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THE GARDENERS' CHRONICLE

AND

AGRICULTURAL GAZETTE

FOR

1864.

LONDON:

PUBLISHED FOR THE PROPRIETORS,

AT 41, WELLINGTON STREET, COVENT GARDEN, W.C.

1864.

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FIRST PRIZE, ROYAL HORTICULTURAL SOCIETY,
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CATALOGUES of this collection will be forwarded on application.

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GARDENERS' ROYAL BENEVOLENT INSTITUTION.

NOTICE IS HEREBY GIVEN, that the ANNUAL GENERAL MEETING of the SUBSCRIBERS to this Institution will be held at the Bedford Hotel, Covent Garden, on THURSDAY, January 14 next, for the purpose of receiving the Report of the Committee and the Accounts of the Society for the past year, and Electing Officers for the ensuing year.

An ELECTION of THREE PENSIONERS will afterwards take place.

The Chair will be taken at 6 o'Clock in the evening.
The Ballot will close at 8 o'Clock precisely.
The Balloting Papers have all been issued; any Subscriber not having received one is respectfully requested to make immediate application for one. By Order,
EDW. R. CUTLER, Secretary.
14, Tavistock Row, Covent Garden. W.C.

The Gardeners' Chronicle.
SATURDAY, JANUARY 2, 1864.

OUR collections of hardy fruits have received many important additions during the present century, both by introductions from the continent and by hybridising at home. To France and Belgium we are indebted for many of the finest varieties of those Pears which are now so extensively cultivated in our orchards. It is but a few years since such kinds were all but unknown in this country, and yet what a void would there seem to be if we were by any means deprived of them. The Strawberry may be brought forward as one of the examples of what we have been ourselves doing by hybridising. Keens' Seedling, MYATT'S varieties, and a number of later kinds well known to our readers, and of great value. have quite driven the older sorts out of cultivation. And certainly as regards size and general appearance, if not in flavour, the new kinds are a great improvement upon the old. We can also point to a number of fine new Apples, Plums,

Cherries, and Raspberries, which we could ill afford to lose, and for which we have to thank our English horticulturists.

In what are called exotic fruits, that is, such as require the aid of walls, glass-houses, or artificial heat to bring them to perfection, we have not made so much progress either in raising new kinds at home or in introducing them from foreign countries. A stray Peach or Nectarine, and one or two remarkable Grape Vines, are almost all we can point to as having been done amongst this class of fruits. Moreover, although we may take some credit to ourselves for the superior way in which we cultivate and bring to perfection the commoner kinds of exotic fruits, such as Pine-apples, Grapes, Peaches, and Nectarines, we have made little progress in the cultivation of many other sorts which have been introduced from abroad. The Mango and the Mangosteen have been long in our gardens, and yet how rarely do we see their fruit at our exhibitions. Many of us may remember a circumstance that occurred a few years since when the Horticultural Society of London held one of its meetings at Kensington Gore. A fruit of the Mangosteen was exhibited, and considered so interesting and so rare, that after being cut and tasted by the judges, it was sent to the Royal table at Buckingham Palace.

It would seem, however, there are now some signs of a movement in favour of the cultivation of exotic fruits which belong to that class which has hitherto been almost neglected, and whose habits and requirements have been unstudied by English gardeners. We have stated at p. 1179 how successful Mr. RIVERS has been with the Tangierine Orange, and we have little doubt that the other sorts will soon be cultivated with equal success. The large loose-skinned variety known as the Mandarin Orange, although inferior in flavour to the common China Orange, is well worth attention. Its deep red colour, flat shape, and large size, renders it a very remarkable object, both when growing on the tree and when placed upon the table. The Cherimoyer has also been alluded to by some of our correspondents, and is certainly a delicious fruit when it can be had in perfection.

A bunch of fruit of the Banana or Plantain was exhibited the other day in the Gardens of the Royal Horticultural Society, which weighed no less than 86 lbs. This was grown by Mr. CARR, gardener to P. L. HIND, Esq., of Byfleet, Surrey, and was produced by a plant which had only been imported about a twelvemonth. The Banana is easily cultivated, perhaps more easily than any other tropical fruit, and when the species known as Musa Cavendishii is selected for cultivation, no large amount of space is required for its growth, as it is one of the dwarfest of its race.

There are some Chinese fruits which are almost unknown to us, except in a dry preserved state, which would form very interesting objects if they could be induced to produce their fruit freely in this country. We allude to the Lee-chee (Nephelium Lichi), Longan (N. Longan), and the Wampee (Cookia punctata). Less known, even than these, is the Yang-mae of Chusan (Myrica sapida var.), a tree which produces bunches of scarlet fruit resembling in outward form and appearance those of our Arbutus, but considerably larger in size. As the Yang-mae is nearly hardy in our climate, and requires only a warmer summer than that of England, it would probably be as easily cultivated as the Orange.

We give the above as a few of the exotic fruits upon which our English gardeners might try their skill, and such is our opinion of their skill, that we are sure their efforts would eventually be crowned with success, providing always they went to work in the right way, that is, by studying the habits and requirements of the trees under their management. In order to assist them we shall return to the subject and endeavour to point out what we conceive to be the foundation of ultimate success in the culture of those exotic fruits which have hitherto withstood all efforts to bend them to our will.

Our Horticultural Societies ought to encourage, by every means at their command, the production of exotic fruits at their exhibitions, for something fresh is greatly needed to attract the attention of visitors. One or two of the foreign fruits which we have just named, would be more attractive than a van-load of those huge SPECIMENS which are sent annually to our flower shows.

May we ask any of the readers of this journal to tell us what they know about the "Flat Peach of China?" Has it been lost to our gardens, or has any one succeeded well in its cultivation? It is a most delicious fruit, curious in form, and ought to be highly prized both in the orchard house and in the dining-room.

WHILE the managers of our FLOWER SHOWS are casting about for novel subjects of competition, to relieve the tedious monotony which the appearance of the same plants over and over again is so well calculated to produce; and while they are sometimes floundering in the slough of indecision—inviting certain subjects in a particular-sized pot, for example, one year, and withdrawing the invitation the next, and thus by the same stroke, spoiling their own exhibition, and warping the temper of the exhibitor who has been trying to meet them on their own terms, there is one field which offers at least a promise of yielding some interesting gatherings, and which, as yet, has been scarcely worked. True, Sir WENTWORTH DILKE's dinner-table prizes point in this direction; and the window-grown Hyacinths suggested by us, and which the Royal Horticultural Society has, we see, invited in the arrangements for the next spring shows at South Kensington, also have the same tendency; yet, after all, very little has been done to give the gentler sex a direct interest in the competitions on these occasions.

We see no reason, however, why there should not, but many reasons why there should, be instituted a series of CLASSES FOR LADIES. They are good gardeners—many of them excellent, and therefore there is no question but that they could produce certain flowers in a state every way fit to command the admiration of the throng of visitors which frequent these fêtes. They have skill in the arrangement of flowers, and could give us of the ruder sex many a lesson by which we should only be too glad to profit. They have spirit, and would, we doubt not, take up *con amore* a matter of this sort, if made congenial to their tastes.

We have not, indeed, been commissioned to draw up a schedule of ladies' classes for the flower shows of the ensuing season, and therefore we do not propose to enter upon any such formal task; but we may at least, without such a commission, undertake to indicate some of the subjects which, as it appears to us, might be introduced into such a schedule, with every prospect of leading to a series of interesting competitions. These we will notice under the two heads of Plants and Cut Flowers.

Amongst the Plants which ladies may cultivate to perfection in the windows of their drawing-rooms, and that either in pots or glasses, are such bulbs as Hyacinths, Tulips, and Crocuses. Some indeed of the most beautiful and perfect of these flowers we have ever seen, have been so grown, in a style, moreover, which quite fitted them for public competition. Now, nothing in the way of gardening is more delightful than to see in winter and early spring a good display of these gay and cheerful flowers lightening up a living room; and consequently nothing can be a more legitimate object for horticultural societies, of whatever standing, than to encourage by any and every means, the extension of this kind of gardening. Nothing moreover in the way of gardening can be more easily accomplished—to use a homely familiar phrase; and therefore we shall hope to see many ladies competing at South Kensington, on the 9th of March next, for the honour of being placed first with their six window-grown Hyacinths. We hope that steps may be taken to induce some fair competitors at least to enter the lists; and we urge on the authorities the duty of not withholding the prizes another year, even though the invitation should now be but sparingly responded to, but of repeating it again and again, with every inducement to make it a success. True, at present there is not a special ladies' class for Hyacinths, but the amateurs' class is open to them now, and we trust to see one provided especially for them, in accordance with the foregoing suggestions, at some future early day.

Probably, after bulbs, the most suitable plants for indoor cultivation by ladies would be such as might be managed in one of Miss MALING'S indoor plant-cases: and as the capacities of these are limited, the demands upon the fair cultivators should not be made too heavy. Thus, single plants would be more readily and successfully grown and shown than duplicates, triplicates, or any higher number. Suppose the best plant of Adiantum cuneatum, grown in a case, were to be selected as one subject. What object could be conceived more beautiful for home decoration, and what more lovely as an exhibition? Caladium argyrites or C. Chantinii again, would be suitable plants for this purpose; so also would many Ferns; and in due time there might be added a succession of numerous other plants with handsome foliage. To produce the best Gold Fern, the best Silver Fern, the best Film Fern, or the best Hardy Fern, case-grown, would furnish interesting occupation to many ladies who have the convenience either of a cold or a heated glass case for plant-growing, and such as these would furnish subjects for summer competition; while Cyclamens, Chinese Primroses, single or double, and such like things, added to the bulbs, would yield subjects for the spring months. In this way many charming little groups of competitive plants might from time to time be brought together at our shows; and a new feature of interest—of intense interest of course to all the fair visitants of these fairy scenes—would be provided.

But perhaps ladies might compete even better with home-grown Cut Flowers than with home-grown plants. Why not have a ladies' class for the best half-dozen cut Roses—we do not say a "stand" of cut Roses, indeed we advisedly avoid doing so—but we would say, the best half-dozen cut Roses, set up according to the taste of the exhibitor. Should not we Solons gain a grain or two of wisdom out of such an exhibition? Might it not—we had almost written, must it not—lead us to some better and more effective way of setting up the cut flowers at our exhibitions, than that of dabbing them at regular intervals upon flat boards, or stuffing them with equal tameness into flat boxes? It would be worth making the experiment if only to secure such a result as this; but we should no doubt gain much in the way of suggestion besides. Other favourite flowers might in a similar way be made the subjects of competition. Then in the selection and setting up of cut flowers—say for a drawing-room table: how peculiarly a lady's work! yet how attractive and interesting a feature would be made by a group of settings up like these—how useful and suggestive too as a lesson or monition in this art, in which, unassisted, few but ladies could hope to excel. It would of itself be worth the price of an admission ticket, to see, as shown to us in the reflex of some "master" mind, that as a decoration, a few simple flowers put together as such an one would place them, must distance a whole crowd of flaunting exotics, and win as easily as did Miss MARCH'S dinner-table decorations. But the ladies might further amuse themselves and benefit gardeners and gardening, by showing us how to arrange the colours in our parterres. They might and doubtless would devise some means of doing this without inflicting on us those vulgar things called "designs" which sometimes appear at exhibitions. Assuredly in whatever way they might prefer to illustrate the subject, it would be done with taste. Of that we cannot doubt.

These brief indications will serve to show, that the introduction of Ladies' Classes at our flower shows is a perfectly feasible matter. We venture to think the ladies themselves would not shrink from becoming actors in these fairy scenes if the invitation were courteously addressed to them; and we are sure that both societies and visitors would be benefited either directly or indirectly if the plan were to be carried out with sufficient zeal and tact. Certainly in the case of the cut flowers, though perhaps not in that of the plants, the decisions must be left in the hands of the ladies.

THE friends of Mr. FLEMING of TRENTHAM, and among practical Gardeners all are his friends, will be pleased to learn that the *Trentham Men*, that is to say his gardening pupils, have among themselves collected money enough to present him with a handsome silver Tea and Coffee service, upon his relinquishing the charge of the Gardens for that of the Trentham estates, over which the Duke of SUTHERLAND has placed him. Long may he live to enjoy the honour his talents and high character have won for him.

HINTS ON ORCHARD MANAGEMENT.—No. I.

FOR some years I have devoted a considerable amount of attention to the subject of orchards, and have also occasionally had opportunities of contrasting the method of cultivation adopted in different localities. I am sorry to have come to the conclusion that in a very large proportion of cases our orchard management is at a low ebb, and has not progressed in equal proportion to that of other branches of the profession, although the same guiding principles which should govern our practice are equally applicable. There seems to be a vast amount of hap-hazard work, of wrong-headed adherence to traditional and antiquated practices, and a thorough disgust at new-fangled

notions, all which is opposed to improved culture on a scale at all proportioned to its growing importance. I say, growing importance, because the importation of fruit from foreign countries has rendered the produce of orchards so much more easily obtainable by the general mass of the people, that it has become as it were a much greater necessity of life than formerly; and there is no reason why the trade which this increased demand creates, should be entirely thrown into the hands of foreigners, since I believe that with a judicious choice of sorts to suit the various markets, and a system of careful culture, in accordance with the improved knowledge of the principles of cultivation which characterises the present day, we may certainly be able to hold our own against all comers.

The success which has attended the application of improved principles in the cultivation of pyramids in gardens, should lead us to hope that an equal amount of care and skill thrown into the culture of orchard fruits on a large scale, would meet with equal success. I commend these considerations to the rising generation of gardeners, as a subject in which they may legitimately try to do a little good in the different localities to which they may be distributed in after years. I do not mean with regard to the orchards which will come under their own immediate supervision in the gardens of their employers—their own interests there should render them careful cultivators—but I would have them try by their own practice to recommend and endeavour to introduce a better system of management among the tenant farmers of their employers. These are the great sources of supply, and ought to be able to produce enough both for their home supply, and to meet the ever increasing demands of the ever increasing populations of our towns. I think if some of our spirited high-farming tenants could be induced to bestow as much care on their Apple trees as they do on their Wheat crops, they would be somewhat surprised at the average of profits which would follow.

The subject is one which cannot be very well dismissed in a few words. I shall therefore be obliged to enter somewhat largely into the various matters which bear upon it, and although much of what I shall advance will probably be only a repetition of the principles laid down by most writers on the subject, yet it will do us no harm to pass them in review, as we have all a common starting ground, and there are certain ruling principles governing every case, the only difference being in the practical application of them; for they must not be applied indiscriminately to every case, but varied according to local circumstances. There are in most localities certain conditions peculiar to each, and it would scarcely be possible for one to imitate exactly such and such conditions, or follow out such and such directions, laid down by any writer; it becomes, therefore, necessary to study the general principles which are common to all, leaving it to the operator to apply them, either partially or wholly, according to local conditions.

Now the principles which should guide our practice in the cultivation of orchard fruit trees are practically the same as those by which we are guided in fruit tree culture generally. Take for example wall-fruit culture. Here we shall find that certain conditions must be aimed at, and a certain amount of care bestowed, before even a moderate degree of success can be expected; but when these are applied with extra care and liberality, success becomes a certainty. There can then be no doubt but that an equal amount of care and attention bestowed upon Apple, Pear, Plum, and Cherry trees, in orchards, would produce a corresponding degree of success. One great mistake is often made in supposing that when the trees are planted, and fairly started, no more care is needed—at least for many years. The contrary is the case, and however much expense may have been incurred and care employed in the operation of planting, the trees will need a constant supervision, and liberal treatment; of which I shall have something to say further on.

I have now detailed the train of ideas which has induced me to believe that it may not be very unprofitable to spend a little time in examining into the causes and effects which bear on the subject in detail. I will therefore proceed to a more practical illustration, and in so doing must take the matter *seriatim*, but without enlarging much upon things that are self evident, such, for example, as that when a proper site is fixed upon, it must be fenced in, as the neglect of such a precaution does not involve the breach of any laws proper to good management.

In the first place the site of an orchard will require careful attention, and in making a selection there are two principal considerations by which the choice must be influenced. The first is the situation as regards aspect and shelter, which will influence the condition of the trees externally, and next the nature of the soil, but more particularly of the subsoil, which will act upon the roots. Shelter from the S.W. to N. and E. is not only desirable, but also indispensable to a perfect condition of fitness for the object desired; it is one of those favourable conditions which often results in a good crop of fruit, in seasons when trees more exposed to the searching winds and morning frosts which are so common in spring, are comparatively barren. I would not assert that this is invariably the case, but I have often observed effects which, other conditions being equal, I could trace back to no other cause.

The aspect I would prefer is one open to the south, and well sheltered on all other sides. Such shelter, however, should not be so near as to prevent a free circulation of air. A distance of about 30 yards is desirable; and if there is not a natural shelter, or existing plantations, there should be a belt of deciduous and coniferous timber trees intermixed, with a close undergrowth of Laurels, Yews, and Hollies, planted at the time the orchard is formed. A width of 20 yards is sufficient for this belt, and it forms an excellent and favourite covert for pheasants.

The bottoms of valleys are often so much more favourable as regards the depth of good soil, owing probably to the constant washing down by heavy rains of worm-casts and other softened disintegrated earth, that they are often chosen as sites for an orchard; but I should hesitate before recommending such a choice until it could be ascertained from observation that the heavy low fogs, so prevalent in early spring, did not hang over such localities, and carry with them the concomitant evils of severe frosts at the time when the leaves were just expanding and the trees in bloom. There are very few of these low situations where such is not the case, in the majority of seasons, particularly if there is sluggish-moving water in the neighbourhood. Besides which, there is the difficulty of obtaining a good outlet for drainage; and as there are very few situations where this will not be necessary, it becomes an all important consideration. Again, it is sometimes found to be desirable to plant very steep declivities with orchard trees, and lay them down in grass at once, on account of the great difficulty of carrying on arable or spade husbandry in such situations. If such declivities have a southerly aspect, and are well sheltered behind, it may be done with very great advantage, and the fruit being naturally more exposed to the sun, and on high land, will come of very fine colour and quality; but, on the other hand, if these steep hills face the east, or are otherwise devoid of shelter, the chances of a crop will be very precarious indeed.

The site which I would prefer, and the eligibility of which I have often found confirmed by practical observation, is that of a gentle slope facing the south, high enough to be out of the reach of the spring fogs and frosts, but not so elevated as to be exposed to the sweeping blasts which come from the higher grounds. The soil, it is true, may not always be so deep as in lower ground, for the reasons before mentioned, nor will the fruit always be so large, but it will be finer in flavour, colour and quality, and therefore more likely to be of superior value in the market.

The great advantage which orchards derive from good shelter will be very apparent to any one who will take the trouble to examine the condition of any large orchards which are devoid of shelter, although otherwise very well situated. I have made a point of doing so for some years, and I invariably find that the best fruit and most abundant crops are on the southern sides and in the centres of the orchards, whilst the condition of the outer exposed trees shows plainly the influence of the winds, both on fruit and branches, and that it is only by their sheltering influence on the interior trees, that good crops and fine fruit are attained; which state of things has often suggested to my mind an idea that it would be good practice in those cases where shelter was unattainable to plant dwarfs of the strong growing hardy sorts on the east, west, and north sides, also to plant them nearer together and prune very little, more with a view to shelter for choicer and tenderer sorts, than with a view to profit. *John Cox.*

SOME OF THE DISTINCTIVE FEATURES BETWEEN BRIAR AND MANETTI STOCKS.

THESE, as I have said before, are both good stocks for suitable Roses and lands. I am no enemy to the Briar, but I am obliged to depend on the Manetti chiefly. Had I strong land, or deep friable loam, I should mainly depend on Roses on 2 feet Briars. The summer Roses here do equally well on both stocks.

The Briar is best for moderate growers, the Manetti for strong growers. The former is good for strong growers, but the latter is not good for dwarf growers. Whether a Rose be for pole, wall or standard, the Briar must be cut hard the first spring of plantation, also whenever the plant is moved. The Manetti never requires to be cut hard, either at the first spring of plantation, or when the plant is moved. After it is established you need only thin out the plant and cut the tops to a good eye, much as you would ordinarily prune an established hybrid China or hybrid Bourbon. In pruning the Briar you must cut it as close to the eye as possible; but in pruning the Manetti you must, if the sap is abundant, cut some way above the eye that you mean to break. In the former you leave an outside eye; in the latter it is immaterial; probably, as you may wish to keep the plant upright, an inside eye is best. The wood of the Briar is usually firmer and better than that of the Manetti, because it is of slower growth. The Briar will not flower from succulent unripe wood, but the Manetti will often do so. The former is not good for dry and shallow lands, or dry banks, but the latter is admirable for such places, and also good for strong lands, where monster plants are wanted. For pole purposes I think the Manetti is superior to the Briar, still the latter is very good for such a purpose if the land and tillage is good. It requires a year's establishment. The Manetti is established as by a talismanic touch. The wood of the Briar must be ripe before the plant is moved, but the removal of the Manetti ripens the wood, if the leaves are shaded, or moistened for a few days. The greater part of my Manetti stocks were planted in the burning heats of September last year, and in October in three previous seasons. Manetti plants may be, and probably in strong land should be, moved annually, or root-pruned; or they may not yield flowers owing to excess of roots.

The Manetti is earlier than summer Roses on the Briar. It is more abundant, more continuous, and later as to blooms. In my lands the blooms are much larger and better coloured. Has it never occurred to any one to ask how it is that Mr. Keynes produces such huge Roses. I reviewed his nursery in the August or September preceding the severe winter. The stock of plants on the Briar and Manetti were both splendid, but the buds of the latter were as big again as those of the Briar. The latter has a long line of frontier to defend, and its root being nearer the surface must be protected in severe winters, and mulched in torrid summers. The Manetti is underground, and requires less defence in winter and summer, and also less water. When the Briar is sick it seldom recovers—it may linger on; but the Manetti when very sick will often recover, as it is so free to make roots. The former casts its suckers from the root, the latter from the stock, seldom from the roots, rarely at all after the first year. The Briar requires a short season of rest after each series of flowers. The Manetti never rests. Its motto seems to be "nunquam dormio." The Briar and the Celine stocks are best for standards. The Manetti is not good for this purpose, as, when exposed to sun the skin cracks, and the wood becomes hard and dry as a stick. Neither is the Rosa cinnamomea as good for standards as the Briar and Celine stocks. The Briar is suited to July and August budding; the Manetti may be budded earlier and later, as well as in July and August. Whether the stock be Briar or Manetti, success mainly depends on the sappiness of the stock. For late budding a ripe bud is best. For earlier budding, if the stock is sappy, and a leaf is put over the bud for a day or so, a very young eye is as good, if not better than a ripe one, because the slice is sappier. If the weather is hot, bud early and late in the day. If you bud in midday, turn your back to the sun, or let your man hold an umbrella over your head. A sharp knife, an even tie, quickness of operation, a sappy stock (watered or mulched), cotton twist or worsted, and a leaf over the bud, are the main "keys of the position." Lastly, a Briar plant can never be more than one plant; but I have just taken up two seven years' old plants of Auguste Mie, and stripped off seven excellent plants, one on own roots and six on Manetti roots; and the two originals are put back in their places, all the better for stripping. This is tolerable interest.

One word as regards the lasting nature of the Manetti stock. I should think it was the hardiest stock in the world, especially when I consider how much too high it has been budded in time past. Manetti budders must go to Sawbridgeworth; and there they will see the stock budded scarcely more than 2 or 3 inches over the radius of the roots; in fact, at a little distance you would think that they were Roses on their own roots. Among many others I bought 12 each of Mad. Rivers, Cecile Chabrillant, Sen. Vaisse, Anna Alexieff, Louise Carique, planted January past. Their efflorescence and continuity of blooming were wonderful. Anna Alexieff groaned with flowers 4 and 5 inches in diameter (Mr. Adolphus Kent saw them), whilst M. Rivers and S. Vaisse threw corymbs from new shoots at the base, 3 and 4 feet long, with five and six Roses expanded in bouquet terminal. I have just moved two huge Manetti Roses (La Ville de St. Denis) that I had of Mr. Rivers six years ago, small pot plants; they had not on removal any other roots than their own. The year before last the first series of these plants was 250 Roses; some of the blooms were as big as a man's fist, beautiful in outline, colour, and series of petals.

One word to Nurserymen. Do not bud Roses on high Briar stocks. Two-feet stocks are most convenient: 3-feet stocks are high enough. Do not give up propagating Roses on the Manetti, or you will be left behind. Do not bud so high, or purchasers will be left behind! Send out good materials; and, after they are delivered, if complaint is not made at once, you are absolved from all blame.

One word to Rose planters. Remember, Nature was never a sexton or a bricklayer. All nature sighs for the surface. Roses can scarcely be planted too fleet; in which case they will need more summer and winter protection, and also more water; they can never be better planted than when the earth is dry and friable, especially if it is strong; in spring they will require water after planting; in November they will require none. *W. F. Radclyffe, Rushton.*

Home Correspondence.

Vitality of Seeds.—In your last Number you mention as a strong illustration of the fact that buried seed, retain for a long time their germinating power, the

case observed by Mr. G. B. Wollaston, of Chislehurst, a few years since, at the time the Beckenham station on the Mid-Kent railway was being formed. Certain excavations were necessary, and these had to be made to a depth varying from 5 to 10 feet in the virgin sand and gravel of the district. Thereupon Erigeron canadense sprang up everywhere, so as to completely cover the surface of the earth, to the almost total exclusion of other vegetation; and you add that the fact Mr. Wollaston records, though not to be taken as exact evidence, seems to afford strong presumptive proof that the plant is a true native, and that its seeds must have been buried for an indefinite period in the soil on which they sprung up. It appears to me, however, that a careful consideration of the facts would lead to a very different conclusion; that this is no exception to the general law which experience has laid down, viz., that the greater number of seeds lose their power of germination within a few years after they are ripened, that some may retain it for many years, yet that the number both of species and individuals diminishes rapidly with every successive season, and that their preservation for a little more than one century, the longest period of which an authentic record occurs, is under very exceptional circumstances, not enjoyed by seeds buried in the earth. I think that the sudden appearance of the Erigeron canadense must be attributed to some other causes. I do not deny that our soil is often full of seeds. Mr. Darwin raised 537 plants from three table-spoonfuls of mud taken from the edge of a little pond beneath water. I have myself seen at certain times of year soil full of seeds; but then it is the surface soil, or surface soil recently buried, and the seeds, or the plants reared from them, are always of many kinds. I never knew of any instance, even of soil taken from a field or garden to fill a garden-pot, and placed out of reach of a seed-shedding weed, which has produced an abundant crop of any one kind of weed. However few those that come up from the soil, they are generally of several kinds, and the very fact that the Erigeron canadense alone came up in such abundance, to the almost total exclusion of any other vegetation, appears to me strong evidence that the seed was not in the virgin soil excavated. But "how else," you ask, "is the profusion in which the plant appeared immediately after the cutting was made to be accounted for?" as "the Erigeron was not previously known to grow in the neighbourhood." The sudden appearance of Charlock and other weeds in great profusion, like that of enormous quantities of insects or Fungi, popularly designated as blight, has been frequently observed, and as popularly attributed in the one case to seeds buried in the ground, in the other to spontaneous generation through atmospheric influences, as the simplest modes of accounting for them; and if we attempt to disbelieve it, we are met by such a poser as the above question, to which we can only give a conjectural answer, depending upon precedent facts insufficiently observed. Erigeron canadense is certainly not common in England, but it is pretty generally scattered about some of the southern counties on roadsides, river banks, railway cuttings, &c., where the soil is light or loose and vegetation thin. The individuals are usually few, and its slender stems, grass-like leaves and insignificant flowers cause it to be easily overlooked. It is moreover one of those short-lived annuals endowed with enormous means of reproduction, of which, as of the Groundsel, two generations may flower in a single year. Every individual may produce thousands of good seed. A moderate sized plant of about 20 inches now before me has above 100 good flower heads at once; each flower head can ripen 40 to 50 seeds, giving a total of near 5000 seeds, and many foreign specimens have twice that number. In ordinary cases these seeds being shed in a time of drought or otherwise ungenial weather, or falling upon a hard, or a pre-occupied, or otherwise ungenial soil, remain on the surface long enough to become the prey of insects or other animals; or if they succeed in germinating are soon devoured, or choked by the surrounding vegetation, or otherwise destroyed in their young state; so that in those places where we see year after year the same small number of scattered individuals, an average of 4999 of the seeds shed come to an untimely end, for every one that lives to form a full-grown plant. But supposing two or three individuals to have been growing among the roadside weeds in the neighbourhood of the cutting, although from their paucity they may have passed unheeded, and suppose their seeds to have been blown on to the fresh earth, exposed and loosened by the cutting, in wet weather or immediately before rain; almost every such seed, thus placed in the conditions of a crop intentionally and carefully sown, would germinate; and in the clean soil, as free from insects and grubs as from obstructing vegetation, the crop would prosper and exclusively cover the ground, not by a successful struggle with those enemies which are usually too much for it, but because it has met with none such to struggle with. There are many means by which strange weeds are brought into the soil thus prepared in railway and canal cuttings, amongst which a very common one is with the fodder for the horses. I have several times observed young plants, especially annuals, not common in the district, come up near the troughs where railway horses are fed; they mostly perish soon after, but one or two surviving might produce a large patch the ensuing year. Every one must have observed how much more frequent large patches of one kind of weed are on a new embankment than upon old ground. Seeds buried in the surface soil, as deep as the filtration of water or the working of worms and insects can penetrate, are subject to those hygrometrical and thermometrical changes which they will resist [for a number of seasons greater or less according to the intensity of these changes, but in the end they will be influenced by them, and either germinate or perish, and their burial in the "virgin soil" below, must be of exceedingly rare occurrence—so rare and so partial that the chance must be very great against any such soil being ever again turned up. The only evidence which might be convincing that seeds contained in such "virgin soil" (like the "antediluvian" Mustard mentioned by the late Mr. Herbert for instance, in a note to White's Selborne, E. T. Bennett's edition, p. 486), remain alive, would be as soon as such a crop is observed, to fetch a barrowfull of the same soil from where it has not yet been disturbed, and bring it into a planthouse out of the reach of weed seeds, and watch what will come up, or carefully wash it and search for the seeds. Mustard and Charlock seeds at least are not so microscopic as not to be readily seen before they germinate. I say nothing of the celebrated cases of the Mummy Wheat and the Devonshire Raspberries. However unimpeachable the veracity and good faith of the authorities on whose evidence these cases rest, there are circumstances in each which, to my mind, make it not at all improbable that some small links in the long chain of proofs may not be entirely free from suspicion of delusion or deception. *B.* [Perhaps Mr. Wollaston would adopt the above suggestion, of treating a barrowfull of the soil, and would report the result.]

Pears not Keeping.—Before reading your leading article on this subject, I was under the impression that this climate had something to do with Pears not keeping. I find, however, that in other parts as well as in Ireland, Pears are affected with a disease which I attribute to the cold sunless autumns we have had. Fruit prematurely ripened decays quicker than that thoroughly matured. Pears at this place came in nearly all at once, very late kinds being ready almost as soon as early ones, and even when ripe they were not of really first-rate flavour; half of them before arriving at maturity became covered with spots, which grew larger until they ended in entire rottenness. Apples on the whole were better; they were not so much spotted; still a goodly portion of them were covered with brown spots. I need only remark that all the Pears here are just over; a fortnight hence will see us cleared out. This will at once show how indifferently they have kept. *John Edlington, Crom Castle.*

Singular Discovery in an Icehouse.—While employed some days ago in clearing out an old icehouse that had not been in use for several years, and the gate of which had in consequence been let fall to pieces, I was surprised to find at the bottom of it the skulls of several cats and of above 100 hares. This somewhat singular discovery suggests to me the necessity of having places of this kind closed when they are no longer wanted; lest other animals more valuable should meet with a similar fate. *E. Welch, Palace Garden, Armagh.*

Mildness of the Season.—In further confirmation of this, I beg to send you a Souvenir de Malmaison Rose grown in the open air here, and cut on Christmas Day. I think you will say you have seldom seen a finer. In reference to Rose showing, noticed lately in your columns, I would say let exhibitors go on as heretofore, as who can tell whether a Rose has been disbudded when you cut it or not. The "National" gives a prize for Teas and Noisettes open, and I informed the Secretary of the Crystal Palace that if a prize were to be given for 18 Teas, Noisettes and Bourbons, the show there would be perfect. *J. Hollingworth, Turkey Mill, Maidstone.* —— Although we had 8° of frost here (Stamford) for a short time on the night of the 22d ult., the following are in bloom in the open air, viz., Devoniensis, old Crimson, and monthly China Roses, Mignonette, Gazania splendens, Stocks, Carnations, Chrysanthemums, Ivy, Laurustinus, Cydonia japonica, Mezereon, Arabis, Butterbur (Petasites), Double and Single Primroses, Polyanthus, Wallflower, Double and Single Violets, Pansies, and May Queen Strawberries. I have also cut to-day (Christmas) Walcheren and Snow's Winter White Broccoli and Neapolitan Cabbage Lettuces, the latter well hearted, crisp and sound, and the best Lettuces I have had during the year. This variety has for a long time stood A 1 with me amongst the Cabbage Lettuces, but being a shy seeder is rarely to be obtained true. *T. L.*—— I send herewith two sprays of Yellow Banksian Rose, which were gathered on the 23d inst., from a south-wall in a garden at Brockley, near Bristol. *A Subscriber.* ——We enclose you specimens illustrative of the mild weather which we are now experiencing; one is a portion of a pyramidal King of the Pippins Apple tree, several branches of which have come into full leaf within the last few days; the other is an example of Peach bloom gathered from an open wall 400 yards long. We have a cold lean-to Peach-house about 40 yards long, but we do not notice the trees in it to be much more forward than they were last season. *Adams & Co., London Road, Gloucester.* ——The Eastern Counties are reported to be cold and bleak, but the subjoined list of shrubs and flowers now blooming in a garden at Dedham, near Colchester, will prove the present season to be equally genial there, as in more favoured localities. Among the plants referred to are Laurustinus, Berberis Darwinii, Double-flowering Cherry, Potentilla fruticosa, Jasminum nudiflorum, Clematis azureus, Coronilla glauca, Christmas Roses, Polyanthus, Intermediate Stocks of various colours, White German Stocks, Wallflowers, Purple Primroses (single and double), Common and Neapolitan Violets, Pansies, Mignonette, Arabis albida, Iberis semperv irens, Double Marigolds, Perpetual Carnations, Gazania splendens, Chinese Chrysanthemums, Tormentilla reptans, Polygala Chamæbuxus, Erica carnea, and others, and Menziesia polifolia. Wild Furze and Broom brighten the plantations, while on the sheltered banks are to be found the Periwinkle, the purple and white Dead Nettle, with Primroses, Oxlips, and Lychnis dioica. The delicate fronds of Adiantum Capillus-veneris, also yet adorn the hardy Fernery. The following Roses have also been gathered since the 24th inst., viz., Gloire de Rosomène, Gloire de Dijon, Mrs. Elliot, Geant des Batailles, Louis Philippe D'Angers, Devoniensis, Souvenir de Malmaison, Duchesse Decazes, together with many blossoms from the miniature Fairy and the common China Rose. *Dedham, Dec.* 30.—— Up to the present time we have not had the least symptoms of the severe frost predicted by your correspondent at page 1160, Dec. 5. On the 18th ult. we had from 2° to 3° of frost, which only lasted a few hours, and was soon succeeded by a dense warm fog. A few beds of Heliotrope and Tom Thumb Nasturtiums were destroyed by it in the flower garden; but with the exception of these all else still presents a healthy appearance. Two or three days ago I filled a vase consisting of 43 varieties of flowers, all from out-door plants, 23 of them being bedding plants and tender annuals. Among them were Camellia Sweetii, Clianthus puniceus, Ceanothus azureus, Pittosporum Tobira, Double Myrtle, Veronicas, Fuchsias, Pentstemons, Calceolarias, Verbenas, Scarlet Geraniums, Wallflowers, Stocks, Alyssums, Seedling Picotees, Lobelias, Mignonette, Tropæolums, Cobœa scandens, Ageratums, Yellow Crocus, and Roses. We have also had Rhododendrons in bloom more than a fortnight since; a plant of R. pulcherrimum has now on it dozens of heads of well expanded blossoms, the colour of which is most brilliant. Among other things are Willow, Cratægus, and Hazel; the latter has catkins from 2 to 3 inches long. *R. Westcott, Singleton, Swansea.* [We have many more communications on this subject, but want of space to-day obliges us to defer them.]

Orchard Houses.—I have been much interested in the discussions which have from time to time appeared in your publication respecting orchard houses, but I have not seen that any one has compared the quantity of fruit which has been obtained from trees in pots with that obtained in a similar sized house from trees planted in beds in the ordinary manner. I have endeavoured with a small portion of a south wall during the past eleven years to grow fruit without protection; you may judge how I have succeeded when I tell you that my three trees have not during the whole time produced 12 dozen of fruit. The trees are in good condition, bloom in abundance every year, but the spring frosts have invariably killed nearly all the fruit. In the spring of 1861 I erected a small orchard house, about 30 feet long by 10 feet wide, in which I placed 24 trees in pots; these in that year produced about 5 dozen good fruit. In 1862, the trees were repotted into 13-inch pots, the former pots being only 10-inch; in consequence of late potting I only obtained about 7 dozen fine fruit in the last season. The fruit produced was as follows, viz.:—5 dozen Pears; 12 dozen Peaches; 11 dozen Nectarines; 1 dozen 2 Apricots; 9 dozen 7 Plums. Cherries on two trees an abundant crop. The fruit has been all fine, and of the best flavour. *An Amateur, Watford.*

Rhododendrons and Sea Breezes.—May I be permitted to observe for the benefit of your correspondent "C. D., Ashdean, near Chichester," that he is in error in supposing that sea-breezes are destructive to the Rhododendron. I live in a purely maritime district, and my own nursery farm, extending, as it does, over 50 acres, is within a few hundred yards of high-water mark. Here I could show him thousands of plants of all sizes, such as I think could not be surpassed for health and beauty in any part of England, and constantly subject to sea breezes. It is equally fallacious to suppose that they will not grow on limestone subsoil. Here at least they grow splendidly almost on the bare limestone rocks, and constantly watered by the spray from the sea. *William Barron, Sketty Nursery Farm, Swansea.*——Your Correspondent, "C. D.," is certainly quite wrong in saying that Rhododendrons will not grow near the sea. They grow luxuriantly near Bournemouth, and also in the Channel Islands; but of course they require to be sheltered. In consequence of "C. D.'s" article, at p. 1205 (1863), I was very nearly taking up all my Rhododendrons in despair; but having ascertained that with care they will flourish near the sea, I have determined to remove them to a sheltered spot in the spring. *E. Sandeman, Havant.*

Bottom Heat.—As the utility of geothermal culture appears to be universally admitted, might not the principle be applied with advantage in orchard houses? The pots might be surrounded—say to half their depth—by some slowly fermenting material, such as a mixture of leaves and tan which would, impart the desired heat gradually and continuously. Have any of

your readers ever tried this plan, and with what result? And which would be the best time to make the application—when the trees are blossoming, or afterwards? *A. J.*

Vine Borders.—Borders constructed on such good principles and of such ample proportions as regards width and depth as those described by your correspondent (see p. 1181, 1863) will undoubtedly produce first-class Grapes, provided proper indoor treatment is given. Borders of the dimensions described are in my opinion quite wide enough, at least for some years to come. Probably at some future period if the Vines are very luxuriant it may be found necessary to make them a little wider; at present, however, it would be next to useless to do so, especially considering the short time the Vines have been planted. I have grown really good Grapes on Vines planted in a border not wider than 4½ feet, walled in on each side, so that it was next to an impossibility for the roots to receive any support from any other source than the narrow limits in which they were placed. Borders leaning to the narrow side are preferable to very wide ones; the roots being under control, and you can supply them with food in a liquid state when required. *John Edlington, Crom Castle, Ireland.*

Heating Orchard-houses.—In reply to an inquiry from a correspondent at Otley, in Yorkshire (p. 1230, 1863), I say yes, he may ripen fruit, but he will find a great uncertainty about securing a crop if he does not adopt hot-water pipes. His question was not so distinctly put as it should have been, for any person residing in the south and unacquainted with the moist atmosphere we so frequently experience here, would at once reply, "Certainly, there is no difficulty whatever to be feared;" and as I have had many years experience in the south, and know what a dry atmosphere prevails there generally, I quite agree that pipes are not required in such favoured localities. Here, and in the surrounding district, we experience so much moist weather in the months of August, September, and October, that a little fire-heat and plenty of air will give material aid in ripening the wood and fruit, whilst at the blooming time, when we are also subject to much moisture in the air, it will be found most valuable in order to keep the indoor atmosphere dry, so that fertilisation can readily take place, and injury to the bloom by frost be prevented. Several orchard houses have been erected in this neighbourhood without heating apparatus, but I believe in every case the gardener now wishes his was heated. I have always been an advocate for heating such structures in this district, and am now erecting an orchard house which will be supplied with pipes just sufficient to preserve a dry atmosphere and keep out frost. *Bradford, Yorkshire.*

Foreign Correspondence.

The Island of Ascension.—The following interesting account of some of the results of the operations instituted by the Admiralty for improving the condition of the Island of Ascension (originally a barren cinder heap without water or other vegetation than a little Grass and Fern towards the summit of the Peak), have been communicated to Sir William Hooker by the energetic officer in command of that Island.

Ascension, Nov. 13, 1863.

MY DEAR SIR WILLIAM,

I regret to say that this my last planting season is as unfavourable or more so than the two former years, and all my sanguine expectations which fine moist weather in the beginning of September gave rise to have vanished, and I do not think that a single transplanted shrub will succeed. Fortunately we confined our operations to the moving of the Wattle (Acacia), of which we have an ample supply, and all the beautiful things you sent us from Kew by Commodore Wilmot, and the "Industry" are safe. I have nearly completed one greenhouse 45 feet long, and if I find that it succeeds I shall build a similar one before I leave; it is well ventilated, and I have built a cement-lined tank within it, which will catch the water from the roof. All our vegetable crops have failed over and over again this year, and there has been so little rain that I am obliged to limit the allowance of water to a gallon a man per diem. You will be glad to hear that the birds are rapidly increasing on the island, sparrows are breeding, and I hear of five nests near Dampier's springs. We feed the cattle there on Oat straw, so they are sure to thrive. Canaries, chaffinches, and several coast birds, brought by Commodore Wilmot, are also doing well, and the avidivats (amadavades) introduced by Captain Burnett, are in flocks of thousands. Thrushes could not get their living in Ascension during the hot season, so I hardly think it worth while to make the experiment. Bees would be invaluable here, and several unsuccessful attempts have been made to introduce them, but they seem to have invariably arrived dead; there is no reason why they should not do very well if sent out direct in proper hives by a store ship. Commodore Wilmot was here when I received your letter, and I delivered your message; he still takes the greatest interest in our little island, and spoke very highly of Mr. Mann, whom he met on the coast. I shall recommend my successor to follow up a system of stone enclosures in the sheltered valleys which we have commenced, for Lime and Orange trees. I could have wished to have done more in this way, but labour is very limited, and the Africans make but little show. I want 20 more marines to do justice to the place, but any increase involves additional supplies to be conveyed to the mountain, and unless their lordships should decide hereafter to increase the establishment altogether, I am not prepared to submit any new plans to them. English Potatos are doing very well now that we have plenty of manure, and I never miss an opportunity of getting seed. In a short time we shall be able to sow our own, as I have built a fine vegetable loft with convenient places of spreading out and preparing all kinds of seeds which have hitherto been destroyed by damp and rats. We have upwards of 20 milch cows, and for several months have been issuing 40 quarts of milk daily; they find good pasturage in Breakneck during the day, and are kept in stalls during the night on Oat straw and the runners of the sweet Potato. Island-bred sheep are very fine. We had 125 lambs between January and June; but I shall endeavour to enter more fully into these subjects in my next report. Some Norfolk Island Pine cones, sent to me from St. Helena, are germinating, and I hope a few will be raised from them, but I am almost in despair of these ever being anything better than stunted trees and shrubs, the long droughts are so very trying and withering. Much, however, may be done by steady perseverance and watching opportunities. *J. Barnard.*

Societies.

ROYAL HORTICULTURAL: *Dec. 28.—Meeting of Council.*—Mr. Henry Cole was elected a member of Council, *vice* the Earl of Ducie resigned.

SCOTTISH ARBORICULTURAL: The Tenth Annual General Meeting of this Society was held at 5, St. Andrew Square, Edinburgh, on the 4th of Nov. last, Mr. J. Balden, V.P., Forester, Lennoxlove, in the chair. The following Candidates were elected:—Rev. H. W. Cookes, Astley Rectory, near Stourport; Messrs. Waterer and Godfrey, Knaphill, Surrey; J. Blackley, Esq., Milton and Castlemilk; R. T. Macintosh, Esq., Nurseryman and Seedsman, Edinburgh; S. M'Glashen, Esq., Canonmills, Edinburgh; P. Robertson, Esq, Foulis Easter, Dundee; Mr. D. Christie, Assistant-Forester, Dalkeith Park; Mr. G. Taylor, Assistant-Forester, Hopetoun House.

The following prizes were awarded to the successful competitors for Essays, during 1862 and 1863:—To Mr. Wm. M'Corquodale, Forester, Scone Palace, 5*l.* for an Essay on "Successful Planting with Scotch Fir after previous crops of old Scotch Fir had been removed from the ground," and the Society's Silver Medal for an Essay on "The Diseases of the Larch." [These papers have already appeared in the Transactions, Vol. II. p. 3.] To Mr. Wm. Gilchrist, Forester, Castlemilk, the Society's Silver Medal for an Essay on "The Conducting of Planting Operations in mixed Fir Plantations.' [This will appear in the Transactions for the present year.]

The Secretary read an Essay on "The Construction of Plantation and Farm Roads and Walks;" and a statement regarding the establishing "Reading Rooms and Libraries for Working Men on Landed Estates," by Mr. R. E. Brown, Forester, Wass, Yorkshire.

A letter was read from Mr. M'Glashen, having reference to the successful transplanting of a number of trees and shrubs near Edinburgh by his machines, in June and July last. A Committee was appointed to examine the trees in August 1864, and report thereon at the next general meeting as to their health and growth, and also as to the time required, and expense connected with their removal by the machines.

It was agreed that Prizes of 5*l.* each should be offered for the best and approved Essays or Reports on any of the following five subjects:—1. Introduction and Cultivation of the newer Coniferæ and other Forest Trees, with special reference to the climate of Great Britain and Ireland. 2. On the Best Modes of Constructing and Maintaining Plantation Roads and Walks, with special reference to their Cost. 3. The Best Method of Rearing and Maintaining Live Fences; with an account of the Plants best fitted for filling up gaps in old hedges. 4. The Species of Timber Trees suitable to the various Soils, Elevations, and Exposures, and the Effects produced on the different Varieties. 5. Hedgerow Trees, having special reference to their utility and ornamental character, and the most successful mode of rearing them. 6. A Silver Medal will be given for the best and approved Essay or Report on any other subject connected with Arboriculture. 7. A Silver Medal will be given for any marked advantageous improvement on any of the Instruments used in Forestry (to be accompanied by a report). It is expected that the Essays and Reports be founded on the experience of the Competitors, and their remarks confined to the subjects of which they treat. All Essays, Reports, and Instruments intended for Competition must be given in to the Secretary not later than October 1, 1864, each bearing a motto, and being accompanied by a sepa ate sealed letter bearing the same motto, and containing the name and address of the author.

The Treasurer submitted a statement of the Society's financial affairs, showing a balance in favour of the Society of 88*l.* 14*s.* 2*d.*

The Office Bearers for 1863—64 were then elected, the Right Hon. T. F. Kennedy, Dalquharran Castle, Maybole, being President, and Mr. J. Sadler, Assistant to Professor of Botany in the University of Edinburgh, Secretary.

Notices of Books.

Johnston's Civil Service Arithmetic. Longman & Co.

Of late the country has been inundated with very good books of arithmetic, but we have sufficient faith in the laws of supply and demand, to believe that new books on such subjects are only written to meet a felt want. The fact is, competitive examination is the hobby of the day, and every candidate for the office of exciseman, tide waiter, weigher, or boatman, every person seeking employment in the post office, dockyard, education office, constabulary, India Board, Inland Revenue, *cum multis aliis*, wishes to know the questions that actually have been set in examinations for his particular department, in order that he may form some notion of the kind of questions he is likely to meet with, and regulate his studies accordingly. Mr. Johnston professes to give 1300 questions that have actually been set, specifying for what class of candidates.

Manual of the Metalloids. By James Apjohn, M.D., F.R.S. London, 1864, Longman & Co. Pp. 596, small 8vo.

The excellent series of scientific manuals edited by Messrs. Galbraith & Houghton, of Dublin University, are well known, and the thick little volume before us fully sustains the character that students and the public have formed of its predecessors. This book is written in a clear, concise, intelligible manner, combining the two very important merits of brevity and a lucid style, so seldom found together in works of this kind. Dr. Apjohn has we think done well to introduce the commoner chemico-algebraic symbols into his treatise, and he has taken care to supply woodcuts with a liberal hand wherever they are needed to elucidate the subject, or to help the experimentalist. In the Introduction we find the laws of chemical combination clearly laid down, and the mode of finding chemical equivalents deduced, the atomic theory is then explained, and after this the symbols and nomenclature peculiar to the science are gone into, and other matters which we must pass over.

On coming to the description of the elements, which Dr. Apjohn designates as Metalloids, one feels inclined to take objection to the term which he has applied to them collectively. Not that the word itself is new, but the things included under it are not those that we have been accustomed to. Where Berzelius classes sulphur, phosphorus, carbon, boron, and silicon as *metalloids;* oxygen, hydrogen, and nitrogen as permanently elastic or *gaseous* bodies; and puts chlorine, fluorine, iodine, and bromine in a class by themselves; Dr. Apjohn places all these, together with selenium, tellurium, and arsenic, making 15 elements in all, under the name of metalloids. Chemists are perfectly aware of certain difficulties in the way of the generalisation, and if they are satisfied, it does not become us to complain. The book was intended for the especial use of students, who will know how to appreciate its merits. There is an index of subjects and of names.

Garden Memoranda.

ROYAL GARDENS, STUTTGART.—The villa of the Crown Prince is situated on the top of a hill opposite the Wilhelmira Palace, on the east side of the town of Canstatt. Its position commands a view of Stuttgart, Canstatt, and the beautiful valley of the Neckar with its Vine-clad hill-sides. The hill on which the Palace stands is beautifully wooded to the top; while on the lower part of it are shady walks winding in all directions, open for public promenade, and forming one of the many pleasant retreats in the environs of this highly-favoured city. The approach from Canstatt is by a good carriage road, which winds round the hill for about three-quarters of a mile. On the upper portion Vines are planted on each side and carefully cultivated. The canes vary from 3 to 5 ft. in height, and at the time of our visit were loaded with rich amber-coloured Grapes, some of the bunches being nearly a foot in length. The canes are pinned down close to the ground every season. On the left side, facing the south, a series of terraces are formed, on which Vines are planted, and being trained over the walks form an agreeable shade. Beyond this the bank is well covered with evergreens. The carriage drive here takes a sudden turn to the left and enters the court-yard of the Palace.

The latter is a handsome structure in the Italian style of architecture; it is nearly square, with a balcony balustraded on the north and east side; in the centre of the court-yard is a handsome fountain, placed in front of one of the principal windows, and facing a long avenue of trees. It has an excellent effect, whether viewed from the drawing-room or from the end of the vista in the pleasure ground. Passing on to the west side we came to a beautiful Pavilion, stretching away from the house some 150 feet. This was made both useful and ornamental. The floor in connection with the balcony was used as a kind of conservatory and promenade, and seats and plants were arranged on all the available space. The underneath part was used for the stables, coach-houses, &c., on the western side; and a grand staircase to the house on the eastern front formed the principal entrance to the villa. The sides of the entrance just named, were adorned with plants in tubs and pots. From the conservatory floor a magnificent view was obtained of the country for many miles round. The roof of the Pavilion is supported upon handsome stone columns, and the sides are all open. When we visited it, it happened to be the good King's birthday, and on that occasion a grand fête is always given at Canstatt. Amongst all kinds of fun and amusement, horticulture was not forgotten. Prizes were given for fruits and vegetables; and independent of this there was a grand architectural façade at the entrance to the ground, designed by the King's architect, and covered with evergreens, fruits, vegetables, and flowers. Lines of Apples, Grapes, Carrots, Turnips, and similar productions might be seen, nearly 200 feet in length, and very artistically arranged; and vases placed on the top of the façade were filled with fruit and flowers. In the whole of this work care was taken to render it worthy of the event which it was intended to celebrate. This could all be seen from the Pavilion, and produced an impression not soon forgotten.

On the south side of the villa—well protected on three sides and open only to the Palace—is the English flower garden, the plans for which, we were informed, were prepared in England. It is nearly square, with a covered way down the centre; this was formed of open brick work, about 3 feet high, and from this, brick columns were carried up at intervals, about 7 feet high, and surmounted by strong wooden lattice-work, and the whole was covered with Vines, yielding agreeable shade and abundance of rich Grapes. The flower beds were well arranged and filled with flowers, and upon the whole the garden in question was worthy of the name it bore. At the end of this, separated by a fence, was a piece of ornamental water, in the form of a half-moon, well stocked with various kinds of water fowl.

Passing under the Pavilion by the principal entrance we came out on the north side of the Palace, and proceeded down the avenue previously alluded to; at the bottom is a round basin of water with a single jet in the centre. Close to this is the Pinetum, where we found good examples of some of the most hardy of the Coniferæ, including Wellingtonia gigantea, Abies Pinsapo, Douglasii and Nordmanniana, and some of the

hardy kinds of Cupressus, &c. In front of the Pinetum is the conservatory, a square building with semicircular wings; this was undergoing repair at the time of our visit, but we could see by the serpentine form of the central pathway that the plants were to be arranged in dense masses on each side. In Germany fine plants do not appear to be a desideratum, but a number of small thin plants, so that by placing them closely together a compact mass of green foliage may be obtained. This appears to be the prevailing mode of setting off or arranging conservatories both here and all through South Germany.

A circuitous path to the left leads to the kitchen garden. This is a large piece of ground on the slope of a hill facing south-west. There are no walls around it, but it is sheltered by large trees on the north side. At the top of this garden are numbers of greenhouses and pits for the propagation and cultivation of plants for the conservatories. Azaleas and Camellias are grown to a large extent, together with a great number of Australian and other greenhouse plants. There were no Pines or other fruit cultivated under glass, the Princes of Germany appearing to be well satisfied with what can be produced naturally.

There was a collection of very handsome pyramid Pear trees planted in long lines by the sides of the walks; also Apple trees and other hardy fruits, and the garden was well stocked with vegetables of all kinds. Altogether this proved to be a most interesting place, the grounds being well wooded, nicely arranged, and well kept.

Miscellaneous.

Royal Horticultural Society.—The days for the Flower Shows of the ensuing season, are fixed as follows, viz:—A Hyacinth Show on 9th March; a Camellia Show on 30th March; an Azalea and Early Rose Show on 20th April; the First Great Show on 1st June; the Great Rose Show on 29th June; the Second Great Show on 6th July; a Strawberry Fête on 13th July; an International Fruit Show in the third week of October. With respect to all, except the Spring Shows, the Council propose to open each for two days—the first day to be considered as a Fellows' day, the second day for the general public. Fellows only will be admitted at one o'clock; at two o'clock, they may introduce personally any number of their friends, whom they will have the new privileges of personally introducing on the reduced payment of half-a-crown. At three o'clock the general public will be admitted by tickets, on the usual payment of 7*s.*, or by tickets purchased previous to the day, price 5*s.* The second day of the Show is intended more especially for the admission of the general public. The charge will be one shilling, and the Council propose that one-fourth of the receipts on the shilling day shall be divided among the exhibitors in proportion to the space which they occupy. The Council also propose to give to those who declare their intention of exhibiting, one month before the Show, the privilege of purchasing tickets for the shilling days at the rate of 30 for 1*l.* With regard to the Spring Shows, the prices of admission will be 1*s.* to the friends of Fellows personally introduced, and 2*s.* 6*d.* to the general public. The hours of admission will be the same as at the Great Shows. The Council propose to hold a Strawberry Fête on the 13th of July. At this show the Council will award three grades of honorary certificates. Out of the receipts for admission, one-fourth will be allotted to the gainers of the several certificates, in proportion to their grade of honour, and one fourth among the whole of the exhibitors, in proportion to the space they occupy. These receipts will be calculated as well on the first or Fellows' day as on the public day. The Council propose to make an agreement by which those who may choose to pay for the privilege may be allowed to taste the fruit at the termination of the day. An International Fruit Show will take place during the third week in October. On the first day it will be open to Fellows and their friends personally introduced, upon payment of 1*s.*, and to the public on payment of 2*s.* 6*d.* During the remainder of the week the Show will be open to the public on payment of 1*s.* Out of the receipts for admission, one-fourth will be allotted to the gainers of the several certificates, in proportion to their grade of honour, and one-fourth among the whole of the exhibitors, in proportion to the space they occupy. These receipts will be calculated as well on the Fellows' day as on the following or public days.

Effects of Deadly Nightshade.—In the month of September we saw a magnificent specimen of the Deadly Nightshade, Atropa Belladonna, growing in a chalk dell in Hertfordshire, near Wheathampstead. It formed a splendid bush, spreading out on all sides, the stems five or six feet long, and the berries quite as large as small Damsons. Shortly afterwards the plant was visited by a young lady, accompanied by a gentleman, who cut a branch, which she held while he cut some more, and then walked away with the branch in her hand. In a few minutes she felt uneasy, and afterwards was seized with violent headache, giddiness, and nausea. These symptoms continued for the rest of the day, through the night, and through the following day, when her eyes were very heavy, and she found herself unable to walk on account of the giddiness. On the third day the headache was better, but pain in the side had come on, and considerable debility. Six days after the first attack the headache and sickness began to return, but were removed by a little brandy and water. The pain in the side did not cease till some days later. These facts indicate the great caution that should be used in dealing with this remarkable poison, to the influence of which some constitutions are peculiarly sensitive. *Intellectual Observer.*

Calendar of Operations.

(*For the ensuing week.*)

THE pleasure to be derived from a garden at this season depends much upon neatness and cleanliness in every department. Lawns should be carefully looked over and cleared of dead spray from trees, worm-casts, &c. Walks should be freed from weeds, and neatly rolled—operations which in the majority of cases require attention rather than much additional labour. In short, the gardener will do well to go over the grounds under his charge with the determination of finding fault with himself rather than with his assistants; he will often discover that this is productive of good, and much more satisfactory than if the fault-finding emanated from his employers.

FLOWER GARDEN AND PLANT HOUSES.

The principal work in plant houses will consist in keeping them and their inmates scrupulously clean. Moderate fires, and frequent washing of stove plants, will be necessary. Conservatories, and indeed all show houses, should now be gay with forced plants, of which a supply must be kept up by means of successions introduced into heat as often as may be necessary.

AURICULAS.—While the weather is mild these should have as much air as possible; remove dead leaves, and keep the surface of the pots free from moss. Water should be given very sparingly.

AZALEAS.—If an early display of flowers is required, a few of the most forward plants should be placed where they can have a temperature of from 50° to 55°. Water carefully when necessary, and in mild weather ventilate freely.

BEDDING PLANTS.—Little, if any, water will be required by these at present; when necessary, give it on the forenoons of fine days, and leave the lights of the pits off for an hour or two afterwards. Give air on all favourable opportunities; but be careful to close up early in the afternoon, and when frosty cover well up at night.

CAMELLIAS.—Many of the earliest will now be in flower. Water must be liberally supplied, and air given tolerably freely during fine weather.

CINERARIAS.—These require careful attention in the way of watering. Do not place them so close together as to touch one another, and be sure to keep them secure from frost.

CHINESE PRIMROSES.—Forward plants in bloom should be introduced to the greenhouse or conservatory, and others brought on to succeed them as their beauty fades. Do not let them suffer from want of water.

PELARGONIUMS.—Finish repotting all plants that require it as early as possible, and keep them free from dead leaves and insects. Specimens intended for flowering in May should be placed as near the glass as possible; let the temperature at night be about 50°. That for the later blooming plants should not be above 40°.

ROSES.—Plants for early flowering should have a brisk steady bottom heat, and a moist growing atmosphere. Keep down the Rose maggot by means of hand picking, and green fly by fumigation.

VIOLETS.—Both Neapolitan and Russian varieties will now be in flower, the latter out of doors. Let the pits in which the Neapolitan is grown, have plenty of air while the weather is mild.

FORCING GARDEN.

Little can be recommended under this head at present beyond attention to the instructions subjoined. During open weather like the present, fire heat should be used with as much moderation as possible. Keep an eye to constant successions of crops, which if well managed, will require both care and forethought.

ASPARAGUS.—Make a bed to succeed that in use last month. On fine days draw off the lights to allow the heads to acquire their natural flavour and colour.

CHERRIES.—Gentle fires may now be lighted to expel damp previous to forcing. Let the first crop be taken from trees in pots.

CUCUMBERS.—If manure is used to supply bottom-heat, sweeten it by means of frequent turnings, and by mixing tree leaves with it, and make every preparation for the construction of a bed soon. Keep down thrips and red spider on those in houses heated with hot water, by maintaining a moist healthy atmosphere.

FIGS.—Trees in pots may now be started, treating them as recommended for Cherries.

MUSHROOMS.—Prepare horse-droppings for beds to succeed such as will soon become exhausted.

PEACHES.—Give abundance of air during the day, keeping gentle fires at the same time, so that during the present mild weather little fire-heat may be required at night.

PINES.—Plants intended for fruiting during the summer must now have careful attention. Let them have a steady earth temperature, and a top heat of about 65° at night. It is not too early to excite the general stock, which, however, must not be allowed to become drawn.

VINES.—See that there is always a steady warmth in the covering on the outside borders of early houses. Attend to the stopping and tying in of young shoots as they advance in growth. Let Hamburghs have a night temperature of about 65°. Muscats should be kept 5° or 6° higher.

HARDY FRUIT AND KITCHEN GARDEN.

While the weather keeps mild, holes or pits may be got ready for the reception of new fruit trees; where old trees too are not growing well, a portion of the soil might be carefully removed from their roots and replaced by better material. All unoccupied ground should be rough dug, trenched, or ridged, regulating these operations according to the nature of the soil and the character of preceding and contemplated future crops.

APPLES.—Prune these, and let all trees infested with insects have a thorough cleaning. Over-luxuriant varieties may now be root-pruned.

ARTICHOKES.—If not already secured from frost, means of protection should not be longer delayed. Tie up the stems with straw bands, and earth up with soil; or, which is better, mulch with litter and leaves close to the stems and as far as the roots extend.

BEANS.—Plant Early Mazagan in a warm situation.

CARDOONS.—Protect these from frost by means of straw bands.

CAULIFLOWERS.—Remove dead leaves, keep down slugs, and should severe weather set in, see that the plants are properly protected.

CELERY.—Sow a little for an early crop. If bad weather should occur, cover that in use with straw or fern.

ENDIVE.—If not already done, tie up to blanch on fine dry days; protect also from hard frost.

LETTUCE.—Protect in very bad weather, but expose freely on all other occasions. Sow Paris Cos for an early crop.

PEARS.—Prune and nail the trees on walls while the weather favours the performance of such operations. Very robust-growing trees may now be root-pruned.

PEAS.—Sow Daniel O'Rourke or Sangster's No. 1 in a warm situation; draw a little earth to the stems of those already up, and protect with Fir branches or dry Fern in severe weather.

POTATOS.—Plant in frames on a bed of leaves, for an early crop.

RHUBARB.—Continue to introduce into warmth successions of Rhubarb, as that in use becomes worn out.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending Dec. 30, 1863, as observed at the Horticultural Garden

Dec.	Moon's Age.	Barometer.		Temperature. Of the Air.			Of the Earth		Wind	Rain
		Max.	Min.	Max.	Min.	Mean	1 foot deep.	2 feet deep.		
Thurs. 24	14	30.167	30.121	49	39	44.0	45	46	W.	
Friday 25	○	30.100	30.065	40	37	41.5	46	46	W.	
Satur 26	16	29.984	29.786	52	39	45.5	46	46	S W.	
Sunday 27	17	30.135	29.894	46	21	33.5	47	46½	W.	
Mon. 28	18	30.263	29.965	44	35	39.5	45½	46½	N.	
Tues. 29	19	29.929	29.879	50	35	42.5	46	46½	W.	
Wed. 30	20	30.088	29.973	42	24	33.0	46	46	N.E.	
Average.		30.052	29.954	46.1	31.4	39.9	46.2	46.2		

Dec. 24—Light clouds; exceedingly fine; very fine at night.
— 25—Fine; very fine, with sun; unusually fine.
— 26—Uniformly overcast; densely clouded, slight rain at night.
— 27—Fine; very fine; frost at night.
— 28—Overcast; a few flakes of snow in forenoon; overcast.
— 29—Densely overcast; exceedingly fine.
— 30—Fine; very fine throughout; changeable; frosty.
Mean temperature of the week 3 deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Jan. 9, 1864.

January.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 3 .	43 4	31 1	37.1	19	0.56 in.	1	3	6	1	6	11	4	1
Mon. 4..	42.6	31.5	37.0	17	0.86	4	7	5	5	2	10	3	1
Tues. 5..	41.8	30.4	36 1	14	0.46	4	7	4	4	4	10	4	1
Wed. 6..	41.5	29 5	35.0	14	0.33	4	7	4	3	5	10	3	1
Thurs. 7..	41.6	29.0	35.3	15	0.34	3	5	5	3	2	8	7	1
Friday 8..	40.9	30.1	35.5	11	0.26	4	4	7	4	1	14	2	1
Satur. 9..	41.2	31.1	36.1	14	0.71	1	7	4	3	5	11	6	1

The highest temperature during the above period occurred on the 5th, 1844—therm. 54 deg.; and the lowest on the 9th, 1841—therm. 6 deg.

Notices to Correspondents.

BOOKS: *Anon.* We do not know of such a book. Such instructions must be communicated personally and not by means of books.

CHERIMOYER *M.* Pooh!

NAMES OF PLANTS: *Corsham.* 1. No doubt a very bad specimen of Dyschoriste littoralis: 2. Clerodendron infortunatum, unskilfully dried. It is almost impossible to name dried fragments unless well selected, and neatly pressed flat.—*J. K.* No doubt a weak specimen of Grevillea rosmarinifolia.—*St. Omer.* Certainly not a Cherimoyer, nor any kind of Anona. We do not recognise the leaf.—*J Mc I.* The leaf belongs to the true Peruvian Cherimoyer.

PINE-APPLES: *St. Omer.* Next week

R. GARDEN, KEW: *Jernigham.* If you wish to see how a great national garden *should* be managed, we advise you to visit Kew *now*, especially if, as we believe, you knew it forty years ago.

RHODODENDRONS: *Keswick.* They doubtless grow too fast, forming leaves instead of flowers. Are you unable to give them peat? Try lifting them and replacing them where they are.

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2 to 3 cwt. per acre to be harrowed into the land before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents; also
SUPERPHOSPHATE of LIME £6 6
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Every description of Nursery Products on Sale for the Trade.
Handsome specimens of Araucaria imbricata, 12 to 14 feet; Cryptomeria japonica, 8 to 10 feet; Fitzroya patagonica, 6 to 7 feet; Libocedrus chiliensis, 6 to 7 feet; Picea Pinsapo, 12 feet; Thujopsis borealis, 7 to 8 feet; Wellingtonia gigantea, 7 to 8 feet, &c. Prices and all other particulars on application.
W. SHORT, Reigate, Surrey.

To Florists and Nurserymen.

HY. PERKINS calls the attention of the above to his large stock of TOBACCO PAPER and CLOTHS, at 10*d.* per lb.; and superior ROLL PAPER, at 1*s.* per lb. Warranted free from adulteration, having taken every pains to secure the same.
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106, Leadenhall Street, E.C.

Chemical Analyses.

DR. AUGUSTUS VOELCKER, F.C.S., CONSULTING CHEMIST to the Royal Agricultural Society of England, has REMOVED his LABORATORY from Cirencester to 191, LEADENHALL STREET, LONDON, E.C., where he receives a few Private Pupils for the Practical Study of Analytical and Agricultural Chemistry.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.
AUTUMN SESSION, 1863.
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Council.
The Right Hon. THE EARL BATHURST.
The Right Hon. THE EARL DUCIE.
The Hon. WILLIAM BATHURST.
The Right Hon. T. H. SOTHERON ESTCOURT, M.P.
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CHEMISTRY.
ARTHUR H. CHURCH, B.A., F.C.S., Smith's Exhibitioner, Lincoln College, Oxon.
ASSISTANT TO CHEMICAL PROFESSOR.
R. WARINGTON, Jun., F.C.S.
BOTANY.—JOHN BAYLDON, M.B. Lond. B. Sc.
VETERINARY SURGERY.—A. J. MURRAY, M.R.C.V.S.
MATHEMATICS AND SURVEYING.
W. MEREDITH LANE, B.A., Scholar of Trin. Coll. Camb.
DRAWING.—JAMES MILLER.
* These Gentlemen will be in temporary residence.
Arrangements have been made for the delivery of Special Lectures by the following Gentlemen, who have kindly offered their services:—
AGRICULTURE.
J. ALGERNON CLARKE, of Long Sutton, Lincolnshire—Lecture on Leicester and Long-Woolled Sheep.
HEWITT DAVIS, M.R.I., Author of Agricultural Essays—Lecture on the Injury and Waste of Corn from too thickly seeding.
CAPTAIN TANNER DAVY, Editor of the Devon Herd Book—Lecture on the History of the Devon Breed.
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The Agricultural Gazette.

SATURDAY, JANUARY 2, 1864.

ANOTHER year has passed away: and the 'New' Year is come! From a hundred journals, like the chimes from a hundred belfries, this same tale is told out to-day, in all the various tones and tunes; such as you hear in a great city when everything else is silent, but the many-tongued announcement of the hour. It is a thought-compelling task to listen to the busy self-assertion of each brazen throat that takes possession of the atmosphere of that little circle where it stands the centre, only broken in upon by some deep distant note whose commanding intervals form a fundamental bass to all the petty rivals harping at once upon the same strain, and venting all their powers to give it special significance to their special audience.

Yet perhaps at no other striking of the hour is there, in the busy throng of human life, so complete and involuntary a convergence of all minds upon one thought, one attitude of reflection, as at that which with one stroke declares a death and a birth,—the departure of the old year, and the commencement of the New. At this moment, and to this extent, we all stand concerned alike: "Time is the stuff that life is made of," let the life and its labours, and its concerns, be what they may. What use have we made of the Past,—how much remains of the Future—occurs, as the twin-question of the hour to each;—the hour poised between them both—the hour of honest review, and of anxious forecaste. It is soon gone; and we are off again each upon our own track; and the year we were just now so busy with, falls off into

the wake which blends it in outline less and less distinguishable from those that have preceded it.

But there is one class to which Time is more than a thing of mere artificial measurement. To the agriculturist, the year is not a mere extension of days and hours: to him the year stands in the substantive relation of 'seasons:' not the mere space he works in, but a veritable portion of the work itself. No fashion can change it, or the duties it brings; and no after-thought or resolution can redeem it. To him the history of the past year is a routine that every year must in its most important features present alike. The march of invention cannot alter it. No new 'line of Rail' can obliterate the beaten road that those before have travelled, no Electric Telegraph shorten the process or hasten the accomplishment, and the end. As it was in the beginning it must in the main continue; and that, exactly because the seasons are themselves its partners and co-agents, and it "is in league with the very stones of the field."

But have we nothing then to report of the Past, or to anticipate of the Coming year, beyond what every revolution of the Earth must bring, of uniformity and sameness? There are not a few who do thus think of the Farmer's calling, and from the shallow judgment of appearance, would, and often do so characterize it. Nor is there wanting the semblance of ground for an opinion so superficial. Yet nothing can be more derogatory. The farmer has to work in partnership with Nature: and all who know anything of her, know that while her law is inflexible Uniformity, her life is incessant Variety. At once faithful, and capricious, she never may be doubted; yet she never can be learnt.

And therefore it is, for one important reason at least, that Farming presents such an inexplicable variety of appearances and results. One man is ruined, and another man gets rich, on the same land, at the same rent. Like Matrimony, it is the conjunction (often *dis*junctive enough!) of two forces, acting and reacting for good or evil on each other,—Man and Nature,—and the shrewdest engineer that ever lived cannot calculate the quotient, or reduce it to equation or to formula.

And, truth to say, this fact has been a good deal overlooked in the discussions we have lately heard, and do periodically hear, upon the subject of Farm Leases. A lease is good for this much; it will undoubtedly compel the Landlord to keep the Tenant: but it will not compel the tenant to keep the farm, nor the Farm *to keep him*. Whereas, that curious Running-noose, called a yearly holding, with a 'good understanding' often fits into the mouth of the composite problem we have named, with all the flexile handiness of a Snaffle, where the Curb does sometimes mischief. A shake of the head, or even a 'playful' kick now and then is as nothing compared with that everlasting rear up on the hind legs, that threatening 'vertical movement' which suggests so strikingly a backward—but emphatically negatives a *forward* action; a very noted indicator of the tight curb, and the hard unsympathising hand.

Perhaps this is one of those 'Anomalies of agriculture,' of which it would not be difficult to furnish a whole catalogue, while we must here be content with taking but a sketch. It may be, indeed, that that light floating buoy-like phenomenon, the 'yearly holding' is moored deeper in English soil than those are aware whose eye does not trace, throughout, the links that connect its elastic surface play with the solid anchorage beneath. Looked at as a self-established *fact*, with an eye privileged by the crowsfoot gathered round it, to know what that implies, it may perhaps be taken as the symbol and expression of a whole system of cause and effect, of a certain existing condition and constitution of rural *life*—as distinguished from 'rural *economy*' presented by no other country but England,—not by Ireland—not even by Scotland. It may imply land so dear, and as a mere investment so fruitless that no one would buy it but those rich enough to be content with the lowest return in money that Capital can submit to,—looking, as it is sure to do, for something *else*, to make up the difference. A Lease for a good round term of years would bring perhaps a higher rent—in Scotland it notoriously does so,—and possibly in some cases a greater produce from the soil. But even the political economist is shrewd enough to recognise in a resident English ownership wealthy enough to be *able* to retain a sort of sleeping interest that might, by a long lease, be parted with for money value, some compensating advantages which he would describe under the title 'reserve capital.'

Wasteful at first sight, to the eye that sees waste in a park of deer, a gallery of costly paintings, and the other hundred forms that only the highest forms of capital assume, it is yet all reducible under the same rule that applies in succession to each condition of life above the lowest, viz., that it retains in possession something that might be parted with for money value. But, as we have said, the whole question as it stands in England, may be classed as an anomaly. And if anything be wanting to complete, or even add to it, it lies in the fact, which non-agricultural writers refuse to be persuaded of, that the defect, we might almost say decay of leases in English farm-tenancy, lies less at the door of those who might give than of those who might receive them.

But the subjects that have cropped up for special, and repeated discussion during the past year, and fallen flat upon their faces, refusing to be comforted and settled, are many and important. Who that is familiar with the noble history and triumphs of the Steam-engine can look without a sense of painful surprise and incredulity at the present aspect of steam-cultivation? Is it real; or spurious? Is it a fact? or a fallacy? If it be a fact, and steam-cultivation in its intended and ultimate form really exists; then it is clearly the inventor of the *Steel-rope* who is entitled to the discovery, and true master of the situation. Are we prepared to admit this? Is the future Earth to be really subdued by *steel ropes?* For, as to a framed multiple of the plough at one end of the tether, and a steam engine at the other, a child at a Christmas pantomime would laugh at the mockery of the clown who "putting this, and that, together," and a rope between them, should shout his mimic *Eureka!* and declare that he had solved the GREAT PROBLEM.

And who, again, can explain the phenomenon, almost unique in economic science, of an undisputed—nay a cruel deficiency of Labourers' Cottages, and that it will not 'pay' to build them? A widely-felt and acknowledged 'Demand' on the one side, and on the other, an appeal not to your self-interest and common sense, but to your charity for the 'Supply!' What secret law is operating there, far, far down beneath what meets the eye, avenging error latent at the source,—hidden near the very mainspring—by this absurd cross-pointing of the hands upon the dial? Again, what pen, or brain shall fathom the mystery involved in the question, and the history, of agricultural Education? Sing, O Muse! the direful wrath poured out, like anything but oil, midnight or diurnal, at the Royal Agricultural College of Cirencester, and the many distinguished souls untimely sent to Hades, in that fierce encounter: and the tender interest thereanent of another Royal Agricultural body in the plenitude of its fostering care for the education of the Farmer, one of the expressed objects for which it took its Charter. And, last not least, look at the recent letters in the *Times* imploring anybody to give somebody some sort of information about Grass-farming, now that free trade in Corn is just beginning to be believed in, and that Rents cannot be paid by Wheat alone:—and, if more than this be wanted, look at the Replies!

If ever the History of Agriculture, the only history that remains unwritten, should be seriously taken in hand, by that coming man, the 'intelligent New Zealander,' the poor year 1863 just defunct will figure in the long chronology of coming time as the year of Babel mystery and dispersion of tongues: everybody asking questions which nobody can answer or understand; large meetings held, and resolutions moved, by which nothing is met, and nothing finally resolved; an almost unexampled good harvest unaccompanied by profit, and followed by a tight money market on a Bank rate of 8, and threatening 9 per cent.! It would puzzle the Cumæan Sybil to write its history in nine books; much more epitomise it in a page.

But with a new year we have entered upon new hopes. "The horse's death," we are told, "is the dog's life." The questions which have baffled the year 1863, remain as food for its young successor to discuss and disentangle. Let us look upon the very grappling with them as a signal of encouragement. Hope is the privilege of youth; and is said to have remained behind, when all the plagues had been opened upon the world to torture with new cares the practical minds of men.

It is allowable, for instance, to hope that the time may come when either by a European Congress of reigning agricultural authorities, or some other imperial measure, 'the best form of Farm-Agreement' may be finally decided on, and some solution arrived at of the problem of persuading English landowners to grant Leases to tenants who would rather be without them: of making a 20-horse power engine glorify the name of STEAM by doing the work of 20 horses quicker and cheaper than they can do it themselves, and breaking up the land without breaking down upon it: of building labourers' cottages "with three bedrooms," to profit, like other human dwellings, and fitted with some patent apparatus to prevent the bees still settling together as before, and letting the 'spare' hives to other swarms: of applying a Royal Agricultural College to the education of the agricultural class it was built for, and inducing a Royal Agricultural Society to take a real interest in that branch of its objects, and try a practical experiment in aid of the Institution that has tried many a scientific one in its behoof, with good effect: of persuading model example farms to set a modest example of paying rent, and keeping out of debt: of learning how to make Grass-land *pay*, when meat and wool and dairy-stuff, are selling at extravagant prices; and of examining the principle of laying nothing out upon it, because it yields spontaneous crops without the cost of ploughing or sowing, and makes the greatest returns for the least expense: and lastly, of exhuming and converting Agricultural Journals from the charnel-house of dry carcases and dead bones, into the cheerful daylight of current topics of agricultural life and practice and events; and when so converted, persuading agriculturists to buy them; and to read them.

Perhaps, to some, our programme may seem heavy, for the coming year: it may contain some few questions that would puzzle an ŒDIPUS, and one or two labours that might try a HERCULES. But it is the recognised privilege of Agriculture to live by promise rather than calculation: and to a careful and a hopeful observer, it is a thought of no trifling significance that the most ancient of all arts should even to this our day present the greatest number of questions unanswered, of problems still unsolved, and of duties, both to the soil and those who labour on it, unaccomplished.

—— AT a recent meeting of the Faversham Highway Board it was moved that the use of locomotive engines on the public highways is dangerous, and that therefore an application be made to the Home Secretary to prohibit their use within that district. It appeared in the course of the discussion that steam traction engines are extensively used in Kent, Messrs. AVELING & PORTER of Rochester having made upwards of 100 of them. Many of the owners of such engines attended the meeting to protest against the suicidal course proposed to be adopted, and on a division the motion was fortunately lost—a very large majority voting against it.

—— The value of Gorse as winter food for dairy cattle has been lately discussed in the columns of the *Times* newspaper. One writer asserts that a few acres of it enable him nearly to dispense with hay, and thus to keep a much larger head of cattle on the same extent of land. Another states, 3½ bushels of crushed Gorse daily, with about 4 or 5 lbs. of hay, and ¼ cwt. of Swedes, are good daily allowance per cow. Others meet the difficulty of preparing the provender for food, and describe the cultivation of the plant. Twenty lbs. of seed sown per acre will yield a crop in the autumn and winter of the following year. The shoots are cut in a chaff cutter and crushed in an ordinary cyder mill, or they are smashed and cut at one operation by machines for the purpose. Messrs. BARRETT & EXALL, of Reading, have long made one. Messrs. CASSARD & TERRALES of Nantes, Loire Inférieure, also make a grinding machine for Gorse, much used in Brittany. The best mode of cultivating the plant is said to be in rows sown 20 inches apart, every alternate row being cut each year—so that two years growth is allowed.

—— A discussion on the best method of laying tillage land in autumn open to the influence of the coming winter's frosts was lately quoted by us from the *Times*. Mr. WRAY, of Tunbridge Wells, denied the economy of steam cultivation; Mr. SMITH, of Woolston, both illustrated it and proved it; Mr. MILWARD asserted the efficiency of cultivation by horse-power; and Messrs. HOWARD recommended that the land should be broken up by the steam-cultivator or grubber as soon after harvest as possible, and in November or even later, with the steam-plough or by horses,

crossed and ridged up for the winter. Messrs. HOWARD also declared that the plan pursued and advocated by Mr. SMITH has these great drawbacks: the benefits of the action of the autumn sun and air in destroying weeds, and the still greater benefits arising from the thorough aëration of the soil are entirely lost; and further on large farms it would be most unwise to postpone the work to so late a period as Mr. SMITH recommends.

To this Mr. SMITH replies:—"I have carefully examined every letter I have ever written on the subject of steam cultivation and nowhere have I found any such recommendation as Mr. HOWARD names." He then quotes a letter written in 1858, in which he had declared September, October, and March to be the best months for steam cultivation. It appears to us that so far as the literature of the subject is concerned, Mr. SMITH's reply was satisfactory and conclusive; and had it not been for the tone of a concluding remark, wherein he appears to charge Messrs. HOWARD with untruthfulness, the discussion might be left unnoticed. This imputation is, however, of course one under which no man can silently remain, and Messrs. HOWARD have accordingly called our attention to the fact that a course of action is "advocated and recommended" much more by the practice than by the writings of its advocate, and that it was to the Woolston practice of leaving the stubbles untouched until after Wheat sowing, sometimes even as late as December, and then breaking them up with the combined ridging and subsoil plough that their strictures referred. Lest the public should be misled on this subject, they had written a temperate letter to the *Times*, commencing with a full recognition of Mr. SMITH's services, but pointing out a more excellent way than that which he had recommended.

SOME months ago an article in the *Times* on the value of Vegetable Mould, and the dependence of our continued fertility upon its maintenance, attracted a good deal of attention. That communication was written by our occasional correspondent, Mr. PATRICK MATTHEW, of Gourdie Hill, Errol, N.B. And we understand that no one was more astonished than himself at the publication of what was originally written as a private letter to a friend.

The article in question was referred to by Professor DAUBENY in a lecture recently delivered by him before the Oxford Farmers' Club, to which publication was given in this Journal; and it was mentioned that this letter in the *Times* had "elicited from Baron LIEBIG a reply in which, under a lively sense of the injury done to society by the dissemination of such errors, he seems to treat almost as a moral delinquency the revival of an hypothesis, which he considers to have been so long consigned to oblivion." This reply has not hitherto been published. Baron LIEBIG had indeed left it within Professor DAUBENY's discretion to publish it or not as he pleased; but it remained unpublished. An inquiry from Mr. MATTHEW as to the character of LIEBIG's reply thus referred to, has elicited the fact that it is no other than a letter addressed by LIEBIG to himself, not in reply to the *Times*' article, but in reply to a letter written when at Shenefeld, near Altona, Holstein, on the 23rd of June, 1863.

Mr. MATTHEW permits us to publish this correspondence, which will be read with interest as indicating the personal feeling of the great German chemist regarding the reception of his doctrines as an agricultural chemist by the agriculturists in this country.

Mr. MATTHEW wrote as follows:—

June 23, 1863.

DEAR SIR,—In the hope of meeting you at the International Show at Hamburg I came over from Scotland, but I am informed that you are not expected to be there. This will be a disappointment to me, as I had hopes of some profitable discussion on the subject of the vegetable mould. You the foremost that has yet appeared in vital chemistry, I might almost say the parent—and myself with the experience of 57 years in conducting agriculture in the Carse of Gowrie, once regarded the garden of Scotland. Being entirely unknown to you I extract the following. * * * (Then follow some references). I enclose a slip the postscript of a letter I had written to my friend, who without my knowledge or permission forwarded it to the *Times* for publication. (Here follows a note regarding the error of the republisher of my postscript.) * * * I have still hopes your presence will give *éclat* to the meeting. Some may indeed regard it a breach of patriotism for Germany's most approved son to be absent.

I am, Dear sir

Your obedient servant,

PATRICK MATTHEW.

The following is Baron LIEBIG's reply:—

July 10, 1863.

SIR,—I should hardly have made up my mind to reply to your letter of June 23, were it not written by a man whose standing in society is such that his words necessarily exercise a certain influence over others. Your article on "The Exhaustion of Vegetable Mould" caused me the greatest astonishment; and I am utterly at a loss to comprehend how, in the present time and state of agriculture, it is possible for any one to express such opinions publicly as are to be found in that paper. In the time in which we live, when the population of every country is yearly increasing, it is of the greatest importance that agriculturists should take the right road, that they should choose that one which will make it possible for them to satisfy the wants of the increasing number to be fed, by obtaining from their fields an increased amount of food. A series of laborious investigations on the conditions which govern the life of plants and animals, occasioned me in the year 1840 to employ in agriculture the experience I had thus gained; and during the last 23 years I have endeavoured, to the very utmost of my power, to make the agriculturist intimately acquainted with the natural laws which govern the production of food for men and animals—laws which he must know, if he has any wish to improve his farm management.

That in giving my studies this direction, I was not impelled by a desire for vain honours, or in order to gain the favour of the agriculturists, will, I think, be clear to you, when I say that I am one of the six foreign members of the Academy of France, foreign member of the Royal Society, as well as, without exception, of all the Academies of Europe; and I would beg you not to lose sight of the fact, that those academies showed me such honour not *because* I had occupied myself with agriculture, but *notwithstanding* that I had done so. Now, when a man has obtained the good opinions of the most distinguished individuals of all countries, as recognition of what he has done in science, this is certainly the highest fame it is possible for him to possess, and you may grant that, for such a one, the applause of a thoroughly ignorant crowd, as that of agriculturists for example, must be absolutely indifferent to him. You may suppose too, that when this man strenuously endeavours to make such a crowd view things rightly, he does it not for their individual sakes, but in order to ward off future dearth and like imminent dangers which threaten society at large. After a struggle of 23 years, I have succeeded in Germany and France in getting those simple natural laws acknowledged, taught by science in reference to agriculture. The success obtained in Saxony, Prussia, Austria, and Bavaria by carrying out my principles in the right way, have once and for ever completely set aside the former theory which asserted vegetable mould to be the chief cause of fertility. On this point there exists not the slightest dissidence. You may then imagine the impression which your *Times* article has produced upon me. I see by it that you endeavour to uphold and disseminate a theory which long ago has been completely set aside by the most positive facts and by repeated experience. By contradicting opinions which I never had, you show, by that article, that you have read none of my works, or, if you have done so, that you did not understand them. I esteem it a great calamity when men like yourself are the opponents of my doctrines; men who, if they would only give themselves the trouble to make themselves acquainted with them, would become warm supporters of them. And, further, I consider it a sin against God and humanity, when such men in questions that so intimately concern the future of the human race, in so flippant a manner arrogate to themselves an opinion about matters which they do not understand, and hinder that very progress which, by their position, they are called upon to promote.—I have the honour, &c. J. V. LIEBIG.

AYRSHIRE AGRICULTURE.

A GREAT part of the soil of Ayrshire is of a heavy character, and the moist climate of the western coast makes it unfit for Turnip cropping unless it be drained. Previous to the introduction of thorough draining the growth of Turnips on anything like an extensive scale was confined to the porous soils near the sea coast, to river side holms, and to trap, sandstone, and other light soils in various parts of the county. There was a considerable extent of bare fallow on land not more than 300 feet above the level of the sea, and therefore suitable, as regards climate, for the growth of Wheat. From land above the Wheat line, two Oat crops were taken in succession; Rye-grass and Clover seeds were sown with the second; a crop of hay was generally taken; and the land lay in Grass for two, three, or four years.

From 1830 to 1840 the draining generally was too shallow to be very effective; but a considerable extent of land was drained by the late Duke of Portland and other proprietors who followed his spirited example. About 1840 the advantages of drains not less than 2½ feet deep began to be admitted by intelligent farmers. The practice formerly had been to make them from 18 to 24 inches deep. The St. Quivox Farmers' Club was instituted in 1837, chiefly through the influence of the late Mr. Campbell, of Craigie, a country gentleman, who united scholarly qualifications with a taste for farming, and a zeal for its improvement which almost amounted to enthusiasm. The Club meetings were held in Ayr on market days, and discussions took place as in Farmers' Clubs at present. The deep drainers of the Club were in a small minority at first, but they gradually gained ground, though several years elapsed before the 2-feet drains were generally acknowledged to be too shallow. The Government grant for draining in 1846 gave a great impulse to agricultural improvement. Draining became general, and, under the superintendence of the Government surveyors, the pipes were laid to greater depths. But a mistake of another kind was made—the drains were put too far apart; instead of 15 to 20 feet, on heavy land, they were widened to 30 feet. A great extent of land in Ayrshire is thus little more than half drained; after lying two years in Grass, Rushes spring up as formerly. With the extension of drainage, guano and dissolved bones came into general use, and farmers were enabled to grow good green crops. A large proportion of the newly-drained land, when it was levelled, and pulverised for the first time, had something of the vigour of virgin soil. The produce of the Cereals was greatly increased, and unfortunately farmers were led to depend too much upon them. Growing good crops with light manures, they too often lost sight of the fact that a proportionate amount of well fed stock must be kept if the fertility of the soil is to be maintained. The heavier land is now growing less Grass, which is a pretty sure indication of reduced condition. Many farms of rather heavy land do not keep more cows than they did before they were drained, and the stiffest clays keep fewer. The evil has been greatly aggravated by a succession of wet, late seasons in the west of Scotland. During four successive seasons the Turnip crop has been very poor on stiff land, and the distempered soils have carried almost equally poor corn crops in the following years. With better seasons we may hope for a return of prosperity; but there is something like a settled conviction that a change of system is required for much of the land that lies above the Wheat-growing districts. With too much cropping there is a want of permanent pasture for the cows, and the proper management of meadow land has to be learned. In the best parts of the lower districts good crops continue to be grown; but in these also, though in a less degree, farmers have depended too much upon corn.

Besides fostering a spirit of inquiry and disseminating information at its meetings, the St. Quivox Farmers' Club took another way of stimulating its members to careful management. Near the beginning of harvest, meetings were held at which the practice was to proceed from farm to farm and see what the members were doing. Much good was done in this way. The prospect of so many critical eyes made farmers exert themselves in order to have well-cleaned green crops and pastures, with headlands, fences, and farm roads in good order. And, in addition to the members, the meetings were attended by intelligent farmers from other parts of the county, who could not fail to profit by such inspections, and carry the influence of the Club over a wider circle. Nor were there wanting men of eminence from a distance. The late Professors Johnston and Shier, and more recently Professor Anderson, attended those pleasant meetings, and sowed a little seed as opportunity offered on soil where it was likely to fructify. The meetings of the Club have been discontinued for ten years.

In 1835 the Highland and Agricultural Society of Scotland had a very successful show at Ayr, and the Ayrshire Agricultural Association sprang from it full grown at once, like Minerva from the brain of Jupiter. The Ayrshire Association was instituted in September, 1855, and has had a prosperous career. Like many other societies its success is mainly attributable to the services of an active and efficient secretary. It had its annual show of cattle, horses, and other farm stock in various towns till 1851, and since that time regularly in Ayr. There can be no doubt that the efforts of the Association have had a considerable influence upon the improvement of Ayrshire stock—a breed of cattle which is justly rising in estimation throughout the country for dairy purposes. Well bred stock is becoming common all over the county, and the coarser descriptions are gradually wearing out. The efforts of the Association in this direction have been seconded by local Societies which have sprung up in every part of this county during the last 15 years. Some of those Societies are already on the wane, but not before they have served a good purpose. It is marvellous how much may be done in a few years when a spirit of improvement is excited, and good breeding cows introduced into a locality where formerly every one seemed content with the old inferior stock.

The introduction of the Cheddar mode of cheese-making and its extension throughout the south-west of Scotland is one of the greatest successes which has been achieved by any provincial society. Scotland was far behind the best dairy counties of England in regard to cheese-making. Good Dunlop cheese was made on some farms, but there was no general mode followed, and the most of the cheese would have been hardly saleable in English markets. Dissatisfied with this state of things, the Highland Society from time to time offered prizes for the best imitation of Cheshire, Gloucester, or Stilton cheese. No great success attended these attempts,

though they undoubtedly tended to prepare the minds of many people for a change of practice. Twenty years ago the cheese making of Galloway was very inferior. It was much behind Ayrshire. Some intelligent dairymen, particularly Mr Robert McAdam and his brothers, turned their attention to the improvement of the Dunlop cheese in Wigtonshire, and they made a very appreciable advance. Mr. Caird, then in Baldoon also turned his attention to the improvement of cheese-making, and sent his dairyman to learn the method practised in Lancashire. Mr. Robert McAdam afterwards became "Bower" to Mr. Caird, and he introduced with much success the Cheshire mode at Baldoon. At the same time the subject was frequently discussed in Ayrshire, particularly in the columns of the *Ayr Advertiser*. A series of articles in that paper in the winter of 1853-4, one of which contained an encouraging letter from Mr. Caird, stirred up the directors of the Ayrshire Association, who sent two of their number to England with instructions to inquire and report whether any of the English modes might be adopted with advantage in Scotland. The deputation reported in favour of the Cheddar mode. It appeared to them to combine in the highest degree the important advantages which may be classed under the heads, lightness of labour, ease and simplicity of management, and high price of produce. The report of the deputation was published in August, 1854, and beginnings were at once made on farms in Ayrshire. In 1855 the Ayrshire Association brought Mr. and Mrs. Joseph Harding from Somersetshire to give instruction publicly in the various districts of the county, and the new mode took a firm hold. Mr. Robert McAdam and other Galloway makers also took it up immediately. Mr. McAdam went to Mr. Harding's farm to learn the art more fully, and in his turn he has taught a number of very successful cheese-makers. At the end of October, 1856, the Ayrshire Association held their first cheese show at Kilmarnock. It has been continued since with increasing success, and is, we believe, the most important annual cheese show in the world. Kirkcudbright has taken part in it for a number of years, and Wigtonshire and Argyle have competed at these shows. There are also classes open to English competitors. Probably one-half of the cheese in the south-west of Scotland is now made in the Cheddar mode, and the new practice is extending year by year. And the spirit of emulation has not been without its effect on the makers of Dunlop cheese, who now produce a much better article in general than could have been got from them 10 years ago.

The produce of cheese has been much enlarged within the last 20 years. I know farms where it has been doubled. These farms have been drained, and were susceptible of great improvement, from the soil being deep and porous. Over considerable districts the increase may be from 30 to 50 per cent. The increase may be ascribed to draining, green cropping, careful selection of stock, and better house feeding. On the other hand a great extent of strong land appears to be deteriorated by green-cropping. Such farms do not keep more stock, nor produce more cheese than they did before the draining and levelling of the old high ridges. The draining of itself must do good, but heavy soil is apt to become distempered by green crop husbandry in our wet climate. This is not so much the case, however, in the lower districts, where the rainfall is not so great. Where the land is adapted for grazing, the remedy would seem to be to lay part of it down for permanent pasture and meadow. There is little of the former and almost none of the latter in Ayrshire.

Large quantities of early Potatos are now grown on light land near the sea-coast of Ayrshire. The Potatos are planted in March, and are highly manured. Fair prices are generally obtained, but the following Wheat crop is not so good as after Turnips.

I can say little about the introduction of the system of distributing liquid manure by pipes which you do not know already. It is understood to have originated in conversations between the Right Hon. P. F. Kennedy, of Dunure, and the late Primrose Wm. Kennedy, Esq., of Drummellan, in 1848. Mr. P. W. Kennedy took up Myremill Farm at Martinmas, 1848, and installed the former tenant, Mr. James Kennedy, as farm steward. Extensive buildings were erected, the land was thoroughly drained, and pipes were laid to distribute manure over 400 to 500 acres. The force-pump, tanks, pipes, &c., were in full operation in March, 1850. Great herds of sheep and cattle were fed, and vast quantities of purchased food consumed for six years. Large crops of Italian Rye-grass were raised for summer feeding, and of Turnips for winter; but the system was carried on at an enormous pecuniary sacrifice. Before Mr. Kennedy gave up the experiment and let the farm at Martinmas, 1856, he had lost the value of the land in fee simple. He attempted too much. The liquid manure of the tanks could have little effect on so much land. Mr. Kennedy's followers may perhaps avoid his mistakes, and have more success, but there is very little done with the pipes now at Myremill.

At Cunning Park Mr. Telfer had the pipes in operation a little earlier that at Myremill. The late Mr. Ralston followed at Lagg, and saved the cost of steam power by running the liquid through pipes to land at a lower level. Mr. Ralston's plans are still followed by his son, and it is believed with success. Mr. Ralston went on cautiously. He saw that the plan would not stand much expense; he was working for profit, and he carefully avoided the rock on which Mr. Kennedy's vessel was split. It makes a wonderful difference as regards pecuniary success in farming when a careful supervision and rigid economy are carried through every part of a process. *J. Drennan, Holmston, Ayr.*

Home Correspondence.

The Prize System at Agricultural Shows.—You have laid before us Mr. Morton's paper, read at the Society of Arts, with the discussion thereon. The prize system appears very prominent in it. As an interested man my thanks are due to Mr. Morton, when he says that "the trials are inadequate. There is a false advantage given to mere novelty. The prizes are in effect a premium upon mere speed and capability of standing a short race," and they are especially due to Mr. Fowler, when he says that "he had many times been placed in an unduly prominent position by a prize—a position he had no right to at the time. . . . With respect to the present system of awarding prizes by the Royal Society, it was known to be a mere scramble," thus virtually admitting that I won the great 500*l.* when he entered his tackle at Chester, &c. But this contrasts sadly with Mr. Fowler's sayings at the Society of Arts in February. 1858, after the reading of Mr. Clarke's paper. "Who was to try all these experiments? Were the inventors to bear the whole brunt of that which was in fact a national benefit? The landlords had hitherto done little. The Royal Agricultural Society had given no help." (See *Mark Lane Express*, Feb. 15, 1858). This shows that Mr. Fowler is now a changed man, but he is not content even now, for he "opposed the continuation of the prize system for agricultural implements and preferred to see well digested reports upon their merits as to the results of test and experience in various localities." This might have been all very well, but it is too late, for the agricultural press has anticipated the Society, and has gone first and done its work well, and Mr. Clark has well summarized their doings in the last number of the Society's Journal. What the Society will do I cannot say, but I do say this, that without the prize system, neither Mr. Fowler nor I should have done what we have as yet, for if it did nothing else it enabled me to agitate the question whether I competed or not, and I have done as I said I would do at the Society of Arts in 1858 after Mr. Fowler: "That I would stand or fall upon the merits of my inventions." Mr. Fowler now virtually says that I have been the winner all along. I thank him. I know I have been, and I also know that I shall be, without ever again submitting to a July "scramble." *W. Smith, Woolston.*

Rape-cake and Bean-meal.—Having seen Rape-cake strongly recommended for cows both in your Paper and in the *Agricultural Journal*, I was induced to try it, but the results are unsatisfactory; several of my cows will not eat it at all; the cow I put on trial liked the Rape-cake, had calved about three months, and is an average cow. She gave on Rape-cake 3 lb. 12 oz. of of butter. When 4 lb. of Bean-meal were substituted for 4 lb. of Rape-cake, she gave 5 lb. 4 oz. of butter and 4 quarts 1 pint more milk. In addition to the cake or meal, I gave the cows 50 lb. a day of Turnips pulped up and mixed with hay and straw chaff; it is allowed to heat for 24 hours, and then given to the cows, who relish it extremely. *Dairy Farmer.*—P.S. Professor Voelcker analysed a Rape-cake, and pronounced it of very superior quality.

Societies.

ROYAL AGRICULTURAL OF IRELAND.—At the half-yearly general meeting, His Grace the Duke of Leinster in the chair.

Captain Thornhill, Secretary, read the report, from which the following extracts are made:—

The annual cattle show at Kilkenny was very successful. The following is a statement of Receipts and Disbursements:—

NATIONAL CATTLE SHOW, KILKENNY, 1863.

BALANCE-SHEET.

RECEIPTS.

	£	s.	d.
Amount received from the local committee ..	£500	0	0
Balance to debit	405	3	4
	£905	3	4

DISBURSEMENTS.

	£	s.	d.
Expenses of deputations to Kilkenny	£7	10	6
Accountant and assistants' expenses to show ..	13	7	3
Travelling expenses of judges	110	2	0
Printing, advertising, and sundry small payments	60	16	1
Mr Corrigan's expenses, 10*l.* 12*s.* 6*d.*, and gratuity, 10*l.*	20	12	6
Accountant's assistants, preparing for show ..	3	10	0
Money premiums awarded	669	5	0
Two gold and 18 silver medals	30	0	0
	£905	3	4

The attention of your Council was particularly called to the description of thorough-bred horses competing for the Croker challenge cup. The judges appointed to adjudicate thereon considered they were so very deficient in the qualities required by the conditions, that not one of them was fully qualified for the prize. It was, however, thought desirable to award it to an English horse named Claret, as coming nearer to what was required than any other of those exhibited. The question of the breeding of horses, and the deterioration that has taken place thereon, consequent on the inferiority of thoroughbred sires in Ireland, had for a considerable time occupied the attention of many of your members.

Your Council have accepted the invitation of a very influential and numerously signed requisition from the noblemen and gentlemen of Sligo and the adjoining counties to hold the annual cattle show of your society for 1864 in that town.

Your Council feel great pleasure in stating that the local farming societies in connection with the central one continue to disseminate their usefulness. Your council regret that the working farmers do not more generally attend such assemblies, and take advantage of the information afforded at such meetings.

Your Council regret that their efforts to carry out the third object of your society, viz., the improvement which may be effected in the dwellings and domestic condition of the farming and labouring classes in Ireland, have not been attended with greater success. For the provincial gold medals and the valuable challenge cup presented by his Grace the Duke of Leinster, for newly erected labourers' cottages, there were only five competitors, all in the province of Leinster; and for the medals for improved previously existing cottages there has been only one entry.

Your Council cannot conclude without expressing a hope that next year the funds of your society will increase so as to enable them to continue the prizes to the local societies for the encouragement of the small farmers, and stimulate their exertions in the rearing of young stock, which has of late years been so much on the decline.

Reviews.

Science and Practice in Farm Cultivation. By Prof. James Buckman, F.L.S., F.G.S. No. 2. *How to Grow Good Grasses.* R. Hardwicke, 192, Piccadilly.

Another Part of Professor Buckman's work on Farm Practice has just been issued. It contains well drawn illustrations of most of the Grasses; instructions for combining them in Pastures; references to the weeds of meadow-land; chapters on irrigation, on laying down land to pasture; and on the management of Grass surfaces. Prof. Buckman has now taken a farm in Dorsetshire, and at Bradford Abbas, near Sherborne, receives agricultural pupils, who will have the advantage, in addition to superintending the operations to be witnessed on a well managed farm, of receiving the scientific instruction which this series of essays from Professor Buckman's pen shows he is so well able to communicate.

Journal of the Bath and West of England Society. Vol. XI., Part 2. Ridgway.

The present Part contains nine substantial essays and 23 shorter fragments. Mr. J. C. Morton writes on steam cultivation, Mr. Scott Burn on town sewage, Professor J. Buckman on the cultivation of meadows, Mr. Wallace Fyfe on farm seeds, Dr. Crisp on splenic apoplexy, Professor G. T. Brown on small pox, Mr. Goodwin and Mr. Langdon on the Exeter meeting, and Dr. Voelcker on milk—this last being quoted from the English Agricultural Society's Journal. In the note book a large number of shorter pieces, many of them original, some of them extracted, are collected. And the whole, sold for 4*s.*, is a very cheap and excellent collection of essays. The following is an extract from the essay on steam cultivation.

"It is more and more the experience of steam cultivators that the grubber is especially the tool for the production of tilth, and that steam-power is most efficiently employed for tillage-purposes when applied to tools of this class. The rough state in which by means of tools of this class dry land is 'smashed up,' to use the Woolston phrase before winter, is the principal object for the attainment of which steam-power should be applied to tillage. The attempts which have been made to attain the state called tilth by one operation, or by one series of operations in combination with each other, are mistakes. And in this class of error I venture to think that the idea of making a mat of saw-dust of the land at once by rapidly revolving teeth, and that of attaining tilth by a combination of cultivator, roller, and harrow in one great implement must both be placed.

"The state called tilth is not altogether, nor even chiefly, an artificial thing. You might grind clods, or even rocks, to powder, but the powdered stuff would not be mould, nor would the condition to which the material would be thus reduced be the state we call tilth. The hardened soil must be moved, of course, by artificial means, broken into fragments, and the labour of such heavy work particularly adapts it to steam-power; but these fragments, large or small, must moulder down by the influence of the weather. It is a great mistake to suppose that steam-power will be best applied to the work of cultivation by setting it to grind the hard ground artificially to powder. Even if this could be done, it would most likely end not in creating but in retarding tilth: the powdered soil would run together in a mass on the first rain which should thoroughly soak it. The great object of the tillage-farmer is to break his land up into dry fri-

ments on a well-drained subsoil, and then leave time and weather to do their work. Frost, with alternate rain and drought, on deeply-moved and well-drained land, are the real tillage implements. The soil is thus reduced from fragments and clods by the mere costless lapse of time into that condition of soft moistened mould which is best both as seed-bed and as feeding-ground for our crops.

"It is the fitness of steam-power for that preliminary artificial process by which the natural and final processes are enabled and facilitated, which renders it of such inestimable value to the tillage-farmer, and which will, especially on clay land, make steam cultivation, following drainage, the inauguration of a new era of fertility and productiveness."

Miscellaneous.

Bread.—The bitter flavour which is too apt to prevail in bread made from home-brewed ale, or indeed from purchased table-beer, yeast, can be effectually obviated by washing the ferment repeatedly with pure, very cold water, suffering the yeast to subside, and then pouring off the water after every subsidence till the washing cease to bring away the bitter flavour. After which the yeast is to be strained through a quantity of good Wheat bran, such as a farmer obtains when he sends his own grist to the mill. This medium does not only correct the alkaloid bitter of the ferment, but adds fresh fermentive principle to it. But a better mode of working bread is to use the genuine German yeast. This substance confers no bitterness, and the required proportion for any batch of flour is estimated at 1 avoirdupois ounce to every pint and a half of water, which will be used in making up a dough of sufficient substance to admit of thorough kneading.

Unfermented Bread.—To 3 lb. of flour, give half an ounce of bicarbonate of soda and 5 fluid drachms of muriatic acid.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. CLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Reading of Dry Bulb.	Thermometer. Reading of Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday ..	Dec. 25	30.24	46	42	S.W.	0	9	49	43	55	39	..
Saturday ..	26	30.00	50	49	S.W	2	10	49	42	53	33	..
Sunday ..	27	29.98	44	40	N.W.	3	10	52	42	50	33	0.01
Monday ..	28	30.30	34	33	S.W.	0	10	44	29	45	23	..
Tuesday ..	29	29.92	49	47	S.W.	1	10	49	33	54	38	..
Wednesday ..	30	30.15	43	41	N.W.	2	7	51	38	55	35	0.02
Thursday ..	31	29.84	36	33	S.E.	3	10	46	29	55	24	..

Notices to Correspondents.

OATS:—*Young Farmer.* See Mr. W. Fyfe's paper on Seeds in the new number of the Bath and West of England Agricultural Society's Journal. Also Morton's Farmers' Calendar, from which we gather that the Black Tartarian Oat, the Sandy Oat, and the Barbachlaw Oat, are good for late climates, and high and heavy land.

G. W. The Early Charlton, of medium bulk as to straw, is an abundant crop and tolerably early, is a white boiling Pea adapted for field culture.

STEAM CULTIVATOR IN THE WEST INDIES: *R.* The following is the summary of the work done by the engine sent by Messrs. Savory from June 9 to August 24:—213 acres grubbed; 772 cwt. of coal consumed, at the rate of 3½ cwt. per acre, in 50 days, at the rate of 4¼ acres and 15½ cwt. of coal a day. The work was extremely hard and efficient.

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12 „ 10	13 „ 10	14 „ 10	15 „ 10	10 9	12 3	12 6	14 0
13 „ 11	14 „ 11	..	..				
14 „ 12	15 „ 12	15 „ 11	16 „ 11				
18 „ 12	19 „ 12	16 „ 12	17 „ 12				
16 „ 13	17 „ 13	20 „ 12	21 „ 14	11 6	13 6	13 6	16 0
19 „ 13	20 „ 13	18 „ 13	..				
16 „ 14	17 „ 14	21 „ 13	..	14 to 15 ozs. to the foot.		16 to 17 ozs.	
19 „ 14	20 „ 14	18 „ 14	..				

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7 „ 5	„ 7½ „ 5½	12	0	„
8 „ 6	„ 8 „ 6½	13	6	„
9 „ 7	„ 9½ „ 7½ and 10 by 8 ...	15	0	„

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20 „ 14	Seconds		English.	English.
20 „ 15	Best		18s. 0d.	23s. 0d.

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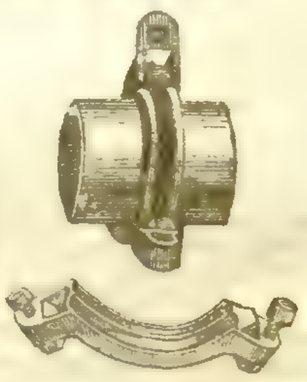

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16 feet by 8 feet ...	£8 10 0 ...	£2 0 0	30 feet by 12 feet ...	£11 15 0 ...	£2 10 0
20 feet by 10 feet ...	9 17 6 ...	2 0 0	40 feet by 15 feet ...	15 0 0 ...	2 15 0
25 feet by 12 feet ...	10 5 0 ...	2 5 0	50 feet by 15 feet ...	18 0 0 ...	3 0 0

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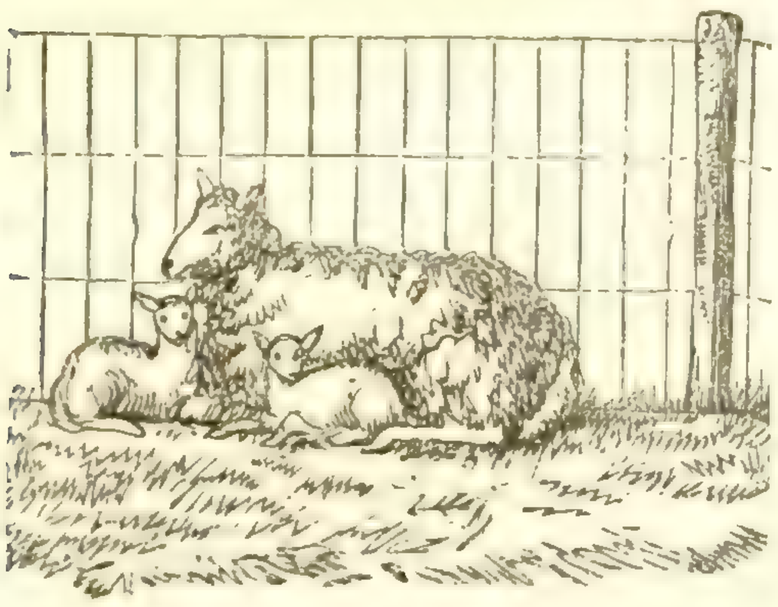

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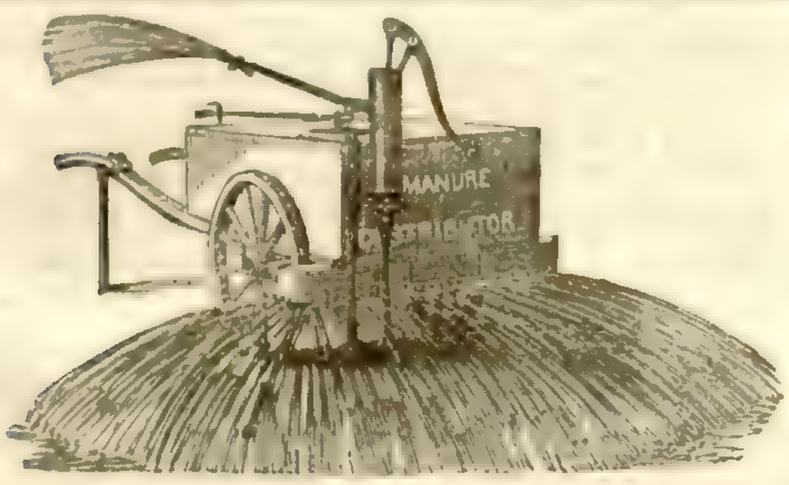

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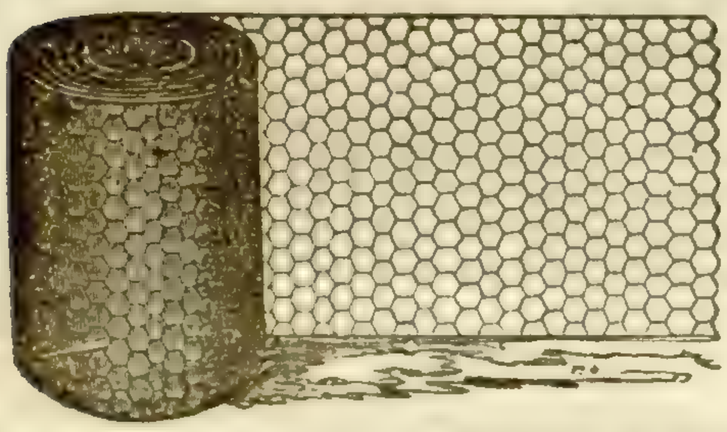

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		Gauge.	Galvanised. per yard.	Japanned Iron. per yard.
2-inch mesh, 24 inches wide	..	No. 19	.. 4¼*d.*	.. 3½*d.*
2-inch " " "	..	" 18	.. 5	.. 4
2-inch " " "	..	" 17	.. 6¼	.. 5
2-inch " " "	..	" 16	.. 8	.. 6½
1⅝-inch " " "	..	" 19	.. 4⅞	.. 4
1⅝-inch " " "	..	" 18	.. 6	.. 4¾
1⅝-inch " " "	..	" 17	.. 7	.. 5¾
1⅝-inch " " "	..	" 16	.. 9	.. 7

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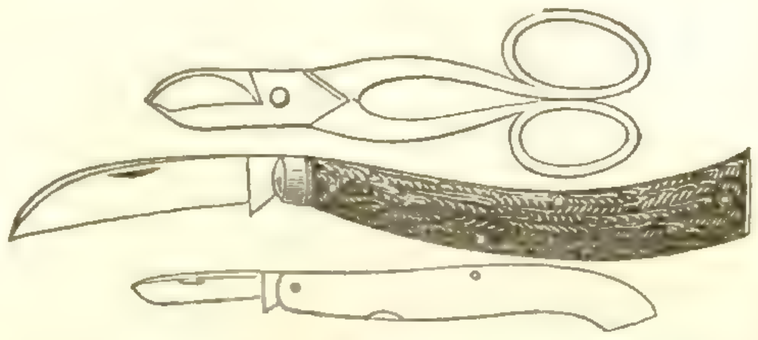

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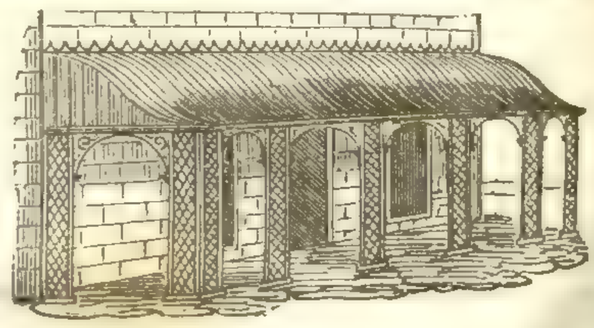

Apply to COTTAM & Co., Manufacturers, (Iron Works) 2, Winsley Street (opposite the Pantheon), Oxford Street, London, W.

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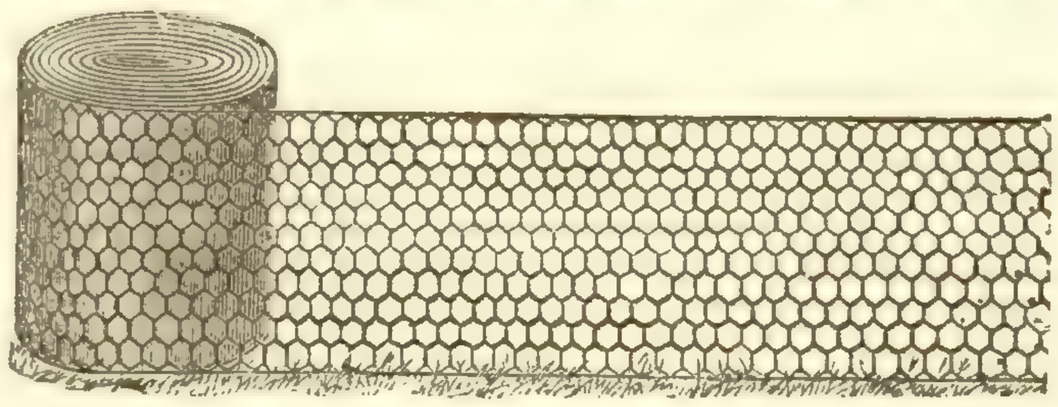

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PRICES PER LINEAL YARD, 24 INCHES HIGH:—

Size of Mesh.	Mostly used for	Light. Japanned.	Light. Galvanized.	Medium. Japanned.	Medium. Galvanized.	Strong. Japanned.	Strong. Galvanized.	Extra Strong. Japanned.	Extra Strong. Galvanized.
2¼ inch	Hares, Dogs, Poultry	3*d.*	4*d.*	3¾*d.*	5*d.*	4½*d.*	6*d.*	5½*d.*	7*d.*
2 inch	Game or Poultry Netting	3½*d.*	4¼*d.*	4*d.*	5*d.*	5*d.*	6½*d.*	6½*d.*	8*d.*
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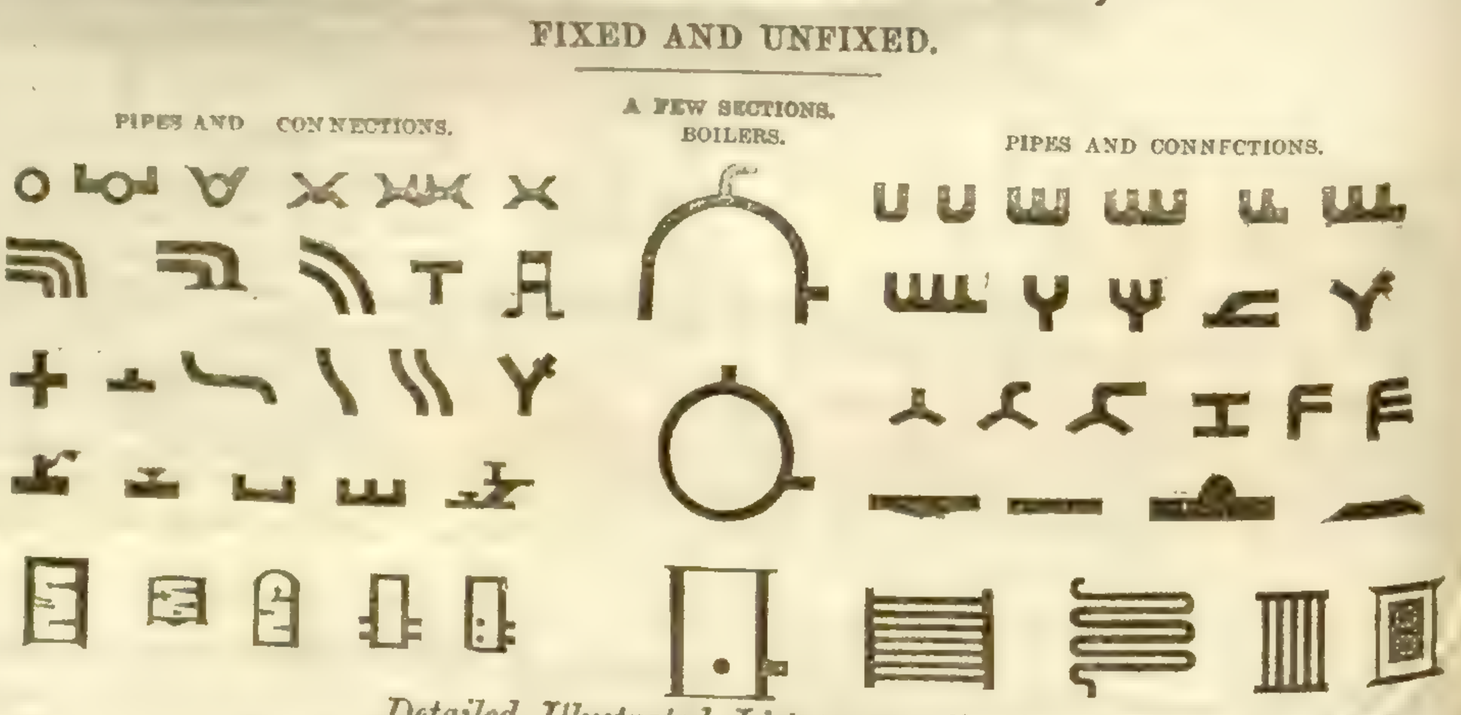

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To the Trade.—Continental Flower Seeds, &c.

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Ditto, in quantities proportionately reduced	2	2	0
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Remittances may be made by Cheques on Town or Country Bankers, or by Post-office Orders payable to SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

The Gardeners' Chronicle.

SATURDAY, JANUARY 9, 1864.

THE branches and leaves of the Holly tree, which, at this festive season, are so much used to decorate our churches and dwelling houses, remind us of a discussion that took place in our pages a short time ago upon some lines in one of SOUTHEY's works. An excellent paper on the common English Holly (Ilex Aquifolium), by Mr. WILLIAM PAUL, of Waltham Cross, had been read at a meeting of the Floral Committee of the Royal Horticultural Society, and was afterwards published in the "Proceedings" of the Society. In that paper Mr. PAUL quotes the following lines from "The Holly Tree," one of SOUTHEY's most elegant and charming poems :—

"Below, a circling fence, its leaves are seen
Wrinkled and keen ;
No grazing cattle through their prickly round
Can reach to wound ;
But, as they grow where nothing is to fear,
Smooth and unarm'd the pointless leaves appear."

Mr. PAUL adds, "it may seem ungracious to throw a doubt on so charming a fantasy, and my opportunities of observation have not been sufficiently extended to allow me to speak decidedly ; but, as far as I have observed, the evidence is not conclusively in favour of SOUTHEY's view."

Several of our Correspondents have given us the result of their observations upon this curious question, and some of them gave examples of trees

which had come under their notice, which had their lower leaves "wrinkled and keen," and the upper ones "smooth and unarmed." Mr. FORTUNE states that Ilex cornuta, a species in many respects resembling our English Holly, is often met with in this condition. Another Correspondent informs us that at Burnchurch, Co. Kilkenny, where there are many beautiful old evergreens, there are Hollies in the condition which SOUTHEY describes. One of them, from which he gathered some leaves to send us as a proof of the correctness of his statement, was 35 feet in height, and in form somewhat like the Lombardy Poplar. On the other hand a Correspondent at p. 390 (1863), "is fully prepared to support Mr. PAUL'S assertion," and describes the Holly trees in the Palace Gardens, Armagh, Ireland, to show that the poet is clearly in the wrong. He says, "one 30 feet high has smooth foliage from bottom to top; one is rough; *and one has rough leaves at bottom and perfectly smooth ones at top.*" We have put the last few words in italics to show that at Armagh, as also at some other places, at least, the circumstance to which SOUTHEY alludes in his charming lines may be met with.

We have no doubt that many other examples might easily be brought forward of Holly trees being in the condition which the poet describes so well. Of course we do not mean to affirm that all old Holly trees are furnished in this way, or even that those individuals that take this form have every leaf at the base prickly, and every one at the top smooth. All we contend for is this, that the Holly is frequently met with having its lower leaves for the most part prickly, and its upper ones for the most part smooth. SOUTHEY saw this, and the circumstance naturally suggested the pretty idea, so well worked out in the poem on "The Holly Tree"—

> "I love to view these things with curious eyes,
> And moralise;
> And in this wisdom of the Holly tree
> Can emblems see,
> Wherewith perchance to make a pleasant rhyme,
> One which may profit in the after time."

There are other trees which exhibit the same peculiarity as the Holly, and provide themselves with prickly stems or leaves near the base, while they are smooth and unarmed above. Limonia trifoliata, a tree belonging to the Orange tribe, and on which some of the varieties are frequently grafted, is a remarkable example of this kind of structure. In its native country the lower part of this plant is furnished with spines of the most formidable kind, quite sufficient to protect it from injury by animals, and on this account it is frequently used for hedges round gardens. Like those of the Hollies above noticed, the upper branches of this plant are smooth and spineless when they are fully grown. And it is not improbable, our readers may be able to point to other examples of a like kind. That certain plants take on this form no one can doubt; why they do so, whether for the poetical reason which suggested itself to the mind of the poet, or owing to an exhaustion of natural power, or to what other cause, we are unable to say.

As having some relation to the subject in question, we may mention a remark upon the Chusan Palm by the late ROBERT BROWN, a man well known as a prince amongst botanists, and a keen observer of Nature's ways. The Chusan Palm produces fibre on its stem in much greater quantities than the Palms of the tropics do, and this fibre is an article of great commercial value. The country where the plant is found growing, is very cold in winter, and its leaves are often bent down under a load of snow. When Mr. BROWN was shown one of its stems, covered with thick layers of brown fibre, each of which was woven as if by a loom, he appeared much struck by the appearance it presented, and remarked, "This thick covering is, no doubt, intended by Nature to protect the more tender parts of the plant from the extreme cold to which it is exposed in its native country." These and many other things which we are constantly meeting with in Nature are—

> "Ordered by an Intelligence so wise,
> As might confound the Atheist's sophistries."

IT has often been a matter of surprise both to ourselves and others, that the GARDENERS' BENEVOLENT INSTITUTION, an institution which, measured by its means, is assuredly dispensing a very considerable amount of benefit amongst the gardening community, should be so lukewarmly supported by the very class of persons, to the failing members of which its benefits are distributed. Even admitting that there may be differences of opinion as to the principles by which such a Society should be guided, some taking the high ground of preferring to dispense to all who need so far as the funds permit, and others favouring the special claims of those who have themselves subscribed—admitting all this, we fear there must be some other powerful reasons which keep back from becoming supporters of the present Institution very many who would not withhold their guinea from mere indifference as to its success.

It would appear from the letter of a correspondent, who is himself one of the fraternity, and who writes under the pseudonym of "DELTA," that one great cause of the state of things to which we have adverted, may be traced to the PRESENT SYSTEM OF ELECTIONS, AND THE EXPENSES CONSEQUENT THEREUPON. It is perfectly true, as our correspondent intimates, though he does not express himself exactly in this form, that under the system now in force, the weakest goes to the wall. The election is a struggle between the combined influence and the money of supporting friends, in which the poor candidate who may happen to be without the help of rich or influential supporters, is certain to be worsted. Of course we use the word "rich" in a limited sense, meaning thereby such as those who would relieve the candidate from the expenses of canvassing, which, small as they may appear to many of us, yet when amounting, as our correspondent observes, to "several pounds," are really overwhelming to one who is almost *in extremis*. The substance of DELTA'S communication on the subject, reads thus:—

"I have been an annual subscriber for many years, during which time I have solicited many of my brother gardeners to subscribe also, but for the most part I have received for answer: Not at present; we will wait until we see the rules made more 'definite.' At present a gardener must subscribe his guinea a year for a number of years before he can have any chance as a candidate; and then in soliciting the votes of subscribers he must incur great expense. This ought not to be the case, for many a hard-working man has to be very careful indeed to be able to pay even the guineas. I regret there should be so much lukewarmness amongst the craft, but under these circumstances it is no marvel. Not long since I interested myself in behalf of a candidate, but after succeeding, I learned that the expenses of the election had amounted to several pounds. From the voting paper now before me I see there are eight candidates, all having a claim through having subscribed many years, but of those only three can be elected, consequently, though put to the expense of canvassing, five of them must wait their chance at another election, to be perhaps passed over by some new candidate who has done much less for the institution, but who has influential supporters. Can it then be wondered that gardeners 'count the cost,' and, believing the chances to be against them, hold aloof?"

If this is really the view taken by the bulk of those gardeners who have as yet done nothing to support the Gardeners' Benevolent Institution, and we cannot say that it is an unreasonable view under the circumstances, the subject is worthy the serious consideration of the managers. It would indeed be a matter of regret if, instead of 'bearing hand' to strengthen an institution which has worked so long and already done so much good, and the results of the management of which in everything but this very item of support are all that could be desired, the gardening body should be drawn off to establish a mere Gardeners' Benefit Society, as has been mooted. Surely something can be arranged which while it would not dispirit those who wish to keep up the benevolent character of the association, would yet satisfy the hard-working men who brood over the objections at which we have glanced, until they button up their pockets and leave the Institution to its fate—turning their eyes meanwhile perhaps in the direction of some new scheme more congenial to their views, but which if carried out could only lead to the inevitable result which attends on doing battle with divided forces. Rather let something be done to induce the whole race of gardeners, and of the friends of gardeners and gardening, to concentrate their efforts in this conflict with distress. A divided camp is weakness, but union is power.

As a contribution towards this object, DELTA offers the following proposition:—"According to Rule 31, the Committee has power, by the bye-laws, to submit any alterations for approval at the next general meeting. Would it not be well for them to suggest that the elections should be dispensed with, and that as vacancies occur, or as the funds will allow of it, new pensioners should be placed upon the list, THOSE CANDIDATES HAVING PREFERENCE WHICH HAVE SUBSCRIBED THE GREATEST NUMBER OF YEARS. I think if the Committee would take it into their serious consideration, they would come to the conclusion that this plan would be the best. I heartily believe that nothing would tend so much to induce gardeners to become subscribers. I trust they may do so, in large numbers, for no one can tell what may befall him. Let those who doubt turn to the *Gardeners' Chronicle* of December 6, 1862, and they will find some melancholy illustrations of this truth."

Now, the real question is, would such an alteration as this bring in the recusant gardeners to the ranks of the benevolent? If it would, we think the committee is bound in fulfilment of its trust to place it before a general meeting in such a form as upon consultation might be found to be most practicable. We confess that for ourselves we should be sorry to see entirely put out the benevolent and charitable spirit manifest in the present arrangement, by which a deserving brother in distress, though he may not have had an opportunity of helping the Institution, or having had the opportunity may have failed to make use of it, is not shut out from receiving the benefits to be dispensed; but at the same time we must admit that those who are the most ready to help others are themselves most deserving of help when the hour of adversity comes, and therefore those who have for the longest period subscribed have the strongest claim on the funds, as they now have on the votes of subscribers. If a fair proportion of the thousands of gardeners who can, but who do not, subscribe, could by the adoption of any such principle as that which "DELTA" suggests, be induced to do so, and, better still, if they would take means to secure also the support of their employers, and in this way augment the funds sufficiently to admit of doubling the number of pensioners—if this could be done on the one hand, it might be considered a reasonable arrangement on the other hand, and one that should satisfy both parties, if, say, two-thirds of the number to be from time to time added, being eligible and deserving candidates, were to be put on the pension list according to seniority as subscribers, and the other third were to be selected by election. This would give considerable advantages to subscribers, which is what the gardening community would seem to wish for; and it would also leave an opening for the exercise of pure benevolence, a principle which must assuredly be kept in view if the generous support of the upper classes of society is to be at all reckoned on.

THE decease of our much lamented friend Dr. BOOTT, which occurred on last Christmas Day, is a heavy blow to Botanical science. We are collecting some materials concerning the life and works of this eminent man, and hope to be able to lay them before our readers next week.

—— THE commencement of a New Year affords a fitting opportunity to look back on the productions of that which has just passed away, and to take stock of any acquisitions in the shape of MERITORIOUS NOVELTIES which may have been introduced to our notice during the course of it.

To begin with the hardy series, we may observe that amongst shrubby plants there have been some grand additions made to those of climbing habit in the Japanese Clematis Fortunii with large double sweet-scented white flowers; C. florida Standishii, from the same country, with large single purple flowers; and C. Jackmanii, an English hybrid, with flowers of the richest velvety violet purple—all of them decidedly front-rank plants. Deutzia crenata flore-pleno, whose flowers are double and tinged with rose, and Weigela rosea alba with pure white flowers, both Japanese, are useful and ornamental dwarf shrubs whose peculiarities are expressed in their names; they will doubtless make good forcing plants. There has been further made known, a very handsome variegated evergreen, called Taxus hibernica fastigiata, which has golden-yellow leaves with green midribs, and is one of the most ornamental of the upright Yews.

Of hardy herbaceous perennials, the past year has made us acquainted with the following as garden plants:—Lychnis Senno, which has red-stained leaves and stems, and very large deep crimson flowers. Tricyrtis hirta, with elegant ovate amplexicaul leaves, from whose axils emerge the singular white purple-spotted handsome flowers; Primula cortusoides amœna, which has flowers of the richest crimson, twice as large as in the common form; Sedum Sieboldii medio-variegatus, which adds to the well-known beauty of its prototype the additional feature of ornament presented

by its centrally-blotched foliage — all these being Japanese. Silene Elizabethæ, an Italian species, forms a beautiful dwarf tuft with large rich magenta-coloured flowers. To these must be added the Chilian Ourisia Pearcii, a Linariad with broad crenated leaves, and beautiful Pentstemon-like crimson flowers, which quite eclipses the Ourisia coccinea introduced last year; and Anemone japonica Honorine Jobert, a dwarf-habited free-flowering autumnal plant, with large white blossoms. Annuals have not yielded much novelty, at least in the shape of distinct species; but one, Helipterum Sandfordii, a golden Everlasting, seems to possess an ornamental character, and is likely to become popular.

Passing to plants of half-hardy character, we may especially mention Lycioplesium pubiflorum, a shrubby Chilian Solanad, with rather pretty reddish-purple flowers, having somewhat the aspect of those of Lycium, but with ventricose flower-tubes, and probably hardy as a wall plant; and Valdivia Gayana, a pretty saxifragaceous perennial, quite different in aspect from anything in cultivation, and producing abundant rose-coloured flowers. This last will perhaps be found a useful half-hardy subject for greenhouse decoration in spring.

Amongst greenhouse plants perhaps the most distinct and ornamental amongst those of herbaceous habit, is the Peruvian Bomarea multiflora, a climbing species with drooping umbels of orange-red and yellow flowers. Erica exquisita decidedly takes the first place amongst shrubby plants, being probably one of the finest Heaths ever raised, a seedling, it is said, between obbata and some form of tricolor, and remarkable for its thick-tubed salmony-red flowers, with dark constricted throat and blush-white limb. Other plants deserving of prominent mention, are the very curious bipinnate Marattia-like Cycad, named Bowenia spectabilis; a very free-flowering variety of Browallia Jamesoni, called multiflora, with changeable orange yellow, and deep orange-coloured flowers; Eranthemum tuberculatum, a dwarf neat-leaved New Caledonian bush bearing a profusion of white flowers; a Rhododendron called Prince of Wales, raised between javanicum and retusum, and associating narrow-tubed orange-red blossoms with broadish elliptic foliage; a blue and white Statice called Frostii, bred between Holfordii and imbricata, and of ornamental character; and a Japanese Saxifraga, having the leaves handsomely variegated with white and pink, and called in gardens, pending its flowering, S. japonica tricolor.

Stove plants have been extensively recruited, but we confine our present observations to Meyenia Vogeliana and Stauranthera grandifolia, amongst the ornamental-flowered series: the first being an erect-habited shrubby Acanthad, with large purple flowers, orange in the throat; and the second a lovely herbaceous Cyrtandrad with panicles of short wide-tubed lilac flowers stained with deep orange at the base. Of the handsome-leaved series, Miconia pulverulenta, though not equal to either Sphærogyne latifolia or Cyanophyllum magnificum, has a beauty of its own, its broad rugose silvery-ribbed leaves being very effective as borne on young fresh-grown plants. Pandanus elegantissimus again, is a plant always presenting a graceful aspect, and it does not appear as if it would attain the cumbrous size of some other species of the Screw Pine family. Lastly, we may mention Gymnostachyum Verschaffeltii, a low-growing perennial with the habit of Eranthemum leuconeurum, and cultivated in English gardens under the name of Eranthemum rubronervium, which is remarkable for the elegant pinkish-red veining of its broad flat oval leaves.

Of Orchids, some few have been brought into prominence by the publication of figures, and others have been introduced as hybrid productions. Occupying a foremost place in the latter category is a Cattleya called Aclandi-Loddigesii, bred between the species bearing these two names, a very handsome dwarf plant whose rosy flowers are spotted with crimson, and the lip beautifully marked with deep rose. Lælia Turneri is a grand plant with the habit of elegans, and large purplish-rose flowers with a lip of intense violet rose. Limatodes rosea alba, whose flowers are pure white, will be a choice acquisition as a contrast with the usual rosy-flowered plant. Dendrobium Wardianum is one of the charmingly-coloured plants related to D. Falconeri, and the finest of the whole series for cultivation as an ornamental plant; while Dendrobium Parishii is both novel in character, and handsome in appearance, as its rosy-tinted flowers, with a fringed lip and deep crimson spots, sufficiently attest; and Dendrobium eburneum, with white flowers, stained with orange on the lip, promises to add both variety and beauty to the fine genus to which it belongs.

Leaving out of sight the magnificent group of Film Ferns, most of them remarkable for their exceeding rarity, if not absolute novelty, which was sent up to London by Messrs. BACKHOUSE & SON, there have been some fine additions made to our garden Ferns. Prominent examples may be cited in the New Grenadian Asplenium ferulaceum with its tall smooth fronds cut up into innumerable fine segments; in Pleopeltis albido-squamata, a Bornean plant, whose pinnate pendulous fronds are dotted over with white spots; in Marattia Cooperi, a provisionally-named New Caledonian species, with motley-green decompound pendent-branched fronds; in Lastrea erythrosora, a fine evergreen Japanese hardy species, with red sori; in Pteris serrulata crispa, a handsome Japanese tasselled form of one of the commonest but most useful of exotic species; and in Asplenium elegantulum, a dwarf evergreen species from Japan, intermediate in aspect between two of our own natives, A. fontanum and lanceolatum.

Amongst the novelties of what are commonly called Florists' Flowers—a term which has not now the definite limits it had in bygone times—there have been some acquisitions, a few of which may be briefly mentioned. Of Indian Azaleas, the most novel have been Louise von Baden, a bold-flowered and remarkably pure smooth-looking white; and Beauty of Dorking, also a white and very smooth, but stained with green, and flecked with carmine. Of Camellias we have had Filippo Parlatore, a smooth blush-white with rosy-carmine stripes; Jubilee rosea, a flat but showy imbricated sport of Jubilee, with rosy-pink flowers; Napoleon III., a cupped flower of veined pink, paler at the edge; and Carlotta Papudoff, a white-blotched carmine-rose—all desirable flowers. Among bedding Calceolarias, Bijou, a rich velvety brown-red, proves to be an acquisition. Chrysanthemums have received meritorious accessions in such flowers as Princess of Wales, ivory white with delicate peach-coloured margin; Prince Alfred, rosy purple; Lady Slade, pale rosy lilac; General Bainbrigge, amber coloured; Venus, pearly lilac—all large-flowered incurved sorts; Mrs. Edward Miles, clear pale yellow; and Lord Clyde, deep crimson, both of the ranunculus form, and of medium size; and Lizzie Holmes, a very perfect yellow Pompon with reddish-tinted margin. Cinerarias have nearly run their length as named flowers; the only ones, out of many shown, which may claim a record here were John Spencer, a deep crimson, and Snowflake, a pure white with blue disk, both selfs, and likely to be useful for decoration.

Dahlias were largely shown, but they want novelty. In this view perhaps Enchantress stood as high as any, having good properties, and being of a pale apricot tipped with rosy carmine; a very showy flower, deeper in colour, but not equal to this in quality, was Brunette. Anna Keynes, a blush white tipped with lilac; White Perfection, a pure ivory white; Fairy Queen, a creamy-blush flushed with rose; Willie Austen and Nonsuch, both amber coloured; and Magpie, rosy purple tipped with white, were also amongst the most noticeable; and Erebus is deserving of mention on account of its intensely dark maroon colour. The carmine-crimson Dianthus multiflorus hybridus, one of the best of bedding plants and nearly always in flower, has been recruited by varieties of exactly similar habit—striatiflorus, with pale pink flowers flecked with crimson; and Marie Pare with the flowers pure white. Gladioli have not shown any remarkable progress this season, but Charles Davis and Mrs. Dix, the first a light rosy scarlet and the latter white with purple stripe, may be mentioned as pleasing novelties. Among Hollyhocks one named R. B. Ullet, a large crimson, occupies a front rank; so also does Neatness, deep crimson; The Queen, blush-white with darker base; Mrs. M. Binning, dark rose; Alexander Shearer, rich deep red; and Acme, peach-colour. Pansies, of which a good many have been raised, we pass over, with the remark that among the fancy sorts Her Majesty, Prince of Wales, Princess of Wales, King of Italy, Hibernia, and Thomas Moore, are amongst the most novel and desirable.

Pelargoniums have not taken the position they did in 1862, but nevertheless some good things have been added. Diadem stands highest in our estimation, a rosy purple with dark top petals, and of exquisite form; Artist, a variety similar in character, but more rosy and less purple; as well as Achilles, a crimson clouded with maroon, are both fine flowers; while Prince of Wales and Princess of Wales, both high-coloured crimsons with maroon markings, differing a little in the disposition of the colours; and Maid of Honour, with a pale purplish-lilac tone, come among the desirable flowers of the year. Many varieties of the Scarlet Pelargonium class have been produced, but from the very profusion of sorts one becomes rather fastidious in the selection of novelties. Adonis, however, a scarlet with white eye, is good; Dr. Lindley is one of the finest of all for form, a light red-scarlet; Beauty, a white with salmon eye, is well described by its name, both form and marking being beautiful; Princess of Wales is a good salmon-coloured sort, deeper in the centre, and a very free bloomer; Lord of the Isles is a fine bold rosy-scarlet; Roi d'Italie is a dwarfish dark-zoned, finely-formed, salmon-tinted scarlet; and Waltham Pet, for its small foliage, dwarf habit, and finely-formed orange-scarlet white-eyed flowers, deserves to be a favourite. The variegated Mrs. Benyon is a free dwarf vigorous novelty in the style of Mrs. Pollock as to its foliage, but flowering very abundantly, the flowers scarlet. Stella variegated, a sport from the well-known and deservedly prized nosegay of that name, is an acquisition, having the same character as the original in all but the foliage, which has a creamy margin. Of single flowered Petunias, Royalty and Duchess of Northumberland, both magenta and white striped sorts, are to be recommended for their fine form. Amongst Picotees, Lucy, a light-edged rose, and Exhibition, a heavy-edged red, are useful; and Pinks have been recruited by a very fine one named in memory of a true florist, the late Rev. G. JEANS. The new race of Pyrethrums continues to be recruited by novelties gradually advancing towards perfection in form. Some of the best of these are Princess Alexandra, white; Lysias; crimson; Roseum album, rose with white centres, Fair Rosamond, pale peach; and Delicatum, lilac. Of Roses, so much has been said, that we content ourselves with the remark that Mrs. William Paul has proved one of the best; and that Lord Herbert and Lord Clyde, both English seedlings, have taken a high position. To out-door Tropæolums has been added King of Tom Thumbs, a variety raised from Brilliant, which it resembles in its dark foliage and scarlet flowers, both rather diminished, but in its habit is quite different, being close and tufted. Very little advance has been made in Verbenas; Mauve Queen has mauve coloured flowers of fair quality; Comte Bernard Lechi has white flowers striped with purple; and Othello is a good mulberry-purple bedder. A large single yellow Wallflower called Yellow Perfection, very sweet and fine, has been obtained by careful seeding and selection through several generations.

With this fragrant flower we close our brief sketch of some of the more important and desirable of the novelties of 1863.

New Plants.

267. THE CANNIBAL'S TOMATO (*Solanum anthropophagorum*).

THE "Correspondence relative to the Fiji Islands," presented to both Houses of Parliament by command of her Majesty in May, 1862, is accompanied by an interesting Appendix, being a report, by Dr. Seemann, on the "Vegetable Productions and Resources of the Vitian or Fijian Islands," in which a chapter at page 58 is devoted to "Vegetables eaten with human flesh;" from which I make the following extract: "These it may be important to notice; since, thanks to the influence of commerce, Christian teaching, and the presence of a British Consul, cannibalism survives only in a few localities, and is daily becoming more and more a matter of history. Human flesh, Fijians have repeatedly assured me, is extremely difficult to digest, and even the healthiest suffer for two or three days after partaking of it. Probably in order to assist the process of digestion, bokola, as dead man's flesh is technically termed, is always eaten with the

addition of vegetables. There are principally three kinds, which in Fijian estimation ought to accompany bokola,—the leaves of Malawari (Trophis anthropophagorum, Seem.), the Tudano (Omalanthus pedicellatus, Benth.), and the Boro dina (Solanum anthropophagorum, Seem.). The two former are middle-sized trees, growing wild in many parts of the group, but the Boro dina is cultivated, and there are generally several large bushes near every "bure" (or stranger's house), where the bodies of those slain in battle are always taken. The Boro dina is a bushy shrub, seldom higher than six feet, with a dark glossy foliage, and berries of the shape and colour of Tomatos. This fruit has a faint aromatic smell, and is occasionally prepared like tomato sauce. The leaves of these three plants are wrapped round the bokola, as those of the Taro are around pork, and baked with it on heated stones. Salt is not forgotten. Whilst every other kind of vegetable and meat are eaten with the fingers, cannibal food is touched only with forks, generally made of the wood of the Nokonoko (Casuarina equisetifolia), or the Vesi (Afzelia bijuga, A. Gray), bearing curious names, and having three to four long prongs.

The reason given for this deviation from the general mode of eating is a wide-spread belief that fingers which have touched bokola are apt to generate cutaneous diseases when coming in contact with the tender skin of children; and as the Fijians are very fond of their offspring, they are most scrupulous in using forks on the above occasions."

The Boro dina above mentioned is the subject of our present Plate. Our plants were reared from seed brought home by Dr. Seemann, and which flowered in the stove of the Royal Gardens in July. Except when in fruit, this species of Solanum has no beauty to recommend it for cultivation; it is only interesting historically as connected with a practice which is happily yearly becoming more and more obsolete. *Botanical Magazine*, t. 5424.

EXHIBITION PLANTS.

THE INDIAN AZALEA.—No. I.

IN treating of this magnificent class of plants, my intention is to give the result of practical experience, extending over a period of thirty years, during which time I have been a successful grower, and a buyer of most of the new varieties as they made their appearance. In my early days we may have had 12 sorts, including varieties and species; this would have been the outside number, and the greater part of them were species. What a change has taken place since that time, both as to the number of varieties and the general cultivation of the plants!

Those who were in the habit of attending the Chiswick shows of the period referred to, will remember the kind of plants which were then exhibited, and which were of course considered to be very near perfection, not only as to their growth and cultivation, but also as to the shape and colour of their flowers. The plants of those days were mostly thin and flat, with their blossoms all tied so as to be brought to one face, lest any of them should be lost from view. The pots were small, seldom exceeding the sizes called 24s or 16s; the latter was indeed considered rather an extravagant size to adopt. However, as time moved on, and every year brought new cultivators into the field, as well as new varieties, it became observable that a very great improvement in cultivation had taken place; and from that time up to the present the improvement has every season become more and more manifest, until now those who attend the great Flower Shows about London, as well as those in many provincial towns, must be struck with admiration as they view the magnificent specimens brought together, perfect giants in size, and literally covered with blossoms of the finest shape, and of nearly every shade of colour.

To the dozen species and varieties we had to select from at the time I refer to, there have been made up to the present time something like 300 additions, consisting chiefly of varieties. The species have been nearly all discarded, as they have been quite superseded by the varieties raised from seed, and by the sports that have developed themselves upon named varieties. Many of the best kinds that are now in cultivation have been obtained from this latter source, the sported branch being taken off and grafted. It has been found in almost every case that these sports retain the colour and character which they have thus accidentally assumed. Many such have been grown and ultimately sent out as "new seedling" Azaleas—not that I think it makes any difference to the buyer whether a desirable novelty is a seedling or a sport. I feel certain that above half the number we are now growing are sports from other established sorts. Some varieties are more inclined to sport than others: the white and striped kinds are all of them disposed to do so, and from these almost all the colours we possess have been selected, grafted, and cultivated, and then generally introduced as seedlings.

I remember that at some of the great shows last season I counted seven distinct varieties, all open at the same time, upon Admiration; some of them were very distinct and beautiful, and well worth preserving, while others were inferior to the parent in shape, and not sufficiently distinct in colour from those already in existence. On another occasion I saw a plant of Iveryana with seven distinct varieties upon it; and had the plant been mine I should have felt disposed to graft some of them. Alba Magna is another kind very much inclined to throw sports; and although the blossoms of the parent are thin and flimsy in texture, yet at times it will give off splendid sports of various colours, having the blossoms finely shaped and of good substance. Madame Miellez is a sporting lady; many fine varieties have been secured from this, and as its colours are distinct from most of the other white-ground varieties (being purple-striped instead of pink or rose), it has opened a wide field for sports of a very different character.

Barclayana I believe to be the mother, grandmother, or great grandmother of more new varieties than any other kind grown. It is really astonishing what extraordinary sports this will produce. I have had one small branch with three blooms upon it, all quite distinct, and none of them in the least like the parent. The most singular circumstance was this, that though there was but one small shoot bearing these flowers, yet when multiplied it yielded all three varieties. The original shoot was taken off and grafted; as the season advanced several more shoots were taken off it, the plant throwing out two or three each time, and the first grafted shoots themselves yielding a good supply of later grafts by taking off their tops as soon as they had made sufficient growth: so that by the next season I had some two or three dozen plants. Some of these young grafted plants bloomed the next year, and to my surprise all the three varieties were there, quite perfect, as they had shown themselves on the one shoot the year before. I have them now under number (sport 1, 2, and 3), but until they bloomed it was quite impossible to tell which of the three they belonged to. One of them was much deeper in colour than Criterion, and much more spotted on the segments. The second was almost the same in colour as Criterion, but the flowers were much larger, and of a fine thick texture. The third was much lighter than Criterion, but larger, in fact, something between Eulalie and Criterion. These sports are now beginning to throw off others of a different strain, some of them nearly white, with slight stripes and flakes; others white with a green eye; but as I am rather particular in my selection, studying to obtain improvements rather than novelties, I am not at present preserving the sports of the second generation, although I may yet get something good from them.

I have noticed, particularly in these Indian Azaleas, that when plants become aged, and the wood hard and stubby, they are the more disposed to sport. Many sports will make their appearance while the plants are young, but as they advance in growth and age, still more will be developed. One can generally determine by the growth of a plant after it has been grafted, from what family or class of Azaleas it has descended. For instance, there are the small-leaved varieties, variegata, lateritia, and Gledstanesii, representing one family, but which of these is the original I cannot decide, though I am certain they are sports from one parent; and as the white-ground sorts show a greater disposition than others to yield sports, I am led to suppose that Gledstanesii is the original. I have had all three distinctly developed upon one plant when grafted with either of the varieties separately; but I have found Gledstanesii and variegata more disposed to sport than lateritia.

There are now many fine sports from the kinds just named, as well as some few varieties that have been produced from seed, but I should say there are two produced from sports to one from seed. There is variegata superba, sent out by Messrs. Ivery & Son, of Dorking, very much superior to the old variegata in its colour and markings, and really a fine thing, well worthy of a place in any collection, however limited. Another sent out by Mr. Bull, under the name of Duc d'Aremberg, is evidently a sport from variegata; and when in bloom I cannot perceive the least difference between this and variegata superba, which had been sent out two or three years before the Duc d'Aremberg made its appearance. There is a whole host of this class, which I have yet to prove, most of them continental productions; but having cut them rather freely for grafting, I have not been able to bloom them to perfection, though as they are all loaded with bloom buds, I hope to do so this next season. Etoile de Gand, which is a lovely flower sent to us from the Continent, has always appeared to me to be a sport from either variegata direct, or from one of its sports, perhaps in the third or fourth generation. I myself had two or three sports this season from Etoile de Gand, that I set the greatest store by; one of them, a beautiful salmon pink, has a distinct white stripe down each segment, wide at top and terminating in a point at the eye. Another is a rosy peach with a lilac or rose shading in the throat, and finely spotted. If I can only succeed in fixing these two sports such as they have showed themselves last season, I flatter myself they will prove two of the very best Azaleas ever seen, as their shape and texture is everything that could be desired.

There is another family of Azaleas represented by Criterion, which has yielded many sports. Had I not been assured by Mr. Ivery, who sent out Criterion, that he had raised it from seed, I should at once have said it was a sport from Iveryana, as I have many times had a sport precisely similar, from that variety. There is one called Iveryana Improved, a sport from Iveryana, with the flowers of thicker and finer texture; this also gives Criterion sports, and some of them very fine flowers. Another received from the Continent under the name of Iveryana alba cincta, and evidently a sport from Iveryana, but not sufficiently distinct from Criterion, gave me reason to suppose that Criterion was a sport, until Mr. Ivery assured me to the contrary. I find that if Criterion, Iveryana Improved, and Iveryana alba cincta are standing together, I cannot distinguish the one from the other without referring to their numbers, as their wood, the colour of their leaves, the shape of their flower-buds, and the general habit and growth of the plants are the same. Another sport of this group has of late made its appearance under the name of Mdme. Ambroise Verschaffelt; this is a robust growing and showy variety, very rough in its flowers it is true, but one that will be sought after by many growers in consequence of its having a frilled edge, in the way of crispiflora, and very distinctly dark-spotted upper lobes. If this is compared with Alexander II. it will be found precisely the same not only in growth but in the buds before opening, and in the whole aspect of the plant. I had always considered it to be a sport from Alexander II. when last season my opinion was confirmed by Mdme. Ambroise Verschaffelt having produced distinct blooms upon her of Alexander II., and by the latter having also borne distinct blooms of Mdme. Ambroise Verschaffelt. Another sport, called Surprise, has appeared at the London shows of the past year. When this was pointed out to me by one of its owners, I at once pronounced it to be none other than Madame Ambroise Verschaffelt, but it was declared to be one of their own seedlings, and very distinct, the great distinction being of course pointed to me, as well as the qualities in which it excelled the variety I had mentioned; unfortunately however, my declining sight did not permit me to perceive the vast difference between the two. It was further remarkable that the plant shown was a grafted one, but this was accounted for by the parent having been unfortunately knocked down and broken off, the mutilated remnants, however, having been as fortunately secured. This splendid variety, as it was considered, was brought before the Floral Committee at South Kensington, and a plant of Mdme. Ambroise Verschaffelt from Mr. Veitch's collection being placed with it on the table, it was unanimously decided by that body, comprising many of the best judges of the day, that they were the self-same thing. I have no doubt but that our continental friends had discovered the sport some years previously to this; and had taken the opportunity of grafting it, and then sending it to this country for distribution under its present name. The plants when first received must have been at least three years old from the graft.

I allude to these facts under the impression that proper attention is not paid, either in the case of seedlings or sports, before sending them out to the public. The parties holding them form the opinion that they are really improvements, and superior to those in cultivation, but do not make themselves sufficiently acquainted with the varieties already distributed. Such a course will most assuredly end in disappointment to purchasers, whether it be those who grow them for commercial purposes, or as specimen plants for their own pleasure. I fear we shall have too many sent out; and the number of new varieties we are continually receiving, especially from the continent, leads me to believe that many of them must be inferior to what we have already got. Upon referring to my list book I find 56 new names added to it in 1862, and 47 in 1863, making 103 in these two years. Now it must be evident that these cannot all be improvements. I would therefore suggest to those who are cultivators of either seedlings or sports, that they should be very particular to send out nothing which is not of a superior character; otherwise we shall have such a crowd of varieties that many of the best sorts will be discarded to make room for others bearing new names, but whose flowers are in every respect inferior. Out of those I have received during these two years, I have as yet flowered but few, in consequence of propagating them, but I shall bloom most of them in the ensuing season, and shall then be able to give my opinion as to their qualities. Some few continental kinds that have bloomed with me are not up to the mark, but I shall give them another trial before I condemn them. I intend hereafter giving a list of those I consider to be fine and valuable varieties, both seedlings and sports. *William Barnes, Camden Nursery, Camberwell.*

NOTES ON GARDENS.—No. II.

(*Continued from p.* 1133, 1863.)

YORK.—EDINBURGH.

THE grounds at York, in which the Museum of the Yorkshire Philosophical Society stands, rise boldly from the river Ouse, and are diversified in a very picturesque manner. They contain, besides the Museum, the ruins of the Roman fortification of Eboracum, as well as the very beautiful remains of the Abbey of St. Mary, and those of other buildings of great antiquity. In the Museum there is a good collection of fossil Ferns and Cycads in fine preservation, also a Hortus Siccus; while out of doors, in front of the Hospitium, an old building filled with Roman antiquities, is a small botanic garden, naturally arranged. But the chief interest in the plant way lies in the houses, of which there are several in a retired part of the grounds, filled with well-grown, fine-leaved plants, Ferns, stove and greenhouse plants, &c. The Ferns were particularly well managed, and a house devoted to the exotic species was very effectively filled with good specimens. I particularly noticed here Hymenolepis revoluta, a singular Fern, producing its sori on long caudal appendages at the apex of the fronds; Phegopteris sancta; Meniscium simplex; Nothochlæna tomentosa, and the beautiful silvery N. trichomanoides; the curious Doodia monstrosa, and a noble specimen of the highly interesting and rare Llavea cordifolia, with numerous other Ferns of interest. The British species were equally well represented, nearly all the curious varieties which have been shown in London during the past few seasons being amongst them. Finely-grown plants of that most elegant of Britishers, Athyrium Filix-fœmina plumosum, placed here and there, shed additional grace amongst these natives. I noticed a very remarkable form of Lastrea montana named Nowelliana; Scolopendrium vivo-polyschides in true

character; and a fine tuft of Asplenium Trichomanes incisum. On a small terrace in front of the houses was a very neat arrangement of alpines, and conspicuous amongst them several specimens of the dwarf and very striking Acæna novæ-zelandiæ, with its purplish crimson bristles decorating the heads of fruit. Mr. Baines being indisposed, and his assistant Mr. Feilden, fern-hunting in the Highlands, I was minus a guide; and, though the glorious old ruins, wavy grounds, and museum, make the place charming under any circumstances, yet I suspect much of interest was lost to me.

The neighbourhood of Edinburgh is a delightful one for the lover of rare and beautiful hardy plants, spring bulbs, &c. The pure air, and very sandy soil, in which plants thrive admirably that would perish, or at best only live, in a clay soil, no doubt tend to make it so; but the immediate reason is that many of the nurserymen and amateurs of Edina are not in the habit of measuring their horticultural excellence and pleasure by the number of Tom Thumbs and Purple Kings which they can marshal out by the first of June each year, but on the contrary endeavour to cultivate the most beautiful of the many plants which will bear the open air of our climate, many of which, indeed may but

"Show their plumage for a day
To wondering eyes, and wing away,"

yet the very transiency of their beauty is in itself a charm. Assuredly if the most sensational of flower gardens were to be petrified and preserved in all its glare, it would soon become about as interesting as a gaily-coloured pocket-handkerchief, and the wearied eye would demand repose. And then there is the associations of these rare plants. What a difference between the emotions called up by the sight of the little bed of Andromeda hypnoides, smaller than many of our Mosses, at the Comely Bank Nursery, and of those produced by some new blazer which has first seen the light at Kingston-on-Thames, and differs by a tint or two from some already known variety of the ubiquitous and "unkillable" Pelargonium zonale.

Taking the advantage of meeting with Mr. Stark at York, to get the names of a few places in his neighbourhood where I should be likely to find something interesting, I was particularly recommended to see Mr. Tait, the superintendent of Messrs. Dickson's extensive nursery in Leith Walk; and finding time to spend an hour with him there, I was well rewarded for it. Amongst the first things which struck my attention were two fine plants of Lilium giganteum, just going out of flower, and still perfuming the air for a considerable distance round. The plants were 6 and 7 feet high respectively, with 12 or 13 flowers each, and had proved quite hardy in the Leith Walk Nursery, having been planted out in 1858, the only protection given being a few inches of old tan over the roots in winter, and it was doubted if even this was necessary. But Mr. Tait's own especial favourites and *protegés* are the British Ferns, and he grows them to perfection in a charming retreat behind his house, though a wall only intervenes between them and the dusty Leith Walk. However, a real lover of Ferns will overcome any difficulty, and on the right side of the wall, the fronds are as fresh and clean as if a dozen miles from a waggon track. It would be useless to enumerate individuals, as all the species and almost every peculiar variety of British Fern is grown there. The Hymenophyllums with Trichomanes radicans and Andrewsii are grown in Wardian cases placed against the Ivy-covered wall which surrounds the Fernery on three sides, Mr. Tait's house completing the square and opening into the delightful spot. Against the walls glass cases of all sorts and sizes are placed, and many of them contain the densest, dwarfest, and healthiest specimens that I have seen of the British Hymenophyllums. As dead flakes of these are often to be seen in the best Fern-growing places, it may be worth while to describe Mr. Tait's mode of treating them. The north side of a wall is preferred for the cases, and there they remain in all weathers, protected in severe frost by having a bass-mat or two thrown over them. The patches of Hymenophyllum are fastened firmly with incorrodible wire on rounded conical stones, one of which is placed in the centre of each case. No soil is used except a little fine peat and silver sand, which is sprinkled over the plants when they are fixed, and then washed in with a fine rose. The cases are never kept close, more or less air being always given; when I saw them the doors were wide open, and I learned that during calm and moist weather they are left so night and day. Mr. Tait found, that if the cases were kept close the plants were apt to get discoloured, drawn and rarely fertile, some one or other of which ailments have certainly affected all the specimens of the British Film Ferns I have elsewhere seen in cultivation, except a very fine specimen in the garden of the late Mr. Borrer, which was subjected to nearly similar treatment. The plants and atmosphere surrounding them were not kept saturated with moisture, which some think should be the case.

In the herbaceous department I was delighted to see a bed of the graceful Acis autumnalis, so seldom met with about London, struggling into flower, the bed in which it grew being edged with Antennaria dioica rosea; several other beds filled with choice hardy bulbs were margined with the same exquisite composite. Most of the beds containing such things as Dog's-tooth Violets, Fritillarias, &c, were edged with some good alpine plant, such as the species of Gentian and Saxifrage. Having often admired the beauty of a few weakly-flowered plants of Helonias bullata, a large bed of it here in rampant health, woke up a vision of what its April aspect would be. The larger growing Ferns are planted extensively and with good effect on the banks of a dyke which runs through part of the nursery, the fronds nearly meeting in the middle, and thus making a pleasing feature of an otherwise unsightly stream. American plants are very largely grown in this extensive, excellently-cropped, and well-kept nursery, much of which, including the specimen ground, time did not permit me to see. The Americans are arranged systematically in 4 feet beds, the beds being edged with the dwarfer kinds, such as Gaultheria procumbens, Ledum buxifolium, Vaccinium Vitis idæa, Menziesias, &c. Menziesia empetrifolia makes a beautiful edging, and Dryas octopetala is also used for that purpose.

Mr. Rae, Superintendent of the Dean Cemetery, and late of the Comely Bank and Edgehill nurseries, being a noted "rare plant man," it was necessary to pay him a visit, and pleased I was to find that banks and stones were being adapted to suit the fastidious tastes of his pets. The cemetery really deserves more than a passing notice from its fine and picturesque situation on the banks of the Water of Leith, its tasteful laying out, and, particularly from its being embellished by almost every hardy ornamental tree and shrub procurable, including nearly all the weeping ones. Coniferæ, which there can be no doubt as to the propriety of employing extensively in such places, were largely used, Wellingtonias and the very best kinds being freely planted. The Miselto was abundant on several species of Thorn, and also on the Mountain Ash, Lime and Almond, which I thought unusual so far north. Without the blemish of gaudiness, the place was decidedly a garden, and from improvements now being carried on, it is likely to be much more interesting. One of these was the building of a house in a retired sort of reserve ground, for bedding and tender plants in winter. There were fine clumps of Lilium eximium in all its snowy beauty; several other kinds of Lily were in flower; and there was a great abundance of Perpetual and Tea Roses of the very best kinds. Simple spring flowers were, I was informed, much used for the decoration of the graves—another proof of good taste.

A handsome and commodious Gothic cottage for the Superintendent, is at once an ornament to the cemetery, and just such a house as a responsible servant should have. One could form an opinion of the sort of treat likely to be afforded by Mr. Rae's rockwork a year or two hence, when, after a few months of his stewardship, plants rare even in botanic gardens, such as Iris reticulata, Androsace Chamæjasme and villosa, Primula Stuartii, and numbers of suitable companions were already established there—meet inhabitants of the place where lie the remains of Ed. Forbes.

I had been told on good authority, that when Mr. G. Stirling was gardener at Melville Castle, he had the best private collection of Alpines and herbaceous plants in Scotland; and I found that he had not lost his love and enthusiasm for such things, for he has now two small gardens devoted to their culture at Comely Bank Place and Malta Terrace, Edinburgh, the latter for Alpines and the neat growing kinds, and the former for the larger species. Together, I was informed the gardens contained several thousand species, the greater number of them of ornamental character. The collection is a most interesting one, and probably the largest that is preserved by any private individual in the country. The Soldanellas, Primulas, and such plants were grown largely in 60 and small 60 pots, and seemed to do well in them. In the open borders patches of Acæna novæ-zelandiæ, a yard in diameter, were very striking; this is a very distinct and desirable plant. Amongst the scarcest species may be mentioned Petrocallis pyrenaica, grown very successfully in pots, Primula Stuartii, Saxifraga cernua, Chrysobactron Hookeri, Sedum Hookerianum, and Allium flavum, a pretty Allium, which I did not see elsewhere. The collection not being arranged systematically, it is probable that many other interesting plants were passed over during a hurried visit; but it was very evident to me, that before concluding any old favourite or rarity was quite lost to the country, it would be judicious to consult Mr. Stirling on the subject. *William Robinson.*

Home Correspondence.

First State of the Season.—The following letters relative to this subject had reached us before the present frost had set in:—I beg to furnish (says Jasper Standstill) a list of plants gathered in the open air in Berkshire, and presented to a young lady on New Year's morning, viz., Daphne Laureola and Mezereum, Verbenas, Gaillardia picta, Scarlet Pelargoniums, Polypodium vulgare, Scolopendrium vulgare, Polyanthuses, Cowslips, Stocks, Wallflowers, Violets, Berberis Aquifolium, Pampas Grass, Marigolds, Anemones, Gazania splendens, Picotees, Mignonette, Furze, Erysimum, Roses, Alyssum saxatile, Chamomile, Periwinkle, Arbutus, Laurustinus, Sowthistle, Groundsel, Rue, Ivy, Saponaria calabrica, Candytuft, Dianthus Heddewigii, Gentiana acaulis, Primroses, Arabis alpina, Nemophila insignis, Linaria Cymbalaria, Rhododendron dauricum, Daisies, Virginian Stocks, Antirrhinum, Jasminum nudiflorum, Banksian Roses (in bud) Pansies, Cydonia japonica, and Chrysanthemums. Total, 85 species and varieties. ——The following were in blossom in Christmas week, at Sunday's Well, Cork, viz., broad-leaved Myrtles between 5 and 6 feet high, which were as green as they were in August; narrow-leaved variety of Myrtle in the same condition; Jasminum nudiflorum, and the sweetly scented Cape Jasmine, Mignonette in abundance, and a few other annuals which have continued in bloom from July. Gentianella, Scarlet Tom Thumb Pelargonium, common Nasturtium, Marigolds, Violets, single and double; Primroses, Auriculas, Polyanthuses, Chrysanthemums, Garrya elliptica, China and Macartney Roses, also three varieties of Tea Rose, Picotees, Wallflowers, Cydonia japonica, Laurustinus, Chimonanthus fragrans, Yucca gloriosa, Magnolia grandiflora (standard); White Heath, Fuchsias, Snapdragon, Double blossomed Furze, and a Camellia tree 6 feet high covered with buds, and displaying about a dozen well blown bright scarlet flowers. In several parts of Cork the Strawberry beds look gay with their snowy tufts peeping from among the green leaves.—— In Leicester, on the last day of December, the following varieties of Rose were in flower, viz., Baron Hallez, Madame Laffay, Souvenir de la Malmaison, and Gloire de Dijon. Our correspondent adds that none of the new varieties of Rose in his opinion equal these for autumn flowering.——Mr. J. Webster, writing to the *Scottish Farmer* from Gordon Castle, Banffshire, on the 15th ult., says:—"The following is a list of plants still flowering in the open borders here, and, what is even more remarkable, some Ash-leaved Kidney Potatos, which had been left in the ground at lifting time, along the bottom of a south wall, started into growth in the warm weather about the middle of November, and some stems are now fully 6 inches long, with leaves as green and healthy as if it were the beginning of May:—Tritoma Uvaria, Nepeta salvifolia, Pyrethrum Parthenium flore-pleno, Morina persica, Valeriana montana, Anemone hortensis, Potentilla formosa, Antirrhinum majus, Arabis alpina, Alyssum saxatile, common Polyanthus, Gazania splendens, Carnations, Branching Larkspur, Geum coccineum, pot Marigold, Statice Pseudo-Armeria, Scabiosa fragrans, Dianthus sinensis, Gilia tricolor and capitata, Sweet Alyssum, Venus's Looking Glass, Collinsia bicolor, Mignonette, Clarkia pulchella, Brompton and Ten-week Stocks, Senecio elegans alba, Silene Atocion, Helichrysum, Nemophila insignis, Borage, Hollyhocks, Coronilla Emerus, Cydonia japonica, Garrya elliptica, Roses: Noisette Lamarque, and Gloire de Dijon; Tea, on a south wall, very fine; common China and a number of Hybrid Perpetuals also in flower." [So much for the beginning of winter. But what a change has come over us! A reference to the Weather Tables in another page shows that the THERMOMETER has fallen as low as 7°, in the Garden of the Royal Horticultural Society—*and this without snow!* Such a state of things is so uncommon that very serious consequences are to be apprehended among recently introduced plants. Communications on the subject, when the real amount of mischief shall be known, will be very carefully recorded in our columns, and we trust will prove so many beacons hereafter.]

Cool Treatment of Orchids.—Bletia (?) species from Orizaba (Botteri) having refused to bloom under glass in stove or greenhouse for years, was planted out in a heated open air bed. The pseudo-bulbs doubled in size during the season's growth, were taken up in autumn, and flowered strongly in the stove the following spring. *R. T. C.* [A very interesting fact, although we do not know what species was the subject of this experiment. Botteri did not send any Bletia among his dried plants, as far as we can discover.]

Rose Showing.—Having read the correspondence between Messrs. Cutbush and Paul relating to exhibitions of new Hyacinths, we were much disappointed at not seeing the names of the judges mentioned, as this might have thrown a ray of light upon the subject. For the last 30 years we ourselves have taken much interest in exhibiting, but the men who act as judges will compel us to retire. It might well have been said by a noble lady to her gardener at the Royal Horticultural Show in May last—"Go and see why Messrs. Lane's Roses are put second, as they are by far the best." Also at the Royal Botanic Society's Show in May last, our Roses were far in advance of those of our adversary, but the judges, Messrs. Perry & Perry, told John Edward Lane that they should not have the first prize, though the plants were admitted to be fine, because the blooms were all brought "to a face"—which was however surely better than showing one half of the flowers to the company, and the other half to the green baize at the back. In June, from what we were told by the judges in May, we trained our plants to show the same face all round; and, to our surprise, a collection was awarded the first prize, which consisted of nearly all stale flowers; one plant in particular, Louise Odier, had not one perfect bloom upon it, while others were trained as flat as a lady's fan, and the plants generally were small in size. We should not have taken the trouble of making these remarks, but it is quite time that the officials of the different societies took some interest in seeing whether the judges are capable of doing their duty or not, and

in the latter case to select others. Earlier or later, this, or something approaching it, must be done in order to prevent the most useful exhibitors from quietly staying at home. *H. Lane & Son, The Nurseries, Great Berk-hampstead, Herts.* [Surely the judges have acted on some principle—a just one we should hope; and can meet these strictures. In our opinion they do quite right when they attach small value to mere size.]

The Year 1863 *at Weybridge Heath, Surrey* :—

Wind.		Weather.		Departure from Mean of last Eight Years. +, *above*. —, *below*.	
Prevailing Winds.	On Days				
N.	16	Mean height of barometer	inches 29.890	inches	.0316
N.E.	42	Mean height of thermometer :			—
E.	4	Highest in the sun	66°.6288		.6818+
S.E.	13	Highest in the shade	60°.7465		1.2306+
S.	21	Lowest	40°.4932		.0826—
S.W.	125	Mean daily amount of ozone	3.4440		—
W.	16	Mean temperature	50°.6240		.5534+
N.W.	82	Rain fall	inches 21.5350	inches	2.8433—
		Number of wet days	32	days	5.6250—
		Number of days on which rain, &c. fell	181	days	10.2500—
Highest Winds		Driest month, April Wettest ditto, September			
January 1 and 2 (S.W., S (S.S.W)		Range of barometer	inches 1.78	inches	.024 +
10 and 20 (N.W. to W.)		Range of thermometer	70°.00		7.875—
24, 26, and 27 (S.W.)		Range of ozonometer	11.25		
30 (S.W. to S.S.W.)		February 13. Barometer highest	inches 30.59	inches	.0175+
February 2 (W. to S.W.)		November 2. Barometer lowest	inches 28.81	inches	.0962—
March 18 (S.W. to N.W.)					
April 22 (S.W.)		August 9. Thermometer highest :			
May 19 (N.E.)		In the sun	98°.5		1°.4375—
August 15 and 16 (S. to S.W.)		In the shade	89°		1°.6250—
September 7 (W. to N.W.), 19 (S.W.)					
October 31 (S.W.)		February 15. Thermometer lowest (in the night of)	19°		6°.0875+
November 2 (S.W.), 21 (S.W. to W.)		January 2. Greatest amount of ozone	11.5		
December 2 (S. to N.W.), 3 (W.)		May 4. Least amount of ditto	0.25		

W. F. Harrison, Bartropps, Weybridge Heath.

Vitality of Seeds.—I observe at page 1228 (1863) that allusion is made to the sudden appearance of plants previously unknown in the locality, by the upturning of the subsoil, in which the seeds are supposed to have remained in a dormant state from time immemorial. About 20 years ago I discovered plants of Linaria minor (previously unknown in Ireland) on a bank of earth or clay then recently thrown up in the formation of the southern and western railway near Carlow. On another occasion (1847) I found near Camolin in this county (Wexford), on a newly made ditch bank, a number of fine healthy plants of Melilotus leucantha, 4 feet high; and as far as my knowledge extends (and I have been a collector for 30 years), this plant was previously unknown hereabouts. In both cases seed was produced, from which I raised plants; but I have never been able to find either kind since in the same places. *A Constant Reader, Enniscorthy.*

Musa Cavendishii.—At page 6 is a remark relative to the splendid bunch of Banana grown by Mr. Carr, gr. to Mr. Hind, of Bylleet. I can testify to the precocity of the plant, for in the summer of 1862 a small example of this Musa was presented to my late employer, T. A. Gibb, Esq. It was immediately potted into a 12-inch pot, and plunged (for want of a more suitable place) in the centre of a fruiting Pine stove. It grew luxuriantly during the autumn, and as it had filled the pot with roots, I gradually withheld the supply of water, but (as I supposed from making its growth during the short days) it did not show fruit in the spring. After pushing several magnificent leaves in the months of May, June, and July, I again withheld water for about a month. The result was, after an abundant supply of water in September, that it showed signs of fruiting, and as the leaves were doubled against the glass I sunk the pot below the surface of the plunging material, taking off at the time two suckers and cracking the sides of the pot to allow the roots to find food in the bed. The bunch of fruit, which was just changing colour when I last saw it (Dec. 11), was not so large as that exhibited by Mr. Carr, but it was of such a weight that it had to be supported by a very stout stake. From the small amount of trouble with which this Musa may be cultivated, I hope to see it as common in the gardens of the affluent as Peaches or Grapes. As Mr. Carr has been so successful with it, perhaps he will kindly furnish us with his mode of treatment. *J. Gadd, Woodside, Crawley.*

Salisburia adiantifolia.—Our female variety of the Salisburia has this year borne 15 fruit, but these, in spite of the favourable season of our latter autumn months, have not been brought to full ripeness. *Extract of a Letter from the late Baron Jacquin, formerly Director of the Imperial Botanic Garden at Vienna, Nov.* 15, 1859.

Soap Plants.—For many years past they bring here a root, under the name of Levant Soap-wort in commerce, to wash lace and shawls with, and it is now being tried for washing wool on the sheep's back. It is a Gypsophila, and lately the root of G. paniculata has been imported from Hungary, where Rochel has introduced the use of it for the same purpose. *Extract of a Letter from the late Baron Jacquin, formerly Director of the Imperial Botanic Garden at Vienna, Nov.* 15, 1859.

Rhododendrons and Sea Breezes.—Permit me to add a word in corroboration of what has been advanced by your correspondents at page 8. I reside in the north of Ireland in a thoroughly maritime district, and I can assure your readers that Rhododendrons grow here luxuriantly not 200 yards above high-water mark, in loamy soil, in a position very slightly sheltered from the cold piercing east wind coming off the sea. I am also perfectly convinced that it is a mistake to suppose that they will not grow and flourish on a limestone subsoil, as I have known them grow and luxuriate as finely as could be desired in a subsoil of that description, and without one particle of peat in the composition in which they were growing. *J. Bothwell, Co. Down, Ireland.*

Rhododendrons as Game Cover.—The kind of soil best suited for these has been pretty well discussed, but there is another question quite as much in want of being settled :—viz., the fitness of Rhododendrons for planting for game cover. I have always observed, wherever a choice was to be had, that pheasants, blackcocks, and hares, (I speak not of rabbits, for they seem less particular in their likings), invariably prefer such covers as have few or no Rhododendrons in them in the shape of underwood. This therefore is a subject much in want of attention, and I trust that some of your practical Correspondents will give us their experience in the matter. *Senilis.*

Societies.

LINNEAN: *Dec.* 17.—G. Bentham, Esq., President, in the chair. R. Hardwicke, Esq., was elected a Fellow. The following communications were read :—1. "On a new species of Cissus (C. gastropus, Welw.) from the littoral region of South Benguela (district, Mossamedes), with some general observations on the chorographical distribution of the Ampelideæ in Angola," by Dr. Welwitsch. The author stated that the entire number of species of this family which he had met with in Angola amounted to about 40, so distributed that, in advancing from the coast towards the elevated plains of the interior, there was found to be a gradual increase in the number of species, as well as of individuals, and with this peculiarity, that certain species with very fleshy stems and slightly hairy leaves were confined to the coast region, while others with long climbing stems and nearly smooth or even shining leaves, occurred principally in the primitive forests of the second region reached in proceeding eastwards; others again with short upright stems, and usually more or less tomentose leaves, were particularly abundant in the third and most easterly region, comprising the high table-lands of the interior. The author then indicated the principal characteristics of C. gastropus, and exhibited dried specimens of the leaves and flowers, and a living one of the singularly swollen and fleshy stem, the lower part of which was upwards of 2 feet in circumference, although the height to the forking of the branches was scarcely a foot. This singular species, which, though one of the dwarfs of the genus, is at the same time that in which the trunk attains the greatest diameter, was stated to be further remarkable from the manner in which the smooth membranous, buff or cinnamon-coloured epidermis separates from the green gouty-looking stem. The author intimated his wish to communicate at a future meeting some further observations on the Ampelideæ of Angola and Benguela, on which occasion he proposed to give some account of a few of the more remarkable species, to one of which, particularly characterised by the golden brown velvety hairiness of its leaves, he had assigned the name, C. Livingstoniana, in commemoration of the distinguished African traveller, with whom he had spent several weeks in the interior of Angola. The curious stem of this new Cissus gastropus bore a remarkable resemblance to the gouty trunk of Jatropha podagrica; while the leaves were large, palmately divided, with long-stalked obovate leaflets.—2. "Flora of the Jhelum District of the Punjab," by Dr. Aitchison, communicated by Dr. Thomson. The district comprised in this Flora is bounded on the south by the river Jhelum, on the south and east by the Khasian hills, on the east and north by the bend of the Jhelum river, which forms the boundary between the British and Kashmir territories, on the north by the ravine country of the Rawul Pindee district, and on the west by an imaginary line drawn from Shapore to Tullagury. The Eastern half has the Bukrala and Ratian ranges of hills running through it; their average height is stated at about 1100 feet, but one of the most westerly parts of the Ratian range, Mount Tilla, rises to 3200 feet. The portion lying on both sides the Jhelum, between the Ratian and Khasian hills, consists of well cultivated plains; but in the hills already referred to, spoken of generally as the Low ranges, there is no cultivation, but a growth of low jungle, among which droves of cattle, sheep, goats and camels, are sent to graze. To the north of the salt range, between the Ratian and Bukrala ranges, the land is cut up by ravines, and is poor and more or less saline; passing westwards, however, it is richer, and produces fine crops of Pulse; indeed the Gram of this part of the district supplies much of the Punjab. The crops were however stated to be much dependent upon rain. From Jelullpore towards Pend-dadan-khan the soil is rich, producing fine crops, including the Sugar-cane as a field crop, and some rice in the moister parts. The bulk of the paper now read, was occupied by an enumeration of the plants of which the Flora is composed. It was mentioned that Brassica campestris, largely cultivated, yields Surson oil; and B. Eruca, also largely grown, yields Black Surson, or Tarameera oil. Capparis aphylla yields wood which burns even while green, and does well instead of boxwood for turning; the fruit is preserved as a pickle, and called Teuti. Cratæva religiosa, called Burna, furnishes a cement in the clammy mucilage of its fruit. Gossypium herbaceum is cultivated throughout the district for local consumption. Zizyphus Jujuba, called Baer, is grown for its leaves and fruit, which furnish good fodder for cattle; the Baer jungles, however, are partly formed by Zizyphus nummularia. Rhus integerrima yields tolerably good timber, called Zebra wood, suitable for cabinet work. Acacia arabica is common, and yields valuable timber; the leaves, flowers, and fruit, being also used as fodder for cattle, and the bark for tanning; the gum, called Keekur, is valuable. Another species, A. modesta, yields timber of great value from its durability and hardness, and supplies much of the fire-wood of the district. Tamarix dioica yields galls called Burree Muee, of which large quantities are exported from the Mooltan district. The wood of Olea europæa, which is called Cow by the natives, is chiefly used for the handles of axes, and for turning and firewood. Caroxylon fœtidum, which with Suæda fruticosa occupies large tracts of land incapable of producing more useful vegetation, furnishes by burning a coarse carbonate of potash and soda, called Sudgee. Of Rottlera tinctoria, the red epidermis of the fruit is recognised as a vermifuge for tape-worm by the natives. Many other similar notices of the uses of the plants, were scattered through the paper. ——3. "On Adelanthus, a new genus of Hepaticæ," by W. Mitten, Esq. The Jungermannia falcata of Hooker is one of the three species referred to this new genus.

Notices of Books.

Popular Names of British Plants. By R. C. A. Prior, M.D. Williams & Norgate, 1863, 8vo., Pp. 250.

It is curious to observe, how the information derived from one department of human learning dovetails into that which another supplies, till the two in conjunction put us on a vantage ground, from which light may be thrown upon some perfectly new, and perhaps difficult branch of study. These thoughts are suggested by the very interesting work before us, in which the author brings his ample store of botanical knowledge and the results of deep research into the northern and other languages, to bear, not merely on botany and philology, as one would expect, but actually tries to elucidate by their means curious and difficult questions, such as the early civilisation of our forefathers, and the route which they must have followed, in travelling from the East.

We are all familiar with the fact, that the names of the animals tended and fed by our Saxon ancestors in England, the ox, calf, sheep, &c., are known to this day by their Saxon designations, while the flesh of the same animals, considered in its quality of food, under which character only the Norman conquerors cared to know it, still goes by the French or Norman names of beef, veal, and mutton. This single fact would prove a Norman conquest, even if there were no existing document whatever giving an account of it. Dr. Prior's mode of reasoning is something of this kind, and we take the word Apple as a good example.

"In all the Celtic and Sclavonian languages the word is, with allowance for dialect, the same. This similarity, or we may say identity, of name, among alien nations would lead us to believe that it was brought with the tree from some one country, and that no doubt an Eastern one; and that the garden Apple is not, as it is often supposed to be, merely an im-

proved Crab, but rather the Crab a degenerate Apple. This was apparently the only fruit with which our ancestors were acquainted before they came into Europe: for, with the exception of a few wild berries and the Hazel-nut, it is the only one for which we have a name that is not derived from the Latin or French. It seems to have accompanied them on a northern route from the western spur of the Himalayan mountains, a district extending through Ancient Bactria, Northern Persia, and Asia Minor, to the Caucasus, and one from which we have obtained, through the Mediterranean countries, and within the historical period, the Peach, Apricot, Plum, Damson, Cherry, Filbert, Vine, and Walnut, and probably some of the cereal grains; a district in which there is reason to think that our portion of the human race first attained to civilisation, and whence it spread, with its domestic animals and plants, to the south-east and north-west. The meaning of the word is unknown, but as *ap* is, in Zend and Sanskrit, 'water,' and *p'hala* 'fruit,' we might be tempted to believe that it originally meant 'water-fruit,' or 'juice-fruit,' with which the Latin *pomum*, from *po*, to drink, exactly tallies. The remarkable coincidences of name, to which allusion has been made, are due to the intimate connection with each other of all the Ind-European nations and their languages, from their having grown up in the same nursery together in Upper Asia, and dispersed subsequently to their becoming acquainted with this fruit, and not to a mutual borrowing of it since their settlement in Europe."

Again, Dr. Prior proves that the tribes which descended upon Britain, had entered Europe, not as a set of savages, wandering pastoral tribes, or mere pirates and warriors, but as colonists, who, though rude in dress and manners, yet in essential points were already a civilised people. Further, they must have come from a colder country, for, while the names of their trees comprehend the Oak, Beech, Birch, Hawthorn and Sloe, trees that extend far into Northern Asia, they do not comprise the Elm, Chesnut, Maple, Walnut, Sycamore, Holly, or any evergreen except some of the Fir tribe, or Plum, Pear, Peach, and Cherry, or any other fruit tree except Apple. The fact of their adopting Latin names for all these trees, shows at once that when first they came in contact with the Roman provincials on the Lower Rhine, they were foreigners, newly arrived as colonists or conquerors, from a country where these trees were unknown. In fact, they came from their home in the East, with a knowledge of letters, and the useful metals, and with nearly all the domestic animals, cultivated Oats, Barley, Wheat, Rye, and Beans, built houses of timber and thatched them, and actually hedged their fields and fenced their gardens.

The romantic reader will be sorry to find that "our Sweet Alisons and Herb Trueloves, our Heartseases, Sweet Cicelies, and Sweet Williams resolve themselves into sadly matter-of-fact terms, which arose from causes very different from the pretty thoughts with which they are now associated, and sometimes, as in the case of the Forget me-Not, were suggestive of very disagreeable qualities. Many we shall find to have been given to them in accordance with the so-called doctrine of signatures. This was a system for discovering the medicinal uses of a plant from something in its external appearance, that resembled the disease it would cure; and proceeded upon the belief that God had in this manner indicated its especial virtues. Thus the hard stony seeds of the Gromwell must be good for gravel, and the knotty tubers of Scrophularia for scrofulous glands; while the scaly pappus of Scabious showed it to be a specific in leprous diseases."

Besides the etymology of the names, taken by themselves, Dr. Prior says the question is ever arising, why they should have been affixed to certain plants. Here the fanciful notions of old writers must generally be accepted with reserve. Synonyms in foreign languages, though useful, are not very trustworthy; for authors, mistaking the sense of some unusual or obsolete word, often mistranslate it into another; so that it is quite impossible to reconcile what is said of certain plants by Greek and Latin writers. At home we find the Scotchman's "Bluebell," which he celebrates in song, a totally different flower from the English Bluebell. This vague way of applying the same name to very different plants causes endless confusion. Who would dream that the Privet has obtained a name indicative of early spring, from having been confused under "Ligustrum" with the Primrose? or that the Primrose has borrowed its name from the Daisy?

Under the word Beech we learn that in northern languages the word book and Beech-tree are identical, except in gender. Thence, by comparison with the Sanskrit, we deduce that the introduction of alphabetic signs from the East was by a northern route, and not from the Mediterranean. For had we learnt them from Greeks or Romans, we should have adopted their names for book and writing materials. The Greeks take their *βίβλος* from the name of an Egyptian plant, showing that book writing was a foreign art, and that they had left the parent stock before its invention. The Germans still retain the word *buch-stab* (beech-stave) in the sense of a letter of the alphabet, the tree and its wood having taken their name and use in writing from northern nations. We observe also that both *βίβλος* and *liber* meant primarily the material, and only in a secondary sense a book; while our Beech means primarily a book, and only in a secondary sense a tree. Under the word Birch we learn the connection between the rind of a tree and the vessel that was made of it, and called a bark or barge; as also that between the same tree-bark and the German *bergen*, Anglo-Saxon *beorgan*, to protect or shelter, for which purpose Birch bark was used. Butter-cup is supposed to come, not from butter and cup, but from *bouton d'or*, the bachelor's button, the cup being the old English *cop*, a head. Flower-de-Luce, from the French *Fleur de Louis*, changed to fleur de lys, and fleur de lis. Baldmoney, the Mew, a corruption of Latin *valde bona*, as we learn from the *Grete Herbal*, is Meum athamanticum. Holly or Holm, Anglo-Saxon *holen* or *holegn*, from Latin *ulex*, confused in middle ages with *ilex*, the Holm Oak of the ancients, whence adj. *uligna*, and with the aspirate *huligna* and *holegn*. Tansy, from French *athanasie*, now contracted to *tanacée* and *tanaisie*; monks' Latin, *athanasia*; Greek, *ἀθανασια*, immortality, referring to a passage in Lucian's Dialogues, where Jupiter tells Mercury to take Ganymede away, "and when he has drunk of immortality, bring him back as cupbearer to us." The word *ἀθανασια* here, like *ἀμβροσια* elsewhere, has been taken for some special plant.

The author refers to no less than 70 works, mostly of early date, one of them being as early as 1486. He also uses abbreviations for no less than 44 different languages, to which he refers. This is a very extensive critical apparatus, and gives some notion of the labour and learning that he has devoted to his subject. The student who seeks to ascertain the truth, and the man of learning who can appreciate such things, will be delighted with Dr. Prior's contribution to the general stock of authentic information; but the general public will feel disappointed that so little ground has been discovered for the fancy names and romantic tales, which comparatively modern fancy has attached to so many of our pretty flowers.

Wine, the Vine, and the Cellar. By Thomas G. Shaw. Longmans. 1863. 8vo. Pp. 505.

The well-printed and very readable book before us is full of amusing gossip, connected with the wine trade, written by one who has visited the countries which he describes, and is evidently acquainted with the business in all its details, and who does not hesitate to let the reader into a vast number of the general tricks of the trade.

Mr. T. G. Shaw was the first man seriously and persistently to advocate the reduction of the wine duties to the uniform rate of 1*s.* per gallon. In this object he has been successful, but not altogether to the extent that he desired, for while wines below a certain low strength pay the uniform shilling duty, all wines in bottle, and all above this very low degree of strength, are charged with the higher rate of 2*s.* 6*d.*

Mr. Shaw describes some of the wine merchants' difficulties, arising at one time from the absurdities of our bonding system (which seem devised for the deterioration of all wines but those that are highly dosed with alcohol, and are thus proof against bad management); at another, from the capricious taste of the public; much from the intended protection of such bodies as the Alto-Douro company; more from the general ignorance that prevails respecting the treatment of all but the indestructible kinds above referred to. But there can be no doubt that a grand future is in prospect both for the consumer and grower of wine, for on the one hand the supply might be enormously increased, and on the other, did Englishmen care to have pure drinkable wines, they could be obtained at little more than the price that we often give for good cyder. As yet, however, these wine-producing countries have in general none but the worst of roads, and often distant shipping ports with heavy dues to pay; the growers are needy persons and very careless, both in the cultivation of the Vine and in the management of their processes; the capitalists are able still to keep up prices to an exorbitant height; and above all, the taste of a nation requires years to change, where the masses have scarcely ever touched wine in their lives, and the few who drink it habitually, love the potent alcoholic stimulant to which they have been accustomed, and will not tolerate the unsophisticated article. The book before us is dedicated to the Right Hon. W. E. Gladstone, the Chancellor of the Exchequer, under whose administration the duties have been so materially reduced; and the little success which these measures have hitherto met with is very properly attributed, in part, to the oïdium or Vine disease, for this has increased the price of wine more than 20*l.*, while the reduction of duty on the same quantity amounts to only about 18*l.*

The result, as Mr. Shaw observes, can scarcely be called "satisfactory" where the consumption of wine in this country, which was 7,263,026 gallons in 1851, last year only reached 9,803,046 gallons, after the very large reduction in duty had been made; and 77 per cent. of all the wine imported last year, exclusive of that in bottle, paid the 2*s.* 6*d.* duty, showing that people will have strength. They will have colour too, though it be made with Elderberries.

There is every reason to believe that these pages give a trustworthy account of the mysteries of wine-craft, which, besides the usual and necessary manipulations, is constantly employed in blending wines, so as to make a mixture "to order," agreeing as far as possible with the description given in colour, taste, and price—no easy matter, when certain kinds refuse to blend kindly with their opposites.

Mr. Shaw doubts the received opinion that the "sherris sack" of Shakspeare is "dry sherry," from the French word "sec," for he thinks little, if any, dry wine was drunk, without honey, sugar, or mead added to it. Again, he recommends decanting all wines, even champagne, and says that sherry requires decanting. At Malaga he found both white and red wine, at the "table d'hôte," little better than vinegar. Within a stone's throw of Chateau Margaux the wine he got could only be drunk with water.

But enough, those who care to know what they are drinking in the shape of wine, and its history, and what may be obtained in future, and whence, will do well to consult Mr. Shaw's comprehensive book, where they will find the fullest information that can possibly be desired. After the preliminary remarks, there is a description of every wine country and its produce, contained in 21 chapers, including short ones on Australian, Californian, and Peruvian. Then comes a chapter on cellarage and bottling; and the concluding chapter treats of gout. What more could one wish for. A list of all known wines is given, occupying 50 pages! and an appendix, followed by a general index.

Bemerkungen, &c. (*Figures of the Variations in Viola tricolor*). By Lesemann.

A handsome 4to volume, costing between 20*s.* and 30*s.*, containing coloured figures of 25 of the ugliest of all Pansies, which nevertheless appear to be pets in Austria.

The Popular Science Review, No. 10 (Hardwicke), contains many interesting well written articles, the best of which we think is Gamgee's paper on "Diseased Pork, and Microscopic Worms in Man."

The Natural History Review, No. XIII. (Williams & Norgate) has some capital papers, the best of which are Huxley's "On the Origin of Species," which no well informed man can dispense with reading, and Hooker's "On the Replacement of Species," of both which we may have something to say hereafter.

Miscellaneous.

Royal Horticultural Society.—In addition to the arrangements for 1864 mentioned at p. 10, we understand that his Grace the Duke of Buccleuch has signified his intention of giving a prize of 25*l.* for the best 12 fine-foliaged and flowering plants—six of each; the Council adding thereto a prize of 15*l.*, for competition among the unsuccessful candidates for his Grace's prize. The judicious mingling of fine-flowering and fine-foliaged plants offers an opportunity for the display, not only of horticultural skill, but of good taste.—Mr. Bateman also offers a prize for Orchids, in the shape of a gold challenge medal, value 20*l.*, or if preferred, the same amount in money, to the exhibitor (whether amateur or nurseryman) who may, during two consecutive years, obtain the largest number of marks for Orchids exhibited, the marks to be reckoned on a definite scale, *i. e.*, a second-class certificate or a special certificate of commendation counting for 50, a first-class certificate for 100. This will not be competed for at the great exhibitions, but will be determined at the Monthly Floral Meetings of the Society. — Lady Dorothy Nevill has placed 10*l.* at the disposal of the Council, for prizes for Pitcher plants. This sum will be divided between Sarracenias and any other Pitcher plants.—Sir Wentworth Dilke has repeated his offer of three prizes for dinner-table decorations. The only alterations in its terms are that the decorations are to be more strictly confined to horticultural elements, while the vessels in which they are to be shown continue unrestricted. The contents are now to be limited to natural flowers, foliage, or fruit—these may be shown in vessels of silver or clay or wicker, but the presence of artificial flowers, gold fishes, and stuffed caterpillars, or humming birds, will disqualify the exhibitor. Unless some novelty in another form be elicited by the prizes now announced, it is probable that this will be the last time of their being offered.—Mr. Blandy, V.P., proposes to encourage the Strawberry Fête by a prize of 10*l.*—Mr. Wilson Saunders offers prizes to the amount of 13*l.* for tea-scented or Noisette Roses, and for hanging baskets of pendent plants.—Mr. Kelk, by means of a prize of 10*l.*, directs the attention of cultivators to growing plants fitted for the decoration of the dinner-table. Many gentlemen prefer a handsome well-grown plant, naturally covered with flowers, for the decoration of their dinner-table, to a bouquet, however skilfully arranged, or even to the elegant adornment of such decorations as those of Mr. March. But the great difficulty has always been to get such plants in a small enough pot to admit of being put on the dinner-table. Mr. Kelk offers 5*l.* for an Azalea, and 5*l.* for a Rose, so adapted;—that is, grown in 6-inch pots. A new feature in the schedule for the July Show is the prizes offered for Scarlet Pelargoniums, or, as they are more commonly called, Scarlet Geraniums. The colours of these vary infinitely—as we have white Lilacs, so have we white Scarlet Geraniums; and the prizes that are offered in July will, it is hoped, bring out a good display of many different shades of colour in these flowers. The superiority of greenhouse specimens

of these flowers over those grown in the open air is scarcely sufficiently recognised. A show of Rhododendrons and American plants will be made by Messrs. Waterer & Godfrey, Knaphill, Woking, in the Rhododendron ground, in the end of May or beginning of June. For the encouragement of the study of scientific botany amongst all classes, the Society offers the following prizes:—1. One Silver, and two Bronze Medals for the three best collections of wild plants of each separate county of the United Kingdom, dried, mounted on paper, folio demy size, classified according to the natural system, and labelled with the name of locality where found, and the date when found. Intending competitors may obtain the forms of labels on sending 12 postage-stamps to the Secretary of the Society, South Kensington. 2. Three Gold Medals will be given for the three best of all the collections out of all the several county collections. Not more than one of the medals can be awarded in one county. The collections must be delivered on or before the 31st December, 1864, to the Secretary of the Society, carriage free, marked with a number or cypher, and accompanied with a sealed letter, containing the collector's name, the address, and the price at which the collection can be sold or another made. Further, a Society's Gold Medal will be awarded to every exhibitor of a new species of plant found growing in the United Kingdom. The Society will hold an exhibition of Ancient and Modern Bouquet-holders, to be opened on the 13th July, and to continue open for four weeks. For the three most artistic and effective modern Bouquet-holders, made since June, 1861 (the opening of the Gardens), they will award three medals—one gold, one silver, and one bronze. The ornamentation of these Bouquet-holders may be with precious stones or their imitations, enamelling of all kinds, niello work, or any other process. The competition is open to all nations.

Fraudulent Trade Marks.—On the 1st of January an important Act of Parliament, intituled "the Merchandise Marks Act, 1862," the main provisions of which it concerns all persons engaged in trade of every description to know, came into practical operation for the first time. The Act, passed in August, 1862, makes it a misdemeanour to forge or counterfeit any trade mark, or falsely to apply any such trade mark, with intent to defraud, whatever the article to which it may be applied, whether it be a cask, bottle, stopper, vessel, case, cover, wrapper, band, reel ticket, label, or any other thing in or with which any commodity is sold or intended to be sold. Again, it is from henceforth an offence for any one to sell or expose, either for sale or for any purpose of trade or manufacture, articles with forged or false trade marks attached, the penalty being the forfeiture of a sum of money equal to the value of such articles, and a sum besides not exceeding 5*l.* nor less than 10*s.* By another provision every addition to and altefation and imitation of any trade mark made with intent to defraud—the intent being of the essence of the offence in all cases—are to be deemed forgeries, and punishable as such. It is made obligatory on every person who shall sell an article having a false trade mark to give information, on a demand in writing being made upon him, as to where he procured it; and power is given to justices of the peace to summon parties refusing or neglecting to afford such information, and in the event of their persisting in their neglect or refusal, to impose a penalty of 5*l.* Further to mark any false indication of quantity upon an article with intent to defraud, is made punishable by a penalty equal to the value of the article, and the payment of an additional sum not exceeding 5*l.* and not less than 10*s.* This provision will apply among other cases to the familiar instances of pale ale sold in bottles, and of cotton reels and the like, on which the contents are falsely denoted. The punishment on conviction of any offence which by the Act is made a misdemeanour is to be, at the discretion of the Court, imprisonment for not more than two years with or without hard labour, or by fine, or both by imprisonment with or without hard labour and fine, and also by imprisonment until the fine (if any) shall have been paid and satisfied. The time within which any action or proceeding may be commenced for the recovery of penalties or procuring a conviction is limited to three years next after the commission of the offence, or one year after its first discovery by the person proceeding. There is a clause according to which the vendor of an article with a trade mark is to be deemed to warrant or contract with the purchaser that the mark is genuine, unless the contrary shall be expressed in some writing signed by or on behalf of the vendor and delivered to and accepted by the purchaser. The seller of an article, too, with a description upon it of its quantity, is to be deemed to contract and warrant that the description is true, unless, as before, the contrary shall be expressed in writing delivered to and accepted by the buyer. This again will apply to the familiar example among others of pale ale sold in bottles on which the contents are indicated. A plaintiff suing for a penalty under the Act may be compelled to give security for costs; and on the other hand a defendant, in case of judgment going in his favour, is to have a full indemnity for costs.

Death of M. Fintelmann.—The papers record the death of the head gardener to the King of Prussia, M. Fintelmann, at Charlottenburg, on Christmas-day, at the age of 90. When young, he was employed at Sans Souci, and he loved to tell how Frederick the Great used to point to the finest Figs with his cane and make him fetch them down from the trees. It was he who cultivated the first Dahlias, which Alexander von Humboldt introduced into Prussia, and to him are due the chief attractions of the gardens on Peacock's Island, near Potsdam, the favourite resort of Frederick William III. *Times.*

Spondias dulcis.—The most prominent place among the native fruits undoubtedly belongs to the Wi (Evia dulcis, Comm. = Spondias dulcis, Forst.) The tree appears to be self-sown, and is met with in abundance about towns and villages. It is often 60 feet high; the bark is smooth and whitish, the leaves pinnate, glabrous, and of a dark green, forming a fine contrast with the yellow oval-shaped fruits with which the tree is heavily laden. The fruit has a fine Apple-like smell, and a most agreeable acid flavour, rendering it highly suitable for pies; indeed, the Wi is the only Fijian fruit which recommends itself for that purpose. At Rewa I weighed and measured several highly developed ones, and found the largest to be exactly 1 foot in circumference, and 1 lb. 2 oz. in weight. *Seemann's Mission to Viti.*

Calendar of Operations.

(*For the ensuing week.*)

THE present hard weather will have proved favourable to the filling of icehouses, a matter of considerable importance in large establishments. Of the mode of constructing ice-houses plans have been given in our volume for 1857, p. 6; and advice as to the best method of storing them with ice will be found at p. 20 of the same volume. In the article just alluded to, sawdust is stated to be the best material that can be employed for placing between the ice and the walls of the ice-well. It is a powerful non-conductor of heat, and ice packed in it on a small scale seems to indicate that it is worthy of trial on a large one. At all events the condition indispensable to the preservation of ice during summer, is that it shall be permanently surrounded by a mass of ill-conducting matter; no experienced person would allow his ice to be actually in contact with the sides of his well, and therefore straw is commonly resorted to as a preventive. We have reason to believe, however, that in many respects straw is inferior to sawdust for that purpose. Another point connected with storing ice that requires attention is efficient drainage. Under no circumstances in this country can ice be prevented from melting in some degree; as soon as it is converted into water, the latter rapidly conveys to it the warmth of the bodies with which it comes into contact, and the melting process becomes daily more and more rapid. To prevent this all icehouses should be furnished with a drain that will carry away the water as fast as it is formed. But if this drain is neglected or ill-constructed, it only increases the mischief instead of diminishing it; for warm air readily passes up it, acts upon the ice, and reduces it to water. To remedy this evil, such drains should be formed like an S so as to ensure the constant presence of water in the bend; straight drains facilitate the entrance of air and destroy the ice. Other out-door operations recommended to be performed last week, will in many cases be stopped in consequence of the sudden appearance of severe weather; nevertheless, we again advert to some of them, in order that our readers may be on the alert to take advantage of the earliest favourable opportunity of redeeming lost time. Within doors it is different; the time may be profitably employed in thoroughly cleaning every part of the glass houses and other buildings, in cleaning seeds, and arranging them with their labels ready for sowing, and in many other occupations.

FLOWER GARDEN AND PLANT HOUSES.

See that nothing out-doors is suffering from want of protection, and should a heavy fall of snow occur, take care that it does not injure tender plants by breaking off their branches. In-doors keep up sufficient heat to keep out frost.

AURICULAS.—Keep these dry for the present, and if they get frozen do not expose them on the return of favourable weather until they are thoroughly thawed.

BEDDING PLANTS.—The instructions just given are also applicable to these should frost touch them, but if possible they must be kept from it by means of efficient coverings.

CINERARIAS.—Many of these will now be coming into bloom; see that they do not suffer from want of water, and when placed in the conservatory or show-house take care that they are not set too near the glass at night while severe weather lasts.

VIOLETS.—The Neapolitan variety now in flower in pits may require covering up with mats while the frost lasts. When it breaks up let air again be given as freely as the weather will permit.

FORCING GARDEN.

Increased care must now be paid to temperature, which must however be accompanied by moisture sufficient to maintain the atmosphere in a healthy state; heat must nevertheless be used with moderation.

ASPARAGUS.—Add linings to the beds of plants put in for forcing if necessary.

MUSHROOMS.—Let the temperature for beds now in bearing range from 60° to 65°.

PEACHES.—If there is no tank for water in the early house, which there should be, the water used for syringing must be heated by other means, say to 60° or 65°, before applying it.

PINES.—If the bottom heat has sunk low in any of the tan beds, a little well prepared bark should be added to the height of the pot rims; let the heat of the beds and the state of the weather be the guide in administering water.

POTATOS.—Some may now be planted in boxes and forwarded in any convenient situation, previously to planting them in pits on leaves and dung.

VINES.—Guard against sudden changes; damp the houses in the morning with the syringe, and carefully guard the roots and stems from frost.

HARDY FRUIT AND KITCHEN GARDEN.

Little can be done in this department at present except pruning and wheeling. Draining and trenching may, however, also be proceeded with; and while snow keeps off, dead trees may likewise be felled and their stumps grubbed up.

APPLES.—When the weather becomes favourable root-prune such trees as may require such attention; afterwards mulch with rotten manure.

CAULIFLOWERS.—Plants under hand glasses, if not already done, must be covered with mats or dry Fern.

CELERY.—If not yet seen to, cover some of the best ridges with litter, or what is better perhaps, take a quantity of the plants up, tie their leaves together to prevent them from breaking, and house them in a cellar or shed.

ENDIVE.—Cover plants in frames to keep out frost, and also to assist in blanching them.

PEAS.—Trap mice, which may be destructive to rows of Dan. O'Rourke lately sown. Let sticks be got ready for use when required.

PEARS.—These may be treated in the same way as is directed for Apples.

ORCHARD-HOUSE.—Fruit trees in pots may now be introduced to this house. In open weather give all the air possible.

STRAWBERRIES.—Put sufficient of these for a second crop into a Peach-house or Vinery, and place them on a shelf near the glass where they will have plenty of light. A fresh supply of plants should be afterwards placed under cover every fortnight or so. Let the temperature be low at first, and even afterwards force gently and give all the air possible, or the flowers will be apt to become "blind."

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON
For the Week ending Jan. 6, 1863, as observed at the Horticultural Garden.

Dec. and Jan.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind
Thurs. 31	21	29.851	29.605	40	30	35.0	45	46	S.E.
Friday 1	22	30.173	29.805	37	20	28.5	45	46	E.
Satur 2	23	30.451	30.382	36	16	26.0	44	45	N.E.
Sunday 3	24	30.528	30.487	34	16	25.0	42	44	E.
Mon. 4	25	30.507	30.393	32	22	27.0	41	43½	E.
Tues. 5	26	30.324	30.154	31	8	19.5	40	43	N.E.
Wed. 6	27	30.188	30.165	23	7	15.0	39½	42	E.
Average.		30.289	30.141	33.2	17.0	25.1	42.3	44.2	

Dec. 31—Foggy; hazy; rain at night.
Jan. 1—Hazy clouds; cold and dry; frosty at night.
— 2—Cloudy and frosty; hazy, cloudy, and cold; overcast; frosty
— 3—Ground sprinkled with small hail; frosty; sharp frost at night.
— 4—Clear and frosty; overcast; sharp frost
— 5—Hazy; light clouds; severe frost at night.
— 6—Intense frost, continuing all day; within 7 deg. of zero at night.
Mean temperature of the week 12 deg. below the average.

STATE OF THE WEATHER AT CHISWICK,
During the last 38 years, for the ensuing Week, ending Jan. 16, 1864.

January.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 10 .	41.7	30 5	36.1	17	0.40 in.	3	10	3	4	5	7	4	4
Mon. 11..	41.5	30.6	36.0	19	0.77	4	6	4	2	6	9	3	5
Tues. 12..	42.4	30.7	36 5	16	0.76	2	7	3	4	6	10	4	4
Wed. 13..	43.0	32 1	37.5	18	0.29	5	4	5	4	6	6	5	5
Thurs. 14..	42.0	29.6	34 8	16	0.80	6	7	6	4	3	6	3	5
Friday 15..	41.5	28.9	35 2	12	0.54	3	6	4	3	4	8	4	6
Satur. 16..	41.7	30.6	36.2	19	0.34	1	9	5	2	5	9	4	4

The highest temperature during the above period occurred on the 14th, 1849, 15th, 1834, and 1852—therm. 56 deg.; and the lowest on the 14th, 1838—therm. 4 deg.

Notices to Correspondents.

CHERIMOYER: *St. Omer.* We venture to hope that your difficulty will vanish if you will again read attentively the reply we gave. "St. Omer" sends something, and is answered by what follows his name. "I M'I." sent something else, and was answered in like manner. Pray don't pin your faith on Loudon as an authority in Botanical nomenclature.

GARDENERS: *P, Sussex Street.* We much regret to say that we see no hope of your getting any other employment than that of an ordinary labourer. A gardener must write legibly, spell fairly, and express himself intelligibly; unfortunately your letter shows that you do not possess one of these qualifications: quite the contrary.

MANURE: *G H.* Yes; it is suitable, if not too strong: Rhododendrons prefer that of the cow. On no account, however, apply manure of any kind to Conifers.

NAMES OF PLANTS: *J S.* Ruscus androgynus. — *E J T.* 1, Hakea clavata; 2, Grevillea repens; 3, Muhlenbeckia complexa; 4, Polygonum pennsylvanicum.—*L G C* The plant with lilac flower and narrow leaves is Goldfussia isophylla; the broad-leaved blue-flowered plant, Eranthemum nervosum. The other leaves are not recognised.—*A. Bridgeman* Spiderwort.

PLANT CASES: *Enquirer.* Miss Maling's Indoor Plant Cases are the same as the Patent Indoor Plant Cases, mentioned in our advertising columns at p 15

WATER PIPES: *An Iron Pipe* has lately had some pipes let down to connect the tanks in his greenhouses with a reservoir at some distance off, and he wants advice as to the most certain way of preventing their rusting.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE, Address 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

THE LONDON MANURE COMPANY have now ready
PREPARED BONE MANURE for present use on PASTURES.
WHEAT MANURE for AUTUMN SOWING.
BLOOD MANURE for ditto.
SUPERPHOSPHATES of LIME, &c.
All the above being in the finest condition. They also continue to supply
GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, and every Artificial Manure of known value. E. PURSER, Secretary.
116, Fenchurch Street, E.C.

Autumn Sowing.

THE PATENT NITRO-PHOSPHATE or BLOOD MANURE COMPANY (LIMITED),
Consisting of Tenant Farmers occupying upwards of 30,000 Acres of Land.
Chairman.—JOHN CLAYDEN, Littlebury, Essex.
Managing Director.—JAMES ODAMS.
Offices: 109, Fenchurch Street, London, E.C.
Manufactory: Plaistow Marshes, Essex.
ODAMS'S BLOOD MANURE for WHEAT.—This Manure, specially prepared for Autumn Sowing, has been in use for upwards of 11 years, and has given great satisfaction to consumers.
Orders may be sent to the Company's Agents throughout the country, or direct to C. T. MACADAM, Secretary.
Offices: 109, Fenchurch Street, London, E.C.
Price 7*l.* 10*s.* per Ton, delivered at any Railway or Wharf in London.

LAWES'S WHEAT MANURE for AUTUMN SOWING.
A supply of the above Manure is now ready for delivery, at J. B. LAWES' Factories, Deptford, and Barking Creeks. Price 8*l.* per ton.
2 to 3 cwt. per acre to be harrowed into the land before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents; also
SUPERPHOSPHATE of LIME £6 6
MINERAL SUPERPHOSPHATE 5 5
Genuine Peruvian Guano direct from the Importers, and all Chemical Manures of value.
American and other Cakes at market prices.
Address JOHN BENNET LAWES, Offices, 1, Adelaide Place, London Bridge, E. C.; and 22, Eden Quay, Dublin.

AGENTS WANTED for a well-known MANURE which commands a ready sale, is highly recommended by Customers for several years, and sold carriage free. Liberal terms given.
Address B. C., 10, Pall Mall East, London, S.W.

Chemical Analyses.

DR. AUGUSTUS VOELCKER, F.C.S., CONSULTING CHEMIST to the Royal Agricultural Society of England, has REMOVED his LABORATORY from Cirencester to 101, LEADENHALL STREET, LONDON, E.C., where he receives a few Private Pupils for the Practical Study of Analytical and Agricultural Chemistry.

Land Drainage, and other Agricultural Improvements.

MR. BAILEY DENTON, C.E., maintains a large staff for the execution of Land Improvements by a commission of 5*s.* per acre for Under Drainage, and a fixed charge for Outfall and other works.
For particulars apply to him, at 52, Parliament Street, Westminster, S.W.

Drainage of Land.

MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

Drainage, &c.

MR. JOSEPH BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments, and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements. Valuations made for Sales, or the re-letting of Farms.
22, Parliament Street, Westminster, S.W.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &C. IN ENGLAND AND WALES AND IN SCOTLAND.
The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for farm purposes.
Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster S.W.

MESSRS. WAY AND EVANS, ANALYTICAL and CONSULTING CHEMISTS, receive PUPILS for the study of AGRICULTURAL and GENERAL ANALYTICAL CHEMISTRY.
106, Leadenhall Street, E.C.

THE GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY,
Offices: 52, Parliament Street, S.W.
HENRY KER SEYMER, Esq., M.P., *Chairman.*
Sir J. VILLIERS SHELLEY, Bart., M.P., *Vice-Chairman.*
J. BAILEY DENTON, Principal Engineer.
Under this Company's Act tenants for life, trustees, mortgagees, guardians, committees of incompetent persons, beneficial lessees, corporations (ecclesiastical or municipal), incumbents, charitable trustees, &c., may effect the following land improvements, and charge the outlay and expenses on the estate improved, by way of rentcharge, to be paid by half-yearly instalments, viz:—
1. All works of Drainage, Irrigation, Warping, and Embankment.
2. The Erection of Farmhouses, Cottages for Agricultural Labourers, and all kinds of Farm Buildings.
3. The Construction of Roads.
4. The Grubbing and Clearing of Old Woodlands, Enclosing, Fencing, and Reclaiming Land.
The owners of estates, not entailed, who may be desirous to avoid the expense or inconvenience of a legal mortgage, may also charge their Estates with an outlay in improvements under the simple and inexpensive process of the Company's Act.
The term of years for the rentcharge is fixed by the landowner, so as to adapt the amount of annual payment to the circumstances of the tenants, the term for building works being limited to 31 years.
No investigation of title being required, and the charge not being affected by encumbrances, no legal expenses are incurred.
The arrangements for effecting improvements are threefold:—
No. 1. The works may be designed and executed entirely by the landowner's agent, and the Company employed only to supply the loan and conduct the matter through all the official forms for charging the outlay on the estate.
No. 2. The Company will supply plans, specifications, and estimates for any improvements to be executed by the landowner's agent as under No. 1. In each of these cases the landowner will be solely under the control of the Enclosure Commissioners.
No. 3. The Company will undertake the entire resposibility of the improvements, prepare the plans, execute the works, and finally charge on the estate the actual amount expended, with their commission thereon, approved by the Enclosure Commissioners.
Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.
Works of Drainage and other improvements are also executed on commission for landowners, who merely require the skill and experience of the Company's officers and a staff in constant practice.
Applications to be addressed to WILLIAM CLIFFORD, the ecretary, at the Office of the Company, 52, Parliament Street, W.

THE CONSERVATIVE LAND SOCIETY.—Investments can be made either in the Share or Deposit Departments, with prompt withdrawal when required. The Interest allowed is 5 per cent. per annum on Shares, and 4 per cent. on Deposits, paid half yearly. No partnership liability, and the taking of land is quite optional. Depositors do not become Shareholders, and the latter only participate in any profits above the guaranteed Interest. The Society has paid from 4½ to 7 per cent. to Shareholders, and they have received 5½ per cent. for the past year. Prospectuses explanatory of the Share, Deposit, and Land Department, will be sent free of charge and postage to any part of the world. Plots of Land for Sale in 18 Counties, giving the freehold franchise and securing a safe investment. CHARLES LEWIS GRUNEISEN, Secretary.
33, Norfolk Street, Strand, London, W.C.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER, will REOPEN on MONDAY, Feb. 8. Applications for Admission must be made to the Principal.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.—J. BAILEY DENTON, M. Inst. C.E., will LECTURE on DRAINAGE.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.—Professor J. MORRIS, F.G.S., will give a COURSE of LECTURES on GEOLOGY, commencing on Feb. 15.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.—Hon. ALGERNON CLARKE, of Long Sutton, Lincolnshire, will Lecture on CATTLE, SHEEP, PIGS, and POULTRY.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.—JOHN THORNHILL HARRISON, of Frocester Court, near Stroud, will give a COURSE of LECTURES on DAIRY HUSBANDRY.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.—RICHARD GRIFFITHS WELFORD, Barrister-at-Law, will give a COURSE of LECTURES on LEASES and the LAW of REAL PROPERTY as affecting Agriculture.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
CARRIAGE ARRANGEMENTS.
The Directors have made arrangements with all the Railway and Steam Companies to deliver all Seeds with the exception of heavy articles, such as Grain, Tares, &c., CARRIAGE FREE to any Railway Station in England and Wales, or to any Steam Port in England and Wales, Ireland or Scotland, Guernsey, and Jersey.
CATALOGUES can be obtained, and every information given on application at the Company's Offices, 68, Welbeck Street, Cavendish Square, London, W.

The Agricultural Gazette.
SATURDAY, JANUARY 9, 1864.

A LITTLE volume has recently been published at Cirencester,* containing in so many chapters the lectures delivered by the Professors at the Royal Agricultural College, introductory to the several courses on Practical Agriculture, Chemistry, Botany, and Veterinary Surgery. It is itself introduced by a discourse on education in general, and more especially on agricultural education, by the Rev. J. CONSTABLE, the Principal, and it closes with a short description of the farm attached to the College, by Mr. J. LYNCH FLETCHER. The whole is a very fair illustration, both of what agricultural education ought to be, and of what the education at the Royal Agricultural College is.

The several courses of Lectures to which these were introductory have been since delivered, and a session has elapsed. What it is supposed that the students may have acquired during the course of it, is indicated by the several examination papers which are appended to the volume; and by which their attention to the instructions of the several professors has been tested.

The direct agricultural teachings of the past session have been conducted on a somewhat novel plan. The topics which more especially fell to be discussed during it were the series between the cultivation of the land, and the harvesting of the crops. Instead of placing the whole, as heretofore, in the hands of one teacher or professor, the services of several lecturers were obtained, and those of others were gratuitously rendered. Thus Mr. MORTON, whose introductory lecture appears in the volume just referred to, delivered eight lectures on land drainage and tillage. Mr. BAILEY DENTON also lectured on the former of these subjects. Mr. SCOTT BURN delivered a course of elaborate and instructive lectures on farm implements and farm buildings. Mr. BALDWIN, of Glasnevin, was resident for several weeks as lecturer on the cultivation of farm crops; and acquitted himself so satisfactorily that we understand his services have been secured for occasional courses hereafter. Mr. HEWITT DAVIS and the Rev. G. WILKINS were good enough to lecture on the right apportionment of seed to the extent of land to be seeded. Mr. WILLOUGHBY WOOD, Mr. T. DUCKHAM, and Capt. TANNER DAVY, the Editors of the Herd Books, undertook introductory lectures on the three leading breeds of cattle. Mr. ELLMAN, of Bedingham, Lewes, lectured on Short-woolled breeds of Sheep, and Mr. J. A. CLARKE delivered a lecture on Leicesters and Long-wools, part of which we have this day given in our columns.

It is plain that by the appearance before the students of occasional lecturers of public reputation and well known qualifications in connection with the several subjects which they discussed—all these topics have been much more fully treated, and the students themselves have been much more completely taught, than they could have been had the task devolved on one alone.

The thoroughness of the agricultural instruction thus given, has so commended itself to the Council of the College that the system thus inaugurated is to be persevered in, and already we understand arrangements have been made by which during the coming session the services of Mr. ROBERT RUSSELL, Editor of the Highland Society's Transactions; of Mr. J. ALGERNON CLARKE, whose name is well known everywhere in the agricultural world; of Mr. BALDWIN, of Glasnevin; and of Mr. J. T. HARRISON, C.E., of Frocester Court, Gloucestershire, have been secured in connection with courses of lectures on the breeding, rearing, and feeding of live stock, on dairy management, &c.

The volume before us, by which the full extent of the system of education adopted at Cirencester is indicated, should be procured and read by every one interested in the subject of agricultural education, whether on his own account or in behalf of others. We hope that by its general circulation and perusal it will tend to the increased usefulness of the Institution which it illustrates.

* "*Agricultural Education.*" Baily. Cirencester.

THOUGH the produce of the Turnip field has not been quite so bad as was anticipated from the appearance which it wore in many parts of England in early autumn, from the combined effects of drought and mildew, the crop has suffered materially in quality from a diseased condition of its tissues, which in many cases will not only detract from its feeding value, but must end in decay. Nor indeed has this condition been confined entirely to districts which have suffered from drought, but in parts of Wales where the crops in the beginning of September were peculiarly luxuriant we observed indications of the malady, which was induced apparently by a decay of the delicate rootlets, by means of which deleterious matters were introduced into the tissues, which could not have entered had the absorbent tips remained sound. It was easy to pick out such diseased individuals from an unhealthy appearance in the leaves, though the malady was in an early stage of development, and a vertical section through the crown and root at once showed the

decay which was sure to follow. The lower leaves are the first to suffer, but ultimately the whole tuft decays, and then the root more or less rapidly perishes.

In at least three varieties of white Turnips, moreover, we have observed a peculiar condition which deserves notice. In both late and early sown Turnips, when just arrived at perfection, we have been surprised to find the bark of the roots, especially just beneath the cuticle, though quite sound externally, and again that portion of it which is close to the vascular bundles situated more deeply, traversed with round patches distinctly visible to the naked eye, and of a more moist appearance than the surrounding cellular tissue. On examination these patches are found to consist of much smaller cells, which either radiate from a central point which is often discoloured, or are arranged concentrically round it. In process of time they acquire a brownish tinge, indicating an organic change in the walls of the cells somewhat similar to that which was noticed so constantly in the Potato murrain.

If we examine the central substance of the roots, we find similar spots, but far more disposed to run into decay, together with vessels gorged with dark brown matter, an indication which is never without significance. It was remarked of the white crop which was more especially under notice, consisting of three approved varieties, two of which had grown with extreme rapidity, that in boiling they contracted a foxy appearance, which seemed to intimate that the cell walls were ripe for decomposition.

As regards the crops of Swedes, which have recovered so wonderfully from the mildew which seemed to threaten their destruction, it can have scarcely escaped notice that the Turnips were peculiarly long-necked, a circumstance which clearly arose from the old leaves, which had been destroyed by the mould, falling away, and being succeeded by an entirely new crown.*

The mention of this circumstance induces us to offer a few words respecting the controversy which has arisen lately about the reversion of Swedes to the Rape type. This reversion, if it may be so called, attracted our notice several years ago, and induced us at that time to recommend farmers to grow their own seed from selected and transplanted roots, attention being paid rather to distinctness of type than to the mere size of the roots, which after all might be deceptive.

The question is one of great importance not only as regards farmers themselves but seed growers, and it is highly desirable that juries should not be led away by positive evidence where it is scarcely possible that the evidence can be really decisive.

The notion of the rapid degeneration of cultivated varieties of plants, and their reversion to the original type, when removed from cultivation, though extremely popular, is not borne out by well established facts. Indeed some of our best botanists doubt it altogether, and think it quite as problematical as the kindred notion that wild plants will improve in the garden without a skilful selection during a series of years, of individuals which seem to indicate improved qualities. The wild Cabbage from the rocks, for example, without such selection remains under culture a wild Cabbage, as harsh and unfit for food as it was originally; on the other hand cultivated varieties soon die out in the struggle for life, but we have no proof that they revert to the wild condition from whence they originated. Where however seedlings are liable to impregnation from other varieties, a multitude of forms may arise, some of which will depart materially from the approved type; and in consequence it becomes needful to secure as far as possible the standard of perfection, by a careful selection of individuals intended for seed. But even supposing every care to be taken, there will be differences in the produce, against which it is impossible to guard. Who for example could blame the seedsman if a large portion of a field of Carrots should flower the first year and the roots in consequence be useless for agricultural purposes. With the best seed, owing to particular conditions of soil and climate, of the exact nature of which we are ignorant, and possibly to some peculiarity in the individual seeds, there will often be a failure. And so in the Swede crop, some individuals may have a tendency to run up to stem rather than to form roots, without any fault of the seedsman. No blame can justly attach to him, if the crop be the subject of anbury, a disease which, like the club in Cabbages, depends on circumstances over which he has no control. There is good evidence, indeed, to show that in different parts of a field, where the same seed has been sown throughout, the plants will assume a different character, partaking according to circumstances more of the Turnip or Rape type. That this is more likely to be the case where no care has been exercised by the seed grower, or where without his knowledge a neighbouring crop of Rape seed may impregnate the Swedes, cannot be denied; but it is probable that no care can guard effectually against the evil. Certain it is that in some years Swedes are more subject to become long-necked than in others. If, however, the seed varies much in size, and the larger seeds produce Rape, we may at once assert that there has been somewhere a fraudulent mixture, but if there is no such indication, and there is merely a tendency to become long-necked, we should not rashly lay blame where none may be due.

After all, we must allow something in such cases to the natural tendency of man to exaggeration; and Rape is Rape, and Turnip Turnip, though the proportions of stem and root may vary. *M. J. B.*

* This tendency is not entirely confined to Swedes. We have noticed it this year in a long-rooted White Turnip (*navet long de Clairfontaine.*)

NORFOLK FIFTY YEARS AGO.

[The following notes are extracted from Mr. Forsyth's Journal referred to last week.]

VISITED Mr. Hagrau's farm at Quarles; consists of 600 acres of good Turnip land, all enclosed. Fences in excellent order. Every acre drilled by 5 and 6 row drills, at 6 inches apart for Barley, and 9 for Wheat. Hoed by machine or hand, as the weather is favourable or not. Pays 335*l.* tithe free, and extra parochial. Has Devon cattle and Southdown sheep. Everything neat and clean, and his remaining three Wheat ricks, which he calculates 120 coombs each, were plastered from the bottom about 3 feet up all round, and quite smooth, to prevent rats getting up, which are most destructive here. Of these he had no appearance whatever. He has a transplanted or inoculated pasture of 20 acres round his house, done two years, and most excellent close surface. Has also 30 acres of reclaimed marsh land, for which he pays 60*l.* a year. Threshes it by machine five or six times, but not generally saved here. Where it is saved the Clover is eaten by sheep till first week of June, and then saved for crop of seed.

Mr. Denny, Egmere, has 1188 acres, rent 2021*l.*, all arable or rich old pasture, completely enclosed in square fields of about 40 acres, an excellent friable loam, fit for the four-course shift, in which he works it. It is a parish of itself, has very few poor, and tithe free; has a new and most commodious dwelling-house, offices, and homestead erected by Mr. Coke, with two detached barns at a distance, with fold-yards and sheds, and cottages for labourers, the whole of which cost about 10,000*l.* His stock are Devons and descendants of Galloway Scots. They are in very fine condition; one pair of 4-year old heifers he showed of 69 stone, oxen about 70 stone, of which he had through the winter about 150. His sheep are on the Downs, very fine, 200, and 40 horses in work, except colts, &c. This is altogether a magnificent farm. Breeds and feeds 400 pigs in a year.

Mr. Hagrau, sen., Crabscastle, has 577 acres of arable, and 32 marsh; the former 309*l.*, the latter 65*l.*, tithe free; poor rates about 4*s.* 6*d.* per pound rent. His land and enclosures similar to the former. Does not breed any stock except pigs, of which he has a great number. Feeds Devon oxen and Galloway Scots; feeds also Leicester and Southdown sheep. All his fat stock goes to London market. His horses are of the same tribe as formerly described, and proportioned three horses to 100 acres arable. Every inch drill, and all on the flat; horse and hand-hoed. Farm-house and premises situated in the centre of the farm; has therefore no field barn, as is commonly the case on large farms; four-course shift.

Mr. Waller, Brenthill, has 816 acres arable, 31 marsh; rent 530*l.*, tithe free, poor rates about 5*s.* per pound rent. House and premises built by Mr. Coke; has a field barn, and fold-yard, and cattle sheds, and labourers cottages detached at a distance, besides those at homestead. Land and enclosures as before. Breeds Southdown sheep and Suffolk pigs, and feeds Devon oxen and Galloway Scots, all for the London market. Horses as before and proportion as before. Everything drilled on the flat, except Turnips, at 27 inches on the ridge. Worked in four and five alternate shifts as already described.

Mr. Thos. Moore, Warham, has 562 acres arable and marsh, rent 485*l.*, titheable, and pays 5*s.* per acre for ditto, poor rates, 3*s.* 6*d.* per pound. Breeds Southdown sheep, Suffolk pigs, Devon cattle; all the fat sent to London market; also Galloway Scots fed for ditto. Horses same breed as formerly and same proportion. A new house and homestead with detached field barn, foldyard, and shed, and labourers' cottages, all built at Mr. Coke's expense; cost about 6000*l.* Everything drilled on the flat, except Turnips. Land in four and five alternate shifts as already described.

Mr. Tuttlemoore, Warham, has — acres arable and marsh, and has also salt marsh; rent 317*l.*, tithe 5*s.* acre, poor rates, 3*s.* 6*d.* per pound. Breeds and feeds Devon cattle, Southdown sheep, and Suffolk pigs, and feeds Galloway Scots for London market. Horses and proportion as before. The four and five alternate course shift. Good old farm house and homestead; no field barn. All drilled on the flat, except Turnips.

Mr. Bloomfield, Warham, has 767 acres arable, including 42 acres inoculated pasture, of which latter he is the inventor and father, rent 639*l.*; also 783 acres of salt marsh, rent 2*l.* 17*s.* in all; also 19 acres of reclaimed marsh, rent 27*l.* Tithe on arable 5*s.* per acre, poor rates 3*s.* 6*d.* per pound. All the arable is worked in a four-shift course. Has most commodious house and homestead, with field barn, cattle sheds, and foldyard, and labourers' cottages detached. His stock are bred and fed by himself, and consist of Devons, Southdown sheep, and Suffolk pigs, and work horses as before described; also Devon oxen, two in a plough, and three in scarifier; they have great action. The proportion of oxen are three to two horses. Sends his fat stock to London market.

Mr. Ward, Warham, has 400 acres arable and pasture, rent 304*l.*, tithe 5*s.* per acre, poor rates 3*s.* 6*d.* per pound. New farm house and homestead with labourers' cottages, cost about 3000*l.* No field barn. Worked on a four-shift course. Stock, Devon cattle, Suffolk pigs, and Southdown sheep; breed and fed by himself, and fat sent to London market. Horses and proportion the same as formerly. All drilled on the flat.

Mr. Reeve, Wighton, has 529 acres pasture and water meadow, rent 346*l.*, tithe free, poor rate 4*s.* per pound. Old farm house and homestead, and one field barn, sheds, foldyard, and cottages. His water meadow consists of 32 acres, made by himself, and cost 100*l.* It is in excellent condition, and the Grass richer and longer at this moment (6th May) than anything else in its neighbourhood. Also a piece of pasture (about 20 acres) reclaimed by one under drain, which throws sufficient water to turn a mill; this drain was his own planning, and done at his own expense. Works his land on a four-course shift, and all drilled. His stock are Southdown sheep, highly improved. Let his tups (6) at from 20*l.* to 60*l.* each. Breeds Suffolk pigs, and home-bred neat cattle, polled, which appear to be descendants of the Galloway Scots. Sells all his fat in London market. Horses and proportion as before. Works no oxen. All drilled and on the four-shift course. This gentlemen lives in a house of his own, and on his own estate adjoining to the farm he rents of Mr. Coke. For Holkham and its Agriculture, see Dr. Rigby's pamphlet.

GENERAL OBSERVATIONS.—The drill system universal, and more perfect than in any other district in the island, perhaps in the world; 10,000 acres may be seen well done on the flat, without a "hinting fur," and every drill perfectly straight.

The land is in consequence kept in the greatest possible state of cleanness by the use of horse and hand hoes, and the judicious mode of cropping, which invariably makes a green crop succeed a white one.

Another immense advantage is the universality of calcareous matter found within 12 or 18 inches of the surface, by which it is renovated every 20 years. Next their system of eating Turnips on the land by sheep, which their vicinity to the London market enables them to keep in vast numbers, and for which purpose the whole land is enclosed, and fenced in the most careful manner, the sheep being kept on smaller portions of the Turnip field by moveable hurdles. Ten to 12 sheep are allowed to an acre of Turnips to keep them all the winter. On good land part of the Turnip crop is drawn for the neat cattle in the yards.

In addition to the enrichment of the fields by sheep eating off Turnips, and the vast quantity of manure obtained from the straw-yard, they have for 16 or 20 years past increased their manure produce amazingly by the use of ground Rapeseed, oilcake, applied to the Turnip crops, but lately more generally to Wheat, at the rate of from 5 to 7 cwt. per acre for Turnips without dung; and 4 to 5 cwt. with 10 loads (of 1 ton) yard manure also for Turnips. For Wheat, 4 cwt. without any yard dung.

The Devons are a very kindly breed of cattle, small heads, thin necks, very broad on the hookbones, and particularly fine and small in the bones—with a supple and thin skin. They feed easily and come to great weights; saw many of them 50, 60, and some 70 stone of 14 lb., from 2½ to 4½ years old. The oxen of them have particularly good action and make excellent workers; are bred hardy, ranging at their pleasure from the sheds to the straw-yard, both in summer and winter.

The Southdowns are now general in Norfolk, and highly approved of; coming to 18 lb. and 20 lb. per quarter, of two-years-old wethers, and prime mutton.

The horses are active, bony, powerful animals, about 15 hands to 16 high, come into work after three years old, and will carry 1400 cwt. dead weight. Bought in a market just now would cost 25*l.*; two years ago, about 15*l*; but are generally bred for their own use by all the farmers.

LEICESTERS AND LONGWOOL SHEEP.

A LECTURE DELIVERED BEFORE THE ROYAL AGRICULTURAL COLLEGE, BY JOHN ALGERNON CLARKE, LONG SUTTON, LINCOLNSHIRE.

It is not my intention to-day to glorify any one breed at the expense of another. However strong may be my predilections in favour of certain races, I cannot admit a doctrine of universal supremacy in sheep. There is no reason that I know of for supposing that, among the perfect types which existed in Paradise, the finest oxen were of necessity Short-horns, while Eve in pastoral innocence milked an Alderney, neither do I see why the best mutton and wool in that age of blissful perfection must have appeared in the form say of an Oxford Down. The lands and climates of our mighty globe are spacious enough and variable enough to feed and nurture almost endless diversities of those domestic animals which yield flesh-meat and other products for our comfort and sustenance; and however pre-eminent certain varieties may be in the feeding-house or the showyard, we find that their prevalence is limited (sometimes within the precincts of a county as well as well as within the boundaries of a kingdom) by peculiarities of soil and climate more favourable to one kind of sheep or cattle than to another. There is scarcely more difference between mountain and lowland regions than you perceive between the breeds of sheep respectively adapted to each locality. And as truly there are also found minor distinctions of climate, aspect, herbage, husbandry, in districts possessing a general similarity, which forbid a successful summer grazing, or a profitable wintering of precisely similar sheep in what might appear to be almost parallel situations. Where one sheep fails because he is imported, a native sheep (though little differing in form and qualities) thrives in the home to which innumerable generations of his ancestry became acclimatised and inured. Of course I do not mean that a good breed from a distance is unable to displace with advantage a home breed greatly its inferior; for I am about to speak of almost miraculous transformations and triumphs achieved by the wide dispersion of improved types, supplanting some aboriginal breeds and combining with and wonderfully ameliorating others. I am simply entering a protest against the notion that either the Leicester, the Lincoln, the Cotswold, or some other perfected long-wool breed, if there be another comparable with these, is destined to surpass all rivals wherever they may be found, and to gradually overspread all the pastures in Britain adapted to long-wool sheep.

Scientific experiments upon the feeding capabilities of different breeds may establish the superior excellence of one description of sheep in the particular locality and circumstances of each trial; but after all, there are so many influences surrounding actual flocks of which no such experiment can take any account, that I believe each master breed, so to speak, must be left to establish itself in new districts, or yield the palm of profitableness to competitors by the tedious but certain conclusions of practical experience. In this neighbourhood you are proud of your noble Cotswolds, that are the ornament of every fat stock or breeding show, and any proposal to substitute Leicesters or Lincolns for them would be treated with ridicule. Yet in Lincolnshire and neighbouring counties we should deem it ruination to have any of your arched necks and handsome forelocks in our sheep pens. And in neither locality is this mere prejudice. The strongest reasons can be given for a stout adhesion to the breed of the district, experience having shown how your West-Country sheep fail in fleece and in profit in our district, while our sheep are unadapted for climbing your hills, and will not attain the colossal proportions for which your breed is famed. I consider that no adequate answer has ever been given to the question "Which is the best breed of long-wool sheep?" and also that no discussion of the relative merits of long-woolled and certain descriptions of short-woolled sheep can arrive at any dogmatic conclusion, settling the controversy at once and for ever for all parts of Britain, and for whatever purposes the flock may be kept. It is for the advocates and cultivators of the different breeds to push their favourites from hill to vale, over dry uplands and unctuous marshlands, just so far and so long as this extension is found to answer in a course of years; and I have no doubt that the shrewdness of the practical manager and the test of his cash returns will ultimately determine for every district what special characteristics of early maturity, hardihood, fecundity, quality of flesh, or variety of fleece are required in its particular flocks.

Without attempting any comparison then, between breeds of equal eminence, I propose to offer a few remarks upon the Leicester, the Cotswold, the Lincoln, and other breeds of long-wool sheep.

It is now somewhat over a century since Robert Bakewell of Dishley, near Loughborough, in Leicestershire, began to experiment upon the sheep of his day and neighbourhood, with the view of rendering more economical in feeding and productive in mutton, animals that had been remunerative mainly from their supply of staple to our woollen factories. The old Leicester was a long, heavy, coarse-woolled animal, described as having "a frame large and remarkably loose; his bone heavy, his legs long and thick, terminating in great splaw feet; his chine, as well as his rump, sharp as a hatchet; his skin rattling on his ribs, and his handle resembling that of a skeleton wrapped in parchment." So that the great master of the breeding art began with what you would call "a regular brute;" seldom ready for the butcher before it was three years old, its weight then being 25 to 30 lbs. a quarter, and its coarse wool averaging about 10 lbs. per fleece. Unfortunately for his successors, he kept his secrets pretty much to himself; but we now know from his results that he must have observed the relation which subsists between certain external characteristics of an animal and its properties of ready disposition to fatten, early development, and larger proportional accumulation of the best-grained meat. By long-continued selection, breeding in and in from animals of greatest compactness and symmetry of form, and finest quality of flesh, and crossing with rare judgment, the Dishley or new Leicester was produced, possessing the requisite fixity of type necessary to render its good properties perpetual. The new breed was distinguished by a general squareness of outline, a uniformly broad and straight firm back, terminating in a square rump and full deep shoulder, with rather too much tendency to the "soda-water bottle," full middle and rounding-off ends, however, to please a Lincolnshire man, who likes a thick scrag at one end, and a wide rump and heavy leg of mutton at the other; it had a well-arched rib, full plate, deep wide chest, tapering neck, a small head covered with short white hair, an open countenance and clean muzzle, a full but quiet eye, and long, thin, well-placed ear; its offal was light, bone uniformly fine, twist well turned, and its pelt was thin, soft, and elastic, with a mellow handling. Its principal deficiencies consisted in a want of size, lightness of wool, and the comparative want of fertility and good milking qualities in the ewe.

Bakewell joined with a few individuals in forming the Dishley Society, the main object of which was to make a complete monopoly of the new breed, for which the secretive inventor was unable of course to take out a patent. The practice of letting rams for the season, either publicly or privately (probably originated in Lincolnshire), was adopted by Bakewell about the year 1760, when he let his first ram for only 17*s.* 6*d.*, and for several seasons afterwards could not realise more than two or three guineas for his best sheep. In 1784 and 1785 however, he obtained 100 guineas for a ram; and the desire to possess this valuable breed then became so great, that in 1789 he made 1200 guineas by three rams, (the very sum for which a Short-horn bull, "Master Butterfly" was sold a few years ago), and 2000 guineas by seven others. He likewise received 3000 guineas from the Dishley Society for the use of the rest of his flock. A Lincolnshire farmer hired two rams at 1000 guineas for the year. The most extraordinary letting was that of a ram called "Two Pounder," for the use of which during one season, he obtained 400 guineas each from two breeders, still reserving one-third of the usual number of ewes for himself; the value of the ram for that season being thus rated at 1200 guineas.

The Dishley Society itself was about as mysterious an affair as a lodge of Freemasons, though probably its members needed no password, grip, or sign. Resolution I. was, "Eleven subscribers, including Mr. Bakewell himself, agree to pay the sum of 10 guineas each, in such sums, and at such times, and for such purposes as shall hereafter be agreed upon by the majority of subscribers." Resolution IV. declares "that secrecy shall be kept by all members respecting the business of these meetings; and that any member quitting the Society keep secret, upon his honour, the transactions before he left it." In 1795, "It is resolved that no ram shall be let to any members of the Lincolnshire Society, in classes, at less than 200 guineas." Also "That no member shall sell any ewes, except to kill, at less than 10 guineas each. In 1796, "Resolved, that whoever deals with Mr. —— shall pay the Society 50 guineas." The new Leicester became a rage and fashion, and quickly spread into all parts of the kingdom, whether into suitable or unsuitable districts. The breed was pushed everywhere from John-o'Groat's to Land's End; Leicester blood was to improve any description of sheep that could be found, whether in flat highly cultivated districts, or upon moorlands and mountains. Certainly the extent to which very distinct varieties of sheep have profited by the symmetrical form and feeding qualities of the Leicester is very surprising. Not only have the various long-wool breeds been largely crossed with Leicester, but there are short-woolled sheep which owe a great part of their present merit to this source. The Ryeland sheep of Herefordshire was enlarged in carcase and lengthened in wool by repeated crosses with Leicesters, thus changing in character the finest wool that England used to produce. I believe that there is good authority for the statement that the improvement of the old Shropshire Downs was begun by the late Mr. Meire, by the use of the Leicester. And in Scotland, upon sheepwalks which, though too elevated and wild for the Leicesters, are yet capable of supporting a larger sheep than the ordinary Cheviot, a cross has been introduced, retaining most of the properties of a true Cheviot, while possessing the larger carcase and ready disposition to fatten conferred by Leicester blood. Of course crosses, alike between Cheviot and Leicester and between Blackface and Leicester, are found most successful in Scotland, where the whole produce is annually sold off, just as crosse between Leicester and Norfolk, Leicester and Southdown, &c., are so valuable to our own midland counties graziers. And the great border fair of St. Bothwell, in Roxburghshire, formerly supplied with pure Cheviots, is now entirely composed of pure Leicesters or crosses. In Cumberland, the Leicester improved the old Kentmore sheep; in Westmoreland, the original long-wools were supplanted by Leicesters and Cheviots. In Devonshire and Cornwall, the Leicester (introduced by Mr. Peters, and by the father of Mr. Turner of Barton), materially changed the character of the South Ham Notts, a small Long-woolled sheep; and on the rich land of Bridgewater Level, to other low tracts of Somersetshire, and extending into Devonshire, the old Bampton breed has been changed by Leicester crossing into the Bampton Notts, their Leicester alliance having deprived them of the original horns. These sheep are larger boned, longer in the legs and body, but not so broad backed as the pure Leicester. They are ready for the butcher at 20 months old, weigh 20 lb. to 22 lb. a quarter, and yield an average of 8 lb. of wool. The Leicester has entirely remodelled or displaced the sheep of Yorkshire, parts of Lincolnshire and Cambridgeshire, and Leicestershire, Warwickshire, and other midland counties. The demand for rams for crossing both in England, Ireland, and Scotland, is very great, and there is a large yearly export of Leicesters to France, many other parts of the continent, and to our pastoral colonies.

(To be continued.)

PROFITABLE FARMING.

AH! but Mr. Mechi, farming is after all a very slow way of making money.—Yes, but it is a very quick way of losing it if you don't mind what you are about. But what do you mean, Mr. Mechi, by saying, "if you don't mind what you are about?" Well, I will tell you. I see so many farmers whose capital is being gradually absorbed, and who are on the road to poverty or want, and so many others who eke out a bare existence, that I have made myself acquainted with the causes of their unsatisfactory condition.

These unfortunate people are generally occupants of very stiff unimproved clay lands, physically poor, but chemically capable of producing under altered circumstances a very much larger acreable return than their present yield. The rents of these heavy lands are not generally high. I know of one farm of 240 acres with an excellent residence and first-rate farm buildings, let at 12*l.* per acre—barely the interest on the buildings alone—and yet the occupier is losing 400*l.* a year; therefore if he had it rent-free he would still make a considerable loss. The cause is obvious—

A minimum crop.

An unescapeable expense.

Here is a list of expenses that must be incurred whether you grow a half crop or a great crop.

Unescapeable Expenses.	£	*s.*	*d.*
Rent	1	0	0
Tithes, great and small	0	5	0
Poor-rate (including Police and County Rate)	0	3	0
Road Rate	0	0	3
Church Rate	0	0	3
Loss of land by trees, hedges, roads, waste, and buildings	0	2	0
Horse labour	1	0	0
Manual labour	1	10	0
Losses by live stock	0	2	0
Depreciation of horses	0	2	0
Seed	0	8	6
Wear and tear of carts and implements	0	2	0
Malt and Hops for beer for men	0	2	0
Mole and rat-catching	0	0	3
Road mending, ditch cleaning, fence trimming, &c.	0	1	0
Wear, tear, and loss of sacks	0	0	3
Bean tyers	0	0	3
Miscellaneous petty expenses	0	1	6
Blacksmith, wheelwright, cooper, founder, saddler, basket-maker, bricklayer, carpenter, and veterinary	0	5	0
	£5	5	0

Besides the clothing, food, and other expenses of the farmer and his family, which cannot, with great economy, be put at less than 10*s.* per acre. These expenses often amount to 150 per cent. on a half crop, but only 75 to 85 per cent. on a full crop.

Yes, but how are you to get a full crop on such soils?—By drainage, by a good farm road, by deeper cultivation, and by a quadruple supply of manure.

But how is the latter to be got?—By selling all the produce of your farm (except Wheat) to your animals, instead of to the miller or factor; by the purchase of cake or other food not grown on the farm, and by artificial manures to begin with. In short, make up your mind to manufacture 5*l.* worth of fat meat for every acre of land that you hold, and I will promise you a success that you never dreamed of.

Well, supposing that this tenant had to pay 8*s.* an acre more for drainage and roads, and 1*l.* per acre for loss on the meat, making under 12*s.* per acre for guano, bones, &c., I will promise him that his crop shall promptly realise an average increase of at least 3*l.* per acre, or 50 per cent. profit on the outlay I mentioned

If the original gross produce was only 4*l.* per acre (and it is generally less on such soils), the increase to 7*l.* would diminish by 50 per cent. those unescapable charges which I first mentioned. I speak practically on this matter. I have tried both ways, and found that

which pays best. Last year I consumed on 170 acres 700*l.* worth of cake, corn, &c., purchased of myself and others. The manure from these purchases must, according to Mr. Lawes's valuation, be of great value; but independent of chemical analysis, we know by the results that this is the right way to farm profitably, and that there is no manure so cheap or so good as unwashed home-made manure.

It is an unpleasant truth to enunciate, but still it is a great truth, that this country is not half manured, and the consequence of taking out and not putting in, empties the agricultural field and the farmer's pocket, but does not diminish the unescapeable expenses. On the contrary it enhances their per centage, and gradually impoverishes the tenant.

It is all very well to say—where is the money to come from? We all hold too much land, and I now see before me a man who lost most of his money on 50 acres, but now, keeping the same amount of stock on 10 acres, he is recovering himself and paying his way.

Experience has taught me that the more meat you make, the more manure you have, and the more corn and produce you must of necessity grow. The first question I ask of an arable land farmer is, how many pounds of fat meat do you make per acre? and by his answer I can determine (other things being equal) as to his crops and probable well-doing.

But then we must take care of this precious and costly manure, and not allow any of it to go otherwise than on the land.

It is astonishing how soon a keen man of business will improve poor neglected land; he will cover it in dry weather with sheep or other animals eating cake, corn, hay, &c., that was not grown on the farm, making in fact a farmyard or a foldyard of the land. The results are immediate and unmistakeable.

He carries out, in fact, Liebig's great theory, that the emptiness of exhaustion must be repaired by the fulness of replenishment. The miserably small supply of stock which I see on poor heavy lands generally, indicates prominently the disease and its remedy. *J. J. Mechi, Dec.* 30.

P.S. It must be obviously a sound proposition that the poorer the land the greater should be the quantity of live stock kept upon it, because such land requires more manure than soils of a naturally more fertile character, and because there is no way of obtaining such good or cheap manure as by feeding stock. I don't ask where the food for the stock is to come from. It is certainly only robbing Peter to pay Paul, to take food from one field on the farm to produce manure for another field on the farm. To increase fertility, which should be the object on poor farms, we should feed our animals with something that did not grow on the farm. This must be done in the case of poor farms, for we know that such soils will not naturally, and especially in their unimproved condition, support so much stock as fertile soils.

SCIENCE, TACT, AND SKILL.

I HAVE, in the first place, to remind you that whatever else you have or want, you must have this practical skill in order to succeed in agriculture or in any other art. The general officer and the agriculturist alike need this as the very foundation of their professional education. It is impossible to speak too strongly on this point. Every art—that of agriculture as one—consists of course in the doing of a series of operations in the right way, and the ability to do things in the right way is just what we call skill. An intelligent man is not thereby an agriculturist, even though his intelligence includes agriculture within its scope. He must have this skill, without which his agricultural intelligence will be useless, before he can take a farm with any prospect of success.

How is this skill to be acquired? There is no other way than simply by observation and practice. An art cannot be learned from the description of it. It must be seen in operation; and it must be practised. Herein lies the immense advantage possessed by him whose natural tastes impel him to the careful observation and mastery of farm details, or whose boyhood spent upon a farm has given him this knowledge and mastery almost without his knowing it. Let me tell you a story in illustration of this:—

A young man fresh from the University, who had taken cordially to the position of a country gentleman—and, among other occupations, had adopted that of agriculturist—was riding round his land one morning with a neighbour of long experience and well proved practical ability and judgment as a farmer. He listened with docility and good-will to the instruction and advice that were given to him; and, struck by the wisdom and good sense of his companion's discourse, he at length exclaimed, "Ah, Mr. ——, I wish I knew as much as you do." "Make yourself perfectly easy on that score, my dear fellow," was the reply—"You never will." The one was fresh from the schools, and the other had spent all his life in the fields, and yet there was neither mock modesty in the speech of the one, nor arrogance in the answer of the other. Mr. —— did not finish his reply. "I have been accustomed," he might have said, "to be amongst plants and animals, constantly riding and walking on the soil which supports them both since I was a child. Ever since I can remember I have had to do with the tillage of the land, the cultivation of crops, the management of live stock. There is not an aspect of weather, land, or life, so far as the live stock of the farm are concerned, which I have not habitually witnessed, realised, and studied. That of which instances and striking cases may be observed by you is foreseen or recognised by me in its first beginnings almost as if by instinct. Long familiarity with the details of my occupation, beginning, too, with the mind of a child which has hardly any other impression on it to weaken the sensitiveness with which its early knowledge is received, gives me, almost unconsciously, and without the effort of any special attention such as you must exercise, those intimations of fitness or of unfitness, of quality and condition, whether of soil or crop, or animal, on which the right direction of our business of course depends." Mr. —— was perfectly correct; it is an immense advantage to an agriculturist, as to the follower of any other occupation, to learn that occupation young; and the reason is that the skill which he thus acquires grow naturally with him, and is thus more perfectly acquired than it can be in any other way.

Gentlemen:—It is impossible for you to accept too unreservedly, or too confidently, the assertion that a personal acquaintance with details—accurate knowledge of every particular regarding those processes and operations which make up the daily practice of the farm—in other words, practical skill, is essential to your professional success.

And all this, as I have said, is only to be acquired by close personal observation.—There is a story, I see, going the round of the papers just now about Bewicke, the celebrated naturalist and artist. He was asked how it was that his engravings of birds were so much truer to nature than those of other men. He replied:—"I suppose I must have just looked harder than other men at the birds when sketching them." The late Lord Ducie used to say, "A young man will never be a farmer unless he can enjoy to sit for two hours on a hurdle and look at a sheep." Bewicke and Lord Ducie were of one mind on this subject; and every other sensible man will agree with them. It is only by close and careful observation that skill, whether as a farmer or an artist, is to be acquired.

I need not tell you that this Institution gives you capital opportunity for acquiring by this close and careful observation, the skill as well as the intelligence which you will need as farmers. A large farm, with considerable variety of soil, under vigorous management affords all the scope of this kind which any one can desire; and one of your most useful opportunities of professional education here (dependent however for its efficiency, like all the others, altogether on your own determination to make use of it) is that afforded by the daily routine of farm operations on so large a scale, carried on directly under your observation.

Next to practical skill, I would rank business tact and ability among the essentials to professional success; and this again is to be acquired only by experience. The profits of farming, like those of every business, are made in the market-place as well as in the field—they hinge upon your ability and judgment in your dealings with other men, whether your servants or your neighbours. However skilful in the management of land and crops, in the management of a flock or of a herd, a man may be, he needs sufficient shrewdness in dealing with his equals as well as ability to direct his inferiors, before he can attain full success in farming. Indeed, this shrewdness, or common sense as it is called, rather because it is commonly needed than because it is commonly possessed, is required in every relation which you will as farmers sustain. I remember, after relating the story which I have just told you, about the young landlord and the practical farmer, to one who was consulting me about the agricultural education of a son, we afterwards conversed on this second point—the necessity for skill and tact in dealing with men. And I told him of one whose career, terminating in great ability as a farmer, had led him through active service in various public offices, and in many different countries, until, while still a young man, he had, with only the advantage, I believe, of general country knowledge, taken a farm and managed it successfully—the inference being, of course, the great superiority in shrewdness, general intelligence, and common sense which such an education must have over that of the young man who is kept labouring all his life in the same parish and almost in the same set of fields, acquiring merely manual dexterity. His reply was, "I can see the force of that, but I can also see that it is the exact antipodes of what you have been telling me before." He was entirely mistaken. It was no such thing. These advantages of practical skill and of business tact, respectively different as they may be, are certainly not opposed to one another. They may be both possessed by the same individual. They must be both possessed by him in order to the full attainment of agricultural success. You may in your own persons unite the skill of the common labourer, the shepherd, and the cowman, with that general intelligence and quickness in business relations, which a larger and more general experience in the market place and elsewhere will give you.

And I say of this, as I said of the other, it is impossible for you to accept too unreservedly and too confidently the assertion that temper, tact, and common sense, (business ability, in short,) are essential to professional success. You will need them all in striking with the landowner the first bargain of the long series in which agriculture, like every other business, consists. You will need them all when taking your farm, when making your purchases and sales, and especially when dealing with your labourers.

It is, in fact, in this last relation, more than anywhere else, that your ability of this kind will show itself—in selecting your labourers—in getting the right man and putting him in the right place—and in your relations with them afterwards—so that all the difference between the services of an ignorant, ill-conditioned body of men, and that of active, intelligent fellow labourers may be in your favour. Even men of undoubted practical skill are dependent upon the willing services of their men. This has been strikingly illustrated within the last few weeks, in instances where no one will deny that a high degree of professional judgment and ability existed.

You know the late Jonas Webb had a career of unparalleled success as a breeder of Southdown sheep. Next to him perhaps stood Mr. Rigden, of Sussex, and Lord Walsingham, of Norfolk. Mr. Webb was almost almost always first in any general competition among Southdown breeders. Mr. Rigden almost always beat Lord Walsingham in any competition between these two. Mr. Webb is no longer with us, and the competition now is between Mr. Rigden and Lord Walsingham alone. The latter has, I understand, secured, during the past year, the services of Mr. Webb's old shepherd. Mr. Rigden's shepherd, on the other hand, has been for late disabled by illness. Under these circumstances these two breeders met at Worcester the other day, and Lord Walsingham took all the prizes! An incident this kind shows how dependent even the practical man on the skill and good will of his labourers—and I refer it here as an illustration not only of the need of skill but of the necessity also of so conducting business as to be on good terms with your servants, and with every other class with whom you are in business relations.

For this second qualification which you need in order to professional success, as well as for that of personal skill, the only school open to you is actual experience and observation. In this respect an Agricultural College does not differ from any other place of professional education. A resolute student can acquire here a great amount of skill in the art which he has come to learn. He can, of course, acquire the intelligence which is to direct him in his operations, but the responsible prosecution of his business can be learned only in actual experience. It may, therefore, be to your interest, in order to supplement what the Agricultural College can communicate, that you should seek somewhere practice and experience in business arrangements either on a farm, or with a salesman, or in an office before taking a farm on your own account.

Be this however as it may, it is worth while to remember that while the skill which you may acquire here or elsewhere, will confer on you only the rank of a good farm labourer, this business ability, in addition to it, will only raise you to the rank of a good farm manager. A successful and influential, because intelligent agriculturist, needs something more than this. And this is the third point to which I have to direct your attention: he needs a liberal and scientific education.

As I have mentioned this last of the three—especially as I have referred to its resulting in an altogether different rank and style of man—it may occur to you that I am advocating scientific knowledge and a liberal education simply on the ground that it places you in a higher social rank. That of course is a result which no sensible man will undervalue, but it is not the ground on which I have any special right to recommend it. Unless it be professionally serviceable I have no right to be its advocate from this place. But here, again, gentlemen, I believe you may with the most unreserved confidence accept the assertion, that knowledge of all the sciences of matter will be of direct advantage to you in your profession.

How can it be otherwise? Your experience in the field is necessarily in accordance with all the great natural truths determined by the geologist, the chemist, and the natural philosopher. These have been observed under such a variety of circumstances, in such a multitude of instances, on every kind of scale, that those relations and properties of matter which they illustrate and teach may be trusted to as existing everywhere, affecting therefore, or rather I may say moulding the practice, and constituting the experience of the farmer as they do that of every other art and manufacture.

One sometimes hears experienced farmers speak of the doctrines of the chemist or the botanist as if they were mere theory—that is, I suppose, mere speculation. But this is a great mistake. The doctrines of the chemist, the geologist, and botanist are based on far more numerous and more carefully determined facts than those on which many a practical agriculturist is content to build his confidence. And what is more, they are built, among others, on the very facts which agriculture itself presents.

Experience is of value just in proportion as the facts which it has witnessed have in this way taught the lesson perfectly—the longer the experience the greater is its value, because the more the facts of which it takes account, the less the chance of the peculiarities of any of them interfering with the lesson taught by all. Now science is the result of all experience—its doctrines

the truths which the observation of all time has taught. How can any one despise or disregard its teaching, while an experience in the field, furnishing perhaps but two or three of the thousand foundation stones on which it rests, is considered by him of such value! I must say that I greatly prefer to let the usefulness of a scientific education to the farmer rest in this way on the obvious nature of things, rather than pretend to prove it as an actual fact by reference to particular instances.

When you consider the great mass of truths determined by the chemist concerning the constitution of matter, and the relations of its constituents to one another, surely the pretence to prove by instances the usefulness of chemical science to one engaged in that perpetual reconstruction of matter which goes on in every agricultural process, whether in the field or farmery—whether in the growth of plant or animal—must seem a mere gratuitous impertinence. One feels, in such a case, somewhat as if in the position—still possible in certain circles—of having to convince an agriculturist of the usefulness of statistical information on agricultural results—only the former case is even stronger. As if knowledge of the facts relating to our business, whether those which the chemist gives us illustrative of its processes, or those which the statist gives us indicative of its results, can fail of being beneficial. In either case, we may be sure that whether we may choose to shut our eyes to them or not, there these facts are; and there they are at work, operating mischievously to us if in our ignorance we run counter to them, or beneficially if by our knowledge of them we are enabled to make use of them.

It is unnecessary, I feel, to refer at any greater length to the practical value of scientific knowledge in the prosecution of farming as a business. Unquestionably the labours, both of the student and of the teacher of farm practice, are, as I said, lightened, made easier and more efficient by the agricultural light which is thrown upon them by all the sciences represented at an Agricultural College. And I need not refer at any length to the ample scope, as students of the sciences of agriculture, which you have in the various professorships and schools collected here. *Lecture by Mr. J. C. Morton before the Royal Agricultural College, in the volume lately published on "Agricultural Education" (Longmans).*

Home Correspondence.

The Pigs Shown at the Agricultural Hall, Dec. 7.—The following is Professor Simonds' report to the Council of the Smithfield Club:—I have to report that in accordance with the rules of the Club an examination has been made of the state of the dentition of each of the pigs in the several classes for comparison with the certificates of age, and I find that the pigs shown in pens 416, 427, 437, 445, and 452 exceed the age stated by their respective owners. I also find that the dentition of the pigs in pen 436 indicates that the animals are not of the same litter. With reference to the pig, No. 445, it should be observed that the animal so much exceeds the certified age as to make it manifest that a clerical error was committed by his owner in filling up the certificate, he being described as a 3 months and 26 days' old pig, whereas it was at once apparent that he could not be less than four times that age. Besides the pigs named in this report as disqualified, the dentition of others, especially in the class under four months of age, showed a greater development than is consistent with absolute correctness, and as this is a circumstance of almost constant occurrence at the shows, I would suggest that for the future the class be altered from animals not exceeding four months to animals not exceeding six months, and further that the class not exceeding eight months be altered to nine months, allowing the other classes to remain as now arranged. I may add that in pigs under four months it is difficult to decide so accurately upon the dentition as in older animals, and hence the Club is always liable to attempts being made to exhibit animals in this class, which are in truth nearly five months old. (Signed) *Jas. B. Simonds, Veterinary Inspector.*

The Hereford Breed.—I consider the general character, quality, evenness of flesh, and aptitude to fatten of the Hereford is greatly improved during the past 20 years, and the uniformity of appearance which they present at our Hereford fairs is such that I have often heard expressions of astonishment and delight from gentlemen who, for the first time, have attended them. I have occasionally heard it stated that they have decreased in size; upon this point I am inclined to think it is more imaginary than real, for although we do not now see the fine oxen of by-gone days, yet it must be borne in mind that they now go off at from two to three years old, instead of from five to six years. This year there were some lots of steers, about two and a half years old, sold from 28*l.* to 30*l.* at our October fair, which now takes place on the third Wednesday in October, instead of upon the 20th as heretofore. The price I quote was for the rear of steers in each case, and when it is borne in mind that they were confidently stated to have been fed without cake or corn, I consider that price will compare well with animals of any breed, and although we have not now the noble five or six years old ox, yet we have the more money-making animal in the Hereford steer, by his early maturity providing food for the million, and a quick return to the farmer. As regards the influence of agricultural societies, I think they stimulate men to renewed exertions for improvement, and frequently produce very beneficial results. The most marked influence I ever saw is in this immediate neighbourhood. In 1855 a ploughing match was started at Ross; the next year a show of stock was established, but this being a great sheep and not a cattle district, the latter cut a sorry figure, there being but few animals beyond the mediocrity, and with, I believe, the exception of myself, no one in the district ever thought of sending to our county show, whereas this year there were five exhibitors, and six prizes were awarded to their animals. I am of opinion that the general improvement observable in the stock and in the cultivation of the county, is attributable in a great measure to the influence of the different local societies, as persons having good animals are induced to send them to compete who would not do so to distant shows, and by this comparison they see faults that would otherwise escape their attention, and thus they are stimulated to improve; besides this they form opportunities for an interchange of ideas, which is at all times beneficial, and for which the farmer has less opportunities often than any other class. I certainly agree with the prize system, but can only regret the over fattening and its attendant evils, that is absolutely requisite to adopt to ensure success, and upon which when judges exercise their opinion upon the relative breeding points of the animals competing, if unfavourable to the over fatted, they are condemned not only by the owner and the public, but by the press also, and indeed upon this point it is a very difficult matter to discriminate; for instance, last year, at Battersea, two or three were passed as too fat for breeding purposes in our class, whereas in the next class the first prize was awarded to the fattest animal exhibited in any of the classes, and she subsequently brought a live calf and did well. Upon this point some societies have restrictive rules, which in my opinion are worse than useless, inasmuch as unprincipled exhibitors have the advantage over the man of honour and integrity. *T. Duckham.*

Roots of Knapweed.—I send you the root of a Knapweed which I took out of a pit opened near here, in an arable field, for digging sand and gravel. The root went down 7 feet below the surface, and it is difficult to speculate on its age. The upper part of the root shows where the plough has damaged it from time to time at depths of about 3 inches. I do not think it would be easy to find a more convincing proof of the folly of shallow ploughing, which is still practised in this county. The pit was full of similar roots. *F. Marx, Ailebury, Alresford.*

Foreign Correspondence.

BRITISH COLUMBIA.—There is a fine field here open to enterprising young agriculturists, and if married so much the better for them. But they should have a little capital to start with—500*l.* clear after the passage money has been paid, would make a nice little beginning. Any one thinking of such a thing should carefully read over Bishop Hill's address to the people of Yarmouth, where he says that no soft-handed young men need think of the colony, and none who cannot resist the temptation to drink; that has ruined many a fine young fellow, and brought many to an early grave. A mother of rank and fashion, who sends some young scapegrace of a son to these colonies with a little money in his pocket, and thinks she has done the best she can for him, little knows to what she has consigned him. *New Westminster, Oct.* 14, 1863. [There is no question as to the perfect authenticity of these statements, which proceed from as honest and experienced a settler as ever set foot in N. W. America.]

BANDA ORIENTAL: *Estancia del* ——, *Aug.* 24, 1863.—I have been somewhat interested in what you say regarding the milk from ewes, but, in flocks similar to mine it is not so practicable, and cannot so easily be obtained as you imagine. Flocks similar to mine never pass a night under a shed (galpón), no matter whether the night is bad or good, and many are never in an enclosure at night time, but remain on an open sheep-walk called a rodéo. My flock has been on rodéo for the last three or four months, in which time it never once has passed a night in an enclosure of any description. If the night be bad they will huddle in some sheltered nook, under some hill or rocks, and far better it is too, than in a corral, or permanent circular sheepfold near the homestead. The consequence of this is that the sheep are not anything like so tame as those at home or those that pass the night under cover (as fine flocks do here), and to catch a ewe for milking out of a flock on rodéo would necessarily worry the flock. What you have said about this milking of the ewes, however, has not been thrown away; it has put a fresh idea in my noddle, and a feasible one too, under certain circumstances. I have tried the ewe's milk, and really it was delicious, much to my surprise, for hitherto I knew nothing of its qualities. And now, perhaps, you can understand how it is so many lambs die here at times in a heavy storm. Imagine the flock on rodéo, at the usual time, sunset. The night comes on windy and rainy. Well, off go the sheep to seek shelter, for stop in an unsheltered and unenclosed place they will not, and very naturally too. Well, the ewes with lambs march away, many lambs are left behind and get lost and perish in the cold, others lose their dams, and those that are born are lost, too, for a ewe won't take to her lamb dropped in such a night, and the consequence is the number of lambs lost in a bad night is often very great. And such nights are often the nights when you have a good fall of lambs, especially if the weather has been dryish for some time previous. In bad nights, when the sheep are on rodéo, a good shepherd will pass the night with his flock and keep "rounding" them, and so perhaps save a "point" that would have strayed off, and many a young lamb besides. Not long since in a heavy tempest (which lasted three consecutive days), I knew a man who was 18 hours out in the camp with his flock, all alone and on foot, his horse being knocked up and useless. He could not leave his flock, or they probably would have mixed with another and got scattered all over the camp, and what was worse he could not drive them home, as a rivulet (arróyo) which the flock passed in the morning had become so swollen that it was impossible to get the sheep over at night. And there he was "rounding" and "rounding them" the whole night, as dark as pitch, until he was relieved the next day. "And," said he, "I hadn't so much as even a bit of 'baccy to chew the whole time."

On very windy nights the sheep will go off rodéo, and in clear moonlight also, so that one has often to jump out of bed in the middle of the night, and turn them back. And the fault is generally with the capones (wethers), for they are devils to wander, and then the sheep go after them. This season I have lost not half so many as in the previous one. One day George skinned more than 50 sheep that had perished during the stormy weather of the day before. You may infer, then, from what I have said, that the corral is always the best place for the flock at night. Well, it is the best if you can get them in against a temporal (squall), whereas in fine weather they thrive best and keep cleaner on rodéo than they would were they folded. Enclosing them every night engenders the scab or encourages it, at least I believe so from what I have seen and have heard from others. When I first had my flock I used to put them in the corral every night, and by and by I noticed the scab coming on one, then on another, until it augured ill for my wool clip. Well, I suspected the cause was from shutting them in, especially as other flocks not enclosed were nice and clean, so I then put mine on the rodéo every night, where they have now been for between three and four months, and the result is they look in good condition and pretty clear of the scab, although many are still touched more or less. A young man told me that for three years he never shut in his sheep, and the result was they were generally nice and clean and pretty clear from scab; but this year, however, he commenced the shutting-in business, for certain reasons, and this year he has more scab than he ever before had. So I think my inference is not altogether unfounded. I mention this as I think your ideas of our sheep out here are rather for fancying they get the same sort of treatment as they do at home. If you were to see some of these flocks when in a corral, and put yourself in among them, they would gallop away from you in all directions, bolting about everywhere, and the corral must be strongly made, or else down it certainly would go. Again, if you were riding to see some of these flocks, and got within say 50 yards of them, off they would gallop to a centre as quickly as they could, and nearer you would not get for a time. Of course you must not misunderstand the class of flock I am speaking of. The fine flocks here (in the country) are generally as tame as those at home, and those that are folded every night quite as much so, but I am speaking of an ordinary mestiza flock, that usually stays the night on rodéo, that is, at large.

* * * *

We have two lambing seasons, March and October, but of our flock of two thousand, all told, we have lost about 40 lambs.

* * * *

You have asked what I think of the country, &c. All that I have seen of the Banda Oriental, and I have been over various parts of it, is on a grand scale, the same interest and picturesqueness to be met with which give a charm to the traveller and ever freshen the eye of the settler. One word would describe it all, as far as surface extent goes, when I say "undulating;" but at the same time would convey but a very imperfect idea of its beauty. The nature of the hills varies—some are of massive rock, immense pieces jutting out in all directions, or are piled and balanced most wonderfully one on the other to a most minute nicety, whilst other rocks are placed, as it were, in regular layers, one above the other; other hills have a gentle slant, covered with verdure, resembling a well-kept lawn, whilst some again are steep and difficult to traverse.

Owing to the hilly nature of the country it is well watered, and numerous arroyos (rivulets) are to be found in all directions, some of which after a good storm become so swollen that it is impossible to ford them except at certain passes, and even then great caution is at times required. To show their danger I will state a little occurrence that happened when I was at San Juan, some 12 months ago. A gentleman lying dangerously ill at a neighbouring estancia, sent a faithful and long-tried servant to procure him some medicine at the nearest town. The servant was desired to be

back the next day. Off in the morning with a spare horse (tied on to the other's tail), he accordingly galloped, obtained the medicine, and slept that night at an intermediate puesto or sheep station, kept by one of his own countrymen, an Irishman. The night was a severe one, and next morning he found the arroyo he had to recross much swollen and was advised to wait a little; but, mindful of his sick master, he resolutely said he would chance it, as he knew the ford he was sure. Well, he entered the pass, with his extra horse tied as theretofore, but he must have made a miscalculation, for the horse he was on lost its foothold, plunged about, and threw the rider into the water. Poor fellow, he came up, and seeing how it was, he immediately drew his big knife and cut the rope which tied the two horses, and so freed them; but he, somehow or other, could not reach the bank. A puesto was not far off from where he was, but before assistance came from the people there he was too far gone. The current had carried him down a distance, when the men lassoed and hauled him out, but he was dead, the medicine firmly wrapped round his body.

So you see one must be careful where they pass these arroyos. A wooden cross, placed near where any unfortunate fellow is drowned, tells its silent tale. In the hot dry weather of summer most of these arroyos get dried up.

There are many rivers, which generally are fringed with trees on either side, giving the whole a pretty appearance, and affording a cooling shade to any one after a ride in the sun. The Rio Negro (Black River), within a league of which I am at present settled, a tributary to the Uruguay, is one of the principal rivers in the Banda. Broad forest strips clothe its banks, affording excellent timber and cabinet woods, and filled with armadillos, of which there are here three species, skunks, pole-cats, capinchas (sea-pigs), foxes, deer, lizards and other reptiles, pigeons, wild ducks, partridges, parrots, the horned plover, and birds of every imaginable hue are to be seen in immense flocks. The pigeons are exquisitely sweet and nice, and impart a rich flavour to soup, whilst some of the partridges are as large as ducks. Wild turkeys also abound in great numbers. As for ostriches, why they are everywhere, and about my house exceedingly tame. Sometimes they come in fifties and hundreds quite close to the house, some within a dozen yards, and often I have counted 40 and 50 within 50 or 60 yards; so that it is hardly worth while to have "tame" ones about, as tamer than these could scarcely be found. Some of the natives eat parts of the ostrich, and one who was visiting me the other day told me that the flesh round the wing-bone is delicious when made an asado (a roasting bit) over a clear fire, and many of which he had eaten. So the next I shoot, which I do for my dogs and chickens now and again, I mean to test the culinary novelty.

The river (Negro) contains a great quantity of fish, of all sorts and sizes. The largest is called the "suruvi," measuring as much as 9 or 10 feet in length and very fine eating; but the "dorado," another fish, reaching 3 feet in length, seems to form the favourite dish, its flesh being most delicious. It is so called from its belly being of a bright yellow or golden hue. Other kinds of fish, and very fine eating also, abound, and a very good day's sport can be obtained by taking a gallop there, as many do, the ride itself not lessening the pleasure, being over a fine piece of country. On a summer's day one may frequently see a party of caballeros galloping over the camp on the way to the Rio Negro, where, when once arrived, the horses are unsaddled and picketed out, the lines regulated and thrown in, and a fire made for boiling water for *maté* and cooking what is necessary of the victims of the bait. If you take your gun there is plenty of exercise for you, and so passes a pleasant day's enjoyment. Wild bees abound, and fine and rich is their honey. Sarsaparilla is also found abundantly on the borders of the Negro. The soil is very fertile and always affords good pasturage for sheep and cattle. I have, however, heard many say, and I believe it too, that the Grass on the Pampas of Buenos Ayres is much better for sheep than it is here. I must, whilst speaking of the Grass, not omit mentioning the pretty little flowers which give in many cases a pleasant odour and always a refreshing charm. Buttercups there are, but not Daisies. The wild Verbena (red and white) take their place, besides others some blue and others scarlet, &c.

I have already mentioned that wood is very abundant. In this locality, one of the most common is the Guava tree, from which I presume the Estancia owes its name. The Guayaba wood when young and fresh is very strong and durable, and therefore very serviceable; it is also excellent fire-wood. An English carpenter tells me he considers it most to resemble Ash in its qualities. The Tala is another serviceable tree found in abundance; the Ombú is an immense tree when full grown, and spreads out its branches to a great extent. One I have seen, under which I should think 200 men could well take shelter, but its wood is valueless, the delightful shade it affords, and its noble appearance being its only merits. The Orange, Fig, Pear, Peach, Quince, Apple, and Walnut trees also abound to a greater or less extent in all parts. The fruit of the Orange tree that I have seen is rather too sour to eat, but forms an excellent ingredient in punch. The Fig trees do not grow as at home, trained to walls, but stand up alone without any but its own support, the same as any other tree. Peach trees are everywhere, and the fruit in town is cheap. I have planted, along with various other seeds, some Ash-Keys, which you so kindly sent out. I am in hopes of a success, as they are in a fertile soil.

Vegetables thrive exceedingly so long as their deadliest enemies, the red and black ants, keep away. To save my little garden from animals breaking into it, I have planted all round a thick prickly thorn now about three feet high. We have two goats, a cat, and upwards of thirty head of poultry—bad gardeners enough; but the black ant, a quarter of an inch in length, is a very devil in stripping young plants, and in carrying off the leaves piecemeal to its hillock. These ants prefer Apple, Pear, and Apricot blossoms, and whilst that supply lasts, they do not invade Poplar, and such like trees. At a neighbouring Estancia a man was employed for eighteen months to do nothing else but destroy ant nests in the garden there. He succeeded, but at the end of a few ensuing months, fresh swarms, doubling the original numbers, overrun the garden. I believe Mr. A. professes to know how to get rid of ants in England. Ask him to let me into the secret, which I fancy I could sell out here for a good round figure. There is cover for pheasants, and if that bird could be introduced, he might do much good by feasting on his favourite food, the ant egg.

At San Jorge (our cattle establishment) there is a first-rate quinta, which is admirably kept in order under the superintendence of a nice young fellow, a Scotchman. There you may find all sorts—Potatos, Peas (green), Broad Beans, Lettuce, Onions, Leeks, Parsley, &c.; numerous Peach and other fruit trees, and a small Vinery, which in a short time, with the tasteful care bestowed on it, will form a fine bower. As it is, it looks wonderfully tempting to smoke a pipe when all is hot outside.

I like this kind of life very well, and never enjoyed finer health, but there are drawbacks which disincline one to wish to settle down permanently. There is too much of uncertainty in being able to hold one's own amidst the local warfare which disturbs the country one quarter or another with few intermissions. Cattle and horses are never quite safe, nor indeed is one's life, although Englishmen are generally respected, and seldom hear of any being murdered, notwithstanding that the native marauding bands are not over scrupulous even on that point. The most irksome condition of pastoral life here is at all times the rarity of the sight of a new face. A week or two often pass without our seeing a stranger.

One of our minor vexations is when G. and S. come home dead beat after minding our separate flocks a day in tempestuous weather, during which 30 or 40 head have been lost, to find our provisions gone (i.e. biscuit, meal, and coffee), and we unable to leave our post in quest of a fresh supply.

In a previous letter I believe I told you of the quantity of stone exported being something considerable. Nearly all the streets in Buenos Ayres are paved with stone from the Banda Oriental. Vast quantities are shipped from the Island of Martin Garcia, and when in San Juan I told you of a company that had bargained for stone from hills belonging to the Estancia for Buenos Ayres. Limestone is abundant, and it with lime is exported largely. Marble, as a natural consequence, is also found and exported to Buenos Ayres. I have heard that gold, silver, and precious stones are to be found in this small but naturally rich republic; but its legitimate source of wealth, is in its agricultural productions, unchecked by interminable civil broils. Not that the foreign settler is even very comfortable, for when the charm of novelty is gone, the beautiful solitude is nothing but a solitude, and nothing short of health and youth will enable him to get through the hard work, the privations, the loneliness, and the wear and tear of mind in his half banishment from the haunts of civilised man.

[The following note is added to illustrate the climate of the station during its winter season:—]

ESTANCIA DEL GUAYABO, Lat. 32° 30′ S., Long. 55° 15′ W.—Banda Orientale.

Day.	Date.	Reading of Therm. (Fahr.)	Hour.	Remarks on Wind and Weather.
Monday	June 1	46°	8 A.M.	Wind N. Frosty morning, but lovely day. Coldish at night-time.
Tuesday	June 2	46°	8 A.M.	Wind N. Fine clear sharpish morning, but quite a warm summer day. Milder at night-time than last few days.
Wednesday ..	June 3	56°	8 A.M.	Exceedingly mild morning—not a breath of wind. At 2 P.M. Therm. rose to 64°. Commenced raining at 8 P.M.
Thursday	June 4	61°	8 A.M.	Wind E., but turned to S. Very close and misty morning, and disagreeably wet and dismal day.
Friday	June 5	53°	8 A.M.	Wind S. Damp morning but no rain. Turned out a warm day.
Saturday	June 6	48	8 A.M.	Wind W. Frosty and clear morning. Lovely day.
Sunday	June 7	47°	8 A.M.	Wind S.E. Cold sharp morning. Fine day but cold at night, with strong E. wind.
Monday	June 8	58°	8 A.M.	Wind N.E., strong. Fairish day, but wind very unpleasant.
Tuesday	June 9	58°	8 A.M.	Wind N.W., strongish and disagreeable, but not cold. At 2 P.M. Therm. 64°. Windy night and much lightning.
Wednesday ..	June 10	62°	8 A.M.	Wind N.W. Rain commenced at 7. A.M., and ceased about 3½ P.M. A mild and calm night.
Thursday	June 11	56°	8 A.M.	Very foggy till about 10.30 A.M. Wind E., and a sharp morning. Heavy storm during the night.
Friday	June 12	59°	8 A.M.	Wind N.W. Very close and stormy. Heavy fog towards sunset, but fairish night.
Saturday	June 13	62°	8 A.M.	Wind N. Stormy during the day, but towards sunset a most severe tempest commenced, lasting all through the night. The thunder was terrific, and the lightning most fearful.
Sunday	June 14	57°	8 A.M.	Wind S. Wind sharpish, but about 11 A.M. the sun shone out.
Monday	June 15	52°	8 A.M.	Wind S.W. Fresh and bright day.

John Miller, June 16, 1863.

Societies.

ESSEX.—The Society was established in 1858. It owes its origin to the Royal Agricultural Society's meeting at Chelmsford in 1856. The surplus funds left from the town and county subscription on that occasion formed the nucleus for its commencement and successful establishment. It was taken up by the gentry and agriculturists with an energy and zeal which was boldly predicted would consume itself in three years. This prophecy was based upon two grounds, viz., that Essex was not a breeding county, and that several local societies in the county, with their annual shows of stock, had flourished and decayed in as brief a space of time. Whether these failures arose from want of sustained effort among the projectors, or inefficient management in its officials, or from local prejudices, which often engender differences and sow the seeds of speedy disruption, I do not pretend to say. But the county society is established on a broader basis. Individual indifference, or prejudice, active or passive, will often prove fatal to the life of a mere local society, but has little effect upon the steady purpose and successful career of a great county society, which has the sympathy and support of all classes living in it. The Essex society is gradually making progress, and has succeeded beyond all expectation.

The annual shows have taken place as follows:—

1858 at Chelmsford.
1859 at Colchester.
1860 at Saffron Walden.
1861 at Romford.
1862 at Halsted.
1863 at Witham.

The aggregate sum awarded in prizes since the commencement is between 3000*l.* and 4000*l.*, or about 600*l.* per annum. It has not been necessary to draw upon the surplus left by the Royal, which amounted to upwards of 300*l.*; but a further sum of 200*l.* has been invested with it, making a total of above 500*l.* now bearing interest.

We have no discussions on agricultural matters. Our operations are confined at present to the offering of liberal prizes for the best specimens of stock at the annual shows, endeavouring thereby to increase the adoption of the purest and best breeds. This competitive rivalry, if I may so call it, has beyond doubt a beneficial effect in various ways, which I think is shown in the increased attendance and practical interest evinced by the farmers in particular and the public generally at the annual exhibitions. *Robert Ensom, Secretary.*

INVERNESS.—The Inverness Farmers' Society, as it presently stands, was instituted in 1838; but there was a Society for similar purposes in Inverness many years before, and several smaller Societies in the neighbourhood, all which united in 1838 and formed the present Society. There are two general meetings in the year, one in February and one in October, at each of which there is a discussion on some subject connected with agriculture, such as the best method of preparing and applying farm-yard manure; the cultivation, &c., of Flax; the comparative advantages of the soiling and pasturing of cattle; the best means of improving the condition of farm servants; the effects on the true interests of agriculture of the practice of binding tenants to a certain rotation of cropping; whether the change from Blackfaced sheep and Highland cattle to Cheviots and crosses has been of advantage to the county; the causes that obstruct the cultivation of reclaimable waste lands; the ways and means by which these may be obviated or removed; and the advantages that would result from the full development of our native agricultural resources; and such like subjects. The Society is supported generally in the district, and these discussions are usually looked upon as useful, and as having considerable influence on the management of lands in the district. The Society does not publish any report of its proceedings; these are reported to the members at the general meetings, and the result as to funds, &c., recorded in the minutes of the several meetings by the Secretary, whose duty is to keep the minutes

and other books of the Society. There have been great improvements in agriculture in this quarter during the last 20 years. These consist chiefly of bringing into cultivation waste lands and draining old lands. For these purposes large sums were obtained from the Government Grant for Drainage of 1846. On several estates in the north, sums amounting to nearly 10,000*l.* were then expended, which gave a great stimulus to farming. Tenants themselves added to this outlay considerably, and in several parts of this neighbourhood the face of the country is entirely changed, and hundreds of acres brought into profitable cultivation. There is little doubt that the gross produce has greatly increased during the last 20 years, but it is questionable if the produce per acre has increased; indeed I think there is little doubt that the produce per acre has rather declined for some years back. Rents have generally advanced in the district, though there are instances of the reverse, and wages are now almost double what they were 20 years ago.

FORMARTINE.—The Formantine Agricultural Association was instituted 27th May, 1829, for the "encouragement and promotion of agricultural interests and improvements in the district." The district of Formantine is that portion of Aberdeenshire lying between the rivers Don and Ythan. It has endeavoured to carry out its object by holding an annual show at Green of Uduy of cattle and horses, and giving encouragement for good ploughing by yearly ploughing matches. The Society has also at intervals given prizes for seeds and roots, sheep, pigs, poultry, and dairy produce; while premiums to servants, male and female, for long-continued and good service, have more than once been awarded.

In addition to the yearly competition of stock above mentioned, there is an annual general meeting of the Society on the second Monday in November, at which office bearers for the ensuing year are elected, the state of the funds looked into, premiums paid, and arrangements made for the coming year, which have to be carried out by a committee of the Association; at this meeting any subject affecting agriculture locally or generally is taken up. The topic under discussion last year was "Finger and Toe in Turnips;" this year "Grub, and its ravages on lea corn" will come under notice. One member is appointed to introduce the subject, and give his views upon it, after which each member in rotation expresses his particular experience. The Chairman sums up, and gives the general result. We have no published records, but a minute book is kept of all the proceedings.

There is not the least doubt but that local Agricultural Societies have done much for the improvement of the country, and without boasting I may say that the Formartine Society has been of great benefit to the district, particularly in improving the breed of cattle. Aberdeenshire stands high as a cattle-rearing district, and in no part of it is there better stock than in the Formartine district. *Alex. Davidson, Sec.*

FRAMLINGHAM.—I send per book post a copy of the proceedings of the Framlingham Farmers' Club from its commencement until November 1862. The improvements witnessed in agriculture are the extension of underdraining, straightening old fences, an extended growth of green crops, and an increase of quantity of cattle kept. In connexion with the straightening of fences, large inclosures are made, and an amount of surplus trees removed, but too great a clearance of trees may be made in this flat country to be beneficial to agriculture, in my opinion. As to the increase of produce, rents and wages, I have nothing definitive to give upon these points, only that by thorough drainage, extension of root culture, and the increased quantity of cattle kept, a larger corn return is made, and no doubt owners are alive to increased rents in consequence. As to wages, an extension of the system of task work gives the labourer an opportunity of increasing his wages. The general wages here are now 10*s.* per week for a horse driver, and 9*s.* per week for a day labourer, but the farm supplies many little perquisites in addition, in the shape of firing, &c. At haymaking and harvests higher wages are paid; at haymaking about 15*s.* per week, which lasts about a fortnight. Harvests, 30*s.* to 40*s.*, which lasts about a month. Of course occupations are increased in extent, and it is clear even to the casual observer, the superior cultivation of holdings of 150 acres and upwards. This is consequent upon capital, and a higher rate of intelligence amongst occupiers of the larger holdings. *D. Smith, Jun., Oct.* 26.

Reviews.

Homes without Hands. By the Rev. J. G. Wood. Longmans. Small 8vo.

This is a periodical in shilling numbers, consisting of 32 pages, and from the first part which is now before us, promises to be as interesting and popular a publication as Mr. Wood's "Illustrated Natural History." The wood engravings are clever and well executed, and the letterpress highly interesting. The meaning of the title shall be given in the author's own words:—"Human habitations, however, do not come within the scope of the present work, which is restricted to those homes that are constructed without the aid of hands, and are planned, not by reason, but by instinct. We pass, therefore, from the handiwork of man to those dwellings which are constructed with feet, or jaws, or beaks, and which are never marred by incompetence, or improved by practice."

The mole is the first animal treated of, being "entitled to take the first place in our list of burrowers," for it not only digs tunnels, "but forms a complicated subterranean dwelling place, with chambers, passages, and other arrangements of wonderful completeness. It has regular roads leading to its feeding grounds, and establishes a system of communication as elaborate as that of the subterranean network of metropolitan sewers. It can run tolerably fast, it can fight like a bulldog, it can capture prey under or above ground, it can swim fearlessly, and it can sink wells for the purpose of quenching its thirst." Nearly eleven pages are given to this interesting little animal, because it is not only one of our commonest, but one of the least understood of our mammals. "Had the creature been a rare and costly inhabitant of the tropics, how deep would have been the interest which it excited. How the scientific world would have crowded to see the marvellous structure of a skeleton wherein are several accessory bones, and which exhibit peculiarities hitherto found only in fossil remains. How great would have been the admiration evoked by its soft, velvet-like fur, its tiny eyes deeply hidden in the fur, so as to be sheltered from the earth through which the animal is continually making its way, the strange mixture of strength and softness in the palms of its fore feet, and the elastic springiness of its nose."

Besides the history of the mole, the first number contains an account of the shrew mole, the elephant shrew, the musk rat, the fox, the badger, the prairie dog, the rabbit, and the chipping squirrel. Upon the whole the work must be regarded as a great acquisition to everybody's library, and especially to that of our young friends.

Farm Memoranda.

SARSDEN.—The Sarsden Estate, twenty years since was composed of a large proportion of wet and many acres of uncultivated land. The roads also came in for their share of the general character and aspect of the country. It is true, before this period, the late Mr. Langston had made a beginning in various ways of improving the estate, which he had since continued on a much larger scale, not only in effectually draining, fencing, and bringing into cultivation the common lands, but in altering the form and character of the old inclosures simultaneously with the progress of draining. These operations alone occupied at least one hundred men for years, and this of itself would have been a great achievement for any one to accomplish, but every other part of the improvement of the estate was equally promoted. About the same period he began to build, re-build, and renovate the farm houses, offices, and buildings, with very little exception, throughout the whole estate—in several instances erecting entirely new houses and all the requisite farm buildings, fitting them up with the means for performing, with machinery driven by steam power, the sundry operations of in-door work, without which the present mode of farming and feeding could not be accomplished by manual labour.

To give an idea of the magnitude of what has been done in this department, it may be mentioned that seven large farm houses, with the necessary out-buildings, have been newly built, and 10 so renovated as to be equal to half new. Two mills, a tilery, kiln, and drying sheds, and various other buildings not connected with the farms, have also been erected. The buildings just enumerated—the draining of about 4000 acres, and making the pipes for the same—the conversion of several hundred acres of common and otherwise uncultivated land into good cultivation—many miles of new roads on different parts of the estate—assistance towards the improvement of the public parish roads of the parishes adjoining to Sarsden—the straightening and otherwise altering water-courses: these form a summary of the principal improvements. We will not attempt to estimate, even approximately the amount of outlay for all these works. Very large of course it must have been. No one can go over the domain without surpise at the extent of new buildings in every direction, and the general fertility of the land. The increase in the produce generally is more than one-third, and in root crops not less than half."

Mr. Langston had recently introduced steam cultivation on his farms in hand; he began with Fowler's ten-horse engine and plough, which did good service, and was the pioneer for the introduction of one of greater power, viz., of 14-horse, with additional implements attached. Both were kept constantly at work. The beneficial effects of this mode of cultivation became so apparent in the increase of roots and other crops that a third engine, of the same power as the second, with all the implements, was procured at an expense of more than 900*l.*, in order that the tenants of the estate should have the opportunity of adopting steam cultivation. One of the tenants, to his praise be it said, seeing the benefit of this system, although only tried on his farm about two months, ceased to continue a customer for the plough procured expressly for him and other tenants, by purchasing one of Fowler's for himself. We cannot omit naming that when Mr. Langston was told that this tenant intended to purchase one, it gave him great pleasure, saying it was what he wished to produce when he procured the plough for the use of his tenants, so convinced was he that eventually the system must become more general.

We have thus narrated many very important works completed on the estate of one gentleman, and though more might be brought forward, enough has been mentioned to establish the fact that he who has accomplished all this is not only deserving the thanks of the community at large, but a memorial also, to testify how greatly he had been the benefactor of the working population of his neighbourhood. The various improvements effected by the late James Houghton Langston up to the day of his decease will be that memorial for many generations to come.

It may be well to state that the system of land drainage adopted at Sarsden is not that of the uniform depth of 4 feet. However this may do elsewhere, it will not do here—notwithstanding the greatest proportion by far is four feet, this being the shallowest allowed. The subsoil is the only criterion for determining whether the depth shall be 4, 8, 10, 14, or more feet. If this guide had not been adopted, a great deal of this land could not have been cured.

More than 20 years since instances occurred where the draining had been done on the uniform depth of 4 feet without any benefit—a second attempt deeper met with the same result—a third deeper still (6 feet) had no better success. The conclusion come to was that it could not be cured. About 14 years since this very ground was again drained, guided as to depth entirely by the character of the subsoil, with complete success. One drain was cut up the hill till it reached the depth of 18 feet, at which point only the water was below, and the outfall would not allow of its being sunk deeper; however, the drain was continued a little further at the same depth; pipes were then put in vertically 2 feet deeper where the water lay, which immediately ascended and flowed off in the pipes laid in the ordinary manner at the depth of 18 feet upwards. This answered completely. In the other cases the depths were not so great, varying from 8 to 14 feet—latterly there has been no occasion to exceed 8 or 10 feet; these even are not frequent. It is fortunate some of the deep draining does not cost so much per acre (superficial) as many of the shallower ones; they draw off the water from a greater distance, and are hence placed further apart.

It is only necessary to add, with reference to the Sarsden property, that it was not only the material prosperity of the inhabitants that was the object of the owner. Mr. Langston had built five school-rooms and four dwelling houses and offices for schoolmasters. Two village reading-rooms had also been founded, and a new church at Milton had been erected.

Calendar of Operations.

JANUARY.

LAMMERMUIR SHEEP FARM: *Jan.* 6.—With the exception of a few days of frost, and one day's snow, the weather has not yet assumed a winter character. We have had a long course of high winds, with a temperature so mild that vegetation has met with little check. The aftergrowths upon the pastures and the luxuriant rankness of the Turnip fields, evidence this in an unusual degree. Such open weather has been very favourable for all kinds of stock, and has already economised winter keep to an appreciable extent, and should it continue for some time longer, must make Turnips plentiful. This crop (with the exception of Swedes, which in many places are not well rooted) was a good one to begin with, and bids fair to be remunerative, which is all the more required that corn makes so little money. Stock is the last string to the bow for the present at any rate; and though we have all heard something of the doctrine that cattle are only useful as manure machines, we suspect that something in the shape of direct return will be looked for from the fattening stock, and that few farmers will be very content to have to look into the manure heap alone for their profits, or that their hopes would much revive at the prospect, or in the above case the necessity, of placing their whole dependence on corn. We are far however from despising the use of auxiliary cattle food to an extent that the animals using it will directly pay for, we even find that a moderate quantity of cake and bruised grain given to young cattle upon straw is this year cheaper than Turnips for wintering, and have a lot of calves which have hitherto had nothing but 3 lb. per day of the above mixture, with plenty of straw and a run out in the field through the day, and seem to thrive admirably. This plan commends itself in many ways. The Turnips are left on the ground to be consumed by sheep, and in a sheep rearing district as this is, they are turned to better account in the wintering of sheep than cattle, especially with the present high prices of store sheep and wool. The expense of pulling the Turnip crop and carting to the steading is also avoided, and the land is left in better trim for the succeeding corn crop by having all the Turnips eaten upon the ground. Part of our own Turnip crop has much disappointed us, never having used more artificial manure in the raising of it, and seldom with so unsatisfactory a result—Swedes upon which 3*l.* worth (besides farmyard manure) was spent, having turned out scarcely half a crop. Unfortunately Peruvian guano alone was used, which the dry season turned to poor account, and we have plenty of proof now that a smaller money expenditure upon a mixture of guano and bones would have produced better results. Other things also were against them, amongst which was an overpowering braird of Wild Mustard, which stole much of the guano, retarded their early growth, and left them too short a season after the pest was mastered for the requirements of the Swede; as also a clay soil, which, though tile-drained every 30 feet some 12 or 15 years ago, shows increasing wetness every rotation, from a falling off in the efficiency of the drains. There is no doubt that wet land suffers more from drought than either dry land or land which is thoroughly drained. Every season's experience serves to show that where drained every alternate furrow it is only half-drained, and raises the question, if a limited amount of money is to be expended on the drainage of a farm, whether it is not better economy to expend that money on a more limited acreage, doing the work

well, rather than spread it over an increased area and have the work imperfectly executed. Our Corn crops are this year yielding satisfactorily, and the harvest was propitious. A Picksley, Sims, & Co.'s reaping machine did good service, although the land was not prepared for it, but the breakages in such rough work teach us the advantage or rather the necesity of having the open furrows reduced and the stones rolled down or removed in spring. As it was, however, we were enabled during the first week or two of harvest to get along with the ordinary staff of farm workers, and were thus rendered less dependent upon the Irish hands, who at the beginning of harvest are employed in the lower and earlier districts of the county. The low price of grain this autumn has sent a considerable quantity of our surplus corn to a different market than usual, much of it having been given to the stock; and there seems good sense in using a commodity which we have at home at a low price, thus economising Turnips, rather than restricting ourselves entirely to the use of manufactured cakes. There is this disadvantage, however, in giving corn to store sheep, that though they do well upon it at the time, they feel the want more when it is taken from them, and do not continue to thrive so well as after Turnips. It is now our practice to winter the ewe hogs of our Cheviot flocks upon Turnips, or at least half Turnips, folding them on through the day, and taking them to the heather at night. They thrive well on this system, and the deaths are fewer than when they are close folded on the Turnip break night and day; but a great disadvantage attending it is that the Turnip field is robbed of a large portion of the manure, which is carried off to the heather and lost. If Turnips were plentiful enough to admit of it, a better plan would be to run the young sheep over heather or rough pasture for an hour or two each day (during which time they will eat as much of the dry herbage as they care about), and then return them to their fold. The Leicester rams used for crossing are now being brought in from the ewes; the Cheviot and Black-faced rams are allowed to run with them for a longer period. It is doubtful policy, however, to let them remain long, and as the season advances it is a question whether you are not better to have an eild or barren ewe than a late lamb. The ewe in the first case gets fat in summer, and can be sold to the butcher, while with a lamb late in the season she is in poor condition herself the following autumn, and is most likely to be again late in taking the ram. After missing lamb for two seasons a ewe is not retained in the flock, but getting fat on the hills, no finer quality of mutton for delicacy and flavour can be produced. Hill ewes look well at the present time, but from this date, during the months of January and February their condition gradually recedes till the backgoing is arrested by the supply of Turnips in spring. If possible, this should be commenced in small quantities about the first of February, and continued till lambing time, or when Grass brings relief. It is much better policy to begin the supply of Turnips early, though in small quantities, than to reserve them for a month's full meat at lambing time. The transition, then, from the dry hill pasture at once to abundance of good keep is too sudden for ewes heavy in lamb, and the timely supply of nutritious food arrests the relapse of condition which is afterwards so difficult to make up. *J. S. B., Jan.* 1, 1864.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer. Dry Bulb.	Reading of Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Thursday	Dec. 1	29.91	34	31	N.E.	1	9	40	33	41	31	0.33
Friday	2	30.43	30	28	N.E.	0	10	35	22	42	16	..
Saturday	3	30.61	28	27	N.E.	0	9	34	19	44	16	..
Sunday	4	30.58	24	23	N.W.	0	0	32	19	35	12	..
Monday	5	30.47	29	27	E.	0	3	32	21	39	13	..
Tuesday	6	30.22	19	18	E.	0	0	36	15	39	10	..
Wednesday	7	30.23	17	—	E.	0	0	26	12	34	9	..

Notices to Correspondents.

HOPS: *14 years' Subscriber.* There is an elaborate article on Hops by the late Mr. Paine of Farnham in the Cyclopædia of Agriculture (Blackie).

SALT: *H S P.* It should be applied in March, April, and May, 1 cwt. per acre each time in wet weather. It is most likely to be useful to Grass land in cases where the Grass is coarse and gross. For fine Grass it is not likely to be of much use. Some nitrogenous manure, as cake, nitre, or sulphate of ammonia, 1 cwt. per acre, is most likely to be of service then—applied in March or April, the season of growth.

To Florists and Nurserymen.

HY. PERKINS calls the attention of the above to his large stock of TOBACCO PAPER and CLOTHS, at 10*d.* per lb.; and superior ROLL PAPER, at 1*s.* per lb. Warranted free from adulteration, having taken every pains to secure the same.

16, Cambridge Circus, Hackney Road, N.E.

COCOA-NUT REFUSE delivered within 2½ miles of Charing Cross, at 2*s.* per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. BARSHAM & Co.

BARSHAM'S BRUSHES and MATS are sold in every town.

CAUTION.—Every Brush is stamped. J. BARSHAM'S Patent'

Winter Dress all Fruit Trees with

GISHURST COMPOUND,

Copy of a Letter from Mr. RIVERS

"Nurseries, Sawbridgeworth Herts, Oct. 22, 1861.

"I must tell you what I heard to-day from a very clever gentleman farmer, Anthony Bubb, Esq., of Witcombe Court, Gloucester. He has a wall to which Peach trees are trained. Well, last autumn they were in a wretched blighted state. As a desperate remedy he unnailed them all early last February, and gave all but one a thorough painting with Gishurst Compound, 1 lb. to the gallon of water; his trees, all but the one, commenced to grow favourably in spring, and are now pictures of health. The tree not painted is in a half-dead blighted state. He used the same dressing to his Apple trees; it killed the woolly aphis entirely, and has made his trees clear and vigorous in their growth. He intends to paint his wall trees annually, and tells all his friends to do the same. I shall certainly serve all my young Peach trees against my walls in the same manner. The Compound is, I believe, more efficacious than the usual offensive mixtures of clay, soot, sulphur, &c., and it does not blacken the shoots on the walls."

Red Spider Magnified.

For Orchard-house Trees 4 ounces to the gallon will be found a good strength; when used stronger some buds on weakly trees may be injured.

GISHURST COMPOUND is Sold Retail by Nurserymen and Seedsmen, in boxes 1*s.*, 2*s.*, and 10*s.* 6*d.* each.

Wholesale by PRICE'S PATENT CANDLE COMPANY (Limited), Belmont, Vauxhall, London, S.

DAY, SON, AND HEWITT, Inventors of the "Stock Breeder's Medicine Chest;" containing DAY'S EXTRACT and GASEOUS FLUID,

which are to the Stock Breeder and Farmer of the most inconceivable value, inasmuch as paining in Ewes in bad lambing, Cows in bad calving, swollen udders, sore teats, and all bad wounds, bruises, and swellings in all Animals, are dissipated and finally annihilated by the "Extract," while the "Gaseous Fluid" for Ewes weakly after bad lambing, Cows after bad calving, Mares after bad foaling, by its balsamic and electrical influence imparts the greatest life and animation. It is proverbial for its marvellous cure of the Fret, Colic, and Gripes in Horses, and for Diarrhœa (or Scour) in Calves, Sheep, and Lambs. Such is the permeation of the "Extract" by rubbing in, and of the "Gaseous Fluid" by dosing, that they draw the acrid humours which cause disease out of the parts affected, and excite the curative powers of nature into action; when life, vigour, and the soundest health ensue. This is the secret of their wonderful popularity. Price of "Extract," 2*s.* 6*d.* and 7*s.* per bottle; or quarter of dozen in wood box, 7*s.* 6*d.* "Gaseous Fluid," 1*s.* 8*d.* per bottle, or 20*s.* per dozen in wooden box. Plain directions for use given with every Article.

☞ Caution. Counterfeits are being hawked about at markets, some as "DAY'S," and others as "DAY & Co.'s," to avoid which be sure and ask the person soliciting orders, "Are you travelling for DAY, SON, & HEWITT?"

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SAMPLE MEDICINE CHEST, 16*s.* 6*d.* Carriage paid.

Patrons, 70,000.

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GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability.

May be obtained at F. & G. ROSHER'S Premises, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; and Kingsland Road, Kingsland, N.E.

Illustrated Price Lists free on application. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

Also WHITE GLAZED TILES, for Lining Walls of Baths, Dairies, Larders, Kitchen Ranges, &c. Grooved Terro metallic and other Stable Paving Bricks of great durability, Clinkers, Red and White Wall Copings, Glazed Drain Pipes, &c.

To be obtained of F. & G. ROSHER, at their Premises as above

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HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.

Sold in casks of about 30 gallons each, at 1*s.* 6*d.* per gallon, at the Manufactory, or 1*s.* 8*d.* per gallon paid to any Station in the kingdom.

Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street, E.C., from whom only it can be obtained.

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2 inches in diameter ..	0	3½	12 inches in diameter ..	1	1
3 ,, ,, ..	0	4½	13 ,, ,, ..	1	2
4 ,, ,, ..	0	5½	14 ,, ,, ..	1	3
5 ,, ,, ..	0	6½	15 ,, ,, ..	1	4
6 ,, ,, ..	0	8	16 ,, ,, ..	1	5
7 ,, ,, ..	0	10	17 ,, ,, ..	1	6
8 ,, ,, ..	1	0	18 ,, ,, ..	1	8
9 ,, ,, ..	1	2	19 ,, ,, ..	1	10
10 ,, ,, ..	1	4	20 ,, ,, ..	1	11
11 ,, ,, ..	1	6			

HAND GLASSES, WITH OPEN TOPS.

	Each—s.	d.		Each—s.	d.
12 inches	6	6	18 inches	9	0
14 ,, ...	7	6	20 ,, ...	10	0
16 ,, ...	8	6	22 ,, ...	11	0
			24 ,, ...	12	0

Painted and Glazed with 16 oz. Sheet Glass.

HYACINTH and FLOWER DISHES.

6 inches diameter, 1*s.*; 9 inches, 1*s.* 6*d.*; 12 inches, 2*s.* 6*d.*

Hyacinth Dishes are intended to contain a number of roots bedded in sand and covered with moss, instead of the common Hyacinth Glass.

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Patent shape, per dozen, 6*s.* 6*d.*

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3. A Complete Collection of KITCHEN GARDEN SEEDS ditto ...	1	11 6
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THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

At a General Meeting of the Members of this Institution, held on Thursday, the 14th inst., for the purpose of Electing Three Pensioners, the following was the result of the Ballot:—

CANDIDATES.

NAME.	AGE.	VOTE.
ROBERT DOWDELL	74	581
JANE ATLEE	73	802
BENJAMIN COLLINS	65	114
CUTHBERT EMBLETON	61	220
JOHN BOSWELL	67	19
MARY BRAY	56	242
GEORGE GREEN	77	723
WILLIAM KER	63	119

The Meeting then declared JANE ATLEE, ROBERT DOWDELL and GEORGE GREEN, as having the greatest number of votes duly elected Pensioners of this Society.

14, Tavistock Row, Covent Garden, W. EDWD. ROGER CUTLER, Secretary

ROYAL HORTICULTURAL SOCIETY.

FRUIT COMMITTEE.

A MEETING of this COMMITTEE will be held on FRIDAY, January 29, at the Rooms of the Society at South Kensington, for the Examination of such FRUITS and VEGETABLES as may then be submitted, and for awarding the following Prizes:

CLASS A.—For the best Dish of ADAMS' PEARMAIN APPLE. 10*s*., 5*s*.
CLASS B.—Ditto MARGIL. 10*s*., 5*s*.
CLASS C.—Ditto OLD NONPAREIL. 10*s*., 5*s*.
CLASS D.—Ditto JOSEPHINE DE MALINES PEAR. 10*s*., 5*s*.
CLASS E.—Ditto ZEPHIRIN GREGOIRE. 10*s*., 5*s*.
CLASS F.—Ditto of any of the newer varieties of PEARS. 10*s*., 5*s*.
CLASS G.—The best Two Bunches of New BLACK HAMBURGH GRAPES. 30*s*., 20*s*.

All Fruit must be ripe, sound, and fit for table. A Dish is to consist of Six Fruits. Subjects for Exhibition must be at the rooms by 11 o'clock on the day of Meeting. As the awards are made by flavour, those Exhibitors who require their Fruit to be returned must not expect to receive it entire.

Communications and Packages to be addressed to
ROBERT HOGG, LL.D., Secretary to the Committee.

The Gardeners' Chronicle.

SATURDAY, JANUARY 16, 1864.

MEETING FOR THE WEEK.

THURSDAY, January 21—Linnean .. .. 8 P.M.

A VERY important paper has lately been published by SCHACHT in PRINGSHEIM'S "Botanical Annual," * on the modifications produced by the presence of FUNGOUS THREADS IN THE CELLS OF PLANTS. It was suggested many years since by Dr. HASSALL that the threads of moulds exercised a specific action on the cell walls, and experience has shown that this is the case, not only where the walls consist of little more than cellulose, but also where there is a thick woody deposit. The matter, however, has never been so closely investigated as by SCHACHT, and though a great many of his facts have no pretensions to novelty, there still remains much that was before unknown, besides other matter which is highly suggestive, while the old things are brought forward in such a guise as to wear an appearance at least of freshness.

His attention was first directed especially to the aërial roots of Orchids, and it is interesting to observe that even the mycelium of an Agaric is capable of penetrating and modifying the cells, as it confirms the suspicions which are entertained of the unfavourable influence of fungous spawn in general on vegetable structures with which it may chance to come in contact. In general, however, when once the threads have entered a cell, the baneful effect seems to be confined almost entirely to the points where they actually touch the walls, and this is equally the case whatever be their nature or thickness, or whether the threads are applied to the starch granules contained in the cells. The solid parts are made soluble apparently by the conversion of cellulose and starch, and what is more wonderful even of the woody lining, directly or indirectly, into sugar,† and consequently, wherever the

* Jahrbücher für wissenschaftliche Botanik. Dritter Band. Drittes Heft. Berlin, 1863.

† The threads of *Oidium violaceum* when penetrating starch grains acquire a rose-coloured tint when treated with sulphuric acid, a tint which is assumed when sugar and albuminous matter are in contact. The author's notion, therefore, of the conversion of the parts of the cells which are in contact with or are penetrated by the fungous threads into sugar, is not pure theory alone.

threads have rested, or have branched and burrowed into the substance of the walls, cavities or depressions are formed, which assume, according to circumstances, various characters. Hence in some cases the cell walls, after the Fungus threads themselves have entirely vanished, appear under the form of a spongy network, in others crystal-shaped impressions are left, while occasionally the depressions are spiral. The most easy passage from cell to cell is afforded by the punctures through the lining membrane which supply a means of communication with neighbouring cells, and in this case should the thread chance to branch within the puncture, we have extraordinary dilatations which have hitherto been considered as peculiarly abnormal forms, without any suspicion of their real origin.

By an ingenious manipulation our author has been enabled to examine microscopically certain conditions of decaying wood, of which hitherto it has been impossible to make clean sections from their friable nature.* And even in cases of that chemical dry-rot which consists in a slow combustion, known under the name of Eremacausis, he has found that during some part of the process fungous growths have been at work. He finds even traces of the same thing in fossil woods, a fact of which Mr. ROBERT BROWN was to a certain extent cognisant, as he informed us many years ago. In true dry-rot the whole effect is not due to the penetration of the threads, which are generally very superficial, but something depends on a specific action, and more probably on the peculiar faculty which Merulius lacrymans has of attracting moisture. Indeed, in every case a certain quantity of moisture is absolutely necessary for the development of the fungous threads, and their penetration into the contiguous tissues.

It appeared from Herr SCHACHT'S observations—a fact indeed which was ascertained before—that where the fungous threads are dark, and if we may so say carbonised, they are far less fugacious than when they are quite free from colour. Accordingly in certain cases where the spores are dark brown, and the threads white, the former are left behind in the cells when the latter have completely vanished.

We have of course been able to give merely a slight sketch of the memoir, and it may be acceptable to many of our readers to have the author's conclusions from the whole of his observations literally translated, as the Journal in which they appear is one which has not an extensive circulation in this country, notwithstanding the extreme value of many of its papers.

1. Besides true parasitic Fungi, others which live on decomposing substances, penetrate the dying or dead tissues of plants, and destroy them more or less completely. They are the almost universal companions of decay, and require for their development above all things moisture and oxygen.

2. These Fungi exercise a peculiar chemical influence on the cells of plants and their contents, acting either directly or indirectly. Starch, cellulose, and woody lining are dissolved by their chemical action. Both cellulose and lignine vanish together from the indurated cells, while on the contrary the intercellular substance is seldom if ever affected.

3. Cavities or canals arise by the direct contact of the fungous threads in the starch grains and thickened linings of the cells, as also complete perforation of the walls. The fissure-shaped crystalloid cavities in the cell lining of the bast-cells of Caryota, and the woody tissue of Hernandia, which were formerly considered as peculiar forms of cell punctures, are due to the action of fungous threads.

4. The dry-rot Fungus acts indirectly on the wood, whose cells are saturated with its juice, and in consequence lose their lignine and cellulose, though their walls suffer no corrosion.

5. The different forms of decay in wood are accompanied by Fungi which either completely destroy the tissue or alter its nature so much by the abstraction of the cellulose and lignine, that it becomes loose and friable. Fungi induce the rapid destruction of decaying wood.

6. The species of Fungus which induces destruction, is not always distinguishable, since fructification is not always present, and the threads of mycelium in the same Fungus are subject to considerable variations in the length and breadth of their articulations.

7. The brown fungous threads alone resist destruction for a considerable time, and like the brown envelope of the spores of the same Fungus are little if at all affected by concentrated sulphuric acid; the colourless threads, on the contrary, are extremely fugitive, and are frequently no longer present in the wood, though the channels which they have bored, and the more persistent spores when brown, give evidence of their former existence. *M. J. B.*

* A small portion of the wood is boiled over a spirit lamp for a short time in a solution of pure gelatine, and then suffered to dry, when fine slices may be obtained, which may easily be divested of their glue by immersion in warm water.

WE regret to have to record the loss of a veteran in the ranks of Horticulturists in the person of Mr. CHARLES MCINTOSH, who died in his 70th year, at his residence, Newcome Villa, Murrayfield, near Edinburgh, on the morning of the 9th inst. For some months he had been under medical treatment, and it would appear that he never completely rallied from the effects of a surgical operation, which it was necessary he should undergo some time since. He will be remembered not only as a gardener who during a long life had occupied a prominent position in the horticultural world, and who had in the course of it acquired a varied and extensive fund of information in all departments of horticulture; but also as one who had contributed largely to the literature, and through his writings to the scientific advancement of the profession; and, further, as the genial, kindly, unselfish, and warm-heated friend of a wide circle of professional associates and acquaintances.

Mr. MCINTOSH was born at Abercairney in Perthshire, in August, 1794. He was educated at Maderty, under Dr. MALCOLM; and after acting for some time under his father at Abercairney, he succeeded him in the charge of the gardens there, and afterwards removed to undertake the management of those of Taymouth Castle, the seat of the Marquis of BREADALBANE. While still young he left for the south, and was engaged as gardener to Sir THOMAS BARING, Bart., at Stratton Park, Hampshire, whence we find him in 1825 contributing to the first volume of "LOUDON'S Gardeners' Magazine," a description of an extremely useful and novel form of Orange tub. After leaving Stratton Park he was engaged under Mr. HORNER in laying out and planting the grounds attached to the Colosseum in the Regent's Park, then newly built. His intelligence and energy recommended him to the notice of Prince LEOPOLD, and at Claremont he resided for many years, during which period he effected very considerable improvements in the gardens and grounds. After the accession of Prince LEOPOLD to the Belgian throne, Mr. MCINTOSH was employed by the KING, whose confidence he possessed, not only to superintend the Royal Gardens at Claremont, but also to remodel those at Laecken, of which he for some time had charge. While filling this position at Claremont, Mr. MCINTOSH had many opportunities of meeting with the Princess VICTORIA, now our gracious QUEEN; and on more than one occasion HER MAJESTY has shown him kindnesses which are, or can be, rarely extended to any subject. In 1838, Mr. MCINTOSH returned to Scotland to take the management of the Duke of BUCCLEUCH'S gardens at Dalkeith; and it was he who planned the magnificent grounds and conservatories which form such an attraction to the Palace. After a period of nearly 20 years spent as head gardener to the DUKE, Mr. MCINTOSH resigned his appointment to become a landscape gardener and garden architect on his own account, since which time he has been engaged in beautifying the villa residences of many citizens, and the gardens and parks of many of the gentry and nobility of the country, his advice being sought not only in Scotland but in England. Prior to his departure from Dalkeith, Mr. MCINTOSH was presented by 600 subscribers with a handsome testimonial, consisting of a tea service and purse, the value of which was 325*l.*, in token of the eminent services he had rendered to horticultural science.

Mr. MCINTOSH was a voluminous writer, and his publications upon the several branches of the profession are numerous. Those however by which he will be best and most favourably known, are the *Practical Gardener*, published many years ago, and of which several editions have appeared; *The Greenhouse*, and *The Orchard and Fruit Garden*, of more recent date; and the *Book of the Garden*, published about 10 years since, in two bulky octavo volumes, recording the results of modern practice, and forming the most recent of garden encyclopædias. He was also a frequent contributor to the *Gardeners' Magazine*, *Paxton's Magazine of Botany*, and the *Gardeners' Chronicle*; and was connected with the periodical horticultural and agricultural literature of the northern metropolis, up to the time of his death. The horticultural department of the *Scottish Farmer* has been conducted by him from its commencement three years ago. He was a corresponding member of the Royal Caledonian Horticultural Society, of the Royal Horticultural Society, and of the Massachusetts Horticultural Society; a member of the Architectural Institute of Scotland, an A.L.S, F.R.P.S., and F.R.S.S.A.

WE return to-day to the subject of the cultivation of exotic fruits in our English gardens. It is very instructive to mark the geographical distribution of the fruits of the earth. The Cocoa-nut, as we have already observed, prefers a situation near the sea-shore, in addition to the heat of the tropics. The Mangosteen grows most luxuriantly on the Islands of the Eastern Archipelago, such as Borneo, Java, Singapore, &c.—places almost under the line, where the seasons vary but little throughout the year. It is always summer there, vegetation is evergreen, and growing and cold or dry seasons are almost unknown. The Mangosteen evidently requires a climate of this nature, and is consequently very difficult to manage in other tropical countries, like Southern India for example, which are subject to cool and hot, and wet and dry seasons. The Mango is much less exacting in its requirements than the Mangosteen. It is cultivated over a much greater space of latitude, and in places where the temperature and seasons are very variable. It is had in perfection in the Philippine Islands, and at Bombay, as well as over a great portion of Southern India.

The class of fruits with requirements like those of the Orange prefer a more temperate climate than the Mangosteen or even the Mango. Places with a temperature and seasons like Southern China, the south of Europe, the north of Africa, the Azores, and the islands in the Mediterranean, are best suited for this class of fruits. Southern China is the home of the Orange, the Lee-chee, the Longan, and the Wampee. Their cultivation extends northwards as far as the River Min, or to about latitude 26° north. In this part of the country the winters are comparatively mild, frost and snow are almost unknown, unless upon the tops of the highest hills. The cultivation of these fruits does not extend further to the northward. Two small kinds of Oranges very like the Tangierine, and the Kumquat (Citrus japonica) are, however, an exception to this rule.

Beyond the region we have named, and further north, another class of fruits is met with, one which requires a different climate again, namely, a summer of equal warmth but a colder winter. The Peach, the Loquat, the Yangmae (Myrica sapida var.), and the Vine, together with the species of Citrus above named, occupy this second belt of latitude, say from 25° to 35°; some of them, such as the Vine and the Peach, going even further north, while others do not go quite so far. And we may remark here, that between these degrees of latitude in that part of Asia our common English fruits, such as Apples and Pears, do not flourish, and where they exist at all, they are almost worthless.

These then are the natural conditions under which the various kinds of exotic fruits we have named are placed in the countries to which they are indigenous, or in which they are successfully cultivated; and we may fairly assume that if we can supply them, in an artificial way, with the same temperature, seasons, and soil, our efforts will have a fair chance of being successful. But if we are ignorant of, or if we disregard, the natural requirements of such fruit trees; if, for example, we keep forcing and steaming a plant all the year round, when it naturally requires a season of rest and repose, need we wonder that the tree remains barren, and eventually becomes sickly and stunted in condition. Or take another case, which, we may remark, is a very common one; suppose our plant requires a higher summer temperature than we are favoured with in this country to enable it to ripen its wood and lay up a store of nourishment, and we simply give it as much as we give to our indigenous fruit trees, can we feel any surprise if it remains unfruitful?

Such being, as we believe, the theory of successful cultivation of exotic fruits, we will now endeavour to show how it may be practically applied. Leaving fruit trees which are purely tropical on one side for the present, we shall confine our observations to the second class we have mentioned, which is represented by the Orange, the Lee-chee, the Longan, and the Wampee. What

then, is the character of the climate of Southern China, where these fruits are at home? We answer: warm summers, much warmer indeed than our English ones; mild winters; rainy weather, and consequently a moist atmosphere in the months of May and June. July and August are the hottest months in the year. During these months the thermometer (Fahr.) ranges between 80° and 94° in the shade; the air is very dry, and the atmosphere is clear and cloudless. In the winter, that is from December to March, the thermometer frequently sinks nearly down to the freezing point, and ranges from 65° to 33°. Ice or snow are rarely seen, except on the tops of the hills. The rains, as already observed, fall copiously in May and June; the summer and autumn is dry, and the other portions of the year are not remarkable for any excess of heat, cold, or dryness. This, then, is the atmosphere and temperature in which the fruit trees we have named grow and flourish, and yield abundant crops. If our English gardeners can supply this atmosphere and temperature in an artificial way by means of glass houses and hot-water pipes or fermenting materials, there is no reason why their labours should not be crowned with the most complete success. The different varieties of the Orange would probably be the easiest to manage among the fruits we have mentioned, and it would appear that we are already much more successful in its cultivation than we were a few years ago.

In the description of climate and temperature which we have given above, we have omitted one very important circumstance, namely, the temperature of the soil. Every intelligent gardener knows the importance of this, and therefore we will only add that in the cultivation of exotic fruits BOTTOM-HEAT is oftentimes as necessary as heat above ground.

THE Proprietors of the *Gardeners' Chronicle* have offered annually, for two years, the sum of Twenty Pounds in prizes each year for flowers &c. grown by Ladies, and shown by them at the meetings of the Royal Horticultural Society. The details are to be settled immediately.

— MR. C. J. PERRY strongly recommends PEGGED-DOWN ROSES for the flower garden; and states their advantages to be:—1, that a much greater quantity of good blooms are produced; 2, the blooming period is considerably prolonged; 3, many kinds which are otherwise too much crowded with buds to open freely, will thus produce single blooms of great size; 4, the plants are less subject to injury from winds. The mode of procedure, which is described in last month's *Florist*, is to take vigorous plants budded low on the Manetti, or better on their own roots; to cut away all the small shoots, and a few inches of the ends of the strong ones; and to bend these pruned shoots carefully down to the ground, and fasten them with pegs strong enough to last for the season. The result is a crop of fine blooms—such blooms indeed as enabled Mr. PERRY to carry off two leading prizes at Birmingham last July. But besides the flowers, many shoots will be produced from the base, too strong for summer-flowering, but most of them such as to produce 'noble flowers' in the autumn. These are the shoots for pegging down the following season. The old ones are cut away in the course of the winter, and the plants, with their ample supply of strong shoots 4 to 8 feet high, are described as then resembling Raspberry bushes. These shoots are bundled together and tied to a stake to prevent their being injured by wind, and at the latter end of March are pegged down. Mr. PERRY observes, that when this method of pegging-down and dwarfing strong-growing Roses becomes generally known, many of the valuable robust show varieties will occupy the prominent position in our flower gardens, to which their merits entitle them.

— In regard to the LUMINOSITY of FRAXINELLA (see p. 1134, 1863) Mr. JAMES BACKHOUSE states in the *Journal of Botany*, that he is certain the solution of this question, which would make the inflammability dependent on the presence of glands secreting etherial oil, is correct. This inflammability is not, however, he states, confined to the glands of the pedicels. Little round glands also cover the stems of the plant, and by applying a candle to the lower part, on a fine summer's evening, he has often obtained a sudden blaze enveloping the stems, and rising considerably above the plant. But the experiment can only be successful once in a season, as the combustible glands are not reproduced on the same stems. The late Prof. HENSLOW adopted a somewhat similar explanation. "The Fraxinella," he observes, "is covered with minute glands which excrete a volatile oil. This is continually evaporating from its surface, and on a calm still evening forms a highly inflammable atmosphere round the plant. If a candle be brought near it, the plant is enveloped by a transient flame without sustaining any injury from the experiment" (*Desc. and Phys. Bot.* 221.) Mr. BACKHOUSE further suggests that the red-flowered plant met with in gardens is the normal state of Dictamnus albus, while the white-flowered state of the plant from which apparently the name is taken, is merely an albino.

— It has become pretty generally known that certain remarkably fine NEW PEARS have been raised by the Rev. J. HUYSHE, of Cullompton, the most familiar of which have been called HUYSHE'S Bergamot, and HUYSHE'S Victoria. To these, as recorded in our last year's volume (p. 8), has to be added a third, which had just fruited, and is called HUYSHE'S Princess of Wales, the quality of which, moreover, so far as experience has gone, is said to equal that of its sister seedlings. During the past season the Fruit Committee of the Royal Horticultural Society very properly offered prizes for the two better known sorts, which are already in the hands of pomologists, and some very fine fruit was produced, fully confirming the high rank which the Devonshire seedlings are entitled to take. That, however, which has hitherto been known as HUYSHE'S Bergamot, having neither the Bergamot shape nor flavour, is in future to be called HUYSHE'S PRINCE OF WALES, a change of name of which, as the varieties are no doubt destined to come into general cultivation, fruit-growers should take note.

— Writing of ACORUS CALAMUS in the penny *Botanist's Chronicle* (Irvine), a contributor who adopts the signature "E. G. R." states that he has "found that quinine has its efficacy in ague and neuralgia quintupled by being administered in a strong infusion of Acorus."

— The *Journal of Botany* gives amongst its BOTANICAL NEWS the following items:—Dr. SCHWEINFURTH, of Berlin, has started for Egypt, with the intention of exploring botanically the Sinai peninsula, and the eastern shores of the Red Sea.—The Historic Society for Lower Saxony—Niedersachsen, as nearly the whole of northern Germany was formerly called—has offered a prize for the best essay on the native plants of Lower Saxony, in their relation to the mythology and superstitions of the old Saxons.

FRANCIS BOOTT, M.D., V.P.L.S.

IT is with deep regret that we have had to announce the death of Dr. Francis Boott, F.L.S., L.R.C.P., a gentleman well known amongst a large circle of friends, no less for his love of science, and especially of botany, than for his cultivated mind and genial disposition, and the affectionate interest he took in the careers of young aspirants to honour in various branches of literature and art. Dr. Boott was born at Boston, in Massachusetts, U.S., Sept. 26th, 1792, and was the son of Kirk Boott, an Englishman who had settled there early in life; his mother was a Scotch lady, and his early education was acquired at Harvard University. When only between 16 and 17 years of age he came over to England, where he resided near Derby with a family connected with his own, and where he made the acquaintance of Mrs. Hardcastle, his future mother-in-law, from whom he acquired his taste for botany, and for everything that is beautiful in nature and refined in literature and art. At about this time he also became acquainted with Sir Joseph Banks, and formed life-long friendships with the late Robert Brown, Sir William (then Mr.) Hooker, Sir James Smith, and most of the eminent botanists of the day. During the years 1818–20 he made several voyages to America, and formed an excellent herbarium of Massachusetts plants, then little known in this country. These he afterwards gave to Sir William Hooker, in whose Herbarium they are preserved at Kew. On his final return to England in the latter year he determined to follow the medical profession, for which purpose he placed himself under the direction of the late Dr. J. Armstrong, for whose professional ability and private character he ever entertained a profound veneration. From London he went to the University of Edinburgh, where he studied under Hope, Munro, Alison, Pillans, Christison, and other most eminent men, of whom the latter only survives him. After presenting his inaugural Essay on Hydrocephalus, he received his degree of M.D. in 1824, and finally settled in London in 1825. Here he first held the chair of lecturer on botany in the Webb Street school of medicine, where his friend Dr. Armstrong was professor of Materia Medica. His lectures are said to have been admirable, both in matter and style, and to have excited much enthusiasm; whilst his untiring efforts to promote the welfare of his pupils in other ways were so deeply and generally felt, that on the eve of his too early withdrawal from the lectureship, they in one day raised a large subscription to present a testimonial "to their friend and teacher," a tribute which, with characteristic modesty and consideration, was declined as soon as heard of; he was however afterwards persuaded to accept a collection of books instead, in remembrance of their grateful feelings and good will.

The death of his friend Dr. Armstrong soon followed, at whose dying request he undertook to publish his life, which appeared in 2 vols. 8vo. in 1834, and was entitled "Memoir of the Life and Medical Opinions of John Armstrong, M.D.; to which is added an inquiry into the Facts connected with those forms of Fever attributed to Malaria and Marsh Effluvium. In this work Dr. Boott entered largely into the subject of the Plague in Egypt, Syria, Holland, France, and London; holding that the Plague obeys the same laws which govern other forms of malignant fever, and does not wholly lose its periodical type in the more northern latitudes. He also states his belief that mean temperature influences type, which he founds on a careful study of the disease in its march from Italy and the Mediterranean through Paris to Great Britain. He also published in 1837 two lectures on Materia Medica.

About this period University College was founded; an institution in which Dr. Boott took the warmest interest, holding for upwards of a quarter of a century the posts of member of its Senate and Council, and being chosen latterly President of the Committee of Council. During this time, and indeed up to the last, he kept up an active correspondence with America, while his house became a place of resort for many of his countrymen, who were not only introduced by him to the men best worth knowing in England, but were also provided with letters of introduction to his continental friends.

For some years Dr. Boott carried on a very successful practice in London, and was especially noted for his treatment of fevers, he being one of the first physicians who, abandoning the old system of confining the patient in hot close rooms, gave abundance of free air in carefully ventilated apartments. For the arduous duties of a full London practice he was, however, constitutionally unfitted; and inheriting a competency at a comparatively early age, he devoted most of his time to the study of literature, both ancient and modern, and to the analysis of an extensive and very difficult genus of plants, that of the Carices. The genus Carex is one of the largest in the vegetable kingdom, embracing, according to his computation, upwards of 600 species, and is spread over every quarter of the globe; and to the study of these he latterly gave up most of his time, much to the detriment of his health, though greatly to the interest of science. Amongst other contributions to their history, he prepared the monograph of 158 species, published in Hooker's "Flora Boreali Americana," and analysed and determined the species in every private and public herbarium to which he could gain access.

More recently he commenced at his own expence the publication of a folio work in two volumes, intended to contain no fewer than 600 plates and descriptions of Carices. Of this work 411 admirably executed plates, full of most accurate analyses of as many species and varieties, are already published: he was engaged in its continuation up to within a few weeks of his death, and we understand that a considerable part of a third volume is all but ready for publication. This work is certainly one of the most munificent contributions ever made to scientific botany, besides being one of the most accurate; on which account it certainly entitles its author to take a much higher place amongst Botanists than that of an amateur, which was all his modesty would allow him to lay claim to. Carex, he used to observe to his friends, was his hobby; tracing out the characteristics of its multitudinous forms was his delight; and to be the exponent of the structure of every species, after an examination of every available specimen, was his unselfish ambition. The work itself cost him many years of assiduous labour, and a very large sum of money; both drawings, engravings, and letterpress, being executed at his own cost. Of his own merits as author of so noble an undertaking, Dr. Boott could never be brought to speak (nor to listen to any praise of them), and the motto inscribed on the title page of the volumes, best explains his own estimate of his feelings regarding them.

> "The man who labours and digests things most,
> Will be much apter to despair than boast."—*Roscommon.*

A double allusion is here intended, to his own assumed incompetency for the task, and the perplexing difficulties the genus Carex presents to the systematist. Again, in no part of the volumes is there any allusion whatever to the duration or extent of his labours, or the manifold cares that must attend the production of so considerable a work; and, indeed, the only mention of himself as connected with the task he had set himself, is the following, which occurs in the dedication to John Amory Lowell, Esq., trustee of the Lowell Institute of Boston:—"I say nothing of the difficulties of my undertaking, undoubtedly increased by my inadequacy to treat them successfully."

Of the many kind offices he undertook on behalf of the needy, the sick and the diffident, this is no time to speak, for he suffered no allusion to them during his life; one action alone is so far public, and so truly characteristic, that we may be permitted to mention it; viz., his having placed in All Saints Church, Cambridge, a tablet in memory of Henry Kirke White, a poet in whose character and early fate he was deeply interested. The epitaph for this was by his friend Professor Smythe, of Cambridge, and the medallion portrait was executed by Chantrey; and it is a circumstance worth mentioning, that the first piece of sculpture received by the National Portrait Gallery was his gift to it of Chantrey's original of this medallion.

It was, however, in connection with the Linnean Society that Dr. Boott was best known in London; he joined the Society in 1819, and acted for some time as its Secretary, and for a longer period as its Treasurer. The latter office he still held when those changes were introduced into its working, to which the Society is so largely indebted for its present unexampled pros

perity; and it is not too much to say that but for his admirable moderation and judgment, those reforms could not have then been carried out. As it was, with consummate tact and irresistible kindliness of manner, he stepped in to harmonize opinions apparently the most opposite, as to what was for the best interest of that venerable body, and carried without a dissentient voice whatever organic changes were required. His tall and fragile frame, silvery voice, and quiet energy were then familiar, both in the Council and general meetings of the Society, at which he practically acted as the Nestor, and that amongst some of the oldest and most eminent scientific men in London.

In this, and in all other phases of life, Dr. Boott was remarkable for great force of character, boundless sympathy for whatever is good and beautiful, and an enthusiastic admiration for all honest cultivators of literature and science. His house was filled with pictures, chiefly by modern artists, selected without regard to names, but with a keenly discriminative eye to harmony of colour and truth of expression; his library was as select as were his pictures; and all his tastes, actions, and manners were in keeping. When practising as a physician, he discarded the customary black coat, knee-breeches, and silk stockings, for the very good reason that sombre colours could not but suggest gloomy ideas to the sick; and was one of the first who adopted the custom now universal in the profession, of dressing in ordinary costume. In doing this Dr. Boott adopted the blue coat, gilt buttons, and buff vest of the period, which he continued to wear to the last, and with which dress his casual acquaintances, no less than his personal friends, will ever associate him. In person he was so tall and thin as almost to suggest ill-health, and the refinement of his manners, his expression, address, and bearing, were in perfect keeping with his polished mind and many accomplishments. Of enemies he had none; very much, no doubt, because he shunned contact with uncongenial spirits; and he never lost a friend, which is the more remarkable, as he often appeared to be over enthusiastic in his estimate of the qualities of those he loved; this, however, mainly arose from that true modesty which with him amounted to an unconscious abnegation of self as a standard of comparison, and not to any affectation of admiration which he did not feel; for he was never known to alter such opinions.

Dr. Boott's scientific merits were widely known and recognised. He was on several previous occasions, and at the time of his death, a Vice-President of the Linnean Society; in 1837 he was elected a corresponding member of the Lyceum of Natural History of New York; in 1835 he became a Foreign Honorary Member of the American Academy of Arts and Sciences; in the same year an honorary Fellow of the Medical Society of Massachusetts; in 1840 a corresponding member of the Boston Society of Natural History; and in 1844 a correspondent of the National Institute of Science of Washington.

Dr. Boott's health had never been robust, and in 1839 he had a dangerous attack of pneumonia. From this time he had repeated slight attacks, but no alarming symptoms occurred till June, 1863, when the remaining lung gave way, and from that time he never fairly rallied. He died at his residence, 24, Gower Street, on Christmas Day; retaining to the last his faculties and all the characteristics of his most admirable life.

ENTOMOLOGY.

THE WILLOW BORING BEETLE.

INDEPENDENT of the value, in an economic point of view, of the genus Salix, whether grown as coppice wood or timber, or for basket and hoop-making, or the many other purposes to which their very flexible parts have been applied, a Salicetum or collection of growing specimens of the different kinds of Willows is of considerable botanical interest, in consequence of the great difficulties connected with the specific determination of these trees. The late Mr. Loudon in his "Arboretum Britannicum," twenty-five years ago, was compelled to admit and lament the unsatisfactory state of the science which, notwithstanding all his care, existed in the portion of his work relating to this genus. With the view to the determination of some of the many points of uncertainty thus admitted to exist, as well as from the beauty of growth in many of the trees themselves, various collections of the living trees have from time to time been formed. The Salicetum at Woburn was rendered famous by the volume printed for private circulation by the Duke of Bedford in 1829, entitled "Salictum Woburnense," in which 160 species were figured and described. The Arboretum of Messrs. Loddiges, at Hackney, also contained a fine collection of these trees, which were studied in 1836 for the purposes of the "Arboretum Britannicum" by Mr. Loudon and his contributors, and since that period others have sprung up, including one at the "Old" nurseries of Messrs. Paul & Son, at Cheshunt, to whom we are indebted for specimens of the insect described below, and which is one of the most destructive enemies to the Willow-tree.

Other species of insects have been enumerated as especially injurious to these trees, including the Goat Moth, Cossus ligniperda, which attacks the Salix babylonica in particular, and "as the larvæ in each tree are generally numerous, in the course of a few year they destroy so much of the trunk that the first violent gale of wind blows down the tree: so infested are the Weeping Willows, in many nurseries, with these insects, that scarcely one in ten can be selected free from them." (W. Curtis, in Trans. Linn. Soc., vol. i.) The Musk beetle, Cerambyx moschatus, in the same manner, but not to the same extent, attacks Willow trees; whilst the Trochilium bembeciforme or lunar hornet moth, is very injurious to Salix Caprea, the most valuable of the British Willows, the caterpillars boring into the solid wood of the trunk in a longitudinal direction. Even the twigs and young shoots are bored into by the larvæ of several minute midges belonging to the genus Cecidomyia, of which we have given instances in our articles on Cecidomyia viminalis, *Gardeners' Chronicle*, 1847, p. 588, and C. saliciperda, *Gardeners' Chronicle*, 1863, p. 891.

But one of the most injurious of these Willow-burrowing insects is a species of weevil, which would hardly be suspected of being such a culprit, first from the name, Curculio Lapathi, which was applied to it by Linnæus, and which, notwithstanding its impropriety, it still retains, and secondly, because the injury itself has been attributed to other insects, which, being attracted to the spot by the extravasated sap and rotten sawdust-like chips of wood made by the larvæ of the weevil, have been erroneously considered as the authors of the mischief. Mr. W. Curtis, in the article in the first volume of the Linnæan Transactions above referred to, has given the history of Nitidula grisea, a small beetle, the larvæ of which he had found in the sawdust-like material thrown out from various parts of the trunk of Salix viminalis, and which fell at its base in no inconsiderable quantity, and of which he had also found specimens of the perfect insect (not very unlike the common bed-bug in size and appearance) in the crevices of the bark. The whole of the trunk where this sawdust was found, emitted a smell somewhat like beer in a state of fermentation. A more careful examination of the state of the tree revealed the real cause of the mischief in the shape of a white grub very similar to that of the common nut weevil, and which proved to be the larva of the Curculio Lapathi. Messrs. Paul state that when the larvæ of the weevil first attack the tree, they eat through the bark and into the centre of the tree, sometimes not going so far as the

centre, and sometimes eating for a considerable distance between the bark and the wood before entering the latter. They appear to attack the trees at or near the ground, and eat their way from bottom to top of the main stem, occasionally eating through the outer bark. They begin their ascent by eating a round tubular hole several inches in length, occasionally winding off its first course at right angles. On looking amongst the trees so destroyed, at first sight they had every appearance of some one having wilfully taken a gimlet and bored holes for their own amusement.

The larva, as stated above, is a white fleshy grub very similar to, but much larger than, the Nut maggot; it is destitute of feet, the place of which is supplied by three pairs of fleshy tubercles capable of dilatation on the underside of the three anterior segments of the body. The head is armed with a pair of strong short triangular horny jaws. The body is curved, and very much wrinkled transversely. When fully grown (as represented in our woodcut, the natural size being indicated by the curved line) it forms an oval cell in the burrow which it has made, the outside of which is defended by a great number of small particles of the wood gnawed into fine short strips, as shown in our figure, and within this cell the larva is transformed into a white inactive pupa, represented as seen sideways, and of the natural size, within the cell, and as magnified and seen on its ventral surface in our lower figure. It was during the month of August that the transformations of the specimens sent to us took place, the pupa state not lasting more than three weeks.

The perfect insect, Curculio (Cryptorhynchus) Lapathi, varies in length from one-third to half an inch; it is of an opaque dirty black colour, with the sides of the thorax and apical portion of the wing-covers clothed with white scales, the latter as well as the thorax also ornamented with tufts of black scales. It feeds also upon the Alder, and, according to Gyllenhal, on the Rumex acutus, but the latter habitat is doubted; indeed Kirby and Spence attribute the application to the insect of the specific name of Lapathi to the accidental discovery of the beetle on some species of Dock (Lapathum) growing under Willows from which the insect may have fallen. In the Salicetum of the Botanic Garden at Oxford several species of Salix are in some seasons almost entirely destroyed by this insect, S. pentandra, S. decipiens, and S. nigricans being the least subject to its attacks, and S. viminalis, on the contrary, seeming to be especially subject to them. As the perfect insect is of considerable size, and is to be found easily on the trunk or leaves of the Willow trees during the months of August and September, a careful investigation of them should be then made, and every individual found destroyed. At an earlier period tobacco smoke introduced into the mouths of the burrows would dislodge the grubs, which would crawl out of their retreats; probably, also, small pieces of rag dipped in turpentine and inserted into the mouths of the burrows, would suffocate them. *J. O. W.*

POINSETTIA PULCHERRIMA.

A MORE charming and beautiful plant than this is during the winter months, when grown in perfection, it is difficult to imagine. Mr. Monk, gardener at The Cedars, Tottenham Green, sent a cut specimen of it to the Royal Horticultural Society's Gardens at South Kensington a fortnight ago, which was placed in water in a Wardian case, and is still comparatively fresh. Its gorgeous whorl of vivid scarlet leaves measures 49 inches in diameter, and the plant from which it was cut bore three other flower heads of similar beauty. Mr. Monk states that he has 15 plants in one stove, growing in 8 and 9-inch pots, and having from four to six flower heads on each plant, and that many are of the size just named. Their beauty has been the admiration of all who have seen them.

As the details of his method of treatment may be useful to our readers, I venture to furnish you with them. The plants are partially dried off preparatory to their being cut down in July. As soon as the young shoots are fairly started, they are taken out of the pots, the ball reduced, and the plants repotted in the same-sized pots. As soon as the latter are filled with roots, the plants receive their last shift into 9-inch pots. They are then placed in a cold pit, and kept close for a short time, after which air is admitted freely day and night, until the beginning of September, when they are again placed in the stove, and about the middle of November their flowers appear encircled by a magnificent whorl of vivid scarlet leaves, which remain in perfection for a space of six weeks, and of semi-perfection for two or three weeks longer.

The Poinsettia is a plant now being grown very largely for the London market, and if properly hardened off it is peculiarly fitted as an ornamental plant for drawing-room decoration. If placed in a plant case free from dust, its period of flowering will be lengthened, and its beauty long preserved. *G. E.*

ROSES.

THE Rose cause in England is as yet but in its infancy: still it spreads. The furor is national. The Rev. S. R. Hole, to whom we owe so much for bringing the Rose more prominently before the public, has lighted a candle that I believe will never be extinguished. I propose now to answer a few questions that are sometimes put to me.

1. "Would you advise me to have Roses on their own roots?"—I can hardly answer such a question as this without knowing other circumstances. I would advise no one to depend entirely upon Roses on their own roots. To succeed well they require great care, till the roots are firm and strong. Rose-wood roots when matured, are very hardy. Tea-roses for out-of-door purposes, when nursed for a year or two, do well on their own roots. Elise Sauvage, Devoniensis, Silene, Souvenir d'un Ami, Gloire de Dijon, are quite hardy on their own roots. As regards other autumnals, except Malmaison—the finest and best of all light-coloured autumnals—I do not think that Roses on their own roots bloom so abundantly, so continuously, or so late, as on alien stocks. There is, however, this advantage in having Roses on their own roots, viz., that if the wood of a previous year is bad, or if it is killed by the winter, you may cut it down to the stump; and if it is injured there, it will still break from the roots. My advice is, have some Roses on their own roots, and also other stocks. Here, no stock is so early, so bloom-producing, so continuous in producing blooms, or so late a producer, as the Manetti stock. As an old Harrow cricketer I call it the "tip and run" stock.

The following autumnals here are (besides being on other stocks) on their own roots, and do well:—Malmaison, Gloire de Vitry, Jules Margottin, Géant des Batailles, General Jacqueminot, M. Laffay, Caroline de Sansal, Pauline Lansezeur, Cardinal Patrizzi, Proserpine, Paul Joseph, La Reine, Madame Campbell, Auguste Mie, and Baronne Prevost. The five Teas and those are all that I have on their own roots.

2. "What Roses won't die, or at any rate will die least?"

This has been partly answered. Confirmed Rose roots will last longest; but, if these questions relate to families, then I answer that the summer Roses are the hardiest of all Roses. About seven years ago I procured some of Mr. Cranston on 2 feet Briars. They are nearly all alive, and they are better trees than when they came here. Half of them are in my home garden, and were removed this time last year; the other half (the same kinds) are in my N.E. garden

and have just been removed for the first time (Nov. 25). I was surprised at their splendid roots—so much better do Briars root with summer Roses on them than with autumnals; moreover their heads are splendid, and their wood is uninjured by summer demolitions, from which other kinds have suffered more or less. They do equally well on Manetti. From their freedom of growth, and sucking so freely at their heads, the stocks and roots are kept more healthy. Roses, however, as I have said before, will, on their own roots, and on all stocks, occasionally die. The most scientific gardener himself has not an immunity from decay and death. How unreasonable then is it to expect that Roses should never decay and die! Even if they were budded on "Lignum vitæ," they would be subject to death and to

"Time's tyrannic sway."

The great wonder to me is, considering what the weather has been for the last four years, that Roses, on own roots and on all stocks, have not been exterminated. The demolition in England and in France this summer has been very great. I watered all mine four times copiously during the torrid weather before the rain came, and I saved all but a very few. They gave an excellent bloom, and they are in excellent condition for next year. Owing to the mischief done to the foliage there is, however, amongst them more dead wood (this year's wood) than I ever saw before. Still there is plenty of matured wood, old and young.

I would here ask those who have lost many Roses this summer, two questions—first, Did you after the continuous rains of winter fork the ground deeply in the spring with Parkes's fork to make the ground healthy? Secondly, after the torrid weather set in, did you water the Roses copiously? If you did not do these two things, they are the main reasons why you have lost your Roses, and why I have saved mine. I dare say you divided the blame between Providence and the nurserymen! I hope nurserymen do not listen.

3. "Is it best to move Roses?"

This depends on circumstances. My rule is to let well alone. If a Rose looks ill, or continues to do badly, I remove it. Roses may be removed annually, or biennially, into fresh ground, if it is done carefully. All depends on the *modus operandi*. The remover should dig all round the plant in a 10-inch radius, and cut off all the roots before he lifts with the spade under the plants. I have seen some dig the spade down under the plant and force it up. Of course some of the best roots are broken off close to the stock. By the above plan I have just moved 200 Briar Roses without the least damage to the roots. After the plant is up, cut out all brood suckers, and shorten the roots to a 6 or 8-inch radius, preserving the fringy roots as much as you can. If it is not desired to remove the plant, to stop blind wood the roots may be pruned with good effect. Trees given to blind wood should be thinned out, but allowed to carry a liberal quantity of wood.

4. "My Roses are covered with Sedge; what would you do?"

Many of mine are much in the same state. I have ordered 2 bushels of quicklime, which I shall slake and mix with soot; and, having made it into a wash, I shall apply it with a brush. This compost is excellent for Apple trees. Add a little salt, and it is good for American blight. This Moss or Sedge is owing to excessive moisture, and also to injury done to the foliage; and, as it grows into the rind of the tree it impedes its healthy functions. It is equivalent to scurf in the skin. Clean rind and clean foliage are essential to the health of the stock, and of the Rose on it. A hardy Rose often dies because the stock, or its roots die.

5. "What are the best tallies?"

I use none myself. They are apt to be lost, or the name becomes defaced. I plant my Roses chiefly in straight lines, and always write their names in a book. The chief object of tallies is to enable the Rosarian to know how to prune them, as the habits of Roses, even in the same family, are often dissimilar, some requiring merely thinning out and a more liberal quantity of wood than others.

6. "What is the best time to prune?"

Taking the average of seven years as regards summer Roses and autumnals (excepting Teas and Chinas, which should be pruned later), the 15th of March would be the best time. The two exceptions require but little pruning.

On these and many other points, the excellent books of Mr. Rivers, Mr. W. Paul, and Mr. Cranston, give sound advice—indeed, one or other, or all, should be in the library of all Rosarians.

I believe that I have now answered, as well as I can, questions frequently proposed to me. The questions may seem trifling, but they are by no means immaterial. *W. F. Radclyffe, Rushton.*

FISH MANUFACTORIES.

UNDER this head we find in the *Builder* an excellent *résume* of an account of the new French Establishments for Breeding Fish, which originally appeared in the *Times*; from this we borrow what follows:—

The system of spawning fish by manipulation owes its success to the fact of the fecundation of fish eggs being an external act,—in other words, the roe of the female is not fecundated by the milt of the male fish till after it has been deposited in its watery bed. A fisherman of the department of La Bresse, in the Vosges, one Joseph Remy, was the first in France to discern that the natural principle of fish fecundation could be easily imitated, and so be turned to profitable account in the pursuit of his business. The Chinese have long practised the art, and have carried it to such an extent as to be able to keep up a constant supply of those particular fishes which inhabit their seas and rivers, so that any quantity of this kind of food can be obtained all over the kingdom, at the rate of about 3*d*. a stone weight. Heat expedites the birth of the fish. Salmon-eggs deposited early in the season, when the temperature is high, come sooner to life than those spawned in mid-winter. Salmon have been brought to life in 60 days at Huninguen; but the quickest hatching ever accomplished at the Stormontfield breeding-ponds took 120 days.

Fish-breeding had been practised in Germany 100 years before Remy, and experiments in salmon-breeding had been made some years before his time by Mr. Shaw, at Drumlanrig Castle; but of all this Remy was ignorant, it seems, and went his own way in the matter. Knowing how enormously prolific all kinds of fish naturally are, he could not understand why they were yearly becoming less plentiful; but he found, first, that an immense proportion of the ova was never properly fecundated; secondly, that even if all the eggs obtained the benefit of the milt, a vast proportion never came to life, from being deposited in places where they were ultimately bereft of water; that others were eaten by waterfowl, or devoured by other fishes; and a proportion swept away to the sea, and so lost for ever. He therefore soon saw that the best way to increase the supply was by obtaining the eggs and protecting the young fish till they were able to take care of themselves. He accordingly went to work, obtained a great degree of success, and was taken up by the Government, who established Huninguen, where millions of eggs are given away every year.

Mr. Frank Buckland, who devotes himself to the animal kingdom, and seems equally at home whether in attendance on a life-guardsman or a porpoise, points out that a large number of gentlemen, proprietors of fisheries, &c., in England, are quite as anxious to take up pisciculture as the 296 applicants for ova from the French fish-breeding establishments at Huninguen; nay more, that there are at this moment fish-hatching boxes either actually at work or waiting for fish ova whereon to operate at the following places; viz., Hampton, Twickenham, Watford, Carshalton (two in number), Farningham, the Zoological Gardens, Regent's Park, and the Crystal Palace; also near Dublin; Canterbury; Petersfield, Hants; Bayfordbury, Herts; Ashbourne, Derbyshire; Mansfield, Notts; Reading, Witney, and Woodstock; in all of which he has more or less interest; to say nothing of the larger establishments at Stormontfield, Mr. Ashworth's, Galway, and other places.

Mr. Stephen Ponder, of Hampton, and himself having undertaken to hatch fish for the Thames Angling Preservation Society, he gives the following as the result of their labours last year—"We let loose on the shallows in the neighbourhood of Hampton, Sunbury, Walton, &c., 22,000 English trout, 6000 Rhine salmon, 2000 French trout, 3000 ombre chevalier (charr), and 2000 grayling, in all 35,000 fish; being when let loose about the size of minnows. Should there be any doubt as to whether these fish are doing well in the Thames, let me beg the reader to take a boat some warm morning next spring, and paddle gently along the shallows above Hampton, and I shall be much mistaken if he does not see a considerable number of our little silver-scaled beauties darting away like water-swallows from the bank side." This is very promising; but we want the practice on a much larger scale, and we have no doubt Mr. Buckland quite agrees with us.

Let us now turn again to the establishment at Huninguen, which occupies a space of 80 acres, and the suite of buildings necessary for carrying on the business has been erected in the form of a square.

The supply of water necessary for carrying on the piscicultural operations is derived from three sources—the springs on private grounds at Huninguen, the Rhine, and the Augraben stream. The water of the higher springs is directed towards the buildings through an underground conduit, whilst those rising at a lower level are used only in the small basins and trenches for the experiments in rearing fish on the outside. The waters of the Rhine, being at a higher level than the springs, can be at once employed in the *appareils* and basins. Being uncovered, however, they are easily frozen, and are besides frequently muddy and troubled. The waters of the Augraben stream which cross the grounds are of very little use. Nearly dry in summer, rapid and muddy after rain, they have hitherto served only to supply some small basins for *l'alevinage extérieur*.

In the middle of the principal building there is a pavilion, containing on the ground-floor in front, the laboratory, used for such operations as require particular care, or are undertaken as experiments. In the buildings, of which the wings communicate with each other underneath the middle of the pavilion, are the arrangements for incubation. The waters of the spring enter by the end, running through three underground trenches, surmounted by high trenches. The waters of the Rhine run along one of the sides, at their natural level, in a built trench, whilst the opposite side is edged with troughs, with falls. The reservoirs containing to a certain height the waters of the spring, allow them to fall into the higher trenches. All the *appareils* of incubation of this building preserve the primitive type of trenches in a continual stream.

A building to the right is a large hall, containing the apparatus of incubation. The waters of the spring there flow into three trenches, built underground, and capable of receiving the hurdles. These trenches are surmounted through their whole length by fittings of earthenware, with falls and hurdles. The higher reservoirs contain the waters of the spring, distributed into all the troughs by pipes and cocks. At the higher end of the building are placed two small turbines, set in motion by the waters of the Rhine, which drive two pumps to raise the waters of the spring into the reservoirs. The waters of the Rhine, conducted at their natural level in a built trench, run along one of the inner sides of the building on the right, to return into the principal building and the left wing. They can, at will, be directed over the *appareils* of incubation, in case the waters of the spring should fail.

Behind the main building a series of simple open air-ponds and running streams have been formed for the purpose of showing the various stages of growth attained in a given period by the Rhine salmon, the ombre chevalier, the trout, and other of the fishes which are of interest to the French people. These can be seen at all ages, some a few weeks old, others having attained their fourth year. We may explain here that the fish are not bred from the eggs in these outside ponds—they are only transferred to them from the basins we have alluded to, and where, of course, the temperature is a great deal higher, and more conducive to the speedy ripening of the ova than it would be in the open air. At Stormontfield, again, the salmon breeding-boxes are quite unprotected, and all through the winter lie open to the frost or snow of the season; hence the ova there are not hatched under a period of 100 days, whilst in a warmer temperature eggs have come to life in little more than half that time. We may just state here, in passing, that the breeding ponds on the Tay at Stormontfield have been so successful as to induce the erection of others both in Scotland and Ireland.

Considering that only 20 years have expired since the re-discovery of the art by Remy, a wonderful amount of good has been accomplished in the repopulating of those streams that had become by overfishing barren of fish. Many millions of eggs are annually distributed throughout the country by the French Government; these being first collected and sent to Huninguen, where they are nursed on the apparatus we have described till they are ripe enough to be transported to any required distance.

[These extracts will doubtless lead many of our country friends to procure the original (*Builder*, No. 1092, Jan. 9, 1864), in which are given capital views of the fish-buildings constructed at Huninguen.]

Home Correspondence.

The National Rose Show.—The day appointed for this show is June 29. I see also that it is proposed to make it a two days' show, the first day to be open to Fellows of the Society and their friends, and the second day to be open to the public. The programme is so liberal that it costs me something to demur to this arrangement, and I hope that what I am about to say (and I speak the mind of one distinguished censor and two amateur exhibitors) will not give offence, nor even seem to begrudge so liberal a Society, to whom we are all so much indebted, a more favourable review of the Roses than could be accorded to crowds of the public. I fear there are serious reasons for not extending the show of these frail cut flowers to two days. 1st, The flowers will be barely worth seeing the second day. 2d, Many cannot give up the time, and many will not incur the expense. The clerical exhibitors could not give up the time; and to send a servant not versed in Roses, is, as I have found, simply futile. The nurserymen for obvious reasons might like the arrangement, and of course servants of exhibitors would also like it, but I am certain that the body of amateurs would be averse to it; and further, the public, I think, would be greatly disappointed at having to review Roses, which, even on the first day, are often sadly wanting in condition. Instead of making it a two days' show, could not the Fellows of the Society and their friends have a private review, to which they are so justly entitled, by the following arrangement:—Let all the Rose boxes be placed by 8 o'clock in the morning, and then the Fellows and their friends could have till half-past 10 to review the Roses. If this was not sufficient time, another hour might be added by turning out the public at 6, making use of the next hour for their private review Amateurs would rather consent to anything than be kept in London with their witherlings two days. Two days' shows, or Saturday shows, are adverse to clericals. I have just had a letter on the subject, in which the

writer says, "The reason I did not go to the Alexandra Park Show was the two days' exhibition. If I show I must go myself, and I cannot stand London for two days, nor can I afford to leave my servant there doing nothing." The writer is a layman and distinguished Rosarian, and successful exhibiter and censor. I see no objection to admitting the Fellows and friends during the time of adjudication, provided they will keep away from the class under adjudication, I hope if this should meet the eyes of Fellows of the Society, that they will graciously consider what I have just stated. The recommendation to give prizes for six Roses shown by ladies is good. You could not mend it unless you were to suggest prizes for ladies who have left off hoops! Probably prizes for the best box of yellow Roses, pure or mixed yellows, would give a golden effect to the show. The class might be open, and the number of Roses undefined. P.S. I have just received a letter from Somersetshire from a distinguished amateur. He says, "I think the extension of a two days' show will entail a deal of fatigue, and, no doubt, prevent some from exhibiting." *W. F. Radclyffe, Jan.* 9. [Censors can't work in a crowd; and we fear there would be difficulty in having all ready for them by 8 A.M.]

Hothouses and their Erection.—Many of your readers may find themselves in the same situation as myself, so I venture to trouble you with the following remarks, which may lead to the removal of their difficulty and mine. On a comparatively limited space, commanded by the windows of my house, I wish to erect the following glasshouses—viz. a good-sized conservatory leading out of the drawing-room, together with suitable houses to keep the conservatory supplied with flowers; also an early and late Grape house, together with Melon, Cucumber, and Pine houses. I want to confide the order for such work to some one who thoroughly understands all the most recent improvements and modifications, and I am entirely at a loss to whom to turn, as I wish the buildings to look well from the inside and outside of my house. I have not the time to sketch the plans nor arrange the buildings myself, nor indeed look after the work while it is being put up; so that I require some one who should represent the architect in house building. We all live in houses and know pretty well what are our wants, but we are not all gardeners, and therefore do not understand the most perfect arrangement for insuring the least loss of heat, and the greatest efficiency with regard to the health of the plants, and handiness for working. While wishing to have my houses put up in a perfectly durable manner, I wish at the same time not to pay more than a fair price for value received. Here again I am at a loss; there is no institution for taxing a hothouse builder's bill as there is for one's law bill. That they often need it must be evident, for on reading Mr. Rivers's book on Orchard-house culture, I thought a building such as he describes would be an agreeable present for a lady in the country. I sent a copy of his printed specifications to an East and West-end Builder, to know the price they could erect the building for. The one answered 37*l.* complete, the other about 135*l.* exclusive of extras. I accepted the 37*l.* offer, and found the house all I desired. Again, with heating, I am often surprised at the sums my friends tell me their pipes have cost, when I ascertain the number of feet and consequent tons of iron which I know can be purchased at from 3*l.* to 5*l.* or 10*l.* per ton, depending on the market and the nature of the castings. It is contrary to human nature to expect the gentlemen who advertise in your columns to be efficient supervisors of their own work, and yet it seems to my uninitiated mind that with the increasing luxury in our gardens one ought to feel as sure of getting as efficient glass houses as cotton mills for one's money. Do there exist any gentlemen who have made this branch of business their study, as, if not, I hope a race may yet rise who will be content with the one commission from their employer, and so look properly after his interests. Did I know an efficient judge in those matters, I should be happy to offer a few guineas for the first and second best designs. Can any correspondent help me? *Merchant, London, Jan.* 6.

Carpenter's Express Pea.—Observing in your impression of the 9th inst. that Mr. Carpenter, of Brighton, advertises that this Pea is to be had only of himself, I beg to state that I had my stock of it direct from Mr. Carpenter, and that he charged me three guineas per bushel for it, exclusive of carriage and packing. If Mr. Carpenter therefore does not forthwith contradict the statement just adverted to, I shall return the Peas I had of him immediately. *William Barnes, Camden Nursery, Camberwell.*

Rhododendrons as Cover for Game.—The Rhododendron is extensively used by Lord Stamford in the plantations here for this purpose, and the mere fact of his lordship having killed 1367 pheasants, 500 hares, besides rabbits, in one day, in covers abounding in Rhododendrons, is evidence that Rhododendrons are not disliked by pheasants and hares. I have not observed that hares or rabbits "bark" them in the woods, though a few growing in an enclosure where Chinese and other fancy rabbits are kept have been quite denuded of bark as high as the animals could reach; a few Ash branches strewed over the ground for the rabbits to nibble at, would, however, have saved the Rhododendrons. *W. Craw, Enville.*—I find that pheasants and hares, except when driven into them, are seldom or never found among Rhododendrons. I believe the reason to be, that the flat growing habit of the branches, prevents game from running along the ground under the leaves or twigs of the plant. The fact is undoubted, and it is unfortunate, for there is no handsomer or more easily grown evergreen cover or underwood than the Rhododendron, and it is not nibbled by hares, and seldom even I believe by that most detestable of vermin, the rabbit. *J. O. M., Lanark.*

Rhododendron Soils.—I observe that several correspondents will have it that Rhododendrons grow on chalk soils, and within reach of sea breezes. I only wrote from my own experience, and for these dozen years I had tried in vain to get them to thrive in this neighbourhood. I never have yet seen them come to perfection in such situations, and probably never shall. Swansea, I observe by the map, is in a sheltered bay with a S.E. exposure; this is very different from the sweep of the S.W. wind. The same applies to the E. coast of Ireland. Limestone, if hard enough for building, may consequently be sufficiently insoluble not to injure them; but our soft chalk, at only a foot or two beneath the surface, is evidently pernicious. Of course, if the soil (loam or sandy) is deep enough, it would not matter much what the nature of the subsoil is. I still believe that the only places where they attain their full size and perfection are sandy loam, or peat. All these, I believe, contain iron; but not professing to understand chemistry, this is only a surmise. I think now the subject is exhausted. *C. D., Ashdean, enar Chichester.*

British Oaks.—In the Proceedings of the Royal Horticultural Society just issued, there is an account given by Mr. Scott of the dimensions of Oak trees felled in 1793, in Vagnor Park, Montgomeryshire, and also an assertion that some trees nearly as large are still growing on the estate of Powis Castle adjoining. Can any of your correspondents in that part of the country inform me if these Oaks are of the species pedunculata or sessiliflora? *Diss.*

Orchard Houses.—Seeing that the dispute between open walls and orchard houses is becoming rather hot, allow me before the skirmish becomes general among my brother gardeners to take one shot which perhaps may settle the matter. Will any champion of orchard houses answer truly the following questions? 1. Has he ever without heat succeeded in getting his trees to bear even in the first year? 2. Have his trees not invariably drooped in the second year, when confined to pots? 3. Have they ever reached the blossom or fruiting season of the third year? If, as I expect, his fate has been the same as mine, his answers will save your subscribers from heavy cost, and suffering themselves to become victims to deluded hopes never to be fulfilled. I, for one, have tried, at an enormous expense, the system of orchard houses, and have signally failed, saving but a few of my favourite trees by transferring them to an open wall under a good coping, when my trees revived, and produced fine full-flavoured fruit such as I never tasted from trees in pots, even though compelled to force by heat, without which I had never been able to raise anything but fleshless stony abortions. I feel that Mr. Thompson was perfectly right, and so was the late Mr. Loudon, in asserting that the new system of culture in question is completely contrary to all practical knowledge, as their opinions have been verified not only by myself, but also, I imagine, by every orchard house grower in the kingdom. Be the end of the controversy what it may, I shall eschew orchard-houses as a burnt child does the fire; content with a lean-to-house, or even a common brick flue, or a 3-inch pipe, so as to command my heat, and to have my fruit when requisite. Orchard houses, unlike Peach or Nectarine houses, are totally worthless, being utterly devoid of every facility for forcing by heat. *An Old Subscriber.*

Bletia (Botteri).—It is possible that the plant alluded to last week may have been one of Mr. Skinner's contributions, a batch of which were nursing at the same time with Botteri's. I have left a plant of it in Mr. Eyles's charge, which appears strong enough to bloom in the spring. It was grown in the heated border during this season. The flower stem is thrown up before the leaves. I mentioned the circumstances thinking that some of the South African ground Orchids sent out lately by the Royal Horticultural Society might succeed by the warm treatment out-of-doors. I am happy to hear from several quarters that the subject of heating the earth out of doors is at last receiving attention. Of course everybody knows it was invented (save the mark) by a Frenchman! A Belgian gentleman too startles the world by his recommendation to grow tender aquatics in an artificially heated pond! which was done years ago, let alone "Weeks" ago, in Chelsea. Probably many of your present readers are not aware that the glorious Victoria Water Lily was no long time since to be seen flowering in high health and beauty in the open air in London! Perhaps Messrs. Weeks would kindly re-insert an account of their achievement. *R. H.* [Circumstances oblige us to defer any observations upon the great subject of Bottom Heat. In the meanwhile read Mr. Bateman's announcement in another page of our present Number.]

Extending Vine Borders under Gravel Walks.—With reference to the communication of "An Old Subscriber" in your Number of the 12th of December last (see p. 1181), I feel confident that the recommendation of his gardener to extend the border under the gravel walk in order to give the roots more room is very judicious. I expect very shortly myself to be under the necessity of having recourse to the same expedient, and my reason for coming to the conclusion that it will answer is this:—a few years ago I had occasion to transplant a Jefferson Plum tree growing in the middle of the orchard house near the foot path. No artificial walk had been made, and therefore it was composed merely of the natural soil, which is moderately light. On taking up the tree, I found that it had thrown out a multiplicity of beautiful fibrous roots quite across the walk, and coming within 3 inches of the surface. If I rightly remember, you have at times expressed an opinion that no possible harm can result to the roots of fruit trees from pressure on the surface, provided the soil is not of too stiff a character. On examining the roots of the tree referred to, it was evident that under the footpath they were completely in their element; and there cannot, I think, be a doubt as to the accuracy of the view which you have taken on this subject. *J., Sheffield.*

Notices of Books.

Industrial Biography; Iron Workers and Tool Makers. By Samuel Smiles. Murray, 1863. 12mo. Pp. 342.

Mr. Smiles, so well known as the author of the very interesting "Lives of the Engineers," has presented another equally attractive volume to the world, written in the same simple easy style, and as instructive as it is pleasant to read. He commences with the early history of iron, or rather with the time when that great source of England's wealth was unknown, when our islands were inhabited by savages, whose only weapons and tools were made of wood, flint, or bone. As civilisation progressed, bronze was introduced, composed of tin and copper, metals which require a comparatively low degree of temperature to smelt. Iron was the last metal that came into use, a fact easily accounted for when we know that tin melts at 3° by Wedgwood's Pyrometer, while iron requires a heat of 130°. "Persons unacquainted with minerals would be unable to discover the slightest affinity between the rough ironstone as brought up from the mine, and the iron and steel of commerce. It is only after subjecting the stone to severe processes of manufacture that usable metal can be obtained from it. The effectual reduction of the ore requires intense heat, maintained by artificial methods, such as furnaces and blowing apparatus. But it is principally in combination with other elements that iron becomes so valuable. Thus, when combined with carbon, in varying proportions, substances are produced so different, but each so valuable, that they might almost be regarded as distinct metals, such for example as cast-iron and cast and bar steel; the various qualities of iron enabling it to be used for purposes so opposite, as a steel pen, and a railroad; the needle of a mariner's compass, and an Armstrong gun; a surgeon's lancet, and a steam engine; the mainspring of a watch, and an iron ship; a pair of scissors, and a Nasmyth hammer; a lady's earrings, and a tubular bridge."

The art of smelting this useful metal was known and practised in England by the Romans, and after them by the monks. Working in iron was regarded as a useful and honourable calling, and the smith, who was also the armourer, was held in great estimation in Anglo-Saxon times. The life and honour of his noble employer depended upon his skill. "His person was protected by a double penalty. He was treated as an officer of the highest rank, and awarded the first place in precedency. After him ranked the maker of mead, and then the physician. In the Royal court of Wales, he sat in the great hall, with the King and Queen, next to the domestic chaplain; and he was entitled to a draught of every kind of liquor that was brought into the hall."

In 1282, as many as 72 forges were leased from the Crown by various iron smelters in the Forest of Dean. The making of iron was carried on in various parts of England, chiefly where wood was easily to be obtained, yet the quantity was insufficient to meet the demand, and the English iron was as much dearer, as it was inferior in quality to that procured from abroad. The first cast-iron cannons of English manufacture were made at Buxtead in Sussex in 1543. At one time so great was the zeal with which iron making was prosecuted, that the heads of many of our noblest families, who engaged in this branch of industry, did not spare their ancestral oaks, but cut them down as fuel for their furnaces. The iron manufacture of Sussex reached its height at the close of Elizabeth's reign, and England, instead of importing iron, exported cannon, so that the Spaniards armed their ships to fight us, with guns of our own manufacture. Sir Walter Raleigh called the attention of the House of Commons to this fact. In the reign of James I., Sussex produced one-half of all the English iron, but the best furnaces produced only three or four tons a week. Wood was the only fuel used in England, indeed a prejudice existed against using pit-coal for domestic purposes. The consumption of charcoal was great, as the ore could not be smelted and worked without it, but the forests were being cut down so fast as to cause a fear that timber-trees would

be quite exterminated from our island. Attempts were therefore made to use pit-coal in the iron-works, and at first without much success. The sulphur from pit-coal combining with the iron made it brittle, whereas one great object of the heating process was to eliminate the sulphur already in combination with the iron. How was the pit coal to be used, and iron of a superior quality produced by its agency? Men arose from time to time who spent their lives in endeavours to solve the difficult problem; men of undaunted energy and untiring patience, who worked for the good of their country and the interests of humanity; men whose services were often unrequited and their fortunes wrecked, but who, as the pioneers of civilisation, cleared the way for others, who at length, after centuries of toil, have laid the sure foundation of England's commercial greatness. It is to rescue the memory of such men from oblivion, and to give us some definite ideas of their characters and work, the difficulties under which they laboured, and the measure of success which they each obtained, that this volume has been compiled from authentic sources.

Did space permit, we should be greatly tempted to make extracts from the lives of some of those sagacious and patriotic Englishmen, to whose inventive genius this country owes so much of her commercial prosperity. Andrew Yarrenton rendered the Stour navigable from Stourbridge to Kidderminster, and planned a canal to connect the Thames with the Severn, which was carried out by modern engineers more than a century afterwards. He introduced from abroad the manufacture of tin plates and many things besides, with great success. The Darbys and Richard Reynolds are instances also of successful improvements in the iron trade. To Huntsman we are indebted for the invention of cast steel. Others died in extreme poverty, like Cort, who invented the method of passing iron through rollers, and thus laid the foundation of gigantic fortunes for other men, and himself was ruined by untoward circumstances; and Dr. Roebuck, who commenced the first ironworks in Scotland, and lived to see those and Watts' steam engine, in which he had a pecuniary interest, prospering in a marvellous way, but in the hands of others. But we have said enough.

Having followed the history of iron making from its first commencement to perfection, tracing that history through the lives of its principal "worthies", in the process, Mr. Smiles passes on to the mechanical inventors and tool makers: Bramah and his hydraulic press; Maudsley, with his various inventions and improvements; Joseph Clement and his power-looms; Fox of Derby, Murray of Leeds, Roberts and Whitworth of Manchester, James Nasmyth, the Vulcan of the 19th century, and William Fairbairn with his iron ships. To the very end of the volume an intense degree of interest is kept up, and those who would duly appreciate the work must read it for themselves.

Heat Considered as a Mode of Motion. By John Tyndall, F.R.S., &c. Longman & Co.

This volume contains the substance, nay, the very words, of a course of lectures delivered by Professor Tyndall at the Royal Institution; and in it the author has attempted to place before the non-scientific public the explanation of that sensation which we call heat. Most of the phenomena of heat are perfectly familiar to all of us; yet when we light a fire, or rub our hands together to warm ourselves, not one person in a thousand ever sets himself to consider why these actions produce the desired result. In all ages philosophers of course framed explanations, and that which was most commonly adopted, and which for a long time was deemed satisfactory, was that heat was "a kind of matter—a subtle fluid stored up in the inter-atomic spaces of bodies." In proportion as science progressed and fresh discoveries were made, it became apparent that this would not settle the question; and physicists accordingly sought some new theory which should reconcile conflicting facts, and by explaining all phenomena, approve itself to men's minds as the true solution of the difficulty. Such is the dynamical or mechanical theory of heat; the theory, namely, "that heat is a kind of molecular motion, and that by friction, percussion and compression, this motion may be generated, as well as by combustion."

This theory Mr. Tyndall has expounded in these lectures, with that clearness of explanation, and fertility in the devising of experiments, so peculiarly his own; and with the aid of diagrams, he has contrived so to describe his experiments, that his readers are enabled to follow them almost as clearly as if they were before their bodily, instead of their mental eye.

We have said that Mr. Tyndall has reproduced the very words in which these lectures were delivered; perhaps this simplicity of rendering is even carried a little too far; for although to those who attended these or similar lectures it may possess the charm of vividly recalling pleasant hours, yet those to whom the Royal Institution is but a name, will feel puzzled at the frequent recurrence of the assistant's name, and a few similar slight allusions irrelevant to the matter in hand. A very little pruning would have removed these trifling blemishes, without in any way detracting from the clear and simple style which forms the great charm of this lecturer, and by which he wins and rivets the attention of his listeners, and leads them gradually from the elements of his subject to the latest discoveries and theories published on it, or made by himself. Thus, in the present course, commencing with the familiar illustration that "when a boy at school, I have often blistered my hand by the contact of a brass button which I had rubbed energetically against a form," he leads his audience up to the climax of all, these grand truths enunciated at the close of the last lecture:—

"This law generalises the aphorism of Solomon, that there is nothing new under the sun, by teaching us to detect everywhere, under its infinite variety of appearances, the same primeval force. To Nature nothing can be added: from Nature nothing can be taken away; the sum of her energies is constant, and the utmost man can do in the pursuit of physical truth, or in the applications of physical knowledge, is to shift the constituents of the never-varying total, and out of one of them to form another. The law of conservation rigidly excludes both creation and annihilation. Waves may change to ripples, and ripples to waves—magnitude may be substituted for number, and number for magnitude—asteroids may aggregate to suns, suns may resolve themselves into floræ and faunæ, and floræ and faunæ melt in air—the flux of power is eternally the same. It rolls in music through the ages, and all terrestrial energy—the manifestations of life, as well as the display of phenomena, are but the modulations of its rhythm."

It is difficult to find passages for extract in a book which is, as it were, a running commentary on the experiments described; nor have we space to attempt even a sketch of Prof. Tyndall's argument; but perhaps the following passage will show, as well as any other, the manner in which he educes laws from laboratory experiments, and brings practical knowledge to test theories and hypotheses:—

"From these considerations, I think it is manifest, that if we know the velocity and weight of any projectile, we can calculate, with ease, the amount of heat developed by the destruction of its moving force. For example, knowing as we do the weight of the earth, and the velocity with which it moves through space, a simple calculation would enable us to determine the exact amount of heat which would be developed, supposing the earth to be stopped in her orbit. We could tell, for example, the number of degrees which this amount of heat would impart to a globe of water equal to the earth in size. Mayer and Helmholtz have made this calculation, and found that the quantity of heat generated by this colossal shock would be quite sufficient, not only to fuse the entire earth, but to reduce it, in great part, to vapour. Thus, by the simple stoppage of the earth in its orbit, "the elements might be caused to melt with fervent heat." The amount of heat thus developed would be equal to that derived from the combustion of 14 globes of coal, each equal to the earth in magnitude. And if, after the stoppage of its motion, the earth should fall into the sun, as it assuredly would, the amount of heat generated by the blow would be equal to that developed by the combustion of 5600 worlds of solid carbon."

In the current Number of the *Botanical Magazine* we find portraits of the following plants:—*Aristolochia leuconeura*, a scandent arborescent corky-barked species of Birthwort, introduced by M. Linden from the Magdalena, and having large cordate green leaves of a fleshy-leathery texture, and marked by seven pallid nerves; the flowers, which are comparatively small, are of curious form, as in so many of the plants of this genus, and of a chocolate-purple, the oblique one-lipped ovate limb beautifully marked with pale yellow lines; they spring in clusters from the lower part of the trunk.—*Pelargonium Bowkeri*, one of the dwarf tuberous South African species, with radical finely-cut bi-tri-pinnatiparted leaves, and a simple scape terminated by an umbel of curious fringe-petaled flowers, which are creamy yellow, stained with purple; it is a native of the Trans-Kei country, and was introduced by Mr. Cooper to the collection of W. Wilson Saunders, Esq., by whom it was flowered.—*Schizostylis coccinea*, a beautiful Iridaceous plant from British Kaffraria and Natal, having a good deal the habit of Crocosmia (Tritonia) aurea, but bearing bright crimson flowers. The plant grows 3 feet high, with several clustered stems, furnished at the base with long ensiform leaves, merging upwards into bracts, and at the apex by a distichous spike of large crimson flowers opening in succession; these flowers have a long slender tube, and six-parted concave limb, and individually bear close resemblance to those of a Crocus, both when closed and expanded. It has been flowered by Messrs. Backhouse.—*Mimulus repens*, a pretty little tufted prostrate Australasian plant, not unlike a Pimpernel in habit, having the slender spreading stems furnished with small opposite obtusely ovate leaves; the flowers, however, are comparatively large, nearly an inch across, and of a delicate lilac, with a yellow spotted throat.—*Solanum anthropophagorum*, noticed by us at p. 27, the flowers of which are white, and the fruit scarlet, about as large as that of Citrus Limetta, obscurely two-lobed, and mamillate at the apex.

The *Florist and Pomologist* commences the new year with a figure of *Camellia Sarah Frost*, a variety said to be of American origin, and one which the admirers of fine Camellias have to thank Mr. Standish for bringing under their notice at the spring flower shows. It is remarkable for its symmetry of form, in which it is probably not excelled, and is altogether a variety of great excellence; the colour is a deep carmine rose. The letterpress of this serial has been usefully augmented at the expense of one of the coloured illustrations; and amongst the new matter thus made room for, we observe that Dr. Hogg has commenced an account of all known Pears, with frequent outline illustrations, upon the plan of his British Pomology, the published portion of which is confined to the Apple.

The pictures in the *Floral Magazine* consist of *Rhododendron Princess of Wales*, a hardy variety raised by Mr. Young, of the Milford Nursery, and described as a white ground flower with dark mauve edge, but which is represented as a pale-centred lilac-purple, faintly spotted on the upper segments; it flowers at the end of June.—*Rose Baron de Rothschild* is represented as a cupped crimson-scarlet H.P., and, in the opinion of some good Rose growers, occupies a foremost place amongst the novelties of last season. Some examples of striped *Gloxinias* wait further improvement, both as to the form of the flowers and the definition of the colours, but are interesting as novelties; *Lady Emily Villiers* being carmine, and *Lady Victoria Howard* purple, both irregularly streaked or striped with white. A plate is devoted to a pair of good seedling *Achimenes—purpurea elegans* and *Leopard*—raised by Mr. Parsons, handsome varieties of the small-flowered group, the first a mulberry, the second a carmine-rose.

In *Seemann's Journal of Botany* is a plate of the new purple Trefoil found in Sicily, and which Prof. Babington describes as a purple-flowered variety of Trifolium repens, the common state of which it resembles in all but the colour of the flowers. The Editor continues his observations on the distinctions between the Umbelliferæ and the Araliaceæ, or, as he prefers to call them, the Hederaceæ, the text being Crithmum maritimum, which has been observed to have a truly valvate æstivation, and hence, along with Hydrocotyle, which has the same character, is referred to the latter order, with which it also agrees in its carpels not separating nor being furnished with distinct carpopods. Among other matters treated on in this Number there is a Florula Orcadensis by Mr. H. C. Watson.

TRADE LISTS RECEIVED.—We have before us the following, all excellent in their way:—*Carter's Autumn Supplement:* very rich in bulbs.——*Butler & McCulloch's Spring Catalogue:* 100 closely printed pages full of information, cultural and otherwise. —— *Williams's Descriptive Catalogue of choice and selected Flower and Vegetable Seeds:* capital selection, and plenty of good matter for young gardeners to study.——*S. Glendinning & Son's Catalogue of Kitchen Garden, Agricultural and Flower Seeds:* a nice selection, exclusive of flower seeds, "a general list of which will be forwarded in a few days."

Garden Memoranda.

G. GLENFIELD GLYN'S, ESQ., BANSTEAD.—From this pretty summer retreat, which is situated on rising ground in the neighbourhood of Epsom, a fine view of the surrounding country, with its celebrated Downs, can be obtained. To the house, an ancient brick building, has lately been attached a neat conservatory; and in the kitchen garden new Peach, Cucumber, and Melon houses have been erected, the whole being well built and efficiently heated by Mr. Weeks. Through the middle of the conservatory runs an embroidered Minton tile pathway, on each side of which is a border filled with prepared soil for the reception of plants which are to be grown both in this border and in pots.

This place, previously to Mr. Glyn's occupation of it, had been permitted to fall into disorder; fruit trees on walls had been ill pruned and badly trained, and many of them had become so worn out from neglect that they have been rooted up and replaced by new ones. The proper management of Espaliers appears also to have been overlooked; but by means of root-pruning, which took place in October last, and mulching on the surface with rotten dung, it is hoped that they may yet be brought into a fruitful condition. In Vineries the old Vines are planted outside; but as these are getting past their best, young ones have been planted inside in a border prepared for their reception as follows:—In the bottom has been put sufficient rough gravelly material to ensure thorough drainage, and on that have been laid turves with the grassy side downwards, the remainder being made up with good turfy loam mixed with old mortar rubbish, well-decayed manure, and bone-dust. For the present the young Vines are to be trained between the old ones; but when the former have got into fruit bearing, the latter, either wholly or in part, will be removed. The Peach houses, which are span-roofed, are furnished inside with circular trellises, on which the trees are trained so as to form an arch over the pathway; on the bottom are dwarfs, and "riders" or trained standards occupy the top, the whole being placed at a distance varying from 2 to 3 feet from the glass, which is good 16 oz. sheet in long panes. The Cucumber and Melon houses have a pit in the centre, in which are laid hot-water pipes. On the latter are placed rough brickbats, and on these are put

turves with the grassy side downwards to support the soil. The latter forms a ridge from which the plants are led up to the central angle of the roof and trained downwards on trellises on either side towards the bottom. Round the sides of the houses just mentioned are shelves furnished with well grown Cinerarias just coming into bloom. These were sown in July last.

A flower garden in front of the house is in course of formation; in this the beds, which are on gravel, are edged with Ransome's patent siliceous stone, a material which, although not as white as Portland stone, has nevertheless a good appearance, and is stated to be much cheaper, and to perfectly withstand the effects of frost. This garden being cut off from the Park in front of it by a sunk fence, an extensive view of a charming piece of English park scenery is obtained without apparent interruption. Near the house, as well as in the Park, are some noble specimens of trees, consisting of evergreen Oaks, Cedars of Lebanon, Beech and Spanish Chesnut.

In the flower garden and newly made ground in its vicinity have been planted a few of the finer kinds of *Conifers, standard Roses, and Rhododendrons.* The latter, it may be added, have been planted in good turfy loam, and Mr. Newton, of Eastbourne Terrace, to whom the improvements of the grounds, as well as the laying out of the flower garden, have been entrusted, confirms the fact advanced by several of our correspondents last year, that not only will all except perhaps the most delicate high-coloured hybrids live in that kind of soil, but that they will grow and blossom in it quite as well as in peat, an opinion in which Mr. Breeze, the gardener, likewise concurs. To ensure success, however, the loam should be rich in vegetable matter, and if it does not possess it naturally, sufficient leaf-mould, or thoroughly decayed refuse of a similar kind, must be well worked into it, in order to render it of that character.

Calendar of Operations.

(For the ensuing week.)

THE late severe frost will have afforded an opportunity of forwarding many little indoor operations which otherwise might have been overlooked; and now when a favourable change in the weather has taken place, everything it is hoped will be in readiness for active outdoor work when wanted. Tools out of order will doubtless have been repaired; a stock of labels, flower sticks of different lengths, and layering pegs will have been carefully stored up; dirty pots will have been washed and arranged according to their respective sizes; potsherds broken; composts required for early potting will have been mixed; frame and other lights not in use will have been cleaned and repaired; and sheds and similar places will have been put in order. In short the whole machinery of a garden should be ready for operation when required. As regards glass-houses take care not to excite rapid growth either in stoves or greenhouses while the weather remains dull and uncertain.

FLOWER GARDEN AND PLANT HOUSES.

If not already done, look over beds of Crocuses and other bulbs to see that they are not thrown out off the ground by frost. Also inspect half-hardy plants that have been closely covered up, in order to see whether or not they are secure from injury. As severe weather may yet be expected, every precaution should be taken to ward off its ill effects.

AURICULAS.—While the weather continues favourable let these have as much air as possible; they dislike close confinement.

BEDDING PLANTS.—These, if in pots, must also have air while the weather is mild; but means of protection at night must be at hand.

CARNATIONS AND PICOTEES.—Draw the lights off these in the day time when dry, but let them be put on again at night.

PELARGONIUMS.—These will now be growing slowly; therefore in fine weather let them have as much air as possible, consistent with the proper temperature. Fancy varieties may be kept a little warmer than ordinary kinds.

ROSES.—A second batch of these may now be placed in heat to succeed those in active growth. Keep down fly on the latter by frequent fumigations, and the Rose maggot by hand picking.

TULIPS.—Place in heat potsful of bulbs to succeed those now in bloom, and see that the latter are not allowed to droop from want of water.

FORCING GARDEN.

During the present dull weather high temperature must be avoided, or unhealthy growth will be the result. This will be indicated by Vines about to unfold their blossoms becoming spindly and by the bunches curling; in Peach houses by weak pale growth and abortive flowers; in Strawberries by their throwing up trusses of bloom incapable of supporting themselves upright; in Roses by the buds dropping; in short throughout the whole forcing department similar evils will present themselves. The proper temperature to maintain is therefore a matter of the utmost importance, and will require during this and the next month or so great attention.

ASPARAGUS.—If not already done, make a bed to succeed that now becoming exhausted. On fine days give as much air as possible consistent with maintaining proper amount of heat.

CHERRIES.—Force very slowly while the weather is dull and sunless. Syringe the trees occasionally, and keep all floors and other evaporating surfaces moist.

CUCUMBERS.—Worn out plants in houses may now be rooted up, the beds renewed, and their places filled with young plants. Be careful in covering up such as may be in dung pits, not to allow the coverings to overhang the edges of the pits, lest they should conduct the rank steam from the linings to the plants. Tilt each light at an upper corner with a thin wedge for the egress of steam, and to admit a little air at night.

MELONS.—For early crops sow now; pot in small pots when strong enough; keep near the glass, and either plant out or pot into large pots, using properly warmed, rather strong turfy soil. Sow for succession at intervals of about a month until May.

PEACHES.—Admit air freely whenever the weather is mild, and keep the atmosphere moist, maintaining a steady night temperature of about 50°. Very early houses in which the fruit is set should be afforded a nice growing temperature, syringing liberally to prevent red spider, and keeping the border in a healthy state as to moisture, to secure a vigorous root action.

PINES.—Young plants growing in beds that have been some time planted will be benefited by having the soil loosened up as deeply as can be done without injuring the roots, giving it a liberal soaking of tepid water if it be found to be too dry. The water should be applied by means of a pot with a rose on it, and not so fast as to flood the surface, for if this is done the soil will be rendered almost as close as before forking up; indeed, careless watering is the great cause of the surface of the soil becoming close and hard, and should be carefully avoided. Endeavour to afford a nice regular bottom-heat, with a thoroughly moist atmosphere, and keep the plants growing as freely as may be consistent with preserving them dwarf and bushy. Have a constant eye to maintaining a succession of fruit, or securing a supply at the season when it may be most wanted, and let the treatment of the plants be regulated according to circumstances; this is a matter which demands considerable forethought, and which can be successfully managed only by careful observation and attention.

VINES.—Take advantage of all favourable opportunities to admit fresh air as freely as can be done with safety, and be satisfied with as low a temperature from fire-heat as may be considered safe under the state of the Vines, but shut up early, allowing the thermometer to rise considerably. This will to some extent economise fuel, and will be much more congenial than much fire-heat. Except where Vines are in flower keep the atmosphere moist, but the foliage should always be allowed to become perfectly dry in the course of the day.

HARDY FRUIT AND KITCHEN GARDEN.

Digging and trenching may now be carried on with activity, and, where necessary, drains may also be put in. Wheeling should, if possible, be kept for hard weather.

APPLES.—Pruning and thinning of these must now be pushed forward with expedition. Where necessary root-pruning may also be performed; but this kind of work is best done in the autumn—say in the end of October or in November.

PEARS.—The observations made in reference to Apples also apply to these.

PEAS.—If not already done, make a sowing of Dillistone's Early, Sangster's No. 1, or Daniel O'Rourke for early crops, and of the Auvergne to succeed them. The latter though an old is still a good useful Pea.

SPINACH.—This has suffered, we hear, in some places from the late hard frost. A sowing to supply early plants should therefore now be made.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending Jan. 13, 1864, as observed at the Horticultural Garden.

January.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind	Rain.
Thurs. 7	28	30.148	29.076	32	18	25.0	39	41½	N.E.	.00
Friday 8	29	30.007	29.904	32	13	22.5	39	41½	N.E.	.00
Satur 9	●	29 906	29.867	39	24	31.5	39	41	S.E.	.00
Sunday 10	1	29.850	29.904	47	27	37.0	39	41	S.	.00
Mon. 11	2	30.116	30 060	49	29	39.0	38	40¾	E.	.00
Tues. 12	3	30.130	30.050	43	35	39.0	39	40	E.	.00
Wed. 13	4	30.270	30.250	39	34	36.5	39	40½	S.W.	.02
Average.		30.061	29.873	40.1	25.7	32.9	38.8	40.8		.02

Jan. 7—Intense frost, partially overcast; frosty.
— 8—Frosty and foggy, densely overcast; severe frost, with fog.
— 9—Foggy, hazy, frosty; roads still dry and dusty.
— 10—Foggy, slight thaw, frosty at night; no snow nor rain.
— 11—Fine; slight fog, clear and fine; slight frost at night.
— 12—Uniformly overcast, cloudy, hazy.
— 13—Foggy; drizzly and foggy, hazy and damp.

Mean temperature of the week 4½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Jan. 23, 1864.

January.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 17	42.5	30 67	36.6	13	0.48 in.	3	8	2	4	3	10	4	4
Mon. 18	42.6	31 3	36.9	15	0.55	1	3	1	5	7	10	6	5
Tues. 19	42.9	30.4	36.6	17	0.88	4	2	4	3	6	10	6	3
Wed. 20	42.4	31 0	36.7	14	0.69	4	7	4	2	7	10	2	2
Thurs. 21	43 6	32 4	38 0	17	0.48	1	5	5	1	7	11	6	2
Friday 22	44.0	32.7	38 4	16	0.57	3	5	1	5	3	15	5	1
Satur. 23	44.8	32.9	38.8	17	0.27	2	3	2	3	7	13	4	4

The highest temperature during the above period occurred on the 19th, 1828—therm. 60 deg.; and the lowest on the 19th, 1838—therm. 4½ deg. below zero.

MONTHLY DEPTH OF RAIN, in inches and hundredth parts of an inch, which fell at Chiswick in the years 1841 to 1863 inclusive.

	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
January	2.60	1.06	1.33	2.25	2.97	2.85	1.31	1.16	1.73	1.43	3.07	2.72	2.14	1.92	0.10	1.76	2.09	0.41	0.61	2.18	0.82	1.53	2.19
February ..	0.76	1.32	2.35	2.27	0.93	1.47	1.34	3.12	2.52	0.95	0.90	1.06	0.59	0.78	1.35	0.62	0.31	1.48	1.31	1.20	1.41	0 38	0.26
March	1.32	1.81	0.47	2.44	1.25	1.09	0.41	3.05	0.85	0.13	3.57	0.25	1.48	0.42	1.75	0.97	0.73	0.88	0.77	1.63	1.89	3.74	0.68
April	1.58	0.15	1.62	0.33	0.95	3.93	0.92	3.06	2.21	1.79	1.65	0.52	2.58	0.30	0.26	1.97	1.77	2.13	2.01	0.95	1.44	2.29	0.54
May	2.16	1.73	5.26	0.25	2.89	1.35	1.59	0.28	3.53	1.84	0.74	1.74	1.60	4.03	1.94	4.38	0.87	2.05	1.80	3.04	1.31	3.54	1.46
June	2.45	1 58	1.62	0.97	1.36	0.80	1.31	3.20	0.31	1.40	1.33	4.69	2.54	1.53	1.48	0.88	1.91	0.78	3.10	5.15	2.35	2.33	4.46
July	3.56	1.52	1.67	2.10	2.31	1.78	0.79	2.21	2.82	2.68	3.90	2.28	4.17	2.40	6.30	1.43	1.22	2.55	2.18	2.72	1.90	2.09	0.80
August	2.69	2.81	3.28	1.84	2.79	4.50	1.50	4.70	1.60	0.97	2.03	3.71	1.87	1.77	1.45	3.50	2.80	1.46	2.49	4.16	0.50	2.40	1.96
September..	3.71	3.39	0.98	1.31	1.77	1.76	1.66	2.20	2.49	2.36	0.42	3.54	2.41	0.58	1.15	1.99	3 52	1.05	4.05	2.82	1.78	2.74	3.47
October	4.61	1.71	4.19	4.13	1.39	5.54	1.75	2.93	1.32	2.18	1.55	2.01	3.87	3.78	2.61	6.15	2.40	4.01	1.36	2.55	1.04	3.00	1.56
November ...	3.41	4.43	2.13	3.06	2.11	1.43	2.26	0.90	1.28	2.03	0.55	6.20	0.91	1.31	1.34	0.94	1.53	0.10	2.72	2.60	4.10	1.01	1.68
December ..	2.12	0.76	0.58	0.39	2.61	2.11	1.81	2.03	1.15	2.03	0.62	1.97	0.30	1.27	1.11	1.88	0.30	1.53	1.95	2.03	0.94	1.49	1.26
Annual amount	30.97	22.27	25.48	21.34	23.33	27.71	16.65	28.34	22.84	18.28	20.79	32.55	24.37	18.92	24.38	22.72	21.06	15.78	25.54	30.08	19.48	26.54	20.32

The amount of rain which fell in 1863 was 20.32 inches, or 3 4/10 inches below the average of the preceding 37 years.

Notices to Correspondents.

DRACÆNA FERREA: We have received from Mr. W. H. Treen, Victoria Nursery, Rugby, a very nice spike of bloom of the Dracæna ferrea from the centre of a nice plant in a 9-inch pot. We learn that it has been in bloom a long time, and although now going a little over is still a charming decoration of the drawing-room or conservatory.

GARDENERS FOR INDIA: *J W.* We doubt your success; all depends upon your ability and intelligence being first-rate, concerning which points we have no information.

ICE HOUSES: *N.* Don't use salt and water.

INSECTS: *W C.* Your two insects are the weevils Otiorhynchus sulcatus, very destructive to the young shoots of Vines, &c., in greenhouses; the crevices in the bark should be carefully examined by day and the leaves after dark with a light, having first placed a large sheet of paper beneath the trees, as the insects drop on being disturbed. *W.*

IMPATIENS NOLI-TANGERE: *W B* is anxious to procure a few seeds of this native plant. We are unable to inform him where he can obtain them, unless it be from some botanic garden. Can any of our readers help him?

MUSHROOMS: *W Nobles.* You will find an article on the disease which has attacked your Mushrooms, which are otherwise very good, in our number for Dec. 26, 1863. *M J B.*

NAMES OF PLANTS: *F G.* 1, Eranthemum nervosum; 2, Gesnera lasiantha.—*A, Plymouth.* Some Petrophila, but nobody can say which, it having no flowers.—*Mary.* A dried bit of Fenzlia dianthiflora, a gem in its way, *if well grown.*—*R G T.* We suppose Mandevilla suaveolens, but we really cannot undertake to name plants not in flower.

PROTECTING THE ROOTS OF PEACH TREES: *A H.* It can at least do no harm to protect during severe frosts the roots of trees, like Peaches, which are not perfectly indifferent to the occasional severity of our climate; and in the case of young or newly planted trees, or trees which may happen to be planted shallow, a suitable covering would be decidedly beneficial. In the case of old healthy well-established trees on properly drained borders it is perhaps hardly necessary, but it would not injure them. Such open coverings as a layer of dry Fern or litter are most to be preferred. However, as a rule, in the case of such trees as the Peach, Nectarine, or Apricot, we should certainly not recommend that the roots should be allowed "to feel the frost"—a regime which may be all very well for hardier subjects of excessive vigour, but not for these children of the East.

THE TUSSOCK GRASS. *A Lady.* This is the Dactylis cæspitosa. Dr. Hooker has given a capital account of it with a figure in his valuable Botany of the Antarctic Voyage (Reeve & Co.), p. 384 and following pages. The Pampas Grass, Gynerium argenteum, bears no other affinity to Tussock than that both are true Grasses. *Very* sorry that your note was accidentally overlooked last week.

Manures and Feeding Stuffs.

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Chemical Analyses.

DR. AUGUSTUS VOELCKER, F.C.S., CONSULTING CHEMIST to the Royal Agricultural Society of England, has REMOVED his LABORATORY from Cirencester to 101, LEADENHALL STREET, LONDON, E.C., where he receives a few Private Pupils for the Practical Study of Analytical and Agricultural Chemistry.

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The advances are repaid by way of Rent Charge on the Estate created for such a term of years as the Landowner shall determine will best adapt the annual charge to the circumstances of the Tenants.
No investigation of title being required, or notices given to Reversioners or Mortgagees, no legal expenses are incurred.
The Company either supply the money expended by landowners in works designed and executed by their own Agents, or they undertake the entire improvement by their experienced staff, supply the weekly advances required, and charge on the estate the actual outlay in the works, and their commission thereon.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

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The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster S.W.

Drainage of Land.

MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

MESSRS. WAY AND EVANS, ANALYTICAL and CONSULTING CHEMISTS, receive PUPILS for the study of AGRICULTURAL and GENERAL ANALYTICAL CHEMISTRY.
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Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments, and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
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ROYAL AGRICULTURAL COLLEGE, CIRENCESTER, will REOPEN on MONDAY, Feb. 8. Applications for Admission must be made to the Principal.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.—J. BAILEY DENTON, M. Inst. C.E., will LECTURE on DRAINAGE.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.—Professor J. MORRIS, F.G.S., will give a COURSE of LECTURES on GEOLOGY, commencing on Feb. 15.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.—JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire, will Lecture on CATTLE, SHEEP, PIGS, and POULTRY.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.—JOHN THORNHILL HARRISON, of Frocester Court, near Stroud, will give a COURSE of LECTURES on DAIRY HUSBANDRY.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.—RICHARD GRIFFITHS WELFORD, Barrister-at-Law, will give a COURSE of LECTURES on LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
CARRIAGE ARRANGEMENTS.
The Directors have made arrangements with all the Railway and Steam Companies to deliver all Seeds with the exception of heavy articles, such as Grain, Tares, &c., CARRIAGE FREE to any Railway Station in England and Wales, or to any Steam Port in England and Wales, Ireland or Scotland, Guernsey, and Jersey.
CATALOGUES can be obtained, and every information given on application at the Company's Offices, 68, Welbeck Street, Cavendish Square, London, W.

The Agricultural Gazette.
SATURDAY, JANUARY 16, 1864.

A CORRESPONDENT asks for the rules by which the award of merit at the ploughing match may best be made. Amidst all our advocacy of steam cultivation, and of "smashing up" the land by a superior power, let us not forget, he says, that the great majority of our acres for many years to come must continue to be ploughed by horses, and that to maintain the skill of our ploughmen must always be a point of great agricultural importance.

"I unfortunately live," he adds, "as many others do, in a part of the country where I do not hope ever to have the mighty power of steam at my command; consequently the farmers of this district are endeavouring to develope and perfect the mode of cultivation we have under our control, viz., that by horse-power, by instituting ploughing matches for that purpose; and I have repeatedly acted as judge of ploughing at those contests; and for the better qualifying myself for the task, I have scanned the pages of the *Agricultural Gazette* and the "Encyclopædia of Agriculture," and also many of the latter numbers of the "Royal Agricultural Society of England's Journal," for instructions or rules by which ploughing might be judged, but I am sorry to confess I have gained next to nothing from either or all of these costly aids. My object, therefore, in thus writing to you is to induce you to provoke a discussion on this very important agricultural topic in your valuable periodical."

Will any of our readers who, like our correspondent, have acted as judge at ploughing matches, declare the rules which have guided their awards?

We imagine the main point in ploughing, whether by steam or horses, is to secure that the whole of the surface soil to a uniform depth shall be turned over in slices of uniform dimensions. The straightness of these slices from end to end of the field, and their uniformity of sectional dimension, uniformity of width and thickness, are the chief points to ascertain. Any departures from the first are at once obvious to the eye; and, as a series of straight furrows can be made only by observing in each a uniformity of width from end to end of the slice, that point, too, is at once ascertained by mere inspection. Whether they are all of a *common* breadth wil appear by observing that they all uniformly overlap each other. Whether they are all of a *common* depth will also be observed at once in this way. But in order to determine that *each* is of the same depth at both sides must be ascertained by uncovering a portion of the moved ground, and observing the configuration of the unmoved subsoil. That should be a perfectly plane surface without ribs, such as must be left when one side of the slice is cut deeper than the other.

When the uniformity of the work and the perfect turning of the whole of the soil to the full depth required has been ascertained, then those points which are essential to good work will have been observed. The preservation of the crest of the furrow-slice, and the requisite pressure of the slices close against each other, are points of considerable practical importance in some cases, and in all add greatly to the beauty of the work, and the observance of these points also accordingly has generally considerable influence on the awards of judges.

We should, however, be glad if we could induce judges to speak for themselves, and inform our Correspondent and others what are the grounds on which their decisions have been made. Will our Correspondent himself begin the discussion? If he and other gentlemen—those for instance who officiated in this capacity at the Warwick meeting of the Royal Agricultural Society—would state their recollection of the proceedings there, they would help to secure good judging at the corresponding trial of ploughs and other tillage implements which is to take place at the meeting of the Society at Newcastle next July.

—— THERE is in the recently published *Annals and Magazine of Natural History* an account of a memoir by Professor THURY, of Geneva, on the law of the Production of the Sexes, which is of great agricultural interest. The author was guided to his conclusions on this subject partly by analogies furnished by the natural history of the Bee and of Poultry. It has been observed, he says, that in bees the fecundation of the ovum, when it takes place early, results in the production of workers (females), while if it be retarded beyond the 22d day all the eggs deposited are male eggs. So, in the case of poultry, the author has observed that the eggs last laid nearly always furnish the cocks of the clutch, and he has thought it probable that the last eggs which detach themselves from the ovary of the fowl are those which have had the most time for maturation. The following accordingly are among the conclusions at which he arrives:—

1. Sex depends on the degree of maturation of the ovum at the moment of its fecundation.

2. The ovum which has not attained a certain degree of maturation, if it be fecundated, produces a female; when this degree of maturation is passed, the ovum, if fecundated, produces a male.

3. When, at the rutting-season, a single ovum separates from the ovary to descend slowly through the genital canal (as in uniparous animals), it is sufficient that the fecundation takes place at the commencement of the rutting-season to produce females, and at the end to produce males—the turning-point of the ovum occurring normally during its passage in the genital canal.

Then follow instructions sufficiently obvious as to the application of these principles in the case of the larger mammalia.

The following certificate, however, from a practical farmer, Mr. GEORGE CORNAZ, of Montel, in the Canton de Vaud, is what will have most interest in the eyes of breeders here. He says, under date of Feb. 10, 1863:—

I received from M. THURY, Professor in the Academy of Geneva, under date of the 18th February, 1861, some confidential instructions the object of which was an experimental verification of the law which governs the production of sex in animals.

I have applied to the management of my herd of cows the data furnished to me by M. THURY, and obtained at once, without any uncertainty, all the expected results.

In the first place, in twenty-two successive cases, I wished to obtain heifers; my cows were of the Schwitz breed, and my bull a pure Durham; the heifers were in demand amongst breeders, and the bulls were only sold to the butchers. I obtained the desired result in all cases.

Having subsequently purchased a cow of pure Durham breed, I desired to obtain from her a new bull, which might replace the one which I had bought at great cost, without waiting for the chance of the birth of a male. I operated in accordance with the directions of Professor THURY, and the success again

confirmed the truth of the process which had been communicated to me—a process the application of which is direct and very easy.

Besides my Durham bull, I obtained six other bulls, of a cross-breed between the Durham and Schwitz, which I intended for work: by selecting cows of the same colour and size, I obtained very well-matched pairs of bulls.

My herd consists of 40 cows of all ages.

To sum up, I have made in all 29 experiments according to the new process, and all have given the desired product, male or female: I have had no case of non-success. All the experiments were made by myself, without the intervention of any other person.

I can consequently declare that I regard the method of Prof. THURY as real and perfectly certain, hoping that he will soon be able to profit all breeders and agriculturists in general by a discovery which will regenerate the business of cattle breeding.

This certificate will certainly have sufficient interest in the eyes of English breeders to induce them to repeat M. THURY's instructions.

—— It will have been seen in our advertising columns that Mr. DUCKHAM announces his sixth volume of "The Hereford Herd Book" early this year, and invites applications from breeders for the forms on which to enter the requisite information. This volume will contain a paper recently read by Mr. DUCKHAM at the Royal Agricultural College, Cirencester, on the "History, Progress, and Comparative Merits of the Hereford Breed of Cattle," as well as several figures of prize animals.

—— A fat cattle show is to be held at Hamburgh on March 17, and three following days. Besides prizes for Continental breeds, the Agricultural Association offer three premiums for oxen bred in Great Britain and Ireland—viz., 30*l*., 15*l*., and 7*l*. 10*s*. They also offer prizes for Southdowns, Long-woolled, and Cross-bred sheep—three for each breed of the respective values of 5*l*., 2*l*. 8*s*., and 1*l*. 4*s*. Applications for entries must be made to Dr. HACHMANN, Hamburgh, on or before the 1st February, 1864, and the stock must be in the showyard on the 14th and 15th March. The entry-money of cattle is 9*s*. each, and for sheep, pigs, &c., 3*s*. each.

THE PRIZE SYSTEM.

I BELIEVE every manufacturer of implements who has anything either to lose or to take care of is of the same opinion as myself. I have, however, been longer under the "Harrow" than any other firm; I began with the Society and exhibited at Oxford when only one or two others were present, and I kept it up for 21 successive years. It cost me during that time certainly not less than 30,000*l*. I refer to the expense I was at in preparing implements at extra cost, which were of no extra value afterwards; in making useless contrivances for the mere purpose of gaining prizes; in the cost of a prize-winning staff of men to work the machines, and to be up to all sorts of dodges to obtain prizes in their various departments; in the general disarrangement of business at the Works, in consequence of the foremen being taken away with all the most expert and best men for three or four weeks to attend the shows, and for as long a time before being unsettled and almost useless, and the same afterwards, making it in all a general upset in the proper conduct of manufacturing business for three or four months in every year; to say nothing of the importance, the consequence, and the almost unbearable independence of foremen and men if they happened to be successful in winning prizes. In fact prize-contending workmen were after a time rendered almost useless in the general business of the Works.

In stating 30,000*l*. as spent by my firm alone, I am certain I am under the mark, and I know other firms who have spent as much or more, although none have been so long at it.

Well, the consequence of this is that we have been obliged to put these yearly sums as waste charges on the selling prices, and our customers have paid them and got nothing for them, nor have they done any good, except to contribute to an annual entertainment for the Council of the Royal Agricultural Society of England, and for those who act as stewards of the yard and commanders of the whole affair.

Persons are called upon to act as judges, who have no more pretensions to sit in judgment upon the products of implement makers than to say who are the fit subjects for eternal bliss. There are exceptions, but generally they will be found far from being the best managers of their own businesses, and some of them even not highly valued in their own localities.

And, besides all I have here set forth, there are well-known evils attending the prize system when applied to manufactures which can never be averted while human nature remains what it is.

I have known several good standard implements entirely spoiled by the principle being so interfered with in order to make it look a novelty year after year, and to win a prize with it so long as we could show something different in it, till at last we had to go back to the original implement and give up the prize gaining. This has been carried on to such an extent that the most practical and money making users of implements now frequently accompany their orders with a remark that we are not to send them a prize implement, but such as we know practically will answer their purpose.

I am convinced that this system will do no longer, and that it is degrading to our English reputation. In foreign countries, where they are behind in agriculture and want the use of improved machines to increase the produce from the land, and have but inefficient or no means whatever of making implements themselves, they may very properly offer prizes in medals, as much for the purpose of inducing the owners and tillers of the soil to adopt the use of the machinery, as for inducing English makers to push the introduction of their implements and machines into such countries.

But there is nothing of this sort required now-a-days in England. It is true there was a time (some 25 years ago) when some tangible reasons might have been shown and actually existed, for offering prizes for the introduction of agricultural machinery by way of stimulating the manufacturers, but if it was so, that time is now gone past, as the very fact of bringing the manufacturers together with their products in the different localities throughout the kingdom is more than sufficient to induce farmers to adopt improved implements with improved stock, without the artificial stimulus of prizes. The natural competition consequent on trade and manufacture is sufficient inducement for the manufacturer to do his very best, regardless of prizes, and awarding such is, in our opinion, encouraging a system of trickery and deception entirely unnatural, and what is more, productive of much evil to both buyer and seller, as explained above.

I need hardly say that it is altogether different with the exhibitors of stock. Let them continue competing for prizes, for they like it, and require in a manner this sort of stimulus. A gentleman or a farmer may send an animal for competition, and if he does not succeed, his future income and means of business are not affected by it, whether the decision be right or wrong. He may not perhaps think so highly of the animal as he did before, but there it ends. If on the contrary he wins a prize, the animal is extolled to the utmost by some and depreciated by others, and there it ends again, having answered his "hobby." In fact if he is a farmer dependent on his business for his livelihood, this is only an extra effort added to his daily business, and every success at competitive shows will be an extra profit gained by his extraordinary exertions and abilities. If he is a gentleman of independent fortune, then it is a "hobby," and let him ride it just as he pleases. The difficulty with the judges does not occur in the same degree with the stock as it does with the implements. The most objectionable prejudice is got rid of then, because the owners of the stock are not known to the judges, or at least not in such a degree as is the case with the implement maker, whose articles, on the sale of which depends his very daily bread, are all provided with his full name and address; and he himself, or some representative, is there to describe and show off the goods, and if he cannot afford to pay a first-rate man or set of men to do this showing off to the judges, he never gets a prize.

For those who think that the prize system has made the leading agricultural implement firms of the present day, I append to this letter a report which was sent by my firm in reply to a request for information which would have illustrated the growth of the implement trade during the period of the Agricultural Society's operations. *R. Garrett, Leiston Works, Suffolk.*

R. GARRETT & SONS' REPLY TO INQUIRY AS TO GROWTH OF IMPLEMENT TRADE.

October, 1863.

"We are favoured with yours of the , and since its receipt have spent some time in ascertaining the number of implements and machines manufactured by us in the years 1838 and 1862 respectively.

"The result shows most conclusively the great advances which have taken place during the last quarter of a century in the use of machinery for agricultural purposes.

"We would, however, observe that no proper comparison for any practical purpose can be drawn between these two years, for the whole system of the trade has undergone a complete revolution; many implements of which we made large numbers in the former year have now fallen into disuse, whilst others have been introduced in the interval, and are now manufactured most extensively, and come into universal demand. In the latter class we would enumerate traction and portable steam-engines, steam power thrashing machines, steam cultivating apparatus, reaping and mowing machines, &c. &c., which were quite unknown in 1838.

"Our returns are now fully 35 per cent. more than they were in 1838, and this we attribute to our every day increasing and extending connection, and to the great care and attention which we devote to the manufacture of our implements and machines, and a determination to supply every article of the best construction and materials; and by the employment of the most skilled labour, and the most untiring attention on the part of masters to all matters of detail in the manufacturing, the employment of a very large amount of capital in plant, and the facilities afforded by railways, which were scarcely in existence 25 years since. These facts, applied with a growing appreciation on the part of the public of the economy and dispatch and other advantages secured by the use of agricultural machinery, will, we think, sufficiently account for the rapid strides our particular branch of manufacture has taken during the period under notice.

"As to the Royal Agricultural Society, we are thankful that it has promoted an advancing spirit of inquiry, and called attention to useful inventions. But when we come to the prize system the matter stands very differently. We are compelled to state that prizes, especially at short intervals, are fallacious as a test of value; we have gained an immense number, but we have learnt—

"1st. That the manufacturer is driven to a constant and serious expense by competitions, and this must increase the purchaser's price.

"2nd. Attention is given to what is showy rather than to what is useful. A machine which works splendidly under certain presented conditions in the miscellaneous wear and tear of a farm will perhaps be useless.

"3rd. The production of one very perfect machine, the special result of several years exclusive attention, is no proof that the manufacturer can produce as many of these as may be wanted at reasonable prices. 'Mr. A. may, therefore, carry off the palm for a striking machine which would be of little practical value or use, whilst Mr. B., with any required number of machines which have been proved and approved, is thrown aside after all his outlay, for this one theoretical novelty.' The prize system is only advantageous at long intervals and for new implements, otherwise it cramps the manufacturer and puzzles the buyer. The approval of the public, as shown by every machine sold causing others to be purchased afterwards because of its proved ability—this is the reward to be sought by English manufacturers.

"We would, in conclusion, remark, that we object to give any detailed particulars as to the number and kind of implement we send out in one year, or indeed for any specified period; but any general information for which you may be desirous, we shall be most happy to furnish if you will give us some idea of its nature."

STEAM CULTIVATION.

WOOLSTON MANAGEMENT.—I have read in your Paper of this week your remarks upon some correspondence between myself and the Messrs. Howard. In justice to myself, I must beg space to say a word.

The Messrs. Howard must have been misled when they "called your attention to the fact, that a course of action is 'advocated, and recommended' much more by the practice than by the writings of its advocate, and that it was to the Woolston practice of leaving the stubbles untouched until after Wheat sowing, sometimes even as late as December, and then breaking them up with the combined ridging and subsoil plough, that their strictures referred." I make this long quotation to make sure that their case is rightly stated.

This you will see is not disproving the correctness of my allegation of their not stating the whole truth, but raising another issue, and under the cover of charging me with advocating one course of action, and practising another, they are avoiding the original charge altogether.

To this charge of advocating one course of action and practising another, here is my reply.

It is not a "fact" that "my stubbles are left untouched until after my Wheat sowing, sometimes even as late as December," for with the sole exception of making an experiment to try whether the tackle would work at all when it first came home, I have never done a day's work at all in December. The latest period in any year to which I have worked was in 1857, to the 4th of November. I have never worked in November since, and why?—simply because I found the days so short and dark that we had not time to do a day's work. It was therefore expedient to have the autumn work done as early as possible. I never use any particular course of order. I simply study my own convenience; sometimes one kind of work is done first, and at another time another; but it is a curious fact in connection with this subject, and illustrates the incorrectness of the Messrs. Howard's assertion, that the last piece of autumn work that has been done in any one year has always been a piece of Wheat seeding after the whole of my steam ridgings, smashings, or whatever else had been done by way of proof, here are a few recorded instances. On the 17th of Sept., 1861, Mr. Morton visited me, and found No. 3 smashing heavy land, a Barley stubble; another field of heavy land, a Wheat stubble, had been smashed, and he saw a pair of horses cross-cultivating it. This was before I did any Wheat seeding that year; see what the *Agricultural Gazette* says about his visit. "As we walked over the stubbles they were being grubbed 9 or 10 inches deep."

This year the whole of my steam work, including the ridging and subsoiling, was finished on the 20th of October, before I finished my Clover lea Wheat seeding with horses. See *Bell's Weekly Messenger* of the Monday following. It says, "On Tuesday we availed ourselves of an opportunity of paying another visit to Woolston, and were "just in time to see the last steam operation for the season." It was the Editor himself who saw and is my witness upon this point. Then it is a "fact" that I not only advocate expedition after harvest, but practise it as well.

Messrs. Howard say that the plan pointed out by them is a more excellent way than the one recommended by me, the plan of steam ridging and subsoiling at one operation. What evidence have they upon the point? They may tell you that it is more extensively practised, but that does not prove that it is a better plan. The combined ridging and subsoiling is but little known, and I believe less understood. I have practised it, and have always had good results from it. I have several times tried the plan pointed out by the Messrs. Howard, and before they did, and again in 1861 and 1862, but the results upon that plan have never been so good, alth ugh the operation cost more.

In conclusion, had the Messrs. Howard been a little more careful in their statements and information, you would not have been misled into the commission of so incorrect a charge as the one quoted

above, neither should I have had the trouble to correct it, but never mind, let us hope for the best, and especially that the Messrs. Howard will be more accurate for the future. *William Smith, Woolston, Bletchley Station, Bucks, Jan.* 6.

LEICESTERS AND LONGWOOL SHEEP.

(Continued from p. 35.)

I CAN scarcely describe to you a pure Leicester of the present day, because the type varies so much according to the influences of locality and the objects which have governed the breeder in his selection; so that you can hardly recognise for instance the exquisitely symmetrical and beautiful sheep of Mr. Sanday, of Holme Pierpoint, Nottinghamshire, and the larger framed coarser sheep of Mr. Valentine Barford, in Northamptonshire, as alike purely descended from the renowned Dishley flock. At 15 months the Leicester wether, highly kept, commonly weighs 20 lb. a quarter; but older animals, when well fatted, have occasionally been exhibited of more than three times this weight. The mutton is not so highly esteemed as some, owing to the usual superabundance of fat; but the flesh of good Leicester crosses has a delicious flavour, with a more equable distribution of fat and lean. The average weight of the fleece may be about 7 to 8 lb., varying much with the character of Leicester found in different districts.

To make a Leicester sheep in good order from the butcher at 15 or 16 months old, it is necessary that it be well fed from the day it is lambed. This will be about the beginning of March, when the pastures are longing to feel the influence of spring, and earlier lambing incurs the risk of very severe storms, besides involving a Turnip or Mangel diet for the ewes, which is not so nourishing nor so productive of milk as when natural herbage forms a main portion of the food. The ewe with the lamb is at once removed from the lambing field to better quarters, as a prepared field of Rye, or of Rye and Tares mixed with a little Rape, but more commonly to young seeds or to Grass lands which have been purposely rested, and there they are supplied with a few Turnips or corn. Upon Turnips and seed farms, where the object is to raise fat wether lamb hoggs, the high management of the lamb is commenced early.

They are first separated from the ewe lambs, and allowed to take precedence through the year. In weaning them it is better to take the ewes from their lambs to a distant field reserved for them, than to take the lambs away from the dams; the lambs being accustomed to this pasture will remain more quiet than when removed to a strange field, where they fret, become thin and exhausted at bleating, and too often incur fever and scouring, which are the forerunners of other diseases, and the cause of their doing badly for weeks, if not during the whole of the ensuing winter. The ram lambs are put with their dams into the Clover on reserved spots for some days previous to weaning, where they learn to eat green Tares, which are found invaluable by those breeders who use them for a start. Lambs should never be placed upon rested summer-eaten Clovers, however tempting they may appear, as they invariably cause scouring and disease. Old Grass, Clover, and Grass aftermath, is preferable until the autumnal quarter commences. So much depending upon the manner in which the young animals are started or taught to eat this winter fare; in the middle of September the lambs are placed in lots upon Grass or seeds, as they are fond of picking this food at this season of the year, Cabbages being thrown to them upon the pastures, or cut in troughs; after a short time White Turnips are mixed with the Cabbages, as a further preparation for winter. As October advances they are placed upon the common or White fleshed Turnips. Some breeders mix a little Rape (or Cole seed) in the first sowing. After a short time the wether lambs have ¼ lb. of oilcake, or corn of that value, per day. At Christmas they are placed upon the Swedes, which are cut for them. As spring advances the cake and corn are increased in quantity. The ewe hoggs are kept upon Turnips and cut Clover-chaff, with plenty of salt to lick; and when the roots are finished they are put upon Grass land or old seeds. In many parts of Leicestershire, however, the lambs are wintered upon Grass only, and are frequently sold fat as early as the following August or September.

Cotswolds.—I don't know whether there is more than tradition for the assertion that the Cotswold sheep were introduced into Britain by Eleanora of Castile, queen of Henry the Second; but soon after that time their wool had become one of the staple riches of this empire. In the 14th century its price was almost fabulous, 5*s.* to 7*s.* per stone, when a fat sheep itself was worth only 1*s.* to 3*s.*; reckoned at the present value of money, the wool realised about 4*s.* per pound. This extraordinary price arose from its demand in the Netherlands for the manufacture of the light and beautiful fabrics, such as cloth of gold, so noted and costly in those days. In the 15th century King Edward the Fourth sent a number of Cotswold rams as a present to Henry of Castile; and another royal lot was sent to John of Aragon, to improve the Spanish long-woolled breed. The old Cotswolds were very coarse animals, with a thick heavy fleece, and with a hardy constitution, well adapted, in spite of their great size, for the bleak unenclosed hills on which they were fed. With the inclosure and high cultivation of the district came the development of all that is desirable in the sheep grazed there; and whether truly or not I cannot say, it is stated by some authorities that Leicester blood was employed to give symmetry and rapidly-feeding propensity. It is understood, however, that to judicious selection the principal part of the improvement was due, and the Cotswolds of the present day are as purely distinct a type of sheep as the Herefords or Devons are distinct breeds of cattle. It is the special qualification of the Cotswold, that while of most massive weight and proportions, he is capable of enduring great hardships, succeeding well in exposed situations on nearly every kind of soil adapted for sheep farming, and he produces a great amount of mutton and wool at an early age. In the best flocks it is no unusual thing to see 12 months' old sheep weighing 30 lbs. a quarter; the average weight of an ordinary flock, when fit for the butcher, at 14 or 15 months old, being from 25 to 30 lbs. The weight to which old sheep may be brought is truly enormous. Mr. Robert Garne, a few years ago, fed a sheep which weighed no less than 86 lbs. per quarter. A 3-year old wether fed by the late Mr. Langston, weighed 85 lbs. per quarter.

The Cotswolds are in very great demand for crossing to give noble dimensions and vigorous constitution to many breeds, at home and abroad—in Australia as well as on the Continent of Europe. It is estimated that about 3000 rams are annually sold by auction, in addition to which a great number are disposed of by private contract, the majority probably going eastward from their native district, but many being sold to Herefordshire breeders and for exportation, sometimes at 40, 50, and even 60 guineas apiece.

Of the management of Cotswold sheep I have no experience, but the following I believe is generally the course pursued. The ewes are put to the ram rather early in the season, they continue with the ram about nine weeks, being drawn out from time to time as they are rammed, being marked with ochre, a different mark being used for each succeeding week, so as to guide the shepherd in lambing time. When the lambs begin to fall, the ewes are shut in warm yards, and very carefully attended to. When the lambs get sufficiently strong, they are removed with their dams to a Turnip field. Sometimes a temporary pen is made in a Turnip field for the ewes to lamb in, surrounded by little houses made with hurdles, to put each ewe to lamb in, until the lambs are a day or two old. Some of the best hay is given to the ewes at this period; and this is especially valuable in producing milk for the lambs, when Turnips and green food may have run short. When the Turnips have been consumed, the sheep are put upon the second year's seeds, where they remain till July, when the lambs are weaned and placed upon aftermath of seeds or Sainfoin. The wether tegs and ram tegs, if any, are put upon Vetches to be forced on for the sales of August. Here they are either allowed fresh pens very frequently, or the green succulent forage is mown and given in racks or alongside hurdles, so as to be eaten through them. Iron hurdles upon feet are very useful for this purpose. Towards Michaelmas the sheep go to Turnips, which are cut with hay for the wether tegs. Some farmers give cake and corn also, but many fat tegs, weighing from 20 to 30 lbs. per quarter, are brought to the fairs in the following April and May, being from 13 to 15 months old, that have tasted neither cake nor corn. Those breeders who have bestowed less care and expense in summering and wintering, sell their hoggets in a store state at the same time, to be fattened by the summer Grasses. The flock ewes are drafted early in the summer, and those to be disposed of are sold in the autumn.

Lincolns.—Though the Lincoln long-wools are now bred in such numbers upon the Wold and Heath-hills, they are not natives of those elevated grounds; the aboriginal natives, indeed, were rabbits, and the flocks were introduced there within the memory of persons still living. The heavy Lincoln sheep is a native of the lower hills, the valleys, and more especially the wide marshlands of the county. The ancient Fen sheep is described as "the largest-legged and largest-carcased sheep of all others; and although their legs and bellies were, for the most part, void of wool, yet they carried more wool than any sheep whatsoever." The old Lincolns were ungainly animals, with carcases long and thin, razor backs, legs thick and rough, bones large, pelts thick; and though attaining to a great weight, they were very slow feeders. In fact, their chief merit was their wool, from 10 to 18 inches long, and weighing form 8 to 16 lb. per fleece; and this heavy skin formerly made the breed profitable to the lowland graziers, although covering such a slow-feeding, coarse-grained carcase of mutton. Sixty years ago, when Arthur Young wrote his Survey of Lincolnshire, the new or Dishley Leicesters were spreading very rapidly over the county, probably faster than they had done (with one or two exceptions) in any other, driving out the primeval breed from the poorer uplands, or improving them by crossing. "The true Lincoln," he says, "is a larger sheep, and with a longer wool, and therefore demands a better pasturage; where it finds such, there the old breed remains; upon inferior land, the Leicester establishes itself from the necessity of having smaller size and shorter wool." At the present time the pure old-fashioned Lincolns are scarcely to be found, except in some few places in the rich marshes adjoining the sea; and these sheep are as might be expected, greatly improved by selection and careful breeding. The improved Lincolns partake largely of the peculiarities of both Cotswold and Leicester, having the expansion of frame and nobility of appearance of the one, combined in a great degree with the quality of flesh, compactness of form, beauty of countenance, and propensity to fatten of the other. But they exceed either in the weight of their fleece. The Lincoln sheep has a thick neck; he is butcher's meat, as it were, up to the very ears; his head is bare of wool, and the face not so white as to exclude black spots, each of which is valued as a mark of superior blood. The wool frills up well round the neck, and covers well down to knees and hocks.

Some remarkable animals of former times have left their history behind them. Mr. Trimnell, of Bicks, near Spalding, killed a 4-year old wether sheep in 1791, which weighed 67 lbs. per quarter, and it had never eaten oilcake, corn, &c., being made up with only Grass and herbage, the extraordinary diet of "Sow-thistles" having been its principal keep. In 1826, Mr. Dawson, of Withral, in Louth, killed three most extraordinary sheep. The heaviest, a three-shear, was alleged to have weighed 386 lbs. or 96½ lbs. per quarter. It measured from the top of the head to the tail, 4 feet 7 inches; girth behind the shoulders, 6 feet 1 inch; height, 2 feet 8½ inches; thickness of the fore-leg under the knee, 4½ inches. The second, a two-shear, weighed 364 lbs., or 91 lbs. per quarter; and the third, a shearling, weighed 284 lbs., or 71 lbs. per quarter. In 1827, Mr. Clarke, of Canwick, near Lincoln, exhibited two wether sheep—one 65¼ lbs. per quarter, the other 62½ lbs. per quarter. A wether sheep, killed in Holbeach Marsh, in 1844, weighed 72½ lbs. per quarter. Ten wethers were produced by one farmer in the same locality and at the same time, averaging upwards of 52 lbs. per quarter each. A ewe exhibited by my father, Mr. John Clarke, of Long Sutton, at the Smithfield Club Show, of 1846, weighed 262 lbs., or 65½ lbs. per quarter; and she had certainly been in higher condition at the previous Newcastle Meeting of July in that year. At Lincoln April fair, 14 months old lamb-hoggs have been known to be slaughtered, as many as 30 together, averaging 35 lbs. each per quarter; and 100 together have clipped 14 lbs. of washed wool each. It is not the common practice for breeders of Lincolns to have them fit for the butcher at 14 or 15 months old, but they are generally kept by graziers who buy of the breeders until they are 22 or 28 months old, when their weight will be from 30 to 40 lbs. per quarter, and they cut a second fleece of 10 to 14 lb. Mr. Plowright, a grazier near Spalding, has throughout many years shown in his regular business sales, 300 to 400 annually of two-shear wether sheep, weighing 35 to 45 lb. per quarter.

The flesh of the Lincoln sheep is of admirable quality, though a foolish notion exists among breeders of Downs that it is not so. While not equal to Down mutton, it has less fat, and a greater proportion of fine-grained meat than is found in the Leicester. The ewes are fair breeders—about one-third of those lambing, producing "pairs"—but they are not first-rate sucklers. The wool of the Lincoln sheep is in great request, from its peculiar properties of length, strength, and lustre or brightness. It is not requisite that the staple should be very long; it need not exceed some 6 inches in length to come under the denomination of "lustre wool;" but the longer and stronger the hair, providing it is bright, and not coarse, the more valuable is it. At Battersea Show, my father exhibited a hogget fleece on the back of the living sheep, the length of hair of which averaged about 17 inches; the weight supposed to be about 20 lbs. Owing to the lateness of the Show (in July) of course this was somewhat over a year's growth. Such a fleece, when used in the Bradford manufactories, as an admixture with cotton in the finest "alpaca" fabrics, suffices for upwards of 12 pieces, each 42 yards in length, and might possibly be extended to 16 pieces, or 672 yards. In the production of this valuable lustre wool (now worth 2*s.* per lb.) the Lincoln breed of sheep have the pre-eminence both in weight and quality. Next in point of merit come the fleeces of the Cotswolds and Leicesters, and Kent and Romney Marsh wool is next.

I have a lock and staple of wool from a ewe hoggett, which is 24 inches long, and another from a ewe, but of more than two years growth, which is no less than 40 inches in length. I may give a few instances of weights of fleece. My father's prize ram at the Lincoln meeting of 1854, had clipped 51¾ lbs. of wool in three years; an average of 17¼ lbs. per fleece. A two-shear ram clipped last year by Mr. Bond of Yarborough, yielded a fleece of 23½ lbs., and though heavy fleeces are too commonly coarse in quality, this was as remarkable for length and fineness of staple as for weight of wool. In 1859, a neighbour of mine clipped 327 hogget fleeces, weighing 130 "tods" of 28 lbs., or an average of over 11 lbs. each. In 1862, one case gave 179 hogget fleeces, averaging nearly 12 lbs. each; another, 190 hogget fleeces, averaging 11 lbs. each; these at present prices would be worth more than a sovereign per fleece.

In the present year a marshland farmer in Norfolk has clipped 200 Lincoln hoggs, averaging 14 lbs. each fleece. Another neighbouring farmer at Walpole, near Wisbech, clipped 100 Lincoln hoggets, and 144 mixed Lincoln wethers and ewes, that is, 244 fleeces weighing 103¼

tods, or an average of about 12 lbs. per fleece, and this clip has been lately sold at 56*s.* per tod, *i.e.*, 2*s.* per lb. or, 24*s.* per fleece. Mr. Plowright, near Spalding, whose fat sheep I have already referred to as attaining such great weights of mutton, has this year the following tod bill of hogg and wether sheep:—690 "threes," 376 "twos," and 2 "ones," or 2824 fleeces, averaging within a trifle of 11 lbs. per fleece, and many of them had been clipped in spring for the butcher.

A farmer at Leverington, near Wisbech, grazed 219 Lincoln hoggetts (bred near Caistor, in Lincolnshire), and 40 Lincoln shearlings, and the 259 fleeces weighed 117 tods, or an average of 12½ lbs. per fleece; 81 fleeces of half-bred Down and Leicesters, averaging 8 lbs. per fleece, made up a clip, sold (October 21st) at 56*s.* per tod, or 2*s.* per pound.

Probably ordinary breeding flocks, where the proportion of hogg wool is about one-third of the whole, the fleeces average 8½ to 9 lbs. each.

The Lincoln long-wool sheep, though of course possessing uniformity in essential character, differ very considerably in minor points. They are bred chiefly in their native county, in some parts of Yorkshire, in the fens of Cambridgeshire and Norfolk, in Huntingdonshire and Northamptonshire. In the northern part of Lincolnshire, and on the high Wolds, most attention is paid to the uniform character and fattening properties of the breed, preferring the wool to be of fine quality, and rather closely set. In the midland portion wool and mutton are sought with about equal care, with a more open and somewhat heavier fleece; and in the southern districts of the county, including the sheep fens and marshes, the three great requisites of large proportions, with plenty of wool and heavy flesh are most prized, and universally sought after. In addition to these general differences, each breeder, or at least each breeder of rams on a somewhat large scale, has some peculiar taste or character displayed in his flock; and common or ordinary breeders congregate at the lettings, according to their tastes, or the peculiar demands of their respective farms, the occupiers of the fat lowlands seeking out rams that can scarcely be too large in frame, or possess too long and broad a staple of wool. Herbage and climate are found in practice to exert a very potent influence upon the fine shades of character in sheep suited to different districts. And this should be borne in mind when advocating a spread of the breed into other parts of the kingdom. I do not see why the Lincoln breed should not be more widely dispersed than it is, provided the extraordinary market demand for lustre wool is kept up.

I am of opinion that the sheep can be introduced into almost any district of the United Kingdom where good natural pasturage abounds, or can be found, and good Turnips can be grown, and also wherever good Clover or seeds are produced. Providing, however, that you have one of two important conditions. It is perfectly futile and useless to attempt the introduction of Lincoln sheep into mountain and moorland districts, or even upon lofty chalk downs. The very size and weight of the animal deters it from travelling far in search of food; but it may be profitably located upon hills of moderate elevation and under good husbandry. The Lincolnshire wolds, and heath and cliff, are not much unlike the Cotswold uplands, and these ranges alike nurture breeds of sheep of wonderful size and weight.

The other condition is that the Lincoln sheep is unadapted to an excessively moist climate. Lincolnshire is one of our dry counties, and the absence of great and incessant rainfall is conducive to the growth of a lustrous fleece. Hence, in introducing this breed into new localities, we should act upon the same principles which guide the choice of breeders in Lincolnshire itself. The long open thin-set staple will not thrive well in a cold, wet, stormy, and changeable season, even in the native habitat; the closer fleece beats it hollow, because neither cold, wet, nor wind can so easily penetrate to the skin through the denser coat or covering. You have only to notice how readily the wool of a thin-set fleece is parted by a slight breeze, to be convinced such is not the best covering to ward off the snow, the cold rains, and storms of a fickle clime. So that judgment will select the closer-skinned wools for wet and bleak districts, larger and heavier fleeces for better soils and situations, while the largest and heaviest sorts, both of wool and mutton, are suited to the best lands and driest climates. For the continuous rains of the West of England, the Lincoln breeder can supply a close-set skin, yet valuable as being true lustre wool. For warm districts of the south of England, where it is objected that the wool degenerates and becomes short and "mossy," owing to too much heat, the open skins and brighter fleeces of North Lincolnshire are adapted. I do not believe that the production of this lustre wool is limited by poverty of soil and inferiority of natural herbage. On Lincolnshire chalk wolds and the oolitic heath district, where 60 years ago, tens of thousands of acres yielded an annual produce, not exceeding three or four couples of rabbits per acre; now they are producing magnificent sheep in almost equal numbers, with sheep's valuable wool instead of rabbits' skins. And the high importance of extending the production of lustre wool appears from the fact that while our manufacturers can obtain ample supplies of short wool from our pastoral colonies, Australia, New Zealand, and the Cape of Good Hope, there is no country in the world but our own which seems capable of yielding supplies of long lustrous wool. The experiment, however, is being tried; 18 young Lincoln sheep, mixed as regards sex, was this autumn shipped for Melbourne.

As illustrations of the value set upon Lincolnshire rams, I may instance a few of the sales and lettings this autumn. Mr. Howard, of Temple Bury, sold by auction 60 shearlings at an average of over 13*l.* each, and 20 two-shears at an average of 10*l.* 5*s.* each; but the prices reached up to 40*l.*; others were 34*l.*, 29*l.*, 27*l.*, and so on. Mr. Mayfield, of Pegdyke, let 100 rams, at prices up to 45*l.* My father's prize ram ot Leicester in 1854 was let for the season for 50*l.* It is quite a common thing for sheep of established fame to make 30*l.* to 40*l.* for their use during a season.

The general system of management of Lincoln sheep is as follows:—The ram is put to the ewes about the beginning of October, and runs loose in the field with 60 or 70 of them, upon Turnips, or Coleseed where it is grown, and upon Grass land where the farm will allow of it, a stimulating diet (particularly a bite of white Mustard), being found to forward the ewes, and tend greatly to their fertility. The ram is rubbed underneath with ochre or soot, so as to leave a mark upon the ewes he has tupped. In the lambing season the ewes are placed upon good green land, or seeds reserved for them, near to the homestead, and are supplied with either Turnips or Mangels, which are not so good, but may be alternated with Turnips with good effect, and a supply of chaff from Oat sheaves, cut up, is an excellent addition to the food. The lambs are castrated, their tails cut short, and they remain with the dams until late in the summer, when they are drafted to Clover eddish, and furnished with a gradually increasing allowance of oilcake. The principal breeders upon the heaths and wolds, have a great fancy to put forward their wether lambs from the earliest period; they are separated from the ewe lambs, and promoted to all the best food. When taken off about the middle of July, they are still supplied with corn or oilcake upon the seeds, and then they are placed upon the Turnips, Cabbages being little used. As the Barley-thrashing advances, they receive bruised Barley and malt combs with their oilcake. As spring advances this artificial food is increased along with the cut Swedes. In the southern district of the county, where Coleseed is grown, the lambs stock this crop early in October, having a stock of Wheat, Oat, or Pea straw to pull at and to shelter under; and Oat chaff is given in troughs, dry food being essential to prevent injurious consequences from an exclusive diet of rich succulent forage. Next to the Coleseed comes the White-fleshed Turnip crop; to them follow the Swedes, sliced for the sheep, which are afforded a fresh square of fold every day, or less frequently in fine dry weather artificial food, as cake, with Bean and Pea meal, and Oats, is plentifully supplied by the best managers, in order to make big, strong and useful lamb-hoggs for sale at the spring fairs.

These lamb-hoggs are bought by graziers from the good sheep pastures, and are got off to market either late in summer, after yielding their first fleece, or if bought in poorer store condition, during the next winter, after clipping a second fleece. The time for clipping is June, the washing being performed about 10 days previously, in wash-dikes constructed for the purpose. The young lambs are cleansed by dipping in a mixture of arsenic, soft-soap, and assafœtida, soon after the ewes are shorn, and in October they are sometimes dressed with mercurial ointment. In August, the ewes are drafted; those selected for future breeding being placed upon ordinary pastures, stubbles, &c., and those for fatting, put upon the best keeping the farm will afford at that season. The breeding ewes are generally dressed with some liquid to free their skins from vermin, arsenic and soft soap being common ingredients.

I have still two more breeds of Long-wool sheep to notice.

The Teeswater, so named from its original locality, the banks of the river Tees in Yorkshire, was at one time a very tall, clumsy animal, without horns, much after the manner of an old Lincoln, with wide back and round barrel, but very sluggish in arriving at maturity. The wool was remarkably long and coarse, but thinly set in staple. One valuable property of the breed was, that it was very prolific, twins having been not only usual, but there are cases of four, and even five lambs at once. By crossing with Leicesters, the size and constitution of this breed have become united with quick feeding properties, with an excellent description of fleece. The management is very similar to that pursued in Lincolnshire; the breeders, however, generally sell their produce as shearlings in autumn, making a great show at Market Weighton farm in September. The young sheep, fattened upon Turnips, are artificially forced during the winter; and those intended for shearlings are kept more moderately, placed upon Clover early in the summer, and then finished upon Coleseed. When they are sold, the wether lambs are put upon the Coleseed to clean it up previously to their going to Turnips, which is a good arrangement for finishing the shearlings, starting the lambs, and preparing for the succeeding Wheat crop.

The Romney Marsh breed, a very hardy long-wool sheep, believed by its breeders to be the only sheep capable of weathering the storms that blow off the English Channel, was at one time distinguished by thickness and length of head, a long and thin neck and flat-sided carcase, rather firm quarters, large bone, heavy bone, and long and coarse wool. Though improved of late years with Leicester blood, they still retain too much of their old character to be favourites in a show-yard, but have very valuable qualities, and all their primitive hardihood. The great business of Romney and adjoining marshes extending over more than 60,000 acres, is the breeding, rearing, and fattening of this sheep. Every grazier whose business is complete, has two sorts of pasture, breeding land and fattening land. The former is stocked with ewes in autumn for the winter; from two and a half to three and a half, and even four sheep an acre. The rams are annually put to the ewes, allowing one to 40 or 50, and sometimes 60, in the middle of November, this being very late, staying with them about five weeks. The ewes live entirely upon the Grass, and without any hay during the winter; in deep snow blasts, scraping with their feet, and obtaining subsistence, although they then lose flesh and become very poor by lambing time. Many twins are produced, but many lambs are lost; so that the breeders are satisfied if they wean as many lambs as they put ewes to ram. The lambs are weaned the first and second week in August, and very soon after are put out to the upland farmers to keep, the price paid being commonly 5*l.* to 6*l.* a score, lasting until the beginning of April. The Wold district is thus stocked with the Romney Marsh sheep during the winter season; and, indeed, this breed is found largely spread throughout the county of Kent. When the Turniped lambs return into the Marsh (often in a poor and half-starved condition, from not being under their owner's attention), they are put on the poorest land, or on such fields as the grazier thinks want improvement by hard stocking. Here they remain until August, distributed, or rather concentrated, at the rate of from 5 to 12 sheep per acre, according to the powers of the different fields. The wether tegs are removed in the autumn to the fatting, and the ewes go to the breeding grounds, when they graze among the two and three years old ewes. The wethers remain until July or August following, when, as they become mutton, they are drawn out, and sold to the butchers at the Marsh markets, or sent up to London. The two-shear wethers, when fat, at this season, weigh from 26 to 28 or 30 lb. a quarter.

The old ewes, or "barrens," as soon as their milk is dried after their third lamb (which is at the age of six years), are put to fatting on some of the best land, when they run from three to five per acre during the winter. In favourable seasons these are sometimes made fat and sold in the spring, soon enough for the same fields to take in a lot of wethers, to fatten them by the autumn; but this can be done only by light stocking. In very growing summers it is necessary to keep a strict watch on the Grass, to prevent it running away from the sheep, by any stock that will keep it under; young beasts being commonly taken in for this purpose, from the upland farmers.

The Romney Marsh wool is now of exceedingly good quality, being very long and fine; the fleeces of the young sheep are about 5 lbs. in weight, those of the ewes 6 lbs., and of the fattening wethers 8 or 9 lbs. each.

DEEP CULTIVATION.

TWENTY years of practical experience ought to be worth something to any man who has observation and reflection. In 1843 I named shallow ploughing as one of the principal curses of British agriculture, and in 1863 I am more than ever convinced that my statement was true; but although I then acted on my own conviction and broke up deeply the soil, I am sorry to be obliged still to state, that in my opinion, formed from observation, 4 inches (solid) is still the full average depth of the British agricultural pie-crust, in which plants are to grow whose roots would, if permitted, descend many feet.

Baron Liebig's last work, "On the Natural Laws of Husbandry," has revealed to us many subterranean secrets, and among the rest that we cannot manure the subsoil through the top or cultivated soil. Deep cultivators can now understand why it is so profitable to mix the manure with the subsoil and both with the top soil—not to bring up all the bad and bury all the good, but so to intermix them that the subsoil may be thus placed in a position to benefit by and participate in the manurial dressings. If you have any doubt of the Baron's theory, cut a deep section, and you will see immediately below the cultivated land the pale, poverty-stricken and unmanured subsoil, presenting a striking and instructive line of demarcation.

The reasons for this non-fertilisation of the subsoil are sufficiently given in his work.

We can now readily understand how it is that the Rev. Samuel Smith, of Lois Weedon, gets his rows of Swedes to "shake hands" by their leaves at 5 feet intervals. He ploughs back all his top soil, and having thus laid bare the poor subsoil, puts on it his manure, and forks it into the said subsoil, and thus providing food and air in the right place, the subsoil, for the deep-feeding root crops. Gardeners understood this, but farmers as a general rule either know nothing of it or do not think it profitable.

I never could understand on logical and reasonable

grounds why a farmer should have one rule for his fields and another for his garden, except the slavery of long custom. No farmer would be content with the farming depth of cultivation for his garden. In the latter he requires greater acreable produce, and is not that what he should require on his farm?

From 16 to 20 years ago I broke up much of my land by six horses following in the track of the first plough drawn by three horses, and in this very year I could see the great contrast in part of a field where I had omitted to do this.

To-day I am following the two-horse plough with four horses attached to an iron plough without the breast. The subsoil breaks up, boils over, and intermixes with the top soil and manure, and as it flows over you see the strong roots of old weeds torn from their hitherto safe residence, but condemned now to destruction or removal.

I have produced on the physiognomy of my farming friends certain curious muscular evidences of entire disbelief, when I told them that my neighbour, Dr. Dixon, of Rivenhall, once pulled up a Parsnip with a vertical root 13 feet 6 inches long, besides the further piece *left* by its breaking off. This was in a bank of earth, 20 feet deep, that fell over loosely when excavated; a paved or polished and hardened subsoil in stiff clays or other soils won't do. Liebig tells you why in his last work. As water cannot wash manure to the roots, the roots must go to every granule if they mean to have the manure. Consolidation is just the thing to prevent such a free working of the roots.

Turn a heavily laden cart in damp weather over a stiff clay and it will leave its mark of poverty unmistakeably; in fact, I have not patience with our present system of shallow cultivation, but believe that the great reformer will be the steam plough after drainage on stiff clays.

The more I reflect upon the Lois Weedon system, the more I am impressed with admiration of the sagacity of its amiable owner. He anticipated the philosopher's discovery, and provided food in the subsoil for plants that do not feed on the surface soil, or that search the subsoil for a completion of their growth.

The advantages of exposing the sullen, unaërated, unaltered subsoil clay, to the influences of climatic vicissitudes, are too obvious to be denied. Let those who doubt this read Liebig on Fallow, and Way on the Absorptive Power of Soils; let them peruse Mr. Thomas F. Jamieson's able prize essay "On the Action of the Atmosphere upon Newly Deepened Soil," in vol. xvii., p. 407, of the Royal Agricultural Society's Journal, and they will appreciate his witty conclusion:—

"Many other benefits however than those of the frost will result. Are the oxygen, ammonia, carbonic acid, nothing? Let the agricultural mind, therefore, be of good cheer; the atmosphere is a force everywhere present; although his form may be like Justice Shallow's, 'barren, barren,' he has at least this consolation 'marry, good air.'"

I remember throwing out of the cutting of a new ditch in my "Black Sandys" field, an absolutely barren subsoil of hard sand and gravel stones, bound together by protoxide of iron. For several years no vegetation was seen upon it, at length a few straggling plants appeared, and now, after a lapse of 20 years, it is well covered. This is evidently due to the action of the atmosphere on the ingredients of the soil. *J. J. Mechi.*

PRODUCE OF MILK AND CREAM.

PROBABLY the greatest quantity of milk in this country is set for cream in leaden cisterns about 4 or 5 inches deep; yet tinned-iron cisterns are on the whole preferable, as being more easily kept clean. It is a great mistake to put up the milk in cisterns 4 or 5 inches deep. Such deep vessels economise space, and cost less than a number of small pans requiring to be renewed from time to time, but what is gained on the one hand is lost on the other, by the smaller quantity and the inferior quality of the cream which they give, in comparison with shallow vessels.

The quicker cream can be made to rise the better its quality; for cream, like all perishable substances, does not preserve its original properties for any great length of time. The cream, or rather milk-globules, being lighter than the fluid portion of milk, necessarily rise in a shorter time from a less depth than from a greater depth, because they have less pressure to overcome than those in the deeper strata; the action is also more complete, as well as more rapid, in shallow vessels. There is another reason for preferring shallow vessels. Milk as it comes from the cow has a temperature of about 90°. If kept in this condition for any length of time, air being freely admitted, it rapidly turns sour. Hence it is of consequence to reduce it as rapidly as possible down to a temperature of at least 60° Fahr. In a shallow tinned-iron milkpan placed upon stone this change is soon effected; and then, in a good dairy, the milk may be kept from 36 to 48 hours, at a season when in deeper vessels it would soon turn sour. When once begun, the process of acidification cannot be stopped by any available means. Hence it is of great importance to cool down the milk as rapidly as possible. As metals are good conductors of heat, shallow tinned-iron milk-vessels, resting on stone, are better adapted to keep milk sweet than glass or earthenware, or slate-pans, placed on a bad conductor like a wooden bench.

It must not be imagined, however, that the lower the temperature is allowed to sink the more cream will rise; for we must bear in mind that with the reduction of the temperature the specific gravity of the liquid is raised, and the rising of the cream or milk-globules checked accordingly.

When shallow metallic milk-vessels are employed in a proper dairy, kept at this temperature, all the cream that will rise at all will have come to the surface in about 24 hours. Under these circumstances it is therefore no use to set milk aside for a longer period. Some people let milk get sour before they skim it; but although the layer of cream in that case appears more bulky and of greater consistency, it does not produce so much nor so good a quality of butter. On this point we possess an interesting experiment by Sannert, who put aside two equal quantities of milk, of which the first skimmed after 30 hours yielded 30 lbs. of butter; and the second skimmed after a lapse of 60 hours, only 27 lbs. of butter.

In another experiment two equal quantities of milk yielded—the one when skimmed after 30 hours, 31 lbs. of butter; and the other after 60 hours, 29 lbs. of butter. In both experiments, in which the milk was skimmed after 30 hours' standing, the skimmed milk was still sweet, and the cream not so thick and less in bulk than that which was thrown up after 60 hours' standing.

Composition of Cream.—As may be expected, the composition of cream varies greatly, according to the circumstances under which it is produced. Four different samples analysed in my laboratory yielded the following results:—

	I.	II.	III.	IV.
Water	74.46	64.80	56.50	61.67
Butter (pure fatty matters)	18.18	25.40	31.57	33.43
*Casein	2.69	7.61	8.44	2.62
Milk-sugar	4.08			1.56
Mineral matter (Ash) ..	0.59	2.19	3.49	0.72
	100.00	100,00	100.00	100 00
*Containing nitrogen ..	.43	..	..	.42

Cream is lighter than milk, but slightly denser than pure water; consequently it sinks in distilled water. No. 1 was skimmed off after standing for 15 hours, and was found to have a specific gravity of 1.0194 at 62° Fahr. The specific gravity of two other samples of cream which stood 48 hours was 1.0127 at 62° Fahr., and 1.0129 at 62° Fahr. Rich cream, I find, has a lower specific gravity than thin cream mixed with a good deal of milk, such as the sample analysed under No. 1.

No. 2 may be taken as representing the composition of cream of average richness. It then contains about one-fourth its weight of pure butter.

These differences in the composition of cream fully explain the variable quantities of butter which are produced by a given bulk of cream.

On an average, 1 quart of good cream yields from 13 to 15 ounces of commercial butter. Occasionally cream is very rich in fatty matters, and then yields much more butter. Thus Mr. Horsfall states that a quart of cream in his dairy yielded 1 lb. of butter, when the cows were out in Grass, and no less than 22 to 24 ounces of butter when the cows were fed in the house on Rape cake, Bran, and other substances rich in oil.

The cream which rises first I find is always richer in butter than that which is thrown up later. Such differences are always particularly marked in warm weather. Generally speaking, cream yields more butter when its bulk, in proportion to that of the milk from which it is taken, is small, and *vice versâ*. Thus, in Mr. Horsfall's dairy, the cream did not exceed 6½ per cent. in the bulk of the milk: but it was so rich as to yield 25 ounces of butter per quart.

In an experiment which I published last year only 4 per cent. of cream was thrown up by the milk. This cream, however, was so rich that 10 quarts yielded 18 lbs. of butter.

The first portions of cream which rise are always thin, but rich in fat; a fact which is explained by the circumstance that during milking and the subsequent agitation to which milk is exposed a portion of the milk-globules get broken, in consequence of which their light fatty contents, liberated from the denser casein-shells, rise to the surface with greater facility, and there occupy less room than the unbroken milk-globules, which, on account of their greater specific gravity, are more sluggish in rising.

In my experiments the milk had to be measured out several times over, in order to secure accuracy; and this exposure to extra agitation explains the unusually small bulk of the cream: since in all instances of careful experiment the milk must be a good deal agitated, until it becomes a sort of mixture of ordinary cream and ready-made butter. The large quantity of butter yielded by cream in Mr. Horsfall's and my own experiments is explained by this circumstance. We may learn from this that on farms where cream is sold the milk should not be shaken more than is absolutely necessary.

Although no doubt originally all the butter exists in the shape of butter-globules, a partial separation, however, between the contents and the envelopes of these take place already in the udder of the cow; for if ether, an excellent solvent for unencased fatty matter, is carefully mixed with the milk as it comes from the cow, and the layer of ether which collects after some time on the surface of the milk is evaporated to dryness, an appreciable quantity of fatty matter is left behind. This is not more than might be expected; for the milk in the udder of the cow to some extent becomes agitated by every violent movement of the animal. For this reason, whether butter or cheese be our object, we should endeavour to keep milking-cows as quiet as possible. *Dr. Voelcker, Agricultural Society's Journal.*

Home Correspondence.

A Cure for Bitter Bread.—I think I may safely say that if Potato yeast be used as in the following recipe, which has been in use in this household for more than 20 years, the bread cannot be bitter. Take 1 lb. Potatos, boil them till thoroughly soft, skin and mash them very smooth, then stir in hot water until the mixture is the thickness of cream. When it is nearly cold, stir into it two tablespoonsful of beer yeast, and set it before the fire until it has done fermenting. It is then fit for use; 1 lb. of Potatos will make a quart of Potato yeast, which is enough for 2 pecks of flour. *Lattenbury.*

Tithe Commutation.—As many of your readers may feel anxious to know the result of the corn averages for the seven years to Christmas, 1863, published by authority in the *London Gazette* of this evening, viz.:—Wheat, 6*s.* 3½*d.*; Barley, 4*s.* 5¾*d.*; Oats, 2*s.* 11¼*d.* per imperial bushel—I beg to state for their information that each 100*l.* of tithe rent charge will, for the year 1864, amount to 103*l.* 3*s.* 10¾*d.*, or about 4 per cent. less than last year's value. The following statement from my "Annual Tithe Commutation Tables" will show the worth of 100*l.* of tithe rent charge for each year since the passing of the Tithe Commutation Act, viz.:—

	£	s.	d.
For the year 1837..	98	13	9¾
,, 1838..	97	7	11
,, 1839..	95	7	9
,, 1840..	98	15	9½
,, 1841..	102	12	5¼
,, 1842..	105	8	2¾
,, 1843..	105	12	2¼
,, 1844..	104	3	5¼
,, 1845..	103	17	11¼
,, 1846..	102	17	8¾
,, 1847..	99	18	10¼
,, 1848..	102	1	0
,, 1849..	100	3	7¾
,, 1850..	98	16	10
,, 1851..	96	11	4¾
	£1512	8	11½

	£	s.	d.
Brought forward	1512	8	11½
For the year 1852..	93	16	11¼
,, 1853..	91	13	5¾
,, 1854..	90	19	5
,, 1855..	89	15	8¾
,, 1856..	93	18	1¼
,, 1857..	99	13	7¾
,, 1858..	105	16	3½
,, 1859..	108	19	6¼
,, 1860..	110	17	8¾
,, 1861..	112	3	4¾
,, 1862..	109	13	6
,, 1863..	107	5	2
,, 1864..	103	3	10¾
	£2830	5	8½
General average for 28 years	£101	1	7½

Charles M. Willich, Actuary to the University Life Assurance Society, 25, Suffolk Street, Pall Mall East, S.W., Jan. 8.

Patent Earth Closets.—The arrival of the frost, and its expected effect of rendering unserviceable the water-closets in many country residences, recalls to my mind an article in the Journal of the Royal Agricultural Society, published last spring; and suggests thoughts of the convenience of the contrivance therein described at this season of the year. I have often thought of the advantage to the occupier of a suburban residence, with a small plot of garden attached, had he the means of utilising the manure produced in his own house and of applying it to fertilize his garden, instead of suffering it to pollute the neighbouring streams. And the contrivance appears from the description given to be not very much more cumbrous than an ordinary night-commode, in moving from room to room, and very much more easy to clean and replace when required for use in a sick-room. I should then be very much obliged to any of your correspondents who have employed this piece of furniture if they would favour me with the results of their experience of its use, either as compared with a common watercloset in hard frost, as a means of manuring a small holding, or for the purposes of the hospital or sick-room. *Ruricola.*

Farmers' Clubs.

LONDON.—(3, Robert Street, Adelphi, London, W.C.)—The following subjects have been selected for discussion during the present year:—

February 1. The Malt-Tax—Proposed by Mr. J. A. Williams, Baydon, Hungerford.
March 7. On Feeding Stuffs—Professor A. Voelcker, 101, Leadenhall Street, E.C.
April 4. The New Assessment Act—Mr. J. Dumbrell, Ditchling, Hurstperpoint.
May 2. The Imperfect State of the Corn Returns. Mr. T. Chandler, Aldbourne, Hungerford.
November 7. County Expenditure and Local Taxation—Mr. W. Spearing, Kennet, Marlborough.
December 5. On some of the Causes that tend to render Farming Unprofitable—Mr. Alderman Mechi, Tiptree Hall, Kelvedon.

*** The discussions commence at half past 5 o'clock, P.M. There are no meetings in January, June, July, August, September, or October.

WIGTON: *High Farming; but, where is the Money to come from?*—Sir R. Brisco, the President of the Club, read a paper on this subject at a recent meeting. We make the following extracts from it:—After a reference to the fact that great land improvements prosper in bad times and slacken in periods of high prices, and to the

absolute need of land drainage, by which this assertion was particularly illustrated, Sir Robert proceeded:

"High Farming" I take to mean the act of obtaining from any given land the greatest possible value of production of which it may be capable by any or whatever means, through the investment of capital in any or whatever form. Now to the proof:—

Given a farm of 50 acres Grass land.

Debit the rent	£100
Debit the rates	10
1 herdsman	40
	£150

Produce 25 cattle grazed, equal to 6*l.* per head cost.

View the same farm under higher farming:—

Given a farm of 50 acres of Grass land.

Rent	£100
Rates	10
Cattle man	40
Manure at 3*l.* (or other enrichment) ..	150
	£300

Produce 50 cattle grazed, equal to 6*l.* per head cost,

In these two examples I have so arranged them as to make the cost per head on the cattle equal in each case, but the result will be found very different. In the first example all the money paid out has left the farmer's pocket for ever; but in the second example half the expenditure is invested in his lease, or, if you like it better, say in his farm. Now, for **example sake, let me assume that the farmer clears one pound a head in both cases, after paying expenses. In the** first case he will gain a profit of 25*l.* off his 50 acres, leaving **his land no richer than he found it. In the second example he will gain a profit of 50*l.* off this same 50 acres, and will leave** these acres richer than he found them. In this case he gains **20*s.* per acre profit, but in the previous case only 10*s.*** per acre. But you will, I hope, observe, that he gains much more than is here represented; for, as the first lot of twenty-five cattle have paid off all the rent, rates, and labour, he will be repaid by the second lot of 25 cattle all his cost in manure also. Practically, the first man has paid 6*l.* per head for the grazing of 25 cattle, whilst the 50 cattle of the second man have only cost him 3*l.* per head for grazing, and he has his land in very superior condition for the next year. The plan adopted in the first example represents what is called a good fair farmer. The second would properly be called a high farmer. The first receiving 16 per cent. on his outlay for rent, rates, and labour, would complain that rents were too high, because he might not receive sufficient profit to suit his views, and would most likely think a reduction of rent was the only way left of improving those profits. The high farmer, on the other hand, gaining 32 per cent. on his outlay of the same amount of rent, rate, and labour, would cheerfully pay an increase of rent, which would make profitable farming an impossibility to the other man. Gentlemen, excuse me, but I would deny the truth of any statement embodying an idea that rents on the average are too high. It is not the case that rents generally are assessed at too high a value for the land, but that the man is not equal to the rent; or, in other words, that the average of farmers do not know and therefore do not carry out correctly the true principle of profit making in their cultivation of the land. This I am convinced is the true explanation of the apparent difficulty. It is a dangerous and too prevalent idea that land gives the rent: it is not the land, but the capital invested in the land, aided by the farmer's judgment, which gives the rent and profit. As well might it be said that the plough or the fork yields the rent. Land can only be viewed as a machine through which the farmer passes his capital, which, worked with judgment, will turn out goods yielding a profit.

In selecting Grass land to exemplify my meaning, I have only done so because it enabled me to put an example in the simplest form. Arable farms are governed by exactly the same law; but on them my examples would have become much more complex and intricate. Neither do I wish it to be supposed that the outlay and return on the examples given above are intended to represent the exact sums either of expenditure or receipts. My object has been to simplify as much as possible and make my meaning clear, so that the great guiding principles of making profits by high farming, might not be clouded or lost sight of, by entering into minute details.

In concluding the first half of our subject, let me now summarise what has gone before.

"High Farming" is best for the nation at large, because it provides a maximum of human food at the cheapest rate. It is the best for the landlord, because it insures him the highest and most regularly paid rent for his land. It is the best for the tenant, because it gives him the greatest interest for, and security to his capital, with the least possible drudgery to himself.

"High Farming" practically, but only ultimately, increases rent to the landlord; at the same time that it virtually decreases rent, rates, and labour to the farmer.

"High Farming" forces from the land the greatest possible amount of food which its composition may be capable of. This is accomplished by liberally supplying it with the uttermost amount of strength and richness it is capable of assimilating, by means of the various manures, suitable for its composition and the requirements of the plants grown upon it.

Having now explained to the best of my power, and I hope clearly, what is meant by "High Farming," with the principles necessary to bring about that result, I shall proceed to show "where the money is to come from."

In answering and explaining this question, do not for a moment suppose I am about to show you some hidden hoard of ready-coined shining sovereigns from which you may supply your wants, or that I am about to show you any smooth royal road to wealth. Man was told in the beginning, "In the sweat of thy brow shalt thou eat bread." To this we must all submit, whether we like it or not: but in obeying this universal and salutary law we nevertheless have it in our power to render it more or less irksome, more or less profitable.

To make it less irksome and more profitable is the object of the remarks I am about to offer.

The primary object of all business occupations is to make the largest possible profit from a given capital, be that large or small, in whatever shape or in whatever character that capital may present itself.

Cumberland farmers profess to think they have no spare capital for improvement by "High Farming." I answer, if it be admitted that a little land farmed well is better than a large area only half cultivated, then there is little weight in this argument. Nothing is so grateful or liberal for kindness shown it as land. Fatten it by high and liberal management and it will as surely fatten you; hunger it and it will hunger you, for there will in that case be left wherewithal nothing to feed you. Do not kill the goose in the vain hope of obtaining the golden eggs; but preserve it, feed it, fatten it, for so in like proportion will you receive its ample, unlimited, and golden gifts.

Capital must be concentrated by employing it upon a less amount of surface. Let the 200-acres farmer confine himself to 150. The 150-acres man to 100 acres. If ordinarily good farming will barely pay, we may be quite sure low or poor farming will soon land a man into ruin.

Suppose a man to commence to farm 100 acres with a capital of 600*l.*, equal to 6*l.* per acre; from this capital he may obtain a profit, more or less, according to his capacity for managing land.

But suppose that instead of 100 acres he were to spread this same capital over a surface of 600 acres, equal to 1*l.* per acre, would he not, even in the present day, be called a fool? Well, then, is not this very same plan carried out on nearly all our Cumberland farms, in a greater or less degree, and does not the question, "But where is the money to come from?" too faithfully confirm this view? Gentlemen, reduce your surface and thus increase the power and profit of your capital. By this means you reduce your outgoings in rents, rates, and labour, which amount of capital saved you can expend in manure to be applied to your lessened surface, from which you will derive much more profit than from your previous double amount of acres. Capital paid away in rent and rates gives little profit, but the same amount expended in manure enriches and blesses the spender.

In exemplification of the above let us revert to our examples in "*High Farming.*"

The first example was that of an ordinary jog-trot farmer who takes his 50 acres of Grass land. He manures not, he improves not, believing that it is the land only which yields the profit; who, faithful to his belief, satisfies his disheartened spirit by finding everybody in fault but himself: his landlord for exacting too much rent; the magistrates for wasteful expenditure of county rates, hardly earned by the sweat of this poor farmer's brow; the overseer for wasting upon the poor and charging him with too much poor rate, both of which rates he is confidently certain he could have laid out much more economically himself.

Had this man, instead of finding fault with everything and everybody, immediately reduced his holding to one half, he would have found himself in possession suddenly of sufficient available capital to pay for a good manuring to his land; thus doubling its previous production, carrying his previous number of cattle, as well as doubling his percentage on the rent, rate, and labour outlay.

Thus by saving the territorial expenses on 25 acres he receives the profit of 50 acres, besides annually receiving back the additional investment of his High Farming expenditure. It has not been my intention in this paper, nor indeed would the range of my subject permit me, to go into and detail the various and minute applications of this principle, to the practical cultivation of every separate farm, every variety of soil, and every system of cultivation adopted by each farmer. I profess to point out and explain the principle only, on which all profitable farming, as a business, must be based. I leave each shrewd and practical farmer to apply this principle to his own special case, and directed by his own practical intelligence.

It is much to be regretted, that merely to name High Farming is sufficient to raise a laugh, not to say a feeling of animosity, as though High Farming were only adopted by fools, or advocated by tyrants, for the purposed ruin of agriculturists. Has it never entered your thoughts that you are all more or less open to the doubtful smile bestowed on High Farmers?

Permit me to say that you are all High Farmers in a degree, though you do not seem to know it. It is not so very long ago, and I doubt not that some here present can even remember it, when the usual system of farming embraced the taking an Oat or Bigg crop, year after year off the same land, without manure, until that land could produce no more grain crops; after which it was left to cover itself with its own wild Grass, as best it could, so to remain neglected until it was thought to be sufficiently refreshed to bear another and similar scourging ordeal. Suppose a man in that day had done as I am doing now; suppose him to have recommended as High Farming, to the farmers of that day, the adoption of the same system of cropping and manuring land as is now adopted by the very worst of farmers; would they not then have treated his advice as that of a madman, or a doubtful friend, and would they not have asked him as now is done "But where is the money to come from?" Their question you have already answered, for you have found the money to accomplish what the farmers of that day thought impossible both in practice and theory. You, however, have done immensely more than that; and you know it, for the whole of you, from the most advanced to the very worst farmer in the county, would look down with contempt upon any man who might recommend or adopt that ancient system; yet you, even in this day, treat, with a pitying smile, the advice to farm high. Let me remind you again that you all, the worst as well as the best, farm high, compared with that ancient system, which you all with one accord would so bitterly condemn. Though you are all High Farmers compared to your ancestors, yet you are far, aye, very far from being High Farmers if judged by the science and knowledge of the present day. It is to open your minds if possible, to this fact, that I have read my paper to-day. Now, what have I advised you to do? Not to alter or change your kind of cropping; I have not advised you to introduce and grow an entirely new class of plants, which might oblige you to obtain entirely fresh knowledge and experience; nor have I advised you to introduce an entirely new breed of animals requiring management and care entirely different from your previous habits and experience. No, I have merely pointed out to you how necessary it is to get a greater produce from land with less relative cost but with greater profit. I have shown you the unalterable laws by which this can be accomplished, and that the adoption of it is perfectly open and easy to all of you; to the very poorest as well as to the richest. It requires little if any change in your system of farming; it only requires you to advance rather further than you are now doing in the enrichment of your land. If at the present moment Mr. A. admits it to be requisite to give 12 yards per acre of farm yard manure to produce 8 Carlisle bushels of Wheat, then the advice given in this paper urges him not to be satisfied with 8 bushels, but to assist the land by an investment of more capital per acre to produce a greater weight and better quality of grain or straw; either by means of more manure, or lime, or subsoil, or trench ploughing, or by some means best fitted to enrich his land. But should Farmer A. answer—"Well, I would do so, but I have no spare capital for the purpose;" then I answer that there is only one plan left: If you consider the land on which you have invested 6*l* per acre would profitably carry 3*l.* more capital, you must part with 34 acres, and in future only cultivate 66 acres, which will furnish you with 3*l.* an acre more capital at once, thus saving the cost of rent, rates, and expense of cultivation, which you must have expended on the 34 acres given up. This expenditure saved from the 34 acres, with the recovered capital of 3*l.* per acre, would enable you to cultivate and manage the remaining 66 acres in so liberal a manner as to give you a very much better per centage and profit on your fixed capital, than any increase of surface

Gentlemen, my paper is a short one, but so also is the principle I have been advocating a simple one. It is simple and small, like the tiny spark applied to a magazine of gunpowder, which in its explosion may convulse a district. So also may this small but mighty principle of money-making which we are now discussing either enrich or convulse the world.

Reviews.

Agricultural Education. Longmans.

To this little volume, named last week, we refer once more.

Mr. Constable, the Principal of the Royal Agricultural College, has collected in it the introductory lectures to the several courses delivered last Session at this Institution; and under a common title he suggests that they furnish a satisfactory answer to the question —What is a sound agricultural education? In his own preliminary discourse he speaks of the advantages of studying abstract science, and of the uses of lectures, of examinations, and of practical observation to the agricultural student; and he then states modestly, and on that account all the more trustworthily, the kind of efficiency in agricultural education which the College claims.

"Let it be borne in mind that we do not at the college make any extravagant pretensions; although in the lecture rooms you will find teachers who, having dedicated their lives to special studies, are in a position to give you, with peculiar point, the results of their labours; and on the farm one not more qualified than he is ready and anxious to help all who are trying to help themselves; yet we do not profess to make farmers after a two years' course. There is no royal road to agriculture, and we should be professing to have found one did we pretend to turn out students after so short a stay with us capable of managing a farm to a profit. We hope, by our system, to lay a good foundation on which each student may build effectually for himself. The principles of farming may be taught—how to put these principles into practice each man must learn for himself. Some may acquire this in a shorter period than others—one man's powers of observation may be great, and from early and constant use may enable him to amass an amount of practical detail which it will take another a much longer period to secure. In a college system it is not possible to do more than to put a student into the way of obtaining this practical knowledge for himself; neither the length of our course, nor the circumstances under which students are placed (diligent students of difficult sciences), will admit of that constant and close attention to practical details which alone enables any one to cultivate land with pecuniary success; and therefore, although we consider that no student does his duty who does not spend some hours of each day on the farm, observing the operations and collecting those details which he is expected to acquire and to produce afterwards in examination; yet we are quite sensible that however perfectly our system is worked, we can never hope to make in a two years' course, a previously uninstructed youth, a farmer. At the same time, we have every reason to believe that we can so teach him that after another two years' residence with an experienced farmer, having learnt with us how and what to observe, he may start in business on his own account with a tolerable chance of success."

Mr. Constable's lecture concludes with an earnest advocacy of the higher aims of education.

"Our prayer is, that while your hearts are fresh and young, you may seek to have them set on some high purpose, which may be blessed to the good of your fellow creatures; and not remain satisfied, as alas too many are, to creep into comfortable homes, closing ears and eyes to the ignorance and evil beyond them. And should any influence here at work tend to foster these good aspirations, and strengthen you to act them out in life, we can say truly, you need no higher honour and we no better reward."

From Mr. Morton's lecture on the qualifications of the successful farmer, we have already made a long extract (p. 36). It commences with somewhat of a contrast to the passage just quoted with which the preceding lecture ends:—

"Gentlemen, you are here to acquire the knowledge and the skill by which agriculturists turn land to profitable account."

And it proceeds to discuss the value of science, tact, and skill, and the efficiency respectively of oral and of practical instruction in agricultural education.

Professor Church's introductory lecture, which succeeds it, discourses with great fulness of illustration on scientific and applied chemistry, on organic and inorganic chemistry. And how well able the lecturer is to point out the bearing of his teachings on the practice of the farmer, let the following illustration indicate:—

"The grand aim of the agriculturist is to form the largest quantity and the best quality of food, vegetable and animal, at the least cost consistent with the permanent good condition of the land. As the animals which he rears subsist on vegatable food, his first aim is to secure the healthy growth and perfect maturity of the plant which he cultivates. The aid which chemistry can here render the agriculturist is evident. What mineral elements, we ask, do the Wheat, the Clover, and the Turnips contain? If the supply of these elements be deficient, how can they best be given? The soil may be barren, and yet contain stores of all the materials requisite for plant food, but so securely locked up in insoluble forms as to defy even the wor-

derful powers of the plant to use them. It is requisite to do something more than merely add the special material which the soil needs, it must be added in an available form. And in some cases it need not be added at all; it will suffice to develope the hidden resources of the soil by some chemical or mechanical process. If a soil, for instance, lacks available potash, but contains insoluble silicates of that alkali, liming will slowly release the potash. Chemistry will show where this process may be usefully performed, and predict and explain in other instances where failure would ensue. Chemistry will point out the time for applying lime, the mode of applying it, the quantity required, and even indicate remedies if the land has been overlimed."

The Professor of Chemistry is followed by the Professor of Botany; and the introductory lecture by Professor Bayldon will be generally pronounced the most eloquent and suggestive of the series here collected. It has great interest for the agriculturist, not only necessarily as generalising and combining all the facts of that plant growth which he guides and directs, but also because of its many illustrations on the one side of the services of agricultural writers and thinkers to the science of vegetable physiology, and on the other of the higher uses of botanical studies in the education of the man.

Professor Murray introduces his course of lectures on veterinary surgery with a few instructive observations on the advantage of a knowledges of veterinary science to the agriculturist. In particular the following will be admitted to be true by every one connected with the management of live stock:—

"It has a special place in the education of the agriculturist; tending to form in him habits of observation and att ntion to circumstances often of the most trifling kind; fostering a taste for direct contact with stock and careful observation of their various peculiarities; pointing out the necessity not only of a general acquaintance with domestic animals but of such an attention as is only to be acquired by handling them, watching their movements, comparing one with another, in fact becoming thoroughly acquainted with them as almost members of his family."

The volume closes with Mr. Fletcher's account of the Farm under his management; and it will be read with interest, both as a description of the only school of agriculture in the island, and as an answer to the question — What constitutes a sound agricultural education?

A Lecture on the History, Progress, and Comparative Merits of the Hereford Breed of Cattle. By T. Duckham, Baysham Court, Ross. Rogerson & Tuxford, 246, Strand.

In this pamphlet, which contains the substance of lectures given before the Royal Agricultural College, Mr. Duckham has collected a great quantity of testimony to the merits of the Hereford breed—and a very full history of its growth, progress, and achievements. And we quite agree with him in his concluding remarks:—

"That the Herefords, although an acknowledged aboriginal race of cattle indigenous to the soil of the county from whence they take their name, readily become acclimatised, and retain their general character, not only throughout the United Kingdom, but wherever they have been fairly tried in distant parts of the world; also, that they continue fully to retain their reputation, which has for ages past been accorded to them, for aptitude to fatten; that the quality of their meat is unsurpassed, if equalled; that it is duly appreciated wherever they have beeu tried; that, by proper management, their milking properties are good; that for early maturity and hardiness of constitution they are equal if not superior to any known breed; that they are a most valuable race of animals for their working powers when required; and that whenever they have been fairly tried, the quantity of meat they make, in proportion to the food consumed, is such that they can justly claim to rank amongst the most valuable class of animals known for the production of animal food, and therefore the most profitable breed of cattle for the grazier."

The only point here specified which will not command general assent, is that relating to the milking properties of the breed; but several of the witnesses whose evidence he collects, attest the high dairy quality of their herds.

The characteristic feature of the pamphlet is its large collection of named witnesses and facts from the various counties, countries, and one might almost say centuries, in which the breed has been known and valued. It will form a valuable introduction to the ensuing volume of the Hereford Herd Book, for which Mr. Duckham is now collecting material.

Farm Memoranda.

NEWLANDS, NEAR MANSFIELD.—Mr. Wilson has during the past year employed steam-power in the cultivation of his farm. The arrangement under which he has given it a year's trial included terms so favourable as to have made the year's experience profitable and satisfactory; but he has concluded,* after a careful review of all the circumstances, to abandon the use of steam-power, and resume that of horses for tillage purposes. A statement of his case must, therefore, none can deny, be as trustworthy a standpoint or platform from which to advocate the abandoned system as any candid person could desire.

Mr. Wilson's original purchase of his 10-horse power engine and apparatus from Mr. Fowler was fortunately effected on such terms as enabled him to give them up at the end of his year's experience without loss. It is, not, however, on a consideration of these favourable terms, but of those on which he would hereafter stand as the owner of this tackle, that he endeavours to base his decision; and to these the attention of the reader will in the first place be directed.

His land, extending over about 1000 acres of extremely light soil, had been worked hitherto by 18 to 20 horses, though this has been rather a narrow allowance. It was stated in the last volume of this Journal that the cost of horse-power on this farm has been about 6*s.* an hour throughout the working hours of the year, or only 5*d.* per cwt. of draught (= lift) at an ordinary walking pace. And this is a case not only where the cost of horse-power is thus a minimum, great attention having been given to reduce the expense of horse-labour, but where the working of land by horses is, owing to the character of the soil, attended with a minimum of injury. It is on a comparison both of the cost and the quality of the annual tillage work of the farm as done by horse and steam-power respectively that our preference of the one or of the other hinges, and in Mr. Wilson's case both of these considerations are unusually favourable to the former. The large amount of work which a pair of horses can perform on such land, and the trifling injury, or, indeed, sometimes actual benefit, incurred by their trampling, reduces the chanee of finding any cheaper tillage power. Nevertheless, even here, as it seems to me, the only reason why steam-power has not proved obviously the more economical of the two has been the smallness of the farm.

Mr. Wilson's farm needs 14 horses for the work of carriage, and of harrowing, drilling, &c., which steam-power cannot be conveniently set to do. He puts in 180 acres of Turnips and Mangel Wurzel every year. Two ploughs open up and cover ridglets as fast as three carts draw the dung out to be placed in them, and two sets must be kept going in order to get the work done with sufficient rapidity. There is thus a possibility of saving only four to six horses by the use of the steam plough; and this is not enough to make steam cultivation economical.

The following was the performance of the 10-horse power set of tackle between May, 1862, and May, 1863, the period in which Mr. Wilson's agreement with Mr. Fowler related. In 98 days of work, part of which was taken up with the labour of removing from field to field, 270 acres were ploughed from 6 to 10 inches deep, and 60 were at the same time pressed by means of a 4-wheeled presser attached to the ploughing apparatus. 397 acres were deeply cultivated, as deep in most cases as 9 to 12 inches, and of these 188 acres were at the same time dragged by heavy harrows attached to the cultivating apparatus. The wages and cost of supplying water amounted together to 14*s.* a day, the oil cost 1*s.* 6*d.* a day, the coals (at 12*s.* 6*d.* per ton upon the ground) cost 7*s.* 6*d.* a day. The whole cost of coal, wages, oil, and water was 112*l.* 14*s.* The repairs required have been very small, and the rope has worn but little; but putting the cost of rope and of repairs at the average expense of steam-cultivators on this point, they are charged at 70*l.* for the year's work. Tear and wear and consequent depreciation of value are estimated at 10 per cent. on the original value of the tackle, and this, with interest on capital at 5 per cent., amounts to 120*l.* a year. These three items of the annual expenditure thus stand as follows:—

Wages and fuel	£112	14	0
Repairs and rope, say	67	6	0
Interest and depreciation	120	0	0
Total cost per annum	£300	0	0

This sum, compared with the number of days' work which it represents, is just 3*l.* a day, for which the usual performance has been 5 acres of ploughing or 8 acres of cultivation; which operations thus cost fully as much by steam as they do by horses. The light horse ploughing on that farm does not cost more than 7*s.* an acre, the deeper ploughing costs 11*s.* The "cultivation" by Bentall's broadshare costs less than 2*s.* an acre. Heavy dragging costs about 10*d.* per acre. Pressing costs 1*s.* 9*d.* Deep grubbing would probably cost 5*s.* an acre.

On a careful estimate of the quantity of light and deep ploughing respectively, and of grubbing, dragging, and pressing, needed to be done upon the farm, in order that the tillage-work might be always in as forward a state with 14 horses as it had hitherto been with the full set of teams, it appears that 430 acres of ploughing at 7*s.*, 150 acres of ploughing at 11*s.*, 320 acres of cultivating at less than 2*s.*, 200 acres of dragging at 10*d.*, and 60 acres of pressing at 1*s.* 9*d.*, would be allotted for steam-power. This work, at these prices, would cost about 270*l.*—somewhat less than the annual cost which was actually incurred by the steam-tackle last year; or rather, than the cost which it may be fairly expected to incur annually for the future.

Mr. Wilson thinks very properly, in addition to all this, that loading a farm with capital is not in itself a desirable thing; that the horses which he must purchase if he concludes to give up steam-culture for the present can now be bought cheap; and that as improvements may yet be looked for in steam-cultivating apparatus, no great harm can arise from waiting a few years should he hereafter resolve to adopt it. His decision is, of course, determined simply by the consideration of immediate profit or loss to himself, and so he proposes to give up steam-cultivation for the present, unless the experience of the coming year should alter his views.

Before his decision is allowed to influence others, it is well to point out that, in his case, horse-labour is as efficient and as cheap as it can be anywhere (4 horses and a broadshare will clear 7 or 8 acres of his Wheat-stubble in a day); that the quality of the work on his farm does not materially differ whether it be done by horses or by steam (no difference in the productiveness of the land cultivated by steam and horse-power respectively has been observed, and in the case of a deep sand, such as his, none was to be expected); and, lastly, it is worth noting that this is a case in which the cost of steam-cultivation is so great per acre because there is not enough work for the steam-apparatus to perform.

It appears that there is not on this farm more than 100 days' work for the tackle; and this, where the standing charge for interest and depreciation is as much as 120*l.* a year, is not enough. This standing charge would not exceed 12*s.* a day were the work to be done enough to occupy 200 days; so large a charge as 24*s.* a day or 5*s.* an acre, for ploughing, at which it at present stands, is enough to convert a profit into a loss. All, therefore, that Mr. Wilson's experience proves is, that 1000 acres of light land managed on his plan do not give sufficient work per annum for Mr. Fowler's tackle; and certainly any other with its narrower tools is not adapted for land so light. I suggested to Mr. Wilson that he should put his Turnips in on the flat—spreading his manure broadcast and covering it with the steam-driven plough—thus doing away with the need both of teams for ridging, and also of getting the work all done during comparatively few weeks in May and June. If his teams of horses were thus reduced to the number required for carting-in his harvest, it is probable that steam-cultivation would be profitable even in his case. He declares, however, that it is necessary to put in his root-crops after this plan for the sake of the thorough horse-hoeing which he is thus enabled to give them during their growth; and, if so, it is probable that he has arrived at the right conclusion, and that horse-power is in his case really cheaper than that of steam.

The lessons of his experience seem to be that steam-power for tillage purposes needs (1) a soil where the superiority of its work will appear; or (2) extent enough—if on light land—to keep the apparatus going more than 100 days per annum. It is plain that there is an enormous and profitable field for steam-cultivation, even though a very large number of farms should be excluded by these two rules; and that the first consideration alone will render it profitable in many cases where, according to principles of the second, it might be supposed inapplicable.

* Since the preparation of this paper, Mr. Wilson has determined to take another year's experience for his guidance to a final conclusion.

Miscellaneous.

The Late Mr. Richard Hornsby.—We have with great regret to announce the death, in the 74th year of his age, of Mr. Richard Hornsby, the head of the well known firm of Hornsby & Son, of Grantham, after a protracted illness borne with Christian fortitude.

Mush.—Add half a teaspoonful of salt to half a pint of Indian Corn meal, gradually mix with a quart of cold milk, or water, boil for 10 or 12 minutes, eat with sugar, molasses, or jam. Another recipe for porridge: Of a spoonful each of Indian meal and Wheat flour, make thin batter, pour it into a quart of boiling milk and water, salt to taste, boil 10 minutes.

Calendar of Operations.

JANUARY.

SOUTH HANTS: *Jan.*—Since the rain and the rough gales of December we can judge better of the Wheat crops than previous to their visitation. Generally the Wheat plant looks weak, thin, and "spindly," The land gets little rest, and consequently is more foul. The seed Wheat and weeds have gone in commingled together. The 'tines' of the harrows clogged and the ridges look 'droky,' that is trails of the tines when clogged with strap-grass and weeds. The worm has been busy in Wheats sown after Peas and Beans (not uncommon this), and scarlet Clover has been in places all but carried away. No dressing of ashes, no ploughings and harrowings seem to abate this pest of a green crop. Winter Tares look well, especially the early sown on fallows, which are rare now-a-days. No sabbath, or jubilee, or day of rest does this Christian soil receive but in sparse spots. Here the Wheat plant looks gay and prosperous; the present frosts will contribute to their yield. Deep ploughing in the fine loam of Hampshire is much neglected. It is useless to preach:—

Plough deep, whilst sluggards sleep,
And then you shall have plenty to sow and to reap!

The yield of last year's crops runs about 9 to 10 sacks an acre, and in very rich soils 12 to 14 per acre. Barley on loams from 9 to 12 sacks, and the weight 50 to 54 lbs. per bushel, but really fine samples are rare; this crop was housed for the most part after heavy rains. Oats are not so good a yield, either in quality or quantity. But many farmers sow their Oats and Barley after Wheat, and their Wheat is sown after a hay crop; the after share being depastured by sheep, and the Wheat deposited in the land, after one ploughing, but this has become quite common, though upon strong soils it is a most unprofitable practice. Light sandy soils (such as Scotchmen never crop with Wheat, the climate being too cold and frosty), may be treated in this manner, but they should be sown thicker and earlier than the rest of the Wheat land. There is n soil in England which embraces such a capacity for pro-

ducing all varieties of crops as Hampshire, only the farming is very slovenly done. The labourers as a class more ignorant than they were 50 years ago, and the tenants grasp at what crops they can obtain, and abandon the tenancy if losers; but if the tenant has an easy lease from a landlord who never sees his estate, the land is cropped as the tenant pleases. The crops are thrust into the soil, weeds and all, and left to the seasons. The horse-hoe and the hand-hoe are employed by many intelligent owners of land, but as a rule the hand-hoeing is a most slovenly and costly executed operation of husbandry. Artificial manures are largely applied to the land for spring crops for hay, and soiling crops. But we doubt if we see so much white crop or such strong straw on these farms as formerly when fallows and some rest were given the land, but the chief blame to farming, is the land is not ploughed deep enough. However good the plough the labourer shirks depth, and considers his horses more than the future crop. The labourer is badly housed, badly paid, and imperfectly educated. The youth must be taught the use of his hands, and the management of the tools by which he has to earn his daily bread in the same manner as the better class have to exercise their intellects for their several professions by which they are to subsist. We want a school to teach not only reading and writing, but how to dig, to plant, to build, to reap, to mow, to thatch, to trench, and plant a garden; and the girls how to sew, to cook, to wash, and prepare a chamber, and every other useful acquirement. In many parts they go to service, and know nothing and will refuse instruction, and also, what is a most painful fact, they are taught at home to lie, to thieve, and be impudent. When going into service in this ignorant condition, the mother's advice is "Eat plenty of meat, for that you will need to keep up your strength to do the work!" The consequence is, many young persons from the country are ill during the first six months of their duties, of downright surfeit—not uncommon in London in large establishments, where a butler has been known to be seriously ill from 6 to 9 varieties of meats. The late Dr. Southwood Smith had many such curious but not singular cases. The wages of labourers are too low, only 7*s.* to 9*s.* a week, and instances are known that when pay day comes, 1*s.* to 1*s.* 6*d.* per week is deducted for rent of the cottage—not left to the harvest month to be liquidated then, and with far more ease to the labourer, but week after week is the cottager's rent deducted. Some have cottages of their own, or have a superior and distinct occupation not attached to the farm. The cottages are often in a very dilapidated condition, too many in a room, because there are not rooms enough, and none, should a member of the family be ill, for an invalid. Instances of five and six, and even more having to sleep in one apartment. But no landlord, no agent seems ever to regard these deficiencies. The rent is taken, and "the housed beggar left." *P. Q. R.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer. Dry Bulb.	Reading of Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday ..	Jan. 8	30.03	27	27	N.E.	0	7	27	22	31	16	..
Saturday ..	9	29.90	32	33	S.E.	1	10	33	21	36	15	..
Sunday ..	10	29.941	39	38	S.W.	1	7	39	32	40	31	..
Monday ..	11	30.10	40	39	E.	2	9	43	30	44	33	0.10
Tuesday ..	12	30.04	41	40	S.W.	3	10	45	38	46	35	..
Wednesday ..	13	30.42	38	38	N.W.	0	10	42	37	42	36	0.27
Thursday ..	14	30.59	36	36	E.	0	10	37	36	38	34	..

Notices to Correspondents.

BOOKS: *Amateur.* "Cyclopædia of Agriculture" (Blackie), or "Stephens' Book of the Farm" (Blackwood), "Morton's Farmers Calendar" (Routledge).

ENTRY TO FARM: *X Y Z.* The payments you must make will include the charge for all acts of cultivation on stubbles up to Michaelmas, and either the value of the green crops estimated as for consumption on the land or the whole cost of manure and cultivation spent upon them.

FARM CAPITAL: *R Smith.* From 6*l.* to 15*l.* are required according to the richness of the land, and the quality of stock which it will carry.

SALTZMUNDE: *S R. in O.* We shall be very glad to hear your further report, as also occasional communications.

WIND ENGINES: *T B M.* An old subscriber will be obliged for information about wind engines. Are they found to answer for agricultural purposes, such as straw cutting, pulping, grinding, &c.? Could any of our numerous correspondents inform us if there is one to be seen at work in either of the counties of Salop or Hereford?

JAMES PHILLIPS & CO.,

HORTICULTURAL GLASS MERCHANTS,

180, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

REDUCED PRICES OF SHEET GLASS FOR HORTICULTURAL PURPOSES.

ENGLISH SHEET GLASS.

Packed in Crates of about 280 feet.

	16-ounce.	21-ounce.
Best	5½*d.* ...	7¼*d.*
Seconds	3¾*d.* ...	5*d.*
Thirds	2½*d.* ...	3½*d.*
Fourths	2¼*d.* ...	3¼*d.*

HORTICULTURAL GLASS.

Stock Sizes, 16-ounce. In 100 feet Boxes.

These prices only apply to the sizes stated.

				4ths.		3rds.		4ths.		3rds	
				s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
11 by 9	12 by 9	13 by 9	14 by 9								
12 „ 10	13 „ 10	14 „ 10	15 „ 10	10	9	12	3	12	6	14	0
13 „ 11	14 „ 11	..	..								
14 „ 12	15 „ 12	15 „ 11	16 „ 11								
18 „ 12	19 „ 12	16 „ 12	17 „ 12								
16 „ 13	17 „ 13	20 „ 12	21 „ 14	11	6	13	6	13	6	16	0
19 „ 13	20 „ 13	18 „ 13	..								
16 „ 14	17 „ 14	21 „ 13	..	14 to 15 ozs. to the foot.				16 to 17 ozs. to the foot.			
19 „ 14	20 „ 14	18 „ 14	..								

HARTLEY'S

PATENT ROUGH PLATE GLASS.

Packed in Boxes of 50 feet each.

				s.	*d.*	
6 by 4	and 6½ by 4½	...	...	10	6	per box.
7 „ 5	„ 7½ „ 5½	...	...	12	0	„
8 „ 6	„ 8 „ 6½	...	...	13	6	„
9 „ 7	„ 9½ „ 7½	and 10 by 8	...	15	0	„

GLASS for ORCHARD HOUSES.

As supplied by us to Mr. Rivers, to the Royal Horticultural Society, and to most of the Nobility, Clergy and Gentlemen of the United Kingdom.

Packed in 100 feet Boxes.

		14 to 15 ozs.	16 to 17 ozs.	21 ozs.
20 by 12	Fourths ...	11*s.* 6*d.*	13*s.* 6*d.*	15*s.* 0*d.*
20 „ 13	Thirds ...	13*s.* 6*d.*	16*s.* 0*d.*	19*s.* 0*d.*
20 „ 14	Seconds ...	...	English.	English.
20 „ 15	Best ...	...	18*s.* 0*d.*	23*s.* 0*d.*

The above prices include the Boxes.

We recommend 3rds quality at 16*s.*, or 21-ounce at 19*s.* (as supplied to Mr. Rivers). Best and Seconds are intended only for pictures or dwelling-houses.

SMALL SHEET SQUARES.

In 100 feet Boxes.

6 by 4	6½ by 4½	7 by 5	7½ by 5½	11*s.*6*d.*
8 „ 6	8½ „ 6⅜	9 „ 7	9½ „ 7½	
		10 „ 8	10½ „ 8½	12 6

Boxes 2*s.* each, returnable at full price.

All small squares from 6 by 4 to 10½ by 8½ are cut from pieces, consequently there is only one quality.

FOREIGN SHEET GLASS.

In Cases for cutting up, in Sizes as Manufactured.

London Agents for Hartley's Patent Rough Plate.

Perforated Glass for Ventilation.

Glass Shades, Ebony and Gilt Stands, Gas and Lamp Glasses, Chimney and Globes, &c.

Glaziers' Diamonds from 10*s.* to 21*s.* each.

Glass Tiles and Slates in Sheet and Rough Plate. Plate Glass, Patent Plate, and Hartley's Improved Rough Plate.

PAINTS, COLOURS, VARNISHES, &c.

GENUINE WHITE LEAD. ANTI-CORROSION PAINT. | LINSEED OIL PUTTY. FINE OAK VARNISH. | FINE OAK CARRIAGE. PATENT DRYERS. | LINSEED OIL. BOILED OIL.

TURPENTINE.

LEAD in SHEETS or CUT to SIZES, LEAD PIPE, LIFT PUMPS, WATER CLOSETS, and PLUMBERS' BRASS WORK of every description.

JOHN WARNER & SONS,

BELL AND BRASS FOUNDERS TO HER MAJESTY,

HYDRAULIC ENGINEERS, BRAZIERS, and MANUFACTURERS of PUMPS, COCKS, and CLOSETS OF EVERY DESCRIPTION.

No. 35.

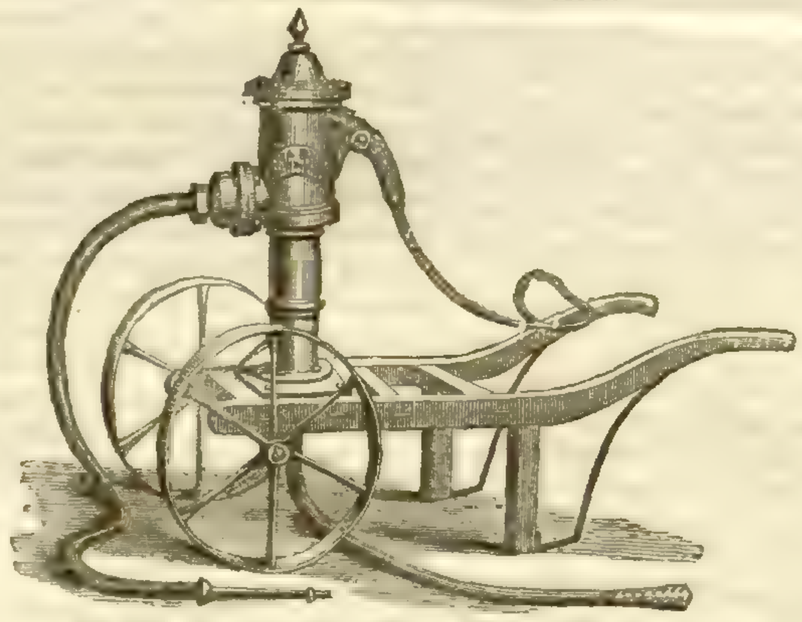

No. 36½. IMPROVED CAST-IRON LIFT AND FORCE PUMP.

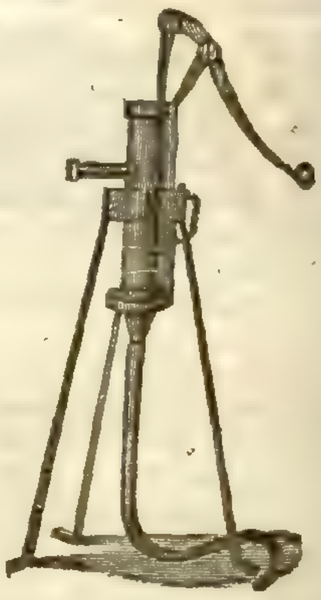

No. 42.

No. 35. PATENT CAST-IRON PUMP, fitted with J. W. & SONS' Metal Bucket and Valve, which cannot clog in action, for Wells not exceeding 25 feet.

2½ inches ... ... 1 foot 7 inches high ... £1 1 0 | 2½ inches ... ... 3 feet 3 inches high ... £1 10 0
2½ inches short, with 15 feet of Lead Pipe attached, ready for fixing £2 0 0
2½ inches long, ditto ditto 2 14 0

No. 36½. WARNER'S IMPROVED 3-INCH CAST-IRON LIFT and FORCE PUMP, mounted on Barrow, with Suction and Delivery Screw, 18-inch Branch Pipe and Spreader, and Suction Rose £5 15 0
1¼-INCH 2-PLY RUBBER and CANVAS HOSE ... ... at per foot 0 1 4
2½-INCH LIFT and FORCE PUMP (Mounted on Plank, 3*l.* 3*s.*) 3 0 0
3-INCH LIFT and FORCE PUMP (Mounted on Plank, 3*l.* 15*s.*) 3 10 0

Larger sizes of any of the above.

By an improved and new action of the handle, this Pump is so constructed that a great deal of friction is avoided; an air vessel is secured, and by introducing a brass lining into the barrel, with brass bucket and sucker, many of the objections to iron pumps are overcome. By this Pump ONE MAN WILL FORCE THE WATER in a continuous stream TO A HEIGHT OF 50 FEET. When mounted on a barrow it forms a cheap, useful, and portable Fire Engine or Garden and Field Irrigator. The simplicity of its construction enables it to be offered to the public at a less price than any other Pump of equal capabilities.

No. 42. IMPROVED LIQUID MANURE or GENERAL PORTABLE PUMP.—These Pumps are fitted with J. W. & SONS' Patent Bucket and Valve, and cannot clog in action.

4½-inch LIQUID MANURE PUMP, with legs, 2*l.* 15*s.*; 2-inch Flexible Rubber and Canvas Suction Pipe, 2*s.* 5*d.* per foot. The Barrel is 27½ inches long, and the Legs are 5 feet high.

The above may be obtained of any Ironmonger or Plumber in Town or Country, or of the

PATENTEES and MANUFACTURERS,

JOHN WARNER AND SONS, 8, CRESCENT, CRIPPLEGATE, LONDON, E.C.

FINE FRUITING ORCHARD-HOUSE TREES.

PEACHES. NECTARINES. | APRICOTS. CHERRIES. PLUMS.

Price on application.

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DWARF-TRAINED FRUIT TREES.

PEACHES. NECTARINES. | APRICOTS, fine. PLUMS.

Price on application.

GEO. S. DODS, Epsom Nursery.

ORCHARD-HOUSE TREES, Fruiting in Pots—PEACHES, NECTARINES, APRICOTS, CHERRIES, PLUMS, PEARS, APPLES, and VINES.

RICHARD SMITH, Nurseryman and Seed Merchant, Worcester.

FORTY ACRES of FRUIT TREES.—APPLES, PEARS, PLUMS, CHERRIES, PEACHES, NECTARINES, and APRICOTS in every form desired for Fruiting.

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Transplanted Forest Trees.

MARSH AND PERKINS have pleasure in offering the following, being fine and well rooted.

Prices on application to 42, Drapery, Northampton.

BEECH, 2 to 3 feet.
LARCH, 1½ to 2 feet and 2 to 3 feet.
WHITE THORN, 2 and 3 years transplanted.
SEEDLING LARCH, 1 year.

NEW PRIZE MELON, CLIMAX.—This superb Green-flesh MELON was raised by Mr. WEBB, of Calcot, and obtained 1st Prize at the Crystal Palace Fruit Show in 1862; never yet offered to the public; a most abundant bearer, and of exquisite flavour. Sold in packets at 2*s.* 6*d.* each. Applications as above.

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DOBSON'S EXTRA CHOICE SEEDS.

Quality second to none. In sealed Packets.

DOBSON'S SUPERB CALCEOLARIA, 1*s.* 6*d.*, 2*s.* 6*d.*, 5*s.*
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The Trade supplied on liberal terms.

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GENUINE NEW SEEDS,

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FOR THE PRESENT SEASON,

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JAMES DICKSON AND SONS,

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which contains the price of every article separately, is NOW READY, and may be had

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SUTTON AND SONS have a fine stock of New Seed. Also all other kinds of Agricultural Seeds at very moderate prices, as see SUTTON'S PRICED SEED LIST (gratis and post free).

Royal Berks Seed Establishment, Reading.

THE NEW PARSNIP "STUDENT."—SEED of this improved PARSNIP, "ennobled" by Professor BUCKMAN, of the Royal Agricultural College, Cirencester, is now ready for delivery by Messrs. SUTTON & SONS, Post-free, 1*s.* per ounce. Also Wholesale to the Trade.

It can also be obtained from any of the Seedsmen named in the Lists which appeared in *Gardeners' Chronicle* of Nov. 28 and Dec. 19, 1863.

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G. SCRYMGER has much pleasure in offering Seed of the above superb variety of BRUSSELS SPROUTS, for which he received the First Prize at the Great International Show in 1862; and since pronounced by all who have seen it to be the best variety in cultivation. Seed in packets at 1*s.* Post free, 14 stamps.

Sonning, near Reading.

Broccoli, very Large.

WANDLESS'S WONDERFUL LATE SUMMER BROCCOLI, White Large Late Dwarf protecting variety, 2*s.* per packet. Will be forwarded to any part of England on forwarding 26 postage stamps.

The habit and quality of the above Broccoli is of the very best; very large head, sits close to the ground; if well grown, will be 14 lb. weight, fit for market. The Wonderful Broccoli is not to be superseded if well grown. Sow early, plant out early, 2 feet apart each way, in good ground.

W. WANDLESS, Market Gardener, &c., Sunderland. Agents: HENRY CLARKE & SONS, Seedsmen, 39, King Street, Covent Garden, London, W.C.; and J. BACKHOUSE & SON, York Nurseries.

Transplanted Larch and Quicks.

CHIVAS AND WEAVER, (late GEO. CHIVAS) Chester, offer SEVEN MILLIONS of TRANSPLANTED LARCH from 1½ to 4½ feet, the quality is unexceptionable; and FOUR MILLIONS of TRANSPLANTED THORNS, a very large proportion of which are four years old, and of extra strength; together with corresponding proportions of SPRUCE, SCOTCH OAK, &c.; and a most extensive general Nursery Stock.

For Prices and Conditions of Free Delivery see CATALOGUE, which will be forwarded on application.

ALGERIAN ACCLIMATATION SOCIETY.—The New PLANT, SEED, and TREE CATALOGUE of the ALGERIAN ACCLIMATATION SOCIETY is just published, and may be obtained on application to the Society's London Agents,

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N.B.—Loaded trucks can be sent on all the principal Rail ways. W. SHORT, Reigate, Surrey.

THE LONDON SEED COMPANY, LIMITED, has been established under the Companies' Act of 1862, for the purpose of supplying all kinds of Seeds for the Farm and the Garden.

The Company has amalgamated with the PLYMOUTH SEED, AGRICULTURAL IMPLEMENT, AND MANURE COMPANY, LIMITED, so that the whole of the extensive trade carried on at Plymouth will be transferred to this Company.

The Business at Plymouth was originally confined to the Western Counties, but of late years the Seeds supplied by the Company have been despatched to all parts of the United Kingdom. It has been therefore thought desirable, if not necessary, in order to keep pace with the extensive connection, either to open an Establishment in London, or to amalgamate with another Company having similar objects.

The London Seed Company has therefore been established, and very desirable premises have been taken in the centre of the Metropolis, and within a short distance of Oxford Street and Regent Street.

One of the principal objects to be gained by the removal of the Business to London, will be the facility afforded by the speedy transmission of all Orders by Railways and Steamers to all parts of the United Kingdom; and the Company has made arrangements with all the Railway and Steam Companies for the immediate delivery of all orders.

ALFRED BREWIN, Manager.

COCOA-NUT REFUSE, delivered within 2½ miles of Charing Cross, at 2*s.* per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. BARSHAM & Co.

BARSHAM'S BRUSHES and MATS are sold in every town.

CAUTION.—Every Brush is stamped. J. BARSHAM'S Patent'

Winter Dress all Fruit Trees with

GISHURST COMPOUND.

Red Spider Magnified.

Copy of a Letter from Mr. RIVERS,

"Nurseries, Sawbridgeworth. Herts, Oct. 22, 1861.

"I must tell you what I heard to-day from a very clever gentleman farmer, Anthony Bubb, Esq., of Witcombe Court, Gloucester. He has a wall to which Peach trees are trained. Well, last autumn they were in a wretched blighted state. As a desperate remedy he unnailed them all early last February, and gave all but one a thorough painting with Gishurst Compound, 1 lb. to the gallon of water; his trees, all but the one, commenced to grow favourably in spring, and are now pictures of health. The tree not painted is in a half-dead blighted state. He used the same dressing to his Apple trees; it killed the woolly aphis entirely, and has made his trees clear and vigorous in their growth. He intends to paint his wall trees annually, and tells all his friends to do the same. I shall certainly serve all my young Peach trees against my walls in the same manner. The Compound is, I believe, more efficacious than the usual offensive mixtures of clay, soot, sulphur, &c., and it does not blacken the shoots on the walls."

For Orchard-house Trees 4 ounces to the gallon will be found a good strength; when used stronger some buds on weakly trees may be injured.

GISHURST COMPOUND is Sold Retail by Nurserymen and Seedsmen, in boxes 1*s.*, 3*s.*, and 10*s.* 6*d.* each.

Wholesale by PRICE'S PATENT CANDLE COMPANY (Limited), Belmont, Vauxhall, London, S.

DISEASE on VINES and FRUIT TREES.—The Advertiser discovered, a few years ago, a COMPOSITION which most effectually eradicated a virulent disease that attacked the late crops of Grapes then under his charge, and by one annual dressing with this Composition, no blight became visible for the season. We have used it now for several years with all the success we could desire.

This Wash applied to Peach and Plum trees, before they are nailed, will keep them perfectly free from mildew and every other species of blight during the ensuing spring and summer months.

The season is now at hand for using this Composition, both on Vines and Wall Trees, and any parties wishing to give it a trial can be furnished with the Recipe on application (enclosing a Post-office Order for 5*s.*) to the

GARDENER, Middleton Park, near Mullingar, Ireland.

TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from frost, blight, birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

VARNISHED FLOWER STICKS:—1 foot, 3*d.*: 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s.* 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

Glass for Garden Purposes.

JAMES PHILLIPS AND CO. beg to submit their prices as follows:—

PROPAGATING

GLASSES.

	Each—*s.*	*d.*		Each—*s.*	*d.*
2 inches in diameter ..	0	3½	12 inches in diameter ..	1	9
3 ,, ,, ..	0	4½	13 ,, ,, ..	2	0
4 ,, ,, ..	0	5½	14 ,, ,, ..	2	6
5 ,, ,, ..	0	6½	15 ,, ,, ..	3	0
6 ,, ,, ..	0	8	16 ,, ,, ..	3	6
7 ,, ,, ..	0	10	17 ,, ,, ..	4	0
8 ,, ,, ..	1	0	18 ,, ,, ..	5	0
9 ,, ,, ..	1	2	19 ,, ,, ..	6	0
10 ,, ,, ..	1	4	20 ,, ,, ..	7	0
11 ,, ,, ..	1	6			

HAND GLASSES,

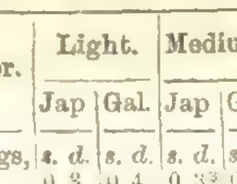

WITH OPEN TOPS.

	Each—*s.*	*d.*		Each—*s.*	*d.*
12 inches	6	6	18 inches	9	6
14 ,, ...	7	6	20 ,, ...	10	6
16 ,, ...	8	6	22 ,, ...	11	6
			24 ,, ...	12	6

Painted and Glazed with 16 oz. Sheet Glass.

HYACINTH and FLOWER DISHES.

6 inches diameter, 1*s.*; 9 inches, 1*s.* 6*d.*; 12 inches, 2*s.* 6*d.*

Hyacinth Dishes are intended to contain a number of roots bedded in sand and covered with moss, instead of the common Hyacinth Glass.

HYACINTH GLASSES.

Common shape, p. doz., 2*s.* 6*d.* | Improved shape, p. doz., 4*s.* 6*d.*

Patent shape, per dozen, 6*s.* 6*d.*

London Agents for Hartley's Improved Patent Rough Plate. Linseed Oil, Genuine White Lead, Carson's Paints, Paints of various colours ground ready for use.

180, Bishopsgate Street Without, London, E.C.

NEW IMPROVED PREMIUM WIRE NETTING.

Great Improvement with Reduced Price.

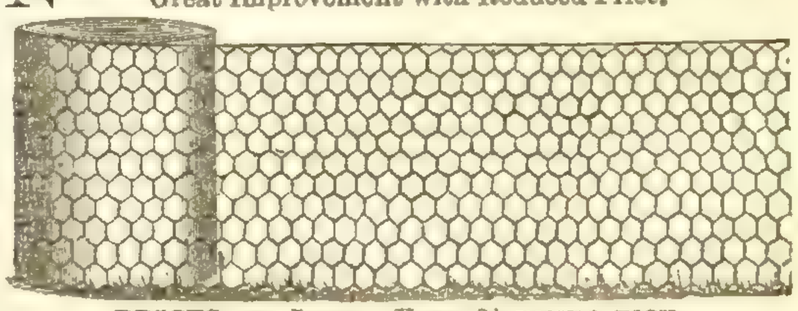

PRICES PER LINEAL YARD 24 INCHES HIGH.

Size of Mesh.	Mostly used for.	Light. Jap	Light. Gal.	Medium. Jap	Medium. Gal.	Strong. Jap	Strong. Gal.	Extra Strong. Jap	Extra Strong. Gal.
		s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
2½ in.	Hares, Dogs, Poultry ..	0 3	0 4	0 3½	0 5	0 4½	0 6	0 5½	0 7
2 in.	Game or Poultry Netting ..	0 3½	0 4½	0 4	0 5	0 5	0 6½	0 6½	0 8
1⅝ in.	Small Rabbits, Hares, &c. ..	0 4	0 4⅝	0 4⅝	0 6	0 5½	0 7	0 7	0 9
1½ in.	Smallest Rabbits	0 5	0 6	0 5⅝	0 7	0 7	0 9	0 9	0 11
1 in.	Pheasantries, &c.	0 9	0 11	10½	1 1½	1 3	1 6	1 9	2 0
¾ in.	Aviaries, &c. ..	1 0	1 3	1 3	1 6	1 6	1 9	..	..

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland and Ireland.

*** Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally.

IRON HURDLES, CONTINUOUS BAR FENCING, IRON and WIRE FENCING, FENCING WIRE, FIELD and ENTRANCE GATES, GARDEN ENGINES, GARDEN ROLLERS, GARDEN SEATS and CHAIRS, CAST IRON VASES, and every description of HORTICULTURAL and AGRICULTURAL MACHINES, TOOLS, and appliances.

Lists Free on application. Every article guaranteed to be satisfactory.

J. B. BROWN & Co., 18, Cannon Street, City, London, E.C.

COTTAM'S PRIZE STABLE FITTINGS and HARNESS BRACKETS.

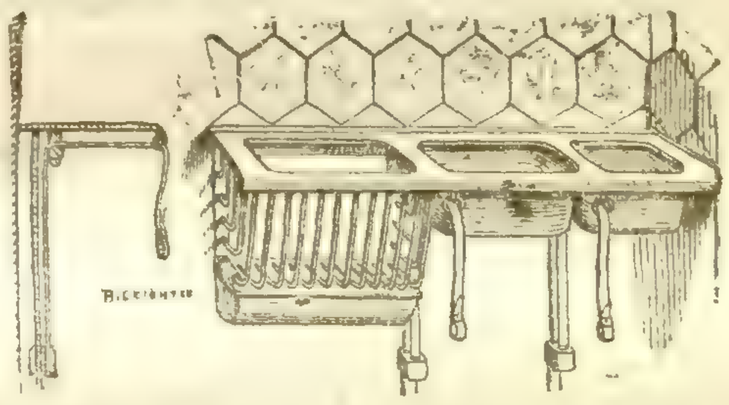

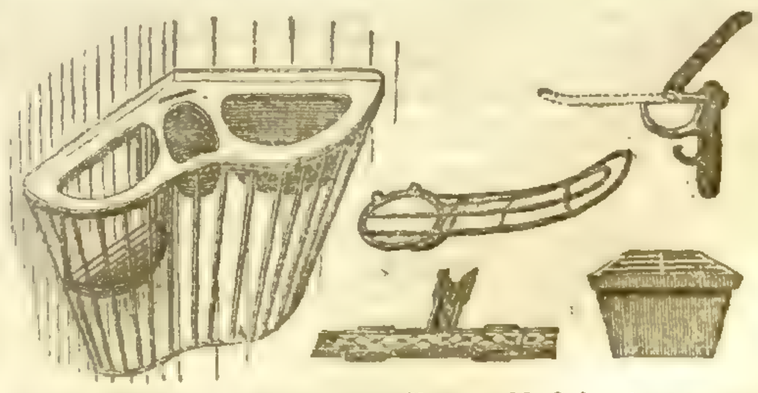

These Fittings, now so generally specified by Architects in their specifications, may be seen at the Manufactory, 2, Winsley Street, Oxford Street, W., where a large supply is always on hand and regular sizes kept in stock, and where full-size Stalls and loose Boxes (variously arranged, with a view to the economy of space) can be examined.

COTTAM & COMPANY, Manufacturers and Patentees, hold the Prizes of 1851, 1855 (Paris) and 1862, for these Fittings.

*** Apply for No. 3 Catalogue, to be had free of COTTAM & Co., 2, Winsley Street (opposite the Pantheon), Oxford Street, London, W.

Seeds for Exportation.—New Seeds, Growth of 1863.

SUTTON AND SONS will shortly be prepared with their NEW SEEDS of this year's growth for export orders. Messrs. SUTTON'S mode of packing is most effectual and economical.

For terms, &c., apply to SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

HARDY FLOWER SEEDS, of Showy Colours only, sent free by post or rail, by SUTTON AND SONS.

A COLLECTION of the best 50 sorts known .. 10*s.* 6*d.*
A COLLECTION of the best 36 sorts known .. 7 6
A COLLECTION of the best 24 sorts known .. 5 0

SUTTON'S CATALOGUE of SEEDS will be sent post free.

SUTTON & SONS, Seed Growers, Reading, Berks.

THE LONDON SEED COMPANY, LIMITED, with which is AMALGAMATED the PLYMOUTH SEED COMPANY, LIMITED, Offices, 68, Welbeck Street, Cavendish Square, London, W.

Best Seeds, Carriage Free.

RICHARD SMITH, SEED MERCHANT and NURSERYMAN, Worcester.

To the Trade.

AZALEAS, ERICAS, and EPACRIS, fine bushy plants, well set with flower buds, at moderate prices. An inspection solicited.

THOMAS JACKSON & SON, Nurseries, Kingston, S.W., adjoining the Kingston New Station, South Western Railway.

New Florist Flower Catalogue.

DOWNIE, LAIRD, AND LAING beg to intimate that their DESCRIPTIVE CATALOGUE of FLORIST FLOWERS, New Garden and Flower Seeds, &c., for 1864, is now ready, and may be had free on application.

17, South Frederick Street, Edinburgh; and at Stanstead Park, Forest Hill, London, S.E.

LOUIS VAN HOUTTE, NURSERYMAN and SEEDSMAN, Ghent, Belgium, begs to call attention to his Four New PRICE LISTS, No. 97, 98, 99, and 100, containing the Stove, Greenhouse, Hardy Plants, Seeds (262 pages 12mo).

Agents in London: Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, E.C.

To the Trade.—Continental Flower Seeds, &c.

F. W. WENDEL, SEED MERCHANT, &c., Erfurt, Prussia, begs to announce that his WHOLESALE CATALOGUE of the above is now ready, and will be forwarded free on application to his Agent, GEO. MACINTOSH, Nurseryman, High Road, Hammersmith, W., to whom all communications should be addressed.

Seeds Carriage Free.

J. DOBSON AND SONS' CATALOGUE for 1864 is now ready, gratis and Post-free.

VEGETABLE SEEDS, best quality, 300 sorts.
FLOWER SEEDS, best quality, 400 varieties.
FARM SEEDS, best quality.

Woodlands Nursery, Isleworth, W.; and High Street, Hounslow, W.

PELARGONIUMS and CINERARIAS.—Intending Purchasers are respectfully solicited to send for our DESCRIPTIVE CATALOGUE of many hundreds of varieties, at very moderate prices, which will be forwarded Post free.

J. DOBSON & SONS, Woodlands Nursery, Isleworth, W.

JAPAN LILIES, Extra strong Flowering Bulbs.

	Each—*s.*	*d.*
LILIUM LANCIFOLIUM ALBUM	1	0
" " ROSEUM	1	3
" " RUBRUM	1	3

Three each of the above, 10*s.*

BUTLER & MCCULLOCH, Seed Merchants, Covent Garden Market, London, W.C.

Seeds, Carriage Free.

WILLIAM CUTBUSH AND SON'S PRICED CATALOGUE of GARDEN and FARM SEEDS is ready, Post-free on application.

The name their house has obtained during many years past, is a sufficient guarantee for the quality of the goods offered.

Highgate Nurseries, London, N.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

American Plants.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE for the present Season is now ready, and will be forwarded free to all applicants. As well as American Plants, it contains a summary of their General Nursery Stock, one of the most extensive in the kingdom.

Knap Hill Nursery, near Woking, Surrey.

Gladiolus Brenchleyensis.

YOUELL AND CO. have much pleasure in offering the above GLADIOLUS, unequalled by any other variety for the brilliancy of its colour. The Bulbs are unusually fine. Price 2*s.* per doz.; 20*s.* per 100.

Trade price on application,

Royal Nurseries, Great Yarmouth, Norfolk.

Prize Gladioli.

YOUELL AND CO. were awarded the following PRIZES for the above in September last:—

FIRST AND SECOND PRIZE, CRYSTAL PALACE,
FIRST PRIZE, ROYAL HORTICULTURAL SOCIETY,
FIRST PRIZE, BRIGHTON.

CATALOGUES of this collection will be forwarded on application.

Royal Nurseries, Great Yarmouth, Norfolk.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c., amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE post free on application.

Paradise and Victoria Nurseries, Holloway, London, N.

THE LONDON SEED COMPANY, LIMITED.

68, WELBECK STREET, CAVENDISH SQUARE, LONDON, W.

THE COMPANY are now sending out their COLLECTIONS of SEEDS, which will be delivered Carriage Free to any Railway Station in England and Wales, or to any Steam Port in England, Wales, Scotland, and Ireland.

No. 1.	**Complete Collection, sufficient for a Large Garden for One Year's supply**	**£3 0 0**
No. 2.	**Complete Collection for a Moderate Sized Garden**	**2 0 0**
No. 3.	**Complete Collection, in Smaller Quantities**	**1 0 0**
No. 4.	**Complete Collection for a Small Garden**	**0 15 0**
No. 5.	**Complete Collection for " " ...**	**0 10 0**
No. 6.	**Extra Large Collection, containing Double the Quantities of No. 1** ...	**5 0 0**

A DETAILED LIST of these COLLECTIONS will be found in the GENERAL PRICE CURRENT, which is now ready, and will be forwarded Gratis and Post Free to any address in the Kingdom.

ADDRESS: 68, WELBECK STREET, CAVENDISH SQUARE, LONDON, W.

BARR & SUGDEN, 12 KING ST. COVENT GARDEN

BARR & SUGDEN'S

COMPENDIUM OF THEIR ILLUSTRATED GUIDES TO THE KITCHEN AND FLOWER GARDEN.

NOW READY, AND MAY BE HAD FREE AND POST PAID.

BARR & SUGDEN'S COLLECTIONS of VEGETABLE SEEDS FOR ONE YEAR'S SUPPLY.

Orders for Vegetable Seeds amounting to 21s. and upwards sent Carriage Paid.

These assortments are suited to Gardens of various sizes; they contain the most approved varieties, and such as are most suited to secure a succession of the best vegetables from January to December.

The Seeds are all of the very best quality.

COLLECTIONS OF SEEDS FOR ONE YEAR'S SUPPLY.

	No. 1. 10s. 6d.	No. 2. 15s. 6d.	No. 3. 21s.	No. 4. 30s.	No. 5. 42s.	No. 6. 63s.
LEGUMINOUS SECTION.						
PEAS, including those best suited for Succession, the most productive and the finest flavoured	4 pt.	4 qts.	6 qts.	8 qt.	12 qt.	20 qt.
BROAD BEANS, best sorts	2 pt.	2 qts.	3 qts.	4 qt.	6 qt.	10 qt.
FRENCH BEANS, including Dwarf and Runners	1 pt.	1½ pt.	2 pt.	3 pt.	4 pt.	6 pt.
EDIBLE LEAVED AND EDIBLE FLOWERED SECTION.						
BORECOLE, or KALE, including Cottager's Kale, &c. ..	2 pkt.	2 pkt.	3 pkt.	3 pkt.	4 pkt.	5 pkt.
BROCCOLI, the best Successional varieties	2 pkt.	4 pkt.	5 pkt.	5 pkt.	6 pkt.	8 pkt.
BRUSSELS SPROUTS, Imported, and ROSEBERRY ..	1 pkt.	1 pkt.	1 pkt.	1 pkt.	2 pkt.	2 pkt.
CABBAGE, including Covent Garden Superfine Early, &c. ..	1 pkt.	3 pkt.	4 pkt.	5 pkt.	6 pkt.	8 pkt.
CABBAGE, SAVOY, best sorts	1 pkt.	1 pkt.	2 pkt.	2 pkt.	3 pkt.	4 pkt.
COUVE TRONCHUDA,, or SEAKAIL CABBAGE	1 pkt.	1 pkt.	1 pkt.	1 pkt.	1 pkt.	1 pkt.
CAULIFLOWER, including Covent Garden Early, &c. ..	1 pkt.	1 pkt.	2 pkt.	2 pkt.	2 pkt.	3 pkt.
SPINACH, Summer and Winter	2 oz.	4 oz.	6 oz.	1 pt.	1 qt.	2 qt.
EDIBLE ROOTED SECTION.						
BEET, including Covent Garden varieties, &c...	1 pkt.	1 pkt.	1 pkt.	2 pkt.	2 pkt.	3 pkt.
CARROT, best for forcing and general crop	1 oz.	2 oz.	3 oz.	5 oz.	8 oz.	14 oz.
LEEK, Musselburgh, &c.	1 pkt.	1 pkt.	1 pkt.	1 pkt.	1 pkt.	2 pkt.
ONION, including White Spanish (Reading), &c.	1 oz.	2 oz.	3 oz.	6 oz.	8 oz.	14 oz.
PARSNIP, including Selected Hollow Crown, &c.	1 oz.	1 oz.	2 oz.	3 oz.	4 oz.	6 oz.
SALSIFY..	..	..	..	1 pkt.	1 pkt.	1 pkt.
SCORZONERA..	..	..	..	1 pkt.	1 pkt.	1 pkt.
TURNIP, including best varieties for Successional Crops ..	2 oz.	2 oz.	3 oz.	6 oz.	8 oz.	14 oz.
EDIBLE FRUITED SECTION.						
CUCUMBER, including Empress Eugenie, &c...	1 pkt.	1 pkt.	2 pkt.	3 pkt.	3 pkt.	4 pkt.
MELON, including Princess Alice, &c.	..	..	1 pkt.	1 pkt.	2 pkt.	3 pkt.
TOMATO	..	..	1 pkt.	1 pkt.	2 pkt.	2 pkt.
VEGETABLE MARROW, including New Custard, &c. ..	1 pkt.	1 pkt.	2 pkt.	2 pkt.	3 pkt.	4 pkt.
SALAD SECTION.						
CELERY, including the two Covent Garden varieties, &c. ..	1 pkt.	1 pkt.	2 pkt.	2 pkt.	2 pkt.	3 pkt.
CRESS, including Curled, Plain, and Australian	3 oz.	3 oz.	4 oz.	8 oz.	10 oz.	12 oz.
ENDIVE, best kinds	..	1 pkt.	1 pkt.	2 pkt.	2 pkt.	3 pkt.
LETTUCE, including the Covent Garden Giant Cos, &c. ..	2 pkt.	2 pkt.	3 pkt.	3 pkt.	4 pkt.	5 pkt.
MUSTARD	2 oz.	4 oz.	6 oz.	8 oz.	12 oz.	16 oz.
RADISH, suitable sorts for Succession	3 oz.	4 oz.	6 oz.	8 oz.	12 oz.	16 oz.
POT, SWEET, & GARNISHING HERB SECTION.						
HERBS, Pot and Sweet	2 pkt.	2 pkt.	3 pkt.	3 pkt.	4 pkt.	6 pkt.
HERBS for Garnishing, &c.	1 pkt.	1 pkt.	2 pkt.	3 pkt.	3 pkt.	4 pkt.
PARSLEY	1 pkt.	1 pkt.	1 oz.	1 oz.	2 oz.	3 oz.

SURPLUS STOCK OF HYACINTHS, TULIPS, &c.

FINE BULBS.

HYACINTHS, 7*s.* 6*d.*, 10*s.* 6*d.*, and 12*s.* 6*d.* per 100.
TULIPS, in 20 Splendid Varieties, 5*s.* 6*d.* per 100.
TULIPS, in 30 Splendid Varieties, 7*s.* 6*d.* per 100.
POLYANTHUS NARCISSUS, 10*s.* 6*d.* per 100.

BARR AND SUGDEN, SEED MERCHANTS, 12, KING STREET, COVENT GARDEN

ROYAL HORTICULTURAL SOCIETY.

FRUIT COMMITTEE.

A MEETING of this COMMITTEE will be held on FRIDAY, January 29, at the Rooms of the Society at South Kensington, for the Examination of such FRUITS and VEGETABLES as may then be submitted, and for awarding the following Prizes:

CLASS A.—For the best Dish of ADAMS' PEARMAIN APPLE. 10*s*., 5*s*.

CLASS B.—Ditto MARGIL. 10*s*., 5*s*.

CLASS C.—Ditto OLD NONPAREIL. 10*s*., 5*s*.

CLASS D.—Ditto JOSEPHINE DE MALINES PEAR. 10*s*., 5*s*.

CLASS E.—Ditto ZEPHIRIN GREGOIRE. 10*s*., 5*s*.

CLASS F.—Ditto of any of the newer varieties of PEARS. 10*s*., 5*s*.

CLASS G.—The best Two Bunches of New BLACK HAMBURGH GRAPES. 30*s*., 20*s*.

All Fruit must be ripe, sound, and fit for table. A Dish is to consist of Six Fruits. Subjects for Exhibition must be at the rooms by 11 o'clock on the day of Meeting. As the awards are made by flavour, those Exhibitors who require their Fruit to be returned must not expect to receive it entire.

Communications and Packages to be addressed to ROBERT HOGG, LL.D., Secretary to the Committee.

ROYAL HORTICULTURAL SOCIETY.

CONTRACTS for the GARDEN OF THE ROYAL HORTICULTURAL SOCIETY AT SOUTH KENSINGTON.

1. The Council of the Royal Horticultural Society are of opinion that increased interest would be given to the Garden at South Kensington if a portion were set apart as EXHIBITION GROUNDS of BEDDING PLANTS, FLOWERS, SHRUBS, &c., Let Out to responsible Nurserymen and Florists of eminence. They accordingly have prepared a Plan of such portions, which may be seen at the Garden, and invite TENDERS for filling such Spaces with Bedding or other Plants during each month of the year 1864.

2. The selection and arrangement would be left entirely to the taste of the Exhibitors, provided that the same shall be in keeping with the general character of the Garden. The Beds so planted must be kept in order by the parties planting them throughout the season. The names and addresses of the Nurserymen and Florists will be placed conspicuously upon the Beds so filled by them.

3. A competent Jury will be appointed to examine the spaces two or three times during the season, and will adjudicate upon the merits of the several arrangements, and select the best. The test of merit will be "Best Arrangement of Colour with Plants of the most durable character," *i. e.*, those that will remain longest in flower. The Council will then award Certificates of Merit to the most successful Competitors.

4. Sealed Tenders must be sent in to the Assistant Secretary on or before March 1, 1864.

Further explanations, and the conditions, may be had of Mr. EYLES, the Garden Superintendent, South Kensington, S.W.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.—JANE ATLEE begs to tender her most sincere and heartfelt thanks to those who kindly supported her on Thursday the 14th inst, at the Election of Pensioners on the Funds, when, by the united efforts of many kind friends, she was placed on the Pension List of your excellent Institution.

Clapham Road, Stockwell, Jan. 19.

The Gardeners' Chronicle.

SATURDAY, JANUARY 23, 1864.

MEETING FOR THE ENSUING WEEK.

FRIDAY, Jan. 29 { Royal Horticultural (Fruit Committee) at South Kensington .. .. .. Noon

A NORTHERN contemporary has recently, not without reason perhaps, directed attention to the comparative NEGLECT OF THE VEGETABLE DEPARTMENT, both by the correspondents of the gardening periodicals, and by the rising generation of gardeners. Vines and Peaches, Orchard-houses and Bedding plants, Florists' flowers and Exhibition plants, it is said, come in for their share and more than their share of discussion, but neither writers nor young gardeners appear to give the thought and attention it deserves to plain kitchen gardening, notwithstanding that it is the very foundation of the gardener's success in the battle of life.

That this is true to a certain extent there can be no doubt; and perhaps, so far as the horticultural press is concerned, for the very reason which the writer of the remarks we refer to has suggested, namely, that what are—rightly or wrongly—termed the highest branches of the profession are the safest and most pleasant to roost upon. There may indeed be more of novelty in those matters which readers and writers appear alike to prefer, but at least we may assert that the hobbies which are thus in some cases so hardly ridden, are not of more importance to the gardening profession than is a thorough knowledge of the management of a kitchen garden, which, as is truly remarked by the writer referred to, "takes in a far wider range of society than any other department." "Most gardeners," he adds, "find the kitchen the most ticklish latitude, from which demands fall upon them with the most exacting promptitude; and he who can satisfy those artistes who prowl in white linen about the hottest regions of the hall, has reason to congratulate himself on being up to the mark in a department through which as much annoyance is likely to arise, as in any other with which he has to do." This, we think, no one will question.

It may not be urged as a reason for this apparent neglect of the vegetable department, that, taking a view of gardens in general, this department is uniformly managed with complete success. In how many of the thousands of gardens scattered through the land, would really good crops and good successions of crops of esculents be found, if a simultaneous examination could be made at any time between Candlemas and Christmas? A sprinkling of our best practical gardeners would of course be found up to the mark in this particular, amongst them doubtless some of whom Fame knows but little; but in too many cases it would be seen that the crop of one kind of vegetable was out of all proportion to the rest, either through deficiency or superabundance, while the very important—indeed the most important—question of succession was either ignored or misunderstood. There are of course difficulties to be encountered in respect to seasons and weather, uncongenial soils, and limited means, all which may be beyond a gardener's control; but the aim should be (and this we hold to be the very perfection of kitchen gardening), to have an abundant supply to meet every reasonable demand, this supply being so regulated that there shall be no glut at one period and scarcity at another, but that every crop shall tell in the total as it comes to maturity, and yield its quota towards an uninterrupted succession—young, fresh, and crisp—of such vegetables as are preferred in each particular establishment.

It is, moreover, by no means to be assumed that the *ultima thule* of kitchen garden cropping has yet been reached. Though the cultivation of all or most of our esculents, severally, in the hands of individual gardeners may have been, (we do not assert that it has been), carried very nearly to the highest degree of perfection, yet it is to be remembered that this is a very different thing from perfection of culture having been reached with the generality of vegetable crops, by all or even the majority of gardeners. There are yet remaining many dark recesses in our kitchen gardens—here in one position, there in another—which each require that a bright ray of light should penetrate their obscurity, so as to bring out in strong relief some real defect of treatment that is lurking there. We recommend the subject of enlightenment on obscure points of practice, to the notice of skilful gardeners of a thoughtful turn of mind, as one which if well worked up would earn for them an honourable eminence in the ranks of their profession.

We should perhaps have been less ready to open this subject in our columns, were it not that we heartily concur in what our Scottish friend writes in reference to its bearing on the interests of the RISING GENERATION OF GARDENERS. This is the class of men to which we must look in the coming time, to maintain the proud position which British horticulture has attained. And in this connection we cannot refrain from an expression of regret that our great English Horticultural Society should have deliberately chosen the path of fashion rather than of fame. Surely there is no way in which it could better carry out the important charge committed to its care—namely the fostering and encouragement of horticulture, in this our happy and fruitful isle, than by an earnest solicitude for the instruction of young gardeners, and by doing its part towards training and disseminating through the land such young men, well-informed in all the branches of horticulture, so that they might act as leaven on the general practice of gardening: permeating and elevating the whole mass. And if this be so, it follows that to utterly neglect if not to repudiate such a duty, and to confine its efforts and its aspirations almost entirely to catering for the world of fashion, putting horticulture as much as possible in the back ground, is, to say the least, a dereliction of trust on the part of a body established for no other purpose than that of advancing horticulture. That the subject of the preparation of young gardeners requires attention is patent to the experience of all who care to observe. The writer to whom we have already referred remarks from personal knowledge:—"I do not know whether my experience corresponds with that of other gardeners who have passed a good many young men through their hands, but I find the majority quite as deficient, or even more so, in this department than in any other. There are plenty of worthy young men who, were they called upon to grow a few genera of plants in pots, or to get up a good many thousand bedding plants, would do so with credit to themselves. But call upon them to subdivide a few acres of kitchen garden into allotments for the proportions of the different vegetables, and crop them with a proper selection of vegetables, and in a manner and at times which would ensure a proper supply for the season, and they would find themselves in a fix. There cannot be a more gross mistake on the part of young men, who, as soon as their two or three years of what is called an apprenticeship are over, indulge a ceaseless hankering to get into houses where forcing and plant-growing are carried on, before they have made themselves conversant with the details of a well-managed kitchen garden."

Let us remind young gardeners too, that this matter is one which intimately concerns themselves. They may or they may not have the assistance and advantages which societies and the higher ranks of their professional elders may be able to afford them in acquiring a knowledge of the principles and practice of the art they have chosen as their own; they may or not have the help, now happily more abundant than ever, which well-chosen books are capable of supplying; they may even have the greatest advantage of all, that of bearing a share in carrying out the most correct and refined practice under the direction of some horticultural SOLON; but notwithstanding all this, if they do not observe and think for themselves, such advantages will avail them but little. The real secret of their advancement—such advancement at least as leads to eminence—lies in their own determination to master the profession they have chosen to follow. And in striving to do this they may rest assured that though they study geology and chemistry, and learn all the mysteries of earths and manures; though they may become proficients in the science of botany, and know at sight all the species which our stoves and greenhouses and flower-gardens contain; though they may perfectly understand the principles of planting parterres, and be quite *au fait* at the manufacture of bedding stuff, yea, even though they may be able to estimate at their true worth the conflicting opinions which clash around them on such subjects as Orchard houses and Peach walls, and can solve the many problems of the forcing garden—and it is well to master all or as much as possible of all these matters; yet if they are not also masters of the mysteries of kitchen garden cropping, they will find themselves in a position which will give rise to constant annoyance if to nothing worse: in a word, they will stand upon a false foundation.

The evil at which we have just been glancing is somewhat characteristic of the age, and hence there is all the more need of its being honestly pointed out to those whom it most concerns. Young men are for getting on as they think, without duly remembering the old proverb, 'the more haste the least speed.' They either have too much pride to begin fairly at the beginning, or having begun there, they have too much impatience to wait long enough to enable them to practise thoroughly and exhaustively the elementary parts of their training; and in this eagerness to advance (which in itself would be laudable enough and only becomes otherwise when unduly indulged), they forget or are not sufficiently impressed by two things, which they get to know afterwards, sometimes even by bitter experience—first, that there is no success before them as general gardeners without a thorough knowledge of kitchen-garden practice as a basis, and secondly, that such knowledge is the most certain, as it is also the most accessible stepping-stone in the attainment of the information they need to enable them to undertake the management of other departments. Too many of them are afraid of rough work, and chafe at their necessary probation as journeymen, or they take to amusements and eschew study, yet at the very first opportunity they hasten to set up on their own account, it may be in some single-handed, or other inferior place, where in the case of the average of men comparatively little is to be learned by experience, a few only of the brighter intellects being capable from such stand-points of moving forwards. What wonder, therefore, that so few comparatively of the thousands of young men who turn to the pursuit of gardening, really distinguish themselves in after life?

Let young gardeners, then, endeavour to realise the fact, that on them, in the future, depends in great measure the position of British horticulture, and that in order to render that position a pleasant one there is nothing for it but to strive and study—study and strive, allowing no enticements to lure them from their course, and no difficulties to damp their ardour. Let them work on with a will, and take as their motto—"Never despair." For all such there is an honourable future in store.

—— THE Royal Horticultural Society has publicly expressed the opinion that increased interest would be

given to the Gardens at South Kensington if portions were set apart as exhibition grounds of bedding plants, flowers, and shrubs, &c., let out to responsible nurserymen and florists of eminence. They accordingly have prepared a plan of such portions, which may be seen at the Gardens, and invite tenders for filling such spaces with bedding or other plants during each month of the year 1864. The selection and arrangement are to be left entirely to the taste of the exhibitor, provided they shall be in keeping with the general character of the Gardens. The beds so planted must be kept in order throughout the season by the parties planting them. The names and addresses of the nurserymen and florists will be placed conspicuously upon the beds so filled by them. A competent Jury will be appointed to examine the spaces two or three times during the season, and will adjudicate upon the merits of the several arrangements, and select the best. The test of merit we are informed will be the best arrangement of colour with plants that will remain longest in flower. Certificates of merit will be awarded to the most successful competitors.

Sealed tenders must be sent in to the Assistant Secretary on or before 1st March, 1864, and in the meanwhile further explanations may be had of Mr. EYLES, at the Gardens, South Kensington.

THE WEATHER OF 1863.

January.—In noticing the weather of 1862, at p. 52 of our vol. for last year, it was remarked that December "was remarkable for the total absence of N.E. winds, whilst strong gales had brought much warm air from southern regions." In January 1863 the mean temperature was fully 6° above the average. The extreme lowest was only 23°. The prevalent winds were still from a south-westerly direction. The amount of rain was fully half an inch above the usual depth; it mostly fell in the first half of the month.

February.—This month, like the preceding, was remarkably mild. The maximum temperature of the days averaged little below the mark denoting a temperate climate, 55°; whilst frequently it was above that point. On three of the nights the thermometer fell 12° or 14° below freezing; but on all others the frosts if any were but slight, and often on the contrary, the temperature at night was above 40°. Only about half an inch of rain fell, so that all ground operations could be carried on without interruption. Favourably thus the winter season passed over without leaving traces of severity.

March.—An average mean temperature was again maintained in this month. The mean minimum was nearly 2½° below the average; but, on the contrary, the maximum of the days averaged 5½° higher than usual. On the 4th, the thermometer in the shade rose as high as 70°; on the night of the 21st it fell to 21°, and these were the extreme temperatures of the month. The amount of rain was nearly an inch below the average.

April.—The minimum temperature at night was but little below the average; whilst the average maximum of the days was 6¼° higher than usual. Owing to the latter circumstance the blossoms of some kinds of fruit trees were brought forward too much for their safety from the frosts which frequently occurred at night, and even so late as the 31st, when the thermometer fell to 8° below freezing. The amount of rain was little more than ½ inch, or about ⅓ of the usual quantity for the month.

May.—The days were occasionally warm; but the nights were still generally cold. Thirteen of them were more or less frosty. On those of the 23d and 25th the thermometer indicated 6° below freezing. In consequence of the blossoms of some sorts of Apples having been injured by the frosts of the previous month, and additionally so by those of the present, the crop of these fruits was but partial. The amount of rain was still considerably below the average, and by the end of the month a supply of moisture was much wanted. The 19th was boisterous, and many trees in parks were blown down.

June.—At the commencement of this month the aggregate deficiency of rain due to the preceding three months amounted to 2½ inches. In the present month there was however an abundant supply, the total depth which fell being nearly 4½ inches, or more than double the average quantity for the month. Heavy falls took place on the 5th, 18th, and 24th. Although the nights were cold, more than 4° below the average, yet the mean maximum of the days was fully maintained, and this being the case, moisture being abundant, the growth of hardy crops proceeded favourably.

July.—This month was most remarkable for the warmness of the days, and the coldness of the nights. The mean maximum was 3½° above the average, whilst the mean minimum was no less than 10° colder than usual. On the night of the 18th the thermometer indicated 5° below freezing; and frequently it was either at, or within a few degrees of that point. We have often observed that if the days are hot and sunny, even although the nights be cold, grain and hardy crops succeed well under the circumstances. Colder nights in July have very seldom been experienced than was in this; and, on the other hand, but rarely warmer days; and to such weather must in a great measure be attributed as a result, one of the finest and most abundant crops ever known. Instead of being tolerably warm night and day, it appears to be essential towards producing a good, substantial, nutritive grain crop, that the days should be not merely warm but hot, even if the nights should be rather cold. Of a certain amount of mean temperature it seems better that it should consist of intensity in the day than that it should be distributed more equally throughout the 24 hours.

August.—The mean temperature of this month was exactly equal to the average for the last 37 years. The mean maximum was 2¼° above that of the days, and the mean minimum as much lower than its usual average. A moderate quantity of rain fell, but with sufficient intervals of dryness to permit the crops to dry and ripen.

September.—This was a wet month. Very nearly 3½ inches of rain fell, or about an inch above the average. Its mean temperature was also 3½° lower than the average. The nights were often cold. The 26th and 29th were respectively 5° and 7° below freezing.

October.—Fully an average temperature was maintained. About 1½ inch of rain fell, which was more than an inch less than the usual quantity. The nights were occasionally frosty. As early in the month as the 5th the thermometer indicated 27°, which partially injured the flowering of such plants as Dahlias; but on the whole the weather was favourable for gardening operations.

November.—From the 9th to the 12th inclusive, the nights were frosty, and again at the end of the month.

TABLE SHOWING THE HEIGHT OF THE BAROMETER AND THERMOMETER, AND DEPTH OF RAIN AT CHISWICK, FOR EACH MONTH OF 1863, COMPARATIVELY WITH THE AVERAGE OF THIRTY-SIX YEARS.

1863.	Barometer. Mean.	Barometer. Extreme highest.	Barometer. Extreme Lowest.	Thermometer. Mean Max.	Thermometer. Above (+) or below (—) the average.	Thermometer. Mean Min.	Thermometer. Above (+) or below (—) the average.	Thermometer. Mean.	Thermometer. Above (+) or below (—) the average.	Thermometer. Extreme Highest	Thermometer. Extreme Lowest.	Rain. Amount.	Rain. Above (+) or below (—) the average.
	Inches	Inches	Inches	Degrees	Degrees	Degrees	Degrees	Degrees	Degrees	Degrees	Degrees	Inches	Inches
January	29.709	30.476	28.897	48.84	+6.03	35.19	+4.17	42.01	+6.10	57	23	2.19	0.56
February	30.223	30.575	29.712	52.14	+6.42	32.75	+1.07	42.44	+3.74	60	18	0.26	—1.17
March	29.820	30.457	29.170	56.48	+5.70	30.91	—2.46	43.69	+1.62	70	21	0.68	—0.97
April	29.927	30.860	29.464	61.20	+6.76	35.60	—0.58	48.40	—1.59	71	24	0.54	—0.97
May	29.967	30.363	29.505	66.25	+1.63	37.35	—4.26	51.80	—1.51	80	26	1.46	0.50
June..	29 827	30.230	29.376	73.07	+1.09	44.30	—4.34	58.68	—1.63	83	34	4.46	+2.47
July	30.071	30.405	29.448	78.27	+3.66	40.48	—10.83	59.37	—3.59	88	27	0.80	—1.65
August	29.847	30.121	29.568	75.63	+2.24	48 25	—2.25	61.96	0.00	86	34	1.96	—0.46
September	29.790	30.296	28.806	66 93	—0.74	39.66	—6.27	53.29	—3.51	75	30	3.47	+0.99
October	29 734	30 222	29.042	61 71	+1.48	39 99	—1.79	50.80	—0.64	68	27	1.56	—1.14
November	29 946	30.459	28.857	54.06	+4.38	35.16	—0.05	44.60	+2 16	63	20	1.68	—0.54
December	30.026	30.415	28.944	48.97	+3.62	33.32	+0.01	41.14	+1.81	56	19	1.26	—0.21
	29.967	30.575	28.806	61.96	+3.51	37.74	—2.29	49.84	+0.53	88	18	20.32	—3.40

The Mean Pressure was .003 inches, almost an inappreciable amount below the average.

The Mean Temperature about ½ degree above the average. The Mean Maximum Temperature 3·51 above the average.

The Mean Minimum Temperature 2.29 below the average. Amount of Rain nearly 3½ inches less than the average.

The mean maximum temperature was above the average. The weather was frequently boisterous; but the quantity of rain was below the average, and most of it fell in the first week of the month. None fell between the 10th and 20th; and on the whole the weather was very favourable for all out-door operations being carried on.

December.—Strong gales were frequent; but the weather was generally dry and the ground in good working order, so that planting and other operations could be carried on with but little interruption, which is rarely the case at this season. The mean temperature was fully maintained: that of the days was above the average. There was no snow, and the year ended with unusually fine weather.

NOTES ON GARDENS.—No. III.

COMELY BANK NURSERY, EDINBURGH.

"Have you such and such a plant?" "No; you will find that at Comely Bank," was the question and answer put and received in more than one place noted for "good things." This made me form a very respectable opinion of the stock of rarities in that famous nursery of Cunningham, Fraser & Co., which still retains the propagation fame imparted by its founder, the late Mr. Jas. Cunningham; and I was not disappointed.

The nurseries are about 20 acres in extent, and are surrounded by a substantial stone wall 12 feet high. Against this wall is a superb collection of Tea, Bourbon, Noisette, and Hybrid Perpetual Roses, occupying about 600 yards run of the wall, and embracing the very best sorts in each section. Most of the plants are fine specimens, and during the height of the blooming season the display of flowers must be worth a journey to see; from May to November Mr. Fraser informed me there generally was a succession of fine blooms. Other portions of the wall are well covered with fine specimens of the best flowering and other shrubs, including Magnolia conspicua, Thompsoni, Soulangeana, speciosa, and Hammondii, most of which looked like plants that would flower profusely; some of them, I was told, produced several hundreds of blooms annually. Ceanothus azureus, rigidus, dentatus, floribundus, and papillosus; Eucalyptus cordata, Arbutus procera, Escallonias, Jasmines, and many such plants were against this great wall, all admirable specimens of their kind.

The houses, sheds, &c., at Comely Bank, surpass for magnitude and strength those generally found in nurseries, as much as does the boundary wall a wooden fence. There is a Leviathan shed used for packing which would make a tolerable barrack, being 120 feet long, 50 wide, and almost strong enough to stand a siege. There are great ranges of glass each measured by the hundred feet, the walls woodwork &c., being as strong as if the houses had been made for all time, some of them being backed by lofty and commodious sheds, stables, and seed-lofts; and there is nearly an acre of pits and frames devoted chiefly to the propagation of rare shrubs, Coniferæ, and plants difficult to increase, which are but little propagated elsewhere.

The first house I entered was the show house, 60 feet long, and filled with a miscellaneous collection of flowering plants: next a new span-roofed house, constructed on the best principles as to heating and ventilation, and intended for Heaths and other greenhouse plants; and then began a walk through long lines of vast lean-tos, which when first erected must have been wonders to the horticultural mind. The first of these was 120 feet long, and contained a large and healthy collection of Cape Heaths and greenhouse plants in general. Among them four handsome Grevilleas—rigidissima, Latrobii, alpestris elegans, and acanthifolia; also Anopterus glandulosa, Muraltia Heisteria, Lachnæa purpurea, &c. Next a range 150 feet long, filled chiefly with soft-wooded plants, and specimen Acacias, Polygalas, &c.; a remarkably fine plant of Rhododendron arboreum, with some old favourites, such as Pelargonium tricolor, Erodium incarnatum, Monsonia lobata, Hoitzia coccinea, Othonna pectinata, Gaultheria erubescens, Gardoquias, Diosmas; Statice imbricata, puberula, and fruticosa; also a fine seedling Statice unnamed, which from its free habit, bold spikes, and long continuance in bloom, seems likely to be a useful kind. Next came a range about 220 feet long, in which was a large and select collection of Azaleas, many of them good specimens; also lots of Rhododendron Dalhousiæ, R. Falconeri, R. Edgeworthii, and R. Nuttalii; Daphnes in variety; Stauntonia latifolia; and several plants of the beautiful Castanea chrysophylla or Golden-leaved Chestnut of California; Drimys Winteri, and many other plants of interest. Then the stove range, about 210 feet long, containing a good assortment of stove plants, exotic Ferns and Orchids; several hundred fine young plants of Luculia gratissima, which is very successfully propagated at Comely Bank, as well as some good specimens of the same plant, also of Lapageria rosea, Allamandas, Gardenias, Cypripediums, and Aphelandras. Next, a house 260 feet long without a division, containing a miscellaneous and very large stock of hardy and half-hardy plants in a young and marketable condition, including such as Magnolias, Grislinia littoralis, Jasmines, and a considerable quantity of young Coniferæ. Behind this was another range 340 feet long, stocked with Roses of all kinds, cultivated in pots, and all on

their own roots. The Tea-scented kinds predominated, there being, I was told, nearly 50,000 of them, and in better health they could not be. In the pits the newer and approved sorts of Tea Rose were planted out for stock, and were growing luxuriantly. In the same range, which is the longest at Comely Bank, there were good specimens of Retinospora obtusa and pisifera, Viburnum macrocephalum, plicatum, and supensum, Arthrotaxus selaginoides, Thuja Doniana, Magnolias, &c.; and a very noticeable variety of Magnolia grandiflora, with undulated ferruginous leaves, quite distinct from any other variety of that species. Another range 240 feet long! chiefly filled with Camellias and Vines in pots; and on the shelves a host of Amaryllis, Ixia, Lachenalia, Hæmanthus, &c., with a fine batch of Spigelia marilandica in flower, a quantity of the Exmouth variety of Magnolia grandiflora, and of Desfontainia spinosa. At last comes the last range, 120 feet long, and serving the double purpose of Vinery and specimen Camellia house.

Out of doors the interest is of a high order. On leaving the last-mentioned range I first came upon an immense quantity of Tree Peonias, strong plants 2 to 3 feet high and as much through, which I learnt were "covered with bloom" two months before. Coniferæ were very extensively grown, and in excellent health. There were large and thriving plantations of Araucaria, Wellingtonia, and all the better kinds, while in the Pinetum good plants of most of the species were exhibited. Those of Picea nobilis, Nordmanniana, and Pinsapo, Wellingtonia, Cupressus Lawsoniana, Torreya myristica, Juniperus cracovia, Cephalotaxus Harringtonia, Taxus coriacea and the yellow-berried Yew were fine specimens. The Irish Yew was in great force in various parts of the ground, and of all sizes, some trained to one stem, and others allowed to grow naturally to suit different tastes, all beautiful healthy plants, numbering collectively between 60 and 70,000. The stock of American plants is very large, Rhododendron davuricum atrovirens being conspicuously plentiful. In several parts of the ground were large masses of hybrid Rhododendrons, which have been all raised in the nursery, and judging from the foliage and the parentage, these were likely to produce some fine varieties. A long border is devoted to single plants of the most admired varieties of Rhododendron, and noble specimens most of them are.

From this point a broad walk leads to the top of the nursery, having a border on each side, planted with a mixed collection of choice and hardy shrubs. Of the Tulip tree there were many thousand seedlings, both in seed-beds and transplanted; hardy Heaths were very extensively grown, there being nearly 50 varieties and species, of which a great number were in bloom, covering large squares with their delicate though effective tints. I was quite surprised at the immense quantity of Lilium lancifolium in fine health, and occupying about the fourth of an acre of ground. There was also a goodly stock of Lilium eximium, chalcedonicum, excelsum; of the best Scillas; as well as of Zephyranthus, Colchicum, and Crocus, both spring and autumn-flowering, and of Orchis foliosa. To see the tiny Andromedas—tetragona, hypnoides, and fastigiata, is alone worth a visit to this home of rarity. A. fastigiata is a mechanical looking little gem, in the way of tetragona, but if possible prettier. A. hypnoides is very rarely met with now-a-days, the only other place where I noticed it was on Mr. Backhouse's noble rockery. And then there was such a fine lot of Rhododendron Chamæcistus, of Azalea procumbens, and Epigæa repens, all three seen in perfection and abundance for the first time.

Amongst herbaceous plants were many worthy of notice, and some hardly to be found elsewhere in cultivation. The rare silvery leaved Geranium argenteum could not be increased sufficiently to supply its numerous admirers. There was a nice healthy stock of that most beautiful of Pinks, Dianthus alpinus; of Houstonia cærulea, and Æthionema membranaceum; and a single plant of Arnebia echiodes, a very striking yellow and black-flowered boraginaceous thing, which probably will not be found elsewhere. The fine Anemones, alpina, narcissiflora, sulphurea, and vernalis were plentifully and luxuriantly grown; as were the Gentians, amongst which I was delighted to find a batch of the rare Gentiana purpurea. There were plants of Thermopsis barbata, with flowers almost black; a good stock of Chrysobactron Hookeri, of three species of Helonias, four of Androsace—in short of almost all first-rate and scarce herbaceous plants, the cultivation of which is far from decreasing at Comely Bank, a nursery that affords a treat to the lover of rare plants, for which the term interesting is altogether too weak. *Wm. Robinson.*

Home Correspondence.

Orchard Houses.—I beg to answer your correspondent, "An Old Subscriber," (see p. 54) that my orchard-house trees, most of them bought in Dec. 1856, are in perfect health; that each year's crop has been an improvement on its predecessor; and that in my opinion, under the pinching system, the only caution necessary is to thin the fruit enough to keep the crop down. The only crop I have not absolutely under control is that of Apricots; the blossoms of these are rather addicted to fall, but from last year's experience and greater success, I believe this to be merely a consequence of insufficient currents of air through the house. The orchard-house fruit is, as a rule, quite full flavoured; there is just uncertainty enough about it to show how much we all have yet to learn about the ripening of some descriptions of fruit. Peaches are excellent, Nectarines equally so, if you only thin enough. Being an incorrigible experimentalist, and having last year an Elruge a perfect picture, with its fruit so evenly spread over, its master could not resist seeing how many it would ripen, so, after taking off a very great many, he left on 13 dozen; these coloured well, but were small and much inferior in flavour to their only properly loaded brethren. Again with Pears, some of the sorts, only moderately good last year, were delicious this, while others usually of the highest flavour, among them Josephine de Malines, was this year comparatively poor. Apples were all good, and apropos of these, which being perhaps the freest growing of orchard-house trees, should suffer most from the confinement of the pot, I may perhaps be allowed to quote your own opinion as to flavour of some Northern Spy Apples I had the pleasure to send. "Finer flavoured specimens we never tasted of this, the most delicious of United States Apples, as well as one of the very finest of table varieties. We prefer it to the best New Town Pippins." Plums, such as the Golden Drop, are an absolutely certain and fine flavoured crop; some of these trees photographed year after year just before ripening show the fruit almost in the same places—the only difference being the increased number increasing years allow them to be trusted with. Cherries are a very beautiful and nice crop. Last year four Stanwick Nectarines ripened excellent fruit and without cracking (owing probably to the warm summer); a basket of these was honoured with a first prize at the great fruit show at South Kensington on 9th September last. My houses have no means of heating nor even keeping out frost; one is 60 feet long and 20 feet wide, the other 60 feet by 15 feet; the last, built with the idea of keeping the fruit as near as possible to the light and exposed to the greatest possible quantity of air, I find to give the best results. How your "Old Subscriber" has arrived at his conviction is the more puzzling to me, as while the only sort of advantage my trees have is that of being under the care of a man, not much of a gardener, who takes pride in them and is not afraid of work, they have the disadvantages of a master much too busy to give them a tenth of the overlooking they deserve, and who (for purposes of experiment) subjects them to much stronger Gishurst and other anti-insect washes than he would dare to recommend to others. The result of his conviction, which has grown with the trees' growth, is that any one with time at command, and with a fair amount of habit of close observation, might grow such fruit in orchard houses as has never yet been seen from walls, for besides the roots of the trees being under perfect control, so that stimulants can be administered in the right place at the right time, the fact of the free play of air all round each fruit gives a more even ripening and colouring than the half-sunned, half-shaded wall fruit ever has. *George Wilson, Gishurst Cottage, Weybridge.* [For other communications on this subject received and already in type, we must endeavour to find room next week.]

Prizes for Wild Plants.—I have been puzzling myself to make out the meaning of the announcement which I quote below from your notice of the programme of the Royal Horticultural Society at p. 32. Can you help me? You say, that "for the encouragement of the study of scientific botany amongst all classes, the Society offers the following prizes:—1. One Silver, and two Bronze Medals for the three best collections of wild plants of each separate county of the United Kingdom, dried, mounted on paper, folio demy size, classified according to the natural system, and labelled with the name of locality where found, and the date when found. 2. Three Gold Medals will be given for the three best of all the collections out of all the several county collections. Not more than one of the medals can be awarded in one county. The collections must be delivered on or before the 31st December, 1864, to the Secretary of the Society, carriage free," &c. I take the words to mean that No. 1 is to be something approaching a complete British Flora arranged under the counties, as it is to consist of collections from "each" county; but then, as more valuable medals are to be given for separate county collections under No. 2, I am fairly puzzled. By the by, is this quite in the line of a horticultural society? *A Young Botanist.* [We do not think that the Royal Horticultural Society's charter justifies this step, which has nothing to do with horticulture, and we trust the Society may not also be laying itself open to a charge of helping to destroy the habitats of rare British plants.]

Rhododendrons.—Another instance to show the extreme hardiness of the Rhododendron in soil which suits it, may be interesting to your readers. About 10 years ago three plants were planted amongst the Sedge at the west end of Hornsea Mere; of these, two were smothered when small by the Sedge, but one of them has grown above it. During these 10 years no cold has ever injured it in the least. Now Hornsea Mere is a sheet of water about two miles long, with but half a mile of low ground, scarcely above high water mark, between it and the sea. Between the plant in question and the coast of Norway there is nothing to break the north-east wind, which sweeps across the Mere with a violence which any of your readers who happen to know what the east coast of Yorkshire is in the month of March, will easily understand. All trees and shrubs are either killed or dwarfed and stunted by it. But the Rhododendron, which has not a tree or a bush of any kind near it, has become a perfectly symmetrical hemisphere 5½ feet high and 11 feet in diameter, and is covered every summer, quite equally all over, with flowers which make it a very beautiful object, conspicuous at a great distance. So much for its hardiness. Of course there is no trace of lime in the peat which it grows in. If any of your correspondents can give an instance of Rhododendrons thriving in soil containing lime (that is, which effervesces in muriatic acid), I for one should be extremely glad to know of it. *C. W. Strickland, Hildenley.*

Roses in Pots at the Royal Botanic Society's Shows.—Messrs. Lane, of Berkhampstead, have (p. 29) thought proper even at this distant period to question the decision of the Judges, in reference to Roses, made in June last. Had they done so a week or two after the exhibitions had been held, and while the circumstances connected with the award were fresh in the minds of all of us, a more satisfactory reply could have been given. It is quite true that I told Mr. Lane that I had a great objection to faced plants. Not only did I mention this to Mr. L., but for years past I have taken every opportunity of instilling into the minds of all the exhibitors the necessity of showing Roses as good in form and as well grown as ordinary greenhouse plants, if they wished to keep pace with the times. What judges would countenance Azaleas, Fuchsias, or Heaths, grown so much to a face as to have the appearance of plants split down the middle—in fact, only half plants, looking as if they had been just unnailed from a wall. Such was the character of nearly all the large specimens that were shown on the occasion in question. Messrs. Lane seem to have a great dislike to show blooms to "green baize at the back," but if they could have prevented the baize from staring through their plants at the judges, they would have stood a better chance of gaining a first prize. Tall transparent plants, whether Roses, Fuchsias, or Azaleas, will in the present advanced stage of cultivation stand no chance with compact, dense, well-formed plants. This has been a constant remark made to me by visitors to the great shows:—"How is it we see so many old worn-out varieties of Roses that we have long since discarded from our gardens shown, while the introductions of later years are so infinitely superior to them in all respects?" My reply has been, "that the growth of several years is requisite before a plant can have arrived at a size sufficiently large to correspond with others shown in the same collection." This undoubtedly to a certain extent is correct, but it is no reason why varieties conspicuous only for their bad qualities should be retained, solely on account of their size. I may just add that young dwarf compact plants have invariably been the turning point towards the higher prizes, and that the tall scraggy ones have had a contrary tendency, whenever they have come under my notice. It is unfortunate for Messrs. Lane that the same judges did not officiate both at the Royal Horticultural and Royal Botanic Shows, as then they would have had only Messrs. Perry and Perry to blame, but as other judges committed the same so-called error in placing Messrs. Lane second, it must be evident that the generality of censors will require some training before they will fall in with Messrs. L.'s views. I do not think that it will be "the men who judge" that will drive Messrs. Lane from the exhibition field, but the worn-out specimens which they will persist in dragging before the public. Messrs. L. may depend upon it that before many years are past Roses in pots will be shown circular in outline, dense in foliage, dwarf and compact in growth, with blooms equally diffused over the surface of the plant, and of a quality rarely met with in the older kinds. [We hope so.] "Spectre or transparent" plants will rarely be seen, and never with a first prize attached to them. *Chas. Jas. Perry, The Cedars, Castle Bromwich.* [Messrs. Lane state that they did receive a first prize last June at the Royal Botanic Gardens, Regent's Park. What they complain of is that it would not have been awarded to them had their opponents' plants not also been trained to a "face."]——In your Number for January 9, I find a rather sharp attack by Messrs. Lane & Son on "Messrs. Perry & Perry." As many of your readers may probably be at a loss to know who or what these gentlemen are, allow me to state that one is Mr. Wm. Perry, of Sawbridgeworth, the other Mr. C. J. Perry, of Castle Bromwich. I have not the pleasure of knowing the latter, but the former, who has been with Mr. Rivers from boyhood, a period of nearly 40 years, I believe to be one of the best judges of Roses in England. Rose showing, plant showing, and above all poultry showing for prizes, more particularly the latter, seem to have a most demoralising influence at the present day. What can be more unpleasant for the cool looker-on, yet lover of all these things, than to see ladies, or clergymen, officers in the army or navy, and other persons calling themselves gentlemen, disputing—perhaps quietly and discreetly, but still with vexation in their countenances—about a feather; or the Rose growers before their Rose boxes, full of disputation and dissatisfaction, because they think they have been treated unjustly by the judges.

Cannot and ought not this state of things—almost as lowering to men's minds as the transactions of the turf—be remedied? It is a subject quite worthy the attention of our two great prize-giving societies. Could not gardeners and nurserymen who make it a rule to show for prizes and orders, and to whom the expense of sending their flowers or plants is an object, be paid all reasonable expenses of transport, leaving to the public to decide which collection is best or best arranged; and could not amateurs show their Roses or their plants to their friends in honourable and agreeable competition, without the disagreeable feeling of seeing favourite plants disfigured by the usual placards of 1st, 2d, 3d, and 4th prize (as it may be), but still not without some token of honour. I throw out these suggestions to our prize-giving societies, feeling a firm conviction that we ought to endeavour to turn over a new leaf, and thus avoid the bitter feelings often engendered by prize giving. *Looker On.*

Woollen Refuse.—Will Mr. Thomson, Wortley, near Leeds, who recommends (p. 1133, 1863), the use of this material, kindly give us some further experience in reference to its value as a manure? This is a matter in which I feel specially interested, as I have been led by circumstances to take a market garden here, and a friend of mine being a manufacturer of oil from woollen waste by means of the new chemical patent process, has highly recommended his "patent wool manure," as he calls it, to me, and I have already got 7 or 8 tons of it, and I contemplate having 10 tons more. I intend employing it along with tan for hotbeds for Cucumbers, and I have already made a compost for a general crop. It is a first-class heating material, indeed too hot without admixture with tan or some other substance slower in heating than itself, as for instance leaves. The refuse used at Wortley is stated to be what had been subjected to pressure only, to obtain the oil from it; but this would surely only imperfectly separate the oil, whereas the chemical processs perfectly cleanses it from oil. There can be no doubt as to wool itself possessing highly fertilising qualities when decomposed; but oil acts in a way to prevent decomposition taking place. If we take Johnstone as an authority, we shall find in his "Agricultural Chemistry," p. 238, a comparison of woollen rags with other manures as follows:—1 ton of woollen rags is equal to 2 tons of pigeon's dung, or 6 tons of blood, or 14 tons of sheep's dung, or 40 tons of farm-yard manure. If this comparative table is correct, the manurial value of woollen waste is very high indeed, but as I have already stated, its worth depends upon its decomposition, which is slow, especially when the oil is in it. But, this being removed, decomposition goes on rapidly, and a large amount of ammonia is evolved. A farmer with whom I am acquainted tried 1½ ton to the acre last year for Potatos, along with, or rather in addition to, his usual dressing of farm-yard manure, and the result was 30 cwt. of Potatoes more to the acre where the woollen refuse was used. He says, too, that he considers it quite as good for the next crop as for that to which it has been applied. He proposes using 2 tons per acre this year. I am told that its effects upon flowers are very remarkable, both as to vigour and colour. I am trying it on Roses out of doors, and various kinds of plants in the greenhouse, besides Strawberries, and Gooseberries, and vegetables; and I may at some future time give the results for the benefit of your readers. *George Rymer, Meadow Cottage, Mansfield, Notts.*

Seaside Shelter.—I have a piece of fruit ground which adjoins the River Medway, that is to say, the river flows over the saltings that adjoin my land; it is therefore exposed to north and east winds, which blow from the sea (the Nore), 5 or 6 miles distant. Would you kindly give me your opinion what trees would grow along the river, exposed to the above-mentioned winds, the air no doubt being charged with saline particles. I do not know if Larch or Spruce would grow; if they would not, what could you recommend me to plant by way of protection to the young trees and bushes? The soil, which is hard at places where it has lain wet, is a strong loam, with a subsoil of gravel and chalk. *M. F., Rodmersham.* [You should plant Pinaster, Larch, Sycamore, and, of the Willows, Salix Russelliana and S. caprea. To these the Tamarisk shrub may be added.]

The Late Frost.—During the late frost our lowest register was early on the morning of the 7th inst., when the thermometer indicated + 6¼°. The same evening, from 4·30 to 6 o'clock, the temperature was + 8°. Both these registers were at 4 feet from the ground. On the ground (naked earth) immediately below the other thermometer, the register was 10° at the same period! No snow, air perfectly calm. Vegetation being well ripened, and the ground unusually dry, very little damage appears to have been done. It may be interesting to know that Hymenophyllum demissum, H. crispatum, and Trichomanes reniforme (from New Zealand); H. cruentum from Chili; and our British Trichomanes radicans are all uninjured, after being in several instances encased in massive icicles for two to three weeks without intermission! Along with Hymenophyllum Wilsoni and tunbridgense, these species are all growing out of doors in sheltered fissures or cavernous recesses, and I believe that I am quite safe in declaring that they look greener and in every way better since the frost than they did before. Some fine plants of T. radicans are still encased in ice, and their clear green colour, seen through the ice, is charming! We have every reason now to believe that all the Hymenophyllaceæ of New Zealand and Chili will bear our frosts without injury. I should perhaps add that two plants of H. demissum were unprotected by ice, and that one of them was exposed to dry frost that could not be much short of 15° to 20°. Todea pellucida, frozen hard for about a fortnight, looks perfectly well, even the youngest (scarcely developed) frond being uninjured. Adiantum chilense and A. sulphureum, the charming Lycopodium dendroideum (like a dwarf Cryptomeria), Sarracenia purpurea, and the Anæctochilus-like Goodyera pubescens are all uninjured, apparently, after having been also frozen for a fortnight. Our new crimson scarlet Schizostylis coccinea seems perfectly hardy, and even the petals of the exquisite Caucasian Primula amœna, Cyclamen coum var. vernum, and Colchicum montanum remained expanded and uninjured throughout the trial to which they were subjected. *James Backhouse, York.*

Bottom Heat.—I am making a house for keeping cuttings, &c., through the winter, and the mode by which I am warming it is an imitation of the Roman hypocaust. The fire will be that of a Kentish oast-house, namely, two sides of large lumps of fire-brick, about 20 inches apart and 2 feet 6 inches or 3 feet long. From this, which will burn anything, from roots or cinders to coke or Welsh coal, a flue will proceed to the front of the excavation under the floor (to prevent the fire cracking the floor). The fire-place will be at one end of the back of the building, and the chimney at the other. The chimney will be furnished with a damper, and the furnace with a simple door, often used in oast-houses; viz., a plate of iron suspended with a balance weight over a pulley, which will draw down over the whole or any part of the opening. The cavity under the floor will be 2 feet 3 inches high; the floor three courses of tiles bedded in cement, supported, at intervals of 3 feet 6 inches, by piers of brick 9 inches square. In front there will be a wall with three arches, (which can be closed at pleasure), and the floor will be continued for about 11 feet under the front

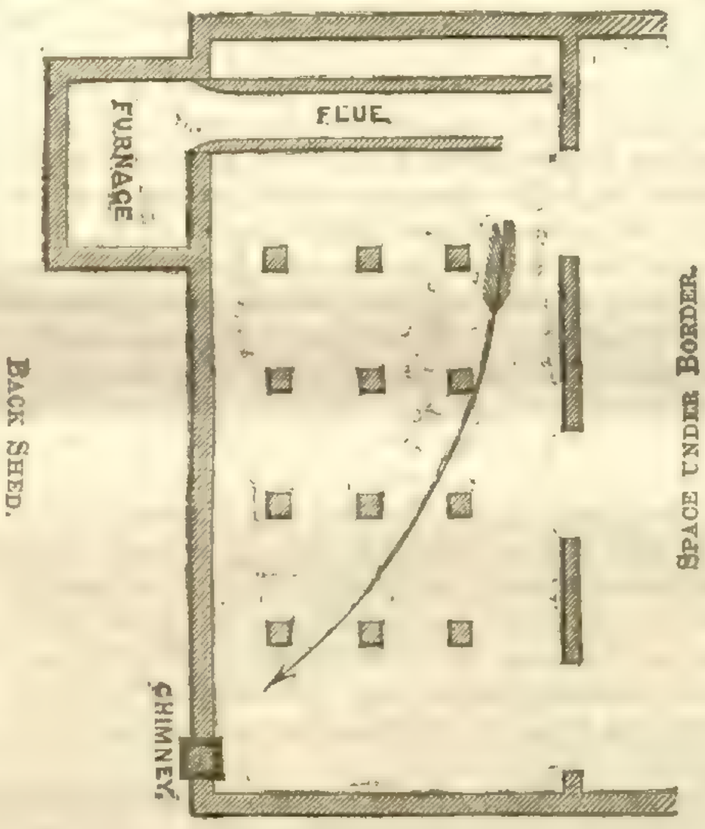

PLAN.

The Cost of the Floor will be about 8*l.*, and the Fire-place 50*s.* to 60*s.*—Dimensions, 26 × 13.

border (a continuation of an adjoining Vine border), so as to die away to about 6 inches deep at that distance from the front of the house. Now I wish to be understood as to the motive for adopting this construction. It is simply to try the effect of introducing this bottom heat under the border. Other plans would answer as well or better perhaps for warming the house, but I think if bottom heat is to be introduced, no other plan would do it so uniformly as this, and probably none would be so much under command. What I chiefly want to know is the depth of soil that I should give in the border? I do not mean to put Vines at first, but to try early Strawberries. I have abundance of water close at hand, and so I can feel my way. I also think of putting a border with stone or brick edges over the floor of the house, with gangways at short intervals, for striking cuttings. Probably you may not like in any way "to stand godfather" to my child, but if you or your correspondents do think of anything that will assist me, I shall be much obliged for a hint. *C. W. M.*

Poinsettia pulcherrima.—This plant is deserving of extensive cultivation, but singular to say, many fail to manage it well. I have under my care half a dozen plants of it, each of which has flowered profusely, but all of them lost their foliage, an occurrence for which I cannot assign any cause. I have grown my plants in loam and peat, mixed with a little leaf-mould and sand. They retained their leaves till the plants showed flower, and shortly afterwards the foliage fell. Perhaps "G. E.," or some of your other Correspondents, may favour us with the mode in which such beautiful specimens as that adverted to in your last week's Number is grown. *Joseph Baxter, The Gardens, Merivale, Atherstone.* [In the article just alluded to, signed "G. E.," p. 52, for 49 inches in "diameter," read "circumference."]

The Winter in Ireland.—As a proof of the mildness of the climate at Killarney, I enclose two out of five Tulips grown in the parterre (in the open air) at Sunday's Well, the residence of Alexander Morphy, Esq. *E. A. M., Dublin, Jan.* 18. [The specimens were examples of Duc Van Thol, small, but well coloured, and free from speck or blemish.]

The late Dr. Boott.—In the interesting notice (p. 51) of Dr. Francis Boott, when mentioning the professors under whom he had studied in the University of Edinburgh, it is said only one of the eminent men named survives him. This is a mistake, for besides Dr. Christison, Dr. Fillans is alive, though he resigned his professorship last spring. I have thought it worth while to correct this error for the satisfaction of the Professor's old pupils at a distance—and their name is legion—for they will be glad to know that he is still in life, and enjoying the retirement so well earned by his long and useful labours. *D. A., Hawick.*

Foreign Correspondence.

[We are indebted to the Committee of the *British Columbian Botanical Association* for the following very interesting letter addressed by Mr. Brown, their collector, to Isaac Anderson Henry, Esq., Secretary to the Association, at Hay Lodge, Trinity, Edinburgh.]

VANCOUVER'S ISLAND: *Valley of the Les-haat Indians, Barclay Sound, N.W. America.*—Lat. 48° 47' 28". *Nov.* 4, 1863.—Since I last wrote I have been in Washington Territory, U.S., British Columbia, and all in the way of business have, first of white men, reached the head of the "Great Central Lake" of Vancouver Island, that *ignis fatuus* of the local geographers of this far western portion of her Majesty's dominions. I have obtained seeds of between 100 and 200 species of plants (in almost every case in quantities sufficient to allow of a complete division), including some very pretty and previously unintroduced herbaceous plants, shrubs, and forest trees. Among the last are some good Coniferæ, including Juniperus, three species, one a large tree, Taxus, n. sp.? a fine lot of the Cupressus nutkaënsis; Thuja Craigiana; a large quantity of Abies Bridgesii not yet introduced into England, about 100 ounces of the finest seed of Abies Douglasii, Pinus species undescribed; Abies grandis, 20 to 30 ounces; Abies Menziesii (is this Pinus sitchensis, Bongard, Veg. Sitch., in the St. Petersburg Academy Transactions?); Quercus Garryana? Arbutus Menziesii, Spiræa, n. sp., a fine shrub; Oreodaphne, n. sp., a fine shrub; and, what I think justly entitles the expedition to the credit which it originally laid claim to, viz., "national importance," about 3 lbs. weight of seeds of a fine pasture Grass from the Upper Fraser, which survives all winter, and is accounted by the Cariboo muleteers superior in fattening qualities to hay, and certainly much more valuable to them, as the cattle and the mules have nothing else to subsist on during the long bleak winter, when the ground is covered with snow, and hard as iron. I have gathered and am still gathering many particulars of its properties from the muleteers and teamsters, which in due time I will submit to you. I believe that it is superior to the much lauded Tussock Grass of the Falkland Islands, and might be introduced with great advantage into some of the bleak islands of the Hebrides, or of Orkney and Shetland, where I have known cattle to die off in the winter from want, or the cost of procuring fodder. My attention was originally drawn to this Grass by Colonel Moodie, R.E., to whom therefore all credit is due, and I believe that I am at liberty to say that he coincides fully in the above statement. You may remember that it was he who introduced the Tussock Grass, and obtained a gold medal for its discovery.

The great region for Coniferæ I have found, since my present summer's travels have terminated, to lie south of this latitude, and to it therefore, with your permission, I shall in future devote my attention.

My funds are in a satisfactory condition, and although the stormy winter now fairly set in will prevent me doing much more for some months, I am prepared to start in early spring with renewed vigour to a widely different, and what I now believe to be a better region than the one I have explored. I trust that I shall be able to take the field by the 1st April with every advantage to the Association, and with every prospect of much greater success attending my efforts than during the previous six months. I hope of some good species of Coniferæ which I could not obtain this year, but am almost certain of next year such as Abies Williamsoni, from the 'Three Sisters' of the Cascade Mountains, Abies bracteata, Picea nobilis, and a new species of Thuja. I have had much to contend against this season, but the difficulties are now, I am glad to say, in a great measure over. I now know the country, and, what is just as important, the people, so well, that should there be only half the subscribers of the previous year I will be able to get on tolerably well. Many expenses were incurred in this year, which will not be required again, independently of the sum paid for travelling to this distant part of the world. Kamchatka is the furthest sea voyage, and that is only a few days sail from here. Last night I was awoke from my camp-fire sleep by the "long cry" of the same wolf that howls from Unalaska's shore. On my return to civilisation, I will send my seeds to England by Wells Fargo & Co.'s express in several air and water-tight boxes, addressed to you, care of the Hudson Bay Company, prepaying the freight. This will be expensive, but their agent refuses to receive them on any other terms, a standing order having been issued to that effect. I will at the same time send a fuller account of my proceedings, and by

later mail a statement of my intromissions will be sent to treasurer. In order that you may be early advised of the despatch of the seeds, and be ready to make the necessary arrangements with the secretary of the Hudson Bay Company, I will send this and the next letter overland by the pony rider, *viâ* the Salt Lake city, to Dr. Joseph, in Missouri, and then *viâ* New York to Liverpool. It will save nearly three weeks, and I hope will escape the emissaries of President Davis.

I am in good health, and strong, rough, ragged, weather-beaten, perhaps a little dirty, and certainly a most unpresentable figure at the meeting where this communication will be read. I am sleeping on a curious Indian blanket, woven from the fibre of Pinus Strobus (is it the same as the P. Strobus of the East?) and to keep the hoar frost off my blanket there is a mat of the bark of Thuja gigantea. Both will, I hope, at some future day, ornament the Museum at the Botanic Garden.

Societies.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.—The 24th Annual Meeting of this charity was held on the 14th inst. at the Bedford Hotel, Covent Garden. Mr. John Lee presided. The report of the Committee and the balance sheet as signed by the auditors were read and adopted. During the past year five pensioners have died, and four have been elected. The total amount disbursed in pensions during the year has been 769*l.* 16*s.* 8*d.*, and the funded stock has been increased to 5500*l.* The Chairman stated that his Grace the Duke of Buccleuch had consented to become the Patron of the Society in the room of the late Prince Consort. Officers for the current year were then elected. The meeting afterwards proceeded to the election of three pensioners, when Jane Atlee, Robert Dowdell, and George Green, having the greatest number of votes, were declared to be duly elected. A vote of thanks to the Chairman and Secretaries was then passed, and the meeting separated.

Notices of Books.

Spring and Winter Flower Gardening: containing the System of Floral Decoration as practised at Cliveden, &c. By John Fleming. London, 162, Fleet Street. Pp. 104.

Some time since we took occasion to notice the condition of modern flower gardens, now that parterres have become the dominant form in which they appear, and to regret the banishment from our flower borders, consequent thereupon, of very many charming flowers of the various seasons, which will not bend to the exigencies of bedding out. Gay and jaunty as the flower beds may be made by this monopoly of some dozen species of plants boasting of brilliant colours, there was a growing feeling that we were sacrificing much of beauty and variety in following out this style of gardening, not only in the mere loss of many beauteous forms, but worst of all in the long period of dreary waste to which the system has too commonly doomed us. Hence, even where parterre gardening was still maintained in principle, there was a reaction to be seen; for whole beds and margins of beds which owed their effect to foliage and not to flowers, and in which there was commonly a preponderance of some neutral tint, were not only to be seen, but were becoming more and more fashionable, and were quietly, though surely, ejecting a portion of the glaring masses which were once so much approved. Indeed we may point to one of the leaf-beds in Battersea Park last season, that of Coleus bordered by Centaurea, as superior in beauty to any combination of gaudy colours which was ever dignified by the name of a flower-bed.

The grand objection to the parterre system lies in the bareness to which it reduces the garden for a much longer period than is desirable in winter and spring. This evil is of course remedied to a great extent when spring-flowers are largely made use of to bridge over the blank; and perhaps there is no garden which has become more famous for its adaptation of spring flowers to this very end, than that of the Duchess of Sutherland at Cliveden, under the management of Mr. Fleming, the description of which occupies the pages now lying before us. As success is a pretty sure test of merit, we may safely conclude that Mr. Fleming's system of management possesses this latter high quality; and his treatise being an explanation of his practice, it cannot but be welcome to those who take pleasure in the beauty of their gardens. We learn that our own remarks already alluded to, have had the effect of bringing out this practical and useful addition to the gardener's library.

The book is divided into five parts, separate chapters being devoted to general observations on spring and winter flower-gardening; to the spring flower gardens at Cliveden; to sundry designs for spring and winter gardens, showing how to fill them; and to the bulb garden at Dropmore; while some 50 pages are allotted to the general treatment, culture, and propagation of the plants most desirable for this kind of decoration.

While asserting that a well-filled summer flower garden in a bright season is very beautiful, Mr. Fleming admits that its beauty is too soon over, and that the gay period is followed by a much longer one, in which the bare soil of the beds is usually the leading object. Of the many plans tried and suggested as remedies for this defect, such as making the beds into different devices or separate gardens, or covering the surface with materials of different colours, or filling the beds in winter with Evergreens kept in pots for the purpose, the latter is the most commonly adopted. To this, however, Mr. Fleming objects as giving a nursery-like appearance to the garden, on account of the difficulty of imparting at once by this plan a full and furnished appearance and a level surface to the beds. We may remark, that when we have seen Evergreens used for this purpose they have mostly been planted too far apart; they have been put in as though they were to remain long enough to grow out the space, whereas they have to remain but a short period, and when put in ought at once to furnish the bed completely. Mr. Fleming regards Ivy as the best of these evergreen materials on account of its creeping habit, and the many beautiful variegated varieties now to be had, but he suggests that it is most appropriately used as a perpetual edging for beds on Grass or for baskets, or in the form of distinct permanent beds for both winter and summer effect.

We are told that as a substitute for the two states of dreariness and incompleteness at which we have glanced, the use of spring flowers and annuals has been gradually making its way during the past few seasons. Our author does not consider it of much importance what plants are made use of, if they but give the colours and other necessary requisites, which are indicated as being:—sufficient hardiness to keep the beds green in the dead part of the winter months, and sufficient precocity to yield an attractive display in early spring. Annuals are found very useful, as two months good bloom can be got from them before the scorching suns of June set in; and variegated plants, both shrubby and herbaceous, now so largely coming into favour, are also found effective. One passage which we must quote, gives a general idea of the kind of materials used at Cliveden, their exact application forming the subject of the second chapter:—

"If a good bed of scarlet is wanted we have the single scarlet Anemone, which continues in bloom for most of the season. The double varieties are more rich still, and for the time surpass any Scarlet Geranium, but they are not of so long duration, and more tender than the single. In the same class there is, besides the scarlet mentioned, a great variety of colours—some white, others a most beautiful blue, but nearly all the varieties are most appropriate in the various divisions of a flower garden.

"Alyssum saxatile is a fine yellow, equal in every way to a Calceolaria, with yellow Pansies, Cheiranthus Marshallii, and a great many others equally good, leaving no lack of choice for yellow beds and ribbons.

"Daisies, both red and white, make good compact rows of colour in chains and ribbons. For small beds or edgings they are equally effective; but they must be planted close and full at first, and by March they are good distinct lines of colour. Through April there is scarcely a leaf to be seen from the great amount of bloom, which will continue up to the end of May.

"For blue we have the beautiful blue Myosotis arvensis [? sylvatica], which being an annual is easily got in great quantities with little care. It can also be planted at any time up to its blooming, but it is better to plant it early for the sake of covering the soil. Cliveden Blue Pansy makes fine rows in ribbons and small beds, and it is nearly always in bloom both summer and winter; but April and May, if planted in the beds early in autumn, is the season in which it makes the most display.

"The white Myosotis arvensis, and the creamy Silene, with white Pansies and Daisies, give good beds and rows of several heights; but all are very useful, and not to be surpassed by any of the summer plants. * * *

"Among Primroses we have an extensive variety of colours, both in double and single; the latter, by far the most beautiful, continue much longer in bloom than the double, being one charming glow of colour from February to the middle of May. They are scarce because the proper treatment has never been understood; or we might perhaps, with more justice, say their habits have never been studied, from there being no call for them in the garden requirements. I have no doubt this will soon be obviated when their beauties become better known."

It is to be remembered that all these glowing descriptions apply to the fine elevated situation and pure air of a table land overlooking the Thames in a pleasant part of the county of Bucks, and is not to be realised in every spot, especially in low, damp and smoky localities.

The second chapter is devoted to the spring flower gardens at Cliveden, of which plans, and an explanation of the arrangement of the plants in the two seasons of 1862-3, are given. Herein is described the manner of filling the Duke's Garden, the Ribbon Border, large Stone Baskets, the Great Garden, and the Lovers' Knot, and various remarks are offered on the treatment of the plants. As regards the large beds, Mr. Fleming tells us that "as soon as the summer flowers are over, which is generally about the first week in October, the beds are prepared for the spring plants; each bed is dressed over with something as it can be got—dung, leaf-mould, or the siftings of the potting bench—which is dug in; and every three seasons the bottom spit is brought up, or what is generally termed double-dug. These are planted as close to the fresh-turned-up soil as circumstances will permit. The Tulips are first planted irregularly all over the bed, avoiding rows as much as possible; they are put in 6 or 7 inches deep, with a tool on purpose. The other plants are then planted all over the surface as close as possible, both the Myosotis and Silene. * * When the time comes to remove these for the summer plants, the Annuals are cleared away and the Tulips taken out, as the footstalk will always show where the root is; the beds are then well hoed and raked over. A man commencing at one side with a Parkes' digging-fork moves the soil up as far down as the fork will reach, loosening the surface at the same time, but the beds are not dug because of turning up the autumn dressing and moisture. The same is done with all the other beds and borders."

The third chapter is devoted to various designs for spring and winter gardens, and the manner of filling them. We find Mr. Fleming agreeing with us is recommending that the garden should consist of two distinct series of beds, worked up together, devoted to summer and winter decoration respectively. This can be done, he says, without in the least detracting from the summer display, or making any more confusion than spaces for dead material would do.

Mr. Fleming's opinion is not much in favour of polychromatic beds. These, he observes, "were no doubt originally intended to relieve the winter season, and on paper, neatly painted, they are very beautiful. Perhaps the most elaborate and extensive example of this sort of designing is to be found in the large piece of garden forming the south parterre at Versailles. Its great extent prevents the eye at first from taking in all the details, but when once this is accomplished, there is nothing more to look for—the oftener it is seen the more dreary and uninteresting it is. It appears strange we should be going back to this system, while the French are everywhere eagerly adopting ours, both of the present and of former times, when large ovals and circles were everywhere to be found." He however, indicates a fitting use for the polychrome beds. "In or close to large towns this sort of designing may be correct, where nothing will grow. I could fancy one of the little dirty square patches so often seen in front of houses in some streets, with very scanty signs of vegetation, greatly improved by introducing a neat design of this sort, and instead of box, wood or artificial stone edging painted green. A good-sized vase in the centre, and one at each corner might always be kept full, from the facility with which plants are purchased in such places all the summer months. Surrounding these a neat design for polychromatics would at least be kept clean by rain, and much more pleasant for persons passing in and out than the bare black soil, besides the improvement in appearance from the windows." In gardens in the country, where flowers are possible, he is however, sorry to see the plan adopted, as "it certainly is not progress."

The remaining part of the book is devoted to a description of the planting and management of the bulb garden at Dropmore, contributed by Mr. Frost; and by a full account of the uses, varieties, and treatment of an extensive selection of the most useful spring flowers to be recommended for this style of gardening. We observe that Galanthus plicatus is erroneously stated to be smaller than the common Snowdrop; and a few misprints occur amongst the names of plants, such as Alyssum saxatile variegat*a*, Erythronium albiflor*a*, &c. There is also omission of capital letters where they should be used; but these errors are not numerous, and do not affect the practical value of the book, which we have no hesitation in recommending to all who take an interest in their flower gardens.

We may add that Mr. Fleming informs us, that in such autumns as we have had for the three last years, his practice might as truly be called autumn flower gardening as spring flower gardening, the beds and borders having been quite gay up to January with Anemones, Alyssum, Arabis, Daisies, Iberis, Pansies, and the various coloured Primroses.

No. 4, Vol. 1 of the *Alpine Journal*, edited by H. B. George, M.A., consists of papers read at meetings, or contributed by members of the Alpine Club. The first paper is by Mr. F. F. Tuckett, F.R.G.S., and entitled "Explorations of the Alps of Dauphiné." The second is a very interesting account of the avalanches of the Jungfrau, which Mr. F. Galton, F.R.S., was enabled to witness from a safe covert in the very course of the fall. He says:—"The snow or ice in the upper fields slides onwards, until it assumes the shape of an overhanging cliff, or reaches a slope too steep to support it. Then a vast piece gives way, and crashes into fragments that roll and tumble and grind one another into globes, on their way to the head of the ravine that forms the path of the ice cataract. They then bound in a succession of leaps down the ravine, and dash forth at its foot in an enormous hailstorm upon the head of a long uniform slope or *talus* of snow and ice." This must have been grand indeed, considering that the perpendicular fall, first spoken of, was about 2000 feet. Fancy Mr. G., sheltered by one of the overhanging slabs of rock, hearing the prodigious roar by which the avalanche

heralded its approach. Fearing there was some mistake, his first impulse was to run for it, but a glance convinced him that the cataract was taking its wonted channel, and he hurried back to rejoice in the storm and uproar. The hurtling of the ice balls in the depth of the ravine, and the crash of the huge hailstones, were almost frightful.

Part 2 of *A History of the World*, by Philip Smith, B.A., one of the principal contributors to the Dictionaries of Greek and Roman Antiquities, commences with a concise description of the Pyramids, and the History of Egypt from the rule of the Shepherd Kings to the Persian conquest. "The chief interest of the story of our race remains with the people of Israel." Accordingly, Mr. Smith traces the destiny of the Hebrew race, and the Hebrew Theocracy up to the Babylonian captivity; and the second part concludes with the first pages of the Chaldæan, Assyrian, and Babylonian empires. It is no small praise to say that the author has up to this point fulfilled his promise of condensing his matter into a "moderate compass," and Messrs. Walton & Maberly present it to the reader in beautiful type.

Orlando Whistlecraft pleads for his *Weather Almanac* that he has made the weather his study for above 40 years, and states that he has found purchasers for 10,000 copies of it yearly. We cannot compliment him on his weather predictions for January, which have been singularly *out*.

The Brown Book is a book of ready reference, published by Messrs. Saunders & Otley, enabling persons, by very ingeniously constructed tables, to find the nearest post-office, cab stand, police station, hospital, telegraph station, &c., together with a mass of useful information relating to hotels, lodgings, dining places, &c., in some instances giving the prices charged; a list of charities, libraries, museums, sights and amusements; and the officers of 47 scientific societies, commencing with the Acclimatisation and ending with the Zoological; the whole contained in 152 pages, all for the small sum of half-a-crown.

Part 11 of the *Dictionary of Chemistry*, published by Messrs. Longman, and edited by Henry Watts, B.A., F.C.S., contains articles from Fluorine to Gallotannic acid. Under the head of *Fruit* we find tabulated the compositions of various fruits, both in the ripe and unripe state; and there is a long and apparently valuable article on *Fuel*, giving the composition and formulæ for ascertaining the thermal effect of any kind of fuel.

Miscellaneous.

Paris Flower Markets.—Paris is about to be enriched with another flower-market, to be established on the Boulevard Richard Lenoir, between the Bastile and the fountain of the Boulevard du Temple. The sale of flowers and shrubs, which now constitutes an important branch of commerce in Paris, was until of late years of no great value. Gardeners in former times did not possess the variety they do at present, and they sold the few flowers they cultivated at the Marché-aux-Poirées or at the Pont Neuf. Their collection comprised only the native Violet and Rose, the Ranunculus of the Archipelago, and the Damascus Rose, imported during the reign of Louis IX.; the Lilacs, imported from Persia in the 16th century; and the Pinks, of which Rabelais brought the first from Italy for his friend Cardinal Estissac. In the reign of Louis XIII. some Spanish women gave the Paris flower-market an additional attraction. The Parisian corporation of flower-sellers would not be surpassed, and in the following reigns the market on the Pont-Neuf acquired considerable importance. The French gardeners had by this time increased their stock by the Japan Tulip, which they received through Holland at the beginning of the 17th century, the Narcissus from the East, and the Hyacinth from Constantinople. The cultivation of flowers was thenceforth considerably extended, and Mignonette and the Bengal Rose were imported into France towards the conclusion of the reign of Louis XV.; the Dahlia was sent to Paris in 1792 from the Botanical Garden of Madrid, which had received it from Mexico two years before. Some years later a French captain brought another new plant from China, which he called Hortensia, after his wife Hortense. Since then various exotics have arrived in such abundance that many plants which were at first received with favour are now neglected. Towards the end of the last century the Pont-Neuf was no longer sufficient for the ever-increasing number of dealers in flowers. The market spread over the Quai de la Ferraille, and in 1808, the carriage way being completely blocked up, it was transferred to the Quai Desaix, in the island of the Cité. In 1824 the number of flower-markets was increased to four, and there is an additional market about to be established at present. *Times.*

Pachyrhizus.—Among the esculent roots growing wild, and eagerly sought for just before the regular crops come in, or in times of scarcity caused by inter-tribal wars during the planting season, or by unfavourable weather, may be named the Yaka or Wa yaka (Pachyrhizus angulatus, Rich.), a Papilionaceous creeper, with trifoliate leaves and whitish flowers tinged with purple. In September and October its tubers send forth new shoots, which grow with rapidity and yield a tough fibre, invaluable for fishing nets. The plant delights in open exposed places and a rich vegetable soil, where the roots, which generally assume a horizontal direction, often attain from 6 to 8 feet in length and the thickness of a man's thigh. When cooked, they have a dirty white colour, and a slightly starchy but otherwise insipid flavour, much inferior, I thought, to that of wild Yams. However, Mr. Charles Moore, of Sydney, ate them in New Caledonia, and is inclined to pronounce more favourably upon their taste. Living plants were brought by him to the Sydney Botanic Garden, where they are now growing with native vigour in the open air. *Seemann's Mission to Viti.*

Calendar of Operations.

(For the ensuing week.)

HYACINTHS, Narcissus, Crocuses, and other Bulbs, placed either in pots or glasses, should be kept as close as possible to light, provided they are well furnished with roots and are commencing active growth. A slight amount of fire heat should be kept up in conservatories and Greenhouses, in order to expel damp. All dead leaves on plants in these structures should be picked off and removed. Water should be given sparingly while the present dull weather lasts; and leaves, if dusty, should be carefully washed with a sponge. In short, thorough cleanliness should be enforced in every department.

FLOWER GARDEN AND PLANT HOUSES.

ACHIMENES.—A batch of these should now be started in heat for stove and warm conservatory decoration during next month. They may either be grown in pans or pots, according to the taste and requirements of the cultivator.

BEDDING PLANTS.—Cover securely at night; but during favourable weather give air pretty freely during the day.

CALCEOLARIAS.—Herbaceous sorts potted last autumn will now be well established, and will require little attention beyond that of frequently fumigating them to keep down green-fly. Such as are required to bloom a little earlier than the others may now be shifted and placed where they will have a temperature of about 45°, and a moist growing atmosphere. In shifting it is a good practice always to sink the ball a little, in order to admit of a top-dressing of fresh mould being put over the riper parts of the young wood, which thus treated soon emits roots, which materially increase the strength of the plants. Thorough drainage, too, is a point to which particular attention must be paid if healthy well-bloomed specimens are desired.

GLOXINIAS.—A few potsfull of these may now be placed in heat and treated in the same way as Achimenes.

FORCING GARDEN.

Forcing of all kinds must advance very gradually until we are favoured with more light and sun heat; the remarks made last week under this head are equally applicable to this.

CHERRIES.—Follow Nature closely in the Cherry-house; no extreme heat will succeed. Plenty of air, permanency of atmospheric moisture, and a very moderate temperature, are the requisites.

FIGS.—Steer a course with these about intermediate between the early Vinery and the Peach-house. In sunny days, however, the temperature may rise equal to that in the Vinery.

PEACHES.—Proceed cautiously with these. Supposing the trees to be in course of blossoming give a little more fire in the daytime, to enable you to give more air; the latter can scarcely be given too freely if the weather is favourable, and the thermometer within can be maintained at 55°; let it, however, sink at night to 40° or 45°. If the roots inside have not been watered, or only slightly so, and the drainage can be relied on, apply another thorough watering with rich liquid manure, clarified of course, and heated to 75°, part of which heat will be reduced immediately it comes in contact with the soil.

PINES.—Plants expected to fruit early should now be allowed a slight rise of temperature. On light days let the thermometer indicate 70° or 75°, and should sunshine occur, 10° more may be indulged in. Those who are inclined to try the planting-out system had better postpone it for a few weeks; some special compost and previous training are however necessary in order to ensure success.

POTATOS.—Endeavour to get a spare frame or pit for early Potatos; a bottom-heat of 70°, that will last for a month, will be amply sufficient; the sooner it dies away after that the better, a continuance of bottom-heat too long will draw the halm.

VINES.—Supposing the buds in the early house to be now considerably advanced, thinning them becomes a daily and important operation. In all disbudding, do not take Nature by surprise—gradual, but rather frequent thinning is the maxim. Above all things, ensure a permanent supply of atmospheric moisture; if this is accomplished by fermenting materials so much the better. If not yet done, put abundance of covering on outside roots, and if it be slightly fermenting so much the better. In late houses in the majority of cases the last Lady Downes' and St. Peter's will now be cut; if the rods are to be taken out to rest let it be done forthwith. They are best laid on the ground, and covered up with straw for fear of injury by frost.

HARDY FRUIT AND KITCHEN GARDEN.

Proceed with digging, trenching, &c., whenever spare ground occurs and time and weather permit. If some of this ground should require digging a second time, previous to cropping, so much the better; it will amply repay the labour. All fruit-tree planting not done in the autumn should be proceeded with at mild intervals; wherever the subsoil is bad it should be entirely removed, and a platform of brick-bats, rubble, or cinder-ashes, rammed hard at about 1 foot below the ground level. On this place, if possible, a little rough turf in a fresh state, and be sure to mix some fresh maiden soil with the compost, using sound and tenacious loams for Apples and Pears; sound yet mellow loam for Peaches, Apricots, &c., and free upland soil for Plums, Cherries, Vines, and Figs. Follow up nailing and training of fruit trees; lose no time, when the weather permits, of advancing these matters. Where such is completed, we would advise a syringing with the laundry soapsuds, saturating every crevice in the wall.

CAULIFLOWERS.—Plants in frames or under hand-glasses should now have free exposure, except during heavy rains. Should frost again set in they must be protected.

CARROTS.—Sow Early Horn on a slight hot-bed.

LETTUCES.—Cabbage and Green Cos may now be sown on a warm border, and when up protected, should the weather become unfavourable.

ONIONS.—A few may be sown on a warm border for drawing in a young state; if they should be destroyed by frost the loss will not be great.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending Jan. 20, 1864, as observed at the Horticultural Gardens

January.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind
Thurs. 14	7	30.255	30.248	39	36	37.5	40	40½	E.
Friday 15	8	30.256	30.236	39	31	35.0	40	41¼	E.
Satur 16	9	30 180	30.100	37	30	33.5	40	41	S.E.
Sunday 17	10	29.940	29.980	45	34	39.5	40	40	E.
Mon. 18	11	30.054	30.047	47	35	41.0	41	41¼	E.
Tues. 19	12	30.126	30.109	50	43	41.5	42	41	S.
Wed. 20	13	30.222	30.100	49	42	45.5	44	41	S.
Average.		30.147	30.117	43.7	35.8	39.0	41	40.9	

Jan. 14—Foggy; dusky and foggy; overcast; foggy.
— 15—Hazy; foggy; overcast.
— 16—Slight frost; partially overcast; fine.
— 17—Rain; drizzly; rain; heavy rain at night.
— 18—Dense fog; foggy; rain.
— 19—Fine; very fine; slight rain; rain at night.
— 20—Rain; densely overcast; rain at night.
Mean temperature of the week 3 deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Jan. 30, 1864

January.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	NE.	E.	SE.	S.	SW.	W.	NW.
Sunday 24	44.3	32 6	38.5	18	0.63 in.	3	4	2	1	4	16	6	7
Mon. 25	44.6	32.4	38.5	20	0.90	1	4	3	1	5	14	5	4
Tues. 26	45.3	32.6	39 0	17	0.34	1	5	3	4	2	15	5	1
Wed. 27	44.2	30.8	38.1	17	0.43	2	5	4	1	5	14	5	1
Thurs. 28	45.4	30.8	38.9	20	0.17	2	5	4	1	2	15	6	1
Friday 29	45.7	32.0	38.8	17	0.23	9	4	—	2	2	13	6	4
Satur. 30	44.4	32.4	38.4	19	0.39	2	3	3	4	3	12	8	5

The highest temperature during the above period occurred on the 29th, 1863—therm. 57 deg.; and the lowest on the 31st, 1857—therm. 8 deg.

Notices to Correspondents.

CAMELLIAS: *Alpha.* We should recommend you to grow fimbriata, alba plena, and Duchesse de Berri, all whites; Comtesse Lavinia Maggi, and Countess of Derby, white striped with red; Reine des Beautés, delicate rosy blush; Sacco, pale pinkish rose; Baron de Vriese and Sarah Frost, bright rose; Mathotiana and punicea, crimson; Chandleri, mottled red and white. They are all good.

EXHIBITIONS: *I. of Thanet.* We may be wrong, but you cannot be right. Who ever heard of such a measure?

NAMES OF PLANTS: *X Y Z.* Echeveria coccinea, Sparmannia africana. Sempervivum glutinosum. Not one of these was numbered.—*C H S.* Some Solanaceous plant; but what do you mean by a *pod?* We find nothing but an empty calyx.—*A C.* Oncidium sanguineum, and Eulalia nepalensis, a beautiful Grass we never before saw alive; it is, as we learn from a friend well acquainted with Sikkim, a native of the temperate parts of that Indian country—*C F.* Next week. We are not quite well enough to go into the inquiry to-day.

PEACH-HOUSES: *Lincoln.* The information given is not sufficient. If the border is outside, and the trees are to root in that direction, keep the pipes a couple of feet from the wall, so that the stems may not be affected by it; but if the border is inside, as is to be preferred, keep the pipes near the front wall and plant inside them, sloping the trees so as to meet the front of the trellis at the point required. In either case the stems would require protecting from the direct heat radiated from the pipes. As to heating power, a good saddle boiler, well set, will do all that any other boiler could accomplish, not so rapidly, perhaps, as a tubular one—which you seem to dislike, but quite as efficiently. You do not give the size of your house. We can therefore only say in respect to the quantity of piping required, that a practical rule is to use one foot of 4-inch pipe for every 5 feet of glass.

RENANTHERA COCCINEA: *G L R.* The flowers are scarlet marked with yellow. It was bloomed at Claremont in 1827, subsequently at Wentworth for many years in succession, and at Chatsworth in 1836. This will be sufficient to show you that it is not such a rarity as you seem to suppose. In these cases the success appears to have resulted from exposure to strong light.

VANDA CRISTATA: *A Subscriber.* We cannot recommend dealers. Apply to any of the firms which advertise that they have collections of epiphytes for sale.

MISC.: *Norwich.* We are very sorry to say that your communication is perhaps the most illiterate we ever saw, and quite unsuited to our columns. If what you say can be proved, pray, in that case, get your statement put into English.—1*s.* will be given for Oct. 15, 1853, on application at this Office. Also 1*s.* will be given for No. 19, 1863.

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Professor J. MORRIS, F.G.S., will give a COURSE of LECTURES on GEOLOGY.

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JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh, will give a COURSE of LECTURES on the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.

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JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire, will LECTURE on CATTLE, SHEEP, PIGS, and POULTRY.

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JOHN THORNHILL HARRISON, of Frocester Court, near Stroud, will give a COURSE of LECTURES on DAIRY HUSBANDRY.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.
THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin, will give a COURSE of LECTURES on FARM LABOUR.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.
ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions," will LECTURE on ROTATION of CROPS.

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The Agricultural Gazette.
SATURDAY, JANUARY 23, 1864.

IN a recent number of a Swiss journal, the *Gazette de Lausanne*, there is published a letter from Baron LIEBIG to M. BLANCHET, of Lausanne, replying to a communication in which that gentleman had called attention to a defect lately observed in the colouring principle of the Madder root. He had also asserted the probability that this is owing to that imperfectly nourished growth of the root, which is alone possible on a soil that has been long robbed of its potash salts and other necessary mineral matters. The following is LIEBIG's letter, which we publish in connection with the criticism by Mr. MATTHEW on a former letter given in our columns the other day:—

"Dec. 2, 1863.

"Receive my sincere thanks for your welcome letter, which is another proof of the interest which you take in my labours. The fact which you have communicated to me about the cultivation of Madder is very curious, and I do not doubt its accuracy, for I have remarked an analogous circumstance in the cultivation of the Potato. I have spoken of it in my discourse as President of the Academy of Sciences, of which I send you a copy. The experiments which are there described throw great light on plant diseases.

"A French landowner in the department of the Indre, whose Vines were severely attacked by oïdium, had asked my advice about a remedy—

the sulphur being no longer of any use. I advised him to manure his Vineyards with wood ashes and phosphates. Last October he sent to me a document signed by a number of persons who had seen his Vines: it declared that those which had been manured with ashes and phosphates had produced healthy fruit in abundance, while others close by, which had not received these manures, were the prey of oïdium.

"My teaching, after so much discussion and resistance, has now reached the period when it is no longer opposed, and when doubt has disappeared. The time has now come when agriculturists should learn to apply it, in order to gather its fruit. In Saxony they have already served this apprenticeship, and the consequence is that the crops of 1863 have surpassed the average of 10 previous years—a great and beautiful result. In order publicly to acknowledge it, the King of SAXONY has written to me, that the progress of agriculture in Saxony has been due to the judicious application of my theory in his kingdom."

We cannot in this country regard a general good harvest as the result of either LIEBIG's teaching or that of any other man.

In 1863 we have had a harvest not merely better than the average of the past 10 years, but exceeding in its productiveness that of probably any previous year; but we do not consider this increased productiveness to have been a work of Art at all. It cannot be attributed to drainage, to guano, or to tillage, or to practice based either on the mineral theory or that of humus and the vegetable mould. It has been owing simply to the weather; and this we are very much inclined to think is all powerful in Saxon agriculture, just as it is in English. Certainly, loyal people as we are, we should not consider the testimony or opinion of a King on such a subject to be of any special value, unless he were also an intelligent agriculturist.

The following is an account of the Potato experiment described by LIEBIG as having been carried out under the direction of Professor NAEGELI and Dr. ZOELLER. Three fields of peaty soil—"tourbe pulverisée"—were set apart for it, of which one was left unmanured, another received a dressing of ammoniacal salts, and the third received a dressing of mineral matters corresponding to the ash of the Potato. Treated in other respects alike, the crops of the three fields were in the proportion of 100, 120, and 285; and in addition to this the two inferior crops soon became the prey of the Potato disease, while the third is sound to this day (Dec. 1.)

These facts, says LIEBIG (we are condensing his remarks), throw great light on the subject of plant diseases generally, especially on that of the Vine, and probably also on that of the silkworm. If the leaf of the Mulberry tree is no longer a healthy food, it is because the exhausted soil where the tree grows is no longer able to supply it with the elements of healthy growth. The discourse concludes with a reference to the coming impoverishment of Lombardy, owing to the failure of the silk industry, which is itself declared to be the result of an impoverished soil.

THERE is not a drearier waste than Woking Common within the limits of the island. A black sand, white and yellow six inches below the surface, which is covered with a stunted growth of Ling, and here and there a Furze bush, offers the very poorest promise to the agriculturist. And yet close upon the edge of this waste, gradually winning way within it, lies a farm whose produce averages close on 5 quarters of Wheat per acre, more than 6 quarters of Barley, and more than 30 tons of Mangel Wurzel.

Riding as we did last Friday along the very edge of the moor, then looming black, indefinite, and gloomy through the mist of a cold damp January day, nothing could exceed the contrast presented on this farm by the bushy green luxuriant plant of Rye, the clean fallows covered with piles of Mangel Wurzel, earthed over from the frost, and the thin but uniform and healthy plant of Wheat already well flattened down for tillering in the early spring, all of which are separated merely by the hedge from the utter worthlessness, and, but for the obvious facts beneath our feet, the hopeless sterility of the waste close by.

This contrast, which must be even greater at almost any other season of the year, is wholly a work of Art. And in its history we have one of the best lessons which English agriculture offers to the cultivator of light land.

Of course the difference between the Common and the cultivated land is not the work or growth of yesterday. Hoe Bridge Farm has, for the most part, been long enclosed and cultivated. Close by it stands the mansion built by JAMES THE FIRST, they say, for a favourite of the Court; and the "Banquet House Field," next to it, taking its name from those times, seems to put back the original enclosure to centuries ago. But within the farm, on what is now one of its most fertile spots, stands almost in ruins the slender column which then served as a land lighthouse to guide the traveller across the moor. And there is enough of evidence not only upon the gradually retreating edge of the waste, but over the whole farm which here abuts upon it, to show how the poor sandy wilderness of one century becomes the fertile field of the next.

Of course the increased productiveness of this land is not the gradual growth of centuries when it is held by men of the energy and intelligence of the present tenant of the Hoe Bridge Farm. Mr. HILDER has added greatly to its fertility during the 16 years he has occupied it under Earl ONSLOW. And it is to his unusually vigorous prosecution of the plans by which light land may everywhere be fertilised, and by which it has been made so productive here, that we have now to call attention. On land originally poor, great crops of Wheat and Barley are now grown—and nowhere is the necessary connection between a great head of stock and a great growth of grain more strikingly illustrated. The land altogether in Mr. HILDER's hands is about 500 acres in extent, of which about 360 lie upon the edge of the moor. On this small light sandy farm a herd of 50 to 70 cows is milked for the London market, a dry flock of Hampshire sheep, varing from 200 to 400 head, is fed, and hogs ranging in number from 1000 to 2000 have been fattened annually up to an average weight of 10 or 12 scores a piece. Add to these, which are the principal points in the management of the business, that 16 to 18 farm horses are employed in cultivation and carriage, and that the labour bill varies between 1000*l.* and 1100*l.* per annum, and it is plain that we have here a very remarkable specimen of vigorous and liberal farm management.

It is now seven or eight years since Mr. HILDER commenced the pig feeding, which has since been one of the chief features of his farming. The sheds and barns of a characteristic Surrey homestead have been divided into pens 10 to 15 feet square, in each of which 6 to 8 hogs are kept. The food is three times a day put in their troughs, as much as they will at once eat up; and straw, thrown in among them, is trodden down on the box-feeding plan, the whole being cleaned out when 3 or 4 feet deep. The pigs are purchased in various parts of the country (being generally delivered by the London and South-Western Railway at the Woking Station). They average from 5 to 7 scores' weight when bought. Barley, spoiled Wheat, Indian Corn, Peas, Beans, Buckwheat, and Lentils, purchased in Mark Lane, are brought down to Woking, ground and mixed in the proportion of one-half Barley meal, and the remainder mingled and varied according as the market prices guide their purchase. The food is prepared in large tubs upon the barn floor, to which water is laid on. It is given fresh and fresh, not allowed to sour; and in a thin uncooked porridge it is served out to all alike at the average rate of half a peck of meal per head daily. Three men do the whole work of feeding and keeping 500 hogs, which has been the usual number on hand at a time. The average growth of pork or bacon is 1 stone (8 lbs.) a week each. They are kept till fit for the butcher, from three to four or even five months, according to the condition in which they had been bought. The last weeks in the fattening process, when they sleep and rest most, are the most profitable. And when ready for the market they are sent by truck to wholesale bacon curers in many parts of the country; large numbers going into Gloucestershire to the manufactory of Messrs. HILLIER & SON, near Nailsworth, lately described in these columns. So long as the carcase is worth near 6*d.* per lb., and the meal can be bought between 7*l.* and 8*l.* per ton, the business yields a moderate profit, independently of the manure, which on so large a scale of rich feeding is very valuable. But, on the other hand, disease has occasionally destroyed all profit. During the past autumn, for example, an attack prevailed which when suffered to pursue its course proved generally fatal in a few days, the result of disease both in the lungs and in the stomach, which destroyed large numbers, and put a stop almost entirely to the feeding. And the number now on hand would be still further reduced on this account, but for the need of maintaining a connection with the trade. The disease has now ceased its ravages, but were it not for the need or advantage of keeping up a connection with regular customers, Mr. HILDER would have stopped his pig feeding altogether until his premises should be considered wholly fresh and free from any taint. In the mean time nothing can be kept neater or cleaner than the gangways, boxes, sties, and every separate part of the old steading in which all these operations are carried on.

Another great business on the farm is the cow-keeping. A herd varying from 50 to 70 in number is kept as long as they continue productive—young cows of all kinds, but chiefly smallish horned cows, being bought in Suffolk markets. They are milked twice a day—the evening's meal being sent up by the mail train in time for London breakfasts. They come to calve at all times of the year, so that the produce of milk does not vary materially from one month to another. And an average yield is about 10 quarts a day—this being made up of such maxima as 25 and even 30 quarts a day in a few rare cases, with the larger number of moderate and inferior milkers dwindling to the time when they will be dry before calving. The price realised is 2*d.* per quart upon the farm after all the risks and expenses of conveyance are covered. The cows are fed just now on Mangel Wurzel, grains, Cotton-seed cake (rough), pollards, Wheat chaff, and hay. During summer they are at Grass, and receive grains and cake in addition. The rough (not decorticated) cake is found to answer almost as well as the Linseed cake previously given. From 4 to 6 lbs. of the cake, 1½ peck of pollards and as much Wheat chaff, about 3 pecks of brewers' grains, 1 cwt. of cut Mangel Wurzels, and 5 or 6 lbs. of hay, make up the liberal daily ration at present.

The sale of milk, in this way generally profitable, is often made a loss by the attacks of foot and mouth disease. The herd is replenished as often as required by purchased cows, and it is rarely that any fresh additions are made in this way without bringing this great cattle plague along with them. The herd is now comfortably housed in half-closed sheds and yards, being supplied with water when required. Four men, a boy, and two women feed and clean and milk from 50 to 70 cows.

Of course with such an immense live stock to feed and bed, the purchases, always of food and often of straw, are very large. Grain and cake and meal, equal to 500 or 600 and sometimes 1000 bushels a week, are brought on to the farm. And the return of meat is correspondingly large. Taking the flock of fatting sheep into the account, and supposing that 300 make 40 lbs. of mutton each—that in a favourable year 1500 hogs make 100 lbs. of bacon each—that 50 cows make 800 gallons of milk each, and putting the gallon of milk as equal in feeding value to 1 lb. of meat—we have here a produce in animal food of 200,000 lbs. a year on a farm of 500 acres—a manufacture of 400 lbs. of meat per acre—probably quite unparalleled.

Of course it is made possible only by the large quantities of food bought on to it, purchased in Mark Lane and elsewhere. But on the other hand, the immense quantities of rich manure thus made on the farm, are increasing its productiveness not only of cattle food, but also of grain crops. The land is cropped for the most part on the four-field course—but Barley is sometimes taken after Wheat—and Clover is taken only with half the Barley crop, the other half of the Barley stubble being generally put to Peas. Wheat stubbles are also sown down sometimes with Rye or Trifolium, followed by Turnips—or with Rape followed by Peas and Turnips, or they are deeply ploughed, manured, and then shallow-ploughed, and followed by Barley.

It is the practice, for all root crops, to plough deeply with four horses in the autumn. And all the land thus gets a furrow about 12 inches deep every other year. The steam-plough has been hired—and has worked the steepest and most uneven slopes upon the farm with ease. From 12*s.* to 15*s.*, and in one case to 30*s.* per acre, along with the provision of coal and water, has been paid. The last being a case of subsoiling, where two furrows only were worked at a time.

Returning to the subject of crop cultivation: 5 to 6 pecks of Wheat, 7 pecks of Barley, 3 to 3 pecks of Peas, are the ordinary seeding per acre. White Velvet-ear, Talavera, and Suffolk white Wheats; Chevalier and long-eared Nottingham

Barleys; Early Dun hog Peas; Long Red and Orange Globe Mangel, (the seed grown and saved at home) are the sorts grown. They were covering in Peas already sown, and elsewhere ploughing 12 inches deep a Wheat stubble for Mangel Wurzel last Friday. The week's frost had enabled the clearance of all the pig-sties and cow-yards—and the manure was lying in heaps already for the most part spread over the deeply ploughed Wheat stubbles ready to be lightly covered in for Barley or Mangel Wurzel. The Mangel heaps, 9 or 10 feet wide, thickly covered up to the ridge lines with earth, these being thatched, lay along the road sides near the cow sheds, or they lay in small conical piles scattered over the field where they grew, and close by the Rye fields, on both of which they were to be fed by folded sheep. In this case they are thrown, leaves and all together, untouched by the knife, and they come out dry and sweet. From 50 to 60 acres of Mangels are annually grown. Their cultivation and manuring is as liberal as possible; 20 to 30 cartloads of dung are ploughed in, and 3 or 4 cwt. of mixed guano and salt are applied per acre, and the seed is drilled on the flat in rows about 33 inches apart.

In this way, notwithstanding the cold weather of the last three or four summers, great crops have been grown. And in good years 40 to 50 tons per acre, ascertained by weighing a few perches here and there, have been obtained. The crop is of course less in cold wet summers, for here, but still more in the case of the grain crops, the cultivator, notwithstanding all his efforts, is dependent on the season. Off the hundred acres of Wheat which are annually grown, 1000 sacks for sale are expected and generally obtained. This year, from such threshing as has yet been done, the yield promises to be considerably greater; last year, with the land in quite as good condition, the yield did not exceed 26 bushels per acre. And the variation in the yield of Barley is just as great.

With the immense yield of rich farm-yard manure at his command, Mr. HILDER is gradually feeling his way towards an extension of his farm within the moor. The Gorse is pulled up; and the Ling and Heather turned under by the plough. All that is brought up by the harrows is burned, and the land, then dressed with ashes, with soapers' waste, with lime, or left undressed, is sown with Turnips. A poor crop is the result; best, however, where the soapers' waste has been used. Sheep are being folded on the land—receiving Cotton-cake and hay—and with a dressing of dung upon the sheep-fold the land will soon be fit for some more valuable crop.

It is chiefly by very deep ploughing, and by heavy dressings of rich farm-yard dung, and by the sheep-fold, and by the application of artificial manure, that the land is raised and kept up to the high mark of its fertility. There is not here, as there is in the light land districts of Norfolk, a calcareous marl immediately beneath the surface with which to improve both the texture and the composition of the soil. Fertility has been all along and is still almost wholly artificial, depending less here than probably anywhere in the country upon the natural resources of the land. It is a fact of very great agricultural importance that in a case so entirely artificial, the result should have been fairly remunerative.

The neatness, cleanliness, orderliness of the whole farm and its management, show that good business capacity has had a great deal to do with this success. And the Hoe Bridge Farm, no doubt one of many such examples, is a proof that our best illustrations of agricultural energy, efficiency and success, do not exist among the speakers and the writers upon agriculture, whose names everybody knows—but among the less pretentious men who are rarely heard of beyond the limits of their well conducted business.

—— WE learn with great satisfaction that Professor JAMES BUCKMAN, F.L.S., &c., has lately received two handsome presentations of plate, in acknowledgment of the valuable services rendered by him during his Professorship at the Royal Agricultural College, and in token of the regret with which his departure from Cirencester is regarded.

A massive Silver Salver, and other pieces, have been presented to him by numerous scientific and personal friends, including the very highest names in the ranks of English men of science, "to mark their high appreciation of his extensive attainments in various sciences and collateral pursuits, as well as of his readiness and success in imparting knowledge."

And a very beautiful "Grace Cup" has been given by old pupils at the College, "as an expression of their high esteem—in testimony of the fidelity and success with which he has discharged the duties of his Professorship during sixteen years—and in acknowledgment of the important services rendered by him in the advancement of scientific agriculture."

BARON LIEBIG VERSUS THE VEGETABLE MOULD.

REFERRING to a letter from Baron Liebig to me which appeared in your Journal of the 2d inst., in which he supports what he terms the mineral theory of the fertility of soils in rather a novel manner, and denounces the opponents of his doctrine as sinners "against God and humanity," as if he were Papal head of agricultural science, himself incapable of fallacy, I regret to observe that a little more than a whole paragraph has somehow been omitted. This the Baron may take umbrage at, as it contains a portion of such proof as he adduces of his mineral theory: I therefore forward to you a copy transcribed from his letter to me of the omitted portion, which is as follows:—

"You will, I trust, not consider it vanity on my part, if as a means of convincing you I quote the words with which a decoration sent me yesterday by the King Johann of Saxony was accompanied. In the diploma brought me by one of his Majesty's Ministers, it was written that an order was given in recognition of my services to agriculture in Saxony, whose practical working had in manifold instances been benefited by my teaching; and on account of the undeniable success resulting from the impulse it had given.

"These are words which a king only utters when about the truth of a doctrine no doubt any longer exists. He must have before him real successes and results, and thousands of witnesses, to pronounce such a judgment."

The very convincing scientific arguments of the above quotation need no comment. Here I must apologise for the flippancy of which the writer complains, and also perhaps for the wantonness of the act of forwarding to him a copy of the *Times* extract. In his reply, which I received last summer, but which only appeared in your Paper of the 2d inst., pique seems to have prevailed over a superior intellect which had just left off banqueting upon incense from royalty, and led him to express himself in a manner, which out of regard to him as a man of science I considered improper for me to publish without his sanction, although I think if any part be published, the whole ought to be. And since he himself sent over a copy to England with authority to publish, I had no right to object. In the note I wrote to him from Holstein, I spoke out my true sentiments regarding him, though perhaps somewhat strongly expressed, which might be necessary to balance what he terms the flippancy of the extract of the *Times*. His reply, in its disparagement of the writer of the note and extract (who, if he did not know, he ought to have known, had done what may be considered quite as much as he himself had done to pioneer useful science), shows how much sensitiveness will overcome the better judgment of a man of eminent ability. But the vanity and irritability of eminent men is generally quite in the ratio of their ability—is indeed often the cause of the eminence and usefulness they attain. We must therefore rest content, though our man of science is not all perfect. It does not dim the beauty of the flower or diminish the usefulness of the fruit, that the plant has sprung from and fed upon what we in our delicacy regard as offensive. It affords one of the curious balancings of Nature which extract good out of evil, and also evil out of good.

Liebig in his letter adduces his numerous honours as proof of his doctrine, that fertility does not depend upon the existence of the vegetable mould. In maintaining this doctrine, he says that he has received honour from all the Academies of Europe, and especially from a crowned head. I may state that I have received no such marks of honour? But anybody knows the little faith that can be placed upon such. The note I sent to Baron Liebig was honestly, kindly, and respectfully written, and contrasted a little with the character of the reply. When my brother agriculturists and myself are spoken of so arrogantly, some may think so offensively, so insultingly, it is right for me to speak out.

I do not say that Baron Liebig's honours are not fairly won, or that a little self congratulation may not rightly be allowed him. His analyses of vegetables, his researches, discoveries, many of his conclusions in vital chemistry, and even his mineral theory, one-sided, defective, and so far erroneous as it is, are the fruits of untiring labour, deep thought, and strong natural ability, researches carried out no doubt from a desire to do good to his fellow man, as well as from the desire of fame. In honouring such a man, scientific societies and crowned heads do honour to themselves. It is pleasing to think he has lived to enjoy his merited fame.

It is proper here to remark that at the commencement of his most recent work, "The Natural Laws of Husbandry" (1863), in the 13th line of the first chapter Liebig states as follows: "*All the materials constituting the food of our cultivated plants belong to the mineral kingdom.* The gaseous elements are absorbed by the leaves, the fixed elements by the roots; *the former, however, being often constituents of the soil, also may reach the plant by the roots as well as by the leaves*"! (The italics are mine.) I may add that in almost all cases of fertility they do reach the plant by the roots, and, along with the minerals composing the vegetable mould, are the cause of the fertility. The paramount importance of the vegetable mould does not depend upon the gaseous elements alone, but upon being the garnered supply of all the constituents of vegetables, even including in the fields of nature their germs or seeds. What says Liebig to this? Why does he ignore the paramount importance of the vegetable mould? He need not attempt any longer to maintain the shadow of his old absurd theory, when he himself is forced to proscribe the substance. The above quotation affords a very curious assertion of, and tantamount renouncement of his exploded theory—said and unsaid in the same sentence. There is an old adage, "learn young, learn fair." It is pretty clear that this chemist, in the new field of agriculture which he had entered upon, when the mental pliability becomes impaired, found himself a little at sea, and seized the first opportunity in his recent work to say something in Sybil fashion—something dubious, to be construed in either sense.

After the above not very ingenuous acknowledgment of error, it may seem a matter of supererogation to expose his denial of the vegetable mould being the chief cause of fertility, as stated in his letter, yet was the letter written after his last work, from whence the above extract is taken. It is rather curious that Baron Liebig, in reference it would appear to what I have written, adds the word humus (in his letter to me the words were "the vegetable mould or humus," but humus was left out in his published letter). I never made use of the term humus, and desire him when he directs anything against what I state, to remember this. To some it may appear that this combining of terms is upon the principle of "call a dog a thief and hang him"—although the most honest and faithful creature in creation.

Let it not be supposed that I ever advocated the idea that the minerals which constitute the loose matter of the globe are of no importance to the fertility. Even clay (argil) the least serviceable of the common minerals as a constituent, is the most serviceable in the retention of moisture, and in giving a firmness or adhesiveness to the soil. My vegetable mould—that which the wise, thoughtful German people term Mutter Erde—Mother Earth—is especially composed of the more fixed constituents of past organic life, a portion of the more volatile escaping, more especially under aration and aëration. Therefore let Baron Liebig and his followers look a little deeper into nature before they attempt to controvert any of my views or statements, or arrogate to themselves a right to reprove.

Space is wanting to proceed further at this time. As yet I have only been playing with the subject and with Liebig's letter. In a future contribution I will enter seriously upon the subject of the vegetable mould, its gradual accumulation in the fields of nature, its exhaustion under civilised man, and its importance as the parent of fertility, containing the minerals as well as the more volatile constituents of plants, also the means how best it can be maintained or increased under aration. This is the most important question that has been brought under the consideration of man. *Patrick Matthew, Gourdie Hill, Errol.*

WHAT IS TO BE DONE WITH OUR CLAY LAND?

PEOPLE are sometimes heard to express surprise at the apparent disproportion which has existed for some time between the prices of grain and butcher meat, on the supposition that when the labouring classes can get breadstuffs at a low price they will not pay a high one for meat, by which the relative prices of both should be in some measure equalised. Such, however, is proved not to be the case, and may, I think, be accounted for upon no unreasonable grounds. The labourers in this country, with the unhappy exceptions of those connected with the cotton trade and manufacture, have been in general well employed and earning good wages; and many more now than at any former period employed in the construction and use of machinery, which may be called "skilled labour," are in receipt of higher wages than usual, in proportion to the intricacy and value of their work. Such people having acquired the taste for and the habit of using meat in their families will not readily leave it off. And it is a natural consequence that the cheaper they can obtain the necessary amount of bread and potatos, both of which are to be had at low prices, the more they have to spare to indulge the taste for meat—a healthful state of things—which every well-wisher of the industrious and productive classes of the community would wish to see perpetuated. Notwithstanding the high prices which have prevailed for butcher meat of late years, there is good reason to conclude that they would have risen still higher but for the depressed condition of the countless operatives and their families in the cotton manufacturing districts, who have been unhappily forced on short allowance.

This change in the relative value of agricultural produce is telling a tale and affecting in an equal degree the value of the kinds of land calculated for raising the different descriptions of produce; for while sound mountain pastures, grazing land, and farms in a convertible state of husbandry, adapted to the growth of root crops and capable of maintaining a good head of stock, both in summer and winter, are in great demand, tenants can hardly be found to engage clay or Wheat-growing farms as they fall out of lease, at the same rents which they are now paying, even where considerable outlay has been incurred by the owners in draining, and the construction of suitable and substantial buildings. It becomes matter of anxious inquiry how such lands are to be treated, and what course is to be taken in order to maintain their value, and to obtain compensation for the money invested in them. Some people are heard to say, but rashly and ignorantly, that such description of land should be laid away for permanent pasture. To this there are obvious objections. Such as the great expense attending the first process in doing so effectually, the great doubt of success from the unfitness and intractable nature of the soil, and the necessity which exists for a sufficient and nutritious supply of food for live stock in winter as well as in summer, which by such a course would be found wanting. I fully admit the benefit of having a good proportion of old Grass land in all farms of that description, and the wisdom of supplying that judiciously when wanted. To do this with any hope of a satisfactory result, it is necessary that the land be well prepared, cleaned from all Couch and weeds, pulverised by a winter's exposure, manured and limed on the surface,—(nothing is more conducive to a good take of small seeds than the application of lime)—and then sown when in a friable and open state, with a good mixture of seeds suitable to the kind of soil, and without a corn crop; though, if the soil will admit of sheep folding, a thin sowing of Rapeseed or Barley among the Grass seeds may be allowed, to be eaten down in autumn before frost comes on and while the land is in a dry state. In the second year it should be stocked with sheep, and light cattle, which keep down the strong Grasses that are passed over by the sheep, and have a tendency to usurp the ground and overgrow the finer plants, if left to luxuriate. Then in the third or fourth year, when the plants begin to look sickly and the pastures to fall off, a manuring of guano mixed with bonedust may be applied early in spring, and a dose of nitrates or phosphatic matter a little later. One cwt. of nitrate of soda and two cwt. of salt per acre, sown in rain, will tend greatly to invigorate the plants, causing them to put out fresh roots as well as to shoot out a large increase of foliage, which is again returned to the soil as manure through the stock. In this way a portion of good pasture may be obtained on each farm where it is deficient of it, which will tend greatly to its profitable occupation.

But still the question remains, which forms the great difficulty—of how clay soils are to be cultivated to advantage with low prices for Wheat? It is unnecessary at this day to refer to the great essential of thorough and effectual draining as the first and indispensable step. But even after being drained, land of a strong and tenacious quality often sustains great injury from being ploughed in too damp a state, which can hardly be at all times avoided where the annual work of the farm is to be performed by such a number of horses as are considered to be adequate to it, or as it is deemed advisable to keep. But besides that, the constant passing over the land with the pressure of the horses' feet in the furrow creates a kind of firm band beneath the loose soil, at once impervious to the roots of plants and to the percolation of water and air, thus not only reducing the depth of soil by which plants are nourished, but also deteriorating the quality of what is left for them to operate upon. Many experiments have proved that the roots of Wheat and other grains will penetrate for several feet downwards in search of nourishment, and many of us have seen that the roots of Rape and Turnips have penetrated into newly made drains at the depth of three or four feet, to their great injury. To form an impenetrable band then under the furrow, cannot fail to be very detrimental. This might be in some measure remedied by trench or subsoil ploughing, but I fear nothing will obviate the evil of pressure by horses' feet, and obtain for such soils a deep and thorough cultivation, short of doing the work by steam. Few farms are, in their present state, as to the size and shape of fields and fast stones under the surface, fit for the introduction of the steam plough and cultivator, and many farmers are incapable of it; but no one can doubt that its advantages in clay soils are incalculable. Not only in its greatly superior cultivation, but in the power it affords of only going upon the land when in a fit state for working, whereas horses are required to work almost constantly to keep up with the requirements of the season.

In the county of Northumberland, where fuel is abundant, and clay soil prevails on the coast, if, by the combined efforts of landlords and tenants, by remodelling fields, straightening or removing fences, digging out boulders, &c., steam cultivation could be generally adopted, instead of that now in use by horses, I believe the great difficulty which now stands in the way of the profitable occupation of clay land would be obviated, and its produce immensely increased, to the general benefit of the owners, the occupiers, and the public. *John Grey, Tyneside.*

WHEAT ON A FEN FARM.

[The following interesting information on the produce of Wheat, date and cost of harvest, and cost of labour per acre on the whole farm, has been sent to us by the tenant of a Lincolnshire Fen farm.]

Year.	Harvest Commenced.	Cost Corn Cutting.	Produce Per Acre.	Sold Per Quarter.	Realized Per Acre.	Weekly Wages excepting Harvest.	Manual Labour Per Acre all Arable.
		s. d.	qrs. bus.	£ s. d.	£ s. d.	s. d.	£ s. d.
1839	August 22	13 2	4 2	3 2 0	13 6 10	..	..
1840	,, 13	11 4½	5 4	3 2 0	17 2 1	..	..
1841	,, 17	11 8	4 4⅜	2 18 6	13 8 0	13 0	1 8 0
1842	,, 12	11 1	5 3	2 6 8	12 10 10	12 0	1 7 6
1843	,, 18	13 7	4 6⅝	2 10 8	12 4 9	11 0	1 8 6
1844	,, 7	10 9	6 0⅝	2 5 8	13 18 2	12 0	1 10 0
1845	,, 28	10 2½	4 0	2 6 0	9 4 0	11 6	1 12 9
1846	July 23	13 2½	5 1	2 18 9	15 0 9	12 6	1 9 3
1847	August 7	13 6	5 2	2 7 4	12 9 4	13 0	1 9 9
1848	,, 2	12 2½	5 3⅜	2 6 0	12 10 0	12 0	1 9 10
1849	,, 17	12 6	5 4	1 16 5	9 19 0	12 0	1 11 6
1850	,, 12	9 1½	3 4	1 10 0	5 8 0	10 6	1 5 8
1851	,, 13	10 9½	5 5	1 15 3	10 0 0	10 0	1 8 5
1852	,, 9	13 2	5 7	1 16 6	10 13 10	10 6	1 10 6
1853	,, 15	14 7	5 1	3 16 8	19 16 10	13 0	1 16 4
1854	,, 22	12 4½	5 5⅜	3 7 4	19 2 3	15 0	1 18 10
1855	,, 22	10 7½	3 2⅜	3 8 9	11 7 7	15 0	1 16 7
1856	,, 15	17 5½	5 7	2 15 7	16 11 0	15 0	1 19 0
1857	July 31	15 0	6 0	2 9 0	14 14 6	13 6	1 15 10
1858	,, 29	13 10	5 0	2 4 2	11 0 2	12 0	1 10 9
1859	August 1	18 4	3 2	2 3 6	7 2 4	12 0	1 10 7
1860	,, 27	12 9½	3 0*	2 2 6	6 0 0	12 0	1 11 6
1861	,, 8	11 0	3 3⅜	2 17 6	9 15 7	12 0	1 11 6
1862	,, 14	12 0	4 2	2 6 11	10 0 0	12 0	1 10 1
24 years	.. ..	304 4	116 2	60 13 8	293 5 10	266 6	34 12 8
Average	August 11	12 8	4 6¾	2 10 7	12 4 4½	12 0	1 11 5¾

* Barely.

DEEP AND SHALLOW MILK PANS.

I SEND you a paper which I lately submitted to the Cork Agricultural Society—on deep and shallow pans. The experiments were conducted on reading an article which appeared in your Paper some time ago. It may prove interesting to your readers. *D. Cunningham, Munster Farm, Cork.*

It may be recollected that I had the honour of bringing before you in February last a paper on the various kinds of vessels employed in the dairy, and which was published in the society's last report.

"I showed from carefully conducted experiments, carried out at the Munster School Farm, that the materials of which dairy vessels are made had a considerable influence on both the quantity and quality of the butter produced. I found that glass vessels gave the largest quantity and best quality butter, and I stated that although their first cost considerably exceeded that of other vessels, yet that in the end I found them to be the most economical. The facility with which they can be washed and cleansed, &c., reduces the cost of labour by at least 100 per cent. Wooden vessels gave the smallest quantity of butter, and its quality was inferior to that from milk set in glass vessels. It is almost impossible, owing to the naturally porous nature of the wood, to keep the wooden keelers properly clean and free from acidity, and without which I need scarcely remark good and well tasted butter cannot be obtained. In the same paper I mentioned that many persons entertained the opinion that shallow pans or vessels threw up a larger proportion of cream than deep ones did, and I instanced an experiment which was published in the agricultural papers. The experiment was thus set forth:—

"In pans containing 1 quart the cream measured 1 gill.
,, ,, 2 ,, ,, ,, 2 ,,
,, ,, 3 ,, ,, ,, 2½ ,,
,, ,, 4 ,, ,, ,, 3 ,,
,, ,, 5 ,, ,, ,, 3½ ,,

"With the view of ascertaining whether there would be any difference in the per centage of butter from milk set in deep and shallow pans, I instituted some experiments in the school farm dairy, and I now beg to submit the results. In the months of July and August I made repeated attempts to carry out this experiment, but failed in consequence of the very high temperature in those months. It was indeed found to be almost impossible to make butter during these months, even with the use of ice for reducing the temperature of the milk.

"I had hoped to carry out this experiment at that season, as the cows were then fed solely on Grass. It was, however, during the month of September the experiments were made, and the cows were then getting a small quantity of Mangel leaves in addition to Grass. The milk was measured, skimmed, and churned under my own supervision. I have tabulated the experiments, giving the kinds of vessels used, the depth of milk and number of quarts in each, the produce of butter, and the increase per centage in each kind of shallow pan.

"The increase in favour of shallow pans I found to vary from 1 per cent. in glass to 4⅜ in wooden keelers. It may be remarked that each experiment consisted of two kinds of vessels—glass having been taken as the standard, and this was done for the purpose of again testing the accuracy of my former experiment with regard to the best material for milk vessels. The former experiments were carried out during the winter season, when the temperature of the dairy varied considerably, and the cows were then fed upon roots, rape cake, brewers' grains, and straw. The experiments fully show that both in summer and winter the materials of which milk vessels are composed have a decided influence on the yield of butter. The quantity of milk in the shallow pans was three quarts of milk in seven experiments, four quarts in four, and eight quarts in one experiment. In deep pans the quantity of milk commenced at four quarts and by gradation reached up to 16 quarts. The per centage of increase in the shallow pans differs very little, if any, when glass vessels were compared with those of delph, tinned iron, or earthenware, but when glass vessels were compared with wooden ones the difference was much greater. The result of the entire experiment shows that shallow vessels do produce more butter than deep ones, ranging from 1 per cent to 4⅜ per cent. The average increase is 3 per cent. in favour of the shallow pans. The practical question then arises: Will it be desirable to extend our dairies to more than twice their present size, to purchase three times the quantity of milk vessels, thereby involving an increase of labour and expense in order to gain 3 per cent. of butter? There can, however, be no doubt that where only a few cows are kept it will be advisable to use shallow pans.

TABULATED EXPERIMENTS OF DEEP AND SHALLOW PANS.

Milk Vessels.		Number of vessels in each experiment.	Depth of milk in each vessel.	Number of quarts of milk in each pan.	Total quarts of milk in each experiment.	Total produce of butter.	Increase of butter in oz.	Per centage increase in favour of shallow pans.
		Pans.	Inches.	Quarts.	Quarts.	Ounces.	Ounces.	Per cwt.
No. 1 Experiment. Sept. 5.	Glass ..	4	1¼	3	12	20½	½	2½
	Do.	3	1¾	4	12	20	..	..
	English ware .	4	2¼	3	12	20½	½	2½
	Do.	4	3¼	4	12	20	..	..
No. 2 Experiment. Sept. 12.	Glass vessels .	3	1⅓	3	9	14	¾	4¼
	Do. Do. ..	2	2⅓	5	10	15½	..	..
	Tinned Iron ..	3	1¾	3	9	14¼	¾	4¼
	Do. Do. ..	2	2¼	5	10	15½	..	..
No. 3 Experiment. Sept. 19.	Glass vessels .	3	1¼	3	9	14	⅝	3¼
	Do. Do. ..	2	2⅓	6	12	18	..	..
	Delph Do. ..	3	1¾	3	9	13	⅛	½
	Do. Do. ..	2	2¼	6	12	17	..	..
No. 4 Experiment. Sept. 22.	Glass vessels .	3	1⅓	3	9	14	½	2½
	Do. Do. ..	2	3⅓	8	16	21½	..	..
	Wooden Do. ..	1	1¾	8	8	12	1	4⅜
	Do. Do. ..	1	3½	16	16	23	..	..
No. 5 Experiment. Sept. 29.	Glass vessels .	2	1⅔	4	8	12¾	⅛	½
	Do. Do. ..	1	4⅓	12	12	19	..	..
	Wooden Do. ..	1	¾	4	4	5½	¾	4
	Do. Do. ..	1	2¾	12	12	18	..	..

"On reading an elaborate article on milk, by Dr. Voelcker, in the 'Royal Agricultural Society's Journal,' I was much struck by an experiment conducted by Tannert, which shows that milk should be skimmed in 30 hours to obtain the largest quantity of butter, the temperature being at 60 degrees. Two equal quantities of milk were put aside, of which the first, skimmed after 30 hours, yielded 30 lb. of butter; and the second, skimmed after the lapse of 60 hours, gave only 27 lb. of butter. Now, the practice in this country is to allow the milk to sit longer than 60 hours, in fact until the milk has changed from the acetous fermentation to the putrefactive, the result of which is seen daily in the Cork Butter Exchange, the greater portion of the butter sent in from the country com-

manding only third and fourth qualities. For the purpose of ascertaining the proper time to skim milk, I beg to give you the result of two experiments on that point. Four pans of milk of 9 quarts each were set, the first was skimmed in the course of 30 hours, the second in 36 hours, the third in 48 hours, and the fourth in 60 hours. In the first pan the milk was perfectly sweet—that is, free from any trace of acidity—when tested by litmus paper, as was also the second; the third showed slight acidity, and the fourth decidedly so. The yield of butter in the first was 9½oz., in the second 11¼ oz., and in the third and fourth 14 oz. A second experiment gave similar results—the temperature being 55 degrees. It thus appears that as long as the milk keeps sweet, the 'milk globules' continue to rise; that as soon as it turns sour, whether in 24 hours or 60 hours, the cream should be taken off, and under no circumstances should it be allowed to remain a longer time. *D. Cunningham.*"

THE MEAT MANUFACTURE.

[The following is the omitted portion of Mr. Coleman's paper read before the London Farmers' Club in December.]

How are the occupiers of arable land to stand their ground with the present low prices of Wheat? Why every one who knows anything of farming will answer, by keeping more stock, or rather I will say by increasing both the acreage and the quantity per acre of his root and green crops. It is all very well to tell a farmer to keep four bullocks where before he had only three; but let him, before he thinks of increasing his stock, direct his attention to the production of food for them, for if there is anything that does not pay, it is having more stock than he can find food for, although I do not think many farmers now-a-days will have more money than is really necessary to invest in stock, as corn does not fill the pocket to overflowing. I am quite sure that a small number of cattle, well done, will pay more than a large number improperly attended to, or that have to be supplied with in nutritious food, such as straw, to make up for the want of roots or hay.

We will take an acre of roots at 20 tons for a good crop, and a crop of Trefoil or Clover at 30 cwt. per acre, and see how long this will with proper management keep a fair-sized ox in a going-on state. The food per day shall be—84 lbs. of roots, 6 lbs. of Clover chaff, 6 to 8 lbs. of straw chaff. The artificial food shall be put at the quantity I generally use, viz.—4 lbs. of Linseed cake, 2 lbs. of corn meal. This gives from the produce of 1 acre of Turnips and 1 of Clover 76 weeks' keep for a bullock: the artificial food, with cake at 10*l.*, and Bean, Indian Corn or Lentil meal at 8*l.* per ton, will cost 3*s.* 6*d.* per week per head. Now, it is but a moderate sort of bullock that will not pay 6*s.* per week for this keep, which will leave 5*l.* per acre for the roots, and 3*l.* per ton for the Clover consumed, besides the manure; those who do not wish to give Clover to their cattle will have to add 2 lbs. of artificial food per day, and use all straw; but I like a portion of each for profitable feeding, if possible. I consider if a farmer (take an average of seasons) realises 5*s.* per ton for his roots, and 3*l.* for his hay, by feeding bullocks, he does very well, and it is quite as much as many of us do. With present prices of beef of course more is made, but he is a lucky man who this year averages 20 tons of roots per acre.

Those who say that cattle do not pay I would tell to take a trip into Norfolk during the winter, and ask some of the farmers in the eastern part of the county what (with the present price of corn) pays their rents, and they will tell you their bullocks. I consider as profit to a farmer all that an animal makes over cost price, and cost of purchased food, if we value the Turnips, as some persons do, at 10*s.* per ton, we must put a liberal price upon the manure made by his cattle and very often very much more than it will bear; but upon Turnip soils, that will not bear treading with sheep (and as I have before said such soils grow the very best quality of roots), bullocks do, have done, and will pay for fattening, with beef anything like or approaching its present price, if the right sort of animal is purchased at not too high a price to commence with.

What is the best sort of bullock for our stalls? Without doubt the Shorthorn, because as good a sort as any man need wish to have is always procurable at a lower price than any of our other established breeds; and I find if they, the Shorthorns, do consume a little more food than the Hereford or Devon, they make more meat, and invariably pay best where a liberal supply of cake, corn, and roots, can be given. Now, unless a farmer knows what is the right sort to purchase, he may soon get tired of feeding bullocks; there are many men who are good judges of a beast when fat, but there are very few who know a good animal when poor. You see men looking at a lot of store beasts, handling them all very carefully, and pronouncing some good quality, and some bad; but I find the hand but of little use if the eye cannot in a lot tell 19 out of 20 without ever touching them; and now that I am recommending the Shorthorn to my brother farmers who may want their Turnips consumed profitably, I must explain, that I do not mean an animal that boasts of a long pedigree, for, though no one likes blood better than I do, still I find the best bred Shorthorns are not the best butchers' beast; they show all their points to perfection, straight back, catchy rumps, nice loin, but not very grand behind the shoulder, and do not generally make such fleshy beasts, when fat, as do some of the more common bred ones. I fancy all our improved breeds of cattle have now-a-days a tendency to produce more fat, in proportion to the lean, than is quite profitable to the consumer, and whenever I have a chance at any of our shows, I like to make a mark against one that carries flesh as well as fat. I have found the Herefords very well in the stall, but much better in the Grass field, and therefore our arable farmer cannot compete with the Grass men for their possession, at any profit to himself; and if he chose to do so, I should like to know where he is to procure any quantity of good beasts from; there are not a great number bred, and of these the best never get far from their native county, and they do not make growth enough when in the stall to pay for expensive feeding. I consider their place is in the Grass field; and although I very often finish a good many in the stalls, and have some in now that will I hope this week make 40*l.* each, still I never like to keep them there for many weeks, and never will put them in unless they are in good condition. The Devon, or red beast of the West of England, is a very useful animal; I do not mean the pure "North Devon," for these are few and far between at our fairs and markets. I did pick up 15 at last Barnet fair, but I never saw many of them so far from home; the large coarser breed of South Devon are bought by many of our arable farmers, and sometimes worked for a year or two, and then fattened; if put at once into the stall they require a little patience on the part of the owner, but when fat are more selling than almost any other breed, because they have always a good proportion of lean to the fat. The Scotch, both polled and horned, are now nearly all the best of them kept at home, and when fattened, sent to London and our other markets. It is to Ireland we must look for the main supplies to our feeding stalls, as her moist climate and humid atmosphere are more suitable for growing cattle than corn. I trust the reports we have lately heard of the decrease of stock in the sister isle will prove incorrect, for it will be an immense loss to us all if the Irish store cattle came shorter in numbers than they have done; some of my Leicestershire friends will begin to think they may never make any more profit of their good Grass land in consequence of the high price of store cattle.

The breeding of cattle upon arable land—is it advisable or not? Well, if I am to give an opinion, I say no; still, as there are few farms upon which there is not some old pasture, a limited number may be bred and reared for the purpose of fattening for the butcher, and as store cattle are now so high in price, it is a good practice for all occupiers of arable land to keep a few cows, and rear the produce of them. Now as I know many of our best farmers are adopting this plan, I will give my reasons for thinking it a good one, and how we can best set about it. Let cows be selected of good size, of any breed, that may be best adapted to the locality; always give a preference to the particular breed that may prevail in the district, as there is a reason for such animals being kept, for our forefathers had good cause, no doubt, for their choice. Let the cows be fair milkers, and chosen with an eye to that quality. A bull, of as pure blood as can be obtained, should be procured; and if he is not of such great size, it is not of so much importance, as the produce will inherit size from the dam, and quality and aptitude to fatten from the sire. This I find to be the cheapest way of breeding stock for the fattening stall, as I am quite sure our pedigree stock are of no use to the tenant farmer; their first cost would be much too high, and they would require more attention than would be remunerative to him. As our arable-land farmer will have his greatest supply of food in the winter, he will manage to have his calves dropped about September and October, as calves born at that time I have invariably found go out six months sooner than those that come after Christmas, even when all have lived together. As dairy produce now fetches a good price, a cow well chosen for milk will always pay for her keep, and perhaps more for the same food than a fattening ox; but then what is the difference in the value of the manure? why, something considerable; therefore let us be careful, and not keep too many; cows will pay for a portion of artificial food, and should always, when good milkers, in winter, have some.

(*To be concluded next week.*)

Home Correspondence.

Cottage Building.—I have been furnished with some important facts connected with cottage-building. The mason I am lodging with having a little money, purchased a feu and built a cottage on speculation. One of his acquaintances built a cottage of the same style. He got a wooden stair, three bedrooms with lath and plaster partitions, and three doors for an additional 15*l.* The mason says he is "very vexed that he did not put three attic bedrooms in his cottage, which he could have got for 15*l.* These cottages are built in accordance with the prepared plans of professional architects, and the 15*l.* covered the contract prices for the stairs and the three attic rooms and doors. My informant tells me that a person who purchases a feu in Edinburgh can have the rubble mason-work, hammer-dressed, done for ten pounds (10*l.*) a rood (36 square yards). This 10*l.* a rood includes the cost of purchasing and carting the stones, lime, and sand. Builders in Edinburgh get rubble for 4*d.* at the quarries, and they pay 3*s.* 6*d.* for the cartage of a load. My informant tells me that cottages with two rooms on the ground floor and a pantry, and two attic rooms could be erected for 70*l.*, provided all the building materials were carted—that is, were a landowner to provide the stones, and cart the lime, sand, wood, and slates, a number of cottages could be built for 70*l.*, barring the expense of providing the stones. Mr. E. Holland prohibits labourers with large families from keeping lodgers; and "Roaldus," p. 1094, states:—"Cottages should be built of two sizes; one suitable for a married couple with no children; these would afford ample provision for health and decency if they contain a good living room, a pantry, and one bedroom. For those who have several children, two and occasionally three bedrooms should be provided." If ploughmen and other farm operatives without children are not entitled to have the same domestic accommodation as those with families, how are Mr. Holland, M.P., Mr. Chambers of Glenarmiston, Mr. Henry Stephens of "The Book of the Farm," Mr. Robb, and "Roaldus" going to dispose of bachelors like your occasional controversial correspondent, myself? If a ploughman is regarded as unworthy of a four-room house when he is in the prime of life, and when he may have only two or three infant children, he will have less chance of getting a four-room house when he presents the appearance of a nearly worn-out ploughman. "Roaldus" states:—"Say that the man marries when he is 25, and his wife is 22 years of age, is it reasonable to expect that these young people, who in a majority of cases have nothing but their own savings to help them, can have money to furnish a house with three bedrooms? But supposing that by some extraordinary piece of good fortune they have the money to buy so much furniture, is it possible to devise a more unproductive method of using it?" "Roaldus" has yet to learn that it requires less money to furnish a house divided into separate apartments than it does to furnish an old-fashioned one. The house in which I was brought up is an oblong enclosure, open from end to end. The box-beds were set across the floor, and the press and a chest of drawers, and a clock on the north side. But I need not repeat what I have already stated in the *Agricultural Gazette*. Reckoning 12*l.* for the purchase of a cow, it requires a Roxburghshire hind and his wife to be jointly possessed of 50*l.* to 60*l.* to enable them to commence their married life free of debt, with furniture adapted for houses without partitions, and without a sufficient number of joists to support a flooring for an attic-room. To bring "Roaldus" to the point, being a bachelor, I have to pay 2*s.* 6*d.* per week for lodgings, 3*d.* per week for gas, and pay for the half of the coals burnt in the room I occupy. Another man and I sleep in the same bed. Owing to my sleeping alone from 1840 till 1854, I do not like a bedfellow, but 5*s.* would be too large a per centage off my wages for lodgings alone. The rent and taxes of the flat I am lodging in average about 11*l.* per annum. Notwithstanding that two lodgers pay more than the rental of the whole house, "Roaldus" asks respecting farm cottages: "Is it possible to devise a more unproductive method of using money than furnishing three bedrooms?" *W., Edinburgh.*

Societies.

DALKEITH.—The Dalkeith Agricultural Society was formed in the year 1836. It has had no meetings for discussion on any subject—at any rate there has been no report of any since I became a member, which was in 1845—but has alone devoted its energies to offering premiums for stock of all kinds, roots, best finished stackyard, and such like. This last season there was held a special meeting to take into consideration the propriety of destroying the wood pigeons, which had become a great pest of late; subscriptions were entered into, and the following sums were offered for the destruction of the said birds, namely, for every pair of heads, 3*d.*, and 1*d.* for every pair of eggs, and I am glad to say that the scheme has been pretty successful, a large number having been killed. Not having as yet got all the returns I cannot exactly say the number, but should say about 800 heads, besides eggs, in this district alone; and the same destruction is going on in West and East Lothian.

The Society has published no annual report, but merely a statement of their affairs at Whitsunday.

The effect generally produced by Agricultural Societies has been for the good of the district they are in.

Of late years reaping machines have been introduced, and are now in pretty general use in this district; the first one used here was Bell's side-delivery machine, which was introduced by myself in 1852, and at the same time I ordered other three, all for parties in this neighbourhood, but they were not in general use here till 1860 and 1861, and there are now all kinds of them, and which there is no doubt lessens the labour considerably on the farm.

Wages have rather increased than fallen of late

years, although the cheapness of the markets should rather have kept them down; the average wages of married men here is 21*l.* in cash, 6½ bolls meal, 3 bolls Potatos, and 1*l.* for harvest meat, and a free house, equal to 12*s.* 3½*d.* per week or thereabouts. *James Wilson, Wester Cowden.*

KINGSCOTE.—The Kingscote Agricultural Association was formed in 1857 with a view to improve the mental and moral condition of the farm labourers, and I have no hesitation in saying it has done much in that way the short time it has existed. At the first ploughing match there were 46 teams—on the whole the work was very inferior. This year a larger number of teams, and the work well executed; as a proof I may mention that a ploughman in the neighbourhood gained the champion prize in competition with the Messrs. Ransome & Sims, of Ipswich, and Howard's, of Bedford. All the improvement is not due to the men; since competition has taken place masters have given them improved ploughs. The premium to shepherds is deserving of notice, as it is in this neighbourhood of great importance.

I enclose our premium list, that you may see the amount, &c., which the Society gives. The Association holds six discussion meetings from November to April; the subjects in 1857 and 1858 were—

On the best and most economic mode of rearing calves to a year old.

The best and most economic system of breaking old fields.

Whether is it best to purchase artificial manure or to enrich the yard-dung by feeding cattle with artificial food?

Is it necessary that an alteration should take place in the laws relating to the management of the highways in England and Wales?

The comparative qualities of different kinds of artificial food for stock, and whether it is advantageous to use such; if so, to what extent, and best way?

The management of breeding ewes.

The cultivation and use of Mangel Wurzel.

The best mixture of seeds for one or two years lea.

The winter housing of stock.

The comparative value of Italian and common Rye-grass.

Observations on the alterations proposed and the improvements introduced in agriculture during the past year.

The proper management of pasture land, and the best method of making meadow hay.

The best means of establishing confidence and imparting a good and mutual understanding between agriculturists and their labourers.

The policy of breaking up Grass lands, and the best means of doing so.

The necessity of farm holdings being for a term, and agreements to contain clauses, guaranteeing compensation for unexhausted improvements at the time of quitting.

The relative merits of high, moderate, and indifferent farming.

The relative merits of grazing and dairy farming.

The preparation of land for Wheat, its after cultivation, and management up to the time of cutting.

Is ox labour economical in comparison with horse labour.

The desirability of the farmer being well versed in the theory as well as practice of his art.

The comparative advantages and expenses of animal and steam-power in the cultivation of the soil.

In what does a knowledge of geology assist the farmer in judging the quality and proper treatment of land?

The relative duties of landlords, tenants, and labourers, with a view to the mutual social well-being of themselves at large.

The use of straw on a farm.

Under what circumstance is it advisable for the farmer to rear his own stock for fattening in preference to buying them in, also the propriety of breeding and keeping sheep on heavy land.

A comparison between the Cotswold and Hampshire systems of farming.

The natural history of weeds, and the best means of extirpating them.

The probable working of the new Highway Act.

The method of determining the nature and value of land by the Grasses growing upon them.

Artificial manures, their relative value and economic application to farm crops.

Comparative anatomy. *Francis Burnett.*

HALIFAX AND CALDER VALE.—The Society was established in May, 1839, and has held 25 meetings. No particular subjects have been discussed at these meetings, except such remarks, bearing on agriculture, as have fallen from the speakers at the annual dinners. No annual report has been published, except the report of the proceedings published by the local papers. The Society having its seat in the midst of a densely populated manufacturing district, where the principal portion of the land is devoted to grazing purposes in order to meet the demand for milk and butter, its influence upon the grain and root cropping of the soil in the neighbourhood is, of necessity, comparatively insignificant. The prizes, however, offered by the Society embrace two sorts of Mangel Wurzel, two sorts of Turnips and Grain crops, and where the farmers have turned their attention to cropping, the produce per acre has increased from 5 to 10 tons, and this increase has arisen partly from the encouragement given to the farmers by this association. The most important feature of the Society's proceedings has been the attention it has given to the encouragement of the breeding and rearing of cattle, horses, and pigs. The improvement of the cattle bred in the district during the last twenty years has been most marked. One of its members (Mr. Henry Ambler, of Watkinson Hall), having been called into existence as a Short-horned breeder, through the instrumentality of this Society, has produced some as fine animals as any in England. Horses, too, in this district have improved wonderfully. The cottagers' pigs stand unsurpassed for their excellence; and the spirit of emulation which this Society has fostered amongst the working classes has been the means, not only of bringing the porcine race to great perfection, but has induced habits of thrift and industry which were quite unknown amongst them previous to the existence of this Society. A liberal list of premiums for poultry was also added to the Society's prizes a few years ago, and in this department alone the improvement has manifested itself most strikingly. *Wm. Irvine.*

Reviews.

Quarterly Journal of Science. No. 1. John Churchill & Son.

We lately quoted from a lecture delivered at the Cirencester Agricultural College remarks on the advantages to the agriculturist of general intelligence as well as of professional knowledge and technical skill. In accordance with these remarks let us recommend our agricultural readers to become subscribers to the Quarterly Journal named above, of which the first Number has just been issued. It will keep them informed of the progress of the various arts and sciences—of Agriculture among others. They will be placed by it in nearly the same position as if they habitually attended the meetings of all the learned societies. They will read in its pages discussions and discourses by men of the highest scientific reputation on the latest additions to our knowledge. It will be as if there were held upon their farms quarterly meetings of the Royal Society, the British Association, the Society of Arts, and the Social Science Congress. Whether this should result in any immediate and direct professional guidance or not, it is certain that it would at any rate give the agriculturist a higher place and rank in the esteem of himself and everybody else. And no one will say that this is not a great professional as well as merely personal advantage.

The Complete Grazier. By W. Youatt, Esq., V.S. Eleventh Edition, by Robert Scott Burn. Lockwood & Co.

"The Complete Grazier," as educated by these pages, is taught the breeding, rearing, fattening, and management of cattle—the economy and management of the dairy—the breeding, rearing, and management of horses, sheep, and swine—the treatment of disease in the live stock of the farm—the management of poultry—all that is necessary to be known on farm buildings and their arrangement, and on farm implements and their uses—the culture and management of Grass land—the cultivation of crops, especially of those for cattle food—and a mass of information on manures. There is also a chapter on farm accounts.

Some of these subjects are treated more fully than others, but on all there is a great deal of information, drawn from many sources, and it is impossible to doubt that any one with a practical knowledge of the many topics here discussed would be a "complete grazier." There are now many systematic works on agriculture, more or less original, to which the agricultural student may refer; and this is an addition to their number. Mr. Scott Burn has both added and remodelled chapters, so as to make the eleventh edition of a well known and popular work as representative of the present state of farm practice, as the original was of the state of agriculture then.

Farm Memoranda.

KIDLAW, HADDINGTON.—The breaking in of heath land at the height of 1300 or 1400 feet above the level of the sea is not a matter of easy accomplishment. This task has, however, been very successfully accomplished by Messrs. W. & J. Jenkinson, the enterprising tenants of the farm of Kidlaw, since the farm came into their hands in 1856.

Kidlaw—the farmhouse of which stands at an elevation of 737 feet above the sea level—was at the commencement of the present lease advertised to contain 750 acres Scotch, 198 of which were arable, and the rest pasture land—in other words, heather. Like all hill farms, the soil varies very much in quality, small portions of it being equal in fertility to anything in the county, and only requiring climate to produce the finest crops. The new tenants, on taking possession of the farm, indicated by the steps they took that they intended to inaugurate a fresh era for Kidlaw. The first thing they did was to reclaim from the heath a large tract of sloping hill-side immediately south of the farmhouse. This had never at any time been under cultivation, and was quite in a state of nature, the ground being covered by Junipers, Fern, and Heather. The nature of the soil, and the elevation of the land—not much more than 800 feet above the sea level—were favourable to the conversion of the hill into arable ground, and this was accordingly done — not less than 144 acres having been added in this way to the grain-producing portion of the farm within the last seven years. The process of reclamation is a somewhat tedious one. The first year's labour is entirely devoted to the uprooting of Junipers and Whins, the hoeing up of the Heather, and draining. The next season as many of the stones are removed from the hill as possible, and thousands of cartloads have in this way been taken off one field. The ground is then enclosed by dry-stone dykes, according to the size of the fields that have been planned out. The third year the ground is cropped either with Oats or Turnips; and in the fourth year it is heavily limed and sown out with a crop, after which it comes into the regular rotation of the farm. These multifarious operations have been successfully performed, as we have said, in the case of 144 acres, and we believe that the tenants are contemplating a still further addition to the arable produce of Kidlaw. Extending their system of "high" farming to a loftier elevation, the enterprising tenants have broken ground on a portion of the hill-side not less than 1300 or 1400 feet above the level of the German Ocean, which here lies full in view. Notwithstanding all the expenditure of labour and carting lime up to nearly the crest of the Lammermoor range, the new tenants have already succeeded in getting 55 acres of mountain land under pasture. To bring in the Heath for permanent pasture is not quite its progress quite so tedious an operation as converting it into arable land. The preliminary operations are of course the same—the Heather has to be burned, the Junipers removed, and the large stones rolled off. This is found enough for one year; in the next, the ground is turned up with the plough, and allowed to lie fallow till the third year, when a crop of Turnips is taken off it. The ground is then heavily limed at the rate of 20 bolls per acre, and sown down without a crop for permanent pasture. The first field taken in for pasture was sown down with Perennial Grass in May 1862, and eaten off with sheep in August of the same year. In the month of April this year, the same field was stocked with half-bred hoggs in the proportion of 6½ to the Scotch acre. The shotts, from these sheep, after being kept on the pasture till the Turnips were ready, were sold in Haddington, at the Christmas sale, on Monday week, at 3*l.* each. It is worthy of note—as indicating the pecuniary value of the improvement thus effected on the land—that, on the piece of land which in 1863 was found capable of feeding 6½ sheep per acre, the natural pasturage previous to the land being cropped was barely adequate to the support of one sheep to the acre. Fifty acres of land at an extreme elevation have already been converted into permanent pasture, where Grass instead of Heather is given to the stock; and at the present moment other 80 acres on the western edge of the farm adjacent to Stobshiels, are undergoing the same process of transformation. *Abridged from Haddington Courrier.*

Miscellaneous.

Turnip Seed.—I have read a great deal lately in your columns about the so-called "sporting" of Turnips, and I should be glad if you would allow me to tell a little I know about the question, as tending to show the extreme care used by some of our seed merchants in their much-talked-of and never-practised importation of seeds "grown only from selected bulbs." Five or six years ago, a friend of mine, an amateur farmer (now dead), sowed a small field of Turnips on what the labourers called "Soda-water;" the Turnips came, but they evidently did not relish the saline draught; perhaps they would have liked it better with a slight mixture of brandy through it. One of your correspondents mentions Turnips as big as soda-water bottles. Now, if you compared these to the corks, you would have been nearer the mark. The land was miserably dirty: every weed that ever had a name, and some, I should think, without names, grew there in rank luxuriance. So my friend very wisely said he would save them for seed; he did so, and, as well as I remember, had about 60 bushels of seed. Now, sir, I will admit that this was a "sporting" lot! and to be sold to the highest bidder. Now, sir, who bought these seeds; and where did they go to? The truth is, the seedsman is like every other trader; he carries out the first principles of trade, as the late Sir Robert Peel said: "he buys in the cheapest market, and he sells in the dearest." K— was the cheapest market, and this worthy trader, who, as Sarah Gamp says, "shall be nameless," bought my friend's seeds at certainly a fair price, and after all said and done, this seed, or combination of seeds, did just as well for mixing as "burnt Rapeseed;" for if you could only grow soda-water bottles, you might have a good chance of the corks. Growing Turnip seed from selected roots is in 99 cases out of 100, is nothing but humbug. The roots are almost all grown from plants or seed. I have seen the market gardener in Bedfordshire, where most of

...in Turnip seed comes from, bringing in plants ...rom the farmers in cart loads, and I say, and that without fear of contradiction, that they never grow them from selected roots at all. Sutton, of Reading, as an admirable article in the Royal Agricultural Journal of England, says that "burnt Rapeseed is largely used for adulterating Swedes," and surely there might be some of the seeds that did not get enough of the fire, ...d hence the "sporting" in our Turnip fields. No, sir, ... not let us poor farmers become the "sport" of the Dublin seedsmen: they charge us quite enough for our seeds to be able to give us a good article, without making "game" of us. *A. K., Farmer, in the Dublin Farm Gazette.*

Calendar of Operations.

JANUARY.

BERWICKSHIRE MERSE FARM: *Jan.* 16.—Up to the close of the year the weather continued uncommonly mild. Until the middle of November it was too wet for Wheat sowing; but with December there came a singularly fine and dry time, though very windy, and during these six weeks the rainfall has amounted to but nine-tenths of an inch. A large breadth of Wheat has been put in in first-rate order, and most of it brairded just in time to get a nip of black frost. Last week the frost was very keen, but dry, the protected thermometer indicating 16° on the morning of the 5th; but this week is neither very frosty nor fresh: under a still and foggy atmosphere, the ground remains hard as iron below. Our cattle courts, which were very full of muck, have got a good clearance; and we are anxious to be at the plough again. During the week Turnips have been pulled in a partially frozen state for immediate use; but they are not yet fit to be stored. Indeed the softer kinds are damaged, and must be eaten soon. The larger portion of Swedes were stored in fine condition; but the crop being a very moderate one owing to July drought, some farmers were tempted to let them grow a little longer. These, we imagine, must be the men who are said to be hurrying their live stock away, and depressing the market. Potatos are at present unsaleable, and will come in good stead to help the root crop. Cattle have done well, and hoggs amazingly, where free of epidemic, but foot-and-mouth disease has prevailed far and wide, and some lots of ewes have had a specially bad time of it. We brought the disease from Newcastle Fair, but were fortunate in having only three cases, all mild, When cattle are not over-driven, they get off more easily. Of course we took special care to have a separate attendant for the tainted lot, to wash the tongue frequently and give a few doses of homœopathic medicine; we use no other. Whether the result of this seclusion proves anything as to the theory of infection or no, certain it is the murrain went no further. Wheat is now getting into condition for threshing, but the yield is nothing so great as in the south. We have had better crops. Barley was a middling crop, and is now pretty well sold out. We have some very fine Oats, but very ordinary as to quantity. In our weekly bulk market there may be seen quite the usual quantity of inferior grain, especially Wheat. On the whole, stock promises to beat corn again. *J. T.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer. Dry Bulb.	Reading of Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in 24 hours previous on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday ..	Jan. 15	30.26	34	34	S.E.	2	10	37	33	35	33	0.05
Saturday ..	16	30.25	40	39	S.E.	3	10	40	33	40	34	..
Sunday ..	17	29.91	39	38	S.E.	6	10	41	34	42	30	0.09
Monday ..	18	30.08	40	40	S.E.	6	10	40	32	40	29	0.07
Tuesday ..	19	30.16	39	39	S.	0	10	45	33	46	28	..
Wednesday ..	20	30.24	48	47	S.W.	5	10	48	38	51	36	0.42
Thursday ..	21	29.98	42	41	S.W.	1	8	48	41	49	37	0.13

Notice to Correspondents.

ERRATUM: At page 35 in Mr. Mechi's article on Profitable Farming, a farm of 240 acres at 12*l.* an acre is spoken of. For "12*l.*" read "12*s.* 6*d.*"

HOTHOUSES FOR THE MILLION.

AWARDED A PRIZE MEDAL, 1862.

ON THE PRINCIPLE INVENTED AND PATENTED BY

SIR JOSEPH PAXTON, M.P.

COMBINING SIMPLICITY, CHEAPNESS, AND DURABILITY,

BEING CAPABLE OF FULFILLING IN THE MOST PERFECT MANNER ALL THE REQUIREMENTS OF HORTICULTURE.

"We do not know in what other way so much interesting amusement, pleasant exercise, and luxurious profit can be obtained as the 'Hothouses for the Million' are calculated to afford."—*Bell's Weekly Messenger*, August 23, 1862.

"Nothing can be more easy than to build them, nothing more simple than to remove them."—*Daily News*, May 22, 1862.

The Cash Prices of LEAN-TO HOUSES, with Water-troughs, Doors and Ends complete, are as follows:—

Ft.	In.	8 ft. Lights	10 ft. Lights	Ft.	In.	12 ft. Lights	14 ft. Lights	16 ft. Lights
20	7 in length	£12 0 0	£16 0 0	20	11 in length	£21 18 0	£28 10 0	£34 5 0
31	3 in length	16 10 0	21 2 6	31	9 in length	29 6 0	37 12 0	45 16 0
41	11 in length	20 18 0	26 18 6	42	7 in length	36 16 0	46 14 0	57 7 0
63	3 in length	30 6 0	38 10 0	64	3 in length	51 14 0	64 18 0	80 10 0
84	7 in length	39 6 0	49 11 6	85	11 in length	66 12 0	83 2 0	103 11 0
105	11 in length	48 17 6	60 12 6	107	7 in length	81 10 0	101 10 0	126 13 0

SPAN-ROOF HOUSES at double the above prices for each length of house.

Circulars with Lists of Prices and Cards to view houses in operation in the neighbourhood of London, also Estimates for Heating and Erection complete, can be had on application to

SAMUEL HEREMAN, 7, PALL MALL EAST, LONDON, S.W.

Manufactured in London; Newton in Cartmel, Lancashire; Gloucester, Coventry, Aberdeen, and Paisley.

A HANDBOOK of VINE and FRUIT TREE CULTIVATION, as adapted to the above Patent Hothouses may be had of Mr. HEREMAN, Second Edition, price 1*s.*; post free, 1*s.* 1*d.*

"The instructions given for the Cultivation of the Vine and other Crops are essentially practical."—*Cottage Gardener*, Oct. 6, 1863.

AUSTIN'S ARTIFICIAL STONE.

INVENTED BY FELIX AUSTIN, 1826.

THIS WATERPROOF STONE, improved during a practice of more than 30 years, is the only one to which the chisel can be applied for high finish of ornament.

An immense quantity of work has during the period been executed for WINDSOR, OSBORNE, TRENTHAM, ARUNDEL CASTLE, WOBURN, WREST, and most other residences of the nobility, which in consequence of its close resemblance to Portland Stone, it is generally mistaken for, and therefore brings no credit to the peculiar invention. It thus becomes necessary (now that Portland Cement is obtaining a factitious reputation) to mark the distinction between Mr. AUSTIN'S material and a mere Cement which is as variable in quality and as much abused by workmen as the old Roman Cement.

AUSTIN, SEELEY, & Co. guarantee their work when fixed by themselves; and after so long a series of years they have accumulated a stock of models far exceeding any ever before possessed by a similar establishment. A general idea of it may be conveyed by the following summary:—

246 DIFFERENT KINDS of VASES.
94 STATUES and FIGURES of CHILDREN.
70 FIGURES of ANIMALS and BIRDS.
About 200 FOUNTAINS, at Prices from 10*l.* to 400*l.*
15 BASKETS from 1 to 10 feet diameter.
17 FLOWER BOXES for WINDOWS, &c.
6 GARDEN SEATS.
22 SUN-DIAL PEDESTALS.
22 ORNAMENTS for GATE PIERS.
And a GREAT VARIETY of BALUSTRADING and PEDESTALS.

As public specimens of their work, open to the inspection of all persons, they beg to refer to FOUNTAINS erected in the Cities of CANTERBURY and GLOUCESTER, and to the large FLOWER BASINS and KERBS, executed for the ROYAL HORTICULTURAL GARDENS, and the new AVENUE GARDENS, REGENT'S PARK.

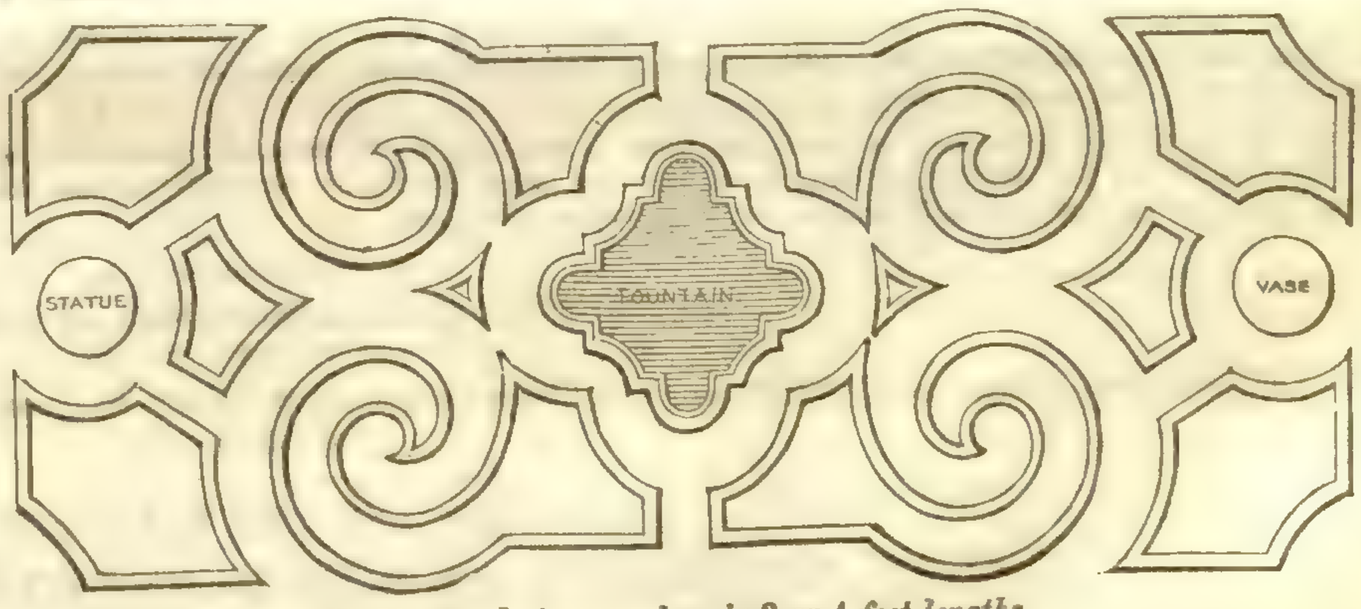

Kerbing made to any plan, in 3 or 4 feet lengths.

AUSTIN, SEELEY, AND CO., 369—375, EUSTON ROAD, REGENT'S PARK, N.W.

Exhibition Prize Medal, 1862.

MUSGRAVE'S PATENT SLOW COMBUSTION STOVE.

This Stove is the nearest approach to Warming by Hot Water.

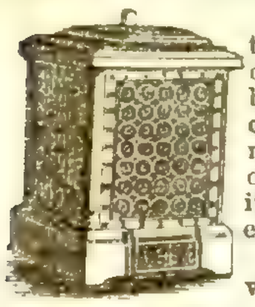

It will burn in Churches from Saturday till Sunday evening, without attention during the hours of worship. In Halls will burn day and night for weeks, with little care. Capable of Warming a large Apartment for 24 hours, at a cost of 3*d.*; and deserving of special attention, because of its safety, healthfulness, durability, and extreme simplicity.

It is also made for small Conservatories with a vapour chamber.

For particulars of the above, and of MUSGRAVE'S PATENT STABLE and COW HOUSE FITTINGS, which attracted so much attention at the Exhibition, address,

MUSGRAVE BROTHERS, Ann Street Iron Works, Belfast.

T. G. MESSENGER, HORTICULTURAL BUILDER and ENGINEER, Loughborough.

T. G. M.'s PATENTED BUILDINGS combine all the modern improvements, are most effectually ventilated by means of his unequalled Apparatus, can be made either plain (and which are at the same time elegant in appearance), or of the most elaborate design. They can be fixed as permanent buildings, or made to be portable.

T. G. M.'s HEATING APPARATUS continues to give the greatest satisfaction for its heating qualities and small consumption of fuel.

ILLUSTRATED CATALOGUES of the above, Glazing without Putty, Garden Engines, &c., sent upon application.

RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

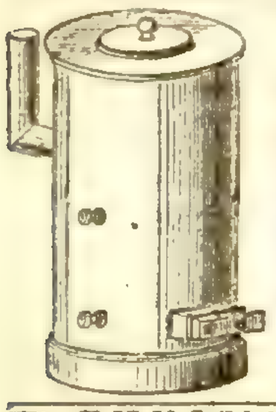

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the

Patentee's Warehouse, 155, Cheapside, London, E.C.

Price complete from 3*l.* 10*s.*

Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the

best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water-tight Roof insured.

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

For Prospectus, &c., address T. H. P. DENNIS, Horticultural Builder, Hot-Water Engineer, &c., High St. Chelmsford, Essex.

PORTABLE HOT-WATER APPARATUS,

WITH TRUSS'S PATENT JOINTS FOR HEATING CONSERVATORIES, HOTHOUSES, &c.

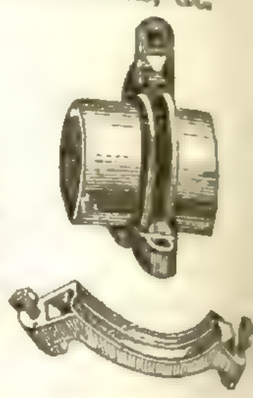

T. S. TRUSS

Begs to offer complete HOT-WATER APPARATUS for GREENHOUSES (consisting of 4-inch Pipes and Joints, Saddle Boiler, Fire Doors, Bars, Soot Doors, Damper, Supply Cistern, Feed and Air Pipes, Pipe Stands, &c., of the best quality), delivered to any Railway Station in England, and to erect the same within 25 miles of London, at the following prices:—

TWO 4-INCH PIPES ALONG ONE SIDE AND ONE END OF HOUSE.

Size of House.	Apparatus complete.	Erection.	Size of House.	Apparatus complete.	Erection.
16 feet by 8 feet	£8 10 0 ...	£2 0 0	30 feet by 12 feet	£11 15 0 ...	£2 10 0
20 feet by 10 feet	8 17 6 ...	2 0 0	40 feet by 15 feet	15 0 0 ...	2 15 0
25 feet by 12 feet	10 5 0 ...	2 5 0	50 feet by 15 feet	18 0 0 ...	3 0 0

Erections beyond 25 miles of London, Railway Fare for one Man charged extra.

By the use of these Joints the Apparatus is easily altered or removed without injury to either Pipes or Joints.

Estimates and Plans forwarded on application to

T. S. TRUSS, C.E., 53, GRACECHURCH STREET, LONDON, E.C.

ST. PANCRAS IRON WORK COMPANY,

OLD ST. PANCRAS ROAD, LONDON, N.W.

HOT-WATER APPARATUS,

FIXED AND UNFIXED.

PIPES AND CONNECTIONS. A FEW SECTIONS. BOILERS. PIPES AND CONNECTIONS.

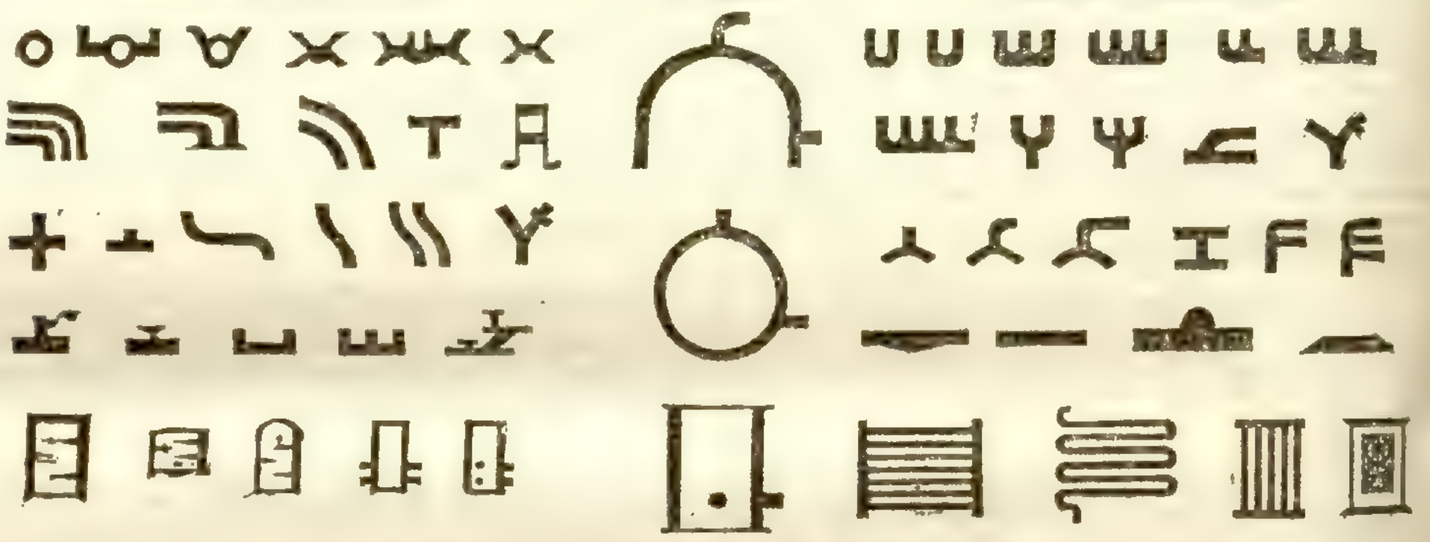

Detailed Illustrated Lists on application.

CONSERVATORIES, GREENHOUSES, &c. PATENT STABLE FITTINGS.

EVERY DESCRIPTION OF IRON WORK.

SHANKS' NEW IMPROVED PATENT

LAWN MOWING, ROLLING, COLLECTING, and DELIVERING MACHINE for 1864.

Important Improvements, combining efficiency with simplicity of construction, have been introduced into Shanks' Lawn Mowers for the ensuing season.

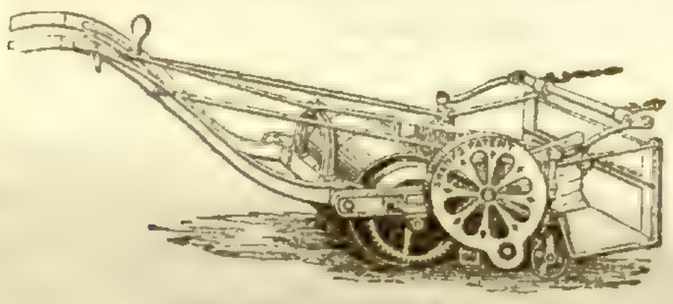

HORSE MACHINE.

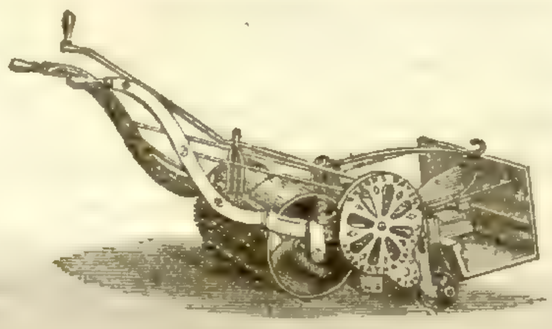

PONY MACHINE.

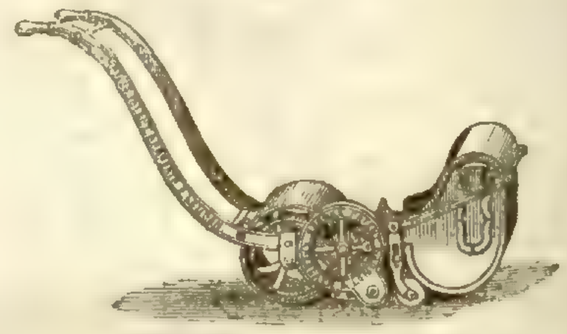

HAND MACHINE.

SHANKS' PATENT LAWN MOWERS are in daily use in the ROYAL GARDENS at KEW, WINDSOR, BUCKINGHAM PALACE, HAMPTON COURT, OSBORNE, and BALMORAL; in the GARDENS of the ROYAL HORTICULTURAL SOCIETY at KENSINGTON; in the GROUNDS of the CRYSTAL PALACE COMPANY at SYDENHAM; and in many hundreds of the principal Gardens in the Kingdom, as well as Abroad, where their merits have been fully proved and their success established.

The First Practical Gardeners of the day who have devoted their attention in examining all the different Lawn Mowers, do not hesitate in recommending SHANKS' MACHINE as the best Mower for general use, their great durability, simplicity of construction, ease in working, and ability to mow (wet or dry) on uneven as well as on level Lawns, give them an immense superiority over all others.

ILLUSTRATED PRICE LISTS FREE ON APPLICATION.

Shanks' Patent Lawn Mowers are free from all useless novelties; they require less power to work them than any other, and are all warranted to give satisfaction.

PATENTEES AND SOLE MANUFACTURERS:

ALEXANDER SHANKS AND SON, DENS IRON WORKS, ARBROATH.

LONDON OFFICE and SHOW ROOMS, 27, LEADENHALL STREET, E.C.

A stock of Lawn Mowers always kept at the London Depot.

CHARLES SHARPE AND CO., SEED MERCHANTS, Sleaford, have a Surplus Stock of the under-named PEAS to offer to the Trade, and will be glad to forward samples and prices on application :—

DANIEL O'ROURKE PEAS (WAITE'S Stock)
EARLY PRIZETAKER MARROW ,,
WOODFORD'S GREEN MARROW ,,

To the Seed Trade.

PEAS.—Early Emperor, Prizetaker, Bedman's Imperial, Ne Plus Ultra, Sangster's No. 1, and Payne's Conqueror. The Subscribers have pleasure in offering about 200 quarters of the above, all the growth of 1863, from true stocks, and harvested in fine condition. Samples with Prices on application to

MARSH & PERKINS, 42, Drapery, Northampton.

Fairbeard's Forty-fold Blue Marrow Pea.

J. FAIRBEARD begs to offer to the public in general a large and distinct New BLUE WRINKLED MARROW PEA, as early as Fairbeard's Champion, about the same height, quite equal in flavour, but much more prolific, and remains much longer in a green state for picking. Retail 3s. 6d. per quart. Trade price upon application. Early orders are requested, as the stock is limited.

J. FAIRBEARD, Nurseryman and Seedsman, Green Street, Sittingbourne, Kent.

The Earliest Pea known is

CARPENTER'S EXPRESS, gathered last season on May 7. 2s. 6d. per quart.

The Largest and Best TALL WRINKLED PEA is CARPENTER'S MAGNUM BONUM ; height, 8 or 9 feet. 4s. per quart.

The Best DWARF WRINKLED PEA is CARPENTER'S MULTUM IN PARVO ; height, 2½ feet. 4s. per quart.

The Largest and Best LETTUCES are CARPENTER'S MONSTROUS GREEN COS and CARPENTER'S MONSTROUS WHITE COS. 1s. and 2s. 6d. per packet.

Either of the above to be had of EDWARD CARPENTER, Seed Merchant, Brighton and Sussex Seed Warehouse, 96, St. James's Street, Brighton.

THE YORKSHIRE HERO PEA.—A Dwarf Green Wrinkled Marrow, pronounced by all who have tried it to be a "WONDERFUL" Pea. We have selected from numerous testimonials the following :—

From Mr. W. KEMP, *late Gardener to* Sir THOS. BECKETT, Bart. *Somerby Park.*

"The Yorkshire Hero Pea is a splendid variety of the Wrinkled Marrow, 2½ feet in height, very branching, and an abundant bearer ; requires sowing very thin in good rich soil, and will produce from 50 to 70 well-filled pods of a most delicious flavour and very thin in the skin, full 10 days or a fortnight earlier than the Veitch's Perfection, and superior in every respect ; it is the best Pea I am acquainted with, and will become a general favourite in every garden, not requiring such an immense forest of sticks to support them as most sorts do. I may further mention that from the quart of seed I had from you I have saved 6 pecks of well-ripened Peas, which I can readily dispose of at 5s. per quart to those who saw them in bearing."—Bracebridge, Oct. 5, 1863.

Price 5s. per Quart.

EDMUND PHILIP DIXON & SONS, Yorkshire Seed Establishment, Hull.

Supplied in London :—
Messrs. HURST & SON, 6, Leadenhall Street.
,, COOPER & BOLTON, 152, Fleet Street.
,, BECK, HENDERSON, & CHILD, Upper Thames Street.
,, JACOB WRENCH & SONS, London Bridge.

FINE NEW SEEDLING EARLY POTATO OF EXCELLENT QUALITY, BEING VERY MEALY, OF AN AGREEABLE FLAVOUR, AND VERY PROLIFIC, **EPPS' GLORY.**

WM. HAMMERTON having purchased the entire Stock of this fine new Potato from the Assignee of the late W. J. Epps, begs to offer the same to the Public.

The Editor of the *Gardeners' Chronicle*, Aug. 9, page 824, speaks thus of its merits :—

"*W. S. Epps, Maidstone.*—Your Seedling is without exception the best we ever tasted, and if, as you say, it is a great cropper, you should name it Epps' Glory."

The Editor of the *Journal of Horticulture and Cottage Gardener*, Sept. 8, says :—

"*W. J. Epps.*—Your Seedling Potato boils to a perfect ball of flour, and is of excellent flavour."

Price 10s. per peck, hamper included. Post Office Order must accompany the order.

W. H. also begs to offer a fine Stock of FILBERTS and true KENTISH COB NUTS, at 4s., 6s., and 8s. per dozen.

His CATALOGUE of Fruit Trees, Garden and Agricultural Seeds, may be had on application.

High Street, Maidstone.—January 30.

Select Catalogue of Seeds and Plants.

ROBERT PARKER begs to announce that his NEW PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE, AGRICULTURAL, FLOWER SEEDS, &c., with Supplementary Descriptive and Priced Lists of Good and New Plants, is now published, and will be forwarded to applicants. All Seeds are warranted to be of the finest possible quality.

Intending purchasers are requested to compare the prices with those of other houses. The following are specially recommended.

	Per oz.—s.	d.
BROCCOLI, SUPERB WINTER WHITE (Snow's) ..	2	6
,, LATE WHITE (Shearer's)	2	6
CAULIFLOWER, NEW EARLY MAMMOTH	2	6
LEEK, HYBRID PRIZE (Henry's)	2	0
LETTUCE, MOOR PARK	1	6
PEA, ADVANCER (Maclean's)	2	0

Exotic Nursery, Tooting, Surrey, S.

Scrymger's Giant Brussels Sprouts.

G. SCRYMGER has much pleasure in offering Seed of the above superb variety of BRUSSELS SPROUTS, for which he received the First Prize at the Great International Show in 1862 ; and since pronounced by all who have seen it to be the best variety in cultivation. Seed in packets at 1s. Post free, 14 stamps.

Sonning, near Reading.

THE NEW PARSNIP "STUDENT."—SEED of this improved PARSNIP, "ennobled" by Professor BUCKMAN, of the Royal Agricultural College, Cirencester, is now ready for delivery by Messrs. SUTTON & SONS, Post-free, 1s. per ounce. Also Wholesale to the Trade.

It can also be obtained from any of the Seedsmen named in the Lists which appeared in *Gardeners' Chronicle* of Nov. 28 and Dec. 19, 1863.

Royal Berks Seed Establishment, Reading.

FINE GRASS LAWNS in FLOWER GARDENS, &c.—The great expense of cutting and carting Turves from a distance may be avoided, and a *superior* Turf produced in a few months, by sowing SUTTON'S LAWN GRASS SEEDS, which consist solely of the finest and shortest growing kinds, perfectly *free from Moss and other weeds.*

Price 18s. *per bushel, or* 1s. *per pound.* Carriage free.

SUTTON & SONS, Seed Growers, Reading, Berks.

Good Clover Seeds at Market Prices.

SUTTON AND SONS have now ready, at very moderate prices, fine new RED, YELLOW, WHITE, and ALSIKE CLOVER SEEDS. As also new Rye Grasses, Turnip, Mangel Wurzel, and other Agricultural Seeds, a PRICED LIST of which may be had Post free.

Address SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Furze or Gorse (Ulex europæus).

SUTTON AND SONS have a fine stock of New Seed. Also all other kinds of Agricultural Seeds at very moderate prices, as see SUTTON'S PRICED SEED LIST (gratis and post free).

Royal Berks Seed Establishment, Reading.

Ornamental Grass for Game Covers, &c.,

(ELYMUS GLAUCESCENS.)

B. S. WILLIAMS begs to call the attention of noblemen and gentlemen to the above ORNAMENTAL GRASS. It is perfectly hardy, having proved it for several years, and can recommend it as being superior to anything yet offered for that purpose. 6s. per dozen, 40s. per 100.

Paradise and Victoria Nurseries, Holloway, London, N.

GENUINE NEW SEEDS,

CARRIAGE FREE.

DESCRIPTIVE PRICED LIST

FOR THE PRESENT SEASON,

Post free upon application.

JAMES DICKSON AND SONS,

SEED MERCHANTS AND NURSERYMEN,

102, Eastgate Street,

Chester.

Excellence and Economy.

SEEDS, CARRIAGE FREE.

COLLECTIONS of VEGETABLE SEEDS for ONE YEAR'S SUPPLY.

I have the pleasure to state that my Collections continue and cannot fail to give satisfaction, as only known really good useful sorts for succession are included. They prove a convenience for Amateurs and Gentlemen who prefer ordering their own Seeds. Any seed not required should be mentioned, when others of equal value will be substituted. I would, however, advise, where a professional gardener is employed, that he should select his own sorts and quantities, as he will judge from the nature of the soil, and the wants of the family he has to serve, what are required.

For Collections of FLOWER SEEDS, &c., see PRICED DESCRIPTIVE 44-page CATALOGUE of Vegetable, Flower, and Agricultural Seeds, containing much information, which may be had free on application.

N.B. All local orders delivered free ; and, if over 20s., to any principal station or port in England, Ireland, Scotland, or Isle of Man. Five per cent. for cash.

QUANTITIES CONTAINED IN COLLECTIONS.

	No. 1. 60s.	No. 2. 40s.	No. 3. 21s.	No. 4. 10s. 6d.
BEANS, common and Kidney, &c.	12 qts	8 qts	4 qts	2 qts
BEET	2½ oz	1½ oz	1 oz	½ oz
BORECOLE, or Kale ..	5 pkts	4 pkts	2 pkts	1 pkt
BRUSSELS SPROUTS ..	2 pkts	2 pkts	1 pkt	1 pkt
BROCCOLI, best sorts for succession	8 pkts	5 pkts	3 pkts	2 pkts
CABBAGE, best sorts for succession	8 pkts	5 pkts	3 pkts	3 pkts
CAPSICUM, sorts	2 pkts	2 pkts	1 pkt	—
CARROT, good useful sorts	14 oz	8 oz	4 oz.	1 oz
CAULIFLOWER, true Walcheren	2 pkts	2 pkts	2 pkts	1 pkt
CELERY, Brown's Wallasey, and others	2 pkts	2 pkts	2 pkts	1 pkt
CORN SALAD	1 pkt	1 pkt	1 pkt	1 pt
COUVE TRONCHUDA, delicious	1 pkt	—	—	—
CRESS, Plain and Curled	1½ pt	1 pt	½ pt	4 oz
CRESS, American, &c. ..	2 pkts	2 pkts	2 pkts	1 pkt
CUCUMBERS, the best varieties	4 pkts	3 pkts	2 pkts	1 pkt
ENDIVE	3 pkts	2 pkts	1 pkt	1 pkt
GOURD (1 cwt. variety, &c., &c.)	2 pkts	2 pkts	1 pkt	1 pkt
HERBS, good sorts ..	12 pkts	8 pkts	3 pkts	2 pkts
LEEK, Musselburgh, &c.	2 pkts	2 pkts	1 pkt	1 pkt
LETTUCE, Brown's Monstrous Cos, &c.	6 pkts	4 pkts	3 pkts	2 pkts
MUSTARD	1 qt	1 pt	½ pt	3 oz
MELON, choice varieties .	3 pkts	2 pkts	1 pkt	—
ONION, best sorts	14 oz	8 oz	4 oz	1½ oz
PARSLEY, curled, very fine, two sorts	4 oz	2 oz	1 oz	1 pkt
PARSNIPS, Student, &c.	8 oz	6 oz	2 oz	1 oz
PEAS, approved succession sorts	24 qts	14 qts	7 qts	5 pts
RADISH, in sorts	1 qt	16 oz	6 oz	3 oz
RAMPION	1 pkt	1 pkt	1 pkt	1 pkt
SAVOYS	4 pkts	3 pkts	2 pkts	1 pkt
SPINACH, Summer and Winter	3 pts	2 pts	4 oz	2 oz
SPINACH, Orache ..	1 pkt	—	—	—
SALSAFY	1 pkt	1 pkt	—	—
SCORZONERA	1 pkt	1 pkt	—	—
TOMATO	1 pkt	1 pkt	—	—
TURNIP, best home grown	12 oz	8 oz	3 oz	2 pkts
VEGETABLE MARROW mixed	1 pkt	1 pkt	1 pkt	1 pkt

Collections from 80s. to 200s. Quantities proportionately larger, or sorts more numerous.

H. BROWN, Wholesale and Retail Seedsman, 4, Commutation Row, (opposite the Wellington Column), Liverpool.

Henry's Prize Hybrid Leek (True).

DOWNIE, LAIRD, AND LAING, having secured the entire Stock of the above from Mr. Henry, are now sending it out in packets, at 1s. each. This Leek can be grown from 4 to 5lbs. weight. None genuine unless in their own sealed packets.

17, Frederick Street, Edinburgh ; and Stanstead Park, Forest Hill, London, S.E.

IVERY'S NONSUCH LETTUCE, 1s. per packet, the best summer variety in cultivation ; will stand four weeks longer than any other kind without running to seed ; of exquisite flavour. It is too well known to require more particulars. Testimonials have been received too numerous for insertion in this advertisement. The undermentioned is a List of Seed Merchants who have received their supply direct from WM. IVERY, Hanover Nursery, Peckham, S.E. :—

BURGESS, CHARLES	.. Cheltenham
BATT, RUTLEY & SILVERLOCK	.. Strand, London
BRIGDEN, T.	.. King William Street
BASKERVILLE & SON ..	.. Bristol
BOSHELL, F.	.. Borough, Southwark
BATES, J.	.. Oxford
BARNES, W.	.. Camberwell
COOPER, BOLTON, & Co. ..	.. Fleet Street, London
CLARKE & SON	.. King Street, Covent Garden
CARTER & Co.	.. High Holborn
CLARK, W.	.. Bishopgate Street, London
CHARTRES, J.	.. King William Street
CLARK	.. London Road, Cheltenham
CHARLWOOD, CUMMINS & Co.	.. Covent Garden
CHIVAS & WEAVER ..	.. Chester
DICKSON, JAMES, & SON	.. Chester
DICKSON, F. & A. & SONS	.. Chester
DENYER, W.	.. Gracechurch Street, London
DANCER, A.	.. Fulham
FLANAGAN & SON	.. Mansion House Street
FISHER, HOLMES, & Co. ..	.. Sheffield
GARAWAY & Co.	.. Bristol
HURST & SONS	.. Gracechurch Street, London
HENDERSON, E. G. & SON	.. St. John's Wood
HUME & Co.	.. Gloucester
IVERY & SON	.. Dorking
LANGHAM & Co.	.. Worcester
LEE, J. & C.	.. Hammersmith
LOWE & Co.	.. Wolverhampton
MAULE & SONS	.. Bristol
NUTTING & SONS	.. Barbican, London
OSBORN & SONS	.. Fulham
POTTER	.. Farringdon Street, London
PAUL & SON	.. Cheshunt
PAUL, W.	.. Waltham Cross, Herts
ROLLISSON & SONS ..	.. Tooting
SANDY, J.	.. Stafford
SMITH, R.	.. Worcester
TURNER, CHARLES	.. Slough
VEITCH, J.	.. Chelsea
THOMSON, T.	.. Birmingham
WHALLEY, T.	.. Liverpool
WRENCH & SON	.. London Bridge
WOOD, THOS.	.. Worcester
WATKINSON, H.	.. Manchester
WOOD & SON	.. Maresfield

N.B. SEED CATALOGUE may be had on application, post free.

The Trade supplied with MUSHROOM SPAWN.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.

CARRIAGE ARRANGEMENTS.

The Directors have made arrangements with all the Railway and Steam Companies to deliver all Seeds with the exception of heavy articles, such as Grain, Tares, &c., CARRIAGE FREE to any Railway Station in England and Wales, or to any Steam Port in England and Wales, Ireland or Scotland, Guernsey, and Jersey.

CATALOGUES can be obtained, and every information given on application at the Company's Offices, 68, Welbeck Street, Cavendish Square, London, W.

WANTED, 25 of each, HAWTHORNDEN, New, LORD DERBY CODLIN, COX'S ORANGE PIPPIN and RIBSTONE PIPPIN APPLES, Dwarf Bushes on Paradise Stock.

Address, stating price, to GEORGE BRADSTOCK, Market Gardener, Beddington Corner, Mitcham, S.

Handsworth Nursery, near Sheffield.

FISHER, HOLMES AND CO. have to offer the following superior well-grown and good-rooted TREES, SHRUBS, &c., viz. :—

50,000 BLACK ITALIAN POPLARS, 2 to 3 ft. and 3 to 5 ft., one of the best trees for damp or wet situations.
50,000 PORTUGAL LAURELS, extra transplanted, stout and well furnished, 9 to 12 in. and 12 to 18 in.
50,000 Strong Transplanted PEAR STOCKS, good roots, mostly fit for working the first season.
6,000 ONTARIO or AMERICAN POPLARS, 5 to 6 ft. and up to 10 ft., well adapted for exposed or smoky situations, strong.
3,000 GIANT or CANADIAN ELMS, 4 to 7 ft., fine.

Several thousands each of the following, viz.

DOUBLE-FLOWERING GORSE, in pots, fine.
ENGLISH and SCOTCH LABURNUMS, strong, 5 to 8 ft.
NORWAY MAPLES, extra transplanted, 5 to 8 ft.
HORSE CHESNUTS, stout, 4 to 7 ft.
ARBUTUS UNEDO, in pots, stout and bushy, 1 to 2 ft.
CREAM and WHITE-FLOWERING BROOMS, extra transplanted.
ARBORVITÆ LOBBI, extra transplanted, well furnished fine, 3 to 4 ft.
HARDY HEATHS, of sorts, fine bushy beautiful plants.
VIRGINIAN CREEPERS, fine.
EARLY and LATE RED HONEYSUCKLES, strong.
COTONEASTER MICROPHYLLA, strong.
RIBES SANGUINEUM, Double-flowering.
WEIGELAS, Van Houtte, Stelzneri, Isolene, striata, and others, strong
ROSES, STANDARDS and HALF STANDARDS, fine named ; for sorts, see our Printed List No. 12.
FRUIT TREES, extra quantity of Standard PEARS, comprising Jargonelle, Beurré Diel, Seckle, Easter Beurré, Prince Albert, Citron des Carmes, Glou Morceau, Beurré Clairgeau, Brown Beurré, Winter Bergamot, with many other good and useful kinds. 4½ to 6 ft. stems.
APPLES, Ribstone Pippin, several hundred, 4 to 6 ft. stems, strong.
PEARS, two years untrimmed, fine, suitable for pyramids.
PLUMS, Green Gage and Magnum Bonum ; several hundred Standard 4½ to 5½ ft. stems.
CRABS, Scarlet-fruited Standards, fine.

FRUIT TREES, other kinds, see our Printed List, No. 3.

Priced Lists on application.

Gladioli.

SUTTON'S LIST, containing the Sorts most worthy of Cultivation, including those to which Prizes were Awarded at the Crystal Palace and other Shows, may be had Gratis and Post free.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Gladiolus Brenchleyensis.

YOUELL AND CO. have much pleasure in offering the above GLADIOLUS, unequalled by any other variety for the brilliancy of its colour. The Bulbs are unusually fine. Price 3*s.* per doz. ; 20*s.* per 100.

Trade price on application,
Royal Nurseries, Great Yarmouth, Norfolk.

Prize Gladioli.

YOUELL AND CO. were awarded the following PRIZES for the above in September last :—

FIRST AND SECOND PRIZE, CRYSTAL PALACE,
FIRST PRIZE, ROYAL HORTICULTURAL SOCIETY,
FIRST PRIZE, BRIGHTON.

CATALOGUES of this collection will be forwarded on application.

Royal Nurseries, Great Yarmouth, Norfolk.

Wholesale Catalogue of Nursery Stock.

GEORGE JACKMAN AND SON'S PRICED and DESCRIPTIVE CATALOGUE for 1863 and Spring 1864 can be had free on application ; it comprises FRUIT TREES, ROSES, AMERICAN PLANTS, CONIFERS, EVERGREEN and DECIDUOUS TREES and SHRUBS, and TRANSPLANTED FOREST TREES, &c.

Apply to GEO. JACKMAN & SON, Woking Nursery, Surrey.

RUSSELL'S PYRAMID PRIMULA.—Seed of this celebrated strain is now ready, in packets, price 2*s.* 6*d.* The great satisfaction which these sorts have given in previous seasons will be fully maintained this. The flowers can be seen at the Nursery during the spring. Printed instructions for cultivation with each packet.

GEO. CLARKE, Nursery, Streatham Place, Brixton Hill, S. ; and 4, Windsor Terrace, Pimlico, S.W.

Cinerarias.

WILLIAM HUSSEY begs to offer the undernamed Collection for 10*s.*, package included, viz., Acme, Duke of Cambridge, Perfection, Bellissima, Constancy, Mrs. Dix, Flower of Spring, Wonderful, Capt. Schrieber, Brilliant, Eclipse, Magenta, Highland Mary, Lady Seymour, Slough Rival, Beauty, Louisa Pyne, Queen Victoria, Lord Stamford, Prince of Wales.

Horticultural Gardens, Norwich.

Cheap and Select Nursery Stock.

WM. JACKSON AND CO., Bedale, Yorkshire, offer the following at annexed very low prices, including delivery at our Leeming Lane Station :—

	£	*s.*	*d.*
12 SCARLET and WHITE PYRUS JAPONICA ..	0	6	0
12 PERSIAN LILACS, 2 feet, in variety	0	6	0
12 SPIRÆAS, in variety, strong plants	0	6	0
12 HONEYSUCKLES, in variety, strong plants ..	0	6	0
12 PÆONIA ALBIFLORA, in variety, sweet scented	0	9	0
12 TREE PÆONIA, in variety	0	18	0
12 NEW WEEPING TREE BOX, strong plants, gold striped	1	10	0
12 BEST HARDY GHENT AZALEAS, 2 feet, with buds	1	0	0
12 RHODODENDRON MYRTIFOLIUM, dwarf plants, with buds	0	12	0
12 ,, HIRSUTUM, and gold edged, ditto ..	0	12	0
12 ,, SPLENDID HARDY HYBRIDS, by name, scarlet, crimson, white, salmon, &c., about 1½ to 2 feet, neat growers	1	5	0
12 SCARLET and other FANCY THORNS, strong, 5 to 6 feet	0	10	0
12 TAXODIUM SEMPERVIRENS	0	10	0
12 WILLIAMS' DOUBLE YELLOW AUSTRIAN ROSE, strong	0	10	0
12 STANDARD ROSES, choice kinds	0	10	0
100 DWARF ROSES, in variety	1	10	0
100 PYRACANTHA, 1½ to 2 feet	1	0	0
100 PORTUGAL LAURELS, twice transplanted ..	0	15	0
100 COMMON LAURELS, ditto ditto 1½ to 2½ feet	0	15	0
100 EVERGREEN and FLOWERING SHRUBS, and FANCY TREES	4	0	0
100 HORSE CHESTNUTS for Avenues, extra transplanted	0	10	0

Fruit Trees.

Per doz.—	£	*s.*	*d.*
APPLES, PEARS, and PLUMS, strong Standards ..	0	12	0
MAYDUKE CHERRIES, 5 feet stem ditto ..	0	15	0
PEARS, best kinds, dwarfs	0	8	0
,, ,, trained	1	0	0
CURRANT TREES, RED and BLACK, best kinds, 2 to 2½ feet	0	2	0
,, per 100 fruiting trees, 2 to 2½ feet	0	10	0

☞ All the above are strong and well-rooted.

A reference or remittance is respectfully solicited from unknown correspondents. The Trade supplied.

GENUINE SEEDS.—CARRIAGE FREE.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Begs to state that he is now prepared to supply with NEW and GENUINE SEEDS all Orders he may be favoured with.

A PRICED and DESCRIPTIVE CATALOGUE is now published, and will be forwarded Post Free to all applicants. It contains all that is really worth growing amongst Novelties, and carefully selected Lists of indispensable articles. The Prices are quoted as low as possible for the finest samples that are to be procured.

Complete COLLECTIONS of KITCHEN GARDEN SEEDS, for One Year's Supply, containing none but the best and most useful kinds. 10*s.* 6*d.*, 21*s.*, 42*s.*, 63*s.*, 84*s.*

WILLIAMS'S MATCHLESS RED CELERY, 1*s.* 6*d.* per packet.

A Large Stock of Strong ASPARAGUS ROOTS for Forcing.

CHOICE GLADIOLI ROOTS, 24 Choice Varieties, one root of each, for 21*s.*

Ditto, NAMED VARIETIES, 4*s.*, 6*s.*, 8*s.*, and 10*s.* per doz.

DOUBLE TUBEROSES, just imported, 3*s.* per doz.

BARR & SUGDEN, 12 KING ST. COVENT GARDEN

VEGETABLE SEEDS, amounting to 21*s.*, sent Carriage Paid. FLOWER SEEDS sent Post Paid.
SEAKALE ROOTS, per 100, 5*s.* 6*d.*, 7*s.* 6*d.*; Extra Strong, 12*s.* 6*d.*

BARR & SUGDEN'S COLLECTIONS of VEGETABLE SEEDS for 1864.

Embracing the best Varieties in Cultivation, and especially those most approved of in Covent Garden Market.

For Particulars see *Gardeners' Chronicle*, January 23, 1864, page 74; or B. & S.'s COMPENDIUM of the ILLUSTRATED GUIDES to KITCHEN and FLOWER GARDEN.

No. 6 contains 33 qt. of Peas, Beans, and other Seeds in proportion									for	£3	3 0
No. 5	,,	20 qt.	ditto	ditto	ditto	ditto	...	...	...	2	2 0
No. 4	,,	13½ qt.	ditto	ditto	ditto	ditto	...	...	...	1	10 0
No. 3	,,	10 qt.	ditto	ditto	ditto	ditto	...	...	...	1	1 0
No. 2	,,	13⅓ pt.	ditto	ditto	ditto	ditto	...	...	...	0	15 0
No. 1	,,	7 pt.	ditto	ditto	ditto	ditto	...	...	...	0	10 0

SEEDS SELECTED AND PACKED FOR ALL CLIMATES.

BARR & SUGDEN'S PAXTONIAN COLLECTIONS OF FLOWER SEEDS.

ADAPTED TO ANY STYLE OF GARDENING. *Sent Post Paid.*

These Collections are composed of the most beautiful and effective Flowers, so that Amateurs who are unacquainted with the more recently introduced species and varieties, may be furnished with such only as are calculated to maintain throughout the summer and autumn months a rich and gay floral display.

HARDY ANNUALS.

						s.	*d.*							*s.*	*d.*
319	100	Packets of beautiful varieties, including the most effective				21	0	324	100	Packets, including those introduced in 1862 and 1863				30	
320	50	Ditto	ditto	ditto	..	10	6	325	50	Ditto	ditto	ditto	..	15	
321	30	Ditto	ditto	ditto	..	5	6	326	30	Ditto	ditto	ditto	..	10	
322	21	Ditto	ditto	ditto	..	3	6	327	21	Ditto	ditto	ditto	..	7	
323	15	Ditto	ditto	ditto	..	2	6	328	15	Ditto	ditto	ditto	..	5	

HALF-HARDY ANNUALS.

						s.	*d.*							*s.*	*d.*
329	100	Packets of the most beautiful varieties ..				30	0	332	21	Packets of the most beautiful varieties ..				5	
330	50	Ditto	ditto	ditto	..	15	0	333	15	Ditto	ditto	ditto	..	4	6
331	30	Ditto	ditto	ditto	..	10	6	334	10	Ditto	ditto	ditto	..	2	6

HARDY PERENNIALS.
HALF-HARDY PERENNIALS.
BEST ANNUALS and PERENNIALS for ROCKWORK.
BEST ANNUALS for ROCKWORK.
BEST PERENNIALS for ROCKWORK.
DWARF ANNUALS best ADAPTED for EDGINGS.
SWEET-SCENTED ANNUALS.
EVERLASTING FLOWERS for WINTER BOUQUETS.
ORNAMENTAL-FOLIAGED PLANTS.
ORNAMENTAL-FRUITED PLANTS.
ORNAMENTAL GRASSES.
ORNAMENTAL PRIZE GOURDS.

For these the Royal Horticultural Society at the Great International Gourd Show, awarded three principal Prizes. At the Birmingham International Gourd Show the First Prize was awarded to our Collection.

CARTER'S COLLECTIONS of GARDEN SEEDS for 1864.

FOR the convenience of those of our Customers who have not the time or inclination to make out their own selection of Vegetable Seeds, we submit the undermentioned COLLECTIONS, to which we respectfully invite attention, and we confidently hope that the liberal and judicious manner in which the selections are made, will induce our Customers to favour us with their commands, also their kind recommendations to their Friends. We have bestowed great care in the arrangement of the sorts; none but what we have proved in our Trial Grounds at Dedham to be the very best of its class is included, and those varieties have been chosen that are most calculated to procure a constant SUPPLY of the best kinds of VEGETABLES all the year round.

These SEEDS have been carefully grown and selected by ourselves at our Seed Farms at Dedham and St. Osyth, Essex; we can therefore guarantee them to be of first-rate growth and pure stocks.

No. 1, price 10s. 6d.; No. 2, price 21s.; No. 3, price 42s.; No. 4, price 63s.

CARTER'S GARDENER'S AND FARMER'S VADE-MECUM. (Now Ready.)

PART I.—Containing Scientific Description of upwards of 2000 Species and Varieties of Flower Seeds, with Lists of Bulbs and Plants for Early Spring Planting, and a Calendar of Garden and House Operations for every month in the year.

PART II.—Comprising Complete Lists of Vegetable and Farm Seeds, with Cultural Directions and a Calendar of Practical Farm Operations.

PARTS III. and IV. will be published in May and September respectively.

The entire Book will be forwarded in Parts as issued Free of Charge, upon receipt of 12 *Postage Stamps. Gratis to Customers.*

JAMES CARTER AND CO., 237 and 238, HIGH HOLBORN, LONDON, W.C.

GENUINE NEW GARDEN SEEDS.

CARRIAGE FREE.

COMPLETE COLLECTIONS FOR ONE YEAR'S SUPPLY IN PROPORTIONATE QUANTITIES FOR LARGE AND SMALL GARDENS,

£3 3s., £2 2s., £1 1s., and 10s. 6d.

Including none but the best and most useful varieties, and only Seeds of First-class quality.

A trial is respectfully solicited.

PRICED CATALOGUES POST FREE ON APPLICATION.

WM. WOOD AND SON, SEED MERCHANTS, MARESFIELD, NEAR UCKFIELD.

SUTTON'S

UNRIVALLED COLLECTIONS of GARDEN SEEDS

FOR ONE YEAR'S SUPPLY, WITH INSTRUCTIONS ON CULTIVATION.

1.	A Complete Collection of Kitchen Garden Seeds for One whole Year's Supply	£3	3	0
2.	A Complete Collection of Kitchen Garden Seeds, proportionately reduced ...	2	2	0
3.	A Complete Collection of Kitchen Garden Seeds ditto ditto ...	1	11	6
4.	A Complete Collection of Kitchen Garden Seeds ditto ditto ...	1	1	0
5.	A Complete Collection of Kitchen Garden Seeds ditto ditto ...	0	15	0
6.	A Complete Collection of Kitchen Garden Seeds for a Small Garden	0	10	6
7.	A Complete Collection of Kitchen Garden Seeds, extra quantities, for a Large Family	5	5	0

All Goods Sent Carriage Free by Rail, except very small parcels, and 5 per cent. discount allowed for Cash Payment.

The sorts of VEGETABLES included in these Collections are those which have proved to be the most prolific, best flavoured, and most worthy of general cultivation, and of which sorts we have therefore grown large Crops of Seed. We exclude from our Collections not only inferior old sorts, but also such new ones as we have been unable to test the merits of, and which are selling at high prices. By this means we are enabled to furnish a Complete Collection at much less expense than when a Gentleman or his Gardener makes his own selection.

A List of the Contents of SUTTON'S COMPLETE COLLECTIONS may be had Post Free on application, as also SUTTON'S SHORT SELECT SEED LIST, which gives the price of every article separately.

SUTTON AND SONS, ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.

ESTABLISHED UPWARDS OF A CENTURY.

EXHIBITION PRIZE MEDALS 1851 and 1862.

BUTLER & McCULLOCH,

SEED MERCHANTS,

COVENT GARDEN MARKET, LONDON, W.C.

COLLECTIONS of VEGETABLE SEEDS for 1864,

GROWTH OF 1863.

Carriage Free. Five per Cent. allowed for Cash.

A London reference or remittance requested from unknown correspondents.

No. 1.	Containing 33 quarts Peas and Beans, and all other Seeds requisite for the Kitchen Garden in proportion	£3	3	0
No. 2.	Containing 20 quarts Peas and Beans ditto ditto ditto ...	2	2	0
No. 3.	" 13 " " " " " " ...	1	10	0
No. 4.	" 10 " " " " " " ...	1	1	0

For full particulars, see Catalogue, page 78.

DESCRIPTIVE SEED CATALOGUE for 1864 may be had Free and Post Paid upon application, containing all the new and most approved varieties of FLOWER SEEDS.

To Exhibitors we can strongly recommend our assortments of ASTERS, BALSAMS, CARNATIONS, STOCKS, and other Imported Seeds.

THE LONDON SEED COMPANY, LIMITED.

68, WELBECK STREET, CAVENDISH SQUARE, LONDON, W.

THE COMPANY are now sending out their COLLECTIONS of SEEDS, which will be delivered Carriage Free to any Railway Station in England and Wales, or to any Steam Port in England, Wales, Scotland, and Ireland.

No. 1.	Complete Collection, sufficient for a Large Garden for One Year's supply	£3	0	0
No. 2.	Complete Collection for a Moderate Sized Garden	2	0	0
No. 3.	Complete Collection, in Smaller Quantities	1	0	0
No. 4.	Complete Collection for a Small Garden	0	15	0
No. 5.	Complete Collection for " "	0	10	6
No. 6.	Extra Large Collection, containing Double the Quantities of No. 1 ...	5	0	0

A DETAILED LIST of these COLLECTIONS will be found in the GENERAL PRICE CURRENT, which is now ready, and will be forwarded Gratis and Post Free to any address in the Kingdom.

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WHEELER'S LITTLE BOOK on SEEDS.

THE LONDON SEED COMPANY, LIMITED,
with which is AMALGAMATED the
PLYMOUTH SEED COMPANY, LIMITED,
Offices, 68, Welbeck Street, Cavendish Square, London, W.

NEW VARIEGATED-LEAVED FUCHSIA "CLOTH of GOLD."—A sport of Souvenir de Chiswick, retaining all its fine properties, with beautiful golden variegated leaves in way of Golden Chain and Cloth of Gold Geraniums. Strong Old Plants in March at 21s., or Small Plants in May at 5s. each. Usual discount to Trade.
S. STAFFORD, Nurseries, Hyde, Manchester.

CENTRAL HORTICULTURAL SOCIETY for the PROTECTION of PURCHASERS of NOVELTIES, held at Dr. Johnson's Rooms, Essex Head, Essex Street, Strand, London.

President—Mr. GEORGE GORDON, A.L.S.

PROGRAMME of the Papers to be read, and Prizes offered for Flowers, Plants, and Fruits for the year 1864.

January 12.—Mr. N. COLE, on the Winter Cultivation of the Mushroom.

February 9.—Mr. J. CRUTE, on Vine Growing on the Continent, with an Account of the Process of Wine Making.

March 8.—Mr. G. GORDON, A.L.S., Author of the "Pinetum," on the Nature and Principles upon which the Operation of Grafting and Budding Plants are founded.

Mr. PHILIP YOUNG'S Prize of 10s. 6d. for the best Six Hyacinths, dissimilar in colour. Size of pots no object.

April 12.—Mr. BURTON, on the Culture and Management of Clianthus Dampierii, or Captain Dampier's Glory Pea.

Mr. GEORGE GLENNY'S Prize of 10s. 6d. for the best pair of Auriculas.

May 10.—Mr. S. BROOME, Temple Gardens, on Plants suitable for Bedding in the Smoky Atmosphere of large Towns.

May 24.—Mr. PRESTON, Victoria Park, Prizes for the best Six Hardy and Half Hardy Ferns. 1st Prize, 15s.; 2d, 5s.

June 7.—Mr. WYNESS, Royal Gardens, Buckingham Palace, on Hybridising and Raising new varieties of Plants from Seed.

June 21.—Mr. MORLEY'S Prize of 10s. 6d. for the best Specimen Plants of Pelargonium.

July 12.—Mr. GEORGE GLENNY, Author of "The Properties of Flowers," &c., on the Rose.

Mr. E. HUTCHINS' Prize of 10s. 6d. for the best Six Blooms of Roses, dissimilar.

Mr. JOSEPH NEWTON, F.R.H.S., Prize of 10s. 6d. for the best Dish of Strawberries.

July 26.—Mr. CUNNINGHAM'S Prize of 1l. 1s. for the best specimen Plant of Fuchsia.

Mr. C. SMITH'S Prizes for the best Specimen Plants of Zonale Geraniums. 1st Prize, 7s. 6d.; 2d, 5s.

August 9.—Mr. HEROD, on Villa Gardening.

August 23.—Mr. BENNINGFIELD'S Prize of 1l. for the best Seedling Hollyhock.

September 13.—Mr. JOSEPH NEWTON, F.R.H.S., on Warming and Aerating Horticultural Buildings.

Mr. BROOME'S Prize of 10s. 6d. for the best Seedling Dahlia, not less than three Blooms.

September 27.—Mr. CRUTE'S Prize of 10s. 6d. for the best Spike of Gladiolus.

October 11.—Mr. DALE, F.R.H.S., Temple Gardens, on Tobacco, its Uses and Abuses.

Messrs. COLE and HALL'S Prize of 10s. 6d. for the best Dish of Ribston Pippin Apples, not less than Six.

Mr. JOSEPH NEWTON'S Prize of 1l. for the best Bunch of Grapes grown without Fire Heat.

November 8.—Mr. N. COLE, on Pruning and Planting of Fruit Trees and Shrubs.

Mr. BROOME'S Prize of 10s. 6d. for the best Three Chrysanthemums, grown in 48-pots, not over 2 feet in height, incurved varieties.

Mr. PARKER'S Prize of 10s. 6d. for the best Specimen Plant of Pompon Chrysanthemum. No restriction to size of pot or form of plant.

Mr. EICKHOFF'S Prize of 5s. for the best Six Blooms of Chrysanthemums, dissimilar.

December 13.—Mr. SHIRLEY HIBBERD, F.R.H.S., Author of "Brambles and Bay Leaves," on British Ferns.

Competition for the Prizes confined to Members only.

The object of the Society, Rules, and every information to be had on application to the Secretaries.

Annual Subscriptions, 4s.; Quarterly Subscriptions, 1s.; Entrance Fee, 1s. JAMES CRUTE, EDWARD HUTCHINS, } Hon. Secs.

The Gardeners' Chronicle.

SATURDAY, JANUARY 30, 1864.

MEETING FOR THE ENSUING WEEK.

THURSDAY, February 4—Linnean ,, ,, ,, ,, 8 P.M.

IN a late article on the cultivation of exotic fruit trees (p. 50) our observations were mainly directed to that class represented by the Orange, and whose requirements were somewhat of the same kind as those of that genus. We described the climate under which these plants grow and produce their fruit abundantly when at home—a climate with a high summer temperature, but with a winter comparatively mild: and we suggested that a similar climate should be made for them in this country by all those who might attempt their cultivation in an artificial way.

We will now take another class which we brought forward at the same time, and which is represented by the Loquat, the Yangmae, and the more hardy species of the Orange tribe. This class of fruits occupies a belt of latitude to the north of that which we pointed out as being the home of the common China Orange, say from 25° to 35° north. Here vegetation is subjected to the rigour of a winter nearly as cold as that of England, and the fruits we have named seem to require such a winter, or, at all events, it does not do them any harm. In this respect they differ from those plants which occupy the more southern belt.

Here then we have a class of almost unknown fruits which one would say, at first sight, ought to be hardy in our climate. But they are not so; or

if they will even exist in the open air with us, they will rarely, if ever, produce their flowers or fruit. And the reason of this is sufficiently obvious. Although their winters may be nearly as cold as ours, their summers are much hotter. During the hot summer months their wood is ripened, or in other words, a store of nourishment is formed and laid up, which makes them strong during the winter season, and which enables them to produce their flowers and their fruit in the following year. The warm summers too, enable them to ripen the fruit for which provision has thus been made. A knowledge of these facts is, we believe, the key to the successful cultivation of these fruits in a climate like that of England. We shall, therefore, endeavour to show with more minuteness, the nature of the climate, as regards temperature and seasons, of the country to which these plants are indigenous.

The eastern sides of great continents are known to be more subject to extremes of temperature than the western sides—to excessive heat in summer, and extreme cold in winter. This was pointed out by HUMBOLDT many years ago, and is very remarkably exemplified on the eastern shores of Asia, which are now under our consideration. Between the 10° of latitude named above, the climate differs greatly from that between the same parallels in western Europe. The winter is of the following description:—In the end of October the thermometer frequently sinks as low as the freezing point, and at this period the cotton and other tender crops which are cultivated in the fields are destroyed by frost. December, January, and February, are the coldest months in the year, and the cold is oftentimes quite as severe as it is with us in the south of England. But the summer, as we have already said, is much warmer than ours. The heat is greatest during the months of July and August. The thermometer (Fahr.) during this period is frequently as high as 100° in the shade, and sometimes even a few degrees higher. The rainy season is not very decided in its character, but rains fall copiously during May and June.

This is the kind of climate which is required by the fruit trees we have mentioned, and if we can make it, in an artificial way, in this country, these trees may be made to yield abundant crops. With glass houses, and heat from flues or hot-water pipes, a climate may be made which will answer all the requirements of such plants. The main points to be kept in view are these—the supply of heat and moisture at the proper season, the ripening of the wood during the summer and autumn, and allowing the trees to go to rest during the winter months.

There is one point more which should not be overlooked. When these trees are growing in the open air in their own country they are exposed to influences which favour the impregnation of their blossoms, and consequently the "setting" of the fruit. The wind shakes their branches and scatters the pollen about in every direction, or insects carry it on their bodies as they flutter from flower to flower, and in these ways the blossoms are fertilised. In cultivating such plants in an artificial way in our English hothouses, these matters ought not to be lost sight of; the flowers should be impregnated by hand.

Various other matters of a practical kind will suggest themselves to those who may feel inclined to cultivate the fruit trees we have named. Soil, manure, and drainage will all have to be considered; but these matters may safely be left to the intelligence of our English gardeners.

In conclusion we may remark that the same natural laws regulate the production of flowers upon plants, as the production of fruits. It is by acquiring a knowledge of these laws, accidentally or otherwise, that our plant growers are enabled to produce those marvellous examples of horticultural skill which we see at our flower shows; and it is to this knowledge we are indebted for a sight of those masses of gorgeous floral bracts upon Bougainvillea spectabilis—a plant which, until very lately, refused to produce its flowers under the hands of our English gardeners.

THAT the cool treatment of a very large proportion of TROPICAL ORCHIDS will rapidly displace the stewing system is becoming more and more evident every day. Of this some specimens just placed in our hands by Mr. ROBERT WARNER afford most remarkable proof. They were grown in a Vinery under the shade of the leaves, and among them were three varieties of Lycaste Skinneri, most brilliant in colour, perfect in form, and in the white parts pure as ivory. Two of these flowers measured 6 inches across, and the other 8 inches. With them were Oncidiums and Odontoglots in equally vigorous health.

—— As Cotton still retains its high price, and is likely as far as we can judge, for a long time to do so, every one is naturally anxious to find some substitute. No success has however attended such inquiries, even when they have been more wisely directed than that which for a short time gained a credit wholly undeserved to the common Zostera, or, as it is called in the trade, Ulva marina. An inquiry has lately be en made at the Kew Herbarium respecting a cottony substance, the produce of a shrub which covers many acres on light sandy soil in the west of Africa. It is of a pure white, and is composed of compressed slightly twisted threads, resembling closely those of Cotton, but unfortunately so short in the staple that there is no probability that it can ever be of use. It may not, however, be uninteresting to say a few words respecting the plant itself, which was at once pronounced by Mr. BENTHAM to belong to the Eriocephaleæ, and which in fact appears to be the Linnean species Eriocephalus racemosus, a native of the Cape of Good Hope, in which, according to specimens preserved in Herbaria, as DE CANDOLLE remarks, the cottony substance varies from a reddish or Nankin brown tint, to the purest white, a circumstance which obtains equally in true cotton. The Eriocephaleæ form a small division, consisting of a single genus in the subtribe Anthemideæ, and are evidently closely allied to the Gnaphalia, differing essentially in their caudate anthers, while those of Gnaphalia are without any appendages. The florets form little heads which are surrounded by a double involucre, of which the inner one, after flowering, is invested with dense cottony hairs. The seeds, or, as they are called in strict Botanical phrase, the achænia, are only slightly downy. When the specimens were sent, inquiry was made whether it might not be possible by cultivation to improve the plant, so that it might answer some economical purpose. No mere cultivation, however, would effect this, and any improvement in the fertility of the soil would most probably act in a directly contrary direction, as plants in general are more woolly in proportion to the dryness and shallowness of the soil in which they grow. The only chance of doing anything towards improving the staple would be by a principle of repeated selection, to raise new plants from seed collected from the most promising individuals. This, however, is a slow process at the very best, and before spending time and trouble on what might after all never remunerate, it would be necessary first to inquire what powers of production the plant possesses, on which at present we have no information. *M. J. B.*

New Plants.

268. DENDROBIUM FYTCHIANUM (*Bateman*). Colonel Fytch's Dendrobium.

D. (EUDENDROBIUM) caule erecto florido aphyllo, racemis terminalibus multifloris spithameis, sepalis lineari-lanceolatis acutis, petalis duplo latioribus obovatis obscure apiculatis, labelli trilobi lobis lateralibus brevibus erectis auriformibus integris rotundatis lobo intermedio dilatato spathulato petalis subæquali versus basin tomentoso.

This charming Dendrobium was received last year by Messrs. Hugh Low & Co., from Moulmein, whence it was sent to them by their invaluable correspondent Mr. Parish. At the time of its discovery Mr. Parish was accompanied by Colonel Fytch, who observed the plant on the branches of an old tree overhanging the river up which they were proceeding; and as it is perfectly new to science, it may with much propriety bear the name of the gallant officer who was the first to notice it.

The flowers of D. Fytchianum are throughout of the most dazzling whiteness, except that the small lateral lobes of the lip are tinged with crimson. They are scentless, and borne in graceful racemes a span long, proceeding from the extremity of the upright stems; the latter being about a foot long and of the thickness of a goose quill.

The slender linear leaves unfortunately fall off before the flowers, which are about an inch across, have had time to expand.

My description is taken from a most beauteous raceme, bearing upwards of 20 flowers, obligingly sent to me last December by Mr. Aspinal Turner, in whose collection at Pendlebury House the species then flowered for the first time in Europe. Specimens have also reached me from Messrs. Low, but being the produce of smaller plants they were very inferior to Mr. Turner's. The plant, which should be grown on a block of wood, is of the easiest culture. *J. B.*

EXHIBITION PLANTS.

THE INDIAN AZALEA.—No. II.

(*Continued from p.* 28).

LET me now give a few hints upon the general management and cultivation of this showy flower, commencing with small plants as they are sent from a nursery. In the first place it is necessary to be very particular to selecting plants that are worked upon clean healthy stocks from 6 to 12 inches high; even if 18 inches high it will be so much the better. I am convinced that a long clean stock is more conducive to their well-doing than a short one, and the great beauty of a specimen Azalea is to weep down over the rim of the pot. If the stem is not sufficiently high to allow of this, the bottom of the plant soon becomes too thick, and the shoots so confused that the blossoms have no chance of properly developing themselves. It may be said by some that they have always had plenty of bloom upon their plants without paying all this attention to the stocks. But I would ask them, did they ever compare the quality of the blooms produced by plants that have been properly trained and the wood neatly thinned, with those that have been allowed to grow thick and confused? I think there will not be two opinions upon the matter.

I will suppose then, that we are commencing with nice young clean-stemmed healthy plants. In the first place put one stake to each plant, selecting the longest and most central shoot to be taken up as a leader, and never allowing the stake to be higher than the top of this shoot. Then commence at the base, and tie the shoots down with very fine string, or with thread if the wood is not too stubborn, for the smaller the material the neater the plant will look; tie the thread loosely round the shoot to draw it down to the stake, so that it may assume a weeping character. In this way the shoots are to be so disposed as to form a regular well-shaped pyramidal plant; the lower tier of branches round the bottom being first drawn down with the thread or string to the position required, and then the second tier, these latter not requiring to be drawn down so much as the first. All however must be brought into their proper places, so as to make the plant appear regular and neatly furnished on every side. The shoots may be held where they are required by reversing the string around the stake. When the plants are first taken in hand for tying out, the tops of all the longest shoots are to be removed, in order to bring the plants into a symmetrical form. The leader should never be allowed to grow more than 4 inches in length before it is topped; this will make the plants throw out their side shoots more freely, and thus they will become well furnished. It is as soon as the shoots have grown 3 or 4 inches in length, that the strongest and best is to be selected and tied up to form the leader, and the others tied down in the manner described.

The plants are now, we will suppose, growing in 6-inch pots, made shapeable, just out of bloom, and commencing their season of growth. Under these circumstances they should be put into moderate heat to make their growth. If bottom-heat is available for them, so much the better, provided it is not too strong; that supplied by any half-spent fermenting material will suit them best. If there are more shoots to be disposed of, treat them precisely the same as the two first tiers, that is to say draw them down to the place where they will be most useful in furnishing the plant. The foundation will now have been laid for a well balanced plant, and by keeping this in view while they are growing, there will be no difficulty in building up handsome well-shaped and well furnished plants; indeed, with such a foundation, there is but little attention required as they advance in growth, to keep them in good order. After the shoots have once been tied down and made pendent by keeping on the string for 12 months, they will all become set to this shape, and will never rise again, even though the ties may then be removed. Plunge them half the depth of the pots, and keep them close or nearly so for a few days until they begin to break into growth freely; then admit air rather plentifully during the day. Syringe them liberally in the afternoon, and shut them up while the sun has power to raise the temperature to 75° or 80°. Thus treated, they will make rapid growth, for no plant I am acquainted with enjoys a close moist atmosphere more than the Azalea. As the season advances, and the sun becomes bright and powerful, a very thin light shading must be used for three or four hours in the hottest part of the day, but it must not remain over them too late in the afternoon, and on no pretence is it to be used at all unless the sun is very powerful. Too much shading will only induce weak, long-jointed growth. In the course of four or five weeks they will require to be examined at the root, and if they have done well and their pots are quite full of roots, they must be repotted. They must never, however, be shifted into larger pots until they have quite filled with young roots those in which they are already. If the roots are in the proper state, give them a liberal shift, that is to say, put them into pots two sizes larger, from a 32 to a 16. The soil, to be prepared in quantity according to the number of plants to be potted, should be prepared as follows:—Take of light fibrous peat and heavy rich peat—the latter such as may be obtained from Petersfield in Hampshire, or Wanstead in Essex—equal parts; add to this a fourth part of good sharp sand, and well mix the whole together.

I would here remark that there are various opinions about preparing good peat for potting. Some prefer to use the peat rough, with the coarse fibres and roots, precisely as it is dug. This, however, is unwise, as these roots and fibres will sometimes become partly decomposed, and breed a poisonous fungus, which, spreading through the ball of earth, will ultimately kill the plant. Unfortunately I have had to suffer from this real and only cause of death, by losing some of my best and

choicest specimens. The next objection I have to the use of rough peat is, that the ball of earth cannot be made sufficiently solid at the time the plant is shifted for the latter to prosper for any length of time. I would therefore recommend the peat to be broken up by being beaten with heavy sticks, and sifted through a moderately coarse sieve, rubbing out every particle of soil, and rejecting every root or strong fibre. When this is done, and the sand is added and well mixed with it, the compost will be ready to commence potting. Having the pots prepared according to the size required, by well draining them with potsherds, say 2 inches deep, put over this drainage some of the lumpy portions of the peat unsifted, but broken into pieces about the size of a small hen's egg, all coarse fibres and roots being picked out. Place about an inch of this over the potsherds, and mix with it a liberal quantity of sand, which is not to be thrown in and allowed to remain in a layer upon the rough peat, but is to be mixed with it, so that the roots may work freely into it after the plants have recovered from their removal. I mention this because I am aware that very little omissions sometimes serve to frustrate the best endeavours; and I have seen it happen, even when orders have been distinctly given to mix the sand with the rough peat, that the direction has been unnoticed, or perhaps thought of too little importance to be attended to. I have had plants come into my hands, in which, in potting, a handful of sand has been thrown upon the top of the peat, forming a layer, and when such plants have come to be again shifted, it could plainly be seen that the sand had done injury instead of good, the roots not having penetrated it, and the rough peat being rendered next to useless.

These matters being attended to, the plant is to be taken out of its pot and examined. If the ball of earth and roots is in good order, shift into the larger pot; but if it should be discovered that the ball is dry, by no means shift until it has been thoroughly soaked, for which purpose a tub of water should be provided, and the plant stood into it, so that the water may cover the ball entirely, in which position it is to remain two or three hours, or until the water has penetrated the whole ball. When this is the case, take it out and allow it to drain well before it is potted, for to pot while the water was still dripping from it, would only tend to make the new soil wet and sour. In potting always be provided with two or three rammers of different sizes, and as the fresh soil is added, ram it well down with that rammer that best fits the space between the new pot and the old ball of earth. This is the most important particular in all the various stages of potting. The greatest possible attention should be paid to make the new soil as solid as the old ball of earth, for if this is not attended to at this time, the cultivator may rest assured that his endeavours will not be rewarded with much success. I feel confident that in the case of half the plants that are lost or get into a sickly state of health, the evil could be traced to one of these two causes: either the plant has been potted with its ball dry, or the new soil has not been made as solid as the old ball so that both may absorb moisture alike. It is well known that water will not percolate through hard solid ground when it can find its way into any that is soft and porous; and this of course would be the condition of the newly-potted plants if the fresh soil was not rammed down as solid as the old ball; but if this firm condition is secured, the water will filter through the whole mass of earth in a regular way. The potting is to be finished off by covering the old ball about half an inch, ramming down both old and new soil, then shaking a little fresh soil on the top to prevent the ball from cracking or shrinking, this being pressed down with the hand, and the surface made neat and level, and finally sprinkled with a little dry sand on the top to keep the surface open and healthy.

Any long shoots that may have grown should be pinched back, to cause the growth of young shoots to fill out the plants; and where the shoots are plentiful, if any of them are too vigorous they should be tied down with string so as to check them. This being done, the plants may be returned to their former warm quarters, where besides daily syringing them so as to keep up a moist atmosphere, and preserving a genial temperature, with proper attention to watering, there will be but little more to be done, with the exception of keeping all the strong shoots which have a tendency to lengthen pinched back as early as it can be done, this being continued until July,—not later however, if the plants are required to bloom the following spring. After they are topped for the last time they must be kept in heat until they have pushed forth fresh shoots, and formed the bloom buds upon the point of each. As soon as this is ascertained to be the case, commence in a gradual way to give more air and exposure; and as the season advances, the plants may either be exposed entirely to the weather by placing them out of doors, or they may be kept in the pits with plenty of air day and night; they will thus become hardened, and the wood well-matured before winter. *William Barnes, Camden Nursery, Camberwell.*

NAILING.

IN works on gardening this question is generally treated of in connection with that of training. There is, however, a single point in the proceeding which seems to be generally overlooked in practice, and which we consider of great importance in various respects, therefore to it specially we would wish to direct attention.

The point will be understood from the following statement:—1st, Some persons drive the nails into the face of the bricks; 2d, Some promiscuously into the face of the bricks, and into the joints; 3d, Others do not nail into the faces of the bricks, but only into the mortar joints. Now the question arises which of these three modes of operation is the best, presuming that their results are not equally indifferent, or that they are not all equally good. No. 2 may, however, be left out of the question, because those who adopt it act partly in accordance with those who nail into the bricks, and partly with those who nail only into the mortar joints, so that if there is decidedly a right and a wrong way it must lie between the other two, whilst those who act both ways, as it happens, must be sometimes right and sometimes wrong. The matter at issue then becomes reduced to the simple question:—Whether should nails be driven into the faces of the bricks, or into the mortar joints?

It is needless to say that garden walls are expensive. Many gentlemen know that full well; and many gardeners can form a correct enough estimate of the fact, to be aware that such walls should be preserved as entire as is possible, consistent with the use for which they were erected—a wearing one it is true; but still with proper care they ought not to be much defaced in the course of one long life-time. Let us see whether adopting the proceeding No. 1, that is, driving the nails into the bricks, is likely to result in this desideratum.

Bricks employed for garden walls are usually about 9 inches long by 2½ thick; and between the courses of bricks there is about ½ inch thick of mortar. This is saved to a considerable extent by nailing into the bricks; but on the other hand, by doing so, the bricks suffer irreparable damage. In nailing Peach and Nectarine trees, and Morello Cherries, a vast number of nails are necessarily employed, and the consequence is that the faces of the bricks are struck all over with nail holes. But the worst is that in driving near the edges of the bricks, pieces are broken off and their squares are by degrees chipped away. If the faces of the bricks are left intact and their edges square, the joints can at any time be cleared out and pointed afresh, and the wall will be almost as good as new; but this cannot be the case when the angles of the bricks are rounded off. The defects of the latter can only be made up by cement, which will exhibit patchwork, or the wall must be refaced with new bricks. The joints may be worn into rather deep grooves, but even in that case the wall will not have such a bad appearance as if the bricks were defaced and pitted with innumerable holes, which afford no end of shelter to hordes of insects, and these cannot be so easily dislodged as they can from the joints. Nailing into the face of the bricks is then to be avoided, on account of the expense which it entails, the unsightly appearance which it produces, and the injury it causes to vegetation by harbouring insects. It is bad.

The mode of nailing in the joints is most to be recommended, inasmuch as the joints can be renewed, and the wall made to look well after many years' wear. If the mortar be good, and the nails driven no farther than is absolutely necessary, a wall should be little worse after being nailed upon, even for training Peaches or Nectarines for half a century. In the course of 60 or 80 years it might be advisable to fresh point the joints, but this is not much expense compared with rebuilding the wall, as would be necessary if the bricks were destroyed by nailing in them. We are aware that some will say "We are obliged to nail in the face of the bricks, because the mortar will not hold a nail." That may be; but then it is wrong to call it mortar. Better replace it with what is really such, and then nail in it only: as we think all should make it a rule to do unless any one can prove the contrary to be a better practice. ||

THE SOURCE OF THE NILE.

"Nilus in extremum fugit perterritus orbem,
Occubuitque caput, quod adhuc latet."

WE have before us on the page of history, four separate accounts of good old Father Nile.

Ovid, some two thousand years ago, has informed us, that during the awful conflagration of the world (caused, we are told, by the folly of a brainless cabman), Father Nile was scared out of his wits, and took himself off into Mother Earth's extremest boundary. There he hid his head, which still lies concealed. So far the poet.

For some centuries after this nobody knew what had become of the terrified fugitive, until one day some adventurous and holy sons of St. Ignatius de Loyola stumbled on him in Abyssinia, whilst they were engaged in preaching Christ crucified to the surrounding Gentiles.

Things went gingerly on in these distant wilds of Africa, when a well known native of Caledonia went into those regions in quest of Father Nile's dark cavern. He fancied that he had succeeded in his investigations, and he then informed the scientific world of his success, congratulating himself that he alone was the discoverer of the long hidden source of the Nile.

And now, in our own days, two hardy explorers, dissatisfied with former accounts, sallied forth from home, and stopped not until they had reached the very spot where the scorched king of the Nile had hid himself at the time when the world was on fire.

Should these accounts be still unsatisfactory, let us hope that some experienced investigator may speedily go on his travels; and that (avoiding however the track of the gorilla, in which science lately has cut so sad a figure) his discoveries may content all parties, and prove to the world at large that the source of the Nile no longer remains in doubt. In talking of the river Nile, we wish to hear no more that "adhuc sub judice lis est." *Charles Waterton, Walton Hall.*

Home Correspondence.

Orchard Houses. — Your correspondent (p. 54) seems to require answers to the following questions, which he puts as if he were actually serious. 1. "Has any one without heat succeeded in getting his trees to bear fruit even the first year?" To which I answer most decidedly, yes. 2. "Have his trees not invariably drooped in the second year when confined to pots?" This is really too much for one's gravity, and so I very merrily but emphatically answer, no. 3. "Have they ever reached the blossom or fruiting season the third year?" Again I can most truly say, yes. Many of my trees are upwards of 10 years old; they are still in the most robust health, and bore last year large crops of finer fruit than I ever saw from walls; they seem as if they are just now in their prime, and likely to live and bear fruit annually as regularly as they have done these 10 or 12 years past. Your "Old Subscriber" does not seem well up in his gardening knowledge—Mr. Loudon died in 1843, some eight or 10 years before the "orchard house" idea was broached. You are at liberty to give your "Old Subscriber" my name; if he is in the flesh, which I doubt, and not one of Mr. Home's "rappers," who occasionally say many odd things, I shall be glad to show him my trees, so that he may verify my statements. *A Very Old Subscriber.*——I have been much amused in reading the eccentric effusion of "An Old Subscriber" in your last number. His "one shot to settle the matter" is so modest, and reminds one, to compare small things with great—a flea to an elephant—of the prophecy in the "Quarterly Review" years ago, that travelling by rail 20 miles an hour would take away the breath of the passengers, and the steam from the engines devastate the country. To his three questions I can say 'yes' to the first, 'no' to the second, and a very emphatic 'yes' to the third. I have never had any difficulty with my potted trees, now several years old. They bear good crops annually, and, as I have no Peach trees trained to walls to give me fruit, finding it useless to contend against spring frosts, my orchard-house Peaches are an annual treat. I can, however, picture to myself a failure like that which your "Old Subscriber" so affectingly narrates, for I have a friend, a good but weak-minded old gentleman, who built a large orchard-house, and furnished it with trees. The first year he had a nice crop of fruit; the second year, in early summer, he claimed my advice, knowing how well I succeeded with my trees. I paid him a visit, and found that neither he nor his gardener understood the management of his orchard house, he being unwilling to learn, and trusting all to his gardener. I gave both master and man good advice as to the necessity of opening the house in hot weather in June and July quite early, and also the care required in syringing the trees twice daily, giving them abundance of water in hot weather, less in cool, and some rich loose surface dressing to nourish the trees and keep in the moisture. Master and man both listened. I hoped I had, as Paddy says, "insensed" them. Not at all; when I saw the trees in the autumn of the second year the earth in the pots was dry and hard, and had had no surface dressing; but the trees had the red spider, and looked starved and unhealthy; the third year the trees produced "fleshless stony abortions," to use the expressive language of your correspondent. Strong measures were required; the man was at my suggestion discharged, an active young intelligent gardener employed, and the trees as if by magic recovered their health, and have continued to give abundant crops of fruit ever since, without fire heat. I presume your correspondent lives in some cloudy cold corner of the kingdom, and cannot grow Peaches and Grapes under glass without fire heat. I pity him. The assertion made by your "Old Subscriber," that orchard houses are totally worthless because they cannot be heated, inclines me to think that he must to a certain extent resemble my amiable friend, for surely every glass-roofed house can be heated by hot water. My first house, a very rude structure, was I found too cool for Figs, and so I had two 4-inch pipes placed round it, and a small boiler attached; it is now a very efficient forcing-house. I trust your correspondent will "go and do likewise." I sincerely wish him a new gardener capable of cultivating orchard-house trees, and of growing Peaches equal to those grown by your obedient servant, *Royal George.*——I do not call myself a champion, but I may assert that I am a successful grower of orchard-house fruit. I have got a very nice house on Mr. Rivers's plan (see Figure 8 of his "Orchard House," third edition), 35 feet long and 20 feet wide, filled with trees in pots, nine years old next month;

and there they all are now, except a few which were thrown away to make room for better sorts. None died, and all the trees I have are in as good condition as they were six years ago. They are not in the least pot-bound, for I repot them every year in October, and I have always had plenty of fruit, without any means of heating artificially. They were never hurt except once by a late frost, which happened about four or five years ago, on the last day of March or the 1st of April, when I lost a few Apricots, but even in that year I had 133 dozen of good fruit worth 6*d.* each. The year before last my employer had a photograph taken of a Peach tree in a pot, which had on it at the time 72 good fruit. I am always sorry to hear any one speak against an orchard house, for I know that they are useful. A good gardener came into my house one day when the fruit was ripe. "Well," said he, "if I had not seen your house, I should have said such success couldn't be achieved." I should therefore advise all who fail to go round and see, in order that they may believe what can be done with orchard houses. Failure must be the cultivator's own fault, for if the trees are duly attended to they will bear well. To have good fruit they must be in good health. Orchard-house champions need not, I am sure, be afraid of speaking on account of getting shot, for I believe that the charge is nothing but powder. My house contains nothing but Apricots, Peaches, and Nectarines in pots; but I have some Pears in pots doing equally well. I put them in another house about three months every spring. I had a fancy to weigh the fruit from two trees last year. One was 10¾ lbs. and the other 11¾ lbs. The sort is Louise Bonne of Jersey. *J. P., Alton.* [Here this sort of discussion *stops*. We have admitted too much of the NONSENSE of orchard house grumblers.]

Prizes for Wild Flowers.—I agree with the editorial note (see p. 77) that it is not advisable for the Royal Horticultural Society to give the proposed prizes. It is very much out of its way. I also think that such prizes are very undesirable, for they tend, as is justly remarked, to destroy the localities of rare plants without being of real advantage even to the successful competitor. As he is at liberty to obtain his specimens in any way, to have such help as he likes in mounting and arranging, and to get any botanist he can to name the plants, the result will not show his activity and acuteness as a collector, his skill as a manipulator, nor his knowledge as a botanist. At local shows we often have prizes for wild plants to be shown alive and named. There is very little use even in this, for the exhibitor *and his helps* scour the country, and get some *qualified person to correct the names.* The result is therefore simply the promotion of activity in finding the plants, and of some amount of discriminative power in distinguishing them: but not in determining their names. I hope that the Society will see fit to withdraw its proposal. *C. C. B.*

Weather Prophets.—Judging from Mr. Plant's letter in the *Times*, he prophesied a very severe winter, because we had a very mild autumn. We have had, it is true, a week's frost not exceeding in severity our usual winter weather, and it seems, if he is to be relied upon, that frost of greater intensity is to come. I have kept a rough journal of the weather for upwards of 30 years, and am quite inclined to doubt that mild autumns as a rule precede severe winters. When I say mild autumns I mean mild weather with but slight intervals of frost up to the middle of December. Thus in the year 1832 we had a mild autumn followed by a winter with no severe frosts; 1833 was remarkable for the mildness of the autumn, followed by so mild a winter that Crocuses were in full bloom the middle of January, 1834. The mild dry autumn of 1834 was followed by a winter without any severe frost, and again the very mild autumn of 1835 was followed by only 10 days of frost, not at all noteworthy for its severity. In the autumn of 18 6 we had towards the end of October a deep snow, and for the season a sharp frost, lasting two or three days, the weather from that date till Christmas remarkably mild; we then had a heavy fall of snow, without any severe frost. January and February 1837 were remarkable for their mildness. Then followed an exceedingly warm dry autumn, which, with the exception of a few November frosts, continued till the commencement of January, the temperature at Christmas ranging from 50° to 55°. On or about the 6th January commenced that terrific frost which lasted till the end of February. We thus had five consecutive mild autumns not followed by severe winters, and one equally mild (1837), followed by a winter remarkable for its severity, showing that if a severe winter is prognosticated from a mild autumn, the prophet would more often than not prove a false one. The truth is, frosts of any severity in autumn in this country are the exception, for taking 30 consecutive years from 1832, I find only eight marked as being worthy of notice from the severity of autumnal frosts. Those who read that most interesting of all Diaries—Evelyn's, may see that 200 years ago the seasons differed but little from those of our own days, with the exception of the frost of 1684, to which we have had none to compare in extreme severity and continuance, except 1814; mild autumns were succeeded by mild winters, with now and then an exception. An opinion prevalent in Evelyn's days as well as in ours, that mild winters are the forerunners of unproductive seasons, like the opinion that mild autumns generally precede severe winters, proved fallacious in 1693 according to Evelyn, and most remarkably so last season, for after the mildest winter ever known, we had in the harvest of 1863 the most abundant crops ever recorded. Another popular idea amongst country people is that when there is an abundant crop of Hips and Haws, a sharp winter will follow, and that when the crop fails the following winter will be mild. In 1862, Hips and Haws were most abundant, and the winter most remarkably mild, dry and agreeable. Last autumn scarce any could be seen, so that the birds during the few days frost we had lately were much distressed. Winds and storms it seems, to a certain extent, can be foretold, but the seasons—the less the weather prophets say about them the better. Was it not Arago, who after studying meteorology, so as to endeavour to foretell the seasons, for 60 years, confessed at the end of that period that he knew nothing? *T. R.*

Heating.—If your Correspondent "C. W. M." who describes (see p. 78) the mode in which he purposes to heat his new plant house or grapery, were to deepen the chamber underneath the floor and have the fire entirely inside it, without any flue, merely having a piece of flat iron suspended directly above the fire so as to spread the heat, similar to what is done in many of the hop kilns in Kent, I think he would economise warmth; and as I understand him to say that the tile and cement floor is to be covered with earth on which plants are to be grown, it would certainly be advisable to keep one or two places bare, so as to give off sufficient heat to warm the atmosphere of the house. A space 1 foot wide along the front of the house should be retained for that purpose, and it would further increase the heating power if a sort of flue, say 1 foot wide and 18 inches deep, were built, whose bottom would be open to the chamber below, from which it would derive its heat; any other form might be given to this flue, the top of which should be thin, and its sides, if convenient, so constructed as to transmit heat through to well warm the house. With some contrivance of this kind no doubt the plan will answer, but I fear if the heated roof of the hot-air chamber is covered entirely over with a foot or more of earth, your correspondent will not be able to secure sufficient internal atmospheric heat to maintain anything like that even temperature required for the purposes to which he alludes. *H. H.*

Patent Earth Closets.—Observing the inquiry of "Ruricola" in your Number of the 16th inst. (see p. 61), I beg to state that I have had one of the earth closets in question in daily use in my house for these past eight months, and my experience has more than borne out the statements made as to its efficiency. Indeed, one thing alone would make it worth its introduction into every house, and that is its answering as a night commode, for it deodorises all effluvia immediately. The late frosts have not interfered with its action in the least—and that is very different from the general experience of the common water-closets during severe weather. "*Custodian,*" *Wareham.*

Grape Setting.—I grew some Fuchsias for exhibition in the year 1862 in a small Vinery. The tops of the plants were close to the glass amongst the foliage of the Vines, and not caring much about Grapes I made a practice of syringing both Vines and Fuchsias two or three times a day, from the starting of the Vines to the stoning of the berries. In fact, the house was never allowed to approach anything like dryness during that time. Under these circumstances I was surprised to see how well the berries had set; in fact they were so jammed together in the bunch that I was unable to get the point of the thinning scissors amongst them. I attributed this profuse setting to the syringing. The season following I tried the same experiment in another Vinery containing Black Hamburgh, Tokay, Muscat, &c., and I had a splendid crop, with bunches of which I took two first-class prizes for Black and White Grapes at a horticultural show. *J. C. Nicholson, Osgodby Hall, Selby.*

Sauromatum guttatum.—This plant has just sloughed its pretty spathe in a stove here, and afforded enjoyment in admiring that richly spotted appendage, drooping gracefully from a brown column 18 inches high, banded near the base by a straw-coloured ring; but the gratification was momentary and not unmixed. While I admired, my man was searching about for what he supposed to be the delinquency of a cat—nothing more odious than the effluvium in the house could be conceived; this we found at length to proceed from the plant. On removing it the odour lingered in the open air behind it as it was carried along like a trail; the top of the spadix was warm, and apparently the seat of the smell, which issued from it invisibly, but in other respects like smoke from a chimney. This plant could not possibly be retained in the largest hot-house, a matter for regret, considering its beauty and its time of blooming. *B., Dungarrow, Jan.* 21.

Ferns.—Since the publication of Sir William Hooker's "Species Filicum," wherein it is shown that the self-same kind is found in many latitudes widely separated from each other—and as a consequence are found growing under very different circumstances, it occurred to me that we may have many quiet nooks that might be suitable for many Ferns not natives of our country, and that only required an introduction to enable them to be denizens of our isle, as many Pines and Conifers generally are now doing. With this impression I looked for a favourable site, and soon, through the kindness of the Hon. Sir John Bligh, Bart., I was enabled to try the experiment. The village of Sandgate, in Kent, is on the sea shore; a turnpike road separates the ground of Enbrook, on which stands, overlooking the sea, a very tasty marine villa. The ground rises so high that the village is out of sight, and the lawn and shrubs appear to be growing on the "margent flood." From the top of this high ground a spring has trickled down for ages, and worn away the softer material, in places exposing the stone of greensand formation in a very pictorial manner. Scattered about irregularly are growing, some naturally and some introduced, many of our British species and varieties of Ferns, and a most charming sight it is to look upon, when they are in their prime. A portion of this ravine I selected for trial of exotic Ferns, and with what success you shall judge. Out of nearly 100 species from all climates, the following are found to have survived:—

*Asplenium lucidum	Onychium lucidum
* ,, coriaceum	*Pteris vespertilionis
* ,, Odontites	* ,, umbrosa
Adiantum pubescens	* ,, hastata
*Dicksonia rubiginosa	* ,, cretica albo-lineata
Doodia caudata	Platyloma falcatum
*Lastrea decurrens	* ,, rotundifolium
,, pubescens	*Niphobolus rupestris
*Lomaria Patersoni	

And those marked * vigorously.

From this our Fern-loving friends, and they are legion, will know that much greater diversity and beauty is to be effected than has yet been obtained in out-door culture. *William Masters.*

Roses.—Having lost many Roses on their own roots during their first winter out after being struck, I can confirm the Rev. W. F. Radclyffe's dictum, that they "require great care till their roots are firm and strong." The conclusion I arrived at was, that it is only strongly rooted and vigorous plants that should be planted out, and that others should be kept in a cold pit or frame till they became strong. Will Mr. Radclyffe kindly say whether his "great care," or "nursing," consists in that, or whether any better or less troublesome plan may be adopted. *A. B., Narberth, S. Wales.*

Iron and Glass Houses.—Being about to erect some houses of this description, will any of your readers inform me of the best mode in which to construct them? Without being in any way prejudiced in the matter, I certainly have a liking for galvanised iron; but for small work is not zinc often used? Paint and putty seem to adhere to these two metals equally well as to wood, but I am told that ordinary wrought iron can be so prepared as to resist corrosion nearly as well as if galvanised. Might I ask through your columns if this is really the case, and what the opinion of practical men is as regards the merits of iron houses compared with wooden ones—keeping in view beauty, utility, and durability? The difference in opinion that exists on this subject is very perplexing, and the practical experience of those who have tested all kinds is much wanted, and in my own case will in some degree determine the class of house I may put up. *L. L.*

Poinsettia pulcherrima.—I would advise your correspondent, Mr. Baxter, to examine the roots of his plants; I fear they are dead, or at least that what should be the active portion of them is in a bad condition. This might arise from the plants being allowed to get dry and flag; when that happens they will sometimes drop their leaves after receiving water; or the soil being ill drained and allowed to become soddened with water would cause the plant to lose its leaves. Any sudden check, too, arising from cold or otherwise will sometimes produce the mischief complained of. Faithfully follow the instructions given at page 52, and success in growth, as well as in having very large floral leaves will be the result. *G. E.*

Societies.

ENTOMOLOGICAL: *Jan.* 4.—F. Smith, Esq., President, in the chair. A series of drawings of the caterpillars of several species of moths belonging to the genus Anticlea, executed by Mr. Buckler, were exhibited by Mr. E. Newman. Captain Cox also exhibited a large number of drawings of the caterpillars of British Lepidoptera, executed by Mrs. C. Cox, and read some notes on the collection and discrimination of such larvæ. A communication was read by the Secretary from the Lords of the Admiralty, inclosing a copy of a letter from the Governor of St. Helena, relative to the ravages of the white ants in that island, where it is asserted these insects were introduced from Guinea about 20 years since, and where they have so multiplied that almost every dwelling, store, or shed, in Jamestown, containing nearly 4000 inhabitants, has been seriously injured by them. Information was requested as to the most effectual means of checking the ravages of the insects and preventing the spread of the mischief. Various suggestions for this purpose were made by General Sir J. B. Hearsey, Mr. E. W. Robinson, and Mr. H. W. Bates. The first of these gentlemen stated that he had found when in India that timber which had been placed in a trough filled with quick lime and water had proved to be effectually obnoxious to these most annoying insects; a house which he had built, worth 3000*l.*, being in as sound a state when he left India as when first built. Mr. Robinson stated that kyanised wood was used for the sleepers of railways in India with advantage; and Mr.

Bates had found on the banks of the Amazons, that the houses in the towns were seldom injured by the white ants, being built with a hard timber called Acapu; and that when the insects had effected a lodgment they were destroyed or driven away by the use of arsenical soap or of the oxide of arsenic. Professor Westwood exhibited a small selection from a collection of Coleopterous and Lepidopterous insects recently forwarded to the Museum of Oxford, from the Zambesi, by the Rev. H. Rowley, one of the clergymen attached to the Oxford and Cambridge Mission, amongst which were a number of new and interesting species of beetles, although there was a great similarity to, and even identity with, the species of these orders inhabiting Mozambique, described in Peters's Voyage by the Berlin entomologists. He also read descriptions of three new species of Paussidæ from India and South Africa, and also of several new exotic species of Lucanidæ.

Notices of Books.

Index Fungorum Britannicorum. By M. C. Cooke. 8vo, pp. 58. Robert Hardwicke, 1864.

This is a mere list of all the British Fungi, so far as they have been ascertained up to the time when this little volume went to the press. No less than 3079 species are recorded, and the list is daily increasing, many fine species, and at least two new genera having been detected during the past year. Mr. Cooke states in his title-page that his work is meant as a check list or for Herbarium labels. If for the latter purpose, separate copies should be printed on one side only. Perhaps this already has been done. In a work like the present there is little or no room for showing the knowledge of Fungi which Mr. Cooke really possesses, but his industry and powers of drawing lead us to hope that the interesting branch of Cryptogams to which he is devoting his attention will receive hereafter much elucidation from his labours, which have commenced so creditably in his Plain and Easy Account of British Fungi.

The Gooseberry Grower's Register; an account of the different Gooseberry Shows for the year 1863, *&c.* Macclesfield: C. Leicester, Crompton Road Nursery.

The growers and exhibitors of Gooseberries are fortunate in having so complete a register as this, of their annual proceedings. A 12mo. volume of some 200 and odd pages gives the results of 155 Gooseberry shows held during the past summer, in "Lancashire, Cheshire, Staffordshire, Yorkshire, Derbyshire, Nottinghamshire, and other parts of the kingdom and the United States of America," recording the respective weights of the berries exhibited, the names of the varieties, and the names of the winners. As probably many of our readers are ignorant of the existence of a fraternity of Gooseberry growers (of which this Register is the bond of union), it may be interesting to glance a little over the records of 1863. The portion most interesting will doubtless be the descriptions of new sorts. Those shown at Manchester, on the 1st of August, which seems to have been a special seedling show, are described thus:—

Reds.—Bratherton's Foreman—29 dwts. 12 grns.; colour dark red, with purplish-tinted veins; a very long three-veined well-formed berry with a few spines; two large berries; and a pair of twins—45 dwts. 15 grns., were exhibited of this most promising variety; distinct. Pilkington's Farmer—24 dwts. 4 grns. Leicester's Smoker—22 dwts. 22 grns.; colour dark purplish-red, very rough; a long good-shaped three-veined berry; distinct. Bayley's Make-room—22 dwts. 7 grns.; colour and form of Wonderful, but rough; distinct. Jones's Macaroni—21 dwts. 22 grns.; a fine-formed dark rough red; distinct; Wilkinson's Registrar—20 dwts. 21 grns.

Yellows.—Walton's Garibaldi—22 dwts. 19 grns. Eardley's Hannah—22 dwts. 5 grns.; a fine-formed three-veined berry, similar in colour to Leader, and smooth, with broad light yellow veins, and fine supple rind; very promising and distinct. Wilkinson's Oyster Girl—22 dwts. 2 grns. Chippindale's Ringer—21 dwts. 15 grns.; a large smooth dark muddled yellow berry; very promising and distinct. Soar's Sir Robert—20 dwts. 22 grns.; a round formed light yellow berry; distinct.

Greens.—Bratherton's Birchen Lane—24 dwts. 17 grains; this variety was one of the most promising; distinct. Prophet's Diadem—23 dwts. 8 grains; a smooth bright green, with broad conspicuous light veins; a fine formed three-veined berry; very promising and distinct. Beckett's Bravo—22 dwts. 19 grains. Soars's Radford—21 dwts. 14 grains; a round bright green; distinct. Jones's Spark—19 dwts. 16 grains; colour and form of Thumper, but very rough; distinct.

Whites.—Walton's Annie—24 dwts. 12 grains. Soars's Miss Soars—17 dwts. 5 grains; a long smooth dull-coloured white; distinct. Shingler's Edna—16 dwts. 2 grains; a greenish white, a little rough, with puckered rind, deficient of seed; distinct, but evidently a tender variety.

The following varieties were not successful in obtaining prizes, but were considered distinct. Prophet's red, Lord Audley; Maddox's reds, Benicia Boy and Roughcast; Bennett's red, Honeywall; Holden's yellow, Lady Popham.

The Yorkshire Seedling Show, which took place on the 10th of August, brought out the following novelties:—

Reds.—Firth's Seedling—13 dwts. 3 grns.; colour and form of Guido, and rough strong veins. Muscroft's Prince of Wales—15 dwts. 16 grns.; resembles Clayton in form, but rough and bright in colour; distinct. Lodge's Yorkshireman—15 dwts. 7 grns.; in form of Lumper but very rough; distinct.

Yellows.—Firth's Yellow—16 dwts. 18 grains; colour of Stella, a long strong vein; berry distinct. Stafford's Hedgehog—19 dwts. 2 grns.; a pale dappled yellow, very rough, distinct, and very promising. Muscroft's Seedling—15 dwts. 1 gr.; a smooth yellow; colour betwixt Leveller and Leader.

Greens.—Lodge's Lizard—17 dwts. 22 grns.; a muddled green, smooth, very promising; distinct. Muscroft's Seedling—16 dwts.; a smooth light green, in form of Turnout.

White.—Muscroft's Seedling—14 dwts. 12 grns.

A table at the end of the Register gives at one view the number of prizes won by each variety, and the weight of the heaviest berry. From this it appears that amongst Reds the favourite is that called London, which has taken 253 prizes, and has attained the weight of 34 dwts. 1 gr. Of Yellows, the highest placed is Leveller, which has won 229 prizes, and been grown as heavy as 28 dwts. 18 grains. Greens, like the Yellows, weigh less than the other classes; the heaviest is Shiner, which reached 29 dwts.; but Stockwell, which in weight only reached 28 dwts. 13 grains, has won many more prizes, as many as 168 falling to it. In Whites, Antagonist has won 267 prizes, and attained 34½ dwts. 21 grains in weight. This last appears to be at the head of the list for weight, and is accordingly represented on the title page. Those who wish to be well up in the Gooseberry fancy, ought to study this Register, which appears annually early in October, and is to be had of Mr. Leicester, Secretary of the Manchester show. Such exhibitions as these no doubt tend to improve the flower or fruit to which they are devoted; but we trust, in their efforts after size and weight, the producers of new Gooseberries are not quite indifferent to flavour. We certainly do not find any allusion to this point throughout the book.

Garden Memoranda.

BASING PARK.—This place has been long celebrated for its high keeping, and for the great ardour with which horticulture in all its branches has been successfully cultivated. It is situated in the eastern part of Hampshire, about seven miles from Alton, and the same distance from Petersfield—a district possessing great natural beauty, and presenting many pleasing examples of what an artist would regard as the highest class of rural scenery. For the last 30 years, Basing Park was the property of the late Joseph Martineau, Esq., whose memory will long be cherished by all who knew his worth or enjoyed his friendship. As a patron and promoter of horticulture he was particularly distinguished, and the beautiful gardens and pleasure ground, with the noble specimens of rare and valuable trees and shrubs they contain, afford abundant proof of his liberality and refined taste.

The domain comprises about 2000 acres, almost within a ring fence. The greater part of the land is of a very useful character, being a clayey sort of loam on chalk, interspersed with flint. The surface is much undulated, and beautifully diversified with wood and thriving plantations. The mansion occupies a good position near the centre of the domain, on a gentle swell with a sloping lawn in front. It is comparatively a modern erection in the Grecian style, commanding some charming views of park scenery. The approaches to it are excellent, and have been planned with consummate judgment, so as to embrace the various points from which the most striking features of the park and surrounding country may be seen. The one from the Gosport road on the north is upwards of a mile and a half in length, while another from the Petersfield road on the south, extends more than two miles through thriving plantations, the carriage drive being skirted on either side with Deodars, Araucarias, and Laurels. The entrance lodges are in our opinion models of what such buildings ought to be, neat and expressive in design, substantially built, and planned with a due regard to their outward appearance, as well as to the comfort and convenience of the persons who may inhabit them.

The flower gardens and pleasure ground occupy the south and east sides of the mansion, and greatly add to its cheerfulness and beauty. The one on the east side is a symmetrical garden of exquisite design, having a handsome fountain in the centre, and being otherwise ornamented by large vases filled with flowers. The beds are well proportioned, and when we saw them they were remarkably gay, owing to the care that had been taken in selecting the plants for the different beds, and arranging them so that their colours might harmonise with one another and produce the most agreeable effect. Shelter is afforded by means of large masses of Rhododendrons and other evergreens, which are also tastefully distributed over the sloping lawn. Along the south front of the mansion is a spacious terrace with a walk down the centre, that leads to an open colonnade which serves as a protection for Camellias and similar half-hardy plants, and connects the terrace with the Conservatory—a large and handsome erection, about 60 feet long, and lofty in proportion. It contains some fine specimens of Camellia, Indian Rhododendron, Habrothamnus, Brugmansia, and numerous other plants that are found so useful for decorative purposes during winter. Immediately in front of the Conservatory, but on a much lower level, is another symmetrical garden with a fountain in the centre, from which the flower beds and walks between them radiate to a border surrounding the whole, in which standard Roses are planted at regular distances. Although not so elaborate in design as the garden previously noticed, yet it has altogether a very striking effect—from the masses of colour in the beds being nicely arranged, and relieved by a wide border of Rhododendrons and other evergreens, which forms the outer boundary. No one can look upon this lovely scene without admiring it, or stroll through the pleasure ground, of which it forms a part, without being delighted with the beautiful example it presents of what art can effect when properly directed. On every side are splendid specimens of some of the finest of our ornamental trees and shrubs, and for the information of those who take an interest in this branch of gardening, we subjoin the measurements of a few that particularly attracted our attention.

Wellingtonia gigantea, 14 feet high; girth at 6 inches from the ground 2 feet 9 inches; at 4 feet high 1 foot 6 inches; circumference of the branches 31 feet 6 inches. It is feathered with branches to the ground, and is without exception one of the most perfect specimens of its kind that has yet come under our notice.

Of Cedrus Deodara, there are many fine examples. The largest is 31 feet high, 3 feet 5 inches in girth at 4 feet from the ground, and covers with its branches a space of 75 feet in circumference.

Cryptomeria japonica, 24 feet high; 15 inches in girth at 4 feet from the ground, and covering a space 53 feet in circumference.

Pinus excelsa, 20 feet 6 inches high; girth 20 inches; spread of the branches 48 feet in circumference.

Thuja orientalis, 17 feet high, with branches covering a space 50 feet in circumference; an unique specimen.

Thuja pendula, a fine example, 11 feet high, worked on a Yew.

Taxodium sempervirens, 22 feet high, girthing at the ground 4 feet 6 inches, and 3 feet 6 inches at 4 feet above it. The branches cover a space 48 feet in circumference, and gradually diminish upwards so as to form a perfect pyramid, dense and beautiful.

Cephalotaxus Fortuni, worked on a Yew, 5 feet high, covers a space 30 feet in circumference.

Of Abies Douglasii there are several handsome specimens; the finest is 36 feet high, girthing 3 feet 5 inches at 4 feet from the ground, with branches covering a space 51 feet in circumference, and forming a dense conical mass of beautiful foliage. Some specimens that were raised from cuttings are but little inferior in size, and quite as ornamental in appearance as the one just mentioned.

Near the Conservatory is a fine example of Araucaria imbricata, 23 feet high, girthing 2 feet 1 inch at 4 feet from the ground, and covering a space 34 feet 6 inches in circumference, without a blemish in any tier of branches from top to bottom.

A Juniperus recurva is 14 feet high; and of Cupressus macrocarpa and Cupressus Lawsoniana the specimens are large and handsome—especially of the latter, which for graceful habit and appearance, we think, is unsurpassed by any other species.

There are also nice examples of the Irish and Golden varieties of Yew, and of many other evergreen trees and shrubs that contribute so much to enliven our gardens during winter.

Adjoining the pleasure ground on the west is a garden wholly devoted to Roses, of which there is a very choice assortment. It is centred by a fountain in a sunken panel, and is surrounded by an oval terrace, from which a broad walk ornamented on both sides with beds of gay flowering plants, and trained specimens of Irish Yew, and varieties of Holly, &c., leads to a terrace on a higher level, where stands the orchard house. This is a large structure erected against the south wall of the kitchen garden, 300 feet long, 17 feet wide, and of proportionate height. The roof is fixed, but for the purpose of ventilation there are numerous openings both at top and bottom of the back wall, and moveable sashes in front, so constructed as to be easily opened and shut by a very simple piece of machinery attached to an iron rod carried along the front. An arched iron trellis occupies the centre, and extends throughout the whole length of the building. The fruit trees are planted along the front and back of this trellis, and trained over it. They comprise the most select kinds of Peaches, Nectarines, Plums, and Apricots, with a row of dwarf pyramid trees of the most esteemed varieties of dessert Pears, between the trees at the back. Against the wall are similar kinds of fruit trees to those on the trellis, with the addition of Vines and Figs. Some are trained to a wire trellis, while others are nailed to the wall, and the fruit ripens a week or ten days earlier than on the trellis. As an orchard house, this is unquestionably the finest example of its kind in the country. It has no artificial heat, nor is it requisite, the principal object for which it was erected having

been solely with the view of protecting the trees from being injured by late frosts in spring, and preventing the fruit when approaching maturity from being damaged by wind or heavy rain. All this has been accomplished with the most gratifying success, and we do not hesitate to say that in our long experience we never saw anything to equal the display of fruit that this house contained at the time of our visit. Every tree appeared in the most perfect health, and regularly covered with rosy, luscious-looking fruit. As for Plums, they were most abundant, particularly Green Gages, Jefferson's, Coe's Golden Drop, and Pond's Seedling. Figs were also in great perfection, especially on such branches as were nailed against the wall. A house of this description, even on a much smaller scale, would be found extremely useful in situations liable to hoar frost, and where a crop of wall fruit cannot always be depended upon. During winter it might be made serviceable for a variety of purposes, such as the protection of plants for salading, of Strawberries intended for forcing, or of different half-hardy and other ornamental plants that require but a slight protection during very severe weather.

For a description of the Kitchen Garden, and for some other particulars respecting this fine place, we must endeavour to find room next week.

Miscellaneous.

Irish Peat Bogs.—In a paper on the supply of fuel in Ireland, recently read by Mr. Hamilton O'Hara before the Royal Dublin Society, much useful information was given as to the extent of the coalfields and peat bogs of Ireland, the different varieties of fuel, and how the immense supply of peat, now of little use for manufacturing purposes, may be rendered by improved modes of preparation nearly as valuable as coal. The area of the bogs of Ireland was stated to amount to 2,830,000 acres, and estimating a cubic yard of dry peat to weigh 550 lb., the quantity of valuable fuel from this source would amount to 6,338,666,666 tons. Taking the economic value of turf, compared with that of coal, as 9 to 54, the total amount of peat fuel in Ireland is equivalent in power to about 470,000,000 tons of coal; and estimating coal at 12*s.* per ton, the money value of all the peat in Ireland would be 280,000,000*l.* sterling. Mr. O'Hara referred to the particular qualities of coal found in the various coalfields, and quoted statistics as to the quantities found in each, the area occupied in Leinster being 230 square miles. There are 73 collieries at present in Ireland, 31 of which are in Leinster, 29 in Munster, 7 in Connaught, and 6 in Ulster. Of these 40 only are at present worked. The quantity of coal taken from them has been 120,000 tons a year, but in 1862 it amounted to 127,000 tons. *Daily Paper.*

Barometer Readings.—It is now a well-known fact that the value of a barometer reading depends less on the actual height of the mercury than it does on whether the column be rising steadily or falling; and, further, before the reading can be rendered available for weather purposes, the hygrometer must be consulted to see the amount of moisture in the air, and also whether this be on the increase or the reverse. The direction of the wind is also another element, as is likewise the temperature. As a help to those who are not yet versed in the science of weather, we append a few short rules, that may serve as guides, however imperfect, until they are more advanced in this interesting and useful study. *A Rising Barometer*: A "rapid" rise indicates unsettled weather; a "gradual" rise indicates settled weather; a "rise" with dry air and cold increasing in summer indicates wind from northward, and if rain has fallen better weather is to be expected; a "rise" with moist air and a low temperature indicates wind and rain from northward; a "rise" with southerly wind indicates fine weather. *A Steady Barometer:* With dry air and a seasonable temperature, indicates a continuance of very fine weather. *A Falling Barometer:* A "rapid" fall indicates stormy weather; a "rapid" fall with westerly wind indicates stormy weather from northward; a "fall" with a northerly wind indicates storm, with rain and hail in summer and snow in winter; a "fall" with increased moisture in the air and the heat increasing, indicates wind and rain from southward; a "fall" with dry air and cold increasing in winter indicates snow; a "fall" after very calm and warm weather indicates rain, with squally weather. *Negretti and Zambra, in the Times.*——All barometers should show the same pressure at the same place, if well made, whatever their construction, if duly corrected for their internal temperature—usually that of air close round them. A mercurial barometer, whether of one kind or another, may differ from and vary in its difference from a good and truly graduated aneroid accurately compensated for temperature; but these differences are only fractions of the tenth of an inch generally. Atmospheric currents and their pressure, or tension, occasion changes in barometers very much more considerable than those caused by rains or snow (which descend from one current of air while influenced or acted on by another). Two such currents of air, or winds, impelled against each other, and having more or less momentum, raise the barometer, by an increase of tension, or pressure, laterally as well as vertically, and rain may fall, or snow or hail, notwithstanding a high reading—perhaps considerably above 30 inches. In such cases the use of a thermometer, and a knowledge of seasonable temperature (see any sixpenny manual), at once indicate the approach and temporary prevalence of either wind displacing another. *Admiral Fitzroy, in the Times.*

Winter Garden in Dublin.—From a report of the Dublin Exhibition Palace and Winter Garden Company just issued, and signed by the Duke of Leinster as chairman, it appears that the contractors, Messrs. Beardwood, have made rapid progress with the work, and there is a prospect that the company will be put in possession of the palace buildings, complete in every respect, in the autumn of this year. The various works in connection with the formation and planting of the surrounding ornamental pleasure-grounds are almost brought to a close, and a considerable portion of the gardens already presents a very pleasing and tasteful appearance. Preparations are being made for an extensive system of ornamental waterworks, for which the Messrs. Grendon, of Drogheda, have contracted to erect the machinery.

Calendar of Operations.

(For the ensuing week.)

ALTHOUGH the expediency of night covering for the roofs of glass houses has been frequently pointed out and pretty generally admitted, yet hitherto little has been done in the way of carrying the plan into effect. It is, however, very economical in point of fuel, more especially in old houses with badly fitting glass. Under such circumstances a trial is only required to prove its utility.

FLOWER GARDEN AND PLANT HOUSES.

Maintain a mild agreeable atmosphere in show houses, and see that all plants are clean and in good health. If any become infested with insects remove them immediately; for no course of culture will succeed without thorough cleanliness.

CHINESE PRIMROSES.—Plants intended for succession to those now in bloom may have a shift, and be otherwise encouraged to make free growth.

CINERARIAS.—Plants intended for specimens may also now receive a shift into larger pots. Admit air freely to them while the weather is mild, and do not let them flag from want of water.

FORCING GARDEN.

The fine weather which we are now experiencing will be found highly favourable to all kinds of forcing. Do not however drive matters too rapidly until we have more sunlight.

CHERRIES.—A mild and somewhat moist atmosphere is what should be aimed at; give air, as in the case of Peaches, when the trees are in flower and the weather favourable, and see that the roots are in a proper state as to moisture.

CUCUMBERS.—Sow successions of choice kinds in case of failure. Pot off young stock and top as soon as the rough leaf has been unfolded. In planting out lay a thick turf under each hill, and in making the latter confine it to the centre of the light. Give air as often as possible, and, in order to be able to do so, keep up powerful linings.

MELONS.—Sow seed of the Beechwood or other early kind. Get some dung at work for the bed, and carry it through as careful a process as that for the early Cucumbers. If ridged out by the second week in February, they will be sufficiently early to prove a safe crop, and will be ready by the first week in June, if not a fortnight earlier.

PEACHES.—Give air at all times when the weather is favourable, and maintain a temperature of about 60°, allowing it to fall 5° lower at night. If the trees have done blooming, syringe freely in the afternoon about 4 o'clock, or earlier if the nights are frosty. Commence disbudding whenever the shoots are in a fit state for that purpose, removing a small quantity periodically till the work is finished.

PINES.—Such plants as are pushing should have plenty of heat and atmospheric moisture. Let the bottom-heat for the present be about 80°.

VINES.—In the early house let the thermometer be 70° by day and 60° at night. Disbud steadily; stop the shoots as they advance at the joint above the fruit. If the lower part of the house be deficient of wood, select some well-placed buds as they break to fill the vacancy; they will soon push into vigorous shoots and fill up the gaps.

HARDY FRUIT AND KITCHEN GARDEN.

The time is at hand for commencing operations here in earnest, and one of the first steps is to plan out every inch of ground for the whole year, if possible. Laths should be written upon and placed at the heads of the quarters, descriptive of the kind of crop, the manuring, and what succeeded by. It is necessary also, in order to follow up a systematic rotation of crops, to keep a cropping book corresponding with the labels.

CAULIFLOWERS.—As autumn-sown stock has doubtless been diminished by the ravages of slugs and the late frost, a slight hotbed may now be made, covered with 3 or 4 inches of soil, and sown immediately.

ONIONS.—Those who desire to have large bulbs ought now to sow White Spanish, Brown Spanish, or Tripoli, either in boxes or on a slight hotbed. The last is a very large mild Onion, but it does not keep long.

PEAS.—These might still be sown in heat for transplanting. Where boxes are not to be got, common draining tiles will be found useful substitutes, or better still, turves cut into long narrow strips and hollowed out in the centre lengthwise for the reception of the seed. In transplanting, these have merely to be lifted and placed where the Peas are intended to grow, first hardening them off a little, and then, when put out, protecting them for a time by means of Spruce branches.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,
For the Week ending Jan. 27, 1864, as observed at the Horticultural Gardens

January.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain
Thurs. 21	14	29.909	29.867	51	38	44.5	44	43	S.W.	.20
Friday 22	15	29.830	29.770	54	37	45.5	45	43½	S.W.	
Satur 23	○	29 918	29.704	50	26	38.0	46	45	S.W.	.14
Sunday 24	17	30.296	30.100	47	25	36.0	46	45	S.W.	.30
Mon. 25	18	30.368	30.245	46	29	37.5	45	45	S.W.	.00
Tues. 26	19	30.250	30.150	52	32	42.0	44½	44½	S.	.04
Wed. 27	20	29.978	29.964	54	38	46.0	45	44	S.W.	.30
Average.		30.083	29.971	51.3	32.5	41.3	45.1	44.3		.20

Jan. 21—Rain; very fine; fine at night.
— 22—Densely clouded; cloudy and windy; boisterous at night.
— 23—Rain; fine; cloudy; rain at night; slight frost.
— 24—Clear; fine; clear at night; slight frost.
— 25—Hazy; fine throughout.
— 26—Cloudy; exceedingly fine, with sun; overcast; rain at night.
— 27—Densely overcast; very fine; cloudy; fine at night.
Mean temperature of the week 3 1-5th deg. above the average.

STATE OF THE WEATHER AT CHISWICK,
During the last 38 years, for the ensuing Week, ending Feb. 6, 1864.

January and Feb.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 31 .	44.4	—	—	17	0.39 in.	5	5	1	2	9	10	3	3
Mon. 1..	43.3	31.0	37.2	12	0.52	5	6	1	2	3	10	5	6
Tues. 2..	43.7	31.0	37 4	13	0.75	3	6	5	3	2	10	6	3
Wed. 3..	44.3	30 9	37.6	17	0.42	4	4	4	3	2	16	3	4
Thurs. 4..	44.8	33.2	39.0	18	0.31	3	4	4	1	7	12	5	4
Friday 5..	45.8	33.7	39.8	17	0.39	2	3	2	2	3	15	6	5
Satur. 6..	46.2	32.7	39.5	19	0.25	2	3	4	3	4	9	7	5

The highest temperature during the above period occurred on the 1st, 1852; and 3d, 1850—therm. 57 deg.; and the lowest on the 31st, 1857—therm. 8 deg.

Notices to Correspondents.

CUCUMBERS: *A B.* The affection in your Cucumber plants is very common and can scarcely be called a disease. There is not power of vegetation to nourish the whole leaf perfectly, and consequently particular spots which are acted upon too strongly by the sun's rays, do not form any chlorophyll, to which the green colour of leaves is due. You may often see the same thing in Spinach, and indeed in many other plants. The worst is that the fruit may have weak points too, and in consequence be spotted. We see no trace of thrips about the leaves. *M J B.*

GRAPES FROM SEVILLE: *W S.* It will take some time to examine the Spanish and other books that *must* be consulted. You shall have an answer next week. In the meanwhile the eyes will take no harm.

HYACINTHS: *S B.* Your Hyacinths, now in cold frames 2 inches high, will require but little heat to be in bloom by the middle of March. A slight hotbed or a greenhouse with plenty of air will furnish all they want. Water them occasionally with weak liquid manure made from sheep or cow-droppings.

NAMES OF PLANTS: *C E F.* Platyloma rotundifolium.—*G C. I.* Justicia speciosa; 2, Begonia manicata.—*H H J.* 1, Goniophlebium verrucosum; 2, Pteris argyræa; 3, Asplenium Colensoi.—*C F.* We believe one of the many varieties of Epidendrum variegatum; but the flower is terribly crushed. —*Ridley Hall.* The leaf is that of some Solanum, and probably of S. xanthocarpum. —*Australis.* Lucilia acutifolia, very pretty.—*Granadilla.* It is one of the many varieties of Passiflora quadrangularis; but a mere leaf does not enable us to say which. We must have flowers.

ORANGES: *Sub.* By no means build your Orangery with an opaque roof. If you intend to cultivate the trees for their fruit, build a span-roofed or lean-to house with good clear glass. Oranges ripen best with plenty of light and heat, witness Malta. The pots may be plunged in leaves or tan to give bottom-heat, but the trees will ripen their fruit with it in any Vinery where Grapes are forced. In your cool climate they should have artificial heat all the summer.

THE SLIPPERY ELM: *C E F.* Compare with the extravagant statement you have sent us, the following sober account by Wood & Bache, whose *United States Dispensatory* is a perfectly trustworthy authority:—"Slippery Elm bark is an excellent demulcent, applicable to all cases in which this class of medicines is employed. It is especially recommended in dysentery, diarrhœa, and diseases of the urinary passages. Like the bark of the common European Elm, it has been employed in leprous and herpetic eruptions; but neither in these nor in any other complaints does it probably exert *any greater powers than such as belong to the demulcents generally.* Its mucilage is highly nutritious; and *we are told* that it has proved sufficient for the support of life in the absence of other food. The instance of a soldier is mentioned, who lived for 10 days in the woods on this bark and sassafras; and the Indians *are said* to resort to it for nutriment in extreme emergencies. It is usually employed as a drink in the form of infusion. The powder may be used, stirred in hot water, with which it forms a mucilage, more or less thick according to the proportion added. The bark also serves as an emollient application in cases of external inflammation. For this purpose the powder may be formed into a poultice with hot water, or the bark itself may be applied, previously softened by boiling." There is a great deal of hearsay even here.

WINTERING VINES: *W Nicholson.* The exposure of the wood of a Vine during autumn and winter after the ripening is completed, is a common and beneficial practice within certain limits, the advantage arising from the state of rest which is induced and secured. It is not very material whether this is done by taking down the stems and putting them outside the house or by removing the sashes, except that in the latter case they should not be continued off too long if the season is wet. The object is to keep the wood inactive by securing coolness and dryness; when therefore removed from the shelter of the glass some protection ought to be afforded. The best is a sort of open thatch of straw or fern sufficient to keep off rains, and afford some shelter from frosts in case they should be severe. Unless however there is a special reason for doing so, it is not often desirable to subject healthy Vines to the risk of disorganisation from frost which might be sustained if the exposure were continued throughout the depth of winter.

ERRATUM.—In Messrs. Lane's advertisement in our last impression, 1st page, referring to another column, read page 72 for page 71.

Seed Corn from the Chalk.

ALL THE MOST APPROVED VARIETIES OF WHEAT, BARLEY AND OATS, SUPPLIED BY

RAYNBIRD, CALDECOTT, AND BAWTREE,
Address, Basingstoke; or 89, Seed Market, Mark Lane.
WINTER and SPRING TARES, SAINFOIN, and all other kinds of AGRICULTURAL SEEDS.
Samples and Prices post free on application.

THE LONDON SEED COMPANY, LIMITED,
has been established under the Companies' Act of 1862, for the purpose of supplying all kinds of Seeds for the Farm and the Garden.

The Company has amalgamated with the PLYMOUTH SEED, AGRICULTURAL IMPLEMENT, AND MANURE COMPANY, LIMITED, whereby the whole of the extensive trade carried on at Plymouth will be transferred to this Company.

The Business at Plymouth was originally confined to the Western Counties, but of late years the Seeds supplied by the Company have been despatched to all parts of the United Kingdom. It has been therefore thought desirable, if not necessary, in order to keep pace with the extensive connection, either to open an Establishment in London, or to amalgamate with another Company having similar objects.

The London Seed Company has therefore been established, and very desirable premises have been taken in the centre of the Metropolis, and within a short distance of Oxford Street and Regent Street.

One of the principal objects to be gained by the removal of the Business to London, will be the facility afforded by the speedy transmission of all Orders by Railways and Steamers to all parts of the United Kingdom; and the Company has made arrangements with all the Railway and Steam Companies for the immediate delivery of all orders.

ALFRED BREWIN, Manager.

FOR SALE by PRIVATE TENDER, about FORTY LOADS of RICH TURF LOAM, Three Years old, and in excellent condition, to be seen on the Premises of Mr. HANSON, Builder, Southall Green, W.

Present Prices of Farm Seeds.

THE NEW FARM SEEDS are NOW READY, at Reduced Prices.
PRICED LISTS may be had, Post free, from SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

"Z" Family, now offered for the First Time.

TRADE

HALLETT'S | PEDIGREE | NURSERY WHEAT.

MARK.

THE BEST SPRING WHEAT KNOWN.

For full description of "Z family" see Advertisements in our Numbers for September and October, 1863.

PRICE—One Guinea a Bushel (or Seven Guineas a Quarter), delivered with printed directions for planting, at the Brighton Railway Station, in bags sewed up and sealed, upon receipt of Cheque or Post Office Order, which must in all cases accompany the order. *In the Spring drill 2 bushels per acre.*

HOW OUR WHEAT CROPS MAY BE DOUBLED, and other papers forwarded on application, enclosing six stamps.

Apply to FREDERIC F. HALLETT, Esq., F.L.S., The Manor House, Brighton, Sussex.

ODAMS'S BLOOD MANURE for CORN.
ODAMS'S BLOOD MANURE for ROOTS.
ODAMS'S SUPERPHOSPHATE of LIME.

MANUFACTURED BY THE PATENT

NITRO-PHOSPHATE or BLOOD MANURE COMPANY (LIMITED). Consisting of TENANT FARMERS, occupying upwards of 30,000 acres of land.

Chairman: JOHN CLAYDEN, Littlebury, Essex.

Managing Director: JAMES ODAMS.

Particulars of these Standard Manures may be obtained at the Offices.

C. T. MACADAM, Secretary, or of the local Agents.

Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow, Essex.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE,
Address 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready
PREPARED BONE MANURE for present use on PASTURES.
WHEAT MANURE for AUTUMN SOWING.
BLOOD MANURE for ditto.
SUPERPHOSPHATES of LIME, &c.
All the above being in the finest condition. They also continue to supply
GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, and every Artificial Manure of known value. E. PURSER, Secretary.
116, Fenchurch Street, E.C.

LAWES'S MANURES.
The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per Ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES ..	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American and other Cakes at market prices.

Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

REIGATE SILVER SAND, 7*s.* 6*d.* per ton; packed, 16*s.* per ton; delivered to Reigate Railway Station. PEAT SOIL of various kinds, LOAM, BOG MOULD, &c. N.B.—Loaded trucks can be sent on all the principal Railways.

W. SHORT, Sand and Peat Depot, Reigate, Surrey.

MESSRS. WAY AND EVANS, ANALYTICAL and CONSULTING CHEMISTS, receive PUPILS for the study of AGRICULTURAL and GENERAL ANALYTICAL CHEMISTRY.

106, Leadenhall Street, E.C.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
J. BAILEY DENTON, M. Inst. C.E., will LECTURE on DRAINAGE.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
Professor J. MORRIS, F.G.S., will give a COURSE of LECTURES on GEOLOGY.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh, will give a COURSE of LECTURES on the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire, will LECTURE on CATTLE, SHEEP, PIGS, and POULTRY.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
JOHN THORNHILL HARRISON, of Frocester Court, near Stroud, will give a COURSE of LECTURES on DAIRY HUSBANDRY.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin, will give a COURSE of LECTURES on FARM LABOUR.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions," will LECTURE on ROTATION of CROPS.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
RICHARD GRIFFITHS WELFORD, Barrister-at-Law, will give a COURSE of LECTURES on LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER, will REOPEN on MONDAY, Feb. 8.
Applications for Admission and for further particulars may be made to the Principal, the Rev. JOHN CONSTABLE.

SUTTON'S GRASS SEEDS FOR ALL SOILS.

SUTTON & SONS, SEED GROWERS,
READING, BERKS,

Have a most extensive and complete stock of all the best kinds of GRASS SEEDS for PERMANENT PASTURE, which they are now sending out daily to all parts of the Kingdom, mixed expressly to suit the soil for which they are intended and the purposes for which the Pasture is required. It is believed that Messrs. SUTTON'S Stock of GRASS SEEDS is the largest in the country, and certainly the quality cannot be surpassed. The sorts can be supplied separate or mixed to suit the soil. The Light Large Seeds in one Mixture, and the Clovers and other Small Heavy Seeds in another; 2 bushels of the former and 12 lb. of the latter per Acre are supplied.

No. 1.	Mixtures for Permanent Meadow and Pasture, mixed expressly to suit the Soil	per acre, 28s. to 30s.
No. 2.	Mixtures for Permanent Field Lawns, Parks and Cemeteries ...	per bushel, 16s.
No. 3.	Mixtures for Irrigation or Catch Meadows	per acre, 25s.
No. 4.	Mixtures for Reclaimed, Marsh, or Heath Land	,, 20s.
No. 5.	Mixtures for Loose Blowing Sands, Heavy Clays, Chalky Soils, and Sharp Gravel	,, 30s.
No. 6.	Mixtures of Finest Short Grasses for Garden Lawn	1s. per lb., or, per bushel 18s.
No. 7.	Renovating Mixture of Clovers and Fine Grasses for Old Parks and Meadows	9d. per lb., or, by the cwt., 80s.

MR. MARTIN SUTTON'S *Essay on Permanent Pasture, containing complete Instructions for Sowing and Management, is supplied with the Seeds.*

SUTTON'S LIST OF PRESENT PRICES OF OTHER AGRICULTURAL SEEDS, MAY BE HAD POST FREE.

Goods delivered Carriage Free, except very Small Parcels.

SUTTON AND SONS, ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.

The Agricultural Gazette.
SATURDAY, JANUARY 30, 1864.

MR. GREY'S question—WHAT TO DO WITH OUR CLAYS?—which he answered in our last Paper by pointing out both the methods of laying down and improving Grass lands, and the superiority of steam cultivation on arable land, is one of the most important of the present day for all owners and occupiers. Those who with us believe that the now popular cry for laying down land to permanent pasture, and the increasing outcry against breaking up old Grass, is excessive, and will be shortlived, have of course to contend with the undoubted fact that land thus laid down can be broken up again, improved as plough land by the process—while land thus broken up can regain its condition as established pasture or meadow only through a long series of comparatively unprofitable years. And we must admit that there are some clays which under ordinary management are so expensive and so profitless that their condition in poor Grass seems the only state in which they will yield what rent is charged upon them. Under ordinary management, therefore, the question can be answered only by reference to the character of the soil. There are some clays which horse-tillage cannot fertilise, and on which a poor coating of Grass is the only produce obtainable without a loss. There

are others which naturally yield such magnificent annual growths of Grass that it would be the utmost folly to incur the expense of arable culture for what would probably be a less valuable annual return. There is yet another class yielding poor Grass from which arable cultivation will profitably extract a great increase of food for both man and beast.

We were last Tuesday over a Gloucestershire dairy farm, where the first and last of these cases were well illustrated. A deep cutting of a railway runs through this farm. The blue lias in alternate layers of stone and shale is shown by it to underlie the greater part of the land. But in places this shaly, stony subsoil is overlaid by a sheer clay without parting of any kind. The soil over this is the poorest and most intractable, and apparently either incapable of cultivation, or yielding at an enormous waste of horse flesh the poorest produce of Wheat, Beans and Vetches. It yields also an extremely poor pasture, blue with Sedge, rather than green with Grass. The stony subsoil, easily drained by channels 4 feet deep and 12 to 15 yards apart, yields naturally a very poor Grass, but is comparatively easily cultivated, and grows Wheat, Oats, Peas or Beans, and Turnips or Mangel Wurzels, heavy crops of good quality at comparatively small expense.

The question what we are to do with our clays is easily answered in such a case as this. It would be folly to break up the whole of the Grass land, even in this latter case; and thus attempt to upset the whole style of the agricultural industry of the district. It is a dairy country, and the larger portion, even of this middling Grass land, must remain in pasture, being improved by drainage and patient continuance in more ordinary good management. But there cannot be a doubt that the superiority of the arable land on such farms as we saw last Tuesday, ought to give confidence to landowners, who are being perpetually petitioned on all Gloucestershire dairy farms for leave to break up a little more Grass land. The little straw that is grown is insufficient to keep the cattle either comfortable or tidy at this time of the year; and the few roots that are grown are quite insufficient for the needs of the herd during winter. If more roots and straw were grown, much less haymaking need be done, and a larger herd could be kept and more cheese made on a given extent.

If more corn crops were cultivated, the dairy farmer would not be reduced to the plight of carting out the fresh-soiled litter on the fields, spreading it there, and waiting till it should be washed clean and dried, and then raking the bleached straw together again for another use as litter.

It seems plain that the present exceptional price of the grain produce of our arable land ought to be allowed but little influence on the decision of the question—What to do with our clays? and that, especially in our dairy districts where first-class pastures do not prevail, a larger portion of our Grass land ought to be brought under the plough.

And, for the large remainder of our poorest clays, where the cost of labour, the poverty of the produce, and perhaps the inclemency of the climate, unite to forbid plough-land cultivation—even here we believe that the line which encloses those lands where a poor natural produce of Grass is the only thing that will pay for occupation, is shrinking and being driven in by the steam plough where it has been substituted for that horse cultivation which has hitherto been unprofitable.

Land drainage must, of course, precede any attempt at the profitable cultivation of such land; but land drainage is hardly possible here, except where steam cultivation deeply opens up the surface soil; even poor clays thus treated will, we doubt not, ultimately yield a profitable return to arable management.

It is a curious fact that at the very moment when our farmers are complaining of the deterioration of their Swede Turnips, and anticipating their reversion more or less completely to Cole seed, as loud cries are raised in the departments of Le Calvados and Maine et Loire in France against disease and degeneration in Colza, a plant referred to Brassica campestris, the species from which the different varieties of Swede Turnips or Rutabaga are supposed to be derived.*

In all such questions, the main point on which the matter turns is the object which the cultivator has in view. If he wants his Cole seed merely as green food for sheep, he looks to quite a different type from what he would do were his labours directed to an abundant crop of seed for the sake of extracting oil.

We will first refer to the disease as observed by ISIDORE PIERRE, an abstract of whose observations is given in the last number of the "Popular Science Review," p. 249, which we take the liberty of extracting:—

"He selected 15 plants of both kinds, healthy and unhealthy, and taking the leaves from each specimen, he compared the normal with the diseased form, and from this was enabled to conclude:—1. That the malady prevents the development of organic matter in the leaves which have been attacked. 2. That a comparison of equal weights (dry or green) of both forms shows an excess of about 20 per cent. of nitrogen in the unhealthy leaves. 3. The latter are also richer in mineral matters, and especially in phosphoric acid and lime, of which there are about 80 per cent. more than in the healthy leaves. 4. The tainted leaves also possess more soda than the normal ones. 5. In equal weights the two varieties contain about the same proportion of salts of potash.

"In estimating the total weight of the substances contained by each leaf his results are more interesting. Thus he proved—1. That the quantity of nitrogen in the tainted leaves is one-fifth less* than that of the healthy leaves. 2. That the total weights of organic matter is about 50 per cent. less in the unhealthy leaves than in the same number of healthy ones. 3. That the total weight of mineral matter in the unhealthy leaves is about one-sixth less than that in the same number of healthy leaves. 4. That the unhealthy leaves contain about one-sixth more phosphoric acid than the same number of healthy ones. 5. That the diseased leaves contain about one-eighth more of lime than the same number of healthy leaves. 6. The unhealthy leaves contain only six-tenths of the quantity of potash contained in the same number of normal specimens. The most important result of all these investigations is evidently the discovery that the diseased leaves have a far greater supply of lime and phosphoric acid than the healthy ones, and are also richer in nitrogenous principles."

The other notice of Colza is by Monsieur CHATEL, who does not enter into chemical details, and who looks rather to degeneration than actual disease. We translate the following from a small brochure which he has kindly forwarded:—

"In looking over or cutting a field of Colza, every one must have remarked a great inequality in the development of the plants. At every step we find, by the side of a vigorous plant, garnished with numerous pods, others far weaker, slightly branched, or with the pods scattered or badly corned. The cause of these differences must depend generally on the bad quality of the plant, which, springing originally from seeds not sown in drills but broadcast, or in other words, from very crowded plants, has been more or less impeded in its development. With small pains and little expense, it would seem to be extremely easy to obtain finer plants and to augment the yield and quality of seed."

M. CHATEL then proceeds to show that wisdom, instead of depending upon the chance produce of ill cultivated land, of selecting the most promising and characteristic plants, and keeping up a supply by a constantly repeated selection.

His remarks apply equally to the maintenance of the character of Swede Turnips, which can only be done by careful selection, and the removal of every possible means of contamination from neighbouring crops of other varieties of Brassica. Selection however is the preliminary point which requires special attention.

It is well-known that in the case of mere varieties of one species, the intermixture of varieties, and the consequent origination of numerous forms, is almost without limit. It is to this tendency that we owe a great portion of the ornaments of our garden. Supposing then that all the access of every form of the genus Brassica be excluded, which differs sensibly from the particular variety of which we want to secure the purity, we shall still have a source of impurity in the intermixture of the different varieties which will inevitably arise in the course of cultivation of the especial form which we wish to propagate. It is clear then that if we wish to raise pure seed, we must first root out from our seed bed every individual which shows the slightest departure from the most approved form. And if this be the case where there is no danger of impregnation from abnormal varieties, much more ought the selection to be careful where such exposure is to be dreaded.

In a former article we touched upon the question of reversion to the original type. As regards the Cabbage tribe, M. DECAISNE, who is a convert after much observation to the views which have been maintained by Dr. HOOKER and others as to the wide sense in which species ought to be taken, has lately expressed himself as follows respecting the non-reversion to the original wild type:—"We may consider it certain that every good variety of Pear, and I may say the same of all our fruits, will, if it is impregnated by itself alone, give rise to good varieties: they may differ, and will in all probability differ, sometimes by one character, sometimes by another from the same variety, but none of them will resume the character of the wilding any more than our Drumheaded Cabbages or Cauliflowers will return to any of the wild species which are so distinct in habit, which grow on the cliffs of the Atlantic or Mediterranean."

Those who wish to see the contrary opinion well and fairly stated, may turn to the January Number for 1864, of the "Natural History Review," in an article on DECAISNE's late memoir on the variability of the European forms of the Pear tree. *M. J. B.*

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* It is a curious fact that in Dr. LINDLEY's article Brassica in MORTON's "Cyclopædia of Agriculture," Colza is referred to Brassica campestris, Rape to Brassica napus. These supposed species, however, as well as Brassica rapa, the common Turnip; Brassica oleracea, the Cabbage; and Brassica præcox, the Summer Rape, all breed with each other with the utmost facility, so that it is extremely difficult to keep them pure. In the article Turnip in the "Penny Cyclopædia," the Swede Turnip is referred to Brassica campestris. Sometimes, however, as in the article Rape in MORTON's "Cyclopædia," Colza is called Brassica napus, while Rape is called Brassica oleracea.

* So in the text, but apparently it is a slip of the pen for greater.

TALE OF A LANDLORD.

[Lark-spur.]

IT is the happy quality of those subjects which have Nature, and her doings for their theme, that they never grow old, and never get stale. But they have even a higher privilege than this, a charm which (with one exception) is possessed by nothing else that comes within human experience,—namely, the power to impart a portion of their own perpetual youth to those who follow them. In the ordinary things that make up life, the early impressions are vivid and durable; and as the journey proceeds they become tame, and evaporate: but a little morning alliance with Nature affords a pretty evening illustration of the well-known 'parietal' adage "Be old when you're young, and you'll be young when you're old." To be sure, it looks a little old-fashioned, or affected, (accordingly as you view it) in a boy, to be scrutinizing curiously and carefully some process of vegetable or insect life, which others apparently more lively and active than he, pass by without a look or thought. But mark them when the grey and silver hues of man's Autumn have touched their temples; and you see a change come on, a sort of inversion: in the one case, either the charms that were so ravishing, or the eyes that followed them, have got dimmed a little; but what is worse than that, there is a touch of fickleness added to insipidity, and the lover finds himself left behind at a rather trying time. Not so in the other case; impressions trifling at first, as mere curiosity, deepen and strengthen as knowledge gives them fuller scope and broader relations; and that vivid mental action on which happiness so much depends becomes intensified by every new discovery of science as life proceeds, reminding one of those shrubs whose hues grow more rich and varied as their annual toilet draws nearer to its appointed close. The true lover of Field or Garden, Tree or Flower, could hardly adopt a more appropriate and touching motto for his banner than that loving invocation of Quinctilian to the Earth as "the nurse and delight of our childhood, the sustainer and invigorator of our youth, the instructress of our manhood and age, and the gentle mother who receives into her bosom our wearied frame, when life and labour are accomplished."

A truant pen recalling a half abandoned theme, hung up like an old cobweb in a corner, a great way back in this Chronicle,—a hand to which by the crushing accident of a moment the wielding of a pen became an agony instead of a pleasure, indulges thankfully its half-restored capacity with such reflection as the above, on reuniting the broken thread of a broken tale.

When a very young landowner riding back home from a visit to his lawyer for general advice, about the management of his newly-born estate, finds on referring to his mental notes of the conference, only a dissertation on pruning and timber management, about which the lawyer knew nothing, and an old brother landowner something if possible less, the conclusion that dimly shapes itself to his mind is apt to be the coming shadow of one that recurs in greater force and substance in many an after year. This conclusion has taken various forms and figures of expression: there may be many more elegant, but I know of none with more of the brevity of wit than that which tells us that 'Every tub must stand on its own bottom.' The experience of 'going to ask advice' brings in fact one

of two opposite results,—either a morbid tendency to lean on other minds, or the healthy and invigorating habit of self-reliance. That a lawyer and land-agent should know nothing about pruning, I had no right, I suppose, to wonder at; yet to a beginner, it was a sort of discovery to find that my lawyer knew nothing about *something*. It felt and acted like a tonic: I had been to the doctor—had got my prescription, and paid for it, as you shall see. And I resolved henceforward to use this medicine, and no other.

I don't say that all this came at once, by any means, during that long dark winterly ride homeward. Nothing ever does that is born to last: but there have been moments in most men's lives when a few—a very few words accidentally dropped upon the mind in a certain condition, cling like a fishhook, and for the moment almost as stingingly: and that *smart* is often the birth throe of a half unconscious resolve—a germ of power to grow into rooted and settled purpose. It finds food from circumstance; and soon acquires a sort of organising power to convert a good deal into special food that might have been indifferent enough without the vital action first started by the venomous barb of that little 'fishhook.'

It had happened to me thus. Before his office hours were over, the good natured lawyer, after replying somewhat indecisively and even unsatisfactorily as I thought, to my anxious and repeated question about the 'Agreements,' and very much after the fashion of that diplomatist, who said 'Language was made to conceal thought,' broke in with a cheery proposal to both his client visitors to stay and join his early family dinner. A grunt, with "You're very good" (also grunted), in a jolly gouty kind of way not easily described, from my 'neighbour,' decided me also: and away we presently repaired to the lawyer's residence close by. "And then we can talk it over you know!" he had added, to me, in a kind of hospitable promissory way, that somehow boded better for the dinner and port wine to my ear, than for anything about 'Leases and Agreements.'

And my ear was right. Plenty of kindness, hospitality, and compliment. "Had I had much shooting?' (He knew I had scarcely been a day from town, and up to my eyes in executory business). 'Best coverts in the county you know, yours, for woodcocks' (Oh! you wicked tempting 'Lawyer,' you very well knew *why!*) And so on from subject to subject, as regular a *run* as if 'Lease' and 'Agreement' were a couple of greyhounds that I had slipped upon him under the dinner-table, or across it, and he was doubling round the decanters. What could it mean? Suddenly, turning round to my neighbour of that morning's anonymous introduction, in the office, who sat half-asleep near me,—the ladies having left the room,—I said, apropos of the coverts—

"Do *you* know that district well, Sir?"

"Which?" wakening up with a start,—

"Windwolde."

"Win'uld!" *Know it?* Yes!—'ld starve a lark!"

If you ever saw a struggling vessel that has had all hands at the pumps for eight-and-forty hours, suddenly shipping a tremendous sea into all the ports, and cabins,—one general sweep and smash over all the deck, and all upon it—as I once did witness, and live,—you may form a fair approximate idea of the shock under which Mr. Penn's face suddenly collapsed—gave up the struggle, and seemed to go right down, under this sudden 'let out'—this boisterous shake of the fresh-awakened lion.

A dead silence. There was nothing to be said or done for it. The shell had burst: there was no 'picking up the bits.' This lay plainly enough in the blank speechlessness of our host's face, from which indeed I gathered a deeper and more formidable meaning of the few words so emphatically dropt, than even from the tongue that uttered them. And as I am inditing a tale of facts, let me record to the honor of solicitorial human nature, which novelists delight to demonize, that I hardly ever saw a more thoroughly tender phrase of wounded feeling for another, written on man's kindly countenance, than the table-lamp shone upon, and lit up like a glory to the mind's eye that recalls that well-remembered evening.

For many a long year he had known, as only the agent of an undrained estate knows, the troublous history of the wide and neglected tract that had just fallen to the life-task of the inexperienced guest seated at his table. Well he could measure the value of a strong heart—strong in its youth and its very ignorance—to enter on a charge that no overdose of fore-knowledge should be allowed to damp or discourage: and down had gone the sticks at the first bowl, as it seemed to me, before the young batsman was fairly planted at the wicket! As time improves every good picture—so did the experience of after years light up with more and more of grace to my remembrance, the lamp-photograph, that still remains, of a large-developed but well-chiselled face with its full and genial expression suddenly blanched—stung by the bite of a rough care-ing word that seemed to have converted his cheerful looking parlour into a kind of moral slaughter-house. Luckily Mr. Penn undermeasured (as elder people mostly do) the forces of Youth, and Ignorance—blessed Youth, happy Ignorance! to which Life and Labour are hidden behind the painted drop-scene, which no hand can lift but that of Time: blessed Youth! happy Ignorance! that listen to the tale of Knowledge with unconscious ear, and meet the faded look of old Experience with a kindling eye, and its chill touch with a warm hand, conquering the earth by the fresh relays of generations, in a fight that is always winning—never won.

This then was the 'fishhook'! Emptyhanded enough as far as legal advice was concerned, I might have been returning home after all my long day with the Lawyer, and so in truth I was. But if all those hours had been spent in receiving good advice—if all the plans for estate improvement that could be uttered in words or written on paper or sketched on pasteboard, or recited from "the best authorities" had been lavished upon me throughout that livelong day, or if all the Leases and Agreements that ever were perfected on paper or parchment, had been shown to exist and placed before my satisfied eyes—would all that time-honoured apparatus put together have surpassed or equalled the laconic force conveyed in that old gentleman's explosive phrase "Starve a lark!" As it turned and twisted itself in my thoughts in all its cutting yet laughable brevity and pertinence, it took almost to my own consciousness the likeness of the little weapon that was speeding my journey home over the frosty road. Better than all the help that lawyer or land-agent could give, the SPUR made itself felt that night! and for many and many an after day and night its keen point was at work to remove that stigma—to shame away the very echo of the words I had heard, from that portion of earth that had fallen to my lot.

Strange, it seemed to me, that I should never have heard of this before! How the boy may fish, and the youth may shoot and hunt, and disport himself in a hundred ways over the land, and meet merry faces, responsive to his own, and partake of jolly luncheons offered with welcoming smiles, at hospitable farmhouses, and never learn, never guess one tittle of the trouble and the sorrow and the need—and the unrequited toil and slavery from year's end to year's end, and alas! often the careless unenquiring ignorance—that lie skin-deep under his feet over wide tracts where the foot that follows the plough, and steps to the hopper and sickle, has preceded him for unknown ages on its annual accustomed errand; yet where the foot of skill and science, the hand that dives below the stale wearied surface-soil, the mind that directs the drain-fall and penetrates the course and character of the under-strata, have advanced no more than into the primeval forests of the Western World, where the bow and tomahawk and warwhoop of the Indian have alike preceded for as many centuries, or more. Wonderful is the history of the earth's development to the growing wants of man! only less seen and less wondered at because human life is too short to read the chapters as they should be read. To one whole generation is given a mere section of the progress of the Turnip-crop—to another its gradual extension—to another the introduction of the drain-tile—to another the improvement of its form, and in its depth—to another the application of steam power to the processes of the farm yard—to another its advancement into the field,—and so on. But who that now stands and contemplates an almost garden soil embalmed with every enrichment and every improved manipulation that present knowledge can give, would believe there was a time when struggling labour could only rescue from the same acres a produce which in the language of expressive irony would 'starve a lark!' *T.*

THE MEAT MANUFACTURE.

(*Concluded from page* 85.)

[The following is the remainder of Mr. Coleman's paper read at the London Farmers' Club.]

A FARMER, having selected or bred his young stock, must keep them nicely, and care must be taken to draw a line between too high feeding and too low—the one on the score of expense, and the other for the sake of the well doing of the animal. I would advise an occupier of arable land not to give his young stock too much straw. The food should be, when a year old, from 24 to 40 lbs. of roots, and 1 lb. of Linseed meal or cake with 1 lb. of Oat, Barley, Maize, or other corn, according to price. This should be boiled or steamed with pulped roots and chaff; from 6 to 8 lbs. of chaff may be given; but care must be taken so to apportion the food as to keep them in a healthy state. I have known many young stock very much injured by the injudicious use of straw chaff, and have lost them myself through it. But after all may be said and done, it is to the fattening of cattle that occupiers of arable land must pay most attention, as the difference in management is often the margin between profit or loss. It is of no use allowing an animal the best of food, if he has an uncomfortable bed at night; he will not make much progress. I remember some years ago seeing 20 very good Shorthorns purchased on Norwich Hill, in October, by two neighbouring farmers, and I helped them to divide the lot, each man taking 10—the one the red, and the other the roan bullocks; I do not think there was 1*s.* per head difference between the two lots; yet, when they came to market the following spring, one lot made, if I remember right, 3*l.* to 4*l.* each more than the others. Upon asking the reason of this difference, knowing both lots to have had the same quantity of artificial food, I was told that the owner of the cattle that paid the most money made as much fuss with them as he did with his children; the others were only attended to in the common way. This taught me a lesson I shall never forget, and I imagine many other farmers would be better for just such an one; for, when I go into some men's stalls and yards, I do not find the comfort of the animal studied so much as it ought to be; and we may be well assured, without great attention, bullocks, instead of paying, or helping to pay, the rent on arable farms, will be looked upon, as they are now by some people, as a necessary evil, and called nothing better than manure manufacturers, and expensive ones too.

When cattle are first put into the stalls I prefer boiling the meal or cake, and mixing the roots with the chaff, pouring the liquid over them, and leaving the mixture either in a heap or cistern to ferment for 24 hours. By this means the chaff is made more palatable, and the mixture eaten very readily. At this time the roots will be pulped or minced, and may be continued the first eight to 10 weeks with the bullocks to the fattening stalls; but when the cattle become about half fat, or within a month or six weeks of being ready for the butcher, then give the roots raw, and the corn and cake dry. The butchers say cattle fed on cooked food do not weigh well, nor do they turn out so full of fat, and the flesh is far from so firm as they wish it to be. Now I know this to be correct; and an instance occurred only last spring, showing that, without a fair allowance of roots, cattle fed in winter will not give the purchaser satisfaction. My brother, who farms in Norfolk (upon the estate of Lord Wodehouse), had 25 very nice Shorthorn steers in his yards, when I visited him last February; he was giving them pulped roots and Clover chaff, with a very small proportion of straw, if any, and from 4 lb. to 6 lb. of cake or meal. They wese sent to the Metropolitan Market in April, fat, and I, happening to be there the following week, saw Mr. Thos. Burrell, the well-known cattle salesman, who came and asked me what my brother had been feeding his bullocks upon, as the butchers who bought them complained most terribly of their weighing so badly, and turning out such brutes. The credit the Norfolks maintain in the London market, from January to June, is owing to the abundance of roots with which they are supplied, and I would have some of my friends remember this, who think that cattle can be fed without any roots at all.

I will now notice the values, according to a farmer's notion, of some of the artificial foods that are most in vogue in the present day. Without doubt, that which stands first is Linseed cake, and, when moderately pure, deservedly so; but we must be careful what we purchase, and be guided by our own "palates" as the best test of its genuineness. I prefer to mix meal of some sort with cake, when a good portion of roots is given; but the relative prices of each article will rule this. Now that most feeding meals are cheap, such as Beans, Barley, Maize, Lentils, and others, it is a good practice to use crushed Linseed, in proportion of about one to five; this does not add much to the expense, and carries off the heating and binding properties of corn meal; and when cattle are eating Mangels, I prefer meal to cake, and give a larger proportion, if possible.

Cotton-seed cake is, I find, very useful on Grass, or Mangels, from its astringent qualities; but it is rather dangerous when imperfectly ground and manufactured. I have had to make a claim within the last few weeks (upon a vendor of it) for a neighbour, who lost two strong Welsh beasts from using it, and the quantity was only 4 lbs. per head per day, thrown to them on the Grass land. Professor Voelcker, when the cake was sent him for inspection, said we might as well give cattle compressed "cherry stones," as they would be quite as digestible; so mind, when purchasing Cotton-seed cake, and let the seed be well crushed, and the cake have a mealy appearance. Decorticated Cotton cake I never did like, and, after repeated trials, gave up using it; but the whole seed cake I use now for store cattle in the yard, being very particular not to give too much, and then rarely or ever to very young stock. The experience of others may differ, and if so I shall be glad to hear that I am wrong, as from its reasonable price, it is just the sort of food a farmer would like to use more extensively. Rape-cake I like very well upon light land for manure, but do not think it profitable for feeding, notwithstanding what great authorities may say upon the matter. I am now taking a practical view of things, and putting aside all analyses of the various foods given to cattle, as I consider them but of little or no value as a test of their fattening properties, or why does Linseed show no better quality by analysis than Rape cake? Maize, Lentils, Beans, Peas, Barley, are all good food for bullocks, when ground fine, and given in moderate quantities; but no one of them separately will increase the weight of an ox so fast as Linseed cake, nor will the manure from them be so valuable. We have heard some statements about cattle eating 28 lbs. of cake per day; now I believe this, in a few instances, has been exceeded, yet when the cake has been pure, no ill effects have resulted, except to the farmer's pocket. The most artificial food I ever had a lot of bullocks eat was 21 lbs. per day, consisting of 14 lbs. of cake, and 7 lbs. of Barley and Bean meal. This was 20 bullocks that I purchased some years ago at Wragby, Lincolnshire, in October; and, as soon as I had bought

them, the late owner came up to me, and told me, as a young man, to mind what I was after with them, as they had been having 14 lbs. of cake per day upon the Grass. They continued eating the quantity I have named until the Smithfield great market, to which most of them went; they paid me about 8*l.* per head for 10 weeks' feeding; so I got a lot of extra good manure, and very well out of a business I can tell you I did not much like, for I would not have had them, had I known their antecedents. Is it not often the case that, when we buy beasts to put in the stalls, they have been living too well to make the improvement we expect with the food we give them? I like to commence with 4 lb. of artificial food, when cattle first go into the stall, and gradually rise to 8 lb., so that they average 6 lb. per day for the whole time they are feeding. If they do not pay for this quantity, they rarely will for more, unless very good large beasts indeed, and when finishing for Christmas markets.

Boxes, stalls, or yards for cattle; which are best? Boxes I prefer, as the manure, under cover, is superior; but I have found cattle in stalls gain quite as much weight, with the same amount of food, as those in boxes. The cost of cleaning the stalls out, and the manure being afterwards exposed, must be set against the cost of erecting the boxes, the only difference being that the one is borne by the tenant, the other is the duty of the landlord. We know nearly all the Norfolk beasts are fed in yards holding from 10 to 20 in each. This is a system not to be condemned, where there is plenty of straw for litter; for I have had cattle, and well-bred Short-horns, too, when the yards were well littered and dry, prefer the open yard to the shed. I do not think the manure made in a yard, with one-third of its space covered by a shed, is very much worse than that made in boxes, notwithstanding what many persons say upon the subject. I have often taken the shed manure and put upon the land by itself, but never yet saw much difference between it and that made in the open yard. Of course no stagnant water is allowed to remain in the yard, but all drains off into a tank. If a landlord, in a district where straw is plentiful and roots scarce (as they are for bullocks in light-land districts), offers to put up his tenant good roomy yards, with one-third covered, I do not think the tenant ought to stand out for boxes, as they are more expensive to both landlord to build and tenant to occupy; but wherever straw is scarce, there it is necessary to have boxes to economise it.

I have been asked to tell fen farmers how to make bullocks pay upon straw and 7 lbs. of cake per day. Now this is a question that will, I think, puzzle even a fen farmer to answer, as their straw is hardly good enough for litter; and some seasons I am sure I pity the animal that has to exist upon it. The occupiers of fen soils must grow, as Mr. Ruston does, a large lot of Mangels, and, by pulping and mixing with straw, he may make his manure at a cheaper cost than by the dry system. I will here remark that my experience as to the value of straw is this; sweet Barley, Oat, Pea, and Bean straw, in the order named; Wheat I do not like for cattle at any time, although sometimes compelled to use it. I look upon straw at best as little more than filling up stuff, allowing the animal to digest more fully the highly rich nitrogenous food that is given to a fattening bullock. I have now 70 fat cattle in the stall for Christmas that eat 1 bushel of straw chaff per day; but they have a like quantity of old hay chaff, 8 lbs. of cake and corn, and 2 bushels of Swedes. We very much want a machine to prepare the straw in a more digestible form than chaff, and I hope our agricultural engineers will try and see if something cannot be constructed. It is the indigestibility of straw that prevents its being more extensively used in the feeding of farm stock. We all now-a-days, as occupiers of arable land and Barley growers, feel very much interested in the course that will be pursued with reference to the malt-tax. If we farmers are not allowed to use malt for our stock feeding, free of duty, it will be a great injustice, for we well know only the worst qualities of Barley would go for this purpose, and therefore not in the least affect the revenue derived from malt made for the purposes of brewing. I see farmers are asked to come forward to give the result of experiments as to the value of malt as food for cattle. I know this much of its value—that if I have an animal getting up for show purposes, there is nothing like a portion of malt, ground fine, and mixed with its food. I now use several hundred quarters of Barley every year; and if I were allowed to turn this into malt, instead of its being applied to the production of the lowest priced meat, (viz., pork), as it now is, it would be used in producing beef and mutton, and would, I am sure, very much save the farmers' cake bills.

THE DEVON BREED OF CATTLE.

[The following lecture was delivered by Captain J. Tanner Davy, the Editor of the Devon Herdbook, before the Royal Agricultural College.]

It is not difficult to observe that the Devonshire and Sussex races are of the same extraction, indeed, so nearly do they resemble each other in colour and length of horn, that if a stranger to the breeds were shown two animals, one a Devon, the other a Sussex, I doubt if he would observe any material difference between them, except that the Sussex beast might appear rather the larger, or as the Swiss would say, the "taller" breed, from the greater length of leg; but the more experienced observer would discover in him a larger and less finely chiselled head, coarser eyelids, combined with a less pleasing expression of the eye, and a crescent-shaped upward horn, instead of the deerlike head and gracefully curved yellow coloured horn of the Devon. He would also detect a tendency to be less level when fattened; but I will do Sussex breeders the justice to admit, they are now breeding animals with loins, and more especially with rumps, very like their original relatives the Devons, and I think them right in doing so.

We find that particular breeds and varieties of a breed were formed long before the modern scientific system of breeding was established; that bulky powerful breeds are co-extensive with a warm climate and rich herbage; and that smaller breeds or varieties of the same breed pervade those districts where the pasturage is more scanty and the climate colder; and as animals are now quite under the control of man, and dependent on him for food, they would degenerate if attention were not paid to their breeding, instances in proof of which too frequently come under our observation.

As with all other breeds, so with the Devons, a great difference is perceptible in animals of the same breed, and cattle of the like colour, and with similar characteristic marks about them, nevertheless differ widely in their feeding and milking properties. The Devon reared in the north of the county is noted for his rich curly coat, which he frequently loses when taken into other districts.

In Vancouver's "Report of Farming in Devonshire," published in 1808, he speaks of the Devon cattle as "active at work, and unrivalled in their aptitude to fatten," but states that they were then declining in their general standard of excellence and numbers, which he traces to "the great demand made for them from other parts of England (where the purchasers, Mr. Coke, afterwards Earl of Leicester, and others) spare neither pains nor price to obtain those of the highest proof and beauty."

I have been told repeatedly by my father and others, and it has been stated by the late Mr. Francis Quartly, that when they were young men, about the close of the last century, that well-shapen, purely-bred Devons were much more plentiful than now; that most of the county gentlemen and the majority of the principal yeomen were breeders. By this I must not be understood to mean that they simply bred animals of a red colour, but fine, hardy, handsome, pure North Devons, of good shape, and possessing great aptitude to fatten quickly. In fact, animals which would now be called choice, were then to be found constantly in South Molton, Barnstaple, Bampton, or any of the local fairs or markets; although at that time there existed no means of testing their relative merits, for those were days long before cattle shows were established.

During the late war with France, the excessive prices offered for cattle tempted many farmers to sell their best at fat stock prices; the quality of these animals being such that in the autumn on Grass alone, they were then, as they are now (even milch cows) always fit for the butcher. It is customary to drive the cows into the yard to be milked, but I have known some of my father's so fat that they were milked in the field, to spare them the fatigue of walking home, which would have been a great punishment. Having sold the greater part of their cattle, the farmers were next attracted by the high price of corn, and gave up their best pastures to its cultivation. Turnip husbandry necessarily followed, and the improvement of their sheep became an object of importance; cattle breeding being for a time generally neglected, and a class of comparatively inferior stock were reared on farms, where those of a superior kind had existed for years previously. During this period a few spirited individuals fortunately acted otherwise. It is reported that the late Mr. Francis Quartly seeing that good Devons were becoming scarce, bought as many as his farm and circumstances would permit, and by the exercise of care and judgment, brought his herd to a high state of perfection. At this time also my father, at Rose Ash; Mr. Merson, of Brinsworthy, in North Molton; Mr. W. Davy, of Flitton; Mr. Mogridge, Mr. Tapp, and the late Messrs. Michael Thorne, and Mr. Acland, of Little Bray, the Halses, and a few others, not tempted by high prices, retained their herds, which were handed down to their successors, and in most instances continue in the same families to the present day. After some years local cattle shows were established, and in their show-yards men had an opportunity of seeing the vast difference between well-bred animals and those of the unimproved breed, and being convinced that the former consumed no more food than the latter, probably less, and that they were at the same time more eagerly sought after, and commanded a higher price in the fairs and markets, a spirit of emulation was aroused, men became conscious of the value of their native breed, and were incited to assist in increasing, improving, and restoring the Devons to their former pre-eminence and purity. At length the Royal Agricultural Society of England was founded, and by the assistance of railways the breed again increased and spread, until instead of being confined to the North of Devon and a small portion of West Somerset, they are now not only extended over a very large portion of Somerset and Cornwall, but also to the Royal farms at Windsor, and in Dorsetshire, Norfolk, Warwickshire, Hertfordshire, Staffordshire, and the Isle of Wight; also into Wales, Ireland, France, Australia, Canada, and lastly, but largely, into the United States of America, which country boasts of several valuable herds, where they are deservedly prized from their answering a very good purpose. They bear the change of climate and soil well, thrive where many breeds would starve and rapidly outstrip most others, when they have plenty of good pasture. There are some sceptical persons who complain of the want of improvement in the Devons of the present day; but surely for the last 20 years there has been a manifest improvement in the general breed throughout the kingdom, and a great increase in numbers throughout the world. This improvement has been effected by a judicious selection of the best materials for the purposes of propagation, without the admission of any foreign blood. The Devons which find their way to the grazing districts in the Midland Counties are bred chiefly in the west of the county and in Cornwall, and are for the most part a coarse bony sort of animal; but they have been gradually undergoing improvement for the last few years, by the introduction of well-bred North Devon bulls, through the instrumentality of the prizes offered by agricultural societies. Here I would remark, that I think there is no way in which landowners could more effectually benefit their tenants than by purchasing a good bull, from two to three years old; he is then fitted to get stock for some years. If bulls are much used when too young, says a little more than a year old, they soon get barren, perhaps at five or six years old. If the bull be kept at a place where the tenantry may avail themselves of his services at moderate cost, the increase of improved stock would be greatly promoted, and the nation benefited.

There is another variety of the Devon kept in the southern part of the county, known by the provincial term of the "South Hams breed," from the district in which they are bred. They are of a lighter colour than the North Devon, and I fancy must have been originally a mixture of the North Devon with the Guernsey. They are large framed, coarse boned, good milkers, with hardy constitutions, and large offals. A friend of mine in speaking of them, is a little severe when he says, "The North Devon differs from the South Devon in everything which is necessary to constitute a good animal." They are now quite a distinct variety, their admirers argue that they answer the double purpose of the dairyman and the butcher; they certainly possess immense frames and are much longer than the North Devons, but I confess I do not like their wedge-like shape, as not calculated to gain much credit either at the Smithfield or at our breeding stock shows; still it is possible by judgment and care in selecting heifer calves from the best milking cows which approach nearest to the "prize animal" quality and shape, and by using bulls which come from good milking cows, not only to sustain the two qualities in the same herd, but to produce animals which the public will value more. However in South Devon these South Hams have their stanch friends, and are said to answer a good purpose for summer feeding. The land on which they graze is undoubtedly very rich, and profit being the ultimate object of most men of business, it seems unlikely that tenant farmers in South Devon, (who have to pay rent, maintain their wives and families, to educate their children, live by their business, and we will hope, lay up a fair store for the future), would continue to keep, and be so much attached to, a breed if they did not find it fairly remunerative.

The offal of these animals is large, their flesh decidedly inferior to that of the North Devon, and when fattened (which is a difficult process) they are chiefly sold in the neighbouring markets or for provisions for the Navy.

Hence, it appears that each breed and variety of breed possesses its own peculiar merits, each answering a better purpose than the other, accordingly to the climate, soil, situation, and other circumstances in which it may be placed. I think as a general rule, the better the milking properties of cattle the more are they disposed to internal accumulation of fat; and it should be understood that excessive accumulations of this kind are the farmer's loss and the butcher's gain. The North Devon breed is most valuable for aptitude to fatten, for delicacy of touch, and the choice quality of its beautifully veined and marbled beef, the especial favourite of the butcher who has a select family trade, for carrying the most beef in the most valuable parts; and for lightness of offal they stand unrivalled. The original type of the breed is peculiar to the north of Devon and the very lower part of West Somerset. Here they have revelled from time immemorial in their bracing, yet humid atmosphere, where nature clothes them in early autumn with rich curly coats, well adapted to their native home at the foot of Exmoor range of hills. Little is known respecting their origin, further than that from the earliest records they can be traced as the peculiar breed of the county from which they take their name. Some persons fancy those of a dark red colour are the best, and that the animals of a lighter shade, almost approaching to chesnut, are in some degree related to the South Hams breed. It is not so. Many of the best Devons I have ever seen were of the lighter shades of red, and in this respect, viz. colour only, do they resemble the South Hams.

Thirty years ago these light-coloured Devons were much more plentiful than they are now. In summer their skins are mottled with beautiful spots of a little darker shade than the ground colour of the skin; and I have seldom witnessed a more pleasing picture than a herd of them, with their beautifully chiselled heads, bright intelligent eyes, and long gracefully curved horns, giving a deer-like appearance to the head, quietly grazing in our undulating meadows, which are frequently almost surrounded by wooded slopes, at the foot of which a rapid trout stream rushes on, gurgling round its many bends, the wild mountain scenery of our west country forming an appropriate background. These light-coloured Devons are generally of the best quality, *i. e.*, they fatten quickly; but I consider those of the darker shade the more hardy, and they possess more lean flesh in proportion to the fat, the objection to the very dark shades being that the skin is then apt to be coarse and the hair wiry, indications of a less rich quality of flesh. The best course to follow is the *via media*; to get our cattle of a middle colour, neither too dark for fear of coarseness, nor too light for fear of a too delicate constitution. In this manner we combine the hardy habit of the former with the high proof of the latter. To a little white about the udder I do not object, but almost think it a part proof of a long line of descent from the best ancestors. I have been told by breeders and by my father, who received a carefully selected herd from his father, and my own experience has confirmed the fact that it cannot be accounted for, and knowing that some of the best and purest Devons that have ever been bred in the kingdom, have occasionally had white about the udder, I should certainly not refuse a good animal for that reason, but the white must be confined to that part alone. Red being the established colour of the Devon from the earliest time, breeders justly object to the intermixture of white, and are supported in this opinion by the public taste; nevertheless it is true that at rare intervals some animals of the most undoubtedly pure descent from solely red parents, say for more than a century, have been known to produce calves with white about the feet or tail or under the belly; whenever these calves are reared, which is but seldom, they almost invariably grow up to be as handsome as any in the herd, and of equally rich quality. When we consider the isolated position of the county of Devon, the absence of railways, and the difficulty of communication with other counties, until within a comparatively recent period, and remember that it is entirely a breeding county, supplying others, but not being supplied; and consequently not having different varieties of cattle brought into it—reflecting also on the just preference which the inhabitants have always entertained for their own cattle, and that in former days it would be impossible for an animal to reach a new home without having spent several days on the journey; so that a fresh arrival of another breed would be surely known, and the herd of any breeder who introduced such, would be for ever after considered mongrels, and strictly avoided. Hence we may feel certain that this occasional show of white is not the admixture with any other breed, but the rare appearance probably of an original colour, which may have lain dormant, and is gradually wearing out. I must not be understood to argue in favour of a mixture of white, or that I should wish calves to be so marked. The true colour of the Devon is pure red. In the north of the county the Devon generally has a soft, rich, curly coat of hair, whilst these keep in the richer districts of Devon and in Somerset have longer and straighter hair, not usually so fine and curly. The effect produced by time, soil, climate, and I will also add water, on their colour and hair, is duly appreciated; and it is a well-known fact that many animals are sent to North Devon for summering, with the two-fold object of grazing and changing their coats.

I felt strongly on this subject, and wrote to my friend Mr. Robert Smith, who resides on Exmoor, and who in replying, after agreeing with me as to the influence of our climate, herbage, and water, says—"Having had in one season perhaps 1000 head of cattle to summer on the hills, I have remarked this change to advantage; the thick short-legged animals invariably do the best. In fact, animals of large frame and smooth coats do not improve, but in most instances return in worse condition than when sent to us. This is also seen at the foot of our Exmoor Hills, at North Molton, Molland, and the neighbourhood, where most of the best Devons are bred, and where many are also sent for summer grazing. The remark with some being, "We send them into North Devon to darken and curl their coats—we find them sell better."

About 20 years ago Messrs. Bult and Bond (two gentlemen farming in the rich vale of Taunton Dene) bought the noted bull, Hundred Guinea (58) of Mr. Quartly. I saw the bull before he left Molland, when his hair resembled that of North

Devon bulls generally. I saw him again, after he had been two or three years in his new home, his hair and general appearance were then considerably changed—he looked a deeper-fleshed animal, but was wanting in that refinement and grandeur which he originally possessed.

Notwithstanding his curly hair, the skin of the Devon should be mellow and elastic. We know that some animals fatten faster than others, and that they are generally more handsomely formed; on handling them we find the skin and parts beneath, soft and "mellow."

This "mellowness" is a kind of softness and elasticity perceived upon pressing the skin with the fingers, and is a favourable sign of the aptitude of animals to fatten. These parts are the cellular membranes, which in fat animals are full of fat, and in store stock the possession of this mellow feeling denotes that there are plenty of membranous cells ready for the reception of fat. No class of breeders have succeeded more thoroughly than our own in attaining this object: indeed, they consider an animal almost valueless, even when possessed of perfect symmetry, if it cannot be made fat without very extraordinary keep. It is difficult, but I have done my best to describe the smooth pleasant feeling conveyed to the senses, by the "handling," as it is termed, of a first-rate Devon; yet it is absolutely necessary that a breeder should attain this knowledge before he can bring his herd to any high state of excellence: and it is the possession of such knowledge that has enabled our breeders to bring their herds to their present perfection. This delicacy of touch is only fully obtained by those who have a natural love of animals, and by constant and unwearied observation. The general form of a Devon is very graceful, and exhibits a refined organisation of animal qualities, not surpassed by any breed. The head should be small, with a broad indented forehead, and should taper considerably towards the capacious nostrils, the nose of a creamy white, the jaws clean and free from flesh, the eye bright, lively, and prominent, encircled by a deep orange-coloured ring, the ears thin, the horns of the female long, spreading and gracefully turned up, tapering off towards the points—in fact the general aspect of the head should in many points resemble that of the deer. At the same time the expression must be gentle and intelligent. The horns of the male are thicker set and more slightly curved, or in some instances standing out nearly square, with only a slight inclination upwards. Fault has been found with the length of the horn of the Devon as being disproportionate, and we have been recommended to get them more like those of the Shorthorn, but I hope, and indeed I feel sure that our breeders will never consent to give up one of the grandest characteristics of their breed.

(To be continued.)

Home Correspondence.

Will the Ewe breed twice in the Year?—In these days of rapid agricultural progression, we may be forgiven for asking such a novel question as this. We know not how soon such a practice or mode of breeding sheep may become popular. We have seen wonderful things done in our day, in almost every department of management and business; and we see no true reason why this cannot be accomplished. The following extracts are to the point. In Loudon's "Encyclopædia" it is said—"The ewe will breed twice in the year, if it be made a point to produce such an effect by attention and high keep; she will receive the male indifferently at any season, and, like the rabbit, very soon after bringing forth. Lisle gives an instance of three of his ewes, well kept, lambing at Christmas, fattening off their lambs at Lady-day, and producing lambs again the first week in June. . . . Could the lambs be advantageously weaned at two months, sufficient time would, he conceives, remain for the ewe to bring forth twice within the year." The following facts are recorded. "The practice of obtaining lambs twice from their ewes in the year was the almost invariable custom throughout Flanders some years ago." "It occasionally happened among the Dorset sheep, and by some farmers used to be followed upon the Mendip Hills." "In the spring of 1801 Mr. Sherriff, of Kinmyles, Inverness, had a ewe lambed in March or April. She dropped a second lamb on the 1st November, a third on the following 29th April, and a fourth on the 12th January, so that she brought forth four lambs at different times in the course of 21 months. The writer of this short paper can testify to a ewe kept upon an adjoining farm having had two lambs at two separate times within the year, and this twice repeated. Many instances have been repeatedly given in the agricultural papers. In fact there can be no doubt as to its partial practicability, but at present there may be great doubts as to its general applicability"; many breeds of sheep for instance would not be well adapted to it. The short-woolled kinds would undoubtedly be most likely to succeed, or any breeds which are good sucklers, and quickly make off fat lamb, for upon this much depends. A lamb cannot with safety be weaned at eight or 10 weeks old, but it may be fatted in that time, and so set the dam at liberty to breed again. It is a subject of great importance to breeders, to lovers of fat lamb, and to our mutton-eating community. Some of our calculating countrymen profess to fix upon a time when we shall be without either, owing to the absurd but very general custom now adopted of fatting off both dam and lamb in the same season. What a wonderful difference and what a national benefit it would be if the ewe could be made to drop another lamb instead of being slaughtered. It is worth the trial. There is no impossibility in the way. The average gestation of a ewe is about 150 days, consequently, there would be about 65 clear days, or between nine and 10 weeks for the early sucklings, i. e. the fatting of the lambs. The ewe will frequently take the ram in the course of the first three weeks after lambing. To bring about this intercourse she should be withdrawn from the lambing field, and be placed with the ram elsewhere and be fed in the most liberal manner, as upon this high keeping everything depends; it being otherwise impossible that she can with profit suckle her lamb and keep herself in condition. The lambing season is approaching. It could not be attended with any serious disadvantages, if numbers of sheep breeders would take up the subject and try upon a small scale what can be done, and next year give the public the result. Something must be done to increase in number our breeds of sheep. The price of wool is enormous, and mutton and lamb is annually more in demand and bears a high price. We often wonder what the skill, research, and industry of our countrymen will effect; we trust our breeders will ere long produce a double crop of lambs equally profitable with the single one now bred. *O. F.*

Ploughing Matches.—I am the Correspondent alluded to in the leading article of a recent impression of this paper, who asked for rules by which the award of merit at the ploughing match may best be made. My aim in so doing was not to give prominence to my own observations; but to elicit from some of the numerous readers of the *Agricultural Gazette*, a discussion on this important agricultural question, that might lead to the establishment of a more explicit mode by which ploughing would be judged by. Being courteously invited by the writer of the article above mentioned to commence the discussion, I with great diffidence beg to submit to the ordeal of public criticism, the following mode by which I have successfully judged ploughing, viz.:—

	Points.
1. Straight feering	2
2. Well shaped rown	2
3. A rectangular straight furrow, bearing the same ratio of dimensions as the standard, viz. 7 inches deep by 10 inches wide, and consequently lying close upon one another, at an angle of 45° to the plane of the unstirred subsoil	6
4. A thorough burial of surface matter, as stubble, &c.	3
5. A straight, narrow well-finished central furrow	3
6. Expeditious manner of doing the work	3
7. Style of finish	2
Total	21

Therefore the possessor of the greater number of points is considered the best ploughman. I quote no authority on this rule, but rely on my own experience, considering "experience bought better than experience taught." *D. P. Davies, Troedybryn, Carmarthenshire, Jan.* 19.

Societies.

HIGHLAND AND AGRICULTURAL: *General Meeting, Jan.* 20.—At the General Meeting of this Society, H.R.H. Prince Alfred being present, the Duke of Argyll (President of the Society) in the chair, the Prince of Wales was elected an honorary member. 110 new members were elected.

The Earl of ROSSLYN reported the arrangements for the next general meeting at Stirling to be very far advanced.

Mr. CAMPBELL SWINTON reported on the subject of premiums for well kept cottages and cottage gardens. He said the members of the Society throughout the country do not frequently enough recollect that by a contribution of 30*s.* from a parish, they can receive an equal sum from the funds of the Society, which may be divided into three prizes of different amounts; and that if there are four competitors, the Society's medal will be given in addition to the most successful of these competitors. Last year only 14 parishes applied for these premiums, and of these there were competitions only in nine. And even that was above the average of the last 10 years, the average being 11 parishes on the list, and of these not more than 8 competing. There can be no doubt that a good deal of delicacy is required in conducting the inspections; but it has been suggested by those who have taken an interest in the subject, that when the ladies connected with the districts in which the improved cottages are situated interest themselves in the matter, it is found to be much more successful than when the landlords or tenants form the inspecting body.

Professor ANDERSON reported of the chemical investigations, that he had finished that of the Potato, and made considerable progress in those connected with the cheese manufacture in the dairy districts of Scotland. The results of these inquiries will be reported in the Transactions of the Society.

In reply to Mr. Harvey, of Whittinghame, Professor Anderson explained that Baron Liebig's statement that Peruvian guano contains only 7 per cent. of ammonia, meant that there exists in guano 7 per cent of ammonia ready formed; but there exists also in it a quantity of uric acid, which, when it undergoes a process in the soil, is capable of yielding 10 per cent. of ammonia, so that when the whole of the nitrogen contained in the guano comes into the plant, it is equivalent to 17 per cent. of ammonia. As he understood the matter, Baron Liebig is of opinion that the ammonia existing in the guano is superior in point of manurial value to that which exists in the condition of uric acid. He stated it as his opinion, and one which he had always held and expressed, that in estimating the value of the Peruvian guano, we must take the whole of the nitrogen as if in the state of ammonia, and reckon its value as he had done at 17 per cent. of ammonia.

PREMIUMS FOR REPORTS.

Mr. FORBES IRVINE, of Drem, then read the following report on Premiums for Reports:—

1. Gold Medal or 10*l.* to Robert G. Thomson, Grange Farm, Kilmarnock, for a Report on Phosphatic and Ammoniacal Manures. 2. Gold Medal or 10*l.* to Robert J. Thomson, Grange Farm, Kilmarnock, for a Report on Soluble and Insoluble Phosphates. 3. Medium Gold Medal or 5*l.* to Samuel D. Shirreff, Saltcoats, Drem, for a Report on the same subject. 4. Gold Medal or 10*l.* to William Walker, Ardhuncart, Mossat, Aberdeenshire, for a Report on Autumn Manuring. 5. Gold Medal or 10*l.* to James M'Gillivray, V.S., Bonnytown, Rayne, Aberdeenshire, for a Report on Internal Parasites in Domestic Animals. 6. Medium Gold Medal or 5*l.* to Hugh Borthwick, Traquair Knowe, Peebles, for a Report on Foot Rot in Sheep. 7. Medium Gold Medal or 5*l.* to John Morrison, Manager, Drummond's Nurseries, Coney Park, Stirling, for a Report on Mixed Plantations. 8. Medium Gold Medal or 5*l.* to Robert Hutchison, of Carlowrie, Kirkliston, for a Report on Breeding Hunters and Roadsters.

Report by Committee on Agricultural Education.—Mr. HALL MAXWELL read the following report:—The remit to your committee is in the following terms:—

"To inquire into the means of Agricultural Education in Scotland, and into the results of the working of the Society's Educational Charter." The following gentlemen named as members of the committee declined to act:—Sir John Forbes, who seconded, and Mr. Maclagan, of Pumpherston, who moved the resolution at the general meeting by which the matter was remitted to the directors, Sir William Gibson-Graig, and Mr. Dundas, of Arniston. In the absence of the mover and seconder of the remit, your committee have no means of ascertaining the views with which it may have been proposed, nor the precise objects to which they might have directed the inquiry. The terms of the remit embrace two points, "the means of agricultural education in Scotland," and "the working of the Society's Educational Charter;" and it appears to your committee that the facts connected with both are so simple and so patent, that they may be exhausted within the bounds of a very brief report. I. The "means of agricultural education in Scotland" are threefold, and consist of:—1st, Facilities for obtaining a practical acquaintance with agriculture by residence on a farm. Several of our most eminent farmers have been in the habit of receiving pupils, the advantage of which not only Scotchmen but Englishmen and foreigners have for long availed themselves. 2d. The means for acquiring a knowledge of the various sciences connected with agriculture, such as botany, chemistry, natural history, veterinary surgery, &c. It would be superfluous to enlarge on the ample opportunities which students have for obtaining such training at the Scotch Universities and veterinary colleges. 3d, The means of acquiring a knowledge of the science of agriculture itself, and of the manner in which other sciences are connected with and applied to it. This branch is fully taught in the class of agriculture in the University of Edinburgh. The above may be a brief, but the committee regard it as a comprehensive summary "of the means of agricultural education in Scotland," and they do not seem called upon either by the terms of the remit or the exigencies of the subject remitted, to go beyond a statement of facts, nor to diverge into matter of speculation and opinion. II. Results of the Society's Educational Charter. Before reporting the results, your committee may be permitted to state the object of that charter. It was obtained to induce agricultural students to avail themselves of the means which have been recapitulated—by acquiring on the field a practical acquaintance with agriculture, and in the class a knowledge of the various sciences allied to it. For this purpose the Society obtained a charter constituting a "council on education," and empowered this council "to grant to students in agriculture diplomas certifying their proficiency in the arts and sciences connected with agriculture." The council, in terms of the charter, framed a curriculum of study, with relative instructions for the guidance of students, and appointed a board of examiners. Since 1858, 15 candidates have presented themselves. Of these, nine obtained the diploma, two were remanded for re-examination, and four were rejected. Such are "the results of the working of the Society's Educational Charter." To some they may appear unsatisfactory and inadequate, and perhaps a greater number of candidates might have been looked for, but it must be kept in mind that the diploma certifying "proficiency in the arts and sciences connected with agriculture" can only be conferred on those who have received a really high education, and who successfully pass a very stringent examination. Your committee conceive that they would transgress their province were they to carry this report beyond the results of the working "of the Educational Charter." The administration of the charter is committed to a council constituting a board independent of the directors, and your committee are informed that so recently as on the 30th November, the regulations and bye-laws and the instructions to students were revised and re-adjusted by the council, with the concurrence and approval of the Professor of Agriculture, who is himself a member of it.

The following discussion ensued on the reading of this report:—

Sir JOHN STUART FORBES explained that he had declined to act on the committee because of the constitution of it. He said:—"I should have wished the Professor of Agriculture to be a member of it, because it appeared to me that without his attendance it would be impossible to obtain such practical information in regard to the existing state of education, and the probable means by which it might be improved by the Society, as we should require in the course of our investigation. I also mentioned that it appeared to me undesirable that any members of the direction hostile to the institution of this inquiry, should be members of the committee." He expressed his regret that the report was so meagre and unsatisfactory. It appeared to him that with such a machinery the results are the minimum of the possible effects of such an arrangement. Fifteen students only in the course of five years have applied for a diploma, and out of these a considerable proportion were rejected. Sir J. Forbes added: "I feel strongly that the machinery we have for carrying out the progressive improvement of the agriculture of Scotland has not been worked up to the point it ought to have been. I regret to say anything personal in the matter, but I may say that this is the last effort I wish to make in regard to the practical views I have taken on these subjects. Our educational department appeared to me to be one on which there could be no difference of opinion in regard to the desirableness of making it efficient, and I had hoped this committee would have been productive of some advantage. I have seen with regret that some points I have brought up have not been approved of by this general meeting, which may be taken as the index of the opinions of the Society, and I bow to their decision, but I entertain my own opinions still and I hope the time will come when some other mem-

ber may be more fortunate in bringing these matters forward in such an influential manner that they may be freely and satisfactorily discussed, and that, in consequence of that, we may still see some improvements which have not yet resulted from it. I state this with the utmost humility with regard to my position in this Society, and I only beg to thank you for the kindness with which you have heard me.

Mr. MACLAGAN, Pumpherston, said in all well-connected and well-organised societies, the usual plan was for the gentleman who introduced the question to be appointed convener of the committee. He was certainly surprised to find, when the committee was appointed, that Sir John Forbes was passed over, and, as he had already mentioned, he sent in his resignation immediately on receipt of Sir John's letter. He thought a great deal of good might be done by a thorough investigation into agricultural education. He could not agree with much that was stated in the report. On the other hand, he agreed with Sir John Forbes that it was a mere statement of facts, and he hoped that ere long the question would be taken up and fully discussed. No doubt, this Society has done a great deal for agriculture; but, in his opinion, it had done nothing for agricultural education. They might point to the agricultural diploma, but, he asked, of what use was it, while they did not give the farmers of Scotland the means of being educated? Or what use was there in merely issuing well-worded reports? No use whatever, except for one thing, and that was the shelving of the matter in question, and trying to silence the voices of honest men. He must say that he was somewhat staggered by the remarks made from the directors' table that day. Many of those present were called reformers, but not "improvers." Look at the Kelso Show, and see what caused the success of that exhibition. Was it not because of the improvements that were made upon former arrangements—as, for instance, the sheds for implements, and the arrangement of them; the sheds for the press, and the show of horses in the ring? And who was instrumental in getting these improvements effected? Was it not those who were called reformers, but not "improvers?" The agricultural press of Scotland and many practical farmers had advocated such improvements, but invariably the directors resisted. At last they yielded, and the result was one of the most successful shows ever held under the auspices of the Society.

Mr. MACDUFF, of Bonhard, explained the composition of the committee, and in reference to the objection that the Professor of Agriculture was not named upon it, to his mind, he could not conceive any one who was less fit to appear as a member of that committee. They were about to enter upon a very delicate inquiry. Suppose they had in the course of their investigation noticed anything by which they were obliged to reflect upon the Professor or upon his class, would there not have been grounds for a captious public saying that they had been less severe upon the Professor of Agriculture because he was there to control them? Suppose, on the other hand, that they had had nothing to do but eulogise the Professor, and praise the great success of his class, would it not have been said that that favourable report was tinged and coloured owing to his being present? He, therefore, said that in any proposal they could make with regard to adding to that committee the name of the Professor of Agriculture was the very last that would have occurred to him, and to this moment he did not know that the Professor had expressed a wish on the subject. For all they knew, he might all the time have been wishing to be saved from his friends. At all events he had in no way protested against his having been left out.

The Earl of HADDINGTON moved the adoption of the report.

Lord POLWORTH seconded the motion that the report should be received.

The noble CHAIRMAN said that no member in agreeing with this report committed himself to any but a simple statement of fact. And as far as he could judge from the terms of the remit, that committee had performed its duty satisfactorily to the Society.

Mr. MILNE HOME begged to assure the meeting, that there was no indisposition on the part of the directors to entertain this question of education. He individually approved of the report, though it ought not to be forgotten, that it came from a committee originally of several members, but ultimately reduced to three; and he quite agreed with the observations expressive of regret that the other members of the committee did not feel it their duty to join the committee and express their views, in order to lay before the Society a more satisfactory report on this important subject. He believed there was no subject of such practical importance to the agricultural interest.

The report of the committee was then adopted.

The noble CHAIRMAN said—Before this meeting separates, I am sure you will allow me to express for you all your gratification at being honoured with the presence of his Royal Highness Prince Alfred. Gentlemen, our meetings are purely for matters of business, and you must be well aware that his Royal Highness has honoured us with his company to-day, not from any amusement he may derive from our proceedings, but for the purpose of expressing the interest which, I think, he has inherited from his illustrious father in every society such as this which has the social and economical progress of the people at heart.

The meeting then separated.

Reviews.

Phospho Guano; its Nature and Properties, with Reports by Baron Justus von Liebig, Dr. Voelcker, and Dr. Anderson. Blackwood & Sons, Edinburgh and London.

This pamphlet describes the material of which the manufactured Phospho Guano is prepared, gives a history of its use as a manure in this country, and quotes reports and testimonials from the distinguished men whose names are on its title-page. Nothing can be more decided than the tone of these reports. If any dependence is to be placed on a chemist's opinion of a manure, there is every reason to believe in the high agricultural value of this manure.

It appears that the Columbian or Maracaibo Guano, which is the basis of the Phospho Guano, is a substance not of mineral but of animal origin, a true guano; and that the manure prepared from it thus contains a considerable quantity of ammonia and some potash, besides the characteristic quantity of soluble phosphate of lime which is present in it. The experience of farmers in the use of this manure has been generally quite in correspondence with the high character given to it by the chemist; and although the reports here given from Liebig, Anderson, and Voelcker, are evidently drawn up with a commercial rather than a scientific end in view, yet it is impossible for an indifferent person, on review of all the facts concerning this manure, collected from the field as well as the laboratory, to refuse his assent to the proposition in its favour on which all this evidence is brought to bear.

The following is the statement with which the pamphlet is introduced by Messrs. Lawson & Son, who are agents for the sale of the manure:—

"It was not until after very great consideration, and ascertaining the result of trials by some of our leading agriculturists, that we accepted the contract for the sale of the Phospho Guano. For although we had often been urged to add the sale of manures to our general business, we steadily refused to connect our names with any of the substances brought before the farmers of this country, from a knowledge of the fact that artificial fertilisers are of ever-varying character and value; and that, consequently, a dealer exposed himself to great risks with his customers, if the article supplied to them was not of precisely the same quality as the guaranteed analysis, on the faith of which bargains were made and sales effected.

"The Phospho Guano, however, came before us, backed by the opinion of our best chemical authorities, who agreed in pronouncing it to be a substance of unvarying character, and far superior to Peruvian Guano. Such evidence demanded our confidence; and, in the interests of agriculture, we set on foot a most searching investigation into the alleged merits of this guano. This investigation resulted in the conviction that Phospho Guano is really the most valuable manure which has yet been introduced to the farmers of this country; and, moreover, that it is a substance perfectly uniform in composition, and not subject to those variations in quality and value, which have tended so much to damage the prestige of Peruvian guano.

"We, therefore, did not hesitate in taking the contract for its sale in Scotland; and subsequently in England also.

"This contract expired last year; but has been renewed for a further term of years, and now embraces the entire Continent of Europe.

"We deem it unnecessary to add anything further; but we commend to the serious attention of agriculturists the subjoined reports of the Baron Justus von Liebig, Dr. Anderson, and Dr. Voelcker, embodying, as they do, facts of so much importance in regard to the comparative value of the Phospho and Peruvian Guanos."

Miscellaneous.

Free Education.—How many readers of the *Times* have large families and small incomes; and how many again, who have received a liberal education themselves, find it difficult or impossible to secure the same advantages for their children. Sir W. Harper, Knight, Lord Mayor of London in 1561, left to his native town of Bedford an estate in Holborn Fields, the rents of which were to be appropriated to the education of the children of this town. This property has increased so enormously in value that the income now derived therefrom is about 14,000*l.* per annum. Large handsome schools have been erected; there are classical, commercial, and preparatory schools, in separate establishments. The classical school is under the supervision and control of the warden and fellows of New College, Oxford, by whom all the masters are appointed. The highest scholastic attainments and efficiency are thus secured. Young men are prepared for the universities, the professions, for the public services. In addition, there are exhibitions of 80*l.* each per annum to either the Universities of Oxford, Cambridge, Dublin, London, or Durham, to be held for four years. In the commercial school, the education is of a liberal character; and two prize premiums of 50*l.* each per annum, to be held for four years, are open to boys who, at the yearly examinations, are selected by the examiners, the premiums to be applied in articling the boys to some profession or business. Bedford is on the Midland Railway, and is an hour's journey from London. It is under the Local Government Act, the operation of which will place the town in the best sanitary condition. Building is going on to a considerable extent, and houses of various sizes are readily obtainable. The only excuse I have for troubling you with this letter is the importance of the subject to so very many respectable families, and the small number to which the advantages of the Bedford schools are known. *James Howard, Mayor of Bedford* (*Times*).

Oatmeal Cakes.—One only should be made at a time, as the mixture dries quickly. Put two or three handfuls of meal in a bowl, moisten with water merely sufficient to form into a cake; knead it round and round with the hands on the paste board, strewing meal under and over it; it may be made as thin as a wafer, or any thickness (generally about half the thickness of a traveller's biscuit). Put it on a hot iron plate called a griddle; bake it till it be a little brown on the under side, then take it off and toast that side before the fire which was uppermost on the griddle. The toaster is such as is commonly used for heating smoothing irons, having a back to support the cake. The griddle is a piece of round iron 1 foot in diameter, which any blacksmith can make, and must be laid on the fire which, should be flat. A trivet does very well for the toaster, putting the cakes on a plate.

Waterproof Boots.—Saturate the boots with solution of caoutchouc (india-rubber), till they will absorb no more, at intervals of a week, without needing to leave a coating on the surface. With this I have walked through the bogs of Dartmoor for hours together, and days in succession, without the least leakage. But it is water tight both ways; the perspiration does not escape when it is thoroughly done. The solution was made with an ounce of india-rubber in a pint of spirits of turpentine, or coal naphtha, kept warm, and occasionally stirred till dissolved, which takes three or four days. In a boiling water bath it can be done in a few hours; but it can now be purchased in large towns ready prepared.

Gloucestershire Bacon.—After it has been killed one day, put a light coat of salt on the sides, and when that is dissolved, about ½ lb. of saltpetre is used to every 50 lb. of bacon, and covered with salt as it is lying single on the floor. After three or four days, put four or five sides together, and turn them every three days; after 10 days, 20 sides may be put together and turned once a week; in three weeks from the first salting they will be ready for the stoves unless they are very heavy, in which case this should be delayed another week.

Cider.—Gather the fruit when thoroughly ripe and dry, and store it in some cool room in heaps. Grind in November in cold weather. Add sugar or malt wort to bring the juice to specific gravity 1070 or 80; ferment in a vat until the specific gravity is reduced to 1060. Transfer it to casks, until at length it may be transferred to a clean barrel, previously filled with sulphur vapour, and placed in a cool cellar.

Eggs.—Take eggs when newly laid, and place them, with the small end downwards, exactly perpendicular in a board perforated with holes for the purpose. It should be, say 2 feet by 1 foot 6 inches, and have legs at the four corners about 3 inches long. This will enable them to be piled one upon another to any extent, as they are filled. Eggs put in thus fresh from the nests in August and September will keep till winter as good as fresh ones, not only for cooking but eating.

To Render Feathers Fit for Use for Beds, Pillows, &c.—Put them in strong paper bags, and these in the oven as soon as the bread comes out; remaining there till the next day, they will be sufficiently dry to prevent the animal juices decomposing and causing a most disagreeable smell. After this, strip the feathery part from the quill of all those whose points are sufficiently strong for pressure to cause their piercing the bed-case. They should be again put in the oven for 12 hours to render them quite sweet and safe from moth, whose eggs might possibly have been deposited among them. The price as piece-work is from 4*d.* to 6*d.* per lb., the feathers being weighed after being brought home picked and ready for use.

Calendar of Operations.

JANUARY.

CHATTERIS: *Isle of Ely, Jan.* 21.—We have had a taste of winter this year, if we escaped last. The weather up to Christmas was unusually fine; we had not only a comparatively high temperature, but a succession of fine dry weather. On several days in December, as also on Christmas Day, the dust was blowing in the streets and on the highways like March or April, and it seemed hard to persuade oneself that spring had not really come; but the new year has quite undeceived us in this respect, although we still have but little downfall. With the exception of a slight shower of rain on the 17th, we have scarcely had any moisture at all since November. The intense frosts, without a covering of snow, will have acted beneficially upon all the strong lands, pulverising them most efficiently, and preparing them for the reception of the spring seed. And as far as we can yet see, they have not injured the fen soils. The Wheats are looking strong and healthy, and where sown after Oats will be much benefited by the severity of the weather, as the Oats growing amongst them are pretty nearly all destroyed; and we have the prospect of being able another year to show a sample of Wheat free from Oats, which have seriously affected the sales of many of our fen Wheats this year. We have just finished steam ploughing, having ploughed 55 acres from 12 to 14 inches deep, on lands with a gravelly subsoil,

We have also ploughed 12 acres 15 inches deep, and 7 acres 22 inches deep with horses on black-bottomed lands. We continue to find deep cultivation a great advantage, and although expensive work, yet an operation which yields a quick and liberal return. With the steam-engine we plough 2½ acres per day, and at the depth named it takes a pressure to the square inch of from 75 to 80 lb. with a 10-horse engine. The cost for manual labour is about 5*s.* per acre, and for coals, exclusive of cartage into the field, about 2*s.* 6*d.* per acre. The cost per acre for the horse-ploughing was 8*s.* manual labour on the 15-inch work, and 10*s.* 6*d.* on the 22-inch work; eight horses being employed in the former and 12 in the latter. We have ploughed 62 acres of land for Beans, and the action of the frost upon it will make it a good seed-bed, and should the weather continue favourable, we shall commence sowing about the middle of February. We have also 22 acres ploughed for Barley, 19 acres for Peas, and 105 for Oats. Besides this, we have 45 acres cultivated by steam in the autumn, which we purpose as soon as the weather will permit cultivating again preparatory to sowing it with Barley. We shall also cultivate another field of 17 acres before sowing, which has not yet been broken up. Our Barley crop last year where thus prepared was very good, and we are encouraged to pursue a similar course this spring. In another week our Cole seeds will be all eaten off. Already we have 342 lambs in yards eating Mangels and cake, Peas, and self-prepared condimental food, to the cost of 4*d.* per head per week. These were put to Coleseed early in October, at which they continued until early in the new year. The lambs are consequently strong, and the Mangels being good in quality, we hear no complaints of scour, but they appear to thrive admirably. Lameness we have none. 96 shearlings, finishing a field of Coleseed, will next week be put into the yards, and these 438 will about consume all our Mangels by the middle of April, when we hope to get them on the pastures. Besides these we have for manure-making machines 76 Scots, which came into the yards at about 12*l.* per head, and to which we give cake and Oats, equal in value to 3 lbs. of cake daily. Our Wheat crops are yielding well, but not extravagantly. White Wheats are considerably better than either Hallett's or the ordinary Nursery. We have just sold 250 quarters White at 45*s.*, and 140 quarters Nursery, 41*s.* and 42*s.*, but prices are again lower, and trade is very heavy. On the hot lands the Oat crop was poor, from 3 to 4 quarters per acre below that on similar lands last year. On cooler lands it is better. A worse crop and lower prices will make Oats tell a poor tale as compared with last year. The price of meat, except pork, continues good. We have just finished selling fat sheep Prices have ranged from 58*s.* to 75*s.* per head, the average being over 60*s.* Pigs pay very badly for feeding, and we have lately sold them stores, rather than lose so much by fattening them. A termination of the American contest will probably again change the relative value of pork and other kinds of meat, as the exportation of bacon would most likely soon be considerably increased. *A. & R.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday	Jan. 22	29.79	52	50	S.W.	3	10	51	42	56	36	0.04
Saturday	23	29.83	49	45	S.W.	0	10	49	46	.	42	0.06
Sunday	24	30.16	40	37	W.	3	0	49	38	56	30	..
Monday	25	30.42	42	42	N.W.	0	5	45	37	53	29	..
Tuesday	26	30.27	40	33	S.E.	2	1	49	36	60	30	..
Wednesday	27	30.00	48	47	S.W.	0	8	47	39	62	35	0.10
Thursday	28	29.94	43	40	S.W.	3	0	51	41	59	35	..

Notices to Correspondents.

DRILL CULTIVATOR: *J G.* Crosskills still make it, we believe It is too heavy a tool for the width worked by it at once.

GRASS HARROWS: *Constant Reader.* Harrowing with a stout toothed tool will do good to mossy Grass-land, whether the pasture be dressed or not. Alkaline manure will do good in such a case, lime or wood ashes—especially any ammoniacal salt. Any seedsman will supply what they call renovating Grass seeds—but it is not of any use trying to renovate the Grass without some renovation of the soil, which should be drained, manured, and harrowed, and then sown.

NEW IMPROVED PREMIUM WIRE NETTING.

GREAT IMPROVEMENT, WITH REDUCED PRICE.

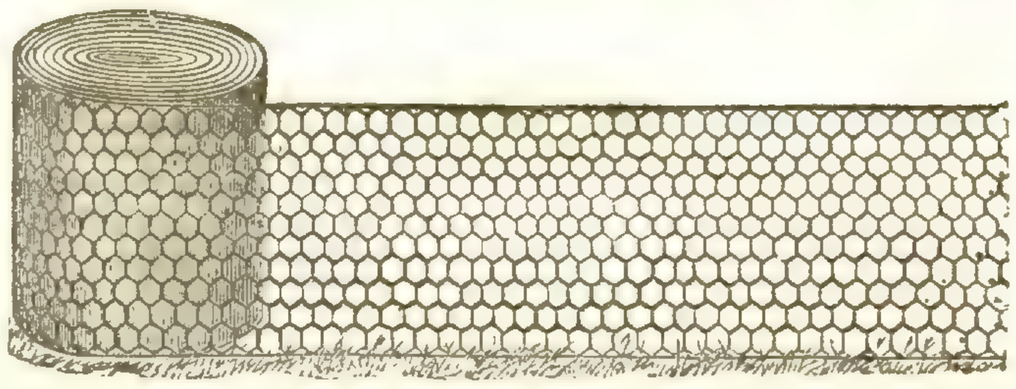

PRICES PER LINEAL YARD, 24 INCHES HIGH:—

Size of Mesh.	Mostly used for	Light. Japanned.	Light. Galvanized.	Medium. Japanned.	Medium. Galvanized.	Strong. Japanned.	Strong. Galvanized.	Extra Strong. Japanned.	Extra Strong. Galvanized.
2½ inch	Hares, Dogs, Poultry	3*d.*	4*d.*	3¾*d.*	5*d.*	4⅓*d.*	6*d.*	5⅓*d.*	7*d.*
2 inch	Game or Poultry Netting	3½*d.*	4¼*d.*	4*d.*	5*d.*	5*d.*	6½*d.*	6½*d.*	8*d.*
1⅝ inch	Small Rabbits, Hares, &c.	4*d.*	4¾*d.*	4¾*d.*	6*d.*	5½*d.*	7*d.*	7*d.*	9*d.*
1½ inch	Smallest Rabbits.....	5*d.*	6*d.*	5⅝*d.*	7*d.*	7*d.*	9*d.*	9*d.*	11*d.*

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland and Ireland.

*** *Every description of Netting warranted to give satisfaction, and if not approved will be exchanged or may be returned unconditionally.*

J. B. BROWN & CO., 18, CANNON STREET, CITY, LONDON, E.C.

PORTABLE HOT-WATER APPARATUS,

WITH TRUSS'S PATENT JOINTS FOR HEATING CONSERVATORIES, HOTHOUSES, &c.

T. S. TRUSS

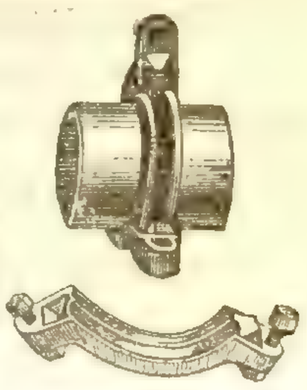

Begs to offer complete HOT-WATER APPARATUS for GREENHOUSES (consisting of 4-inch Pipes and Joints, Saddle Boiler, Fire Doors, Bars, Soot Doors, Damper, Supply Cistern, Feed and Air Pipes, Pipe Stands, &c., of the best quality), delivered to any Railway Station in England, and to erect the same within 25 miles of London, at the following prices:—

TWO 4-INCH PIPES ALONG ONE SIDE AND ONE END OF HOUSE.

Size of House.	Apparatus complete.	Erection.	Size of House.	Apparatus complete.	Erection
16 feet by 8 feet ...	£8 10 0	£2 0 0	30 feet by 12 feet ...	£11 15 0	£2 10 0
20 feet by 10 feet ...	8 17 6	2 0 0	40 feet by 15 feet ...	15 0 0	2 15 0
25 feet by 12 feet ...	10 5 0	2 5 0	50 feet by 15 feet ...	18 0 0	3 0 0

Erections beyond 25 miles of London, Railway Fare for one Man charged extra.

By the use of these Joints the Apparatus is easily altered or removed without injury to either Pipes or Joints.

Estimates and Plans forwarded on application to

T. S. TRUSS, C.E., 53, GRACECHURCH STREET, LONDON, E.C.

ST. PANCRAS IRON WORK COMPANY,

OLD ST. PANCRAS ROAD, LONDON, N.W.

BY ROYAL LETTERS PATENT.

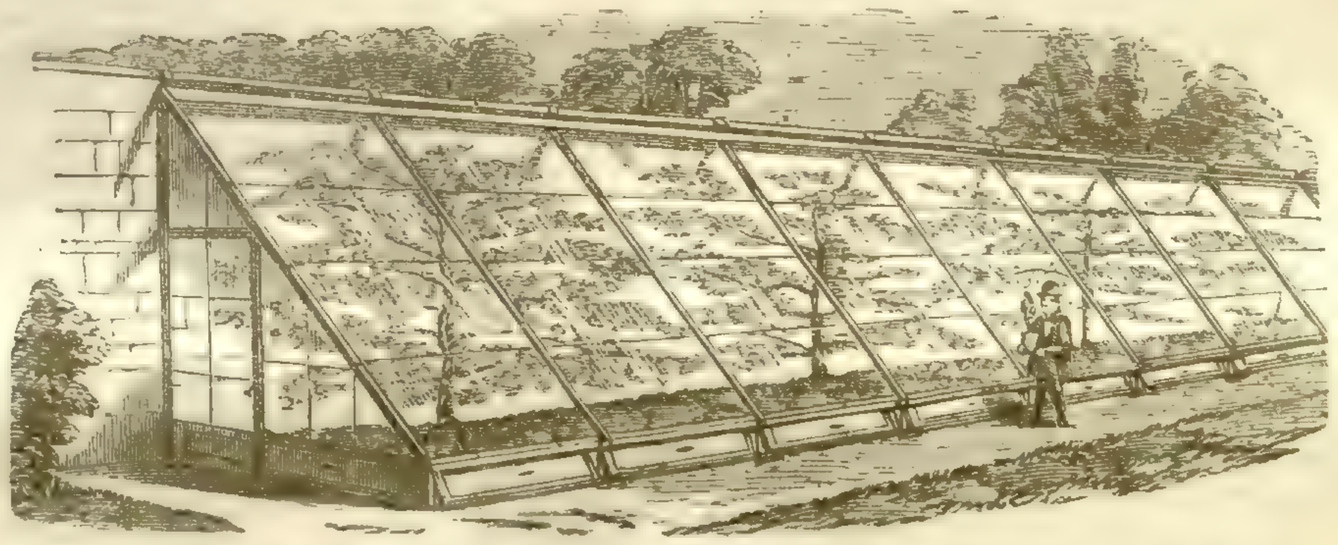

SCOTT'S GLASS WALLS and ECONOMIC GREENHOUSES.

Designed to meet the suggestions of JAMES SCOTT, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES	PINE and MELON PITS	BALCONIES	GATES
GREENHOUSES	VASES	IRON SASHES	TANKS
HOTHOUSES	VERANDAHS	IRON HURDLES	HOT-WATER WORKS.

PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. *Lists Free.*

ST. PANCRAS IRON WORK COMPANY, OLD ST. PANCRAS ROAD, LONDON, N.W.

BARNARD, BISHOP, & BARNARDS'

PATENT NOISELESS LAWN MOWER.

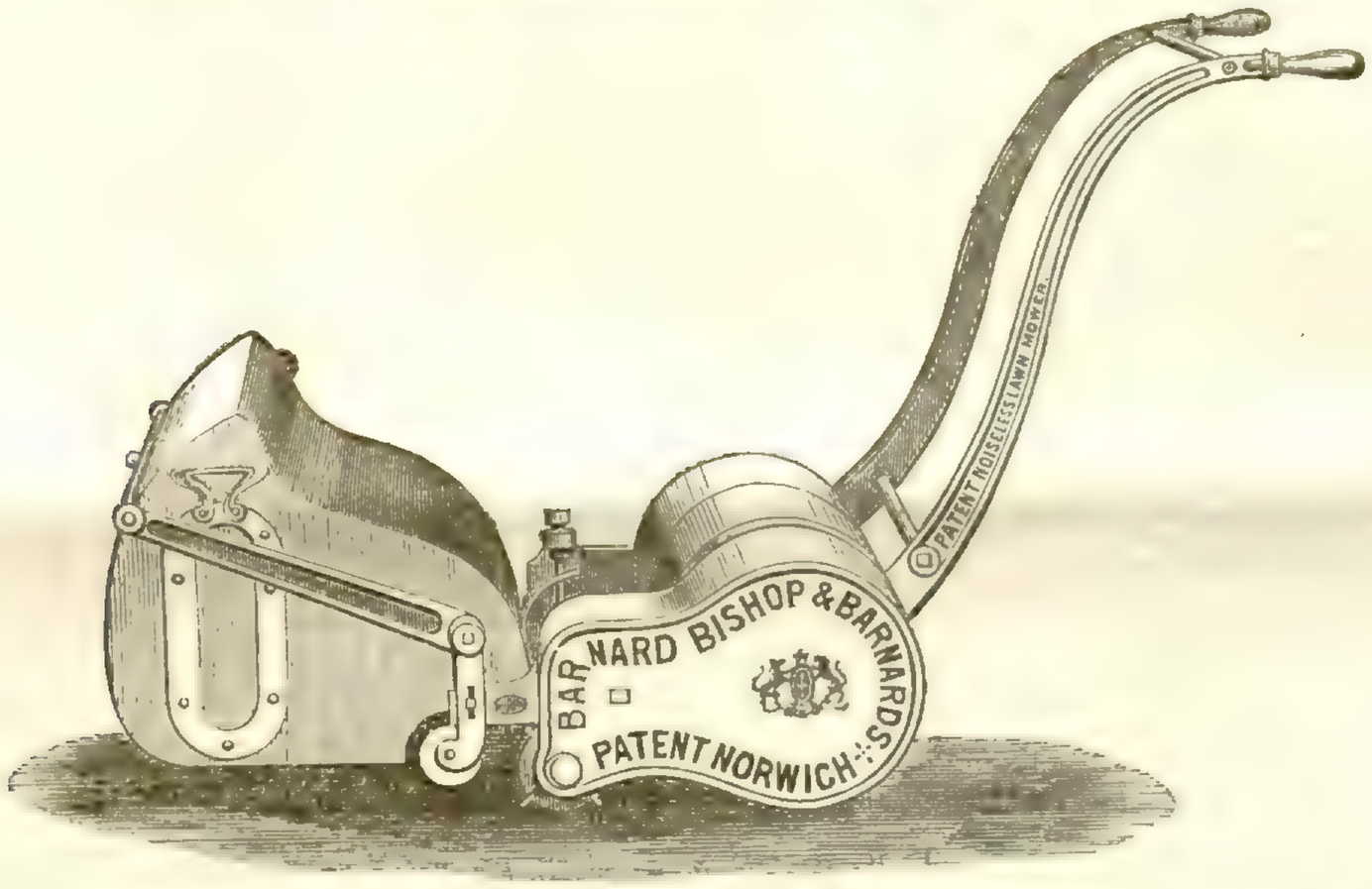

THIS MACHINE differs from all other LAWN MOWERS, in being constructed without either Gear-Wheels, Chains, or Levers, the Power being transmitted to the Cutters by a loose Intermediate Wheel, with an India-rubber Tyre which is placed between a Plain Faced Driving Wheel, and Pinion; it is very certain in action, and at the same time so simple that it cannot be deranged.

When the MACHINE is drawn back, the Intermediate Wheel throws itself out of work, and the Cutters cease to rotate. The Cutters have steel on both sides, and when blunt can be reversed, bringing the sharp edges forward. It is perfectly noiseless, both in its forward and backward action, and works with considerably less power than any other Machine for the purpose yet introduced.

The India-rubber Tyre will last from one to two seasons, and can be replaced at the cost of a few pence. An extra Tyre is sent with each Machine.

The Iron Work of Grass-Box is Galvanized, which prevents its being destroyed by rust, to which this part is so liable from its contact with damp Grass.

THE MINIATURE LAWN MOWER, Cuts 8 inches **£2 10 0**

Suitable for the very Smallest Grass Plots or Edgings; can be Worked with Ease by a Child.

To Cut 10 inches. This can be Worked by a Lady **3 5 0**

To Cut 12 inches. Suitable for One Person **4 10 0**

The 12 inch and all larger sizes have the Drum or Roller divided in two parts, for the convenience of turning.

To Cut 14 inches. Suitable for One Person **5 0 0**

Packed, and Delivered Carriage Free to the principal Railway Stations in England.

GUARANTEED TO GIVE SATISFACTION, AND IF NOT APPROVED, CAN BE RETURNED.

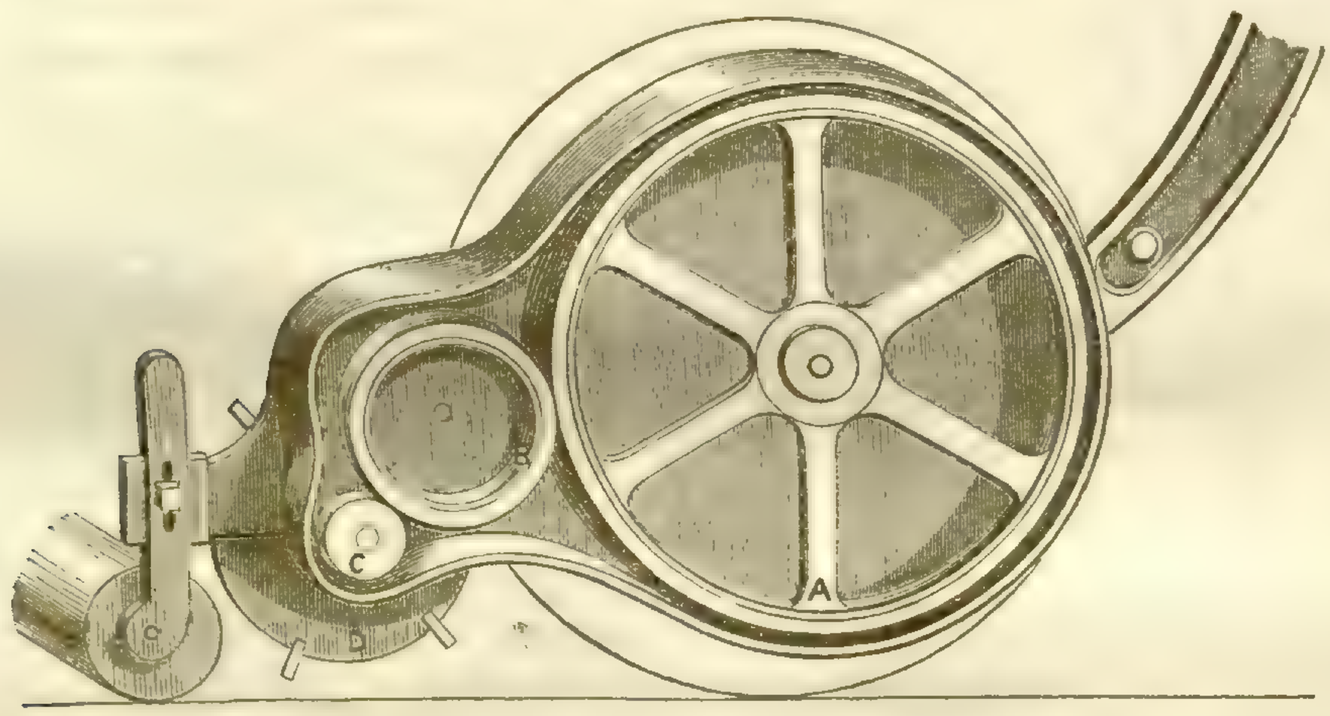

THE ABOVE ENGRAVING SHOWS THE ARRANGEMENT OF WHEELS.

A, Plain-faced Driving Wheel. **B,** Intermediate Wheel, with India-rubber Tyre. **C,** Pinion. **D,** Cutters.

To insure an early delivery of these useful Machines, all Orders should be sent at once to

J. JONES,

6, BANKSIDE, SOUTHWARK, LONDON, S.E.

HARDY FLOWER SEEDS, of Showy Colours only, sent free by post or rail, by
SUTTON AND SONS.

A COLLECTION of the best 50 sorts known .. 10s. 6d.
A COLLECTION of the best 36 sorts known .. 7 6
A COLLECTION of the best 24 sorts known .. 5 0
SUTTON'S CATALOGUE of SEEDS will be sent post free.
SUTTON & SONS, Seed Growers, Reading, Berks.

WELLINGTONIA GIGANTEA.—To noblemen and gentlemen wishing to plant an Avenue or Group of the above, WILLIAM BARRON begs to offer a number of splendid SPECIMENS, from 6 to 14 feet high, remarkably cheap, all of which can be insured to remove with safe balls.

6 ft., 7 ft., and 8 ft., 3l. 3s. to 5l. 5s.
9 ft., 10 ft., and 11 ft., 6l. 6s. to 8l. 8s.
12 ft., 13 ft., and 14 ft., 9l. 9s. to 10l. 10s.
Elvaston Nurseries, Derby.

Transplanted Larch and Quicks.

CHIVAS AND WEAVER, (late GEO. CHIVAS) Chester, offer SEVEN MILLIONS of TRANSPLANTED LARCH from 1½ to 4½ feet, the quality is unexceptionable; and FOUR MILLIONS of TRANSPLANTED THORNS, a very large proportion of which are four years old, and of extra strength; together with corresponding proportions of SPRUCE, SCOTCH OAK, &c.; and a most extensive general Nursery Stock.

For Prices and Conditions of Free Delivery see CATALOGUE, which will be forwarded on application.

Transplanted Larch,
9 TO 12 INCHES, 12 TO 18 INCHES, 18 TO 24 INCHES.

MORRISON BROTHERS, NURSERYMEN, Aberdeen, have several Hundred Thousands of each of the above sizes of TRANSPLANTED LARCH to offer, of very superior quality and moderate price; also a general stock of SEEDLING and TRANSPLANTED FOREST TREES.
Prices, with Samples if required, may be had on application.

Transplanted and Seedling Larches.

BENJAMIN REID AND CO., NURSERYMEN, Aberdeen, N.B., offer for Sale several Millions of SEEDLING and TRANSPLANTED LARCHES. They are furnished with abundant healthy roots, clean stems, and capital leaders, and being grown in friable soil in an exposed situation are well worth the attention of proprietors and the Trade. CATALOGUES Post Free.

Special Prices and free delivery for large quantities on application.

Strong 2-years Transplanted Larch.

DICKSONS AND CO., NURSERYMEN, SEEDSMEN, and FLORISTS, 1, Waterloo Place, Edinburgh, have a large Stock of the above to offer, of first-rate quality and moderate in price, as well as all other kinds of FOREST and ORNAMENTAL TREES and SHRUBS.
CATALOGUES and Samples will be sent free on application.

FOR SALE, 30,000 LARCH, 30,000 SCOTCH, 100,000 SPRUCE, and 100,000 extra strong THORNS, all from 2 to 3 feet high; 3000 DEODARS, splendid plants, to be sold a bargain.
For prices, &c., apply to J. SCOTT, Merriott Nurseries, Somerset.

SCOTT'S FRUIT TREE CULTIVATOR, his CONIFEROUS CATALOGUE, his FLOWER GARDEN ANNUAL DIRECTORY, and his SELECT SEED CATALOGUE, ought to be in the hands of every lover of a garden. They are allowed to be the best published on these subjects, and are replete with information. Two Stamps required.

2,000,000 Transplanted Thorn Quicks for Sale.

JOHN BUCK, Melbourne, near Derby, in offering the above, begs to say that they are of superior quality, and that he will deliver any quantity free at Derby Station at the following prices:—

3 years old, transplanted	8s.	0d.	per 1000
,, strong, all selected ..	10s. to 12	0	,,
4 years old, very strong, suitable for filling up old fences	16	0	,,
GREEN HOLLIES, fine bushy plants with fine roots, from 16 to 20 inches .	10	0	per 100

Handsworth Nursery, near Sheffield.

FISHER, HOLMES AND CO. have to offer the following superior well-grown and good-rooted TREES, SHRUBS, &c., viz.:—

50,000 BLACK ITALIAN POPLARS, 2 to 3 ft. and 3 to 5 ft., one of the best trees for damp or wet situations.
50,000 PORTUGAL LAURELS, extra transplanted, stout and well furnished, 9 to 12 in. and 12 to 18 in.
50,000 Strong Transplanted PEAR STOCKS, good roots, mostly fit for working the first season.
6,000 ONTARIO or AMERICAN POPLARS, 5 to 6 ft. and up to 10 ft., well adapted for exposed or smoky situations, strong.
3,000 GIANT or CANADIAN ELMS, 4 to 7 ft., fine.
Several thousands each of the following, viz.
DOUBLE FLOWERING GORSE, in pots, fine.
ENGLISH and SCOTCH LABURNUMS, strong, 5 to 8 ft.
NORWAY MAPLES, extra transplanted, 5 to 8 ft.
HORSE CHESNUTS, stout, 4 to 7 ft.
ARBUTUS UNEDO, in pots, stout and bushy, 1 to 2 ft.
CREAM and WHITE-FLOWERING BROOMS, extra transplanted.
ARBORVITÆ LOBBI, extra transplanted, well furnished fine, 3 to 4 ft.
HARDY HEATHS, of sorts, fine bushy beautiful plants.
VIRGINIAN CREEPERS, fine.
EARLY and LATE RED HONEYSUCKLES, strong.
COTONEASTER MICROPHYLLA, strong.
RIBES SANGUINEUM, Double-flowering.
WEIGELAS, Van Houtte, Stelzneri, Isolene, striata, and others, strong
ROSES, STANDARDS and HALF STANDARDS, fine named; for sorts, see our Printed List No. 12.
FRUIT TREES, extra quantity of Standard PEARS, comprising Jargonelle, Beurré Diel, Seckle, Easter Beurré, Prince Albert, Citron des Carmes, Glou Morceau, Beurré Clairgeau, Brown Beurré, Winter Bergamot, with many other good and useful kinds, 4½ to 6 ft. stems.
APPLES, Ribstone Pippin, several hundred, 4 to 6 ft. stems, strong.
PEARS, two years untrimmed, fine, suitable for pyramids.
PLUMS, Green Gage and Magnum Bonum; several hundred Standard 4½ to 5½ ft. stems.
CRABS, Scarlet-fruited Standards, fine.
FRUIT TREES, other kinds, see our Printed List, No. 5.
PRICED LISTS on application.

Transplanted Forest Trees.

MARSH AND PERKINS have pleasure in offering the following, being fine and well rooted.
BEECH, 2 to 3 feet.
LARCH, 1½ to 2 feet and 2 to 3 feet.
WHITE THORN, 2 and 3 years transplanted.
SEEDLING LARCH, 1 year.
Prices on application to 42, Drapery, Northampton.

To Planters.

W. FEAN begs to offer a quantity of Transplanted ASH, from 3 to 9 feet; COB NUTS; POPLARS, of sorts; LABURNUMS, ENGLISH MAPLE; also a large quantity of SPRUCE FIR, THORNS, LARCH, ARBOR-VITÆ, BERBERIS, from 2 to 4 feet. Price and sample on application.
Nurseries, Silcoates, near Wakefield, Yorkshire.

CHARLES DALY and SON will sell 2-years Transplanted THORNS, at 6s. per 1000; 1-year ditto, at 4s. per 1000; 2-years SEEDLINGS, at 2s. 6d. per 1000; PORTUGAL LAUREL, 1½ feet, at 4s. per 100; IRISH YEWS, 1½ feet, last year transplanted, at 12s. per 100; DUTCH CABBAGE SEED, our own saving, 1s. per lb., or 5l. per cwt. for cash. PRICED LISTS free on application.
Coleraine.—Feb. 6.

H. AND R. STIRZAKER can supply, of good quality,
200,000 SPRUCE FIR, strong, from 1 up to 2½ ft.
500,000 LARCH, twice transplanted, from 1½ to 2 feet
50,000 HORSE CHESNUTS, from 2 up to 10 feet
10,000 STANDARD APPLES, 2 to 3 and 3 to 4 feet stems
The above are well rooted and hardy; Prices low.
Also about 300 bushels of EARLY HANDSWORTH, ASH-LEAF, and IMPROVED LEMON KIDNEY POTATOS, good stocks; Prices on application.
The Nurseries, Lancaster.

Planting Season.

TO NOBLEMEN, GENTLEMEN, NURSERYMEN, BUILDERS, AND PUBLIC COMPANIES ENGAGED IN PLANTING.

PROTHEROE AND MORRIS most respectfully invite the Public to inspect their valuable NURSERY STOCK, extending over THIRTY ACRES, and in the finest state of cultivation, consisting of FRUIT, FOREST, and ORNAMENTAL TREES of every description and in considerable quantities; also a large and rich assortment of AMERICAN PLANTS, fine EVERGREENS, all sizes, including many Magnificent Specimens, which will give immediate effect, and from the adhesive nature of the Soil, and being continually Transplanted, incur no risk from removal.

The following include a portion of their Stock:—

These are fine bushy Plants and well set with Bloom Buds.
30,000 Rhododendrons: Scarlet, Catawbiense, Ponticum, and others
10,000 Ghent and other Azaleas
1,000 Kalmia latifolia
3,000 Andromeda floribunda

EXTRA FINE FRUIT TREES.
2000 PEACHES, NECTARINES, and APRICOTS. Dwarf-trained and very handsome.

6,000 Standard Apples of the best sorts, many of which have large fruiting heads, and will come into bearing at once.

A LARGE VARIETY of ORNAMENTAL and FOREST TREES, including
7,000 Limes, 5 to 12 feet, Laburnums, Chesnuts, Birch, Maples, Poplars, Mountain Ash, Acacias, Thorns, &c.
10,000 Fine Standard Roses, including the newest and most approved varieties, with clean straight stems, fibrous roots, and full bushy heads
2,000 Fine Double Camellias
3,000 Azalea indica, best kinds, beautifully set with bloom buds
50,000 Laurels, 1 to 10 ft.
3,000 Handsome Fan Yews, 3 to 12 ft. high, and 6 ft. wide, (Magnificent Plants).
12,000 Bushy Aucubas, 1 to 5 ft.
Green and Variegated Hollies, Box Trees, Cedrus Deodara, Cedar of Lebanon, Pinus excelsa, Hemlock Spruce, Araucaria imbricata, Picea Pinsapo, Nordmanniana, and nobilis, Cupressus Lawsoniana, Thujopsis borealis, Laurustinus, Sweet Bays, Phillyreas, Irish Yews, Privet, Arbor-vitæ, Berberis, Chinese Privet, &c.
Lists and Prices forwarded on application.
The Nurseries are accessible by Railway in 20 minutes from Fenchurch and Bishopsgate Street Stations, whence Trains leave 12 times daily to Leytonstone Station, which adjoins the Nurseries.
American Nurseries, Leytonstone, Essex.

H. LANE AND SON beg to inform their Patrons that the season is advancing, and that it is quite time intending Planters should examine our CATALOGUES. We beg permission to call their especial attention to our WELL FAMED STOCK, among which will be found great quantities of the following, viz.:—

Abies Douglasii, 3 to 12 feet
,, orientalis, 1 to 3 feet
,, taxifolia, 1 to 3 feet
Azalea indica
,, Ghent
Araucaria imbricata, 2 to 12 ft.
Cedrus Deodara, 3 to 10 feet
,, Libani, 3 to 10 feet
Cupressus Lambertiana, 3 to 6 feet
Cupressus Lawsoniana, to 3 ft.
Fruit Trees of every description
Juniperus, upright, 2 feet
,, chinensis, 1 foot
Picea grandis
,, lasiocarpa
Picea Lowii
,, nobilis, to 4 feet
,, Nordmanniana, to 4 feet
Pinus in sorts
Podocarpus
Retinispora
Roses, strong and fine, second to none
Thuja aurea
,, gigantea
,, Siberian
Thujopsis borealis
,, dolabrata
Wellingtonia, 1 to 4 feet
Yews in variety

which we can supply at most reasonable prices.
CATALOGUES may be had gratis on application at the Nurseries, Berkhampstead, Herts.

SEEDLING FOREST TREES, &c.

		s.	d.
4,000,000 1-year LARCH	..per 100,000	100	0
400,000 1-year BIRCH	per 1000	2	0
300,000 1-year ALDER	,,	1	6
300,000 1-year SYCAMORE	,,	2	0
50,000 1-year MAHONIA AQUIFOLIA ..	,,	7	0
1,000,000 2-year SPRUCE FIR	,,	1	6
500,000 3-year ,, ,, ...	,,	2	0
300,000 2-year BEDDED SPRUCE FIR ..	,,	5	0
600,000 3-year SILVER FIR	,,	5	0
50,000 4-year ,, ,, ...	,,	7	6
50,000 2-year PINUS AUSTRIACA ..	,,	6	0
300,000 3-year BEECH	,,	4	0
2,000,000 2-year ASH	,,	2	0
60,000 1-year COMMON LAUREL ..	,,	15	0
300,000 Transplanted SPRUCE FIR, 12 to 18 ins.	,,	15	0
80,000 Twice Transplanted AMERICAN ARBOR-VITÆ, 6 to 8 inches	,,	30	0

The Subscriber begs to call the attention of the Trade to the above, hoping to be favoured with their orders, which shall be executed without delay, and in the best possible manner. All delivered free of expense at Dublin.
Application to MICHAEL BURKE, Drumlargan Nurseries, Summerhill, County Meath, Ireland.

Surplus Nursery Stock.

WOOD AND INGRAM have to offer the following at very moderate prices, which, with samples if required, may be had on application.
ELMS, HERTFORDSHIRE, true from layers, 3 to 4, 4 to 5, and 5 to 6 feet
,, HUNTINGDON, 4 to 5, 5 to 6, and 6 to 8 feet
HOLLIES, 1-year Seedling, extra fine
OAK, ditto. ditto.
FIR, SPRUCE, 1 to 1½, and 1½ to 2 feet
,, WEYMOUTH PINE, 2 to 3, 3 to 4, and 4 to 5 feet
LABURNUM, fine Standards
LILACS, 4 to 5, 5 to 6, and 6 to 8 feet
POPLAR, BLACK ITALIAN, 5 to 6, 6 to 8, and 8 to 10 feet
,, LOMBARDY, 8 to 10, and 10 to 12 feet
,, ONTARIO, 4 to 6, 7 to 8, 8 to 10, and 10 to 12 feet
,, ABELE and WHITE, 2 to 3, 3 to 4, 7 to 8, and 8 to 10 feet
WILLOW, BEDFORD, CŒRULEAN and HUNTINGDON, 4 to 5, 5 to 6, 6 to 7, 8 to 10, and 10 to 12 feet
YUCCA RECURVA, very fine plants
ROSES, Dwarf Standards, on 6 to 18 inch stems
VINES, BLACK HAMBURGH and MUSCAT of ALEXANDRIA, from eyes, various size.
CURRANTS, Red and Black
Huntingdon Nurseries.

Lawn Trees.

LILACS, STANDARDS and PYRAMIDS.—The following interesting varieties of LILACS are offered at 1s. 6d. each; the trees are straight and well grown:—

Gloire de Moulins	Valletiana
Triomphe d'Orleans	New Light Blue
Charles 10th	Grandiflora rubra
New Dark Red	White Siberian
Lilas de Louvain	Red Siberian

SIBERIAN TREES, Standards, 5 feet stems.

Caragana jubata (rare)	2s.	6d.	Halimodendron argenteum	2s.	6d.
,, frutescens	2	6			
,, arenaria ..	2	6	Ulmus microphylla pendula, a new small-leaved Weeping Elm	3	6
,, Chamlagu ..	2	6			
,, spinosa ..	2	6			
Calophaca Wolgarica	2	6			

THOS. RIVERS & SON, Nurseries, Sawbridgeworth.

WILLIAM BARRON'S SELECT PRICED CATALOGUE of HARDY CONIFEROUS and other ORNAMENTAL PLANTS for 1864, with Supplement of valuable Importations from Japan, is now ready, and may be had Post free on application.

W. B. begs to call attention to his magnificent Specimens of the Rarer CONIFERS, many of which are not to be elsewhere met with. Gentlemen wishing for a fine plant, well grown, are respectfully invited to inspect the Elvaston Nursery, which is only one mile from the Borrowash Station on the Derby and Nottingham Railway.

Elvaston Nurseries, Derby.

WANTED, CUTTINGS of the following sorts of VERBENAS.—Melindre's, Venus, Reine des Amazons, Firefly, Predestine, Ocean Pearl, Madame Gassier, Perle de Parterre, Hardy Freres.
Address, stating price per 100, T. S., Lutterworth.

Furze or Gorse (Ulex europæus).

SUTTON AND SONS have a fine stock of New Seed. Also all other kinds of Agricultural Seeds at very moderate prices, as see SUTTON'S PRICED SEED LIST (gratis and post free).
Royal Berks Seed Establishment, Reading.

To Purchasers of Seeds.

SUTTON'S PRICED LIST of NEW GARDEN and FARM SEEDS and POTATOS is now ready, and will be forwarded Post free on application. Address
SUTTON & SONS, Royal Berks Seed Establishment, Reading.

Notice.

PURCHASERS of LARGE QUANTITIES FARM or GARDEN SEEDS will be supplied liberally by SUTTON & SONS.
For prices apply (stating quantity required) to SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Page's Genuine Seeds.

PAGE'S COMPLETE COLLECTIONS for GARDENS, 3l., 1l. 10s., 15s.
PAGE'S DEEP BLOOD-RED BEET, 9d. per oz.
PAGE'S EARLY DWARF CABBAGE, 6d. per oz.
PAGE'S GOLIAH PEAS, 1s. 6d. per quart.
PAGE'S PRODIGY (Earliest Dwarf), do., 1s. 6d. per quart.
PAGE'S CRYSTAL CELERY, 6d. per oz.
BLUNDELL'S CATTLE MELON, and BLUNDELL'S CATTLE MARROW, only a few Packets left, 50 Seeds, 2s. 6d.; 100 Seeds, 3s. 6d.; 150 Seeds, 5s.
PAGE'S SUPERB HOLLYHOCK, 2s. 6d. per packet.
PAGE'S SUPERB ANTIRRHINUM, 1s. per packet.

BLACK TARTARIAN OATS.—Gentlemen desirous of having a Change of Seed of the above productive Oat can be supplied by the Subscribers with a remarkably clean and heavy sample. Price furnished on application.
W. DRUMMOND & SONS, Seed Warehouse, Stirling, N.B.
N.B.—This Advertisement will not be repeated.

Seed Corn from the Chalk.

ALL THE MOST APPROVED VARIETIES OF WHEAT, BARLEY AND OATS, SUPPLIED BY

RAYNBIRD, CALDECOTT, AND BAWTREE, Address, Basingstoke; or 89, Seed Market, Mark Lane.
WINTER and SPRING TARES, SAINFOIN, and all other kinds of AGRICULTURAL SEEDS.
Samples and Prices post free on application.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.
CARRIAGE ARRANGEMENTS.

The Directors have made arrangements with all the Railway and Steam Companies to deliver all Seeds with the exception of heavy articles, such as Grain, Tares, &c., CARRIAGE FREE to any Railway Station in England and Wales, or to any Steam Port in England and Wales, Ireland or Scotland, Guernsey, and Jersey.
CATALOGUES can be obtained, and every information given on application at the Company's Offices, 68, Welbeck Street, Cavendish Square, London, W.

REIGATE SILVER SAND, 7s. 6d. per ton; packed, 16s. per ton; delivered to Reigate Railway Station. PEAT SOIL of various kinds, LOAM, BOG MOULD, &c. N.B.—Loaded trucks can be sent on all the principal Railways.
W. SHORT, Sand and Peat Depot, Reigate, Surrey.

A Very Extensive and Well-grown Stock of Roses,

CONSISTING OF MANY THOUSANDS OF STANDARDS AND DWARFS,

OFFERED BY

WM. WOOD AND SON, Nurseries, Maresfield, near Uckfield, Sussex.

	Per doz.—s. d.
STANDARD HYBRID PERPETUALS	18s. to 24 0
HALF STANDARD ditto	15s. ,, 18 0
DWARF ditto	9s. ,, 12 0
STANDARD SUMMER ROSES	18 0
HALF ditto ditto	15 0
DWARF ditto ditto	9 0
DWARF BOURBON and TEA-SCENTED	12s. ,, 18 0
DWARF CHINA	9s. ,, 12 0
DWARF NOISETTE	9s. ,, 15 0
CLIMBING ROSES	9s. ,, 12 0
CLIMBING ROSES, without names, for covering banks, &c. per 100	30s. 4 0
COMMON CHINA, CRIMSON CHINA, COMMON MOSS, and PROVENCE CABBAGE	5 0

Roses, New and Old.

PAUL AND SON, having still an immense stock of ROSES, are able to complete orders, both as Standards and Dwarfs, of all the best varieties.

They beg to remind intending planters that February and March are, with November, the best months for removing Roses.

PRICED LISTS on application. The NEW ROSES of 1864 will be ready in April.

"Old" Cheshunt Nurseries, Herts, N.

Mitchell's Renowned Roses.

PATRONISED BY THE ROYAL FAMILY.

JAMES MITCHELL has the honour of informing the nobility and gentry, that he has to offer this season the most magnificent stock in England. All Roses at these Nurseries are propagated and grown in the open ground, possessing a hardy constitution suitable for all climates.

(No grafted plants or any drawn up under glass, which cause the great number to fail every season).

Piltdown Nurseries, Maresfield, near Uckfield, Sussex.

ROSES.—Fine DWARF ROSES, still on Sale. A few fine Standards of 1863 yet on hand. Prices on application.

The NEW DAHLIA CATALOGUE now ready.

All the NEW ROSES in April.

JOHN KEYNES, Nurseryman, Salisbury.

Roses.

EDWIN HOLLAMBY has the pleasure of informing the Nobility and Gentry that his extensive Stock of STANDARD and DWARF ROSES of all the leading kinds in cultivation is in the finest possible condition; fine straight stems, fine heads, and beautifully rooted. Purchasers of large quantities will be liberally dealt with.

DESCRIPTIVE PRICED CATALOGUES for the present season will be forwarded gratis and post paid on application.

Nursery and Seed Establishment, Tunbridge Wells; and Goldsmith's Park, Groomsbridge, Kent.

Great Reduction in the Price of Roses.

BENJAMIN R. CANT has still for SALE a fine stock of STANDARD, HALF-STANDARD, and DWARF ROSES. Purchasers of large quantities, either Amateurs or the Trade, will be supplied at extremely low rates. The Plants are very strong and cannot be surpassed.

CATALOGUES, with special Prices, on application to

BENJAMIN R CANT, St. John's Street Nursery, Colchester.

Paul's Nurseries, Waltham Cross, N.

ROSES.—Superior STANDARDS, 18s. per dozen and upwards; Do. DWARFS, 9s. per doz. and upwards.

All the NEW ROSES, including BEAUTY of WALTHAM, MRS. WM. PAUL, and LORD MACAULAY (three of the best), at the lowest advertised Prices. The new PRICED CATALOGUE is now ready, free by Post.

FRUIT TREES.—Apples, Pears, Plums, Cherries, Apricots, Peaches, Nectarines, Figs, Grape Vines, Gooseberries, Currants, Raspberries, Strawberries, &c. All the really desirable sorts in perfect condition for transplanting at lowest advertised prices. Fruit-bearing trees of the first seven fruits may be had suitable for potting for orchard house culture, from 18s. to 30s. per dozen. PRICED CATALOGUE free by post.

PLANTING.—Planting to any extent, with or without the supervision of the trees, &c., till established, undertaken in any part of the United Kingdom. The rich and varied collection of Trees and Shrubs growing in one Nursery of 30 Acres, have been removed within three years, which is almost a guarantee of success in transplantation.

WM. PAUL (Son and Successor to the late A. PAUL), Nurseries and Seed Warehouse, Waltham Cross, N. Entrance from the platform, Waltham Station (Great Eastern Railway), half-an-hour's ride from London.

GENUINE SEEDS.

JAMES VEITCH,

THE ROYAL EXOTIC NURSERY, CHELSEA, S.W.,

BEGS TO ANNOUNCE THAT HIS

CATALOGUE OF KITCHEN GARDEN AND FLOWER SEEDS FOR 1864,

WITH A LIST OF IMPLEMENTS AND OTHER GARDEN REQUISITES,

IS NOW PUBLISHED, AND WILL BE FORWARDED POST FREE ON APPLICATION.

J. V. devoting his personal attention to this department of his business, can warrant his Seeds true to name, and of the most genuine description.

The CATALOGUE will be found to contain all new VEGETABLE and FLOWER SEEDS of merit in addition to those kinds in general cultivation, and includes—

PEAS.

DILLISTONE'S NEW EARLY | CARPENTER'S EXPRESS, NEW EARLY | MACLEAN'S ADVANCER, EARLY, very fine | ,, DWARF PROLIFIC | VEITCH'S PERFECTION, fine selected stock.

BROCCOLI.

WALCHEREN, fine stock | SNOW'S WINTER WHITE, True | CHAMPION (CARTER'S), New

The following are varieties which are offered after many years careful selection, and will be found very select and choice:—

VEITCH'S IMPROVED WILCOVE, fine Late White
,, SURPRISE, new, the latest variety yet in cultivation
VEITCH'S FINE EARLY WHITE, for Spring use
,, ROYAL VICTORIA, Late White

BRUSSELS SPROUTS.

Imported seed, from a very fine and true stock.

ROSEBERRY, very select | DALMENY SPROUTS, new

BEET.

DWARF DARK, very fine

CABBAGE.

DWARF and LARGE YORK, very true
ENFIELD MARKET, fine
FULHAM or BATTERSEA, very select stock
LONDON COLEWORT, fine
LITTLE PIXIE, an excellent Dwarf kind,
And other fine kinds.

CAULIFLOWER.

STADTHOLDER.—A very fine late variety
EARLY LONDON, WALCHEREN } From very select stocks
EARLY ERFURT, true

CUCUMBER.

MASTERS' PROLIFIC.—A very excellent variety. See *Gardeners' Chronicle* of October 11, 1862, page 957.

LETTUCE.

NONSUCH, COS, new | NEAPOLITAN CABBAGE, very fine

MELON.

HYBRID CASHMERE, Green flesh, MOUNSDEN'S MORETON HALL, Scarlet-flesh } Fine exhibition varieties

TURNIP.

VEITCH'S RED GLOBE, an excellent Garden variety

POTATOS.

EARLY ASHLEAF, true
VEITCH'S PROLIFIC ASHLEAF, an excellent second early kind
EARLY HANDSWORTH, very prolific
MONA'S PRIDE, new

NEW and CHOICE FLOWER SEEDS.

LOBELIA PAXTONIANA | MIMULUS MACULOSUS | RHODANTHE ATROSANGUINEA | RHODANTHE MACULATA ALBA | AMARANTHUS MELANCHOLICUS RUBER | MIMULUS CUPREUS

Imported GERMAN STOCKS and ASTERS, in collections of various kinds; for details see CATALOGUE. Also COCKSCOMBS, LARKSPURS, WALLFLOWERS, ZINNIAS, HOLLYHOCKS, &c.

J. V. would also direct attention to the following, which are of the very choicest description:—

CALCEOLARIA, choicest mixed, CINERARIA ,, } Saved from the best kinds in cultivation.
PRIMULA SINENSIS FIMBRIATA, Red and White, saved from the best fringed flowers only.
PRIMULA KERMESINA SPLENDENS.
CELOSIA AUREA PYRAMIDALIS.
,, COCCINEA
DIANTHUS HEDDEWIGI," and varieties, both Single and Double
PANSY, both English and Belgian, from named kinds, &c.

ALL OTHER NOVELTIES OF MERIT AT ADVERTISED PRICES.

CARTER'S COLLECTIONS of GARDEN SEEDS for 1864.

FOR the convenience of those of our Customers who have not the time or inclination to make out their own selection of VEGETABLE SEEDS, we submit the undermentioned COLLECTIONS, to which we respectfully invite attention, and we confidently hope that the liberal and judicious manner in which the selections are made, will induce our Customers to favour us with their commands, also their kind recommendations to their Friends. We have bestowed great care in the arrangement of the sorts; none but what we have proved in our Trial Grounds at Dedham to be the very best of its class is included, and those varieties have been chosen that are most calculated to procure a constant SUPPLY of the best kinds of VEGETABLES all the year round.

These SEEDS have been carefully grown and selected by ourselves at our Seed Farms at Dedham and St. Osyth, Essex; we can therefore guarantee them to be of first-rate growth and pure stocks.

No. 1, price 10s. 6d.; No. 2, price 21s.; No. 3, price 42s.; No. 4, price 63s.

CARTER'S GARDENER'S AND FARMER'S VADE-MECUM. (Now Ready.)

PART I.—Containing Scientific Description of upwards of 2000 Species and Varieties of FLOWER SEEDS, with Lists of Bulbs and Plants for Early Spring Planting, and a Calendar of Garden and House Operations for every month in the year.

PART II.—Comprising Complete Lists of VEGETABLE and FARM SEEDS, with Cultural Directions and a Calendar of Practical Farm Operations.

PARTS III. and IV. will be published in May and September respectively.

The entire Book will be forwarded in Parts as issued Free of Charge, upon receipt of 12 *Postage Stamps. Gratis to Customers.*

JAMES CARTER AND CO., 237 and 238, HIGH HOLBORN, LONDON, W.C.

Paul's Hollyhock Seed.

COLLECTION OF 12 NAMED VARIETIES, POST-FREE, 5s.

PAUL AND SON have now ready the above; they can be also had of the principal nurserymen and seedsmen. Genuine Vegetable and Flower Seeds Carriage Free. List on application.

"Old" Cheshunt Nurseries, Cheshunt, Herts.

Superb Double Hollyhocks.

WILLIAM CHATER'S NEW LIST is now ready, and may be had on application by enclosing one Postage Stamp.

P.S. A large Stock of FINE PLANTS now ready.

Nurseries, Saffron Walden.

Gladiolus Brenchleyensis.

YOUELL AND CO. have much pleasure in offering the above GLADIOLUS, unequalled by any other variety for the brilliancy of its colour. The Bulbs are unusually fine. Price 3s. per doz.; 20s. per 100.

Trade price on application,

Royal Nurseries, Great Yarmouth, Norfolk.

Prize Gladioli.

YOUELL AND CO. were awarded the following PRIZES for the above in September last:—

FIRST AND SECOND PRIZE, CRYSTAL PALACE,
FIRST PRIZE, ROYAL HORTICULTURAL SOCIETY,
FIRST PRIZE, BRIGHTON.

CATALOGUES of this collection will be forwarded on application.

Royal Nurseries, Great Yarmouth, Norfolk.

Gladioli.

SUTTON'S LIST, containing the Sorts most worthy of Cultivation, including those to which Prizes were Awarded at the Crystal Palace and other Shows, may be had Gratis and Post free.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well-assorted Collections of EXOTIC ORCHIDS, FERNS, Miscellaneous STOVE and GREENHOUSE PLANTS, Variegated and Ornamental FOLIAGED PLANTS, TREE FERNS, &c., amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE with a list of Beck's New and Choice PELARGONIUMS, Post free to all applicants.

Paradise and Victoria Nurseries, Holloway, London, N.

American Plants.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE for the present Season is now ready, and will be forwarded free to all applicants. As well as American Plants, it contains a summary of their General Nursery Stock, one of the most extensive in the kingdom.

Knap Hill Nursery, near Woking, Surrey.

To the Trade.

AZALEAS, ERICAS, and EPACRIS, fine bushy plants, well set with flower buds, at moderate prices. An inspection solicited.

THOMAS JACKSON & SON, Nurseries, Kingston, S.W., adjoining the Kingston New Station, South Western Railway.

New Florist Flower Catalogue.

DOWNIE, LAIRD, AND LAING beg to intimate that their DESCRIPTIVE CATALOGUE of FLORIST FLOWERS, New Garden and Flower Seeds, &c., for 1864, is now ready, and may be had free on application.

17, South Frederick Street, Edinburgh; and at Stanstead Park, Forest Hill, London, S.E.

Wholesale Catalogue of Nursery Stock.

GEORGE JACKMAN AND SON'S PRICED and DESCRIPTIVE CATALOGUE for 1863 and Spring 1864 can be had free on application; it comprises FRUIT TREES, ROSES, AMERICAN PLANTS, CONIFERS, EVERGREEN and DECIDUOUS TREES and SHRUBS, and TRANSPLANTED FOREST TREES, &c.

Apply to GEO. JACKMAN & SON, Woking Nursery, Surrey.

RUSSELL'S PYRAMID PRIMULA.—Seed of this celebrated strain is now ready, in packets, price 2s. 6d. The great satisfaction which these sorts have given in previous seasons will be fully maintained this. The flowers can be seen at the Nursery during the spring. Printed instructions for cultivation with each packet.

GEO CLARKE, Nursery, Streatham Place, Brixton Hill, S.; and 4, Windsor Terrace, Pimlico, S.W.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

Notice.

JOHN WATERER, of The American Nursery, Bagshot, Surrey, is the EXHIBITOR of RHODODENDRONS at the Royal Botanic Gardens, Regent's Park.

His CATALOGUE, describing colours, prices, &c., can be obtained by letter addressed to the Nursery as above.

☞ For detailed Advertisement of CONIFERS, ORNAMENTAL SHRUBS, &c., refer to page 1151 for 1863.

Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET.

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

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HEDGES and SCREEN-FENCES.

The Council of the Royal Horticultural Society being desirous of Dividing, Sheltering, and Screening-off certain parts of the Garden, invite competition from persons willing to TENDER to PLANT such Hedges or Screen-fences, and to keep the same in order during a period of two years.

CONDITIONS.

The Hedge or Screen-fence must occupy the smallest space of ground consistently with its verdure and its effectiveness as a screen.

It must be not less than 6 feet 6 inches high.

It must be either of Evergreen Plants, or covered with green foliage from May to September inclusive, Annuals being admissible if fulfilling or aiding to fulfil such conditions.

Any Trelliage, Stake work, or Open-work Netting to support and for training the plants, must be provided by the person contracting, and kept in proper order during two years.

Persons tendering must name the mode of constructing the Screen-fence, whether it is on a raised bank or otherwise, the nature of the supports for Training, &c., and the plant or plants to be used.

Persons whose Tenders are accepted will be required to have the Fence planted and in an effectual state by the 30th of April next.

The Horticultural Society will engage to affix to the work the name of the Contractor in some conspicuous manner, but will not engage to accept the lowest or any tender.

Sealed Tenders to be sent to the Assistant Secretary on or before the 1st of March, 1864.

The Gardeners' Chronicle.

SATURDAY, FEBRUARY 6, 1864.

MEETING FOR THE ENSUING WEEK.

TUESDAY, Feb. 9 { Royal Horticultural (Anniversary) at South Kensington .. .. 1 P.M.

IN a recent Number (p. 1131, 1863) we submitted to our readers Mr. BATEMAN'S plan for laying out the estate adjoining the new Museum at Oxford. The plan had been prepared in accordance with instructions supplied by Delegates specially chosen by the University, and had received their unanimous approval, as well as the sanction of certain high professional authorities to whom the parties in question—somewhat diffident of their own judgment—had very properly submitted it. It was moreover popular with the inhabitants of the city of Oxford itself. Nothing, therefore, remained but that Convocation should give its *imprimatur* to the recommendations of its own delegates, pass a vote for the necessary funds, and set the pickaxe and shovel merrily to work. Yet when, on the 28th of last month, the subject came on for discussion before that august and irresponsible body at whose bar the works of heretical professors, and the plans of innocent landscape-gardeners, have alike to appear, it soon became evident that the entire scheme would have to encounter a most fierce and intractable opposition on the part of certain resident members of the University, who in their zeal for muscular Christianity and athletic sports were heedless of all the charms of nature and all the refinements of art. It was in vain that such men as the Dean of Christchurch and the President of Magdalen sought to bring Convocation to a better mind, and exposed the inconsistency of first issuing and then ignoring the instructions on which the Delegates had acted from the first! It was in vain they expatiated on the advantages of a park—properly so called—to the University at large, and on the support and dignity that it would impart to the façade of the Museum, which is certainly in no condition to dispense with such aid! In vain, too, in order to propitiate the cricket interest, they pointed to the 30 acres (more than a third of their disposable space) that had been unconditionally surrendered to the votaries of that popular sport. But the Leviathan of cricket was not so tamed! Then the voice of foot-ball made itself heard, and fives-courts were loudly called for. The equestrians next laid claim to a share of the space—for hurdle-races and steeple-chases we presume; and although nothing seems to have been said about the pigeon-shooters, we can scarcely conceive that such important interests should have been entirely overlooked. Some, indeed, there were, who, true to a reactionary policy, were willing to solve all difficulties by the simple expedient of converting the park into a sheep walk. This proposition however fell to the ground, as did, by decisive majorities, the various sections of the original plan. We need not say how much we regret this strange result, nor how entirely we sympathise with the Delegates, who, naturally indignant at the manner in which their labours have been requited, now propose to resign *en masse*.

But supposing some scheme to be introduced, such as might satisfy the wild expectations of the movement party. How, we would ask, could it be carried out without utterly subverting that quietude and decorum which ought to reign in the neighbourhood of the Museum, and in the absence of which but little head-work could possibly be done? Professor PHILLIPS is not the man to be scared by trifles, but we may yet, some day, see him claiming as against these anarchs—whether old or young—of Oxford, the same protection that Parliament is about to accord to Professor BABBAGE from the hurdy-gurdies and organ-grinders of London. Failing this, we would suggest that the site of the Museum be transferred to some spot at the greatest possible distance from its own park; that the lecture-rooms of the existing building be supplied with billiard tables, and the grand central hall be at once converted into a tennis-court. The sprightly idea of the opposition would thus be realised in all its integrity, and a huge playground substituted for the contemplated park.

It is difficult to write seriously on such a topic, but nevertheless it is high time that the question be seriously put to the University as to whether Park or Playground shall carry the day. If it is to be the latter, there is an end of the Oxford of the olden time; but if, as we still venture to hope, the advocates of the former should ultimately triumph, then let it be borne in mind that no plan would deserve to be entertained that did not include (besides cricket grounds)—

1. A re-distribution of the surface to such an extent as to afford grateful variety, and ensure by means of mounds the requisite seclusion from the outer world.

2. Water to light up the picture, and afford, in the excavations that it would necessitate, materials for the mounds.

3. Groups of hardy trees and shrubs.

4. A walk carried round the boundary of the estate, and conducting to all the more remarkable spots.

5. A grand mall or promenade in connection with the central buildings.

These principles are well illustrated in the parks at Birkenhead and Derby—laid out respectively by PAXTON and LOUDON—and in common fairness to the Delegates it must be admitted that they were sufficiently regarded in the plans that they submitted—to such little purpose—to Convocation. The next move now rests with the obstructives, and we wait with much curiosity and some solicitude to see what it is that they propose to do.

IN our Paper for 1861, pp. 966 and 1091, we gave our readers an account of a new method of RAISING FUNGI FROM SPORES, which had been reported to the French Institut by M. CHEVREUIL, as practised by M. LABORDETTE. It consisted in making the spores mixed with sand germinate on slips of glass, and inserting them when quickened in beds of river sand and lime rubbish, which were then irrigated with a weak solution of saltpetre. Large Mushrooms were exhibited to the Academy, which were said to have been actually developed in this manner in six days.

There was something approaching the incredible about the matter, though it seemed to rest on good evidence. Some suspicion however arose from the fact that there was evident confusion about the distinction between the young Mushrooms and spawn, and that the published accounts did not exactly tally with each other. Further information therefore was looked for, but as far as we are aware none was given.

Dr. NYLANDER, however, at p. 307 of the "Flora" for 1863, informs us, on the authority of Monsieur TRIANA, that the whole was a myth, and that the gigantic specimens exhibited did not owe

their growth to any peculiar method of culture, but were the creatures of accident.

Dr. NYLANDER has in vain tried to coax the spores of Agaricus campestris into germination on glass, and he believes that they will not germinate till they have passed into the stomach of some graminivorous animal. This is not indeed a new idea, but it is one of some importance, as it accounts for the growth of Mushrooms without spawn from artificial mixtures of dung and other matters, as also for the wonderfully sudden appearance of the numerous deliquescent species which appear on hot-beds in a perfect state of development in from 24 to 48 hours after they have been made.

COEMANS had some time before made the same remark with respect to Pilobolus, the sporangia of which are shot out elastically and attached to neighbouring herbs, which are devoured by cows, and after passing through their stomachs, spring up like a little forest on the dung. The enormous abundance in which this little plant often appears, and the rapidity of its development, are easily accounted for on this supposition, though very difficult of explanation in any other way.

NYLANDER does not fail to point out the curious analogy which exists between the development of these Fungi and the different species of Gasterophilus (Œstrus, LINN.), or Bots, the eggs of which are subject in the stomach of the horse to a temperature of 102° Fahr. The true Œstri have a different habit, the pupæ being developed in the frontal cavities of the sheep, or under the hides of oxen and cows, where the eggs are deposited by the flies, and are subject to a degree of heat requisite for the earlier stage of their development. *M. J. B.*

— IN every new home-produced, robust or hardy variety of fruit, of good quality, which is originated, there is a clear gain to the Pomologist in the acquisition of a superior fruit especially suited to our climate. The value of the prize may not at first be fully realised, as it often takes time to develope all the good qualities inherent in a novel variety, but if the preliminaries we have mentioned are to be satisfactorily made out, the future becomes full of promise. We have recently (p. 51) mentioned some fine NEW PEARS of Devonshire origin, but there are others also of recent date, that deserve to be better known, on account of their intrinsic merits. One of them is the BRITISH QUEEN, raised by Mr. INGRAM of Frogmore, and said to be a seedling from the Seckel crossed with the Marie Louise. This is a very fine looking Pear, and as good as it looks; it has been shown on one or two occasions, and has invariably met with approval. The fruit itself is large and pyramidal, with an undulating surface, and smooth shining golden yellow skin, here and there freckled with patches of thin cinnamon russet, and on the exposed side often acquiring a crimson flush. In flavour it resembles Marie Louise, the flesh being fine grained and melting, with a rich saccharine juice, and fine aroma. As an autumn Pear, ripe in October and November, this has few equals. Another to which we may specially refer is the AUTUMN NELIS, a variety raised by Mr. F. J. GRAHAM, of Cranford, a variety of remarkably hardy character, and so compact and short-jointed in habit, that the branches become closely set with spurs. Indeed the whole habit of the tree especially recommends it for culture as a pyramid, either out-doors or in the orchard house. The fruit is rather above medium size, obovate-turbinate in outline, almost entirely russeted on a surface which here and there shows a little patch of greenish yellow. The flesh is yellowish, fine grained, and melting, with abundance of rich aromatic sugary juice, and an exquisite flavour, which has been compared to that of the Winter Nelis. The ripening season is October. The parent tree of this variety has been in bearing for some five or six years, and proves to be most prolific. We believe this is the same as a Pear which Mr. GRAHAM exhibited before the British Pomological Society in 1858, under the name of Graham's Bergamot, when it was considered one of the most delicious of Pears, but that before being let out last year it was rechristened Autumn Nelis.

There can be no doubt that these Pears, both of which have had First-class Certificates from the Royal Horticultural Society's Fruit Committee, are, like Mr. HUYSHE'S varieties, acquisitions of real merit, and as such destined along with them to occupy a prominent place amongst our hardy dessert fruits. It appears to us that the Fruit Committee would do well another year to include them in its list of prizes to be distributed on ordinary meeting days. They might be invited in the shape of pot plants grown in orchard houses, for which the Pear seems very well adapted; and if young plants were invited, all growers would compete on equal terms, the fruit being shown on the plant. It would add we think very much of interest to these meetings to adopt such a mode of familiarising the public eye with the aspect of fruits so well deserving to be generally known.

— OF the many bulbs which may be employed for the decoration of the SPRING FLOWER GARDEN, there is perhaps none more useful than the BEDDING TULIP as it is now to be obtained. This flower is to be recommended for the showiness and brilliancy and the fair endurance of its blossoms, which in consequence of their closing up against the evil influences of adverse weather, last nearly or quite as long as the flowers of most other bulbs available for the spring garden. And it is not less estimable on account of the variety it affords, the facility of its culture, and its earliness. Within the last few years the number of varieties has been very largely increased; and if the season be at all favourable we know of no sight about London in the way of Spring Flowers more worth seeing, than the display of these bedding Tulips usually to be found in the Wellington Road Nursery of Messrs. E. G. HENDERSON & SON, and in the garden of the Royal Botanic Society in the Regent's Park.

Of course for the earliest bloom the bulbs are planted in autumn, and as a general rule this is to be preferred; but those who have failed to avail themselves of the opportunity, or who wish to avoid risk to the incipient blossoms from severe weather, and have no very ready means of protection at hand, or who are content with blossoms at a somewhat later period, may realise a very satisfactory bed by planting in the early part of January, provided the bulbs have been well kept. In the case of small gardens this may even be generally the more convenient season of the two, but its success would depend on the manner in which the roots had been kept. The plants themselves are exceedingly gay; they are hardy enough not to suffer injury from the cold of ordinary seasons; and they are amongst the easiest of all plants to manage, requiring only that the bulbs should be properly planted, and be taken up when partially ripened, and after exposure for a week or so in a dry place, stored away where damp and frost cannot reach them until the next planting time. The soil which suits them most exactly is a sandy loam, moderately enriched with thoroughly decayed cow manure, and the bulbs should be uniformly planted at a depth of about 4 or 5 inches from the surface, which may be done more beneficially by means of drills or removing the surface to the necessary depth before placing the bulbs, dropping a little dry sand about them before returning the soil, than by means of dibbles, which although easily enough regulated as to depth, leave the sides and bottom of the hole compressed, by which the rains are more readily conducted to the bulbs—a condition decidedly prejudicial if the season proves to be either cold or wet. These bedding Tulips especially recommend themselves to the notice of those who follow the parterre system of flower gardening, as they fit in exactly with the wants of the summer plants, having yielded their display, completed their growth, and commenced the ripening process to a sufficient extent for removal by the time the summer plants require to be put out.

As in all cases where varieties are multiplied, there are many which do not recommend themselves to notice except for special purposes. Indistinct or confused markings, unattractive hues, or slight differences in the shades of colours which are in themselves desirable enough, are examples of this sort; but putting these aside, there is a sufficient residuum of distinct and decided colours, successive as to flowering, which are of the greatest value in enlivening the garden in the earliest months of spring. Indeed, a constant succession of bloom may be had from the early part of April till the end of May.

The very earliest will furnish some of the brightest and most decided colours. Thus in scarlets there are such as Duc Van Thol, Vermilion Brilliant, and Waterloo; in crimsons, Cramoisie Fidèle, Couleur Cramoisie, and Couronne Pourpre; in whites, Queen Victoria, Pottebakker, and Luna; and in yellows, Canary Bird, Golden Prince, and Pottebakker. These are from 4 to 6 inches high. Somewhat later there come, of crimsons or bronze reds, Brutus, Couleur de Feu, and La Majestueuse; of violet crimsons, Duc de Luxembourg and Typhon; of orange scarlets, Couleur de Cardinale; of bronzy crimsons with yellow edge, Duc Major, Archduc d'Autriche, and Duc de Chartres; of violet purples, La Plaisante; of purples, Molière; of orange-buffs, Thomas Moore; and of rosy crimsons, Monument. Besides these there are numerous white-ground sorts variously marked with rose carmine and purple. These later sorts grow from 9 to 12 inches high, and afford a good succession to the dwarfer earliest series.

To these latter a succession may be had, by planting the double-flowered varieties, such as Rex Rubrorum and Pæony Rose amongst reds, Tournesol red and yellow, Couronne Impériale, violet-crimson and white, Yellow Rose, and Yellow Tournesol amongst yellows, and La Candeur, a white. Those who have failed to plant either in autumn or at the turn of the year, should at least make an opportunity to examine a good collection when the blooming time comes, in order to select varieties suited to their respective requirements for next season's planting.

These bedding Tulips serve admirably for mixing in beds with low-growing evergreen perennials, and are perhaps better used in this way than in any other, as their comparative deficiency of foliage is compensated for, and the flowers are thrown up better by contrast with the green surface.

LADIES' GARDENING.

AFTER the prizes offered by the proprietors of the *Gardeners' Chronicle* for the benefit of lady gardeners, it would be quite beyond female nature to abstain from attacking the subject. One feels that any tried data must be so very valuable, that I think every one who has grown any one plant well, *i. e.*, to admiration, ought forthwith to contribute her quota on the subject: and if there should be an objection to the idea of "appearing in print," I shall be but too glad to be made the channel of using any good practical details not already too well known. For to-day, however, I have a few hints of my own to offer.

It seems to me perfectly useless for ladies to try to grow, with any hope of prize-winning, any plant that is not first proved to be capable of being grown to perfection under the special circumstances that they have to offer it. One person may, for instance, grow the most lovely Pelargoniums; but then, you perceive, she has a well-ventilated span-roof greenhouse with a south-east aspect. If her neighbour across the square were to start the same sort of plants, growing them in a window or in a north-west greenhouse, it is not very probable that they would answer by any means—any more than the Ferns and the grand Begonias thriving there, would retain their beauty if changed to the sunnier quarters.

There are a few special plants just now that people should bethink themselves of. For those who have any means, either in a greenhouse or hotbed, or with a warmed plant-case, of giving some heat to start with, I know there are many splendid things, but even without any heat there are a few that do perfectly. First and foremost of these I reckon the Japan Lilies, which flower year after year, and are most entirely beautiful. I have had them in full beauty grown in a window always, and without any heat, a thing that they do not need at all. Lilies of the Valley are quite of the same class; and I know if I were a judge I should award a prize instantaneously to a well-grown pot of such Lilies, skilfully forced or retarded. That really takes some gardening—and yet you may do the latter beautifully without heat. I have never seen any better than those forced in a plant case, so that is an evident chance for all who are using these cases.

The Vallota purpurea is another plant that does in London very well; but this again as a rule is glad to be started in heat, and unless one can manage something just to give the first start, things of this description are apt to be too late to attain full size and beauty. Tree Carnations are things that with plenty of air will thrive well. Auriculas are another kind which require no heat whatever: whose enemy is damp, and yet who can't stand sun. Ferns may be grown to perfection with or without a glass shade, taking due care as to aspect, and extreme care as to watering. Then there are the Campanulas, which cannot be better off than in a cool light window; and there are the Veronicas, which do quite equally well.

The great thing, it seems to me, that we must bear in mind, is never to begin anything with weight against it at starting—a thing we have not the right aspect for, or a thing we can't allow air enough—or, quite as much as either, plants that require heat to start with, that we can't give them. The prizes are quite open, and if one plant fails, perhaps another will win. In all the great gardens there are succession houses, where the plants are brought into bloom, or hardened, or set to grow. I don't know if every one can arrange for succession windows, but most houses have two sides at least, and it would be a great thing if they could. The north windows would then be for plants quite at rest and for Ferns; the east and west for such as were in bloom or growing fast; and the south would be for heat-loving plants coming out, and for hardening and ripening the wood of newly-grown shoots. *E. A. M.*

ORCHARD MANAGEMENT.—No. II.

IT will be seen that in my former remarks (see p. [illegible]) much stress was laid upon the necessity of a good and efficient shelter for orchards. This, indeed, is all important, and if the attainment of it involves any sacrifice, either between employer and gardener, or landlord and tenant, it ought to be made. After that fearful and destructive gale which occurred on the 26th and 27th of May, 1860, several orchards came under my observation, and very marked indeed was the difference between the sheltered and the exposed—not in isolated, but in numerous cases. In exposed places many trees were entirely denuded of their young and tender leaves, and were consequently barren of fruit, whilst in the same orchards, the interior trees, and those on the sheltered sides, were uninjured, and bore fruit in abundance.

I have been thus strenuous in advocating the necessity for effectual shelter, because the exercise of a little forethought and research into the subject, by any one about to plant an orchard, would often prevent mistakes which no after trouble could fully rectify. Situations might also be selected where the necessary shelter might be so arranged as to become an ornamental feature of the landscape, and thus combine

ornament with utility. For let it be observed that there is no necessity for an orchard to be rectangular in shape; and supposing it to be possible to combine the planting of some high ground, within view from important points, with shelter for the orchard, a bold circular outline would be preferable to a formal straight one, under almost any circumstances. Thus a circular or irregular outline for an orchard may possibly be an advantage, rather than otherwise, but this of course is merely suggestive, and its non-adoption breaks no necessary rule of practice.

The next consideration will be that of soil and subsoil, and this is in a great measure inseparable from that of shelter, so that it will be necessary to look at them in combination, rather than as separate influences. It may be that a situation is all that could be desired, but the soil bad; on the other hand, the soil may be favourable, but the site bad. A locality which combines the two will of course be preferred and sought after; but as this combination is rarely to be met with, it becomes necessary for the operator to cast about for the means of supplying deficiencies, which should in a great measure guide his selection; and as I hold it to be the best plan of two evils to choose the least, I should prefer a thoroughly sheltered situation with an inferior soil to one with a better soil, but deficient in shelter or the means of supplying it, and this, not only because I believe external influences to have an important bearing upon the well-doing of the trees, but also because I believe that by careful management and liberal treatment, the deficiencies of soil can be the most easily supplied, and good orchards thus raised on inferior soils. All this of course implies a liberal expenditure at the outset, for the purpose of getting together a large quantity of good soil at the time of planting; but indeed, under the system of planting and management which I shall have to propose, this will have to be the case under any condition of soil.

The best soil for an orchard would be a good dark loam of a retentive and aluminous nature, rather than siliceous. Great depth is not necessary, although it is advantageous when present. The subsoil should be of a strong and retentive nature, in preference to one of sand or rock, or gravel, but at the same time, not of a character so strong and retentive as to preclude the possibility of effecting the most efficient drainage. This indeed is a matter of so much importance, that unless it can be secured it would be useless to plant, because the effects which are supposed to follow on certain modes of proceeding are entirely dependent on its thorough efficiency. Hence it might perhaps be inferred by some that it would be preferable to plant where the subsoil is naturally porous and dry, such as gravel, or rock, or sand; but I have not found this to be the case in practice, except indeed the superstratum of good soil lies very deep on a gravelly subsoil, in which case the conditions are often very highly favourable. In most cases however, such subsoils, particularly those which are composed more or less of sand, have a very shallow surface soil, which again is often very poor, requiring large additions of fertilising elements to keep the trees in good health. Moreover, if the cultivation is such that the roots must of necessity penetrate such subsoils for want of better food, the wood is apt to canker and die off; and hence it is that the vigorous and luxuriant growth, which is so necessary to the healthy and profitable development of trees which are required to stand for a vast number of years, can only be attained in an economical manner in strong loamy soils and subsoils. Not but what trees may be kept healthy and vigorous on shallow and poor soils, but then the expense is proportionately greater, thereby diminishing the profit, and still further exemplifying the necessity for very great care in selecting localities.

I may here observe, in reference to this part of my subject, that one important point to be kept in view in the cultural management of orchards should be to keep the roots as near the surface as possible, and for the furtherance of this object I place a much greater faith in superficial cultivation than in depth of soil. I therefore maintain that a great depth of surface soil is not an absolute necessity, and only so far advantageous as affording a healthy medium in which stray roots may spread and penetrate without incurring the risk of canker and dying branches. I say stray roots, because the main roots, on which the healthy development of the tree depends, must be kept near the surface by feeding them from above, and thus the inducement for them to penetrate deep in search of food is removed. Hence it is also that I maintain, that by this system of surface cultivation, orchards may be raised on soils comparatively shallow and inferior, if other necessary conditions are favourable. Although, therefore, I would not in the least undervalue the presence of a good soil in every way favourable, I would not despair of success in situations where the natural conditions might seem to be the reverse of favourable. My experience, so far as it goes, is decidedly in favour of strong lands when they are efficiently drained, but if the drainage is neglected, and the subsoil is retentive of water, the trees will go quite as fast to ruin in them as when planted in light and shallow soils on poor bottoms, and left to take their chance.

Drainage, then, will be the first thing to be attended to, when the site is fixed upon whereon to establish an orchard. I have known several orchards where this important operation was not attended to until the lapse of many years after planting, and only then adopted because the trees began to show by cankered wood, and moss and lichen-covered branches, that something was amiss below. Then drains would be opened up the centre between the rows of trees, and if this operation were well and efficiently performed, and means taken to clear the trees of rotten wood and cryptogamic vegetation, good results have followed in cases where the evil was not too far gone; but in many cases it would be too late to restore the trees by any amount of expenditure, and both money and labour might be much more profitably employed in establishing a new orchard on a better system.

I have mentioned the necessity for good and efficient drainage. Now we often learn more from mistakes than from successes, because the latter are often the result of adventitious circumstances, which we cannot understand. I have myself both made and seen others make great mistakes in the drainage of established orchards, the mistake consisting in using only pipes in the bottom of the drains, the consequence of which has been that the roots have very soon penetrated the loosened earth, and, having a natural tendency to follow after running water, have made their way into the draining pipes also, which thus have rapidly become choked up with roots. In one particular instance it took just five years to stop the drainage and restore the former condition of things.

Guided by these and similar experiences, I hold that an orchard should be drained from the outset, and that means should be adopted to obviate the possibility of the drains being choked by the roots. Now there are various ways of effecting this object. I myself advocate the employment of draining pipes in the bottom of the drains, first covering them for 18 inches, or even 2 feet, with broken stones or bricks, and then laying over these the turf sod which was taken off the top, unbroken and with the grass downwards; but I find that many practical men differ from me, and consider the stones or bricks quite enough, and the pipes a useless addition and expenditure. The expenditure I grant, but that does not affect their utility. I consider that a circulation of air forms an important part in the efficiency of drainage, and that this is best secured by a complete system of arterial pipe drainage. At the same time I am bound to allow that stone drains, without pipes, are very durable and efficient. I saw one lately which was laid through a young orchard nearly 50 years ago, and it runs as freely as when first laid in.

As stones and bricks for these purposes are not always easy to be procured, I would recommend, in places where much furnace work is going on, the use of vitrified clinkers, which make very durable and effective drains; but failing these there are yet other means, which I purpose to bring forward in my next. *John Cox.*

NEW ROSES.

NOVELTIES are always looked forward to with anticipations which may, or may not be realised. The number of these for 1864, I am told, will be far greater than those enumerated by me in a preceding article. I do not myself mean to buy many sorts, but an accumulation of those whose colours are most wanted, and which are described as large, full, of good form, and vigorous growers.

Before I mention Roses of 1864, I think that Rosarians will be safe in buying the following of 1863, or such of them as they may want, viz.:—Alfred de Rougemont, Duc de Bassano, Mrs. W. Paul, Mr. W. Paul, Lord Macaulay, Le Rhone, and, subject to hard and cracky opening, 'Sœur des Anges,' sometimes magnificent and superior to its portrait. For growth, foliage, and resistance of blights, even amidst many mildewed and black blighted ones, La Tour de Crouy and Sœur des Anges are the best by far of the Roses (here) of 1863. The former gave no flowers from excess of growth. Its foliage is exactly like that of the Elder tree. Fourteen plants of the two sorts are now transplanted; and I have no doubt they will give greater satisfaction next year.

As regards Roses of 1864, I have decided to buy these:—*André Leroy*, figured in the January Number of the *Florist* of 1863, and highly spoken of by the Rev. H. Helyar, of Pendomer, Somerset; *La Duchesse de Morny*, light but richly shaded rose, with silvery reverse to the petals. Monsieur Eugène Verdier, its raiser, kindly sent me the portrait of it, as figured in the French Journal of Horticulture. It is a most choice and splendid one, as so figured. The painting by Maubert, and the sculpture by Debray, are most masterly. I hope they strictly followed Nature, although Squeers pronounced "Natur" to be a "rum un!" Poets and painters, however, are allowed a little licence. This puts me in mind of a gentleman, who, upon his being asked by the artist, how he would like to be taken, answered "Take me with a Roman nose; posterity will be none the wiser!" *Madame Victor Verdier*, rich brilliant rose-cerise (extra); *Eugène Verdier*, superb dark violet; *Senateur Reveil*, brilliant red crimson, shaded with dark purple (extra); *Madame Macker*, white, very slightly roseated; *Madame Ducamp*, beautiful red purple; *Rev. H. Dombrain*, brilliant carmine, a Bourbon, to which class I am not attached, excepting Malmaison and Acidalie.

This reminds me of what I have observed, viz., that many of the Roses called after distinguished people in England, of English extraction, or of English connection, are scarcely worthy of them. Some, however, of them are grand Roses, viz., Souvenir de la Reine d'Angleterre, Queen Victoria (good only on the Manetti stock), W. Griffiths, Mrs. Rivers (good only on Manetti), Lord Raglan, John Hopper, Mrs. C. Wood, Charles Lawson, General Washington, Souvenir de Leveson Gower. These are the cream. The following are good: Duchess of Norfolk, Duchess of Sutherland, George Peabody; and for pole purposes, Sir J. Paxton. All the others that I have had were either too small, not full enough, or tender and defective growers. Respectively, General Simpson, Reynolds Hole, and Thomas Rivers, and Duke of Cambridge, a very fine Rose in some hands, will illustrate this.

My hope for this year rests on the eight Roses of 1864, the octagon of my anticipations, especially the two first named. It is possible that I may be wrong; still I hope to find in these eight Roses the "remedium efficax et universum"—the true Catholicon and panacea for all griefs. I expect to hear that hundreds of the nobility, gentry, clergy, and commonalty can testify to the value of the "remedium efficax!" I hope to be able to add, "No family should be without the 'remedium efficax.'" In the mean time observe, that a reward of 50*l.* will be given to any informer on the conviction of any offender or offenders who shall try to palm off on a too credulous public a spurious imitation of my "remedium efficax et universum!" *W. F. Radclyffe, Rushton.*

Home Correspondence.

Kitchen Gardening.—I quite agree with the writer of the article at p. 75 that kitchen gardening is the department most disliked by young gardeners, and the one causing the most annoyance to the gardener. During the four years I have been in this place I have had four housekeepers to deal with, and they have had as many different wants. One of the lot liked anything and everything in the shape of a vegetable; therefore, by growing a little of all sorts, I was safe to be right. The next one soon began to remark that master did not like this, and would not eat that, which of course was very annoying, especially as it happened to be in the autumn season of the year. By making a few exchanges with my neighbours, however, I managed tolerably well, and the next year cropped accordingly. Before that year was out I had a duplicate of the last good woman. I have less than half an acre for vegetables, and the requirements are two dishes for dinner and one for lunch, without Potatos. There are eight in the family, exclusive of servants. Now, can any of your readers tell me how to crop to keep up a supply, and follow anything like a rotation? I have managed it up to the present, but not to my satisfaction; therefore any advice will be thankfully received by myself, and no doubt by others. *Wakefield.*

Iron and Glass Houses.—In answer to "L. L.'s" inquiry (p. 102), I beg to say that I have amused myself in making two iron and glass houses. I would advise him to have 1-inch iron sash bars for the uprights, strong and wide in the rabbet, and 1-inch tee bars for the roof, which allows nearly half an inch for glazing and for expansion after fitting. Let them be galvanised; if not allowed to rust, painting every year will preserve them. When zinc gets hot it easily bends and buckles. Iron houses admit plenty of light; they are extremely hot in summer, and, with air drains, warm in winter. *H. S., Muswell Lodge, Hornsey.*

Poinsettia pulcherrima.—I am glad to find that attention is being directed to this plant, for it is an extremely useful one; and having had some practice in its growth, I give you my mode of treatment, which, if followed up, will not fail to produce favourable results. The best way of propagating it is by means of single eyes taken from the hard well-ripened wood of the previous year, inserting them in very sandy peat, and plunging the pot in a brisk bottom heat on a dung bed, where they will soon root freely. Afterwards pot them off into small pots, but still keep them in the frame until they have become well established, after which place them in a stove, keeping them near the glass. From the beginning of June, however, to the end of September they should be kept in a greenhouse and afterwards replaced in the stove. Having received proper attention as regards watering, &c., up to this time, they will very soon push forth their brilliant heads of floral leaves, which will amply repay the little care that has been bestowed on them. As this plant is liable to be attacked by red spider, the under sides of the leaves must be well syringed occasionally, but after the floral heads begin to show colour syringing should cease, as the water will damage their beauty. Old plants do not produce such fine heads as young ones; I would therefore advise cultivators to propagate a few every year, although this Poinsettia may be grown so as to form nice bushes. The way to effect this is not to cut back until the plants are partially dried off, as very little bleeding will then occur. This plant is one which requires good drainage, and the soil should be equal parts light loam, peat, and leaf-mould, well mixed with Reigate sand. *John Cole McArdell.*

Wintering Roses on their own Roots.—In answer to the request of "A. B." (p. 102), I beg to say that the

best way to winter any Rose is to keep the roots dry. It is wet that gives frost power. I find that pot novelties on Manetti winter perfectly well in the baskets in which they are sent, by filling the baskets with dry leaves, and closing the tented matting around them in severe weather. About 50 plants of Mr. and Mrs. W. Paul, and John Hopper, are now so treated, and are quite healthy. Others are planted out in Cucumber frames, and strewed with dry leaves upon their roots. These also are very healthy. The frame should never be closed except in very severe weather. The former is quite as good, if not a better plan, than the last, as the plants are kept more dormant. Your Correspondent will do well to try both plans. Keep water from them in either case. The earth needs to be only moderately moist. If "A. B." leaves his plants *in loco*, he must give them a thick covering of leaves or Wheat straw over the surface. Every plant here on its own roots, or on other stocks, is so covered; and I have lost scarcely anything. Once more, keep things in winter as "dry" as you can. *W. F. Radclyffe, Rushton.*

***Rainfall at Dorward's Hall, Witham, in* 1863 :—**

	Ins.		Ins.
January	2.11	Brought forward ..	8.19
February	0.36	July	0.62
March	1.01	August	1.02
April	0.66	September	2.88
May	0.78	October	1.81
June	3.27	November	1.98
		December	0.83
	8.19	Total	17.33

Henry Dixon.

***Rainfall at Dorward's Hall, Witham, for* 14 *years, from* 1850 *to* 1863 *inclusive* :—**

	Ins.		Ins.
1850	17.25	Brought forward	181.79
1851	19 91	1859	24.13
1852	28.49	1860	25.98
1853	26.20	1861	18.83
1854	15 48	1862	21.28
1855	20.24	1863	17.33
1856	17.76		
1857	21.76		14) 289 34
1858	14.70		
	181.79	Average per year for 14 years	20.66

Henry Dixon.

Renanthera coccinea.—That the flowering of this plant is somewhat rare there can be no doubt; therefore, in addition to the places named at p. 80, in which this occurrence is reported to have taken place, I may perhaps be allowed to say that it was flowered in 1845 by Mr. Sealby, Gardener to Edward R. Roberts, Esq., Fort Hill, near Barnstaple, Devonshire, and I believe either two or three times since that date. I am not exactly certain, but I have reason to believe that it was also flowered about 14 or 15 years ago, in the Mount Radford Nursery, near Exeter. Mr. Sealby considers that his plant was induced to blossom through sudden exposures to heat and cold. *J. Cole McArdell.*

Notices to the Public in English Gardens.—A few years ago I sent to this Journal a description of some gardens which I had an opportunity of visiting during my travels in China, and amongst those described was one belonged to Howqua, the great tea merchant of Canton, well known in connection with the once celebrated compound called "Howqua's mixture." In this garden there were many things well worthy of notice, and altogether it was a very pretty place. Roses, cultivated in pots and covered with flowers, were there in abundance, and this too at a time when such a thing was considered impossible by practical gardeners in England. Orange trees also were there, some of them of a goodly size, and others only a foot or two feet in height, but all equally under the control of the gardener, and loaded with delicious fruit. In England we have overcome our difficulties as regards pot Roses, and some day soon we hope to be equally successful in the culture of the Orange. Many other kinds of plants remarkable on account of the beauty of their foliage, flowers, or fruit, were also cultivated in this garden. These, with the nicely paved walks, ornamental dwarf walls, halls, summer houses, alcoves, and small lakes or fish ponds for gold and silver fish, had a very pretty appearance, and were very enjoyable. But it is to the public notice boards observed in this garden, which I described at the time, to which I wish to draw especial attention on the present occasion. Howqua, like a true English gentleman, was quite willing that those enjoyments and luxuries which he had created for himself, should, under certain restrictions, be enjoyed by the public, and it was therefore easy for any one to obtain access to his garden. The good people of Canton were not slow to avail themselves of his liberality. During high days and holidays they used to go there in great numbers, and to their credit, let me add, they were as well behaved as those crowds are who now visit our great National Garden at Kew. In these early days of which I write, the working classes in this country were looked upon as wild and mischievous in their habits, and were not considered fit to be trusted in our public gardens. If admitted at all they were watched like so many thieves, and the stoves and greenhouses were carefully kept under lock and key. The writing on the "notice" boards of those days were warnings indeed. To be given into custody, to be fined and imprisoned, or to be prosecuted with the utmost rigour of law, was to be the fate of all those who should walk on the Grass, or touch the flowers or the fruit. Now what were the garden notices like at the other end of the world at this period, amongst a people whom we are accustomed to consider barbarians and uncivilised? Howqua had up notice boards also in his garden for the guidance of the public. But he was evidently of opinion that human nature is not quite so bad as some would have us believe, that there is a chord in the lowest mind which will vibrate if it is properly struck, and that, in short, as we ourselves say, "there is honour among thieves." His garden notices were therefore very different from ours. Here is one or two of them as examples :—"In this garden the plants are intended to delight the eyes of all visitors; a great deal has been expended in planting and in keeping in order, and the garden is now beginning to yield some return. Those who come here to saunter about are earnestly prayed not to pluck the fruit or flowers, in order that the beauty of the place may be preserved. We beg persons who understand this notice to excuse it." On a Leechee tree which was growing on the side of one of the walks, and whose branches were loaded with bunches of scarlet or crimson fruit, there was the following polite notice. "Ramblers here will be excused plucking the fruit of this tree." Another notice "earnestly requests those who chew Betel Nut to spit outside the railings." The notices were all of the same character as those I have quoted; no threatening language was used, but the better part of human nature was appealed to, and certainly the appeal was not made in vain. The visitors were made to feel that they were trusted, that the garden was kept up for their enjoyment, and that they were in honour bound to respect it themselves, and to guard it from being injured in any way by the ill-disposed. This is the way they do things in China, and it is probable the practice had been in existence for a long time previous to the date of my visit to that country. I will not venture to say that the Chinese custom I have described has had any effect upon those who frame the notices which we now see in our English gardens, but a change for the better has certainly taken place since the time to which I have alluded. What are the notices to the public like, which we observe in our gardens now? Take the notice boards at Kew as an example. As we enter this noble National Garden we read something like the following—"Visitors are requested not to touch any of the plants." "As these gardens are for instruction and recreation, smoking idle sports and play are forbidden." At Battersea Park we read that "visitors are requested not to walk on the Grass on this side of the Park." And in the training schools at South Kensington there is a notice stating that, "the protection of the school property is confided to the students:" this is "By order of the Lords of the Committee of Council of Education." I might give many other examples of a like kind which I have met with in various parts of the country, but the above are sufficient to mark the change which has taken place. The examples given are perhaps not quite up to the Chinese mark for politeness, but they are probably as near as could be expected from us "outer barbarians!" These little matters, although at first sight apparently insignificant in themselves, tend to show that we have learned to form a higher opinion of the working classes than we formerly had; we have discovered that they are not quite so bad as we had supposed them to be, and that it is possible to trust them to walk in gardens, amongst trees and green Grass and flowers, under certain restrictions of a very gentle kind. And in addition to this we have also learned a little more of human nature. It is a curious thing that most persons in the world are particularly anxious to do anything which they are desired to leave alone. Tell a child he may eat of all the fruits of the garden except one—the sourest perhaps of them all—and he will not rest until he has tasted the forbidden fruit. And so it is with children of larger growth, from the time of the first gardener's wife until the present day. But there is also a better part of human nature to be worked upon—the part to which I have already alluded as being so well understood and worked upon by the Chinese. In dealing with the working classes, in so far as their admission to our gardens is concerned, two things ought to be kept in view. The better feelings of their nature ought to be called into action, and they ought not to be menaced and tempted by too stringent prohibitions. We are going upon this tack now, and apparently with the most satisfactory results. Look at the open gates of our great National Garden at Kew. See how proudly the people flock into their garden, for they feel that it is a kind of freehold which they can enjoy freely, and which they are bound in honour to protect. That they behave themselves well, and that little damage is ever done to the plants, is satisfactorily shown in Sir Wm. Hooker's reports. *Robert Fortune.*

Woollen Refuse.—In reply to Mr. Rymer's request (see p. 78), I can say that from my own experience of this material as a manure, I am led to consider it valuable for nursery and market garden requirements; where the soil is of a heavy nature, a liberal application of it will soon effect a wonderful change in its texture and temperature. On the other hand, however, where the staple is light, I think that the refuse ought to be used sparingly, and principally as a top dressing, as it decomposes much more rapidly on the surface than under the soil. My kitchen garden is one half light hazel loom, and the other half stiff heavy clay. The last named portion I found principally covered with fruit trees and bushes, and amongst the first things I did after coming here was to thoroughly drain this part of the garden, and to give it liberal applications of woollen waste; this I have continued to do at intervals of 2 or 3 years, and the soil is now as light and friable as a mole hill, and my trees and bushes grow and bear freely. For vegetables, I would not recommend it to be used alone; its slow decomposition prevents it from doing much good the first year after its application. But I find that when mixed with farm-yard dung to the extent of one-half, it is certainly one of the best manures for some purposes I have ever used. I have grown my Celery in a compost of this kind mixed with a little salt, when it is in a state of slight fermentation. I also grow my Potatos in the same mixture, with the exception of the salt, and I can say that for size and quality I have rarely seen finer; I have had many tubers of Haigh's Seedling or Lapstone Kidney weighed, and have found them from ¾ to 1½ lb. in weight, with a skin as smooth as that of the finest Apple. With regard to the effect of this material upon flowers I am unable to speak, as I have made no experiments with it on them; but the foliage of one of my Vines where I have used it freely in the border is so striking as to elicit surprise, even from a casual observer. *J. Thomson, Wortley, near Leeds.*

Spanish Vines.—I have received from a friend, an extensive cultivator of the Grape Vine in Seville, a large quantity of Vine eyes with the following names. He remarks they "are all first-class sorts," a statement which may apply to that part of the world, but I much fear that if grown in this country many of them—perhaps all—would prove "good for nothing;" and it is very vexatious to plant out worthless varieties of Vines when so many really good sorts are already in cultivation. Nevertheless one does not like to commit to the flames sorts that may deserve consideration. Can you, therefore, or any of your Grape-growing correspondents, inform me whether any of the following sorts are at all likely to be worthy of a trial, viz :—Muscatel, Gracera, Gallegas, Abegeras, Luisis, Garenes, Bebas, Tintella, Cagalonas, Gracera Negra, Teta de Vaca, Mollares, Rabuas, Chipre Gerdo, Chipre fino, Mantuas, Mantuas de la brieno, Garias, De Rey, Curazon de Cabrito, Lubenes, Listanes, Zuracales, and Benitos. *W. S.* [The work in which we expected to find an account of these Vines says nothing about them, so we are obliged to place the letter in the hands of our readers.]

Societies.

ROYAL HORTICULTURAL: *Jan.* 29 (*Fruit Committee*).—Several prizes were awarded on this occasion, both for hardy and tender fruit. Of Adams' Pearmain Apple Mr. Spivey, Hallingbury Place, Bishop's Stortford, was the only exhibitor; but instead of the variety indicated he furnished a dish of Pearson's Plate. Mr. Spivey was also the only exhibitor in the class of Margil Apples, which, though good looking externally, on being cut open proved to be decayed in the centre. For Old Nonpareil a first prize was awarded to Mr. Snow, of Wrest Park, Beds., Mr. Spivey being second. Mr. Snow received a second prize for handsome fruit of Bergamotte Esperen Pears. The best dish of New Black Hamburgh Grapes came from Mr. Budd, gr. to the Earl of Darnley, Cobham Hall, Kent; and Mr. Pearson, gr. to Lord Foley, Worksop Manor, received the second prize. Mr. Budd's bunches were large, well coloured, and excellent. Mr. Tillery, of Welbeck, sent bunches of Black Alicante, Black Tripoli, and a seedling from Barbarossa to compare with the new Black Hamburghs. The Black Tripoli, which is the same as Frankenthal, had large berries, very fleshy, and much shrivelled; the flavour was sweet and delicious. The Black Alicante was a little but not much shrivelled, and the flavour good. The Barbarossa seedling was stated to be better in flavour than the Alicante. The Committee was of opinion that, notwithstanding the sugary flavour of the Black Tripoli, the sorts in question did not possess the fresh vinous flavour of the new Hamburghs. Mr. Fleming, of Cliveden, sent nice bunches of Barbarossa, and of Oldaker's West's St. Peter's. Mr. Sanders, gr. to Sir Henry Meux, at Theobald's Park, sent a very fine bunch of Lady Downes' Grape, which was awarded a Certificate of Commendation. Mr. Williams, Holloway, exhibited the Royal Vineyard Grape, of which we have spoken in favourable terms in former Numbers. Mr. Spivey furnished 33 varieties of Apples, all correctly named, except one called Winter Pearmain, a green Apple, which could not be identified. For this collection a Certificate of Commendation was awarded. Mr. Rivers sent specimens of Red Baldwin, Ladies' Sweeting, Jonathan, and Melon Apples, all American sorts, grown at Sawbridgeworth. The same exhibitor also sent another called Allen's Everlasting, an Irish Apple, a very late keeper, which may doubtless prove useful. Dr. Sankey, of Hanwell, exhibited a seedling kitchen Apple, accompanied by some of the same in a cooked state. The Committee was of opinion that though a good Apple, the fact of its being of a brownish colour when cooked detracted from its merit. The Rev. Mr. Alleyne, of Rickmansworth, sent three sorts of seedling Apples, and Mr. Turner, Slough, a fine large seedling kitchen Apple raised by Mr. Joy, of Roundway Park, Devizes. This last was considered sufficiently good to deserve a First-class Certificate, which was awarded it. Mr. Rivers sent Tangierine Oranges, of the excellence of which it is impossible to speak in too high terms. He also sent some specimens of the Maltese Egg Orange, which, however, were not quite ripe. Mr. John Forbes, gr. to J. C. Pickersgill, Esq., Hooley House, Coulsdon, Surrey, sent a fine dish of forced Tomatos, which were awarded a Certificate of Com-

mendation. From Mr. Budd came specimens of a variety of Beet, which has been grown at Cobham Hall for upwards of 40 years, and which never shows any disposition to degenerate or "sport." The Committee considered it to be the same, or nearly so, as the Castelnaudary.

Linnean: *Jan.* 21.—G. Bentham, Esq., President, in the chair. The following resolution, proposed by J. J. Bennett, Esq., and seconded by Dr. Hooker, was unanimously agreed to:—"That this meeting is desirous of recording at the earliest opportunity the sincere and profound regret with which it has received the announcement of the death of Dr. Francis Boott, whose name during a period of 45 years has been so intimately associated with the affairs and with the progress of the Society. That the meeting is especially desirous of giving expression to its grateful recognition of the advantages which the Society has derived from the soundness of his judgment, from his constant devotion to its best interests, and from his untiring zeal in the discharge of the duties of the several offices of Secretary, Treasurer, and Vice-President, in all of which he has deservedly won the confidence, esteem, and respect of every Fellow of the Society. That the meeting also earnestly desires to express its sincere and respectful condolence with the sorrowing partner of his affections, and to assure her of its deep and heartfelt sympathy in this her irreparable loss." It was further agreed that this resolution should be entered on the minutes of the meeting, and communicated to Mrs. Boott. Captain G. E. Bulger, Julius Haast, Esq.; W. R. Hughes, Esq.; W. Jameson, M.D.; T. C. Jerdon, Esq.; Osbert Salvin, Esq.; J. Smith, Esq.; and W. J. Hawke Spink, Esq., were elected Fellows. The following papers were read:—1. "On Cygnus Passmori, a new American Swan," by the Rev. W. Hincks. This swan was described as resembling the Trumpeter, C. buccinator, in general aspect, having like it, the beak legs and feet black, and a little cinnamon colour on the plumage of the head and upper parts of the neck, but considerably less in bulk, and having the prominence of the forehead between the eyes subangular; the weight of the bird was stated to be 18 lbs., that of a medium specimen of C. buccinator being 30 lbs. ——2. "On a new genus of Teredininæ," by Dr. E. P. Wright.——3. "On Dicellura, a new genus of insects belonging to the stirps Thysanura in the order Neuroptera," by A. H. Haliday, Esq.——4. "Description of a new species of Annelid, belonging to the family Amphinomidæ," by Dr. Baird.——5. "The Bryologia of the Survey of the 49th parallel of latitude," by W. Mitten, Esq. The author stated that comparatively little was yet known of the Moss Flora of British North America, beyond the fact that it was very nearly identical with that of the North of Europe, and, so far as known, having few peculiar species. It was, however, remarked that in herbaria a great gap exists in the almost entire absence of collections from the extensive tract of country between Davis Straits, Hudson's Bay, and Nova Scotia, and as this includes a great extent of region subject to marine influences, it must be expected to produce a very extensive series of species. After referring to the difficulty of discovering defining characters which are not exceptional—as exceptional, it would appear, amongst Mosses as in other classes of plants—Mr. Mitten observed that the mode of growth of the greater number of Mosses was very little understood. The comparison of a number of plants of the more abundant species, such as Hypnum rutabulum, shows that the habit assigned to Rhynchostegium, Eurynchium, and Scleropodium is found in that species as well, and that the stem may be rooting its whole length, or erect and arcuate, or even subdendroid, and as all these are equally fertile states, one cannot be said to be less perfect than the other. In the group Stereodon a number of aquatic species become erect in their mode of growth from, as it would appear, inability to increase in any other direction on account of the crowding of the stems. In all systematic arrangements of Mosses, the peristome has been taken as the chief distinguishing character, and genera have been formed and are maintained upon characters dependent on differences, of which the value, Mr. Mitten thinks, has been greatly over-estimated. Even the straightness or curvature of the capsule has been considered sufficient to constitute a distinct genus; and thus species become removed from the proximity of those to which in every other particular they are so intimately allied as to be in several cases almost undistinguishable. Prominent examples of this were said to occur in the Trichostomæ, in which there occurs a regular ascending series, from Pottia through Anacalypta, into Desmatodon; and as all these stages of development are occasionally found in specimens of the same species, it was argued that the conclusion seemed inevitable that the definition of a single genus should be sufficiently wide to contain them all. It was pointed out that very nearly the same position is occupied by the species of Trichostomum allied to T. flavovirens, in respect to Tortula, taking for the typical species T. tortuosa, the only difference being in the shorter teeth of the peristome, the structure being identical. The same analogies exist in the development of the peristome of the pleurocarpous Mosses, as for example, in the capsule and peristome of the so-called genera Homalothecium and Camptothecium. In the species contained in these genera the resemblance between the plants, without the fruit, is so great that it requires an expert bryologist to distinguish them from each other. The author therefore concluded that a natural group of Mosses can only be defined from the structure of the species in which the highest development is found; habit, ramification, position of the fruit, and form and substance of leaves, in the case of species which present a less development of peristome, being considered only as negative differences and of barely specific value. There would appear, he said, to be no escape from this conclusion among the acrocarpous genera; and as there is no difference in the structure of the peristome in the pleurocarpous, it must be applicable to the whole group of arthrodontoid Mosses. The bulk of the paper consisted of an enumeration of the species collected within the indicated range, and of their habitats, accompanied by descriptions of new species, and figures and dissections of sixteen of the most interesting among them.

Notices of Books.

The Philosophy of Geology. By David Page, F.R.S.E., F.G.S. W. Blackwood & Sons, Edinburgh and London, 1863. Crown 8vo, pp. 160.

The mere fact that Mr. Page's "Introductory Text-Book of Geology," and "Advanced Text-Book of Geology," have respectively attained to their fifth and third edition, abundantly proves that they are appreciated by the public, and adapted to the requirements of a large class of readers. "Debarred," as he says, "from active participation in the labours of the field," Mr. Page has employed his leisure in writing a little work on the "aim, scope, and character of geological inquiry." This work is characterised by great sobriety of view, and is especially intended for the use of the young student.

The writer treats in eloquent terms of the progress of science during the last 60 years, and especially since the establishment of the Geological Society in 1809. "So substantial," he says, "has been the progress of geology, that it now takes equal rank with the other natural sciences, attractive as an intellectual pursuit, and valuable as bearing most intimately on the operations of every-day life. Yet notwithstanding this progress, it behoves us now and then to pause, to see that we comprehend exactly the objects and limits of our inquiry, that we discriminate between the plausibilities of the possible, and the realities of the philosophically attainable. There are some spirits, impatient of research, ever prone to launch on the limitless sea of conjecture," &c.

Mr. Page thinks that there are a multitude of speculations with which the geologist has nothing whatever to do. He objects too, to the introduction of violent cataclysms to account for unusual phenomena, and maintains that geology can only take cognisance of regular laws, and argue from what is taking place around us in the present day to what has taken place in the past. "While accepting the doctrine of uniformity, the philosopher will bear in mind that we are dealing with a world, not only of mutation, but of progress. The wheels revolve at a uniform rate, but they advance at the same time, and every advance carries them forward to new conditions."

In writing of palæontology, Mr. Page deprecates "that multiplication of species which has become the clog and cumbrance of the science," and says that "no sincere worker who knows the inherent difficulties of his subject, will unnecessarily increase them by continuing this practice." There is also a disposition in the present day to push some sciences into an attitude of defiance and of dogmatism, which is utterly repugnant to the spirit of true philosophy. Mr. Page on the contrary, would have every science stand upon its own proper basis; and nobody will suspect him of disloyalty to geology, if he calmly tells us what has already been obtained in that science, and what is still matter of inquiry, and what is the limit beyond which all must ever be mere matter of conjecture and speculation.

Financial Statements. By the Right Hon. W. E. Gladstone. Murray. London, 1863. Pp. 462.

One rises from the perusal of Mr. Gladstone's speeches, deeply impressed with the wonderful power which that statesman possesses, of keeping the attention of his audience chained to his subject, and as it were enchanted, while the orator pours forth his hundred pages (for that is the exact length of the financial statement for 1853), so smoothly, that there is no perceptible hitch in any part; the figures he deals with meanwhile, are at one time so large, that only the trained mind can take in their meaning; while at another, descending to pence and fractions of a farthing, he still holds on his brilliant course, amid the silence and profound attention of the House, till at length he pleasantly remarks:—"I scarcely dare to look at the clock, reminding me, as it must, how shamelessly I have trespassed on the time of the Committee." Nobody has ever doubted the right hon. gentleman's power as a speaker, whatever may have been thought of him as a financier. The financial statement of 1853 is a wonderful production, and deserves any amount of praise. There had been a vast deal of grumbling about that perpetual incubus, that Old Man of the Sea, the income-tax. People said it was unequal in its incidence, and peculiarly unjust to professional men, and a great deal more to its disparagement, and they could not help remembering, that when Sir Robert Peel first revived the obnoxious impost, he only asked for its continuance for three years. In the financial statement of 1853, Mr. Gladstone set himself to show how much the country owed to Mr. Pitt's original income-tax; how, from 1793 to 1798, before the tax was invented, the country was getting further into debt by more than 15 millions every year. Again, when the tax was partially applied, a reduction in the increase of indebtedness immediately took place, though stupendous exertions were being made to carry on the war; and once more, when we had the tax in full force, from 1806 to 1815, the increase of the debt was only about two millions a year, notwithstanding all our difficulties, and the immense burthen of our national debt. Such was the power of the income-tax. The Chancellor of the Exchequer then eloquently commented upon the national importance of such a resource, and contended for the retention of the income-tax in all its integrity, so long as it was necessary to keep it at all. "To relinquish it," he said, "is altogether safe, and when emergencies arise, you may do as your fathers did—take down the weapon from the shelf, and make it serve you again for the ends of honour and of duty;" but he objected most strenuously to nibbling at it, which, he said, would only destroy its utility, and ultimately break it up. He warned the committee that the exemption of one man meant the extra taxation of another, and while actually admitting the injustice of the tax, maintained that a far higher injustice would be inflicted by any scheme of exemptions.

Mr. Gladstone gave, moreover, the most conclusive reasons for extending the tax to incomes between 100*l.* and 150*l.*, and at the same time made provision for its extinction altogether in 1860. The pleasing prospect raised a smile upon the faces of several honourable gentlemen of the House, and we all recollect that within two years thereafter, the tax was raised to 16*d.* in the pound to meet the exigencies of the Russian war. The whole speech is admirable.

The year 1860 witnessed the falling in of the long annuities, but that "good time coming," so long looked for, brought disappointment in its train, for the expenses of our military and naval services had increased so greatly, that we were actually in worse plight financially than before. Then came the French Treaty of Commerce, and the abortive attempt to abolish the paper duty, which however was carried the next year. Of the later speeches it is not our intention to say anything. At all events we can cordially endorse the right hon. gentleman's sentiments when he remarked, "if, as my noble friend once said, with universal applause, this country cannot bear a revolution once a year, I will venture to say in like manner that it cannot bear once a year a reconstruction of the income-tax."

Garden Memoranda.

Basing Park (*Continued from p.* 104.)—The kitchen garden is on the west side of the mansion, close to the pleasure ground. It is surrounded by good walls covered with admirably trained fruit trees, and is very productive. In the borders, espalier Apple and Pear trees are grown and trained to a wire trellis, while over the principal walk in the centre of the garden is an arched trellis covered with Apples and Pears, which has a pleasing effect, and is found to be quite as useful as it is ornamental. Against the north wall is the main range of forcing houses. It is 212 feet in length, divided into seven compartments,—one of which is a Peach house, and the rest are Vineries for forcing in succession. They are heated by hot water in the most efficient manner, so that ripe Grapes may be had at all seasons if required. The Vines were in the best of health, and as for the fruit it was perfection—noble bunches of Hamburghs, with berries like Plums, and as black as Sloes; Muscats equally fine, with the rich amber colour they always have when well grown and thoroughly ripe. Indeed, it would be difficult to find better examples of good Grape-growing than were presented to us in the Vineries here.

Behind the hothouses is a range of buildings comprising apartments for an under gardener and assistant, a fruit room, store and seed rooms, mushroom house, and sheds for holding pots, and potting, &c. The Pineries and Melon ground occupy part of a walled enclosure at the east end of the kitchen garden. They are of recent erection, and consist of four ranges of span and half-span-roofed pits, of the most approved construction as regards the perfect command of heat and moisture, and means for ventilation. Hot-water pipes are carried along one end of the entire range of pits, from which other pipes are laid along the front and back of each pit, as well as into a chamber underneath the bed in which the fruiting Pines are planted. Open troughs are also placed in this chamber, from which steam can be admitted into the pit to moisten the air when necessary; and by means of valves in the pipes the circulation of the water is easily regulated, and the temperature raised or lowered at pleasure. In one of the pits is a bed 4 feet wide, against the back wall, heated by pipes underneath, for the purpose of cultivating a few select Orchids, Ferns, Lycopods, and

similar plants that are remarkable either for their fine flowers or bautiful foliage, and now so much in request for table decoration. We consider these pits among the best that have yet been designed for the culture of Pines and Melons, and in this opinion we are confirmed by the noble specimens we saw cultivated in them of those kinds of fruits, and the healthy appearance of the young plants.

From the Pinery a broad walk, having a gay ribbon-border on each side, brings us back to the large orchard house, in front of which is a noble terrace walk ornamented on either side by fine specimens of trained Hollies, Golden Yews, Portugal Laurels, &c., and large boxes filled with Geraniums and various other showy flowering plants usually employed for such purposes. At the western end of this terrace, the main walk leads us to the Evergreen garden, situated at the southern extremity of the pleasure ground, with which it is connected by a rusticated bridge that crosses one of the approaches to the mansion. This garden is of considerable extent, and laid out in a style remarkable both for its originality and beauty. It contains a fine collection of Coniferous plants, and a variety of other hardy evergreen trees and shrubs, such as Buxus, Cotoneaster, Ilex, Berberis, &c. The walks are so arranged as to sweep in the most graceful manner in various directions, and separate the different sections of Coniferæ from one another. The undergrowth is formed of Laurels thickly planted, and kept very low, while the outline of the edge next the Grass on either side of the walks is tastefully varied and fringed with Berberries, forming altogether an excellent cover for game, and a cheerful promenade at all seasons for those who have a desire to study the peculiarities of form and appearance by which the different species of Firs may be recognised.

From the preceding account it will be evident that, in so far as productive gardens and nicely kept pleasure grounds are conducive to the comfort and enjoyment of a country residence, few places are more to be envied in these respects than Basing Park, with which the name of our esteemed friend Mr. Duncan has been for many years associated as gardener and general superintendent. For this appointment he was eminently qualified both by his active business habits and practical experience, acquired in some of the first horticultural establishments in the kingdom. We believe it is not too much to say that it was mainly through his untiring energy and skill that Basing Park attained the high position it has so long held for the variety and excellence of its horticultural productions; and to his fine taste and knowledge of the art of landscape gardening it is also indebted for much of its beautiful scenery. Like the celebrated improver Kent, "he leaped the fence, saw all nature was a garden," and with the eye of an artist marked out various parts of the domain that were susceptible of improvement, and embellished them with the hand of a master.

Nor has our energetic friend been less successful in his management of the Home Farm, which consists of 500 acres, or in his treatment of the cottages on the estate, which with only one or two exceptions have all been rebuilt or remodelled under his direction, and now form a pleasing feature in the landscape. The style is somewhat of an Elizabethan character, but not overdone with ornament, while their interior arrangement has been carefully studied with a view to comfort and convenience. But the best examples of Mr. Duncan's taste in building are the Parsonage and Almshouses, in the pretty rural village of Privett, with its little church covered with Ivy, which is within the domain, and about a mile from the mansion. The Elizabethan style is also here adopted and beautifully carried out, especially in the Parsonage, which has a very picturesque effect. It was erected at Mr. Martineau's expense, and with the garden and several acres of land presented to the parish.

In the churchyard there is a venerable Yew, which we think is well deserving notice. At 1 foot from the ground, the trunk measures 23 feet in circumference, and at 8 feet high, 21 feet 6 inches. It is not lotty, but very bushy from being crowded with small branches, nearly all of the same size and height. Near the walls enclosing the churchyard are planted specimens of Abies canadensis, A. Douglasii, and A. Pindrow, of Taxodium sempervirens, Araucaria imbricata, and Taxus baccata var. Dovastoni, together with Cypresses and similar evergreens. From this place a delightful prospect is obtained of the rich scenery of Eastern Hampshire, backed by a distant view of the tops of the South Downs; and here are deposited the remains of the late respected owner of Basing Park.

As Mr. Martineau had no family, he directed by his will that the beautiful property in which he had taken so great an interest, and in the improvement of which he had expended so much, should be sold. It was accordingly put up to auction in October last, and realised 67,000*l*., exclusive of timber, &c., to be taken at a valuation—about twice the amount Mr. Martineau gave for it. The purchaser was John Nicholson, Esq., under whose auspices we hope Basing Park may continue to maintain the high character by which it has been so long distinguished as a country residence.

As Mr. Duncan is about leaving Basing Park, and is as active and energetic as ever, we hope he may shortly meet with a situation in which he may have an opportunity of displaying his talents.

Miscellaneous.

Pinus Peuce.—We have received from Messrs. Haage & Schmidt, of Erfurt, fine specimens of this rare Fir, which is nearly related to Strobus, and by no means to Cembra. It is the πευκη of the Greeks, and grows wild in Macedonia on the sides of Mount Peristeri, on granite soil, to an elevation of near 2000 yards, at which height, however, it becomes a scrubby gnarled tree. Gordon's account of it is a miserable mess of blunders.

The Toi, or Tahitian Chestnut, as it has been called by voyagers (Inocarpus edulis, Forst.), is one of the common trees, and when fully grown has a most venerable aspect. I still see in my mind's eye a fine group on the banks of a rivulet between Wairiki and Somo somo, diffusing a dense shade. Sixty, often 80 feet high, the Toi bears a thick crown of oblong leathery leaves, small white flowers emitting a delicious perfume and kidney-shaped fruits, which contain a kernel, resembling Chestnuts in taste. The kernel is either baked or boiled, and eaten without further preparation, or grated on the mushroom coral (fungia), and made into puddings or bread (madrai). The stem is most singular. When young it is fluted like a Grecian column; when old it has regular buttresses of projecting wood. Ferns, Orchids, and Wax-flowers frequently take up their abode on the soft bark. The roots of old trees appear above the ground, somewhat like those of the Bald Cypress of North America (Taxodium distichum, Rich.). Thousands of seedlings are continually springing up around the old plants, and nothing, save the dense shade of their parents, and the close proximity in which they grow to each other, exercise a check upon their engrossing all the adjacent ground. *Seemann's Mission to Viti.*

Calendar of Operations.

(For the ensuing week.)

Now that brighter weather may be soon expected to set in, see that all insects are removed before growth commences. Such pests as red spider are not so commonly met with in these days as they were 20 years ago, a circumstance doubtless to be attributed more to the fact of a greater degree of humidity being maintained now than formerly, than to any special receipt for its destruction having become of general application. Humidity alone is not, however, sufficient at all times to keep red spider in check; but sulphur rightly applied in conjunction with atmospheric moisture will be found a perfect cure for it. Apply it on an under pipe or on the least heated portion of a flue as thick as paint, and worked up with soft soap to make it stick. Great care must, however, be taken not to use it on any surface that is so warm as to produce inconvenience to the hand when grasping it—a simple but safe rule for the guidance of beginners.

FLOWER GARDEN AND PLANT HOUSES.

The winter has been so favourable for indoor plants generally that comparatively little fuel will have been required in conservatories or greenhouses; a slight increase of warmth may now, however, be indulged in for a couple of hours or so on sunny afternoons; but let the temperature sink at night again to 45° or 50°.

CINERARIAS.—Plants for flowering late may now be re-potted and stopped. Tie out the side shoots of such as are approaching the blooming season, and by means of frequent fumigation endeavour to keep them free from green fly.

FUCHSIAS.—Push forward autumn-struck plants; let them have sufficient pot room, and a moist growing moderately warm atmosphere. Pinch in the young shoots as often as they require it. Old plants may now be shaken out and re-potted, and put in cuttings for blooming late in the autumn.

PELARGONIUMS.—These will now be beginning to grow, and in watering them take care that the soil is well soaked down to the bottom of the pot. Tie out the side shoots as they lengthen, and stop young plants from which late bloom is expected.

VERBENAS.—Cuttings of these put in now will be found to make good plants, either for pot culture or bedding purposes.

FORCING GARDEN.

In addition to the forcing of hardy shrubs for the decoration of the Conservatory or Greenhouse, the keeping up regular supplies of Seakale, Asparagus, and Rhubarb will now require considerable attention. Owing to the changeable character of the weather, night coverings will have to be resorted to, especially in the case of pits, in which an even growing temperature must be maintained. This will diminish the amount of fire heat employed, which should be no more than is absolutely necessary. All glazed frames or pits at work must be kept washed and thoroughly clean; the importance of this in early forcing can never be overrated. Hang mats or other coverings upon rails free from dirt. Keep at all times plenty of leaves and dung well blended, and in a state of high fermentation, ready for new beds, linings, &c.; a portion should be mixed once a week at this period.

CUCUMBERS.—Keep up a temperature of about 70° at night and 75° by day, with an increase by means of sun heat of say 8° or 10°. Train and stop young shoots, and destroy red spider in the way mentioned above. Keep young plants near the glass.

MELONS.—Make a successional sowing of these for fear of disappointment. Any surplus strong plants of the early sowings may be planted in large pots or boxes, and placed in a light part of any warm house; 70° of heat, and abundance of atmospheric moisture night and day, are indispensable.

PEACH HOUSE.—Continue to make slow advances in heat on bright days. Trees in flower should have as much air as possible whenever the weather is favourable.

PINES.—Proceed steadily; if pits are at liberty, and provided with permanent bottom-heat of say 80°, it would be a good plan to shift a small portion of the plants into large pots in the expectation of their producing early fruit. Where a constant succession is required, let the final removal into the fruiting pots take place successively; no doubt this influences in a considerable degree the period of fruiting. Young stock which has thoroughly filled the pots, might also have a liberal shift, provided pit-room is at hand. With young plants an early growth, with a long summer before them, is important. In all potting, use good turfy loam, the newer and the rougher the better; when the soil is in a proper condition, water will pass through precisely where it falls without puddling the surface.

POTATOS.—Some Ash-leaved Kidneys may now be put into pots and placed in heat to bring them forward for planting out into frames and pits when the latter are ready for them.

VINES.—Proceed as before recommended; lessen the atmospheric moisture when the Vines are in blossom, and dispense altogether with syringing for a while; allow plenty of day heat with a lively circulation of air.

HARDY FRUIT AND KITCHEN GARDEN.

Nailing must now be pushed forward with vigour. Get all planting of fruit trees finished, and stake and mulch them. Remember to drain thoroughly. Nowhere is this advice more necessary than in the orchard; although Apples and Pears are fond of adhesive soils, they will never prove profitable where water is allowed to accumulate.

CAULIFLOWERS.—Get hand-glasses ready for such plants as are to be turned out of pots; enrich the stations for them, adding fresh loam also if at hand. Turn out four strong plants—one under each angle of the glass; the soil should be well soaked with liquid manure previously to their being planted.

HORSE-RADISH.—If not already done, this may now be planted; dibble in the sets or crowns in light rich soil from a foot to 15 inches deep.

RHUBARB.—Get both this and Seakale for next year's forcing planted immediately on rich ground, trenched; throw a hillock of old tan, ashes, or sand, round each crown to coax it on through the vicissitudes of the weather during this month and March.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending Feb. 3, 1864, as observed at the Horticultural Gardens.

January and Feb.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind	Rain in.
Thurs. 28	18	30.120	29.884	51	35	43.0	45	44½	N.W.	.00
Friday 29	19	30.488	30.460	39	16	27.5	45	44½	N.E.	.00
Satur 30	20	30.437	30.428	41	17	29.0	44	44½	S.W.	.00
Sunday 31	21	30.293	30.237	44	19	31.5	41½	43	N.E.	.00
Mon. 1	22	30.180	30.090	49	35	42.0	41½	43	S.	.00
Tues. 2	23	30.121	30.000	51	44	47.5	42	43	S.W.	.02
Wed. 3	24	29.995	29.977	52	28	40.0	43½	44	S.W.	.02
Average.		30.233	30.153	46.7	27.7	37.1	43.2	43.8		.02

Jan. 28—Fine in forenoon; cloudy; overcast.
— 29—Fine; very fine; overcast; cloudy; clear; sharp frost.
— 30—Frosty; hazy clouds; fine; frosty at night.
— 31—Frosty; clear; fine; frosty at night.
Feb. 1—Frosty; fine; very fine; overcast.
— 2—Densely overcast; cloudy; overcast; warm at night.
— 3—Overcast; fine with clouds; showery.

Mean temperature of the week 4·5th deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Feb. 13, 1864.

February	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 7 .	46.7	33.0	39.9	20	0.29 in.	2	3	4	1	5	13	7	3
Mon. 8..	45.6	32.7	39.2	20	0.67	1	4	4	2	5	14	5	3
Tues. 9..	45.2	31.8	38.5	15	0.40	1	6	4	2	2	15	5	3
Wed. 10..	44.6	29.6	36.6	14	0.52	7	7	3	2	5	10	3	1
Thurs. 11..	44.4	29.9	37.1	16	0.34	9	6	2	—	5	9	2	4
Friday 12..	44.8	29.7	37.3	15	0.26	4	7	1	—	4	11	5	3
Satur. 13..	44.1	29.6	36.8	14	0.37	3	5	5	2	5	10	6	2

The highest temperature during the above period occurred on the 10th, 1831—therm. 65 deg.; and the lowest on the 13th, 1855—therm. 0 deg.

Notices to Correspondents.

BOOKS: *R W T.* Excuse us for expressing our surprise at such trash, although printed, being sent to us for opinion. There is, at least there should be, such a thing as common sense in gardening, and although gardening cannot be conducted by common sense alone, we assure you it cannot be conducted without it. We know nothing about poultry.

NAMES OF PLANTS: *H. I,* One of the less-divided forms of Asplenium bulbiferum; 2, Pteris hastata macrophylla; 3, Adiantum formosum; 4, Polystichum angulare.

ROSES: *J W.* Any sudden check might cause the flower-buds of your Roses to turn yellow and never develope themselves; or the fault may lie at the root, which may be water-logged through the drainage being out of order. If the latter should be found to be the case, carefully repot them, and thin the flower buds. What remains may then come to perfection. Too dry an atmosphere is doubtless the cause of thrips attacking your Vines. Sulphur freely, and, if not in flower, give them frequent washings with the garden engine.

THE ROYAL HORTICULTURAL SOCIETY: *Woolwich.* It will be time enough to join in the clamour against the Council when its annual Report shall have been presented, which will be next week. In the meanwhile lovers of fair-play will suspend their judgment.

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ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.

Professor J. MORRIS, F.G.S., will give a COURSE of LECTURES on GEOLOGY.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.

JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh, will give a COURSE of LECTURES on the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.

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JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire, will LECTURE on CATTLE, SHEEP, PIGS, and POULTRY.

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JOHN THORNHILL HARRISON, of Frocester Court, near Stroud, will give a COURSE of LECTURES on DAIRY HUSBANDRY.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.

THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin, will give a COURSE of LECTURES on FARM LABOUR.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.

ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions," will LECTURE on ROTATION of CROPS.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.

RICHARD GRIFFITHS WELFORD, Barrister-at-Law, will give a COURSE of LECTURES on LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER, will REOPEN on MONDAY, Feb. 8.

Applications for Admission and for further particulars may be made to the Principal, the Rev. JOHN CONSTABLE.

The Agricultural Gazette.

SATURDAY, FEBRUARY 6, 1864.

IN connection with the paper on the Malt Tax read by Mr. WILLIAMS before the London Farmers' Club last Monday, and reported in another column, we are glad to call attention to the fact that on Thursday evening an announcement was made in the House of Commons, on behalf of the Government, that on Monday a Bill will be introduced for the repeal of the tax in the case of malt used in the feeding of cattle.

FIVE hundred acres of land near Cirencester, Gloucestershire, chiefly on the calcareous stone brash of the Cotswolds, though here and there a stiff calcareous clay, surround an imposing Gothic structure, including accommodation for upwards of 100 residents. There is a house for the Principal, and laboratories, theatre, museum, class-rooms, chapel, and every other provision for the residence and professional education of agricultural students. The Institution stands in the midst of a well-cultivated district, in a healthy country, by a good market town. A clergyman presides over it—able and efficient teachers and professors are engaged in it—a disinterested and public-spirited Council, including men of the highest rank in the agricultural world, hold the final authority over it.

It is the only Institution in Great Britain professing to qualify for what is the most popular profession of the day. Agricultural students are not a very numerous class in the census returns; but they must in reality include a very large number of young men, many of whom expect to have the direction of large amounts of capital upon large farms. They come from almost every social rank. Sons of tradesmen, professional men, of farmers, landowners, and peers, all seek the knowledge and the skill by which agriculturists turn land to profitable account. It is absurd to suppose that one Institution of the kind whose help they need will suffice for all this number.

The Cirencester Agricultural College will no doubt ultimately have many prosperous rivals. Meanwhile it stands alone, and ought to be a most prosperous, as it is a most efficient educational institution.

It is not so prosperous as it ought to be. The number of students seeking instruction in its classes and on its farm is not so great as might fairly be expected. What is the cause of this? We need not, in order to explain it, re-discuss the causes to which recent changes in the professorial staff have been attributed—there is enough to account for it in the fact that confidence in any new arrangements requires years of experience for its thorough re-establishment. But of the efficiency and fitness of the Institution as a school of agriculture there cannot be a doubt. In almost everything which agricultural students seek, the College is very much superior to the private farms which the great majority of pupils still prefer. The one thing in which the arrangements of the public establishment have been hitherto their inferior, was, strange to say, the direct agricultural teaching. This, left exclusively to the farm manager, made him much the hardest worked officer of all the staff. The management of 500 acres of land was of itself enough to occupy his time—the lectures twice a day, in addition, were a labour which under such circumstances one man could not efficiently perform.

The arrangement now, as the advertisement sufficiently declares, secures the services of many separate lecturers, each well known in his own department of farm practice, and the farm manager is left to his field work and field classes exclusively. Of course such an arrangement involves a great annual increase of expenditure—it is, however, an expenditure entirely in accordance with the objects of the Institution. If the arrangements for teaching and illustrating farm practice in an Agricultural College are imperfect, it has no right to the designation it assumes. At present, besides the opportunities for general education necessary in a school to which boys as well as young men are sent, there are mathematics and surveying, chemistry and analysis, botany, geology, and veterinary surgery, all represented by separate teachers and professors. And agriculture, in a course which is completed in two years, is taught in the class room by many separate lecturers, and in the field by Mr. FLETCHER, the very efficient and accomplished farm manager.

During the coming Session, besides occasional lectures on particular branches of farm practice, several distinct courses will be delivered on live stock, labour, and law—the concluding discourses of a series, which, beginning with the cultivation of the soil, has traversed the subject of plant cultivation and the management of live stock, and ends with a discussion of the relations of master and servant, and of landlord and tenant.

Mr. FLETCHER'S field classes are another most important part of the agricultural teaching of the Institution. They are in detail what the farm is on the great scale, a daily illustration of the character of the professional education which the Royal Agricultural College gives. If these and all the other means provided for the students be diligently observed, it is impossible but that the information and the aptitude which is in the course of years acquired by mere residence on a farm must be rapidly and systematically acquired at Cirencester. Cultivation books, indicating the cropping of each field during many past years, and giving room for memoranda during a residence of two years longer, are supplied. The keeping these is made a thing of urgent importance. We have one before us as we write, and it is impossible to doubt that so full a journal of all the operations of the year, recording the circumstances under which each has been performed, and their cost, history, and result, with the illustrations thus given of the influence of soil and weather upon the management, must be both an admirable book of reference in future years, and a capital agent meanwhile in the work of a good professional education.

The extent and variety of the land around the College, its equipment with buildings and with veterinary hospital—its management on the ordinary cropping of the district, together with experimental variations on a small scale from the ordinary rules—its Cotswold flock and breed of Berkshire pigs—its adoption of steam cultivation—the means taken to teach the students in the field from day to day—the detailed journal of farm operations which they are required to keep—the general and systematic discussion of every branch of farm practice by competent lecturers—the instructions in chemistry, botany, and geology, in land surveying, in veterinary surgery—the more general education offered to those who are deficient—all these, the elements of a sound professional education, are combined in

the Royal Agricultural College, and nowhere else in Great Britain. What can hinder its success!

—THE committee in charge of the Testimonial to Mr. FISHER HOBBS, announce the immediate close of the subscription list. Let us refer once more to the long and useful career of a public-spirited man as most worthily justifying this expression of the esteem in which Mr. FISHER HOBBS's name and services are held.

One of the original Committee of Management, from which the English Agricultural Society has sprung, and ever since upon its Council, no man has worked more earnestly or more persistently towards the splendid result which it now presents as the end of so much unselfish and patriotic effort. Subscriptions towards the Testimonial should be addressed to the Secretary of the Fund, Farmers' Club, Bridge Street, Blackfriars, London.

THE following communication has been addressed to us by the Melplaish (Dorsetshire) Agricultural Society, with a request for its publication:—

Mr. HUSSEY, of Pine Apple Farm, Netherbury, Dorset, sowed the last week in June 5 acres, with seed of his own growth, of Purple-top Swedes in a light, sandy soil. He used 2 cwt. of blood manure, with 16 loads of good farm-yard dung per acre, the land having been previously well manured by his flock having been nightly folded on it. The plant grew rapidly and was for a time very healthy, the roots being regular and of good size. About the latter part of October a disease or decay in several of the roots became visible, commencing just by the neck and gradually spreading over the whole root. This disease has now shown itself in every portion of the field, affecting roots here and there, more than one-fourth of the crop being destroyed. The Melplaish Agricultural Society desire to know of their brother farmers what is the cause of this decay. Is it from the atmosphere, soil, or any cause which science can show means of remedying?

THE NEW HIGHWAY ACT IN NORFOLK.

WE have been more fortunate in Norfolk in resisting the introduction of this "permissive" measure than most other counties. Our Suffolk neighbours, for instance, sent 90 memorials to the Quarter Sessions against the new Act, and the magistrates could only get up three in its favour, and yet by a large majority the "great unpaid" adopted it. The Waywardens when elected showed their sense of this treatment by twice adjourning for three months without transacting any business. What they have since done we don't know, but we understand that one of the proposed amendments of the Bill this session is to prevent the Waywardens from thus making the new Act a dead letter, after it has pleased the magistracy to impose it on a refractory district. But in Norfolk there is a Union so far ahead of other Unions, that it has been for years, for all purposes of the Poor Law, one great parish. This Docking Union, having therefore no silly prejudices in favour of parochial self-government, was of all others the best for the experiment to be tried in Norfolk; and as only three farmers memorialised the Quarter Sessions against the order, the new Act might be considered to have been adopted there by universal consent. With a good chairman, an excellent clerk, and a thoroughly business-like and willing Board of Waywardens, the Act started with everything in its favour. How it has worked the following extracts from a letter addressed to the ratepayers of the Mitford and Launditch Union, by John Calthorp, Esq., of Stanhoe Hall, will show:—

GENTLEMEN,—You have made a determined and I hope a successful stand against the introduction of the New Highway Act into your district. It is a most mistaken piece of legislation.

I was one of the five magistrates who signed the requisition to the Quarter Sessions for its introduction into the Docking Union, most sincerely believing at that time that it would cure a great evil, and produce all the good that we hoped for; but the result is a complete disappointment.

I may add that I not only attached my own name to the requisition, but I canvassed my brother magistrates, and (with some persuasion as to two of them) I got four other names, and then forwarded the requisition to the Clerk of the Peace.

I mention this to show my zeal at that time, and to convince you that it is not a trifle that induces me now to denounce a measure which I then thought so highly of.

We elected as our chairman, Mr. Blyth, of Sussex farm, one of the most energetic, influential, and practical men, who spares neither time nor exertion in promoting its success.

No district can possibly select a better, and very few can hope to select one so good; but with this very great advantage, the working of the Act produces the greatest dissatisfaction. The increase of expense will, I fear, be very heavy, and to the clergy it will be unfairly oppressive.

The surveyor of this district has 37 parishes; most of the work must necessarily be done by the day, and as the farmers are not likely to furnish him with their best men, he is obliged to put up with such as he can get. And how is it possible for any surveyor, however diligent, to superintend labourers of such a description in 37 parishes? If three or four surveyers were appointed they could not properly do it.

It may be argued that Mr. Calthorp's conclusions are premature. It takes some little time to prove the utter impossibility of certain things. The Norfolk farmers knew very well that no one Surveyor could ever hope to superintend 300 or 400 miles of roads, yet it needed that this unfairly worked official should ride a horse or two to death before such excellent magistrates as Mr. Calthorp and Mr. Blyth could discover its impossibility. If the unfortunate Surveyor were blown through the district by the Pneumatic Dispatch Company, he could hardly do his duty. Unless the Waywardens will condescend to become the foremen of the District Surveyor, the Act can never be cheaply worked, or (as we apprehend there are not many Wardens who would act under the orders of a Surveyor, any more than there are guardians who would obey the nod of their relieving officer), there must of necessity be a class of sub-surveyors or contractors and a body of skilled labourers always employed on the roads. What will be the expense of this system time alone will prove. As we have good roads in Norfolk with 2*d*. or 3*d*. surveyor's rates, we hope the experiment will be tried elsewhere before it is inflicted on our county. Mr. Calthorp not only finds fault with the new measure, but tells the Docking ratepayers how they may mend the old Highway Act. His advice is:—

"I would suggest that you should petition to return to the old Act, 5 & 6 William IV., with an additional clause, appointing a surveyor over each district with a salary of 20*l*. or 25*l*. per year, whose only duty should be to examine into any complaint that might be made to him, and to take proceedings before the local magistrates, against any road which might really be out of repair. It is repugnant to the feelings of country gentlemen to act as informers; but, if an inspecting surveyor be appointed with that duty, the farmers would soon put their roads into good condition, in order to save the useless and discreditable expense of an information."

A clause of this sort, if added to the old Highway Act, would render it well nigh perfect. How many of our modern Acts of Parliament would be worse than useless if there was not some public officer to enforce them? "What is everybody's business is nobody's;" and we know that farmers, quite as much as country gentlemen, dislike to act as informers, though they have often more cause to complain of bad bye-roads than the gentry, who very seldom use them. *East Norfolk.*

To the above we add the following letter from Mr. Hastings, of Longham Hall, to the *Norwich Mercury*.

"I feel that the thanks of the ratepayers are due to Mr. Calthorp for his letter which appeared in your paper of last Saturday, on [the subject of the 'New Highway Act.'

"After having been an advocate for its introduction, few men would have had the moral courage to make such a gratuitous public avowal of the mistake into which he has fallen, as Mr. Calthorp has so generously done. By saying that he is now induced 'to denounce a measure which he then thought highly of,' Mr. Calthorp clearly means that he would not have others suffer from the error into which he, in conjunction with others, has been led.

"If the 'New Highway Act' cannot be made to work advantageously in the Docking Union, where it appears that Mr. Blyth has given so much personal attention to it, and where he has had the co operation of so many of the ratepayers, it is quite certain what the result would be if tested in other parts of the county.

"The honourable member for West Norfolk, when seconding the noble Lord Sondes' proposition for rescinding the provisional order for the adoption of the Act in Mitford and Launditch, said that he thought the Government had it in view to make some amendments. Surely, instead of this, it would be better to abolish the new Act altogether. Although, in my opinion, the old Act is quite sufficient, there can be no objection to Mr. Calthorp's suggestion of employing a Surveyor. The roads are in a rapidly progressive state of improvement, the repairing of them is now much better understood, and I may confidently affirm that there is a perfect willingness on the part of the ratepayers generally to do whatever is necessary in order to render them all that can be reasonably expected." *John Hastings, Longham Hall, Norfolk, Jan.* 19, 1864.

The following letter to Mr. Calthorp appeared in last Monday's *Mark Lane Express*:—

"Mr. J. Calthorp states he is a magistrate—I am a tenant farmer; but my experience in road-making has been very considerable, commencing when 'statute duty' was required to be done under 34 Geo. III., c. 74, which was repealed by the 5 & 6 Will. IV., and a great improvement effected by the abolition of the statute duty, and substituting a money payment; but it left the appointment of the parish surveyor from year to year much as before. Now, I take it, the recent Act is intended still further to improve the former system, and, if fairly carried out, will no doubt be an improvement, although it may not be perfect in all its details. I have watched its working in this county (Salop) during the last nine months, and, as a ratepayer, am perfectly satisfied, for notwithstanding the extra charges of salaries to a clerk, surveyor, &c., my payments are reduced and the roads improved. Mr. Calthorp, on the other hand, is much disappointed, and from a zealous promoter is now become an opponent of the measure. What the peculiar circumstances of the 'Docking Union' may be I know not; but Mr. Calthorp's letter rather shows mismanagement by the local authorities than any deficiency in the Act itself. He says they have appointed a surveyor over 37 parishes: but that two or three could not do the work. If so, how can the waywardens and ratepayers expect the duty to be properly performed by one individual? Again, he says, great part of the work must necessarily be done by the day. This is quite contrary to what it ought to be, and to our practice in Shropshire. Most of the work executed under our surveyor is contract, or, as we call it, task-work. The idle habits Mr. C. speaks of, are induced by the day-work system. He also says the farmer will not part with his best men. Why should he The best farm labourer is seldom the best roadmaker. I am aware the prejudice existing has been very strong in many minds; but I feel sure it must eventually give way whenever the new Act is fairly and properly tried.

"I enclose my card, which Mr. Calthorp is welcome to; but prefer subscribing myself *An Old Parish Surveyor, Jan.* 27, 1864

THE DEVON BREED OF CATTLE.

(*Continued from p.* 109.)

[The following is the continuation of the lecture before the Royal Agricultural College given last December by Captain J. T. Davy, Editor of the "Devon Herd Book."]

Marks of the Pure-bred Devon.—Judging from the rude state of agriculture until, we will say, within the last 200 years, it is just possible that our ancestors were not so fastidious about the colour of the nose as we have since become, and did not object to breed from an animal with a "black muzzle." They simply required their cattle for beef, and even that was principally consumed in their own immediate neighbourhood. Owing to the difficulty of transit, and the non-existence of exhibitions up to the beginning of the present century, they were hardly aware of the value of their native breed.

A black, or even a spotty nose, is very much disliked, and a calf so marked is never kept by the best breeders. Now, the wild cattle in Chillingham Park are of a creamy white colour with black muzzles; may not the appearance at rare intervals of these black muzzles, and also of the white, of which I have already spoken, be additional proofs, if any be wanting, that the Devons were originally descended from the wild cattle which were native to these islands?

The outline of a fat Devon very nearly approaches a parallelogram; angular bony projections are, I am happy to say, never found among the best bred ones, but their frame is level from the tops of the shoulders to the tail. The belly is longitudinally straight, and well filled out at the flanks, which should easily be found by the unbent fingers; the breast is wide, and comes out prominently between the fore legs, extending down to within 2 or 3 inches of the knee joint, and towards the udder in rolls of fat. The neck is rather long and thin, increasing towards the shoulder, which is tapered off to meet it, where the neck vein forms a sort of collar in front of the shoulder, connecting the fat of the shoulder with the fat of the breast. In the fore-quarters the Devon excels all breeds, by the shoulders being placed so obliquely that there is no hollow behind them, but the part is well filled out with good flesh and fat; preserving an unbroken line, and promoting a uniform covering of fat throughout every part, commencing at the rump, over the pin bone, edge of the loins, ribs, shoulders, and on to the neck, without patch or excess of any kind. Devon breeders think nothing can compensate for upright shoulders, which are sure to produce a hollowness behind them, and a consequent loss of flesh and fat, besides diminishing the capacity of the chest and width of the breast. In breeding it is most important to get animals with shoulders placed obliquely, for it is found in practice to be much more difficult, and to require a longer time to correct the fore than the hind-quarters; yet how often do we find men who are supposed to be judges disregarding, or at least not observing, faulty fore-quarters. It is a remarkable fact in the form of the best Devons, that their shoulders are so placed and packed that they can, like a similarly formed horse, go up and down our hills (which, as is generally known, are very steep and rugged) with much greater facility than what are called the "large *Devons*." This well-adapted form, combined with a similar fitness to the climate and pasturage, has secured to the breed the possession of the whole northern division of Devonshire, as instanced by the fact that no other breed of cattle is seen at any of the northern fairs. The covering over the shoulder blades is nearly as full as the ribs, which should project at right angles to the back, preserve the barrel shape, and be broad and deep. The loin is wide and flat, projecting in a line with the pin bone, and is well covered, not only on the top but also on the edge of the bone. The pin bones must not project to break the even line. The rump is long and well filled out, and the tail set on level, falls perpendicularly from the line of the back. The buttock is moderately full, tapering towards the hock, with a sufficiency of lean flesh, but not too much, for if animals are too heavy here, they are apt to be deficient on the sides, back, and rump.

Formerly the Devons were very much used for working, up to the age of five years, when they were fattened. Latterly, ox labour having been found unequal to the demands of a new system of husbandry, is therefore almost discarded. The question then arises, one of the causes for which Devons were formerly so much sought after having nearly ceased, what are their merits as graziers compared with other breeds; considering they do not make such great weights. My answer is, for feeding purposes they possess every qualification; they will fatten at an early age (their offal is very light), will carry more beef in the most valuable parts than almost any other breed, and may be made quite fit for the butcher at from two to three years old. Mr. Robert Smith, who has had very great experience, and was most successful in breeding and feeding Shorthorns and Leicester sheep in Rutlandshire, as the number and value of the prizes he has gained will show, as well as the high prices his cattle and sheep fetched, but who has resided in the lower part of Somerset for the last 14 or 15 years, during which he has had ample opportunities of seeing a great deal both of the Devons in Somerset and Devonshire, not being what is considered a "Devon breeder," with his experience with various breeds, may justly be considered to give a truthful and unprejudiced opinion Speaking of the Devons, he says:—"As converters of vegetable into animal food—breed against breed they are found to return as much per acre, or for weight of food consumed, as any other breed." From observation I can most truly endorse this opinion. The most profitable stock animals is a subject on which all breeders like to dilate, and on which we find a great difference of opinion amongst men whose judgment and experience entitle them to great respect, their favourites of course being the only animals fit to be bred and fed, and so forth.

What is meant by a Gold Medal Beast?—Why! that animal which approaches nearest to the form and quality of a Norman Devon; and if these animals were only placed on useless long legs, they would be no longer designated "little Devons." In speaking of size it must be understood that it is the length, depth, and width, and not the height of a beast which constitutes size; nothing can be more objectionable to the eye than a tall overgrown animal without proportionate depth and thickness, and, to use a homely phrase, with too much daylight under his belly. Whilst admitting that Devons do not attain to the great weight which some breeds do, and knowing animals possess no magical power of producing beef but out of the food which they consume, I contend that if the herbage of any given numbers of acres were to be consumed by Devons, although I believe it would take a greater number to consume it, they would produce in the aggregate as much beef as any other breed; indeed, there would be a greater weight of the most valuable beef, of that which sells for the highest price.

at the same time there would be less offal and coarse pieces, which is the reason why the Devons and Scotch cattle command the best prices in Smithfield. On this subject Mr. Robert Smith says, "They (the Devons) sell first in the mornings, and at a higher rate, and why? Because they carry more roasting 9*d*. than 6*d*. boiling beef." I was very much struck in 1862 at the Smithfield Cattle Show, at seeing nearly every one of the Devons sold on the first public day, and chiefly to London butchers, a circumstance of which the larger breeds could not boast, and as far as I and a friend could discover from hearing the prices at which a great many animals were sold, they fetched quite 2*s*. or 2*s*. 6*d*. per score more than the Short-horns, so that a Devon weighing only 64 score lb. sold at 15*s*. a score would realise 10*s*. more than an animal of the larger breed, weighing 76 score at 12*s* 6*d*. a score. Common sense teaches us that it would require a larger quantity of food to produce 76 score than 64 score weight of beef. Two animals may be of the same weight but not of the same value, arising from a difference in the quality of the meat, and from the one carrying a greater preponderance of the most valuable beef over the coarse meat and offal; whilst the other has a much larger quantity of the latter in proportion to the former. The reason why the Devons find so ready a sale is because they rarely if ever disappoint the butcher, and the beef with which they are loaded in those parts commanding the highest prices is so beautifully veined and marbled and eagerly sought after. It is certain that animals which will thrive in cold bleak districts and on ordinary pasture cannot fail to flourish in more favoured situations. Every day observation and experience teach us they will thrive in a rigorous climate, for the larger portion of their native home is, I should say, from 900 to 1200 feet above the sea level, and will and do prosper in any part of England. Thus I have fairly proved my statement that they possess every qualification as graziers, and fully confirm Mr. Robert Smith's opinion as to their making as good a return per acre as any other breed.

It has been asked why Devon bulls do not fetch those fabulous prices which we hear recorded of the Short-horns. The answer is plain; they have not become so fashionable, and until lately were not taken up by noblemen and the large landed proprietors. A few years ago his late Royal Highness the Prince Consort established a herd of Devons; and they have for many years been warmly supported by the late and present Earls Fortescue, the late and present Earls of Leicester and Lord Portman, and I am glad to say the last volume of the Herd Book contains a great many new names of noblemen and gentlemen in different parts of England and Ireland, clearly proving they only want to be known to be valued. But for some years, until within a comparatively recent period, the majority of the principal Devon breeders were tenant farmers, who could not afford to give each other those almost fabulous prices. This is also the reason why many of our breeders do not exhibit so often at the large cattle shows; for on the one hand they do not like the risk of making their best animals barren by the system of over-feeding which is now necessary to be successful, and on the other hand they dislike the expense of such costly training. When looking at a superior animal I have heard the owner reply, on being asked why he did not show it, "She is too valuable to show, I will not run the risk," *i. e.*, of making her barren, and to a certain extent creating disease in her internal organs and inflicting injury to her constitution by the necessary subsequent reduction to a normal state.

(To be concluded next week.)

PORTABLE FARM RAILWAYS.

[At a recent meeting of the Maidstone Farmers' Club Mr. Grant read an interesting paper on this subject, from which we make the following extracts.]

In 1854, letters patent were granted to Mr. Crosskill, of Beverley, for "improvements in the construction of portable railways." Since then, a great many sets of Mr. Crosskill's manufacture have been sold. Of those used in England some have been employed with very great advantage in getting root crops off wet land. Others have been employed in conveying manure, lime, &c., over wet land. It was about two years and a quarter ago when the idea of a portable railway first entered my head, being forced upon me by the difficulty I found in clearing my root crops off, and getting my manure on, my wet fields. I did not then know that such a thing as a portable railway existed anywhere. The rails and trucks which I exhibited at the Battersea Show had never been worked, and were with difficulty completed in time for exhibition. In November following I performed my first work, partly by manual and partly by horse power. It consisted in carrying out dung over a piece of Hop garden, which could only be reached by crossing over another intervening piece. The saving of damage to the ground, particularly to the intervening pieces, was so immense, and the work altogether so successfully performed, that I issued circulars to farmers and others in the neighbourhood, and the editors of the local press, to witness my next operations of getting off my root crops and manuring a field. The work on the whole showed a profit, when the damage which carting would have inflicted upon the soil, in the then wet state of the ground, is taken into account. I soon after cleared off 468 tons of stone lying scattered over a piece of woodland, which Mr. Rayfield recently grubbed, on the farther side of his Hop garden at Tovil. I carried them across the Hop garden by manual power, a distance of a quarter of a mile, without a frost, but without injury to the ground, and at a much cheaper rate than carting, to the great satisfaction of Mr. Rayfield, who well knows that the stones must have remained where they were till this winter, had I not moved them, and so enabled him to grow, as I believe he did, a good crop of Potatos on his fresh ground. My trucks next assisted in emptying a great quantity of mud out of the large pond in Mr. Whatman's park, where a great many men with planks and barrows were simultaneously employed at the same work. Nothing could be plainer to a looker on than the immense superiority of the rails and trucks over the planks and barrows, both as regards economy and despatch. The rails were next laid across a meadow to some clay pits, a distance of about a quarter of a mile, where carts would not have been allowed to pass, on account of the damage they would have inflicted, but must have gone upwards of a mile round by the road, which passed over a steep hill; but both distance and hill were avoided by the rails. A large quantity of clay having been thus obtained for repairing the pond, the rails and trucks were next employed in carrying out about 2000 cubic yards of the mud on to a much higher level entirely by manual power, and laying it in small lumps over the Grass land of the park, at convenient distances apart for spreading, after the manner of ordinary field carting. Mr. Whatman directed his horses and carts to work one whole day against the rails, with the view of testing the difference of expense, which was most carefully noted, and was found to be 1¼*d*. per load in favour of the rails. The chief advantage to Mr. Whatman, however, was not the saving of expense, but the preservation of the turf. The rails were next employed in carrying out 160 cubic yards of manure over Mr. Dawson's Hop garden, at Bearsted, after the Hops were poled. This work was expeditiously performed by two men only without injury to the bine or the soil, at the moderate charge of 4*d*. per cubic yard. The rails were next employed by Mr. Punnett, at Chart Sutton, in carrying out 300 cubic yards of dung for Turnips, over a 15-acre field, at a time when, from the wet state of the weather, it would have been impracticable to have carted it on the land at all. Having performed the various works I have described satisfactorily to my employers, I took half-a-mile of rails, a number of trucks, and the four men of Kent who beat the horses at up-hill work in Mr. Whatman's park, with me to the Royal Agricultural Society's Show at Worcester, and exerted myself most strenuously, but in vain, to obtain a working trial before the Society.

[The Report by the Society's judges, very favourable to Mr. Grant's invention, was then quoted.]

In reply to a question in the Worcester report, whether my system is not rather a substitute for the barrow than the cart, I appeal to the amount of work done to the displacement of carts both before and since the Worcester Show; and my best answer to the second query, respecting horse-traction, is the fact that the identical rails and trucks which suggested the doubt have, since their return from Worcester, been almost incessantly at work by horse-power. They went straight from Worcester to the Earl of Romney's park, where they remained idle until the end of August, on account of the difficulty of getting men during harvest. They were then employed in carrying out earth by contract over the Grass land, and were worked so successfully by horse-power as to yield me a profit, and also to earn a testimonial from his lordship's agent that the removal of upwards of 1500 yards of earth in the Mote Park proved very satisfactory, and at much less cost to Lord Romney than if the earth had been carted wholly by horses in the usual way.

From the Mote Park the tackle was conveyed to the Kent County Lunatic Asylum, where it was also employed by contract in conveying 550 solid cubic yards of earth a distance of half-a-mile, over arable and meadow land, for the purpose of forming a mound in one of the airing courts of the patients. A small nag horse, worth about 8*l*., altogether too weak for carting, drew from two to three cubic yards of loose earth up hill, and trotted back with the empty train at the rate of about eight miles an hour. In this instance, at least, I had the satisfaction of finding that time saved is money earned; for, when the work was finished, I found myself the richer by a clear profit of 8*l*. (the value of the horse employed), after paying all expenses, and allowing for wear and tear. By means of the rails, this work was performed at a time when it could not have been done at all by ordinary carting, in consequence of the hard road being broken up by drainage works in progress. From the Asylum the tackle was at once removed to the College Hop gardens, where it is still at work, and has already carried out upwards of 900 cubic yards of earth and mixed dung and earth, up hill, by horse-power, an average distance of nearly half a mile, the coat applied being 30 loads to the acre. I hope that the story of the work done has not wearied you, and that it has convinced you that the employers of the rails have in every instance derived more or less advantage from their use. The wages of the men employed—3*s*. a day—will, I think, bear comparison with the average earnings of farm labourers in this or any other district.

In the course of his address Mr. Grant exhibited one or two recent improvements effected in laying down the rails, and explained the system of laying down the rails, and the simplicity of connecting the various lengths.

A cordial vote of thanks was given to him at the close of his address. *Abridged from the Maidstone Journal.*

IMPROVEMENT OF AGRICULTURAL PLANTS.

The improvement of Cereals is at present attracting the attention of the public. At the recent Birmingham and Midland Counties Exhibition there were 57 samples of grain, and from the interest which they excited the samples are likely to increase next show. Were bundles of ears to accompany the seeds of each variety, the interest of the exhibition would be greater, but this and other improvements will no doubt result from experience.

Fat animals, large vegetables, and fine grains have their respective admirers; and attending such an exhibition affords a good opportunity of extending the knowledge and refining the taste of individuals.

The improvement of Cereals has also lately been discussed in many of our agricultural publications. In that instructive work, "Morton's New Farmer's Almanac for 1864," there is an article on the improvement of plants, either written by Professor Buckman, or some person entertaining the same sentiments. But, instead of being an unbiassed exposition of the modes of agricultural plant-improving, it may justly be regarded as an advertisement of "Hallett's Pedigree Nursery Wheat," and in this respect so hurtful to the progress of agriculture that an attempt to counteract the effects of the article becomes a duty.

Two modes of improvement are noticed—namely, selecting new varieties, and cultivating the best sort already known in the best artificial manner for a number of years.

The selecting of new varieties is noticed, and dismissed in the following short sentence:—"Keep a sharp look out, and when you see in any natural sort or variety the qualities you want, take care of the plant, and multiply it as fast as you can."

In many plants growing in a state of nature, and in all crops of the farm propagated by seeds, new varieties from time to time appear, being often found to be inferior, but also sometimes superior, to the sorts which had been sown, and generally reproduce themselves, but sometimes they are inconstant and completely broken up as varieties. Such plants arise from causes which have not been fully explained; but that they are found, and with care continue to exist, is fully admitted. In this way arose Chidham Wheat, with its heavy, transparent, and beautiful grain, having been selected by Mr. Poslethwaite, of Chidham, Essex, about forty years ago; and Shirreff's Bearded White, which is in no respect inferior to Chidham, is a very recent selection.

The writer considers the second mode of plant-improving at considerable length in something like the following terms:—Select the best sort, and cultivate it in the best manner. Year by year its excellences will increase and become fixed, for there is such a thing as inherited properties in plants as well as in animals. The term "ennobling" has been applied to the process by which flowers and vegetables have been derived from their natural originals. Although there is no history of the progress on record, yet there is history enough on the one side, and analogy enough on the other, to justify the expectation of improving the grains by adopting similar means. It is out of a history and an idea of this kind that Mr. Hallett justifies the term "pedigree," by which he designates the kind of Wheat which he has so industriously advertised of late, and in which we confidently believe.

The danger of reasoning at random from analogy is well illustrated by the effects of castration on some of our domestic animals, the horns of oxen being lengthened and the horns of sheep being shortened by the operation. But it is still more dangerous to reason analogically from the animals to the plants of the farm. There being male and female sexes with animals, the farmer can alter the character of his stock by the selection of breeders. Cereals are hermaphrodite with sexes in the same flower, where their union cannot be controlled. In the breeding of animals the farmer's interference is reasonable and beneficial; but in breeding Cereals it is unnatural, and seldom successful.

There is no reasonable foundation for believing that plants improve from year to year from the effects of cultivation, neither the field nor garden furnishing examples of such change. In the article under consideration it is stated that "we have no actual history of the progress on record;" and, in the absence of history and all tangible evidence the truth of the system is made to rest entirely on "Hallett's Pedigree Nursery Wheat," which, it will be afterwards shown, exists only in name.

Nursery Red Wheat is well known for fine quality of grain, and having been selected as the best of its class to undergo the year by year process of improvement by the fostering hand of Mr. Hallett, he sends it out altered and ennobled under the name of "Hallett's Pedigree Nursery Wheat." This alleged new variety created much disappointment; and instead of the grain being an improvement on Nursery, the sample proved coarse and inferior. This character rests on satisfactory evidence. At the end of last harvest five parcels of Wheat were forwarded by a correspondent to the Editor of the *Agricultural Gazette* for his inspection and opinion. The following is the Editor's account slightly abridged:—"Shirreff's Bearded White.—Very beautiful white Wheat; as good as can be, short-berried, plump, and white. Australian Wheat.—Very good white Wheat; larger berried, horny in appearance. Pringle's Bearded White.—Very beautiful white Wheat, larger and longer berried, horny. Shirreff's Bearded Red.—Good large berried; fine red Wheat. Hallett's Pedigree.—A sample of large and coarse red Wheat." The Editor's opinion was corroborated by the awards at the Birmingham and Midland Counties' Exhibition, where in the class of red Wheats Shirreff's Bearded obtained the first prize, Nursery the second, and Hallett's Pedigree the third.

As bearing on the plants of the former, the following is extracted from the paper recently read before the

Society of Arts by Mr. J. Chalmers Morton, on Agricultural Progress, one of the most interesting and suggestive essays connected with agriculture which has lately appeared:—"Again, we owe our better crops to the selection and adoption of the better sorts of the plants in cultivation. I do not suppose that individual sorts have improved on our hands. Probably, as a general rule, they have deteriorated. But new sorts are being perpetually introduced; and of Wheat, Barley and Oats, Mangel Wurzel, Swedes, Turnips and Potatos, Cabbages and Vetches, a man can grow as good as any, I think probably better, than any that his predecessors have known."

Of the six varieties of Wheat which have been mentioned by name in this communication, the three bearded sorts have recently been selected and raised from single ears, which places the system of improvement of Cereals by selection immeasurably above the year by year mode of progress, which can only lay claim to the doubtful Hallett's Pedigree Nursery Wheat.

What is really the sort of Wheat which has been grown in the neighbourhood of Brighton, and sold by Mr. Hallett? By his own account Nursery was selected, and has been improved by skill and attention into what he has been pleased to call Hallett's Pedigree Nursery—a Wheat which has little or no resemblance to true Nursery. The ear of Nursery is rather close set with white chaff, which stands on the notches at an acute angle with the axis, while the ear of Hallett's is rather wide set, the chaff cream coloured, and often standing at a less acute angle. The grain of Nursery is long, narrow, oval, and small, glossy, smooth, and fine, while the grain of Hallett's is large, wrinkled, and coarse. Mr. Pawlett long since publicly stated that he could see no difference between Quentin's Giant and Hallett's Wheat, and Mr. Mechi at that time seemed to incline to the same opinion. Wheat growers in one of the midland counties, with high powers of observation and ample opportunity of judging, informed me that they can see no difference between Kessingland, Quentin's and Hallett's. After having grown these three sorts contiguous, in the summer of 1863, making sure that each was true to its name, and carefully comparing them at different stages, I have been unable to discover any difference, and believe them to be one and the same variety.

Mr. Hallett's perseverance and ingenuity in calling attention to his Wheat has been not a little remarkable. At our recent International Exhibition he had cases of large ears, and such might have been obtained from other sorts by thin seeding, and he had also plants with immense stools, "showing the vital energy of the seed," and the jurors, fortunately for themselves, passed over both unnoticed. Then followed leading articles in newspapers praising the man and his system of plant improving, and high sounding advertisements, without much meaning. And more lately, Wheat families differing in degrees of improvement, and distinguished by letters of the alphabet. Still, his Wheat is inferior to the true Nursery.

Farmers generally travel slowly the road of improvement, the slightest disappointment creating a pause; and anything like imposition produces a dogged standstill which too often lasts for life. It is in this way that an over-praised plant injuriously affects the progress of agriculture. The farmer, having been once deceived, avoids new plants in future to his own and the country's loss.

Should Mr. Morton ever be induced to revise his admirable essay, "Progress of Agriculture; its Helps and Hindrances," he would do well to notice amongst the hindrances the frauds of the seed trade, which have been long and severely felt in many distinct departments. Fowler's [qy. Fuller's] Cow Cabbage fraud, memorable in modern times, will merit particular notice, and there are recent ones not likely to prove less injurious. *Patrick Shirreff, Haddington.*

Home Correspondence.

The Consumption of Farm Produce by Farmers.—The importance of this subject will ere long force itself upon the serious consideration of the agricultural public, and ultimately of the Legislature. The quantity of grain consumed as food for stock throughout the kingdom is enormous. It is now estimated to comprise nearly one-third of the entire bulk grown in the country, and supposing Indian Corn and rice to be substituted for home-grown corn, it would fully equal one-third of the actual produce of our farms. Moreover the grain thus consumed is almost always the inferior qualities, particularly those sorts which have received injury from becoming stained or sprouted, and the lean grown and tailing samples. These, if they fail to bring a good price in the market, are ground up for meal for cattle, sheep, and pigs. Now in the present position of the artificial food markets, and the known adulterations which all are subject to, there can no better system be found than to substitute good meal for adulterated cake, or other like cattle food. The practice is widely extending. It is nearly universal in this country. Cake of various kinds, and other advertised foods have had an immense sale thus far, but farmers begin to see that they can grow both cheaper and better food at home in the form of Barley, Beans, Peas, Oats, and Wheat, &c., and they have also learned the right application of them. Few cattle are now fatted in the winter without corn or meal in addition, or in lieu of cake. Sheep have their daily rations of corn or chaff; horses, of course, have Oats in abundance; pigs consume large quantities of Barley or inferior Wheat meal; hence this immense consumption of grain as food for the stock of the farm. This is quite right in itself, and profitable to the farmer, but it also militates against him in some respects; for instance, none of this inferior produce finds its way to market except as meat, or in the animal frame; it does not as grain, consequently it is not returned in the average of "Corn returns." Now as this vast quantity of inferior corn is left out of calculation in the average of corn returns, it is manifest that the prices returned are much higher than they would have been had they been included. This of course fixes or rules the averages at a higher rate by which our rents and tithes, *i. e.* rent-charge, are assessed and paid, which of course again is a direct injustice to the occupier. He ought not to be called upon to pay his rent or tithe rent-charge at a higher valuation than his farm will give, but as he only sells his best qualities of grain, and consumes his inferior qualities, he pays the rate the best qualities alone give, which is wrong. He ought to be permitted to make a return to the corn-returning officer of corn consumed upon the farm at its proper value. This would bring the averages right to what they actually ought to be. The *Agricultural Gazette* has often advocated a scale of farm accounts whereby all the grain grown on the farm and consumed thereon, would be shown as being sold to the stock of the farm. It should be so done, and the returns be given in to the proper inspector. It is not lawful to do it under existing regulations. The returns now come from certain towns having the privilege of "making corn returns," whereby the averages are made up and settled. It is by no means the average prices of the whole country; however these towns would give it near enough were all qualities included, and if all farmers residing in the neighbourhood of these towns were permitted to make their farm consumption returns to the returning officers of these towns respectively. There is therefore no absolute necessity to increase further the number of towns for taking such returns; the present arrangement would do. It is an undoubted fact that corn and cornmeal is becoming a staple article of food for stock throughout the country, and its consumption is vastly on the increase. Another session of Parliament, therefore, should not be allowed to close without a strenuous effort being made to include farmers' returns in the averages, as by so doing the difference would be very considerable, probably from 15*l.* to 25*l.* per cent. This is worth the most earnest consideration on the part of the farmer, who would thereby find his corn-rent and his tithe rent-charge reduced in that proportion. Farmers are, of all classes, slowest to discern and act upon these things. *O. F.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

MONTHLY COUNCIL: *Wednesday, Feb.* 3.—Present, Lord Feversham, President in the chair. The Earl of Powis, Lord Chesham, Lord Eversley, Lord Tredegar. Lord Walsingham, Major-General the Hon. A. N. Hood, Sir A. K. Macdonald, Bart.; Sir Watkin Wynn, Bart., M.P.; Mr. Acland, Mr. Raymond Barker, Mr. Barnett, Mr. Bramston, M.P.; Mr. Cantrell, Colonel Challoner, Mr. Clayden, Mr. Dent, M.P.; Mr. Exall, Mr. Brandreth Gibbs, Mr. Hamond, Mr. Fisher Hobbs, Mr. Holland, M.P.; Mr. Hudson, Colonel Kingscote, M.P.; Mr. Lawes, Mr. Lawrence, Mr. Randell, Mr. Rigden, Mr. Sanday, Mr. Shuttleworth, Mr. Robert Smith, Mr. Torr, Mr. Wallis, Mr. Burch Western, Professor Simonds, and Dr. Voelcker.

The following New Members are elected:—

Aldridge, John, 17, Cadogan Place, London, S.W.
Anderson, James, Jun., Hedley Hall, Gateshead
Angus, John, Whitefield, Morpeth
Biggs, John, Cublington, Leighton Buzzard
Bolam, Harry G., Keverstone, Staindrop, Durham
Browell, Edmund J. J., East Boldon, Gateshead
Browne, Samuel, Brockton, Shiffnal, Salop
Burn, William, Broomhill, Acklington
Burnard, Charles F., Compton Villa, Plymouth
Burrell, John, 3, High Swinburne Place, Newcastle-upon-Tyne
Butler, George Cooper, Stanford Place, Faringdon
Cargey, Gilbert, Kiplin, Catterick, York
Cobb, Frederick, Walton, Warwick
Chittenden, James, Hope All Saints, New Romney
Chittenden, John, Newchurch, New Romney
Denton, J. Bailey, Stevenage, Hertford
Garraway, Edward, Norcott Farm, Wonersh, Guildford
Gibbs, Thomas, Sawndby, Retford
Grey, Charles G., Dilston, Corbridge-on-Tyne
Griffith, John, Jun., Trevorgan, Cardigan
Hawdon, William W., Walkerfield, Staindrop, Durham
Headlam, Rt. Hon. Thomas E., Gilmonby Hall, Barnard Castle
Hedley, Thomas, Cox Lodge, Newcastle-on-Tyne
Hesketh, Sir Thomas George, Bart., M.P., Rufford Hall, Ormskirk, Lancaster
Hett, John, Gainford, Darlington
Hodgson, John Geo., North Dene, Gateshead
Hodgson, R. W., North Dene, Gateshead
Housman, John, M.D., Newcastle-upon-Tyne
Howsin, Daniel, Flintham, Newark, Notts
Hunter, Patrick, Roden, Wellington, Salop
Langdale, Sampson, Newton Red House, Morpeth
Laverack, Samuel, Chapel Haddlesey, Selby, York
Loesch, Heinrich, Cammerswaldan, Hirschberg, Prussia
Loxley, John Dingley, Charlton, Pershore
Marshall, Rev. Charles, Ripley Court, Ripley, Surrey
Mather, William, Hemscott Hill, Morpeth
Morgan, Matthew, North Bondgate, Bishop Auckland
Morrison, Charles, Basildon Park, Reading
Neale, Charles, New Field, Newark
Newton, Thomas H. G., Barrell's Park, Birmingham
Nicholson, William, 4, Sussex Square, Hyde Park, W.
Page, William, jun., Southminster, Maldon
Peck, Edmund, Plas-y-Dinas, Shrewsbury
Philips, Richard, Brockton Grange, Shiffnal
Plumptre, Charles J., Pedding House, Sandwich
Polwarth, Lord, Mertown House, St. Boswell's, N.B.
Purrott, Charles, 8, Park Street, Croydon, S.
Richardson, John, Alnwick
Robertson, John J. E., The Naish Farm, Christchurch, Hants
Robotham, Ambrose, The Oak Farm, Drayton Bassett, Tamworth
Sharpe, Wm. Barling, Baker's Cross, Cranbrook, Kent
Smith, John, The Hundred, Romsey, Hants
Smith, William, Chimhams, Farningham, Dartford
Smith, William W., Colwood Park, Cuckfield
Stephens, George, Cropthorne, Pershore
Stephenson, Hugh, Throckley House, Newcastle-upon-Tyne
Still, Henry, Chelsham, Croydon, S.
Stott, John, Bothal Barns, Morpeth
Surtees, Wm. Edward, Tainfield House, Taunton
Thomson, Wm. Cunningham, Dilston Haugh, Corbridge, Northumberland
Ware, Rev. Chas. Astwood, Newport Pagnel
Waters, Richard, Broughton, Stockbridge, Southampton

FINANCES.—The Hon. General Hood, Chairman of the Committee, presented the Report, from which it appeared that the Secretary's receipts during the past two months had been examined by the Committee, and by Messrs. Quilter, Ball, & Co., the Society's accountants, and were found correct. The balance in the hands of the bankers on January 31 was 1467*l.* 12*s.* 6*d.* The balance-sheet for the quarter ended December 31, 1863, and the statement of subscriptions and arrears, were laid on the table, the amount of arrears then due being 574*l.* Sixty-nine members have given notice during the past year of their withdrawal from the Society. The sum of 2000*l.* received from Newcastle has been placed on deposit with the Society's bankers.

DISCUSSIONS.—Mr. Holland, M.P., announced that Mr. Lawes would read a paper on Wednesday, the 17th inst., on Salt used as a Manure.

NEWCASTLE MEETING.—The Earl of Powis announced that a Prize List amounting to 410*l.*, and including premiums for Galloway Cattle; Border, Leicester, and Herdwick Sheep; Hunters, Roadsters, Ponies, and Agricultural Horses; Wool, and Butter, had been received. The Council ordered these additions to the Society's Stock Prize Sheet, which may now be obtained complete of the Secretary.

The Committee further reported that an ample supply of the best forage had been secured by Mr. Jacob Wilson. They recommended that the same amount of shedding be ordered as at Leeds. This report was adopted.

Mr. Brandreth Gibbs having moved that in future, after the Council has decided at what city or town the country meeting shall be held, the usual agreement shall not be signed until the stewards of implements or some one authorised by the Council shall have finally inspected and definitely selected the fields to be used for the trials of implements; and that the decision of the Council (at its May meeting) as to the place for the country meeting shall be considered as subject to the above being satisfactorily arranged, it was seconded by Mr. Fisher Hobbs, and carried unanimously.

Mr. Robert Smith moved for a Committee to consider the subject of "dates of calving" for the cattle classes, and was seconded by Mr. Hudson; the motion having been carried, the following committee were appointed. The President, Lord Tredegar, the Hon. Major-General Hood, Mr. Barnett, Mr. Clayden, Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Holland, M.P., Mr. Hudson, Mr. Randall, Mr. Sanday, Mr. Torr, Mr. Turner, Professor Simonds, and Mr. Robert Smith.

A letter from the Secretary to the Treasury relative to a collection of sheep for his Highness the Viceroy of Egypt having been read, the Council appointed the President, the Hon. General Hood, and Mr. Holland, M.P., a committee for carrying out the necessary arrangements.

The Council then adjourned.

A Special Council was then held by order of the President, when his lordship having announced the gracious intention of his Royal Highness the Prince of Wales to become a Governor of the Society, over which the lamented Prince Consort had presided with so much ability, his Royal Highness was elected by acclamation.

SOCIETY OF ARTS: *Effects of Smoke on Vegetation.*—Dr. Voelcker lately read a Paper on Smoke and its Effects, before the Society of Arts; and the following is a passage from his lecture which especially interests the agricultural reader:—

"Wheat, Barley, Grass, or Clover, exposed to a smoky atmosphere at an early stage of their growth, are visibly affected in a short time. The tops of these plants turn first red, then yellow, and finally white, and an effect is produced not unlike that caused by frost or excessive drought. Corn crops affected in this manner by smoke may recover to a certain extent, but they never yield well, inasmuch as the development of the plants becomes irregular, and the corn ripens unequally. If cereals are attacked by smoke when in flower, the ears do not fill well, and the grain is of a poor quality.

"Grass and Clover, more or less discoloured or

bleached and damaged by smoke, are disliked by cattle, and often rejected by them altogether. Smoke deteriorates the quality and diminishes the quantity of Grass and Clover crops. Plants with strongly developed leaves, for instance, Mangels, Swedes, Turnips, and other green crops, are less liable to suffer injury from a smoky atmosphere.

"Fruit and ornamental trees, on the other hand, are readily affected by such an atmosphere. The leaves turn yellow, brown, and finally black, and then drop. If the leaves are destroyed two or three years in succession the trees become sickly, and finally die off. Fruit-trees in blossom attacked by smoke yield no fruit, or but a poor sickly crop.

"During the combustion of coal much sulphurous acid is generated, which is carried away by the smoke of the fire. The injurious effects of smoke on vegetation are evidently due to sulphurous acid, a gas which, according to experiments made many years ago by Turner and Christison, causes the leaves of plants to drop when it is present in air merely in the proportion of 1-10,000dth part.

"Recently experiments on the effects of air containing small quantities of sulphurous acid upon vegetation have been made in Germany, by my friend Prof. Stöckhard of Tharand. Young Fir trees exposed twice or three times, for two hours, to air containing only 1-20,000dth, or even 1-80,000dth of sulphurous acid gas, were completely bleached in wet weather, and killed when they were exposed for a longer time to air containing so small a quantity of sulphurous acid.

"In dry weather a much larger quantity of this acid may be present in the air without doing any injury to plants. It is in wet weather that air containing only traces of sulphurous acid is injurious to vegetation. In localities where much coal of inferior quality, generally rich in iron pyrites, is burned, the injury done to vegetation by the sulphurous acid proceeding from such coal may often be seen at a distance of from one to two miles from the place where the smoke is generated.

"Farmers residing in a neighbourhood where brick-kilns and potteries abound, frequently sustain much more injury than they are themselves aware. The quantity of sulphurous acid emanating from open brick-kilns is very considerable, and there cannot be any doubt that, in certain localities, the air is poisoned with sulphurous acid gas to an extent which prevents the healthy growth of Wheat, Barley, or Oats, so that good crops are rarely seen in such localities, and blighted ones are quite the rule.

"By a recent Act of Parliament provision is made for the effectual condensation of muriatic acid gas in alkali works; but, as far as I know, there is no law which prevents brickmakers throwing into the air any quantity of sulphurous acid which they choose, although it is more pernicious to vegetation than even muriatic acid gas. I have had many opportunities of becoming practically acquainted with the injurious effects which a smoky atmosphere produces on our cereal crops, and regard a strong deposition of soot on Wheat and other corn crops quite a sufficient evidence of the more or less complete injury which the crops must have suffered by the sulphurous acid always present in the air in districts where such sooty deposits are seen on plants. The disadvantages of carrying on agricultural pursuits in the Potteries, or in districts where volumes of black smoke discharge enormous quantities of sulphurous acid into the air, are well-known amongst the more intelligent and enterprising farmers. This fact explains to a certain extent the backward condition of agriculture in such localities, and loudly calls for a mitigation of the evils to which farmers are exposed who have the misfortune to occupy land in the immediate neighbourhood of large manufacturing towns, or in localities where immense quantities of inferior coal are consumed by brick and tilemakers and manufacturers of earthen and stoneware, &c. Again, in districts where copper-ore, consisting for the greater part of the sulphurets of copper or iron, are the raw materials from which copper-smelters extract the metal, enormous quantities of sulphurous acid are discharged into the atmosphere.

"The injury done to vegetation by the smoke from copper-works has been traced beyond a distance of 4 miles. It is true that smoke from copper works generally contains appreciable quantities of arsenic, which of course is inimical to the health of plants; but as the arsenical fumes are insignificant in quantity in relation to the large amount of sulphurous acid which is produced in roasting copper ores, and as air containing 1-40,000dth or even 1-800,000dth part of sulphurous acid gas is decidedly injurious to vegetation in wet weather, I think the sulphurous acid of copper smoke does more mischief to the crops in the neighbourhood of the works than the arsenical compounds of the smoke. Just as little as alkali-makers are permitted to discharge muriatic acid into the air, copper-smelters should be allowed to discharge into the air the enormous quantities of sulphurous acid which is produced in roasting certain copper ores. It may perhaps not be possible to condense sulphurous acid so perfectly or as readily as muriatic acid gas, and probably the arrangements for the condensation of the latter will be found altogether inappropriate to effect the condensation of the latter, but attempts to mitigate the evil resulting to vegetation by sulphurous acid fumes should be seriously undertaken.

"It has occurred to me that the sulphurous acid fumes of copper-works might, perhaps, be converted economically into sulphuric acid, or be used for the production of sulphite or hyposulphite of soda; and I do not consider it improbable that one of these days this highly injurious product will cease to be a nuisance to the inhabitants of the country round about the works, and be turned to good economical account.

"As regards the actual quantities of sulphurous acid gas contained in the smoke of brick kilns, we possess no data for our guidance. The quality of the coal used, the construction of the kiln, and the composition of the clay of which the bricks are made, must affect to a great extent the proportion of sulphurous acid in the smoke. Thus a coal, with a high per centage of sulphur, but containing also much mineral matter on burning, may produce less sulphurous acid than another kind of coal, poorer in sulphur and in mineral matter, inasmuch as the greater portion of the sulphur is fixed by the mineral portion of some coals. Again, if the clay contains magnesia or lime, or is purposely mixed with chalk, most of the sulphur of the coal will be fixed by the magnesia or lime.

"The brick-makers in the neighbourhood of London, who use with the clay a considerable proportion of chalk, therefore produce a smoke which contains but very little sulphurous acid, whilst in districts where fire-bricks, tiles, &c., are largely manufactured from clay that does not contain lime or magnesia, or merely insignificant quantities, the air becomes charged with sulphurous acid to an extent which injuriously affects the vegetation for miles round the brick-clamps or kilns."

SCOTTISH METEOROLOGICAL.—At the recent half-yearly general meeting of this Society, Mr. MILNE HOME read the report, which stated that the total number of stations in Scotland which at present sent up monthly schedules to the Society's office was 72. Stations had been formed at Jerusalem and Damascus. Two prizes—one of 10*l.* and the other of 20*l.*—had been offered by the Marquis of Tweeddale for a series of trustworthy observations on the temperature of drained and undrained soil on mountain pasture and on arable land. Two reports of observations carried on for a year had been received by the Council in competition for the prizes, but no decision had yet been given. Another prize of 21*l.*, or a piece of plate of that value, had been offered for the best essay explaining on scientific principles the popular signs or prognostics of the weather collected by Dr. Mitchell, a member of the Council, and published a few months ago.

Sir JOHN FORBES then gave an address on "The Progress of Meteorological Science since the Formation of the Society." He began by noticing recent investigations into the phenomena of the temperature of the air, by the ten aërial voyages of Glaisher and Coxwell, which had proved that the temperature in ascending did not follow a uniform rate of reduction. He also noticed the extraordinary fact that, although the region of moisture did not extend more than two or three miles above the earth, the cirrus clouds at five miles appeared to float as high as ever above them. The ingenious weather charts of Mr. Galton, in his Meteorographica, were explained, as well as the "bulletin" and map with signs, explaining the phenomena communicated daily to Paris by telegram from about 60 stations. He went on to characterise the results of digests of meteorological observations by Glaisher, Symons, and Eaton in various parts of the country, embracing barometric pressure, wind, and rainfall; and then proceeded to touch upon the practical objects which might be subserved by an increased acquaintance with the relations these phenomena had to the statistics of life and health, and the industrial interests of commerce and agriculture. On the subject of agriculture, great regret was expressed that, while its interests as providing for the food of the people, and its liability to damage from bad weather, were admitted at all hands, and Government did so much to provide at the public expense a staff for making information available, not the slightest notice had been taken of this great interest. So careless had they been, that although above two millions sterling had been lent to be invested in drainage, no provision was made for even getting returns of the actual benefits derived by the borrowers; and though the agriculturists themselves came forward to procure information which the Government gave a small sum to collect and publish, even that, on a slight misunderstanding with the Highland Society, had been discontinued, and no effort had been made to re-establish it in any other form. It was earnestly to be hoped that the great benefits of such statistics, not only as a branch of trade, but as embracing the results of the effect of different kinds of seasons, and the test of the advantage of peculiar systems of management, would soon be restored to Scotland. There was no doubt that the same staff of enumerators could easily be reorganised upon fair terms of remuneration, and the simple way to effect its proper working was to put it under the management of the Registrar-General, to whose department it seemed properly to belong. Such a scheme, if influentially pressed upon the Government, from all parts of Scotland, would, he had no doubt, be carried out. In utilising meteorology, by applying it to practical agriculture, no one has shown so much energy, liberality, and judgment as our noble President (the Marquis of Tweeddale). His numerous and valuable premiums have been arranged, not according to fancy, or for popular clap-trap subjects of superficial inquiry, but to throw light upon great questions by well-defined and carefully reported experiments. They have already produced most valuable information, and promise still farther additions to our knowledge on these subjects.

Farmers' Clubs.

LONDON: *Feb.* 1.—*The Malt Tax.*—At the first monthly meeting of this session, Mr. Williams, of Bayden, introduced this subject in an able paper, of which we give the following abridgment.

Mr. WILLIAMS said: In the observations I intend making, I shall confine myself to three points, namely: the hardships the tax inflicts on the working population; the injustice it causes to the occupier of the soil; and the injury the public generally sustain by an augmented price of our national beverage, and in all probability of the animal food they consume. You are all doubtless aware that Sir Fitzroy Kelly has written to the late Chairman of our Club, for all the information that we can give him respecting the result of feeding cattle, sheep, horses, &c., on malt. There is no doubt that, as far as these experiments have gone, they show that it is of the greatest importance to the public at large; and it must not be forgotten that the Chancellor of the Exchequer told the deputation that waited upon him in April last, that if we could produce beef and mutton 1*d.* per lb. less than at present by feeding on malt, that would weigh very much with the Government in favour of its repeal. But, except so far as regards the injustice of this measure in these days of "Free Trade," as it is called, to the British farmer—I look upon this last division of the subject as quite unimportant in comparison with the other two, inasmuch as with the public it is a matter of taxation only, while in the case of the British farmer it is a rank piece of injustice; and as regards the labourer and artisan, it doubly affects them, morally and physically, or in other words, both in body and soul.

(1). With respect to the hardships the labourer and artisan have to contend with, we must look into their cottages and contrast their present condition with what it ought to be, and see if we can lay the charge to the high duty on malt affecting their domestic comforts.

To do this, I will picture what I consider ought to be the happy and comfortable firesides of our cottagers. Fancy the duty abolished. Observe the young man who has just taken a wife: he sees the evil of the past, and wishes to steer for himself a fresh course; he finds, in these days of machinery and steam, that it is worth his while to become a first-class man, as he will thereby earn more money; he hires a cottage, and is about to become a family man; a pig fed from the offal of the cottage and garden, and perhaps from an allotment, and finished with two or three sacks of meal, graces the ceiling in the shape of two sides of bacon. A barrel of good wholesome beer, made from malt and hops only (as it would not pay to adulterate it), and served from the brewer (as it would not answer to brew it at home, and is much better and cheaper when brewed in large quantities), is to be found in the pantry. In the evening, after his day's work, whilst his wife is at her duty mending his clothes, or other work, he reads his Bible and his penny newspaper, smokes his pipe, has a chat with his neighbour, and has got a cup of good ale for himself and his friend, and Saturday night finds him by his own fire-side, making a better preparation for the Sabbath than we can point to under our present circumstances. Contrast this with the existing state of things, and say if such a case can be found, or if it is not an exception to the rule. I happened to form one of the deputation that waited on the Chancellor of the Exchequer last year, and in the observations that I made to him I said it was a serious fact that out of the three classes of society—the higher, the middle, and the lower—the two first having plenty of wine, spirits, and beer at command, it was patent to every one that the lower class, who had none of the necessaries of life at home, in the shape of beer as their national and natural beverage, were those who, as a rule, were most given to intoxication. Surely, it is not their poverty that causes it: as by the retail method they obtain what they have, it costs them more than any one else, and consequently less must fall to their share. But is it not that, lacking the comfort I have described, as natural to us all, they go where it is to be had, namely, to the beershop or publichouse. There, as we all know, they meet their boon companions: one pint calls for another, till this scene too often ends in drunkenness, and quarrelling is the result. Again, at what time does this happen? Generally, as a rule, on the eve of the Sabbath. When the workman takes his weekly pay is the time to settle scores, and to be jolly as I have described. But what a preparation for the next day! Is it any wonder that we find our churches and chapels so ill attended? Who form the bulk of our village population but the poor? and where are the majority of them to be found on the Sabbath day? Certainly not in the House of God.

A "Prize Essay," of 18 years ago, well illustrates the position of the labourer. The following is extracted by it from "Hansard," 1839:—"Mr. D. W. Harvey, page 845, stated the words of a labourer, James Kershaw, aged 91, examined before the Poor-law Committee. On being asked, 'Do you remember the condition of the labourer during your life?' He said, 'Yes; when I was married, I could have a bushel of malt for 2*s.* 6*d.*, and every poor person had a barrel of beer to drink instead of water, but it soon rose to 3*s.* 6*d.*' The question was put by Mr. Hodges, M.P. for Kent, 'Did the labouring man in former times used to brew as a general thing?'—'Yes.' 'How long have they left it off?'—'Ever since malt got to such a price that they could not buy it.' 'Do you know any poor man who brews his own beer now?'—'Not one.' 'Do you remember the rate of wages when malt was 2*s.* 6*d.* per bushel?'—'Yes, 1*s.* 4*d.* per day, or 8*s.* per week.'" I was truly glad to find such corroborative testimony to the observations I had previously made, although written some 18 years before. The evidence of James Kershaw is most valuable to our cause. If you look at his age (91), and the time his evidence was given (1839), it will show him to have been in the prime of life when the duty, in the year 1803, was at 4*s.* 5½*d.* per bushel; and he had too much reason to remember the cause of his ceasing to brew his barrel of beer. I will now conclude this part of my paper

by reiterating the charge, that the duty on malt has been the cause of the altered circumstances of our labouring population.

(2) Next, as regards the injustice done by the malt-tax to the British farmer.

(*a*) If we feed our cattle with malt, we have to pay a duty equal to two-fifths of the value of the Barley, or in these glorious days of "free-trade," we are prohibited from using it! I find, on looking at the returns in the *Mark Lane Express*, that in the year ending December 31, 1863, 65,054 quarters of malt were exported. Now, if malt is good as a condiment here, it is so abroad; and on what terms of equality do we stand with the foreigner, who gets the duty on these 65,054 qrs. of malt remitted, and can brew his beer and feed his cattle with malt untaxed, and then come into our markets and sell his corn at 1*s.* duty, and his cattle and sheep duty free? But this is not all. I suppose few people are aware of the quantity of beer that is sent abroad. The following statement will show the quantity exported in the last three years:

Years.	barrels	
1861	378,461	at a declared value of £1,411,205
1862	464,279	do. do. £1,594,308

For 1863, probably 468.845 barcels, value 1,679,126*l.* This shows an increase since 1861 of over a quarter of a million value of beer exported, where no duty is paid; whilst it has been a stationary matter at home ever since I can remember. I will suppose the duty allowed on this 1,679,126*l.*, value exported in the past year, to be one-fourth. The drawback will then amount to 419,781*l.* To this add the drawback on the 65,054 qrs. of malt exported, 70,474*l.*, and you will find 490,255*l.*, or nearly half a million, given to the foreigner, whilst the producer and consumer are obliged to pay the tax.

(*b*) Another glaring injustice is that the duty, not being an *ad valorem* one, confines the manufacture of malt to the best description of Barleys. The present season is well calculated to show to all those farmers who hugged the malt duty as their friend (because, generally growing a fine quality, it gave them a monopoly in the market), the injustice it is to all those who pay tithe, or a corn rent. The harvest of 1863 was, perhaps, one of the most curious ever known. Several farmers in this room can say, "I never had such a beautiful harvest in my life; I never got the produce together so well, and with so little trouble or expense;" whilst others, myself among the number, can say, "I never had (with the exception of 1860) a more dilatory or expensive affair." The effect of such a season is, that while the Midland and Eastern Counties carried their Barley without any rain, the whole of the West of England and the Northern Counties had their Barley very much stained and sprouted. I have taken the trouble to ascertain from the *Gazette* the average price of Barley from the 1st of September to the present time—20 weeks; and I say those farmers who had to contend with adverse weather in getting in their Barley crops will certainly not have much cause to rejoice that the malt duty, which renders their article almost unsaleable, or only to be disposed of at from 20*s.* to 28*s.* per qr., will be the means of their having to pay an average price of 33*s.* 8*d.* per qr. on their tithe, and, where so rented, on their corn rents; in fact, were it not that a very large quantity of the second-rate and inferior Barleys are ground up, and given to cattle and pigs—the glut on the market would be so great that the price would be whatever the buyer choose to offer. This of necessity affects the average price. I have often heard it remarked that the tail Wheat ought always to be sold, to keep down the average; but what is that in comparison with the Barley trade, where not only the tail, but a class of second-rate samples to an immense extent are never sold, and consequently never go into the returns? The result is that we pay tithe, &c., chiefly on the higher-priced Barleys, and the malt duty is the cause of it.

3. The last part of this subject to be considered is the effect which the tax has on the public generally. And this depends chiefly on the view taken as to whether they have to pay an additional price for their meat or their beer through the imposition of this tax.

There is no question as to the price of beer being increased to the public one-third at least; but how does the tax affect them with respect to the price of meat? As a matter of course, and as a rule, the cheaper cattle and sheep can be fed, the less money the public have a right to expect to pay for their meat, and, consequently, there should be no restriction as to the mode of feeding—no law taxing the raw material by which such beef and mutton can be made. Fortunately for the grazier, and unfortunately for the public, meat is now at a high price, and remunerating to those who produce it. But if there was taken into account the amount paid by the British farmers for 188,000 tons of foreign oilseed cakes, annually imported into Great Britain—for a portion of 1,401,603 qrs. of foreign Linseed annually converted into English cake, and for about 3,000,000 qrs. annually of Indian Corn and Maize, to say nothing of Locust Beans, Lentils, and a host of other feeding stuffs—all foreign productions—all this would make a wonderful drawback from the supposed profits of the farmer. The law of free imports has for the last four years, with three bad crops and one very excellent one, kept the price of Wheat so low, that it is become a losing game to grow it to any great extent. The farmer naturally asks himself, what he can plant as a substitute? and looking at the immense sums paid for the foreign productions I have just quoted, he feels satisfied there would be no end of the demand for Barley to any extent that it could be produced, if the malt-tax did not prevent its free and unlimited use. But as it is, he finds the quantity required for malting limited to about 5,000,000 quarters annually. However much the population has increased or may increase, he finds the law checking the sale of his second-rate Barley, by preventing its use for cattle in its most nutritious and profitable form; and whilst he is in this dilemma, the public are paying a most serious price for the beef and mutton they consume. To show that it is no idle supposition that Barley when changed in its nature from starch to sugar is superior to any other feeding stuff when mixed with other food, I will read to you quotations from letters that I have received from several of our most practical farmers who have tried it. In the case of the first letter, I cannot give the name of the writer, as he has requested me not to do so; but I believe you may entirely rely upon what is said.

Mr. Williams then read letters, which we shall give in our next week's paper, from Mr. Hudson, of Castle Acre; Mr. Sanday, of Holme Pierrepoint; Mr. C. Howard, of Bedford; Mr. Raincock, of Ongar; Mr. Mumford, of Needham Market; Mr. Stenning, of Godstone; Captain Davy, of Rose Ash; Mr. Luxton, of Wembworthy; Mr. Hobson, of Brigg, and a number of other gentlemen, stating their experience in the use of malt in feeding cattle and sheep, and he concluded as follows:—

These letters afford conclusive evidence of what the result would be were we at liberty to do "what we like with our own." The writers are most of them known to the agricultural world as practical men, and nothing but this "vile tax" as Mr. Hudson calls it, prevents malt coming into general use. Whereas the amount of English Barley sold during the past year, and entered in the *Gazette*, amounts to 2,487,661 qrs., the amount of foreign Barley imported into Great Britain and Ireland or the same period amounts to 2,058,756 qrs., or within 428,905 qrs. of the whole of the corn returns. Surely, if we have to compete with all this foreign produce we require our markets to be freed from the restriction of this confounded tax. I trust I have said sufficient to prove the damage the Malt-tax has been and is to the welfare of our country. The public at large are vastly injured by it. The occupiers of the soil suffer from its injustice to an extent that no other class in the kingdom would submit to, and there is not the slightest doubt but it has been the means from 1803 (when James Kershaw ceased to brew), of demoralising and corrupting the peasantry of England to an extent that is truly deplorable. And why should it be suffered any longer to exist? There is no man who can justify it, except for revenue; and will the country be so blind as to perpetuate such a blister for the sake of 5,000,000*l.*, which I have no hesitation in saying damages the kingdom to the extent of four times its amount. The loss of revenue was never considered when the customs duty was taken off corn. The revenue took its chance when the duties were reduced on the luxuries of the rich; the revenue was a secondary consideration when upwards of a million per annum duty was thrown off the paper manufacture; and I will venture to assert, that deprive the Chancellor of the Exchequer of the malt duty this session of Parliament, and he will have the ability and the tact to replace it to the satisfaction of the country at large. At all events, we have a duty to perform, and it is a straightforward and easy one if we are only united. We have fired the first shot, we are about to storm and besiege the citadel, and, as Sir Fitzroy Kelly told the Chancellor of the Exchequer, "We don't intend to raise the siege until he has surrendered." The course that we must pursue with our members of Parliament, is to ask them to demand of the Government "the total abolition of the malt-tax." Less than this will be of no use; the whole of the abominations would still remain, and we must tell those members who would represent our interest in the House of Commons, whether it be a Lord John Manners or a Newdegate, two men whom I highly esteem, or any one else, that unless they are prepared to vote that the whole of the tax be repealed, if no other candidate can be found to replace them at the next election, which is not far distant, some gentleman from the Manchester School shall be solicited to go the "whole hog" in "free trade." The county of Berks—in which I am a small freeholder, and therefore consider I have a right to look to its representation—is at present represented by two would-be "freetraders" and one Conservative. Now, strange as it may appear, the only true "freetrader" is the Conservative, Mr. Benyon. I cannot conclude without offering my thanks to Mr. Corbet and the other gentlemen who have written to me on the subject, for the trouble they have taken. I sincerely hope that those who discuss this subject will agree with me, that a partial repeal, although it may add to the consumption of beer, will be of no service whatever to remove the evils which I have mentioned; and therefore, as we have been taught to "agitate," we will do so till we obtain the total abolition of the malt tax.

MELPLAISH, DORSETSHIRE.—At the late monthly meeting of this Society, Mr. COX read an elaborate paper on the uses of science to agriculture, in which he referred to the labours of Mr. Huxtable, Mr. Mechi, and Mr. Wallace Fyfe, and especially to the "New System of Teaching Agriculture in the Face of Nature," a work recently published by the latter gentleman, and which was the lecturer's guide through the many topics presented to the agriculturist by the face of Nature during the successive months of the year. He concluded thus:—"I have had a multiplicity of subjects, but I have only desired to prove the importance of science in connection with agriculture. Either geology, chemistry, physiology, botany, meteorology, hydraulics or mechanics, would of itself form a subject, and therefore I cannot have done justice to either. I ask you now to discuss first—"Is not the system of binding farmers to a course of farming a pernicious one?" "Is it not desirable that in our rural agricultural schools more attention should be paid to the subject of agricultural science?"

On these questions the subsequent discussion turned. Mr. POPE, in answer to Mr. Cox's question, "Is not the system of binding farmers to a prescribed course of cropping a pernicious one?" said he concluded from his experience that it was. With lands in Netherbury, Broadwinsor, or any of the adjoining parishes, a restricted course of cropping could not be carried out profitably. Farmers would not find a return for their outlay as long as their holding of the land was as uncertain as it was at present, he was quite sure. It was remarked by some gentlemen that "they held too much land in proportion to their capital, and it would pay them better to improve the soil they had than to pay rates and taxes on a larger quantity." Perhaps that was correct, but he thought it would not be wise to expend much money on land, unless they could have a more lasting hold on it, so as to get a profit upon their outlay. Of course it was necessary for landlords to have protection. He once held his land of a lawyer, a class of gentlemen reputed to be very acute and sharp on all matters; and when he said to him, on taking the farm, "How about a lease?" his landlord remarked that "farmers never looked at their leases except on entering and leaving a farm." That was, he believed, true; but still that did not affect their holding of the land; and with the many uncertainties of life, such as change of ownership of the property and of stewards, it was very necessary that they should have greater security in the holding of the land than they now possessed. And next had to be considered, "How is this permanent tenure of land to be granted?" He agreed with the Duke of Richmond in objecting to the term "tenant-right," because a tenant had no more right than was given him by his landlord, but thought with him that they should get 21 years lease of their farms if they could. It was necessary for them to apply commercial principles to agricultural pursuits. They should know what per centage they got for their capital. He really thought that as a class farmers had to strain to the utmost to make both ends meet. He hoped they would not consider him egotistical in saying that he occupied two of the most important farms in the West of England, at a rental of from 1200*l.* to 1800*l.* a year; and having had long experience, thought he ought to know what should be the principles to govern men in investing their money in the occupation of land. He had come to the conclusion (he did not mean anything personal) that farmers did not get more than 6 per cent. on the average for the capital they employed. ("Not half of it") Six per cent. was not enough; they should have more to keep pace with the times. In conclusion, Mr. Pope said that he hoped they should ere long get a better tenure of the land than they now had; they only wanted fair play.

Mr. ELSWOOD thought, in reference to a remark that the landlord required protection, that the landlord of the farmer had a protection no other landlord had, for he could seize everything his tenant possessed. He held that it was not fair to compare the farmer with the manufacturer. With capital a manufacturer could extend his business as much as he pleased; but the farmer with a limited quantity of land could not do that. He coincided with Mr. Cox as to the advantages a knowledge of the various soils they cultivated would give them. By means of such knowledge they could apply that manure to the land best suited for it. A knowledge of chemistry would also be very advantageous. With regard to the steam plough, he remarked they all knew it could not be used in this district to advantage; for instance, it would cost more to get a steam engine to some of his fields than it would to plough them. He contended, in opposition to what Mr. Cox had said, that guano could be obtained at the present time as good and genuine as 25 years ago. At the same time he remarked that in purchasing both guano and seeds they had to depend in a great measure on the honour of the vendor. He confirmed Mr. Cox's statements as to the germination of seeds at stated temperatures. He had known Wheat to grow in a rick at 120° Fahrenheit.

Mr. HUSSEY, of Netherbury, had brought to the meeting several Swede Turnips of the Purple-top description that had become decayed without his being able to assign any cause, and they were shown to the meeting by him, with a view to ascertain it. Reference is made to these Turnips in another part of the paper.

Reviews.

Plans and Estimates for Labourers' Cottages. By Lady Caroline Kerrison. Hatchard & Co.

We have here a dozen large octavo pages of stiff paper tacked together with a single introductory paragraph, giving plans and elevations of single and double cottages and almshouses. There is sufficient material given for an estimate of cost, and in the simple elegance of the designs and well packed arrangement of the accommodation which they give there is sufficient evidence of the thorough fitness of the authoress for the benevolent work she has undertaken. The rough sketches, as the preface describes them, here collected, are "the result of some experience in a country district, and are designed to combine substantial comfort to the tenant with a moderate expense to the landlord. It is hoped that a cost so moderate may both enable and induce a great number of landed proprietors to effect that most desirable and in many cases much needed object—improved accommodation for the labourers on their estates." Nothing can be simpler or in better taste than the style of building here recommended; and an examination of the designs will show that Lady Kerrison has here made a very useful contribution to the efforts now being made to improve the condition of the labourer.

Miscellaneous.

Sour Beer.—In a two-hogshead cask we had about 56 gallons of very stale beer, turned by the thunder last summer, and not fit to drink. I drew it off, washed the cask out, and put in 2 lb. of calcined chalk, and the beer on the chalk. I let it stand three days, then brewed 56 gallons of beer with four bushels of malt and 6 lb. of hops (worked as usual), and put it into the cask with the stale beer. It has been done about a month, and now tastes very soft and pleasant. Master says it is a hogshead of beer gained.

To make Sugar Vinegar.—Put to 10½ gallons of water 10 lb. of brown sugar, boil it gently till no scum is on the surface, taking what does arise off with a skimmer; put it into an open tub or pail to cool, and when quite so add a tea-cupful of yeast, to put it into a fermentation; in three days put it into a cask, filling about two-thirds of it, which will cause it to acidify quicker. Place the cask in the sun with the bung-hole open, covering it with a coarse piece of muslin to prevent flies from getting into the liquor.

Composts.—In whatever way the materials of our dung heaps are gathered together, there is a considerable store accumulated by January; and as, during the frosts of winter, the land is fit for carting on, a good deal is generally carried to the fields this month. When cattle are fed in open yards, the dung may be either carried out now, or left till spring, and then turned over and made fit for application to the land at once. This, however, is a most wasteful practice; for the manure thus suffers the greatest possible exposure both to air and rain water. When cattle are fed in covered yards, such a method is economical and efficient enough; as the dung so made is not then exposed to the washing of rain water. When stall feeding is adopted, the soiled litter is thrown daily into the yard, either covered or open; or it is carried daily to the heap, and there covered with earth. When box feeding is adopted, the litter accumulates under the cattle, and the boxes are cleaned out only at intervals of months. It is then cut out and carted to the field, and either spread at once and ploughed in, or, if this cannot be done, carted to heaps in the fields where it is to be used. When carted together in January, the carts should be driven over the heap, which should be about 4 feet high. This treading down excludes air, and so checks the rotting process. Later in the season the carts are backed against the heap, which, lying more loosely together, ferments more rapidly, and so the sooner acquires that rotten texture which enables it to be easily buried under the surface, or perfectly mixed with the soil. In any case, in order to the retention both of the volatile and the soluble products of this fermentation, the heap should be laid upon a bed of loamy soil, about 6 inches deep, and covered with a layer of such

soil 3 or 4 inches thick: and when the heap is finally mixed together, before being carted out, this earth, rich with ingredients that would have been lost, should be mingled with the mass."

Calendar of Operations.

FEBRUARY.

WESTER ROSS: *Jan.* 25.—The weather for several weeks has been particularly seasonable. We have had a continuation of severe frost, with a slight covering of snow, which came very opportunely after the protracted wet season we previously had. The manure was comfortably carted from the cattle courts to the fields, the condition of the grain in the stackyard has been much improved, and the upturned soil will be found more friable, and better fitted for the production of another abundant crop. And now the storm has passed away quietly and comfortably, and as there was little rain, the fields are quite dry, and the ploughs are again at work breaking up the land for Oats and seeds, furrowing the land where the Turnips were eaten off by sheep. The autumn-sown Wheat is well above ground, and appears vigorous and closely planted, and should the weather continue fine as it now is, a considerable addition will be made to the breadth already sown by laying it down after Turnips. The winter having been favourable both sheep and cattle have been making satisfactory progress. It is quite astonishing to mark the improvement a lot of hoggs, when well attended to, make within three or four months after their arrival from their hill grazings. They reach the low country in the month of October, wearied with their journey, and very unpromising in appearance, but for some three weeks thereafter they are allowed a run of the pasture of the whole farm, which greatly strengthens and fits them for being transferred to the Turnip field. On being enclosed they take ill with confinement, a thing with which they had no previous acquaintance, and they are unwilling to take to their strange food, but a few days of want read them a lesson, and by and by Turnips become to them the most delicious food. In the month of March they leave us and return to their native hills, fat, and hale, and hearty; and now and then some of them again return to a second wintering, larger in bone, but not heavier than when they previously left. Our Turnips have been disappearing rapidly, and as a good many have been destroyed by the intensity of the frost, they will be very scarce ere the season of Grass comes. Potatos are abundant here, but they are all but unsaleable. The price is from 27*s.* to 30*s.* per ton, and at this low figure there is scarcely any demand. Grain also continues unusually low—so low, that the farmer who can make both ends meet may well count himself both rare and fortunate.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Thursday	Jan. 28	30.38	38	36	N.E.	0	10	48	36	57	31	
Friday	29	30.46	35	33	S.W.	1	10	41	23	55	16	
Saturday	30	30.34	36	34	S.W.	1	4	36	28	42	21	
Sunday	31	30.20	30	33	S.W.	1	0	42	30	47	23	
Monday	Feb. 1	30.15	48	47	S.W.	1	0	47	33	50	34	
Tuesday	2	30.03	48	46	W.	2	10	51	46	52	42	0.02
Wednesday	3											
Thursday	4											0.11

Notices to Correspondents.

ADDRESS: Mr. C. Smithies' letter has been forwarded to Mr. Hookyns,

SWIFT MILKING MACHINE: 142, *High Holborn*. Mr. Taylor's (Meatmore) note states that it does its work well, and that it may become a favourite with amateurs with a cow or two. We should fear, however, that a cow giving its milk by mere gravitation through the orifice of the teat would be taxed for the time by the insertion of a small tube—this being the principle of the invention—will be apt to waste its milk at other times without the aid of the artificial insertion.

DRESSING: *Forester*. Instead of 2 cwt. of guano and 1 cwt. of salt, we should prefer 1 cwt. of guano, 2 cwt. of superphosphate, and 2 cwt. of salt mixed up in mould and soaked with liquid manure and turned repeatedly under cover. The mixture ought to be applied as soon as it has thoroughly fermented and rotted. It will benefit Grass and Clovers. For Swedes the Peruvian guano without the bones will be preferable.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE, Address 89, Seed Market, Mark Lane; or Basingstoke.

Samples and prices on application.

THE LONDON MANURE COMPANY have now ready

PREPARED BONE MANURE for present use on PASTURES.
WHEAT MANURE for AUTUMN SOWING.
BLOOD MANURE for ditto.
SUPERPHOSPHATES of LIME, &c.

All the above being in the finest condition. They also continue to supply

GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, and every Artificial Manure of known value. E. PURSER, Secretary.

116, Fenchurch Street, E.C.

LAWES'S MANURES.

The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per Ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES ..	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American and other Cakes at market prices.

Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

ODAMS'S BLOOD MANURE for CORN.
ODAMS'S BLOOD MANURE for ROOTS.
ODAMS'S SUPERPHOSPHATE of LIME.

MANUFACTURED BY THE PATENT

NITRO-PHOSPHATE or BLOOD MANURE COMPANY (LIMITED). Consisting of TENANT FARMERS, occupying upwards of 30,000 acres of land.

Chairman: JOHN CLAYDEN, Littlebury, Essex.

Managing Director: JAMES ODAMS.

Particulars of these Standard Manures may be obtained at the Offices.

C. T. MACADAM, Secretary, or of the local Agents.

Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow, Essex.

To Seed Merchants and Nurserymen.

SAYNOR AND COOKE, PRUNING and BUDDING KNIFE MANUFACTURERS, beg respectfully to say that they WILL NOT BE UNDERSOLD by any House in the Trade. They also warrant one of their Knives to last two of any other make.

Paxton Works, Sheffield.

Glass Tiles.

JAMES PHILLIPS AND CO. beg to hand their Prices of GLASS TILES and SLATES for Farm Buildings, Sheds, &c.

GLASS SLATES.

WITH DRILLED HOLES. Size.	ROUGH PLATE. ¼ inch thick.	ROUGH PLATE. 3/16 inch thick.	ROUGH PLATE. ¼ inch thick.	SHEET. 16 oz.	SHEET. 21 oz.	SHEET. 26 oz.	SHEET. 32 oz.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Duchess .. .. 24 by 12	1 8	1 6	1 9	0 9	1 1	1 4	1 8
Small Imperials .. 20 „ 14	1 2	1 5	1 8	0 8	1 0	1 3	1 7
Small Duchess .. 22 „ 12	1 2	1 5	1 8	0 8	1 0	1 3	1 6
Countess .. .. 20 „ 10	0 11	1 1	1 3	0 7	0 10	1 0	1 3
Viscountess .. 18 „ 10	0 10	1 0	1 1	0 6	0 9	0 11	1 1
Large Ladies .. 16 „ 10	0 9	0 11	1 0	0 6	0 8	0 10	1 0
Ladies .. .. 16 „ 8	0 8	0 9	0 10	0 5½	0 7	0 8	0 10
Doubles .. .. 13 „ 7	0 6	0 7	0 8	0 5	0 6	0 7	0 8

GLASS TILES.

ROUGH PLATE.	Each—*s. d.*	SHEET.	Each—*s. d.*
¼ inch thick	0 10	16 ounce	0 6
3-16 inch thick	0 11	21 ounce	0 8
⅛ inch thick	1 0	26 ounce	0 10
5/16 inch thick	1 6	32 ounce	1 0
⅜ inch thick	2 0		

GLASS TILES, quarter of an inch thick, Packed in Cases containing 50. 1*l.* 18*s.* 6*d.* per Case nett.

3-16 inch Case of 60 £2 2 3 | ⅛-inch Case of 60 .. £1 17 6

Cases, 2*s.* each extra, returnable at full price.

Glass Tiles and Slates will be found invaluable for Outhouses, Farm Buildings, Stables, and Factories.

London Agents for Hartley's Improved Patent Rough Plate.

Linseed Oil, Genuine White Lead, Carson's Paints, Paints of various colours ground ready for use.

180, Bishopsgate Street Without, London, E.C.

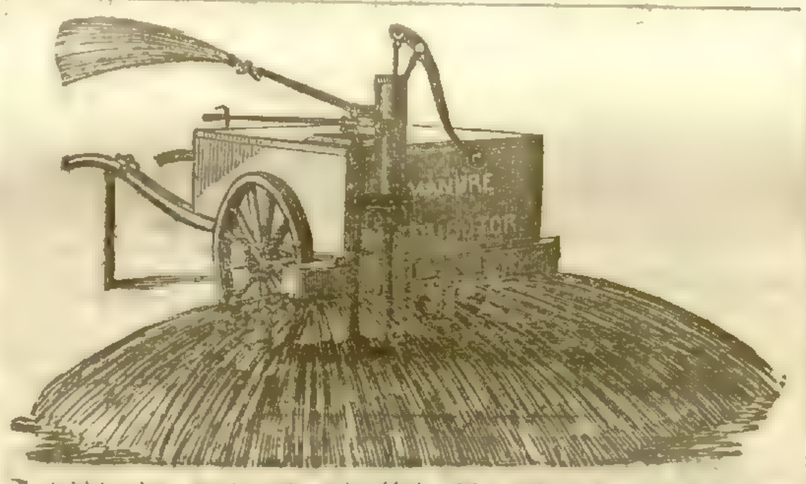

JAMES'S FIRST PRIZE MANURE CART has been Awarded 20 PRIZES. Is now fitted up to answer for LIQUID MANURE, for Supplying the STEAM PLOUGH, for WATERING STREETS, or for a FIRE ENGINE. Nearly 300 already sold.

Washing.

The last great improvement in Washing Machines is in JAMES'S new Patent PRIZE WASHING, WRINGING, and MANGLING MACHINES, awarded several FIRST PRIZES. Will Wash 20 Shirts in 20 Minutes, with much less injury than with the hand. More than 300 Sold.

Address, I. JAMES, Tivoli Works, Cheltenham.

MR. J. KER, ESTATE and HOUSE AGENT, SURVEYOR, and LANDSCAPE GARDENER, undertakes the Management of Property generally, the Collection of Rents, the Planning and Laying-out New Grounds; Planting, Reclaiming, and Draining Land, Erection of Cottages and Farm Buildings, &c. Plans and Specifications for Contracts, &c.

No. 17, Connaught Terrace, Marble Arch, W.

ESTATE IMPROVING.—JOSEPH NEWTON undertakes the General Management of Land, Garden Architecture, Laying-out Grounds, Draining Improvements, &c.

Address for Foreman of Works, reference and terms, 30, Eastbourne Terrace, W.

Paxton Works, Sheffield, Established 1738.

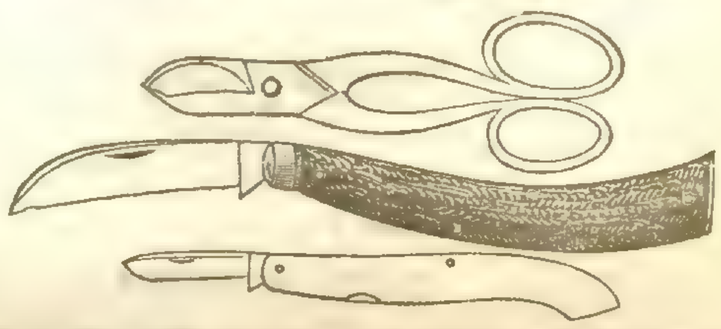

INTERNATIONAL EXHIBITION PRIZE MEDAL WAS AWARDED TO SAYNOR & COOKE FOR SUPERIORITY OF QUALITY IN PRUNING AND BUDDING KNIVES, &c.

SAYNOR AND COOKE'S celebrated English and French Exhibition PRIZE PRUNING KNIVES, &c., can be obtained of any respectable Nurseryman or Seed Merchant in the three kingdoms, all Knives warranted both by the Seller and Maker.

CAUTION.—None are genuine unless marked SAYNOR. Other marks would cause disappointment, as these Knives are tempered by an improved process known only to the Makers.

Iron Works.

COTTAM AND CO., 2, Winsley Street, Oxford Street, London, W.

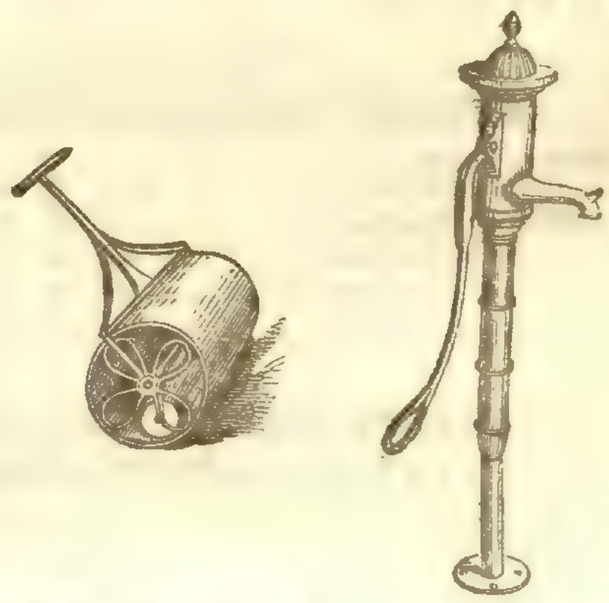

COTTAM & Co. manufacture all kinds of Implements and Machines for Garden and Horticultural purposes, Verandahs, Greenhouses, Conservatories, Hot water Apparatus, &c.; Iron Fencing, Gates, and Hurdles.

Illustrated Catalogues free of COTTAM & Co., Iron Founders, &c., 2, Winsley Street (opposite the Pantheon), Oxford Street, London, W.

NEW IMPROVED PREMIUM WIRE NETTING.

Great Improvement with Reduced Price.

PRICES PER LINEAL YARD 24 INCHES HIGH.

Size of Mesh.	Mostly used for.	Light. Jap	Light. Gal	Medium Jap	Medium Gal	Strong. Jap	Strong. Gal.	Extra Strong. Jap	Extra Strong. Gal.
		s. d	*s. d.*	*s. d.*	*s. d.*	*s. d*	*s. d*	*s. d*	*s. d.*
2½ in.	Hares, Dogs, Poultry ..	0 3	0 4	0 3¾	0 5	0 4½	0 6	0 5½	0 7
2 in.	Game or Poultry Netting ..	0 3½	0 4¼	0 4	0 5	0 5	0 6½	0 6½	0 8
1⅝ in.	Small Rabbits, Hares, &c. ..	0 4	0 4¾	0 4¾	0 6	0 5½	0 7	0 7	0 9
1½ in.	Smallest Rabbits	0 5	0 6	0 5¾	0 7	0 7	0 9	0 9	0 11
1 in.	Pheasantries, &c.	0 9	0 11	10½	1 1½	1 3	1 6	1 9	2 0
½ in.	Aviaries, &c. ..	1 0	1 3	1 3	1 6	1 6	1 9	..	..

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland and Ireland.

*** Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally.

IRON HURDLES, CONTINUOUS BAR FENCING, IRON and WIRE FENCING, FENCING WIRE, FIELD and ENTRANCE GATES, GARDEN ENGINES, GARDEN ROLLERS, GARDEN SEATS and CHAIRS, CAST IRON VASES, and every description of HORTICULTURAL and AGRICULTURAL MACHINES, TOOLS, and appliances.

Lists Free on application. Every article guaranteed to be satisfactory.

J. B. BROWN & Co., 18, Cannon Street, City, London, E.C.

Oil Paint no longer Necessary.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.

Sold in casks of about 30 gallons each, at 1*s.* 6*d.* per gallon, at the Manufactory, or 1*s.* 8*d.* per gallon paid to any Station in the kingdom.

Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street, E.C., from whom only it can be obtained.

SHANKS' NEW IMPROVED PATENT

LAWN MOWING, ROLLING, COLLECTING, and DELIVERING MACHINE for 1864.

Important Improvements, combining efficiency with simplicity of construction, have been introduced into Shanks' Lawn Mowers for the ensuing season.

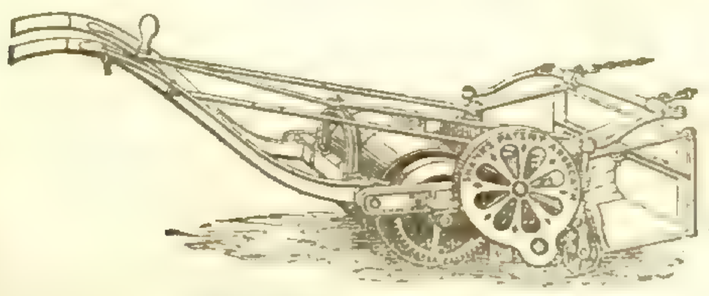

HORSE MACHINE.

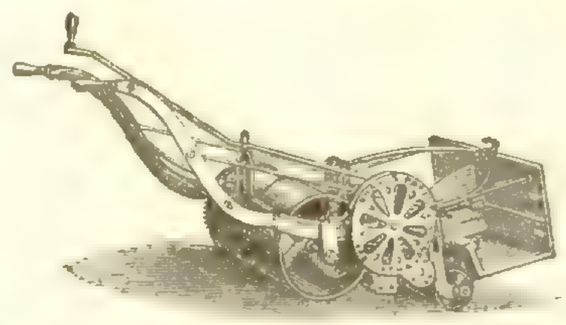

PONY MACHINE.

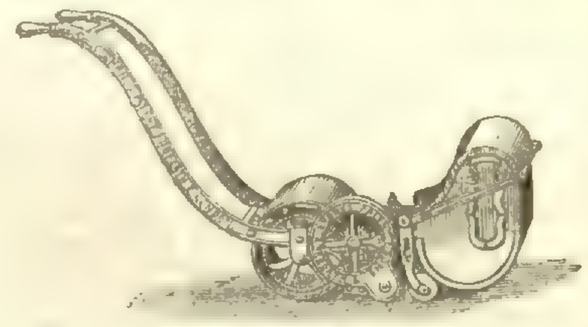

HAND MACHINE.

MOWS ON UNEVEN AS WELL AS ON LEVEL LAWNS, AND WHETHER THE GRASS BE WET OR DRY.

Extract from the Letter of Mr. R. GARRETT, Leiston Works, which appeared in the *Gardeners' Chronicle* of 16th January last, on "The Prize System":—

"I have known several good Standard Implements entirely spoiled by the principle being so interfered with in order to make it look a novelty year after year, and to win a prize with it, so long as we could show something different in it, till at last we had to go back to the original Implement, and give up the prize gaining."

ALEXANDER SHANKS & SON can only attribute the universal satisfaction and complete success which has attended the introduction of their PATENT LAWN MOWERS, to their strict adherence to practical utility and simplicity of construction in the design and manufacture of their celebrated Machines.

A. S. & SON have for a quarter of a century devoted their attention to the Improvement and Manufacture of LAWN MOWERS; the demand for their Machines is now unprecedented, and out of the many thousands of Machines they have manufactured and sold, they cannot point to a single instance where they have not given every satisfaction. A. S. & SON have further improved their PATENT LAWN MOWERS for this season, and have no hesitation in saying that their Machines are still, as they have always proved themselves to be, unequalled for the qualities that constitute a really good LAWN MOWER fit for the hands of the Gardener.

PRICES, including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.		If with Patent Delivering Apparatus.
No. 1.—48-inch Machine	£28 0 0	... ... 40*s.* extra.
No. 2.—42-inch Machine	26 0 0	... ... 40*s.* „
No. 3.—36-inch Machine	22 0 0	... ... 30*s.* „
No. 4.—30-inch Machine	19 0 0	... ... 30*s.* „

Silent Movement, 20*s.* extra; Boots for Horses' Feet, 24*s.* per set.

SHANKS' NEW PATENT PONY and DONKEY MACHINE.

Width of Cutter.		If with Patent Delivering Apparatus.
No. 5.—30-inch Machine	£15 15 0	... ... 30*s.* extra.
No. 6.—28-inch Machine	14 10 0	... ... 30*s.* „
No. 7.—25-inch Machine	12 10 0	... ... 25*s.* „

Silent Movement, 12*s.* 6*d.* extra; Boots for Pony, 21*s.* per set;
Ditto for Donkey, 16*s.* per set.

SHANKS' NEW PATENT HAND MACHINE,

For Pushing or Drawing, Separately or Together.

Width of Cutter.		
No. 8.—24-inch Machine	£8 17 6	*Easily Worked by Two Men.*
No. 9.—22-inch Machine	8 7 6	
No. 10.—19-inch Machine	7 12 6	*Ditto by a Man and Boy.*
No. 11.—16-inch Machine	6 12 6	*Easily Worked by a Man.*

Silent Movement, 7*s.* 6*d.* extra.

SHANKS' NEW PATENT HAND MACHINE,

For Pushing only.

Width of Cutter.		
No. 12.—14-inch Machine	£5 10 0	*Easily Worked by a Boy.*
No. 13.—12-inch Machine	4 10 0	*Ditto by a Lady.*
No. 14.—10-inch Machine	3 10 0	

Silent Movement, 4*s.* extra.

A. S. & SON have pleasure in submitting the following List from among the hundreds of distinguished individuals, both in this country and abroad, whose patronage they have had the honour to receive:—

HER MOST GRACIOUS MAJESTY THE QUEEN,

For the Royal Gardens at Kew, Windsor, Buckingham Palace, Hampton Court, Osborne, and Balmoral.

HIS MAJESTY THE EMPEROR OF THE FRENCH
HIS ROYAL HIGHNESS THE PRINCE OF PRUSSIA
HIS GRACE THE ARCHBISHOP OF CANTERBURY
HIS EXCELLENCY THE LORD-LIEUTENANT OF IRELAND
HIS EXCELLENCY THE BELGIAN MINISTER
HIS GRACE THE ARCHBISHOP OF YORK
THE RIGHT HON. LORD PALMERSTON.

His Grace the Duke of Bedford
His Grace the Duke of Newcastle
His Grace the Duke of Marlborough
His Grace the Duke of Rutland
His Grace the Duke of Sutherland
His Grace the Duke of Buccleuch
His Grace the Duke of Devonshire
His Grace the Duke of Leinster
His Grace the Duke of Atholl
His Grace the Duke of Norfolk
His Grace the Duke of Hamilton and Brandon
His Grace the Duke of Argyll
His Grace the Duke of Northumberland
His Grace the Duke of Roxburgh
His Grace the Duke of Wellington
His Grace the Duke of Buckingham
The Most Hon. the Marquis of Winchester
The Most Hon. the Marquis of Exeter
The Most Hon. the Marquis of Breadalbane
The Most Hon. the Marquis of Westminster
The Most Hon. the Marquis of Lansdowne
The Most Hon. the Marquis of Stafford
The Most Hon. the Marquis of Kildare
The Most Hon. the Marquis of Abercorn
The Most Hon. the Marquis of Londonderry
The Most Hon. the Marquis of Ailsa
The Most Hon. the Marquis of Tweeddale
The Most Hon. the Marquis of Aylesbury
The Right Hon. the Earl of Leicester
The Right Hon. the Earl of Camperdown
The Right Hon. the Earl of Shannon
The Right Hon. the Earl of Abergavenny
The Right Hon. the Earl of Morley
The Right Hon. the Earl of Durham
The Right Hon. the Earl of Lauderdale
The Right Hon. the Earl of Home
The Right Hon. the Earl of Harrington
The Right Hon. the Earl of Carnarvon
The Right Hon. the Earl of Northesk
The Right Hon. the Earl of Glasgow
The Right Hon. the Earl of Stamford and Warrington
The Right Hon. the Earl of Aberdeen
The Right Hon. the Earl of Aberdour
The Right Hon. the Earl of Ashburnham
The Right Hon. the Earl of Haddington
The Right Hon the Earl of Cawdor
The Right Hon. the Earl of Denbigh
The Right Hon. the Earl of Galloway
The Right Hon. the Earl of Hopetoun
The Right Hon. the Earl of Mansfield
The Right Hon. the Earl of Milltown
The Right Hon. the Earl of Selkirk
The Right Hon. the Earl of Winchilsea
The Right Hon. the Earl of Zetland
The Right Hon. the Earl of Minto
The Right Hon. the Earl of Kintore
The Right Hon. the Earl of Seafield
The Right Hon. the Earl of Southesk
The Right Hon. the Earl of Kinnoul
The Right Hon. the Earl of Airlie
The Right Hon. the Earl of Bessborough
The Right Hon the Earl of Brownlow
The Right Hon. the Earl of Howe
The Right Hon. the Earl of Lindsey
The Right Hon. the Earl of Rothes
The Right Hon. the Earl of Ranfurly
The Right Hon. the Earl of Shrewsbury and Talbot
The Right Hon. the Earl of Strathmore
The Right Hon. the Earl of Rosslyn
The Right Hon. the Earl of Harrowby
The Right Hon. the Earl of Westmoreland
The Right Hon. the Earl of Dalhousie
The Right Hon. the Earl of Portarlington
The Right Hon. the Earl of Kilmorey
The Right Hon. the Earl of Dartmouth
The Right Hon. the Earl of Guildford
The Right Hon. Earl Spencer
The Right Hon. Earl Fortescue
The Right Hon. Earl Vane
The Right Hon. Earl Nelson
The Right Hon. the Countess of Stair
The Right Hon. Countess de Morella
The Right Hon. Viscount Seaham
The Right Hon. Viscountess Castlereagh
The Right Hon. Viscount Duncan
The Right Hon. Viscount Eversley
The Right Hon. Viscount de Vesci
The Right Hon. Viscount Boyle
The Right Rev. the Lord Bishop of Durham
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The Right Rev. the Lord Bishop of Killaloe
The Right Hon. Lord Bagot
The Right Hon. Lord Monck
The Right Hon. Lord Hatherton
The Right Hon. Lord Kinnaird
The Right Hon. Lord Lovat
The Right Hon. Lord Rollo
The Right Hon. Lord Braybrooke
The Right Hon. Lord Blantyre
The Right Hon. Lord Berwick
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The Right Hon. Lord Churchill
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The Right Hon. Lord Portman
The Right Hon. Lord Vernon
The Right Hon. Lord Willoughby de Broke
The Right Hon. Lord Cremorne
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The Right Hon. Lord Elibank
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The Right Hon. Lord Ashtoun
The Right Hon. Lord Hume
The Right Hon. Lord Stanley
The Right Hon. Lord James Murray
The Right Hon. Lord Berners
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The Right Hon. Lord Rivers
The Right Hon. Lord Taunton
The Right Hon. Lord Oranmore
The Right Hon. Lord Wharncliffe
The Right Hon. Lord Crewe
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The Right Hon. Lord Lilford
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The Hon. Major Murray
The Hon. Chief Baron Sir Frederick Pollock
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Shanks' Patent Lawn Mowers require less power to work them than any other, are all warranted to give satisfaction, and if not approved of may be at once returned.

PATENTEES AND SOLE MANUFACTURERS:

ALEXANDER SHANKS AND SON, DENS IRON WORKS, ARBROATH, N.B.

LONDON OFFICE and SHOW ROOMS, 27, LEADENHALL STREET, E.C.

A Stock of Lawn Mowers always kept at the London Depot, from which orders can be at once executed.

Unadulterated Choice Seeds.

ROBERT PARKER begs to announce he can supply a few pounds of each of the undermentioned, price of which will be forwarded on application:—

CUSTARD VEGETABLE MARROW.
LOBELIA ERINUS SPECIOSA.
LEEK HYBRID PRIZE (HENRY'S), the largest and finest in cultivation.
LETTUCE MOOR PARK, the best Brown Cos in cultivation.

A NEW PRICED and DESCRIPTIVE SEED and PLANT CATALOGUE is published, and will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

RICHARD SMITH'S FRUIT LIST contains a sketch of the various forms of Trees, with Directions for Cultivation, Soil, Drainage, Manure, Distance, Pruning, Lifting, Cropping, Treatment under Glass; also their synonymes, quality, size, form, skin, colour, flesh, flavour, use, growth, duration, season, price, &c. Free by Post for one stamp.

RICHARD SMITH, Nurseries, Worcester.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE, Address 89, Seed Market, Mark Lane; or Basingstoke. Samples and prices on application.

Blight.

BROWN'S PATENT FUMIGATOR.—A Portable Instrument for Fumigating Greenhouses, Stoves, and Frames, or Shrubs and Flowers in the open air, without injuring the most delicate plant; delivering the smoke cold, in a dense mass, and effecting a great saving of Tobacco. Price 10*s.* and upwards.

Manufactured and supplied to the Trade by Messrs. BARBER & GROOM, London; and may be had of all Ironmongers, Seedsmen, and Florists.

Sticks and Tallies.

F. A. HAAGE'S, JUN., PRUSSIAN WOOD GARDEN STICKS and TALLIES, Commended by the Royal Horticultural Society, may be had of all sizes, Wholesale of BETHAM & BLACKITH, Cox's Quay, Lower Thames Street, E.C., and Retail of all the Nurserymen and Seedsmen in London and the Provinces.

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PREPARED BONE MANURE for present use on PASTURES.
WHEAT MANURE for AUTUMN SOWING.
BLOOD MANURE for ditto.
SUPERPHOSPHATES of LIME, &c.

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116, Fenchurch Street, E.C.

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ODAMS'S BLOOD MANURE for ROOTS.
ODAMS'S SUPERPHOSPHATE of LIME.

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Chairman: JOHN CLAYDEN, Littlebury, Essex.
Managing Director: JAMES ODAMS.

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C. T. MACADAM, Secretary, or of the local Agents.
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American and other Cakes at market prices.

Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

REIGATE SILVER SAND, 7*s.* 6*d.* per ton; packed, 16*s.* per ton; delivered to Reigate Railway Station. PEAT SOIL of various kinds, LOAM, BOG MOULD, &c. N.B.—Loaded trucks can be sent on all the principal Railways, and to Angerstein Wharf, Thames.

W. SHORT, Sand and Peat Depot, Reigate, Surrey.

COCOA-NUT REFUSE, delivered within 2½ miles of Charing Cross, at 2*s.* per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. BARSHAM & Co.

BARSHAM'S BRUSHES and MATS are sold in every town.

CAUTION.—Every Brush is stamped. J. BARSHAM'S Patent

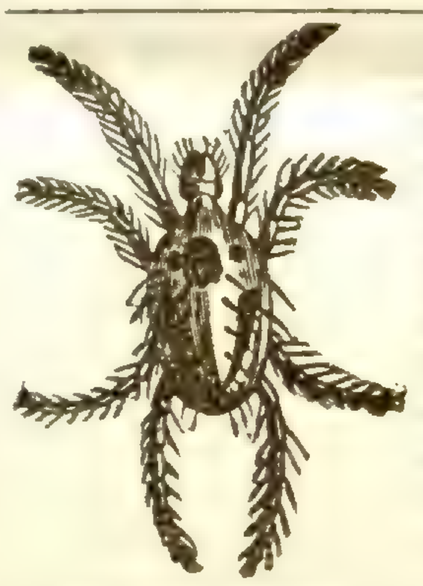

Red Spider Magnified.

GISHURST COMPOUND, whether used against Insects and Mildew, on Growing Plants, or as Winter Dressing on Trees at rest, should be dissolved 48 hours before use. This gets rid of smell, and if the Solution be decanted, prevents any staining of foliage. A strength of from 1 to 2 oz. to the gallon of water is recommended for growing Plants; one from 4 to 16 oz. for Trees at rest.

Sold Retail by Nurserymen and Seedsmen, in boxes, 1*s.*, 3*s.*, and 10*s.* 6*d.* each.

Wholesale by
PRICE'S PATENT CANDLE COMPANY (Limited).

SEVERE FROST.

IMPORTANT NOTICE.

IT IS WITH FEELINGS OF CONSIDERABLE PLEASURE, MINGLED WITH A SANGUINE DESIRE TO ADVANCE THE BEST INTERESTS OF THE HORTICULTURAL WORLD, THAT

JOHN WEEKS & COMPANY

EMBRACE THIS SEASONABLE OPPORTUNITY OF CALLING SPECIAL ATTENTION TO THE STORE OF USEFUL AND PRACTICAL INFORMATION TO BE OBTAINED BY PAYING AN EARLY VISIT TO THE UNDERMENTIONED ESTABLISHMENTS, WHERE THEIR MARVELLOUS AND EFFICIENT

ONE-BOILER SYSTEM of HEATING by HOT-WATER

MAY BE SEEN IN SPLENDID OPERATION.

The number of BOILERS and FURNACES removed from these various Establishments to be substituted by WEEKS'S ONE-BOILER SYSTEM, range from 8 to 22. Thus, in one instance the labour and fuel of 21 fires becomes a complete saving.

The Principal Establishments are:—

THE ROYAL HORTICULTURAL SOCIETY, LONDON
THE ROYAL BOTANIC SOCIETY, REGENT'S PARK, LONDON
THE ROYAL BOTANIC SOCIETY, DUBLIN
THE ROYAL BOTANIC SOCIETY, LIVERPOOL
THE ROYAL ZOOLOGICAL SOCIETY, LONDON
THE CRYSTAL PALACE, SYDENHAM
MESSRS. E. G. HENDERSON AND SON, WELLINGTON ROAD
ARTHUR HENDERSON AND CO., PINE APPLE NURSERY, EDGWARE ROAD
MESSRS. F. AND A. SMITH, DULWICH
MR. WOODROFFE, HARROW ROAD
MONS. LOUIS VAN HOUTTE, GHENT
MESSRS. JAMES DICKSON AND SONS, CHESTER
" F. AND A. DICKSON AND SONS, CHESTER
" WOOD AND SONS, UCKFIELD
" WOOD AND INGRAM, HUNTINGDON
ST. THOMAS'S HOSPITAL, LONDON
WHITECHAPEL UNION
MESSRS. WEEKS'S SHOW ESTABLISHMENT, CHELSEA

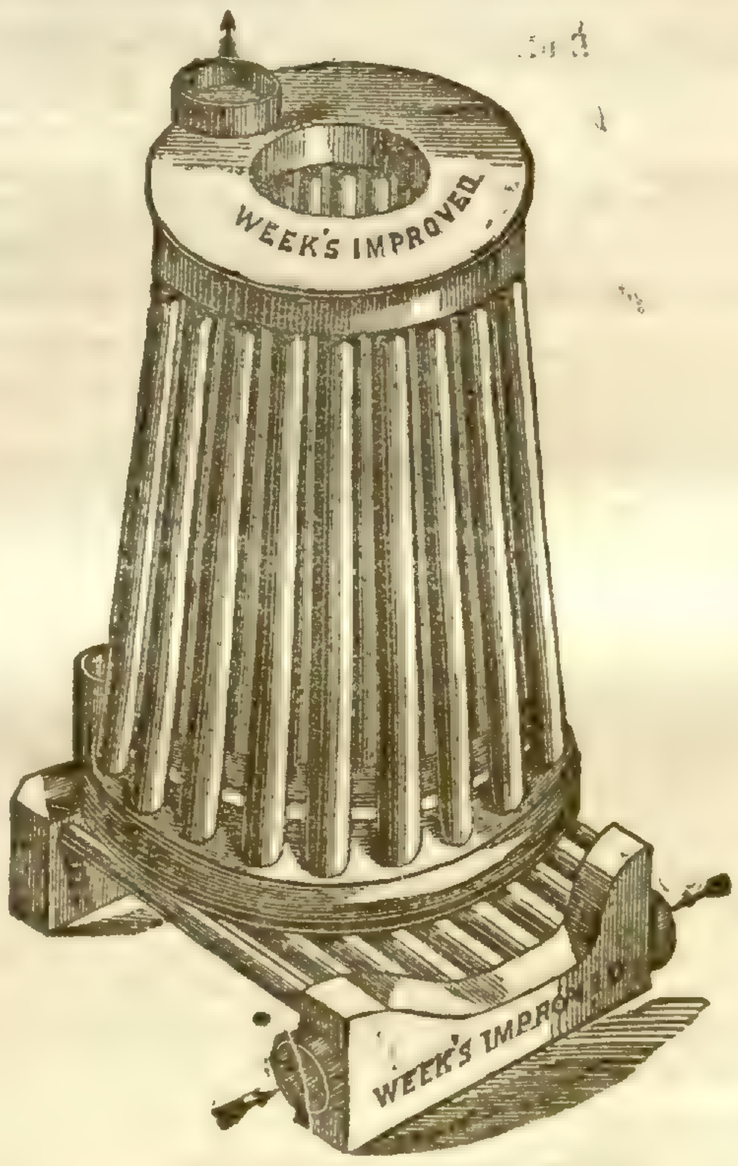

J. WEEKS & Co. unhesitatingly aver that for magnitude and efficiency, and heated by one fire, a parallel to the various apparatuses at the above is not to be found in the United Kingdom.

At the CRYSTAL PALACE their New No. 6 BOILER is Heating an equivalent to nearly 20,000 feet of 4-inch piping—a feat hitherto unheard of, and certainly not to be accomplished by any other than WEEKS'S ONE-BOILER SYSTEM.

CATALOGUES, PLANS, AND ESTIMATES FREE.

J. WEEKS AND COMPANY, HORTICULTURAL BUILDERS and HOT-WATER APPARATUS MANUFACTURERS, KING'S ROAD, CHELSEA, S.W.

Seeds Carriage Free.

J. DOBSON AND SONS' CATALOGUE for 1864 is now ready, gratis and Post-free.

VEGETABLE SEEDS, best quality, 300 sorts.
FLOWER SEEDS, best quality, 400 varieties.
FARM SEEDS, best quality.

Woodlands Nursery, Isleworth, W.; and High Street, Hounslow, W.

Seeds, Carriage Free.

WILLIAM CUTBUSH AND SON'S PRICED CATALOGUE of GARDEN and FARM SEEDS is ready. Post-free on application.

The name their house has obtained during many years past, is a sufficient guarantee for the quality of the goods offered.

Highgate Nurseries, London, N.

JOHN CATTELL'S DESCRIPTIVE CATALOGUE of SEEDS for 1864 is now ready, and contains select lists only of

SEEDS for the KITCHEN GARDEN,
SEEDS for the FLOWER GARDEN,
SEEDS for the FARM.

And will be forwarded, Post-paid, on application.

Nursery and Seed Establishment, Westerham, Kent.

West Riding Seed Establishment, St. John's, Wakefield.

THE PROPRIETORS beg to announce they have received their new supply of VEGETABLE SEEDS, which have been tested, and will be found to be genuine. Their supply of FLOWER SEEDS comprises all the Novelties of the present season.

CATALOGUES will be forwarded free on application to WILLIAM BARRATT.

Vegetable and Flower Seeds

OF THE VERY BEST, INCLUDING MANY NEW VARIETIES.

WM. B. JEFFRIES is now sending out his 21*s.* Collections of VEGETABLE SEEDS, for a whole year's supply, which have given general satisfaction the last 10 years, including 20 packets of choice FLOWER SEEDS, or half the quantities, 10*s.* 6*d.*

CATALOGUES of PLANTS, SEEDS, &c., free for two stamps. Arboretum Nurseries, Ipswich.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well-assorted Collections of EXOTIC ORCHIDS, FERNS, Miscellaneous STOVE and GREENHOUSE PLANTS, Variegated and Ornamental FOLIAGED PLANTS, TREE FERNS, &c., amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE, with a list of Beck's New and Choice PELARGONIUMS, Post free to all applicants.

Paradise and Victoria Nurseries, Holloway, London, N.

CONIFERÆ.—ARAUCARIA IMBRICATA. 14 ft. high; PICEA PINSAPO, 12 feet high; WELLINGTONIA GIGANTEA, 8 feet high, with about 170 other select species and varieties of all sizes and prices.

W. SHORT, Salesman, Reigate, Surrey.

Dodecatheon elegans.

DOWNIE, LAIRD, AND LAING have to offer 6000 of the above, at 30*s.* per 100. Price to the Trade on application.

17, Frederick Street, Edinburgh; and Stanstead Park, Forest Hill, London, S.E.

Picea nobilis.

WILLIAM BARRON can supply strong and remarkably well-rooted Seedling Plants of this lovely FIR, from 2 to 4 inches, in store pots. Per 100, 60*s.*; per doz., 9*s.*, including package.

Elvaston Nurseries, Derby.

BERBERIS DARWINI, Lawn and Cover.—Too much cannot be said of this fine evergreen species; it is hardy, and the profusion of its orange-coloured blossoms, together with the quantity of berries which it bears (of which pheasants are very fond), render it one of the most attractive and desirable plants for lawn as well as cover planting ever introduced.

W. BARRON can supply strong and well-rooted plants of the above.

1 to 2 feet .. per 100, 20*s.* | 2 to 3 feet .. per 100, 30*s.*

Elvaston Nurseries, Derby.

The Japanese Nurseries, Biggleswade, Beds.

DEUTZIA CRENATA.—This magnificent Double Red Deutzia, just imported from Japan by Mr. ROBERT FORTUNE; the greatest novelty ever offered. Strong plants now ready from 18*s.* to 30*s.* per dozen. Also all the new JAPANESE CHRYSANTHEMUMS. Strong plants ready March 1, from 12*s.* per dozen. Catalogues of all the Novelties from Japan, gratis, now ready.

THOMAS AYRES.

LOUIS VAN HOUTTE, NURSERYMAN and SEEDSMAN, Ghent, Belgium, begs to call attention to his Four New PRICE LISTS, No. 97, 98, 99, and 100, containing the Stove, Greenhouse, Hardy Plants, Seeds (262 pages 12mo).

Agents in London: Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, E.C.

To the Trade.—Continental Flower Seeds, &c.

F. W. WENDEL, SEED MERCHANT, &c., Erfurt, Prussia, begs to announce that his WHOLESALE CATALOGUE of the above is now ready, and will be forwarded free on application to his Agent, GEO. MACINTOSH, Nurseryman, High Road, Hammersmith, W., to whom all communications should be addressed

Double Italian Tuberose Roots, 4s. per Dozen.

A. COBBETT, FOREIGN WAREHOUSE, 18, Pall Mall, W., has the pleasure to inform all Amateurs and Gardeners that he has just received from Italy his usual Annual Importation of this beautiful and fragrant Flower; and has much pleasure in announcing that the Roots are very large, and in splendid condition.

N.B. Directions for Planting sent with each order.

Asters, Stocks, Wallflowers.

JAMES TYNAN'S importation of the above and other Select CONTINENTAL FLOWER SEEDS is now ready, and consists of none but first-class varieties, such as have previously given so much satisfaction to those who have grown them.

An extensive assortment of other ANNUAL and PERENNIAL FLOWER SEEDS, containing all the good and rare kinds. All the above are made up in large or small packets to suit the requirements of purchasers.

VEGETABLE and AGRICULTURAL SEEDS of the very best quality, at moderate prices.

PRICE LISTS free by post on application.

Importer of CONTINENTAL SEEDS.

Seed Warehouse, 68, Great George Street, Liverpool.

GENUINE NEW GARDEN SEEDS.

CARRIAGE FREE.

COMPLETE COLLECTIONS FOR ONE YEAR'S SUPPLY IN PROPORTIONATE QUANTITIES FOR LARGE AND SMALL GARDENS,

£3 3*s.*, £2 2*s.*, £1 1*s.*, and 10*s.* 6*d.*

Including none but the best and most useful varieties, and only Seeds of First-class quality.

A trial is respectfully solicited.

PRICED CATALOGUES POST FREE ON APPLICATION.

WM. WOOD AND SON, SEED MERCHANTS, MARESFIELD, NEAR UCKFIELD.

SUTTON'S

UNRIVALLED COLLECTIONS of GARDEN SEEDS

FOR ONE YEAR'S SUPPLY, WITH INSTRUCTIONS ON CULTIVATION.

1.	A Complete Collection of Kitchen Garden Seeds for One whole Year's Supply	£3 3 0
2.	A Complete Collection of Kitchen Garden Seeds, proportionately reduced ...	2 2 0
3.	A Complete Collection of Kitchen Garden Seeds ditto ditto ...	1 11 6
4.	A Complete Collection of Kitchen Garden Seeds ditto ditto ...	1 1 0
5.	A Complete Collection of Kitchen Garden Seeds ditto ditto ...	0 15 0
6.	A Complete Collection of Kitchen Garden Seeds for a Small Garden	0 10 6
7.	A Complete Collection of Kitchen Garden Seeds, extra quantities, for a Large Family	5 5 0

FLOWER SEEDS, FREE BY POST.

The best 100 sorts of FLOWER SEEDS, hardy, half hardy, and tender, with instructions ...	£1 1	0
The best 50 sorts ditto, with instructions	0 10	6
The best 36 sorts ditto	0 7	6
The best 24 sorts ditto	0 5	0
The best 50 sorts, all hardy, and very distinct in colour	0 10	6
The best 36 sorts, all hardy, ditto	0 7	6
The best 24 sorts, all hardy, ditto	0 5	0

All Goods Sent Carriage Free by Rail, except very small parcels, and 5 per cent. discount allowed for Cash Payment.

A LIST of the CONTENTS of SUTTON'S COMPLETE COLLECTIONS may be had Post Free on application, as also SUTTON'S SHORT SELECT SEED LIST, which gives the price of every article separately.

SUTTON AND SONS, ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.

BARR & SUGDEN, 12 KING ST. COVENT GARDEN

VEGETABLE SEEDS, amounting to 21*s.*, sent Carriage Paid. SEAKALE ROOTS, per 100, 5*s.* 6*d.*, 7*s.* 6*d.*; Extra Strong, 12*s.* 6*d.*

BARR & SUGDEN'S COLLECTIONS of VEGETABLE SEEDS for 1864.

Embracing the best Varieties in Cultivation, and especially those most approved of in Covent Garden Market.

For Particulars see *Gardeners' Chronicle*, January 23, 1864, page 74; or B. & S.'s COMPENDIUM of their GUIDE to KITCHEN GARDEN.

No. 6 contains	33 qt.	of Peas,	Beans,	and other	Seeds	in	proportion	...	...	for	£3 3	0
No. 5 ,,	20 qt.	ditto	ditto	ditto	ditto			...	...	...	2 2	0
No. 4 ,,	13½ qt.	ditto	ditto	ditto	ditto			...	...	...	1 10	0
No. 3 ,,	10 qt.	ditto	ditto	ditto	ditto			...	...	...	1 1	0
No. 2 ,,	13½ pt.	ditto	ditto	ditto	ditto			...	...	...	0 15	6
No. 1 ,,	7 pt.	ditto	ditto	ditto	ditto			...	...	...	0 10	6

SEEDS SELECTED AND PACKED FOR ALL CLIMATES.

SENT POST PAID,

BARR & SUGDEN'S PAXTONIAN COLLECTIONS OF FLOWER SEEDS.

ADAPTED TO ANY STYLE OF GARDENING.

For particulars, see *Gardeners' Chronicle*, Feb. 6, p. 118; or B. & S.'s COMPENDIUM of their ILLUSTRATED GUIDE to the FLOWER GARDEN.

HARDY ANNUALS.
HALF-HARDY ANNUALS.
HARDY PERENNIALS.
HALF-HARDY PERENNIALS.
BEST ANNUALS and PERENNIALS for ROCKWORK.
BEST ANNUALS for ROCKWORK.
BEST PERENNIALS for ROCKWORK.
DWARF ANNUALS best ADAPTED for EDGINGS.
SWEET-SCENTED ANNUALS.
EVERLASTING FLOWERS for WINTER BOUQUETS.
ORNAMENTAL-FOLIAGED PLANTS.
ORNAMENTAL-FRUITED PLANTS.
ORNAMENTAL GRASSES.
ORNAMENTAL PRIZE GOURDS.

BARR AND SUGDEN, SEED MERCHANTS, 12, KING STREET, COVENT GARDEN.

Paul's Hollyhock Seed.

COLLECTION OF 12 NAMED VARIETIES, POST-FREE, 5*s*.

PAUL AND SON have now ready the above; they can be also had of the principal Nurserymen and Seedsmen. Genuine Vegetable and Flower Seeds Carriage Free. List on application.

"Old" Cheshunt Nurseries, Cheshunt, Herts.

Superb Double Hollyhocks.

WILLIAM CHATER'S NEW LIST is now ready, and may be had on application by enclosing one Postage Stamp.

P.S. A large stock of FINE PLANTS now ready.

Nurseries, Saffron Walden.

PELARGONIUMS and CINERARIAS.—Intending Purchasers are respectfully solicited to send for our DESCRIPTIVE CATALOGUE of many hundreds of varieties, at very moderate prices, which will be forwarded Post free.

J. DOBSON & SONS, Woodlands Nursery, Isleworth, W.

THOMAS METHVEN begs to intimate that his NEW CATALOGUE of GARDEN, FLOWER, and AGRICULTURAL SEEDS, &c., for 1864 is now ready, and will be forwarded Post-free on application.

Seed Warehouse, Nursery Gate, Leith Walk, Edinburgh.

Notice.

JOHN WATERER, of The American Nursery, Bagshot, Surrey, is the EXHIBITOR of RHODODENDRONS at the Royal Botanic Gardens, Regent's Park.

His CATALOGUE, describing colours, prices, &c., can be obtained by letter addressed to the Nursery as above.

☞ For detailed Advertisement of CONIFERS, ORNAMENTAL SHRUBS, &c., refer to page 1151 for 1863.

Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET.

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

CATALOGUES are now ready, and a stock of Plants in the most perfect health, of all sizes, and at prices to suit all purposes. Sunningdale Nursery, S.W. Rail.

GEO. BAKER begs to announce that his extensive Collections of Hardy RHODODENDRONS, GHENT AZALEAS, and KALMIA LATIFOLIA, are unusually well set with bloom, and his fine Collection of CONIFERS in the best possible condition.

CATALOGUES on application at the American Nursery, Bagshot, Surrey. The Nurseries are about 1 mile from Sunningdale Station, South-Western Railway.

RICHARD SMITH'S SEED of the following is direct from the Growers, and most superb.—Imported GERMAN ASTER, STOCK, WALLFLOWER, Phlox Drummondii, Zinnia, Balsam, Cockscomb, Larkspur, Dianthus, Variegated Poppy, English Saved Calceolaria, Cineraria, Chinese Primula, Mimulus, Rhodanthe, Pansy, Hollyhock, Antirrhinum, Auricula-eyed Sweet William.

Packets, 6*d*. to 1*s*. each.

RICHARD SMITH, Seed Merchant, Worcester.

American Plants.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE for the present Season is now ready, and will be forwarded free to all applicants. As well as American Plants, it contains a summary of their General Nursery Stock, one of the most extensive in the kingdom.

Knap Hill Nursery, near Woking, Surrey.

To the Trade.

AZALEAS, ERICAS, and EPACRIS, fine bushy plants, well set with flower buds, at moderate prices. An inspection solicited.

THOMAS JACKSON & SON, Nurseries, Kingston, S.W., adjoining the Kingston New Station, South Western Railway.

New Florist Flower Catalogue.

DOWNIE, LAIRD, AND LAING beg to intimate that their DESCRIPTIVE CATALOGUE of FLORIST FLOWERS, New Garden and Flower Seeds, &c., for 1864, is now ready, and may be had free on application,

17, South Frederick Street, Edinburgh; and at Stanstead Park, Forest Hill, London, S.E.

Wholesale Catalogue of Nursery Stock.

GEORGE JACKMAN AND SON'S PRICED and DESCRIPTIVE CATALOGUE for 1863 and Spring 1864 can be had free on application; it comprises FRUIT TREES, ROSES, AMERICAN PLANTS, CONIFERS, EVERGREEN and DECIDUOUS TREES and SHRUBS, and TRANSPLANTED FOREST TREES, &c.

Apply to GEO. JACKMAN & SON, Woking Nursery, Surrey.

RUSSELL'S PYRAMID PRIMULA.—Seed of this celebrated strain is now ready, in packets, price 2*s*. 6*d*. The great satisfaction which these sorts have given in previous seasons will be fully maintained this. The flowers can be seen at the Nursery during the spring. Printed instructions for cultivation with each packet.

GEO. CLARKE, Nursery, Streatham Place, Brixton Hill, S.; and 4, Windsor Terrace, Pimlico, S.W.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

EARLY SPRING FLOWERS, largest Stock in England and greatest variety.—WEBB'S Giant Polyanthus and Giant Cowslip, Cowslip from the Himalayas, Golden Chain Polyanthus, Florist Flower Polyanthus, American Primrose, Scarlet Primrose, Gentianella, Double Crimson Primrose, ditto Yellow ditto, ditto Purple ditto, ditto Rose ditto, ditto White ditto, ditto Lilac ditto, Double Pansy, ditto Negro Polyanthus, ditto Golden Chain ditto, ditto Pink Hepatica, Single Blue ditto, ditto White Violets, ditto Purple ditto. Seed of the above Polyanthus and Cowslip. List on application to

Mr. WEBB, Calcot Gardens, Reading.

BARKER'S NEW HYBRID TROPÆOLUMS.—Seed of these beautiful Hybrids, which gave so much satisfaction last year, now ready. Some of them have a charming yellow ground, strikingly spotted with dark crimson; others are variously coloured; but all are admitted to be extremely handsome. (See reports in this and other papers.) Price 1*s*. and 2*s*. 6*d*. per packet.

C. J. BARKER, Exotic Nursery, Godalming, Surrey.

WHEELER'S LITTLE BOOK on SEEDS.

CARTER'S GARDENER'S VADE-MECUM.

Genuine Seeds, Carriage Free.

B. S. WILLIAMS, NURSERYMAN and SEEDSMAN,

Paradise and Victoria Nurseries, Holloway, London, N.

General PRICED and DESCRIPTIVE CATALOGUE for 1864 forwarded Post-free on application.

GLADIOLUS, SEEDLINGS of GANDAVENSIS.

	£	*s*.	*d*.
50 in 50 choice varieties	2	12	6
25 in 25 ,, ,, ...	1	5	0
12 in 12 ,, ,, ... 5*s*. to	0	12	0
Extra choice mixed, 3*s*. 6*d*. per doz. .. per 100	1	5	0
Fine mixed, 2*s*. 6*d*. per doz. .. .. ,,	0	17	6
GANDAVENSIS, strong roots, 2*s*. 6*d*. per doz. ,,	0	15	0
BRENCHLEYENSIS, ext. strong roots, 3*s*. p. doz. ,,	1	0	0

BUTLER & MCCULLOCH, Seed Merchants, Covent Garden Market, London, W.C.

Gladiolus Brenchleyensis.

YOUELL AND CO. have much pleasure in offering the above GLADIOLUS, unequalled by any other variety for the brilliancy of its colour. The Bulbs are unusually fine. Price 3*s*. per doz.; 20*s*. per 100.

Trade price on application,

Royal Nurseries, Great Yarmouth, Norfolk.

Prize Gladioli.

YOUELL AND CO. were awarded the following PRIZES for the above in September last:—

FIRST AND SECOND PRIZE, CRYSTAL PALACE,
FIRST PRIZE, ROYAL HORTICULTURAL SOCIETY,
FIRST PRIZE, BRIGHTON.

CATALOGUES of this collection will be forwarded on application.

Royal Nurseries, Great Yarmouth, Norfolk.

DOBSON'S EXTRA CHOICE SEEDS.

Quality second to none. In sealed Packets.

DOBSON'S SUPERB CALCEOLARIA, 1*s*. 6*d*., 2*s*. 6*d*., 5*s*.
DOBSON'S SUPERB CINERARIA, 1*s*., 2*s* 6*d*., 5*s*.
DOBSON'S SUPERB PRIMULA, 1*s*., 2*s*. 6*d*., 5*s*.
DOBSON'S SUPERB PANSY, 1*s*., 2*s*. 6*d*.
DOBSON'S SUPERB SHOW PELARGONIUM, 2*s*. 6*d*., 5*s*.
DOBSON'S SUPERB FANCY PELARGONIUM, 2*s*. 6*d*., 5*s*.
DOBSON'S SUPERB BALSAM, 1*s*., 2*s*.
DOBSON'S SUPERB ANTIRRHINUM, 1*s*., 2*s*.
DOBSON'S SUPERB LOBELIA SPECIOSA, 1*s*.
DOBSON'S SUPERB HOLLYHOCKS, 1*s*., 2*s*. 6*d*., 5*s*.

The Trade supplied on liberal terms.

J. DOBSON & SONS, Woodlands Nursery, Isleworth, W.

Good Seeds, Carriage Free.

ROYAL BERKSHIRE SEED ESTABLISHMENT

SEEDS DIRECT FROM THE GROWERS THE MOST CERTAIN MEANS OF PREVENTING DISAPPOINTMENT.

SUTTON AND SONS, SEED GROWERS, Reading, Berks, can supply every kind of FARM and GARDEN SEEDS of genuine and superior quality.

Agriculturists residing in the most remote parts of the kingdom can procure good Seeds at very moderate prices from this Establishment. For particulars apply to

SUTTON & SONS, Seed Growers, Reading, Berks.

The Gardeners' Chronicle.

SATURDAY, FEBRUARY 13, 1864.

MEETING FOR THE ENSUING WEEK.

THURSDAY, February 18—Linnean .. .. 8 P.M.

IN another column will be found some account of the proceedings of the Royal Horticultural Society at the Anniversary on Tuesday last. The discussion was more than usually animated, and eventually the meeting was adjourned for a fortnight.

We have no space to-day for comment, in consequence of the great length to which the report of the meeting has run. If necessary, however, we shall return to the subject hereafter.

IT has been already announced that the proprietors of the *Gardeners' Chronicle* intend to distribute the sum of 20*l*. in 1864, and a similar sum in 1865, in the form of LADIES' PRIZES, for plants cultivated and shown by lady gardeners at the meetings of the Royal Horticultural Society. The object of offering these prizes is to induce Ladies—many of whom, as we have already remarked, are most excellent gardeners, and also admirable critics of the skill displayed by gardeners at our flower shows—to take a more direct interest than that of mere lookers on, in those great floral displays which have had so potent an influence on the practice of plant culture. The fair critics themselves will be thus invited to take part in the proceedings on such occasions, and to submit their own horticultural attainments to a not unfriendly criticism.

In order that the task imposed may not be too laborious, the objects to be brought into competition for these special prizes are to consist each of a single plant, or at least, of the contents of a single flower-pot. They are to be illustrations of what is called indoor gardening, that is to say, of plant culture, carried on with such aid as is afforded by indoor plant-cases, window ledges, and conveniences of this nature. The competitors are to consist of ladies only. In the present year the prizes will be distributed at the first great show to be held at South Kensington on the 1st and 2d of June. Any kind of drawing-room plant will be admissible. It is understood that the plants which are to be sent in for competition shall have been really cultivated by the ladies by whom they may be exhibited, and not by other persons employed for the purpose; but no further condition as to the production of the plants will be imposed.

We have said that any kind of drawing-room plant will be admissible, by which is to be understood that the prizes are equally open to be competed for by plants which are interesting either on account of their flowers or their foliage, and that in these two series the choice of subjects, for this year at least, is perfectly open. As some sort of guide to indicate the kind of subjects which would be most likely to become available, we may mention of flowering plants, such as Pelargoniums of all kinds, Fuchsias, double and single; China, Fairy, and other Roses, Heliotropes, Gloxinias, Achimenes, cool Orchids, Begonias, Heaths, Azaleas, Statices, Agapanthus, Vallotas, and such like. Of foliage plants there might be Adiantums and other Ferns of various kinds, hardy or tender; Lycopods or Selaginellas of erect and bushy habit; Caladiums, variegated Begonias, Anæctochili, Cephalotus, Myrtles, Coleus Verschaffeltii, trained Ivies with pretty leaves, and so on. In fact, anything pretty, and suitable for drawing-room decoration.

In order to give the utmost possible interest to this competition, two prizes only, of 10*l*. each, will be awarded; so that the winners will really receive some substantial recognition of their skill. The winning subjects however must be dissimilar, and must belong to different competitors. It will be necessary on the part of the exhibitors that notice of the intention to exhibit should be sent to the Garden Superintendent at South Kensington, not later than the 28th of May, in order that suitable space may be provided for the plants; and on the 1st of June the plants must be in their places and ready for adjudication by 10 o'clock in the morning. The usual arrangements will be made to receive and label the several competition plants.

We trust the fair gardeners of England, and especially those of the metropolis and its suburbs, will, in this friendly encounter amongst themselves, fully vindicate the position which has been claimed for them in respect to their horticultural prowess.

WE have just received a well written and highly creditable letter from a person who signs himself "A Young Gardener," respecting an extraordinary failure which has taken place in an establishment of which he is a junior member, though, it may be observed, his inquiry is made with the perfect concurrence of his employer. The letter was accompanied by specimens of the COMPOST in use, and of the dung and soil of which it was composed, together with bulbs of Hyacinths, Tulips, Narcissuses and Crocuses, all of which had failed in a similar manner.

Had the matter been confined to these, we should have thought the fact of their having been ever since October in a shed, enough to account for their condition, but as Eriostemons, Azaleas, Pimeleas, Epacrids, Cinerarias, Primulas, Coronillas, and other plants all suffered in a similar way, we must look in another direction for the solution of the difficulty. Our correspondent, however, shall first speak for himself.

The compost is a mixture of dung and soil in about equal proportions. The dung was procured from some distant stables, and while in a state of fermentation and rather wet, was made into a Mushroom bed in a dry shed in October 1862, and wheeled out in the spring of 1863, and exposed to all weathers. It was always very dark and adhesive, and so retentive of moisture that having been placed in a very dry shed in a small heap for several weeks, it was found difficult to rub it through a riddle of half-inch mesh with the hand.

The soil was cut from a neighbouring pasture in a dry place in the autumn of 1862. The turf was pared off, about 8 inches thick, and the soil removed from where the turf was raised to the depth of 4 or 5 inches, the turf being returned to its old position. Melons were planted in it last summer, but were a total failure. Cinerarias and Primulas dragged out in it a miserable existence where the soil preponderated in the compost. Chrysanthemums refused to flourish. A Coronilla was planted in it to check the growth and cause it to bloom freely, and it would not grow at all till supplied with manure water.

Attention was called to the matter, but without

much effect, till a large quantity of bulbs which were planted in it were in such a dreadful condition that it became imperative to make some inquiry.

We have had no opportunity of seeing any plants except the bulbs. These appear in themselves to be perfectly healthy, and to have sent out at first vigorous roots, but in every case the tips of these have become diseased and discoloured, or a large portion has decayed. In many instances, especially where the roots were in contact with the pots, the outer coat alone has been left, and as there were some minute larvæ in the soil, which, from the specimen sent, appear to belong to some Dipterous insect, it was imagined that they might have something to do with the evil, but there is not the least probability that this is the case.

We do not pretend to have analysed the soil. A quantitative analysis, which is the only one which would be of any use, is an expensive matter.* There seems, however, no reason to imagine that any deleterious matter has been wilfully or accidentally mixed with it, and there is enough we believe to account for the evil without any surmise of the kind. The dung had been used for a Mushroom bed, and was consequently highly impregnated with spawn, and was itself of a peculiarly ungenial nature, such as could be recommended only for very coarse purposes. But in addition, the compost was full of undecayed vegetable matter, such as scraps of Beech mast, all of which are likely to produce spawn. It is very possible, too, that there was something about the dung itself, from its bad, or as cultivators call it, sour condition, which might affect the delicate spongy tips of the roots. It is well known that deleterious matter is not absorbed by roots in any quantity while the tips remain perfect; but when the tips are destroyed the exposed tissues may imbibe a certain quantity. In many cases, the injurious constituents are deposited on the surface, and thus prevent the admission of nutritive matters. The evil has certainly been derived from the compost, for there is no indication of disease except in the lower parts of the roots.

Should this explanation fail to satisfy our Correspondent, an actual analysis may be made; but whatever might be its result, we are quite sure that we cannot caution cultivators in general too strongly against any compost whatever which is either already impregnated with fungous spawn, or likely to generate it. *M. J. B.*

—— THE army of Railway Companies, with a distinguished staff of engineers at its head, is again pouring forth from its winter quarters like a swarm of locusts to devour the land; here sweeping away before it every vestige of human habitation, there burrowing larva-like under ground for a season to issue forth again as full-blown snorting plagues. There is to be, as the leading journal puts it, "a great raid of new projectors and ancient schemers; of secretaries with old animosities, and directors with new aspirations; of young engineers just breaking the shell, and old engineers crowing and scratching upon their long-possessed ground; of young barristers whose friends have only just become directors, and of old stagers whose position makes them a necessity; of pushing young firms of solicitors who are aspiring to the dignity of Parliamentary agents, and of the veterans of a hundred committees, and of a thousand reams of bills of costs;" and all are now in earnest preparing for the conflict. The metropolis itself is threatened with some 50 or more invasions, many of them indeed regular sieges, with parallels pushed forward in orthodox fashion, to undermine our houses, our streets, our public squares, and our parks. Against this combined attack truly a strong defence is needed, and also untiring watchfulness so as not to be taken at a disadvantage.

The incursion of the Railway enemy, so far as it relates to our streets and houses, does not come within the province of this Journal: that belongs specially to the public authorities; but we have a word or two to say respecting LONDON SQUARES and PUBLIC PARKS, the railway attacks upon which it is not quite so much in the way of these same authorities to appreciate to their full extent. The Companies themselves, moreover, by concealing these inroads beneath the surface, doubtless hope to pass for the most part unsuspected of any design on the public enjoyment, and the public health. But they cannot be held thus innocent. Only let our tree-adorned parks and gardens, and our gardenesque squares and open spaces be attacked in the way these burrow-mongers have planned out, and then farewell to their picturesque beauty, farewell to their umbrageous shelter, farewell to their oxygenising influence on our carbonised atmosphere. Farewell at least to all those arboreal embellishments that come within their influence or their range; for, as we have shown on former occasions, it is such deep cuttings up of the subsoil beneath us, as these railway companies contemplate—cuttings which drain away all the little moisture that in paved and macadamised and roofed-in London, can possibly find its way into the earth to nourish the vegetation which it is so pleasant to see growing up about our homes—that, more than any other influence brought to bear upon them, destroys our trees, and robs our London parks, and squares and gardens, of their greatest and most natural ornaments.

But what care Railway companies and Railway engineers for such trifles as these? "A park on the line of route," as the *Times* has most truly remarked, "is apparently considered rather a good thing than otherwise, inasmuch as the promoters evidently flatter themselves that they will be allowed to tunnel through such places for nothing." The best of the squares too seem to have been selected for passing through or near, for tunnelling under, or for occupying as stations. The engineer of the Metropolitan Board of Works has reported that Hyde Park, the Green Park, St. James's Park, Kensington Gardens, Newington Park, Hackney Downs, Leyton Grange Park, Trinity Square, Finsbury Circus, Camden Square, Oakley Square, Ampthill Square, Euston Square, and Sloane Square are all proposed to be cut through, and some of them in two or three places, and that the same fate awaits the following commons:—Stoke Newington, Clapham, Tooting (invaded by seven different lines), Acton Back, Acton, Wimbledon, Fulham, and Turnham Green. It is perfectly monstrous that the lungs of London should be thus wantonly cut up.

Let any one but glance at a map of the so-called "improvements" in the shape of Railways, which are proposed to be carried out in the metropolis this year, if the Legislature will but sanction their execution. The engineer of one notable scheme, bearing for its title the "Paddington and Charing Cross railway," but which seems to have failed in completing the necessary preliminaries, actually had the hardihood to propose to bisect Hyde Park diagonally by means of a tunnel passing from the Uxbridge Road to Hyde Park Corner. Is the finest of our London Parks, with its noble trees, to be thus wantonly sacrificed? The propounders of another, called the "Metropolitan Grand Union Railway," ask leave to dash through Kensington Gardens in a tunnel, and after doing immeasurable and irreparable injury to the plantations there, to pass on by way of Exhibition Road and Sloane Square to the Thames Embankment. We trust in the interests of London trees, that this leave will not be granted. Besides, in reference to the Thames Embankment, if railways are to have full play thereon or thereunder, as the Board of Works seems to think almost inevitable—more's the pity—the splendid opportunity which now offers to margin our noble river by as noble an avenue of trees, must be utterly and for ever lost. Then, before it is lost, we ask that it may be well considered by the powers that be, how healthful to the inhabitants, how grateful to the pedestrians, and how great an ornament to our river, would such an avenue be in such a place—the most magnificent thoroughfare in the world, as it has been called. From Hyde Park Corner the before-named Paddington line sought to pass down the side of the Green Park, just beneath where there is now growing a line of thriving young Plane trees; to cross the Mall in front of Buckingham Palace, destroying trees again, and cutting the avenue in twain; and then to pass along beneath St. James's Park, to the damage of the trees now growing there. Surely some Peer or Commoner will step into the breach, as Lord DERBY did last year, and stop such selfish havoc. The Parks do not indeed escape with this amount of damage, if the engineers and companies have their way. There has been a "London Union Railway" projected to run under Hyde Park in a line almost parallel with the road from Kensington to Hyde Park Corner—just where it would damage hundreds of trees; and then to traverse the Green Park, the Mall, and St. James's Park nearly in the same line as that chosen by the Paddington and Charing Cross Company, and of course doing like mischief.

The Regent's Park escapes the hands of the railway Goths, but Euston Square comes in for further despoliation beyond what it has already sustained, one delinquent at least being a Charing Cross extension of the Tottenham and Hampstead Junction line, which also passes through Queen Square on its way to Charing Cross; as if, to quote the *Times* again, every man, woman, and child who once gets into England were seized with an uncontrollable desire to be put down at Charing Cross. But this is not the only attack to be made in that quarter. The "Charing Cross Northern Railway," in making for the same enviable spot, cuts through Red Lion Square; and Bedford Square, Tavistock Square, Russell Square, and Brunswick Square, fall uncomfortably near one or other of the Charing Cross lines. These schemes, which are virtually southward extensions of the northern and midland lines, are to be in open cuttings, which will be as destructive to tree life as though they had been tunnelled.

Further eastward the "Metropolitan Extension" seeks to pass through Finsbury Square in an open cutting, and the Metropolitan District line proposes to pass through Trinity Square in a similar way; and a net-work of competing lines, including the "London Low Level," which seems to have failed in the preliminary forms, the "London Main Trunk," and the "Metropolitan" Railways, threaten the spoliation of Finsbury Circus and its "beautiful garden, which it has required half a century to perfect." The alarmed inhabitants, harassed as they say, year by year, by repeated notices of projected railway schemes invading their retreat, have passed strong resolutions of opposition, and they will be supported by all those who are not railway-mad, or who care to see trees flourishing in the heart of London. The Chairman of their committee, too, Mr. ALFRED SMEE, has addressed a letter to the *Times*, deprecating the reckless attempts to spoliate this Circus, remarking that, "while in Paris every square, however small, is carefully watched and filled with ornamental flowers, the projectors of railroads in London are seeking to take possession of every open space." We can very well commiserate with these Finsbury residents if they are threatened with the loss of only half 50 years' growth of trees in their vicinity. A certain Mr. MANSELL, indeed, coolly remarks of the Low Level scheme, one of the delinquents, that its line is to pass under, "but not destroy," Finsbury Circus. This is adding insult to injury, for what beauty or interest would there be in the spot when made bare and desolate by the destruction of its now flourishing trees?

Passing south of the Thames, Battersea Park is allowed to go unscathed, though with a projected "improvement" on either side of it, to remind it of its narrow escape; but as we have already mentioned, Clapham Common is not so fortunate, for unless rescued from such a fate it is to be bored by some extension of the "London, Brighton, and South Coast Railway;" Tooting Common is to be pierced five times; while attacks are also to be made on various other open spaces more to the westward.

Now there can be no doubt that the execution of these various schemes, involving either the tunnelling or the deep cutting of the earth, must have an injurious influence upon gardens and gardening in the localities through which the lines are intended to be carried; while the trees, especially those of more mature growth, which come within their range must be considered as doomed to pine and die away, just as has happened already where deep sewers have been cut. There can also be no doubt—for the question is a settled one in these days of applied science,—that parks, and squares, and gardens, and trees, and flowers, are amongst the most beneficial provisions of a general kind which can be made for the public health and the public enjoyment. And this being so, we may surely appeal with confidence to the good sense and good offices of the members of the Legislature to prevent the perpetration of so much mischief at the mere *bidding* of a horde of railway speculators.

—— A GRAND EXHIBITION, to take place in Paris from March 12 to 17, is announced to be held in the rooms of the Imperial Horticultural Society, No. 84, Rue de Grenelle-St. Germain. Prizes varying in value up to 12*l.* sterling are offered for forced vegetables, Camellias, Heaths, Hyacinths, Epacrids, Cyclamens, Cinerarias, and all sorts of forced ornamental plants. For particulars, apply immediately to M. ROUILLARD, 28, Rue de Longchamp, Paris.

—— There will also be a GRAND EXHIBITION AT BRUSSELS from April 24 to May 6. As the list of prizes occupies 27 8vo pages, we can only state that Catalogues and all other information may be obtained of M. EDOUARD MOTTIN, Secretary, Place du Trône, Brussels. Among other things especially interesting, is the offer by her Royal and Imperial Highness the Duchess of BRABANT, of a Great Gold Medal for the best collection of 25 different Exotic Orchids in flower. That ought to come to England. It would look well suspended from the neck of an Essex friend of ours.

—— It may be worth while on behalf of those who may not see Mr. W. THOMPSON's Seed Catalogue, to transcribe what he says in respect to the GERMINATION OF RHODANTHE SEEDS. He says it is important to know (writing of the seeds of his new Rhodanthes—atrosanguinea, maculata, and maculata alba—all very desirable plants) that these seeds require to be *freely* watered in order to induce them to germinate quickly. The pot in which they are sown may even be plunged under water for a few seconds with advantage; and the soil being thus saturated will often require no farther watering until the seeds are above ground. If, he adds, the seeds are thus treated and placed in a temperature of 65° to 70°, they will speedily give proof of their vitality, but if insufficiently watered, they will remain dormant for several weeks. This hint may be useful now that the seed-sowing season is coming on.

EXHIBITION PLANTS.

THE INDIAN AZALEA.—No. III.

(*Continued from* p. 101.)

THE principal enemy to the Azalea through the growing season is the black thrips. This pest, if allowed to attack the plants without interference, will assuredly do most serious injury. I have tried many things to destroy the thrips, and with various success. One was the Gishurst Compound, used in the proportion of 2 oz. to a gallon of water. This was made up in larg

* The charge at the School of Mines for a quantitative analysis of ore is five guineas. A rough analysis may be obtained there for a guinea. The charge for soil would probably be much the same.

quantities and taken to the houses and pits in tubs, in which the plants were immersed and kept covered for a minute or two, and then taken out and washed with clean water by means of the syringe. On examining the plants, to see what the effect had been upon the thrips, I was delighted to find, as I thought, that they were all destroyed, for many dead ones were found adhering to the plants. I however then tried some further experiments, by taking a few leaves off the plants and placing them in the Gishurst mixture. As soon as the insects came into contact with this, they tried to escape, starting off at full speed, and running a short distance, and then turning round several times as quickly as possible, they made a few struggles and died. I began to think the Compound was a great boon, for having always a large quantity of Azaleas about me, it was a matter of some importance to have discovered a sure remedy against such destructive vermin. I took the precaution, moreover, to place the leaves under a powerful microscope when I took them out of the mixture, and then found that all the perfect insects were killed, but that the eggs deposited close to the ribs of the leaf did not appear to be much affected. However, nothing daunted, I determined to persevere, and set about giving the plants another dipping in about three weeks from the first, when to my surprise I found them completely covered with living black thrips in a perfectly developed condition. It was thus clear that although the solution had destroyed the perfect insects, it had not taken the least effect on their eggs; and as it took three men to do the thing properly—one to take the plants to the dipping tub, one to dip them, and another to syringe with clean water: as moreover after a few days the plants become as bad as ever, I found that the labour would be incessant, and was compelled though reluctantly to abandon the Gishurst, and fall back upon my old plan of thorough fumigation with tobacco paper or rag. This I have found and still find, the only effectual remedy to keep the insect pests in check; and I feel assured that by its use, if I were not to have a fresh supply brought to me upon the plants of new varieties that are constantly being received, I should not have such a thing as the thrips upon my premises.

I have heard many opinions upon the practice of fumigating. Some advocate smoking the plants on three successive nights. This plan I do not approve, having practised it and found its defects. I do not assert that it did not kill all the insects that were alive at the time it was done, but what about the eggs that had been deposited, and had not yet come to life? Why, in three or four days these eggs had hatched and become perfect insects, and the plants were covered again; in three or four days more those of this crop had deposited their eggs; and if the plants were but let alone for 10 days or a fortnight, it would be easy to discover on them a very promising healthy family, including three or four generations of progeny.

The most certain and effectual remedy I could ever find was to fumigate well three or four times—commencing upon any given night, then leaving them for three or four days before giving another strong dose, and then again leaving them for a similar interval before having recourse to the third smoking. I have rarely found any left after the third dose, but should a few stragglers remain, another or fourth smoking three or four days later will, I feel convinced, thoroughly clear the plants. I remember many years ago being terribly annoyed with thrips upon my Azaleas, and from them they got on to the Ixoras, Gardenias, Camellias and Grape Vines, making terrible havoc among them all, and causing every plant attacked to look brown and unsightly—so much so indeed, that things began to get rather serious. At that time I tried many appliances to destroy or keep them in check, such as strong soapsuds, hot water, tobacco water, and sulphur dusted upon the under side of the leaves. These things having all failed, I felt determined to take some more decisive steps, and the first was to give them a thorough fumigation. I had them all removed into my seed room, which was close, so that there was no escape for the smoke except up the chimney, which I stopped with damp mats. I set the plants upon shelves, and empty pots, so that they should be as close to the ceiling as possible, and that the smoke might have every facility to draw up regularly through each plant. Then, to be certain what effect the smoke had had upon them, I placed sheets of white paper over the top of the pots, and set about smoking until the room was completely filled—taking care not to allow the fire to break through the top of the fumigating pot, for this generally injures the plants in their foliage. As soon as the place was full of smoke I took out the fumigating pot and shut the room up close. The next morning the plants were well shaken, and the white paper being taken off, was found almost covered with dead thrips. I was of course very much pleased to find them dead, and carefully collected them from all the papers, and threw them into a furnace, thinking I should never be troubled with such pests again. The plants were fumigated on the two following nights, the papers being again placed over their pots; on the second morning I found but very few, and after the third and final smoking there was not one to be seen. The plants were taken out of the room, well syringed, and returned to their original quarters to finish their growth, with a firm conviction on my part that I should not be troubled with any more of the vermin. But to my surprise I discovered in a few days that the plants were again covered with them. How could this be? The plants appeared thoroughly cleared when smoked before. However, I had them brought back to the seed-room, and thoroughly smoked, the paper laid as on the former occasion, and I found the next morning large quantities of dead insects. I then left them for three days before giving them a second dose, and allowed a like period to elapse before the third and final smoking; this thoroughly cleared them, and I was never troubled with them after that time in sufficient quantity to do any serious injury. This is an important matter, for these insects sometimes make their appearance when least suspected, being brought in with new or fresh plants in the shape of insects or eggs, and from them spreading through a whole collection. Upon a close observation of the plants after a thorough fumigation it will be found that all the perfect full-grown insects are destroyed, and by repeating this, say four times, with three or four nights intervening between each, I firmly believe that an examination after the final fumigation would fully substantiate my assertion as to the efficacy of this plan.

Before leaving the subject of fumigation I wish to offer a few further suggestions. When smoking is necessary it should be done in the evening, as the smoke will continue in the house much longer then than it would during the day. As soon in the afternoon as the sun has lost some of its power, take off the lights if the plants are in pits, or if in the growing house give plenty of air to thoroughly dry the foliage, and withhold the syringe that night. I have seen that fumigating plants of almost any description when they are damp will cause much injury to the foliage, and sometimes cause the leaves to fall off in large quantities, which much disfigures as well as damages them; whilst by having the foliage quite dry, such a disaster need not be feared. I find good tobacco paper or tobacco rag the best article to fumigate with, but care is required in the keeping of either article. As soon as it is received it should be opened and laid out to prevent it from becoming mouldy. I find that both paper and rag if allowed to get mouldy lose their power, and will have but little effect upon the insects; therefore any which may have been allowed at some time to become mouldy, might as well be destroyed, as it will surely lead to disappointment when used for fumigating. *William Barnes, Camden Nursery, Camberwell.*

PATERSON'S SEEDLING POTATOS.

[These Potatos, which we noticed last summer (p. 1013, 1863), have been so favourably reported on by several well-known gardeners and others who have had them under trial, and whose opinions as to their quality are entitled to respect, that we reproduce such portions of their statements as our space will permit.]

MR. J. CAIE, gardener to the Duke of Argyll at Inverary Castle, states that although planted late, the growth and produce of these Potatos was such that he is certain, under field culture, they would prove still more productive, and resist unfavourable weather. Out of 12 varieties planted, 10 were of very excellent quality, and all very productive croppers.

Mr. W. Gray, gardener to the Earl of Dalhousie, at Brechin Castle, reports as follows:—*Victoria:* White, and of a handsome flattish oval; growth vigorous; very hardy constitution; when cooked white and mealy, and rich in flavour; a very good cropper, and well adapted either for field or garden; average produce per plant, 3½ lb. *Napoleon:* First-rate quality; white and dry; an extraordinary strong grower; the tubers hang on strings of four or five, like beads; really a good variety, but more for field than garden culture; average crop per plant, 4 lb. *Goliath Kidney:* Large size, and fine quality; a very good variety for field or garden; average crop per plant, 4½ lb. *Paterson's Red:* The admiration of all who saw it; of first-rate quality; a perfect model in shape, and very hardy; average crop per plant, 5 lb. *Seedling Rock:* Like the old Rock, of very hardy constitution; of good quality, and offers well to be a standard Potato for the country; average produce per plant, 5 lb. *Oval Blues:* Fair size, every one fit for table; requires no picking, and of very fine quality; average crop per plant, 4½ lb. *Seedling Fluke:* A great improvement on our old Fluke; it is much earlier, very hardy, and of good quality; average crop per plant, 2½ lb. *Irish Blues:* a very heavy cropper, and of very hardy constitution; best for field culture; average crops per plant, 5 lb. The varieties all received exactly the same treatment as our general crops, except that they were much later in being planted. The seedlings were not planted till after the 12th April, which Mr. Gray considers too late for planting any Potatos; they appear, he says, to be of hardier constitution, more prolific, and far better disease resisters than any of the old varieties.

Mr. D. Easson, land steward to the Earl of Camperdown at Camperdown, states that the seedling Potatos were planted by him on 6th May in the field. They were uplifted on 7th November, the ground occupied by each lot carefully measured, and produce carefully weighed, viz.:—*Victoria*, from 77 square feet, yielded 56 lb.; *Napoleon*, from 91 square feet, yielded 60 lb.; *Irish Blue*, from 112 square feet, yielded 120 lb.; the first upwards of 14 tons, the second upwards of 12 tons, and the third upwards of 19 tons per imperial acre. Specimens of all were cooked, and proved excellent in flavour; they were wonderfully matured, though so late in being planted, the form and size all that could be wanted. In addition to their vigorous growth they were entirely free from disease, while their neighbours were a good deal diseased.

Mr. Petrie, land steward to the Earl of Southesk, at Kinnaird, gives the results of his trial of the Seedling Potatos planted 9th May, as follows, viz.:—*Victoria*, produced at the rate of 50½ bolls (5 cwt. per boll) per imperial acre, handsome, large size; *Napoleon* produced 51¾ bolls, very handsome; *Paterson's Red* produced 64¾ bolls, fine sample; *Seedling Rock* produced 63 bolls, nice size; *Seedling Fluke* produced 44 bolls, fine sample—all per imperial acre. Had they been planted a month earlier the result would have been a still heavier crop. They were ripe three weeks earlier than others planted at the same time, as well as better matured; very hardy growers, with fine, strong, healthy haulm, and quite free from disease.

Mr. Loney, gardener to Sir Peter Murray Threipland, Bart., Fingask Castle, reports that he planted several varieties in Fingask Castle Garden about 10th April with these results:—*Victoria:* Very white and mealy; fine flat oval shape; a very free hardy grower and heavy bearer; field or garden. *Napoleon:* Very superior late field variety; fine round oval shape; very strong grower; excellent quality. *Goliath:* White, large size; a very free grower; garden or field. *Paterson's Red:* Very beautiful and large; extraordinary cropper, 75 lb. in 4½ yards. *Buff Kidney:* A wonderful Potato; length of one tuber, 9½ inches by 8½ circumference; garden or field. *Paterson's Wonder:* White, very numerous middle sized tubers; late grower. *Paterson's Rock:* Very handsome and fine quality; great cropper. *Late Red Kidney:* Stems 6 feet long, like trees bearing quantities of plums; not numerous, but large and handsome. *Irish Blue:* For field culture requires to be planted thin; very hardy vigorous grower, and fine quality.

Dr. Moore, of Glasnevin, reports that the Potatos were planted on 1st April, and dug 11th November 1863. The crop from 5 yards of each, was:—Victoria, 28 lb.; Napoleon, 26 lb.; Seedling Regent, 30 lb.; Paterson's Blue, 35 lb.; Oval Blue, 28 lb. Goliath, 32 lb.; Paterson's White Seedling, 36 lb.; Paterson's Wonder, 34 lb.; Mixed Seedlings, 28 lb. He considers them a very fine series of varieties.

The Rev. James Cæsar, of Panbride Manse, by Carnoustie, in reference to the Irish Blue Seedling, writes:—"I had one stone of seed, which produced 50 stones of good-sized Potatos, of good quality. All the sorts were entirely free from disease;" and Mr. John Bennett, of Sandhill, Adlingfleet, near Goole, considers the Victoria the finest Potato in cultivation; the Irish Blue standing next.

[Samples of 10 varieties of these seedling Potatos, which have been sent to us, quite bear out the descriptions of the foregoing reports, so far as regards the appearance of the tubers. They are, in fact, excellent examples of Potato culture, perfectly clean and healthy.]

Home Correspondence.

The Royal Horticultural Society.—In accordance with what I thought my duty as an old F.H.S., I attended the meeting on Tuesday, the 9th inst., and heard a portion of the vials of wrath poured upon the heads of the Council. In common with most of my confrères I much regretted to hear that the Society is so poor as to be compelled to receive a loan from the Royal Commissioners of 13,000*l.*, and almost angry to find that a part if not all of this loan is to be spent on their estate, so as to have at our expense "an ornamental centre to the main square of the estate" (*vide* their letter of Feb. 6). [Our correspondent is quite mistaken. There is no loan, nor any intention of effecting one.] For some time past, and up to the period of the meeting of the 9th inst., I had entertained a pet idea of taking advantage of the Chiswick Gardens, and of moving that they should at once be made a school of horticulture for the whole empire. The gardens, even as they are, are well managed as to the vital matter of gardening; fruit and fruit trees, vegetables and exotics, are all well cultivated; in short, the school is ready for pupils—why then should it not be at once taken advantage of? I happen to know the great want of the present day—educated gardeners; it is true gardeners, and good ones, are to be found, but we have no good public school to supply a demand which, if gardening progresses as rapidly as it is now doing, and if the prosperity and its attendant luxury continue, must be very far beyond the supply. It was my intention to have moved at the meeting—"that a sum be appropriated by the Council to form a School of Horticulture at Chiswick," but I was so disheartened at all I heard that I promptly gave up my long-cherished scheme. The "11,000*l.* now agreed to be advanced by the Commissioners," will, I presume, all be spent on the Gardens at South Kensington, to make the "ornamental centre" of the Commissioners' estate more valuable, but surely it is in the power of the Council to do something for gardening—something for Chiswick. I can only now suggest a rough outline of what may be most beneficial to Horticulture. Gardeners at present

are educated in the gardens of the nobility and gentry—the head gardener, in some instances, receiving a premium with every youth he receives. This arrangement need not be changed. It is beneficial as far as it goes, but we all know that in such gardens only one routine is followed, so that a youth on leaving a garden perfect in all its appliances, becomes as it were at sea on leaving it; he requires finishing by learning the horticulture of the world, to be taught at Chiswick, which should be the University of Horticulture. Every youth on the termination of his apprenticeship in the provinces, should serve one year at least at Chiswick, and at the end of that term receive a certificate of ability — he should in fact take his degree. As far as I can see, no great expense would attend the opening of the doors of our school. Two or three professors, *i. e.*, good gardeners, would be required to attend to the pupils, who should do the work of the garden, be instructed in pruning and training and general culture, and hear lectures in the different branches of horticulture, as is now the practice in most of the public gardens of France. No premium need be paid, but the pupils should give their work for one year's finishing. All who travel in France well know that as gardeners in a general sense we excel them, but there are many things there worthy of notice, particularly their management of fruit trees in the open air, and also some little matters in vegetable culture. All these deviations from our routine of culture should be taught at Chiswick, and taught economically; for, as far as I can see, the only expense to be incurred is the paying a remunerating stipend to two or three accomplished gardeners, one of whom at least should be a travelled man, so as to give the pupils the advantage of learning something more than the routine of English gardening. I know that Chiswick has educated some of our most accomplished gardeners, but from our London connection being now so expensive, we cannot afford to do things with so high a hand. I have sketched my plan roughly and imperfectly; it may, however, serve as a basis. At any rate let us open the doors of our school at Chiswick, and try to do something for the education of the rising generation of gardeners. A competent person might, at a small expense, go to Rouen and see how that most accomplished cultivator Du Breuil manages his economical school of horticulture. We are poor, and must, therefore, practise economy. *A Very Old F.H.S.*

Rhododendron argenteum.—Perhaps it may not be uninteresting to know that Mr. Cornelius, gardener to William Williams, Esq., of Tregullow, Cornwall, has succeeded in flowering this plant, which, though young, has eight beautiful trusses of blossoms on it now in perfection, each truss measuring about 20 inches in circumference, with 16 to 18 flowers on each truss. The same plant was flowered last year, but not so successfully. *J. T., Feb.* 11.

Renovating Old Trees.—Nine years ago next summer, the Right Hon. T. F. Kennedy, of Dunure, pointed out to me at his seat, Dalquharran Castle, a number of old Lime trees, upon the roots of which he had, a season or two previously, placed a quantity of good soil, with a view to reinvigorate the trees, and most successfully had he succeeded in his object, for the trees were then pictures of health. I have often since surfaced valuable decaying trees, principally Elms, Limes, Chestnuts; and when the operation has not been too long delayed, the trees, as in the case of Mr. Kennedy's, have been quite restored to health. There are numberless valuable old decaying trees—valuable on account of their associations as well as of intrinsic value in contributing to landscape effect, scattered about the parks throughout the land, with roots exposed to the hoofs of cattle, and the baneful influence of a powerful summer sun, which might at small cost be re-invigorated. The present time is a good one in which to perform the operation, and where posts and rails to ward cattle off the roots are objected to, or it is considered not humane to deprive the cattle of the shade the branches afford them in summer, a few large stones placed round the bole of the tree will prevent the hoofs of the cattle doing much harm to its roots. *W. Craw, Enville.*

Oaks.—In your paper (p. 54) your correspondent "Diss" has expressed a wish to know whether the large Oaks in Powis Castle Park are of the species pedunculata or sessiliflora. I believe that they are of both kinds, but until they are again furnished with foliage, I cannot undertake to give a positive reply, believing that by the leaves only can the species be distinguished accurately. I shall have much pleasure in communicating the desired information to the best of my ability, as soon as the trees are again furnished with foliage. *Geo. Brown, Gardens, Powis Castle.*

Renanthera coccinea.—This remarkable Orchid has flowered many times in the establishment of Messrs. Lucombe, Pince, & Co., of the Exeter Nursery. I saw a grand spike of bloom on a plant from 4 to 5 feet high in their show house this last autumn; and during the time I had charge of their collection of Orchids it flowered several times. Since my engagement with Mr. Turner I exhibited at the Manchester Botanical and Horticultural Society's show, about five years since, a splendid specimen with two spikes about 18 inches long, and nearly as much through; but it has not flowered since, owing to its being shaded more than usual. The great points to be observed in blooming Renanthera, are to grow it 6 or 7 feet long, and to give it a thorough exposure to the sun, with very little water at the roots. When it gets well ripened and it has formed its flower buds, keep up a good heat, with plenty of moisture, in fact syringe the plant vigorously two or three times a day, and during hot sunny days a slight shade will be beneficial. I have been told that it will flower well, treated in the way Mr. Daniels flowered his Bougainvilleas so successfully. Any extra trouble taken will be amply repaid in the production of its most glorious flower heads, a colour much wanted amongst Orchids. *G. Toll, Gardener to J. A. Turner, Esq., M.P., Pendlebury, Manchester.*

Orchard-house Trees.—Your correspondent, "J. P. Alton" (p. 102), says, in reference to these, that "they are not in the least pot-bound (*i. e.*, his Peach trees), for I repot them every year in October." Will he have the goodness, for the information of myself and others, to say whether he shakes the earth from the roots and prunes them, or merely yearly gives them a size larger pot? I don't wish at all to open the orchard-house controversy, but merely ask for information on these points. *James Watson, Rotherham.*

Rainfall in Dorsetshire, 1863:—

	In.		In.
August	4.95	Brought forward	17.50
September	5.20	November	2.60
October	7.35	December..	2.97
	17.50	Total	23.07

I., Melbury House.

Oxford Park.—Having just seen your remarks on the laying-out of the ground at Christchurch, Oxford, I beg to suggest the planting of the trees and shrubs in groups of natives of the same place, as Norwegians, British, Spanish, Italians, &c. Hints for the position of the groups might be taken from Mercator's Chart. *Constant Reader.*

Roses on Manetti Stocks.—I have received a letter from H. Taylor, Esq., who lives in the rich vale of Mowbray, Yorkshire, in which he says, "I have planted 200 Manetti stocks. I am getting very partial to the Manetti Roses, having had splendid blooms on them this last season." Mr. John Ford, who lives here, and whose land is strong rich friable loam, told me that the Manetti Roses gave him finer blooms, and were hardier and healthier than Briar Roses, or Roses on their own roots. His place is on the top of a hill, exposed to high winds. I gave my worthy friend nearly all his Roses. *W. F. Radclyffe, Rushton.*

Foreign Correspondence.

SAINT VÉRAN, AVIGNON, *Jan.* 26, 1864.—I have just seen in a newspaper a piece of intelligence which I earnestly hope is not true, but which is stated so circumstantially that I fear there must be some foundation for it. The statement is that the Royal Horticultural Society intends offering three prizes for the three best herbaria of every county in England, and three additional prizes for the three best of these best; the herbaria to be sent to the Society in December next. If this most inconsiderate resolution has really been taken, I am sure it must have been in the absence of those members of the Council who have any real sympathy with British botany. If it be carried into effect, the present year 1864 will be marked in our botanical annals as the date of the extinction of nearly all the rare species in our already so scanty flora. If the extirpation of these rarities had been the direct object of the Society, they could have done nothing more effectual than by inviting, not simply three botanists in every county, but all the dabblers in plant collecting, a race whose selfish rapacity certainly needs no additional stimulation, and all of whom may think they have a chance of one of three prizes, and holding out to them a positive inducement to hunt out all the rare plants in every part of the country, and to carry off all they find, or destroy what they do not carry off, in order that not only they may themselves possess the plants, but that their competitors may not. Already our rare plants are becoming scarcer every year; you are, no doubt, aware how rapidly, for example, the rare Kentish Orchids are disappearing. The Royal Horticultural Society is proposing to treat rare plants, as King Alfred treated wolves—and this under the profession of encouraging local botany: as if local botany could be encouraged by destroying that on which it feeds, or as if any one were likely to begin studying the science in hopes of collecting a good local flora in a single summer. All local botanists will be thrown into consternation by this project, and if it is not yet too late I am sure they would all join in entreating you to use your great influence towards stopping so destructive a scheme. *J. S. M.* [Hear, Hear, Hear.]

Societies.

ROYAL HORTICULTURAL: *February* 9 (*Anniversary*).—The chair having been taken by Sir Daniel Cooper, Bart., and the Scrutineers of the Ballot appointed, the ASSISTANT SECRETARY read the Annual Report of the Council, as follows:—

1. After two years of inactivity with the works in the Gardens at South Kensington, occasioned by circumstances over which the Society has had no control, the Council are happy in being able to announce to the Fellows that they have now reason to hope that her Majesty's Commissioners for the Exhibition of 1851 are about to take important steps towards the completion of those works, and also to lend the Council their assistance in carrying out some operations not strictly falling within the landlord's province, which the Council think of importance, but which they could scarcely have undertaken without assistance.

2. The experience which has been acquired since the opening of the Gardens has given rise to various suggestions for the improvement of the original designs, and the Commissioners and the Council have devoted much time to their consideration. Some of these have appeared to them worthy of adoption, and the Council cannot better explain their nature than by laying before the Fellows the letter which they addressed to the Commissioners on the subject.

LETTER FROM THE COUNCIL TO THE COMMISSIONERS FOR THE EXHIBITION OF 1851.

To EDGAR A. BOWRING, ESQ. C.B. (SECRETARY TO H.M COMMISSIONERS FOR THE EXHIBITION OF 1851).—Royal Horticultural Society, South Kensington, Dec. 15, 1863.—SIR,—I am directed by the Council of the Royal Horticultural Society to inform you that they have had under their anxious consideration the present state and prospects of the Society's Gardens at South Kensington, especially in connection with those works which are under the control of her Majesty's Commissioners, and that they have arrived at certain conclusions, which they request you to have the kindness to submit to the Commissioners.

1. Since the foundation of the Gardens by H.R.H. the Prince Consort and the Commissioners, many unforeseen circumstances have happened, affecting the fortunes of the Gardens, which neither her Majesty's Commissioners nor the Horticultural Society could have controlled. It is not necessary to enter into an examination of these circumstances, further than to point out that they have kept in abeyance the realisation of the plans upon which the Gardens were projected, and upon the completion of which their success depended, and still depends.
2. Whilst the Council are sensible that it may be difficult for the Commissioners to afford the Council any precise information of their future intentions in completing the original design, particularly as respects the buildings forming the Central Arcades, they cannot hesitate to express to the Commissioners their conviction that the present state of those Arcades has an injurious effect upon the success of the Gardens and the Society. The imperfect decoration of the North Arcades, in like manner, gives an air of poverty and hesitation which is injurious. Moreover, the ground at the east and west sides of the Central Arcades is a waste, which, in any case, requires to be put in decent order; and certainly, the operation of removing the Great Exhibition buildings, so as to enable the Commissioners to dispose of their land to the Government—an operation which is likely to last during the present season—is not calculated to benefit the Gardens.
3. The Council conceive that a considerable amelioration of these depressing circumstances is possible, and they submit that it is the duty and interest both of the Commissioners and the Society to promote it. They feel confident that the Commissioners will be prepared to discuss the subject in an enlightened public spirit, and with the desire of promoting the eventual accomplishment of the original design in laying out the ground and devoting it to public uses.
4. The Council have applied themselves to the consideration of what it would be best to do at the present time to assure as well the Fellows of the Horticultural Society as the general public, that the Gardens and Arcades are not under a state of permanent paralysis.
5. The Council propose themselves immediately to commence operations in the Gardens, for the purpose of obtaining greater shade, also of providing exhibition space under cover, and generally of adding to the decoration of the Gardens, and making them more attractive.
6. The Council estimate that the cost of these operations will be between 2000*l.* and 3000*l.*, which they propose shall be borne by the Society.
7. But there are other most important works, the expense of which the Council feel would be beyond the means of the Society, and they seem to be works in which her Majesty's Commissioners have equal, or even greater, interest than the Society. The Council strongly recommend that these works should be put in hand immediately, so as to be completed before the 1st May. They are as follows:—
   - *a.* The *North Arcades* should be glazed and plastered, and certain carvings and decorations proceeded with. The Conservatory should be strengthened and improved, and lighted, so that it and the adjoining Arcades may be used for flower shows. &c. These would be permanent works, and would require the chief outlay.
   - *b.* The Middle Arcades should be put into a suitable state of repair, likely to last for three years, and openings should be made between them and the adjacent waste ground. Planting should be done, so as to make the whole an attractive covered way.
   - *c.* The adjacent waste plots of ground should be planted and grassed, and the palings raised. I am directed to observe, that the decorative completion of the North Arcades appears to the Council from a moral, if not a legal, point of view, to be imperative on the Commissioners at some period, at a very large cost, whilst the works in sections *b* and *c* may be considered really in the light of obligations on the part of the landlord, which, for the general value of the property and its appearance, it is the landlord's interest especially to execute.
   - *d.* The entrances and the South Arcades should be made more attractive, and be sufficiently protected against the weather.
8. The Council estimate that these works, exclusive of those in 5, could be properly executed for the sum of 13,000*l.*, and they will undertake that they will ask for no further sum on behalf of them.
9. The Council are satisfied that this expenditure would infuse new life into the Gardens, and give confidence to the public that the Commissioners' plan had not been abandoned. The Council submit that the experience of the next three years would be most valuable both to the Commissioners and the Society, in determining how far the comprehensive plans, as originally designed, should be prosecuted, modified, or given up.

Should the Commissioners be prepared to sanction the outlay of the sum proposed, and advance the money, the Council would be happy that its expenditure should be carried on under the superintendence of the Expenses Committee, which represents the interests both of the Commissioners and the Society.

I have, &c.,
(Signed) ANDREW MURRAY,
Assistant Secretary.

The following is the reply of the Commissioners for 1851, to the letter of the Council of December 15 (see par 2.)

PALACE OF WESTMINSTER: *Feb.* 6, 1864.—I am directed by her Majesty's Commissioners for the Exhibition of 1851 to acknowledge the receipt of your several letters of the 10th December, 1862, 17th November, 1863, and 15th January, 1864, on the subject of the Arcades erected by the Commissioners round the Gardens of the Royal Horticultural Society, and of the position and prospects of those Gardens.

The Commissioners feel that it is only necessary for them to

reply to the last mentioned of these various communications, viz., your letter of the 15th ultimo.

Without admitting the existence of any legal or moral obligation on their parts, her Majesty's Commissioners are willing to allow that the difficulties experienced by the Council of the Society, to which your letter alludes, may be in some measure attributed to the fact, that the funds which the Commissioners were required by their agreement with the Society to expend upon the Gardens, proved to be insufficient to complete the works according to the original design.

Under all the circumstances of the case, Her Majesty's Commissioners direct me to acquaint you, for the information of the Council, that they will be prepared to advance a sum, not exceeding a maximum of 13,000*l.*, for the purposes of the Gardens, to be expended in the manner indicated generally in your letter, such advance to be made out of the balance remaining payable to the Commissioners of Her Majesty's Government on account of the purchase of the site of the Exhibition buildings, and to be subject to such conditions as may be hereafter determined on.

Of the sum of 13,000*l.* in question, a sum, not exceeding a maximum of 2000*l.*, is to be specially applicable to the putting in order of the ground occupied by the two Annexes of the late Exhibition and its temporary appropriation to the purposes of the Society, as suggested by the Council.

It is to be understood, that the Commissioners reserve to themselves the power of resuming possession of either or both of the two Annexe grounds referred to, or any part of them, on giving to the Society six months' clear notice, commencing from any date. The Society will further understand that they will not be entitled to make any claim for compensation on the Commissioners in the event of such resumption.

The remaining sum, not exceeding a maximum of 11,000*l.*, now agreed to be advanced by the Commissioners, will be specially applicable to the other works proposed by the Council to be executed.

Her Majesty's Commissioners consent to the proposal that the supervision of the contemplated outlay shall be entrusted to the Expenses Committee of the Society, in which Committee the interests both of the Commission and of the Society are represented.

It will of course be understood by the Council of the Society, that her Majesty's Commissioners only consent to make this large advance on the distinct understanding that no such appeal as that contained in your letter will again be entertained by them; and they agree with the Council, that the experience of the next three years should be held as sufficient to determine the future of the Gardens, and the advisability, or otherwise, of proceeding with the original plans of laying out the Commissioners' estate, of which plans the maintenance of the Gardens, as an ornamental centre to the main square of the estate, formed a part.

I am directed, in conclusion, to express the hope of her Majesty's Commissioners that the concession now made by them may prove to be the means of ensuring the permanent success of the Horticultural Gardens. They feel convinced that no efforts will be wanting on the part of the Council of the Society to attain that end. *Edgar A. Bowring.*

3. The Council attach considerable importance to the temporary loan to the Society of the ground on which the two Annexes of the Great Exhibition stood. It will not only add to the pleasure-ground of the Society and gave additional room for the recreation of the Fellows at a trifling cost of maintenance, but will enable the Middle Arcades to be opened at intervals, and thus tend to lighten and enliven them. Perhaps it may be possible to arrange for the erection of one or more glass-houses in which a portion of the horticultural operations of the Society may be carried on, and an opportunity afforded to the Fellows and the public to see them without going so far as Chiswick.

4. The chief alterations which the Council propose to make upon the Gardens are increased planting for shade and a greater quantity of Grass. They propose to plant and decorate with flower-beds the walks in the Ante-Garden, &c.

5. Some of the Fellows have proposed to establish independent clubs for croquet and bowls, and the Council readily lend themselves to the proposition, in the expectation of thereby increasing the enjoyments of the Fellows and the attractions of the Gardens.

6. It has also appeared to the Council that increased interest would be given to the Gardens if portions of them were set apart as exhibition grounds of bedding plants, flowers, and shrubs, &c., let out to responsible nurserymen and florists of eminence. They accordingly have invited tenders for filling such spaces during the year 1864. The selection and arrangement are proposed to be left entirely to the taste of the exhibitors, provided that the same be in keeping with the general character of the Gardens. The beds so planted would be kept in order by the parties planting them throughout the season; and the names and addresses of the nurserymen and florists placed upon the beds so filled by them.

7. The object which the Council have had in view in recommending the Commissioners to be at the expense of glazing the Upper Arcades and lighting the Conservatory, has been chiefly to provide a place in which the Society might hold evening meetings. The want of such a place has been felt, and various plans have from time to time been proposed for supplying it. They expect that the work will now be undertaken without delay, and the Council look forward with pleasure to being able to hold occasional evening réunions in the Conservatory during the present season.

8. They trust also, by this means, to be able to have their great Shows open on the evening of the first day of the Show.

9. On no point has the experience of the last three years been more instructive than on the question of the admission of the public to the Gardens. On this point the two extremes have been tried, and neither of them found to answer. In 1862, the public were admitted with as great freedom as was well nigh possible. For the greatest part of the week, during the continuance of the Great Exhibition, the price of admission could scarcely be said to be more than 6*d.* a head; and the Fellows, recognising the exceptional nature of the year, good-naturedly submitted for the time to this practical abrogation of exclusive privileges.

In the following year the Council went to the other extreme, and excluded the public altogether. The new rules were not long in operation before the Council felt that they would not answer. But, although strongly pressed to relax them, the Council adhered to the programme which they had announced, and maintained the exclusive character of the privileges to the end of the year. The experience which they have thus acquired, however, has thoroughly convinced them that the right policy lies between these extremes—namely, in admitting the public at an easy rate on certain days, and virtually excluding them on others. This was the policy originally laid down by H.R.H. the Prince Consort, as President of the Society. It was the footing on which her Majesty's Commissioners entered into their agreement with the Society. This also is the policy which has been found most successful by a society in a very similar position to that of the Horticultural Society, viz., the Zoological Society, and it is the policy which the Council now recommend for the adoption of the Fellows.

10. The Council feel confident that it is quite possible to increase the privileges of the Fellows in the use of the Gardens, and at the same time, through the assistance of the general public, to make them much more remunerative than heretofore, and therefore auxiliary in promoting the scientific objects of the Society.

11. As respects increased privileges of the Fellows, the Council recommend that the evening meetings shall be confined to the Society itself and to other learned societies.

12. They propose that the Fellows shall have the new privilege of purchasing (previous to the day) any number of tickets of admission to each Great Show at half-price, that is, 2*s.* 6*d.* instead of 5*s.*

13. They propose that at each of the minor Shows the Fellows shall have the privilege of purchasing tickets at the door for their friends at 1*s.* instead of 2*s.* 6*d* each (which last price will continue to be charged to the general public).

14. They propose not only that the Fellows shall have the privilege of visiting the Shows at an earlier hour than the general public, but also that they may bring their friends (who have tickets) at an earlier hour, although not so early as the Fellows' hour.

15. They recommend that each Fellow shall have the privilege of admitting two friends, personally or by written order, on Sundays; also on Mondays and Saturdays, on which two days the public will be admitted on payment of one shilling each person; on Tuesdays, Wednesdays, Thursdays, and Fridays, that Fellows shall only be allowed to introduce their friends personally as heretofore, and the public to be admitted by payment of five shillings each person. The privilege of introducing friends personally or by order will not extend to show-days.

16. Another point which has occupied much of the attention of the Council is the publication of the "Proceedings" of the Society. Several Fellows have recommended their more frequent publication. The only objection is the increased expense of delivery. It will be in the recollection of the Fellows that last year, in order to reduce the expense of the "Proceedings," the Council dropped the publication during the four months of the year when most of the Fellows were out of town. A considerable saving was thus effected; and a further saving will this year be effected by the new form of printing in double columns and smaller type, which has been adopted in the month of January. It is not the expense of printing, however, which would deter the Council from complying with the wishes of those Fellows who desire a more frequent publication; it is the expense of delivery which is the most serious obstacle; that is so great as to form an absolute barrier to the proposition, unless it be borne by the individual members themselves. This is done in some other societies. Those Fellows who are willing to pay the postage or expense of delivery receive the publications at once. To those who do not choose to incur that expense they are sent by parcel and at intervals when they have accumulated sufficiently. The Council recommend that in future this plan be adopted, and the "Proceedings" published once a fortnight, if possible.

17. Whilst the Council have thus had much of their attention directed to supporting the material prosperity of the Society, and promoting the general comfort and enjoyment of the Fellows, they have steadily kept in view the primary object for which the Society exists, viz., the advancement of Horticulture.

The operations of the Fruit and Floral Committees have gone on effectively, and the reports of their meetings have been published in the Society's "Proceedings." The results of the experiments at Chiswick during the past year will appear in them without delay. By means of these experiments the most important garden flowers and fruits are by degrees being reported on, and inferior sorts are eliminated from the lists; the Fellows and the public have thus a trustworthy report of the best kinds of each. Experiments have also been made in regard to improvements in heating, and on other Horticultural matters, of which, when desirable, account will be given in the "Proceedings."

18. The collector, Mr. Weir, was last year recalled from South Brazil, that district having been sufficiently explored, and not found very productive; he is now collecting in New Grenada, and already six boxes, collected in the neighbourhood of Mompos, have been received in excellent condition. These will form the subject of ballot during the following season; and as the access to New Granada is easy, it is expected that materials for several ballots will be received.

19. The seeds and plants which he sent home from South Brazil were raised and propagated, and have been distributed by ballot last year among the Fellows; 5059 plants have been so distributed, and a few still remain for ballot during this season.

The total distribution of plants, seeds, &c., during the year has been—8300 plants; 78,065 packets of seeds; 2000 bundles of grafts of fruit trees.

The value of the privilege of obtaining fruit from the Chiswick Gardens at a wholesale price seems to be every year better known and appreciated. The Fellows have availed themselves of it during the past year to a greater extent than they have ever done hitherto. The Garden at Chiswick has, by means of its sales, contributed considerably towards its expense.

20. The Accounts and Balance-sheet of last year have been already published. The different items of expenditure are suggestive of various alterations in the mode of management of the subjects to which they relate. The Council feel that even after three years they are still at the commencement of a large experiment, and they recognise the necessity of making alterations as experience suggests, or necessity demands them.

The efforts of the Council have been chiefly directed to the reduction of expenditure, and this they will continue to keep steadily in view.

The number of Fellows has been increased during the past year by 23. There have been elected 245. But the Society has to lament the loss of 86 by death.

The following is a comparative view of the number of Fellows belonging to the Society at the respective dates noted:—

Fellows at Anniversary.				1 Guinea.	2 Guineas.	3 Guineas.	4 Guineas.	20 Guineas.	40 Guineas.	Total.
May,	1858	..	..	..	..	..	..	..	..	978
,,	1859	..	..	..	..	..	..	..	..	985
,,	1860	..	..	..	..		..	..	..	1416
,,	1861	..	..	..	..	..	..	..	..	1752
January,	1862	..	..	10	722	25	1130	334	555	2776
,,	1863	..	..	10	918	25	1387	386	587	3313
,,	1864	..	..	7	945	23	1372	406	583	3336

21. In conclusion, the Council repeat that they look forward with confidence to the increased usefulness of the Society. The progress of Horticulture on the Continent, and the more frequent intercourse resulting from the extension of railways, are silently changing the position of the Society. Numerous Horticultural Societies are now established all over the Continent, and if the Society wishes to maintain its position as the leading exponent of Horticulture in the world, and no to sink into the status of a mere provincial Society, it mus not ignore the steps taken and the progress made by Continental Societies. The Council have therefore paid considerable attention to enlarging the circle of the Societies with which they are in friendly relation, and drawing closer the bonds of sympathy and friendship by which they are united. They are already in communication with 27 foreign and colonial Societies, with which they exchange publications and mutual good offices; and the Council look upon the strengthening of these bonds of union as no unimportant part of their duty, and no small means towards the advancement of Horticulture.

Earl Ducie and Dr. Lindley having resigned, letters from them were read, explaining the cause of their resignations.

The ballot for members of Council and other officers having been opened, the CHAIRMAN proceeded to move the adoption of the Report, and Mr. W. W. SAUNDERS seconded the motion.

The attention of the Council was called to the wretched state in which the Gardens at Chiswick were kept, and an opinion was expressed that they ought to be opened on Sundays. Some dissenting remarks were also made as to the character of some of the proposals before the Society.

The CHAIRMAN said that it was impossible to keep the Gardens at Chiswick in a better state, as the Society had no money in hand with which that could be done.

Mr. BATEMAN observed that it would entail additional expense to open the Gardens in question on Sundays, in consequence of the number of men who would have to be employed.

Mr. HARRY CHESTER deprecated the manner in which the Gardens at Chiswick had been kept. They were, he said, disgraceful, and would call forth the opprobrium of foreigners interested in horticulture who might visit this country. Many improvements were also needed in the Society's Gardens at South Kensington, for at present, he added, they resembled an ill-planned and ill-kept Cemetery.

In this statement, especially that in reference to Chiswick Garden, Mr. Chester was warmly supported by a large number of the Fellows present. A long discussion then ensued, in which it transpired that the Society contemplated giving, at some time not fixed, a series of popular lectures on the science of horticulture. A question was also raised as to whether the 13,000*l.* offered to be "advanced" by the Royal Commissioners of 1851 was on loan or as a gift, and consequently whether or not interest would have to be paid upon it.

Sir WENTWORTH DILKE, in reply to the question, said that he thought a large part would be treated as landlord's assistance, but there might be a slight amount of interest chargeable upon the remainder. He defended the general conduct of the Commissioners, and said that the advance now offered would be of the greatest advantage in furthering the interests of the Society.

Mr. CLUTTON also contended that it had been the desire of the Commissioners to assist the Society. The gardens must be made attractive to be remunerative, and to become attractive there must be some additional outlay, which was now generously offered by the Royal Commissioners, and therefore he thought that the Society should without hesitation accept the offer they had made.

After some further discussion,

Mr. HARRY CHESTER said he thought they could not adopt the Report without knowing the terms upon which the 13,000*l.* was to be granted; and he moved as an amendment that the meeting be adjourned for a fortnight, in order that the Council might obtain information from the Royal Commissioners of 1851 as to the terms upon which the sum of 13,000*l.* would be advanced, whether as a gift or as a loan.

The amendment having been seconded, another long conversation ensued, in the course of which it was observed that the rent of upwards of 2000*l.* payable to the Royal Commissioners was more than the resources of the Society could meet.

Mr. EDGAR BOWRING contended that as between landlord and tenant nothing could be more just and fair than the conduct of the Commissioners. In his opinion, their liberality in making their agreement with the Society as to the payment of rent was most unprecedented.

Mr. KELK reminded the Meeting that the answer of the Commissioners to the Council respecting the 13,000*l.* was only agreed to at their meeting last Saturday, and that the terms of the arrangement were yet to be considered. There was no doubt, he added, that at present the Council had a good bargain, and if there was any internal quarrel about it the Commissioners might feel inclined to hold the matter tightly in their hands, and the result would be that that which was now an advantage to the Society, might be found to be a hard-driven bargain.

At this stage of the proceedings the result of the Ballot was declared to be as follows, viz.:—That Earl Grosvenor, M.P., Lord Henry Gordon Lennox, Mr. Cole, Mr. Bateman, and Major Trevor Clarke had been elected members of Council, in the room of Earl Ducie, Dr. Lindley, Mr. Robert Cooper, Mr. John Fleming, and Mr. James Veitch.

(We learn however that the meeting was far from unanimous in the case of Mr. Henry Cole.)

As officers for the ensuing year, the following gentle

men were elected:—President, the Duke of Buccleuch; Treasurer, Sir Daniel Cooper, Bart.; Secretary, William Wilson Saunders, Esq., F.R.S. Expenses Committee: the Treasurer, the Secretary, and Mr. Henry Cole. Auditors: Messrs. Jonathan Clark, Charles Edmonds, and James Nicholson.

The CHAIRMAN then put the amendment for the adjournment of the meeting for a fortnight, against the original motion for the adoption of the Report, and declared it to be carried by about 40 to 24 hands.

The meeting then adjourned until the 23rd inst.

We may add that an admirable half-length portrait of Prof. Lindley, painted with consummate skill by Eddis, and presented to the Society by the gentlemen at whose expense it had been executed, was placed in the room.

Notices of Books.

The *Botanical Magazine* for February contains figures of the following plants:—*Forrestia hispida*, an Eastern hothouse perennial of the Spiderwort family, known in gardens by the name of Pollia purpurea, under which we believe it was introduced from the continental gardens, but which, according to Sir W. Hooker, by no means belongs to it, as it is certainly "both generically and specifically the same as Forrestia hispida, of Lesson and Richard," which is found in New Guinea, extends to Sumatra and Java, and occurs also on the Indian continent as far north as Sikkim. It is a perennial herb, with slender stems which become creeping and radicant below, and furnished above with obovate-lanceolate caudate-acuminate deep purple leaves (becoming green above, however, in the flowering age, according to the figure); while the small purplish flowers appear in dense clusters from the hairy leaf-sheaths.—*Ipomœa filicaulis*, a slender much-branched trailing scarcely climbing annual plant; said to be found in Asia, Africa, Australia, and the warmer parts of the New World; very graceful and elegant in character, but with blossoms scarcely large enough to become useful for ornamental purposes. The leaves are smooth linear-oblong, frequently somewhat hastate at the base; and the small cream-coloured flowers with a purple eye, are borne in pairs on long slender axillary peduncles. It requires stove culture.—*Gladiolus sericeo-villosus*, a singular species of Cornflag obtained by W. Wilson Saunders, Esq., from the interior of the Cape Colony. It grows three to four feet high with very long linear ensiform leaves, and a spike a foot or more in length, the spathes as well as the tall stem densely clothed with shaggy silky hairs, the flowers themselves being a peculiar yellow-green tinged with brown. Though very distinct and interesting as a botanical plant, the flowers are too small to make it of much importance as a garden flower, the yellow colour too being already present in the larger-flowered varieties we already possess.—*Trichantha minor*, a very striking Gesneraceous plant from Columbia, introduced by Messrs. Veitch: a slender climbing rooting herb with ovate acuminate leaves, and clustered axillary flowers, the limb of which is yellow and the tube striped with blackish purple, the calyx, which is composed of five ciliated fringed segments, being, as well as the stems and pedicels, bright red.—*Canscora Parishii*, a most remarkable species of the Gentian family, sent from Moulmein, by the Rev. C. S. P. Parish. It is an annual of tolerably rapid growth, and the singular leaves and copious white flowers are described as having quite an ornamental character. "The species is very remarkable as having perfectly terete stems and branches, and an equally terete calyx, in no way angled or winged. The leaves are throughout the plant perfectly connato-perfoliate into one exactly orbiculate leaf, with the stem or branch as it were passing through the centre, and the veins all radiating from that point." The flowers and calices remind one of Silene inflata, except that the corolla is four-petaled and less spread out, so that it has a more bell-shaped form.—*Dendrobium ciliatum*, a Moulmein species, with rather slender elongate terete stems, oblong acute leaves, and several erect racemes from the upper axils, the inflorescence having much resemblance to that of some Epidendrum. The flowers consist of oblong spathulate petals of a yellowish green, and a small yellow lip marked with purple lines, and remarkable for the long rather distant clavate bodies which fringe its middle lobe, and which, when minutely examined, are found to be prolongations of the veins, and of a very different character from real hairs.

The *Floral Magazine* figures two *Chrysanthemums* called *Lord Clyde* and *St. Margaret*; *Gladiolus Randle Jackson*; *Eranthemum tuberculatum*; and *Schizostylis coccinea*, much exaggerated—the two last recently noticed as figured in the "Botanical Magazine," and rather odd florists' flowers, to which we had been told the subjects in this work were to be restricted.

In the *Florist and Pomologist* is a capital figure of a fine continental variety of *Magnolia*, called *Lenné*, related to M. conspicua and purpurea, and probably the finest yet obtained of this deciduous race, being remarkable for the size and substance of its flowers, which are of a full reddish purple on the outside and white within. Mr. Barnes, of Bicton, commences an explanation of his mode of cultivating the Pine Apple; Mr. Carr describes the way in which he grew the large bunch of fruits of Musa Cavendishii, exhibited a short time since at South Kensington; and Mr. Tillery recommends the Celosias known as argentea and pyramidalis, as admirable decorative plants for the greenhouse during the autumnal season.

Of Mr. Lowe's excellent *Manual Flora of Madeira*, the third part is before us. It commences with Myrtaceæ, and ends with Araliaceæ. We congratulate our Madeira friends upon their vegetation being investigated by so able and judicious a botanist. The genus Sempervivum is particularly well done, and should be consulted by horticulturists.

The 12th Part of Watts's skilfully managed *Dictionary of Chemistry* (Longmans), contains capital articles on Gas, Gases, and kindred subjects. There is also a very carefully written account of the gastric juice, which all readers will consult with advantage.

Calendar of Operations.

(For the ensuing week.)

THE recent return of frost, accompanied by a little snow, may have put a temporary stop to some of the out-door operations recommended to be done last week, and that being the case, in-door work will doubtless have had additional attention. The potting, training, and cleaning of plants, the tying and dressing of fruit trees in forcing houses, and other matters of that description, if not already done, may now be resorted to with advantage. In favourable weather such work may sometimes be suffered to stand still for a time without much harm, and indeed considerable time is frequently saved by a little judicious management, so that both out-doors and in-doors work may be carried on under circumstances most favourable to each department.

FLOWER GARDEN AND PLANT HOUSES.

Improve as much as possible outlines of every kind. When favourable weather returns, plant fresh masses or groups of shrubs where necessary, and introduce specimen plants where fitting opportunities offer. Much mischief is done by planting single specimen trees in recesses; these should be carefully preserved as a general rule, to give deep shadows, and to throw the prominent features into bold relief.

AURICULAS.—Let these be protected from severe frost; but when the weather shall have become mild, and the plants started into growth, water sufficiently freely to moisten the soil to the bottom of the pots, and then top dress with mould of rich character.

AZALEAS.—Plants that have been kept in heat to bring them into flower will now require pretty liberal supplies of water, and take care to keep them free from cold currents of air. See that young plants are clear of insects and in a healthy growing condition.

CALCEOLARIAS.—Plants of these intended to form fine specimens may soon receive a shift. They like a mild moist heat, and to be kept clear of insects.

CARNATIONS AND PICOTEES.—Soil for these having been prepared at the proper time and well frosted, should now be occasionally turned and kept dry for use when wanted. Take care that it is free from wireworm. As the potting season is fast approaching, keep the plants as hardy as possible.

CINERARIAS.—Give a little air if possible, but avoid frosty draughts. Pick off decaying leaves and keep down mildew by means of sulphur. Thin out superfluous leaves and shoots, and continue to move at intervals a few of the most forward plants into an intermediate house for early display.

DAHLIAS.—Roots of these may now be placed in heat to start them into growth.

FORCING GARDEN.

Notwithstanding that rather severe frost has again visited us, few seasons have been more favourable than this for early forcing, and therefore where anything like proper attention has been paid, most things will now be in a highly satisfactory condition.

CHERRIES.—Advance steadily. Ventilate freely when the weather will permit, and maintain a moist growing temperature.

CUCUMBERS.—Stop and peg down regularly plants sufficiently forward for that purpose. Water frequently between the hills, and round the sides of the frame. Ensure a temperature of 70° night and day, allowing a rise of 5° in the day if possible, and rising to 85° or even 90° during sunshine.

PEACHES.—If the fruit is swelling off, syringing may be again resumed, and should be performed twice a day, viz., in the morning about 9 o'clock, and in the afternoon about 3 o'clock. Shut up early.

PINES.—As a somewhat general shift should take place during this month, let us offer a little advice about soils. Our best Pine-growers adhere in general to loam. What is wanted is not a new description of soil, but good texture. Few people use turf so fresh as they may and ought to do. Proper mechanical texture is the great desideratum, and this may be obtained in perfection in fresh loamy turf; lumps of charcoal and broken bones will add to its porosity, and also to its quality. Turf for Pines should be housed in September in a dry state, and should be chopped into squares, or small pieces when dry. As drainage for pots we would recommend in addition to open crocks, broken bones and charcoal mixed; on this put a layer of fresh turf in lumps, and then the ball of the shifted Pine.

STRAWBERRIES.—To those in bloom near the glass give abundance of air when the weather is at all mild, and thin the fruit where too thick.

VINES.—Difficult setters should be artificially fertilised, choosing the middle of a dry day for the operation; Grapes swelling should be thinned the moment the bunches can be handled. Many exhaust their Vines by deferring too long this important operation. Follow up the close stopping of all superfluous wood, provide plenty of atmospheric moisture, and do not be afraid to indulge in a considerable increase of temperature on the afternoons of bright days, which we may now surely soon expect.

HARDY FRUIT AND KITCHEN GARDEN.

As soon as favourable weather shall have set in, see to the due preparation of ground for crops in general, but beware of carrying on any operations when the soil is in a wet state. Where kitchen gardens are composed of light sandy soil, they are better dug or trenched some weeks before the ground is wanted for cropping.

CAULIFLOWERS.—Look carefully after those in frames and under handglasses while cold weather lasts.

LETTUCES.—Plants of these in frames will also now require attention. See that they are not suffering from undue confinement.

POTATOS.—As soon as the frost shall have broken up, a few Ash-leaved Kidneys may be planted on a dry warm border, and when up protected a little in unfavourable weather.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending Feb. 10, 1864, as observed at the Horticultural Garden

February	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind
Thurs. 4	26	30.144	30.060	43	21	32.0	43½	44	N.W.
Friday 5	27	30.215	30.073	38	28	30.5	43½	43½	W.
Satur 6	28	30.156	30.002	37	21	29.0	43	43	N.
Sunday 7	●	29.921	29.826	34	18	26.0	40½	42½	N.E.
Mon. 8	1	29.745	29.656	38	15	26.5	40	41½	N.
Tues. 9	2	29.617	29.506	37	11	24.0	40	41	N.W.
Wed. 10	3	29.510	29.386	41	28	34.5	39½	41	N.W.
Average.		29.901	29.831	37.5	20.3	28.9	41.4	42.3	

Feb. 4—Fine; clear and cold; overcast; slight snow; frosty.
— 5—Clear and frosty; clear with cold north wind; overcast.
— 6—Clear and cold; fine but cold; sharp frost.
— 7—Clear and frosty; cold and dry; frosty.
— 8—Uniformly overcast; fine but cold; sharp frost.
— 9—Frosty; overcast; severe frost at night.
— 10—Frosty and foggy; at 10 A.M. a remarkably dense fog of reddish hue; slight frost at night.

Mean temperature of the week 10½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Feb. 20, 1864.

February	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 14 .	45.4	31.1	38.3	14	0.50 in.	1	5	4	3	3	12	8	1
Mon. 15..	46.7	31.1	38.9	13	0.37	4	4	5	—	5	10	7	3
Tues. 16..	46.6	30.6	38.6	8	0.23	6	6	4	3	1	9	6	3
Wed. 17..	46.7	31.1	38.9	14	0.32	3	4	4	3	3	7	9	4
Thurs. 18..	45.2	31.1	38.1	16	0.30	3	3	4	2	5	6	9	6
Friday 19..	45.1	31.3	38.2	14	0.50	6	2	5	6	10	4	1	4
Satur. 20..	45.6	30.7	38.1	20	0.51	2	4	3	5	9	7	4	6

The highest temperature during the above period occurred on the 16th, 1863—therm. 59 deg.; and the lowest on the 17th, 1855—therm. 2 deg.

Notices to Correspondents.

HOLLIES: *A H W.* It is not unusual for these to put forth blossoms and even sometimes new leaves when placed in water in a warm sitting room.

LABELS FOR ROSE-TREES: *Wellington.* Wood soon decays; white earthenware breaks and mildews. Metal, such as zinc or copper, when painted is far better; but you must take care that the wire by which it is suspended does not cut the label through by friction. Any coppersmith will furnish such things.

MILDEWS: *A H.* The brown specks on Camellia and Veronica are the incipient stage of that on the Citron, which is the common Fumago, a pest that is very prevalent wherever Aphides have been, or where there has been a honey-like exudation on the leaves. Nothing but constant care in sponging and ventilating will prevent it. The white patches are not the Oidium but a minute Sporotrichum which is in too bad a condition to say much about. Sulphur will be of no use as a remedy against the Fumago. *M. J. B.*

MOSS ON LAWNS: *C W F.* Surface applications will be of no use if the evil arises from deficient drainage. Of that you must judge for yourself. If the drainage is satisfactory, the bush-harrowing you propose will be useful, and you may afterwards apply a good top dressing of lime and ashes, or of lime ammoniacal lime from gas works; or you may use a top dressing of guano by and by as the season advances; or you may water the Grass with gas-water, that is the refuse ammoniacal water to be obtained at any gas works. We believe these are all successful plans, provided the soil is properly drained.

NAMES OF PLANTS: *E C.* Rhipsalis salicornioides.

OAKS: *Sir J. R.* We are prepared to defend every statement that has appeared in our columns. We *know* that we are right in our opinion of Quercus sessiliflora, as we could demonstrate were it worth while to revive a question that has now been settled in the mind of every forester, except of those who have been napping, for the last ten years.

PINE APPLES: *A Constant Reader.* The disease in some Pine Apples which appear well coloured and moderately well flavoured, but have a blackness through the centre of the fruit of about 2 inches in diameter, is caused by the plants having had too much water and too little good warm ventilation. Reduce the water, and put more faith in sunshine.

TREE SEEDS: *J H L.* Any of the *great* seedsmen may be consulted with advantage.

TYDÆA: *W. Bull.* The variety is a good one, the flowers being large (1¾ inch across), brightly-coloured, and of good form and substance. We do not remember to have seen any like it. The colour is light crimson, marked freely with radiating lines and dots of velvety black, which contrast very effectively with the ground colour. If the habit is good we should think it an acquisition amongst these plants, which are not sufficiently appreciated amongst cultivators, but which are most useful for winter-flowering, if a supply of young plants is kept.

MISC.: *A digested Reason.* Pooh!—*Potato-land.* Your letter has four faults: it is too long and too ill written, and contains many things that are libellous and false.

Present Prices of Farm Seeds.

THE NEW FARM SEEDS are NOW READY, at Reduced Prices.

PRICED LISTS may be had, Post free, from SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

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ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.

SPRING SESSION 1864.

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Drawing.—JAMES MILLER.

SPECIAL LECTURERS.

J. BAILEY DENTON, M. Inst. C.E.—On DRAINAGE.
Professor J. MORRIS, F.G.S., of University College, London—On GEOLOGY.
JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.
WILLOUGHBY WOOD, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.
JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.
JOHN THORNHILL HARRISON, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.
THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.
ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.
RICHARD GRIFFITHS WELFORD, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.

Applications for Admission and for further particulars may be made to the Principal.

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The Agricultural Gazette.

SATURDAY, FEBRUARY 13, 1864.

MEETING FOR THE ENSUING WEEK.

WEDNESDAY, Feb. 17 { Agri. Society of England.. .. Noon (Mr. LAWES on Salt as Manure)

MR. PATRICK SHIRREFF, of East Lothian, to whom we owe many of our best varieties of cultivated plants, last week called attention in this Journal to our means of Plant Improvement; and, referring to a passage on the subject in MORTON'S "New Farmers' Almanac" as having been written either by Professor BUCKMAN, or by some person entertaining the same sentiments, he said of it that "instead of being an unbiassed exposition of the modes of agricultural plant improvement, it may be regarded as an advertisement of HALLETT'S Pedigree Wheat."

Knowing the authorship of the paragraph in question, it was a careless oversight on our part that this reference to Professor BUCKMAN'S name should have been permitted. Whether his sentiments were properly represented in the paragraph or not, it was certainly a mistake to allow his name to appear in a case where he was not responsible, especially in connection with the not very complimentary allusion to the words used, as being an advertisement of Mr. HALLETT'S Wheat.

The article in question is, we believe, defensible against Mr. SHIRREFF'S attack. Certainly it was not written in order to promote the sale of the Pedigree Wheat. A clever tradesman knows the value of perpetual, urgent, and even outrageous advertisement sufficiently well to ensure the sale of his goods, without anything like editorial assistance. This

we have never given to any one unless it were incidentally, and in fact unavoidably. It was unquestionably our duty to inquire into a history professing to illustrate a principle which cannot be denied, under its designation of "*habit* of growth," to have general influence in plant cultivation. But whether Mr. HALLETT or any one else has benefited, or whether his customers have benefited or been injured by the result of our inquiries, is nothing at all to us. The article in question no doubt named Mr. HALLETT, and was so far an advertisement of his proceedings; but that could not be helped. Let us add that it would have been avoided if it could—for we do not carry our admiration of a career beyond the stage of patient and persistent labour during which it has, as we believe, done good agriculture a material service. The intelligence and perseverance which during several years of it have been exhibited are worthy of all praise. The subsequent skill as salesman or as tradesman which it has since displayed—skill in the mere art of money making and turning this intelligence and perseverance to personal account—is of course its own reward, and needs no commendation from us. Certainly we have no desire either to foster a trade which rests upon an extravagant estimate of the influence of the principle which has been established, or to promote the sale of Wheat at seven guineas a quarter!

Leaving, however, now these personal considerations, which have been forced upon us by Mr. P. SHIRREFF'S personal attack, we add a word or two upon the methods of plant improvement, which are referred to in the Almanac.

The writer had said of the plan by mere selection—"Keep a sharp look out, and whenever you see in any natural sort or variety the qualities you want, take care of the plant, and multiply it as fast as you can." And this appears to us to include all that need be said on the subject. Any further elaboration of the idea would have added nothing—it would indeed have rather weakened the influence of the statement. It is however upon the other method—that by cultivation, which Mr. HALLETT has employed—and in describing which the writer had mentioned Mr. HALLETT'S Wheat as an illustrative example, that Mr. SHIRREFF is more especially displeased. Here it had been alleged that the history of plant cultivation united with the analogies of animal life to prove that it was possible by careful attention to successive generations of a particular plant—by the best cultivation continued for many years under the best circumstances—to confer upon it good habits of growth, which become confirmed the longer the process is continued. And this we believe to be a well-founded statement—one to which a very wide-spread and long-established agricultural experience will bear testimony. Whence the idea in favour of change of seed, if there be no foundation for the idea? No one is more able than Mr. SHIRREFF to appeal to the history of plant improvement in proof of his opinion. But we shall be very much astonished if on a review of the whole of that large subject, he finds, as he declares, that the alleged history of HALLETT'S Pedigree Wheat is the only instance which can be quoted in defence of the idea which the word "habit," as applied to the growth of plants, necessarily conveys.

[Since this has been in type, and too late for publication this week, we have received from Mr. HALLETT a long communication on the subject of plant improvement, and on his experience as a Wheat grower, which cannot appear until next week.]

ON Thursday last a Bill was introduced into Parliament by the CHANCELLOR of the EXCHEQUER for enabling the malting of Barley to be used, free of duty, in the feeding of cattle. The safeguard provided by the Bill against any other use of the malt so made is obtained by requiring that the Barley shall be first mixed with not less than one-tenth its weight of Linseed. The effect of this on the article as food will be to make it even more laxative than malt naturally is—so that it will no doubt need to be further mixed with Bean meal or some other astringent addition, when given as food.

The only point of agricultural interest that arose in the course of the debate was the reading of the following letter on the subject from Baron LIEBIG:—

"Munich, July 6, 1863.

"In forming a judgment on the feeding properties of malt, when given to horses, cattle, and sheep, it is obvious that in comparing it with Barley we must not lose sight of the fact that there is a larger amount of nourishment in Barley than in the malt manufactured from it; for in the process of malting Barley suffers a loss in weight amounting to from 7 to 11 per cent. of dry substance. The 'rootlets' constitute 3 to 3½ per cent. of this loss, and as they contain a pretty large quantity of blood-forming (nitrogenous) matter (25 to 30 per cent.), the grain, by their separation from it, undergoes a loss of one of its nutritive elements. Hence it is clear that if, in practice the feeding qualities of malt are found to be greater than those of Barley, this can only arise from the circumstance that the nutritive matter contained in malt is present there in a more soluble, more digestible state than in Barley; and that therefore in feeding with Barley more nutritive matter leaves the body in an undigested state than is the case when an equal weight of malt is used as food. There can be no doubt whatever that in malt blood-forming matter is contained in a more soluble form than in Barley; for the process of malting occasions a loosening of the component parts of the grain in so great a degree that 100 volumes of dry Barley yield (notwithstanding the loss of weight) 112 to 114 volumes of dry malt. Such a loosening of the inner parts of the grain, thus enabling the gastric juice in the animal body to penetrate it more easily and thoroughly, is not to be attained in like degree by a mechanical process. The comparative analysis shows finally that the amount of readily soluble blood-forming elements in Barley is 1¼ per cent., and in malt 2.2½ per cent. By the process of drying in the kiln, a part of the soluble blood-forming elements is rendered insoluble, and from this it cannot add to the feeding capabilities."

—— THE very elaborate returns of the harvest of 1863, which are given in the *Mark Lane Express* of Monday last, are again a singular confirmation of the accuracy with which the character of the crop can be estimated at the time it is reaped. We have for many years obtained from 200 or 300 correspondents (all over the country) their opinion of the current harvest in the month of August. Our contemporary gathers the opinions of a much larger number of correspondents in the month of January, when a good deal of the crop having been threshed out, a much more confident judgment of its yield may be pronounced. The two estimates are, however, very nearly alike. The following is the result of inquiries by the *Mark Lane Express* as regards the crops of Wheat, Barley, and Oats:—

Reports.	Wheat.	Barley.	Oats.
Under average	5	55	64
Average	96	245	268
Over average	523	261	200
Total	603	561	532

The following are our own returns of the same crops six months ago:—

Reports.	Wheat.	Barley.	Oats.
Under average	1	23	40
Average	60	109	110
Over average	131	58	49
Total	192	190	199

The Barley and Oat crops appear from the late returns to have turned out better than their promise at harvest time. How nearly the Wheat crop has fulfilled its promise, as that was read by our correspondents in August last, is plain from the following table, in which the percentages of the different reports at the two dates are calculated separately.

	Under Average.	Over Average.	Average.	Total.
Mark Lane Express	.32	83.42	15.76	100
Agricultural Gazette	.82	68.23	31.25	100

Here, too, the threshing machine has more than satisfied the anticipations which were formed at harvest time; but these nevertheless have proved exceedingly accurate.

STEPS are being taken—under the auspices of a most influential committee, presided over by Lord PORTMAN, and including many of the first names among leading agriculturists—both landowners and tenant farmers—for the presentation of a testimonial to Mr. JOHN FOWLER, as a public acknowledgment of the indomitable perseverance, untiring energy, and large expenditure of capital which he, as one of the pioneers of steam cultivation, has devoted during many of the best years of his life to an object which must eventually become a national benefit.

Mr. C. CLAY, of Walton, near Wakefield, to whom subscriptions should be sent, is the Hon. Secretary and Treasurer to the fund. The testimonial is to take the form of a full-length life-sized portrait in oil colours of Mr. FOWLER, and subscribers will be presented with an engraving of it, according to the amount of their subscriptions. There needs no additional word from us to declare (on behalf we are sure not more of the managers than of the readers of the *Agricultural Gazette*), how thoroughly such a testimonial has in this case been earned, or how deservedly in their opinion it will be conferred.

—— A LONG correspondence read at the last meeting of the Council of the Royal Agricultural Society has been since published. 1. Messrs. HOWARD (Jan. 21), suggest to Mr. AMOS, C.E., the Consulting Engineer to the Royal Agricultural Society, that he should resign his appointment on the ground, "among other reasons," of the business transactions of his firm in the implement trade. A copy of this letter had been also addressed to Mr. EASTON, the new partner of Mr. AMOS.

2. Mr. EASTON, in his reply (Jan. 23) does not think that there is anything new in the relations which his firm sustain requiring any alteration in the position which they occupy as Consulting Engineers to the Society. They have from the beginning of their association with the Society had large transactions with many of the exhibitors both in buying and selling, and there appears no reason why they should not continue to do so. And Mr. AMOS, in a subsequent letter, delayed by illness, expresses himself to the same effect.

3. Messrs. HOWARD (Jan. 28) intimate that though the facts admitted may not be new, they are new to them. They are persuaded that neither the Council nor the public are aware of the transactions acknowledged in the letter of Jan. 23.

4. Mr. EASTON, in a reply (Jan. 29), enumerates 27 firms, and speaks of several others for whom, as well as for Messrs. HOWARD themselves, his firm had had pleasure in selling implements at various times. He adds:—

"I cannot understand your object for writing such letters to us; you must have forgotten that we are not judges, and that the instruments introduced into the Society by us for testing the various implements are so simple and effective that the exhibitors, as well as the appointed judges, can at once see the most useful machine, and this I am confident has been the means of enabling the makers to advance the quality of their manufacture to the present high pitch of excellence, and of improving the system of agriculture, not only of this country but of all the world, much faster than would have otherwise been the case."

5. To this Messrs. HOWARD reply (Feb. 1) that the transactions alluded to in their original letter had reference more particularly to the large number of pumps supplied for steam ploughing and other engines going to Egypt. One exhibitor, they are assured, has ordered some 50 pumps at about 40*l.* or 50*l.* each. They add—

"You appear to see nothing inconsistent in your position of Consulting Engineers in having these large transactions with the exhibitors. Suppose, for instance, we recommend the pumps of Messrs. GWYNNE, and Mr. FOWLER recommends your pumps, would not the circumstance, however disposed you might be to be uninfluenced, *tend* to place us at a disadvantage; we think so, and so we believe the public would think.

"You refer to transactions you have had with our firm from 1851 to 1860. On reference to our books, we find that during these ten years, a few things have been supplied to your order, but the transactions really were so trivial, that we had well nigh forgotten them; they amount to less than six pounds (£6) a year; we had no idea, and certainly did not infer from these exceptional transactions, that you traded regularly in Agricultural Implements.

"With respect to the testing instruments introduced by you into the Society, whatever may be their merits, you certainly must admit that they have had no part in the perfecting of our productions, and we are inclined to think that the engine builders would no more give you the credit you claim for the improvements in their engines, than would the builders of railway locomotives for the great improvements introduced into their engines during the same period.

"As to your instruments showing 'at once the most useful machine,' you must have written these lines without consideration. Without commenting upon the many mistakes that have been made in the awards, we will simply remark that if your instruments possess the high qualities claimed for them, surely the Society may at once dispense with Judges, Consulting Engineer, and the attendant expenses.

"In conclusion, we have to inform you that we have addressed the President of the Society upon the subject of our objection."

Accordingly the whole correspondence has been laid before the Council of the Society. And it is urged upon them that the Consulting Engineer to the Royal Agricultural Society should have no trade relations with those firms upon whose productions he is called upon to pronounce opinion; he should be one whose business does not make him a rival of any of the manufacturers or engineers who exhibit at the annual meetings of the Society.

THE SARSDEN SALE OF SHORT-HORNS.

ONE of the two great Sales of the ensuing season takes place at Sarsden, near Chipping Norton, Oxon, on March 22d. The late Mr. Langston, always a country gentleman and agriculturist, was many years ago a purchaser of well-bred cows in Northumberland, Durham, and Yorkshire, by the then agent Mr. Tomlinson. On these cows, themselves well-bred, pure-bred bulls have been for many generations used. And besides these there are in the herd the descendants of other purchases within the last 12 years, themselves of greater note and better families, on which, as well as on the descendants of the original stock, bulls of the most fashionable blood have been employed. In this way a herd numbering upwards of 100, which stands in the very highest rank for quality and blood, has grown up—to be dispersed by Mr. Strafford's agency on the death of the owner. They have been bred in a high-land district, under such circumstances as the cold and bracing air, middling

pastures, and second-rate soils of the Sarsden farms afford, and thus present all the characters of a hardy constitution—good coats, short legs, deep frames, sufficient bone, regularity in breeding, and freedom from disease.

A written account of a herd can rarely do more than describe genealogies and relationships, and this, with an occasional remark on the individual quality of one or two members of it, is all that can be undertaken in the present account of the Sarsden herd.

It is descended from *Merry* by LOCKSLEY (4240); *Silver* by LOCKSLEY (4240); *Daisy* by BUCEPHALUS (6816); *Juventus* by ALMACKS (7779); *Red Cherry* by PRINCE OF WALES (8432); *Crummy* by STANHOPE (5315); *Roan Crocus* by GENERAL ELLIOTT (10,260); and *Homely* by YOUNG WEATHERCOCK (15,495)—all from separate purchases made many years ago in the North. Besides these there are families descended from Mr. Adkins's *Charmer*, Sir C. Knightley's *Coquelicot*, Earl Ducie's *Chaplet* and *Louisa*, and a few others. We add that heifers and cows in the following statement are named in italics, bulls in capitals—that the dates of birth are given, and that all the animals which are numbered (*e.g.* No. 5, *Cream*) are in the sale.

Let us now take in succession one or two of the original families in illustration of the fecundity of the stock and of the quality of the bulls used.

1. *Roan Crocus*, by GENERAL ELLIOTT (10,266), a calf in '53, was a descendant (through three generations) of HAWTHORN, by STANHOPE (5315), whose dam *Beauty*, by SON OF SIR KENNETH (1450) was bought by Mr. Tomlinson a great many years ago, from Mr. Richmond, of Newton Grange, near Darlington. The following are her descendents :—

Descendants of "Roan Crocus."

1st Generation.	2d Generation.
No. 5. *Cream*, '56, by YOUNG WEATHERCOCK, (15,496)	*Cameo*, '59
	No. 33. *China Aster*, '60, by ARCHDUKE 2d (15,588)
	No. 49. *Clematis*, '61, by ROYAL TURK (16,875)
	No. 60. *Cactus*, '62, by LORD OF HAREM
RED DUKE, '57	No. 21. ROYAL ARCH 11TH, '63, by ROYAL ARCH (18,749)
WHITE DUKE, '59	
ARCH, '60	
No. 48. *Royal Crocus*, '61, by ROYAL TURK (16,875)	No. 30. BARRISTER, '63, by ROYAL COUNSELLOR
No. 59. *Grand Crocus*, '62, by GRAND ARCH	
No. 64. *Princess Dagmar*, '63, by ROYAL ARCH	

Besides these, *Clematis No.* 1 has a bull calf, GUY FAUX, by LORD OF THE HAREM, No. 28 in the sale, and *China Aster*, besides a bull calf, ROYAL ARCH 5TH, by ROYAL ARCH (18,749), which is not now in the herd, has just dropped *German Aster*, the latest named in the catalogue, by ROYAL ARCH.

The descendants of *Roan Crocus*, herself, it will be seen, a remarkable breeder, have all done well; they are a good family. The bulls which have been used upon them, as will hereafter appear, are of first-rate descent.

2. *Daisy* by BUCEPHALUS. Take now the descendants of this cow as an illustration of regular and prolific breeding. She was purchased on Tyneside by Mr. Tomlinson. Her descendants in the herd are from her calves of 1847 and '48, viz., *Roan Daisy* and *Dairy Maid*, both by PRINCE OF WALES (8432).

Descendants of "Roan Daisy."

1st Generation.	2nd Generation.
	Steer, '53.
	Heifer, '54.
	No. 3. *Delightful*, 55. by FIELD MARSHAL (14,545).
Dinah, '50 by LORD MILTON (10,461).	*Darling*, '55.
Damsel, '52.	*Dewdrop*, '57.
YOUNG WEATHERCOCK, '53, by WEATHERCOCK (9825).	No. 13. *Daucus*, '58. by GLOSTER'S GRAND DUKE (12,944).
Steer, '54.	*Dewlap*, '59.
Twin bulls, '55.	
Twin heifers, '56.	
Twin heifers, '57, by FIELD MARSHAL (11,545) viz.,	No. 34. *Turk's Pride*, '60, by ROYAL ARCH (16,875).
No. 9. *Dora*.	NORMAN ARCH, '61, by ARCHDUKE 2D.
	Heifer, '62, by LORD OF HAREM,
and	*Bull*, '63, by ROYAL ARCH.
No. 10. *Doubtful*.	SAXON ARCH, '62, by ARCHDUKE 2D.
No. 19. *Dandelion*, '58, by GLOSTER'S GRAND DUKE (12,949).	No. 43. *Royal Daisy*, '61, by ROYAL TURK (16,875).

Besides these she had a heifer in '60 and a heifer calf in '61. There are, however, several descendants in the 3d generation. No. 3, *Delightful*, has bred since '59 as follows:—A bull in '59; a Bull, ARCADE, in '60; *Turk's Delight*, No. 40 in the Catalogue, by ROYAL TURK, in '61; *Turk's Darling*, No. 55, by ROYAL TURK, in '62; and ROYAL ARCH 3D, No. 8, in '63.

Daucus, No. 30, has also had MARBLE ARCH, in '60; a steer in '61; CHIEF ARCH, No. 15 in the sale, by ARCHITECT, in '62; and *Dear Me*, by ROYAL ARCH, a heifer calf, No. 77 in the Catalogue, last year.

Roan Daisy has thus proved a most prolific cow. Her sister, *Dairy Maid*, by PRINCE OF WALES, had *Young Dairy Maid* in '52, ADMIRAL in '54, *Lady's Maid* in '55, DAIRY DUKE in '56, DAIRYMAN in '57, another bull in '58, *Maid of Honour* in '59, from none of which are there any descendants in the herd. In 1860 she had *Lady Warwick*, No. 30 in the Catalogue, by ARCHDUKE 2d, 15,588, who had a bull calf in '62, LORD WARWICK, by ROYAL TURK; and a cow calf, No. 80, by LORD OF THE HAREM, both of which are in the sale. In '61 she had *Laundry Maid*, No. 37, by ROYAL TURK, and before the conclusion of the same year she had bred twins, which are not in the sale. Her daughter, *Laundry Maid*, has just had a bull calf, LAWYER, No. 33, by ROYAL ARCH.

There are thus in all 15 of this prolific family in the sale. It will be seen that *Roan Daisy* bred twins 3 years following, and that her sister *Dairymaid* had also twins in 1861. The former bred 13 calves, the latter 11. *Dairymaid* took the prize at Warwick along with *Red Cherry*, for the best pair of dairy cows.

These two instances of the original families in the herd may suffice in illustration of the prolific character of the stock. As regards the others, from *Champion* by VAGABOND (9765) there are 9 descendants in the herd. From *Meretrix* by LORD MILTON (10,461) there are five, from *Red Cherry* six, *Juventus* by ALMACKS five, and from *Merry* by VAGABOND two.

We now come to the subsequent purchases, dating from the Tortworth sale, where Mr. Langston purchased *Chaplet* and *Louisa*, the former by USURER (9763), the latter by CRAMER (6907). The daughter of *Louisa*, *Lucy Long* '54, by DUKE OF GLOSTER (11,382), No. 2 in the Catalogue, an extraordinary milker, has had a large family, which, with their descendants, are named in the following Table :—

Descendants of "Lucy Long."

1st Generation.	2d Generation.
Linda, '56	—A bull, 1860
No. 12. *Lady Lucy*, '57, by GLOSTER'S GRAND DUKE, 12,949	No. 29. *Lady Best*, '59
No. 17. *Lady Long*, '58, by FITZMILTON, 14,554	Steer, '62
	No. 67. *Lady Leigh*, '63, by ROYAL ARCH, 10,719
No. 22. *Lady Louisa*, '59, by ARCH DUKE 2D, 15,588	No. 65. *Lady Churchill*, '63, by ROYAL COUNSELLOR, 20,725
Steer, '60	
Steer, '61	
Bull, '62	
No. 79. *Alma Mater*, '63, by LORD OF THE HAREM	

In addition to these, *Lady Best*, No. 29, has a calf, ROYAL ARCH 3D, by ROYAL ARCH, 18,749. This, including nine members, is one of the best families in the Sarsden herd.

4. The descendants of the other Tortworth cow, *Chaplet* by USURER, are also tolerably numerous. She was a 4-years cow at the Tortworth sale, and was then bought for 54 guineas. She has had four bulls, among them FITZMILTON, by LORD MILTON, 10,461, and a heifer *Charmer* by 4TH DUKE OF YORK (10,167), a calf in 1854.

From *Charmer* there are the following descendants :—

1st Generation.	2d Generation.
No. 8. *Countess*, '56, by GLOSTER'S GRAND DUKE (12,949)	No. 3. ROYAL ARCH, '58, by ARCHDUKE 2D (15,588)
Heifer, 57	No. 26. *Archduchess*, '59 by ARCHDUKE 2D (15,588)
	No. 54. *Columbine*, '62, by LORD OF THE HAREM
	No. 26. CHURCHWARDEN, '63, by LORD OF THE HAREM
No. 21. *Roan Duchess*, '59, by GLOSTER GRAND DUKE	No. 53. *Woman in White*, by LORD OF THE HAREM
	No. 63. *Blushing Bride*,
	No. 74. *Charming Woman*, by ROYAL ARCH

Besides these, *Charmer* has, since 1859, had *Lady Charmer*, No. 32 in the sale, by ROYAL TURK, in '60; No. 41, *Royal Charmer*, by ROYAL TURK (16,875), in '61; and CHIEF JUSTICE, No. 6, in '62 by LORD OF THE HAREM. And *Lady Charmer* has had ROYAL ARCH 2d, No. 7 in the sale, by ROYAL ARCH.

There are thus 11 of this family in the catalogue, and considering the original breeding of *Chaplet* and the bulls 4TH DUKE OF YORK, GLOSTER'S GRAND DUKE, ARCHDUKE 2D, ROYAL TURK, and LORD OF THE HAREM, used on her and her descendants, there can be no better family in the herd.

5. There is yet another family deserving especial notice—the descendants of *Coquelicot*, by DUKE OF CAMBRIDGE (12,742). She was bought a calf in '56 at Sir Charles Knightley's sale for 90 guineas. She has *Cocoa*, No. 14, by GLOSTER'S GRAND DUKE, *Arch Duchess of Cambridge*, No. 28, by ARCH DUKE 2D, ROYAL COUNSELLOR, No. 4, by ROYAL TURK, THORNDALE GRAND DUKE, No. 10, by 2D DUKE OF THORNDALE, and *Pride of Sarsden*, No. 75, by LORD OF THE HAREM. *Cocoa* again has had CONQUERING HERO, by ROYAL TURK, and she has in the catalogue CHIEF JUDGE, No. 5, by LORD OF THE HAREM, and SIR CHARLES, No. 13, by ROYAL ARCH. The *Arch Duchess of Cambridge* is now in calf by Royal Arch. This very valuable family, containing six members in the catalogue, is interesting as one of the few remaining descendants in this country of this tribe of the Fawsley herd.

One reference more to a single heifer—*The Pet*, No. 46, bought at *Mr. Banks Stanhope's* sale for 45 guineas. She is from *London Pride*, by JANIZARY, a Fawsley cow, by 7TH DUKE OF YORK; and she is in calf by the THORNDALE GRAND DUKE, just named, which is out of *Coquelicot* (another pure Fawsley cow), by 2D DUKE OF THORNDALE, another pure Duchess bull. Her produce will thus be a singularly well balanced cross of Mr. Bates's and Sir C. Knightley's breeds. She is herself a beautiful roan of first-rate quality, symmetry, and substance, and is likely to command a good price.

The bulls used in the herd have been sufficiently named already. It will be seen on reference to the catalogue, that the very best blood in the country has for many years been used. ROYAL TURK (16,875), who has 13 of his immediate offspring in the herd, was bought of Mr. Ambler, for 350 guineas. He took the 1st prize in his class at the Warwick show. He is got by HEART OF OAK (14,683), dam *Princess Royal*, by BARON WARLABY (7812), and further back comes from Lord Spencer's *Zeal*. LORD OF THE HAREM (16,430), who has 21 of his immediate descendants in the Catalogue, a well-known bull, was bought a calf, from Mr. Housman, of Lune Bank; he is by Booth's DUKE OF BUCKINGHAM (14,428), dam *Gulnare*, by GRAND TURK, (12,969). Both of these bulls thus trace from Warlaby. ARCHDUKE 2D (15,588), again, who has 12 of his immediate offspring in the Catalogue is, Captain Gunter's well-known bull by 6TH DUKE OF OXFORD, 12,765, out of *Duchess* 72*d* by 4TH DUKE OF OXFORD, a pure Duchess bull, carrying back his pedigree to Colling's original *Duchess*. He was a red bull and has got a large number of red descendants from cows of all colours, which, moreover, notwithstanding having been put to white and roan bulls subsequently, still in the red offspring which they bring seem to bear testimony to the influence of the original cross.

We do not go more than two or three steps back in the history of most of the animals for sale at Sarsden before coming upon all the best names in the history of the breed—Bates, Booth, Knightley, Fawkes, Tempest, Earl Ducie, Ambler, Housman, Kingscote, Adkins, have all had to do with the formation of the herd. And in Mr. Langston and his farm manager, Mr. Savidge, there has been united good judgment, enterprise, and perseverance sufficient to ensure that the stock now announced for sale are not only well bred, but managed with judicious attention to hardiness and condition.

Mr. Savidge's good management is efficient, not only in the herd but in the field. Nowhere has the steam plough acquired a better reputation than on the Sarsden estates, and this is owing to his able management. Three or four sets of Mr. Fowler's apparatus are at work upon farms all round. It will illustrate the care and good management which have been here observed that one rope now in use has already ploughed or cultivated 3000 acres, and that 25*s.* will cover all the breakage of Mr. Savidge's apparatus during 1863, when 650 acres were ploughed or cultivated. Of the effects upon the land there is ample testimony: Green crops are surer and better; Barley after Wheat is now a certain and productive crop; the land which formerly used to show mildewed and prematurely ripened spots in crops of Wheat at harvest time, now always shows a sound crop throughout—the stiff clay soils of the lower farm have *disappeared*. Clovers are a more certain crop; horse tillage and steam tillage, side by side, present in many instances remarkable contrasts at harvest time—the worms of the soil are everywhere *increasing in size*. All these are quoted by Mr. Smith as proofs of the unquestionable superiority in his experience of steam cultivation.

COTTAGES FOR AGRICULTURAL LABOURERS.

PUBLIC attention has very properly been much drawn of late to the want of better cottages for agricultural labourers in most parts of the kingdom. Let me try to show why there is this want in the country, when the building of small houses is generally found so profitable in towns, viz :—

The reason that good cottages are not more general in the country is, they don't pay to build. The rents they command being much below a moderate rate of interest on the cost of building them, and while this is so it is useless to expect a supply.

The rents of cottages in the country are ruled, not as in towns by the law of supply and demand, but by the practice of land owners allowing labourers to occupy their cottages at merely nominal rents.

Land owners give their cottages to labourers at low rents, thinking, by so doing, they benefit the labourers, where wages are low.

Land owners in giving their cottages to labourers at low rents, in the long run, benefit the employers of the labourers, who regulate their wages accordingly, and not the labourers themselves.

I may make this clearer by instancing what would be the effect of landowners giving labourers their daily bread upon the same principle. Would it not come to this, that the bread given would be of the cheapest kind, and the wages paid be made proportionately less, so that the labourer would be no gainer in money to spend on other necessaries, and would have to put up with the lowest quality of bread. This is exactly what has come to pass with respect to cheap cottages in rural districts. The labourers gain nothing in money by being housed nearly rent free, and they have to put up with the barest accommodation.

Let me add, I have large experience in cottage building, being a Government Inspector under the Inclosure Commissioners by whose sanction so much is

doing in building farm premises and cottages throughout the kingdom, and this has shown me the great improvement to be made in this respect, and, with respect to cottages, the propriety of giving three chambers to each cottage, and of placing one in the roof upon the plan adopted by Colonel Lennard, of Wickham Court, Bromley, Kent, or still better, upon that of Captain Dashwood, of Kirtlington, Oxford, who provides one on the ground-floor. In either of these plans the sexes are more thoroughly separated, and the chambers are not so cramped for space as when the three are upon one floor. Colonel Lennard has also adopted with great success hollow 9-inch brick on edge walls. They are recommended as being drier, warmer, and somewhat cheaper.

A first-class pair of cottages with three chambers may generally be built for 250*l*. The interest on this outlay, at 5 per cent. per annum, is 12*l*. 10*s*., or say 2*s*. 4*d*. per week per cottage; and I have found no difficulty in getting this rent when wages were 11*s*. per week, and may add that I have ever found labourers more ready to give 2*s*. 4*d*. per week for such a cottage than 1*s*. a week for the accommodation that has too long and too often been thought sufficient. *Hewitt Davis, Feb.* 6.

THE DEVON BREED OF CATTLE.

(*Continued from p.* 131.)

[The following is the conclusion of the lecture before the Royal Agricultural College given last December by Captain J. T. Davy, Editor of the "Devon Herd Book."]

The Devon Herd Book.—I had thought for some time previous to publishing the 1st volume in 1851 that the Devons deserved to have their pedigrees recorded, and determined to set about it. Before this there was no published record of their pedigrees, respecting which Mr. Dixon remarks:—"They had no names in those great days, but still Devon breeders were a herd book to themselves, and had attained quite a masonic accuracy in their oral lore before Captain Davy stepped forth and fixed 1820 as the year of memory." The pedigrees of Devons were known to breeders, and communicated to their successors as long ago as the beginning of the last century; and I could have given earlier pedigrees from private notes and information, but thought it unnecessary to go beyond the date of the establishment of agricultural societies and the prize system, from which the public knowledge and interest may be dated. Among the earliest is Forester (46), bred by Mr. Quartly, and his grandsire, bred by my father, the late Mr. Davy, of Rose Ash. The pedigree of Brinsworthy, bred by Mr. Merson, although he was not entered, was perfectly understood, as well as the fact of his being the father of Cambridge (12), who was calved in 1837, and gained the 1st prize at the Royal Agricultural Show at Cambridge in 1840.

The breeders of Devons are so numerous that it would be tedious to enumerate the whole of them; although there were a few who have been breeders of Devons as long as the Quartlys, it must be admitted that the late Mr. Francis Quartly was very instrumental in bringing them to perfection, and with the assistance of his nephews, by exhibiting them, and being so successful at cattle shows in their early days, afforded people an opportunity of testing the superiority of the breed, and for which the public expressed their gratitude by presenting him with a testimonial. The "Herd Book" will prove that the great majority of the prize Devon bulls were descended from Forester (46), bred by Mr. Quartly, who also bred his dam Tulip (451) by a bull bred by my father. He was a "very celebrated bull" as the "Herd Book" truly states; and having been calved in 1827 may fairly be looked upon as the patriarch of the breed in modern days. He took the name of "Forester" from having been sold when young to the late Mr. Knight to run with stock on the moor, and was afterwards repurchased by Mr. Quartly; the great number of prize animals descended from him bears evidence of his value as a stock-getter. Mr. Frank Quartly's nephews, Messrs. John and James Quartly, breed from each other's bulls, and thus a prize gained by one tells equally for the other.

The following bulls, which gained 1st prizes at the Royal Agricultural shows, were bred by Mr. James Quartly:—Baronet (6), Duke of Devonshire (35), Quartly's Prince of Wales (195), Napoleon (259), Duke of York (37), and Warrior (548), whilst Mr. John Quartly bred Hundred Guinea (56), Earl of Exeter (38), Duke of Chester (494), and Sultan (318), and of course both have bred a large number of prize females. His late Royal Highness the Prince Consort established a valuable herd of Devons in May, 1856; his first entries appear in the 3 l volume of the Herd Book in 1859, having previously gained the 1st prize at the Royal Agricultural Show Chelmsford, with "Zouave." He was the sire of Prince Alfred, who obtained 1st prizes at the Royal Agricultural shows at Battersea as a bull calf, and at Worcester as a yearling. His own sister, the "Rose of Denmark," was awarded the 1st prize as a calf at Worcester. The 1st prize for the best steer under 3 years and 3 months, also the extra prize of 25*l*. for the best Devon exhibited, were awarded to a steer from the Royal herd at the show at Birmingham the other day. The cows were selected from the herds of Messrs. Mogridge, Turner, and Farthing. Mr. Brebner, the respected bailiff, writes me:—"The prize steer shown last Christmas was sold for 60 guineas, and weighed about 145 stone, or at about 1*s*. 1½*d*. per lb. The Devons fatten well, and the average weight is from 110 to 140 stone (London weight). The present herd of Devons here consists of three bulls, Saracen, Prince Alfred, and Crown Prince, 19 cows in milk and calf, and 23 store and fattening beasts."

The Davy family have been breeders of Devons for the last 150 years. At my grandfather's decease in 1790, his herd was divided among two of his sons; my father, who remained at Rose Ash, and William, who went to Flitton. My father gained many local prizes, but ill health compelled him to give up farming, and with it cattle breeding, about the time the Royal Agricultural Society was established, or doubtless he would have been an exhibitor. Both Taunton (440) and Birthday were prize cows, the latter afterwards so highly valued in the United States; both sprung from this herd, as did the Sire of Tulip (451), the dam of the noted bull Forester. Mayboy (249), the winner of the 1st prize at New York Agricultural States Fair at Saratoga; Richmond (292), a prize bull at the Bath and Exeter Show, and others, were bred by me. The late Mr. William Davy, of Flitton, the friend and compeer of Mr. Francis Quartly, was a very successful breeder, and at his death was succeeded by his son, Mr. James Davy of Flitton, who can claim about an equal number of male and female prizes. The herd first signalised itself at the Royal Shows, almost at their commencement, with the 1st prize bull Oxford (89), who had been previously sold to Mr. Paul. Since that time Nelson (83) took the 2d prize at the Royal Agricultural Show at Windsor; Napoleon III. (464), the 1st prize bull at the Royal Agricultural Show at Salisbury; Eclipse (190), a 1st prize bull at the Bath and West of England Show; and the Duke of Flitton, who took the 1st prize and the Gold Medal at the late Royal Agricultural Show at Battersea. The report of the Stewards of Live Stock at the Battersea Show, page 379, says: "The Devons are the best I have ever seen, and I have attended 11 meetings; the cows, heifers, and yearling heifers especially were very superior. Mr. James Davy, of Flitton, sent five animals, and won four 1sts and a 2nd against one of his own, besides taking both Gold Medals with the Duke of Flitton and Temptress" Princess Alice, the 1st prize yearling—also Mr. Davy's—and who had previously won the 1st prize as a calf at Leeds, was drawn out with Temptress for the Gold Medal.

Further on the report says, "Two such yearlings as Mr. Davy's Princess Alice and Young Empress have been seldom seen in one man's possession." Mr. Richard Mogridge, of Molland, bred and sold many valuable animals to the late Prince Consort, including the 1st prize steer at the Smithfield Show in 1854, and brother to his celebrated heifer who gained the first prize in her class, and was reserved for the Gold Medal at Smithfield in December, 1860. He also bred Abd-el-Kader, who, when Mr. Turner's property, gained the 1st prize at the Royal Agricultural Show at Lincoln. Mr. George Turner, of Blacon Downs (late of Barton), says:—"I began breeding in 1818, having had some from my father, who had bred them for 30 years. I also purchased the best I could get from the late Mr. Davy, of Rose Ash, Mr. Davy, of Flitton, and the Messrs. Quartly; and up to this time I believe I have won more prizes than any other man. I have now the best herd I ever had, numbering about 70, of various ages." The bulls, Derby (23) at Derby, Turner's Prince of Wales (106) at Southampton, Protection (110) at Newcastle, Duke of York (36) at York and Exeter, Duke of Devon at Gloucester and Paris, and the Zouave, were all 1st prize bulls at the Royal shows. A great number of his females have also won prizes.

Mr. Farthing, of Stowey Court, Bridgwater, has since 1845 been a very successful breeder of Devons; when the present Mr. Walter Farthing induced his uncle to exhibit, and obtained several prizes at the Smithfield, the Royal, the Bath and West of England, and various local shows. The breed has been in the Farthing family for the last 50, and probably nearly 100 years. The late Mr. Farthing, who died in 1854, said they had possessed the breed as long as he could recollect. Since his death Mr. Walter Farthing has been a successful exhibitor, and has gained above 150 prizes. He and his uncle have bred the following 1st prize winners, and at several of the local shows, viz.:—Bulls Baronet (145), Lewes (226), Duke of Leeds (618), and Viscount (746). Females Bessie (534), Lovely (856), Nelly (1512) and Duchess of Leeds (194?). The two 1st prize Devons at Worcester sent from the Royal herd at Windsor were both from a cow bred by me. Mr. Farthing, as well as other breeders, has sent many animals to France, America, and Australia. Mr. Farthing may justly be placed as one of the principal of the Devon breeders in Somerset, and his success to his foresight and correct judgment in uniting the best blood and symmetry of the North Devon with old stock which were of a larger size. "Sir Peregrine," bred by Sir Alexander Hood, and the winner of the 1st prize at the Bath and Exeter Show at Truro, and the Royal Agricultural Show at Warwick, although bred in Somerset, possesses almost entirely Quartly blood, and was used by Mr. Farthing with great success, as was proved by his son "Viscount," the winner of many 1st prizes.

Mr. James Hole, of Knowle, has bred many 1st prize winners at the Royal and other Societies, as also Cecil Smith, Esq., of Bishop's Lydeard, and the Messrs. Gibbs. To the fact of Messrs. Bult & Bond having purchased Hundred Guinea (56), and bringing him into the Vale of Taunton Deane, may be mainly attributed Messrs. Fouracre and Bond's success for some years at the Royal Agricultural Shows; and with Northampton (86) laid the foundation of the great improvement in the breed of Devons in the county of Somerset. Their influence on the stock of the neighbourhood was most marked, and their steers could be picked out at the local fairs for years afterwards.

The late Mr. R. Merson bred Cambridge (12), and Northampton (86), both 1st prize winners, and Sultan (122), who was 2d at York. His brother, Mr. J. Merson, has since his death bred many Royal and Bath and West of England 1st prize winners. Mr. Bodley, of Stockley Pomeroy, is the breeder of a great many prize bulls; he rather objects to fatten females for exhibition. The Earl of Leicester, in Norfolk; Lord Portman, the Earl of Eldon, Mr. Edward Pope, Mr. Paull, and Mr. J. A. Smith, are successful breeders in Dorset; the Messrs. Umbers, in Warwickshire; Mr. Tremayne was one of the earliest breeders in Cornwall. Among the principal in that county are Viscount Falmouth, Mr. Samuel Anstey, Mr. Palmer, Mr. Jas. Tremain, and Mr. Harvey, of Hayle, with a great many others in Devonshire and several other counties.

I have before stated the Devons are extensively bred in America, and it may not be uninteresting to know how some of the best first found their way there. The following extract from a letter, written by Mr. Patterson, of Maryland, United States, to Mr. R. Peters, of Georgia, and by him kindly communicated to me, will throw light on the subject. It runs thus:—

"Sykesville, Maryland, Sept. 3, 1853.

"DEAR SIR,—Your letter of the 29th August has been received. In 1817, Mr. Coke, afterwards Earl of Leicester, of Holkham, England, gave my brother Robert Patterson six Devon heifers and a yearling Devon bull, named by Mr. Coke 'Taurus.' My brother gave three of the heifers to his father-in-law, Richard Caton, the other three he gave to my father, Wm. Patterson; the bull Taurus was the joint property of Caton and my father. Two of the heifers belonging to my father were in calf by a bull of Mr. Coke's, the third heifer was put to Taurus upon their arrival in this country. The three afterwards were bred to Taurus, and the progeny of the whole were bred together. In 1835, after the death of my father, I became possessed of his Devon cattle descended from Taurus, the three heifers before mentioned, and the calves of the two heifers which were in calf before leaving England. Taurus was bred by Mr. Denny, a tenant of Mr. Coke's. Mr. Coke gave 50 guineas for Taurus. In 1820, I saw the dam of Taurus on the farm of Mr. Denny: she made 13 pounds of butter a week. In 1835, I wrote to the Earl of Leicester, that I owned the Devon cattle descended from the stock he had given my brother some years before, and that I was anxious to procure a bull for a cross. He sent me out 'Anchises,' and wrote to me that he had bought him from one of the best dairies in Devonshire for his own use. "Signed, G. PATTERSON."

Since then the breed has spread rapidly, and is highly valued in the United States, which now contains a very large number of animals of the purest descent.

I have traced the breed from the earliest to the present time, and shown how, from being originally confined almost to a portion of one county, gradually and chiefly by the aid of tenant farmers, therefore without the advantages of unlimited means which have been at the command of other breeds, it has spread itself, still retaining its original purity, into almost every civilised country.

The great secret of breeding is to keep animals which are adapted to the soil, pasturage, and climate; and to succeed we must study this: for a breed which is invaluable in some localities may be ill adapted, and consequently unprofitable, in others.

It must be admitted that the Devon breed is particularly valuable in this respect, for experience has shown that they will flourish in any climate, yet perhaps are never seen in greater perfection than among their native hills; where amid the Heather

"At morn the blackcock trims his jetty wing;"

and where bleak stormy winds prevail nearly two-thirds of the year; and through the long winter nights

"The tired ploughman, dry and warm,
Hears, half asleep, the rising storm
Hurling the hail and sleeted rain
Against the casement's tinkling pane;
The sounds that drive wild deer and fox
To shelter in the brake and rocks."

ENFORCEMENT OF OUTFALL.

I AM anxious to obtain, through your columns, an answer from Mr. Bailey Denton to the following question.

What is the date and title of the Act of Parliament by which a landowner is enabled to cut a drain through another landowner's land, either with or without the permission of such other landowner, in order to obtain a proper outfall for the drainage of water from the land of the first-named landowner? and where can such Act be obtained?

I adopt this public mode of asking this information, as I consider the subject of such vast public importance.

I am at this moment anxious to obtain a deeper outfall for drainage off my estate at two points—across a turnpike road. The road authorities have expressed their readiness to deepen the existing old water courses under the road at each point, to any depth I require, as soon as I make the drains on the other side of the road of the necessary depth.

In both cases the owners of the land across the road, have, long ago, stopped up old open water courses (in one case a wall of a building being actually built over it, leaving only a drain under the wall), and have made in lieu thereof drains too small and too shallow to take the water which comes from my land across the road, which therefore stands back even in my ditches. In one case I have received a modified consent to cut a new drain at my own expense, to a brook below. In the other case I have asked for permission to do so. I wish to know what I can do in either or both cases—either with or without the consent of the owners of the land over the road?

I know of no one so well qualified as Mr. Bailey Denton to give this important information, as no one has done so much for the public good in the matter of land drainage as he has. *A Gloucestershire Drainer.*

THE MINERAL THEORY.

[The following communication from Liebig has been sent to us by Mr. Alderman Mechi, "by request of the Baron."]

IN the last number of the Journal of the Royal Agricultural Society of England, there is a paper by Messrs. Lawes & Gilbert, in which old charges against me, personal and others, are revived; and as they have sent an extract from that paper to all the Universities, Agricultural Colleges, and Journals in Germany, as well as duplicates to myself, it is evident that they attach a great value to their statements, and in order to give others the means of judging them correctly, I think it advisable to answer them.

In my Principles of Agricultural Chemistry (p. 90, 1855), I had called Messrs. Lawes & Gilbert's attention to the fact, that their experiments included the proof that farm-yard manure (organic manure) could be entirely replaced by mineral manure (for sulphate of ammonia and sal ammoniac are mineral); and, therefore, so far from refuting my doctrine, they had really substantiated it. To this they replied that ammoniacal salts belonged to the class of organic manure; that I had always considered them as such; and that in falling back on the strictly scientific meaning of the terms mineral and inorganic, I was begging the question; was trying by a manœuvre or ruse to give a new definition to my mineral theory, or rather to substitute for it another which was not my own. Although I tried to convince them by a paper printed in the Journal of the Royal Agricultural Society of England (1856) that I never had considered ammoniacal salts an organic manure, they return to their accusations now, and endeavour to support them by quoting the following passages of my works:—

"But the weight or amount of the crops is in proportion to the quantity of food of both kinds, atmospheric and mineral, which is present in the soil, or conveyed to it in the same time. By manuring with ammoniacal salts a soil rich in available mineral constituents, the crops are augmented in the same way as they would have been if we had increased the proportion of ammonia in the air."—*Principles*, pp. 77-8 (1855).

"The mineral constituents act, as is shown by the produce

of the unmanured land, without any artificial supply of ammonia."

"The ammonia increases the produce only if the mineral constituents be present in the soil in due quantity, and in an available form.

"Ammonia is without effect if the mineral constituents are wanting. Consequently the action of ammonia is limited to the acceleration of the action of the mineral constituents in a given time."—*Principles*, pp. 86-7 (1855).

". . . . . the other is the action of sulphate of ammonia as a solvent for certain important mineral constituents of the soil."—*Ib*, p. 99 (1855).

"Ammonia, when used as a manure alone, and when there is a want of mineral constituents in the soil, is like the spirits which the labourer takes in order to increase his available labour, power, or imagination; and like that stimulant, its action in this case is followed by a corresponding exhaustion."—*Ib*, p. 106 (1855).

"A fertile soil must contain in sufficient quantity, and in a form adapted for assimilation, all the inorganic materials indispensable for the growth of plants.

"A field artificially prepared for culture contains a certain amount of these ingredients, and also of ammoniacal salts and decaying vegetable matter."—Fourth Edition, p. 169.

It is scarcely necessary to multiply these citations, as the meaning of them is nearly the same.

The conclusion which is drawn by Mr. Lawes from these passages is the following:—

"These sentences will be sufficient to show whether or not Liebig is justified in now attempting to fall back, in agricultural discussions, upon the more strictly scientific meaning of the terms 'mineral' and 'inorganic,' so as to include within them 'ammonia,' 'ammoniacal salts,' 'atmospheric constituents,' &c., and thus to give a new definition to his mineral theory, or rather substitute at this date for his own theory, which has proved to be erroneous, another not his own."

It is quite true that I have contrasted ammonia with mineral substances; but the meaning of these passages must be obvious to any candid reader of my works. I said (Fourth Edition, p. 50)—

"No conclusion can have a better foundation than this—that it is the ammonia of the atmosphere which furnishes nitrogen to plants."

In my "Principles of Agricultural Chemistry," from which the first passages quoted by Lawes are taken, I said—

"All these substances (phosphoric, sulphuric, silicic, and the alcalic, lime, magnesia, iron, &c.), are included in the term mineral food of plants. Carbonic acid and ammonia are the atmospheric food of vegetables."—(p. 24.)

In my book I had to explain the relation of the atmosphere to the soil in the growth of plants, and to distinguish the elements furnished by the air and those by the soil, and to avoid, by contrasting them, a long tedious enumeration of each of these elements, which all had been stated as inorganic. I divided them in two classes—atmospheric and mineral.

I must admit that some scientific education is required for a man to understand that the word atmospheric, designating gaseous compound, like the word salt (for ammoniacal salts), in whatever connection they may be used, entirely exclude the idea of organic. We speak frequently of salts of organic acids (acids derived from organic compounds), but a salt itself is never called organic, because it is exactly the opposite of organic. As to the term mineral constituents, I showed in the 8th chapter of my book that the constituents of ashes are originally constituents of minerals—thus, potash a constituent of feldspar, phosphoric acid a constituent of agratite, &c.—(See also chapter 9 on formation of arable soil, and chapter 12 on fallow.)

From this it will be understood why I used the word mineral constituent to designate the constituents of ashes, sometimes of soils, but never for ammonia.

Ammonia is a constituent of the atmosphere, but is never a constituent of any mineral; it is mineral and inorganic, but not a mineral constituent.

For a man not versed in scientific language there is some ambiguity in the word mineral—at least in Germany we say sulphate of ammonia is mineral (in its origin), and the mineralogists say sulphate of ammonia is not a mineral (species); but this has nothing to do with Lawes and Gilbert's accusations.

Although the word organic does not occur in any of the sentences quoted from my works, and is never associated with ammonia, although I distinctly stated that the opposite of mineral constituents was atmospheric, they affirm that by atmospheric I understood organic constituents. Their mode of arguing is most simple. They take any passage out of my book, twist their own erroneous idea into it, and then assert that, by contrasting ammonia with mineral constituents, I had regarded it as an organic manure.

The origin of Messrs. Lawes and Gilbert's wonderful statements can scarcely be understood without referring to a definition of manure which Mr. Lawes gave in 1847, and which he is pleased to call his theory. It is the following (Journal of the Royal Agricultural Society of England, vol. i., p. 240):—

"I now come to the action of manures, which are generally divided into two classes—organic and inorganic. Although this distinction is by no means satisfactory, I shall adopt it as being generally understood. Organic manures are those which are capable of yielding to the plant, by decomposition or otherwise, organic matter—carbon, hydrogen, oxygen, and nitrogen—constituents which uncultivated plants derive originally from the atmosphere. Inorganic manures are those substances which contain the mineral ingredients, of which the ash of plants is found to consist."

Before I enter on any discussion of this definition or theory, I must beg to recal the views on the food of plants, which I published in the year 1840. They are contained in the following passage:—

"The elements of nourishment of all green plants are inorganic or mineral substances.

"The plant lives on carbonic acid, ammonia, water, phosphoric acid, sulphuric acid, lime, magnesia, potash, iron; and many, too, require common salt."

As I did not admit the existence of organic food, my theory was called mineral theory. This name was correct, inasmuch as it was directly opposite to another theory, which prevailed before 1840.

According to De Saussure, Sprengel, Thaer, &c., there were two different laws of nourishment, and two kinds of manure, organic and inorganic.

"Uncultivated plants," says De Saussure, "receive their combustible elements from the air, their carbon from carbonic acid; but the products generated from this kind of food possess no value for agricultural purposes. The normal development of cultivated plants, on the other hand, and the amount of produce of arable fields, depends on organic matter in the soil, on residues of fermentation, and decay of animal and vegetable matter.

"Fertile soils contain a mixture of these remains, and their absorption by the roots is a powerful assistance to the food which is contributed by the air and water.

"Plants receive their nitrogen almost entirely by the absorption of the soluble organic substances.

"Mineral substances, marl, gypsum, clay, lime, favour the growth of plants, but take no part in nourishment."—(See Bibliothèque Universelle, t. 36, p. 430; Ann. of Chemistry, t. 42, p. 235.)

This view, it will be seen, is diametrically opposed to my theory, inasmuch as De Saussure maintained the necessity of organic food for cultivated plants, and I denied it altogether.

At first sight the so-called theory of Lawes, or his definition of manure, would seem exactly identical with that of De Saussure. Mr. Lawes assumes the existence of different laws for cultivated and uncultivated plants, and of two classes of manure, organic and inorganic, just as De Saussure and Sprengel maintained; and most certainly Mr. Lawes does not claim this theory as his own, but states that it was generally understood, though by no means satisfactory.

There are, however, two essential differences between Mr. Lawes's so-called theory and that of De Saussure. First, that Mr. Lawes admits the existence of inorganic food or manure, consisting of the substances contained in the ashes of plants. The second, that Mr. Lawes applied the name of organic manure to something very different from what De Saussure meant. For the first, De Saussure knew nothing of the fact that the ashes of plants were nutritive elements; for he maintained that they (for instance, potash, lime, magnesia), were variable ingredients, changing with the geological formation and character of soils. I think no one can deny that I was the first to point out that the elements of the ashes were really food of plants, and Mr. Lawes has most certainly no claim to this essential part of my theory.

As to the second, by organic manure De Saussure meant genuine organic matter. Mr. Lawes, however, has not the slightest desire to prove that the vegetable mould of Sprengel, or the organic extracts of De Saussure, are necessary ingredients of an efficient manure. On the contrary, all his experiments tend to prove that these substances, which cannot be produced in a manufactory, are not necessary. What then does Mr. Lawes mean by organic manures?

The candid reader will be puzzled to learn that Mr. Lawes's theory, correctly expressed, is exactly the same which I published seven years before his definition of manure: That the action of manure depends on two classes of bodies. The combustible part of plants derive their carbon, hydrogen, nitrogen, and oxygen, from carbonic acid, ammonia, and water; the incombustible parts of plants consist of phosphoric, sulphuric acid, potash, soda, lime, magnesia, silica, iron; that "stable manure, the excrements of men and animals, do not influence vegetable life by means of their organic elements, but indirectly by means of the inorganic compounds which decomposition and slow combustion produce; in consequence therefore of their carbon being changed into carbonic acid and their nitrogen into ammonia. Thus organic manure, consisting of parts or remains of plants or animals, may be replaced by those inorganic compounds into which it resolves itself in the soil."

The difference between Lawes's theory and mine is simply this—that he has borrowed the substance of mine and the terms of De Saussure's theory—that he calls ammonia, carbonic acid, and water, which I had called atmospheric food, organic manures!

There is still a question to be solved: Were these three substances classed by Lawes as organic manure generally understood by that name?

Now it is perfectly certain that neither De Saussure nor Sprengel employed the term organic to denote these three substances, which they knew as inorganic. This denomination can therefore not be referred to them. There exist, moreover, no chemical works published before or after Lawes's definition (1847), in which they are classed as organic food or organic manure. It was consequently not generally understood that ammonia, water, and carbonic acid belong to the class of organic manure. The part of Mr. Lawes's theory which belongs to himself is merely this erroneous nomenclature; I repeat, that the terms of his definition of manure he has taken from De Saussure, the essence of it is simply mine, but the manner in which he has tacked De Saussure's terms on to my meaning is purely his; we must let him have the credit of the invention and a monopoly of the property.

I cannot think that the humblest teacher of chemistry in Great Britain would be content to accept a theory from a man who shows such ignorance of the first elements of chemistry as Mr. Lawes, and yet Mr. Lawes has the conceit to make believe that I had adopted his definition of manure seven years before he gave it, and that although it was by no means satisfactory to himself, it was perfectly satisfactory to a German professor of chemistry.

Mr. Lawes accuses me of a manœuvre and a ruse, and I convict him of trying, by a false definition, to annex a theory which I have the sole right to claim. It is obvious that his definition of manure would be perfectly satisfactory if his word organic were changed into my word atmospheric, and carbonic acid, ammonia, and water included in the term inorganic, to which they are universally assigned. Messrs. Lawes and Gilbert's conclusions belong to that class which goes under the name of Fallacies of Confusion in John Stuart Mill's "System of Logic," and which comprehends, "among others, all those which have their source in language, whether arising from the vagueness of our terms or from casual associations with them, in which no other causes can be assigned for the mistake committed than neglect or inability to state the question properly, and to appreciate the evidence with definiteness and precision."

If the leading idea of my work is borne in mind, as it is stated in the following passage (Fourth Edition, "On Manure," p. 186)—

"A time will come when plants growing upon a field will be supplied with their appropriate manure, prepared in chemical manufactories, when a plant will receive only such substances as actually serve for its food, just as at present a few grains of quinine are given to a patient afflicted with fever instead of the ounce of wood which he was formerly compelled to swallow in addition."

—it will be seen that all my statements and endeavours were directed with a view to oppose the ruling idea that organic manure was necessary to preserve the fertility of fields and to increase the crops. The prejudice in favour of their necessity had grown to be a dogma, and the progress of agriculture depended on the farmers becoming aware of their error.

My whole book may be described as an uninterrupted protest against the existence of organic food of plants, for organic matter cannot in the nature of things be produced by chemical manufactories; and if they were really necessary, chemistry could afford no assistance to agriculture.

If any one will consider the real cause of this 16 years' controversy, he will be aware that it is a false definition of manure. If Messrs. Lawes and Gilbert had not classed ammonia and ammoniacal salts among organic manures, a dispute upon my theory would have had no excuse. There is something so degrading from a scientific point of view at the bottom of this controversy, that those who have taken part against the only scientific doctrine which agriculture possesses, will look back with shame when a few years have elapsed; but there is nothing humiliating to me, although much that is highly annoying, for I am not so proud as to think myself humbled when I am fulfilling the vocation to which I have devoted my life—that is, of instructing others. To suppose that in this controversy I was influenced by personal motives would simply be absurd. When I strenuously endeavoured to make the agriculturists view things rightly it was not for their own sakes, but in order to ward off future evils and the imminent dangers which threaten society at large. Every man of intelligence must see the strongest confirmation of my teaching in all the facts produced in this dispute. Every single experiment of Messrs. Lawes and Gilbert brings new evidence in its favour, and every doubt must disappear by the creation and progress in all countries of Europe of an immense branch of industry—the fabrication of artificial manures from inorganic or mineral substances, which is now extensively employed.

Mr. Lawes's definition of manure, though false in itself, may yet have had, perhaps, a good effect in diffusing more widely these artificial manures, which are all, without exception, mineral manures. The prejudice in favour of organic manure was so strong that many agriculturists accepted under that name artificial manure which they would have refused under the name mineral manure, and Mr. Lawes, acting on his definition, could give, in all conscience, the assurance, that their manure for corn contained the organic constituent which is most efficacious in stable-dung.

Societies.

BATH AND WEST OF ENGLAND: *Feb.* 6.—A meeting of the Council was held at Taunton, Sir J. T. B. Duckworth, Bart., in the chair. *Shropshire Sheep.*—A communication was read from Mr. H. Smith, of Sutton Maddock, Shiffnal, complaining of certain restrictions in the prize sheet for the Bristol meeting, which would prevent his being an exhibitor of Shropshire sheep, for which there is no special class. *Age of Cattle.*—Mr. Fowler, Secretary of the Herefordshire Agricultural Society, communicated a copy of a resolution recently passed by that body, recommending that the 1st January should be adopted as the date of reckoning the age of cattle for exhibition at agricultural shows. The subject was referred to the Stock Prize Committee. *Disqualification of Exhibitors.*—An animal disqualified at a recent exhibition, on account of what was held to be an inaccurate representation of its age, has since been sold, and the *bonâ fide* purchaser now applied to the Council to know if he was at liberty to enter the animal for exhibition. It was decided that as the

disqualification alluded to attached to the exhibitor and not to the animal, there was no rule to prevent the present owner exhibiting under a strictly accurate certificate as to its age, &c. *The Bristol Meeting.*—A report was read from Mr. J. Widdicombe, the director, explaining the steps he proposed to take for securing proper accommodation and shelter for horses at the Bristol meeting.

HEREFORDSHIRE: *Ages of Cattle from the 1st of January.*—At a special general meeting of the members of this Society, held at Hereford last Wednesday, Mr. JANCY, the Chairman, said:—At a meeting of this Society, held on January 20, Mr. Duckham offered some remarks respecting the different dates fixed upon in different places for the commencement of the breeding year for cattle, and those present unanimously concurred with him that it would be to the advantage of breeders generally if all the principal societies in the kingdom reckoned from one date. But there appeared to be almost as many opinions as to what that date should be, as there were members present at the meeting. It was then resolved to call a meeting of breeders and others interested in the matter, irrespective of members, to take into consideration the best day from which to reckon the age of cattle, and Mr. Fowler, the secretary, has advertised notices in the Hereford papers calling the present meeting. He himself had formed no opinion as to the best day, and he should be glad to hear the gentlemen present express their opinions on the point. He hoped some day would be unanimously agreed upon, so that that day might be recommended to the breeders of cattle generally.

Mr. DUCKHAM proposed "That the opinion of this meeting is that the 1st of January in each year should be adopted as the date of reckoning the age of cattle for exhibition in this and other agricultural shows."

Mr. J. E. JONES thought it highly necessary that some day should be fixed on, and as it seemed to be the opinion of several gentlemen that it should be fixed on the 1st of January, he begged to second the proposition.

A discussion then took place as to the time, some gentlemen being for the 1st of March, others for the 1st of April. Eventually an amendment, which proposed to postpone the decision of the question, was lost, and the original resolution was therefore declared carried.

Farmers' Clubs.

LONDON: *Feb.* 1.—*The Malt Tax.*—The following are some of the letters read by Mr. Williams at this meeting, to which we alluded last week.

1. *From Mr. Hudson, of Castle Acre.*—It is nearly 18 years ago that I tried the experiment of fatting three Highland Scots upon malt, against three of the same lot upon Barley-meal. The three fed on malt were decidedly the best beef when they went to London to be slaughtered. The six were selected from a lot of 20, and were as level as we could select them, and I had them weighed alive when they were first put into boxes, and again when they were sent away to London. I enclose you the letter of the butcher who slaughtered them. "The beasts 4, 5, 6 were of a very much better quality than the others; the grain was finer, and altogether of a superior description, fully bearing out Mr. Collins' opinion with respect to the quality."

2. *From Mr. M. Biddell, of Playford.*—I cannot yet give the particulars, as the experiments are not concluded; but, as I have frequently weighed the animals, as well as all the food that they have consumed, I can state that the result has most satisfactorily proved that a quarter of malt will produce more meat than the same quantity of Barley. I can also add that, in all my experiments, excepting one, the malt-fed animals have been most healthy and regular in their feeding throughout.

3. *From Mr. C. Howard, of Biddenham.*—I have never used any malt, nor do I know any one hereabouts who has; but unfortunately last harvest I had rather a large breadth of Barley very much injured by the rain—in fact, fully one-third of it was sprouted, rendering it unsaleable. I have dried it, at an expense of 2*s.* per qr., and am using it for both cattle and sheep. They are all doing excellently, the latter being entirely on Wurzels. There is sufficient malt to flavour the whole food. I can assure you clean mangers are quite the rule. Of course my consumption of cake is not half what it generally is; and this is what I think farmers require—to be allowed to make the best of their own produce, so that the expensive article of cake need not be nearly so much used.

4. *From Mr. E. Stenning, of Godstone.*—I have a small malting attached to one of my farms; in 1860 I got the duty returned upon 10 quarters of inferior malt; but I was obliged to make an affidavit that I had consumed it, which I did, and I can honestly say my sheep never thrived and fattened so fast as upon that occasion. I can fully testify that malt is more valuable for fattening sheep than any other corn; then again the malt coombs and the ashes are also valuable, the former for feeding, and the latter for manure; wherever I used the ashes I always grew much finer Turnips. I can see to a drill, therefore if we could get rid of this obnoxious tax I fully believe that double the quantity of Barley would be made into malt.

5. *From Mr. W. Hobson, Brigg.*—Some time ago I was making up some sheep; I fed them with oilcake, split Beans, white Peas, bran and Oats, and weighed them every week; they for several weeks gained no weight. I had heard of malt being good for feeding, so I began to give them malt, a quart a-day, and increased it to two quarts. The first week they gained weight. I continued to weigh them every week. They gained weight, and went on uncommonly well.

A discussion ensued on the reading of Mr. Williams's paper, and the following is an abridgment of the several addresses that were delivered.

Mr. FISHER HOBBS related the various steps that had been taken during a previous agitation against the tax, and read the appeal which was then addressed to electors, signed by Mr. Corbet, Secretary to the Anti-Malt Tax Society. He then stated the following as his experience on the use of malt as food. He said:—

I have used it with great advantage. Living in the county of Essex, I bred Southdown sheep. It was supposed that an Essex man would have no chance of obtaining a prize for such sheep from the Royal Agricultural Society; but when that Society held its meeting in Norwich, I showed a pen of Southdowns. I gained the first prize of 40*l.*, beating the Duke of Richmond, a result which was owing mainly, if not entirely, to the circumstance of the animals having been fed upon malt. —Any gentleman who is a sportsman must know that when he has had a long day with the hounds and his horse has seemed very tired, though the animal would not eat his gruel he would readily take a malt mash, and by that means I believe many a horse has been saved. Many years ago I bought a horse of a gentleman residing at Stowmarket, with which I afterwards gained a prize of the Royal Agricultural Society at Shrewsbury. After purchasing the horse, I asked him if he could give me any advice with respect to its management. He replied by letter, as follows:—"My experience in feeding with malt extended only to horses used for covering or getting up for sale quickly; and it is now some years since I left off, on account of the expense, the duty making the article too dear to answer." Surely if we were to take a little trouble, and forward such facts as many do possess as to the value of malt for feeding purposes, it would go further than signatures to a memorial, if well linked together, and placed before a Chancellor of the Exchequer by a deputation. We might plead three things: Let the stock have its untaxed food, the poor their unadulterated beer, and the farmer his right. Let me add, that I hope that if we should be compelled by the Chancellor of the Exchequer to rest the merits of malt on this point, we shall not be placed in the position that we were some years ago, when two Alderney cows were placed in the hands of two scientific men, Dr. Thompson and another, and it was apparently forgotten that in the case of such animals we look for milking qualities and not for fattening ones. The whole country was humbugged by the course pursued by those two gentlemen, who were seeking the advancement of their own profession, and had no feeling for agriculture. If we are obliged to rely upon experiments of that kind, let them not be small ones. I should like to see some 500 quarters at least of malt free of duty placed in the hands of a committee of members of this Club, having a scientific man like Dr. Voelcker to guide them, and I have no doubt that if in that way the merits of malt were honestly and fairly tested, the result would be to show that they are much greater even than farmers generally believed.

Mr. SIDNEY followed with arguments addressed to the method by which the agitation against the tax was to be conducted. The only way to prove that the agricultural interest are in earnest in the matter is to subscribe some thousands of pounds towards the cost of the opposition to it. A description of a model labourer to be refined and elevated by home-brewed beer is mere cant. Men loved society as well as beer, and that is what takes them to the public-house.

Mr. Punnett, of Chard Sutton, argued that the agitation against the tax would be most effectually conducted, not by noisy and expensive public action, but by a resolution to vote against any one who would not pledge himself to its repeal.

Mr. T. B. Dring, of Claxby, contended that no good would arise to the farmer from the repeal of the tax. He did not approve of exacting pledges from public men—he did not believe malt to be better for feeding purposes than the Barley from which it had been made—nor that if Barley rose in price from the greater consumption, if the duty should be removed, did he think it would continue so, for more would be grown at the expense of other grain. He did not believe that the cheapening of beer to the labouring man would do him any good.

Mr. W. Spearing, of Kennet, maintained, in opposition to Mr. Dring, that the repeal of the law would be a great benefit to the labouring man. He said:—

I believe that the present heavy duty on malt tends to encourage the manufacture of a spurious article, and that, owing to this cause, a vast amount of deleterious matter is thrust down the throats of labouring men, the mischief of which to their health it is almost impossible to exaggerate. There have recently been a number of mechanics, masons and others, at work in my parish, and while the cost of the bread which they consumed has not exceeded 8*d.* per man, some of them have been known to pay on Saturday night, out of 35*s.* a week, as much as 1*l.* for beer and spirits.

Mr. T. Owen, of Clapton, related the following experience in the use of malt as food. He said:—

I am a grower of Barley, and out of 800 or 900 quarters which I have produced, not 100 have been fit for malting. I am also a maltster, and have 200 quarters of malt which I cannot sell. I have had recourse principally to the feeding of 200 or 300 pigs, which I have sold under 6*d.* per lb. As regards the feeding qualities of malt for bullocks and sheep, I would remark that no man living has had fair opportunities of testing them. I have had a little experience in this matter. In the year 1860, I bought 20 quarters of Barley, re-winnowed it, and having reduced it to 16 quarters wetted, and the result was that, it having grown on a cold soil, that Barley never sprouted, and became completely dead on the floor. Before it came to be dried off, I said to the exciseman: "This Barley has not risen at all; what am I to do with it? I cannot mix it with any other malt. May I use it for feeding purposes?" The matter was afterwards mentioned to the supervisor, and the result was that an application was made to the Board of Excise in London, who consented that the article should be used for feeding without paying duty. I used it for feeding eight or ten beasts, mixing it with cake and sliced roots, and the animals ate their food much quicker and with greater benefit than they had ever done before. What I contend is, that if malt will improve the condition of our animals, we ought to be in a position to use it, for there can be no doubt the food must be made more palatable and nutritious by adding malt; and the sooner an animal fills his belly, the more time he has to rest. As regards the labourer, notwithstanding what has fallen from Mr. Dring, I contend that the repeal of the malt tax would have a tendency to keep the labourer at home with his family, and to teach him to find his greatest enjoyments in home comforts, by the side of his wife and children, instead of going to the public-house to get drunk. I am quite sure, too, that there has been for a long period a great falling off in the consumption of beer at farm-houses. As a maltster, I know that many farmers formerly spent as much as 40*l.* a year on malt; but now do not brew at all, leaving their men to drink water, upon which I am sure they cannot do a fair day's work; or to find their own beer, which is only to be obtained at some retailer of brewer's beer.

Mr. CORBET related his experience as Secretary to the former Anti-Malt Tax Association. He said:—

You are all aware that a new Anti-Malt Tax Association, of which Mr. Punnett is the chairman, has been recently formed. I was secretary of the first association, and the result of my experience is that we did not fail for want of money, nor do I believe we shall fail now for want of it. It is men that are wanted to ensure success. I feel sure that the first agitation failed for want of fitting representatives in the House of Commons. My notion is that if the repeal of the malt-tax is to be obtained, it will be done with very little expense—that is to say, it will be through its being made a personal question rather than a public one. Let every man go home determined to speak to his own members in the way that has been suggested this evening, and the object will soon be accomplished. Mr. Sidney implied that the thing could not be done in consequence of the yearly tenure of land; but he contradicted his own statement by telling us that a former member for Berkshire was turned out because he did not represent the opinions of his constituents. If the electors of Berks turned out Mr. Pusey on that ground years ago, why cannot farmers now act in a similar manner in reference to the malt tax? I believe that that tax was never before as great a sore in the House of Commons as it is at this moment, and that certain gentlemen there have a very great dread of it.

Reviews.

The Journal of Agriculture, &c. Jan. 1864. Blackwood.

It is a very good number of this quarterly periodical. Mr. Henry Stephens, than whom no one is a more experienced or trustworthy writer on agricultural subjects, relates the astonishing experience of Scottish farmers, both on manuring and on tillage, showing what safe and profitable scope their soils and climate afford for liberal and enterprising management under both of these heads. An interesting account of William Harley, of Glasgow, and his dairy system; essays on the storing of root crops; on farm crops and cropping; on popular weather prognostics; on cottage building and how to warm it with one fire; with the quarterly *resumé* of news, make up the first part of the volume.

The Transactions of the Highland Society, bound up in the same cover, contain an elaborate and exhaustive essay by Mr. Wilson, of Woodhorn, in which however due credit has not been given by the author to the preceding labours of Mr. Benet Woodcroft, C.E., as the source whence the historical part of the essay has been derived.

Mr. Wilson's essay describes the various machines made by the different manufacturers, and enumerates the performance of each at the different experimental and competitive trials which have been instituted of them. He refers to his own experience during five years in the employment of a machine, and sums up the relative cost of hand and machine labour as follows:—

"With regard to the question of comparison of the expense of reaping grain by the various systems of sickle, scythe, and machine, the writer is able to speak very confidently in favour of the latter, after five years' experience, during which period he has cut with one machine upwards of 1200 acres of different kinds of crops, exclusive of a large quantity cut for his neighbours. Previous to the use of a reaping machine, the cutting of Wheat on this farm cost as follows:—

(Formerly) By hand-labour.

The reaping, binding, and stooking of Wheat, from 11*s.* to 15*s.* per acre.

Mowing, binding, and stooking of Wheat, about 8*s.*

(Now) By machine.

Cutting of Wheat, 1*s.* 6*d.*
Binding and stooking, 4*s.* 3*d.*
} 5*s.* 9*d.* per acre, exclusive of wear and tear, interest on capital, &c.

"The above has reference more particularly to the harvesting of Wheat; hence all other crops cut by hand will be in due proportion. But whilst the cost of cutting Oats by sickle or scythe will be proportionably and considerably less than Wheat, no difference can be made in the cost of cutting these crops by a machine, inasmuch as the same staff is required for the cutting, though, in some cases, Oats may be more expeditiously taken up and stooked than Wheat or Barley. On this farm the corn, which is cut by a swathe-delivery machine, is taken up by women using long-toothed rakes, each of these requiring a boy preceding them to make bands, and a man following to bind and stook, which gang can take up, on an average, 1½ acre per day, at a cost of 4*s.* 3*d.* per acre. It will be evident, however, to every one conversant with the variable kinds of crops with which the reaping machine has to cope, that there must be a necessary and considerable difference in the cost of cutting as well as of taking up the corn—as, for instance, where circumstances admit of a heavy crop being cut in one direction only, one half of the time of both men and horses is wasted by having to return empty. Taking, however, the cost of cutting, binding, and stooking all our grain crops—one with another—at 11*s.* per acre by manual labour, we find a saving at once of from 30 to 40 per cent. by the use of a reaping machine; and this opinion seems to be indorsed by the experience of our leading agricultural authorities on this subject—such as Messrs. Wilson of Edington Mains, Hunter of Thurston, Hope of Fenton Barns, Wilson of Wester Cowden, and others, who have kindly come forward and recorded, for the public benefit, in addition to their valuable opinions, the expenses of their harvest operations. The experience, however, of the writer with regard to the saving accruing from the use of reaping machines would lead him further to observe—

"(*a*) That a swathe-delivery reaper takes the place and does the work of ten good mowers on average corn.

"(*b*) That a manual sheaf-delivery reaper does the work of from sixteen to twenty reapers with sickles.

"(*c*) That a sheaf-delivery reaper with automaton rake does the work of thirty reapers with sickles."

The essay is somewhat deficient as regards the account which might have been collected of the actual

experience of farmers with the various reapers in different parts of the country; and the labours of Mr. Woodcroft, to which the former part of the essay is due, ought not to have been ignored. The other papers in the volume are an essay on the cultivation of the Carrot, and reports of the Veterinary College, and of proceedings in the laboratory. The essay of Mr. Henry Stephens in the Journal, and the report by Dr. Anderson as to the value of bird's dung as manure, will afford material for remark hereafter.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

Day of the Month	Day of the Week	At 9 A.M., Railway Time. Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer. Dry Bulb.	Wet Bulb.	Wind. Direction.	Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
Feb.		Inches.	°	°				°	°	°	°	Inches.
5	Friday	30.29	33	31	N.	3	0	42	25	50	24	
6	Saturday	30.23	32	31	N.	2	6	37	31	45	27	
7	Sunday	29.97	28	27	N.	0	10	37	26	45	22	
8	Monday	28.79	30	29	N.W.	2	10	33	19	38	30	
9	Tuesday	29.64	24	24	S.E.	0	0	34	19	45	14	
10	Wednesday	29.42	31	30	S.E.	0	5	37	19	45	13	
11	Thursday	29.77	31	33	N.	0	10	37	19	51	16	

Notices to Correspondents.

CLOVER: *A W.* Two quarters of well rotted bonedust per acre applied now to Grass land will promote the growth of Clover.

GRASS MANURES: *Mr. Richardson.* Your letters must go in as advertisements. The principles you urge have been established by Mr. Lawes' experiments, which have been referred to by us as often as the subject seems to require discussion.

MILK PANS: *A H T* asks where he can procure milk pans on Major Gussander's principle, mentioned by Dr. Voelcker in his essay on Milk in the Journal of the Royal Agricultural Society of England.

MUTTON: *Eland.* A fat Cotswold sheep will yield a Smithfield stone of mutton for every imperial stone of live weight, *i.e.*, 8-14ths of their live weight is mutton. If your sheep are short-woolled and in very good condition they will yield more mutton than this.

PIG DISEASE: *County Asylum.* It appears to be a malignant epidemic somewhat of the character of scarlet fever, and it is probably infectious. Separation, cleanliness, ventilation, the free use of chloride of lime, are called for. Give bran and boiled Linseed as a substitute in part for the Barley meal, with free access to a green vegetable diet as well as to water acidulated with acetic acid. Sulphate of magnesia may be given once as a cooling aperient, and nitrate of potash as a diuretic several times—2 drachms of the former, and 10 grains of the latter being sufficient for a four months pig. Yeast may be tried to diminish the tendency to the putrid state, and if tonics are afterwards required, give gentian and sulphate of iron. *W C S.*

RED WATER IN COWS: *An Old Subscriber.* The disease is rather in the liver and digestive organs than the kidneys. Open the bowels by giving sulphate of soda 1 lb., ginger 1 drachm, gentian 1 drachm, and warm water; and next day, powdered alum ½ drachm, nitrate of potash 4 drachms, camphor 1 drachm, spirits of wine 1 drachm, ginger 1 drachm, gentian 1 drachm. To be given with gruel, and repeated the following day. Books—Youatt on Cattle and Pigs, White on Cattle Medicine, Youatt and Spooner on Sheep.

SEA SOIL: *Agricola.* It is impossible to give advice founded upon a more examination by the eye of a handful of the soil. We can only urge as general truths, that the drainage of land when water stagnates, the marling of sands, the addition of lime when no calcareous matter, or when an excess of organic matter exists, are all profitable operations.

TOLL BARS: *Husbandman.* We are not learned in the law; but it is plain that the spirit of the Act, and of decisions under it, is against the charges you name, viz., for carting the tops of trees (not timber) from one part of a farm to the other, and for the farmer riding his pony from one part of the farm to the other.

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	16-ounce.	21-ounce.
Best	5½d. ...	7¼d.
Seconds	3¾d. ...	5d.
Thirds	2½d. ...	3½d.
Fourths	2¼d. ...	3¼d.

HORTICULTURAL GLASS.

Stock Sizes, 16-ounce. In 100 feet Boxes.

These prices only apply to the sizes stated.

		4ths. s.	4ths. d.	3rds. s.	3rds. d.	4ths. s.	4ths. d.	3rds s.	3rds d.
11 by 9, 12 by 9, 13 by 9, 14 by 9 / 12 „ 10, 13 „ 10, 14 „ 10, 15 „ 10 / 13 „ 11, 14 „ 11		10	9	12	3	12	6	14	0
14 „ 12, 15 „ 12, 15 „ 11, 16 „ 11 / 18 „ 12, 19 „ 12, 16 „ 12, 17 „ 12 / 16 „ 13, 17 „ 13, 20 „ 12, 21 „ 14		11	6	13	6	12	6	16	0
19 „ 13, 20 „ 13, 18 „ 13 / 16 „ 14, 17 „ 14, 21 „ 13 / 19 „ 14, 20 „ 14, 18 „ 14		14 to 15 ozs. to the foot.				16 to 17 ozs.			

HARTLEY'S PATENT ROUGH PLATE GLASS.

Packed in Boxes of 50 feet each.

	s.	d.	
6 by 4 and 6½ by 4½	10	6	per box.
7 „ 5 „ 7½ „ 5½	12	0	„
8 „ 6 „ 8 „ 6½	13	6	„
6 „ 7 „ 9½ „ 7½ and 10 by 8 ...	15	0	„

GLASS for ORCHARD HOUSES.

As supplied by us to Mr. Rivers, to the Royal Horticultural Society, and to most of the Nobility, Clergy and Gentlemen of the United Kingdom.

Packed in 100 feet Boxes.

		14 to 15 ozs.	16 to 17 ozs.	21 ozs.
20 by 12 / 20 „ 13 / 20 „ 14 / 20 „ 15	Fourths ...	11s. 6d.	13s. 6d.	15s. 0d.
	Thirds ...	13s. 6d.	16s. 0d.	19s. 0d.
	Seconds		English.	English.
	Best		18s. 0d.	23s. 0d.

The above prices include the Boxes.

We recommend 3rds quality at 16s., or 21-ounce at 19s. (as supplied to Mr. Rivers). Best and Seconds are intended only for pictures or dwelling-houses.

SMALL SHEET SQUARES.

In 100 feet Boxes.

6 by 4	6½ by 4½	7 by 5	7½ by 5½	11s. 6d.
8 „ 6	8½ „ 6½	9 „ 7	9½ „ 7½	
		10 „ 8	10½ „ 8½	12 6

Boxes 2s. each, returnable at full price.

All small squares from 6 by 4 to 10½ by 8½ are cut from pieces, consequently there is only one quality.

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Perforated Glass for Ventilation.

Glass Shades, Ebony and Gilt Stands, Gas and Lamp Glasses, Chimney and Globes, &c.

Glaziers' Diamonds from 10s. to 21s. each.

Glass Tiles and Slates in Sheet and Rough Plate. Plate Glass, Patent Plate, and Hartley's Improved Rough Plate.

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GENUINE WHITE LEAD. ANTI-CORROSION PAINT. | LINSEED OIL PUTTY. FINE OAK VARNISH. | FINE OAK CARRIAGE. PATENT DRYERS. | LINSEED OIL. BOILED OIL.

TURPENTINE.

LEAD in SHEETS or CUT to SIZES, LEAD PIPE, LIFT PUMPS, WATER CLOSETS, and PLUMBERS' BRASS WORK of every description.

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To all who have a taste for the cultivation of In-door Plants, for raising Seedlings, striking Cuttings, &c the Plant Cases will be found an inestimable boon.

The Cases are highly approved and recommended by Professor Lindley, and by Messrs. Veitch, of The Royal Exotic Nursery, King's Road, Chelsea.

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PORTABLE HOT-WATER APPARATUS,

WITH TRUSS'S PATENT JOINTS FOR HEATING CONSERVATORIES, HOTHOUSES, &c.

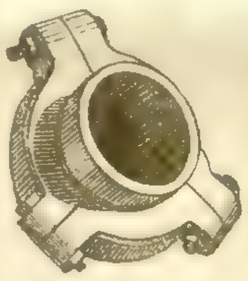

T. S. TRUSS

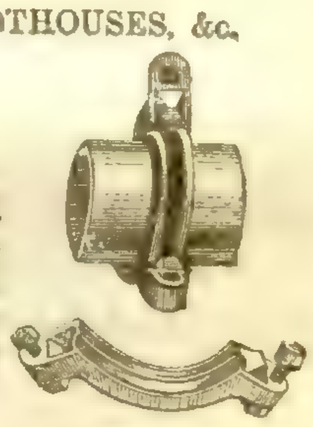

Begs to offer complete HOT-WATER APPARATUS for GREEN-HOUSES (consisting of 4-inch Pipes and Joints, Saddle Boiler, Fire Doors, Bars, Soot Doors, Damper, Supply Cistern, Feed and Air Pipes, Pipe Stands, &c., of the best quality), delivered to any Railway Station in England, and to erect the same within 25 miles of London, at the following prices:—

TWO 4-INCH PIPES ALONG ONE SIDE AND ONE END OF HOUSE.

Size of House.	Apparatus complete.	Erection.	Size of House.	Apparatus complete.	Erection
16 feet by 8 feet	£8 10 0 ...	£2 0 0	30 feet by 12 feet	£11 15 0 ...	£2 10 0
20 feet by 10 feet	8 17 6 ...	2 0 0	40 feet by 15 feet	15 0 0 ...	2 15 0
25 feet by 12 feet	10 5 0 ...	2 5 0	50 feet by 15 feet	18 0 0 ...	3 0 0

Erections beyond 25 miles of London, Railway Fare for one Man charged extra.

By the use of these Joints the Apparatus is easily altered or removed without injury to either Pipes or Joints.

Estimates and Plans forwarded on application to

T. S. TRUSS, C.E., 53, GRACECHURCH STREET, LONDON, E.C.

HOTHOUSES FOR THE MILLION.

AWARDED A PRIZE MEDAL. 1862.

ON THE PRINCIPLE INVENTED AND PATENTED BY

SIR JOSEPH PAXTON, M.P.

COMBINING SIMPLICITY, CHEAPNESS, EXCELLENCE, AND DURABILITY.

BEING CAPABLE OF FULFILLING IN THE MOST PERFECT MANNER ALL THE REQUIREMENTS OF HORTICULTURE.

MANUFACTURED in LONDON; NEWTON in CARTMEL, LANCASHIRE; GLOUCESTER; COVENTRY; ABERDEEN, and PAISLEY; in order to supply the Neighbouring Districts, and to save purchasers unnecessary expense in Carriage.

These PATENT GLASS HOUSES are composed of simple parts, and may be lengthened and arranged to form the boundaries of Gardens; they cost less than Brick Walls, and insure a certain crop of Fruit. As Portable Structures they may be removed and refixed at little expense; and though calculated for Gardens of the highest order, they are, from their cheapness, desirable for Market Gardens, where they may be made to cover any extent, as also for Suburban Villas and Cottage Gardens.

When the HOUSES are not required Portable, improved Iron Gutters and Supports are now supplied, rendering the structures most permanent and durable.

TESTIMONIALS.

"Grosvenor House, May 19, 1863.

"The Marquis of Westminster writes, in reply to Mr. Hereman's note, to say that he has much pleasure in informing him that the Glass Houses for Peaches, &c., which he constructed for him in Dorset, 1860, have fully answered their purpose, and prove very satisfactory."

"5, Prince's Gate, S.W., May 16, 1863.

"Sir,—I am happy to be able to inform you that the Lean-to Roof which you sent to me at Bryanstone is most successful, and I am quite satisfied will repay its cost.

"Mr. S. HEREMAN." "Yours &c., PORTMAN."

"27, Grosvenor Square, May 14, 1863.

"Sir,—I have much pleasure in reporting to you that I am quite satisfied with the Patent Glass Houses which you furnished in 1861. My gardener at Hackness is of opinion, as far as his experience of them up to this moment goes, that the system of ventilation which you adopt is quite equal, if not superior, to any other system which he has yet tried.

"Mr. S. HEREMAN." "I remain, &c., [Sir] JOHN V. B. JOHNSTONE."

"Woodcote [Newport, Salop], May, 1863.

"Mr. Cotes has much pleasure in stating that he considers the Glass Lights put up by Mr. Hereman to be a great addition to the Woodcote garden, and shall be always ready to testify as to their efficiency."

"Mr. S. HEREMAN, 7, Pall Mall East."

"Belgrave, near Leicester, May 20, 1863.

"Sir,—The Lean-to House which you supplied to me in 1860 has fully answered my expectations. The House is planted with Vines, and Figs on the back wall; there is no artificial heat, and, though last year was a most unfavourable one, some of the bunches of Black Hamburgh Grapes weighed more than a pound, and ripened well for the season.

"The material and construction of the house have proved highly satisfactory.

"Mr. HEREMAN." "Yours &c., ALFRED ELLIS."

["Johnson Hall, near Eccleshall, Staffordshire. May 11, 1863.

"Sir,—I have had in operation for several years, Lean-to Vineries made with your 14 feet sashes at an angle of about 50°, the lower or front wall being 3 feet high. Nothing can be more simple than their construction; the mode of ventilation is excellent, and entirely obviates the annoyance and breakage caused by movable sashes, and I feel much pleasure in recommending these structures.

"Mr. S. HEREMAN." "Yours, &c., EDWARD LYON."

"Shalimar, Acton, N., May 11, 1863.

"Sir,—In reply to your letter of the 9th inst., I am happy to say that I was so very well satisfied with the Lean-to Houses erected by you in my garden three years since, that I had another put up last November.

"Mr. S. HEREMAN." "I remain &c., SAMUEL RICKARDS."

"Wath-upon-Dearne, near Rotherham, May 12, 1863.

"Dear Sir,—The three small Glass Houses you sent me answer admirably. The Lean-to with 16 feet sashes covers now about 25 healthy and strong Vines; last year the produce and quality of the fruit were surprising. * * * * I recommend every one who is so fortunate as to take pleasure in his garden, and who can afford the expense, to erect one or more of your cheap 'Hothouses for the Million'—a never-falling source of profitable amusement.

"I have other more costly and extensive glass structures, but, having regard to their cost and efficiency, they bear no comparison with those I had of you.

"I am surprised that market gardeners do not adopt them more generally.

"Mr. SAMUEL HEREMAN." "I remain, &c., G. P. NICHOLSON."

"Norfolk Villa, Eastbourne, May 12, 1863.

"Mrs. Baugh has much pleasure in informing Mr. Hereman that her Orchard House is perfect in every way, and answers admirably for the culture of fruit trees in pots. Mr. Hereman is at liberty to make whatever use he wishes of these few lines, as Mrs. Baugh thinks it a pity these houses should not be more general in this growing place."

"Inverary [Castle] Gardens, May 21, 1863.

"Dear Sir,—I have much pleasure in bearing testimony to the efficiency of the Lean-to Glass Houses which you erected here for covering in Peach and Fig trees. Although our wall is 17 feet high, the fruit sets regularly over the whole surface, and, with the command of ventilation these houses have, fruit can be forwarded or retarded at pleasure.

"I remain, &c., JOHN CAIE [Gardener to His Grace the Duke of Argyll."]

"Mr. S. HEREMAN."

"The Grove, Stanmore, May 12, 1863.

"Dear Sir,—I am happy to inform you that the Glass House supplied by you answers every expectation. I am using one division for Cucumbers, and the other for bedding-out plants, which thrive remarkably well, being so near the glass, and having a thorough ventilation, which your method of construction so amply secures.

"Mr. S. HEREMAN." "I remain, &c, W. LEWIS" [Gardener to Joseph Gillott, Esq.]

"Nothing can be more easy than to build them—nothing more simple than to remove them."—*Daily News*, May 22, 1862.

"We do not know in what other way so much interesting amusement, pleasant exercise, and luxurious profit, can be obtained as these 'Hothouses for the Million' are calculated to afford."—*Bell's Weekly Messenger*, August 23, 1862.

Circulars with LISTS of PRICES and CARDS to VIEW Houses in operation in the neighbourhood of London, also ESTIMATES for ORNAMENTAL CONSERVATORIES, GREENHOUSES, &c., can be had on application to

SAMUEL HEREMAN, 7, PALL MALL EAST, LONDON, S.W.

The SECOND EDITION of A HANDBOOK of VINE and FRUIT TREE CULTIVATION, as adapted to the above Patent Hothouses, is now ready, and may be had of Mr. HEREMAN, price 1*s.*; post free, 1*s.* 1*d.*

"We strongly recommend this attractive shilling's worth, conscious that none who purchase it will be disappointed."—*Shirley Hibberd, Esq., in Floral World*, May, 1862.

CARTER'S CHAMPION BROCCOLI.—Dwarf, compact growing, and large-headed, the best late Broccoli in cultivation, spoken of by the *Gardeners' Chronicle* as follows:—

"Very large, not in the least coarse, white rather than cream-coloured, and proved when cooked to be wholly free from the strong taste which spoils so many Broccolis."

MR. ARTHUR HENDERSON, *the eminent Nurseryman, of Pine Apple Place, Edgware Road, says of this Broccoli*:—

"It is a really excellent and compact variety, with large round and close heads, flavour sweet and first-rate, growth equal and alike, as if turned out of a machine. There is no mistake in this being one of the right things; coming in so late is another valuable consideration; it certainly fills up the gap or interval between the Broccoli and Cauliflower." Price, per packet, 1s.

JAMES CARTER & Co., Seed Merchants, 237 & 238, High Holborn, London, W.C.

THE COLESHILL CUCUMBER.—We have much pleasure in drawing attention to this first-class Cucumber; it was raised by Mr H. Eckford, Gardener to the Earl of Radnor, Coleshill, Berks, who speaks of it as follows:—

"The Coleshill Cucumber, which I have grown for several years, is well adapted both for early and late work.

"The fruit grows about 20 inches long, is of uniform girth like a gun-barrel, perfectly round, with a particularly short handsome handle; it is smooth, of light green colour, thickly covered with bloom, an abundant cropper, and of first-rate quality. Specimens I sent to you on two or three occasions were fair examples of it. Twenty inches is about the average length, but I have had it 26 inches, but not when in full bearing, or rather when the plants were fully cropped."

(We have grown it ourselves, and can confidently recommend it.) Price per packet, 1s.

JAMES CARTER & Co., Seed Merchants, 237 & 238, High Holborn, London, W.C.

APPLEBY'S SEEDLING CUCUMBERS.—We have much pleasure in offering the following six varieties of CUCUMBERS, which we received from Mr. APPLEBY, the well known writer on Horticult ral subjects; we have grown them at our Nursery, and can fully endorse Mr. APPLEBY'S description of them, which is as follows:—

EMPEROR, 24 to 26 inches long.—A handsome fruit, with black spines; hardy, a good setter. Well suited for winter culture.

QUEEN, 28 to 30 inches long.—A fine, well-shaped fruit, with black spines; a free bearer, good setter. Suitable for exhibition.

CONQUEROR, 28 inches long.—Handsome in shape, with white spines; a good bearer. Fit for exhibition, very excellent in quality.

ALBION, 24 inches long.—A white-spined well-shaped variety; extra bearer, a good forcer, and bears freely in winter. Qualities excellent, being crisp and well-flavoured.

HAILSTONE.—Blunt white spines in the form of hailstones; a free bearer; handsome and curious.

HAMILTON'S IMPROVED BLACK SPINE.—A well-known excellent variety.

The above collection for 3s. 6d.

JAMES CARTER & Co., Seed Merchants, 237 & 238, High Holborn, London, W.C.

CHARLES SHARPE AND CO. SEED MERCHANTS, Sleaford, have a Surplus Stock of the under-named PEAS to offer to the Trade, and will be glad to forward samples and prices on application:—

DANIEL O'ROURKE PEAS (WAITE'S Stock)
EARLY PRIZETAKER MARROW
WOODFORD'S GREEN MARROW ,,

A Few Really Good Things.

DIXON'S NEW YORKSHIRE HERO PEA, 5s. per quart.

	Per packet—s.	d.
DIXON'S New MAMMOTH WHITE CELERY ..	1	0
DIXON'S New CHAMPION GREEN COS LETTUCE	1	0
DIXON'S YORKSHIRE FAVOURITE MELON ..	1	0
DIXON'S YORKSHIRE HERO CUCUMBER	2	0
The EARLY FORCING CAULIFLOWER	1	0
The ROSEBERRY BRUSSELS SPROUTS	0	6
MELVILLE'S VARIEGATED GARNISHING KALE ..	0	6

All post free except the Peas.

EDMUND PHI[illegible] DIXON & SONS, The Yorkshire Seed Establishment, [illegible].

Earliest Pea known is

CARPENTER'S EXPRESS, gathered last season on May 7. 2s. 6d. per quart.

The Largest and Best TALL WRINKLED PEA is CARPENTER'S MAGNUM BONUM; height, 8 or 9 feet. 4s. per quart.

The Best DWARF WRINKLED PEA is CARPENTER'S MULTUM IN PARVO; height, 2½ feet. 4s. per quart.

The Largest and Best LETTUCES are CARPENTER'S MONSTROUS GREEN COS and CARPENTER'S MONSTROUS WHITE COS. 1s. and 2s. 6d. per packet.

Either of the above to be had of EDWARD CARPENTER, Seed Merchant, Brighton and Sussex Seed Warehouse, 96, St. James's Street, Brighton.

CARTER'S SURPRISE PEA.—An improved blue Surprise, larger in sample, larger pods, and more prolific, a good useful Pea for market garden work, and one that will come into general use. Price, per quart, 1s. 6d

JAMES CARTER & Co., Seed Merchants, 237 & 238, High Holborn, London, W.C.

ADVANCER PEA.—A dwarf green wrinkled Marrow, of fine flavour, large pods well filled up, and bodding well up the haulm; very prolific, and nearly as early as Daniel O'Rourke. Price, per quart, 1s. 6d.

"The best wrinkled Marrow in cultivation."—Vide *Gardeners' Chronicle*.

JAMES CARTER & Co., Seed Merchants, 237 & 238, High Holborn, London, W.C.

WONDER of the WORLD PEA.—Tall white wrinkled, with large, broad, well-filled pods, earlier than British Queen, very prolific, a fine flavour. This Pea might truly be called a "Mammoth," as it is the largest, earliest, and most prolific of the late varieties of tall wrinkled Marrow Peas. Price, per quart, 3s. 6d.

JAMES CARTER & Co., Seed Merchants, 237 & 238, High Holborn, London, W.C.

To Seedsmen & Nurserymen.

W. BROOKS, AGRICULTURAL SEED GROWER and NURSERYMAN, Long Sutton, begs to inform the Wholesale Trade that he has about 200 Bushels of SWEDE TURNIP SEED to dispose of, consisting of Purple Top, Skirving's Purple Top, and the Golden Swede. Green Bronzed, also 16 Bushels of WHITE SPANISH ONION SEED, all grown in 1863, will grow 80 per cent, Turnip 90 and upwards. The Advertiser would have no objection to take about one-third of the amount out in Nursery Stock.

Address, W. BROOKS, Seedsman, Long Sutton, Lincolnshire.

Unadulterated Choice Seeds.

ROBERT PARKER begs to announce he can supply a few pounds of each of the undermentioned, price of which will be forwarded on application:—

CUSTARD VEGETABLE MARROW.
LOBELIA ERINUS SPECIOSA.
LEEK HYBRID PRIZE (HENRY'S), the largest and finest in cultivation.
LETTUCE MOOR PARK, the best Brown Cos in cultivation.

A NEW PRICED and DESCRIPTIVE SEED and PLANT CATALOGUE is published, and will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

Select Catalogue of Seeds and Plants.

ROBERT PARKER begs to announce that his NEW PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE, AGRICULTURAL, FLOWER SEEDS, &c., with Supplementary Descriptive and Priced Lists of Good and New Plants, is now published, and will be forwarded to applicants. All Seeds are warranted to be of the finest possible quality.

Intending purchasers are requested to compare the prices with those of other houses. The following are specially recommended.

	Per oz.—s.	d.
BROCCOLI, SUPERB WINTER WHITE (Snow's) ..	2	6
,, LATE WHITE (Shearer's)	2	6
CAULIFLOWER, NEW EARLY MAMMOTH	2	6
LEEK, HYBRID PRIZE (Henry's)..	2	0
LETTUCE, MOOR PARK	1	6
PEA, ADVANCER (Maclean's)	2	0

Exotic Nursery, Tooting, Surrey, S.

SELECTED SEEDS, CARRIAGE FREE.

PAUL'S SUPERB CRIMSON BEET, 1s. per ounce.
PAUL'S WALTHAM BRUSSELS SPROUTS, 1s. per packet.
PAUL'S EMPEROR CUCUMBER, 2s. 6d. per packet.
PAUL'S IMPROVED TELEGRAPH CUCUMBER, 1s. per pkt.
PAUL'S WALTHAM GREEN CURLED ENDIVE, 1s. per pkt.
PAUL'S SELECTED EXTRA CURLED PARSLEY, 6d per pkt.
BROCKET HALL BROWN COS LETTUCE, 1s. per packet.
IMPROVED JACKSON'S LATE CURLED KALE, 1s. per oz.
SNOW'S WINTER WHITE BROCCOLI (True), 1s. per packet.
SUPERB DWARF HERTFORDSHIRE CAULIFLOWER, 1s. per packet.
GODFREY'S WHITE SPINE CUCUMBER (True), 1s. per pkt.
ASTERS, STOCKS, BALSAMS, ZINNIAS, LARKSPURS, &c., in collections from the very first sources.
HOLLYHOCK.—WM. PAUL'S Collection in 12 distinct named sorts, 5s.
,, finest mixed, 1s. to 2s. 6d. per packet.
CALCEOLARIA, CINERARIA, PRIMULA, PETUNIA, SWEET WILLIAM, finest strains, 1s. to 2s. 6d. per packet.
All other Seeds, separate or in collections, of best quality.
PRICED DESCRIPTIVE CATALOGUE free by post.

Address WILLIAM PAUL, Paul's Nurseries, Waltham Cross, N.

New and Choice Seeds, Free through the Post.

EDWARD TAYLOR, SEEDSMAN, Malton, Yorkshire, has pleasure in offering the following varieties of SEEDS, being quite confident they are articles of sterling merit, and are certain to give satisfaction:—

	Per packet—s.	d.
TAYLOR'S SUPERB SELECT RED CABBAGE ..	1	0
TAYLOR'S DEFIANCE WHITE CELERY	1	0
TAYLOR'S DEFIANCE RED CELERY	2	6
TAYLOR'S SUPERB SUMMER CABBAGE LETTUCE	1	0
DALMENEY SPROUTS	1	0
FEARNOUGHT CABBAGE	0	6
CARTER'S DWARF MAMMOTH CAULIFLOWER ..	1	0
EARLY DWARF ERFURT CAULIFLOWER	1	0
NEW FEATHER-STEM SAVOY	0	6
PRINCESS ALICE MELON	2	6

For Prices and other particulars see CATALOGUE, to be had gratis on application.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.

The MANAGER begs to solicit attention to the following Choice GARDEN SEEDS, now being sent out by the Company, full descriptions of which will be found in the GENERAL PRICE CURRENT.

		s.	d.
MACLEAN'S HERO PEA, 2 feet	per qt.	5	0
,, NEW DWARF WHITE, 2½ feet ..	,,	1	6
ADVANCER, 2 feet	,,	1	6
WONDERFUL, 2½ feet	,,	1	6
BECK'S DWARF GEM BEANS, 1 foot	,,	1	0
VARIEGATED DUN DWARF, 1 foot	,,	1	6
NUTTING'S fine RED BEET	per oz.	1	0
BACKHOUSE'S WINTER PROTECTING BROCCOLI,	per pkt.	1	0
DALMENY WHITE	,,	1	0
DALMENY SPROUTS..	,,	1	0
FEARNOUGHT CABBAGE	,,	1	0
TOM THUMB	,,	1	0
HOOD'S IMPERIAL DWARF RED CELERY ..	,,	1	0
MOORE'S VEGETABLE CREAM	,,	1	0
TOMATO DE LAYE, a new upright growing var..	,,	1	0
PRINCESS ALEXANDRA MELON	,,	2	6
STUDENT PARSNIP	per oz.	1	0

CATALOGUES and all other information may be had on application at the Offices, 68, Welbeck Street, Cavendish Square, London, W.

SEEDS of SUPERIOR MERIT.—Free by Post, except the Peas and Beans.

	per Quart—s.	d.
PEA, DILLISTONE'S EARLY PROLIFIC, 2 ft, the earliest of all	1	6
,, ADVANCER (McLean's), 2 ft., the best dwarf Pea	1	6
,, PAYNE'S CONQUEROR, 5 ft., the best tall Pea	1	0
BEAN, BECK'S DWARF GREEN GEM	0	8
	per Packet.	
BEET, PINE APPLE, superb crimson	0	6
,, NUTTING'S SUPERB RED..	0	6
BROCCOLI, SNOW'S IMPERIAL WINTER WHITE ..	1	0
,, BACKHOUSE'S WINTER WHITE PROTECTING	2	6
BRUSSELS SPROUTS, ROSEBURY	0	6
CAULIFLOWER, LARGE EARLY ERFURT	1	0
CABBAGE, LITTLE PIXIE	0	6
CUCUMBER, SMITH'S FINE LONG FRAME	1	0
CELERY, MAMMOTH WHITE	0	6
,, ,, RED	0	6
MELON, EMPRESS EUGENIE	1	0
LETTUCE, PARIS WHITE COS	0	6
,, ,, GREEN COS	0	6
PARSLEY, extra curled garnishing	0	6
SAVOY, NEW FEATHER-STEMMED	0	6
PARSNIP, THE STUDENT	0	6
TOMATO DE LAYE	0	6
LOBELIA PAXTONIANA, or Crystal Palace var. ..	1	0
TRUFFAUT'S SPLENDID ASTER, 18 vars.	1	0
CHRYSANTHEMUM-FLOWERED ASTER, 12 vars. ..	1	0
IMPORTED LARGE-FLOWERING STOCK, 18 vars ..	1	0
BALSAM, SPLENDID ROSE-FLOWERED, 12 vars ..	1	0
AMARANTHUS MELANCHOLICUS RUBER	0	6

The whole of the above carriage free for 21s.

RICHARD SMITH, Seed Merchant, Worcester.

SEED POTATOS.—Webb's Imperial Kidney, 10s. per cwt.; Gloucestershire Kidney, 12s. per cwt.; Daintree's Earliest, 7s. 6d. per cwt.; Walnut-leaf Kidney, 12s. per cwt. Sacks 2s. each. Terms Cash.

W. MINCHIN & SON, The Nurseries, Hook Norton, Oxon.

DAINTREE'S SEEDLING POTATO.—This fine flavoured early round white variety is certified by the "Journal of Horticulture," page 269, to have yielded at the rate of 22 TONS per Acre. Present price 6l. per Ton, or 8s. per cwt.; and to prevent disappointment, orders (enclosing remittance) should now be sent to Mr. SIMON A. DAINTREE, of Fendrayton, St. Ives, Hunts. Sacks, 2s. each.

POTATOS, &c.—Daintree's Seedling, 3s.; Myatt's Kidney, 3s. 6d.; Ashleaf, Lemon, and Webb's Imperial Kidney, 4s.; Royal Ashleaf, 8s. per bushel, and many other sorts, all clean and true to name. Strong 3-years ASPARAGUS, 30s. per 1000; 300 finest named AURICULA, good plants, 8s. per dozen, 3l. per 100.

A. GIBB, Broughty Ferry.

SKERRY BLUE and FLOUNDER POTATOS.—The Skerry Blue is a very fine, late, table Potato, and the only variety entirely free from disease. The Flounder is as early as the Ashleaf, and very large, and particularly suitable for Market Gardeners. Free on board at Belfast (sacks included). Skerry Blues, 6s. per cwt.; Flounders, 10s. per cwt. Cash to accompany order.

JOHN E. ANDERSON, Seedsman, Downpatrick, Ireland.

Seed Potatos.

WILLIAM ROSE, SEED POTATO GROWER, Combe Down, Bath, is taking orders for the following varieties of SEED POTATOS, warranted true to their kind—

DALMAHOY, per peck of 20 lbs, at	1s. 6d.
FLUKES	1s. 6d.
SKERRY BLUES, the most productive Potato in cultivation	1s. 6d.

Sacks, 2s. each. Delivered at the Bath Railway Station.

THOMAS AYRES, Biggleswade, Beds, NURSERYMAN and SEED GROWER, has to offer 50 Tons of SEED POTATOS:—

EARLY ASH-LEAF	EARLY OXFORD
MYATT'S PROLIFIC	EARLY SHAW
EARLY HANDSWORTH	FLUKE
OXFORD KIDNEY	YORK REGENT.

Also strong 3-year old ASPARAGUS PLANTS, WHITE SPANISH ONION SEED, and ENGLISH SCARLET RUNNER BEANS. Prices on application.

THE ROYAL ASH-LEAVED KIDNEY POTATO.—This is the most productive of all the early Kidney Potatos. The following is extracted from a letter received from F. C. Steggall, Esq., of Weymouth, dated Oct. 5, 1863:—

"I have no hesitation in saying that the Royal Ash-leaved Kidney is a most valuable variety. I tried it by the side of the best early varieties known; it beats every one by at least a fortnight, and moreover its flavour is delicious, far superior to the old Ash-leaved."

Sold Wholesale by Messrs. RIVERS & SON, Sawbridgeworth; and Retail by Messrs. WRENCH & SON, Seedsmen, London Bridge; by Messrs. SUTTON & SONS, Reading; and other respectable houses.

Splendid New Potato.—The Pink Fluke.

SUTTON AND SONS have great confidence in recommending this fine POTATO. It has hitherto been entirely Free from Disease, and keeps mealy and fine flavour until the succeeding harvest.

The Grower, writing to Messrs. SUTTON, says:—"They are a beautiful Potato, and will astonish your customers. They will keep 12 months and improve in flavour, when all others are getting unpalatable."

Price according to quantity required, which may be had on application to SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

CARTER'S CHAMPION EARLY FORCING POTATO.—The earliest frame Potato in cultivation; described by the *Gardeners' Chronicle* as "an early Kidney frame Potato, earlier than the Ash-leaf, with scarcely any haulm, and therefore very suitable for forcing." Price, per peck, 3s.

JAMES CARTER & Co, Seed Merchants, 237 & 238, High Holborn, London, W.C.

CARTER'S INCOMPARABLE DWARF DARK CRIMSON CELERY.—This variety was selected by us from Turner's Incomparable Dwarf White; it has the same very dwarf habit, and is an exceedingly solid variety, with a fine dark crimson colour. Price, per packet, 1s.

JAMES CARTER & Co., Seed Merchants, 237 & 238, High Holborn, London, W.C.

CARTER'S IMPROVED GARNISHING KAIL.—This will produce more than 20 varieties, some of which are worthy of a place in a Greenhouse, being quite equal in colour to the new Coleus. The colours vary from rich crimson to white laced and fringed. Price per packet, 1s.

JAMES CARTER & Co., Seed Merchants, 237 & 238, High Holborn, London, W.C.

Extra Fine Seakale.

GEORGE CLARKE has plenty of clean stout Roots, which cannot be surpassed for Forcing qualities:

Price for Picked Roots, per 100	10s.	0d.
Do. second size ,, ...	7	6
Also strong for Planting, per 100 .. 5s. and	7	6

Nursery, Streatham Place, Brixton Hill, near London; and 4, Windsor Terrace, Pimlico, S.W.

Page's Genuine Seeds.

PAGE'S COMPLETE COLLECTIONS for GARDENS, 3l., 1l. 10s., 15s.

PAGE'S DEEP BLOOD-RED BEET, 9d per oz.
PAGE'S EARLY DWARF CABBAGE, 6d. per oz.
PAGE'S GOLIAH PEAS, 1s. 6d. per quart.
PAGE'S PRODIGY (Earliest Dwarf), do., 1s. 6d. per quart.
PAGE'S CRYSTAL CELERY, 6d. per oz.
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1. An assortment of 8 new and finest varieties, containing of each colour 1 packet, 2*s*.

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COCARDEAU, or CROWN ASTER.—A very novel and beautiful class; all the flowers have distinct coloured outlines and large white centres.

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CHRYSANTHEMUM-FLOWERED DWARF ASTER.—These are an important acquisition, being dwarf and very robust in habit, abundant bloomers, with flowers similar in form and quality to Truffaut's; they also flower later than any of the other classes, and prolong the blooming season until the first frosts of autumn.

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DWARF BOUQUET ASTER.—This Aster was introduced two years ago, and has been fully proved to be a variety of great merit.

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DWARF PYRAMIDAL BOUQUET-FLOWERING ASTER.—These Asters have given great satisfaction, and are strongly recommended for pot culture; height, 1 to 1½ feet; form, that of a Pyramidal Bouquet; flowers very double. When allowed sufficient pot room, the flower stalks are very vigorous, and require no tying.

10. An assortment of 12 varieties, containing of each colour 100 seeds, 2*s*.

TRUFFAUT'S FRENCH PÆONY-FLOWERED PERFECTION ASTER, Truffaut's Pæony-flowered or Reine Marguerite.—These are remarkable for their large, fine formed, and brilliant coloured flowers, which are the most perfect and beautiful in cultivation.

13. An assortment of 18 varieties, containing of each colour 100 seeds, 4*s*.

14. Ditto 12 varieties, containing of each colour 100 seeds, 2*s*.

NEW LARGE-FLOWERING DWARF PÆONY ASTER.—This beautiful novelty is half the height of Truffaut's Pæony Aster, producing very large double flowers, being of a beautiful pyramidal habit; it requires no tying when grown in good soil.

16. An assortment of 6 splendid varieties, containing of each colour 50 seeds, 2*s*.

NEW GIANT EMPEROR ASTER.—A new and distinct variety, with fine pyramidal-formed flowers, of enormous size, the finest of its class.

18. An assortment of 10 varieties, containing of each colour 50 seeds, 3*s*.

DOUBLE QUILLED GERMAN ASTER.—These are very double, half globular in form, the petals having the appearance of quills or tubes; very pretty and distinct.

21. An assortment of 24 varieties, containing of each colour 100 seeds, 3*s*.

23. Do. 12 varieties, containing of each colour 100 seeds, 1*s*. 6*d*.

RANUNCULUS-FLOWERED GERMAN ASTER. — These varieties are very distinct and pretty, and very useful for bouquets.

26. An assortment of 4 varieties, containing of each colour 100 seeds, 1*s*.

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DOUBLE CAMELLIA-FLOWERED BALSAM.

28. An assortment of 6 splendid and distinct varieties, saved from a choice collection, 2*s*.

DOUBLE ROSE-FLOWERED BALSAM.—The same as the French Camellias, or Andrieux.

29. An assortment of 8 varieties, containing of each colour 50 seeds, 2*s*. 6*d*.

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31. An assortment of 6 varieties, containing of each colour 50 seeds, 2*s*.

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32. An assortment of 12 varieties, containing of each colour 1 packet, 5*s*.

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CARNATIONS.

33. An assortment of 12 superb varieties, of 10 seeds each, 3*s*.

PICOTEES.

44. An assortment of 12 superb varieties, of 10 seeds each, 3*s*.

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56. An assortment of 5 varieties, containing of each colour 1 packet, 1*s*.

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Hollyhocks.

SUPERB DOUBLE HOLLYHOCK.—A superior strain, saved from prize flowers, and warranted excellent.

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JACOBŒA.—Extra double, saved from the finest double flowers.

63. An assortment of 8 varieties, containing of each colour 1 packet, 1*s*. 6*d*.

Larkspurs.

DOUBLE DWARF HYACINTH-FLOWERED LARKSPUR.

65. An assortment of 10 varieties, containing of each colour 1 packet, 1*s*. 6*d*.

DOUBLE TALL LARKSPUR.

67. An assortment of 8 varieties, containing of each colour 1 packet, 1*s*. 6*d*.

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MARVEL of PERU.

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ORNAMENTAL GOURDS.—The varieties of this collection have been selected with the greatest care. The colours of the fruit are rich, varied, and effective, and when dried are very pretty and ornamental.

74. An assortment of 12 distinct varieties, 2*s*.

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76. An assortment of 12 splendid kinds, 1*s*. 6*d*.

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79. An assortment of 12 distinct large-flowered show varieties, by name, in separate packets, containing of each variety 10 seeds, 5*s*. 6*d*.

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80. An assortment of 8 varieties, containing of each colour 1 packet, 2*s*. 6*d*.

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83. An assortment of 8 varieties, containing of each colour 1 packet, 1*s*. 6*d*.

Poppies.

DOUBLE PÆONY-FLOWERED POPPY.

85. An assortment of 8 varieties, containing of each colour 1 packet, 1*s*.

CARNATION POPPY.

87. An assortment of 12 varieties, containing of each colour 1 packet, 1*s*. 6*d*.

PORTULACAS.

89. An assortment of 8 finest varieties, containing of each colour 1 packet, 1*s*. 6*d*.

SCABIOUS, SWEET.

91. An assortment of 6 varieties, containing of each colour 1 packet, 1*s*.

Stocks.

AUTUMNAL STOCK, EARLIEST FLOWERING.—These new Autumnal Stocks are strongly to be recommended, producing a splendid effect when grown in the open ground; grown as Summer Stocks they bloom abundantly from the beginning of August until destroyed by the frost.

93. An assortment of 8 varieties, containing of each colour 100 seeds, 2*s*.

94. Ditto 4 varieties, containing of each colour 100 seeds, 1*s*.

BROMPTON, or BIENNIAL STOCK.

96. An assortment of 12 varieties, containing of each colour 100 seeds, 2*s*. 6*d*.

97. Do. 8 varieties, containing of each colour 100 seeds, 1*s*. 6*d*.

COCARDEAU, or TREE GIANT CAPE BIENNIAL STOCK. This magnificent variety is one of the finest yet raised; it commences to produce immense spikes of flowers about nine months after sowing.

99. An assortment of 6 varieties, containing of each colour 100 seeds, 1*s*. 6*d*.

EMPEROR STOCK, PERPETUAL FLOWERING.

100. An assortment of 12 varieties, containing of each colour 100 seeds, 3*s*.

101. Ditto 4 varieties, containing of each colour 100 seeds, 1*s*.

EMPEROR STOCK, NEW LARGE FLOWERING.—These are remarkable for extra large flowers and beautiful habit; when cultivated in the open ground, the effect in autumn is magnificent.

102. An assortment of 8 varieties, containing of each colour 100 seeds, 2*s*.

103. Ditto 4 varieties, containing of each colour 100 seeds, 1*s*.

DWARF GERMAN TEN-WEEK STOCK.

105. An assortment of 36 varieties, containing of each colour 100 seeds, 6*s*.

106. An assortment of 24 varieties, containing of each colour 100 seeds, 4*s*.

107. An assortment of 12 varieties, containing of each colour 100 seeds, 2*s*.

DWARF GERMAN TEN-WEEK STOCK, NEW LARGE FLOWERING.

109. An assortment of 16 varieties, containing of each colour 100 seeds, 3*s*.

110. An assortment of 12 varieties, containing of each colour 100 seeds, 2*s*. 6*d*.

111. An assortment of 8 varieties, containing of each colour 100 seeds, 1*s*. 6*d*.

GERMAN TEN-WEEK STOCK, NEW HYBRID. Foliage between rough and Wallflower leaved.

113. An assortment of 6 varieties, containing of each colour 100 seeds, 1*s*. 6*d*.

GERMAN TEN-WEEK STOCK, WALLFLOWER-LEAVED.

114. An assortment of 18 varieties, containing of each colour 100 seeds, 3*s*.

115. An assortment of 8 varieties, containing of each colour 100 seeds, 1*s*. 6*d*.

MINIATURE, OR DWARFEST TEN-WEEK STOCK.

117. An assortment of 6 varieties, containing of each colour 100 seeds, 1*s*. 6*d*.

NEW DWARF BOUQUET TEN-WEEK STOCK.

118. An assortment of 4 varieties, containing of each colour 100 seeds, 1*s*.

NEW LARGE FLOWERING PYRAMIDAL TEN-WEEK STOCK.—A new and improved class, producing splendid spikes of large and beautiful flowers.

119. An assortment of 6 varieties, containing of each colour 100 seeds, 1*s*. 6*d*.

SALPIGLOSSIS.

120. An assortment of 10 varieties, containing of each colour 1 packet, 2*s*.

SCHIZANTHUS.

122. An assortment of 8 varieties, containing of each colour 1 packet, 1*s*. 6*d*.

THUNBERGIAS.

126. An assortment of 6 varieties, containing of each colour 1 packet, 1*s*. 6*d*.

WALLFLOWERS.

128. An assortment of 10 double varieties, containing of each 100 seeds, 3*s*.

129. An assortment of 6 double varieties, containing of each 100 seeds, 2*s*.

Zinnia elegans.

131. An assortment of 6 varieties, containing of each colour 1 packet, 1*s*.

ZINNIA ELEGANS FLORE-PLENO.

123. An assortment of 4 varieties, containing of each colour 1 packet, 1*s*.

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COMPLETE COLLECTIONS for LARGE and SMALL GARDENS, containing all that is essential in variety for the various requirements in family consumption, at the following prices:—

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Strong ASPARAGUS ROOTS for Forcing. Choice GLADIOLI ROOTS, 4*s*., 6*s*., 8*s*., 10*s*. per dozen.

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WOOD AND INGRAM beg to announce that their New PRICED and DESCRIPTIVE CATALOGUE of the above may be had Post free on application.
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WILLIAM BARNES begs to inform his friends and the Public generally, that his NEW CATALOGUE is now ready, and can be obtained upon application, Post-free.
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WEBB'S PRIZE COB FILBERTS, and other varieties of FILBERTS and NUTS, as shown in the GREAT EXHIBITION of 1862, and for which a CERTIFICATE of Honourable Mention was given. Trees of the above can be had on application to Mr. WEBB, Calcot Gardens, Reading.

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RICHARD SMITH being overstocked, will sell in lots of not less than 50, good Trees of best sorts, and true to name, at 30*s.* per 100; also Half-standard PLUMS, PEARS, and CHERRIES, at 50*s.* per 100.
RICHARD SMITH, Nurseries, Worcester.

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BY THE THOUSAND, HUNDRED, OR DOZEN.

PEACHES, PEARS, PLUMS, and CHERRIES.—Fine, flat, well trained, of best quality and true to name.
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FORTY ACRES of FRUIT TREES.—APPLES, PEARS, PLUMS, CHERRIES, PEACHES, NECTARINES, and APRICOTS in every form desired for Fruiting.
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H. AND R. STIRZAKER offer of good quality, 200,000 NORWAY SPRUCE, strong, from 1 to 2½ ft.; 10,000 LARCH, twice transplanted, from 1 to 2 feet; 10,000 STANDARD APPLES, 2 to 3 feet stem, from 25*s.* per 100.
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ONE-YEAR TRANSPLANTED LARCH.
Very hardy plants, the produce of Scotch Seed.
RHODODENDRON PONTICUM, from 4 to 18 inches.
Lists prices on application to HOWDEN BROTHERS, Inverness.

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STRONG BLACK THORNS.
EVERGREEN PRIVET | GORSE or FURZE.
Price on application to
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STRONG THORN QUICKS, 2, 3, and 4-year Transplanted; EVERGREEN PRIVET, 3 to 4 feet; WHITE GLOBE RASPBERRY, CARTER'S PROLIFIC RASPBERRY.
For Price and Samples, apply to JOHN CARTER, Nursery, Keighley, Yorkshire.

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TO BE SOLD, at low prices, about 200,000 3-years old THORN QUICKS, from the Seed beds.
Apply to COOPER & BOLTON, Seed Merchants, 152, Fleet Street, London, E.C.

CONIFERÆ.—ARAUCARIA IMBRICATA, 14 ft. high; PICEA PINSAPO, 12 feet high; WELLINGTONIA GIGANTEA, 8 feet high, with about 170 other select species and varieties of all sizes and prices.
W. SHORT, Salesman, Reigate, Surrey.

Picea nobilis.

WILLIAM BARRON can supply strong and remarkably well-rooted Seedling Plants of this lovely FIR, from 2 to 4 inches, in store pots. Per 100, 60*s.*; per doz., 9*s.*, including package.
Elvaston Nurseries, Derby.

THOMAS METHVEN begs to intimate that his NEW CATALOGUE of GARDEN, FLOWER, and AGRICULTURAL SEEDS, &c., for 1864 is now ready, and will be forwarded Post-free on application.
Seed Warehouse, Nursery Gate, Leith Walk, Edinburgh.

Superb Double Hollyhocks.

WILLIAM CHATER'S NEW LIST is now ready, and may be had on application by enclosing one Postage Stamp.
P.S. A large stock of FINE PLANTS now ready.
Nurseries, Saffron Walden.

Paul's Hollyhock Seed.

COLLECTION OF 12 NAMED VARIETIES, POST-FREE, 5*s.*

PAUL AND SON have now ready the above; they can be also had of the principal Nurserymen and Seedsmen. Genuine VEGETABLE and FLOWER SEEDS Carriage Free. List on application.
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WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE for the present Season is now ready, and will be forwarded free to all applicants. As well as American Plants, it contains a summary of their General Nursery Stock, one of the most extensive in the Kingdom.
Knap Hill Nursery, near Woking, Surrey.

To the Trade.

AZALEAS, ERICAS, and EPACRIS, fine bushy plants, well set with flower buds, at moderate prices. An inspection solicited.
THOMAS JACKSON & SON, Nurseries, Kingston, S.W., adjoining the Kingston New Station, South Western Railway.

Wholesale Catalogue of Nursery Stock.

GEORGE JACKMAN AND SON'S PRICED and DESCRIPTIVE CATALOGUE for 1863 and Spring 1864 may be had free on application; it comprises FRUIT TREES, ROSES, AMERICAN PLANTS, CONIFERS, EVERGREEN and DECIDUOUS TREES and SHRUBS, and TRANSPLANTED FOREST TREES, &c.
Apply to GEO. JACKMAN & SON, Woking Nursery, Surrey.

LOUIS VAN HOUTTE, NURSERYMAN and SEEDSMAN, Ghent, Belgium, begs to call attention to his Four NEW PRICE LISTS, No. 97, 98, 99, and 100, containing the Stove, Greenhouse, Hardy Plants, Seeds (262 pages 12mo).
Agents in London: Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, E.C.

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CARTER'S GARDENER'S VADE-MECUM.

Genuine Seeds, Carriage Free.

B. S. WILLIAMS,
NURSERYMAN and SEEDSMAN,
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General PRICED and DESCRIPTIVE CATALOGUE for 1864 forwarded Post-free on application.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.
*** Part II. (Exotic Ferns) will be issued as early as possible.
Foot's Cray Nursery, S.E.

Notice.

PURCHASERS of LARGE QUANTITIES of FARM or GARDEN SEEDS will be supplied liberally by SUTTON & SONS.
For prices apply (stating quantity required) to SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Good Seeds, Carriage Free.

ROYAL BERKSHIRE SEED ESTABLISHMENT

SEEDS DIRECT FROM THE GROWERS THE MOST CERTAIN MEANS OF PREVENTING DISAPPOINTMENT.

SUTTON AND SONS, SEED GROWERS, Reading, Berks, can supply every kind of FARM and GARDEN SEEDS of genuine and superior quality.
Agriculturists residing in the most remote parts of the kingdom can procure good Seeds at very moderate prices from this Establishment. For particulars apply to
SUTTON & SONS, Seed Growers, Reading, Berks.

Ladies' Plant Prizes.

THE PROPRIETORS of the GARDENERS' CHRONICLE offer TWO PRIZES of 10*l.* each, for the best examples of INDOOR or DRAWING ROOM PLANTS, cultivated by Ladies, and exhibited at the Great Show to be held in the Garden of the Royal Horticultural Society at South Kensington, on the 1st and 2d June next.
Any kind of Drawing Room Plants, whether in flower or not, will be admissible. The competition is to be confined to single plants, cultivated without the assistance of professional gardeners by the Ladies who exhibit them.
Notice of the intention to exhibit must be sent to the Garden Superintendent at South Kensington not later than the 28th of May. The plants must be placed ready for adjudication by 10 A.M. on the 1st of June, and none can be received at the Garden after 9 o'clock.
The prizes are open for competition amongst all Lady Gardeners.
A similar amount will be offered in 1865, and early intimation will be given of the subjects to be then produced.

The Gardeners' Chronicle.

SATURDAY, FEBRUARY 20, 1864.

MEETING FOR THE ENSUING WEEK.

TUESDAY, Feb. 23 { Royal Horticultural (Adjourned Anniversary) at South Kensington 1 P.M.

WE have learned that one of the greatest PUBLIC GARDENS in Europe will shortly be in want of a Curator. The persons who may desire the appointment must bear in mind the following indispensable requirements. The Curator must be about 30 years of age, of good manners, and well acquainted with plants. He must speak English, and some other European language, probably French or German. Moreover he must be a very careful accountant.

Letters upon the subject may be addressed to X. Y. Z., 41, Wellington Street, W.C.

IN the midst of all the outcry which has been raised against the proceedings of the Royal Horticultural Society, it is pleasant to have to award our meed of praise, where that praise appears to be justly due. It will be in the recollection of many of our readers that at the annual meeting of this Society, held in February, 1863, some complaints were made on the absence of SPRING FLOWERS in the Conservatory during the early part of the year. Many of the Fellows were of opinion that more pains should be taken to render the garden attractive at the season when they were in town to enjoy it, and they expressed their opinions somewhat freely upon the subject. It was well enough, they argued, to have the garden gay and attractive during the autumn, when most of them were away from London; but it was necessary for them to have something to see and enjoy when they had the opportunity.

We are glad, therefore, to be able to state that the wishes and suggestions of the Fellows of the Society in this respect have received the attention they deserved. The Conservatory has, this year, been most enjoyable all the winter through, and is now one of the most charming places one can possibly imagine. Beds and circular baskets filled with flowers of gay colours of all hues, and broad masses of green and glossy foliage, having, moreover, a somewhat tropical appearance by being mixed with Tree Ferns and Palms, make up a scene of, what may be called, light and shade, which has a very pleasing effect. Then we have the noble broad walks, with, here and there, examples of sculpture of a very high class, and the air of the house just sufficiently heated to be rendered most agreeable to the feelings of the visitors. As we enter the door we seem to pass from winter into summer, and experience a sensation like that which the voyager feels who leaves the shores of England covered with ice and snow, and after five or six days of sea-sickness—during which time he does not think much of climate—finds himself set on shore at Gibraltar amongst groves of Myrtles and Scarlet Geraniums in full bloom. No one, we are sure, can enter such a place as this Conservatory, at the present time, without experiencing a keen sense of enjoyment, and without wondering that such places are not more common in the wealthy squares of our English towns.

When the complaints to which we have alluded took place, it was argued that the difference between having the garden as it was at that time, and having it gay and attractive as it was proposed that it should be, and as it is now, was simply a matter of expense. And no doubt to a certain extent this was true. But, as was shown by one of the correspondents of this Journal at the time, much may be done to accomplish the end in view, at a trifling cost, by cultivating a number of plants which produce their flowers naturally in midwinter or very early in the year. This has been shown in the South Kensington Conservatory during the present season in a most satisfactory manner. Camellias; beds of Chinese Primroses; Spiræa prunifolia flore-pleno, with its blossoms of snowy whiteness; Jasminum nudiflorum, and Dielytra spectabilis have all been very effective, and have been produced with little expense or labour. And a host of other plants with gay flowers might be named, which have the same habits as to time of flowering as those we have mentioned, and which could be rendered most effective as objects for decorating a conservatory during the dull months of winter and early spring. There is one plant in particular which we may bring prominently forward, and which is well worth more attention than it usually receives. We allude to Luculia gratissima, a native of the Nepaul hills, and a plant which has been many years in cultivation in this country. It blossoms all through the winter, its flowers are deliciously fragrant, and it succeeds admirably when planted out in the border of a conservatory. We remember a specimen of this plant, which, some years ago, used to be in the iron conservatory at Chiswick, where it bloomed profusely every winter, and was admired by all who visited the garden.

The semi-circular trays which are placed at intervals all down the south side of the Conservatory, and at present filled with Hyacinths and other spring flowers, produce a charming effect. To see these only is worth a visit to the garden. Taking the building as a whole, and the way in which it is laid out and adorned, it would be difficult to find its equal, and any of our readers who have half an hour to spare could not spend it more agreeably than in this South Kensington Conservatory.

MOST cultivators must at times have experienced more or less of difficulty in RAISING MINUTE SEEDS. If covered with mould they too often refuse to germinate, and if sprinkled over the surface, unless extreme care be taken, they are apt to be washed away even with a fine rosed water-pan. It is a practice in some establishments to cover them with a layer of Moss, but there are several objections to this method, though we know that Rhododendron seeds will germinate more easily than elsewhere (at least in some situations) amongst the rootlets of Mnium punctatum, and the young seedlings thrive better in this than in any other position.

Whether the practice, however, is more or less advantageous, a method has been suggested in the *Wochenschrift fur Gärtnerei und Pflanzenkunde* for 1858, p. 61, which we do not recollect having noticed before. The pots are filled with mould firmly pressed in, and made perfectly level at the top, leaving the edge projecting above the soil for about half an inch. The seed is then scattered over the mould, and gently pressed with some flat round surface, as the bottom of a flower-pot. A piece of filtering paper is then cut of the size of the pressed surface and pierced with holes, so as to make it pervious to air, and the paper is kept moist from time to time with a fine rose. The surface of the soil in consequence is not disturbed, and the seeds buried, while the paper can easily be lifted

from time to time to see what progress they have made, and may be turned on one side altogether as soon as the seedlings are well rooted. Plants with larger seeds, as for example Stocks, it is said, may be sometimes raised advantageously in this manner. *M. J. B.*

—— AT a recent meeting of the *Société d'Horticulture et de Botanique de L'Hérault*, M. BRAVY, in the course of some remarks on the culture of certain BROMELIACEOUS PLANTS, referred specially to the success he had obtained in the treatment of some of the genera, Æchmea and Tillandsia to wit, by growing them in an epiphytal manner with the aid of Sphagnum moss. So many of the plants of this order are really interesting and ornamental, and yet so little grown, comparatively speaking, in consequence of the limited number of species of other affinities suitable for exhibition purposes, which too generally usurp the whole or nearly the whole of the stove accommodation in a private garden, that we take the opportunity to allude to M. BRAVY's experiment for the purpose of inviting more general attention to the merits of this race as ornamental plants, and their utility as giving considerable variety to a collection of stove plants.

M. BRAVY observes that nearly all the species of Æchmea and Tillandsia, in which latter he includes Vriesia, grow on trees after the manner of epiphytal Orchids; and like them therefore should be grown either on blocks of wood or cork, with their roots enveloped in Moss, or when grown in pots should have provided for their roots a mixture of half-rotten wood, thick fragments of heath soil, and Sphagnum Moss. This mode of culture was tried last spring on several young plants of the two genera just mentioned, and especially on Æchmea fulgens, and Vriesia speciosa, and although the weakly condition of the plants at the time did not permit of the hope that they would yield their inflorescence during that season, yet two months after this treatment was commenced, their flower-stems appeared. M. BRAVY attributes to his mode of culture the precocity of the inflorescence in these two cases; and he proposes to make further trials in the same direction.

We may cite a few of the examples which M. BRAVY adduces in support of the claim he sets up on behalf of certain Bromeliaceous genera as affording plants of a remarkably ornamental character. Thus, of Bromelia he instances two species, B. fastuosa and B. exsudans, which have their flower stems adorned with numerous large floral leaves of a brilliant red; and we may add that B. Sceptrum combines a noble bearing with a brilliant display of colour. Of Æchmea he refers to four species as grown in European gardens: Æ. Mertensii, with purplish bracts and rosy flowers with a yellow cup or calyx; Æ. fulgens, with violet flowers and fine red bracts, pedicels, and cup; Æ. discolor, with a similar inflorescence, but the leaves stained with violet purple beneath; and Æ. suaveolens, which to the elegance of its flowers joins the sweet odour of Violets. Of Billbergia, he rightly states that numerous species offer an elegant and brilliant inflorescence, the magnificent B. rhodocyanea and B. Moreliana being put forward as prominent examples, with their large rose-coloured floral leaves, and their blue or violet flowers, with a cup of lively rose. Of Pitcairnea there are such species as P. flammea, longifolia, and latifolia, with very striking flowers of different shades of red; and P. macrocalyx, with white flowers, having a yellow cup. Puya, a group formed at the expense of Pitcairnea, yields a dozen showy species, amongst them P. Altensteinii and P. macrostachya, of which the splendid inflorescence is borne on tall stems adorned with floral leaves of a fine red, and is composed of a long close spike of bracts of a still more lively red, from amongst which issue flowers of a pure white, or white tipped with yellow. Of Tillandsia, he points out that there are several handsome species, of which T. nitida serves as an example. And then there is Vriesia, separated from the last, and affording V. psittacina and V. speciosa, two brilliant plants with flattened spikes of scarlet bracts, and the latter with finely-marked dark-zoned leaves. We ought to see more of these fine things in our stove collections, and somewhat less of Begonias and Caladiums, which, with other like subjects, are usurping too great a share of our hothouse accommodation.

—— The *Journal of Botany* mentions the DEATH OF M. JACQUES ÉTIENNE GAY, at Paris, on the 16th ult., at the age of 77 years. It is well observed that his loss to science is inestimable; and that those who were honoured with his friendship will feel his absence from amongst us to a very painful degree. Though not a voluminous writer, it would be difficult to name a botanist to whom we are more indebted for advancing the scientific knowledge of European plants.

—— We have also to record the DEATH OF Mr. JOSEPH WOODS, a well known veteran amongst British Botanists, after whom the rare genus Woodsia was named by ROBERT BROWN. He died at Southover, on the 9th of January, having attained the ripe age of 88 years. His earliest botanical essay was a monograph of the British Roses, printed in 1816; and his most important work, the Tourist's Flora, published in 1850. This latter work, embracing a much larger portion of Europe than any recent botanical work of portable size, has become an indispensable handbook for English botanists travelling on the Continent.

New Plants.

269. TRICHANTHA MINOR, *Hooker, Icon. Plant.* t. 666; and *Botanical Magazine*, t. 5428.

Some 20 years since Sir William Hooker published in his *Icones Plantarum* two species of a new genus of Gesneraceæ, gathered by Mr. W. Lobb, in Columbia. These plants were called Trichantha, from the long copious hairs which grew over the surface of the stems and leaves and flowers, both calyx and corolla being thus invested. One of them was the species represented by the annexed figure, and to this the name of Trichantha minor was given; the other, which was altogether a large plant, was called T. major.

Of Trichantha minor living plants have lately been introduced to our gardens from tropical America by Mr. Veitch through his collector, Mr. R. Pearce, and from specimens which flowered with Mr. Veitch, in the course of last autumn, Mr. Fitch has prepared the beautiful figure of the *Botanical Magazine* above quoted as well as our own. The garden plant would seem to be a somewhat less hairy form than that originally figured from Mr. Lobb's dried specimens, but even on this the hairs are rather more obvious than they would appear to be from our woodcut. At any rate it is a very beautiful addition to our small-growing free-flowering stove climbers.

The habit of the plant is described as epiphytal, and the slender stems as scandent and rooting, either smooth or clothed with appressed hairs, and of a bright red colour. The leaves are ovate acuminate, entire, and ciliated, becoming at length smoothish, the upper surface of a full green, while the under surface is strongly marked with a red rib and primary veins; they are opposite, but of each pair one is much smaller than the other. The very hairy flowers are aggregated in the leaf axils, the pedicels and the deeply five-parted calyx, whose divisions are palmately cut into

long linear ciliated segments, being entirely red. The corolla is tubular, a couple of inches long, narrowed at the base, the limb yellow, oblique, four-lobed, and spreading; its upper lobe is bifid, and a singular club-shaped appendage, stellately hairy at the apex, grows from the exterior suface just beneath each sinus. The yellow of the limb is continued in stripes down the tube, the intervening spaces being of a deep chocolate purple, almost black, and the base red.

The varied colours of the flowers—red, yellow, and chocolate purple, each boldly developed, and the very singular fingered hairy coloured calyx, together with the evident profusion in which the flowers are borne in the leaf axils, will make this a most desirable plant for the hothouse. Mr. Pearce indeed describes it as a charming little stove climber, and we can well believe it will prove itself to be so.

ON PRUNING THE PEACH TREE.

IN this climate it is well known that the Peach and likewise the Nectarine tree require the aid of a wall in order that their fruits may be obtained in perfection. Accordingly, many good walls have been built for them. In some cases the trees cover very fairly the spaces respectively allotted to them; but in others, very fine walls are merely disfigured by wretched specimens of trees, which, barely existing, are attached to them. These make perhaps a little growth in the course of the season; but the extent of naked wood is every year on the increase, the consequence of which is that the bare framework of the tree becomes soon out of all proportion to the scanty amount of foliage which the small bits of weak terminal shoots are able to bear. Now it must always be recollected that the existence of the tree solely depends on its foliage, little and inadequate as that may be, in such cases, for the important offices it has to perform. It has to form a layer of alburnum or young wood every year over all those naked pieces of old wood; it has to make what young shoots it is able; it has to contribute to the extension and formation of roots, for although these feed the tree, they themselves are formed, like other solid parts of it, by sap elaborated by the leaves. The foliage has moreover to elaborate sap in a peculiar manner to support the fruit, with its saccharine fleshy pulp: of flesh, indeed, under the circumstances there may be little, but then there is the stone, a hard bony substance, the formation of which tries all the energies of the tree, and sometimes, when the latter is weak, its whole vitality is exhausted in the effort. This sometimes happens when general debility pervades every part of the tree in an equal degree, or nearly so. Generally, however, some branches more vigorous, or at all events less weak than others, continue to exist, whilst the weakest successively die off limb after limb; but still the tree becomes less and less every year, till the only hope is in a young one for replacement. In many cases we are persuaded that such an event may be now easily foreseen; and the most advisable proceeding would be to procure young trees and keep them in training ready for replacements, so that vacancies on the walls might be readily filled up; for Peach trees can be safely moved at any age, even till they more than half cover the height of the wall.

But well-trained healthy trees may be planted in a good soil and situation, and if so they are sure to grow vigorously—often so much so that the difficulty lies in controlling their growth. "Cut out that rank wood," say some; "it will never bear fruit; you must get smaller shoots for that." Before this advice is adopted, however, it should be taken into consideration that if such vigorous shoots do not bear fruit themselves, yet they are far too important to be thrown away, inasmuch as they bear the shoots that do bear the fruit. All the branches of the tree originate, each respectively, from a shoot; a sufficient number of these branches constitute the frame-work of the tree; and in regulating these the aim is to make them radiate like the ribs of a fan. As they diverge from each other in straight lines, like the legs of an angle, the farther they extend the wider they are apart. When they are so far apart as to leave room for another branch, one should accordingly be selected and laid in; and again another, when the extent of divergence will permit. If a shoot be shortened back, the eye or bud immediately below the section will push, as will likewise the next lower in most cases. The shoots from the former will serve for the prolongation of the branches, whilst the others will serve for the origin of the required additional branches. Thus can a sufficient number of leading branches be obtained.

A tree about to be pruned at the present season should exhibit—1st, The main branches above mentioned; 2d, Shoots which grew two summers ago, and which bore or should have borne the fruit last summer; 3d, shoots which pushed last spring, and were grown throughout the season as succession shoots, to bear the fruit in the ensuing summer. All the branches No. 2, which bore the fruit last season, will bear no more, and should, therefore, be cut away in order to make room for their successors No. 3. Presuming then that those branches which bore last season are all removed, there will then only be left No. 1, the leading branches; and No. 3, the one-year-old shoots. The leading branches should have their extremities shortened to make them push a shoot where required, and this is all that need be said respecting them on this occasion, so that we have now only to deal with No. 3, that is, those that were left of last summer's shoots for succession. Their management, however, is of the utmost importance, for on it the fate of the tree mainly depends. They are as yet untouched. What is to be done with them? Shall they be shortened, or shall they be trained in at full length?

The consequences of leaving the summer shoots at full length are well known to be these: handsome looking trees in the first instance, from the training in of fine long shoots; but from their length these shoots are unable to push wood-buds near their base, and consequently no shoots for succession will there appear. Advantage can only be taken of one that breaks high on the shoot, although it be what is technically termed too far from home, that is, too far from the main branch. In its turn this one becomes a bearing shoot, and the succession shoot is still farther removed from near the base than its predecessor was. This system of laying in at full length being still pursued, no succession shoot can be obtained, and only a weak prolongation of the growing point. At last the decision arrived at is, that these useless pieces of naked wood must be cut out; and then the ruin of the tree is in full progress. This is the inevitable consequence of training in successively the shoots of a Peach tree at full length.

The results of judiciously shortening the succession shoots at the winter pruning are very different from the preceding. We have shown that such shoots can

be originated in great abundance, and almost where we please, in a tree that has never been mismanaged—so numerous, indeed, that if each were only to bear a single fruit there would be an abundant crop on an established tree; therefore one need not grieve to see so many thousands of plump blossom buds cut away with the tops of these successional bearing shoots, seeing there are as many left as any tree could nourish, and more. But some fruits may drop in stoning? Not one by this system will part from the branch till pulled off (unless the kernel has been injured by untimely frosts), therefore there is no necessity for making provision against that contingency. Proceed then to shorten every bearing shoot more or less, according to its vigour, to between 6 and 12 inches; by so doing each will be induced to push a young shoot from near its base for a succession. The growth of this succession shoot ought to be encouraged during the summer, so that it may be in condition to bear good fruit in the following season, when it comes to succeed the one that bears the fruit in the present, for the latter must be cut out. These successional shoots will keep the branches in a vigorous state, in consequence of the great amount of healthy foliage which they carry. Shortening the shoots is the only mode by which abundance of healthy leaves can be ensured, and where such exist the branches will not die off. If occasionally one should do so, it will be from some accidental cause, not attributable to the system of pruning, which is a very simple one, consisting, we may again repeat, in providing (1) branches, which should have on them only (2) bearing shoots, and (3) succession ones. The succession shoots are those produced in the summer of, say, 1863. They should now be shortened, so that buds near their base may push in the ensuing spring, and the lowest one of these should be encouraged to form a shoot for succession, to be treated like its predecessor. In other words, shoots that are one year old are now bearing shoots, and should be shortened back; those that are two years old have borne fruit (or should have done so), and ought to be cut entirely away. The main point to be remembered is the shortening. Only do that, and the trees will continue healthy and fruitful, but lay in their shoots at full length, and they will come to ultimate ruin.‖

THE NEW PELARGONIUMS OF 1862—3.

The additions in the shape of novelties which have been made to the varieties of this popular flower during the two preceding seasons have been both numerous and important. The improvement in the form of the flowers, and their increase in size, have been very remarkable. What we now want is a greater variety of colour and marking, combined with good form and a dwarf robust free-blooming habit of growth. Without such qualifications new flowers can never become either popular or useful for exhibition purposes.

I propose here briefly to describe those novelties of 1862-3, which I consider the best and most worthy of general cultivation:—

Achilles (Hoyle).—A dark rich flower of the most striking colours, and of beautiful form; also a profuse and constant bloomer. The ground colour is crimson, clouded with maroon on the lower, and almost entirely maroon on the upper petals; white throat.

Artist (Hoyle).—A fine variety, the colour a deep rose on the lower petals, slightly spotted; the top petals dark maroon, passing to red at the margin; white throat. A first-class flower.

Aimée (Beck).—This is quite new in colour, the top petals being nearly black, with maroon crimson edge; the lower ones dark purple, painted with deep maroon.

Beacon (Hoyle).—A very large and fine crimson flower; dwarf and robust in habit.

Belle of the Ball (Foster).—A very fine variety; light crimson, marbled with maroon crimson; the upper petals very dark maroon; throat pure white, very fine.

Butterfly (Beck).—One of the spotted class; deep carmine rose with black shaded spot; very free.

Colossus (Hoyle).—Very large salmon rose; white throat; fine.

Conflagration (Foster).—Subdued deep rose colour, with dark spot on top petals; good form.

Diadem (Hoyle).—Rosy purple, the lower petals tinted with a deeper shade; rich dark top petals, with a narrow margin of crimson; white centre; very fine. The best flower of 1863.

Lord Eversley (Hoyle).—A free constant flower of excellent quality and rich colours; warm tinted rose lower petals; the upper ones rich maroon, with crimson margin; fine.

Illuminator (Foster).—Bright orange scarlet, very free and fine.

Jewess (Foster).—Deeper and richer than Bacchus, with more white in the eye; free and fine.

Maid of Honour (Beck).—A distinct and pleasing variety, of a purplish lilac colour; an improved Viola.

Peerless (Hoyle).—A rich dark-coloured spotted variety, and a very free bloomer.

Princess Helena (Foster).—A flower of the Topsy class, but of better form; black top, and painted rose lower petals.

Princess of Wales (Beck).—A very striking flower; lower petals marbled with bright maroon on a crimson ground, the upper ones very dark maroon; bright clear white throat

Queen of Whites (Dobson).—Lower petals silvery paper white; upper petals rich crimson carmine. A very fine flower.

Queen Bertha (Beck).—A very large flower, of fine form and substance; the upper petals dark maroon, the lower mottled rose.

Regina Formosa (Beck).—A carmine rose flower with maroon top, of very fine form and quality.

Royalty (Foster).—A very fine flower, of extra quality; lower petals painted rose, the upper black with a margin of rose; white centre.

Royal Albert (Hoyle).—A superb flower of immense size; carmine rose lower petals, and a large blotch shaded with orange on the top ones; very free and constant. The best of its class.

Startler (Dobson).—Scarlet crimson lower petals, black top, vermilion centre; very free and striking.

The Charmer (Beck).—A very effective and constant variety; top petals lively maroon, shaded with carmine; lower petals deep carmine, white centre; large.

The Prince (Hoyle).—Lower petals orange red; upper ones light maroon; throat shaded with purple; very showy.

Of the Fancy class the novelties are less striking, but I may mention the following:—

Belinda (Turner).—Delicate tinted blush, blotched and spotted with lilac carmine; distinct.

Edith (Turner).—Bright carmine and cerise; large and free.

Eleanor (Turner).—A finely-formed rose, suffused with purple; light throat and edges.

Ellen Beck (Turner).—Delicate light carmine; of robust habit, very free, and a fine sort for exhibition.

Godfrey Turner (Turner).—Intense crimson upper petals, the under ones light crimson, with lilac margin; a most beautiful variety.

Lady Towers (Turner).—Bright rosy lake; very fine, and free.

Mrs. Hogg (Turner).—Rich mottled purple, with light throat and edges.

Miss in-her-Teens (Turner).—A charming flower with the colours of Roi des Fantaises.

Mrs. Marnock (Turner).—Crimson and violet; a very large flower.

Mrs. Reynolds Hole (Turner).—Delicate French white; a decided acquisition.

Princess of Prussia (Turner).—A delicate lilac blush, with white throat, and of fine form; a great acquisition.

I have selected the above without reference to their raisers, and I believe they are the cream of the new varieties. I would advise all growers who do not possess any of them, to procure them forthwith. It has been a very favourable season for the growth of this plant, and I wish every cultivator his full share of success. *Henry Bailey, Jun., Shardeloes Gardens, Amersham, Bucks.*

Home Correspondence.

Cool Treatment of Orchids.—[It is now pretty well known that there is no more skilful cultivator of exotic Orchids than Mr. Warner, of Broomfield. For ourselves indeed we may say that we have never seen elsewhere such a diversity of glorious species in such a uniform state of exuberant health. The following letter, with which Mr. Warner has favoured us, will, therefore, be read with very great interest.]—I am glad that the flowers arrived safely, and that you liked them. In answer to your inquiry as to how they have been grown—cool or stewed—I may say that I bought your work when I commenced growing Orchids, and that I never stewed my plants, which would have been contrary to your theory of cultivation. Of course such plants as Cattleyas are grown warmer than Odontoglots, and Aerides &c. are kept warmer still; but I never stew my plants. The houses will not admit of that; in short, they are never so hot as to be uncomfortable to any one, except it might be just in the middle of the day in summer from sun heat, and then I set the doors open to admit as much fresh air as I can. I am not in the habit of growing my Orchids so fast as some do; but I believe that few cultivators, if any, ever flowered their plants better. At the same time, I must admit that some varieties of Saccolabiums do not succeed with me so well as I could wish; but the finest Aerides, viz., Schröderii, and the finest Saccolabium guttatum, viz., Holfordii, do first-rate. The Lycastes, Odontoglots, and Zygopetalum sent were grown cool, but not cold, under the shade of Vines, and I never flowered Arpophyllums, or Barkerias, or Pleione lagenaria well before I grew them under Vines. The latter, thinly trained, furnish a slight shade, but do not prevent the sun from doing good, like a canvas shading—nothing like the sun for ripening bulbs. The fire heat which I employ is very little. From the next number of my work on Orchids, you will see that Odontoglossum citrosmum requires more heat than most others. Cœlogyne cristata I grow in the Cattleya house, cooler than most people do, and I have grown and flowered it well under Vines. The Cattleya maxima sent last time is, I think, a fine variety. The Cattleya Trianæi, or Luddemanni, or Warscewiczii, I shall be glad to know the true name of, when you have time to search it out. No one but yourself knows what the three Cattleyas just mentioned are like, or the differences between them. The Saccolabium violaceum sent was grown in a house put up on purpose for Orchids, but I fear that it is not warmed quite sufficiently for them; I must put a double glass roof on it. To grow Orchids from the East Indies properly, we want houses built so that we could use a steam-engine to pump warm air—sometimes moist, sometimes dry—through them. In a large establishment it could easily be done, and at very little cost. I have taken the liberty of furnishing you with a few flowers this morning, in order to show that I had not exhausted my stock of varieties in flower at this season. They consist of five sorts of Phalænopsis, viz., amabilis, grandiflora, rosea, Schilleriana, and intermedia var. Portei; two of Cattleya, viz., marginata and Warscewiczii delicata; one of Brasavola; one Angræcum eburneum; one Odontoglossum or Oncidium Insleayi (as I suppose); and one Maxillaria or Lycaste venusta, which has been grown under Vines. I have also several Cypripediums in bloom and Ansellia africana; Vanda cœrulea does well in a vinery. Not even Kew Gardens, I imagine, could show as many Orchids in bloom as I now have in beautiful condition. *R. Warner, Broomfield, Feb.* 8, 1864.

Botany Extraordinary.—I have been much interested by the following statement of a botanical fact—if it be a fact—which I have met with in a country paper:—"A remarkably intelligent young botanist of our acquaintance asserts it as his firm conviction, strengthened by his public observation not the less than by his private experience, that plants have a decided influence upon the actions of mankind in general, and of womankind, perhaps, in particular. In illustration of this axiom, he adduces with some shrewdness the indisputable fact that many a delicate young lady who would shrink with maiden modesty from being kissed under the Mistleto, has yet not the slightest objection to that ceremony if it be performed under the Rose." Perhaps, as the Royal Horticultural Society has just taken botany under its protection, as I learn from your columns, and proposes to hold lamp-light meetings in the gardens at South Kensington, it may see its way also to favour the development of the charming science in the direction indicated by the above quotation, if you will allow me to make the suggestion. *Julia.*

Dracæna terminalis.—Having grown quantities of this ornamental-leaved plant for decorative purposes, I have been often amused with such exclamations as "Oh! what beautiful plants, how do you obtain them?" To this question I reply that I can propagate them by the thousand. Nevertheless, I am certain that in many instances the proper cultivation of this plant is not sufficiently known, or at least that it does not receive that amount of attention which it so richly merits. It is a strong-growing shrub from the East Indies, and should be kept in a warm house where it can have bottom heat during its season of growth. Its propagation is easy, and may be effected in various ways. When a few plants only are required, the young shoots or suckers will afford a sufficiency of cuttings, which may be taken off with a sharp knife as soon as they become a little solid at the base, and inserted singly in small pots. Bottom heat should be given them until the roots are formed. If numbers of plants are required as early as possible, and an old plant or two is at command the operator may with certainty proceed in the following manner. Having allowed the plants to get dry, but not so much so as to cause the leaves to flag, cut up the whole stem and fleshy roots into pieces, from 1 to 2 inches in length. Then provide some well drained pans and a compost consisting of equal parts of loam, peat, and silver sand, passed through a quarter-inch meshed riddle, place over the drainage a layer of fibry peat or Moss, then 2 inches of the compost, and on this place the cuttings an inch apart. Cover with the compost to the level of the pieces, slightly cover with sand, and plunge the pans in bottom-heat; if covered with glass to partially exclude air so much the better. Take care that they do not suffer from excess of water. If kept in a moist atmosphere and slightly shaded they will require little or no water until such time as they show signs of growth. They will soon make shoots a few inches in length, and when they have developed two pairs of leaves may be potted singly into small pots, using the soil in a rougher state than that recommended for the cuttings. Plunge the pots in bottom-heat in a nice moist shady atmosphere, and keep up a temperature of 70° at night, with a rise of from 10° to 15° during sunshine. They will make rapid growth, and may be put into larger pots as required. Before removing the plants to the conservatory, care must be taken to have them gradually hardened, as any sudden transition would at once disfigure them. After being well hardened, this and others of the same family will endure even rather rough treatment. I have no doubt that it may be bedded out in sheltered situations in the south of England during the summer months with excellent effect. *G. Westland, Kingston Hall, Derby.*

On Writing Garden Articles.—1. The writer should give his name and address at full length. This will be in some measure a security against mis-direction. Moreever, the name will often carry great weight with it, 2. Personalities should be avoided. The cause is bad when counsel are directed to abuse the plaintiff's attorney. Reflections on motives are not arguments, nor are they facts. 3. Persons should distinguish between hearsay and experience. They should write

only on subjects with which they are conversant. My plan is to open one eye and shut it, and then to open the other eye and shut it, and next to open both eyes at once; and if they agree together for any length of time, I think there must be something in their separate and united testimony. Sight is not necessarily observation; people see a great deal that they do not observe. Observation is particular sight—it is the clairvoyance, or second sight of the intellect. The Psalmist, therefore, in the last verse of the 107th Psalm, says, in reference to the ways of Providence, "Whoso is wise will observe these things." Horticultural and floricultural writers should, before directing the public, exercise "observation." The different modes of vision in olden time were called heteropticks, and were divided into the voluntary and involuntary turn of the eyes, the half and the whole leer, tipping the wink, the circumspective roll, the side peep through a fan, and the broad stare. What we want in the garden is the broad stare. 4. Articles to be useful should be practical—good hard gardening articles; moreover, small details, upon which oftentimes success depends, should not be omitted. Years ago I received a letter from a gardener living with a lady of high degree in the Isle of Wight, thanking me, and saying (I blush to record it), "I wish all writers of articles were like you. You tell us what will do us good. Many now-a-days write learned articles to show off their learning—say about Cinerarias; but they keep back the 'key of the position' for fear that others should have as good as themselves!" Probably this suppression of "the key" is not intentional, but proceeds from the assumption that people will know, or guess these small details, upon some one or more of which success often depends. Let us all then strive to furnish "the key of the position." *W. F. Radclyffe, Rushton.*

Potatos.—The following may be interesting to those of your readers who are Potato growers. Some five or six years ago, after having been cultivating for an early crop the Ash-leaved, both Red and Walnut-leaved, and other much vaunted early sorts, it occurred to me that the Potato well known in Ireland from the time I could recollect as the old "Bangor," or "Banger," was superior to them all. It was a large, long, white kidney of excellent flavour, which it preserved up to, and past Christmas. It used to come in about the middle of June, that is, very nearly as soon as the Red Ashleaf, and yielded a crop double that of any other early kidney which I was cultivating. Not being able to hear anything of this Potato in either North or South Wales, I wrote to a Dublin seedsman, mentioning that I could not find "Bangors" in any part of Wales, and asking him where they were to be had. His answer began, "Strange to say, Bangor Potatos are not known in Wales." He then went on to say that they were known in England by various names; as Cumberland Long Whites (the original name), Lancashire Kidneys, and Halstone Kidneys; in Ireland as Cumberland Bangers, Bangors, &c. He mentioned also that he had the preceding season obtained some Halstone (or Alstone) Kidneys from the south-east of England, "had them grown on bog for seed, and that they were as true Cumberland Bangers as ever he saw in his life." It is as well to state here that Bangor is a mere corruption of the Irish word Banger, a name with which this variety was honoured in Ireland because it was found to bang, or beat, all other Potatos for an early crop. Just about the time the letter from the Dublin seedsman was received, a neighbour and friend of mine got Alstone Kidneys from the south of England as a new thing; and just as might be expected they turned out to be true Bangers. A couple of seasons after this, by which time, it appears, the seller of the Alstone Kidneys had time to appreciate their good qualities, there appeared an attractive advertisement of another new Potato under the name of Gloucestershire Kidneys, the good qualities and productiveness of which were so minutely and truly described that I recognised at once my old friend, the Banger, adopted, rechristened, and advertised at 5*s.* a peck. The very next season, however, after the Banger *alias* Gloucestershire Kidney, was advertised at this high price, it was to be had in the town of Carmarthen for 5*s.* a cwt., to which place a shipload had been imported from France, where it appears that this sort is grown in large quantities. I proved this by planting the French Potatos, and having a crop of true Bangers. What is correct about these Potatos is that they really have all the good qualities ascribed to them, and with the exception of their being a very few days after the Red Ash-leaved, they are equal in every respect to any other early sort, with the advantage of being a heavy cropper. It is a curious fact that this Potato, which 30 years ago was the only one any one thought of planting in Ireland for an early crop, which was grown by fields-full there, and which filled the markets for the first weeks of the season, is now almost out of fashion there. On inquiry of an Irish friend, whether or not they were cultivated to the same extent as formerly, he replied "No: they had been generally given up on account of their liability to disease, and the Red Ashleaved was therefore taking their place with those who could afford it." Now, everyone who knows the Red Ash-leaved knows that they are as liable to disease as any Potato grown, and more so than most kinds; and I who have cultivated both for some years know that the advantage, if any, is on the side of the Banger. It is impossible, therefore, that any benefit in that respect can have been derived from the exchange; but the former are new in Ireland and expensive, and for the latter reason are cultivated in small quantities only, and being early are quickly consumed. The disease, therefore, has not time to make much ravage among them, and so people fancy that they are better off in that respect. If, however, they were to treat the Banger like the Ash-leaved, they would find that it was quite as little affected by disease, besides being better on the whole than the Ash-leaved. The proper way to manage with all very early Potatos is to watch carefully for the first appearance of the disease, and as soon as it shows an inclination to spread over the crop, but before it has done so, have them all up at once—which with a small quantity is easily done; handle them carefully, and pit them solid, that is with dry earth or ashes among them, cover with earth, and thatch the outside. When managed thus, during the worst years of the disease, they have kept sound with me almost to a tuber, when three of every four left three weeks longer in the ground rotted. *A. B., Narberth, South Wales.*

Nets on Walls.—In order to fix these, run a galvanised twisted wire cord along the top, fixed to wall-hooks 6 feet apart; then run a parallel twisted wire a few feet from the wall and 2 feet from the ground, supported by light stakes 6 feet apart. Now fix your nets to the top and bottom wire, and stretch them out with wire guys pegged down to the ground in the same manner in which the roof of a tent is stretched out. When single trees are covered, bring a wire down at each end of the net obliquely to the stake and the ground in order to fasten the ends of the net. The wire is supplied at ½*d.* per yard, and wall-hooks at 1*d.* each. Pegs and stakes are of very little value, and can be easily obtained. The whole cost will not exceed 2½*d.* per yard run of wall. *Anon.*

Gishurst Compound.—Your Correspondent, Mr. Barnes, while giving his valuable experience on the subject of clearing Azaleas from insects, speaks of two ounces to the gallon solutions of Gishurst Compound having been efficacious against living Thrips, but powerless against their eggs. May I be allowed to suggest a trial on a single plant of a stronger solution, say ½ lb. to the gallon, to ascertain the fact whether the eggs would not be destroyed before the foliage was injured. I have tried with success very strong solutions when followed by an almost immediate after-dipping in water. *George Wilson, Weybridge.*

Germination of Fungi.—"M. J. B." remarks (p. 124) "that the spores of Agaricus campestris will not germinate till they have passed into the stomach of some graminivorous animal." Is it not more likely, however, that the situation only quickens germination, in the same way as Haws, Hips, &c., are forwarded a year by feeding ducks with them; and possibly the germination of Coniferous seeds may be promoted in a similar manner. *F. C., Garnons.*

Schizostylis coccinea.—We notice in your reference to the figure of this in the *Floral Magazine* the remark "much exaggerated." Permit us, therefore, in fairness to our plant, to say that in the size and number of the flowers we do not think that it is exaggerated, as we frequently had five blossoms fully expanded on a spike, and quite as large as those alluded to. The colour of the figure given is not materially different from Sir W. J. Hooker's illustration in the *Botanical Magazine*. Probably the idea of exaggeration was derived from the plant we sent to the Royal Horticultural Society's Rooms at South Kensington (too late for exhibition) last winter, which was undoubtedly past its prime. Moreover individual plants do vary in colour—from deep rosy crimson to the scarlet of the "Scarlet Duc Van Thol" Tulip. The colour is also diminished by the influence of shade. We do not fear being able during the ensuing season to satisfy all on this point, as the plants are again coming rapidly into bloom. The drawing in the "Floral Magazine" was not copied from Sir W. J. Hooker's figure, but taken from the plant itself. *Jas. Backhouse, York.* [Our remark, not meant as a depreciation of the plant, but as a criticism of the plate, was founded on the specimen alluded to, which at least bore no indication of producing six expanded flowers at one time on one spike.]

Foreign Correspondence.

WEATHER IN EGYPT.—On the 19th, 20th, and 21st of this month, Egypt was visited by an unprecedented hard frost—Negretti and Zambra's self-registering thermometers marking on the above-mentioned dates respectively 5°, 7°, and 21½° Fahr. below freezing point. Previously to the setting in of the frost, high winds from the south had prevailed for several days; these changed to the east, and afterwards to the north.

Ice has been found in some of the ditches on the morning of the 22d inst. fully an inch in thickness, and many of the crops now springing up, especially Wheat, Beans, Clover, and Flax, have suffered severely. It is remarked by old European residents that the climate of Egypt is gradually changing in respect to its winters, which become sharper every year.

The gardens here have suffered severely this year from the late high Nile. Many hundreds of fine trees have already been cleared away, and now to-day I am sorry to say that all the beautiful climbers, which are so well known to beautify the gardens in the East, are all more or less cut off, and many of them quite dead. Stephanotis floribunda and the Ipomœas, which predominate so much, are all killed; also Thunbergias, and the beautiful scarlet Lapageria rosea; in fact all the stove and greenhouse specimens are all more or less destroyed. *Wm. Chapman, Chief Gardener to His Highness Prince Ibrahim Pasha, Choobrah Gardens, Cairo, Egypt, Jan.* 26.

QUEENSLAND FIBRE.—In your issue of June 27, 1863 (p. 604 *b*), a Correspondent inquires about Queensland fibre. May I ask permission through the medium of your columns to give the information?

The fibre alluded to is produced from Sida retusa, a Malvaceous plant having a wide geographical range. I have found it at Illawarra, to the south of Sydney, and at nearly all the intermediate ports between this and Rockhampton on the north, within the tropics. At Brisbane, Queensland, it grows luxuriantly, covering the ground like a field of cereals, and generally attaining a height of from 4 to 6 feet. In cultivated places it is rather a nuisance, and like all that family of plants seeds profusely; its rapid growth and thick cover at Illawarra, forms the hiding place of the small Wallabi, Halmaturus Thetidis, and it doubtless would, as suggested, make a fine cover if in England.

When being prepared for fibre, it requires some 14 or 16 days maceration in water to get rid of the sap. The fibre is long and silky, and could easily with proper appliances be made an article of export from the colonies. Indeed we have several fibres of great strength, and which are used by the aboriginals for nets, bags, and lines. Urtica gigas, Hibiscus, and two or three Sterculias, yield excellent fibres, which were represented at the late Exhibition.

I send you a specimen of the plant, and will prepare a sample of the fibre from plants growing here for the next mail. *E. S. Hill, Woollahra, Sydney, N. S. Wales, Dec.* 21, 1863.

Notices of Books.

Selecta Fungorum Carpologia. Tomus Secundus, accedunt Tabulæ xxxiv. ære incisæ. Fol. pp. xix. and 220. Junctis studiis ediderunt L. R. Tulasne et C. Tulasne. Parisiis, 1863.

It is two years since we reviewed the first volume of this admirable work, which excited so much interest that we are quite rejoiced to receive another proof of the wonderful sagacity and diligence of the two brothers to whom we are indebted for the opportunity of its perusal. Like the former, it is devoted to the proof of a fact now more or less generally received by mycologists, that a plurality of modes of fructification exists in a large portion of the grand Fungal division of Cryptogamic plants.

Genus after genus of moulds and dot-shaped parasites disappears under the repeated observations of mycologists, till at last it seems a matter of doubt whether any will remain. The task is, however, one of such extreme difficulty, requiring so much time and such unwearied powers of accurate observation, that we can only expect instalments at present, and we must be content with respect to the greater part of these more obscure productions to remain for the time being under a cloud.

As the volume is devoted to the examination of especial genera and species, and does not launch out into many general observations, there is not much to extract which can interest the readers of this journal. We must confine ourselves, therefore, to the consideration of one or two species only.

The first we shall notice is Sphæria herbarum, a species which is produced on the dead stems of all sorts of herbaceous plants, and is extremely common on Pea haulm and Asparagus, but attacks also the harder parts of the fruit occasionally, and even takes up its abode at times on the larger Algæ, when thrown up in heaps by the tide and left to decay. It appears also sometimes to infest animal substances, as dead Aphides, at least under one of its forms. Sphæria herbarum has been described under various names, according as it inhabits various plants; but the peculiar yellow-brown obtuse ovate, or ovate-oblong septate sporidia, which are a beautiful object under the microscope, always distinguish it.

Those who have had an opportunity of inspecting Corda's beautiful volume called "Prachtflora" will not easily forget a pretty mould, Alternaria tenuis, said to be parasitic on Cladosporium herbarum, and consisting of a chain of inverted jointed clubs. From the observations of our authors it appears that not only this, but Cladosporium herbarum itself, and Macrosporium sarcinula, Berk., are three forms of the mycelium of this species, as developed on decaying Gourds, by running into each other and producing reproductive naked spores. But besides these, in addition to the subglobose or ovate perithecia which produce the asci and sporidia, we have distinct papillate or bottle-shaped cysts, which contain naked spores, which, equally with the four bodies above mentioned, are capable of germination. Thus we have five different forms of fruit in the same plant, and it is very possible that in some allied Fungi there may be cysts containing those minuter bodies called spermatia, which seem to be analogous to the spermatozoids of higher cryptogams, if they do not perform their functions. Cytispora

orbicularis, Berk., which grew on the same Gourd with Macrosporium sarcinula, B., may possibly belong to this category.

We ought, however, to give an example in which these organs all appear, and we cannot find a better one than Dothidea Ribis, one of our most common Fungi, which occurs in the form of little black shields on dead twigs of Currants and Gooseberries. Here we have naked spores (conidia), growing on the external cells of the stroma; we have naked spores of a second kind (stylospores) produced in distinct cysts (pycnides); we have minute bodies of a third kind (spermatia) produced again in distinct cysts, resembling very closely similar bodies in Lichens; and we have a third kind of cysts containing the usual sporidia in sausage-shaped hyaline sacs (asci). Even here, however, we have not done with marvels, for if the stylospores are placed in water, they produce in the course of four-and-twenty hours conidia of a second order exactly analogous to those which arise on the germination of the spores of the rusts and mildews which affect our Cereals and other plants.

We have chosen these as obvious instances, but if we wish for striking examples amongst objects less known, we would refer to the connection of Helminthosporium and Sphæria polytricha, Wallr., where the beautiful mould with its umbels of large septate spores is seen growing from the sides of the thick perithecium and the matrix from which it grows; or the wonderful illustration in the following plate, tab. xxx., of Sphæria Clavariarum, where plant and parasite and conidia are represented in the wildest apparent confusion, yet where every part is perfectly distinct—a prodigy in fact of drawing, which it is scarcely possible to equal, much less to excel.

Much remains still to be done amongst the more fleshy Sphæriæ, and we not only hope that our authors will persevere in the work they have so well begun, but that they will undertake a complete revision of the genus, which at the present moment is in great confusion. We have the arrangement of Fries in his Summa Vegetabilium Scandinaviæ, of Cesati and De Notaris in their lately published volume, and several new genera in the work before us, all differing more or less from each other, and all with many points of merit. Fries, however, and De Notaris and his colleague, have examined the group principally from their own point of view, the former from the vegetation, the latter from the fructification of the plant; and now we have the Tulasnes, who have combined with both of these an investigation of the secondary forms of fruit. It would be a great boon to science if in the next part of their work they would simply give a list, of the European species at least, if not of the exotic, indicating to what genus they believe each species belongs. Without this their labours will not be of the general use which they are calculated to serve. We do not even know what group they propose to keep in the genus Sphæria itself, which certainly ought not to be entirely set aside. We know that there is tempting matter before them amongst the coloured moulds, and the cyst-bearing Mucors, but great as their discoveries may be in that direction, we believe that they can nowhere be more usefully employed than in completing what they have so successfully inaugurated in the volume before us.

Wedgwood: an Address. By the Right Hon. W. E. Gladstone, M.P. Murray.

We are so accustomed to associate Mr. Gladstone's name with the House of Commons and financial statements, that it is somewhat startling to read an address of his, containing no allusion to his usual topics; an address delivered in a distant county on the occasion of the foundation of a local institution, and in honour of a native of that place. But when we perceive that the person thus honoured was Josiah Wedgwood, the apparent incongruity vanishes. For, as Chancellor of the Exchequer, Mr. Gladstone must naturally take a strong interest in the commercial welfare of the country; and there is no doubt that its commerce and prosperity increase in a direct ratio to the excellence of its productions. Viewed in this light, Wedgwood becomes a public benefactor; he, more than any single man, raised the manufacture, to the improvement of which he devoted his life, to such a height as not only to challenge competition with the productions of other nations, but to take the very highest place, whether for beauty or utility, amongst them. Witness the encomiums of a "contemporary Frenchman, M. Faujas Saint Fond, who, in his 'Travels in England,' writes as follows respecting Wedgwood's ware:—'Its excellent workmanship; its solidity; the advantage which it possesses of standing the action of the fire; its fine glaze, impenetrable to acids; the beauty, convenience, and variety of its forms, and its moderate price, have created a commerce so active and so universal, that in travelling from Paris to St. Petersburg, from Amsterdam to the furthest point of Sweden, from Dunkirk to the southern extremity of France, one is served at every inn from English earthenware. The same fine article adorns the tables of Spain, Portugal, and Italy; it provides the cargoes of ships to the East Indies, the West Indies, and America.'"

The means by which Wedgwood attained to such a point of excellence are well worthy of consideration, and Mr. Gladstone has devoted a considerable portion of his address to the elucidation of them. Commencing with a long discussion on the influence of beauty, and the advantages that result from embodying as much of it as possible in every production, however mean, he winds up by showing that in this appreciation of beauty, and in his happy combination of it with utility, lay Wedgwood's chief excellence. "His most signal and characteristic merit lay in the firmness and fulness with which he perceived the true law of what we term industrial art, or in other words, of the application of the higher art to industry; the law which teaches us to aim first at giving to every object the greatest possible degree of fitness and convenience for its purpose, and next at making it the vehicle of the highest degree of beauty which, compatibly with that fitness and convenience, it will bear; which does not, I need hardly say, substitute the secondary for the primary end, but which recognises, as part of the business of production, the study to harmonise the two. To have a strong grasp of this principle, and to work it out to its results in the details of a vast and varied manufacture, is a praise high enough for any man, at any time, and in any place. But it was higher and more peculiar, as I think, in the case of Wedgwood, than in almost any other case it could be. For that truth of art, which he saw so clearly, and which lies at the root of excellence, was one of which England, his country, has not usually had a perception at all corresponding in strength and fulness with her other rare endowments. She has long taken the lead among the nations of Europe for the cheapness of her manufactures; not so for their beauty. And if the day shall ever come, when she shall be as eminent in true taste as she now is in economy of production, my belief is that that result will probably be due to no other single man in so great a degree as to Wedgwood."

At the present day it is too often supposed that the term "Wedgwood ware" applies exclusively to the beautiful vases and other articles, principally of a pale blue colour with white raised ornaments; but exquisite as these productions are, it is not by them that the influence of Wedgwood has been most widely felt; they were his relaxation, the (often expensive) luxuries in which he indulged his taste; and were paid for by the excellence of his more ordinary manufactures, and the consequent extensive demands for them. Some of the latter Mr. Gladstone describes: ordinary water-jugs, "constructed in a simple capacious form of flowing curves, broad at the top, and so well poised that a slight and easy movement of the hand discharges the water;" common sixpenny ink-stands, "so tasteful that they would not disgrace a cabinet, but so plain that they would suit a counting-house." Again: "take, for instance, his common plates, of the value of I know not how few, but certainly a very few, pence each. They fit one another as closely as the cards in a pack. At least I, for one, have never seen plates that fit like the plates of Wedgwood, and become one solid mass. Such accuracy of form must, I apprehend, render them much more safe in carriage." One peculiar excellence of these plates is not noticed, namely, the slightly concave edge on which to deposit the salt; an improvement all must appreciate, who have been annoyed by the common sloping edge, which seems designed on purpose to shoot the salt into the gravy! The great secret of the excellence of these homely articles is the same with them as with everything and everybody—a modest aiming at perfection. "They have no pretension: all Wedgwood's works, from the lowest upwards, abhor pretension."

Perhaps it is scarcely fair to criticise the English of a spoken address; but if its author thinks it of sufficient importance to print and publish, it is surely worth a proper revision; and since this bears evidence of having been somewhat carefully prepared for the press, it is the more unpardonable that so many slip-shod expressions should have been permitted to remain uncorrected. They are the more to be regretted, as the subject is so carefully got up and worked out, that the little pamphlet is quite worthy of a place on our shelves, even without taking into account the three woodcuts with which it is embellished.

Seemann's Journal of Botany, for February, contains a synopsis of the British Æcidiacei, by Mr. M. C. Cooke, illustrated by a plate of new or little known species of *Æcidium*. Forty species are noticed. There is also an account of Mr. Howard's Analysis of Indian Cinchonas. Mr. T. R. A. Briggs communicates a notice of Hypericum undulatum, a recent addition to the British Flora, found in two places near Plymouth, where it grows plentifully in boggy ground and on the margins of streams. It is a plant widely distributed over Southern Europe, Northern Africa, Madeira, and the Azores, and bears the additional names of H. decipiens, H. neapolitanum, and probably also H. bœticum. The Plymouth plant, according to Mr. J. G. Baker, "differs from H. perforatum by its quadrangular stem, broader leaves with network of pellucid veins, broader and blunter sepals, and styles only half as long as the capsule; from H. dubium by its closely dotted leaves and erect sepals; from H. quadrangulum by its less robust and less decidedly winged stem, more dotted leaves, larger petals, and differently shaped sepals; from all three by the much fewer and more distantly placed flowers of its panicle. The Editor gives an account of the Cucurbitaceæ of tropical Polynesia. Dr. H. Schott describes four new species of Aroideæ; according to the writer, who is a high authority on the subject, the plant recently figured in the Belgian publications as Dieffenbachia Verschaffeltii, is the D. irrorata of Martius. A further note from Mr. Carruthers indicates that the new Irish Fucus, found at Kilkee, and referred successively to F. furcatus and F. distichus, proves to be an undescribed species, to which its discoverers, Dr. Harvey and Mr. Ward, give the name of Fucus anceps. Mr. G. C. Churchill mentions the discovery of the American Woodsia glabella in the Tyrol and Carinthia, by Baron Hausmann, in 1860 or 1861, and by himself last year, the specimens having been compared at Berlin and at the British Museum. It would however be desirable to know further, if those who have identified this Swiss plant with the North American species, distinguish Woodsia alpina or not.

The last issue of the *Scottish Gardener*, a cheap horticultural magazine, whose existence has extended over more than a decade of volumes, contains a thoroughly practical article on the Onion crop, one of the series of kitchen gardening papers to which the remarks we recently adverted to were introductory. There are some interesting "stray notes" on Conifers; pleasant reminiscences of Scottish Gardens by Mr. Cramb; brief notes on Grapes grown at Castle Kennedy, by Mr. Fowler; and various other matters.

The *West of Scotland Horticultural Magazine* is of more recent origin than the foregoing, but similar in character. The February number (No. IX.) contains some well written articles on practical horticulture. We may instance, as especially useful, a paper on the culture of the Amaryllis (Hippeastrum), and another on certain Coniferous trees grown at Castle Kennedy.

Amongst other scraps of information in the current number of the penny *Botanist's Chronicle*, we notice an announcement that Mr. W. Pamplin, who for many years had been known as a botanical bookseller, has, in his retirement at Llandderfel in Merionethshire, established the North Wales Central Botanic Garden, which "although no pecuniary speculation, nor commercial enterprise, aims chiefly at utilitarianism, in an endeavour to promote and assist in every possible way a taste for gardening, economic and useful, and that chiefly among the smaller farmers, the cottagers, and the rural population of this part of the principality generally," by means of "a gratuitous distribution of seeds and of plants; by a mutual exchange with those who are able and willing to help in adding to our store; and by advice and assistance in planning and managing the gardens of the small farms and cottages, and in offering such suggestions, hints and information as the circumstances of each particular case may seem to require."

Laurie's Sketches of the English Constitution, and the same author's *Sketches of Political Economy* (Murby, and Simpkin Marshall & Co.) which belong to a series of Reading Books designed to be used either as text books to be amplified by teachers, or for general reading, give a clear and concise account of the leading points of their respective subjects, very useful to those who may not have the time or opportunity to consult more extended treatises.

BOOKS RECEIVED.—*Britain's Metal Mines: a Complete Guide to their Laws, Usages, Localities, and Statistics.* By J. R. Pike. 3d edition. 8vo. A pamphlet, without an index.——*The Sugar Question as it affects the Consumer.* By M. B. Dureau. Edited by Joseph Travers and Sons. 8vo. (Longmans) A capital pamphlet.

Garden Memoranda.

VILLA STUART, NICE, THE RESIDENCE OF E. STUART, ESQ.—To this pretty villa is attached more than usual interest on account of its being the place from which many of the novelties which annually grace our English gardens are derived. Its boundary walls are almost washed by the waters of the Mediterranean, so close is it to the shore, and the climate of the charming bay in which it is situated is most delightful. Here Dates, Oranges, Lemons, Olives, Guavas, and Pomegranates ripen in abundance. Indian Azaleas, Abutilons, Passion-flowers, and even Pelargoniums stand the winter unhurt in the open air; and during Christmas week flowers were gathered from the following plants, viz., Banksian, Tea and other Roses, Habrothamnus fasciculatus, yellow Jasmine, Cestrum aurantiacum, Tecoma jasminoides; Acacias, Heliotrope, Cassias, Chænestes lanceolata, and sweet-scented Verbena. Need it therefore be wondered at that seeds which refuse to ripen in England arrive at full maturity in a climate so favourable to healthy vegetation as this is. New Holland plants and all the better descriptions of Pelargoniums are grown here in great profusion, as are also Cuphea eminens, Dracæna terminalis, Ardisias, Carnations, Picotees, and Roses. On terrace walls are plants of what is called Tacsonia igned, covered during summer with multitudes of dazzling scarlet blossoms; also T. mollissima, Ipomœas, Kennedyas, Mandevillas, Lapageria rosea, Hoyas, and various other climbers.

Under glass are thousands of choice seedling Pelargoniums, of which, as a raiser, Mr. Stuart has a high reputation, and which, when in bloom, make a grand display; also others in the form of specimen plants; the

latter, though large, are unsupported by stakes, and bloom magnificently. In the same collection are also Cinerarias, fringed Chinese Primula, some very fine Begonias, Gloxinias, Achimenes, and Bougainvillea; in short, all that is fashionable in English gardens is grown here in perfection. Mr. Stuart's residence is therefore one which is often resorted to, not only by English visitors to Nice, but also by many foreigners of distinction, who take an interest in floricultural matters.

Miscellaneous.

Danish Gardening.—Soon after my arrival [at Copenhagen] I made my way to the Botanic Garden, which is nearly in the centre of the city. I carried a note of introduction to the Superintendent, M. Agust Weilbach, which I got from Professor Asœmted, whom I met at Upsala. The former gentleman received me with much kindness, and took great pains to show me the garden and fine library. I found a good collection of plants cultivated here, such as are well adapted for teaching purposes, and also many rare ornamental kinds. The conservatories are placed apart from each other, but if connected would make a good range. The principal one is a low Palm house, wherein a considerable number of species are cultivated, along with some good Zamias. I was much interested with one plant I observed there that I had not previously seen, which was named Dioon imbricatum. It differs considerably from the Dioon edule, and, as M. Weilbach showed me, particularly in the fruits preserved in the museum there, which are much larger than those of the latter, though of same sex. They may, however, only be varieties of one species. Another stove contained Orchids and Ferns, among which there were some good specimens, as well as some scarce sorts. Several other small houses for growing South African and Australian plants in during the winter, were filled with flowering annuals, &c., at the time I saw them. The arrangement of herbaceous plants is according to Endlicher's system, and his numbers are attached to the plants. They are divided into general collection, medical collection, and indigenous collection. Among the latter I observed some interesting species, such as Psamma baltica, Iris spuria, Sturmia Lœseli, and Herminum Monorchis. The botanical library is in the garden, and contains a rich collection of books on the science, comprising all the modern standard works, as well as those of the older authors. Some numbers of the new edition of "Flora Danica," in which the plates appeared to be beautifully and faithfully executed, were lying on the table. Many more of our hardy trees stand the winters in Denmark than do in Norway and Sweden. Diospyros Lotus flowers and ripens fruits in the botanic garden; Platanus orientalis and several species of Juglans also grow freely there. At the palace and gardens of Rosenberg there are very large trees of Horse Chestnuts, Purple Beech, Walnut, and other deciduous kinds. Among the ornamental shrubs several kinds of Robinias, Loniceras, Roses, Spiræas, and on a wall Wistaria sinensis was flowering freely. The trees near the esplanade, and on the ramparts round the city walls, consist chiefly of Horse Chestnuts, Elms, Sycamore, and Walnuts (Juglans regia). They are planted in lines on both sides of the broad walks, where in summer they afford pleasant shade, as well as shelter from showers, to the inhabitants of Copenhagen, who so much frequent them. I observed symptoms of considerable improvements in the way of ornamental planting, both in the city and suburbs. In front of the large palace, Charlottenberg, a good deal has already been done, and also in many places outside the city gates. *D. Moore, in Proceedings of Royal Dublin Society.*

Calendar of Operations.

(*For the ensuing week.*)

As open weather has returned, accompanied, we may expect, by increased sunshine, and as many indoor plants will soon require attention in the way of potting, et everything be put at once in readiness for the proper carrying out of that operation. Insects too must now be strictly kept in check, and constant care bestowed upon the timely performance of routine work.

FLOWER GARDEN AND PLANT HOUSES.

As regards the Conservatory and Show-houses, the obtaining spring bulbs and other plants in flower from forcing pits or other houses, and the removing such as have done blooming to other quarters, will now be the kind of work requiring most attention. As these houses will now be the chief resort of the family, it is requisite that the floors, &c., be at all times kept particularly clean and dry. Dryness of atmosphere through fire heat will not, however, keep the plants in that luxuriant health which not only creates a present interest in them, but also furnishes a guarantee for success in the future. Great moderation, therefore, in the use of fire heat is necessary in this department. A temperature in the conservatory of 45° at night, and from 50° to 55° during the day time, is during this time of the year sufficient. Out of doors all Grass lawns should now have a thorough rolling, and all turfing repairs should be completed as soon as possible. The weather having been upon the whole mild, every chance will have been afforded of not only bringing up arrears of autumn business, but of even stealing a march on the coming spring.

CARNATIONS AND PICOTEES.—Planting time with respect to these is now rapidly approaching; therefore bestow great attention on the proper preparation of the soil, as upon that much of the after success depends.

ORCHIDS.—Repot such kinds as require that attention. Many sorts on blocks will have received little water since last autumn, and may be very dry. Occasionally, therefore, soak the blocks for a few minutes in tepid water; and baskets, if dry, will also be benefited by being subjected to the same process. Syringing may now be resorted to early in the afternoon on fine days, and other conditions favourable to growth may more generally be put in force than would have been prudent during duller weather.

PANSIES.—Beds for these are best made in the autumn; but where plants have been kept in pots during winter they may now be planted out with their balls entire on richly prepared soil.

PINKS.—These ought now to be carefully gone over, slightly forking up the surface soil and applying a top-dressing of light rich fresh mould to the depth of say half-an-inch all over the bed.

TULIPS.—If not already done cover the beds with large meshed nets; when too small the plants are apt to be drawn by them, which should be avoided.

FORCING GARDEN.

During the present changeable weather no precise rules for the guidance of the inexperienced can be given. The operator must therefore in a great measure use his own judgment in applying the directions, so as to make them suit any altered conditions of external temperature that may occur.

CHERRIES.—Advance the heat cautiously on bright days, falling back to a lower temperature at night.

CUCUMBERS.—Follow up former directions—regularly stopping and often sprinkling lightly with water round the frame.

FIGS.—As soon as the young shoots are four or five joints long, commence stopping them; squeeze them flat between the finger and thumb; this is one of the principal secrets of success in Fig management. Ensure a steady degree of moisture at the roots; Figs are very impatient of drought—a very short period of neglect in this respect may prove fatal to the crop.

KIDNEY BEANS.—Give plenty of liquid manure to these, and make sowings for succession as required.

MELONS.—Pot off young plants into pots singly; stop them, and get them strong for succession frames.

PEACHES.—As before observed, suffer no gross shoots to push above five or six eyes without stopping; this will do more to equalise the sap than any mode of winter pruning. If the trees are properly attended to in these respects there will be little left for the knife. When the fruit is as large as marbles, commence thinning, only a few at a time. Give air freely when the weather is favourable, and syringe liberally with much force in the afternoon.

PINES.—Do not allow the bottom-heat to rise too suddenly; when much new tan has been added in consequence of recent shiftings or removals this may readily take place. Constant attention to the trial sticks is therefore now necessary, in order to ensure success. For general purposes 80° or 85° will be sufficient. Let atmospheric moisture be in proportion to the natural increase of heat and light, and give air freely early in the day on all favourable occasions, shutting up a good amount of sun-heat whenever a chance of doing so occurs.

VINES.—Attend regularly to the disbudding or stopping of superfluous wood. Take good care of bunches that require shoulder tying. A brisk heat may be permitted on sunny afternoons; but be moderate at night; let 65° at that period be the maximum. Keep up a liberal amount of moisture independent of the syringe. As soon as succession houses are closed for forcing, be careful to secure a thoroughly moist state of the atmosphere by frequently sprinkling the floors and every available surface, but as observed previously, a regular moist state of the atmosphere is most effectually secured by means of a slight bod of fermenting materials in the house, which will also afford a little warmth, and the moisture from this is much more congenial to vegetation than anything that can be effected by the most careful use of either syringe or evaporating pans.

HARDY FRUIT AND KITCHEN GARDEN.

As the period for sowing seeds of all the more important crops is now at hand, see that everything is in readiness for that purpose; do not sow, however, until the ground is sufficiently dry to bear treading on without disadvantage, and otherwise in proper condition to receive the seed. Much mischief is committed by inattention to these particulars.

BEANS.—Sow Early Mazagan and Johnson's Wonderful.

CARROTS.—Sow Early Horn on a warm border.

PEAS.—Sow successional crops of Dickson's Favourite, Fairbeard's Nonpareil, Champion of England, and other good kinds. Draw up some soil to those now above ground, and stake them if necessary.

POTATOS.—Plant Ashleaf Kidneys if the ground is at all dry. If wet, defer the operation until it gets into better condition to receive them.

WALL TREES.—All pruning and nailing must now be brought to a close. Timely preparations for protection must also be made in order that it may be speedily applied when wanted.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,
For the Week ending Feb. 17, 1864, as observed at the Horticultural Garden

February	Moon's Age.	Barometer. Max.	Barometer. Min	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep	Wind
Thurs. 11	4	29.774	29.374	42	28	35.0	39	40½	N.W.
Friday 12	5	29.624	29.327	46	31	38.0	40	40½	S.W.
Satur 13	6	30 078	29.638	55	30	42.5	41	41	S.W
Sunday 14	7	30.278	30.080	55	38	46.5	42	41½	S.W.
Mon. 15	8	29.922	29.776	54	43	48.5	43	42	S.W.
Tues. 16	9	29.735	29.685	51	29	40.0	43½	42½	W.
Wed. 17	10	30.074	29.882	43	25	34.0	43½	43	N.W.
Average.		29.926	29.680	49.4	31.8	40.6	41.7	41.5	

Feb. 11—Frosty and foggy; overcast; frosty; rain.
— 12—Rain; densely overcast; slight frost.
— 13—Boisterous; densely clouded; clear at night.
— 14—Clear; very fine; overcast.
— 15—Densely and uniformly overcast; brisk S.W. wind; rain
— 16—Drizzly; fine, with clouds; clear at night; rain; slight frost.
— 17—Fine; cloudy and cold; clear, frosty; rain.
Mean temperature of the week 3¼ deg. above the average.

STATE OF THE WEATHER AT CHISWICK,
During the last 38 years, for the ensuing Week, ending Feb. 27, 1864

February	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 21	46.8	32.3	39.5	18	0.20 (n.	3	7	4	6	1	10	6	1
Mon. 22..	46.5	32.2	39.3	17	0.29	4	3	6	3	1	12	6	3
Tues. 23..	47.2	31.8	39 5	13	0.44	4	4	7	2	1	10	7	4
Wed. 24..	46.8	32 7	39.8	17	0.60	1	5	6	3	7	6	4	7
Thurs. 25..	47.4	32.7	40.1	19	0.92	2	5	7	—	6	10	5	3
Friday 26..	47.3	33.4	40.3	20	0.48	4	6	5	1	4	7	5	2
Satur. 27..	48.0	33.6	40.8	18	0.40	3	6	4	2	6	8	6	1

The highest temperature during the above period occurred on the 27th, 1848—therm. 62 deg.; and the lowest on the 24th, 1860—therm. 18 deg.

Notices to Correspondents.

BOMBYX CYNTHIA: *A Correspondent* wishes to know where he can refer for information about the mode of getting a supply of cocoons of this insect for the Cape of Good Hope? Can any of our readers assist him?

BOOKS: *L R.* We know of no better hand-book on Timber Trees, with instructions for planting, thinning, &c., than Brown's "Forester."—*British Botanist* cannot do better than procure the new edition of "English Botany," by Mr. Syme, if he can afford it.—*J T.* Standish's Treatise on the Cultivation of American Plants may possibly answer your purpose.

CANKER: *W A.* A composition of cowdung and soot, with a little lime and clay to give it body, is sometimes applied with advantage, the diseased parts being first carefully cut away. Our friend Mr. Rivers recommends a biennial removal of the trees, as the only cure for canker.

CINERARIA: *E F G.* No satisfactory opinion can be formed from shrivelled flowers as yours were. You should have sent a sprig in a small box with slightly damped Moss. As far as we can see the colour is good—a rich crimson self, and the florets seem broad, smooth, and free from notch, but the blooms appear to have the defect of a grey eye. The question of merit hangs very much on the habit of the plant.

FISH MOULD: *T G.* The mould upon your dead fish ova is Saprolegnia ferax, a production which we believe belongs to the Fungi, though it is often associated with Algæ. You will find an account of several of its allies in the Intellectual Observer for April next. *M J B.*

FUNGI: *C L Paxtonia.* Your Fungus is Geastrum fimbriatum, as far as we can judge from the sketch. None of the species are common. *M J B.*

LADIES' PRIZES: *E A M.* The only condition, as you will see from our remarks last week (p. 147), and an advertisement which appears to-day, is that the plants shall have been fairly produced by the exhibitors. It will, therefore, not be necessary that they should be grown, *i. e.* reared from the seed or cutting-pot, but simply that they should be grown on into shape and size, and in the case of flowering plants brought into blossom. Three months' possession will be ample qualification, but even so much as this is not imposed.

NAMES OF PLANTS: *Jane.* 1, Adiantum cuneatum; 2, Adiantum Capillus-veneris.—*E H.* 1, Epacris nivalis; 2, Epacris grandiflora; 3, Acacia longifolia.—*J B C.* The common Snowdrop, not Galanthus plicatus.—*W S.* It appears to be nothing but Cyrtomium falcatum.—*W.* 5, Ceterach officinarum: 6, Asplenium Trichomanes; 7 and 8, slightly different forms of Lastrea Filix-mas.—*J B.* Ornithogalum scilloides, the Onion plant of window gardeners.—*T S.* Clematis balearica.

OAK GALLS: *G.* Your galls are the same as those described in our volume for 1860, p. 72, where you will find a woodcut illustration of them.

RENOVATING AN OLD GARDEN: *A H.* We cannot advise you as well as would a good practical gardener on the spot. If the soil is full of humus and in the usual condition of old garden soil, the dressing of old lime rubbish you propose would be beneficial; but we do not quite gather that this is the case. The lime dressing would certainly not destroy wireworm; if that is troublesome, we should recommend a good dressing of spirits of tar in autumn. Parsnips and Carrots are apt to grow forked on badly worked ground. You cannot probably do better than have the ground well worked and sweetened by rough trenching in winter; and as the subsoil is clay, take care that it, as well as the upper soil, is well drained. The lime would doubtless be a useful application to the meadow land.

ROYAL HORTICULTURAL SOCIETY'S GARDEN: *Windsor.* We wholly disapprove of the recent proposals; but it is not we, it is the Fellows themselves who must stir, if anything is to be done.

VINES: *J W.* If your five-year-old Vines are in health and vigour, as they ought to be if the border is satisfactory, and if moreover, they are of hardy constitutioned sorts, we should advise you to inarch them with the kinds you wish to substitute, in preference to planting young Vines, which would take longer time to become established. You might do one-half this year, and the rest next, with but partial loss of crop. The stems of the inarched Vines might be allowed to bear a moderate crop of fruit, as well as to carry the graft, and the graft itself should become a strong well-ripened cane as long as the rafter by the end of the season, if properly cared for, and might bear moderately the following year. But this depends on the vigour of the plants. You could make up with pot Vines for a couple of seasons.

WATER: *Aqua.* The water from your proposed shallow well, containing 26 grains of salts of lime to the gallon, is scarcely more affected in this way than Thames water, which according to Solly contains from 17 to 24 grains in every gallon, of which at least 15 grains consist of the carbonate. Probably that from your stream would not differ materially. Soft water is, of course, preferable for gardening purposes, and if you can secure a supply from rain, collected either from buildings or the ground surface, that will be best of all; but from our experience of Thames water we should say you may use the well water with little inconvenience, especially if it is, as it should be, aërated. It ought not, however, to be used for syringing, as it will leave a deposit on the foliage. The lime will not be precipitated by exposure in a tank.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.

MEETING at NEWCASTLE-ON-TYNE, 1864.

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SPRING SESSION, 1864.

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SPECIAL LECTURERS.

J. BAILEY DENTON, M. Inst. C.E.—On DRAINAGE.

Professor J. MORRIS, F.G.S., of University College, London—On GEOLOGY.

JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.

WILLOUGHBY WOOD, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.

JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.

JOHN THORNHILL HARRISON, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.

THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.

ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.

RICHARD GRIFFITHS WELFORD, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.

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The Agricultural Gazette.

SATURDAY, FEBRUARY 20, 1864.

WE have received from Messrs. JOHN FOWLER & Co., of the Steam Plough Works, Leeds, the following communication referring to the correspondence between Messrs. HOWARD of Bedford and Messrs. EASTON & AMOS, of which the substance was given in last week's *Agricultural Gazette*:—

"In the letters that have passed between Messrs. EASTON, AMOS, & Co. of London, and Messrs J. & F. HOWARD of Bedford, we find that our Firm is especially referred to as being the cause of the controversy. We beg to say that Messrs. J. & F. HOWARD are entirely in error in their assumption, as we have not had any business transactions whatever with Messrs. EASTON, AMOS, & Co. either as a firm or individually."

THE MAINTENANCE of the PRIZE SYSTEM in the machinery department of the Annual Agricultural Show, which was the subject of a recent letter by Mr. GARRETT in these columns, and which had been one of the subjects examined at the meeting last December of the Society of Arts, must, it is plain, be discussed with reference merely to the interests of those who use the machinery in question. No matter what its effect may be upon the manufacturer—entailing, though it should, useless and immense expenditure on the established firms who no longer have to fight their way towards the front—or cheering, it may be, the younger firms who may by its aid be struggling upwards, the system must be maintained or abandoned, according simply to the interest of the farmer. It is for him that the Society exists, and by his interest only must its conduct be regulated. If therefore it can be shown that the award of prizes stimulates or guides the manufacturer to the construction of improved implements, or if it can be shown that the award stimulates or guides the farmer to the purchase of improved implements, then clearly the policy of awarding prizes is defensible as a most serviceable part of the Society's operations. On the other hand, if it should appear on inquiry, that whatever the tendency of the system in former years when the trade was entirely local, and manufacturers did not compete with one another, it now adds nothing to their natural rivalry and competition—does not distinguish the best machines, nor guide purchasers aright—then we imagine that whatever else may be claimed for it the system must be abandoned. It does not answer the purpose for which it was instituted, and some other plan of serving that purpose must be devised.

What then are the facts? And first we must confess that they have already sufficiently instructed us; and our classification of them, therefore, unavoidably takes the form which naturally follows on the lesson which they teach:—

1. First of the examples of implements introduced by manufacturers, and largely bought by farmers, notwithstanding adverse awards.

Of CAMBRIDGE'S roller thousands were sold before its merits were recognised by a prize.

Of BENTALL'S broadshare we understand that many hundred testimonials to its merits were published before it was in any way recognised by the Royal Agricultural Society.

SMYTH'S corn drills are in more general use than those of any other maker; and though always in the background so far as prizes are concerned, he is still, we believe, by far the largest drill maker of the day.

GARDNER'S Turnip-cutter was sold by tens of thousands before receiving a prize.

SMITH'S and HOWARD'S steam cultivators have always been put into the background at Society competitions; but they have made their way nevertheless.

2. Another class of facts illustrative of the small use of prizes as a guide to purchasers, includes the many examples in which the award of prizes has failed to produce a sale. The ULEY cultivator and BIDDELL'S scarifier, rivals in the earlier days of the Society, and both at times successful, have never obtained general adoption. NEWBERRY'S dibbling machine, rewarded more than once, is nowhere. The ULEY spiral chaff cutter, COLEMAN'S expanding harrows, SAMUELSON'S digger, BENTALL'S dibble, GARRETT'S drop drill, FOWLER'S small Leeds steam tackle—all these illustrate the position that those who award the Society's prizes, whether from wrong judgment on their part, or the slight value put on their judgment by the outside public, have had little influence in guiding purchasers. It is also a fact belonging to this class that Messrs. HOWARD, of Bedford, who in 1856 took all four of the first prizes for ploughs at the Chelmsford meeting, have never sold 20 ploughs within a radius of 10 miles of the place. And we are informed that Messrs. RANSOME, who took all the plough prizes at the Southampton meeting, have in like manner never obtained a footing there.

3. The influence of the prize system on the fortunes of competing firms is another point which should illustrate the power and value of it as a guide, both to manufacturers and purchasers. We believe it will, on inquiry, be found that it has had very little influence indeed on the fortunes of competing firms. Certainly there are many who can be named as having succeeded in spite of adverse awards. Messrs. CLAYTON & SHUTTLEWORTH, who make we presume as many agricultural steam-engines as all other makers put together, have hardly ever stood first in the Society's competitions. Messrs. RANSOME and Messrs. GARRETT were great firms long before the annual competitions commenced. The growth of Messrs. HOWARD'S manufacture took place during the time when year after year they were beaten at these meetings. Good work, cheapness, fitness for the operation to be done by it, will, when backed by ENERGY, always sell a machine, whether it be decorated by a prize or not.

What, then, is the reason that so many facts are forthcoming to throw doubt upon the policy of awarding prizes? There can be but one:—*They do not tell the truth.* Here, more than on any other course we know, the prize is earned by the jockey rather than the horse. It is the ploughman as much as the plough; the stoker as much as the engine; the feeder as much as the threshing machine or chaff-cutter, by whom the prize is won. Or if it be the implement whose merits are thus by good jockeyship exhibited, the machine is itself made and *trained* for a racing trial, and not for the ordinary rough usage of the field, the farmyard, or the barn. Farmers know what they want better than the engineers or professional men who record the performance of the machine during a few hours' trial; and they are not likely to be much influenced in their judgment by the result of a short race.

If the Society wish the annual award of prizes to be influential for good, they must take greater pains to be sure that it is truthful. And therein perhaps lies the true solution of the differences between them and the exhibitors.

We do not for an instant dispute the uprightness of the awards—no one doubts the justice of the judges. The point on which doubt has arisen, is the justice of their awards, and that has been owing to the lack of adequate evidence before them on the point in dispute. And no one can suppose that adequate evidence will ever be forthcoming from the short trial of an agricultural machine under one set of circumstances. Let then the evil be remedied by improving the trials on which the judgment is formed. That will be the best possible solution of the difficulty. It is very probable that the leading exhibitors may wish the trials given up altogether. But we naturally look with very great suspicion on their prejudices in such a matter; and if by any extension of the time of

trial, by the substitution of reports for premiums, by an examination of machines upon the farm rather than on the trial ground, trustworthy results can be obtained, we are not likely to listen to any protest from them; nor, indeed, is it probable that any protest from them would then be offered.

Meanwhile it is well to bear in mind that it is not the trials as now conducted that gathers the extraordinary collection of implements and machines every year to the Society's show yard. It is the hope of trade. There never was a greater show than at Battersea, where no prizes were awarded. There had never been such shows of implements at the Bath and West of England Society's as since they gave up their prize list altogether. And lastly, although it is only to one class of implements out of four that the prizes of the Royal Agricultural Society are each year awarded, yet we defy any one, after a mere examination of the show yard, to declare which is the class in question—the other three are always equally represented.

It may amuse our readers to learn how the prize system is regarded by the enterprising promoters of agricultural meetings in some parts of the Continent. An exhibition of farm machinery is to be held at Breslau on the 10th, 11th, and 12th of May. Certainly the offer of a careful adjudication of merit is no part of the inducement offered to English manufacturers to exhibit. Nevertheless, after specifying the conditions on which standing ground will be given to machines, the circular, although intimating that no prizes will be given, declares—"10. If, however, the exhibitors wish for a judgment of the different articles, this will be done by a jury, *and charged for extra!*"

A LONG letter, for which we have not room, has been addressed by Mr. SMITH, of Woolston, to the Council of the Royal Agricultural Society, in which he protests against the trials of steam cultivators, and the consequent award of premiums at previous shows; and intimates that he does not intend to compete at Newcastle. He recommends that the trial at the annual country meeting should have for its effect simply the selection of those machines which may be worth further examination; and that the more serious work of determining the relative merit of these should be adjourned to the Society's "Home Farm," where a year's experience if necessary could be obtained.

We certainly hope that no such scheme as a home farm under the Society's management will grow out of this suggestion. The Society teaches nothing by example—and a very good thing too—for its best examples would be certainly outvied. It has no home farm—no model stock, or crops, or implements, or schools. It rightly leaves all this in the hands of men "whose business it is." *They* are urged by necessity and rivalry and personal interest—any of them a stronger motive for exertion than any which the Society could bring to bear upon its servants or its representative, if it should adventure teaching by its own example. It therefore wisely confines itself to teaching by mere precept, using, however, as its chief engine the examples of its members in their individual capacity; and adding such stimulant to the ordinary motives here as its offered prizes may supply. It does not breed good stock, but it offers premiums for good stock, and thus stimulates those who do; it does not manufacture implements, but it offers premiums for good machines, and is thus supposed to stimulate those who do; it does not teach veterinary surgery and medicine, but it presents an annual subsidy to the Veterinary College, and this too it is to be hoped stimulates those who do; it does not teach young men how to farm, but—we should be glad if it were here, as in the other instances, in our power to add that it offers scholarships or premiums as a stimulant to those who do. This, however, certainly *it ought to do.*

Meanwhile, as regards the steam plough trials to which Mr. SMITH takes exception—and to which we believe all the other competitors also take exception—it is plain that the real thing of which we want a full report is the behaviour of the several machines, not upon the Society's home farm, but upon the 500 home farms all over the country, where steam cultivation has been adopted, and where an experience, varying from one to six or seven years' exists.

It is a full report of the everyday experience of the steam cultivator, not a record of the behaviour of the rival implements during 10 hours of a high pressure trial, that is desired. This full report we have not got as yet. The weekly agricultural papers have done, and are doing their best to supply the missing information; but the Society has as yet done nothing. Its reports upon the subject hitherto have been little more than a collation of the information already given to the public in the weekly journals. They are thus exceedingly imperfect; and far from an adequate representation of the truth. And they are likely to remain so, for neither weekly papers, nor, as we have every reason to know, a book upon the subject, will bear the brunt of the expenses connected with the preparation of the full report that is required.

It would tend more to stimulate manufacturers—much more to furnish good guidance to agriculturists—if the Society would commission a report of steam cultivation over say 100,000 acres, which might be drawn up from actual inspection during the ensuing spring, than will be done by all its trials and examinations during a few days once a year for the award of a prize, or than can be done by any more elaborate examination on a home farm, as Mr. SMITH suggests.

PLANT IMPROVEMENT.

To your Number of the 6th inst., Mr. Patrick Shirreff, of Haddington, contributed an article entitled "The Improvement of Agricultural Plants," which, however, was in fact, neither more nor less than another attack upon "Hallett's Pedigree Nursery Wheat," and upon Professor Buckman for daring to believe in it.

I do not know whether Professor Buckman did me the honour to write the article in "Morton's New Farmer's Almanack for 1864," which Mr. Shirreff says "may justly be regarded as an advertisement of Hallett's Pedigree Nursery Wheat," and not having seen the article I cannot say if it merits that description, but Mr. Shirreff's article certainly must be regarded as an evident advertisement of his own.

I am not the person nor is this the place to deal with Mr. Shirreff's use of the very serious words "imposition" and "fraud." I pass on at once to really consider the important public question of the improvement of cereals, which he has left entirely untouched.

My system of effecting this is founded upon three facts, which I have had to ascertain for myself. Before stating them let it be borne in mind that the comparative powers of grains can be tested only when they are so planted as to be able fully to develope them.

These three facts, which I am in a position to prove, are:—

1. The grains of cereals differ in their powers of productiveness.
2. Their descendant plants and grains inherit more or less the characteristics of their respective parents.
3. These characteristics may by selection be so often repeated as to become fixed characteristics of the plant.

As no two grains will give precisely equal produce, there must in any given quantity be one best; and, again, among its produce there must annually be one best grain; the "best" grain being that one whose descendant plant and grains most nearly approach the standard fixed upon.

Now, a "pedigree" cereal is one descended from a line of such proved best grains (having started from a single one in each successive year), and its record having been kept, is strictly and literally just as much entitled to the name as is the Duchess family of improved Durham cattle.

I will give an illustration of fact No. 1, the difference in the powers of grains; and to make it stronger, I have chosen one which shows this difference, not among grains from an ordinary sample which might have contained 20 different varieties, but between those of the different ears of the same plant, and even between those in the very same ear.

The grains of a plant of ordinary Wheat, itself grown from a single grain, were planted singly a measured 9 inches apart every way, in such a manner that the grains of each ear were kept separate. The following are some of the results, which illustrate our present proposition as well as if I gave the whole, which covers with a dense mass of figures two sheets quarto.

Number of Ear.	Classification.	PARENT, 1862. Ears per Plant.	Grains per Ear.	PRODUCE, 1863. Grains per Plant.	Weight in Grains Troy. Grains per Plant.	Per 1000 Grains of Wheat.
3	Grains not classified	33½	37	1239	817	634
2	Smallest grains ..	21½	34	726	482	664
	Largest grains ..	22½	33	737	468	635
1	Smallest grains ..	18¼	34⅔	636	419	660
	Largest grains ..	27	30	810	572	707

Here the grains of one ear were 50 per cent. more productive than those from either of the others, and 100 per cent. more so than the smallest grains of one of the others, while in the case of ear No. 3 there is a difference of upwards of 30 per cent. between the powers of its two classes of grains.

I may mention that the results are obtained thus:—Each plant is pulled up with the roots and labelled, the ears (in a single plot many thousands) are counted, and their number recorded, their produce threshed and cleaned separately, and the grains produced counted and weighed.

My next case will illustrate "facts No. 1 and No. 2"—the difference in the powers of productiveness in the form of weight per bushel, and the inheritance of superiority.

A plant of Chevalier Barley grown in 1862 from a single grain consisted of 50 ears. The record in 1863 against one of these ears, No. 8, is as follows, after minute descriptions: "An extraordinary ear, all of whose grains are short, plump, thin-skinned, and beautiful, while there is a general tendency in the grains from all the other ears to elongated grains whose colour is not so good, and whose skins are thicker." The grains from the best 10 of the 50 ears and those from the remaining ears were planted separately, making 11 divisions, each of which was divided into two classes at planting, and there were thus 22 divisions in all.

I have a sample grain and ear from each of these 22 divisions placed in open tin boxes arranged together so that the whole can be seen at a glance. There is a great difference between them, scarcely any two being alike. An eminent Barley buyer and maltster upon seeing them selected as the best the sample from Class I., grains of No. 8 ear, the one which had shown such marked superiority in the previous year. The following results give proof of its superiority. All the plants were taken up at the same time under precisely similar conditions, and preserved in zinc cases from every chance of accident.

PARENT, 1862. Number of Ear.	Classification.	PRODUCE, 1863. Description.	Weight per Bushel, Pounds Avoirdupois.
8	Grains, Class 1	Sample just as grown	56.32
All the other Ears	do. do. 1	ditto	54.20
	do. do. 2	ditto	52.50

Showing a superiority of nearly 3 lbs. weight per bushel in the produce of No. 8 over that of the rest of the ears taken together. This is upon a soil usually producing Barley weighing 51 or 52 lbs., and generally cereals grown here weigh 2 or 3 lbs. per bushel less than when grown upon suitable soils of good staple.

The similarity of the Pedigree Wheat in ear and grain in widely different parts of the world, illustrates "fact No. 3." To return to Mr. Shirreff: he seems unable to understand that breeding is anything but the "controlling the union of the sexes," and regards this as the end itself instead of a mere means to that end. He writes:—

"There being male and female sexes with animals, the farmer can alter the character of his stock by the selection of breeders. Cereals are hermaphrodite with sexes in the same flower, where their union cannot be controlled. In the breeding of animals the farmer's interference is reasonable and beneficial; but in breeding cereals it is unnatural and seldom successful."

Now the end is in both cases precisely the same, viz., to obtain the best descendants.

The breeder of cattle employs as a parent an animal having certain "points" in the hope that the progeny will inherit them.

I select the progeny itself, which actually does possess the points required, as a proof of its parent grain having been a good one for my purpose (although when I planted it I did not know it), and I humbly thank Mr. Shirreff's "nature" for having "controlled the union of the sexes" much more successfully than I probably should have managed to do.

The cattle-breeder unites two parents, hopes for the best, and takes the one he gets (or nothing); I plant one parent, take from its thousands of descendants the best one, and throw the rest away. *Frederic P. Hallett, Manor House, Brighton, Feb. 9.*

(To be concluded next week.)

THE VEGETABLE MOULD.

FERTILITY (the existence or production of the higher orders of organic life, vegetable and animal) depends upon the presence of five provisions or accessories: 1st, proper admixture of earths; 2d, vegetable matter; 3d, water; 4th, air; 5th, sun's rays and bottom-heat.

1st. A suitable admixture of those earths required by the plant to build up its structure or frame in sufficient strength, and also to retain the necessary moisture and give a certain amount of adhesiveness to the soil. Of the various earths necessary to plants, silex is essential to strengthen the exterior or rind in the Gramineæ and Cereals, the Equisetaceæ and other families having a soft or open interior of stem, and therefore require a hard exterior. Iron seems also to exert a strengthening power in some families. Argil or clay is required for the preservation of moisture, and to give an adhesion to the soil necessary for many plants. The other abundant earths, lime and magnesia, are especially necessary to Legumes, more especially to Clovers; they also act to repress Fungi and other small parasites, and as a stimulant to bring effete organic matter into operation, their alkali neutralising the preservative acid of peat. The other mineral, or what are termed mineral constituents of plants, chiefly potash, soda, phosphates,

sulphates, &c., may be applied as especial manures to especial plants, known by an analysis of the kind of plant and also of the soil; but of the latter with no great certainty, as the mineral may exist in the soil in such a condition or combination that the plant cannot absorb it. Hitherto the empiric mode, that is actual trial and general experience of the effect, have proved the best guide. In fact, the science of the chemist has done little to forward agriculture. The production and application of small manures has been chiefly empirical, and even the use of these, as generally employed, of doubtful ultimate utility.

2d. An accumulated vegetable mould, consisting of the remains of former organisms and mineral earth. The accumulation of vegetable mould now existing has been going on for unknown periods, ever since the present configuration of the earth's surface, that is, where it has not been washed away by water or exhausted by man's culture, but though of slow formation it can be got rid of in a few years. The exhausted sterile condition of most of the once fertile land in the eastern States of North America, denuded of the vegetable mould by aëration, shows that it is pre-eminently the food of plants. Man may be defined the only vegetable mould-destroying organism, hence ought to be termed *humanus destructor*. Yet he does this in ignorance, that without a vegetable mould, neither man nor the higher animals could have been developed or could continue to exist.*

3d. Water is of the first necessity to organic life, as the chief component, as holding, assisted by an acid, most of the constituents of vegetables in solution, as floating the molecules in their vital courses, and in preventing the organism from withering under the drying atmosphere and sun exhalation. River water, skilfully employed in irrigation under sufficient temperature, with such help as it receives from the soil, seems to supply without manure all the nutriment required by plants. Water constitutes about three-fourths of plants. In the fields of nature, water as well as air is the element or field of life both to plants and animals, in both elements rising from the lowest forms to the mammals. In plants some kinds, the Water Ranunculus for example, have a pliancy of character to both water and air on the same root or even the same branch, with leaves differently formed adapted to the different element. Some animals have also a power of adaptation to either element. This affords a most striking fact in support of the adaptation-development theory. The Ivy leaf, so different on a wall or clinging to any thing, from what it is on a self-supported Ivy branch, affords another example of adaptation. Also in some Australian trees of different kinds grown in this country which rose from the seed with fine pinnate leaves like our Acacias, as the plants got older the pinnate leaf did not expand, though an abortive attempt was often made to do so, but a portion of the leaf-stalk spread out into a large simple leaf, with this peculiarity, that the leaves have both sides the same, and generally stand perpendicular to the horizon.

4th. Purity of atmosphere. This is essential in our climate to the families of plants which supply food to man and to the higher animals. A dank still atmosphere abounding in putrid exhalations, is only suited to the lower order of vegetables, Mosses (Musci), Mushrooms (Fungi), &c. Where such an atmosphere prevails, the cereals and most of the fruits and tubers are much injured or destroyed by these diminutive parasites. The larger Fungi are produced where putrescence is in excess, and taint the atmosphere with unwholesome effluvia; instance the dry rot (Merulius lachrymans), phallus fœtidus, &c.

5th. The atmosphere contains probably a minute quantity of all the minerals in some of their combinations in the gaseous form, often discernible by the sense of smell, though not discoverable in the atmosphere by ordinary chemical tests. The deep deposits of Peat Moss, sometimes it is said 50 feet thick, often covered with bog-iron ore, I think demonstrates this. Moss accumulates in places which do not receive the washings of other grounds, and except from the atmosphere it is rather difficult to say from whence the minerals are derived. It is barely possible that the minerals of the Moss deposit rise from the ground, dissolved in water, by capillary attraction, as the course of water is rather to descend in the Moss.

6th. A supply of the necessary heat, light, and other constituents or impulses of the sun's rays. A considerable exposure to the sun's rays seems necessary to the higher land vegetables and animals. It is said that mothers, passing much of their time in the dark casements of fortresses, have often children with malformation, as if there was a disposition to sink in the grade of life. This leads us to conceive that in former geological eras, from a greater amount of bottom heat, steaming vapour may have greatly abounded, veiling the earth with a dense covering of cloud from much of the sun's rays—hence the earth only fitted to a lower fauna. I have often wished to try the effect of a considerable increase of the sun's light, pure and divided, by means of reflectors, &c., upon vegetables and animals, as a means of producing variation, and many years ago endeavoured to get the late Mr. McNab, of the Experimental Garden, Edinburgh, to experiment upon it.

It is interesting to mark the different types of life which exist in the wilderness from the Polar to the Equatorial regions, caused by the difference in intensity of the sun's rays and heat. This gradual change through the different degrees of latitude, from the hyperborean Mosses, Lichens, Grasses, Willows, Pines, Birches, to the Palms, Cacti, Mimosas, Lianas of the tropics,—the whole series show how strongly circumstances have operated upon organic life. *Patrick Matthew, Gourdie Hall, Feb.* 1, 1864.

* Baron von Liebig will allow me, as an experiment, to skim off (in imagination) the vegetable mould to a depth of 10 inches from the entire of Germany, from the Vistula to the Rhine, and I will guarantee that a civilised people, raising their own food, could not exist in Fatherland—even with the chemical aids which a thousand Liebigs could give. This earth cover of vegetable mould being removed, only a few kinds of forest trees and some Legumes, Heaths, Cudweeds, poisonous Equisetaceæ, Lichens, and the poorest stunted Grasses, could exist for ages to come,—the whole wide region only fitted for a few roaming savages, obliged to eke out a subsistence for a part of the year as of yore, by mollusks (shell fish) procured on the more productive sands of the North Sea. Hereafter, on the Brocken, the summit of the Hartz, on *Walpurgis Nacht*, amongst the scattered masses of the lightning rifted rocks, the legion of spectres of Liebig and his goblin followers might be seen, by the glare of their lurid fires, labouring with their furnaces and crucibles to prepare pure minerals for the food of the cereal plants. To this penance, for a thousand years, had the Cereal Goddess doomed our presumptuous chemists for *læsa Majestas*, for the attempt to subvert her throne, the Vegetable Mould. Pray, Liebig will pardon me for this play of fancy—a suitable reply to his Papal infallibility and denouncement of heretics in his letter to me of 10th July last. A considerable portion of the contest betwixt us is one of words. Liebig moulded his theory under the name of mineral theory—that minerals alone constituted the food of plants, and when he found this untenable under the usual acceptation of the term "mineral," he now endeavours to protect himself and his theory by terming all the food the plant receives from the soil, even the volatile alkali, as mineral, including my vegetable mould! Now this appears to me to be a shuffle. Sinking this contest of words, the real difference betwixt us is this,—Is it profitable in agriculture to prevent the exhaustion of the vegetable mould, Nature's prepared seed and growth bed, or is it not? Can the supply of food of plants be chemically prepared by man of such a quality and admixture as to raise sufficient food for a dense population, when what is termed the vegetable mould is exhausted, and nothing but pure mineral earth remains? In as far as the work of Nature—of the Creator—surpasses the work of man, so far, I expect, will the vegetable mould prepared by Nature as the seed and growth bed of plants, excel what can be prepared by man. I will revert to this very important subject. *P. M.*

A WEEK UPON THE COTTESWOLDS.

STEAM CULTIVATION ON THE ROYAL AGRICULTURAL COLLEGE FARM:—Fowler's apparatus has been employed here since September, 1861. Including a 10-horse power engine, plough, water cart, ropes, &c., it cost 840*l.* upon the farm. A cultivator has since been purchased, at a cost of 75*l.* The record of its performance is before me, beginning with "20 acres ploughed in 30½ hours during 4½ days," early in October, 1861, with a consumption of 2 tons of coal, and at a cost of 3*l.* 2*s.* for labour, 4*s.* 6*d.* for oil, and 4*l.* for wear and tear (an item charged at the rate of 1*l.* per diem). The expenditure was thus 4*s.* 8*d.* per acre in immediate outgoings, or 8*s.* 6*d.* per acre including wear and tear. The next memorandum is "21 acres ploughed in 4 days" (including the moving of the apparatus), at a cost of 4*s.* 3*d.* per acre, or 7*s.* 7*d.* including wear and tear. These two fields were worked with the aid of accustomed hands from Leeds. During the following five days upon a neighbouring farm only 11 acres were ploughed in 39 hours, at a cost of 5*s.* 2*d.* per acre, or 12*s.* with wear and tear, notwithstanding the coals were provided. And now we read for the first time of accident—anchor "flying out," &c., the result of mismanagement and inexperience. On the same farm another 11-acre field took 40 hours during six days, and costing 9*l.* 5*s.* 6*d.* in all or 17*s.* an acre (coals being paid!). We then read of 18 acres accomplished in 47 hours during eight days, costing 13*l.* 8*s.* 9*d.* for everything, including 1*l.* a day for tear and wear, or 14*s.* 6*d.* per acre.

The record proceeds, showing very fairly continuous work considering the lateness of the season. Ten acres done in 22½ hours in five days, including a removal, for 8*l.* 12*s.*, or 17*s.* an acre; 14 acres ploughed in 29 hours on five days, for 11*l.* 0*s.* 10*d.*, or about 16*s.* an acre; 18 acres ploughed in 29 hours on five days, for 9*l.* 13*s.* 10*d.*, or about 10*s.* an acre; and 12½ acres ploughed in 26¼ hours on five days for 8*l.* 2*s.* 3*d.*, or 13*s.* an acre. This was during the last week of 1861, the engine having been employed during every week of the last three months of the year on 48 days, ploughing at various depths 137 acres at a cost, including tear and wear, of about 84*l.*, or 14*s.* 6*d.* per acre. The following are the remarks of the superintendent on the autumn work:—

"In reviewing the history of the steam-plough on the College farm several important facts stand out. Unusual difficulties have been encountered from the rocky nature of the subsoil. The want of uniform depth of soil, even in level fields, will always be a serious impediment to cultivation by steam-power on the Cotswolds. Again, a fertile source of delay has been the want of sufficient strength in some of the working parts of the implement; the plough drum smashed on Mr. Lawrence's farm, and there were frequent breakings in the links of the chain strap. Thirdly, the construction of the anchor is defective, as shown in the frequent draggings of it, causing a most serious and vexatious delay. Lastly, we unwillingly came to the conclusion that our power is unequal to all the work we may have to do. A 12 horse power engine would have been better for us—less coal and less wear and tear would have resulted.

On this it is necessary to remark that the parts referred to as defective in 1861 have since been strengthened, and the faults then pointed out have been remedied; that the flying out of the anchor is a result in general of mismanagement; and that one great source of increased cost is owing to working the apparatus during the short winter days. The following is a specimen of the daily memoranda, partly, no doubt, in consequence of this:—

Nov. 20.—The moving took a long time to-day, consequently we did not start till late. Ploughing 6 inches deep, with four ploughs (ploughed 2 hours). *Nov.* 21.—The ploughing did very well, but owing to the rockiness of the land we broke two skiffs and three shares, which delayed us the rest of the time, except an hour lost from derangement of the rope on the plough drums. The rope slipped off the drum, and got between the spring and the chain (ploughed 5 hours). *Nov.* 22.—The ploughing, from the rockiness of the ground, was altered to 4 inches, and did very well, except in one place, where there was a little slope, which made it difficult to keep it in its place, as the rain was falling, and made the land very slippery. We were obliged to stop at 12 o'clock, as it continued to rain very heavily. From the carelessness of the porter boy we broke the handles and one wheel of a small porter. We also broke a share. We were delayed putting out the headland rope for the engine, as it got too wet for it to travel by itself (ploughed 4 hours). *Nov.* 23.—Owing to a steep slope in the field we had to change the headland rope of the anchor from drawing it in front, and put it behind to keep it from going too much down hill (ploughed 6½ hours). *Nov.* 25.—The ploughing went on well, though we took some time about it as the time was so short. We broke a share. As soon as we finished we moved into No. 13, but were not able to get the engine quite back in its place, as the linch-pin belonging to the hind wheel broke. We found the spring of one of the little wheels that keep the rope in the clip drum broken."

In these five days 10½ acres were ploughed in 22½ hours, 2*l.* 1*s.* 4½*d.* was paid in wages, 2 tons of coal were consumed, 4*s.* 6*d.* was spent in oil, and 4*l.* 5*s.* was charged for wear and tear. The total cost was thus 8*l.* 12*s.*, or 17*s.* an acre. This, it is plain, was not a profitable operation. Its failure is attributable to some extent, no doubt, to the character of the work, and to the weather of the week, but it was in the main owing to the shortness of winter days and to the inexperience of the hands employed.

The apparatus commenced work again in 1862 on a neighbouring farm on Feb. 14, and made better work than any hitherto quoted, doing 15 acres in three days. Very soon, however, we come upon another illustration of the liabilities which its promoters incur, especially when taking work on hire.

MARCH 15.—Saturday, fine day, roads dry; travelled to Preston; entering gate of field the forewheel caught on post, and swinging round broke one of the discs that keep the rope against the clip drum. After much trouble and sticking got into position and commenced to plough at 2, P.M., but soon stopped, as the anchor would not work. A pin had broken. Got the smith to drill it out. Rain set in on Sunday and continued more or less for three weeks. *April* 4.—Friday. Commenced work, but land too wet. Rain at night, and on Saturday it was worse; stopped again until the 14th, when it began to work pretty well."

This pretty well illustrates the risks and disappointments to which steam cultivation is liable. The whole of the work in 1862 is thus described in the *Agricultural Gazette*, No. 19, of 1863:—"210 acres ploughed and 400 acres grubbed. Wages paid, 104*l.* 11*s.* 2*d.* Coals burned, 94*l.*; oil, 8*l.*; repairs and rope, 83*l.* 3*s.* 3*d.* Total cost about 290*l.* or 9*s.* an acre. This is exclusive of annual sinking fund or interest of capital. An average performance of about 5 acres daily during 1862 was, however, a great improvement upon the average experience of the previous autumn and winter, when short days and inexperience made work both slow and costly.

Of the performance in the spring of 1863 there is no record. Since the 18th of August, 1863, the date on which the new management made their *debût*, the apparatus has been at work pretty constantly up till December 11, as follows:—

At Mr. Dewe's farm on 22 days, including removals—or at work 172 hours during these days—ploughing with the digging breasts 40½ acres in 76 hours, and ploughing with the turnfurrows 62 acres in 96 hours. This included 28 acres with the drags on as well. The whole was at a cost of 10*l.* 14*s.* for labour, and a consumption of 12 tons 8 cwt. of coal, and 2 gallons 3 pints of oil. It was 5-inch work. There were five removes; 18*l.* 5*s.* are charged for wear and tear. Mr. Dewe is charged 12*s.* an acre for this work. It was done at the rate of 5 acres a day, with a consumption of about 2⅖ cwt. of coal per acre.

At Mr. Lawrence's farm on seven days the apparatus was at work during 58 hours, and it turned over 27 acres during that time, at a cost of 2*l.* 16*s.* 6*d.* for labour, and with a consumption of 4½ tons of coal and 8½ pints of oil. It was generally a stiff soil, and the work was 11 and 12 inches deep. There were three removes. 6*l.* 7*s.* 6*d.* is charged for wear and tear, and Mr. Lawrence is charged 17*s.* an acre for the work. It was done at the rate of rather less than 4 acres a day, and with a consumption of 3½ cwt. of coal per acre.

On the College Farm on 35 days the apparatus was at work during 314 hours, and it turned over 59½ acres with the plough, 57 acres with the digger, and 91 acres with the cultivator—208 acres in all—at a cost of 26*l.* 17*s.* 6*d.* for labour, and with a consumption of 25 tons 7 cwt. of coal, and 7 gallons 6 pints of oil. It included fields of very various texture—light, shallow brash, and deep clay—the ploughing was about 7 inches deep, the digging was 10 and 12 inches deep, and the cultivator worked 5 and 6 inches deep—there were 11 removes—42*l.* is charged for wear and tear. The College Farm is charged 10*s.* an acre for this work.

On the whole 123 acres have been ploughed, 124½ acres have been "dug," 91½ acres have been cultivated—339 acres have been worked in 62 days at a cost of 32*l.* 17*s.* 6*d.* for coals, 40*l.* 8*s.* for labour, 3*l.* 8*s.* 3*d.* for oil, 5*l.* for blacksmith, and 3*l.* for broken fittings, or 84*l.* 13*s.* 9*d.* in all for actual outgoings, being at the

rate of close on 5*s.* an acre, which is a very good average performance. To this must be added 66*l.* 12*s.* 6*d.*, the sum of allowance already named for tear and wear, bringing the whole up to close on 9*s.* an acre. If instead of this we charge 1*s.* an acre for rope, or 17*l.*, together with 135*l.* per annum, being 10 per cent. for depreciation of value and 5 per cent. for interest of money—dividing this 135*l.* on 150 days as the probable yearly employment of the apparatus—then 73*l.* will have to be charged on 339 acres for tear and wear, or about 4*s.* 6*d.* an acre, bringing the cost of steam cultivation up to 9*s.* 6*d.* per acre.

It will be observed that the work is charged to the College at 10*s.* an acre, to Mr. Dewe at 12*s.*, and to Mr. Lawrence at 17*s.* In the case of the College Farm the charge is a mere question of account, and if the object be to keep an account which shall exactly show the value of the steam plough to the College, it is right to charge the price at which it could be done by the horses of the farm. And this, seeing that the work included not only ploughing at 5 and 6 inches but digging and stirring 10 and 12 inches, is probably what has been done. In the other two cases, of course the cost of the operation has nothing whatever to do with the fairness of the price which is charged. That depends solely upon the *value* of the work that was accomplished. Twelve shillings per acre is probably a full price for ordinary ploughing on the Cotswold Hills. Seventeen shillings is certainly a price not likely to be underbid by any rival, either horse or steam, for work 10 and 11 and 12 inches deep on adhesive soil.

The following are some of the memoranda of the autumn work:—

Sept. 11.—One hour occupied in removing the apparatus rather under ½ a mile, two hours fixing, one hour in preparing the new cultivating implement made: fair work on Pea stubble for Wheat going less than 4 inches deep (1½ acres cultivated). *Sept.* 12.—Accomplished 10 acres in 9 hours, burning 14 cwt. of coals. *Sept.* 14.—Engine and apparatus removed to No. 29, ¾ of a mile, at 6 this morning, tackle fixed, and commenced work by 8.30 A.M., being a summer fallow for Wheat, made splendid work, accomplished 9 acres before night. *Sept.* 15.—Up tackle, and moved this morning ½ a mile—at work before 8. Implement going magnificently on Turnip ground, preparing the same for Vetches—did 10 acres before night. *Sept.* 17.—Cultivating fallow and breaking up Rape ground behind sheep for Wheat, good work, 9 acres.

(*To be concluded next week.*)

A SIGNIFICANT QUESTION.

"How much per acre do you get, Mr. Mechi, for your root and green crops after paying for all the purchased food?" and sometimes when this question is asked, I observe a peculiar twinkle of the eye and expression of the countenance of my questioner, which betrays a sort of "nil" expectation.

I reply, "Here are my stock balance sheets for the last two years, and they are as nearly as possible the average of several past years." I sometimes add, "How much do you get for your green and root crops?" and the reply I get from farmers on unimproved soils is too often, "We get from 1*l.* to nothing per acre, after paying for the corn and cake." And perhaps the best confirmation of this is that dealers and others who purchase the feed will rarely give more than 1*l.* to 2*l.* per acre for a crop of Turnips if they give the animals cake, and sometimes they will give no money, only the cake—I speak now of our south and east country, not of Scotland or the north and west, where among high mountains, arresting the clouds as they pass, they have a moist atmosphere suitable to the Turnip crops, which grow there free from mildew and other hindrances of a dry atmosphere.

My brother agriculturists must not expect such results as 5*l.* to 7*l.* per acre on poor land, after paying for 20*l.* worth of purchased food consumed with each acre of green and root crops, unless they adopt a particular mode of feeding, like that recommended and practised by Mr. Horsfall (Royal Agricultural Society's Journal, vol. 18, p. 150). I have also the advantage of irrigating with my farm and house sewage about 12 acres of pasture and Rye-grass. Farmers must learn to consume all their Bean straw, and much of their other straw, and keep their animals well sheltered in bad weather.

All these tend to produce the 5*l.* to 7*l.* per acre for the root and green crops. Thus, the manure from 700*l.*-worth of imported food costs me only the necessary shelter and attendance, &c. The latter would absorb nearly all the balance left for the green and root crops. The food, even if purchased of myself, is always charged at market (not cost) price—say hay at 5*l.* 5*s.* per ton, cake and corn at market price.

With every bushel of roots there are consumed of Rape or Cotton-cake, 4 lb., bran and malt-combs, ¾ of a lb. each, and when approaching fatness some Bean-meal, say from 2 lb. to 7 lb., with more cake and some hay, or in round numbers, 700*l.* worth of purchased food is consumed, with 30 acres of green and root crops, and part of the straw of the farm. As I make farm-yard manure enough for 70 acres annually, each of those acres may be said to receive the manure from 10*l.* worth of purchased food. The 70 acres receive also the manure from the consumption of 30 acres of good root and green crops, and the manure from the cart-horse stable. Such other portions of the farm as need manure, get guano, superphosphate, nitrate of soda, and salt, with irrigation on the Rye-grass and pasture, and occasional folding.

I need hardly say that under such a system, even on my naturally poor soil, the root and green crops are very heavy.

My great object is to grow plenty of corn, of which I have 100 acres annually out of my entire holding of 170 acres.

This abundant season my crops have been heavy—8 acres of Red and 8 acres of White Wheat, sold out of the field, or rather off the stack before thatching, realised near 16*l.* per acre, the produce being 7 quarters 2 bushels per acre, grown after Peas and Beans.

My subsequent threshings from various fields have been 6½ and 6 quarters of Wheat per acre, 6 and 7 quarters of Beans, 6 of Barley, and 10 to 11 of black Oats; of this much is due to season, and much to ample manuring, deep cultivation, and drainage.

My Rivett Wheat produced 6 quarters per acre. It was grown on land which produced last year 5 quarters of Red Wheat per acre. With ample manure at our command, we may take liberties in cropping. Rivett Wheat suits our heavy land better than Barley. *J. J. Mechi.*

TIPTREE HALL.

LIVE STOCK ACCOUNT.

DR.				CR.			
Oct. 31, 1861.				Oct. 31, 1862.			
To valuation ..	£737	18	0	By valuation ..	£749	18	8
To food bought ..	538	13	9	By live stock sold, including wool, dairy produce, and poultry ..	1299	5	9
To live stock bought	534	6	0				
To balance ..	238	6	8				
	£2049	4	5		£2049	4	5
Oct. 31, 1862.				Oct. 31, 1863.			
To valuation ..	£749	18	8	By valuation ..	£817	19	11
To live stock bought	624	0	6	By live stock sold, including wool, dairy produce, and poultry ..	1384	16	3
To food bought ..	645	11	0				
To balance to credit of root and green crops	183	6	0				
	£2202	16	2		£2202	16	2

CROPS CONSUMED (ONE YEAR) 1862-3.

12 acres of Globe Mangel
6 acres of Swedes
12 acres of Italian Rye Grass
1 acre of pasture
4 acres of Tares
The aftermath of
7 acres of Red Clover
4 acres of pasture.

MALT, DUTY FREE, BILL.

THE following is a *resumé* of the Bill brought in by the Chancellor of the Exchequer to allow the making of malt duty free to be used in feeding cattle:—

1. Any person giving security and taking out a license may make malt in a malt-house approved by the Excise for the purpose; and all malt so made and mixed with Linseed cake or Linseed meal as directed shall be free from duty.
2. The security required is a bond to her Majesty, with sureties to the satisfaction of the Excise, not to take from any such malt-house any malt except duly mixed with material prescribed by the Act.
3. The malt-house must be properly named upon its door.
4. All malt made in it shall be deposited in a store room, and shall be conveyed to and from the room upon such notice as the officer of Excise shall appoint.
5. The maltster shall provide secure rooms in his malt-house, to be approved in writing by the supervisor, for grinding the malt made by him in such malt-house, and mixing and storing the same when mixed; and all such rooms shall be properly secured and kept locked by the proper officer of Excise.
6. All malt before removal from the malt-house shall be ground and thoroughly mixed with one-tenth part at the least of its weight of ground Linseed cake or Linseed meal; and ground to such a degree of fineness and in such manner as the Commissioners shall approve, and mixed together in a quantity not less than 40 bushels at a time in the presence of an officer of Excise.
7. The maltster shall keep account of the quantity of all malt mixed as aforesaid which he shall from time to time send out or deliver from his malt house, with the dates and addresses of the person for whom such mixed malt shall be so sent or delivered.
8. If any person shall attempt to separate any malt from any material with which the same shall have been mixed as aforesaid, or shall use this malt for the brewing of beer or distilling of spirits, he shall forfeit the sum of 200*l.*
9 and 10. The penalties of existing Acts are recited.
11. This Act shall continue and be in force for five years.

ENFORCEMENT OF OUTFALL.

I CANNOT resist the compliment paid me by the "Gloucestershire Drainer," and at once give him the information he requires on the subject of compulsory outfalls.

There are several Acts of Parliament which will give him the power of enforcing the object if he likes to resort to them.

There are the private Drainage Companies' Acts; or "The Land Drainage Act, 1861," and also, under certain conditions, Lord Lincoln's Act, as it is popularly called. By either of these Acts he can effect his purpose if he determines, come what will, to overcome those difficulties which have hitherto acted, as every practical man knew they would, as a complete veto to a fair and reasonable settlement of a proper demand.

The difficulties arise out of the obligation imposed on every applicant for an outfall, not only to pay unavoidable expenses where the object may warrant such costs, but all expenses, let them amount to what they may, in the shape of surveyor's witnesses and lawyer's bills (both his own and his neighbours), which can be shown to be legally "reasonable" for the most trifling easement. These expenses I have known to exceed the fee simple value of the land improved by the outfall.

In the last case in which I acted—the only case, as far as I can learn, of a positive compulsory proceeding under the "Land Drainage Act 1861," the result has been worse than nothing. Arbitration was decided upon, and the case went to an umpire as the cheapest mode of settling it (!).

A surveyor of the highest character as an agriculturist and as a man of business, was selected as the umpire. The applicant in this case had "cleared out," as he considered (and "deepened" as his neighbour thought), a water-way which had always carried the water from certain land which he had drained, under Government inspectors, 4 feet deep; but the ditch in question had hitherto taken the water away at the ordinary depth of rural water-courses, which did not exactly fit the depth of under drainage required by the Inclosure Commissioners without the careful "clearance" it received or "deepening," as the neighbour asserted. Whichever it was, it was so doubtful that the umpire was asked to determine the question, and he had no satisfactory evidence offered him to prove that the ditch had been deepened instead of being cleared. I lay this stress on "deepening" and "clearing" to show that the question in this case (and it is the type of many) was a nominal one.

The umpire has made his award. But no one but himself knows what is in it, for the applicant fearing the costs, which I have explained, refuses to take it up, and so the water way, which had been blocked up by his kindly disposed neighbour, after it was made serviceable, remains in a condition worse than it was originally. Three acres of land is all that is affected, and the applicant is content to bear the evil, and the charge for the drainage under Government, rather than pay more than the fee simple value of the drained land. This is the result of proceeding under the last Act of Parliament for securing outfalls.

This will sound incredible in this draining age; but it is true; and so long as my single voice alone is raised to expose the absurdity, nothing will be done. But the absurdities with respect to outfalls are not more glaring than those relating to underdraining itself. Can anything be worse than the continuance of the present system of parallel drainage to free soils, just as if they were clays requiring aëration and were subject to the same influences.

At this moment, after nearly 20 years experience, we are doing the same as we did in the infancy of our practice, and I hesitate not to affirm that we are irretrievably injuring the water supply of the country, and prejudicially affecting the free soils in the drainage of the land itself.

I will beg the "Gloucestershire Drainer" to join with me in securing an inquiry into the whole question. *J. Bailey Denton*, 52, *Parliament Street, Westminster, Feb.* 15.

Home Correspondence.

The New Highway Act.—You did me the favour lately to insert a few remarks from a Norfolk magistrate and myself on the working of this new Act in the Docking Union. At the same time you copied from the *Mark Lane Express* a reply to Mr. Calthorpe signed by an "Old Parish Surveyor." Probably Mr. Calthorpe has not seen that letter, but as he has addressed another note to the rate-payers of Norfolk, I think your readers should hear what he says and how he has answered the arguments of the "Old Parish Surveyor." He says:—

In my letter of 13th January I said in reference to the working of this Act in the Docking Union, that I was afraid the increased expense would be heavy, but a complaint has been made by its advocates that I adduced no proof of this; the following, however, is one of my reasons. The roads in this parish are unexceptionably good, and for the last 20 years the expense has not averaged so much as 2*d.* in the pound, but we have already paid under the new Act, a rate of 3½*d.* in the pound, about double. Great part of this sum has not been expended at present, but I feel sure that what has been expended would have been much more beneficially laid out, had it been in the hands of one of the old surveyors.

It has been said that in that letter I advocated a return to the old Act, with the employment of an "Informer." This is an ill-sounding word, calculated to bring my recommendation into bad odour, and to draw attention from the real question. I advocated the appointment of an Inspector of Highways, similar to the Inspector of Nuisances—an appointment which under the Nuisance Removal Act has worked so well. This Act is also stated by its advocates to have been adopted in many counties with success, but I fear that this statement is incorrect. If we were told in what counties, we could probably gain information by inquiries.

When the Act was adopted in the Docking Union, a majority of the Waywardens met it in the best spirit, and with a wish to carry it out to the best advantage. The Guardians of that Union, who are also Waywardens, are a most intelligent and superior set of men, and when I tell you that notice has been given by the chairman that on Wednesday, 10th February, he will move that a requisition be forwarded to the magistrates, begging them to take measures for dissolving this Highway District, as provided for by 39th sec. of the new Act, and that it is believed that the motion will be carried almost if not quite unanimously, it will be readily conceived that the Act is not working well here.

In conclusion, I will only add, that my remarks have been made solely from a conscientious desire to do good, and to give such information as from a practical experience in road making of more than 50 years, and as a county magistrate of long standing, and therefore familiar with the plans and merits of the old Act, I felt myself in some measure enabled to do.

I might well let this letter suffice as an answer to the "Old Surveyor." But his experience of the new Act in Salop is so different from ours in Norfolk, that we must look to some previous cause for this difference. The "Old Surveyor" says, "Notwithstanding the extra charges of salaries to clerk, surveyor, &c., my payments are reduced and the roads improved." Such being the

case, I do not hesitate to say most emphatically, but most respectfully and with no desire to offend, that the "Old Surveyor," when in office, either did not understand his duty or he sadly neglected it. Who can mend roads so cheaply or so well as the farmer who lives on the spot? and whose interest is it so much as the tenant farmers' to have the best roads at the least expense, for he uses them more than any one, and pays chief part of the highway rate. The "Old Surveyor" says that the best farm labourer is seldom the best road maker (mender I suppose he meant, for surely the roads he has managed have been made long ago, and if kept in good repair don't want remaking), and I contend that it requires no great amount of genius to be a very good parish surveyor. Any farmer who has his wits about him is well qualified for the office, but he must give his attention to the work, and should stick to it for a few years. Carting and breaking stones can be easily done by piece-work, but there are many little matters, such as scraping up mud, raking in ruts, and putting on stones, that are better done by the day. These odd jobs usually find employment for some partially disabled or old labourer, who would otherwise have nothing to do in winter, and who infinitely prefers thus earning from 6*s.* to 8*s.* a week, to receiving parish relief, or passing the winter in the workhouse. It is idle to contend that this class of men would find work under the District Surveyor or his contractor, so we may expect from the new Act a slight increase of the poor rates. In this parish, like Mr. Calthorpe's, we have had for years very good roads with a twopenny rate, although chief part of the stones have to be carted 3 or 4 miles, and we have a fair amount of traffic, being near Norwich. The new Act can't be properly worked without costing the occupier for its machinery nearly 2*d.* in the pound, and I have no desire (being a poor tenant farmer) to have my highway rate doubled or even increased one-half. Supposing, as the "Old Surveyor" proposes, that all the road work is done by the piece, contractors, whether great or small, seldom work long without a profit, and then there is the salary of the surveyor, and perhaps his deputy, that of the clerk and the treasurer, to say nothing of the cost of printing, advertising, and the like, for which we paid nothing under the old Act. I therefore conclude with once more asserting, that if the "Old Parish Surveyor" had properly performed his duties, it is utterly impossible for the new Act to diminish his rates. *East Norfolk.*

Lodgers and Cottagers.—You have lately quoted from the *Times* the following agreement required of his cottagers by Mr. Holland, M.P.:—

"I . . . . agree to take the cottage from Mr. Holland at the yearly rent of upon the following conditions—viz., that the rent shall be paid quarterly, and that I will give up the cottage to Mr. Holland on receiving a quarter's notice to that effect. But if I take in a lodger without Mr. Holland's consent, I render myself liable to quit at any time on one month's notice being given me." (See p. 899, 1863.)

I remember an operative drainer lodging with a byreman with a wife and eight children and a foreigner called a "bondager." That farm is the property of a man who has a seat in the House of Lords, and it is not long since he was a member of the Cabinet. That house or cottage, or hovel, was not more than 20 feet by 16. There were not a sufficient number of joists in it for supporting a flooring for an attic room. The married couple with eight children, and the female bondager, and the Irish labourer, all herded together within the limits of 20 feet by 16 feet. Since I resided a twelvemonth between Tewkesbury and Worcester, I am aware that this barbarous compulsory bondager-contract system does not cross the river Tyne in South Northumberland, nor the Solway Frith in the south-west. But suppose me to get work on any of the farms where that enactment is in force, I might have to walk several miles morning and evening to and from my work, which I have done. I know what it is to kindle a fire to thaw my clogs before I could thrust my feet into them. I cannot explain why walking an hour does a man more injury than working energetically with the pick or spade for an hour. Bachelorhood has sufficient drawbacks without proprietors by such agreements as these adding to its discomforts. *W., Edinburgh.* [Our correspondent supposes that if he got work on Mr. Holland's farm he would in consequence of the agreement have to walk four or five miles to and from his work. Not at all! The effect of the agreement would only be to require any of the cottagers to ask the permission of the landowner before giving him lodging.]

Cotton Seed Cake.—In the *Chronicle* of the 30th ult. is the concluding part of Mr. Coleman's paper, which he read at the London Farmers' Club, on the Meat Manufacture, and in it the following passage occurs relative to Cotton-seed cake:—"The experience of others may differ, and if so I shall be glad to hear that I am wrong, as from its reasonable price it is just the sort of food a farmer would like to use more extensively." In 1860, I purchased a quantity of the best decorticated Cotton-seed cake, which although quite free from bark or husk, contained a little cotton fibre, without which perhaps it cannot be obtained. After breaking it up, I gave it to a lambing flock—to the ewes, 1 lb. per day, and to the lambs *ad libitum* for a short time; both seemed to do well on it, but very soon the lambs' coats became rough, then followed a sharp inflammation, which ended in death in a few hours at the rate of one, two, or three per day, until I had lost nearly the whole of them. After losing several I determined with the assistance of a butcher to examine very minutely the internals of two or three; in each of them we found a number of cotton balls of various sizes, from a common marble to a Walnut, as completely wound by the process of digestion as if done by hand, some of which were fixed in the narrow passages of guts, which were dry, and had the appearance of having been cooked, so fierce had been the inflammation. After having satisfied myself as to the cause, I gave them a good deal of castor and other oils, but did not think any good resulted from their use. The process of digestion did not appear to have changed the cotton, which must have been some time accumulating, and therefore I conclude the ewes would also have fallen had I continued to give the cake to them. As this subject is of very great importance to all who are employed in the manufacture of meat, you will perhaps be good enough to give it a place in your next week's paper. *M. P., Hatfield.*

Short of Summer Food.—Said a Gloucestershire farmer to me the other day, "We were sadly short of food for our stock last summer, had to put out our ewes on tack, and were very much inconvenienced generally." I quietly asked "Had you no Beans?"—"Oh yes—our Beans were 6 feet nigh."—"Well then," said I, "how could you be short of summer food, and what necessity was there for putting out your stock?" A peculiar expression of doubt and uncertainty appeared on my friend's countenance, as he said, "Will they eat green Beans?" I replied, Try them: I always feel quite independent as to green food during July and part of August, so long as I can have recourse to my standing Beans well podded. They are passed through the chaff-cutter, and afford hearty food, taking the place of, and following Mangel. Of course the animals continue to receive their usual allowance of cake, meal, malt combs, and bran. It is astonishing how much food is yielded by an acre of really good Beans. I was dining at St. Andrew's Hall, Norwich, when the Royal Agricultural Society held its meeting there in July, and asked an excellent farmer near me how his Beans were. "Oh! capital," he said; "I am going to put my sheep on them to-morrow. It spares the trouble and expense of harvesting them and bringing back the manure." Acting on the hint, I tried my sheep, much to the astonishment of my bailiff and the sheep too; for in the first small fold they hardly knew what to make of it, but in the third they cleared them off close to the ground. So now we know that if pushed for summer food on very stiff clays, where Grass is usually scarce, or in very dry summers, or light thin soils, we can find a comfortable and profitable substitute in our growing Beans and Peas. I have now about 1½ acre of land, heavily manured, and deeply trench ploughed, ready for young Cattle Cabbage plants, which will shortly (in February if possible) be taken out of their seed-bed and planted, so as to produce ample food in July and August, when other juicy food is scarce. I also plant about 4 acres in June with Cabbage after Tares; first heavily manuring and deeply cultivating the land. *J. J. Mechi.*

Consulting Engineer to the Royal Agricultural Society.—You have given us the substance of some correspondence submitted to the Council of the Royal Agricultural Society by the Messrs. Howard, of Bedford. Since I am somewhat interested in the matter, may I beg space to say a word? Do the Messrs. Howard wish to heap upon the head of Mr. Amos all the inefficient trials and past blunders of the Royal Agricultural Society, and do they suppose that the getting rid of that gentleman will set the prize system in a healthy position? What did Mr. Amos do at Worcester? According to the Society's report, Messrs. Wm. Owen, Engineer, H. B. Caldwell, Chas. Sewell Read, and Jacob Wilson took the steam cultivators; John J. Gooch and D. K. Clark took the portable and fixed engines; William Chalcraft, John Hicken, and G. Martin took the portable and fixed threshing machinery; and G. M. Hipwell and Arthur Rigg took the rest of the machinery, &c. Why then, Mr. Amos appears to have done nothing. Do the Messrs. Howard mean to say that Mr. Amos influenced these gentlemen? It is for them to explain themselves to the public. The mere sale of a few implements cannot have had much to do with it. If the Messrs. Howard think that the tossing Mr. Amos over will put all right, they are vastly deceived, for unless the Society's trials are based upon actual practice, pointed out in the correspondence forwarded by me to you, January 28, 1864, we shall never get satisfactory awards. *William Smith, Woolston, Bletchley Station, Bucks, Feb.* 16.

Diseased Swedes.—In the year 1856 I tried many experiments with various manures on a gravelly soil on 1 acre pieces of ground, and particularly remarked that on the piece dressed with 15 loads of farmyard manure and 2 cwt. of blood manure, the Swedes appeared to ripen early and decay prematurely and almost universally in the autumn, as described by Mr. Hussey in last week's *Agricultural Gazette.* The Swedes on all the other plots at the same time were quite sound, and at the time I attributed the diseased state of the Swedes on the blood manure plot solely to the stimulating effects of that manure. I may add that in the experiments of 1856 the acre of Swedes dressed with 15 loads of farmyard manure and 2 cwt. of superphosphate—Lawes' gave the best results as to quantity for money value of manure. The same was the case in a piece dressed with the same quantity of farm-yard manure, and 2 cwt. of Fothergill's superphosphate. All the other plots dressed with larger quantities of superphosphate, and others with guano and the same quantity of farmyard manure, did not give such advantageous results as to quantity of roots for the value of artificial manure applied as the 2 cwt. of superphosphate dressings. There was no perceptible difference in the Barley and Clover crops in the following years; but of course the extra dressings must have had a slight influence on them. *R. Burniston, Henley-on-Thames.*

The Agricultural College, Cirencester — Education for Young Farmers.—It cannot be too often reiterated that we have in this kingdom one of the best institutions in the world for promoting the business interests of young farmers. It is the Agricultural College at Cirencester, in Gloucestershire. It was originated and is designed to give the best agricultural education that can be obtained in accordance with modern practice. The object is a noble one, and worthy of the times in which we live. Modern agriculture is no doubt satisfactorily progressing, but nevertheless it is much retarded by the ignorance and prejudices still existing. Agricultural societies, the agricultural press, the general reports of meetings, and the many other sources of information are so continually before the world now, that it is impossible to remain altogether ignorant of the value and progress of modern agriculture. But this is far different from finding our young men, our next race of farmers, thoroughly grounded in all that pertains to the best interests of modern farming. It is beginning at the beginning, and agriculture, like most other sciences, has no limit in its practice or to the extent of its knowledge. It is unbounded, but it is only in these latter years that it has become partially developed. The wonder is that more colleges are not founded, and that every young farmer of any standing does not take advantage of them. They will prove the very nurseries of modern practice in connection with the scientific knowledge there taught. The Cirencester College is a noble institution, a high type of its class. The cost of a good agricultural education there may serve to deter many pupils entering, but it is to be observed that its advantages are very great. The students are taught practical agriculture on a farm containing 500 statute acres, and all of it managed upon the best modern principles, and cultivated with the best implements and the best machinery, including steam culture, every result being carefully noted. He is also taught the breeding, care, and management of stock as upon a breeding and fatting farm. Besides this he is taught agricultural chemistry, mechanics, hydraulics, hydrostatics, botany, surveying, mensuration, veterinary practice, anatomy, drawing, &c. These sciences being taught by competent masters and professors, it cannot be expected to be done without rather heavy costs, which, however, are, notwithstanding, moderate. It is highly desirable that every intelligent young farmer should participate in these great advantages, if only for a limited period. A single year might suffice to set an intellectual youth on the right road to acquire such knowledge, to be more or less perfected in future. Objections may be mooted as to the correctness of the courses of culture, and the breeds of stock upon the farm. This is of minor importance; every farmer (and more particularly every one taught at the College) would of course adapt his breeds of cattle and sheep in accordance with the soil and climate with which he has to do. Few Norfolk or Eastern counties farmers would breed Cotswold sheep; nor would the Devon or Herefordshire men breed Short-horns. But a good man of business would soon distinguish the better qualities of the animals he found best adapted for his occupation; he would find no difficulty in thus adapting his stock. The great thing is to bring up our young men to high intelligent union with, and in close combination with, habits of plain practical business. The chief fault is that the intellectual young farmer abhors the petty details of business. It ought not to be so. Many of our greatest men were not above such details. Instances innumerable may be found in every walk of life. Why should young farmers be so exceptional? It may not be very intellectual employment to look after the welfare of the weakly lamb, the puny calf, the tiny suckling pig, or again the mischievous poultry; or again on the farm to the various petty things that so continually require supervision. But when the young aspirant bears in mind that these weakly, puny, tiny animals are from some precious stock, some noted breed, his whole self is interested, he delights to nurse the little stranger. It is in the propagation of excellent profitable stock and their development, and in the successful growth of his corn and root crops, that his prosperity is achieved. His knowledge and acquirements then, if perseveringly and industriously applied, cannot fail to be of essential service in producing this result; and it is thus he proves that "knowledge is power," although applied to that oldest of all occupations—the tillage of the soil. But suppose we go a little further to give him experience before he hazards his property in business. We then come to a popular system of education as carried on by many intelligent farmers, *i. e.*, the reception of agricultural pupils in the farm-house. In connection with a college education this is an admirable continuation. The system taught in the college is one, it may or it may not be the right one for any individual student. He would like, and ought to know, the best system as applied to the farm or district in which

his future lot will be cast. Hence it would be right and proper for him to spend a year or so in gaining experience upon a respectable farm in that district or on a soil and climate analogous to it elsewhere; indeed it is to be preferred, because he will learn the customs of the distant district, which he can adopt or repudiate at his pleasure on entering upon his own business. However admirably the farm business at Cirencester may be carried on, and however well it may suffice for a model of farming for the students, it is not likely that it could in its entirety be adopted on every farm. It would, therefore, appear desirable, if not necessary, that the majority of the students should subsequently locate themselves at one or other of the many farm-houses open for their reception. Neither would it be amiss if intelligent men and clever farmers, resident in different districts, were sought out by the College authorities to whom they might recommend students desiring farm residence. In this way much ultimate good might be done the student, and much loss prevented by his engagement in business prematurely and without matured experience. *O. F.*

Naked Oats and Barley.—Could any of the Correspondents of the *Gazette* inform me where these varieties are to be obtained, and whether they are suitable for this country. I imagine that they would have considerable advantages in being devoid of husk, and thereby more easily convertible to human and animal food. There are, I have no doubt, several varieties, but the kinds I wish to ascertain particulars of are:—1. The Skinless Oat, introduced into Ireland in 1830, by Thomas Derenzy, Esq, of Clebeman Hall, being originally obtained from Shantag, a remote district in China; its productiveness and nutritious qualities are much praised in Baxter's Agricultural Library. 2. The Barley is the 4 or 6-rowed naked Siberian Barley, sometimes called Hordeum cœleste, from its productiveness; is grown in France and Germany, and greatly praised by Von Thaer and other writers; introduced to Great Britain so early as 1768. As also a somewhat similar variety, though earlier, the Himalaya or Nepaul naked Barley, introduced to England in 1817, and said to grow wild in the Himalaya mountains. These varieties would seem well suited for land that is unfit to produce first-rate malting Barley. But as I am unable to obtain information respecting them from such seedsmen as I am acquainted with, I should be glad if any one of your numerous Correspondents could supply it. *W., Feb.* 2.

Societies.

ROYAL AGRICULTURAL OF IRELAND: *Feb.* 11.—*Improvement of the Breed of Horses in Ireland.*—The report from the committee appointed to inquire into the question of the deterioration of the breed of horses in Ireland was presented.

The following questions had been widely circulated:—

1st. Are there many horses bred in your locality of that class adapted for cavalry remount or chargers, weight-carrying hunters, and road purposes?

2d. Has the breeding of such horses increased or decreased of late years?

3d. What thorough-bred sires exist in your district, and what is your opinion as to their soundness and merit, as also the quality of the stock produced by them?

4th. Would the services of a first-class thorough-bred stallion be appreciated, and what is the maximum price which your stock breeders would be disposed to pay for such service?

And the general nature of the replies to Nos. 1 and 2 went to show that there was a general decrease in the breeding of horses, corresponding with the Registrar-General's return, showing that in 1859 there were 629,000 horses, and in 1863, only 579,000. The replies to No. 3 were to the effect that the thorough-bred sires now in this country for stud purposes are not at all of the class they used to be, and the stock produced by them more weedy and unsound than formerly. The replies to No. 4 state that the general breeding of horses has fallen so much into the hands of those poor farmers, who did not appreciate or understand the value of that class of thorough-bred sire best adapted for getting even troopers, it would be necessary, if such a sire were provided, to give his services, at least for a few years, at a lower rate than would remunerate any private individual. Such a sire, therefore, can only be expected to be provided in some few localities where a large proprietor might be satisfied to do so at a present pecuniary loss, for the future advantage of his tenants.

The committee refer with concern to the evidence accumulated from every reliable quarter, showing distinctly that the number of that valuable class of horses for which this country was long so celebrated bears a very small proportion to a most inferior class of horses, the breeding of which must be a pecuniary loss to the farmer and the community.

The evidence shows that hardly any gentleman now breeds a thorough-bred horse; and the few who do still breed, from having the remains of our superior thorough-bred mares, find a difficulty in procuring that class of sire suited to those mares, and which would perpetuate the good old strain of blood now fast dying out, but for which this country was so celebrated, as combining strength, endurance, and speed. It appears, therefore, almost evident that as the source from which (when their racing days were over) the horse-breeding counties were supplied with thorough-bred sires of blood, bone, and sinew has, to a great extent, ceased, that Government should consider the best mode of now providing that which national taste and the spirit of a by-gone age for generations obtained from private enterprise. A favourable opportunity seems thus to present itself for something definite being at once done in Ireland, which might be for the benefit of the whole kingdom.

In this country weedy and unsound thorough-bred horses, when found deficient in speed as well as in strength and endurance, are sold at a low rate as sires, and then may be the only thorough-bred horse available in the district to which he is taken; and the low average price of the produce, even from a good mare, is so small that the sensible farmers will abstain by degrees from breeding at all, and sell their best mares and fillies to the continental buyers. In order, therefore, to remedy these evils they recommend the Council to call the attention of the Government to the necessity of taking the existing state of horse breeding into their serious consideration.

After some discussion it was resolved that the Secretary should communicate with the Royal Agricultural Societies of England and Scotland on the subject; and that an address should be presented to her Majesty, praying for the issue of a royal commission, and that a deputation be appointed to wait upon his Excellency the Lord-Lieutenant in relation to the subject.

Farmers' Clubs.

KINGSCOTE: *Growing, Storing, and Consuming Root Crops.*—Mr. F. BURNETT lately introduced this subject for discussion. The following are extracts from his paper:—

The Soil.—The expression Turnip soil is a very familiar one, but it may mean anything if we are to believe a statement of Mr. Huxtable, that it is possible to raise a root crop off a deal table. I believe roots can be produced on any soil, and that on arable farms they are indispensable. A good Turnip soil is a brash or sandy loam, with a porous subsoil, which is easy work for two horses to plough, dries quickly after rain, and yet does not burn in dry weather. Swedes will flourish on a heavier soil than Turnips, which is consistent with their slower and firmer texture. Until the last three seasons Mangel has succeeded on almost any soil, except very light sands and gravels. The soils best suited for them are rich loams, clayey loams, and good peat soils. On heavy lands where Swedes and Turnips are uncertain, very large crops are produced. The great secret of all root-crop growing is to hit the season, and this cannot be done unless we are ready for it; therefore no time should be lost after the crops are off, whether light or heavy land, in having the cultivator or paring plough set to work. The former I prefer, going twice over it in different directions. Cultivating or paring answers several useful purposes; it arrests the Couch roots before they have a deep hold of the ground, the want of air keeps the roots near the surface when the corn is growing, and instead of burying them keeps them on the top, ready for the harrows to work. After a few dry days all the rubbish can be raked off and burned in large heaps, and we all know how useful ashes are to mix with artificial manures. The breaking of the surface soil in the autumn is of great advantage to the working of the land in the spring, much less labour being required to produce a fine tilth, and a saving of labour in the spring is of great importance. Our next operation is to have the dung hauled out into small heaps, enough for about two acres. The system of wheeling is to be recommended in all seasons (especially in a wet one), so is the system of having one year's dung in hand. Theory laughs at this, but facts are stubborn things. I need hardly say the sooner the land is ploughed the better. The depth must depend on your soil, although I am an advocate for deep ploughing for root crops, yet to break all the pan, or whatever it may be called, that is between the ordinary depth of furrow and the rock, I do not advise. Experience and the theory of ploughing all soils 10 or 12 inches deep do not agree. Once ploughed, or once cultivated in the spring, will, in most cases, be sufficient, when the land has been left in a good state after autumn cultivation. If much work is required in the spring the moisture will evaporate, the soil become so loose and hollow, or so hard and gnarly, that the crop of roots becomes a decided uncertainty.

Applying the Manure.—In all the most successful root-growing localities the ridge system is invariably adopted, the farmyard dung and part of the artificial manure being put inside, especially when guano is used, that it may not come in contact with the seed. Bones are also better put inside, if not the rooks carry a large quantity of them away. A mixture of farmyard manure and artificials is better than either sort alone themselves. There is also a great advantage in the ridge system enabling the horse hoe to be worked at a much earlier period, whereby the weeds are destroyed and a new surface exposed to the air. The width of the ridges ought to depend on the amount of manure you intend to put. If your object is to grow large roots and a great weight per acre, 28 inches seem to be about the width, where from 28 to 30 tons has been grown.

The system of cultivation I have mentioned only applies to cultivation after a straw crop. Turnips after Sainfoin is a general rule on the Cotswold Hills, and the system of preparing the land is worthy of imitation; although at first sight it may appear very expensive, yet I believe it is the most economical system. Mr. Burnett gave details of the system, and then stated in what cases a green spring crop can be profitably introduced before the root crop. On farms where a large flock of sheep is kept, it is very advisable to have a spring crop, such as Vetches, Rye, or Rape, to supply food after the roots are eaten, and before there is sufficient Grass. This can only be done where the land is perfectly clean, and of a brashy nature.

The Time of Sowing varies with the climate. The further north or the colder the climate, the earlier ought to be the date of sowing. The time for sowing Swedes on the Cotswold Hills is from the middle of May to the middle of June; Turnips from the middle of June to the middle of July. A few Turnips for early use may be sown before the time mentioned. Swedes sown in the middle of May in the vale would, three seasons out of four, be attacked with mildew. The frequent use of the horse hoe is the best check for the disease, or what is called paring in Scotland, that is taking a light furrow from each row. Where large quantities of Turnips are grown it is often difficult to get over the work within the time which is best suited for growing the heaviest crop; it is therefore preferable to commence a little earlier in favourable seasons, as unfavourable weather may set in, and it is of the greatest importance to have a fine seed bed.

The quantity of seed per acre—4 lb. of Swedes and 3 lb. of Turnips. It is advisable to sow much more than would be required, for a thick crop of plants grows the most rapid at first, and gets out of harms' way from the fly. In all cases, whether put in with the drill on the ridges, or on the flat, two cwt. of superphosphate, or some other similar manure, mixed with ashes, should be put in with the drill; this either gives the fly a good supply of food, or drives them on so fast that there is no food at all. On light land a roll should follow the drill. This keeps the moisture in the land; but on heavy land, and especially when rain falls soon after, the compressed surface will not readily admit the water, and the land runs together, and roots seldom do well. When the plants are thick, hoeing must not be deferred too late. First the horse, then the hand hoe, should be applied. I have said nothing about the quantity or the different kinds of artificial manure that it is advisable to use. So much has been said on the subject that I feel inclined to say little, but I am sure the farmers in this neighbourhood lose more from not using a larger quantity than by using too much. I doubt not but there is also a loss in not knowing the right sort to use. All experience has shown that Turnips require four great manuring principles to be successfully developed. 1. Carbonaceous matter, supplied by farmyard manure. 2. Ammoniacal manure, supplied by bones, guano, &c. 3. Phosphatic manure. 4. Sulphuric acid. As I have said before, I believe in a mixture of manure for a root crop, and would advise ten loads of well-made farmyard manure, two cwt. of guano, or eight bushels of bones, and two cwt. of superphosphate, or some other similar manure, with as much soluble phosphates as possible.

Method of Storing.—I think there is no better plan than that adopted in this neighbourhood. Those roots which are to be fed on the land from December to the end of February, are put into pits with only the tops cut off; those for feeding off after that time are put into furrows made by a plough, and another furrow put on them. In March they should be taken out of the furrows and put in heaps, the growth of the shoots being thus checked. By using an extra quantity of manure an extra crop can be produced, whereby the farmer is in a position to have some to haul off to be consumed by cattle. The quantity required should be taken off in strips across the field, that the whole field may have an equal dressing with the sheep; and when taken home they should be put in houses or heaps and thatched.

Method of Consuming.—From what I have said, you will see that I mean the greater portion of the Swedes and Turnips on light soils to be eaten on the land by sheep, and I have no hesitation in saying that the most economical system is to have them cut by Gardner's Turnip cutter. The saving of food and the advantage to the animals from having their food in a prepared state, will amply repay the extra cost. Roots contain a very large quantity of moisture, and the more hay, corn, and cake the sheep eats, the better it will thrive. I believe that no animal pays better for the consumption of corn when on Turnips than sheep. Whatever may be the wants of the body, an animal kept on roots alone can only supply himself with such elements of food as the root contains. Pulping the roots and mixing them with chaff for sheep has been advocated, but I can see but little if any advantage in it, unless one has a large quantity of inferior hay and but few roots. I had the hay cut into chaff for two years, but gave it up, believing it was a step in the wrong direction.

With regard to mashing and cooking roots for cattle, sheep, and horses, I believe no advantage whatever results, and that the labour and fuel are entirely lost. It is only natural to suppose that the powerful digestive organs of these animals are suited for the consumption of roots in a raw state. The pig is altogether a different animal, and it is advantageous to prepare his food; as roots are cheaper than meal there is a decided advantage in using them mixed together. Store pigs will do well on Swedes or Mangel without being boiled or cut. For horses and cattle I know of no better plan than pulping the roots and mixing with chaff. I find I can keep store cattle in good condition with 28 lb. of pulped Swedes, and the same quantity of straw cut in chaff every day.

But the quantity of food required depends very much on the position the animal is in. It is well known that a certain quantity of food is used up in preserving the animal temperature, therefore the colder its position the more heat is abstracted and the more food or fuel is required to maintain it. This is quite in keeping with science that animals thrive better when housed; therefore it is important to have shed room for all the cattle on the farm. I feel sure there are few landlords in this neighbourhood who would object to build extra accommodation where required, the tenant paying a fair interest for the capital invested.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Direction of Wind.	Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Thursday	11	29.40	43	43	S.E.	3	10	43	33	44	30	0.40
Friday	12	29.40	43	43	S.E.	3	10	43	33	44	30	0.40
Saturday	13	29.69	53	49	S.W.	5	10	53	35	57	34	0.18
Sunday	14	30.33	42	40	S.W.	1	2	50	34	62	28	..
Monday	15	29.92	47	46	S.W.	1	10	51	40	59	39	..
Tuesday	16	29.77	44	44	N.W.	0	10	52	43	52	43	0.04
Wednesday	17	29.98	38	36	N.	4	3	51	32	60	29	0.30
Thursday	18	30.10	37	31	N.E.	0	10	44	27	60	20	..

Notices to Correspondents.

DRAINAGE ACT: *A Herefordshire Drainer* informs a "Gloucestershire Drainer" that the merits of the Drainage Act, 24 and 25 Vict., cap. 133, are due to Mr. Grantham.

PHOSPHO GUANO: *G P Morris.* We believe that the experience of farmers in the South of England declares any ammoniacal addition to the manure for Turnips to be unnecessary. For Wheat and Grasses, however, ammoniacal manures are the best possible. For Clovers they are not needed. Guano is, therefore, better than phospho-guano for Wheat and Grasses—phospho-guano is better than guano for Clovers and for Turnips. A good superphosphate is probably better still for the two crops in the South of England, for the ammonia in which the phospho-guano is the superior of the superphosphate is not needed here. In Scotland, however, an addition of ammonia seems beneficial, and thus phospho-guano may be, and probably is, the best possible form of artificial manure for the Turnip crop. For us in the south it presents just the combination in which as an addition to farmyard manure Mangel Wurzels seem to delight.

SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS: [illegible] says, "Wishing to connect myself with this Society, will you oblige by giving the name of some officers of that Society with whom I can communicate, in order to attain [illegible]." Perhaps this notice of his requirement may obtain for him the introduction he desires.

S. E. asks, 1. Am I liable to pay a turnpike whilst driving milk from my farm to the railway station? 2. Am I liable to pay turnpike whilst riding between two parts of [illegible] about a mile, and only accessible, except through the toll bar by a ford through a deep river? [We are not learned in the law; but we imagine "S. E." is liable in the first case, but not in the second. He should however consult his solicitor.]

To Purchasers of Seeds.

SUTTON'S PRICED LIST of NEW GARDEN and FARM SEEDS and POTATOS is now ready, and will be forwarded Post free on application. Address
SUTTON & SONS, Royal Berks Seed Establishment, Reading.

FINE GRASS LAWNS in FLOWER GARDENS, &c.—The great expense of cutting and carting Turves from a distance may be avoided, and a *superior* Turf produced in a few months, by sowing SUTTON'S LAWN GRASS SEEDS, which consist solely of the finest and shortest growing kinds, perfectly *free from Moss and other weeds.*
Price 18*s. per bushel, or* 1*s. per pound.* Carriage free.
SUTTON & SONS, Seed Growers, Reading, Berks.

Grass Seeds for all Soils.

SUTTON AND SONS have one of the largest Stocks in Europe of the PERMANENT NATURAL GRASS and CLOVER SEEDS, which they mix expressly to suit the soil for which they are required.

The following letter has been received, besides many others:—

From Professor LINDLEY, *Royal Horticultural Society, London.*

"We have already made trial of your Grass Seeds, and it is only justice to say that they have proved the best we have sown for many years."

PRESENT PRICES ARE—	Per Acre. s.	d.
Best quality MIXTURES for Laying Down to PERMANENT PASTURE .. ..28*s.* to	30	0
Cheaper MIXTURES, omitting certain sorts ..20*s.* to	26	0
Best quality ditto, for Three or Four Years' Lay ..	22	0
Ditto ditto, for One or Two Years' Lay ..14*s.* to	18	6
CLOVERS and fine GRASSES for Renovating Old Pastures .. .. 6*s.* to	9	0
Finest LAWN GRASS SEEDS .. .. per bushel	18	0
PARK LAWN GRASS SEEDS .. .. ,,	16	0

The First Prize Medal was awarded to SUTTON & SONS for their Grass and Clover Seeds at the Great International Exhibition of Roots and Cereals at South Kensington in October, 1862.

A Copy of Mr. MARTIN SUTTON'S "Essay on Pastures" is sent with each lot of Grass Seeds.

Seeds sent carriage free to all parts of the kingdom. Export orders delivered free to the Ship's side in any English Port.

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Grass Seeds.

RICHARD SMITH is now prepared to supply MIXED GRASS SEEDS of very superior quality, suitable for all kinds of Soil.

	Per Acre.
MIXTURE for Laying down to PERMANENT PASTURE	25*s.* to 30*s.*
MIXTURE for ORCHARDS or LAND shaded by Trees	24*s.* to 26*s.*
MIXTURE for PARKS and CEMETERIES ..	28*s.* to 30*s.*
MIXTURE for Improving OLD PASTURE ..	6*s.* to 8*s.*
MIXTURE for One, Two, or Three Years' Lay ..	15*s.* to 18*s.*
MIXTURE for Fine LAWNS and BOWLING GREENS	per lb. 1*s.*

PRICED LISTS may be had on application.
RICHARD SMITH, Seed Merchant, Worcester.

Hanover Nursery, Peckham, S.E.

IVERY'S NONSUCH LETTUCE, the best Summer variety in Cultivation, 1*s.* per packet. See *Gardeners' Chronicle*, Jan. 30, for further particulars, with names of Seed Merchants and Nurserymen who have received a supply direct from W. I. SEED CATALOGUES free by Post on application
The Trade supplied with Mushroom Spawn.

Scrymger's Giant Brussels Sprouts.

G. SCRYMGER has much pleasure in offering Seed of the above superb variety of BRUSSELS SPROUTS, for which he received the First Prize at the Great International Show in 1862; and since pronounced by all who have seen it to be the best variety in cultivation. Seed in packets at 1*s.* Post free, 14 stamps.—Sonning, near Reading.

Henry's Prize Hybrid Leek (True).

DOWNIE, LAIRD, AND LAING, having secured the entire Stock of the above from Mr. Henry, are now sending it out in packets, at 1*s.* each. This Leek can be grown from 4 to 5lbs. weight. None genuine unless in their own sealed packets.

17, Frederick Street, Edinburgh; and Stanstead Park, Forest Hill, London, S.E.

To Gentlemen, Nurserymen, and Others.

GLOBE ARTICHOKE PLANTS, at 25*s.* per 100; also a quantity of PROVINCE or CABBAGE ROSE PLANTS, at 12*s.* per 100.

A good discount allowed to the Trade.

Post orders payable to JOHN GAINES. Herbalist and Seedsman, Covent Garden Market, London, W.C.

SUTTON'S LARGE YELLOW GLOBE MANGEL WURZEL.—The heaviest and best sort known, price 6*d.* per lb., or cheaper by the cwt.

ORANGE GLOBE and several other sorts, 6*d.* per lb.

Also SUTTON'S CHAMPION SWEDE and other TURNIP SEEDS at very low prices.

PRICED LISTS of FARM SEEDS post-free.
Royal Berkshire Seed Establishment, Reading.

SEED CORN, from the (Cold Chalk) Chiltern Hills, clean, true, and in good sowing condition, a capital change for all other soils. WATERLOO OATS, for early or late sowing, good croppers. In corn and straw, 25*s.* per qr. GOLDEN MELON BARLEY, a selection from Chevalier, 35*s.* per qr. HALLETT'S RED NURSERY WHEAT, having a few white corns in it, at 45*s.* per qr. New Sacks and delivery to Henley Station included in prices. Cash to accompany orders, addressed to
Mr. R. C. M. YOUNG, Hambleden, Henley-on-Thames.

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CAUTION.—Every Brush is stamped. J. BARSHAM'S Patent

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PREPARED BONE MANURE for present use on PASTURES.
WHEAT MANURE for AUTUMN SOWING.
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SUPERPHOSPHATES of LIME, &c.

All the above being in the finest condition. They also continue to supply
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The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

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LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES ..	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

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Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE, Address 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

REIGATE SILVER SAND, 7*s.* 6*d.* per ton; packed, 16*s.* per ton; delivered to Reigate Railway Station. PEAT SOIL of various kinds, LOAM, BOG MOULD, &c. N.B.—Loaded trucks can be sent on all the principal Railways, and to Angerstein Wharf, Thames.
W. SHORT, Sand and Peat Depot, Reigate, Surrey.

ROLL TOBACCO CLOTH.—The best and cheapest article for Smoking Greenhouses and Destroying the Fly. Price 1*s.* 4*d.* per lb.; over 10 lb., 1*s.* 1*d.*
JOSEPH BAKER, 10, Gough Square, Fleet Street, E.C.
Post-office Order payable Fleet Street.

Blight.

BROWN'S PATENT FUMIGATOR.—A Portable Instrument for Fumigating Greenhouses, Stoves, and Frames, or Shrubs and Flowers in the open air, without injuring the most delicate plant; delivering the Smoke cold, in a dense mass, and effecting a great saving of Tobacco. Price 10*s.* and upwards.

Manufactured and supplied to the Trade by Messrs. BARBER & GROOM, London; and may be had of all Ironmongers, Seedsmen, and Florists.

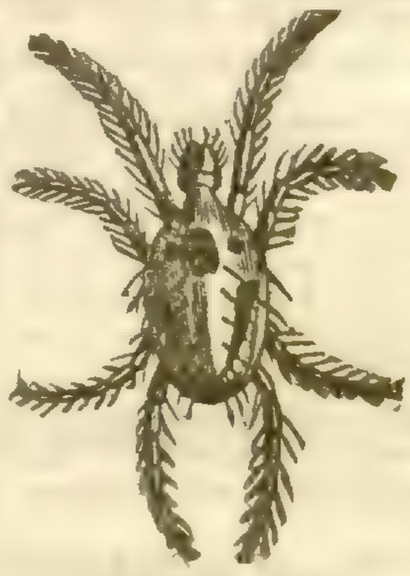

Red Spider Magnified.

GISHURST COMPOUND, whether used against Insects and Mildew, on Growing Plants, or as Winter Dressing on Trees at rest, should be dissolved 48 hours before use. This gets rid of smell, and if the Solution be decanted, prevents any staining of foliage. A strength of from 1 to 2 oz. to the gallon of water is recommended for growing Plants; one from 4 to 16 oz. for Trees at rest.

Sold Retail by Nurserymen and Seedsmen, in boxes, 1*s.*, 3*s.*, and 10*s.* 6*d.* each.

Wholesale by
PRICE'S PATENT CANDLE COMPANY (Limited).

TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from frost, blight, birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

VARNISHED FLOWER STICKS:—1 foot, 3*d.*; 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s.* 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, &c.

PROTECTION from the COLD WINDS & MORNING FROST.
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1*s.* 8*d.* per yard run.
Four yards wide	3*s.* 4*d.* per yard.
An improved make, 2 yards wide,	1*s.* 9*d.* per yard.
An improved make, 3 yards wide,	2*s.* 8*d.* per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.
"It is much cheaper than Mats as a covering.

GREEN'S PATENT SILENS MESSOR,

OR

NOISELESS LAWN MOWING, ROLLING, and COLLECTING MACHINES.

BY SPECIAL APPOINTMENT,
SOLE MANUFACTURER

TO HER MOST GRACIOUS MAJESTY
THE QUEEN.

THE
FIRST PRIZE MEDAL
OF THE
INTERNATIONAL
EXHIBITION,
1862,
WAS AWARDED TO
THOMAS GREEN,
FOR HIS
PATENT
LAWN MOWERS.

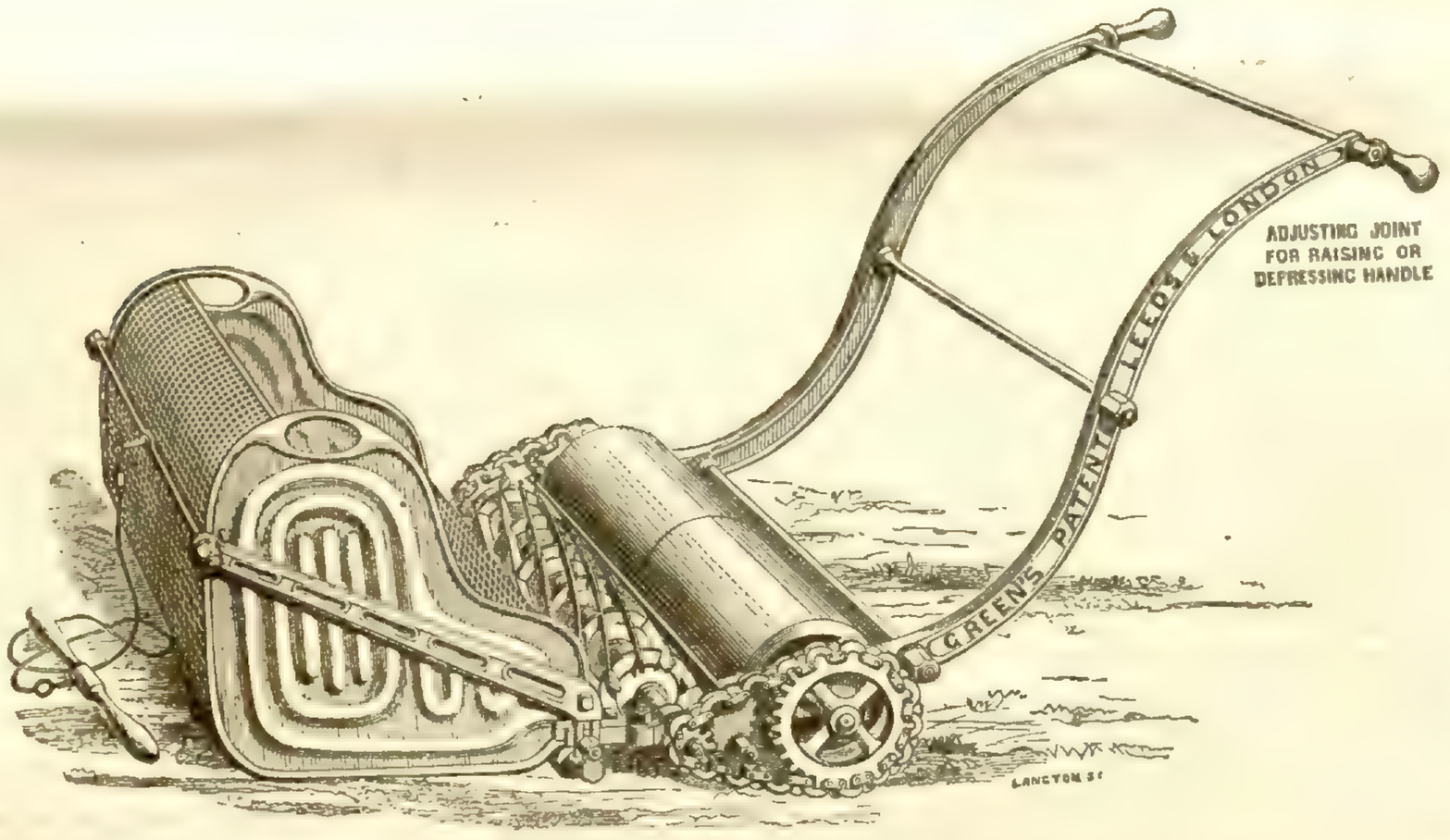

FOREIGN MEDALS
AWARDED TO
GREEN'S PATENT
LAWN MOWERS.
LIEGE, 1861.
BRUSSELS, 1861 & 1863.
NAMUR, 1862.
GAND, 1862.
LINNEENNE, 1861, 1862, & 1863.
LAEKEN, 1862.
HAMBURG INTERNATIONAL EXHIBITION, 1863.

EXTRAORDINARY and WONDERFUL IMPROVEMENTS for the PRESENT SEASON 1864.

THOMAS GREEN AND SON, in introducing their NEW PATENT LAWN MOWING MACHINES (of which the above is a drawing) for the present season, beg to state that, in addition to the great number of improvements hitherto brought out, they have succeeded, after several months' trial (on the most difficult Lawns), in bringing out a machine which transcends the one of last year equally as much as did the very original one ever brought before the public. They are lighter and stronger, simpler in construction, more durable, and are warranted to last for years without getting out of repair. They do not require two-thirds the amount of power to work them of any other machines extant; and, from their efficiency, are unequalled for keeping Lawns in the highest state of perfection.

GREEN'S PATENT LAWN MOWERS have carried off every Prize that has been given in all cases of competition, and were the only Machines Highly Commended at the Royal Horticultural Society's Great Shows, held at South Kensington, May 21, June 11, and July 2, 1862. (No Prizes were given.) They are the only Machines in constant use at the ROYAL GARDENS, WINDSOR; BUCKINGHAM PALACE GARDENS; SANDRINGHAM PARK GARDENS; the ROYAL HORTICULTURAL SOCIETY'S GARDENS, SOUTH KENSINGTON; the BOTANICAL GARDENS, REGENT'S PARK; the CRYSTAL PALACE COMPANY'S GARDENS, SYDENHAM; the KENSINGTON PALACE GARDENS; the HYDE PARK GARDENS; and in most of the principal Parks, Squares, &c., of the Nobility, Clergy, and Gentry throughout the Kingdom.

PRICES OF HAND MACHINES.

To Cut	10	inches	...	...	£3	10	0	...	...	Suitable for a Lady.	To Cut	18	inches	...	...	£7	10	0	...	...	Suitable for One Person.
„	12	„	...	...	5	0	0	...	...	„ „	„	20	„	...	...	8	0	0	...	...	Suitable for Two Persons.
„	14	„	...	...	5	10	0	...	...	Suitable for One Person.	„	22	„	...	...	8	10	0	...	...	„ „
„	16	„	...	...	6	10	0	...	...	„ „	„	24	„	...	...	9	0	0	...	...	„ „

The Patentees beg to call special attention to their HORSE, PONY, and DONKEY MACHINES, which have been entirely remodelled, and embrace all the recent Improvements adopted in the Hand Machines. They cannot fail to give entire satisfaction wherever used.

Prices of HORSE, PONY, and DONKEY MACHINES, including Patent Self-Delivery Box, Traces, and Stretcher, suitable for attaching to ordinary Chain Traces or Gig Harness.

To Cut	26	inches	...	...	£13	0	0	...	...	Leather Boots for Donkey, 18s.	To Cut	30	inches	...	...	£21	0	0	...	...	Leather Boots for Pony, 22s.
„	28	„	...	...	14	0	0	...	...	„ „	„	36	„	...	...	24	0	0	...	...	„ „

To Cut	42	inches	...	...	...	£27	0	0	...	...	...	Leather Boots for Horse, 26s.
„	48	„	...	...	...	30	0	0	...	...	...	„ „

The 26 and 28 inches can be easily worked by a Donkey or by Two Men on an even Lawn, the 30 and 36 inches by a Pony, and the 42 and 48 inches by a Carriage Horse; and, as the Machines make no noise in working, the most spirited animal can be employed without fear of its running away, or in any way damaging the Machine.

Both the HORSE, PONY, DONKEY, and HAND MACHINES possess over all other Makers the advantage of Self-sharpening; the Cutters being steel on each side, when they become dull or blunt by running one way round the cylinder, can be reversed, again and again bringing the opposite edge of the cutters against the bottom blade, when the Machine will cut equal to new. Arrangements are made so that the cylinder can be reversed by any inexperienced person in two or three minutes.

The above MACHINES are made from the best materials, and of superior workmanship; are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England; are warranted to give satisfaction, and if not approved of can be at once returned, if sent Carriage Free to Leeds.

THOMAS GREEN & SON, SMITHFIELD IRON WORKS, LEEDS;
and 2, FARRINGDON ROAD (formerly 2, VICTORIA STREET), HOLBORN HILL, LONDON, E.C.

ESTABLISHED UPWARDS OF A CENTURY.

EXHIBITION PRIZE MEDALS 1851 and 1862.

BUTLER & McCULLOCH,

SEED MERCHANTS,

COVENT GARDEN MARKET, LONDON, W.C.

COLLECTIONS of VEGETABLE SEEDS for 1864,

£3 3s., £2 2s., £1 1s., 15s., and 10s. 6d.

These COLLECTIONS contain only SEEDS of first quality—growth 1863—and have been prepared in a most liberal manner. Full particulars as to quantities and varieties included, may be seen at page 78 of our DESCRIPTIVE CATALOGUE. Free per Post, on application.

Orders amounting to 21s. and upwards sent Carriage Free, and a Discount of Five per Cent. allowed for prompt cash payments.

GENUINE NEW GARDEN SEEDS.

CARRIAGE FREE.

COMPLETE COLLECTIONS FOR ONE YEAR'S SUPPLY IN PROPORTIONATE QUANTITIES FOR LARGE AND SMALL GARDENS,

£3 3s., £2 2s., £1 1s., and 10s. 6d.

Including none but the best and most useful varieties, and only Seeds of First-class quality.
A trial is respectfully solicited.

PRICED CATALOGUES POST FREE ON APPLICATION.

WM. WOOD AND SON, SEED MERCHANTS, MARESFIELD, NEAR UCKFIELD.

CARTER'S

COLLECTIONS of GARDEN SEEDS

for 1864.

FOR the convenience of those of our Customers who have not the time or inclination to make out their own selection of VEGETABLE SEEDS, we submit the undermentioned COLLECTIONS, to which we respectfully invite attention, and we confidently hope that the liberal and judicious manner in which the selections are made, will induce our Customers to favour us with their commands, also their kind recommendations to their Friends. We have bestowed great care in the arrangement of the sorts; none but what we have proved in our Trial Grounds at Dedham to be the very best of its class is included, and those varieties have been chosen that are most calculated to procure a constant SUPPLY of the best kinds of VEGETABLES all the year round.

These SEEDS have been carefully grown and selected by ourselves at our Seed Farms at Dedham and St. Osyth, Essex; we can therefore guarantee them to be of first-rate growth and pure stocks.

No. 1, price 10s. 6d.; No. 2, price 21s.; No. 3, price 42s.; No. 4, price 63s.

CARTER'S GARDENER'S AND FARMER'S VADE-MECUM. (Now Ready.)

PART I.—Containing Scientific Description of upwards of 2000 Species and Varieties of FLOWER SEEDS, with Lists of Bulbs and Plants for Early Spring Planting, and a Calendar of Garden and House Operations for every month in the year.

PART II.—Comprising Complete Lists of VEGETABLE and FARM SEEDS, with Cultural Directions and a Calendar of Practical Farm Operations.

PARTS III. and IV. will be published in May and September respectively.

The entire Book will be forwarded in Parts as issued Free of Charge, upon receipt of 12 *Postage Stamps. Gratis to Customers.*

JAMES CARTER AND CO., 237 and 238, HIGH HOLBORN, LONDON, W.C.

THE LONDON SEED COMPANY, LIMITED.

68, WELBECK STREET, CAVENDISH SQUARE, LONDON, W.

THE COMPANY are now sending out their COLLECTIONS of SEEDS, which will be delivered Carriage Free to any Railway Station in England and Wales, or to any Steam Port in England, Wales, Scotland, and Ireland.

No. 1.	Complete Collection, sufficient for a Large Garden for One Year's supply	£3 0 0
No. 2.	Complete Collection for a Moderate Sized Garden	2 0 0
No. 3.	Complete Collection, in Smaller Quantities	1 0 0
No. 4.	Complete Collection for a Small Garden	0 15 0
No. 5.	Complete Collection for ,, ,, ...	0 10 6
No. 6.	Extra Large Collection, containing Double the Quantities of No. 1 ...	5 0 0

A DETAILED LIST of these COLLECTIONS will be found in the GENERAL PRICE CURRENT, which is now ready, and will be forwarded Gratis and Post Free to any address in the Kingdom.

ADDRESS: 68, WELBECK STREET, CAVENDISH SQUARE, LONDON, W.

Pinus Bungeana (the White-barked Pine).

MR. FORTUNE has received from Peking by the Overland Mail, a few SEEDS of this most remarkable and hardy Pine (see p. 776, 1863). They are offered for Sale at 25s. per oz. (free by post on the receipt of Post-office Orders, or crossed checks), by R. FORTUNE, 1, Gilston Road, London, S.W.

COB NUTS: COB NUTS, WEBB'S KENTISH.—A few hundred 3-year-old Seedling Plants to be Sold very cheap.
Apply to C. CHESTERMAN, Market Gardener, Reading, Berks.

WEBB'S PRIZE COB FILBERTS, and other varieties of FILBERTS and NUTS, as shown in the GREAT EXHIBITION of 1862, and for which a CERTIFICATE of Honourable Mention was given. Trees of the above can be had on application to Mr. WEBB, Calcot Gardens, Reading.

RASPBERRIES.—Cornwell's Seedling, 14s.; Carter's Prolific, 12s.; Red Prolific, New Monthly Autumn-fruited and Yellow Antwerp, 8s. per 100.
STRAWBERRIES, GOOSEBERRIES, ASPARAGUS, SEA-KALE, SEED POTATOS, Large LAURUSTINUS, YEWS, &c.
GEO. CORNWELL & Co., Seedsmen, &c., Barnet, Herts, N.

STANDARD CHERRIES.
Extra fine.
STANDARD SPANISH CHESNUTS, extra fine for Avenues, 75s. per 100.
RICHARD SMITH, Nurseries, Worcester.

WANTED, Five DWARF MAYDUKE CHERRY TREES, with heads of large size regularly trained, and roots fit for successful removal to Scotland.
Send particulars of size and price to BENJAMIN REID & Co., Seedsmen, 132, Union Street, Aberdeen, N.B.

Surplus Stock.

MARSH AND PERKINS have pleasure in offering a quantity of Dwarf-trained MAY-DUKE CHERRIES. Prices on application to 42, Drapery, Northampton.

Dwarf-trained Trees

BY THE THOUSAND, HUNDRED, OR DOZEN.
PEACHES, PEARS, PLUMS, and CHERRIES.—Fine, flat, well trained, of best quality and true to name.
RICHARD SMITH, Nurseries, Worcester.

PYRAMID APPLES, PEARS, PLUMS, and CHERRIES.—Beautiful Trees for Garden or Orchard Houses. RICHARD SMITH, Nurseries, Worcester.

FORTY ACRES of FRUIT TREES.—APPLES, PEARS, PLUMS, CHERRIES, PEACHES, NECTARINES, and APRICOTS in every form desired for Fruiting.
RICHARD SMITH, Nurseryman and Seed Merchant, Worcester.

ORCHARD-HOUSE TREES, Fruiting in Pots—PEACHES, NECTARINES, APRICOTS, CHERRIES, PLUMS, PEARS, APPLES, and VINES.
RICHARD SMITH, Nurseryman and Seed Merchant, Worcester.

Half-standard Apples.

RICHARD SMITH being overstocked, will sell in lots of not less than 50, good Trees of best sorts, and true to name, at 30s. per 100; also Half-standard PLUMS, PEARS, and CHERRIES, at 50s. per 100.
RICHARD SMITH, Nurseries, Worcester.

Pine Plants and Vines.

T. PAPE can supply PROVIDENCE, MONTSERRAT, and other varieties of PINE PLANTS, clean. Also strong VINES for fruiting in pots or planting out.
Undercliffe Gardens, Bradford, Yorkshire.

Grape Vines from Eyes.

WM. CUTBUSH AND SON have an immense stock of GRAPE VINES for fruiting in pots, or planting out, of all the best kinds. Prices on application.
Highgate Nurseries, London, N.

Vines Black Hamburgh and Muscat of Alexandria.

ROBERT PARKER begs to state that he can supply fine FRUITING CANES, well ripened, of the above, at 7s. 6d. each. The usual discount to the Trade.
Exotic Nursery, Tooting, Surrey, S.

Late Grape Vines.

JOSEPH MEREDITH has still some VINES of the true B. ALICANTE left; also of LADY DOWNES.
N.B. Beautiful Bunches of the above sorts may be seen at J. M.'s Vineyard, Garston, near Liverpool.

Grape Vines.

B. S. WILLIAMS begs to announce that he has a fine and healthy stock of the best kinds of GRAPE VINES from EYES, for fruiting in pots or planting out. Prices on application.
Paradise and Victoria Nurseries, Holloway, London, N.

The Gardeners' Chronicle.

SATURDAY, FEBRUARY 27, 1864.

MEETING FOR THE ENSUING WEEK.

THURSDAY, March 3—Linnean .. .. 8 P.M.

CHISWICK, A SCHOOL OF HORTICULTURE! The very idea is refreshing, and the sound of the exclamation musical, after the croakings we have heard of late years to the effect that Chiswick was worn out, Chiswick was obsolete and useless, Chiswick was dead and ought to be dismembered. Dead, indeed! Why it has at this moment more inherent vitality than has the fashionable show garden; witness the scores of voices raised in its defence at the annual meeting of the Society the other day.*

Chiswick useless, indeed! Was it useless, then in the days when BANKS, and KNIGHT, and WEDGWOOD, and SABINE, and BENTHAM, and SOLLY, and LINDLEY were occupied therein, in the development of horticultural science, and familiar-

* We are glad to learn that at the adjourned annual meeting on Tuesday last, it was intimated that the Council had named a committee, consisting mainly of Horticultural Fellows, to consider what could be done to render Chiswick more useful in a horticultural point of view.

ising energetic young men with improvements in the practice of horticulture? When such men as our PAXTONS, and BOOTHS, and DUNCANS, and TRAILLS, and BAILEYS, and WILSONS, and many more were indoctrinated in the scientific practice of modern times; was it useless, that in those days of action, the country gentlemen of England came forward as Fellows of a Society which was worthily working at horticulture, and that for the sake of doing good service in their day and generation, and of upholding so noble and so important a pursuit—which in its reflex influence upon agriculture they well knew was of the utmost importance to our national prosperity? No, no; they knew, did these gentlemen of England, that a good and beneficial work was in progress, and like good men and true, they gave it their hearty and patriotic support. And is there now less cause for carrying on the work so well begun and so nobly carried forward, almost down to the present day? Almost we must say, but not quite, for alas! a change has come over the scene; and because the fashionable crowd won't go to Chiswick now as it once was wont to go, the real work of the Society, that for which it was incorporated, becomes wearisome to the powers that be, and other fields are explored to find some questionable vein of novelty, in order to keep up the flagging interest of a public tired of scenes in which it sees there is no heart or inner life. If, in those days to which we have alluded, there were advances on the practice of former days which required to be demonstrated for the improvement of the then rising generation of gardeners, have we not since then again advanced, yea, have we not advanced much further, and much more rapidly, and does not the present generation of gardeners need as much, nay more than their predecessors, the benefit of the same example set before them, and of the same stimulus to action—in a word, of the same kind of practical teaching. And is it not that this work—legitimate horticultural work—should go on, that so many of the nobility and gentry who take a lively interest in the cultivation of the soil, have continued to support a Society which has been honoured by bearing Chiswick with the emblems of its peaceful conquests emblazoned on its shield? Has not the idea that this work was not abandoned, kept the garden owners of England on the Society's roll, even while it has been passing through the vale of adversity; and is such generous sympathy to be sacrificed for an idea which, whatever it is, is not gardening.

We enter not now on the question of what MIGHT be done at Kensington in the way of reviving and encouraging the taste for horticulture, though we believe that not one of the schemes now in course of being carried out, will have half so much influence upon the public in this direction, as will the revival of day meetings of an interesting character—not the institution of night meetings. We intend to refer rather, to what might be and ought to be done at Chiswick. Since those days when old Chiswick—we love the venerable name—was a school of horticulture, by which we mean as much an exemplification of advanced horticulture, as a seminary for young gardeners, we have gone on acquiring new fruits and new flowers, which have, in fact, accumulated around us. We have gone on, and by the aid of the increasing light of science have improved our practice, till what was advanced practice in the days to which we refer, is now antiquated. There were then no orchard-houses, and practical gardeners at least knew nothing of the cool treatment of Orchids. Many of the races of fashionable flowers whose name is now on the tongue's end of almost every child, were in that not very distant past, as yet quite unknown. But where are we to find the exemplification of all this? Where are we to go as to a fountain of knowledge to become acquainted with such of these matters as we may each be specially interested in? No private garden would, besides carrying on its special private objects, be capacious enough to take in the vast extent of subjects to be illustrated; it must be done in a public garden; and what garden but that of a society chartered for the very object, is it to be expected should be devoted to it?

Then as to our young gardeners, those on whom the owners of private gardens must depend hereafter for the productiveness and much of the comfort of their several garden establishments, is it not now more than ever, a necessity that they should have an opportunity to become acquainted with all these matters, that they may know how to provide and act for the best, when the destinies of a garden establishment are committed to their hands? We unhesitatingly say it is a necessity; it is one of the wants of the age. The decadence of Chiswick as the fountain of horticultural information, is already telling upon the rising generation of gardeners. We willingly admit that there are bright exceptions, but as a whole, the class is not now what it was when it yielded a PAXTON. We hear constant complaints by head gardeners, that the young men who enter the profession are not to the same extent as formerly, industrious, intelligent, and knowledge-seeking. Does this prove Chiswick to be useless? Nay rather, it proves it to be, as we have already said, a necessity of the present as it was of the past; and it is for the sake of keeping up this very influence—reviving it in truth, we now must say, that the class of fellows to which we have more than once alluded, has, if we mistake not the evidence of our own eyes and ears, clung to the Society through all its troubles, in the hope of brighter days returning, and that modern horticulturists have given it their support, to an extent unknown in former times.

Chiswick worn out, indeed! Why even in its worn-out and threadbare state, we are officially told that besides the local visitors there are annually 200 of the extra-local class who enter its gloomy precincts. What are these but so many country residents seeking information, and when they find it bearing away their share, and disseminating it in their respective localities? What are they, in fact, but so many missionaries of horticulture? and if Chiswick were better kept, if it were but kept as it ought to be, if more were to be seen and learned by a visit there, the number of visitants would be more than quintupled at a bound. That visitors could not easily be got there if there were any effort made in the right direction to induce them, we will not believe. Suppose, for example, that during the time the collections of trial flowers and fruits are in their prime, there were one or two special days set apart for a Fellow's promenade there; and suppose that the meritorious and approved subjects, instead of blooming on, unknown at least if not unseen, until some months afterwards a report appeared, were to be marked so that they could be recognised by the Fellows and their friends—would they not go there to see and take some interest in the subject? Undoubtedly they would—some going perhaps to be seen, as well as to see; but that would matter little, for while a portion would be gratified by the information gained, the rest would be gratified by having had a pleasant meeting. And what cost would it be to have the gardens made decent for one or two such visits? It need not be much, and whatever it might be, the sum would be better thus spent than on some other questionable propositions.

At present, however, there is little inducement to those who have not a deep and intense interest in anything horticultural, to undertake a visit there, which it is granted the distance does not favour. But a reasonable inducement would outweigh even the distance with many of those 3000 Fellows who have come in merely to derive pleasure, and who do not look for profit in any sense from their fellowship. Look at the trial Flowers during the past two or three seasons, noble collections, contributed willingly and gratuitously by our nurserymen and florists. Why, they have been parsimoniously crammed into a space not half sufficient for their development, while acres were allowed to lie waste; and it has been impossible, even if the effort had been made, to indicate to the Fellows and visitors the superior varieties, whose very character indeed has been in many cases destroyed by the huddled manner in which they grew. And if Fruits, from their more permanent character, and greater intrinsic value, have fared better in respect to accommodation, they have not fared better in respect to any effort made to indicate their merits to those who would gladly go to acquire the information. What has hindered these things from being done, but the want of interest which has been manifested in the dear old garden. True, the facts which we think should be, and might be made patent to the visitor, appear after the lapse of time as the reports of the Committees, but while these are lying useless in the editorial portfolio, the opportunity for the visitors to make the personal acquaintance many would wish to do with the approved kinds, passes away for ever.

So far then from being not wanted, or being effete, or useless, or dead, Chiswick is at this moment more necessary than ever, and has, we believe, capacity to arise Phœnix-like from its ashes, and to take its proper place at the head of British Horticulture. We propose to show hereafter in more detail, what might be done at Chiswick and in other fields by the Society for the Advancement of Horticulture, in accordance with its charter, and with every prospect of a successful issue; and if in addition to this, the Royal Commissioners would but complete their own share of the Kensington work in accordance with their bargain, and at the same time a wise and proper economy were to be exercised, the horticultural Fellows would be satisfied that things were taking a right course; while the pleasure-seeking body of Fellows might have their own special gratifications, and in twelve months the institution would stand in a very different position from that which it now occupies.

WE have on several occasions noticed the successful progress of the CINCHONA PLANTATIONS in the East Indies; and we are now gratified to learn from a report by Mr. WILSON, dated December, 1863, that the experiments which have been made in respect to the cultivation of this valuable drug-yielding plant in the West Indies promise also to result in a successful issue, under certain conditions of climate.

Mr. WILSON states that seeds of the quinine-yielding Cinchonas were received at the Botanic Garden, Bath, Jamaica, of which he has the charge, in the autumn of 1860, and by the following autumn he had succeeded in rearing upwards of 400 healthy plants, quite ready for planting out. Unfortunately, as in some other first experiments, the selection of a proper site for their final establishment was overlooked, and the consequence of the subsequent treatment the plants had to undergo was the loss of about half their number. However, continues Mr. WILSON, "being wishful to prove by every means in my power, the result of the experiment of testing the adaptability of the plants (constitutional and climatic) for cultivation in the higher altitudes of this island—finding the climate of Bath, as the summer approached, by far too warm—I had the whole of them removed, in small pots, to Cold Spring Coffee plantation, the elevation being about 4000 feet, and placed under artificial treatment. I soon found the climate and soil of that locality to be all I could desire for the plants; and as it afforded every facility for carrying out so valuable an experiment, I at once availed myself of it, and planted out in the Coffee fields on the 16th of November, 1861, several plants of each species, then about 2 or 2½ inches in height. In 12 months after, a plant of the Red Bark, Cinchona succirubra, had attained the height of 44 inches, with leaves measuring 13½ inches long by 8¾ inches broad. The same plant, now two years old, measures 6 feet in height, with 10 branches, having a circumference of stem at the base of 4½ inches. The Grey Barks, Cinchona nitida and C. micrantha, being of more slender growth, have not made such rapid progress. The highest has attained to 5 feet, with three branches; the leaves, however, are larger, and measure 14 inches by 10 inches. So far the experiment has proved eminently successful."

In the months of August and September, 1862, the major part of the plants were, it appears, again removed to Bath. They were now from 18 to 20 months old, a critical age, as Mr. WILSON observes, for forest trees in flower-pots under artificial treatment; and in the uncongenial climate of Bath they would soon have died had they not been shortly afterwards (in October) planted out at Mount Essex, near Bath, at an altitude of 2000 ft. or little more. This site was selected as a temporary one, to save the plants alive, until a better could be obtained, and has so far answered the purpose that the majority are healthy, but their progress has been slow; the soil being too stiff and loamy to admit of the free and rapid escape of the heavy rains which fall in torrents during the greater part of the year, and the altitude being also too low. The Red Bark is, however, found to thrive at a much lower altitude than the others, and is altogether a more robust and hardy tree. Mr. WILSON strongly urges on the authorities the acquisition of an eligible site near the place where his successful experiment was carried out, and the speedy transfer thither of the young trees, which as yet are not too large for removal.

We quite agree with the author of this report,

that the fact thus established, namely that the climate of the higher, and many of the intermediate mountains of Jamaica has been thus found suitable for the cultivation of the most valuable of the quinine-yielding plants, Cinchona succirubra, is a very important one, not only in respect to its bearing upon the prosperity of the island itself, but also in reference to the supply of quinine, which has become one of the necessaries of modern life. We trust the knowledge thus acquired may be speedily, successfully, and profitably applied, so that, as Mr. WILSON remarks, the plants may in a short period extend over the length and breadth of the island, and secure those advantages to the country which they are capable of conferring.

— We understand that Dr. HOGG has resigned the Secretaryship of the FRUIT COMMITTEE of the Royal Horticultural Society; and that until some more permanent arrangement can be made, Mr. MOORE has been requested to take charge of the Committee.

— Our readers will observe by an advertisement in our columns to-day, that Mr. FORTUNE has received from Peking by the Overland Mail, a few seeds of the remarkable PINUS BUNGEANA. Inhabiting, as it does, the cold bleak mountains near Peking, it is, of course, perfectly hardy in our climate. For an account of this curious tree, we refer to p. 776, 1863.

HARDY VARIEGATED PLANTS.

WITHIN the last few years these plants have become favourites in gardens, so much so, that they are now considered essential for decorative purposes both indoors and out. It is fortunate that such a class of plants exists, especially in the case of amateur gardeners, who are frequently dependent upon hardy things, not having glass at command to winter the ordinary bedding subjects. These plants, too, are easily managed, being readily increased without fear of losing stock, and, the principal of them at least, are hardy enough to withstand our average winters, if only placed in some sheltered nook. Another inducement to their cultivation is the little attention they require. Most of them are increased by division of the roots in the open ground. Some plants of this class are likewise suitable for cultivation in pots, for stands in windows, and for small vases. I may mention a few of them:—

Dactylis glomerata variegata is an elegant Grass, and forms an effective line for a small ribbon border, while for decorative purposes, grown in pots, it is most graceful; small portions detached from the neck of the plant root readily, and grow rapidly.

Saxifraga umbrosa variegata is a most useful thing for various purposes; it is most at home out doors in a partially shady place, and like the rest of the Saxifragas is propagated by division.

Arabis, of which there are several variegated kinds, yields neat growing plants, all beautiful, and worthy to be more extensively grown, well adapted for small beds, or a dwarf row in a ribbon border. They are increased readily in autumn or spring, small pieces rooting in any common garden soil.

Ajuga reptans variegata is another useful plant hardy enough, and finely marked, the white parts of the leaf being well defined; it is readily increased and grows rapidly.

Scrophularia aquatica variegata [miscalled nodosa in gardens] if grown in good rich soil, rather wet, and kept free from snails, which are apt to riddle its leaves and disfigure it, is most distinct and well marked; a good row of it is very telling; small pieces from the neck of the plant root freely. I fancy this would be more extensively employed than it hitherto has been, if it were better known.

Gnaphalium lanatum is a fast-growing hardy plant, and is propagated rapidly; it requires to be handled pretty freely to keep it within bounds. Pegging down is the readiest and neatest way to manage it.

Tussilago Farfara variegata is admirably adapted for ribbon work; when grown as it ought to be it is an elegant thing, and has a striking appearance; small pieces of the root chopped up, say an inch and a half long, each produce a plant, if covered over slightly with sandy soil.

Achillea Millefolium variegata is a graceful looking thing when kept within bounds; its tendency to bloom, however, is apt to spoil its appearance, and must be prevented by repeated pinching. There is no difficulty in propagating this Yarrow, perhaps more in destroying it.

Ivy, like Vinca, is only suitable for certain purposes. Some of the varieties are beautifully marked, and form very pleasing edgings for large raised beds, and carriage drives. *John Edlington, Crom Castle.*

EXHIBITION PLANTS.

THE INDIAN AZALEA.—No. IV.

(*Concluded from p.* 149.)

PRESUMING that we are now at the end of the season, with all the plants well furnished with bloom buds, what is now required is to give air liberally, to water carefully, and to keep the temperature of the house low, just sufficient to prevent frost from reaching the plants in winter. If any of them are required for forcing to decorate the conservatory, those should be selected that carry the most prominent buds; and these, if introduced into the stove, will soon expand their gay blossoms.

After the blooming season is past, the plants will require to be placed in heat again, and treated precisely in the same manner as they were in the previous season. All long shoots must be stopped, especially where there is a tendency to assume a straggling habit; this topping will cause them to throw out side shoots; and when these are long enough they are to be tied in as required. The roots must be closely examined, and if they are found in a healthy state and the ball well filled with them, the plant may have a larger pot, and should be placed again into comfortable quarters for the season's growth. By attention to the particulars which I have pointed out, the cultivator may have the pleasure of being the possessor of such specimens as those which adorn our exhibitions to the wonder and delight of all who see them.

The following is a selection of the finest Azaleas in cultivation with which I am acquainted:—

Duke of Devonshire	Standard of Perfection
Diadem	Baron de Pret
Holfordii	Queen of Whites
Iveryana Improved	Leopold the First
Ardens	Duchesse Adelaide de Nassau
Juliana	Flower of the Day
Perryana	Souvenir de l'Exposition
Beauty of Reigate	Variegata superba
Symmetry	Sir H. Havelock
Magnet	Perfection
Vesta	President
Maria	Mars
Chelsonii	Kinghornii
Lucens	President Claëys
Gledstanesii	Mad. Ambroise Verschaffelt
Glory of Sunning Hill	Etoile de Gand
Extranii	Carnation
Stanleyana	Tricolor
Admiration	Roi des Doubles
Gem	Brilliant
Criterion	Advance
Magnifica	Dr. Livingstone
Perfecta elegans	Salmonia albo-cincta
Eulalie van Geert	Bernard Handre
Lceana	Reine Blanche
Louis Napoleon	Flag of Truce
Madame Miellez	Elegantissima
Princess Mary of Cambridge	Marie Vervaene
Petuniæflora	Reine des Belges
Roi Leopold	Sinensis lutea
Modèle	Sinensis alba
Rubens	Leviathan

Of these, which are of course too numerous to be all included in any one private collection, I would recommend as the best 12 of varied and distinct colours, the following sorts:—

White.—Queen of Whites, Marie Vervaene.
White with stripes.—Flower of the Day, Madame Miellez.
Rose or Peach.—Standard of Perfection, Kinghornii.
Violet Rose.—Extranii.
Deep Rosy Purple.—Baron de Pret.
Salmon or Pink.—Criterion, Etoile de Gand.
Deep rich Salmon.—Gem.
Rich Orange.—Mars.

These are selected with special reference to their combining the points of freeness and vigour of habit, with abundance of blossom, distinctness of colour, and superiority in the quality of the flowers. They may be regarded as the cream of the Azaleas now in our gardens. Another 12 of about equal merit with respect to the qualities just named, and which might be usefully added where a greater number of varieties was required, will be found in the following selection:—

White.—Reine Blanche.
White with Stripes.—Tricolor, Iveryana Improved, Beauty of Reigate.
Rose or Rosy Peach—Dr. Livingstone, Modèle.
Salmon or Pink.—Variegata superba, Salmonia albo-cincta.
Orange Scarlet.—Juliana.
Deep Red.—Rubens.
Rosy Salmon.—Magnet.
Rich Rosy Purple.—Halfordiana.

There are many besides these which I have bloomed, or have heard others mention in very high terms, but the above list enumerates all I can confidently recommend at present. Many of those that I have bloomed, though very much praised by some persons, I consider no better than the above, even if they can be reckoned equal to them. Other varieties have not yet bloomed, or have bloomed prematurely in consequence of the severe cutting they have to be subjected to for grafting, and these it would not be just to condemn without further knowledge. Any such that I may consider worth adding to the above selection, I shall be pleased to mention at some future time.

Before closing this paper, I will offer a few hints to amateurs (who may not have already taken advantage of this plan) on the best method of obtaining a large plant of any new or scarce variety in a short time. There are in many places large plants of the original varieties such as Phœnicea, Woodsii, Prince Albert, Rosea Superba, Constantia Rosea, or other robust growers, that may have been discarded on account of the comparative poverty of their flowers. Such a plant then, if obtainable, should be placed in a moist genial temperature, and syringed two or three times a day; the stems should be scrubbed with a hard brush, to remove the accumulations that may have been forming for years, and to open the pores, which will cause the sap to flow more freely and bountifully; all small wood and any weakly branches that may be crowding others should be thinned out, and the wood regulated, so that it may be as equal as possible all through the plant. Any variety, of which a large plant is desired, may now be grafted upon this old stock, distributing the grafts over the whole plant, and of course keeping them on the upper side of the branches. In grafting take off a small piece of the bark of the stock, cut the graft slantingly, and thin at the end, making it fit the place prepared for it, and then tie it down with bast or worsted. If the stock is very large, some hundreds of grafts might be put upon one plant; and these, if preferred, might be of several varieties, if one important point is kept in mind, namely, not to put some strong robust-growing sort on the same stock with other sorts that are more weakly and delicate in habit. If this error is fallen into, the robust ones will soon take the lead, leaving their weaker brethren far behind, and ultimately causing them to perish. Always, therefore, select kinds for this purpose of as nearly the same constitutional vigour as possible. When the stock has been filled in this way with the kinds preferred, place it in a close damp place, and keep it well shaded. I have found cast-iron hand-glasses to make capital enclosures for such plants after grafting, as they can be raised as high as may be required by placing three or four of their square bottoms one upon the other, with one cap upon the top. The plant must be well shaded at first; but when the grafts begin to take hold of the stock, light and air may be admitted, though at first cautiously. The grafts must be well looked after, as their binding will soon decay in so close and moist a place, and fresh ones will be required, otherwise the graft may fall off, and if once loosened it is useless to attempt to replace it except by recurrence to the first process, or making fresh cuts both upon the graft and stock. I would however suggest, that no large plants of the old Indica Alba should be selected as stocks either for this or any other kind of grafting, as I have invariably found that the grafts put upon this sort die in a short time. They may take to the stock, but as it throws its leaves so completely in winter, they will be sure to fail when the season arrives for them to commence their growth and thus not only the trouble of grafting and tending, but the grafts also, will be lost. *William Barnes, Camden Nursery, Southampton Street, Camberwell.*

Home Correspondence.

Royal Horticultural Gardens.—I was present at the meeting on the 23d, and think it must be highly satisfactory to Mr. Chester to find that his adjournment has been productive of so much good. All praise to him for his exertions, and for his clear, admirable, and conciliatory remarks. We may also congratulate the Society on the timely concession of the Council to the wishes of every lover of horticulture, by the appointment of a committee of the right kind of men, to see what can be best done to increase the usefulness of Chiswick Gardens. I must confess, that when I first read the annual report I was reminded of Prince Hal's exclamation upon looking over Falstaff's bill, "What, one half-penny worth of bread to all this intolerable deal of sack!" Upwards of 20 paragraphs about the adornment and expensive alterations of the South Kensington Garden, and only one little allusion to poor old Chiswick—the garden to which the Society owes all its fame. For what objects was the Horticultural Society of London originally founded? For the promotion and advancement of Horticulture in all its branches; for the introduction of novelties in plants and seeds for the flower and kitchen garden; and for an authority to test what was good and deserved to be preserved, and what was worthless and only fit for the manure heap. And has that mission been fulfilled? Let the rapid strides—all emanating from the encouragement and example set by the gardens at Chiswick—which horticulture has made within the last 20 years answer the question. Far be it from me to draw disagreeable comparisons. The Apple of Discord is a bitter fruit, which should find no place in our catalogue; but with all admiration for the beautiful design of Mr. Nesfield, and a hearty wish—as it is my interest to have—for the prosperity of the new garden at South Kensington, it is absurd to consider that as the locality (excepting from periodical exhibitions) where one is to look for specimens of horticultural skill. The foreigner who comes over to our Society for information and instruction in horticultural progress, would of course be taken down to the gloriously covered walls, and vineries, and fruit houses, and the unrivalled collection of fruit trees at Chiswick; and if, as the Report says, "the Society wishes to maintain its position as the leading exponent of horticulture in the world, and not to sink to the status of a mere provincial society," it must uphold Chiswick, where what horticulture has done and can do, may be seen. I trust the intelligent men appointed on the committee will develop some scheme which shall prove to the garden-loving public, that Chiswick Garden is something more than what has been insinuated more than once by unthinking Fellows—a mere nursery for the supply of plants to South Kensington! I trust that, with increased railway facilities from the City and Charing Cross, I am not visionary when I look forward to see some day, with

the aid of the large conservatory and an inexpensive neat weather-tight building, something of a revival of the old Exhibition days, or at any rate the setting apart of some promenade days, with a band of music and refreshments, when the gardens are in perfection. The difficulty of access is the present drawback, but this once done away with, I have little doubt that half the new Fellows, who have I verily believe never yet been to Chiswick, would soon give their full share of patronage to a spot, which from the great extent of turf and shade, from fine specimens of interesting shrubs and trees, would be one of the most delightful places of resort in summer. I could have wished that some of the gardening element, as Mr. Chester justly remarked, had been introduced into the Council. It should be a strict rule, that the Council should always be partially composed of men whose business and calling is gardening. They would watch over that, without which the Horticultural Society is nothing; would see that the practical was not swamped in the ornamental; and if, as Sir Wentworth Dilke said, South Kensington is the place for making money, that this money was not all absorbed in the ever craving maw of that great undertaking--in fact, that we should not hear again that there was not sufficient money left to mow the lawns and trim the trees of Chiswick. The new Committee is a step in the right direction. May their fruits prove worthy of an extra Knighto-Banksian gold medal! *Another Old F.H.S. of London.*

Successful and Unsuccessful Garden Practice.—Having often considered that the result of wrongly directed practice is more impressive in the way of caution than the rehearsal of success, I am induced to offer a few remarks on the subject. There must be a kind of sting or dread attending failure, more productive of improvement than any emulative feeling consequent upon success. I hold therefore that if all failures, and the cause or causes that produce them, were truly recorded, much benefit would result, as information of that description would act as a guide to the inexperienced. I imagine however that the majority of your readers would shrink from giving publicity to their own errors, as it is rare to find a sense of public duty so predominant as to induce a man to voluntarily acknowledge his own want of skill. Nevertheless, to a frank and open mind a fair confession would cause no uneasiness, neither would it be any disgrace, as failures will often happen in spite of the greatest care, a fact which is universally admitted. The sooner, therefore, professional mistakes are acknowledged and published the better, because if made in regard to the management of particular flowering plants, shrubs, Vines, wall trees, &c., such as planting too deeply, or placing them too closely together, they are sure to be detected at some time, and perhaps reported by visitors, from whom such reports may come ungracefully. I doubt not that it will be said that if a man writes at all, it will be of some successful achievement of his own, and if truly and minutely described, his report of the matter will answer the same purpose as if he had written an account of an unsuccessful experiment; the latter can easily be inferred from the former. Bad gardening is more easily discovered and made known than imperfect agriculture; because young gardeners are continually passing from one place to another in pursuit of knowledge, and they are most of them reading men. Since horticultural publications have become so plentiful, literary gardeners and improved gardening have been on the increase. Few I think will deny that these publications are serviceable to us; for though their contents are not always new, yet they go far to answer the question that it is as useful to publish unsuccessful as sound practice. Courteous criticism on what is done or left undone by others, often stimulates to healthy action, men who might otherwise remain dormant; therefore every one should exercise his own judgment, and carefully canvass men and measures, exposing error and upholding truth. Such records give periodical publications, whether on arts or sciences, an inquisitorial character, but while they are kept pure from abuse and frivolous petulance, they are raised thereby in the eyes of readers into a kind of tribunal which all are willing to respect. Gardening periodicals in particular have a peculiar value to gardeners, as any mistake that may accidentally creep into one, is almost sure of being corrected in the next or some following issue; and as refutation must be accompanied by some discussion, facts are elicited, and new ideas not unfrequently broached, which but for the first mistake or misstatement, would perhaps have been for ever buried in oblivion. A record of failures therefore has an equal, if not greater, value than that of successful practice. *John Cole M'Ardell, Late Foreman in the Gardens of Sir Watkin Williams Wynn, Bart., M.P., at Llangedwyn Hall, North Wales.*

Renanthera coccinea.—None who have the means should be deterred from growing this charming plant from a belief that it is difficult to bloom. When gardener to the late Mrs. Huskisson, at Eartham, near Chichester, a plant of it flowered with me five times in six years. Once, in the year 1854, it had four beautiful panicles on it, all in perfection at one time. Mr. Webster, now at Gordon Castle, whom I succeeded, flowered the same plant successively for a much greater number of years. To him then belongs the credit of being one of the first, and, as far as I have been able to learn, the very first, to get this plant to bloom with anything like regularity and certainty. A gardener in the same neighbourhood was likewise most successful in flowering it; I have seen him have two quite small plants of it in bloom at the same time. The Eartham plant when under my care was grown on a small trunk of Yew, and except when growing or during very severe weather, it was kept suspended close to the glass in the warmest end of an old house heated by a common flue. While it was growing the temperature never exceeded what is considered ordinary stove heat, with abundance of moisture, but for about eight months in the year it was kept comparatively cool and dry, as may partly be judged from the fact of Strawberries being successfully grown in the same house from the beginning of the year till the end of May. In short, to ensure success, all that is wanted is a strong well grown plant, thoroughly ripened by exposure to the sun, with currents of air at all times, and a rather long season of perfect rest. I have found Dendrobium moschatum and D. Calceolaria, likewise Vanda teres and others, to flower freely, managed in the same way. *Jas. Bell, Bretton Hall, near Wakefield.*—I observe that several places are named in your columns where this fine Chinese epiphyte has flowered, which seems to indicate that its blossoming is still a matter of uncertainty in the hands of some cultivators. Having been successful in flowering it for a number of years by a system of treatment differing from that commonly adopted, perhaps some account of my method may be interesting. I may also state, that I have had as many as four and five spikes all in flower at one time, and that two silver Banksian medals have been awarded to me for flowering it by the Horticultural Society of London—one on Nov. 5, 1844; the other on Nov. 3, 1846. The plant from which these flower spikes were cut, was grown on a mossed block of wood, from 8 to 10 feet in length, the roots being kept to the block as much as possible, which enabled it to be easily transferred from one house to another when required. My plan of management was to grow it in heat in winter, and to rest and ripen it in summer. Preparatory, therefore, to removal, about the beginning of June, the plant had little water given it for a week or two, so as to make the change less felt than otherwise it would be when put into a colder and more airy situation; the most suitable place at command for its reception was a Peach-house that had little fire-heat given it, and in which fruit ripened about the end of July. It was placed at one end of the house about the middle of June, and kept there until the middle of September, receiving very little water during that period. As regards airing and other matters, the house was managed so as to suit the Peaches, just as if there had been nothing besides in the house. The leaves and stem of the Renanthera thus treated assumed a yellowish and ripened hue towards the latter end of this period, but upon being replaced in heat, they soon regained their dark green healthy appearance. On its resuming active growth, flower stems began to make their appearance. In order to have fine large spikes, I found it best to keep the whole plant as nearly parallel to the roof as possible, and the young shoots near the glass. *J. Webster, Gordon Castle.*

Gardeners' Education.—Having seen in your columns a letter from a "Very Old F.H.S.", in which it is set forth that the great want of the present day is educated gardeners, I should like to be informed to what degree a gardener is expected to be educated for the paltry sum of 50*l.* or 60*l.* per annum. Is he expected to be well versed in botany, Latin, chemistry, geometry, drawing, and natural philosophy? If so, better wages must be paid to enable gardeners to send their children to school to learn such things, for they will have very little time to learn them after they have entered a garden, unless they fare a great deal better than myself. I have to be at my work at 6 o'clock in the morning, and very often continue on till 8 at night, and in the winter time am up most of the night tending the fires, all of which I have to do for the sum of 12*s.* per week, nine of which I pay for my board, washing, and lodging; the other three go in finding me a few books and a few clothes—and few they are, I can assure you. *Ignoramus.*

Royal Horticultural Society's Botanical Prizes.—In my dominions grows a plant of Parnassia palustris, and there is one more in the county, the last of its race, watched over by a loving "she," and so tended and hidden by fairer hands than mine. Now, I give fair warning that if I catch any "ruthless botanical pirate" at either of these plants, I will shoot him. I am a humane man, and shall give him what we allow for a dog that runs hare, an ounce of No. 6 at 75 yards, so sure as my name's *Diogenes.*

Grape Setting.—Mr. Nicholson (see p. 102) appears to attribute his success in this matter to the daily syringing of his Vines from the period of starting until the stoning of the fruit. Now there can be no question that gardeners in general are opposed to syringing Vines while they are in flower. In my young days the plan pursued was as follows:—From the first day a Grape-house was shut up, washing was commenced and continued daily until the Vines came into flower; then for two weeks or so the engine ceased working, and during that time the temperature was raised up to from 70° to 85°. The flues were then deluged with water, causing steam to arise, which heightened the temperature to say 95°, producing what was termed "a first-class artificial shower." Unfortunately, however, during these 14 or 16 days red spider not unfrequently established itself on the Vines, and that very much to the damage of the crop. Twenty-five years ago therefore, it occurred to me, that if all out-door fruits set best in a mild temperature with refreshing showers when the trees were in blossom, why should not Grapes also set under similar conditions; and ever since I have continued to syringe my Vines, whether in flower or not, and in four divisions of vineries I have never lost a crop, neither have I ever been troubled with red spider. Muscats I find in fact to set best under the treatment just mentioned at a temperature of not less than from 80° to 85°, but the washing must by no means be continued after the fruit approaches stoning, lest it should interfere with the bloom upon the berries. *Archibald Smart, Fullerton, N.B.*

Labels (see p. 152).—In my experience I have found the best material for these to be sheet lead, on which I stamp the names, and for that purpose I have two sets of types made of iron and tipped with steel; one consisting of capitals, the other lower case letters. My fruit trees of various sorts on walls are labelled with names printed on lead, and though that was done some 10 or 15 years ago the labels are all as legible as on the day on which they were nailed to the wall. A row of Apple trees on a border, kept dwarf for getting buds and grafts from, is also labelled in the same way; but in this case the labels are fastened to the outside branch with circular copper wire, which is capable of being enlarged as the branch swells. I have also a set of figures which are used for numbering young trees on other walls. Although the leads for these are only 1½ inch square, yet a number consisting of three figures may be printed on them. The types are placed in pieces of Oak with three rows of holes in them, deep enough to allow the types to go half way down. *W. S.*

Foreign Correspondence.

VERSAILLES: *Feb.* 16.—*Mould containing Fungus Spawn.*—An interesting article in your Number of the 13 inst. ends with these words:—"We cannot caution cultivators in general too strongly against any compost whatever which is either already impregnated with fungus spawn or likely to generate it." Permit me to give my experience on this subject.

The garden which I cultivate in person, "en amateur," being situated on a southern slope, and the soil "rabbit sand," I of course require a good deal of mulching during our very hot summers, and for that purpose I employ broken up Mushroom beds, which I obtain from the abandoned quarries of Chaville (half way between this and Paris). For 10 or 12 years I have annually covered my whole garden 3 inches deep with this material, and I have never found any bad effects to arise from it; in the autumn it is regularly dug in, and never since using it have I found a single Mushroom to spring up.

I cultivate Peaches and Grapes as wall fruit, Pears in pyramids (quenouilles), and Plums as standards; all the usual run of perennial and annual flowers; greenhouse plants put out in summer, &c.; and moreover a large collection of succulents, which are freely potted from the mould out of this garden, yet I have never found it to produce either "mildew," or "meal," or anything of a "cryptogamous" nature.

The old quarries of Chaville formed in the side of a hill, and from which a good part of western Paris was built, are completely deprived of light, and their temperature never sinks below +6 to +8 degrees centigrade, so that Mushrooms are there grown under the most favourable circumstances for the Paris market.

The sojourn of the manure during a "season" (about six weeks) in these vast caverns, totally deprives any seeds it may contain of their power of germinating, so that a weed never by any chance is brought into my garden by it; the colour is a lightish brown, and the straws about 1 inch long, so that in every way it is a most cleanly and agreeable material to cover a flower garden with. It is of course full of spawn, although the best flakes have been taken out by the "champignoniste" to "lard" his new beds with. The cost is 15 sous the lineal toise of Mushroom bed; 18 of these form a good load for one horse. When I first began employing it, it was only used to make mould of, but at present it is extensively employed for mulching flower beds in all the show places about Paris. *F. Palmer.*

Societies.

ROYAL HORTICULTURAL: *Feb* 23.—(*Adjourned Anniversary.*)—J. J. Blandy, Esq., V.P., in the chair. In opening the proceedings, the CHAIRMAN stated that upon one of the most important points which led to the adjournment, the Council had received a letter from the Royal Commissioners of 1851, which would be submitted to the meeting. He had no doubt that it would be deemed highly satisfactory, as the total increase of interest to be paid was only 38*l.* 5*s.* It had been alleged that it was not the intention of the present members of the Council to carry out the original objects of the Society. That was not correct. In fact, five members of the present Council had themselves on one occasion, before the removal to Kensington, became security for 2000*l.* to save the Society from absolute collapse. They were therefore entitled to some credit for what they had done, instead of having the allegations which had been put forth made against them

The ASSISTANT SECRETARY then read the following letter from the Commissioners:—

Palace of Westminster, February 13th, 1864.

SIR,—In order to explain the terms upon which her Majesty's Commissioners for the Exhibition of 1851 are willing to make the advance of a sum not exceeding 13,000*l.* for the purposes of the Horticultural Gardens, as announced in my letter of the 6th inst., the Commissioners feel it necessary to revert shortly to the pecuniary relations now existing between themselves and the Royal Horticultural Society.

Under the agreement of July 24th, 1860, her Majesty's Commissioners advanced a sum of 50,000*l.* By the 14th clause of that agreement, a rental of 2145*l.* per annum is reserved to the Commissioners, this sum being the exact amount of interest paid by the Commissioners for the loan of the money laid out under the agreement by them on the Gardens.

In pursuance of a further agreement, dated March 1st, 1861, her Majesty's Commissioners advanced a further sum of 5100*l.*, exclusive of a much larger sum expended by them on the Southern Arcades. By clause four of this agreement, the Commissioners are entitled by way of rent to a sum of 216*l.* 15*s.* per annum, being after the rate of 4½ per cent., making the total rent or interest now payable to the Commissioners under both agreements amount to 2361*l.* 15*s.*

The above rent is independent of the share of surplus profits secured to the Commissioners.

With respect to the proposed expenditure of a sum not exceeding 13,000*l.*, I am directed to acquaint you, for the information of the Council of the Society, that it is the intention of her Majesty's Commissioners to charge interest by way of rent on the sum of 4900*l.* only.

The Council will observe that this sum of 4,900*l.*, added to the two sums of 50,000*l.* and 5,100*l.* already alluded to, completes the amount of 60,000*l.*, the expenditure of which was contemplated by the above-mentioned agreement.

Her Majesty's Commissioners have now much pleasure in proceeding to inform the Council of the Society that, having been recently enabled to pay off that portion of their mortgage debt which bore 4½ per cent. interest, they are willing to reduce the rent or interest payable to them by the Society to 4 per cent., calculated upon the outlay of 60,000*l.*, being 2400*l.* a year.

The Council will therefore observe that Her Majesty's Commissioners make the advance of 13,000*l.*, with only a nominal addition to the rent at present payable by the Society.

I have the honour to be, Sir,
Your very obedient servant,
EDGAR A. BOWRING.

The Secretary to the Royal Horticultural Society.

Mr. HARRY CHESTER then, in a long and able speech, reverted to the numerous topics which were under discussion at the previous meeting, and said that he had a series of resolutions which he intended to propose. Amongst them was one upon the necessity for making the gardens at Chiswick a school of gardening.

The CHAIRMAN interposed to inform the meeting that the Council had considered that subject, and had just passed the following resolution with respect to it:—"That a Committee be appointed to consider how the present working of the gardens of Chiswick may be made to conduce to the improved education of gardeners, with instructions to frame a scheme, and the estimated cost for carrying it into effect, having reference especially to the experience of the past efforts of the Society in this direction." The names suggested to act on this Committee were Mr. Chester, Sir Wentworth Dilke, Mr. Fortune, Mr. J. Lee, Mr. Moore, Mr. W. Paul, Sir Joseph Paxton, Mr. Rivers, Mr. Veitch, and Mr. Murray, Secretary, with the President, Secretary, and Treasurer as *ex officio* members.

MR. CHESTER expressed his approval of the letter which had been read, and also of the resolution which had been come to. He thought that they were much indebted to the Chairman for his conciliatory address; he wished to see a feeling of amity exist, for without it the Society would never succeed. With regard to the alleged irregularity in the election of Council, he thought that they should have contested the point at the last meeting; but as it had passed over, they should now consider it settled, and ask the Council to make a general revision of the bye-laws, in order that such might not occur again. Having suggested certain improvements in the gardens at Chiswick, and also at South Kensington, he concluded by moving the following resolution:—

"That the report of the Council be adopted, and that they be assured and requested to assure H. M.'s Commissioners of the cordial support of the Fellows in realising as far as possible both at Chiswick and at South Kensington, the comprehensive scheme for the Royal Horticultural Society: which scheme having been proposed by our lamented President the Prince Consort, and accepted by the Commissioners, and by our Society, and embodied in Her Majesty's charter and the agreements founded thereon, has already led to a large expenditure, and has induced great numbers of persons to become Fellows of the Society, Life Fellows, and Debenture Creditors."

Upon reference being made to the annual outlay upon sculpture for the garden, Sir Wentworth DILKE said that some misapprehensions existed. H.M. Commissioners did not require the Council to spend any fixed amount of money in that respect, but the idea emanated from the Council that they should encourage artists to exhibit their works at certain seasons of the year. He ventured to suggest that it would be better if Fellows would speak out, instead of murmuring, and make what suggestions they had to offer, and he assured them they would, where practicable, be adopted.

Mr. CHESTER was glad to hear any explanation, his only object being to benefit the Society.

Mr. HARWOOD HARWOOD seconded the resolution proposed by Mr. Chester.

The Hon. Judge DES BARRES having defended the conduct of the Council; and some criticisms having been offered in respect to the publications of the Society, the resolution was adopted.

Mr. CHESTER then moved the further resolution:—

"That the Council be requested to revise the bye-laws and to submit a draft of amended bye-laws to a general meeting of the Fellows as soon as possible."

Sir ANDREW WAUGH seconded the motion.

Mr. J. SIDNEY SMITH thought that the course suggested would create much unnecessary confusion, and therefore he asked Mr. Chester not to press his resolution.

Mr. CHESTER said he had not that intention in bringing it forward. He wished to assist the Council, and not to throw any hindrance in their way. If the Council felt that the passing of the resolution would create confusion, and expressed a wish to that effect, he would withdraw it.

The Chairman and several of his colleagues said they had no objection to the resolution; which was accordingly put and carried unanimously.

After a few remarks from Mr. STRICKLAND and others, a vote of thanks was passed to the Chairman, and the meeting separated.

ENTOMOLOGICAL: *Feb.* 1.—F. Smith, Esq., in the Chair. The Rev. Hamlet Clark exhibited a collection of the Phytophagous Coleoptera of Australia, formed by Mr. Wilson, of Adelaide; and also the species of those insects collected by Mr. F. Waterhouse during his overland journey. Mr. G. R. Waterhouse exhibited several allied species of Psammodius and Onthophilus, of which he detailed the characters. Mr. Dunning exhibited a portion of a coffee cask from Ceylon, destroyed by the larvæ of some beetle, probably of the genus Anobium. Professor Westwood exhibited a specimen of wild silk from St. Salvador, in Central America, communicated by Mr. Daniel Hanbury, being the produce of a colony of caterpillars of some unknown species of Lepidopterous insects. He also read the descriptions of two remarkable new genera of Carabidæ from the Oxford Museum; and also of a fine Moluris, to which he applied the name of Rowleiana, in honour of the Rev. Henry Rowley, by whom it was collected at the Zambesi. Mr. Smith exhibited a very interesting collection of wasps' nests in various stages of formation, belonging to Mr. S. Stone, who had made holes in banks which the wasps had subsequently adopted for their abodes. Major Parry read a paper entitled "Further Remarks on Mr. Thomson's Catalogue of Lucanidæ." Mr. T. W. Wood exhibited a block of Honduras mahogany, inclosing a number of cells, somewhat resembling the honey-pots of the Bombi, but considerably larger. General Sir J. B. Hearsey exhibited a collection of beetles, chiefly from India and China.

Notices of Books.

A History of the World. By Philip Smith, B.A. In Monthly Parts. Walton & Maberly, 1863.

Following the example of Sir Walter Raleigh, Mr. Smith proposes to write "A History of the World from the Earliest Records to the Present Time," wisely condensing his matter where possible, but "bestowing special care on those periods and nations, the history of which is scarcely to be found in any works accessible to the general reader," and regarding the whole from a common point of view—a view which, he says, may in some cases modify the conclusions drawn by classical partiality and national pride.

In the matter of Biblical Chronology Mr. Smith adheres to the dates given by Archbishop Ussher, as being on the whole the most satisfactory, but subjoins a comparative table of the six chief epochs, from the Creation to the destruction of the Temple, according to Ussher, Petavius, Clinton, Hales, Jackson, and Poole, the most celebrated modern chronologers. In the absence of any other authentic sources of information, Mr. Smith makes bold to take the scriptural accounts as his guide, and often points out as he proceeds, that there is nothing improbable in these earliest records, while they are continually being corroborated by recent discoveries. A notable instance of this, is the discovery of an inscription among the ruins of Birs Nimroud, and deciphered by Oppert, which proves, in Mr. Smith's opinion, that the story of the confusion of tongues is "no mere Hebrew tradition." In discussing the dispersion of the nations, in Chapter 3, the Bible genealogies (which appear in many cases to be also ethnical), are taken for the basis, and a flood of light is thrown upon this difficult subject, from the philological investigations of Professor Max Müller. More treasures will be found in this mine of wealth, as it is worked, for the inquiry here indicated, is only in its infancy.

Chapters VI. and VII. treat of Egypt and its claims to a great antiquity. It seems that Mizraim, the scriptural name of the country, is a dual form, pointing to its division into Upper and Lower Egypt. Mizraim is also the name of a son of Ham; but the circumstance that Egypt is often called "the land of Ham," need not prove more than a remote derivation of its people from the son of Noah. The case is much stronger when we find that the name of the country was actually that of Noah's son. "The name Khem, by which Egypt is denoted on its monuments, is the same as the Hebrew Ham (or rather Cham), and has a kindred signification."

A singular discovery promises to give some clue to the date of the Pyramids. It was found "that the passages which slope inwards from the northern face of these structures are inclined at the very angle which would make them point to what was the pole-star at the epoch of their erection." Sir John Herschel speaks of this "as a circumstance which can hardly be supposed to have been unintentional, and was doubtless connected with the observation of that star, of whose proximity to the pole, at the epoch of the erection of these wonderful structures, we are thus furnished with a monumental record of the most imperishable nature." In the two Parts before us, which will form a third of the first volume, the reader is carried through the Egyptian dynasties, and the history of the Hebrew nation as far as the Babylonish captivity.

We have endeavoured to give a very brief account of the plan of the work, and the principles upon which it is conducted. That the writer is both well informed and trustworthy there can be no doubt, being, as he is, one of the principal contributors to the Dictionaries of Greek and Roman Antiquities, &c.

Notes on Hospitals. By Florence Nightingale. Third Edition. 1863. Longman & Co. Small 4to square. Pp. 187.

The British nation owes a deep and lasting debt of gratitude to Miss Nightingale for her noble self-denying Christian conduct at a time when gloom and sorrow hung like a dark cloud over a multitude of English homes. The state of our hospitals in the East was deplorable, and the miseries endured by our brave soldiers stirred every heart, when this brave and accomplished lady offered her services; which, much to the credit of the authorities, were thankfully accepted. The result speedily manifested itself in the improvement of the military hospitals, and the name of Florence Nightingale is embalmed as a sacred thing in the memory of many an English family, both among rich and poor; and never will it be uttered by British lips but with profound respect and deepest gratitude.

The book before us bears ample evidence of the defective state of hospitals in general, and it is a happy circumstance, that Miss Nightingale has directed her attention and her remarkable abilities to the very important, but very difficult subject, here treated of. We are persuaded that nobody will study these "Notes on Hospitals" without coming to the conclusion, that the volume thus modestly described is a well-arranged, lucidly written, and most valuable treatise, on a subject which appears to have been too much neglected.

It is a startling fact, to commence with, that the mortality in splendid hospitals, where apparently no expense is spared, and the highest skill of the kingdom is employed, should be actually "higher than any calculation founded on the mortality of the same class of diseases among patients treated out of hospital would lead us to expect."

This leads Miss N. to inquire, first, into the sanitary condition of hospitals, and at once we find the difficulty of obtaining accurate statistics, arising from the circumstance, that where "the mortality which has taken place in a hospital is given, no cognizance is usually taken of those cases which are discharged in a hopeless condition, to die immediately afterwards, a practice which is followed to a much greater extent by some hospitals than by others." What a lesson against overcrowding, and in favour of fresh air, is afforded by the following extract:—"In the hospital tents of the Crimea, although the sick were almost without shelter, without blankets, without proper food or medicines, the mortality was not above one-half what it was at Scutari; but these tents had only a few beds in each. Nor was it even so high as this, in the small Balaclava General Hospital, which had part of its sick placed in detached wooden huts. While, in the well-ventilated detached hut of the Castle Hospital, on the heights above Balaclava, exposed to the sea breeze, at a subsequent period, the mortality among the wounded did not reach 3 per cent."

The prime essentials of 1, fresh air, 2, light, 3, ample space, and 4, subdivision of sick into separate buildings, being fully established, the second chapter shows the principal defects in existing hospital plans and construction, arranged in ten heads. We make a small extract from the "defective kitchen" department. "I have often seen the sick unable to eat the messes prepared for them in the name of diets, not so much because they were bad in quality, as because the cook had no clear idea of the class of stomachs for which he or she had to provide. It is singular that, while so much care is taken to provide good medicine properly made up, so little care is bestowed on the cooking of that, which is of more importance than most medicines. The nurse or doctor only finds out, perhaps next day, that the patient has lost appetite, or been sick, or has had a relapse, and nobody suspects that the men or women in the kitchen had occasioned it."

Numerous large plates are given of the plans of celebrated hospitals, and it is gratifying to find that the Herbert Hospital at Woolwich is spoken of in the highest terms of praise. "This, when completed, will be by far the finest hospital establishment in the United Kingdom, or indeed in Europe." The remarks on convalescent hospitals will strike the reader as

being replete with sound sense, and are evidently the result of careful observation and much experience. They are of this kind: "The convalescent hospital should as much as possible resemble a home, and therefore every condition of the sick hospital should, as far as possible, be reversed. We don't want the convalescent to feel, or think, or act, as hospital inmates, but as people who are recovering."

We have received from Messrs. Smith, Beck & Co., 31, Cornhill, Mr. Osbert Salvin's series of *Photographic Views of the Ruins of Copan*, a place in Central America. These views are not merely of antiquarian interest, but give a capital general idea of the exuberant richness of the vegetation of a country that produces many of our finest hothouse plants. For this reason we recommend them to the careful study of our horticultural readers.

Miscellaneous.

Unusual Severity of the Weather in the South of Europe.—It appears from the *Revue Horticole* for the present month, that the cold has been more severe in Italy and the south of France than has been experienced in those countries for the last 34 years. November and December are stated to have been very mild, and formed a remarkable contrast with the severe degree of cold experienced in January; and what is also very remarkable, the frost was more severe in the south than in the north. Throughout the greater part of Italy the thermometer descended unusually low. At Turin it indicated (—20°) Centigrade, or 4° Fahrenheit below zero. In the extreme south of France it is stated to have been equally severe, and very destructive to vegetation, as will be understood by some extracts of a letter from Carcassonne, dated January 22, 1864:—"The cold has set in with frightful intensity in our Department. The frosts on the 2d, 3d, and 4th of January cut up all our vegetables. Our Beans were in flower, our early Peas were green, but nearly all are lost. Our Artichokes, Celery, Cardoons, &c., exhibit only a mass of putrefaction. Our parterres are like deserts; our Anemones and Ranunculuses were commencing to flower; but at present there is left scarcely a trace of them. Our river Aude was in many places completely frozen over, and this has not been the case since the memorable winter of 1830."

Sparassis, a new esculent British Fungus. — The genus Sparassis, the name of which is derived from σπαράττω, I tear or lacerate, with the fleshy consistence of Clavaria and similar esculent characters, has flattened laminæ, which are in every part covered with the fructifying surface, or hymenium. In Thelephora and the closely allied genus Stereum, in which the divisions are often much flattened and expanded, there is not only a leathery consistence, but the hymenium is definite, being confined to the lower surface. In Sparassis the lobes are extremely large and numerous, so as to form a rounded and sometimes hemispherical mass, occasionally a foot or more in diameter, with a height of several inches, which, together with a delicate waxy appearance, render the species most striking objects. The habit is somewhat similar to that of Millepora reticulata, an analogy which is not without example amongst other Lithophytes, in which, as Fries remarks, we find forms which remind us of such genera as Agaricus, Boletus, Hydnum, Clavaria, Peziza, &c. Similar resemblances occur amongst the galls on leaves produced by insects, which accordingly have been confounded by superficial observers, even since the principles of Fungology have been better known, with true Fungi. Sparassis laminosa, which may be considered as the type of the genus, has not yet occurred in this country. It is found on old Oak stumps, or amongst Oak chips, and acquires the size of a large Cauliflower. When pure in colour and young it is excellent, but it soon acquires a yellow tinge and disagreeable smell, and is then wholly unfit for food. The laminæ are very large and broad, springing from a very short stem, and are narrow and wedge-shaped below, but dilated above, and confluent with each other in every direction. Sparassis crispa, though sometimes attaining a considerable size, is on a smaller scale. The laminæ are more rounded and leaf-like, though curled, and folded, and variously lobed and laciniate with a crest-like margin, and springing from a well marked, thick, rooting stem, the greater part of which is sunk in the soil. The hymenium is more or less uneven, and rather wrinkled, or rough, with little wart-like elevations. In decay the margin becomes soft, acquiring first a yellow, then a brownish tinge, and finally the whole forms a loathsome mass. Like all other esculent Fungi, those specimens only are fit for use in which there is not the slightest tendency to decay. Sparassis crispa, which was found [by the Rev. G. H. Sawyer] in a Fir wood in the south-east of Berkshire, between the Asylum for Criminals and the Wellington College, where there is much Fern and Heath, occurs in several parts of Europe. It is rare in Sweden, but more common in Germany, especially about Prague, where it is frequently brought for sale to the market. It also occurs in France, in the provinces bordering on the Rhine, where it is said by Roques to be highly valued. We have not heard of its being used in Hungary, nor does it occur in a large collection of Fungi gathered in the neighbourhood of Schemnitz. It is scarcely probable that it will be found in this country in sufficient quantities to make it an article of food, but in case it should be found plentiful, we subjoin Roques' "indications" for its preparation, which apply equally to true species of Clavaria, to which genus, indeed, it is referred by Roques, in this following Wulfen, who described it in Jacquin's "Miscellanea Austriaca." Schœffer referred it previously to Helvella, with a less correct appreciation of its affinities. "The plant," says Monsieur Roques, "should be well cleaned from any particles of soil which may adhere to it, then washed in warm water and thoroughly drained, after which it should be baked with butter, Parsley, a little Eschallot, or a *soupçon* of Garlic, and seasoned with pepper and salt. When tender, cream and yelks of eggs should be added. While baking, a few spoonfuls of stock or broth may be added occasionally, to make it more tender. In Austria it is simply fried in butter and seasoned with sweet basil." *Rev. M. J. Berkeley, in Intellectual Observer.*

Calendar of Operations.

(For the ensuing week.)

During the present changeable weather great attention will be required in the way of maintaining proper temperatures, and the requisite amount of moisture in stoves and other plant houses. Spare no labour to keep up a gay appearance in Conservatory and other show houses. Cut and train Climbers, and let everything be kept scrupulously neat and clean.

FLOWER GARDEN AND PLANT HOUSES.

If not already done, look over beds of Crocuses and other bulbs to see that they are not thrown out off the ground by frost. Also inspect half-hardy plants that have been closely covered up, in order to see whether or not they are secure from injury, or suffering from confinement. As trying weather may yet be expected, every precaution should be taken to ward off its ill effects.

AURICULAS.—On the first favourable opportunity let these have as much air as possible; they dislike close confinement.

CARNATIONS AND PICOTEES.—Draw the lights off these in the day time when there is no frost, but let them be put on again at night.

PELARGONIUMS.—These will now be growing pretty freely; therefore whenever the weather is fine, let them have as much air as possible, consistent with the proper temperature. Fancy varieties may be kept a little warmer than ordinary kinds.

ROSES.—Another batch of these may now be placed in heat to succeed those coming into bloom. Keep down fly by frequent fumigations, and the Rose maggot by hand picking.

TULIPS.—Place in heat potsful of bulbs to succeed those now in bloom, and see that the latter are not allowed to droop from want of water.

FORCING GARDEN.

High temperatures must still be avoided, or unhealthy growth will be the result. The proper degree of heat to maintain is therefore a matter of the utmost importance, and will, as we have just stated, require at present great attention.

ASPARAGUS.—If not already done, make a bed to succeed that now in cut. On fine days give a little air, to keep the heads from becoming too much drawn.

CHERRIES.—Force slowly while the weather is dull. Syringe the trees occasionally, and keep all floors and other evaporating surfaces moist.

CUCUMBERS.—Worn out plants in houses may now be rooted up, the beds renewed, and their places filled with young plants. Cuthill's Black Spine is as useful as any to plant for ordinary purposes.

MELONS.—Sow now; pot in small pots when strong enough; keep near the glass, and either plant out or pot into large pots, using properly warmed, rather strong turfy soil. Sow for succession at intervals of about a month, until May.

PEACHES.—Admit air freely whenever the weather is mild, and keep the atmosphere moist, maintaining a steady night temperature of about 50°. Early houses in which the fruit is set should be afforded a nice growing temperature, syringing liberally to prevent red spider, and keeping the border in a healthy state as to moisture, to secure a vigorous root action.

PINES.—Young plants growing in beds that have been some time planted will be benefited by having the soil loosened up as deeply as can be done without injuring the roots, giving it a liberal soaking of tepid water if it be found to be too dry. The water should be applied by means of a pot with a rose on it, and not so fast as to flood the surface, for if this is done the soil will be rendered almost as close as before forking up; indeed, careless watering is the great cause of the surface of the soil becoming close and hard, and should be studiously avoided. Endeavour to afford a nice regular bottom-heat, with a thoroughly moist atmosphere, and keep the plants growing as freely as may be consistent with preserving them dwarf and bushy. Have a constant eye to maintaining a succession of fruit, or securing a supply at the season when it may be most wanted, and let the treatment of the plants be regulated according to circumstances; this is a matter which demands considerable forethought, and which can be successfully managed only by careful observation and attention.

STRAWBERRIES.—Put sufficient of these for a second crop into a Peach-house or Vinery, and place them on a shelf near the glass where they will have plenty of light. A fresh supply of plants should be afterwards placed under cover every fortnight or so. Let the temperature be low at first, and even afterwards force gently and give all the air possible, or the flowers will be apt to become "blind."

VINES.—Take advantage of all favourable opportunities to admit fresh air as freely as can be done with safety, and be satisfied with as low a temperature from fire-heat as may be considered safe under the state of the Vines, but shut up early, allowing the thermometer to rise considerably. This will to some extent economise fuel, and will be much more congenial than strong fire-heat. Except where Vines are in flower keep the atmosphere moist, but the foliage should always be allowed to become perfectly dry in the course of the day.

HARDY FRUIT AND KITCHEN GARDEN.

Digging and trenching may still be carried on with activity. All wheeling will, as a matter of course, have been done during the late hard weather.

APPLES.—Pruning and thinning of these must now be completed.

PEARS.—The observation just made in reference to Apples, also applies to these.

PEAS.—If not already done, make a sowing, as soon as the ground is in a fit state to receive the seed, of some early variety, and of the Auvergne to succeed it, following up with some of the kinds mentioned last week.

SPINACH.—This has suffered, we hear, in some places from the late frosts. A sowing to supply early plants should therefore now be made.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Feb. 24, 1864, as observed at the Horticultural Garden.

February	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain
Thurs. 18	11	30.257	30.117	41	24	32.5	41½	42	N.E.	00
Friday 19	12	30.245	29.993	33	21	27.0	41¼	42	N.E.	00
Satur 20	13	30.016	29.765	32	24	28.0	41	41¼	N.E.	.00
Sunday 21	14	29.696	29.641	34	26	30.0	40	41	N.E.	0
Mon. 22	○	29.880	29.764	37	16	26.5	39	41	E.	00
Tues. 23	16	29.904	29.892	36	17	26.5	39	40¼	N.E.	00
Wed. 24	17	29.924	29.896	38	26	32.0	39	41	N.E.	.11
Average.		29.988	29.885	35.8	22.0	28.9	40.1	41.3		.11

Feb. 18—Overcast; some snow-flakes; snow-shower; overcast.
— 19—Dry frosty wind; snow-showers; overcast; frosty.
— 20—Frosty; cloudy, not above freezing all day; frosty.
— 21—Overcast, fine but cold, overcast.
— 22—Overcast; densely clouded in large masses; overcast; sharp frost.
— 23—Densely and uniformly overcast; hazy; frosty.
— 24—Frosty; overcast; snow at night.
Mean temperature of the week 10 deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 28 years, for the ensuing Week, ending March 5, 1864.

February and March,	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 28 .	49 2	33.4	41.3	14	0.84 in.	1	8	3	—	2	9	5	0
Mon. 29..	47.6	34.0	40.3	14	0.62	—	8	2	1	5	11	2	1
Tues. 1..	49.0	35.5	42.2	14	0.45	2	7	5	—	3	15	3	0
Wed. 2..	49.8	32 2	41.0	15	0.22	3	7	5	2	3	9	6	1
Thurs. 3..	49.7	31.2	40.0	11	0.48	3	9	2	4	3	6	6	1
Friday 4..	48.9	31.7	40.3	10	0.40	2	7	3	4	4	9	2	1
Satur. 5..	48.9	32.6	40.2	14	0.26	4	6	4	3	4	8	5	0

The highest temperature during the above period occurred on the 4th, 1860—therm. 70 deg.; and the lowest on the 4th, 1855—therm. 15 deg.

Notices to Correspondents.

TO CORRESPONDENTS.—A few inquiries as to matters which demand some investigation, necessarily stand over till next week.

BOTANICAL COLLECTIONS: *Hontoniensis.* We do not object to the scheme, as a scheme, but as a manifest departure from the purposes for which, and which only, the Royal Horticultural Society was chartered. If prizes are to be given for the best collection of little botanical obscurities, which have nothing to do with Horticulture, prizes may also be given for the best collection of wild birds, or wild animals, or wild mollusks.

DRY ROT: *K K.* Your Fungus is incipient dry-rot. Make a strong aqueous solution of corrosive sublimate, and wash your timbers well with it. This will at any rate relieve you for a season. *M J B*

FLUKE POTATO: *T B.* is desirous of knowing in what year the Fluke Potato was sent out, and by whom. We really do not remember, but perhaps some of our readers may be able to inform him.

JUNGERMANNIA: *Muscus.* The word is pronounced as if written Junghermannia.

NAMES OF FRUITS: *F C.* French Russet.—*S J P.* Your Seedling Apple from the Herefordshire Pearmain will bear no comparison with its parent, and is only fit for kitchen use. It has briskness enough, but wants richness.

NAMES OF PLANTS: *J C.* 1, Acacia verticillata; 2, A. Riceana.—*M A C.* Dendrobium speciosum.—*Constant Reader.* There is very little difference in your Scolopendriums. Nos. 1, 3, 4, 6, 7, and 12 are S. vulgare lobatum; Nos. 5, 10 and 11 a poor form of S. v. multifidum; while Nos. 8 and 9 are probably what has been called S. v. lato-multifidum.—*C.* The New Zealand seeds appear to be those of Chamælaucium puniceus.

NEW GRAIN: *S S.* The "new grain" referred to in the paragraph from the Carlisle paper, as having been observed in our N. American possessions by some gentlemen in her Majesty's Service, who "were struck by the pertinacity with which immense flocks of wild fowl and other game haunted certain localities, where it was found they came to feed on a sort of Rice indigenous to the place," is no doubt the Zizania aquatica or Canadian Rice. It appears that the trial is to be made whether it will naturalise itself in our northern bogs, as food for wild fowl, drainage and improved cultivation having thinned these in localities where they once abounded: and that a considerable quantity of the grain has been obtained for this purpose.

PRESENT PRICES of FARM SEEDS.—See Messrs. SUTTON'S PRICED LIST at page (present Number) of the *Gardeners' Chronicle*.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
GRASS SEEDS of best quality, can now be supplied Carriage Free.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
CLOVER SEEDS of best quality, supplied Carriage Free.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
TURNIP SEEDS from best selected Roots supplied Carriage Free.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
MANGEL WURZEL from the best selected Stocks, supplied Carriage Free.

RICHARD SMITH'S RENOVATING GRASS SEED should Now be Sown, at a cost of 6*s.* per acre. A greatly increased yield will result from sowing 6 lbs. of Finest Grass and Perennial Clover.
RICHARD SMITH, Seed Merchant, Worcester.

PAGE'S PERMANENT PASTURE GRASSES. PAGE'S PERMANENT LAWN GRASSES. PAGE'S BLIGHT COMPOSITION, 2*s.* per gallon; 10 gallons and upwards carriage paid. With mode of application and Testimonials, commencing with Her Majesty's Steward, November 1852, and the leading Agriculturists and Nurserymen of the United Kingdom to the present time.
B. PAGE, Royal South Hants Seed Establishment, Oxford Street and West End, Southampton.

Grass Seeds.

RICHARD SMITH is now prepared to supply MIXED GRASS SEEDS of very superior quality, suitable for all kinds of Soil.

	Per Acre.
MIXTURE for Laying down to PERMANENT PASTURE	25*s.* to 30*s.*
MIXTURE for ORCHARDS or LAND shaded by Trees	24*s.* to 26*s.*
MIXTURE for PARKS and CEMETERIES	28*s.* to 30*s.*
MIXTURE for Improving OLD PASTURE	6*s.* to 8*s.*
MIXTURE for One, Two, or Three Years' Lay	15*s.* to 18*s.*
MIXTURE for Fine LAWNS and BOWLING GREENS	per lb. 1*s.*

PRICED LISTS may be had on application.
RICHARD SMITH, Seed Merchant, Worcester.

Seed Corn from the Chalk.

ALL THE MOST APPROVED VARIETIES OF WHEAT, BARLEY AND OATS, SUPPLIED BY

RAYNBIRD, CALDECOTT, AND BAWTREE, Address, Basingstoke; or 89, Seed Market, Mark Lane.
WINTER and SPRING TARES, SAINFOIN, and all other kinds of AGRICULTURAL SEEDS.
Samples and Prices post free on application.

"Z" Family, now offered for the First Time.

TRADE

HALLETT'S PEDIGREE NURSERY WHEAT.

MARK.

THE BEST SPRING WHEAT KNOWN.

For full description of "Z family" see Advertisements in our Numbers for September and October, 1863.

PRICE—One Guinea a Bushel (or Seven Guineas a Quarter), delivered with printed directions for planting, at the Brighton Railway Station, in bags sewed up and sealed, upon receipt of Cheque or Post Office Order, which must in all cases accompany the order. *In the Spring drill 2 bushels per acre.*

HOW OUR WHEAT CROPS MAY BE DOUBLED, and other papers forwarded on application, enclosing six stamps.

Apply to FREDERIC F. HALLETT, Esq., F.L.S., The Manor House, Brighton, Sussex.

PRIZE SEED OATS from SCOTLAND.—100 QUARTERS SCOTCH BIRLEY SEED OATS, which have gained for four successive years the First Prize at the "Royal Northern Agricultural Show," Aberdeen.
50 QUARTERS POTATO SEED OATS.—The natural weight of these Oats is 42 lbs. to 44 lbs. per Bushel, and they will be delivered free to London, Hull, or Newcastle in 5 Quarter lots, at 36*s.* per Quarter, cash. Bags, 2*s.* each.
Samples on application to BENJAMIN REID & Co., Seedsmen, Nurserymen, and Implement Makers, 132, Union Street, Aberdeen.

Extra Fine Seakale.

GEORGE CLARKE has plenty of clean stout Roots, which cannot be surpassed for Forcing qualities:

Price for Picked Roots, per 100	10*s.* 0*d.*
Do. second size "	7 6
Also strong for Planting, per 100	5*s.* and 7 6

Nursery, Streatham Place, Brixton Hill, near London; and 4, Windsor Terrace, Pimlico, S.W.

To Gentlemen, Nurserymen, and Others.

GLOBE ARTICHOKE PLANTS, at 25*s.* per 100; also a quantity of PROVINCE or CABBAGE ROSE PLANTS, at 12*s.* per 100. A good discount allowed to the Trade. Post orders payable to JOHN GAINES, Herbalist and Seedsman, Covent Garden Market, London, W.C.

THE LONDON SEED COMPANY, LIMITED, has been established under the Companies' Act of 1862, for the purpose of supplying all kinds of Seeds for the Farm and the Garden.
The Company has amalgamated with the PLYMOUTH SEED, AGRICULTURAL IMPLEMENT, AND MANURE COMPANY, LIMITED, and the whole of the extensive trade carried on at Plymouth will be transferred to this Company.
The Business at Plymouth was originally confined to the Western Counties, but of late years the Seeds supplied by the Company have been despatched to all parts of the United Kingdom. It has been therefore thought desirable, if not necessary, in order to keep pace with the extensive connection, either to open an Establishment in London, or to amalgamate with another Company having similar objects.
The London Seed Company has therefore been established, and very desirable premises have been taken in the centre of the Metropolis, and within a short distance of Oxford Street and Regent Street.
One of the principal objects to be gained by the removal of the business to London, will be the facility afforded by the speedy transmission of all Orders by Railways and Steamers to all parts of the United Kingdom; and the Company has made arrangements with all the Railway and Steam Companies for the immediate delivery of all orders.
ALFRED BREWIN, Manager.

Unadulterated Choice Seeds.

ROBERT PARKER begs to announce he can supply a few pounds of each of the undermentioned, price of which will be forwarded on application:—
CUSTARD VEGETABLE MARROW.
LOBELIA ERINUS SPECIOSA.
LEEK HYBRID PRIZE (HENRY'S), the largest and finest in cultivation.
LETTUCE MOOR PARK, the best Brown Cos in cultivation.
A NEW PRICED and DESCRIPTIVE SEED and PLANT CATALOGUE is published, and will be forwarded to applicants.
Exotic Nursery, Tooting, Surrey, S.

Page's Genuine Seeds.

PAGE'S COMPLETE COLLECTIONS for GARDENS, 3*l.*, 1*l.* 10*s.*, 15*s.*
PAGE'S DEEP BLOOD-RED BEET, 9*d.* per oz.
PAGE'S EARLY DWARF CABBAGE, 6*d.* per oz.
PAGE'S GOLIAH PEAS, 1*s.* 6*d.* per quart.
PAGE'S PRODIGY (Earliest Dwarf), do., 1*s.* 6*d.* per quart.
PAGE'S CRYSTAL CELERY, 6*d.* per oz.
BLUNDELL'S CATTLE MELON, and BLUNDELL'S CATTLE MARROW, only a few Packets left, 50 Seeds, 2*s.* 6*d.*; 100 Seeds, 3*s.* 6*d.*; 150 Seeds, 5*s.*
PAGE'S SUPERB HOLLYHOCK, 2*s.* 6*d.* per packet.
PAGE'S SUPERB ANTIRRHINUM, 1*s.* per packet.
Royal South Hants Seed Establishment, Oxford Street, and West End, Southampton.

SELECTED SEEDS,

CARRIAGE FREE.	per oz.—*s.*	*d.*
PAUL'S Superb Crimson BEET, of excellent flavour	1	0
" New Large Green Curled ENDIVE	1	0
" Extra-Curled Garnishing PARSLEY	0	6
Richmond Cream BROCCOLI (true), the latest	1	6
Hardy Early Herts CAULIFLOWER	2	6
LENORMAND'S and EARLY ERFURT ditto per pkt.	1	6
SCARLET PERFECTION MELON "	2	6
PAUL'S HOLLYHOCKS, in 12 Varieties "	5	0
" mixed "	1	0
" Imported Collections of ASTERS, STOCKS, per pkt., 1*s.* 6*d.* to	2	6
" Home-saved QUILLED ASTERS per pkt.	2	6

All other SEEDS of first quality. PRICED LIST on application.
PAUL & SON, "Old" Cheshunt Nurseries, N.

SELECTED SEEDS, CARRIAGE FREE.

W. PAUL'S SUPERB CRIMSON BEET, 1*s.* per ounce.
W. PAUL'S WALTHAM BRUSSELS SPROUTS, 1*s.* per pkt.
W. PAUL'S EMPEROR CUCUMBER, 2*s.* 6*d.* per packet.
W. PAUL'S IMPROVED TELEGRAPH CUCUMBER, 1*s.* p. pkt
W. PAUL'S WALTHAM GREEN CURLED ENDIVE, 1*s.* p. pkt
W. PAUL'S SELECTED EXTRA CURLED PARSLEY, 6*d* p. pkt
BROCKET HALL BROWN COS LETTUCE, 1*s.* per packet.
IMPROVED JACKSON'S LATE CURLED KALE, 1*s.* per oz.
SNOW'S WINTER WHITE BROCCOLI (True), 1*s.* per packet.
SUPERB DWARF HERTFORDSHIRE CAULIFLOWER, 1*s.* per packet.
GODFREY'S WHITE SPINE CUCUMBER (True), 1*s.* per pkt.
ASTERS, STOCKS, BALSAMS, ZINNIAS, LARKSPURS, &c., in collections from the very first sources.
HOLLYHOCK.—WM. PAUL'S Collection in 12 distinct named sorts, 5*s.*
" finest mixed, 1*s.* to 2*s.* 6*d.* per packet.
CALCEOLARIA, CINERARIA, PRIMULA, PETUNIA, SWEET WILLIAM, finest strains, 1*s.* to 2*s.* 6*d.* per packet.
LAPAGERIA ROSEA, 1*s.* to 2*s.* 6*d.* per packet.
All other Seeds, separate or in collections, of best quality.
PRICED DESCRIPTIVE CATALOGUE free by post.
Address WILLIAM PAUL, Paul's Nurseries, Waltham Cross, N.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
The MANAGER begs to solicit attention to the following Choice GARDEN SEEDS, now being sent out by the Company, full descriptions of which will be found in the GENERAL PRICE CURRENT.

		s.	d.
MACLEAN'S HERO PEA, 2 feet	per qt.	5	0
" NEW DWARF WHITE, 2½ feet	"	1	6
ADVANCER, 2 feet	"	1	6
WONDERFUL, 2½ feet	"	1	6
BECK'S DWARF GEM BEANS, 1 foot	"	1	0
VARIEGATED DUN DWARF, 1 foot	"	1	6
NUTTING'S fine RED BEET	per oz.	1	0
BACKHOUSE'S WINTER PROTECTING BROCCOLI,	per pkt.	1	0
DALMENY WHITE	"	1	0
DALMENY SPROUTS	"	1	0
FEARNOUGHT CABBAGE	"	1	0
TOM THUMB	"	1	0
HOOD'S IMPERIAL DWARF RED CELERY	"	1	0
MOORE'S VEGETABLE CREAM	"	1	0
TOMATO DELAYE, a new upright growing var.	"	1	0
PRINCESS ALEXANDRA MELON	"	2	6
STUDENT PARSNIP	per oz.	1	0

CATALOGUES and all other information may be had on application at the Offices, 68, Welbeck Street, Cavendish Square, London, W.

SEEDS of SUPERIOR MERIT.—Free by Post, except the Peas and Beans.

	per Quart—*s.*	*d.*
PEA, DILLISTONE'S EARLY PROLIFIC, 2 ft., the earliest of all	1	6
" ADVANCER (McLean's), 2 ft., the best dwarf Pea	1	6
" PAYNE'S CONQUEROR, 5 ft., the best tall Pea	1	0
BEAN, BECK'S DWARF GREEN GEM	0	8
	per Packet.	
BEET, PINE APPLE, superb crimson	0	6
" NUTTING'S SUPERB RED	0	6
BROCCOLI, SNOW'S IMPERIAL WINTER WHITE	1	0
" BACKHOUSE'S WINTER WHITE PROTECTING	2	6
BRUSSELS SPROUTS, ROSEBURY	0	6
CAULIFLOWER, LARGE EARLY ERFURT	1	0
CABBAGE, LITTLE PIXIE	0	6
CUCUMBER, SMITH'S FINE LONG FRAME	1	0
CELERY, MAMMOTH WHITE	0	6
" " RED	0	6
MELON, EMPRESS EUGENIE	1	0
LETTUCE, PARIS WHITE COS	0	6
" " GREEN COS	0	6
PARSLEY, extra curled garnishing	0	6
SAVOY, NEW FEATHER-STEMMED	0	6
PARSNIP, THE STUDENT	0	6
TOMATO DE LAYE	0	6
LOBELIA PAXTONIANA, or Crystal Palace var.	1	0
TRUFFAUT'S SPLENDID ASTER, 18 vars.	1	0
CHRYSANTHEMUM-FLOWERED ASTER, 12 vars.	1	0
IMPORTED LARGE-FLOWERING STOCK, 18 vars.	1	0
BALSAM, SPLENDID ROSE-FLOWERED, 12 vars.	1	0
AMARANTHUS MELANCHOLICUS RUBER	0	6

The whole of the above carriage free for 21*s.*
RICHARD SMITH, Seed Merchant, Worcester.

CARTER'S IMPROVED GARNISHING KAIL.—This will produce more than 20 varieties, some of which are worthy of a place in a Greenhouse, being quite equal in colour to the new Coleus. The colours vary from rich crimson to white laced and fringed. Price per packet, 1*s.*
JAMES CARTER & Co., Seed Merchants, 237 & 238, High Holborn, London, W.C.

Scrymger's Giant Brussels Sprouts.

G. SCRYMGER has much pleasure in offering Seed of the above superb variety of BRUSSELS SPROUTS, for which he received the First Prize at the Great International Show in 1862; and since pronounced by all who have seen it to be the best variety in cultivation. Seed in packets at 1*s.* Post free, 14 stamps.—Sonning, near Reading.

Hanover Nursery, Peckham, S.E.

IVERY'S NONSUCH LETTUCE, the best Summer variety in Cultivation, 1*s.* per packet. See *Gardeners' Chronicle*, Jan. 30, for further particulars, with names of Seed Merchants and Nurserymen who have received a supply direct from W. I. SEED CATALOGUES free by Post on application.
The Trade supplied with Mushroom Spawn.

Chemical Analyses.

DR. AUGUSTUS VOELCKER, F.C.S., CONSULTING CHEMIST to the Royal Agricultural Society of England, has REMOVED his LABORATORY from Cirencester to 101, LEADENHALL STREET, LONDON, E.C., where he receives a few Private Pupils for the Practical Study of Analytical and Agricultural Chemistry.

MESSRS. WAY AND EVANS, ANALYTICAL and CONSULTING CHEMISTS, receive PUPILS for the study of AGRICULTURAL and GENERAL ANALYTICAL CHEMISTRY.
106, Leadenhall Street, E.C.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.
SPRING SESSION, 1864.
President—The Right Hon. the EARL BATHURST.
Council.
Rt. Hon. the EARL BATHURST. | Rt. Hon. T. H. SOTHERON ESTCOURT, M.P.
Rt. Hon. the EARL DUCIE. | EDWARD HOLLAND, Esq., M.P.
Hon. WILLIAM BATHURST.
Principal—The Rev. JOHN CONSTABLE, M.A., Trin. Coll. Camb.
Farm Manager—J. L. FLETCHER.
Resident Professors.
Chemistry.—ARTHUR H. CHURCH, M.A., Lincoln Coll., Oxon., F.C.S.
Assistant to Chemical Professor.—R. WARINGTON, Jun., F.C.S.
Botany.—JOHN BAYLDON, M.B., Lond. B. Sc.
Veterinary Surgery.—A. J. MURRAY, M.R.C.V.S.
Mathematics and Surveying.—The Rev. W. MEREDITH LANE, B.A Scholar of Trin. Coll. Camb.
Drawing.—JAMES MILLER.
SPECIAL LECTURERS.
J. BAILEY DENTON, M. Inst. C.E.—On DRAINAGE.
Professor J. MORRIS, F.G.S., of University College, London—On GEOLOGY.
JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.
WILLOUGHBY WOOD, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.
JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.
JOHN THORNHILL HARRISON, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.
THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.
ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.
RICHARD GRIFFITHS WELFORD, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.
Applications for Admission and for further particulars may be made to the Principal.

The Agricultural Gazette.

SATURDAY, FEBRUARY 27, 1864.

WITHIN a pleasant Home Park Farm, near Burnley, Lancashire, once surrounded by as fair a landscape as any countryman could wish to see, but now in the very midst of chimneys, smoke, and cotton manufactories, there has within the past 20 years grown up a small but wonderfully successful herd of pure-bred Short-horns. Originally in the hands of Mr. EASTWOOD—during the past 14 years the property of Lieut.-Colonel TOWNELEY, whose agent Mr. EASTWOOD is—and latterly under the management of Mr. JOSEPH CULSHAW, Colonel TOWNELEY's herdsman—it has won higher and more numerous distinctions at national and provincial competitions—earned more money, medals, cups and prizes—commanded higher prices for individual animals—and, we believe it may be added, achieved a higher reputation for its manager and breeder than has ever in so short a time been earned, commanded, or achieved by any herd in this or any other country.

These cattle are to be sold next month by Mr. STRAFFORD, and the sale will no doubt take its rank among the most noteworthy recorded in the history of the breed.

Since Mr. CULSHAW took the management in 1849, Colonel TOWNELEY has shown at the meetings of the English Agricultural Society every year but '53 and '61, and every year he has won

prizes—490*l.* in all. He has shown every year at the Yorkshire Agricultural Society's meetings, and won prizes every year—607*l.* in all. He has won 473*l.* in prizes at the North Lancashire Agricultural Meetings, 135*l.* at the Irish Agricultural Improvement Society's meetings, 100*l.* at Paris, 105*l.* at Smithfield, and 110*l.* at Birmingham. He has won 22 cups, including two challenge cups, value 100*l.* and 120*l.* respectively, also 26 gold medals, with more than 100 of silver and of bronze, as well as other trophies.

This extraordinary career is no doubt owing to the judgment and the skill displayed by Mr. CULSHAW and his employer. There has been no extravagant outlay of money in costly purchases, no following in the wake of great names by the adoption of "fashionable" strains of blood; but a thoroughly independent course, guided by a natural gift and insight of the kind required, as great, probably, as has been possessed by any one since BAKEWELL'S days. The upshot has been to some extent already stated; the final utterance will be made next month, when prices rivalling any in the history of the Short-horn breed, will no doubt be realised.

During the next few weeks we hope to call particular attention to the five families, separate in their origin but related now by the employment of the same bulls over all the stock, of which the herd consists. In another column a reference is made to the Sockburn Short-horns, and to the mother of them, probably the oldest cow of which any exact account exists. She has nine of her descendants in the Towneley herd—*Roan Duchess*, the 16th generation from *Old Sockburn*, was bought a calf in 1852, by Mr. WETHERELL, who had obtained her grandam *Blanche 5th* through Mr. MAW, of Tetley, from *Kirklevington*. We shall see next month what value Mr. CULSHAW'S genius has impressed upon a family, now second to none in the herd, though descended from a *Blanche*, which having been parted with by Mr. BATES, was no doubt not considered by him to stand in the same rank as his Duchesses.

A second family, including five members, is descended from *Venilia*, bought a calf in 1849 at Sir C. TEMPEST'S sale, herself in the 10th generation from CHARLES COLLINGS' 400 guinea *Countess*.

A third family, including eight of pure "Booth" blood is descended from *Pearly*, bought in 1852 of Mr. JOHN BOOTH, herself a great granddaugher of *Bracelet* by PRIAM (2452), twin sister to *Necklace*, Mr. JOHN BOOTH'S two best cows.

A fourth family, including five members, is descended from *Madaline*, another from the Killerby herd, purchased of Mr. BANNERMAN in 1849.

The principal family in the herd, including no fewer than 29 members, is descended from *Barmpton Rose*, a celebrated cow bred by Mr. WALDY on ROBERT COLLINGS' farm at Barmpton, in 1835. She was bought by Mr. WATSON, of Walkeringham, from Mr. WETHERELL. We shall another week give her descendants so far as they can be traced. They have almost always made high prices. Ten averaged upwards of 100*l.* at Mr. WATSON'S sale in '45; five averaged 91*l.* 11*s.* at Earl DUCIE'S sale in '53; four averaged 66*l.* 3*s.* at Mr. SMITH'S sale (West Rasen) in '52, and other high averages could be quoted.

Mr. EASTWOOD paid 130 guineas for *Buttercup*, one of her daughters, in '45. MASTER BUTTERFLY sold for 1200 guineas at the Chelmsford meeting, was the grandson of this purchase, and his brother, *Royal Butterfly*, is in the sale next month. Another daughter of *Barmpton Rose*, *Princess Royal*, fetched 230 guineas at Mr. WATSON'S sale, bought then by Earl DUCIE. All her daughters were bought at the Tortworth sale by Mr. GRENFELL, of Taplow Court, and purchased again by Colonel TOWNELEY at Mr. GRENFELL'S sale a few years later. From them and from purchases of other descendants, from Mr. SMITH, of West Rasen and others, the largest of the Towneley families, including all the Butterfly tribe, has descended. We hope to give a fuller account of all these families before the date of the sale. Meanwhile we direct attention to the elaborate catalogue issued by Mr. STRAFFORD, from which every information of the breeding of this herd is to be obtained.

If the number of generations through which the excellence of any family is traceable be the true measure of the certainty with which that excellence will be transmitted to their descendants, then there can be no doubt that the Towneley herd can claim as high a character for power to transmit good blood and quality as any herd that can be named.

—— WE are glad to hear of the success of the Steam Plough Company at Wakefield. A capital of 2250*l.* has been raised in 1*l.* shares; and after paying 135*l.* 18*s.* 4*d.* in wages during the past year, and 113*l.* 11*s.* 4*d.* in oil, repairs, and management charges, there remains a balance on the year's receipts of 286*l.* 5*s.* 9*d.* available for a dividend. A dividend of 7½ per cent. has accordingly been declared, leaving 165*l.* 7*s.* 9*d.* in hand, of which 100*l.* will be put aside as the first instalment towards the formation of a reserve fund to provide for the replacement of capital, and to meet unforeseeable liabilities, and 65*l.* 7*s.* 9*d.* will go to the purchase of a new rope, which will no doubt be needed during the next half year. When so many local companies of a similar kind are starting, it is a matter of great public importance that so good an example can be put before them, as has thus brought forth good fruit at Wakefield. Mr. CLAY, the Secretary of the Wakefield Company, has been applied to for information from Whitchurch, Shrewsbury, Leominster, and Nottingham, and several other places, and the publication of his balance sheet will no doubt soon increase their number.

—— It will be remembered that some time since a handsome Testimonial was presented to Professor BUCKMAN, by former students of the Royal Agricultural College. We have much pleasure in now stating that this was part of a general expression by students and others of the esteem in which the whole of the former staff of that Institution is held by them. Dr. VOELCKER has a handsome piece of plate, Professor BROWN a valuable microscope, and Professor COLEMAN a gold watch and chain bearing suitable incriptions. The Professors in acknowledgment have issued the following joint note to the subscribers:—

London, February 23, 1864.

DEAR SIR.—As we were unable to meet you personally, we take this opportunity of returning you our cordial thanks for the handsome Testimonial we have received. It is peculiarly gratifying as a mark of your esteem, and approval of our conduct as the old Staff of the College. We shall be frequently reminded of the happy years passed at Cirencester, and of the many friends we made there. In conclusion, we heartily re-echo the wish that in the future, opportunities may occur for the renewal of friendly intercourse.

We are, Dear Sir, Yours very faithfully,
AUGUSTUS VOELCKER.
JAMES BUCKMAN.
GEORGE T. BROWN.
JOHN COLEMAN.

—— As we gave this prominence to a note from Messrs. FOWLER & Co., of Leeds, upon the correspondence between Messrs. HOWARD, of Bedford, and the Consulting Engineers of the Royal Agricultural Society, it is right that their reply, addressed to us, should also appear in the leading columns of the *Agricultural Gazette*. They say:—

"We have never stated that Messrs. JOHN FOWLER & Co. were 'the cause of the controversy' between ourselves and Messrs. EASTON & AMOS. Nor have we stated that they 'had any business transactions' with Messrs. EASTON & AMOS. It is not, therefore, we who are 'entirely in error,' but Mr. FOWLER, in *assuming* that we referred to his firm.

"The name of the firm we *did* allude to we are prepared to give should the Council institute an inquiry into the relations of the Consulting Engineers with the implement manufacturers.

"In our last letter to Messrs. EASTON & AMOS we put this case:—'Suppose, for instance, we recommend the pumps of Messrs. GWYNNE, and Mr. FOWLER recommends your pumps, would not the circumstance, however disposed you might be to be uninfluenced, *tend* to place us at a disadvantage?'

Now, although Mr. FOWLER denies having had any business transactions with Messrs. EASTON & AMOS, we are sure he will not attempt to deny that a large number of steam pumps, to be worked by his engines, have been sent abroad by Messrs. EASTON & AMOS through his recommendation.

"We much regret that Mr. FOWLER, evidently through misapprehension, should have thought it necessary to interfere in this dispute. We have no controversy whatever with him; our controversy is with the Consulting Engineers, who, we maintain, occupy a false position—the fact of their being manufacturing engineers and dealers in agricultural machinery, makes them rivals of many of the competing firms.

"If the decisions of the Royal Agricultural Society are to gain the confidence of the public, we submit that above all things it is necessary that those in office should be above suspicion."

PLANT IMPROVEMENT.

(*Concluded from page* 178.)

THE important thing in such a selection is to know exactly what you want, and not to continue any plan which shows a tendency towards what you do not want. If the object is to retain the characteristics of the original sample, all deviation from them must in the selection be avoided; if mere productiveness be the object, as it was in the case of the Pedigree Nursery Wheat, it can be most quickly attained by going for that solely, and I humbly submit that the following facts show that I have been not altogether unsuccessful.

PRODUCE OF PEDIGREE WHEAT.

United Kingdom.		Year.	Produce per Acre.	Weight per Bushel.	Remarks.
			qrs. bus.		
North	Yorkshire	1861	7 4	..	Golden Drop, surrounding, yielded
East	Essex ..	1862	9 0	..	5 qrs. 2 lbs. sold
West	Ireland ..	1862	7 6	64	to a miller at
South	Devonshire	1863	9 4½	..	43*s.* a quarter.

In your Journal of the 26th of December last, in the reports headed "St. Austell's Farmers' Club," it is said:—"We have this year tried Hallett's Wheat and the dibbling process, and found it answered well; although labour was high we found at harvest there was a saving of 20 per cent.; that is in reckoning the quantity of seed put and the yield per acre, as compared with our former means of putting." There is no reason, however, why the Pedigree Wheat should excel all others, but merely that it should be more prolific than it was before the selection commenced.

From Australia the following report has been sent:—"The English Wheat (Hallett's), sown before I came, produced when drilled 29 bushels per acre; and when dibbled 35 bushels per acre. The average crops about here are under 10; ours were 6; and our neighbour's opposite 4½ bushels per acre. The largest ear produced 113 grains. The greatest number of ears on one stool was 72."

MR. SHIRREFF takes the liberty of adducing the name of Mr. Alderman Mechi as if in his support. I could, if the worthy alderman gave me permission to do so, produce a letter in which he does frank, full, and honourable justice to the importance of the work in which I am engaged; and on the occasion of a subsequent visit to me here, after having carefully gone through the whole subject with me, and seeing practical proofs of the improvement effected in a variety of cereals by selection, he did me the honour, and from such a man I deem it an honour, to say upon leaving me, "I call you the Jonas Webb of Grain." Such is the testimony of a highly honourable man who has really at heart "the improvement of agricultural plants," and is one of the best friends that agriculture has had.

I fear that I have already intruded too long upon your space, but hope you will bear with me while I place side by side extracts from Mr. Shirreff's letter of September 6, 1862, and that of Feb. 6, 1864.

Mr. Shirreff's Report, Sep. 6, 1862.

"Mr. Hallett's Wheat crops (at Brighton) had evidently been sown at widely different periods of the season, but all of them were remarkable for length of ear and levelness of crop, and so genuine that after a careful examination I could only detect two or three spurious plants. The ears being deceptive, and only large in appearance, I failed to discover any improvement which Mr. Hallett had effected on the Wheat plant, and *believe that his Pedigree variety is identical with the common Nursery Wheat of the country.*"

Mr. Shirreff's Letter, Feb. 6, 1864.

"What is really the sort of Wheat which has been grown in the neighbourhood of Brighton and sold by Mr. Hallett? By his own account Nursery was selected, and has been improved by skill and attention into what he has been pleased to call Hallett's Pedigree Nursery—*a Wheat which has little or no resemblance to true Nursery.* The ear of Nursery is rather close set, with a white chaff which stands on the notches, at an acute angle with the axis, while the ear of Hallett's is rather wide set, the chaff cream-coloured, and often standing at a less acute angle."

And then this amusing gentleman, with an acuteness less even than that of the angle of my chaff of which he complains, goes on to describe the difference between the Pedigree and common Nursery Wheats, which he on the 6th September, 1862, with all that polite decision for which he is remarkable, pronounced to be identical. Surely Mr. Shirreff cannot expect to be regarded as an authority upon a subject upon which he can so write.

Mr. Shirreff does not write in a way which really entitles him to notice at my hands. I have however in this instance replied to him. It is not to such as he that I look for countenance and support, but to the men of science and practice in all countries, and I am happy to say that I do not so look in vain.

No man has a right to complain of my advertising the Pedigree Wheat, for to the growers of Wheat in all lands, I at the very outset, in your Number for August 26, 1861, in making fully known the whole system, used these words.

If a farmer wants a good Cabbage, Mangel, or Turnip, his instinct leads him to select a good parent—the same with regard to animals, horses, cattle, or dogs—but the moment he approaches the cereals he no longer adopts the principle which he knows in other cases to be right.

Now all farmers should be continually trying this as a matter of business, employing any kind of Wheat they think likely to suit their purpose. I do not say that my Wheat is the only Wheat that can be thus

improved, far from it. All Wheat may be improved, though not to the same extent.

I then went on to say that if gentlemen would not take the trouble to do it for themselves, they must pay me for doing it for them. I say so now. *Frederic F. Hallett, Manor House, Brighton, Feb.* 9.

THE VEGETABLE MOULD.

THE vegetable mould is the natural seed and growth bed prepared for the existing superior order of plants in the course of almost illimitable time. It is composed of disintegrated rock—drift or lacustrine and ocean sediment—chiefly sand, clay, and lime, along with more or less organic matter, consisting of the remains of vegetable and animal life of past ages. And according as these remains are plentiful or deficient, other things being equal, is the productiveness of the soil, excepting where from peculiar circumstances these remains take a peaty character.

This formation of vegetable mould, in most cases, had taken place in the fields of nature before man had appeared as a cultivator, and is found deepest and richest where the rock or mineral deposit had been most favourable for its increase, and where climate and a fair supply of moisture had been propitious for the gradual accumulation. In some places circumstances have been so favourable that this accumulation of the garnered food of plants is so great as almost to defy man's power of exhaustion, but generally it is not deeper, in any estimable richness, than from that of a common plough furrow to three feet.

The vegetable mould is evidently connected with the existence of the higher vegetables and animals. Commencing upon the bare rock or pure mineral earth with an inferior or different order of vegetation, Lichens, Mosses, and deep rooting arborescent Fern and Equisetaceæ, a sufficient vegetable mould has been formed for the higher vegetables upon which the higher animals depend for subsistence. Over the whole earth, wherever this formation is greatest, the product of the food of man is greatest, and can be obtained with less exertion of labour (warm-climate irrigation excepted). But it unluckily happens that man himself is the great destroyer of that which is of the greatest importance to himself—that upon which his existence depends, at least as a civilised dense population has hitherto depended. I believe that no writer has pointed out this fact, perhaps as being universally known. Yet even under the culture of the highest civilised, leading, and most extending race in North America, the Cape, Australia, New Zealand, and even in India, the same exhaustion of the vegetable mould is in progress; and even in Britain itself, where so great facilities are present for its increase, the most reckless destruction is going on. This I will hereafter treat of. Let us at present take the Eastern States of North America as an example of the destruction, which are only similar in this respect to other colonies where land is abundant. In all the best soils and favourable positions of these States, away from the rich deposits of the Mississippi valley and interior on the south side of the lakes, the land by reckless cultivation has been robbed of the vegetable mould. While they had good forest land to fall back upon, no endeavour whatever was made to keep up the natural fertility by manuring, &c. The field was cropped with the most exhausting plants—the cereals, Maize, Tobacco, Cotton—till it would no longer pay to cultivate. Thus nearly the whole of the good land of the Eastern States has been rendered unfit to support a dense population, unless a system of irrigation be introduced along with a judiciously provident system of agriculture directed as well to increase the vegetable mould as to obtain immediate return of crop.

In Europe of late years, and especially in Germany and France, the subject of a decrease in fertility, although the working or tilth of the soil has been greatly improved, has occupied the attention of scientific men. Boussingault, Liebig, and others have been drawn into a consideration of the growth of plants, but none of them, as far as I have learned, were agriculturists, and consequently destitute of the knowledge of innumerable facts which practical experience only can give, and which alone enable the mind to form a correct judgment. Liebig, in particular, an eminent chemist, has devoted much attention to the subject, but unfortunately is more chemist than agriculturist, and naturally, like the man of leather who was to do everything with leather, considered everything accomplishable by chemistry; so having started a new theory of his minerals being the sole food of plants, he ignored the utility of the vegetable mould, and he or his followers went so far as seriously to advise us ignorant farmers to feed the plant rather than load the soil, to treat the latter as a machine and not as a warehouse, as if properly tilled it is unexhaustible of its stores, which are being continually replenished without much help from man! Here the wonder is that these new light chemists and savans did at all apply to the soil as an instrument or machine for fabricating food, and which they naturally thought would work with more facility when not loaded with useless lumber. Why do they not at once transmute their all-sufficient minerals into roast beef and plum pudding, without being indebted to the old-fashioned half-exploded system of using the soil machine at all?

Seeing the sterilised condition of various regions of the earth from the exhaustion of the vegetable mould, I would strongly recommend to Baron von Liebig and his followers to form a company forthwith, with Johann King of Saxony as Royal President, to take out an extended patent for reconverting those exhausted regions in the Eastern States of North America and elsewhere into highly productive lands, a conversion no doubt not very difficult to effect, as they would not be much discommoded with warehoused loads of vegetable mould. No possible company could enter upon a more favourable field in prospect, and there would be no use to have the company limited as to the liability of shareholders, as the marvellous success of Baron von Liebig in repairing the great exhaustion of much of the lands of Saxony will dispel any doubt of the success of the undertaking. As soon as a prospectus can be got ready and issued, the wise and thoughtful Germans, led by King Johann of Saxony in person, will hasten to enter into the judicious scheme. The money-holding Jews, particularly the Rothschilds, countrymen of the Baron, so acute in money speculations, will no doubt afford funds to any required amount. Baron von Liebig and his followers must pardon me, but really I cannot treat the subject of his mineral theory and the loading the soil with useless warehoused organic remains (vegetable mould) with that respect or reverence which a scientific subject of so great importance merits. *Patrick Matthew, Gourdie Hill, Errol, Scotland, Feb.* 1.

A WEEK UPON THE COTTESWOLDS.

(*Concluded from* p. 180.)

STEAM CULTIVATION ON THE ROYAL AGRICULTURAL COLLEGE FARM.—The following memorandum drawn up by the present farm manager sufficiently describes the experience of the past autumn:—

The extent of the College farm is 500 acres, 450 being arable; the land is very varied in character, and the whole is divided into 20 fields of from 10 to 50 acres each. A considerable portion of the occupation immediately surrounds the buildings, and is easily accessible, being intersected by the turnpike and occupation roads; 100 acres are difficult to approach, present an irregular surface, undulating in character, and naturally of inferior quality. The farm is by itself not capable of affording beyond 70 or 80 days' employment to the steam plough in the year, a breadth insufficient for the profitable working of the apparatus. Under these circumstances work for the implement is sought in the neighbourhood, and it not unfrequently happens that the convenience of the adjacent occupiers is consulted before the wants of the College farm. Our neighbour Mr. Dewe has hitherto been our greatest supporter; since the establishment of the steam plough, two years back, he has found it ample work for six weeks or two months in each year. Although the land on his farm is chiefly light and much of it brashy, the benefits the soil has derived from the thoroughness and depth of the tillage operations by the steam plough have been sufficiently plain. Owing to the shallowness of the surface, the power expended in tilling the soil is reduced at times nearly to its smallest amount; the cost of operating, however, is increased by the frequent breakages of skifes and shares, in consequence of the implement fouling projecting portions of the limestone rock. On the 26th of August we commenced our autumn work by digging at a depth of 4 inches a Wheat stubble for winter Vetches. The implement got over 7 acres per day, with the drag attached, making a splendid seed bed. The consumption of coal was somewhat large, viz., 15 cwt.; our engine being only 10-horse power, the coal is more per horse-power than would be required with a more powerful machine. Our next operation was on a piece of lea ground, required for Wheat, with the turn furrows in the place of the digging breasts. Very fair work was made at a depth of 5 inches. The steam plough leaves a somewhat rougher surface than is desired in a preparation of this nature, and one or two extra strokes with the drag were found necessary to obtain an even seed bed. On the College Farm 208 acres were ploughed, dug, or cultivated at depths varying from 4 to 12 inches. It is in smashing up our stubbles at the latter depth that we find the greatest care is demanded of all those employed with the apparatus. By occasionally removing a skife and turn-furrow, and slackening the speed, the operation proceeds regularly, and the strain on the engine and gear is much lessened. An average of 4½ acres per day was our work with this implement going the depth just named, the consumption of coal being barely 11 cwt. I cannot speak too highly of the quality of the work performed with Fowler's 7-tined cultivator, whether running at a shallow or great depth. This implement, furnished with 7-inch shares, skimmed the surface of our bare fallows and Pea stubbles, and left a first-rate preparation for the Wheat; although the prudence of operating thus on a tenacious soil that had been exposed for so many months to the action of the weather, was questioned, nothing could have answered better; from 10 to 12 acres per day were tilled after this manner. The present appearance of the Wheat plant and firm condition of the soil is the best evidence of the efficiency of the operation with the cultivator on these lands. Our Bean stubbles received similar treatment with this tool; owing to the abundance of surface weeds and a strong stubble, the ground was not so thoroughly moved as it should have been; and I think shares of greater width than those we had on, viz., 7-inch, would be better for paring ground in such condition immediately after harvest. The value of a steam plough on a large farm is never more evident than at that season, I scarcely know what we could have done without this implement. With harvest still about us, and some 100 acres of land to prepare for winter sowing, nothing short of six or eight additional horses could have achieved the thing for us."

Having been over the College farm during a recent week of visits in the Cotswold district, I am able to speak with confidence of the quality of the work thus accomplished on it. The young Wheats after it look uncommonly well: the land treads firmer and better on the steam-cultivated portion than where worked by horses. This is particularly noticeable in a field sown towards the end of October after Rape, the steam cultivation of which did not extend over the whole field. The portion ploughed by horses, though sown the same day, does not now tread so firm, or look so well, as the rest of the field treated otherwise the same.

In another field, where, owing to the ridged form of the land, the steam plough had made indifferent work in turning over seeds for Wheat—by dint of hand labour in properly turning under any small portions that were missed, and rolling with Crosskill's clod crusher and repeated heavy harrowings, the land was brought into capital condition as a seed bed, and now, well water furrowed, for the escape of surface water, and covered with a good plant, it treads satisfactorily and promises well.

The detailed account thus given of the steam cultivation at the Cirencester College farm has been transcribed thus fully, because it is in a record of this kind that the real experience of the steam cultivator is fairly represented. It is to a very large extent, it will be seen, an experience of annoyance, accident, and disappointment, and the cost of the operation on the whole has not been so much less than that of horses as in some more exceptional cases it has proved. The real and ultimate experience, however, is seen in the superior quality of the work thus done. The single operation after harvest being itself more efficient for fallow and tillage purposes than a whole series of ploughings and cultivatings by horse-power, and the rapid accomplishment of it during the short intervals when clay land is fit to work, doubling and tripling the effect.

This notice of the farm has been confined simply to the experience of steam cultivation on it; but there are many features in its management deserving more notice than can be given to it now. The sheep are a good illustration of the Cotswold breed—the swine are a capital illustration of the Berkshire breed — the dairy include a number of well-bred Short-horn cattle. The buildings, though a systematic and elaborate pile, are defective in several particulars, and especially in the want of cottage accommodation for resident labourers. The cultivation of the land is forward, roads and fences are being improved, and the whole—land, labour, stock, and cultivation—appears to be well "in hand" and forms a capital pendant to a great Agricultural College.

Home Correspondence.

Hallett's Wheat.—I quite agree with all that Mr. Shirreff has written respecting this Wheat. There cannot be two opinions as to Mr. Hallett having devoted a great amount of time, care, and attention to the growth of this particular sort, but it is a matter of obscurity and doubt whether he can establish much claim to consideration as a plant improver. In the autumn of 1860 I purchased a bushel of this Wheat with an idea of giving it a trial, having heard and read so much about it, and must confess to my surprise and disappointment at the outset, for on opening the bag, instead of the superfine Nursery which I had fairly been led to expect, worth more per quarter by some shillings, I found a coarse and inferior Red Wheat of some kind or other, faint and weak in colour, and totally unlike the genuine Red Nursery. Having bought the Wheat, however, I determined upon giving it a fair trial upon a rich piece of land, and carefully put it in according to instructions. There was nothing particular about the growth; it tillered very well, certainly, and grew a coarse reedy kind of straw, longer considerably than ordinary kinds of Wheat. But the crop—what was that per acre? Nothing extraordinary—barely 10 sacks per acre; like the parent seed, a coarse grain, weak and faint in colour, a very bad millers' Wheat; and, small as was the quantity, I had much trouble in finding a customer at a low figure. There being nothing particular in the season of 1861 favourable or otherwise to the growth of Wheat, my impression is that any description of Red Wheat planted under similar circumstances would have produced as favourable a result. Did Mr. Hallett when he started commence with a false ear, believing it to be Nursery, or has the Nursery Wheat degenerated under his care and attention? The prolific growth does not amount to much, as I remember 20 years ago a crop of 15 or 16

sacks per acre in the neighbourhood of Chichester, of a coarse brown quality. *W. Simmonds, Guildford.*

The Prize System and Steam Cultivation.—I thank you for your article upon the prize system, and your remarks upon my letter. The evidence in your article is strongly against pastawards, but your remark upon my letter—"We certainly hope that no such scheme as a home farm under the Society's management, will grow out of this suggestion; the Society teaches nothing by example,"—puts a wrong construction upon my words: "say by selection after trial at your annual shows to be tried at an appeal court, a kind of House of Lords—a farm of your own on which you must test them year after year." Now, what is the House of Lords? It is our supreme law court, presided over by our greatest law lords of the day. They sit and hear evidence about the doings of other men, and decide as to who is right or who is wrong. They "teach nothing by example" in the sense in which your words would imply. Then take the steam-plough case at Worcester, where Fowler, Howard, and Smith, one and all protested against the award, and let it be tried before my suggested House of Lords. The tackle ought all of it to have been impounded at Worcester, and conveyed, if required, to the appeal court, when 100 acres of land ought to have been allotted to each. "There! Smith, do that 100 acres; farm it as you like, we shall book time and cost in every shape and form, for all the men, steam and horse-power, that you may employ. After harvest we shall know the produce in bushels, and the condition of your land as well as the cost. You must go on for seven years, we shall then be in the yearly possession of facts that we can rely upon. You must submit to this or we will not hear your case, and so must all others who enter this Court." Such a trial as that would be worth ten 100,000 acres reported upon in the way you propose. This I know is but mere opinion, but pray allow me to have an opinion as well as yourself. *William Smith, Woolston, Bletchley Station, Bucks, Feb.* 22. [A report of the behaviour of one hundred acres under steam cultivation and of the behaviour of the steam cultivator upon one hundred acres would in Mr. Smith's opinion be a better guide than a report of the behaviour of ten 100,000 acres under steam cultivation and of the behaviour of the steam cultivator upon ten 100,000 acres!!]

The Potato Disease.—Mr. Alderman Mechi has sent us the following letter to himself for publication:—

"'Old Times,' Peascod Street, Windsor, Jan. 19, 1864.

"Sir,—Knowing you to be one who farms upon chemical principles, I thought I would write to you and explain my ideas upon the Potato disease, with a remedy for the same; if you think it worth your while to try it you are welcome to the information. Although now a publican, I at one time was a chemist in a print works, with Mr. C. Swainland, Crayford, Kent, and afterwards manager at Ravensbury Print Works, Mitcham, Surrey. You are, of course, aware that the Potato contains about 25 per cent. of starch, the rest water and a few chemical salts. Now starch and sugar are composed of the same compounds, viz, oxygen, hydrogen, and carbon, but sugar contains more oxygen than starch. We know an Apple growing upon a tree as it becomes ripe is sweeter than a green one, because it absorbs oxygen from the atmosphere, and converts the starch into sugar; so with the Potato we never have diseased Potatos until we have had a thunder-storm, with rain, &c. During a thunder storm a peculiar gas termed ozone is formed, containing more oxygen than the atmosphere; being ponderous it descends, and having a peculiar chemical affinity for the Potato, it runs down the haulm, and seizing upon the starch in the young Potato, converts the starch into saccharine matter by the addition of oxygen; the rain and heat converts the earth into a kind of oven; the Potato begins to ferment, and the saccharine matter works almost the same as when yeast is added to beer or wine,—you doubtless have noticed that diseased Potatos when cooked are very much sweeter than good ones, which is of course owing to the sugar in them. To prevent the disease, myself and a friend (Mr. Marshall, 6, Brewer Street, Golden Square, London), tried some experiments; we planted 12 rows, six were planted in the usual way, and six as follows:—make a small hole in each Potato, and firmly push a Marrowfat Pea into the incision; drop into the earth carefully, so that the Pea may be upwards if possible; we let the 12 rows be for a month longer than other people were leaving theirs in the ground, and when we dug them up, those rows planted with the Pea were all good, with the exception of one root where the Pea had fallen out and took root in the earth; the other rows were very nearly all diseased, and scarcely a good one amongst them. Now, in the first place, in planting this way the farmer gets two crops at once, and the Pea, from deriving so much nutriment from the Seed Potato as it rots in the ground, produces a much finer crop of Peas. I account for its curing the disease, simply that the Pea contains more saccharine matter than the Potato, and when after thunder the ozone enters into combination with the starch, that the Pea robs the sugar from the bulb; and thereby fattens itself upon it. If you think it worth notice perhaps you will give it a trial, and if it should prove correct, I should only be too glad for you to make it public. *H. Clement.*

Cottages.—It is amusing and instructive to read letters in the public prints, from persons who advocate the cause of the labourer, and take credit to themselves for originating and opening afresh the important subject relating to the improvement of the dwellings of the working classes. However it signifies little, whether the discussion was revived through an *Agricultural Gazette* or a daily journal. The main question is, which will most strenuously support the movement, and expose the weak points of those who view it as a mere £ *s. d.* affair. Many landowners and farmers appear to take their stand on low grounds, and allow a per centage on capital laid out in building cottages to occupy their thoughts, irrespective of the indirect advantages dry, airy, commodious dwellings would bring with them. Supposing the owner of the poor man's improved cottage realised but 4 per cent. in actual cash, he would surely gain largely in having strong, healthy, contented labourers in his employment, who would soon learn to appreciate the blessing of a comfortable house, instead of envying the beasts of the field, which are too often better provided with shelter than the peasants. It may be asked what hope is there of making a favourable impression upon the majority of the adult population, male and female, who have been accustomed—to the disgrace of the United Kingdom—to scenes of vice and profligacy. It must be confessed, the chance of converting to better ways those who have been forced into a state of existence, frightful to contemplate, is small indeed. Yet this is no reason why the rising generation should not be placed in a condition to profit by the instruction they receive. Education is thrown away, if precept alone is the foundation on which the attempt is made to build up a useful member of society. Good examples have no growth in the present dwellings of the poor. Common decency and self respect are strangers, in rooms 12 feet square, into which are crowded every age and sex, to eat by day and sleep by night—the healthy and sick, the dead and the living, indiscriminately mixed together. Not two miles from hence on the third of February, 1864, in a room not so large as the one above mentioned, there were a man, his wife, just recovering from a bad confinement, two living children, and one dead child. The couple were travellers, but such occurrences are not rare amongst resident families. In many parishes, no doubt, clergymen visit portions of their flocks daily, yet seldom meet with those who most require advice and superintendence, the business of the able-bodied men calling them away to the fields and shops, &c., at an early hour in the morning. Thus occupied they have only the Sunday services to look to for instruction, and what do they consist of?—beautiful prayers and lessons from the Bible, often so indistinctly read as to be scarcely audible to two thirds of the congregation, followed by a sermon delivered in language, it may be very classical, but beyond the comprehension of the poorer classes. Those who happen to pick up a few words of excellent teaching in the House of God experience on their return home how utterly impracticable it is to follow what they have heard from the lips of their minister. The good and bad must live together, the sexes are crowded into dens without distinction. The carelessness of how or where the labourers live is short-sighted policy, to say the least of it, and ere long the evil consequences will fall upon the shoulders of the masters. Those who can carry their memories back 30 years must be aware how great a change has come over even the day labourer, who is neither so active nor so willing to give a fair day's work for a fair day's wages as he used to be in former times. The cause of this forgetfulness of duty may be traced also amongst shopkeepers, &c., who assume a position in society they have no right to. Now-a-days, a grocer, stationer, attorney's clerk, shoemaker, &c., is disappointed if "Esq." is not attached to his address on a letter, and not be to behindhand in gentility, the stonemason and carpenter are known as Mr. Smith and Mr. Jones. The above innovations amongst tradesmen and labourers may appear of little consequence—what's in a name? A great deal of it leads to vanity and vexation of spirit, and renders men and women unfit for their stations in life. It would be ludicrous to observe the airs of a shopman with a bad cigar in mouth, and the housemaid and shopwoman in crinolines, if wishing to appear what they are not, ended in innocent folly; but the love of finery leads to extravagance which common wages cannot afford, and the consequences are most lamentable. *Falcon.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

Salt as a Manure.—At the meeting last week Mr. LAWES read a Paper on the subject.

1. He enumerated the advantages said to be derived from its use:—

It is said to increase the production and improve the quality of grain and straw. It is said to produce great effects on crops which have a marine origin, as Mangel Wurzel. It is said to fix ammonia in the soil, and also to convey moisture in dry seasons. Many of the experiments which have been reported certainly could not be accepted in the present day. For instance, Sinclair states, as the result of experiments in 1817, that 45 tons of dung gave between 40 and 50 bushels of Wheat per acre; 6½ bushels of salt gave above 70 bushels of Wheat per acre; and 45 bushels of salt gave above 90 bushels of Wheat per acre.

2. Mr. Lawes then referred to his own experiments on the subject, taking, in order to be perfectly free from any hindrance to a fair comparison, the average of the crops of 3 years ending 1850, and 3 years ending 1853, on two plots A and B of half-an-acre each:—

They both received exactly the same amount of artificial manure, but A, unlike B, received for three years together 3 cwt. of common salt per annum in addition to the other manures. The parallel is exact with that exception. Now if you look (referring to a table) at the mean produce of 1848, 1849, and 1850, the years previous to the application of salt, you will see that the produce was 32¼ or 32½ bushels in each case: showing that the crops of Wheat were extremely alike. There was, in fact, no difference between them. Again, in 1851, 1852, and 1853, the years in which A received 3 cwt. of salt per acre per annum and B did not, the produce of Wheat per acre was almost exactly the same. Then if you take the next 10 years, you will find the produce again nearly alike. The produce of the 16 years was in each case 37¼ bushels, showing that in the yield there was no trace whatever of the action of the 9 cwt. of common salt. Some persons, I am aware, think that, although salt may not increase the quantity of produce, yet it improves its quality. Let us see, then, what was the weight of the produce per bushel. In the first three years the weight was a little more in A than in B; in the three years when the salt was applied—1851, 1852, and 1853—the difference was again slightly in favour of A, though not so much as it was before; and in the next 10 years the weights per bushel were almost exactly alike. It made no difference whatever, you see, whether we used a pound of common salt or not. I now come to the total produce—a very important matter. The total produce of the first three years was 5985 lb. against 5976 lb.—a difference of only a few pounds. In the three years when salt was used the produce was, as nearly as possible, the same; and in the 10 years after salt was applied, the produce was 7790 lb. against 7[illegible] again a difference of only a few pounds. In the total produce of the whole period of 16 years the difference was only 12 lb., 7222 lb., against 7234 lb. Salt is supposed to strengthen straw, and to improve its quality. In the first period, before salt was applied, there was 57 lb. and a fraction against 56 lb. of grain to 100 lbs. of straw, therefore A was in that case rather superior to B. In the next period we have 42.6 against 41.7, there being again a slight difference in favour of A. In the next 10 years the case was reversed, and the result was in favour of the land which had no salt, the figures being 49.0 against 54. Again, in the 16 years, the comparison is 49.7 against 49.8, being again a little in favour of B. Practically there is no difference in the proportions of corn and straw, taking the whole period. I must now speak of the proportion of offal corn to 100 lb. of dressed corn. In the first three years A was in this respect slightly superior to B. In the three years in which salt was applied the reverse was the case, that is to say, the offal corn was a little larger in quantity when the salt was used. In the third year of this second period, I may remark the balance was still greater against salt; the offal corn was then 17 to 13, showing that the salt had the effect of injuring the quantity, instead of improving it. In the next 10 years the result was 7.4 in A. to 8.3 in B. If you take the 16 years, you find that the results are almost identical; that is to say, following out the table as far as it goes, we see no result whatever from salt in the case of experiments extending over a great number of years. My desire was to get at the real action of salt, if possible, on the soil. Manures were put on the land with the view of getting the largest obtainable crop, and the general result of the application of salt was that the crop was very much laid indeed. If we could have got any manure that would have made the straw stand up, we should certainly have applied it. The largest crop of Wheat per acre was 7 qrs., and the average was 5 qrs. In fact, our aim has been in every case to produce the largest crop that could be grown.

3. Mr. Lawes then referred to the action of salt on Mangel Wurzel. He said:—

I generally grow from 10 to 15 acres of Mangel Wurzel a-year; and, following the common custom of agriculture I have usually applied salt as well as other things to the land. My usual course has been to apply half a dressing of dung in the autumn, and half a dressing in the spring; to put on the top of the dung 2 cwt. of guano, or some other artificial manure, per acre, and 4 cwt. of salt; the salt and artificial manure being strained on the top of the dung and ridged in, and the seed being drilled on the top. As everybody says that salt is good for Mangel Wurzel, I always use it, but I am not satisfied as to its value. I have, in fact, been led to doubt whether the produce resulting from the use of salt has the proper meat-producing qualities; and I intend, therefore, to investigate that subject further. Last year I ordered one acre to be manured with 10 cwt., and another to be left without any salt; the other manures being the same in the three cases. One thing which struck me immediately was, that the salt evidently appeared to check the growth of the Mangel Wurzel. This went on for a good many months, and in time there was a very large difference between the one set of roots and the others. The crops were very carefully weighed, and I will give the results. The produce per acre in bulbs without salt was 21 tons 2 cwt.; with the smaller quantity of salt it was 20 tons 10 cwt., a difference of 12 cwt.; and where 10 cwt. of salt was applied there were only 18 tons of bulbs. The result was that where the smaller quantity of salt was used there was more top and less bulb, and where the larger quantity was used, less top and less bulb.

4. A reference was then made to experiments by Mr. Hall Kearey in 1852—4, which were shown to correspond with those just quoted, as proving the inutility of salt as a top-dressing for Wheat. Messrs. Barral's opinion of the inutility of salt as a manure was quoted, and the following were the conclusions reached:—

It may be asked, why should not salt be useful when we find it existing largely in a certain class of plants? There can be no doubt that salt is to be found in a certain class of plants, but the question of the value of salt depends, I think, not so much upon what is found in the plant as upon what is taken from the farm. If you find salt taken out of the land by a plant which circulates it through the farm, as is the case with Mangel Wurzel, you may conclude that there the salt is not exported and therefore does not need to be replaced. As to grain, an analysis of ripe corn will show that it contains little or no salt. There is just a trace of salt, and nothing more. Animals undoubtedly contain salt. I have had a great many animals analysed at different times, and you may take it that, as a general rule, an animal as he stands alive contains about 3 per cent. of mineral matter, and that of this matter there is 8 per cent. is salt. Therefore an ox weighing 10[illegible] contains about 2½ lbs. of salt, and a sheep or a pig weighing [illegible] contains about 4 oz. of salt. Hence, the amount of salt required by animals is very small indeed. A great many experiments have been made for the purpose of ascertaining the amount of salt which falls on the land through the medium of rain. I do not wish to go into figures, but there can be no doubt that a large quantity of salt does descend in that way to our soils. In our climate, surrounded as we are by sea, the rainfall of salt is decidedly larger than the amount carried to the land in any shape or way, and consequently, so far as our fields require salt, they obtain it from that source. I would say that the general conclusion at which I have arrived is, that salt does not act very beneficially as a manure, though it has an action of some kind or other; that there are farms which are constantly farmed well that never receive salt, while there are others that do receive it; I am not at all prepared to say that these last are not better farmed, or do not produce better crops, than others. I cannot help thinking, however, that the large amount of money which is expended annually on salt as a manure throughout the British Isles, is not returned in produce. There may be some cases in which it is, but I think that, as a general rule, the outlay of money is not returned in increased production.

A discussion ensued, to which Mr. Dent, M.P., Mr. Fisher Hobbs, Dr. Voelcker and Mr. Hooker, of Chelsea, lands, contributed.

Mr. FISHER HOBBS said—In the east of England, where we have a dry climate, we find, especially in the case of root plants, to which class Mangel belongs, that salt is very beneficial. We also perceive that along the coast, where the air is impregnated with salt, you can grow Mangel Wurzel

without farmyard manure, better than in other situations. only so, but the quality of the crop is decidedly firmer, Mangel is generally admitted to contain more saccharine there than in parts of the interior where high farming

VOELCKER said:—He had come to the conclusion that on salt was often used with great benefit; while on it was attended either with no advantage whatever, decided disadvantage. The character of the soil had a to do with the utility with which salt could be used. the properties of salt there was one which belonged soluble saline matters, the property of retarding the of plants. When applied in quantities of above 3 cwt. salt certainly retards the growth of plants, and for reason it was of great utility on the lighter soils. It kept the for a longer time in good growing condition, and the final was that there was a larger produce. That was decidedly with regard to Mangels. In the eastern counties the use of salt had very materially increased the root and he believed it did so by retarding the growth of plant. In light soils, when dry weather set in, roots were not to dwindle away or to yield only half crops. By giving salt in moderate quantities, provided the land were otherwise well-manured, they prolonged the life of the plant; Mangel Wurzel crop did not then go off so rapidly, and a better crop was obtained. But the reverse of this was the case when salt was applied to heavy land. There they began to use manures like superphosphates, which tended to bring about early maturity. Some years ago he made experiments on Grass land with salt and with nitrate of soda. Now, nitrate of soda pushed on the growth of Grass, and secured a great produce. Salt, on the other hand, checked it to such an extent that, if they used on stiffish land as much as 10 cwt. per acre, they would get a less crop, even though nitrate of soda were used with it.

Mr. J. HOOKER (Oatlands, Walton-on-Thames) said, having made some experiments with salt, he had put down the results, which did not at all accord with those of Mr. Lawes. He took the land in 1860 in a very foul condition. Ten acres he was obliged to fallow. Four acres by the side of them, and precisely the same kind of soil, he planted with Mangel, which crop he applied 4 cwt. of salt per acre at different periods of the year. The soil was a rather stiff clay on the side of the Thames, resting on a sandy subsoil. In 1862 he set these plots with fluff Wheat. The four acres salted gave seven sacks and two bushels per acre of good quality; the 10 acres not salted gave five sacks per acre of tailing quality. The plant was precisely the same over the whole 14 acres. Up to the time of blooming the Wheat all looked remarkably well, and he thought he was going to have a large crop; but the 10 acres which had received no salt entirely broke down, and the crop was very bad. He selected samples of straw to see whether salt or not had anything to do with the result. On examining the ash of the straw on the salted land he found that it gave 83 per cent. of silica, whereas on examining the ash of the straw on the land that was not salted, taking some of the best straw that could be found, he found 78 per cent. of silica. The straw of the 10 acres was by far the most valuable. He agreed with Professor Voelcker that a small quantity of salt was better than a large quantity on stiff land. In the case to which he referred 1½ cwt. of salt was sown broadcast per acre on the 12th of May, 1863. A portion of the land was not sown with salt. The following was the result. The land salted gave a produce of 2475 lb. of Wheat per acre, and the land not salted gave a produce of 2337 lb. per acre, showing an increase of 138 lb. per acre on the salted land. Further, the land salted gave a produce of 3389 lb. of straw per acre, and the land not salted a produce of 3150 lb. per acre, showing 239 lb. per acre on the salted land. This showed a large excess of straw in proportion to the Wheat, and that was accounted for by the finer quality of the straw. The straw grown on the salted land contained more mineral matter than the other straw, and consequently had a greater weight.

Mr. LAWES, in replying, said it might be supposed that his land was not favourable for an application of salt, but his experiments with Mangel Wurzel were not carried on upon experimental land, but as part of his ordinary farm practice. The soil was a heavy loam resting on yellow clay. Mr. Kersey's experiments made also part of what was termed farming practice, and though he said that salt was a capital manure, the results which that gentleman gave tended to show the contrary. He agreed with Professor Voelcker that, when salt was applied to grass lands, the herbage looked better, and the cattle seemed more fond of it; nevertheless, he doubted whether the herbage contained the best meat-producing qualities, nor indeed did he think that salt ultimately increased the amount of the crop. He also concurred in the opinion that salt checked the growth of plants; but whether that was an advantage to the farmer was another question. As regarded cattle, they found that, if cows fed much on Mangel Wurzel, they were apt to have scour. What they ate operated on them like a dose of Epsom salts. Agriculturists did not want to accumulate salts in Mangel Wurzel; what they needed was good feeding qualities; and the question of the value of salt and other manures depended on their influence on the feeding properties of crops. Admitting that salt arrested the growth of plants, the question arose, whether agriculturists always wanted that. Did they wish their crops to be stopped at a particular stage of growth? They all knew in some years Mangels were too ripe in autumn, and in other years not ripe enough. That was a matter which depended on the seasons. One year there was a hot summer, ripening the crops too early, and next year perhaps the case was reversed; thus a manure which might be beneficial at one period and not at another. He did not deny, then, that the use of salt might be advantageous in certain cases; but, speaking generally, he doubted whether the large amount of money now paid for that article by farmers was returned in the produce.

Mr. FISHER HOBBS observed that Mr. Lawes seemed to think the error in cattle arose in a great degree from the salt present in Mangel Wurzel. In opposition to that he would remark that when sheep had too much vegetable matter, and showed symptoms of scour in consequence, almost the first thing the shepherd did was to give them a handful of salt, and in nine cases out of 10 it proved a corrective.

Mr. LAWES said what he had referred to was an accumulation of salts in Mangel, which gave it a purgative character. He had never grown Mangel Wurzel without salt, but this year had occasion to make experiments in relation to this question, to his surprise he found that the crop seemed much better without salt than with it. He had been as steady a user of salt as any one, and if questioned on the subject he should probably have said that Mangel, being a marine plant, required salt; but after his recent experience he should look a little more carefully to his consumption of salt another year.

Farmers' Clubs.

WINCHESTER: *On Grass Lands.*—Mr. LONGMAN read a paper on this subject. He said:—

If we begin by improving our wet land, draining is indispensable, and draining is of little use unless it is done effectually. To do this in strong clay land drains should not be more than seven or eight yards apart; and I think from three to three and a-half feet quite deep enough for land of that description; but if land has a gravel or sandy porous subsoil you may go four feet or even deeper, and from 10 to 15 yards apart. However, as there can be no uniform rule laid down as to depth and distance of drains, the subsoil varying so very much, this point must be left to the discretion of the drainer; but we must not be led away by the theory of book drainers, who tell us if we drain deep we may drain wide apart in any soil. I have known drains put in four and a-half feet deep and 12 yards apart in strong clay land, and in two or three years after, when the clay got close over the drains, they were of very little use indeed. However deep we drain in clay lands we must not go too wide apart. It is highly recommended by experienced drainers to put in air drains where convenient, allowing the upper end of the drain to lead into a ditch or some other open place to admit the air, by which the drains will work more freely, and consequently the land will get dry more quickly. Draining does not only benefit the land by making it drier but by rendering it more porous, so as to allow the rain water to filter through the soil and leave behind the gases and nutritious qualities which it contains. If draining is thoroughly carried out, it secures that degree of porosity in the soil which is best calculated to insure its productiveness. Water meadow is the cheapest land to improve, as the water brings fertilising properties with it, which save the expense of artificial manure, also the cartage of farmyard manure; but this, above all other Grass land, should be kept dry, except when you turn the water over it. If it is capable of getting dry as soon as the hatches are drawn out, the water will do twice as much good when it comes over it again. If it is necessary to drain water meadows, you should be careful that the soil be pressed firm in the drains after the pipes are put in, otherwise the water will run in at the top and wash down the small earth into the pipes and stop them up. They should not be watered the following year after draining, to allow the drains to get firm on the top, when the water will flow over as before. We all know that for a meadow to water well it should be thrown up in narrow beds, so that the water may run swiftly over it, otherwise it will not do half the good, but produce a rough coarse Grass. The water that comes from chalky springs is the best, but this is only obtainable in certain districts; the next best is the thick flood water from the rivers, but that which comes from the heath I think of little use. We should be particular to get the first floods at autumn over our meadows if possible, as the water is then much fuller of manure than afterwards. As, however, water meadows are only possible in certain localities, we must endeavour to improve our other Grass lands, which we all know is a difficulty, because we seem to want all the yard manure we can get to manure the arable land, seeing that it will bring a quicker, but I should say not a surer return. To manure strong and heavy land chalk is a good manure, at from 30 to 40 tons an acre. It will not only fertilise the soil, but will last a number of years. If that is not obtainable by reason of distance, lime is a good substitute, at about three waggon loads per acre, mixed up with the cleaning of ditches, earth by the roadside, and road scrapings, all of which are good manures for heavy lands. Or if lime is applied in a raw state in heaps of about a bushel, and spread abroad as soon as pulverised, it will answer a good purpose. To manure light soils marl is a capital thing. This should be applied at about 40 tons per acre. This, like chalk, will last for a number of years. If this is not obtainable, then the cleaning out of mud ponds, ditches, rivers, or any heavy compost mixed up with yard dung is a good dressing. Where the herbage is rough and coarse, salt, at about 5 cwt. per acre sown broadcast, is recommended. In Staffordshire, a large producing county of butter, and cheese, and cattle, they annually use a large quantity of bones to restore the fertilising qualities taken away. According to a prize essay in the Highland Society's Transactions upon artificial manures as a top dressing for pastures on strong soils, guano, sulphate of ammonia, nitrate of soda, and soot are recommended; on light soils compost of earth, bone dust, cattle urine, salt, seaweed, and fish refuse, are said to be the most suitable. Thousands of meadow and pastures are producing less than half the quantity of hay and feed which the land is capable of, owing to a deficiency of the Grasses which are most productive and most suitable for the soil. In some cases, where the pasture is very foul with weeds and moss, it is advisable to pare and burn the old sward and re-sow the land entirely; but in most cases great improvement can be effected by merely sowing renovating seeds, which should consist of the finest and most nutritive kinds of perennial Grasses and Clovers, in the following manner:—Heavy harrows should be drawn over the old turf early in spring to loosen the soil for the admission of seeds, which, if sown freely, will occupy the numerous small spaces between the Grasses already growing, and supersede the coarse Grasses and noxious weeds. It is a good practice to sow these seeds at the same time as the top dressing, if any, is applied, but this is by no means necessary. The months of February, March, and April, are proper for sowing the seeds; the earlier the better, as the old Grass will protect the young from frost. It is also useful to sow in July and August, immediately after carrying the hay. Should the old turf be very full of Moss, this is generally an indication that draining would be beneficial. The following is, however, an almost infallible remedy for the Moss, not only destroying it but preventing the growth in future:—Mix two cartloads of quick lime with eight cartloads of good light loam, turning the compost several times that it may be well mixed and the lime slaked; spread this quantity per acre over the pasture, dragging the turf well with iron harrows. Cattle should not be allowed to graze at the same season as this dressing is given, or at least not till after one crop of hay is taken from it. As to the poor chalky hills that are now worth but little for feed, I should recommend that they be broken up, by doing which we could get double the amount of feed from Sainfoin and root crops that they produce in the present state, and enough corn between to pay the expenses.

Reviews.

Origin and Pedigrees of the Sockburn Short-horns with Remarks, an Appendix, and a Supplementary Essay: the whole intended to elucidate many points necessary to be known by South Country breeders and amateurs. In Prose and Verse. By John Hutchinson. London: Printed for Evans & Ruffy, 9, Budge Row, by W. Robinson, Stockton. 1822.

A copy of this little pamphlet has lately fallen into our hands; and as it contains probably the oldest published record of any herd in the North of England, it is particularly interesting to the student of Short-horn history.

How far back it goes appears from the date (1822) of the youngest of the herd, whose pedigree is given then through 10 generations, from *Old Sockburn*, the original mother of the herd. She was a large yellow cow, with some white, remarkable for mellow handling. She was the mother of the cow for which Messrs. Collings bid 50 guineas when purchasing Mr. Maynard's cow and heifer for 30 guineas. Her granddaughter, *Old Sall*, is thus described from memory, by Mr. Thomas Hutchinson, of Hindwell (Nov. 13, 1821).

"She was well shaped, almost symmetry! darkish red and white, flecked in equal proportions, but not in large patches; the white portions, not distinctly so, but dappled, or dashed with red, like the leaves of a new bound book. Beautiful lively countenance, fine white horns turning a little upwards, and a great milker. She produced but two calves, both heifers; one was sold to Mr. Luke Seymour, and the other was the premium cow Sall. The premium bull and Old Sall were brother and sister. Their mother was a lightish red and white cow, called Young Sockburn, and got by the Dalton bull. She was a large useful cow, and, as far as I can remember, had nothing very striking about her; but my uncle used to prize her highly. The premium bull and Old Sall were got by Mr. Hill's bull. Premium Sall (or Sockburn Sall, as you have named her), was out of Old Sall, and got by John Coates' bull, bought (I believe) of Robert Thomas, (and not by the Sockburn bull, as you have it). The old cow of all, the mother of Young Sockburn, was a large yellow cow with some white; she was most remarkable for her mellow handling; but as to her pedigree, I am totally ignorant. She might, indeed, have been descended (for anything I know to the contrary) from the old woman's propitious Dun cow found at Durham (some time back now), which directed the monks, attending the remains of St. Cuthbert, to that seat of ease and magnificence. They were nearly of the same colour, I believe, and the old woman's was (as you will find her to be) a short-horned cow, if you take the trouble to examine her effigy upon the west corner tower of the east transept of the cathedral; but whether she was of Dutch extraction or not, I really cannot say. The old yellow cow (do not mistake me—not the old woman's cow) was the dam of Mr. Thomas Scott's cow, which Mr. Colling wished to purchase, and she was likewise dam of the cow, got by her grandson, which was sold, fat, to Mr. Chrisp, weighing 136 stones as she walked. She was a small yellow cow, and *Old Jin* was her daughter, which won the premium for heifers in 1795. My uncle farmed Sockburn long before I went to reside there in 1783."

We presume that the granddam of *Old Sall* is thus the oldest cow of which anything like a particular description exists in the history of the Short-horn breed. Of the merits of this particular strain of the breed, the following description by the owner is sufficient testimony. *Young Sall*, it should be mentioned, was the granddaughter of *Old Sall*.

"When I first became possessed of my brother's cows, I had no more land than was necessary to keep two cows for my family use, and this addition of stock, as soon as Young Sall (No. 6) calved, gave us more milk than we had occasion for, or my dairymaid could well carry home. This happened early in May, 1806. Intending to rear her calf, (the cow Crescent, No. 9), and seeing how promising she was for milking, I went into the market and bought two young calves, purposely for Sall to feed; they were accordingly turned to her, night and morning; and after they had fully, and daily, satisfied themselves, her own calf was set to, to take what was left. In this way I proceeded for twelve weeks (buying a young calf as I sold a fat one); at the end of which time I had bought and fed six calves, which cost me 5*l.* 10*s.*, and which I sold for 18*l.*, clearly paying me for her milk, 12*l.* 10*s.* in twelve weeks, besides rearing her own calf, which was then weaned, turned off altogether, and able to provide for itself; it having, for two months before, had liberty to go at large in the pasture, which the veal calves had not. Though Crescent got the smallest portion of each meal, she certainly got the richest; and to this mode of rearing her (so unusual in this county for heifer calves) do I attribute that very superior touch which this cow possessed, over any cow I almost ever saw. Joseph Farbridge, butcher, of Bishopton, killed all these calves; he is alive to testify the statement.

For breeding and feeding, milk, handling and hair,
Amongst all other cows pick me out such a pair."

An appendix to the pamphlet gives an account of the meetings from 1785, of the Durham Agricultural Society, with the names of the winners—Charles Colling, 1785; F. Walker, of Bradberry, 1786; Thomas Hutchinson, of Sockburn, 1787; R. Colling, of Bampton, 1788; for the best bulls, &c. The Society lasted

till 1814, and then died—the result, Mr. Hutchinson insinuates, of favouritism and mismanagement.

He writes thus of the register of meetings and awards which he had thus collected :—

"In laying the foregoing register before my readers, I present them with the best means of judging of the progressive improvement of the DURHAM SHORT-HORNS, and what they were at the commencement of this Society, when the highest and the lowest breeders contended for the prizes in honest, unsophisticated rivalry ; and every man thought his own stock equal to that of his neighbour. The title of *pure blood* was then unknown in the land, as applicable to horned cattle. That grand discovery was left for Mr. John Bailey ; and which is now become the most undefinable and visionary term in the English language. But he pronounced the words, and they became the death-blow of the Society ; for this noble Institution only survived them four years, as may be seen above. His book was published in 1810, and the partial account of this Society which he has given, shows in the clearest light, from what class of men he had gained all his information, and for what purpose the question had been so blinked. It was to raise up these *pure-blood breeders*, as they wished to be styled, above all others in the county ; and to "keep alive an imaginary notion of individual superiority" in blood and origin, to which they had not the smallest pretension ; and which soon enabled them to tread all other stocks in the county underfoot. The Blackwell, and all other contemporary stocks upon the Tees, to whom they owed everything, were for a time forgotten, as though they had never been ; and, to my feeble pen has it fallen, to do them that justice to which they are so fully entitled."

The pamphlet, or rather tract, is written with a good deal of literary ability—witness its description of Sockburn, the farm whose herd is here described :—

"The River Tees, in its meanderings between High Coniscliffe and Park Knowle, near Yarm :—

'———with many a winding bout
Of linked sweetness long drawn out,'

washes several large holms of rich grazing land ; or

'Meadows trim' with king-cups glowing ;

some of them forming complete peninsulæ ; alternately leaving one in Yorkshire and one in Durham — of which latter, SOCKBURN may properly be called the chief—THE PENINSULA—or, poetically, the Queen of the group. Almost encircled by the river, as by a silver girdle, and adorned and protected by Beverley Wood, the situation is delightful ; the soil a rich gravel, warm and dry ; producing heavy crops of Barley and Turnips, and most luxuriant pasturage. Its principal pasture is called the Greens, perhaps the richest in the county ; and which has produced the largest sheep and most excellent cows and oxen."

And again, on the origin of the breed :—

"In that vale of linked peninsulæ, mentioned in my introduction, are situated Newsham, Traffic Hill, Low Middleton, Overdinsdale, Girsby, Worsall, Dinsdale, Nesham, and, in the centre dropping far to the south, SOCKBURN—the brightest emerald on this pendent chain !—Ayreholm, Westfield House, Hurworth, Red-Hall, Rockcliffe, Springfield, Oxenfield, Blackwell, Croft, Barton, Newton-Morrell, Stapleton, Oldbrough, Cleasby, Manfield, Dalton, and Coniscliffe—a small district, which, from time immemorial, I may say, has produced the largest sheep, and the best breed of Short-horned cattle in this island ; clearly superior to any bred formerly in Cleveland ; where, to my recollection, from the year 1783 to 1800, the cows were of the most ill-favoured and ordinary description—notwithstanding all we hear of what the late Sir James Pennyman did, or might have done, to improve them. But now, indeed, the case is altered. By the encouraging example of their landlords, the farmers individually, or joined in parties, have taken bulls, for the last 15 or 16 years, from the most eminent breeders of the county of Durham ; by which means, their stocks have become very excellent, and in great repute. Major Rudd's, in particular, I must not omit to name, because his Short-horns consist altogether of *genuine Kettons* ; —this gentleman having lately sold three cows for 500*l.*—a price, that in all likelihood, may never be again equalled.

"And to this favoured spot did Mr. Charles Colling, in 1785 (when he first turned breeder) repair for the selection of his originals. The Dalton bull, Mr. Hill's, Mr. Barker's, the Sockburn bull, Mr. Robson's, Mr. Jolly's, Mr. Alcock's, that extraordinary bull Hubback, and Mr. Maynard's cow and heifer, where all to be found here. How incredible—what a presumption then is it—to assert, that all the merit of the improved Short-horns rests with Hubback, whose origin is the most doubtful of all !"

On the pedigree of HUBBACK, here referred to, we may hereafter make further extracts. Meanwhile it is plain that Mr. Hutchinson's object was to claim equal rank in the Short-horn lists for the many good herds prevalent over a large district, which nevertheless owed little or nothing to the influence of the so-called pure bred cattle belonging to a few well-known and distinguished names.

Notices to Correspondents.

COARSE HERBAGE : *S H R.* Bone-dust, wood ashes, and salt well mixed tend both to correct coarse growth of Grass and to promote the growth of Clover. Apply 2 quarters of bone-dust rotted in a heap of moistened wood ashes. Give 5 cwt. of ashes and 1 cwt. of salt to each quarter of bones.

FAILED CLOVER LEA : *Wiltshire.* You had better sow Italian Rye-grass—if any Rye-grass at all—as early as possible, in order to a crop at midsummer. But it would in general be better policy, we imagine, to plough it up and put in Vetches.

GAS LIME : *J Smith.* It is a common practice to apply a waggon load of gas lime or even two per acre for Potatos in Gloucestershire. It should be mixed up in compost and turned over and over, or spread thinly over the land for a month or two before the crop is planted.

THE DRIFT : *J T H.* We are informed by Mr. Jenkins, one of the Secretaries of the Geological Society, that no general map of the subject has yet been published, but there is an abundance of papers on the drift, &c., of different districts. The following titles may be of use :—"On the Agricultural Geology of England and Wales," by J. Trimmer, Journal of Royal Agricultural Society, vol. xii., part 2. "On the Diluvial or Northern Drift of the Cambrian Chain," by J. Trimmer, 8vo, Dublin, 1838. Published by P. Dixon Hardy, 3, Cecilia Street, Dublin. "Trimmer's Geology and Mineralogy," 8vo, London, J. W. Parker, 1841, (see pp. 379 *et seq*.). "On the Distribution of the Flint Drift of the South-east of England," by Sir R. I Murchison, Quarterly Journal of the Geological Society, vol. vii., p. 349, 1851. "On the Geology of Norfolk," by J. Trimmer, Journal Agricultural Society, vol. vii., part 2. "Researches in Newer Pleiocene and Post-Tertiary Geology," by James Smith, Esq., of Jordan Hill. 8vo, Glasgow, 1862. Mr. Mylne's Geological Map of London gives the distribution of the gravels, &c., for that district ; and the Government Surveyors also map them, or, at any rate, they have done so of late years.

SECURED BY
ROYAL LETTERS PATENT.

PRICE 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanized Wire Strainer, Rose, and Small Jet, With Copper Stirrup, Two Guineas.
Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

ROBERT HOGG, LL.D. and F.L.S., SHIRLEY HIBBARD, Esq., F.R.H.S., THOMAS RIVERS, Esq. (the eminent Florist), and other well-known gentlemen recommend the

HYDROPULT

AS AN INVALUABLE GARDEN IMPLEMENT.

CAUTION.—IMPORTANT TO THE PUBLIC.

The extensive sale of the HYDROPULT has excited the cupidity of so-called respectable, but in reality unprincipled, manufacturers, who are now palming on the public worthless imitations of the HYDROPULT, and through their connections are enabled to place said devices on exhibition, and for sale, in many of the principal Ironmongery and Seed Establishments throughout the city and provinces. Their devices resemble in many respects the HYDROPULT in appearance, and are calculated to deceive the unsuspecting, as they are often placed under or near the HYDROPULT show card.

It has often come to my knowledge that in many instances Ironmongers have actually recommended these devices as equal to, if not superior to, the HYDROPULT, from the fact that I have persistently refused to place the HYDROPULT "on sale," as is the custom of the manufacturers of the HYDROPULT imitations, and I have thereby obtained the enmity of said interested tradesmen, who unscrupulously state that which they know to be untrue. For there is no Pump in existence except the HYDROPULT, weighing but 8 lbs., which will throw 8 gallons of water per minute a distance of 50 feet when worked by the power of one man.

The public should remember that no Machine, Pump, or other Implement PLACED IN A BUCKET is the HYDROPULT.

Prospectus, with Testimonials, sent Free on application.

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Seed Potatoes.

H. AND F. SHARPE have splendid stocks of MYATT'S EARLY PROLIFIC KIDNEY, EARLY DALMAHOY (round), and other early varieties, which they can offer to the Trade at low prices.
Seed Growing Establishment, Wisbech.

SEED POTATOS.—FORTY-FOLD (early); DALMAHOY (early); REGENTS (Dunbar); ROCKS; REGENTS (Walker's); FLUKES. The above are grown on fresh land, and are an excellent sample. For price, which is very moderate, apply to
Mr. RIDDELL, Steward, Park Attwood, Bewdley.

To the Trade.

SEED POTATOS.—Early Handsworth, Lemon Kidney, Webb's Imperial, Daintree's Seedling, Lapstone, &c., warranted true.
PRICED DESCRIPTIVE LIST sent on application to
G. & W. YATES, Seed Merchants, Manchester.

DAINTREE'S SEEDLING POTATO.—This fine flavoured early round white variety is certified by the "Journal of Horticulture," page 269, to have yielded at the rate of 12 tons per Acre. Present price 6*l.* per Ton, or 8*s.* per cwt.; and to prevent disappointment, orders (enclosing remittance) should now be sent to Mr. SIMON A. DAINTREE, of Fendrayton, St. Ives, Hunts. Sacks, 2*s.* each.

SEED POTATOS for SALE.—80 to 100 Tons of REGENT SEED and FLUKES, carefully selected by an extensive Grower, on the light black soil suitable for change to clay or loam lands. Samples to be seen at the Brick Lane Station, Great Eastern Railway, on application to R. B. WEBSTER, Potato Salesman.
Letters to be addressed, 16, Harmar, S.W.

THOMAS AYRES, Biggleswade, Beds, NURSERYMAN and SEED GROWER, has to offer 50 Tons of SEED POTATOS:—

EARLY ASH-LEAF	EARLY OXFORD
MYATT'S PROLIFIC	EARLY SHAW
EARLY HANDSWORTH	FLUKE
OXFORD KIDNEY	YORK REGENT.

Also strong 3-year old ASPARAGUS PLANTS, WHITE SPANISH ONION SEED, and ENGLISH SCARLET RUNNER BEANS. Prices on application.

Potatos.—Seeds.

H. BROWN having on hand an extra large Stock of the following POTATOS, begs to offer them at considerably reduced prices per Imperial Bushel, for present orders, viz.:—True Early Ashleaf Kidney Potatos, 6*s.*; Myatt's Prolific Ashleaf Kidney, 5*s.* 6*d.*; Early Pink, Early Kempe, 4*s.* 6*d.* Also Dalmahoy, Fortyfold, White Rock, Scotch Downs, Flukes, Arrowsmith's Seedlings, and other varieties.
Prices for quantities on application. For SEEDS, see PRICED DESCRIPTIVE 44-page CATALOGUE, post free.
4, Commutation Row, Liverpool.

SEED POTATOS.—PROTESTANTS, 6*s.* per sack of 1½ cwt., delivered at Rye Station, South Eastern Railway; sacks 1*s.*, or new 1*s.* 6*d.* each. Whole sets, size 12 cwt. to plant an acre, will be sent; or, if preferred, large, for cutting. The Grower, after some years' trial against Flukes, Regents, Pink Eyes, and other favourite kinds, has found this to be the most profitable, being an excellent cropper, and least affected by disease—indeed never to any extent, even when other sorts have suffered most severely.
Direct, with instructions and remittance, to Mr. HENRY DENGATE, Bailiff, Flackley Ash, Peasemarsh, Sussex.

THE ROYAL ASH-LEAVED KIDNEY POTATO.—This is the most productive of all the early Kidney Potatos. The following is extracted from a letter received from F. C. Steggall, Esq., of Weymouth, dated Oct. 5, 1863:—
"I have no hesitation in saying that the Royal Ash-leaved Kidney is a most valuable variety. I tried it by the side of the best early varieties known; it beats every one by at least a fortnight, and moreover its flavour is delicious, far superior to the old Ash-leaved."
Sold Wholesale by Messrs. RIVERS & SON, Sawbridgeworth; and Retail by Messrs. WRENCH & SON, Seedsmen, London Bridge; by Messrs. SUTTON & SONS, Reading; and other respectable houses.

New Kidney Potato—The Golden Kidney.

MESSRS. McRAE AND FRASER have much pleasure in offering this decided novelty in the way of POTATOS.
Mr. WM. HORLEY, Toddington, Beds., of whom we purchased it, thus speaks of its merits:—"The tubers under good circumstances run large, there being scarce any seed size; the foliage has a distinct golden edge; it is very white and flowery, the most delicate skin, and eyes not perceptible; very productive, as early as the common Ash-leaf, and first-class for exhibition."
We have but a very limited stock of this remarkable Potato. Purchasers desiring to possess it, are requested to make immediate application. Price per Peck, 6*s.*
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PINK FLUKE POTATO (quite true).—Fine flavour, most prolific, may be said to be literally free from disease; obtains the best market price, will keep 12 months, is in high perfection from January, to September, therefore invaluable when others are useless. This Potato is almost unknown except in the vicinity of Pershore and Worcester, where the principal growers have been supplied by the Advertiser, who has grown it with great success for several years, in an increasing extent, to the exclusion of all other kinds, being convinced it yields a profit double that of any other variety; the past season he grew 22 acres. Has 120 tons now to dispose of, which he offers on terms below, assured that e'er long the Pink Fluke will occupy the great bulk of every grower's crop in the kingdom. Price, delivered at Pershore Station, upon receipt of remittance, in new corn sacks (charged 2*s.* each), containing 3 bushels, or 180 lb. nett: one sack, 17*s.* 6*d.*; two, 16*s.* 6*d.* per sack; three, 15*s.* 6*d.* per sack; five, 15*s.* per sack; a discount on larger quantities. The distance from the Station compels a scale of prices.
Apply to FRANCIS JAMES, The Warren, Brockhampton, near Worcester.
N B.—As the Pink Fluke bears great contrast in its nature, habit, and growth, to other kinds, F. J. will, on receipt of a stamped envelope (addressed), forward a printed description of the same, as also his successful mode of culture.

THE FINEST SUMMER LETTUCES in CULTIVATION, each free by Post for Six Stamps.
COS, PARIS WHITE, finest stock.
" " GREY, very large.
" LONDON WHITE.
CABBAGE, VICTORIA, compact, early.
" NEAPOLITAN, very large.
" SILESIAN, very large and tender.
" EARLIEST FRENCH, best small early.
A Packet of each for 36 Stamps. All saved from unusually fine stocks.
HOOPER & Co., Seedsmen, Covent Garden Market, London, W.C.

Notice.

PURCHASERS of LARGE QUANTITIES of FARM or GARDEN SEEDS will be supplied liberally by SUTTON & SONS.
For prices apply (stating quantity required) to SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Excellence and Economy Combined

SUTTON'S UNEQUALLED COLLECTIONS of KITCHEN GARDEN and FLOWER, &c. SEEDS.
SUTTON'S COLLECTIONS of GARDEN SEEDS will be found the most economical, as well as the best in quality of seeds, as see List of Contents, which may be had gratis and post free.
No. 1, 3*l.* 3*s.*; No. 2, 2*l.* 2*s.*; No. 3, 1*l.* 11*s.* 6*d.*; No. 4, 1*l.* 1*s.*; No. 5, 15*s.*; No. 6, 10*s.* 6*d.*; No. 7, in extra quantities for a large family, 5*l.* 5*s.*
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Splendid Seakale for Forcing.

WILLIAM BARNES has a few hundreds, extra strong crowns, to offer, and feels confident they cannot be surpassed for size or health. He has also some of a second size, which will produce fine heads for table.
Price upon application.
Camden Nursery, Camberwell.

Extra Fine Seakale.

GEORGE CLARKE has plenty of clean stout Roots, which cannot be surpassed for Forcing qualities:

Price for Picked Roots, per 100	.. ..	10*s.* 0*d.*
Do. second size	"	7 6
Also strong for Planting, per 100	.. 5*s.* and	7 6

Nursery, Streatham Place, Brixton Hill, near London; and 4, Windsor Terrace, Pimlico, S.W.

SELECTED SEEDS, CARRIAGE FREE.

W. PAUL'S SUPERB CRIMSON BEET, 1*s.* per ounce.
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BROCKET HALL BROWN COS LETTUCE, 1*s.* per packet.
IMPROVED JACKSON'S LATE CURLED KALE, 1*s.* per oz.
SNOW'S WINTER WHITE BROCCOLI (True), 1*s.* per packet.
SUPERB DWARF HERTFORDSHIRE CAULIFLOWER, 1*s.* per packet.
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ASTERS, STOCKS, BALSAMS, ZINNIAS, LARKSPURS, &c., in collections from the very first sources.
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LAPAGERIA ROSEA, 1*s.* to 2*s.* 6*d.* per packet.
All other Seeds, separate or in collections, of best quality.
PRICED DESCRIPTIVE CATALOGUE free by post.
Address WILLIAM PAUL, Paul's Nurseries, Waltham Cross, N.

SELECTED SEEDS,
CARRIAGE FREE.

	per oz.—	*s.*	*d.*
PAUL'S Superb Crimson BEET, of excellent flavour	..	1	0
" New Large Green Curled ENDIVE	.. ..	1	0
" Extra-Curled Garnishing PARSLEY	.. ..	0	6
Richmond Cream BROCCOLI (true), the latest	.. ..	1	6
Hardy Early Herts CAULIFLOWER	.. .. ..	2	6
LENORMAND'S and EARLY ERFURT ditto	per pkt.	1	6
SCARLET PERFECTION MELON	"	2	6
PAUL'S HOLLYHOCKS, in 12 Varieties ..	"	5	0
" mixed	"	1	0
" Imported Collections of ASTERS, STOCKS,	per pkt., 1*s.* 6*d.* to	2	6
" Home-saved QUILLED ASTERS ..	per pkt.	2	6

All other SEEDS of first quality. PRICED LIST on application.
PAUL & SON, "Old" Cheshunt Nurseries, N.

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ROBERT PARKER begs to announce that his NEW PRICED and DESCRIPTIVE CATALOGUE of VEGETABLE, AGRICULTURAL, FLOWER SEEDS, &c., with Supplementary Descriptive and Priced Lists of Good and New Plants, is now published, and will be forwarded to applicants. All Seeds are warranted to be of the finest possible quality.
Intending purchasers are requested to compare the prices with those of other houses. The following are specially recommended.

	Per oz.—	*s.*	*d.*
BROCCOLI, SUPERB WINTER WHITE (Snow's)	..	2	6
" LATE WHITE (Shearer's)	..	2	6
CAULIFLOWER, NEW EARLY MAMMOTH ..	..	2	6
LEEK, HYBRID PRIZE (Henry's)	..	2	0
LETTUCE, MOOR PARK	..	1	6
PEA, ADVANCER (Maclean's)	..	2	0

Exotic Nursery, Tooting, Surrey, S.

A Few Choice Seeds really worth Growing.

WM. WOOD AND SON offer the following, all Carriage paid. Small Seeds post free.
BECK'S DWARF GEM BEAN, 1*s.* per quart.
MINSTER GIANT LONG-POD BEAN, 1*s.* per quart.
PINE-APPLE BEET, 1*s.* per oz.
NUTTING'S SELECTED DWARF RED BEET, 1*s.* per oz.
NEW SEAKALE BEET, 6*d.* and 1*s* per packet.
CARTER'S CHAMPION BROCCOLI, 1*s.* per packet.
FEARNOUGHT CABBAGE, 6*d.* and 1*s.* per packet.
KEMP'S INCOMPARABLE CABBAGE, 8*d.* per oz.
LITTLE PIXIE CABBAGE, 1*s.* per oz.
CARTER'S DWARF MAMMOTH CAULIFLOWER, 1*s.* p. pkt.
HOOD'S IMPERIAL DWARF RED CELERY, 6*d.* per packet.
INCOMPARABLE WHITE CELERY, 6*d.* per packet.
DALMENY SPROUTS, 1*s.* per packet.
PEARSON'S LONG GUN CUCUMBER, 1*s.* 6*d.* per packet.
THE SENSATION CUCUMBER, 1*s.* 6*d.* per packet.
WOOD'S IMPROVED VARIEGATED KALE, 1*s.* per packet.
MELVILLE'S VARIEGATED GARNISHING KALE, 6*d.* p pkt
DUNNETT'S GIANT BROWN COS LETTUCE, 1*s.* per pkt.
WHEELER'S TOM THUMB LETTUCE, 1*s.* per packet.
PRINCESS ALEXANDRA MELON, 1*s.* 6*d.* per packet.
PRINCESS LOUIS of HESSE MELON, 1*s.* 6*d.* per packet.
THE STUDENT PARSNIP, 6*d.* and 1*s.* per packet.
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CARPENTER'S EXPRESS PEA, TRUE, 3*s.* 6*d.* per quart.
MACLEAN'S PRINCESS ROYAL PEA, 2*s.* 6*d.* per quart.
NEW FEATHER-STEM SAVOY, 6*d.* per packet.
Descriptive CATALOGUES post free on application.
Address Woodlands Nursery, Maresfield, Uckfield, Sussex.

CHARLES SHARPE AND CO., SEED MERCHANTS, Sleaford, have a Surplus Stock of the under-named PEAS to offer to the Trade, and will be glad to forward samples and prices on application:—
DANIEL O'ROURKE PEAS (WAITE'S Stock)
EARLY PRIZETAKER MARROW "
WOODFORD'S GREEN MARROW "

To Farmers, Market Gardeners, and Others.

THE BEST SORTS of PEAS to GROW for PICKING GREEN.

Champion of England	Bedman's Dwarf Imperial
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The above can be supplied at Low Prices, in large quantities, by
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The Earliest Pea known is

CARPENTER'S EXPRESS, gathered last season on May 7. 2*s.* 6*d.* per quart.
The Largest and Best TALL WRINKLED PEA is CARPENTER'S MAGNUM BONUM; height, 8 or 9 feet. 4*s.* per quart.
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Either of the above to be had of EDWARD CARPENTER, Seed Merchant, Brighton and Sussex Seed Warehouse, 96, St. James's Street, Brighton.

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DOWNIE, LAIRD, AND LAING beg to announce their new PRICED LIST of the above is now ready, and may be had Post Free on application.
The Seeds are from the most carefully selected Stocks, and are of the finest quality. The following sorts we particularly recommend:—
DILLISTONE'S EARLIEST PEAS, 1*s.* 6*d.* per quart.
BROCCOLI, OSBORN'S NEW WINTER, 2*s.* 6*d.* per packet.
BROCCOLI, SNOW'S SUPERB, 2*s.* 6*d.* per ounce,
CUCUMBER KIRKLEES HALL, 1*s.* per packet.
Ditto DONALD BEATON, new hybrid ridge, very fine, 1*s.* per packet.
LEEK HYBRID PRIZE (seed saved by Henry), 1*s.* per pkt.
LETTUCE STANSTEAD WINTER CABBAGE, 1*s.* per pkt.
MELON SCARLET PERFECTION, new, First-class Certificate at Royal Horticultural Society, 2*s.* 6*d.* per packet.
Nursery and Seed Establishment, Stanstead Park, Forest Hill, S.E.; and Edinburgh.

Henry's Prize Hybrid Leek (True).

DOWNIE, LAIRD, AND LAING, having secured the entire Stock of the above from Mr. Henry, are now sending it out in packets, at 1*s.* each. This Leek can be grown from 4 to 5 lbs. weight. None genuine unless in their own sealed packets.
17, Frederick Street, Edinburgh; and Stanstead Park, Forest Hill, London, S.E.

Scrymger's Giant Brussels Sprouts.

G. SCRYMGER has much pleasure in offering Seed of the above superb variety of BRUSSELS SPROUTS, for which he received the First Prize at the Great International Show in 1862; and since pronounced by all who have seen it to be the best variety in cultivation. Seed in packets at 1*s.* Post free, 14 stamps.—Sonning, near Reading.

Broccoli, very Large.

WANDLESS'S WONDERFUL LATE SUMMER BROCCOLI, White Large Late Dwarf protecting variety, 2*s.* 6*d.* per packet. Will be forwarded to any part of England on forwarding 30 postage stamps.
The habit and quality of the above Broccoli is of the very best; very large head, sits close to the ground; if well grown, will be 14 lb. weight, fit for market. The Wonderful Broccoli is not to be superseded if well grown. Sow early, plant out early, 2 feet apart each way, in good ground.
W. WANDLESS, Market Gardener, &c., Sunderland. Agents: HENRY CLARKE & SONS, Seedsmen, 39, King Street, Covent Garden, London, W.C.; and J. BACKHOUSE & SON, York Nurseries.

OSBORN'S WHITE WINTER BROCCOLI.—This is without doubt the best early and mid-winter Broccoli in cultivation; it forms fine heads and is as white as a Cauliflower—in these respects being equal to "Snow's," but superior to it, inasmuch as it is hardier (being self-protecting) and comes in before it. If sown early in March, it turns in early in November, and by successive sowings may be had in use up to April or May. Sold in sealed packets, 2*s.* 6*d.* each.
Fulham Nursery, London, S.W.—March 5.
Special offer to the Trade on application.

To Gentlemen, Nurserymen, and Others.

GLOBE ARTICHOKE PLANTS, at 25*s.* per 100; also a quantity of PROVINCE or CABBAGE ROSE PLANTS, at 12*s.* per 100. A good discount allowed to the Trade.
Post orders payable to JOHN GAINES, Herbalist and Seedsman, Covent Garden Market, London, W.C.

SEEDS of SUPERIOR MERIT.—
Free by Post, except the Peas and Beans.

	per Quart—*s.*	*d.*
PEA, DILLISTONE'S EARLY PROLIFIC, 2 ft., the earliest of all	1	6
" ADVANCER (McLean's), 2 ft., the best dwarf Pea	1	6
" PAYNE'S CONQUEROR, 5 ft., the best tall Pea	1	0
BEAN, BECK'S DWARF GREEN GEM	0	8
	per Packet.	
BEET, PINE APPLE, superb crimson	0	6
" NUTTING'S SUPERB RED	0	6
BROCCOLI, SNOW'S IMPERIAL WINTER WHITE ..	1	0
" BACKHOUSE'S WINTER WHITE PROTECTING	2	6
BRUSSELS SPROUTS, ROSEBURY	0	6
CAULIFLOWER, LARGE EARLY ERFURT	1	0
CABBAGE, LITTLE PIXIE	0	6
CUCUMBER, SMITH'S FINE LONG FRAME	1	0
CELERY, MAMMOTH WHITE	0	6
" RED	0	6
MELON, EMPRESS EUGENIE	1	0
LETTUCE, PARIS WHITE COS	0	6
" GREEN COS	0	6
PARSLEY, extra curled garnishing	0	6
SAVOY, NEW FEATHER-STEMMED	0	6
PARSNIP, THE STUDENT	0	6
TOMATO DE LAYE	0	6
LOBELIA PAXTONIANA, or Crystal Palace var. ..	1	0
TRUFFAUT'S SPLENDID ASTER, 18 vars.	1	0
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IMPORTED LARGE-FLOWERING STOCK, 18 vars. ..	1	0
BALSAM, SPLENDID ROSE-FLOWERED, 12 vars. ..	1	0
AMARANTHUS MELANCHOLICUS RUBER	0	6

The whole of the above carriage free for 21*s.*
RICHARD SMITH, Seed Merchant, Worcester.

AGRICULTURAL AND FARM SEEDS

SAVED FROM THE MOST GENUINE STOCKS, AND AT VERY LOW PRICES.

JAMES VEITCH

DESIRES TO ANNOUNCE THAT AT THE SOLICITATION AND BY THE ADVICE OF MANY AGRICULTURAL FRIENDS, HE HAS ADDED

AGRICULTURAL SEEDS OF ALL KINDS

TO THE OTHER BRANCHES OF HIS SEED BUSINESS.

J. V. has seen for many years past the terrible effects and losses arising from SOWING BAD SEEDS, either from being BAD STOCKS OR OLD AND MIXED SEEDS AT LOW PRICES. Seeds to be REALLY CHEAP MUST BE REALLY GOOD, and it is his intention to sell nothing but what is of the FINEST POSSIBLE QUALITY.

The Stocks now offered are strongly recommended as being exceedingly select and fine; and J. V. desires to assure all who favour him with their orders that no trouble or labour will be spared to insure punctuality in the despatch and accuracy in the execution of their Orders.

Many of the kinds are of HIS OWN growth, and the remainder are procured from the most respectable Growers, on whom he can depend.

THE TURNIPS

Comprise all the varieties of decided merit, the stocks of some of the kinds being more than usually select.

THE MANGOLDS

Are especially recommended, the YELLOW and ORANGE GLOBE being EXCEEDINGLY FINE and TRUE, the LONG VARIETIES VERY SELECT, and all of the most genuine quality.

GRASSES AND CLOVERS OF FINEST QUALITY, AND FREE FROM WEEDS.

J. V. has paid particular attention to this branch of the business, and guarantees the MIXTURES sold by him to be the VERY BEST. He supplies—

The very finest Mixtures for Permanent Pastures and to suit all Soils.
The very finest Mixtures for Irrigation or Water Meadows.
ditto ditto Park and Field Lawns.
The very finest Mixtures for Sheep Walks.
ditto ditto Reclaimed Marshes or Heath Lands.
ditto ditto Garden Lawns, Pleasure Grounds, Grass Plots, Bowling Greens, &c.

All at the lowest prices, and such as will bear comparison with all respectable houses.

Every kind of Grass can also be supplied separately in large or small quantities.

CLOVERS.

WHITE DUTCH, of finest samples. | ENGLISH RED, very select and good sample.

Also PERENNIAL RED, ALSIKE, YELLOW or TREFOIL, LUCERNE, &c.

All very true and free from weeds.

CATALOGUES are now ready, and will be forwarded Post Free on application.

Where large quantities are required, special prices will be given, and a trial is respectfully requested.

JAMES VEITCH

WILL BE HAPPY TO FORWARD ALSO, POST FREE, ON APPLICATION, HIS CATALOGUE OF

GENUINE SEEDS of all kinds for the VEGETABLE and FLOWER GARDEN.

It will be found to contain every article of merit, including Garden Implements of all kinds, and the prices charged will bear FAVOURABLE COMPARISON with those of any respectable Firm in Great Britain.

The VEGETABLE SEEDS sold are true to name and unmixed, and J. V. feels confident that a trial of them cannot fail to give satisfaction.

The FLOWER SEEDS are from the very best growers, both home and continental, and may be fully relied on as being the best of their respective kinds, and true to name.

No trouble or expense is spared to ensure accuracy and despatch, and all Orders will receive immediate attention.

ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, S.W.

GENUINE SEEDS.—CARRIAGE PAID.

(FLOWER SEEDS IN PACKETS POST FREE.)

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

OFFERS

COMPLETE COLLECTIONS OF KITCHEN GARDEN SEEDS,

10s. 6d., 21s., 42s., and 63s. each.

CHOICE FLOWER SEEDS.

	Per packet—s.	d.
PRIMULA, very fine, red, white, or mixed	2s. and 3	6
CALCEOLARIA	1s. 6d. and 2	6
CINERARIA, from named flowers	1s. 6d. and 2	6
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BALSAM, Camellia-flowered, very fine	1	0
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The Gardeners' Chronicle.

SATURDAY, MARCH 5, 1864.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, March 9 { Royal Horticultural (Floral Committee) at South Kensington .. .. 10 A.M. / HYACINTH, or FIRST SPRING SHOW, at South Kensington .. .. 2 P.M.

IN the course of the experiments which were undertaken at the Jardin des Plantes by Messrs. DECAISNE and NAUDIN, with a view, if possible, to determine the limits of the different kinds of Gourds, comprised under the common names of Pumpkins and Vegetable Marrows, together with a few ornamental hardy kinds as Orange and Pear Gourds, many of which seemed to vary indefinitely, the whole were reduced to four species—Cucurbita maxima, C. Pepo, C. moschata, and C. melanosperma. These alone admitted of accurate definition, and obstinately refused to breed with each other.

This, however, was not the case with some other Cucurbits, which have yielded several valuable contributions towards the history of HYBRIDISATION in general. An account of these hybrids has been lately published in an interesting memoir by M. NAUDIN, some notice of which we propose to give on the present occasion, previously to an abstract of his prize essay on Hybrids in general, which is of too much importance to be neglected.

M. NAUDIN obtained by actual fertilization of different species of Cucurbits, four cases of hybrids, in addition to one which occurred naturally. In all the first four cases he was able to carry on his observations beyond the first generation, though not with equal success, but it is to two of these more especially that we now wish to call attention.

The first relates to Luffa cylindrica, fertilized with the pollen of L. acutangula. The produce of this cross, according to the nomenclature adopted for hybrids, was called L. acutangulo-cylindrica. The seeds which were produced in 1858 proved fertile the next year, and not only were the plants perfectly intermediate, but the fruit had the ribs less prominent than in the father plant, and had entirely lost the black lines and elongated warts which are so remarkable in L. cylindrica.

The earlier male flowers of the hybrids fell off without opening. Of those which expanded the anthers contained but a small quantity of pollen, and this, as it appeared from the weakness of the fruit produced, and the small quantity of fertile grains which it contained, was by no means very perfect. Some of the same seeds were sown in the three following years with similar results.

In 1859 the seeds of the hybrid fertilised with its own pollen were sown. The plants did not differ from those of the first generation, except that the males all opened, and were more rich in pollen, and a large quantity of fruit was obtained. The ribs of the fruit were now much less prominent than before, and the black lines and warts began to reappear.

The seeds of the third generation were sown in 1860, but the weather was so unfavourable that a single fruit only attained the normal size, and that resembled perfectly the fruit of Luffa cylindrica. In

imperfect fruit there were still slight traces of ribs. Though, however, the season was unfavourable for the development of fruit, a singular fact appeared in these plants of the third generation. In the first and second they had been uniformly monœcious, like the two parent species, but in the third, the male flowers in half the plants were transformed into female. The axillary bunches, which in the normal plants are exclusively male, bore male and female flowers intermixed, while some plants were absolutely unisexual.

In the fourth generation, the fruit did not differ at all from L. cylindrica, except in the presence of very slight traces of ribs, while the plants themselves exhibited no difference, except that the inflorescence was androgynous.

We pass over L. amaro-cylindrica and Coccinia Schimpero-indica, because the observations were not extended so far as in the case just mentioned. Both, however, produced fertile fruit, and in both there was a tendency to revert to the parent. In the first the pollen was defective in quantity and quality, but in the second it was abundant, and its perfection was proved by its fecundating the pure Coccinia indica, there being no hybrid plant to operate on, as all proved males.

We now come to Cucumis trigonus fecundated with the pollen of three varieties of the common Melon. All the three fruit proved fertile. The plants to which they gave rise, approached in size those of their male parent, of which they possessed the herbaceous stem without any tendency to become perennial; their leaves however were more like those of C. trigonus. The number of fertile grains of pollen seemed to be about equal to that of those which were effete. The fruit was of two kinds. One was about the size of a goose's egg, and contained a small number of fertile seeds; the other was much smaller, and only twice or thrice as large as that of C. trigonus. In both the flesh was very bitter.

In the second generation the seeds from the larger fruit produced fruit resembling the Melon very closely, and the flesh, though insipid, was free from bitterness. A few seeds only were perfected in each fruit. The seeds of the small fruit succeeded well, and in most cases there was an evident reversion to the Melon, while in one case only, the fruit was nearly that of C. trigonus. It was extremely bitter, and as the seeds were abundant and perfect, there seemed an almost perfect reversion to the female parent.

The natural hybrid between Cucumis Figarei and C. myriocarpus, the former being the female parent, was not examined early enough or carefully enough to yield any reliable results. The fruit of the hybrid which was rough like that of C. myriocarpus, though apparently perfect, was in most cases barren, but in a few instances afforded a single ripe seed, but whether the result of self-fertilization, or of fertilization from the pollen of the pure plants of Cucumis Figarei, amongst which it grew, is uncertain. Two plants only came up from the seed, and one of these was destroyed by an insect, and the other perished prematurely, so that no further information could be obtained.

On the whole then, it appears that though the fertility of the hybrids was not as great as it would have been in plants fertilized with their own pollen, yet the hybrids were really fertile, both as regarded the male and female organs, though the male seemed the first to be more or less impaired; and that in every case there was a manifest tendency, after the first generation, to revert either to the male or female parent. The notion that hybrids, between distinct species, are necessarily sterile can now no longer be maintained, if indeed it could reasonably have been done before, and the stability of hybrids fertilized by their own pollen must equally give way in the face of these observations. *M. J. B.*

ALL the lovers of flowers in this country are supposed, somehow or other, to have a decided preference for large size and gorgeous colours, and if the plants themselves are unnatural in form, or what are called monstrosities, they are all the more attractive, and all the more likely to sell. Hence we see, not unfrequently, the most exaggerated representations of flowers and fruits upon paper, while they themselves are very different objects, although perhaps to a cultivated taste they may seem far more attractive than the daubs of drawings which are put forth to represent them, and to sell them. "Distinguished foreigners" from the Continent sometimes pay us a visit, and offer us fruit trees which bear fruit of extraordinary size: Oranges growing upon Apple trees, or blue Roses, blue Dahlias, and other most rare and wonderful productions. Those who are silly enough to purchase such "novelties" usually find out, when too late, that they have paid away their money for what turns out to be perfectly worthless.

A very amusing instance of an attempt upon our credulity was exhibited in London a few days ago. This time the attempt was not made by a Frenchman, a Belgian, or a German. The Japanese—sly dogs as they are—have already found out some of our weak points, and it would appear they intend to make a profit out of the discovery. A consignment of flower seeds had been sent from "the land of the rising sun" to STEVENS'S Auction Rooms, that great emporium for all that is rich and rare in natural productions. This consignment consisted of 600 packets of seeds, and on each packet there was a coloured drawing by a native artist of a plant in full bloom: the drawing, it is presumed, being designed to show what the flowers of each packet of seeds were like, and thus form a guide to the purchaser. Colouring matter would appear to be cheap in that far off country, for in the paintings in question it had been liberally applied. We cannot say much in praise of the talent exhibited in these drawings by the "native artist," but we may fairly give him a good deal of credit for drawing upon his imagination for a number of his sketches, for certainly many of his flowers never had any representatives on the hill sides or gardens of Japan. Some of the drawings however, were evidently meant to represent the flowers of the country. For example, the pretty Lychnis Senno (SIEBOLD), was unmistakeable on some of the papers, while Caprifoliums, bottle Gourds, and a few other plants might be guessed at on others. One sketch in particular attracted our attention, and this was nothing less than a Dielytra spectabilis *with blue flowers*. This we believe was knocked down at the sale for a pound or 25 shillings.

Although we have our doubts—like those gentlemen who attended the sale and who would not give more than 25*s*. for a *blue* Dielytra—that the seeds, if they grow, will turn out as represented on the cover of the packet, yet there is no reason why we should not have a blue Dielytra, and it would certainly be a great acquisition if we had one. We shall therefore be glad to hear that the seed germinates, and that when the flowers are produced they prove to be as blue as those which had been painted by the Japanese artist. Amongst new flowers of the present season—or shall we say the next one, to give more time—a Dielytra spectabilis with blue flowers would certainly be the lion at our flower shows.

We do not like to seem uncharitable, but we strongly suspect this consignment of flower seeds was got up in the following way:—A contract was made with an artist to supply some 600 painted flower bags, and then these were filled, mostly at random, with any seeds which chanced to be at hand at the time. If this supposition prove true, it will probably be found that many of these seeds will turn out to be the common grains of the country, such as Rape, Oily Grain, Egg Apple, Turnips, Radishes, Asters, Poppies, Sunflowers, and such-like plants. There may be some grains of Wheat amongst all this chaff, and we hope there may be, for the sake of the purchasers. Meanwhile we may state for the benefit of all enterprising speculators on our credulity, whether they be from the continent of Europe, or from the far off lands of the rising sun, that we are not so easily gulled as we used to be; experience has made us wise. If they send us anything that is really valuable, we are ready to pay for it, and we will pay handsomely; but if they attempt to palm off rubbish upon us, however nicely glossed over and got up, they will probably find the speculation a losing one.

—— OUR readers may be reminded that the FIRST SPRING SHOW of the season takes place at South Kensington on Wednesday next, the 9th inst. The principal feature of the Show is to consist of forced bulbs, as Hyacinths, Tulips, and Crocuses; and it is to be hoped the day may prove bright, in order that the two latter of these flowers may fairly develop their charms. We shall be curious to see what is brought forward in the class of New Hyacinths of 1863-4, our own views concerning which have been already expressed. We are glad to see that the brilliant family of Hippeasters or Amaryllids, which is again engaging the attention it deserves, is not forgotten on this occasion. No doubt, if encouragement is continued to be held out to these noble flowers, a fresh impetus will be given to the production of choice English varieties, which, as far as we have seen, are superior in technical points of excellence to those obtained from abroad. We hope to see several groups of them brought forward on Wednesday. In cut stands of Camellias, too, which really make an admirable display, we trust there will be more competition than took place last year.

—— We learn from Mr. W. B. SIMSON, of Edinburgh, that the credit of first discovering the TRICHOMANES RADICANS in the Scottish Isle of Arran (see 1863, p. 602), is due to a resident there, named ROBERT DOUGLAS, who is in the habit of collecting Ferns for sale. Mr. SIMSON states that DOUGLAS, who is very little acquainted with the names of the Ferns he gathers, did not, till he informed him, know either the name or the rarity of the Trichomanes, of the discovery of which he afterwards informed Mr. COMBE. So far as it goes, therefore, this may be taken as evidence in favour of the authenticity of the habitat; as at least, if so, the Fern was not planted by the discoverer, as it is sometimes uncharitably suggested may have happened in cases of a like kind.

While referring to this Trichomanes, we may mention that Mr. BACKHOUSE has found the plant in Carnarvonshire, in what he regards as "a truly wild state," and remarkably luxuriant.

—— We learn that an INTERNATIONAL HORTICULTURAL CONGRESS under the auspices of the Federation of the Horticultural Societies of Belgium, is announced to take place at Brussels on the 24th, 25th, and 26th of April next, simultaneously with the opening of the Universal Horticultural Exhibition, for which the Royal Floral Society is making preparations, under the patronage of the Belgian Government.

The Congress will be opened precisely at 3 o'clock, on the 24th of April, at the Ducal Palace, at Brussels. The Federation specially invite to the Congress delegates from horticultural societies, both Belgian and foreign; members of academies, of botanic societies, and of other scientific colleges; professors of botany, and the directors and curators of botanic gardens; directors and editors of botanical and horticultural reviews; members of the jury of the Universal Exhibition of Horticulture; and, without distinction, all botanists and horticulturists who wish to take part in the discussions, and who give notice to that effect before the 13th of April to M. EDOUARD MORREN, Secrétaire-Général, à Liège.

The following are the subjects which it is proposed to submit to the deliberations of the Congress:—

1. Acclimatization, naturalization, and domestication of Vegetables.

2. Hybridization, crossing, and artificial fertilizations in general; characters of hybrids, their sterility, their polymorphism; preservation of pollen, &c.

3. Theory of the variation of species, or of the origin of varieties, and of races. Theories of VAN MONS, of VILMORIN and others. Reform in the nomenclature of varieties.

4. Dynamics of plants, and the periodic phenomena of vegetation. Influence of temperature on the germination, leafing, flowering, and fruiting of plants; forcing, retarding, &c.

5. Food of plants: action of the atmosphere, influence of nitrates, ammonia, phosphates; theory of manures, composts, &c.

6. Floral æsthetics: points of excellence in flowers, single and double. Harmony of colours.

7. Coloration of plants. Variegation, is it hereditary by the seed and contagious by the graft?

8. History of horticulture. Historical documents, biographies, explorations, voyages, introductions, rectifications.

9. Humidity, water: are these absorbed directly by the leaves?

10. Vegetable pathology: diseases of plants; remedies.

11. Insects and other destructive animals: their destruction.

12. Garden architecture: characters of its actual or present style.

—— Among the many flowers in the very effectively-decorated conservatory of the Royal Horticultural Society, to which we have already adverted (p. 171), we have been particularly pleased with a specimen of the hybrid RHODODENDRON COUNTESS OF HADDINGTON, sent there by Mr. PARKER, of Tooting. This is a first-cross with the Indian R. Dalhousiæ as one of the parents, and is probably one of the most useful hybrids as yet resulting from the introduction to our gardens of the Indian species of this varied genus. The good qualities of the plant, and those in which it differs from other fine-flowered hybrids which have appeared, are its dwarfish moderately vigorous branching habit of growth, and its prolificacy of bloom, every shoot producing a head of four or five large white flowers. These flowers are of the long-tubed character of those of R. Dalhousiæ, with a prettily undulated border, and at all stages of their development have here and there apparent, a pleasing flush of soft rose-colour.

—— Those who are interested in the subject of the COOL TREATMENT OF ORCHIDS will be glad to learn that Mr. SKINNER has just received, by the R.M. steamer Shannon, from his quondam collectors in Guatemala, some splendid examples of Lycaste Skinneri, Odontoglossum grande, Epidendrum vitellinum, &c., fresh

from their native habitats, which they only left on the 22d of January last. These it has been resolved to submit to the public, by auction, next Thursday, the 10th of March, as will be seen from an advertisement in another column. The quantity, we understand, is large, and the specimens never surpassed.

NOTES ON GARDENS.—No. IV.

Backhouse's Nurseries, York.

The nurseries of Messrs. Backhouse & Son lie about a mile to the west of York, on slightly elevated ground, sloping gently to the southward, and affording a varied and extensive view over the rich and fertile district in which they are situated. The warehouses, offices, &c. are very extensive and compactly arranged. Passing them I came to the first main block of glass houses, in four rows, each 70 feet long, including the stoves, tropical and cool fernaries, orchid houses, &c. In front, standing as sentinels at the entrance door, two colossal Tree Fern trunks, perhaps the largest ever imported into Europe—one of them measuring 16½ ft. in height, of prodigious girth, and quite symmetrical, arrest the eye. On the roof of the first house was a fine flowering specimen of Lapageria rosea. The main stove next presented itself. In it was a select collection of tropical plants in the best condition, especially attractive being fine masses of Allamanda Schottii and Passiflora kermesina, depending from the rafters; also a new Dipladenia, said to be a hybrid, with leaves larger than those of D. crassinoda, and flowers of the deep rosy crimson of that species, but nearly as large as those of splendens.

Adjoining this stove is the tropical Fernery, a house filled with sumptuous specimens, and in every way worthy of its object. The most telling plant was a noble specimen of Thamnopteris australasica, with a crest nearly 10 feet across, and fronds 9 to 10 inches wide. Near it was a fine example of the rare Hydroglossum heterodoxum, a climbing Fern from Central America with huge palmate fronds; this had already reached the roof, and formed a pillar-like mass, 11 feet high, of the deepest green. A large and rich assortment of arborescent and other Ferns was also to be seen. Amongst them must be mentioned Adiantum cardiochlæna, with fronds 4 feet wide, on erect wiry stems, black as polished ebony, and exquisitely drooping pinnæ of the tenderest green; A. denticulatum; two varieties of the rare A. pulverulentum; A. hirtum; A. cayennense (?) which has pinnules of a rosy pink when young; and A. Ghiesbreghtii, a species of surpassing beauty and great rarity, allied to the well-known A. tenerum, but with larger, heavier, and much more densely clustered leaflets. Two fine plants of Hymenodium crinitum, in full fructification, had the back of their fronds one mass of black chaff and sori, strangely contrasting with the pale whitish green of the midrib. Two Tree Ferns planted out, Cyathea aurea (?) and C. aspera, promised soon to become objects of great beauty. One more tropical Fern may be named amidst the vast variety of old and new that flourished there—a Lygodium with bronzy rose-coloured fronds, recently introduced from Guiana.

The Orchid house is entered from the tropical Fernery, and contains a large collection of Lælias and Cattleyas, including many very distinct and promising looking unproved species, imported by Messrs. Backhouse from Brazil and New Granada. From the latter country the Messrs. Backhouse first received the beautiful Cattleya Warscewiczii delicata, already known to cultivators. Another, nearly allied, to which they have given the provisional name of C. Wageneri rosea, equals if it does not surpass this in beauty. It is in fact a fine Cattleya Wageneri with white blossoms and richly orange-stained lip, the densely crisped edge of which alone is of the tenderest pink. Here was first flowered, and from here first exhibited, the well-known Lælia purpurata and Cattleya Wageneri; and from here also were supplied to our botanico-horticultural literature the first figures of Lælia elegans, of Lælia xanthina, and of the rare and beautiful Cattleya Schilleriana.

The Anæctochili were growing "like weeds" in this house. There were wonderful plants of A. Lowii and its variety virescens; as also of the charming Macodes Petola, with its fine varieties cuprea, velutina, latifolia, and superba. The habit of the var. cuprea is very diverse from that of the typical form, being taller (6 to 9 inches high), and the veins of a flesh-tinted copper-colour, light at certain angles. The var. velutina has a very dark ground colour, contrasting finely with its network of golden veins. As the name implies, the var. latifolia has very broad, indeed nearly round leaves, and is of vigorous habit. In the var. superba the intersecting golden veins are very numerous, and of an unusually brilliant hue. In addition to these are two other apparently permanent and interesting varieties. One of the specimen pans of this species contained a dozen plants, supporting many score leaves, and producing an indescribably beautiful effect. The rare A. Veitchii and A. setaceus var. cordatus were also in unusual vigour. Along with the Anæctochili, and apparently equally at home, was the brilliant haired Pogonia discolor.

Again passing on, a door was opened and I entered—what? The Messrs. Backhouse's exhibition at Kensington last summer had given me some indication of the vast collection of novelties to expect. I had also a vague notion of great Ferneries and so forth, but was utterly unprepared for such a fascinating imitation of wild Nature as that which stretched for 70 feet before me, and which may be likened to a concentrated New Zealand or Australian Fern ravine, everywhere charmingly diversified and draped with graceful verdure. Ferns large and small, massive and delicate, filmy and arborescent, lend their aid, the latter kinds throwing feathery canopies gracefully aloft, and almost effectually hiding the only surface which indicates art — the roof. The "glen" is 20 feet wide, 70 tons of massive stones having been used in its construction. At one side a small sheet of water, deeply seated among the surrounding "crags," receives a charming little cascade which gushes down the rocks, half hidden among the Ferns that fringe its margin, and grow around in wild profusion. Who would not be charmed by such a scene, and who describe the feelings of a lover of "ferny nature," when feasting on its diversities? Brick "burrs," cement, &c., which are supposed to represent nature in other attempts of this sort, are here unseen, the stone being of one kind only, superimposed in the most artistic and natural manner, the whole combining to form a sight which it would be difficult to persuade a Maori had not been bodily transferred from the Antipodes. The engraving does not show the defile-

like character of the scene, the photograph being taken at its further or upper end; and to some extent the tops of the Tree Ferns have vanished from the picture. To one like myself, fresh from the region where monotony holds almost undisputed sway; where "decided" colours take a too decided lead, and where "every ally" may hopefully look forward to rejoin the society of its fraternal relative, the relief afforded by this exquisite touch of nature, and sudden collapse of pot, bench, and regulation, could only be equalled by a sudden transfer from a Bedfordshire Cucumber field to a Gentian-covered Alps—or some such desirable flight. Tree Ferns were here seen in their real character—trunks 6 to 9 feet high, and crests 10 to 15 or 18 feet across, of great beauty. Conspicuous amongst them was Dicksonia squarrosa from New Zealand, with its slender stem, straight as an arrow, and crowned with a crest of more than 20 fronds of the deepest green. Far larger still in its crest, though as yet only a young plant, is the lovely Cibotium Scheidei, the finest of the Tree Ferns of Mexico. There were also fine crests of the silver Tree Fern of New Zealand, Cyathea dealbata, surmounting tall and massive trunks covered with seedlings of the same and of other species; one of these forms the centre piece of the most distant part of the house and is probably the finest specimen in Europe. Amongst the smaller Ferns in this house a nice effect is produced by the rose-coloured young fronds of Lomaria L'Herminieri; Todea pellucida, and the British Hymenophyllums grow well among the moist rocks; good specimens also of the Sulphur Maidenhair in two varieties, and of A. chilense, may be seen, together with the rare Asplenium auriculariun, A. valdivianum, and a fine variety of A. flabellifolium, double the size of the ordinary form, and very pleasing as seen suspended in baskets or drooping from dry crevices of the rocks.

The house devoted to the culture of East Indian Orchids contains a select, though not very large collection of those plants, and amongst them several scarce species. Associated with these is a class of Ferns that can probably be found nowhere else in cultivation, I mean the Lindsæas—remarkably interesting Ferns. They grow quite freely with a high temperature, deep shade, and an atmosphere saturated with moisture. Perhaps the most conspicuous amongst them are Lindsæa trapeziformis, and its variety (?) L. falcata, from their large size and finely curved pinnules. Then there is the delicate L. dubia, like a small semi-transparent Gleichenia; L. reniformis, resembling in the form of its fronds the well known Adiantum reniforme, but of a fine glaucous colour; L. stricta, L. guianensis, and L. crenata, with erect pinnate fronds, very distinct, the last-named having the edges of the pinnæ finely frilled; and L. sagittata, an extremely rare Fern with broadly arrow-shaped fronds. These and many others of this genus, cannot fail to highly interest every lover of Ferns.

Near the habitation of the Lindsæas are the propagating houses, and also a small house occupied by Odontoglossums and other Orchids requiring little or no heat. A new building of considerable size was in course of erection for plants of this class. With the Odontoglossums were two or three species of a genus as yet little known, but likely to become general favourites—Callixene. They are evergreen shrubs with small ovate or oblong leaves, that climb upon trunks of trees in the rich forests of Chili, and bear a profusion of Lily-of-the-Valley like flowers, yielding a delightful fragrance. Here also was Gleichenia cryptocarpa, another plant of great interest, from the probability of its proving hardy in our climate. It is of the same group as Gleichenia flabellata, and forms fronds 1½ to 3 feet high, very rigid, and yet graceful from the delicate texture and colour of its narrow pinnules. This is the second Gleichenia likely to prove quite hardy in England, introduced by Messrs. Backhouse. The other is Gleichenia alpina, a fine specimen of which was exhibited by them at South Kensington last summer. It had already stood a winter in the open air without the slightest injury, even its uncurling fronds not suffering. Along with the Callixenes is a fine specimen of the scarce Dendrobium Hillii, a spring-flowering species; also the large Australian Sundew, Drosera binata, with leaves 10 to 18 inches high, covered with "dew," and with entrapped insects. In the warm propagating house was a very promising-looking Melastomaceous plant, the leaves of which were thickly covered with long soft hairs of a bright rose colour, very distinct, and one which appeared likely to become a fashionable fine-leaved plant. *William Robinson.*

(To be continued.)

Home Correspondence.

Royal Horticultural Society.—Will your Correspondent ("Another Old F.H.S. of London") kindly point out the "good" produced by Mr. Chester's "adjournment" of the annual meeting. I have read the reports of the meeting, and see no mention made of the games referred to at a former meeting. Do the Council purpose introducing bowls, &c.? If so, I feel satisfied it will injure the Society very much, inasmuch as it would be unsound in principle—hostile to the purposes for which the Society was established—and totally opposed to its prosperity. I read, with regret, in the report of the Council, that they would do all in their power to introduce these games: depend upon it, if this is the case, the tone of the institution will be very much lowered [Hear, hear], and a vast number of members will withdraw altogether. And then, again, the stupidity of talking about dancing, tea-drinking, &c. However, this is quite in keeping with the introduction of bowls, croquet, and all the rest of it. My impression is, that if these things are established in the Kensington Garden, the Society will be brought to a dead lock. I have read your excellent leading article in to-day's (Feb. 27) *Gardeners' Chronicle*, and regret that you did not refer to this subject, for, to my mind, it is one full of importance, as far as the Society is concerned. I therefore cannot join with your Correspondent in patting Mr. Chester upon the back, for I believe it is a part of his programme to promote the bowling, &c., in the Gardens. Pray, sir, favour us with your opinion upon the subject. *Another F.R.H.S.*

[No one can possibly disapprove of these matters more than we do.]——When, some years ago, I became a F.H.S., Chiswick was my favourite resort. The watching of the training of the fruit trees, and the sight of the experimental beds, with all that was new, I found as interesting as instructive. I cannot imagine how the giving up of this garden to grow plants to supply Kensington can ever have been thought of. On the introduction of croquet and bowls, I must put my veto. I know that if games are to be allowed, many of the aristocracy and landed gentry will withdraw their names. I shall gladly continue my support to the society while it has for its object the advancement of the science of horticulture. The new garden at South Kensington promises much, but its leading feature is a paucity of floral decoration. Surely the notion of keeping up the Royal Horticultural Society without Chiswick would be like the old joke—the play of "Hamlet" advertised, with the part of *Hamlet* omitted. *A Country F.R.H.S., March* 2.——In connection with a most interesting article in your last week's Number (p. 197) by an old F.H.S., permit me to say a few words. While cordially endorsing his admirable advice to eschew the "apple of discord," I think it may fairly be observed that the "beautiful design" attributed to Mr. Nesfield can only in part be claimed as his; inasmuch as the whole of the water-basins and their arrangement, with the consequently troubled sea of levels that must painfully affect the legs, if not the æsthetic sensibility of the generality of visitors, emanated from others. This much appears to me to be due to Mr. Nesfield's veteran reputation, which rests rather, on the classical compositions at Holkham, Castle Howard, and Witley Court, on the creation of the main features at Kew, and on other numerous works in nearly every county of Great Britain. *Delta.*

The Hydropult.—Will you be good enough to ask some of your Correspondents, who have had the hydropult fairly in everyday use as a garden engine, to favour me through your columns with their opinion of it. I tried one exhibited at Kensington, but thought the labour requisite to work it too great. I want to purchase that or the old garden-engine this spring, and shall be glad of assistance in determining which to adopt. *R. C.*

Orchard House Trees.—Observing in your impression of Feb. 13, p. 154, an inquiry by Mr. Watson as to whether "J. P." shakes the earth from the roots of his fruit trees in pots, or merely gives them a size larger pot, and not seeing any reply to Mr. Watson's inquiries, and having had ten years' practice in the management and cultivation of orchard house trees in pots, I tender my experience in reference thereto. In 1854 I commenced the cultivation of fruit trees in pots, more especially that of Peaches and Nectarines, and my labour has been crowned with success. I have scarcely during the whole time repotted a tree of those with which I first started, unless I have observed the drainage to be defective; in that case I have shaken the stagnant soil from the roots, and returned the tree to the original or a pot of the same size. I allow the pots to stand on a bed of soil, into which the roots are allowed to descend; the pots are not moved till the fruit is ripe. During the time the fruit is swelling, the trees receive liquid manure occasionally, and after the wood is pretty well ripened they are placed out of doors until the approach of winter; the old soil is then gently stirred on the surface, and a little fresh applied. I have exhibited Peach and Nectarine trees in pots at Brighton for several seasons, and have always been a successful competitor. Many of my trees are in as fine health as can be desired, and none are in a bad condition. About the time I commenced the cultivation of fruit trees in pots, a gentleman in this neighbourhood, D. Lyon, Esq., had an orchard house erected and filled with trees in pots. At Mr. Lyon's request I repotted them for him either in 1854 or 1855, and from then until now, not one had been repotted; but the person in charge finding the drainage choked, repotted four or five of them a few weeks back, and the whole house now is without exception the very *beau ideal* of what an orchard house filled with potted trees should be. There is not a shoot or spur that is not covered with blossoms. Therefore Mr. Watson, provided his trees are in sufficiently large pots, may safely allow them to remain in the same pots, and not trouble himself about shaking out or repotting. *Richard Gadd, Salvington, Worthing.*

Wellingtonia gigantea.—I was present the other day at the removal of a large Wellingtonia from Mr. Barron's old nursery at Elvaston to some new ground which he has purchased near the Borrowash station. It was removed on one of his transplanting machines with about three tons of soil, and there is little doubt that it will do well in its new situation. This, although not the tallest, is perhaps one of the handsomest plants in the country. It is so dense in habit that several people can stand on the opposite side of it without being seen. Its height is 14 feet, the spread of the branches 12 feet, and the circumference of the stem 4 feet 6 inches. *Observer.*

Patent Bituminised Paper Pipes.—About the time of the repeal of the paper duties, much was said of the many useful objects to which the coarse material of paper might be applied, and among them to "pipes" for various purposes, and a company came forward to supply such pipes, with the strongest statements as to their durability. In 1861 I was induced to purchase and lay down a quantity of these pipes, called "Patent Bituminised Pipes," for distribution of liquid manure. I am sorry to say that in 1863 these pipes became useless, and they are still worse now. They seem to have rotted in the ground, not from the internal action of the manure, but the outside action of the water in the soil. I should be glad to hear if any of your correspondents have any experience of these pipes, and whether it be at all similar to mine. They were supplied to me by "The Patent Bituminised Pipe Co., Limited." *J. W.*

Heating by Hot Water.—It would be useful if some of your readers would state their experience as to the quantity and description of fuel consumed during the two months just past, adding of course the sort of boiler used, and the size of it, also the height of the chimney. It will be also necessary to be informed how many feet of 4-inch pipe has been used, the temperature the houses have been kept at, the internal dimensions of the houses, how glazed, and whether standing in exposed or in sheltered situations. *R. W.*

Gnaphalium lanatum.—This is said (see p. 197) to be hardy, a statement which my experience does not confirm, for I find after three years' trial with it that an amount of cold which will kill Calceolarias will also kill this Gnaphalium. It will not even stand in a cool Peach house, as I lost a lot of it during the last frost in such a situation, where there was no fire; and I very much doubt if it will prove hardy even in the Emerald Isle. *G. Fletcher, Picton Castle, Pembrokeshire.*

Prizes for Wild Flowers.—Participating as I do in the feelings of your correspondent "Diogenes," but desiring to save him from the necessity of resorting to the sharp practice which he threatens against "botanical pirates," I have written a letter, of which I subjoin a copy, to the Editor of the *Athenæum*, deprecating the carrying out of the ill-advised offer of premiums for the extirpation of botanical rarities. *W. C. Trevelyan, Bart.* The following is the letter referred to:—*To the Editor of the Athenæum.* Sir,—I trust that, the season for collecting wild plants not having yet commenced, it may not be too late for the Royal Horticultural Society to withdraw their ill-judged offer of prizes for collections of the native plants of various districts of this country, which, if carried out, would inevitably lead to the annihilation of some of the greatest botanical rarities of Britain; some of them occurring in only a single locality, and those often in a very small number, their destruction would be an irremediable loss to all lovers of botany. Such collections, I may remark, have no bearing on the science of horticulture, and any persons who have had an opportunity of observing, can testify with me to the fact, that the mere collecting of plants helps very little the extension of the study of scientific botany. I am, sir, yours truly, *W. C. Trevelyan, Bart., Feb.* 25, 1864.

Societies.

LINNEAN: *February* 4.—G. Bentham, Esq., President, in the chair. The Rev. T. Cornthwaite, M.A., J. T. Dickson, Esq., and Clements R. Markham, Esq., were elected Fellows. The following papers were read: 1. "Observations on the functions and structure of the Reproductive organs in the Primulaceæ," by Mr. John Scott, of the Edinburgh Botanic Garden; communicated by C. Darwin, Esq. The principal object of this paper was to give an account of some experiments made on several dimorphic and non-dimorphic species of the genus Primula. The more completely to elucidate the subject of dimorphism, a brief account of the structure of a few other genera was prefixed. Hottonia was said to present dimorphic characteristics in its British representative; in the long-styled form of which the pistil was said to be more than twice as long as in the other, projecting far out of the flower; while in the short-styled form, the anthers, not the style, are thus projected; a marked difference also occurs in the size of the pollen grains in the two forms. Experiments on two short-styled racemes of Hottonia gave the following results:—12 flowers fertilised with their own pollen yielded five good capsules containing 37 seeds; while eight flowers fertilised with pollen of a long-styled flower gave five good capsules and 154 seeds. The H. inflata of North America was not found to present structurally dimorphic characteristics. It was stated that the genus Primula, along with a great majority of truly dimorphic species, contained others in which one form only—either

long or short-styled, had been observed, and others again in which the stamens and pistils were found to be equal. The dimorphic species recorded were:—P. altaica, amœna, aretioides, Auricula, capitata, carniolica, cortusoides, denticulata, elatior, farinosa, finmarchica, glaucescens, glutinosa, helvetica, hirsuta, integrifolia, involucrata, latifolia, macrocalyx, marginata, minima, Palinuri, pedemontana, petiolaris, pubescens, purpurea, sibirica, sikkimensis, sinensis, Stuartii, stricta, venusta, veris, villosa, viscosa and vulgaris. So far as the author had observed, the following were short-styled, namely P. floribunda, pusilla, rosea, saxifragifolia, rupestris and nivalis; while the long-styled were, P. intermedia, Floerkiana, longifolia, mistassinica, Pallasii and pulverulenta. The non-dimorphic species mentioned were, P. elata, longiflora, mollis, scotica, sibirica β, and verticillata. The author hence concluded that dimorphism of the sexual organs was a very general characteristic in the species of Primula. Gregoria was said to present at least one structurally dimorphic species, G. Vitaliana. Cortusa was mentioned as remarkable in apparently presenting the long-styled structure only, as was the case also with Dodecatheon and Soldanella. The other genera of Primulaceæ which the author had examined, have stamens and pistils of equal length, though occasional specific exceptions occur. A very long and detailed account was then given of a series of experiments on the several dimorphic and non-dimorphic species of Primula, in which the results were tabulated. As to the general structural differences of the two sexual forms, it was explained that the long-styled had the pistils equalling in length the tube of the corolla, the stigmas larger and rougher, the stamens attached below the middle of the corolla tube, whose diameter was thus increased upwards, and the pollen grains generally smaller and more transparent; while in the short-styled forms the pistil did not rise above half way up the corolla-tube, the stigma was generally smoother and depressed at the summit, the stamens were attached to the mouth of the corolla tube, causing an abrupt expansion, and the pollen grains were larger and more opaque. As to function, the pollen of the long stamens was found to be best adapted to fertilise the long pistils, and that of the short stamens the short pistils. By applying the pollen of either form to the stigma of its own flowers, thus effecting a homomorphic union, the degree of fertility was greatly decreased, as compared with the foregoing or heteromorphic union. The usual differences in the fertility of heteromorphic and homomorphic unions were summarily illustrated by the mean results from the respective unions in several species. Thus in respect to the heteromorphic and homomorphic unions in P. Auricula, sikkimensis, cortusoides, involucrata, and farinosa, the mean results gave for every 100 seeds yielded by the heteromorphic unions, only 24 by those of a homomorphic character. The pollen of a distinct species moreover produced a much higher grade of fertility than an ordinary homomorphic union. One of the most remarkable results observed was, that when species usually dimorphic ceased to be dimorphic, their reproductive functions were greatly modified. Thus the Cowslip, which in the ordinary homomorphic union produced about 14, and in the heteromorphic about 24 seeds per capsule, yielded in the form with stamens and pistils of equal length, and fertilised with its own pollen, as many as 34 seeds per capsule. "Whether or not," observed the author in conclusion, "the ultimate tendency of dimorphism is a complete separation of the sexes, I think we have the clearest testimony that dimorphism has not always been a genealogical characteristic, and furthermore that the two forms did not *per saltum* assume these structural and physiological characteristics. I here allude to the evidence afforded by the non-dimorphic Cowslip, namely, the resumption of perfect hermaphrodism, and the occasional production of intermediate stages between this and the normally dimorphic state. These taking us back in the genealogical line, indicate an original non-dimorphic progenitor, and the graduated plan by which it gave rise to a dimorphically characterised race." 2. "Notes on some points in the anatomy of the Rotatoria," by Walter Moxon, M.B.

February 18.—G. Bentham, Esq., President in the chair. The executors of the late Joseph Woods, Esq., presented a valuable series of local Floras, and other botanical works, which that gentleman had bequeathed to the Society. Dr. Hooker exhibited the fruit of the Chayota (Sechium edule), which is cultivated in the West Indies and the Azores, and has lately been introduced to the south of Europe and India. A communication entitled "Contributions to the Knowledge of the Foraminifera—The rhizopodal Fauna of the Shetlands," by Henry B. Brady, Esq., was read.

Notices of Books.

The Gate of the Pacific. By Commander Bedford Pim, R.N. Lovell Reeve & Co. 1863.

The advantages of a route across the Isthmus of Panama are so evident, that its formation has long been acknowledged to be a necessity; and the best means of accomplishing it have afforded a fertile theme for discussion, and given rise to innumerable schemes. During a long residence in Central America, Capt. Pim became much interested in the subject, and accumulated a mass of information, which he lays before the public in a somewhat diffuse form in this volume. He particularly dwells on the vast importance of such a route, both politically and commercially, were it free to all nations alike; for unfortunately the only existing passage across Panama is an American monopoly. The United States, more alive to their own interests than the Government of Great Britain, turned their attention to the subject many years ago; and in 1848 a company was formed by some American merchants, who concluded a formal treaty with the Government of New Granada, for the exclusive right of constructing a road across the Isthmus of Panama.

The railway was commenced in 1850, and notwithstanding the enormous difficulties of the undertaking, was completed in 1855; since which time the Americans have possessed the monopoly of what Captain Pim emphatically terms "the gate of the Pacific." In consequence of the dilatoriness of our Government, the Americans "lost no time in opening their route; a railroad was built which will ever be a monument of skill and enterprise, and the value of which has far surpassed every calculation. Its political importance to the United States is immense; by means of it the real control of the Pacific commerce falls into the hands of our rivals, and our policy must of necessity be cramped when we reflect that our unscrupulous offspring have the power, in the event of war, to inflict disaster upon our squadron, menace our possessions, cut up our trade, or destroy our cruisers in detail, before we could even inform our countrymen that hostilities had broken out."

Captain Pim proceeds to say, "that the territory of New Granada being closed against any rival to the Panama railway by the terms of its contract, which grants to the citizens of the United States the exclusive privilege of transit, it follows that we must look elsewhere for the means of crossing expeditiously from ocean to ocean." The object therefore of the present volume is to point out the different routes which have been suggested, and to report on their peculiar advantages. As an introduction to the subject, several chapters are devoted to descriptions of the country, geographically, historically, politically, &c., and many interesting details are given as to the aboriginal inhabitants, the climate and productions of the country. These are followed by long extracts from a pamphlet by the present Emperor of the French, on the advantages of one particular transit, viz., that through Nicaragua. This was written in 1847; and shows that, with his usual acuteness, Louis Napoleon had not failed to discover the importance of establishing this great highway.

We next find an account of the various schemes that have from time to time been formed for crossing the Isthmus by a canal. This idea suggested itself at a very early period, when the efforts of the early conquerors to discover a natural passage from sea to sea had failed.

"Fernando Cortes was the first who gave his earnest attention to the search for a practicable route from sea to sea. In his admirable letter to the King of Spain this passage occurs:—'It is the thing above all others in this world I am most desirous of meeting with, on account of the immense utility which I am convinced would result from it.'"

Of the canal schemes Captain Pim says, "That such an idea is a great conception cannot be denied; but in my opinion it would practically be one of the greatest failures of the age; it would in reality be a return to the stage coach travelling of a former period; for time, not distance, has now become the true measure of space; and it must be borne in mind that for a sailing vessel the time occupied from England to India would be longer viâ a canal through Nicaragua than it would be by a voyage round the Cape of Good Hope. My proposal is to connect Realejo and Gorgon Bay by means of the iron road." "To construct a railway from the Atlantic to the Pacific by the route I have designated would require some four or five years to finish, but it would not be necessary to wait until then before a passage from sea to sea could be effected. The completion of the section from the Atlantic to San Miguelito would suffice for the immediate opening of a temporary line, as from there passengers and goods could be conveyed by steamer across the lake of Nicaragua to Virgen Bay, whence a fine macadamised road, 13 miles in length, well bridged, and levelled as much as possible, has already been constructed to San Juan del Sur, on the Pacific."

We are next given a full description of the country through which this railway is projected to pass, and though admitting that in some parts there are considerable difficulties to be surmounted, yet the author says, "I am inclined to think that no engineering impediment of any importance will be met with in the interior; in point of fact, that an easy gradient might be marked out over the whole distance."

"Gorgon Bay, the Atlantic terminus of the new route, would speedily attract a large population to its shores, and I propose to make it a free port; open to the commerce of the whole world, and untrammelled by any narrow regulations calculated to restrict its full usefulness."

With regard to the country through which this railroad is proposed to pass, we are told that it is impossible to exaggerate the value of the land, both of Mosquito and Nicaragua, if only for agricultural purposes. "As regards Mosquito, I do not hesitate to say, that it is, both from position and adaptability, the finest country for the growth of Cotton in the entire world." In addition to so valuable an article of commerce, may be mentioned mahogany, which is to be procured in abundance. These, and numerous other advantages mentioned in this volume, would appear to justify Capt. Pim in his sanguine expectations of the success of his scheme, and the future prosperity of Central America. But we would venture to suggest, that instead of firing off abuse at the British Government in general, and its ministers and officers in particular, he should take the matter in hand himself, and endeavour to form a company to carry out his plans. Our best and most successful enterprises have been accomplished in this way; and if the scheme be really a judicious one, and likely to succeed, we are convinced he will not find it difficult to secure coadjutors.

He has given substantial proof of his own faith in its ultimate success, by purchasing from the King of Mosquito a tract of land surrounding Gorgon Bay, as a site for a future terminus and emporium; whether, however, this fact adds weight to his testimony, or the reverse, we leave to others to determine.

In the December number of M. Verschaffelt's *L'Illustration Horticole* we find portraits of the following plants:—*Diervilla multiflora*, one of the Weigela group, a branching shrub, with ovate-lanceolate acuminate leaves, and deep red funnel-shaped five-lobed regular flowers, growing in pendent umbels of five or six from the tips of the twigs. It appears to be an elegant shrub, and was received from Japan under Siebold and Zuccarini's name of D. floribunda, the identity of which, with its one to three-flowered peduncles, clavate corolla tube, and sub-bilabiate limb, M. Lemaire doubts, and substitutes that of D. multiflora.—*Gloxinia maculata* v. *insignis*, a Brazilian variety.—*Areca alba*, a Mascaren Palm, with elegant pinnated foliage, and known in some gardens as Areca borbonica.—*Rhododendron Baron Osy*, a hardy hybrid, with blush-white flowers, thickly spotted with reddish brown on the upper segments.

The January number contains:—*Dieffenbachia Baraquiniana*, which, according to M. Schott, is the D. humilis, Pœpp. The plant, which is a rather desirable stove Aroid, so much resembles that sent over by M. Verschaffelt to our summer shows under the name of D. Verschaffeltii, that we fail to distinguish them, and at p. 175 were led inadvertently to mention the latter as being the plant figured. We do not, however, find in the text any intimation that the two names belong to one species. It appears from M. Schott's statement, referred to at the page already quoted, that there are in the establishment of M. Verschaffelt three new species of this genus, which M. Lemaire and his coadjutor have respectively named D. grandis, Verschaffeltii, and Baraquiniana. The first of these is the D. cognata, Schott; the second, D. irrorata, Martius; the third, D. humilis, Pœpp. The latter, which is the plant figured in the plate before us, is a caulescent species, with ovate-oblong sparsely white-blotched leaves standing erect, and having the stalks and midribs ivory white. It was discovered in the Brazilian province of Pará by M. Baraquin.——*Dianthus cincinnatus*, a Japanese Pink, stated to be of perennial duration, but having very much the aspect of the laciniate form of D. Heddewigii, only that the petals are more deeply cut into variously branched contorted segments; the colour is a rich deep crimson.——*Deutzia crenata flore-pleno*, a pretty double-flowered Japanese shrub, already noticed by us as having been exhibited by Mr. Standish in the course of the last summer.

A work on laying out *Villa Gardens* and other ornamental grounds of comparatively limited extent, having a considerable reputation on the Continent, is, we understand, about to be published in this country by Mr. Hardwicke, of Piccadilly. It is to be illustrated by 24 coloured plans by Dr. Siebeck of Vienna, and the English letterpress is, we believe, to be supplied by Mr. Newton, of Eastbourne Terrace, Hyde Park.

Miscellaneous.

Zizania, or Wild Rice (see p. 200).—The Water Oats, or Wild Indian Rice, common in many parts of the North American continent, and we believe also in Russia, is a wholesome nourishing article of diet, which deserves to be better known. The plant grows in vast beds, in still waters, in a depth of from 3 to 8 feet, where there is a great deposit of mud and sand. In many places, where there is little current, these beds increase so as materially to fill up the shallow lakes, and impede the progress of boats. The plant is usually 6 feet high or more, and has a panicle with female flowers above and male below. It has been found growing wild in the north-west territory, and in the lakes and streams all over the country. In Minnesota, Illinois, and many other American States, as well as Canada, it is common. When the rice begins to show the tender green blade above the water, the lakes seem to be studded with low verdant islands. It comes into flower in July and August. The leaves attain a great length—some 11 to 13 feet. In the month of September in Canada, and in the North-Western States rather earlier, the grains are fully ripe and withered. They are so loosely enclosed between the bearded husks as to fall out at the slightest puff of wind; hence the

harvest can only be continued for a few days after the maturity of the crop. The stalk and the branches, or ears that have the seed, resemble Oats, both in appearance and manner of growing, the stalks being full of joints, and rising from 2 to 4 feet above the level of the water. The squaws collect the seed by paddling through the Rice beds, with a stick in one hand, and a sort of sharp-edged curved paddle in the other, striking the ripe heads down into the canoe, the ripe grain falling to the bottom. Many bushels are thus collected. An Indian squaw will gather from 5 to 10 bushels per day. Very great quantities grow on all the lakes in the Minnesota territory; the outlets and bays are filled with it. It is the main reliance of the Indians during the winter months. The green Rice is dried in the following manner in Canada:—The Indians make an enclosure or a square area of dry ground, by sticking branches of Pine or Cedar close together, to form a sort of hedge. In the centre of this place they drive in forked sticks in a square of several feet, across which they lay others, and on this rude frame they extend mats of Bass or Cedar, for the manufacture of which the Indian women are renowned. They light a fire beneath this frame, and when reduced to hot glowing embers, the Rice is spread on the mats above the fire; the green enclosure is to keep the heat from escaping; the Rice is kept stirred and turned with a wooden shovel or paddle, and after it is dried the husk is winnowed from it in large open baskets shaken in the wind. Professor Randall, of Cincinnati, and General Verplanck, late Commissioner to the Chippewa Indians, consider it to be superior in taste and far more nutritious than Southern Rice. It is long, narrow, and of an olive-green colour outside. Its flavour is better; for when boiled and stewed and left to cool, it forms a consistent mass like good Wheat bread. Boiled like ordinary Rice it is very palatable. The appearance, however, is not inviting, as the outer skin of the hulled Rice is dark coloured, though the inside is white as the Carolina kind. The parched Indian Rice is heated in pots over a slow fire till it bursts and shows the white floury part within the dark skin. This sort is eaten by the Indians in their soups and stews, which are chiefly made of game, venison, and wild fowl; and often also dry by handfuls when on journeys, as the parched corn of the Israelites. The wild Rice is sold in the stores of Canada at 10*s.* a bushel. The Indians sow it up in mats or coarse birch baskets to keep it. The gathering of wild Rice is rarely practised by the settlers, whose time can be more profitably employed on their farms; but we have thought the description of harvesting it might not be devoid of interest, since men who have gone exploring or "lumbering" on the shores of lonely lakes and rivers, far from the haunts of civilised man, have sometimes been reduced to worse shifts than gathering wild Rice to supply their wants. *Technologist.*

Narcissus, Gr. *ναρκισσος*, from *ναρκαω*, become numb, related to Sanskr. *nark*, hell, so called from the torpidity caused by the odour of the flower as remarked by Plutarch: "Narcissus as blunting the nerves, and causing narcotic heaviness; wherefore also Sophocles called it the ancient chaplet of the Great (that is the Infernal) gods." The passage is quoted from an exquisite chorus of the Œdipus at Colonos where, at l. 682, the original has *μεγαλαιν θεαιν*, the two great goddesses, meaning Ceres and Proserpine. The epithet which the poet here applies to the Narcissus, *καλλιβοτρυς*, finely clustered, suggests that he meant the Hyacinth, a plant that, from its heavy odour and dark colour, was more likely than the one we now call Narcissus to have been consecrated to those deities. Plutarch adds that "those who are numbed with death should very fittingly be crowned with a benumbing flower." The coincidence of the name Narcissus with the Sanskr. *nark*, indicates some very ancient traditionary connexion of Greek with Asiatic mythology. The poets represent it as having been so called after a youth who pined away for love of his own image reflected in a pool of water; an instance among many more, of a legend written to a name; for as an old poet, Pamphilus, remarks, Proserpine was gathering Narcissi long before that youth was born. *Prior's Popular Names of British Plants.*

Calendar of Operations.

(For the ensuing week.)

The season for seed sowing out of doors is now at hand, and as soon as the ground shall have become sufficiently dry to receive them, most kinds of kitchen garden seeds will be committed to the earth. As the too early performance of this operation, however, often ends in disappointment, from the seeds not germinating, we would advise the inexperienced in such matters to wait until the soil is not only sufficiently dry to bear trampling upon without injury, but also until its temperature has been raised a little by means of increased sun heat. Vegetation will then push onwards unchecked, vigorous, and healthy.

FLOWER GARDEN AND PLANT HOUSES.

As soon as favourable weather shall have set in, fill up vacanies in borders, either from the reserve garden or by sowing hardy annuals. Many plants, as for instance Phloxes, Asters, &c., throw up too many flowering shoots; where such is the case thin them out so as to obtain not only fine heads of bloom but increased strength in the remaining shoots, to enable them to stand with less assistance from stakes. Secure all newly-planted trees against strong March winds, and mulch well over the roots. Turn, clean, and roll walks and roll Grass frequently, so as to have it in proper order for the scythe.

AURICULAS.—Young growths of these will now be somewhat tender, therefore protect them from frost, and water more frequently, as well as more liberally; weak liquid manure once a week will strengthen the trusses; give plenty of air, and fumigate occasionally; green-fly generally appears with the young growth.

AZALEAS.—Give young growing plants liberal shifts; a good fibrous peat with a little white sand suits them admirably, but for stronger growing kinds a small portion of loam may be used with advantage. When potted the plants should be put into a nice moist growing atmosphere, and they should have a temperature of from 55° to 60° by night, and 65° to 70° by day; give air freely in fine weather, and attend regularly to the stopping, thinning, and training of the shoots. Large specimens will now require more water.

CALCEOLARIAS.—Any plants struck during the winter should be repotted into 4-inch pots to succeed the first plants. If not so large, they will make compact handsome bushes for purposes of decoration; it is not too late to strike cuttings of the best shrubby kinds for bedding out, such as Aurea floribunda, Prince of Orange, King of Sardinia, Pallida, Beauty of Montreal, Kayi, Dropmore, and Orange Boven.

CARNATIONS AND PICOTEES.—Strong growing varieties may now be put into larger pots. If there is any green fly on the plants, give them a good smoking with tobacco or tobacco-paper before taking them from the pit. The latter end of the month will be soon enough for planting out in borders.

CINERARIAS.—Such plants as are intended for exhibition should now have their small leaves and superfluous shoots removed, to admit light and air; tie out as thinly as possible, and keep them as near the glass as may be convenient; fumigate, so as to have them thoroughly clean before coming into flower, and sulphur such as may be affected with mildew. Seedlings will now be coming into flower, and any novelties that may appear, should be watched for selecting for preservation such only as are of first-rate form, and well defined colours.

DAHLIAS.—March is the best month for propagating the Dahlia; cuttings struck now have time to make fine plants; therefore propagate freely, and when sufficient cuttings have been taken, divide the roots to make a few strong early plants.

FORCING GARDEN.

CUCUMBERS.—Maintain for these a steady heat of 65° or 70° at night. Give air on every favourable opportunity.

FIGS.—Keep the shoots thin so as to expose the foliage to light and air, and persevere in the use of the syringe to prevent red spider. Give air freely on bright days, shutting early in the afternoon after syringing the house.

PEACHES.—Proceed gradually with the disbudding of the early house, and where the fruit is very thick a portion should be removed as soon as fairly set.

PINERIES.—Look over young stock, occasionally examining and repotting such as is found to be in want of more pot room. The temperature may be slightly advanced as the amount of light increases, but this is a matter in which the state of the plants will be the best guide. Aim at securing strong dwarf plants, with a free habit of growth; and if this is obtained, it is immaterial whether the night temperature is 60° or 70°, and very much will depend upon circumstances as to which will be proper.

STRAWBERRIES.—Continue to bring on succession plants very gradually, and afford those in bloom a rather dry atmosphere, with a free circulation of air, as they set their fruit badly in a moist close atmosphere. Plants swelling their fruit must be liberally supplied with clear, rather strong, manure water; and if fine large fruit is expected, thinning must be resorted to immediately the berries are fairly set.

VINERIES.—See that Vines starting into growth are tied up in their places before the shoots get so long as to be liable to be broken off in the operation. Syringe frequently until the leaves begin to unfold; but use the syringe sparingly after that time. Where the buds do not promise to break regularly, bend the Vines so as to place those that are backward in the most likely position to catch the sap, and this should be done directly any indications of their not breaking regularly are observed. If any of the bunches in houses where stoning has been finished, look as if they would be improved by a few more berries being cut out, let this be done at once.

HARDY FRUIT AND KITCHEN GARDEN.

Rather than lose a season, we would still plant young fruit trees—that is, if we could get good ones; but there is generally a difficulty in obtaining them at this season, as the best plants always go first: and, after being picked over the whole autumn and winter, nothing very first-rate can be expected now. All pruning and nailing should be brought to a close as soon as possible. Make timely preparations for protecting wall trees. Be sure that everything is in readiness for that purpose, so that the material to be used can be put up in a short time when it is needed.

BEANS.—Sow more Long Pod and Broad Windsor; these like stiff soil best, and need not have the most open quarters selected for them.

CARROTS.—A good breadth of Early Horn should be got in about this time, to succeed those sown on hand last month.

CAULIFLOWERS.—When large enough, and the weather has become warmer, these should be carefully pricked out, either in gentle heat, or on a warm sheltered border; if the latter, they will require protection until well rooted.

LEEKS.—These should now be sown.

PARSNIPS.—These should be sown at once, if not done earlier.

PEAS.—As soon as the ground is tolerably dry, get in successional crops, commencing with the second early sorts, but where there is ample space, a few of the later sorts, sown at the same time, come in very nicely for succession.

POTATOS.—Plant more of these both in frames and in warm borders, making use of the sets which have been carefully sprouted; the general crops should also be got in during seasonable weather.

TURNIPS.—Sow Early White Dutch on a gentle bottom heat, and also a good supply for succession in a warm border; dress the beds with dry soot and ashes occasionally.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending March 2, 1864, as observed at the Horticultural Garden

February and March,	Moon's Age.	Barometer.		Temperature. Of the Air.			Of the Earth		Wind	Rain
		Max.	Min.	Max.	Min.	Mean	1 foot deep.	2 feet deep.		
Thurs. 25	18	29.932	29.910	39	30	34.5	39	40½	N.E.	.00
Friday 26	19	29.918	29.851	40	34	37.0	40	40	N.E.	.00
Satur 27	20	29.724	29.655	42	36	39.0	40	40½	E	.12
Sunday 28	21	29.621	29.590	50	30	40.0	41	40½	S.W.	.01
Mon. 29	22	29.651	29.583	48	27	37.5	41	40½	S.	.18
Tues. 1	((	29.785	29.695	50	25	37.5	42	41½	S.E.	.00
Wed. 2	24	29.786	29.662	48	32	40.0	42	42	E.	.00
Average.		29.773	29.706	45.3	30.5	37.9	40.7	40.7		.10

Feb. 25—Hazy; overcast; hazy.
— 26—Overcast throughout.
— 27—Foggy; hazy and cold; overcast; foggy.
— 28—Foggy; fine; overcast.
— 29—Foggy; exceedingly dark, dense fog 10—12 A.M.; slight frost
March 1—Hazy; fine in forenoon; cloudy; slight frost at night.
— 2—Foggy; hazy; foggy at night.
Mean temperature of the week 3 deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending March 13, 1864

March.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 7	49.5	32.7	41.1	14	0.22 in.	4	6	4	1	5	11	4	3
Mon. 8	49.7	31.7	40.7	14	0.17	3	7	2	3	6	7	4	6
Tues. 9	49.9	31.2	40.4	10	0.47	3	4	3	2	6	9	6	5
Wed. 10	50.1	31.7	40.9	14	0.69	4	4	1	4	5	10	4	6
Thurs. 11	49.4	32.0	40.7	15	0.33	2	6	3	5	3	14	4	2
Friday 12	50.7	32.3	41.5	19	0.24	1	4	3	4	4	12	5	2
Satur. 13	50.8	34.2	42.5	14	0.36	2	2	6	3	3	10	6	5

The highest temperature during the above period occurred on the 10th, 1826, 12th 1841, and 15th, 1828—therm. 67 deg.; and the lowest on the 10th, 1847—therm. 7 deg.

Notices to Correspondents.

AGE OF TREES: *Subscriber.* The plan of computing the age of a tree, from the examination of a portion of the wood, the diameter of the trunk being known, is not at all to be relied on; this in fact could only be the case if the rate of growth were at all times uniform, and the development of the trunk on all sides equal—neither of which is the case. The Ash tree with a diameter of 60 inches, 7 of which from the bark inwards contain 31 rings, would be about 130 years old, if this mode of reckoning could be trusted, but we have no faith in the exactness of such computations, though in your case they may give an approximation to the truth.

BITTER POTATOS: *Inquirer* asks how bitterness in a crop of Potatos may be accounted for. Can any of our correspondents answer the question? He adds:—Would soil recently broken up and on which Fern was previously growing, produce such an effect?

BOOKS: *P B.* We cannot recommend the two first books you mention. Moore's "Handbook of British Ferns" is quite trustworthy, and within the price you name; but its illustrations are woodcuts, and not coloured plates.—*J C.* We advise you to read Fleming's "Spring and Winter Gardening," recently published.—*W M.* The "properties" of flowers and plants, that is to say the standard of excellence adopted by the florists, have been defined in a little shilling volume published by Houlston and Wright. This seems likely to meet your wants.

COTTON PLANT: *M M.* The seeds of the Cotton plant require to be sown in heat to induce them to germinate freely. The plants may be treated much in the same way as Balsams, only they are more woody; they may consequently be reared in a hotbed or in a warm propagating frame or pit. They require a good heat and plenty of moisture for their after growth.

INSECTS: *J J J.* We found not the slightest trace of emmets or any other insect, with a microscope, on your leaves. The glass slides were of course smashed to atoms in the post. *W.*

JUNGERMANNIA: *Muscus.* Our reply last week was misprinted. The word is sounded Yunghermannia.

NAMES OF PLANTS: *Arvon.* 1, appears to be a Swainsona; and 2, a Justicia, but you must send flowers; 3, Siphocamplus bicolor; 4, Diplacus glutinosus, or puniceus if red flowered.—*Buxus.* A long-leaved form of the Common Box, which varies considerably in respect to the outline of its leaves.—*L.* 1 and 4, Blechnum Spicant; 2, Asplenium Adiantum-nigrum; 3, Polypodium vulgare.—*C R.* 1, Diplazium decussatum; 2, Polypodium dregnanum; 3, Asplenium umbrosum; 4, Nephrolepis exaltata.—*C Ross.* The fleshy-leaved plant from Bermuda is Peperomia clusiefolia.

SHIFTING CAMELLIAS: *Ignorance.* July is the time preferred by many good growers for performing this operation. We therefore advise you to allow your plants to complete their growth, and set their buds, before they are repotted or in any way disturbed at the root.

WOOD-CUTTING MACHINE: *Delta.* The machine used for making very thin slices of wood, &c., for microscopical purposes, referred to by you as having been published in Dr. Lindley's "Elements of Botany," is also figured at p. 120 of our volume for 1847. Its cost is 4*l.* There is, however, a contrivance by Topping, costing only 16*s.*, which for most practical purposes is, we believe, equally efficient. A figure of this may be found in Quekett's work on the Microscope.

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PREPARED BONE MANURE for present use on PASTURES.
WHEAT MANURE for AUTUMN SOWING.
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SUPERPHOSPHATES of LIME, &c.
All the above being in the finest condition. They also continue to supply
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MESSRS. WAY AND EVANS, ANALYTICAL and CONSULTING CHEMISTS, receive PUPILS for the study of AGRICULTURAL and GENERAL ANALYTICAL CHEMISTRY.
106, Leadenhall Street, E.C.

Chemical Analyses.
DR. AUGUSTUS VOELCKER, F.C.S., CONSULTING CHEMIST to the Royal Agricultural Society of England, has REMOVED his LABORATORY from Cirencester to 191, LEADENHALL STREET, LONDON, E.C., where he receives a few Private Pupils for the Practical Study of Analytical and Agricultural Chemistry.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.
SPRING SESSION, 1864.
President—The Right Hon. the EARL BATHURST.
Council.
Rt. Hon. the EARL BATHURST. | Rt. Hon. T. H. SOTHERON ESTCOURT, M.P.
Rt. Hon. the EARL DUCIE. | EDWARD HOLLAND, Esq., M.P.
Hon. WILLIAM BATHURST.
Principal—The Rev. JOHN CONSTABLE, M.A., Trin. Coll. Camb.
Farm Manager—J. L. FLETCHER.
Resident Professors.
Chemistry.—ARTHUR H. CHURCH, M.A., Lincoln Coll., Oxon., F.C.S.
Assistant to Chemical Professor.—R. WARINGTON, Jun., F.C.S.
Botany.—JOHN BAYLDON, M.B., Lond. B. Sc.
Veterinary Surgery.—A. J. MURRAY, M.R.C.V.S.
Mathematics and Surveying.—The Rev. W. MEREDITH LANE, B.A Scholar of Trin. Coll. Camb.
Drawing.—JAMES MILLER.
SPECIAL LECTURERS.
J. BAILEY DENTON, M. Inst. C.E.—On DRAINAGE.
Professor J. MORRIS, F.G.S., of University College, London—On GEOLOGY.
JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.
WILLOUGHBY WOOD, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.
JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.
JOHN THORNHILL HARRISON, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.
THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.
ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.
RICHARD GRIFFITHS WELFORD, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.
Applications for Admission and for further particulars may be made to the Principal.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE-ON-TYNE, 1864.
STOCK and IMPLEMENT PRIZE SHEETS are now ready, and will be forwarded on application to
H. HALL DARE, Secretary.
12, Hanover Square, London, W.

The Agricultural Gazette.
SATURDAY, MARCH 5, 1864.

MEETING FOR THE ENSUING WEEK.
MONDAY, March 7—Central Farmers' Club .. .. .. 6 P.M.

WE have during the past two numbers of the *Agricultural Gazette*, given Mr. HALLETT a capital opportunity of calling attention to the merits of his PEDIGREE WHEAT, and of effectively replying to Mr. SHIRREFF, who had attacked it. Barring the personal character of the attack, and the need of permitting a personal defence, the only reason why the publication of this long advertisement, or of that by Mr. SHIRREFF in the previous week, has been permitted, has been because the two rival principles of selection and cultivation in the art of plant improvement which they severally represent, need to be defined as well as to be defended.

At any rate we are glad of the opportunity of defining the degree of acceptance which the latter of these principles appears to us to deserve. Mr. HALLETT chooses a promising ear of Wheat—plants all the seeds—takes that plant of the series which is best—chooses its best ear—again plants all *its* seeds—again chooses the best plant, best ear, and best seed—and after a series of harvests thus obtained, during which, as he alleges, the plants and ears have annually improved upon his hands, he takes the ultimate produce as the parents of the

grain which he shall offer for sale, and multiplies it by thin seeding and careful cultivation as fast as he can—and so by and by the "Z family," or some other of long lineage, is offered to the "faithful," for they alone will venture its price, at perhaps one or two guineas a bushel!

In accordance with this practice the improvement of the cereals is alleged to depend upon three facts which Mr. HALLETT declares himself to be in "a condition to prove," viz., (1) that the grains of cereals differ in their powers of productiveness; (2) that the descendant plants and grains inherit more or less the characteristics of their respective parents; and (3) that these characteristics may by selection be so often repeated as to become fixed characteristics of the plant. Now, it appears to us, that there is not one of these "facts" which Mr. SHIRREFF will deny. Of course he admits the first, and in accordance with it he himself offers several varieties of Wheat in the market whose "differences" from other Wheats he has ascertained—and whose descendants he has multiplied for the purpose of sale, confident that they have inherited the properties which he detected in the original plant. The only point to which he might take exception, is, we presume, the third; he might object to Mr. HALLETT taking any credit for the fixed character which his plants at length acquire, and allege that these characters are fixed by Nature in the very origin of the sort.

It is on this third point, and the view of it which Mr. HALLETT and many of his predecessors have held, that the whole possibility of improving plants by cultivation hinges. For, as regards the second, no doubt can exist; and, as to the first, if it is meant to allege that varieties of Wheat and Oats and Barley differing in quality and productiveness exist, there can be but one opinion.

But perhaps Mr. HALLETT means by the grains of cereals the grains of any one ear; it is the differences in their powers of productiveness that he declares himself in a position to prove. We do not think he is. Whether the statement that different powers of productiveness exist be true or not, the mere fact that differences of produce have been observed does not prove it. These may be, and to a certain extent no doubt always are, owing to the different circumstances in which the several grains whose produce has been observed were placed. For, equidistant and covered equally though the grains may be in the experimental bed, it is impossible to ensure that all the incidents and accidents of growth shall be uniform throughout the season. Mr. HALLETT and Mr. SHIRREFF are, in fact, more nearly agreed than either will admit. Both select the best natural origin they can find—both are confident that the progeny will be like the parent—both believe in the fixity of character of the resultant grain; the one however thinking that the character is fixed in the origin, and the other that it is fixed in the successive annual growths of the sort in question.

Whichever of these opinions be the true one, there cannot be a doubt which of these gentlemen has the best quality of Wheat as the result of his experiment and research. The fixity of character, too, of both is so far proved by our own experience of them, that such samples of Mr. HALLETT's Pedigree Wheat as we have seen have always been of remarkably coarse red grain, while such samples of SHIRREFF's bearded white and bearded red Wheats have always been of remarkably fine quality, thin skinned, bright and good. The former has in fact, by, we presume, excessively thin seeding year after year, brought his principle of continuous treatment to bear in fixing the excessive coarseness which thin seeding tends to produce. So that the inferior quality of the grain may be pointed to in proof of the soundness of his theory.

So far as it asserts the existence of habit of growth in cereals as in other plants, and alleges the folly of carelessness in the selection of our seeds, in the soundness of that theory we entirely believe; and with Mr. HALLETT we wonder at farmers, who, when they want a good Cabbage, Mangel, or Turnip, take care to choose a good plant as the parent of the seed they use, yet the moment they approach the cereals they no longer adopt the principle which, in the other instances, they know to be right.

We entirely differ from Mr. HALLETT however in the personal reference which he makes to his opponent Mr. SHIRREFF. It *is* such as he whose confidence and good opinion are to be desired by any one engaged in efforts to improve our plants. Long before Mr. HALLETT was ever heard of as a plant improver, Mr. SHIRREFF had patiently and perseveringly been spreading good grain of Wheat, Oats, and Vetches, and other plants all over the country. His experience in this department is longer than that of any other man we know. Creditable as are the insight, care, and resolution which have been displayed both for many years in the experimental garden at Brighton, and subsequently in the advertising columns of our agricultural papers, we owe a vast deal more as yet to Mr. SHIRREFF than to Mr. HALLETT.

[Since the above has been in type we have received the following communication from Professor CHURCH, of the Royal Agricultural College. He says:—

"I think that some of the readers of the *Agricultural Gazette*, even those who, like myself, do not take part in the discussion as to the merits of HALLETT's Wheat, may yet like to know the following facts, learnt last autumn.

"In making preparations for some experiments which are now being carried out on the College farm, I had occasion to separate, in large and small samples of seed Wheat, the grains according to their specific gravity. I select the following results, in which the finest seed obtainable from Messrs. LAWSONS' was employed. A certain standard specific gravity being assumed, the undermentioned per centages of grains of the three varieties given were found respectively lighter and heavier than that standard.

BROWICK'S	lighter	...	95·9	per cent.
	heavier	...	4·1	„
FENTON ...	lighter	...	83·7	„
	heavier	...	16·3	„
HALLETT'S	lighter	...	65·2	„
	heavier	...	34·8	„

"If high density be a measure of goodness in Wheat, the numbers just given need no further explanation. It is however necessary to state that the specific gravity of the whole sample of HALLETT'S Wheat was higher than that of any other variety examined."

We understand the specific gravity in this case is the average density of individual grains, not the density or weight per bushel of a bulk of the grain. Of the two sorts with which HALLETT's Wheat is here compared, the first is a coarse prolific Red Wheat, the second one of our best White Wheats; so that there could not be better chosen sorts with which to contrast it; and the result is very remarkable. The value of Wheat per bushel to the miller is however the only test of quality in the market; and that, combined with its productiveness, make up the value of the sort per acre, which is its value in the eyes of the farmer. HALLETT'S Wheat has the reputation of being very productive but extremely coarse. It has borne out that reputation in every instance known to ourselves.]

THE correspondence which we have published during the past few weeks bearing on the appointment of Consulting Engineer to the Agricultural Society is we presume closed by the letter which appears in another column from Messrs. HOWARD, as exhibitors before the Royal Agricultural Society and competitors for their awards, to Lord FEVERSHAM, the President of the Society. They point out that in the appointment of judges men have been removed from the list solely on the ground that they traded in machinery; and knowing that Messrs. EASTON & AMOS deal with many exhibitors both in the purchase and sale of machinery, they contend that the same rule ought to be applied to them as consulting engineers as has been applied to other men as judges.

We do not see on what plea the rule which binds the judges should not apply to those who are virtually their umpire, and we can hardly doubt that Messrs. EASTON & AMOS will forestall any inquiry from the Council into the facts of the case by stating exactly how they stand with the exhibiting manufacturers of agricultural machinery, in order to a decision of their official position satisfactory to exhibitors and the public.

THE debate upon THE MALT FOR CATTLE BILL has resulted in certain insignificant amendments; and the measure will no doubt become law essentially the same as it was when originally laid on the table of the House. The privilege which it confers is now generally understood to be of no appreciable value to the farmer. What they want is free malt for man, not free malt for cattle. There is already better material than malt, for feeding sheep and cattle, at a price less than that which the latter will command even when the duty shall have been removed. Those who may go into the manufacture allowed by the Bill (for no one will incur all the expenses imposed by it for his own use only) must demand a price which, repaying them their outlay, will much exceed that of other better mixtures that can be named and have long been used.

Malt and Linseed mucilage, both of them relaxing substances, are to be mixed together. If used to any extent as food they must receive a large addition of Bean meal or other somewhat astringent substance to correct a tendency which will rather check than help the fatting process. While if used merely to induce the saccharine fermentation in other meal which would form the substance of the food administered, the small quantity needed will not be worth the legislation which has been demanded for it. The real object of the existing agitation on the malt tax is seen in the notice given by Mr. MOFFATT, M.P., for Tuesday next, that he will then move that in the opinion of the House the reduction of the malt tax has a permanent claim upon the attention of the Government.

Mr. WILLIAMS's ideal flock which could be fed in France on untaxed English malt, and be brought across the Channel to bring down the price of the mutton at the metropolitan market, fed on English malt on which no drawback had been allowed, may now be replaced by the thousand flocks at home which will for the future compete with one another on the more favourable terms which are now to be allowed. But we very much doubt indeed if there will be much more malt-fed mutton in the market hereafter than there is at present. The point, practically worthless and unimportant, but theoretically indefensible, which was pointed out, and on which the present Bill is founded, has, however, served a valuable purpose by directing attention to the tax upon malt to be used in brewing; and the pressure which the CHANCELLOR of the EXCHEQUER has to some extent encouraged by this Bill, and which is now in almost every county being exerted on the Government, may perhaps ultimately succeed in removing what we believe a demoralising, and, excepting the tenants of good Barley-growing districts whom it benefits, a generally mischievous impost.

—— IT may be mentioned in connection with our account elsewhere of THE TOWNELEY HERD, that the 1st and 2nd prizes in the class of 2-year old heifers at Worcester, which had been awarded to Lady PIGOT's *Rosedale*, and Mr. BOOTH's *Queen of the May 2nd*, have during the past few days been paid to Colonel TOWNELEY, for his *Roan Knight's Butterfly* and *Royal Butterfly's Duchess*, the former animals having failed to qualify. One of the winning heifers is named on the tabular account of the Barmpton Rose tribe below—the other will be referred to next week.

TWO measures for THE PREVENTION OF CATTLE DISEASES have been introduced by the Home Secretary, of which the following are the principal provisions:—

The first (1.) forbids under a penalty of 20*l.*, the turning out of diseased cattle, sheep, &c., into any waste places, or into any imperfectly fenced places, or into any stable or other building without permission of the tenant, or into any market or place of sale, or even (without proper care), into any public road. And if the owner of any animal, suspecting it to be diseased, shall sell it without giving notice of its condition, he shall be deemed guilty of fraud, and liable accordingly.

The term "diseased" means affected with any contagious or infectious diseases as defined by the Act.

2. An Order in Council may forbid the removal of cattle from any specified part of the country—may direct the examination of any cattle, and may direct the purification of infected vehicles, places, &c., and the destruction and burial of diseased cattle, &c.; and any one wilfully obstructing any person acting under that order shall be liable to fine and imprisonment (not and 2 months).

3. All carriers, railways, canal companies, &c. shall provide cleansed and disinfected carriages (under a liability to 1*l.* penalty for every carriage)—they shall provide water at least once in every 12 hours for cattle *carried*—they may refuse to carry infected stock.

4. Local authorities (named) shall appoint inspectors who shall have power to examine cattle, &c. at fairs and markets and to exclude diseased animals.

The second Bill relates to THE IMPORTATION OF DISEASED CATTLE, AND OF UNWHOLESOME MEAT. The following are its principal provisions:—

1. An Order in Council may direct the examination of imported animals, their subjection to quarantine, the destruction of any that are diseased, also, if necessary, of any parts of animals, provender, &c., and the prohibition of importation from infected ports, &c.

2. An Order in Council may direct the examination of all meat offered for sale, and the destruction of any that is unwholesome.

3. Importers in defiance of these orders shall be liable to a penalty of 100*l.*

Provision is made in both Acts for the payment of salaries and expenses.

In connection with this subject we append a letter from Mr. Holland, M.P., on the relation in which the Royal Agricultural Society stands to it.

THE ROYAL AGRICULTURAL SOCIETY AND THE CATTLE PLAGUE.

In Professor Gamgee's report on the diseases of live stock, published last year (in the 5th report of the medical officer of the Privy Council), the Steppe disease, or Russian cattle plague, is thus referred to:—

"This terrible disease, so peculiar to the ox tribe that the Germans call it 'Rinderpest,' is a very contagious fever. It spreads somewhat slowly, and is not very fatal where it originates as an enzootic; but it is propagated very rapidly, and proves the most fatal of all cattle plagues when it crosses the Russian frontier into central Europe. At the present time the outbreaks of this disease are perhaps more widely distributed over Europe than at any previous period during the present century; but so exclusively is the disease due in spreading to contagion, and so energetic are the Governments of Central Europe in protecting the herds of their people from the disorder, that it is not likely the malady will return to these islands, unless in the event of a general European war."

Fears are now arising that this Russian plague has followed the Austrian army into Schleswig, and if there be foundation for this rumour, steps ought to be taken for the prevention of this fatal cattle disease into this country. It might be supposed that an investigation of the facts connected with the spread of this disease, and of its advance towards this country, together with the consideration of the best means of resisting its progress, would be legitimate business for the Council of our great Royal Agricultural Society. That body, however, cannot stir in the matter; they are debarred by the terms of their charter, which was granted upon the condition "that a principle of its constitution should be the total exclusion of all questions at its meetings or in its proceedings of a political tendency, or having reference to measures pending, or to be brought forward, in either of our Houses of Parliament, which (condition) no resolution, bye law, or other enactment of the said body politic or corporate, shall on any account or pretence whatever be at any time allowed to infringe."

And there being at this moment two most useful Bills introduced into the House of Commons by Government (viz., one for the Amendment of the Law relating to the importation of Diseased Cattle and Unwholesome Meat; and the other to make further Provisions for the Prevention of Infectious Diseases amongst Cattle), the Council of the Royal Agricultural Society are of course debarred from taking any measures for the prevention of the introduction of a new and fatal disease at this juncture.

When will the members of this Great Society insist upon such an alteration of their charter as shall allow of their representatives in Council having power at all times to assist in warding off a national evil, and prevent them from being debarred, as they frequently are at present, from steadily advancing the interests of agriculture. *Ed. Holland, Dumbleton, March* 1.

THE BARMPTON ROSE TRIBE IN COLONEL TOWNELEY'S HERD.

There are 30 descendants of *Barmpton Rose* in the Towneley herd. *Barmpton Rose* was bred by Mr. Waldy of Barmpton. She was by Expectation (1988), and her dam was by Belzoni (1709). Belzoni was from *Cleopatra* by North Star, tracing on both sides immediately from Comet and Favourite.

Expectation was by Young Eryholme (1981) which also traces very soon back to Charles and Robert Colling's stock.

Barmpton Rose was purchased from Mr. Waldy by Mr. Wetherell, and sold by him to Mr. Watson of Walkeringham for 40 guineas. She had *Bessy* by Thick Hock (6601), a cow calf in 1838 when still in Mr. Waldy's hands, *Princess Royal* by Thick Hock (6601), in 1839 when in Mr. Wetherell's hands, and *Buttercup* by Garrick (3863) in 1841, and subsequently *Britannia* by Lord Adolphus Fairfax (4249) and one bull while in Mr. Watson's hands. Of these *Bessy* came into Mr. Watson's hands, as did also *Princess Royal*—so that the whole family of Barmpton Rose was at Walkeringham at the date of the sale. The ten members of which it then consisted sold for 1005*l.* 18*s.*, Mr. Eastwood of Towneley buying *Buttercup* for 130 guineas, Lord Ducie buying *Princess Royal* for 230 guineas, and Mr. Strafford buying *Bessy* for Mr. Downs at 68 guineas, along with four others of the family, two of which went to Mr. Birchall. The descendants of these three cows are given in the following tables, at least so many of them as include the Barmpton Rose tribe now at Towneley. The heifers and bulls which are now in the herd, or through which the herd has descended, are printed in italics and capitals respectively; and the breeding of every animal concerned in the herd is given with them; the numbers in the Catalogue are added to all the names of the stock to be sold next Thursday week.

1. It is from *Briseis*, a daughter of *Bessy* by Thick Hock (6601), that it will be seen most of the Towneley stock is descended. She was repurchased by Mr. Smith, of West Rasen; and her daughter *Rosa*, by Baron of Ravensworth (7811), was purchased from Mr. Smith by Colonel Towneley for 105 guineas. Another daughter, *Rasen Rose*, was 1st in her class at the Royal Agricultural Society's show at York. A third daughter, *Christmas Rose*, by Baron of Ravensworth (7811), bred a daughter, *Rosette*, by Lord John (11,731), which was bought of Mr. Smith through Mr. Hutton, of Gate Burton. There are 13 descendants of *Rosette* and seven descendants of *Rosa* in the Towneley Catalogue. The only notes which it is necessary to make on the descendants of *Bessy* relate to the bull Frederick (11,489). Frederick was originally given away by Col. Towneley to one of his tenants on the moor—but the character of his calves induced Mr. Eastwood to purchase him; and he was had back to the Towneley herd—at a price similar to that which Charles Colling paid for Hubback—8*l.* or thereabouts! He was of a rich roan colour, remarkably fine in head and forequarters—a small underfed animal however when brought back from the moors: and then used more because of the character of the calves he had already got than for any extraordinary promise in himself. His descent, however, of course, strengthened the confidence with which Mr. Eastwood insisted on his being used.

DESCENDANTS OF *BESSY*, DAUGHTER OF *BARMPTON ROSE*, BY THICK HOCK (6601).

1st Generation.	2d Generation.	3d Generation.	4th Generation.	5th Generation.	6th Generation.
Beatrice *c.*, Barrister *b.*, '41					
Briseis, by Raree Show (4874), bought at Mr. Watson's sale for 40 guineas, and sold to Colonel Towneley	Rasen Rose *c.*, '45		Rosalind *c.*, '54	Baronet b. '59	No. 37. *Wharfdale's Ringlet*, '63, by Duke of Wharfdale (19,648)
	Rowena *c.*, '48		Buttercup 2d *c.*, '55	No. 19. *Butterfly's Ringlet*, '61, by Baron Hopewell (14,134)	
	Christmas Rose c., '47, by B. of Ravensworth (7811)	*Rosette*, '50, by Lord John (11,731) bred at West Rasen, sold for 46 guineas to Mr. Hutton, and resold to Col. Towneley	No. 10. *Fred's Ringdove*, '57, by Frederick (11,489)	B. R. B. 13th, '61 dead *b.*, '62	
			Burnley Hopewell *b.*, '58		
			Hopeful *c.*, '59		
			Dead *b.*, '60		
				No. 12. *Rose of Lancashire*, '58, by M. Butterfly 4th (14,920)	No. 23. *Buttercup Again*, '61, by Fred's Grandson (17,881)
					Bull dead, '60
				No. 16. *Young Butterfly*, '59, by Royal Butterfly (16,862)	No. 29. *Burnley Butterfly*,' 62, by F.'s Grandson (17,881)
		Hogarth *b*, '52	No. 5. *Young Barmpton Rose*, '56, by R. Cœur de Lion (13,590)		
		Rembrandt *b.*, '53		B. R. B. 9th, '60	
		Miss Butterfly *c.*, '55		No. 26. *Barmpton Butterfly*, '61, by Royal Butterfly (16,862)	No. 45. Duchess of Towneley, '64, by Duke of Wharfdale (19,648)
		Fred's Rosa *c.*, '56	Dead *c.*, '58		
			Fred's Grand-daughter *c*, '59		
	Rosa, '47, by B. of Ravensworth (7811), bought of Mr. W. Smith, for 105 guineas, by Col. Towneley			B. R. B. 14th, '62	
				No. 8. Duke of Towneley, '63, by Duke of Wharfdale (19,648)	
Buckingham *b*, '43		Roseleaf *c.*, '51	Rose of Townley *c.*, '55	The Rose *c.*, '58	
				Young Rose *c.*, '60	
				Rose's Red *c.*, '61	
Beeswing, '45	*Beeswing* has a large number of descendants through *Batwing & Honeycomb*, her daughters, in the herds of Dr. Dickinson and Mr. John Bowstead		Rosebloom *c.*, '58		
		Rosemary, '54, by Gavazzi (11,503)		No. 11. *Butterfly's Hope*, '58, by Baron Hopewell (14,134)	Heifer, '63, died
Bubona *c.*, '45 Battus *b.*, '45			*Paris Butterfly*, '56, by M. Butterfly (13,811)		
				No. 15. *White Butterfly*, '59, by Butterfly's Nephew (15,714)	No. 25. *Pretty Butterfly*, '61, by F.'s Grandson (17,881)
					Bonny Butterfly, '62
					No. 40. *Baron's Butterfly*, '63, by Baron Hopewell (14,134)
Brennus *b.* Bithon *b.* '46					
Blucher *b.*, '48					
				No. 18. *Roan Knight's B.*, '60, by Roan Knight (15,167)	No. 38. Wharfdale's Butterfly, '63, by Duke of Wharfdale (19,648)
Dotty *c.* Frederick *b* '49					
Barmaid *c*, '50					

(Besides these, in the 7th generation from *Bessy*, No. 23, *Buttercup Again* has a heifer calf, No. 44, *Wharfdale's Buttercup*, by Duke of Wharfdale; and No. 29, *Burnley Butterfly*, has a bull calf, No. 10, Duke of the Butterflies, by Duke of Wharfdale (19,648); and No. 25, *Pretty Butterfly*, has a cow calf, No. 43, *Duchess' Butterfly*, by Duke of Wharfdale.

2. *Princess Royal.*—We now come to the descendants of *Princess Royal*, the 2d daughter of *Barmpton Rose*. She was bought at Mr. Watson's sale by Earl Ducie for 230 guineas, and brought home to Tortworth Park, where Mr. Grenfell purchased all her descendants (5) at the Tortworth sale for 436 guineas. At his own sale they were eight in number, and fetched only 434 guineas. Mr. Towneley was a buyer at the latter sale, and five of the descendants of the Ducie-Grenfell progeny of *Princess Royal* are now for sale. The table in next page represents nearly all the descendants of this the second daughter of *Barmpton Rose*.

3. *Buttercup*, the third daughter of *Barmpton Rose*, was purchased at Mr. Watson's sale by Mr. Eastwood, and she and her family were handed over to Colonel Towneley when his agent gave up the herd. *Buttercup* bred nearly all bulls. Her only daughter by Jeweller (10,354) was bred by Colonel Towneley in 1849. He called her *Butterfly*, a name which has since become well known in the Shorthorn world. Her son, Master Butterfly, by Frederick (11,489), out of *Bessy*, by Duke, 9832, had an extraordinary career, which is related below. He was sold at Chelmsford to Mr. Ware, of Melbourne, for 1200 guineas. Her second son, Royal Butterfly, by the same sire, now seven years old, was shown at Warwick, and Colonel Towneley then refused 1200 guineas for him. He is in the catalogue of the sale. It will be seen from the list in next page of the family of *Buttercup*, that he is the only descendant of that cow which remains in the herd.

Butterfly was frequently shown. She was in 1850 1st among extra stock at the Yorkshire and at the Royal North Lancashire meetings, and 2d at Glasgow and Northumberland. In 1851 she was first in her class at the Windsor meeting of the Royal Agricultural Society, at the Dublin, the Yorkshire, and the Royal North Lancashire meetings. In 1852 she was first at the Royal Agricultural Society at Lewes, also at the Galway meeting of the Agricultural Improvement Society of Ireland, also at the meetings of the Yorkshire Agricultural Society, and the Royal North Lancashire. In 1853 she was first at the Irish Agricultural Society's meeting at Killarney, winning the challenge cup for the 2d time, also at the Yorkshire and Royal North Lancashire meetings. In 1854 she was 1st at the Royal Agricultural Improvement Society's Armagh meeting, winning the challenge cup finally—having won it three times in succession. She also won the gold and silver medal and challenge cup at the Royal Dublin Society's meeting, and she was the best cow in the yard at Burnley.

Her son, Master Butterfly, next took up the running. He was 1st in his class in '54 at the Royal Agricultural Society's meeting at Lincoln, and at the Royal North Lancashire meeting at Burnley. In 1855 he was first at the Royal Dublin show, and at the Royal Agricultural Society's meeting at Carlisle. In 1856 he was first at Paris and at Chelmsford, there being sold for 1200 guineas for Australia.

Butterfly's second son, Royal Butterfly—the only descendant of *Butterfly* in the herd—was 1st at

Yorkshire and Lancashire in 1858, 1st at the Warwick meeting of the Royal Agricultural Society, and at Yorkshire and Lancashire and Durham in 1859, 1st at Canterbury and Yorkshire and Lancashire in 1860, 1st wherever shown in 1861, and 1st wherever shown in 1862 and 1863, when the challenge cup for the best bull offered by the North Lancashire Society having been won by him three years in succession, became the property of Colonel Towneley. His performances this last year were exceedingly remarkable. 1st at the Royal Dublin show, at Rochdale, at Skipton, at Lancaster, at Halifax, at Keighley, at Wigton, at Clitheroe—not shown at the Worcester meeting nor at Stockton-on-Tees. He won besides money, three silver medals and one gold medal, and five gold and silver cups, meeting Mr. Booth's and Lady Pigot's stock constantly in competition.

We have before us a complete list of the prizes won by Colonel Towneley since 1849, including therefore the history of the herd during 14 years—upwards of 200 1st prizes, besides a great number of inferior distinction. The prizes have amounted to upwards of 2000*l.* in all, besides nearly 200 medals and cups. We shall next week refer to the other families in the herd.

DESCENDANTS OF *PRINCESS ROYAL*, DAUGHTER OF *BARMPTON ROSE*, BY THICK HOCK (6601).

- Dead *c.*, '42
- Bustle *c.*, '43
- Boddice, '49
- Bull, '50
- Richmond *b.*, '51
- Pantaloon *b*, '52
- *Bellona c.*, '44
- *Princess Fairfax*, '45 by Lord A. FAIRFAX (4249)
  - Dead bull, '49
  - Dead cow, '49
  - *Pride*, '52 by 4TH DUKE OF YORK (10,167)
  - Prince Duke *b.*, '53
  - Protector *b.*, '54
- Pageant *c*, '47
  - Plume *c*, '57
  - Placid *c*, '56
  - No. 14. *Fred's Pride*, '59 by FREDERICK (11,489)
    - No. 28. *Butterfly's Pride*, '61 by ROYAL BUTTERFLY (16,862)
    - Butterfly's Pride 2d *c*, '62
    - No. 42. *Proud Duchess*, '63 by D. OF WHARFDALE (19,648)
  - Prim *c*, '58
  - B. R. B. 8th, '60
    - No. 22. *Roan Knight's Pride*, '61 by ROAN KNIGHT (15,167)
      - No. 36. *Beautiful Butterfly*, '63 by ROYAL B. 10TH (18,761)
    - Baron Calder *b*, '62
- *Pomp*, '48 by D. OF CORNWALL (5947)
  - Prelate *b.*, '51
  - Parliament *c.*, '52
  - Privilege *b.*, '54
  - Pompous *c.*, '57
  - *Parade c.*, '53 by D. OF GLOSTER (11,382)
    - Patience *c*, '57
    - Permit *c*, '58
    - Prince Consort *b*, '56
    - No. 9. *Pageant*, '57 by COUNT GLOSTER (12,650)
    - Precurser *b*, '58
      - Romulus Butterfly *b*, '59
      - Remus Butterfly *b*, '59
      - No. 4. R. B. 11TH, '61 by ROYAL BUTTERFLY (16,862)
    - Master Frederick, *b*, '59
    - No. 3. R. B. 10th, '60 by R. BUTTERFLY (16,862)
      - No. 33. ROYAL BUTTERFLY'S PAGEANT '62, by ROYAL BUTTERFLY (16,862)

DESCENDANTS OF *BUTTERCUP*, DAUGHTER OF *BARMPTON ROSE* BY GARRICK (3363).

- Boccaccio *b*, '45
- Dead bull, '46
- Valentine *b*, '47
- Horatio *b*, '48
- *Butterfly c*, '49 by Jeweller (10,354)
  - Butterfly 2d *c*, '52
  - MASTER BUTTERFLY *b*, '53
  - Butterfly 3d *c*, '54
  - Butterfly 4th *c*, '55
  - No. 2. ROYAL BUTTERFLY *b*, '57 by FREDERICK (11,489)
    - Butterfly 5th *c*, '57
    - Butterfly 6th *c*, '57
    - Butterfly's Grandson *b*, '59
    - Butterfly 7th *c*, '60

LIEBIG AND THE "MINERAL THEORY."

[The following extract from a paper by Messrs. Lawes & Gilbert in the 24th volume of the English Agricultural Society's Journal has been sent to us by Dr. Gilbert as being the note to which Baron Liebig's letter given in a recent number of the *Agricultural Gazette* is a reply.]

THE terms "mineral" or "inorganic," as applied to the constituents of manures or crops, are, for convenience, employed throughout this paper to designate the incombustible or "ash constituents," they having been generally employed in this restricted sense by Liebig and most other writers on agricultural chemistry during the last 20 years or more. Yet, in his recent work (Einleitung in die Naturgesetze des Feldbaues, p. 32 *et seq.*) Baron Liebig repudiates and ridicules such a classification as unscientific, claims ammonia and its salts as mineral manures, and accuses Mr. Lawes of setting up, in opposition to his own, a theory according to which mineral or inorganic manures should contain only incombustible or ash constituents. To support this allegation, he gives, in a separate paragraph, and in italics (Sperrschrift), the following sentence as a quotation from Mr. Lawes's paper on "Agricultural Chemistry," vol. viii. p. 240, of the Royal Agricultural Journal :—

"Manures are generally divided into two classes, organic and inorganic: organic manures are those which are capable of yielding to the plant, by decomposition or otherwise, carbon, hydrogen, and nitrogen. Inorganic manures are those substances which contain the mineral ingredients of which the ash of plants is found to consist."—[Translation.]

But the following is the passage as it really stands at the page referred to by Baron Liebig, and the portions given in capitals are those which are omitted by Baron Liebig in his professed quotation :—

"I NOW COME TO THE ACTION OF manures, WHICH are generally divided into two classes—*organic and inorganic.* ALTHOUGH THIS DISTINCTION IS BY NO MEANS SATISFACTORY, I SHALL ADOPT IT AS BEING GENERALLY UNDERSTOOD. Organic manures are those which are capable of yielding to the plant, by decomposition or otherwise, ORGANIC MATTER—carbon, hydrogen, OXYGEN, and nitrogen—CONSTITUENTS WHICH UNCULTIVATED PLANTS DERIVE ORIGINALLY FROM THE ATMOSPHERE. Inorganic manures are those substances which contain the mineral ingredients of which the ash of plants is found to consist."

Here, then, in this which was Mr. Lawes's first paper, the classification which Baron Liebig accuses him of originating is only adopted as being already at that time "generally understood," and with a distinct protest that it is "by no means satisfactory." Yet, in order to fix the origination of the distinction upon Mr. Lawes, Baron Liebig joins together disconnected parts of a passage, and gives them, in a separate paragraph, in italics (Sperrschrift), and between unbroken inverted commas, omitting (besides less material portions) an entire sentence which distinctly disproves the truth of the allegation in support of which the professed quotation is brought forward! Having thus moulded Mr. Lawes's sentence to suit the requirements of his argument, he goes on to say :—

"From this doctrine of the practical man it necessarily followed that a mineral manure must be one which contained *only* the ash-constituents of vegetable products, and from the composition of which ammonia-salts, as belonging to organic manures, are excluded. To be sure, in every chemical manual ammonia and its salts are treated of among inorganic substances, since they are objects of chemical manufacture, whilst organic matters cannot be produced by man; and this fact might well have led to the suspicion that ammonia was not necessarily excluded from an inorganic manure. THE agricultural chemistry of the practical man was evidently a peculiar chemistry, which had no connection with ordinary chemistry, and thus *his* theory might well find some justification, but according to *my* theory I obviously took another point of view. Mr. Lawes, indeed, mentions in his paper (p. 21), that my manures smelt of ammonia, and hence contained an ammonia-salt; but he implied that this might be a little artifice, in order to give to my manures an efficacy which, according to his interpretation of my theory, they should not possess."—[Translation.]

The following quotations, taken from several of Baron Liebig's works, will show whether he has not been accustomed to use the terms "mineral" or "inorganic" to designate the incombustible or ash-constituents, and to distinguish these from "ammonia," "ammoniacal salts," "atmospheric constituents," &c. The italicising is our own.

"The *mineral* constituents act, as is shown by the produce of the unmanured land, without any artificial supply of *ammonia*."

"The *ammonia* increases the produce only if the *mineral* constituents be present in the soil in due quantity, and in an available form.

"*Ammonia* is without effect if the *mineral* constituents are wanting. Consequently, the action of *ammonia* is limited to the acceleration of the action of the *mineral* constituents in a given time."—"Principles," pp. 86-7 (1855).

". . . . . the other is the action of *sulphate of ammonia* as a solvent for certain important *mineral* constituents of the soil."—Ib., p. 99 (1855).

"*Ammonia*, when used as a manure alone, and when there is a want of *mineral* constituents in the soil, is like the spirits which the labourer takes in order to increase his available labour, power, or imagination; and, like that stimulant, its action, in this case, is followed by a corresponding exhaustion."—Ib., p. 106 (1855).

"Hence it is quite certain that in our fields the amount of nitrogen in the crops is not at all in proportion to the quantity supplied in the manure, and that the soil cannot be exhausted by the exportation of products containing *nitrogen* (unless these products contain at the same time a large amount of *mineral* ingredients), because the *nitrogen* of vegetation is furnished by the atmosphere, and not by the soil. Hence also we cannot augment the fertility of our fields, or their powers of production, by supplying them with manures rich in *nitrogen*, or with *ammonia salts* alone. The crops on a field diminish or increase in exact proportion to the diminution or increase of the *mineral substances* conveyed to it in manure."—4th Edition, p. 210 (1847?).

"But, at the same time, it is of great importance for agriculture to know with certainty that the supply of *ammonia* is unnecessary for most of our cultivated plants, and that it may be even superfluous, if only the soil contain a sufficient supply of the *mineral* food of plants, when the *ammonia* required for their development will be furnished by the atmosphere."—4th Edition, p. 212 (213).

"A fertile soil must contain in sufficient quantity, and in a form adapted for assimilation, all the *inorganic* materials indispensable for the growth of plants.

"A field artificially prepared for culture contains a certain amount of *these ingredients*, and *also* of *ammoniacal salts* and decaying vegetable matter."—4th Edition, p. 169.

"The meaning of these sentences in my work is this:—'that *ammoniacal salts* alone' have no effect; that, in order to be efficacious, that must be accompanied by the *mineral* constituents, and that the effect is then proportional to the supply—not of *ammonia*, but of the *mineral* substances."—"Principles," p. 55 (1855).

"These two paragraphs are altogether irreconcilable; for if Mr. Lawes admit that the *mineral* constituents are indispensable to plants, how can he maintain 'that these very mineral constituents are replaceable by *ammonia*, that is to say, that by means of ammonia we can altogether dispense with them?'—"Principles," p. 89 (1855).

"It has been mentioned in the preceding part of the chapter, that animal excrements may be replaced in agriculture, by other materials containing their constituents. Now, as the principal action of the former depends upon their amount of *mineral* food so necessary for the growth of cultivated plants, it follows, that we might manure with the *mineral* food of wild plants, or, in other words, WITH THEIR ASHES [the capitals are Baron Liebig's own]; for, these plants are governed by the same laws, in their nutrition and growth, as cultivated plants themselves."—3d Edition, p. 183 (1843).

"But the weight or amount of the crops is in proportion to the quantity of food of both kinds, *atmospheric* and *mineral*, which is present in the soil, or conveyed to it in the same time. By manuring with *ammoniacal salts* a soil rich in available *mineral* constituents, the crops are augmented in the same way as they would have been if we had increased the proportion of *ammonia* in the air."—"Principles," p. 77-8 (1855).

These sentences will be sufficient to show whether or not Liebig is justified in now attempting to fall back, in agricultural discussions, upon the more strictly scientific meaning of the terms "mineral" and "inorganic," so as to include within them "ammonia," "ammoniacal salts," "atmospheric constituents," &c., and thus to give a new definition to his mineral theory, or rather substitute at this date for his own theory, which has proved to be erroneous, another not his own.

Home Correspondence.

Labourers' Cottages.—I think some of the writers on cottages are rather extravagant in their estimates, and particularly Mr. Hewitt Davis (see page 155), where he says "a first-class pair of cottages can be built for 250*l.*" What does he mean by "first-class?" Is it to be decorated and finished off in fine architectural style? If it is, his price may be a reasonable one, but labourers want nothing about their cottages but what is plain and useful—they cannot afford to pay for ornament. If landlords want cottages built in an artistic style, they ought not to charge the labourer interest for the money they spend in outside decoration to please their own taste, any more than they would think of charging them interest on the money they expend in improving their own gardens and pleasure grounds. Then, why should they charge 5 per cent. upon their cottage capital? Can they get it on other good securities? I think not in very few cases. When I look down the Money Market column of a newspaper I find securities there that are paying 5 per cent. are selling at above par. Then, why should cottages be expected to pay a higher rate of interest than other property? [Because of the deductions to be made from the rent for repairs, expenses, and risk of collection, &c.] In nearly all parts of the country a good pair of useful cottages can be built for less than 200*l.*, and in some parts for 150*l.*; and by giving each cottage a little garden (say 20 poles) they could be let for 4*l.* per annum, or at the most 4*l.* 10*s.*, which is as much as a labourer is able to pay. I do not agree with H. D. that the employers of labour, or in other words the tenant-farmers, reap the benefit of cheap cottage rents, as the price of labour is ruled by the demand for it. In this part of the country, where there is a great demand for labour in the coal, iron, and many other employments, the agricultural labourer gets a higher rate of wages than in a regular agricultural district. In the eastern counties the price of labour is ruled by the rate that corn is selling for, but in no part have I heard of the rents of cottages governing the labour market. How, I will ask, in the name of common sense, can a man be expected to pay 2*s.* 4*d.* per week rent, when he only earns 11*s.*? What is his family to live upon?—8*s.* 8*d.* Let any man charging 2*s.* 4*d.* per week for his cottages, ask himself how he would like to live upon 8*s.* 8*d.* per week. I think he will at once return the cottager part of his rent, or advance his pay. I have no doubt that "H. D." has found many willing to pay 2*s.* 4*d.* per week for his cottages rather than 1*s.* per week for their older accommodation, if accommodation it could be called. In my experience of agricultural labourers, I have found many that would pinch and screw in any way to make up the rent for a comfortable cottage to live in, particularly if there was a garden to it—and no cottage ought to be without one. I must also beg to differ with Mr. Davis that the scarcity of cottages in country villages is owing to their not paying; in more cases, it is owing to landlords not liking cottages in the parish belonging to them, but preferring to draw their labour from some place adjoining. Where I have known a scarcity of cottages it has been in parishes all belonging to one. I know parishes in the eastern part of Norfolk where the land is in part owned by small farmers and tradesmen, and

even some labourers have a small allotment. In those parishes there is no scarcity of good four-roomed cottages, and many have been erected in the last few years, and have been let before they were finished at rents varying from 3*l.* 10*s.* to 5*l.* per annum, according to the quantity of land let with them for gardens, and at that rent they are found to pay a good profit to their owners. *J. R. B., Wakefield.*

Enforcement of Outfall.—Referring to the letter of "A Gloucestershire Drainer," in your publication of the 13th inst., and assuming that Mr. Denton's reply will not give the desired information, I beg permission to state in your next Number that the West of England Drainage Company's Act affords every facility to landowners for obtaining the right of outfall through their neighbours' lands; the power is frequently exercised, and in the most simple and inexpensive manner. Pursuant to the wish of "A Gloucestershire Drainer," I have pleasure in furnishing the title of the Act, viz,, "Landowners West of England and South Wales Land Drainage and Inclosure Company's Act, 1848." *Fred. Brodie, Secretary of the West of England and South Wales Drainage Company, Exeter, February* 25.

The Consulting Engineer of the Royal Agricultural Society.—The following additional letter has been addressed to the President of the Royal Agricultural Society of England. *Britannia Iron Works, Bedford, February* 26, 1864. My Lord,—On the 29th ult. we ventured to address through your Lordship a communication to the Council of the Royal Agricultural Society of England upon the position of the Consulting Engineers; calling attention to facts which had recently come to our knowledge. The main object of our communication was to urge what we are prepared to prove, viz., that Messrs. Easton & Amos supply a large number of machines of their own manufacture to exhibitors. We submit that this is a graver objection to that firm being in office, and influencing the adjudications, than the fact which Messrs. Easton & Amos admit, viz., that they buy machinery to a large extent from the exhibitors. Although we consider the former objection the stronger one, we would remind the Council that on several occasions during the past few years the names of persons who have acted as judges of implements have been struck off the list of judges, upon the sole ground that they had traded in machinery. We respectfully submit that if this was a valid objection to a judge, surely in the more important office of Consulting Engineer it becomes a still graver objection. We desire also to call the attention of the Council to the fact of Mr. Amos being professionally engaged by more than one of the exhibiting firms, and we are prepared to prove that he, Mr. Amos, has been a zealous and an active partisan when, from his official position, he ought to have been neutral. Being about the oldest exhibitors at the Society's meetings, having exhibited at the first show at Oxford, we hope we shall not be thought obtrusive in thus submitting our views, and asking the Council to institute an inquiry into the subject we have brought before it. We have the honour to be, your lordship's most obedient servants, *James & Frederick Howard. To the Right Hon. Lord Feversham.*

Reports of Steam Culture.—Your note under my letter last week puts the case very fairly so far as a hundred acres supposed to be done by myself, and if multiplied by other competitors who would enter such a court, it would be quite correct; 400 or 500 acres worked for seven years, under the supervision of the Royal Agricultural Society, would, in my opinion, give more substantial evidence than all the hap-hazard working that can be raked up. The reports out give the cost per acre under this and that man's working, and that's about all; a multiplication of them would do but little more. It is very desirable that we should know the price per acre under many circumstances that we have got, and with it some inconsistencies. I say that steam power ought not on an average to go more than once for a crop; in this I am to some extent supported, but there are some who go 10 times for a crop; a thing that cannot pay; many go four and five times, that's too much. The public know what the cost is per acre, they now want to know how to apply the power; that is a point that they do not understand, and until they do they will not buy tackle, neither will they know what cheap farming is. 10*s.* 6*d.* per acre on an average is the cost with me; more than that it will never be so long as I live, and what is more, my farm is always clean and farmed double depth. *William Smith, Woolston, Bletchley Station, Bucks, Feb.* 29.

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

Monthly Council: *Wednesday, March* 2, 1864.—Present—Lord Feversham, President, in the chair. The Earl of Powis; Lord Chesham; Lord Tredegar; The Hon. Major-General Hood; Sir E. C. Kerrison, Bart., M.P.; Sir A. K. Macdonald, Bart.; Sir Matthew Ridley, Bart., M.P.; Sir Watkin W. Wynn, Bart., M.P.; Mr. Acland; Mr. J. H. Arkwright; Mr. Raymond Barker; Mr. Barthropp; Mr. Bramston, M.P.; Mr. Bowly; Mr. Buller, M.P.; Mr. Cantrell; Colonel Challoner; Mr. Clayden; Mr. Druce; Mr. Exall; Mr. Brandreth Gibbs; Mr. Fisher Hobbs; Mr. Wren Hoskyns; Mr. Hudson; Mr. Hutton; Mr. Jonas; Colonel Kingscote, M.P.; Mr. Milward; Mr. Pain; Mr. Rigden; Mr. Sanday; Mr. Shuttleworth; Mr. Thompson, M.P.; Mr. Torr; Mr. Wills; Mr. Frere, and Dr. Voelcker.

The following New Members were elected:—

Angus, John, jun., Whitefield, Morpeth
Armstrong, John A., Bays Leap, Wylam, Northumberland
Askew, Watson, Pallinsburn, Coldstream, Northumberland
Barclay, George Robertson, Keavil, Dunfermline, Fifeshire
Barrass, Matthew, Sen., Killingworth, Newcastle-on-Tyne
Barrass, Matthew, Jun., Killingworth, Newcastle-on-Tyne
Biehl, John, Crowhurst, Battle, Sussex
Blandford, Thomas, Corbridge, Northumberland
Browning, Samuel, Joint Counties Asylum, Abergavenny
Chick, John, Whitwell, York
Clark, James, View Lawn, Longhorsly, Morpeth
Clay, William D., St. Aston House, Lutterworth
Cleasby, R. H., Broomside House, Durham
Cooper, Edward Henry, Markree Castle, Callooney, Sligo
Crawford, Thomas, North Shields
Curtis, Frederick Thos., Elmstone, Sandwich, Kent
Davison, Michael, Long Bank, Alnwick
Dees, James, Whitehaven
Easton, William, 6, Hammet Street, Taunton
Evans, Thomas Sutton, Sawston, Cambridge
Everett, Rev. Charles Henry, Netherton House, Hungerford
Fair, William, Aston-by-Budworth, Northwich, Cheshire
Fawcus, John, South Charlton, Chathill
Fowler, Edward Parsons, Jersey
Garbutt, William, Dunston Lodge, Gateshead
Glanville, Reginald Carew, Sconnor, St. Germans, Cornwall
Grantham, Henry, Scawby, Brigg
Grantham, Richard B., C.E., F.G.S., 7, Great Scotland Yard, London, S.W.
Graves, Anthony Elly, Rosbereon Castle, New Ross, Wexford
Hansell, Thomas, North Shields
Harvey, John James, Statenboro' House, Sandwich, Kent
Hill, Henry, Thornton, Pickering, Yorkshire
Hodgson, Joseph, Blyth, Northumberland
Holmden, James, Edenbridge, Kent
Johnson, Thomas, Ellington, Morpeth
Kingsnorth, Alfred, Great Chart, Ashford, Kent
Leighton, Robert, Thistleyhaugh, Morpeth
Lethbridge, Charles, Eastbrook House, Taunton
Maughaw, Robert, Oxford Street, Newcastle-on-Tyne
Morton, Henry Thomas, Biddick, Fence Houses
Nash, John, Reed Court, Rochester
Ockleston, Wm. Fairhurst, Ingon, Stratford-on-Avon
Page, Henry, Walmer Court, Walmer
Paget, Lewis, Queenborough, Leicester
Pattison, J. M., Norwood, Gateshead
Potter, Addison, Heston Hall, Newcastle-on-Tyne
Price, James, Eye Cottage, Leominster
Radford, William, Beeston, Nottingham
Rea, Charles, Doddington, Wooler, Northumberland
Stable, Charles Leonard, Crayford, S.E.
Swann, John, Bedlington, Morpeth
Swann, William, Bedlington, Morpeth
Taylor, John, jun., Sandycroft Farm, Hawarden, Chester
Usher, George M., Railway Street, Beverley
Wakefield, W. H., Prizet, Kendal
Walker, John L., 71, Oxford Terrace, Hyde Park, London, W.
Walker, William, Beeston, Nottingham
Wealleans, John Dodd, Flotterton, Rothbury, Northumberland
Webbe, Rev. H. Cowperthwaite, 38, Jermyn Street, London, S.W.
Wetton, Geo. Norman, Collington, Northampton
Wilkinson, Henry Etridge, Pilgrim Street, Newcastle-on-Tyne
Wilson, Thomas, Oaklands, Newcastle-on-Tyne
Yates, William, Grindle, Shiffnal

Finances.—The Hon. General Hood, Chairman of the Committee, presented the Report, from which it appeared that the Secretary's receipts during the past month had been examined by the Committee, and by Messrs. Quilter, Ball, & Co., the Society's accountants, and were found correct. The balance in the hands of the bankers on February 29 was 1709*l.* 19*s.* 10*d.*

The Committee recommended that the Secretary send the usual circular to Members who have not paid their subscriptions for the current year.

Journal.—Mr. Thompson, M.P., Chairman, reported that in consequence of the resolution of the Council giving the Committee authority to take such measures with reference to the illness of the Editor as they considered necessary, a special meeting of the Committee was held on the 5th ult., when a report was received from the physician attending Mr. Frere which induced the Committee to postpone the publication of the forthcoming number of the Journal from the month of February to the month of March. The Committee had great pleasure in stating further that Mr. Frere yesterday attended a meeting of the Committee and reported himself convalescent and able to resume work.

It was announced that on Wednesday, March 16, there would be a discussion on the Cultivation and Management of Clay Farms, to be opened by Mr. Alfred Hughes, of Thorness, Isle of Wight, to commence at 12 o'clock.

Chemical.—The particulars of Chemical Analyses made for Members of the Society during the year 1863 are as follows:—

Guanos	40
Superphosphates and similar artificial manures	64
Nitrate of soda and ammoniacal salts	25
Refuse manures	29
Bone-dust	24
Limestones and marls	17
Soils	28
Waters	10
Oilcakes	91
Feeding meals and vegetable productions	10
Examinations for poisons	5
	363

The subjects which have been proposed to Professor Voelcker by the Committee, are as follows:—

1. The continuation of the investigations already in hand on the "Causes of Sterility and Fertility in Soils."
2. A series of experiments carried out on soils of different character (light and heavy) on "The influence of Salt in reference to Vegetation."
3. On the Growth of Clover and Grass Seeds, and the comparative nutritive properties of the produce cut at different periods of growth.
4. A series of manurial experiments on Clover.
5. The mechanical and chemical qualities of leaf-mould.

Lectures.—The first Lecture proposed to be given by Professor Voelcker this year will be on "The Nutrition of Plants from the Atmosphere," to be delivered on the second Wednesday in May, at 12 o'clock. The second Lecture will be on "The Chemical Qualities of Water for Economical Purposes," to be delivered on the second Wednesday in June, at 12 o'clock.

The Professor wishes it to be stated that he will be in regular attendance at the Society's House, 12, Hanover Square, every Wednesday.

Newcastle Meeting.—Colonel Challoner reporte that the Committee recommended that the sum of 200*l.* be granted to the Local Committee to secure the fields marked on the Ordnance plan for the purpose of the trial of steam cultivators in addition to the land which had been offered by the Local Committee. The contractor having laid before the Committee a plan of the show-yard, they recommended that it be considered as preliminary, that the exact position of the sheds be subject to adjustment to suit the ground, and that the contractor furnish a final plan in accordance with the above for approval by the Council in April. This report was adopted.

On the motion of Mr. Torr, the Council resolved that Herdwick sheep have the same advantage as to clipping as Blackfaced Mountain sheep.

Sheep for the Viceroy of Egypt.—The Secretary reported that the sheep had been safely embarked on board the Pera, which sailed for Alexandria on the 20th ult., and read a letter from the Lords Commissioners of her Majesty's Treasury requesting their acknowledgments might be conveyed to the Council of the Society for the trouble they had taken in carrying out the wishes of her Majesty's Government as regards the sheep and shepherd for the Viceroy of Egypt.

Mr. Acland brought forward the motion, of which Mr. Holland, M.P., who was prevented by indisposition from attending, had given notice, for the appointment of a Committee for the consideration of the measures which ought to be taken "for the improvement of the education of those who depend upon the cultivation of the soil for their support," this being declared by the Charter as the 7th national object to be prosecuted by the Society.

The motion was seconded by Sir Edward Kerrison, and supported by Mr. Thompson, M.P.; when the Council resolved to nominate a Committee at their next meeting to take this subject into consideration.

The Trinidad Agricultural Society having written to express their wish to enter into correspondence with the Royal Agricultural Society of England, and to request information on the subject of steam cultivation, the Earl of Powis moved that a set of the *Journal* be presented to the Trinidad Society; the motion was seconded by Mr. Jonas and carried.

Letters inviting the authorities of Bath, Bristol, Exeter, Plymouth and Taunton, to offer sites for holding the meeting of 1865 in that district, were directed to be sent.

The Council then adjourned.

Smithfield.—A Meeting of the Council was held on March 1, 1864. Present: The Right. Hon. Lord Tredegar, President, in the Chair. Major-General the Hon. A. N. Hood, V.P. Messrs. Buckley, Joseph Druce, Samuel Druce, Brandreth Gibbs (Hon. Sec.), Charles Howard, H. W. Keary, Robert Leeds, R. Milward, E. W. Moore, R. Overman, J. Robinson, W. Rigden, H. Smith, W. Sanday, J. Thompson, H. Thurnall. Messrs. R. H. Ellman and Joseph Druce were elected Stewards of live stock for the ensuing three shows. Messrs. William Torr and O. Wallis were elected Stewards of Implements for the present year. The reports of the Stewards on protests made against certain animals exhibited at the last Show were received and adopted, and the prizes ordered to be paid as awarded by the judges. The Council having considered the date to which the ages of animals exhibited are calculated, determined that no alteration should be made—viz., to remain Dec. 1. being a few days before the Show.

It was resolved that "the members of the Club and exhibitors be admitted to the galleries during the time the judges are adjudicating the prizes, subject to the acquiescence of the Agricultural Hall Company. It was resolved that a Framed Certificate and a Sovereign be presented to the Feeder of the 1st prize animals in the classes—and Mr. Moore and the Hon. Secretary were authorised to select the designs for the same. Directions were given as to advertisements.

The Prize Sheet for 1864 was revised, and the following alterations and additions made, viz.: 1. That in each of the following divisions, viz., Devons, Herefords and Short-horns, there be a new class for Steers under 2 years 6 months old, 1st prize 20*l.*, 2nd prize, 10*l.*; also that the class now limited to animals not exceeding 3 years be not exceeding 3 years and 3 months, and that the other class be for animals above 3 years and 3 months. 2. That in the Sussex division there be a new class for heifers not exceeding 4 years old, 1st prize 20*l.*, 2d, 15*l.*, and that the other class

be for cows above 4 years old. 3d, that in future "Freemartins" be not disqualified for competition in the respective Heifer Classes in the different divisions. 4. That there be a new class for Ryland, Cheviot, Dorset, or any other pure breed of Sheep not otherwise enumerated in the prize sheet; 1st prize, 15*l.*; 2d prize, 10*l.* 5. That the medal for Cross-bred Sheep in extra stock be for Sheep of a Long and Short-woolled cross. 6. That the ages of the Pig classes be arranged as follows:—A class for Pigs not exceeding 6 months old, instead of 4 months, as heretofore; ditto for Pigs above 6 months and not exceeding 9 months; ditto for Pigs above 9 months and not exceeding 12 months; ditto for Pigs above 12 months and not exceeding 18 months. It was resolved that a fine of 10*s.* for non-exhibition of animals entered be imposed on the same conditions as at the Royal Agricultural Society of England. Also that protests must be delivered in before 6 o'clock, P.M., on the Tuesday of the Show, and that no protest be received after that time. The rules of the prize sheet were revised and amended. It was determined that the entries for implements, &c., shall close on the 1st October as during the last two years. The implement committee was re-appointed; new members were elected. The thanks of the meeting were voted to the President for his able conduct in the chair.

Farmers' Clubs.

HEXHAM.—At the last meeting of this Club, JOHN GREY, Esq. (the Chairman), introduced a gentleman who a few years ago was well known to them, but who had been lately employing his time most profitably at Cirencester College, where he understood that such progress had been made by him that Mr. Wrightson had been awarded a diploma without his going through the usual number of years' probation. He (the Chairman) had had a very short time since a visit from Mr. Constable, the Principal of Cirencester College; and he heard from him with very great pleasure, and, he might say, pride, the high testimony he bore to the character of the north country students.

Mr. JOHN WRIGHTSON, M.R.C.A., F.C.S., then read an interesting paper on *Science in its Relation to Agriculture*. The following is an abstract:—

He first defined theory and science and practice. Practice is synomymous with performance—is content to do what it is told or what it has seen. Theory is the explanation of the cause of a practice. Thus, while practice has found drainage to be beneficial to many soils, theory, investigating the cause of this benefit, finds that the temperature is increased several degrees by the reduction of evaporation, and that the climate of a whole district is much improved. Instead of one stagnant reservoir, the soil becomes a medium through which new supplies of water are constantly percolating and leaving behind them their fertilising elements, viz., nitric acid, ammonia, and even warmth. The object of science is to seek the "reason" for every known phenomenon. Practice tells you that stiff soils must be worked dry, that light soils may be worked wet; that autumn tillage is excellent, or that subsoiling is followed by great results. This is all that practice can tell you. Suppose, now, the question be started, "Mr. A. has found subsoiling answer on his farm. What guarantee have I that I shall find it equally beneficial on mine?" Now, this important question cannot be answered without the aid of science; and the first step to its solution is to find the reason why the operation was so beneficial to Mr. A.'s farm. Having ascertained the "reason why" the operation had proved useful on the first farm, we next proceed to apply the same reasoning to the second, and finding the conditions altogether opposite, we conclude that on no known principle can a similar course of action give similar results. Let me give you an illustration as to how science goes to work in order to find out the cause of phenomena. Practical knowledge finds that Clover should only be sown once in eight years on the same land, because if sown oftener it is apt to fail. Science or scientific men immediately ask, "Why?" and set to work to discover and to bring together every fact bearing on the subject. In the first place they ask whether Clover sickness is a universal sequence of its too frequent culture. If they find a case in which land is free from this evil, they take every condition into account, and seize on those which are peculiar. The next question asked is whether this peculiarity is the cause of the immunity enjoyed in this single instance; and if so, the same conditions are applied to another case. If in this also a similar result is produced, it may be assumed that the explanation is found, and an hypothesis may be built, though it still requires further confirmation. If subsequent facts disprove the former conclusions, the hypothesis is deserted and a new explanation sought for, and when propounded a similar sifting takes place, and ends either in the hypothesis being proved true in every instance, or by a second abandonment and fresh search after truth. Now, this method of procedure is unknown to unscientific men. They have frequently mistaken these hypotheses for settled truths, and building expensive practices upon them, have often been disgusted at their possible failure, and have laid all the evil consequences at the door of science. Nor are scientific men totally free from blame. The very love of their pet idea—their new explanation, causes them frequently to have too much confidence in its truth. In trying to find the present position of science to agriculture, chemistry must take a most important place. Still there are reasons for thinking that this branch of science has been too exclusively applied to agriculture. We cannot read Liebig's newest work on the "Natural Laws of Husbandry" without noticing the important position given to structural botany. When however chemistry was first applied to agriculture, this co-relation of sciences had not taken place. Organic chemistry was hardly touched, and physiologists were working independently of chemists. The plant was considered to live on organised dead and decaying vegetable matter (humus). It was thought to assimilate that which was good for it, and excrete what was bad. The masterly manner in which Liebig showed the impossibility of this explanation of vegetable growth, must be considered admirable by all his readers. Still the fact remains, in spite of all that has been said, that crops are often much improved by the application of salts of ammonia and nitric acid, and farmers will continue to use them so long as this is the case. Liebig strives to explain it as follows:—Phosphates of lime and magnesia, as found in the soil, are insoluble in water, but are much more soluble in water containing carbonic acid, common salt, salts of ammonia or saltpetre. These salts, according to him, then, do not act by directly nourishing the plant, but by dissolving from the soil those constituents which are in an insoluble state, and offering them to the plant in a state in which they can be assimilated. Now it is plain that vegetables cannot grow simply because they are supplied with ammonia, carbonic acid, or any other single constituent, as the experiment of Prince Salm Horstmar and others sufficiently proved that every constituent must be present. It is therefore evident, argues Liebig, that although these salts, by their solvent action, present pabulum to the plant, yet such a system is an exhaustive one for the soil. If there is enough phosphoric acid in the soil to last 100 ordinary crops—and by thus more quickly rendering this phosphoric acid soluble, double crops are obtained—then only 50 such double crops can be grown. These views of Liebig have not, however, passed unchallenged, but have found able opposers in Messrs. Lawes and Gilbert, Dr. Voelcker, and others. These gentlemen seem not so much to fear exhaustion of the soil, and are great advocates for the use of nitrogenous manures. In the eagerness for analyses of soils, and ash of plants, too much faith seems to have been placed in the results of such analyses. One of the most remarkable discoveries bearing upon agricultural science, and which is destined to throw much light upon the nutrition of plants and the effects of manuring, is that of the physical attraction possessed by soils for several substances which give value to manuring agents. Mr. Thompson, of Moat Hall, was the first to observe that arable soil had the power of removing ammonia from its solutions, and Mr. Way shortly afterwards showed that a like power existed of removing not only ammonia but potash, phosphoric acid, and several other substances in a less degree. This property of soil has received the name of surface attraction, and has been compared to a like power in cloth to remove the colouring matter used in dyeing, and to the deodorising and decolourising properties of charcoal. The strength exerted in removing matters seem to depend on the porosity, or, in other words, the largeness of surface possessed by the charcoal or soil. So it is with soils—the more porous they are, the more strongly do they possess this property, and consequently strong pure clays on the one hand and pure sand on the other remove least from such solutions; while well tilled loams containing humus remove the before-mentioned salts most completely. Lastly, it is found that after salts have thus absorbed ammonia, potass, or their salts, water applied in very large quantities is able partially, but never entirely, to wash out the matters so absorbed. This discovery, thus described in the most general terms possible, has had a great effect in modifying the hypothesis of the manner in which plants assimilate their food. Still further, this discovery has caused greater attention to the study of roots, for since it is evident that only a small part of the required mineral matter is brought in solution to the plant, the plant must send out roots in search of food, which by vital force, and most likely by the excretion of carbonic acid, succeed in separating food from the different particles of soil with which they come in contact. I have mentioned this circumstance, and made the few anterior remarks, to show how botany bears upon agricultural science, and would also draw your attention to this branch of science as having much to do with the enabling of the farmer to select good seeds and detect adulterations with other seeds, which cannot be well detected without knowing their botanical characteristics. Botany can also throw light on the question of changing seed, and whether good or bad Wheat being sown makes any difference in the crop; in fact, it seems natural that, to a man who spends a large portion of time in raising certain plants, botany must be an interesting and instructive science. If botany is useful and deeply interesting to the farmer, how much more the knowledge of the much more complex and more easily disarranged animal system? Agriculture is now reaping the benefit of all thinkers upon medicine from Hippocrates to the present day, and the scientific labours of Gamgee, Simonds, and [illegible] devoted, as they are, to veterinary medicine, are of inestimable value. In reading their works, however, we cannot but be struck with how completely the branch of science is merely an offshoot from the stem of medicine as regards man; and this is another proof how science works for all, patiently turning up fact after fact until something is found which the ingenuity of man turns to his own account. [This is but a mere reference to a very able, full, and instructive discourse.

Rebiews.

Sale Catalogue of Mr. Allnutt's Agricultural Library, 200, Fleet Street, London.

We think proper to call attention to a pamphlet containing the Sale Catalogue at 200, Fleet Street, because it is right that agriculturists should know where they can find on view for sale a complete agricultural library, besides a great many other things, maps, philosophical instruments, models, &c., in which agriculturists are interested. Mr. Allnutt's *Estate Gazette* is a well-known medium of connection between buyers and sellers of landed property. In it and in his published diagrams of the selling prices of land for many years back, and in this agricultural library he has long and usefully laboured in the service of English agriculture.

Land Surveying and Levelling for Farmers. By J. Tabor. Longmans.

A simple book of instruction in the use of the chain and the theodolite—enabling the careful reader of it to undertake the work of measurement and levelling.

The Principles of Agriculture. By W. Bland, M.R.A.S. Longmans.

This is the second edition of a little volume on the theory of the growth of plants, the action of manures, the rotation of crops, draining, fallowing, &c., by the Hon. Secretary to the Sittingbourne and Milton Farmers' Club. The author treats of a well-cultivated fallow, the application of manures, variety of crops, rest as in Grass, and draining and irrigation as the means of fertilising land. These are the subjects of so many chapters, and the work concludes with a discussion of the cultivation of the several crops of the farm, and with a few remarks on the relation of the tenant to his labourers and his landlord. It is a useful little book.

Fowls: a Plain Familiar Treatise, &c. By J. Baily, 113, Mount Street. Hemingham & Hollis, Mount Street, Grosvenor Square.

This is the sixth edition of the simple, clear, explanatory and instructive work by Mr. Baily, well known as the first authority of the day upon its subject.

Miscellaneous.

The Meadow Saffron as a Poison.—It sends up a succession of lilac-coloured, Crocus-like flowers in September and October, after the fading of which nothing more is seen of the plant until the following spring, when its broad leaves begin to peer above the ground on the first advent of warmth. Its effects upon cattle may be gathered from the following report:—"The flowers of the Colchicum have not generally been considered by writers on the subject to be as poisonous to cattle as the leaves, but where the flowers are very thick, it is highly dangerous to allow cattle to graze upon the field. A farmer at Eyeford, near Stow-on-the-Wold, Gloucestershire, had 10 calves killed by eating of the flowers of the Colchicum, and two three years since three cows were destroyed by the plant in flower in the same neighbourhood; our experience leads to the inference that cattle used to a district are not so liable to eat the Colchicum as strange beasts from a district where the plant does not grow. There can be no doubt that this large-leaved plant, which, even if innocuous, must occupy much space, should if possible be eradicated from the pasture. The means to this end are—never to let the plant seed, or indeed mature a single leaf." *Morton's New Farmer's Almanac.*

Calendar of Operations.

MARCH.

WEST SUSSEX: *Feb.* 29.—After a rather sharp week we have now got mild weather, and everything is putting on a [illegible] appearance. I suppose opinions will be rather divided as to the character of the winter; we have certainly had [illegible] sharp weather, but of short duration, and upon the whole may say it has been rather mild. But the cold weather we have had has not left us so well provided with stock as we thought we were; sharp dry frosts always cause greater consumption than when it is mild. But although done well, and the lambing of the Down ewes has been seldom have the lambs looked healthier, and no doubt there will be a good many ready for the butcher by Easter, though it comes rather early upon us this year. Our market has been very fully supplied with mutton for some weeks, and prices for all kinds have been high; some have been over 7*s.* per stone of 8 lb., and yet the supply does not seem much; whether it is owing to abundant keep, or [illegible] marketable stock, we don't know, but think it is from the latter cause; and I do not think that there is more than will be wanted. Beef commands a good price, and [illegible] is about as usual, but prices are better. The Wheat has stood the changea le weather pretty well; it certainly looks very forward, but spreads itself well for tillering, and the plant is equal on the ground. Work is getting rather late, but as the frosts have shaken the furrows so well, a wing will go on quickly as soon as the surface is dry. *G. S.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Month.	Day of the Week.	Barometer corrected to Freezing Point & at Mean Sea Level.	Thermometer. Reading of Dry Bulb.	Thermometer. Reading of Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
Feb. 26	Friday ..	Inches. 28.96	° 36	° 35	N.E.	1	10	° 37	° 34	° 40	° 24	Inches. 0.07
27	Saturday ..	29.77	37	36	S.E.	1	10	57	35	40	23	..
28	Sunday ..	29.63	42	42	S.	0	10	43	37	45	25	..
29	Monday ..	29.61	44	43	S.W.	0	10	49	39	50	34	0.40
March 1	Tuesday ..	29.77	41	40	S.E.	1	10	49	38	53	30	0.10
2	Wednesday ..	29.79	38	38	N.W.	0	10	46	30	51	30	..
	Thursday ..											

Notices to Correspondents.

CABBAGE: *Arvon.* We should prefer Drumhead Cabbage. Do not put them too close together. One of the heaviest crops we ever saw was of plants a yard apart every way in heavy loam well and deeply cultivated, and horse-hoed both ways; the plants being in quincunx order, enabling the tool to take the rows east and west, as well as north and south.

COWS: *W P.* We know nothing for it but leaving the cow and bull together if necessary for a day during her season.

IMPORTATIONS IN 1862 AND 1863: *R.* The following are selected from the published tables. A certain proportion of most of the articles are reexported; but the quantity is practically unimportant.

I.—*Articles Free of Duty.*

Articles.		Importations. 1862.	Importations. 1863.
Animals, living—Oxen, bulls, and cows	No.	68,818	109,653
Calves	,,	29,069	41,245
Sheep and lambs	,,	299,472	430,788
Swine and hogs	,,	18,162	27,137
Bones (whether burnt or not, or as animal charcoal)	tons	67,230	77,492
Flax	cwt.	1,798,351	1,458,962
Guano	tons	141,636	233,574
Hemp	cwt.	981,765	1,038,159
Hops	cwt.	133,791	147,281
Oil Seed Cakes	tons	101,156	88,566
Potatos	cwt.	1,354,636	1,249,360
Provisions—Bacon and hams	,,	1,345,694	1,877,813
Beef, salt	,,	187,640	282,677
Pork, salt	,,	226,470	168,939
Butter	,,	1,037,371	986,708
Cheese	,,	703,909	756,285
Eggs	No.	232,321,200	266,929,680
Lard	cwt.	530,090	530,512
Saltpetre	,,	443,248	404,515
Cubic nitre	,,	794,318	539,808
Seeds—Clover	,,	169,974	272,626
Flaxseed and Linseed	qrs.	1,088,472	1,104,578
Rape	,,	189,307	313,577
Wool	lbs.	168,836,713	174,094,062
Wool, Alpaca	,,	3,106,759	3,402,582
Yeast, dried	cwt.	102,202	104,233

II.—*Articles Subject to Duty.*

Articles.		Entered for Home Consumption. 1862.	Entered for Home Consumption. 1863.
Corn—Wheat	qrs.	9,542,363	5,670,809
Barley	,,	1,863,683	2,078,717
Oats	,,	1,623,449	2,376,474
Peas	,,	230,133	304,155
Beans	,,	479,229	488,438
Indian Corn, or Maize	,,	2,751,267	2,986,707
Wheatmeal	cwt.	7,314,319	5,265,843
Indian Corn Meal	,,	9,192	9,702

POULTRY: *Anxious Inquirer.* Rock salt in moderate quantities will do your birds no harm, and will not produce the symptoms described by you, which are rather those of some slow poison. Rock salt is greedily eaten by all fowls, pigeons, &c., when they can get it in pieces small enough; the latter birds will perch on large lumps of it and scrape it with their bills. It has the effect on them of a good tonic, and gives a healthy lustre to the plumage.

TOP DRESSING FOR WHEAT: *Subscriber.* 1 cwt. of nitrate of soda and 2 cwt. of common salt per acre is as good a dressing as you can use.

SECURED BY
ROYAL LETTERS PATENT.

PRICE 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanized Wire Strainer, Rose, and Small Jet, Brass Cylinders and Japanned Stirrup. With Copper Stirrup, Two Guineas.
Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

ROBERT HOGG, LL.D. and F.L.S., SHIRLEY HIBBARD, Esq., F.R.H.S., THOMAS RIVERS, Esq. (the eminent Florist), and other well-known gentlemen recommend the

HYDROPULT

AS AN INVALUABLE GARDEN IMPLEMENT.

CAUTION.—IMPORTANT TO THE PUBLIC.

The extensive sale of the HYDROPULT has excited the cupidity of so-called respectable, but in reality unprincipled, manufacturers, who are now palming on the public worthless imitations of the HYDROPULT, and through their connections are enabled to place said devices on exhibition, and for sale, in many of the principal Ironmongery and Seed Establishments throughout the city and provinces. Their devices resemble in many respects the HYDROPULT in appearance, and are calculated to deceive the unsuspecting, as they are often placed under or near the HYDROPULT show card.

It has often come to my knowledge that in many instances Ironmongers have actually recommended these devices as equal to, if not superior to, the HYDROPULT, from the fact that I have persistently refused to place the HYDROPULT "on sale," as is the custom of the manufacturers of the HYDROPULT imitations, and I have thereby obtained the enmity of said interested tradesmen, who unscrupulously state that which they know to be untrue. For there is no Pump in existence except the HYDROPULT, weighing but 8 lbs., which will throw 8 gallons of water per minute a distance of 50 feet when worked by the power of one man.

The public should remember that no Machine, Pump, or other Implement PLACED IN A BUCKET is the HYDROPULT.

Prospectus, with Testimonials, sent Free on application.

CHARLES P. BUTTON, PROPRIETOR, HYDROPULT WAREHOUSE and SHOW ROOMS,
27, LEADENHALL STREET, LONDON, E.C.

GREEN'S PATENT SILENS MESSOR,

OR

NOISELESS LAWN MOWING, ROLLING, and COLLECTING MACHINES.

BY SPECIAL APPOINTMENT,
SOLE MANUFACTURER

TO HER MOST GRACIOUS MAJESTY
THE QUEEN.

THE
FIRST PRIZE MEDAL
OF THE
INTERNATIONAL
EXHIBITION,
1862,
WAS AWARDED TO
THOMAS GREEN,
FOR HIS
PATENT
LAWN MOWERS.

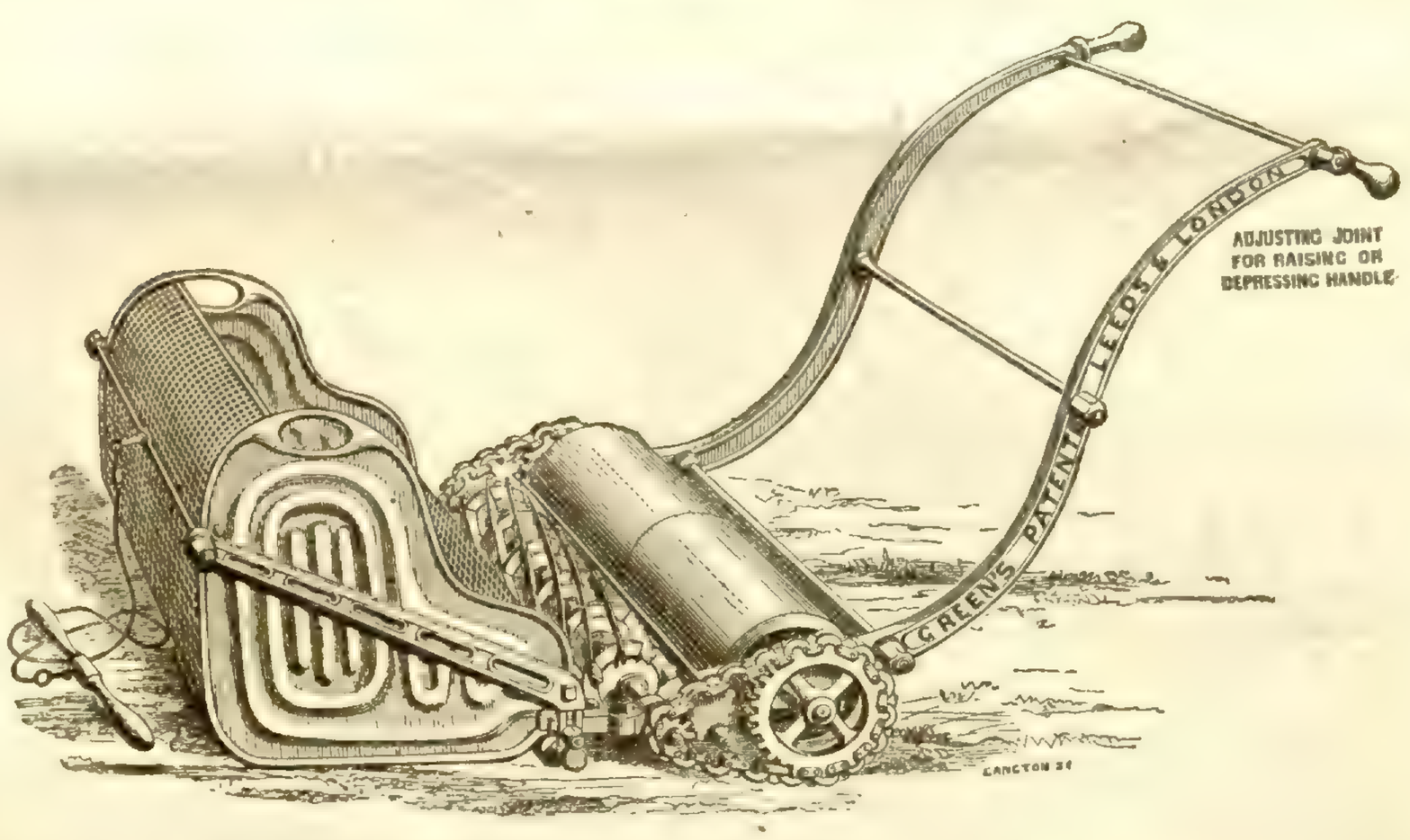

FOREIGN MEDALS
AWARDED TO
GREEN'S PATENT
LAWN MOWERS.
LIEGE, 1861.
BRUSSELS, 1861 & 1863.
NAMUR, 1862.
GAND, 1862.
LINNEENNE, 1861, 1862, & 1863.
LAEKEN, 1862.
HAMBURG
INTERNATIONAL
EXHIBITION, 1863.

EXTRAORDINARY and WONDERFUL IMPROVEMENTS for the PRESENT SEASON 1864.

THOMAS GREEN AND SON, in introducing their NEW PATENT LAWN MOWING MACHINES (of which the above is a drawing) for the present season, beg to state that, in addition to the great number of improvements hitherto brought out, they have succeeded, after several months' trial (on the most difficult Lawns), in bringing out a machine which transcends the one of last year equally as much as did the very original one ever brought before the public. They are lighter and stronger, simpler in construction, more durable, and are warranted to last for years without getting out of repair. They do not require two-thirds the amount of power to work them of any other machines extant; and, from their efficiency, are unequalled for keeping Lawns in the highest state of perfection.

GREEN'S PATENT LAWN MOWERS have carried off every Prize that has been given in all cases of competition, and were the only Machines Highly Commended at the Royal Horticultural Society's Great Shows, held at South Kensington, May 21, June 11, and July 2, 1862. (No Prizes were given.) They are the only Machines in constant use at the ROYAL GARDENS, WINDSOR; BUCKINGHAM PALACE GARDENS; SANDRINGHAM PARK GARDENS; the ROYAL HORTICULTURAL SOCIETY'S GARDENS, SOUTH KENSINGTON; the BOTANICAL GARDENS, REGENT'S PARK; the CRYSTAL PALACE COMPANY'S GARDENS, SYDENHAM; the KENSINGTON PALACE GARDENS; the HYDE PARK GARDENS; and in most of the principal Parks, Squares, &c., of the Nobility, Clergy, and Gentry throughout the Kingdom.

PRICES OF HAND MACHINES.

To Cut	10	inches	...	...	£3	10	0	...	...	Suitable for a Lady.	To Cut	18	inches	...	...	£7	10	0	...	...	Suitable for One Person.
„	12	„	...	...	5	0	0	...	...	„ „	„	20	„	...	...	8	0	0	...	...	Suitable for Two Persons.
„	14	„	...	...	5	10	0	...	...	Suitable for One Person.	„	22	„	...	...	8	10	0	...	...	„ „
„	16	„	...	...	6	10	0	...	...	„ „	„	24	„	...	...	9	0	0	...	...	„ „

The Patentees beg to call special attention to their HORSE, PONY, and DONKEY MACHINES, which have been entirely remodelled, and embrace all the recent Improvements adopted in the Hand Machines. They cannot fail to give entire satisfaction wherever used.

Prices of HORSE, PONY, and DONKEY MACHINES, including Patent Self-Delivery Box, Traces, and Stretcher, suitable for attaching to ordinary Chain Traces or Gig Harness.

To Cut	26	inches	...	...	£13	0	0	...	...	Leather Boots for Donkey, 18s.	To Cut	30	inches	...	...	£21	0	0	...	...	Leather Boots for Pony, 22s.
„	28	„	...	...	14	0	0	...	...	„ „	„	36	„	...	...	24	0	0	...	...	„ „

To Cut	42	inches	...	...	...	£27	0	0	...	...	...	Leather Boots for Horse, 26s.
„	48	„	...	...	...	30	0	0	...	...	...	„ „

The 26 and 28 inches can be easily worked by a Donkey or by Two Men on an even Lawn, the 30 and 36 inches by a Pony, and the 42 and 48 inches by a Carriage Horse; and, as the Machines make no noise in working, the most spirited animal can be employed without fear of its running away, or in any way damaging the Machine.

Both the HORSE, PONY, DONKEY, and HAND MACHINES possess over all other Makers the advantage of Self-sharpening; the Cutters being steel on each side, when they become dull or blunt by running one way round the cylinder, can be reversed, again and again bringing the opposite edge of the cutters against the bottom blade, when the Machine will cut equal to new. Arrangements are made so that the cylinder can be reversed by any inexperienced person in two or three minutes.

The above MACHINES are made from the best materials, and of superior workmanship; are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England; are warranted to give satisfaction, and if not approved of can be at once returned, if sent Carriage Free to Leeds.

THOMAS GREEN & SON, SMITHFIELD IRON WORKS, LEEDS;
and 2, FARRINGDON ROAD (formerly 2, VICTORIA STREET), HOLBORN HILL, LONDON, E.C.

Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET.

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

CATALOGUES are now ready, and a stock of Plants in the most perfect health, of all sizes, and at prices to suit all purposes. Sunningdale Nursery, S.W. Rail.

GEO. BAKER begs to announce that his extensive Collections of Hardy RHODODENDRONS, GHENT AZALEAS, and KALMIA LATIFOLIA, are unusually well set with bloom, and his fine Collection of CONIFERS in the best possible condition

CATALOGUES on application at the American Nursery, Bagshot, Surrey. The Nurseries are about 1 mile from Sunningdale Station, South-Western Railway.

Chrysanthemums, Chrysanthemums.

J. H. BIRD, F.R.H.S., NURSERYMAN, Stoke Newington, is now sending out from his great Stock of the above:—20 pairs of fine varieties of LARGE CHRYSANTHEMUMS for 10s.; 20 pair of Cuttings of ditto for 5s.; 25 pair of fine POMPONS for 10s.; 25 pair of Cuttings of ditto for 5s.

N.B. To save trouble all orders to be prepaid.

Gladiolus Brenchleyensis.

YOUELL AND CO. have much pleasure in offering the above GLADIOLUS, unequalled by any other variety for the brilliancy of its colour. The Bulbs are unusually fine. Price 8s. per doz.; 20s. per 100.

Trade price on application,
Royal Nurseries, Great Yarmouth, Norfolk.

GLADIOLUS, SEEDLINGS of GANDAVENSIS.

	£	s.	d.
50 in 50 choice varieties	2	12	6
25 in 25 „ „	1	5	0
12 in 12 „ „ .. .. .. 5s. to	0	12	0
Extra choice mixed, 3s. 6d. per doz. .. per 100	1	5	0
Fine mixed. 2s. 6d. per doz. .. .. „	0	17	6
GANDAVENSIS, strong roots, 2s. 6d. per doz. „	0	15	0
BRENCHLEYENSIS, ext. strong roots, 3s. p. doz. „	1	0	0

BUTLER & MCCULLOCH, Seed Merchants, Covent Garden Market, London, W.C.

To the Trade.

AZALEAS, ERICAS, and EPACRIS, fine bushy plants, well set with flower buds, at moderate prices. An inspection solicited.

THOMAS JACKSON & SON, Nurseries, Kingston, S.W., adjoining the Kingston New Station, South Western Railway.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

West Riding Seed Establishment, St. John's, Wakefield.

THE PROPRIETORS beg to announce they have received their new supply of VEGETABLE SEEDS, which have been tested, and will be found to be genuine. Their supply of FLOWER SEEDS comprises all the Novelties of the present season.

CATALOGUES will be forwarded free on application to WILLIAM BARRATT.

Major's Half Shrubby Calceolaria Seed for 1864.

MR. HENRY MAJOR, Knosthorpe, near Leeds, is prepared to supply the above as usual, in packets at 2s. 6d. each, or three for 5s., post free. The seed is very select, having been saved from large and strikingly beautiful flowers. Postage stamps in payment.

N.B.—To suit parties not raising their own Seedlings, Mr. H. M. will have nice young plants ready to send out in April, in parcels of 20 for 6s., or three for 15s., post free.

Notice.

JOHN WATERER, of The American Nursery, Bagshot, Surrey, is the EXHIBITOR of RHODODENDRONS at the Royal Botanic Gardens, Regent's Park.

His CATALOGUE, describing colours, prices, &c., can be obtained by letter addressed to the Nursery as above.

☞ For detailed Advertisement of CONIFERS, ORNAMENTAL SHRUBS, &c., refer to page 1151 for 1863.

Rhododendron Countess of Haddington.

ROBERT PARKER begs to announce that he can supply good healthy Plants on their own roots of this beautiful variety, at 21s. each.

For description, see *Gardeners' Chronicle* of March 5, p. 220. Plants may now be seen in flower at the Nursery.

Exotic Nursery, Tooting, Surrey, S.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well-assorted Collections of EXOTIC ORCHIDS, FERNS, Miscellaneous STOVE and GREENHOUSE PLANTS, Variegated and Ornamental FOLIAGED PLANTS, TREE FERNS, &c., amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE, with a list of Beck's New and Choice PELARGONIUMS, Post free to all applicants.

Paradise and Victoria Nurseries, Holloway, London, N.

Agricultural, Vegetable, and Flower Seeds.

EDWIN HOLLAMBY begs to inform his friends and the public, that his NEW DESCRIPTIVE CATALOGUE is now ready, and will be forwarded post free to all applicants.

Nursery and Seed Establishment, Tunbridge Wells; and Groombridge, Kent.

Seeds, Carriage Free.

WILLIAM CUTBUSH AND SON'S PRICED CATALOGUE of GARDEN and FARM SEEDS is ready, Post-free, on application.

The name their house has obtained during many years past, is a sufficient guarantee for the quality of the goods offered.

Highgate Nurseries, London, N.

Double Italian Tuberose Roots, 4s. per Dozen.

A. COBBETT, FOREIGN WAREHOUSE, 18, Pall Mall, W., has the pleasure to inform all Amateurs and Gardeners that he has just received from Italy his usual Annual Importation of this beautiful and fragrant Flower; and has much pleasure in announcing that the Roots are very large, and in splendid condition.

N.B. Directions for Planting sent with each order.

SUTTON'S SEEDSMEN BY APPOINTMENT Sutton AND Sons

FLOWER SEEDS

FREE BY POST.	£	s.	d.
The best 100 sorts of FLOWER SEEDS, hardy, half hardy, and tender, with instructions ..	1	1	0
The best 50 sorts do. do.	0	10	6
The best 36 sorts do. do.	0	7	6
The best 24 sorts do. do.	0	5	0
The best 50 sorts, all hardy and very distinct in colour	0	10	6
The best 36 sorts, all hardy and very distinct in colour	0	7	6
The best 24 sorts, all hardy and very distinct in colour	0	5	0

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

SUTTON'S FINE LAWN GRASS SEEDS for making New or Improving Old Garden Lawns, price 1s. per lb.; 2s. 3d. per gallon; or 18s. per bushel.

From Professor LINDLEY, *Royal Horticultural Society, London.*

"We have already made trial of your Grass Seeds, and it is only justice to say that they have proved the best we have sown for many years."

From Mr. JAS. ALBOROUGH, *Gardener to* Mrs. POPHAM, *Trevarno*, Jan. 15, 1863.

"The seeds which I had of you last season for laying a fine piece of Grass Lawn down proved to exceed all others. It is most wonderful to see such a fine piece of turf in one season."

From A. W. ENGLISH, Esq., *Aisleby Lodge, Whitby*, April 1, 1863.

"The Lawn seed I had of you last spring was quite a success. It was sown in May, and by the end of October we had mown it several times, and at a short distance from it I could hardly distinguish the new from the old lawn adjoining."

From the Rev. G. JORDAN, *Sungrove, East Woodhay*, May 5, 1863.

"Some Grass Seed which you sent me in the spring of 1859 for two acres answered thoroughly."

From Mr. J. JENNINGS, *Gardener to the* Earl of DERBY, *Knowsley Park.*

"The Lawn Grass Seeds were very good indeed."

From the Rev. F. KITSON, *Hemyock Rectory, Wellington.*

"The fine Grass Seed for Lawns which Messrs. SUTTON sent in the spring has given great satisfaction."

From Mr. HENRY GADD, *Gardener to the* Right Hon. Lord MIDDLETON, *Wollaton Hall, Notts*, March 22, 1862.

"I am pleased to inform you that the Grass Seeds you supplied last season have given the greatest satisfaction, they being so remarkably clean and free from all coarse Grasses."

From B. J. P. BASTARD, Esq., *Kitley, Yealmpton, Devon*, April 7, 1862.

"The Grass Seeds with which you supplied me last spring were remarkably clean and well selected, and the result produced upon three acres of new garden lawn then laid down was highly satisfactory, and perfectly uniform throughout."

From the Rev. G. P. GRIFFITHS, *Hillfield, Cheltenham*, Nov. 4, 1862.

"The Turf Seed which you sent me in the spring has come up admirably both in the churchyard and on my lawn, and does you great credit in both places."

QUANTITY OF SEED REQUIRED.—These Grasses being of small neat growth, not spreading so much as other kinds, it is necessary they should be sown thickly. For forming New Lawns, 3 bushels or 60 lb. is the quantity required per acre; or 1 gallon to 6 rods (or perches of land).

FOR CEMETERIES, BOWLING GREENS, PARK LAWNS, &c., where the very finest kinds are not required, another Mixture is prepared, of which 2½ bushels per acre will be found sufficient, and the price will be 16s. per bushel.

SUTTON & SONS, Royal Berks Seed Establishment, Reading.

Flower Seeds. Free per Post.

BUTLER AND MCCULLOCH'S unrivalled Assortments:—

HARDY ANNUALS.

100 varieties, 20s.	50 varieties, 10s.
30 varieties, 5s.	15 varieties, 2s. 6d.

HALF-HARDY ANNUALS.

100 varieties, 30s.	50 varieties, 15s.
25 varieties, 7s. 6d.	15 varieties, 2s. 6d.

The varieties included in the above assortments are all distinct and of the brightest colours. Each packet bears a printed description and practical hints on cultivation.

Covent Garden Market, London, W.C.

Flower Seeds, free per post.

WM. WOOD AND SON'S splendid COLLECTIONS as under:—

HARDY ANNUALS.

100 varieties	20s. 0d.	25 varieties	5s. 0d.
50 do.	10 0	12 do.	2 6

HALF-HARDY ANNUALS.

100 varieties	25s. 0d.	25 varieties	7s. 0d.
50 do.	12 6	12 do.	3 6

GERMAN FLOWER SEEDS as imported in original sealed packets on lowest terms.

CATALOGUES on application.

Woodlands Nursery and Seed Warehouse, Maresfield, Uckfield, Sussex.

American Plants.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE for the present Season is now ready, and will be forwarded free to all applicants. As well as American Plants, it contains a summary of their General Nursery Stock, one of the most extensive in the kingdom.

Knap Hill Nursery, near Woking, Surrey.

ROYAL HORTICULTURAL SOCIETY.

SHOW of HYACINTHS and other SPRING FLOWERS, WEDNESDAY, March 9.

AWARDS of the JUDGES.

CLASS 1.—18 HYACINTHS, distinct kinds. (Nurserymen.)
1st Prize, Messrs. W. Cutbush & Son, Highgate Nurseries, N., 1*l.* 10*s.*
Equal 1st, Mr. Wm. Paul, Waltham Cross, N., 1*l.* 10*s.*
3d, Mr. W. H. Treen, Victoria Nursery, Rugby, 10*s.*

CLASS 2.—12 HYACINTHS, 6 kinds. (Amateurs.)
1st, Mr. Wm. Young, Gr. to R. Barclay, Esq., Highgate, 2*l.*
2d, Mr. Carr, Gr. to B. Noakes, Esq., Highgate, N., 1*l.*
3d, Mr. Geo. Taylor, Gr. to C. A. Hanbury, Esq., East Barnet, 10*s.*

CLASS 3.—6 HYACINTHS, 6 kinds. (Open.)
1st, Messrs. W. Cutbush & Son, Highgate Nurseries, N., 1*l.*
2d, Mr. W. Young, Gr. to R. Barclay, Esq., Highgate, N., 15*s.*
3d, Mr. Wm. Paul, Waltham Cross, N., 10*s.*

CLASS 4.—6 HYACINTHS, 6 kinds, grown in Windows in Pots or Glasses. (Amateurs.)
1st, Mr. B. Noakes, Hope Cottage, North Hill, Highgate, N., 1*l.*
2d, Mr. Wm. Young, Gr. to R. Barclay, Esq., Highgate, N., 15*s.*
3d, Miss Fortune, 1, Gilstone Road, Brompton, S.W., 10*s.*

CLASS 5.—6 HYACINTHS, new kinds of 1863-4. (Open.)
1st, Messrs. W. Cutbush & Son, Highgate Nurseries, N., 1*l.*
2d, Mr. Wm. Paul, Waltham Cross, N., 15*s.*
3d, Messrs. Barr & Sugden, 12, King Street, Covent Garden, 10*s.*

CLASS 6.—12 Pots of TULIPS, 6 kinds. (Nurserymen.)
1st, Messrs. W. Cutbush & Son, Highgate Nurseries, N., 1*l.* 10*s.*
2d, Mr. Wm. Paul, Waltham Cross, N., 1*l.*

CLASS 7.—12 Pots of TULIPS, 4 kinds. (Amateurs.)
1st, Mr. Wm. Young, Gr. to R. Barclay, Esq., Highgate, 1*l.* 10*s.*
2d, Mr. Geo. Taylor, Gr. to C. A. Hanbury, Esq., East Barnet, Herts, 1*l.*
3d, Mr. A. Carr, Gr. to B. Noakes, Esq., North Hill, Highgate, 15*s.*

CLASS 8.—CROCUSES, Collection of. (Nurserymen.)
1st, Messrs. W. Cutbush & Son, Highgate, N., 15*s.*
2d, Mr. Wm. Paul, Waltham Cross, N., 10*s.*

CLASS 9.—CROCUSES, 12 Pots. (Amateurs.)
1st, Mr. Wm. Young, Gr. to R. Barclay, Esq., Highgate, 15*s.*

CLASS 10.—Collection of 12 FORCED FLOWERS, various (Open.—No Competition.)

CLASS 11.—Collection of 6 AMARYLLIS, distinct kinds. (Open.—No Competition.)

CLASS 12.—3 AMARYLLIS, distinct kinds. (Open).
1st, Mr. Robert Parker, Exotic Nursery, Tooting, S., 15*s.*

CLASS 13.—6 EPACRIS, not less than 3 Colours. (Open). (No Competition.)

CLASS 14.—6 Pots of LILIES of the VALLEY. (Open).
1st, Mr. Wm. Bartlett, Shaftesbury Road, Hammersmith, W., 1*l.*

CLASS 15.—6 PRIMULAS, various colours. (Open).
1st, Mr. Thos. Todman, Gr. to R. Hudson, Esq., Clapham Common, S., 15*s.*
2d, Messrs. J. Dobson & Son, Woodlands Nursery, Isleworth, W., 10*s.*
3d, Mr. Geo. Taylor, Gr. to C. A. Hanbury, Esq., East Barnet, 5*s.*

CLASS 16.—6 DOUBLE CHINESE PRIMROSES.—(Open.) (No Competition.)

CLASS 17.—3 CAMELLIAS, distinct kinds. (Open.) (No Competition.)

CLASS 18.—12 CAMELLIAS, cut blooms, distinct kinds. (Open.)
1st, Mr. Wm. Paul, Waltham Cross, N., 1*l.*
2d, Mr. W. H. Treen, Victoria Nursery, Rugby, 15*s.*

CLASS 19.—MISCELLANEOUS. (Open.)
Extra 1st, Messrs. W. Cutbush & Son, for a Collection of Hyacinths, 2*l.* 10*s.*
Extra 2d, Mr. Wm. Paul, for a Collection of Hyacinths, 2*l.*
Extra, Mr. Wm. Bull, for a Collection of New and Rare Plants, 2*l.*
Extra, Messrs. W. Cutbush & Son, for a Collection of Tulips, 1*l.* 10*s.*
Extra, Mr. Thos. Todman, for a Collection of Azaleas, 1*l.* 10*s.*
Extra, Mr. Wm. Paul, for a Collection of Tulips, 1*l.* 10*s.*
Extra, Messrs. W. Cutbush & Son, for a Collection of Narcissus, 1*l.*
Extra, Messrs. Paul & Son, for a Collection of Roses in Pots, 1*l.*

The Gardeners' Chronicle.

SATURDAY, MARCH 12, 1864.

MEETINGS FOR THE ENSUING WEEK.

THURSDAY, March 17—Linnean .. .. 8 P.M.
SATURDAY, — 19—{Royal Botanic (First Spring Exhibition) .. .. .. 2 P.M.

AFTER an acquaintance with the blotched-leaved form of AUCUBA JAPONICA extending over more than three quarters of a century, British horticulturists have at last, thanks to Mr. FORTUNE, had an opportunity of forming some notion of the true merits of this invaluable hardy evergreen, in its normal condition. It is no exaggeration to say that the plant exhibited by Mr. STANDISH at South Kensington on Wednesday last, was alone worth a pilgrimage through the pitiless snow-storm of that luckless day. It is a glorious shrub, seen, as it was in this case, laden with bunches of its large oblong berries of the brightest coral red; nothing in the way of hardy evergreen shrubs already familiar to us at all compares with it; and to have been the means of presenting it before the gardening community is an honour of which both the introducer and the cultivator may well be proud. The recommendation which we saw appended to the plant, that some special mark of approbation in the shape of a medal should be conferred, was nobly merited.

How it has come to pass that we have not seen berried Aucubas before now, may be thus explained. The Aucuba is a dioecious plant, that is to say, some of its individuals produce only male and others only female flowers. The blotched-leaved plants we are all so familiar with, springing doubtless from a single original, are all females, and

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

LIST OF AWARDS, March 9, 1864.

FIRST-CLASS CERTIFICATE.

AUCUBA JAPONICA (in Fruit), from Mr. Standish, Ascot. Recommended for a Medal.

GYMNOGRAMMA sp. Chili, from Messrs. Veitch & Son, Exeter and Chelsea.

HYACINTH LORD PALMERSTON, from Mr. W. Paul, Waltham Cross.

HYACINTH ROBERT FORTUNE, from Messrs. Cutbush & Son, Highgate.

SECOND CLASS CERTIFICATE.

HYACINTH HENRIETTA ELIZABETH, from Messrs. Cutbush & Son.
HYACINTH JOSEPHINE, from Messrs. Cutbush & Son.
LYCIOPLESIUM PURIFLORUM, from Messrs. Veitch & Son.

COMMENDATION.

AZALEA LORD DERBY, from Mr. Todman, Cladham.
RHODODENDRON sp. Moulmein, from Messrs. Veitch & Son.

The next MEETING will take place on the day of the SPRING CAMELLIA SHOW.

THOMAS MOORE, Secretary to the Committee.

there being no anther-bearing plants within reach there could be no berries—no complete development of even isolated fruits, much less of a crop of full-grown perfect brightly-coloured ones, lighting up the whole bush. When wandering in the East, Mr. Fortune sent to England that form of the normal or green-leaved plant which bears female flowers; one small specimen of the plant bearing antheriferous flowers, was also got to England alive, and last spring this blossomed, for the first time, we believe, in Europe, with Mr. Standish. The materials being thus at hand, the mother plant was fertilized, and the result was the very beautiful and important exhibition to which we have referred—an exhibition which places the Aucuba in the very forefront of cultivated evergreens. As the male plant becomes distributed, we may therefore look forward to seeing berry-laden Aucubas common amongst our choicer shrubs, those with plain green unspotted leaves yielding the most agreeable contrast with the coral berries.

There are few if any subjects relating to the physiology of plants on which vouchers may not be found for the most contrary opinions, and both equally professing to be founded on facts. The subject of hybridization is no exception. We pointed out last week the important facts adduced by Monsieur Naudin to show that fertile hybrids may arise from the union of two distinct species, a fact which has been more than once controverted; and now it appears from the essay which Monsieur Godron sent in for the prize proposed by the French Academy, to determine some important points respecting hybridization, that he has arrived at a conviction that self-fertilized hybrids cannot arise from two distinct species, though they may be fertilized with the pollen of one of the parents. Something of course will depend upon the point from which species are viewed, but not to mention the various facts adduced by M. Naudin, M. Godron's own examples of Nicotiana alato-Langsdorffii, and N. angustifolio-auriculata, as pointed out by the reporter M. Duchartre, prove the contrary. The seeds of these hybrids, communicated the one by Alexander Braun, the other by Monsieur Naudin, produced plants which when perfectly isolated yielded perfect seed.

The question proposed by the Academy was *to study hybrids with respect to their fertility, and the constancy or inconstancy of their characters.* "The production," it was remarked, "of hybrids between plants of different species of the same genus, is an established fact, but precise researches are still wanting to resolve the following questions, which are of equal interest as regards physiology in general, and the determination of the limits of species, together with the extent of their variation.

"1. In what cases are hybrids self-fertilizable? Is their fertility proportional to external resemblances of the species from whence they are derived, or does it indicate a special affinity in regard of generation, as has been remarked with respect to the facility of the production of hybrids themselves.

"2. Do hybrids which are sterile when isolated, always owe their sterility to the imperfection of their pollen? Are the pistil and ovules always capable of being fertilized by the pollen of some strange plant properly chosen? Is there an appreciable state of imperfection in the pistil and ovules?

"3. Do self-fertilized hybrids sometimes retain their characters without variation through many generations, and can they become the type of constant races—or do they always, on the contrary, return to the form of one of their ancestors after a number of generations, as recent observations seem to indicate."

Now the experiments of which we gave some account at p. 219, and still more the numerous additional observations recorded in M. Naudin's prize essay, show decidedly that hybrids from two different species, when left to themselves, without the possibility of access of any strange pollen, are by no means absolutely barren, but in many cases produce seeds capable of germinating. But of the hybrids which M. Naudin raised in the course of his observations only about a fourth were sterile. The degree of fertility was not the same in every case, but it appeared to be proportioned to the number of good pollen grains which were contained in the anthers. It appeared, moreover, that self-fertilized hybrids have a decided tendency to revert to one of their parents, and that after a few generations the reversion is complete. There can therefore be no justice in the supposition that an infinite variety of species can arise by means of hybridization, though peculiarities which have once arisen, without the crossing of two species, may be propagated indefinitely, and thus give rise to a distinct race.

The only apparent exception to this tendency with which M. Naudin has at present, met is that of an Ægilops, supposed to be a hybrid between Æ. ovata and some variety of Wheat. The hybrid origin of this plant is however doubtful, but supposing the observations respecting the gradual conversion of Æ. ovata into Wheat to be correct, we have either a distinct set of phenomena, or if the pollen of Wheat enter into the question, we have a pure case of reversion. If, however, the Wheat-like Ægilops (Æ. speltæformis, Jord.) be really a hybrid, it is a singular exception to what appears to be a very general rule.

As regards the third question, it appears from M. Naudin's observations that though species which resemble each other closely, are in general more apt to intermix than those which are decidedly different, still there are instances in which species which scarcely differ from each other refuse to intermix, while on the contrary species of extremely different character will sometimes yield with great facility fertile hybrids.

As regards the condition of the male and female organs, M. Naudin confirms former observations as to the comparative imperfection of the pollen, but he has not been able to determine anything positively with regard to the female organs, which as far as his observations go seem to be perfect, though he fancies that the ovules may present imperfections if closely examined. This is clearly a matter of extreme delicacy, and could only be profitably studied by those who have already great experience regarding the normal development of the embryo. M. Naudin has confessedly not had time or opportunity to follow this up, and we may be well content for the present with the conclusions at which he has so carefully and logically arrived.

As regards those cases in which the characters of the two parent plants are not entirely blended together, but appear distinctly represented in different parts of the hybrid, as for example where a hybrid is formed between two species, one of which has a rough, the other a smooth capsule, the capsule of the hybrid is in parts rough and in parts smooth, his explanation that it arises from the presence of two specific essences in the same plant which tend to separate from each other in different degrees, is ingenious enough, though it does not bring conviction with it, especially when he attributes the reversion to one particular parent rather than to the other, to this cause. The notion is metaphysical, and can at present be regarded as mere theory. We believe, moreover, that Cytisus Adami, to which he refers under this head, was not a hybrid, but a variety arising from some admixture of Cytisus Laburnum and Cytisus purpureus in grafting.

An important point still remains to be noticed, as it is contrary to received notions on the subject, viz., that the same stigma is capable of being fertilized at once or in succession with two kinds of pollen, its own and that of a stranger, so that the same fruit may contain pure and hybrid seeds. Still we believe that this is of rare occurrence, though the stigma of many a plant is more fertile with regard to strange pollen than that contained in its own anthers, as Mr. Darwin has so cleverly pointed out in Primula and Linum. One of the most curious facts, however, in this direction which we recollect meeting with, is that which occurred to Mr. Thwaites in a hybrid between two Fuchsias, where a seed which contained a double embryo produced two distinct varieties, partaking separately of the peculiarities of either parent. We are not aware whether the fact was recorded by him at the time, but we feel quite certain of it from his great accuracy and love of truth. In this case we can scarcely account for the difference without supposing that two pollen tubes from grains of different origin must have penetrated the embryo sac.

A portion only of M. Naudin's memoir is at present published, and we shall look for its appearance in a perfect form, accompanied by its numerous illustrations, with great interest. *M.J.B.*

— We have received from Mr. G. H. Pearce, drawings and a description of what he calls his Patent Hotwater Apparatus, the peculiar feature of which, so far as we gather from the materials before us, consists in the flue being carried along the centre of the hotwater flow pipe, instead of being carried up out of the house in the usual way in the form of a chimney, so that it is in fact a combination of flue and hotwater pipe. The boiler used is a conical one, placed inside the house and left quite exposed in order that advantage may be taken of the heat radiating from its surface. The fire, which is fed by a slanting opening from the outside, occupies the centre of the boiler, from the dome-like top of which the flue pipe passes out. The water-space of the sides of the boiler is carried over the dome, and then contracts to the size of a large pipe encircling the flue pipe, which thus becomes surrounded by water. The boiler is placed at one end of the house, and the flue pipe, with its enveloping hotwater pipe, is carried straight forward in the manner described, to the opposite end, at which point the former passes out through the wall, and communicates with a perpendicular chimney pipe of the usual character, the hotwater-pipe being returned, minus the flue, within the house.

There is no reason to doubt the practicability of this scheme, or to question the advantage of thus utilising the heat which would otherwise pass off directly from the furnace through the chimney, but which must, according to Mr. Pearce's arrangement, in a greater or less degree, be absorbed by the water which comes directly in contact with the flue pipe. The flue pipe, placed where it is, is in fact an indefinite extension of the boiler surface, and the apparatus must, therefore, be both rapid and powerful in its action. We understand, indeed, that it has been applied with very decided success in the nursery of Mr. E. Pearce, of Yeovil, where it may be seen at work. The objection might perhaps be put forward that a flue pipe, such as that above described, would be liable to become choked with soot, and being in the centre of the water pipe would not easily be got at for cleaning; but it would appear that the sharp elbow at the top of the boiler comes in such close contact with the burning fuel, that it may be assumed the pipe will clear itself at this point, while being carried straight through the wall at the opposite end, an opportunity, which is taken advantage of, is afforded of making provision there for cleaning out the remaining portion as often as may be required.

New Plants.

270. Phalænopsis intermedia, *var.* Portei, *Rchb. fil., Bot. Zeit.* No. 15, 1863, p. 128.

The flower of this variety resembles a small flower of Phalænopsis Aphrodite (amabilis, Lindl.); it is of a snowy whiteness, with a purple lip, the centre of which is yellow, as well as the callosity, which is marked by blackish purple spots; the lateral sepals and petals are free from spots at their base. M. Marius Porte found but one single specimen of this plant during his long stay at the Philippines. Neither does he appear to have found more than one plant of Phalænopsis intermedia, Lindl. (Lobbii Hort.), which appears to accord with M. Reichenbach's statement, that there it is a hybrid, the issue of Phalænopsis Aphrodite and equestris, Rchb. (rosea, Lindl.) It ought, therefore, according to the rules adopted for naming hybrids, to be called Phalænopsis Aphroditi-equestris. The only plant that is known of this remarkable variety or hybrid belongs to Mr. Robert Warner, of Broomfield, a distinguished amateur, in whose house there is a plant of Phalænopsis Schilleriana which has lately produced 80 flowers. *Journal de la Société Imp. et Centr. d'Horticulture.*

ORCHARD MANAGEMENT.—No. III.

Another means of providing for the efficiency of drains in orchards, by securing them as much as possible against being obstructed by the roots of the trees (see p. 125), is to cover the drain pipes with Blackthorn bushes, trimmed up and laid in very straight, so that they may be pressed down into a close compass over the pipes. These bush drains are very much used in some parts, particularly in the west of England; and instances have been brought to my notice where the wood has been found quite sound after the lapse of 40 years. For the reasons before mentioned I would use pipes in addition, although for the mere carrying off of the water the bush drains are very durable and efficient. I met with one a short time ago, which was apparently formed of Alder wood; it was surrounded by timber trees and underwood, yet it was running freely, and was probably laid in previous to 1808. I can also recommend for very strong wet land the use of long faggots of green Willow wood bound up very tight, and laid over drain pipes. The depth of these, and also of the Thorn bushes, when pressed down close over the pipes, should not be less than a foot, and to prevent the loose earth from settling down amongst them, the turf sod from the top should be used, turned over on them as before recommended.

And now with regard to the distances of the drains apart. In established orchards this must of necessity be regulated by the distances of the rows of trees, but in opening out a set of drains in new ground, the distances may approximate to the absolute requirements of the ground, and the quantity of water present in the soil. As a rule, in very wet and stiff soils, they must be nearer together than in such as are naturally more porous and dry, and 24 feet may be safely taken as a medium distance, to be increased or lessened according as water is present in greater or lesser quantity, or perhaps I should say, as the soil is more or less retentive of water.

The depth to which the drains should be dug out will mostly depend on the inclination of the ground, whether level or sloping, and also on the facility for

obtaining a good outfall. If the situation is on an easy slope, the drains may be laid in at a uniform depth of 5 feet; but if level, it will then be necessary to start with a depth that will allow a sufficient fall to the outlet. In no case however would I start with a depth of less than 4 feet, if I could avoid it. There are yet many who stoutly maintain that 2 feet drainage is the utmost that ought to be practised in strong wet lands, and that all below that depth is useless expense. This is a perfect fallacy; the shallow drains may certainly at first appear to act quicker upon the soil, but this is only temporary, and very far from effecting a permanent amelioration of the condition of the soil. I can cite an instance quite to the point. Twenty years ago a tenant of my employer's drained a large meadow within view from the mansion; it was at the time full of Rushes, and although on a gentle slope, the surface water in winter laid so deep in places, that one was obliged to make considerable detours to get across it. The tenant, a stout opposer of deep drains, laid in his drains at 2 ft. deep. and although some of the higher parts were laid drier, the Rushes still flourished, and the water kept on the surface in the winter. Five years after it was very little the better for the expenditure, and at that time it came back into the landlord's hands. He immediately had it well and deeply drained, and now the Rushes are all gone, the herbage is vastly improved, and rabbits burrow where formerly you could not walk without getting wet in the feet.

I trust that I have urged this question enough to impress on the minds of young practitioners, that drainage to be effectual must be deep; and in the case of orchards to be durable as well as effectual must not be formed of pipes alone.

The next important operation will be the preparation of the soil for planting. There are many persons who consider this sufficiently attended to by digging out to the depth of 2 ft., a hole of 6, 8, 10, or even 12 feet in diameter, according as their ideas are enlarged or narrow, pulverising the soil, returning a portion to the hole, and then planting the tree, taking care to give it some good compost about the roots in addition to the natural soil. This indeed, taken in its most liberal sense, is very excellent practice compared with some I have seen, where a hole has been taken out but little larger than the spread of the roots, the tree stuck in, the roots covered, the soil trampled down, the turf relaid, and the tree staked and tied. The picture may be finished by imagining the operator resting from his labour, with his foot on the spade, and wiping his forehead, while he dreams of the bushels of rosy or golden fruit in due time to be produced. Alas! in such a case the result is very seldom at all commensurate with the expectations of the operator, nor is it likely indeed that any, except the most hardy and vigorous growing trees, should ever fight their way out of such adverse circumstances.

I mention this latter because it is a practice to be altogether repudiated, as being contrary to reason and common sense; and although the first-named practice —the formation of large holes and the addition of new compost, is no inconsiderable advance upon the second, yet there is too much of the old leaven in it, and I should never consider myself justified in recommending it to any one in the planting of a new orchard. But it may be adopted in cases where it may be desirable to replace with better kinds any ill-conditioned trees or inferior sorts in an established orchard, in which case it is imperative that the whole of the soil to the depth of 2 feet, and to a diameter of not less than 12 feet in each case, should be carted away, and its place supplied with good compost, mainly composed of soil which has not been previously exhausted by the roots of trees. I advise the absolute removal of the old soil, because it is a well known fact that no kind of fruit tree will make a satisfactory progress when planted in the soil and place where one of the same kind has previously been growing. The success also will be proportionate to the size of the excavation, and the amount of new soil. It will be found excellent practice for the first few years after such planting, to take out (in October) a trench 2 feet deep, and a spit or so wide, all round the outside of the excavation, this operation being intended to cut off the roots, which will ramify from the older trees into the new soil in all directions. This soil may be left on the surface for a time to ameliorate, and then be returned to the trench. Care must be taken to dig out the trench of the following year outside that of the previous one, and so on *ad libitum*.

This, however, is only applicable to the establishment of isolated trees to replenish old orchards, but in the case of establishing a new orchard, I have no hesitation in recommending that the whole of the ground should be trenched over a good two spits deep, believing it to be absolutely necessary to the success of all future operations; first, because all the superstrata to that depth being turned over, every part is equally, and, therefore beneficially, affected by the drainage (and in order that this may act still more beneficially, I would recommend that the bottom of each trench should be turned over and broken up, but not brought to the surface); and, secondly, that for the same reason the roots being placed in a medium not overcharged with moisture, are enabled to extend laterally and equally in all directions, which is very different to being checked by the consolidated earth at the sides of a hole; and being thus unchecked in their ramifications, they are much more likely to lay the foundation for a strong and vigorous after-growth, which is the true foundation of success, and much more important than most persons conceive at first sight. It is one of those points in practice which require to be imperatively carried out, in order that success may follow on future operations which depend on its being efficiently performed; but as I purpose to revert to this idea under another section of my subject, I will resume my remarks on the benefits to be derived from a thorough moving the whole of the soil to a certain depth. This will become more apparent, when we consider likewise, that the mere act of turning the soil over, and throwing it about, exposes it to atmospherical influences, which, we find from our every day practice, are most beneficial to the soil, and may be considered as equivalent to the addition of a considerable amount of fertilising materials, aërated and disintegrated soil, being more capable of retaining the fertilising matter which falls from the clouds. In short, first drainage, and then trenching, are entirely dependent upon each other for thorough efficiency, and the following them out may be considered as the only certain way of obtaining a perfect condition of fitness for the object in view.

It will of course require a considerable outlay to bring the land up to the point and into the condition at which we have now arrived, but as the old adage hath it, "whatever is worth doing at all is worth doing well," and as in this case the object is to lay the foundation for profitable production for many years, it is obviously very questionable economy to be niggardly in the application of means to attain that result.

The proper time to plant the trees will be either late in October or early in November, and on no consideration would I plant after that time, if I could avoid it. Well then, presuming that the ground has been drained and trenched during autumn and winter, which is the time when labour can best be spared for the purpose, it would not be desirable to leave it unemployed all the summer, and therefore it should be cropped with Potatos, marking out the rows at least 3 feet apart, so that the spaces may be freely cultivated, which will still further tend to the amelioration of the soil, and the bringing it into a better condition for planting the trees in the autumn, whilst the Potatos, if tolerably successful, and they generally are in newly trenched maiden soil of reasonable quality, will afford a very fair return for the outlay up to this point. *John Cox.*

Home Correspondence.

Royal Horticultural Society. — The handsome manner in which her Majesty's Commissioners for the Exhibition of 1851 have met the Council of the Society, and the conciliatory and praiseworthy way in which the Council has acted towards the Fellows, by considering and endeavouring to act on the leading propositions suggested at the annual meeting, must be a source of satisfaction to the Fellows, and to horticulturists generally. As, however, the Fellows have been requested to "speak out instead of murmuring," and to make what suggestions they have to offer, with the assurance that where practicable they will be adopted, I ask permission to do so through your columns. My object is not to cavil, but to mention a few things which seem to require consideration. The first point I wish to notice is the way in which the Council is elected. I believe it ought to be by an election from the Fellows, but it certainly now is so only nominally, the Council holding the nomination in its own hands; for at the meeting on Feb. 9, the Chairman (by mistake, no doubt) objected to any other names than the nominees of the Council being proposed, on the ground that it would not then be a ballot. But if so, how could it be a ballot in the case of the names announced publicly by the Council itself? especially, too, when only five names were submitted for filling five vacancies. Can it be a ballot to propose only sufficient names to fill the vacancies, and not allow any others to be put to the meeting? My motive in asking this is not to throw down a stumbling block in the way. I am glad to see the Society occupying so eminent a position that upwards of 3000 of the *élite* of the country are Fellows of it, and that the majority of them interest themselves in so elevating and enjoyable a pursuit as horticulture; but I also believe that with conciliatory management and well-developed resources, worked out with a view to horticultural advancement, the number of Fellows might be doubled. May that day not be far distant! In England there is positive need of a society whose avowed object should be the encouragement and development of everything conducive to horticultural interests, and to the distribution of horticultural knowledge. There is a very strong feeling and desire in the country to make the Horticultural Society such a body, if it will but fulfil its mission. In no other country, indeed, is horticulture so successfully practised as in this. We have only to look at our horticultural shows for the evidence. In short, I never feel so proud of the horticultural pre-eminence of England as when witnessing horticultural exhibitions abroad. The first and perhaps natural inquiry then made of an Englishman is, "What do you think of our show?" My rejoinder invariably is, "Magnifique; mais avez-vous vu une exposition des fleurs en Londres?" I should, however, have been very sorry to have applied this remark to the so-called Grand Show held last July, for a more sorry attempt at a grand show has not of late years been seen in the metropolis. I was frequently asked by visitors, where is this class of plants? and where that? and could only reply, "there are no prizes offered, and so they are not represented." Is it not a mistake for the Society with the patronage it has, and its large number of Fellows, to have grand shows unless they are made worthy of the name? The shows ought to be superior to any others in or around London, instead of which (last year especially), they suffer by comparison. And this brings me to a subject deserving more of the attention of the Council than it appears to receive, viz., the more liberal awarding of prizes to meritorious New Plants—for I cannot give honorary awards that title. That new plants are the most interesting and attractive features at horticultural shows, no one with any knowledge of the subject can doubt. The first inquiry with most visitors, and with all having any horticultural taste or knowledge, is, What is there new? Let me ask what part of the exhibition is most crowded during the whole time it continues open? I have before alluded to this subject (p. 990, 1863), and have now to remark that the prizes for new plants in this year's schedule are even more vaguely worded than before. This year, at the two grand shows, 167*l.* is offered in prizes for Orchids, 144*l.* for stove and greenhouse plants, 129*l.* for Geraniums, and so on—sums not too high, for productions requiring great horticultural skill ought to be well rewarded; but how much is there for new plants? and whatever sum may be meant, why is the amount not stated? I happen to know something about this matter, for last year at the Society's great exhibitions I was awarded one silver Knightian medal, four silver Banksian medals, and four bronze medals, besides no end of honorary awards, for all which at the end of the year, I was sent the sum of 5*l.* 6*s.* Although interested in the matter, let it not be supposed that I wish a class of prizes to be made for myself. Such is not the case. I press the point in the interest of horticulture, and with a desire to see the money value offered in prizes by the Society, fairly distributed in the encouragement of those objects in which the horticultural public takes the most interest. There was a time when the Horticultural Society very liberally rewarded new introductions of a deserving character; and this it seems to me is one of its most legitimate objects. I know it has been mooted that the notoriety attached to exhibiting new plants is a sufficient recompense, but it might as well be said that a similar recompense would be sufficient for any other attractive object. The withholding of substantial prizes for new plants is already detracting considerable interest from our exhibitions, inasmuch as foreign novelties have ceased to be sent over. At the first show held at Kensington a great many new plants were sent to me to exhibit for foreign horticulturists, and no less than six prizes went from that show to the continent. Last year, however, I received but one for exhibition, and it obtained the highest award it could have, viz., a First-class Certificate. My correspondent wrote to know its value, and when I explained, that although a very high distinction, it was merely honorary, he requested me immediately to return the plant by express, evidently with some feeling akin to disgust. It is much to be regretted that the plan of giving honorary awards is becoming so much adopted at horticultural exhibitions, for they carry little or no weight with them. An award should represent something; but at present a First-class Certificate, or Certificate of Merit, only means a prettily ornamented card. In other words, the best offering made to a horticulturist, for the introduction of a meritorious novelty, is a valueless card! In the provinces I know novelties are frequently kept back, simply because the encouragement is not sufficiently inducive. This is scarcely as it should be, and I think the subject is one which the Council might advantageously entertain. If its members think otherwise, I bow to their decision, for however desirous they may be to carry out the wishes or suggestions of Fellows, it would, doubtless, be impossible to acquiesce in every alteration suggested. *William Bull, March* 2.

The Rising Generation of Gardeners.—As you seem to take a lively interest in our future welfare, perhaps you may induce some of our "superiors" to develope the secret of what has placed us in our present condition. I trust they will do so with singleness of eye, and purity of motive. Have our accusers used every endeavour to prevent this coming catastrophe to the gardening community, or have they been the means of bringing it on? These are grave questions, and ought to have been thoroughly investigated before such an injurious imputation was circulated. We are now branded with the reproach of being negligent, and unable to occupy the position of our predecessors. Has this outcry been made without any selfish motive? It may, but while these men were young and prosperous they quite overlooked the necessity of training their pupils properly, and now, when declining years are gathering round them they are aware that "misspent opportunities scarce ever return," and to vindicate themselves, they say the fault lies with the rising generation. Had our interest ever been their study, we should not, now, have to deplore our present degenerated condition. They have made one effort to

deprive us of our "bread and cheese," and it is to be hoped they will make another to reclaim us, so that we can earn salt for our "porridge." Young gardeners, one and all, let us bestir ourselves, and not be disheartened at what has been imputed against us; rather let it determine us to disprove the charges which have been made. *A Young Gardener, in a Midland County.*

[We endorse the good advice to his comrades with which "A Young Gardener" concludes his remarks; though he certainly misapprehends the discussion on this question, so far at least as it has gone in our columns. Those amongst the rising generation of gardeners who do "strive" are sure of their reward, and on such as these, friendly criticism will act only as a legitimate stimulus to further effort. Whenever such criticisms are felt to be censures, it is a certain indication that they are not without some foundation in fact. Those moreover, who sit down resignedly, and expect their "superiors" to cram them with the information necessary to their successful progress in their profession, may depend upon it that in the end they will find themselves deficient; they will just know what they will take the trouble to learn, and most of this knowledge must of necessity come from observation of daily practice; but so far as our experience goes they will not find their "superiors" backward in helping them by imparting information, when they really show a disposition to profit by it.]

Royal Garden, Kew.—Having been absent from England upwards of five years, I was much pleased upon a visit to Kew the other day, though at so unfavourable a season, to find that numerous improvements had been made in the Garden, more especially as regards the general health of its vast collection of plants under glass; and in no department was greater advancement observable than in that devoted to Orchids, notwithstanding that the houses are ill adapted for their culture. When I last saw these plants they were certainly in a deplorable condition, and being a great lover of them I was the more grieved when I considered that Loddiges' collection was dispersed, and that I could see no reason to hope to ever behold many of the species which were then dying out at Kew. Now, however, the Director may point with pride to the many fine specimens of Orchids at Kew, which bid fair to surpass what they formerly were in that establishment when associated with the Ferns in another part of the Garden. Many a day have I spent among them at that time; I have inspected most of the collections on the Continent, and I feel sure that that at Kew is only surpassed in number by one or two, and in general health and vigour by none. Most growers of Orchids confine themselves to the cultivation of a few good species and varieties, which make a great display certainly when grouped together, but here the arrangement is as it should be—the showy ones are to be found among their more humble but not less interesting congeners. It is needless for me to point to particularly fine specimens or to those which were new to me, but I may just mention that even at this dull season I counted numbers in bloom, and many others will soon be in a similarly interesting condition. Leaving the Orchids, I turned my steps to the Palm house, and there I also found that great changes for the better had taken place. The first objects which met my eye were some noble stems of Caryota urens lying on the floor; they had recently been cut down for want of head room. I was told that this house had been considerably thinned of plants in order to furnish the large winter garden—an operation which will be of benefit, as it will let in more light and air to the plants remaining in it. Why however, let me ask, is the winter garden closed to the public? To see it was one of my principal reasons for visiting Kew. I may add, that the general keeping of the garden is good; and it is, I consider, highly creditable to the authorities that whilst giving ample enjoyment to the public, the usefulness to the botanist of the different collections of plants has not been overlooked. In no other garden have I seen enjoyment and scientific aid so happily combined as at Kew. *Norman Elliott.*

Gardeners' Education.—Having seen at page 198 the reply of "Ignoramus" to the letter of "A very old F.H.S.," I am induced to state my own case, which I have every reason to believe is similar to that of other young men, who have been turned out like myself when about 16 years of age, with a very slender stock of clothes, and a still more scanty supply of money. In my own case the latter was considerably under a pound; and I was sent to a place where I received 9*s.* per week. In a former place I had fires to attend to constantly, without any assistance from the foreman or any other person. In my last place I had three fires to attend to—these half a mile from the bothy, and in frosty weather I had to go to them at least four times after dark. What time had I to study, even supposing my wages would have furnished me with means? "F.H.S." proposes that Chiswick should become a sort of finishing school for young gardeners, who should give their work for one year's finishing; but where is the money to come from to keep them, if their parents—as is often the case—are not in circumstances to assist them? I am satisfied they cannot save money out of such wages as are ordinarily paid to our class. *A Young Gardener.*

Admission to Flower Shows.—There has been at different times a great deal written and said about under gardeners; but comparatively little has been done for their benefit that I am aware of. Now, cannot the prices of admission to the London flower shows be reduced so as to give young gardeners an opportunity of seeing the finest shows in Britain. I have seen flower shows in the North, and two or three in London, and I am sure the sight acts as a stimulus in regard to our calling. It is my belief that every young gardener in or near London would avail himself of the opportunity if the price were lowered, so that he could meet the payment without wanting his dinner next day. I hope some friend will help *A Young Man.*

[The facilities already afforded to young gardeners who wish to see the London shows are considerable. They are admitted at the Regent's Park and Kensington in the morning, without charge, on application through a proper channel; and the admission at the latter place on the second day of the shows is fixed at 1*s.* Besides which a certain regulated number of free admissions are distributed amongst the exhibitors. What more does our correspondent wish for?]

Callirrhoë verticillata.—Some weeks since you kindly inserted a few lines from me with reference to the plant figured under this name in the "Revue Horticole" for May, 1862, and which I believed to be nothing but the C. involucrata. Having obtained a copy of the "Revue" I ventured to forward it to Professor Gray, requesting his opinion as to the correctness of my belief, and I beg to hand you his reply, which settles the question conclusively, though I must confess that, from my knowledge of the tenacity with which a section of the horticultural world adheres to any name, when once given, let it be ever so absurd, I have not much hope that even the decision of the authority best qualified to judge will meet with much respect. *W. Thompson.*——"As to the Callirrhoë verticillata of Nuttall, so called in the "Revue Horticole," 1862, I have only to remark, that—1. I see no reason to doubt that it is merely a form of C. involucrata, with unusually large flowers. These ordinarily are of about the size they are figured in *Botanical Magazine*, t. 4681; but the colour of the corolla is with us nearly as deep and rich as in the figure of the C. verticillata. 2. I find nowhere published, nor in herbaria, any indication of verticillata of Nuttall; I suppose this name was a lapsus of involucrata. 3. I do not believe that this species is indigenous to California. It abounds on the plains up to the Rocky Mountains, but surely has not been found so far beyond them as California. The seeds received at the Jardin des Plants, or their parent seeds, were probably collected in the Nebraska Territory, on the overland journey to California. 4. All the species of the genus, at least all that have been cultivated (*i.e.* C. involucrata, pedata, digitata, and Papaver), are so handsome and so neat, that I cannot see how they could ever have been said to be weedy. *A. Gray.*"

Laying out Gardens.—I have not yet had the pleasure of seeing "the classical compositions at Holkham, Castle Howard, and Witley Court," but have been startled to find the creation of the main features at Kew adduced by "Delta" (p. 222), as a proof of ability in a great landscape gardener. Kew is immeasurably the greatest garden in the world, but none of its fame is derived from its general arrangement, system of planting, &c. Indeed the only apparent and consistently pursued plan seems to have been the planting of a tree wherever there happened to be an open space. The laying out of Kew is, in my opinion, a disgrace to the country which boasts the priceless treasure of London's literature, and has had such a magnificent lesson from Paxton at Sydenham. I need only instance the splendid new Conservatory at Kew, with its end, and very harsh end too, first presented to the visitor. What a noble feature it would have made, if properly placed in such a glorious garden. *Iris persica.*

Zizania aquatica.—With reference to this plant, some of your readers may be interested in knowing that there is no need to send to British Columbia for its seeds, as I have observed them in the catalogues of some of the German seedsmen, and presume therefore it may be procured without much difficulty. *W. T.*

[But will the seeds grow unless kept in water?)

A Gardener recommended.—I have so often heard my poor father mention your name in connection with his favourite pursuit of horticulture, that I venture to bring to your notice, that in consequence of my being obliged to reduce the scale of the gardens here, the head gardener is in want of a situation, and it occurs to me, that you could perhaps recommend him to some one who is in want of a first-rate gardener, thoroughly experienced in all branches of gardening, respectable and trustworthy. He is about 50 years of age, but is still vigorous and hardworking himself; he has a 19 years character, and is quite competent to undertake any large place. Roses, Ferns, Bulbs, Stove plants, and Vineries, have been his especial care for many years, and he has also considerable taste in landscape gardening. I have so high an opinion of him, that I regret much being obliged from circumstances to lose his services. *J. H. S.*

[No doubt a capital man, trained in an excellent school, once famous for first-rate cultivation.]

Roses: the Bud Rule.—On inquiring of Mr. Eyles whether the bud rule would be enforced, he writes:—"The rule forbidding disbudding Roses is erased as quite useless. We say any addition to the truss will disqualify; and although we do not wish to encourage disbudding, we do not forbid it. It is not against our rule. We left it open on the principle that when a rule is an annoyance, without being a preventive, the sooner it is discontinued the better. I am an advocate for letting exhibitions be as free as possible, and having only such rules as are absolutely necessary." I quite concur. *W. F. Radclyffe, Rushton, March* 1.

The Hydropult (see p. 222).—In answer to "R. C.," regarding the efficiency of the "hydropult" as a garden engine, I beg to state that I was induced to procure one, but two or three trials of its powers were sufficient, and I discarded it for the following reasons:—It is much too hard work for one man; it does not throw the water in a continuous stream, and the jerking intermittent action is anything but desirable; the operator is subject to a liberal wetting, which falls on the foot when placed on the stirrup of the machine; and lastly because a common hand syringe, costing only 10*s.* or 12*s.*, is infinitely superior. *Veritas.*

Hybrid Cucurbitaceæ.—To Monsieur Naudin's list may be added a cross from the Green-fleshed Melon by the pollen of Cucumis flexuosus, a long-shaped, fragrant, uneatable fruit, obtained by me before M. Naudin began his experiments. Also between a Melon and C. Osmocarpus by Herbert some 20 years before that. The black-seeded Citrouille perfected a fruit by the pollen of a Green-fleshed Melon, but the produce was not tested. The Custard Gourd (Patisson) was most carefully crossed with the Large Potiron jaune, but the produce does not warrant the efficiency of the cross. *R. T. C.*

Shelter for Wall Trees.—In the *Revue Horticole* for Feb. 1864, a mode of protecting wall trees from the effects of frost in spring is described by M. Bouscasse, of Rochelle, who states that he has practised it, and finds it very inexpensive. He stretches a stout wire immediately under the coping, fixing it to iron pins at each end, and then using the pins to strain the wire sufficiently, by turning them round. Another wire is similarly secured parallel to the first, but lower, and distant from the wall as much as the width of the protecting material. This is fixed by wire to Oak shingles inserted in the soil. These being made of split Oak (*Chêne de refend*) may bend but will not readily break. On these two wires, thus fixed horizontally, the shelter is placed. This consists of *paillassons* made with strips of Oak and Rye straw, and secured by strong wire hasps. When the danger of frost is over, all is removed except the wire fixed immediately below the coping.‖

[We notice this mode because it may furnish some hint for improvement, as regards the employment of wire; but we do not think it would be so cheap in this country as it may prove in France. In the first place, the Oak would be expensive; and so would be the labour of making the paillassons or mats by those unaccustomed to the process.]

Societies.

ROYAL HORTICULTURAL: *March* 9 (*First Spring Show*).—This was accommodated partly in the entrance hall in the Exhibition Road, which has been altered so as to render it suitable for such a purpose, and partly in the adjoining Council Room and the arcade in connection with it, all three compartments being well filled with charming collections of spring-flowering bulbs and other plants. The weather was unfortunately most unfavourable, snow falling heavily all day.

Hyacinths.—These were in all respects excellent, and produced in sufficient abundance to be highly attractive. In the Nurserymen's class of large groups, finely grown plants came from Mr. Cutbush, who showed among *Reds* well-flowered examples of Queen of Hyacinths, Von Schiller, Lady Sale, Macaulay, Pelissier, Victoria Alexandrina, Madame Hodgson, Howard, and Lina. Of *Blues*, the collection contained Charles Dickens, Laurens Koster, an old but still excellent variety, Baron von Tuyll, Couronne de Celle, Prince of Saxe Weimar, Leonidas, Bleu Mourant, Grand Lilas, and last but not least Argus, a deep blue with a white eye. Of *Plum* or *Mauve*-coloured kinds the best was Haydn. *Black-Purples* were well represented by Prince Albert. Among *White* varieties the most conspicuous were Madame Van der Hoop, Mont Blanc, Prince of Waterloo, Alba maxima, Voltaire, Snowball, Mirandoline, and Queen of the Netherlands. *Blush* or *Delicate Pinks* consisted of Gigantea, Tubiflora, a large-flowered kind; and Lord Wellington. *Buffs* were confined to Koning van Holland. From Mr. Wm. Paul, who furnished another collection, came among *Blues* Sir Colin Campbell, Van Speyk, Orondates, Grand Lilas, Charles Dickens, Baron von Tuyll, Mimosa, Regulus, and charming plants of Argus. Among *Reds* the most conspicuous were Macaulay, of which very fine specimens were shown; Von Schiller, Mrs. Becher Stowe, Solfaterre, Queen of Hyacinths, Howard, Madame Hodgson, a sort prettily striped with white, as were also Queen Victoria, Le Prophète, Duchess of Richmond, and Princess Charlotte. Of *Buffs striped with red* the best was Duc de Malakoff, a truly beautiful sort, and shown in good condition. Among *Whites* the best were Orondates, Mont Blanc, Miss Burdett Coutts, and Grandeur à Merveille. *Blushes* were confined to Duke of Wellington.

Awards.—1, Mr. Cutbush; 2, Mr. Wm. Paul.

Hyacinths in Eighteens.—In this class beautifully flowered plants came from both Mr. Wm. Paul and Mr. Cutbush. Those from the former consisted of Grand Lilas, Feruck Khan, deep porcelain blue; Queen

of the Netherlands, Macaulay, Baron von Schiller; General Havelock, a fine deep blue sort; Chas. Dickens; Mimosa, bright deep blue; Mirandoline, white; Howard, salmon; Duc de Malakoff; Argus, with an unusually fine spike of charming white-eyed blue flowers; Marie, blue; Princess Clothilde, red striped with white; Ida, yellow; Snowball, King of Blues, and Baron von Tuyll. From Mr. Cutbush came Laurens Koster; Grandeur à Merveille, creamy white; Mimosa, Haydn, Baron von Schiller, crimson striped with white; Duke of Wellington, double white flushed with pink; Mont Blanc, C. Dickens, Amiable, Macaulay; Seraphine, white; Gigantea, Florence Nightingale, white striped and flushed with red; Argus; Queen of the Netherlands; Princess Clothilde, red striped with white; and Ida, bearing a noble spike of yellow blossoms.

Awards.—Equal 1, Mr. Wm. Paul and Mr. Cutbush; 3, Mr. Treen.

Hyacinths in Twelves (Amateurs).—This Class was also well supported with finely grown plants, among which we did not recognise anything different from those just named.

Awards.—1, Mr. Young; 2, Mr. Carr; 3, Mr. Taylor.

Hyacinths in Sixes.—In this class were some charming specimens, especially in the group from Mr. Cutbush, who furnished Baron von Schiller, Grandeur à Merveille, Princess Charlotte, Florence Nightingale, General Havelock, and Ida.

Awards.—1, Mr. Cutbush; 2, Mr. Young; 3, Mr. Wm. Paul.

Hyacinths in Sixes, grown in Windows.—Most of the exhibitions in this class did credit to those who produced them. The following sorts in glasses came from Miss Fortune, of Gilston Road, Brompton, viz., Lord Wellington, Sultan's Favourite, white and red striped; Prince of Waterloo, double white; La Tour d'Auvergne, double white; Grand Vainqueur and Bloksberg. Those to which the 1st prize was given were grown in pots.

Awards.—1, Mrs. Noakes; 2, Mr. Young; 3, Miss Fortune.

Hyacinths of 1863-4, *in Sixes.*—Mr. Cutbush showed the following, viz., Josephine, bright deep glossy orange crimson; Schwarzwald, deep porcelain blue; Queen of Denmark, striped crimson; Henrietta Elizabeth, pale lilac; Robert Fortune, mauve with darker stripes; Die Jung Frau, white. From Mr. Wm. Paul came King of Blues, Emma Livry, yellow; L'Or d'Australie, yellow; Lord Palmerston, blue with a white centre, in the way of Argus; Sir C. Napier, blue and white striped; Alba nova, white. Messrs. Barr & Sugden contributed Lord Shaftesbury, white flushed with pink; Dr. Lindley, mauve; King of the Blues, Lady Morgan, deep crimson; Flag of Truce, striped crimson; Queen of Beauty, white. From Mr. Young came Leonidas, President, mauve and white; Philomèle, white, slightly striped and flushed with delicate pink; Horace Vernet, in the way of Argus; Bouquet Constante, striped red; and Mr. Gladstone, creamy white. Of these the best were admitted to be Lord Palmerston, Robert Fortune, Henrietta Elizabeth (which is new in colour), and Josephine.

Awards.—1, Mr. Cutbush; 2, Mr. Wm. Paul; 3, Messrs. Barr & Sugden.

Tulips.—These were numerous; and, if the day had been sufficiently favourable to induce them to open, they would doubtless have made a good display. The following are the names of a few of the most attractive of them, viz.:—Couleur de Cardinal, scarlet; Duc d'Aremberg, brown bordered with yellow; Molière, purple with a yellow base; White Pottebakker; Proserpine, rich glossy rose; Bizard Pronkert, yellow and red; Roi Pepin, white and crimson; Monument, bright crimson; La Metelas, deep rose; Keizer Kroon, yellow and red; Grand Duc, bright yellow; Fabiola, purple and white, together with Vermilion Brilliant, Rex Rubrorum, Tournesol.

Awards.—1, Mr. Cutbush; 2, Mr. Wm. Paul. *Amateurs.*—1, Mr. Young; 2, Mr. Taylor; 3, Mr. Carr.

Crocuses.—These were plentiful, but owing to want of sunshine their flowers did not open. The following were of good quality, viz., Versicolor, Sir Walter Scott, Prince Albert, New Giant Yellow, Ne Plus Ultra, Marie Stuart, La Majestueuse, Elfride, David Rizzio, Calypso, Bride of Abydos, white, and Albion.

Awards.—1, Mr. Cutbush; 2, Mr. Wm. Paul. *Amateurs.*—1, Mr. Young.

Narcissi.—A collection of these, well grown and finely bloomed, was furnished by Mr. Cutbush.

Camellias.—These were confined to two stands of cut blooms—one from Mr. Wm. Paul, the other from Mr. Treen, of Rugby. Mr. Paul's varieties consisted of Old Double White, Teutonia, Reine des Fleurs, Princess Bacciocchi, Alexina, a pretty carnation-striped sort; Eximia, Caryophylloides, Rubens, Catherine Loughi, Jubilee, La Reine, and Mathotiana.

Chinese Primulas.—Of these several well-grown collections were produced, consisting wholly of single white and pink sorts.

Awards.—1, Mr. Todman; 2, Messrs. Dobson.

Lily of the Valley.—A few plants of this were contributed in tolerably good condition by Mr. Bartlett, of Hammersmith.

Roses in Pots.—A small group, well-bloomed for the season, came from Messrs. Paul & Son. Among them were Géant des Batailles, Madame Willermoz, Paul Ricaut, Devoniensis, Souvenir d'un Ami, Anna Alexieff, Triomphe de l'Exposition, Triomphe de Paris, L'Enfant Trouvé, and Marquise de Foucault.

Amaryllis.—These were confined to one small exhibition from Mr. Parker, in which there was a superb velvety crimson kind called Ackermanni pulcherrima.

Subjects belonging to the department of the Floral Committee were by no means numerous. Foremost among them was the magnificent example of the true female Aucuba, loaded with orange-scarlet fruit, from Mr. Standish, of which separate notice will be found in another column. This received a First-class Certificate, as did also Messrs. Veitch for a Gymnogramma, from Chili, with very finely cut quadripinnate fronds; a Second-class Certificate was also awarded to the latter exhibitors for Lycioplesium pubiflorum, of which a full account will be found at p. 388 (1863); and a large white blossomed Rhododendron from Moulmein, related apparently to Veitchii, from the same establishment, was Commended. A pretty bright-looking rosy pink Azalea named Lord Derby, from Mr. Todman of Clapham, was also Commended. From Mr. Shortt, of Clewer Park, came a delicate blue-flowered plant called Pycnostachys urticifolia, and Mr. Standish sent a singular looking Azalea from Japan, with long narrow pink petals, from which the leaves were scarcely distinguishable except by their colour.

A collection of New and Rare Plants came from Mr. Bull, who showed among other things handsome examples of Lomaria cycadifolia, Aspidium pinnatum, a well grown specimen of Cephalotus follicularis, the orange-blossomed Imantophyllum miniatum, Camellias, the handsome-leaved Anthurium leuconeurum, Palms, variegated and other plants, for all of which an extra prize was awarded. The same exhibitor also showed a tastefully-filled example of Miss Maling's plant case. Mr. Todman sent a small but well flowered collection of Azaleas.

Destruction of Glass.—On the day on which this exhibition took place, the heavy wet half-melted snow in sliding off the upper ridge of the Society's Conservatory on to the projecting lower part of the same roof broke between 40 and 50 panes of glass in its descent, letting in the frozen snow on the plants beneath that portion of the roof. It is evident, therefore, that stouter glass should have been employed in that part of the building, and to prevent such a catastrophe in future let us hope that in all that portion on which snow fell, better glass may be put in than that which has just given way, under by no means unusually trying circumstances.

Botanical of Edinburgh: *February* 11.—Professor Balfour, President, in the chair. Various donations were announced. The following communications were read:—"On Displostemonous Flowers, with some remarks on the position of the Carpels in the Malvaceæ." By Dr. Alex. Dickson. The author described two principal forms of diplostemony.—1. Where the younger stamens are the more internal, the carpels, when of the same number, being superposed to the older stamens, as in Coriaria, Agrostemma, &c. In this case there seem to be two true whorls of stamens. 2. Where the younger stamens are the more external, the carpels, when of the same number, being superposed to the younger stamens, as in Geranium, Erica, &c. This was considered to be a merely apparent diplostemony. With regard to the Malvaceæ, it was observed that as with Hermannia and the Dombeyaceæ, the carpels, when of the same number, are superposed to the sepals. An apparent exception to this occurs in Urena, where they are superposed to the petals. In this plant, however, there are 10 styles, so that, as Payer has found in Pavonia, there are 10 carpels, five fertile and five barren. It is a very remarkable circumstance regarding these two genera that in Pavonia the fertile carpels are superposed to the sepals, while in Urena they are superposed to the petals.——2. "On the Cinchona Plantations in connection with the Botanical Garden at Bath, Jamaica." By Nathaniel Wilson, Curator of the Garden. Communicated by Dr. Lauder Lindsay. The principal facts comprised in this report have been already referred to at page 196.——3. "Notice of the Occurrence of Woodsia alpina (hyperborea) in Gaspé, Canada East." By Dr. Lawson, Professor of Chemistry, Dalhousie College, Halifax, Nova Scotia. Professor Lawson stated that this rare Fern (Woodsia alpina) had not been found by any recent collector in Canada, and no one knew where to look for it. He had recently described, however, in connection with Woodsia glabella, and under the name of var. Belli, a remarkable Woodsia found in Gaspé, on the Dartmouth River, 20 miles from its mouth, by his former pupil, Mr. John Bell. This plant on further examination turned out to be the Woodsia alpina.——4. "Remarks on Myrica cerifera, or Candleberry Myrtle." By Professor Lawson. I found Myrica cerifera a few days ago in some quantity on a hillside near Halifax, with small birds feeding on the berries. It is variously called Wax Myrtle, Candleberry tree, and Tallow shrub, in reference to the wax with which its berries are coated. The wax is yellowish green, emitting a fragrant balsamic odour not so unctuous as bees' wax, nor so brittle as resin, sinking in water, whereas bees' wax swims; sp. gr. 1.015; fusing point, 110°. The wax is obtained by boiling the berries in water. The plant is common all over the hills overlooking the innumerable bays and harbours of the Nova Scotian coast, but I do not know that the product has been made an object of commerce here. Some years ago Professor Simmonds called attention to the desirability of encouraging the production of Myrtle wax, and gave (Pharm. Jour., xiii., 418) very full details respecting the wax-yielding Myrtles of South Africa, and the mode of manufacturing the product. The species which is cultivated at the Cape as the best South African one, is Myrica cordifolia. Professor Simmonds speaks of our American Myrtle wax (M. cerifera) as identical commercially with that produced at the Cape. A consignment of Cape wax (2561 lb.) yielded a clear profit of 54*l.* 4*s.* 5*d.*, after payment of all expenses, collecting, shipping, &c. Should any manufacturer in Britain feel an interest in the matter, I will be happy to furnish such additional information as may be procurable here. It is stated that the European Myrica Gale yields a little wax. The Myrica cerifera, like its African congener, is a coast plant. I never saw it in Upper Canada; but Professor Gray gives a station on Lake Erie. On the Halifax hills it is a small spreading bush 3 or 4 feet high, forming a close brush.——5. "Note on the leaves of Ulex (Whin)." By Professor Lawson. The seedling Ulex has at first no spines. The young stem is clothed with leaves—from 12 to 20 in number; these are shortly petiolate and trifoliate, consisting each of three small elliptical hairy articulated leaflets. When the stem becomes 5 or 6 inches in length (usually) the trifoliate leaves cease to be developed, and spines are then produced. Ulex is truly a plant with compound trifoliate leaves, not simple-leaved, as stated in many works.——6. "Notice of Mosses found in the neighbourhood of the Burn, near Brechin, Forfarshire." By Mrs. M'Inroy. Communicated by Mr. John Sadler. The list contained 144 species.——Mr. W. J. Haig, Dollarfield, sent a specimen of a plant just received from a friend in the Banda Oriental, Republic of Uraguay, who writes, "I should be glad if you could get a scientific opinion on the following case:—It has long been a known fact here that sheep removed from the province of Buenos Ayres to the Banda Oriental, or imported from Europe, are liable to die in great numbers during the first fortnight after arriving. I saw an instance myself last week. At an estancia about five leagues from here, the owner had just received from Buenos Ayres 60 rams and ewes freshly imported from Europe, which cost 15*l.* per head: of these 14 died in five days. It is believed that the mortality arises from the sheep eating a plant called 'Min-min,' peculiar to this province. I enclose a twig of it. It grows in patches about the size of one's hand. The stomach and intestines after death are found much inflamed, and in some cases the under side of the skin is quite red with effused blood. I may add that sheep born here, or acclimatised, are in no way injured by the plant, in fact, they almost entirely avoid it." It was suggested that the only way to avoid the danger would be to put the animals in an enclosure cleared of the plant, for the first week or two, by which time desire for green food would be somewhat abated, and they would, like the native born, become more discriminating. The specimen sent was a mere twig without flowers or fruit, and not sufficient for the identification of the plant.——A note was read from N. B. Ward, Esq., in which he stated that the Fucus discovered by Professor Harvey and himself at Kilkee, which was first published as Fucus furcatus, and then as F. distichus, turns out to be neither the one nor the other, but a new species, proposed to be called F. anceps.——James Backhouse, Esq., presented specimens of Trichomanes radicans, accompanied by the following note:—"I have much pleasure in forwarding herewith specimens of Trichomanes radicans, found by my father and myself in a truly wild state, in Carnarvonshire. The plant was remarkably luxuriant."——Mr. J. S. Stewart Hepburn, Colquhalzie, near Crieff, presented the stock of a Larch tree which had continued to grow for a number of years after the tree had been cut down. Professor Balfour suggested that this might be owing to its roots being connected with those of a neighbouring tree, by natural grafting.——Mr. M'Nab recorded the flowering of the following plants in the Botanic Garden:—Jan. 26. Nordmannia cordifolia; Feb. 2. Galanthus plicatus; Feb. 4. Leucojum vernum.

Notices of Books.

Passages of a Working Life. Vol. I. By Charles Knight. Pp. 346. 1864. Bradbury & Evans.

The name of Charles Knight is associated in most minds with certain well directed and successful efforts which were made some 36 years ago, for the promotion of education among the masses; and many will remember with gratitude those marvellously attractive, excellent, and cheap publications, the "Penny Magazine" and the "Penny Cyclopædia," which marked a new era in the literature of the country, and for which we were indebted to the skill and enterprise of Mr. Knight; as also for the publication of those well known but more strictly scientific treatises of the Society for the Diffusion of Useful Knowledge. Passages from the life of such a man can hardy fail to be both interesting and instructive, especially as from early days, young Knight seems to have possessed quick powers of observation, and the times were very critical,

and his profession soon brought him into contact with persons of celebrity.

Naturally enough he loves to dwell upon the incidents of his boyhood, which was passed at Windsor, and this of course leads him to tell us a little about the singularities—as they may without offence be called—of the Court of George the Third. As a boy our author was an enthusiastic admirer of the beauties of nature, and delights in the recollection of the hours which he spent amid the beautiful scenery of the river, in fishing, even when there was scarcely a nibble to reward his pains.

As he grew older the state of the Continent, and the intolerable abuses which reigned in England, stirred his soul within him. He saw the deplorable condition of affairs at home and abroad, and even at that early period conceived the idea that the simple and natural remedy lay in the proper education of the people. At this time his strong sense of religion was shocked with the way in which his confirmation was conducted; and on the other hand he was greatly impressed with a prayer which, while making a catalogue of her library, he found written in the Princess Amelia's prayer book, in her own hand-writing.

After serving his apprenticeship with his father, young Knight, disgusted with the coarseness of manners in the people around him, and pining for literary and intellectual improvement, became a resident in London for a short time in 1812, and occasionally helped his father's friend Mr. Lane in reporting the speeches made in the House of Commons for the *Globe*, and another newspaper. After a few weeks he returned to Windsor, a wiser, a more tolerant, and a more hopeful man. He writes at this time, "some are afraid to educate the poor, some are afraid of distributing Bibles, and the greater part are afraid of Popery." He did not despair of his country, or doubt of its ultimate destiny.

August 1st, 1812, saw young Knight established as proprietor with his father in the *Windsor and Eton Express*, and entrusted with its responsible Editorship, at the age of 21. The difficulties of journalism at that period are feelingly pourtrayed. There was the four-penny newspaper stamp; 3*s.*, and subsequently 3*s.* 6*d.* was the duty charged for every advertisement. There was so little postal accommodation that the distribution of the newspaper when printed, was a work of difficulty and labour. A copy of the *London Gazette* with the latest news was sent down to Windsor by courier, but when it was delayed, and that was often, a leading article had to be written *impromptu*. Lastly the Government was most jealous of criticism, and foolishly severe in punishing anything which they considered a reflection on the powers that be.

Stirring and troublous times were these for the country, and not easy times for the journalist. The condition of the labouring classes was deplorable, and the soundest political economists were overwhelmed with the difficulty of the problem before them. Grim colliers were marching towards London in solemn silence, bearing a placard on which was inscribed, "Willing to work, but none of us will beg." The old poor laws were shockingly administered. The gulf between rich and poor seemed ever widening. Dissatisfaction was visible everywhere, and the Queen's trial drew forth the expression of much bitter feeling.

Observing the influence which Cobbett and such writers had obtained over the labouring classes, Mr. Knight thought that a lesson might be learnt from the enemy, and that, if the intellectual wants of the masses were attended to, the new power of the Press might be employed in supplying healthful food, which would ultimately supersede that which was deleterious; and with this view he published a periodical called "The Plain Englishman," in conjunction with Mr. Locker. One of the first contributors was Dr. John Bird Sumner, the future venerable Archbishop of Canterbury. The publication closed in December 1822, on the completion of the third yearly volume. A little before this time Mr. Knight had become proprietor of a London paper called the "Guardian," and thus made himself acquainted with the London publishing trade.

In 1820, at the request of some young Etonians, he became the editor of the "Quarterly Magazine," and had the privilege of being associated in terms of intimacy with some of our most brilliant writers. We find the names of Walter Blunt, Praed, Sidney Walker, a fellow of Trinity College, Moultrie, Derwent and H. N. Coleridge, Malden, Macaulay, and De Quincey. He dwells with evident pleasure upon the friendship of these distinguished men, sometimes giving a brief account of their several contributions, occasionally remarking that some of the gems of these pieces are not to be found in the collected remains of the authors, and often telling us very pleasantly of characteristic and amusing anecdotes and events which took place during the continuance of this intimacy. And thus Mr. Knight brings us to the end of Vol. I. of "Passages of a Working Man's Life," which is well worth reading, and of which we have endeavoured to give our readers a brief sketch, hoping to return to the subject when Vols. II. and III. are published.

Miscellaneous.

Clavaria.—Most of our readers are acquainted with the little tufts of white, cylindrical bodies, which occur in profusion on our close-shaved lawns in autumn, looking like little bundles of wax tapers. They belong to Clavaria vermicularis, one of the simplest forms of the genus Clavaria, which contains a large number of esculent species, amongst which the little candles, though small, are not to be despised when dressed in little fagots, like bundles of Asparagus. Other species of the genus are simple and club-shaped, others branched, and some to such a degree that they look like little shrubs divested of their leaves. Some are even, compressed, though a neighbouring genus, once confounded with it, but distinguished by its more leathery consistence, departs from the cylindrical type. They exhibit the most various hues, as white, golden yellow, rose, amethyst, grey, orange, with many intermediate tints. *Rev. M. J. Berkeley, in Intellectual Observer.*

Gooseberry [Ribes Grossularia, L.], a name of obscure and disputed origin. It seems to have come to us through the Fr. *groseille*, corrupted to *gozel*, and this word *groseille* from the Germ. *kraüselbeere*, uva crispa, frizzle-berry, a name that seems absurd enough when applied to the Gooseberry, and one that could only have arisen from that common source of blunders in the popular names of plants, the mistranslation of a foreign word. The origin of it is clearly the Du. *kruis-bezie*, cross berry, from the triple spine assuming the form of a cross, and which has been mistaken for *kroes-bezie*, frizzle-berry, and so translated into German and herbalist Latin. In Matthioli, however (ed. Frankf., 1586) it is given correctly *creutzbeer*. *Groseille* has been usually derived through *grossularia*, from *grossula*, dim. of Lat. *grossus*, a small immature Fig. But as the fruit was unknown to the ancients in its cultivated state, and like so many other productions of the garden, was introduced by the Netherlanders, it is to the language of these latter that we should refer for its name. The derivation of it given in some popular works of reference, from *gost*, a furze-bush, probably a misspelling of the MS. for *gorst*, and that of Patrick Blair and some other herbalists, who say that it was called so "because when the green geese begin to be eatable 'tis frequently used as a sauce to them," is undeserving of any serious attention. *Prior's Popular Names of British Plants.*

Calendar of Operations.

(For the ensuing week.)

THE weather is still extremely changeable; nevertheless, if not already done, a collection of the best hardy annuals may still be sown; they are of most service and most esteemed before Verbenas, Pelargoniums, and other bedding plants, come to perfection. Where a frame or pit is at liberty we would recommend their being sown in small pots in loamy soil, and not turned out until they are slightly pot-bound; the flower then gains the predominance, and the great proportion of this above the leaf constitutes the chief beauty of most annuals.

FLOWER GARDEN AND PLANT HOUSES.

Crocuses in pots have blossomed unusually well this year, and out of doors a fine display may doubtless also be expected. Among yellows, lilacs, and whites are some very large and showy kinds, which when planted in parallel rows close together, have a striking effect, a point that should not be forgotten at next planting season. Of some of the more showy kinds a list will be found at p. 247.

FUCHSIAS.—Where fine specimens of these are required, a moist atmosphere, with a slight amount of shading, will cause the shy sorts to make wood by retarding the flowering principle. Those wintered in outhouses or cellars should now be brought forth and potted, if possible, to give them a start for the decoration of lawns or the flower-garden.

HYACINTHS.—These should not have too much heat; they lose much of their effect when the bells are too far asunder, through too much excitement in proportion to light.

NEW HOLLAND PLANTS.—Now is a good time to shift such as require more pot room.

ORCHIDS.—These will be pushing vigorously, and many on blocks and baskets will require careful attention in the way of watering, which should be done on sunny mornings early, and air given freely for a couple of hours in order to prevent moisture from lodging amongst the buds and tender shoots.

ROSES.—Keep these free from insects, and water those in the forcing pit occasionally with weak liquid manure.

FORCING GARDEN.

CUCUMBERS.—Make it a point to turn one or more of the linings frequently until May. See that they are in good condition as regards moisture, and take care that no burning extends into the bed. Do not object to turning out old plants in preference to young ones, provided they have not received any check.

FIGS.—Provide against red spider by copious syringings, and the application of sulphur on the pipes. Be sure to follow up stopping.

KIDNEY BEANS.—Secure abundance of atmospheric moisture to these, and water them continually with clear manure water.

PEACHES.—Trees on which fruit is swelling will now begin to enjoy a little liquid manure; guano water, clear and weak, will be found of great service. Gross shoots need scarcely be feared with this application, provided all luxuriant wood is stopped as soon as it is 5 or 6 inches long.

PINES.—It should be at all times understood that a sudden check of any kind whatever is at variance with the whole economy of Pine growing. In shifting in spring this frequently happens if the plants are allowed to stand unplunged in a temperature of 50°, whilst the tan bed from which they were taken has probably been 85°. Such a great discrepancy is found to be followed by pernicious effects. Attend well to atmospheric moisture; rest assured that as far as the Pine alone is concerned, it is not easy to overdo it at this period. Shut in sun heat whenever it can be done. Do not be afraid of a thermometer of 90° at 3 o'clock on a sunny afternoon.

STRAWBERRIES.—Continue to force Keens' Seedling for succession crops to those of last month.

VINES.—Look well to the bottom-heat outside. Endeavour to keep your fermenting material to 80° or 90°. When material of this kind is suffered to become inactive at this period, it is worse than useless. Early Grapes now about stoning should be run over once more with the scissors; let the shoulders be well set out. Keep up an agreeable warm atmosphere on all ordinary occasions, but allow the heat to rise to 85° or 90° early in the afternoon of bright days, which we may now expect soon to get, sinking to 65° at night.

HARDY FRUIT AND KITCHEN GARDEN.

Finish planting of all sorts of fruit trees and bushes, and mulch newly planted trees with half rotten dung. Grafting of Apples and Pears may now be proceeded with, following in the order in which the buds break. Protect fruit blossom by all possible means. Straw-ropes, mats, canvas, bunting, nets, Fir boughs, and fronds of Fern, should all, or any of them, be in requisition. As soon as nailing Peach trees is finished, mix sulphur and soap water to the thickness of paint, and draw a band of the mixture between the shoots, in all directions; this once done, and that well, will tend to secure the trees from red spider.

BROCCOLI.—As soon as the ground is in a proper state to receive the seed, sow a little of the Purple Sprouting sort.

CAULIFLOWER.—If not already done, a small sowing may still be made upon a slight hot-bed, or better perhaps early next month upon an open border.

CELERY.—To secure fine heads prepare a slight hot-bed, covered with 2 or 3 inches of light rich soil, and protected by a hand-glass or frame, on which sow the seed now, covering it lightly with sifted soil; when the plants appear, water sparingly, and give abundance of air to prevent damp.

HERBS.—Sweet Marjoram and Basil may now be sown in heat.

TOMATOS.—If not already done, these should now be sown, and raised in a Cucumber frame.

TURNIPS.—If not yet done, lose no time in getting in a little seed of the White Dutch on a warm border.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending March 9, 1864, as observed at the Horticultural Garden.

March.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain
Thurs. 3	24	29.662	29.499	54	39	46.5	42	42	E.	.54
Friday 4	25	29.509	29.490	57	31	44.0	43	42	S.	.06
Satur 5	26	29.409	29.227	48	38	43.0	44	42½	E.	.47
Sunday 6	27	29.102	29.047	54	39	46.5	44½	43	S.W.	.18
Mon. 7	28	29.165	28.911	53	39	46.0	45	44	S.W.	.13
Tues. 8	●	29.200	28.988	47	30	38.5	45½	44	N.	.11
Wed. 9	1	29.261	29.079	35	25	30.0	43	45	N.E.	.40
Average.		29.329	29.180	49.7	34.4	42.0	43.8	43.5		1.85

March 3—Foggy; rain; heavy rain at night.
— 4—Hazy and mild; very fine; clear at night.
— 5—Foggy; very fine; heavy rain at night.
— 6—Rain; cloudy; overcast; showery.
— 7—Cloudy; rain; strong wind; overcast; rain; barometer very low.
— 8—Foggy; rain; overcast.
— 9—Cold rain; sleet and snow all day, with cold N.E. wind.
Mean temperature of the week 1¼ deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending March 13, 1864.

March.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No. of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 13 .	50.8	34.2	42.5	14	0.86 in.	2	2	6	3	3	10	5	5
Mon. 14..	51.2	34.8	43.0	17	0.70	1	6	5	—	6	13	3	1
Tues. 15..	51.0	34.4	42.7	18	0.37	3	9	4	1	3	11	5	2
Wed. 16..	51.5	34.7	43.1	13	0.68	—	10	7	—	5	7	1	3
Thurs. 17..	49.9	32.2	41.6	12	0.37	5	5	3	—	3	7	5	5
Friday 18..	50.4	33.5	41.9	11	0.24	3	8	2	2	2	11	5	3
Satur. 19..	51.5	33.8	42.6	13	0.33	5	5	2	4	2	10	7	3

The highest temperature during the above period occurred on the 15th, 1828, and 19th, 1836—therm. 67 deg.; and the lowest on the 17th 1845—therm. 17 deg

Notices to Correspondents.

BOOKS: *A Devonian.* Berkeley's British Mosses. If you want a more complete series of figures, the volume of English Botany, small edition, containing the Mosses, might be added; but it will not render the first superfluous.

INSECTS: *J P D.* The white spots on your Pine leaves have been produced by Scale. If you take a magnifier you will see numbers of the infant Cocci still adhering to the leaves.

NAMES OF FRUITS: *T B H.* No. 2, Scarlet Nonpareil.—*C R.* 1, a very austere mealy Apple not known; 4, Scarlet Nonpareil, very good.

NAMES OF PLANTS: *R J., Deal.* 1, Arabis alpina; 2, Gilanthus plicatus; 3, Cornus mas; 4, Laurus nobilis.—*M T M.* 1, Disandra prostrata; 2, Phlebodium aureum; 3, Arthr[illegible] dium paniculatum; 4, Lastrea augescens.—*Arran S.* 1, recognisable; 6, Habrothamnus elegans; 7, Nephrolepis tuberosa; 8, Blechnum occidentale, var. minor.—*P D L.* Eranthemum nervosum; 2, Goldfussia isophylla; 3, Aristolochia crenulata; 4, Solanum capsicastrum.—*J.* Quercus coccifera.

WOODS AND FORESTS: *Delta.* "The Right Hon. the First Commissioner of Woods and Forests, Whitehall, London." Better send through some Member of Parliament.

Agricultural Seeds.—Carriage Free.

SAMPLES OF THE MOST GENUINE STOCKS, AND AT PRICES NOT TO BE UNDERSOLD BY ANY RESPECTABLE HOUSE IN THE TRADE.

WILLIAM WOOD AND SON beg to intimate that they have for many years supplied their customers with PURE, GENUINE, UNADULTERATED FARM SEEDS, in consequence of which this branch of their business has so increased, that they have been compelled to extend their premises, and are now in a position to supply the largest orders with promptitude and despatch.

W. W. & S. will be happy to send samples and lowest prices of CLOVERS, RYE-GRASS, NATURAL GRASSES for Permanent Pasture, CABBAGE, CARROT, MANGEL WURZEL, PARSNIP, TURNIPS, and all other Agricultural Seeds.

Woodlands Nursery and Seed Warehouse, Maresfield, near Uckfield, Sussex.

Agricultural Seeds.—Carriage Free.

WM. WOOD AND SON are prepared to supply from their immense stock the following pure and genuine Seeds:—

First Quality GRASSES and CLOVERS for Laying down Permanent Pasture, 28*s.* to 30*s.* per acre.

Second Quality for Ditto, 20*s.* to 26*s.* per acre.

CLOVERS and GRASSES for Renovating Pastures, 6*s.* to 9*s.* per acre.

LAWN GRASS, best quality, 18*s.* per bushel.

Ditto for Parks, 16*s.* per bushel.

MANGEL WURZEL SEED. Special reduced prices will be given for large quantities.—IMPROVED YELLOW GLOBE (very pure stock), 6*d.* per lb.; IMPROVED ORANGE GLOBE (extra fine), 6*d.* per lb.; RED GLOBE, 6*d.* per lb.; LONG RED (very superior stock), 6*d.* per lb; LONG YELLOW, 6*d.* per lb.; ELVETHAM LONG RED (highly recommended), 8*d.* per lb.

SWEDE and TURNIPS, RAPE, MUSTARD, DRUMHEAD CABBAGE, CLOVERS, &c., at lowest prices.

PRICED CATALOGUES Free on application.

Woodlands Nursery and Seed Warehouse, Maresfield, near Uckfield, Sussex.

Seed Corn from the Chalk.

ALL THE MOST APPROVED VARIETIES OF WHEAT, BARLEY AND OATS, SUPPLIED BY

RAYNBIRD, CALDECOTT, AND BAWTREE, Address, Basingstoke; or 89, Seed Market, Mark Lane.

WINTER and SPRING TARES, SAINFOIN, and all other kinds of AGRICULTURAL SEEDS.

Samples and Prices post free on application.

"Z" Family, now offered for the First Time.

TRADE

HALLETT'S | PEDIGREE | NURSERY WHEAT.

MARK.

THE BEST SPRING WHEAT KNOWN.

For full description of "Z family" see Advertisements in our Numbers for September and October, 1863.

PRICE—One Guinea a Bushel (or Seven Guineas a Quarter), delivered with printed directions for planting, at the Brighton Railway Station, in bags sewed up and sealed, upon receipt of Cheque or Post Office Order, which must in all cases accompany the order. *In the Spring drill 2 bushels per acre.*

HOW OUR WHEAT CROPS MAY BE DOUBLED, and other papers forwarded on application, enclosing six stamps.

Apply to FREDERIC F. HALLETT, Esq., F.L.S., The Manor House, Brighton, Sussex.

Alsike Hybrid Clover.

THE LONDON SEED COMPANY, LIMITED, can supply SEED of this valuable CLOVER, at 9*d.*, 10*d.*, and 1*s.* per lb., or 82*s.*, 88*s.*, 94*s.*, and 100*s.* per cwt. Carriage free. Samples fine.

68, Welbeck Street, Cavendish Square, W.

THE ALSIKE CLOVER for CLOVER-SICK LAND.—This excellent Clover will thrive in almost any soil. It produces two good cuttings in the year, and makes superior Clover Hay. It may be sown alone (14 lbs. per Acre), or in conjunction with other Seeds, either for alternate husbandry or for Permanent Pasture. If sown with Italian Rye-grass it is ready for mowing three times in the year.

SUTTON & SONS have now the satisfaction of offering very fine new Seed at the greatly reduced price of 10*d.* per lb., or cheaper by the cwt., and strongly recommend this Clover to more general cultivation.

Royal Berkshire Seed Establishment, Reading.

RICHARD SMITH'S RENOVATING GRASS SEED should Now be Sown, at a cost of 6*s.* per acre. A greatly increased yield will result from sowing 8 lbs. of Finest Grass and Perennial Clover.

RICHARD SMITH, Seed Merchant, Worcester.

Grass Seeds.

RICHARD SMITH is now prepared to supply MIXED GRASS SEEDS of very superior quality, suitable for all kinds of Soil. Per Acre.

MIXTURE for Laying down to PERMANENT PASTURE .. .. 25*s.* to 30*s.*

MIXTURE for ORCHARDS or LAND shaded by Trees .. .. 24*s.* to 26*s.*

MIXTURE for PARKS and CEMETERIES .. 28*s.* to 30*s.*

MIXTURE for Improving OLD PASTURE .. 6*s.* to 8*s.*

MIXTURE for One, Two, or Three Years' Lay .. 15*s.* to 18*s.*

MIXTURE for Fine LAWNS and BOWLING GREENS .. .. per lb. 1*s.*

PRICED LISTS may be had on application.

RICHARD SMITH, Seed Merchant, Worcester.

SUTTON'S ITALIAN RYE-GRASS SEED, cheaper in large quantities. per bush.—*s.* *d.*

ITALIAN RYE GRASS, good English seed 5 6

SUTTON'S IMPROVED ITALIAN RYE-GRASS, extra fine 6 6

PRIZE IMPORTED SEED, extra well cleaned 7 0

ITALIAN in BALES, as imported 6 6

Sow 2 or 3 bushels per acre alone. It will thrive in any soil, and may be sown any time between February and September, with a certainty of success. Italian Rye-grass is also very useful for sowing with Clovers instead of Common Rye-grass; it rises early in the spring above the Clover, and protecting it from frost, brings the crop forwarder and heavier.

ENGLISH AND SCOTCH RYE-GRASSES, CHEAPER IN LARGE QUANTITIES. per bush—*s.* *d.*

PERENNIAL RYE-GRASS, good clean seed 5 6

PACEY'S PERENNIAL RYE GRASS, very fine heavy do. 6 6

EVERGREEN RYE-GRASS, or PERENNIAL DEVON BEAVER 7 0

ANNUAL, or COMMON, for alternate husbandry, best quality 5 6

Ditto ditto lighter seed, but clean 4 6

Samples and lowest price per quarter may be had on application to

SUTTON & SONS, Seed Merchants, Reading.

Present Prices of Farm Seeds.

THE NEW FARM SEEDS are NOW READY, at Reduced Prices.

PRICED LISTS may be had, Post free, from SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

SUTTON'S MIXTURES of CLOVERS and RYE-GRASS.

To be sown with Corn for a crop of Clover, &c., in the following year.

In the Mixtures of Clovers and Rye-grass described below, we generally give 14 lbs. of Clovers (principally Red and Alsike) and 1 peck of Rye-grass per acre, but if more Rye-grass should be desired it can be supplied without altering the price by omitting a pound or two of Clovers. Should one sort of Clover only be required, it is only necessary to state this in giving the order.

CLOVERS and ITALIAN RYE-GRASS, for One Year's Clover Hay, at 12*s.* 6*d.* per acre.

CLOVERS and COMMON RYE-GRASS, for One Year's Clover Hay, at 12*s.* 6*d.* per acre.

If Rye-grass Seeds are not desired, the following will answer well—

CLOVER SEEDS WITHOUT RYE-GRASS, at 10*s.* 6*d.* to 12*s.* 6*d.* per acre, according to sorts and quantities supplied.

*** Gentlemen requiring "Seeds" to sow with Corn for One Year's Clover Lay will save themselves trouble, and ensure a proper mixture for their soil, by ordering the above-named Mixtures for the number of acres to be sown.

SUTTON'S MIXTURES for 2, 3, or 4 Years' Lay.

GRASSES, CLOVERS, &c., for 3 or 4 years' Pasture, Hay, or Soiling (2 bushels per acre), 21*s.* per acre.

GRASSES, CLOVERS, &c., for 2 years' Pasture, Hay, or Soiling, (weighing about 30 lbs., containing a large proportion of Clover Seeds), at 17*s.* 6*d.* per acre.

ITALIAN RYE-GRASS and ALSIKE CLOVER, for 2 or 3 years' Hay and Soiling, which may be cut three times a year (2 bushels per acre), 21*s.* per acre.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading, Berks.

SUTTON'S GRASS SEEDS for all SOILS.

The following Letter has been received, besides many more to the same effect from other customers:—

From Professor LINDLEY, *Royal Horticultural Society, London.*

"We have already made trial of your Grass Seeds, and it is only justice to say that they have proved the best we have sown for many years."

MIXTURES for LAYING DOWN LAND to PERMANENT MEADOW or PASTURE.

The quantity per Acre is 2 bushels large light Seeds and 12 pounds small heavy Seeds, for best Permanent Pasture. If required for three or four years' lay only, cheaper mixtures will be supplied.

				Per Acre.	
				s. *d.*	*s.* *d.*
1.	BEST MIXED PERMANENT GRASS and CLOVER SEEDS, for good Loamy Soil of medium texture				30 0
2.	Cheaper	ditto	ditto, for similar Soil ..	21 0 to	25 0
3.	Best	ditto	for Heavy Loam		30 0
4.	Cheaper	ditto	ditto	21 0 to	25 0
5.	Best	ditto	for Stiff Clay		30 0
6.	Cheaper	ditto	ditto	21 0 to	25 0
7.	Best	ditto	for Light Sandy Soil ..		30 0
8.	Cheaper	ditto	ditto	21 0 to	25 0
9.	Best	ditto	for Sharp Gravelly Soil ..		30 0
10.	Cheaper	ditto	ditto	21 0 to	25 0
11.	Best	ditto	for good Black Peaty Soil		30 0
12.	Cheaper	ditto	ditto	21 0 to	25 0
13.	Best	ditto	for Chalky Soil		30 0
14.	Cheaper	ditto	ditto	21 0 to	25 0
15.	Best	ditto	for Dry Uplands and Sheep Downs		30 0
16.	Cheaper	ditto	ditto	21 0 to	25 0
17.	Best	ditto	for Parks, Field Lawns, and Cemeteries ..	30 0 to	36 0
18.	Best	ditto	for Water-Meadows		25 0
19.	Best	ditto	for Orchards and Pastures overshadowed with Trees		30 0
20.	Best	ditto	for Reclaimed Marsh Lands ..		20 0
21.	Best	ditto	for Poor Heath Lands		20 0

22. FINE LAWN GRASS SEEDS, for making New, or improving Old, Garden Lawns. Price 1*s.* per lb.; 2*s.* 3*d.* per gallon, or 18*s.* per bushel. (3 bushels or 60 lbs. per acre.)

23. RENOVATING MIXTURE for Improving Old Pastures, consisting of the finest Grasses and Perennial Clovers. Seed required, 8 to 12 lbs. per acre. Price 9*d.* per lb., or 80*s.* per cwt. Sow in March and April, or after hay-cart at Midsummer.

24. MIXED GRASS SEEDS of coarse kinds, for Railway Embankments, Game Cover, &c., &c., 3*s.* 6*d.* per bushel.

N.B.—Gentlemen possessing Perennial Clover Seeds, &c., can be supplied with a proper mixture of Grasses to sow with them, as under:—

25. MIXED FESCUES, COCKSFOOT, LOLIUMS, POAS, SWEET VERNAL, &c., best sorts for Permanent Pasture (omitting Clovers, &c.), 10*s.* per bushel, (20*s.* per acre).

Two Bushels of the above, and 12 lbs. of mixed Clovers, will be the proper quantities per acre for Permanent Pasture.

A copy of Mr. MARTIN SUTTON'S ESSAY on PASTURES, containing complete instructions on sowing and management, is supplied with each parcel of Grass Seeds.

SUTTON'S LIST of PRESENT PRICES of other AGRICULTURAL SEEDS, may be had Post Free.

Goods delivered Carriage Free, except very Small Parcels.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

WHEELER'S LITTLE BOOK on SEEDS.

CARTER'S GARDENER'S VADE-MECUM.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.

GRASS SEEDS of best quality can now be supplied Carriage Free.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.

CLOVER SEEDS of best quality, supplied Carriage Free.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.

TURNIP SEEDS from best selected Roots supplied Carriage Free.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.

MANGEL WURZEL from the best selected Stocks, supplied Carriage Free.

THE SECOND INTERNATIONAL DOG SHOW at the AGRICULTURAL HALL, ISLINGTON.

Several important Exhibitors having represented that the days first fixed, viz., May 13, 16, 17, and 18, would be inconveniently early, the Directors of the Agricultural Hall have decided on deferring the Show to FRIDAY, May 27, and the following SATURDAY, MONDAY, TUESDAY, and WEDNESDAY. Prize Lists and conditions will be ready on the 14th inst.

By order, S. SIDNEY, Secretary,
Agricultural Hall Company (Limited).

Offices, Barford Street, Islington, March 3, 1864.

BATH and WEST of ENGLAND SOCIETY, for the Encouragement of Agriculture, Arts, Manufactures, and Commerce. ESTABLISHED 1777.

Patron—H. R. H. The PRINCE OF WALES, K.G.

BRISTOL MEETING, 1864.

President—The RIGHT HON. EARL FORTESCUE.

The ANNUAL MEETING, 1864, will be held at BRISTOL, on JUNE 13, 14, 15, 16, and 17.

ENTRIES Close as follows:—STOCK and POULTRY, April 9; IMPLEMENTS, April 11; ARTS, April 16.

Applications to be made for STOCK and IMPLEMENTS to the Secretary; for POULTRY, to Mr. S. PITMAN, Taunton; for ARTS, to Mr. R. R. M. DAW, Exeter; for HORTICULTURE, to Mr. JONATHAN GRAY, Bath.

A SUPPLEMENTARY LIST of PRIZES, offered by the Local Committee, and the Society of Merchants of the City of Bristol, for Cattle, Shropshire Sheep, Long and Short Wool Couples, and Cart Stallions, is now ready. Entries to Close on April 16. By Order of the Council,

HENRY ST. JOHN MAULE, Secretary.

2, Wood Street, Bath.—March 12.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.

MEETING at NEWCASTLE-ON-TYNE, 1864.

STOCK and IMPLEMENT PRIZE SHEETS are now ready, and will be forwarded on application to

H. HALL DARE, Secretary.

12, Hanover Square, London, W.

The Agricultural Gazette.

SATURDAY, MARCH 12, 1864.

MEETING FOR THE ENSUING WEEK.

WEDNESDAY, March 16 { Agri. Society of England.. .. Noon (Mr. HUGHES on Clay Land Cultivation.)

IT will be seen from our Parliamentary report that the "Cattle Diseases" Bills, mentioned last week, were on Thursday evening read a second time, and ordered to be referred to a Select Committee.

The following estimates and facts were quoted during the debate. It appears that we have about 3,500,000 cattle in England, 3,250,000 in Ireland, and 1,000,000 in Scotland. The total number of sheep is about 40,000,000, that of pigs about 4,300,000. The value of our live stock is estimated at 121,000,000*l.* The annual mortality is 5 per cent. of cattle, 4 per cent. of sheep, and of pigs 10 per cent. in Ireland, less in England and Scotland. The loss by death is of course only part of the mischief done by disease—loss of condition is another material injury—and the bad quality of much of our meat is a third. On the third point many medical authorities were quoted, which appear to establish the fact that diseased meat is more or less poisonous.

It is believed that the Bills now before Parliament will, if they pass into law, check the progress of all the contagious diseases to which our live stock are liable, and so diminish all these evils consequent upon them.

THE history given last week of the *Barmpton Rose* tribe at Towneley, with the short account in another page of the four remaining families of which this celebrated herd consists, will suffice for the information of our readers about the stock which will on Thursday next, March 17, be finally disposed of.

We must however make an addition to the list of prizes named last week as taken by the cow *Butterfly*. In 1850 her wonderfully successful career commenced at the Exeter Show of the Royal Agricultural Society, where, as well as at the shows of the Yorkshire and North Lancashire societies, she was that year first in the class of yearling heifers to which she then belonged. And as no event of late years in the history of Short-horns has excited anything like the interest which the

approaching sale of the Towneley herd now commands, we publish the following account of it by a good and well known judge who has paid a recent visit to it. He says:

"I had indeed a great treat yesterday in looking over Colonel Towneley's magnificent herd. Nothing can be more splendid in condition and health, and there is scarcely an animal undeserving of the highest praise. I really think there has been nothing like it in my time, save perhaps to some extent Lord Ducie's great sale, where grand figures were realised. I particularly noticed Lot 9, *Pageant*, a remarkably nice cow, an extraordinary breeder, and as it seems to me, breeding so entirely after the bull she is in calf to. This in horse breeding is invaluable, and it must be good in cows also, whether Short-horns or not. Lot 7. *Pearl*, takes my fancy very much, and Lot 18, *Roan Knight's Butterfly*, also. Her daughter (38), *Wharfdale's Butterfly*, is a lovely heifer. Lot 26 is a fine specimen; Lot 30 is a wonderfully good one, and probably the best; and 31 is a grand heifer. *Violante* is a great and grand cow and a good breeder. Her calf, Lot 9, B.C., must make a most useful bull. Lot 33, heifer out of Lot 9, is a wonderfully curiously marked, but a very smart one indeed, and will be much fancied. Altogether it is impossible to conceive a grander show than the whole makes, and no herd can ever possibly be exhibited in finer health and condition.

"ROYAL BUTTERFLY looks as gay and lively and aristocratic as ever. BUTTERFLY 11TH is a remarkably good one, and has gone on wonderfully since the Worcester meeting. BARON HOPEWELL is a bull that bears looking at, but his first impression is not very striking. I saw the DUKE OF WHARFDALE. He is a wonderful young bull, though not in health just now, but the hope is he will soon be right. I hardly know whether we ever had a more promising young bull for every useful purpose. Grandeur and size and quality of hair—great substance—all combined."

As the time of year approaches when one thinks of spring chickens and Asparagus, and ducklings and green Peas, and as one considers what a number of chickens must be consumed during the bustling, driving time of the London season, the question constantly presents itself—where do they all come from? If properly and statistically answered, many who live in our agricultural districts, with every means and appliance at hand for the profitable rearing of poultry, would stand amazed at the idea that eggs can be sold, and chickens also, at prices so low, and yet leave a good profit to the importer here, the exporter abroad, the peasant or farmer who is the producer, and to all of them after the payment of freight and commission. On the other hand, what farmer will not be inclined to doubt his eyesight, when in about six weeks from this date he reads (as he will do in any Paper that gives the weekly return of London markets)—"best Surrey fowls, 10*s*. to 12*s*. per couple, and chickens, 8*s*. to 10*s*."

Many a man who now looks on the feathered denizens of his farmyard with certainly a feeling nearly akin to disgust, and who tolerates them only out of kindness to one indoors, would be induced to pay attention to the production of them in perfection could he but feel satisfied that his exertions would bring him a fair return. Many who read this will say, as has been often said before, "These fine prices are all very well on paper, but who gets them in reality?" In reply it can only be said that between this present time and the first week in June, numbers of accounts will be returned to the different feeders, breeders, and higglers of Surrey, Sussex, and some parts of Kent, presenting an average equal to the prices quoted above, and in some instances exceeding them. Essex, Cambridgeshire, Lincolnshire, and some parts of Bedfordshire all take large sums of money from London for fowls. One reason why hitherto the farmer has cared little for his fowls is that the return he really has obtained for them has been but nominal. This may easily be remedied by taking them under his own supervision, as he would any other part of his stock.

Take an ordinary homestead in almost any part of England: you ask the owner if he keeps fowls, the answer is, "There are some about—more trouble than they are worth—but the mistress likes a chicken on the table when we have a friend." It is very often the case that the birds which form the breeding stock are some that are old, worn out, and degenerate; no care is taken to introduce fresh blood, or in the selection of breeding stock; and then, when the hens come off with weakly and small clutches, and the pullets lay badly, it is said that fowls are more bother than they are worth. Very often the produce is sold to a travelling higgler, who from lack of competition pays what he likes for the chickens, but this would not be tolerated with any other part of the farm produce. Imagine a farmer allowing a pig-jobber to take away a litter of pigs and return what he liked for them! The early lamb and pork is sent direct to London or some large market town. What a pity that the poultry produce is not equally cared for! Consider the many intermediate expenses which might nearly all be avoided by its being sent direct from the producer to the London or other large market. The higgler who purchases the chicken at the farm house, takes it home, kills, plucks, packs, and sends it to market. If the producer sent it direct to the market, how much more satisfactory would the return be. Young, well fed, and carefully killed fowls, sent to Leadenhall or Newgate markets, will always sell well, except just in the hot dull months of August and September. Chickens that are ready for market in April, May, and June, will always well repay the care and extra pains taken in feeding them.

Open competition has done a great deal for all sorts and branches of trade. The quantity of fowls, turkeys, ducks, geese, and eggs imported into this country in the course of the year is immense, and although the price fetched by the foreign produce is in every case below that of the native, yet so well does it answer that every season brings new names and new firms into the trade from abroad, and the quantity imported is constantly on the increase. It is very gratifying to find in the catalogues and prize lists of the principal Poultry Shows the names of many landed proprietors and farmers as exhibitors. It is to be hoped that the number of them may yet be doubled, and that by their good example the poultry yard, which hitherto has not played its part, may take its place in a good position on the right side of the farmer's balance-sheet. *B.*

FOR the correction of exaggeration on the subject of prevalent cattle diseases Professor SIMONDS has addressed a letter to the *Times*, from which we make the following extract:—

"Within the last week my attention was directed to a statement in one of the leading agricultural papers to the effect that the 'lung disease' was on the increase in the London dairies, and that 'in the fertile vale of Aylesbury the disease has'—I quote the entire sentence—'for three months been extremely prevalent, and the cases are generally of a severe and fatal character.'

"Feeling that these statements might have considerable weight just now, and believing from my previous information that they did not fairly represent the facts, I put myself in communication with several farmers, cattle-dealers, veterinary surgeons, dairymen, and others in London and its immediate neighbourhood; and I also wrote to the veterinary surgeon to the Vale of Aylesbury Cattle Association. The results are now before me, and I have the satisfaction of saying that my informants from the London district are almost unanimous in stating that the lung disease has not prevailed to any serious extent for several months, and that in many establishments it has had no existence at all; and, further, that in the isolated instances in which it has been present its virulence has been considerably diminished.

"My information from Aylesbury is even more conclusive on the point. My correspondent thus writes:—'With respect to pleuro-pneumonia—lung disease—possibly I cannot do better than give you extracts from my case-book, and forward with these a copy of the rules of our association, at the end of which you will find a list of the members with the numbers of the cattle insured within a radius of 10 miles of the town of Aylesbury, no very inconsiderable number to form a conclusion as to the extent of disease of any kind.' 'Of cases of pleuro-pneumonia we had in May, 1863—3; June, 2; July, 12; August, 9; September, 15; Oct., 3; November, 4; December, 1; January, 1864, 2; February, 0; making in all 51 cases in 10 months, but only 10 during the last five months.'

"On referring to the list alluded to I find no less than 11,310 beasts insured, and 150 calves, making a total of 11,460, among which, as we see, there have been only 51 cases of lung disease during ten months; or, speaking in general terms, only five cases a month in this large number of animals.

"I trust that these facts may tend to place the matter of cattle diseases in its true light, and somewhat allay the excitement in the public mind on this question."

WE learn from the *Mark Lane Express* what ought to have appeared in the official report of the proceedings at the last Council Meeting of the English Agricultural Society, that the letter of Messrs. HOWARD, of Bedford, on the office of Consulting Engineer to the Society, was read, and on a division referred by a large majority to a committee who were to inquire into the circumstances and report. At the Smithfield Club Council meeting, also officially reported in our last week's paper, we now learn that Mr. CORBET suggested that "the Members of the Club should have admission to the Agricultural Hall during the time the judges were making their awards;" and Mr. MOORE "that the servants in attendance on the principal prize animals should receive some gratuity or reward, either in the form of money to the amount of a sovereign, or a medal." Mr. H. CORBET's proposition for admitting the members of the Club to the galleries of the Hall during the time the Judges are engaged in making their awards, having been duly moved and seconded, was carried unanimously. This is the more noticeable, as at the last Council Meeting, in December, a similar proposal was negatived by 11 to 6. Mr. CORBET, however, had further given notice that in the event of the Council not entertaining his suggestion, he should bring it as a substantive motion before the next general meeting. "Mr. MOORE's considerate and politic proposal was also carried, so that for the future the man as well as the master will have his share in all the glory of winning in London."

—— We have had a large mass of Shorthorn papers placed in our hands for examination, and during the next few weeks it is intended to make extracts for publication of such portions as are of historical interest in connection with the breed.

TALE OF A LANDLORD.

To Wind-ward!

IN an old-fashioned Book-room, long and lofty, but very narrow, and rendered, almost spitefully, narrower by rows of deep bookshelves ranged along both sides, so deep indeed that when you wanted to persuade a volume out of its ancient nest, you had to dive in, arm-deep, as if you were drawing a rabbit out of his hole,—whence after the labour of extraction there followed such a general resurrection of long-laid dust and dead spiders that you must rest the book upon the ledge and turn away for breath till the hurly-burly had subsided,—in this mortuary chamber of departed volumes, which I shall not describe any further because I think the state of the bookshelves will stand sponsor for all the rest—the antiquated furniture, the carpet of extinct pattern reduced to its thread-skeleton of woof and warp;—in this room, lighted by a single glass door opening into a quadrangular court, when there was any daylight to come in, but at present in a more artificial manner,—there hung one winter's morning a tall Map nearly six feet high partially illuminated by a candle, which also revealed, dimly enough, the face and form of the inquisitor who was holding it and applying its rays from time to time over the different portions of the landscape, if so it may be called, which this ancient Survey recalled to modern view in the state in which it existed a hundred and fifty years ago.

The very sight of it was a history: a wilderness of waste and warren and wold, and wood, and water; the last article apparently in its state of primeval freedom, not yet finally separated from the dry land: indeed there was some artistic merit in the way this circumstance was suggested to the eye, by a sort of hazy shadowing off in faded colour that conveyed no boundary or outline, but left imagination to wander freely from 'the old pool' to 'Snipe marsh,' and thence to 'The Osiers' and 'the Alder-Leasowes,' which gradually darkened into 'the New Coppice.' Then came some arable pieces rather carefully, I may say pompously denoted; for you could count the ridge and furrow; and a large figure marked upon each field bore reference to its order in the ancient 'terrier' annexed. Then came a Paddock, indicated in a brownish bluish hue that had once been green. A good many things had been green and turned to something else, alas! since that was in its pristine verdure! But when you had arrived so far into the bowels of the land, and got beyond the paddock, you came to something not quite so reducible to modern ideas as all the rest. Instead of a grand assemblage of Farm-house, Offices, Outbuildings, and Yards, in all the pride and magnitude of modern holdings, you descried a small dwelling, and a barn with its cattle-shed and strawyard, and underneath this modest homestead the words "Gwilliam's Living," or "Pulford's living," or "Franklin's living," or somebody else's 'living,' in multiform repetition sprinkled over the map between the less numerous larger holdings which bore the ambitious title of "The Abbot's Grange," or "The New Farm," or other pretentious indication of broader acreage. On referring for information to the 'Terrier,' you would find these small holdings to vary from about 30 up to 60 acres, and in a few cases rather more. Variety of extent seemed to be the rule; large and small holdings adjoining, and grouping with each other in picturesque proportion.

But there must have been something very picturesque indeed or very thought-compelling in the contemplation of this record of 'a hundred and fifty years ago,' for you might see upon the countenance that was so busily scrutinising it with the candle in one hand, and the other raised up in the two-fold capacity of eye-shade and reflector, various expressions come and go that surely were not all the mere effect of light and shadow. Presently the examination apparently at an end,

replacing the light upon the table, down sat our scrutineer, and if thought can be written on an attitude it was not ill pourtrayed upon his figure as it flung itself down in the musing mood of early leisure, the face half buried in the hand, while the cold iron-grey dawn began to peep obtrusively into the room disputing with the candlelight, as if illustrating the quality and conflict of the thoughts that had possession of its solitary occupant.

"A hundred and fifty years ago! Small holdings—small enclosures; the first stage—the babyhood of recovery from Nature's Wide Encampment! 'Gwilliam's Living'—'Franklin's *Living*.'—If Gwilliam or Franklin could awake up now he might search a good while for his 'Living'! he might walk again and again over Mr. Squitchall's farm and not know that his foot had been upon the site of his own hearth-stone of former days! What a round it is, if human life was but long enough to trace it! First Nature's wide fields, the biggest farmer of all; then small enclosures coaxed and bitten away scrap by scrap from the boundless common;—now a cottage is built,—a barn, a strawyard, and a cow-pen added; and behold Fulford has a 'Living,' and there for *generations* dwells a family! Anon, times change, the plough must have more room, down goes a hedge or two,—Fulford is extinct, even the very name, and the space it filled and lived on, knows neither him nor even itself any more; it turns into a couple of arable fields—two fields only of Mr. Newbody's farm of two or three hundred acres. And does *that* remain? No! Even Mr. Newbody with his wooden ploughs of wonderful and weighty pattern has to give way. More room, more room for the new and improved machinery; away go even his enclosures: a dozen of Fulford's 'closes' have leapt into one, and behold presently the Steam-plough will enter the wide gap and commenced operations. What will it come to? Was Nature after all then right at first, and all the enclosures a mistake? Truly it begins to look like it!

But we are anticipating, not to say anachronising, as time often makes us do, when we are telling of bygone things and thoughts; for it is no easy task to recall, in the smallness of their true limits, even our most ambitious projects of a former day, so rapidly does Time, "*the greatest of all revolutionists*," (quoth Bacon,) overtake our utmost plans, and turn to our own laughter the mimic proportions we once thought so vast.

In truth the Student of estate-geography whom the contemplation of that ancient Survey had thrown into such a deep reverie on the changes which the agricultural tenure of land had since undergone, was one of those in whose mind the almost romantic feeling for the past could co-exist with schemes of improvement, as great in point of change, and—in the future sense—as remote from the present. Is there anything really singular in this? Do not most of us exemplify it? Even while we are adding to the pressure that is ever bringing in the tide of modern changes, we indulge an eye of fondness and fancied reverence for days and things gone by, and picture to ourselves a sort of innocent and blessed antiquity "when every rood of land maintained its man."

This careful examination and perusal of the features of the old map was a sort of leave-taking; for in a very modern and suspicious-looking deal box of oblong proportions lay as yet unpacked in that very room above described the result of Mr. Dumper's dreary but persevering winter's task—a nine-chain-to-the-inch Survey of the same identical lands. There was presently a most elaborate lifting of the lid, which with true carpenter-like 'high-finish' had been screwed and glued and fastened down, as if it was a mummy-case made to last some thirty centuries, and keep in the very soul as well as body of the little occupant.

At length it came forth, looking very like the fresh and lively grandchild of the ancient 3-inch Survey that hung against the book case close by. It was indeed a wonderfully reduced edition, small enough to carry about with you in an ordinary walk,—a point of some convenience and consequence where much has to be undertaken and accomplished.

It is a charming piece of handy-work, a really accurate and well-drawn Map. But who could have recognised in the monotonous sameness of two-or-three-hundred-acre Farms which in dull uniformity of extent monopolised the surface, that picturesque family-group, that pleasant variety of 'great and small' that had found room in the olden time for Fulford's and Gwilliam's 'livings'? They indeed were swept away; but in their place there had appeared a novelty *unknown to* the elder Survey,—no less a novelty than actual Roads! utter Roads! and of both denominations, 'Parish' and 'Turnpike'! For in that '*orbis veteribus notus*' seen in the old map, the world seemed common to mankind in general, the occupied portions being only divided here and there by long and wide unmeasured-looking spaces, over which you might gallop, it was said, nearly twenty miles straight-a-head over the wild Turf and Gorse and Ling and Heath;—and this not in mountainous Scotland or peaty Ireland or hilly Wales, but all on the level, nearly in the heart of merry England! As the encroachments had spread, these great land-estuaries had narrowed and narrowed towards a central line which had formed itself haphazard; as neighbouring towns had grown, Traffic increased, wheel carriages succeeded to the Pack-horse and the Pillion; and in that central-line the turf had disappeared,—hard work had made it *bald*, (as it has a playful way of doing with hard-worked surfaces,) and behold the result in Roads—not made, but *grown*; yet with such an ample breadth of margin left on either side, as might well suggest to an ambitious owner of such a district to set up at once as king of all the Gipsies.

Don't say that I have dwelt too long upon the Maps! Believe rather, if you can, on such poor evidence as the feeble efforts of written description can convey, that the pen of a Fielding or a Richardson could hardly pourtray a more vivid picture of the olden time, than the comparison of these two Surveys—veritable land-pictures, aye and life-pictures presented to the eye, of *the interval*, and what had happened in it, of a century and a quarter, between 1713 and 1838. There they lay before the eye, the old world and the new brought into direct comparison. Nor was it a barren morning's work, that mute and thoughtful hour of contemplation; for it suggested a Beginning; and "Well begun is work half done," the proverb says.

"*Stare super antiquas vias*"! Never surely before was such an application of the maxim, which literally expresses the resolve which followed. "Yes! I will take my stand upon the Roads!" quoth he; on those wide-margined driftways above described, stretching away North and South, East and West, to every point of the compass over that wide windswept world of flatness and coldness. These at least were in a manner 'No man's land:' and there he resolved to lay his first 'approaches,' to begin his trench-work, and make Dame Nature countermine herself.

It is said to be the highest art "out of the worst to make the best." These broad strips of *un*-enclosure, through which the roads threaded their way, were the weirdest, wildest, most forbidding features of the landscape; without a tree or shrub to break the rushing wind or the wide horizon, their surface chequered only by deep gravel pits, gaping marl-pits, where every one had come and taken what he wanted, from depth or surface, of soil or turf, sand or stone; and left nothing behind—but *the holes!*

Excellent things in their way are Air, and Water. But then, where crops are to be grown and ripened the first should be kept quiet and the second kept moving. And here they each did the opposite: that was all. The trees, nay the very hedges showed the tyranny overhead, by a suspicious inclination all in one direction, as if they were paying low homage to the spirit of the terrible North-East; for, cruel as is that breath which is "neither good for man nor beast," it is its fierce antagonist the South-Wester which leaves the mark of its permanent yoke and sway, upon the trees and hedges.

Yes! sovereign as the necessity and benefit of Drainage, there are districts where an element more fatal than even stagnant water has first to be done battle with. No time was to be lost, for Spring would soon be on the Earth. Before that morning's fast was broken, a summons had gone forth for a meeting of professors, the most skilful which the neighbourhood afforded—to wit of the Spade and Mattock. These shall be the gipsies thought our Map-student of the morning, and I will be their king; and we will encamp upon those broad margins; and before ten years are over, every one of these shall be a running belt of rich Plantation, and the Larch, and the Thorn, and the Sycamore, and Birch, and Elm shall wake up lazy Winter with their delicious livery of early green, and the Beech and Spanish-Chesnut and Oak, and the still lazier toilet of the Ash shall follow, gilding the latter Autumn with their varied and retentive hues, and the Scotch and Spruce shall stand sentry outside the nursery-doors to guard the growing family from the cutting North-East and the driving storms of the South-West: and the sparkling Holly shall peep and laugh inside and underneath, and reflect inexplicable rays of light at all sorts of impossible angles, under a shade and drip that would suffocate any creature of less prickly spirit and stubborn temper. If I cannot, like King Æolus, shut them up in a cave, I may yet do something to curb and check those devastating winds that scour like Macbeth's Fury-witches over the plain, blighting the very earth they traverse. And the night-Mail shall trot along, and the leader's bars shall rattle their pleasant music between the warm Plantations; and the guard shall no longer draw on his thickest capes, and swear through his chattering teeth that "Blest if this ain't enough to cut a man's head off! it's the freezingest stage, sir, over Win'uld here, and alliz was, from the time yere 'off the stones' o' London, down to Holyhead!" *T.*

NOTES ON CELEBRATED SHORT-HORNS.—No. I.

The following memoranda by the late Mr. Bates of Kirkleavington, and other distinguished breeders, are extracted from correspondence which has been kindly placed in our hands for examination.

1.—Sir Thomas Fairfax:—He is thus described in the Herd Book:—

(5196) *Roan*, calved April 13, 1837, bred by Mr. Whittaker, the property of Mr. Parkinson, of Leyfield, near Newark: got by Norfolk (2377) d. (Miss Fairfax) by Fairfax (1023), g. d. (Lily) by young Warlaby (5598), grgd. by Young Dimple (971), gggd by Snowball (2648), ggggd by Layton (2190), a son of Mr. Charge's Grey Bull (892).

The following is a letter from Mr. Bates, dated *Kirkleavington near Yarm, York*, August 12, 1840, addressed to *John Bolden, Esq., Hyming, near Lancaster.*

It describes with great precision the arrangements made for shipping cattle of Mr. Bolden's to London, on their way to Australia, and proceeds as follows:—

"I hope with the above arrangements all will be safely and effectually done till the cattle reach London, when you must have proper persons to attend to them there till shipped for Australia, and I hope they will have a prosperous voyage and repay all your attention, care, and judgment.

"I thank you for your hints and information. You have properly declined Sir Thomas Fairfax—he is not worth 5*l.* to breed from. I told Earl Spencer that no two bulls could be found so likely to throw discredit on the Short-horned breed of cattle as Sir Thomas, and Raine's coarse-headed bull; and that to give premiums to such was a disgrace to any agricultural society, and I also said 'your lordship may now see why the regulation was made at Leeds to prohibit any better bull appearing than Sir Thomas,' and that no society had till now offered a premium of 30*l.*, and a penalty of 50*l.*, if any one showed for the 30*l.* premium,' but one class of persons who had the judges of their own appointing.

"If you intend your sons in Australia to use any sons of Magnum Bonum to their own cows, you will bring discredit upon the whole concern. The cow Mr. Lax's bull is of may be very good, but no cow, however good, can breed a bull fit for getting bulls by Magnum. Did any bulls ever show such coarse bad horns, eyes sunk in head, and a horrible countenance, like Raine's bull shown at Northallerton by Magnum Bonum? I told Earl Spencer I would not put the cows to him if he would give me a thousand pounds. Now this is my decided opinion. He may (Mr. Lax's bull) be fine looking, and every way to please the eye, &c., but it will come out in his produce, sooner or later. Consider, if you ever saw Mr. Stephenson's stock, what an error he committed in sending the grandam of Belvedere to *Baron*, bull of Lord Faversham's by Comet. He was good looking and pleased the eye, but he ruined Stephenson's stock, and though the produce put to Waterloo, and then to Belvedere, yet they can never be restored to what they were before the cross with *Baron*. Do, I entreat you, attend to what I have said. Put Mr. Booth's cows and mine that went out, and my tenant's cow to Mr. Robert Jobson's bull your son got in the spring, and not to Mr. Lax's bull by Magnum Bonum. Sell the latter on his arrival at Port Phillip—he will please the eye, I suppose—and get quit of him, but do not use him to the best cows, or those for bull breeding again, or you will entail sure destruction on the offspring, and lose all character as breeders,—sooner or later it will be sure to happen."

THE TOWNELEY HERD.

We add a few words about the four smaller families which, with the *Barmpton Rose* tribe described last week, make up this celebrated herd.

1. The following table gives the descendants of No. 1 in the Catalogue, *Roan Duchess* 2d.

Descendants of (1.) *Roan Duchess* 2d, by Frederick (11,489).

- 8. *Violante*, 1857, by Valiant (10,989)
  - 27. *Another Roan Duchess*, '61, by Master Frederick (18,348)
  - 34. *Violante's Butterfly*, '62, by Royal Butterfly (16,862)
- 17. *La Fille de Frederick*, '59, by Frederick (11,489)
  - 9. Valiant Duke, '63, by Duke of Wharfdale (19,648)
- 21. *Royal Butterfly's Duchess*, '61, by Royal Butterfly, (16,862)
  - 39. *Butterfly's White Duchess*, '63, by Duke of Wharfdale (19,648)
- 32. *Red Duchess*, '62, by Baron Hopewell (14,134)

Roan Duchess 2d, is the 16th generation from *Old Sockburn*, Mr. Hutchinson's original old cow. She is from a Kirklevington family, numbering 2d Cleveland Lad, Duke of Northumberland, Norfolk, and Belvedere, among her progenitors. She has been several times shown, and has succeeded in winning many prizes; 1st as a heifer calf at York in '53; 1st as yearling heifer at Lincoln, at Burnley, and at Ripon in '54; 1st at the Royal Dublin Society, and at the Royal Agricultural Society at Carlisle as 2-year-old heifer in '55; 1st in the cow class at the Royal Agricultural Society at Chelmsford in '56, and winning repeatedly in after years. Her daughter, *Royal Butterfly's Duchess*, has just had the Worcester prize awarded to her, owing to the failure of her competitors there.

2. We now turn to the family of *Madaline*, purchased from the Killerby herd in 1849, including No. 6, *Alice Butterfly*, and her descendants. There are four of this tribe in the herd, as follows:—

Descendants of Alice 2d by Duke of Athol (10,150)

- 6. *Alice Butterfly*, '56, by Master Butterfly (13,311)
  - 30. *Double Butterfly*, '62, by Royal Butterfly (16,862)
    - 47. *Phœbus Butterfly*, '64, by Duke of Wharfdale (19,648)
  - 41. *Alice Wharfdale*, '63, by Duke of Wharfdale (19,648)
- 5. Royal Butterfly 15th, '62, by Royal Butterfly (16,862)

Alice 2d, the dam of No. 6, was shown at the North

Durham show, and stood 2d in her class in 1858. Her grand-daughter *Double Butterfly* was second in her class at the Royal Dublin Show in 1863, and with *Perfume* took the 1st prize in their class at the Worcester meeting last year, and then helped, as one of three, to win the Challenge Cup at Keighley in '63. It will be seen from our correspondent's letter in another column, that he regards her as one of the best animals in the herd.

3. We come now to the descendants of *Pearly*, a cow of pure Booth descent, which are classed in the following Table :—

Descendants of Pearly, by ROYAL BUCK (10,750.)

3. *Pride*, '54, by VALIANT (12,258) — 31. *Perfume*, '62, by BARON HOPEWELL (14,134); 6. PROUD BARON, '63, by BARON HOPEWELL (14,134)

4. *Frederick's Bracelet*, '55, by FREDERICK (11,489)

7. *Pearl*, '56, by R. CŒUR DE LION (13,590) — 20. *Pearl II*, '61, by BROAD BACK (15,696).

13. *Precious Stone*, '58 by MASTER BUTTERFLY 4TH, (14,920) — 11. PRINCE OF TOWNELEY, '64, by BARON HOPEWELL (14,134).

Pearly (purchased at the Killerby sale in 1852), was the best old cow at Burnley in '54. Her daughter *Pearl* was 2nd in the class of 2-year-old heifers at Warwick, and again 2nd at the Yorkshire Agricultural Society's meeting in the same year. She was 2nd at the Yorkshire meeting in 1860. The family includes seven members, and it will be seen that bulls of Warlaby breeding have latterly been exclusively used upon them. *Perfume*, named above, was successful at Worcester last year.

4. The last family to be noticed includes the descendants of *Venilia*, a cow bought as a calf in 1849 at Sir C. Tempest's sale. The following are the members of the family now in the herd :—

Descendants of Venilia by TOM OF LINCOLN (8714).

2. Vestris 3d, '54, by VALIANT (12,253) — 24. *Frederick's Farewell*, '61, by FREDERICK (11,489); 35. *Venus's Butterfly*, '62, by ROYAL BUTTERFLY (16,862); 7. ROYAL BUTTERFLY 17TH '63, by ROYAL BUTTERFLY (16,862)

Of this it may suffice to mention that *Frederick's Farewell*, a two-year old heifer, was last year unusually successful. She had been 1st in her class at the Yorkshire and at Preston in '62, and in '63 she was 2d at Worcester, and 1st at Rochdale, Ulverton, Skipton, Lancaster, Halifax, Stockton-on-Tees, and Clitheroe, and produced last month a red and white heifer calf 46 *Duchess of Lancaster*, by DUKE OF WHARFDALE (19,648).

A concluding word on the prospects of the sale and general character of the herd will be found among our leading paragraphs.

Home Correspondence.

Vegetable Mould.—If I understand rightly the communications of Mr. Patrick Matthew, their meaning is, that organised vegetation formed from atmospheric and terrestrial inorganic materials, is, when disorganised, or decomposed into inorganic elements, suitable food for a new vegetation. This is, in my opinion, an exact confirmation of Leibig's great theory, except that the Baron begins at the beginning, viz., not with the ready made plant, but with the elements of which it is formed. Every farmer knows that if he can get plenteous and varied vegetation, it will, after decomposition, produce a new and abundant crop. But the Baron tells us where the first crop is to come from, and that is the question that concerns us, who have to deal with a soil from which, by repeated cultivation, the available ingredients have been abstracted—naked clay, rock, sand, the slates or tiles on roofs, originally destitute of vegetable, or rather organic, matter, become, after long exposure to atmospheric influences, covered with vegetable growth—whence are derived the combustible elements of this vegetable growth? Certainly not from the mineral or earthy foundation on which it has been established, but from the atmosphere. When I observe the bulky, burning logs on my hearth gradually disappearing, leaving nothing to my view but an insignificant heap of ashes, I ask myself, can any one, seeing this, doubt Liebig's great theory? Where are the logs gone to? To the atmosphere, from which their bulk was derived as invisible gases condensed in the structure of the plant. Looking at the spontaneous gigantic primeval forests resting on once bare rock, grown without the aid of man, can we for a moment disbelieve Liebig's theory that this vast combustible mass (nineteen-twentieths of whose bulk would disappear by combustion). must have been derived from atmospheric elements, and not from the soil? We need no other evidence than this to convince us that Nature provides in the air an abundant supply of elements, which, combining in the structure of the plant with the earthy or mineral substances, form ponderable and tangible masses. There is a natural affinity or affection between the terrestrial and atmospheric kingdom. We see it on our walls, our public monuments, and other masses of mineral or earthy matter. The hand of time, as it is called, unites the combustible with the incombustible. The grandest and most durable monuments of ancient times succumb to this immutable law, crumbling to dust under atmospheric influence, and ultimately giving up to vegetation such of its parts as are suitable for vegetable growth. How admirable and all-wise is this everlasting round of composition and decomposition! The lovely monuments of ancient Rome give unmistakeable evidence in this matter; more than 400 varieties of flowers thrive on those colossal walls within whose compass gladiatorial and other combats excited and delighted the Roman people. We should all rejoice in the possession of what is called new or virgin soil, where the atmospheric operations of ages and the vital action of plants have rendered abundantly available the necessary earthy or mineral constituents—but, in this sea-girt isle, we have used up most of the store so provided, without making a due return. It is in our power to prevent the extension of this exhaustive system if we will it—but so long as we are content to see flowing wastefully down our sewers and streams the very vitality of the nation, so long may we sigh in vain for virgin soil or decayed vegetation. We have emptied the purse, and must therefore replenish it either by costly artificial manures, or by the more natural and cheaper return of the elements of our food. *J. J. Mechi.*

Wind Engines.—They do answer for the purposes named. If "T. B. M." will write to Mr. E. Wortley, Ridlington, Uppingham, he will give him all the information he can on the subject. *Ridlington.*

Diseased Turnips.—In your Paper of February 6, the Melplaish Agricultural Society expresses a wish to know the cause of decay of Mr. Hussey's Swedes. In Berwickshire, where sheep are folded on the fallow break in spring and getting cut Turnips, we invariably find that the following Turnip crop is subject to rot. The reason might be difficult to find, but the fact is so firmly believed in, that we always sow White Turnips (for early use) on any small piece that may unavoidably be treated as Mr. Hussey's was. *J. T., March* 5.

Farmers' Clubs.

LONDON: *March* 7.—*The Chemistry of Food.*—Professor VOELCKER, after some prefatory remarks, said :—

Mr. Chairman and Gentlemen, if we examine the body of an animal we shall find that the preponderating constituent is water. Of this I need not speak any further. In the solid portion of animals we shall find, first the substance of muscle or lean flesh, in which there is a large quantity of nitrogen; then we have the fat, which is mixed intimately with the muscle or fibre, and which is deposited in certain parts of the body, or is purposely laid on, as in the fattening of stock; and thirdly, we have the bones, and the saline matters which enter into the composition of the blood, and serve various animal uses. The muscle of animals closely resembles in its composition the epidermal matters, such as the skin, hair, horns, and hoofs of animals. Now, these various constituents of the animal frame must necessarily be supplied by food, in order to keep the animal in vigorous health; for every animal sustains loss through the waste to which every part of the body is subject. But, over and above this daily waste, in order to maintain a uniform temperature in the body, a considerable quantity of food is required; and food of a particular character also is needed to maintain what is called the animal heat. According to Boussingault, a horse consumes between 4 and 5 lb. of carbon in the course of the day, merely in supplying animal heat to the body. In other words, food is required to maintain respiration and to maintain sufficient animal heat in the bodily system. Now, in any food we should require constituents which supply the muscle of animals; we should require also constituents which were well adapted to produce fat and to feed respiration; and thirdly, we should require constituents containing bone material and the mineral and saline matters which enter into the composition of blood and serve various animal uses. No food is well adapted for maintaining vigorous health that contains too much of any of the three classes of food which I have just mentioned. But as regards the proper admixture in which we should have these constituents—the flesh-forming, the heat maintaining, and the bone-producing constituents—no general rule can be laid down; because the wants of different kinds of animals, like the wants of animals of different ages, are so very various. In young animals we require a different admixture of the nitrogenous and non-nitrogenous, the heat-giving and the fat-producing constituents, from that which is required in order to fatten animals with the greatest profit. Fattening animals require food which is less nitrogenous and which is more abundant in flesh-forming constituents, as nitrogenous matters have been called, than that which is desirable for young growing stock. Again, for the successful production of milk and the maintaining of dairy stock in good health and condition, we require food richer in nitrogenous matter than that which is calculated to keep full-grown fattening animals in good thriving condition. The cause of this is, that there is a great drain of nitrogenous matter in the curd, the albumen, and the milk, as well as a great drain of phosphoric matter: for I need hardly remind you that a large quantity of phosphate of lime, as well as a large quantity of nitrogen, enters into the composition of milk. Passing now from these preliminary observations to the more practical part of my subject, I would first direct your attention to what is known in practical farming life under the name of concentrated food. The most concentrated food that farmers are in the habit of using is, unquestionably, oilcake.

After some remarks on Linseed, Cotton, and other cakes, Professor Voelcker observed ;—

The chemical constitution of food I hold to be very material to the proper use of food; but, after all, we must appeal to practical experience. We must institute feeding experiments; and in order that we may institute proper feeding experiments, the dictates or suggestions of science should not be disregarded; but, on the other hand, the final appeal to the practical feeder must not be disregarded. We ought not to say this food must be good because it contains such and such things, but we ought rather to say that it must be good if there be no practical impediments, in the shape perhaps of some unlooked-for injurious substance, present perhaps in such small quantities that we cannot detect it with our most delicate agents, or some condition which renders the food indigestible. So far as practical experience goes, it tends to show that lentils are a very nutritious description of food, particularly for sheep. Indeed, they are too nutritious if by the term "nutritious" we mean rich in flesh-forming materials. A mixture of lentils with food which is poor in flesh-forming constituents—for example, with Indian Corn or Barley-meal in equal proportions—will be found a most useful description of food for sheep, as well as for dairy cows, and for bullocks. The leguminous seeds, Peas, Beans, and Lentils, contain on an average about 25 per cent. of flesh-forming materials. They are, therefore, considerably richer in vegetable matters than cereal seeds, Wheat, Oats, Barley, or Indian Corn. In these feeding materials, especially in Barley-meal, the proportions of nitrogenous to non-nitrogenous matter are more nicely adjusted than in any other description of food to the requirements of fattening animals. Barley-meal, therefore, is justly valued as a fattening food for pigs, and as a finishing food for every description of stock. It is rich in starch, which, as all of you are no doubt aware, is changed into fat in the animal economy. Wheat when cheap is perhaps still more valuable than Barley-meal. It contains about the same quantity of nitrogenous or flesh-forming, and a larger proportion of fattening material; and on the whole, therefore, it is a more valuable feeding substance than even Barley-meal. Indian Corn, on the other hand, is not so rich in flesh-forming constituents as Barley-meal or Wheat, and for this reason it is an exceedingly good mixture for such food as cake or Peas, or Beans, or Lentils, which are rich in flesh-forming materials. Animals fed on Indian Corn exclusively get fat very quickly; but the substance of which the cells or cellular tissues in which the fat is deposited consists, not being supplied by Indian Corn in sufficient quantity, is insufficiently formed, and the result is that the fat which is deposited in pigs or other stock is too soft. Bacon fries out, runs to waste, and becomes flabby. You can meet this practical inconvenience by mixing Indian Corn with Pea-meal or Bean-meal. A mixture of these two kinds of food produces very good bacon. Bean-meal or Pea-meal alone produces a bacon which is rather too hard and is not sufficiently fat; while Indian Corn on the other hand produces bacon which runs to waste. Thus we have here an example showing that the inductions of science may be used with advantage by practical experience in the feeding of stock. Rice dust is, I must say, but a poor kind of food, notwithstanding that it has been occasionally recommended. It is vastly inferior to Barley-meal. I have in my hand a paper in which Rice-meal is stated to be a superior food to Barley-meal; but on looking at the results I find that the composition of Rice-meal, as compared with Barley meal, was ascertained by a chemist who lived some 100 years ago, when analytical processes were as yet in their infancy. Rice-meal is an inferior description of food, and is not nearly so valuable as Barley-meal. It is deficient in flesh-forming materials, it is also deficient in bone-producing materials, and as generally obtained in the market contains a large quantity of innutritious, indigestible fibre. I have hardly time to speak in detail of hay. Still, one or two observations on the quality of hay may perhaps not be out of place. More especially would I introduce one observation that I have to make. We have the pleasure, and I trust the benefit, of Alderman Mechi's presence with us to-night. I have on several occasion expressed the opinion that hay and Grass from irrigated meadows (I do not think much hay is made from irrigated pastures) is inferior in point of nutrition to Grass from old pasture or herbage which is grown more slowly. I still adhere to that opinion. A larger proportion of nitrogenous matter is found in the produce of irrigated meadows; but it is very questionable whether the nitrogen that occurs in the produce of irrigated meadows really exists in the form of albumen. I cannot help thinking that the nitrogen which is obtained by analysis of a quantity of such produce does not exist at all in the shape of albumen or casein, or similar albuminous compounds applicable to the animal economy for the purpose of producing flesh. I know as a fact, that in irrigated meadow lands some of the nitrogen exists in the shape of ammoniacal salts and other saline matters, which when taken by an animal constantly produce a relaxation of bowels. In all animal produce I find ammoniacal salts. The nitrogen is not always present as flesh-producing matter, some of it consisting in the shape of ammoniacal salts, and there are other compounds which are not assimilated by animals and do not produce flesh. I would here appeal to the practical experience of those who have fatted stock on old pasture, of those who have fatted stock not only upon irrigated meadow Grass, but upon every description of food which is grown rapidly, whether injury is not sometimes done in spring by keeping cattle on seeds, which have been too highly manured. When the spring gets warm, and Clover seeds spring up rapidly, if you put on your sheep they are sure to scour. The remedy is to take them off as soon as possible and put them on a piece of Sainfoin or old pasture. Notwithstanding the high per centage of nitrogen that occurs in irrigated meadow Grass, and in all forced produce, I believe that food of that description is inferior to Grass and green food of every description which is grown more slowly, and is not so rich in nitrogenous matter.

I add a few words here on the feeding qualities of straw, which is not so universally used as food as it deserves to be. In the opinion of some, straw is only fit to be trodden into manure, but well-harvested straw is a very useful feeding material indeed. It is especially useful when it is not allowed to get over ripe. Oat straw is in this respect a most valuable description of food. It is wonderful how much further concentrated food and a limited supply of roots may be made to go by giving along with the pulped and sliced roots and Linseed-cake, broken up into small bits, or made into a jelly, a due proportion of well-harvested straw, cut sufficiently fine into chaff. Oat straw is the most valuable description of straw among the cereals, but it is surpassed in nutritive power by Pea straw, and perhaps also by Bean straw. Now, Bean straw may be exceedingly good or exceedingly bad; it is entirely a question of harvesting. If the Beans are allowed to become perfectly mature, if the plant gets over ripe, we then find Bean straw very hard and indigestible; but if the farmer is compelled, as is often the case in late seasons, to harvest his Beans before they are perfectly ripe in the pod, then Bean straw will be found very useful. I mention this in order that you may not entertain the opinion that in every county, and in every season one kind of straw, for example Oat straw, is more valuable than another description of straw. You cannot lay down any such rule; it depends entirely upon the condition in which the straw is harvested, and upon what the season was. Thus you may sometimes find Wheat straw better than Barley or Oat straw, or you may find the reverse. But, taking everything into account, perhaps we are not far wrong in saying that Pea straw is the most valuable, next to that Bean straw under ripe, then Oat straw, Wheat straw, Barley straw, and lastly, perhaps, Bean straw over ripe. Thus you find that Bean straw occurs in two places, second on the list and last. After adverting to the use of succulent food or green crops, Prof. V. said: In a general way I am not an advocate for the use of condiments, at all events not the use of purchased condiments. If farmers want condiments, let them make them for themselves.

WINFRITH: *Food for Stock.*—The following is an extract from a recent address by Mr. W. C. SPOONER:—The starch, the gum, and the sugar are the principles employed in providing the means of respiration, or rather for the support of the animal heat. The albuminous part of food contains to a large extent that which will preserve the heat of the body as well as

the material which makes up for the waste of the muscular system. Thus flesh will support life because it supplies the waste of the tissues and also preserves heat.

If we take as examples various kinds of food, we shall find great difference in the albuminous properties of some as compared with others. Beans contain nearly one-fourth, or 24 per cent., of albuminous matter, whilst Wheat contains only 12 per cent., but this is sufficient for our system. Beans we could not endure, although they have about double the power of supplying the waste of the tissues as compared with Wheat. Peas contain somewhere about 23 per cent.; Barley, about 13 per cent.; Oats, 13 per cent.; Maize, or Indian Corn, 11 per cent.; Linseed-cake, about 26 per cent.; and Rape-cake rather more, about 29 per cent.; whilst Linseed itself contains only 20 per cent. Locust Beans contain only a very small per centage, not above 3 per cent., but about 50 per cent. of sugar. Swedes contain less than 2 per cent., and Turnips about 1.2; whilst the starch, gum, and sugar, including oil—that is, the carbonaceous matter—is 11 per cent. Thus it is that roots will support life far better than make fat. In many districts they are quite incapable of putting on fat, although they will preserve existence; in other districts they are more nutritive if given in sufficient quantities; but if we feed on roots alone we must give three or four times the quantity of water that is necessary; therefore it is far better to give a less quantity of roots, and substitute other more nutritious dry food. Again, in albuminous food we find that the starch, gum, and sugar in Beans is 48 per cent.; in Wheat it is 57, and thus Wheat is 10 per cent. richer in starch than Beans and Peas or Pulse; in Barley 56 per cent. or almost equal to Wheat; in Oats, 46; Maize 64; Locust Beans, 50, consisting almost entirely of sugar; Rape cake, 23; Linseed cake, 27; Linseed, 20. And then we come to oil or fat, which is a most important property, for it was stated just now that it contained double the quantity of carbon to what sugar contains, and nearly double to what starch contains, therefore we cannot be surprised at its being so readily converted into fat.

There was an experiment related by Mr. Lawes some short time since, in which his object was to ascertain what quantity of food in different forms would produce so much flesh and fat, and he found that it took about four times the quantity of dry substance to make an equal quantity of food when he used dry chaff alone to what it did when he had succulent food, in addition to cake and corn; and he found the addition of Barley to these had a greater effect than the addition of Beans; but when he used Linseed oil mixed with the Beans it was found to have a greater effect than either; and the oil that was used had a considerably greater effect than when double the quantity of Beans were employed, showing that the animals pined after a certain quantity of nourishment in the form of oil, which thus relieved the system of extra exertion, for it was converted with little trouble into fat itself. We find then that Oats contain about 5 per cent. of oil or fat; Maize, 8 per cent.; Rape-cake, 11; Linseed-cake, 12; while Linseed itself contains 34 per cent. of oil.

We have next on the list vegetable fibre, which in Beans is 10 per cent.; Peas, 10; Wheat, 12; Barley, 13; Oats no less than 20; Linseed Cake, 14; Linseed, 10; Swedes nearly 4; and Turnips somewhat more than 3 per cent. There has been some considerable doubt whether vegetable fibre must be considered as entirely devoid of nutriment or not. The term chemists give to vegetable fibre is cellulose. There had recently been experiments made, which some might have seen in the *Agricultural Gazette*, where a certain quantity of food was analysed and the quantity of vegetable fibre ascertained, and then the excrement was analysed likewise, and it has been found that there has not been anything near so much vegetable fibre in the excrement as in the food, plainly showing that a certain portion is taken up in the system. Hence, if we preserve straw for fodder, we should cut it as young as possible, because, when vegetable fibre is in a state of cellulose it is much more digestible.

We have thus glanced at the various constituents of food. It takes something like 150 lbs. of Turnips to make 1 lb. of mutton, if fed in the open air, but when housed in sheds under favourable conditions 100 lbs. have succeeded in making the same quantity of mutton, therefore 100 lbs. and 150 lbs. may be considered the extremes. I do not mean to say that in all cases 100 lbs. given in sheds will produce the same effect as 150 lbs. given out of doors, because sometimes those given out of doors will produce a better effect than the others; but it is well known that in a succession of four or five wet days the animals make little or no increase. This proportion of 150 lbs. of roots to 1 lb. of mutton is derived from a number of experiments made by different people, and is as near the fact as we can arrive. It is interesting, because it enables us to ascertain what is the value of a given quantity of roots, and what really is their feeding value; thus you may put what you like as the price of mutton, 6*d*., 7*d*., or 8*d*. per pound, and if it takes 150 lbs. of roots to make 1 lb. of mutton, or one ton to make 14 lbs., the price of which is the value of the roots. It has been found by accurate observers that the sheep will economise food better than the ox. Sheep, if fed on nutritious food, will make 1¾ per cent. in live weight, whilst in the ox not more than 1 per cent. is made. In the pig a much greater amount of food is turned into flesh and fat, but then there is this drawback, that we are obliged to keep the pig on much more expensive diet, and it brings the result perhaps pretty nearly the same. In some other experiments it has been found that to make 100 lbs. of mutton, 170 lbs. of oilcake and 876 lbs. of Swedes were used; in another, 321 lbs. of oilcake and 1103 lbs. of Swedes; and Linseed was found not to present any more advantages than cake. In a trial between Barley and Beans it was found that 1 lb. of Barley had as much effect on the animal as 1 lb. of Beans, but then, as we have noticed, Barley contains a considerably less quantity of nitrogen, a less quantity of nitrogenous matter; and although it proved sufficient for the animal, yet as nearly all the value of the manure resides in the albuminous matter, it shows at once that the value of that from Beans, or cake, or other nitrogenous substances, will be double that left behind by Barley, Oats, or even Wheat. The quantity of food required by various kinds of sheep varies according to the different circumstances to which they are subjected. It has been found that the Cotswolds require least, next the Leicesters, next a cross-bred; next to them the Hampshire downs, and then the Sussex downs, which required the greater quantity of food. The Cotswolds required 802 lb. of dry substance to make 100 lb. of flesh, and the Sussex downs 877 lbs., but the last was the more valuable per pound. These experiments showed that it was very essential that animals should have a certain portion of food of various kinds, but inasmuch as roots consist so largely of carbonaceous matter and so little of nitrogenous matter, it is better to make up this by cake, unless grain can be got at much less expense. Whilst Linseed cake produced a greater effect than Peas or Beans—that is to say, 6 lbs. of cake produced something like the effect of 7 lbs. of Beans or Peas, yet the mixture of Linseed-cake and Beans in the winter or Linseed-cake and Peas in the summer produced a considerably greater effect on the feeding properties than when either one or the other was given separately.

Reviews.

Rules of the Penrith Farmers' Club: with a List of Subscribers, &c., and a Summary of its Proceedings since its Establishment in March, 1851. B. T. Sweeten, "Advertiser" Office, Penrith.

We cannot do better than recommend the perusal of this little pamphlet to any who may be disposed to start a farmers' club, and who want, therefore, a good set of rules, a good way of introducing the subject to the farmers of the locality, and a good history, by way of stimulant, of what has been actually accomplished by a local club, under wise and vigorous management.

Our history of the Penrith Club is abridged from the extremely interesting report of it which the Honorary Secretary has been good enough to draw up for our information.

In Cumberland and Westmoreland the arable farms are, on the average, much smaller than those in most of the southern counties. Those of 300 or 400 acres of good land, are considered large; of course there are many much larger, but the majority are below that average. One hundred acres of good arable land may be considered the average.

The farmers themselves, though celebrated, like their neighbours over the Border, for their shrewdness and intelligence, are more primitive in their customs than their brethren of the south, who, renting their 1000 or 1200 acres, hunt in scarlet, and drive to market in well appointed carriages.

Moreover, many of them are Yeomen, or as they are locally called, Statesmen, occupying their own land, from 50 to 100 acres and upwards. Though plain and unostentatious in their manners, they will generally be found to be sensible, well informed, energetic men, ready to appreciate and avail themselves of modern improvements, and march with the times. With a view to the convenience and advantage of the farmers and others frequenting Penrith Market, the Club was established in the spring of 1851, the project of its formation having been appropriately introduced at one of the principal market ordinaries, the town and district being peculiarly adapted for it, as exclusively agricultural. The committee of management, anxious to induce thorough practical farmers to join and assist in promoting the usefulness of the Club, wisely fixed the subscription at a low sum, as it was desirable also, by making it accessible to every class of farmers, to do away with any suspicion of exclusiveness, and the committee, by the economy of their arrangements, have amply fulfilled the intention.

A good President and Vice-President were fortunately obtained. The formation of a library was a great object, and liberal donations of both books and money were made by gentlemen of the neighbourhood, to which we are continually adding, as far as our funds will allow, as well as by frequent contributions. Our Club Room, situate in a central part of the town, and supplied with the leading agricultural and other newspapers and magazines, is a great convenience to those members who wish to avail themselves of such advantages.

The Club, very soon after it was established, seemed, by the rapid accession of members, to be well appreciated. And though essentially a Farmers' Club, there are amongst the subscribers, men of all grades and professions — magistrates, barristers, clergymen, physicians, &c., all of whom contribute valuable information at the meetings.

On referring to the minute book it appears that during the first year, there were discussions on 'Manure; and the Waste of it;' on 'The Cultivation of Turnips;' on 'Lime and its Application;' and on 'The Rotation of Crops.' During the harvest a discussion on 'The comparative advantages of the Scythe and the Sickle or Hook in Cutting Corn,' which resulted in a trial of them in the field, and although in that trial the sickle had the advantage, the scythe has come more into use, and is now almost superseding the hook or sickle. The reaping machine, though used by many of the larger farmers, cannot be so successfully worked in the more hilly districts. Discussions on 'Drainage,' on 'Storing Turnips,' an essay on 'Rot in Sheep,' read by a veterinary member, and one on 'The Cultivation of Flax,' were the last subjects brought before the Club during the first year.

1852.—The year 1852 commenced with a discussion on 'Linseed Cake in connection with Flax Growing.' There was next a discussion on 'The Management of Ewes during the Lambing Season.' Then followed 'The advantages or disadvantages of encouraging the Breed of Hares and Rabbits,' a paper on 'The Diseases of Turnips,' and another on 'Unexhausted Improvements.'

1853.—The proceedings of this year included papers on 'The Management of Hedges and Roads,' the "Diseases of Sheep;" and a resolution was passed "That it is expedient that the Rural Police be introduced into the district.'

1854.—'The propriety of Farmers not engaging Servants without a Character from their last Master' was the subject introduced at the first meeting of this year. An alteration in the hours of opening the Corn Market in Penrith, was effected by the Club. [A lecture on 'Agriculture' was printed for distribution among the members; and a member read a paper on 'The Feeding of Cattle in that County, for the Supply of the London Market.'

1855.—This year discussions were held on 'Deep and Shallow Tillage,' on 'The Effect of Cross-breeding on the System of the Dam,' and on 'The Cottage System.'

In subsequent years the value and importance of the Club to the farmers of the district increased and was much appreciated. In illustration of this we quote the proceedings of the last two years.

In 1861 correspondence was held with the Central Farmers' Club, on the 'Uniformity of Weights and Measures,' and an offer to co-operate with this Club in any measure for the promotion of that object. Discussions on 'The Parochial Assessment and Irremovable Poor Bills,' and 'Reports of the Committee on the Highways' Bill' were among the business of the session. In the course of this year the Club established Wool Fairs, much to the convenience of the farmers and wool buyers. After a paper on 'Common of Pasture,' a subject of great importance in these counties, where there are so many thousands of acres of unenclosed land, it was resolved that the law relating to the enclosure of Commons, as it at present stands, is not satisfactory. Numerous letters and complaints were received from this and various other counties, as to the present state of the law. Some correspondence with the Enclosure Commissioners followed, but they declared their inability to afford redress.

1862.—Finding the present law inefficient for the satisfactory arrangement of Common rights, the Club presented a petition to Parliament praying for amendment. A statement of the result of experiments in the application of special manures to cereal crops was presented to the Club, and a paper on 'The Management of Meadow Land.' Sir Stuart Donaldson gave the members a most interesting lecture on 'Australian Sheep Farming and Wool Growing.'

Although there were many warm discussions, and many adverse opinions given in reference to the New Highway Act, a petition to Parliament was prepared and signed by a majority of the members, praying that it may be made compulsory. Subsequently a memorial was presented to the Magistrates in Quarter Sessions of Cumberland and Westmoreland, urging them to adopt the provisions of the Act.

From this meagre sketch of the proceedings, it may be seen that the Club has effected much good since its institution. The report concludes with the following account of recent agricultural improvements in the district. Its proceedings are now regularly published, and it has obtained an influence that could scarcely have been hoped for. That the agriculture of Cumberland and its sister county, Westmoreland, has much improved during that period, is unmistakeable. This may be noticed in the breed of all kinds of stock, from horse to hen, as well as in the management of soil. From the want of statistics it is impossible to state what may have been the increase of the produce of the two counties, but that it is very considerable cannot be denied, and it may be attributable not only to the improved quality of the stock, but to the extension of the means of keeping them in greater numbers and better condition. The extensive drainage that has

taken place during the last 10 or 12 years (many hundreds of miles having been laid down upon the most approved system, the old shallow stone drains being now superseded by pipe and collar at a greater depth), and the introduction and liberal use of guano and other special manures, having enabled the farmers to bring into cultivation and raise crops of Turnips upon lands that are almost inaccessible to heavy dung carts. Thus, as the food increases, so does the stock, and the number of sheep brought to consume the large breadth of Turnips produces its effects on the after crops of Corn and Grass. On account of these improvements, the large sums expended in drainage, the renovation and extension of farm buildings, the advantages afforded by the railways, both to buyers and sellers, in the carriage of stock and produce, the great competition, especially for the smaller class of farms, and from other causes, the value of land has been steadily on the increase for some years, and rents of course in proportion, in some instances having more than doubled, though such cases are exceptional, but upon an average rents may be quoted at about 15 per cent. higher than they were 20 years since.

Employment in the carrying out of the above mentioned improvements, the formation of railways, &c., has had the effect of raising the wages, both of the hired servant living in the house, and of the cottager or day labourer, the wages of the former having during the last 10 years or so increased from 9*l.* to 12*l.* the half-year, those of the latter from an average of 12*s.* to 15*s.*, and in some cases to even 16*s.* a week, or about 30 per cent.

In noticing the improvements in this district, the Secretary adds, "I cannot resist claiming credit for the Penrith Farmers' Club, as having conduced to them in some slight degree, by the diffusion of useful agricultural information, and as our example has been followed at Kendal, in Westmoreland, and at Wigton, in this county, by the establishment of flourishing clubs (from which probably you will have received communications), I trust those districts may reap the same advantages."

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. Slatter, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer. Dry Bulb.	Reading of Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, (—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	March	Inches.	°	°				°	°	°	°	Inches.
Thursday	10	29.60	38	34	S.	2	0	48	24	91	21	..
Friday	11	29.72	39	34	N.W.	1	10	46	30	90	30	0.41
Saturday	12	29.92	41	35	N.	1	10	53	33	94	30	..
Sunday	13	29.95	43	41	W.	2	6	55	32	96	30	1.00
Monday	14	29.92	43	41	S.W.	1	10	55	32	94	30	..
Tuesday	15	29.72	44	41	S.W.	0	10	55	32	94	30	..
Wednesday	16	29.72	46	41	S.W.	0	10	55	32	94	30	..

* Deep snow.

Notices to Correspondents.

Analysis of Soils: *Agricola.* Read the late Mr. Rham's Essay on this subject in Vol. 1 of the Journal of the Agricultural Society. No book will teach you to perform such an analysis as you require. You must pay a large fee and spend two years in the laboratory of a professional analyst before you will acquire the skill. But if you want to know if a soil is fertile, look at the crops it bears—that is a better indication than any weight in the pan of a chemist's scales can be.

Cow-Milking Machine: *Q. Y.* The Company can be addressed at the Lacteal Works, Birmingham. We should be glad to obtain information for you; but it is not our business to advertise their wares.

The Agricultural College: *A. Z. Worcester.* You should append your name. The more your subject is openly discussed the better.

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Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.

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They are all from Eyes, well ripened, and short-jointed, and in an admirable state for Fruiting this season. The prices of this sized plants are 7*s*. 6*d*. each.

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GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-Class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.

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Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.

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Fruit large, often measuring 9 inches in circumference.

Young Trees, full of blossom buds, 10*s*. 6*d*. each.

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Half-standard Apples.

RICHARD SMITH being overstocked, will sell in lots of not less than 50, good Trees of best sorts, and true to name, at 20*s*. per 100; also Half-standard PEARS, and CHERRIES, at 50*s*. per 100.

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PEACHES, PEARS, PLUMS, and CHERRIES.—Fine, flat, well trained, of best quality and true to name.

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8 SMOOTH CAYENNE PINES, strong plants.
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EXTRA strong bushy PRIVET, adapted for making a thick Hedge soon, 8*s*. per 100, or 60*s*. per 1000.
50 very strong Fruiting RED CURRANTS.
25 " " " BLACK NAPLES CURRANTS.
50 best sorts of GOOSEBERRIES, in 6 varieties.

The above collection for 30*s*.

CHAS. SOUTHBY, Nurseryman, Clapham, S.

W. VIRGO AND SON have a very large Stock of the following to offer for Sale at very moderate prices:—

Apples, espalier
Beech, Common, 3, 4, to 6 feet
Berberis aquifolia, 12 to 18 ins.
" dulcis, 1, 2, to 3 feet
Briar, Sweet, 2 to 3 feet
Cherries, espalier
" standard
Cotoneaster microphylla, 9 to 12 inches
Holly, Green, 9 to 12 inches
Laburnum, 6 to 8 feet
Laurel, Common, 2 to 3 feet
" Portugal, 1 to 2 feet
Mountain Ash, 6 to 9 feet
Oak, English, 2 years seedling
" Turkey, 3 to 4 feet
Poplars of various kinds, 4 to 6 feet
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Sycamore, 3, 4, 5, to 6 feet

All the above are strong, healthy, and well rooted.

Samples with prices can be had on application at the Nursery, Woneresh, near Guildford, Surrey.

RICHARD SMITH'S FRUIT LIST contains a sketch of the various forms of Trees, with Directions for Cultivation, Soil, Drainage, Manure, Distance, Pruning, Lifting, Cropping, Treatment under Glass; also their synonymes, quality size, form, skin, colour, flesh, flavour, use, growth, duration, season, price, &c. Free by Post for one stamp.

RICHARD SMITH, Nurseries, Worcester.

WILLIAM BARRON'S SELECT PRICED CATALOGUE of HARDY CONIFEROUS and other ORNAMENTAL PLANTS for 1864, with Supplement of valuable Importations from Japan, is now ready, and may be had Post free on application.

W. B. begs to call attention to his magnificent Specimens of the Rarer CONIFERS, many of which are not to be elsewhere met with. Gentlemen wishing for a fine plant, well grown, are respectfully invited to inspect the Elvaston Nursery, which is only one mile from the Borrowash Station on the Derby and Nottingham Railway.

Elvaston Nurseries, Derby.

HARDY FLOWER SEEDS, of Showy Colours only, sent free by post or rail, by SUTTON AND SONS.

A COLLECTION of the best 50 sorts known .. 10*s*. 6*d*.
A COLLECTION of the best 36 sorts known .. 7 6
A COLLECTION of the best 24 sorts known .. 5 0

SUTTON'S CATALOGUE of SEEDS will be sent post free.

SUTTON & SONS, Seed Growers, Reading, Berks.

FLOWER SEEDS

Free by Post.	£	s.	d.
The best 100 sorts of FLOWER SEEDS, hardy, half hardy, and tender, with instructions ..	1	1	0
The best 50 sorts do. do.	0	10	6
The best 36 sorts do. do.	0	7	6
The best 24 sorts do. do.	0	5	0
The best 50 sorts, all hardy and very distinct in colour	0	10	6
The best 36 sorts, all hardy and very distinct in colour	0	7	6
The best 24 sorts, all hardy and very distinct in colour	0	5	0

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

CHOICE NEW FLOWER SEEDS.

Free by Post. Per pkt.—	s.	d.
AMARANTHUS MELANCHOLICUS RUBER ..	1	0
CLARKIA INTEGRIPETALA MARGINATA ..	0	6
GODETIA THE BRIDE	0	6
HELIPTERUM SANFORDII	1	0
KAULFUSSIA ATROVIOLACEA	1	0
LEPTOSIPHON HYBRIDUS	0	6
LOBELIA PAXTONIANA	1	0
LUPINUS ALBO-COCCINEUS	1	0
MIMULUS MACULOSUS	1	0
RHODANTHE ATROSANGUINEA	1	0
" MACULATA ALBA	1	0
TAGETES SIGNATA PUMILA	0	6

For full description of the above choice New Annuals, see SUTTON'S AMATEUR'S GUIDE, which will be sent to any address on receipt of 6 stamps, or gratis to customers.

SUTTON & SONS, Reading, Berks.

DOBSON'S EXTRA CHOICE SEEDS.

Quality second to none. In sealed Packets.

DOBSON'S SUPERB CALCEOLARIA, 1*s*. 6*d*., 2*s*. 6*d*., 5*s*.
DOBSON'S SUPERB CINERARIA, 1*s*., 2*s*. 6*d*., 5*s*.
DOBSON'S SUPERB PRIMULA, 1*s*., 2*s*. 6*d*., 5*s*.
DOBSON'S SUPERB PANSY, 1*s*., 2*s*. 6*d*.
DOBSON'S SUPERB BALSAM, 1*s*., 2*s*.
DOBSON'S SUPERB LOBELIA SPECIOSA, 1*s*.
DOBSON'S SUPERB HOLLYHOCKS, 1*s*., 2*s*. 6*d*., 5*s*.

The Trade supplied on liberal terms.

J. DOBSON & SONS, Woodlands Nursery, Isleworth, W.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

JOHN KERNAN, SEEDSMAN, 4, Russell Street, Covent Garden, W.C., has now on Sale an excellent Assortment of VEGETABLE and FLOWER SEEDS of the choicest description, selected, regardless of expense, from Growers pre-eminent for the superiority of their Stocks, as J. K. always considers that 100 seeds warranted to grow are far cheaper than 1000 whereof not 10 will germinate.

PEAS. Per quart—	s.	d.
Daniel O'Rourke	1	0
Sangster's No. 1	1	0
Early Emperor	1	0
Climax or Napoleon ..	1	0
Champion of England ..	1	0
Scimetar	0	9
Ne Plus Ultra	1	0
Fairbeard's Surprise ..	1	0
Knight's Dwarf Green Marrow	1	0
Matchless Marrow ..	1	0
Hair's Dwarf Mammoth .	1	0
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And all other varieties.

BEANS.	Per oz	
Early Mazagan	0	6
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Johnson's Wonderful ..	0	8
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And all the best varieties.

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Dwarf Red	0	6
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BROCCOLI.		
Early White	1	0
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And all other varieties.

CABBAGE.		
Early Nonpareil	0	6
Ne Plus Ultra	0	6

And all the choicest varieties in cultivation.

CARROT.	Per oz.	
Early Short Horn for forcing	0	6
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James's Intermediate and other varieties.		

CRESS.	Per pint.	
Curled	1	0
Plain	0	6

LETTUCE.	Per oz.	
Finest varieties of White and Brown Cos ..	1	0
Cabbage of every sort ..	1	0
MUSTARD .. per pint	0	6

ONION.	per oz.	
White Spanish	0	6
James' Long Keeping ..	0	6
Silver Skin for pickling	0	9
Tripoli and other choice varieties.		

RADISH.	per pint	
Scarlet Olive shaped ..	1	6
Long Scarlet	1	6
Turnip, red and white ..	1	6
RAPE .. per quart	1	0
SPINACH, round, pr pint	0	6

TURNIP.	per oz.	
Early Dutch	0	3
Early Six-week	0	3
Orange Jelly	0	3
American Stone	0	3
Teltoe, for stewing ..	0	3

And all other varieties.

Asparagus and Seakale Plants, Garlic and Shallots, Russian Mats, Cuba Bass, Japan Flax, Chinese Grass, Peruvian Guano, Fumigators, &c.

COLLECTIONS of HARDY, HALF-HARDY, and TENDER FLOWER SEEDS, including the Newest introductions up to the present time, in 30 varieties, 5*s*. Imported German Asters, Stocks, Larkspurs, Wallflowers, New Large-flowered Mignonette, Balsams, Double and Single Zinnias, Petunias, Geraniums, Calceolarias, Cineraria, Phlox, &c.

AGRICULTURAL SEEDS.

Carrot, Altringham
" White Belgian
Mangel Wurzel, Long Red
" " Yellow Globe
Parsley, Plain
Turnip, White Globe
Turnip, Skirving's Swede
" Yellow Bullock, and other approved sorts
RYE-GRASS, Perennial and Italian. CLOVER, Red, White, and Alsike.

COLLECTIONS of VEGETABLE SEEDS for Ordinary-sized Gardens, 20*s*.; for small ditto, 10*s*., warranted to give satisfaction to parties, who are required to name in their order the articles of which they would prefer the largest quantity.

Gladiolus, Ixias, Double and Single Anemones, Ranunculus, Lilies, &c., should be planted now up to the middle of April.

J. K. offers his services in securing Ornamental Trees and Shrubs, Standard and Dwarf Roses, Orchideous and other rare plants, which are frequently sold by Auction in this neighbourhood at much lower prices than they can be procured from Nurserymen.

WHEELER'S LITTLE BOOK on SEEDS.

CARTER'S GARDENER'S VADE-MECUM.

Seeds, Carriage Free.

WILLIAM CUTBUSH AND SON'S PRICED CATALOGUE of GARDEN and FARM SEEDS is ready, Post-free, on application.

The name their house has obtained during many years past, is a sufficient guarantee for the quality of the goods offered.

Highgate Nurseries, London, N.

AMBROISE VERSCHAFFELT, NURSERYMAN, Ghent, Belgium, begs to announce that his NEW CATALOGUE (No. 74) for the present Spring is ready, and may be obtained Gratis at

Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, London, E.C.

Picea nobilis.

WILLIAM BARRON can supply strong and remarkably well-rooted Seedling Plants of this lovely FIR, from 2 to 4 inches, in store pots. Per 100, 60*s*.; per doz., 9*s*., including package.

Elvaston Nurseries, Derby.

To the Trade.

AZALEAS, ERICAS, and EPACRIS, fine bushy plants, well set with flower buds, at moderate prices. An inspection solicited.

THOMAS JACKSON & SON, Nurseries, Kingston, S.W., adjoining the Kingston New Station, South Western Railway.

Notice.

JOHN WATERER, of The American Nursery, Bagshot, Surrey, is the EXHIBITOR of RHODODENDRONS at the Royal Botanic Gardens, Regent's Park.

His CATALOGUE, describing colours, prices, &c., can be obtained by letter addressed to the Nursery as above.

☞ For detailed Advertisement of CONIFERS, ORNAMENTAL SHRUBS, &c., refer to page 1151 for 1863.

RHODODENDRON HYBRID CATAWBIENSE, from 4½ to 7 feet high; thickly set with bloom, 5*s*. to 7*s*. 6*d*. each.
RHODODENDRON PONTICUM, 5 to 8 feet, 5*s*. to 7*s*. 6*d*. each.
GREEN HOLLIES, 7 to 10 feet, 7*s*. 6*d*. each.
Two ditto, 20 feet, moved last spring, very handsome, 63*s*. each.
CEDRUS DEODARA, 10 to 25 feet, very handsome, moved last spring; price on application.

G. BAKER, American Nursery, Bagshot, Surrey.

Rhododendron Countess of Haddington.

ROBERT PARKER begs to announce that he can supply good healthy Plants on their own roots of this beautiful variety, at 21*s*. each.

For description, see *Gardeners' Chronicle* of March 5, p. 220. Plants may now be seen in flower at the Nursery.

Exotic Nursery, Tooting, Surrey, S.

Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET.

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

CATALOGUES are now ready, and a stock of Plants in the most perfect health, of all sizes, and at prices to suit all purposes. Sunningdale Nursery, S.W. Rail.

GEO. BAKER begs to announce that his extensive Collections of Hardy RHODODENDRONS, GHENT AZALEAS, and KALMIA LATIFOLIA, are unusually well set with bloom, and his fine Collection of CONIFERS in the best possible condition.

CATALOGUES on application at the American Nursery, Bagshot, Surrey. The Nurseries are about 1 mile from Sunningdale Station, South-Western Railway.

Chrysanthemums, Chrysanthemums.

J. H. BIRD, F.R.H.S., NURSERYMAN, Stoke Newington, is now sending out from his great Stock of the above:—20 pairs of fine varieties of LARGE CHRYSANTHEMUMS for 10*s*.; 20 pair of Cuttings of ditto for 5*s*; 25 pair of fine POMPONS for 10*s*.; 25 pair of Cuttings of ditto for 5*s*.

N.B. To save trouble all orders to be prepaid.

New Chrysanthemums.

JOHN SALTER'S DESCRIPTIVE CATALOGUE of New CHRYSANTHEMUMS, PYRETHRUMS, HARDY VARIEGATED PLANTS, &c., for 1864, is now ready, and will be sent post free on receipt of Two Stamps.

Versailles Nursery, William Street, near Hammersmith Turnpike, W.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

NOTICE is HEREBY GIVEN, that an ELECTION of THREE PENSIONERS on the Funds of this Institution, will take place in JULY NEXT.

All persons desirous of becoming Candidates will be required to send in their certificates and testimonials to the Committee on or before April 25, after which day they will not be received.

Preference will be given to those Candidates who may have subscribed for 15 years and upwards. Should there not be sufficient of this class, then the claims of those who have not subscribed so long or not at all, will be considered.

Printed forms of application may be obtained of the Secretary. EDWARD R. CUTLER, Secretary.

14, Tavistock Row, W.C.—March 19.

The Gardeners' Chronicle.

SATURDAY, MARCH 19, 1864.

IN continuation of our remarks at page 196, on the HORTICULTURAL GARDEN AT CHISWICK, we propose to offer a few further observations on the changes in a legitimate direction, which might be carried out there with good prospect of success, and which would tend in every way towards the improvement and advancement of Horticultural science.

Chiswick, it has been suggested, should become again a school of horticulture, and in becoming this, it should be rendered efficient by becoming also an exemplification of modern gardening in

every department. Now this is just what is wanted, and if the Council of the Society will but facilitate the realisation of this object, uninfluenced by foregone conclusions, the horticultural Fellows will not only be satisfied for themselves, but will be content that the non-horticultural Fellows should have their legitimate, and even, if need be, their illegitimate objects of amusement provided nearer home. And with less than this, we are confident that neither the horticulturists themselves, nor the country patrons of gardening, will be content.

What then is to be done? To provide for the improved education of young gardeners, so far as the means can be found, is one fixed idea which must not be separated from the future of Chiswick. Whatever, therefore, is attempted to render the garden more horticulturally attractive to the scientific body of Fellows, must be consistent with this idea. We see no difficulty in the way of combining the two, nor any objection to the combination. For both purposes we want and we must have all the departments of horticulture fully represented by an exemplification of the culture of all the principal subjects which belong to it, and by the most complete collections which it is possible to keep up, of the different varieties of each—the collections being as much a necessity as the demonstration of culture. A garden manager requires to be taught not only *how* to cultivate, but *what* to cultivate; and the garden owner and scientific horticulturist require to see and thus to become acquainted with the best kinds of the different cultivated plants, whether fruits, vegetables, or flowers, as well as to learn the utility or otherwise of new modes of practice, and of novel appliances. All this must be shown at Chiswick, before the garden can be considered to supply the wants of the present day, and of the present race of gardeners and garden owners.

When we look at the subject a little more in detail, it will soon become evident that the perfect condition of the practical department at Chiswick, in which some of our friends affect to believe, is in fact very far from being as yet realised. Taking Fruits first, as being a most important department, we shall find that Grapes are well represented, better, perhaps, than ever has been done previously in any one place, and we have also very successful Grape growing; but Chiswick still wants, before it can be regarded as reasonably complete even in respect to Grapes, a well-constructed house in which pot Vines could be grown, so that an extensive series of sorts could be fruited together, and after being fruited, the Fellows could fairly get to see them; and then, this being done, we want the complete utilisation of the whole, which has never been attempted, if it has ever been dreamed of. The way we would horticulturally utilise the splendid collection of Vines now at Chiswick would be—having a house in which pot Vines could be seen as well as produced—to grow the whole series of sorts in pots and fruit them simultaneously, and then to invite the Fellows to a Grape Promenade. It could not perhaps be possible that the Fellows should taste the varieties, but at least they could all be legibly named, and the merits and adaptabilities of the better and more useful sorts, decided on the authority of the Fruit Committee, could be indicated. A Grape Promenade would be very enjoyable if a fine day were to be selected; we have, however, more yet to say on this subject of summer promenades at Chiswick.

But these matters by no means exhaust the interest existing, and to be excited amongst fruits; and if, as we thus see, Chiswick is even yet deficient in respect to its strongest point—Grapes, what shall be said with respect to many other choice fruits, the deficiency in which is still more palpable? Look at Pine-apples for example: not one, as far as our eyes have discovered, is to be found within the boundaries. Now all the good sorts of Pine-apples at least—and there are some quite new amongst them—should be grown there, in order that the garden students might learn to know their peculiarities and their merits. A house, as we have said, ought to be provided for pot Grapes, and the pits in which pot Vines are now so well grown, but rendered so utterly inaccessible to visitors generally, would then be liberated for the Pine-apples. Then as to Peaches: though there is a fine Peach wall, we question if good examples of all the best Peaches could be found upon it. Peach house there is none; and though this might be supplied by one division of a genuine orchard house, if it existed, yet, as a matter of fact, the genuine orchard house does not exist there. Strawberries, though a tolerably full collection, are, we believe, by no means complete; yet even the materials already existing in the garden would form a good foundation for a Strawberry promenade, in which tasting might doubtless be made part of the programme, the appearance of the sorts being shown to good advantage by a pot-grown plant or two of each. For the display of such things as these the great conservatory would serve admirably. And as the Society has announced a Strawberry fête during the present year, where can so fitting a place to hold it be found, as in the immediate neighbourhood of the beds of Strawberries at Chiswick—where there might be some chance of getting at the proper flavour of the fruit, as well as of feasting the eye upon its external charms, the former a thing impossible at the end of a second day's show in London? Then a real orchard house—with or without heat, as the disputants on this knotty point may settle to be the proper thing—might be made full of interest by means of Apples, Pears, Plums, Cherries, &c., in pots or otherwise as most convenient; the plants would show the appearance of the several kinds, and information might easily be appended to them respecting those which were known to be of good quality. Such a series as this would add increased interest to the proposed promenade in the Grape season, even though some of them were not themselves fully matured. Of the hardy winter fruits, too, a fine display of samples might be and ought to be made in some more accessible place than the dark and confined fruit room. Even this by no means exhausts what might be accomplished with fruits in the way of teaching—the learners being not only young gardeners, but also their elders.

To a certain extent the same principle of growing, in their proper season, the different vegetable crops, and of illustrating the choice of varieties, should be carried on, announcements being made in the Society's Journal as to when particular crops would be in a state for examination by those interested in them. The bulk of the produce might be, as now, utilised by being sent to market. We, however, pass on to flowers.

As with fruits, so with flowering plants, there should be in a school of horticulture examples of all the departments of flower culture, and of all the usual flowers met with in gardens. There should be, that is, a selection of horticulturally useful stove plants, and of greenhouse plants; there should be samples of the most useful Orchids properly grown, and when a subject like that of the cool treatment of Orchids is occupying public attention, it should be shown in practical operation at the head-quarters of British gardening; there should be the best kinds of the popular decorative plants, as Pelargoniums, Fuchsias, Calceolarias, &c.; there should be conservatory spring flowers and conservatory autumn flowers, so managed that the student might learn how to keep up a supply of these necessities of a first-class garden. And all these flowers and plants might be so managed as to serve the double purpose of instructing both the public and the pupils in the respective matters on which they need information, and at the same time of aiding in the ornamentation of the town garden at South Kensington.

Out-door flowers—summer plants and perennials—should be largely grown at Chiswick, as samples of the materials available for garden decoration at all seasons. Good collections, as complete as circumstances will permit, should be maintained and planted out with some regard to effect, in order that Fellows and their gardeners, when they want to introduce any novel elements into their flower-gardens, may see by glancing at a full series, what kinds will best suit their purpose. Some persons, we know, entertain the notion that these things could be done as well at Kensington, but this only shows how the want of practical knowledge may lead well-intentioned men astray; for leaving aside the question of climate and situation, which in itself is enough to negative such a proposal, there remains the insuperable objections that Kensington is or ought to be planted with a limited number of appropriately fitting colours, and that the medley of a trial ground would be utterly out of place there. No, this proving of garden flowers is horticultural work, and Chiswick is the proper place for it. At Chiswick it has indeed been carried on with considerable success; but this brings us to a point we have previously hinted at, namely, that improvement is needed to make the trial of garden flowers there, what it should be.

When the trials of summer flowers were commenced some few years ago, a space of enclosed ground, long accustomed to be occupied by beds of flowers, was given up for the purpose. But the liberal contributions of the growers and raisers of this class of plants more than filled the allotted space, and certain subjects, as Stocks and Asters, and subsequently Hollyhocks and Dahlias, were banished to other parts of the garden, the original space being still crammed to repletion. Now what should be done with these flowers is to give up to them a site, where they might be disposed with some regard to effect, and with full regard to the space required by each to develop its proper character. The ground hitherto used is not only worn out for the purpose, but it is too limited, besides being too close and confined. It so happens, however, that to the eastward of the great conservatory, there is an unoccupied space which would exactly suit this purpose, and where the plants would be seen to very much greater advantage than in any other spot in the garden. A flat surface of Grass flanks both sides of a broad gravel path, and here on the Grass they might be located, in a series of suitable beds, with ample space for each to be properly seen, and for the superior kinds to be distinctly labelled as soon as the Committee had completed their examination. Shortly after this has been accomplished, we hold that there should be a Floral promenade, to give the public a pleasant excuse for going to examine the flowers, and this would supply both instruction and gratification to a large number of that body of the Fellows who have gardens, and who therefore desire to see the gardening status of the Society maintained in its integrity.

Besides these things, such matters as geothermal culture ought to be exemplified in our national horticultural garden; and there is no reason why hybridisation should not be carried on, and a series of useful novelties obtained for the Fellows' use. Let no narrow minded person say that this would injure trade, and so object to it. On the contrary it would arouse interest in, and give an impetus to gardening pursuits, which would be highly beneficial to all, whether in trade or not.

We must leave other matters for the present, merely remarking that Chiswick ought to have next summer at least its Strawberry Promenade, its Floral Promenade, and its Grape Promenade, not as a source of revenue, but for the information of the Fellows.†

IT has been often remarked, that whilst the FLOWER SHOWS in Paris and other parts of France are inferior in respect to the flowers, and plants, and fruits exhibited, they are much better arranged, and produce a much more decorative general effect than our own. Somehow there seems to be a prejudice in the British exhibitors for flat surfaces covered with shabby green baize, ranged in long monotonous lines, and at every flower show a critical observer may remark the want of neatness in the details. Nevertheless like the seats in an amphitheatre, which display the spectators to the best advantage, there is no doubt that plants and flowers are seen much better upon stages of different heights.

It may be difficult to provide a uniform system of stages to suit exhibitions of all kinds of things, but the result could be easily obtained if the exhibitors themselves would come prepared to make their own arrangements. At the last Hyacinth show at the Royal Horticultural Gardens, some flowers were shown on flat tables and some on stages, and the difference of effect was remarkable. Again, our neighbours on the continent are accustomed to find shrubs and Mosses as back-grounds and fore-grounds for their collections. It was pleasant to see at the late Hyacinth show that many exhibitors had decorated their pots with Mosses. The idea might be carried by them much further than it is at present, with good effect. In their very admirable display Messrs. CUTBUSH had caused each pot to be ticketed with the name of the flower in a much neater fashion than is usually done, but as the label was white and affixed close to the stem of the flower, it attracted the eye in the first instance more than the flower itself. If the ticket were of a neutral sage-coloured tint, or, better still, of a neutral tint, affixed to the pot itself, the flower, and not the ticket, would become the principal object in view.

Something was done at the last Horticultural Show to make the exhibiting space secure from the weather. There is no doubt the arrangements could be carried much further, and instead of a wet day deterring people from visiting the shows, it might be made to render them all the more attractive, by presenting the exhibition to the public as a beautiful and comfortable retreat, altogether independent of the elements. With

the great amount of covered space at command, the Horticultural Society has the opportunity, if it will but use it, of making its shows altogether independent of our capricious climate.

New Plants.

271. Cattleya quadricolor, *Lindl. in Paxton's Flower Garden*, i. p. 6.

C. caulibus angustis compressis monophyllis pedunculis 1-2 floris, sepalis oblongo-lanceolatis obtusis, petalis spathulatis 3-plo latioribus, labello indiviso cucullato haud dilatato margine anteriore subcrispo.

Habitat in regno Novo-Granatensi. *Rucker.*

Stems narrow, compressed, 6 or 8 inches high, often as long as the leaves, which are more erect than in other species of the genus. Peduncles usually bearing two flowers, which are not quite 4 inches across; these, with the exception of the lip, are of the purest white. The lip itself is rolled round the column, and trumpet-shaped (not spreading out in front, like many Cattleyas), and adorned with three colours: a rich purple transverse blotch forming its upper extremity, to which succeeds a band of yellow, which is itself succeeded by large patches of pale rosy lilac, fading away as they approach the base of the column.

This beautiful Cattleya is quite distinct from every previously known species of this genus. A single plant of it was introduced many years ago by Mr. Rucker from New Grenada, and to his kindness I am indebted for the specimen that is now (March 1) flowering at Knypersley, and from which the above description has been drawn up. It exactly accords with a sketch that I remember having seen in Dr. Lindley's herbarium, taken from a flower communicated by Mr. Rucker himself, and to which the name of quadricolor was assigned—no doubt because the pure white of the sepals and petals, with the purple, yellow, and lilac of the lip, made up the sum of four colours. I do not think the plant relishes as much heat even as other Cattleyas do, but as it is as yet exceedingly rare, it has not been possible to ascertain this or the contrary by experiment, and unfortunately we have no precise information as to the elevation or climate of the locality whence it was originally brought to Europe.

This is the only genuine white Cattleya with which I am acquainted, for the so-called C. crispa is a Lælia, and C. Wageneri and C. candida are mere varieties of C. Mossiæ and C. Harrisonii.

While on the subject of Cattleyas I may mention that a plant of C. pallida that I received many years since from the Horticultural Society, and which was sent from Mexico by Hartweg, is now flowering with me for the first time. It is clearly, as Reichenbach suspected, the C. Warscewiczii delicata of Mr. Warner's book. C. Trianæi is another variety of the same species; indeed I much doubt whether the true C. Warscewiczii is at present to be met with in this country, a circumstance that is greatly to be regretted, as, judging from the specimens in Dr. Lindley's herbarium, it must be a superlatively beautiful thing.

272. Dendrobium luteolum (*Bateman*).

D. caulibus erectis (?) foliosis ramosis, foliis lanceolatis apice obliquis acutis racemis lateralibus 2-4 floris subæqualibus, sepalis ovato-lanceolatis obtusis lateralibus in mento longe producto incurvo connatis, petalis conformibus, labelli trilobi lobis lateralibus erectis rotundatis intermedio majore integro oblongo convexo emarginato disco tomentoso.

Habitat in Moulmein. *Parish.*

With the exception of a few reddish streaks on the lip, the flowers of this new Dendrobium are of a uniform pale primrose tint. Indeed, I should have called it D. primulinum, if that name had not been already appropriated to another and totally different species. The mentum (or spur) is about the length of the ovary, and is curved inwards. The flowers are about 2 inches across, and are remarkable for their straight margins or edges, which are not waved or curled, as in most Dendrobia; they are borne in short lateral racemes that come forth towards the upper (not the end) portion of the stems. With me these racemes are two-flowered; but in a much finer specimen from Clapton, of which a drawing has been prepared for the "Botanical Magazine," as many as four flowers appeared together, and possibly this number may be exceeded when the plant—which is of the easiest culture—has been longer established. Even now it is very ornamental. Its nearest affinity is with D. rhombeum.

Moulmein seems to be inexhaustible in new Dendrobia; Messrs. Hugh Low & Co. can already boast of having introduced nearly a dozen species that were previously unknown, among which the present is one of the most distinct.

273. Dendrobium infundibulum (*supra*, p. 1194, 1862).

This beautiful species is now finely in bloom at Knypersley, but the stems and flowers are very different from those of the specimen that flowered with Mr. Rucker, and to which my description referred. The stems of my plant are long and grassy, those of Mr. Rucker's short and clavate, and while with Mr. Rucker the markings of the labellum were a rich Roman red, with me they are deep orange. No doubt the species will prove to be variable, but all the varieties promise to be admirably beautiful, while their flowers retain their freshness for weeks.

274. Dendrobium Fytchianum (*Bateman*), *supra*, p. 100.

I find that I was mistaken in supposing this plant to be altogether new. I am now satisfied that in reality it is a variety of D. barbatulum (*Paxton's Fl. Gard.* iii., p. 113), but as that species is represented as having its sepals and petals nearly equal, and as in my specimens the petals were thrice as broad as the sepals, I was at first disposed to consider the Moulmein plant to be quite distinct. Many Indian Dendrobia are especially prone to vary and run into each other, as poor Griffiths long ago remarked, and hence there is great difficulty in settling specific distinctions until after the examination of a large number of specimens. *J. B., Biddulph Grange.*

NOTES ON GARDENS.—No. V.

Backhouse's Nurseries, York. (*Second Notice.*)

Leaving the first group of houses, a short glazed verandah conducts to a range 160 feet long, chiefly occupied by a general collection of greenhouse plants, Vines, succulents, &c. In a large house devoted to the raising and culture of Vines, a fine stock of Schizostylis coccinea, the first representative of a new genus imported by Messrs. Backhouse under the name of a "new scarlet Tritoma," and recently figured in the Botanical Magazine, was coming rapidly forward. If it should prove hardy, which was confidently expected, it will be a great acquisition to the outdoor as well as indoor department, flowering as it does at a time when brilliant things are scarce or absent. Here also were many fine flowering bulbs of Gastronema sanguineum, a new and handsome bulb from South Africa, with orange-red or scarlet blossoms 3 to 4 inches across. Another house, used for Vines during the early part of the year, contained a lot of Agaves, Yuccas, and such plants, amongst them a fine specimen of Yucca filamentosa variegata, with Yucca tricolor, quadricolor, and others, Agave schidigera and filifera, &c., the whole mixed up and contrasting well with the commoner forms of vegetation. The greenhouses were filled with Ericas, Geraniums, &c., clean and well done, but with nothing among them claiming special notice, except perhaps a lot of fine specimens of the Shanghae Palm interspersed. This is an interesting plant, from the strong probability of its adding the Palm to the garden landscapes of Britain. If living in the contumacious clay of north-western London for the past four years without a rag of protection of any kind, be a proof of hardiness, Chamærops Fortuni is certainly so. A young plant survived with the Messrs. Backhouse, when the thermometer fell nearly to zero several years ago, but was killed the following year by being "protected" with Spruce Fir boughs: not being able to bear the moisture and cold combined, though the temperature was not so low by 10 or 12°.

Having "passed on," through the principal houses, the next movement was in a downward direction; along a winding passage terminated by a rustic doorway, and opening into the subterranean glen or partly filled crevasse, known as the "Trichomanes house," which from its unique design and arrangements, and the wondrous collection of Trichomanes and Hymenophyllums cultivated therein, is without doubt the most remarkable and interesting garden structure in England at the present moment; 120 tons of rough sandstone were used in its construction; and though in many parts the huge rocks overhang—though every variety of inclination is presented by them—though the whole thing is of recent origin—yet, without the aid of bricks or cement, so naturally and safely are they placed, that one fancies the scene a mountain rent through which the water had trickled for ages. The rocks reminded me of those under which I had crept years ago on the shattered sides of the Scalp Mountain in Wicklow, and one can fancy some such "covered way" being found there, were the opposing sides of that curious mountain to meet from depression.

The ground plan is in the form of an irregular horse-shoe, one limb being for the species of Trichomanes and Hymenophyllums from cool regions, and the other for tropical species. The two divisions are not separated by any door, but a huge stone drops across and forms a a low rude rocky arch, which is so placed that its summit is only a few inches higher than the ascending floor at the further extremity of the warm division, thus preventing the escape of the heated atmosphere till the whole of that portion has been charged with it. A still more remarkable effect is produced by this arch in generating atmospheric currents—and not more remarkable than valuable; for to this cause must be attributed the great success of the house. It will at once be seen that two atmospheres of different temperatures and degrees of moisture cannot remain quiescent. The warm and moist air admitted from a heated tank (thoroughly concealed) at the furthest extremity of the warm division, rapidly passes towards the arch, filling that division from its roof downwards. A cool current admitted from the open arch continually passes underneath the other, in the opposite direction. This in passing condenses the vapour of the upper warm current in so remarkable a manner, that everything within the range of that current is incessantly covered with dew. And such dew! every Fern, nay every pinnule, and every particle of moss was radiant with tiny drops that glistened like polished diamonds and emeralds, for the reflection of light—now green, now gold—on these living gems was wonderful. And yet this moisture, incessant day and night, scarcely touches them. They would not bear it, so delicate is their texture. It stands upon their tiny hairs, hardly touching the real substance of the frond. Even the sprinkling of the finest watering pan or the thinnest misty spray is too much, so admirably are their delicate forms fitted by the hand of the great Creator to be nurtured by evening dews, and defended by the deep recesses and intense shade of tropical forests from the storms and tempests which abundantly assail the elevated and robust forms of vegetation. In this house they have "a little world of their own," with its "equatorial and polar currents" constant in their operation. Close the arch with a door and the spell would be broken; atmospheric motion, always so valuable to vegetation, would be stopped, and the grand condensing process ruined.

As before stated, the entire structure is underground, 9 to 10 feet deep and very narrow, the cooler division being in some places considerably deeper and lower than the warmer. Iron bars span the chasm, bearing the large slabs of thick glass which form the roof. The top is of course the only surface exposed to the influence of frost, and that danger is obviated by the introduction, just under the glass roof, of a common drain pipe, connected with the open air space round the boiler, by which means a thin and slightly warmed stratum of air is diffused just under the only place where frost could otherwise enter. The floor is formed of rough slabs of stone, and is always moist from the percolation of water by natural drainage among its fissures. In rainy weather the whole house filters water from its rocky sides, and the floor becomes a veritable watercourse, clean and pure-looking as a mountain streamlet. Abundant moisture in the atmosphere, and but little variation of temperature, are the natural results, and produce just the effect the Ferns desire, to judge from their appearance.

Some large and gloomy looking rocks surrounding a pool of clear water near the entrance are appropriated to the varieties of Trichomanes radicans, which here fruits abundantly. Opposite to and rivalling it in size and beauty was Hymenophyllum scabrum, from New Zealand, remarkable for the chaffy hairs that clothe its stalks. Further on were sheets of Hymenophyllum tunbridgense and Wilsoni; the former especially in wonderful luxuriance. Among them were fine plants of the beautiful Trichomanes reniforme and Hymenophyllum pulcherrimum, both New Zealanders; the latter with tripinnatifid fronds, 15 to 18 inches long, of the palest green. Next came two magnificent masses of Hymenophyllum demissum in two varieties, with more than 100 fronds, above 18 inches high, and covered with the minutest drops of "golden" dew. Near these the rare Hymenophyllum caudiculatum bid fair to put all others into the shade; nothing can exceed the beauty of its transparent fronds as they curve over the mossy rocks. Closely associated with them, and at the same time rivals to them, were H. cruentum and Trichomanes exsectum, the former with entire wavy fronds, 3 to 12 inches long, exquisitely veined, and so thinly transparent that I could easily read small print through the young ones; the latter like the finest highly divided green seaweed, 6 to 12 inches long, and pendent. In its own land this is said to hang from the roof of dripping caverns, and seems to luxuriate in any amount of water. Fringing the rocky arch, on the warm side, with myriads of its attenuated pendent glistening fronds, is Hymenophyllum valvatum, from the West Indies; and near it fine plants of Trichomanes Luschnathianum, a species that climbs 10 to 20 feet up the trees in Brazilian forests, throwing off sessile, highly divided fronds 18 inches long. Further on is a ledge from which droops the lovely Hymenophyllum interruptum, with linear pinnated fronds, covered with tawny hairs, and along with it Hymenophyllum sericeum in a young and small state. On another ledge was the noble Trichomanes maximum, recently introduced from Java. It resembles the Killarney Fern in having a thick creeping hairy rhizome, but has paler fronds nearly 3 feet in height when fully developed. In another shady and humid nook, climbing upon the trunks of young Tree Ferns, &c., are fine plants of Trichomanes scandens, with silky branched fronds 18 inches long, that shone like satin. Near these another ledge, covered with tufts of T. alatum, radiant with dew-drops; also the elegant T. trichoideum, running its slender rhizomes among a host of other species, and throwing off its fronds—like diffuse bottle-brushes of veins alone, so slender are its hair-like pinnules; and T. Zollingeri, a handsome species, closely allied to T. javanicum, which accompanied it. There was also the rigid, yet membranaceous T. Kaulfussii, 15 or 18 inches high; and likewise the curious Trichomanes membranaceum, with its round sessile fronds, sticking like Ivy to the rocks and decaying wood. T. plumosum is a most charming species, allied to T. crispum, densely clothed everywhere with the softest white pubescence, which, studded as it was with minute pearly drops, looked like a perpetual mantle of hoar frost, and contrasted finely with the golden lustre of the prostrate fronds of Hymenophyllum Plumieri. It is useless, however, to attempt to describe fully when there are above 80 living species. Two more and I have done. One of these is T. floribundum, with pinnated fronds 6 to 24 inches high, of which the pinnæ are broad, finely serrulate,

and so thin that they remind one of the texture of a fly's wing slightly tinted with green. The other is T. superbum, a new and most noble species, imported by Messrs. Low & Co. of Clapton, from Borneo; it has highly divided fronds of very large size (said to become nearly 3 feet high, and 18 inches to 2 feet wide), with broadly winged stipes. There are many others from Java, Guiana, and other countries, of great beauty, and perhaps in some instances surpassing any I have attempted to describe.

Accustomed to see but very few species of these rare plants in gardens generally, and a scarcity of them even in the very best places, small wonder it is that an ordinary son of Adam should feel an alarming gushing up of ignorance in the midst of the delights of such a scene and from being for the first surrounded by so much novelty. In fact, few but a Smith, a Moore, or a Hooker, could fully value and appreciate the collection, though the lovely varied dew-tipped and pellucid masses of verdure could not fail to charm even those who would hesitate not to class the Hemlock with the Bracken. A considerable number of species from the hottest regions are grown in a small low-roofed house, attached to the stove, where they can be accommodated with a high temperature—70° in winter. They are grown in pots on a warm tank, and have no glasses over them, being kept constantly saturated with moisture.

Some species require to be grown on the living stems of young tropical trees, and here some were to be seen in that state. I remember being particularly struck with one, Trichomanes brachypus, which healthfully twined round a young simple-stemmed plant of the bitter Quassia, canopied over by a graceful tuft of its handsome leaves.

Many acres of these nurseries are devoted to the cultivation of fruit trees; and single quarters with from 5000 to 10,000 young Apple trees formed to me an interesting and by no means common sight. A sandy and yet not poor soil prevails. In some parts the ground is composed of mingled clay and gravel; in others acres together are very sandy, ripening well horticultural seeds of various kinds; and in others again is peat, filling natural hollows to the depth of 10 feet or more—a rare combination of soils admirably adapted by nature for the purpose to which it is devoted. A somewhat humid climate characterises the district, and gives great richness to the verdure. Judging from the state of the tiniest and most fastidious hardy plants, no air could be more to their taste. I noticed one very well feathered Wellingtonia, 12 feet high, or thereabouts, and adjacent to it a specimen of Picea nobilis 15 or 16 feet high, dense and luxuriant—a grafted tree, moreover, and yet its last leading shoot was more than 3 feet in length. A seedling could scarcely have made a better plant. I understood it had rooted freely from the base of the scion for some years. Pinus grandis, a beautiful species, with foliage nearly a foot in length, appears to be perfectly hardy, having stood the great frost of 1860. This bids fair to be the finest long-leaved hardy Pine introduced. *Wm. Robinson.*

(To be continued.)

Home Correspondence.

The Royal Horticultural Society and Gardeners.—I observe with much interest the movement by which, I trust, the gardening world will profit—I mean the resolution lately passed by the Society to form the gardens at Chiswick into a finishing school for young gardeners. One difficulty seems to arise—can the Society afford to pay a competent director to be a constant resident at Chiswick, in addition to the salary paid to the present competent manager of both the gardens? Another will be, I fear, the difficulty of finding a well-educated gardener ready and willing to take so responsible a situation. I can only hope and trust that a commencement, even in a humble way, will be promptly made. I have for a long time thought that gardeners as a body—a most intelligent class of men, ministering largely to our enjoyments—have been placed in an unfavourable position, and all lovers of horticulture should in my opinion endeavour to make it more favourable, more independent. I learn that the present custom (which, by the way, it seems has existed for many years), is for a gardener when he is out of a situation to apply to a nurseryman or seedsman for one. If his character be satisfactory, his name is placed on a register, and when a situation offers for which he is thought adapted, he is recommended to obtain it; this is obligation No 1 which he incurs. If he be poor and unable to wait till his turn arises, he is probably offered work in the nursery, where he will receive 12*s.* or 14*s.* a week, till a situation offers. This is obligation No. 2. Now, although this seems perfectly fair and above-board, the gardener's independence is gone; he feels indebted to his recommender, and of course wishes to repay him, which I suppose is done by sending an order. I have such faith in the majority of our modern horticultural tradesmen, that I believe the gardeners they recommend are left perfectly free to send their orders to whomsoever their employers please, but there is the obligation looking them in the face, and the dread in case of dismissal of not being again placed on the register because they have not sent their annual seed order. Now although this system may have worked well for many years, and in honourable hands may have never been abused, still it is open to abuse; and all well-wishers to gardeners must wish to see established something that will assist and save them from incurring obligations to individuals, which in some cases—I trust few and far between—may be very irksome to an honest man. To illustrate this, I may mention an anecdote which I used to hear many years ago of firms long since passed away. The principal would be perhaps a keen man of business, and always have a long list of gardeners waiting for situations on his register. The *on dit* was, that as soon as one "turned up," and the gardener received his *congé* to take possession, the hand-shake (if a very grand place this was the whole hand; if moderate, two fingers; if small and only a faint hope of an order, it was one finger, called by the gardeners the pump-handle shake) was accompanied by a sort of masonic intimation that a good order was expected. Now this "good order" in the hands of a weak-minded man would swell something in this way; if 2 ounces say of Cauliflower seed was the real requirement of a garden, six or eight ounces were sent, and so on in proportion with other seeds. Thanks to the present mode of conducting the seed trade, and to the excellent catalogues published, things like this, even if they ever occurred, are scarcely possible, and not at all probable. I merely mention the anecdote to illustrate my proposition that the present system is open to abuse; and we may perhaps contribute to the comfort of gardeners if some project like the following is carried out. Suppose, then, that in addition to the proposed school at Chiswick where young gardeners may receive one year's finishing education, a general register be kept, open to all the Fellows, something after the following mode:—A gardener of mature age, out of place, on receiving testimonials of character from his last employer, and a recommendation say from one or two Fellows, should make his appearance at Chiswick, and, if thought proper, should undergo a *viva voce* examination by the Director, so as to ascertain to a certain extent, at least, his capabilities; he should then have his name placed on the register, as fit to take a first, second or third-class situation. By some such method as this the Royal Horticultural Society would, in conjunction with the Chiswick school, be the centre of the horticulture of the empire, and the numerous Fellows of the Society would, without incurring any obligation to individuals—for how often is a gardening amateur applied to by numerous friends something after this way: "Can you recommend me a good gardener?"—know where to make an application, and have their want supplied. This is, I am well aware, a mere crude suggestion, but I have some faint hope that it may be realised. In mentioning three classes of gardeners, I think I am going with the times, for villas, with simply a greenhouse vinery, and a few garden frames, are rising daily, and offer comfortable and improving situations for young men, at say 21*s.* per week. Other places with more pretensions may require a man with more experience—say at 30*s.* a week; we will call the former a third-class place, the latter a second-class; in both the wages should be placed to the applicant's name. The first-class man should have this matter left open, for first-class places differ much in their requirements, and the wages required should be given in confidence to the Director. I have reason to believe that if something like what I have thus roughly suggested could be carried out, it would lead to a large addition to the number of Fellows—for how gladly would hundreds of amateurs go to a safe central office for a gardener; it would also be of great benefit to a very large number of deserving men. *Hortulanus.*——A correspondent, signing himself "Another F.R.H.S.," asks me in your number of the 5th March "to point out the good produced by Mr. Chester's adjournment of the Annual Meeting?" In reply I beg to assure him that in my opinion, as well as in that of many others, had it not been for the time given by the adjournment for the Council to reflect upon the strong demonstration in favour of poor old Chiswick at the Annual Meeting, the committee for developing the usefulness of the real Horticultural Gardens would never have been appointed. The motion that Mr. Chester was speaking to, and was about to make with regard to the old gardens, was forestalled by the Chairman politely interrupting him to inform him that the required committee had already been decided upon. This was no little "good" produced by Mr. Chester's adjournment. For the present Council, albeit "all honourable men," are with three, or at most four exceptions, I fear, more the Council for the gardens at South Kensington than for the gardens at Chiswick; and unless looked very sharply after they will not weep very bitterly if the latter is swamped, provided that its more showy, extravagant, and fashionable consort can live out its prescribed time. On the newly appointed Committee I know there is one gentleman whom I heard at the last meeting speak most despairingly of Chiswick, and another who stated that he knew nothing about gardening. These may be very good Fellows, but the "gardening element" of the Committee must keep them "up to the traces," and see that they stick to their appointed work. The conciliatory nature of Mr. Chester's speech, when a very little spark might have created a blaze, was, I apprehend, another "good" produced; and although I may not have agreed with Mr. Chester in all that he said, still there were matters he alluded to which were sensible and serviceable. Again, "Another F.R.H.S." is mistaken in believing that it was "a part of Mr. Chester's programme to promote bowls," &c., as I know that he is, like any sensible man, strongly opposed to such misplaced amusements. The "Report of the Council," as "F.R.H.S" elsewhere states, is answerable for this idea. From what little I know of Mr. Chester (who is perfectly able to defend himself: far better than I can, indeed), I believe that he, "Another F.R.H.S," and I have all pretty much the same object in view. I would merely ask one question for the consideration of the new committee, which is—Why should not plants supplied by Chiswick to South Kensington be charged to the account of the latter? The extra expense is incurred for the latter's benefit, and it should pay for it in all fairness, to the amount I believe of some 300*l.* or 400*l.* or more per annum. [There ought to be no mystery or secresy as to the objects on which money is expended, in either establishment.] I beg to thank "Delta" for his compliment and kind correction, and should grieve in any way unintentionally to detract from Mr. Nesfield's well-earned fame. *Another Old F.H.S. of London.*

Hydropult.—I have had one of these contrivances in use here since last June, and in cases where a garden engine is too cumbrous, and a common syringe too tedious, I have found it very efficient. Your correspondent "Veritas" complains of its intermittent action, which it certainly has; but, if properly worked, not more so than a garden engine; less by a great deal than a common syringe; and, if used with the single jet and regulated by the forefinger, it has none at all. If "Veritas" got his foot wet, his instrument must have been out of order, for all the joints are packed with leather, screwed tightly together and water-tight. As regards the capabilities of the common syringe in that respect, I have certain unpleasant memories of cold water trickling down my arm and side within my clothes when using it against high walls, &c. I do not find using the hydropult to be hard work. I can empty six pots of water with it right off, and I am only a man of ordinary strength. I think however that a lady would find it very hard work indeed. *D. Hendry. Mount Clare, Roehampton.*——We have had one of these implements in constant use here for upwards of 12 months, and it gives perfect satisfaction. On reading your correspondent's article, I questioned my man as to the hard work complained of in using it, and he directly told me that he greatly prefers it to the syringe, both on account of its continuous stream of water, and the small amount of time taken in wetting a long range of Peach houses and Vineries with it. As to the foot getting wet, that is easily remedied by putting a little stopping occasionally on the caps. Any man who complains that the hydropult is hard to work, is in my opinion of no use in a garden. *Geo. Bond, Walcot Garden.*

New Hyacinths.—In the *Florist and Pomologist* for December last, Mr. William Paul, of Waltham Cross, thus comments on the schedule of prizes for the current year, just then issued by the Royal Horticultural Society:—"It is with regret that I see the alteration in the Royal Horticultural Society's prize schedule for next spring, wherein the new Hyacinths are restricted to the production of a single year. I fear, but the sequel will prove, that by thus qualifying a term, the Society is placed on the horns of a dilemma. Six Hyacinths of the current year will no doubt be shown, and the best six the year produces; but it is barely probable that they will in the aggregate surpass those already under cultivation. Should the judges withhold the prizes on the ground of indifferent quality, it will amount to a censure on the rule; if they award it, to a premium on retrogression." Mr. Paul here forcibly describes the two difficulties that would inevitably result from the operation of this rule, and that did result at South Kensington on Wednesday, the 9th inst. The "horns of the dilemma" were presented to the judges, and on the last of them were they fixed. The aggregate quality of the new Hyacinths was much below the aggregate quality of those forming the best collections in the several other classes, and, yet they were awarded prizes according to the quality of the stands. It was a "premium on retrogression." In the four stands of "six new Hyacinths of 1863-4," 23 varieties were staged, and had 18 of the best of them been selected to come into competition with the collections in the class for a similar number of varieties, the new flowers would indeed have suffered by contrast. The Floral Committee selected one flower from Mr. Cutbush's stand, and one from Mr. Paul's, to which they awarded First-class Certificates. These unquestionably were acquisitions, being both novel in colour, and having handsome spikes. Two others in the group from Mr. Cutbush were awarded Certificates of the 2d Class; and what shall be said of the remainder? It is very doubtful indeed if ever they will be seen again, unless another season's culture should develop qualities at present undiscovered. On such a shifting quicksand of questionable policy does the subject of "New Hyacinths" at present ride at anchor. Here is seen the large majority of new Hyacinths distanced by those already in cultivation, presenting an anomalous spectacle not to be met with in connection with any other class of plants. Newness, without corresponding quality, is valueless where progression is required, unless something startlingly novel should be presented and cultivated, though requiring corresponding qualities of form, symmetry, &c. I would

suggest that the class for six new hyacinths, in the form in which it appeared in the schedule of the Horticultural Society, should be withdrawn. It is both unsatisfactory and misleading. Instead thereof, let there be a class of new Hyacinths in which certificates of money value shall be awarded to such of the flowers as are deemed worthy of the distinction, If they are not decided advances on existing known varieties they should nevertheless be of average quality. It would be better to see only two really good flowers in such a class than to gaze on the ill-conditioned crew that were to be seen at the South Kensington Show. This regulation would act as a sufficient inducement for our growers to search out the best that can be obtained, inasmuch as such a course would be the more commended to at least two of them, from a consideration of this fact, that, so closely have Mr. Cutbush and Mr. Paul approached each other's perfection of culture, that henceforth the supremacy will have to be decided by the quality, and not least, the novelty, to be found in the competing stands. *Quo.*

Prizes for New Plants.—I think you have very fairly stated at p. 915, 1863, the points that may be set up against the plan of giving prizes of intrinsic value to new plants. They are almost without exception the property of tradesmen, whose business it is to show them, and make them known. There can, however, be no reasonable objection to the exhibitors in this or any other class being fairly paid for their risk and trouble; and adhering as I do to the opinion that new plants ought not to receive money prizes, I would suggest that for the purpose of the aforesaid payment, the Certificates should bear a graduated money value, which may meet the exhibitors' expenses. This would probably be done if a First-class Certificate carried also an allowance of 10*s.*, a Second-class Certificate of 7*s.* 6*d.*, and a Third-class of 5*s.*, the award to the plant being still, not the money, but the Certificate. Cannot you induce the managers of our shows to give this suggestion a trial? What say the exhibitors generally, and the managers, and the treasurers? *X.*——I confess that I differ from Mr. Bull (see p. 245). In my opinion a Certificate is the reward which should be made for the introduction of a new plant. Mr. Bull seems to me to lose sight of this important point: a new plant is introduced for the sake of making money by its introduction. It would be introduced if there were no horticultural societies. A First-class Certificate, declaring it to be a novelty and worthy of cultivation, is of money value to the introducer or importer. It is not a question of cultivation—it competes with no other plants. It is simply the result of good commercial arrangements. The value of the Certificate is seen in the weekly appearance in the *Gardeners' Chronicle* of advertisements announcing that "Perseverance & Co." have obtained from the Royal Horticultural Society a First-class Certificate for the new-plant energy just shown by them. *D.*

Training Plum Trees.—I send you a sketch of a tree of Denyer's Victoria Plum, which has been planted four years. As the mode of pruning and training which has been followed is, I think, well suited for low walls or fences, a brief description may prove interesting. After the tree had been planted, every branch was cut away but the two bottom leaders, which were left a foot long, and trained in a horizontal direction with the points a little raised. After the tree had broken, and the buds were about an inch long, thumb and finger pruning commenced. Two shoots were left on each leader, one as near the base as possible, the other at the point; the latter was allowed to run in an upward direction and stopped when about 24 inches long, while the shoot near the base was stopped when a foot long. In the second year's pruning the leaders, which were

36 inches long, were pruned back to 30 inches, and trained horizontally, the points being a little raised; the subordinate shoots were pruned back to 9 inches, and trained in a line with the leader. At the time of disbudding three shoots were left on the leader and two on the subordinates; the end shoot on the leader was allowed to grow in an upward direction, and not stopped; and the shoots on the subordinates were stopped, the one nearest the base when a foot long, the other when 18 inches. The third year's management was similar to the preceding. *Charles Squires, Heywood, Westbury, Wilts.*

Royal Horticultural Society.—Time was when this was in reality what its name implies—a Horticultural Society, and when Chiswick was in all respects a school of horticulture. In those memorable days the Society possessed a large and valuable collection of plants, even including Orchids, now unfortunately all dispersed. The proving and naming of fruits then formed a subject of much interest and instruction, as did also the carrying out of different systems of pruning and training. The chemistry of vegetation too was not overlooked; on the contrary this department was skilfully conducted by Prof. Solly, the experimental garden, as it was called, being consigned to him as a field for his operations. The kitchen garden was then well stocked with all the best esculents of the period; and the arboretum could boast of a well varied and extensive collection of hardy trees and ornamental shrubs. In short the garden was replete with subjects of the greatest possible importance to horticulturists. Need it therefore be wondered at that young gardeners flocked to an establishment like this, in which materials for improving their knowledge in the profession they had chosen were so abundant, and that on the Society's books were long lists of names of young aspirants for honours for whom room could not be found in the garden. Then Chiswick took of gardening a truly parental care; its young devotees were subjected to periodical examinations in their art by Prof. Lindley, who moreover delivered lectures to them on botany and matters connected with the theory of horticulture, in the winter evenings. Under such able tuition scientific horticulture became in its way a perfect giant, and its stronghold was admitted on all hands to be Chiswick. The prosperity of Chiswick had, however, about this time reached its height; unhealthy action soon afterwards began to manifest itself; and to escape ruin the whole of the Society's energies were directed towards its Shows, which sometimes were successful in the way of replenishing its partially empty treasury, and at other times were a failure. Thus, as far as financial matters were concerned, the Society was playing a "game of speculation." To subvert such a state of things one gentleman strove long and manfully, but, over-ruled at last, he was obliged to sail with the stream, which ultimately transferred the head-quarters of horticulture from Chiswick to South Kensington. Here a handsome Conservatory, embroidered parterres, and unsightly brick arcades for a time seized hold of people's affections, and the aged parent of horticulture, Chiswick, was permitted to fall asleep, until Mr. Chester the other day took upon himself the task of awakening her. But times are changed. Like another Rip van Winkle she awakes, I am afraid, too late—or at all events, far behind the requirements of the present day. Endearing expressions are now bestowed upon her; the Prodigal is about to return, and the fatted calf is to be killed, but where are the means to be obtained with which to provide the feast? Without money, and that in no inconsiderable sum, the standard of horticulture can never be hoisted at Chiswick so as to be seen and recognised by the outer world. Young men will not now seek to crowd her courts as in days gone by, even though led on with promises, too flattering, I am afraid, to be fully realised. Nevertheless, if money is obtainable, doubtless Chiswick may again be looked up to with pride by horticulturists, both old and young. Let us hope, therefore, that the tide which has set in in her favour may not ebb until all is accomplished that is predicted in the present movement. There is as much want of reformation now in many matters connected with gardening as in days gone by. The Society's committees at present in existence will therefore find work sufficient for them to do. I would suggest that to that devoted to arboriculture should be set apart the arboretum as a field for its experiments. In this way new interest might be infused into this now least instructive portion of the Garden. Above all, let us have an improved set of Transactions. The Journal now published is a most unfit store-house for the valuable information that may be expected to result from reformed horticulture, such as we all trust to see carried out at Chiswick. And in order to induce the public once more to tread her soft green lawns, under the shade of trees worthy of the name, enlivened by sweet music from military bands, let a June show be held in the gardens now under notice, this summer. Is the experiment unworthy of trial? Of the garden at South Kensington, I at present say nothing beyond expressing a hope that the scanty vegetation which it now contains may be improved, and that means may be taken to render the arcades not only more attractive in appearance, but also more comfortable, especially in winter. *Joseph Newton, 30, Eastbourne Terrace, Hyde Park.*

Notices of Books.

Dr. Harvey's *Thesaurus Capensis*, consisting of useful illustrations of South African plants, has reached the second part of the second volume. Among the plants figured in this issue is a curious new genus called *Heteropyxis*, which the learned author describes as combining some of the prominent features of the Myrsineæ and Lythrarieæ, as well as presenting some of the characters of Rhamneæ. There is also a figure of the rare and odd-looking *Eriosphæra Oculus Cati*, with white woolly dark-spotted flower heads; and of *Lasiopogon micropoides*, which a good deal resembles it. These illustrations with their descriptions are of great use to those interested in South African vegetation; and in association with the invaluable Flora Capensis by the same author, assisted by Dr. Sonder, now in course of publication as one of a series of Colonial Floras, will greatly facilitate the inquiries of succeeding botanists who may enter on this field of inquiry. So many Cape plants find their way to our gardens, that publications like these are necessary in every good garden library.

The Illustrated Bouquet, Parts XVI. and XVII., are capital numbers, with extremely good letterpress. Part XVI. has figures of the following: *Primula prænitens atrorosea plena*, but why the coxcombical name of prænitens, instead of sinensis, should have been adopted, we cannot divine; three *Fuchsias;* three bedding *Pelargoniums:* some *Dwarf Dahlias;* and two new *Ixoras*. Part XVII. contains *Alocasia Lowii*, unskilfully drawn; *Early-flowering bedding Tulips*, very coarsely and unartistically represented; two *Methonicas;* a white *Agapanthus umbellatus*, not worth a figure; and *Dipladenia Houtteana*, a really beautiful thing. May this fine work, to gardeners very precious, go on and prosper.

Verschaffelt's *L'Illustration Horticole* devotes a plate to the pretty little stove herb *Stenogastra concinna*, and the somewhat larger *S. multiflora*, the latter a hybrid raised by Messrs. Veitch & Son between S. concinna and the pretty Mandirola or Scheeria lanata; another to the *Victoria Nectarine*, copied from the Florist; and a third to *Camellia Ninfa del Tebro*, or Nymph of the Tiber, an Italian variety, with imbricated cerise rose flowers, having the petals longitudinally tipped by a band of white.

The *Botanical Magazine* (March) has representations of the following new plants:—*Helichrysum Mannii*, a stout erect simple-stemmed herb, 2 feet or upwards in height, with copious lanceolate half-clasping subdecurrent leaves, woolly beneath, and a large terminal corymb of globose showy flower-heads, an inch across, white with an orange-yellow disk. It does not appear to be known whether it is an annual, or a plant of longer duration. This was found by Mr. Mann on the Peak of Fernando Po, and on the Cameroon Mountains. —*Quamoclit Nationis*, a fine Peruvian climber, cultivated at Lima, but a native of the Cordillera. It is a perennial, with large tubers, smooth twining stems, cordate leaves, and salver-shaped flowers, having a long whitish tube, and a five-lobed limb 2 inches across, of a rich orange-scarlet colour.—*Saccolabium Harrisonianum*, a fine white-flowered fragrant species, imported by Messrs. Low & Co. from Pulo Copang, in the Chinese seas. The small specimen figured appears to have flowered on the voyage home, but withered specimens show the racemes to be from 20 to 24 inches long, and one of the imported plants had borne seven spikes. Sir W. Hooker seems to have at one time considered it a white variety of S. violaceum, which it resembles in general structure, except that the five lines on the lip, which are conspicuous in that plant, are wanting. —*Begonia Mannii*, an weedy-looking erect simple fleshy-stemmed species from Fernando Po, having ovate-acuminate leaves, "scarcely perceptibly unequal-sided," and short-stalked fascicles of small rose-coloured flowers in their axils.—*Ada aurantiaca*, of which an account has already been given at p. 1228, 1863. Though they do not expand, the drooping spikes of clear orange-coloured flowers, (which somewhat resemble as to form those of a Blue-bell with elongated perianth segments), must be effective on a well-grown specimen. It is to be hoped that this plant may not be forgotten amongst the more fashionable Odontoglots for which collectors seem to be scouring its native country, New Grenada; but that a good supply may be obtained for general distribution.

The *Floral Magazine* has a good figure of Mr. Veitch's fine variety of *Barkeria Skinneri* called *superba;* a group of *Pompon Chrysanthemums*, among them *Lizzie Holmes*, which we have already mentioned as one of the acquisitions of last season; *Coccocypselum repens* in the berry-bearing state, with the new name of Coccosypsilon discolor; and three varieties of *Dianthus hybridus multiflorus*, one of the most useful of flowers both for the border and for beds, as well as for the greenhouse and forcing-pit—here indeed spoken of as though belonging to the old-fashioned Mule Pinks, but in truth of a very different and much more desirable character. The varieties are *Marie Paré*, a pure white; *Rosette*, a salmon pink; and *striatiflorus*, a flaked rosy-pink.

The illustrations in the *Florist and Pomologist* consist of two first-class large-flowered *Chrysanthemums*—*Princess of Wales*, and *General Bainbrigge*, which latter, by some oversight, bears the name of Prince Alfred. The letterpress is, as usual, interesting and varied.

Trade Lists Received.—Louis Van Houtte's *Catalogue de Plantes de Serres et de Plein Air*, is a very full list, admirably arranged, and with much useful information scattered through its century of pages. The article 'Gesnériacées," for example, pp. 30—35, is quite a garden monograph of this interesting family. ——Vilmorin-Andrieux et Cie.'s *Supplement aux Catalogues pour l'Année* 1864 is a useful descriptive list of the best novelties amongst flowers, fruits, and vegetables, some of which are illustrated by means of woodcuts.——John Salter's *Catalogue of Chrysanthemums, &c.*, contains a very complete list of these flowers, both old and new, and the most perfect list of hardy variegated plants of which we have any knowledge.——William Bull's *Retail List of New Beautiful and Rare Plants* contains an assortment of interesting novelties; we may especially mention Pentstemons, Phloxes, and Bedding Pelargoniums. Of the former the collection is said to far eclipse any that have preceded them.——Charles Turner's *General Spring Catalogue* is very full in every department, the new Pelargoniums of Messrs. Hoyle and Foster occupying a prominent position, as well as new Pinks, Dahlias, and Verbenas.——Robert Sim's *Descriptive Catalogue of British and Exotic Ferns* is much more than a catalogue. Part 1, already issued, is in fact a very faithful account of the principal varieties of British Ferns. We shall notice it more fully when the portion relating to Exotic Ferns makes its appearance.——Paul & Son's *New Roses of* 1864 briefly describes some 40 new varieties of this popular flower.

Of Seed Lists which have accumulated on our table we may mention the following:—William Thompson's *Descriptive Catalogue of Flower Seeds* is very select and well arranged, and contains several interesting Australian novelties.——William Paul's *Select List of Vegetable, Flower, and Agricultural Seeds* is an epitome of the best of everything in these several departments; among other things a superb Crimson Beet is highly spoken of.——Charles Turner's *Catalogue of Seeds* contains Dr. Maclean's new Peas—Wonderful, Advancer, and The Little Gem; also "Premier, a new Pea of great excellence, now offered for the first time." ——William Cutbush & Son's *Catalogue*, and Robert Parker's *Catalogue;* may all be usefully consulted for the descriptive and cultural hints appended to the lists of flower, vegetable, or farm seeds respectively.——Charlwood & Cummins' *List of Seeds* contains, besides vegetables and flowers, a useful list of seeds of trees and shrubs which can be supplied.——E. G. Henderson & Son's *Seed List* of 96 pages with several

pages of illustrations, is very full of subjects, and amongst other matters comprises some "golden rules for amateur gardeners."——BARR & SUGDEN'S *Select List* has grown into a folio of some 20 pages, all filled to the very margin!

Miscellaneous.

Gardeners' Benevolent Institution.—From the report of the Committee, which has just been printed, it appears that during the year 1863, five pensioners have died, and four have been elected, besides a further election of three on the 14th of January in the present year. At the last election there were eight candidates all duly qualified to have been placed on the pension list without the trouble and expense of an election, if the funds had permitted it. The committee announce an increase in all sources of revenue, which they attribute to the articles which have from time to time appeared in our columns, to the success of the anniversary festival, and to an appeal which was made in the early portion of the year by circular to a large body of gardeners, "whom the committee believe were totally ignorant of the existence of the Institution." It is announced that the Duke of Buccleuch has consented to become Patron in the room of the late Prince Consort. The balance-sheet shows that the amount of stock in the 3 per Cent. Consols is 5500*l.*; that the receipts of the year have amounted to 1284*l.* 0*s.* 6*d.*, of which 471*l.* 13*s.* were received at or in consequence of the annual dinner; and that the balance in hand is 377*l.* 11*s.* 5*d.* The ensuing anniversary dinner is to be presided over by the Right Hon. Charles Lawson, Lord Provost of Edinburgh. As one of their fraternity, we trust that Mr. Lawson will be heartily supported by the gardeners of the three kingdoms, both amateur and professional, and that not only by their presence on this occasion, but also by their liberal donations, and above all by a steady and earnest support of the Institution.

Shamrock [Trifolium repens, L.] from an Irish word, *seamrog*, which seems to be compounded of *seamar ogh*, holy Trefoil, and is apparently the same as the Celtic name of Clover given by Marcellus of Bordeaux, physician to Theodosius the Great, *visumarus*, from *vi*, sheep, and *sumar*. It is usually taken to be the Dutch Clover, and this is regarded by the Irish themselves as the right Shamrock. Mr. Bicheno, however, in a paper, of which there is an abstract in the Philosophical Magazine for 1830, p. 288, has maintained that the Wood Sorrel is entitled to this honour, on the ground that the Shamrock is represented as having been eaten by the Irish, and a sour plant; that it is abundant in early spring before the White Clover is in blossom; and that it is called Shamrog by the older herbalists; while the Clover is not esculent, is not sour, and was not common until it was introduced for cultivation in the 17th century, and not in blossom on St. Patrick's day, the 17th March. Unfortunately, in the short abstract given of his paper, there are no references to the Herbals where the Wood Sorrel is called Shamrog, or to the works in which this is said to be sour. Nares quotes from Taylor:—

> "Whilst all the Hibernian Kernes in multitudes
> Did feast with Shamerags stew'd in usquebaugh."

And from Wythers:—

> "And for my clothing in a mantle goe,
> And feast on Shamroots as the Irish doe."

But such sarcastic allusions as these prove nothing. It is further to be remembered that, as it was upon the leaf of the plant and not its flower that St. Patrick explained the Trinity, it is nothing to the purpose that the White or Dutch Clover is not in blossom on his day. Any Trefoil would have served his turn equally well. It is scarcely possible that Mr. Bicheno really found the name assigned in old Herbals to the Wood Sorrel, for neither in our English works, nor in Keogh's Botanologia Hibernica, is this the case. There is therefore no ground whatever for admitting this change, and the Shamrock may remain as before, the White Clover. *Prior's Popular Names of British Plants.*

Scandinavian Fences.—The sort of fence in general use along the road sides is of a peculiar kind, differing from what is generally in use for that purpose in middle Europe. It consists of Spruce Fir trees, split up roughly into triangular pieces, which are placed at about an angle of 45°, with one end sunk slightly in the ground, and so close as to prevent hogs or lambs from getting through them. The whole is then bound with two or three lines of withes, of twisted Spruce Fir, Birch, or Willows, at certain heights from the ground; and in this way a formidable fence is constructed, difficult to get over, as well as sufficiently open to permit the snow to blow through it. *D. Moore, in Proceedings of Royal Dublin Society.*

Calendar of Operations.

(*For the ensuing week.*)

FLOWER GARDEN AND PLANT HOUSES.

Keep up a lively circulation of air all the early part of the day in mixed plant houses, and dispense with fire-heat as much as possible. Where houses of this character have stove as well as common greenhouse plants in them, a climate superior in point of heat to that of an ordinary greenhouse must be maintained; and in order to do as little mischief as possible through the compromise necessary, let all advances in point of extra warmth be made during the day time when there is light. Therefore practise early shutting up; and on such occasions take care that the fire has been very low, or out for an hour or two previously. The heat thus secured for the evening, if accompanied by sufficient atmospheric moisture, will establish a healthy and short-jointed growth. Climbers in Conservatories and other show houses will now want attention at least once a week. Prune off superflous shoots, stop or pinch the points of over luxuriant leaders to induce a flowering habit in such kinds as produce blossoms from the axils of their leaves, and keep them neatly tied and trained. As regards the out-door department, see that rolling, mowing, &c., proceed in due order. Now is the period to lay the foundation of a fine lawn. Let all fresh turfing be completed forthwith. Early herbaceous plants overgrown may now be divided, the exterior portions of the stool should be reserved and the interior rejected. Be sure in planting them again to introduce fresh soil. If not already done, cut in all coarse evergreens or shrubs before the bud becomes too much advanced; Holly hedges may also yet be cut.

ANNUALS.—Make a sowing of tender sorts if not already done. Pot off Balsams, Cockscombs, &c.; these things will do better, however, in a frame, with fermenting materials, close to the glass, and well matted up at night.

BEDDING PLANTS.—Continue potting off stock for out-door decoration; also making cuttings of Verbenas, Fuchsias, Petunias, Calceolarias, Geraniums, &c.; they will all be wanted. Shade newly-potted plants, and remember that in making cuttings the leaf should not be first allowed to flag, and then an attempt made to restore it by abundance of water; foliage should never be allowed to droop.

DAHLIAS.—Repot the most forward cuttings; and put in others. It is very desirable to have extra strong plants for mixed borders and the shrubbery. These can be obtained by dividing and potting the old roots, after sufficient cuttings have been taken from them.

ORCHIDS.—Those growing in stoves should now be carefully shaded for two or three hours on bright days, more especially those which have been disturbed at the root; these, if convenient, should be removed to a house or pit by themselves, as established plants which have remained undisturbed will enjoy more sunshine.

TULIPS.—Keep the foliage dry so long as we are in danger of spring frosts. If a watering is necessary, either from a continuance of dry weather, or from the soil being light, it can be done between the rows, without watering the plants over head. Protect from hail on all occasions, and rain also, if the weather is cold.

FORCING GARDEN.

CHERRIES.—These should have free syringings, with abundance of air early. The syringing, however, must cease the moment any change of colour in the fruit is perceived.

FIGS.—Follow up stopping; give manure-water very freely.

MUSHROOMS.—A late bed may now be made.

PEACH HOUSES.—Persist in stopping at all times every gross shoot on all the upper parts of the tree—allowing such, however, to ramble when they grow towards the extremities of the lower parts; this is the best way of equalising the sap. Syringe freely—especially in the afternoon—and at that period endeavour to create atmospheric moisture for the night, by sprinkling all available surfaces, except flues or pipes.

PINERY.—Little new can be added at present. Give air freely to growing successions in dung-pits; induce them to grow more in bulk than in length.

STRAWBERRIES.—Keep up successions; do not suffer those on which fruit is swelling to get dry; use plenty of liquid manure according to former directions, viz., constantly clear and weak.

VINERIES.—Endeavour to avoid the consequences of indulging in too much atmospheric moisture in the day time. Many berries are doubtless scalded, as well as leaves injured, by a surplus of atmospheric moisture in the morning, or too early in the afternoon, in an endeavour to accelerate forcing by shutting up unreasonably early. Night is the period established in the order of nature for copious dews. See that late Vines which have been laying out all the latter part of the winter are now introduced. If they bleed, scrape and dry the wounds, and apply the late Mr. Knight's plaster, which is scraped cheese and powdered oyster-shells, kneaded into a fine paste, or some of the grafting wax elsewhere mentioned.

HARDY FRUIT AND KITCHEN GARDEN.

Continue to protect blossoms, and to eradicate insects by all possible means. See that all winter and early spring work amongst fruit trees is brought to a close forthwith.

CABBAGES.—Earth up plantations of the largest plants, and keep them free from weeds. Sow also seeds of two or more sorts which will succeed each other.

CARROTS.—Look sharply after crops of Early Horn, to prevent slugs from eating them. Nothing is better, perhaps, than cinder-ashes riddled extremely fine, and the mere dust taken out; these sown thickly over the ground present such a sharp macadamised kind of surface, that snails and slugs are at the last point of starvation before they will venture on them.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,
For the Week ending March 16, 1864, as observed at the Horticultural Gardens

March.	Moon's Age.	Barometer. Max.	Barometer. Min	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind
Thurs. 10	2	29.633	29.619	46	30	38.0	43½	44½	S.
Friday 11	3	29.589	29.555	54	40	47.0	44	44	S.W.
Satur 12	4	30.170	30.000	53	29	41.0	44	43½	W.
Sunday 13	5	30.208	30.063	53	40	46.5	45	44	S.W.
Mon. 14	6	30.025	29.906	57	44	50.5	45	44	W.
Tues. 15	7	29.902	29.788	52	29	40.5	46	44½	W.
Wed. 16	8	30.145	30.041	53	28	40.5	46	45	E
Average.		29.953	29.858	52.5	34.3	43.4	44.8	44.2	

March 10—Clear, fine, clouds in strata moving in different directions; clear.
— 11—Low clouds in strata; bolsterous and showery; thunder and lightning in the evening.
— 12—Clear; fine with sun; clear at night; slight frost.
— 13—Clear; fine; overcast.
— 14—Fine; flying clouds; clear; fine; overcast.
— 15—Rain; cloudy; overcast; slight frost.
— 16—Foggy; slight haze; fine at night; clear; slight frost.
Mean temperature of the week, 1½ deg. above the average.

STATE OF THE WEATHER AT CHISWICK,
During the last 38 years, for the ensuing Week, ending March 26, 1864.

March.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds
Sunday 20.	51.7	34 3	43.0	15	1.11 in.	3 4 3 2 — 14 6 1
Mon. 21..	51.1	32.7	41.9	17	0.21	9 8 3 3 4 2 1 1
Tues. 22..	50.7	31.6	42 6	18	0.44	7 3 4 2 4 8 5 1
Wed. 23..	50 8	33 7	42.3	16	0.60	6 7 1 2 1 12 6 4
Thurs. 24..	48.5	32.2	40.3	13	0.13	4 5 4 — 4 7 8 6
Friday 25..	51.1	32.9	42.0	13	0.50	3 10 5 — 2 5 7 6
Satur. 26..	52.1	32.4	42.2	14	0.17	— 7 4 2 5 6 7 7

The highest temperature during the above period occurred on the 25th, 1863,—therm. 69 deg.; and the lowest on the 25th, 1860—therm. 14 deg.

Notices to Correspondents.

BOURNEMOUTH: *Camberwell.* This is a very nice place, with a nice climate and extensive plantations of Scotch Fir and Pinaster, of the management of which the less said the better.

CALCEOLARIAS: *W H T.* We already have in gardens all the best species for garden purposes.

CAMELLIAS: *Old Subscriber.* You cannot do wrong to take any of the following:—Alba plena, candidissima, fimbriata alba, ochroleuca, Duchesse de Berri, Pearl, all useful whites; De la Reine, Countess of Derby, Countess of Orkney, Contessa Lavinia Maggi, Jubilee, amœna, Princess Frederic William, Countess of Ellesmere, Filippo Parlatore, variously striped; Carlotta Papudoff, Chandleri, optima, Baron de Vriere, blotched; Reine des Beautés, Bicolor de la Reine, pale rose and flesh tints; Saccoi, Storyi, imbricata, Vade Vareda, Sarah Frost, shades of rose; corallina, punicea, Bealii, Mathotiana, crimson. Duchesse de Berri, Countess of Derby, Contessa Lavinia Maggi, Reine des Beautés, Saccoi, Sarah Frost, and punicea, are exceedingly fine flowers.

FUNGI: *W Belfield.* Your mould is a very curious one and quite new, belonging to the genus Rhinotrichum. Would you kindly send a few specimens directed "Rev. M. J. B., Kings Cliffe, Wansford." It is not likely to hurt your Vines, but if it spreads it may prove a great annoyance to Lycopods and other plants. Your only chance of getting rid of it is to dust it with sulphur, and if this does not succeed you must turn out of the house every plant which it has attacked. *M. J. B.*

GRAFTING WAX: *G Grey.* There are several kinds of grafting wax. The best is perhaps that composed of equal parts bees' wax, resin, and tallow. This is pliable, yet impervious to air and moisture. Another kind is made up of pitch 5 parts, resin 1 part, yellow wax 1 part, tallow 1 part, with a little fine brickdust to give it consistence; but we prefer that without the pitch. In some compositions turpentine is introduced, but that is decidedly objectionable.

HYACINTHS: *W. G.* If *sufficiently* covered with ashes after potting, they certainly do not require the shelter of a frame, though in the event of continued heavy rains it may be beneficial to use temporarily such a covering as may throw off the wet. The ash covering should not be less than six inches in thickness.

KEW HERBARIUM: *Bucklund.* Apply by letter to the Director, Royal Botanic Garden, Kew, Surrey.

NAMES OF PLANTS: *R P C.* Prof. Oliver, Royal Botanic Garden, Kew—*Ellen R.* We assure you, you are mistaken. The plant you suppose yours to be is as different from what you call it as an ox from a sheep; and more so—*O L.* 3, Phaius grandifolius. The other specimens are insufficient.—*Novice.* 1, Asplenium Adiantum-nigrum; 2, Polypodium vulgare; 3, Scolopendrium vulgare; 4, An Adiantum of some sort, probably formosum.—*M T M.* 5, Pteris serrulata; 6, Selaginella Martensii.—*J. M.* Scilla bifolia.—*Sir R. D. L* Pinus Cembra; 2, Pinus longifolia; 3, Abies cephalonica; 4, Chimonanthus fragrans, just forming its leathery fruits.—*F D.* Lastrea dilatata.

PELARGONIUMS: *W W.* The name of the disease in your Pelargoniums is Chlorosis. Its treatment will depend upon the cause, which cannot be ascertained from the leaves only. Examine the roots, and if they are in good condition water with a *weak* solution of sulphate of iron. Try, however, only one or two plants at first. If the roots are withered, you must take means to obtain a supply of healthy roots by fresh potting in good soil. *M. J. B.*

PRESERVING FERNS: *Old Subscriber.* A tourist may keep the larger sorts of Ferns alive for two or three weeks, while wandering from place to place, if the caudices and roots are tied up in slightly damped Moss, the plants, kept in the botanical box, being taken out at intervals of a few days and lightly sprinkled in the evening, leaving them open in a cool place all night. The fronds should not be wet when confined, nor should they be kept without opening more than three or four days at a time. They may survive with rougher treatment, but they may not.

ROYAL HORTICULTURAL SOCIETY: *Red Hand.* Dr. Lindley has now nothing to do officially with the Society, and consequently is in no way responsible for the late vitreous smash. *Palmam qui meruit ferat*; it is for the Fellows to look to that.

VINES: *An Anxious One.* We do not believe that your Vines are unhealthy. The leaves have probably either been scorched by day, or withered from the dry state of the air at night consequent on radiation. It is, however, very difficult to judge accurately from one or two crushed and half-decayed leaves. If we are right as to the cause, a slight awning at night, or when the sun is very bright, would probably assist you. The awning is, however most requisite at night to prevent radiation, or to protect from severe external cold. *M. J. B.*

MISC.: *H N.* Some iodine or some closely related chemical substance must accidentally have fallen upon your paste, perhaps iodide of potassium. We have examined it under the microscope and can arrive at no other conclusion. *M. J. B.*

engines. It will perhaps be remembered that we mildly tried to dispel these agreeable delusions. Perhaps we may some day hear of the Royal Agricultural Society swelling the sound of our own still small voice by publishing the amount of fuel consumed by all the engines shown at work—"racers" and cart-horses. It might even happen that our little suggestion may come to the aid of a not unnatural repugnance of the Royal Agricultural Society against being indirectly used to puff badly designed engine work. But in the meantime cannot we find some happy medium between the rude voraciousness of the steam cart-horses and the fragile and lady-like want of appetite of the "racers?" Some of the ingenious gentlemen who provide agriculturists with steam machinery are accustomed to assert that only the simplest form of engine can be sent to a farm. Cannot simplicity and economy be united? Cannot we have some improvement on the rude combination of cylinder, piston, crank, and slide-valve, which seems to be the highest ideal of the sages of our agricultural engineering establishments?

Some time in last October we pointed to the urgent necessity for economy of fuel in an engine used for what we might term perambulating or peripatetic purposes, such as traction engines and ploughing engines generally. In some by no means very out of the way cases the cost of the carting of water and coal makes up nearly one-half of the cost of steam ploughing.

We also mentioned Mr. WENHAM'S engine, with its two cylinders and interheater, as being very likely to meet the increasing demand for an engine uniting the two grand qualities of simplicity and economy. A compound portable engine on Mr. WENHAM'S interesting principle was exhibited at the Smithfield Show. It appeared to attract some attention. We do not know whether any more solid results ensued. At the new Foreign Offices being built in Downing Street, there is now working a portable engine designed upon a very elegant and ingenious principle for saving fuel. Its leading idea is similar to one of those embodied in Mr. WENHAM'S, viz:—that of taking steam at a high pressure to get a full stroke of piston from it, and then conducting the steam away in its expanded state, to do duty for another half of the full stroke.

Arrangements thus relying upon general construction, instead of upon valve gearing, for getting full expansion from steam, are evidently safer in the hands of unskilled labour;—they cannot be tampered with, and the engine cannot be forced to do an undue amount of work by simply altering its valve gear, or by at once taking the extra valve away, as has been the fate with many agricultural engines designed expressly with a view to economy of fuel. At first sight the engine appears like an ordinary portable. It will, however, be noticed that the cylinder is double the stroke of the crank. In the centre of this long cylinder is a partition; substantially there are thus two cylinders, placed end to end. Each of these two cylinders has a piston, and these two pistons are united by what is termed a "trunk," which is, in this case, simply a cylindrical connection, acting as what we may call a pistons' rod. From one of the pistons proceeds an ordinary rod as usual. It will now be seen that between each side of the partition in the centre and the two pistons there exists respectively an annular space. Steam at a high pressure as it leaves the boiler is admitted into one of these annular spaces, thus driving before it the two pistons. By the time it gets to the end of the stroke its pressure is somewhat fallen, and it is then conducted to the full side of the piston in its cylinder. The steam at full boiler pressure is now let into the other annular spaces of what may be termed the other cylinder. We have thus the precise action of a compound double cylinder engine, by the use, however, of only one. It is evident that this arrangement gives all the uniformity and regularity of two cylinders.

It will at once appear that the weak point in this engine is the partition in the centre. In the first place, the cylinder cover and a piston must be taken off in order to get at it, and any leakage is not seen; and besides this, a packing of this kind is difficult and expensive. We do not see, however, that there is any necessity for an adjustable packing in the centre. The wear would be taken up by the two adjustable pistons and stuffing-box, and a white metal bearing might be probably sufficient. Any leakage, moreover, would not be a dead loss, as the steam could be used on the full area of the piston. It is evident that one of these cylinders could be very easily applied to an old engine. We have seen some excellent indicator diagrams taken off the Foreign Office specimen. The general result also of some of its performances on the brake gave, under favourable circumstances, an evaporation of 8 lb. of water with 1 lb. of coal, and one dynamometrical horse-power was obtained by a consumption of from 4½ to 4¾ lb. of small or "smith's" coal. The temperature of the feed water was 150° and of the smokebox about 300°. Its slide valves, of which there are necessarily two—in one casting however—are balanced against the steam pressure on their backs. We are informed that this increased the brake power by more than ¾ of a horse-power in a 10 horse (nominal) engine. The experiments were taken at a steam pressure of 50 lb., and at a speed varying from 125 to 135 revolutions per minute. It would thus appear, although we do not at present vouch for the explanation, that with such a low pressure as 50 lb., there is not that film of steam between the valve and the ports, which undoubtedly to a great extent diminishes the necessity for balancing the steam valves of, for instance, locomotives, which work at a pressure of from 100 to 150 lb. on the square inch. This appears to be an advantage attendant on high pressure steam, and it is evident that the whole results of this particular engine would have been better with a higher pressure.

It is a rather surprising thing that the makers of this engine have not thought fit to steam-case the cylinder covers—the more so, as they are so careful to put the cylinder itself inside the fire-box. This is another remnant of the unfortunate prejudice among *soi-disant* practical men against "steam jacketting," or completely casing the cylinder and steam ports in a steam envelope. It is said that WATT, after using a steam jacket to his engines, rejected the practice for some time, as he reflected that a steam jacket must necessarily increase the radiating surface of his cylinder. Having found, however, that his engines did much less duty without the jacket, he resumed the plan. Such is the case with the best practice of the day. Steam jackets, after being put on one side for some years—so entirely so, indeed, that we saw the other day M. EUGENE FLACHAT, the eminent French engineer, alluding to steam jacketing as a new plan—are now being used on the best marine engines and locomotives. The several phenomena of conduction and radiation of the iron cylinder, and of the absorption of heat during the expansion of steam are too complex to be here examined. But it may perhaps be sufficient to remind ourselves of the fact that on the first admission of steam into an ordinary cylinder, the steam is condensed with an amount of water that would knock out the covers if the "mud-cocks" were not opened. The cooling action of the exhaust steam on communication with the air is carried on twice for every revolution of the crank, and, radiation also going on unimpeded from the cylinder or the covers, the fresh steam as it enters has to give up its heat and force to the chilled iron of the cylinder—and iron, as it will be remembered, has nine times more capacity for heat than water.

A strict comparison between Mr. F. H. WENHAM'S and Mr. E. E. ALLEN'S engine would take us too far out of our way. We may however notice that the economical results of Mr. WENHAM'S engine would be probably the most favourable, although Mr. ALLEN'S possesses advantages that will doubtless lead to wider success on the farm. The one cylinder renders a system of interheating scarcely applicable.

When also the hot high pressure steam has only to enter one cylinder, it cannot be partially condensed and weakened through the chill given to the cylinder by the exhaust steam's communication with the atmosphere. Mr. E. E. ALLEN'S mechanical arrangement, however, has that simple elegance which always gives much pleasure to the beholder. *P.*

THE DIETARY OF THE AGRICULTURAL LABOURER,

WITH OTHER STATISTICS OF HIS EXPENDITURE.

[The following paper on this important subject was lately read by the Rev. J. Slatter, of Streatley, Berks, before the Ashmolean Society, Oxford.]

THE subject on which it was proposed to me to contribute some remarks is the Dietary of the Agricultural Labourer, with such other statistics as might seem generally to show the way in which his wages are expended in these southern and midland counties of England. To do full justice to the subject the investigation ought to have been pursued over a more extended area than has been the case, and an endeavour was made to procure information from various places, but the results of inquiries made elsewhere for the most part have not reached me, and accordingly I am obliged to content myself with the more humble task of representing to you the condition of things as I find it in my own parish in Berkshire, which probably is not an unfair specimen of what is the general state of the case in this part of England.

WAGES.—The present rate of wages is 9*s.* or 10*s.* a week, which may occasionally at this time of year, and more frequently during other seasons, be raised to 12*s.* by piece-work; and at other times, especially during the few weeks of harvest, is considerably increased. Families which have boys above the age of 10 have also from 2*s.* to 10*s.* more, and are enabled in consequence to live in somewhat greater comfort; but the crucial question is how to keep house with a family of five or six children, especially if the eldest happen to be girls, or the family has sprung up too fast to allow of the boys being old enough to be at work, upon, we will say, 10*s.* per week, or in the case of an old person on parish allowance, upon 2*s.* 6*d.* per week. I may say at once that it is impossible without starvation (lingering starvation possibly), but yet starvation on the one hand, or debt on the other.

The first great difficulty to be encountered in this inquiry arises from the fact that the poor keep no accounts. It is much to be regretted, as such a practice would of itself be no inconsiderable step in thrift and economy; but in their minds the need for accounting seems superseded by their carrying the coin as so many counters to the shopkeeper, which are paid away as the representatives of their wants, and happy enough they consider themselves if that entirely clears the transaction. It may be doubted if they can ever be persuaded to economise, in the strict or useful sense of the word, until they have obtained a sum in hand, so as to be able to forecast their wants and buy many articles on a somewhat larger scale than they are in the habit of doing.

I am informed that some time ago a benevolent gentleman advertised a reward of 5*l.* to the labouring man who should show the clearest statement of a year's expenditure. After repeating the advertisement several times, at intervals, he met with one claimant who certainly well deserved the prize from the accurate and faithful manner in which his annual expenditure had been detailed; but this man seems to have been superior to the class about whom we are now inquiring. In fact, if much pressed on the point, the poor will tell you that they really do not know themselves how their money is spent. I do not mean those who have any desire to conceal the information, but those who are honest and true and on such good terms with one that they will readily communicate the best answer in their power; and then if statements are canvassed, from a desire to see how they can be reconciled, you find there is no more to be learnt. In a few cases only then hrve I been able to analyse the expenditure fully; and in order to arrive at some conclusion worthy of dependence on that point of the subject which is of the greatest interest, the question of diet—the inquiry was principally confined to the quantities of the various articles of food consumed in each family.

And here I may most fitly acknowledge how greatly I am indebted to a most valuable paper published by Dr. E. Smith, in the 5th report of the medical officer of the Privy Council "on the Economics of Diet," relative to the inquiry he was directed to make in the manufacturing districts when the recent distress began to be felt. The assistance I have been able to derive from this paper has enabled me to translate—so to say—the bare statistics collected, and thus offer you the conclusions to be made from them as to great extent reliable statements and not the mere vague expression of opinion.

BREAD.—It need hardly be said that bread constitutes the bulk of the food consumed by the agricultural poor; it contributes fully 90 per cent. of the carbon supplied to the system, and a much larger proportion of the nitrogen, in some cases as much as 98 per cent. Upon the whole this article of food is generally bought as bread: though the more thrifty housekeepers buy the flour and make their own bread. What is called a gallon loaf costs about as much as a gallon, *i. e.* 7 lbs. weight, of flour. The loaf which goes by the same name weighs 8 lbs., but 7 lbs. of flour will make considerably more than 8 lbs. of bread, according to Dr. Smith, 9¾ lbs, which agrees very closely with my own experience. The present price of bread is about 1¼*d.* per lb.

It is pleasant to find that the universal demand among the poor for the finer sorts of flour is not a mere luxurious taste, but is supported by reason on good physiological grounds, and it seems tolerably evident that the contrary opinion of the greater wholesomeness as well as economy of the undressed sorts of flour is founded upon reasons which have reference only to the really luxurious and superabundant diet of the rich.

OATMEAL.—It is a matter of regret that the habits of the people in this part of the country are so opposed to the use of oatmeal, which furnishes all the necessary ingredients of food in a much more compact form than Wheat flour.

FLESH.—To come next to that which by common consent forms the next important article of diet, flesh. In the form of fresh meat it may be wholly excluded from notice. It is never tasted except as a charitable gift at Christmas or some festival, or during sickness. Almost all that is consumed under this head is in the shape of bacon. There are two sources of supply

Home-cured, that is English or Irish bacon, which is 8*d.* per lb., and American, which is 4*d.* or 5*d.* This latter is, however, in no favour. The taste is occasionally so offensive that the most hungry stomachs refuse it, and it is very apt, to use the technical expression, to "boil out." Its chief use appears to be to keep down the price of the better and more acceptable sort. The amount of bacon consumed in each family is extremely various, and depends entirely on the income. The main staple is bread, and the diet is enriched by as much bacon as can be afforded in addition.

Butter and Sugar.—The next things to consider are what may properly be called the accessories of diet—butter or lard and sugar. These are consumed in very various proportions, according to the tastes and habits; the chief amount of the former goes to the women and children, but the men have the latter in a greater degree when they take, as some do, tea with every meal.

Cheese.—Cheese is sparingly used, and is very much a matter of taste.

Potatos and Vegetables are also not a regular part of a diet, and are taken in such varying quantities that it is hardly possible to estimate what effect they have as contributing to the available amount of nutriment. When they are to be had they appear to be used to the saving of bread, and except perhaps as a variation, which would probably have a good tendency in respect of general health, their absence is not to be regarded as a loss. At the present season there is little to be had besides Potatos, and these are used by most families in very small quantities, probably not more than 10 lb. in the whole week.

Milk is to be had to a certain extent at a cheap rate, viz., skimmed, at ½*d.* per pint, and if there were a sufficient amount of this it would be a most valuable accession, especially to the diet of the children; as it is, it is merely added to the tea, and in such small quantities that it is impossible to take it into account. Herrings are referred to by Dr. Smith as a valuable source of nitrogenous elements; they are not used largely enough to come under our consideration here.

(To be concluded next week.)

NOTES ON CELEBRATED SHORT-HORNS.

No. II.

Second Cleveland Lad.—The following is a letter from Mr. Bates, of Kirkleavington, dated Jan. 1, 1848, and addressed to an eminent Short-horn breeder:—

"I shall be glad to see your brother here on his return from Northumberland. If you or your brother do not like 2d Cleveland Lad, both *Easter* and *Euclid* are by him; but he can see both, as well as the two Duchess bulls. 2d Earl of Beverley was by Duke of Northumberland and his dam, sister in blood to the Duke of Northumberland dam.

"3d Duke of York is by 4th Duke of Northumberland, dam (Duchess 51st) by 1st Cleveland Lad, and dam own sister to Short-tail (the sire of both Cleveland Lads, and their sister, 2d Oxford). Therefore, having Cleveland Lady's blood in the brother to 2d Cleveland Lad, you would perhaps prefer 2d Earl of Beverley. I name this that you may inform your brother, and you had better write to him here.

"2d Cleveland Lad is a great favourite with me, as he is a bull of greater growth than I ever knew any bull; very superior to Favourite bull, Mr. Charles Collings's favourite. He came here the 6th of June, 1843, then turned 5 years old, and in 54 days he increased 24 stone in weight, weighed at the weigh-house both times; which was above 6 lbs. per day, above 42 lbs. per week, or 3 stone of 14 lbs. I had known 2 stone per week gain, but never more. When he had been here 29 days (on the 5th of July), Mr. Burnett saw him, and he could scarcely believe his own eyes. I considered him much increased, but seeing him daily it was not so striking as to Mr. Burnett, who had not seen him for 29 days. And it was on his way to Beverley that he was again weighed, both times by my old man, without saying anything to me, and when he gave me the two certificates I was astonished at the increase—160 stone was the first and 184 stone the second weighing. He keeps his condition on the worst keep I ever knew any bull retain his condition with, and he is a ready buller, now in his 10th year, and his brother is the same, now turned 11 years old. They have their great growth from my Short-tail, whose dam had two crosses of my 2d Hubback, and he had his great growth from Yarborough a bull of Mr. Charles Collings, being used in 1810 by Mr. Hustler and his tenants, and came from them to be sold at the Ketton sale in 1810, and was a superior bull to Comet, sold the same day at 1000 guineas; but my 2d Hubback's dam was a far superior cow to any one by Comet. I name these facts for your consideration, and giving you my reasons for approving of 2d Cleveland Lad. Your brother will see his calves—five heifer calves from one tribe, of sisters or half sisters, and all got by 2d Cleveland Lad. *Euclid's* dam was by Duke of Northumberland, and from Mr. Edward's Foggothorpe I bought in 1839. Your brother will see a brother in blood to *Euclid*, of his dam's own sister, and by 2d Cleveland Lad, a bull calf this last autum.

"I have a heifer calf also of 2d Oxford's daughter (Oxford 5th, by Duke of Northumberland), and by her mother's own brother, 2d Cleveland Lad, so that these facts speak for themselves."

AGRICULTURAL PUPILS.

We can seldom in the present day take up a Paper of any repute connected with agriculture without finding one or more advertisements headed "Agricultural Pupils," "Agricultural Pupil Wanted," "Mr. J. Smith, of ——, is open to receive one or two Agricultural Pupils," "Agricultural Pupils desirous of becoming acquainted with the best system of Scotch Farming may hear of a suitable situation on application to X. Y. Z., Stirling." "Mr. David Macgregor has a vacancy for one or two Agricultural Pupils." "The best modern system of Scotch farming practised," and very many similar announcements, many of which are intended to be very attractive and alluring to the young noviciate in farming. We have "Northumberland Farming," "The Norfolk System," "Kentish Agriculture," "Lincolnshire Farming," "Scotch Farming," "Light Land Farming," "Heavy Land Farming," &c., so that the young farmer has plenty of choice. Now we have no wish to depreciate all this—we care not how well or how rapidly modern systems of farming are made to progress, or how many teachers of it the wants of the farming public may bring forth; but we do care to know that these professed teachers of modern British agriculture are qualified for the high responsibility they undertake. It is to be feared that many of these advertisers, these teachers of modern farming, are looking far more to the half-yearly payments than the progress of their pupils. A young friend of the writer of this paragraph lately advertised in our leading agricultural papers for a situation with a good practical farmer; he had upwards of 30 replies in a few days, coming from all parts of England, and some from Scotland, offering terms the most advantageous, varying from 50*l.* to 200 guineas per annum, and facilities unbounded; steam cultivation upon divers systems—Fowler's here, Smith's there, Howard's not quite everywhere, &c. Cotswold sheep, and Short-horn cattle kept, says one; a Down flock and four-course shift, says another; Longwools, Short-horn cattle and horses bred, and many pigs fatted, with the best arable farming on a loamy soil, says another; half-bred Leicester and Downs flock, with the best Norfolk farming, says another. Again, the fox-hounds close at hand; another, the harriers in the parish; another, the fox-hounds and the beagles close by; a fine hunting country, plenty of coursing, says another; with many kindred specimens of like attraction. Some of the epistles are homely enough, and rather outraging "the Queen's English," but possibly from first-class men of business. Others, again, quite aristocratical, both farm and homes duly designated. Then the attractions of home are peculiarly enticing. "Wife and two daughters," "separate sitting and bed rooms." "hunter kept," "quite one of the family," "decided Churchman," "charming situation in a good county." One says "farm small, but plenty of good farms for observation all around;" and one or two give little family histories. My young friend is in great perplexity amidst all these eligible situations, knowing not which to choose; so I recommend him to take time and visit all, unless he can positively decide before he gets round, for I tell him he will undoubtedly meet with a ready welcome, more particularly where he will find the daughters. Well, leaving this little playfulness, we must look at the matter seriously. It is of the highest importance that our young farmers should be properly taught the best principles and practice of modern agriculture, otherwise safe progress is by no means advanced, but rather retarded.

It is not to be wondered at, that in these days of agricultural colleges (colleges for scientific and practical agriculture, colleges of agricultural chemistry, &c.) that the respectable farmers of this country should not take advantage of this desire of the farming public to have their sons more highly educated in all that pertains to agriculture, and open their houses for the reception of young farmers, or those likely to be landowners. It is a help to many a needy farmer in bad times. What is really wanted is some test as to their ability and proper qualification for undertaking this duty, and that their respective farms are well adapted to show the best practice carried out. For this purpose it might be desirable for these teachers to produce testimonials from their respective districts as to their fitness, respectability, and standing, or from former pupils or their friends, or such persons might put themselves into communication with our leading Societies and Colleges through their officers or secretaries. The authorities of the Cirencester College for instance, ought to be in possession of the names of several eligible places in different parts of the United Kingdom, to which they could with confidence recommend their students for further practical improvement upon quitting College. The Secretaries of many provincial Societies are often applied to for information on these matters. It would be no difficult thing to furnish terms and necessary particulars to such officers, and it might be extended to some of our large public schools, such as the King Edward's Schools, Christ Church Schools, Westminster School, Rugby School, Harrow, Winchester, City of London, or any similar institutions. If the authorities in these schools decline to retain names submitted to them, they are done with, but if they retain others upon good inquiry, it is high testimony; and all students desiring practical instruction in agriculture to these places, let them be recommended. This is one efficient way of preserving the student from any untoward course. He leaves his college or his school, enters upon practical agriculture under an intelligent and able master, and thus obtains a full insight into the management and capabilities of the various soils with which he may come in contact. This is far better than wasting time with incompetent farmers, to say nothing of the many inconveniences to be met with in the homes of strangers, and the distaste it may altogether give the student for agricultural study. It may be urged that we are taking too high ground; that practical farming after all is but a low, dull, grovelling employment, full of petty details, which no student of powerful mind could endure. We grant that to a certain extent this is true, but we are looking forward to a much higher order of agriculture; to a much greater development of the powers of the soil; the knowledge of and successful growth of all the farm crops—the breeding, management, and prosperity of all the farm stock. In this there is scope enough for any mind, however comprehensive it may be. Take the varieties of cereals—the 1000 varieties of Wheat, for instance. It is not to be expected that a farmer shall cultivate all these varieties to prove them; no, it is a subject for study. The root crops again, how numerous the varieties and the manures they best appropriate; here again is scope enough. Herbage and mediciual plants, how little is known of their culture. Then the stock of the farm, their habits, their management, their diseases, their progress, requires the nicest and most discriminating study. The hardest student may find a field large enough for his widest range and brightest thoughts. *O. F.*

Home Correspondence.

Vitality of the Dock.—I send a sketch of a common enemy found in a Wheat field a few days since. The complete inversion of the last year's position of the root has by no means injured its vitality, the roots still grow downwards and the leaf upwards; and had I not arrested its course a fine healthy Dock would have been the result. Few cultivated plants would bear this Antipodean position and grow, I trow! *Peter Dryland.*

Beans for Summer Food.—I quite agree with Mr. J. J. Mechi that no farmer need be short of summer food the time Beans are growing. I had never used or heard of their being used for sheep till I saw his article at page 181, and should I have to do with stock again I shall not fail to adopt it. For horses, store pigs, and breeding sows I have seen them used to great advantage. Some farms that I know are usually very short of keep in summer, owing to there being no meadow or pasture land attached to them. Such was the one I was brought up on, occupied by my grandfather, whose practice it was to plant a quantity of Beans at different times in the spring, often in the stack-yard and other odd corners that occurred close to the homestead. With those we used to keep our horses and pigs through part of July, August, and part of September, and well they used to do with them. The horses did not know what to make of them at first, but they soon took to them, eating all up clean while they were green, and did remarkably well with them. The pigs lived on them till they were done or harvest was over, when they were turned on the stubbles. By adopting that system with the horses we could let most of our Clovers go for a second crop, thereby increasing our supply of hay for winter and early spring, which we were in general short of till we adopted the Bean feeding for horses, besides allowing cows and other stock better keep in the same months. I think if others placed in like circumstances will give it a trial, they will be obliged to Mr. Mechi for giving the hint. *J. R. B., Wakefield.*

Foreign Correspondence.

An Agricultural Sketch: Salzmünde, Wurtemburg.

To my great disappointment I have been hitherto unable to send you the continuation of the agricultural sketch on Salzmünde, which appeared last year in Nos. 27 and 28 of your Paper, and if it should not be too late I will now venture to finish my description of one of the most interesting farms of Germany. In the first part of my sketch I gave you, as you will remember perhaps, some details on the size, administration, and crops of Salzmünde, and as the season is just now more adapted for indoor work, I may perhaps be permitted to add some words on the live and dead stock, and on the industrial or technical establishments of this place.

1st. The live stock of Salzmünde consists of about 140 head of heavy plough horses; 20 head of carriage and riding horses; 360 to 400 head of working oxen; 150 head of milk cows; 60 head of rearing cattle; 100 head of feeding pigs; 3500 to 4000 head of sheep.

According to these numbers, there are 17 to 18 acres of arable land to every head of working cattle, which is rather a high proportion, and only explicable by the extensive carriage of Beetroots, Potatos, clay and coals, and the large distances to and from the central points.

Of cattle in general, there are seven heads to

1 Prussian acre of land, (the whole area is 9000 acres =5700 English acres), and certainly this would be a good proportion too for the fertility of the farms, if so much of the good animal manure was not spoiled. The working horses are mostly of Danish breed, and worth about 80*l.* per pair. Fifteen horses are sold out yearly, so that on the average they are 9 years in use. Through the whole of the year the horses are fed daily with 10 lbs. of Oats, 10 lbs. of bruised Barley, and 10 lb. of Clover hay, a food by which they keep themselves very well, notwithstanding their hard work. The working oxen are of the Voigtland breed, occasionally they are imported from Bavaria. The purchase as well as the sale of these beasts is done by their live weight only, and the dealer who usually takes care of the former, gets for the cwt. of lean beasts as much as he has to pay for the cwt. of fat beasts. During late years the prices were from 27*s.* to 30*s.* per 100 lb. of butcher's meat. The oxen are mostly fed with the refuse of the sugar manufactory and distillery, which lasts nearly for the whole year. The working oxen get daily per head:—40 quarts of draff, 25 lb. of pressed Beetroots, 2 lb. of Rape cake, and 2 lb. of hay. The fattening oxen get each: 40 quarts of draff, 50 lb. of pressed Beetroots, 4 lb. of Rape cake, and 3 lb. of hay, and straw and litter *ad libitum*. The fattening season of the latter is always in winter, and lasts about 4 months, during which time they increase from 250 to 350 lb. per head. The milk cows are throughout of the Dutch breed, and 20 to 25 heifers from one-half to three-quarters of a year old, are imported yearly from Holland, and reared up until they are 1½ year old, when they are put to the bull. The calves are all sold to the butcher, and by this kind of supply a pure breed is always kept up. Much care is bestowed here on the attendance and cleanliness of these beasts, which, excepting in the winter time, are driven daily to the river Saale. For the prevention of pleuro-pneumonia, which is not uncommon in this district, all cows and all beasts in general are vaccinated here with much success. The cows get each daily, 70 quarts of draff, [Is our correspondent right as to his measure?] 2 lb. of oilcake, 3 lb. of hay, and straw and litter *ad libitum*. On the average of 10 years they produce each daily (taking the whole year) 7½ quarts of milk. All horned cattle are stable-fed, and pastures are not known here; they get mostly as dry a food as possible, but plenty of fresh water to drink. The milk is mostly made to butter after the Swedish system of Gussander, which in so far proves preferable here, as only a sixth part of the fatty substance remains in the churned milk, whilst with the old systems mostly one-fourth part of it is remaining. The milk, as is usual from cows fed on draff and oilcake, is very watery and poor of fat. Dr. Gouven never found more than 3 per cent. of butter fat, whilst the milk from cows fed on pastures contains fully 4 per cent. For this reason 15 quarts of milk are required here on the average for one pound of butter. The latter is almost entirely consumed on the farm, and only in winter some of it is sold. The churned milk is made into cheese for the servants, and the last refuse given to the feeding pigs. Pigs are bred only for the wants of the place, and fattened quickly with the refuse of the mill and the dairy. The pure English breed is used exclusively there, as having the best fattening qualities, and when the so fed pigs are one year old, they reach an average weight of 4 cwt., and are mostly killed at this age.

Sheep likewise are reduced to stable feeding, and only when the Beetroot crop is secured are they driven on the Beetroot fields, where they find ample food in the cut-off shaws and heads of the Beetroots. In winter time the hogs get each:—4 lbs. of pressed Beetroots or cut-off heads, ½ lb. of hay, and 1½ lb. of straw. The fattening sheep get however 6 lbs. of pressed Beetroots or cut-off heads, 1½ lb. of hay, and 1 lb. of straw, and 1-fifth pound of Rape-cake. 500 to 600 fat sheep are sold yearly at an average weight of 145 lbs., and last year 10 thalers or about 30*s.* were got per head. The breeding of sheep is carried on at the Inspection of Schochwitz, where we find a flock of about 1000 heads of fine Spanish sheep. As is mostly the case in Germany, the sheep are bred also there chiefly for the production of wool, from which they clip 3 to 3½ lbs. per head at a price of from 2*s.* 4*d.* to 2*s.* 6*d.* per lb.

At the public sale of the late Mr. Webb in 1861, a small flock of Southdown sheep, 20 ewes and 2 rams, were bought by Mr. Zimmermann, and were doing very well at my visit there in 1862.

Of workmen, considering the extensive culture of roots, and the variety of Salzmünde's husbandry, it is not easy to say how many hands are employed in each branch of the latter, so we must confine ourselves to saying that in winter about 1000 and in summer about 2000 people are employed there. According to the work, fixed yearly wages are given, or the former is paid by the piece, or, as usually, by the day. The ploughmen or carters earn for example 45 thalers, or 6*l.* 12*s.*, and their food, consisting mostly of soup and meal dishes, besides the following weekly appendages:—1½ lb. of butter, 3 lb. of small "hand cheese," 3 lb. of fresh beef or pork, 14 lb. of rye bread, and Sundays, ½ lb. of sausages. Their cottages are spacious and healthy. As the working powers of this district are not sufficient, many people come periodically from other countries; they are housed in barracks built especially for their purpose. One part of them returns home at winter time, whilst the other part remains there for working at the sugar manufactory. For the numerous workers of the manufactories, Mr. B. has founded a special victualling-house, the keeper of which is supported by the proprietors, and therefore obliged to give to each workman a quart of warm soup or vegetables, besides a piece of meat, at the fixed price of about 1½*d.* For feeding the other people of the place the following quantities of food are required yearly:—About 250 quarters of Pearl Barley, 600 quarters of Rye and Wheat for bread, 40 heads of oxen averaging 900 lb. of butcher meat, 60 head of pigs averaging 350 lb. of butcher meat, 150 head of sheep averaging 85 lb. of butcher meat, 25 head of calves averaging 70 lb. of butcher meat; and finally the dairy produce of 100 cows at the least.

The workmen of the manufactories get from 9*d.* to 1*s.* 8*d.*, and the labourers of the farm 6*d.* to 1*s.* daily. Those of the latter, who are exclusively employed for the Beetroot culture (about 1000 heads) live in the adjoining villages, and bring their food with them. I have still to mention the extensive body of handicraftsmen, who, in about 10 to 12 different workshops are supplying all the wants of the farm and the manufactories.

The live and dead stock of Salzmünde is taxed to a value of 23,000 to 25,000 thalers. Besides the cattle and horses, we find a large number of agricultural machinery and implements, such as harrows, grubbers, root-slicers, chaff-cutting and bruising machines, 200 heavy (Magdeburg) Beetroot ploughs, 170 heavy Beetroot waggons, holding 70 cwt. each; 6 Strasburg machines with horse-gears, 6 large English drilling machines, 2 hay-tedding machines, 2 sowing machines, and 4 manure distributors, &c.

Having described to you now the agricultural part of Salzmünde's husbandry, some words yet remain to say on the industrial and other establishments of Salzmünde, which are all in close connection with the former. I begin with the most important, viz., the sugar manufactory. It was erected in 1847, and works the Beetroots after the pulping and pressing system. There are 18 large hydraulic presses, and about 100 tons of Beetroots may be worked daily. More than 20,000 tons of Beetroots are converted to sugar, and nearly 20,000*l.* are paid yearly for their duty. The produce of sugar is fluctuating, according to the influence of the weather—between 8 to 9 lbs. of raw sugar per 100 lbs. of Beetroots. In the season of 1861 about 1800 tons of raw sugar were sold, at prices ranging from 11 to 12 thalers per cwt. Refined sugar is only made for the wants of the household, and the raw sugar is sold to adjoining refineries. About 500 people are employed there during the manufacturing season, which often lasts until the end of April.

The distillery was built seven years ago, and is said to be a model in every respect. It was constructed for the purpose of distilling molasses at the same time as Potatos, which latter are, however, chiefly used. The raw spirit is got by means of excellent distilling apparatus to a strength of 85 to 90 per cent., and is sold mostly in this quality. The distillery is working through the whole year, and when the Potatos are done with at the beginning of summer, newly centrifugated molasses are distilled, which latter are supplied by neighbouring raw-sugar manufactories. During the last season 4250 tons of Potatos, 370 tons of malt, and 500 tons of molasses were distilled, and produced altogether 3640 oxhoft (about 180,000 gallons) of spirit at 14.400 per cent. Tralles. The Government tax for distilled Potatos amounted alone to 23,482 thalers. The draff, as well from molasses as from Potatos, serves as cattle food, and is consumed not only by the stock of Salzmünde, but carted to the remotest farm station.

The production of steam for the sugar manufactory and the distillery is effected by nine steam-engines with 81 horse-power, and 13 double and two simple boilers, which consume yearly about 130,000 tons (?) of peat, got out of Mr. Boltze's peat bog, at Bennstedt.

The corn, oil, and sawing mill is put in motion by two turbines or a large water-wheel, and in the want of water by a steam-engine of 24 horse-power.

The tilery is very considerable, and more than 20,000 tons of clay are worked yearly there. In connection with the former is a mechanism for cleaning or washing out porcelain clay, 800 to 1000 tons of which are prepared yearly, and sold to northern countries at 1*s.* 2*d.* to 2*s.* per cwt. Besides the ordinary building stones—porphyry and sandstone—large quantities of peat, iron-free sand for glass and porcelain manufactories, chalk-stones, and especially different qualities of clay, are won at Salzmünde, and an extensive trade is carried on with all these articles. The carriage of goods, and the intercourse with remote places, is favoured highly by the navigation of two rivers, on which Mr. Boltze has 25 to 30 barks in constant circulation.

To add details on some benevolent institutions, which Mr. Boltze has founded with great liberality, such as a savings bank for economic and sick workmen, an infirmary, an institution for the improvement of boys of 14 years, a school, church, and poor-house, &c., would lead us too far, and so we must confine ourselves to a few remarks on the experimental stations and a few other topics. The experimental station has been founded by the Central Agricultural Society of the province of Saxony and removed to Salzmünde, because there could not be found a more convenient place, and also because Mr. B. had promised a warm reception to this establishment.

Dr. Grouven, to whom I owe the most of these notes, is the director of this institution; he is seconded by three chemical assistants, and very useful and interesting experiments and analyses are made there on various practical and scientific questions referring to agriculture. All the buildings of Salzmunde are insured by several companies to a value of 500,000 thalers. The duties and taxes amount yearly to 125,000 or 130,000 thalers. More than a million and a half thalers are put in circulation there, and a pretty rent or net produce may be supposed to be got out of so extensive a business.

In conclusion, I have yet to mention that at my visit in October, 1862, I met with several gentlemen from different countries at the pretty inn, who were there partly as agricultural students, partly as passing visitors. The agricultural students or pupils live at the inn of Salzmünde, where they pay also for their board and lodging (about 250 to 300 thalers each). By the kindness of the proprietors they are allowed to inspect and see everything they like, as well at home as on the farms, and much opportunity is offered there for the improvement of young enterprising agriculturists. I regretted I was not introduced to Mr. Zimmermann, the head of the agricultural department, but considering the numerous confluence of visitors from all countries, it is a matter of course, to expect this only by special introduction. *J. R, O., near Stuttgart, January* 30, 1864.

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

Cultivation of Clay Lands.—At the ordinary meeting of the Royal Agricultural Society of England, held in Hanover Square on Wednesday last, under the presidency of Mr. Raymond, a lecture was delivered by Mr. Alfred Hughes, of Thorness, Isle of Wight, explanatory of a seven years' rotation adapted for the maintenance of sheep on a clay farm.

Mr. HUGHES observed at the outset that his plan was something more than idea, for he had had it in work two years, and he should not have ventured to talk about it were he not satisfied of its usefulness. He prefaced his explanations by laying down one or two conditions as to the real character of the soil with which he proposed to deal. There were, he said, all kinds of clay farms, but the class for which he had adopted the rotation was that which was not adapted for the four-course shift, but land that would grow valuable roots, but which defied the farmer to make a profitable use of them after they were there—land that was not kind to Barley. These conditions deprived the farmer of two of the most profitable sources of income open to him, namely the production of a large quantity and useful quality of malting Barley, and the production on the land itself of a large quantity and good description of mutton. The system of management set forth applied only to land of that kind, and those whose lot was cast upon soil not subject to the same conditions would find nothing in the scheme that would assist them. His object had been to discover a course of cropping suited to this soil to relieve it from the difficulties and heavy burdens besetting its tillage, and to find a means of profitably consuming the greater part of the root crops on the land. Managers of clay lands well knew what the difficulties were, where the spring corn was to follow the root crop in a climate like this, and the effect upon Barley, the most valuable, most sensitive, most delicate of our plants. Then again, in taking Wheat after Clover in such land, when they came to plough, the soil came up so stiff and stubborn that the Wheat could only be cut in by force and buried in water-tight drills, and the work was looked forward to with dread every year. If the season was not favourable the Wheat was not in till winter came, for although Wheat liked a firm bottom, the seed of Wheat, like all other seeds, did not like to be locked up in water-tight compartments. If the soil was naturally tough and binding, the farmer must adopt a mode of preparation for the reception of the seed which would afford as much as possible a kindly bed, and their seed must fall into a condition of soil which would secure a rapid development. With regard to Mangel Wurzel, if grown after Wheat, the summer was so far gone that they did not get either the weight or quality that the land was capable of producing if exposed to a mid-summer sun. By the system he had adopted these difficulties were met; a season was afforded for each crop, while at the same time ample time was allowed for the profitable consumption on the land by sheep of a very large amount of green crop, thus enabling the heavy-land farmer to participate in the advantages of sheep farming, which rendered the farm self-fertilising. In this way, too, the haulage of the root crops home was avoided by growing for the most part roots that would store on the land; and by taking no corn crop in the spring, ample time was afforded to consume the root crops with advantage to the sheep and to the land. The distribution of the crops also was such as to remove the repetition of each course to

seven years, and the subdivision of the crops in each course afforded the opportunity of removing the more sensitive, such as Clover, to 14 and 21 years. Another advantage accruing by this arrangement, of saving a great deal of horse labour, was the time allowed for the preparation of the seed bed for each crop, especially the three with which, under the four-course system, they had the greatest difficulty, namely, Wheat, Barley, and Mangel Wurzel, the latter getting a summer as well as a winter fallow, thus affording a weather-made surface. One of the greatest blunders they all made in farming was, that when they ought to be putting the seed in and giving it a fair start they were rending and tearing the surface to pieces by force. Another collateral advantage arising out of this septennial division was the severance of the periods of sowing into small tasks, so that none were likely if begun in good time to be protracted to an awkward season, to the detriment of the crop itself, and the hindrance of all the work of the farm. The summer preparation for the Wheat rendered it perhaps the latest seed time of the season affording the best opportunity for thin and early sowing, and the leas remaining unbroken through the latter part of the winter gave a firm and healthy run and feeding ground for the sheep when the ploughed lands would not bear them. A good supply of roots should be stored at some convenient spot, so as to supply the sheep with as little cartage as possible when they were driven from the Clover lands to the Turnip lands. He considered his system peculiarly adapted to the requirements of a flock of ewes, and Dorsets in particular. Having got in in September, the sheep took the run of the stubbles, and came upon the land intended for Winter Beans. Directly that land became too wet for them he removed them to the old Italian Rye-grass, and when that got short he sent them to the early white Turnips. If wet set in they were brought off to the fold on the old lea ground, and there supplied from the store drawn for the purpose till they could be got again on the Turnip land. All the labour bestowed on the sheep was well bestowed, for their own value, and also as saving the hauling of roots home, and in the dunging of the land. He proceeded to take the crops year by year. He commenced with Wheat, deferring, however, the preparation for Wheat, thinking that would come better when he explained the nature of the preceding crop. But, supposing the Wheat stubble to be on the land, he found he could grow a very much better quality, and, taking the average of seasons, a very much larger quantity, of Barley upon such land as he was speaking of on the stubble than after Turnips or any roots. After Wheat ample time was afforded to get the land into perfect condition for Barley, and the preparation itself was such that there was no fear of the crop not being clean. In harvesting the Wheat he left 6 inches of stubble on the land, and then before Christmas the soil was turned in for the reception of the Barley. He used at one time to turn in the Wheat stubble in the autumn and leave it the whole winter, but he found the land healthier and sounder by the other course. He ploughed the stubble in a week before Christmas with three horses, and once in the first dry time in February broke the top by harrowing. He then used a cultivator, constructed especially for the purpose, a very light implement, by which the soil was lifted completely up as deep as it had been ploughed. The effect of this, as far as his experience went, was to produce the finest preparation for Barley on clay lands. He twice cultivated with this cultivator with four horses, twice harrowed, drilled 14 rows of 8 feet with three horses, and light harrowed afterwards. The total cost of the preparation for Barley, taking all the expenses of horse and hand labour from the beginning to the end over 9 acres, was 10*l.* 15*s.*, or 1*l.* 4*s.* 3*d.* per acre. He had good land for his horses—salt marsh—which considerably lessened the cost. The first year he took Wheat, the second Barley, and the third Beans and Peas. For the third crop he carted a good dressing of farm-yard dung. He divided this course into three different classes—that was to say he grew winter Beans, spring Beans, and an early description of Pea. By this division they got different periods of sowing and smaller tasks, and this was an advantage with land like his, as it gave more certainty of getting through the work. The total expenses in preparing for winter Beans over 8 acres, was 12*l.* 0*s.* 4*d.*; for spring Beans and Peas over 12 acres, including mucking, was 24*l.* 17*s.* 7*d.*, or 2*l.* 1*s.* 6*d.* an acre. The next course was the Oat course—the fourth year. He seeded down the Oat crop in October, but he divided this also into three divisions—a winter portion, getting some in in the autumn to make sure, then Black Tartarean Oats, a rarely productive description for the spring, and some Canadian Oats; and he placed the winter Oats upon the spring Bean land. The expense in this case for 8 acres, including dunging, was 15*l.* 10*s.* 2*d.*, or 1*l.* 18*s.* 9*d.* per acre. The spring Oats followed the other two divisions of the Bean crop, but for this he merely scarified and cleaned, but did not break the land. The expenses, including carting the muck, were 12*l.* 2*s.* 9*d.* over 8 acres, or 1*l.* 17*s.* 10*d.* per acre. In the fifth year came the first green crop, and for this he used the improved Italian Rye-grass and clean Clover, and seeded the rest down with a mixture adapted to the soil. The old Clover leas remained unbroken till the Spring, giving a fair run to the sheep. He used a mixture of Trefoil, Dutch Clover, and Italian Grass. The cost of seeding this land, not of course calculating the cost of the seed, was 1*l.* 8*s.* on 10 acres, or 2*s.* 9½*d.* per acre. The next course was roots and Mangel Wurzel, and he reserved for the Mangel the land which in the previous year was in Tares. The Tares were cut for the use of the horses, the manure was carted on at once, and ploughed in as deep as possible, and often as early as May the land was under summer fallow for Mangel. He used for this 18 loads of long manure, good farmyard dung, and the cost of carting, spreading, harrowing, and preparing 8 acres for Mangel after Tares was 20*l.* 7*s.* 6*d.*, or 2*l.* 10*s.* 11*d.* per acre. The second division of the seeded land was the Clover land, which was now intended for Swedes and hardy Turnips. The land was ploughed deep in March or April, and the expense (artificial manure was used for the root crops) amounted over eight acres for Swedes and hardy Turnips, including storing, to 8*l.* 15*s.* 9*d.*, or 1*l.* 2*s.* on an acre. The third division, in preparation for roots, was that laid down in Italian Rye-grass in the spring. This was an astonishing plant for vigour; it was sold by Sutton, of Reading. In preparing this division for roots the tillage was a little more expensive than in the other divisions, as the land was apt to be tough and stubborn; the total cost upon eight acres was 16*l.* 0*s.* 4*d.*, or 2*l.* 0*s.* 0½*d.* upon one acre. The seventh course was the green fallow. After the Mangels were removed he ploughed as early as possible, and put in winter Tares if likely to be required, but in the land he farmed the soil was so exceedingly stiff that sometimes in an awkward bit or two he did not put in the roots at all, for he had found it better to get it up at once, and let it remain without a crop all the winter. The whole of the root-course was now prepared and put in order for the summer green crop as soon as possible, and the most profitable he found was Rape with the same manure as for Turnips. The Mangel land was put in at once with the new green crop for summer consumption. He did not plough after the Turnips. The whole of the expense of preparing for the green fallow after the Mangel was 6*l.* 12*s.* 4*d.* for 8 acres, or 16*s.* 6½*d.* per acre. The expense of preparing after Swedes and Turnips was 4*l.* 11*s.* 3*d.* over 8 acres, or 11*s.* 5*d.* per acre—the cost in this case being lessened by the fact that the work was done in the spring, when the land worked easier. The next point was with respect to pieces of land that had not been cropped at all, a bare winter fallow that was ploughed at a convenient season of the winter, and put in winter Tares in February, and cultivated as for Rape, the cost being 7*l.* 13*s.* on 8 acres, or 19*s.* 1½*d.* per acre. The average cost of tillage in the three preparations after the root crop was 1*l.* 17*s.* 8*d.* per acre. The process of feeding off the summer green crop was the preparation of course for the first year's crop of Wheat, and the tillage and preparation of the land for the Wheat crop was only 10*l.* 15*s.* on 9 acres, or 1*l.* 4*s.* 3*d.* per acre. This was a very important item in the reduction of the expenses of heavy land farms. The principal features of his system were that time was allowed for the preparation of the seed beds for each description of crop, and that they followed on each other in such a way that sufficient time was allowed for a good weather-made surface for the seed which was to come. The next most important was that ample time was afforded for the profitable consumption at a convenient time of the root crop, by which much expense was saved. Upon the old system they had the spring corn hanging over their heads that must be got in at a certain time, and consequently the roots must be got rid of; they must be "muddled off," or "puddled on" the land. By his plan the weather was allowed to do a great deal that otherwise cart horses and implements would have to do, and it afforded ample time for the consumption of the green crop at that period when the land would best bear the sheep.

The Chairman asked in what locality the farm was situated.

Mr. Hughes. On the north side of the Isle of Wight, near to Cowes—the stiffest clay in the world, I should think.

Mr. Hughes (replying to Lord Berners), stated that he commenced drilling Rape in April and went on to June. The Rape he grew after Turnips last year with the same manure as for common Turnips produced such an enormous crop that he had to give over feeding it, and to cut the whole into chaff for the sheep. He mixed the Rape with Mustard, which was useful for sheep. He paid for labour 10*s.* a week to labourers, 11*s.* and 12*s.* to horsemen, and 8*d.* a day to women.

Mr. Howard thought if the lecturer got a steam cultivator on his land he would find some advantage in breaking up in autumn.

Mr. Hughes thought that if Mr. Howard's experience had been in the Hampshire hills he would abandon his idea of employing the steam cultivator. He should be glad if he could work it with advantage.

Mr. Howard should be sorry for it to go forth that hilly ground was unsuited to the steam cultivator, which could be profitably worked on any description of land—it could work, in fact, upon a perpendicular.

Mr. Hughes was glad to hear this was the case. He had had no experience in the matter himself; he had only seen the steam cultivator in operation where it was worked successfully.

Lord Berners, in proposing a vote of thanks to Mr. Hughes for his lecture, endorsed from an experience Mr. Howard's view as to the value of the steam cultivator.

The vote was passed unanimously, and the proceedings terminated.

Reviews.

A Lecture on the Breeding and Management of Sheep. Delivered before the Wayland Agricultural Association. By H. Woods, Agent to the Right Hon. Lord Walsingham. Ridgway & Co., Piccadilly.

This remarkably instructive lecture, which has been published in most of the agricultural journals, has been in type for some time, and is waiting for publication in our own. It will appear as soon as room can be found for it, and in the meantime it is published in a separate form along with additional matter; and we are glad to name it here as one of the very best addresses on its subject that have ever been delivered.

Calendar of Operations.

MARCH.

Chatteris, Isle of Ely: *March* 10.—At last we have an abundance of rain. During the last two months of the old year we had great drought, and the dust was blowing in the streets and on the highways like March or April. During the last fortnight we have had weather resembling that usually looked for in November, viz, continued fogs followed by heavy rains and snow. The last week, especially, has been wet; the Ouse has overflowed, and the Huntingdonshire meadows are all inundated, and the waters are pouring down the Wash from Earith to Sutton, Messel, and Welney, to empty themselves through Welmore Lake Sluice, again into the Ouse, and away to sea by Lynn and the Norfolk estuary cut. We have not had so heavy a flood for a long time. Low-lying fen lands are quite wet enough, and all the Fen engines, whether steam or wind, are busily employed day and night in pumping the waters into the large drains to be conveyed to "old Ocean" as speedily as possible. The Middle Level syphons erected across the main drain just after the calamity of the 4th of May, 1862, when the outlet sluice gave way and such fearful disasters ensued, will now be fairly tested, and from the experience of the last two or three days we are inclined to think Mr. Hawkshaw's anticipations will be fully realised. We have also had a good share of frost as well as downfall since the new year came in. In January we had several severe nights, with the ground uncovered, but no perceptible injury was sustained by the growing crops; indeed, the Wheats only appeared to have received a salutary check; whilst all stiff, tenacious soils designed for spring crops were thoroughly pulverised and disintegrated, and a better seed-bed than they afterwards made could not have been desired. This weather was soon followed by a fall of snow which covered the ground for some days, and appeared to revive the Wheat plant and do good service to all vegetation. The snow, however, had scarcely disappeared when frost again returned, and the land was locked up for some days in its embrace, and farmers became anxious for suitable weather for putting in their Beans and Peas. Their anxieties were soon relieved, and a few fine days enabled them to get these crops safely deposited in the ground; but scarcely was this work completed and the Barley and Oat seeding commenced than fog and wet weather set in, and all sowing operations must now be suspended for some time. Yesterday from dawn to dark it snowed without intermission, and was followed by a severe frost, with the thermometer marking 23°. To-day it has been thawing again, and the wind has veered into the S.W. The fogs and humid atmosphere have improved the appearance of the growing Wheats; else, after the second frost with the land uncovered they were looking cut, and in some instances sickly, and there appeared reason to apprehend a partial failure. We have sown 62 acres of Beans, 18 of Peas, 10 of Barley, and 7 of Oats. We also commenced steam cultivating for Barley ten days ago, but only succeeded in getting one day's work done ere the weather changed, and we have before us a gloomy future for this work. We have between 50 and 60 acres to cultivate once over yet, preparatory to sowing the Barley; 17 acres, part of this is yet Wheat stubble, the other was cultivated once over in the autumn. All our other lands for spring corn are ploughed and ready for the drill as soon as the weather becomes again favourable. We still have upwards of 430 sheep in yards; we give them, namely the hoggets, cut Mangels, Bean and Wheat-straw, ¼th lb. cake, ¼th pint of Peas, and ¼th pint condimental food (the latter being home-made). The shearling sheep get everything the same, except a double quantity of cake. The sheep generally are very healthy; in one yard of 90 put in during Christmas week there were 90 living this morning. In another of 80 only one is missing, which died by getting on his back in the night; in another of 173, three are missing, these are the hoggets. In the 96 shearlings one went dizzy and one died from inflammation of the lungs. The loss, therefore, has been inconsiderable, and not one single case of lameness have we yet discovered. What this rain may do remains to be seen. We have besides these 76 Scots which are treading straw into manure, eating cake and corn. The present wet weather is making sad work with straw stacks, and even then cattle can scarcely be kept comfortable. Our horses are all idle, and men not much better. Work is very scarce. *A. R.*

Wester Ross: *March* 7.—We are again in the midst of a pretty severe snow storm, which, driven with a boisterous wind, has filled up hedge and ditch. Some three weeks ago an intense frost arrested the plough, and although a thaw set in about ten days thereafter a cold easterly wind continued to blow, accompanied with frost at night; and except on fields well exposed to the sun, the frost had not quite relaxed its hold when this new storm set in. A few days, no doubt, will clear the fields again, and prepare the way for the plough, but at this advanced season, and with so much yet to do, a few days even are of great importance. At this time last year a considerable breadth of Oats was sown in excellent condition; but with the best weather now, and on the driest farms, the seed time must be a considerable way off. Our Turnips were in the way of being consumed quite fast enough without any extra aid, but intense and long-continued frost, accompanied with snow quite insufficient to afford any protection, so assisted the consumption that the few patches now to let for sheep are in great demand at prices much advanced. Many of the sheep now in the low country will have to return to their grazings, previous to their usual time, and were it not that our Potatos are unsaleable even at 27*s.* per ton, and will have to be consumed on the farm, many of the cattle also would have to be disposed of sooner than was anticipated. Cattle in good condition have been selling well; our lately opened railways affording facilities to southern butchers and dealers to visit our markets, and

rendering the transit of our stock to the south a greatly simpler matter than it hitherto was. Grain has been, and is still selling at a figure so unremuneratingly low that many farmers have commenced a rotation of cropping by which a full half of their farms will always be under Grass, whilst many more seem satisfied that a change of some sort is needed, but are not over certain what that change ought to be. We have been busy of late in doing up all odds and ends of work, so that the ordinary labour of the farm may not be interrupted when favourable weather sets in. Nearly all our ground for Barley and Oats is yet to plough, and a more busy spring than this must now be, we have not had for many years.

BERWICKSHIRE, MERSE FARM: *March* 7.—The weather of February was decidedly wintry, though quite different from the keen black frost of the new year. Two distinct snow-storms are to be noted, lying some 3 inches deep, in the low country; and the air temperature fell to 10° on the 8th, and nearly as low on the 20th. Between these two storms we were visited on the 13th by a sustained gale from the west, which stripped roofs, and kept straw flying across the country for two whole days. Up to the close of the month we registered but 1¼ inches of downfall, but since that we have 2 inches more of rain and sleet; the land is in pools, and the snow is beginning to lie white to-night. Our streams being but slightly swollen, indicates hard snow on the hills. After struggling through mud for a week, we have been compelled temporarily to remove all our sheep stock from the Turnip-break to such small Grass fields as we can spare. This was easily done in November, and with complete success; but it is not without difficulty we can do it now; for all the lea is ploughed, and the seeds are strictly reserved for ewes just about to lamb. Hoggs have thriven remarkably, where care was taken to have their meat stored fresh and clean; and if they suffer from this wet, it will be their first check. There are to be found instances of folk having to go a-field, fair or foul, for the day's supply; but that system is not now, as it was formerly, the rule. Swedes are plenty to last all next month, and the longer we can keep off the young Grass the better, for the plant is exceedingly poor and weak. Early stored roots are coming out in fine condition, but those exposed to the last frost are going fast. With a large reserve of unsaleable Potatos, cattle will need little oilcake to bring them to market. Wheat is not far above ground yet, nor can it be called green; but there seems to be plenty of plants. We believe there has been little sown since December, and it needs some faith to sow Wheat in the middle of March; but the price is so low compared with that of Barley, that we need not regret the hindrances of the weather. Mr. Gladstone's scheme will benefit no one, unless (as we may hope), it lead him a step towards a reduction of the malt duty. Rather a considerable portion of the crop remains in stack: for, while low prices have urged threshing, the dry season on the other hand has retarded the disposal of straw; and straw stacks are a deformity, and a source of confusion when the wind blows. The absence of Red Clover will prevent the soiling of cattle, which might have helped away with the surplus. *J. T.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Reading of Barometer corrected to Freezing Point and at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in the previous 24 hours on the Ground.
Friday	March 11	Inches. 29.55	50°	45°	S.W.	3	5	49°	35°	55°	19°	Inches. 0.79+
Saturday	12	30.10	45	41	N.W.	3	0	51	38	59	31	0.00
Sunday	13	30.24	46	43	N.W.	1	5	50	38	59	31	0.00
Monday	14	30.06	48	46	W.	2	10	54	43	68	37	0.01
Tuesday	15	29.82	50	47	S.W.	3	10	55	45	64	41	0.00
Wednesday	16	30.09	43	41	S.E.	2	1	53	34	56	20	0.30
Thursday	17	30.14	39	36	S.E.	2	10	53	33	56	20	..

* Melted Snow of the 9th, and Rain of the 10th.

Notices to Correspondents.

ASHES *Eversley.* "Small cinders from a furnace" are not a good thing to mix with guano. Use any ordinary loam.

BOOKS: *Agrestis.* Hand-book of Dairy Husbandry, 1*s.* 6*d.* (Longmans).

COTTAGE ACCOMMODATION: *Agricola.* Landowners can borrow money of the Land Improvement Companies, giving a rent charge on their estates for a period long enough for the repayment of principal and interest.

COWS: *Anon.* Tie the cow up until she has become accustomed to the calf.

LAMBING FOLD: *N.* A low shed erected round three sides of a sunny sheltered yard, open to the south. Perhaps some of our correspondents may give their experience on the best plan and material for its formation.

POULTRY: *G E O.* Next week.

WHEATS: *Triticum.* Many thanks. Next week.

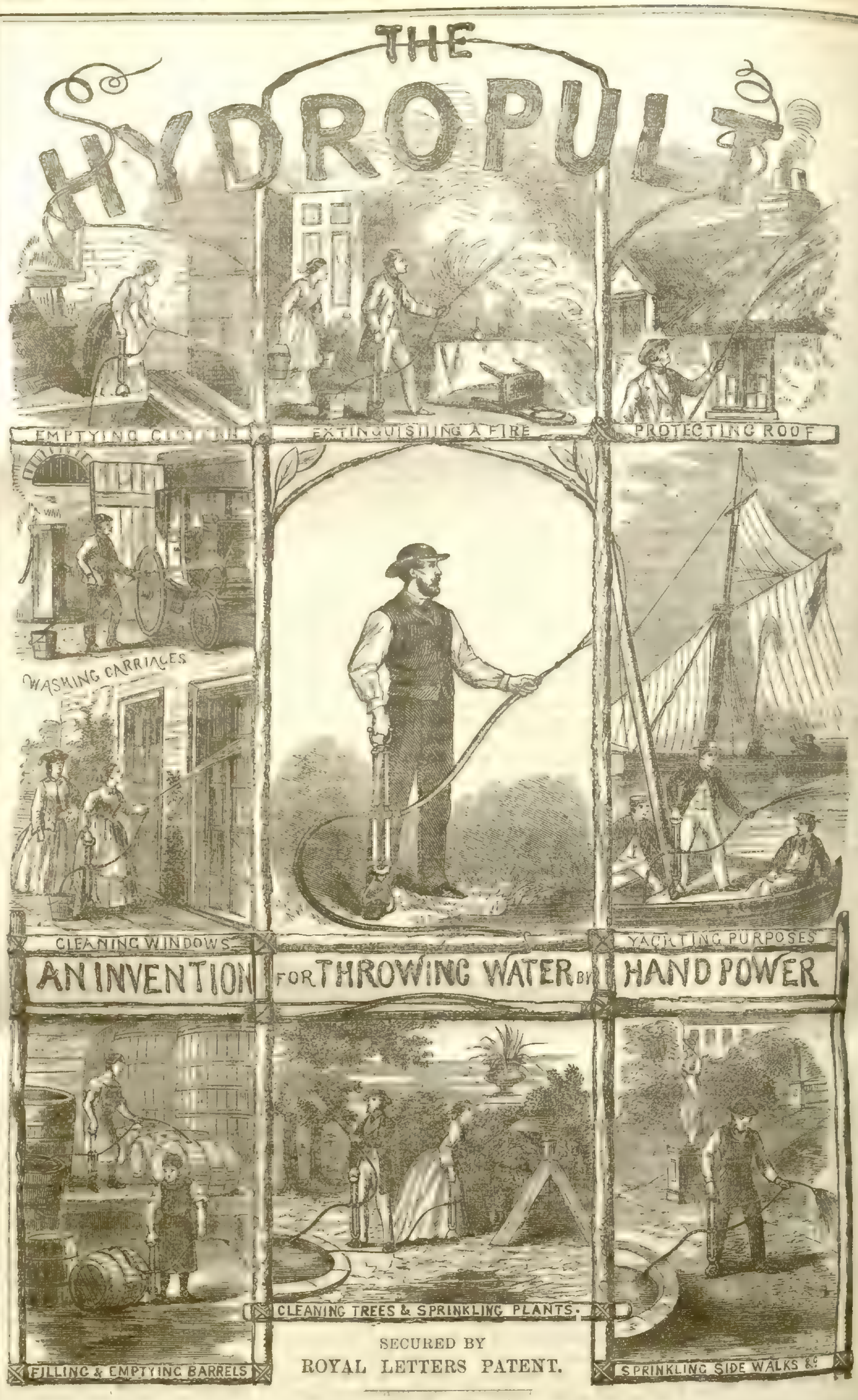

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ROYAL LETTERS PATENT.

PRICE 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanized Wire Strainer, Rose, and Small Jet. Brass Cylinders and Japanned Stirrup. With Copper Stirrup, Two Guineas.
Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

ROBERT HOGG, LL.D. and F.L.S., SHIRLEY HIBBARD, Esq., F.R.H.S., THOMAS RIVERS, Esq. (the eminent Florist), and other well-known gentlemen recommend the

HYDROPULT

AS AN INVALUABLE GARDEN IMPLEMENT.

A CARD.

It may not be known to the Public generally, that *interested parties*, unable legitimately to prevent an extensive sale of a new, efficient, and valuable invention, which, by its merited success, has superseded other devices of the kind, have resource *through their friends* to the now too frequent practice of writing anonymous communications to journals of large circulation, *requesting answers* as to the merits and efficiency of the invention in question. These questions and the answers, PREVIOUSLY CONCOCTED by the interested parties aforesaid, duly appear; and are so worded as to have the desired effect. Thus are the Public misled and deceived by *malicious* and *envious* inuendos, the tendency of which is to bring into bad repute an article of utility, which has received the unqualified approval of thousands of well-known gentlemen, who, in a spirit of kindness, forward to the inventor gratuitous testimonials, as a token of their appreciation of his invention.

Parties unknown to me, have from motives best known to themselves, in this manner criticised the efficiency of the "Hydropult." I have no answer to make to them: to the Public I would say that I will cheerfully forward, on application, a prospectus, containing testimonials from gentlemen well known throughout the United Kingdom.

CHARLES P. BUTTON.

CHARLES P. BUTTON, PROPRIETOR, HYDROPULT WAREHOUSE and SHOW ROOMS,
27, LEADENHALL STREET, LONDON, E.C.

New Chrysanthemums.

JOHN SALTER'S DESCRIPTIVE CATALOGUE of New CHRYSANTHEMUMS, PYRETHRUMS, HARDY VARIEGATED PLANTS, &c., for 1864, is now ready, and will be sent post free on receipt of Two Stamps.

Versailles Nursery, William Street, near Hammersmith Turnpike, W.

Chrysanthemums, Chrysanthemums.

J. H. BIRD, F.R.H.S., NURSERYMAN, Stoke Newington, is now sending out from his great Stock of the above:—20 pairs of fine varieties of LARGE CHRYSANTHEMUMS for 10*s.*; 20 pair of Cuttings of ditto for 5*s.*; 25 pair of fine POMPONS for 10*s.*; 25 pair of Cuttings of ditto for 5*s.*

N.B. To save trouble all orders to be prepaid.

Notice.

JOHN WATERER, of The American Nursery, Bagshot, Surrey, is the EXHIBITOR of RHODODENDRONS at the Royal Botanic Gardens, Regent's Park.

His CATALOGUE, describing colours, prices, &c., can be obtained by letter addressed to the Nursery as above.

☞ For detailed Advertisement of CONIFERS, ORNAMENTAL SHRUBS, &c., refer to page 1151 for 1863.

Seeds, Carriage Free.

WILLIAM CUTBUSH AND SON'S PRICED CATALOGUE of GARDEN and FARM SEEDS is ready, Post-free, on application.

The name their house has obtained during many years past, is a sufficient guarantee for the quality of the goods offered.

Highgate Nurseries, London, N.

Superb Double Hollyhocks, now ready for Planting.

WILLIAM CHATER has a large stock of fine healthy plants, which he can supply on liberal terms.

See Advertisement on other page.

Address, WILLIAM CHATER, Nurseries, Saffron Walden, Essex.

Select Double Hollyhocks.

WILLIAM PERRY begs to announce that he has for SALE a good and healthy stock of the above that will flower well this season.

A DESCRIPTIVE LIST of sorts may be had on application.

FOREMAN at the Nurseries, Sawbridgeworth, Herts.

To the Trade.

AZALEAS, ERICAS, and EPACRIS, fine bushy plants, well set with flower buds, at moderate prices. An inspection solicited.

THOMAS JACKSON & SON, Nurseries, Kingston, S.W., adjoining the Kingston New Station, South Western Railway.

AMBROISE VERSCHAFFELT, NURSERYMAN, Ghent, Belgium, begs to announce that his NEW CATALOGUE (No. 74) for the present Spring is ready, and may be obtained Gratis at

Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, London, E.C.

Double Italian Tuberose Roots, 4s. per Dozen.

A. COBBETT, FOREIGN WAREHOUSE, 18, Pall Mall, S.W., has the pleasure to inform all Amateurs and Gardeners that he has just received from Italy his usual Annual Importation of this beautiful and fragrant Flower; and has much pleasure in announcing that the Roots are very large, and in splendid condition.

N.B. Directions for Planting sent with each order.

Gladiolus Brenchleyensis.

YOUELL AND CO. have much pleasure in offering the above GLADIOLUS, unequalled by any other variety for the brilliancy of its colour. The Bulbs are unusually fine. Price 3*s.* per doz.; 20*s.* per 100.

Trade price on application,

Royal Nurseries, Great Yarmouth, Norfolk.

GLADIOLUS, SEEDLINGS of GANDAVENSIS.

	£	*s.*	*d.*
20 in 50 choice varieties	2	12	6
10 in 25 " "	1	5	0
12 in 12 " " .. .. 5*s.* to	0	12	0
Extra choice mixed, 3*s.* 6*d.* per doz. .. per 100	1	5	0
Fine mixed 2*s.* 6*d.* per doz. .. .. "	0	17	6
GANDAVENSIS, strong roots, 2*s.* 6*d.* per doz. "	0	15	0
BRENCHLEYENSIS, ext. strong roots, 3*s.* p. doz. "	1	0	0

BUTLER & MCCULLOCH, Seed Merchants, Covent Garden Market London, W.C.

RHODANTHE MACULATA, 6*d.* per packet.
RHODANTHE MACULATA ALBA, 1*s.* per packet.
RHODANTHE ATROSANGUINEA, 1*s.* per packet.
HELIPTERUM SANFORDII, 6*d.* per packet.

W. THOMPSON, Tavern Street, Ipswich, begs to offer Seed of the above-named beautiful Novelties, introduced by him from Australia, at the annexed prices, with instructions for cultivation. Also,

CLIANTHUS DAMPIERI (received from Australia by last mail), packet of 10 seeds, 2*s.* 6*d.*

TRITOMA UVARIA GLAUCESCENS, 6*d.* and 1*s.* per pkt.

W. T.'s DESCRIPTIVE CATALOGUE for 1864, of more than 1200 Flower Seeds, may be had on post paid application.

EARLY SPRING FLOWERS, largest Stock in England and greatest variety.—WEBB'S Giant Polyanthus and Giant Cowslip, Cowslip from the Himalayas, Golden Chain Polyanthus, Florist Flower Polyanthus, American Primrose, Scarlet Primrose, Gentianella, Double Crimson Primrose, ditto Yellow ditto, ditto Purple ditto, ditto Rose ditto, ditto White ditto, ditto Lilac ditto, Double Pansy, ditto Negro Polyanthus, ditto Golden Chain ditto, ditto Pink Hepatica, Single Blue ditto, ditto White Violets, ditto Purple ditto. Seed of the above Polyanthus and Cowslip. List on application to

Mr. WEBB, Calcot Gardens, Reading.

To the Trade.

MARSH AND PERKINS, 42, Drapery, Northampton, have great pleasure in offering strong Autumn-struck Plants of the following, from Store Pots—

SCARLET GERANIUMS—Tom Thumb, Frogmore's Improved and Finedonensis.
AGERATUM MEXICANUM.
VERBENAS—Purple King, Géant des Batailles, Brilliant de Vaise, Lord Raglan, General Simpson, and Mrs. Holford.

The above at 8*s.* per 100; 70*s.* per 1000.

N.B. A reference or remittance requested from unknown Correspondents.

To the Trade.

J. NUNN has a Surplus of the following Spring-struck Plants in Store Pots to offer at 10*s.* 6*d* per 100, viz.—VERBENAS, FUCHSIAS, DAHLIAS, TROPÆOLUMS, AGERATUMS, HELIOTROPES, LOBELIA SPECIOSA, CALCEOLARIAS, Purple, PYRETHRUMS, PETUNIAS Single and Double; well rooted plants, now fit for Potting. Payments in three months from date of Invoice, or 5 per cent. discount for Cash. First-class PRIMULA SEED, 1863, 2*s.* per packet.

J. NUNN, St. Augustine's Nursery, Norwich.

CARTER'S GARDENER'S VADE-MECUM.

WHEELER'S LITTLE BOOK on SEEDS.

Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET.

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

CATALOGUES are now ready, and a stock of Plants in the most perfect health, of all sizes, and at prices to suit all purposes. Sunningdale Nursery, S.W. Rail.

GEO. BAKER begs to announce that his extensive Collections of Hardy RHODODENDRONS, GHENT AZALEAS, and KALMIA LATIFOLIA, are unusually well set with bloom, and his fine Collection of CONIFERS in the best possible condition.

CATALOGUES on application at the American Nursery, Bagshot, Surrey. The Nurseries are about 1 mile from Sunningdale Station, South-Western Railway.

DOBSON'S EXTRA CHOICE SEEDS.

Quality second to none. In sealed Packets.

DOBSON'S SUPERB CALCEOLARIA, 1*s.* 6*d.*, 2*s.* 6*d.*, 5*s.*
DOBSON'S SUPERB CINERARIA, 1*s.*, 2*s.* 6*d.*, 5*s.*
DOBSON'S SUPERB PRIMULA, 1*s.*, 2*s.* 6*d.*, 5*s.*
DOBSON'S SUPERB PANSY, 1*s.*, 2*s.* 6*d.*
DOBSON'S SUPERB BALSAM, 1*s.*, 2*s.*
DOBSON'S SUPERB LOBELIA SPECIOSA, 1*s.*
DOBSON'S SUPERB HOLLYHOCKS, 1*s.*, 2*s.* 6*d.*, 5*s.*

The Trade supplied on liberal terms.
SEED and PLANT LISTS post free.

J. DOBSON & SONS, Woodlands Nursery, Isleworth, W.

Flower Seeds, free per post.

WM. WOOD AND SON'S splendid COLLECTIONS as under:—

HARDY ANNUALS.

100 varieties .. .. 20*s.* 0*d.*	25 varieties	5*s.*	0*d.*
50 do. 10 0	12 do.	2	6

HALF-HARDY ANNUALS.

100 varieties .. .. 25*s.* 0*d.*	25 varieties	7*s.*	0*d.*
50 do. 12 6	12 do.	3	6

GERMAN FLOWER SEEDS as imported in original sealed packets on lowest terms.

CATALOGUES on application.

Woodlands Nursery and Seed Warehouse, Maresfield, Uckfield, Sussex.

Flower Seeds. Free per Post.

BUTLER AND MCCULLOCH'S unrivalled Assortments:—

HARDY ANNUALS.

100 varieties, 20*s.*	50 varieties, 10*s.*
30 varieties, 5*s.*	15 varieties, 2*s.* 6*d.*

HALF-HARDY ANNUALS.

100 varieties, 30*s.*	50 varieties, 15*s.*
25 varieties, 7*s.* 6*d.*	15 varieties, 2*s.* 6*d.*

The varieties included in the above assortments are all distinct and of the brightest colours. Each packet bears a printed description and practical hints on cultivation.

Covent Garden Market, London, W.C.

RICHARD SMITH'S SEED CATALOGUE contains a Calendar of Time for Sowing, particulars of Collections with prices, Directions for Cropping well and economically, Soil, Manure, Depth, Distance, Season, Hardiness, Duration, Form, Height, Colour, Storing, Use, Flavour, and other qualities described. This List Free by Post for one stamp. Seeds direct from the Growers, the surest way to success.

RICHARD SMITH, Seed Merchant, Worcester.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

Ferns.

WANTED, FERNS in quantities, both Hardy and Exotic Varieties.—Persons having young Plants to dispose of, are invited to send List of sorts, quantity of each kind, and cash price, to

X., Care of Mr. Clark, 25, Bishopsgate Street Within, E.C.

MR. WILLIAM BULL can recommend the following NEW HERBACEOUS PLANT.

TRICYRTIS HIRTA. — The credit of introducing this beautiful plant is due to that distinguished traveller, Mr. ROBERT FORTUNE, and is one of the treasures collected by him on his last visit to Japan. It grows 4 to 5 feet high, and the copious blossoms which appear on the axils of the leaves are of a pearly white, dotted with clear purple, rendering it as singular looking as it is beautiful. 7*s.* 6*d.*

PHLOX ADMIRATION.—The entire stock of this exquisite variety was purchased from that eminent Phlox cultivator, M. LIERVAL, of Paris. It only grows about a foot high, and has immense Hydrangea-like heads of blossom; the flowers individually are large, and of the most perfect form, colour bright red or carmine, with glowing crimson centre. The best Phlox ever offered. 1*s.* 6*d.* each; 12*s.* per dozen.

Other good varieties, 12*s.*, 18*s.*, and 20*s.* per dozen.

NEW BEDDING DAHLIA.

Now ready, in pot roots fit for spring propagation, at 7*s.* 6*d.*

GEM of the DWARFS.—"Of Bedding Dahlias, a variety which is to be called 'Gem of the Dwarfs,' and which is in the hands of Mr. Dean, of Shipley, appears likely to be an acquisition in its way. It is a crimson red tipped with white, and is said to be the dwarfest bedding variety yet seen, the plants never exceeding and seldom attaining so much as 18 inches in height. The variety has proved constant to this habit for three seasons, and is described as a most profuse bloomer, looking amazingly bright and showy in a bed. The blooms we have seen lead us to believe that it really deserves this good character."—*Extract from Gardeners' Chronicle*, Nov. 8, 1862, *vide* page 1050.

The above having been so strongly recommended, Mr. WILLIAM BULL purchased the entire stock.

Establishment for New and Rare Plants, King's Road, Chelsea, London, S.W.

HARDY FLOWER SEEDS, of Showy Colours only, sent free by post or rail, by

SUTTON AND SONS.

A COLLECTION of the best 50 sorts known .. 10*s.* 6*d.*
A COLLECTION of the best 36 sorts known .. 7 6
A COLLECTION of the best 24 sorts known .. 5 0

SUTTON'S CATALOGUE of SEEDS will be sent post free.

SUTTON & SONS, Seed Growers, Reading, Berks.

CHOICE NEW FLOWER SEEDS.

	Free by Post. Per pkt	*s.*	*d.*
AMARANTHUS MELANCHOLICUS RUBER ..		1	0
CLARKIA INTEGRIPETALA MARGINATA ..		0	6
GODETIA THE BRIDE		0	6
HELIPTERUM SANFORDII		1	0
KAULFUSSIA ATROVIOLACEA		1	0
LEPTOSIPHON HYBRIDUS		0	6
LOBELIA PAXTONIANA		1	0
LUPINUS ALBO-COCCINEUS		1	0
MIMULUS MACULOSUS		1	0
RHODANTHE ATROSANGUINEA		1	0
" MACULATA ALBA		1	0
TAGETES SIGNATA PUMILA		0	6

For full description of the above choice New Annuals, see SUTTON'S AMATEUR'S GUIDE, which will be sent to any address on receipt of 6 stamps, or gratis to customers.

SUTTON & SONS, Reading, Berks.

ROYAL BOTANIC SOCIETY of LONDON,

REGENT'S PARK.

THE FIRST SPRING EXHIBITION.

LIST of AWARDS, March 19, 1864.

12 HYACINTHS. (Amateurs)

1st Prize, Mr. W. Young, Gr. to R. Barclay, Esq., West Hill, Highgate
2d, Mr. A. Carr, Gr. to B. Noakes, Esq., Highgate

12 HYACINTHS. (Nurserymen.)

1st, Mr. W. Paul, Waltham Cross
2d, Messrs. W. Cutbush & Son, Highgate
3d, Messrs. Barr & Sugden, King Street, Covent Garden

CUTBUSH'S SPECIAL PRIZE for 12 HYACINTHS.

1st, Mr. W. Young, Gr.
2d, Mr. A. Carr, Gr.

6 CAMELLIAS in Pots. (Amateurs.)

2d, Mr. W. Young, Gr.

12 CAMELLIAS, cut blooms. (Amateurs.)

1st, Mr. T. Todman, Gr. to R. Hudson, Esq., Clapham Common

12 CAMELLIAS, cut blooms. (Nurserymen.)

1st, Mr. W. Paul
2d, Mr. W. H. Treen, Rugby, Warwickshire

12 CYCLAMENS.

1st, Mr. J. Holland, Gr. to R. W. Peake, Esq., Spring Grove, Isleworth
2d, Mr. J. Wiggins, Gr. to W. Beck, Esq., Worton Cottage, Isleworth

12 CHINESE PRIMROSES.

1st, Mr. T. Todman, Gr.
2d, Messrs. J. Dobson & Son, Nurserymen, Isleworth

6 MISCELLANEOUS PLANTS.

1st, Mr. W. Bull, Nurseryman, King's Road, Chelsea
2d, Mr. W. H. Treen, Nurseryman, Rugby
3d, Mr. J. Cross, Gr. to Sir F. H. Goldsmid, Bart., Regent's Park

NEW PLANTS and SEEDLINGS.

First-class Certificate of Merit to Mr. W. Bull, for Camellia Comte de Gomer
Ditto, Messrs J. Veitch, for Azalea indica Stella
Second-class Certificate of Merit to Messrs. J. Veitch, for Rhododendron sp. nova
Ditto, Mr. W. Bull, for Chamerauthemum Beyrichii variegatum
Ditto, Messrs. F. & A. Smith, for Cineraria Eliza
Ditto, Messrs. F. & A. Smith, for Cineraria Flower of the Day
Ditto, Mr. J. Wiggins, Gr., for Cineraria Nonpareil

MISCELLANEOUS.

Silver Medal to Mr. W. Hill, Gr. to B. Sneyd, Esq., for Old and New Grapes
Ditto, Mr. W. Paul, Nurseryman, for Collection of Hyacinths
Ditto, Messrs. Paul & Son, Nurserymen, for Collection of Roses in Pots
Small Silver Medal to Messrs. W. Cutbush & Sons, for Collection of Hyacinths
Ditto, Mr. W. Howard, Gr. to J. Brand, Esq., for 24 Pots of Lily of the Valley
Bronze Medal to Messrs. Cutbush & Son, for Collection of Tulips
Ditto, Messrs. E. G. Henderson & Son, for Collection of Cyclamens
Ditto, Messrs. E. G. Henderson & Son, for Collection of Chinese Primroses
Small Bronze Medal to Mr. W. Young, Gr., for Collection of Tulips
Ditto, Messrs. Paul & Son, for Box of Cut Roses
Ditto, Mr. W. Paul, for Collection of Tulips
Ditto, Mr. W. Paul, for Collection of Crocus
Ditto, Mr. R. Parker, Nurseryman, for 6 Amaryllis

The Gardeners' Chronicle.

SATURDAY, MARCH 26, 1864.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, March 30 { Royal Horticultural (Floral Committee) at South Kensington .. .. .. 10 A.M. / Royal Horticultural (CAMELLIA SHOW), at South Kensington : .. 2 P.M.

IT has often been matter of surprise that in Russia and some other countries of Eastern Europe FUNGI seem to be preserved almost indiscriminately without regard to their presumed wholesome or deleterious qualities. It has generally been supposed that the vinegar in which they are preserved neutralises the poisonous qualities of the amanitine, or whatever other noxious principle may enter into their composition. Monsieur GERARD, in an article contained in the *Journal de Médecine et de Chimie Pratique*, vol. xxxiii., p. 465, confirms this notion. He informs us that poisonous Fungi may be eaten with impunity if steeped for two hours in water acidulated with vinegar in the proportion of one or two fluid ounces to two pints of water, or in brine. The

Fungi are then to be well washed and boiled for 20 or 30 minutes, and then washed again. We have no exact information as to the method adopted in Russia for the winter preservation of Fungi, but from the specimens we have seen, we suspect that after being salted they are stored away in tolerably strong vinegar. Whether this method would succeed with such dangerous species as Agaricus muscarius is uncertain. Even a single specimen mixed with wholesome species is sufficient to produce fatal effects.

A case is reported by Mr. MANGIN in the *Bulletin de Thérapeutique*, vol. lxi., in which two deaths occurred in a family of six, four of whom were affected after partaking of a stew made of the common Chantarelle (Cantharellus cibarius), with which a specimen of the Fly Agaric had unfortunately been intermixed. The fatal effects took place in two children out of four who were attacked in the inverse order of their years, the youngest child of three years escaping only from profuse vomiting.

LALLEMAND and CHEVRET, in the same volume of the journal above mentioned, inform us that five persons were killed by the Fly Agaric, which had been served up to the mess of an infantry regiment instead of the true Oronge, which is said to be the most excellent of all Fungi, but unhappily sometimes confounded with the Fly Agaric.

While on the subject of poisonous Fungi, it may not be uninteresting to notice the dreadful effects which are produced by a species of black rust which attacks the large South of Europe Reed, Arundo Donax. This is, in all probability, the same species with that which attacks Arundo Phragmites in this country, the spores of which produce violent headaches, and other disorders amongst the labourers who cut the Reeds for thatching. M. MICHEL informs us that the spores from the parasite on Arundo Donax, either inhaled or injected, produce violent papular eruption on the face, attended with great swelling, and a variety of alarming symptoms which it is unnecessary to particularise in various parts of the body. This is probably not the only case in which the spores of parasitic Fungi when abundant, produce deleterious effects. We have heard an unfavourable report of the spores of Uredo Rubigo vera, the red Rust of agriculturists, but founded only on very imperfect observations.

The above cases are taken from the admirable Year Books for 1861 and 1862, published by the New Sydenham Society, which, apart from other valuable publications, would alone render it deserving of support. *M. J. B.*

THERE is scarcely a plant in cultivation—perhaps none—which as an object of out-door embellishment equals the TRITOMA, or as some would now call it the Kniphofia, with its glow of brilliant colouring, lightening up as it were our out-door gardens at a season when they show more or less evident symptoms of dulness and exhaustion. Not even the Chrysanthemum itself, with all its variety of form and colouring, and with all its beauty too, can boast of so much thorough effectiveness out of doors during the late autumn and winter months as the late Tritomas; and we must go to our brilliant-berried shrubs to find something of a parallel. There is a peculiar grandeur about a fine well-flowered mass of the Tritoma; and in the south of England at least our national botanic garden at Kew has done much to render it popular. But like other plants, Tritomas vary in their quality, the variety no doubt being attributable to their seedling origin. And they not only vary in the colouring and quality of their flowers, but also in respect of their habit, some of them blooming early, and some late in the autumn.

In a letter now before us from a gentleman who has employed the Tritoma very extensively for decorative purposes, the notion entertained by some persons that these plants reproduce themselves true from seed is altogether exploded. I have at least proved, he writes, that the best variety of T. Uvaria does not do so, and that from a packet of seed many varieties may be obtained, few, if any, being at all equal to the original. This best variety of T. Uvaria is the one which has become so well known in consequence of having been brought into notice at Kew. It differs from all others in its much more glaucous leaves, and from the other earlier sorts in its brighter and richer coloured flowers. For the sake of distinction it is now known in gardens under the name of T. Uvaria glaucescens. It is no doubt one of the two finest forms of this noble autumn flower which are at present to be met with in our gardens, but it is an early bloomer, and is in its best condition in the months of August and September. Our informant describes a row of it nearly 50 yards in length, with upwards of 850 spikes of flowers developed at one time, as a floral picture of the most gorgeous character, not easily to be forgotten.

The value as a decorative plant, of the variety to which we have just referred, is on all hands admitted, but it appears that there is in gardens another very distinct variety of equal beauty, and having the very useful quality of blooming late in autumn, and in favourable seasons continuing in a fresh and very effective state quite through the winter. Such a plant deserves prominent notice as a real acquisition for our flower gardens. This is grown sometimes as T. Rooperi; but from the examination of a boxful of flowers sent to us about New Year's Day by Mr. PARKER, of Tooting, who is cultivating it extensively, we are inclined to question its relationship to T. Rooperi, which, at least in the typical form, is an early summer flowerer, and appears besides to have some structural differences.

The provisional name of TRITOMA GRANDIS, which it seems well to deserve, has in consequence been adopted in gardens for this late-blooming plant, of which we shall now proceed to record such particulars as have become known to us. The leaves have the broad base and recurving habit of those of the true T. Rooperi; indeed it is probable that this similarity of aspect in the foliage may have led to the use of that name. The plants come into bloom towards the end of September or in October, and a succession of flower-spikes is produced all through the winter, if the weather continues at all mild—in such seasons as the past for instance, continuing in full beauty quite into the new year, and in those of milder character, lasting on till February. The stems grow to a height of six or sometimes seven feet, more than half of their length being clothed with flowers, and smaller lateral blossom-spikes are also sometimes produced from the main stems. We are informed that the flower-spikes themselves last in flower twice as long as do those of the other kinds, and that the plant is a much stronger grower. When fully developed the flowers are quite equal in colour and effect to those of T. Uvaria glaucescens. The winter-blooming habit of this Tritoma grandis sufficiently distinguishes it from the variety just mentioned; its foliage distinguishes it from the other recognised varieties of T. Uvaria, such as serotina; while certain points relating to the bracts and the flowers separate it from T. Rooperi, so far as there is any evidence of what that plant is: besides which, the latter blooms in the month of May.

But what are all these reputed species of Tritoma—Uvaria, Burchellii, Rooperi, &c.—so very imperfectly distinguished and so difficult to distinguish by botanists, and yet so different in a horticultural point of view? The inference which may be drawn from our present knowledge of the variability of T. Uvaria when originated from seeds, is that they are wild varieties of one and the same species, somewhat modified by the conditions under which they have been grown, or perhaps cross-bred varieties of aboriginal origin. We hope during this season to notice more exactly the characteristics presented by T. Rooperi, which may throw some light upon the subject.

Reverting to the more strictly horticultural question, we may say that the two plants we have alluded to under the names they bear in gardens, T. Uvaria glaucescens and T. grandis, are both of them really grand subjects for garden decoration, and that by planting the two alternately a fine display of their brilliant flowers may generally be had for five months at least in succession. They are telling objects as isolated specimens dotted about the pleasure-ground, but still more so if possible, when used as a back row for a ribbon or other flower border. We may add moreover, that there is no finer plant than this T. grandis, for the decoration of a cool greenhouse or conservatory in the autumn and early winter months, for which purpose the plants may either be grown in pots or lifted from the borders when they are commencing to flower, which latter may be done without appreciable detriment to them if they are afterwards kept shaded for a few days.

—— THE following paragraph which lately appeared in the *Athenæum* contains a hint that might be beneficially taken by vestries and other local boards which have the control over streets and roads, whether in London and its environs, or in other cities and towns throughout the country, wherever the opportunity is afforded to plant TREES IN PUBLIC THOROUGHFARES:—"It is the intention of the Department of Science and Art to plant a line of trees extending from the students' entrance to the schools of the department in the Exhibition Road, South Kensington, to the south-western angle of that road, opposite the south-eastern entrance of the Exhibition building, and in an eastern direction along the Cromwell Road as far as the public entrance to the South Kensington Museum. We hope the parish authorities in charge of the Brompton Road will not fail to follow this excellent example." The example, so far as regards the idea of Tree Planting, deserves to be very widely followed; it should, however, be done with better taste and with less disregard to practical tree culture than in the instance in question.

New Plants.

275. EPIDENDRUM (SPATHIUM) CNEMIDOPHORUM, *Lindl. Folia Orchidacea.*

At the time this plant was described in the "Folia," dried specimens only had been examined, and from these no idea could have been formed of the imposing habit of the plant. Mr. Skinner, its original discoverer, spoke in high terms of its stately appearance, and again and again attempted to introduce it into the collections of this country; but, with the solitary exception of the young plant that was placed last year under Mr. Veitch's care, all his efforts to do so had hitherto proved abortive. At length however his persevering energy has been rewarded by the receipt of a dozen or more live specimens in the most robust health, and which more closely resemble Arundo Donax, as to their stems and leaves, than any Orchid with which we are acquainted. Being found wild at a great elevation in Guatemala, they will require to be treated as among the coolest of the many cool Orchids that are now so rapidly coming into vogue.

In the "Folia" the raceme is described as "short," but from a model executed by some ladies in Guatemala, and which is now, through Mr. Skinner's kindness, in our possession, it would appear to be at least a foot long, drooping gracefully, and studded with innumerable flowers arranged spirally like the leaves on the stem of a Screw-pine. These flowers are gaily spotted, about an inch and a half across, and supported on white pedicels of twice their own length. The name of the species was suggested by the numerous spathes that, like greaves (κνημαι), protect the raceme as it bursts forth from the end of the stem.

As we are yet in the dark as to the exact elevation and the conditions under which this remarkable plant is found in its native haunts, we much wish that Mr. Skinner would kindly favour us with a little additional information on these points.

NOTES ON THE AUCUBAS OF JAPAN.

THE readers of this Journal will have observed by a leading article at page 243, that the first fruits of the introduction of the male plant of Aucuba japonica were exhibited to the public at the last meeting of the Royal Horticultural Society. Mr. Standish had a plant at that meeting, loaded with berries of the brightest coral-red, which was admired by everybody. It was the new green-leaved kind known as A. japonica vera, which was exhibited on this occasion, but as the male plant becomes common enough to be planted out in our gardens, we may expect the old garden variety to produce fruit in the same way, and to be equally ornamental.

Now that the value of the introduction of the male plant of Aucuba has been shown in such a satisfactory way, it may be worth while to make a few remarks on this favourite garden shrub. Most of the flowering plants in the vegetable kingdom produce their stamens and pistils, that is their male and female organs, in one and the same flower. Some, however, produce them in separate flowers although upon the same plant, as the Melon for example; while a third class has always the male flowers on one plant, and the female ones on another. The Aucuba belongs to the third class I have named, the flowers on one plant having stamens only, while those on other plants have pistils only.

The Aucuba of our gardens, that Laurel-looking bush with variegated leaves, which is so common in our London squares, and which flourishes under the smoke of our large towns better than almost any other evergreen we possess, appears to have been introduced to Europe in 1783. Thunberg's "Flora Japonica," published in 1784, has two figures, one showing a branch with male flowers, and the other meant, I suppose, to represent the plant in fruit. The male flowers are well shown in the figure, but if the fruit is really meant to be represented, the artist could not have seen the plant with fruit upon it, or he had seen only an abortive specimen. Kæmpfer describes it more accurately when he informs us that "the fruit is a red oblong drupe, like a Laurel berry, with a white sweetish pulp, and a kernel with a bitter taste."

The female plant only of the Aucuba had been introduced to Europe previous to my visit to Japan in 1860. The plants which grew in our gardens produced nothing but female flowers, and hence we never had an opportunity of seeing those clusters of rich coral-coloured berries which were so much admired at South Kensington on the occasion referred to. I have often wondered how

it came to pass that all our plants were of this description, and I can account for the circumstance in one way only. It is probable that the first plant, and perhaps the only one, that ever came to Europe from 1783 to 1861, was a female, and from this plant all our gardens have been stocked. A person buying an Aucuba in a Japanese garden is much more likely to get a female plant than a male one, and for the following simple reason — the Japanese appreciate the beauty of the berries of the plant, and consequently the female is more frequently found in their gardens than the other kind which does not bear berries. Oftentimes they dig up the wild plants in the woods or on the hill sides, and carry them home to plant in their gardens, where they can have them at hand to enjoy the beauty of the ripening fruit. This will account for the introduction of the female plant to our gardens without its mate. The first plant imported we will suppose had been picked up in some garden where it had been cultivated for the sake of its berries. There being no male plants in the country to which it came, it ceased to bear any more fruit. From this plant, then, all those have sprung which have been adorning our gardens for 80 years—sprung not by reproduction, but by division. Such is my theory; I may be wrong, but the matter is not of much importance.

I will now make a few remarks on the discovery and introduction of the male Aucuba. Being fully aware of all the circumstances I have related above previous to my visit to Japan, I lost no time after my arrival in that country in looking out for the individual from whom the plant in our gardens had been divorced so long. It was found at last in a garden near Yedo. In outward appearance, that is, in so far as the leaves, stems, and size are concerned, the male plant does not differ from the female. It is only by the flowers or fruit that they can be distinguished. As the flower buds were only forming when I first saw them, it was impossible to tell whether my plant was a male or a female. But long before they were fully formed or expanded, I had discovered, with the aid of a penknife and pocket-glass, the little anthers in the undeveloped buds, and that was all I wanted. The plant was immediately secured, put in a Ward's case and shipped for England. It reached this country in the early part of 1861, and flowered last year; and the pollen of its flowers was used to fertilise the flowers of the female plant which Mr. Standish exhibited at the late meeting of the Royal Horticultural Society.

The reason why the Aucuba of our gardens never had any berries upon it, or at most only a few abortive ones, will now be evident. I was somewhat amused by a version of the story which was given in an excellent review of my recent book on Japan. It was gravely stated that the female Aucuba "is, of course, unfruitful," and that "the male plant is covered with a profusion of great crimson berries." Well, this, to be sure, was rather reversing the order of things, but luckily the writer was in error. It was not that the female plant we cultivate does not produce berries, but its nonproductiveness was simply owing to the absence of the pollen which is naturally shed by the male blossoms.

In conclusion I may allude to another fallacy which has taken possession of some individuals, namely, that the green-leaved Aucuba is the true berry-bearing kind. This is not quite correct. All the varieties, whether the leaves be green or variegated, bear berries when the male plant is present. The berries add greatly to the beauty of the plant in the Japanese woods and hedges, where it grows wild; and when our shrubs in this country are covered with coral fruit, their value in an ornamental point of view will be greatly increased.

There are many varieties of the Aucuba in Japan. The green-leaved one already named would seem to be the original parent or species. In the woods many forms of variegation are met with—indeed scarcely any two plants are exactly alike. The green-leaved I look upon as the most valuable of them all. It forms excellent dwarf hedges, and its glossy evergreen foliage is very ornamental, particularly during the spring months, when the rich coral-coloured berries may be seen peeping out from amongst the leaves. I am glad to hear that this plant and many of our other Japanese importations have passed through the late severe frosts, without protection, unharmed. *Robert Fortune.*

STRAWBERRIES.

The time of year—the best time here (unless runners can be got in June)—for making new plantations of Strawberries is come. Notwithstanding what has been said against depriving Strawberry plants of their runners, I advise your readers to plant now, and deprive the plants of flowers and runners. When the plants have got very strong a few plants may be taken. In my opinion young plantations are ruined by being fruited and allowed to run before the plants have become strong. This may not be the experience of those who have rich, friable, deep loam.

My two spring plantations (1863) of Rivers' Eliza, one of Trollope's Victoria, one of Wonderful, disfruited last year and deprived of runners, have wintered without protection unscathed, and are full of crowns. The fruited plantations of Rivers' Eliza and Marguerite —two iron Strawberry plants—now coming to their second year's bearing, have wintered the best, and unscathed. The worked plants of Wonderful have not wintered so well; I think the plants suffer from inordinate cropping. The best plants, planted after fruiting time last year, are President, a fine Strawberry of good flavour, and of excellent constitution. Its flavour is good, and besides this it will fruit well as a plantling.

The worked plantation of Frogmore Pines—the most valuable of all new sorts—have wintered next best of the worked sorts. The runners have suffered much. The hardiest of all the first-class Strawberries of extra flavour—the flavour of the old Pine—is the Scarlet Pine. Both old and young plants of this sort have wintered perfectly well without protection.

The plants of Empress Eugenie, both old and young, have suffered by the winter. I have never yet been able to get a regular plantation of this fine sort. Eliza is the type of a plant, and gains favour fast in this part of the country; Wonderful also. I strongly recommend your readers to buy constitutional Strawberries, and to plant now, and try my plan of deprivation of fruit and runners through this summer.

Buy these, or some of them:—Royal Hautbois, Marguerite, very early; Rivers's Eliza, Wonderful, Trollope's Victoria, Empress Eugenie, Bicton White Pine, Scarlet Pine, Frogmore Late Pine, and I will venture to add President. Here are ten good sorts, of good habit and constitution; and if these fail, you will have no chance with others; nor can you bring 10 more in their lines to match them in their many good qualities.

I will append a few useful observations.

1. *Liquid Manure.*—This should be put on now, not into the line of the plants, but into the centre space between the ranks. Supposing the ranks to be 2 feet apart, soak well the centre foot of this space, either with liquid manure or with guano water. The rootlets in fruiting time will run out into this, and your crop will be greatly increased. Beware of strong liquids. I have seen great damage done by putting these into the line of the plants.

2. *Soot.*—Soot may be sown over the plants with great advantage. It is a sure cure for red spider and slugs, and also a good manure. Kitley's Goliath is subject to red spider more than any other sort, but I never had any trouble after a good sooting. It is a fine and good Strawberry; and I should say that Wonderful and this were the two best hardy representatives of the Queen. Both are subject to white tips; they are respectively wedge-coned and obtuse-coned.

3. *Curiosities.*—Fragaria viridis, lately spoken of in the *Gardeners' Chronicle*, is worthless in itself; but it might be valuable for hybridization. Fragaria lucida, with polished shining leaves, is also a curiosity, but worthless except for the above purpose. The stems are too short, and the fruit is small and worthless. I have had a few years ago a fine polished-leaved hybrid of this and Eleanor here, raised by the late Mr. Nicholson. I did not consider it sufficiently meritorious to keep it. Mrs. Nicholson can supply, I believe, both the above curiosities.

4. *What is wanted.*—We want not only good Strawberries, but better than we have got; or rather we want Strawberries, that being hardy, are also distinctive in flavour, or more successional. If the Queen could be got on to the plant of Eliza there would be perfection. The standards are still the Queen, Carolina superba, and Filbert Pine, but they cannot be grown successfully in all lands. I doubt whether they can be depended upon year after year in any land.

I have these on trial—Lucie, Napoleon the Third, John Powell; and the following seedlings by Mrs. Clements, of Warleggan Rectory, Cornwall: Favourite, Punch, Treasure, Sabreur, Kate, Robin Hood, and Gweniver. *W. F. Radclyffe, Rushton, March* 15.

Home Correspondence.

Japanese Plant Impostors.—When reading your remarks on the frauds practised on our countrymen by foreign dealers, I was irresistibly reminded of what happened to myself last year. A kind neighbour shared with me a present he had received from a connexion in the East, and which consisted of at least a hundred packets of Japanese seeds, done up in as many gay covers. On these were portrayed a variety of singular and beautiful forms, naturally enough supposed to represent the flowers which in due time would be the progeny of the seeds within; you may, therefore, imagine how much I felt annoyed when I found myself rewarded with a crop of the very commonest Convolvuli, Œnotheras, and even Spinach and Sorrel! *James Stanton, Gardener to James Bateman, Esq., Biddulph Grange, Congleton.*

Gardeners' Education.—As the subject of gardeners' education is now being ventilated in your columns, permit me to draw attention to the means adopted at Maidstone towards this desirable end. The Gardeners' Mutual Improvement Association was formed by Mr. S. Bunyard, Mr. Thos. Frost, Mr. Robson, and other local professionals, in order that by meeting once a month, knowledge might be imparted and experience gained. The society has not been in existence six months, and numbers some 200 members, while the exhibition and conversazione just held has been a grand success, and is so chronicled by our local papers. It appears to me this mutual instruction system would serve the purposes of such as your correspondents "A Young Gardener," and "A Midland County Young Gardener." Our subscriptions are merely nominal, and will be reduced as soon as honorary members join in sufficient numbers. I shall be happy to give further information on the subject if it is desired. *Thomas Bunyard, Jun., Nursery, Ashford.* [These Gardeners' Mutual Instruction Societies are excellent, if well managed, but their success depends a good deal on the presence of one or two active leading judicious members.]

Rainfall at Ayr.—The following table shows the rainfall at Auchendrane House, 4 miles S.S.E. from Ayr, Scotland. Lat. 56° 11′ N.; Long. 5° 14′ W. Rain gauge 2 feet 3 inches above level of the ground, and 94 feet above the sea. Observations taken daily at 9.30 A.M.

Mean of the eight years, 44.784.

Year.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	Mean.
January ..	Inches. 2.29	Inches. 3.65	Inches. 4.98	Inches. 5.74	Inches. 6.430	Inches. 4.870	Inches. 3.130	Inches. 6.550	Inches. 4.717
February ..	3.67	2.77	1.21	6.06	3.800	3.130	2.673	5.149	3.561
March ..	none.	3.22	2.45	5.55	4.300	6.360	3.287	1.282	3.306
April ..	0.85	2.05	2.55	4.35	1.620	0.610	4.151	4.228	2.551
May ..	4.76	1.31	4.43	0.12	3.080	1.370	4.947	3.174	2.898
June ..	6.89	3.88	4.16	1.79	4.580	3.843	3.331	4.753	4.153
July ..	3.01	2.52	5.30	4.00	1.715	2.727	4.076	0.222	2.946
August ..	5.09	1.64	2.49	5.89	3.955	6.400	3.623	3.215	4.037
September ..	2.52	2.96	5.50	5.61	1.745	4.984	2.894	5.824	4.003
October ..	1.71	2.99	4.91	3.03	6.740	3.802	8.245	4.569	4.499
November ..	1.90	3.97	1.11	3.82	1.645	7.720	3.546	4.611	3.540
December ..	6.35	4.38	3.83	3.62	2.320	3.399	6.280	6.374	4.569
Yearly Total	39.14	35.34	42.95	49.58	41.930	49.215	50.173	49.951	44.784

The three last years, 1861, 1862, and 1863, have been disastrous years to the gardens, orchards, and farms in this district. *E. C.*

Plantago lanceolata.—Perhaps it is because this plant is never spoken of except as a weed by horticulturists that I took a fancy for it; we are always discussing the best mode of exterminating it, and it may be, that was why I took it into my head to discover the means by which Nature frustrates all our plans. I don't want to deny that the plant is a weed—an unmitigated weed, but there is no doubt it has its use in the world, as everything else has; and even in the life of a weed there may be something worthy of study. The first fact that came under my notice in examining this plant is that its ovules are not fertilised with the pollen produced by the same flowers. Look at the first spike you find in flower, and you will see that the stigmas of the lower flowers are protruded first; they make their appearance half way up the spike, and the lower ones are quite shrivelled up before the stamens of even the lowest flowers issue forth from the protection of the floral envelopes. Finding this to be the case, I covered a spike or two with fine netting; though this kept all insects away, it could not prevent pollen getting through to the stigmas. With every puff of wind I saw the pollen coming through the netting from the spike contained within it, and of course the rule would work equally well the reverse way. In fact I found that I had failed. I then tried double netting, and having left it on until the spike was quite out of flower, I removed it, and found that only a very few of the flowers had set their seeds. On the average only one flower in 20 produced seeds, and these were all upon that side of the spike facing the centre of the plant, where I had left one or two uncovered spikes in order to examine them in their natural condition. As this was the result observed from three spikes which had all been treated in the same way, we may presume that the few seeds which were perfected were fertilised with pollen obtained from the outer uncovered spikes, which had been wafted to them by the wind. The more closely we examine plants the more numerous shall we find those species which are never fertilised with their own pollen; they are far greater in number than most of us think, I believe. Insect agency does a great deal, as has been so fully explained with regard to Orchids, and the agency of the wind, in which we formerly put considerable faith, has been shown to be confined within more limited a sphere than was generally believed. Still I am inclined to think that it is to the wind, and not to the help of insects, that we must look as the agent which insures such perfect fertility in this common weed. If you examine a flower spike in its natural state, you will hardly find a single blossom that has not produced its

full complement of seeds. In the first place there is nothing to attract insects to it—no perfume, no honey, no brightly coloured corolla. On the other hand there are many circumstances so admirably adapting this plant for fertilization by the help of the wind, that we cannot doubt that that is the agency by which it is effected. The stigmas are exserted, that is, project considerably beyond the reflexed petals; they are also plumose—both circumstances fitting them for collecting any pollen grains which may be floating in the air. The anthers, too, are hung upon long slender projecting filaments, every breath of wind carrying away a puff of pollen from those newly thrust forth. This process is so rapidly and completely carried out that the anthers which have only been pushed forth an hour or two are entirely emptied of their pollen. I believe that the same plan of operation obtains also in the four other British species of this genus, as well as in a number of South European and other foreign species of Plantago. We find the anthers perfect before the stigmas are ready to receive the pollen in a much larger number of plants, than we do the reverse order of things, as in Plantago; and as in these days the most trifling circumstances connected with the biology of plants is considered of interest, I have thought that even these few notes upon one of our commonest weeds might not be unworthy of a place in your columns. I mentioned the fact to Mr. C. Darwin, and he was good enough to call my attention to the difference in size of the pollen grains in most specimens. Having examined a considerable number of individuals of P. lanceolata, I found there was a decided tendency towards a separation of the sexes among them. Some few individuals I found which were decidedly females; the stigmas were developed to double the size of those in the normal form, while the stamens were entirely abortive, not a single anther in the spike being properly developed. Intermediate forms are quite common, but as yet I have not succeeded in finding an individual in which the stamens are perfect and the stigmas abortive, though it seems probable from analogy that such a form may exist. This tendency towards a separation of the sexes has been observed among the American species of Plantago by Dr. Asa Gray, and made the groundwork upon which the species found growing in North America are arranged; but P. lanceolata is put into a division of which "Flowers all perfect alike" is one of the distinctive marks. I should be glad to know if P. virginica, in which this tendency seems to be most fully developed, is in cultivation in this country. P. patagonica also shows this peculiarity to some extent, but I have not been able to detect it in any other of the 18 or 20 species I have examined. *C. W. C.*

Societies.

ROYAL BOTANIC: *March* 19 (*First Spring Show*).—This was held in a small tent in the rear of the conservatory, and the day being fortunately fine there was a fair attendance of visitors.

Hyacinths.—Of these there was a good display, consisting chiefly of sorts enumerated at p. 246. Among them were one or two fine examples of the new kinds—Lord Palmerston and Josephine, the latter a bright deep glossy orange scarlet, the former in some respects resembling Argus, but possessing a new and pleasing shade of colour. Among older kinds Queen of the Netherlands and Snowball rank among the best whites; Miss Burdett Coutts is also good. Among single pale blues none beat Grand Lilas; and Ida is decidedly the best yellow. Among dark, nearly black sorts, Prince Albert stands in the front rank; and of dark reds few are better than Pelissier. Among mauves, Haydn stood conspicuous; as did also Duc de Malakoff among buffs; when in perfection, however, the last is generally beautifully striped with bright red. The best double blue is perhaps Van Speyke, a charming pale-tinted sort which no collection should be without.

Awards.—12 varieties: 1. Mr. Wm. Paul; 2, Messrs. Cutbush; 3, Messrs. Barr & Sugden. *Amateurs.*—1, Mr. Young; 2, Mr. Carr. For Messrs. Cutbush's prize: 1, Mr. Young; 2, Mr. Carr.

Tulips.—Of these there was a fair display. Among the most attractive varieties were Keizer Kroon, bright red strikingly edged with clear yellow; Roi Pepin, striped crimson and white; New Yellow Tournesol, conspicuous on account of its large size; the ordinary Tournesol, and Vermilion Brilliant.

Awards.—1, Messrs. Cutbush; 2, Mr. Wm. Paul. *Amateurs.*—1, Mr. Young;

Amaryllis.—From Mr. Parker came a small collection, in which the handsome A. Ackermanni pulcherrima was by far the best. Next in point of merit was Holfordii, a crimson-scarlet streaked with white.

Chinese Primulas.—Groups of single purple and white sorts, well grown and flowered, were contributed by Mr. Todman and Messrs. Dobson. Small plants of the red and white Fern-leaved varieties, which have large showy fringed flowers, were also shown by Messrs. E. G. Henderson.

Cyclamens.—Collections of these charming plants, beautifully in blossom, came from Mr. Holland, gr. to R. W. Peake, Esq., and from Mr. Wiggins, gr. to Walter Beck, Esq. They consisted wholly of different varieties of C. persicum, of which also a charming specimen was shown by Mr. Holland. Messrs. E. G. Henderson furnished an interesting group of various-coloured varieties of persicum and the pretty small-growing sort called C. Atkinsii.

Camellias.—A collection of plants in pots was shown by Mr. Young, gr. to R. Barclay, Esq., of Highgate; and boxes of cut blooms were contributed by Mr. Wm. Paul, Mr. Treen, and Mr. Todman. A new striped variety named Comte de Gomer, to which a First-class Certificate was awarded, was also shown by Mr. Bull.

Roses.—A group of dwarf plants in pots was exhibited by Messrs. Paul & Son, who also sent a box of cut blooms. Among the latter were François Lacharme, Prof. Koch, Lord Canning, Vicomtesse Decazes, Devoniensis, Anna Alexieff, and other well-known kinds, all excellent considering the season.

Crocuses.—Mr. Wm. Paul furnished a collection, in which the following were unusually fine, viz: of striped sorts, Albion, Ida Pfeiffer, and Sir Walter Scott; of yellows, Large Golden; of whites, Queen Victoria and Mammoth; and of violets, David Rizzio and Prince of Wales, the last large and showy.

Stove and Greenhouse Plants.—Of these one or two collections were shown, in which were the ample bright green-leaved Anthurium acaule, Palms, Ferns, Cordylines, variegated-leaved Begonias, Maranta zebrina, and a variegated-leaved variety of Screw Pine. Among plants in flower were Rhododendrons, Epacris Mrs. Pymm, a white-tipped bright rosy-flowered sort; Azaleas of various kinds, Deutzia gracilis, Imantophyllum miniatum, Hebeclinium atrorubens, and Pourretia pungens, the last a bromeliaceous plant with long narrow leaves and bearing a fine spike of orange-scarlet blossoms. This came from Messrs. Smith of Dulwich. Mr. Howard, gr. to J. Brand, Esq., showed two dozen nicely flowered plants of Lily of the Valley.

Awards.—1, Mr. Bull; 2, Mr. Treen; 3, Mr. Cross.

Novelties.—Foremost among these were the blush bright rosy striped Camellia Comte de Gomer, from Mr. Bull, mentioned above as having received a First-class Certificate; and Azalea Stella, a very fine orange-scarlet sort, to which a similar award was made. The last came from Messrs. Veitch, who also received a Second-class Certificate for their white-blossomed Rhododendron from Moulmein. Similar awards were likewise made to Messrs. Smith, of Dulwich, for Cineraria Eliza, a showy sort with a dark centre, surrounded by a broad ring of pure white, and edged with deep crimson; and for Cineraria Flower of the Day, a kind with a pale centre surrounded by a ring of crimson, exterior to which is a broad margin of deep mulberry. Mr. Wiggins also received a Second-class Certificate for Cineraria Nonpariel, a variety with a pale centre and bright crimson edge; and to Mr. Bull was assigned a similar award for the prettily variegated-leaved Chameranthemum Beyrichii variegatum.

Mr. Hill, gr. to R. Sneyd, Esq., Keele Hall, Staffordshire, showed capitally retarded last year's bunches of Lady Downes' and Barbarossa Grapes, without a shrivelled footstalk; and finely swelled and well coloured examples of Black Hamburgh and West's St. Peter's, both the latter of this season's produce.

LINNEAN: *March* 3.—G. Bentham, Esq., President, in the Chair. C. W. Villiers Bradford, Esq., and Bernard Ed. Brodhurst, Esq., were elected Fellows. On the proposition of Dr. Hooker it was unanimously resolved, that the following memorial be addressed to his Excellency the Governor of the Mauritius:—"The Linnean Society of London begs to call the attention of His Excellency the Governor of the Mauritius and Seychelles Islands, to a statement of Mr. Ward, Civil Commissioner of these Islands, relating to the wanton destruction of the sea Cocoa-nut tree, threatening its total extinction; and to express a confident hope that His Excellency will see the expediency of taking some steps towards the preservation of a tree of such high scientific interest, independently of its practical importance." The following papers were read:—1. "On the Identity of Pinus Peuce of Macedonia, with the P. excelsa of the Himalayan Mountains." By Dr. Hooker. This tree was discovered in 1839 by Dr. Grisebach in the eastern part of Macedonia, forming an interrupted wood of distant trees, between the elevations of 2400 and 5800 feet (German). It was at first regarded as a variety of P. Cembra, but subsequently Dr. Grisebach, in his "Spicilegium Floræ Roumeliæ," describes it as a new species under the name of P. Peuce. Nothing further seems to have been known about it till recently Mr. Orphanides, late Curator of the Royal Gardens at Athens, gathered it in the same forest that Dr. Grisebach discovered, and branches with ripe cones from this source, sent to Kew by Messrs. Haage and Schmidt, of Erfurt, proved to be identical with the Indian P. excelsa. The plant has been found nowhere between Macedonia long. 21° E., and Affghanistan, long. 70° E., an extent of upwards of 2200 miles. It was observed that the bearing of this fact in geographical distribution upon our modern speculations as to the origin and migration of existing species was indeed most suggestive. "That a plant so well marked, should have ceased to exist over an area of 2000 miles, and yet have retained its characters unaltered, during the ages that have elapsed in the interval represented by this extinction, and regardless of the vast geographical and climatal changes that must have determined its present limitation, are amongst the most interesting problems that have ever been unfolded to us by the history of one European tree."——2. "On the Double Cocoa-nut of the Seychelles, Lodoicea seychellarum," by Swinburn Ward, Esq., Civil Commissioner; communicated by Sir W. Hooker. This Palm, it appears, is found only in two small islands belonging to the Seychelles group, named Praslin and Curieuse, lying in juxtaposition between 4—5° S. lat., and 55°—56° E. long. The tree requires a great length of time to arrive at maturity. The shortest period before it puts forth its flower buds is 30 years, and 100 years must elapse before it has attained its full growth. No one can tell how long it will last, or how old some of the gigantic specimens may be. No Nuts planted since the British came into possession have arrived at their full growth; one in the garden at Government House, planted 15 years ago, is quite in its infancy, about 16 feet high, with no stem yet visible, the long leaves shooting from the earth like the Traveller's Palm (Urania speciosa), and resembling them in shape, only much larger. From the age of 15 to 25 the tree is in its greatest beauty, and the leaves at this period are much larger than they are subsequently. The stem grows quite upright, straight as an iron pillar, and in the male trees frequently attains 100 feet in height, the females being somewhat shorter. At the age of 30 it first puts forth its blossoms, the males forming enormous catkins about 3 feet in length and 3 inches in diameter, the females set on a strong zigzag stalk. Sometimes 11 nuts, averaging about 40 lb. weight each, hang from the stalk, but four or five is a more usual number. From fructification to full maturity a period of nearly 10 years elapses, the full size of the fruit being attained in about four years, when it is soft and full of a semi-transparent jelly-like substance. The arrangement provided by nature for the roots of the trees was described to be of a most peculiar kind, quite distinct from that met with in any other known tree. The base of the stem is rounded, and fits into a natural bowl or socket about 2½ feet in diameter and 18 inches in depth; this bowl is pierced with hundreds of small oval holes about the size of a thimble, with hollow tubes corresponding on the outside, through which the roots penetrate the ground on all sides, never however becoming attached to the bowl, their partial elasticity affording an almost imperceptible, but very necessary "play" to the parent stem when struggling against the force of violent gales. This bowl is of the same substance as the shell of the nut, only much thicker. As far as can be ascertained, it never rots or wears out. It has been found quite perfect and entire in every respect 60 years after the tree has been cut down. Mr. Ward remarked that the high price of the nuts would ultimately lead to the complete extinction of the trees. Their growth being so slow no one can expect to reap where he has sown, and the people therefore never take the trouble to plant, but ruthlessly destroy the existing trees for the sake of their nuts; so that not many years can elapse before the Coco de Mer will become in reality as rare as was supposed by the voyagers who picked up the first-known specimens of the nuts floating on the sea.——3. "On Freræa, a new genus of Asclepiadeæ," by N. A. Dalzell, Esq., Superintendent of the Botanic Garden, Bombay; communicated by Dr. Thomson. This genus was said to come nearest to Boucerosia in the structure of its flowers, but in habit to approach the Euphorbias, having a miniature resemblance to E. Nivulia barring the thorns.——4. "Description of Brandisia, a new genus of Scrophularineæ from Martaban," by Drs. Hooker and Thomson. B. discolor was described as a scandent shrub, very little like the Scrophulariaceæ in appearance, but with much of the aspect of the Verbenaceæ; and probably ranking in the former order among the Cheloneæ, the only tribe in which large woody climbing plants occur.——5. "Notes on the Fecundation of Orchids and their Morphology," by Dr. H. Crüger, Director of the Botanic Garden, Trinidad; communicated by C. Darwin, Esq. The author stated that in Trinidad, Catasetum tridentatum shows two extreme forms, which he does not hesitate to call male and female, though very frequently intermediate forms may be seen, the latter always sterile. He then described various observations, from which it appeared to him evident that the fertilization of the female flower must take place by means of the pollen of the male flower, as in other plants with distinct sexes; and as fruit was extremely common it was impossible to attribute this to any other agency than that of insects—in respect to which he observed that he had had occasion to verify the supposition of Darwin to its fullest extent. After a detailed statement of his observations on this part of the subject, Dr. Crüger concluded by some remarks on the morphology of the Orchid flower.——6. "Observations on a peculiar mode of fructification in Chionyphe Carteri, Berk.," by the Rev. M. J. Berkeley.——7. "Descriptions of new species of Dipterous Insects of New Guinea, and 8, "Description of new species of Dipterous Insects from the Island of Salwatly, near New Guinea, both by F. Walker, Esq.

March 17.—George Bentham, Esq., in the chair. The Rev. G. Henslow, M.A., and Gervase F. Mathews, Esq., were elected Fellows. The following paper was read:—"On the Phenomena of Variation and Geographical Distribution, as illustrated by the Papilionidæ of the Malayan region," by Alfred R. Wallace, Esq.

Notices of Books.

Skin Diseases of Parasitic Origin, their Nature and Treatment. By W. Tilbury Fox, M.D. London. 8vo. 1863. Pp. vii., and 210. Tab. 5.

Leçons Théoriques et Cliniques sur les Affections Cutanées parasitaires professées par le Docteur Bazin, rédigées et publiées par Alfred Pouquet. Paris. 8vo. 1862. (Deuxième édition.) Pp. 15 and 292. Tab. 5.

Though these two works treat of the same subject, and in some respects resemble each other, they look upon it generally from a different point of view, the prevailing characteristic of the former being an attempt to determine the relations of the parasites to which the skin affections in question are due, while that of the latter looks more especially to a mode of treatment which Dr. Bazin has followed with great success, the fungous origin meanwhile being kept constantly in view. Nothing can be clearer than Dr. Bazin's style of lecturing, and the lectures themselves are very clearly reported by a young student, Monsieur Pouquet, who has added some interesting notes. Dr. Bazin makes an especial distinction between affections and diseases; and one of some importance. The latter arise from constitutional derangement, the former from external agents, and though these agents require a particular condition of the matrix to establish themselves, it is absolutely necessary to distinguish them from diseases which are somewhat similar in outward characters, as the treatment requisite is totally different. One especial point then of the lectures is to indicate these distinguishing characters of both, a matter of great consequence, not only as regards treatment, but because the skin diseases of fungous origin are essentially contagious.

The following interesting note of Monsieur Pouquet shows that they may be communicated by contact with animals as well as by intimate social intercourse.

"None of the authors who have written on the *tinea favosa*, seem to have observed this affection except on the human subject, and in consequence have not spoken of its communication by means of animals to man. M. Bazin himself has not noticed the fact.

"Nevertheless, in the course of last winter, Mr. Draper, a very distinguished young practitioner at New York, assured me, that, in his country at least, the favus was not rare amongst animals, and that he himself had observed it more than once amongst rats.

"In the course of 1854, many members of a family, amongst whom was a young physician, remarked that several mice caught in a trap were affected with a singular malady. Yellow crusts, more or less raised above the parts which remained healthy, of a rather deep tint and a tolerably regular circular form, existed on the head and anterior members. A manifest depression, moreover, was seen in the centre of each of these crusts, exactly as in *porrigo favosa*, and where these had fallen off, there were ulcers which seemed to have completely destroyed the skin. These diseased mice were given to a cat, who some time afterwards had a crust above the eye similar to that with which the mice were affected. At a later period two of the children, who played with the cat, were successively attacked. Yellow circular crusts appeared on the shoulders, face, and thighs, which were pronounced to be the formidable *porrigo favosa*, which, however, yielded to acetate of copper and hyposulphite of soda."

Dr. Bazin's book is illustrated with good figures of the Fungi which always accompany these affections, and of their mode of action on the bulbs and lower parts of the hairs on which they mainly depend. He does not, however, attempt to consider their relations amongst each other, or with extraneous Fungi. Dr. Fox, on the other hand, enters expressly on this part of the subject, a circumstance which alone justifies the notice of matters in this Journal in other respects so purely medical. His theory is that though each affection is accompanied by a peculiar form of Fungus, so distinct that it may always be recognised, and to which an especial name has been assigned, the several supposed species are mere modifications of one. This view he supports by numerous arguments, some of which certainly would not pass muster with a committee of experts.

We know indeed that the same Fungus may appear under a variety of forms, and produce two or more kinds of fruit, but no one has yet shown that Penicillium, Aspergillus, and Mucor are mere forms of one genus, nor is there reason to believe they are. The figures which Dr. Fox has given do not tend to the establishment of such a view, nor indeed does he seem to have very definite views as to the structure of these genera. He supports his argument by a supposed admission by Mr. Berkeley that the Chionyphe of the Fungus foot of India may take its origin from the Mucors. On reading over Mr. Berkeley's paper in the "Intellectual Observer," we can find no such admission. We suppose that the mistake must have arisen from the word "mucors" being used in contradistinction to moulds, to designate the whole tribe of moulds, which, like Mucor and Chionyphe, produce their spores in cysts. We would not, however, assert that the same spawn or mycelium may not produce two different kinds of fruit, the one of which is that of a true Mucor, the other of a Chionyphe, but at present there is not a particle of evidence to show that this is the case, prepared as we may be for almost any amount of wonder amongst the Fungi.

Dr. Fox's book, however, is a step in the right direction, as it tends to upset the whole botanical distinctions of the Fungi which produce or wait upon these skin affections. Physicians in general have not time for minute botanical investigations, and in consequence nothing can be more unsatisfactory than the scattered accounts of these moulds. They are assigned to different genera, often without a particle of reason, and on grounds which could not possibly be recognised by mycologists. Not content with making species of Puccinia grow on human integuments, a genus essentially confined to living vegetables, organisms which are clearly fungal are assigned to Algæ, and mere mycelia are elevated to the rank of genera and species.

The truth probably is that they are particular conditions of common moulds, analogous to yeast, the vinegar plant and similar matters. The exact state of the case however can never be demonstrated till some competent mycologist obtains the perfect development of the plant due to each variety. For this end individual spores must be isolated, for it is very possible that as in the yeast several kinds of Fungi may arise from the same mass. The distinctive spores must, therefore, be isolated to obtain a trustworthy result. We wish very much that Mr. Currey would take up the subject, as he is the only botanist perhaps, in this country, who from local circumstances and especial endowments is competent for the task.

We do not, indeed, wish to depreciate the labours of Dr. Fox, in whose work, notwithstanding some botanical inaccuracies, several highly suggestive matters may be found, amongst which we would call especial attention to his remarks on Sarcina.

Unless we adopt the views which were once so prevalent of equivocal or spontaneous generation, the notion of Fungi peculiar to the human frame seems *à priori* untenable, and we thank Dr. Fox most cordially for what he has done towards its extinction.

Warners' Select Orchidaceous Plants, Part 7. (Lovell Reeve & Co.)

This is a glorious number, filled with superb things, admirably drawn for the most part by Fitch; the fine Odontoglossums—Pescatorei, and citrosmum roseum, with Cymbidium eburneum are from the pencil of that skilful artist; the fourth—the large variety of Dendrobium macrophyllum, by another hand, is overcoloured and shows less artistic talent.

We must find room for an extract from Mr. Williams' practical remarks on the cultivation of Odontoglossum Pescatorei:—

"We are indebted to Mr. Linden not only for the importation of this, but also of many other Odontoglossums; and as their culture is now better understood than formerly, we may look forward to their being preserved in our collections. Cultivators have found by experience that a cool temperature suits these plants best, and that under other conditions they will not thrive.

"Odontoglossum Pescatorei is a distinct evergreen species, with the pseudo-bulbs 2 or 3 inches high, supporting light green strap-shaped leaves, of a foot in length. The branching panicles are produced from the side of the bulbs, and bear a large number of the showy flowers, which are nearly 3 inches across, the sepals and petals white with a stain of pink, and the lip white with a yellow stain and red markings near the base. It blooms in March, April, and May, the flowers continuing for several weeks, especially if the plant is strong and vigorous. A plant which exists in the collection of T. Dawson, Esq., of Meadowbank, would, on account of its luxuriance, quite puzzle any one who was not familiar with the species, the pseudo-bulbs being 3 inches high, and as much in breadth; it has borne branched flower spikes with fifty flowers. The bulbs are of a different colour from those usually seen, being of a dark-brown, a tint which indicates great strength and vigour. Mr. Anderson, the gardener at Meadowbank, grows several other Odontoglossums remarkably fine. Thus O. cordatum, a rare species, is a wonderful specimen, nearly two feet in diameter; this has had 14 spikes, bearing 10 flowers each; the plant while in bloom is placed in a greenhouse, and afterwards removed back to the growing house. There also may be seen a splendid plant of O. citrosmum with 25 bulbs; and of O. grande several large specimens, some of the bulbs producing 18 flowers of large size—truly a grand sight; while O. nævium, O. nebulosum, and O. Karwinskii are all equally well grown. These were all bought when small plants, and have been grown to their present state in a few years. We are not therefore without hope that we may see them grown still finer, for the plants improve year after year. The leading point of their treatment is this: they are grown in a cool and light span-roofed house with little shade, and as near the glass as possible; the great secret of all in the cultivation of this class of plants being to get well-ripening and thoroughly-matured bulbs, such as have some strength to produce flowers and foliage. These three conditions being supplied, any one may grow them with success. There are many other fine Orchids that may be advantageously treated in the same way; that is to say, they must have cool treatment, and unless they get it there is no hope of their thriving. They grow naturally where the temperature is not high, most of them on the mountains, and consequently they will bear cold much better than they will bear fire heat; sun heat, however, will do them good at any time, provided they have a free circulation of air, applied with caution indeed in cold weather, and being made to pass between hot-water pipes, so that it may become slightly warmed."

Similar matter, invaluable to the grower, accompanies the other plates.

Garden Memoranda.

Messrs. Cutbush's Exhibition of Hyacinths at Highgate.—This has been open to the public during the past week, and, judging by the freshness and beauty of the flowers, it may, doubtless, yet be inspected for some time to come. Seldom have the plants been finer than they are this year, or the bloom more perfect. Many hundreds of varieties of all shades of colour—reds, blues, blacks, whites, and yellows—are effectively arranged in a lean-to show-house, which at present may be said to be literally a blaze of flower. So favourable an opportunity of seeing these and other early-flowering plants in perfection should therefore not be overlooked.

Hart Hill, Pendleton, Manchester, the Winter Residence of J. Dugdale, Esq.—This fine property came into the possession of Mr. Dugdale little more than five years ago, and he has since that time greatly improved it. The house stands upon high ground, and the views from it are numerous and extensive, embracing some fine scenery. The gardens are well laid out, no expense having been spared to render them attractive. On entering the conservatory, the tessellated tiles with which the floor is paved, tend much to produce a good effect. In the centre is a large double white Camellia with upwards of 1400 blooms and buds upon it. The plant is about 24 feet in circumference, and from 12 to 14 feet high, well feathered to the base, and extremely symmetrical. Associated with it is also another large double white Camellia, and numerous other examples of all the leading varieties in cultivation. In the stove are many fine Begonias, Marantas, Crotons, Cyperus alternifolius variegatus, and numerous Ferns. The back wall is well covered with creepers of various sorts. In the Vineries are some strong young Vines, some of which have Grapes upon them, although leafless. The plant-houses, eight in number, two of which are about 120 feet long, contain numbers of Roses in pots for forcing, and some fine specimen plants of Azaleas and Heaths; conspicuous amongst the latter were Erica ventricosa coccinea minor, Cavendishiana, Hartnelli, and tricolor elegans, all of which were in beautiful condition. In the pleasure grounds are some fine Deodars, Araucarias, and Rhododendrons; many of the latter could not measure less than from 6 to 8 yards through. A Holly hedge divides the kitchen garden from the pleasure grounds. The whole place is kept in excellent order by Mr. Grange, the gardener, and for the information of such as may wish to visit it, I may add that it is only three miles from the Manchester Exchange, on the Eccles Road. *J. S.*

Miscellaneous.

The Cultivation of Humea elegans.—There are few plants whose beauty is so much augmented by cultivation as that of this, which, when really well done, forms one of the finest ornaments of the flower garden; and when seen as it is usually done, is a poor, weedy, shabby thing. We remember many years ago going to Whiteknights, then the seat of the great gardening Duke of Marlborough, and seeing there such plants of Humea as could hardly be conceived. They were from 10 to 12 feet in height, perfectly bushy, 8 feet in diameter at the base, from which they tapered to the top, presenting to the spectator a fountain-like mass of the most elegant auburn colour; and, when agitated by the wind, spreading an agreeable and aromatic odour—an odour which I have heard pronounced very agreeable by connoisseurs in scents. It is a Chinese plant, and was named after Sir Abraham Hume, late of Wormleybury, Herts. It is a biennial; and as it flowers the second year, it is most important to cultivate it most vigorously during the first season. It should be sown in February in pots, in a gentle heat. The soil should be sandy loam and peat. When it has come up it should be pricked off into 60-pots, and from them to sizes larger and larger as required. About the end of July it may be hardened to stand out of doors; and here its growth will be very rapid, if shifted according to its rooting. At the time of housing—say the early part of October—they will be fine plants; and as it will be prudent to grow some supernumeraries, the best plants should be chosen and housed; giving them a slight shift to carry them on through the winter. This shift I regard as most important to the future progress; they keep forming roots slowly, and it prevents their forming weak and premature flower stems. Their treatment at this time is of importance; they must not be huddled together at the back of other plants, but should be placed near the glass, with plenty of air and space all round them.

There is a peculiar disease they are subject to—the damping and rotting of the leaves, something like the rot in Geraniums. To prevent this, the plants should be kept free from the syringe in winter, and every specked leaf removed as it appears. I have seen fine plants wholly spoiled by this disease. We will now suppose that the plants have passed through the winter, and it is the middle of February. Some very large pots must be procured, and the plants shifted into a good compost of peat and loam. They must now be set growing, for which a Vinery just started will do very well; and as the temperature is increased they can be moved into another succession-house. They may now be duly syringed, and the heat and moisture will soon force them into luxuriant growth. By the beginning of June they will be fit to harden off in a cooler house. This must be carefully done with shading, so as not to injure the luxuriant and ample foliage, which has been making itself in the Vinery. When brought entirely out they must be inured to the rays of the sun by degrees. If all this is well and properly managed they will be magnificent plants, and the person who has the charge of them will not grudge the trouble which has been bestowed upon them. Having now detailed the progress of cultivation, we would make a few observations as to the situations proper for the stations of such plants in the flower garden. In all large gardens certain episodes of peculiar character may occur, without detracting at all from the general expression of the place as a whole; and I know of no plant more fit to give a marked and peculiar character to such spots than Humea elegans. I have seen plants of it stuck out on terraces, with weak slender stems, looking most miserable, and inviting one's pity—indeed, scarcely have I ever seen them placed with proper effect. What could be more lovely than in the midst of charming pleasure grounds to come suddenly upon a small nook or terrace decked out with these fine Humeas to give it character, and filled with specimen pots of Japanese Lilies, blue Hydrangeas, Lobelias, and other plants from the far East? Several of these spots might be made in a place; and we think that the charming interest they would create would be felt and acknowledged—the whole being of different characters. We could write a great deal more on this subject, but feel that we are approaching the limits of our space. It is often contended that intricacy destroys breadth. But we do not assent to this; we think that there may be the most perfect intricacy, with all due respect to the latter quality. In writing this paper, I will conclude by assuring my brother horticulturists that I have penned nothing but what I have seen and practised; and I hope that my humble endeavours may be useful in rescuing a fine plant from a state of obscurity. *Henry Bailey, C.M.R.H.S., Amersham, in the Florist and Pomologist.*

The Larch.—The oldest Larch trees on Killerton, the property of Sir Thomas Dyke Acland, Bart., near Exeter, were planted about 85 years since, but they appear very much older; the tops are broken, and the growth has been but trifling for the last 30 years. The first planting of late years was in 1800, on the side of a hill facing the south-west, about 250 feet above the sea; soil about 9 inches of loam, lying on broken trap on volcanic trap rock. There are 17 of them left at distances from each other of from 20 to 30 feet: those made good growth for 55 years; since which time the tops have been much broken with the wind, and they have the appearance of trees much older. The best of them measures at 4 feet from the ground, 7 ft. 1 in. in circumference, 41 ft. to the first branch, and the extreme height is 92 ft. 4 in. One was taken down on September 8th; at four feet from the ground 6 ft. 3 in., at 35 feet 4 ft. 3 in., at 54 feet 6 in. 2 ft. 8 in. in circumference, the extreme height 74 ft. 6 in, and perfectly sound. About 300 yards to the east there were planted in 1809 some Larch and Scotch Fir as nurses for Oak over a considerable quantity of ground. The Scotch Fir and Larch have been taken away as soon as they interfered with the growth of the Oak, and there are but few left. About five years ago there were some taken down, and three of them were discovered slightly tainted in the bottom. On Sept. 8th there were five cut; three of them were sound, one slightly, and one very much decayed; it was taken into the timber yard and a centre cut made through it; the decayed part ran up 17 feet from the bottom, and it was worth but little. It does not appear that the disease begins in the centre, as this tree was sounder in the centre than some of 10 or 15 years' growth apart from it, and the one slightly decayed showed three spots in different parts, and had the appearance of the commencement of dry rot. There are no particular appearances to show whilst standing which are sound or unsound, as in most other timber; and the measurement of the trees is nearly alike, the one decayed being at 4 feet from the bottom 5 feet 7 inches, at 29 feet 4 feet 4 inches, at 49 feet 2 feet 10 inches in circumference, and the extreme height 69 feet. One perfectly sound, at 4 feet from the bottom 5 feet 7 inches, at 32 feet 4 feet 1 inch, at 53 feet 2 feet, and the extreme height 69 feet. In 1818 about 56 acres were planted with Larch, Scotch Fir, Oak, and Ash on a gravel and clay subsoil, with less than 6 inches of loam, facing the south, about 400 feet above the level of the sea. The Scotch Fir and Larch have been regularly thinned about every third year to give room to the Oak. The greater part are now Oak; the Larch has grown very well, and not an unsound one has been discovered. In 1829, 1830, and 1831, about 200 acres were planted, principally on clay, and clay and gravel subsoil, with Oak, Ash, Scotch Fir, and Larch, and since kept regularly thinned to give room to Oak and Ash, and none has been cut unsound. We find the thinnings valuable. The first thinnings make good trellis work for cottage garden fences; and when the poles get about 4 inches in diameter, they are cut for park palings; after that for rafters for thatched cottages; and as soon as large enough, for rafters for slate roofs; but care must be taken in fastening them to prevent twisting. The oldest when seasoned may be used instead of imported deals for any building purposes. *W. Birmingham, in Proc. Roy. Hort. Soc.*

Calendar of Operations.

(For the ensuing week.)

THE frost at night and cold north-easterly winds during the day time with which we have been visited of late, will have afforded good cause for self-congratulation in cases where timely means have been taken for guarding from injury the unfolding blossom-buds of fruit trees. Those who have neglected such precautions will do well at once to put them in practice, lest worse weather should yet set in, and that when the trees are still less able to endure it. Plenty of mats, canvas, and other covering materials for all purposes of protection should therefore always be at hand, in order that they may be ready in cases of emergency.

FLOWER GARDEN AND PLANT HOUSES.

The conservatory and other show houses should now be gay with Camellias, spring bulbs, and other early flowering plants. Stock exhausted by forcing should be placed in a pit or frame by itself to regain its lost vigour. A bottom heat of 80° with frequent syringings will in due time restore it to perfect health and put it in proper order for another season.

CAMELLIAS.—Keep such as are making growth well syringed; they should not have much air given them at present. Should black-fly appear on the young shoots, which sometimes will happen, a good syringing with tobacco water will soon destroy it.

CINERARIAS.—As many of these will now be in blossom, a little shade during the middle of the day will be necessary in order to prolong their season of flowering; remove to a cool shady house such as are required for later display. Weak liquid manure may now be given liberally, say two or three times a week. Look well to seedlings, and select such as have the most circular outline and well defined colours, and place them apart from the more common kinds for seed.

PELARGONIUMS.—A slight shade may soon be necessary for a few hours on bright days; green-fly is occasionally very injurious to them at this season, and therefore the plants should often be fumigated; tie and regulate the shoots according to previous instructions. June and late flowering plants, and also seedlings, will now require attention; let each shoot be tied to its proper place, and everything in the way of crowding the plants should be avoided.

PINKS.—The effect of the late frosty winds is alread in some instances becoming disagreeably apparent. The plants having been firmly pressed in the soil, and the beds top-dressed, little remains to be done for some time. If, however, the weather continues dry, a good watering on a mild morning will assist the plants in making their spring growth.

TULIPS.—Protect the best bed with canvas, frigi domo, or mats, whenever there is frost or excessive rain, but as a rule keep it covered as little as possible, a doing so obviously excites weakly growth. Stir the surface between the bulbs as soon as it is in the best state for the operation, *i.e.* between wet and dry.

FORCING GARDEN.

In disbudding, do not remove all at once; on the contrary, go frequently over the trees, removing a few each time. When the fruit is set, the trees should be syringed in the early part of the day; water regularly, and ventilate freely when the state of the weather will permit.

CUCUMBERS.—Get out successional crops, if not done. Take every precaution to avoid burning at the roots. To this end, when making the hills for them, form a hole three parts the depth of the bed in the centre of each light; half fill it with raw turf chopped slightly and on this place the compost for the hills. Never finally soil over the beds until all danger from burning is past, and then only half at a time, taking care that the linings are in good order at that period, or an injurious depression of the temperature will suddenly take place. Melons may receive similar treatment.

FIGS.—More Figs are lost through drought than by any other evil. A constantly moist state of the soil is indispensable to their success, when confined in boxes or pots. They succeed admirably when a pit of leaves in a state of fermentation can be given up to them. Plunged in a bottom-heat of 70° or 75°, in this way, and allowed to ramble at the root, with close stopping in the wood, and a humid atmosphere of 65° or 70° they will be everything that can be desired.

PEACHES.—Early fruit will in many cases be stoning. Remember that this process will not bear pushing. See that young wood is carefully trained. No plant requires more sunlight than the Peach, and abortive blossoms commonly spring from inattention to summer training.

STRAWBERRIES.—Introduce sufficient plants every fortnight to meet the demands; keep them near the glass; give them all the air possible while in flower; when sufficient are set for a crop, pinch all the rest of the blooms off. Plants that are swelling fruit should be well supplied with manure water.

VINES.—Thinning and shoulder-tying being finished in early Vineries, little is necessary to be done, except to pursue an even course in regard to heat and atmospheric moisture. See that all the principal leaves, on which so much depends, have fair play as to a free exposure to light, and endeavour to prevent their coming in contact with the glass. Follow up stopping, more especially with the grosser shoots, and allow lower branches to ramble a little, to equalise the sap. Late Vines as before; keep the wood moistened at least twice a day.

HARDY FRUIT AND KITCHEN GARDEN.

ASPARAGUS.—In planting this it is of the utmost importance to give every attention to a proper rotation of crops. Where Celery is grown in what are called Scotch beds, the latter make capital Asparagus ground. The preparation consists in trenching it much deeper than the rest, and in burying a considerable quantity of raw vegetable matter in the bottom of the trench: old refuse, vegetables, Cabbage stalks, weeds, or what is very good (if it can be obtained), half-rotten leaves with which some little manure has been blended for linings in the previous year. The upper part of the beds has some rotten manure of course for the Celery. In taking up the Celery for use, the bed is broken up to a great depth, and the alleys with it, and thrown into a ridge, which ridge remains fallow until planting time, when it is merely levelled down. It should not be planted until the early part of next month.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,
For the Week ending March 23, 1864, as observed at the Horticultural Garden

March,	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain
Thurs. 17	9	30.100	30.074	51	20	35.5	45	45	E	.00
Friday 18	10	30.132	29.682	53	27	40.0	45	44½	E.	.00
Satur 19	11	29.957	29.598	58	23	40.5	44	44½	E.	.00
Sunday 20	12	29.662	29.595	60	31	45.5	44½	44	E.	.00
Mon. 21	13	29.647	29.609	51	36	43.5	44½	44	N.E.	.00
Tues. 22	14	29.816	29.636	48	35	41.5	44½	44	N.E.	.00
Wed. 23	○	29.987	29.869	51	19	35.0	45	44	N.E.	.00
Average.		29.900	29.723	53.1	27.3	40.2	44.5	44.2		.00

March 17—Fine throughout; frosty at night.
— 18—Hazy; fine; dry haze; slight frost at night.
— 19—Slight fog; very fine; frosty.
— 20—Slight fog; fine; very fine; clear and fine at night.
— 21—Uniformly overcast; fine but cold; overcast at night.
— 22—Overcast and cold; overcast at night.
— 23—Overcast; fine with sun, sharp frost at night.
Mean temperature of the week, 2 deg. below the average.

STATE OF THE WEATHER AT CHISWICK,
During the last 38 years, for the ensuing Week, ending April 2, 1864.

March and April,	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 27 .	54.1	34.7	44.4	13	0.37 in.	2	7	4	2	3	7	11	2
Mon. 28..	53.3	34.3	43.8	15	0.68	4	7	6	2	2	6	8	1
Tues. 29..	53.9	33.9	43.9	12	0.33	1	5	9	3	2	7	8	3
Wed. 30..	53.8	34.9	45.4	16	0.50	3	5	6	1	6	9	5	3
Thurs. 31..	54.8	34.0	44.4	16	0.30	3	7	3	3	9	5	5	3
Friday 1..	54.9	34.6	44.8	21	0.76	3	8	4	3	5	10	1	4
Satur. 2..	55.5	33.6	44.5	20	1.19	4	5	4	3	4	12	3	3

The highest temperature during the above period occurred on the 27th, 1830—therm. 75 deg.; and the lowest on the 1st, 1838—therm. 16 deg.

Notices to Correspondents.

TO CORRESPONDENTS.—In consequence of the absence of the Editor through ill health, replies to one or two enquiries are this week unavoidably postponed.

AURICULA SHOW: *Delta.* The National Auricula Show is to take place at the spring meeting of the Royal Botanic Society on the 30th of April. The Secretary is Mr. Douglas, of York, of whom particulars may be had.

FERN-LEAVED PRIMULAS: *B Scott.* They are increased, like the common form, by seeds; and we believe are quite constant to their peculiar character. They are good-looking plants even when out of flower, and quite as good as other Primulas when in bloom.

FUCHSIAS: *W Allen.* We have all along contended for young plants; and if properly handled even a spring cutting will make a good plant by the flowering season. Cuttings of last year may be admissible for larger specimens, but we object to plants older than this—not that good gardeners cannot bring them out in a presentable condition, but that the rule is one which has been and will be abused by bad gardeners, and is therefore better avoided.

HYACINTH PRIZES: *B N.* The class should be better defined, certainly, another year, for there can be no fair competition between glass-grown and pot-grown, nor between room-grown and conservatory-grown plants, all which were admitted under the present year's regulations. Conservatory-grown plants should be excluded from the ladies' class, and the others separated, if indeed both are desirable.

NAMES OF PLANTS: *T G.* 1, Ranunculus Ficaria; 2, Caltha radicans; 3, Salix aurita; 4, Salix phylicifolia; 5, Gagea lutea—If wild a rarity.—*Pityl.* We cannot explain why the name Douglas Fir has been exchanged for Douglas Pine; for a Pine the tree is not.—*B J D.* We are unacquainted with Abobra viridiflora, Acacia Leakeana, or Solanum citrullifolium: Abobra viridiflora is a Cucurbit.—*C D* The Nottingham spring-flowered Crocus is *C. vernus*.—*Mary.* 1, Adiantum Capillus-veneris; 2, A. cuneatum. If you observe you will find the two are very different in habit.

PLANE TREE SEEDS: *L E R.* will be much obliged to any one who will inform him where he can procure seeds of Platanus occidentalis and orientalis; he has tried at several large houses and failed.

RHUBARB: *Inquisitor.* Your Rhubarb arrived in a state of hopeless corruption, covered with mould, and looking very much as it would have done had it been dipped in boiling water. Is it possible that a pan of boiling water has been poured over it? This would account best for its condition. We have never seen a case at all like it before. *M. J. B.*

Seed Corn from the Chalk.

ALL THE MOST APPROVED VARIETIES OF WHEAT, BARLEY AND OATS, SUPPLIED BY

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TREFOIL or HOP, 28*s*. per cwt., 3½*d*. per lb.
WHITE DUTCH. 8*d*. per lb.
PERMANENT MEADOW GRASS, 7*s*. per bushel.
PERENNIAL RYE, 30*s*. and 36*s*. per Quarter.
ITALIAN FOREIGN, 30*s*. per cwt., 5*s*. 6*d*. per bushel.
SPRING TARES, 44*s*. per quarter.
YELLOW GLOBE MANGELS, 30*s*. per cwt.; 4*d*. per lb.
SACKS, 1*s*. 6*d*. each; BAGS, 1*s*. 2*d*. each.
The above prices are for cash, and a remittance must accompany all orders.
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CHEAPER BY THE CWT.

	Per lb.—*s*.	*d*.
LARGE YELLOW GLOBE	0	6
ORANGE GLOBE	0	6
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LONG RED	0	6
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NEW SORTS of MANGEL WURZEL.

NEW YELLOW INTERMEDIATE, very fine shape, free from roots	1	6
NEW RED INTERMEDIATE, similar in shape and quality	1	0
SELECTED LONG YELLOW, a heavy cropper of fine texture	0	8
SUTTON'S ELVETHAM LONG RED, of superior feeding quality	0	8
FISHER HOBBS' ORANGE GLOBE, a fine sort, already very popular	0	9
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N B Our LEWISHAM SWEDE again obtained First Prizes at several Root Shows this last season; one report states of them: "These Turnips were the admiration of all who saw them, being also a very even crop, although some bulbs were of immense size."

RICHARD SMITH'S RENOVATING GRASS SEED should Now be Sown, at a cost of 6*s*. per acre. A greatly increased yield will result from sowing 8 lbs. of Finest Grass and Perennial Clover.
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MIXTURE for Laying down to PERMANENT PASTURE	25*s*. to 30*s*.
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MIXTURE for One, Two, or Three Years' Lay	15*s*. to 18*s*.
MIXTURE for Fine LAWNS and BOWLING GREENS	per lb. 1*s*.

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PERMANENT PASTURE.

PERMANENT PASTURE GRASSES and CLOVERS, of finest quality, very carefully selected: for medium loamy soil, at 30*s*. per acre.
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"I have no hesitation in expressing my great satisfaction at the *manifest improvement* both to lawn and *pasture* from the Seeds which I received from you, though I was somewhat late in the sowing."

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"Five years ago I wrote to you to send me a Mixture of Grass Seeds to sow upon 10 acres of old Pasture. At the time I took the Farm the 10 acres of Meadow were almost useless. I now have a most excellent pasture."
Meadows and Upland Pastures may be increased in value 50 per cent. by sowing these Seeds.
Our RENOVATING MIXTURE consists of the Finest GRASSES and PERENNIAL CLOVERS. If the Seeds are sown *early in the season*, the improvement in the Pasture will be very great, and at a small expense.
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The Seeds of each sort separate may be seen in large quantities in Messrs. SUTTON'S Warehouses, and growing specimens of these and many others in their sample grounds.
All the best and most suitable of them are contained (together with Alsike, Perennial White, and Perennial Red Clovers), in Messrs. SUTTON'S Mixtures for Permanent Pastures.

	Per lb above 7 lb. *s*.	*d*.	Per Bush. *s*.	*d*.
ALOPECURUS PRATENSIS	1	8	9	0
ANTHOXANTHUM ODORATUM	1	6	20	0
AGROSTIS STOLONIFERA	0	10	9	0
BRACHYPODIUM SYLVATICUM	1	0	15	0
CYNOSURUS CRISTATUS	1	0	20	0
DACTYLIS GLOMERATA	0	10	6	6
FESTUCA DURIUSCULA	0	10	7	6
,, ELATIOR	1	0	12	0
,, GIGANTEA	1	3	14	0
,, HETEROPHYLLA	1	0	12	0
,, PRATENSIS	0	10	12	0
,, OVINA	0	10	8	0
,, RUBRA	0	10	8	0
,, TENUIFOLIA	1	0	12	0
,, LOLIACEA	0	10	14	0
GLYCERIA FLUITANS	1	0	14	0
,, AQUATICA	1	0	10	0
HOLCUS AVENACEUS	0	10	7	0
LOLIUM ITALICUM	0	7½	6	6
,, PERENNE	0	4½	5	6
,, ,, PACEYANUM	0	4½	6	6
,, ,, SEMPERVIRENS	0	4½	7	0
,, ,, TENUE	0	5½	10	0
PHLEUM PRATENSE	0	6	21	0
POA PRATENSIS	1	0	21	0
,, TRIVIALIS	1	0	21	0
,, NEMORALIS	1	8	28	0
,, FERTILIS	1	8	28	0
,, SEMPERVIRENS	1	6	30	0
,, AQUATICA	0	10	12	0
PLANTAGO LANCEOLATA	0	5	25	0

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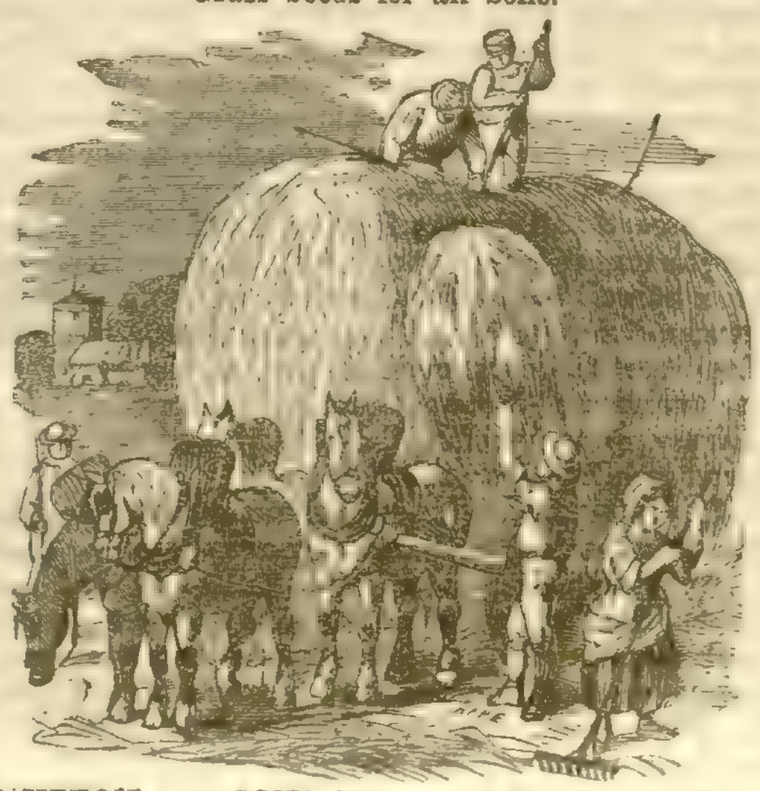

SUTTON AND SONS have one of the largest Stocks in Europe of the PERMANENT NATURAL GRASS and CLOVER SEEDS, which they mix expressly to suit the soil for which they are required.
The following letter has been received, besides many others:
From Professor LINDLEY, *Royal Horticultural Society, London.*
"We have already made trial of your Grass Seeds, and it is only justice to say that they have proved the best we have sown for many years."

PRESENT PRICES ARE—

	Per Acre. *s*.	*d*.
Best quality MIXTURES for Laying Down to PERMANENT PASTURE	30	0
Cheaper MIXTURES, omitting certain sorts	20*s*. to 26	0
Best quality ditto, for Three or Four Years' Lay	21	0
Ditto ditto, for One or Two Years' Lay	12*s*. 6*d*. to 17	6
CLOVERS and fine GRASSES for Renovating Old Pastures	6*s*. to 9	0
Finest LAWN GRASS SEEDS per bushel	18	0
PARK LAWN GRASS SEEDS ,,	10	0

The First Prize Medal was awarded to SUTTON & SONS for their Grass and Clover Seeds at the Great International Exhibition of Roots and Cereals at South Kensington in October last.
A Copy of Mr. MARTIN SUTTON'S "Essay on Pastures" is sent with each lot of Grass Seeds.
Seeds sent carriage free to all parts of the kingdom. Export orders delivered free to the Ship's side in any English Port.
PRICED LISTS of GARDEN and FARM SEEDS gratis and post free.
SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
GRASS SEEDS of best quality can now be supplied Carriage Free.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
CLOVER SEEDS of best quality, supplied Carriage Free.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
TURNIP SEEDS from best selected Roots supplied Carriage Free.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.
MANGEL WURZEL from the best selected Stocks, supplied Carriage Free.

Agricultural Seeds.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square. W.
See large Advertisement, page 266.

Agricultural Seeds.

LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, W.
The GENERAL FARM SEED PRICE CURRENT, containing instructions for the Management of the Farm for every month in the year, is now ready, and can be had gratis and post free.

Present Prices of Farm Seeds.

THE NEW FARM SEEDS are NOW READY, at Reduced Prices.
PRICED LISTS may be had, Post free, from SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

BATH and WEST of ENGLAND SOCIETY, for the Encouragement of Agriculture, Arts, Manufactures, and Commerce. ESTABLISHED 1777.
Patron—H. R. H. The PRINCE OF WALES, K.G.
BRISTOL MEETING, 1864.
President—The RIGHT HON. EARL FORTESCUE.
The ANNUAL MEETING, 1864, will be held at BRISTOL, on JUNE 13, 14, 15, 16, and 17.
ENTRIES Close as follows:—STOCK and POULTRY, April 9; IMPLEMENTS, April 11; ARTS, April 16.
Applications to be made for STOCK and IMPLEMENTS to the Secretary; for POULTRY, to Mr. S. PITMAN, Taunton; for ARTS, to Mr. R. R. M. DAW, Exeter; for HORTICULTURE, to Mr. JONATHAN GRAY, Bath.
A SUPPLEMENTARY LIST of PRIZES, offered by the Local Committee, and the Society of Merchants of the City of Bristol, for Cattle, Shropshire Sheep, Long and Short Wool Couples, and Cart Stallions, is now ready. Entries to Close on April 16.
By Order of the Council,
HENRY ST. JOHN MAULE, Secretary.
2, Wood Street, Bath.—March 12.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE-ON-TYNE, 1864.
STOCK and IMPLEMENT PRIZE SHEETS are now ready, and will be forwarded on application to
H. HALL DARE, Secretary.
12, Hanover Square, London, W.

The Agricultural Gazette.

SATURDAY, MARCH 26, 1864.

To the other great Short-horn sales of the last few days we have now to add that of Sarsden, which took place on Tuesday last, when 121 animals—32 of them calves—realised an average price just exceeding 42 guineas. This, considering the large number offered on one day, and following the large sales at Towneley and at Otley, must be considered a satisfactory average price.

Among the prices given were 76 guineas for a wonderfully fine white cow, *Dandelion*, of the *Daisy* tribe, purchased by Mr. ANDERSON, of Waterford; 80, 82, and 100 guineas, for *Archduchess of Cambridge*, *Lady Best*, and *Lady Warwick*, bought respectively by Mr. BOYD, Mr. DAVIES, and Mr. E. L. BETTS. Several of the *Charmer* tribe, which fetched so high a price at Mr. ADKINS' sale at Milcote, here also realised great sums. *Cornelian*, one of this tribe, was bought for 80 guineas by Mr. GRAHAM. Some of the descendants of Lord DUCIE'S *Chaff* and *Chaplet*, also fetched high prices. *Roan Duchess*, one of these, was bought by Colonel LOYD LINDSAY for 96 guineas; and Lady Charmer, a 4-year-old cow, was bought by Mr. RICH, of Didmarton, for 71 guineas.

The bulls and bull calves did not realise quite the average price made by the cows and heifer calves. The LORD OF THE HAREM, which has been one of the best bulls in the country, and is now only in his sixth year, was knocked down for only 65 guineas. The younger bulls fetched relatively much higher prices.

The sales of the last few days quite maintain the market value of first-rate Short-horn stock. The following are the average prices realised at the greatest sales on record:—

At C. COLLING'S	47 made 7304*l*.,	or 155*l*. 8*s*. 1*d*.
At Lord DUCIE'S	62 made close upon	151*l*. 0*s*. 0*d*.
At Col. TOWNELEY'S	56 made 7189*l*. 7*s*.,	or 128*l*. 7*s*. 7*d*.
At R. COLLING'S	61 made 7774*l*. 4*s*.,	or 127*l*. 8*s*. 0*d*.

—— MR. HOWARD of Bedford complains of our short reference to his remarks on steam cultivation at last week's lecture before the Royal Agricultural Society. What he said was that Mr. HUGHES was mistaken in supposing the steam cultivator to be unsuited to hilly land—on the

contrary, it had greater advantages over horse power on such land than on flat land; and wherever horses could go—indeed, where they could not go, owing to the steepness—the steam cultivator could work. On one of his fields, the acclivity was one in seven, and there was not the slightest difficulty in working it. He also said that he considered the weak point in Mr. HUGHES's plan of culture was that he had little for his horses to do in autumn, leaving, as he did, nearly all his work for the spring.

IN another column will be found a report of experiments by a known correspondent with various Wheats. The samples which he has forwarded for our inspection were opened and laid side by side for examination before reading the account which our correspondent gives of them; and the following results of this examination were penned in ignorance of the names of the several sorts described.

No. 1. A large and long-berried white Wheat, of somewhat horny and translucent appearance, uniformly good; 137 grains weigh 100 grs.

No. 2. A very large and long-berried white Wheat, slightly wrinkled transversely as if somewhat shrunken in drying; 104 grains = 100 grs.

No. 3. Coarse brown-red Wheat, the grains individually particoloured, and the sample uneven, some of the grains being somewhat shrivelled and horny and others full and brown; 120 grains = 100 grs.

No. 4. Large and long true-red Wheat, semi-translucent; the grains of uniform size and good quality; 132 grains = 100 grs.

No. 5. Larger and longer berried true-red Wheat, very uniform, translucent; a beautiful sample; 124 grains = 100 grs.

No. 6. White Wheat, horny, somewhat rioy; not so large as Nos. 1 and 2, but otherwise like them; 145 grains = 100 grs.

No. 7. Large berried white Wheat, somewhat shrunken, very much resembling No. 6; 149 grains = 100 grs.

No. 8. Large white Wheat, horny, very fine, and though not of such uniform quality, its larger grains hardly distinguishable from No. 2; 127 grains = 100 grs.

No. 9. Remarkably fine sample of true-red Wheat, very uniform, translucent; grains large and even; 137 grains = 100 grs.

No. 10. Coarse brown-red Wheat resembling No. 3, but not so large, and less even; a good many small and shrivelled grains; 135 grains = 100 grs.

No. 11. A sample of coarse and exceedingly large true-red Wheat, shrunken; 111 grains = 100 grs.

No. 12. A brown-red Wheat, somewhat coarse; some of the grain shrunken in drying; 124 grains = 100 grs.

No. 13. A sample of short, round-berried true white Wheat, of extraordinary uniformity and beauty; 136 grains = 100 grs.

No. 14. A fine sample of true white Wheat, but of inferior quality to No. 13, with occasional faulty grains, and hardly of such perfect colour or form; 145 grains = 100 grs.

Those who are curious on this subject may refer to the "Comparison of Wheats" in another column, and find from it the names which attach to these numbers: and they may also compare our independent description of the numbered samples with our correspondent's original descriptions of the named sorts. We have only to add that we retain the samples in case our account of them should be called in question. It may be added that the sample of HALLETT's Wheat which accompanied the paragraph by "E. B." in another page, is a specimen of a smaller, fuller, and apparently more starchy grain than those of HALLETT's Wheat, which we have received from "TRITICUM."

It is also proper to add that the character of a sample, depending as it does materially on its cultivation, may mislead any inquirer into the real value of any sort; and therefore the histories given of the cultivation of these sorts must be carefully read along with the accounts of the samples that have been sent to us.

THE Cattle Diseases Prevention Bill now before a Select Committee of the House of Commons is exciting the angry opposition of agriculturists and cattle dealers. At the last meeting of the London Farmers' Club, both Mr. GIBLETT and Prof. SIMONDS protested against the foot and mouth disease being included in the list of contagious disorders, any one of which is to render cattle liable to the preventive measures which the Bill proposes to enact. The disease in question was declared to be not in the least injurious to meat; and on the other hand, it is so prevalent, that to interfere with the sale of animals affected by it would be to put a stop to cattle dealing. A committee was appointed to watch the progress of the Bill and to take such steps as might be deemed fit.

The Highland and Agricultural Society, which appears to be free from the conditions under which the charter of the English Agricultural Society has been granted, and thus at liberty to discuss measures brought before Parliament, has also held a meeting, at which it was resolved to petition against the Bill in its present shape. It was resolved—

1st. "That, whilst this meeting feel that it is most desirable that proper precautions should be taken to prevent the spread of infectious diseases amongst cattle, they decidedly object to committing to the servants of shipping and to railway companies, or to inspectors appointed by local authorities, the power to take such precautions, which appears to be at present more satisfactorily and constitutionally exercised by her Majesty's Council."

2d. "That, while this meeting are of opinion that the law should prohibit all traffic in animals suffering under acute and infectious disease, they are of opinion that it would be most inexpedient to extend such prohibition to animals affected by murrain, which disease is of a temporary nature, and seldom fatal."

3d. "This meeting therefore strongly disapprove of a Bill recently introduced into Parliament, entitled 'The Cattle Diseases Prevention Bill,' and that a petition be presented to the House of Commons against it being passed into law in its present shape, and that the Chairman be authorised to sign the same."

Mr. MELVIN, of Bonnington, thought that in place of the Bill being called "The Cattle Diseases Prevention Bill," it ought to be called "The Cattle Trade Stoppage Bill." He did not see how they could, under these Bills, dispose of their stock at all, when epidemic or epizootic diseases existed in the country. The fines were so large, and the results that would follow from carrying out the provisions of the Bill were so serious, that he did not see how it would be possible to hold such markets as those of Dalkeith, the Falkirk Tryst, and Hallow Fair under such a system as this Bill would introduce.

Mr. MCLAGAN, of Pumpherston, recommended that they should not be too rash in condemning the Bill *in toto*; there were many things in it of which he strongly approved, such as the provisions for preventing over crowding of trucks and steam boats. The existing loss to farmers he believed to be greater than the penalties to which the measure would render them liable.

Professor GAMGEE said that since 1842 the mortality in this country had doubled, tripled, quadrupled; he declared that 50 per cent. of that mortality is due to contagious and preventible diseases. "We are in this position; disease has entered into our stock, and we refuse to adopt any measures to prevent it. We say, 'I will not be the loser, at all events, for I will sell them to my neighbours to lose by them.' If, as an agricultural association, we stand forward to consider how human food is to be kept untarnished, we shall then meet the country in a proper temper; but if we stand up for no inquiry, no prevention of disease, no legislation, the Society will be placing itself in a false position."

Sir JOHN DON WAUCHOPE thought that legislation on these subjects was necessary, and he could quite corroborate what Mr. MCLAGAN had said about the injury done to dairy stock by the murrain, and he thought it would be a very great pity were the Highland and Agricultural Society to go forward and petition against these bills without proposing something in lieu of them.

Mr. J. B. NICOLSON discussed the existing law relating to the prevention of cattle diseases, and the effect of the proposed measures if they should be enacted, pointing out the enormous powers which the Bill confers upon any station master or even any railway porter—who would be able to refuse conveyance of live stock, though entirely unqualified to pronounce on their condition as to health or disease.

It was resolved to petition against the Bill in its present state.

Lord ROSSLYN, who presided, submitted the following resolution on the subject of the Cattle Importation Bill:—

"That this meeting is of opinion that the Bill recently introduced into Parliament for the purpose of regulating the importation of diseased cattle into the United Kingdom is quite unnecessary, and should be withdrawn, the existing Act, 11 and 12 Vict., c. 105, being amply sufficient for that purpose; that a petition against the Bill be presented to the House of Commons; and that the Chairman be authorised to sign the same."

A COMPARISON OF WHEATS.

IN compliance with promise you have herewith a few samples of Wheats (ears and grain) grown by us with many others. Before proceeding with the particulars, it may perhaps be as well to state that the descriptions and remarks are perfectly free from any personal motive or party feeling, and given regardless of pleasing or displeasing any one. The experiments are conducted with extreme care, the principal motive being to arrive at satisfactory conclusions respecting quality, productiveness, and many other particulars of a practical nature, and not with a view to produce sensation specimens by employing means that cannot be adopted in ordinary agriculture. To render the descriptions as short as possible, we have omitted all minor detail and exact produce of each sort. The soil on which the Wheats were grown is a good loam, deep and friable.

No. 1. *Pringle's Bearded White.*—Planted Sept. 2, 1862, single seeds one foot apart each way. Not more than one grain to the hundred failed in giving fine healthy plants, which tillered remarkably well, and produced a perfect mass of fine, large, clean ears, very uniform in size; straw rather short and very hard; grain white with red tinge, quality unequalled, not perhaps so white as some others tried, but thinner-skinned and much stronger in quality. This fine variety is well adapted for sowing late in the season, being of rapid growth, and ripening early; the sample of grain is just as it was threshed, the chaff being only removed; none of the corns are bad or coarse. Produce A 1.

[The four following sorts, No. 2, 3, 4, and 5, were grown alongside each other, planted Oct. 8th, 1862, single seeds 9 inches apart each way.]

No. 2. *First-prize South Australian.*—Nearly every seed germinated, and produced healthy plants, which tillered moderately. Straw long, hard, and erect; ears long, thin, and tapering; grain very large, white, rather inclined to be flinty and rough, but a great improvement on last season's (1862) crop; produce fair average; ripened very early—first of any.

No. 3. *Hallett's Pedigree.*—Second season's produce starting with the large ears mentioned to you in the autumn of 1862. Germinated below average; plants healthy and strong, tillered well, but many of the stems failed to produce ears; the ears irregular in size, some very large, but not ripening altogether on the same plant (a fault common to all tender-strawed Wheats when sown thin on rich land); chaff large, coarse, and of a dull creamy white, or light brown; straw long, thick, and soft, very subject to mildew; grain large, pale yellowish red, coarse and very weak in quality, so much so that when used alone the bread is of the most inferior description. Produce of grain—average.

No. 4. *Lammas Red.*—Germinated over average; plants very healthy, tillered well, and produced ears regular in size, long and somewhat thin; straw very long and slender; grain fine bright red, rather large and of very superior quality; produce good, exceeding No. 3. The sample of this variety is just as it was threshed, and sent for comparing with 3 and 5.

No. 5. *Shirreff's Bearded Red.*—Germinated over average; plants very healthy (the plants of this variety during the winter appear small and weak, but in the spring they grow and tiller in the most amazing manner), tillered abundantly; straw long, very hard, rather slender and erect, pale reddish purple when reaching maturity; ears long, uniform in size and shape; grain clear red, thin-skinned, large, and finer in quality than any other red Wheat tried; produce very much above any other red variety: this is unquestionably the best of its class.

[Eighty-six varieties separated 2, 3, 4, and 5 on the ground from 6, 7, 8, 9, 10, 11, and 12; these last were planted November 1, 1862; single seeds 9 by 6 inches apart.]

No. 6 *Trump Wheat* (?).—Germinated well; plants very healthy, tillered well; straw long and thickish, but tough; ears rather thin, not long, but uniform in size; grain medium size, white and good quality; produce, fair average.

No. 7. *Essex Rough Chaff.*—Germinated well, good strong healthy plants, tillered moderately; straw very short and regular in length, stout, hard and erect; ears short and thick, chaff woolly; grain medium size, reddish white and rather rough; good in quality; produce average.

No. 8. *Burghfield Early White.*—Germinated below average, tillered moderately; straw very long, thick, and tender; ears rather long and thick; grain large, flat, and uneven, reddish white; moderate quality, produce average. The ears of this variety have some resemblance to Kessingland, but with whiter chaff; it is not earlier than most other sorts.

No. 9. *Nursery Red* (true).—Germinated over average; plants healthy, tillered moderately; straw short, very thin and hard; chaff clear silvery white; grain bright polished red, small, very regular in size and of superior quality; produce good average; the sample of grain is just as it was threshed, and sent for comparing with 3 and 10.

No. 10. *Hallett's Pedigree*, grown from seed sent out by Mr. Hallett in 1862; the description appended to No. 3 is equally applicable here; after the most minute examinations during the growing season, and at harvest, we are bound to admit our inability to detect

any material alteration in appearance, or improvement in quantity or quality to No. 3 sample.

No. 11. *Wrench's Wheat.*—Germinated well, extra strong plants, tillered moderately; straw remarkably long and thick; ears very long, thick and coarse; grain red, large, flat, rough, irregular, and very inferior quality.

No. 12. *Quentin's Giant.*—See description given to No. 3, which need not be repeated here; this sample is sent for comparing with 3 and 10; these three, with Kessingland, are identical in every material point, no matter how the so-called varieties may have been obtained.

No. 13. *Shirreff's Bearded White.*—Grown on a strong free working loam overlaying a hard red clay. 4 acres were drilled on September 17th, 1862, 1 peck of seed per acre, which germinated unusually well, and produced a grand crop, ripening very early; straw rather long, medium thickness, very hard and tough, habit erect; ears longish of the sort, and uniform in size; grain plump, remarkably regular in size and shape (none coarse or bad); transparent white, very thin skinned, and extremely fine in quality. Sixty-nine pounds per imperial bushel, and was sold that weight to an eminent corn miller, who declared it to be the best Wheat he had ever ground, producing an extraordinary quantity of flour of superfine quality.

No. 14. *First-prize Victoria (Australian).*—Grown on land similar to 13; sown broadcast October 24, 1862, at the rate of eight pecks of seed per acre; germinated uncommonly well, tillered only very moderately (a natural consequence when seeded so wastefully and injuriously thick); straw rather short, very thin, and hard; ears rather irregular in size, some very small, none large; grain plump and uniform in size, white, some much more so than others, quality fine, produce above average. This is a prime Wheat for strong rich loamy soil, but not so well adapted for poor or sandy soils.

No. 15. *Marked Sport from Nursery Wheat.*—We are fully aware of the impropriety of using the word "sport;" but it will perhaps serve for want of a better. The facts are as follows. A certain quantity of seeds of Nursery Red Wheat, all separately and carefully examined, were planted (see No. 9) during the growing season. One plant only, from which the enclosed ear has been taken, was observed to differ altogether from the original. At harvest we were rather surprised to find it closely resembling "Hallett's Pedigree;" the straw perhaps rather shorter. The ears are about the same length and shape, with chaff of the same colour, and similar in every respect, except the semiaristate appendages being slightly elongated. Seeds from one of the ears so obtained have been planted, and the result remains to be seen, being yet in what may be termed a state of transition. It would not be safe to make any positive declaration, but in all probability it will throw some light on the origin of Hallett's Wheat.

Permit us to direct your attention to samples Nos. 1, 4, 5, 9 and 13, which are the produce of thin seeding, and to a certain extent proves that the system under proper management does not injure the quality, but has a tendency to improve it. As an illustration we may mention that five acres were drilled with Shirreff's Bearded White, four pecks of seed per acre, on land similar and contiguous to that on which No. 13 grew, and yet the produce of the comparatively thick seeded was not equal in quantity, and 1 lb. per bushel lighter weight than 13.

We have many other things to say, but for the present must let this communication (already much too long) suffice.—*Triticum & Co.*

THE TOWNELEY SALE.

We add to our last week's notice the following list of the cattle sold, and of the purchasers:—

Lot	COWS AND HEIFERS.	Gs.
1.	Roan Duchess 2d, calved Sept. 3, 1852; Mr. Reeve, Brentwood	55
2.	Vestris 3d, calved March 12, 1854; Rev. W. Beever, South Wales	40
3.	Pride, calved Sept. 29, 1854; T. E. Pawlett, Beeston	135
4.	Frederick's Bracelet, calved Nov. 22, 1855; T. Statter, Bury	50
5.	Young Barmpton Rose, calved June 21, 1856; (13,590) —C. Naylor, Preston	71
6.	Alice Butterfly, calved Aug. 1, 1856; J. How, Broughton	100
7.	Pearl, calved Nov. 28, 1856; T. E. Pawlett	110
8.	Violante, calved May 20, 1857; Viscount Strathallan, Perth	85
9.	Pageant, calved March 23, 1857; E. L. Betts, Preston Hall, Kent	50
10.	Frederick's Ringdove, calved June 21, 1857; T. Greetham, Stainfield Hall	43
11	Butterfly's Hope, calved Aug. 19, 1858; T. H. Parker, Warwick Hall	45
12.	Rose of Lancashire, calved July 26, 1858; T. Crisp, Butley Abbey	13
13.	Precious Stone, calved Feb. 28, 1858; R. Burton, Whitehaven	43
14.	Frederick's Pride, calved April 14, 1859; Duke of Devonshire	80
15.	White Butterfly, calved June 28, 1859; C. W. Packe, M.P., Prestwold	70
16.	Young Butterfly, calved July 19, 1859; T. Crisp, Butley Abbey	125
17.	La Fille de Frederick, calved Dec. 8, 1859; J. Platt, Bangor	61
18	Roan Knight's Butterfly, calved Aug. 6, 1860; Duke of Sutherland	175
19.	Butterfly's Ringlet, calved Jan. 19, 1861; (ill, not offered)	
20.	Pearled, calved Feb. 23, 1861; A. & A. Mitchell, Alloa	61
21.	Royal Butterfly's Duchess, calved March 1, 1861; E. S. Betts, Kent	500
22.	Roan Knight's Pride, calved March 15, 1861; J. Platt	71
23.	Buttercup Again, calved July 17, 1861; B. B. Colvin, Pishiobury Park	57
24.	Frederick's Farewell, calved Oct. 9, 1861; Mr. Reeve, Brentwood	150
25.	Pretty Butterfly, calved Nov. 1, 1861; C. W. Brierley, Rochdale	77
26.	Barmpton Butterfly, calved Nov. 7, 1861; R. Eastwood, Whitewell	350
27.	Another Roan Duchess, calved Nov. 29, 1861; W. Stirling, M.P., Keir	225
28.	Butterfly's Pride, calved Dec. 6, 1861; A. Cruickshank, Sittyton	62
29.	Burnley Butterfly, calved Jan. 15, 1862; A. Dugdale, Burnley	52
30.	Double Butterfly, calved Jan. 21, 1862; R. Eastwood	300
31.	Perfume, calved April 23, 1862; H. C. Pole Gell, Barton Fields	190
32.	Red Duchess, calved June 5, 1862; Lord Sudeley, Toddington	170
33.	Royal Butterfly's Pageant, calved Aug. 6, 1862; R. Eastwood	590
34.	Violante's Butterfly, calved Nov. 17, 1862; Hon. Col. Pennant, M.P.	205
35.	Venus's Butterfly, calved Nov. 27, 1862; J. Platt	75
36.	Beautiful Butterfly, calved May 29, 1863; E. L. Betts	150
37.	Wharfdale's Ringlet, calved July 12, 1863; G. Roper, Latham House	43
38.	Wharfdale's Butterfly, calved July 13, 1863; C. W. Packe, M.P.	86
39.	Butterfly's White Duchess, calved Sept. 30, 1863; E. L. Betts	170
40.	Baron's Butterfly, calved Oct. 11, 1863; Callen, Ireland	46
41.	Alice Wharfdale, calved Dec. 16, 1863; Lady Pigot, Branches Park	50
42.	Proud Duchess, calved Dec. 28, 1863; G. F. Frere, Roydon Hall	35
43.	Duchess' Butterfly, calved Jan. 21, 1864; G. Roper	33
44.	Wharfdale's Buttercup, calved Jan 23, 1864; G. Roper	36
45.	Duchess of Towneley, calved Feb. 13, 1864; G. Roper	100
46.	Duchess of Lancaster, calved Feb. 19, 1864; Capt. Tennant, Scracroft Lodge	29
47.	Phœbus Butterfly, calved Feb. 29, 1864; G. Roper	50

BULLS.

1.	Baron Hopewell (14,134), calved Aug. 12, 1856; E. W. M. Waldo, Stonewall Park, Kent	100
2.	Royal Butterfly (16,862), calved Aug. 12, 1857; reserve 1200 guineas. No bid.	
3.	Royal Butterfly 10th (18,761), calved Oct. 6, 1860; Joseph Whitworth, Standcliffe Hall	115
4.	Royal Butterfly 11th (20,719), calved July 4, 1861; W. Sterling, M.P., Keir	400
5.	Royal Butterfly 15th (20,723), calved Dec. 8, 1862; Duke of Sutherland	160
6.	Proud Baron, calved April 10, 1863; Duke of Newcastle	145
7.	Royal Butterfly 17th, calved Oct. 13, 1863; Rev. W. Beever	200
8.	Duke of Towneley, calved Nov. 7, 1863; C. Patrick, Rossendale	55
9.	Valiant Duke, calved Dec. 17, 1863; T. H. Parker	70
10.	Duke of the Butterflies, calved Feb. 12, 1864; R. Eastwood	100
11.	Prince of Towneley, calved Feb. 13, 1864; W. Fox, St Bees Abbey	71

Summary.

46 cows and heifers		£5702	11 0
Average	£123	19 4	
10 bulls		1486	16 0
Average	148	13 7	
Total sale		7189	7 0
Average 56 head		128	7 7½

Tribes.			Average.		
9 Roan Duchesses	£1618	1 0	179	15 8	
5 Alices	693	0 0	138	12 0	
28 Butterflies	3409	7 0	121	15 3	
8 Pearls	855	5 5	105	13 1½	
5 Vestrises	518	14 0	103	14 9	
Baron Hopewell	105	0 0			
Total	7189	7 0			

The average is just below that of Robert Colling's sale in 1818 at Barmpton, which exceeded it by a few shillings.

THE DIETARY OF THE AGRICULTURAL LABOURER,

WITH OTHER STATISTICS OF HIS EXPENDITURE.

[The following is the remainder of the paper on this subject lately read by the Rev. J. Slatter, of Streatley, before the Ashmolean Society at Oxford, the former part of which appeared last week.]

Results of Inquiry.—I now proceed to give the results of my investigation:—1st, as to the amounts consumed, and the quantity of carbon and nitrogen therein contained.

I give first for comparison with the results of the same sort of inquiry in the manufacturing districts, the average amount consumed by each head in the family—in three cases—which I select as those which I believe live the most hard in the parish.

1. Man and Wife, Seven Children and Baby, reckoned as nine persons.

	lbs.	Carbon. Grains.	Nitrogen. Grains.
Bread	56	110,200	5,152
Bacon	1	4,750	96
Butter	1	4,580	....
Sugar	1½	4,035	....
		123,565	5,248
Potatos, say	10	7,600	240
		9) 131,165	5,488
		7) 14,570	609*
		2,080	87†

* Weekly average. † Daily average.

2. Man and Wife and Six Children, eight heads.

	lbs.	Carb.	Nitrog.
Bread	56		
Bacon	1⅓		
Butter	1	2,380	98
Sugar	2		
Potatos	10		

3. Man, Wife, and Six Children (1 baby)=seven heads.

	lbs.	Carb.	Nitrog.
Bread	48		
Bacon	2½		
Butter	1½	2,580	99
Sugar	2		
Potatoes	10		

Now, in Dr. Smith's tables, p. 364, Table 41, he gives these specimens:—

		Carb.	Nitrog.	
Number	58	3,193	180	Much Oatmeal.
,,	59	2,945	111	Young children.
,,	60	2,275	85	Exceedingly low; young children.
,,	65	2,792	111	Young children.
,,	66	2,849	112	

The first three are man and wife and six children, the last two man and wife and seven children. We must conclude, then, that he would have judged the diet of the three families I have exhibited above as very low, and insufficient. But this mode of judging by the average consumption of all ages is unsatisfactory; it might be that one part of the family suffered at the expense of another, and it would be extremely desirable to ascertain how far this is likely to be the case.

It has been attempted in the following way:—Taking about 20 families, their condition is so various as to the number and ages of children, that it occurred to me that, throwing the consumption of each in the form of an equation, it might be possible, without attempting a rigorous solution, to ascertain the respective shares of the man and wife, and the older and younger children.

It appears then that the average consumption in bread of a child between 10 and 12 is 8 lbs., and under 10 the average is 4 lbs. Now, it is said that children need an abundance of the nitrogenous element in their food, and it is greatly to be regretted that there is not a sufficient supply of skim milk to constitute it a regular and considerable article of children's diet.

Let us see however what the actual supply of nutriment for the children amounts to. The way of life at present is about this: a piece of bacon (when the allowance is small—the whole) is cooked for Sunday's dinner; whilst it is hot all dine off it with what vegetables they can get—generally about 7 lb. weight of Potatos; the children have upon their bread a tiny portion generally (not always), about say ½ oz. at the outside. The rest is put by to be eked out cold for the man's dinner in the field as long as it will last. All the rest of the week the children, and generally the women, have no more animal food except by accident. I ascertained from a little girl about 9 or 10 years old that she had four slices of bread per day. I weighed the quantity indicated by her, and found that her allowance would be about 12 oz., perhaps 14 oz. The butter is in such small quantity that it is hardly to be rated as more than a condiment. But taking the allowance as stated at the average of 8 lb. for a child 10 or 12 years old, we have the week's allowance as follows:—

	Carbon.	Nitrogen.
Bread, 8 lb.	15,750	736
Bacon, ½ oz.	150	3
Butter, ⅓ oz. × 21 meals 3½ oz.	1,020	—
Sugar, say 3 oz.	540	—
	17,460	739*
	2,494	105½†

* Weekly average. † Daily average.

Without reckoning Potatos extra.* This, according to the amount of nutriment per lb. weight of bodies required in the case of adults, would suffice for one weighing 100 lbs., but children require a larger rate of the nitrogenous element owing to their growth. In the case of the little girl mentioned above, weighing about 80 lb, the daily average would be 1650 carbon, 66 nitrogen, a quantity greatly under the mark, and I entertain little doubt that in many cases it is so: that the children and the old are underfed, and that the lion's share goes to the father, and perhaps rightly so, as the least grievous of two cruel alternatives.

Proceeding by the method already mentioned, the joint amount of the husband and wife's consumption can be found, but there is no means of separating accurately between the two, as the only data within reach that give either separately refer to aged persons. The proportion adopted has been derived from Dr. Smith's paper, where a man's to a woman's allowance is nearly as four to three. It appears, and with a degree of uniformity which gives great certainty to the result, that the joint consumption of husband and wife is from 24 to 28 lbs. of bread per week with scanty bacon, and from 16 to 18, where there is a larger allowance of bacon.

In the former case, where the diet is almost confined to bread, the man's share being from 14 lbs. to 16 lbs. per week, with 2 ounces of bacon daily, it would seem that his daily consumption would give from 4500 to 5100 grains of carbon and from 196 to 220 grains of nitrogen; the average amount required for an adult weighing 150 lbs. is 4300 carbon and 200 nitrogen;† but, singularly enough, the result is altogether different when we take the case where a full amount of bacon is obtained, which we should *d priori* pronounce to be the better diet. We then find a much lower amount of nutriment supplied. When a man gets about 4 ounces of bacon per day his allowance sinks to 9 or 10 lbs. of bread instead of 14 to 16, and the result is, with the higher amount of bacon, only 4000 carbon, and 155 nitrogen; it is very possible that, with easier means, other comforts in food are attainable, which here are not brought to account, but it is difficult to say whence a larger supply of nitrogen is to be gained—it is possibly made up by cheese.

To come next to the case of persons living on parish allowance; the intention of the Board of Guardians is to give them 2*s.* 6*d.* per week, partly in money and partly in kind. The allowance is for a single woman half a gallon of bread—that is 4 lb., 1 oz. of tea, ½ lb of sugar, and 1*s.* 8½*d.* One case which I have examined adds to this ½ lb. of bacon, ¼ lb. of butter, and ¼ lb. of sugar; and this is all she is able to provide herself; it amounts to a daily quantity of less than 2000 carbon and 60 nitrogen—in fact, unless she were largely assisted by private

* If used the quantity of bread is diminished.

† In a paper lately read before the Society of Arts, Dr. Smith, referring to his former paper, says that he estimated this as the average quantity required by a man making a moderate amount of exertion. In the earlier paper the result of his own experience as required under considerable labour, viz., 5000 grains carbon and 230 nitrogen, was overlooked—and a statement (page 325)—"whilst therefore there is some diversity in the conditions both in ordinary and present times, it may be affirmed that their ordinary and present occupations induce but little comparative increase in the work of the body," being misapprehended, led to the assumption that the quantity here mentioned was sufficient for a man under the ordinary circumstances of labour. Such would hardly seem to be the case. It must be borne in mind at least, that this is a low estimate.

charity she could not live. The case of two single women living together presents a slightly better aspect, because one cottage and one fire do for both; their allowance rises to 2466 carbon and 81 nitrogen. Another case which I have carefully watched, of two old persons living together; their sustenance procurable with parish allowance gave them, with their good management, 2275 carbon and 81 nitrogen. With this amount they were enfeebled and pining away; an increased allowance of 2 lb. of mutton weekly, raising their daily nutriment to 2400 carbon, and 100 nitrogen, just sufficed to keep them in as fair health as can be expected to be enjoyed by persons verging on 80 years of age, though probably still below what would have been desirable.

The conclusion then as regards this part of the subject may be stated thus:—1. That the parish allowance is not sufficient for what it is intended and professes to do, viz. supply a bare maintenance; it is only accidentally and when supplemented from other sources that it can at all be said to be enough, and this will appear more clearly presently. 2. That on the whole children seem to have scarcely sufficient food, and there are cases where they suffer greatly and probably have the seeds of future diseases sown in the system. 3. We are met with the unexpected result that the men for the most part who chiefly feed on bread with a very small proportion of animal food, according to theory at least, appear to receive more nutriment than those who live more largely on animal food, and this accords with the opinion that animal diet is by no means necessary. Indeed it may be remembered that in the case of the maximum allowance of bread, the quantity of nutriment considerably exceeded what was deemed the minimum allowance.

On this point it may be doubted whether, in so great bulk, a considerable portion may not pass through the system without assimilation. And here seems the place to notice the great absence of variety in diet, which unless health is in perfect vigour is so severely felt, and the great expenditure of vital force which must arise from almost all the food being taken cold into the stomach. Any expedient which might meet the one of these evils would tend to mitigate the other. The greatest obstacle to improvement here exists in the habits of the poor themselves. Attempts that have been made in this direction to ameliorate their condition have proved in vain, and it is some consolation to think that fair health and a life passed in the open air, enable their possessor to thrive under a dietary which in the close atmosphere of a factory might speedily enervate him.

Nothing has yet been said of the labourer's beverage. Coffee is comparatively little used. Tea is very general. We are taught to regard these not so much as nutrients in the strict sense of the word, but as stimulants of vital action, and facilitating thereby the transformation of other food. Beer can hardly be called a part of the labourer's dietary; they can rarely or ever afford to drink it. Some make a very wholesome small beer for drinking in harvest time; but for the most part it is only consumed under circumstances that are injurious alike to health and morals, and it need not be said that when 2*s.* or 3*s.* go on the Saturday and Sunday in this way at the public house, in almost every case the wife and children suffer correspondingly in their allowance of food.

It is necessary now to furnish the concluding proof to show that the parish allowance or the ordinary wages are not enough to keep house upon without encountering privation, or the other alternative—debt.

1. The case of two old people on the parish allowance of 5*s.*:—

a.			*b.*		
Bread	1*s.*	0*d.*	Bread	1*s.*	3*d.*
Mutton	0	9	Bacon	0	6
Butter	0	6½	Butter	0	4
Tea	0	5	Sugar	0	5
Sugar	0	5	Tea	0	5
Soap	0	1	Soap	0	1¼
Candles	0	1½	Candles	0	3½
Rent	1	3	Rent	1	0
	4	7		4	3¾
Leaving a balance of 5*d.* for Clothes, Shoes, and Fuel.			Leaving a balance of 7¼*d.* for Clothes, &c.		

2. The case of a single woman on parish allowance of 2*s.* 6*d.*:—

Bread	0*s.*	5*d.*
Bacon	0	4
Butter	0	2½
Sugar	0	7½
Candles	0	3½
Soap	0	0½
Tea	0	5
	2	4

Leaving a balance of 2*d.* for Clothes, &c., and Rent, which is 5*d.*

These are the cases noticed above as illustrating a miserably low diet, and withal making plain besides that to exist at all they must be dependent on other sources than the parish allowance.

3. To take next the case of a man who through illness could not do piece-work, and was forced to take light work at ordinary wages.

Flour	4*s.*	7*d.*
Bacon	1	8
Butter	1	4½
Tea	0	5
Sugar	0	11
Soap—say	0	3
Candles—say	0	3½
Rent	1	3
	10	9

i. e. 9*d.* above the wages, and nothing for fuel, clothes, shoes, club, or schooling.

In such a case debt is being incurred, to be wiped off during the summer if possible, thus causing a diminution of the fund which is generally expected to provide shoes and clothing. The shoes for a large family, without giving all a new pair, cost (with mending the old), from 3*l.* to 4*l.*; if not taken out of the harvest money, at least 1*s.* 6*d.* a week ought to be laid by for this alone. Very little clothing is bought: little is procured except by the clothing club and charitable gifts of one kind or another.

Fuel during three parts of the year averages about 1*s.* per week. The money representing the wants of the family that are omitted above, is, therefore, as follows. At the least:—

Fuel	1*s.*	0*d.*
Women's club	0	3
Children's club	0	3
Children's schools	0	3
Shoes	1	0
	2	9

Which, added to the sum above, gives 13*s.* 6*d.* as the weekly necessary cost of the family. Well might the mother reply, when asked whether the children's portion satisfied them:—"They know they must take what is given them, and that it is no use to ask for more."

It would be foreign to the immediate subject of this paper to inquire what means might avail to ameliorate the condition of the agricultural labourer. The improvement of their dwellings is just now, and very rightly, attracting public attention, and indirectly no doubt it will affect their condition generally. At present it is by no means popular with the labourers themselves. No great improvement of the houses on a large scale can take place without an adequate return for capital expended; and if an increased rent is demanded without corresponding increase of wages, the improver, at present at least, will receive small thanks for meddling. But in one way it is likely to open the way to the improvement by taking the cottage rent out of the hands of the farmer as a middleman; according to the general sytem, though nominally free to move, the labourer is virtually as he was described in Domesday Book 800 years ago, when it was said of this parish IBI VII FERVI.

The introduction of machinery, which is becoming necessary to the farmer, is working also in the same direction; and attempts to elevate the agricultural labourer will be mere palliatives, until all unnatural restrictions are removed which now prevent him from carrying his labour to the best market.

NOTES ON CELEBRATED SHORT-HORNS.

No. III.

LORD HARDINGE.—The following is a letter from Mr. Bates, dated Kirkleavington, near Yarm, August 25, 1848, addressed to an eminent Short-horn breeder:—

"Mr. Thos. Bell has just brought me the produce of Harriot Cow, the dam of your Lord Hardinge—she gave 15¼ pints of milk in the morning, and 16½ pints in the evening—on Grass only—no hand food, and the produce in butter for the day was 32 ounces, being just 3 ounces per quart of milk.

	Per week—*s.*	*d.*
The butter here at present (16 oz. per lb.) is 11*d.* per lb. or	12	10
The old milk, if sold at 1*d.* per quart, or	9	4
	22	2

"Mr. Bell's pasture after calving was bare, and I told him to put her into my cows, and she has been very unsettled, breaking out to get to her old companions, or might have given more milk.

"Old Duchess 34th when she last calved, with two paps only in milk, gave 9 quarts per meal, and each quart yielded 2¼ ounces of butter.

"My first Duchess, bought in 1804, calved on Grass, June 7, 1807, and gave 14 quarts per meal twice a day for several months in the summer, and each quart yielded 1½ oz. of butter, or 21 oz. of butter per meal; and then our Newcastle weight was 21 oz. per lb., and sold at 2*s.* per lb., making 28*s.* per week in butter; and milk at 1*d.* per quart was 16*s.* 4*d.* per week, or 2*l.* 4*s.* 4*d.*—there would be a little loss in quantity by creaming, or about two guineas per week—and went into a pasture with 19 other cows at Halton.

"The generality of Short-horned cows used to yield 1 oz. of butter per quart in my dairy at Halton Castle, near Corbridge, in Northumberland, and my West Highland cows yielded 2 ounces per quart of milk, going in the same pasture; and those bred from West Highland cows by my old Halton bull, yielded as much butter per quart as the West Highland cows, and gave a vast increased quantity of milk over the Highland cows. So that now, with several crosses of my own bulls—all of the Duchess tribe—they yield as much butter per quart as the West Highland Kyloes I kept at Halton; but those West Highland cows exceeded any I ever saw, and I could never again obtain such after the years 1800 and 1801. I got 20, each of those years, and they kept increasing in produce till I had one year 99 in calf; but by an unfortunate cross by the bull St. John, belonging to the late Christopher Mason, he communicated disease into my herd of mixed Highland blood, and I could not recover their constitutions again, and was obliged to part with that valuable herd in 1826, and have not had any Highland blood since then. The third and fourth crosses got to as much weight as the Short-horns, and were once an invaluable breed, being far less consumers of food than the generality of Short-horns—24 lb. per day, cows in milk, when on hay only—while in most large dairies of Short-horns the consumption is 56 lb. per day of hay. I remember Mr. McKenzie weighing to a lot of cows bought of my next neighbour, and they consumed 52¾ lb. per day of hay, but were good milkers, and made 8*l.* per ton of the hay—butter then high, in the late war in 1812.

"I tried the consumption of hay by Duchess 34th—in different years—and it was 24 lb. per day, not more than West Highlanders; and I doubt not that Lord Hardinge's dam is a small consumer of hay, when in milk, if tried in winter.

"I was no little surprised on learning that the two judges of Short-horned bulls never handled any of them at York; but only looked at them. This accounts for their strange decisions, and it is a disgrace to the Society to employ such men. Had Mr. Stokes been suffered to cast his eyes over the decisions I doubt not they would all have been reversed.

"Thomas Bell has sent the *pedigree of Lord Hardinge*—Roan colour, calved Sept. 6, 1846. Got by 2d Duke of Oxford; d. Harriott, by 4th Duke of Northampton (3649); gd. Hilpa (sold to Mr. Vail, of Troy, in America, and obtained the highest premium at their great State Show last autumn, as the best cow in America, and universally so admitted) by Cleveland Lad (3407); gr. gd. Hawkey, by Red Rose bull (2492); gr. gr. gd. Hart, by Rex (1375). This last I bought and let Messrs. Bell have her; and I went a few years after to see the cattle from which she came. They were all roan colours, and they had had the predecessors for above 30 years, being all good milkers, and a roan colour; they were cleanly neat cattle, and they had used the best bulls in their district, but kept no pedigrees. Rex was a neighbouring bull that got good stock, and highly spoke of by all who had used him.

"2d Duke of Oxford has not been entered in Herd Book, and I have not seen any Herd Book since G. Coates', jun., death. 2d Duke of Oxford was by Duke of Northumberland (1940); dam *2d Oxford Cow*, by Short Tail (2621); gd. Matchless Cow (4414), I bought at Mr. Brown's sale in 1831.

"*2d Oxford Cow—her two sons* (shown also at York and *Lord Hardinge* (her grandson), and *her two daughters*—six in all, were shown at the Scarborough meeting of the Yorkshire County Society in August, 1847, and each obtained a premium. Lord Hardinge, highest premium as a bull calf; his sire, 2d Duke of Oxford, highest premium as an aged bull; 3d Duke of Oxford, second premium; and his own sister highest premium as a heifer calf. 2d Oxford Cow, second premium as an aged cow; her daughter, own sister to 2d Duke of Oxford, second premium as a 2-year old: so that there were three first premiums, and three second premiums. But the judges candidly owned to me that there ought to have been more first premiums; but they well knew that they would have given great offence by reversing the decisions at the Northampton meeting. And certainly they (the judges) were most unfairly treated for setting Captain Shaftoe second, when he ought properly to have been left out without any premium. There were many better bulls at Scarborough than Captain Shaftoe's. I think the above will give you a full account of Lord Hardinge and his predecessors."

Home Correspondence.

The Sheffield Accident: Bursting of the Bradford Reservoir.—It is possible this accident has arisen from a change that all earthen embankments made to hold water are liable to after being similarly exposed. These embankments are made principally of clay, a substance that freely loses moisture on exposure to air, and shrinks and cracks in all directions in so doing. I may, in proof of this, instance the cracked state of clay land in autumn, and its porosity after draining; or the difference of size in a brick fresh from the mould and one after exposure in the clamp, which will often amount to an eighth. The soil in making embankments to hold water is necessarily put together in a wet state, approaching to that of a brick fresh from the mould; it is then impervious to air and water, and so remains all the time that it is so kept, but will so continue only while in this condition. Now the amount of rain fallen in the midland counties during the last autumn and winter, up to the last three weeks, has been remarkably small, and the land has been singularly dry; this has been so much the case, that in many parts the ponds, usually overflowing, have not been filled, landsprings have not risen, wells have continued dry that were never before known to fail at this season. The consequence of this has doubtless been to greatly reduce the contents of the reservoir and expose the lower part of the embankment to the evaporating action of the air, the soil has lost moisture, and consequently shrunk and cracked, fissures have opened, and while in this state the late heavy rains have fallen; the water has suddenly risen many feet in the reservoir, the fissures have been filled under great pressure, and the cracked bank, unable to resist the strong hydraulic force so brought to bear on it, has been blown out. I use the word *blown*, for really when one considers the power of water acting upon an open body, as I must consider the bank to have been after the drought, no other word so well expresses its force, so strongly exemplified in its destructive course. *Hewitt Davis, March* 21.

Hallett's Wheat.—In the *Agricultural Gazette* of March 5 the above Wheat is described as extremely coarse. In the autumn of 1862, I purchased of Mr. Hallett a bushel of it for 2*l.* 2*s.*, and dibbed it at the rate of a peck to the acre, one seed in a hole. Herewith I beg to send you a sample of the produce from which the chaff only has been blown. Winnowed, the bushel weighs 65 lbs. It is not, I think, coarser than the other Red Wheats grown in this neighbourhood, and makes good bread. Last October Mr. Saunderson, the miller, offered me 26*s.* per load of 5 bushels for it, which was at that time his highest price for Red Wheat. I have this year grown a bushel of the Z family, for which I paid 1*l.* 1*s.* Should you wish for a sample I shall be happy to send it after harvest.

E. B. [Thanks; will you give us a full history of the produce in the two cases?]

Extraordinary Fecundity in a Sheep.—A small Welsh ewe of the Llyn breed, belonging to Mr. Wilbraham, of Rode Hall, Cheshire, produced for 12 consecutive years three lambs, which she reared and brought to maturity, making a total of 36 lambs. Last year she had four lambs, one of which died; the other three she reared. This year she would have given birth to five had she not died of old age and exhaustion a few days before her time of yearning, thus making altogether in 14 years 45 lambs, 39 of which she reared. She was in the habit of being fed with new milk morning and evening for some weeks after the birth of her lambs, of which she partook freely from a bottle. *W. P., March* 19.

Garden Manures.—Sanitary subjects are attracting much attention, and if you do not think the matter too trivial for your columns, may I beg to suggest a very simple and inexpensive improvement in cottage conveniences, which I do not remember to have seen practised exactly in the manner I propose. It is of course founded upon the Rev. Mr. Moule's little pamphlets on useful and sanitary subjects, which are very excellent, and based upon a perfectly right principle; but I think it must be admitted that his plan requires an amount of constant attention and trouble, which, though not laborious, is yet so contrary to the usual habits of country cottagers, that I fear it is not likely to be generally adopted. Besides which I cannot but think that there would occur in practice various difficulties and objections not necessary to particularise. Neither do I exactly approve of Mr. Moule's plan of throwing Cabbage leaves, &c., among growing crops. They would harbour slugs, be blown about by the wind, and encourage a habit of untidyness. As Mr. Moule truly observes, "In God's Providence there is no waste." The principle of nature, according to its Maker's arrangement, is in few words, this:—The dung of all animals, as well as all other offal matters and dead vegetable substances, become food for living plants by means of the earth (or mould) they grow in; and the point he urges on his readers is, that the sooner offensive matter is covered over and mixed with earth the better, as earth has, by its own natural properties, the power of combining with itself the substances required for the growth of the "herb of the field," and all plants necessary for the support of man. The smell of anything is only a certain part of it that is carried away by the surrounding air, which air is thereby made not only disagreeable but very unwholesome, and it is moreover very wasteful for man's purposes, as it is just so much of its strength lost. In furtherance of Mr. Moule's benevolent objects, allow me to offer a plan for cottage privies, that would, I think, by the application of his principle to a rather different arrangement, make it likely to meet with more general favour, and suit better with the habits and requirements of country labourers. It is as follows:—Instead of the usual flat-bottomed pit or vault under the seat, I would have it made in form like a trough, falling from all sides towards an arched opening through the back or side into the ash-pit, which should also be made in like manner, falling from each side towards another arched opening placed a little below the level of the ground, and leading to a third small pit, having a flat bottom, and of a size to contain not more than about half a barrowful of earth; this last pit, which I will call the emptying pit, should be walled round just up to the level of the surrounding ground. All these pits must be built with good solid walls, well mortared together and cemented, to prevent as much as possible any liquid from oozing through. By their construction the contents will be constantly pressing forward towards the smallest, or emptying pit. This emptying pit should be kept always full of earth to receive the drainage from the ash-pit and the privy. Into the ash-pit should be thrown all the kitchen refuse and garden rubbish, and it will also receive gradually the contents of the privy. The ashes from the fire should be distributed both in the privy and over the contents of the ash-pit, so that they may be at once mingled together. Besides the ashes a small quantity of earth should be thrown down the seat every day. If the seat were made so as to lift up, by having hinges at the back, it would make it easier to throw in the slops, fire ashes and earth, as often as necessary without causing rubbish on the seat, and would also enable the under side of it to be kept clean and in good order. The work required would then be as follows each day: throw the ashes or part of them down the seat, and also the house slops and soap-suds from washing, and once every day or oftener, throw down also half a spadeful of garden earth; this will prevent almost or quite entirely the usual unwholesome smell which too often comes up such places; and not seldomer than once a week, take away in a barrow the contents of the emptying pit, both the earth that was put in the week before, and as much more of the general contents of the ash-pit as will come out easily by the spade or shovel, through the opening. Make a heap of it in some convenient part of the garden, and refill the pit with earth collected as before from any vacant place. So much of the top of the earth in the pit as is dry and unmixed with the other contents, may be used again. By these means you will soon have a good heap of manure and no waste, with really very little trouble, surely not more than any working man could easily give after his day's work for his master is ended. It is sad to see what a great deal of useful material for making manure is constantly wasted! How large an amount of soap-suds and house-slops of all sorts are let to run into the ditch for the benefit of the nettles and other coarse weeds, instead of being turned to good account. I have said above that the garden rubbish should be thrown in the ash-pit, but of course I do not mean large quantities of Potato stalks and such like, which should be burned, and the ashes taken to the garden heap, and be mixed with the rest. Whatever of this kind is put into the ash pit should be cut with a knife or spade into short pieces; they will mix better with the rest and come out more easily than if left long and awkward. The above remarks apply chiefly to cottages and small country establishments, but improvement is needed in houses of a larger kind in respect of waste, as in general the only object sought for is to get rid of offensive matters and drain them away, not to apply them to use. About two years ago you gave some excellent articles on the late Prince Consort's farms, and among other subjects the system of drainage at Osborne was touched upon, but I think there was not a perpendicular section; if I am mistaken will you kindly direct attention to it. *Rusticus.*

Use of Malt.—As the Chancellor of the Exchequer proposes to bring in a Bill to remit the duty on malt when used for feeding purposes, it is very desirable that information should be collected that bears on this point. Mr. Williams, with an industry that does him credit, obtained the opinions of many leading feeders, and read to the Farmers' Club a great number of letters, all speaking favourably of the limited use of malt, but in no instance have we anything approaching accurate experience as resulting from a carefully conducted experiment. The comparative feeding effects of a given quantity of Barley, and the same when converted into malt, accurately noted, would be more to the point than any number of general statements. If malt is really so superior to Barley, and can be substituted for it, the boon will not be slight; and as it is after all doubtful whether the abolition of the tax would result in a much higher, though possibly a more average price, as the duty is paid more by the consumer than the producer, it may be wise to accept a part, since there is little prospect of obtaining the whole. But is malt so superior to Barley? In the absence of actual experiments we can only hazard an opinion. Mr. Dring told the Club, that two tons of malt made, duty free, would cost as much as three tons of Barley; consequently, to be profitable, it should possess one-third more feeding property. Many of those who think highly of malt argue, we think illogically, when they suppose that because a small quantity largely mixed with other food is found very feeding, a large amount would have the same effect. Experience in the use of the Carob Bean has shown that it is easy to supply too much saccharine matter. In such cases the appetite becomes affected, and possibly acidity might result. The animal refuses other food which is necessary for proper feeding. Used in moderate quantities, and well mixed with other food, malt would doubtless be useful; but it is a question whether the same effect may not be obtained at a cheaper rate. Most of the cattle foods which are still in extensive use, contain a large percentage of the Carob Bean, and this appetising effect is partly attributable to the agreeable taste thus communicated to the food. Why should not the farmer make a proper mixture of different feeding substances, using home-grown and foreign according to relative prices; thus—Barley, Indian Corn, Lentils, Peas or Beans, and Wheat, with a small percentage of the Carob Bean, mixed and well ground, would make an excellent food; which would possibly be found more valuable for the general purposes of feeding than the use of a large quantity of malt. *John Coleman, Wandsworth.*

Enforced Outfall.—I beg to thank Mr. Bailey Denton for his answer to my question, although it is not quite so satisfactory a one as I had hoped to have received. I should be very glad to join with him, and to assist him, if I could, to obtain a more simple remedy; but what can I do? I am not in Parliament; and both the chairman and vice-chairman of his company are influential men in Parliament; and either of them might, with Mr. B. Denton's assistance, bring in a short Bill to provide some simple and speedy tribunal—such as the Court of Petty Sessions, before not less than two or three Justices, who should view the ground in question, and who might be empowered, on satisfactory evidence being put before them—in addition to a view—to order the required outfall to be made through any person's land at the expense of the applicant, and specially providing that no damage be done to the owner or occupier of such land. Such is quite roughly an outline of a measure which Mr. B. Denton could easily put into shape. If I can assist him in any way I shall be most happy to do so if he will only point out how; or if he will come here to see me and confer on the matter I shall be most happy to see him (he knows my address); or if he will get up a landowner's meeting in London or elsewhere to discuss this matter I shall be most happy to attend it. I hope that this important subject may not be lost sight of, for that the importance of it is daily increasing I have no doubt whatever. *A Gloucestershire Drainer.*

Foreign Correspondence.

The accompanying letter may be interesting to some of your readers. Here we see the old error of exhausting fertile soils, neglecting and undervaluing manures, and believing in perpetual fertility. The same sentiments prevail extensively in the United States, where manure is too often thrown into rivers or accumulates unused for a long period of years. *J. J. Mechi.*]

Rockwood, Appin: *January* 20, 1864.—Having read with much interest, and I think with no little advantage, your treatise on agriculture, published in 1859, I now take the liberty of addressing you on the subject. I would not thus so boldly act, did I not observe in the pages of your book the strongest desire to promote the cause of agriculture, and thereby confer the greatest boon on mankind.

The farmers in this country have fallen into the self-same errors which you have alluded to in your book. For instance, never changing their crop, sowing Wheat on the same land for upwards of 30 years; the land badly tilled at about 4 or 5 inches depth; never thinking of returning one vestige of manure to the land to atone for the perpetual cropping; burning the stubbles, should they be thick enough for the purpose, with numerous other absurdities. The consequence is, these lands now produce from 8 to 12 bushels per acre, while in their virgin state (I learn from reliable authority) 35 and 40 bushels was the usual return. In glancing at these statements you will naturally conclude that the farmers are the poorest people of the community, and your surmise would be correct, as they most decidedly are.

There are lands in this country worth from 8*l.* to 10*l.* per acre, but these are alluvial flats, possessing I might almost say an inexhaustible amount of vegetable deposit, and are the exceptions, but the land in general is not worth more than from 30*s.* to 60*s.* per acre. Of course I am referring to land bordering the different settlements, the land in the far interior being used exclusively for grazing purposes, and the price merely nominal. I will give you the average value of farm produce here, as accurately as it lies in my power, say for the last 5 years, as the markets have been in a somewhat temperate or even low state during these years. In all cases I will give you good qualities. Wheat from 4*s.* to 7*s.* 6*d.* per bushel; Oats, 5*s.* to 7*s.* 6*d.*; Barley, 4*s.* to 5*s.*; Indian Maize, 3*s.* to 6*s.*; other cereals little grown. Potatos, from 4*s.* to 10*s.* per cwt.; Onions, 14*s.* to 20*s.* per cwt.; Beef from 1*d.* to 3*d.* per lb.; Mutton, 2*d.* to 5*d.*; Bacon, 7*d.* to 1*s.* 3*d.*; Butter, 6*d.* to 1*s.* 3*d.*; other produce at proportionate prices.

Farm labourers' wages range from 35*l.* to 40*l.* per annum, with board and lodging. I must candidly admit that the rate of wages is high, and the greatest drawback to profitable farming, but to balance this, we have many advantages in this country: for instance no land taxes to pay as yet; fuel costs us little or nothing, and many other things in our favour. Still farming is the pursuit least remunerated in the colony, all owing I affirm to the low, miserable style of cultivation. Were you to witness the operations of us farmers for one year, it would take a good deal of persuasion to convince you of our sanity. Since reading your book I have reduced the extent of my cultivation one-third, worked the land better, and used as much manure as came within my reach; my neighbours allowing me to remove it from their farms gratis, where in some places it had been accumulating for years, they asserting that it was good riddance of bad rubbish.

Unfortunately, since I have somewhat altered my mode of cultivation, guided by your valued book, the seasons have been most unfavourable, thereby preventing me from properly estimating the value of the additional cultivation, &c. The only year that my Wheat arrived at maturity since I followed a somewhat better style, it was cut to the earth by a severe hailstorm. I, however, had cut about 3 acres before the storm, which nevertheless got knocked about in the stooks, but still turned out 23 bushels per acre, and weighed 63 lbs. to the imperial bushel. I calculated that I more than doubled my produce per acre, with comparatively little additional expense. This year my Wheat has again failed, being completely destroyed by the rust. I have, however, 40 bushels of Oats per acre, and I may safely say double the Oaten hay per acre in comparison with my neighbours.

I am sure it cannot fail to gratify you to learn that your "work" has reached this far distant country, and likely in all probability to be of much benefit to us. I saw in the *Sydney Morning Herald* a few days since a return of your last Wheat crop, where you mention having in the one case 58 bushels, and in the others 52 bushels per acre, weighing respectively 66 and 64 lbs. per bushel. This immense produce I pointed out to some of my friends, but they only heaved a deep sigh and said "It can't be accomplished here," but this I cannot help thinking is most ridiculous.

In conclusion, may I ask as a very great favour a brief description of your farm. That is to say, its extent at present, number of acres under each crop, a few of the most prominent improvements that you look upon as indispensable to good farming. *An Australian.*

Societies.

BATH AND WEST OF ENGLAND.

At the last monthly meeting of the Council the Secretary reported that the Local Committee

of the city of Bristol had paid to the Society's Treasurer the whole of the sum of 1600*l.* promised towards the expenses of the meeting in June next.

BRISTOL MEETING: *Local Prizes.*—A letter was read from Mr. Proctor Baker, honorary secretary to the Bristol Local Committee for receiving the Society in June next, announcing that they had voted the following amounts to be given as special local prizes, subject to such conditions as the Council might see fit to enforce:—

Cattle.—For the best bull, cow, and offspring, the calf not to exceed six months in age, 15*l.*; 2d ditto, 10*l.* For the best bull-calf of any breed, above five months and under twelve months old, 10*l.*; 2 l 5*l.* For the best heifer-calf, ditto, 10*l.*; 2d 5*l.* *Shropshire Down Sheep.*—For the best yearling ram, 10*l.*; 2d 5*l.* For the best ram of any other age, 5*l.*; 2d 3*l.* For the best pen of five two-tooth ewes of the same flock, 5*l.*; 2d 3*l.* *Other Classes.*—For the best ten long wool couples in the wool, of the same flock, 10*l.*; 2d 5*l.* For the best ten short-wool couples, ditto, 10*l.*; 2d 5*l.* *Entire Horses.*—The Society of Merchants, at the request of the Committee, have offered 50*l.* for the best cart stallion, not of the Suffolk breed, to cover in the season of 1865, in the district, within twelve miles of Bristol, and to attend in Bristol every alternate Thursday, the fee not to exceed two guineas for each mare.

Mr. R. H. BUSH, in allusion to the foregoing offer of 50*l.* by the Society of Merchants, expressed a hope on the part of those giving the prizes, that there would be good competition among the Clydesdale stallions; an animal of that breed being much wanted in the neighbourhood.

Commencement of the Breeding Year.—Mr. KNOLLYS called attention to a letter on this subject by Mr. Duckham, editor of the Hereford Herd Book, and considering as he (Mr. Knollys) did, that unanimity of practice was desirable, wherever it could be agreed upon by different societies, he gave notice that on an early day he should call the attention of the Council to the propriety of considering in what way a uniform system of calculating the age of animals could be adopted by the various societies, so as best to promote the interests of agriculture.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

At 9 a.m., Railway Time.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer. Dry Bulb.	Wet Bulb.	Wind. Direction.	Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	March 18	Inches. 29.85	38	35	E.E.	1	0	49	30	56	30	Inches.
Friday ..	19	29.63	47	43	S.E.	1	5	44	31	56	24	..
Saturday ..	19	29.63	47	43	E.	0	0	59	30	64	23	..
Sunday ..	20	29.63	47	43	E.	0	0	59	30	64	23	..
Monday ..	21	29.66	42	40	E.	0	10	59	35	68	50	..
Tuesday ..	22	29.67	43	40	N.E.	1	10	50	37	65	39	..
Wednesday ..	23	29.90	39	37	N.E.	2	10	45	36	64	34	..
Thursday ..	24	30.02	41	38	E.	0	0	48	25	64	17	..

Notices to Correspondents.

MUSTARD: *A D E.* Sow about 1 peck of seed broadcast on any soil in good tilth. If sown in May, it will be fit in six or seven weeks—but it is slower of growth when sown as late as August or September. The sheep are put on in time to finish it before the blossom opens.

SKINLESS BARLEY: If our Correspondent "W," (see *Agricultural Gazette*, of Feb 20, 1864, page 182), has not obtained the naked or skinless Barley, we should be glad to procure for him two or three ears and a few seeds if he will send us his address.

SECURED BY
ROYAL LETTERS PATENT.

PRICE 32*s.* 6*d.*

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanized Wire Strainer, Rose, and Small Jet, Brass Cylinders and Japanned Stirrup. With Copper Stirrup, Two Guineas.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

ROBERT HOGG, LL.D. and F.L.S., SHIRLEY HIBBERD, Esq., F.R.H.S., THOMAS RIVERS, Esq. (the eminent Florist), and other well-known gentlemen recommend the

HYDROPULT

AS AN INVALUABLE GARDEN IMPLEMENT.

A CARD.

It may not be known to the Public generally, that *interested parties*, unable legitimately to prevent an extensive sale of a new, efficient, and valuable invention, which, by its merited success, has superseded other devices of the kind, have recourse *through their friends* to the now too frequent practice of writing anonymous communications to journals of large circulation, *requesting answers* as to the merits and efficiency of the invention in question. These questions and the answers, PREVIOUSLY CONCOCTED by the interested parties aforesaid, duly appear; and are so worded as to have the desired effect. Thus are the Public misled and deceived by *malicious* and *envious* inuendos, the tendency of which is to bring into bad repute an article of utility, which has received the unqualified approval of thousands of well-known gentlemen, who, in a spirit of kindness, forward to the inventor gratuitous testimonials, as a token of their appreciation of his invention.

Parties unknown to me, have, from motives best known to themselves, in this manner criticised the efficiency of the "Hydropult." I have no answer to make to them: to the Public I would say that I will cheerfully forward, on application, a prospectus, containing testimonials from gentlemen well known throughout the United Kingdom.

CHARLES P. BUTTON.

CHARLES P. BUTTON, PROPRIETOR, HYDROPULT WAREHOUSE and SHOW ROOMS,
27, LEADENHALL STREET, LONDON, E.C.

Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET,

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

CATALOGUES are now ready, and a stock of Plants in the most perfect health, of all sizes, and at prices to suit all purposes. Sunningdale Nursery, S.W. Rail.

GEO. BAKER begs to announce that his extensive Collections of Hardy RHODODENDRONS, GHENT AZALEAS, and KALMIA LATIFOLIA, are unusually well set with bloom, and his fine Collection of CONIFERS in the best possible condition.

CATALOGUES on application at the American Nursery, Bagshot, Surrey. The Nurseries are about 1 mile from Sunningdale Station, South-Western Railway.

Notice.

JOHN WATERER, of The American Nursery, Bagshot, Surrey, is the EXHIBITOR of RHODODENDRONS at the Royal Botanic Gardens, Regent's Park.

His CATALOGUE, describing colours, prices, &c., can be obtained by letter addressed to the Nursery as above.

☞ For detailed Advertisement of CONIFERS, ORNAMENTAL SHRUBS, &c., refer to page 1151 for 1863.

American Plants.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE for the present Season is now ready, and will be forwarded free to all applicants. As well as American Plants, it contains a summary of their General Nursery Stock, one of the most extensive in the kingdom.

Knap Hill Nursery, near Woking, Surrey.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 86 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

New Chrysanthemums.

JOHN SALTER'S DESCRIPTIVE CATALOGUE of New CHRYSANTHEMUMS, PYRETHRUMS, HARDY VARIEGATED PLANTS, &c., for 1864, is now ready, and will be sent post free on receipt of Two Stamps.

Versailles Nursery, William Street, near Hammersmith Turnpike, W.

Chrysanthemums, Chrysanthemums.

J. H. BIRD, F.R.H.S., NURSERYMAN, Stoke Newington, is now sending out from his great Stock of the above:—20 pairs of fine varieties of LARGE CHRYSANTHEMUMS for 10s.; 20 pair of Cuttings of ditto for 5s.; 25 pair of fine POMPONS for 10s.; 25 pair of Cuttings of ditto for 5s.

N.B. To save trouble all orders to be prepaid.

New Chrysanthemum, Empress of India.

E. G. HENDERSON AND SON are now prepared to supply plants of the above. It is a beautiful variety from the "C. Queen of England;" pure white, three quarters globe in shape, with a full centre, in size one of the largest. 5s. each; or four for three. with Trade Discount.

Wellington Nursery, St. John's Wood, London, N.W.

Superb Double Hollyhocks, now ready for Planting.

WILLIAM CHATER has a large stock of fine healthy plants, which he can supply on liberal terms.

See Advertisement on other page.

Address, WILLIAM CHATER, Nurseries, Saffron Walden, Essex.

Select Double Hollyhocks.

WILLIAM PERRY begs to announce that he has for SALE a good and healthy stock of the above that will flower well this season.

A DESCRIPTIVE LIST of sorts may be had on application.

FOREMAN at the Nurseries, Sawbridgeworth, Herts.

Agricultural, Vegetable, and Flower Seeds.

EDWIN HOLLAMBY begs to inform his friends and the public, that his NEW DESCRIPTIVE CATALOGUE is now ready, and will be forwarded post free to all applicants.

Nursery and Seed Establishment, Tunbridge Wells; and Groomsbridge, Kent.

Seeds, Carriage Free.

WILLIAM CUTBUSH AND SON'S PRICED CATALOGUE of GARDEN and FARM SEEDS is ready, Post-free, on application.

The name their house has obtained during many years past, is a sufficient guarantee for the quality of the goods offered.

Highgate Nurseries, London, N.

GEORGE SMITH'S PRICED and DESCRIPTIVE CATALOGUE of all the leading NOVELTIES of 1864, of choice Show, Spotted, Fancy, Zonal, and Variegated Pelargoniums, Fuchsias, Verbenas, Petunias, Dahlias, Chrysanthemums, Bedding Plants, &c, is now ready, and may be had free by Post in exchange for one Postage Stamp.

Tollington Nursery, Hornsey Road, Islington, London, N.

RUSSELL'S PYRAMID PRIMULA.—Seed of this celebrated strain is now ready, in packets, price 2s 6d. The great satisfaction which these sorts have given in previous seasons will be fully maintained this. The flowers can be seen at the Nursery during the spring. Printed instructions for cultivation with each packet.

GEO. CLARKE, Nursery, Streatham Place, Brixton Hill, S.; and 4, Windsor Terrace, Pimlico, S.W.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well-assorted Collections of EXOTIC ORCHIDS, FERNS, Miscellaneous STOVE and GREENHOUSE PLANTS, Variegated and Ornamental FOLIAGED PLANTS, TREE FERNS, &c., amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE, with a list of Beck's New and Choice PELARGONIUMS, Post free to all applicants.

Paradise and Victoria Nurseries, Holloway, London, N.

RICHARD SMITH'S SEED of the following is direct from the Growers, and most superb:—Imported Truffaut's Aster, Stock, Wallflower, and Balsam, 1s. per packet; Phlox Drummondii, Zinnia, Cockscomb, Larkspur, Dianthus and Variegated Poppy, 6d. per packet; English saved Calceolaria, Cineraria, and Fringed Primula, 1s. 6d. per packet; Mimulus, Rhodanthe, Lobelia, Pansy, Hollyhock, Petunia, Amaranthus ruber, Antirrhinum and Auricula-eyed Sweet William, 6d. per packet

RICHARD SMITH, Seed Merchant, Worcester.

FINE GRASS LAWNS in FLOWER GARDENS, &c.—The great expense of cutting and carting Turves from a distance may be avoided, and a *superior* Turf produced in a few months, by sowing SUTTON'S LAWN GRASS SEEDS, which consist solely of the finest and shortest growing kinds, perfectly *free from Moss and other weeds.*

Price 18s. *per bushel, or* 1s. *per pound.*

Quantities of not less than one bushel will be sent carriage free.

SUTTON & SONS, Seed Growers, Reading, Berks.

HARDY FLOWER SEEDS, of Showy Colours only, sent free by post or rail, by SUTTON AND SONS.

A COLLECTION of the best 50 sorts known .. 10s. 6d.
A COLLECTION of the best 36 sorts known .. 7 6
A COLLECTION of the best 24 sorts known .. 5 0

SUTTON'S CATALOGUE of SEEDS will be sent post free.

SUTTON & SONS, Seed Growers, Reading, Berks.

Flower Seeds, Free per Post.

WM. WOOD AND SON'S splendid COLLECTIONS as under:—

HARDY ANNUALS.

100 varieties, 20s. | 25 varieties, 5s.
50 varieties, 10s. | 12 varieties, 2s. 6d.

HALF-HARDY ANNUALS.

100 varieties, 25s. | 25 varieties, 7s.
50 varieties, 12s. 6d. | 12 varieties, 3s. 6d.

GERMAN FLOWER SEEDS as imported in original sealed packets on lowest terms.

CATALOGUES on application.

Woodlands Nursery and Seed Warehouse, Maresfield, Uckfield, Sussex.

Flower Seeds, Postage Free.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.

COLLECTIONS of FLOWER SEEDS, 100 Packets, 20s.
" " " 50 " 12s.
" " " 25 " 6s.
" " " 12 " 3s.

SEEDS WORTH GROWING.

DOBSON'S PRIZE CALCEOLARIA, unequalled, 1s.6d., 2s. 6d ,5s.
DOBSON'S PRIZE CINERARIA, ex. ex., 1s, 2s. 6d., 5s.
DOBSON'S PRIZE PRIMULA, splendid, 1s., 2s. 6d., 5s.

Sealed packets, Post free. Trade supplied.

J. DOBSON & SONS, Seedsmen, Isleworth, W.

Herbaceous Calceolarias.

E. G. HENDERSON AND SON offer these, of splendid varieties, in healthy fine plants for conservatory decoration, being now in most suitable order for travelling. 12s and 18s. per dozen.

TIGRIDIA PAVONIA.—Very beautiful for groups in the flower garden, or for pot culture. The remarkably large and brilliant orange-scarlet flowers, picturesquely spotted, render them exceedingly attractive during the summer months. 1s. 6d. per doz.

Wellington Nursery, St. John's Wood, London, N.W.

NEW PLANTS of 1863.

In strong healthy Plants.

NEW GERANIUMS, 24s per doz. | New FUCHSIAS, 6s. p.doz.
" ZONALE, 12s. per doz. | " PETUNIAS, 6s. "
" CINERARIAS, 12s. per doz. | " VERBENAS, 4s. "

LONICERA AUREO-RETICULATA, 4s. to 9s.

H. WALTON, Edgend Marsden, near Burnley.

CATALOGUES on application for one stamp.

To the Trade.

AZALEAS, ERICAS, and EPACRIS, fine bushy plants, well set with flower buds, at moderate prices. An inspection solicited.

THOMAS JACKSON & SON, Nurseries, Kingston, S.W., adjoining the Kingston New Station, South Western Railway.

ANDROMEDA FORMOSA (TRUE).—Strong Plants of this beautiful hardy Evergreen Shrub, about 1 foot, 50s. per 100; 1½ to 2 feet, 12s. per dozen; and extra strong selected bushy specimens, 2s. 6d. each.

A CATALOGUE of one of the finest Nursery Stocks in the kingdom, extending over 60 acres, forwarded on application.

W. H. ROGERS, Red Lodge Nursery, Southampton.

Gladiolus Brenchleyensis.

YOUELL AND CO. have much pleasure in offering the above GLADIOLUS, unequalled by any other variety for the brilliancy of its colour. The Bulbs are unusually fine. Price 3s. per doz.; 20s. per 100.

Trade price on application,

Royal Nurseries, Great Yarmouth, Norfolk.

Giant Scarlet and White Intermediate Stocks.

ROBERT PARKER begs to offer SEED of these splendid varieties, which are far superior to the ordinary varieties of Intermediate Stock. Habit more robust and branching; flowers larger, and borne in greater profusion. If sown in April they will commence flowering in July and continue until Christmas in mild seasons. Price per packet, 1s.

The following Choice SEEDS are also specially recommended, having been selected with the greatest care:—

	Per packet—s.	d.
CALCEOLARIA, HERBACEOUS, finest mixed	2	6
CARNATION, PERPETUAL, finest mixed	2	6
CINERARIA CRUENTA, finest mixed	2	6
PICOTEE, PERPETUAL, finest mixed	2	6
PRIMULA SINENSIS FIMBRIATA, finest mixed ..	2	6
PRIMULA SINENSIS FIMBRIATA KERMESINA SPLENDENS	2	6

A SELECT PRICED and DESCRIPTIVE CATALOGUE of FLOWER, AGRICULTURAL, and VEGETABLE SEEDS, and NEW and RARE PLANTS, is published and will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

60,000 3-YEAR SEEDLING SILVER FIR, 4s. per 1000.

60,000 3-year Seedling SPRUCE FIR, 3s. per 1000.
60 PINUS EXCELSA (fine), 8 to 10 feet, 5s. each.
200 TRITOMA UVARIA GLAUCESCENS, true.
12 cwt. new FURZE SEED, at moderate prices.

WANTED, 2-year SEEDLING SCOTCH FIR.

R. FENNESSY & SON, Waterford.

Double Italian Tuberose Roots, 4s. per Dozen.

A. COBBETT, FOREIGN WAREHOUSE, 18, Pall Mall, W., has the pleasure to inform all Amateurs and Gardeners that he has just received from Italy his usual Annual Importation of this beautiful and fragrant Flower; and has much pleasure in announcing that the Roots are very large, and in splendid condition.

N.B. Directions for Planting sent with each order.

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

LIST OF AWARDS, March 30, 1864.

FIRST-CLASS CERTIFICATE.

ASPLENIUM FERULACEUM, from Mr. W. Bull, Chelsea.
CHAMÆROPS STAURACANTHA, from Mr. W. Bull.
HYACINTH KING OF THE BLUES, from Mr. W. Paul, Waltham Cross
PHORMIUM TENAX VARIEGATUM, from Mr. Williams, Holloway.

SECOND CLASS CERTIFICATE.

ANÆCTOCHILUS SPECIOSUS, from Mr. W. Bull.
FORSYTHIA SP., from Mr. Standish, Ascot.
LASTREA VARIA, from Mr. W. Bull.

COMMENDATION.

BEGONIA DIGSWELLIENSIS, from Mr. Earley, Gr. to F. Pryor, Esq., Digswell.

SPECIAL CERTIFICATE.

SARRACENIA DRUMMONDII, from Mr. Williams, Holloway.

The next MEETING will take place on the day of the AZALEA SPRING SHOW, April 20.

THOMAS MOORE, Secretary to the Committee.

ROYAL HORTICULTURAL SOCIETY.

CAMELLIA and RHODODENDRON SHOW,

WEDNESDAY, March 30, 1864.

AWARDS of the JUDGES.

CLASS 1.—6 CAMELLIAS in flower, distinct kinds. (Nurserymen.)
No competition.

CLASS 2.—6 CAMELLIAS in flower, distinct kinds. (Amateurs.)
1st prize, withheld.
2d, Mr. Wm. Young, Gr. to R. Barclay, Esq., West Hill, Highgate, 2l.

CLASS 3.—4 CAMELLIAS in flower, distinct kinds. (Open.)
No competition.

CLASS 4.—6 RHODODENDRONS, 6 kinds. (Nurserymen.)
No competition.

CLASS 5.—4 RHODODENDRONS, 4 kinds. (Amateurs.)
1st, Mr. Wm. Young, Gr. to R. Barclay, Esq., Highgate, 1l. 10s.

CLASS 6.—6 ROSES in Pots, distinct kinds. (Open).
1st, Mr. C. Turner, the Royal Nurseries, Slough, 1l. 10s.
2d, Messrs. Paul & Son, Old Nurseries, Cheshunt, 1l.

CLASS 7.—24 HYACINTHS, distinct kinds. (Nurserymen).
1st, Messrs. W. Cutbush & Son, Highgate Nurseries, 2l.
2d, Mr. Wm. Paul, Waltham Cross, 1l. 10s.
3d, Messrs. Barr & Sugden, 12, King Street, Covent Garden, 1l.

CLASS 8.—12 HYACINTHS, distinct kinds. (Amateurs.)
1st, Mr. Wm. Young, Gr. to R. Barclay, Esq., Highgate, 2l.
2d, Mr. A. Carr, Gr. to B. Noakes, Esq., Highgate, 1l. 10s.
3d, Mr. J. Masters, Gr. to W. H. Bodkin, Esq., Highgate, 1l.

CLASS 9.—12 Pots of TULIPS, 4 kinds. (Open.)
Equal 1st, Messrs. W. Cutbush & Son, Highgate Nurseries, 1l. 10s.
Equal 1st, Mr. Wm. Paul, Paul's Nurseries, Waltham Cross, 1l. 10s.
2d, Mr. Wm. Young, Gr. to R. Barclay, Esq., Highgate, 1l.
3d, Mr. A. Carr, Gr. to B. Noakes, Esq., Highgate, 15s.

CLASS 10.—Collection of 18 FORCED FLOWERS, various. (Open.)
1st, Mr. W. H. Treen, Victoria Nursery, Rugby, 2l.
2d, Mr. Wm. Young, Gr. to R. Barclay, Esq., Highgate, 1l. 10s.

CLASS 11.—6 GERANIUMS, forced, distinct kinds. (Open.)
1st, Mr. C. Turner, Royal Nurseries, Slough, 1l. 10s.

CLASS 12.—12 RHODODENDRONS, cut blooms, distinct. (Open.)
No competition.

CLASS 13.—12 CAMELLIAS, cut blooms. (Nurserymen.)
1st, Mr. W. H. Treen, Victoria Nursery, Rugby, 10s.

CLASS 14.—6 CAMELLIAS, cut blooms, distinct kinds. (Amateurs.)
1st, Mr. Thos. Todman, Gr. to R. Hudson, Esq., Clapham Common, 10s.

CLASS 15.—6 Pots of LILIES of the VALLEY. (Open.)
1st, Mr. W. Howard, Gr. to James Brand, Esq., Bedford Hill House, Balham, 1l.
2d, Mr. Wm. Bartlett, Shaftesbury Road, Hammersmith, 15s.

CLASS 16.—MISCELLANEOUS COLLECTIONS. Plants in Flower. (Open.)
Extra, Mr. Wm. Bull, for a Collection of New and Rare Plants, 2l.
Extra, Messrs. Paul & Son, for a Collection of Roses in Pots, 2l.
Extra, Mr. Wm. Paul, for a Collection of Hyacinths, 2l.
Extra, Messrs. W. Cutbush & Son, for a Collection of Hyacinths, 2l.
Extra, Mr. Wm. Paul, for a Collection of Cut Roses, 1l. 10s.
Extra, Mr. Wm. Bull, for a Collection of 6 Azaleas, 1l. 10s.
Extra, Messrs. Paul & Son, for a Collection of Cut Roses, 1l.
Extra, Mr. W. Howard, Gr. to James Brand, Esq., Bedford Hill House, Balham, S., for a Collection of 24 Lilies of the Valley, 1l.
Extra, Mr. T. Todman, for a Collection of Primulas, 15s.
Extra, Mr. Wm. Paul, for a Collection of Tulips, 15s.
Extra, Mr. Wm. Bull, for Plant Case filled with Plants, 10s.
Extra, Mr. C. Turner, for 4 Plants of Bougainvillea speciosa, 10s.

The Gardeners' Chronicle.

SATURDAY, APRIL 2, 1864.

MEETINGS FOR THE ENSUING WEEK.

THURSDAY, April 7—Linnean .. .. 8 P.M.
SATURDAY, — 9 { Royal Botanic (Second Spring Exhibition) .. .. .. 2 P.M.

At this season of the year, some of our readers may find it useful to be reminded of certain considerations which bear upon the operation of SEED SOWING, which they have now to put in practice.

A seed planted in the earth germinates under the combined influences of heat and moisture, and the process is all the more active when these agencies are accompanied by the exclusion of light. The practical means employed to secure the latter condition, namely a covering of earth, is indeed also favourable to the action of the two former, by closing in and sheltering the seed from the vicissitudes of temperature to which it would otherwise be exposed, and by serving to retain in the soil immediately surrounding it a more uniform condition of moisture than could readily be secured if it were exposed. When seeds are sown therefore, the conditions under which they are placed should

secure for them darkness, and moisture, and warmth.

The seeds of different plants require different degrees of warmth in the soil, in order to enable them to carry on the germinating process, and hence no very general rule on this point can be laid down for the guidance of the uninitiated. Some seeds, those of the Chickweed and other common weeds for example, will germinate when the soil is but little above the freezing point, but practically the influence of the sun and of warm rains is necessary to bring the earth into a state fit to receive the germs of all our cultivated crops. Some of them, indeed, the Onion for example, will do with a smaller amount than others of this acquired warmth, and such as these are always the better, in certain soils at least, for being sown early, in order that their roots may become well established before hot parching summer weather sets in. Some again, such as the Umbellifers, take a much longer time than others for effecting the germinating process; and for the same reason, namely, that they may have the advantage of getting well established and forwarded during the moist genial weather of spring and early summer, these also are the better for being sown as early as circumstances will permit. The great heats and droughts of summer, without abundant feeding is resorted to—more abundant than is often possible—tend to check the vegetative development of our crops in the same degree as they tend to forward the production and development of blossoms. Hence it is that as a rule the main vegetable crops in which succulent leafy development is desired—and this is desired in the early stages of all crops, as well as also in the mature stages of some—should be sown as early in the season as circumstances and the peculiar character of particular seasons and situations will permit. Succession cropping is another matter, and has to be regulated by the supply needed. It is indeed often little better than a struggle between horticultural skill on the one hand, and the adverse conditions of an unfavourable period for the respective operations on the other; and therefore may be excluded from the present argument.

We have already mentioned the covering of earth as one of the conditions to be considered as practically necessary to the healthy germination of seeds. The covering must indeed be greatly varied to suit the various kinds of seeds, those of minute size needing the merest sprinkling of the finest soil to be placed over them, and others admitting, in a ratio exactly proportionate to their bulk, of a covering of one-eighth, one-fourth, or half of an inch, or even of 1, 2, or 3 inches, or more as the case may be. There is however one condition especially obvious, if we confine our attention for a moment to indoor seed-sowing, or the sowing of the small seeds of choice plants, which is doubtless often overlooked, but which has a decided influence on the result that is expected to follow: this influence being moreover, from the very nature of things, in an inverse ratio to the bulk of the seed. We allude to the watering of the soil. An experienced cultivator will, however, understand that other conditions and considerations here intervene: for instance, the soil must be of a proper mechanical texture to allow the moisture to drain away freely; there must (in the case of all ordinary terrestrial plants) be no approach to a water-logged condition, and heavy soils being more liable to this defect than light ones, will require less abundant applications of water than others; but allowing for all this, as well as for the varied requirements of individual species, there remains the fact that constant moisture—in plenty, but not in excess—is from first to last necessary to germination. We know how rapidly seeds will germinate after a warm shower, especially if they have been a short time in the soil, so as to have gradually absorbed therefrom just that quota of moisture which is necessary to have brought the germ which lies hidden within them, into a state to be influenced by a further supply. We also know how sluggish a seed will lie in its bed if the earth happens to continue to be in a parched dusty condition after sowing. Now this, in principle, illustrates the whole question, but what may we often see in practice? Why, scared by the bugbear of "rotting the seed," an unskilful cultivator will be found sowing the seed of some choice plant, and then suffering it to lie parched in the unmoistened soil; or, with some like phantom before him, he will be found careful above all things to provide that the soil should be allowed to "dry" between each application of water. This is no doubt an error of practice; and the smaller the seed the more forcibly it tells upon it. In the former of the two supposed cases, the moisture which is necessary for the germinating process—a truly chemical process, which we need not here stay to explain—not being present, germination is, to say the least, retarded; and in the second case, that of an alternating condition of moisture and drought, the germ is first excited, and then checked or shrivelled, and the chances are that such of the seeds as are so acted on will be killed outright; indeed, but for the surplus to be attributed to the accidental inequalities of development attendant on what is in itself another error—thick sowing, the whole crop in cases like this would often be lost.

But this avoidance of watering has a further adverse influence in the case of small seeds especially, which is not at first sight so apparent. It leaves the particles of soil so open, that as far as regards all shallow coverings at least, the light can penetrate through them even down to the very seeds themselves. We have already mentioned that one of the conditions favourable to germination, is darkness; and it will be evident that the act of watering the surface of the soil after sowing must produce this condition by closing the soil around and upon the seed. Hence we regard the advice sometimes found in books of garden instruction, that the operation of sowing should be finished off by watering the surface with a pot having a finely-pierced rose to its spout, as being perfectly sound in theory and beneficial in practice. It might, indeed, be thought that there would be some advantage in leaving the soil after sowing, for a day or two without water, on the ground that the moisture in the unexposed portion of the soil would suffice for the requirements of the seed in the first process of germination, and this indeed may often be so; but in the case of very fine seeds our own experience is that a surface of earth thus left exposed is apt to become so thoroughly dry that it does not absorb water readily when the latter is applied, and the consequence of this is that in the case of such seeds as those alluded to, necessarily thinly covered, the earthy particles settle down, and the seeds being lighter than they, float on the water, and on its subsiding are deposited *on* instead of *beneath* the surface of earth. Such seeds are consequently left fully exposed to light, and are by no means placed under the most favourable conditions to promote germination.

Such considerations as these, indeed, apply mainly to choice seeds sown in pots and on carefully prepared seed beds, and to the finer seeds sown outdoors, whether in the flower or kitchen garden. They also apply strongly to seeds sown in heat, under conditions which favour the drying of the surface of the soil. And they apply still more forcibly in the case of all these, if it so happens that sunny weather occurs just after sowing; for this sunshine, by causing rapid evaporation, brings about more rapidly the parched condition to which we have referred. There are of course other means besides watering which may be adopted to secure a uniformly moist condition of the soil in which seeds are sown; and these are especially valuable when the seeds are of a kind in which germination is sluggish, and where consequently if the applications of water were frequent and repeated, they would tend to consolidate the soil, or reduce it to a soddened condition. The most important of such auxiliary means, is that of shading during hot sunshine. This, by preventing, to a certain extent, the drying of the surface, may indeed be regarded as a negative instead of positive means of keeping it moistened; but after all, there will remain the necessity for the first watering, and for such subsequent supplies, fewer or more numerous as circumstances may demand, as will keep both soil and seeds damped until germination has taken place.

The more bulky crops of the kitchen garden, from the depth at which their seeds are deposited, are, at the usual seed-time, when spring showers are plentiful, in little risk of being exposed to light until growth has set in, and from the same cause they are much less likely than those we have been considering, to be in danger of suffering from actual lack of moisture; but as every gardener well knows, attention to this moistening process becomes absolutely necessary in the case of those succession crops of kitchen garden produce, which have to be sown during periods of drought in summer.

THE POSTMASTER-GENERAL has given orders that on the 1st of April next, and thenceforward, patterns of merchandise, similar to those already transmissible by post between any places in the United Kingdom, at reduced rates, may be transmitted by post between England and the East Indies, either *viâ* Southampton, or *viâ* Marseilles, at the following rates of postage, which must in all cases be prepaid by means of postage stamps, viz.—*viâ Southampton:* for a packet not exceeding 4 oz., 4*d.*; not exceeding ½ lb., 8*d.*; not exceeding 1 lb., 1*s.* 4*d.*; not exceeding 1½ lb., 2*s.*, and so on, every additional ½ lb. being charged 8*d.* *Viâ Marseilles:* For a packet not exceeding 4 oz., 6*d.*; not exceeding ½ lb., 1*s.*; not exceeding 1 lb., 2*s.*; every additional ½ lb. being 1*s.* Samples of seeds, drugs, and so forth, which cannot be sent in open covers, may be enclosed in bags of linen or other material, tied at the neck; but bags so closed that they cannot be readily opened, even though they be transparent, must not be used for this purpose.

Such is the announcement which was made a few days ago by the POSTMASTER-GENERAL. The latter portion of the new regulations, namely, that relating to the importation and exportation of samples of seeds, will be very acceptable to many of the readers of this Journal. All horticulturists who have friends in the East, have an interest in any measure which faciiltates the transmission of seeds. How many of those of our countrymen who have settled down on the far off slopes of the Himalayas to cultivate Tea or Cinchona will be gladdened with the sight of a parcel of seeds from their friends at home, delivered fresh and in good order with their bi-monthly mail. And with what pleasure will the same individuals ransack the forests of their adopted country to procure the seeds of the Deodar and other ornamental and useful trees to send back in exchange for those seeds sent to them from their "old home." All honour, then, to the authorities of the Post Office for this new boon. We doubt not it will prove a real benefit to all lovers of horticulture, and at the same time a success as regards the revenue of the Post Office—as successful, indeed, as those great measures which have preceded it, namely, penny postage, and the pattern and book post. Our great horticultural and botanical societies throughout Great Britain and Ireland had better wake up, otherwise the POSTMASTER-GENERAL will have done more than them all for the advancement of horticulture.

We shall return to this subject on a future occasion, and endeavour to give some practical instructions how to select seeds for exportation, and how to prepare them and pack them. We shall also point out what kinds are usually most acceptable to our friends in foreign countries.

—— As it may be useful to many of our readers who are interested about BEDDING PELARGONIUMS to know the result of the Chiswick examinations of these flowers last season, which results have recently been made public, we propose here to give a brief summary of the decisions which were arrived at.

The plain-leaved series of Scarlet Pelargoniums, which is considered superior to the zonate series for bedding purposes, yielded a dwarfish variety, called Little Major, of the highest degree of merit, though singularly enough, in former years, this same variety had not proved to be a telling one—a fact which will no doubt furnish an argument in favour of the use of old plants of bedding Pelargoniums, especially in the case of those of dwarf habit. To this variety must be added Trentham Scarlet, Stella, and Punch, selected in previous years, as furnishing the most highly approved of the plain-leaved Scarlets of different shades of colour, and of varying habit, Punch being the larger growing, and Little Major the dwarfer of the four sorts. Among the plain-leaved cerise-coloured sorts, Lady Rokeby and Lord John Russell proved themselves to be highly meritorious, taking rank with Lady Middleton, which was considered the best of this colour in former years. None better than Christina and Rose Queen have been found as yet among the rosy-pinks, though some of the novelties closely approached them in merit.

To the zonate-leaved series with scarlet flowers was added with a high character, Roi d'Italie, a dwarfish kind, with salmony-scarlet blossoms; Volcano and Cheshire Hero, too, both with orange-scarlet flowers, were determined to be useful acquisitions. To these must be added as already approved:—Attraction, Vivid, Adonis, Victor Emmanuel, Martin Gireau, and Scarlet Globe. Of those with cerise-scarlet flowers, the first place was given to Herald of Spring, which was closely followed by François Chardine and Paul Labbé. Of those with salmon-coloured flowers, Aurora and Blackheath Beauty, formerly selected, continue the best; as do Amy and Minnie amongst the rosy pink series; while Prince of Hesse, which is bright salmon with a deeper eye, was found every way commendable in its class. There are however some fine varieties with these dark-eyed flowers which have not yet been submitted to trial, some of which are certainly acquisitions as conservatory plants, if not in the garden. Madame Vaucher remains the best proved white. We of course here leave out of the question sundry novelties of which rumour speaks well, but which have yet to be fully tested.

Of the marbled-leaved zonate series Sheen Rival,

Empress of the French, and Cerise Unique, continue to be the most useful sorts.

To the class of Nosegays we hear of grand additions as forthcoming or just distributed; but confining our attention here to sorts already proved, we must mention Stella as having won a front rank position amongst bedding plants, its rich deep scarlet flowers and floriferous habit rendering it very attractive; while Merrimac with cerise flowers, and Lord Palmerston with a rosy-flushed crimson, are acquisitions to this much maligned but certainly very effective group.

The variegated-leaved is now a very extensive as well as a very useful class of bedding Pelargoniums, and there is ample choice of varieties in most of its sections. The silver-variegated series yields of highly approved sorts:—Flower of Spring, Venus, Koh-i-Noor, and Meteor, with creamy white margin; Jane, Bijou, Mary Ellen, and Mrs. Lenox, with purer white margin; and Argus, Fontainebleau, Burning Bush, and Countess of Warwick, with silver margin and red zone. The golden-variegated series is more limited in extent, but still affords room for choice, the undermentioned being highly approved sorts:—Golden Chain, Cloth of Gold, and Golden Harkaway, with golden margin; and Mrs. Pollock, Mrs. Benyon, Lucy Grieve, and Sunset, with golden margin and red zone.

Though much has been done in the way of improving this race of Pelargoniums for flower garden purposes, and also for the conservatory, there is much more to be accomplished, and much too, no doubt, is now in progress or already just attained, of which the precise results can hardly be as yet estimated. Those kinds with golden red-zoned leaves, and those with pale dark-eyed flowers may be mentioned as being more especially in a progressive state; and to these, if report speaks correctly, may also be added the Nosegays.

As certain of these Pelargoniums are so admirably suited for pot-culture and the decoration of conservatories, we hope to see them produced in a respectable manner at the ensuing summer shows, especially as liberal prizes are offered for their production. Nothing can be more charming than some of those with rosy-tinted, salmon-coloured, or dark-eyed flowers; nothing more beautiful than some of those with red-zoned leaves.

NOTES ON GARDENS.—No. VI.

Backhouse's Nurseries, York. (*Third Notice.*)

The presence of a Tree Fern or rare Trichomanes is not always indicative of choice things in the hardy way, nor are rare tropical Orchids frequently an index that their fine hardy N. American and Siberian relatives are near at hand; so that when one finds much skill and labour bestowed indoors, sanguine expectations of rarity or interest in the outdoor department are rarely indulged in. With a feeling that the interest was exhausted, and the sands of my admiration run out, I left the Ferneries, &c., already described, and wandered about the finely kept grounds, here and there coming upon little sheltered squares in the midst of the larger nursery stuff, filled with thousands of the Aucuba-leaved Daisy, Calandrinia umbellata, and such plants. These suggested an incidental wish to see something good in the alpine or herbaceous way; which was gratified by my being taken to the frame ground, &c., where I first encountered quite a bedding-out stock of the rare and beautiful English Ladies' Slipper, Cypripedium Calceolus, strong and healthy plants in 48's, a rare sight indeed. Then a fine lot of Gentiana verna, and between 2000 and 3000 plants of Linaria alpina, a beautiful and continuously blooming plant, its corymbs of bluish-lilac flowers being "set off" with an orange centre, and contrasting admirably with the silver hue of its leaves and branches. It flowers the first year from seed, but gains its full strength and beauty when two or three years old. Along with these was a large stock of many fine hardy plants, grown in pots plunged to the rim in beds of sand, and in such a glossy, clean, and healthy state that one could at once see they were paid as much attention to as any plants in the nursery. In a mixed group of recently received things, I noticed Ranunculus glacialis with its leaves of icy smoothness and large and handsome white blossoms, brought from just below the summer snow line on the mountains of Norway and Switzerland; also Diapensia lapponica, recently had from Norway with the Ranunculus. Here too, were fine specimens of Gleichenia alpina.

From the neighbourhood of the houses a glimpse is caught of a varied craggy mass, rising among the trees at about 100 yards distance. It is the Alpine Rockery, and is reached by a winding path, near the margin of which were fine specimens of Wellingtonia and of the graceful Picea lasiocarpa. The "rockwork" is best described as the facsimile of a very charming and well selected little bit of Wales or Cumberland, with its cliffs and ravine, little lake, rocky island, and gloomy gorge complete. It is utterly unlike and infinitely superior to any of the compositions known as "rockwork" that I have ever seen. Four hundred tons of "crag" rise in the most varied and rugged forms to 20 or 25 feet in height, surrounding and hemming in a placid sheet of water, and presenting every sort of nook, aspect, fissure, soil, shade, or shelter, that one could wish for the numerous and in many cases not easily to be pleased gems that flourish on the rockwork, from the water-overhanging slab under which the Killarney Fern looks at home, to the exposed ledge where the Alpine Forget-me-Not thrives as if on its native Ben Lawers. Standing on one ledge, on which the lovely Dianthus alpinus was quite the master of the "struggle," one could look over the water to the inhabitants of Southern Europe and Madeira—Mesembryanthemums and Cyclamens, while beneath, on cool and shady spots, were plants from the Arctic regions, from Spitzbergen and Melville Island, which in a wild state rejoice in incessant cold and moisture. On the one hand was a carpet of Gentiana verna, beside a little chalky bed of the Bee Orchis; on the other Primula farinosa in fruit, with scapes 16 inches high, along with its congener P. scotica; and below, cropping out vigorously from under large stones on the little island, the beautiful hardy North American and Siberian Cypripedium spectabile, pubescens, and macranthum, all seeming to thoroughly enjoy the delightful spot so skilfully adapted to their various tastes. Andromeda hypnoides formed a dense moss-like tuft on a moist and cool shelf, a treasure in itself, especially so when exhibiting its lovely little white bells. Gleichenia alpina, Asplenium lætum, Adiantum Capillus-veneris, Asplenium palmatum, Cheilanthes tomentosa, the noble Lomaria magellanica, and many other Ferns usually supposed to require protection from frost, live here without any, some of them in cavernous recesses. The last named stood a temperature of 6°. Along with these was Lygodium palmatum, a beautiful and perfectly hardy Fern from North America, with creeping rhizomes and Ivy-like fronds. Many rare British plants were to be seen in fine condition, such as Goodyera repens, Ophrys arachnites, Orchis laxiflora, Trientalis europæa, Viola arenaria recently discovered in Teesdale, Eriophorum alpinum, Pinguicula grandiflora, Hierochloa borealis, and many others. Running along dry fissures, Calandrinia umbellata formed dense tufty lines, almost as compact as masses of Silene acaulis. In its own class of colour there is nothing equal to this plant. Many thousands of it were "getting up" in various parts of the nursery, indicating its being speedily disseminated as much as it deserves.

To enumerate all the interesting plants on this noble rockwork would require a catalogue, but those must be mentioned that are not likely to be found elsewhere, with many very rare ones, some new to the country, and others reintroduced by the Messrs. Backhouse. I can fancy that many will be delighted to hear of the existence in cultivation of some of these. So, to begin with hardy Orchids—in addition to those already mentioned there is Orchis cornuta from South Europe, closely allied to our British Spider Orchis; Cypripedium acaule, a fine North American species, usually with a single pair of leaves, and Cypripedium parviflorum; Orchis Robertiana from Sicily; Chamæorchis alpina; Goodyera pubescens with reticulated Anæctochilus-like leaves; with Orchis papilionacea, Ophrys lutea and picta, Serapias parviflora, and others of more frequent occurrence. The existence of such a collection during the present famine of interest in the hardy plant way, is of itself a hopeful sign. Now for the other most remarkable plants:—Sisyrinchium multiflorum, bearing a profusion of pale blue flowers about the size of a florin; Geranium argenteum, a fine silvery-leaved hardy Geranium, whose "home" is, I believe, at Comely Bank; Oxytropis montana and cyanea; Astragalus purpureus and vaginatus; Vicia argentea; Ranunculus pyrenæus, rutæfolius, and alpestris, all white-flowered species; not forgetting R. glacialis, which Ruskin admired so much in its stony icy resorts; Pyrola maculata from N. America, its leaves beautifully marbled with white, and several other Pyrolas; Gentiana Fortuni, a fine species, proved to be a perfectly hardy perennial; also G. Gebleri, imbricata, brachyphylla, ciliata with large finely fringed azure blue flowers, and excisa, with many commoner kinds; while G. bavarica, the species which adorns the high passes in Swiss mountains, a little below the line of perpetual snow, with tufts of deep and dazzling blue, is mixed up here and there with Gentiana verna, and known from it by having rounded Box-like leaves. It is said to be a more rapid grower than G. verna, and is considered by the Messrs. Backhouse more beautiful than it, which is saying a great deal. Myosotis montana, a lovely plant with flowers twice as large as those of the wood Forget-me-not, and of a much brighter blue, flowering too with the Snowdrop, and even with the Aconite. Mr. Atkins, who collected this plant on the Swiss Alps, sent me a few plants of it in flower last spring, perfect masses of the loveliest blue, and I shall not readily forget their "first appearance;" I believe it to be the best Myosotis for general work, as Myosotis alpestris cannot be grown everywhere. Here were Saxifraga biflora, a new and interesting species recently received by the Messrs. Backhouse from the lofty mountains around Zermalt in Switzerland, of the S. oppositifolia group, and like that species having trailing "mossy" shoots and rose-coloured flowers; here, too, Saxifraga cæsia and other neat ones were present; also S. cernua, and rarer still, S. Seguieri and S. glacialis; Primula minima, an inch high, and with flowers of the same width, a perfect gem; P. spectabilis, longiflora, and Floerkeana, all very rare species, recently had from the Alps, the last not in a hopeful state; P. glumacea, erosa, and another, with shaded lemon and purple flowers; P. amœna from the Caucasus, with soft hairy leaves, and very large dense heads of the tenderest pale purple flowers, which open with the earliest dawn of the year, sometimes even expanding under the snow—an extremely rare species; P. Fortuni, and a host of equally beautiful but better known Primulas; Androsace obtusifolia, pubescens, coronopifolia, lactea, Chamæjasme, and the rare A. glacialis, also a fine lot of Androsace lanuginosa; Anemone baldensis, like a dwarf alpina, A. vernalis, and all the good hardy Anemones. The rare and beautiful Dianthus glacialis had been received, but in a dying state, and there were D. Simsii, and a lot of others. Then Hepatica angulosa, a fine plant which the Messrs. Backhouse have been very fortunate to import, a true Hepatica, with flowers more than double the size of the common single blue Hepatica, and of a clear sky blue, 6 to 12 inches high, well above the large five-lobed leaves; Iris reticulata; Crocus Aucheri, Boryi, Sieberi, and marathonisius, all from the mountains of Greece—the three last named being autumn and winter flowering kinds, blooming from November to January; Fritillaria tristis; Colchicum alpinum received during the summer from the Alps; C. lingulatum, neapolitanum, and montanum, from the mountains of Greece, which flowers in December, and forms with the Crocuses above mentioned a fine addition to the few midwinter flowering things we cultivate; Gnaphalium Leontopodium; Senecio incanus, a dwarf hoary perennial, likely to prove useful as an edging plant, or in other words, in ameliorating the vulgarities of the colour-culturist—we want a new name, and I think the foregoing very defensible. Then came Senecio carniolicus; Campanula cenisia; Silene Elizabethæ, likely to become a general favourite; Allium alpinum from Lapland; Lychnis pyrenaica, a very pleasing perennial; Trifolium alpinum, a new and remarkable plant found on high alpine pastures; it is a matted tufted perennial, with heads composed of few very large rose-coloured flowers, more like a dwarf Lupin than a Clover. Next came Lycopodium dendroideum, a perfectly hardy and erect Canadian species, which I had thought was confined in this country to the gardens at Wimbledon House, where there is a fine bed of it, like a fairy Pine wood; and L. lucidulum, another erect Canadian with glossy leaves; Rigidella immaculata and R. flammea; Linum alpinum; Arctostaphylos alpina, rarely seen in cultivation; Acæna novæ zelandiæ; Aster tanacetifolius, a dwarf branching species with bright purple flowers; Cerastium suffruticosum; Rhododendron Chamæcistus, and R. lapponicum, just arrived, and in a very doubtful state; Meconopsis, an imposing species from the Himalayas, with large lemon-coloured flowers on spikes 5 feet high; Eritrichium nanum, another gem of unusual interest and beauty, found only on the highest and most exposed ridges of the Swiss Alps, and closely allied to the Forget-me-Nots, but having very minute tufts of silky leaves and dense heads of bright blue flowers, large for a very small plant, on hairy stalks about 2 inches high. Great as is the collection of rare plants, familiar ones of first-rate merit find plenty of space amongst them; such things as Anemone apennina and Scilla sibirica being freely planted, and very justly appreciated as much as any of their neighbours; while ranging between the extremes of novelty and familiarity, scores of first-rate plants might be mentioned.

So exquisitely natural looking and picturesque is the spot, that were it only clothed with the native plants of the neighbourhood, a journey would be well repaid by seeing it. Indeed, pilgrimages after hardy plants are often made to natural and other scenes, not yielding one-tenth of its interest. And so, surprised and delighted to a degree previously unknown to me, I took leave of the York Nurseries, more than ever thinking with the author of "Guesses at Truth," that "Nature will never be bettered by any art, till that art becomes Nature." Often since have I concluded that were the famous "wishing carpet" at my service, I should frequently during the coming spring and summer have a "rapid ride to York," and spend an hour amongst the delicately beautiful "transparencies of the tropical Fernery," but for a real feast of interest I should settle down amidst the "heaven kissing" gems of the great Alpine Rockery there. *William Robinson.*

NEW FRUITS.

Apple: Schiebler's Taubenapfel (Oberdieck).—Messrs. Schiebler and Son, of Celle, Hanover, announce a new Apple, named as above (or in English, Schiebler's Pigeon Apple), by Superintendent Oberdieck, one of the best German pomologists. Of this new variety, they publish the following account, accompanied with an engraving. After several years' experience of this Apple we can with confidence recommend it as a first-rate table fruit. It is of medium size, and pyramidal in shape. At first it is greenish, afterwards becoming citron yellow, and sometimes, but rarely, exhibiting a tinge of red. The flesh is snow-white, very fine and tender, juicy, with an aromatic vinous flavour, surpassing in this respect the Pigeon Blanc Apple, and not so apt to speck as that is. The fruit sets mostly in threes together. It is a table fruit of the first rank, becoming fit for use in the end of December, and

keeping good till Easter. The tree forms a spreading head, and bears abundantly.

Pear: Hélène Grégoire.—An October Pear, which with the two following, is very highly spoken of and figured in one of the lists of novelties put forth by M. Vilmorin-Andrieux et Cie. of Paris. It is said to form a vigorous and very fertile tree, and to make a fine pyramid. The fruit is described as of moderate size, obovate, of a light green changing to straw yellow, and having a melting flesh of the first quality.

Pear: Madame Treyve.—This appears from the representation to be a very large Pear, and is described as being ripe at the end of August and the beginning of September. The fruit is in fact extra-sized, broadly and bluntly turbinate, pale green in colour, changing to yellow, and dashed with flesh-colour; the texture is said to be fine, melting, and juicy, with a sugary aromatic flavour. The tree is vigorous and very fertile.

Pear: Nouvelle Fulvie. A variety which yields large pyriform fruit, remarkably bossed or uneven on the surface, the colour a yellowish green spotted with grayish-red and flushed with bright red on the side exposed to the sun; the flesh is said to be yellowish-white, very fine and buttery in texture, melting, with a delicious flavour. The fruit is in season from November to January, and is produced on a tree of vigorous and prolific habit.

STANDARD EPIPHYLLUMS.

Now that plants have come largely into requisition for the decoration of the dinner table, I know of none that can be recommended as more suitable for the purpose during the winter months than the Epiphyllum truncatum and E. Russellianum with their varieties. These plants can be had in flower from November until March. In November, 1862, I grafted many varieties on stems of Pereskia aculeata from 12 to 24 inches high; and in the following November, 1863, many of them began to flower, and continued flowering until March, 1864.

The following are the sorts I am growing:—

E. Russellianum.
E. R. Snowii.
E. R. rubrum; tube pink, petals deep red, large and fine.
E. R. superbum; tube pinkish violet, petals deep violet purple, large and fine.
E. truncatum.
E. t. Bridgesii; tube violet, petals deep violet purple, fine.
E. t. cruentum; tube purplish crimson, petals deep crimson, large and fine.
E. t. magnificum; tube rosy violet, petals deep red, large and fine.
E. t. spectabile; tube white, petals white, deeply margined with violet, large and fine.
E. t. salmoneum.
E. t. Morelianum.
E. t. Ruckerianum.

The six sorts which I have briefly described are beautiful varieties; and there are many others, of which I have not seen sufficient to judge whether they are distinct from those named. I find that the varieties of E. truncatum flower first, while those of E. Russellianum are later, and by exciting a few of the former in autumn and retarding a few of the latter, I am confident they can be had in flower for a much longer period than I have named above.

My plants were repotted from 60 to 48 size or 4½ in. pots, in the spring of 1863, and the heads of many of them were by the autumn 12 inches in diameter. When in flower they formed beautiful objects. I have just repotted some of the largest in 6½ inch pots, and I anticipate that by the autumn there will be many of them not easily surpassed as flowering plants either for the decoration of the dinner-table or for the conservatory, in which latter, mixed with Camellias, forced Hyacinths and other bulbs, Azaleas, Rhododendrons, &c., they form a beautiful contrast.

The pots should be well drained. The soil should be very fibrous sandy loam, having a small quantity of potsherds broken small mixed with it, sufficient to keep it porous. The house most suitable to their growth is an intermediate one, such as would be suitable to many of the Orchids that require cool treatment, or the warmest end of the conservatory. The temperature in winter should range from 40° to 50° by night, and from 50° to 60° by day. They should be kept rather dry during the winter, but not allowed to shrivel, the quantity of water being increased as the season advances, giving a higher temperature and plenty of air, particularly in hot weather, sufficient water being thrown about the house to keep up a humid atmosphere. They should not have too much shade. When they are required for the table, some neat creeper should be twined round the stem to hide it. *Thomas Brown, Exotic Nursery, Tooting.*

Home Correspondence.

The Fluke Potato.—"T. E." (see p. 200) asks for information respecting the origin of this Potato. John Turner, a hand-loom weaver, and occasionally a farm labourer, of Birch, near Middleton, Lancashire, first raised the Fluke from a "seed apple," taken indiscriminately from a field of Potatos grown on the Langley Hall farm, near his residence in 1841. He sowed the seed in his own small garden, and it produced 12 plants, one of which was the Fluke; the others, being of little value, were thrown away. He grew the Fluke for several years, and occasionally made presents of tubers of it to his friends. Amongst others he gave some to a neighbouring farmer, who has sold large quantities of it; but Turner himself never made one farthing by it in the way of trade. In 1852 a subscription was got up for him, chiefly through the exertions of Oswald Dicken, Esq., surgeon of Middleton, and Mr. John Lancashire, farmer, of Little Heaton, to which the Earl of Derby subscribed 10*l.*, and the Earl of Wilton 5*l.*; the amount raised was 115*l.*, with which a life annuity was purchased for him, but this he only enjoyed for a very short time, as he died on the 28th of February, 1854, aged 72 years. I have spoken more fully of the Fluke in former volumes of your Paper, especially in that of the year 1856. *Ed. Bennett, Osberton Hall, Worksop.*

Duchess of Buccleuch Grape.—Being in Dalkeith a few days ago, and having an hour to spare, I called at the Palace Gardens there. I was fortunate in finding Mr. Thomson at home, and still more so in seeing this new variety of Grape in an early stage of growth. I was shown into a lean to house where there are numbers of plants of it fruiting in pots. There are also some Black Hamburghs in the same house, but they are entirely eclipsed by the Duchess. On entering the house I was astonished at the profusion of bunches showing upon quite young Vines. The rods are about 8 feet long, good stout canes, though not extra strong, having been grown under the shade of Vines last year; consequently they are not so well ripened as they would have been under more favourable circumstances. Nevertheless many of the shoots are producing large bunches at the third, and on to the fifth leaf, proving to a certainty its free-bearing character as an early Grape. I had the curiosity to measure some of the bunches which (though not yet in flower) were 14 inches in length, excluding the stalk. It may therefore be judged what they will be when fully grown; and this, be it recollected, from pot Vines started on the 1st of January. I had also the pleasure of seeing it in another house a stage later, planted out. The flavour of this new Grape resembles that of Chasselas Musqué, which is one of the parents, but the seedling is free from the cracking propensity of that sort. It was exhibited last year at Kelso, where it carried off the first prize for the best flavoured Grape. Among the many Grapes of recent introduction I am convinced that the Duchess will occupy a place in the foremost rank. *A. Anderson, Oxenford Castle.*

Orchard-House Trees.—I beg to apologise to Mr. Watson, of Rotherham, for not answering his letter (p. 150) before, but it so happened that I did not read the number of your Paper in which it appeared. When I re-pot, I reduce the ball about an inch all round, and about 4 or 5 inches at the bottom; I then cut away all the large roots that I can get at. The pot is cleaned out, and the tree put in it again; the earth is then rammed tight all round with a flat rammer. The trees are all gone over in this way, the border is dug and every pot is set in order, and in that state they remain till the next October. I give them now and then a good watering, and occasionally a good syringing. They do not receive any check, but go on as if nothing had happened, and they get well established in their pots in about a fortnight or three weeks after the operation. The reason why I repot so early is because all such trees make fresh roots as the sap descends, just as they make young shoots in spring when the sap ascends. So, if I delay repotting till the trees are quite at rest, it would be of no use to do it till the spring, and then they have got every thing to do, which I think is very unfavourable for the ensuing crop. To guard against all creeping insects, such as earwigs, woodlice, and ants, I tie narrow strips of brown paper about two inches wide round the trees, and form a ring of tar, mixed with a little lard to keep it moist; this is done just before the fruit gets ripe. These remain till the next February, and they form a nice trap for the red spider; they must therefore be taken off very carefully and burned. I never fumigate, and I think it is useful to know how to do without it. When I begin to water in spring, I now and then give the trees a good syringing till they come into bloom, and again directly the bloom begins to fade. *J. P., Alton.*

Blight.—Few things are less understood than blight, which is generally attributed to some mysterious condition of the air or winds, rendering them capable of generating myriads of insects, or at least of carrying them about over the face of the earth, doing sad mischief in their course. By some, blight has been described as having the appearance of a haze or blue mist or a sultry purplish or orange tinge, while others entertain certain fancies in regard to it equally unfounded and ridiculous. These notions too are not confined to the lower classes; they have even found their way into books. It is now some time since I noticed in one of these the following passage, or words having a similar meaning. In "singular collapsions and accumulations called a blight, the air becomes filled for miles with millions of animalculæ never before seen, and of sudden spontaneous formation." If this was merely a fancy unconnected with practice, it might be left to the care of theorists without remark, but as it is not so, and likely to lead many into error, perhaps I may be allowed to say that as far as insects are concerned, all ordinary accounts of blight can be nothing else than mistakes, though there is not the least doubt that cold northerly or easterly winds will produce shrivelling and browning of the leaves of trees and hedges, as may also sometimes sultry, thundering weather. It has been proved that insects are invariably hatched from eggs deposited by parents similar to the produce; therefore it is impossible for them to be generated by any particular state of the air. It is also unlikely that the eggs of insects are floating about on blighting winds, for insects, with few exceptions, glue their eggs tightly upon whatever they may be deposited on. The fact is, these insects are all hatched from eggs which had been laid the preceding autumn or very early in spring, and if believers in blight had been on the look out they might have discovered a great quantity of the eggs, minute though they be, and by destroying them might have saved a large portion of their crops. It is, however, probable that the sudden appearance at one time of so many insects may have given some plausibility to popular errors respecting blight, but this occurs from the eggs being all hatched at once, or at least within a very short time of each other. In consequence of their minuteness, and the peculiar places in which they are concealed, it is difficult to find some insect eggs, but it is easy to find those of others, such as leaf-rolling caterpillars and the kinds which make such havoc on Oaks and Currant trees; these are readily discovered in little greyish patches, about the breadth of a card-wafer, firmly glued to the bark. If these were scraped off during winter no blighting wind of any description would be able to generate a single insect of that kind, any more than it could produce a covey of skylarks. To check the progress of these insects the foliage attacked should be washed over and under with tobacco-water or pure lime-water; this will destroy the pests in question, and also clean the leaves. I have washed the foliage of plants with clear water only, and cleaned them perfectly; but this has to be repeated several times, while once, or at most twice, applying the wash just mentioned, will suffice. *John Cole McArdell.*

Wood Ashes.—It is well known that these are a valuable manure for almost every description of crop; but in the absence of loppings and prunings, they are not easily procurable. They are valuable, I presume, chiefly on account of the potash which they contain, in the form of sub-carbonate; and it has occurred to me that, as the potash of ammonia is not very costly, it might be used on a moderate scale, as a substitute. I have accordingly procured a quantity of potash, intending to apply it to a Vine border, provided that can be done with safety. It appears to me however that, in its present state, the salt is by far too caustic, and would probably do more harm than good, even if diluted with 200 or 300 times its weight of water. I have consulted Liebig, Thomson, Davy, and several other authorities, but they say little or nothing upon the subject. Perhaps you can refer me to some other source of information, or some of your Correspondents might favour me with the result of their experience in the use of the salt in question. *An Amateur, Clapham.*

Societies.

Royal Horticultural: *March* 8 (*Election of Fellows*).—J. J. Blandy, Esq., V.P., in the Chair. The following Candidates were duly elected, viz.:—

The Archbishop of Armagh, Mrs. Wm. Atkinson, Mrs F. Barrow, Mrs. Edward L. Betts, Miss Boardman, Mrs. Collyer, Mrs. A. K. Corfield, Mrs. Ralph Disraeli, H. Dugdale, Esq; Miss Emily Fielder, Mrs. C. W. Graham, Mrs. Harrington, Mrs. T. E. Harrison, Mrs. R. Nugent, The Lady Panmure, G. Pirie, Esq.; M. B. Power, Esq.; G. Tanner, Esq.; Lieut.-Colonel F. C. Tombs, and A. G. Yeates, Esq.

March 30 (*Second Spring Show*).—This was held, as on the last occasion, in the Entrance Hall, the Council Room, and the adjoining Arcade, all of which were well filled with spring flowering shrubs, Hyacinths, Tulips, and other plants in blossom. Her Majesty, accompanied by H.R.H. the Princess Helena, honoured the exhibition with their presence just as it was being thrown open to the Fellows.

Hyacinths.—Charming collections of these were furnished by Messrs. Paul, Cutbush, Young, and others; the sorts, however, being in no way different from those noticed in our last report, it is unnecessary again to record their names. To King of the Blues, a fine kind in Mr. Wm. Paul's group of 24, a First-class Certificate was given by the Floral Committee. A similar award was made to Thorwaldsen, a blue with large bells, from Messrs. Cutbush.

Awards.—24: 1st, Mr. Cutbush; 2d, Mr. Wm. Paul; 3d, Messrs. Barr & Sugden. *Amateurs.*—1st, Mr. Young; 2d, Mr. Carr; 3d, Mr. Masters.

Roses.—These, both cut and in pots, considering the season, were excellent, the foliage being remarkably clean and healthy, and the blooms large and finely coloured. Conspicuous among them were Lord Clyde, John Hopper, Lord Raglan, Chas. Lawson, Beauty of Waltham, Madame Boutin, Victor Verdier, Maurice Bernardin, Senateur Vaisse, François Lacharme, and Madame Julie Daran. Among yellows, Celine Forestier was greatly admired, as was also the promising white Hybrid Perpetual, Louise Darzens. Of the bronzy buff-coloured Madame Falcot there were one or two nice-looking buds.

Awards—6 in pots: 1st, Mr. Turner; 2d, Messrs. Paul & Son. Cut blooms: extra, Mr. Wm. Paul and Paul & Son.

Azaleas.—Of these Mr. Bull contributed a small collection, in which Queen Victoria, a white kind, striped with pink, attracted especial notice; other

sorts, though well covered with blossoms, were less remarkable.

Camellias.—Of these a collection of 6 plants in pots was shown by Mr. Young, gr. to R. Barclay, Esq., of Highgate; and of cut blooms we noticed one or two boxfuls, the best of which came from Mr. Todman of Clapham.

Collections of Forced Flowers.—These consisted of Hyacinths, Tulips, Lily of the Valley, Pimeleas, Lilacs, Acacias, broad-leaved Kalmias, Rhododendrons, Azaleas both Indian and hardy, Polygonatum vulgare, Deutzia gracilis, Cinerarias, Roses, Dielytra, and Cytisus racemosus.

Awards.—1, Mr. Treen; 2, Mr. Young.

Lily of the Valley.—Charmingly-bloomed potfuls of this universal favourite were shown by Mr. Howard; and from Mr. Bartlett also came six well-flowered plants of it. Of these Mr. Howard's exhibition well deserved a first prize, which was awarded it.

Tulips.—These, being tolerably numerous and in good condition, made a gay display. The kinds did not differ from those produced on the last occasion. Foremost among them stood Vermilion Brilliant and Keizer Kroon, the last bright red, boldly edged with yellow, a most useful kind for out-door decoration.

Awards.—12 pots: 1, Mr. Wm. Paul; 2, Mr. Young.

Plant Cases.—Two of these were exhibited. In one were suspended two nice plants of the little scarlet-flowered Orchid, Sophronitis grandiflora, and associated with them were variegated-leaved Coleus, Dielytra spectabilis, Solanum Capsicastrum in fruit, and Lily of the Valley. The other, which was noticed in our last report (see p. 247) came from Mr. Bull, King's Road, Chelsea.

Forced Pelargoniums.—One small group of these came from Mr. Turner, of Slough. It contained Phœbe and Clarissa, two light kinds; Dr. André, Pamela, Pescatore, and Sir C. Campbell, the last a dark velvety kind with white eye.

Chinese Primulas.—Of these a collection of well-grown plants came from Mr. Todman, of Clapham. They consisted wholly of single white and pink sorts.

Rhododendrons.—Mr. Young furnished well bloomed examples of Columbus, lucidum, Barclayanum, and maculatum.

New Plants.—Among subjects submitted to the inspection of the Floral Committee were a prettily variegated-leaved variety of New Zealand Flax, to which a First-class Certificate was awarded; and the singular-looking Sarracenia Drummondii in flower, to which was given a Special Certificate. Both of these came from Mr. Williams of Holloway. Mr. Bull, of King's Road, Chelsea, received a First-class Certificate for Chamærops stauracantha, a Palm remarkable for its handsome foliage; and Second-class Certificates for Anœctochilus speciosus and Lastrea varia, both good additions to their respective genera. To a Japanese Forsythia from Mr. Standish, stated to be different from suspensa, a Second-class Certificate was assigned; and to Mr. Earley was awarded a Commendation for a deep bright rosy-flowered Begonia called Digswelliensis. Last, but by no means least, was the charming Asplenium ferulaceum, of which a full account has been given in a former number (p. 1108, 1863). This came from Mr. Bull, and received, as it well deserved, a First-class Certificate.

Miscellaneous Plants.—Of these interesting collections came from Mr. Williams, Mr. Bull, and Mr. Moss. They consisted of Cordylines, a vigorous growing Lindsæa from Trinidad, Gleichenias, Todea pellucida and other Ferns, the large bronzy-leaved Alocasia metallica, Palms, variegated Yuccas, the Bornean Sphærostema marmoratum, Chameranthemum Beyrichii variegatum, the showy orange-blossomed Imantophyllum miniatum, and different varieties of Amaryllis.

Of Bougainvillæa speciosa, some well-flowered plants in small pots were exhibited by Mr. Turner, of Slough. Of the way in which these are managed, some account will be found at p. 388 of our last year's volume.

Entomological: *March* 7.—F. Smith, Esq., in the chair. F. Pascoe, Esq., F.L.S., was unanimously elected President of the Society. Printed copies of the annual address delivered by the Chairman at the Anniversary Meeting in January, were distributed. Mr. G. R. Waterhouse exhibited specimens of two small beetles belonging to the genus Aleochara, new to this country. Professor Westwood exhibited both sexes of the splendid Ramphorhina Petersiana, belonging to the family of the Goliath beetles, brought from the Zambesi by the Rev. H. Rowley; also various Lepidoptera from the same gentleman, including a new Charaxes, which he described under the name of C. Argynnides. He also read descriptions of a remarkable Papilio from Borneo, to which he applied the name of P. Hewitsonii; and of two curious new beetles, one belonging to the genus Apatetica, and the other forming a new genus of Trogositides, from India. He also exhibited the larvæ and cases of a common English moth (Tinea sarcitella), the former of which had eaten a number of holes in a carpet newly laid down; and also specimens of Ptinus hololeucus, a small beetle which had caused considerable damage by gnawing the binding of books. Mr. S. Stevens exhibited a case of Coleoptera recently received from Old Calabar. Some observations were made by Mr. J. Young on the effects of Dumont's Insect Destroying Powder. The Chairman stated that the introduction of the minute house ant into London might partially at least be attributed to the large cargoes of Pine Apples, now annually brought to this country, he having noticed a stall in Oxford Street, on which the fruits were placed, swarming with these troublesome little insects. Mr. Baly read the commencement of a memoir on the species of tortoise beetles (Cassididæ) captured by Mr. Alfred R. Wallace in the Eastern Archipelago. The first part of a memoir by Mr. Pascoe on the Longicorn beetles, from the same regions, was also read; and Mr. Waterhouse read an elaborate memoir on the structure of the cells of bees, which he considered were normally cylindrical in form.

Notices of Books.

A History of the World. By Philip Smith, B.A. Part 3.

This Part commences with the history of the Chaldæan, Assyrian, and Babylonian monarchy, and carries on the Medo-Persian empire to the conquest of Egypt. Though the fragments of Berosus embrace an unmistakeably mythical period, we find that where other evidence exists there is much that is confirmatory of his statements. These fragments, then, studied in the light of the cuneiform inscriptions, which the investigations of Sir Henry Rawlinson and the discoveries of Layard and others afford, serve to clear up many difficulties, and throw a flood of new interest upon the points of contrast between these great empires and the Jewish nation. The Biblical student is much indebted to Mr. P. Smith. The story of Chedorlaomer and his quadruple alliance with the three kings, acquires fresh interest, if, as there seems reason to suppose, "the nations led by Tidal, king of nations, were the Turanian or Scythian nomad tribes, by whom the country was first peopled; the Semites were established at Babylon, under Amraphel, king of Shinar; Arioch, king of Ellasar, was the head of the Aryan population; while the Hamite race was represented by Chedorlaomer himself. All this agrees with the name *Kiprath-arbat* (four nations or tongues) which is given in the cuneiform inscriptions to the subjects of this dynasty."

Mr. Smith mentions the curious coincidence that whereas "the Medo-Persian Kings found it necessary to publish their edicts in the three chief forms of language—their own, which is Aryan, the Assyrian, which is Semitic, and the Scythic or Turanian;" at this day, "the valley having fallen again under the dominion of a Turanian race, public documents are now issued in Turkish, which is Turanian; Persian, which is Aryan; and Arabic, which is Semitic."

It may be interesting to know that the cuneiform inscriptions are partly on bricks and partly on tablets; the former bear royal inscriptions only, the latter are real books, and the whole body of them forms a vast library, the characters being as fine and the lines as close as those of an ordinary octavo page. The means taken to secure the writing from injury are equally curious and effectual. After the inscribed clay had been burnt to a terra cotta, far more durable than most sorts of stone, it was coated with another layer, on which the inscription was repeated, and the whole was again fired, so that the interior writing might be brought to light long after the exterior was effaced. The writing of the inscriptions is from right to left.

On our Knowledge of the Causes of the Phenomena of Organic Nature. By Professor Huxley, F.R.S. R. Hardwicke, 1863.

In this little volume we have, as it were, a digest of Mr. Darwin's "Origin of Species," rendered into simple, even homely language for the comprehension of working men. Mr. Huxley's name is so well known in connection with the controversies on this subject, that few can be ignorant that he is a believer in Mr. Darwin's theory, nor that he has not adopted these views hastily, but upon mature examination and conviction; and we believe that the number is rapidly increasing of those who can heartily echo his concluding words, that "Mr. Darwin's work is the greatest contribution which has been made to biological science since the publication of the '*Règne Animal*' of Cuvier, and since that of the 'History of Development' of Von Baer. I believe that if you strip it of its theoretical part, it still remains one of the greatest encyclopædias of biological doctrine that any one man ever brought forth; and I believe that, if you take it as the embodiment of an hypothesis, it is destined to be the guide of biological and psychological speculation for the next three or four generations."

Such being the case, Mr. Huxley has done good service by throwing together in a popular form the facts upon which Mr. Darwin's theory is founded; educating, as it were, the mind of the non-naturalist to appreciate the full force of the arguments used, not only for, but against it: for, like his leader, Mr. Huxley by no means shrinks from facing the facts that tell against him.

With this aim, he begins by selecting an animal with which all are familiar, namely, the horse; giving a rapid sketch of its organisation, and its dependence on the vegetable, and through that on the inorganic world, and its final return to the latter, "thus coming to the conclusion, strange at first sight, that the MATTER constituting the living world is identical with that which forms the inorganic world." The processes of reproduction are next dwelt on, and finally "Geographical Distribution;" and it is shown how little functional difference there is between animals and plants. "For we shall find that, distinct as those plans are, whether it be a porpoise, or man, or lobster, or any of those other kinds I have mentioned, every one begins its existence with one and the same primitive form, that of the egg, consisting, as we have seen, of a nitrogenous substance, having a small particle or nucleus in the centre of it. Furthermore, the earlier changes of each are substantially the same, and it is in this that lies that true unity of organisation of the animal kingdom, which has been guessed at and fancied for many years, but which it has been left to the present time to be demonstrated by the careful study of development. But is it possible to go another step further still, and to show that in the same way the whole of the organic world is reducible to one primitive condition of form? Is there among the plants the same primitive form of organisation, and is that identical with that of the animal kingdom? The reply to that question, too, is not uncertain or doubtful. It is now proved that every plant begins its existence under the same form; that is to say, in that of a cell—a particle of nitrogenous matter having substantially the same conditions. So that if you trace back the Oak to its first germ, or a man, or a horse, or a lobster, or oyster, or any other animal you choose to name, you shall find each and all of these commencing their existence in forms essentially similar to each other; and, furthermore, that the first processes of growth, and many of the subsequent modifications, are essentially the same in principle in almost all."

Having laid this foundation, and devoted one lecture to describing the results of geology, Mr. Huxley proceeds to discuss the origination and perpetuation of living beings, with hereditary transmission and variation, the latter of which he shows to be a necessity, "for inasmuch as the thing propagated proceeds from two organisms of different sexes and different makes and temperaments, and as the offspring is to be either of one sex or the other, it is quite clear that it cannot be an exact diagonal of the two, or it would be of no sex at all; it cannot be an exact intermediate form between that of each of its parents—it must deviate to one side or the other."

Many curious and interesting notices are given of instances of variation which have been recorded; and Professor Huxley then touches on the difficult point of the sterility of hybrids, the one objection to the Darwinian hypothesis which he considers of any value. However, though he admits that "at present, so far as experiments have gone, it has not been found possible to produce this complete physiological divergence by selective breeding;" yet that "when we see how capricious and uncertain this sterility is, how unknown the conditions on which it depends, I say that we have no right to affirm that those conditions will not be better understood by and by, and we have no ground for supposing that we may not be able to experiment so as to obtain that crucial result which I mentioned just now. So that, though Mr. Darwin's hypothesis does not completely extricate us from this difficulty at present, we have not the least right to say it will not do so."

We have only to add that these lectures are written in a most concise and yet lucid style, and are admirably adapted to their object—that of rendering their subject clear to non-scientific persons.

Miscellaneous.

Pyrethrum Powder.—All the Anthemidæ of this group, as for instance, Chrysanthemums, Chamomiles, &c., possess in the sexual parts of the flower a singular narcotic matter, which has a great effect upon insects, and even kills small ones in a short time. In Pyrethrum roseum and P. carneum (just within the disk), this matter is found in the largest quantity. In order to prepare this powder to advantage, only the centre of the flowers must be used, and these must be cut before the seeds are quite formed. It is also very essential to dry them in the shade. The Spaniards, to keep off the gnats, burn the centres of the flowers of the Chrysanthemum Leucanthemum. It is stated that the flowers of Anacyclus valentinus and A. clavatus produce nearly the same effect as the powder of the Pyrethrum. M. Duchartre has used the powder of the wild Chamomile (Anthemis Cotula) to destroy insects. The country people fasten this same plant to the branches where swarms of bees have settled (after having secured them), in order to prevent the bees from leaving the hive. The Mahometans and the Tartars have long employed the powder of the Pyrethrum against all insects indiscriminately. To destroy flies, gnats, and bugs, they burn it on an iron plate, which they slowly heat in order to produce more smoke. But in this country adulteration has also taken place, and it is very difficult to procure the powder pure, doubtless arising from its commercial importance during some few years. They are beginning to use to some extent the Anthemis nigrescens. *E. J. Bedinghaus, in Belgique Horticole.*

Scandinavian Vegetation.—It was on the morning of the 20th [of June] the "Scandinavian" sailed from Hull

for Christiania, and, after a fine passage across the North Sea, we reached Christiansand early on the morning of the 22nd. On learning that the vessel would remain here a couple of hours or more, we went on shore, and had a ramble over the rocks, which rise in a picturesque manner around the beautiful harbour, and also over the town. Among the first plants picked up were the following—Linnæa borealis, Ajuga pyramidalis, Trientalis europæa, Cornus suecica, Silene rupestris, and Asplenium septentrionale. Syringa vulgaris, which had been a month out of flower before we left England, was still in full flower here. Sycamore, Lime, and Horse Chestnut trees appeared to thrive sufficiently well in the little gardens near the town, but the great mass of wood which covered nearly the whole face of the country consisted of Spruce and Scotch Firs. After a short stay on terra firma, we were again summoned on board, when the steamer started for Christiania. On leaving the harbour we passed numerous boats sailing up to the town with mackerel, which were all managed by women, who appeared expert sailors. The fishermen, who have their houses on the coast near the harbour, go out to fish at night, and the women are ready to take charge of the boats in the morning to bring them up to Christiansand to sell the fish, thus allowing the men to get rest and sleep. During the whole day we skirted along the coast within a short distance of it, which enabled the passengers to get a good view of the beautiful scenery it presents. The low rugged hills were everywhere covered with dense black Pine forests, which came close down to the sea, whilst farther in the distance mountains of much greater elevation were visible, with black patches of forest only reaching partly up their sides. At 9 o'clock in the evening we passed the light-house at the entrance of the Christiania fiord, when the twilight kind of darkness which occurred a short time before and after midnight prevented our seeing the scenery on the shores of this fiord. It was, however, sufficiently light again between 1 and 2 o'clock next morning, when we went on deck and enjoyed the fine scenery until the ship reached Christiania at 4 o'clock. After breakfast we waited on the British Consul, Mr. Crowe, who received us with his well-known urbanity of manner, and, on learning the route we intended following, he kindly offered letters of introduction to my two friends, who were going to Hammerfest, with the intention to cross over Lapland to the Gulf of Bothnia. Various circumstances prevented me from making so long a journey; hence I only proposed to accompany them to Trondhjem. Whilst my friends were making preparations I went to the Botanic Garden, which is about an English mile from the town. Soon after arriving there I met the active practical superintendent, M. Moe, who conducted me over the establishment, and enabled me to make a good list of desiderata. Professor Schubeler was not at home when I called, consequently I did not see him. The Botanic Garden is beautifully situated on an eminence which overlooks the harbour, and ships are constantly entering and leaving during the summer months. It joins the park in which the Royal palace stands, and can be easily reached by walking through the park. It is laid out more to suit the piece of ground on which it rests than it is to any regular plan. The range of conservatories is not extensive; and only affords an inferior kind of accommodation for plants in the different divisions. Those cultivated consist principally of South African and Australian kinds, among which are a good many Mesembryanthemums, Aloes, Sempervivums, &c. The herbaceous plants out of doors are arranged in classes and orders, according to the system of De Candolle, and contain among them a large assortment of well-named kinds. Cyperaceæ and Gramineæ were favourite families with the late Professor Blytt, and M. Moe is well up in them also. Besides, the Flora of Norway is peculiarly rich in Carices; and the climate is favourable for their cultivation, hence the best collection I have seen in any European garden is to be found at Christiania. I was able to select about 50 species for the present collection at Glasnevin, which has hitherto been considered a pretty full one. The Grasses contained among them a number of rare alpine kinds, which I have long been anxious to get, but never could lay hold of before. The Coniferous plants, so beautiful in English gardens, are cultivated at Christiania in pots, and moved into the conservatory during winter; the Common Laurel and Laurustinus are treated similarly. The Arbor-vitæ, Thuja orientalis, with one or two of the hardier kinds, have stood out three years, and seem to thrive very well in sheltered spots, which leads me to think there are a good many more now under cultivation in Britain sufficiently hardy to grow in the south of Norway. A large Horse Chestnut, which must be a very aged tree, stands at the entrance gate. Rows of deciduous trees are planted along the sides of the walks and drives through the park, in which the Royal palace stands, consisting principally of Lime, Ash, Oak, and Sycamore. They produce a good effect among the groups of natural Spruce and Scotch Firs, which are still standing in some places, besides affording a desirable shade in summer, when it is sometimes very hot. During two days when I was in Christiania, Fahrenheit's thermometer reached 75° and 80° in the shade, between 12 and 2 o'clock. The shrubs generally cultivated are species of Spiræa, Philadelphus, Viburnum, Robinia, Rubus, and Rosa, which flower much better and more profusely than they do in England. Spiræa Lindleyana becomes a magnificent plant there! The old-fashioned yellow Austrian Rose made a fine appearance in shrubberies. Light, and also heat, but especially the former, being greater there during the summer months than with us, favour the production of blossoms, which appeared to me to be brighter in colour, and also stronger in perfume. But the seasons are too short for most of our fruits ripening. Cherries, with some of the hardier kinds of Apples and Pears, are cultivated near Christiania, but, so far as I could learn, do not arrive at great perfection. The Strawberries offered for sale in the market were the fruit of the common wood kind, Fragaria vesca. Potatos, Peas, and some other sorts of vegetables, were very good. Most of our half hardy bedding-out plants, grow well, and flower abundantly. Pelargoniums, Petunias, Calceolarias, Dahlias, Balsams, Carnations, &c., made beautiful beds in the park, and also in front of some of the houses in the suburbs of Christiania. *D. Moore, in Proceedings of Royal Dublin Society.*

Calendar of Operations.

(For the ensuing week.)

RECENTLY transplanted trees and shrubs will now and during the early summer months require some attention; for failure is often caused by sudden bursts of hot weather or by cold drying winds, when these occur before the plants have had sufficient time to replace their lost roots. Occasional waterings should therefore be given in dry weather, and to maintain a more uniform state of moisture about the tender newly formed fibres, spread, where it can be done, a thick mulching of rotten leaves or dung over the ground as far as the roots extend. This, if objectionable on account of its appearance, might be hid by a covering of Moss. When the plants are very valuable they might be sheltered from drying winds, and even shaded from hot sunshine, by a temporary screen of mats or other suitable material. It need scarcely be added that large trees which have been recently planted should be firmly secured against wind-waving, in order that they may not be displaced, or their roots strained or broken.

FLOWER GARDEN AND PLANT HOUSES.

AURICULAS.—Weak liquid manure now once a week will strengthen the trusses; give plenty of air, and fumigate occasionally.

AZALEAS.—Give young growing plants liberal shifts; a good fibrous peat with a little white sand suits them admirably, but for stronger growing kinds a small portion of loam may be used with advantage. Give air freely in fine weather, and attend regularly to the stopping, thinning, and training of the shoots. Large specimens will now require more water.

CALCEOLARIAS.—Any plants struck during the winter should be repotted into 4-inch pots to succeed the first plants. If not so large, they will make compact handsome bushes for purposes of decoration.

CARNATIONS AND PICOTEES.—If there is any green fly on the plants, give them a good smoking with tobacco or tobacco-paper before taking them from the pit in which they have been wintered.

CINERARIAS.—Plants intended for exhibition should now be kept as near the glass as may be convenient; fumigate, so as to have them thoroughly clean before coming into flower, and sulphur such as may be affected with mildew.

DAHLIAS.—Cuttings struck now will be found to make fine plants; therefore propagate freely, and when sufficient cuttings have been taken, divide the roots to make a few extra strong plants.

FORCING GARDEN.

CUCUMBERS.—See that the plants do not get overcrowded with wood and foliage, and by no means allow them to bear heavy crops at one time. If you wish them to continue in a bearing state for any length of time, give them a good watering occasionally with liquid manure. Sow some Short Prickly for Gherkins.

PEACHES.—The night temperature should not exceed 60° in the early house, until the "stoning" of the fruit is completed.

PINERIES.—Secure good linings to plants in dung-pits. Young stock will now be in rapid growth; take care to give air freely night and day, if the thermometer can be kept above 60°. In the afternoon, however, syringe and shut up at 90°, if possible, for a couple of hours. Pines swelling will, of course, now require liberal waterings of warm liquid manure. Those who can find time should syringe the surface of their tan slightly, both morning and evening. It is impossible to keep up too much atmospheric humidity in Pine stoves at this period.

VINERIES.—Those who started early will now or soon have Grapes in their last stage of swelling. A mistaken notion prevails with many, that in order to produce well-coloured Grapes, the laterals, at a given period, should be reduced so as to admit the sun to shine on the berries. The most powerful sunshine will not colour Grapes in perfection, unless the Vines possess a proper proportion of leaves and healthy roots. Some of the blackest Grapes we have ever seen, and possessing the finest bloom, were in situations in which we might almost say the sun's rays never shone on them.

HARDY FRUIT AND KITCHEN GARDEN.

See that fruit trees are well covered at night, and during hail and snow storms. The covering should be removed during the daytime, unless in very severe weather. It is a good practice to thin the flowers and young fruit; also keep down insects. The young shoots of Peach and Nectarine trees are very subject to attacks of green-fly, which, if allowed to get ahead, seriously injure them. Syringing occasionally with tobacco-water is the best remedy. If the weather continues dry, all newly planted trees should be well watered, and then have a good mulching of rotten dung.

BEANS.—Earth up transplanted ones, and put in another crop if those last sown are fairly up.

CELERY.—That sown early in boxes will soon want pricking out. The old plan is very good, viz., to put some very rotten and mellow dung, on a firm bottom. On this, the plants, pricked 3 inches apart, will produce many fibres, and will remove with the trowel, in balls, with the most trifling amount of check. The chief reason why Celery runs, is that luxuriance of growth is succeeded by a sudden check. The buttoning of the Cauliflower is also traceable to the same cause, as is likewise premature fructification in many other plants.

CAULIFLOWERS.—Sow for an early autumn supply.

MUSTARD AND CRESS.—Sow at the foot of a south wall.

POTATOS.—Continue to plant as the winter crops of Borecole, Brussels Sprouts, and other greens are cleared away.

SPINACH.—Hoe between the rows of autumn crops. If the ground is poor, a good soaking of manure-water will increase and prolong its produce.

STRAWBERRIES.—Get beds and borders of these weeded and otherwise cleaned before the plants have grown much. Where appearances do not require to be studied, a thin mulching of long stable litter will be found to protect them from cutting winds, and to encourage and strengthen their growth.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending March 30, 1864, as observed at the Horticultural Garden

March.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs. 24	16	29.987	29.853	59	20	35.0	45	44	N.E.	.00
Friday 25	17	29.741	29.520	52	26	39.0	43½	44	N.E.	.01
Satur. 26	18	29.622	29.518	42	27	34.5	43½	44	N.	.00
Sunday 27	19	29.563	29.500	50	27	38.5	43	43½	N.E.	.00
Mon. 28	20	29.405	29.061	50	30	40.0	43½	44	W.	.12
Tues. 29	21	29.502	29.181	48	24	36.0	43½	43½	N.	.01
Wed. 30	22	29.667	29.409	50	25	32.5	43	43	N.W.	.00
Average.		29.626	29.434	48.8	25.5	37.1	43.5	43.6		.1

March 24—Frosty; dry haze; sharp frost at night.
— 25—Dense fog; overcast; slight frost.
— 26—Fine; overcast and cold; slight frost at night.
— 27—Fine throughout; slight frost.
— 28—Fine; cloudy and cold, with dry air; fine at night.
— 29—Cold, cloudy and windy; clouds low in snow-like masses, overcast; frosty.
— 30—Heavy fall of snow in broad flakes, commenced 5—6 A.M.; cloudy and showery.
Mean temperature of the week, 6 deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending April 9, 1864

April.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 3 .	58.8	35.2	46.0	19	1.19 in.	4	4	5	3	4	12	3	3
Mon. 4..	56.5	36.1	46.3	14	0.30	5	3	3	1	3	12	6	5
Tues. 5..	56.9	36.5	46.7	17	0.30	2	6	4	2	3	7	12	2
Wed. 6..	59.1	34.7	46.9	14	0.30	3	9	4	2	4	13	2	1
Thurs. 7..	59.4	36.9	48.1	18	0.50	2	8	4	2	2	12	7	1
Friday 8..	55.7	35.8	45.8	21	0.69	2	6	7	1	6	8	6	2
Satur. 9..	54.5	35.5	45.0	19	0.73	2	7	7	1	5	6	6	1

The highest temperature during the above period occurred on the 7th, 1859—therm. 72 deg.; and the lowest on the 10th, 1860—therm. 20 deg.

Notices to Correspondents.

AILANTHUS SILK WORM: *W P.* We do not know who deals in its eggs. You might enquire of Mr. Hooper, Central Avenue, Covent Garden, who can probably procure them if he does not keep them for sale.

AUCUBAS: *John G.* We presume the male Aucuba is at present only to be obtained in the Ascot Nursery; but of course, amongst the many seedlings which have been raised, males may be expected to appear by and by.

CLIMBING ROSES: *M M B.* You cannot do wrong in planting Amadis, Ruga, Splendens, Thoresbyana, Adelaide d'Orleans, Félicité Perpétue, Celine Forestier, Myrianthes Rénoncule, Gloire de Dijon, Homer; and if you are sheltered enough, you may add Russelliana, Cloth of Gold, Jaune Desprez, La Biche, Ophirie, Lamarque, and Solfaterre. Paul's "Rose Garden" is a trustworthy guide.

NEW HYACINTHS: *J R.* The best of those which have appeared in public, are King of the Blues, very fine, Lord Palmerston, also a fine lilac-blue, with a white eye; Thorwaldsen, a blue with large bells and flat segments; and Robert Fortune, a reddish mauve. They are all acquisitions.

NAMES OF PLANTS: *P B.* 1, Scilla sibirica; 2, S. præcox; 3, S. bifolia.—*J M.* Helleborus fœtidus.—*Ellen.* The finely-cut Fern shown by Mr. Bull the other day, was Asplenium ferulaceum.—*R S.* 1, Primula denticulata; 2, P. nivalis.

PRUNING: *A Young Gardener.* The Apricot, Plum, and Cherry, although ranked among *stone fruits* like the Peach and Nectarine, should not, however, be pruned in the same way as the two last mentioned. These require to have their young shoots shortened in the winter following that summer in which they are produced, for the reasons stated in the article to which you refer. But as regards the Apricot, Plum, and Cherry, it is not necessary to cut out the wood that has once borne, because, unlike that of the Peach, it will bear again, and on spurs for many years, without danger of the branches becoming naked. Their shoots may be laid in at full length, unless they be weak at the points and badly ripened; then these weak points should be cut off. Or, if the shoots are very long, and in consequence are not likely to push their buds near the base, they should likewise be shortened to make them do so. They may also be cut back to the point where it is desirable to originate another leading branch.‖

UNUSUAL PLANTS: *T D.* The common things can be had anywhere, as you are aware. As to the others, you had better apply to the Curators or Superintendents of such Botanic Gardens as are within your reach—Glasnevin for example—or Kew in case of need. The Newtown Pippin may be had at any of the great nurseries.

CARTER'S FARMER'S VADE-MECUM.

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1s. 6d. each for sacks.
Address, Mr. H. STEBBING, Slow Bedon Hall, Attleborough, Norfolk.

The following are Testimonials from gentlemen in the neighbourhood:— (Copy.)

"Barnham, Thetford, Norfolk, Dec. 24, 1863.

"Dear Sir,—It gives me great pleasure to report favourably from my experience in the growth of the plant Anthyllis vulneraria. I have now grown it three years, increasing the extent each year. I had 20 acres last spring, which I fed constantly with my ewes and lambs till the last week in May; from that time I saved 12 acres to mow, had a good two loads per acre, and that on very poor land. The Sheep are remarkably fond of it, and I believe it to be a most valuable plant. I have just received the following testimonial from Mr. G Kersey Cooper.—I am, dear Sir, yours very truly,
"GEORGE TURNER.

"P.S.—My first piece laid down in 1860 was only 1¼ acre, which is still very productive."

"Euston, Thetford, Norfolk, Dec. 24, 1863.

"Dear Sir,—I am happy to add my testimony to the value of the plant you call Anthyllis vulneraria (better known to me as Kidney Vetch), as feed for sheep on poor sandy soils. I have particularly watched the growth of that grown by you at Barnham, and I have never seen so much food produced from any plant as this, on very poor land.—I am, dear Sir, yours respectfully,
"G. KERSEY COOPER.
"To Mr. Turner, Barnham."

"Swaffham, Norfolk, Feb. 18, 1864.

"To Mr. HENRY STEBBING.—Dear Sir,—The Kidney Vetch I had from you produced 5 loads per acre, much to my astonishment, as in the early part of the spring there appeared to be nothing of it.—Yours very truly, "JACOB FINCH."

"Langford, Brandon, March 8, 1864.

"I bought 1 bushel of Kidney Vetch seed of Mr. STEBBING in 1862, with which I sowed 4 acres of very poor sandy land, the subsoil chalk, and near the surface. I consider the plant well adapted to give a good crop of Hay on the poorest soil.
"F. E. CALDWELL."

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GRASSES and CLOVERS, rather rough and coarse: for game covert, at 18s. per acre.
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GODFREY'S WHITE SPINE CUCUMBER (True), 1s. per pkt.
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The First Prize Medal was awarded to SUTTON & SONS for their Grass and Clover Seeds at the Great International Exhibition of Roots and Cereals at South Kensington in October 1862.
A Copy of Mr. MARTIN SUTTON'S "Essay on Pastures" is sent with each lot of Grass Seeds.
Seeds sent carriage free to all parts of the kingdom. Export orders delivered free to the Ship's side in any English Port.
PRICED LISTS of GARDEN and FARM SEEDS gratis and post free.
SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Early Sheep Feed.

SUTTON'S IMPROVED ITALIAN RYE-GRASS.—At the meeting of the Royal Agricultural Society on the 16th March, in a Lecture delivered by ALFRED HUGHES, Esq., of Thorness, Isle of Wight, as reported in the *Bell's Weekly Messenger* and the *Mark Lane Express*, Mr. Hughes says:—
"I always reserve a portion of Oat Land to lay down with SUTTON'S Improved Italian Rye-grass, the most reliable Plant I have come across for some years for ewes and lambs in the spring. When I tell you that I put it in in the spring and dressed it after harvest with guano, and that in the autumn when my sheep fed it off it was up to their knees, and that I fed it off again this spring with ewes and lambs, I think you will agree that it is a crop of very great value. This Italian Rye-grass, which is sold by SUTTON, of Reading, is a most astonishing vigorous plant; indeed I never saw anything to equal it in the course of my experience."

Mr. W. CARDWELL, of *Nunnery Farm, near Sheffield*, in a letter to Messrs. SUTTON, dated April 9, 1863, says:—
"The Italian Rye-grass grown from seed purchased from you, and sown in August, is now 16 inches high, and is much admired."

Messrs. SUTTON have also been favoured with the following on the same subject:—

Mr. R. STURT, *Pilming, September* 14, 1863.
"The SUTTON'S Improved Italian Rye-grass seed I had from you last year was very good; I think every seed came up. I have a beautiful plant, and have cut four good crops from it since the 30th of March last. It surprises my neighbours very much.

From JOHN BALDWIN, Esq., *Luddington, April* 11, 1859.
"It is certainly delightful to witness the sheep up to their knees in your beautiful Italian Rye-grass."

From FREDERICK H. HALLETT, Esq., *The Manor House, Brighton.*
"I mowed some of your Italian Rye-grass at Christmas 1856; again April 12, 1857; three times since in same year, and am mowing it again now, March 15, 1858. The cut on April 12 was four feet high, and a perfect mass of grass."

From J. H. FOWLER, Esq., *Eastleach, May* 16, 1862.
"I seeded some Rye-grass this last year, the seed of which I had from you, and sold it for 6s. per quarter more than any other sample in the market, in consequence of its very superior quality. Your Turnip and Swede seed also produced the best roots I ever saw. They were universally admired in this neighbourhood. Your Champion Swede is, I am satisfied, the best that can be sown—mine lasted and were quite juicy to the end of March, and none went rotten."

SUTTON & SONS have a fine stock at present of their Improved Italian Rye-grass, which is a very different and superior article to much that is sold as Italian Rye-grass. Present price 6s. 6d. per bushel, carriage free in quantities of 8 bushels and upwards.
Quantity required per acre if sown alone, 3 bushels.
Royal Berkshire Seed Establishment, Reading.

Farm Seeds.

RICHARD SMITH is now prepared to supply the following SEEDS, all of which have been selected with the greatest care, and are of very superior quality:—
CLOVER, BROAD ENGLISH RED, 58s.—62s. per cwt.
" PERENNIAL or COW GRASS, 68s.—75s. per cwt.
" WHITE or DUTCH, 62s.—70s. per cwt.
" YELLOW or TREFOIL, 30s.—34s. per cwt.
" ALSIKE or HYBRID, 76s.—84s. per cwt.
RYE-GRASS, Finest PERENNIAL, 6s.—6s. 6d. per bushel.
" ITALIAN EXTRA, 5s. 6d.—6s. per bushel.
SWEDE, SMITH'S WORCESTERSHIRE, 9d. per lb.
" KING OF THE SWEDE, 8d. per lb.
MANGEL WURZEL, ORANGE GLOBE, 6d. per lb.
" " RED and YELLOW, 6d. per lb.
" " LONG RED and YELLOW, 6d. per lb.
RICHARD SMITH, Seed Merchant, Worcester.

Present Prices of Farm Seeds.

THE NEW FARM SEEDS are NOW READY, at Reduced Prices.
PRICED LISTS may be had, Post free, from SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Clovers and Rye-grass Seeds.

SEEDSMEN BY APPOINTMENT Sutton AND Sons

SUTTON AND SONS can supply the proper quantities of the best kinds of CLOVER and RYE-GRASS SEED, either Common or Italian Rye-grass, at 12s. 6d. per acre; or Clovers without Rye-grass at 10s. 6d. to 12s. 6d. per acre.
The sorts of Clovers supplied by SUTTON & SONS are the Alsike, the Common Red, and the White Clover (14 to 16 lb. per acre).
The great produce of the above-named Mixture is shown by the following:—
From C. F. THRUSTON, Esq., *Talgarth, Machynlleth, July* 31.
"I cut a crop of Grass on June 2, which had been previously dressed with soot and guano. It was full ripe, and the Italian Rye-grass was really 4 feet high, Clover in proportion. I am now (July 31) getting a second crop from it equally heavy."
In ordering it is only necessary to state that "Clovers and Italian Rye-grass," or "Clovers and Common Rye-grass," or "Clovers only," are required for so many acres, when the proper quantities will be sent.
Royal Berkshire Seed Establishment, Reading.

Two Hundred and Fifty Guineas in Ten Prizes.

FOR FIVE YEARS SUCCESSIVELY HIS LATE ROYAL HIGHNESS THE PRINCE CONSORT'S PRIZE CUPS HAVE BEEN AWARDED TO
SUTTON'S CHAMPION SWEDES at the Royal East Berks and South Bucks Agricultural Societies.
New Seed now ready, 9d. per lb., or cheaper by the bushel, carriage free.
Royal Berkshire Seed Establishment, Reading.

IMPROVEMENT of OLD PASTURES, PARKS, and MEADOWS, by sowing the most suitable kinds of GRASS and CLOVER SEEDS.
SUTTON'S RENOVATING MIXTURES.—Quantity of Seed required, 8 to 12 lb. per acre. Price 9d. per lb., or 80s. per cwt.
From the Rev. CANON GUTHRIE, *Vicarage, Colne.*
"I have no hesitation in expressing my great satisfaction at the *manifest improvement* both to lawn and *pasture* from the Seeds which I received from you, though I was somewhat late in the sowing."
From Mr. G. NORRINGTON, *Rectory Farm, Taplow.*
"Five years ago I wrote to you to send me a Mixture of Grass Seeds to sow upon 10 acres of old Pasture. At the time I took the Farm the 10 acres of Meadow were almost useless. I now have a most excellent pasture."
Meadows and Upland Pastures may be increased in value 50 per cent. by sowing these Seeds.
Our RENOVATING MIXTURE consists of the Finest GRASSES and PERENNIAL CLOVERS. If the Seeds are sown *early in the season*, the improvement in the Pasture will be very great, and at a small expense.
Royal Berkshire Seed Establishment, Reading.

TURNIP, MANGEL WURZEL, and AGRICULTURAL SEEDS.—The undersigned offer as above, of first-class selected Stocks and prime Samples, crop 1863, at lowest prices. Terms on application.
JAMES FAIRHEAD & SON, Seed Growers and Merchants, 7, Borough Market, London, S.
N.B. Our LEWISHAM SWEDE again obtained First Prizes at several Root Shows this last season; one report states of them: "These Turnips were the admiration of all who saw them, being also a very even crop, although some bulbs were of immense size."

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE-ON-TYNE, 1864.
STOCK and IMPLEMENT PRIZE SHEETS are now ready, and will be forwarded on application to
H. HALL DARE, Secretary.
12, Hanover Square, London, W.

The Agricultural Gazette.
SATURDAY, APRIL 2, 1864.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	April 4	Central Farmers' Club (Mr. Dumbrell on the New Assessment Act.)	6 P.M.
WEDNESDAY,	" 6	Royal Agri. Society of England	Noon

THE variations to which cultivated or induced varieties of plants are liable is a matter so full of interest that we make no apology for again publishing our notes on so important an agricultural subject.

We have been accustomed to speak of the different sorts of any cultivated species as *derivative forms*, which have been attained either as the result of accident or more generally of selection.

Now it seems clear that inasmuch as such new forms can in the latter case be obtained only by great care in the selection of individuals that are to be reared for the growth of seed, so this care must be exercised to keep any derived form up to the mark arrived at. If this care be not exercised,

the specimen reverts from its attained status and becomes degenerate.

This, then, is exactly what is taking place, and more rapidly than is by some supposed, with the Swede crop. The Swede is a derived plant, and our experiments lead us to suppose it a hybrid of some form of common Turnip with a plant of Rape; but without theorising as to how a Swede has been created, it may be described in its best specimens as a *globe* of succulent vegetable tissues, the lower part of which tapers into a tap root, while the upper part has its crown surrounded by large leaves; and when well formed it is not forked in the root on the one hand, not necked or multiheaded on the other.

Such a specimen then may be safely chosen to plant for "seed from selected bulbs." Such examples, however, are so rare that he who rigidly chooses or selects them for seed, will we are certain produce seed so good as to be worthy of a large increase of price.

But let us examine into this myth of selected bulbs! If we may judge from the samples which usually carry away the prizes at root shows, even the judges of roots do not quite understand the physiology of a good root, as most frequently the prize will be given to the largest series, regardless of forked roots or branched tops, and so again for the best crop the prize is awarded to the greatest weight per acre.

Now in estimating the value of these two points, we would direct attention to a piece of Swedes on our own farm of about 5 acres; these we estimate at about 17 tons per acre, which is perhaps a little beyond the average of prize fields.

In this field many of the roots were as much as 24 inches in circumference, and yet if we had conscientiously selected examples for seeding, we should consider only about 10 per cent. as properly adapted for seed growing; the following being an analysis of 500 average roots taken just as they were lying side by side for topping and tailing.

Analysis of Golden Globe Swede.

1. Root and top sufficiently well formed for seeding ..	54
2. Necky and multiheaded	44
3. Necky or finger-and-toe, or both	402
	500

Here then we had to deal with a crop by no means deficient in weight, and yet, how malformed, *i. e.*, for the purpose of propagation! In fact this field presented all forms intermediate between a good globular succulent root and an entire absence of fleshy roots, but in their stead branched woody roots like those of Cabbages, whilst the single crown, which is the usual attendant of a well formed root, had become branched into stems and side branches of more than a foot in length.

In order to an estimate of the real value of these changes, we took pains to measure a series of representative examples, and we would recommend a careful study of the following table as showing the progress of degeneracy; and as, in the present day, there are few large fields of Swedes that would not afford the like example, so an estimate of the proportionals of our three divisions will give the amount of the resulting degeneracy.

Table representing the Declension of Swedes:—

	Number.	Circumference of Bulb (inches).	Length of Bulb.	Circumference of Neck.	Length of Neck or Stem.	
I. Good Swedes.	1	22½	7	6	2	
	2	18½	6	4½	1½	Tolerably well formed bulboid roots, with small, short, more or less well formed necks, having only a single crown.
	3	22	7½	6½	3	
	4	18	8	4½	1½	
II. Degenerate Swedes.	5	13	8	9	12	Much forked in the root. Stems long, woody, and more or less branched, some of the side shoots being many inches in length.
	6	11	10	5	12	
	7	11	4	9	8	In these the root is rather a collection of fleshy forks than a bulb, whilst the stem is more that of a branched "green."
	8	13	4½	9	11	
III. Bastard Rape.	9	6	5	6	19	
	10	Woody root stock.	Branched.	A collection of stems.	10	Root-stock graduating into hard woody forks (not fleshy). Stem more or less branched with woody Rape-like stems.
	11				8	
	12				20	

This table shows the nature of the progress to degeneracy in Swedes, and to such an extent is this plant degenerating, that at present there are few fields in which a large majority of at least the second group may not be found. As regards the group 3, this will be less or greater in numbers according to the care with which the seed has been grown, and the skill employed in its cultivation, for our own experiments show in the clearest manner that the use of degenerate forms of roots for seeding purposes results in even a lower formed progeny, so that if we were to seed this bastard Rape—for be it remembered these rough-looking branched examples are not true Rape—we should expect such seed to produce tops, but not bulbs; and when we look at the large size of these bastards, and calculate the amount of green crop they are likely to bear, all cross or mixed breeds having a tendency to produce size, it is not improbable that in the Rape-like plant we should find a useful crop.

These remarks, then, show how important it is that we should select our plants in growing seed; and so fully is this recognised that people buy Turnip seed all the more readily that purports to be from selected bulbs, and hence seedsmen profess to sell "seeds from selected bulbs;" but let any man look about the country and he will conclude that not a fiftieth part of the seeding patches that will come under his observation is grown from even shifted bulbs, to say nothing of *selected ones*. Seedsmen will sometimes grow from transplanted bulbs, but generally speaking the breadth so occupied is not anything like proportionate to the extent of their trade.

We take it then to be true that there is a tendency to degeneracy in cultivated plants if their seed be not grown with great care, and consequently we should be prepared to pay for the exercise of care and judgment. If, however, seeds are sold under the assertion that this has been done when it has not, of which we have had notable examples in our own experience, it is justly a matter for condemnation; and if then we apply this to the great development of bastard Rape we occasionally meet with in a Swede crop, we have no hesitation in saying that it is the result of growing degenerate seed, wherever the fault of doing so may rest.

We shall here be met with the assertion that the same seed behaves very differently in different positions. This we admit. It is quite true that even a degenerating sample will not show its downward tendency in so marked a manner when the seed is sown in a different climate, leaving a colder for a warmer position, or with good cultivation; but that it will be there we are assured by the results of careful experiment and extensive observation; and we are as certain that a bad strain will result in a degeneracy of crop as that a carefully grown seed will produce, other things being equal, not only a better form, but even a larger produce.

Mr. Du Boulay has announced "the still, warm, dry, but not productive summer, of 1864." The equinoctial week was still and dry, but some degrees below the average temperature of the period, so that we hardly understand the consistency of this prediction with the indications on which we understand it to be built. The following, however, is his account of the ensuing season in detail:—

"I certainly think that the season will be fine—in fact, too fine, and that want of water from above may probably curtail, below the average, the amount which the soil might otherwise produce, of every variety of spring-sown crop, including Grass and forage plants, Oats, Barley, Beans, Peas, and root-crops generally—Potatos, Mangel, Turnips. I do not mean that these crops are going to fail altogether, because I think the summer itself will be in its own nature in many respects a genial one, and that the dews of Heaven will do much to keep all vegetation going throughout; but I do think that all these productions may eventually come short, and that even Wheat, favourable as is a dry season to it, will not be superabundant, like last year; for a very little disposition to premature ripening, when not dissipated without delay, by an immediate change of weather, will very easily curtail that also.

"I do not think, therefore, that the season will eventually be called a productive one, though it probably will be called a very fine one; and comparatively backward as the spring now seems to be, I believe the harvest will be an early and not a late one. I believe that May, June, July, August, and September will, in the aggregate, be superior as regards warmth and inferior as regards rainfall to the average of seasons; and that the summer cannot possibly be tempestuous, promising, as it does, to be the exact opposite to that of 1860."

The summer "cannot possibly be tempestuous," because the equinoctial week was calm—but the week following the equinoctial week has been unusually boisterous. And there is not the smallest reason to suppose that the week, 18th—24th of March, has any greater influence on the coming weather than the week, 25th—31st. There is not the slightest probability that any one will allow a prediction of this kind to influence his business arrangements; or we might take pains to show its utter baselessness. Its author's only chance of obtaining a hearing for it would be to show from meteorological records how often his so-called rule connecting the equinoctial week with the subsequent summer, has been observed. Instead of this, however, he condemns the whole affair by entering the lists on equal terms with an "astro-meteorologist;" and the planetary and equinoctial theories are thus placed by himself in equal rank on the scale of folly and absurdity.

CATTLE IMPORTATION BILL 1864.

At a recent meeting of salesmen and others interested in the importation of foreign cattle, the following resolutions were adopted, viz:—

1. That any measure calculated to diminish the fatality of the diseases of cattle will be a great boon to agriculturists and the public. That having considered two Bills now before Parliament, entitled respectively "A Bill to prevent Infectious Diseases among Cattle," and "A Bill for the Amendment of the Law relating to the Importation of Diseased Cattle and Meat," this meeting is of opinion that certain sanitary clauses therein proposed may be productive of much benefit, but that other clauses directed to the same end will tend to aggravate the evil, and cause heavy loss to all classes connected with the trade in cattle.

2. That the foot-and-mouth complaint is general among cattle brought to the London market, and has existed without intermission for a period of more than 25 years, and before the importation of foreign cattle; that it attacks no vital part of the body, and that the flesh of animals suffering from it is not thereby rendered an unwholesome article of food, and that a prohibition of the sale of cattle with the foot-and-mouth complaint will occasion immense loss to the owners of stock, and greatly diminish the supply of food to the public, and also greatly enhance the price of butchers' meat, and ultimately deter agriculturists from sending their stock to market.

3. That it is desirable that a schedule be added to the "Cattle Importation Bill," specifying what diseases shall be considered as infectious and contagious.

4. That the unsoundness of cattle is a subject with respect to which an error of judgment on the part of the Government Inspectors may occasion great loss and injustice to the importer, and that, therefore, it is desirable that a power of appeal be allowed to importers, or their agents, who may be dissatisfied with the decisions arrived at by the Government Inspectors, and this meeting is of opinion that the Royal Veterinary College will be a fit authority to constitute in London for the purpose.

5. That it is highly desirable, owing to the great suffering and fatigue which cattle endure on their voyage from foreign ports, that the animals on their arrival in this country be immediately inspected and passed without delay, in order that they may be supplied with the necessary food, and allowed that rest so beneficial to their well-being, previous to the exposure for sale.

6. That the disinfecting or otherwise purifying any quay on which animals with an infectious disease may be landed, should form a part of the business of the wharfinger, as is now the case with the cleansing of cattle ships and cattle trucks by shipowners and railway carriers.

7. That as the importers of cattle and meat are, with very rare exceptions, residents in foreign parts, upon whom the penalty of 100*l.* proposed by this Bill for the importation of diseased cattle and meat cannot be enforced, and that as the importers' agents, or salesmen, have no control over the shipments consigned to their care, and are in nowise responsible for the health of the animals at the time of arrival in this country, the destruction of any diseased imported animals or meat is the only preventive measure that can be reasonably enforced.

8. That a committee be appointed to prepare a petition, praying that the Bills now before Parliament respecting the cattle trade be amended to meet the exigencies of the trade, and to adopt such measures in reference to the inquiry which is about to take place before a select committee of the House of Commons as may be needful.

A WEEK UPON THE COTSWOLDS.

Having lately enjoyed a visit to the farm of Mr. Stiles Rich, of Didmarton, on which during the last 18 or 20 years a herd of pure-bred Short-horns has been established, a short account of it may not be uninteresting to our readers. The farm is also interesting

as having preserved records of its produce since so far back as 1774, when the average produce of Wheat during several years was about 17 bushels per acre; of Barley, 25 bushels; and of Oats, 30 bushels. The crop now averages 30 bushels of Wheat, 4 quarters of Barley, and 36 to 38 bushels of Poland Oats. Nothing is more clearly made out from these figures than the increasing fertility of the Cotswold district, of which this is a specimen farm.

The farm is about 680 acres in extent, 400 acres arable, and 280 acres pasture. The labour force of the farm includes 23 men, 7 boys, and 10 women; and 12 horses besides 2 ox teams. Extra hands are also sometimes employed, as during hay and corn harvest, and at Turnip-hoeing time. The cropping includes 170 acres in corn, 170 acres in Clover and Grass seeds and Sainfoin, and about 60 acres in Turnips. The rotation is 1, Wheat; 2, Oats or Barley; 3, Turnips; 4, Barley, or spring Wheat; 5, Clover, kept down a second year; and one-seventh of the land is generally in Sainfoin. A good deal of paring and burning is carried on upon the farm, and in the neighbourhood generally the old Sainfoin is thus broken up for green crop of some kind. The practice of stifle burning, by which a larger quantity of soil in proportion to the fuel is exposed to heat than by any other way, is also carried out to some extent, though not so extensively as it used to be.

It is, however, the herd of pure bred Short-horns upon his farm that distinguishes Mr. Rich in a district which is generally well cultivated. The farm has always been to some extent a dairy farm, the Long-horns having been originally the sort adopted, but now by gradual purchases at well-known sales during the past 20 years, and by the employment of first-class bulls, a herd including members of some of the most fashionable strains of pure Short-horn blood has been collected.

Thus at the sale of Mr. Glass, of Worton, near Devizes, in 1847, three pure bred Short-horn cows were obtained, which have several descendants now in the Didmarton herd. About 1852 a good cow of Lord Ducie's, "Ursula," by "Usurer," was obtained from Tortworth, and she has eleven female descendants at Didmarton. Another "Usurer" cow ("Flourish") was bought at the Tortworth sale, and she has eight descendants. Old "Splendour," a cow bred by the Hon. Noel Hill, and bought at Mr. Dickenson's sale 9 or 10 years ago, has four female descendants. "Sweetbread," another cow bought at Mr. Dickenson's sale, has eight female descendants at Didmarton. Captain Gunter's cow "Phœbe," descended from Sir C. Tempest's blood, has four female descendants at Didmarton, one of which is by "6th Duke of Oxford." From "Florentine," bought of Mr. Sainsbury, of Corsham, there are several female descendants. "Oak-leaf," bought at Mr. Harvey Combe's sale, has four female descendants; and there are three heifers from another cow "Kathleen," directly descended from the Tortworth herd. In 1859 there were bought at Mr. Tracey's sale in the county of Kent, "Snowberry," her daughter "Clusterberry," and "Carolina 2d." And of Lady Pigott, "Belvoir Lady" and "Belvoir Duchess," a calf by the "6th Duke of Oxford," were purchased, A red cow "Libel," bred by Mr. Bolden, of Lancaster, and almost entirely of Warlaby blood, has also been added to the stock, by purchase from Mr. Strafford. Waterloo 28th, bred by Mr. C S. Bolden, bought at Mr. Hale's sale, has just had a heifer calf by "7th Duke of York." Mr. Rich was the purchaser at the Sarsden sale of Lady Charmer, a cow of the celebrated *Chaplet* family; also of Alma Mater, a cow calf of the Louisa tribe, both descended from the well known Tortworth herd, which will no doubt add materially to the future value of his herd.

The bulls employed on this herd have been as follows:—"Old Strickland" (11,870), bred by Miss Strickland so long as 1837 or 1838; "Ned Poins" (6241), bred by the late Mr. Cotterell of Congresby in 1842; "Berkeley" (7830) bought a calf at Lord Ducie's sale in 1845; "White Helicon" (13,999), bred by Lord Ducie, and bought in 1843; "Saturn" (12,051), bred by Mr. Woodward in 1846; "Douglass" (12,715), a grandson of Bates's "Duke of Northumberland;" "Valentine" (13,932), bred by Lord Ducie, calved in 1852; "Duke of Ulster" (12,774), bred from "Ursula," by "4th Duke of York," calved in 1853; "Koh-i-noor" (11,642), bred by Lord Ducie, also by "4th Duke of York," calved in 1851, was used four years; "Cupid" (14,359), bred by Mr. Sainsbury in 1856, by "4th Duke of Oxford," out of "Darlington 6th," the latter being bought by Mr. Thorne, America, at 300 guineas: and latterly the magnificent white bull 7TH DUKE OF YORK (17,754), bred by Captain Gunter, which is now at Didmarton, and has already a lot of produce there of first-rate character. Among the young bulls and bull calves by him now for sale is HEIR OF YORK, a rich roan, calved last October, bred from a daughter of *Snowberry*, named above. CONRAD, a red and white bull, now 9 months old, got by 3D DUKE OF LANCASTER (19,624), also out of a daughter of Snowberry. PRINCE ROYAL, rich roan, 12 months old, by DUKE OF CLARENCE (19,611), out of a granddaughter of Captain Gunter's cow *Phœbe*, named above.

EARL OF ELGIN, roan, 6 months old, got by 7TH DUKE OF YORK, from a granddaughter of *Kathleen*, named above. And FRANK FAIRLEGH, by EARL HOWE (a bull by Captain Gunter's GRAND DUKE OF OXFORD), out of a daughter of Lord Ducie's *Flourish*.

The above account of their breeding is enough to guide any one likely to become a purchaser.

The farm is, however, interesting, not only for the first-class herd which has been by Mr. Rich's enterprise and judgment, and patient resolution, grown up upon it, but, as already stated, also for its ordinary arable management, and for the records of its produce, kept through many years, which prove the gradual and constant increase of its fertility.

AGRICULTURAL PLANT IMPROVEMENT.

WHILE treating of the rival principles of cultivation and selection, in your Leading Article of the 5th March, you have neither correctly defined nor defended my views on agricultural plant improvement; I therefore ask space for explanation in your valuable paper.

Of the three "alleged facts," none of which you think I will venture to deny, I take exception to all of them. Commencing with the first postulate, namely, "that the grains of cereals differ in their powers of productiveness." In discussing this subject you seem in doubt whether Mr. Hallett means the grains of different varieties or of a single ear, and you sometimes adopt the one view and sometimes the other. It is, however, evident that the grains of a single ear is meant, as the system he advocates is based upon it, and which you explain as selecting the best ear for successive generations. In ears of a fixed variety of Wheat, and more especially large ears, seeds are often found different in size, form, quality, and sometimes also in colour, but all the descendant plants are equally productive when grown under a parity of circumstances. It is space, nourishment, soil, climate, &c., which causes inequality in the productiveness of Wheat plants of the same variety, and not inherent properties of the seeds. The diversity of seeds and uniformity in type of plants proceeding from them are known to every observant cultivator. Farmers do not attribute inequality in the size of Turnips of a variety grown in the same field to anything but space and nourishment surrounding the plants.

The second postulate, "that the descendant plants and grains inherit more or less the characteristics of their respective parents, is true only in a restricted sense, there being anomalies with Wheat. From seeds of varieties with fixity of type descend plants identical in character, and unless this is the case the term variety is perhaps misapplied, but the seeds have nothing in common beyond the germs giving life to new plants. Some anomalies are known as sports, which often prove fixed varieties, differing widely from the parent plant. Other anomalies arise from the pollen of one floret coming in contact with the style of another, and are sometimes called hybrids, which often, but not always, prove inconstant on reproduction from seed. An ear of this description, and its seeds which came into my possession produced 13 plants, and 5 of them had characteristics of chaff distinct from each other, and all different from the original ear, and the diversity goes on increasing from year to year. With sporting Wheats, and there are several of them from different origins, I have not succeeded by repeated selection to fix any type, but perseverance may effect this object. I am not without hope that my sporting Wheats may give rise to new and valuable varieties; but whether the expected kinds are to be fixed by repeated selections, or to arise fixed by nature, can only be determined by experience.

On the fixity of characteristics Mr. Hallett's sentiments differ widely from mine. He believes them changeable, and capable of being fixed by yearly selection, while I consider them fixed in ther origin, and unalterable by cultivation. But while contending for fixity by nature, sports and hybrids are exempted. We are perhaps agreed that selection is the best, if not the only way of improvement, while we pursue different modes of attaining the desired object. Mr. Hallett begins with a grain—one of the most minute, uncertain, and mysterious parts of a dead plant, while my foundation is a living object, with all its characteristics and properties fully displayed. The results of the systems brought out form a striking contrast. The bearded varieties bearing my name are new in their field characteristics, with beautiful grain yielding flour of the finest quality. Hallett's Pedigree Nursery variety has a strong resemblance to Kessingland in the field, as well as in a corn exchange, and yielding flour best suited for the dusting purpose of the bakehouse.

The three alleged "facts" which have been enunciated, approved, and defended in the editorial columns of the *Agricultural Gazette*, have so damaged the system of Wheat improving by the yearly selection of ears and grains, that it cannot now be successfully maintained. If the first selection was an ear of Nursery, which is a fixed variety, Mr. Hallett and the "faithful," ought to explain how it was made to alter from year to year, and how the ears and grains change while the other parts of the plant remain fixed. They also ought to point out the yearly rate of change, the length of time requisite to bring about the maximum increase, and if the present generation may expect to see Hallett's Pedigree Nursery Wheat with ears as long as the handle of a pitchfork and grains larger than a quartern loaf.

The second alleged "fact" is also seriously damaging to the yearly system of plant improving. If it is true without exceptions—and none have been mentioned—"that descendant plants and grains inherit more or less the characteristics of their respective parents," it is difficult to see how any change whatever can take place. This postulate is obscure, and the words "more or less" may have been inserted to provide an escape from error if anything of the kind should be detected. The expressions best plant, best ear, and best grain, leave no doubt that magnitude is the leading property desired. Now, if largeness of a single grain can be inherited, so can every gradation of size, and this leads to the monstrous conclusion that grains which have been reduced to little better than mere skins will transmit their shrivelled conditions to the grains of the succeeding generation. But although exemption may perhaps be claimed for such visitations, still enough may be gleaned to condemn the postulate. In the case previously noticed, where out of the grains from one ear there were five plants out of 13 unlike the parent ear, which was discovered in my own nursery, and was not influenced by human agency, there was an undeniable departure from the characteristics of the parent plant. But I had another illustration while investigating the origin of sports. I fecundated a floret of Shirreff's Bearded White, with pollen from another floret of the same ear, and in the following year the operation was repeated on three florets of an ear of the resultant plant. One of the grains obtained in this manner produced a plant with bearded white chaff, a second plant had bald white chaff, and a third had chaff white, bald, and semi-woolly (pubescens). I also fecundated a floret on the same ear with pollen from Talavera, and the descendant plant was bald, with grain bell shaped, and nearly as high coloured as red Wheat. None of these Wheats proved fixed on reproduction in the second year, and diversity of characteristics often extended to the grains.

But by far the most damaging part of the leading article in question is a paragraph treating of fixity of characteristics, where the writer says:—"The former (Hallett) has in fact by, we presume, excessive thin seeding year after year, brought his principles of continuous treatment to bear in fixing the excessive coarseness which thin seeding tends to produce. So that the inferior quality of the grain may be pointed to in proof of the soundness of his theory." This extract is a full and clear admission that Hallett's system of plant improvement, so extravagantly lauded at home and abroad, has resulted in producing Wheat of "excessive coarseness;" so that the system has not only failed to improve, but has produced great deterioration. I have long been anxious to break down this system, hurtful by misleading agriculturists in plant improving, and I rejoice at the most effective aid lately received through the columns of the *Agricultural Gazette*.

Before concluding allow me to notice part of a letter from Mr. H llett in your paper of the 5th instant, and contained in parallel columns. The matter in the left-hand column was written on September 6, 1862, and afterwards corrected in your Paper in a letter dated the 29th of the same month, as follows. "A mistake shall be corrected which I made by stating that Pedigree Nursery Wheat was identical with the common Nursery Wheat of the country. At the time of my visit none of the crop had been reaped, and from the immature state of the seeds it was difficult to determine the variety." This rash and foolish opinion, given by me, has been adroitly used by Mr. Hallett, and if he himself and all the "faithful" will as readily confess their errors, their system of plant improving will henceforth be harmless. *Patrick Shirreff, Haddington, March* 19, 1864.

THE VEGETABLE MOULD.

THERE is a great similarity in the components of vegetables, and also of animals subsisting directly or indirectly upon vegetables.* There is, however, in vegetables a considerable difference in the relative amount of the components betwixt one family or genus and another, in one more of lime, &c., in another more of potash, &c., and so on. It is also noticed that the same species or variety in different soils differs a little in the amount of each ingredient, owing to the difference of supply from a difference in the soil. It is thus that in the fields of Nature we find a connection betwixt the plant and the soil, and can determine of the kind of soil from the kind of plant. We also notice a great difference in the size of plants of one family or even species, according as the soil is rich or poor in vegetable mould and other provisions of fertility, or under the culture of man as the plant is suited to climate and soil. This being patent to all, we notice further that the flora and fauna of former eras have been much different from the present. Here we observe that the difference is nearly in the ratio of the recession backwards, and at the same time taking a comprehensive view of all, that in both kingdoms, from the highest antiquity we have indices of a gradual approach to the present forms and progressive rise of being in the higher organisms up to the present era—the era of the Cereals, rose-flowering fruits, mam-

* In animalcule life, and especially in sea animalcule life, where animal and vegetable seem to unite, some varieties of animals appear to subsist like vegetables upon the elements alone.

mals and of man, as if predestined and effected by a gradual provision for superior life,—that life itself is endowed by virtue of a variation power, to rise *pari passu*, as its field of life, the vegetable mould, becomes improved.*

We are yet ignorant of the nature of the power which the rootlets possess so far, of the selection of food—that in the same soil plants of different genera, growing side by side, absorb to some extent different ingredients, or of the same ingredients, different quantities: as there appears to be no stomach to divide the useful from what is not useful a more accurate selection is required here than in animals. We are almost equally ignorant of the functions of the leaves, in assimilating the substances which the roots or the leaves absorb; we only know that both root and leaf selected absorption takes place. Yet it seems probable that the matter absorbed, both by roots and leaves, may be either in a state of chemical solution in water, or aërial, or in very minute division physically (not chemically) in the water or air. The fact that plants absorb the germs of fungi or musci by the rootlets, renders it likely that matter in fine division and moist, without being in chemical solution, and even deleterious, can be absorbed. We are also ignorant whether the rootlets and leaves have or have not a power of attracting what is required from some little distance. This is not altogether improbable, from some observed facts not otherwise easy to account for—that not having the power of locomotion or locomotive members like hands, or tongues, or proboscis, they may have a compensating magnetic attractive power extending minute distances. If such a power does not exist, and suppose the selection to be only from the substances dissolved in the water the plant drinks up—how are the dissolved substances not suited left out? The power of selection shows why a mixture of different kinds of plants is more productive than one kind only, and why a succession of different kinds of crops is also more productive. It is I believe admitted that the matter selected or absorbed by each kind of plant may vary a little, and that one alkaline or acid substance sometimes supplies the place of another. The nature of the attraction we cannot comprehend, but it seems to some extent magnetic. It has been thought that there is a difference in the magnetic influence upon organic life in the southern hemisphere, at least in the southern temperate zone from the northern. The advancement of the fauna in the southern is behind the northern. The ancient-era organisms are predominant in Australia, New Zealand, &c.,—the Tree Fern (Felices), the Equisetum tree, the want of rose-flowered fruit-trees, the prevalence of marsupials in mammals, this last a provision against an unstable world and precarious food supply. It is not improbable that the changes of life in the different geological periods may be connected with a change in the terrestrial magnetism, and that animal magnetism, capable of being so far brought under man's control, may not be baseless conjecture. The purpose of magnetism as an agent in Nature remains yet undiscovered.

Animals have a large mouth to receive and a stomach to digest organic matter without change from its natural form,—instance the negro savage with large projecting mouth, great jaws, large incisors to divide and molars to grind the food, *in transitu*, downwards to the digestive organ; instance the civilised man with his quern or large corn mill, when his jaws and teeth, not so much in request, become smaller and the mouth rather retiring; instance the bird without incisors or molars, and only a forceps to seize, but with a natural mill and millstones internal, driven by muscular power, a gizzard worked to reduce the more obdurate portion of their food. In plants the digestive organ is wanting; they have no large mouth nor molars, nor mills, nor digestive stomach; but must have their food in much the same condition as that supplied by the digestive organs of animals, from which an organ absorbs the chyme and chyle in the animal. Their food, organic and mineral, must be supplied, in a manner digested, the mineral portion by the solvent digestive action of the organic portion, perhaps assisted by the vital power, the whole thus reduced and rendered of a mild nature, free from putrefactive acridity and the acid and alkaline ingredients nearly balanced.† Such is the vegetable mould, the digested food of plants, ready like the chyme for absorption by the rootlets and for assimilation. And it is this provision (a portion of the progressive scheme of Nature) so gradually prepared in the course of innumerable ages for the support of a higher order of organisms, the very means of his own creation and continued existence, that man by his, I may say, wilful ignorance, obstinate blindness, has been destroying. It is to open the eyes of the British landlords, in regard to this destruction in progress, that I am trying to effect, as their best friend, but with no great hope of success.

The whole dry land surface of the earth, wherever organic life exists, is a great stomach digesting food for the vegetable creation, and the organic remains of every kind, as they escape from life, mixed with the minerals of the soil, is the food that is being digested; in the case of peat formation we have only a little local indigestion produced by cold and wet feet which drainage and a little lime powder will cure. In this wide digestive organ or field, animals (for whom in the scheme of vital existence vegetables seem formed) by consuming a great portion of the crop of vegetables, act in some measure to assist in the digestion. I have years ago strongly pointed out that man by his ignorant and mischievous hand-to-mouth system of agriculture, comes in to exhaust this digested supply, trusting, as in the case of the British landlords, that Liebig, or rather his presumptuous followers, will supply the food of plants concocted by chemical art to supersede the natural concocted food, the vegetable mould, but which (ignorantly applied it is true) has only tended to accelerate its destruction by upsetting the natural balance of ingredients which this provision, formed of decayed organisms, must generally possess. Hitherto in Britain, under the mischievous system of destruction of the vegetable mould necessarily resulting from the want of protection to capital and skill vested by the farmer in preserving and improving the mould, the effect of these small manures has been to hasten the exhaustion. So much has this extended, that crops cannot be obtained without a gradual increase of these artificial manures; and under the present low prices of grain—of grain raised abroad from land where the vegetable mould is not exhausted—the cost of the increased and increasing quantity of small manures necessary to raise crops will soon amount to the whole rent which the land was once capable of paying. This the landlords of Britain will find is a little more true than the smooth comforting flattery they so willingly listen to from their chemist advisers.

Nothing shows the wise disposition and provision of nature more than the vegetable mould. Here the digestion of plant food, to which I have alluded—the slow chemical fermentation or corruption, if you choose to term it so, is carried on with the utmost sweetness and freshness. This is necessary for the health and existence of the higher organisms, animal as well as vegetable, otherwise none but the lower orders, the carrion animals, the foul-feeding fungi and musci which batten on corruption, could bear the putrid fluids and gases which would result. For, be it remembered, the most nauseous and poisonous materials are here mingled together and sweetly and harmlessly arranged; sulphur, carbonic acid, phosphorus, chlorine, animal and vegetable compounds, &c., are all held mixed together, rendered innocent by the wholesome deodorising power of the mould imbibing and neutralising what is hurtful. How wisely this is directed can best be felt by the chemist.*

Liebig and his followers will encounter something in the above for their mental organ to digest. They will not find it soup maigre. I hope their digestion will be free from bile and acridity—sweet and salubrious as Nature's digestion of the Vegetable Mould.
Patrick Matthew, Gourdie Hill, Errol, Feb. 25.

* To this conception of a gradual accommodation of life to circumstances, and other rather abstruse phenomena, I have given the key in the solution of the problem of species, by the variation power of organic life and by the law of competitive selection published more than 33 years ago, a time when the prejudices of the age could not brook progress in the higher fields of science.

† It is not always that animals and vegetables are built up like a neutral salt. In the Wood Sorrel, ant, centipede, &c., the fluids are often strongly acid. When I first went to school, and playing by the way turning over stones, a large black centipede was unkenneled, and taking up a stone in my hand I chopped at the poor creature as it ran, and striking it, the juice of its body squirted upon the back of my little hand, burning the skin of the portion touched as by a mineral acid. I believed my hand poisoned, and it set my young mind a thinking. I could not then distinguish between mere chemical erosion by an acid, and that strange unaccountable power which the venom of the snake, scorpion, tse-tse fly, &c., have, or the juice of the sumach, poison Vine, &c., of which Curare is made, and in which the Bodejesman of the Cape dips his slight reed arrow, the scratch of which on even the little finger of man or on the toe of the lion or elephant puts a stop to the action of the vital machine. Here the chemistry of the savage has outstripped that of the savant.

THE INFLUENCE OF SEASON ON THE PRODUCE OF WHEAT.

It is proverbial that the weather exerts a very powerful influence on the produce of our fields. The accounts of the condition of the crops about the time of harvest, which are collected with much care by some of the agricultural papers, give, under the terms average, above average, below average, good, bad, &c., the opinions of individuals as to the probable yield of the most important crops in many different localities. In other words, they sum up, in general terms, the probable effects of the weather of the particular season on the quantity and quality of its produce. But they at the same time necessarily take into account a great many influences besides those of the weather alone. Indeed, even were it possible to reduce these general terms to figures, and it were attempted to state numerically the proportion which the produce of one season bears to that of another, or to the average of any number of seasons, the figures would not show the comparative effects of the seasons alone, unless the crops reported on were grown under otherwise the same conditions year after year in the same locality. It would be necessary to this end that the character of the land should be the same; and that the tillage operations, the previous course of cropping, and the manuring, should also have been very nearly the same each year. But we know that these conditions do not remain the same.

In a field at Rothamsted in which Wheat has been grown on some plots without manure, and on others with different descriptions of manure, for 20 successive years, the tillage operations having been, as far as the seasons would allow, the same year after year, the essential conditions for comparing the productive characters of one season with that of another are perhaps better fulfilled than in the case of most records of ordinary farm practice. Unfortunately, none of the plots have been dressed with exactly the same description and quantity of manure every year since the commencement, excepting the one with farm-yard dung; and owing to the great accumulation of almost every important constituent that must take place within the soil when a large quantity of this manure is annually employed, it is obvious that the difference in the amount of produce yielded by it year after year, cannot be taken as simply due to the comparative effects of the different seasons. Many of the plots have, however, been supplied with artificial mineral manures alone, or with mineral manures and ammonia salts together, without any material change either in the description or the amount employed, for the last 12 or 15 years; and as there is sufficient evidence that the influence of these manures upon the crop of the succeeding year is comparatively limited, I propose to compare the produce and increase obtained by the application of some of these artificial mixtures in the remarkable season of 1863, with the average result yielded by the same manures over the last 12 years.

Many years ago, in a paper published in the "Journal of the Royal Agricultural Society of England," it was stated, as the result of the experiments now under consideration so far as they had then proceeded, that the farmer might assume for practical purposes that he would, on the average of seasons, get one bushel of increased produce of Wheat with its proportion of straw, for every 5 lb. of ammonia applied as manure for the crop, provided the soil were not deficient in the necessary mineral constituents. This statement met with much ridicule from Baron Liebig, who said that it was "a mere stroke of fancy." Whether the statement in question, or this condemnation of it, partakes most of "a mere stroke of fancy," may be judged by the following record of facts relating to it.

On one of the experimental plots a complex mineral manure has been applied every year for the last 12 years, and on another the same mineral manure, with an amount of ammonia salts containing 50 lb. of ammonia, has been annually applied. The average annual produce of Wheat over the last 12 years has been:—

With mineral manure and 50 lb. of ammonia ..	23½ bush.
With mineral manure alone	13½ "
Increase by the use of 50 lb. of ammonia ..	10 "

Taking the average of 12 years, therefore, we have in this experiment an increase of exactly 1 bushel of Wheat, with its proportion of straw, for every 5 lb. of ammonia. I propose, then, to consider this as the yield in a season of average productiveness; and, adopting this standard, to consider a season good or bad in proportion as it gave more or less increase than 1 bushel of Wheat and its proportion of straw for every 5 lb. of ammonia used as manure.

In 1863 the same mixture of mineral manure and ammonia salts gave a produce of 39½ bushels, or an increase of 21 bushels over the average produce with the mineral manure alone. In this experiment, therefore, 5 lb. of ammonia has given, in the season of 1863, an increase of more than 2 bushels of Wheat and its equivalent of straw, or more than 100 per cent. above the average effect.

On another plot, with the same mineral manure, but with the large amount of 100 lb. of ammonia annually applied, the average result over 12 years was as follows:—

With mineral manure and 100 lb. of ammonia ..	36½ bush.
With mineral manure alone	13½ "
Increase by the use of 100 lb. of ammonia ..	19 "

There is, then, even with this comparatively heavy dressing, an average of nine-tenths of a bushel of increase of Wheat, and its proportion of straw, for every 5 lb. of ammonia employed in the manure. In 1863 this plot gave 53½ bushels, or an increase of 35 bushels over the average produce with the mineral manure alone; that is, again very nearly 100 per cent. over the average result.

On another plot, where, in addition to the mineral manure, a still larger amount of ammonia was annually employed, the produce amounted in 1863 to nearly 1 ton 13 cwt. of grain, and more than 3 tons of straw per acre. Large as this produce is, it would doubtless have been larger, had not the heavy storms of June laid the crop completely flat, in which condition it remained up to the time of harvest.

Throughout the 20 years of the experiments no season has yielded a crop at all equal to that of 1863. In 1847, 1857, and especially in 1854, the produce was

* When a little boy, I remember of gathering together such articles as I could collect, the resin from the Fir tree, gum from the Gean, charcoal, the honey of wasps, and a number of the most curious minerals I could find, and put them into an iron pot on the kitchen fire without water. The result was that everybody had to run out of the house, myself among the rest, from the insupportable odour and fumes. This escapade put me out of conceit of chemistry for a time. The chemistry of nature is better conducted.

very large, and in both 1854 and 1857 that obtained by the mineral manure alone even exceeded that by the same manure in 1863. But owing to some peculiar meteorological influences in 1863 (which deserve a careful study), the increase of crop was, in every instance where ammonia salt or nitrate of soda was employed, very much greater in that year than under like conditions in any preceding season. It was about 100 per cent. over the average of the last 12 years, and in many cases about 400 per cent. over that of the worst of those 12 seasons. In fact, the results of the whole set of experiments are perfectly consistent with those of the individual cases that have been quoted, in showing the extraordinary productiveness of 1863, compared with that of any of the other years under consideration, whenever ammonia, or nitrogen in some other available form, was liberally supplied in the manure.

There is no doubt that the Wheat crop of 1863 has been pretty generally a large one. But it would be fallacious to conclude from the results above referred to, that it has been over any very extensive area so much above the average as in the case of the experiments quoted. The season might possibly be too dry for Wheat growing on many of the lighter descriptions of soil. And as the experimental plots manured with the mineral manure without ammonia, gave a less crop in 1863 than in either 1854 or 1857, it may perhaps be judged that the past season would not be unusually favourable for the crop on lands deficiently supplied with nitrogenous manure.

At any rate the effect of ammonia on the crop was, at Rothamsted, much greater in 1863 than in any preceding year of the experiments. And the fact that, by its use, the crop was increased from 18½ bushels (the average produce by the mineral manure alone) to 56½ bushels, in the 20th year of the growth of Wheat on the same land, is surely a very significant one, and well worthy the careful consideration of those who maintain that the atmosphere is a sufficient source of ammonia (or nitrogen in some other available form) for cultivated crops, and that it is of little value or importance as a constituent of manures. *J. B. Lawes.*

Home Correspondence.

The Skerry Blue Potato.—As the Skerry Blue Potato appears to be growing into popularity, it may not be amiss to offer a few remarks upon the variety. I have for the past two years grown the sort very successfully, and feel some confidence in naming its peculiarities. How it came to be called the Skerry Blue Potato I don't know; it was accidentally introduced into Ireland a very few years ago, from whence it derived its name. As it proved to be impenetrable to the Potato disease, it was soon sought after, and extensively grown in many districts. The great fact being ascertained that the variety has never been tainted with the disease gives it a predominance over every other kind, and renders it worthy of extensive cultivation. Why it should be called blue I can't say. It certainly is a red Potato. It is in form what is commonly called "apple shaped." It grows to a good size, but not large; the eyes are rather numerous and large, but not very deeply indented, and they have a slight tinge of blue around their sockets. It is a good cropper, the tubers are floury and of good flavour, and may be used for table at any season; but I think they pay best for keeping of any variety, as they retain their flavour up to midsummer. In planting them caution should be observed. The eyes are strong, and if many sound eyes are set, the quantity of haulm is very great, hence the sets should be reduced to three eyes at most. I don't know a variety that grows with greater vigour, so that three eyes will give abundance of tops or stalks. Their tendency also is to throw out very many tubers, which, if not guarded against, detracts from the value of the sample, because of the quantity of small ones. Of course, in proportion to the number of sound eyes planted wide depend the number of stalks and quantity of tubers, therefore I say three eyes are amply sufficient to ensure a crop, and that a far more satisfactory one, as the tubers will be proportionately larger, and make "good ware." I was unwise enough in planting my first crop, to use a great many whole tubers, and surely such a crop of haulm was never seen. The soil was in high condition; a good loam manured with fold-yard dung, and the planting was put in with one and a-half cwt. of Peruvian guano sown along the ridge. The number of tubers was enormous but small, and the haulm a compact mat of interwoven stalks of great length, amounting in weight to several tons per acre. My last year's crop would yield more than ten tons per acre, and not a diseased one to be found; the quantity of haulm much too heavy. This season I propose setting the tubers at a greater distance in the rows; the rows being 30 inches apart. (My impression is that Skerry Blues should be planted in rows 30 inches apart, and the sets 15 inches asunder.) They are ready for harvesting about the usual time, being an average variety as to maturity, but as their skins are somewhat slow to set, it is wise to stay till the haulm is dead. Mine have kept remarkably well this season, while very many graves throughout the district have sadly rotted. I have no hesitation in saying that they are a very useful and serviceable kind, and being untainted by disease ought to be grown in every district where the disease is prevalent. There is a foolish prejudice in the London market against them on account of their colour. The white kinds have now so long had the run of the market, and had a place on every family table, that a red one seems now to be quite an interloper, although a few years ago it was quite the reverse. It ought to be borne in mind that colour has but little to do with flavour and quality. The red Regents are exceedingly good in size and quality. The old Red Ruffs never were excelled in flavour. The Poor Man's Profits and the Forty-folds, although reds, have but few equals. Why then this prejudice in favour of whites? Housekeepers should look out for themselves and not depend so much upon the salesmen's recommendation. *O. F.*

The Vegetable Mould.—I noticed in the *Agricultural Gazette* lately, some observations by Mr. J. J. Mechi regarding the vegetable mould, where he expresses some doubt of understanding my recent statements respecting it, but thinks that they afford "an exact confirmation of Liebig's great theory." Here I must say, that if he sees no difference betwixt Liebig's ideas and mine, he has not paid much attention to our statements. Liebig, with his mineral predilections, has studied inanimate matter in the crucible and retort, while my observations and conclusions have been made and come to in the fields of living nature, and the theories partake of the difference of their origin. Besides, what I have said has been clear and consistent, while Liebig has shifted his ground and the sense of terms he employs as he has found necessary or convenient in twisting his mineral theory in some degree to approach to what I have good right to call my theory—of the vegetable mould being the natural parent of fertility—published years ago, and that in our improvements we should go hand in hand with nature. Liebig's theory leads to the application of small manures in the mineral form, the continued unguarded use of which under the present hand to mouth system of agriculture has proved exhaustive, and he and his followers have studiously ignored the vegetable mould and its improvement; while my theory inculcates its improvement by large manures as of the first importance. Let me not be misunderstood here. I do not contemn the use of small manures, I use them myself. I commenced using them before I heard that Liebig existed; but I do so with care and caution, and especially as a means of producing large manures for continued application. I would ask Mr. Mechi,—"Does he quite understand all this? and if he does, has he shown an honest impartiality?" Mr. Mechi is a clever man, and expatiates upon "the admirable and allwise everlasting round of composition and decomposition." Whether these emotions are most referrible to Baron v. Liebig's description of the scheme of nature, or to mine, I leave the reader of both to determine. With regard to the amount of Liebig's discoveries, taking a general view of them, it did not require a Solomon to find out that the vegetable kingdom is formed of earth, air, and water, not did it require a second Solomon to tell us, as Mr. Mechi has done, that Liebig had made that great discovery. This few will deny who do not admit of miracles, the admission of which would upset all science, render wisdom an absurdity, for what is science, what is wisdom, but a knowledge of the immutable laws of nature? It is the system of operation, the giving existence to an almost infinity of varied being, vegetable and animal, of progress in development and in providing a field of life and food for every select variety, all conducted by general law, by nature's infallible truth—it is this which gives us a conception of the wisdom and grandeur of the scheme of nature. I endeavoured some time ago, prefatory to my recent description of the vegetable mould, to give a more extended explanation of the scheme of nature, but it was said to be too lengthy for the abridged space in the *Agricultural Gazette*. Should the Editor desire it I will again forward the manuscript, divided into two portions. In it the reader may find, not a beginning, but something like a basement and progression of past and present known forms of organic life, regulated by general law. I cannot close this without expressing a strong sense of our obligations to Mr. Mechi. It is with much pleasure that I have perused, in the *Gardeners' Chronicle*, his observations on agricultural science and account of his practice. These prove him to be a man of superior intellect and industry. The means he has employed and the greatly increased productiveness of his farm give evidence of this, more especially as he has not had the usual breeding and training, or the early experience of an agriculturist. But we must remember that his position as a prospering merchant enables him to lay out capital in improvement of the soil fearlessly—even though it were lost the *éclat* of his industrial improvements would more than compensate him. Were the capital of the farmer laid out on the improvement of the soil protected, we would not have only one Mechi, but many. His improvements have been made in spite of mischievous social regulations. *Patrick Matthew, Gourdie Hill, March* 18, 1864.

The Pedigree Wheat.—The correspondence in the *Agricultural Gazette* relating to the Pedigree Wheat shows that the seed is not worth one guinea a bushel to the farmer. It appears to be coarse in the grain, and long and strong in the straw; the first not suiting the miller, the second taking too much out of the soil, and not so valuable for cutting chaff as a finer description of stem. However prolific the seed might prove when first obtained at eight guineas a quarter, it would be almost impossible to preserve a sample similar to the original without hand picking, at a cost which would not remunerate the farmer for the trouble and expense. Nevertheless agriculturists are indebted to any one who will try experiments with a view of increasing the yield of either cereals or roots. Experience points out the great advantage of selecting the finest seed for sowing—that which has attained mature growth, and ripened well before harvesting. This practice holds good, not only with regard to Wheat, but with everything else in the farm and garden. There is difficulty in obtaining true and sound seed even from respectable firms, which may be attributed to the extraordinary competition in the trade, reducing the price below the fair value, and thus encouraging adulteration amongst wholesale vendors. Scarcely any disappointment exceeds that of watching growing crops, planted with every attention to soil and situation, which promise fair till the period of fruiting and seeding, and then turn out worthless, too late to supply a substitute. The money loss is a trifle compared to the 12 months patience required before the evil can be remedied. *F.*

Societies.

Royal Dublin: *March* 30.—The Spring Cattle Show opened this day with an unusually large number of entries—430 in all, of cattle, sheep, and pigs.

The head prize and the *Farmer's Gazette* Challenge Cup for the best bull has been won by Soubadar for Mr. Butler. The cup has now, we understand, been won three years in succession, and is the property of that gentleman. The Ganley Cup offered in the yearling bull class is won for Mr. Crosbie, of Ardfert; and the Railway Challenge Cup by Dr. McHale the 2nd (19,577), the property of Mr. T. Barnes, of Westland. The show in the Short-horn classes is exceedingly good—that of Kerries is also good—the sheep classes and pig classes are well filled; and there is a large show of implements.

Reviews.

The Journal of Agriculture. No. 84. March 1864. Blackwoods.

From the current number of the "Quarterly Journal of Agriculture," with which are printed the Transactions of the Highland Society of Scotland, we quote the substance of Mr. Scot Skirving's prize report on the relative effects of manure made in the yard and under cover respectively.

"The experiments, an account of which follows were made during the years 1860 and 1861, upon a field which was cropped the first of these seasons with Potatos, and the second with Wheat.

"The soil upon which the experiment was made is a lightish loam of good quality, with a considerable slope towards the north. Previous to the Potato crop of 1860 it had carried Oats, following two years' pasture. The experimenter's first business was to secure good dung, which had been made in every respect in the same manner, with the exception of the circumstance of cover. For this purpose a shed and court were selected, in which a lot of six cattle had been fed off upon Turnips, oil-cake having been added during the last six weeks they were there. As the one portion was entirely exposed to rain, whilst the other was perfectly excluded from it, and as the litter used and the food consumed were identical, the necessary conditions were satisfactorily obtained. Besides the two acres devoted to the experiment, a third was added for the sake of further comparison, which was manured with half the weight of dung and with 5 cwt. of portable manure, which consisted of guano and dissolved bones in equal quantities. The dung used on this acre was from the open court. The ground experimented on was as equal in quality as could be desired; and it would be difficult to assign a superiority to any one of the three acres. The Potatos used were Regents, which were planted on the 12th of April—a long winter and a backward spring having delayed all the operations of seed time. The dung, which was in good condition, was applied at the period of planting. The three lots were manured in the following manner:—

Lot 1.—20 tons of dung per imperial acre, from open court.
Lot 2—20 tons of dung per imperial acre, from covered sheds.
Lot 3.—10 tons dung from open court, and a mixture of 2½ cwt. Peruvian guano and 2½ cwt. dissolved bones."

The treatment of the crop having otherwise been exactly the same, the results may be attributed to difference of manure alone.

"The crop was carefully lifted with the fork, and the produce of each acre accurately measured, with the following results:—

	tons	cwt.	qr.	st.	lbs.	
Lot 1.—Open court ..	6	6	0	0	0	per imp. acre,
Lot 2.—Covered shed..	7	8	2	1	10	"
Lot 3.—Mixed manure	7	9	1	1	6	"

These weights represent the total produce per imperial acre.

"It will be seen from the above that the dung made under cover produced 1 ton, 2 cwt., 2 qrs., 1 st., 10 lb. more Potatos per imperial acre than that made in the open court; whilst the acre manured with dung and guano, &c., while it produced a crop slightly in excess of the covered-shed lot in the first instance, lost that small superiority in the process of sorting for market,

and may, for all practical purposes, be accounted of equal value."

Wheat followed Potatos, but unfortunately an accidental injury, to which a portion of the experimental crop was subjected by a partial "throwing out" of the plant, interfered with the uniformity of the circumstances under which alone could the results be considered trustworthy. Mr. Skirving thus relates these results:—

"The Wheat was stooked separately, and, shortly after being 'carried,' was threshed, weighed, and measured. The following are the results:—

WEIGHT.	lbs.
Weight of open-court lot per bushel	60½
Weight of covered-shed lot per do.	61
Weight of mixed-manure lot per do.	60¾

QUANTITY—per Imperial Acre.

	Bush.	p.	gall.	qt.	pt.	gills.
No. 1.—Open court, good grain	29	0	0	0	1	2
" " grey do.	1	3	1	3	1	2
	31	0	0	0	1	0
No. 2.—Covered shed, good grain	33	0	0	3	1	2
" " grey do.	2	2	0	3	1	2
	35	2	1	2	1	0
No. 3.—Mixed manure, good grain	30	1	1	0	1	0
" " grey do	1	3	1	3	1	2
	32	1	1	0	0	2

"I cannot give any trustworthy estimate of how much the open-court acre was damaged by the 'throwing out;' but my opinion is, that but for that circumstance it would have been little inferior to the other; and the experiment seemed to indicate, contrary to my expectation when the Wheat was sown, that a second season had tended to equalise in a great degree the power of the two lots of dung."

So far as the second year is concerned, there is no definite lesson given us by this experiment; but the lesson is plain enough, so far as the first year's crop is concerned; and cannot fail to give an impetus to the progress of good management.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratfield, near Reading.

Day of the Week.	March	Day of the Month.	At 9 A.M., Railway Time. Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer. Dry Bulb.	Reading of Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
			Inches.	°	°				°	°	°	°	Inches.
Friday ..	25	25	Decr. 29.74	36	35	S.E.	0	0	53	25	65	19	0.01
Saturday ..	26	26	29.55	40	38	N.	2	10	55	33	66	28	0.18
Sunday ..	27	27	29.62	37	35	N.	3	10	42	30	45	26	0.17
Monday ..	28	28	29.43	40	38	N.W.	4	6	48	36	56	28	..
Tuesday ..	29	29	29.25	41	39	N.W.	4	10	49	33	57	28	..
Wednesday ..	30	30	29.40	46	43	N.W.	4	7	47	34	57	28	0.08
Thursday ..	31	31	29.71	48	45	S.W.	1	10	46	31	60	26	..

Notices to Correspondents.

POULTRY: *G E O.* The Spanish Cock is suffering from a disease that was prevalent among birds of that breed a few years since, but which is not much heard of now. The bodily health of the bird will not be affected, and he suffers in appearance only. The best and simplest remedy is compound sulphur ointment constantly rubbed on the parts affected. Should the cock seem to suffer, it would be well to touch the edges of the scab with caustic, to prevent its spreading.

SARSDEN SALE: *R.* 86 cows and heifer calves fetched 3885*l.* 13*s.*, averaging 44*l.* 12*s.*; 35 bulls and bull calves fetched 1358*l.* 14*s.*, averaging 38*l.* 16*s.* 5*d.* The total sale included the 121 head of stock, which averaged 42*l.* 18*s.* 6*d* and realised 5194*l.* 7*s* The highest price was 100 guineas, for *Lady Louisa*, bought by Mr. Betts. Among the several families included in the herd—

8	descendants of Lord Ducie's *Louisa* averaged	..	54*l.* 4*s.*
13	" " " *Chaplet* "	..	60*l.* 5*s.*
5	" " Mr. Adkin's *Charmer* "	..	53*l.* 11*s.*

ERRATUM.—In p. 300, col. b., for IBI VII. FERVI, read IBI VII SERVI.

SECURED BY
ROYAL LETTERS PATENT.

PRICE 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanized Wire Strainer, Rose, and Small Jet. Brass Cylinders and Japanned Stirrup. With Copper Stirrup, Two Guineas.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

ROBERT HOGG, LL.D. and F.L.S., SHIRLEY HIBBERD, Esq., F.R.H.S., THOMAS RIVERS, Esq. (the eminent Florist), and other well-known gentlemen recommend the

HYDROPULT

AS AN INVALUABLE GARDEN IMPLEMENT.

A CARD.

It may not be known to the Public generally, that *interested parties*, unable legitimately to prevent an extensive sale of a new, efficient, and valuable invention, which, by its merited success, has superseded other devices of the kind, have recourse *through their friends* to the now too frequent practice of writing anonymous communications to journals of large circulation, *requesting answers* as to the merits and efficiency of the invention in question. These questions and the answers, PREVIOUSLY CONCOCTED by the interested parties aforesaid, duly appear; and are so worded as to have the desired effect. Thus are the Public misled and deceived by *malicious* and *envious* inuendos, the tendency of which is to bring into bad repute an article of utility, which has received the unqualified approval of thousands of well-known gentlemen, who, in a spirit of kindness, forward to the inventor gratuitous testimonials, as a token of their appreciation of his invention.

Parties unknown to me, have, from motives best known to themselves, in this manner criticised the efficiency of the "Hydropult." I have no answer to make to them: to the Public I would say that I will cheerfully forward, on application, a prospectus, containing testimonials from gentlemen well known throughout the United Kingdom.

CHARLES P. BUTTON.

CHARLES P. BUTTON, PROPRIETOR, HYDROPULT WAREHOUSE and SHOW ROOMS,
27, LEADENHALL STREET, LONDON, E.C.

Extra Fine Seakale.

GEORGE CLARKE has plenty of clean stout Roots, which cannot be surpassed for Forcing qualities

Price for Picked Roots, per 100 .. .. 10*s.* 0*d.*
Do. second size ,, ... 7 6
Also strong for Planting, per 100 .. 5*s.* and 7 6

Nursery, Streatham Place, Brixton Hill, near London; and 4, Windsor Terrace, Pimlico, S.W.

Farm Seeds.

RICHARD SMITH is now prepared to supply the following SEEDS, all of which have been selected with the greatest care, and are of very superior quality:—

CLOVER, BROAD ENGLISH RED, 58*s.*—62*s.* per cwt.
,, PERENNIAL or COW GRASS, 68*s.*—75*s.* per cwt.
,, WHITE or DUTCH, 62*s.*—70*s.* per cwt.
,, YELLOW or TREFOIL, 30*s.*—34*s.* per cwt.
,, ALSIKE or HYBRID, 76*s.*—84*s.* per cwt.
RYE-GRASS, Finest PERENNIAL, 6*s.*—6*s.* 6*d.* per bushel.
,, ITALIAN EXTRA, 5*s.* 6*d.*—6*s.* per bushel.
SWEDE, SMITH'S WORCESTERSHIRE, 9*d.* per lb.
,, KING OF THE SWEDE, 8*d.* per lb.
MANGEL WURZEL, ORANGE GLOBE, 6*d.* per lb.
,, ,, RED and YELLOW, 6*d.* per lb.
,, ,, LONG RED and YELLOW, 6*d.* per lb.

RICHARD SMITH, Seed Merchant, Worcester.

To the Seed Trade.

H. AND F. SHARPE can now make special offers of the following SEEDS, grown by them last season, from the finest selected bulbs. They are of fine quality, and free from adulteration:—

Long Red Mangel Wurzel
Long Yellow ,, ,,
Red Globe ,, ,,
Yellow Globe ,, ,,
Orange Globe ,, ,,
Long Red Surrey Carrot
,, ,, Altringham Carrot
James's Scarlet Intermediate Carrot
Early Cabbage of sorts
Purple Top Swede Turnip
Sharpe's Improved Swede Do.
Liverpool Swede Do.
Improved Green Top Yellow Do.
Fosterton Hybrid Do.
Green Top Swede Do.
Pomeranian White Globe Do.
Green Globe Do.
Red Globe Do.

Prices on application.
Seed Growing Establishment, Wisbech.

Mangel Wurzel and Turnip Seed.

KING'S CHAMPION ORANGE GLOBE WURZEL, superior to any other.
Fine YELLOW GLOBE. | Fine RED GLOBE.
Do. ELVETHAM LONG RED.
Do. LONG YELLOW, from roots, many of them 3 feet long; a heavy cropper.
SKIRVING'S and PURPLE-TOP SWEDE TURNIP SEED.
All the above are saved from none but the best Stocks.
PRICED LISTS with testimonials sent post free.

JOHN K. KING, Seed Grower, Coggeshall, Essex.
Established 1793.

Grass Seeds.

RICHARD SMITH is now prepared to supply MIXED GRASS SEEDS of very superior quality, suitable for all kinds of Soil.

	Per Acre.
MIXTURE for Laying down to PERMANENT PASTURE	25*s.* to 30*s.*
MIXTURE for ORCHARDS or LAND shaded by Trees	24*s.* to 26*s.*
MIXTURE for PARKS and CEMETERIES	28*s.* to 30*s.*
MIXTURE for Improving OLD PASTURE	6*s.* to 8*s.*
MIXTURE for One, Two, or Three Years' Lay	15*s.* to 18*s.*
MIXTURE for Fine LAWNS and BOWLING GREENS	per lb. 1*s.*

PRICED LISTS may be had on application.
RICHARD SMITH, Seed Merchant, Worcester.

SUTTON'S GRASS SEEDS for PERMANENT PASTURE (all carefully and thoroughly cleaned).

The Seeds of each sort separate may be seen in large quantities in Messrs. SUTTON'S Warehouses, and growing specimens of these and many others in their sample grounds.

All the best and most suitable of them are contained (together with Alsike, Perennial White, and Perennial Red Clovers), in Messrs. SUTTON'S Mixtures for Permanent Pastures.

	Per lb above 7 lb.	Per Bush.
	s. *d.*	*s.* *d.*
ALOPECURUS PRATENSIS	1 3	9 0
ANTHOXANTHUM ODORATUM	1 6	20 0
AGROSTIS STOLONIFERA	0 10	9 0
BRACHYPODIUM SYLVATICUM	1 0	15 0
CYNOSURUS CRISTATUS	1 0	20 0
DACTYLIS GLOMERATA	0 10	6 6
FESTUCA DURIUSCULA	0 10	7 6
,, ELATIOR	1 0	12 0
,, GIGANTEA	1 3	14 0
,, HETEROPHYLLA	1 0	12 0
,, PRATENSIS	0 10	12 0
,, OVINA	0 10	8 0
,, RUBRA	0 10	8 0
,, TENUIFOLIA	1 0	12 0
,, LOLIACEA	0 10	14 0
GLYCERIA FLUITANS	1 0	14 0
,, AQUATICA	1 0	10 0
HOLCUS AVENACEUS	0 10	7 0
LOLIUM ITALICUM	0 7½	6 6
,, PERENNE	0 4½	5 6
,, ,, PACEYANUM	0 4½	6 6
,, ,, SEMPERVIRENS	0 4½	7 0
,, ,, TENUE	0 5½	10 0
PHLEUM PRATENSE	0 6	21 0
POA PRATENSIS	1 0	21 0
,, TRIVIALIS	1 0	21 0
,, NEMORALIS	1 3	28 0
,, FERTILIS	1 3	28 0
,, SEMPERVIRENS	1 6	30 0
,, AQUATICA	0 10	12 0
PLANTAGO LANCEOLATA	0 5	25 0

From Prof. LINDLEY, *Royal Horticultural Society, London.*
"We have already made trial of your Grass Seeds, and it is only justice to say that they have proved the best we have sown for many years."

A Copy of Mr. M. H. SUTTON'S Essay on Laying Down Land to Permanent Pasture, from the "Journal of the Royal Agricultural Society," will be sent with every parcel of Grass Seed.

SUTTON & SONS, Royal Berks Seed Establishment, Reading.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.
The GENERAL FARM SEED DIRECTORY, with full Instructions for the Management of a Farm for every Month in the Year, will be forwarded Gratis and Post Free to any address in the kingdom.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.
Purchasers of Large Quantities of AGRICULTURAL SEEDS will be dealt liberally with.
All Seeds Carriage Free.

Seed Corn from the Chalk.

ALL THE MOST APPROVED VARIETIES OF WHEAT, BARLEY AND OATS, SUPPLIED BY

RAYNBIRD, CALDECOTT, AND BAWTREE,
Address, Basingstoke; or 89, Seed Market, Mark Lane.
WINTER and SPRING TARES, SAINFOIN, and all other kinds of AGRICULTURAL SEEDS.
Samples and Prices post free on application.

REIGATE SILVER SAND, 7*s.* 6*d.* per ton; packed, 16*s.* per ton; delivered to Reigate Railway Station. PEAT SOIL of various kinds, LOAM, BOG MOULD, &c. N.B.—Loaded trucks can be sent on all the principal Railways, and to Angerstein Wharf, Thames.

From E. ENSOR, Esq., *Woodville, near Burton-on-Trent.*
"The Sand is very good; when we want more we will write you."

W. SHORT, Sand and Peat Depot, Reigate, Surrey.

COCOA-NUT REFUSE, delivered within 2½ miles of Charing Cross, at 2*s.* per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. BARSHAM & Co.

BARSHAM'S BRUSHES and MATS are sold in every town.

CAUTION.—Every Brush is stamped. J. BARSHAM'S Patent

ROLL TOBACCO CLOTH.—The best and cheapest article for Smoking Greenhouses and Destroying the Fly. Price 1*s.* 4*d.* per lb.; over 10 lb., 1*s.* 1*d.*

JOSEPH BAKER, 10, Gough Square, Fleet Street, E.C.
Post-office Order payable Fleet Street.

Important Discovery.

JULIUS MULLER'S FERTILISING POWDER for Promoting the Growth of Flowers, Shrubs, Fruit Trees, &c. Wholesale only at 21, Chapel Street, Finsbury. THEODORE TOBIAS, Manager, and Retail by all respectable Seed Merchants and Chemists in the United Kingdom. In Canisters, 5*s.* 6*d.* and 10*s.* 6*d.* each. The following is one of the many testimonials in the hands of the Proprietor:—

J. CUTHBERT, Esq., Clayton Square, Liverpool, says in his Testimonial deposited with Sir Joseph Paxton, Devonshire House, Piccadilly, London, that flowers cultivated with Mr. Muller's Fertilising Powder, were the best he ever had seen.

Red Spider Magnified.

GISHURST COMPOUND, whether used against Insects and Mildew, on Growing Plants, or as Winter Dressing on Trees at rest, should be dissolved 48 hours before use. This gets rid of smell, and if the Solution be decanted, prevents any staining of foliage. A strength of from 1 to 2 oz. to the gallon of water is recommended for growing Plants; one from 4 to 16 oz. for Trees at rest.

Sold Retail by Nurserymen and Seedsmen, in boxes, 1*s.*, 3*s.*, and 10*s.* 6*d.* each.

Wholesale by
PRICE'S PATENT CANDLE COMPANY (Limited).

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.

F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.
Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

Also TESSELATED PAVEMENTS of more enriched designs than the above.

WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.

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Orders forwarded by Railway with despatch.

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GARDEN FLINTS for Grotto Work, 12*s.* and 14*s.* per Ton.

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"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles. Your obedient servant, G. GLENNY."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump, Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype trays, &c, manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.

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FARM SEEDS.—CARRIAGE FREE.

GRASSES and CLOVERS, mixed for Permanent Pasture, and adapted to any description of soil.

ALSIKE, RED WELSH, and other CLOVERS. Pure samples.

PACEY'S PERENNIAL, IMPORTED ITALIAN and other RYE-GRASSES. Extra cleaned.

TURNIPS, DICKSON'S PRIZE SWEDE, and others saved from picked transplanted bulbs.

MANGEL WURZEL, Select YELLOW GLOBE, OVAL, &c.

☞ *All of the very best description, and Carriage Free.*

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SEEDS FOR PERMANENT PASTURE.

A liberal supply of Seeds, consisting of from 12 to 14 varieties of Clover and Grasses, assorted to suit the various soils, the quantities and kinds of which are given in detail, may be had at a cost not exceeding 23*s.* to 25*s.* per acre from

W. DRUMMOND & SONS, SEEDSMEN,

STIRLING,

Whose experience in Laying Down Land to Permanent Pasture has extended over many years, during which they have supplied their Assortments to numbers of the leading Proprietors and Farmers throughout the kingdom. The quality of their Seeds is well known, and they respectfully assure intending purchasers that this year they are UNUSUALLY GOOD, and so moderate in price that the above cost will secure the best article that can be grown.

PRICED CATALOGUES of every description of Farm Seeds may be had Post Free on application.

SEED WAREHOUSE, STIRLING.

*** Stirling is most favourably placed in point of Railway accommodation, there being direct and constant traffic to all the principal Stations in Scotland and England, and by Steamers (*viâ* Glasgow) almost daily to the chief pots in Ireland, thereby ensuring a speedy delivery of Goods, all of which (with certain limitations) are forwardred CARRIAGE PAID.

GRASS SEEDS FOR ALL SOILS.

SUTTON & SONS

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OF THE

PERMANENT NATURAL GRASS AND CLOVER SEEDS,

WHICH THEY MIX EXPRESSLY TO SUIT THE SOIL FOR WHICH THEY ARE REQUIRED.

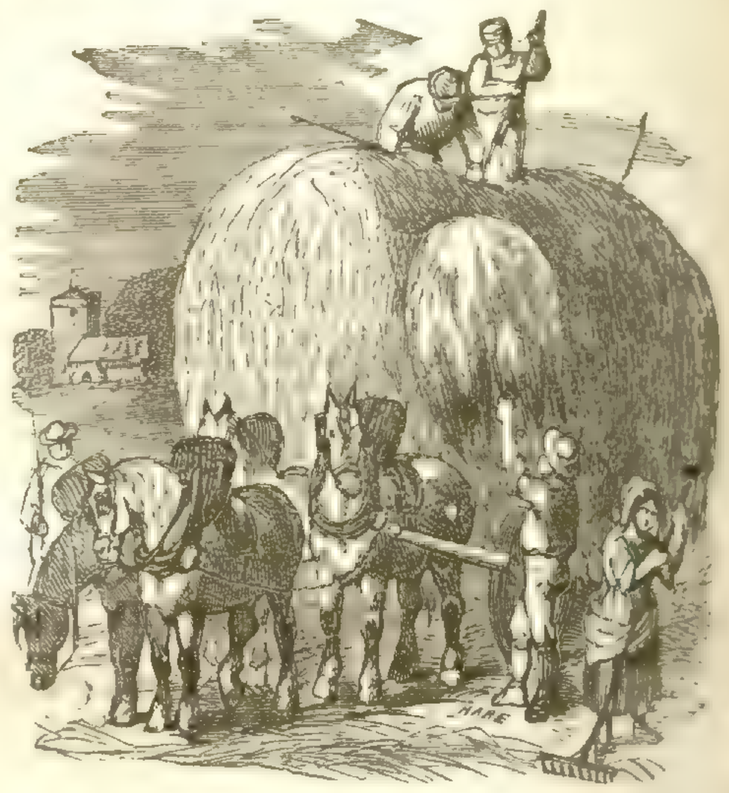

The following letter has been received, besides many others:

From Professor LINDLEY, *Royal Horticultural Society, London.*

"We have already made trial of your Grass Seeds, and it is only justice to say that they have proved the best we have sown for many years."

PRESENT PRICES ARE—

Best quality Mixtures for Laying Down to Permanent Pasture, 30s. per acre.

Cheaper Mixtures, omitting certain sorts, 20s. to 26s. per acre.

Best quality Mixtures, for Three or Four Years' Lay, 21s. per acre.

Best quality Mixtures, for One or Two Years' Lay, 12s. 6d. to 17s. 6d. per acre.

Clovers and Fine Grasses for Renovating Old Pastures, 6s. to 9s. per acre.

Finest Lawn Grass Seeds, 18s. per bushel.

Park Lawn Grass Seeds, 16s. per bushel.

The FIRST PRIZE MEDAL was awarded to SUTTON & SONS for their GRASS and CLOVER SEEDS at the Great International Exhibition of Roots and Cereals at South Kensington in October 1862.

A Copy of Mr. MARTIN SUTTON'S "ESSAY on PASTURES" is sent with each lot of Grass Seeds.

Seeds sent Carriage Free to all parts of the kingdom. Export Orders Delivered Free to the Ship's side in any English Port.

PRICED LISTS of GARDEN and FARM SEEDS Gratis and Post Free.

SUTTON AND SONS, ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.

THE ONLY PRIZE MEDAL AWARDED for SEEDS, INTERNATIONAL EXHIBITION 1862.

CARTER'S PERMANENT GRASS SEEDS.

We recommend a proportionate Mixture of the undermentioned according to soil, averaging about 2 bushels light seed and 12 lb. heavy seed (Clovers) to the acre.

Price, per acre, 24s. to 30s.

COCKSFOOT HARD FESCUE FESTUCA ELATIOR	FESTUCA PRATENSIS " RUBRA " OVINA	MEADOW FOXTAIL TALL OAT GRASS POA NEMORALIS	POA PRATENSIS " TRIVIALIS SWEET VERNAL	ITALIAN RYE-GRASS PERENNIAL RYE-GRASS TREFOIL	WHITE CLOVER COW GRASS

SUNDRY MIXED GRASS SEEDS.

Grass Seed for Park Lawns, 1s. per lb.; 16s. per bushel

Grass Seed for Renovating Old Grass Lands, 10s. per bushel

Grass Seed for Chalky Uplands and Sheep Walks, 12s. per bushel

Grass Seed for Wet Lands, 10s. per bushel.

Mixed Clovers for Permanent Pasture, 1s. per lb.

GRASS SEED FOR FINE LAWNS.

This is really a splendid Mixture, containing proportionate quantities of the following:—

CRESTED DOG'S-TAIL HARD FESCUE SHEEP'S FESCUE	MEADOW FESCUE FESTUCA TENUIFOLIA POA NEMORALIS	POA PRATENSIS WHITE CLOVER SUCKLING

Price, per bushel, 18s.; per lb., 1s.

Report of Seeds supplied by us to the Crystal Palace Company, from Mr. J. A. GORDON, *Garden Superintendent.*

"January 6, 1864.

"GENTLEMEN,—The Grass Seeds and Clovers supplied by you to the Crystal Palace Company in the spring of 1863 have proved of excellent growth, are perfectly free from weeds and coarse Grasses, and have already formed a fine sward. The Grass Seed you supplied the Company with in 1862 is now as solid as turf. I was very much pleased with the Flower Seeds; the French and African Marigolds, Dunnett's Crimson Candytuft, the Indian Pinks, and Larkspurs, were particularly fine.—I am, Gentlemen, your obedient Servant,

"Messrs. JAMES CARTER & Co. "J. A. GORDON, Garden Superintendent at the Crystal Palace."

JAMES CARTER AND CO., SEED MERCHANTS and NURSERYMEN.

OFFICES and SEED WAREHOUSES, 237, 238, and 261, HIGH HOLBORN, LONDON, W.C.

SEED FARMS—EAST HOUSE FARM, DEDHAM, ESSEX, and the SEED FARM, ST. OSYTH, ESSEX.

NURSERY—CRYSTAL PALACE NURSERY, FOREST HILL, SYDENHAM, S.

Notice.

JOHN WATERER, of The American Nursery, Bagshot, Surrey, is the EXHIBITOR of RHODODENDRONS at the Royal Botanic Gardens, Regent's Park.

His CATALOGUE, describing colours, prices, &c., can be obtained by letter addressed to the Nursery as above.

☞ For detailed Advertisement of CONIFERS, ORNAMENTAL SHRUBS, &c., refer to page 1151 for 1863.

GEO. BAKER begs to announce that his extensive Collections of Hardy RHODODENDRONS, GHENT AZALEAS, and KALMIA LATIFOLIA, are unusually well set with bloom, and his fine Collection of CONIFERS in the best possible condition.

CATALOGUES on application at the American Nursery, Bagshot, Surrey. The Nurseries are about 1 mile from Sunningdale Station, South-Western Railway.

Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET.

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

CATALOGUES are now ready, and a stock of Plants in the most perfect health, of all sizes, and at prices to suit all purposes. Sunningdale Nursery, S.W. Rail.

American Plants.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE for the present Season is now ready, and will be forwarded free to all applicants. As well as American Plants, it contains a summary of their General Nursery Stock, one of the most extensive in the kingdom.

Knap Hill Nursery, near Woking, Surrey.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

Chrysanthemums, Chrysanthemums.

J. H. BIRD, F.R.H.S., NURSERYMAN, Stoke Newington, is now sending out from his great Stock of the above:—20 pairs of fine varieties of LARGE CHRYSANTHEMUMS for 10s.; 20 pair of Cuttings of ditto for 5s.; 25 pair of fine POMPONS for 10s.; 25 pair of Cuttings of ditto for 5s.

N.B. To save trouble all orders to be prepaid.

New Chrysanthemum, Empress of India.

E. G. HENDERSON AND SON are now prepared to supply plants of the above. It is a beautiful variety from the "C. Queen of England;" pure white, three quarters globe in shape, with a full centre, in size one of the largest. 5s. each; or four for three, with Trade Discount.

Wellington Nursery, St. John's Wood, London, N.W.

New Chrysanthemums.

JOHN SALTER'S DESCRIPTIVE CATALOGUE of New CHRYSANTHEMUMS, PYRETHRUMS, HARDY VARIEGATED PLANTS, &c., for 1864, is now ready, and will be sent post free on receipt of Two Stamps.

Versailles Nursery, William Street, near Hammersmith Turnpike, W.

The Best New Dwarf Bedding Scarlet Geranium of the Season is "Lady Cowper."

E. P. FRANCIS will send out the above GERANIUM the first week in May. For description, see *Gardeners' Chronicle* of April 2.

Price: Good plants, 3s. 6d. each; or 30s. per dozen.

The Nurseries, Hertford, Herts.

Golden Chain Geranium.

To NURSERYMEN, FLORISTS, &c.

TO BE DISPOSED OF, 100 Dozen of the GOLDEN CHAIN GERANIUM.

Application by letter, stating the price given per dozen. To be delivered, well packed, at the Lincoln Railway Station.

A. JONES, The Gardens, Coleby, near Lincoln.

50 SUPERB PHLOXES for 30s.—All the New and Superb PHLOXES of the season, at 12s., 15s., 18s. per dozen; Older, but approved kinds, 4s., 6s., 9s. per dozen.

DESCRIPTIVE CATALOGUES post free.

Address WM. WOOD & SON, Woodlands, Maresfield, Uckfield, Sussex.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well-assorted Collections of EXOTIC ORCHIDS, FERNS, Miscellaneous STOVE and GREENHOUSE PLANTS, Variegated and Ornamental FOLIAGED PLANTS, TREE FERNS, &c., amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE, with a list of Beck's New and Choice PELARGONIUMS, Post free to all applicants.

Paradise and Victoria Nurseries, Holloway, London, N.

GEORGE SMITH'S PRICED and DESCRIPTIVE CATALOGUE of all the leading NOVELTIES of 1864, of choice Show, Spotted, Fancy, Zonal, and Variegated Pelargoniums, Fuchsias, Verbenas, Petunias, Dahlias, Chrysanthemums, Bedding Plants, &c., is now ready, and may be had free by Post in exchange for one Postage Stamp.

Tollington Nursery, Hornsey Road, Islington, London, N.

RUSSELL'S PYRAMID PRIMULA.—Seed of this celebrated strain is now ready, in packets, price 2s. 6d. The great satisfaction which these sorts have given in previous seasons will be fully maintained this. The flowers can be seen at the Nursery during the spring. Printed instructions for cultivation with each packet.

GEO. CLARKE, Nursery, Streatham Place, Brixton Hill, S.; and 4, Windsor Terrace, Pimlico, S.W.

Superb Double Hollyhocks.

WILLIAM CHATER begs to remind the admirers of this flower that for those who wish to insure a fine bloom this season, the proper time has now arrived for planting it out. CATALOGUES, with proper instructions for its cultivation, also prices of plants per dozen, 100, or 1000, may be had on application.

Seed, saved only from finest varieties, new and very choice, 2s. 6d. or 5s. per packet; Collections of 12 separate named varieties, 4s. to 10s.; young Seedling plants, from best varieties, 30s per 100, or 4s. per dozen: Bloomed Seedlings of last year, with colours named, 6s. per dozen, or 30s. per 100.

Address, W. CHATER, Nurseries, Saffron Walden.

Sutton's Lawn Grass Seeds,

AT THE CRYSTAL PALACE, AND AT THE PEOPLE'S PARK, HALIFAX.

SUTTON AND SONS have had the honour of supplying the Grass Seeds by which so many acres of Arable Land have been converted into the beautiful Park and Lawns, now so much admired at Sydenham, and at the People's Park, Halifax.

The following letter has been received, besides many others:—

From Professor LINDLEY, *Horticultural Society, London.*

"We have already made trial of your Lawn Grass Seeds, and it is only justice to say that they have proved the best we have sown for many years."

Price 1s. per lb.; 2s. 6d. per gallon; or 18s. per bushel. Quantity required for forming new Garden Lawns, 3 bushels, or 60 lbs.

Address, SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Flower Seeds, Postage Free.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.

COLLECTIONS of FLOWER SEEDS, 100 Packets, 20s.
" " " 50 " 12s.
" " " 25 " 6s.
" " " 12 " 3s.

Herbaceous Calceolarias.

E. G. HENDERSON AND SON offer these, of splendid varieties, in healthy fine plants for conservatory decoration, being now in most suitable order for travelling. 12s and 18s. per dozen.

TIGRIDIA PAVONIA.—Very beautiful for groups in the flower garden, or for pot culture. The remarkably large and brilliant orange-scarlet flowers, picturesquely spotted, render them exceedingly attractive during the summer months. 1s. 6d. per doz.

Wellington Nursery, St. John's Wood, London, N.W.

Gladiolus Brenchleyensis.

YOUELL AND CO. have much pleasure in offering the above GLADIOLUS, unequalled by any other variety for the brilliancy of its colour. The Bulbs are unusually fine. Price 3s. per doz.; 20s. per 100.

Trade price on application,

Royal Nurseries, Great Yarmouth, Norfolk.

ROYAL HORTICULTURAL SOCIETY.
FLORAL COMMITTEE.

In the LIST of AWARDS at p. 315, the following was accidentally omitted:—

FIRST-CLASS CERTIFICATE.

HYACINTH THORWALDSEN, from Messrs. Cutbush & Son, Highgate.

THOMAS MOORE, Secretary to the Committee.

The Gardeners' Chronicle.

SATURDAY, APRIL 9, 1864.

THE subject of RADIATION, though one of great importance, is too often neglected by gardeners. We have on more than one occasion called their notice to the injurious effect which it has in drying the air in conservatories, where there is no power of interposing a screen, especially where a high temperature is kept up at night.

It is not however to this part of the subject that we wish to allude at present, but to its effect in the open ground. It is radiation which makes it difficult to cultivate plants like the Sikkim Rhododendrons, which come from a country where there is so frequently a veil of clouds; it is radiation again which has frequently so fatal an effect in spring on the blossoms of our wall fruits, to prevent which some temporary coping to the walls is often applied with great benefit by good cultivators. So great indeed is the effect of radiation, that if it were not for the moisture of the air and some absorbent power in the air itself, cultivation would be impossible, and a single bright night would reduce everything to ice.

There is a passage bearing on this point in a paper lately read by Professor TYNDALL, which is highly deserving of notice, as it shows that an additional provision is made by Nature to ward off injury. Dr. TYNDALL had before shown the enormous differences which exist between gaseous bodies, both as regards their power of absorbing and emitting radiant heat. It was a point of interest however to determine whether, when reduced to a liquid form, they exhibited a deportment altogether different from that of the vapour from which they were derived.

Accordingly he examined 12 different liquids, and then the same liquids in a state of vapour, and he found that for heat of the same quality the order of absorption of liquids and their vapours are identical. If then the conditions of a liquid are determined, that of its vapour may be assumed. The conditions of water and steam, consequently, ought to be similar. Water, indeed, as a radiant and absorber exceeds all liquids with which it has been compared. A lamina of water an inch in thickness absorbs 81 per cent., and only allows 19 per cent. of the radiation to pass through it. And as we may assume that its vapour is equally energetic, we may infer with certainty, had no single experiment ever been made with the vapour of water, that, weight for weight, this vapour transcends all others in the power of absorbing radiant heat.

"The part then played by aqueous vapour in the economy of nature is far more wonderful than hitherto supposed. To nourish the vegetation of the earth, the actinic and luminous rays of the sun must penetrate our atmosphere; and to such rays aqueous vapour is eminently transparent. The violet and extra-violet rays pass through it with freedom. To protect vegetation from destructive chills, the terrestrial rays must be checked in their transit towards stellar space, and this is accomplished by the aqueous vapour diffused through the air. This substance is the great moderator of the earth's temperature, bringing its extremes into proximity and obviating contrasts between day and night, which would render life insupportable. But we can advance beyond this general statement, now that we know the radiation from aqueous vapour is intercepted in a special degree by water, and reciprocally the radiation from water by aqueous vapour; for it follows from this, that the very act of nocturnal refrigeration which produces the condensation of aqueous vapour upon the surface of the earth—giving as it were a varnish of liquid water to that surface—imparts to terrestrial radiation that peculiar character which disqualifies it from passing through the earth's atmosphere and losing itself in space."

Our account of Dr. TYNDALL's paper read before the Royal Society on the 17th of March, is taken from the *Reader* of March 26. It is scarcely possible to exaggerate the importance of it as regards cultivation, every drop of dew formed on a leaf, or on the panes of a hothouse, acting thus as a protection against serious evil, while the same water in a state of vapour will act as a most efficient blind to prevent a needless or injurious waste. It is obvious, too, that it may have an important bearing on the theory of steaming and syringing, and may prove of unexpected consequence in many questions where artificial heating is concerned. *M. J. B.*

IN drawing the attention of our readers to the new postal regulations by which samples of seeds can now be sent through the Post Office to the East Indies at a small cost (p. 316), we promised to return to the subject in order to give some practical directions (1) how to select seeds for exportation; (2) how to prepare and pack them; and (3) to point out what kinds are most acceptable to friends in foreign countries. We will now endeavour to fulfil our promise. And, first of all, in the selection of seeds, it is of the greatest importance to take care that they are all new and fresh, that is, all lately gathered and not mixed up with old ones of a former season. It may be well enough to mix old seeds with new ones for home sowing, but this should never be done when the seeds are to be sent abroad. Old seeds, which would probably vegetate if sown in England, in many instances lose their vitality during a long sea voyage, and are perfectly worthless when they arrive at their destination in a foreign country. To illustrate the importance of selecting new seeds only for exportation, we may relate what happened in a case in which we ourselves were concerned a few years ago. A friend who had a garden, some 16,000 miles from where we are now writing, wrote to us complaining that he was very unfortunate in getting his seeds to vegetate, and begged our assistance. The late Mr. CATLEUGH, the well-known florist, who was then alive, offered to procure an assortment of new fresh seeds from his friend Mr. CHARLWOOD, of Covent Garden. Mr. CHARLWOOD, to whom the object in view was explained, took an interest in making the selection; all the seeds were consequently those which had ripened the same season, and now mark the result. When sown, after their long journey, they vegetated so thickly, and with such vigour, as to remind our correspondent of the way in which such seeds used to grow in his garden in England. Fresh seeds are therefore of the first importance, and they ought always to be secured for exportation. During a long sea voyage to the East, they are subjected to great changes of temperature, and unless the vital principle be strong and vigorous, it is almost certain to be injured or destroyed. Any respectable seedsman will supply seeds of this description, and will give information when such seeds are ripe and fit for exportation. All who have gardens of their own, can make sure of having seeds in this condition by gathering them for themselves.

Having procured the seeds in the condition we have described, the next question which presents

itself is how to prepare and pack them. The preparation of seeds for exportation is perhaps of more importance than the manner in which they are afterwards packed. In the first place they ought to be dried very carefully, so that all signs of moisture may be evaporated and driven off. If this is not attended to, the moisture is apt to induce them to vegetate while passing through warm latitudes, and their vitality is thus injured or destroyed. This important matter being attended to, they may be packed in almost any of the ways which are usually employed; they may even be put in bottles and sealed up, although this is a system of packing which has oftentimes been objected to, and is one which we do not recommend.

We mention the system of putting up seed in bottles merely to show the importance we attach to the seeds being carefully dried before they are put up. Some years ago Messrs. WRENCH & SONS, of King William Street, London Bridge, were requested by the Horticultural Society of London to put up a collection of seeds in different ways for exportation, as an experiment. Some of these seeds were put in bottles and sealed up, others were put in different kinds of paper, and others again in canvas bags. They were sent to China round the Cape of Good Hope, and the voyage occupied about four months. When the seeds were sown, they all vegetated in a most satisfactory way; those packed in bottles grew quite as well as any of the others, nor could any preference be given to any one mode of packing over another. But then, it must be remembered that these seeds were carefully dried before they were put up. Had this part of the operation not been attended to, the result would probably have been very different; those packed in bottles would have perished, while those in brown paper and canvas bags might have survived. In availing ourselves of the pattern post which is now offered to us for the transmission of samples of seeds, there is only one mode of packing allowed, and luckily that mode is usually considered the best one. "Samples of seeds, &c., which cannot be sent in open covers, may be inclosed in bags of linen or other material, tied at the neck." Had the POSTMASTER-GENERAL studied the mode of preserving the vitality of seeds during a long voyage, he could not have suggested a better plan.

As to the kinds of seeds which are likely to prove most acceptable to friends in foreign countries, we may remark that common well-known things are more appreciated than anything else. Useful vegetables are always welcome, and common flowers, such, for example, as Mignonette, Wallflowers, Stocks, Geraniums, Primroses, and plants of that class, are more highly prized than floral novelties with high-sounding names. Anything which recalls to the mind the flowers and home of childhood and youth has an irresistible charm for those whose lot is to sojourn in countries far away from home.

There is a class of seeds which retain their vitality for a very short period unless they are sown in the earth, and therefore it is useless to attempt to send such things abroad in paper or canvas bags. Acorns, Chestnuts, and seeds of a like kind belong to this class. If we wish to send these to a country as distant as the East Indies, they must be sown in earth in WARD'S cases, and in this condition they will vegetate during the voyage. The seeds of some of the Conifers, such as Abies Kæmpferi for example, are very short-lived if they are kept long out of the ground. If the seeds of this species are cut open when they are ripe, the little germ will be observed already in a green and growing condition, and this circumstance will readily account for the difficulty which is felt in getting home seed of this fine species in good order. It is stated, and we believe on good authority, that the seed of some of the Conifers which are so difficult to get home without having their vitality destroyed, ought to be gathered before it is quite ripe.

In conclusion, we congratulate our readers on the new boon which has been conferred by the postal authorities of England on all those who may choose to send samples of seeds to their friends in the East, or who may wish to receive oriental things suitable to our English parks and gardens.

A CORRESPONDENT asks for further information on the following points respecting the LADIES' PRIZES offered at the exhibition of the Royal Horticultural Society on the 1st of June, by the Proprietors of this Journal. As there seems to exist some uncertainty respecting the questions which are thus mooted, we may usefully devote a small space to some further explanations supplementary to those already offered, which will be found at p. 146. The questions which have been now put to us are these:—

1. What length of time is it necessary that the plants should be *grown* in the drawing-room? Where there is a large establishment it would be very easy for one of the ladies to obtain, we will say, an Orchid just coming into flower, and to grow it for two or three weeks; would that come within the terms of the prize?

2. In the competition, suppose a good plant of a Fern, and a good plant of a flowering plant were exhibited; would the flowering plant take the prize in preference?

3. Is it necessary that they should be grown in pots? or would a plant in a hanging basket, for instance, be admissible? It would be a pity that the objects of the promoters should be thwarted by their wishes not being understood.

We have already stated that it was not our intention to impose any conditions on the exhibitors, beyond this, that the competing plants should be drawing-room plants, that is, drawing-room grown plants, actually cultivated by the lady exhibitors themselves. The foregoing inquiries, however, and others which have been addressed to us, seem to indicate that the competition, if left in this way, may be misunderstood. The subjoined explanations will, it is hoped, prevent this from being the case.

To the first inquiry our reply is, that a plant just coming into flower, brought into a room from a frame or plant house ready to expand its blossoms, would not have been grown in a room in the sense we intend, and should therefore be excluded by the judges. It is clever indoor culture which we desire to encourage. The most satisfactory way to clear up this point will be to require that the exhibited plants shall have been kept in a room for at least six weeks previous to the show.

To the second inquiry we reply, that if the judges give the awards to the two plants which display the greatest skill in culture, whether Fern or flower, we shall be satisfied. Our object in offering the rewards will then have been gained. As there are two prizes, it is scarcely within the limits of probability that any difficulty will be found in selecting the two best dissimilar subjects.

To the third inquiry we reply, that undoubtedly a basket plant—not however a basket of plants—will be eligible if grown indoors for the requisite period, and so would a water plant grown in an aquarium, if it met this requirement. We say that any kind of plant, grown in any manner, will be admissible, provided it is fairly grown indoors under the care of a lady gardener, not a professional.

We hope our correspondent will now have no difficulty in setting his friends to work; and that others may go and do likewise.

—— WE observe that one of the plants which the Horticultural Society's Floral Committee has approved, in its last year's report on the experimental plants grown at Chiswick, is the ATHANASIA ANNUA, an old-fashioned annual, which it is stated was very effective for a considerable period during the summer months. We saw these plants, and can bear testimony that such was the case. The subject is mentioned here for the sake of pointing out that the effectiveness of this Athanasia was, as is the case in so many other instances that could be named, owing entirely to good cultivation. Sown thickly on poor soil, as is the lot of too many of our annual flowers, the Athanasia is a mere weed; but here, transplanted singly into good soil, it formed a close mass, adorned with a profusion of its bright yellow flower-heads. The branching habit which the plant assumes under such treatment is highly favourable to the production of a succession of flowers. In the instance referred to, the individual plants formed dwarfish freely-branched tufts of about a foot in height, the ends of all the branches being decorated with a corymb of the peculiar rayless flower-heads. These are, as gardeners would say, all "eye," wanting entirely the ray-florets which in general give their beauty to composite flowers; in point of fact, they very much resemble those of the Tansy, but from their bright yellow colour, they are very showy when produced abundantly.

NEW GARDEN FERN.

GYMNOGRAMMA PEARCII, *M.*

Fronds erectly arching, membranaceous. bright transparent green, quite smooth and glossy, deltoid, quadripinnate (lamina about 1 ft. long and 1 ft. broad at base); primary pinnæ ovato-pyramidal or elongately triangular acuminate (6–8 inches long), the lowest somewhat unequal-sided, the posterior pinnules being longest; pinnules ovato-pyramidal (2-2½ inches), the secondary ones of the same form (½-¾ inch) deflexed; ultimate pinnulets ovate divided at the base into forked and at the apex into simple minute linear blunt segments, consisting of a midrib and narrow membranaceous border; sori irregular, forming unequal usually forked oligocarpous lines along the basal part of the vein of the ultimate segments; caudex short erect, its crown and the base of stipes only clothed with white farinose powder; stipes terete, nearly a foot long, bright chestnut brown, clothed with a few light brown lanceolate entire scales on the powdery base, otherwise smooth and polished; secondary rachides chestnut-coloured at the base.

This is one of the most elegant additions which have recently been made to our collections of garden Ferns. The plant has a strong *prima facie* resemblance to Asplenium ferulaceum, noticed at p. 1108, 1863, having like it tall triangular bright green fronds very finely cut into small narrow segments, but the fructification is totally different, being that of a genuine Gymnogramma, and consisting of sparse usually forking lines of naked spore-cases lying along the centre of the minute and narrow segments into which the frond is cut up. The lower part of the stipes, as well as the crown of the caudex, has a covering of white powder similar to that common on some species of this genus, but this is confined to about a couple of inches at the very base, the remaining part of the stipes, as well as the lamina of the frond, being quite smooth and shining.

The plant has been introduced by Messrs. Veitch & Son, from Chili, through their collector, Mr. Pearce, and proves to be a free-growing greenhouse evergreen Fern, of such exquisite beauty that it must be welcomed by all Fern growers. A very nicely grown example was exhibited at South Kensington on the occasion of the late Hyacinth show, and then received the First-class Certificate of the Floral Committee. It perhaps comes nearest to the curious zigzag-stemmed Gymnogramma flexuosa of tropical America, that being also three or four times pinnate, and having small linear segments; but the two plants are nevertheless very different—obviously so, indeed, in the peculiarly flexuose rachis which has suggested the name of the latter species, and in the refracted position of its primary pinnæ. No other described species known to us approaches it even so nearly as this. *T. M.*

DIES ORCHIDIANÆ.—No. XI.

(*Continued from p.* 1223, 1863.)

MESSRS. VEITCH AND SON, EXOTIC NURSERY, KING'S ROAD, CHELSEA. — This enterprising firm although somewhat late in entering the lists as Orchid growers, soon fought their way into the front ranks, when once the matter was fairly taken up. No other establishment has made greater efforts to obtain a continuous supply of new Orchids from all parts of the world, and none have been at greater pains to make their hard-earned treasures thoroughly at home.

As you enter their vast establishment from the King's Road, you proceed along an extensive gallery with gay plants arranged on either side, until you come to an open quadrangle surrounded on all sides by glass structures. Here you may be almost said to

"Survey the (Orchid) world from China to Peru,"

for here you have a miniature world arranged according to "Mercator's Projection," the houses on your right being devoted to the denizens of the old or eastern hemisphere, whilst the natives of the new or western hemisphere are provided for in a corresponding range of houses on your left; and as the Orchids of Africa and the East Indies for the most part affect a higher temperature than their transatlantic cousins, these their constitutional peculiarities have not been overlooked in Mr. Veitch's arrangement, for the houses on the right, where the true air plants are collected, are always kept much warmer than the houses on the left, where Cattleyas, Lycastes, &c., predominate. Some years since there was yet another subdivision, several Odontoglossa, &c., being then massed in a little narrow house facing the north, and here it was that I first saw what we now call 'cool treatment' in actual operation. It seemed to answer admirably, and Mr. Veitch, believing that little more was requisite to ensure the health of a large number of hitherto unmanageable plants than to keep down the temperature of the house in which they were grown, proceeded to apply the principle to one of his larger Orchid houses, into which the Odontoglossa, &c., were removed—and where indeed they are still—but they have not succeeded so well as in their first abode, chiefly as I conceive because the house in question faced the north, which their present house does not. But Mr. Veitch talks of restoring them to their old quarters, and I hope he will.

Ere long I apprehend that there will neither be a London nursery nor a provincial chateau, in which a cool Orchid-house does not form a part of the ménage. But it is time to take a systematic walk round this attractive Orchid region, and as we were speaking of cool-country plants we had perhaps best begin with the first house on the left, in which the temperature is comparatively low. Here were (in pots) ample stores of Lycaste Skinneri and (on blocks) Epidendrum vitellinum,‖ and Barkeria Skinneri. The latter was in luxuriant health, as indeed was the Lycaste, of which many striking varieties were in bloom at the time of my visit (November), and I doubt not an equal number of equally fine varieties are in bloom still (March). In fact, with a little manœuvring you may have the Lycaste in flower for at least six months in the year, and when it is over, Epidendrum vitellinum will be ready to take its place, and keep up a succession of its sparkling blossoms till Lycaste Skinneri comes again.*

* I wonder whether your fair readers are sufficiently

In the same house with the Lycaste were a few fine specimens of certain rare Odontoglossa, such as O. nævium, O. Pescatorei, and O. Phalænopsis, which had only been kept in their places by putting prohibitory prices on their heads.* Here likewise, and finely in flower, was O. Uro-Skinneri, a Guatemala plant of most imposing presence when well grown. From the same country another great rarity was pointed out—Epidendrum cnemidophorum to wit—of which, at the time of my visit, there was only this one living specimen in Europe, although others, I was happy to hear, were shortly expected. Passing on to the Cattleya house—where the temperature undergoes a moderate rise—I found all the popular favourites mustered in great force; among which, however, I must not be supposed to include some of the hybrid triumphs of Mr. Dominy's misplaced ingenuity, *e.g.*, C. Dominii and so forth. Hybridise everything else if you will, but spare—oh, spare—the Orchids.

When the door of the Cattleya house is closed we bid adieu to the Orchids of the new world, and must now prepare to face the much greater degree of heat and moisture to which the old E. Indians still lay claim. We now in fact enter the houses on the right of the quadrangle, and which are all but exclusively devoted to the Orchids of the Eastern hemisphere, including of course Africa, Continental India, and the Eastern Archipelago. As to the first and last of these there is I fear little hope that they can ever be induced to grow in other than a high temperature; but with respect to those from central India many have already proved to be almost as impatient of heat as the Epidendra and Odontoglossa of New Grenada, and some of these Mr. Veitch had placed in one of his cool houses, in which at the time of my visit there was no heat in the pipes, although the out-of-door thermometer indicated 2° of frost! As yet it would be premature to give a list of "cool" East Indians, but it will be forthcoming in due time, and meanwhile I trust "growers" who have the means and opportunity of making experiments, will not fail to institute them. As an encouragement, I may mention that many of the loveliest Cœlogynes and Pleiones, and even some of the varieties of Aërides affine, have been found to succeed perfectly well under "cool treatment." But there is this difference between such treatment as applied to American and East Indian subjects; the former for the most part grow leisurely during the whole year, whereas the last make a short and sharp "burst" during their growing season, and then sink into a state of profound repose. But there is no such repose to be expected in the house through which we are now passing, and in which many magnificent Vandas and Angræca are found in a state of ceaseless activity. Conspicuous among these were noble specimens of A. eburneum and the very rare A. sesquipedale, of which last Mr. Veitch has at length succeeded in obtaining a small reinforcement from Madagascar, though not without such repeated failures and disappointments as would have gone far to break a less resolute spirit. With the Angræca came also a few other most extraordinary forms that were perfectly new to me. One of these may possibly be Grammatophyllum Ellisii (on which Reichenbach founds his new genus Grammangis); but what can we say of another, the pseudo-bulbs of which might almost be supposed to have once belonged to Oncidium ampliatum, and to have then been passed and flattened under a mangle. It had a strong rhizome with its strange flat bulbs at distant intervals, and the remains of very stout upright flower stems issuing from their base. As there is no trace of any such plant in the work—exhaustive as it was supposed to be—of Du Petit Thouars, we may reasonably hope that other extraordinary forms remain to be discovered in the interior forests of this vast island of Madagascar. Mr. Veitch's enterprise and perseverance had also been rewarded by the receipt of a copious supply of what had long been the rarest and most costly of Orchids—Vanda Batemanni, to wit. More imposing even than this last, was a glorious specimen of V. Lowii, which, though at another season of the year, I was once fortunate enough to see in flower. Though the flower-spikes were shorter than those of Mr. Rucker's plant, it was still a wonderful and beautiful sight, and I only regret that neither here nor when it flowered at Wandsworth, was there a drawing prepared for any of our botanical works! While on the subject of new and extraordinary forms, I must not neglect to notice an Orchid, supposed to come from the East Indies, which had purplish leaves and pseudo-bulbs on a straggling rhizome, and which, if it be referable to any known genus, may perhaps prove to be a gigantic Cirrhopetalum. There were other houses devoted to Air plants, in which some gigantic specimens of Saccolabium præmorsum (var.) deserve honourable mention; as do also some half-dozen unimpeachable plants, with leaves more than a foot long, of the charming Phalænopsis Schilleriana. But I must not linger too long even here, or my 'Dies' will be unduly prolonged; let me, however, before I conclude, call special attention to the goodly array of Cypripediums that Mr. Veitch has succeeded in bringing together. Besides the ordinary kinds (*e. g.*, C. insigne, C. venustum, C. purpuratum, C. barbatum, C. javanicum, and their varieties,) I observed the following, all more or less rare, and all perfectly distinct; *e.g.*, C. villosum, C. Fairieanum, C. hirsutissimum, C. Hookeræ, C. Lowii, C. superbiens (*alias* C. Veitchii), C. Stonei, C. Schlimii, and C. caudatum, of which last there were two varieties that will, I expect, ultimately take specific rank. In addition to these were plants of an entirely new E. Indian species, discovered by Mr. Veitch, jun., on the spot where Vanda Batemanni grew (indeed it was actually settled on its roots); and another still more unique form—with grassy leaves and a travelling rhizome—just imported from Peru. Notwithstanding these recent additions, I believe that as yet we have not in cultivation more than a moiety of the species of this wonderful genus, which, even as at present represented, forms a truly distinct, very manageable, and most enjoyable group. It would form a nice subject for a "Monograph."

Serapias.

* alive to the value of these two Orchids for bouquets, or to wear in the hair? For the latter the Epidendrum is invaluable, while for the former nothing can surpass the Lycaste, and—which cannot be said of any other flowers whatever—they may both be made to do duty for several nights in succession! What a popular ballot might there be at S. Kensington, if either or both of these plants could be distributed in any quantity!

* The prices at which "cool" Orchids are now assessed, bid fair to eclipse all former extravagances in the same line. Mr. Bull told me that he not long since bid (and bid in vain, too,) 80 guineas for what could hardly be called a large plant of Odontoglossum Phalænopsis! A living plant of O. crispum (much finer than O. Pescatorei) or O. Warscewiczii, would be worth a king's ransom in these phil-Orchid days!

WILD PLANTS, AND THE ROYAL HORTICULTURAL SOCIETY'S PRIZES FOR DESTROYING THEM.

We understand that the following "remonstrance" has been addressed to the Council of the Royal Horticultural Society:—

"*April*, 1864.

"We beg respectfully to represent to the Council of the Royal Horticultural Society that serious injury will be caused to the native plants of England by the prizes recently offered by the Society for collections of wild specimens of English plants. But, at the same time, we desire to thank the Society for having shown a wish to promote a knowledge of scientific Botany.

"The value of land, and the advanced state of agriculture consequent therefrom, has caused many wild plants to be now confined to few or even to single localities, often of small extent. It is feared that such species will be extirpated by collectors for prize herbaria, who are desirous of obtaining every plant known to grow in their county, and are greatly tempted to destroy what they do not gather, in order to prevent other candidates from finding as many species. The plants liable to be thus destroyed are mostly not such as gardeners would wish to obtain for cultivation: they possess no beauty nor interest to the common eye, but are of much value in the estimation of scientific botanists. There is scarcely a county in England in which one or more plants will not be in danger of extirpation by the collectors for these prizes. Neither will the prizes promote scientific botany amongst the class for whose benefit they are intended, for there is nothing to ensure the recipient of a prize himself knowing the names or localities of the plants in his collection, or that he has examined a single botanical book, gathered any of the specimens, or even seen any of them. But supposing the case not to be so bad as this, the objection will probably apply, in some degree, to every collection sent to the Society; for no attempt is made (indeed, it would be next to impossible) to ensure the collection being really formed, named, mounted, and arranged by the candidate himself, without the help of other persons.

"As it seems nearly certain that these prizes cannot be of much use in promoting scientific Botany, and must seriously threaten the rare, curious, and botanically interesting plants with extirpation, we venture to express our hope that the Council may be induced to withdraw them before the season has arrived for the destruction to commence.

"We have the honour to be, Gentlemen,

"Your most obedient Servants,

"A., B., C., D., &c."

What ignorant and evil adviser can have led the Horticultural Council to attempt such a mischievous operation? The *Botanists' Chronicle*, a useful little periodical just struggling into existence, expresses itself as follows:—

"It has been announced in the newspapers that the Horticultural Society, with the laudable design of encouraging the study of local botany, has determined to offer prizes for the three best herbaria of every county in Great Britain, with further prizes for the three absolutely best of the entire number—a measure which, though the Society do not intend it, amounts to offering two or three hundred prizes for the extirpation of all the rare plants in the British Islands. Every genuine lover of botany already laments the growing tendency to the extinction of our botanical rarities, through the selfish greed, not of real botanists (who greatly regret the loss of even a single species, and are generally careful to leave enough for their successors), but of the race of mere collectors, who have no true interest, either in plants or in science. If, even now, the known habitats of many of our plants are rapidly becoming exhausted, what have we not to fear if one of the great botanical societies, to whom we look for the protection, not the destruction, of our botanical treasures, should let loose all the idle dilettanti in the country to search out and pillage all the localities of rare plants, giving them, moreover, a direct interest in taking or destroying every specimen they can find, that what they do not themselves want may be made inaccessible to their competitors? If this resolution be persevered in, the year 1864 will be remembered as the last year of the existence of most of the rare plants in the British Flora—especially in the Southern counties—anywhere but in the Horticultural Society's series of herbaria; and the 'local botany' which the Society seeks to encourage, will, by the annihilation of its materials, become a record only of the things that were."

We also learn with very great satisfaction that a memorial has been addressed by Sir W. Hooker, and the chief authorities at Kew, to the Council of the Royal Horticultural Society, earnestly requesting a reconsideration of this proposal to give prizes for collections of indigenous plants; for the very obvious and excellent reason, that whilst such prizes can do no good whatever, they will certainly lead to the extirpation of some of our rarest and most interesting native plants.

It has been already pointed out that this disposal of the funds of the Society is quite beside its legitimate purposes and functions, and we have only to repeat that we cordially approve of the course taken by the learned Director of the Royal Gardens, in thus protesting against it.

We must however, before quitting the subject, express our regret and surprise that so important a public document as this "remonstrance" should have been drawn up in so confused and ungrammatical a style.

RECIPROCAL INFLUENCE OF THE STOCK AND GRAFT, AS REGARDS FRUIT TREES.

As this is a subject of considerable importance, and apparently yet unsettled, the following extracts from a communication by M. Jules Liron d'Airoles, which appeared in the "Revue Horticole" for March, 1864, may not be without interest. He says, that "for our own part, we are of opinion that in the union of graft and stock, made between the same species or between species closely allied, such as that between different Pears on wild Pears raised from seed, the quality of the fruit of the graft ought to be very little changed. What supports this assertion is the continual reproduction of the same variety with the same flavour, the same sweet or sharp quality, the same nature, whether breaking or melting, throughout centuries. Everybody knows that of late years the greater number of our stocks are taken from the forests; and these stocks certainly come for the most part from the seeds of the small wild astringent Pear, which is more wild and primitive in its nature than our perry Pears that have been cultivated for many years. We ought also to take into account the alternate grafting on the Quince and Pear stocks. All things taken into consideration, one must come to this conclusion—that the sap of the stock is to the graft what the juices of the soil are to the root, or rather that the stock only transmits to the graft the principle of life drawn up by the roots. From this it follows that the quality of the fruit is affected more by the quality of the soil than by the influence of the stock. In support of this opinion we may mention the fact, well known in Vine countries, that manured Vines bear larger bunches and more abundantly than others not so treated, but the wine made from them is correspondingly impaired in quality."

M. Breitling, in the *Annales de la Société Centrale d'Horticulture de France*, says, "There has been much discussion on the reciprocal action of the stock and graft; this important question is, however, so far from being definitely settled, that even in this year (1860), the Federation of Sociétés Horticoles de Belgique has offered a prize for the best memoir relative to this subject, and has cited some facts difficult to reconcile with each other, and many almost contradictory. There is a general agreement in regarding the influence of the stock upon the graft as positive; but that of the graft on the stock is estimated as nil, or very doubtful."

In France, continues M. Liron d'Airoles, it is very seldom that we work the Apricot on the Apricot coming from the stone, but almost invariably on the Plum stock, and consequently the fruits produced by the trees are good or indifferent according to the soil, aspect, or season. However the affinity of the Apricot to the Plum appears to us somewhat improper; and we regret that nurserymen do not work trees on stocks raised from the stones of Apricots, and of good varieties of Plums, which trees they might give to the planter with the indication that they are on free stocks raised from the stones of the same varieties as those ordered [for example, a Greengage worked on a stock raised from the stone of a Greengage. What says Mr. Rivers?] There is a chance of such a tree producing better fruit; and moreover it is likely to be longer lived. For certainly the interruption which the flow of sap undergoes when a strong-growing tree is made to support a weak-growing one, must have a great influence on its organisation, sometimes causing death, or at least occasioning gum, to which stone fruits are so liable.

It is not so with the Pear and Apple. As is remarked by the German author, we have little to apprehend from the influence of the stock on the

graft; and, as we have endeavoured to show, that influence is almost inappreciable.

In the case of Pears the sap circulates freely in all the varieties worked on the Pear or free stock. The only exception is in the case of weak and debilitated kinds which require an immediate Pear graft of a less vigorous habit than the wild Pear, but at the same time more vigorous than the Quince.

As regards the influence of the stock on the fruit, it appears logical to conclude that owing to the sap passing with less force through the tissues of the Quince than through the more open tissues of the Pear, the tree which is nourished by the former, having a more limited supply of crude sap, its fruit will contain less water, and secrete more sugar, and consequently may be better. But the difference which we observe after paying the utmost attention to the production of trees grafted on both stocks, chiefly arises, in our opinion, from the nature of the seasons and the quality of the soil in which the trees are planted. In a year neither too wet nor too dry, it is very difficult to discover the least perceptible difference in the fruits from trees worked on either of these stocks. Under contrary conditions [in cold wet seasons], the fruit from the Quince proves better than that from trees on the Pear stock. Such, says JULES LIRON D'AIROLES, is our opinion.‖

Home Correspondence.

New Hyacinths.—Where are the mystifications in the matter of New Hyacinths to end? In the report of the Royal Horticultural Society's Show in your paper of the 12th ult., we find that in his collection of six novelties, Mr. Wm. Paul exhibited Lord Palmerston, a lilac blue, with white centre, in the style of Argus. From the announcement in p. 243 we learn that for this variety the Floral Committee awarded him a First-class Certificate. This Hyacinth is no novelty here, and was included in the prize lot exhibited by us at South Kensington last season, and specially noticed in your report of the March Show. If any award for novelties be given to exhibitors, not raisers, it scarcely seems in this instance to have reached its proper destination. Another of Mr. Paul's novelties, Sir Charles Napier, a single blue, with white stripe, has been repeatedly exhibited in Edinburgh, but is now discarded, owing to the smallness of the spike. Mr. Paul, in the *Florist* for December, says, he fears that the prizes offered will be a premium on retrogression. Certainly, in more ways than one, they have already proved to be so. Surely, by this time it must be apparent that the keenness of competition, and the interest of the trade in encouraging the adoption of new and consequently more expensive varieties, afford a better guarantee for the introduction of every really desirable novelty, than is to be found in a system of awards, void of any definable standard, and producing such equivocal results. *Carstairs & Sons, Warriston Nurseries, Edinburgh.*

Parasitic Skin Fungi.—Will you allow me, in justice to myself, to say one word in reference to the notice of my work on Parasitic Diseases, which appeared at p. 295; otherwise I may appear to have exhibited carelessness, and laxity of observation. The reviewer does not quite comprehend my position. (1). He states correctly enough that "no one has as yet shown that Penicillium, Aspergillus, and Mucor are mere forms of one genus," and adds: "Nor does he (Dr. Fox) seem to have very definite views of the structure of these genera." Well, I never thought to deal with Fungi in a wide sense, but merely attempted to show that those forms of Fungi found upon the human body, and which have been described, amid great difference of opinion (among authorities), as forms of Aspergillus, Penicillium, and Mucor, are not distinct, but merely varieties of one species, *ergo* erroneously named and described. The point noted by the reviewer remains untouched. (2.) The reviewer writes: "he supports his arguments by a supposed admission by Mr. Berkeley that the Chionyphe of the Fungus foot of India may take its origin from the Mucors. On reading over Mr. Berkeley's paper in the 'Intellectual Observer,' we can find no such admission. We suppose the mistake must have arisen from the word 'mucors' being used in contradistinction to moulds." My reply is: Mr. Berkeley, at p. 250, line 26—28, Intellectual Observer, Nov. 1862, says:—"The Fungus resembles closely the genus Mucor, but there is no columella in the sporangium, a character which accords with Chionyphe rather than Mucor;" line 4-5, the germination "gave rise to a peculiar mould which it can scarcely be doubted is the perfect condition of the species;" and at p. 255 says there is "great reason . . . . for looking to the origin amongst the Mucors," &c. Hence I can scarcely be said either to have confounded the terms "mould and Mucors," or to have misstated as to the origin of Chionyphe Carteri, especially since I find the following remarks at p. xxvii., appendix to the No. VIII. N.S. of the Trans. of the Med. and Phys. Society of Bombay (1862), from Dr. V. Carter's own pen: "Mr. Berkeley is not inclined to agree with the views I formerly expressed as to the possible connection of the fungus of Mycetoma, with the rusts and mildew infesting many plants; and as just intimated, I now think it is rather amongst the moulds (Mucor) we must look for the parent of the former. He considers the facts already made known warrant the specific distinction of the red mould, which, although closely resembling Mucor—identical I should myself say—is yet more like the genus Chionyphe, whence his proposed name and definition, &c." *W. Tilbury Fox*, 15, *Old Cavendish Street.*

[In reply to the above observations, we beg to state that we formed our judgment as to what is mentioned in the paragraph No. 1 from pp. 164, 165. The absolute differences described in books (at least in books written by competent authorities) are easy enough to recognise where true specimens of Aspergillus, Penicillium, and Mucor are examined. We at least have never found any difficulty about it. The distinguishing character of Mucor is the columella, which Dr. Fox does not notice. As regards paragraph 2, Mr. Berkeley distinctly states that the Fungus resembles closely the genus Mucor, but there is no columella in the sporangium. He does not say that the Chionyphe may take its origin from the Mucor. The assertion that the germination of the black fungous masses gave rise to a peculiar mould, does not intimate that Chionyphe and Mucor are the same thing, the word mould being used in its popular sense. Mr. Berkeley is not answerable for the sense in which Dr. V. Carter may have used the word Mucor, or for his opinion that Chionyphe does not differ from Mucor. It is quite certain that Mr. Berkeley has not said a single word which implies a belief that Chionyphe is a form of Mucor, though he might be very unwilling to assert dogmatically the impossibility of such a connection. We beg to add that the notice was written in no unfriendly spirit, though we thought it absolutely necessary to point out that Mr. Berkeley did not think the Chionyphe might take its origin from the Mucors (p. 62).]

The Hydropult (see p. 270).—I have had one of these contrivances in use here for these last 12 months, and I consider it to be one of the best things in its way ever made for the gardener. It can be used either indoors or out, and with any amount of force. I have a large Peach-house here upwards of 100 feet in length, and I think I may safely say that there was not an insect in it all last summer; this I attribute in a great measure to the free use of the hydropult, and I may add that what would take me an hour with a common syringe I can now do comfortably in about a quarter of that time, and much more effectually; as to an occasional drop of water falling on one's foot, what gardener cares for that? I have however as yet no reason to complain even of this inconvenience. *David Uphill, Moreton Gardens, Dorchester.*

New Plants for Distribution amongst Fellows of the Horticultural Society.—I submit to the Council of the Society, and to those of the trade who employ collectors abroad, whether it would not be in the interest of both parties to come to some arrangement as to new plants. I think it would repay the Horticultural Society if it made an arrangement with introducers of new plants to purchase for distribution 50 or 100 specimens of every novelty brought over by private firms before they were issued to the public. I am sure it would repay the trade to let the Society have them at a very low price, with the condition that they should not be issued for six months; the Council agreeing, as it would be bound to do, to announce when the ballot was about to take place—"This plant was introduced by Messrs. ——, and 50 of them purchased from those gentlemen by the Society for ballot amongst the Fellows. Messrs. —— will issue them to the public next year." For three years after the date of the ballot a list should be published in every Journal of the plants which have been thus issued by the Society, and to each should be attached "Obtained from Messrs. ——, and on sale by that firm." This announcement would be the best of trade advertisements. Every person wishing for good specimens would assuredly apply to that firm, even if rivals were dishonest enough to try and strike layers, and sell them cheaper. *D.*

Societies.

ROYAL HORTICULTURAL.—A meeting of this Society was held in the Council Room, South Kensington, on Tuesday last, when a number of new Fellows were elected, a list of whose names will be given next week. After the election the following lecture on the Hyacinth was delivered by Mr. Wm. Paul, of Waltham Cross, and it was illustrated by a beautiful assemblage of these favourite flowers:—

THE HYACINTH (Hyacinthus orientalis) is a native of the Levant, whence it was introduced to England in 1596. The derivation of the word Hyacinth is uncertain; it is of very ancient date; some derive it from Hyacinthus, the beautiful boy, who was killed by Zephyrus, and from whose blood the flower sprang into existence by the command of Apollo.

The plant belongs to the Natural Order Liliaceæ or Lily-worts, to which also belong the Tulip, the Fritillaria, the Lily, the Tritoma, the Aloe, the Yucca, the Squill, and many other genera, some of which, if less attractive, are scarcely less useful and interesting. The plant is bulbous, and produces an annual stem or stems, adorned with rows of beautiful flowers, red, white, blue, and yellow, of varied and distinct shades, pointing in all directions. In the climate of England, if planted in November, and left permanently in the ground, the flower-stems and leaves rise in March, flower in April, decay in June, and the bulb remains hidden in the ground till the following spring. I have said the plant was introduced from the Levant in 1596, but it was known to Dioscorides, who wrote about the time of Vespasian. Gerarde, in his Herbal, published at the close of the 16th century, enumerates four varieties, the single and double blue, the purple, and the violet.

In that valuable old book on gardening, "Paradisi in Sole Paradisus terrestris," published by John Parkinson in 1629, there are mentioned and described eight different varieties. He tells us, some are pure white, another is almost white, but having a show of blueness, especially at the brims and bottoms of the flowers; others again are of a very faint blush; some are of as deep a purple as a Violet; others of a purple tending to redness, and some of a paler purple. Some again are of a fair blue, others more watchet, and some so pale a blue, as if it were more white than blue: after the flowers are past there rise up great three-square heads, bearing round black seed great and shining. So wrote Parkinson in 1629, and before you are sketches of the Hyacinth of his day, single and double.

Here then is the type of those splendid Eastern flowers which decorate our halls, our conservatories, our parterres, with their gay and varied colours, and load the air with their delicious perfumes at a time when winter still lingers upon our northern shores. It is interesting to compare the Hyacinths of that epoch (1629) with those of 1864, and to mark the improvement. Two hundred and thirty-five years have elapsed since then, and this simple flower serves well to illustrate the great fact that the original forms of nature do not remain fixed and stationary, at least when brought under cultivation. While looking at the extremes, we must not however forget that there are intermediate stages which are for the most part lost to us. Nature will sometimes indulge itself with a leap, but as a rule her march is slow and gradual. It were idle to speculate as to how far these results are due to the inherent capacity of the flower for improvement, and how far to the intelligence and industry of man. I care not to adjust such a balance; man's intelligence and industry would have been but wasted had the flower been created incapable of improvement; the flower would probably have remained but little changed, but for man's labour. Were not man and plants created by the same beneficent hand?—and what more cheering prospect in protracted labour, what higher recompense for toil, than the knowledge that the objects we deal with are capable of improvement, and that by their cultivation we are adding to the useful and the beautiful in this kingdom of Nature? The Horticulturist once in possession of the wild forms, finds it his business to cultivate and improve them. In order to accomplish this, he has in his mind an ideal of beauty, for the realisation of which he works with head and hand. Now, while I do not claim for the horticulturist an immunity from the errors common to the labourer in other fields of art and science, I yet believe that his profession rests on a broad basis of experiment and fact. His object is to extend and beautify the useful and the beautiful. Without entering into the abstract question, as to whether beauty is the result of mere habit and association, or whether there is an innate standard by which the senses are influenced, I am ready to admit that association, if merely an influence, is the strongest of all influences, if not equivalent to all other influences. It is certain that, in the cultivation and improvement of flowers, our ideal is not fixed and unalterable, but is constantly exalted as we advance. Show me the most beautiful flower, and I will presently conceive one still more beautiful. The ideal of to-day, once accomplished, leads only to a higher standard in the future.

Among the numerous varieties of Hyacinths at present cultivated, are found not only various shades of colour, but also flowers and spikes of different forms and proportions. Without presuming to define the exact height or breadth to which a good Hyacinth should be restricted, I may perhaps be permitted to state that I have on several occasions taken the dimensions of that part of a spike covered with flowers which has pleased me by its symmetry, and I have invariably found 6 inches in length and 8 inches in circumference, or similar proportions, to be the result. Such a spike is here singled out and placed before you. Am I asked, "Is this flower really improved, or only varied?" I answer, both;—if varied, improved, but improved also in other respects beside the increase in variety. The flowers, originally narrow, wrinkled, and pointed, are now broad, smooth, and round; the breadth and length of the spike and the size of the individual flowers are also increased; the colours are intensified. By the increase in size, the plant has become more highly decorative; the broader, smoother, and rounder petals also give a finish and brilliancy to the whole. To put these views in an exacter form:—

The original spike was short and narrow.
The improved spike is long and broad.

The original spike was feeble, drooping, and loose.
The improved spike is strong, erect, and compact.

The original form of the flower was square or polygonal and crumpled.
The improved form of the flower is round, or almost round, and smooth.

The original substance was flimsy and transient.
The improved substance is solid and durable.

The original colours were few, undecided, and dull.
The improved colours are many, decided, and clear.

These changes, then, are the work of the horticulturist, and if they be fairly and impartially considered, I think none will deny that he has reason to rejoice over the fruits of his labour. I claim for him no creative power, but merely the intelligent use of the powers given to him by his Creator, whereby he exercises a dominion, more or less, over all created things.

In advocating these views I have no wish to depreciate the flowers of Nature. We may admire their simple beauty; we may wonder at their adaptability to the situations they naturally affect; we may have revelled amid their pleasant and fascinating associations; but we must remember that as horticulturists we are looking at the question from the horticultural point of view. Returning to the days of Parkinson, and following the stream of time, we find by the writings of successive authors on gardening that the culture and improvement of the Hyacinth steadily advanced. In the 17th century Holland contained the principal manufactories and storehouses of all that was rare and beautiful in gardening. The florimania, as it has been termed, raged in Holland about the middle of the 17th century, when as much as 200*l.* was given for a single Hyacinth, and more than 600*l.* for the Semper Augustus Tulip. Loudon observes, "Many noted instances are on record of the extravagant sums given for flowers possessing certain qualities agreed on by florists as *desiderata*, and established about this time as canons of beauty. Hirschfield states that in the register of the city of Alkmaer, it is recorded, that in the year 1637, they sold publicly, for the benefit of the Orphan Hospital, 120 Tulips with their offsets for 9000 florins; and that one of those flowers, named the Viceroy, was sold for 4203 florins. When we consider the value of money at this remote period, these sums appear enormous, a florin at that time in Holland being the representative of nearly an English bushel of Wheat." These recorded facts lend at least the appearance of truth to some of the traditions of the Dutch horticulturists; one of these which I met with at Haarlem was, that 1000*l.* were offered and refused for a single Tulip, and only accepted when the purchaser agreed to throw his new carriage and four horses into the bargain. This I receive as a mere satire on the proceedings of those times; but one thing is certain—to such a height was this species of gambling carried, that the legislature thought fit to interfere, and enacted that no Tulip or other flower root should be sold for any sum exceeding about 50*l.* sterling.

About the middle of the last century (1753) was published in England a Treatise on the Hyacinth, being a translation from the Dutch, by Bartholomew Rocque, a florist at Waltham Green. About this time also the practice of growing bulbs in water first obtained, and that prince of gardeners, Philip

Miller, wrote a treatise on the subject. The importance of this branch of national industry, and the fortunes realised in its pursuit in Holland, induced men of talent and capital to engage in it, and as a consequence improvement went on more rapidly. Miller tells us, that in the early part of the last century, the Haarlem florists distinguished 2000 sorts. Since that period the number of sorts has probably decreased rather than increased; it is true that new kinds come forth every year, but their number is few, and certain of the old ones have disappeared before the severe tests of quality and fashion. In the most extensive bulb garden at Haarlem I found last year only 700 sorts, and probably not more than 200 of these are subjects of extensive commerce.

The multiplication and growth of Hyacinths for sale, is principally carried on out-of-doors in the vicinity of Haarlem in Holland. The sandy soil, and moisture of both soil and climate in that country, is peculiarly favourable to the growth of the Hyacinth. In the month of June, at which time the bulbs are ripening, the earth heat appears to me greater than in any soil of which I have had experience in England. Hundreds of acres are there devoted to the culture of these and kindred plants, and the Haarlem Gardens are a gay sight from the present season of the year till far on in summer. The flowers of spring are principally Crocuses, Hyacinths, and Tulips; those of summer, Ranunculuses, Anemones, Ixias, Iris, and others. Large warehouses are erected, with tables rising tier above tier, on which the bulbs are laid to dry when taken from the ground in summer.

I have already stated, in the description of this plant, that no branches are formed, and therefore the process of multiplication is carried on by sowing the seeds, or by taking offsets from the parent bulb. By seeds new varieties only are obtained; it is by offsets the already known and valued kinds are increased. The latter process takes place naturally, of which here is an example: but in Holland, where this plant is principally increased, man steps in to the aid of Nature, and, by skilful manipulation, quadruples or quintuples the produce that would naturally arise. The bulbs are cut crosswise, and sprinkled with sand to absorb any superfluous moisture that may exude from the incisions. After a time they are planted in the earth, when numerous small bulbs are formed on the edges of these incisions. At the expiration of one season they are again lifted from the ground, and the numerous small bulbs, still only partially developed, are separated from the parent root and planted out *again* and *again* year after year for three or four years before they become flowering bulbs of fine market quality.

But let me turn to the culture of this flower in our own country. Here the subject seems to fall naturally under two heads—out-of-door, and in-door culture. When grown out-of-doors, the bulbs should be put in the ground late in October or early in November. The crown of the bulb should be placed 4 inches below the surface of the soil, and 2 or 3 inches of litter or manure should be strewed thereon as a protection against frost. The litter may be removed early in spring, so soon as the leaves have pushed fairly through the earth. It may be placed on again at night during frosty weather. A sandy loam is the soil in which these bulbs seem to grow and flower best, and if such is not the natural soil of the spot they are intended to occupy and adorn, it is well worth while to provide such as an artificial soil. If during the season of flowering, a slight shading be provided, the quality and durability of the flowers will be increased. Hyacinths out of doors require no water, as the soil is sufficiently moist in their season of growth and flowering. When the flowering is over and the leaves show signs of decay, the bulbs may be taken up and laid by for a fortnight, embedded in the surface soil, after which time they may be gathered up, deprived of their roots and leaves, and placed away in a cool dry shed or storehouse.

The indoor culture of the Hyacinth in pots, rustic baskets, bowls and glasses, is largely carried out in this country. Indeed, our conservatories and halls would be shorn of their brightest and sweetest floral embellishments in winter and early spring were the Hyacinth and the Tulip withheld. Hyacinths potted in September may be brought into good condition of bloom before Christmas; and by potting fresh bulbs at intervals of a fortnight till the end of the year, a succession of flowers may be obtained till the middle or end of April, when other flowers will be bursting upon us from every nook and cranny of the well-stored plant-house. The best soil for Hyacinths in pots is also sandy loam, enriched by the usual cool and solid fertilisers. Guano I have heard recommended under this head, and I am not sure that I have not in former times included it among permissible fertilisers. My later experience, however, is not in accordance with this view, as I have found it develope the leaf rather than the flower. When placing the bulb in the pot, the crown or apex should be just above the soil. The pots should be placed on the level soil, out of doors, and surrounded and covered over with a thick layer, say 6 inches, of cinder ashes, as an efficient protection against frost. They should not be left more than two months in this position, by which time the leaves and flower spikes will be pushing into life. Remove them then to a cold pit, greenhouse, or forcing house, according to the date at which they are wanted to flower. Deluge the soil with water, which repeat at brief intervals till the flowers are on the wane. Place the plants close to the glass, and admit abundance of air that the leaves may not be developed out of proportion. It may be well to bear in mind that the long slatternly leaves and attenuated stems sometimes met with in Hyacinths, are due to the want of air and light. It is however necessary to say that the Hyacinth, however skilfully grown, requires an artificial support for the flower stem, owing to the succulent and supple nature of the latter. For this purpose a piece of wire bent zigzag fashion, is the best contrivance I have hitherto been able to apply.

Hyacinths do not succeed well a second year in pots or glasses, but if planted out of doors they become highly decorative in the flower garden.

The cultivation of Hyacinths in glasses is a delightful recreation, and so accessible to rich and poor, young and old, and fraught with so many pleasing incidents and associations, that I am not surprised to find this beautiful branch of in-door gardening very generally practised. Nothing is easier than to grow good Hyacinths in glasses, provided the cultivator possesses himself of good sound bulbs. Nothing can be more interesting than to watch the development of root and leaf and flower. The springing up of the leaves in winter when the vegetable world without is in a state of rest, is a refreshing harbinger of returning spring. The rapid rise of the flower-spike is hardly a trial of patience to the least patient, and the flush of blossoms places in his hands a chaste and finished object of beauty:—

> Well they reward the toil,
> The sight is pleased, the scent regaled,
> Each opening blossom freely breathes abroad
> Its gratitude; and thanks him with its sweets.

I shall conclude this paper with a few short simple rules relating to Hyacinths grown in glasses. These rules may be learnt in five minutes, and if followed, will, I am persuaded, be attended with satisfactory results.

1. If you choose your own bulbs, look for weight as well as size: be sure also that the base of the bulb is sound.
2. Use the single kinds only because they are earlier, hardier, and generally preferable for glasses.
3. Set the bulb in the glass so that the lower end is almost but not quite in contact with the water.
4. Use rain or pond-water.
5. Do not change the water, but keep a small lump of charcoal at the bottom of the glass.
6. Fill up the glasses with water, as the level sinks by the feeding of the roots and by evaporation.
7. When the bulb is placed, put the glass in a cool dark cupboard or in any place where light is excluded, there to remain for about six weeks, as the roots feed more freely in the dark.
8. When the roots are freely developed and the flower spike is pushing into life, (which will be in about six weeks), remove by degrees to full light and air.
9. The more light and air given from the time the flowers show colour, the shorter will be the leaves and spike, and the brighter the colours of the flowers.

The lecture, which was repeatedly cheered, occupied about 20 minutes in the delivery.

A paper by James Bateman, Esq., F.R.S., of Biddulph Grange, on the cultivation of the dwarf Banana, Musa Cavendishii, was next read; a large bunch of the fruit was exhibited, and was broken up and distributed among the audience. A ballot afterwards took place for the possession of a fine specimen of Dendrobium nobile, presented to the Fellows at the meeting by Mr. Bateman, which was won by Miss Nicoll, of Hyde Park Gardens.

Notices of Books.

The Story of the Guns. By Sir J. Emerson Tennent. Small 8vo. Pp. 364. Longmans.

The worthy armourer who first welded together iron bars, secured them with iron hoops, and fashioned them into a cannon for the battle of Creçy some 500 years ago, would be rather amazed if he could now peep into the Royal Gun Factory at Woolwich, and see the cannon manufactured there. Surely there is nothing in the annals of mechanical skill comparable to the result at which this branch of ordnance construction has arrived. By ordnance, we mean small arms as well as heavy guns. This history of the successive improvements is excellently told by Sir Emerson Tennent, for he has not looked at the matter with a merely military eye, but as a sportsman, and we advise our deerstalking friends to study him attentively.

It is no part of the business of a peaceful newspaper to discuss such subjects. Our duty is confined to announcing them; and we think that in doing so it will be enough to extract the following statement, after reading which a good idea will be formed of the immense importance of the matter included in the little volume before us.

One of the most unexpected results of Whitworth's mode of construction was the range of his shot, that is the distance to which his cannon could throw it. In some firing in Lancashire—

"The experiments were so arranged as to exhibit not only the range of the new ordnance but the accurate flight of the projectiles. The smallest of the guns, the 3-pounder weighing only 208 lbs., fired at an elevation of 35°, threw a shot to the distance of 9688 yards, or a little more than *five miles and a half*."

"Mr. Whitworth has since surpassed the startling performance of 1860; his 12-pounder gun having sent a ball 10,300 yards, or very little short of *six miles*."

This notice, brief as it necessarily is, will show the immense importance of the new principle of constructing ordnance with which Mr. Whitworth's name has become imperishably associated.

Books Received.—A temporary illness has caused the Editor to overlook the following works, viz.:—

1. *Croquet*, by John Jaques (Longmans), a sixpenny pamphlet on this game.

2. *A Descriptive List of Ceylon Timber Trees*, by W. Ferguson, F.L.S., Ceylon Civil Service (a pamphlet published at Colombo), All who are interested in our Eastern Colonies must appreciate a work of so much labour and accurate observation as this. It is a pity that the wealth of Ceylon in trees fit for the finest cabinet work, should be so utterly neglected for want of an official Curator. Some of the most valuable trees are becoming fast extinct there!

3. *Samuelson & Co.'s Improved Machines for Lawn and Garden* (18, Cannon Street, City)—a useful priced Catalogue.

4. *Ambr. Verschaffelt* (Ghent), Catalogue No. 74, for the Spring and Summer of 1864, offers a great many new things well deserving trial.

5. *Vilmorin & Co.* (Paris), the usual Catalogues for 1864, with a Supplement, and good useful woodcuts of some of the novelties, among which the following Pears are strongly recommended, viz.:—Hélène Grégoire, Madame Treyve, Nouvelle Fulvie—all autumn and winter melting sorts.

6. *Flore des Serres*, Vol. V., Part 6, is occupied chiefly by Roses, and such Roses! admirably figured. The sorts are Bernard Palissy, Charles Lefebvre, Empereur de Maroc, François Arago, General Washington (Granger), and John Hopper.

7. *A Dictionary of the Bible*, Parts XII. and XIII. (Murray) contain capital articles on the first and second books of Kings, Knife, &c., &c. We select, by way of confirming our opinion, the article on Leeks.

"*Leeks* (חָצִיר, *châtsîr*: τὰ πράσα βοτάνη, χλόη, χόρτος, χλωρός: *herba, porrus, foenum, pratum*). The word *châtsîr*, which in Num. xi. 5 is translated *Leeks*, occurs twenty times in the Hebrew text. In 1 K. xviii. 5; Job xl. 15; Ps. civ. 14, cxlvii. 8, cxxix. 6, xxxvii. 2, xc. 5, ciii. 15; Is. xxxvii. 27, xl. 6, 7, 8, xliv. 4, li. 12, it is rendered *Grass*; in Job viii. 12, it is rendered *herb*; in Prov. xxvii. 25, Is. xv. 6, it is erroneously translated *hay*; in Is. xxxiv. 14, the A. V. has *court* (see note). The word *Leeks* occurs in the A. V. only in Num. xi. 5; it is there mentioned as one of the good things of Egypt for which the Israelites longed in their journey through the desert, just before the terrible plague at Kibroth-hattaavah, "the Cucumbers, and the Melons, and the Leeks, and the Onions, and the Garlic." The Hebrew term, which properly denotes *Grass*, is derived from a root signifying "to be green," and may therefore stand in this passage for any green food, Lettuce, Endive, &c., as Ludolf and Maillet have conjectured; it would thus be applied somewhat in the same manner as we use the term "greens," yet as the *châtsîr* is mentioned together with Onions and Garlick in the text, and as the most ancient versions, Onkelos, the LXX., and the Vulgate, together with the Syriac and the Arabic of Saadias, unanimously understand *Leeks* by the Hebrew word, we may be satisfied with our own translation. Moreover, *châtsîr* would apply to the *Leek* appropriately enough, both from its green colour and the Grass-like form of the leaves.

"There is, however, another and a very ingenious interpretation of *châtsîr*, first proposed by Hengstenberg, and received by Dr. Kitto (*Pictor. Bible*, Num. xi. 5), which adopts a more literal translation of the original word, for, says Dr. Kitto, 'among the wonders in the natural history of Egypt, it is mentioned by travellers that the common people there eat with special relish a kind of *Grass similar to Clover*.' Mayer (*Reise nach Aegyptien*, p. 226), says of this plant (whose scientific name is *Trigonella Fœnum Græcum*, belonging to the natural order *Leguminosæ*), that it is similar to Clover, but its leaves more pointed, and that great quantities of it are eaten by the people. Forskål mentions the *Trigonella* as being grown in the gardens at Cairo; its native name is *Halbeh* (*Flor. Aegypt.* p. 81).

"Sonnini (*Voyage*, i. 379) says, 'In this fertile country, the Egyptians themselves eat the *fenu-grec* so largely, that it may be properly called the food of man. In the month of November they cry 'green halbeh for sale!' in the streets of the town; it is tied up in large bunches, which the inhabitants purchase at a low price, and which they eat with incredible greediness without any kind of seasoning.'

"The seeds of this plant, which is also cultivated in Greece, are often used; they are eaten boiled or raw, mixed with honey. Forskal includes it in the Materia Medica of Egypt (*Mat. Med. Kahir.* p. 155). However plausible may be this theory of Hengstenburg, there does not appear sufficient reason for ignoring the old versions, which seem all agreed that the *Leek* is the plant denoted by *châtsîr*, a vegetable from the earliest times a great favourite with the Egyptians, as both a nourishing and savoury food. Some have objected that, as the Egyptians held the *Leek*, *Onion*, &c., sacred, they would abstain from eating these vegetables themselves, and would not allow the Israelites to use them. We have, however, the testimony of Herodotus (ii. 125) to show that *Onions* were eaten by the Egyptian poor, for he says that on one of the pyramids is shown an inscription, which was explained to him by an interpreter, showing how much money was spent in providing *Radishes*, *Onions*, and *Garlic* for the workmen. The priests were not allowed to eat these things, and Plutarch (*De Is. et Osir.* ii. p. 353) tells us the reasons. The Welshman reverences his Leek, and wears one on St. David's Day—he *eats the Leek* nevertheless; and doubtless the Egyptians were not over-scrupulous (*Scrip. Herbal.* p. 230). The *Leek* is too well-known to need description. Its botanical name is *Allium Porrum*; it belongs to the order *Liliaceæ*.

Garden Memoranda.

Mr. Williams's Victoria Nursery, at Highgate.—Those who may have the opportunity of paying a visit to this nursery in the course of the next week or two, may expect to feast their eyes upon a sight which would repay a much longer pilgrimage. A few day since we saw there a magnificent plant of Rhododendron Nuttallii, which is the most magnificent of all the Indian Rhododendrons. This plant, standing some 10 feet high, and a picture of sturdy health, had its branches crowned by some dozen and a-half of the great scaly buds which are the precursors of flower trusses. The immense white bell-shaped blossoms of such a plant when perfectly developed must form a very grand picture.

Swyncombe Park, near Henley-on-Thames.—The beautiful Bougainvillea is again in full bloom at Swyncombe. In addition to the original plant of B. spectabilis now many inches thick in the stem, and covering an extensive roof of glass with its long clusters of amethystine bloom, Mr. Daniells has two other species coming into blossom, viz., B. speciosa, in which the coloured bracts are smaller and of a deep rose tint, and the smooth leaved B. glabra. Neither of these however is likely to take the place of the larger, more luxuriant, and much freer blooming B. spectabilis. A large extent of glass, providing a profusion of early blossom and early fruit, and several acres of garden ground kept in admirable order, equally with the successful cultivation of stove and greenhouse plants,

attests the great professional skill which is here engaged; as for the Bougainvilleas they are here in matchless perfection.

Miscellaneous.

Lapland Vegetation.—My friends having completed the necessary arrangements for their Lapland journey, we started from Christiania by rail to Eidsvold, 42 English miles. On this line we passed a good deal of cultivated land, Bere and Rye, with Potatos, being the prevailing crops. The number of cattle seemed to be disproportionate to the state of the country, and their lean appearance betokened that they had not been over well wintered. The Norwegian breed of cattle is something between the Ayrshire and Alderney, and they are both hardy and good milkers. At Eidsvold we got the steamer which sails on the beautiful lake Miosen to Lillehammar, a distance of 62 English miles. To those who can relish the beautiful mixed with the sublime in nature, a sail on this lake is no ordinary treat—the scenery ever changing on both sides, now verdant with cultivated fields, and cattle grazing, again the rugged rocks rising to considerable elevations, and covered with dark towering Pine forests, down to the edge of the water. The change of costume among the peasantry as they came on board and left occasionally at the little villages along the shores, was not less remarkable. They all appeared comfortably clad, though their garments in some instances were of a homely description. It was near 12 o'clock at night before the boat reached Lillehammar, yet the landing place was crowded with parties waiting the arrival of their friends, such as we frequently see in England at 12 o'clock, noon. At 6 o'clock next morning we commenced our journey up the beautiful and highly picturesque Gudsbrandsdalen, the first stage or two in a four-wheeled waggon machine, and the remainder on the singular carrioles of the country. Nothing can surpass the beauty of some parts of this extensive valley, shut in between lofty mountains, with those in the background covered with snow at the time we passed up. The scenery appeared to me intermediate between that which occurs in many parts of Switzerland and that of some deep highland glens in Scotland. The mountains not so lofty or so rugged as they are in the former case—more lofty and rugged than in the latter. Besides, many of the houses are perched high on the mountain sides, and, being all constructed of timber, they much resemble the Swiss chalets. The Norway Maple (Acer platanoides) was first seen by us in its wild state, growing on the sides of this valley, where it becomes a large and handsome tree. The wayside plants were mostly of the subalpine type, and among them the following were conspicuous: Aconitum septentrionale, Cardamine amara, Geranium sanguineum, Geranium sylvaticum, Plantago media, Anchusa officinalis, Polygonum viviparum, Maianthemum bifolium, Linnæa borealis, Vaccinium Vitis idæa, Vaccinium uliginosum, Struthiopteris germanica, &c. In the evening we reached the station Viig, where we remained a day. On entering the room in the hotel, a bouquet of native flowers stood on the table, among which we observed Astragalus alpinus, Androsace septentrionalis, Asperugo procumbens, Galium boreale, Lychnis Viscaria, &c. Next day we rambled round the station, and ascended to the tops of some of the mountains. On this excursion the following, along with other plants, were collected:—Astragalus alpinus, very abundantly; Menziesia cœrulea, Arbutus alpinus, Cerastium alpinum, Saxifraga oppositifolia, Saxifraga Cotyledon, Pyrola uniflora, Juncus trifidus, Juncus biglumis, Carex atrata, Carex Vahlii, Carex rupestris, &c.; Woodsia hyperborea, Woodsia ilvensis, Equisetum scirpoides, Betula nana, and Salix lapponica. The tops of the mountains were in some places covered with Cetraria islandica, Cetraria nivalis, Solorina crocea, and Nephroma arctica. Among the Mosses were Hypnum abietinum and Orthotrichum speciosum. At Jerkin on the Dovrefjeld, I remained 10 days, and during that time I botanised over the mountain sides and valleys. On the Dovrefjeld, as far as Drivstue, I was much too early for getting many plants in flower; for, although now the first week in July, nearly all the surrounding mountains and deep valleys were still covered with snow. The Birch and Willows were only expanding their leaves, so that I enjoyed two springs in the year 1863. It is, however, impossible for those who have not had experience of it, to form anything like a just conception of the rapidity at which vegetation advances in northern latitudes, after the snow is removed. No sooner is this winter covering gone, than the plants are in bloom; and with nearly constant light during the 24 hours, and a warm sun during the day, they get rapidly into seed, and thus go through their annual cycle much quicker than the same kinds of plants do in more southern climes. Close up to this mountain station, many of the rare alpine plants grew in profusion. Arbutus alpina, Azalea procumbens, Menziesia cœrulea, Primula farinosa, Primula stricta, Lychnis alpina, Cerastium alpinum, Viola biflora, Silene acaulis, Anemone vernalis, Potentilla opaca, Potentilla nivea, Thalictrum alpinum, Sibbaldia procumbens, Astragalus alpinus, Phaca alpina, Luzula spicata, Luzula hyperborea, Erigeron uniflorum, Erigeron alpinum, Bartsia alpina, Pedicularis lapponica, Pedicularis hirsuta, Juncus Hostii, Juncus trifidus, Juncus triglumis, Elyna spicata, Arenaria rubella, with many more equally rare, were growing on this plateau of the mountain. The surface of the ground was in many places white with Cetraria nivalis; Cetraria juniperina and Cetraria islandica were also very abundant, whilst every damp rock was more or less covered with Gyrophoræ. The dwarf Birch (Betula nana), with rare Alpine Willows, covered large portions of the country, among which were Salix lanata, Salix lapponica, Salix reticulata, Salix polaris, &c. Menziesia cœrulea held the place the Calluna vulgaris holds on the mountains in Britain. I did not observe any Ferns at this elevation, but when I crossed over the mountain and got into the valley of the Driv River, Cystopteris alpina and Cystopteris fragilis were seen on rocks near the road side, along with Saxifraga cernua, Saxifraga nivalis, &c., &c. *D. Moore, in Proceedings of Royal Dublin Society.*

We learn that Mr. W. H. Rogers, of the Red Lodge Nursery, Southampton, has been appointed Nurseryman to her Majesty the Queen, for Osborne.

Calendar of Operations.

(*For the ensuing week.*)

Great care should always, but especially at this season, be bestowed on the operation of watering. Too much, too little, or an injudicious mode of appliance, are equally fatal to high cultivation. Many plants are seriously injured at the periods of shifting or potting off, by improper watering. It is the fashion to recommend what is termed a thorough soaking to newly potted stock, and we fear that in this very act the foundation of what is technically termed "sourness" is frequently laid. A very fine rosed pot, and slight applications of water, at intervals, close on the heels of potting, is the best way, as a general rule, to penetrate the mass, and to cause the particles of soil so to arrange themselves that atmospheric influence shall be somewhat modified, but by no means intercepted. This advice has reference chiefly to newly potted stock in pots; but equal attention must be paid to ordinary conservatory specimen plants. Shrubs newly put out in beds will now require careful watering. Specimens in tubs must also have a little supply, provided the drainage is in perfect order, as it should be. This is the period too for the free use of liquid manure, but take care that it is perfectly clear, and not too strong.

FLOWER GARDEN AND PLANT HOUSES.

AZALEAS.—Young plants will now be growing rapidly; syringe them daily, water when necessary, stop and tie shoots, turn the plants occasionally, and do not let them stand too closely together; give air freely in mild weather, and fumigate when necessary.

ORANGES.—Large trees will now enjoy copious applications of clear weak manure water. Where these trees produce gross wood, disbud or remove it altogether, and let the lower shoots take its place.

ORCHIDS.—Growing plants should now have abundance of atmospheric moisture, with a liberal circulation of air early in the morning, shutting up close betimes, and taking care to observe moderation in the use of fire heat, in order that a pure atmosphere may be inclosed for the night. See that growing Dendrobiums have liberal supplies of water, and plants on blocks frequent syringings.

PELARGONIUMS.—Plants intended for early blooming will now want watering freely; be careful that enough is given at a time to penetrate the ball. Sufficient artificial heat must be used to admit of air being given freely every day. In bright weather maintain a moist growing atmosphere by sprinkling the paths and floor of the house two or three times a day. Attend regularly to the tying and training of the shoots as they progress. Some of the autumn potted plants may be stopped for late flowering. The surface of the soil should be kept clean, the plants kept free free from decayed leaves, and above all things keep a diligent watch for green fly.

FORCING GARDEN.

CUCUMBERS AND MELONS.—Follow up successions. This is a good time to sow for a crop of autumn Melons; at least with those who have nothing but dung beds to grow them in.

MUSHROOM HOUSE.—Take care to provide a humid atmosphere. Beds made after this, should possess more moisture in the manure.

PINERIES.—Attend to regulating the air, heat, and atmospheric moisture, as directed last week. Fruiting houses or pits should now average 80° by day, and about 70° at night; 85° or 90° may be allowed, however, from 3 o'clock to 5 in the afternoon. Dung pits must not be so warm by 5°, as the plants in them are more liable to become drawn.

STRAWBERRIES.—In order to get fine fruit, pick off all flowers as soon as two or three are set on each plant, which will be enough. Place them near the glass and give plenty of liquid manure; also keep up a moist warm growing atmosphere until the fruit begins to colour. There will be no difficulty in getting fruit set after this, if the plants are kept near the glass, and are allowed on all favourable occasions abundance of air.

VINERIES.—Where crowded, some of the laterals may be removed in the earliest house, where the Grapes are beginning to ripen; not, however, to throw sunlight immediately on the berry, but in order to promote a perfect secretion in the principal leaves, with a view to heighten the flavour of the fruit, and to organise plump buds for the ensuing year.

HARDY FRUIT AND KITCHEN GARDEN.

ASPARAGUS.—As soon as young plants are from 3 to 6 inches high, let new plantations be made.

POTATOS.—A full crop may now be planted. Kidneys, with well-protected sprouts, or any other early kinds planted now, will be little later than those put in in February. This, however, requires some extra care; the sets should be placed in baskets, a single layer thick, on damp litter, and carefully handled; they should by no means be planted during either sunshine or wind. Those with sprouts 2 or 3 inches long, if managed thus, and covered at night until the second week in May, will closely succeed those in frames.

WINTER GREENS.—See that plenty of Kales, Savoys, Brussels Sprouts, Leeks, &c., are got in without delay.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,
For the Week ending April 6, 1864, as observed at the Horticultural Garden

March and April.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain in.
Thurs. 31	23	29.773	29.601	55	36	45.5	45	44	W	.12
Friday 1	24	29.691	29.633	54	31	42.5	45	44	S.W.	.06
Satur 2	25	29.936	29.855	53	36	44.5	46	44½	W	.00
Sunday 3	26	29.943	29.805	61	44	52.5	46	44½	S.W	.00
Mon. 4	27	29.996	29.845	64	34	49.0	46½	45	N.W.	.13
Tues. 5	28	30.217	30.159	45	34	39.5	47	45½	E.	.54
Wed. 6	●	30.200	30.178	50	39	44.5	46½	46	E.	.50
Average.		29.965	29.866	54.5	36.2	45.4	45.8	44.8		.34

March 31—Fine; cloudy; overcast; rain.
April 1—Clear; fine; clear at night.
— 2—Clear, cold and dry; fine; clear at night.
— 3—Uniformly overcast; rain; overcast.
— 4—Overcast, warm south-west wind in the morning; rain.
— 5—Cold rain, mixed with hail and sleet; rain till night.
— 6—Densely overcast throughout.
Mean temperature of the week, ½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,
During the last 38 years, for the ensuing Week, ending April 16, 1864

April,	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 10 .	55.4	33.6	44.5	15	0.27 in.	2	6	8	3	4	6	6	3
Mon. 11..	55.3	35.6	45.4	19	0.51	2	8	5	—	2	12	2	6
Tues. 12..	55.6	36.6	46.1	25	0.56	8	7	3	3	3	6	7	1
Wed. 13..	55.4	33.7	44.5	15	0.45	8	6	4	3	3	6	7	1
Thurs. 14..	59.0	36.4	47.2	14	0.36	4	8	3	3	3	6	2	9
Friday 15..	59.8	37.6	48.7	19	0.47	1	9	5	1	5	8	2	6
Satur. 16..	59.2	36.3	47.7	16	0.63	7	9	5	2	3	5	3	6

The highest temperature during the above period occurred on the 14th, 1852—therm. 73 deg.; and the lowest on the 10th, 1860, 16th, 1847, and 15th, 1862—therm. 20 deg.

Notices to Correspondents.

BOOKS: *G E.* The best book on British Wild Flowers for a young beginner is Lindley's Synopsis of the British Flora.—*E C.* Chambers' Practical Mathematics.—*J S.* may order what he wants of any country bookseller, who will also give him the price.

CINERARIAS: *M N.* If the sorts are good enough to be worth keeping, let them stand in a greenhouse pit for a short time after the flowers are over, and then cut them down, and as soon as the young suckers are large enough divide these and pot them. They should be kept as sturdy as possible up to the time of housing. In their winter quarters they must be free from frost. For mere decorative purposes you will probably do quite as well, if not better, by depending on a pinch of good seed, sown as soon as ripe.

DIOSCOREA BATATAS: *E T.* What this plant wants is a deep open soil, which should be thrown up in ridges, so as to give the tubers increased depth. Though quite hardy, it does best in our hot summers.

HAUTBOIS STRAWBERRY: *H R.* Some of the plants bear only male flowers, and these are necessarily barren; others have stamens and pistils combined, and are therefore fertile. The former should be treated as weeds. The Prolific Hautbois is nearly free from this defect.

HORTICULTURAL DEGREES: *A Young Gardener* has sent us a gross libel upon his brother gardeners, which it would be disgraceful to us to admit into our columns. Considering that the *Gardeners' Chronicle* is a Paper for gentlemen—we don't mean great people, but men of good taste and proper feeling—we are surprised at receiving such a libel.

HYBRID PINKS: *D D.* We believe they are all of continental origin. The original red one, now getting common, is very handsome and very useful. No doubt the new pure white variety called Maria Pare will be equally so. The red one is a capital bedding plant, and a good forcer if not too freely stimulated.

NAMES OF PLANTS: *Jas. Hodges.* It is we presume a fine form of Cattleya elegans.—*Oswestry.* Conifers cannot in general be named in the absence of cones. Your specimen looks like a bit of Strobus, or some allied species. Illness must be our excuse for not having answered sooner.—*Emily.* The magnificent new Clematis Fortuni. Permit us to congratulate you on so glorious an acquisition.—*P F.* Nobody can undertake to name plants by their leaves alone. 1, a morsel of some Pteris; 2, possibly some Tradescantia; 3—?; 4, a Selaginella, perhaps aeroviridis. This is the worst lot of plants to name we ever received.

NECTARINES: *W Sherrard.* We never heard of Nectarines from healthy trees, in good soil, and in the South of England, becoming dry and fleshy as you describe. It could not be for want of water, for in that case the trees would not be in good health. Have you not got firm-fleshed Clingstone varieties instead of melting ones? And are their flowers large or small? It would be desirable to know this in the first place. ‖

PRUNING EVERGREENS: *J T.* Laurels and other evergreens may be pruned with advantage now, or any time during the month.

TROPÆOLUMS: *J. Barker.* Your seedlings, varying as they do from bright yellow to rich crimson scarlet and beautifully spotted, are charming additions to the class to which they belong. Your Mimulus, named Amazon, is also large and showy; it is bright yellow, bordered with rich velvety maroon, and spotted in the throat with the same colour.

MISC.: *H H.* The works you inquire about are all explained in Lindley's "Introduction to Botany." Study the market gardens of Putney and Greenwich. As much Latin as suffices for a third form boy is all that you will require.

ERRATUM. In our report of the Royal Horticultural Society's Show, at p. 319, we find that we have omitted to state that for twelve Tulips a 1st Prize was awarded to Messrs. Cutbush, as well as to Mr. Wm. Paul.

ODAMS'S BLOOD MANURE for CORN.
ODAMS'S BLOOD MANURE for ROOTS.
ODAMS'S SUPERPHOSPHATE of LIME.

MANUFACTURED BY THE PATENT

NITRO-PHOSPHATE or BLOOD MANURE COMPANY (LIMITED). Consisting of TENANT FARMERS, occupying upwards of 30,000 acres of land.

Chairman: JOHN CLAYDEN, Littlebury, Essex.
Managing Director: JAMES ODAMS.

Particulars of these Standard Manures may be obtained at the Offices.

C. T. MACADAM, Secretary, or of the local Agents.

Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow, Essex.

LAWES'S MANURES.

The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per Ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES ..	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American and other Cakes at market prices.

Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

THE LONDON MANURE COMPANY have now ready in fine condition—

DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots.
URATE,
MANGOLD MANURE, &c., &c.

They also continue to supply GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.

Works, Plough Wharf, Isle of Dogs.

Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE, Address 89, Seed Market, Mark Lane: or Basingstoke.

Samples and prices on application.

CARTER'S FARMER'S VADE-MECUM.

WHEELER'S LITTLE BOOK on SEEDS.

TURNIP, MANGEL WURZEL, and AGRICULTURAL SEEDS.—The undersigned offer as above, of first-class selected Stocks and prime Samples, crop 1863, at lowest prices. Terms on application.

JAMES FAIRHEAD & SON, Seed Growers and Merchants, 7, Borough Market, London, S.

N.B. Our LEWISHAM SWEDE again obtained First Prizes at several Root Shows this last season; one report states of them: "These Turnips were the admiration of all who saw them, being also a very even crop, although some bulbs were of immense size."

PHOSPHO GUANO.

Company's Trade Mark.

Contractors' Trade Mark.

THE PHOSPHO GUANO, in its natural state, is found on trap-rock islets within the tropics. It was discovered in 1854; and its existence was made known in August, 1856, by Dr. VOELCKER, who read a paper at the Cheltenham meeting of the British Association for the Advancement of Science, "On the Remarkable Composition of a New Variety of Guano, called Columbian or Maracaibo Guano," pointing out its peculiar fitness as the base of a highly concentrated phosphatic manure.

Its valuable and peculiar qualities immediately attracted the attention of the leading Agricultural Chemists, who pronounced it at once to be greatly superior to all other Guanos as a manurial agent. The result of careful experiments in the field having fully established this superiority, the consumption has increased year by year; and at the close of the seventh season, 1863, it has attained a position second only in consumption to that of Peruvian Guano.

The Baron LIEBIG, in the course of his investigations, discovered potash in the raw Guano, a discovery since confirmed by Dr. VOELCKER and other Chemists. To the presence of this substance (which is not found in any mineral phosphate) is attributable, in some degree, the great superiority of the PHOSPHO GUANO when compared with other phosphatic manures made from coprolites, apatite, Sombrero Guano, &c.

PHOSPHO GUANO contains in its natural state nearly double the quantity of phosphoric acid found in bones and other substances from which Superphosphates are prepared; and LIEBIG states that by using PHOSPHO GUANO, the farmer conveys to his field 26 per cent. more phosphoric acid than by a mixture of equal parts of Peruvian Guano and Superphosphate of Lime; while "the advantage for the improved quality of the soil appears still more in favour of the PHOSPHO GUANO, if the quantity of soluble phosphoric acid is taken into consideration."

One of the most important advantages of the PHOSPHO GUANO is its uniform composition, and in this particular it is equalled by no other manure; for with scarcely an exception, they all vary greatly in different samples, even when drawn from a comparatively small bulk.

All Chemists of standing have ceased to place a money value on manures submitted by them to analysis, as tending to lead to erroneous conclusions, owing to the disingenuous manner in which such values are paraded before the public eye by dealers; but for the information of those farmers who still have faith in this test, the money value of the PHOSPHO GUANO, calculated by the data hitherto in use, is, according to the mean average of Dr. VOELCKER'S analyses, 13*l*. 18*s*. 2*d*. per ton; and of Baron LIEBIG'S analyses, 14*l*. 18*s*. 4*d*. per ton.

Peruvian Guano and PHOSPHO GUANO are respectively the representatives, in the highest degree, of the two most important manurial substances, ammonia and phosphoric acid. In Peruvian Guano there is 13.61 per cent. of nitrogen, yielding 7.0 of actual ammonia and 10.0 latent—and the latent, in the opinion of Dr. VOELCKER, is as available or nearly so as the actual ammonia—together with 3.0 per cent. phosphoric acid in soluble state. In PHOSPHO GUANO there are 18.027 per cent. of phosphoric acid in soluble state, and 3.50 per cent. actual ammonia.

As Peruvian Guano is acknowledged to be a cheap source of ammonia, so likewise PHOSPHO GUANO must be considered as a cheap source of phosphoric acid—much to be preferred to bones, superphosphates, coprolites, apatite, Sombrero and other inferior Guanos; while the proportion of 3.50 per cent. of actual ammonia constitutes it the best-balanced manure in the market.

If the results of practical experience were required to recommend the PHOSPHO GUANO, testimonials from many of the most eminent Agriculturists in the kingdom could be adduced; but the reader of this advertisement is particularly referred to the most recent of these, published in the last number of the *Quarterly Journal of Agriculture* (Jan. 1864), by Mr. HENRY STEPHENS, author of the "Book of the Farm," detailing the experiments made by the MARQUIS OF TWEEDDALE, with their successful results.

Pamphlets, containing a full description of the PHOSPHO GUANO, its History, Nature, Properties, &c., may be obtained on application.

PRICES AND TERMS.

The Cash Prices, including the cost of bags, Carriage Free at any railway station or shipping port in the kingdom, are as follows:—

For 10 tons and upwards, £11 10s. per ton. | For smaller quantities, £11 15s. per ton.

For full cargoes, direct to any port, special rates will be quoted.

CREDIT RATES.—Should the Consumer require credit, the price is increased at the rate of 2*s*. per ton per month.

To prevent fraud, all casks and bags are branded with the PHOSPHO GUANO COMPANY'S Trade Mark, as well as that of the Contractors, copies of which appear at the head of this advertisement.

There are Authorized Agents appointed for the sale of PHOSPHO GUANO in all the principal towns and villages in the United Kingdom; but where any difficulty exists in procuring supplies, orders may be sent direct to

PETER LAWSON & SON,
GEORGE IV. BRIDGE, EDINBURGH; or, 28, KING ST., CHEAPSIDE, LONDON, E.C.

PETER LAWSON AND SON, *Contractors.*
WILLIAM DIXON AND CO., *General Agents.*
GEORGE SEAGRAVE AND CO., *Brokers.*

Present Prices of Farm Seeds.

THE NEW FARM SEEDS are NOW READY, at Reduced Prices.

PRICED LISTS may be had, Post free, from SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Two Hundred and Fifty Guineas in Ten Prizes.

FOR FIVE YEARS SUCCESSIVELY HIS LATE ROYAL HIGHNESS THE PRINCE CONSORT'S PRIZE CUPS HAVE BEEN AWARDED TO

SUTTON'S CHAMPION SWEDES at the Royal East Berks and South Bucks Agricultural Societies.

New Seed now ready, 9*d*. per lb., or cheaper by the bushel carriage free.

Royal Berkshire Seed Establishment, Reading.

Early Sheep Feed.

SUTTON'S IMPROVED ITALIAN RYE-GRASS.—At the MEETING of the ROYAL AGRICULTURAL SOCIETY on the 16th March, in a LECTURE delivered by ALFRED HUGHES, Esq., of Thorness, Isle of Wight, as reported in the *Bell's Weekly Messenger* and the *Mark Lane Express*, Mr. Hughes says:

"I always reserve a portion of Oat Land to lay down with SUTTON'S Improved Italian Rye-grass, the most reliable Plant I have come across for some years for ewes and lambs in the spring. When I tell you that I put it in in the spring and dressed it after harvest with guano, and that in the autumn when my sheep fed it off it was up to their knees, and that I fed it off again this spring with ewes and lambs, I think you will agree that it is a crop of very great value. This Italian Rye-grass, which is sold by SUTTON, of Reading, is a most astonishing vigorous plant; indeed I never saw anything to equal it in the course of my experience."

From JOHN BALDWIN, Esq., *Luddington, April* 11, 1859.

"It is certainly delightful to witness the sheep up to their knees in your beautiful Italian Rye-grass."

From FREDERICK H. HALLETT, Esq., *The Manor House, Brighton.*

"I mowed some of your Italian Rye-grass at Christmas, 1856; again April 12, 1857; three times since in same year, and am mowing it again now, March 15, 1858. The cut on April 12 was four feet high, and a perfect mass of grass."

SUTTON & SONS have a fine stock at present of their Improved Italian Rye-grass, which is a very different and superior article to much that is sold as Italian Rye-grass. Present price 6*s*. 6*d*. per bushel, carriage free in quantities of 8 bushels and upwards.

Quantity required per acre if sown alone, 3 bushels.

Royal Berkshire Seed Establishment, Reading.

Agricultural Seeds Carriage Free.

THE LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, London, W.

See GENERAL FARM SEED DIRECTORY, now ready.

MIXTURES of GRASSES to suit any soil, 20*s*. to 30*s*. per acre (with Clovers).
RED, WHITE, and COW CLOVERS, 6*d*. to 10*d*. per lb.
ALSIKE CLOVER, fine sample, 80*s*. per cwt.
SWEDISH TURNIPS, 8*d*. to 1*s*. per lb.
COMMON DO. 8*d*. to 9*d*. per lb.
MANGEL WURZEL, in varieties, 6*d*. per lb.
WHITE BELGIAN CARROT, 1*s*. per lb.
YELLOW BELGIAN CARROT, 1*s*. per lb.
Large DRUMHEAD CABBAGE, 2*s*. per lb.
CATTLE PARSNIP, 1*s*. per lb.

All other Agricultural Seeds, at moderate prices.

Address, LONDON SEED COMPANY (Limited), 68, Welbeck Street, Cavendish Square, London, W.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.

MEETING at NEWCASTLE-ON-TYNE, 1864.

STOCK and IMPLEMENT PRIZE SHEETS are now ready, and will be forwarded on application to

H. HALL DARE, Secretary.

12, Hanover Square, London, W.

The Agricultural Gazette.

SATURDAY, APRIL 9, 1864.

WE have to announce a new green crop, yielding 40 tons per acre of a food especially adapted for milch cows, as, being void of all aromatic flavour, it communicates none to milk. The Cattle Melon, a sort of Gourd, grown like Mangel Wurzel, but at wider intervals, appears in Mr. BLUNDELL'S hands to have furnished a solid and substantial food, good for fattening bullocks, as well as for cows, and sheep, and pigs. Dr. VOELCKER'S report of its composition is favourable. And there is every reason to recommend our readers to give it a trial. The following is Mr. BLUNDELL'S account of it:—

"This variety of the Gourd tribe seems to have been hitherto overlooked, and not considered as adapted for cattle-feeding. My attention, however, was called to it a few years ago by a friend of mine in America in the State of Indiana, who grows them extensively for feeding his cattle, and believes that a much larger and heavier produce of them per acre can be obtained for cattle feeding than of any known vegetable production used for that purpose. I believe that ideas have prevailed in this country that our climate in the open air was unfavourable to their production, and indeed hitherto they have been usually grown for

fancy purposes by the aid of artificial heat and large quantities of manure, in which case most of the varieties I have noticed when thus treated are very hollow and worthless for feeding animals. Not so however with the varieties as selected and grown by myself for some years past; for when cultivated in the open air with a moderate amount of manure (in fact the same quantity as required for other vegetable produce in field culture) they are very solid and weighty, and possess considerable feeding value (equal to the common White Turnip), and are especially adapted for the feeding of Milch cows at the time of year when Grass is usually short and scarce, and before Turnips, &c., are ripe and fit for feeding in the months of August, September, and October. During the past season I had fed the milch cows with them, and from the circumstance of the fruit being so very agreeable, and so completely void of any peculiar flavour like Turnips, and most other vegetable produce, it does not affect the flavour of the butter injuriously; but on the contrary, I have never made butter, or tasted any made from cows fed on vegetables or roots, equal in quality to that made when the animals have been fed on the Cattle Melon. The cultivation may be carried out upon land usually appropriated to root culture, and particularly in the southern and eastern counties; they will flourish and produce very large crops per acre under ordinary culture such as may be required for Mangel Wurzel, Swedes, Carrots, &c., which the following experiment will prove:—

"On my own farm at Bursledon, near Southampton, a field prepared for Mangel as usual, the land being sandy loam on a brick earth, was ridged 2 feet apart, manured with 20 tons of box-dung and 1 cwt. Peruvian guano per acre, Mangel seed dibbled on the ridge, May 15. A ridge 4 feet wide, extending the whole length of the field, was dibbled May 15, with Cattle Melon seed, and the same quantity of manure applied as for the like space of Mangel. The crop of Melons was removed on the 28th September at the rate of 40 tons per acre, there being 37 fruit per pole, weighing 560 lbs., and the Yellow Globe Mangel crop removed on the 3d of November at the rate of 22 tons per acre.

"The expenses attending the cultivation of each crop were exactly the same. The Melon plants being 4 feet apart give ample space either for the plough or cultivator, and the growth of the plant is so slow in the early stage that the cultivation may be continued for five weeks after dibbling the seed. When the plants begin to spread, the growth is so rapid that all the land is covered with foliage in about 17 or 18 days, and at the end of five weeks after the blossom the fruit will weigh 30 lbs. and upwards.

"Having for two seasons fed my fatting bullocks upon the Melon, and the animals having fattened beyond my expectation, yet I wished to know the feeding value by analysis, and for that purpose forwarded to Dr. VOELCKER part of a fruit which weighed 16 lb.

"COMPOSITION OF CATTLE MELON.

"*First General Composition.*

Water	92.080
Organic matters	7.350
Mineral matters (ash)	.620
	100.000

"*Second Detailed Composition.*

Water	92.030
† Soluble Albuminous Compounds	.619
* Insoluble Albuminous Compounds	.156
Sugar and Mucilage	4.661
Woody Fibre (crude)	1.914
Soluble Mineral Matters	.540
Insoluble Mineral Matters	.080
	100.000
† Containing Nitrogen	.099
* Ditto Ditto.	.025
Total Nitrogen	.124
Equal to Albuminous Compounds (flesh-forming matters	.775

"My conclusions are as follow:—The Cattle Melon is now known to possess valuable feeding properties, and is readily eaten by cattle, sheep, and pigs. It is easy of cultivation, exhausts the land less than any root crop, being less time in the ground, and deriving so much nutriment from the atmosphere through the large and luxuriant foliage, it is more certain to plant than root crops, having fewer enemies, and may be cultivated upon all soils suitable for root crops."

SEVERAL important Short-horn sales take place during the next fortnight. On Wednesday next (April 13) Mr. STRAFFORD will dispose of Mr. ROBINSON'S herd at Clifton Pastures, near Olney. On the following day he sells the herd of the late Mr. LAWFORD at Southcote, Leighton Buzzard, and on the Thursday of the following week the Short-horn herd of the Hon. H. NOEL HILL, at Cronkhill, near Shrewsbury, will be sold.

The very large number of pure bred stock which have been and are to be thus distributed, does not seem to satiate the demand; and nothing is more remarkable than the very high prices which really good stock continues to command. A herd of 120 head of all ages, averaging 40 guineas immediately after the disposal of another which averaged close on 130*l.* apiece, proves what a large demand exists. And how different are the circumstances from those of 30 or 40 years ago, when, as we read in a contemporary, a well-bred herd of 28 cows, 8 heifers, and 2 bulls made less than 15*l.* apiece. "BORDERER, 3 years old, was then bought by Mr. Fox, of St. Bees, for 15*l.*; and Mr. Fox's son bought the last bull in the Towneley list the other day, a calf 33 days old, for 74*l.* 11*s.*"—"This speaks volumes," says Mr. DREWRY, writing from the neighbourhood of the earlier sale, "for the rise in value of Short-horns during the last 36 years."

The sale next Wednesday of Mr. ROBINSON'S herd, will, we doubt not, illustrate these remarks. The stock comprises 29 cows, 26 heifers and heifer calves, and 14 bulls and bull calves. There are 13 descendants from *Foggathorpe*, a cow purchased by Mr. BATES, and the origin of a small tribe which at his sale averaged about 50*l.* apiece. It was from *Jemima*, a daughter of *Foggathorpe*, bought a calf for 105*l.* at the Castle Howard sale, that her family at Clifton Pastures has descended. There are seven descendants of the celebrated cow *Sylph*, by SIR WALTER, including several direct descendants from Mr. ADKINS' *Charmer*, which will no doubt realise long prices. Several *Gwynnes*, descendants of the celebrated cow *Princess*, by FAVOURITE; and others descended from cows of Fawsley, Wiseton, and Warlaby origin. And on these and their descendants first-class bulls have for many years been used, "containing the purest blood of Kirklevington and Warlaby; among the former may be mentioned Short Tail (2621), Third Duke of Oxford (9047), and Second Duke of Thorndale (17,748); and of the latter will be found Highthorn (13,028), British Prince (14,197), and Duke of Leinster (17,724), whilst in May Duke (13,320), these two celebrated tribes are united, and the bulls Second Duke of Airdrie (19,600), and Grand Duke 5th (19,875), of the same sort are now being used. The animals, which will be sold without any reserve, are in fine health and condition, and their dispersion affords an excellent opportunity to purchasers of first-class stock."

Clifton Pastures is nine miles from Wolverton, 12 from Bletchley, and 10 from Bedford. These are the nearest railway stations.

MANY arguments, advanced with much earnestness and eloquence, never suffer so much as when real statistics are brought to bear on them; but in all probability there are few articles that have so little to fear and so much to gain by a thorough ventilation as poultry. Could the number of fowls and chickens consumed in the metropolis during the year be mentioned, it would astonish many, and to these we have to add turkeys, geese, ducks, pigeons, &c.; and then comes a startling item in the shape of eggs, both English and imported. The "Quarterly Review," writing many years ago on the Commissariat Supply of London, declared the following quantities of birds, hares, and rabbits, as the annual consumption of London:—"Fowls, 2,000,000; ducks, 350,000; geese, 100,000; wild ducks, 200,000; turkeys, 104,000; pigeons, 400,000; grouse, 100,000; partridges, 125,000; pheasants, 70,000; hares, 100,000; rabbits, 1,300,000. But these numbers would not now fairly represent the quantities of the different varieties of birds brought into London for consumption. Since the time when they were published, railroads have penetrated into districts where they were never expected, and have afforded the means of sending goods to London easily. Steamers and coasting vessels bring tons weight of this sort of produce from France, Belgium, and Holland, and yet the demand increases. So profitable is the sending of poultry to London (from abroad), that even from Northern Prussia men are found anxious to send at very low rates, paying very heavy charges for the transport of their goods. Many deep thinking and clever men have long had an idea that poultry may be produced for market on a large scale at a cost that will ensure a fair profit. In America we read that the farmer takes it into fair consideration as part of his stock. In France the far-famed establishment of M. DE SORO has long enjoyed a European reputation. Not far behind was the poultry-yard of his Highness the Prince of TOUR AND TAXIS, whose stock numbered 3000 breeding hens. These large establishments have all, we are told, done well, and are not without their effect in England. Last spring there was a question raised as to the practicability of forming a Poultry Company, but whether it was carried out we know not. It is certain that the stone has been set rolling which will do much to develope our own resources in the production of poultry for consumption, and we may fairly hope to see it take a better position among the agriculturists of Great Britain, when they find at how trifling an outlay of money and time it may really be made to contribute its fair proportion to the farmer's income.

Mr. R. HAWARD, of Mells Hill, Halesworth, calls our attention to the relation in which the farmer stands to the income tax; and to an alteration of practice on the part of the Commissioners which will in many cases be an annoyance, if not a direct interference with justice. He says:—

Farmers have now the right of appealing against their assessment under Schedule B. in case they can prove that they had made no profits by their farming during the past year. As the great majority of farmers who keep correct accounts balance their accounts yearly to Michaelmas, when their tenancies commence and terminate, application was made to the Board of Inland Revenue for permission to produce the balance-sheets made up to Michaelmas, instead of to April as directed by the Act.

This privilege was conceded, and farmers have accordingly always possessed it from the date of Mr. HAWARD'S application to the present time. It has now, however, been withdrawn, as may be seen by the following letter, which Mr. HAWARD received a few days since.

17th March, 1864, Inland Revenue, Somerset House, London, W.C.

Sir,—The Board of Inland Revenue have had before them your further letter of the 7th inst., with reference to the requirement of the Commissioners for general purposes of the Income Tax Act for the Division of Blything, that you and the other Farmers in the Division, when appealing under the 3d section of the Act, 14 Vict. Cap. 12, with a view to obtain relief in regard to the Assessment under schedule B of the Act 5 and 6 Vict., cap. 35, should produce a balance sheet made up from April to April, instead of from Michaelmas to Michaelmas as heretofore.

In reply, I am directed to acquaint you that the Commissioners in the course they have taken are acting according to law, and that this Board has no power to interfere with their decision. I am, Sir, Your obedient servant, J. SARGENT.

The result of this decision will be that a great proportion of farmers will be hereafter prevented from appealing against their assessment under Schedule B.; and however adverse the seasons, and however unprofitable their business, the Act 14 & 15 Vict. cap. 12, which gives them this appeal, will be to them a dead letter. Mr. HAWARD adds:—"As far as I and many others are concerned, we shall never be able again to appeal, as as any account we could produce drawn from April to April would be made by cutting two years' accounts in half, and must necessarily be only approximate. When I have appealed, I have always carried such an account as I could verify upon oath, and I should decline presenting any other.

"The withdrawal of this privilege from the British farmer at the present moment is a most paltry and contemptible movement on the part of the Government, and I suppose is intended as a set-off against the presumed *advantages* we are to obtain by the new Bill, which will enable us to feed our cattle with malt that has paid no duty."

NOTES ON CELEBRATED SHORT-HORNS.

No. IV.

SIR THOMAS FAIRFAX.—The following additional criticism on this bull is taken from a letter by Mr. Bates to the *Farmers' Journal* of Nov. 25, 1844, in which he replies to the charge of a "Correspondent," that having expressed himself strongly against CRAMER by Sir THOMAS FAIRFAX, he had nevertheless refused to back his judgment by showing his own stock against that of Mr. Parkinson, the breeder of CRAMER. In his rejoinder he declares that he had always declined challenges, and had never given an opinion except for the good of those he spoke to. He added as follows:—

"If the parties, under the signature of 'Correspondent,' wish to have the demerits of the blood of 'Cramer,' I can furnish them with plenty, to the heart's content. In the room where this is written a breeder from the same blood I object to in this animal declared to me he had lost more than 10,000*l.* by breeding Short-horns, and he began with one of the best tribes of Short-horns then in existence, before Mr. Robert Colling went to Barmpton, and he was some years at Barmpton before he, and his brother Charles, began to breed Short-horns;

and the Short-horns at Barmpton, before Mr. R. Colling's day, were better than any he ever bred.

"Now this instance is not a solitary one, for two near neighbours of mine, when I lived at Halton Castle, in Northumberland, had the hardiest and best constitutioned stock of Short-horns, and they were two very large herds, and very prolific up to 1811, and the one lost all his calves but two, and from the same blood as 'Cramer,' and it was for two years in succession. The other breeder's Short-horns all lived, but the former always said he was the greatest gainer of the two, for the latter person's stock became the most delicate, distbriving cattle, that I ever saw, and continued so for above 10 years, till they at last, many of them, died out, or would have done so, had they not been slaughtered, and till this cross no stock could be more hardy than they were, and such has been the case wherever I have known that blood enter any well-descended herd of Short-horns. With inferior coarse ill-bred cattle such may go on; and many breeders, having this same blood, have resorted to coarse ill bred Short-horned cattle to try to restore their delicate constitutions—and this has filled the country with the very worst breed of cattle, called improved Short-horns, which now so generally prevails, and has brought—justly—a discredit upon Short-horns; for it is such as these that have ruined many breeders, and destroyed many a valuable herd; and I might fill all the columns of your Paper by reciting instances—such as the blood of 'Cramer on his dam's side. I shall now state my objections to the sire of "Cramer," Sir Thomas Fairfax (5196) When I saw at Mr. Whittaker's his bull, called Fairfax (1023), the predecessor of Sir Thomas Fairfax. I asked him if he had ever used that bull, and he clenched his fist, turned round to me, and with great vehemence said, 'Do you think I would use a bull of a tribe that do not give a drop of milk; I have never used him, nor ever will to my herd of Short-horns?' Mr. Whittaker further told me that the great grand-dam of Fairfax bull was a cow between a blue and a black colour, that she was bought for him by a jobber, who said that he had bought her at Stockton, and Mr. Whittaker desired me at different times to try to make out her pedigree, if she had one. I made many inquiries, for many years, but no person ever heard of this blue-black cow: I was repeatedly told that she could not have been a Short-horn, for they never knew a Short-horn of that colour. Let Mr. Whittaker deny these facts if he dare!

"On Sir Thomas Fairfax being knocked down to Mr. Parkinson at a public sale, he said afterwards to me. 'You don't approve of this blood I know,' and I replied, 'Certainly not;" and when Mr. Booth told me he had sold his half of Sir Thomas Fairfax to Mr. Parkinson, sen., I congratulated him thereon; he was not offended no more than Mr. Parkinson sen.; and they must thank 'Correspondent' in your Journal for this disclosure I now make."

NITRATE OF SODA AND COMMON SALT.

We have ample evidence that in certain cases these salts pay well by the increased produce. In other cases they had failed to be remunerative. To Baron Liebig we are indebted for a clear explanation of this apparent phenomenon.

In his profound work "On Modern Agriculture," page 63, "Solution of Earthy Phosphates," he says, "It is quite conclusive from these facts that water containing a very small quantity of common salt, nitrate of soda, or a salt of ammonia, acquires thereby the power (which alone it does not possess, or only in a slight degree) of dissolving phosphoric acid, in the form of earthy phosphates. These feeble solutions, therefore, react towards earthy phosphates like solutions of carbonic acid in water. * * * Direct experiments prove that a very dilute solution of the same salts take up phosphoric acid from a soil which contains earthy phosphates in excess, and that this dissolved acid is again given up by this solution to other portions of the soil which are not saturated with phosphoric acid."

Page 65, "Like the salts of ammonia, or a watery solution of carbonic acid produced by the decay of organic matter in manures, a solution of these salts, wherever they come in contact with spots containing accumulations of earthy phosphates not fixed by the soil, must become saturated with these phosphates, and thus convert them into a condition in which they can be diffused through the ground. If the earthy phosphates, when thus diffused in solution, come in contact with other portions of soil not yet saturated with these salts, those portions absorb and fix these earthy phosphates. * * * When we consider how much the fertilising effect of bone earth is increased by the greater solubility and capability of distribution in the soil communicated by the action of sulphuric acid, we cannot too highly estimate the significance of the properties, just described, of the salts of ammonia, chloride of sodium, and Chili saltpetre.

"The most abundant application of earthy phosphates in coarse powder can in its effects bear no comparison with a much smaller quantity which, in an infinite state of division, is dispersed through every portion of soil.

"A rootlet requires at the spot where it touches the soil a most minute amount of food; but it is necessary to its functions and its very existence that this minimum be found exactly at this spot; for if the food of plants be not soluble in water, then is any excess at any other spot as valueless to the function of nutrition as if it did not exist in the soil. Now the salts of which we have been speaking possess the property of carrying these elements of food from the spot in which they exist in superabundance to others in which there is a deficiency; and even though their elements contributed in no way directly to the process of nutrition, yet these salts must nevertheless exercise a marked influence on the increase of produce. * * * We can now understand why these salts exercise a favourable action in cultivation only on certain soils, and why on a second or third application of them the same effect is only partially, or not at all reproduced."

Every word of this valuable chapter should be read by those who desire to know the importance of the infinite sub-divisibility and solution of phosphate of lime, These remarks suggest the propriety of mixing bone dust with our farm-yard dung where carbonic acid and ammonia will act in dissolving it.

It is quite clear that where there is no bone earth in the soil, we shall get no result from applying nitrate of soda or common salt, and it is equally certain that the continued application of these salts will ultimately exhaust the most fertile soil.

Liebig says (page 83), "If by a more thorough mechanical preparation of the ground, or by chemical means, such as Chili saltpetre, common salt, and salts of ammonia, the action of the available mineral food be accelerated, the field will perhaps yield in 50 years as much grain and straw as it would have done in 100 years without these means, and in half the time it would be exhausted for the cultivation of Wheat."

I am induced to enlarge upon this subject to put landlords upon their guard against permitting cereals to be grown every year in succession by such means. I know of one instance of 200 acres where the whole of the farm has been cropped for eight or nine years with only cereal crops, dressed with 25*s.* worth of nitrate of soda and no other manure. The crops have been ample; the whole with their straw have been sold and carried off the farm without any apparent exhaustion. This process is, of course, most remunerative, as no cattle are required.

The system is spreading, and I hear of 2000 to 3000 acres being hired by one person with unrestricted leave as to cropping. On applying to Baron Liebig for his opinion, he replies to me under date March 14. "The theory of manuring is very little understood in England, and this by the so-called practical teaching of Mr. Lawes and his associate.

"The best advice you could give to the respectable but very ignorant gentleman who grows Wheat every year merely by manuring with nitrate of soda is, to continue if he wants a proof of the truth of my theory. In a few years he will be aware that he has perfectly ruined his fields, very rich in earthy phosphates, which by the means of the nitrate are simply dissolved and diffused, as you observe yourself in your letter."

The Cheshire cheese pastures give unmistakeable evidence of the evils of exhausting the phosphates, and of the advantage of restoring them by boning. *J. J. Mechi, March*, 1864.

A LIFETIME ON THE COTSWOLDS.

[The following paper was read by Mr. J. Chalmers Morton, at the late monthly meeting of the Kingscote Farmers' Club.]

The materials from which the following paper has been prepared are a set of annual diaries kept between 1766 and 1793 by Mr. John Smith, then of Bowldown and Lasbro' in this neighbourhood; copies of several letters written by the same Mr. John Smith about 80 years ago; and a most elaborate set of annual records of the produce of the Didmarton and Oldbury farms, from 1774 down to the present time, kept by successive tenants of those farms. It is to Mr. Rich, of Didmarton, that I am indebted for the use of all these documents. The series together form a most complete agricultural history—descriptive, we may suppose, with more or less accuracy, of a whole district. Add to them Mr. Rudge's report of the agriculture of Gloucestershire, published in 1813; Mr. Bravender's report of Gloucestershire, published in the Journal of the Agricultural Society in 1852; and the very explicit and instructive comparison of Cotswold and Hampshire farming by Mr. Drew, read last year before this Club; and we have almost unequalled means of arriving, certainly at a very confident opinion—indeed I might almost say at an exact knowledge of the progress which has during all these years been exhibited in Cotswold farming. You will understand, then, that although I am glad to be able to lighten my story by a number of personal memoranda relating probably to individuals known either personally or by reputation to some of the gentlemen present, yet it is not intended to attempt any single biography. My "Lifetime on the Cotswolds" will refer generally to the period of the past 90 or 100 years, and it is intended not so much to bring out personal character, as to establish the fact of general agricultural progress.

Gentlemen, it will I believe be generally felt that it is impossible for any one to speak or write on any agricultural subject with any local serviceableness or utility if he be not himself personally acquainted with the circumstances out of which the farm practice of the locality has arisen. Although I have known some farms on the Cotswolds for more than 20 years, and have long had a general acquaintance with the district, yet I cannot pretend to anything like that detailed agricultural knowledge of the Cotswold district which only the tenant of a Cotswold farm after many years acquires, and therefore it may at once be said to me:—"You have no right to be talking to a Cotswold Farmers' Club."

There are however two ways in which an agricultural discussion may be usefully opened by even an entire stranger to the district. He may omit from his discussion those local circumstances which give a local colouring to farm management, and referring only to the general laws of Nature which are in operation everywhere he may confine himself to the leading truths regarding the soil, the rain, the air and the light—regarding the seed and the future plant, regarding the breeding, rearing, feeding of the animal—truths which constitute the theory of agriculture, which are in operation everywhere, and the force of which *makes* the success of the good farmer, who, whether he knows it or not, is using and directing them; the force of which, too, *mars* the operations of the bad farmer, who, whether he knows it or not, is opposing them, fighting against them, and being inevitably beaten by them.

This is the way in which a man unacquainted with a locality, not even possessed of knowledge by experience of farm practice anywhere, but taking his knowledge of agriculture at second-hand, may nevertheless usefully lead an agricultural discussion. It is in this way that Dr. Voelcker, Professor Way, Liebig, and scientific men in general, are able to hold confident and well-founded opinions on the policy of this, that, and the other point of farm management, and are able to throw good and useful light on farm practice generally.

And there is another way in which an outsider not having local knowledge may usefully lead the discussion at a Farmers' Club, and that is by simply making himself the mouthpiece of those who have this knowledge.

It is to some extent in both of these ways that I have ventured to accept the invitation of your Secretary, and as a Gloucestershire man take my turn in opening a discussion before this the leading Gloucestershire Farmers' Club.

What I have to do is in the first place to call attention to such biographical details as will I believe interest any one of this district whose family has been long resident in it. They will throw light on the character of the witnesses whose evidence I have to bring before you. In the second place I have to collect this evidence into such a form as will bring out the fact of the extraordinary agricultural progress which this Cotswold district has made within the present century—a progress which I believe to be unexcelled anywhere. In the third place I wish to contrast the facts which I shall have proved with the confident assertions on one side of certain scientific men regarding the inevitable failure and decadence of English strength, and in fact of England, through its faulty agriculture; and on the other side with the equally confident assertions of some of Liebig's opponents regarding the necessity of preserving the so-called vegetable mould on which they believe fertility to depend. And, lastly, I wish to bring the whole discussion to bear on the present condition of the dairy farms of the Vale district of Gloucestershire, which have generally, I believe, been as stationary in their produce as the hill farms have been progressive.

I. Biographical.

I am certain that you will agree with me that the position of any district on the agricultural scale—whether it be high or low, on a comparison with other parts of the country—does not depend alone upon the quantity of produce which the cultivators of that district extract from it. It does not even depend alone upon the quantity of food per acre which is extracted from it, as compared with the natural fertility of the land. The *personal character* for intelligence and worth of the tenant farmers of the district has a great deal to do with the reputation which, agriculturally and professionally, any district will command. And nothing has appeared to me on reading the papers which Mr. Rich has been good enough to give me—not even the evidence which they give of the increased quantity of produce which is now obtained from this district, nor even that of the large produce of food per acre which is extracted from it in spite of a low natural fertility—nothing has appeared to me in these papers more noteworthy and interesting than the evidence which they give of the intelligence, the neighbourliness, the mutual helpfulness, and the shrewd individuality of character which in the case of Mr. John Smith and his friends, and in the case of his immediate successors the late Mr. Stiles Rich and his friends, these papers so strikingly illustrate. It may be a hard matter in a few minutes to lay all these sufficiently before you—but the impression which these papers have made on me in that respect, is as definite and clear as possible.

The late Mr. John Smith was, I gather from them, born in 1722, in the neighbourhood of Chipping Norton. In 1744, his father and he came to Bowldown Farm. He had when just of age then written out for private use, as he says, what he repeatedly calls his system of farm management, which in the letters of his which I have seen addressed to his friend Major Ogilvie, of Montrose, he strongly advocates, and which was adopted by the late Mr. Stiles Rich, of Didmarton, who expressly says that he abandons the plan he had hitherto followed for that of Mr. John Smith, of Bowldown. It consisted essentially in the six-course rotation of crops, an extension of the ordinary four-course by keeping the seeds down a second year, and by taking Oats after Wheat. Mr. Smith returned to the neighbourhood of Chipping Norton about 1790, and I presume did not live many years afterwards. He was a large hearted and intelligent man. In his annual memorandum books, containing an entry for every day of the year (every day of his life), the private domestic and public character of the man is plainly to be read.

A constant attendant on divine worship, the text of every sermon that every week he heard is duly recorded. A most social and warm-hearted friend—every week records hospitable and friendly meetings with his

neighbours at his own home and at theirs. And journeyings, consultations, labours in behalf of friends either needing help or else requiring guidance and advice, are perpetually mentioned. Almost everybody, male or female, is mentioned by the Christian name—and many a good picture is unconsciously drawn of the style and character of the grandfathers of persons, both squires and tenant farmers, whose names belonging to this district I have known all my days.

Mr. Smith was a resolute, confident, and altogether vigorous character, with not only a warm heart for a friend, but with powers of fight and opposition too when the exercise of them was needed.

He was a public-spirited and travelled man. His Journals record the public events of the time, and describe also his annual excursions to distant counties, to Hants, Lincoln, Nottingham, Somerset, &c.

In his letters he declares his want of education, and with characteristic shrewdness he adds that he does not as a farmer particularly lament it. Yet there is evidence enough that he was a remarkably well educated man. His Journals, with their copious daily entries, are written in good and vigorous English—he is never guilty of false spelling—never ungrammatical, nor even slipshod and careless in his style. He speaks in the very way, using the same colloquial phrases, in which a good hearty well-educated Englishman would speak and write at present. And whether he is enjoying the society of his friends, relating the incidents of village life, recording angry dealings with an impracticable neighbour, describing what he sees upon his journeys, or writing down his impression of what he has been reading—he speaks and writes just as a first-rate sort of fellow would feel and express his feelings at the present day. I read entries about "this most glorious rain" which has succeeded the drought—about a visit to Portsmouth, and to a mansion he had seen which was "more like the work of a God than of a man," —about his Majesty's first-rater, the Britannia, being the "grandest sight in the world." One sees him perpetually in a room full of friends with the most hospitable spread and hearty talk with which he entertained them. And withal, on one or two occasions you read, from month to month, and week to week, entries showing the rise, growth, and at length the happy termination of a quarrel with a neighbour. His anger sometimes broke out unrestrainedly, and I come on one occasion on the following entry. "This day kicked J—— B—— and gave him two slaps." The whole journal is a genuine picture of country life. His earlier days are full of business and occasional sport, and journeyings to and fro—then again, as he gets on in life, his references are to the society, the characters and the deaths of friends. He begins to record gifts of venison, Pines, Cucumbers, old wine and good living generally, and latterly he comes to recipes for this, that, and the other medicine, castor oil, pills, and so forth, until at length he disappears. Throughout all, his reverence for the Sabbath day and for divine service, and for the Bible, are all pleasantly characteristic. I read such an entry as the following. He says:—

"I don't find the word *blight* in any part of the Bible, but the words *blast* and *mildew* occur in one or two places, from which I think the blight in corn is rather mismanagement on the part of the farmer than from the immediate hand of GOD."

This, whatever may be thought of his biblical criticism, does I think illustrate the originality and individuality of the man. His letters still more clearly show this. I have two of his letters to Major Ogilvie. In one he recommends his friend to adopt six-field course of rotation and speaks of the advantages of paring and burning. He says:—

"When Grass-land is broken up in the common way, with horse-ploughs, the sward being a vegetable, and mixing with the earth, never fails producing fermentation, which throws the corn out of the ground, for the earth being mother to what she brings forth herself, and only step-mother to what we plant, she never fails to revenge the deed, sooner or later, unless the vegetable part is destroyed by fire!"

The following is the special advice given to his friend:—

"Never farm at too great an expense, but sit down and count the cost, for nothing can be an improvement unless it puts some money in the farmer's pocket. Industry, with a common share of understanding, will do more to make a man comfortable than all the high-flying notions in agriculture. In servants and workmen's idleness is a great tax; therefore I have always done with as few as possible!"

He concludes—

"The thing is to farm well at the least expense possible, and bring the annual produce of your estate to market as good as you can. I believe it not impossible to make you a good farmer, for that tyrant 'prejudice' can have no footing in your breast. Yes! and I will undertake to make 20 good farmers before I can mend one bad one."

Mr. Smith's second letter in my possession was written three years later. It is a similar illustration with the former one of the shrewd and quaint character of the man. He begins:—

"I never knew a learned man who was a good farmer, and, therefore, I never lamented the want of an education. The time of life to make men scholars is the time for observation in the farming line, and it rarely happens that a man can be a proficient in that business unless he is trained to it from his youth. I would take a man that can neither read nor write to make a farmer sooner than I would the most learned man. The former has no knowledge but what comes from Nature and of good natural parts—the later prides himself upon his reading and education, by which he thinks of putting Nature out of its course, and so out-doing everybody."

There are in this second letter a number of very shrewd and clever remarks. He says:—

"It is not those that are possest with the greatest number of acres who have always the most sense; and what is still worse, they often employ those that have less. This is, and will be, an eternal bar to improvement. Several instances I know of, and I believe there are many others, where the tenants are shackled with covenants in their leases not to pare and burn. What a curst vexation must it be to an ingenious farmer, that perhaps has 10 times more sense than either his landlord or steward, not to be able to do what he knows to be a real improvement to the estate he occupies. For it is not the paring and burning that injures the soil, but the ill use made of it. The expense of paring and burning, I have shown in a former letter, is generally from 16*s.* to a guinea per acre; and an ignorant farmer thinks that as he has laid out a deal of money, he must as soon as possible reap the benefit, and sows the land three or four crops one after another without rest; thereby making the land in a much worse condition than when he burnt it. On the contrary, the landlord should oblige the tenant when he breaks up a piece of land to pare and burn for Turnips—after that Barley and Grass seeds—and let it go in the course of husbandry that I have recommended. By these means lands may be kept fresh and in good heart for a man's life, or to the end of time. On the contrary, by sowing too often, lands will become like a tired horse, you may whip and spur, but will not be able to get him on; but give him rest, and the horse will recover his vigour, and go on as well as ever. I am sure I have known that 5*l.* per acre, I may say 10*l.*, has been lost by breaking up old land without burning. The reason is plain, if people will but think; for the earth is mother to the sward, and if the land be first broke up with horse plows, the sward mixing with the earth will cause fermentation and rottenness in the particles, that they will not adhere, and vegetation will be interrupted till the land has been Turniped and Clovered, and has lain still two years at least."

Then he goes on to talk of the Georgics of Virgil. He says:—

"There is more sterling sense in the Georgies than in all the books I ever read upon agriculture. I am sure that Virgil was bred to a country life, otherwise he could not have known it so well. I never could read a single page in any other book before without being soured, because of the vast expense recommended in the management of lands, and generally said by the author to be an improvement. All expensive improvements will defeat themselves, unless it be draining of lands; and then people should be careful not to throw away their money. I have often wondered that our great men don't make agriculture a part of their pleasure—it would yield them more satisfaction than all the gaiety of life: for besides health to the body, it gives pleasure to the mind. If at any time whilst I was in business I could not tell what to do with myself by staying too long at home, I had nothing to do but to mount my horse, and all went well; and it was ten to one before I had rode a mile but I rose to a song. I say if gentlemen would but make the improvement of their estates a part of their pleasure, they would know how to value merit; and I believe none are more happy and healthy than those that contemplate the beauties of nature, for it generally adds cheerfulness and serenity to the mind, which many of those in high life are strangers to."

Well, gentlemen, though I fear I am occupying too much of our time with this account of Mr. Smith, I am sure you will agree with me that he deserves a much fuller biography if we could get at it.

Mr. Smith is succeeded in these papers by Mr. Stiles Rich, the uncle of the late Mr. Rich of Didmarton. And the mantle of the one seems to have fallen very much upon the other. The late Mr. Stiles Rich was in the habit of recording accurately the circumstances and produce of his farm. From 1774 down to the present time, the actual produce both total and per acre of Wheat, Barley, Oats, Peas, and other corn, of cows and sheep, and pigs upon that farm—the payments to landlord, parish, and labourer, are all recorded, and I don't know anywhere a more interesting agricultural history than is thus afforded. To the lessons which they teach us about the progress of agriculture on the Cotswolds I shall immediately refer. It is to the personal character of the men whom I call as witnesses that I am now referring.

We have in these papers a history of the early difficulties which Mr. Rich encountered—an account of the changes of management adopted, from dairying to sheep (both a breeding flock and a dry flock). There are references to the profits of ram selling—to the losses consequent on "the goggles" (brain disease) among his sheep—illustrations of the genuine honesty displayed in the way in which at a great personal loss he at length got rid of his diseased flock—illustrations, too, of the confidence, and as it proved, the trustworthy confidence with which he turned for advice to his "two worthy friends, Mr. Brooks of Wilsby and Mr. Brooks of Higham." All this in a very interesting manner displays both the character of the man and the character of the tenant farmers of that day in this neighbourhood. He says that when he first entered on the farm he was advised by Mr. Cornelius Robins to work the arable land on a 5-field course of husbandry, which he did for seven years or better. But when he found himself so awkwardly placed by his sheep losses, he "made the best observations in his power upon different methods of farming, and then found that the 6-field system which was practised by Mr. John Smith before he left Bowldown would make a better return" for his trouble than any other; and notwithstanding he had practised the 6-field system for 25 years since then, he had not as yet found any other method to beat it for poor Cotswold lands.

The proofs of progress which I shall by and by quote from the experience of this farm describe the increase of its fertility under the six-course system, for it has been ever since maintained upon this farm. And I suppose that these figures will therefore be at least equalled by those which should give the general increase of the district, which is more generally farmed, I understand from Mr. Drew's paper under the less severe cropping of the five or even of the four-course rotation.

Mr. Stiles Rich was, I gather from his papers, a man of great shrewdness, humour, and observation. There is a clever sketch among them, in which "Mr. Jack Ploughshare" has to answer before the Court on a charge by "Mr. Community-at-Large," that he has failed in his duty. Jack of course gets off with flying colours, and if the judge could have foreseen what he has since done in the way of meeting the wants of Mr. Community-at-Large, I doubt not that an action for malicious prosecution would have lain against the latter. There are also among these papers observations on threshing by machine or hand; on the relation between the live and dead weight of sheep; and calculations of cost concerning almost every agricultural operation. There is a long account of an attempt to introduce a number of Scotch tenants on the property of a late Earl of Suffolk—the former tenants being displaced by Scottish farmers, by whom much land was broken up and professedly improved, but after remaining some few years, so it is said, and paying scarcely any rent, they were nearly all ruined, and left their farms, which were relet to Englishmen. This was 50 years ago.

Mr. Stiles Rich was succeeded by his nephew the late Mr. E. W. Rich of Didmarton, and among these papers are many showing that he inherited the personal shrewdness and possessed the intelligence and public spirit of his predecessors. He was doubtless known to many gentlemen present, and it hardly becomes me therefore, with a much smaller acquaintance with him, to refer to his agricultural career and personal and professional character. I have always heard of him from my father and others as one of the leading and characteristic tenant farmers of the Cotswold country; and when, 24 years ago, I walked over several of the Cotswold farms for my personal instruction, I remember very well the friendly reception, and the wealth of agricultural information which I received from him.

I have now brought these personal references to the present time. And I doubt not that to you, long acquainted with the present generation of tenant farmers in this district, I have not been drawing any strange or unrecognisable picture, but that the same style and character of man exists in many instances—generally, indeed, upon these hills at present. To this I can to some extent bear personal testimony. And it is doubtless to this personal character and professional ability of the tenant farmer of the district, far more than to the natural circumstances of soil or climate, that the general agricultural progress which I have now to show that it has witnessed has been due.

(To be concluded next week.)

Home Correspondence.

The Summer of 1864.—I much wish that I and the *Gardeners' Chronicle* stood on better terms, and that the *Agricultural Gazette* more highly appreciated my endeavours to enlighten the agricultural and commercial community as to the probable general character of the approaching summer. I know that you and Sir J. Herschel, and perhaps some others, are of opinion that not in any particular can the coming weather be discerned for more than 48 hours in advance, even with the aid of the telegraph; and that any man must be mad who would alter his business arrangements in the slightest particular, on account of any special prediction of the general character of a coming summer. But I have addressed myself in a special manner to the mercantile community comprehended in the general term Mark Lane—from them, I know, I have obtained a hearing, and I have the full and unalterable purpose to convince that very capable and sane body of merchants, that there is a reasonable probability that my expressed views of a summer shall be correct, and that it shall not be unreasonable in them to alter their business arrangements in the slightest particular, in consequence of forecasts founded on my principles. With what other design could I write on the coming summer weather at all, always referring as I do, to its probable effects on the crops? I refer you back for consideration, to the published records and forecasts of the last four summers. Three at least of those summers and harvests were remarkable, and each in a diverse manner. I allude to 1860, 1862, 1863, and the leading features of each were exactly seized on in each forecast—and it at least was a curious incidence, if each were simply a lucky hit. What is there at this moment to show the least probability that the coming harvest shall be early, hastened by dryness, or that many crops may probably rather come short of an average than be in excess, like last year, from the operation of the same principle? The spring is quite backward, the land in beautiful order, and the seeding committed to a ground which seems and is full of strength. But, though I am not sure, I do certainly think that the summer will be too dry; and I think also, that if I am correct again, you will hardly be justified in repeating the cry "another lucky hit." If you do, you will perhaps allow at the same time that my luck is greater than yours. It is quite true that I can make nothing certain out of the general meteorological records of a long series of past years, so as to exemplify and in that way establish the principle of my own forecasting. But the records themselves are not perfect, and I could not really ascertain from them what summer inference I should have drawn from any particular equinox, in

the same way that I might have done had I witnessed it personally myself in a locality whose weather signs I was well acquainted with. You think my views are condemned because I seem to put them on a par with astro-meteorology. I have no reason to think, any more than you, that the planets have any sensible influence at all on our atmosphere, but neither do I consider that a courteous bearing to an opponent, whether he be an astro-meteorologist or any thing else, can have any sensible influence in lowering my views in the eyes of sensible people. *Thomas Du Boulay, Sandgate, April* 6

Slugs.—I think it well to inform you that slugs, wire-worm, snails, and the Turnip-fly can be entirely destroyed by using powdered glass, and the only place I know of where it can be had in large quantities is at the Phœnix Glass Bottle Works in Bristol. They grind and sift it ready for use. I have heard they have a house in London in Endell Street. Are you aware the slugs must be limed three times before you burn them, whereas one bit of glass does the thing. *R., a very Old Subscriber to your Gardeners' Chronicle.* P.S. If you find the glass kills your slugs as it does mine, perhaps you will write an article upon, and sign it R., as I am only a tenant farmer.

Vitality of the Dock.—So "Peter Dryland" has just crept out of his shell to tell us that he "sent a sketch of a common enemy found in a Wheat field a few days since. The complete inversion of the last year's position of the root has by no means injured its vitality. The roots still grow downwards and the leaves upwards, and had I not arrested its course a fine healthy Dock would have been the result." When he tells us that "Few cultivated plants would bear this antipodean position and grow," he proves that it is only just his nose that has had a peep at daylight. The question is what are "cultivated plants?" According to "Peter Dryland's" doctrine a Dock is, when the old roll over plough has "completely inverted its last year's position." Why, then, so is a Thistle. Yes, Thistles of various kinds, so are Crowfoot and Coltsfoot, and so are no end of other plants when rolled over by that same old plough. If "Peter Dryland" will give me his address I will supply him with a number of specimens. It is the old roll-over plough that is at fault, for had that Dock that we are now hearing about been cultivated out instead of turned down it would have died. *William Smith, Woolston, Bletchley Station, Bucks, March* 21.

Enormous Egg.—The egg I send herewith appears to be so extraordinary as to be worth notice. It is from a small half-bred Spanish fowl, and measures in girth 6½ inches and lengthwise 8 inches. Its weight is one quarter of a pound. *W. R. Perry, Crouch Hill, Hornsey.* [The egg reached us broken.]

Steam Plough Companies.—You gave a short account in your columns some three or four weeks ago of the signal success of the Wakefield Steam Plough Company. As there are several other societies just ready to start into life, but still hanging fire for want of a few more subscribers, would it not be worth while for you to communicate with the secretary of the above-named Company, requesting him to furnish you with all the details. If there is nothing special in the circumstances under which the Wakefield Company have flourished, why should not other parties do the same? If we could reckon on a dividend of 7½ per cent., with a large surplus, steam ploughing must become general. The points to be inquired into are: 1st, the nature of the soil and its geological character; 2d, the size of the fields; 3d, the number of acres ploughed in the year; 4th, the average depth of the cultivation; 5th, the kind of apparatus employed, and its cost, &c. Perhaps Mr. Fowler, who I think furnished the machinery, would help you; it would obviously be for his interest to do so. *Philo Vapor.* [Will Mr. C. Clay, of Wakefield, kindly respond to this appeal?]

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

Monthly Council: *Wednesday, April* 6.—Present: Lord Feversham, President, in the chair; Lord Walsingham, the Hon. A. H. Vernon, Sir J. J. B. Johnstone, Bart., M.P.; Sir E. C. Kerrison, Bart., M.P.; Sir A. K. Macdonald, Bart.; Sir Matthew White Ridley, Bart., M.P.; Sir J. V. Shelley, Bart., M.P.; Mr. Raymond Barker, Mr. Barthropp, Mr. Bowly, Mr. Bramston, M.P.; Mr. Cantrell, Col. Challoner, Mr. Claydon, Mr. Dent, M.P.; Mr. Druce, Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Holland, M.P.; Mr. Hutton, Mr. Jonas, Colonel Kingscote, M.P.; Mr. Lawes, Mr. Lawrence, Mr. Milward, Mr. Pain, Mr. Pope, Mr. Randell, Mr. Rigden, Mr. Shuttleworth, Mr. Robert Smith, Mr. Thompson, M.P.; Mr. Torr, Mr. Wallis, Mr. Wells, Professor Wilson, Mr. Frere, Professor Simonds, and Dr. Voelcker.

The following new members were elected:—

Allington, Henry, Little Barford, St. Neots]
Appleby, William, Smalburn, Longhorsley, Northumberland
Armstrong, Charles, Hawthorn Terrace, Newcastle-upon-Tyne
Ashwin, Henry, Guiting Power, Winchcombe
Ayton, J. Featherstone, Hindley, Stocksfield, Northumberland
Baker, Robert, Garnston, East Retford
Barrett, Alfred, Reading
Beale, Joseph, Boro' Fields, Walton, Burton-on-Trent
Berners, The Right Hon. Lady, Keythorpe Hall, Leicester
Bogg, Walter, Milborne Wick, Sherborne
Cholmondeley, Colonel the Hon. Thos. Grenville, Abbott's Moss, Northwich
Clarke, J. Goff, Brackley, Northampton
Collisson, William, Beverley
Coulman, John, Red House, Thorne
Cuningham, Captain, 3, Great Stanhope Street, W.
Davie, J. Thornton, Hepscott Red House, Morpeth
Davison, John, Tritlington, Morpeth
Dinning, Joseph, Langley Hill Top, Haydon Bridge
Doneraile, Viscount, Doneraile Court, Co. Cork
Donkin, Samuel, Bywell, Felton, Northumberland
Dunn, Wm. H., Inglewood, Hungerford
Fenwick, John C., Manor House, Riding Mill, Northumberland
Gambles, Herbert E., Nocton, Lincoln
Gamgee, Professor John, New Veterinary College, Edinburgh
Garbutt, Cornelius, Dunston Lodge, Gateshead
Gibbs, Philip H., Eckington, Worcester
Gilpin, James, Roseworth Villa, Newcastle-upon-Tyne
Gray, John C., King's Grange, Castle Douglas, N.B.
Halewood, Edward, Great Crosby, Lancaster
Hall, Charles, Croydon, S.
Harrison, J. F., Caterham Court, Redhill
Hawthorn, William, Benwell, Newcastle-upon-Tyne
Heath, Thomas, Little Benton, Long Benton
Henderson, William, Fowberry Maines, Belford, Northumberland
Hunter, William, Moor Lodge, Newcastle-upon-Tyne
Innes, William, Field Place, Warnham, Horsham
Large, William, Taywell House, Goudhurst
Levett, William, Glassenburg, Cranbrook
Lightfoot, F. L., University College, Oxford
Lyne, Robert L., Oddington, Stow-on-the-Wold
McLaren, Henry, Hylton Castle, Sunderland
Massey, Hugh M., Kidnall, Malpas
Myers, Christopher, Dunston, Gateshead
Parker, Henry, Low Elswick, Newcastle-upon-Tyne
Pollard, George, Dilston, Corbridge
Pollock, Geo. D., 27, Grosvenor Street, W.
Porter, James, Corney Bury, Buntingford
Potts, John, Gateshead
Ronaldson, J. T., 4, Victoria Terrace, Newcastle-upon Tyne
Row, Edward, Moulas Haugh, Acklington
Shiell, John, Kenton, Newcastle-upon-Tyne
Smith, T. Fenton, Ilsworth, Gateshead
Spencer, James, Jun., Newcastle-upon-Tyne
Spencer, William, Team Villa, Gateshead
Surtees, Villiers C. V., Benridge House, Newcastle-upon-Tyne
Swan, Joseph, High House, Morpeth
Thompson, Captain F. W., Willow Lodge, Finchley
Trotter, William, South Acomb, Stocksfield
Walker, Thomas S., Maunby Hall, Thirsk
Watson, Robert H., Bolton Park, Wigton
Williamson, Sir Hedworth, Bart., Whitburn Hall, Sunderland
Wilson, Joseph, Manor House, Woodhorn, Morpeth
Wood, Charles A., 25, Chesham Place, London, S.W.
Woodhouse, John, Skerton, Lancaster
Wrightson, John, Spring House, Ladberge, Durham
Young, John, Kenley House, Coulsdon, Croydon, S.

Finances.—Mr. Bramston, M.P., presented the Report, from which it appeared that the Secretary's receipts during the past month had been examined by the Committee, and by Messrs. Quilter, Ball, and Co., the Society's accountants, and were found correct. The balance in the hands of the bankers on March 31 was 2295*l.* 1*s.* 10*d.* The balance-sheet for the quarter ended March 31, 1864, and the statement of subscriptions and arrears were laid on the table, the amount of arrears then due being 554*l.* The Committee recommended that a further sum of 1000*l.* be placed on deposit with the Society's bankers.

Discussions.—Mr. Holland, M.P., announced that he would read a paper on Agricultural Education on Wednesday, April 20, at 12 o'clock. Professor Voelcker will deliver a lecture on the Atmospheric Food of Plants on May 11.

Implements.—Colonel Challoner, Chairman of the Committee, reported their recommendation that a special meeting of the Committee shall be held in February each year to report to the Council on the quantity of trial land and other requirements to be provided by authorities of the localities inviting the Society to hold its country meeting in the following year. That Messrs. Easton & Amos be requested to report on Mr. Fowler's suggestion that there should be one dynamometer equal to about three tons and two equal to about 12 cwt., also one break which will register the power given off by ploughing engines; together with the cost of providing what may be necessary. That the trials of steam cultivators be triennial. This report was adopted.

Newcastle Meeting.—Colonel Challoner reported that the plan of the Showyard had been finally settled; that Mr. Jacob Wilson had secured 34 acres of land in two fields for the trial of steam cultivators, contiguous to the land already provided by the local Committee for the purpose, who also placed an additional 40 acres at the disposal of the Council on the condition that it be used exclusively for the trial of steam cultivators. Mr. Jacob Wilson had been requested to accept the office of Steward of Forage, and the Committee recommended that he be allowed an assistant at the rate of not exceding 5*l.* per week. The Committee further resolved that Lonk sheep are not qualified to compete in the Black-faced Mountain Classes. A discussion ensued on this resolution, which was ultimately carried by 16 ayes to 9 noes. The report was adopted.

Dates of Calving.—The President reported that the Committee having fully considered this question, were unanimously of opinion that any alteration in the date of calving would be inconvenient and thus unadvisible.

A committee consisting of the Earl of Powis, Sir Ed. Kerrison, Bart.; Sir J. Johnstone, Bart., M.P.; Col. Kingscote, Mr. Acland, Mr. Barthropp, Mr. Druce, Mr. Holland, M.P.; Mr. Wren Hoskyns, Mr. Thompson, M.P.; Mr. Owen Willis, and Professor Wilson, was appointed to consider the measures which ought to be taken "for the improvement of the education of those who depend upon the cultivation of the soil for their support," this being declared by the Charter as the 7th National Object to be prosecuted by the Society.

The following Committee was appointed to consider a report from the Horse-breeding Committee of the Royal Agricultural Society of Ireland, viz., The Earl of Powis, Lord Berners, Lord Tredegar, Hon. Col. Cotton, Hon. General Hood, Sir E. Kerrison, Bart.; Sir Watkin Wms. Wynn, Bart.; Col. Kingscote, M.P.; Mr. Burnett, Mr. Dent, M.P.; Mr. Fisher Hobbs, Mr. Milward, Mr. Pain, and Mr. Torr.

The appointment of a Committee to consider a letter addressed by Messrs. Howard to the President relative to the office of Consulting-Engineer to the Society, having been moved by Mr. Fisher Hobbs and seconded by Mr. Clayden, an amendment was brought forward by Mr. Milward, that as the facts are admitted, there would be no advantage in appointing a Committee. After a full discussion by the Council, the amendment was carried by 18 ayes to 8 votes for the original motion.

Meeting of 1865.—Memorials with plans and section, signed by the Mayors and Town Clerks of Exeter and Plymouth, were presented, soliciting the Council to hold the Society's Country Meeting at those places in the year 1865, and a Committee, consisting of Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Pain, Mr. Randall, and Mr. Torr was appointed to inspect the various sites offered for showyard and trials, and to report to the Council on the 4th May. The Secretary having announced a vacancy in the Council by the decease of the Right Hon. Lord Ashburton, Vice-President, gave notice that the election to fill this vacancy would take place on the 4th May.

Farmers' Clubs.

Central: *April* 4.—Mr. T. Congreve in the Chair. The subject appointed for consideration on this occasion was, "The New Assessment Act," the introducer being Mr. J. Dumbrell, of Ditchling, Hurstpierpoint. After a few remarks by way of introduction, Mr. Dumbrell said:—

For many years past, and probably ever since the Parochial Assessment Act came into operation, much difference of opinion and great discrepancy of practice have prevailed as to the mode of arriving at a proper valuation of rateable hereditaments. The words of the Parochial Assessment Act 6 & 7 Wm. IV., Cap. 96, s. 1, enacted that rates were to be made "upon an estimate of the net annual value of the several hereditaments rated thereunto, that is to say, of the rent at which the same might reasonably be expected to let from year to year," &c. These words have given rise to endless controversy, to a vast number of legal decisions. In spite, however, of all the experience gained, and all the legal lore accumulated upon the subject, differences of opinion and anomalies of principle have continued to spring up, and parishes and ratepayers have submitted to assessments rather in the spirit of compromise, and for the sake of peace and quietness (and that often after much expensive litigation), than from any real satisfaction with results obtained or intelligent appreciation of the principles acted upon. Now it is obvious that to get rid of the prevailing anomalies, the appointment of some officer or tribunal exercising the functions of an official valuer was needed; and although the main object of the recent Act was to give the means of a fair adjustment of taxation for county and union purposes between parish and parish, another important object was to get rid of the existing difficulties of ascertaining rateable value by appointing official valuers; not, indeed, the expensive highly paid gentlemen exercising that profession, but a cheap, because unpaid body, who should really exert their united judgment to value the properties subject to assessment, and who were not intended blindly to follow rigid and narrow rules to absurd consequences. If we can imagine a body of professional valuers constantly sitting to settle the fair and just value of rateable properties, irrespective of such actual rentals as are not unfrequently created by the greed of landlords, the folly of tenants, or the vagaries of both, we should have just such an assessment committee as it seems the Legislature intended to establish by the Act of 1862, only less costly, because not composed of professional and highly paid men. The Act gives them every possible assistance; for by the 13th section it enables them to call for and obtain the production of all sorts of documents and records relating to rates, taxes, and valuation—not indeed that they may become fetters to their common sense, but simply as aids to their judgment. It is to the consideration of the best means for carrying out the spirit of the Act that I would direct your attention, for we must admit that the objects desired are fair and reasonable. The first great point to be considered is, How shall the value of a property be estimated? There are three modes of doing this—either by taking actual rent as the guide, or property tax return, or by taking comparative value. The Acts says the value shall be determined at the rent a property may "reasonably be expected to let for from year to year;" not the actual rent from year to year. Actual rent is, of course, in many cases—in fact in a majority of cases—a very fair guide of annual value; but there will be exceptional cases. For instance, where land is let below its value, and it frequently does happen that a large district, it may be a whole parish, belonging to a large proprietor, is by no means fairly represented in the union assessment by taking its actual rent as a criterion. Again, another instance: From accidental causes properties may be hired at a rent above their actual value. A tenant for accommodation or fancy may be willing to pay more than the legitimate rent: is it just that because a man pays too much rent that he should also be saddled with too much taxes? It may be argued, a property is worth what it will fetch in the market. Granted; but where is the farm, however dearly rented, that would not command a higher rent if brought into the market to-morrow? The occupier of too highly rented land naturally inquires, when he finds his assessment above that of his neighbours, why land of equal value, and similar situation to his own, should not be placed on equal terms as regards assessment for taxation? To assess land, therefore, at actual rent, there are these difficulties—you ease the burden of taxation from the shoulder of him who is already lightly rented; you add an additional weight to him who is already over-weighted, and you run the risk of bringing all properties in a parish up to a high standard. The next mode of arriving at an estimate of actual value is by taking property tax as the guide. The great difficulty here applies, not so much to occupiers, as to owners occupying their own properties. In the case of mere occupation, property tax and rent should be represented by the same figures. Now we all know (and it is a singular fact) that although in this country we are perfectly used to the visit of the tax collector, yet every man does endeavour to evade taxation as much as possible; and although occasional notices in the *Times* do announce that A. B. has sent the half of a 5*l.* note to the Chancellor of the Exchequer on account of unpaid income tax,

it may be taken as a rule that no owner of property, being occupier, makes his return under Schedule B too favourably to the revenue; and I appeal to all members of assessment committees if their experience does not lead them to the conclusion that cases of properties held by owners are inadequately represented in the union assessments by property-tax returns Besides all which, it is a well-known fact that the returns to the property-tax are made very loosely or inaccurately, and in many cases, whether purposely or carelessly, no returns are made to the assessor at all, and that officer makes his own guess at the value; and many persons are exempt from income tax, in which case neither they nor the revenue officers care anything about a correct assessment. In my own and two neighbouring parishes, out of 290 assessments, there are 96, or nearly one-third, which make no return. Another argument against taking actual rent or property-tax return—or rather, another argument against the mode of working the Act, if these criteria are taken—is that there can be no need for the cumbersome machinery of parochial committees to make out valuation lists, or assessment committees to sit in judgment upon them, because any overseer or ordinary clerk could compare the whole of the lists with property-tax returns, and there would be an end of the matter. Of course it is a much easier plan to adopt some simple rule which shall do for all cases than to judge every case on its own merits; and if assessment committees can find such a rule, and can avoid the exercise of independent judgment, they will be saved from much thinking, and escape a vast amount of trouble; but then they, in fact, abdicate their functions, and leave the Quarter Sessions to do their work for them. If the above views are sound, it follows that assessment committees should boldly and really value the properties to be assessed, exercising a conscientious judgment to the best of their ability. By so doing, they would, no doubt, carry out the spirit of the Act, and become efficient and valuable tribunals; but if they do otherwise, and tie themselves down by rules to adopt as invaluable criteria of value either actual rentals, property-tax assessments, or other standards, which always ought to be right, but which are often very wrong, they will, of course, reproduce all the old evils, and instead of litigation being diminished it will be greatly increased. We now come to the third proposed mode, viz., of taking comparative value of property—in other words, of revaluing the whole of the parishes in a union. This is to do no more or less than what has been done before; with this difference, that, as before, the only object in view was to obtain equality of rating between individuals in a parish, equality among parishes is now also indispensable. It is not to be supposed that even this plan could give entire satisfaction; but if the whole of a union was valued at one time and on one basis, the probability is that a more uniform system of rating would be arrived at. One other objection to this plan is on the score of expense, but this would be a secondary consideration if the object desired were gained. I have now endeavoured, as briefly as I can, to point out the three plans by which the object of the Act may be attained, and a uniformity of rating established. Our next question is the mode of appeal in cases where dissatisfaction has been given. As you all know, the first appeal is the assessment committee; but experience leads me to the belief that an appellant seldom finds redress there, and as a last resort he is driven to appeal to Quarter Sessions. And who are the judges? The very men who are probably chairmen of most of the assessment committees in the county, and who, in spite of all the evidence that may be brought before them, adhere strictly to the principles they have laid down to their respective boards of guardians or assessment committees, and this is one of the most unjust parts of this Act. We all know that in some boards of guardians the weight of *ex officio* influence is very heavy, and the views of these guns of large calibre in a great measure guide the opinions of less independent members; and yet, as I said before, a court composed of these very *ex officio* members of boards of guardians is the last appeal for a dissatisfied ratepayer.

After relating his experience in his own parish as to the working of this Act in the matter of appeals, Mr. Dumbrell adds, "I venture to think that this case proves the justness of my premises, viz., that no absolute rule based on actual rent or property tax return can possibly be laid down, in estimating the value of property for the purpose of assessment; and where such rule has been adopted, much injustice must necessarily follow, and the object of the Act be altogether defeated. In conclusion, I would observe, that whilst the ends sought by this new Assessment Act are perfectly fair, the means to attain them are as yet very indistinctly understood; and, if care be not taken, far from giving satisfaction by the equalisation of assessments, this Act will be a fire-brand thrown amongst parishes and ratepayers, leading to no end of ill-feeling and litigation."

Reviews.

The Quarterly Journal of Science, No. 2. April, 1864. J. Churchill & Son, New Burlington Street.

The second number of this Quarterly Journal is even more interesting agriculturally than its predecessor. Among the principal topics, zoological, astronomical, mechanical, geological, and physiological, which occupy the body of the work, there is an elaborate report by Dr. Voelcker, on the chemistry of milk and on the considerations which ought to affect dairy arrangements. And among the chronicles of progress, agriculture figures along with botany, chemistry, zoology, and all the other sciences.

From Dr. Voelcker's paper we make the following extracts:—

1. *The Effect of Food and of Season of the Year on the Milk.*—"In the spring and early part of summer milk is abundant, and of good flavour. As the season advances the supply is diminished, but becomes richer in butter. The same quantity of milk which in August scarcely yielded 3 per cent. of pure butter and 3 per cent. of curd, in November produced 4½ per cent. of butter and 3½ per cent. of curd.

"A series of observations, made for the purpose of ascertaining the variations in the quality of the milk on the same farm throughout the year, convinced me that the supply of food was chiefly concerned, the richness or poverty of the diet being in all cases represented by the quality of the milk yielded.

"In November and December the cows had meal-nut oil given to them, which is the refuse left after pressing ground kernels of the Palm Nut. This substance, when of good quality, not too hardly pressed, is very nutritious and rich in fat, and was found to exercise a decided influence upon the proportion of butter in the milk.

"Brewers' grains are generally considered to possess a peculiarly stimulating effect upon the formation of the mammary gland. M. Struckman, of Wartburg in Germany, in 1855, published some feeding experiments, the results of which are of such practical importance as to justify an analysis of them here.

"Four good and four bad cows were selected, and the diet included brewers' grains, Mangels, Oat-straw, and Rape-cake.

"'Most milk was produced by 5½ lb. of Rape-cake, 36 lb. of Mangels, and 25 lb. of Oat-straw daily to each animal.'

"A reduction of 9-10ths lb. of Rape-cake led to a decrease of 6.55 litres per cow daily; thus 1 lb. of Rape-cake represents an average of 1⅛ lb. of milk. A diminution of 6 lb. of grains was followed by a reduction of 6.72 litres of milk; thus 1 lb. of grains appears to have produced ¼ lb. of milk.

"When 18 lbs. of brewers' grains were replaced by 4½ lbs of Rape-cake, the yield of milk was nearly the same; accordingly, 1 lb. of Rape-cake was equal to 4 lb. of grains, in its power of producing milk.

"Rape-cake produced milk richer in butter; grains, however, produced butter of more delicate flavour.

"During the experiments, the superior cows were found to be most influenced by the changes of food. In the inferior animals the yield was tolerably uniform, notwithstanding they were subjected to the same dietetic changes."

2. *The Influence of Breed on the Yield of Milk.*—"The Yorkshire cow, essentially a Shorthorn, is the favourite of cowkeepers in London and other large towns, surpassing all others in the quantity of its yield, although the quality loses by comparison with that of smaller breeds.

"If breeders would make it an object to cultivate both the feeding and milking qualities, there is nothing in previous experience opposed to a successful result.

"Small breeds, or small individuals of large breeds, usually give a better quality of milk from the same food than large ones. The larger animals giving a better return in quantity, and furnishing more meat for the butcher, are, however, more profitable.

"Where good quality is the main object, Alderneys perhaps will give most satisfaction, for they give richer cream than any other breed in common use in this country. The small Kerry cow, and the miniature Breton, produce extremely rich milk in quantity proportioned to their size.

"For dairy purposes in cheese districts the Ayrshire are justly celebrated; indeed they seem to possess more completely than other breeds the power of converting the elements of food into cheese and butter; they do not, on the other hand, lay on fat and flesh well.

"A cow of this breed bought by the Duke of Atholl from Mr. Wallace, Kirklandholm, produced from April 11, 1860, to April 11, 1861, 13,456 lb., or about 1305 gallons of milk, which at 8*d.* per gallon would be worth 43*l.* 10*s.*

"For general dairy purposes Shorthorns are probably the most useful. The dairy farmer will naturally select those that are more distinguished for milking qualities than for their tendency to fatten, at the same time not losing sight of the latter qualification, which will tell when the animals are no longer profitable for his dairy."

The agricultural chemist commences thus:—"Almost every department of farm management is in active operation during the first months of the year. Land drainage and autumnal tillage have put the fallows in the best condition for deriving fertility from the atmosphere. The direct application of manures to the crop becomes useful and economical as the season of growth commences. Seed time brings under discussion the various methods at our command for plant improvement. The continuance of stall-feeding on winter food keeps the whole subject of the meat manufacture before the mind of the farmer. And the lambing and calving season recalls for his consideration all those points on which the theory and practice of the improvement of his live-stock depend."

And it is in the order of the several departments of farm practice that the agricultural record of the first three months of 1864 is written. The Journal bids well for the attention and interest of the agriculturist. We hope it will obtain the large country circulation which it deserves.

Miscellaneous.

Sheep Dips and Salves.—The following account of experiments, undertaken in different counties, has been handed to us for publication. The smearing composition (Reid's) is composed of—No. 1, tallow (refined), castor oil, and butter; No. 2, tallow (refined), whale oil, and butter: in proper proportions to laying on.

General Average of Weight, and Price of Cheviot Hill Fleece, in Roxburghshire, Ayrshire, Argyleshire, Inverness-shire, Sutherland, and Caithness, for Clip of 1863, where the sheep has been prepared for winter with the undermentioned applications, viz.—Reid's vegetable oil bathing mixture, smear of tar and butter, preparation from arsenic, and Reid's white smear:—

UNWASHED FLEECE WOOL.

		s.	d.
Oil dip.	6 fleeces required to make one stone of 24 lb. or 4 lb per fleece. Cheviot hogg wool sold at 20½*d.* per lb.	6	9
	Deduct expense of bathing	0	3
		6	6
Tar and Butter Smear.	4 fleeces required to make one stone of 24 lb., or 6 lb. per fleece. Cheviot hogg wool sold at 14*d*	7	0
	Deduct expense of smearing ..	0	9
		6	3
	3*d.* per sheep in favour of an oil dip	0	1
Arsenic Dip.	3½ lb. fleece Cheviot hogg wool sold at 20½*d.* per lb.	5	10
	Deduct expense of dipping	0	0½
		5	9½
Reid's White Smear.	4 fleeces required to make one stone of 24 lb., 6 lb. per fleece. Cheviot hogg wool sold at 18*d.* per lb. ..	9	0
	Deduct expense of smearing ..	1	0
		8	0
	2*s.* 2½*d.* in favour of white smear	2	2½

EXAMPLE OF WASHED CHEVIOT.

Hogg wool from Morvern, prepared with Reid's white smear, 5 lb. per fleece, sold at 22*d.* per lb.		9	2
Deduct expense of smearing		1	0
		8	2
Cheviot hogg wool, smeared with tar and butter from Sutherland, 5 lb. per fleece, sold at 16½*d.* per lb.	6	10½	
Deduct expense of smearing	0	9	
		6	1½
2*s.* 0½*d.* in favour of white smear		2	0½
Example of Balnagown Clip of Half-bred Ewe Stock Hoggs prepared with Reid's smear, made an average throughout of 7 lb. per fleece, sold at June sale, at 21¾*d.* per lb.		12	8¾
Deduct expense of smearing		1	0
		11	8¾
Example of Balnagown Clip of Half-bred Wedder Stock Hoggs prepared with usual dip, made an average throughout of 5 lb. per fleece, sold at June sale at 22½*d.* per lb.	9	4½	
Deduct expense of dip	0	1½	
		9	3
2*s.* 5¼*d.* in favour of smear		2	5¼

North British Agriculturist.

The Treatment and Feeding of Cattle.—Mr. Archibald Macdonald, of Bowood House, Calne, has addressed the following remarks on the above subject to the *Morning Post*:—1.—Treatment.—The constitution of cattle is often ruined by their being kept out in the fields during the inclement months of winter. A cow should never be caught in a cold night, for a certain consequence is an immediate depreciation of the quality of the milk, and an injury to the cow, and if suckling the calf, to that also. But, I may be asked, is it not their nature to be out at night? It was; but by the improvements in breeding (which has made them less hardy), and the artificial Grasses they eat, it is no longer so. A Highland cow eats the natural herbage of the hills, and knows for hours before a storm is coming, and will feed on for a considerable distance, till it reaches a place of shelter from the cold. Bring that same cow from its natural Grass, feed it on ours, confine it in a field where it cannot obtain shelter, and it will soon be in a worse condition than when brought here. It must be housed at night, in a building completely enclosed and properly ventilated. Another most reprehensible plan is to allow (as is done in thousands of cases) animals to have calves before they are two years old. The constitution of the mother is thereby seriously impaired, and the stock is weakly in consequence. If we get an epidemic among our stock, the loss from this system will be fearful. They should never have a calf till three years old. I have noticed in many parts of the country that fattening bullocks (those stall-fed excepted) are never housed at night. This is a most improper plan. There should be a covered shed for these erected at one side of the field, closed at the back and ends, but open in front, and divided into compartments for each bullock. Give at night to each a few handfuls of hay, and two ordinary-sized Turnips, sliced just previous to being given. I adopted this method with the worst half of some Highland bullocks, allowing the better half to lie out at night. At the end of five months those housed were pronounced by competent judges to be worth 3*l.* per head more than the others. A steward to a noble lord writes me—"I adopted your plan with a part of my bullocks, and now, at the end of one month, I consider those housed are worth 1*l.* more than the others. In future, I shall take care to house all my cattle." A gentleman, writing to the *Times*, spoke of a number of cattle which had been infected with the "foot and mouth disease," through travelling in a filthy railway truck. He stated that when taken out into the park they were perfectly wild, and would do nothing for days but drink water, which resulted in lung disease, and he was obliged to kill a great number of them. Access to water was a great evil. They should, if possible, have been confined till the sensation of railway travelling had gone off, and had a little hay, and a very little water in a tepid state given to them. The disease would then have been cured. 2. Feeding.—It is the custom to give milch cows as much food as they can eat—in fact, more than they can consume. Thus a two-fold evil results—viz., a loss of food, and a decided injury to the animal. Never give, therefore, as much as it can eat. Water.—Cows are allowed to drink far too much, the consequence being

a great deterioration in the quality of the milk. It is a well-known fact that the London milkman does not require to add water to his milk, simply because he waters the food of his cows, and gives them large quantities to drink before milking them. He thus obtains quantity, not quality. Cows in milk should have but little water, and in the mornings should be obliged to walk from their house some distance before drinking. They will then eat as they walk, and on arriving at the water will drink much less than they otherwise would do. The result of this treatment will be cream like mine, of such a consistency that a spoon would stand perpendicularly in it in the middle of winter. By this method I have obtained from 12 cows 5 lbs. more butter per week, and of a far better quality than was before got by the old plan of feeding. Many of the aristocracy have frequently asked me how I produced such excellent cream and butter; and I have as invariably attributed the result to the way in which the cows were fed and housed at night. Cows with calves should be still further attended to in this respect. There is a great analogy between a woman with a child and a cow with a calf. How many are the restrictions laid upon a woman by a medical man if she is nursing a gentleman's son! He knows that what is injurious to the elder will be alike to the younger. It is exactly so with a cow; it is injured by being allowed to eat improper and too large quantities of food, and drink too much water; the milk is impoverished and unwholesome, and the calf, if it lives, is of a weak, debilitated constitution. Give, therefore, less food and less water, and you will have healthier stock, and far better milk and cream.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. Slatter, Streatley, near Reading.

Day of the Month.	Day of the Week.	At 9 A.M., Railway Time. Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
April.		Inches.	°	°				°	°	°	°	Inches.
1	Friday	29.67	48	43	N.W.	4	5	52	38	58	31	0.05
2	Saturday	29.91	45	41	N.W.	3	3	52	35	65	28	0.02
3	Sunday	29.94	45	41	S.W.	1	10	52	38	63	33	0.03
4	Monday	29.83	59	54	N.W.	1	10	57	43	62	43	0.06
5	Tuesday	30.20	39	38	E.	1	10	54	38	75	38	0.18
6	Wednesday	30.21	40	39	S.	2	10	39	36	40	31	0.28
7	Thursday	30.28	44	42	S.W.	1	10	47	30	52	30	0.01

Notices to Correspondents.

Gas Water: *Marcus.* It is worth as much to the farmer if the carriage be not great, as the gas works can get from any other customer. What its actual worth may be depends on the proportion of ammonia which it contains, which varies with the coal and the process. We should apply it direct after a dilution the quantity of which must be ascertained by experiment with a watering pot on the lawn, and put it with the water cart on Grass land. Gas lime should be bought months before used and turned over in compost with other material before application to any Grass crop, or it may be applied on stubble and spread at once and left exposed to the air, by which its causticity is destroyed, and it becomes a mixture of lime and gypsum. It is worth at the gas works as much as lime is worth at the kiln, but it generally sells for less.

Grass Land: *Cor.* Drainage, foddering cattle, feeding sheep on Turnips in the field, and bone-dust, say 16 bushels per acre, well crushed, are good means for the improvement of Grass land. Further information another week.

Grass Seeds.—Consult the Index of the Journal of the Agricultural Society.

Red Rabi: *C. J.* It will keep clamped in heaps like Mangel Wurzel; but it will stand frost better than any other root in the open

Kerry Blues: *W. Crossman.* We see they are advertised by Mr Clarke, of Long Sutton, Lincolnshire.

SECURED BY
ROYAL LETTERS PATENT.

PRICE 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanized Wire Strainer, Rose, and Small Jet, Brass Cylinders and Japanned Stirrup. With Copper Stirrup, Two Guineas.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

Robert Hogg, LL.D. and F.L.S., Shirley Hibberd, Esq., F.R.H.S., Thomas Rivers, Esq. (the eminent Florist), and other well-known gentlemen recommend the

HYDROPULT

AS AN INVALUABLE GARDEN IMPLEMENT.

A CARD.

It may not be known to the Public generally, that *interested parties*, unable legitimately to prevent an extensive sale of a new, efficient, and valuable invention, which, by its merited success, has superseded other devices of the kind, have recourse *through their friends* to the now too frequent practice of writing anonymous communications to journals of large circulation, *requesting answers* as to the merits and efficiency of the invention in question. These questions and the answers, PREVIOUSLY CONCOCTED by the interested parties aforesaid, duly appear; and are so worded as to have the desired effect. Thus are the Public misled and deceived by *malicious* and *envious* innuendos, the tendency of which is to bring into bad repute an article of utility, which has received the unqualified approval of thousands of well-known gentlemen, who, in a spirit of kindness, forward to the inventor gratuitous testimonials, as a token of their appreciation of his invention.

Parties unknown to me, have, from motives best known to themselves, in this manner criticised the efficiency of the "Hydropult." I have no answer to make to them: to the Public I would say that I will cheerfully forward, on application, a prospectus, containing testimonials from gentlemen well known throughout the United Kingdom.

CHARLES P. BUTTON.

CHARLES P. BUTTON, Proprietor, HYDROPULT WAREHOUSE and SHOW ROOMS,
27, LEADENHALL STREET, LONDON, E.C.

SHANKS' NEW IMPROVED PATENT

LAWN MOWING, ROLLING, COLLECTING, and DELIVERING MACHINE for 1864.

Important Improvements, combining efficiency with simplicity of construction, have been introduced into Shanks' Lawn Mowers for the ensuing season.

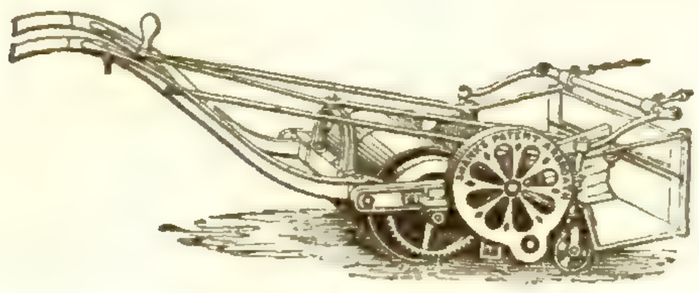

HORSE MACHINE.

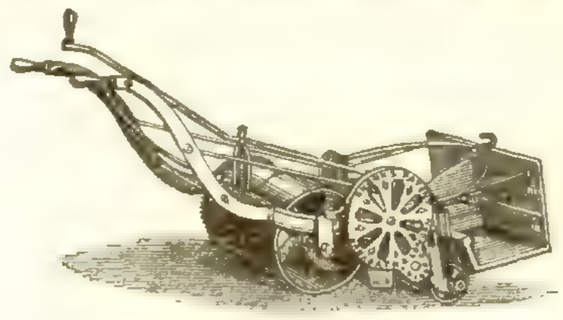

PONY MACHINE.

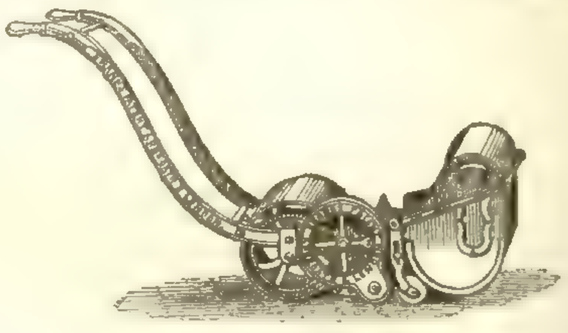

HAND MACHINE.

MOWS ON UNEVEN AS WELL AS ON LEVEL LAWNS, AND WHETHER THE GRASS BE WET OR DRY.

ALEXANDER SHANKS AND SON have had the honour this Season to again furnish their celebrated LAWN MOWERS to HER MAJESTY THE QUEEN, for the Royal Gardens at Windsor, and to HIS MAJESTY THE KING OF SAXONY, for the Royal Gardens at Dresden.

A. S. & SON have for a quarter of a century devoted their attention to the Improvement and Manufacture of LAWN MOWERS; the demand for their Machines is now unprecedented, and out of the many thousands of Machines they have manufactured and sold, they cannot point to a single instance where they have not given every satisfaction. A. S. & SON have further improved their PATENT LAWN MOWERS for this season, and have no hesitation in saying that their Machines are still, as they have always proved themselves to be, unequalled for the qualities that constitute a really good LAWN MOWER fit for the hands of the Gardener.

SHANKS' PATENT LAWN MOWERS are in daily use in the ROYAL GARDENS at KEW, WINDSOR, BUCKINGHAM PALACE, HAMPTON COURT, OSBORNE, and BALMORAL; in the GARDENS of the ROYAL HORTICULTURAL SOCIETY at KENSINGTON; in the GROUNDS of the CRYSTAL PALACE COMPANY at SYDENHAM; and in many hundreds of the principal Gardens in the Kingdom, as well as abroad, where their merits have been fully proved, and their success established.

PRICES, including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

SHANKS' NEW PATENT HAND MACHINE,

For Pushing only.

Width of Cutter.				
10-inch Machine	... ...	... £3 10 0	*Easily Worked by a Lady.*	
12-inch Machine	... ...	... 4 10 0		
14-inch Machine	... ...	... 5 10 0	*Ditto by a Boy.*	

Silent Movement, 4*s.* extra.

SHANKS' NEW PATENT HAND MACHINE,

For Pushing or Drawing, Separately or Together.

Width of Cutter.				
16-inch Machine	... ...	... £6 12 6	*Easily Worked by a Man.*	
19-inch Machine	... ...	... 7 12 6	*Ditto by a Man and Boy.*	
22-inch Machine	... ...	... 8 7 6	*Easily Worked by Two Men.*	
24-inch Machine	... ...	... 8 17 6		

Silent Movement, 7*s.* 6*d.* extra.

SHANKS' NEW PATENT PONY and DONKEY MACHINE.

Width of Cutter.				If with Patent Delivering Apparatus.
25-inch Machine	... ...	.. £12 10 0	... ...	25*s.* extra.
28-inch Machine	... ...	... 14 10 0	... ...	30*s.* „
30-inch Machine	... ...	... 15 15 0	... ...	30*s.* „

Silent Movement, 12*s.* 6*d.* extra; Boots for Pony, 21*s.* per set;
Ditto for Donkey, 16*s.* per set.

SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.				If with Patent Delivering Apparatus.
30-inch Machine	... ...	... £19 0 0	... ...	30*s.* extra.
36-inch Machine	... ...	... 22 0 0	... ...	30*s.* „
42-inch Machine	... ...	... 26 0 0	... ...	40*s.* „
48-inch Machine	... ...	... 28 0 0	... ...	40*s.* „

Silent Movement, 20*s.* extra; Boots for Horses' Feet, 24*s.* per set.

ALEXANDER SHANKS AND SON regret they find it necessary for the protection of their interests to call the attention of their numerous friends to the following assertions of Messrs. THOMAS GREEN & SON in their advertisement of LAWN MOWERS which has this year appeared in the *Gardeners' Chronicle* and other newspapers. A. S. & SON also particularly request attention to the following letters, in answer to these assertions:—

Messrs. GREEN have the following statement in their advertisement: "*By special appointment Sole Manufacturers to Her Most Gracious Majesty the Queen.*" In answer to this A. S. & SON subjoin the following letter from EDWARD M. BROWELL, Esq., Secretary to the Lord Steward of Her Majesty's Household:—

"Board of Green Cloth, Buckingham Palace, February 27, 1864.

"SIRS,—In reply to your request that I should write you a letter for publication, stating that Messrs. GREEN & SON had no appointment whatever, nor had any liberty or title to say that they had one, I can only repeat what I told the Gentleman who represented himself as your Agent when he called to ascertain how you could get the appointment of Manufacturers of Mowing Machines to Her Majesty, that no Warrant had been granted for about 10 years, and that *Messrs. Green had not one*, although they had lately supplied Her Majesty's Gardens, &c., with several of their Lawn Mowing Machines.

"I am, Sirs, your obedient Servant, (Signed) EDWARD M. BROWELL."

Messrs. GREEN also give a list of "Foreign Medals awarded to them for their Patent Lawn Mowers." Amongst the number is one from the "Hamburg International Exhibition, 1863." A. S. & SON subjoin the following letter from the Secretary to the Committee of the International Exhibition at Hamburg, translated into English:—

"Messrs. PETER SMITH & Co., Hamburg, (Agents for A. S. & SON.)

"SIRS,—In answer to your favour of yesterday, I beg to inform you that, after having looked myself over the list of awards during the last year's International Agricultural Exhibition, GREEN'S Machine for Lawn Mowing *did not receive* a Medal, whereas T. GREEN & SON (Leeds) were awarded with the small Silver Medal for a combined Steam-Engine with standing Boiler.

"Most respectfully, (Signed) GERHARD NACHMANN, Dr.,

"Hamburg, February 12, 1864." "As Secretary of the former Executing Committee of the International Agricultural Exhibition at Hamburg, 1863."

A. S. & SON beg to state that they are making inquiry of the Secretaries of the other Societies where Messrs. GREEN state they have received Medals, and as soon as they are able will publish the result.

Messrs. GREEN & SON also state that their "Patent Lawn Mowers are the only Machines in constant use at the Royal Gardens, Windsor, the Royal Horticultural Society's Gardens, South Kensington, the Crystal Palace Company's Gardens, Sydenham, and other places.

A. S. & SON beg to state that for many years their Lawn Mowers have been in successful operation in the Royal Gardens at Windsor; and further, *only a few weeks ago they had the honour to receive Orders for their newly Improved Machine for the same Gardens.* The following letters from Mr. EYLES, Superintendent of the Royal Horticultural Society's Gardens, and from Mr. GORDON, Superintendent of the Crystal Palace Company's Gardens, are amply sufficient to satisfy any one that Messrs. GREEN & SON's statements on this point are also incorrect.

"Royal Horticultural Society, South Kensington, March 3, 1864.

"MY DEAR SIRS,—In answer to your inquiry, I beg to say that your Machines have been almost in constant use here during the Mowing season ever since the formation of the Gardens.

"I am, yours very truly, (Signed) GEORGE EYLES."

"Crystal Palace, Sydenham, S.E., March 29, 1864.

"GENTLEMEN,—In reply to your inquiry respecting the Mowing Machines supplied by you, I am pleased to say both the Horse and Hand Machines were in constant use during the whole of the last season, and have given great satisfaction to me and many others who saw the Machines at work. The self-acting Apparatus for delivering the Grass being a great acquisition.

"I am, Gentlemen, yours, (Signed) J. A. GORDON."

A. SHANKS AND SON feel it altogether unnecessary to make any remarks on these proceedings. The letters they have been authorised to publish are amply sufficient to convince any one that Messrs. GREEN have used incorrect statements in their Circulars and Advertisements. These statements are calculated to mislead parties in selecting LAWN MOWERS, and consequently to some extent must be prejudicial to the interests of A. S. & SON as Manufacturers.

DENS IRON WORKS, ARBROATH, April 2, 1864.

Shanks' Patent Lawn Mowers require less power to work them than any other, are all warranted to give satisfaction, and if not approved of may be at once returned.

PATENTEES AND SOLE MANUFACTURERS:

ALEXANDER SHANKS AND SON, DENS IRON WORKS, ARBROATH, N.B.

LONDON OFFICE and SHOW ROOMS, 27, LEADENHALL STREET, E.C.

A Stock of Lawn Mowers always kept at the London Depot, from which orders can be at once executed.

ILLUSTRATED PRICE LISTS OF CHAFF CUTTERS, WIRE NETTING, GARDEN CHAIRS, ETC., FREE ON APPLICATION.

THE ALSIKE CLOVER for CLOVER-SICK LAND.—This excellent Clover will thrive in almost any soil. It produces two good cuttings in the year, and makes superior Clover Hay. It may be sown alone (14 lbs. per Acre), or in conjunction with other Seeds, either for alternate husbandry or for Permanent Pasture. If sown with Italian Rye-grass it is ready for mowing three times in the year.

Sutton & Sons have now the satisfaction of offering very fine new Seed at the greatly reduced price of 10*d.* per lb., or cheaper by the cwt., and strongly recommend this Clover to more general cultivation.

Royal Berkshire Seed Establishment, Reading.

Extra Fine Seakale.

GEORGE CLARKE has plenty of clean stout Roots, which cannot be surpassed for Forcing qualities

Price for Picked Roots, per 100 .. .. 10*s.* 0*d.*
Do. second size „ 7 6
Also strong for Planting, per 100 .. 5*s.* and 7 6

Nursery, Streatham Place, Brixton Hill, near London; and 4, Windsor Terrace, Pimlico, S.W.

SELECTED SEEDS,
Carriage Free.

W. PAUL'S SUPERB CRIMSON BEET, 1*s.* per ounce.
W. PAUL'S WALTHAM BRUSSELS SPROUTS, 1*s.* per pkt.
W. PAUL'S EMPEROR CUCUMBER, 2*s.* 6*d.* per packet.
W. PAUL'S IMPROVED TELEGRAPH CUCUMBER, 1*s.* per pkt
W. PAUL'S WALTHAM GREEN CURLED ENDIVE, 1*s.* per pkt
W. PAUL'S SELECTED EXTRA CURLED PARSLEY, 6*d* per pkt
BROCKET HALL BROWN COS LETTUCE, 1*s.* per packet.
IMPROVED JACKSON'S LATE CURLED KALE, 1*s.* per oz.
SNOW'S WINTER WHITE BROCCOLI (True), 1*s.* per packet.
SUPERB DWARF HERTFORDSHIRE CAULIFLOWER, 1*s* per packet.
GODFREY'S WHITE SPINE CUCUMBER (True), 1*s.* per pkt.
ASTERS, STOCKS, BALSAMS, ZINNIAS, LARKSPURS, &c., in collections from the very first sources.
HOLLYHOCK.—Wm. Paul's Collection in 12 distinct named sorts, 5*s.*
„ finest mixed, 1*s.* to 2*s.* 6*d.* per packet.
CALCEOLARIA, CINERARIA, PRIMULA, PETUNIA, SWEET WILLIAM, finest strains, 1*s.* to 2*s.* 6*d.* per packet.
LAPAGERIA ROSEA, 1*s.* to 2*s.* 6*d.* per packet.
All other Seeds, separate or in collections, of best quality.
PRICED DESCRIPTIVE CATALOGUE free by post.
Address William Paul, Paul's Nurseries, Waltham Cross, N.

Seed Corn from the Chalk.

All the most approved Varieties of Wheat, Barley and Oats, supplied by

RAYNBIRD, CALDECOTT, and BAWTREE,
Address, Basingstoke; or 89, Seed Market, Mark Lane.

WINTER and SPRING TARES, SAINFOIN, and all other kinds of AGRICULTURAL SEEDS.

Samples and Prices post free on application.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.

The GENERAL FARM SEED DIRECTORY, with full Instructions for the Management of a Farm for every Month in the Year, will be forwarded Gratis and Post Free to any address in the kingdom.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.

Purchasers of Large Quantities of AGRICULTURAL SEEDS will be dealt liberally with.

All Seeds Carriage Free.

Agricultural Seeds, Carriage Free.

THE LONDON SEED COMPANY, LIMITED,
68, Welbeck Street, Cavendish Square, London, W.

See GENERAL FARM SEED DIRECTORY, now ready.
MIXTURES of GRASSES to suit any soil, 20*s.* to 30*s.* per acre (with Clovers).
RED, WHITE, and COW CLOVERS, 6*d.* to 10*d.* per lb.
ALSIKE CLOVER, fine sample, 80*s.* per cwt.
SWEDISH TURNIPS, 8*d.* to 1*s.* per lb.
COMMON DO. 8*d.* to 9*d.* per lb.
MANGEL WURZEL, in varieties, 6*d.* per lb.
WHITE BELGIAN CARROT, 1*s.* per lb.
YELLOW BELGIAN CARROT, 1*s.* per lb.
Large DRUMHEAD CABBAGE, 2*s.* per lb.
CATTLE PARSNIP, 1*s.* per lb.
All other Agricultural Seeds, at moderate prices.
Address, London Seed Company (Limited), 68, Welbeck Street, Cavendish Square, London, W.

REIGATE SILVER SAND, 7*s.* 6*d.* per ton; packed, 16*s.* per ton; delivered to Reigate Railway Station. PEAT SOIL of various kinds, LOAM, BOG MOULD, &c. N.B.—Loaded trucks can be sent on all the principal Railways, and to Angerstein Wharf, Thames.

From E. Essor, Esq., *Woodville, near Burton-on-Trent.*

"The Sand is very good; when we want more we will write you."

W. Short, Sand and Peat Depot, Reigate, Surrey.

COCOA-NUT REFUSE, delivered within 2½ miles of Charing Cross, at 2*s.* per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the Patent Cocoa Fibre Company, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. Barsham & Co.

Barsham's BRUSHES and MATS are sold in every town.

Caution.—Every Brush is stamped. J. Barsham's Patent

Red Spider Magnified.

GISHURST COMPOUND, whether used against Insects and Mildew, on Growing Plants, or as Winter Dressing on Trees at rest, should be dissolved 48 hours before use. This gets rid of smell, and if the Solution be decanted, prevents any staining of foliage. A strength of from 1 to 2 oz. to the gallon of water is recommended for growing Plants; one from 4 to 16 oz. for Trees at rest.

Sold Retail by Nurserymen and Seedsmen, in boxes, 1*s.*, 3*s.*, and 10*s.* 6*d.* each.

Wholesale by
PRICE'S PATENT CANDLE COMPANY (Limited).

ROLL TOBACCO CLOTH.—The best and cheapest article for Smoking Greenhouses and Destroying the Fly. Price 1*s.* 4*d.* per lb.; over 10 lb., 1*s.* 1*d.*

Joseph Baker, 10, Gough Square, Fleet Street, E.C.
Post-office Order payable Fleet Street.

BOTANICAL PAPER for DRYING FLOWERS, FERNS, and SEAWEEDS.—The only paper adapted for the purpose. Price 20*d.* a Quire. 25 per cent. allowed to Stationers and Booksellers.

Edward Newman, 9, Devonshire Street, Bishopsgate, E.C.

Blight.

BROWN'S PATENT FUMIGATOR.—A Portable Instrument for Fumigating Greenhouses, Stoves, and Frames, or Shrubs and Flowers in the open air, without injuring the most delicate plant; delivering the Smoke cold, in a dense mass, and effecting a great saving of Tobacco. Price 10*s.* and upwards.

Manufactured and supplied to the Trade by Messrs. Barber & Groom, Union Court, Holborn, London; and may be had of all Ironmongers, Seedsmen, and Florists.

HOWARD'S NEW CHAIN or FLEXIBLE HARROW.—This Patent Harrow is much more effective and durable than the ordinary Chain Harrows. It is composed of a series of steel links connecting tripod-shaped tines, which have case hardened points on each side, and its construction is so simple that a new link can be put into the Harrow in the field.

J. & F. Howard, having had the above Harrows at work on their own farms for the past year, can with great confidence recommend them.

	£	*s.*	*d.*
Price, for one horse, to cover 6½ feet, marked F 1	2	15	0
Price, for two horses, to cover 8 feet, marked F 2	4	0	0

Full particulars may be had of their Agents throughout the kingdom, or will be sent free on application to
James & Frederick Howard, Britannia Iron Works, Bedford.

Card.

SAMUEL N. McGERROW,
General Horticultural Builder,
Knotty Ash, near Liverpool.

Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

Greenhouses and Conservatories.

H. FREEMAN, Horticultural Works, Triangle, Hackney, N.E.—Good substantially-made GREENHOUSES, glazed, ready for fixing, 42 feet by 13 feet, 50*l.*; 21 feet by 13 feet, 28*l.*; 12½ feet by 10 feet, 15*l.* A handsome CONSERVATORY, 46 feet by 19 feet, for Sale, price 130*l.* A large assortment kept. Estimates given for any branch in Wood or Iron.

Heating by Hot Water.

HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, Tubular, and Elliptic, from 24*s.* each. Improved Boilers and Iron Stands to use without brickwork, 56*s.* each. Valves from 10*s.* 6*d.* each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at

Mr. Lynch White's Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S. Price List on application.

LAWN MOWERS made in a superior manner, and at reduced prices.

S. Smith, Engineer, 204, High Holdorn.

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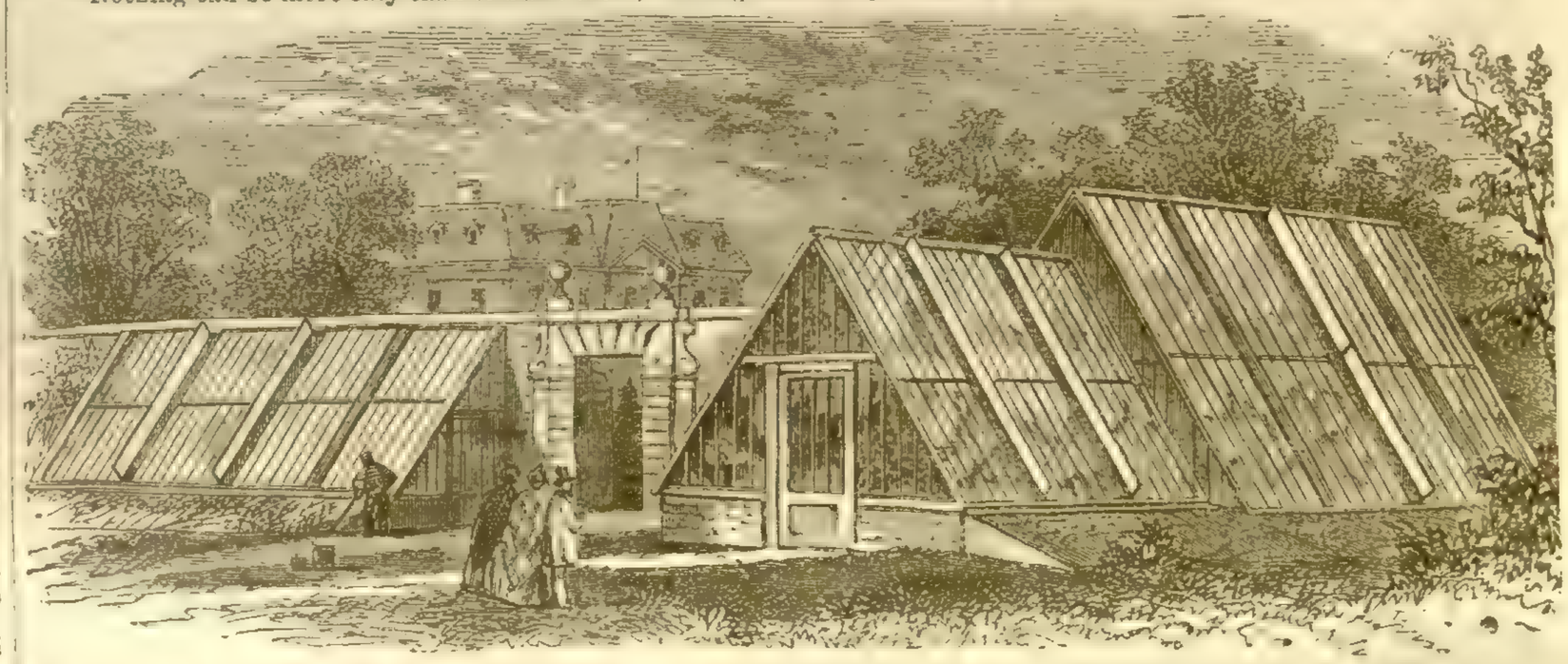

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31	3	in length	16	10	0	21	2	6
41	11	in length	20	18	0	26	18	6
63	3	in length	30	6	0	38	10	0
84	7	in length	39	6	0	49	11	6
105	11	in length	48	17	6	60	12	6

Ft.	In.		12 ft. Lights			14 ft. Lights			16 ft. Lights		
20	11	in length	£21	18	0	£28	10	0	£34	5	0
31	9	in length	29	6	0	37	12	0	45	16	0
42	7	in length	36	16	0	46	14	0	57	7	0
64	3	in length	51	14	0	64	18	0	80	10	0
85	11	in length	66	12	0	83	2	0	103	11	0
107	7	in length	81	10	0	101	10	0	126	13	0

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Saved from large transplanted roots of good shape and a fine dark orange colour. Can be recommended as the best Mangel in cultivation.

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"GENTLEMEN,—The Grass Seeds and Clovers supplied by you to the Crystal Palace Company in the spring of 1863 have proved of excellent growth, are perfectly free from weeds and coarse Grasses, and have already formed a fine sward. The Grass Seed you supplied the Company with in 1862 is now as solid as turf. I was very much pleased with the Flower seeds; the French and African Marigolds, Dunnett's Crimson Candytuft, the Indian Pinks, and Larkspurs, were particularly fine.—I am, Gentlemen, your obedient Servant,

"Messrs. JAMES CARTER & Co. "J. A. GORDON, Garden Superintendent at the Crystal Palace." "January 6, 1864.

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RED GLOBE; similar to the above, except in colour	0	6
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ROYAL BOTANIC SOCIETY of LONDON,

REGENT'S PARK.

THE SECOND SPRING EXHIBITION.

LIST of AWARDS, April 9, 1864.

6 AZALEAS. (Amateurs.)

1st Prize, Mr. J. Cross, Gr. to Sir F. H. Goldsmid, Bt., Regent's Park
2d, Mr. T. Todman, Gr. to R. Hudson, Esq., Clapham Common
3d, Mr. W. Young, Gr. to R. Barclay, Esq., West Hill, Highgate

6 AZALEAS. (Nurserymen.)

1st, Mr. C. Turner, Slough, Bucks
2d, Messrs. H. Lane & Son, Great Berkhampstead, Herts
3d, Mr. W. Bull, King's Road, Chelsea

3 NEW AZALEAS.

1st, Mr. C. Turner
2d, Messrs. H. Lane & Son
3d, Mr. T. Todman, Gr.
4d, Messrs. F. & A. Smith, Nurserymen, Dulwich

6 CINERARIAS. (Amateurs.)

1st, Mr. J. James, Gr. to W. F. Watson, Esq., Isleworth
2d, Mr. R. Marcham, Gr. to E. Oates, Esq., Bydorp House, Hanwell
3d, Mr. W. Lacey, Gr. to C. Mortimer, Esq, Morden Park, Morden, Surrey

6 AMARYLLIS.

1st, Mr. B. S. Williams, Nurseryman, Holloway

6 BEGONIAS.

1st, Mr. J. Cross, Gr.
2d. Mr. W. Young, Gr.

6 MISCELLANEOUS PLANTS.

1st, Mr. B. S. Williams
1st, Messrs. A. Henderson, Nurserymen, Edgeware Road
2d, Mr. W. Bull
3d, Mr. J. Cross, Gr.
3d, Mr. W. Young, Gr.
4th, Mr. W. H. Treen, Nurseryman, Rugby

MISCELLANEOUS.

Silver Gilt Medal to Messrs. Paul & Son, Herts, for Collection of Roses in Pots
Silver Medal to Messrs. W. Cutbush & Son, Highgate, for Collection of 100 Hyacinths
Ditto, Messrs. Paul & Son, Herts, for Boxes of Cut Roses
Ditto, Mr. W. Paul, Waltham Cross, for Boxes of Cut Roses
Ditto, Mr. W. Paul, Waltham Cross, for Collection of 100 Hyacinths
Ditto, Mr. B. S. Williams, for Collection of New and Rare Plants
Ditto, Mr. C. Turner, for Collection of Azaleas
Ditto, Mr. C. Turner, for Collection of Pelargoniums
Small Silver Medal to Messrs. H. Lane & Son, for Collection of Azaleas
Bronze Medal to Mr. W. Howard, Gr. to J. Brand, Esq., for Lily of the Valley
Ditto, Mr. W. Paul, for Collection of Tulips
Ditto, Messrs. W. Cutbush & Son, for Collection of Tulips

NEW PLANTS and SEEDLINGS.

First-class Certificate to Mr. B. S. Williams, for Phormium tenax variegata
Ditto, Mr. B. S. Williams, for Sarracenia Drummondi
Ditto, Messrs. F. & A. Smith, for Azalea Excelsior
Ditto, Messrs. F. & A. Smith, for Cineraria Rembrandt
Ditto, Messrs. J. Ivery & Son, for Azalea Fascination
Ditto, Mr. W. Bull, for Gymnostachyum Verschaffelti
Second-class Certificate to Mr. W. Bull, for Lilac Dr. Lindley
Ditto, Mr. W. Bull, for Lastrea varia
Ditto, Mr. W. Bull, for Anæctochilus zeylanus
Ditto, Messrs. H. Low & Co., for Erica Halfordiana
Ditto, Mr. W. Lacey, Gr. to C. Mortimer, Esq., for Cineraria Satisfaction
Ditto, A. Potts, Esq., Hoole Hall, Chester, for Cineraria magnifica

The Gardeners' Chronicle.

SATURDAY, APRIL 16, 1864.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY,	April 20	Royal Horticultural (Floral Committee) at South Kensington	10 A.M.
		Royal Horticultural (AZALEA AND ROSE SHOW), at South Kensington	2 P.M.
THURSDAY,	— 21	Linnean	8 P.M.

SINCE more especial attention has been called to the DISEASES OF PLANTS, it is quite astonishing what a number of curious maladies was brought before our notice, which appear to have been hitherto entirely neglected. We have this week received specimens of diseased Black Currant shoots which are very strangely affected. It is not an uncommon thing to find portions of Black Currant trees, especially towards the centre, die off suddenly; and without any proper examination, we have supposed that some portion of the stem had been excavated by the larva of some species of Ægeria, as in other Currants, in consequence of which the supply of nutriment was cut off, and the upper portions died.

Here, however, we have something very different, as is indicated by the condition of the buds. In our common species of Ribes, and possibly in all, the buds, at least in spring, are not sessile, but supported by a short stalk, which from the compression of the petiole of the leaf is sometimes slightly flattened. In the specimens before us there is often an abnormal development of this peduncle, which is flattened as much as the stags-horn shoots which so often occur upon the Ash, and in several instances the peduncle has become a branchlet with buds at its base and on its surface, and frequently in greater number than on healthy plants. The buds when examined are more or less defective, and sometimes there is nothing more when the scales are removed than a broad disc studded with very imperfect and extremely minute flower buds. Occasionally the force of vegetation is sufficient to develope something like a raceme, and if so the fruit is not a fourth part of the usual size.

On close examination it appears that the

flattened bases of the buds consist sometimes of two confluent individuals, but we do not find this to be always the case. Occasionally these bases are fan-shaped, with numerous more or less confluent buds arranged along the upper margin.

The shoots, it should be observed, are remarkably vigorous, and as far as the specimens before us show, there is no indication of decay about them. The case seems rather one of abnormal development, the cause of which in all probability it may be difficult to detect.

A first impression was that it was due to the peculiarity of the last season, and it was supposed that when the drench of wet came after the long drought, the buds in the axils of the leaves pushed, and were unable to form healthy buds before winter. But this is contradicted by the history of the case. The affection has been observed for three years, and is on the increase. It appeared at first on a single bush only, but when this was rooted up, and another put in to supply its place, three neighbouring bushes in the following year were similarly affected. These also were removed and the soil taken out, and now there is scarcely a tree in the garden which is not more or less diseased, the greater part being quite useless. The new plant which replaced the first which was diseased, showed no symptoms of being affected the first year, but this year it is quite as bad as any tree in the garden.

All this seems to indicate that something must have been brought into the garden as manure, which does not agree with the trees. Should this be the case, it is not certain, even were the noxious matter ascertained, that the health of the trees would be recovered by the withholding of the particular ingredient in the manure, or that cuttings from them would not exhibit the same affection. We shall keep our eye upon the case, and with a view to doing so, we have planted those of the specimens which seem to retain the greatest degree of vitality, and if they take root, we shall hope to make our report next year. *M. J. B.*

—— THE HYACINTH bloom of the present season has been a very satisfactory one, if we may judge from the displays of this flower which have taken place at the metropolitan spring shows, with a result which places the two champion growers pretty much on a par. The favourite varieties of the past few seasons have kept up their character, and, as we have formerly observed, show clearly that there is an advance both in quality and variety going on even in this slow-paced flower—for slow-paced we must call it, when novelties take years before they can be bred in sufficient quantity to supply the demand which exists for them.

The season has contributed a fair quota of novelty, and although the institution of special classes for new sorts at the exhibitions, at least in their present restricted form, must be regarded as a failure, so far as regards forming a guide to the public in the selection of choice varieties, yet we are free to confess that good has, as it were, come out of the evil, by the drawing together of a considerable number of the newest sorts, such as might not otherwise have been seen, and certainly not in each other's company, and thus affording an opportunity for some competent tribunal—the Floral Committee for example—to pronounce an opinion upon their individual merits. It is when this opinion has been pronounced, not before, that the public get to learn how far the novelties of the year are acquisitions; and with this addition, we gladly accept the class as it now stands. We observe with satisfaction that at the recent shows the Floral Committee has gone a little out of its ordinary course, to pass judgment in this way upon the novelties brought together, and to mark the most deserving of them by some special award.

There is one thing however not to be overlooked in dealing with this question of new Hyacinths, namely, that if the individual plants submitted to examination—these being in the case of new sorts not very plentiful of course—are not quite up to the mark in respect to the age and stamina of the bulbs, there will be a corresponding falling off in the quality of the flowers which have to be adjudicated on. We think the fair inference from this is, that novelties which have not as yet come up to the required standard of merit, ought not to be entirely condemned until another opportunity at least of winning honours has been afforded to them.

With this consideration before us, we have to remark that the blooming season of 1864 has introduced to English gardens four varieties which may be pronounced to be of first-class character. We include in this number that named Lord Palmerston, although it was seen in 1863, for the subject of new Hyacinths had not then attracted much attention, and the variety was overlooked by many visitors to the shows. It proves, however, to be one of the best in cultivation—a veritable premier, the colour a sort of grayish blue shaded with purple, and having a light centre or eye, the spike at the same time being bold and well-proportioned, and the pips of fair size and of good form. Robert Fortune is another of the first-class sorts, not perhaps so perfect in respect to form and surface as the former, but of a perfectly new colour, and of more than average quality withal, the spike being well furnished, and the colour a kind of reddish pucy mauve, each segment of the flower having a darker stripe down its centre. Then King of the Blues must be regarded as a decided acquisition amongst the full deep clear blues, in which class there has long been room for some additions; it is bolder in character than Baron Von Tuyll, which, though a common sort, is one of the most generally useful blues we have; it is also a shade deeper in colour than that sort, altogether forming a very showy variety, which may be expected to take a prominent position hereafter. Another novelty, Thorwaldsen, has been placed in the first rank on somewhat different grounds; it is one of those with large bells in the style of Pieneman, and like all this race has a rather thin open spike, but then the flowers themselves compensate by their size and quality for their lack of numbers, and the segments are so smooth and broad that on these grounds alone it must be considered worthy of the honours accorded to it; the colour is a light and bright or azurean blue. To our mind some of these varieties with large well-proportioned pendent bells hanging somewhat thinly, not scantily, on the stem, have a more graceful and pleasing character than those in which the spike is crowded with showing bells indistinctly—though doubtless the well-filled spike is a necessity in the florist's view of the matter. To the foregoing must be added a couple of sorts which have been adjudged worthy to stand in the second rank, namely, Henrietta Elizabeth and Josephine. The first is a decided novelty, the colour being a delicate lilac, totally different from any of the colours with which we have been so long familiar in the Hyacinth family; the spike, as we have seen it, is but of moderate size, and the pips wanting both in size and breadth; but notwithstanding these drawbacks, we welcome it for the sake of the variety afforded by its colour. Josephine, too, is mainly desirable for its colour, which is one of the rich crimsons with which we have of late years become familiar; only in this the tube has a brilliant orange glow, which makes it specially attractive. Its defect so far has been thinness in the spike, but this may be from want of age and vigour. These half dozen new flowers form decided acquisitions.

Some few others which we have seen we regard as giving promise that they may improve on further acquaintance when older and stronger bulbs are procurable. Of these we may name Schwarzwald, a purple with pale centre; Die Jung Frau, a large-belled white; Lady Morgan, a glowing red; Dr. Lindley, a light lilac purple; Goertruida, a small flowered lilac; and Fanny, a reddish lilac with a bluish-lilac tube. We shall look out for these or some of them another year.

A little observation of an extensive collection of Hyacinths, such for instance as that of Mr. CUTBUSH, which we have been enabled to inspect leisurely within the last week or two will show that there are two divisions in which the varieties may be ranged, namely, those in which the flowers are smooth and even on the surface, and the parts more or less flat; and those in which the segments are pinched in and crumpled, more especially towards their tips. The quality of flatness is not indeed always equally marked, nor are all the smooth-surfaced flowers equally marked for the breadth of their segments, but more or less of flatness and of breadth are to be seen in not a few of the varieties. Now, although these peculiarities may sometimes be the result of external conditions, there can be no doubt that to a great extent they are inherent, and that, as in all other improved or improving flowers, the broader, the flatter, and the smoother the surface of their parts within certain limits, the more effective will they become. Instead, therefore, of inspecting Mr. CUTBUSH's collection with the object of picking out for commendation the newest sorts, or the brightest and most telling colours, which has been done before, we sought amongst the legion of varieties in bloom with the special object of selecting those with the smoothest and broadest limb-segments. Any one doing this would have found that the varieties having these features were much to be preferred to others in which they were wanting. Such features were found more or less strongly marked in the following sorts, which we therefore recommend to the attention of growers, namely:—Von Schiller, deep red, striped; Cavaignac, pink, striped; Le Prophète, pink, with dark stripe; Florence Nightingale, delicate pink, striped; Sultan's Favourite, delicate blush-pink, striped; Princess Charlotte, rose pink, with green tips; Macaulay, deep rose pink, pale centre; Ida, clear palish yellow; Charles Dickens, light porcelain blue, pale centre; Bleu Mourant, violet blue; General Havelock, dark violet purple—these being of the ordinary full-spiked medium-flowered series. We must add to them the following from amongst the large-flowered series in which the same desirable features were apparent, namely:—Pieneman, light azurean blue with paler edges; Leonidas, azurean blue with darker stripe; Thorwaldsen, light azurean blue; Grand Lilas and Couronne de Celle, light grayish blue; Madame Van der Hoop, Fair Maid of Denmark, and Queen of the Netherlands, pure white; and Elfrida and Voltaire, blush-white. As an illustration of the difference in the two series of varieties, we may instance Queen of the Netherlands and Paix de l'Europe, both of which appear at a distant glance to be pure white flowers of the finest quality, but while the former has smooth expanding bells, the latter has the segments incurving and crumpled, and is consequently less effective. Many of the older small pinched-up crumpled flowers might very well be dispensed with at once. And there is another series, represented by Seraphine, consisting of narrow-petaled ineffective flowers, which should follow them to the open borders if not to the refuse heap, for they are not worth growing in pots, least of all for exhibition purposes. We must reform our list of Hyacinths, and the materials for doing so are abundant.

—— WE understand that in consequence of the expiration of the three years' agreement between Mr. STANDISH and Mr. FORTUNE, the remaining portion of the valuable new JAPANESE PLANTS introduced by the latter gentleman, will shortly be disposed of at STEVENS'S Auction Rooms. Amongst them, we are told, will be included some of the most important novelties which have of late years been introduced to our gardens. Clematis Fortuni, the magnificent species with huge double white fragrant blossoms, represented in our last year's volume, is to be one of them. Clematis Standishii, too, which, with its profusion of deep rich violet purple flowers, Mr. FORTUNE describes as even finer than the other, is another of these rarities. Then there are the new Skimmias, fine free growing hardy evergreen bushes, taller in growth and more ample in foliage than the Skimmia of China with which we are now so familiar—one of them with great oblate red berries double the size of those of the common plant, and with broad laurel-like leaves and more conspicuous clear white fragrant flowers; the other even freer in habit though with somewhat narrower leaves, and greenish-white flowers sweet as Mignonette, but (the genus being polygamous) a male and unmated. Both of these are first-class evergreen shrubs independent of berries, which the first however produces freely. There are, too, several forms of Osmanthus ilicifolius, Holly-like bushes which during two winters have proved perfectly hardy, and are freer to grow than most of the Hollies themselves. Two or three green-leaved forms of this plant and as many with the leaves variegated will be welcome additions to our borders of choice shrubs. Then there is the stock of the male Aucuba, a plant which has attracted so much attention of late; and the new Forsythia Fortuni from Peking. But perhaps the most striking of all is Lastrea Standishii, certainly one of the very finest of all hardy Ferns—and we venture to call it hardy, for we learn it has endured without injury some 10 or 12 degrees of frost under glass. This Fern has large spreading fronds, much divided, and until they become aged, of a most charming pea-green colour; remarkable, moreover, for having its little pinnules themselves concave, while they are so singularly deflexed from the rachis that the branches of the fronds are quite convex.

These then are a few of the treasures which the auctioneer's hammer is shortly to disperse. There are many things of great horticultural interest besides those we have mentioned, all which, as well as the time of the sales, will no doubt be duly announced.

New Plants.

276. RHODODENDRON LINDLEYI, *Moore.*

A shrub apparently of dwarfish habit, with stiff erect branches; leaves (3¾ by 1½ in.) elliptic oblong, retuso-mucronate, somewhat narrowed and decurrent at the base, rigid almost coriaceous, slightly revolute, dark green opaque, and rugose without hairs above, glaucous and lepidoto-punctate with the nerves prominent beneath; flowers 5—6 in a terminal umbel, pure white, and of remarkably stout wax-like texture, with a strong aromatic and very enduring perfume; calyx divided almost to the base into five nearly equal membranaceous segments ciliated with fine twisted hairs, the two upper ones ovate-oblong, obtuse, and slightly larger, the rest oblong obtuse; corolla funnel-shaped, the broad tube (2½ in. long) 5-angled and deeply 5-pitted at the base, the limb (3 in. broad) of five rounded spreading lobes; stamens 10 about as long as the tube, the filaments hairy at the base, the anthers oblong; ovary 5-celled; style longer than the tube, with a large hemispherical obsoletely quinquangular stigma.

This very beautiful Rhododendron, which is now flowering for the first time with Mr. Standish, of Ascot, was raised by him from Bhotan seeds—a stray plant which has all along been observed to differ from other species now familiar to cultivators. It is evidently most nearly allied to R. Dalhousiæ, but differs in its altogether smaller habit, its smaller retuse foliage, and its smaller flowers, which are nevertheless about 3 inches across, and wondrously beautiful on account of the pure white waxy character of their corollas, which are entirely without stain except at the very base of the tube, out of sight, where there is a slight tinge of dull yellow. The flowers are also deliciously and most powerfully fragrant, the aromatic odour being very durable, and partaking of that of Lemons and Nutmegs. Combined with the neat habit above referred to, the large trusses containing some half dozen of such flowers, are very charming; indeed amongst all the fine additions made during the few last years to this noble genus, we have met with none more truly beautiful or promising to be more generally useful to cultivators, than that which forms the subject of this brief notice. *T. M.*

Epidendrum cnemidophorum (p. 292).—On the subject of this plant we have been favoured with the following com-

munication from Mr. Skinner:—"E. cneumidophorum is found at a very considerable elevation in the province of Quesaltenango. I met with it on the slopes of a deep ravine, growing amid a profusion of Ferns and Moss, and there attaining the height of 6 feet or more, but in cultivation it did not exceed 3½ feet. In this condition, however, it produced its finest flowers; some of the racemes borne by a plant in the garden of Donna Rafaela Jauregui de Machado (a great florist in Guatemala, to whom I gave it) not being less than half a yard in length! It was the gem of gems in my eyes, but the plant that flowered in the Donna Rafaela's garden, and from which the model was made, was not finer than the specimens just imported, and all of which are happily doing well."

ORCHARD MANAGEMENT.—No. IV.

The remarks at p. 215, in which it is recommended to plant the newly trenched ground with Potatos the first summer, are based on the supposition that it is intended eventually to lay the orchard down in Grass; but for the first few years after planting, it will be more desirable and profitable to crop the intervals at a certain distance from the stems of the trees, say for example, five feet to commence with, that distance to be increased a foot or so every year, until it is finally laid down. If the orchard is attached to the garden, the gardener will find these spaces useful for almost any kind of kitchen garden crop, which will come very fine in a fresh soil if the quality is pretty good. On the other hand the tenant farmer may crop the intervening spaces with Carrots, Mangel Wurzel, Onions, Turnips, or Potatos, each and all in rotation; but on no consideration would I sow corn or Pulse, unless the distances between the trees were very wide indeed, so that ample space around each tree might be left uncropped.

I must further observe that my object in recommending this course of cropping is because both in the farm and garden these latter crops require a most liberal supply of manure, and constant and careful cultivation, to obtain a remunerative produce; and if this cannot be afforded it would be better to sow Grass seeds after the second year, because to crop longer than that without returning ample supplies of manure to the soil would deprive it of a large amount of nutritive matter, which would tell very much against the welfare of the trees in after years, and require an infinitely greater amount of top-dressing than would otherwise be necessary. But when good cultivation and liberal manuring are combined, the land can very well afford to throw up a superior produce, and at the same time leave the soil in a fine condition for the ingress of the roots of the orchard trees as soon as they are strong enough to take advantage of it, which under liberal treatment will generally be in the fifth or at the most the sixth year after planting. This indeed is quite as long as such a system of manuring ought to go on, otherwise the soil will become assimilated to the condition of old garden soil, which is not particularly favourable to the healthy growth of fruit trees. At the end of that time, therefore, it will be advisable to level the soil perfectly, afterwards to roll it down firmly, and at the proper season, say the end of March or early in April, to sow the finer kinds of meadow Grasses, which may be slightly raked or harrowed in, the surface being again rolled down firm—very firm; for I have often observed that Grass seeds appear to come up stronger and become established much sooner on firm ground than on that which is left looser; an idea which any intelligent practitioner may apply to more cases than that of Grass seeds.

I have followed out this train of reasoning up to this point because it is all connected with the management of the soil; but I must now return to that point where the soil was prepared for planting the trees, about which I have something more to say. Before, however, we can plant, we must have trees to plant; and this opens up some questions of very great importance in the culture of fruit trees of all sorts on free stocks, and in which a vigorous and healthy development is the object aimed at. These questions are, first, the preparation of the stocks for grafting, and secondly, after grafting, the preparation of the trees for planting. In the first case the roots are the parts subjected to control, direction, and encouragement; and in the next, the stem and branches.

Now as these two operations are a work of time, it will be necessary for all who desire to have for planting such trees as ought only to be planted in orchards where the expense has been incurred of carrying out the above routine of preparation of the soil, to commence the preparation of them some six or seven years before they will be required.

This is a subject which I am strongly inclined to believe receives but very indifferent attention on the part of the great majority of those who are supposed to supply orchard fruit trees eligible for planting. They of course are not to blame for crowding as many trees on their ground as they can possibly get to grow, and find a sale for, such as they are. The fault lies with the planter who does not demand a superior and highly finished article, being willing to give a correspondingly higher price for it, rather than rest satisfied with an inferior tree at a lower price. For example, a purchaser considers himself very well treated if he gets four fine healthy-looking young standard Apple trees for 10*s.*: and yet, looking at the treatment which such trees are unavoidably subjected to, it would answer his purpose far better, and be infinitely cheaper in the end, for him to give 10*s.* or even 12*s.* for one tree, carefully prepared for the object in view, and requiring very little after management in the development of the branches. In the former case—that of four trees for the money—they are like young cubs, and have to be cut, and hacked, and tutored into shape, which is a work of time, and would be far better performed on other ground than that where they are to be permanently fixed. Most persons when planting an orchard of Apples make up their minds to wait some years before they can obtain a remunerative crop; but if by a more rational and careful management of the trees, that interval can be considerably shortened, it is obviously very bad economy not to take the extra care necessary. If they are neither able nor willing to undertake the labour of preparing their own trees, I have no doubt but those whose proper business it is, would be only too glad to do so, if only there was a demand, which, as I before observed, depends upon the planter.

In the mode of preparation to which I am now about to draw attention, the foundation of all is emphatically the stock, and on its careful selection and treatment future success depends. In the case of the Apple, to which I am now more particularly alluding, it is necessary that the stock should be of a vigorous habit both in root and branch. The best are those which are grown from the pips of Apples, either taken from the hardiest and strongest growing garden varieties, or the more vigorous of our common English wild Apples. These should be sown in beds, in a similar manner to beds of Thorn Quick, and not too thickly, so that they may be allowed to stand in these beds until they develop their character—that is, till a goodly number of sturdy fellows take the lead, and thus keep the weaker ones in the background. These sturdy plants are the stocks to be selected for future operations. After their removal, some of the weaker ones may grow out to be eligible for another season, but as a general rule the first will always be best for large orchard trees, and the remainder will be most suitable for dwarfs and espaliers, which, having less space to fill up and being necessarily restricted in their growth, will require less manipulation when worked upon slow growing stocks.

In this early stage of preparation of the stocks, the leading shoot should be shortened to about a foot in length, after which the branches should be left to develop themselves freely, in order to encourage both the constant formation of roots, and a rapid increase in the size of the stem. At this stage also it is highly important that the operator should pay particular attention to the roots, because it is quite as important that endeavour should be made to cause them to radiate equally from the stem, as it is to cultivate a nicely balanced head; and it is at this stage of transplanting from the seed bed that this operation must be commenced by cutting off the tap root (straight through, not transversely) at that part where a number of small rootlets spring out from the upper part of the main root just below the surface of the ground. It is necessary to be very particular in this; however tempting the rootlets below may appear, or however unpromising those around the collar, the latter must be retained and encouraged, and the former ruthlessly removed by a clear horizontal cut through the main root.

It will be readily perceived by any practical operator, that the object is to give a lateral direction to the future root stems—if I may so designate those large roots which spring from the collar of the plant, and which are the channels through which the reciprocal action between the roots and branches is to be carried on; and as these should be equally distributed around the stem, and at the same time kept as near the surface as possible, the present is the time in their growth when the foundation should be laid for that object, by following out the above practice. I do not say but that it may be done later, but then the loss of much time, which is bad economy, is entailed.

The stocks thus prepared should be planted in beds, in rows three feet apart, and the plants two feet apart in the row, and placed quincunx fashion. The beds should be prepared by previous trenching and pulverisation, and then trodden down firmly and raked level; the plants should then be taken and placed in position, care being exercised to spread the young rootlets out equally on the flat surface, and then the whole should be covered to the necessary depth with a friable loamy compost, which should have been previously prepared. This mode of planting is infinitely preferable to that of digging out small holes and "sticking the plants in," as it is called. *John Cox.*

THE ROSE BALL.

The Senateur Vaisse sent out his cards
For a grand Rose ball one summer night.
Thousands of glow-worms far and near
Silver'd the Grass with their mellow light,
Where throng'd sweet Roses of every hue,
Hardy and delicate, old and new.
The splendid General Jacquéminot
Was clad in his richest scarlet coat,
Gem of the garden and King of the show;
His state and bearing his rank denote,
And his faint sweet breath seemed ever to sigh,
Is there any here so handsome as I?
There was the Géant, bright and true,
And brave Lord Raglan's matchless leaf,
Eugène Appert with his rich, false bloom,
Marengo vivid, but all too brief;
Prince Léon, stately and passing gay,
And the splendid Glory of Santenay.
With a mincing air came Chabrillant,
And the ample skirts of pale Vidot,
The powder'd and rouged De Malmaison
Exhaling an odour of Rotten Row—
And sweeter and comelier far than these
The pink complexion of fair Louise,
Acidalie—"call her fair, not pale,"
With the handsome face of Paul's Victoire,
Miss Gray, who is hoarding her wealth of gold,
And the weather-beaten but glorious Gloire,
Niphetos, as white as a ghost in her pall,
And Devoniensis, the best of all,
The sweet Furtado, as good as sweet,
Patrizzi, brown'd with the sun's hot stroke.
The fainting Virginal trembled there,
And dark Prince Noir in his velvet cloak,
Bold Anna Diesbach with her robe thrown loose,
And Anna Alexieff prim and spruce.
But one in a corner by chance I spied,
Blushing apart from the beauties gay,
The rain drops coursed down her glowing cheeks,
And no one was near to wipe them away—
Yet loveliness clearer from fault or flaw
Nor poet can sing nor artist draw,
Those nestling charms—that deepening hue—
From the pale clear lips to the rich bright bloom,
Where its innermost glory is hidden close
In the secret haunt of its fresh perfume—
And the delicate stooping graceful form
That shakes in the stillness and bends in the storm!
"Oh! tell me," I cried, "what sorrow is this—
That far from the sisterhood here you pine,
Wasting away, in your lonely grief,
Charms so tender, and shape so fine?
In vain would sympathy hazard a guess
At the secret cause of this strange distress."
"Stranger," she murmured—her voice was low,
Like the soft west wind on the growing Grass;
"My race and its glories have passed away,
For life is cruel and fame must pass.
Few, ah, how few! of a numerous band,
Poor perishing outcasts, the time withstand.
Poor Magna Rosa has left us now,
We shall see her no more on the dewy walk.
Blairi, Brennus, and Paul Ricaut,
Of their new successors they daily talk.
And of me, too, soon they will laugh and say,
We have found us a better than Coupe d'Hébé.
To sleep the sleep where my sisters lie,
Is a better chance than to linger here,
A gazing stock for the curious eye,
And a target for envious taunt and sneer.
For Beauty is slighted where fashion goes,
And I—I am only a Summer Rose!"

Think of it, think of it, maidens fair,
Just shooting up into womanly grace;
And feeling the strength of the charm that lies
In the mute appeal of a lovely face.
The tide that has turn'd ne'er backward flows,
And beauty is only a Summer Rose!

W. P. L.

NOTES ON GARDENS.—No. VII.

Dalkeith.

The visit to Edinburgh of a professional son of Adam—no matter what his specialty—without having a look at Dalkeith, would too much resemble the rustic's day at "the house that Fowke built," minus a gaze down the nave from Minton's fountain. And so on a brilliant afternoon I popped out to Dalkeith on a very ricketty sort of railway, found the guiding mind from home, and began a rapid walk round the place, beginning at Mr. Thomson's house. The gardening visitor does not proceed far from that point ere he halts, as a view more interesting to him than the bay of Dublin, the bay of Naples, or any such famous scene, is stretched before him. It is the horticultural wealth of Dalkeith nearly all pictured on one page, with its rich and deep margin of well-arranged colour—streets of glass with brilliant and nobly diversified surroundings, which, again drawing on the "International" for a simile, I may compare from a horticultural point of view, to the scene which spread out from beneath the great dome. Range after range of symmetrical and bright perfect-looking houses, furnish glass enough to justify the comparison, while the colour was "all there" and no mistake, produced by 50,000 little dyers, and arranged by Mr. Thomson with all the skill of a Crace. Having concluded my wondering gaze, I descended into the great "square" kitchen garden, began the houses, and, there being nearly a mile of them to do, the examination was a quick one.

The first house passed through was one devoted to Apricots, more than 200 feet long and about 8 wide, the trees being trained on wires against the back wall, and a row of Pears in pots plunged in the border in front, with a cast-iron path within 18 inches of the back wall. Ventilation is given at the top by a short sash moved by a lever, and in front a small upright sash is instantaneously moved by the same means. The house seemed to be comparatively new, and very perfect in all respects. In it good crops of Apricots are obtained a month earlier than they are ripe out of doors. The covered Peach wall is of similar construction to the last mentioned, and the trees are also trained on the back wall; but Plum, Peach, and Cherry trees are trained up the front as high as they can be without intercepting the sun's rays from those on the back wall. No fire heat is used in either of these fine houses. I learnt that more than 200 dozen Peaches and Nectarines were gathered from the last-mentioned house during the season.

I passed on through the Vineries used for early work—houses of Black Hamburghs, Muscats, and of mixed kinds, having their borders heated and aërated, into a large stove, where Musa Cavendishii is regularly fruited for table; and from it proceeded onwards through the New Holland and three Peach houses, into a Vinery 110 feet long and 11 wide, chiefly planted with Lady

Downes' Grape, bearing a very heavy crop, but having also Vines of Snow's Muscat Hamburgh, inarched on the Black Hamburgh, and bearing bunches weighing nearly 6 lb. each. On again through an aquatic house with the Victoria, into an orchard house 70 feet long and 22 feet wide, well filled with healthy plants; and from that into a ridge-and-furrow Camellia house, 66 feet long and 24 wide, the plants large and in fine condition. Next, the Heath house, a large half-span structure, with a collection of big Heaths, very creditably done. A new half-span Pine pit was in course of erection, with all the best appliances, and about 200 feet long.

The remainder of the Vineries, Pineries, French Bean and Strawberry houses, Cucumber, Melon pits, &c., I had only time to cast a glance over before going to a distant part of the demesne to see the "Circular Conservatory," an elaborately ornamented and costly structure, containing Palms, medicinal plants, and a mixed collection of stove things, thence returning to make a few notes on the ribbon borders. These were certainly more effective than any I had seen elsewhere, and presented a very desirable deviation from the ordinary mode of "ribboning" by the judicious use of that fine plant, Centaurea ragusina, which I believe Mr. Thomson was the first to bed out extensively, about 200 plants of it having been annually used in the bedding out at Dalkeith for the past five years. There is strictly speaking no flower garden, though the vast borders which run along the sides of the "square" garden, and in front of the great ranges of glass, make a display of the fashionable stamp which it would be difficult to parallel in the greatest bedding-out places. But the beauties of the bedding system as seen at Dalkeith, do not arise from the opposition of the primitive colours; only one large border being given up to the red, blue and yellow, and that border was in my opinion the least beautiful of the lot. Some very conspicuous spots about London are planted year after year with the primitive colours, but I am convinced that were one of Mr. Thomson's displays seen in juxtaposition, a change would soon result. The system of ribboning at Dalkeith may be now well known and used in the North, though on a smaller scale, yet it may be useful to the Southerner if I describe some of the more important borders; first noting that some of the squares in and beyond the central kitchen garden were margined with a broad belt of Mignonette, and beyond it a strip of Red Beet, which did its work well as a fine-leaved plant. There were borders shaded and "shot," looking very pleasing, but perhaps the most effective display of all was in front of a range of glass 420 feet long, running its whole length, and planted in the following manner. Between the glass and first row of plants was a strip several feet wide, unplanted; then two rows of Scarlet Pelargoniums, the first Shrubland Rose, and second Sutton's Dwarf Scarlet; the next and third row was Purple King Verbena; the fourth, Alyssum maritimum, and then came a grand panel running the whole length, and—speaking from memory—about 8 feet wide, planted with Lobelia speciosa and Gazania, mixed up, one plant of the latter to three of the former; and along the centre of the panel, at about 10 feet apart, fine single plants of Centaurea ragusina; then another line of Alyssum as at the back of the panel; in front of this a wide strip of Lady Victoria Scott Verbena, one mass of crimson scarlet; and between it and the Box edging 6 inches of Cerastium tomentosum. Lady Victoria Scott is a fine Verbena, used with great effect in most of the compositions at Dalkeith.

On the other side of the wide walk fronting this grand border was another vast ribbon of equal length, and nearly equal breadth. [It began with a line of Cerastium, then a broad belt of Purple King Verbena, nearly as wide as the opposite one of Gazania, Lobelia, and Centaurea, and along the centre a line of little squares of Calceolaria aurantia multiflora, about 3 feet across and 10 apart in the line, opposite the single plants of Centaurea on the other side. Behind this a row of Alma Variegated Pelargonium, followed by one of Commander-in-Chief Pelargonium, then a line of Standard Roses and Gladioli mixed, and backed by a dwarf Box hedge to shut out the vegetable ground.

Another fine border, 460 feet long, had single plants of Centaurea at intervals along the centre, surrounded by a band of Lobelia speciosa, encircled by a chain of white gravel walks, the intermediate space on the side of the houses being filled with Pelargoniums, shaded off from Trentham Rose to Brilliant, and in front Lady Victoria Scott, with a line of Cerastium between it and the walk. Again, another great Centaurea-varied border, beginning with Variegated Mint, backed by a great belt of Miss Hamilton Scarlet Verbena, with plants of Centaurea along the centre; and further on a row of Purple King, then one of Calceolaria aurantia multiflora, backed by a line of Dahlia Zelinda and Calceolaria amplexicaulis, planted alternately.

The mixture of Gazania and Lobelia in the first described border, aided by the bold outline of the Centaureas, which quite relieved the picture from any appearance of monotony, was the most pleasing bedding composition I have yet seen. Had time permitted it, I would have much enjoyed a ramble through the large fruit and kitchen gardens, with a dive into the Mushroom houses and forcing recesses; but so much has been told of Dalkeith in the "Book of the Garden," and "Thomson on the Vine" has so fully informed the gardening world of the Grape culture so largely and successfully pursued there, that probably any notes I might have collected would have been twice told. Indoors and out, every spot of the place which I saw, was in the most perfect keeping possible. *Wm. Robinson.*

Home Correspondence.

Two Days' Shows.—In consequence of the intention of the Royal Horticultural Society to hold a two days' show consecutively, the exhibitors have thought it necessary to petition against that intention. The exhibitors think it necessary for the information of all interested in the shows, that the petition should be published in your Paper, if you would kindly oblige them. *Geo. Baker.*

"To the Council of the Royal Horticultural Society of London.

"We, your petitioners, most humbly beg to inform you that in consequence of the schedule of the Royal Horticultural Society containing two days' Exhibition consecutively, we regret we cannot, out of justice to our respective employers, advise that their plants should be shown, our former experience having convinced us that the exposure on the second day materially injures the plants, especially those of the Orchids and stove plants generally. That the time occupied by the second day doubly detracts from our daily pursuits consequent to our employment; that the expenses attendant upon taking our productions to and from the exhibitions, coupled with our personal expenses, are double those of one day's show. We therefore pray that you will take these our grievances (which are obvious to every practical exhibitor (into your serious consideration, and rescind your second day's show. It having come to our knowledge that you purpose lighting the conservatory with gas, we beg most respectfully to inform you that after one day's exposure in a dry hot atmosphere, the vapour from gas would be decidedly injurious to plants. (Signed) Geo. Baker, Gr. to A. Basset, Esq, Stamford Hill; J. Wheeler, Gr. to J. Phillpot, Esq., Stamford Hill; C. Penny, Gr. to H. H. Gibbs, Esq., Regent's Park; J. Cross, Gr. to Sir F. Goldsmid, Regent's Park; B. Peed, Gr. to Mrs. Tredwell, Lower Norwood; T. Page, Gr. to W. Leaf, Esq., Streatham Common; C. Smith, Gr. to A. Anderson, Esq., Norwood Grove; J. Green, Gr. to Sir E. Antrobus, Bart., Lower Cheam; H. Chilman, Gr. to Mrs. Smith, Ashtead House; W. Kaile, Gr. to Earl Lovelace, East Horsley Towers; R. Baxendine, Guildford, Surrey; J. Wiggins, Gr. to W. Beck, Esq., Isleworth; J. Smith, Gr. to his Grace the Duke of Northumberland; W. Taylor, Gr. to J. Yates, Esq., Lauderdale House, Highgate; W. Young, Gr. to R. Barclay, Esq., West Hill House, Highgate; J. Weir, Gr. to Mrs. Hodgson, The Elms, Hampstead; W. Milford, Gr. to E. McMorland, Esq, Hampstead; T. Bailey, Gr. to T. T. Drake, Esq. Shardeloes, Amersham; J. May, Gr. to J. Butt, Esq., Arle Court, Cheltenham; R. Bullen, Gr. to A. Turner, Esq., Bow Bridge House, Leicester; W. May, Gr. to J. Spode, Esq., Hawksyard Park, Rugeley, Staffordshire."

Wild Plant Distributing.—I have read with much interest the remarks of your Correspondents respecting prizes for collecting wild flowers. All of them condemn the practice—and seem agreed in thinking that our flora is in some particulars scanty. If that therefore is the case, cannot we do something towards increasing it? Why should every crevice in our old chalk pits not teem with flowers of the beautiful Centranthus ruber and its white variety, and Echium vulgare, and dry and sandy places have a plentiful supply of White and Purple Foxglove? Other places too might be furnished with the flowers of Medicago lupulina, M. sativa, Stellaria Holostea, Prunella vulgaris alba, and scores of other things not less beautiful. All that is needed to accomplish this, is simply for lovers of wild flowers who reside in different parts of the country to correspond one with another, and circulate lists of such plants as may grow in their particular districts. For example, suppose I was to receive such a list from some one 150 miles away, and learned from it that no Foxgloves grew there. What would be easier than for me to gather a few hundred seeds and send them through the post for a penny? Further, what could prevent him or her, as the case might be, from sowing them in some waste place, and returning seeds of anything that did not grow in my district, care always being taken to sow the seeds where they would do no harm to crops, hedges, or the like? Should you be disposed to favour this scheme I will forward you my name and address, furnish a list of plants to any applicant, and send and receive seeds in the way just indicated. *Vide, Hull.*

Exhibiting Orchids.—As the time for exhibiting these is at hand, I beg to offer a few remarks upon the way in which we often see them shown. I allude to the practice of making up specimens by putting a number of plants of any particular variety in the same pot merely for the occasion. Any one acquainted with those matters must have noticed at many of the principal shows, both in London and other places, that this practice is frequently resorted to, and I consider it anything but fair. An exhibitor doing the same thing with any other class of plants would be sure to be disqualified as soon as detected, and deservedly so. I maintain, therefore, that the same rule ought to be applied to Orchids. I fancy I hear some of the make up gentlemen say, "Oh, but you can't make the rule absolute with regard to Orchids; for some growers run the knife through their plants, to induce the back bulbs to break without further disturbing the plants; and in that case a number of plants in the same pot is the result." I do not, however, find fault with this so long as all have been grown in the same pot, and this is easily discovered by any one experienced in Orchid culture. What I allude to is the practice of making up specimens a few weeks or in many cases a few days before exhibiting them; in that case, instead of rewarding the best grower, the prize goes to the man who commands the longest purse. *T. Baines, Gr. to H. L. Micholls, Esq., Summer Field, Bowdon, Cheshire.*

Lily of the Valley.—I beg to forward a couple of pots of this favourite Lily, of which I have had similar plants in flower ever since the third week in January. Those started in November pushed flowers only, and few of them. My employer is of opinion that Neapolitan Violets, Mignonette, Roses, Lilies of the Valley, and Stocks, as pot plants, are a class of things much neglected by gardeners in general, and he hopes to see prizes offered for them by our great metropolitan societies. I had 32 pots of Lily of the Valley at the Regent's Park show on Saturday last, similar to those now sent, and the Judges awarded them a Bronze Medal, which did not clear my expenses in taking them there. *W. Howard, Gardener to James Brand, Esq., Bedford Hill House, Balham.* [The plants sent were beautiful examples of skilful cultivation, charmingly bloomed, and deliciously fragrant.]

Influence of the Moon.—I shall esteem it a favour if you will allow me to say that I shall be greatly obliged to any of your readers who may furnish me with information relative to any real or supposed influence exercised by the moon on vegetation. *G. L., 13, Roman Road, Barnsbury, London.*

Death of Mr. Andrew Stewart.—I desire, with your permission, to inform your readers of the departure from amongst us of a highly successful gardener, and a very worthy man. Mr. Andrew Stewart, who died at Chatsworth on Sunday last, was, I doubt not, well known to many of your readers, and I cannot let this event pass without expressing my personal respect for his character. He came to Chatsworth about 37 years ago, and had charge of the kitchen gardens under my direction for many years. He was most successful in the cultivation of fruit, which was so well known that he has been invited for some years to officiate as a judge of fruit at the best London Shows, and he was much respected by everyone acquainted with him. Since the death of the late Duke of Devonshire, Mr. Stewart had sole charge of the Chatsworth fruit and kitchen gardens, which he has maintained in the high state of efficiency so well known. He understood and spoke the French language, and had visited some of the best gardens on the Continent. His strictly moral habits and extensive reading eminently qualified him for taking up new ideas and improving upon the art of gardening as practised in his youth. My regard and esteem for his integrity has constantly increased with my knowledge of him, and I am sure all who knew him will feel with me the loss to the gardening world of a man so exemplary in every relation of life. *Joseph Paxton.*

Societies.

Royal Horticultural: *April* 5.—W. Wilson Saunders, Esq., F.R.S., in the chair. On this occasion the following candidates were elected Fellows, viz.:—Miss Anstey, D. Copland, Esq.; A. Cowan, Esq.; Mrs. Crawford, Mrs. Flockton, Mrs. Hadfield, J. Haig, Esq.; R. Hall, Esq.; C. Mohr, Esq.; W. Nicol, Esq., M.P.; G. Plucknett, Esq.; Mrs. G. Robinson, W. Shairp, Esq.; Earl of Sheffield, Mrs. Stephens, Madame Richard de Valmency, Mrs. Watts, Mrs. Manuel, and Mrs. George Seymour.

Royal Botanic: *April* 9 (*Second Spring Show*).—Hyacinths and Tulips were plentiful on this occasion, and there was also a capital display of other early flowering plants.

Azaleas.—Of these some finely flowered examples were shown, especially by Mr. Turner, who furnished neatly trained pyramidal specimens of Criterion, Conspicua, Prince Jerome, Beauty of Reigate, Illustris alba, and General Williams. Among other kinds from the same exhibitor, were also Queen Victoria, Sir J. Outram and Duc de Nassau.

Of New Varieties Mr. Turner had President, rosy salmon; President Claeys, pale salmon with white margin; and Perfection, rosy crimson spotted. Messrs. Lane had Reine des Blanches, white; Comte de Hainault, rosy salmon, much spotted; and President Claeys. Messrs. Smith sent Flag of Truce, one of the best double whites; Prince of Orange, glowing salmon scarlet; Prince Albert Victor, semi-double red; and Excelsior, a finely-shaped deep rose; the last receiving a First-class Certificate. From Mr. Bull came Hortense Vervaene, delicate salmon spotted with crimson; and Alexander II., a good white. A First-class Certificate was awarded to Messrs. Ivery for Fascination, a charming rosy-pink kind, spotted on the upper segments and boldly edged with white, quite a novelty.

Awards.—6: 1, Mr. Cross; 2, Mr. Todman; 3, Mr. Young. *Nurserymen.*—6: 1, Mr. Turner; 2, Messrs. Lane; 3, Mr. Bull. *New Kinds.*—1, Mr. Turner; equal 2, Mr. Todman and Messrs. Lane; 3, Messrs. Smith.

Cinerarias.—Conspicuous among these were Lord Elgin, Duke of Cambridge, and Perfection. Rembrandt, a mulberry-crimson seedling from Messrs. Smith, received a First-class Certificate; and A. Potts, Esq., Hoole Hall, Cheshire, had a Second-class Certificate for Magnifica, a very large crimson. A similar award was also made to Satisfaction, a white kind with dark centre, and broad edging of rich crimson, from Mr. Lacey.

Awards.—1, Mr. James; 2, Mr Marcham; 3, Mr. Lacey.

Amaryllis.—A small group of these, finely in flower, came from Mr. Williams, of Holloway.

Begonias.—These consisted wholly of variegated-leaved kinds, among which little novelty was observable.

Dutch Flowering Bulbs.—Large collections of these were again furnished by Messrs. Cutbush and Mr.

Wm. Paul, to both of whom 1st prizes were awarded for Hyacinths and Tulips. The day being bright the latter opened rather too freely.

Miscellaneous Plants.—Among these were Boronia pinnata, Eriostemons, one or two Camellias, Azaleas, Maranta zebrina, Pandanus variegatus and elegantissimus, Latania borbonica, Gleichenia Speluncæ, and Dicksonia antarctica; also Vanda suavis and Crotons. Thirty-two potfuls of Lily of the Valley, finely grown and beautifully flowered, were shown by Mr. Howard, gr. to J. Brand, Esq., of Balham, and received a Bronze Medal.

Awards.—Equal 1, Mr. Williams and Messrs. A. Henderson; 2, Mr. Bull; equal 3, Mr. Cross and Mr. Young; 4, Mr. Treen.

Roses.—These, both cut and in pots, were in excellent condition. Among them were charming examples of John Hopper, Lord Clyde, Senateur Vaisse, and Celine Forestier, the last very attractive on account of its clear yellow colour.

New Plants.—Among these was the variegated variety of New Zealand Flax from Mr. Williams, who received a First-class Certificate for it; and from the same exhibitor were plants of Sarracenia Drummondi, flava, and purpurea; Cypripedium Lowii, and other plants. Mr. Bull also sent a collection, in which, besides plants referred to in previous reports, were Gymnostachyum Verschaffelti, a pretty red-veined leaved plant, to which a First-class Certificate was awarded, as it proves decidedly different from Eranthemum rubronervium, with which it had been thought to be identical; and Lilac Dr. Lindley, a new continental variety with large almost white flowers, which received a Second-class Certificate. Genista Everestiana, certificated a year or two since, came from Messrs. Low, of Clapton, who also sent Erica Halfordiana, a pretty salmon rose-coloured kind of the aristata set, which received a Second-class Certificate.

A plant of the Australian Grass Tree, just received from the colony, is flourishing in the Conservatory; and a fine specimen of Agave yuccæfolia is showing flower.

Botanical of Edinburgh: *March* 10.—Prof. Balfour in the chair. Various donations to the Library and Herbarium were laid on the table. Mr. James Williamson was elected a resident Fellow. The following communications were read:—1. "Researches on Hybridity in Plants," by M. Ch. Naudin; translated from the French, and communicated by Mr. Geo. May Lowe. This communication was a continuation of one read at a former meeting. The subjects considered were—1. The return of hybrids to the specific forms of the producing species, and the cause which determines this return. 2. Exceptions to the law of return of hybrids to the parent forms. Do certain hybrids become fixed and give rise to new species? 3. Is there any precise limit between hybrids and crosses? 4. What is a species, race, and variety? 5. Can artificial hybridisation furnish a mark to determine what it is proper to distinguish as a species?——2. "On the Chemical and Natural History of Lupuline," by M. Personne; translated by George Lawson, LL.D. Dr. Lawson remarked that, considering the great importance of the Hop in an economical point of view, we might expect our scientific and manufacturing works to contain a somewhat satisfactory statement of the chemical products of the Hop, and of the nature and development of the remarkable organ by which these products are secreted. This, however, was far from being the case. "I have therefore," he remarked, "thought that a translation of M. Personne's Memoir might not be without its use. In some of its bearings, the subject is of much interest in a strictly scientific point of view. It is obvious, likewise, that an acquaintance with the chemical properties of lupuline is important, not only to the brewer, but to the Hop grower, the exporter, the manufacturer of Hop-extract, and indeed to every one who has to handle an article so prone to change its character, and consequently its commercial value, from apparently trifling causes. The Canadian brewers having a favourable grain market, and an unlimited supply of excellent water in the great lakes, almost entirely devoid of organic matter, have the means of manufacturing excellent beer. But much of the Hops used requires to be imported from England. Canadian Hops are grown to some slight extent at Kingston, more abundantly about Picton and Belleville, C. W., and especially farther to the westward; but the best qualities of Hops are always imported." According to M. Personne the cones of the Hop employed in therapeutics, and especially in the manufacture of beer, owe their properties to a multitude of yellow corpuscles, resinous and odorous, which are separated very freely in bruising the ripe and dry cones. These small bodies have been successively called by the names of lupulin, lupuline, and lupulite. It is to these that the Hop owes its bitter and aromatic flavour; for if the scales and the fruit are deprived of this yellow powder, the cones lose those properties on account of which they are sought after. In 1822, MM. Payen and Chevalier made the most complete chemical analysis which we have of this substance. They demonstrated the complex nature of lupuline, and, consequently, the error of Planche; but the small quantity of substance upon which these chemists worked did not permit them to study sufficiently well the bodies which they had obtained from it. Lastly, in 1827 M. Raspail published, on the organisation of lupuline, the unique work which exists on this subject. That author sought to demonstrate the analogy of this body with the pollen, as much by the investigation of its structure as by that of the action which the various solvents and chemical reagents exercise upon it. He designated it under the name of pollen of the foliaceous organs, "because its office," said he, "is to fecundate the bud, just as that of the pollen of flowers is to fecundate the ovary." (!) Dr. Lawson then considered the structure and development of lupuline and its chemical history, noticing the volatile acid, the volatile oil, and resinous matter of lupuline, and gave a full account of their chemical qualities. The paper was illustrated by drawings of lupuline, and a series of specimens from the Industrial Museum, exhibited by Professor Archer.——3. "Remarks on the Sexuality of the Higher Cryptogams, with a notice of a Hybrid Selaginella," by Mr. John Scott. In this very curious paper the author details a series of experiments made in the Botanic Garden of Edinburgh with species of Selaginella, in which he endeavours to show that a hybrid form was produced between S. Martensii and S. Danielsiana by applying the microspores of the one to the macrospores of the other. He found that the macrospores did not germinate unless the microspores had been applied. Specimens of the hybrid form, as well as of the parent species in a living state, were exhibited.——4. "Abstract of a paper on Gymnospermous flowers." By A. W. Eichler; communicated by Prof. Balfour.——5. "List of Fossil Plants found in the Tertiary Strata in the South-east of France," by Gaston de Saporta; communicated by Prof. Balfour.——6. "Notice of Plants at present in flower in the open air at the Royal Botanic Garden," by Mr. M'Nab. Of the 35 species and varieties of spring flowering plants recorded at a former meeting as being in bloom during the month of December, 1863, only 15 are now to be found in flower—viz., Eranthis hiemalis, Helleborus abchasicus, (abascius, A.Br.) olympicus, and purpurascens, Hepatica triloba, Arabis albida, Petasites nivea, Erica herbacea, Gentiana acaulis, Primula elatior (var.), and vulgaris, Corylus Avellana, Sisyrinchium grandiflorum, Galanthus nivalis, and Crocus susianus. From 1st January to this date, four species have only been added to the list, viz.:—Nordmannia cordifolia, Galanthus plicatus, Leucojum vernum, and Crocus vernus, making in all 19 species in flower at this time. Out of the 19, only 9 species are in full bloom—viz., Eranthis hiemalis, Helleborus abchasicus, olympicus, and purpurascens, Corylus Avellana, Sisyrinchium grandiflorum, Galanthus nivalis and plicatus and Crocus susianus. The first blooms of the Snowdrop were open at the end of December, 1863. It has been much retarded by the late inclement weather, and it is only now that we see the plant in full flower. This remark is also applicable to the Crocus susianus, which opened its first blooms towards the end of December. The Crocus vernus and its varieties are only now showing flower buds, except in warm sheltered borders, where the flowers opened on the 16th of February. Last year the first flowers of the Ribes sanguineum were open on March 2; at this time it has scarcely commenced bursting its buds. The Narcissus pumilus was in flower on March 8; it is only now pushing through the ground. The Erythronium Dens-canis was in bloom on 4th March; it is only now breaking the surface soil. The same remark applies to Puschkinia scilloides, which was in flower last year on 9th March. The Crown Imperial was in flower last year on 22d March, the flower-stems being then 3 feet high; it is only 4 inches through the ground at this date.——A specimen was exhibited from Dr. Bowen, of what the natives of Peru call Huanarpo. It was gathered on the sides of the Andes, and is said to be a strengthening and stimulating plant well known to the natives. Dr. Bowen believes it to be Jatropha podagrica. It is found in Lima, New Grenada, and Peru, and belongs to the natural order Euphorbiaceæ. The stem of the plant has remarkable discoid pith.——Dr. Richard de Gambleton Daunt sent specimens of a plant called at San Paulo, Brazil, Perovinha do Campo, which is used there as an article of materia medica. Professor Oliver has compared it with specimens in the Kew Herbarium, and finds it to be Pterolobium elegans of Vogel, a leguminous plant belonging to the Cæsalpinieæ. It has a remarkably corky bark.——Professor Balfour noticed a prize offered by the Royal Academy of Science of Prussia for an essay on the mode in which the two kinds of silicic acid contribute to the nourishment of plants. The prize to be awarded in 1866, and the essays to be in German, Latin, or French.——Printed copies of the conditions of prizes offered by the Royal Horticultural Society, South Kensington, for county collections of dried plants, were laid on the table.

Reviews.

Species Filicum: being Descriptions of all known Ferns. Illustrated with Plates. By Sir William Jackson Hooker, K.H. London: Dulau & Co. Part XVII.

Of this most valuable aid to the student of Ferns, the first part of the fifth volume, or the 17th part of the entire work, has lately appeared. Commenced so long since as 1844, it is a matter of congratulation that the health and faculties of the estimable author should have been thus spared to bring to a close so herculean a task—for we learn that the following part, which is to be a double one, and to complete the work, is just ready. Indeed, if we are not misinformed, it has for some time been out of the author's hands.

This first instalment of the fifth volume commences with the netted-veined species of Polypodium, forming the genera Goniopteris, Goniophlebium, Phlebodium, Campyloneurum, Niphobolus, Phymatodes, Drynaria, &c., of some modern authors, groups which Sir W. Hooker treats as sections of Polypodium. These run through the 96 pages of letter-press of which this first part is composed, some 170 species being therein described and localised. When the wide geographical range taken by some species of Ferns is considered, and the heaps upon heaps of specimens from all quarters which have to be examined, and referred to their respective positions, are taken into account, some idea may be formed of the labour of preparing such a work as this, extending through five thick octavo volumes. The species, indeed, in many other hands would have risen to a much higher number; and if the author has erred at all, we think it has been in omitting to distinguish plants which to the eyes of other pteridologists both in this country and on the continent appear to be abundantly different. On this question, however, that of the limits of species, it seems hopeless to expect unanimity of opinion; and therefore, without dwelling on such objections, all real students of Ferns will, we are sure, be grateful to Sir W. Hooker for the much he has done to elucidate the objects of their study.

There are 16 capital plates by Fitch, giving figures of some score of species, mostly new. †

A Flora of Ulster, and Botanist's Guide to the North of Ireland. By G. Dickie, A.M., M.D., Professor of Botany in the University of Aberdeen. Belfast, Aitchison; London: Reeve & Co. 12mo., pp. 176.

The district to which this Guide refers, may be stated generally to lie to the north of the 54th parallel of latitude, including the whole of Ulster (excepting the most northern portion of Monaghan and Cavan), comprehending also the northern portions of Leitrim, Sligo, and Mayo, belonging to Connaught. The coast line is very irregular, owing to the branches of the Atlantic—the Loughs of Strangford, Belfast, Foyle, and Swilly, and the Bays of Donegal, Sligo, and Killala, each of which receives the drainage of a river basin of greater or less extent. The geological formations include Silurian rocks, granite, basalt, chalk, greensand, oolite, carboniferous limestone, and Devonian rocks. And there are high mountains chiefly grouped in the east, north-west and west, the highest points being Slieve Donard in Down, 2796 feet; Muckish and Erigal in Donegal, 2190 and 2460 feet respectively; and Nephin in Mayo, 2646 feet high.

This variety of outline and soil, and the peculiarly mild and moist climate which prevails, have their influence on the vegetation of the district, the Flora of which, according to Dr. Dickie's enumeration, comprises 570 dicotyledonous, and 172 monocotyledonous plants, and 43 Ferns and Fern allies, making a total of 805 species at present known to occur. Among other peculiarities Dr. Dickie notices that in the north of Ireland, a decided fall of the upper limit of some species occurs in passing from the north or north-east to south-west. Thus Euphrasia officinalis, which in the north-east of Scotland finds its upper limit at 3400 feet, on Muckish does not ascend higher than 2000 feet, on Erigal 2400 feet, and on Nephin 1700 feet; Melampyrum pratense, which reaches in Scotland 3000 feet, only attains 2200 feet on Erigal, and 1900 feet on Nephin; while Pinguicula vulgaris, reaching in Scotland 2800 feet, only attains 2000 feet on Erigal, and 800 feet on Nephin. Various other instances of similar modifications in respect to altitude are recorded.

The species are arranged according to natural families, and under each is given besides the habitats, which are more or less precisely recorded according to the rarity or interest of the plant, a statement of its duration, its flowering season, its type according to Mr. Watson's plan of distribution, its range in Britain as to temperature, and an indication of its range in other parts of Ireland. It will be found to be a very useful guide, and seems carefully prepared. Dr. Dickie's residence in Belfast for many years as Professor in Queen's College, and his excursions with students must have given him good opportunities for collecting this kind of information, at which he is an expert; and this, with the additional facts obtained through friends and correspondents, has doubtless left comparatively little to be added hereafter.

The *Botanical Magazine* for this month has excellent figures of some charming garden plants, *e.g.* Reidia glaucescens, Dendrobium luteolum, and Scutellaria costaricana. The first figure represents *Miltonia Regnelli*, a Brazilian epiphyte, with foliage and pseudobulbs resembling M. spectabilis, but with a racemose inflorescence, the flowers five or six on the peduncle; they are however smaller than in that plant, and less highly-coloured, blush-white, with a rosy-tinted subpandurate lip.—*Reidia glaucescens* is a graceful habited stove Euphorbiaceous shrub, with regularly distichous obliquely oblong leaves, glaucous beneath

and numerous small green flowers with fimbriate sepals, hanging down from the under side of the branches by slender red pedicels; the flowers remain for a very long time, and are stained with red about the centre; this has been introduced from Siam.—*Vieussieuxia fugax*, one of the pretty but fugacious-flowered bulbs of South Africa, with elegant pale lilac flowers, the three petals marked with a bright orange blotch.—*Scutellaria costaricana*, a very showy stove plant, with ovate-acuminate serrato-dentate leaves, and a terminal subsecund close raceme of scarlet and yellow flowers; "its beauty consists in the great size and the colouring of the numerous flowers; these measure 2½ inches in length, of a rich golden-scarlet colour, with the faux or inside of the lips a deep yellow; it is a native of Costa Rica."—*Eranthemum crenulatum* var. *grandiflorum*, from Moulmein, a stove plant with a loose raceme of pinkish flowers having a long white curved tube, and not very attractive.—*Dendrobium luteolum*, a beautiful Moulmein epiphyte, with abundant and highly ornamental primrose-coloured flowers; it has been already fully noticed at p. 269.

The *Florist and Pomologist* for April contains a fine figure of *Lychnis Senno*, an introduction by Mr. Fortune, as brilliant in colour as the old Scarlet Lychnis, and far more handsome in form. It is one of the many handsome border flowers, which may be heartily commended to the notice of those who are getting tired of the monotony of the parterre gardening of the present day. Mr. Barnes continues his remarks on Pine culture; there is also an illustrated article on the Cordon or linear system of training fruit trees, by J. F.; and some sensible remarks by Mr. Bailey on the renovation of fruit trees by means of transplantation.

In the *Floral Magazine* are figures, in the usual style, of Messrs. Carter's "*Godetia rosea alba* var. *Tom Thumb*;" of three *Verbenas* raised by Mr. Nichols, of Hunslet, and to be let out by Messrs. Low; of *Dahlia Alexandra*, one of Mr. Perry's seedlings; and of one of the many forms of *Lycaste Skinneri*, from the collection of Messrs. Veitch.

Seemann's Journal of Botany figures, in its March number, *Gentiana germanica*, a plant supposed to be distinct from G. Amarella. It is said to have larger and more decidedly funnel-shaped flowers, with the germens stalked instead of sessile. Dr. Grisebach, the greatest living authority on the Gentianaceæ, considers most of our English plants to belong to this G. germanica, and not to G. Amarella. In the April number is a figure of *Hypericum undulatum*, the new British species recently found near Plymouth. This plant, which has a host of synonyms, has also a very extensive range, being found in Algeria, Italy, Sicily, Spain, Portugal, Madeira, Azores, and south-western England. It has a good deal of resemblance to *H. quadrangulare*. Among the papers in these numbers, occur some further remarks on Raphides by Prof. Gulliver, who finds that whilst the Onagraceæ abound in these needle-shaped crystals, the allied orders have so far been found entirely destitute of them; Balsaminaceæ is raphid-bearing, while in the surrounding orders they are not found; there are raphid-bearing Ficoids, standing between House-leeks and Indian Figs which are without raphides; and the Hydrocharidaceæ, with Water Plantains, and Pondweeds are destitute of them, while in the surrounding orders they abound. Dr. Daniel reports that the leaves of Jamaica-grown Cinchona succirubra yield from .75 to 1.00 per cent. of alkaloids. Mr. A. H. Church describes a peculiar opening which he had met with in the pods of some Leguminosæ, and which he proposes to call aëropyle; the functions of this aëropyle remain to be determined. Prof. Babington has some further remarks on the inutility and mischievous tendency of the Royal Horticultural Society's prizes for wild plants.

Miscellaneous.

The Past Winter.—In the contrast presented by the mild temperature of November and December with the severe cold of January, the most remarkable fact is that the south has suffered more from frost than the north. In many parts of Italy the thermometer fell extraordinarily low; at Turin 20° were registered. In the extreme south of France also the cold has been exceptionally intense; and from a correspondent at Carcassonne we learn that the Peas, Beans, Artichokes, Cauliflowers, Celery, &c., have been entirely destroyed; while many cereals, such as Oats and Barley, have greatly suffered. He adds, "Our flower beds, lately so gay, are now bare; our Ranunculuses and Anemones were just coming into flower, but at present scarcely a trace of them remains. Our young shrubs, such as Veronicas, Fuchsias, Verbenas, &c., have met with the same fate. The river Aude was in many places frozen entirely across, an event which has not occurred since the memorable winter of 1830. Some Orange trees have also lost their leaves in the Orangery." Nevertheless there have been favoured spots which have escaped the effects of this severe season. The extreme mildness of last November and December formed the subject of a memoir communicated by Professor Balfour, of Edinburgh, to the Royal Society of London. This gentleman has during 1863 systematically observed the changes in the plants of the botanic garden in the cotch capital. We had not expected to find our advice followed at the very moment when it was given, by one so learned in natural physics. It is with much pleasure that we have also to report that the period of the flowering and fruiting of wild plants ranks first among the observations to be made by the correspondents of the Smithsonian Institute at Washington. On the same subject we may also quote a new memoir by M. Dove, which has appeared in the last volume of the "Mémoires de l'Académie de Berlin." This learned physicist has deduced from a large number of observations the mean temperatures of several towns throughout the year, dividing it into 73 periods of 5 days. Other tables show the variations occurring in the different years, and explain what may be called "thermic anomalies." A similar work was executed by Delambre at the beginning of the century. Variations of temperature do not appear to follow a regular course, even when the means are founded on an increasing number of observations; but hitherto it has been very difficult to ascertain the causes which regulate them. *Revue Horticole.*

Calendar of Operations.

(For the ensuing week.)

THE weather, though bright during the day, still continues cold and even frosty at night; be in no hurry therefore to remove protecting materials wholly from plants out of doors. Even Calceolarias pricked out in turf pits to harden must still be covered up at night. Any protection that may have been afforded to fine specimens of Standard Laurustinus, should however now be at once removed.

FLOWER GARDEN AND PLANT HOUSES.

Thorough-dress all beds and borders; prepare stations on lawns for extraordinary specimens of ornamental plants, as large Fuchsias, &c., putting drainage in the bottom, and good turfy and mellow compost above. Trim and prune all climbers on out-door trellises, or conservative walls; and prepare stations for plants to fill up blanks. Indoors keep up a proper system of cultivation by means of sweet and healthful soils, and skilful potting, together with complete drainage, and the constant use of weak and clear liquid manure, during the growing seasen. Cold pits will now be occupied with some of the early struck or potted off stock, hardening for the flower garden.

ANNUALS.—Half hardy sorts should now receive attention. The best method of raising them is to sow them in pans or boxes now, or in a bed about 3 inches thick, of light soil, placed on a gentle bottom-heat furnished by means of stable manure or vegetable refuse, and protected with a frame. Water sparingly, and give plenty of air when the plants appear; thin out or prick off in small pots, and be careful to get the plants well inured to the weather previous to planting in the open border, and also to give water as may be necessary, after planting, until they become established.

AZALEAS.—Specimens now in full blossom must be shaded from bright sunshine. Plants that have been kept in heat, to bring them into flower, will now require pretty liberal supplies of water. Great attention should be paid to ventilation, particularly in guarding against cold currents of wind. Young plants will grow rapidly if shifted and placed in a moist warm temperature; see that they are clear of insects.

CALCEOLARIAS.—Those intended to make large specimens will have received their final shift. As the season advances, so must the grower be more watchful to keep down insects. A very mild moist temperature is the best suited for the Calceolaria at this season.

CAMELLIAS.—Plants that have done blooming should be placed in heat to make their growth; shift any that require it; syringe them daily. Water freely plants now in bloom, and occasionally with weak liquid manure.

CINERARIAS.—These should now have all the air possible on every favourable opportunity, avoiding cold draughts. Pick off decaying leaves and blooms, and look well to mildew.

FORCING GARDEN.

FIGS.—As the season advances gradually raise the temperature of the house. Syringe mornings and afternoons. Keep a moist atmosphere. When the borders require watering, give them a good soaking. Plants in pots and tubs should have some weak manure water occasionally.

MELONS AND CUCUMBERS.—Effect a second sowing of ridge Cucumbers; get the earliest sown hardened forthwith, preparatory to turning out, and let trenches be prepared for them. A trench thrown out 3 feet wide and 2 feet deep, and filled to a foot above the ground level with such materials as litter, Grass mowings, or leaves, with a little hot manure, all thoroughly blended, will make an excellent bed. When completed, raise mounds of soil 3 or 4 feet apart, to receive the hand glasses, leaving the residue uncovered with soil for the present.

PEACHES AND NECTARINES.—Continue to keep the shoots well tied-in in the early house, and be careful not to get them crowded. In disbudding, the bearing wood of the present year should be divested of all shoots except the terminal one and those near the base. When a deficiency occurs in any part of the tree, more may be tied in. Ventilate freely in fine weather, and be careful to close up early in the afternoon. Syringe once or twice daily, and keep a moist atmosphere by throwing plenty of water on the paths, borders, &c.

PINES.—See that good mellow turfy soil is ready under cover for the shifting process; also materials for thorough drainage, such as broken crocks, rough bones, charcoal, &c. Use clear liquid manure to swelling fruit, when necessary; and keep up a lively heat, with plenty of atmospheric moisture.

VINES.—Late Grapes, such as West's St. Peter's, Lady Downes' Seedling, Black Damascus, Muscats, &c., will now be breaking fast. Let disbudding, tying, stopping, &c., be duly attended to, according to principles laid down for the earlier houses.

HARDY FRUIT AND KITCHEN GARDEN.

Lime is well known to be useful for destroying snails and slugs; it is, however, not always at hand in a quick state. Cinder ashes riddled to the size of Radish seeds, all dust being excluded, will therefore be found a good substitute. These strewed over young crops when just emerging from the ground will be found to be an efficient protection. A handful of good Peruvian guano, blended minutely with these ashes, would also prove to be a ready mode of manuring a weak seed bed.

RASPBERRIES.—If not already done, thin suckers from these, leaving four or five to each stool.

SPINACH.—Sow some round Spinach for succession in a cool aspect.

STRAWBERRIES.—A sloping bank should now be prepared, and planted with nice runners of the Alpine varieties, for fruiting in September and October; plant three in a patch, at intervals of 15 inches; the ground between should be covered with slates when the plants are established.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON

For the Week ending April 13, 1864, as observed at the Horticultural Gardens

April.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs. 7	0	30.260	30.228	53	36	44.5	47	46	S.E.	.00
Friday 8	1	30.339	30.243	59	35	47.0	47	46	S.E	.00
Satur 9	2	30.263	30.159	61	47	54.0	47	46	W.	.10
Sunday 10	3	30.147	30.097	63	40	51.5	50	47	N.	.05
Mon. 11	4	30.058	30.001	70	36	53.0	50½	47½	E.	.00
Tues. 12	5	30.039	30.019	61	25	43.0	5 4	48	N.E	.00
Wed. 13	6	30.056	30.002	59	29	44.0	50½	49	N.	.00
Average.		30.166	30.114	60.9	35.4	48.1	53.2	47.1		.00

April 7—Uniformly overcast; overcast throughout.
— 8—Overcast throughout
— 9—Partially overcast; fine; overcast and warm.
— 10—Very fine throughout; overcast.
— 11—Uniformly overcast; very fine; overcast.
— 12—Fine; exceedingly fine; frost at night.
— 13—Fine; hot sun; clear and slight frost at night.
Mean temperature of the week, 2¼ deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending April 23, 1864

April,	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 17 .	59 5	36.1	47.8	14	0.32 in.	8	7	6	2	1	7	4	3
Mon. 18..	60.3	35.8	48.1	15	0.44	6	6	7	1	4	4	7	3
Tues. 19..	60.3	34.9	47 6	8	0.45	6	12	3	3	1	7	6	—
Wed. 20..	61.8	34 7	48 3	14	0 39	5	7	5	2	—	9	6	3
Thurs. 21..	60.7	37.3	49.0	11	0 28	4	6	6	3	2	6	8	3
Friday 22..	60.4	37.5	48 9	20	0.32	5	8	5	3	1	5	8	5
Satur 23..	60.3	36.7	48 5	20	0.52	2	8	5	1	1	8	8	7

The highest temperature during the above period occurred on the 19th, 1854—therm. 77 deg.; and the lowest on the 17th, 1947—therm. 22 deg.

Notices to Correspondents.

CHRYSANTHEMUMS: *Rus in Urbe.* Shift now the strong young plants from suckers parted last autumn; and shift at once into the blooming pots. The plants will then break uniformly, and can hardly fail to form good well-balanced specimens. Consult Mr. Holmes' instructions at p. 1180 of our last year's volume.

DISEASED CONIFERS: *H W C.* There is no fungus on your Wellingtonia. In a very large collection of Wellingtonias, one of the largest in England, we have occasionally seen shoots similar to those you send, and, as in similarly affected shoots of Araucaria, we have always supposed the partial death attributable to cold. Young plants suffer more in general than those which are well established. Sometimes however, Conifers become unhealthy from being planted amongst old roots, and you would do well to consider whether this may be your case, and if so, the old roots must be grubbed out carefully. *M J B.*

FUNGI: *J H.* The little seed-like bodies covering the surface of your pots are the winter state of some Fungus, derived in all probability from leaf-mould. We will try to make it vegetate, and in the course of a few weeks we may be able to tell you what it produces. In its present state it would be called by older Mycologists *Sclerotium* seminum. *M J B*

GRAFTING WAX: *John R.* One of the best forms of grafting wax is the Mastic Lhomme-Lefort, of which an account was given by us last year. It does not require heating, and continues pliable and elastic, which are its chief advantages. It is especially suitable for grafting Vines under glass.

NAMES OF PLANTS: *Blue Apron.* No; nor has it the least resemblance, except that both are Mosses.—*J B H* 1. Jasminum nudiflorum; 2. Andromeda calyculata.—*B F.* 1. Oncidium hastatum; 2. Epidendrum altissimum.—*C B.* 1. Deutzia parviflora; 2. D. scabra.—*Beaumanor.* We are of exactly the opposite opinion.—*G B., Stamford.* We really cannot undertake to give private advice.—*W T I* We believe Notylia bicolor.

SALSIFY: *W West.* By all means try the plan of sowing in poor light land, well manured in the under stratum, some 7 or 8 inches beneath the surface. If all goes well, you will get good clean succulent roots by this mode of culture.

SCARBOROUGH LILY: *Amici.* What is called the Scarborough Lily is Vallota purpurea.

MISC.: *Ayr.* We are wholly unacquainted with the "swarthy" gentleman, whose reference to one who knows nothing about him is by no means a satisfactory proof that he deserves employment.

LAWES'S MANURES.

The Manures manufactured by J. B. Lawes for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per Ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES ..	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr Lawes, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American and other Cakes at market prices.

Address John Bennet Lawes, 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

THE LONDON MANURE COMPANY

have now ready in fine condition—

DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots.
URATE.
MANGOLD MANURE, &c., &c.

They also continue to supply GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all Fertilisers of known value.

Works, Plough Wharf, Isle of Dogs.

Offices, 116, Fenchurch Street, E.C. E. Purser, Secretary.

WOOLLEN REFUSE MANURE, in any Quantity, from a Quarter of a Ton upwards.

For particulars, Post-free, address Procter Bros., Manwood, Leeds.

ODAMS'S BLOOD MANURE for CORN.
ODAMS'S BLOOD MANURE for ROOTS.
ODAMS'S SUPERPHOSPHATE of LIME.

Manufactured by The Patent

NITRO-PHOSPHATE or BLOOD MANURE COMPANY (Limited). Consisting of TENANT FARMERS, occupying upwards of 30,000 acres of land.

Chairman: John Clayden, Littlebury, Essex.
Managing Director: James Odams.

Particulars of these Standard Manures may be obtained at the Offices.

C. T. Macadam, Secretary, or of the local Agents.

Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow, Essex.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, and BAWTREE, Address 89, Seed Market, Mark Lane: or Basingstoke. Samples and prices on application.

Drainage, &c.

MR. J. BEAUMONT, Land Agent, Surveyor, and Drainage Engineer (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments, and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.

Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.

22 Parliament Street, Westminster, S.W.

Land Drainage, and other Agricultural Improvements.

MR. BAILEY DENTON, C.E., maintains a large Staff for the execution of Land Improvements by a commission of 5s. per acre for Under Drainage, and a fixed charge for Outfall and other works.

For particulars apply to him, at 52, Parliament Street, Westminster, S.W.

Drainage of Land.

MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5s. per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

RICHARD SMITH'S RENOVATING GRASS SEED should now be Sown, at a cost of 6s. per acre. A greatly increased yield will result from sowing 8 lbs. of Finest Grass and Perennial Clover.

Richard Smith, Seed Merchant, Worcester.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
SPRING SESSION, 1864.

President—The Right Hon. the Earl Bathurst.

Council.

Rt. Hon. the Earl Bathurst. | Rt. Hon. T. H. Sotheron Estcourt, M.P.
Rt. Hon. the Earl Ducie. | Edward Holland, Esq. M.P.
Hon. William Bathurst.

Principal—The Rev. John Constable, M.A., Trin. Coll. Camb.

Farm Manager—J. L. Fletcher.

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Assistant to Chemical Professor.—R. Warington, Jun., F.C.S.

Botany.—John Bayldon, M.B., Lond. B. Sc.

Veterinary Surgery.—A. J. Murray, M.R.C.V.S.

Mathematics and Surveying.—The Rev. W. Meredith Lane, B.A. Scholar of Trin. Coll. Camb.

Drawing.—James Miller.

SPECIAL LECTURERS.

J. Bailey Denton, M. Inst. C.E.—On DRAINAGE.
Professor J. Morris, F.G.S., of University College, London—On GEOLOGY.
John Gamgee, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.
Willoughby Wood, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.
John Algernon Clarke, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.
John Thornhill Harrison, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.
Thomas Baldwin, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.
Robert Russell, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.
Richard Griffiths Welford, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.

Applications for Admission and for further particulars may be made to the Principal.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.

MEETING at NEWCASTLE-ON-TYNE, 1864.

STOCK-and IMPLEMENT PRIZE SHEETS are now ready, and will be forwarded on application to

H. Hall Dare, Secretary.

12, Hanover Square, London, W.

PHOSPHO GUANO.

Company's Trade Mark.

Contractors' Trade Mark.

THE PHOSPHO GUANO, in its natural state, is found on trap-rock islets within the tropics. It was discovered in 1854; and its existence was made known in August, 1856, by Dr. Voelcker, who read a paper at the Cheltenham meeting of the British Association for the Advancement of Science, "On the Remarkable Composition of a New Variety of Guano, called Columbian or Maracaibo Guano," pointing out its peculiar fitness as the base of a highly concentrated phosphatic manure.

Its valuable and peculiar qualities immediately attracted the attention of the leading Agricultural Chemists, who pronounced it at once to be greatly superior to all other Guanos as a manurial agent. The result of careful experiments in the field having fully established this superiority, the consumption has increased year by year; and at the close of the seventh season, 1863, it has attained a position second only in consumption to that of Peruvian Guano.

The Baron Liebig, in the course of his investigations, discovered potash in the raw Guano, a discovery since confirmed by Dr. Voelcker and other Chemists. To the presence of this substance (which is not found in any mineral phosphate) is attributable, in some degree, the great superiority of the PHOSPHO GUANO when compared with other phosphatic manures made from coprolites, apatite, Sombrero Guano, &c.

PHOSPHO GUANO contains in its natural state nearly double the quantity of phosphoric acid found in bones and other substances from which Superphosphates are prepared; and Liebig states that by using PHOSPHO GUANO, the farmer conveys to his field 26 per cent. more phosphoric acid than by a mixture of equal parts of Peruvian Guano and Superphosphate of Lime: while "the advantage for the improved quality of the soil appears still more in favour of the PHOSPHO GUANO, if the quantity of soluble phosphoric acid is taken into consideration."

One of the most important advantages of the PHOSPHO GUANO is its uniform composition, and in this particular it is equalled by no other manure; for with scarcely an exception, they all vary greatly in different samples, even when drawn from a comparatively small bulk.

All Chemists of standing have ceased to place a money value on manures submitted by them to analysis, as tending to lead to erroneous conclusions, owing to the disingenuous manner in which such values are paraded before the public eye by dealers; but for the information of those farmers who still have faith in this test, the money value of the PHOSPHO GUANO, calculated by the data hitherto in use, is, according to the mean average of Dr. Voelcker's analyses, 13*l.* 18*s.* 2*d.* per ton; and of Baron Liebig's analyses, 14*l.* 18*s.* 4*d.* per ton.

Peruvian Guano and PHOSPHO GUANO are respectively the representatives, in the highest degree, of the two most important manurial substances, ammonia and phosphoric acid. In Peruvian Guano there is 13.61 per cent. of nitrogen, yielding 7.0 of actual ammonia and 10.0 latent—and the latent, in the opinion of Dr. Voelcker, is as available or nearly so as the actual ammonia—together with 3.0 per cent. phosphoric acid in soluble state. In PHOSPHO GUANO there are 18.027 per cent. of phosphoric acid in soluble state, and 3.50 per cent. actual ammonia.

As Peruvian Guano is acknowledged to be a cheap source of ammonia, so likewise PHOSPHO GUANO must be considered as a cheap source of phosphoric acid—much to be preferred to bones, superphosphates, coprolites, apatite, Sombrero and other inferior Guanos; while the proportion of 3.50 per cent. of actual ammonia constitutes it the best-balanced manure in the market.

If the results of practical experience were required to recommend the PHOSPHO GUANO, testimonials from many of the most eminent Agriculturists in the kingdom could be adduced; but the reader of this advertisement is particularly referred to the most recent of these, published in the last number of the *Quarterly Journal of Agriculture* (Jan. 1864), by Mr. Henry Stephens, author of the "Book of the Farm," detailing the experiments made by the Marquis of Tweeddale, with their successful results.

Pamphlets, containing a full description of the PHOSPHO GUANO, its History, Nature, Properties, &c., may be obtained on application.

PRICES AND TERMS.

The Cash Prices, including the cost of bags, Carriage Free at any railway station or shipping port in the kingdom, are as follows:—

For 10 tons and upwards, £11 10s. per ton. | For smaller quantities, £11 15s. per ton.

For full cargoes, direct to any port, special rates will be quoted.

Credit Rates.—Should the Consumer require credit, the price is increased at the rate of 2*s.* per ton per month.

To prevent fraud, all casks and bags are branded with the PHOSPHO GUANO COMPANY'S Trade Mark, as well as that of the Contractors, copies of which appear at the head of this advertisement.

There are Authorized Agents appointed for the sale of PHOSPHO GUANO in all the principal towns and villages in the United Kingdom; but where any difficulty exists in procuring supplies, orders may be sent direct to

PETER LAWSON & SON,
GEORGE IV. BRIDGE, EDINBURGH; or, 28, KING ST., CHEAPSIDE, LONDON, E.C.

PETER LAWSON and SON, *Contractors.*
WILLIAM DIXON and CO., *General Agents.*
GEORGE SEAGRAVE and CO., *Brokers.*

The Agricultural Gazette.

SATURDAY, APRIL 16, 1864.

MEETING FOR THE ENSUING WEEK.

Wednesday, April 20 { Royal Agri. Society of England .. Noon (Mr. Holland, M.P., on Agricultural Education.)

A Committee comprising many of the leading members of the Council of the Royal Agricultural Society of England, has been appointed to consider in what way Agricultural Education—the seventh object for which, according to its charter, the Society was incorporated—may be best promoted. And next Wednesday Mr. Holland, M.P., who has, these many years, done more than any other man in this country for the promotion of agricultural education, will read a paper in which we hope he will declare the results of the discussion before this Committee.

It would not be difficult to prove that this subject has been hitherto singularly neglected by the Agricultural Society. The improvement of the various breeds of our domesticated animals, and of our agricultural machinery—the promotion of better veterinary education—the condition of the agricultural labourer—the application of scientific knowledge and discovery, have all occupied its attention; but nothing has yet been done for the professional education of those who live by the cultivation of the land. It is no denial of this assertion to declare that the Journal, the annual show, and the occasional discussions which the Society holds are all of them educational, and thus a discharge of its obligation in this particular. These are all separately specified in its charter as among the objects and purposes of its incorporation, and *in addition to them* it is declared that it is to take measures for the promotion of agricultural education. As the fact at present stands, these and other objects have engaged its attention and its labours, but *in addition to them* nothing whatever has yet been

done by it for the promotion of agricultural education. There is thus an *un*fulfilled duty belonging to it—an obligation still resting on it, and remaining to be discharged. And the business of the Committee no doubt is to determine in what way this duty may be best discharged.

We shall not at present discuss the various methods which will at once occur to any thoughtful person, by which agricultural education may be promoted by the Society. Our reference to the Committee which has been appointed for its consideration, is simply that it may be understood that the Committee do not meet to determine whether or not it may be advisable to act in this matter, but what it may be advisable to do. The duty of action in this matter is inevitable—as plain as any other condition which the charter of incorporation imposes. And while this charter is occasionally appealed to by men who seek for precedent and guidance "how not to do it," we hope it will be as urgently upheld now that it is being quoted in a case where its direction of active effort is as clear as possible.

ON Wednesday last Mr. STRAFFORD sold the Short-horn herd of Mr. ROBINSON, at Clifton Pastures, near Olney. The average price realised was 58*l.* apiece, or 417*l.* 17*s.* in all, for 72 head. Of the several families of which the herd consisted, the Foggathorpes, numbering 12, realised 74*l.*, or about 65*l.* apiece; three Gwynnes fetched 226 guineas; and the descendants from *Sylph* by SIR WALTER, 5 in number, made upwards of 60*l.* apiece. The following were among the highest prices realised:—125 guineas for *Specimen*, by MAMELUKE, bought by Mr. G. C. ADKINS, one of his "Charmer" tribe; 120 guineas for *Forest Queen*, a descendant of *Foggathorpe*, bought for Sweden; 125 guineas for *Revelry*, by SECOND DUKE OF THORNDALE, bought by Mr. FORSTER, of Cumberland; 110 guineas for *Golden Gwynne*, bought by Mr. C. HOWARD; and 200 guineas for GRAND DUKE 5TH, a pure Duchess bull, 2½ years old, also bought by Mr. CHARLES HOWARD, of Biddenham.

IT is satisfactory to find in a recent judgment that the LORD CHANCELLOR has manfully set his face against that loose manner of drawing Patent Specifications, which has been the cause of so many law-suits.

We refer to the judgment delivered on the 9th of March, in the case of *Foxwell* v. *Bostock and others*, which concerns a sewing machine. The patent was taken out for an improved arrangement or combination of machinery for sewing or stitching by a needle and shuttle. The specification was accompanied by drawings and descriptions of the drawings, which contain but do not point out the improved arrangement patented. On this ground the patent was called in question, because it virtually claimed machinery which had been previously invented and protected by others, and was used to produce the result specially required. It was contended by the plaintiff's counsel that "a patent for a new machine would be good if the specification contained nothing but clear drawings of the machine and a description of them."

At one stage of this trial, however, certain distinct inventions were disclaimed, and the judgment now under consideration refers to an amended specification, in which, strange to say, passages were allowed to remain which became a description of the working of part of that machine, and of drawings and descriptions, which had been disclaimed. His Lordship decided that although the inventions had been disclaimed, the drawings and descriptions having been allowed to remain, they must be taken as part of the combination of machinery for which the patent is claimed in the amended specification. The words in the latter document state the patent to be for "the combination and arrangement of the various parts of machinery for sewing and stitching with the use of a needle and shuttle," which his lordship decided, "by reason of their unlimited extent, would render the patent void, unless they were construed as necessarily meaning the *aforesaid* combination and arrangement of the *aforesaid* various parts of machinery; and if they are so construed they then necessarily denote and comprise all the various parts of machinery which are thereinbefore described, and include the parts which belonged originally to the three separate disclaimed inventions."

This is the necessary result of the plaintiff's view of the amended specification, and of the fact that the patent is for a combination of machinery, and that there is no other description in the amended specification of that combination, than what is afforded by the drawings and the descriptions thereof, nor anything which denotes that the patented combination is to consist of certain portions only of that machinery which is delineated and described. Unless the whole of the drawings and descriptions be taken, there is nothing, as the LORD CHANCELLOR said, to show where the description of the invention begins and where it ends.

It is further shown that the patent is for improvements in machinery or apparatus for sewing or stitching, and the specification describes the invention as consisting in an improved arrangement and combination of machinery for stitching by a needle and shuttle. The words "improved arrangement," or "improved combination," indicate the nature of the invention. This improvement is nowhere specified. The plaintiff's counsel contended that it was expressed in the drawings. These drawings exhibit an entire machine, the composition and working of its several parts, but do not indicate where the improvement lies, or in what it consists. To this objection it is replied that the invention lies in the whole arrangement.

His Lordship very properly demurs entirely to this. He will not allow that words are to be used to darken and hide meaning as in diplomacy: he maintains that "the law requires that a specification should be intelligible to a workman of ordinary skill and information on the subject," and that he should not be supposed to possess an accurate knowledge of the construction of all needle and shuttle machines which were known and used in England at the date of this patent, before he can discover the differences and novelties that existed in the improved combination.

It seems that there was no difficulty in describing the arrangement for which the claim of utility was sought to be established. The plaintiff's counsel stated that it consisted in an arrangement of three cams on one shaft, by the direct action of which the three principal movements in a needle and shuttle machine are effected, and though these cams and shaft appear in the drawings, nothing in the specification confines attention to their addition as constituting the special novelty.

His Lordship then proceeds to state his opinion *that a patentee is bound to show in what the improvement consists*, not in ambiguous but *in clear precise terms*, and that this obligation is not discharged by a description of the entire machine, which embodies but does not distinguish the improvement, and thereby renders it undiscoverable, except upon minute comparison and collation of all existing combinations with the new combination that is claimed. The rule followed in these terms:—"I must therefore lay down a rule which is consistent with and in reality a mere sequence from the decided cases, that in a patent for an improved arrangement or new combination of machinery the specification must describe the improvement and define the novelty, otherwise and in a more specific form than by the general description of the entire machine. It must, to use a logical phrase, assign the *differentia* of the new combination. This obligation flows directly from the condition of the patent. It is part of the condition of the patent that the specification shall particularly describe and ascertain the invention. With that condition the specification, in my judgment, fails to comply."

It will be at once obvious to all who are concerned in patenting inventions of agricultural and other machinery why we call attention to this decision. Latterly many important trials have occurred, owing to the loose drawing of specifications, and it is very necessary that this tendency should be checked. Not a few of those who are recognised agents in this branch of business were gaining a character for wording their specifications so doubtfully as to conceal false representations, and yet so as to avoid attack. Their practice was encouraged for a time by certain judgments from the bench, and there really seemed as little chance of obtaining precision in patent law as in theology. Now, however, the highest authority in the land has spoken out in favour of honest declaration of intention; and this being the fact, it is to be hoped that the law courts will be cleared of cases which have grown out of vague descriptions, and leave an open path for inventors who feared pitfalls and ambuscades at every turn, and were prevented from making public their ideas because of the danger and perplexity which attended their protection.

The rule made by the LORD CHANCELLOR is certainly in favour of the public, as it is of all men who honestly seek to patent their own invention, without claiming those which do not belong to them. Those who, under cover of ambiguous language, have been in the habit of disguising doubtful claims to originality and utility on behalf of their clients, will not thank his lordship for spoiling their little game. *H. R.*

AGRICULTURAL PLANT IMPROVEMENT.

UNDER the above heading Mr. Shirreff contributed to a recent number of your Paper an article in which he takes exception to my three "facts" given in your Number of February 20th last. Had he done no more than this, I should have been quite content to keep silence, but in professing to describe my system and opinions he so utterly misstates them, that I must ask you to accord me space to state them for myself—I fear necessarily at some length.

Mr. Shirreff says:—"Mr. Hallett begins with a grain, one of the most minute, uncertain, and mysterious parts of a dead plant, while my foundation is a living object, with all its characteristics and properties fully displayed . . . . The expressions best plant, best ear, best grain, leave no doubt that magnitude is the leading property desired. Now, if largeness of a single grain can be inherited, so can every gradation of size, and this leads to the monstrous conclusion," &c.

The following concise statement of my mode of procedure, defining clearly what I mean by best plant, &c., was printed more than a year ago; thousands of copies were circulated, and it was last autumn reprinted in the *Agricultural Gazette*, and several leading English journals:—

In every plant of Wheat, Barley, or Oats, there is always one best ear, and in every ear there is always one best grain, which is that one found at the following harvest to produce the best plant, all the grains having been planted in competition with each other. The best of all the competing plants of any "family" of a cereal, is ascertained by the most studious comparison of the good qualities they visibly present, and of the notes of the peculiarities exhibited by each during the whole course of its growth, such as:—the rapidity with which the parent seed germinates: the manner, time, and extent of the "tillering" of the plant; the periods of its earing, blooming, and ripening; its power of withstanding disease, frost, wet, &c.; the toughness of its straw, and any other characteristics which are essential to forming a correct decision, and which cannot be determined by even the most careful inspection of the perfect plant.

The very article in which Mr. Shirreff found my "facts" contains sufficient to show him that my principle of selection is not limited to any single property, and certainly nothing in it or in anything I have ever written or said can give the slightest ground for supposing that I attach importance to the size of the grain.

On the contrary, I had occasion last November, in commenting upon two letters, one of them from Mr. Alderman Mechi, which appeared in a leading London journal, to make the following statement of my opinion on the subject of the mere appearance of grains (apart from their parents):—

"Grains divided into two classes, either 'largest' and 'smallest,' or 'best' and 'worst,' give in numerous instances very conflicting results. The true principle as to such a classification can be educed only from a very extended series of experiments such as I am now carrying on. I can only say that I find nothing whatever to countenance the principle which 'Wheatsheaf' lays down so boldly ('if you wish to reap a first-rate article you must sow a second-rate article'), but much in support of the Alderman ('I attach as much importance to a heavy well-developed seed as to a perfect animal'), indeed, everything in his support, had he only explained that the 'perfect animal,' to which he would attach importance, would be one the result of long-continued selection (or breeding), not an accidentally good animal of no breed whatever, whose perfections, suddenly developed, would in its descendants as suddenly disappear amid the reproduced imperfections of its mongrel ancestors."

Mr. Shirreff says:—

"If it is true that (my Fact No. 2), 'descendant plants and grains inherit more or less the characteristics of their respective parents,' it is difficult to see how any change whatever can take place."

Whatever difficulty, if any, he may feel upon this point, I fear he will experience a far greater one in answering the question which I am about to put to him, viz.:—How does Mr. Shirreff account for his own varieties being, as he says, "new in their field characteristics," when in the very same paragraph he contends that the characteristics of Wheat are "fixed in their origin and unalterable by cultivation," and upon what ground he claims any credit whatever for his services in improving agricultural plants? It is quite true that he goes on to say, "But while contending for fixity by Nature, sports and hybrids are exempted," but he does not leave himself even this loophole, for of his "sports" he had unfortunately said just before "I have not succeeded by repeated selection in fixing any type," and directly after, with equal ill luck, of his "hybrids" he says:—"None of these Wheats proved fixed or reproductive in the second year." So much for Mr. Shirreff's Wheat; now just one word in defence of my own.

Mr. Shirreff ingeniously treats you as a thick and thin supporter of my system, in order to give the value of an "admission" to your statement that my Pedigree Wheat is "very productive but extremely coarse." There is not a single fact in existence in support of this statement. Indeed if "coarseness" means that the Wheat contains an undue proportion of "offal," what facts we have are quite the other way. To give one only—Professor Church says that the Pedigree Wheat was of higher specific gravity than any other variety (which

be examined). But all kinds of "offal" are of less specific gravity than the fine flour—how then is "coarseness" consistent with high specific gravity? It surely cannot be difficult to obtain something like the truth upon this point. I fearlessly challenge my Wheat, not a bad sample of it, but such a specimen as that grown by Alderman Mechi last year, and weighing 65½ lbs. a bushel, against any half-a-dozen other varieties of Red Wheat of equal weight. The trial to be conducted by any one whose impartiality is beyond doubt, and the results in flour, offal, and 4 lb. loaves of bread to be published. If Mr. Alderman Mechi would undertake such an experiment, the public would soon learn the truth of the matter.

In any case it is always to be borne in mind that the miller, unless also a farmer, has no interest whatever in the produce per acre: and that he seldom, if ever, uses any kind of Wheat alone.

I will only say in conclusion that I have no need to have recourse to such an article as this for purposes of advertisement, and that in all discussions upon "Agricultural Plant Improvement," in which I take part, I should greatly prefer to leave my Wheat unnoticed. *Fred. F. Hallett, The Manor House, Brighton, April* 4.

A LIFETIME ON THE COTSWOLDS.

[The following is the conclusion of Mr. J. C. Morton's Paper lately read before the Kingscote Farmers' Club, of which the first portion was given last week.]

II. Statistical.

I shall now try to prove this agricultural progress by reference to facts recorded in these papers about the rent of lands—about the sums paid to labourers—about the enterprise and increased liberality of farm management, and the consequent increase of farm produce. This is the second part of my paper.

1. *Of Rent.*—I was yesterday told by Mr. John Lane, of Cirencester, that his great grandfather 100 years ago rented almost all the lands at Stratton, near Cirencester, for 5*s.* an acre. They are now let, so I understood him, for 30*s.* to 40*s.* an acre. Wheat was formerly taken on these lands once perhaps in four or five or six years—it is now taken every other year. On Jan. 12th, 1771, there is an entry in Mr. John Smith's diary, "Parry called to tell me that the farm of Bowldown and Lasbro' is to be 10*s.* an acre." This was a proposed rise of rent, for on the 15th I see that he records as follows:—"Went to Shipton and bid 100*l.* a year more for Bowldown and Lasbro', but was not heard,"—so that the rent had, up till then, been less than 10*s.* an acre by more than 100*l.* a year. What the rent is now perhaps the present tenant can inform us. At all events it has since then been doubled. In 1774 I see, "Took Mobro' field, in Ozleworth, 10½ acres, at 5*l.* a year for seven years." That field is no doubt still known by its former name. Again, in 1780, "Called on Farmer White, at Kingscote, to hear the former rent of land in Bagpath. He told me the old rent was 5*s.* an acre, and 1*s.* tythe, field measure." There, again, you who know the district, have a means of estimating the advance in the value of land.

In the year 1780 there is an entry: "To Wotton in the morning, and took the glebe land of Mr. Clissold for 8*s.* an acre."

Now for the Didmarton farms, then as now of about 680 acres. From 1774 to 1784, the rent was 356*l.*—about 10*s.* an acre. In 1785, 1786, and 1787, it rose year by year to 371*l.*, 380*l.*, and 413*l.* From 1789 to 1800, it stood at 434*l.* From 1800 to 1805, it was 457*l.*, about 14*s.* an acre.

What these lands are let at now I do not know. But everybody will gather from these figures that during the past 100 years, rent has risen in the district from 5*s.* to 8*s.*, 10*s.*, and probably now to 20*s.*, and 22*s.* and 24*s.* per annum.

2. *Of Labour.*—On this point I have only the Didmarton figures. Here on 680 acres, the wages averaged 260*l.* a year, from 1774 to 1780, or 8*s.* per acre; from 1780 to 1787, 272*l.* were paid, not much more than 8*s.* an acre. During 1787, and seven years after, the sum paid for labour averaged 357*l.*, or about 10*s.* 6*d.* an acre. During seven years after 1794, it averaged 448*l.*, or 13*s.* an acre.

During the past 10 years the annual labour of that same farm has cost 900*l.*, exclusive of beer, or at least 30*s.* an acre.

It is plain therefore both that rents have doubled during the past 50 years, and that the wages paid for labour have nearly tripled during the same time. Well! rent and labour are voluntary payments by the tenant farmer. I may say so, although of course there is a sense in which they may be said to be involuntary and enforced. No man *can* get land or labour under the market price; but the market price arises out of the *mutual* competition of men bidding of their own free will against one another. And the fact that under these circumstances such enormously increased outgoings per acre should in this district have arisen, proves conclusively how largely the agricultural produce of this district has increased.

3. *Of Produce.*—But this increased produce need not be merely inferred: it can be proved. The Didmarton figures, Mr. Rudge's figures, and your own knowledge of the present produce, will sufficiently prove it. The average produce of Wheat during seven years up to 1794 was, on these farms, 17¾ bushels per acre, and during the next 7 years 16¾ bushels. Of Barley, during the first 7 years, it was 26 bushels, and during the second seven years it was about the same. Of Oats, during the same period, it was about 30 bushels per acre. These were the 14 years ending 1801. Take now the average of the years 1860, 61, and 62, three exceptionally bad years throughout the country generally, though what they were on the Cotswold district particularly I do not know:—

Produce per Acre.

	Wheat.	Barley.	Oats.
	Bushels.	Bushels.	Bushels.
In 1860 ..	30	35½	37
„ 1861 ..	36	33	37
„ 1862 ..	37* / 21†	30	36

* Autumn sown. † Spring sown.

These figures contrast remarkably with 17 bushels of Wheat, 26 of Barley, and 30 bushels of Oats yielded during the 14th year up to 1801. And the annual corn books of the early part of the century show that the increase has been constant and gradual throughout, though most rapid during the past 15 years.

Now refer to the returns from sheep. During 21 years ending 1801, when a dry flock was kept, 5328 sheep had been bought for 661*9l.*, averaging 260 per annum at 24*s.* 6*d.* a-piece. During the same years 4843 were sold, leaving I presume 260 on the farm, and losing about 200 during the 21 years. The sheep were sold, wool and all, for 13,960*l.*, or about 54*s.* a head, returning therefore 29*s* per head per annum. This is considerably more than Mr. Rich, and his "two worthy friends the Messrs. Brooks" had estimated as the return from a dry flock, for they had put it at probably 20*s.* per head per annum. But I presume it will at once be felt that this is nothing like the annual return now obtained from a Cotswold sheep. That is now I expect nearer 40*s.* to 49*s.* than 20*s.* to 29*s.* per head per annum.

Taking, however, the return per acre, it was less than I have named. This return is from a flock of 260 sheep, kept on nearly 700 acres of land. I suppose that now the return is pretty nearly from one sheep per acre all over the Cotswold district, so that if the produce was about 10*s.* per acre for sheep then, it is vastly exceeded now.

Mr. Rudge speaks in 1813 of the Cotswold sheep as coming then to 22 lbs. or thereabouts per quarter at three years old. This weight is now obtained at 12 to 15 months. He also speaks of Wheat producing about 15 bushels per acre on the Cotswolds, and Barley 25, and Oats 40 bushels per acre. I dare say Wheat would not now be generally put at less than 26 bushels; Barley at 32 to 36, and Oats at more than 40.

Of course all this is the result of a very different style of agriculture. Large quantities of cake and corn are used in sheep feeding. The Swede and Turnip crops have greatly increased, and are grown with the aid of guano, superphosphate, and bonedust, and the manure of the farm goes on the Clover and seed before breaking them up for Wheat.

The expenses of agriculture in this district have enormously increased in labour, manure, and cattle food, and the upshot is that there is a double crop of Wheat within the past 50 years; there is a produce of Barley not so much, but still materially increased; there is—where the six-fold course of crop prevails, and Oats follow Wheat—a rather larger, but not materially larger produce of Oats; and there is a four-fold yield of mutton.

I believe that the Cotswold district has well done its part towards maintaining our increasing population.

Well now, we have all heard of the declaration of the great German chemist that our agriculture is on the road to ruin. Baron Liebig foretells the exhaustion of English soil from what he considers our reckless agricultural mismanagement. Certainly his predictions clash grotesquely enough with our actual agricultural history. What a contrast is presented by the island generally now and a century or two ago! That which literally was a wilderness has become literally a garden. For forest, moor, and wold, with wild inhabitants, we now have waving fields of corn and flocks of sheep and herds of "horned cattle" of quite another sort. And nowhere is the contrast greater than in the Cotswold district, where, if anywhere, Liebig's prophecies might have been expected to have been fulfilled. For where should we expect to see land going back rather than progressing in fertility, if not in a country of free and open soil spread thinly over a hollow rock.

The *chemist* comes to his study of agriculture, knowing that plants feed, so far as the soil is concerned, on solutions of the substances existing there. He comes from his laboratory where he has watched and patiently superintended the washing of precipitates spread thinly over filter paper until all soluble substances had disappeared. And here he finds a district where the material, on which, so far as it is soluble, plants feed, spread thinly over as good a filter bed as anywhere exists, and there washed annually by six or seven times its bulk of rain-water, as powerful a solvent as any he employs. How is he to explain the increase of fertility, in spite of the great *natural* waste of soluble matters from the soil, which must be more or less experienced in this case. He finds here a district from which during the past—say, 64 years, off each and every acre, 10 tons weight of Wheat, as much Barley, and probably nearly one ton of mutton, have been actually grown and made and sold. How is he to explain the growing fertility of the soil under the direct *artificial* robbery and waste of the very material of the soil which has been thus occasioned. If this puzzles him it is because he forgets that agriculture is something more than a material art dealing with mineral dead atoms. Our fertility depends upon the wit, and energy, and mind which are brought to bear upon our land, as much as it does on bones and guano and the dung cart.

The man of science who considers the fertility of land merely as a question of the addition or subtraction of more or less of mineral atoms to or from a definite quantity, neither more nor less, which Nature has provided—the man too who believes that fertility depends on the maintenance of the so-called vegetable mould in our soils—both of these might well expect that on these Cotswold soils, under perpetual arable culture, there would be exhibited a state of gradually diminishing fertility, while the pasture lands of the Vale, richly stored by Nature, would be in a state of gradually increasing fertility. The facts are just the reverse of their anticipations. The thin arable lands of the Cotswold district have largely increased in fertility—paying more rent, more labour, yielding more produce than ever they have done. The pasture lands of the Vale are stationary—I believe as nearly as possible stationary. It is arable culture which gives the most scope for applying artificial aid to the natural growth of plants—which, in short, gives the most scope to mind; and it is from this accordingly that not only do we get largely increased produce of bread and malt, but in a fourfold ratio largely increased produce also of meat and wool.

Certainly I do not believe in the soundness of the outcry that has latterly arisen among agricultural writers and speakers for the laying down of land to Grass. We can, I believe, generally grow nearly as much cattle food upon 100 acres of arable land as we can on 100 acres of Grass land: and we get the grain to boot. It is to this contrast between the arable and Grass lands of Gloucestershire that I have in the last place to call attention. Landowners do not willingly give leave to break up old Grass, and they are wise not to do it on any such scale in any district as would alter the general style of industry and the general character of farm management under which the labourers and tenants of that district have through many generations grown up. But it is worth while for them to recollect that the Grass lands which, as being less injureable, they so tenaciously retain in Grass, are at the best stationary and stop the way in agriculture, and that the arable lands of which, as being liable to injury, they fear the extension, are the really progressive part of English agriculture. It is these whose rents have increased—*they* have given the labourer his wages, and *they* have fed the population. I believe, if any one will inquire into the circumstances of the dairy farms of the Vale, they will find no more cheese or butter made per acre now, than was made 40 years ago. I have the figures (not by me unfortunately) of 13 dairy farms in Tortworth and Wickwar parishes, collected in 1830 by my father. There were then about 23 cows per 100 acres kept upon those farms, and there are not more now. And some statistics which Mr. Harrison gave me a few weeks ago, about the stock on richer farms in Frocester and Coaley parishes, seem to bear out the assertion that the dairy farming of the Vale is in very remarkable contrast to the arable farming on the hills in all that is for the interests of landlord, labourer, and population. I expressly forbear to give any opinion as to how the interests of the tenant farmer have been served by the progress on the hill. But it may reasonably be supposed that the competition for land here, as elsewhere, reduces the profits of the farmer to pretty much an even level wherever you go.

The main point on which I should be glad that any remarks made this evening should rest, is the safety to all classes of good arable farming—certainly the safety of it to the landlord. I believe that more cheese and butter will be cheaper made per acre on a dairy farm, when 25 acres out of every hundred are under the plough—than, as now, when a very scanty allowance of arable land exists. And it would be a very satisfactory result of this discussion if landlords in the Vale district should be induced by it to regard more favourably than they do the request which often reaches them for permission to break up a field or two upon the dairy farm more than is at present under cultivation.

During the discussion which ensued, Mr. Thomas, of Lasbro', Mr. Drew, of Calcot, and others declared that it was becoming annually more difficult to maintain the increasing fertility of the Cotswold lands. And it was urged by Mr. Harrison, of Frocester Court, the President of the Club, that the large and increasing amount of tenant's capital invested in their cultivation ought to be under the protection of a lease. Colonel Kingscote called attention to instances within his own knowledge of the improvements in Grass lands on which Mr. Morton had expressed his doubts. The following resolutions were adopted:—

"That the great improvement in Cotswold farming is due to greater care in cleaning the land, and to the extended use of artificial manures and cattle foods.

"That to maintain this improved condition it is increasingly necessary to continue the use of these means.

"That were they discontinued the land would rapidly revert to its former inferior condition.

"That the improvement being thus dependent on the tenants' energy and expenditure of capital, it is due to them that leases should be general.

"That the breaking up of a large proportion of the Grass lands on the dairy farms of the Vale would greatly stimulate improvement there."

SEWAGE IRRIGATION.

THE time is gradually approaching when thinking men who now know something of the natural laws and chemistry of agriculture will no longer abhor their own excreta, but will look upon them as the only reliable means for producing their future food. With the existing sentiments on this question, every man who dares to shock the false delicacy of the public by an appeal to their reason and common sense must expect to incur a certain amount of obloquy, ridicule, censure, contempt, or pity—but a stern sense of public duty and general welfare will give him courage and support. I feel convinced that the time will come and is coming when we shall be compelled to educate our children to regard their excreta as a treasure worth preserving, and too precious to be wasted. This is the practice in Japan and China, where as a consequence the people have increased and endured beyond any nation on earth. The reason is obvious. With them increase of population brings increase of manure, and consequently increase of food, without recourse to foreign imports of either corn or manure. Cause and effect thus follow each other in logical sequence.

The population of China is estimated at 412 millions (nearly half the world's population); of Japan, I believe, 30 millions. In Great Britain, owing to our neglect and waste of human excreta, increased population does not bring increased food; on the contrary, we become annually more and more dependent on foreign supplies, not only of food but of costly manures. We pay millions annually for Peruvian birds' dung, and throw away our own at our own doors. Is this reasonable or consistent with true commercial principles?

What should we say if our farmers, who depend for the production of their crops on the droppings from their 10 millions of sheep, were to divert all these droppings to the nearest stream or rivulet; and yet the waste of the excreta from our 30 millions of population is as great a folly, I had almost said as great a crime. That profound and rare philosopher Baron Liebig, has, in his never to be sufficiently appreciated works, unveiled and exhibited to us for the first time the natural laws of agriculture, and if we believe in those laws and listen to his advice there will soon be an end to that cruel waste of man's vitality, which flows in golden streams through our sewers to pollute our rivers.

It is curious to observe the amount of pertinacious disbelief and opposition that have been created by the enunciation of that great man's theories, but it ought not to surprise us when we remember that every new truth has had to pass through the same ordeal—Galileo, Harvey, Jenner, and a hundred other good and great men, in ancient and modern times, have all felt the force of ignorance and prejudice, but truth has ultimately prevailed. So it will be with what is called the sewage question.

The great dilution of our sewage is looked upon as a fatal objection to its economic use. There never was a greater error. Has not science revealed to us that the earth can and does abstract and arrest from the filtering fluid all those portions of it that are suited for the growth of plants? The potash, phosphate of lime, and ammonia, forsake the sewage water, and cling affectionately to those earthy granules from which men and animals, by an all-wise Providence, obtain their food. Sixty or 70 years ago we had no sewage or sewers, nor steam-power to avail of, but now mighty steam makes child's play of draining a swamp or emptying a sewer.

Sewage croakers who plead expense as an objection to the economical use of sewage should learn, if they do not know, that 112 lbs. of coal, value 1*s.*, will, in a Cornish engine, so multiply its weight or power, that it will lift or raise 105,000,000 lbs. of sewage or water 1 foot high. This is the ordinary duty performance of our water companies' best pumping engines, and thus we have the question settled so far as one important expense goes. There only remains the laying down pipes to convey it to the land, so soon as people can be brought to believe that town sewage is the very best of manure, and well worth paying for. To instil this belief into the agricultural mind is the most difficult part of the affair; witness the apathy in regard to the wasteful washings of farm-yard manure, the strong tea going unheeded down the brooks after heavy rains.

In order to give town sewage its full value, we have only to add to it as much superphosphate of lime as is contained in the bones which we do not eat, and which, therefore, do not go into our sewers. This was clearly explained by Baron Liebig in his recently published letter, giving the value of town sewage with phosphates at 4*d.* per ton, without phosphates only 1¼*d.* per ton. The want of phosphate of lime in sewage or manure is like the want of water in house building—all the other elements or materials present are, by its absence, rendered unavailable. This is another of Liebig's great theories and truths.

We have all heard of the sewaged meadows of Edinburgh, which, owing to the heavy dressings of town sewage, are now let on an average at 27*l.* per acre per annum, and we know that the great cow-keeping firm in Glasgow, acting upon the advice of that good friend to agriculture, the late James Smith, of Deanston, pump the sewage from their cows to their farm out of town, but I will now proceed to detail a very important instance of the value and profit of town sewage.

This undertaking, being so recent, so accessible (only nine miles by rail from London), and so cheaply and effectively carried out, is likely, as an example, to have a great influence on the sewage question.

On the 23d of June, 1863 (by the kind permission of Mr. Marriage), I devoted some hours to a close inspection of the Beddington Meadows (300 acres), which receive continually, night and day, winter and summer, over a portion of their area, the sewage from 18,000 of the inhabitants of Croydon. The fœcal matters of this population are diluted by a water supply of more than a million of gallons daily, often increased by springs and rainfall to 2,000,000 gallons. The conditions on which it is granted are that the sewage shall leave Mr. Marriage's farm nearly as clear and bright as spring water. This actually takes place.

This application of town sewage to the land arose from no voluntary desire to benefit the soil, but from stern compulsion. In the first instance the Board of Health turned it into the river, the beautiful and pellucid little Wandle, a trout stream.

Law and Chancery suits were instituted at an enormous cost. A gentleman who holds a mill on the stream told me that he alone had expended 7000*l.* in law, and ultimately the Board of Health were compelled to hire 300 acres of land at 4*l.* per acre, the previous rental having been only 30*s.* They then let it at an increased rental for a term of years to the present occupier, Mr. Marriage, an Essex farmer, who has expended some 6*l.* or more per acre in pulling down 40 acres of wood, grubbing an immense area of rough old banks and fences, levelling, cutting carriers and gutters, and otherwise preparing the land to receive the sewage. Out of this sum the Board of Health have allowed him 3*l.* per acre. The land is favourably situated, being tolerably level, falling as the river falls. It is also very light and loose, resting on gravel, and self-drained. Mr. Marriage flooded the wood with sewage, and then pulled down the trees with a steam engine, the chain being attached to the tree about 18 feet from the ground. This flooding destroyed the numerous rabbits that infested the farm. Mr. Marriage, who is a judicious as well as enterprising man, entered upon this occupation in 1861, and has now laid nearly the whole 300 acres under sewage. This has been no easy task, but the work is done most economically and efficiently.

An open ditch of small dimension, with stops or sluices, communicates with carriers along the head of each field; from this carrier the sewage flows into open gutters, 12 inches deep, and 8 or 9 inches wide, 50 feet from each other, and running from top to bottom of the field. One man attends to the whole, placing the boards or stops at proper intervals to divert the sewage equally over the soil. From 30 to 40 acres are always under irrigation, the cost of attendance being 1*d.* per acre for labour for each irrigation. Sometimes the Rye-grass is flooded again when 18 inches to 2 or 3 feet high, if it appears to require it. It grows very strong and green near the gutters, and this guides one or rather warns one where to step over them. Those who see great difficulties about sewage would be surprised at the simplicity of the operation. The sewage flows from the town down to the Board of Health sewage works, where the solid is separated from the fluid by passing through perforated plates and gravel beds. The fluid then comes to Mr. Marriage's farm in an open cutting. There is nothing to shock a farmer's nerves, and although the weather was warm there was only a faint and slightly disagreeable smell on those fields from which the sewage had been recently withdrawn.

The arable land was in a wretchedly neglected condition, covered with Docks, Couch Grass, and other pernicious weeds, which Mr. Marriage naturally concluded would impede the growth of his young Italian Grass. To his surprise and joy, however, the rapidly-growing Rye-grass, under the influence of sewage, first smothered and then ate up all its opponents. No other vegetation can exist under the dense mass of this Italian Rye-Grass, looking like a solid and impenetrable wall from 3 to 4 feet 6 inches high. The second cut (from April 22 to June 22) was of that height, and at least 9 to 10 tons per acre. In the hot and dry month of July the crop grew much less vigorously, showing a desire to run to seed.

With more cloudy weather and shorter days its strength returns. The first cutting takes place in March—the last in November. The total cuttings yield from 25 to 30 tons per acre, according to season. This, if converted into hay, would give 10 to 12 tons per acre. During the spring months enough is sold daily to feed about 900 cows, in addition to a great number of cattle and horses grazed on the farm. This large supply affects the London hay market. The spring growth is so rapid and simultaneous that it becomes necessary to make some into hay, although this is rendered a difficult operation, owing to the great crop, and also to the rapid growth of the following crop.

The price received on the field is 17*s.* per ton for the green Grass. About 25 horses are employed in carting to London, where it is sold at 25*s.* per ton. Cowkeepers and others from many miles around, come to the farm for supplies. The Grasses are of a very fattening quality, as evidenced by the peculiar glossy coats and healthy appearance and well-filled outlines of the numerous grazing animals ready for the butcher. No other food is given but Grass, and they eat it quite bare before the irrigation is turned on. Pasture and Italian Grass benefit alike by the sewage, the former being rendered a rich and close sward by the application of sewage. Many head of cattle are grazed on the pastures during winter, and do well. Forty acres of Mangel Wurzel are grown annually.

On the whole this undertaking gives unmistakeable evidence of the value of town sewage, and although, after passing over Mr. Marriage's land, the sewage appears to be water, I imagine that it must still be of considerable value if applied to other land.

I cannot conclude this paper without thanking Mr. Marriage for his public spirit and kindness in permitting an inspection of his operations. *J. J. Mechi, Tiptree Hall, March*, 1864.

P.S. I may add that the sanitary condition of the neighbourhood of the farm is good, and that the alarm originally existing has now passed away. I would remark that from experience I find that when farm-yard manure is converted into sewage by being very largely diluted and applied like rain, its effect on the growth of plants is much more rapid, and the return for the quantity of manure applied is more immediate, than the slow action of what is called solid manure.

It is the solubility and divisibility of guano that tends to produce a quick return. The same principle holds good with sewage.

I annex Mr. Marriage's letter to me, just received—

"Grassmere, near Mitcham, Surrey,
March 12, 1864.

"Dear Sir,—In answer to your queries, I may inform you that 17*s.* per ton is the price I obtain for my Grass in the field.

"I charge 25*s.* per ton, delivered in London; but as so much of this is made up with the expense of cartage, &c., therefore the most correct estimate, and the one that most fairly states the value, is as above, viz., 17*s.* per ton in the field.

"You know that I have hired about 300 acres of land, and apply the sewage of Croydon to it; that it is a great stimulant to the growth of vegetation, especially to Grass, producing a crop much earlier in the season than any other method, and continuing on much later, also through the autumn; that Grass so produced possesses great feeding qualities; that sewage-water so passed over the land is rendered not only clear and free from feculant matter, but will not create a nuisance if the land is situated not immediately in the neighbourhood of habitations. This latter remark I make purely on the ground that under any circumstances the application of the purest water to the soil, will of necessity produce a dampness in the earth, and perhaps influence the air, and would not be conducive to health.

"I remain, dear Sir, yours very truly,
"JOHN MARRIAGE."

The following facts, which I ascertained from reliable sources, settle the question of the practicability of applying town sewage to the soil:—

"An iron pipe of 4 feet in diameter, having a fall of 5 feet per mile, conveys from Loch Katrine to Glasgow (40 miles), 22½ million gallons of water every 24 hours. The cost of the 4-feet pipes, including bridges and other necessary works, was 10*l.* 18*s.* per yard. This was carried out for the Corporation Water Works, Glasgow."

The largest daily water supply to London is 100 millions of gallons during summer. Much of this is wasted and evaporated by street watering, boiling, steaming, &c. Therefore four of the Glasgow pipes would reconvey all the water and sewage to the country. Oh! but then there is the rainfall! Well, Mr. Bazalgette, in a paper read in January, 1857, says that in 1855 there were

226	dry days in the year
90	days fraction to 1-10th of an inch of rain
21	days 1-10th to 1-5th of an inch
28	days heavy rainfalls.
365	

Ancient Rome, with its seven millions of inhabitants, also had its great sewer, the celebrated Cloaca Maxima, which still exists. What was the result of their wasting their excreta in the Tiber instead of applying it to the soil?

Liebig tells us at pages 229 and 242 of his "Modern Agriculture:"—"The sewers of the immense metropolis of the ancient world engulphed, in the course of centuries, the prosperity of the Roman peasant (farmer); and when the fields of the latter would no longer yield the means of feeding her population, these same sewers devoured the wealth of Sicily, Sardinia, and the fertile lands on the coast of Africa. * * * The land was in the end not able to bear the heavy taxation, and as the history of the first three centuries of our era informs us, there ensued a condition of the population the most calamitous and frightful into which a nation can fall. It is true that many causes co-operated in producing this result, but assuredly one of these was the exhaustion of the soil by the spoliation system of agriculture then pursued."

Surely the almost depopulation of that once great city should warn us in time to avert our own catastrophe.

Purchased food and bought manures, rendered necessary by the non-return to the soil of our own excreta, cost the farmers of this country probably not less than 10 to 12 millions annually, and are almost to this extent an abstraction from their profits. Every new sewer made, and every old cesspool abolished,

are further abstractions from the farmer's manurial resources, and render necessary a further outlay.

Liebig says, p. 184, "Natural Laws of Husbandry," —"Of the large amount of mineral substances which man consumes in his food during a lifetime, but a small fraction remains in his body. * * * Chemical analysis demonstrates that the excrements of man contain the ash-constituents of bread and flesh very nearly in the same quantity as they exist in the food."

THE VEGETABLE MOULD.

In previous Numbers of the *Agricultural Gazette*, I have brought out some important original views of the agency of the Vegetable Mould in the economy of Nature—as an accumulated provision necessary for the origin and continued existence of the higher order of vegetables and animals, and of man himself. It now remains to point out the most efficient means of maintaining, improving, increasing this mould. This is the highest, the most important object of all to man —that upon which his own existence, at least the amount of population which the earth is capable of supporting, depends; the capacity of doubling and quadrupling, or halving and quartering the present number, being according as this provision is increased or diminished. Yet strange, this highest, most important art that man is master of attaining, has been unheeded, unmentioned, even ignored, unthought of by Liebig. But previous to entering upon the subject of improvement, it is proper, though in part a repetition, to point out the highly efficient means to effect its destruction which man has adopted.

In the reduction of the wilderness, especially the forest land in North America, the business of the settler would almost seem to be to get rid of the vegetable mould. In cutting down and burning the forest trees, he throws all the valuable components of the vast mass of vegetable matter, Liebig's minerals excepted, into the atmosphere. He then by aration exposes to the parching hot atmosphere and sun's rays the black and brown vegetable mould under the most exhausting crops. Often, in order to get rid of the manure which the consumption by cattle of these crops produces, he drives it out upon the river ice, if he has a convenient river near; and in the absence of this conveniency, reckless of its economical management and application as a manure, it is seldom made use of in a manner to retain the fertility of the soil, which would require the utmost care and leniency in cropping, as the vegetable mould of the forest, from having accumulated under shade and shelter from sun and wind, is much more volatile when exposed than mould accumulated under different circumstances. Its preservation is however no great object to the settler. He crops it till it is reduced to pure mineral earth, yellow or white sand or clay—quite the mineralogist fancy. He then subjects a new portion of the forest land to the same course of exhaustion.

In another colony of this highest enlightened race of man, the Cape, where the farms are extensive, the country only partially wooded, and flocks and herds the chief product, owing to the danger from destructive wild animals the cattle are brought home, and pass the night in enclosures close to the people's dwellings, defended by large dogs. Here the manure accumulates in mounds around the homestead to such an amount as to render necessary its removal to a distance, leaving the mounds "to waste their fragrance on the desert air." The exhaustion of the pastures from this cause, and the destruction of the wood by the sheep and cattle browsing upon the young tree plants, must tend to sterilise and parch up the country, which though like Australia subject every few years to an excessive rain flooding, most seasons suffers from aridity. The browsing of cattle and gnawing of sheep must diminish the wood, and the resulting aridity may react to destroy the wood altogether in the drier sandy districts. Subjected to great drought a wooded country ceases to be wooded.

In Australia much the same exhaustion of the vegetable mould is in progress as at the Cape. The nibbling and gnawing of the sheep not only destroys the young tree plant, but also the thin tufted Grass is bitten down into the root knot and dies out, leaving the ground comparatively naked to what it was in the state of nature, open to the parching sun and wind to reduce the vegetable mould to the chemist's wish—to its more fixed mineral constituents, almost as if subjected to torrefaction in his crucible; hence the gradual decrease of the fertility of much of the Australian pastures. The great disadvantage of these countries, both Australia and the Cape, is that the rainfall is not distributed regularly over the year, and also not regularly from year to year. A course of seasons occur of nearly the same rainfall, followed by one or even two seasons of excessive drought, or by an excessive rainfall, flooding the rivers of steep banks 80 or 90 feet perpendicular, and laying the low inland country, where the banks are low, deep under water.

Passing northward to British India, we meet with a country under very different circumstances—a land of the olden time, still densely peopled, perhaps the cradle of the human race. Here we find vestiges of very ancient civilisation—strata of broken bricks and earthenware, a number of feet in thickness and miles on miles of extent, such as London would furnish, trampled down by an earthquake, but not swallowed up, again and again reconstructed, and at length buried in the dust of time. Here we find a people suffering from excess of social order, fallen into a system of social, political, and religious slavery—so chained together by impassable social barriers, so fettered body and mind by the system of caste, and by crushing forms, ordinances and usages, as to be inextricable by any effort of their own, a state of society as definitely fixed and binding, though not so wisely ordered, as that of the instinctively guided bee-hive.

In the ancient civilised countries of the East, where in the great plains despot rule and tyrant custom have reduced man into abject slaves, liberty, physical and mental strength, has retired to the mountain fastnesses. In the open country of India, physical and mental slavery, and consequent degeneracy of race is complete, and has left the people a prey to foreign thrall, luckily for them to the most improving race that has ever appeared upon the earth. Whether under the rule of this race the Hindoos may be recoverable from the chains which have been rivetting upon them for thousands of years, is a question which time only can solve. Unfitted, themselves, by the climate to become colonists, and make a clearance like the Jews of old, we shall see whether these modern masters of India, after manumitting their slaves in the West Indies, have only done so to increase them a hundredfold in the East, only changing the form of slavery from the individual slaveholder system to the political and social phase—what I have termed indirect slavery.

In India the land tenure system, as regards improvement and the well-being of those who are the farmer cultivators, is perhaps the worst that could be contrived—worse even than that of Britain. In India the Government proprietorship of the land is an actual reality, practically carried out, and not merely a theoretical form as in Britain. The Government farms out the land, in the same manner as the taxes were wont to be in some of the European countries, first in large districts to first-class middlemen, who again in their turn farm it out in smaller divisions to second-class middlemen, who parcel it out to the farmer cultivator on the most grinding and destructive system of yearly tenure, exacting three-fourths of the produce as rent; an amount exceeding what I have ever heard of in Europe, when one half of the estimated produce is the highest rental for land under aration that I have known. This system retains the tenant in abject poverty, and necessarily produces a hand-to-mouth system of cropping exhaustive of the vegetable mould.

It would seem that continental countries deprived of forest and a fertile vegetable mould fall more into extremes of drought and rain—a long period or season of parching drought followed by an excessive flooding. Such great alternations occur in India, while the vegetable mould in most places is much exhausted, and the Hindoo race nearly in the same ratio degenerate, and exposed to destructive famines, now perishing by hundreds of thousands where the ancient works of irrigation have been allowed to go to decay. Why do the British rulers allow such a state of things to exist? Surely there are plenty of labourers in India. What would the labour that constructed the useless Egyptian pyramids, or the labour of the present standing armies of Europe not be capable of, if directed to works of utility? As the aids of steam and machinery come to operate, a vast amount of human labour power is set free. One half the human labour can perform the usual agricultural work, and less than one-third the work of textile clothing and other articles necessary to human comfort. This leaves an enormous amount of human power unemployed. Is it to minister to the debasing luxury and pride of the few? Is it to go to keep up enormous standing armies and war navies? Or is it to be directed to grand works of future human advancement, of which irrigation in warm countries is the foremost?

I will defer the account of the destruction of the vegetable mould going on in Britain, notwithstanding the unprecedented means we possess of increasing it, till I come to treat of the improvement of the vegetable mould in cooler regions.

In hot climates irrigation in a great degree compensates for and with judgment and industry can be worked to furnish a rich vegetable mould to the portion of the land not irrigated, the irrigated portion requiring little manure and giving much material to form it. Irrigation has long been practised profitably in Egypt and other places, where the water from insufficient fountain level had to be raised by human power alone. In the South of Spain, during the political calm of the Roman rule irrigation was extensively carried out, and where necessary the water raised by ass and mule power, giving a vast increase to the population, raising it to treble what it now is, as 1 lb. of coal is able were there no loss of power by friction, &c., to raise 1 ton of water 1 mile in height, that is about 50 tons, 100 feet. How much more easily and effectually by means of steam power, can the increase of irrigation, and vast increase of a well fed population be carried out. Man has it now in his power to raise every spot of the warmer climates, the unmanageable mountains excepted, to the highest state of fertility. To effect this, the industrious man must be protected in the property he creates, facilities for the creation of real property—the enrichment of the Vegetable Mould—afforded, the fetters which repress reproductive industry and promote misery removed.

In order to compass means for the repair of the waste of the vegetable mould which man has effected, it is well to look at the processes of Nature where its greatest depth has accumulated. The reedy shores of rivers and shallow lakes in climates of sufficient temperature are the natural laboratories of those deep formations of vegetable mould which we find in low countries, such as the south of Russia, the black soil of India, the north of China, and some other places, where great fresh water lakes and rivers, with shallow shores, had gradually retired and left the reed and sedge-formed vegetable remains of great thickness. This formation is gradually built up of the roots and fallen down stem and leaves along with a little mud till it rise above the water, or in case of the slowly retiring water of shallow lakes (a not uncommon occurrence) there is built up of these materials along the shallow border a deep formation of vegetable mould, extending in width as the water retires. Artificial irrigation, wisely conducted, can be worked to act in the same manner as Nature does, where the temperature is sufficient, that is for about 40° on each side of the equator. I speak here of what is within the power of highly civilised man to effect, aided by rapidly extending science, under protection to capital and skill invested in improvement of the soil.

With irrigation there is a luxuriant and rapid growth, so that two, or even three crops can in warm climates be grown in the year. It is rather difficult to understand how the necessary materials are obtained. No doubt the water, different from rain water, in containing more minerals, supplies a portion, and the increased vigour of the vital attraction in a luxuriant plant is abler to overcome the existing material attractions which withhold the mineral and other components of the soil, or, perhaps to widen the sphere of the plant's attractions, to draw from a deeper or more distant source, whether in the soil or atmosphere. Here not improbably the metamorphic power of electro-magnetism which carries metallic substances and deposits them in rock veins may act here, more especially through the conduction of water. Supposing one half of each farm to be under irrigation, whether producing man's food, or that of beasts, cut and given them in stalls, the quantity of manure produced will be adequate to raise the other half to as high a pitch of fertility as land not irrigated could well reach. In the irrigated portion it might be profitable now and then to take a flying crop without irrigation. This may be found expedient in order to expose the soil to aeration, thus to give it an opportunity of imbibing a large quantity of air, and to render it of a more crumbly character. The fertilising effects of aeration I have yet to treat of.

In effecting the proposed improvements which extending science points out, railways will facilitate the conveyance of the necessary coals from their natural depots, scattered over most regions, though perhaps not so plentiful within 30° of the equator (this demands examination, as no peat deposit takes place except at very high altitudes within this lat.) The steam elevator of water and steam plough, along with steam conveyance, are destined to revolutionise the earth's surface and the condition of man, morally as well as physically. In warm countries these aids of human labour, doing all the heavier more laborious work, will be much more felt and their advantage more appreciated than in cooler regions, where heavy labour is not so burthensome. These aids will render man more a superintendent of labouring machines than a labour drudge, and the business of superintendent or conductor, a charge of trust requiring intelligence, will be found too important an occupation for any but freemen—hence the slave's and slave-driver's occupation will be gone.

I have here redeemed my promise, so far, of proposing a practical scheme of vastly improving the vegetable mould in more than four-fifths of the habitable globe, and which intelligence and industry under the present and coming unexampled advance of science and extension of the arts of life over every land will enable man to effect. The means of improving the vegetable mould and greatly increasing production in cooler climes remains to be treated of. *Patrick Matthew, Gourdie Hill, Errol, Scotland, March.*

Home Correspondence.

Agricultural Plant Improvement.—Since writing to you on the 19th ultimo, your leader of the 13th February came under my notice for the first time, and although late I offer a few remarks in reply to what you have said in connection with my name. The following extract from the leader in question does not fairly meet the question at issue:—"No one is more able than Mr. Shirreff to appeal to the history of plant improvement in proof of his opinion. But we shall be very much astonished if, on a review of the whole of that large subject, he finds as he declares that the alleged history of Hallett's Pedigree Wheat is the only instance which can be quoted in defence of the idea which the word habit, as applied to the growth of plants, necessarily conveys." In replying to this I shall leave out of consideration the import of the words "idea" and "habit," and substitute the term cultivation as used in my communication of 6th January last. On the widest review of plant improving, embracing my experience in the farm and garden, I am unable to name a single instance of a variety having been improved by cultivation. Being aware of my deficiencies in botanical knowledge, I consulted by letter a practical person of considerable attainments, and received the following answer. "I have not yet seen nor even heard of any trustworthy exemplification, nor do I believe it possible to improve, strictly speaking, any plant through the effects of cultivation. I am aware that a variety under different circumstances may have various aspects, but not improved or deteriorated thereby. Habit of growth is quite foreign to the subject." As our opinions on this subject are so different, I beg you will favour me with a list of the varieties which you think have been improved by cultivation. Can there be anything in the origin and nature of Hallett's Wheat to render it an exception with respect to improvement by cultivation? I think not; but let this subject be examined. Mr. Hallett says he commenced with an ear of Nursery, which he improved by cultivation. But there is overwhelming evidence establishing that the Wheat is not Nursery at all, and many of your correspondents have stated that it is similar, perhaps identical, with Quentin's Giant. But, Mr. Editor, you have recently been supplied by "Triticum" with evidence to judge for yourself, and as you retain the samples in case your account of them should be called in question, it is not too late to let your readers know your opinion. I therefore venture to ask you to re-examine "Triticum's" samples—No. 3 (Hallett's Pedigree), No. 10 (Hallett's Pedigree), sent out in 1862, and No. 12 (Quentin's Giant)—and tell your readers if they are different varieties. I also ask you to compare these samples with No. 9 (Nursery Red), and say if it is the same variety with either No. 3 or No. 10. Hallett's Pedigree Nursery Wheat must either be fact or fiction, and your reply to the requests which have been made may go far to establish or annihilate the year by year system of plant improving. *Patrick Shirreff, Haddington, April* 11.

Hallett's Wheat.—You were good enough to insert in the *Agricultural Gazette* of March 26 my letter respecting the quality of Hallett's and other Wheats grown in this parish, adding, "Will you give us a full history of the produce in the two cases?" The state of the farms in this parish varies so much that I fear no

useful conclusion can be drawn from a comparison of the produce on one with that on another. Our soil is gault, underlying the Biggleswade green sand, mostly very tenacious, but occasionally gravelly or sandy. Some of the land is drained 4 feet deep with pipes, some with bushes, 2 or 2½ feet deep, some not drained at all; some has been steam-ploughed, some exhausted by former bad tenants and full of weeds, some in a high, some in a creditable state of cultivation. As might be expected under such varying circumstances, the produce greatly varies. Last harvest some of the land produced 17 bushels to the acre, some not less than 50 bushels, and in one case more. The deep drained land, which is the best cultivated as it happens, produced the greatest crop, the undrained the least. To make a comparison between the productiveness of Hallett's and another Wheat both should be grown under the same conditions of cultivation, and this has not been done here yet. I took my land into my own hands at Michaelmas 1861, when it was the most exhausted and foulest in the parish. I dibbed the Wheat called Tibbald's Wonder at the rate of a bushel to the acre, and in the spring sowed on it 1½ cwt. of guano to the acre; the produce was 11 bushels to the acre of very coarse Wheat. In the autumn of 1862, having drained the land, I dibbed, after a poor crop of Trefoil, Hallett's Wheat at the rate of 1 peck to the acre, and during the winter and spring top-dressed it with dung and 1½ cwt. of Peruvian guano. The plant, in consequence of the poverty of the soil, the falling away of the moved earth in the drains, and my omission to resow where the seed failed, came up patchy, in some places nearly enough, others half, a quarter enough, or scarcely any; the crop produced on an average 25 bushels to the acre, but in places there were, I have no doubt, 40 bushels. In reference to "Triticum's" remarks, numbered "3" in the same paper, Hallett's Wheat "when used alone makes bread of the most inferior description," mine makes excellent bread. The true explanation of the discrepancies in the various accounts of this Wheat is to be found in your leading article on the subject at p. 298, namely, in the differences of climate, elevation, soil, slope, latitude, and cultivation. My land is situated about 52°, at a very moderate elevation, somewhat gravelly clay, gently sloping to the south, and above all, deep-drained. In proof that this is the cause, and that our soil will produce Wheat of a better quality than another from the same seed, both I and my neighbour noticed that the Wheat which I grew was perceptibly better than the seed which I sowed. *E. B., Hatley Cockayne Rectory, St. Neot's, April* 9.

Garden Manures.—The paper of "Rusticus" in the *Agricultural Gazette* of the 26th of March on utilizing human excreta is valuable, as every attempt to stop the waste of the most valuable of all manures. Having for many years, indeed ever since Mr. Way, the eminent chemist, proved that clay effectually deodorised fœcal matter, and preserved it for the gradual use of plants by their roots, I have brought the system into practice, doing away with all sinks in out-door closets. A tray on the level of the ground is used instead, containing dry earth, clay, or earth containing clay, but not siliceous earth, which does not absorb and lock up like clay, or what answers well and is very convenient, the sifted ashes from the house fires; thus provided, a shovel and a brush are all that are requisite, and a shovelful of earth or ashes thrown in every time before leaving the closet effectually deodorises. Then, as often as necessary, the contents of the box or tray are removed, one side or the back being made to open, to enable a person to shovel out and carry away the contents, which is only like taking away so much earth or ashes, so effectual is the deodorisation. You will see how inexpensive and applicable this plan is for all out-door closets. As for indoor, I have used Smith's apparatus (of Glasgow), which is a chair to which is attached a receptacle for ashes, and a little mechanism to make it self-acting every time it is used. I believe this would answer as well as water-closets in a well regulated family, where the supply of earth and the removal of the contents of the box is properly attended to; and I believe the Rev. Mr. Moule's apparatus is something of the same kind. My plan is applicable to all towns, and might be carried out by a system of day scavengers, and would preserve manure now lost, and of the value of millions a year, as well as prevent the defilement of water in wells, and thus doubly contribute to the health and happiness of man. *Thos. C. Brown, Further Barton, Cirencester.*

Societies.

BATH AND WEST OF ENGLAND AGRICULTURAL: *April.*—At the usual monthly meeting of the Council of this body, it was resolved that the Right Hon. Lord Fortescue be requested to put himself in communication with the authorities of the city of Bristol for the purpose of inviting H.R.H. the Prince of Wales, the Patron of this Society, to honour the approaching Exhibition with his presence.

Selection of Judges for the Bristol Meeting.—On the motion of Mr. KNOLLYS it was resolved that the Secretary be desired to apply to the Secretaries of the National and County Agricultural Societies (named in the resolution), requesting them to furnish lists of gentlemen qualified to act as judges for the several descriptions of stock for which prizes are offered by this Society.

The Open Judging of Stock at Bristol.—A code of rules for the regulation of the open judging at the Bristol meeting was brought up by Mr. H. FOOKES, and carried unanimously. It was among other things resolved that the judging shall commence at 10 o'clock on Monday morning, at which hour the public will be admitted to the show yard; and it may be stated in general terms, that the rules for judging are with very slight modifications the same as those adopted at the Worcester meeting of the Royal Agricultural Society.—On the motion of Mr. JOHN GRAY, seconded by Mr. KNOLLYS, it was resolved that in the event of an animal to which a prize has been awarded being disqualified, the animal next in merit (unless disqualified), shall succeed to the vacant prize, unless certified by the judges to be of insufficient merit for a higher prize than that which has been assigned to it; and that the judges be requested to hand in one or more "reserved numbers" of animals which shall succeed in like manner. It was further resolved that the Veterinary Inspector do accompany the judges, when the classes of horses are judged, and advise the judges, before they make their awards, of any disqualification affecting the animals selected for prizes, and that in all other classes he be sent for by the judges, before they award the prizes in any case of doubt.

The Entrance Fee for Horses in Classes 39 to 50 inclusive, was fixed at 1*l.*

Farmers' Clubs

OXFORD.—On "*The English Labourer and his Cottage Home.*" Mr. E. W. MOORE, of Coleshill, Wilts, Agent to the Earl of Radnor, read a paper on this subject. The Rev. J. C. Clutterbuck presided.

His title to speak on labourers' cottages consisted in a 24 years' practical acquaintance with the subject, during which period he had erected close upon a hundred dwellings. After acknowledging the improvement which had been made within the last 30 years, and noticing the provisions made by the late Prince Consort on the Royal farms, Mr. Moore mentioned that Mr. Tucker had procured returns of the cottage accommodation throughout the Faringdon Union, and, on the whole, the results were most distressing. After remarking that the dwellings of the poor in London and our large cities were equally disgraceful, and that the remedy was to be sought, not so much in legislation as in awaking the consciences of owners, the lecturer proceeded to notice the question of wages, giving it as his opinion that, instead of a uniform standard, each man should be recompensed according to his diligence and ability, due regard being paid to trustworthiness and length of service. He read a number of letters which he had received from agriculturists and agents in various parts of the country, the general effect of them being that more labour might be profitably laid out by farmers, and that the labourers in the north, being better paid, better housed, and better fed, were far superior in physique and endurance to those of the southern counties; one gentleman attributing the difference to the former laying out more money on animal food and less on beer. Mr. Moore then expressed his opinion that the abolition of the law of settlement would be a great boon to the working classes, giving instances of the harshness of its operation, and remarking that union rating must follow or precede the change. He next touched on beer houses, deprecating the present law, by which they were virtually brought to every man's door, and assigning the prevalence of drunkenness mainly to the discomfort of the labourer's home. He should prefer the throwing open of the trade to the present system, but thought brewers should encourage the supply of wholesome beer in small casks, to meet the wants of the working man. The evil of indiscriminate charity was next alluded to, Mr. Moore's belief being that nothing so much demoralised and degraded the poor in rural parishes. He then referred to education, pointing out the need of infant schools, children being so early taken to work, and the propriety of a practical, religious, and industrial education, which would fit boys to become good ploughmen, shepherds, and herdsmen. Those who were capable of a higher position in life would find this no hindrance. In conclusion, he dwelt on the influence possessed by landowners, clergymen, and farmers, and the good which might be effected for the labourer by their example, sympathy, and kindness.

The PRESIDENT expressed the cordial thanks of the members to Mr. Moore for his most instructive and admirable lecture. There was one point on which he had not touched—the state of the cottages in the holdings of the colleges. He (Mr. Clutterbuck) was sorry to believe that they were in a very deplorable condition, many being a disgrace to the country, and this arose from the very nature of their tenure, being under long leases in the hands of the farm tenants, who had no permanent interest in them, and had very often to pay for their own improvements on the renewal of their leases. The sooner that system was amended the better. He quite concurred with Mr. Moore as to wages, a subject which required much consideration; and the great disproportion in the relative value of piece-work and day labour in the north and south showed that a low weekly scale of wages was as expensive as a higher one.

Reviews.

The Theory of Under Draining (a Lecture delivered at the Royal Agricultural College).

This is an unpublished pamphlet, containing a lecture by Mr. Bailey Denton, lately delivered before the Royal Agricultural College at Cirencester. He has been good enough to place it at our disposal; and we had hoped to have laid it entire before our readers in the same fulness as a former lecture by the same gentleman had been given in these columns. The pressure upon our limited space is however so great that we have to be satisfied with an abridgment in place of a full report.

The lecturer here discusses the theory of under-drainage in reference to the texture, the composition, and the temperature of four classes of soils, which he denominates free, clay, peaty, and mixed soils respectively. The water in land is derived from the rain, and is then called surface water—or from springs, when it is called "effluent" water—or from pressure, rising to the surface of free soils in the lower grounds, when it may be called "diffluent" water.

"1. *As to the Mechanical Effects of Under-drainage.*—Each description of soil has its appropriate mode of drainage, and each character of wetness commands a special mode of removal; but the atmosphere takes such a prominent part in bringing about the desired mechanical changes in clays, which are retentive soils, that it is positively necessary to regard the art of draining them as distinctly different from that of draining free soils, which are not retentive.

"The surcharged free and peaty soils being naturally 'percolative,' are only wet from position, and they require just sufficient outlet for the water pent up within them to turn stagnation into motion, and to create, in point of fact, a sub-irrigation for the benefit of the roots of vegetation. You have observed, no doubt, the effects of moving water on the surface of our irrigated meadows, and have seen that it is not wetness that is wanted, for these meadows are generally too wet before the water is turned on, but that it is motion; and so it is with the under-drainage of our free soils. In them the true art of draining is in doing as little as will attain this object. When once drained they possess the same capabilities as those which are naturally dry, and they are equally susceptible of absorption, the only difference being the depth of the subterranean water level, which, in the case of the high and dry lands, sinks beyond the reach of evaporation; while, in the case of drained lands, though sunk lower than before by the operation of draining, it still remains within reach of the atmosphere.

"The clays, on the contrary, though rendered capable of 'permeation' by under-drainage, still hold their peculiar powers of retention and expansion, which limit their capabilities of absorption, and cause them to resist, when the surface is not properly and deeply cultivated, the admission of falling rain. The clays are the 'conservatives' of the soil. They hold the moisture they seize, and give it out gradually except on occasions of heavy downfalls, after their own capacity for retention has been satisfied, when they readily discharge the excess. These soils cannot be aërated too much, as it is only by aëration that their retentive nature can be held in subjection. In clay lands, the more perfectly the aërating action of the drains tells upon the mass of soil between them, the quicker and more uniform the passage of surplus water through it, and the only limit to the number of drains to produce this result is the cost. The true art of draining is not confined to ejecting surplus water, but extends to the complete aëration of the soil drained. You must bear in mind that all the drainage in the world will not alter the constituents of clays; it merely alters their condition. There are persons who think that if clays are drained they become as ductile as free soils, but it is a mistake; they still retain their peculiar properties, and when fitly treated are as grateful as any; when abused they become the *noli me tangere* of soils."

The discussion of the chemical effects of under-drainage, and of its influence on the temperature of soils, occupies the latter part of the lecture, and to this we shall recur next week.

A Guide to Geology. By John Phillips, M.A., LL.D., F.R.S., F.G.S., &c., Professor of Geology in the University of Oxford. Pp. 314. Small 8vo. Longman & Co., 1864. Fifth Edition.

Professor Phillips reminds us in his preface, that about 30 years ago, when his Guide to Geology was first given to the public, many persons were surprised with the revelations of that science, and their minds received a shock. To this feeling, he says, an almost easy faith in the wonders of geology has succeeded; but, if we would retain this confidence, we must persevere in the methods which have won it, carefully shunning speculations without data, &c. The reader will find that throughout this little work the Professor does not transgress these just limits which he here prescribes for himself.

The "Guide to Geology" is written for three classes of readers.

1. For those who desire to know what geologists have settled with regard to our globe.

2. For those who wish to know how they arrived at their conclusions.

3. For such as wish to add to the facts, and to take their place among the discoverers of new truths in geology.

As to the laws which are recognised in this science, while geologists allow that no single feature of earth, sea, or air, no single mountain, river, or lake, remains as it was in primeval times, they find no traces of phenomena inconsistent with those genera laws which now prevail; nothing to require the supposition of any other forces than those known to be now in operation. As to a progression in the systems of animal nature, it seems that the forms and combinations of forms once passed recur no more; in this point of view Nature has no backward steps. Yet

that there must have been a beginning of life on the earth will be admitted by all who allow that our globe "was once in a state quite incompatible with the presence of animals and vegetables—in fact a globe of melted matter enveloped in a vast misty expansion, in which the water was suspended which now fills the ocean." Ordinary folks, who are thus driven, by the nature of the case, to allow that there must have been a beginning of animal and vegetable life upon the earth, do not see much difficulty in what the Professor calls "an enrichment by new creations added from time to time to an original stock," but the Professor does not seem to think there is any necessity for stating what are his own opinions on matters of this kind.

In considering the movements in the crust of the globe, and the internal fluidity of the globe, Mr. Hopkins's Researches in Physical Geology, printed in the Cambridge Philosophical Transactions, are referred to with much and deserved commendation. In chapter 5, on Series of Life, Professor Phillips tells us, "Between recent and fossil organic beings, we find a general analogy of system, frequent agreement in important points, but almost universal distinction of minute organisation. Thus, of 10,000 fossil species well examined, not more than 200 or 300 are identical with living species. Again, "on placing together primary fossils and recent shells of zoophyta, the difference is striking and total; but on comparing tertiary and living forms, it is the resemblance which arrests our attention. In one case we see at a glance the most obvious and complete discordance; in the other it requires careful scrutiny to assure ourselves that they are not identical. Viewed in this manner, the whole living and fossil world of existence, as far as relates to the inferior, and especially marine tribes, seems to be almost united into one vast chain of being, which has derived from the Creator, in all past times, the same fundamental laws of relation to the conditions, of the world, but which shows itself in various forms, because these conditions were made to change. What a lofty view of the superintending care and providence of God, through all periods of past time, is thus opened to our minds!"

The chapter on "Succession of Rocks in the crust of the globe," and "Lithology," are very full, and most excellent; the latter being illustrated by nearly 40 diagrams of crystals and minerals, which will be very useful to the student. We expected to find the mineralogical department well illustrated, and we are not disappointed. There are also four plates, of which that placed as a frontispiece is a geological view of the Isle of Wight.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. Slatter, Streatley, near Reading.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	April	Inches.	°	°				°	°	°	°	Inches.
Friday ..	8	30.35	45	42	S.W.	1	10	59	40	60	38	..
Saturday ..	9	30.27	48	45	N.W.	1	10	53	42	61	39	..
Sunday ..	10	30.1	54	53	N.W.	0	10	56	40	64	37	..
Monday ..	11	30.08	60	55	S.W.	0	7	58	48	69	41	..
Tuesday ..	12	..	..	..	N.W.	..	..	..	..	..	..	..
Wednesday ..	13	..	..	..	E.	..	..	..	..	..	..	..
Thursday ..	14	29.96	51	47	N.E.	3	9	58	37	67	35	..

At 9 A.M., Railway Time.

Reading of Thermometers.

Notices to Correspondents.

Clover Dodder: *R J.* It occurs in patches in light Clover fields, and when these are seeded; its seeds are mixed in the bulk. They can be separated by sieves.

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Parties unknown to me, have, from motives best known to themselves, in this manner criticised the efficiency of the "Hydropult." I have no answer to make to them: to the Public I would say that I will cheerfully forward, on application, a prospectus, containing testimonials from gentlemen well known throughout the United Kingdom.

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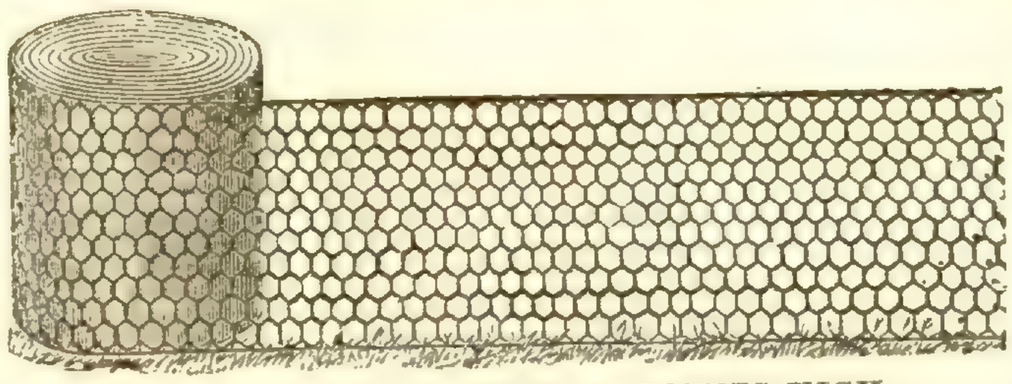

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2¼ inch	Hares, Dogs, Poultry	3d.	4d.	3¾d.	5d.	4½d.	6d.	5½d.	7d.
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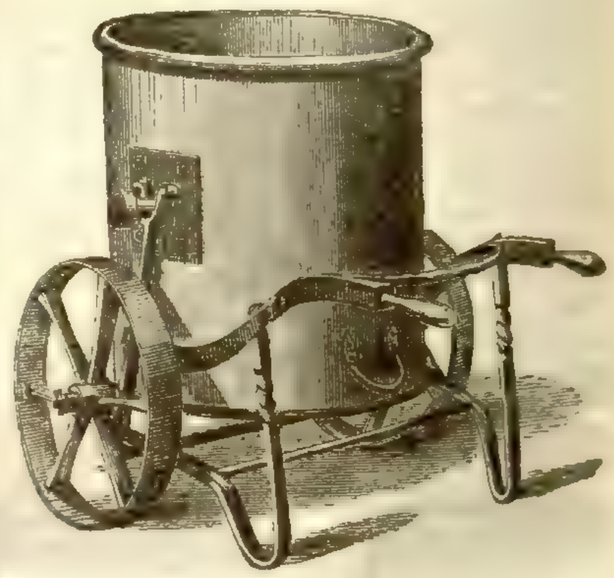

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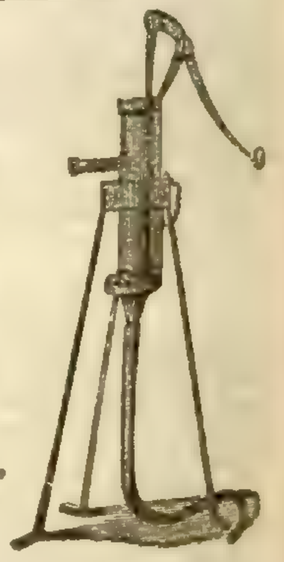

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☞ For detailed Advertisement of CONIFERS, ORNAMENTAL SHRUBS, &c., refer to page 1151 for 1863.

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SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

BEDDING and BORDER PLANTS.—CALCEOLARIAS, CARNATIONS, CHRYSANTHEMUMS, CLEMATIS, DAHLIAS, FUCHSIAS, GERANIUMS, PETUNIAS, ROSES, and VERBENAS.

The choicest kinds of each at the lowest prices, at Mr. TOWNSEND'S, St. Mary's Nursery, adjoining the Compasses, Hornsey, a few minutes' walk from the Hornsey Railway Station. Dealers supplied on liberal terms.

GREEN HOLLIES and all EVERGREENS.—This is a good time to remove all Evergreens—our stock of which is very large and of prime quality—of all sizes, from 1 foot and upwards. Low prices on application, especially to large buyers.

JAMES DICKSON & SONS, The "Newton" Nurseries, Chester.

HOLLIES and AUCUBA JAPONICA.

HOLLIES, 1 foot Transplanted, fine, 8*s.* per 100.
" 1½ " " " 15*s.* " 100.
" 2 to 2½ feet, very fine, 35*s.* per 100.
AUCUBA, 1 foot Transplanted, fine bushy plants, 30*s.* per 100.
" 1 foot to 1½ feet, by 1 to 1½ feet, twice Transplanted, very fine, 75*s.* per 100.

The above are all fine plants, and remarkably well rooted. A remittance or reference from unknown Correspondents is respectfully requested.

J. & W. FIELD, Boughton Nursery, Chester.

Green Hollies.

BRERETON NURSERY, RUGELEY, STAFFORDSHIRE.

CORNELIUS WHITEHOUSE has pleasure in offering, from one of the largest Stocks in the Trade, 200,000 Transplanted HOLLIES, from 4 inches to 4 and 5 feet, which are well known to be extra good, rooted from this soil, are very healthy, stout, well furnished, and clean grown; a very large portion moved last May. Can supply the Trade from 4 inches to 2 feet. Cash or reference is respectfully requested from unknown correspondents.

ROYAL HORTICULTURAL SOCIETY.

AZALEA and ROSE SHOW.

WEDNESDAY, April 20.

AWARDS of the JUDGES.

SPECIAL PRIZE.

PLANT CASE filled with SPRING PLANTS. for Drawing-room. (No Competition.)

CLASS 1.—9 AZALEAS, distinct kinds. (Nurserymen.)
1st Prize, Mr. C. Turner, Slough, 2*l.*
2d, Messrs. H. Lane & Son, Great Berkhampstead, 1*l.* 10*s.*

CLASS 2.—9 AZALEAS, distinct kinds. (Amateurs.)
1st, Mr. T. Todman, Gr. to R. Hudson, Esq., Clapham Common, 2*l.*

CLASS 3.—6 AZALEAS, distinct kinds. (Open.)
1st, Mr. C. Turner, Royal Nurseries, Slough, 1*l.* 10*s.*
2d, Messrs. H. Lane & Son, Nurserymen, Great Berkhampstead, 1*l.*
3d, Messrs. J. Dobson & Son, Woodlands Nursery, Isleworth, 15*s.*

CLASS 4.—9 ROSES, distinct kinds. (Nurserymen.)
1st, Mr. C. Turner, Slough, 2*l.*
2d, Mr. Wm. Paul, Waltham Cross, 1*l.* 10*s.*
3d, Messrs. Paul & Son, Cheshunt, 1*l.*
Extra, Mr. E. P. Francis, Hertford, 15*s.*
Extra, Mr. W. H. Treen, Rugby, 10*s.*

CLASS 5.—6 ROSES, distinct kinds. (Amateurs.) (No competition.)

CLASS 6.—Collection of NEW ROSES, 1863-4, 6 kinds. (Open.)
1st, Messrs. Paul & Son, Old Nurseries, Cheshunt, 2*l.*
2d, Mr. C. Turner, Royal Nurseries, Slough, 1*l.* 10*s.*
3d, Mr. Wm. Paul, Paul's Nurseries, Waltham Cross, 1*l.*

CLASS 7.—6 CINERARIAS, distinct kinds. (Open.)
1st, Mr. J. James, Gr. to W. F. Watson, Esq., Isleworth, 1*l.* 10*s.*
2d, Mr. R. Marcham, Gr. to E. Oats, Esq., Hanwell, 1*l.*

CLASS 8.—4 CINERARIAS, distinct kinds. (Amateurs.)
1st, Mr. J. James, Gr. to W. F. Watson, Esq., Isleworth, 1*l.*
2d, Mr. R. Marcham, Gr. to E. Oats, Esq., Hanwell, 15*s.*
3d, Mr. Wm. Lacey, Gr. to C. Mortimer, Esq., Morden, Surrey, 10*s.*

CLASS 9.—12 AURICULAS, 3 of each kind, viz: 3 Grey edged, 3 White edged, 3 Green edged, and 3 selfs, distinct kinds. (Nurserymen.)
1st, Mr. C. Turner, Slough, 1*l.* 10*s.*

CLASS 10.—8 AURICULAS, 2 of each kind, distinct. (Amateurs.)
1st, Mr. Thomas Potts, 35, Glengall Grove, Old Kent Road, 1*l.* 10*s.*
2d, Mr. J. James, Gr. to W. F. Watson, Esq., Isleworth, 1*l.*
3d, Mr. J. Butcher, 1, South Street, Camberwell, 15*s.*

CLASS 11.—6 ALPINE AURICULAS, distinct kinds. (Open.)
1st, Mr. C. Turner, Slough, 1*l.*

CLASS 12.—6 POLYANTHUS, distinct kinds. (Open.)
1st, Mr C. Turner, Royal Nurseries, Slough, 1*l.*
2d, Mr. J. Butcher, South Street, Camberwell, 15*s.*

CLASS 13.—4 CYCLAMENS, distinct kinds. (Amateurs.) (No Competition.)

CLASS 14.—24 PANSIES, Cut Blooms, 12 distinct kinds. (Open.)
1st, Mr. Wm. Bragg, Star Nursery, Slough, 10*s.*
2d, Mr. J. James, Gr. to W. F. Watson, Esq., Isleworth, 5*s.*

CLASS 15.—8 PANSIES, Fancies, in Pots, distinct kinds. (Open.)
1st, Mr. Wm. Bragg, Star Nursery, Slough, 15*s.*

CLASS 16.—MISCELLANEOUS COLLECTION of PLANTS in FLOWER. (Open.)
1st, Messrs. J. Veitch & Son, Miscellaneous Collection of Plants in Flower, 1*l.* 10*s.*
Extra, Mr. Wm. Bull, Collection of New and Rare Plants, 2*l.*
Extra, Messrs. H. Lane & Son, Collection of Azaleas, 2*l.*
Extra, Mr. Wm. Paul, Collection of 8 boxes of Cut Roses 2*l.*
Extra, Messrs. Paul & Son, Collection of 6 boxes of Cut Roses, 1*l.* 10*s.*
Extra, Mr. Chas. Turner, Collection of Geraniums, 1*l.* 10*s.*
Extra, Mr. B. S. Williams, Collection of New and Rare Plants, 1*l.* 10*s.*
Extra, Mr. Wm. Bull, Plant Case filled with Plants, 15*s.*
Extra, Mr. Robert Parker, 3 Rhododendrons, Countess of Haddington, 10*s.*
Extra, Mr. George Batley, Box of Cut Roses, 10*s.*
Extra, Messrs. J. Dobson & Son, Collection of 6 Pansies in pots, 10*s.*

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

LIST of AWARDS, APRIL 20, 1864.

FIRST-CLASS CERTIFICATES.

AZALEA INDICA STELLA, from Messrs. Veitch and Son, Exeter and Chelsea
AZALEA INDICA ROI DES DOUBLES, from Mr. Bull, Chelsea
DENDROBIUM DAYANUM, from Mr. Williams, Holloway
DRACÆNA COOPERI, from Messrs. Veitch & Son
FRANCISCEA CALYCINA MAJOR, from Messrs. Veitch & Son
GYMNOSTACHYUM VERSCHAFFELTII, from Mr. Bull
PHALÆNOPSIS RUCKERI, from Mr. Bull
RHODODENDRON NUTTALLII, from Mr. Williams
TRICHOPILIA CRISPA, from Messrs. Veitch & Son
XANTHORRHŒA AUSTRALIS (?) from Mr. Williams

SECOND-CLASS CERTIFICATES.

AURICULA (ALPINE) SHAKSPERE, from Mr. C. Turner, Slough
AZALEA INDICA METEOR, from Mr. Kinghorn, Richmond
AZALEA INDICA BELLONA, from Messrs. F. & A. Smith, Dulwich
GENISTA PROSTRATA, from Messrs. E. G. Henderson & Son, St. John's Wood
PRIMULA CORTUSOIDES AMŒNA, from Messrs. Veitch & Son

COMMENDATION.

COLLINSIA VERNA, from Mr. Thompson, Ipswich

The NEXT MEETING of the COMMITTEE will take place on May 3, at noon.

THOMAS MOORE, Secretary to the Committee.

The Gardeners' Chronicle.

SATURDAY, APRIL 23, 1864.

MEETING FOR THE ENSUING WEEK.

SATURDAY, April 30 { Royal Botanic (Third Spring Exhibition) .. .. .. 2 P.M.

MONSIEUR DEHÉRAIN has been lately conducting some very important experiments to show in what manner the absorption of potash by plants is really effected. The experiments are in fact so important that we hasten to give them all publicity in our power.

In the first part of these researches the author points out how and for what crops the farmer and the gardener may apply gypsum with great advantage; and, on the other hand, how they may be at the expense of applying it with no advantage at all. This, therefore, is an important matter, deserving of serious consideration. We need not enter into all the minute details of the elaborate and carefully-conducted chemical analyses and experiments by which the author arrives at his conclusions; but we shall state sufficient to call attention to the subject.

Farmers (says M. DEHÉRAIN) have long been aware of the remarkable effects produced by gypsum on artificial meadows; they admit that it increases by one-third or even by one-half the crops of Clover, Lucerne, and Sainfoin; but what distinguishes this substance from others that are employed for promoting vegetation is its great effect on leguminous plants, and its having none

whatever on cereals. M. DEHÉRAIN'S experiments proved—

That gypsum applied to arable land does not assist nitrification: no nitric acid being formed in consequence of its application.

That moreover it does not promote the formation of ammonia.

But that it does promote the solubility of potash buried in the soil.

If we examine, in the first place, what plants are benefited by gypsum, we shall find that they are such as are rich in potash, namely leguminous plants, especially Clover, Sainfoin, and Lucerne; and the Vine, which takes up a considerable quantity of potash from the soil, is also manured with gypsum in some countries.

An old observation of SCHWERTZ is very much in accordance with this view of the subject. That agriculturist asserted that gypsum cannot promote the growth of Clover on certain stiff soils; but he adds, that its unsuitability is frequently overcome by manuring with ashes. Gypsum, in fact, does not create potash, it can only set it at liberty, and render it soluble; and if the potash is entirely absent the gypsum has no effect; but ashes themselves contain potash, and give to the soil the element without which leguminous plants could not grow.

Some experiments have shown that the potash becomes soluble almost immediately after the gypsum has been applied. This explains why agriculturists recommend the application of gypsum to the growing crop rather than to the soil before sowing. In either case, it seems that gypsum acts only on the soil; but if it liberate or render soluble the potash whilst there are no plants to take the latter up, it may be carried off by rains and lost; but if, on the contrary, the plants are in a growing state, potash will be absorbed by them as it becomes dissolved under the influence of the gypsum.

"I have stated," says M. DEHÉRAIN, "that gypsum produces little or no effect on cereals. If we examine the composition of the ashes of those plants, we find that they contain considerable quantities of phosphates and large quantities of silica, and we know that nitrogenous manures are absolutely necessary for them. Now, we have seen that gypsum neither promotes the formation of ammonia nor that of nitric acid, and we have stated that the solubility of the phosphates in weak acids is not increased by gypsum; whilst experiments prove that the latter acts with far less energy than lime in rendering silica soluble. It thus appears that none of the elements of cereals is rendered more soluble by gypsum.

"Nitric acid, soda, chlorine, and sulphuric acid are but little retained by arable land. They are chiefly found in the water that runs off by the surface, and in that of the drains in well manured land; but potash, ammonia, and phosphoric acid are retained in the soil. Gypsum and lime are employed to dissolve the last three elements, and although the actions of these have some points in common, yet in others they are widely different.

"The object of supplying gypsum to arable land is to liquefy the soluble salts which the soil usually retains, and permit them to be dissolved from the soil by water, so that they can be absorbed by plants. In this way, to use an expression now usually adopted, we may consider gypsum as an assimilating agent.

"The action of lime is not entirely similar. It attacks insoluble matters and transforms them. I still uphold what I stated some years ago on the effects which it exercises on the insoluble phosphates. M. BOUSSINGAULT has likewise shown that lime attacks insoluble nitrogenous matters, and renders them capable of assuming the form of ammonia; lime, then, is also an assimilating agent, but its action extends to insoluble matters. It acts by chemically decomposing certain substances, and causing them to take a different form. Gypsum, on the contrary, seems to act physically by setting free soluble substances that are shut up in the soil. As lime is the assimilating agent of the phosphates and of nitrogen in the state of ammonia, so gypsum is the assimilating agent of potash."

To us it seems that these very curious statements are of at least as much interest to the gardener as the farmer.

—— WE have received from Mr. MELVILLE, of Dalmeny Park, samples of a hybrid form of the Cabbage family, which he names the ALBERT SPROUT, and the parent of which, he informs us, was the Drumhead Savoy, which had been crossed several times with the Brussels Sprout. The samples, as they have come to us, appear to indicate a very useful late hardy winter green. They had moderate sized hearting heads like a small Savoy, perhaps as big as one's fist, and the stems were completely clothed with somewhat loosely hearting sprouts, neither the head nor the sprouts showing the least indication of running to seed. With them were sent samples of Henderson's Feather-stemmed Savoy and of the common Brussels Sprout, sown on the same day as the Albert Sprout, and both these, the former especially, were far advanced towards flowering.

"The Feather-stemmed Savoy," Mr. MELVILLE remarks, "produces scarcely any head, and will not be in a fit state for use nearly so late as my variety, for it is now far run for seed, and the common Brussels Sprout is likewise sending out its flowering shoots, while my sprouting Savoy will keep good and be fit for cooking for five weeks to come. I gathered some last year as late as the middle of May. I therefore think it is a variety of vegetable that will be invaluable as coming in when other vegetables are scarce, and all other sorts of Sprouts are over. It is much hardier, too, than the common Brussels Sprout, the latter being this season very much browned, while the new Sprout is fresh and green. As it comes in at a different time from all others, and will be valuable, I shall call it the Albert Sprout."

The flavour after cooking, was all that could be desired, being mild and mellow, without any kind of coarseness.

—— With regard to TWO DAYS' SHOWS, the following is the reply which has been sent by the Council of the Royal Horticultural Society to the remonstrance by Exhibitors against the second day's Shows, which we published last week. The Assistant Secretary says:—

"Your letter, remonstrating against the proposed second day's Show, was read to the Council at their meeting to-day, being the first meeting which they have held since its receipt.

"I am directed by them to inform you that they have received it with regret, and that they are sorry to learn that you consider the arrangements inimical to your interests, which certainly was not intended.

"In explanation of the proposed arrangement, I am to point out to you that for some years past it has been found that the Flower Shows have not been on the whole remunerative, and are very riskful owing to bad weather; consequently, the question in which exhibitors are especially interested, has resolved itself into this, that if the shows are to continue to be held at all, they must either be carried on at a loss and in jeopardy, or some change be tried in the arrangements, which may lead to a favourable result.

"It has been thought that a second day's show and an evening exhibition might have this effect, and as compensation for the additional risk and trouble which these will impose upon the exhibitors, a large proportion of the second day's receipts has been set apart for them.

"The Council were and are prepared to make any necessary arrangements for carefully preserving the plants, and would lend every assistance to the exhibitors in doing so. The new buildings which will be used afford ample facilities for protection, and the Council invite you to inspect them. To enable suitable arrangements to be made, it will be requisite to have information of the general nature of the plants proposed to be exhibited and the space they will occupy. For this time and subsequently printed forms will be prepared and must be filled up.

"As respects the lighting, the subject has received the most careful attention of the most experienced persons, scientific and otherwise, who all are unanimously agreed that it is simply a question of proper ventilation, and the ventilation provided by the Society will be ample. Gas is used quite harmlessly at the fine conservatory at Bentley Priory, Stanmore, and in other conservatories.

"The Council had hoped that the arrangements made for dividing the receipts of the second day would have much more than covered any increased expenses caused to the exhibitors by the plants remaining over a second day. If it be a question of expense, they would be prepared to consider any proposal for converting the exhibitor's anticipated share of the second day's receipts into a fixed sum, or to guarantee that such share should not be less than a sum to be decided on; and should you desire it, the Secretary would be glad to see a deputation of your body to endeavour to arrive at some satisfactory solution of this point, if you make an appointment.

"The evening show will probably be the most attractive part of the exhibition, but if after these explanations you should still be of opinion that you would desire only to show your plants for ONE day, arrangements will be made to meet your wishes by arranging your plants apart, so that you may remove them at the close of the first day's exhibition.

"The Council will be glad to hear specifically from each individual, which of the different arrangements he has a preference for, in order that they may prepare accordingly."

—— It appears that Mr. THOMSON'S new GRAPE DUCHESS of BUCCLEUCH, is not, as has been stated, a seedling of the Chasselas Musqué, nor a cross from the Royal Muscadine. As it is desirable there should be no mistakes or mysteries in questions of this kind, Mr. THOMSON has very judiciously cleared up the matter by stating that it was raised from seed taken out of a Muscat berry crossed with the Chasselas Musqué.

THE HIMALAYAN SPRUCE FIR.

[In answer to some inquiries respecting Grafted Conifers, we reprint the following remarks from the *Scottish Gardener*.]

ABIES SMITHIANA, or A. Morinda, as it is commonly called in gardens, was raised for the first time in Europe at Hopetoun House by the late Mr. James Smith, gardener there, from seeds received from Dr. Govan in 1818. It was called Pinus Khutrow by Royle and Endlicher, from one of its names common in the Himalayas, of which it is a native. The designation A. Morinda, as will be seen from a subsequent extract, is also borrowed from a native name.

Several of the trees growing in the pleasure grounds at Hopetoun House have attained a considerable size. The following dimensions of the three largest have been supplied by Mr. A. Niven, the able and obliging gardener there:—

No. I. On its own roots, 48 feet high, and 5 feet 10 inches in girth, at 6 feet above the ground.

No. II. Grafted, 47 feet high, and 4 feet 6 inches in girth at the same height from the ground.

No. III. grafted, 37 feet high, and 3 feet 3 inches in girth.

Nos. II. and III., with a few others, were grafted in 1827 by Mr. Charles Smith, then a youth in Hopetoun Gardens, and afterwards landscape gardener in Edinburgh. The stocks were the common Spruce, as is seen by a tier of branches of that species still remaining. The grafts were inserted in the leading shoots, by the operation called herbaceous grafting, about 4 feet from the ground. In No. II. there is a swelling at the point of union; and the stem is rather thicker above than below the graft. The grafted trees however, have grown with great vigour and beauty; and are considerably larger than one of the original batch on its own roots, recently removed to make way for a magnificent tree of A. Douglasii, to which it was in too close vicinity. The latter, it may be noted in passing, though perhaps not the largest, is one of the finest in Britain, being 61 feet in height, 4 feet 4 inches in girth, and feathered in the most exquisite style with branches to the ground.

In the present day grafted Conifers are by no means rare; but few perhaps have prospered so much as those above described. At one time the grafting of Pines was deemed a thing incredible. A military cadet of the noble house of Hopetoun, having met with the late Dr. Wallich, thought it might interest the old Indian botanist to tell him of the grafted Himalayan Spruces. The learned doctor avowed his disbelief of the facts, and offered to eat up all such grafted trees that could be produced to him. Fortunately Dr. Wallich never came to Hopetoun House, otherwise he might have had harder work to do than ancient Pistol had with his Leek. The story shows that even wise men may err in *à priori* judgments.

The climate of the grounds at Hopetoun House seems singularly propitious to the Himalayan Spruce. Nos. I. and II. grow within the garden, near the bottom of a bank sloping gently towards the north, at the height of 70 or 80 feet above the level of the sea, well sheltered from the east, and slightly screened in winter from the direct rays of the sun. They have never been nipped or even browned by the spring frosts, as the species often is in many places. The large tree in the Royal Botanic Gardens, Edinburgh, which was one of the original Hopetoun seedlings, was considerably injured by the terrible frost of Christmas, 1860. We observe that Endlicher, deriving his information probably from Royle, estimates the height of the Himalayan Spruce at 50 feet; and, if this be accurate, the Hopetoun trees have nearly attained their maximum, of which, however, they give no indications in themselves. Another Indian traveller, the author of "A Summer Ramble in the Himalayas," gives a different view of the subject. He says:—

"The Morinda Pine is, I believe, peculiar to the Himalayas, and grows in the middle higher regions from an elevation of 6000 feet to near the limits of the forest. In the great Oak forest of the middle ranges it occurs at intervals, sometimes singly, sometimes in clusters, and its very dark foliage and spire-like top towering above the other forest trees make it a conspicuous object. On some of the hills nearer the snow, where Pine is the prevailing wood, it almost monopolises the forest. The Morinda is a large and very handsome tree, the trunk perfectly straight, often upwards of 20 feet in circumference at the base, and sometimes reaching a height of between 150 to 200 feet. The branches, which in a large tree commence about 20 feet from the ground, are very short, in some cases not extending more than a few feet from the trunk, and are very regular all the way up, which adds to the apparent height of the tree. The wood is of little use except for indoor work, as when exposed to the atmosphere it soon decays."

With the exception of the tint of the foliage, which is rather dull glaucous green than dark, the above description is perfectly adapted to the trees at Hopetoun. The trunks are straight as an arrow, and

appear as if turned in a lathe. The writer does not notice the graceful droop of the annual shoots.* The magnitude of the Indian trees suggests the hope that in this country the species will live long and attain a considerable size. It is only a presumption, however, which must be confirmed by experience. The Hemlock Spruce and Weymouth Pine, which are giants in America, are only dwarf scrubby trees in Scotland. The great Cedars in the grounds at Hopetoun House, which are only 150 years old, are showing unmistakeable signs of decay, while on Lebanon and Taurus it is said there are Cedars from 1000 to 1500 years old.

It may be added that there must be many trees of A. Smithiana in this country grown from cuttings, as the late Mr. Cunningham, of Comely Bank, Edinburgh, used to propagate numbers in that way. The writer of these notes planted a tree of this species in a churchyard near him, which was originally a cutting. Growing at the height of 350 feet above the level of the sea, and exposed to the full rays of the sun, it has been sometimes spring-nipped, yet it is now healthy, though rather slender, and is about 13 feet in height. In the same churchyard grows a seedling A. cephalonica, a younger plant, which is 9 feet high, flourishing most vigorously, and evidently as hardy as the common Silver Fir. There is also a fine Deodar, which stands all kinds of weather. These and several other Conifers seem admirably adapted for the adornment of cemeteries and churchyards. *J. S., Ecclesmachan Manse.*

REPLACEMENT OF SPECIES IN THE COLONIES AND ELSEWHERE.

By J. D. Hooker, M.D., F.R.S., &c.

Among the most interesting phenomena connected with the distribution of plants, are those that concern the rapidity with which some species of one country will, when introduced into another, rapidly displace the aborigines and replace them. The Cardoon in the Argentine Provinces is one conspicuous example, the Anacharis in our own rivers is another, but neither of these cases is more remarkable than some that our colonies present. In Australia and New Zealand, for instance, the noisy train of English emigration is not more surely doing its work, than the stealthy tide of English weeds, which are creeping over the surface of the waste cultivated and virgin soil, in annually increasing numbers of genera, species, and individuals. Apropos of this subject, a correspondent, W. T. Locke Travers, Esq., F.L.S., a most active New Zealand botanist, writing from Canterbury, says, "You would be surprised at the rapid spread of European and other foreign plants in this country. All along the sides of the main lines of road through the plains, a Polygonum (aviculare), called Cow-grass, grows most luxuriantly, the roots sometimes 2 feet in depth, and the plants spreading over an area from 4 to 5 feet in diameter. The Dock (Rumex obtusifolius or R. crispus) is to be found in every river bed, extending into the valleys of the mountain rivers, until these become mere torrents. The Sow Thistle† is spread all over the country, growing luxuriantly nearly up to 6000 feet. The Water Cress increases in our still rivers to such an extent, as to threaten to choke them altogether; in fact, in the Avon, a still deep stream running through Christ Church, the annual cost of keeping the river free for boat navigation and for purposes of drainage, exceeds 300*l*. I have measured stems 12 feet long and ¾ inch in diameter. In some of the mountain districts, where the soil is loose, the white Clover is completely displacing the native Grasses, forming a close sward. Foreign trees are also very luxuriant in growth. The Gum trees of Australia, the Poplars and Willows, particularly, grow most rapidly. In fact, the young native vegetation appears to shrink from competition with these more vigorous intruders."

I have urged upon various Colonial correspondents the great importance of systematically collecting and recording facts upon this curious subject, but hitherto without success. The same spirit which prompts us to subscribe more for the heathen of Africa than of St. Giles, seems to animate the collectors in our colonies, and yet this department of botany is most interesting and important. Directly, every problem of the geographical distribution of plants is interfered with by these intruders, and, indirectly, the zoology of the colonies is even more materially affected. Hitherto but one author has had the boldness to inquire into the rationale of this "replacement;" to grapple with the startling fact that plants are thus proved to be located by nature, not necessarily under the conditions best suited to their development; and this is Mr. Darwin. This great naturalist informs me that he believes that the facts hitherto observed favour the supposition, that in the struggle for life between the denizens of the Old Continents and the New, the former are prepotent; and he attributes this to the longer period they have been engaged in strife, and the consequent vigour they have acquired. European weeds have established themselves abundantly in America and Australia, but comparatively very few plants of these countries have become weeds in England. We may hence infer why it is that the indigenous vegetations of St. Helena and Madeira show no tendency to increase, whilst European and African trees, shrubs, and herbs are rapidly covering those islands.

On the other hand, there are many reasons why a whole population of Old World plants should become established in the New World and in the colonies, before any symptoms of a return emigration can be detected. The export of garden and field-crop seeds, as well as of European animals and merchandise, favours the rapid introduction of emigrant plants into the colonies, but there is no such import of materials to Europe; it is also to be observed, that the processes of agriculture, conducted through many centuries, have resulted in a European population of sturdy weeds (the tramps of our Flora), and that there can be nothing of the kind in the colonies, till these are as long cultivated by ourselves or others. It is therefore conceivable that, had New Zealand been cultivated for a thousand years, there might have resulted races of its native Dock, Speedwells, Polygona, &c., which would, on being introduced into England, displace some of those very Docks and Polygona now establishing themselves in New Zealand; and that something of this sort is going on may be argued from the rapidity with which the Impatiens fulva, Galinsoga, Erigeron canadense, Claytonia perfoliata, and other American plants are spreading in Europe, of which some are *bonâ fide* weeds with us, and may perhaps at a future period be re-introduced into America as more intrusive forms of the species than that continent now possesses. So too, I am given to understand, various Australian Acaciæ, Eucalypti and other Myrtaceæ are established and spreading spontaneously in the peninsula of India: which is the case of the plants of an assumed new continent displacing those of one much older.

The rapid propagation of European animals is no less remarkable than that of plants. J. Haast, Esq., Government Geologist, Canterbury, writes as follows to Mr. Darwin, in a letter which the latter has kindly communicated to me, transferring to me the author's permission to make any use of the facts recorded:—

"The native (Maori) saying is, 'as the white man's rat has driven away the native rat, so the European fly drives away our own, and the Clover kills our Fern, so will the Maoris disappear before the white man himself.' It is wonderful to behold the botanical and zoological changes which have taken place since first Captain Cook set foot in New Zealand. Some pigs which he and other navigators left with the natives have increased and run wild in such a way that it is impossible to destroy them. There are large tracts of country where they reign supreme. The soil looks as if ploughed by their burrowing. Some station holders of 100,000 acres have had to make contracts for killing them at 6*d*. per tail, and as many as 22,000 on a single run have been killed by adventurous parties without any diminution being discernible. Not only are they obnoxious by occupying the ground which the sheep farmer needs for his flocks, but they assiduously follow the ewes when lambing, and devour the poor lambs as soon as they make their appearance. They do not exist on the western side of the Alps, and only on the lower grounds on the eastern side where snow seldom falls, so that the explorer has not the advantage of profiting by their existence, where food is scarcest. The boars are sometimes very large, covered with long black bristles, and have enormous tusks, resembling closely the wild boar of the Ardennes, and they are equally savage and courageous.

"Another interesting fact is the appearance of the Norwegian rat; it has thoroughly extirpated the native rat, and is to be found everywhere, even in the very heart of the Alps, growing to a very large size. The European mouse follows it closely, and what is more surprising, where it makes its appearance, it drives, to a great degree, the Norway rat away. Amongst other quadrupeds, cattle, dogs, and cats are found in a wild state, but not abundantly.

"The European house-fly is another importation. When it arrives, it repels the blue-bottle of New Zealand, which seems to shun its company. But the spread of the European insect goes on very slowly, so that settlers, knowing its utility, have carried it in boxes and bottles to their new inland stations."

It must be long before facts enough to theorize upon can be collected. Meanwhile, the inquiry appears to be perhaps the most interesting and important in all Biology, and as such it is most earnestly to be desired that all who are favourably circumstanced to pursue it, will do so both systematically and very carefully. *Natural History Review.*

* Dr. Hooker, who met with this tree in the Lachen Valley, describes it in his "Himalayan Journals" as much resembling the Norway Spruce in general appearance, but with longer pendulous branches. The wood is white, and considered indifferent, though readily cleft into planks. It is employed for posts and beams.

† Sonchus arvensis is wild in New Zealand, and was eaten by the aborigines; but the cultivated form is far more abundant than the aboriginal.

THE LARGE YELLOW GOURD (POTIRON JAUNE GROS).

This is the largest known variety of Gourd. We have frequently heard of its being grown to weigh upwards of 200 lbs.; but it appears from the *Journal de la Société Impériale et Centrale d'Horticulture* that M. Fournier produced one which weighed fully 330 lbs. It may be interesting to some of our readers to know the mode of cultivation he adopted, and this he explains in the following note on the subject:—

"The primary cause of the indifference of market gardeners to the cultivation of the Potiron is doubtless the extent of ground which it requires; for, in order to obtain such results as I have done for many years, it is necessary to allow the plant to grow at full freedom until such time as the fruit has attained the size of an Orange; it is found that premature amputations or prunings interfere with the circulation of the sap. The fruit intended to be preserved ought to be left upon the main shoot or stem, and not on the laterals. When this fruit is fairly set, the shoot is pruned to three or four leaves above the fruit, and the extremities of all the lateral branches are pinched off. At the same time the young fruit should be turned so that the eye may be uppermost. This must be done very carefully; and as the fruit has a tendency to regain its natural position, that of lying on its side, this tendency must be guarded against by gradually turning it to the desired position (which is on its base; for when it rests on its side, the latter becomes flattened, and the Gourd consequently is not symmetrical). In doing this, care must be taken not to strain the fibres of the stalk. Twenty-four hours after the pinching of the shoots, the fruit will swell with extraordinary rapidity; luxuriant shoots which appear in the axils of the leaves must then be checked; and male flowers, which will show themselves in great profusion near the base of the plant, must be removed.

"One of the indispensable conditions for success is very abundant watering, and so true is this, that in 1860, notwithstanding that it was a rainy season, I submerged my Potirons, and they enlarged 3 or 4 inches every 24 hours. All the family of Cucurbitaceæ are susceptible of the above mode of cultivation."

It may be remarked that the soil and climate of France being hotter in summer than ours, more water will be there required. Still it must be borne in mind that the very great surface of foliage which the Gourd tribe presents for evaporation, must drain a large amount of moisture from the soil in the latter; and when that is exhausted, the foliage becomes unhealthy, and mildew invariably ensues. On the other hand, whilst it appears that the plants may be flooded with advantage in a warm climate, yet being natives of countries where the soil is warm, it is certain that their roots would be chilled and growth checked by watering so copiously from ordinary sources here. Cold spring water ought unquestionably to be avoided; and if we determine to obtain the fullest possible success, we must give water of a temperature not lower than 65°.‖

Home Correspondence.

The Moon's Influence.—At p. 366, your correspondent "G. L." asks your readers if there is any real or supposed influence exercised by the moon on vegetation. In a word, I say there is none really, but there is a supposed one, the result of want of better information. The moon's action on this globe is confined to the waters and the heads of men, in both cases by attraction. It draws the waters into a heap, and is one of the causes of tidal action; in the case of lunacy, I suppose it acts by drawing more blood into the head than the vessels can conveniently discharge. As regards vegetation, it has no influence whatever. The moon has no atmosphere, or, if it has one, it is so rare, that it is with difficulty that it refracts light. Its days and nights are equal, and it has no variety of seasons. The moon is not a luminous body, but shines by the borrowed light of the sun. The rays we get are the feeble reflections of the sun. And yet superstition attributes to this perfectly innocuous moon all the ills of vegetation which are attributable solely to radiation. When, in April or May, the most dangerous months of radiation, the moon shines brightly, of course the atmosphere is clear. As there is no obstructing cloud to reflect the heat, or pen it back, the heat taken in by day is given out and diffused into infinite space. There is no radiation on a cloudy night, and hence no damage. The matter then stands thus: the moon, having no atmosphere or a very rare one, having no calorific powers, and no chemical properties, is accused of doing vegetation mischief which is solely attributable to radiation, which is greatest when the moon shines brightest. The moon of course shines brightest on a clear night, when there is no cloud to obstruct radiation; and hence, as I have said, through want of better information, it has been made the cause of all the miseries of the vegetable kingdom; but still "Luna est innocua!" In fine, we see effects, and attribute them to wrong causation. Effects we feel; causation we do not see; or rather, won't see! *W. F. Radcliffe, Rushton.*

Dog Manure.—Some little time before I came here, a large heap of soil had been carted together for garden purposes, principally for potting, and it contained among other things the top spit from the neighbourhood of a kennel yard, where hounds (thirty couple) were in the habit of running about for exercise during a period of nearly six years; I think, therefore, that the soil had become impregnated with the urine and manure from the hounds, as I find that many things after being potted in it succeed very badly; it is a stiff poor loam. If any of your correspondents would give

me their opinion on the subject they would greatly oblige me. *F. B.*

Parasitic Skin Fungi.—I am sure your readers must have noticed the inconsistency of the remarks appended to my letter (p. 342). The reviewer, in the face of the quotation given from Mr. Berkeley, "great reason . . . for looking to the origin among the Mucors," concludes thus: "we thought it absolutely necessary to point out that Mr. B. did not think Chionyphe might take its origin from the Mucors. I don't use the word Mucor attributed to me, but Mucors. The other observations do not appreciate in the least the explanation my letter contained as to Aspergillus, Penicillium, and Mucor. I hope soon to be enabled to ventilate this subject effectually. *W. Tilbury Fox.* [We think enough has been said on this subject. *Among* and *from* are not synonymous.]

Rhododendron Thomsoni.—This fine Sikkim species has recently flowered, for the first time, in the American Garden at Combe Royal, South Devon; it is a truly good thing, and being perfectly hardy is a very valuable addition to any collection. The flowers were rather larger and deeper coloured than the figure in Dr. Hooker's work represents them, but the species may be identified by its orbicular leaves, which are very distinct, and its prominent calyx. The blood-red flowers are of a wax-like texture. *A Devonian, April* 18

Ants.—Can you inform me of any means that will destroy ants in stoves and Orchid houses. My houses are over-run with these pests. I tried a paste of arsenic and honey, with which sticks were smeared. Unfortunately the mixture touched several valuable plants, among others an Aerides virens, and a Vanda insignis showing flower; and every plant the paste touched rotted off as if scalded. I then tried a receipt mentioned by Henshall in his work on "Orchidaceous Plants," viz., melting spermaceti and arsenic together, and dipping twigs in the mixture, and when cold sticking them into the pots. I find however that the ants touch and eat everything, except this bait, which they carefully avoid. I have also sprinkled turpentine and guano on their tracks, but they seem to be as numerous as ever. Perhaps some of your readers can suggest some efficacious remedy against these plagues. *M. D.*

Woodlice.—My frames and houses have lately been infested by woodlice, (or as we call them here "sow-bugs"), which have proved very destructive to Cucumbers and young cuttings; so much so indeed, that the saving of any considerable number of the latter appears almost hopeless. I was recommended to employ pieces of Potato to attract the pests together, in order that they might be killed in numbers, and for a time this did pretty well, but at last, when food became more abundant, the Potato was deserted, and the young plants consumed. The only remedy that I have found as yet, is to place a quantity of the strongest Scotch snuff round the place to be protected, forming in this way a barrier, which, so far as I have been able to observe, the woodlice will not cross. This is evidently impracticable in many cases, and therefore I apply to your Correspondents to know whether others suffer in the same way, and if so, what is the best thing to do. *W. G. A.* [In the case of Cucumber frames, Mr. Cuthill recommends pouring boiling water round the walls inside; but in such a way as not to injure the roots of the plants. This, he says, repeated as often as may be necessary, keeps his frames clear of woodlice. A toad or two placed among them, also helps to thin their numbers.]

Floral Exhibitions.—Will you allow me to express the satisfaction which it is but natural to feel in the prospect now opening for ladies to compete for distinction in a department so appropriate as that of the floral exhibitions? Will you also allow me to offer a few remarks upon these exhibitions—remarks arising out of no careless study of what is beautiful both in nature and art? These remarks refer especially to the arrangement of stove and greenhouse plants for exhibition. We have long seen these exhibited under a fixed form—round, or cone-shaped, and presenting an even surface, with all the flowers brought to the outside. Now when we consider that beauty—the attainment of the most perfect and the highest order of beauty—is really the object of our floral exhibitions, it becomes important that year by year there should be some perceptible progress towards this end. Beauty, considered under its most perfect aspect, always comprehends form as well as colour; and the form of a sugar loaf or a pyramid, with an even surface, especially with a sameness of colour, is one never found in nature. We hear sometimes the name of "sugar-loaf mountain," and now and then we see a massive and formal tree approaching to this shape; but neither would be introduced into a picture by any one acquainted with true art. In fact both would look unnatural, and would offend the eye. Comparison with another art will perhaps most clearly show whereabouts we are, and what we should do well to aim at in this. A gentleman remarkable for eloquence once described to me the three stages through which successful students in public speaking are supposed to pass. The first stage, crude, and awkward, may be said to be marked by the simplicity of rudeness. The next has no simplicity at all. It is florid, artificial, and redundant, bearing no resemblance to nature, nor indeed aiming at what is natural. In the third and finished stage the student comes back to Nature—studies Nature as his true pattern, and thus he arrives again at the simplicity of Nature, but of Nature in its highest and purest forms. It is not straining this simile too far, I think, to say that our exhibitions are at present at the florid, artificial stage, presenting only flowers, and as a whole bearing little resemblance to what is most beautiful in nature. A few steps further in the attainment of a true and perfect taste, and we shall see plants as they really grow. The eye will then be relieved, the desire for beauty gratified, and at the same time a prospect opened for further progress in the right way. When once that crust of flower, for I can call it nothing else — that solid surface of equal colour, which we never behold in nature, is broken up, we shall have the light spray, the deep hollow, the refreshing green, the half hidden flower, with all the charming variety of nature which never tires the eye; and which, instead of lessening the beauty of any individual flower, serves rather to throw the best into clearer and stronger prominence by the half tints, shadows, and varied outlines which are so abundant in nature, and so essential to beauty of the highest order. Pardon these remarks from one who believes that our flower shows might be made the means of forming a purer taste than we have yet attained, and of promoting a higher ambition in the cultivation of what is truly beautiful. *S. S. Ellis, Rose Hill, Hoddesdon.*

Societies.

ROYAL HORTICULTURAL: *April* 20 (*Third Spring Show*).—Azaleas and Roses, which were numerous and fine, made an effective display on this occasion, and there was also a large assemblage of other plants, many of which were new and extremely interesting.

Azaleas.—Of these, charmingly-flowered pyramidal bushes were furnished by Mr. Turner, of Slough, among whose varieties the following were conspicuous, viz:—Stanleyana, Gladstanesi, Fielderi, Trotteriana, Rosalie, Broughtoni, Standard of Perfection, Duc de Nassau, Mary, Model, Gem, Holfordii, a fine rich semi-double pink; Criterion, and two kinds, a red and a white worked together on the same stock, so as to form a handsome union of variously coloured flowers. Messrs. Lane and others also contributed collections, in which were some skilfully grown and beautifully flowered plants.

Awards.—9: 1, Mr. Turner; 2, Messrs. Lane. *Amateurs.*—9: 1, Mr. Todman.—6: 1, Mr. Turner; 2, Messrs. Lane; 3, Messrs. Dobson.

Roses.—Nine plants in pots of these came from Mr. Turner; nothing in their way could well be handsomer, the blooms being large and fine, and the foliage not only free from speck or blemish, but of that ample character and deep green hue which unmistakably indicates perfect health. The sorts were Senateur Vaisse, Comtesse Ouvaroff, Baronne Prevost, General Jacquéminot, Charles Lawson, Souvenir d'un Ami, Madame Boll, Souvenir de Malmaison, and Victor Verdier. Another group from Mr. Wm. Paul, also contained good examples of President, the yellow Tea Rose Marquise de Foucault, Empereur de Maroc, Madame Willermoz, and Triomphe d'Alencon. Messrs. Francis and Treen also furnished collections. Foremost among new varieties, which were unusually numerous, were Le Rhone (H.P.), a bright velvety crimson; Alba rosa (Tea), white; Pierre Notting (H.P.), handsome shaded crimson; Alfred de Rougemont (H.P.), very dark velvety crimson; Madame Alfred Rougemont (H.P.), blush; Baronne Adolphe de Rothschild, crimson; Lords Clyde and Canning, and John Hopper. Some of these and others we hope to see again in better condition when the season is further advanced. Cut blooms from Mr. W. Paul, Messrs. Paul & Son, and others, were plentiful and greatly admired, and to most of the collections extra prizes were awarded.

Awards.—9 *Plants in Pots:* 1st, Mr. Turner; 2d, Mr. Wm. Paul; 3d, Messrs. Paul & Son. Extra, Mr. Francis and Mr. Treen. *New Varieties:* 1st, Messrs. Paul & Son; 2d, Mr. Turner; 3d, Mr. Wm. Paul.

Store and Greenhouse Plants.—Of these Messrs. Veitch had an interesting collection, in which were handsome specimens of Azaleas, including the pretty A. petuniæflora, Eriostemons, of different sorts Pimelea Neippergiana; a well-bloomed and striking example of the sweet-scented Rhododendron Gibsoni, Acacia grandis, Boronia tetrandra, and other early flowering shrubs. Mr. Bull and Mr. Williams also furnished admirable collections, in which we noticed various pale-flowered varieties of Rhododendron, Azaleas of different sorts, Palms, Ferns, the singular dark-brown leaved Pogonia discolor from Java, the yellow Dendrobium densiflorum, and the rare D. infundibulum; also Cypripedium Lowii, and various Side-saddle plants. The last, together with the Orchids, came from Mr. Williams.

New Plants.—From Mr. Thompson, of Ipswich, came several examples of Collinsia verna, an old-fashioned free-blooming annual, which was Commended. Genista Everestiana, certificated a year or two ago, was again shown by Messrs. Low. From Mr. Williams came a cut specimen of the glorious white-blossomed Rhododendron Nuttallii, of which a tree now magnificently in bloom, may be seen in his new nursery at Highgate. For this a First-class Certificate was deservedly awarded; and a similar award was also made to the same excellent cultivator for Dendrobium Dayanum, a fine kind in the way of D. macrophyllum. To Mr. Bull were awarded First-class Certificates for the rare Phalænopsis Ruckeri, a white species with a yellow lip; and for the red-veined Gymnostachyum Verschaffelti, to which we have alluded in former reports. From Messrs. Veitch came Dracæna Cooperi, a gracefully drooping red-leaved sort, to which a First-class Certificate was awarded. Similar awards were also made to the same eminent firm for a large-flowered variety of Franciscea calycina, and for Trichopilia crispa; and a Second-class Certificate for Primula cortusoides amœna, a large purple-flowered showy variety. To Mr. Turner was awarded a Second-class Certificate for an Alpine Auricula, named Shakspere, with a bold deep violet-purple-shaded edge. Foremost among new Azaleas was Stella, a brilliant orange-scarlet sort, spotted and flushed with violet on the upper segment, from Messrs. Veitch, who received a First-class Certificate for it. To Meteor, from Mr. Kinghorn, a variety brighter in colour than even Mars itself, a Second-class Certificate was awarded; and Mr. Bull received a First-class Certificate for Roi des Doubles, a rosy-pink sort, with flowers nearly as large and double as those of an Oleander. To Azalea Bellona, from Messrs. Smith, a semi-double bright rose, a Certificate was also given.

Cinerarias.—Of these several collections were shown, in which Duke of Cambridge, a dark crimson self; Adam Bede, rosy purple self; Admiral of the Blues; Regulator, pale blue; Fair Helen, white with a dark centre; Viola, white with dark centre and violet edge; and several of the white, crimson bordered sorts, were conspicuous.

Awards.—6: 1, Mr. James; 2, Mr. Marcham; 4: 1, Mr. James; 2, Mr. Marcham; 3, Mr. Lacey.

Pansies.—A few well-flowered plants in pots came from Messrs. Dobson, whose sorts were Canary, Rev. Joshua Dix, British Queen, and Alexander McNab. We also noticed one or two pans of cut blooms from Mr. Bragg and Mr. James, which suffered greatly from the heat of the day. Among Fancies, a yellow and brown sort, named Vesuvius, from Mr. Bragg, was greatly admired on account of its bright and striking colour.

Auriculas.—In small groups of these, from Mr. Potts, Mr. Turner, and others, we noticed the following in good condition, viz.: Lord Yarborough, Fletcher's Mary Ann, Maggie Lauder, Warris's Union, and Syke's Complete. Of other well-known kinds there were also some good examples.

Polyanthuses.—In one or two small groups of these the following were conspicuous, viz, Lady Milner, Lady Abingdon, Warrior, Santarara, Highland Mary, and Defiance, all of which in their way were extremely pretty. In no class of plants, however, is variety more wanted than among Polyanthuses.

Awards.—6: 1, Mr. Turner; 2, Mr. Butcher.

Miscellaneous Plants.—Among these, the greatest curiosity was perhaps a specimen of the Australian Grass Tree (Xanthorrhœa australis), from Mr. Williams, a singular production with a stout black-looking stem, like that of a Tree Fern, and bearing a noble head of bright green Rush-like foliage. From Messrs. E. G. Henderson came the old-fashioned Genista prostrata: and Mr. Parker, of Tooting, furnished a well-flowered plant of Rhododendron Countess of Haddington, described by us in favourable terms at p. 220. From Mr. Turner came a small collection of Pelargoniums, the names of most of which have been given in former reports.

Finally, in a nice group of small plants from Jas. Bateman, Esq., we observed examples of Thibaudia elliptica, loaded with bright orange tubular blossoms, and a cut specimen of Psammisia sarcantha, a shrub with ample pale green leaves and short waxy tubular pale green and red flowers: both very good things. We also observed on the table the handsome silver epergne which some Fellows of the Royal Horticultural Society had caused to be prepared as a mark of their regard for Dr. Lindley.

LINNEAN: *April* 7.—G. Bentham, Esq., President, in the chair. W. Eassie, Esq., was elected a Fellow. Dr. H. J. Carter exhibited leaves of Ficus glomerata, in which a double foliaceous development had formed along some of the secondary veins on the under surface of the leaf, recalling the indusium of Ferns. The following communications were read:—1. "On the Garcinia yielding Gamboge in Siam," by Daniel Hanbury, Esq.; with remarks on the structure of the anther in the section Hebradendron of the genus Garcinia, by Prof. Oliver.——2. "Dimorphism in the Flowers of Monochoria vaginalis," by J. Kirk, M.D., communicated by the President. This plant, which is found in the shallow lagoons of the Zambesi, was described as presenting two very distinct forms in its mode of flowering. The usual inflorescence was said to consist of a spike of three or four inches long, with a membranous spathe at its base arising from the sheathing petiole; this spike rises above the water at the time of flowering, but again descends to mature its fruit. The other form of inflorescence consists of a solitary almost sessile flower, produced at the base of the leaf stalk, and included in its sheath; this is never raised above the water. Each of these flowers is protected by a short sac, formed of the membranous spathe without any opening, within which flowering and fecundation go on, the sac not becoming ruptured till after the capsule has become enlarged. Both forms produce capsules containing many perfect seeds.

Notices of Books.

Elements of Physics, or Natural Philosophy. By Neil Arnott, M.D., F.R.S., &c. Sixth Edition. Part I. Longmans, 1864. Pp. 400, 8vo.

This is really a scientific work, though written in plain or non-technical language. The Part now published comprises Mechanics, Hydrostatics, Hydraulics, Pneumatics, Acoustics, and Animal Mechanics, thoroughly revised from the former editions (which had an immense sale, and were translated into the principal languages of Europe, and were largely reprinted in America), and brought up to the present time. The Second Part, which is to be published in the course of the year, treats of Heat, Light, Electricity, Magnetism, and Astronomy. Dr. Arnott seems always to have enjoyed a considerable reputation as a man of science, and when the London University was founded he was appointed a member of the Senate, a dignity which he still holds, and it seems always to have been one of the great aims of his life to popularise science, and to inculcate upon a reluctant world the importance of studying Natural Philosophy "for all who in the present day pretend to have a moderately good education." In taking a survey of the progress of mankind and human knowledge, Dr. Arnott says, "There is a change going on in the world connected closely with the progress of science, yet distinct from it, and not less important than many of the scientific discoveries themselves—it is the diffusion of existing knowledge among the mass of mankind. Formerly knowledge was shut up in convents and universities, and in books written in the dead languages, or in books which, if in the living languages, were so abstruse and artificial that only a few persons had access to their meaning," &c.

This and the following passage will serve as a key to explain the author's object in writing the work before us.

"Bacon truly calls Physics or Natural Philosophy, 'the root of the sciences and arts.' That its importance has not been marked, by the place which it has held in common places of education, is owing chiefly to two causes, 1st, the misconception, that a deep knowledge of technical mathematics, which only few have leisure to acquire, was a necessary preliminary; and 2nd. to an opinion that the degree of acquaintance with physics, which persons almost unavoidably acquire by common experience in the world, is sufficient for common purposes." Accordingly the Doctor sets to work to disabuse men's minds of these misconceptions, and with most marked success; for he has written most clearly and intelligibly on subjects of no ordinary difficulty. Moreover he has introduced a multitude of curious facts, apt illustrations, and other matters of interest; such as we do not remember to have met with in any scientific treatise whatever.

As a medical man himself, Dr. Arnott very properly insists upon the importance of a knowledge of physical science to the medical practitioner, and most sensible people will endorse the opinions set forth in the chapter on the Mechanism of the Human Skeleton.

"There is scarcely a part of the animal body, or an action which it performs, or an accident that befals it, or a piece of professional assistance which can be given to it, that has not close relation to the truths of natural philosophy here set forth. It follows, that every individual who has such a complex and delicate body to care for, should understand its nature to a certain degree; and that those who embrace the profession of which the object is to guard the public health, and to cure or mitigate evils which befal it, should have that knowledge as complete as is attainable."

A traveller possessing moderate powers of observation is often enabled to enliven his subject by illustrations of what he has witnessed in foreign lands. Dr. Arnott does more than this, for he also shows a fertility of invention and a rare ingenuity in the application of known principles to the subject that he would elucidate.

Perhaps one of the most ingenious and useful of his inventions is that of the hydrostatic bed, which has contributed so much to the resources of the medical profession, and the comfort of the helpless invalid. The doctor gives a graphic account of how he came to devise this simple apparatus; how the carpenter made the trough part of it in the night, and at 6 o'clock the patient was placed in it, carefully, but not in the position that had been intended: but she said "Do not touch me, for I am quite at ease." She soon fell into a calm sleep, which lasted for nearly four hours, awoke singularly refreshed, and took nourishment, and from that time her complete recovery commenced. Dr. Arnott attributes the little favour that has been shown to his invention, 1st, to the common misconception, that a water pillow is a nearly equivalent substitute for the floating bed; 2d, the want of a clear notion of hydrostatic support or floating, and the common erroneous belief that the weight of a person resting on the bed was supported partly by the strength and tension of the caoutchouc sheet; 3d, the considerable cost and bulk of the complete bed, which induced people to adopt any cheaper and smaller apparatus which was thought to answer in a degree the same purposes. "Before reflection," he says, "a person readily supposes a resemblance to exist between the hydrostatic bed, and an air bed or cushion, and calls it a water bed or cushion; but the principles of the two are very distinct, not to say opposite. An air pillow supports altogether by the tension of the surface which incloses the air, and is therefore somewhat like a naked hammock, and really may be a very hard pillow; but in the hydrostatic bed there is no tense surface or web at all; the patient is floating upon the water, on which a loose sheet, partly in folds, is lying between him and it, merely to keep the mattress dry, and every point of his body is supported by the water immediately beneath it. Even Sir Astley Cooper, on first conversing with Dr. Arnott about his invention, expressed a wish to lie down upon a bed then before him, but feared that his great bulk might burst it, and laughed when he saw the mistake that he had made.

A Dictionary of Chemistry, Part XIII. (Longmans), extends from Eugetic Acid to Glucose, and completes the second volume of what we think will stand at the head of this class of chemical books. Those who doubt, if any, should read the article on Gutta Percha.

The Popular Science Review, No. 11 (Hardwicke), has a capital popular article on the *Rusts of Plants*, by Mr. Cooke; and on *Printing Telegraphs*, by Mr. Culley. An excellent number.

The Natural History Review, Nos. 13 and 14 (Williams & Norgate) have good articles (*inter alia*) on Huxley's Darwinian Lectures; Salter's monstrous Passionflowers (very curious); on the Replacement of Species, by Dr. Hooker (this we publish elsewhere); Vegetable Hybridity; European and Oriental Oaks, and the Parasitism of the Miselto.

The Rod, the Net, and the Public, by Sir John Stewart Richardson (Blackwood); a very curious and instructive pamphlet on regulating the Times and Seasons of the Salmon Fisheries of Scotland, evidently the work of one who knows what he writes about.

The place in the literature of floriculture lately vacated by "Gossip of the Garden," has been occupied by a periodical of similar character, called the *Midland and Northern Florist's Guide*, which appears under the management of Mr. W. Dean of Shipley. For eight years past, the promoters observe, "Gossip" had well supplied the wants of a large section of ardent florists and amateurs, who take quite as much interest in the cultivation of a few florists' flowers, as the more opulent do in the higher productions of their gardens; and the new "Guide" has been projected to minister to the wants of the same class of readers. Two numbers have appeared, and if we may form an estimate from these, the new publication will worthily occupy the field it has chosen. In the first number are practical papers on Roses, Gladioli, and Hollyhocks; as well as some keenly critical remarks on the Dahlias sent out in 1863, which are said to have not added much to the raiser's credit. In the north it would appear that Lord Dundreary proved the best flower of the year. The second number, that for April, has more information on Roses and Gladioli; a good paper on Pelargoniums; some Auricula lore, and such like matters. In a report of a spring show at Liverpool, there is a record of some remarkably fine Mignonette plants from Mr. Reid, gardener to the Earl of Balcarres, "superbly grown pyramids, each 4 feet high, on 1 foot stems." A plan of exhibiting Hyacinths in green boxes, wide enough and deep enough to take the 24 pots in angles, and with the surface covered by fresh green Moss, is recommended as effective, and as enabling the exhibitor to arrange his plants at home, and leave nothing to be done at the show but to lift the boxes from the van at once to the exhibition table. If not crowded, and protected by paper or other removable material, they travel well in this way. As to dressing, it is observed that the stem should be kept in an upright position whilst growing, so as to get a perfectly straight spike; then, on the morning of the exhibition, and occasionally before, the bells should be gently lifted with a pencil or some such implement, commencing at the top of the spike and going regularly over them to the bottom. This obviates looseness and irregularity in the spike, which will then have, what it ought to possess, a symmetrical form.

In the *West of Scotland Horticultural Magazine* for March and April are useful papers on the growth and propagation of the Hollyhock; a sketch of orchard house management, as compared with the old house system and the glazed wall system; Peach growing on walls; the Gooseberry caterpillar, &c. In reference to the last, Mr. Fowler strongly recommends the removal of three or four inches of the surface soil from beneath the bushes, and the burying of it in a deep trench, fresh soil being added in the place of that removed. This, if carefully done, need not be repeated oftener than every third or fourth year. Twenty years' experience, he says, has proved this to be a very reasonable and successful method of escaping the ravages of Gooseberry caterpillars.

The *Scottish Gardener* comments on Flower shows, and states a patent fact, namely, that—"However fond one may be of plants, it is really no treat to go to Regent's Park, the Palace, or even to the new garden at Kensington, after one has for four or five years visited every exhibition of the season." The writer suggests a more tasteful arrangement, and intimates that the public don't go to see whose productions are best, but to see the display—the general effect of the whole. This exhibition question is one which the managers of shows must soon take in hand seriously. There are sound and full practical articles on Cauliflower and Asparagus culture, and on the management of Figs; besides a variety of articles on other gardening matters.

Books Received.—*Transactions of the Scottish Arboricultural Society* (Vol. III., Part 1.) contains papers on Mixed Fir Plantations, by W. Gilchrist; Plantation Roads and Walks, by Robert E. Brown; Reading-rooms and Libraries for Working-Men on Landed Estates, by the same; an Abstract of the Accounts for 1862-63; the List of Members, corrected to March, 1864; Prize Essays, &c.

Garden Memoranda.

Royal Horticultural Society's Garden, South Kensington.—Great changes are going on here, as will be seen from the following description.

As regards entrances, that in the Kensington Road is about to be closed, and instead of it two new ones are being made,—one in Prince Albert's Road, the other in Exhibition Road, both in a line with the statue of H.R.H. the late Prince Consort. Between the Arcades and the public roads in question, these entrances are to be covered with glass, so as to form span-roofed houses some 200 feet in length and about 12 feet in height in the centre. Through them a central walk is to be carried, and on either side of it orchard-house trees intermixed with Roses and other ornamental shrubs are to be planted out or kept in pots, while over the roof creepers of different kinds are to be trained. Of the alterations which have been made in the principal entrance near the Exhibition building, notice has already been taken in our columns on the occasion of the Society's first spring show (see p. 246). We have therefore merely now to remark that the opaque roof of the Arcade in the rear of the Council room has been partly glazed, so as to put plants placed under it in a better light. On the right of this a portion of the Arcades is being fitted up for exhibitions of implements, to which we understand it is to be permanently devoted. In reference to other compartments of the Arcades, we may remark that those on the terrace right and left of the Conservatory are being put into good repair and glazed in front so as to make them if necessary fit for holding floral exhibitions in, or suitable receptacles for statuary, intermixed with Orange trees in tubs or plants of that description. The Conservatory itself is also being newly painted and decorated, and we understand that a covered pathway 8 feet in width is to be constructed on a level with the galleries on the north side of it, in order to facilitate the passage of visitors from one gallery to the other, and to avoid the necessity of descending and ascending flights of stairs in order to reach the elevations in question. Means have also been employed not only for lighting the Conservatory with gas, but like wise the Arcades in connection with it, and the latter are to be warmed with hot water in 4-inch pipes.

To the improvement of the annexes especial attention is also being directed. That on the west side between the orchard house entrance above alluded to, and the late Exhibition Building, is already nearly put in order. The ground has been levelled so as to be laid down in Grass, through which walks of a winding character are carried—generally on a level with the surrounding surface, but in one instance through a dell to be planted with Ferns under the shade of trees. Next the boundary fence, a bank planted with trees and shrubs has been thrown up, and the back wall of the Arcade is to receive some temporary leafy covering, so as to take off in some degree its present bald appearance. To the Eastern Annexe is to be committed the charge of holding Messrs. Waterer and Godfrey's forthcoming American plant show, and already a space of ground 300 feet in length and 120 feet in width, is being laid out in the shape of raised banks, interspersed with walks for that purpose. The area just named is to be covered with a tent supported on two huge wrought iron masts or columns some 60 feet in height, now in course of erection, and the peat earth in which the plants are to be placed is also being got in. The remaining portion of this annexe is likewise we believe at once to be trenched and otherwise put in order for decorative purposes.

Mr. Nesfield's plan laid down in the body of the garden has, we find, not escaped alteration. On the contrary, walks are being taken up, especially that connecting the two band houses; and the main features of the design are partially cut off from view, so that now they are in danger of being overlooked, especially by persons not having a previous knowledge of their existence or location. In the ante garden hedges of Rhododendrons elevated on steep narrow banks enclose compartments to which it is at first sight difficult to find an entrance; we are curious to see the effect of growing these swamp shrubs on dry banks. Is the experiment intended for the instruction of the Department of Science and Art? And if so what has the Royal Horticultural Society to do with that? The triangular Box tracery ornamentations formerly conspicuous from the great central walk have been shut out by means of Yew hedges, while fences of Poplar and Laurel traverse the compartments in their

neighbourhood in other directions, so as to form little grassy avenues about 60 yards in length and 5 yards in width. Along the sides of the walks, near the straight pieces of ornamental water, in the lower portions of the garden, are likewise planted hedges of Laurel and Poplar, and iron trellises in one instance are being put up, over which Lombardy Poplars are to be led so as to overcanopy the walks close to the water in a horizontal direction for a space of 6 feet. Covered ways are also to be formed in other parts of the garden, if we may judge from preparations being made apparently for that purpose. The great central walk, too, has been narrowed, and out of beds and borders taken from its sides, rise lofty Poplars, which form, as it were, an avenue leading from Minton's fountain, which is being erected at the lower end of it, in the direction of the Conservatory to the north of the garden. Young plants of Abele Poplar have been planted 10 feet apart close to the sides of the walks in the neighbourhood of the fountain just named, which is moreover, we understand, to be surrounded by beds of flowering plants.

To the north of Minton's fountain, which excited so much interest in the late Great Exhibition, and in the central walk, has been placed the French marble monolith, from the Jura Mountains, presented by M. P. de Tinseau, St. Ylie, Jura, France. A bronze statue, probably a copy of John of Bologna's "Mercury," will surmount the column. One side of the base will record the facts of the late Great Exhibition. On the other side will be a sun-dial.

Examples of Arbor-vitæ hedges from Mr. Sharpe Nurseryman, Wisbeach, have been planted in different parts of the ground; and there are others of Laburnum along the edge of banks in front of the Arcades, from Messrs. Lee, of Hammersmith. In the latter, the shoots cross each other obliquely, so as to form diamond-shaped lattice-work, and, occupying as they do little room, fences of this description seem well adapted for purposes where thin screens are required.

Trellis-work, to be ornamented with creepers, has also been put up along the tops of some of the terrace walls; and surmounting the stone work on each side of the flight of steps leading from the garden to the Council Room deep narrow boxfulls of Cupressus macrocarpa have been placed for evergreen screens. Poles connected together at top by means of loose chains, along which climbers are to be led, have also been put up at the sides of the main walk opposite Mr. Nesfield's floral device in front of the large central piece of water.

As regards the ornamental water, the different ponds and basins are to be stocked with fish now being hatched in the garden under the superintendence of Mr. Frank Buckland. The hatching apparatus, which is at work in a corner near the Council room, consists of rustic pottery boxes arranged one above another, like a series of steps, so that the water runs in a zigzag manner through the whole of them from top to bottom. Labels are attached to each box, so that visitors may see what kind of fishes the boxes contain.

To other changes also in contemplation, we may advert on another occasion.

Miscellaneous.

Curatorship of the Royal Botanic Garden, Kew.—We learn with great satisfaction that this important post has been given by Government to Mr. John Smith, now Gardener at Syon, who has been in the very kindest manner encouraged by the Duke of Northumberland to accept it. Mr. Smith is one of the best practical gardeners now alive, and we warmly congratulate Mr. Cowper upon his having secured the services of so thoroughly efficient a Curator.

Garden Allotments to Soldiers.—In the House of Commons Mr. W. Ewart asked the Under-Secretary of State for War what steps had been taken, or were about to be taken, to enable soldiers in camp (or elsewhere, where it is possible) to employ themselves in the cultivation of gardens. The Marquis of Hartington had very little to add to, and he did not think he had anything to retract in, the answer which he gave to the hon. gentleman on this question some time since. He then stated that Lord de Grey had every disposition to afford facilities to soldiers desiring to employ themselves in the cultivation of gardens, and that a commencement had been made in the matter, and would be extended as much as possible. The Horse Guards had received a report from the officer commanding the Artillery at Aldershot that two batteries of artillery had been for some time cultivating grounds as gardens, and that the very best results had followed. Occupation had been afforded to the men, and their comfort greatly increased by the production of vegetables for their mess. The land had also been allotted for that purpose for the Military Train at Aldershot, but owing to a question having arisen as to the payment of rates by the soldiers, it had not yet been cultivated. At Warley three acres had been allotted for that object. In the south-eastern division, in the neighbourhood of Brighton and Dover, some of the troops had had allotments made to them. In Woolwich also some allotments were in existence, and more were being provided. At Colchester arrangements of a similar nature were in progress. No general rule could be laid down on that subject, and each case must be dealt with as it arose. In some places land was easily procured, and in others not so easily, and it became a question, of course, whether the soldiers were not to pay rent for land taken out of occupation; but he could assure the hon. member that every representation made by the generals commanding at the different stations would be taken into consideration by the War Office, and that every disposition existed to encourage this system. *Times.*

Calendar of Operations.

(*For the ensuing week.*)

THE bright sunny weather which we are now experiencing will render additional attention to watering, both in doors and out, necessary, and great care will be required in its application to plants recently put out or newly potted, in order to keep the soil from becoming soddened and soured. When any plant is observed to be in that state, it should be shaken out, repotted in fresh soil, and more carefully watered for the future. But if this operation is to be of any service in any particular case, it must be performed without delay, as roots are speedily injured and destroyed if allowed to remain in contact with unwholesome soil.

FLOWER GARDEN AND PLANT HOUSES.

In conservatories and other show houses, Azaleas will now be in full bloom, and every attention must be paid to keep them in beauty as long as possible. By judicious arrangement both borders and shelves may now be rendered extremely gay with flowering plants, and if a few red and white coloured Azaleas in the shape of standards are introduced among dwarf plants, either of the same or of other kinds, the general appearance of the house will be greatly improved. Standard plants of Deutzia gracilis, now in full blossom, as well as Cinerarias, and things of that description, will likewise be found useful for purposes of decoration, as will also forced Roses, which are flowering unusually well this season. Out of doors let manuring and dressing proceed as required. Highly dressed ground should be mown at least once a week after this period, for a well kept lawn is always a pleasing object.

CAMELLIAS.—Keep such as are making growth well syringed. Should black-fly appear on the young shoots, which sometimes will happen, a good washing with tobacco water will soon destroy it.

CINERARIAS.—As these will now be in blossom, a little shade during the middle of the day will be necessary in order to prolong their season of flowering; remove to a cool shady house such as are required for a later display. Weak liquid manure may now be given liberally, say two or three times a week. Look well to seedlings, and select such as have the most circular outline and well defined colours, and place them apart from the more common kinds for seed.

PELARGONIUMS.—A slight shade will now be necessary for a few hours on bright days; green fly is occasionally very injurious to them at this season, and therefore the plants should often be fumigated; tie and regulate the shoots according to previous instructions.

PINKS.—If the weather continues dry, these will require careful attention in the way of watering.

TULIPS.—Protect the best bed, if not already done, with canvas. Stir the surface between the bulbs when it is in the best state for the operation, *i. e.* between wet and dry.

FORCING GARDEN.

PINES.—Early potted suckers or young succession plants will soon have filled their pots with roots. Where such is the case, give them a liberal shift. When dry they had better be watered occasionally with weak liquid manure, *i. e.*, after the plants shall have become sufficiently established to enable them to receive it with advantage.

STRAWBERRIES. — These will want abundance of water. They must not be allowed to flag by any means, and if the weather continues bright, they may be removed to a cooler and somewhat shady shelf.

VINES.—In most places early Grapes will now be ripe. Let it, therefore, be remembered that a tolerable amount of dryness in the atmosphere is necessary, in order to obtain good flavour. A free and wholesome circulation of air early in the morning and continued until evening, will be found to increase both colour and flavour. Be very moderate in fire-heat until late Vines approach the period of blossoming. Keep the syringe employed morning and evening until the flowers begin to open; after that it must be discontinued.

HARDY FRUIT AND KITCHEN GARDEN.

Disbudding wall trees will be the principal work in hand in this department during the next few weeks. In the final regulation of the shoots do not allow more to push into wood than can be conveniently trained in. When working at wall trees avoid treading upon the soil; a plank and a few bricks moved along as the work proceeds will obviate the evil just named, and will yield more comfort to the workman.

BEANS.—Put in successions of these as required. A few French ones may also now be sown on a warm border.

LEEKS.—These are fond of moisture, the ground, therefore, for this crop should be double dug 18 or 20 inches deep, and the manure laid into the bottom of the trench, which should be previously loosened with a fork.

LETTUCES.—After this time it is best to sow these where they are to remain. Drills for them should be drawn 10 or 12 inches apart, and a few seeds dropped in at intervals of about 8 inches asunder; as soon as the plants are fairly up these patches should be thinned to one plant.

PEAS.—Sow for succession to those now coming into bearing.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON

For the Week ending April 20, 1864, as observed at the Horticultural Garden

April.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain
Thurs. 14	7	29.923	29.758	63	27	45.0	50	49	E.	.00
Friday 15	8	29.691	29.658	70	42	56.0	50	49	S.E.	.00
Satur. 16	9	29.709	29.706	50	38	44.0	51	49	N.E	.32
Sunday 17	10	30.000	29.861	64	27	45.5	50	49	E.	.00
Mon. 18	11	30.040	30.017	67	27	47.0	50	49	S.W	.00
Tues. 19	12	29.969	29.901	69	30	49.5	50	49	S.	.00
Wed. 20	13	29.917	29.902	75	32	53.5	51	49½	E.	.00
Average.		29.893	29.829	65.4	31.8	48.6	50.3	49.1		.32

April 14—Fine, very fine; clear; slight frost at night.
— 15—Dry haze; exceedingly fine throughout, air very dry.
— 16—Slight drizzle; drizzling rain; overcast.
— 17—Cloudy; fine; very fine; slight frost.
— 18—Clear; very fine; hot sun; slight frost.
— 19—Clear; very dry air, and quite cloudless; fine.
— 20—Very fine throughout.
Mean temperature of the week, ¼ deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending April 30, 1864

April,	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 24 .	60 2	35.7	48.0	15	0.60 in.	5	6	5	5	2	8	4	3
Mon. 25..	61.3	37.3	49.3	16	1 40	5	7	5	3	7	5	3	3
Tues. 26..	61.7	35.7	48 7	16	0.53	4	8	3	3	1	10	3	6
Wed. 27..	55.5	35.5	45.5	16	0.14	11	2	8	2	5	5	4	1
Thurs. 28..	62.2	35.8	49.0	15	0.64	4	6	6	4	5	5	5	3
Friday 29..	62.8	37.7	50.2	13	0.75	4	4	8	2	4	8	1	7
Satur. 30..	63.3	39.8	51.6	16	0.31	6	3	8	2	3	7	4	5

The highest temperature during the above period occurred on the 28th, 1840—therm. 81 deg.; and the lowest on the 24th, 1841, and 29th, 1861—therm. 18 deg.

Notices to Correspondents.

CHINESE PRIMROSES: *C C.* The double sorts are to be strongly recommended, especially some of the more recent of them; but you will probably find the ordinary fringed varieties, raised from a good strain, as the growers say, more generally useful. The sowings for winter and spring bloom should be early in April and late in May. They should be raised in a close warm frame, and afterwards grown on through the summer in a common cold frame, shading freely in hot weather. The earliest should have their final shift about September. Cow-dung is a good ingredient in the compost; and they should always be grown close to the glass. The new Fern-leaved sorts come true from seed, and are quite as handsome as the others, besides making a nice variety.

CHRYSANTHEMUM BLOOMS: *J T.* The large specimen blooms seen at the shows are produced by disbudding and by high feeding. The young plants should be shifted on from time to time, using pots gradually larger, and *aiming at getting* the shoots well ripened. Use healthy loamy soil, but apply no strong stimulants till the buds are formed; then stimulate gently till the buds show colour. Several shoots may be grown from the stem, but only one bud on each branch. Some sorts develop the terminal bud best, others a lateral one. Of course all extra side shoots, if there be any, are to be removed when the buds appear.

CLIVIA NOBILIS: *Kirby.* This is a stove plant, and should have plenty of pot room for its thick fleshy roots, and a rich loamy soil. When growing freely it needs plenty of water. Well managed it is a fine thing.

FUNGI: *An Inquirer.* Both Pæony and Tulip are alike attacked by some Fungus which must come from the soil. Do you mix anything with the top-dressing, which is likely to encourage the growth of Fungi? The evil in all probability arises from some injudicious admixture, which you alone can ascertain, If in future you use nothing but loam, sand, and peat, your bulbs will probably be safe, provided no Fungus spawn is left in the beds. *M. J. B.*

GARDENERS' PLACES: *J G.* Pray do not apply to us for that or any other place. We have nothing to do with advertisements, except to give them currency. You, and every one else, should apply to the advertiser—and to no one else.

MUSAS: *M G.* To regulate a supply of the fruits for the table, it is customary in some of the countries where Musas are freely grown—Egypt for example—to cut the full-grown clusters while green, dividing them into pieces and placing them in large boxes with alternate layers of chopped straw. They are then pressed by means of a heavy weight, and the pressure causing the straw to heat, they ripen in a few days. The coarse-grained are more wholesome than the fine-grained varieties.

NAMES OF FRUITS: *T S T.* Your Apple is perhaps Dumelow's Seedling, but cannot be certain in its present state; if it is you will find the bark of the shoots more spotted than that of almost any other variety.‖

NAMES OF PLANTS: *G T.* Every one of the names given you by your young friend is erroneous. We really cannot sit down to correct puerilities.—*W D F.* We see no reason why it should not be a sport from Narcissus odorus; but it is impossible to speak with certainty on such materials.—*A C.* Some Bifrenaria, near B. Harrisoniæ; Oncidium ascendens; some Dendrobium crushed by the letter stamper, but apparently moschatum.—*S S S.* There is no such plant. We fear you have been sadly imposed upon. Five guineas is a long price for O——. *F C.* Dendrobium fuscatum; and Aerides cornutum—*G.* Blue. Some Mertensia; perhaps M. virginica: specimen insufficient; the other, Chrysosplenium oppositifolium.—*R T.* Osmanthus ilicifolius and Ligustrum japonicum.—*S Y.* Berberis Darwinii.—*Redux.* Calycotome candida, Hebenstreitia hamulosa, Mystroxylon filiforme, Amyris inæqualis.—*C B.* Some Psoraleæ, perhaps P. glabra, from Natal.—*C L M.* The Fungus next week.

ORCHIDS: *W W B.* Next week; a most welcome paper.

RED SPIDER ON IVY: *R H.* The pest on your Ivy is probably attributable to poor soil, and a hot dry situation, as you say the aspect is south-east. Give the plants several thorough good waterings at the root; and in addition, syringe the leaves and stems repeatedly with a strong solution of Gishurst compound, allowing it to settle before using, or, if necessary, washing it off with a drenching of clean water before it dries. The applications both to the roots and leaves must be thorough; and if the ground is poor use manure-water.

RUSTIC BRIDGES: *C. Parker, Isle of Wight,* is anxious to obtain plans of these, and also of rockwork. The simpler they are the better. The place where they are to be constructed is in the Isle of Wight. Can any of our readers kindly inform him where he will be able to procure them?

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ROYAL AGRICULTURAL SOCIETY of ENGLAND.

NEWCASTLE MEETING.

LAST DAY for ENTRY of IMPLEMENTS, MAY 1.

All Certificates received after that date will be returned to the senders. H. HALL DARE, Secretary.

12, Hanover Square, London, W.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.

MEETING at NEWCASTLE-ON-TYNE, 1864.

STOCK and IMPLEMENT PRIZE SHEETS are now ready and will be forwarded on application to

H. HALL DARE, Secretary.

12, Hanover Square, London, W.

PHOSPHO GUANO.

PHOSPHO GUANO COMPANY LIVERPOOL

Company's Trade Mark.

EDINBVRGH AND LONDON

Contractors' Trade Mark.

THE PHOSPHO GUANO, in its natural state, is found on trap-rock islets within the tropics. It was discovered in 1854; and its existence was made known in August, 1856, by Dr. VOELCKER, who read a paper at the Cheltenham meeting of the British Association for the Advancement of Science, "On the Remarkable Composition of a New Variety of Guano, called Columbian or Maracaibo Guano," pointing out its peculiar fitness as the base of a highly concentrated phosphatic manure.

Its valuable and peculiar qualities immediately attracted the attention of the leading Agricultural Chemists, who pronounced it at once to be greatly superior to all other Guanos as a manurial agent. The result of careful experiments in the field having fully established this superiority, the consumption has increased year by year; and at the close of the seventh season, 1863, it has attained a position second only in consumption to that of Peruvian Guano.

The Baron LIEBIG, in the course of his investigations, discovered potash in the raw Guano, a discovery since confirmed by Dr. VOELCKER and other Chemists. To the presence of this substance (which is not found in any mineral phosphate) is attributable, in some degree, the great superiority of the PHOSPHO GUANO when compared with other phosphatic manures made from coprolites, apatite, Sombrero Guano, &c.

PHOSPHO GUANO contains in its natural state nearly double the quantity of phosphoric acid found in bones and other substances from which Superphosphates are prepared; and LIEBIG states that by using PHOSPHO GUANO, the farmer conveys to his field 26 per cent. more phosphoric acid than by a mixture of equal parts of Peruvian Guano and Superphosphate of Lime; while "the advantage for the improved quality of the soil appears still more in favour of the PHOSPHO GUANO, if the quantity of soluble phosphoric acid is taken into consideration."

One of the most important advantages of the PHOSPHO GUANO is its uniform composition, and in this particular it is equalled by no other manure; for with scarcely an exception, they all vary greatly in different samples, even when drawn from a comparatively small bulk.

All Chemists of standing have ceased to place a money value on manures submitted by them to analysis, as tending to lead to erroneous conclusions, owing to the disingenuous manner in which such values are paraded before the public eye by dealers; but for the information of those farmers who still have faith in this test, the money value of the PHOSPHO GUANO, calculated by the data hitherto in use, is, according to the mean average of Dr. VOELCKER'S analyses, 13*l.* 18*s.* 2*d.* per ton; and of Baron LIEBIG'S analyses, 14*l.* 18*s.* 4*d.* per ton.

Peruvian Guano and PHOSPHO GUANO are respectively the representatives, in the highest degree, of the two most important manurial substances, ammonia and phosphoric acid. In Peruvian Guano there is 13.61 per cent. of nitrogen, yielding 7.0 of actual ammonia and 10.0 latent—and the latent, in the opinion of Dr. VOELCKER, is as available or nearly so as the actual ammonia—together with 3.0 per cent. phosphoric acid in soluble state. In PHOSPHO GUANO there are 18.027 per cent. of phosphoric acid in soluble state, and 3.50 per cent. actual ammonia.

As Peruvian Guano is acknowledged to be a cheap source of ammonia, so likewise PHOSPHO GUANO must be considered as a cheap source of phosphoric acid—much to be preferred to bones, superphosphates, coprolites, apatite, Sombrero and other inferior Guanos; while the proportion of 3.50 per cent. of actual ammonia constitutes it the best-balanced manure in the market.

If the results of practical experience were required to recommend the PHOSPHO GUANO, testimonials from many of the most eminent Agriculturists in the kingdom could be adduced; but the reader of this advertisement is particularly referred to the most recent of these, published in the last number of the *Quarterly Journal of Agriculture* (Jan. 1864), by Mr. HENRY STEPHENS, author of the "Book of the Farm," detailing the experiments made by the MARQUIS OF TWEEDDALE, with their successful results.

Pamphlets, containing a full description of the PHOSPHO GUANO, its History, Nature, Properties, &c., may be obtained on application.

PRICES AND TERMS.

The Cash Prices, including the cost of bags, Carriage Free at any railway station or shipping port in the kingdom, are as follows:—

For 10 tons and upwards, £11 10s. per ton. | For smaller quantities, £11 15s. per ton.

For full cargoes, direct to any port, special rates will be quoted.

CREDIT RATES.—Should the Consumer require credit, the price is increased at the rate of 2*s.* per ton per month.

To prevent fraud, all casks and bags are branded with the PHOSPHO GUANO COMPANY'S Trade Mark, as well as that of the Contractors, copies of which appear at the head of this advertisement.

There are Authorized Agents appointed for the sale of PHOSPHO GUANO in all the principal towns and villages in the United Kingdom; but where any difficulty exists in procuring supplies, orders may be sent direct to

PETER LAWSON & SON,
GEORGE IV. BRIDGE, EDINBURGH; or, 28, KING ST., CHEAPSIDE, LONDON, E.C.

PETER LAWSON AND SON, *Contractors.*
WILLIAM DIXON AND CO., *General Agents.*
GEORGE SEAGRAVE AND CO., *Brokers.*

The Agricultural Gazette.

SATURDAY, APRIL 23, 1864.

THE large numbers of pure bred Short-horns which have during the past few weeks been offered for sale by public auction do not seem to have more than satisfied the demand. The *Mark Lane Express* speaks of 253 sold within eight days, averaging 61*l.* 7*s.* apiece; and of 161 sold at three sales during last week for 7,879*l.* 4*s.*, or 48*l.* 18*s.* 6*d.* each. To that of the Clifton Pastures herd named in our last Number, we have now to add Mr. STRAFFORD'S sale of the herd at Southcott, the property of the late Mr. E. LAWFORD, which took place on Thursday of last week. Eighty-nine head sold for 3,703*l.*, or 41*l.* 12*s.* apiece. Among the principal prices were 240 guineas for *Seraphina* 13*th*, bought by Mr. BARCLAY, of Keavil; 160 guineas for *Seraphina* 15*th*, bought by Lord SUDELEY, and 300 guineas for IMPERIAL OXFORD by SECOND GRAND DUKE from *Oxford* 13*th*, bought by Mr. HEGAN.

HOW TO IMPROVE A PIECE OF UNPRODUCTIVE PASTURE?—This is the question which all England of a certain class is asking. Our pasture lands, which are the pride of our island, have nevertheless been justly declared the disgrace of our agriculture. Their fertility is stationary or retrograde, while that of our plough lands is almost universally advancing. Yielding the natural produce, every artificial assistance ought to be especially profitable in the case of our pastures. Manures applied to them go to the furtherance of a crop for which all the other circumstances are in their case naturally adapted: whereas, applied to the crop which has been sown on plough land by the cultivator, their influence may be neutralised by unfitness of climate or of soil for the crop which he has selected. Whether, however, or not, it be because Nature has done so much for our natural pasturage, that agriculture has done so little, it is nevertheless certain that it is generally in a poor and impoverished condition; so that multitudes

are in the condition of our Correspondent "Armiger," who describes his case as follows:—

"The land in question forms part of a park, and cannot be ploughed up; the Grass is such as is found on cold wet clay, and in its present state cannot be worth above 20*s.* per acre. A year ago it was tile-drained, but further measures are necessary. My steward recommends a dressing in autumn with lime. I suggested, as recommended by Messrs. Sutton, harrowing the surface, sowing with Grass seeds, top-dressing with the mixture of guano, dissolved bones, and salt recommended by Professor Voelcker, and cutting for hay instead of grazing during the first summer. I am answered that Professor Voelcker's mixture will cost 3*l.* per acre; that the land will not repay such an outlay; and that to cut hay on land already too poor would prove injurious. What should be done?"

The answer to this question must be based upon the undoubted but neglected truth, that the Grasses, like the other crops we grow, are dependent for their productiveness upon the fitness of the soil as regards both texture and composition to the plants grown on it. The unproductiveness of a pasture is just a case of ordinary infertility, to be explained by the soil not containing the food of the crop in question, or at any rate not yielding it. In such a case, the seeds of the crop will be sown in vain; and thus, on the face of it, there appears but little reasonableness in the recommended practice of sowing upon poor Grass lands what are called renovating mixtures. We are told to harrow out the Mosses which have encroached upon the Grasses, and perhaps to spread abroad some earthy compost over the surface, and thereafter bush-harrow in a couple of bushels per acre or thereabout of some mixture of good Grass seeds. These seeds, or some of them, may grow, and for a year or two they may result in a partial renovation of the pasture; but it is certain that the land will ultimately revert to its former condition, unless some essential change be effected in the circumstances out of which that condition originally arose.

Land which does not contain the food of Grasses will revert to Moss, in spite both of harrowing and seed; and land which, water-logged, will not yield the food of Grasses whether it be present there or not, will continue to yield Sedge and Rush in spite of every effort that may be made. The first step to its improvement undoubtedly is that which our correspondent has already taken. The land must be drained, and thus be at once unlocked and fertilised. "Dame Nature's top-dressings," to which we see a veteran agricultural writer is directing attention in the columns of a contemporary, would thus have a chance of entering the soil. The rain water which brings them would be their carrier to, instead of from, the plants they are intended for; and it would also be the carrier of other food which may then be applied with some chance of its answering its purpose.

The Bailiff is quite right in his proposal to apply a lime compost after drainage. This will help to bring into use whatever natural supplies of food for plants the soil contains. In addition to this other food may now be artificially applied with a better chance of its accomplishing its intended end.

Eight or twelve bushels of bone dust rotted in several times its bulk of damp ashes may be applied per acre. This will tend to promote the growth of Clovers, the increase of which in a natural pasture is the best evidence that exists of increasing fertility.

Add to this the gradual process of foddering sheep and cattle on the land; and you have then all the means in operation for its ultimate renovation. We agree with the bailiff in preferring grazing to mowing in such a case; and though we have very little faith in renovating mixtures of Grass seeds, as often used, yet by-and-by, it may be well to apply as bulky an earthen compost as can be had, spread it abroad, and thereafter bush-harrow in some good seeds—if after a few years of the influence of drainage, liming, boning, and diligent foddering on the Grass it shall still appear to be required.

Wool at 3*l.* 10*s.* per tod, and mutton without the wool at 7*d.* per lb.; while Wheat, Barley, and Oats stand at 5*s.*, 4*s.*, and half a crown per bushel, present an extraordinary combination of prices. What will be the effect of them, if they should continue, upon the character of English agriculture?

It is at the seed time of the year that the influence of the market demand for any particular produce must operate, if at all. What is the influence of these extraordinary prices effecting now? Has there been a greater demand for Grass seeds, Vetches, Mangel Wurzel, Rape, and Turnip seed than usual? Our operations hinge so much on one another that alterations of management are extremely slow; so that possibly but little change of cropping may be noticeable at once. And in addition to this it is no longer green crops only on which we depend for the maintenance of a flock or herd. Much Barley has found its best market during the past winter in pig feeding—and Peas and Beans and other grain at the present low prices may be profitably given to fatting sheep, while wool and mutton maintain their present market value.

These prices must, however, ultimately tend to an increase of the supply. In the records of the Didmarton farms referred to by Mr. Morton the other day at Kingscote, we see that from 1822 to 1830, when the price of wool ranged between 19*s.* 6*d.* and 27*s.* per tod, about 600 fleeces were cut annually. During the years 1831 to 1839 the price of wool ranged between 40*s.* and 50*s.* per tod, and 700 fleeces were cut per annum. In like manner, no doubt, every effort will now be made to increase the sheep stock of the country, and to this end more sheep food must be provided. Greater efforts will no doubt be made to secure a good seed bed for the Turnip crop, greater liberality in the manuring, and greater energy in the cultivation of the crop will be displayed. Other crops, too, will be more liberally treated. Top-dressings of Grass land will pay under such circumstances as the present. And green food will be eked out and saved by an increased consumption of grain and cake, as well as of hay and straw along with it. Rye and Vetches, Clovers, Grasses, early Turnips, Rape, Mustard, Swedes, stubble Turnips, Mangel Wurzel, hay and straw, all of them may be thus increased in quantity, and some of them in acreage, and made to support the larger flock which we hope will be maintained. We should be glad to see the prices of lamb and mutton rising, and thus proving that a larger number of sheep and lambs than usual are being kept over to another season.

IS FARMING A BUSINESS?

IF NOT, WHAT IS IT?

For my own part I look upon it as something undertaken to make a living by, and although Nature causes it to be slowly profitable, I can see nothing to withdraw it from the rules and customs that regulate other business transactions non-agricultural.

In ordinary undertakings capital is attracted and flows more freely into channels where its course is free and unobstructed, and it is naturally diverted from those encumbered by obstructions. That rule, in my opinion, holds good equally for agriculture.

Filling the British stomach is in my opinion the most important of all trades and manufactures, and in order that it should alike benefit all parties concerned, it ought to be especially conducted upon the most intelligent and recognised systems of commercial equity. But is it so managed? In my opinion certainly not. There is no free trade in it, but it is almost smothered in the swaddling clothes of old feudal customs and practices. Can I wonder then that agriculture is poor, and comparatively unremunerative. I am constantly told by landlords that it is very difficult to obtain men of sufficient capital to give full development to the powers of the soil. I will leave out of the question for the present the game preserves and the power over men's political consciences, and take the mere question of tenure. In this respect I can see no cause for difference between town and country.

If you let a house in a town to a trader or manufacturer on yearly tenure, depending in fact on the will of the landlord, you may rest well assured that that tenant will do nothing to alter or improve the landlord's property. But suppose you grant him a lease; do you suppose that he would accept of that lease unless he had the power to transfer or dispose of it? I don't know of such an instance in all my town knowledge.

Take my own case, and I could multiply it by thousands. I hold both my places of business on lease, and have expended on them in permanent and other improvements over 20,000*l.* Should I have done so without the power of sale or transfer? One of these leases is held under the Corporation of London, and they reserve to themselves the approval of the incoming tenant, but they were never known to object to a suitable tenant, and consequently their houses and lands are always sought after by men of capital, who invest freely. Moreover, although it is well known and calculated, that at the expiration of leases the Corporation will take increased rentals and participate (as they ought to do), in the general enhanced value of the property caused by efflux of time and the tenant's own improvements—the tenant in possession almost invariably commands a preference, if willing to give the price, or near the price, equitably affixed by the Corporation surveyor.

No tenant is ejected on political or religious grounds or from personal feeling, for the City of London is the cradle of civil, religious, and personal liberty, and yet there is no place in the world more loyal and orderly, nor where life and property are more secure. The result is that capital flows amply into our good old city, which the late Baron Rothschild, in his examination before the Lords' committee, named the financial heart of the world.

But why should not a tenant have the right to sell or transfer his lease? The human mind is active and variable. An enterprising man may desire to exchange or improve his investment, as is so frequently done in the trading, commercial and financial world. This activity and progress is the very soul of business, but agriculture is inactive and unenterprising, because it is tied down by a narrow and suicidal policy in fixed and slowly alterable trammels. To deprive the widow or orphan of the beneficial interest in a lease arising from a tenant's improvements, is a positive cruelty and injustice, and few men of capital will expose their families to such a risk.

Altogether farming is so embarrassed and fettered by antiquated and semi-paternal customs that it cannot rank in enterprise or progress with our general manufacturing, commercial, or other interests. The fear of loss of political influence is really a mistake, for that influence is exercised now by both parties, and so it would be then, for you cannot make men all think one way.

It requires no calculator to predict that the greater freedom of action in agriculture would do what it has done in towns—enhance the value of property greatly to the landlord's benefit. It has been stated on reliable authority, that the mere facility of ready transfer of land would add 10 per cent. to its value. I am quite sure that it would attract to it many improvements; just as we see new enterprising tenants in towns.

Under the circumstances I have mentioned, our good old City of London is being actually rebuilt; convenient, elegant, and substantial business palaces rear their heads on the site of old antiquated dilapidatories, and the land on which they stand has advanced in value from 100 to 500 per cent. A good deal of it about the Exchange is now worth 1,500,000*l.* per acre, and a site about the size of a nobleman's drawing-room would, if near the Royal Exchange, command a ground rental of 1000*l.* per annum, equal to the rental of a thousand-acre farm.

I know of many estates that could be enormously increased in value both to the owner and to the country at large by such means as I have indicated. The humility of poverty and subserviency would be exchanged for a respectful but wealthy and independent action, not at all inconsistent with the best and most kindly feelings as between man and man. *J. J. Mechi, April*, 1864.

P.S. The following truthful letter addressed to me by a lady in Worcestershire makes a suggestion which is worthy of consideration. Certainly, if yearly tenure is to continue, capital will not flow as it should do, unless in some way secured.

"Sir,—I have waited, but in vain, to find how the proposed tenant right would be forwarded; it will, you know, come to nothing. How many tenant farmers dare press the question when only holding land from year to year? They must hold their tongues and be thankful, for how many are there watching with eager eyes for the time when old So-and-so shall drop off, or poor young Tryhard have spent his last sixpence in bringing his land round. Trade of every class and profession, indeed, can protect itself, and they do wisely do so. But what have we farmers done? Do we not toil on and on sowing our money, and little knowing if we shall see it again. I could tell you a tale that would make all English blood boil of my personal wrong, but being only personal, I can get no redress by law. I could have exposed false men, but have further robbed my children; a sweeping dire calamity one would, in England, get ready help from; but for personal loss few think about it, and yet how many hundred farmers in England are yearly turned adrift for a pique of the agents, or a higher bidder, or a more eligible neighbour, and he, poor devil, singly, can get no help; he must go, and let seasons be what they may, sell stock, &c. Ah, well you must know, to make farming pay there must be money sunk in venture that no six months could see out again. Could you not be a director or proposer of a scheme of insurance to protect farmers against this sudden ejectment? A farm, though taken yearly, is taken in good faith of holding for years; to insure all permanent improvements could not be more open to imposition than any other insurance effected; and surely now a man almost holds his farm as his life, it is a most light tenure. Of course a properly digested scheme would alone bring it to bear, but I do think it very feasible; even those holding leases would then avail themselves of it, because it is well known not to pay to run land out, and landlords could say nothing against it; you ask nothing from them, and you can see your way in your outlay. A man who has made great outlay often has to endure very much, because the agent knows he may say and do as he pleases, grind here and pinch there, for he cannot afford to go; this would be checked then; indeed I could point out so many benefits to be derived from this insurance that I really think, if brought to bear, John Bull would leave off grumbling. I often read with delight your spirited enterprise in bringing forward schemes of improvement; believe me, farms and farmers would improve rapidly, and, may be, rents (but don't hint at that).

"Now, there is a good Alderman, do not have another dinner till you have thought this over; you may laugh if you like at it, but think at the same time; it might be done and relieve hundreds of brow-beaten young farmers, and give competence to us poor wives. I am one of them."

STEAM CULTIVATION COMPANIES.

Having had my attention drawn to your appeals for information respecting the working of our "West Riding Steam Ploughing, Cultivating, and Threshing Company," I gladly respond thereto, and shall always

have pleasure in giving information to your numerous correspondents, and any assistance in my power with a view to the introduction of Steam-power Cultivating Companies into those districts requiring such assistance.

Your friend "Philo Vapor" seems to imagine that there may have been some "special circumstances" favourable to the working of such a company in this neighbourhood. I can however assure him that the facts are quite the reverse. The farms here are necessarily small—averaging not more than 150 to 170 acres, which is partly owing to this being the threshold, as it were, between the agricultural and the manufacturing districts. The soil varies exceedingly in some parts, as for instance, between Ackworth and Askern, we have a fair field for our operations on a strong loam soil, but in others we have fields in which at one end there is only 3 inches of soil upon the surface of the hard sandstone rock, while at the other end there will be a tenacious clay subsoil 4 or 5 feet deep. Some fields are so full of large loose stones as to defy all attempts to work them by steam-power, while the adjoining inclosure is so soft and swampy as to be unable to support the weight of the engines even upon the headlands. The engines weigh about 13 tons when filled with water and coals. The fields are generally small and most irregularly shaped, the average size not exceeding 10 to 12 acres. We have in a few instances ploughed 6 acres, but in such cases always charge for eight.

It will be readily admitted that with such "special circumstances," coupled with the prejudice against and the great want of faith in the undertaking, the original promoters had no light task in hand, and it was these difficulties which induced us at the onset to select the double engine system. My own opinion has always been strongly in favour of that system, and I hold that no one engine method can ever compete with the double engines on the system of hire. The varying character of the work, the irregularity of the fields, the absolute necessity of always having sufficient power to convey all the implement and apparatus upon the road without any horse power assistance, places the single engine out of the question entirely.

The formation of a company in this district (which has occupied my attention in conjunction with a few friends more or less since 1859) would have been attempted long ago, but the double engine plan was not in such a practical working condition as to satisfy us, and it was not until Mr. Fowler introduced to my notice the peculiar and clever contrivance for coiling the rope on to the horizontal drum of his engines that we could see anything like a clear course towards overcoming our numerous difficulties, and meeting the requirements of this part of the country. That being done, this company was formed after much struggling, and for the encouragement of those who are "still hanging fire" I may state that we commenced working before the whole of the first capital, only 1500*l.*, was subscribed for, and we claim to be the first to demonstrate that the double engine system is the best for hiring out, and we certainly are the first to declare a dividend (7½ per cent.) and put away a handsome sum as well towards a reserve fund, the result of the first year's operations.

In answer to your other questions, the total amount paid to Mr. Fowler for the two field engines, with one four-furrow plough, one cultivator, 800 yards of steel rope, and 10 rope porters, was 1292*l.*, and with the cost of a third self-transporting road engine, with a threshing machine and other expenses on the capital account, we have a total outlay of 2158*l.* 6*s.* 6*d.* up to Christmas, 1863. The number of acres ploughed and digged over is 393 acres 1 rood, and the quantity cultivated is 925 acres 2 roods, making a total of 1318 acres 3 roods worked over during the year, 1863, the depth varying from 6 to 11 inches for digging, and from 8 to 16 inches for cultivating.

Had I not already troubled you with so many details I might have enlarged on the improvement now to be seen in the land worked by our tackle, and also on the direct benefit to the farmers, who in some instances are already dispensing with two horses and one man each, thereby saving twice the amount paid to this Company for doing their work far more efficiently. I might also point out that this Company is desirous of largely extending its operations, and increasing its capital, and is only waiting patiently for the turn in favour of such undertakings as a purely commercial matter, which must undoubtedly come about in time, when we shall be prepared to supply any district in England (where 1500*l.* can be raised) with the proper ploughing tackle — taking all the responsibility of the management—giving all the advantages to be derived from our past experience (no small matter in itself, as every new beginner will find out) and be enabled by such extension to work at much less cost per acre, and to supply the machinery far more certainly when required by the farmers than it will be possible for any small company or a host of small companies with limited means to accomplish. I take, however, a shorter course, and send you by post a copy of our last half-year's report, wherein you may perhaps find further particulars worthy of your notice, and if any of your correspondents or large circle of readers require more I shall be glad to give answers to any direct questions sent me, either through your columns or by post. On receipt of six stamps I can also furnish the report above mentioned to any one wishing to have one. *Chas. Clay, Secretary, Corn Exchange, Wakefield.*

Home Correspondence.

Dynamometers and Steam Cultivation.—You have kindly laid before us the Royal Agricultural Society's request to the Messrs. Easton & Amos to report upon Mr. Fowler's suggested dynamometers, &c. It cannot make much difference to me as to what these dynamometers are, since I shall not be in for this year's "scramble" at Newcastle, but I should be glad if Mr. Fowler, or some other kind friend, would give us some information about them as to the use of them. The three ton one may do very well to test Mr. Fowler's over-worked engine. Three ton is equivalent to 40 horse power, thus implying that Mr. Fowler works his 14 horse engine up to something like that power. Who is the rope maker who can make durable ropes worked under such a pressure, and who are the farmers who can afford to throw ropes away with something like three tons pull in them? Is that a best application that requires some 30 or 40 horse power to pull its implements about, to dash its ropes and machinery to atoms, and to empty the farmers pockets? Let the Royals reflect before they adopt such a test, for assuredly England never will be farmed by such wasteful machinery. Mr. Clay, the head of the Wakefield Company, may give us his flaming accounts and large per centages for the first year, but we have yet the Gloucester Company as well as Mr. Moscrop's prize essay to look to that will require some reconciling; besides that, does Mr. Fowler know how to practically apply steam power to the cultivation of the soil? What are his operations per crop, and what are their cost? It is that that the practical farmer must look to to guide him; a dynamometer experiment is mere trash; nothing short of a "scramble" engine can be made to stand any push. Now for the two 12 cwt. dynamometers. They are of no use to test Mr. Fowler's implements with, for he has nothing of so light a draught; 12 cwt. is equivalent to 8-horse power. Neither I myself, Fowler, Howard, or any one else "scrambled" with so light a power at Worcester. Then they are not worth talking about. I am pleased to see that the Council have set at naught the attack upon Mr. Amos, their consulting engineer. Mr. Amos may not always have been right in his advice to the Council, but it seems that the Council, and I am quite certain that the general public, place the most implicit confidence in him as an honourable man. *William Smith, Woolston, Bletchley Station, Bucks, April* 12. [We have given almost numberless examples of unquestionable profit and success attending the use of Mr. Smith's steam cultivating apparatus—attending the use of Mr. Howard's apparatus—attending the use of Mr. Fowler's apparatus. And we shall by and by report the result of another year's experience of all three. It is, we believe, an entire mistake to suppose that the correspondence with the Council of the Agricultural Society about their Consulting Engineer, was intended as a personal attack on Mr. Amos.]

Societies.

Royal Agricultural: At the Annual Meeting on *Wednesday, April* 20, Lord Faversham in the chair, Mr. Holland, M.P., delivered a lecture on Agricultural Education. After referring to the dryness of the subject, and the general admission that something was necessary in the way of education for the agricultural classes, he observed that the subjects for discussion had usually taken three different phases, according to the nature of the land, the climate, and the latitude, and in practice there were different views arising out of these circumstances, but in all these cases there was the difficulty in regard to education that they had no regular educational system as connected with the agricultural interest. But the growth of civilisation and the force of competition required that no class which had to make its way in a free country should be backward in the acquirements of the age. An engineer of some repute connected with the Society, when asked how a lad should be brought up who was intended for the engineering profession, replied, "Send him to King's College or some similar public school;" and when it was further asked, "What do they teach of engineering there?" the answer was, "Never mind, do not think at present of the boy's future profession, but only of giving a large ground-work—a good basis of general education." This was the rule which should be followed with the early education of the agriculturist. With our ancestors education was not absolutely necessary for the general purposes of life, as with us, and a man became educated or not according as his tastes led one way or the other. But with us and with our sons education was a necessity, and the question was, how that necessity should be met. The first thing to consider was, what was education? It had been quaintly described to be the placing of the growing human creature in such circumstances of direction or of restraint as might make the most of him. It was the machinery for furnishing him with such information as would be practically serviceable to him in his future life. In considering this matter in connection with the farmer and the agriculturist, it must be remembered that there were three classes connected with the land: the landlord, the labourer, and the intermediate class—the occupier. Now the reports of different public offices in this country tended to show that this intermediate class had been greatly neglected. Mr. Bellaires, one of the Inspectors of the Privy Council for Education, said, "I am afraid that in my district (Gloucestershire, Worcestershire, and Warwickshire) there are few instances of schools for farmers, small tradesmen, artisans, and others of that class, and yet it would be difficult to mention any description of school that is more important—there is no class of society so imperfectly educated, or whose opinions are so crudely formed. Again, Prebendary Brereton, of Exeter, the author of several interesting papers on Middle-class Education, said, "The comparative deficiencies of middle class education in England may be attributed to the single fact that neither in the development during this century of the higher system,"—that was, the system of public schools, colleges, and universities for the wealthier classes,—"nor in the establishment of the lower,"—which had reference to the education given to the poorer classes, of which, be it remembered, the large body of occupiers of land as well as the middle classes were the chief supporters, through having to pay the rates,—"has there as yet been provision made for the large intermediate class who can neither aspire to the former, nor condescend to the latter. There are, indeed, many advocates for so extending these two systems as to embrace all the upper middle class in the educational system of the gentry, and to absorb the remainder in that form by the help of the State for the labourer. It is also still an open question, though not likely long to be so, whether public opinion will acquiesce in the permanent establishment of those subsidising examinations which the universities have recently undertaken for the middle class, or whether it will adopt the proposal to establish in connection with the different counties a new educational system with its own public schools, colleges and university." The more wealthy of the intermediate class, he might assume, took advantage of the colleges and universities established for the rich, and in the same way the poorest of the occupiers who were included in the same class would probably take advantage of the schools established through State influence for the poor; but the great mass of the middle class were without any means of obtaining an education commensurate with their wants. Speaking of this Mr. Brereton added, "In either case we may hope that a standard will be gradually fixed both for general knowledge and for special studies, which will remove existing uncertainty of object and irregularity of method, which are equally injurious to the teacher and taught;" and alluding particularly to farmers, for Mr. Brereton's pamphlet from which he was quoting was entitled, "Education as connected with Agriculture," he went on to say, "the effects of such a definite standard upon the English farmer's family can hardly be overrated. Whenever it becomes recognised as a rule that all the sons of a family should complete their education by obtaining a degree, the habits of a household would be regulated accordingly, and the mere necessary arrangements for study would open in the seclusion and frequent leisure of the family home, prospects of domestic order and happiness hitherto almost unknown. Such an object alone, without reference to the means of its attainment, would ensure this. For equally the holidays of the school-boy, the vacation of the collegian, or the daily pursuits of the home student would have this effect, extending also indirectly to the female members of the family. Such was the connection which the farmer has with the large middle class, and the section of that class to which immediate reference was now made was the agricultural section, in dealing with which there came in the great difficulty that they hardly knew whether there existed machinery for bringing into play all that was requisite in as quick and speedy a manner as the present generation required. That there was a demand for it there could be no doubt, but the question was—how was the demand of this section of the great middle class to be met? During the period they were at school general education of a public nature was all that was required. The difference between a public and a private educational system was that a public system being, as it were, public property, was open to the approbation or disapprobation of the class which required it for its own benefit, and at the same time there was in it the certainty of stimulus given in the shape of scholarships, prizes, or some particular mode in which honours were bestowed, and which gave to the individual a certain status in his class, a certain position amongst his fellow-students; and if the examiners were what they ought to be, an opportunity of displaying what there was in him. For this was the peculiar meaning of the word "education,"—it was very different from the meaning of the word "instruction." Instruction might be giving a certain amount of learning, but education was the bringing out what there was in the individual. His own view was that the education ought to be public, like that of the children of the other sections of the middle classes, but after public school or college more was wanted for the agriculturist. Even while the connection between the boy and the college still existed, there ought to be some bearing in the education on the practical working of land, and the future occupation of the student. And

in this was one of the difficulties with which they had to contend. Here in the education of the farmer it was necessary to leave the mass of the great middle class, and go to the individual section of that class. A great authority on this question, Mr. Grey, of Bilston, in a speech he made in the north some time ago, said, "The time has gone by with too many of us to profit by the improved education which the present state of society requires and affords, but allow me to remind such of you as have the responsibility of being parents, of the duty incumbent upon you to educate your families so as to fit them for taking a respectable position in life. It is the best patrimony you can bestow upon them. A liberal and judicious course of education is a foundation of future acquirement. It opens up sources of knowledge, and gives vigour and opportunity of expansion to every peculiar tendency of intellect which the mind is disposed to. Without it no man need expect to keep pace with the onward movement of society, or to make his way in either manufactures or agriculture, in which some knowledge of chemistry and the natural sciences is indispensable." Then, having done with the education connected with agriculture, they had to consider the matter of agricultural education as based upon the broad foundation of general education, which was to be obtained at the public institutions, of which he hoped, through the exertions of Mr. Brereton and others, and the examples set in the county of Devon, we should soon see many more scattered over the country. Mr. Wilson, of Edington Mains, the author of "British Farming," had given his opinion with regard to the rising young farmer in the following terms: "The mere possession of capital does not qualify a man for being a farmer, nor is there any virtue inherent in a lease to insure his success; to these must be added probity, knowledge of his business, and diligence in prosecuting it. These qualifications are the fruits of a good education in the fullest sense of that term, and are no more to be looked for without it than good crops without good husbandry." "But a great difficulty at present lies in finding appropriate occupations for such youths between their 15th and 20th years. In many ways sons of farmers are during that period put to farm labour; if they are kept steadily at it and are made proficient in every kind of work performed on a farm, it is a good professional training as far as it goes. The more common one, at least as regards the sons of the larger class of farmers, which consists of loitering about, without any stated occupation, attending fairs and markets, and probably the race course and hunting field, is about the most absurd that can well be imagined. Such youths are really to be pitied, for they are neither inured to bodily labour nor afforded the benefits of a liberal education. It need not surprise any one that such lapless lads often prove incompetent for the struggles of life, and have to yield their places to more vigorous men who have enjoyed the benefit of bearing the yoke in their youth. Unless young men are kept at labour, either of mind or of body, until continuous exertion during stated hours, confinement to one place, and prompt obedience to their superiors, have ceased to be irksome, there is little hope of their either prospering in business or distinguishing themselves in their profession. Owing to the altered habits of society there is no less likelihood than heretofore, of such young persons as we are referring to, being subjected to that arduous training to bodily labour, which was once the universal practice, and hence the necessity of an appropriate course of study to take its place." — "It is also common for such youths to be sent to Edinburgh for a winter or two to attend a class of agriculture and perhaps also of chemistry and the veterinary college. This is well enough in its way, but yet there is wanting in it an adequate guarantee that there is real study—the actual performance of early mental work."—"After acquiring the benefits of such a course of training as we have here indicated, young men would be in circumstances to derive real advantage from a residence with some experienced and practical farmer, or from a tour through the best cultivated districts of the country." These were Mr. Wilson's views, and Mr. Morton, in a lecture which he delivered at the Royal Agricultural College, laid down these three points as essential to the practical farmer:—1st, that he should have practical skill; 2d, that he should have business tact; and 3d, that he should have a liberal and scientific education.

Now in taking these three points into consideration, Mr. Morton showed that if a man had mere practical skill, he was very little better than a labourer, and if he had business tact he might not only be a labourer but become the manager of a farm, but that without having in addition to his capital a liberal and scientific education he was not fitted for holding a large farm in the present day. In this he (the lecturer) perfectly agreed, but the difficulty was to induce the farmer to spare his sons for additional education after they had left school, and the only way to encourage him to do so was the wholesome one of the having a portion of the expenditure on the lad repaid him by his obtaining a scholarship or some prize which would partly support him, either at the same establishment or in connection with some large farm. There was a want of all this, and that was one of the reasons why a Committee of the Society had been lately appointed. But the duties of that Committee were limited to an inquiry into the manner in which the Royal Agricultural Society of England could assist those who were employed in obtaining their living, and it could not take up the question of education as they could do in a discussion in that room. The discussion, therefore, would have nothing to do with the operations of the Committee, although, for what he knew of the members of it, he thought they were likely to take the view he was advocating, and be glad to be made acquainted with the operations of those present. His (the lecturer's) views were these: that following the example set in Devonshire they ought to do their utmost, not as a society, but as members of the agricultural class, to establish a system of public schools throughout the country as opportunity offered; that whilst the farmer's son was reaping the advantage to be obtained from this system, they ought to show him that if he would exert himself to bring out and develope his talents, he would gain honours and attain a status. And they ought to follow that up by enabling those who gained such honours, further to make themselves perfect in their profession by means of a scientific education, or the practical study of agriculture on a farm. Only in this way could the agricultural body wish, until the time came, as he hoped and trusted it would come, when from the benefits that would have accrued to the sons of the occupiers of land from a better education supplied in the way he had suggested, the agriculturists themselves would come forward to join in the great work of improving the educational condition of the farming class.

Sir EDWARD KERRISON, M.P., thanked Mr. Holland for bringing forward the subject, which he thought ought to have received more attention from the Society than it had yet done. He bore testimony to the value of Mr. Brereton's exertions in the cause of agricultural education, and having visited that gentleman's school, bore testimony to the efficiency of the system pursued, and the very reasonable charge at which the sons of agriculturists were there maintained and instructed, observing that it was within the means of any farmer. He was decidedly in favour of the public school system, and suggested that the Society should forward papers on agricultural subjects to such schools, contribute prizes, or better still, found a scholarship. He referred to the middle class school at Lancing, the new one now forming at Balcombe, where 1000 boys would be maintained and educated at 14*l*. 14*s*. a year each, and another large school in Suffolk, where the cost would be 24*l*. each, as suitable for agricultural pupils.

The Rev. Prebendary BRERETON gave a detailed account of the progress of his own school, which now contained 60 boys, the terms being 23*l*. a-year for boys under 13, and 25*l*. a-year for those above that age, and showed that after meeting all expenses these charges left a profit of 3 per cent. upon the capital. He entered into statistics, proving that such schools might be safely established on the self-supporting principle.

Dr. VOELCKER, as one who had been practically engaged in the education of agriculturists, warned those interested in the subject to avoid the rock upon which many promising schemes had split, viz, that of attaching farms to the schools, the practical education necessarily given on the farms of the small tenants to the farmers now being infinitely preferable to that upon any school farm.

Some further discussion ensued, in which Professor Coleman, Mr. Wren Hoskyns, and other gentlemen, took part, and a vote of thanks was given to Mr. Holland, which terminated the proceedings.

Farmers' Clubs.

DUBLIN: *April* 16.—*The National Horse Show.*—This very important meeting was held in the premises of the Royal Dublin Society. Taken as a whole, the show was a most important one, were it for no other reason than that by means of it our weak points have been indicated, so that attention may be given to their amendment. This was the object which Lord St. Lawrence and the other promoters of the show had in view, when they first thought of bringing the different classes of saddle horses together; and we feel convinced that if their exertions are continued, and annual shows held at a better time of the year, the result will ultimately be most beneficial to the country; for it will let people understand what kind of horse is expected, and that unless they can come up to the mark they must be content with having their horses put aside. This can only be effected by regularly established exhibitions, and a liberal scale of prizes.

We have said that the show should be held at a better time of the year, and the period which has unavoidably been fixed for the first meeting told most in the case of the first section of Class A; that is, the section of thorough-bred stud horses; for the engagements of several well-known sires of high character prevented them from being present. This is a very important section; for much of the future character of Irish horses depends upon it. The first prize horse Wild Irishman, belonging to Mr. Dillon, is a lengthy horse, with good legs, a beautiful neck and shoulder, and great quarters, but rather plain in the rib. Lord Powerscourt's Schamyl bay horse is a very powerful animal, and Mr. Moon's Stepping-stone, which was put third, though a little hollow-backed, caused, no doubt, by age, is a very pretty horse, with great loin and quarter, and very nice walking action. The sires shown in the second section—that of sires got by a thorough-bred horse, or out of a thorough-bred mare; or thorough-bred horses for covering half-bred mares, calculated to get troopers or riding horses—were but a middling lot. In the section of weight-carrying hunters, equal to 14½ stone and upwards, there were 39 entries, and, as might be expected, there was a great deal of interest exhibited by spectators while this and the next two sections were under the attention of the judges. Those gentlemen, however, could not find it in their hearts to give a prize to any of the horses exhibited in the section—a severe lesson, under which some winced when the result was known; but a very convincing proof, nevertheless, of the necessity for such a movement as that in which this same national horse show has originated.

The next section—that of hunters equal to from 13 stone to 14½ stone—fared better, being generally commended. The section was headed by Captain Coddington's gray gelding Rust, followed by Lieut.-Colonel Brown's bay mare Weazel, and a high commendation to Mr. H. Murray's wonderful old hunter Frank. There were some fair horses in the third section—that of hunters up to 12 and 13 stone—but not many promising three-year-old colts and fillies.

Of ladies' horses, park horses, and cobs there were 47 entries in the first section, and 40 in the second—that of weight-carrying cobs. In the latter there were several very middling animals, and at the same time some particularly good ones, especially the aged cob belonging to Sir George Brown. This is a very useful section, and one which requires to be looked after; for really good weight-carrying cobs, from 14 to 15 hands, have become much scarcer than they were at one time.

In carriage horses his Excellency the Lord Lieutenant was the leading exhibitor; and the entry of brougham horses was only limited. There were not many officers' chargers; and in the class of horses calculated for troopers there was one animal entered in each of the three sections of which the class consisted—a poor turn-out, indeed, considering that this country has always been looked upon as the nursery for cavalry remounts, and another evidence of the necessity which existed for such an exhibition.

There were some good brood mares, while several shown in the sections included in this class were by no means fitted to improve the breed of horses in the country. Mr. Thomas, Holles Street, Dublin, had one of the handsomest ponies we have seen fer a long time, with which he got not only the first prize in his section—that of ponies from 12 to 13 hands—but both the medals, given respectively for action and merit. Mr Taaffe's pony under 12 hands was also an extraordinarily good one. Mr. Metge's entire chesnut pony Bob, a perfect gem in his way, and standing only 8 hands high, got the medal as being the smallest pony exhibited. *Dublin Farmers' Gazette.*

Reviews.

The Theory of Under Drainage: one of a Short Series of Lectures on Agricultural Drainage delivered at the Royal Agricultural College, Cirencester, by Mr. Bailey Denton.

A former lecture was published some months ago in these columns, in which Mr. Denton called the attention of agricultural students to the bearing of the great geological features of the island upon the practice of the land drainer, and upon those particulars in which the future use of our water supply are liable to be affected by land drainage. Last week we referred to the first part of this second lecture, in which the details of the art are described, and its relations to fertility are discussed. A passage was extracted upon the mechanical effects of under-drainage; the following series of short extracts illustrate the corresponding chemical effects of it.

"Every one of you must have observed how our cultivated plants, our crops, and trees, dislike stagnant water; and how their roots travel along its surface underground directly they reach it. The existence of stagnant water implies the absence of air, which is as essential to the development of vegetable growth in the soil as it is to our existence above the surface, and therefore we can readily understand how essential it is to render the depth of soil which our plants require for their perfect development, percolative or permeable, free or active. This is not only required because roots will not penetrate a bed of stagnant water, and will prosper in a deeper feeding ground, but because there are in soils, in a saturated state, organic and inorganic ingredients which require amelioration, only to be gained by the absorption of oxygen from the atmosphere. By drainage you not only afford to plants the deeper bed to sustain them, at the rate of 100 tons per acre for every inch of depth gained, but you correct the injurious elements of the soil, and, what is more, you carry into the deepened bed those fertilising ingredients which are constantly associated with fresh air and moving water."

Chemical Effects of Comminution.—"The benefit derived from disintegration, *i.e.*, the comminution or minute division of soils, will be readily understood by those who have studied the views of Jethro Tull, who went so far as to maintain that land deeply and frequently stirred gathered sufficient fertility from the atmosphere to keep up its inherent powers; and by those who have visited Mr. Smith, of Lois Weedon, who, in his treatment of land, has adopted the same theory. I do not advocate these extreme views as capable of general adoption in farming, but I do not hesitate to say that the principle of aëration is a sound one, and that we should recognise in the atmosphere a source of fertility to surface soils by deep cultivating, and to subsoils by deep draining. Dr. Madden, in an admirable paper published in the Transactions of the Highland Society in the year 1846, thus explains the effects of disintegration:—

"'When water is added to perfectly dry soil, it, of course, in the first instance, fills the interstitial canals, and from these enters the pores of each particle; and if the supply of water be not too great, the canals speedily become empty, so that the whole of the fluid is taken up by the pores: this, we have already seen, is the healthy condition of the soil. If, however, the supply of water be too great, as is the case when a spring gains admission into the soil, or when the sinking of the fluid through the canals to a sufficient depth below the surface is prevented, it is clear that these also must get filled with water so soon as the pores have become saturated. This, then, is the condition of undrained soil.

"'Not only are the pores filled, but the interstitial canals are likewise full; and the consequence is, that the whole process of the germination and growth of vegetables is materially interfered with. We shall here, therefore, briefly state the injurious effects of an excess of water, for the purpose of impressing more strongly on your minds the necessity of thorough draining as the first and most essential step towards the improvement of your soil.

"'The first great effect of an excess of water is, that it produces a corresponding diminution of the amount of air beneath the surface, which air is of the greatest possible consequence in the nutrition of plants; in fact, if entirely excluded, germination could not take place, and the seen sown would, of course, either decay or lie dormant.

"'Secondly, an excess of water is most hurtful, by reducing considerably the temperature of the soil: this I find, by

careful experiment, to be to the extent of six and a-half degrees at Fahrenheit in summer, which amount is equivalent to an elevation above the level of the sea of 1950 feet.

"'These are the two chief injuries of an excess of water in soil which affect the soil itself. There are very many others affecting the climate, &c.; but these not so connected with the subject in hand as to call for an explanation here.

"'Of course, all these injurious effects are at once overcome by thorough-draining, the result of which is, to establish a direct communication between the interstitial canals and the drains, by which means it follows, that no water can remain any length of time in these canals without, by its gravitation, finding its way into the drains.

"'Lest any one should suppose that the contents of these interstitial canals must be so minute that their whole amount can be of but little consequence, I may here notice the fact, that, in moderately well pulverised soil, they amount to no less than one-fourth of the whole bulk of the soil itself; for example, 100 cubic inches of moist soil (that is, of soil in which the pores are filled with water while the canals are filled with air) contain no less than 25 cubic inches of air. According to this calculation, in a field pulverised to the depth of 8 inches—a depth perfectly attainable on most soils by careful tillage—every imperial acre will retain beneath its surface no less than 12,545,280 cubic inches of air. And, to take one more element into the calculation, supposing the soil were not properly drained, the sufficient pulverising of an additional inch in depth would increase the escape of water from the surface by upwards of 100 gallons a-day.'"

Mr. Bailey Denton's last subject is the influence of Drainage upon the temperature of the soil. He gives the results of a series of experiments illustrative of the differing absorbent and retentive qualities of various clays. While the drift clay will absorb one-half its bulk of water, expending six-tenths of its bulk in the process, another will absorb two-fifths of water and expanding hardly more than one-fifth its bulk. He adds:—

"We may be content to believe that if under-drainage maintains the level of saturation at an adequate depth below the surface of the soil, the line of moisture supported by attraction must be further from the direct and prejudicial influence of the sun and wind in drained soils than in those undrained, and that land in a saturated state is in a more effective condition to yield to evaporation than land in the modified condition of healthy moisture.

"When we see the under-drains of surcharged free soils discharging sometimes as much as 10 times the quantity of water that falls on their surface in the shape of rain, and the drains of clay soils discharging as much as from one-fifth to one-sixth of the rainfall, we have the tangible satisfaction of knowing that these copious discharges must first replenish our rivers before it can replenish the rainfall; and when we frequently find that by the action of under-draining we establish a constant flow of water from lands which have never given out water in the shape of springs before, we have the additional consolation that we have entrapped an enemy, and made him a friend, for we have not only prevented his coming to the surface and chilling the land by evaporation, but we have created a permanent addition to the water supply of the country.

"Every one knows that the only way for surplus water, which does not infiltrate to a subterranean level, to escape from land, is by exhalation into vapour; and, though perhaps not equally well known, it is equally true, that heat disappears or becomes latent by the conversion of water into vapour. It is this effect on the moistened skin that produces cold in human beings when they expose themselves to the action of the air, and precisely the same evil attends the exposure of the moist soil to the sun and wind. An application of this homely bit of philosophy has led to the manufacture of ice in the hottest climates; and I once convinced a doubtful farmer of the chilling effect of evaporation on his land by hanging a bottle of his port wine clothed in wet flannel before a kitchen fire.

"To reduce the effect of evaporation to tangible figures, I may state that every gallon of water carried off from the soil by evaporation robs the soil of as much heat—heat, remember, which is beneficial to vegetation—as would raise 5½ gallons of water from freezing to boiling point. You cannot be surprised, therefore, that saturated lands should be called "cold" as well as wet.

"Heat will not pass downwards in water, and, if the soil is saturated, the warmth of the atmosphere cannot penetrate it. Heat is propagated in water by circulation, that is, by the upward movement of the heated particles, and the downward movement of the colder ones to take their place. Heat is conveyed to a soil by the circulation of the air and water through its recesses, and this fact, considered in relation to what I have before said, will help to explain how it is that water occupying the interstices of the subsoil by attraction, is forced downwards by descending rain which is warmer than itself."

These extracts are followed in the pamphlet by passages from the writings of Mr. Gisburne in the "Quarterly Review," and of Judge French, an American writer, on the subjects of radiation, evaporation, and dew.

We hope that these hitherto unpublished lectures will be collected and added to the number of the author's published works.

Farm Memoranda.

EYEMOUTH SCHOOL GARDENS.—The following is a report on small plots of ground cultivated by the boys attending one of our ordinary parish schools. The amount of the produce surprised me so much that I was led to test the accuracy of the returns. The teacher sent with his report the account current or diary kept by one of the boys (Edington) showing how and when his different crops had been disposed of. I found from it that his plot had yielded 128 Cabbages, 13 Savoys, 12 dozen of Greens, 13 stones of Potatos, besides Leeks and Onions. I therefore wrote to the teacher to measure the extent of the ground on which these 128 Cabbages grew. His answer is subjoined. It seems to me to give a satisfactory explanation, and also some useful information on other points. I may mention that the Eyemouth School Gardens were instituted by me some years ago, after seeing the same thing in a school at Alnwick, supported by the Duke of Northumberland, and in consequence of hearing from the clergyman there that the system was very advantageous, not only by affording amusement and useful instruction to the boys, but by inducing their parents to allow them to remain longer at school for the sake of possessing these gardens. The experiment at Eyemouth has fully justified this testimony. In looking back to the yearly reports which have been sent to me, I observe that the value of the crop was as follows:—

Year.	Profit.
1861	£5 12 2½
1862	7 3 9½
1863	8 10 9½

These yearly returns show the earnestness and increasing skill of the boys; whilst their ages, as stated in the table below, which are above what is usual at our parish schools, also countenance the idea that they have remained longer at school for the sake of their little gardens. The inducements are considerable. The profits realised on almost all the plots exceed the school fees—a result which removes one objection on the part of their parents to their getting more school instruction. Moreover, the boys are not only kept out of mischief during their play hours and holidays by spending them in their gardens, but are acquiring habits of industry, as well as manual dexterity in the use of implements. The very accounts which they keep—and which is made a condition, showing the number of vegetables reared, and how they have been disposed of—form also a useful lesson. As the teacher refers to the rate of 48*l.* 1*s.* per acre, as "the amount of profits," it is right to prevent any exaggeration or misapprehension on this point by observing that no account has been taken by him for the following items:—

1. Rent for the land—which, when let, yields from 4*l.* to 5*l.* per acre.
2. Value of the boys' labour.
3. Cost of the manure applied.

It is, however, not the amount of produce realised which appears to me of importance. It is the moral benefit to the boys which is derived from the harmless enjoyment, useful training, and prolonged school instruction afforded and secured to them by means of these garden plots. Of course, the culture of them is not allowed to interfere in any degree with the indoor instruction, which occupies the usual period of six hours daily. But if the recent views on the subject of elementary education are to be adopted, which advocate an abbreviation of the indoor lessons for the sake of some systematic bodily exercises in the open air, spade work in a garden, under the eye of the teacher, seems to afford one method of obtaining that object. Were heritors in parishes to appropriate a small bit of ground to the use of the parish school, to be cultivated by the oldest and best-behaved boys, I am sure they would feel amply rewarded for sacrificing the paltry rent for the land, and for awarding a few shillings in prizes yearly, by the consciousness of the moral good they are doing, and of the innocent pleasure they afford to young people. *David Milne Home, Edinburgh, March* 19, 1864, *in North British Agriculturist.*

I. Alex. Edington, age 12 years, has had a garden two years:—Potatos—cost of seed, 10*d.*; produce, 9*s.* 8½*d.*; profit, 8*s.* 10½*d.* Cabbage—cost of seed, 6*d.*; produce, 5*s.* 4*d.*; profit, 4*s.* 10*d.* Greens—cost of seed, 2½*d.*; produce, 4*s.*; profit, 3*s.* 9½*d.* Onions—cost of seed, 3*d.*; produce, 1*s.* 0½*d.*; profit, 9½*d.* Leeks—cost of seed, 1*s.* 1½*d.*; produce, 2*s.* 10*d.*; profit, 1*s.* 8½*d.* Shallots—cost of seed (Savoys), 2*d.*: produce, 1*s.* 5*d.*; profit, 1*s.* 3*d.* Total—cost of seed, 3*s.* 1*d.*; produce, 1*l.* 4*s.* 4*d.*; profit, 1*l.* 1*s.* 3*d.* Well manured a year ago with refuse of fish. Exposure fair. Very well kept.

II. John Jerdan, age 11½ years, has had a garden one year;—Potatos—cost of seed, 10*d.*; produce, 4*s.*; profit, 3*s.* 2*d.* Cabbage—cost of seed, 9*d.*; produce, 6*s.* 6*d.*; profit, 5*s.* 9*d.* Onions—cost of seed, 1*s.*; produce, 2*s.* 6*d.*; profit, 1*s.* 6*d.* Leeks—cost of seed, 9*d.*; produce, 2*s.*; profit, 1*s.* 3*d.* Total—cost of seed, 3*s.* 4*d.*; produce, 15*s.*; profit, 11*s.* 8*d.* Five barrowfulls manure (horses'.) Exposure fair. Very well kept.

III. William Paterson, age 15 years, has had a garden five years:—Cabbage—cost of seeds, 1*s.* 3*d.*; produce, 11*s.* 6*d.*; profit, 10*s.* 3*d.* Greens—cost of seed, 2*d.*; produce, 1*s.* 6*d.*; profit, 1*s.* 4*d.* Onions—cost of seed, 6*d.*; produce, 2*s.* 6*d.*; profit, 2*s.* Leeks—cost of seed, 6*d.*; produce, 2*s.* 9*d.*; profit, 2*s.* 3*d.* Total—cost of seed, 2*s.* 5*d.*; produce, 18*s.* 3*d.*; profit, 15*s.* 10*d.* Eight barrowfulls of manure (pigs'.) Exposure fair. Carelessly kept.

There are three specimens out of 10 reported, of which the total profits are declared to have been 8*l.* 10*s.* 0½*d.* The following are extracts from a letter of the schoolmaster:—

(1). The total area of ground laid off for gardens is 1066 square yards, of which 216 are occupied by walks and flower-borders, and 850 divided into 10 allotments are available for crops. Each allotment, therefore, contains nearly 85 square yards. The total amount of profits for 1862 was 7*l.* 3*s.* 9½*d.*, which is at the rate of 40*l.* 8*s.* 9*d.* per acre. The amount of profits for 1863 is 8*l.* 18*s.* 0½*d.*, or 48*l.* 1*s.* per acre. From this report you will see that the past year's report is even more favourable than that of 1862. This increase of profits is owing to a more diligent cultivation by the boys. I am also better able to judge than formerly of the character of the boys to whom gardens may be given. It is of little use to give one to a boy who has not proved regular and steady in his attendance at school, or whose parents will not give encouragement in laying out a few shillings for seeds. At the season for letting them I have always a sufficient number of eager petitioners.

(2). As to the number of square feet of ground occupied by the 128 Cabbages on Edington's plot, I have to state that it was 15 feet long by 13 feet broad—that is, 195 square feet. Now, early sorts are planted 18 inches from row to row, and 12 inches asunder. The length of 15 feet would therefore give 10 rows, with 13 Cabbages in each. I caused the ground of two other boys to be measured, and the proportion was nearly the same. The remainder of this boy's plot, 560 square yards, was occupied by Potatos and an Onion bed. Each of the boys cultivated an Onion bed. These beds varied in size from 6 to 8 square yards. They all yielded a small profit. None of them attempted to rear Carrots, garden Turnips, Strawberries, or Peas, as these are crops that unprincipled boys are sure to plunder. I asked Edington and several other boys how they had disposed of their crops. They told me what they had told me often, that they had used a portion of them at home and sold the rest. Few families in Eyemouth have gardens, and there is always a ready market, particularly during the herring fishing season. If the Cabbages are any size, they sell freely at ½*d.* In 1862, a boy received 2*d.* for one. When they take a Cabbage, therefore, for home use, they put down the value at ½*d.* Edington says he sold all his winter crop of Greens, and received 4*s.* for it. Greens of a fair size are sold at two stocks for ½*d.*; of small, three. The Leeks, another portion of the winter crop, are sold at three for ½*d.*, if ordinary sized. Edington planted about 200; these, at four for ½*d.*, would nearly produce his return. The gardens are early, and the boys are frequently digging new Potatos when they are selling at 1½*d.* per lb. This raises the value of the Potato crop materially. *James Cox.*

Miscellaneous.

New Method of Curing Meat.—The animal is killed in the usual manner by a blow on the head, causing instantaneous death. It is then turned on the back, the chest opened, the bag or pericardium, containing the heart, opened. The right side of the heart, into which all the venous or returning blood enters, is seen distended; the ear or right auricular tip, as most convenient, is opened, or its tip cut off, or an incision made into the right ventricle, another also directly into the left. The animal is turned on the side to let the blood run out. A pipe, furnished with a stop-cock and coupling at the outer end, is now introduced into the incision made in the left ventricle, and makes its way at once into the aorta. The fingers, holding a piece of stout cord, are now passed round the aorta, close to the heart (including at the same time the pulmonary artery), and the cord is tied strongly over both, so that the pipe is fixed in the aorta firmly. To the outer end a coupling, connected with an india-rubber or other tube, three-fourths of an inch in diameter, 18 to 20 feet long, joins this to a vessel or tank elevated to the height of the length of the tube; brine of ordinary strength, with a little saltpetre dissolved in it, is let on; it directly (under 15 seconds in most cases) rushes out at the incision made either in the right auricle or ventricle, before mentioned. About five gallons will suffice. This clears the smaller vessels for the next stage, which is the essential one. The brine so used can be recovered if desired by adding a little old brine and heating. The materials to be ultimately used are now put into the tank, taking care that they are strained, and a stout clip or clamp is put on the incision in the right side of the heart. The fluid is then turned on and directly makes its way to the right side, as before, but its exit being now prevented, and its admission into the smaller vessels being secured by the first process of clearing these vessels, as mentioned, the fluid, by the pressure and the capillary attraction of minute vessels and muscular fibre percolates through every particle of the animal, and can be seen at the moment diffusing itself in any part, by making incisions in the hide, horn, bone, and flesh, or any other parts. The quantity I use is about one gallon of brine to the cwt., a quarter to half a pound of nitre, two pounds of sugar, a little spice, sauce, &c., to taste; also ½ oz. of the mono-phosphoric acid, which, having the power of coagulating albumen and forming a compound with it, retains this very desirable element in the flesh, and gives an extra supply of phosphoric acid, which is of course at present denied the sailor, as above stated. The use of boiling brine in the second stage I also advocate, as it coagulates the albumen or gives a set (as it is called by cooks) to the meat. It is needless to remark that the entire animal is cured almost instantaneously. I would now draw attention to the further treatment of the flesh, referring to

1st. The method scientifically used;
2d. The advantages attained;
3d. The mechanical advantages.

If we now consider the first part of the process complete: the animal is in a few hours cut up into the 8 lb. pieces required by the navy, and is ready for casking in the usual way, or in dry salt (all expense of preparing being done away), or for drying by being tranferred to a drying-house (as in the specimens for inspection). It is obvious that it loses none of those materials abstracted by the present method of salting, so that the meat is absolutely perfect, as in fresh meat without water, having, as I hold, the additional advantages of salt, which the weight of authority is in favour of rather than against, and of sugar, now issued to the navy, along with the lemon juice; the use of sugar Liebig shows plainly is for the formation of lactic acid (which, as mentioned before, he has found abstracted by the brine), and a most essential compound not only of muscle juice, but of gastric juice, as well as an important

respiratory food. I would suggest the use of "sauer kraut," or some other vegetable product containing lactic acid, or lactic acid itself. Sugar is, in an economic point of view, specially advantageous, as it is about two-thirds the price of meat, or less, while it improves the flavour and keeps soft the flesh, aiding also in the preservation. *Professor Morgan's Lecture before the Society of Arts, published in their Journal April* 15.

Garibaldi at Bedford (*Friday, April* 15).—A very significant incident occurred immediately on the illustrious stranger's arrival at the Britannia Works, where, being formally introduced to Mr. James Howard, Garibaldi met the presentation with the remark that he knew Mr. Howard very well. On the latter expressing his doubts as to ever having previously had the honour of seeing the General, the rejoinder was, "But I have your portrait in the Farmer's Magazine," a work to which, it appears, Garibaldi is a regular subscriber; a fact that shows how sedulously he has cultivated alike the arts of peace and war. His criticism on the work made by the pair-horse plough and the champion man George Brown, was much to the purpose. Admitting that the performance was very good, the General went on to say that the horse-ploughing in England was too shallow for hot countries, where they were compelled to go very deep, or all the moisture would be carried off by evaporation. With the steam ploughing, or more particularly the cultivating, he was much pleased, quickly comprehending the mechanical action of the system, as well as the advantages of increased depth and the way in which the weeds were left on the surface. The land selected for operation was a stiff heavy clay of three or four inclosures recently thrown into one, and altogether a rough and trying job; but the cultivator was more than equal to the occasion. Garibaldi is manifestly well up in all farming matters, and evinced a deal of interest in the stock on Mr. James Howard's farm, where improved Shorthorns, Clydesdale horses, and Yorkshire pigs, all in turn received due commendation; while he made very "good work," as he expressed himself determined to do, in planting his tree; and left his name not only in Messrs. Howard's album, but under a red letter heading in the visitor's book of the firm. Many a welcome as Garibaldi will have in England, we question whether there will be anything more after his own heart than this day in the well cultivated lands of Bedfordshire. *Mark Lane Express.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer. Dry Bulb.	Wet Bulb.	Wind. Direction.	Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	April.	Inches.	°	°				°	°	°	°	Inches.
Friday ..	15	29.68	55	50	S.S.E.	2	5	49	42	77	33	..
Saturday ..	16	29.73	45	45	N.W.	1	10	47	44	78	42	0.05
Sunday ..	17	29.92	43	46	N.W.	2	9	46	40	54	40	1.12
Monday ..	18	30.07	57	54	S.W.	1	0	60	38	70	29	..
Tuesday ..	..	..	..	..	..	..	..	..	..	..	..	..
Wednesday ..	..	..	..	..	..	..	..	..	..	..	..	..
Thursday ..	..	..	..	..	..	..	..	..	..	..	..	..

Notices to Correspondents.

CATTLE MELON: *C Langley*. See our account of it two weeks ago, and apply to Mr. Blundell, of Bursledon, Southampton.

GARDEN MANURE: *Cotswold*. Mr. T. C. Brown mentions "Smith's Apparatus of Glasgow" for indoor closets. Can any of our readers tell us the probable expense of this apparatus, and where it can be obtained.

ROYAL ARCH 2D: *B K*. This bull was sold at the Sarsden sale to Mr. Cradock, of North Leach, for 68 guineas.

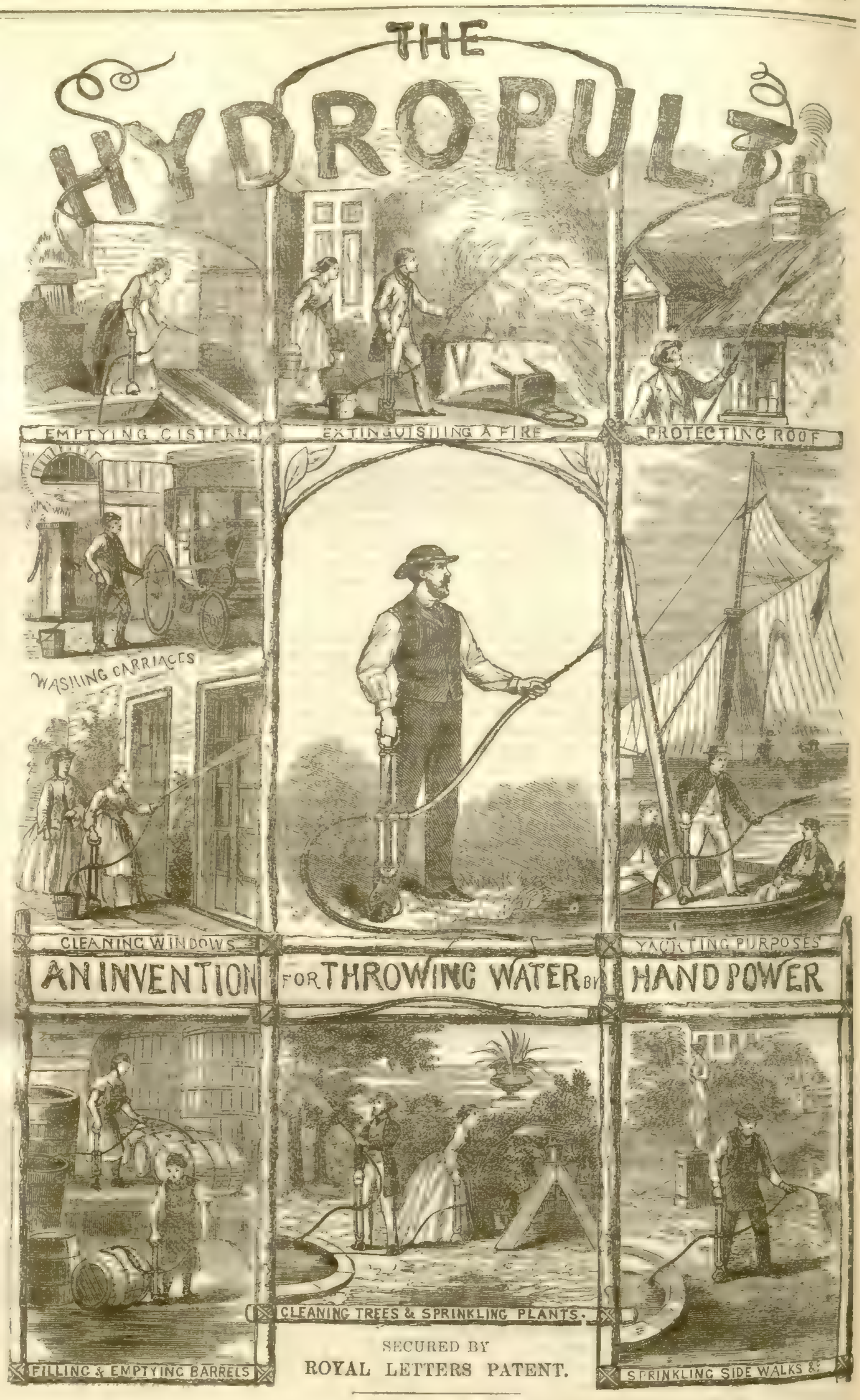

SECURED BY
ROYAL LETTERS PATENT.

PRICE 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanized Wire Strainer, Rose, and Small Jet, Brass Cylinders and Japanned Stirrup. With Copper Stirrup, Two Guineas.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

ROBERT HOGG, LL.D. and F.L.S., SHIRLEY HIBBERD, Esq., F.R.H.S., THOMAS RIVERS, Esq. (the eminent Florist), and other well-known gentlemen recommend the

HYDROPULT

AS AN INVALUABLE GARDEN IMPLEMENT.

A CARD.

It may not be known to the Public generally, that *interested parties*, unable legitimately to prevent an extensive sale of a new, efficient, and valuable invention, which, by its merited success, has superseded other devices of the kind, have recourse *through their friends* to the now too frequent practice of writing anonymous communications to journals of large circulation, *requesting answers* as to the merits and efficiency of the invention in question. These questions and the answers, PREVIOUSLY CONCOCTED by the interested parties aforesaid, duly appear; and are so worded as to have the desired effect. Thus are the Public misled and deceived by *malicious* and *envious* inuendos, the tendency of which is to bring into bad repute an article of utility, which has received the unqualified approval of thousands of well-known gentlemen, who, in a spirit of kindness, forward to the inventor gratuitous testimonials, as a token of their appreciation of his invention.

Parties unknown to me, have, from motives best known to themselves, in this manner criticised the efficiency of the "Hydropult." I have no answer to make to them: to the Public I would say that I will cheerfully forward, on application, a prospectus, containing testimonials from gentlemen well known throughout the United Kingdom.

CHARLES P. BUTTON.

CHARLES P. BUTTON, PROPRIETOR, HYDROPULT WAREHOUSE and SHOW ROOMS,
27, LEADENHALL STREET, LONDON, E.C.

GREEN'S PATENT SILENS MESSOR,

OR

NOISELESS LAWN MOWING, ROLLING, and COLLECTING MACHINES.

BY SPECIAL APPOINTMENT,
SOLE MANUFACTURER

TO HER MOST GRACIOUS MAJESTY
THE QUEEN.

THE
FIRST PRIZE MEDAL
OF THE
INTERNATIONAL
EXHIBITION,
1862,
WAS AWARDED TO
THOMAS GREEN,
FOR HIS
PATENT
LAWN MOWERS.

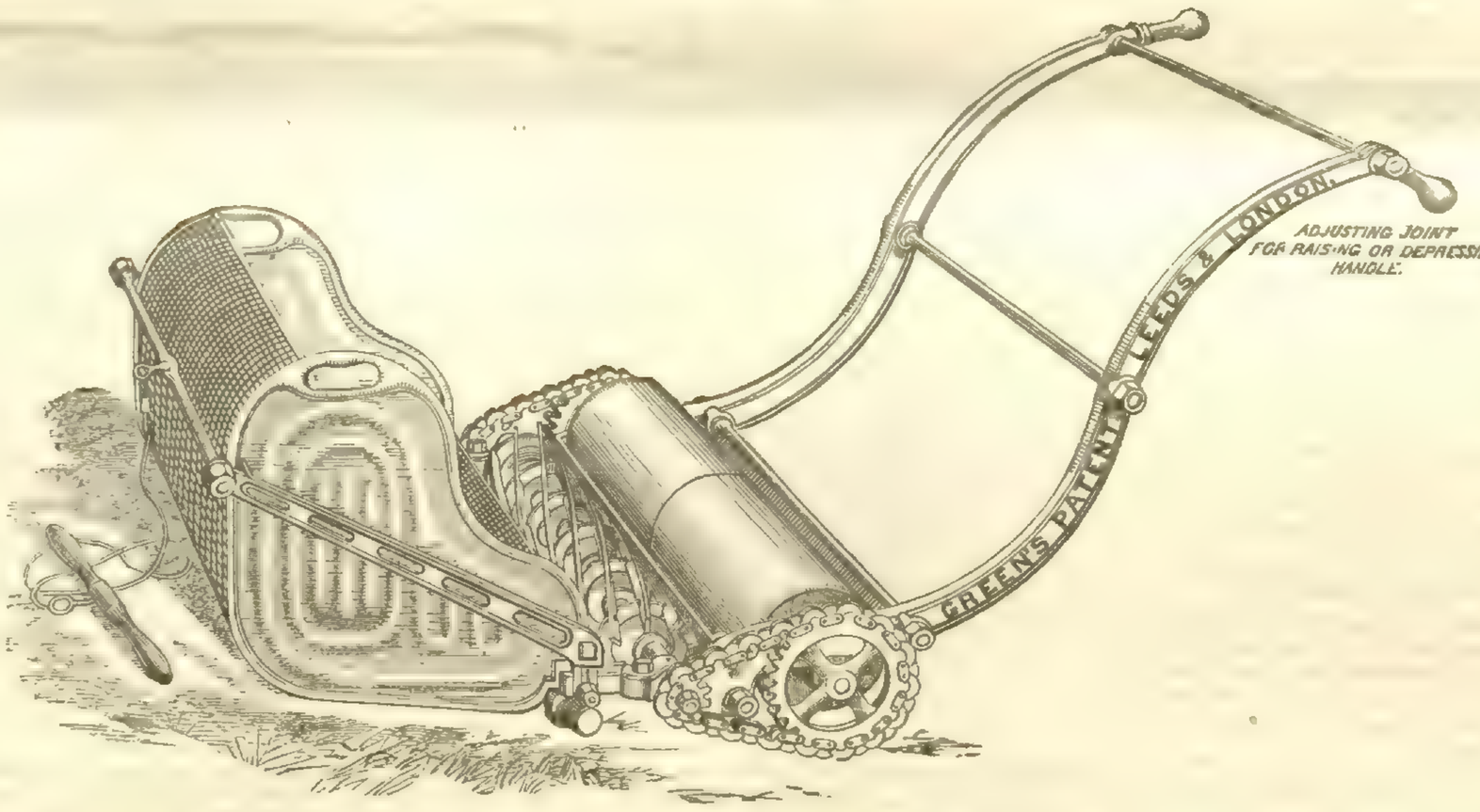

FOREIGN MEDALS
AWARDED TO
GREEN'S PATENT
LAWN MOWERS.
LIEGE, 1861.
BRUSSELS, 1861 & 1863.
NAMUR, 1862.
GAND, 1862.
LINNEENNE, 1861,
1862, & 1863.
LAEKEN, 1862.

EXTRAORDINARY and WONDERFUL IMPROVEMENTS for the PRESENT SEASON 1864.

PRICES OF HAND MACHINES.

To Cut 10 inches	...	...	£3	10	0	...	...	Suitable for a Lady.	To Cut 18 inches	...	...	£7	10	0	...	...	Suitable for One Person.
„ 12 „	...	...	5	0	0	...	...	„ „	„ 20 „	...	...	8	0	0	...	...	Suitable for Two Persons.
„ 14 „	...	...	5	10	0	...	...	Suitable for One Person.	„ 22 „	...	...	8	10	0	...	...	„ „
„ 16 „	...	...	6	10	0	...	...	„ „	„ 24 „	...	...	9	0	0	...	...	„ „

The Patentees beg to call special attention to their HORSE, PONY, and DONKEY MACHINES, which have been entirely remodelled, and embrace all the recent Improvements adopted in the Hand Machines. They cannot fail to give entire satisfaction wherever used.

Prices of HORSE, PONY, and DONKEY MACHINES, including Patent Self-Delivery Box, Traces, and Stretcher, suitable for attaching to ordinary Chain Traces or Gig Harness.

To Cut 26 inches	...	...	£13	0	0	...	...	Leather Boots for Donkey, 18*s*.	To Cut 30 inches	...	...	£21	0	0	...	...	Leather Boots for Pony, 22*s*.
„ 28 „	...	...	14	0	0	...	...	„ „	„ 36 „	...	...	24	0	0	...	...	„ „

To Cut 42 inches ... ... £27 0 0 ... ... Leather Boots for Horse, 26*s*.
„ 48 „ ... ... 30 0 0 ... ... „ „

The 26 and 28 inches can be easily worked by a Donkey or by Two Men on an even Lawn, the 30 and 36 inches by a Pony, and the 42 and 48 inches by a Carriage Horse; and, as the Machines make no noise in working, the most spirited animal can be employed without fear of its running away, or in any way damaging the Machine.

Both the HORSE, PONY, DONKEY, and HAND MACHINES possess over all other Makers the advantage of Self-sharpening; the Cutters being steel on each side, when they become dull or blunt by running one way round the cylinder, can be reversed, again and again bringing the opposite edge of the cutters against the bottom blade, when the Machine will cut equal to new. Arrangements are made so that the cylinder can be reversed by any inexperienced person in two or three minutes.

The above MACHINES are made from the best materials, and of superior workmanship; are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England; are warranted to give satisfaction, and if not approved of can be at once returned, if sent Carriage Free to Leeds.

REPLY TO MESSRS. SHANKS' ADVERTISEMENT OF LAST WEEK.

In reply to what has been said by Messrs. SHANKS in their Advertisement of last week, we beg to state—Our Machines have carried off every prize that has been given in all cases of competition, and that fair play and an impartial decision have been given by the Judges on all occasions, and this, coupled with our present improvements, is the reason why the principal places in England adopt our Machines in preference to any others; they being lighter and more durable, and warranted to last for years without getting out of repair; they do not require two-thirds the amount of power to work them of any other machines extant, and are unequalled for keeping Lawns in the highest state of perfection.

Now we do not wish to say anything that would have a tendency to raise the ire of Messrs. SHANKS, or to produce a paper war, but if they doubt the above, we are willing once more to come to a trial, when the merits of both Machines can be fairly tested. We are surprised after so many objectionable things had been stated in Messrs. SHANKS' Advertisements that any annoyance should be felt at what we state, viz., with regard to the words Special Appointment. In reply, we say, by virtue of the progress we have made, and the acknowledgments from the principal places we have received to others' exclusion, we were induced to use the words Specially Appointed, and the first remark inserted by Messrs. SHANKS speaks but little for them, when the Public are told through their medium that Messrs. GREEN & SON have lately supplied Her Majesty's Gardens with several of their Machines. With regard to the Hamburg Medal, had we have known it was for Steam Engines we should have long since advertised it as such, which would have done us a much greater service than has our clerical error, for the information of which we beg Messrs. SHANKS will accept our thanks.

THOMAS GREEN & SON, SMITHFIELD IRON WORKS, LEEDS;
and 2, FARRINGDON ROAD (formerly 2, VICTORIA STREET), HOLBORN HILL, LONDON, E.C.
AND 19, EDEN QUAY, DUBLIN.

Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET.

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

CATALOGUES are now ready, and a stock of Plants in the most perfect health, of all sizes, and at prices to suit all purposes. Sunningdale Nursery, S.W. Rail.

Notice.

JOHN WATERER, of The American Nursery, Bagshot, Surrey, is the EXHIBITOR of RHODODENDRONS at the Royal Botanic Gardens, Regent's Park.

His CATALOGUE, describing colours, prices, &c., can be obtained by letter addressed to the Nursery as above.

☞ For detailed Advertisement of CONIFERS, ORNAMENTAL SHRUBS, &c., refer to page 1151 for 1863.

GEO. BAKER begs to announce that his extensive Collections of Hardy RHODODENDRONS, GHENT AZALEAS, and KALMIA LATIFOLIA, are unusually well set with bloom, and his fine Collection of CONIFERS in the best possible condition.

CATALOGUES on application at the American Nursery, Bagshot, Surrey. The Nurseries are about 1 mile from Sunningdale Station, South-Western Railway.

RUSSELL'S PYRAMID PRIMULA.—Seed of this celebrated strain is now ready, in packets, price 2*s.* 6*d.* The great satisfaction which these sorts have given in previous seasons will be fully maintained this. The flowers can be seen at the Nursery during the spring. Printed instructions for cultivation with each packet.

GEO. CLARKE, Nursery, Streatham Place, Brixton Hill, S.; and 4, Windsor Terrace, Pimlico, S.W.

Splendid New Double Fuchsia, Lord of the Manor.

GEORGE FRY is now sending out this noble variety, a full description of which, with an Engraving, may be had on application.

A LIST of some of the leading Men in the Trade who have ordered, and can Supply the above, will appear anon.

Manor Nursery, Manor Lane, Lee, Kent.

Unblomed Seedling Calceolarias.

MR. HENRY MAJOR, Knosthorpe, near Leeds, is prepared to supply nice young plants of the above in parcels of 20 at 6*s.* per parcel, or 3 parcels for 15*s.*, post free. They are raised from seed saved from his unrivalled collection.

Mr. M. has a few Packets of his choice CALCEOLARIA SEED still on hand, at 2*s.* 6*d.* per Packet.

Postage Stamps in payment.

Green Hollies.

BRERETON NURSERY, RUGELEY, STAFFORDSHIRE.

CORNELIUS WHITEHOUSE has pleasure in offering, from one of the largest Stocks in the Trade, 200,000 Transplanted HOLLIES, from 4 inches to 4 and 5 feet, which are well known to be extra good, rooted from this soil, are very healthy, stout, well furnished, and clean grown; a very large portion moved last May. Can supply the Trade from 4 inches to 2 feet. Cash or reference is respectfully requested from unknown correspondents.

BEDDING and BORDER PLANTS.—CALCEOLARIAS, CARNATIONS, CHRYSANTHEMUMS, CLEMATIS, DAHLIAS, FUCHSIAS, GERANIUMS, PETUNIAS, ROSES, and VERBENAS.

The choicest kinds of each at the lowest prices, at Mr. TOWNSEND'S, St. Mary's Nursery, adjoining the Compasses, Hornsey, a few minutes' walk from the Hornsey Railway Station. Dealers supplied on liberal terms.

Hollyhocks and Dahlias.

JOHN HARRISON having on hand a large stock of several thousands of fine plants of the above, all properly hardened off, and now fully exposed to the air, begs to offer them to his friends in the Trade by the hundred or thousand on the most liberal terms. Amateurs dealt with liberally. Catalogues free on application.

Nursery, Darlington.

New Hollyhocks.

WM. PAUL respectfully announces that he is now sending out Two first-rate NEW HOLLYHOCKS, selected from many thousands of Seedlings, namely:—

BEAUTY of WALTHAM.—Flowers pale silvery peach, large in size, perfect in form, and closely set on a large handsome spike: one of the finest ever raised.

RED GAUNTLET.—Very fine blood crimson, unsurpassed in colour and form, spike magnificent.

Strong healthy autumn-rooted plants, calculated to flower well this summer, 10*s.* 6*d.* each.

PAUL'S Nurseries, Waltham Cross, N.

MR. JEAN VERSCHAFFELT, Ghent, begs to announce that his NEW SUPPLEMENTAL CATALOGUE is now ready, and contains a great many novelties for the season. The Catalogue may be had free on application to JEAN VERSCHAFFELT, 43, Rue de la Caverne, Ghent (Belgium).

Agents in London: Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, E.C.

Continental Novelties, &c.

LOUIS VAN HOUTTE, NURSERYMAN and SEEDSMAN, Ghent, Belgium, begs to advertise his PRICE LISTS, No. 99, 100 and 102, containing the STOVE, GREENHOUSE, HARDY PLANTS, and SEEDS.

Agents in London: Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, E.C.

Giant Scarlet and White Intermediate Stocks.

ROBERT PARKER begs to offer SEED of these splendid varieties, which are far superior to the ordinary varieties of Intermediate Stock. Habit more robust and branching; flowers larger, and borne in greater profusion. If sown in April they will commence flowering in July and continue until Christmas in mild seasons. Price per packet, 1*s.*

The following Choice SEEDS are also specially recommended, having been selected with the greatest care:—

	Per packet—*s.*	*d.*
CALCEOLARIA, HERBACEOUS, finest mixed	2	6
CARNATION, PERPETUAL, finest mixed	2	6
CINERARIA CRUENTA, finest mixed	2	6
PICOTEE, PERPETUAL, finest mixed	2	6
PRIMULA SINENSIS FIMBRIATA, finest mixed	2	6
PRIMULA SINENSIS FIMBRIATA KERMESINA SPLENDENS	2	6

A SELECT PRICED and DESCRIPTIVE CATALOGUE of FLOWER, AGRICULTURAL, and VEGETABLE SEEDS, and NEW and RARE PLANTS, is published and will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

Sutton's Lawn Grass Seeds,

AT THE CRYSTAL PALACE, AND AT THE PEOPLE'S PARK, HALIFAX.

SUTTON AND SONS have had the honour of supplying the Grass Seeds by which so many acres of Arable Land have been converted into the beautiful Park and Lawns, now so much admired at Sydenham, and at the People's Park, Halifax.

The following letter has been received, besides many others:—

From Professor LINDLEY, *Horticultural Society, London.*

"We have already made trial of your Lawn Grass Seeds, and it is only justice to say that they have proved the best we have sown for many years."

Price 1*s.* per lb.; 2*s.* 3*d.* per gallon; or 18*s.* per bushel. Quantity required for forming new Garden Lawns, 3 bushels, or 60 lbs.

Address, SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Grass Seeds for all Soils.

SUTTON AND SONS have one of the largest Stocks in Europe of the PERMANENT NATURAL GRASS and CLOVER SEEDS, which they mix expressly to suit the soil for which they are required.

The following letter has been received, besides many others:

From Professor LINDLEY, *Royal Horticultural Society, London.*

"We have already made trial of your Grass Seeds, and it is only justice to say that they have proved the best we have sown for many years."

PRESENT PRICES ARE—	Per Acre. *s.*	*d.*
Best quality MIXTURES for Laying Down to PERMANENT PASTURE	30	0
Cheaper MIXTURES, omitting certain sorts ..20*s.* to	26	0
Best quality ditto, for Three or Four Years' Lay	21	0
Ditto ditto, for One or Two Years' Lay 12*s.* 6*d.* to	17	6
CLOVERS and fine GRASSES for Renovating Old Pastures 6*s.* to	9	0
Finest LAWN GRASS SEEDS per bushel	18	0
PARK LAWN GRASS SEEDS ,,	16	0

The First Prize Medal was awarded to SUTTON & SONS for their Grass and Clover Seeds at the Great International Exhibition of Roots and Cereals at South Kensington in October 1862.

A Copy of Mr. MARTIN SUTTON'S "Essay on Pastures" is sent with each lot of Grass Seeds.

Seeds sent carriage free to all parts of the kingdom. Export orders delivered free to the Ship's side in any English Port.

PRICED LISTS of GARDEN and FARM SEEDS gratis and post free.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

PRIMULA SEED.—By the Ounce or Pound.
J. DOBSON & SONS, Seedsmen, Isleworth, W.

Seeds worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each.
J. DOBSON & SONS, Seedsmen, Isleworth, W.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our collection in the spring, 1862. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*
J. DOBSON & SONS, Seedsmen, Isleworth, W.

DOBSON'S PRIZE PRIMULA SINENSIS SEED. Superbly Fringed. In sealed packets. 1*s.*, 2*s.* 6*d.*, and 5*s.*
J. DOBSON & SONS, Seedsmen, Isleworth, W.

New Plants for 1864.

B. S. WILLIAMS has much pleasure in offering the following Novelties for the first time, descriptions of which will be found in previous advertisements, and in his NEW PLANT CATALOGUE, post free to all applicants.

NEW ACHIMENES.

Purpurea elegans, Leopard, Magnet, Scarlet Perfection, Vivicans, Eclipse — 7*s.* 6*d.* each, or the 6 for 42*s.*

NEW FUCHSIAS.

Neptune, Queen of Beauties, Gem of the North, Minotaur — 7*s.* 6*d.* each

NEW SINGLE PETUNIAS.

Royalty, Purple Prince, Duchess of Northumberland — 5*s.* each

NEW ZONALE GERANIUMS.

Display, Beauty, Royalty — 5*s.* each

Paradise and Victoria Nurseries, Holloway, London, N.

Coleus marmoratus, the prettiest Novelty of the day.

A. VAN GEERT, NURSERYMAN, Ghent, Belgium, has the pleasure to offer strong Plants of this very desirable new COLEUS MARMORATUS; it is of dwarf habit and rich colour, with large velvet green leaves, edged with clear amaranth, very distinct and superior to C. Verschaffeltii.

1 Strong Plant for 7*s.* 6*d.* | 12 Strong Plants for 70*s.*
6 Strong Plants for 42*s.* | 25 Strong Plants for 120*s.*

Early orders will be punctually attended to.

Agents: Messrs. R. SILBERRAD & SON, 5, Harp Lane, Tower Street, London, E.C.

Flower Seeds, Postage Free.

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Salisbury, April 23.

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CRIMSON PERFECTION, ruby crimson.
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NIGGER, blush, striped and spotted crimson.
FANCY BOY, buff, striped crimson.

A List with full descriptions can be had on application.

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MR. WILLIAM BULL begs to announce that he is now sending out his

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" PENTSTEMONS for 1864
" BEDDING GERANIUMS for 1864
" ENGLISH SPOTTED PELARGONIUMS for 1864
" FRENCH SPOTTED PELARGONIUMS for 1864
" FANCY SPOTTED PELARGONIUMS for 1864
" DROOPING GLOXINIAS for 1864
" ERECT GLOXINIAS for 1864

For full particulars and prices, see SPRING LIST of NOVELTIES, which can be had on application.

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New Bedding Plant, COLEUS MARMORATUS, 10*s.* 6*d.* each.
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Establishment for New and Rare Plants, King's Road, Chelsea, London, S.W.

The Gardeners' Chronicle.

SATURDAY, APRIL 30, 1864.

MEETINGS FOR THE ENSUING WEEK.

Wednesday,	May 4	Royal Horticultural (Election of Fellows) at South Kensington ..	1 P.M.
		Lecture on Cool Orchids, by Mr. Bateman	3 P.M.
Thursday.	— 5	Linnean	8 P.M.

The Exposition Universelle d'Horticulture now open at Brussels, which was inaugurated by his Majesty the King of the Belgians on Sunday last, may be chronicled as a decided success. As an exhibition it is altogether unlike our own in respect to the arrangements, and in great measure also in respect to the peculiar character of the plants exhibited. There are none, or almost none, of the immense specimens of which we have so many, and there are none, at least in the principal departments of the exhibition, of those endless lines of tall stages which elevate our monster specimens so much, that it almost breaks one's neck to look up at them. On the other hand there are magnificent "foliage" plants—Palms especially—such as we never see exhibited in England, and various noble forms of the Screw Pine and Yucca race enter largely into the composition of the show; there are flowers on moderate-sized bushes which, when distributed as they are in this case, are quite sufficient to lighten up the scene without dazzling the eyes of the lookers-on; and both variety and taste are displayed in the distribution of the materials brought together. There is also one other thing we were highly gratified to see, and that is that horticulturists take in Brussels their proper place in conducting their King to view the horticultural exhibition, which is held under his Majesty's auspices.

The particular features of the show will be gleaned from the very ample report which appears elsewhere (p. 412). Generally, it may be stated that such subjects as Palms and Cycads were plentiful and grand, and contributed very largely to the general effect. Ferns were plentiful, and as a considerable number of them were of arborescent habit, their charming fronds, here and there thrown overhead by the elevation of the plants to a convenient height, entirely effaced that appearance of baldness and stiffness which our own dense and interminable pyramids of bright colour, almost if not quite without relief, and set up in long straight lines, invariably produce. Standard Azaleas of small size, with stems of from 1 to 2 feet in height, were plentiful, and contributed largely to the colouring elements of the show; they were almost always placed so as to spread out a varied field of colour beneath the eye, and were backed up and flanked by such green as that of the Ferns, and foliage plants like Theophrastas, Rhopalas, Aralias, &c. Yuccas, and plants of Yucca-like habit, the Littæas and Beaucarneas and Dasylirions of botanists, were quite a feature of the display. The same remark applies to Agaves, of which many species, common and oft-repeated objects in the show, are scarcely known to the generality of plant-growers in our own country. Camellias were not so good as we expected to see them. Large plants of them were few, and not particularly well furnished; the smaller ones appeared to have been spoiled by travelling, and altogether this element of the show failed to be very effective. Good use was made of the race of hardy hybrid Rhododendrons, of which there was a fine display, the plants being mostly dwarf, and set on the floor. Hardy variegated plants, both of the shrubby and herbaceous order, were plentiful, and, introduced here and there in suitable contrast, they had a very good effect. Another set of plants, of which we ourselves use but few, namely, the Hippeastrums, furnished several very telling groups, the pots being set on the floor, and the blossoms brought nearly on a level, the latter ones being placed at the back, or in the centre, according to the requirements of the position they occupied. Hardy trees and shrubs, either mixed up together, as the Conifers, or in distinct families, as the Hollies, were extremely interesting objects, the plants being specimens of considerable size, and apparently not treated as back-grounds and make-weights, but as constituent parts of the whole. Roses were decidedly inferior, both in respect to the appearance of the plants and the quality of the flowers, to those produced at our London early shows.

So much for some of the principal subjects exhibited. As to their arrangement, we have already mentioned that there were no straight, formal, lofty, expensive stages, and we might almost say in respect to the greater part of the space occupied, that there was no staging at all. The floor is the stage, save and except that along the back-bone of the central group a few specimens were set up where necessary, not on stages, but individuals on stools or pedestals, so as to suit the peculiarities of each case, and the same plan has been adopted in arranging the central portion of the great masses which occupy the sides of the hall. Neither in the one case nor the other is there a level line of plants, but they stand, here high, there low, here advancing, there receding, just as may best minister to the effect. In all this, and also in the plan of arranging broad masses beneath the level of the eye, the disposition of the plants is much better than our own. The only drawback to this mode of arrangement is the want of space and consequent crowding of the visitors at certain points, but even though there was considerable crowding we did not see that any serious damage was done, the flexible trellis-work which formed the boundary of the groups acting as a very efficient protection. If we may take a lesson from our neighbours as to the arrangement of the plants, we may also give one which would save much of the confusion at which we have hinted—it is that of keeping the visitors moving as much as possible, and, above all, moving in one direction.

The Congrès International d'Horticulture, held contemporaneously with the flower show, was well attended by botanical and horticultural celebrities from all parts of Europe; and several sittings were held for the discussion of the subjects named in the programme.

We understand that it is in contemplation to hold a similar International Flower Show and Horticultural Congress in London in 1866, if possible under the auspices of the Royal Horticultural Society.

In our last Number (17), it was announced that at the Third Spring Show of the Royal Horticultural Society at South Kensington "from Mr. Thompson, of Ipswich, came several examples of Collinsia verna, an old-fashioned free blooming annual, *which was commended.*" Upon this subject Mr. Thompson sends us the following letter:—

"The atmosphere of South Kensington being apparently unfavourable to some of my plants, if I may judge from the verdict given there, I hope I need not apologize for sending you two or three of the Collinsia verna exhibited by me on Wednesday, that you may judge how far that verdict was just and impartial. If the committee who damned my plant with such faint praise as a Commendation could come and see my plants growing, two beds, each 100 feet or more long, they would surely be visited with compunction for their inadequate award. I now send you materials for the formation of an opinion. They are all potted up from the open ground this afternoon, and may perhaps flag a little, but I preferred sending them immediately for several reasons. A few hours' shading will put them right. In masses it is most beautiful. There is nothing that I can call to mind for spring blooming to equal it. What blue flower, annual or perennial, except the Squills, can be had in bloom in April? I have grown it for several years, and at first was inclined to give it up, as I found it so untractable. But having at last succeeded in its management, which not even Nuttall himself seems to have done, and certainly no one else, I hope I shall find some encouragement and reward for my labour a little more exhilarating than the Commendatory card of the South Kensington judges."

A further communication on the same matter will be found in to-day's Home Correspondence.

We do not generally take part in disputes of this nature, nor should we do so now were it not that a question of some horticultural and botanical importance is involved, and that the Committee have, very unintentionally we know, and not unnaturally, mistaken the value of Mr. Thompson's most beautiful annual. In the first place, then, no doubt can exist that it is the real *C. verna* of Nuttall. That being ascertained, the idea of its being "old-fashioned" must clearly be abandoned, for nobody saw it alive in this country before 1855 or 1856, in which last year an excellent figure was published in the "Botanical Magazine." There is indeed a notion abroad that it is only *C. bicolor*, a plant figured in the "Botanical Register" in January 1835; and we ourselves must admit that at first sight it appeared as if *C. verna* and *bicolor* might be mere varieties of each other, bright blue being substituted in the first for the lilac in the second. We now however wholly reject the supposition for the following reasons, for many of which we have to thank the experience of Mr. Thompson, whose seed came from Dr. Short of Kentucky, through Dr. Asa Gray. Mr. Thompson says reasonably enough, that as C. bicolor did not grow wild in Kentucky, that must count for something; adding that the behaviour of his C. verna under cultivation, is totally different from that of C. bicolor. The latter may be sown at any time. C. verna will only grow if sown in autumn, and that is why everybody has failed with it, while C. bicolor may be grown by a child, and is grown everywhere. Again the seed of C. verna is twice as large as that of bicolor. The capsules of verna contain from three to four, five, and very rarely six seeds. Those of C. bicolor, a score or more. The capsules of verna open before seed is ripe, exposing it in a greenish state, and I have to pick each capsule off singly just after they split, to make sure of the seed. The spike of C. verna is at first corymbose and lengthens out greatly—lower seeds ripe, while top flowers are in bloom. The capsules of bicolor never open till the seed is ripe, and the whole spike may be cut at once. Who ever saw the latter of a blue colour? I never saw any but lilac. The C. verna is of a pure blue (in the beds), varying from pale porcelain blue to the deepest imaginable blue, and here and there a plant with violet flowers.*

We cannot doubt that these facts are conclusive on the side of Mr. Thompson, who, although not the introducer (for the first plants blossomed in a cool frame at Kew in 1856) has certainly the merit of first bringing this, the most charming of all vernal hardy annuals, under the observation of the whole floral world. In our opinion the resolution with which he has held his own in the controversy does him honour, and we presume to thank him in the name of the Horticulturists of Europe. May he reap the reward he so richly merits.

This is the age of Lectures. From the Royal Institution in Albemarle Street to the smallest school-room of the most quiet parish in the most remote county the sound of lecturing fills the air! All the sciences have their trained lecturers, so has every political creed, and so too every phase of error or belief. In this general *furore* for lecturing, horticulture and botany have hitherto perhaps had less than their rightful share, and therefore we are not sorry to see that at South Kensington a series of lectures has been commenced that promise to be both popular and useful. Mr. Paul had the honour of delivering the first on the list a fortnight ago, and our readers who had not the opportunity of being present will have gathered from our report how much of interest and novelty he threw into his theme. The second was given on Tuesday last by Mr. Bates, who—as the readers of his interesting book are aware—has been hunting insects for 12 of the best years of his life on the different affluents of the Amazon.

A report of Mr. Bates's lecture appears in our columns to-day, and will we hope attract the attention of botanists to some of the localities that he visited, for where there is so much of novelty in the *fauna* of a district, the *flora* may be reasonably expected to prove equally rich. It is thought indeed that it is from some of the regions visited by Mr. Bates, and from the eastern slopes of the vast chain of mountains whence the tributaries of the mighty Amazon descend, that the greatest harvest of new plants is to be sought.

None of course will be quite hardy, though but few will require that insufferable amount of heat

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* Let us add, as a peculiar feature of this plant, that as the seed does not grow when kept till spring, it must only be sown in autumn; a very important fact. With no other species is this precaution necessary.

which we usually associate with what is called the "stove.' Multitudes of beautiful Thibaudias and other Vaccineæ will be found in these localities, which as their cultivation comes to be better understood, cannot fail to be general favourites. Here too exist the richest mines of 'cool Orchids,' the cultivation of which has given a fresh impulse to the Orchid-mania; but with these matters we shall leave Mr. BATEMAN to deal, as they fall naturally within the range of the subject that he has chosen for his lecture on Wednesday next.

Often as we have felt compelled of late to question the wisdom of some of the acts of the present Cabinet at South Kensington, we are the better pleased when, as in the case of the series of lectures now in progress, we can heartily sympathise with their proceedings and wish them every success. At all events these lectures aim at the advancement of horticulture in a legitimate way, and that is saying a good deal at a time when idle people are endeavouring to disgrace it by lawn billiards, croquet, and similar fashionable trash.

—— Mr. BATEMAN'S LECTURE ON COOL ORCHIDS. In consequence of a Drawing Room being announced to be held on Tuesday next—the day originally fixed for Mr. BATEMAN'S lecture at South Kensington—the lecture is postponed till the following day. It will be illustrated by coloured prints and original drawings of Orchids adapted for cool treatment, as well as by a large number of living specimens.

NOTE ON A NEW FORSYTHIA FROM PEKING.

FORSYTHIA VIRIDISSIMA, a shrub introduced to this country from China about 20 years ago by the Horticultural Society of London, is at this period of the year in full blossom, and in that state it is very ornamental in our parks and gardens. In Battersea Park, for example, where it has been extensively planted, it has been in perfection, and certainly produces a most striking and agreeable effect at a time when few other shrubs are in bloom in the open air. This shrub is well worth the attention of all who wish to make their gardens attractive during the month of April. Then it has the advantage of being very hardy, is of easy cultivation, and produces its blossoms in great profusion.

Another species of Forsythia has been recently introduced from the country near Peking, which is even of greater importance as an ornamental plant than the one above named. The history of the discovery and introduction of the new species is, I think, worthy of being recorded in the *Gardeners' Chronicle*. When I visited the Chinese capital in the autumn of 1861, I fully expected to find many new plants of a hardy nature well suited to our English climate. Peking is several hundred miles further north than those parts of China I had formerly explored, and it was not unnatural to suppose that many new forms of ornamental plants might be met with in its vicinity, particularly as it is a well ascertained fact that all that is rich and rare usually finds its way to the capital of a country. I may give London as one example of this, and if another were wanted a little further away, I may mention Yedo, the capital of Japan. In so far as Peking is concerned, however, my expectations were doomed to be disappointed. There was no scarcity of plants, for here, as in other parts of the country, the people exhibit an ardent love for flowers, but most of those in cultivation had been brought from the more southern parts of the empire, and were already in Europe. The productions of Canton, Foo-chow, and Shanghae were fully represented, and were apparently highly prized by the natives. Sweet-scented Jasmines, Pomegranates, Olea fragrans, Oranges, Citrons, together with Apples and Pears, were in abundance, and all cultivated in pots, so that those that were tender could be protected in winter. As I looked eagerly into every hole and corner in quest of something new, something indigenous to that part of the country, the good-natured Chinamen were evidently greatly puzzled. "Had I not come for flowers? Well, here were plenty of the finest which could be had; why did I not take some of them?" It was a difficult task to make them believe that all the things which they admired so much, had been long in cultivation in Europe.

My explorations, however, were not altogether fruitless. A new Forsythia was discovered, which now proves to be a great acquisition to our spring-flowering shrubs. As it was in the autumn when I first met with it, I had no opportunity of seeing its flowers, and therefore could only form an opinion of it by its foliage. I had no difficulty in recognising the genus to which my plant belonged, and as its leaves differed in form and appearance from the old species, there as little doubt that it would prove new to science and to our gardens. The leaves of F. viridissima, as every one knows, are oblong or oblong-lanceolate, in form while those of the Peking plant are broadly ovate. Some of them, if my memory does not fail me, are slightly lobed, and they are all of a dark green colour —much darker than the old species; they have more substance, and are very glossy on the surface. The flowers, as we now see by the plants which have bloomed at Bagshot, are also larger in size and of a brighter yellow than F. viridissima. There are also many other botanical distinctions between them. Altogether the new plant is the most ornamental of the two, and I have no doubt it will prove a very important acquisition to our collections. It will be perfectly hardy in our climate, and is a shrub which, when once planted, will take care of itself. *Robert Fortune.* [We shall ourselves return to this species on an early occasion. In the meanwhile it will most deservedly bear the name of its very able and enterprising discoverer, and will be called FORSYTHIA FORTUNI.]

Home Correspondence.

Collinsia verna, Nutt., v. *The Floral Committee of Royal Horticultural Society.*—Having succeeded after several years' experience in bringing under cultivation the above beautiful little plant, all previous introducers having entirely failed to preserve it, I was induced to forward a few specimens to the last exhibition of the Royal Horticultural Society, believing that its great merit could not fail to be recognised, and that they would afford considerable gratification to the visitors to the Show. I was in due form apprised that my plants reached the show, and had received from the Floral Committee the award of—happy man that I am —a Commendation! For this signal honour, I regret to say, I cannot pretend to have felt any gratitude whatever. But, though quite as much puzzled to account for this want of justice, as I was annoyed, I should not have asked permission to occupy your space but for an unlooked for revelation of the apparent motive of that award, which I find in your report of the exhibition. Your reporter states that I exhibited several examples of Collinsia verna, "an old-fashioned annual." In this not over complimentary phrase the secret of the liberality of the Committee leaks out. It is evident that these gentlemen assumed I had furbished up some veteran of the borders, and presented it for their approval, though had I done so, it strikes me I should have merited less their commendation than their severest reprobation. So far, however, from the Collinsia verna being old-fashioned, I beg to state for the information of the committee and all whom it may concern, that it has never yet had a chance of being even new-fashioned, for the very simple reason that it has never before been cultivated! The C. grandiflora, often erroneously sold under the name of verna, has evidently been mistaken for it, though a very small amount of attention would have been sufficient to dispel this conclusion. But without enlarging on that point, at present permit me to state that the Collinsia verna was first introduced to this country, though long previously known to botanists, by its original discoverer, the late Mr. Nuttall, in 1855, and by him plants were sent to Kew Gardens, where they bloomed early in the spring of 1856. It was figured in the Botanical Magazine the same year, t. 4927, and Sir W. J. Hooker, no mean authority surely on this subject, commences his description by the following words:—"This lovely annual is entirely new to our gardens," and quotes further a letter of Mr. Nuttall, who styles it the most beautiful of the genus. Mr. Nuttall failed in perpetuating the plant, and the same ill-success followed at Kew. Having hit upon the right mode of treatment, and grown it from small beginnings till I am at length able to show beds of about 8000 plants, thus securing it I hope to our gardens, your readers can judge for themselves whether I have any legitimate grounds for protesting both against the award of the Floral Committee, and the statement of your reporter. And now let me add that my beds of this beautiful plant, even those entirely unprotected, were in bloom some days before the 15th of April, a period at which no other Collinsia, and, so far as I can recal, no other annual whatever, blooms naturally; and that the effect of so large a mass of pure azure blue and white is such that could the public at large (and I heartily wish they could) witness this display of vernal beauty, the misjudgment of the Committee would meet with a unanimous reversal. *W. Thompson, Ipswich.*

Injury to Wellingtonia gigantea.—Some years ago I planted an avenue of Deodars, but finding that many suffered in spring from the east winds, which did not appear to affect Wellingtonias in other parts of the grounds, I took up every alternate Deodar and planted Wellingtonias instead. For two seasons the latter succeeded perfectly, but this spring they are all considerably injured on their eastern side, whereas the Deodars are not affected in the slightest degree. To me the circumstance is perfectly inexplicable; can any of your readers throw any light upon it? *J. B., Biddulph Grange.*

Ivy and Red Spider.—Having read in your columns (p. 392) a notice relating to red spider on Ivy, I beg to furnish you with the result of my experience in the matter. For more than 10 years I have grown Ivy inside a window, and though the plants have never been renewed it is still green and pretty, but I have many times feared I should lose it, and once from red spider; in my trouble I asked all my friends what to do, and followed all their advice with no effect, until I was told to try what shifting it from the ornamental pots to the common red earthenware ones would do. This I did, and in a few weeks my Ivy was clear from its red intruders, and I never have seen any since. The pots were MADE of ZINC, and painted very prettily with green stripes of two shades. From this experiment I conclude that the roots will not bear being confined in anything water-tight, but require that there should be the means of evaporation; I find that my Ivy keeps very green with merely drenching it once a week with rain water; and every two years changing the soil. *B.*

Horticultural Society's Garden at South Kensington.—Will no horticultural Sir Richard Mayne put a stop to the Poplar demonstrations which are being got up here? Within the quiet precincts of this so-called Arcadia stand these plebeians, rank and file, in true warlike order, already fully equipped and Laurel bedecked. Has Mr. Nesfield been consulted on the subject? Surely he never can permit his beautiful Italian garden to be converted into a drill ground. Notwithstanding the unsightly barricades that have been placed along the top of terrace walls, on grassy banks, and even on stone balustrades, these aspiring gentlemen still appear to advance, and already occupy some of the most prominent places in the garden. If the fastening of them tightly down on horizontal wire work, as is now being practised by the side of the water, does not have the desired effect of checking further incursions, I would not hesitate to recommend even harsher measures being at once adopted with them. Pray use your own powerful influence in the matter. As the old proverb says, "What cures Sancho makes Martha sick." *Joseph Newton*, 30, *Eastbourne Terrace.* [We have no voice in this absurd matter, as we hoped everybody would have seen.]

Royal Horticultural Judges.—On what principle does the Horticultural Society's Floral Committee give Certificates to such plants as Genista prostrata, Collinsia verna, or the Australian Grass tree, all of which nearly equal the age of the "oldest inhabitant." Will some of the Committee explain? *Flora.* [As to Collinsia "verna," that is noticed editorially elsewhere.]

Foreign Correspondence.

EXHIBITION OF THE SOCIÉTÉ ROYALE DE FLORE.—The "Exposition Universelle d'Horticulture" of this Society, held at Brussels, under the auspices of the Belgian Government, was opened on the 24th instant. The exhibition, which is of the most extensive character, continues open till the 6th of May. Our limits do not admit of giving so complete a report as the merits of the show would have justified, as will be evident from the fact that a bare enumeration of the subjects brought forward, and of the prizes awarded to them, occupies an octavo pamphlet of 149 pages. We propose, therefore, the rather to give a general description of the exhibition as it appeared when ready to be thrown open, noticing a few of the most remarkable and interesting of the plants as we proceed.

The show took place in the Place du Trône, in a lofty but temporary wooden building, some 200 feet or more in length, and 80 feet in width, and having a glazed roof; a portion of the space at the north end being shut off so as to be kept warmer to suit the more tender of the plants. In this latter division the plants were arranged on tables after the manner adopted at our English exhibitions, but in the larger portion the arrangement was altogether different, the majority of the plants being set on the floor in groups of varying outline, protected at the margin by a removable trellis-work border, the hindermost of them and a few of the finer specimens only being elevated. An irregular pathway, here broader, there narrower, divided the central group from those which covered the sides of the building.

Commencing with this central group, there stood immediately in front of the entrance a monster specimen of Livistonia Biro, exhibited by Madame Legrelle d'Hanis, of Antwerp. This plant, which was not less than 20 feet in height, and as much in diameter, formed one of the finest features of the show. In front of it stood a group of dwarf standard Azaleas of all colours, the plants being on stems of from one to two feet high. Right and left came collections of Ferns, continued to the right by a fine series of larger Azaleas, forming the northern termination of the central mass. The dwarf Azaleas were continued on the left in company with Rhododendrons, the bank being broken up by a group of broad-leaved foliage plants, and small Roses. Amongst the dwarf standard Azaleas, which consisted of very nicely grown plants, mostly of good varieties, the best were Gloire de Belgique, white, finely striped with red; Hortense Vervaene, with large flesh-coloured flowers, masqued with white; Rubens, a magnificent orange-scarlet of large size and fine form; Alexander, a fringed white with stripes; mirabilis, a telling bright rose; Lorlei, a large white, flaked moderately with rose purple; Roi des Doubles, a fine showy double rose; and Roi des Blancs, a fine pure white. At this point came a silvered globe, elevated to about the level of the eye, and reflecting all the surrounding features. Then came a few tall Tree Ferns set up on stands; a new Camellia, and a fine group of large leaved plants. The Camellia was Comte de Flandres, a full-sized delicate rose-coloured sort, with imbricated petals and good foliage. Of the large-leaved plants, the most noticeable were Theophrasta macrophylla and imperialis, Crescentia regalis, Gustavia Leopoldi, Botryodendron macrophyllum, and Bæo-

botrys trichotoma, all having ample simple leaves of an elongated elliptic or broad lanceolate form; Theophrasta angustifolia having large narrow lanceolate leaves; Coccoloba pubescens, about five feet high, with five of its great round sessile stem-clasping horizontal rugose leaves; Oreopanax dactylifolium, a handsome plant, with long-stalked palmatifid leaves, of which the segments are lobed, and the stem covered with rust-coloured pubescence; with Stadmannia cordifolia, and Simaruba grandis, each having good pinnate leaves.

The continuation of this central mass was made up with a centre of large plants of Angiopteris, Palms, &c., and in front of these were Azaleas, edged by variegated Pelargoniums, with a fine elevated example of Alsophila contaminans, a Philippine Island Fern, with abundance of narrow white scales about its crown, purplish prickly stipes and a glaucous undersurface. In the large group were:—Cycas Ruminiana, with a stem three inches in diameter, and a foot long, clothed with shining leaves, like Fern fronds, the leaflets of which are long lanceolate and acuminate; Ceratozamia mexicana, with a stem six inches through by nine inches high; Angiopteris, with shining fronds; Areca Verschaffelti, a fine stiff-fronded pinnate Palm; Ceroxylon audicola, a fine young plant; Chamædorea Ernesti Augusti, with broad two-lobed leaves and smooth stem; and Astrocaryum aureo-pictum, with broad two-lobed serrated leaves, and prickly stem. Then came another silvered globe, with a group of Camellias in front, edged with Pansies. Camellia Bononicana in this group was a beautiful cupped blush-white, with well-defined red stripes, and a fine outline; there was also the small double Sasanqua rosea; Madame Strukalof, a distinct light rose pink with white bars down the centre of the petals; and Valtevaredo, a fine imbricated cerise rose. Then came more high Ferns as a centre, and in front a Rhododendron Nuttallii, also tall, with five heads of flowers, and a fine specimen three feet by three of Erica elegans; then a bank of Hippeasters edged with Cinerarias, and finally, at the south extremity, a pyramidal Rhododendron ten feet high, called Arboreum Beurgravianum, a delicate rose slightly spotted and well flowered. Of the Hippeasters, Cleopatra, a deep red with clear white stripes broken off abruptly an inch from the end of the segments; Christophe Colomb, a brighter red with similar white stripes, but narrower segments; Boelensii, a large red with green star; and Marie Henriette, white striped with red, fine at the edges, were the best.

On the west side came first a fine group of Azaleas, dwarf standards and dwarfs; a fine green-leaved Dracæna, eight feet high; and a pretty well-flowered small plant of Azalea Souvenir du Prince Albert, with the flowers really effective. Next a group of large Ferns, in which was a fine young plant of Cibotium princeps, and a stemless plant in a magnificent state of Cyathea medullaris. Then a capital standard Coleus Verschaffelti, with a dense head a yard across; followed by a mixed group of flowering plants. Succeeding these came a nice group of Dracænas, in which those marked angustifolia, punctata, mauritiana, Rumphii, callicoma, and lineata were narrow-leaved forms; and guatemalensis, fragrantissima, and fragrans latifolia broad ones; umbraculifera, of which there was a fine dense plant, being narrowish; and cannæfolia, with long-stalked glaucous leaves, being very broad. This was followed by a large flat mass of Azaleas, intersected by Rhododendrons, and backed by Ferns. The most effective of the Rhododendrons were—Bylsianum, a bright carmine with white centre; Queen Amélie, a large bright rose with good trusses and well spotted; Souvenir de Jean Byls, a lovely rose with paler centre, and a greenish-yellow blotch; and Étendard de Flandres, a large rosy-lilac, heavily spotted with chocolate.

Coming opposite the great Livistonia, was a bank of Roses, poor plants, as were most of the Roses shown; then a flat group of Rhododendrons, edged by hardy Ferns; finishing off with the Azaleas referred to at the commencement, these latter being edged with Verbenas.

At the north end, between the two entrances to the enclosed warmer portion, was a noble group of large Palms, among which Chamærops excelsa, Corypha australis, Sabal Blackburniana, and Areca sapida were remarkable; as also was a pretty Latania rubra, three feet high. At the north-west angle was placed a group of mixed flowering plants, with Phœnix humilis, set up on a high support; and a beautifully symmetrical plant of Cyathea dealbata followed, set up over a small bank of Rhododendrons. Then along the side of the building came a fine set of Palms and Cycads, followed by a set of Anthuriums. Here were Encephalartos Altensteinii with a stem 15 inches thick and three feet high, bearing long bright green fronds; Chamærops argentea, with the leaves silvery; Areca Verschaffeltii, six feet high; Ceroxylon, 12 feet high; and Geonoma paniculigerum, a slender habited plant with few broad pinnæ.

Opposite the entrance, and the Livistonia already mentioned, came a piece of water, backed by three fine sheets of plate glass set up at intervals, the two side ones being anglewise, so that they reflected a great part of the exhibition at this point. The central plate, over which dashed a waterfall, was surmounted by a statue, backed and overhung by Cocos plumosa, and having Dion in front. The back ground of the small lake, in which were two small bronze fountains, was filled out by a rock border planted with Caladiums, Cannas, Heliconias, and plants of similar character; while the front was made up of an irregular border, also of rock-work, with Cinerarias, other flowering plants, and a well-placed Caladium Chantinii, &c. In a projection in front of the water was placed a very gay bed of Hippeasters. Beyond the basin was a similar set of large Palms, Cycads, Anthuriums, &c., and amongst them the broad-leaved Anthurium Hookeri, with stalked oblanceolate pale green leaves measuring three feet by one; Zamia Lehmanni with a stem two feet broad by one in height, and an erect tuft of young glaucous fronds; Wallichia caryotoides, ten feet high, with fine broad pinnæ, brownish stems and silvered under surface; Areca Verschaffelti, eight feet high; Seaforthia robusta, six feet high; Stephensonia grandifolia, a Palm with broad bilobed leaves serrated at the upper edge and armed with needle-shaped black spines on the stalks; Latania Jenkinsonii, with ferocious-looking hooked spines on the stalks of its orbicular palmatifid leaves; and two smaller Latanias, Verschaffelti, with orange-coloured margin to the stalk and leaflets, and L. rubra, with these parts red.

After these came a group of three or four Tree Ferns and large-foliaged plants, edged by Cinerarias in flower. There were Theophrasta imperialis, ten feet high; a large spreading Cyathea medullaris, with a stem three feet high; a good Cyathea dealbata also three feet high; and Yucca pendula with recurved glaucous leaves. Here also intervened another elevated silvered globe, presenting to the eye of the spectator a miniature picture of the contiguous portions of the scene. A tall group of mixed greenhouse plants in flower followed; then a dwarfer group of mixed hardy flowering plants, with a fine specimen of Cyathea medullaris, ten feet wide on a four feet stem, set up over them on a pedestal. Again a miscellaneous group with Camellias at the back; a Rhododendron group with a tall Cibotium princeps over it, and in the south-west corner a large group of fine foliaged plants, such as Pandanus latissimus, having long pointed pale green leaves four or five inches wide; Agave Schiedigera and A. filifera, both stiff-leaved sorts, the former with the edges as if hung with carpenter's shavings, the latter as if hung with mantua-makers' tacking threads; a fine Alocasia zebrina and a good Cordyline australis; Pandanus Blancoi, an elegant tall narrow-leaved sort of a glaucous green colour; Yucca canaliculata with long narrow thread-margined leaves, Bonapartea stricta and many others. The south end, which formed the communication with the hardy division of the show, was unoccupied by plants, an aquarium being set in the centre.

At the south-east angle was a grand collection of large Palms, Yuccas, and plants of like character, among which we especially noted a Beaucarnea 5 ft. high, with the bulb-like base a foot in diameter; Oreodoxa Sanchona, a slender-stemmed plant with pinnate leaves, like a miniature Seaforthia; Cocos australis; a Seaforthia elegans, 20 ft. high; Plectocomia spectabilis, 20 ft.; Caryota javanica, 10 ft.; Zamia horrida, in fruit; Agave xylinacantha, a fine species, with the leaves edged by coarse recurved hooked spines; Agave Rumphii, with long narrowish glaucous leaves edged by small spines; a beautiful Dasylirion junceum, with a globular trunk nearly a foot in diameter, and a magnificent crown, some ten feet across, of its long rush-like leaves; Beaucarnea glauca, a grand specimen with the bulb a foot and a half through, from which the 4 ft. stem tapered upwards and bore a head some six feet across of narrow glaucous leaves; Dasylirion serratifolium, with twisted glaucous spiny leaves, six feet long, this plant accompanied by a dead flower-stem of about ten feet high. Elevated in the front rank of this fine group was a very handsome Yucca Parmentieri, with a stem two feet long, bearing glaucous thread-edged leaves. Next came Cyathea Beyrichiana, with a thickish 5 ft. stem, standing over a bed of Roses; then Cyathea mexicana, with a slender 5 ft. stem, elevated in the midst of a group of dwarf standard Azaleas,—the fronds of both these Ferns forming a graceful canopy above the flowers. Then came a group of mixed flowering plants, with three Tree Ferns disposed so as to overshadow them; a group of Rhopalas, Aralias, &c.; more Palms and Ferns, intermixed with fine samples of Pandanus and margined with Dwarf Roses and hardy variegated plants. Then, standing out as one of the most noble features of the whole show, was a magnificent specimen of Cibotium princeps from Mr. Linden; this plant had a stem about 5 feet high, bearing five noble fronds some 15 feet or more in length each with about a dozen pairs of pinnæ, and having the thick stipites clothed with abundance of pallid scales. Beneath the Ferns came more Roses; and then a group of mixed plants, amongst them Beschcorneria yuccoides in flower, terminated the arrangement up to the entrance doors.

To the right of the entrance was another grand group of Palms and Cycads, in the centre of which stood a magnificent Seaforthia robusta with a stem about 3 feet high, and fronds fully 15 feet long. This group was bordered on the one side by Aralias and Rhopalas, among the former of which were Aralia Lindeni, a palmate-leaved sort with serrated elliptic leaflets, and a very well-marked Aralia japonica variegata; and on the other side by Azaleas, amongst which Gloire de Belgique and Roi Leopold were prominent by their merit; the latter is a large smooth light red with violet stain on the upper segments. Then came Roses, more Azaleas, and a dwarf set of Bromelias, over which last stood a tall Alsophila australis placed upon a stand. Finally, in the north-eastern corner was a miscellaneous group of large flowering plants, in which was a capital Richardia æthiopica, dwarf and sturdy, in a small pot, but with half a dozen finely-developed flowers.

Passing into the enclosed warmer part of the building already referred to, a space some 50 feet by 80 feet, the new plants and Orchids became the chief subjects of attention. On the right commenced a group of novelties from M. A. Verschaffelt, containing several of the beautiful Japanese Maples—Acer japonicum jucundum with palmate leaves of a very lively pale green colour; A. j. sanguineum with bronzy-red palmate leaves; A. j. princeps with finely dissected leaves coloured bronze and pink; and A. j. Frederici Gulielmi, with dissected leaves wholly of a bronzy red; also Ficus Porteana, a tall plant with oblong leaves 18 inches long, here and there slightly lobed or becoming sinuated; Aspidium Ghiesbreghti, having the segments notched with a few sharp teeth; a triangular quadripinnate Fern; Dieffenbachia Baraquiniana, a fine Brazilian Arad, with ivory-white stalks and midribs to its green slightly blotched leaves; Phrynium Vanden Heckii, a beautiful dwarf Marantad with dark green leaves, having a central and two lateral feathery bands of grey-green, and the under surface stained with purplish red; Gymnostachyum Verschaffelti, a fine plant; Calamus Imperatrice Marie, a slender pinnate Palm with spiny rachids and stalks. Then on the east side more new plants; a group of Orchids containing the Dendrobium Farmeri, Odontoglossum nævium and O. Pescatorei beautifully coloured, Phalænopsis amabilis and grandiflora, Lælia purpurata; and the Cypripediums Hookeri, Lowii, and barbatum majus. Near these stood a fine specimen of the curious Tacca pinnatifida, with its tall pedately lobed leaves and taller flowering stems; and as a still finer example of cultivation a capital Campylobotrys Verschaffeltii, three feet high, with square four-winged stems, plentifully furnished with leaves a foot and a half long, and really handsome. Then a group of Pandanus; with Cattleya Brabantiæ, one of Mr. Veitch's dwarf hybrids, standing in front. This Cattleya, one of the race of dwarfs, had terete stems, a pair of ligulate-oblong leaves, and large flowers, the sepals and petals being black thickly spotted with rose, and the lip with a retuso-reniform front lobe of a Magenta rose colour, and white lateral lobes curved over the broad rose-coloured column.

Along the north end came first a group of Orchids containing several Vandas; Phalænopsis Schilleriana, with eight large flowers on a smallish plant; and two forms of the handsome Dendrobium infundibulum, one with a stain of deep orange in the partially rolled-up lip: another with the stain of a paler orange-yellow. Then a dozen extremely well-grown Anæctochils, consisting of argenteus and argenteus pictus, intermedius, Lowii and Lowii virescens, Petola, querceticola, speciosus, setaceus, Veitchii, and zebrinus. Then a collection of new Palms, the most interesting of which were, Areca Verschaffelti, which differs from A. aurea in the orange-coloured line at the back of the rachis; Pinanga maculata, a spotted sort, beautifully bronzy when young; Chamærops Ghiesbreghtii; Stephensonia grandifolia; Brahea nitida, an uncommon Fan Palm; and Latania Verschaffelti and glaucophylla. To these succeeded the best group of Orchids in the exhibition, that which won the Duchesse de Brabant's gold medal. This came from Mr. Linden, and included Vanda Cathcarti, a curious species, the sepals and petals thickly cross-lined with cinnamon-red, and the free calciform lip white with one or two red lines down the centre, having a yellow frilled edge. The collection contained several other Vandas, as well as Phaius maculatus, with its spotted leaves and lively yellow flowers, a plant not often seen at our English shows. In a group of new Ferns which succeeded was Asplenium alatum, looking like a thin-leaved A. marinum with a winged rachis; Lomatia pteropus, remarkable for its abruptly contracted lower pinnæ; and Litobrochia (Doryopteris) Alcyonis, a Fern which when well-grown, as it occurred in more than one collection in the exhibition, proves sufficiently distinct, having a long terminal and two long lateral lobes, and shorter posterior ones at the base of the latter. Here also were more new Palms; a group of poor Orchids; a set of Screw Pines; and then a fine collection of Arads, of which the most noticeable were Alocasia zebrina, Colocasia macrorhiza variegata, and C. albo-violacea; Caladium Veitchii and C. Lowii, the latter much the finer of the two.

These were fronted with dwarf Cacti. Passing over one of the centre tables to follow up this outer series, we come upon a large group of Marantas, containing 23 species, along with a Heliconia and a Thalia. Then a group of Anthuriums, Philodendrons, &c., brings us to the western opening communicating with the larger exhibition hall.

Between the two openings for ingress and egress in this party wall was a side table full of novelties. Of Ferns, there was Cibotium regale from Mexico, with a thick, very shaggy, soft stem, and long arching fronds, nearly related to Schiedei; a splendid example of Todea (or as innovators now affect to call it, Leptopteris) superba; Pteris serrulata crispa; Gymnogramma Pearcii, and others. Of Palms there were, Regelia (?) majestica, from Madagascar, a fine looking plant in the young state, having needle-spined stems, and very broad bilobed leaves in the way of Stephensonia, but only erosodentate at the edge. Here also were Dieffenbachia spectabilis, with green stems and leaf-stalks, and green leaf-blades, dabbed here and there with gray, and blotched with yellow-green; D. gigantea, with green stems, spotted stalks, and green leaves marked more especially in the central part with mixed angular spots of cream-colour and pale yellow; D. grandis, with green stems, spotted stalks, and green leaf-blades; Caladium Leopoldi, a handsome sort, with broad almost cordate leaves, marbled and mottled with red, and scattered over with pinkish blotches; C. Rongieri, also broad-leaved, with red ribs in the pale green centre, and outwardly dark green with angular white spots; Amorphophallus nivosa, from Brazil, an extremely odd-looking plant with the marbled stem of its one leaf three inches thick at the base, and six feet high, perfectly upright, and bearing at top a pedate compoundly pinnatifid horizontal head of leaflets; Maranta splendida, a long-stalked Mexican species, with large leaf-blades dark green, marked with a broad continuous band of yellow-green towards the margin; Maranta Veitchii, probably a Phrynium, but a very handsome plant, with tallish leaf-stalks, broadly oblong ovate leaf-blades, which are beautifully marked with dark green and gray, and are also deep red behind, and quite transparent in the paler parts. Here also was Dracæna Cooperi, the new Caledonian species, coloured like terminalis, but with recurving leaves; and a very dwarf Philippine Island Maranta, very freely striped with creamy white.

The two centre tables in this division were a good deal taken up by collections of officinal and fruit-bearing plants from some of the Belgian Botanic Gardens, and the collections of the leading nurserymen. A very good plant of Myristica was among them, and there was Quassia amara in flower. Here also were placed most of the specimen Orchids, one of which, from Mr. Veitch, a Cypripedium villosum, carried off the first prize. There were besides some good Vandas, and one or two collections of Anæctochils, some in pots, others placed in a large glass case, the latter having the surface covered with Berlin wool of different shades of green intermixed; the wool had been worked up and afterwards unravelled, and would have passed well for green moss; the advantage of using it, however, being not to supply the place of moss so much as to keep down the condensation of vapour on the glass. There were here also collections of Nepenths, Caladiums, Begonias, erect Gloxinias, Screw Pines, Marantas, Bromelias, Lycopods, and in one set seven species of Campylobotrys, not forming an attractive group, the colours being too heavy.

Exterior to the building already described, occupying the southern end, and extending partly along the eastern side, was what may be called the hardy Annex, containing various exhibitions of hardy subjects, with some overflowings from the central building. This was a frame-work of wood covered with canvas, and communicated with the glazed building, at the southern end of the latter. This southern part contained a large detached mass, the centre of which was made up of Palms and Cycads; the margin consisted of a set of hardy bulbs in pots; then a very handsome specimen of Dracæna Draco, about six feet high, and beautifully clothed, standing out from the rest; then a fine collection of varieties of the Holly, mostly pyramidal plants of from three to four feet in height, shown by M. Rosseels, of Louvain, and consisting of about 50 kinds; next a group of Conifers; then Mushrooms growing out of a round-headed heap of earth, about three feet across at the base; then forced hardy plants, comprising a good Rose Acacia—one of the neglected plants of the present day; next some poor Acacias; and finally another group of Conifers.

Commencing on the western side of this division, the right-hand corner was filled out with standard Rhododendron arboreum, of various colours, flanked with large hardy flowering shrubs, as Magnolias, Cherries, Pæonies, Azaleas, &c., and finished off with Roses, Hollies, and hardy variegated shrubs. At the southern end, the table was devoted to vegetables and fruit, many of the former growing in pots, as well as gathered; among them were good Lettuces and Dwarf Peas, fine Asparagus, middling Strawberries, some Pine Apples, a few Grapes, and a good many Apples and Pears; some samples of the latter kinds of fruit being very good in quality. Beyond these were seedling Azaleas, a few of which appeared worth attention. The best were Octave Van der Cruyssen, a very large cerise-rose, with dense violet-rose spotting; Triomphe de l'Exposition Universelle, a very large white, striped with rose and carmine, and stained with greenish spots, but not good in shape; Madame Van der Cruyssen, a fine deep violet-rose, of excellent form, and very rich in colour, also large, bold, and well spotted; Madame Vervaene, a deep blush, with purple spots disposed in about four somewhat radiating series on the upper segments, the margins being white; Guillaume III., a large wavy-margined light brick-red, slightly spotted, and distinct in colour; Roi des Belges, a showy, deep rose, finely spotted, but reflexing; and Madame de Cannart d'Hamale, a large white, with greenish blotch, and sometimes slightly striped. Further on were groups of Camellias, evidently the worse for travelling; the new Lastrea Standishii; various forms of Bouquets, with a front rank of variegated Pelargoniums; and a few Hyacinths and Tulips. Then came some lots of Von Siebold's Japanese plants, in one of which were 20 sorts of Maples, many of them with beautiful foliage. The most charming was one which Siebold calls A. dissectum fol. pinnatifidis viridibus with finely cut leaves of a beautiful delicate green; A. septemlobum had green leaves, with serrated segments, and A. septemlobum bicolor had the tips of all the pale green segments bronze-red; A. digitatum had narrow segments entirely bronze-red; and A. Meikets had leaves considerably broader than any of the rest, green, and palmatifid. Among some hardy variegated plants which followed were finely marked examples of the variegated Quercus Cerris, and of the Cratægus Oxyacantha. The northern end was filled out by a group of large Bays and Hollies in one corner, with miscellaneous flowering plants and Auriculas in front, and a group of standard round-headed Bays, Myrtles, Myoporum lætum, Laurustinus, Clethras, Pomegranates, Eugenia australis, and other things, margined with some two dozen kinds of Ivy in pots, in the opposite corner. Between these two groups was a well-placed set of fine Dracænas, with variegated Pelargoniums and Anemones as a margin. Then followed along the western side, and open to the principal building, various collections of Agaves, of mixed flowers, of large Conifers, and of hardy variegated trees, the last group being one set of fine, healthy-looking Conifers, with a border of a light variety of hardy Rhododendrons. Of the hardy variegated trees, the most remarkable were, a white variegated Common Ash, finely marked; a golden-striped Maple; both silver and golden variegated Horsechestnuts; and good forms of Althæa frutex, Cornus sanguinea, and Cornus Mascula; all with cream-coloured variegation.

The centre of this eastern annex was occupied by a large irregular mass of various kinds of plants. Commencing opposite the Conifers just named, and retracing our steps, we find in succession a bed of French and another of zonate Pelargoniums; a second fine set of pyramidal Hollies in great variety; one of the silvered globes effectively placed for reflection; a Rose bank; a monster group of hardy Rhododendrons, with a border of variegated herbaceous plants; a group of Rhopalas and Aralias, with zonate Pelargoniums, and some good Mignonette in front; and a 6-feet flat basket full of flowers; some Palms and Agaves; a bank of Roses; more Azaleas, Roses, and Conifers; some large Palms and Cycads, with Dasylirions, &c., extending into the background, and variegated plants in front; more Agaves, Yuccas, and Rhopalas; a fine group of Hippeasters not named; Acacias almost out of blossom; Agaves, Roulinias, and Yuccas, repeated; a bed of Roses, with variegated Pelargoniums in front; Agaves, Dracœnas, Yuccas, &c., again; a group of flowering plants; more vegetables, including Finochio; some large Conifers, with a pyramid of Strawberries in pots in front; then a patch of light-coloured Rhododendrons extending to the French spotted Pelargoniums already mentioned.

A few good plants, including some remarkable specimens of Grevillea longifolia, and a collection of Hollies, were placed outside, where were also examples of Fruit-tree-training and various Horticultural appliances.

The exhibitors who contributed most extensively were the following:—M. Beaucarne, of Eenaeme; MM. Bruylant Frères of Schaerbeck; M. De Cock, of Ghent; M. De Smet, of Ghent; Madame Legrelle d'Hanis, of Antwerp; M. Linden, of Brussels; Baron Osy, of Antwerp; M. Rosseels, of Louvain; M. Vanden Hecke, of Ghent; M. Vanden Ouwelant, of Laeken; M. Vandermaelen, of Molenbeek-St.-Jean; M. Aug. Van Geert, of Ghent; Mr. Veitch, of London; M. Amb. Verschaffelt, of Ghent; M. Jean Verschaffelt, of Ghent; and M. Von Siebold, of Leyden.

The following is a list of the principal prizes awarded:—

75 plants in flower.—1 (Large Gold Medal, given by the Duc de Brabant), M. Amb. Verschaffelt, Ghent; 2, M. de Koster, Brussels.

50 plants in flower.—1, M. Van der Ouwelant, Laeken; 2, M. Van Kiel, Brussels.

25 plants in flower (Amateurs).—1, Madame Tertzweil-Boucqué, of Ghent. (Nurserymanj: 1, M. Dallière, of Ghent; 2, M. Rosseels, ainé, of Louvain.

12 New Plants, introduced to Europe by the exhibitor, not in commerce.—1 (Gold Medal), Mr. Veitch, of London; 2, M. Amb. Verschaffelt, of Ghent.

25 New Plants, not introduced to Europe before 1865.—1 (Gold Medal), M. Amb. Verschaffelt; 2, M. Linden, of Brussels.

3 New Plants, shown for the first time in flower.—1, Mr. Veitch.

Exotic Plants, in flower, newly introduced to Europe.—1, M. Von Siebold, of Leyden, for Cerasus pseudo-cerasus fl. roseo plena; 2, Mr. Veitch, for Anthurium Scherzerianum.

Exotic Plants not in flower, newly introduced to Europe.—1, Mr. Veitch, for Maranta Veitchii; 2, M. Amb. Verschaffelt, by acclamation, for Dieffenbachia Baraquiniana.

Plant from Seed, presented in flower for the first time.—1, Mr. Veitch, for Cattleya Brabantiæ; 2, Mr. Parker, for Rhododendron Countess of Haddington.

The most remarkable Plant in flower (Orchids excepted).—1, M. Aug. Van Geert, for Rhododendron Nuttallii; 2, Mr. Veitch, for Rhododendron jasminiflorum.

The most remarkable Plant for good culture, in or out of flower.—1, Mr. Veitch, for Erica elegans; 2, M. Kegeljan, for Campylobotrys Verschaffeltii.

50 Ornamental Plants of large size.—1 (Gold Medal), M. Amb. Verschaffelt; 2d, M. le Baron Osy.

10 Ornamental Plants of large size (Amateurs).—1, M. Allard, of Brussels; 2, M. Beaucarne, of Eenaeme. (Nurserymen): 1, M. Van Riet, of Brussels; 2, M. Lubbers, of Ixelles.

20 Dracænas, &c., (Amateurs)—1, Madame Legrelle-D'Hanis, of Antwerp; 2, M. Vandermaelen, of Brussels. (Nurserymen): 1, M. J. Verschaffelt, of Ghent; 2, M. de Beukelaer, of Schaerbeek.

25 Exotic Orchids in flower, unique prize: (Large Gold Medal given by the Duchesse de Brabant).—M. Linden of Brussels.

15 Exotic Orchids in flower.—1 (Gold Medal), Mr. Veitch, of London; 2, M. Beaucarne.

The best Orchid in flower.—1, Mr. Veitch, for Cypripedium villosum; 2, Madame de Cannart d'Hamale, for Vanda suavis.

25 Palms, Pandanus and Cycads of large size.—1, (Gold Medal), M. Amb. Verschaffelt; 2, M. Vandermaelen, and M. Linden.

20 Palms, Cycads and Cyclanths.—1, M. Vanden Hecke; 2, M. Vanden Ouwelant.

25 Palms of recent introduction.—1, M. A. Verschaffelt; 2, M. Linden.

25 Stove and Greenhouse Plants, with ornamental foliage.—1 (Gold Medal), M. Linden; 2, Madame Legrelle-d'Hanis.

10 species of Pandanus, (Amateurs).—1, M. Beaucarne; 2, Madame Legrelle-d'Hanis. (Nurserymen): 1, M. Linden; 2, M. Aug. Van Geert.

12 Tree Ferns.—1 (Gold Medal) M. Linden.

6 Tree Ferns (Amateurs).—1, M. Vanden Hecke. (Nurserymen): 1, M. Linden.

The best Tree Fern.—1, M. Linden, for Cibotium princeps; 2, M. Amb. Verschaffelt, for Cyathea dealbata.

30 Exotic Ferns (Amateurs).—1, Madame Legrelle d'Hanis; 2, M. Vanden Hecke. (Nurserymen): 1, M. Linden.

12 New Exotic Ferns.—1, M. Linden; 2, M. Aug. Van Geert.

Collection of Lycopodiums.—1, Vanden Hecke; 2, Madame Legrelle d'Hanis.

Collection of Rhopalas and Araliaceæ (Amateurs).—1, M. le Baron Osy; 2, Madame Legrelle d'Hanis. (Nurserymen): 1, M. Linden.

Collection of Nepenthes.—1, Mr. Veitch.

Collection of Bromeliaceæ in flower or not (Amateurs).—1, M. Beaucarne; 2, Madame Legrelle d'Hanis. (Nurserymen): 1, Linden.

Collection of Aroïdeæ.—Madame Legrelle d'Hanis.

25 Large Variegated Plants (Amateurs).—1, Madame Legrelle d'Hanis and M. Vanden Hecke. (Nurserymen): 2, M. Linden.

25 Variegated Plants.—1, Madame Legrelle d'Hanis; 2, M. Vanden Hecke.

Collection of Marantas (Amateurs)—1, Madame Legrelle-d'Hanis; 2d, Madame Legrelle-d'Hanis. (Nurserymen): 1, M. Linden.

20 Caladiums (Amateurs).—1, M. Kegeljan; 2, Madame Legrelle d'Hanis and M. Lemoinier, of Lille. (Nurserymen): 1, M. Amb. Verschaffelt.

Collection of Alocasia and Colocasia (Amateurs).—1, Madame Legrelle-d'Hanis. (Nurserymen): 1, M. Linden.

Collection of Anæctochilus.—1, M. Amb. Verschaffelt; 2, Madame Legrelle-d'Hanis.

Collection of Officinal or useful Exotic Plants.—1, M. Linden; 2, M. Von Siebold.

Collection of Tropical Fruit Trees—1, M. Linden.

30 Begonias—1, M. Barbanson.

Collection of Cacti in flower or not.—1, M. Dedeyn, of Ninove.

Collection of Amaryllis in flower (Amateurs).—1, M. Beaucarne; 2, M. Vanden Bossche. (Nurserymen): 1, M. Boelens; 2, M. Vandriessche.

50 Camellias in flower.—1 (Gold Medal), M. Van den Ouwelant; 2, M. Jean Verschaffelt.

25 Camellias in flower (Amateurs).—1, M. Beaucarne; 2, M. Carolus, of Louvain. (Nurserymen): 1, MM. Vervaene, of Ghent.

6 Camellias in flower.—1 and 2, M. Vervaene père, of Ghent.

75 Rhododendrons.—1 (Gold Medal), M. Decraet-Bracq, of Ghent.

50 Rhododendrons.—1, M. Byls.

25 Rhododendrons (Amateurs).—1, M. De Neuf and M. Vanden Ouwelant. (Nurserymen): 1, M. Jacob Makoy and M. Amb. Verschaffelt; 2, M. Coen, of Laeken.

50 Azalea indica.—1 (Gold Medal, given by the Comte de Flandres), M. Amb. Verschaffelt; 2, Madame Legrelle-d'Hanis, and M. Vanden Hecke.

30 Azalea indica (Amateurs).—2, M. Vanden Ouwelant. (Nurserymen): 1, M. Vander Meulen, of Ghent; 2, MM. J. Vervaene et Fils.

15 Azalea indica (Amateurs).—1, M. Vanden Ouwelant. (Nurserymen): 1, M. Vander Meulen; 2, M. Bruylant.

6 New Azalea indica.—1, M. Vander Cruysse; 2, M. Vervaene père.

Collection of Liliaceæ, Amaryllideæ and Irideæ in flower.—1, M. Vander Linden of Antwerp.

20 Yuccas (Amateurs).—1, M. Vandermaelen; 2, Madame Ch. Verhulst. (Nurserymen): 1, M. Jean Verschaffelt; 2, M. de Beukelaer.

20 Agaves, Bonaparteas, Aloes, &c. (Amateurs).—1, M. Beaucarne; 2, Madame Legrelle d'Hanis. (Nurserymen): 1, M. Jean Verschaffelt; 2, M. de Beukelaer.

100 Roses in pots (Gold Medal).—1, M. Peeters, of Saint-Gilles; 2, M. Marest, of Paris.

50 Roses in pots (Amateurs).—2, M. Vanden Ouwelant. (Nurserymen): 1, M. Renaud, of Versailles; 2, M. Peeters, and M. Albeerdienst, of Ghent.

25 Roses in pots.—1, M. Humann, of Mayence; 2, M. Vanden Ouwelant.

20 Ericas and Epacris.—1, M. Dallière.

15 New Holland Acacias.—1 and 2, M. Jean Verschaffelt.

75 Hyacinths in flower.—1, M. Vander Linden.

100 Tulips and Narcissus.—1, M. Vander Linden.

25 or more Hollies.—1, M. Rosseels; 2, M. Douchet.

25 Forced Plants in flower.—1, M. Medaer.

12 Forced Plants in flower.—1, Madame Tertzweil-Boucqué.

Collection of large Oranges, Bays, Myrtles, &c.—1, M. Vanden Ouwelant; 2, M. Van Riet.

30 Large Conifers.—1 (Gold Medal), M. Vanden Ouwelant; 2, M. Van Geert, père.

20 Conifers.—1, M. Aug. Van Geert; 2, M Gaujard.

10 or more New Conifers.—1, Mr. Veitch; 2, M. Aug. Van Geert.

35 Variegated Trees or Shrubs.—1, M. Desmet; 2, M. Rosseels.

50 Pelargoniums.—2, Madame Halkin

50 Pelargonium Inquinans and Zonale.—1, Madame Halkin, of Brussels; 2, M. Barbanson.

30 Variegated Pelargoniums.—1, M. Dallière, of Ghent; 2, M. Delobel, of Loos.

30 Hardy Herbaceous Plants in pots.—1, M. Medaer, of Saint-Gilles.

30 Hardy Variegated Herbaceous plants.—1, M. De Smet; 2, M. Vanden Ouwelant.

30 Hardy Ferns in pots.—1, M. Stelzner, of Ghent; 2, Madame Ch. Verhulst, of Stalle.

Forced Grapes (Amateurs).—1, M. de Wauthier, of Brussels; 2, M. Vander Plas. (Nurserymen): 1, M. D. Goes, of Schaerbeek.

6 Pine Apples.—1, M. le Comte Meeus, of Brussels; 2, M. Vander Plas.

Strawberries.—1, M. Vander Plas; 2, M. Baron de Vinck.

Collection of Pears and Apples of 1863.—1, M. le Comte de Ribaucourt, and M. de Biseau d'Hauteville, of Binche; 2, M. de Jonghe, of Brussels; and M. Capeinick, of Ghent.

10 Fruit Trees in pots, boxes, &c.—1, MM. Jamin et Durand, of Paris.

Collection of Forced Vegetables, 30 sorts or more.—1 (Gold Medal), M. Jacqmotte, of Brussels.

Collection of Salads.—1, M. Allard, of Brussels; 2, M. Jacqmotte.

Mushrooms.—1, M. Mortier, of Schaerbeek.

The Medals of Honour offered by the King were awarded: that for foreigners to Mr. Veitch; and that for Belgians between Madame Legrelle d'Hanis, M. Linden, and M. Amb. Verschaffelt.

Societies.

ROYAL HORTICULTURAL: *April* 26 (*Election of Fellows*).—On this occasion the following candidates were elected Fellows:—

C. P. Allen, Esq.; Tye Bainbridge, Esq.; H. Blackburn, Esq.; Mrs. Brooking; R. Chadwick, Esq.; Mrs. Clutterbuck, Mrs. C. Colville, Mrs. Davis, Mrs. Edwards, Mrs. E. Elliot, Mr. Gibson, E. Hackett, Esq.; H. B. Kent, Esq.; James Lord, Esq.; R. Lowenthal, Esq.; Captain Martin, Mrs. Maxwell, Hon. Mrs. David Murray, Miss Parkin, J. Parkinson, Esq; Lady G. Paulet, W. C. Pickersgill, Esq.; Mrs. Praed, Mrs. Scrimgeour, G. Shepherd, Esq.; G. Simpson, Esq.; Mrs. Somerset, Lord Stratford de Redcliffe, Mrs. Walkinshaw, Mrs. W. C. Wentworth, J. E. Williams, Esq.; and Miss Orby Wombell.

After the Candidates just named had been elected, Mr. BATES, to whom allusion is made in another column, proceeded to deliver a lecture on the "Vegetation and Insect Life of the Amazons," from which the following are extracts. He said:—

Of the three great river-plains of South America, namely those of the Orinoco, the Amazons and the Plata, the central and largest, or that of the Amazons, is the only one that is clothed with the rich primæval forest so distinctive of this splendid continent. A crowded and luxuriant wilderness of lofty trees covers the whole of the banks of the great steam, from the slopes of the Andes to its embouchure in the Atlantic: so that the traveller, in ascending from the sea-port of Pará to the terminus of navigation—a distance of 2600 miles—sees no break in the serried mass of jungle that forms the water-frontage. The general features of the vegetation are similar to those which characterise the virgin forests of Southern Brazil, namely great picturesqueness in combination and grandeur, beauty and excessive multiplicity of specific forms. There are, however, many points of difference: the region is traversed throughout its whole length by the equator, and permeated by numerous broad streams; the high and uniform temperature and abundant moisture hence resulting, stimulate a much loftier growth of trees, and favour the existence of many noble forms of vegetation unknown in Southern Brazil or other parts of tropical America. But the forest-clothing of the Amazons valley is by no means uniform: differences of soil, climate and hydrographical conditions exist, which, although apparently small, have a powerful influence on the nature of the vegetation. The great plain, indeed, may be divided into three parts, each of which has much that is peculiar to itself. First, there is what may be called the Delta region of the river; secondly, the valley of the Lower Amazons, a district about 200 miles long and from 30 to 80 miles wide; and the third and last division of the country is the great plain of the Upper Amazons.

Mr. Bates next proceeded to examine a few of the more interesting features of the vegetation in each of the three districts just alluded to; beginning with the Delta region, or that lying nearest the Atlantic.

The land (he said), in this portion of the plain, as I have before mentioned, is of small elevation, and the innumerable channels which intersect it as well as the broad rivers, have not the nature of streams, although wholly of fresh water, but of creeks, ebbing and flowing with the tide. These conditions determine, to a great extent, the character of the forest. I will not speak of the Mangrove woods which fringe the banks of all the creeks near the mouth of the river, but carrying you a few miles towards the interior dwell awhile on other features more peculiar to the region. A traveller, embarked in one of the palm-thatched canoes of the country, may wander for weeks along these narrow, silent channels, away from the broad reaches of the main river. The water-frontage, every step of the way, is formed of lofty walls of greenery, the forest is without paths, and all communication between the scattered houses and villages is by means of canoes. As there are no powerful currents to tear away the earthy banks, the luxuriant masses of foliage seem to rest on the surface of the water. For long distances the green walls are draped with a profusion of beautiful-leaved climbing plants (Ipomœas, Convolvuli, Bignonias, Paullinias, Passion flowers, and so forth), concealing, as with an artistically-designed leafy curtain, the trunks of the trees. They even climb up the lianas or bush-ropes which hang obliquely from the boughs of the taller trees, and decorate the boughs themselves with festoons and garlands. Out of breaks in the rich mantle peep the feathery crowns of Palms, which are again hung with strings of creepers; and in many places the whole is beautified to the highest degree by spikes of pink and crimson blossom, or the yellow, trumpet-shaped flowers of the Bignonia or scarlet stars of a large species of Passion flower. In some of the channels this wonderful drapery is much more scanty, and then glimpses are obtained into the interior of the wilderness. The trees are seen to be of endless variety, and the spaces between them filled with a serried growth of Heliconias, Marantas, and wild Bananas; plants, some of them 12 to 15 feet high, which, by the great length and breadth of their glossy light green leaf-blades form a striking addition to the richness of the sylvan picture.

The most peculiar feature of the forests in the Delta region is the very large proportion of Palms, and of the broad-leaved plants already alluded to, of the Banana and Arum types. These occur in most parts, intermingled with the dense growth of ordinary-looking exogenous trees. For scores of miles the ground-work of the forest-picture is formed of the rounded shapes of these trees, having the same general outline as our Oaks, Elms, and so forth; the plumy heads of Palms, in great diversity of form, serving merely as fringe-work or decoration. But in other places Palms predominate, and it is not uncommon to see a dozen or more species, beautifully diversified in shape of leaves, crowns, and stems, growing partly in small groups, partly intermingled for miles without much mixture of exogenous trees. In such places the channels are lined with rows of thick-stemmed arborescent Arums or Caladiums, rising like palisades to a height of 15 feet, with heads of large and glossy heart-shaped leaves.

The ordinary forest trees have an average height of about 80 or 100 feet, but at intervals of a furlong or so a veritable colossus towers up and expands its dome-shaped crown far above the rest. These loftier trees generally belong to the silk-cotton order, the grandest and commonest species of which is the Eriodendron Samauma, whose large woody fruit-capsules inclose a mass of silky fibres enveloping the seed. Another kind is the Bombax Monguba, which has a huge tapering trunk, with dark green bark streaked with yellow. Its flowers, before opening, form large red balls studding the branches, and in æstivation shed their masses of thick heavy stamens, which fall heavily to the ground. India-rubber trees grow in large quantities in these same low-lying districts, and the localities are visited annually in the dry season by collectors, the gathering and exporting of this important material constituting a great part of the industry and trade of the country. The trees have no resemblance whatever to the well-known Caoutchouc plant (Ficus elastica), which we are accustomed in England to regard as the producer of India-rubber, but belong to a quite different order of plants.

After describing some of the more remarkable Palms of the Delta region, Mr. Bates next passed on to the vegetation of the second division of the country, namely, the narrow plains of the Lower Amazons.

We find here (he remarked), a sylvan landscape, entirely different from that just adverted to. As before mentioned, the forest in many parts is limited to a narrow belt of wood along the banks of the streams; the interior of the land being a sandy campo region, covered with a growth of coarse hairy Grasses. These grassy plains, however, have by no means a desert aspect. They are varied with Leguminous bushes having brilliant blossoms, and with scattered trees, many of which, such as the Sucu-uba (Plumieria phagedænica), the Muruxi (Byrsomina), and the Barbatemon (Stryphnodendron), have beautifully glossy foliage, and a profusion of flowers of a white, yellow, or tender blue colour. The plains are also varied with numerous, small, isolated patches of wood, standing in the midst of the grassy level, like copses on a lawn in an English landscape. The hills which limit these plains both on the north and south are generally bare of trees, but one is often surprised to see, rising by the side of a naked hill, another of similar form and height, richly wooded to the summit; the neighbourhood of water seeming to determine the absence or presence of forest.

The general appearance of these limited woods is not greatly different from that of woods in temperate climates. Broad-leaved plants and Palm trees are not externally visible, but only masses of ordinary-looking forest trees having a rounded outline and moderate height. On penetrating, however, into the dense thickets of which they are composed, it is found that the composition of the woods is essentially tropical. The trees are often small species of the same genera which produce loftier kinds in the more luxuriant forests of the alluvial lands; their stems and branches are loaded with similar forms of epiphytous plants and woody climbers, or bush ropes bind the whole together. Palms are plentiful in the thickets, but instead of being of large growth consist of slender dwarf species, most frequently covered with spines (Bactris). One extremely beautiful species, the Attalea spectabilis, peculiar to this sandy district, has no stem at all, but radiates its rigid, elegantly pinnate leaves directly from its root in the earth. Large species of Agaves, Bromeliaceæ, including the wild Pine Apple, whose fruit though small is pleasant eating, and Cacti, are also more plentiful here than in other parts of the country, giving a peculiar character to the general vegetation.

Leaving the varied and picturesque valley of the Lower Amazons, we journey onward to the boundless wooded plains of the Upper River. The traveller, once embarked on the Solimoens, as the Upper Amazons is called by the natives, soon finds that he has entered a region quite different from those bordering the lower course of the stream. He is now in the centre of the continent, remote from the influence of the sea breezes. The river, three miles broad, rolls onward its turbid current through a profound solitude, between broken, clayey, timber-strewn shores, bearing on its surface a continuous line of uprooted trees, islets of marsh plants and other *débris* torn from the land. A stagnant cloudy atmosphere, varied by intervals of burning sunshine and sudden hurricanes, are the chief features of the climate. The forest is loftier, the vegetation more riotous, and, as far as trees are concerned, much more varied than in other portions of the country. And this kind of country continues without interruption in a straight line for 1200 miles! It would occupy the lifetime of a multitude of botanists to investigate the vegetation of so extensive a region; yet, as far as I am aware, no professed botanist has yet paid it more than a passing visit. It may be imagined, therefore, what a fine field lies here for future travellers. The time I spent in this wilderness—four years and a half—was almost wholly occupied in collecting and observing the animal tenants of the region; the few notes I made on the vegetation were only of a general nature. I could not, however, fail of remarking how many of the most conspicuous trees of the forest—the wild fruit trees, for instance, which are extremely numerous, yield delicious fruit, and are mostly unknown to science—were peculiar to this part of the Amazons valley.

Tall Grasses are a striking feature in the scenery; they grow to the height of about 20 feet, their leaves being arranged in the form of a fan, and their long flower stalks terminating in elegant plume-like flowers of a gray colour. The flower stems are of great length and straightness, furnishing the Indians with excellent shafts for their arrows. In some places the Urucurí Palm (Attalea excelsa) grows by thousands; their smooth columnar stems are all of nearly equal height (40 or 50 feet), and their broad finely-pinnated leaves interlock above and form arches and woven canopies of elegant and diversified shapes. Almost every individual Palm has beneath its crown a bouquet of epiphytous plants, a few glossy leaves of Pothos, varied with pendent fronds of Ferns, and interlaced strings of graceful creepers, all nourished on the decaying matter of the bases of the old broken leaves; this ornamental leaf-work gives an indescribable charm to the interior of the wilderness. The plant which I have termed Wild Banana grows here in vast abundance. The Urania amazonica is one of the grandest and most characteristic trees of the Amazonian forests. Its average height is about 30 feet, and its leaves, as long as those of the Banana, but broader, and more erect and entire, have the same silky surface, varying in shade of green with the play of light. It is called by the Indians Pacova sororóca, that is, Banana thatch-house, or supplying leaves with which houses are thatched, half-a-dozen of the leaves being sufficient to cover an ordinary Indian hut. The flower stem is stout and erect, having a number of large boat-shaped spathes, and the fruit bears a number of largish mealy seeds, which are roasted and eaten by the natives.

As regards the interior of the wilderness, Mr. Bates said:—

The only means of penetrating with ease into the great forest in any part of the Amazons region is to follow the narrow paths which the inhabitants have made in the neighbourhood of their scattered settlements. Near the larger towns these paths are sometimes broad enough to admit a wheeled vehicle, and penetrate a long distance into the interior, but in the vicinity of the smaller places they are simply narrow tracks, made chiefly by hunters, and seldom go farther than a few miles. To wander from them, except in the company of Indians, is to lose one's way in the inhospitable jungle, and perish helplessly. The roads lie wholly under shade, the crowns of the lofty trees on each side meeting overhead, and the damp ground beneath, unwarmed by the sun, is covered with a vast accumulation of dead leaves, and rotting trunks and branches, on which grow plentiful crops of Fungi. A cool moist air and a smell of dead mouldering vegetation accompany the pedestrian in whatever part he treads. There is no carpet of verdure in the denser parts, the pathways alone having a border of shrubs, generally Sedges or Lycopodiums, whose fronds, sometimes of great length and elegance, trail over the humid soil. No flowers are seen, and not much foliage, for the growing, budding, and reproducing life of the forest is carried on in the leafy chaos which closes in 100 feet or more above our heads. In some places, however, especially on the banks of the cool rivulets which flow through every little valley, there is more diversity. In such situations many species of Ferns are sure to be seen growing in great abundance on the ground, climbing the trunks of trees, or hanging from the branches in company with elegant tufts of grey Tillandsiæ—Bromelia-like Air-plants. In the undulating parts of the plains of the Upper Amazons two or three arborescent species of Fern are always met with in these situations; their widely spread heads of elegantly-divided fronds, reared on stems 7 or 8 feet high, forming a great addition to the sylvan scene. It is only on the banks of these streams that Orchids are conspicuous objects; they are found either seated in the forks of the larger boughs which stretch over the water courses, or clothing the trunks of trees near the water's edge, where the rare sight may be sometimes enjoyed of a whole row of broad stems covered with the green blades, varied with masses of white, yellow, or rose-coloured blossom.

The animal life of the forest next engaged attention.

The traveller, said Mr. Bates, would be disappointed who expected to find in these interminable shades a display of the higher classes of animals commensurate with the teeming abundance of vegetable forms. Nothing is more striking than the stillness and absence of life which reign in the heart of the wilderness. (There are here no herds of elephants, buffaloes, deer, or antelopes, such as are met with in the woods and plains of the old world or of North America; two or three species of pachyderms (tapirs and wild hogs), and two small deer inhabit these forests, but like the jaguar and puma they are shy of men and rarely ever seen). As the pedestrian wanders along the narrow silent paths he hears at most the twittering of flocks of monkeys in the tree tops. The wary animals are sure to perceive him before he is aware of their presence; the noises are the notes of alarm, and a crash amongst the boughs overhead announces their flight from the spot. It is only seldom that a break in the dense canopy of foliage permits the flock to be seen, scampering in hot haste along the larger boughs of taking flying leaps from tree to tree. Birds are rather more numerous, and some of those that live in the heart of the forest surprise by the melancholy sweetness of their notes. The best way to see birds, is to choose a place near wild fruit-trees on the banks of the picturesque rivulets which wind through the shades, and remain quietly seated for a time on the trunk of some fallen tree. Numbers of richly-plumaged creatures may then be observed as they come successively to plunder the abundant harvest. Occasionally a troop of scarlet and blue macaws will be descried feeding on the fruits of tall Palm trees, and looking like a cluster of gaudy banners beneath the dark green crown; or flocks of scarlet tanagers lighting up the foliage of Cecropia trees with the flame-coloured liveries.

But these sights are rare, and as ingredients in the woodland scenery are not to be compared with those presented by much more lowly order of creatures—I mean the butterflies. This class of insects is universally allowed to reach its highest degree of perfection and beauty in form and colour in the tropical forests of America. They are, throughout their whole existence, more closely associated with, and dependent on, the vegetable kingdom than any other group of animals. It is not surprising, therefore, that in a region where vegetable forms are so richly developed, their satellites, the butterflies, should make a corresponding show. It is not too much to say that the absence of flowers in the forest, especially in the less dense portions, is compensated by the abundance of these brightly-coloured insects. The most remarkable group in this respect is the Heliconidæ—a family quite peculiar to tropical America—and represented by a large number of species, each of which swarms in individuals. These insects are of slow flight, and being always seen sailing about the bushes or lower trees, their showy colours, black, white, yellow and crimson, are a charming set off to the monotony of the green foliage. Some of them are often seen associated in pairs or little groups, performing a kind of slow dance, moving with expanded wings slowly towards and away from each other, sometimes for an hour together. Another group, the Morphos, are also unfailing ingredients in every sylvan scene. The large satiny blue species (M. Menelaus Nestia), and the blue and black species (Achilles and Deidamia) are the most common. They choose the narrow alleys, open spaces, and margins of shady rivulets, along which they move with heavy undulating flight. The blue lustre of one of the species (Rhetener) is of surpassing richness, and dazzles the eyes when the insect flaps its wings in the gleams of sunlight. Several other kinds have a more lofty flight, and although very abundant, are almost unattainable prizes; their habit being to sail with outstretched wings (half a foot in expanse) to and fro across sunny spaces between the crowns of trees. The lazy, gliding flight of these gigantic insects in the heat of noonday remains always associated in the memory with the most beautiful scenes of these luxuriant forests.

Every part of the forest is tenanted by its peculiar species of these insects. The dry, scanty woods of the sandy valley of the Lower Amazons yields two of the most handsome kinds of the whole country. One of these is the Sapphire butterfly (Callithea Sapphira), which abounds to such an extent in an otherwise barren wood near the mouth of the Tapagis that the leafy glades seem to blossom with winged flowers. The sunny skirts of the forest in every part have their own frequenters which never enter the shades; these are generally of less brilliant hues than the denizens of the forest, although showy enough in their hues of yellow and orange, and some of them are of most graceful shapes (swallow tails). The open groves and

Orange orchards near villages again are tenanted by peculiar forms which one never fails of finding in such places, and there only. Amongst them are the Ageroniæ, which settle with expanded wings on the trunks of trees, and in sporting together make a singular noise with their wings, like the cracking of a whip. In the reeking Palm swamps several characteristic kinds occur, such as the Epicalia anœa, velvety black with bands of blue and orange. These delight to settle on the broad glossy leaves of the wild Plaintains, where rays of sunlight penetrate the shade. But it is in the shadiest parts of the forest that the bulk of the handsome species are exclusively found; although the males of a great number of them emerge on calm warm days to sport in sunny places sheltered from the wind, returning in the afternoon by troops to their partners in the tree tops (such are the Catagramma, the Eunicæ, and others). Numerous groups of species live entirely in the heart of the forest, some of these are not a whit less rich in colour than those which spend part of their lives in the sun (such are the Papilios of Æneas group, Zeoniæ, &c. Other shade lovers have transparent glossy wings. In many parts of the forest these are found in large flocks, and when they have a portion of colour in their wings form conspicuous subjects amongst the scanty herbage. Two of the most beautiful are the Hetæra Aurora and Esmeralda, the bright rosy and violet patches on whose wings deceiving one in the dark places where they fly by their resemblance to the petals of flowers.

A vote of thanks was given to Mr. Bates for his admirable lecture, after which Mr. Wilson Saunders made a few interesting remarks on Root Parasites. On the table in front of the lecturer were cases containing magnificent examples of the insects above alluded to; also a few living plants illustrative of the vegetation of the Amazons, and some Orchids and charming cut blooms of Tree Pæonies from Mr. Bateman.

Notices of Books.

Lawson's Pinetum Britannicum.—No. 5 of this superb work is before us, containing magnificent figures of *Picea Apollinis* and *Pinus Jeffreyi*, together with an abundance of useful woodcuts. To the first of these Mr. Lawson has very judiciously referred, as mere varieties, *P. Reginæ Amaliæ* and *P. Peloponesica*; and we should have thanked him in the name of true botanists if he had reduced the whole of them to the ranks of *P. cephalonica*. If he has not done this he has at least stated with fairness and impartiality the differences supposed to exist among them.——As to *Pinus Jeffreyi*, so called after poor little Jeffrey who found it, and who has probably perished in some botanical adventure, all we need say is that it is one of the glorious race of three-leaved Pines, admirably illustrated by the skilful pencil of Mr. Robert Black.

Miscellaneous.

A New Garden Pest.—The large water-tanks of the hothouses at the Garden of Plants are at present peopled with a race of obstinate enemies to plants, which the greatest care and caution have as yet been unable to extirpate. These enemies are no other than the Oscillaria utriculata, a sort of cryptogamous plant of wonderful fecundity, and which was hitherto only known to thrive in hot mineral waters; it seems, however, that it grows and multiplies admirably in any water of a sufficient temperature. Its shape is somewhat like that of a small Mushroom with its stalk turned upwards. Examining it with attention we perceive round its centre a circle of a light green hue, which renders it distinguishable from the general colour of the plant, which is dark green. From this circle other Oscillarias are constantly emerging, which literally grow in size under the very eyes of the observer, and which immediately begin in their turn to give birth to other Oscillarias. Untold generations are thus produced in the course of 24 hours; a few minutes are quite sufficient to infect the water of a tank. The numerous red fish which people the reservoirs of the hothouses and purge the water of all noxious principles seem to be powerless against this new invader, whose misdeeds we have not yet half enumerated. When the Oscillaria has at length exhausted its whole reproductive power (for everything must have an end), it suddenly goes and joins its fellows, whereby a fibrous sort of film, or rather sheet, is formed, which assumes the appearance of felt, then rapidly becomes black, and increases in weight by some unaccountable process, until it sinks to the bottom of the tank. This looks as if the plant were dead, but it is nothing of the kind; in this dormant state it sticks to and envelopes the roots of the aquatic plants it finds, and corrodes them so as soon to kill them. Another evolution is still to come; after doing as much mischief as possible under water, the sheet of felt again acquires sufficient lightness to return to the surface; it loses its blackness, becomes green again, then separates once more into a thousand little individual Oscillarias, which recommence the sort of life already described. No remedy has hitherto been found against these marauders that have found their way into the reservoirs by some unaccountable accident; they require a temperature of from 40 to 75 degrees Centigrade (104 to 167° Fahr.) for their existence. They might therefore be got rid of by lowering the temperature, but that would injure the valuable plants as well. *Galignani, in the Times.*

Ivy (Hedera Helix, *L.*) in MS. Sloane, No. 3489, 3, spelt Ivyne, Ang. Sax. ifig, a word strangely mixed up with the names of the Yew tree, Old High Germ. ebah, from which, according to Grimm, arose ëbowe, ëbhowe, ëbihowe, ephou, opheu, and in Alsace epphau. It seems to have originated with the Lat. abiga, used by Pliny as the name of the plant called in Greek Chamæpitys, and miswritten by some copyist ajuga, which was further corrupted to the Med. Lat. iva. Looking at the names of the two trees, the Ivy and the Yew, in the different languages of Europe, we cannot doubt that they are in reality the same word. Indeed in Höfer's "Wörterbuch der in Oberdeutschland üblichen Mundart," we find that Ive, or Iven-baum, belongs equally to one or the other. In English we get Ivy from iva, and Yew from the same word, written ina. The source of the confusion seems to have been this. The Chamæpitys of Pliny, as we learn from Parkinson, Th. Bot. p. 284, was "called in English Ground-pine and Ground-ivie, after the Latin word Iva." But this name Ground-ivy had been assigned to another plant, which was called in Latin Hedera terrestris; and thus Ivy and Hedera came to be regarded as equivalent terms. But there was again another plant that was also called Hedera terrestris, viz., the creeping form of Hedera Helix, and as Ivy had become the equivalent of Hedera in the former case, so it did in this too, and eventually was appropriated to the full grown evergreen shrub so well known. *Prior's Popular Names of British Plants.*

Calendar of Operations.

(*For the ensuing week.*)

PROCEED with potting all stove or greenhouse plants which require it, in order that they may have the advantage of the next two months in which to produce a vigorous growth; and have plenty of time for ripening it before winter. Many free growing plants which were potted early in the season will now require larger pots, with which they should be immediately supplied, unless it is wished to flower them in their present sizes, and somewhat earlier than their usual season. In the latter case occasional waterings of liquid manure of moderate strength will be useful, both in maintaining the present vigour of the plants, and in assisting the future development of their flowers.

FLOWER GARDEN AND PLANT HOUSES.

Out of doors, work up arrears with all possible speed while the weather is at all favourable. Rolling and mowing should be proceeded with unremittingly. Newly laid turf should be levelled and rolled whenever the ground is at all damp, in order that an even surface may be obtained.

AZALEAS.—Specimens now in full blossom must be shaded from bright sunshine. Plants that have been kept in heat to bring them into flower will now require pretty liberal supplies of water. Great attention should be paid to ventilation, particularly in guarding against cold currents of wind. Young plants will grow rapidly if shifted and placed in a moist warm temperature; see that they are clear of insects.

BEDDING PLANTS.—In order that half-hardy plants may be induced to make rapid progress when planted out, it is absolutely necessary that those taken from indoor protection should undergo a hardening process for at least a week. In no case is the old adage of "The more haste the worse speed" more applicable than in this affair. To be well established in their pots, and well hardened, is to insure success. Many, however, cannot command frame or pit room sufficient to receive a host of potted off Verbenas, Calceolarias, Heliotropes, Petunias, Fuchsias, Pelargoniums, &c.; such, therefore, cannot pot off stock singly. The next best plan is to prepare some raised beds in the kitchen garden with old vegetable mould (light and sandy), and to transplant, or, as gardeners term it, prick out the struck cuttings from their store pots into these beds, about 3 inches apart—in fact, so that they can be taken up by a trowel, with a ball of earth; they must have hoops and mats, or some good covering every night, and in bad weather perhaps all day. In the second or third week in May they may be transferred to their destination, removing with good balls of earth.

CHRYSANTHEMUMS.—Shift now the strong young plants from suckers parted last autumn; and shift at once into the blooming pots. The plants will then break uniformly, and can hardly fail to form good well-balanced specimens.

FORCING GARDEN.

FIGS.—As the season advances, gradually raise the temperature of the house. Syringe mornings and afternoons. Keep a moist atmosphere. When the borders require watering, give them a good soaking. Plants in pots and tubs should have some weak manure water occasionally.

MELONS.—If there be any room to spare on kerbs or over back flues of houses "at work," some of the finer Melons may be placed thereon in pots or boxes. These, however, should be roomy and filled with mellow turfy loam, out of which the loose soil has been separated.

PEACHES AND NECTARINES.—Continue to keep the shoots well tied in the early house, and be careful not to get them crowded. In disbudding, the bearing wood of the present year should be divested of all shoots except the terminal one and those near the base. Where a deficiency occurs in any part of the tree, more may be tied in. Ventilate freely in fine weather, and be careful to close up early in the afternoon. Syringe once or twice daily, and keep a moist atmosphere by throwing plenty of water on the paths, borders, &c. Attend to the disbudding and thinning of the fruit in the second house.

PINES.—Let shifting take place as soon as the plants have filled their pots. Give air freely to all growing stock, and above all plenty of atmospheric moisture.

VINES.—Let late Vines now breaking have every attention in regard to disbudding, &c. The litter or dung covering should now be removed from all borders, whether early or late. Litter in an unfermenting state keeps the soil cool instead of imparting warmth in the early part of summer.

HARDY FRUIT AND KITCHEN GARDEN.

Continue to disbud wall trees, and to keep them free from insects; also see that the blossoms of Peach and Nectarine trees are carefully attended to in the way of protection.

BROCCOLI.—If not already done, sowings of the best kinds may now be made. Ward's Superb, a late form of Knight's Protecting, is found to be one of the best late spring whites. Snow's Superb, as a winter white, and Mitchinson's Penzance for early spring, are also exceedingly good. The true Autumn Whites, like Grange's, seem to have got scarce; and there is now little to fill up the gap between Walcheren at the end of August, and Snow's Superb at the beginning of December.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending April 27, 1864, as observed at the Horticultural Garden.

April.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs. 21	14	30.063	29.960	71	33	52.0	51	49½	E.	.00
Friday 22	○	30.156	30.122	65	26	45.5	51	49½	N.E.	.00
Satur. 23	16	30.210	30.182	69	37	53.0	51	49½	E.	.00
Sunday 24	17	30.232	30.148	60	34	47.0	51	49½	E.	.00
Mon. 25	18	30.148	30.089	61	35	48.0	51	50	N.E.	.00
Tues. 26	19	30.117	30.114	57	41	49.0	51	50	N.E.	.01
Wed. 27	20	30.152	30.119	61	40	51.0	51	50	N.E.	.00
Average.		30.154	30.105	63.4	35.1	49.3	51	49.7		.01

April 21—Very fine: cloudless; excessively dry air; fine at night.
— 22—Very fine throughout; slight frost at night.
— 23—Slight haze; very fine; dry easterly wind,
— 24—Hazy; overcast; fine at night.
— 26—Fine; uniformly overcast, fine; slight rain.
— 27—Overcast; dry cold air; uniformly overcast; fine but cold.
Mean temperature of the week, 2 deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending May 7, 1864

May.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 1	61.6	39.5	50.0	13	0.51 in.	3	7	7	4	5	7	4	1
Mon. 2	62.5	39.1	50.3	13	0.72	4	9	10	1	5	6	2	2
Tues. 3	61.8	40.2	51.0	17	0.58	2	7	10	1	4	6	2	6
Wed. 4	62.4	38.4	50.4	13	0.70	6	10	8	—	6	4	3	1
Thurs. 5	62.5	39.0	50.2	20	1.26	5	11	4	3	8	5	1	1
Friday 6	61.3	38.9	50.1	14	0.68	—	11	5	4	4	6	5	3
Satur. 7	59.1	40.0	49.5	16	0.80	9	6	6	2	6	7	3	2

The highest temperature occurred on the 6th, 1862—therm. 84 deg.; and the lowest on the 2d, 1855—therm. 20 deg.

Notices to Correspondents.

AUCUBA HIMALAICA, *Hook. f. and Thomson*: *G.* This is figured and described in Dr. Hooker's "Illustrations of Himalayan Plants," plate XII. It is strictly dioecious, and differs from A. japonica in the much narrower, longer, more attenuate leaves, and in the long acuminate tips of the petals of the flowers of both sexes. The flowers are small, of a red-purple colour.

FUNGI: *C L M.* Your Fungus is the common Morelle, one of the best and most wholesome of Fungi. The best way of dressing them is to stuff them with minced veal or chicken ham, with a minute portion of garlic. *M. J. B.*

GLASS: *Z S.* It is of no consequence whose glass you use; it would not be a bad plan to take such as Hartley's rough 21 oz. for the sloping roof, and some other kind, of similar weight, for the uprights.

INSECTS: *J A B.* The grubs which had attacked the stems and branches of your Apple trees are the caterpillars of the wood leopard moth, Zeuzera Æsculi. The moths, which appear in the middle of summer, are very conspicuous, being white with many steel-blue spots on the wings. They should be sought for on the bark of the trees and destroyed. Tobacco-smoke blown into the burrows of the caterpillars will dislodge them. *W.*

LILY OF THE VALLEY: *A Subscriber.* No roots are better than such as grow in our good English woods. Plant them a few inches deep in rich loam or loamy clay, and if below turf it will not matter. The Lilies will beat the Grass. The most vigorous plants will produce the finest flowers: that 's all.

NAMES OF PLANTS: *A C.* Dendrobium amœnum.—*G G G.* You are in bad hands; every name is wrong.—*Arthur King.* None of the genus are handsome enough for cultivation where striking beauty is required.—*Youngster* must consult his Ainsworth's Latin Dictionary.—*A R K.* Next week.

ROSES: *W V.* states that the buds on his Standard Roses (especially the newly planted ones) and the dormant buds which were put in last year, have in numerous instances been eaten away down to the wood and entirely destroyed. He wishes, therefore, to know by what insect the mischief is done, and whether there is any preventive. Perhaps some of our readers will kindly furnish the information required.

THE CURATORSHIP referred to on the 20th of February, has been given away, as we have already partly announced.

THE HYDROPULT: A paper on this overrated machine is in type, and will appear next week. We have no room left this week.

VERBENA: *A P.* Large and very handsome; send it to the next meeting of the Royal Horticultural Society's Floral Committee.

VINERIES: *W.* No better Vineries are known than such as are made of iron. If you want proof go to the old Horticultural Garden at Chiswick, and look at the great iron Vinery there. Your informant can have no practical knowledge of the subject.

MISC.: *B.* There is no known fossil Orchid.—*A Z.* We never answer legal questions. You will rely on the opinion of a solicitor, if you are wise, *and upon that of no one else.*

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Moisture	6.91
Fatty matters	26.50
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Gum, starch, sugar, and digestible fibre	31.20
Woody fibre (Cellulose)	16.13
†Mineral matters (Ash)	4.33
	100.00

* Containing nitrogen, 2.39. † Containing silica and sand, 1.07.

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"Dear Sir,—I have much pleasure in sending you the preceding analytical results, for they show that the sample of Nut-meal which you gave me for analysis possesses extraordinary fattening properties, in as much as it contains no less than 26½ per cent. of a beautiful butter like fat. You will notice that the meal contains about as much flesh-forming matters as the best Barley meal, and that the proportion of woody fibre is not large. The condition of the meal is excellent. In conclusion I beg to say that this valuable fattening meal must not be confounded with a description of cake made from Palm-nut kernels. The samples of Palm-nut kernel cake that have come under my notice were all quite inferior feeding materials.

"AUGUSTUS VOELCKER, Ph.D.
"Consulting Chemist to the Royal Agri. Soc."

"To John Coleman, Esq."

Having been appointed by Messrs. SMITH, Agent for the sale of Palm-nut Meal, I shall be happy to supply samples and further information as to this valuable feeding material.

JOHN COLEMAN, 150, Leadenhall Street, E.C.

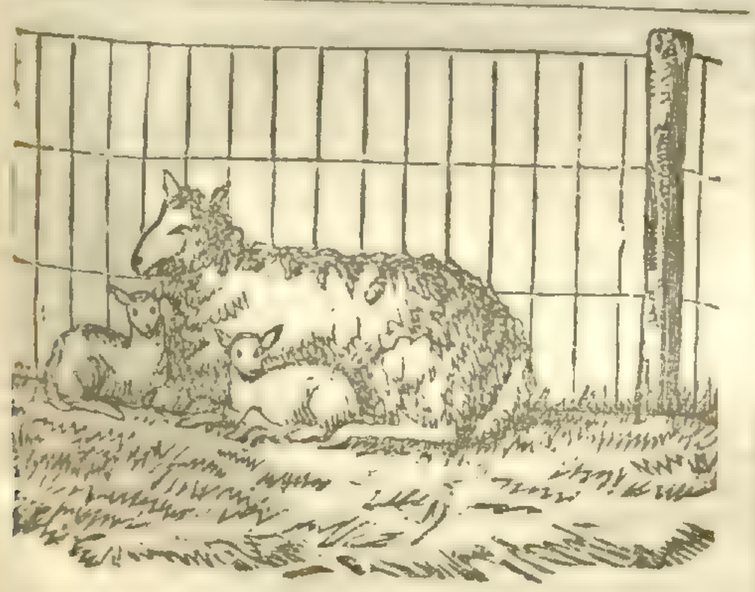

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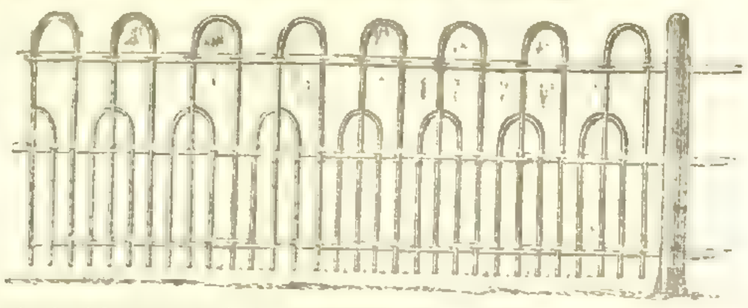

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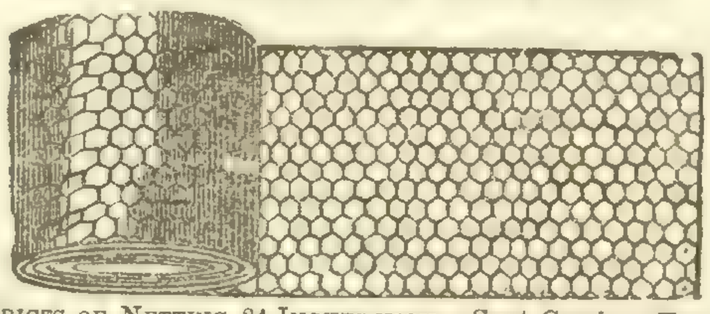

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Assistant to Chemical Professor.—R. WARINGTON, Jun., F.C.S.

Botany.—JOHN BAYLDON, M.B., Lond. B. Sc.

Veterinary Surgery.—A. J. MURRAY, M.R.C.V.S.

Mathematics and Surveying.—The Rev. W. MEREDITH LANE, B.A Scholar of Trin. Coll. Camb.

Drawing.—JAMES MILLER.

SPECIAL LECTURERS.

J. BAILEY DENTON, M. Inst. C.E.—On DRAINAGE.

Professor J. MORRIS, F.G.S., of University College, London—On GEOLOGY.

JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.

WILLOUGHBY WOOD, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.

JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.

JOHN THORNHILL HARRISON, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.

THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.

ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.

RICHARD GRIFFITHS WELFORD, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.

Applications for Admission and for further particulars may be made to the Principal.

The Agricultural Gazette.

SATURDAY, APRIL 30, 1864.

MEETINGS FOR THE ENSUING WEEK.

MONDAY, May 2—Central Farmers' Club .. .. 6 P.M.
WEDNESDAY, — 4 { Agricultural Society of England.. Noon / Torrington.

"THE practical education which is given on the farm to the agricultural student is better given in the home and on the farm of a practical tenant farmer than on the farm attached to an agricultural college."

This is the substance of Dr. VOELCKER'S remark the other day on direct agricultural teaching, during the discussion which ensued upon Mr. HOLLAND'S excellent lecture on Agricultural Education. We presume that most people will acquiesce in his opinion. His former colleague, Professor COLEMAN, agreed with him, though not entirely—believing that whatever the difficulty of commanding the attention of a large field class, it might be overcome. But why is it that the practical teaching upon the College farm is so confidently asserted and so readily admitted to be less efficient than it is upon a private farm? We imagine that it is simply because this practical teaching is not, as it should be, made the aim and end of the Institution. It is a monstrous failure

indeed that is confessed, when an Institution equipped to the utmost for the very purpose of agricultural education, with special instructors for every branch of it, is admitted to be beaten by the ordinary practical farmer, who takes a pupil merely for the sake of an addition to his income, and, in nine cases out of ten, leaves him to seek his agricultural knowledge for himself.

The Royal Agricultural College has Principal, and Professors, laboratories, lecture-rooms, and museums: an apparatus costing some thousands of pounds per annum. There is no better school of chemistry or of botany—a man shall acquire at Cirencester the skill to analyse a soil or dissect a plant as rapidly and perfectly as anywhere. But of what use to him is this if he be sent out unable to cultivate the one or grow the other profitably. Let the Institution drop its distinguishing title altogether, if it cannot compete with the ordinary practical farmer in the work of practical agricultural education.

However good a school of chemistry, of botany, of geology, and of other branches of a scientific education, it may be, there are schools as good elsewhere. We are very unwilling to believe that they are equally deserving of agricultural patronage, but that is simply because of the agricultural object which is professedly kept in view at Cirencester. We don't believe that the English Agricultural Society will be obeying the instructions of its charter if it strives merely to promote general and scientific education. Nor do we believe that it can properly do anything to stimulate and help the Royal Agricultural College, except in so far as that Institution is agricultural.

The intentions of the original promoters of the Institution are plainly to be seen in the existence of the College farm as a necessary part of the establishment, which seems to us a necessary part of every agricultural school, and which ought to be at least as profitable there as it is in the hands of an ordinary business man. How far the intentions of the promoters of the Cirencester College have been obeyed in its subsequent management is also to be seen, not merely in the great expenditure of effort on particular departments to the comparative neglect of others; but also in the relative rank and reputation which those departments respectively hold amongst the pupils; for this has arisen, of course, out of the estimation in which they are severally held by their superiors.

What is the history of agricultural teaching at Cirencester? Professor COLEMAN, as able and efficient a teacher as could be desired, had the management and marketing of 500 acres of land upon his shoulders, he lectured once and sometimes twice daily in the theatre, superintended daily field classes also, and was, we presume, the hardest worked as he was the worst paid officer in the place. One hundred students were provided in this way with all of agricultural instruction they received. How was it possible that Dr. VOELCKER, the witness of all this, should avoid the conclusion that a private farm is better than the College one for instruction in farm practice; or that this opinion should command such universal acquiescence?

More attention certainly, or at least more labour, is being given now to the practical teaching on the farm than has hitherto been possible. The farm manager now undertakes only field classes in addition to his special duties; and a succession of lecturers are now engaged on the different sections of the general agricultural field for the full demonstration of each in the theatre. But if the teaching of farm practice had the place which it ought to have in the general scheme of education at the Agricultural College, no students ought to be received who could not prove on examination that they had already acquired all that an ordinary "middle class" education confers—twice or thrice the time for practical instruction that is now allotted daily ought to be allowed—twice or thrice the number therefore of practical instructors ought to be at work—instructions in the mysteries of chemical analysis, and laboratory work in general, ought to be altogether abandoned—and the scientific teaching ought to be conducted not for the purpose of making chemists and botanists and geologists, but for the purpose of making farmers.

Let the Agricultural Society *then* come in and declare that young men from this or any other establishment in the country where there are at least 20 students engaged after the fashion thus indicated, are welcome to come and contend before it at an annual examination in the principles and details of farm practice, for prizes of 40*l*., 50*l*., and 60*l*. per annum, to be held a second year if won a second year; and the nature of the examination which would be prescribed, with the direct spur of so handsome a reward, would both guide and stimulate agricultural education so as it has never been guided and stimulated in this country hitherto.

— OUR former correspondent Mr. J. H. DICKSON, who has for many years in this and other Journals urged the increased cultivation of Flax, must be greatly gratified by the very largely extended growth of the crop in Ireland, which recent statistical returns announce. He is now endeavouring to introduce into cotton mills the fibre not only of Flax but of Hemp and Rheea and New Zealand Flax, as prepared by his patent process.

Of this we will merely say that the samples we have seen of fine soft short and flossy fibre, prepared by his method, seem to us as capable of being dealt with by cotton machinery, as is the Cotton fibre itself. Except, however, as every additional facility for working up so valuable a produce of the land as Flax, must tend to the promotion of its cultivation—the particular topic to which Mr. DICKSON is now drawing public attention is not of direct agricultural interest—and we are therefore unable to reproduce here the discussions which in other journals he has been of late conducting. We can merely express the hope that he may succeed in his attempt to interest the large, wealthy, and energetic body of Lancashire manufacturers in his schemes for the benefit of Irish and other Flax-growing districts.

— In addition to Mr. BLUNDELL'S former remarks on the cultivation of the Cattle Malon, we have to add, as a reply to many inquiries, that the Gourds so called cannot when ripe be pitted as Swedes or Mangel Wurzels are. They must be hung up or placed separately on a floor for use. They would not generally be required beyond the autumn months, as Mangels and Carrots and other roots adapted for Cow-feeding come into use in general during the winter and spring. More, therefore, should not be grown than may be consumed in September, October, and November. And these must be housed before the first frosts either by laying them on a sheltered floor or by stringing them up and hanging them in a sheltered room or shed.

— There is now in progress, and will continue all the ensuing week, a steam cultivation competition at Roanne (Loire—France), which is being held during the ordinary annual agricultural gathering of that district. Prizes of 100*l*., 80*l*., and 40*l*. respectively are to be awarded by a jury, of which Messrs. FISHER HOBBS, JACOB WILSON, and T. J. THACKERAY are the English members.

NOTES ON CELEBRATED SHORT-HORNS.

No. V.

THE DUKE OF NORTHUMBERLAND.

[The following letter by the late Mr. Bates, of Kirklevington, appeared on Nov. 14, 1842, in the *New Farmers' Journal*.]

SIR.—Herewith I send you the pedigree of my Short-horn bull "DUKE OF NORTHUMBERLAND," as described in the "Herd Book" (1940, in 3d vol.), and which is as follows:—

Colour roan, calved Oct. 15th, 1835; got by Belvidere (1706), dam (Duchess 34th, page 356 of vol. 3d of "Herd Book") by Belvidere (1706, g d (Duchess 29th) by second Hubback (1423), gr g d (Duchess 20th), by the Earl (1511), gr gr g d (Duchess 8th) by Marske (418), gr gr gr g d (Duchess 2d) by Ketton 1st (709), gr gr gr gr g d Duchess 1st, bred by Mr. Charles Colling) by Comet (155). [This cow was bought by me at Mr. C. Colling's sale, at Ketton, near Darlington, in 1810.] Gr gr gr gr gr g d by Favourite (252), gr gr gr gr gr gr g d by Daisy Bull (186). [This cow was also bought of Mr. C. Colling, by me, in 1804.] Gr gr gr gr gr gr gr g d by Favourite (252), gr gr gr gr gr gr gr gr g d by Hubback (319), gr gr gr gr gr gr gr gr gr g d [bought by Mr. C. Colling, from Stanwix, in 1784, of the late Duke of Northumberland's agent] by Mr. James Brown's old red bull, (97).

The *whole* of this family of Short-horns are *alone* in my possession—having purchased my original cow of this tribe of cattle of the late Charles Colling, Esq., then of Ketton, near Darlington, 38 years ago; they had been in the possession of Mr. C. Colling 20 years, who purchased his original cow, from Stanwix, of the agent of the late Duke of Northumberland, and Mr. C. Colling named her "DUCHESS" (which name I have continued), and when the first "Herd Book" was prepared, I called the Duchess by Comet (155) No. 1. The Duke's dam, DUCHESS 34th, is the oldest cow I have of the family, and "THE DUKE" was her first calf; she has had eight calves, and is (I hope) again in calf to "*The Duke*," her eldest son. She was calved September 14th, 1832, and in her tenth year she obtained the highest prize at the Yorkshire Society's late exhibition, at York, in August last, as the best cow of any age, the only time she was ever exhibited. Her daughter, Duchess 43d, obtained the premium as the best year-old heifer at the Oxford meeting of the Royal Agricultural Society of England, in 1839. Her eldest brother, "*The Duke*," obtaining at the same meeting the premium as the best bull of any age, being then three years and eight months old; and the sister in blood to the Duke's dam obtained at the same time the premium as the best heifer in calf, though then only a year old; the Duke's own sister was then also in calf. And these same two heifers were awarded the first and second premiums at the Yorkshire Society's exhibition at Hull in August, 1841, as the best three-year old cows. "The Duke" also obtained the highest premium as the best two years old bull, at the Yorkshire Society's first exhibition at York in 1838; and premiums likewise at Stockton and Darlington, the same year (1838), as the best bull of any age, and obtained the highest premium as the best bull of any age, at the late York meeting in August last. He never has been exhibited but upon the above five occasions.

I named this bull "Duke of Northumberland," to perpetuate the commemoration, that it is to the judgment and attention of the ancestors of the present Duke of Northumberland that this country, and the world, are indebted for a tribe of cattle which Mr. C. Colling repeatedly assured me *was the best he ever had, or ever saw*, and that his first cow of this tribe was better than any he could produce from her, though put to his best bulls, which improved all other cattle. And *this tribe* of Short-horns was in the possession of the ancestors of the present Duke for two centuries; and Sir Hugh Smythson, the grandfather of the present Duke, kept up the celebrity of this tribe of cattle, by paying the greatest attention to their breeding—he used, a century ago, regularly to weigh his cattle and the food they ate, so as to *ascertain the improvement made in proportion to the food consumed*. This was before Mr. Bakewell was known as a superior breeder of stock, and this system I adopted above 50 years ago, not knowing that it had been previously done, and it was from the knowledge thus acquired by weighing the food consumed, and ascertaining the improvement made, that I became enabled to judge of the *real merits of animals by their external characters*, and in my experience as a breeder I have never found it to fail. From that knowledge thus acquired I selected *this tribe* of Short-horns, as superior to all other cattle, not only as small consumers, but as great growers and quick graziers, with the finest quality of beef. Mr. C. Colling exhibited at Darlington, in the spring of 1799, his two first calves by his bull Favourite (252), a heifer and a steer (afterwards known as the Durham ox, and exhibited for six years by Mr. John Day)—these each three years old. The heifer was of this Duchess family, and she was larger than the steer, and exceeded him in every point, and on being slaughtered the *following* week weighed above 100 stones, of 14 lb. per stone; but her great excellence consisted in the superior quality of her beef. She was uniformly covered with fat on every part. Mr. Robert Thompson, then of Chillingham Barns, in Northumberland (whose superior judgment in Short-horns and Leicestershire sheep no one ever questioned) was at Darlington that day, and we repeatedly met each other at this heifer, both agreeing that she far exceeded any animal we had ever seen at her age. Finding that tribe of cattle were equally extraordinary as great milkers, induced me afterwards to purchase my first Duchess, then in-calf by Favourite of my bull Ketton 1st, and her daughter, and afterwards at the sale in 1840 the granddaughter. My first Duchess calved at Halton Castle, in Northumberland, June 7th, 1807; she was kept on grass only, in a pasture with 19 other cows, and made in butter and milk for some months above *two guineas* per week, or 42*s*. English money.

As a proof that this tribe of Short-horns have improved under my care, I may mention that "Duke of Northumberland's" dam consumes one-third less food than my first Duchess (purchased in 1804), and her milk yields one-third more butter for each quart of milk; and, whilst the consumption of food is one-third less, and the milk yields one-third more butter, there is also a greater growth of carcase, and an increased aptitude to fatten.—"*The Duke's*" dam, Duchess 34th, was found with her right leg broken below the knee, when on grass, before she was a year old, and was (in consequence) confined in the house, and was not able to bear her weight on this leg for near nine months afterwards—thus preventing any improvement for that length of time—and is a cow that never has been indulged at any period—for some years scarce ever tasting a Turnip in the winter months—and yet preserving her condition, and breeding regularly.

It is now above 60 years since I became impressed with the importance of selecting the very best animals to breed from, and for 25 years afterwards lost no opportunity of ascertaining the merits of the various tribes of Short-horns—and it was *only then* that this could be done, as there is scarce a vestige remaining of the many excellent cattle that were then in existence. I have never used any bull that had not Duchess blood, since I became possessed of this tribe, without perceiving, immediately, the error—except Belvidere (1706), and he was the last bull of a long race of well-descended Short-horns, whose blood (in the Princess, cow) went direct from Hubback (319) to Favourite (252)—as in the Duchess tribe, and in Yarborough's dam (second Hubback's blood, 1423)—and these are the only *three tribes of Short-horns* that were so bred as females (and

Mr. R. Colling's white bull the only male, being of the Princess family)—and all these three tribes, so bred, are united in the dam of the Duke of Northumberland—and there are no other Short-horns so bred.—The superiority of the stock of Mr. R. Colling's white bull over Favourite's stock (252), his sire, was evident to me in 1804—and was admitted by Mr. C. Colling—and I would gladly have then given 100 guineas to have had my first Duchess bulled by him, but I could not obtain it on any terms, and it was 27 years afterwards before I obtained the same blood in Belvidere (1706), the last pure blood of that tribe of Short-horns. For the last 35 years I have paid little attention to the subject, but the matter was as perfectly fixed in my remembrance as that of the pence or multiplication tables; nor have I had cause to alter any opinion I then formed, and each revolving year has given me additional proofs that the judgment I formed 35 years ago was correct in every particular. From 1805, when the Tynedale Ward Agricultural Society was formed, till 1812, I exhibited cattle at their Ovingham shows, and my success, even with inferior animals of my breeding, is yet well remembered, but I never showed my first Duchess, nor her son, Ketton 1st; and from 1812 till the York first meeting, in 1838, I never showed any cattle at public exhibitions (26 years between); and it was with great reluctance that I again did so, well knowing what I had seen practised at public meetings; but I consented, at the urgent request of a then stranger, who happened unintentionally to have seen my cattle when buying horses of my tenants, and I exhibited seven Short-horns for eight premiums at York, in 1838, and though five premiums were awarded to them, the three best animals were rejected; and then I sent the next year to the Royal English Agricultural Society's first meeting at Oxford, expecting those placed before them at York would have again made their appearance at that exhibition; but none of those appeared, and all my three rejected at York obtained the highest premiums; the fourth (the cow) I there obtained the premium for was placed second at York, as a three years old, to one of my own, which got her thigh broke in the field, or she would have gone to Oxford instead of the one I did send.

I have entered thus into detail to answer objections by quoting facts, to prove that this tribe of cattle have not had a recent origin; and though the best cow then in existence when I purchased my first Duchess, I have yet improved upon her, while all other Short-horns then in existence have been getting worse and worse year by year.

Impressed with the importance of the subject of improving the live stock from my attention to it, I addressed a printed letter in 1807 to the Board of Agriculture, and all other agricultural societies; but I met with the most violent opposition. I trust that the spirit of inquiry is at length awakened by the formation of the Royal English Agricultural Society, and that thus the large landed proprietors of the United Kingdoms will direct that attention to the subject which it deserves, and which their own interest so evidently requires. It is only by the amelioration of the live stock that expensive improvements can be prudently undertaken; this once made evident, the increase of green crops to rear and fatten the live stock furnishes the manure that increases the produce of grain crops, and adds not only to the increased wealth of the nation, and to its increased population, rendering these kingdoms thereby independent of a foreign supply of the necessaries of life, and of those great fluctuations in price which inevitably have ever followed a foreign supply, increasing the wealth of the importers for a time, and generally ending in their ruin, whenever a kind Providence sends a fruitful season.

As the post hour draws near I must conclude, to enable you to print this letter in the same paper in which you purpose inserting the portraits of "The Duke" and his dam.

I do not expect any artist can do them justice. They must be seen, and the more they are examined, the more their excellence will appear to a true connoisseur; but there are few good judges—hundreds of men may be found to make a Prime Minister, for one fit to judge of the real merits of animals.—In great haste I remain, yours truly,

THOMAS BATES.

Kirklevington, near Yarm, Yorkshire, Nov. 11, 1842.

SCAB IN SHEEP.

THIS disease is produced by a small insect furnished with legs, having at their extremities trumpet-like appendages and suckers by means of which they maintain their hold of the animal, soon perforating the cuticle and the membrane which is the principal seat of sensation. It burrows itself in this pulpy substance, producing a degree of irritation quite unbearable to the animal. The itch in man and the mange in horses are analogous diseases to the scab in sheep, and like it are also produced by an insect. When once the insects get fairly rooted in a flock, unless prompt and effective measures are used, a great loss to the flockmaster is the result. The writer has frequently known flocks to suffer from scab for years without ever having been fairly eradicated, and that entirely from inattention and the want of proper ingredients for effecting a cure.

From 10 to 15 days after the sheep has received the infection, supposing that it has been contracted by coming in contact with animals suffering from this disease, it begins to rub on every bank stone or other object of resistance which may happen to come within its reach. At the same time it is constantly kicking with its hind feet and gnawing itself with its teeth, particularly when the insects are at work within reach of those members; hard knots or pimples are soon formed on the parts where the acari have found a footing, the continued rubbing, kicking, and gnawing, soon breaks the pustules, which exude a hot acrid fluid; this fluid when discharged forms a scab on the skin, destroying the cuticle or scarf skin; it then affects the true skin in which the wool is rooted, and from which it derives its nourishment. Still the rubbing continues, but this time the scab when displaced carries with it a part of the wool, leaving an open sore; if this state of things is allowed to continue, the excessive irritation and constant exertion of rubbing soon reduces the animal to a state of great emaciation and prostration of strength. The wool also becomes dead, and if suffered still to remain unchecked, the violent rubbing and discharge from the sores often causes it to peel off in a hard caky mass; and as is frequently the case at this stage of the disease, death puts an end to the animal and its sufferings.

The scab in all animals is seldom found to originate where the inhabitants are comfortably lodged and liberally fed. Like many other diseases it is fostered and propagated by a diseased and weakened system; the blood becomes poor and unfit to support the body in a healthy state; hence we invariably find the first attacks of scab to originate amongst the starveling flocks pastured on the roadsides and commons, or amongst the sheep on some exposed and barren mountain top, where an insufficient quantity of rough innutritious food affords a scanty subsistence for those denizens of the wilderness. I doubt not the disease is caused by the sheep grazing on exposed situations being hunted and overheated by the use, or rather we may say abuse, of the shepherd's faithful servant the dog, when in the hands of careless and inexperienced servants. The sheep when in this heated state being exposed to the inclement elements on some bare mountain side, frequently become affected with diseases of the skin. An experience of twenty years in the management of large sheep flocks, partly gained amongst the Cheviot and Blackfaced sheep of the West of Scotland, the Downs and cross breds of the South, and the Leicesters and long wools of the Midland counties of England, confirms the opinion that the scab rarely originates in well managed well kept flocks; in fact in all my experience I never knew a flock suffer from scab under those circumstances, except from infection, contracted most frequently by coming in contact with infected animals, or in many cases from being pastured on land where sheep suffering from the disease have been recently lying on uninclosed sheep walks, where a right of road exists, as is the case in many parts of the country, the droves passing to and from fairs and markets frequently leave the disease amongst the native flocks. Another common cause of the transmission of the scab to clean flocks is from sheep being sent to fairs and markets, and the trade not being equal to the farmer's anticipations they are brought home again and mixed with the regular flock to await the next fair or market, and not unlikely in the interval may have come in contact with sheep suffering from scab; in this way many a clean flock has been polluted, to the great annoyance and loss of the owner.

Preventives. — Formerly, in most sheep grazing districts of the north, the whole of the flocks were dressed about the end of October or early part of November with a mixture of tar and grease, "butter or palm oil," which undoubtedly in all wet and exposed situations was advantageous to the health and comfort of the animal; at the same time the wool was greatly reduced in value to the manufacturer; this dressing was said to prevent the attacks and kill the acari and other insects which attack the sheep. For some years the system has been on the decline, and in most districts of the lowlands is nearly discontinued, and pouring or dipping with arsenical preparations, extract of tobacco, and other materials is now extensively used; all preparations of tobacco, Macdougal's and Long's specifics, are not injurious to the health of the animal, neither do they injure the quality or lessen the quantity of the fleece, and are therefore greatly to be preferred to any of the arsenical preparations generally used. The use of arsenic for dipping or dressing sheep invariably exercises a deteriorating effect on the quantity and value of the wool; its use is also very injurious to the health of the animal. I have frequently known flockmasters to suffer great losses from its use, particularly among lambs when dipped in the autumn, if, as is often the case at this season, they are suffering from hoose or cold; when in this state I have sometimes known the loss to be from four to five per cent. Many also cast their wool, and should they live require great care and attention, and frequently do not fully recover from its effects before the following summer. It is likewise attended with considerable danger to those persons employed in using it on the sheep; we have frequently seen cases of men having the whole of the skin peel off their arms and hands, and even the nails from their fingers, when using it in a strong form for several successive days; a case recently happened where several persons were poisoned by an arsenical preparation used for dipping sheep having become mixed with the food of the family, it having been placed in a cupboard and mistaken for something else. As far as my practical experience extends, I think the use of all preparations for sheep dressing containing arsenic cannot be too highly condemned. Both for the prevention of scab, and for destroying the tick and other insects, I know of nothing better than the common sheep ointment, mercury and lard, in the proportion of one of the former to five of the latter; it can be purchased of most chemists at 1*s.* 4*d.* per lb.; for several years I have used it on large flocks, dressing all my stock ewes and lambs during the month of October or beginning of November, the ewes with three, and the lambs with two and a-half lbs. per score, or a total cost, inclusive of ointment, of 2¾*d.* per sheep; this outlay is doubly repaid in the increased quantity of wool. The general health of the sheep is also improved when properly dressed with ointment, all insects are destroyed, the sheep rest much better, consequently the same quantity of food produces a greater quantity of mutton. In dressing with mercurial ointment, the operator turns the sheep on its back, parting the wool down the throat and neck to the brisket, holding the wool open with the left hand, with the two first fingers of the right hand a small quantity of ointment is closely laid to the skin the whole length of the parting, he then proceeds by opening the wool down the middle and sides of the belly, and applying a portion of the ointment; the operator then turns the sheep on its side, and parts the wool from the ear to the hip, putting two long dressings along each side and one on the back, with two or three short ones on the hips and shoulders; a small quantity rubbed on the skin of the flank and fore-arm complete the operation. Care should be taken that the ointment is closely laid to the skin, as on proper attention to this point mainly depends the success of the operation; the warmth of the body soon causes the ointment to spread over the whole surface of the skin. The shepherd or man employed in dressing carries the ointment in the wide end of a bullock's horn, the small end being cut off and corked with a piece of wood, this is attached to the wrist of the left hand by a strap and buckle fastened to the top of the horn; this horn should be made to contain a fixed quantity (ours are made to hold a pound and a half), so that the operator has no difficulty in knowing the quantity he is using per score.

Remedial Treatment.—Sheep suffering from scab, either in its earlier or more advanced stages, require prompt treatment in order to check its inroads. Various mixtures have been recommended and used for this purpose, the most efficacious of any with which we are acquainted is Long's specific, as dipping or pouring preparation, and the mercurial ointment as a salve. The former contains a mixture of tobacco and other vegetable poisons, is perfectly harmless in its nature, both to the health of the sheep and the growth and quality of the wool, and may be safely used in any quantity or of any degree of strength. An extensive practical experience fully convinces us that mercurial ointment is the most certain cure for scab in sheep of any mixture at present used for that purpose, at the same time we must not disguise the fact that great mortality often takes place in the flocks on which it has been used; whenever this happens it is entirely due to the imprudent and extravagant mode of using it. When applied in too large quantities salivation and intestinal irritation is the result; when this is the case the animal is sometimes seized with a violent and continuous purging, which soon reduces it to a complete skeleton, when it generally succumbs to the disease; in the most violent form of scab 2½ to 3 lb. per score is an ample dressing when properly applied; used at this rate it is quite harmless as regards the health of the sheep. Much depends on the way it is put on; it should be laid on the skin and not on the wool, as is too often the case; we frequently see sheep dressed many times with mercurial ointment without producing any abatement of the evil, entirely because the remedy never reaches the seat of the disease. When the wool becomes caked and hard, as it frequently does when the disease has been of long standing, and scab rises in a hard crust from the skin, it should then be parted with a sharp knife and the ointment well rubbed in till it reaches the seat of the disease; about ten days or a fortnight after the first dressing they should again be looked over and carefully examined, and all those showing any symptoms of live scab upon them should again be dressed, but this time only on the knots or affected parts; in this way they should be regularly and carefully gone through for six weeks or two months, when, if the dressing has been properly performed and a sufficient degree of attention exercised afterwards, a perfect cure will be found to have been effected; if the sheep are kept well during and for some time after dressing, it will be advantageous in hastening the cure, as the wool grows more quickly, carrying with it the scab from the skin, when the insects have been killed with the ointment.

In 1856 the writer purchased, of a dealer, 80 Gloucester wethers, which were suffering severely from scab; he got them considerably under their value had they been clean. He had them dressed immediately with mercurial ointment at the rate of three pounds per

score, they were well attended to afterwards, and in less than two months were perfectly clean; many of them had cast the greater part of their wool, it being the first week of August when he bought them, their wool grew again before winter, he put them to Turnips, and sold them the 26th of January, 1857, and never remembers to have had a lot of sheep pay so much per week for their keep.

In conclusion, I am fully convinced that scab in sheep may be completely eradicated from any flock by the use of mercurial ointment when properly applied and carefully followed up, and that without either risk or injury to the health of the flock. *G. Murray, Overstone.*

THE BREEDING AND REARING OF SHEEP.

[We have lately given full reports of lectures on cattle, sheep, and other branches of farm management delivered before the Royal Agricultural College, Cirencester. We now publish a most elaborate and admirable lecture by Mr. Woods, Lord Walsingham's agent, of Merton, near Thetford, recently given before the Wayland Agricultural Association.]

Mr. WOODS said—In starting upon this subject, I may say that it is so comprehensive, and contains so much matter, that I felt, in making an extempore address, considerable difficulty to know where to begin and where to end. I, therefore, consulted with Mr. Barton, who, with that intelligence, that readiness to assist, and that kindness with which he always assists his neighbours, at once lent me his aid, and we agreed to discuss the matter under the following heads:—

1. The ewes to breed from.
2. The rams to use; how to use them; and when to put them to the ewes.
3. Treatment of ewes during pregnancy; abortion, its causes and effects.
4. Treatment of ewes during the lambing season.
5. Management of lambs when on the ewes, and when weaned.
6. Hoggets—their treatment from July to Michaelmas.
7. When on Turnips, and their treatment thereon.
8. Whether most profitable to sell in or out of their wool.

Pure Breeds.—As you all know that I have strong partialities for the pure breeds of sheep, I shall only ask you to allow me for a minute or two to say that I believe the pure breeds of sheep to be the foundation from which all good crosses must spring.

I do feel that every person who may be induced to put down his flock of pure breds does a national injury, and one that every farmer and every cross-breeder of sheep must deeply regret. I would ask, "From what came originally the numerous breeds that have now sprung up?" What did Shropshires spring from? What did the Oxford Downs spring from? What did many others that are called "Downs" spring from? I will leave that question for others to answer. Having asked you one or two questions, I shall sink the pure breed of sheep altogether, and the remarks which fall from me this evening shall be made upon what I may call "the Norfolk flock-masters' question;" that is, as to the animals from which we shall breed cross bred lambs.

The Ewes to Breed from.—The first question I would suggest for your consideration is:—"Which do you consider the best for ewes for flock for breeding cross-bred lambs? Do you think the black-faces, the brown-faces, the Hampshires, or half-bred ewes the best?"

I have no doubt some gentlemen present will tell me why they prefer one sort to another. But there is one thing upon which I think, as we pass on, many gentlemen must agree with me. That point is this—that whetever kind of ewe you may prefer to breed from, there is very great difficulty in getting the sort you require. There is a gentleman in this room (and a very excellent breeder he has proved himself) who told me that last autumn he rode miles and miles in endeavouring to find such ewes as he wished to put in his flock. Generally he was unable to do so, and when he did so the price was extravagantly high. This, I think, arises from the fact that the price is always according to the demand. A great many people want the good ewes, and, consequently, the sellers put the price on tolerably stiff; and I don't blame them for it. But what I say is this—that there is not sufficient attention paid by those gentlemen who breed your flock ewes; they pay little attention to the shape and make of the animals they breed, or to the quality of their wool, because many persons, I am sorry to say, make a point of getting a sheep because it is a cheap one. I think that is very poor economy, because I hold that sheep to be the cheapest which will produce you the lamb that shall pay you the most money, whether you sell it or whether you graze it. I hold that the production of a better class of flock sheep depends very much upon the farmers themselves; because if they would make up their minds to buy only those animals which should be considered by good practical judges to be suitable for breeding good cross-bred lambs, those gentlemen in the south-east would breed better ewes. I remember crossing an adjacent county last autumn, and seeing a very large flock of sheep, the black-faces being tupped by black-faced rams. I was driving with as good a judge of sheep as any man in the kingdom, and the remark he made was, "Now, can it be wondered at that there are so few good ewes bred, when we see here 500 or 600 ewes, possessing no peculiar merit, tupped by rams even still worse?" I know this is a difficult question; but I believe that if the farmers of this county were once to set the example, and say they would only have ewes which possessed the merit necessary for the breeding good lambs—I believe they would get them. If they were to say, "We will have none of your bare-polled ewes, with little or no wool on the belly or neck, and no wool under their tails; but we will have those that possess wool, and of a quality of flesh which shall produce us good mutton; if not we will not have them at all," those gentlemen of the south-east would produce them, because they would know that they could not sell bad ones.

The Lambs we Breed.—Now comes another question with respect to the lambs we breed. I have often looked upon the management of the breeding of cross-bred lambs as one which deserves as much attention and as much care as the breeding of pure-bred Downs or Leicesters, and I base my opinions upon the following fact:—If gentlemen have well-bred lambs, they always have a demand for them.

I know it from practical experience. It is not only so on our own estate, but it is the case with gentlemen in the neighbourhood; they breed lambs that everybody is glad to get hold of; they have no running about to seek for customers; they have plenty of customers on hand, because the dealers, the farmers, and other people who purchase hoggets or lambs for feeding are sure to turn their attention in the first place to the well-bred ones. Now, I ask you to compare that with gentlemen who go upon the haphazard style of breeding—who put a ram to a ewe because it is a ram, and not because it possesses any particular merit—who say that a ram's a ram, and he's sure to get a lamb. Many people do that, and what is the result? The lamb bred from that careless system of breeding is sure to hang upon hand; no dealers run after that gentleman's lambs; they don't care to buy them, for they know they are bred to sell; and they only take them when they cannot get lambs from other people. Supposing, however, that that person does sell them, the buyer will not come to him a second time. The very act of trying to graze them has proved that they have no feeding properties, but the reverse, as I know for a positive fact. Gentlemen who have fed well bred lambs from this estate have desired to come again and again, and they have done so; every year the value of these lambs is increasing. Then there is another point which has frequently struck me as a very important one, and one which must have struck home to the heart of every man who goes on Norwich Hill. Go there in the lamb or the hogget season, and you see a group of people here, and a group of people there; perhaps you see a third group, but it is a rare circumstance. How is it? There is a good lot of lambs or hoggets, and everybody is rushing to see them, showing that it is the exception, and not the rule, to have a good lot. Now, instead of seeing a few pens of hoggets or lambs which possess far more merit than others, I wish to see them all good alike. I don't think I ever shall see that; but I do trust that we shall see a considerable advance in the breeding of sheep.

Good and Bad Breeding.—Well, we have in this neighbourhood some most extraordinary instances of breeding; we have both good and bad. I will first give you an instance of the good, and then an instance of the bad.

We have gentlemen in the neighbourhood who breed with care—who buy the best ewes they can lay their hands on—who select them for certain points (which they know them to possess) for breeding good lambs. Not satisfied with that, they go and hire or buy a ram also possessing peculiar merits, and well adapted for the ewes they are intended to serve; they put those two together, and there is no fear whatever as to what the result will be. There is no chance in breeding. Breeding good animals is no matter of accident. You might as well attempt to breed a pure-bred Short-horn from an Alderley bull as endeavour to breed good lambs from ordinary parents. Well, the result is this: those gentlemen can sell their lambs at from 28*s.* to 30*s.* each, while other people, breeding in a different way, sell at something like 18*s.* or 20*s.* Then we have another extraordinary case in this neighbourhood, and the reverse of what I have named before. A farmer of the old school, living not three miles south of this town, has all sorts of mongrel bred ewes on his farm, and a sorry lot they are; and the lambs they breed are such as no man who cares for his credit or his pocket would ever try to fatten. Usage has, as it were, so acclimatised his ewes that he has actually got them to breed nearly all the year round. He runs the rams with them all the year round, and says, "Poor things, they know what's the best; nature taught them." I merely give these as illustrations of two systems.

The Rams to be Used.—After getting good ewes, the next most important step is to get good rams. I am one of those who fancy it is not ill-spent money to give an extra 5*l.* for a ram. I think it is far better to give a fair price than a low one.

The profit, I do believe, will be greater upon breeding good lambs than bad ones, and you will never breed good lambs from bad rams. Now, we know that in the breeding of cross-breds there is great diversity of opinion. Some gentlemen like Cotswold sheep; some like Cotswold crosses, or Cotswold crossed—(I am not in the mysteries of these crosses)—with something of a Leicester; and some people like a large Leicester, with a dash of Lincoln in it. It is not for me to say which will best answer a farmer's purpose. I can only venture to make suggestions. Allow me then, to say that I think the adaptation of the rams to the ewes, and their selection with judgment, ought to rest in the discretion of the flockmaster who is going to use them. But I have an opinion of my own with respect to the sort of ram which I think ought to be used to short-woolled ewes for breeding cross bred lambs. I have an idea that he ought to possess merits peculiar to himself; that is to say, he ought to have a good masculine countenance; he ought to have his neck neither too long nor too short, and placed upon his body as though it formed part and parcel of him. His breast ought to be well thrown out in front, and be wide and expansive between his fore legs. There is one thing which is being lost sight of in many pure breeds of sheep—the important point of the shoulders; because I hold that all male animals ought to be so constructed as to have the right power of locomotion. Now, what I do say of many of the pure breeds of sheep, and alas! of many others, is, that the shoulders are placed upon their bodies as though they were pieces of wax-work—as if the body was made first and the shoulder had been a second thought, and stuck on after the body had got cold. Well, if we could get their shoulders right I should like to have wide and expanded loins. I should like his tail placed well upon his rump, and well surrounded with mutton; his backbone should be straight, but better a little arched rather than the other way. I should like to see what I call "legs of mutton," deep, full, and weighty. Then I do not want to see them too long upon the legs, because if they are too long upon the legs they cannot travel. Another great and important point is to see that the wool is of the right character, and plenty of it, and that you get a skin not blue, but of that nice cherry hue that every farmer acquainted with breeding knows must propagate good stock, and stock which will graze.

How Rams ought to be used.—I am not going to start a theory, but I am going to ask you to bear with me for a few minutes while I say how I consider rams ought to be used.

We will suppose that some of those gentlemen who do breed those very good lambs give 7 guineas for one ram, 10 guineas for a second, and 15 guineas for a third. Well, it is very proper: I have no doubt they have done wisely in giving 15 guineas. But they turn all the rams into the flock together. Now, let me ask whether it is not within the range of possibility that the 7 guinea ram should tup the ewe intended for the 15 guinea ram; and the 15 guinea ram the ewe naturally belonging to the 7 guinea ram, while the 10 guinea ram takes his choice of both? I hold that, after giving those prices for your rams, the way to get a level crop of lambs is to select the ewes for the rams. You have got some ewes with glaring faults which you can see, but which the 15 guinea ram would materially correct. I will go to the other extreme. You have got some ewes that show very well in some points in which the seven guinea ram is a little deficient. Now, I believe if you were to go upon the principle of selecting the ewes for the rams you would be more likely to breed a level lot of lambs, because you would breed them with corrected points, which you could not do otherwise. I am aware that you will tell me that this is a very difficult matter. It is a difficult matter even in an enclosed country, and in an open country you will find it still more difficult. It will take a great number of hurdles, it will require more attention, and altogether involve considerable trouble. But what great success has ever yet been achieved without trouble? The object of almost all our cross-breeding is to get as many lambs as we can; because, looking at the prices of wool and mutton and corn, it becomes an important consideration. My experience tells me that if we want to produce plenty of lambs, and if we desire the single ones to come strong and healthy, it is very much within our own control, and it is by these means—that is, flush your ewes two or three weeks before the rams go to them, and continue that for two or three weeks afterwards; I will answer for the result. Now I will give you my own experience last year. We were rather deficient in early Turnips. I tupped some upon layers, some upon the parks, and gave them a certain quantity of cake, and one lot upon Turnips, and no cake at all. We had 25 per cent. more twins from those on Turnips than from those on the new layer, or with cake besides. As we don't wish to have failures with our rams, there are one or two little points upon which it has occurred to me to speak to you this evening. Rams, in my opinion, travel a great deal too far on our flock farms. The principle is, in a great measure, to let the rams run with the ewes indiscriminately. They run with them into the fold at night; they go out with them the next day, and they thus travel a considerable distance. I think you thus destroy very much of their vigour. What I advise you to do is to let the ewes go out on the heath, the fields, or wherever you think well; but keep the ram at home, and give him a little cake and fresh food. I am quite sure you will be well repaid by an alteration of your present system. Again, I believe it to be a most important matter, when you put the ram to the ewes, to notice how the ewes are running. If you do not use ochre, how can you tell when their time has elapsed? If you go upon the principle of using red ochre at a certain period, blue ochre at another period, and yellow ochre afterwards, you can tell to a dead certainty how your ewes will lamb, that is to say, when you may expect a number of lambs, and when you may not. I hold it to be a matter of considerable importance, and I wish that every flockmaster paid attention to it; and if you adopt my recommendation of selecting the ewes to the ram, you will see if the rams are seasoning your ewes. Here let me ask do you make it a rule to examine certain parts of your rams when you buy them, or before you turn them with your ewes? for, depend upon it, if a certain peculiar construction of his generative organs, which is, or ought to be, well understood by every flockmaster or shepherd, is not perfect, he will never produce a lamb; and you thus not only experience much disappointment, but lose several weeks of the best part of the season."

When to put the Ram to the Ewes.—Now, the last point under this heading is one which those gentlemen who have cross-breds will understand better than I do; that is—when ought the rams to be put to the ewes?

I think this is a matter which is very much affected by localities, or by the situation of the farm upon which the flocks are placed. If a gentleman is in an enclosed country; if he is well provided with spring food, and is well able to carry along his lambs when they come at an early time, then the ram may go in by the end of September; but as a general principle, where lambs fall in an open country, I would certainly advise Michaelmas as the best time, considering that they would then drop about the 7th of March, and follow from that time. My experience tells me that it is not always the forward lambs that make the heaviest sheep. I can state that as practical information. In our own system of breeding we mark the ears of lambs for the first month, and after the month has expired we have no mark at all. Now let me tell you a fact worth relating at a meeting of this kind. At the last Birmingham exhibition there was one sheep which was said to be the largest Southdown shearling ever exhibited at the Birmingham exhibition, of which you can form an opinion yourselves when I tell you that it weighed 17 stones (imperial) live weight. That wether had no ear mark, proving that he was one month at least younger than the first lamb which was dropped. I merely mention this to show you that Michaelmas Day is not a very bad time.

Treatment of Ewes during Pregnancy.—Now we are coming to another important subject, and one which, I think, must claim the attention of every breeder: that is, "The treatment of ewes during pregnancy," and "Abortion—its causes and effect."

I am going to deal with this as a plain matter-of-fact question. The first thing, and the most important thing, too, I think, is the feeding of our sheep. I believe this to be the crowning point of our success, or the reverse—abundance of lambs or the reverse. The question is—"How are our ewes to be fed?" Many of you have been longer in the county, and have had a great deal more experience than I have had; but yet I will ask you one question—"Taking it as a general rule, have you ever seen these two things together in Norfolk, viz., a good crop of Turnips and a good crop of lambs in the same year?" I think you will find in nine cases out of ten that the reverse has been the case. The simple fact is, I believe, we are too free in the use of our Turnips. There is another question, upon which, however, I do not profess to give an opinion myself, because my experience has not carried me to that, but it is a question upon which many gentlemen may be able to give us some practical opinion. It is this:—"Is it right to allow the ewes to follow the hoggets when on Turnips?" that is to say—"Is it right to allow the ewes to feed upon the refuse food of the hoggets?" My opinion is that it is not—that it is not only a barbarous custom, but also a dangerous one. I do believe that by placing the ewes to follow the hoggets, they not only get a great amount of indigestible food, but they take up a great amount of silt, which must act as an irritant to the bowels. My experience tells me that abortion is probably produced by two causes, and comes at two periods of the pregnancy of the ewes. The first time generally happens between the 25th of December and the 6th of January: then, I fancy, it is produced by food that is too stimulating to the generative organs, and which thus acts on the uterus, and causes it to expel its contents. The next stage, and I believe the most dangerous one, happens about February, which I believe to be produced by the great amount of indigestible food which the ewes have taken up between those periods. You have all witnessed a great amount of fever in the system, which produces an inflammatory action over the whole system of the animal, and abortion is the result. You have it shown to you by the effect the fever produces afterwards, because at that time of the year seldom do you get a case of abortion without the ewe losing its wool, and I would ask in how many cases its life also? Now, how are we to alter this? I hold that it is—I will not say entirely

within our own control, but if experience is worth anything, and I will give you that experience, it tells us that it is almost within our own control. Let me give you one or two sterling facts, and facts that I defy any man to get over. Up to 1853 the Merton flock of sheep was known to be as unhealthy as regards abortion as any flock of sheep in the county. In that year we had something like 110 cases of abortion, and we lost 80 ewes. I felt that the time was come when a change was necessary, and that to go on in that way was stamping those who had to do with the sheep with a want of that intelligence, care, and discretion that ought to be thrown into the management of so valuable a flock. I, therefore, entirely altered the system which was then in use, and I determined that never again, after a certain time of the year should they have another Turnip until nearly the time of the lambing, and the system I followed out was this: we put our ewes on Turnips for tupping, and kept them on for six weeks; we got abundance of lambs by that means. I brought them back again on the park. By taking them off in the autumn months the Grass grew a good deal. There was a great amount of food which would last them very well in an open season until the end of December or the beginning of January. Then I gave bran and chaff until about a fortnight before the time for the first lambs to fall. I then placed them upon Turnips, taking care to give very few at a time, and with good allowance of chaff. Now it is a fact, that from that day we have not had a single case of abortion on the farm, and our averge number of ewes lost has never, up to the present year, exceeded five.

Treatment of Hoggets.—Now I come to the sixth heading, which is the treatment of hoggets from July to Michaelmas.

This is a question with which gentlemen of large experience are well acquainted, and it will perhaps be necessary for me to say that a frequent change of pasture is desirable. We have always found that to give bran with cake has done more towards the growing our hoggets successfully up to the time when we wish them to be put on to the Turnips than anything else; in fact, it keeps them healthy. In other things we have bought experience once or twice. By too suddenly flushing our hoggets with too much highly stimulating food we have produced a great amount of fever; but when we have done so, we have been fortunate enough to hit upon a remedy, which has very much corrected it. If we find we have been unfortunate enough to get into that dilemma, we give to each a decoction of half an ounce of senna leaves and an ounce of salts, frequently followed by a second dose in the course of a fortnight. We have rarely failed to carry off the fever, and our hoggets go on satisfactorily afterwards. I believe it also to be very important to dip our lambs in July or August. I merely make this remark to say that I have tried most of the compositions of note which have come under my notice, and I have no hesitation whatever in saying I have found none so good for ticks, or lice, or any other insect that can affect a sheep, as the composition by Allen, of Lynn. Of course we always take great care in giving our hoggets Turnips on the pastures for some three weeks, or they have gone on as long as a month before putting them wholly on Turnips, and I have found they do not then suffer.

Home Correspondence.

Skinless Oats and Barley: Salt as a Manure.—A Correspondent in a late number of the *Gazette* having made inquiry of your contributors how far from experience many or any of them approved of cultivating skinless Oats and Barley, being one of your numerous readers who has for a long time obtained much valuable information through your pages, supplied by Correspondents as well as by yourself, I feel bound to give a mite or two in return. I have repeatedly, for experimental purposes, grown both skinless Oats and Barley on a great variety of soils in various parts of Ireland, and in every case found both the one and the other to fall far short in value in juxtaposition with their congeners. I had the skinless Oats from the late Mr. De Renzey alluded to by your correspondent, the first year after its introduction, and the results of my attempts to cultivate it with profit were very abortive; nor do I think there had been a single plant of it grown in the locality of Clobemon Hall for many years; indeed I doubt much if there be many there who even remember its name. The skinless Barley I first had from a distillery establishment at Middleton, near Cork, and subsequently in Kerry, in a collection of cereals from Messrs. Lawson, of Edinburgh, and, as already said, I gave up its extended culture.* It is a fact which may have been ascertained by some of your readers in other parts of the United Kingdom, that almost every good variety of Barley becomes partially, in many cases wholly skinless, and invariably free from awns when grown on the coast of Wexford, and for some miles inland, which I have never known to be the case in any other part of Ireland; and it is also a fact that seed Barley thus grown, when sown farther inland produces better crops than are obtained from the same variety of seed, whether of home growth or imported. Are such things common on any of the sea coasts in England or Scotland? And this brings me to the second part of my heading—"Salt as a manure." I cannot agree with Mr. Lawes in the conclusions he has come to, as lately published in the *Agricultural Gazette*. I have been using salt for many years for general and experimental purposes in the growth of many plants, and speaking now as a practical man, I believe salt to be indispensably necessary on many rich loamy soils to give strength to the straw, and preventing the laying, or, as we say in Ireland, the "lodging" of the crops of cereals when grown on such soils. It may be great presumption on my part to question the correctness of the analyses alluded to by Mr. Lawes, when he says he found so little salt in the grain of crops grown on land so highly manured. Here, again, I will fall back on the coast of Wexford, where I have been for several years superintending the reclamation of the vast mudlands of the Wexford Harbour Embankment Company. On these lands, when but partially reclaimed, there were extensive crops of various kinds grown for general purposes, but of Wheats more especially, and to such an extent was salt found to exist in the Wheat-grains, which were in all other respects of the finest samples, that some of the millers objected to buy the same, alleging as a reason that their customers the bakers at first found a difficulty in making the bread sufficiently free from salt to satisfy their customers. But by a little more practice they found they could dispense in a great measure with the usual quantity of salt used in making ordinary bread. I could give you many examples also of the value of salt in the growth of Mangel Wurzels far from the seashore, and especially in peat bogs. But I quite agree in opinion with all who have spoken on the subject on the occasion I am alluding to, that salt, if used at all extensively on heavy, wet, or un trained lands, will prove injurious to most crops in their early growth, especially during cold wet seasons. When I say this, let me not be supposed as arguing against the use of salt even on such lands when properly drained and aerated. In proof of this I could give you many examples in the case even of leguminous crops as well as of green crops and cereals. *Edward Carroll, Demtaheen, Fermoy.*

* The Barley I found most profitable for cattle feeding, milch cows especially, was the common Bere or Bigg. This when cooked, and its product used in a liquid shape, produced extraordinary effects, the more especially when having been previously malted, as somehow has been done "under the rose."

Foreign Correspondence.

Berlin: *March.*—The Agricultural Society and German Association of Posen, of which I am a member, are preparing a Cattle Show for the 19th and 20th of May, and horse races for May 21. Do you think anything could be done by advertising or by writing letters to the clubs or societies to induce English people to induce English people to come over or to send a reporter. They would be hospitably received, and might at the same time see a little of the war, or of Polish life and manners. It is a good opportunity to see this part of the world. *A German Member of the Central Farmers' Club.*

Farmers' Clubs.

Kingscote.—At a recent monthly meeting of this Association, Mr. J. T. Harrison, the President of the Association, read a paper "On Climate," from which we extract the following passages:—

The subject which I have the pleasure of bringing under your notice this evening, may not appear so practically useful to you as many of those we have discussed at these our quiet social meetings; it is one, however, very full of interest, will well repay study, and be surely found one of the most engaging departments of natural science. We will first consider the sources of heat. These are, 1st, the heat of the earth; 2d, that of the sun—I might add, chemical action in the soil.

1st. *The Heat of the Earth.*—In any latitude, at a depth which is small compared to the earth's radius, the temperature is permanent throughout the year; the effects of solar radiation being confined to a superficial stratum of inconsiderable thickness.

The temperature increases rapidly as we descend into the earth. I have myself been down one of the deepest pits in the North of England, where the thermometer stood at 90°. From careful observations there is now little doubt that the interior of our earth is in a molten state, and that the solid crust encompassing it is considerably less than 100 miles in thickness. Time was, no doubt, when this internal heat played a very important part in the earth's vegetation, and it is very probable that that most extraordinary vegetation which in the shape of coal is so much conducing to our comfort this evening, was stimulated in its growth by the internal heat of the earth rather than by the sun. This subject has been well argued by Dr. McCausland, in his interesting little book, "Sermons on Stones."

One peculiarity of the vegetation of the great coal formation is the entire absence of season rings, those marked signs of the sun's influence. In fossil trees of a later geological date, these season rings become marked features, evidencing the sun's predominating influence. The earth, no doubt, is still gradually cooling down, and thus there is probably a constant supply of heat to the earth's surface from within it. This seems in some measure borne out by some observations made by Mr. Backhouse, at York, on the 7th of January, during the severe frost.—(See *Times*, January 16, Letter from Admiral Fitzroy.)—Mr. B. found that a thermometer placed upon the bare ground indicated 10 degrees, whilst one 7 feet distant, separated from the earth by a Russia mat and a thin board, stood at 3 degrees, or 7 degrees lower than the naked earth.

2. *The Radiation of the Sun.*—The sun is constantly sending out in every direction rays of light and heat. When we consider the effect of the few rays that fall upon our comparatively little world at the great distance it is off—how it surpasses our limited means of conception to grasp any definite idea of the intensity and immensity of the heat given off by it in all directions! These are the source of heat more directly affecting climate. Now these rays can fall perpendicularly only upon a limited area of the earth's surface at once. This area is daily extended into a band or girdle round the earth by means of its daily rotation on its axis, and to a still wider girdle in the course of the year, or during its revolution round the sun. This extended girdle, receiving during the year the sun's perpendicular rays, is in consequence of the axis of the earth's rotation not being at right angles to the plane of its revolution. (Illustrated with a Turnip and lamp.) This band or girdle extends for about 23½° on either side of the equator. This beautiful provision is the cause of our seasons, as you are no doubt aware, spring and autumn corresponding with the period when the sun's rays strike perpendicularly on the equator, when the days and nights are equal—midsummer with us, when the rays fell perpendicularly on 23½° of north latitude; midwinter when they fall on 23½° of south latitude; in the southern hemisphere summer and winter being exactly reversed. Upon all the rest of the earth's surface except this band of which I have spoken, which is the tropical region, the sun's rays must fall more or less obliquely. The more obliquely, the greater the surface over which the rays are spread, and consequently the less the warming effects produced. Thus the temperature gradually diminishes from the equator towards the poles.

There is, however, a compensating element which materially affects the result, namely, the comparative length of the day and night. All places within the tropics have nearly 12 hours of day and 12 hours of night throughout the year, but as we recede from these tropical regions, we find that during summer the days gradually get longer as we travel towads the poles and the nights shorter, till in the polar regions there is one long continuing day of six months, and a six months' night. The effect of this modifies the climate of the north very much, and the long summer's days enable the corn in Norway and Sweden to ripen, which would otherwise be impossible. Indeed, it has been calculated by eminent mathematicians, that considering the length of time that the sun is shining without intermission in the northern regions, the heat of summer ought to be greater at the poles than at the equator. Though this is not the case, yet, when the rays of the sun are allowed their full effect, they have been known to set fire to forests in Norway and Sweden; and during Sir John Franklin's expedition the heat was sufficient to melt the pitch from the ships in latitude 67°.

So far as the ripening of grain is concerned, however, the mean temperature of a place is not of so much consequence as the maximum, and it so happens that this considerable decrease in the mean temperature in the high latitudes arises, not so much from diminished summer's heat as from the intense winter's cold. The maximum temperature of Moscow, for instance, is only 12° below that at the equator, whilst the cold of winter is greater by 70°, consequently Wheat and other cereals are grown there during the short summers and brought to perfection—and Barley ripens in Lapland so far north as 70°.

Mr. Harrison here offered some observations on the effect of altitude and aspect on temperature, and quoted from a paper read by Mr. Simpson to the Royal Agricultural Society. He then proceeded to consider the influence of the ocean and of ocean currents in moderating the effects of solar radiation upon the earth's surface.

One of these ocean currents, the *Gulf Stream*, is especially valuable to these, our islands, its influence extending to the north of Scotland and Norway.

The effect of it upon our British Isles is most marked; to it chiefly, Ireland owes its name of Emerald, and that the following peculiarity in England must be attributed, viz.:—that although the average temperature decreases towards the north from 52° at Penzance to 50°.36 at London, 47°.84 at Edinburgh, and to 42° in the north of Scotland; yet, this decrease is almost entirely owing to the greater heat of summer in the south and south-eastern parts. For instance, the temperature of the summer months in London is 63°.14, and in Edinburgh 58°.28; and whereas London is colder than the Orkney Islands in winter, it is full 20° warmer in the summer. Yet the lines of equal winter temperature instead of lying east and west across the Island, run nearly north and south; so that you might travel from Dover through London to Worcester, Liverpool, Lancaster, to the Western Isles of Scotland, and find very little difference throughout in the temperature. Or again, from Hull, through York, Newcastle, and Edinburgh, through the western part of Scotland to the Orkneys and Shetland in the depth of winter, and not experience any very great difference in the temperature.

After remarks on icebergs, and their influence on the climate and character of particular seasons, Mr. Harrison referred to the influence of the atmosphere:—

Atmosphere.—The effect of the warm or cool water of the ocean would be comparatively inappreciable, were there no medium of communication between them and the land. We know from experience that in perfectly calm weather we can stand a very severe degree of cold, but let the air begin to move, and a brisk wind drive past us, we find it necessary to protect ourselves with impervious non-conducting clothing, or to take violent exercise so as to apply to the surface of our bodies heat sufficient to meet the demand of the chilling blast. To this atmosphere, as the vehicle of conveying warmth and moisture from the ocean to the land, I beg next to draw your attention.

When from any cause the temperature of the air is lowered beyond a certain point, that moisture becomes visible, forming what we call mist. A remarkable instance of this occurs at the time I am preparing this paper—Jan. 13, 1864. During the week ending January 9 we experienced a most severe frost, followed by a rapid thaw, with westerly winds, so warm on the evening of the 12th that it seemed like summer. During the night the wind changed, and, without violence, we have to day a mixture of warm air brought during the last few days from the ocean, with the cold easterly borne air; the consequence is a dense fog all the day, the mixed air being cooled down, and unable to maintain in an invisible form the moisture with which the warmer air was charged.

Such a mixture of opposing currents of air in the sky gives rise to the formation of the clouds, which are, as it were, suspended fogs. Various causes have been assigned for the particles of the cloud collecting and falling to the ground in the form of rain, such as electricity, &c. The subject is now under careful scientific examination, and will no doubt have a good deal of light thrown upon it by Mr. Glaisher.

After considering the causes of motion in the air, the principal of which, he said, was heat, the lecturer went on to consider the effects of atmospheric currents thus produced.

You must understand (he observed) that the atmosphere, though it is apparently quite free and without intimate connection with the earth, is not so in reality, but that as the earth turns round upon its axis the atmosphere is carried along with it—if it were otherwise there would be such a wind on the earth's surface in a direction opposite to its motion that nothing could stand upon it. Now, as the earth's rotatory motion is greatest at the Equator and nothing at the Poles, so is that of the atmosphere that surrounds it—but this motion can neither be given suddenly nor stopped suddenly—the consequence is that the air passing from the North Pole where it has no lateral motion towards the Equator where the earth has rapid lateral motion from west to east, seems to lag behind or to blow from the east, and this, combined with its motion from the Pole, produces a north-east wind. On the other hand the air passing from the Equator where it has rapid motion with the earth from west to east towards the North Pole where the earth has no lateral motion is constantly moving faster towards the east than the earth as it moves northward; the effect is a south-west wind.

We know pretty well from experience that these are the two winds to which we are most accustomed, varying slightly on one side or the other, the wind but for a comparatively short time remaining steadily in any other quarter.

After a full discussion of this subject and of the influence of movements in the air in our insular climate, Mr. Harrison brought the facts and laws he had illus-

trated, to bear upon the agricultural management of land. He said:—

Climate depends very much upon the fitness of the earth's surface to retain the sun's rays, and upon what becomes of the water that falls upon it. Let me mention that there is no worse conductor of heat than water. You may apply heat for a long time to the top of a kettle before you can make it boil; evaporation would go on from the surface, but the water below would remain comparatively cold. In the case of ordinary boiling, by heat applied to the bottom, the heat is not communicated to the mass of water by conduction, but by the heated particles expanding and floating up to the top, the colder ones falling down and in turn becoming heated.

From this you will see why the effect of the sun's rays should not be great on wet undrained land, the water lying on the surface is heated and evaporates, but every gallon thus carried off requires as much heat as would raise 5½ gallons of water from the freezing to the boiling point, thus the earth is frequently caked on the surface and damp and cold below. Again the cold dry easterly winds of spring rob such land of the surface moisture and of the heat required to evaporate it, chilling the plants and giving rise to the sickly yellow appearance of the Wheat, so common at that season of the year. The effect is frequently a difference of 10° to 15° of temperature between fields that are drained and those undrained, though similar in other respects. This undrained ground, again, being thus cooled, has a tendency to chill the air adjoining it below the temperature at which it can retain its moisture in an insensible state. Thus we see such land subject to fogs, hurtful to man and animals, and by intercepting the rays of the sun further prejudicial to vegetation. Observe the opposite effect on well drained land: Observe first that as the water evaporates from the ocean, it, in the state of vapour, contains a much larger quantity of heat than it did as water, this heat becoming what is called latent or not sensible; this heat, when it again assumes the liquid form and falls as rain, becomes sensible, so that in the atmosphere charged with vapour, we have, as it were, bottled up in an invisible state both rain and heat. The rain thus warmed falling upon the earth and passing freely through it, imparts not only moisture but warmth. Of this warmth as well as moisture well drained land can take advantage, whilst to ill-drained land the former is soon lost and the latter is an enemy. Now it seems to me that by your endeavour to consolidate the pan under your thin soils, you are trying what you can to reduce your soil to the condition of undrained land, and that you must thereby encourage surface evaporation and consequent cooling. If it were possible, the more desirable system would seem to be, to deepen the soil by mixing this pan with some of the brash below, and so allow the heavy rains to which we are subject, to percolate freely, leaving warmth and moisture behind them.

There are three variable qualities of the atmosphere, from which result variations in the weather; these are, its weight, temperature, and moisture: and, by a careful observation of these, it is possible frequently to predicate the weather we are likely to have. It is well to bear in mind that in the months of May and June, when the advantage of a moist atmosphere is so important to the success of the Turnip crop, if the dew point is not more than five or six degrees below the temperature of the atmosphere, Turnips may safely be sown, for though rain may not fall, yet the soil will imbibe sufficient moisture from the air for the successful germination of the plants. In November and December, the air is much more saturated with moisture than in the months of February and March. The subject is so extensive, that it would afford materials for several, instead of one paper only. My endeavour has been to open the subject to you as simply as I could, and so as to induce some of our younger members especially to follow it up, and I promise them they will find it a path of abundant interest and enjoyment. The following signs of rain, given by the celebrated Dr. Jenner, are amusing, and, being founded on experience, trustworthy:—

The hollow winds begin to blow,
The clouds look black, the glass is low;
The soot falls down, the spaniels sleep,
The spiders from their cobwebs peep;
Last night the sun went pale to bed,
The moon in halos hid her head;
The boding shepherd heaves a sigh,
For see a rainbow spans the sky;
The walls are damp, the ditches smell,
Closed is the pink-eyed pimpernel.
Hark, how the chairs and tables crack!
Old Betty's bones are on the rack;
Loud quack the ducks, the peacocks cry,
The distant hills are seeming nigh;
How restless are the snorting swine,
The busy flies disturb the kine;
Low o'er the Grass the swallow wings,
The cricket, too, how sharp he sings;
Puss on the hearth, with velvet paws,
Sits wiping o'er her whiskered jaws;
Through the clear stream the fishes rise,
And nimbly catch the incautious flies;
The glowworms, numerous and bright,
Illumed the dewy dell last night;
At dusk the squalid toad was seen
Hopping and crawling o'er the green;
The whirling wind the dust obeys,
And in the rapid eddy plays;
The frog has changed his yellow vest,
And in a russet coat is drest;
Though June, the air is cold, and still,
The mellow blackbird's voice is shrill;
My dog, so altered in his taste,
Quits mutton bones, on Grass to feast;
And see yon rooks, how odd their flight,
They imitate the gliding kite,
And seem precipitate to fall.
As if they felt the piercing ball:—
'Twill surely rain, I see with sorrow,
Our jaunt shall be put off to-morrow.

A cordial vote of thanks to Mr. Harrison, and another to the Chairman, terminated the proceedings.

Reviews.

Journal of Proceedings of the Manchester and Liverpool Agricultural Society. Secretary, T. B. Ryder, 57A, Church Street, Liverpool.

Laying Down Land to Permanent Pasture. By Martin H. Sutton, Reading.

We couple these two pamphlets together for the sake of that which they have in common—instruction in the art of laying down a permanent pasture. The Society's Journal records the circumstances of competitions for premiums which are offered in it for the best cultivated farm, for works of irrigation, for the making of fences, for laying down pastures, and for many other agricultural operations, and it describes the methods employed by the several competitors, with the results which have attended their efforts. We shall make many extracts and publish them hereafter.

Mr. Sutton's paper, taken from the Journal of the Agricultural Society of England, describes in full detail the plan which he has found successful. We have already more than once extracted from its pages.

The following are passages descriptive of the experience of Cheshire farmers, taken from the former of these pamphlets:—

1. *On Mr. Atherton's farm at Chapel House, Speke.*—"This claimant's farm is 168 acres, and he claims for laying down 36 acres. The land is a good loam. Last year the land was mown twice, it has been drained with tiles. The seeds sown in April, 1861, quantity and variety sown were—10 lb. Red Clover, 3 lb. Alsike, 3 lb. White Clover, 3 lb. Trefoil, 3 lb. Rib Grass, 1 bushel perennial Rye-grass, 3 lb. meadow Fescue, 3 lb. root stalked meadow Fescue, 3 lb. smooth stalked ditto, 2 lb. Crested Dogstail and 2 lb. of Foxtail. The 36 acres of laying down in this case is in two fields, and claimant stated that one field had been pastured with stock until the middle of April; it was then dressed with guano and nitrate mixed, and 3 cwt. of this mixture applied to the acre. The crop on this field was tall and thick on the land, the bottom well set with nearly all the Grasses sown, and altogether a first-class laying down. Number 2 field was top-dressed with similar mixture and about the same time as No. 1. It was equal to No. 1 in quality and thickness of plant, and somewhat of greater length. Both fields quite superior, and we very rarely see any so good."

2. *On Mrs. S. Jenkinson's farm at Speke.*—"This claimant's farm is 189 acres, and claims for laying down 27½ acres of rather a good strong loam land, the seeds were sown under Barley in 1861. The land has been drained, quantity and variety of seeds sown were—130 lb. meadow Fescue, 130 lb. Poa trivialis, 104 lb. Crested Dogstail, 130 lb. hard Fescue, 104 Poa pratensis, 140 lb. Rib Grass, 160 lb. Red Clover, 80 lb. White Clover, 70 lb. Trefoil, 70 lb. Cow Grass, and 18 bushels Perennial Rye-grass. The crop inspected June 9, and was equal in variety of Grasses to the best seen this year. It had been top-dressed with 2½ tons of the best guano to the acre. Seeing such close competition in this case for the same premium, the crop was walked through carefully in different parts, and found fully as good as the other competing for the same premium."

3. *On Mr. G. Halsall's farm at Halebank, near Warrington.*—"This claimant's farm is 132 acres, and he claims for laying down 18 acres. The soil is strong loam on clay. The seeds were sown under Oats in 1861. The Oats following Wheat; the land has been drained, and manured this year with 2½ cwt. of guano to the acre. Quantity and variety of seeds sown per acre—3 lb. Red Clover, 3 lb. Cow Grass, 2½ lb. White Clover, 2½ lb. Alsike Clover, 2½ lb. Rib Grass, 2½ lb. Crested Dogstail, 3 lb. Poa pratensis, 3 lb. Poa trivialis, 1 peck meadow Fescue, 1 peck hard Fescue, ½ peck Cocksfoot, ½ bushel Italian Rye-grass, ½ bushel perennial Rye-grass. This claimant's crop was tall and thick, seeds having succeeded well. Red Clover, Cow Grass, Alsike Clover, White Clover, Dogstail Grass, and Fescue all plentiful on the land, forming one of the best turfs for new laid down seen this year."

M'Lean and Hope's Descriptive Catalogue and Price List of Feeding Stuffs, Manures, &c.

We notice this capital trade list, which contains a great deal of useful agricultural information, for the purpose of extracting from its pages the following notice by Mr. M'Lagan, of Pumpherston, of his experience in the improvement of Grass lands to which we alluded last week:—

"Mr. M'Lagan, of Pumpherston, has shown us how Grass-fields can be kept in heart and even improved. He says:—'We have been successful in having good and improving pastures in soils of both the above descriptions [*i. e.*, land worth 15*s.* and 50*s.* per acre respectively] for more than four years; in one instance, the field, worth about 50*s.* per acre, has been pastured for 10 years. In this case, cake and grain were consumed by sheep on the field for the first two years after it was sown out, and the Grass became so luxuriant that it was considered advisable to discontinue the use of extra feeding. In four or five years after, there was an evident deterioration of the Grass, which became 'fogged.' As a remedy, cake was again resorted to, and in two months in spring, when there was a scarcity of Grass, half-bred ewes and lambs were allowed at the rate of 1 lb. of rape-cake and 1 lb. of linseed-cake for each ewe per day. The first year there was an immense improvement in the Grass; the increased profit from the ewes paid for the extra feeding, and the improved pasture was got into the bargain. While we advocate more land being in pasture, we would insist upon the pasture being made to keep more stock. We have indicated the mode of doing this by giving the stock cake, or other auxiliary food, on the Grass. When this practice is pursued judiciously, there can be no doubt that it is remunerative, both from the increased value of the stock and the improved condition of the soil. So long as the relative prices of stock and feeding stuffs continue as they are, it will be found profitable to use the latter on Grass, more particularly for stock in condition. We would, however, recommend the use of feeding stuffs with caution for lean stock, particularly those in low condition. The same profit would certainly not be derived from them as from the others. The great desideratum at present is cakes of various qualities to be given to stock of different degrees of condition. To economise the Grass so as to enable it to keep more stock, we should have a cake which combines bulk with nutrition; that is, if we wished to give a certain amount of nourishing matter to an ox, we should have it in our power to give it say in 6 lb. daily, rather than in the more concentrated form of 3 lb. . . . One great advantage in using cake on the Grass is the keeping of the Grass always in a progressive state.'"

Lays for the Cottage. By Jeptha Young, King's Stanley, Stonehouse, Gloucestershire.

The author is a handloom weaver, well known to us as a worthy labouring man, who is often disabled by disease, and during his frequent illnesses, chronicles in rhyme the events of his neighbourhood, eking out the scanty earnings of his loom by the sale of his songs in penny broadsheets to his neighbours.

A former collection of these verses was noticed some years ago in these columns, and Jeptha informs us that the readers of that notice purchased an entire edition of his sixpenny pamphlet at that time.

He has now sent us a collection of the pieces which have since accumulated. Though they are for the most part mere rhymes, yet among the stanzas are many which indicate both greater natural powers, and much greater effort and resolution in the laborious work of self education than are commonly displayed.

We quote a single verse in illustration of the ability of the author, from one of his longer religious pieces, descriptive of the Journey of Life. In this he very effectively sums up his argument as follows:—

"The sunny South, the frozen North,
Send their long trains of travellers forth,
And thousands press from East to West
To one Great Terminus of Rest."

These rhymes cannot claim of right more than the local interest which they have hitherto excited. We name them here nevertheless, feeling sure that if any one shall send seven stamps to the address of the author (which is given above), he may feel repaid, if not by the pamphlet which will be sent to him in return, at least by the certainty that a charitable contribution has been well bestowed.

Homes Without Hands. By the Rev. T. G. Wood.

Part III. contains an interesting account of the Stormy Petrel, the Woodpecker, the Starling, the Toucan, the Swift, and some other birds which either make their home by burrowing or by taking possession of holes already made. A short chapter is devoted to burrowing reptiles, and another to burrowing invertebrates, land crabs, and other crustaceous creatures. There are five nice woodcuts to enliven the 30 pages of letterpress, which is written in a popular style for young people.

Farm Memoranda.

Liscard Hall, near Birkenhead.—Mr. Littledale, a Liverpool merchant, here owns "400 acres, and the extent of land irrigated is 65 acres, in the last season. Iron pipes are laid for operating over 115 acres, and liquid was thrown over the 65 acres named three times in the season. A portion of the land watered is strong loam on clay, the other portion is sandy loam on free-stone rock. There are over two miles of iron pipes laid under ground about three inches in diameter. Taps are fitted to the iron piping at various places, so as to accommodate about 8 acres by one tap. Gutta percha piping is attached to a tap at such a point of the land where irrigation or showering the surface is intended, and the gutta percha piping is worked by two men, one at the extreme end of the piping (where a rose is attached) directs the water evenly on the surface of the land, and the other man moves the gutta piping as the surface is dressed. Water for irrigating is obtained at any season, which is directed into two tanks, these tanks will contain about 100,000 gallons of liquid. All liquids from the farmhouse, yard, and cattle standing, piggeries, &c. run into the tanks, and from there is raised by a steam-engine of 10-horse power, and forced into such of the main iron pipes as accommodate the land to be watered. The piping cost about 300*l.*, and the tanks (both of which are built of brick and made water tight) cost 300*l.* The cow and horse stock on this farm are mainly supported in stalls during summer, the Grass, Clover, &c. being cut and carted daily as the stock requires it; the number of cattle and horse stock is generally about 100 heads, and besides that stock a large number of pigs are kept. The system as here detailed economises most completely all the liquids from the stock and farmyard. The inspectors have not been furnished with statements showing in cash amount the comparative merits of this system to that of the ordinary mode of keeping dairy and other stock on their pastures during summer months."

Miscellaneous.

Statistics of Cheese Farms.—1. Alfred Buck's Vernon, Oneida County.—Number of cows, 470 for six months; 145,695 lb. cheese made; 10.1 lb. milk made 1 lb. dry cheese; cheese sold for 13 cents per lb.; the cost of boxes, bandage, salt, &c., 40¼ cents for 100 lb.; price charged by cheesemaker for making cheese, 1 dol.

per 100 lb.—making whole cost, 1 dol. 40¼ cents. 2. Williams, Adams, & Dewey's, Hampton, Oneida County.—Number of cows, 350; pounds of milk, 976,378; pounds of cured cheese, 95,959, sold for 12,279 dols. 73 cents; 10 lb. 2 oz. milk made 1 lb. cheese; price of making cheese, at 1 dol. per 100 lb., 959 dols. 59 cents; incidental expenses, 386 dols. 92 cents: total, 1346 dols. 51 cents. 3. Whitesburo', Oneida County.—Number of cows, 650, eight months milking; number of pounds of milk was 2,122,855; number of pounds of cheese, 207,313; sold for 12 cents and 88-100 per lb. Thirty cords of wood used, costing 90 dols.; 3 tons of coal, costing 24 dols. Expense of bandage, salt, boxes, &c., 45 cents per 100 lb.; shrinkage of cheese 4 per cent. 4. Clark's, Vernon, Oneida County.—Number of cows not reported; pounds of milk, 955,915 for four months; number of pounds of cured cheese, 101,694; number of pounds of green cheese, 107,083; 9399 lb. of milk for 1 lb. of cured cheese; expense of boxes, &c., 40 cents per 100 lb. of cheese. 5. Miller's, Constableville, Lewis County.—290 cows; 971,515 lb. milk; 100,089 lb. cured cheese. Nett sales of cheese, 11,011 dols. 64 cents; 9 7-10 lb. of milk for 1 lb. of cured cheese—the amount of shrinkage was 6 17-100 per cwt. 6. Deerfield and Marcy, Oneida County.—700 cows; 1,949,215 lb. of milk; 193,335 lb. cheese; 1082 lb. of milk, 1 lb. of cheese; cheese sold for 13 611-1000 cents. per lb., delivered at Utica. 7. Lowvills, Lewis County.—600 cows; 1,763,934 lb. milk; 172,162 lb. dry cheese; shrinkage 8754 lb.; cheese sold for 13 7-10 cents per lb.; cost of bandage, boxes, &c., 43 cents. 8. Georgetown, Madison County.—435 cows; 1,538,204 lb. of milk; 156,911 lb. of cheese; 9¾ lb. of milk for 1 lb. of cheese; shrinkage 3½ per cent.; cheese sold for 12½ cents per lb. *Albany Country Gentleman.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. Slatter, Streatley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer.		Wind.		Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers.				Rain fallen in previous 24 hours on the Ground.
		Inches.	Dry Bulb.	Wet Bulb.	Direction.	Force, 0—6		In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Inches.
Friday ..	April 22	..	..	..	..	..	..	..	..	..	..	..
Saturday ..	23	30.24	50	44	E.	0	0	..	32	..	28	..
Sunday ..	24	30.25	44	43	N.E.	0	10	65	37	78	34	..
Monday ..	25	30.16	52	47	N.E.	0	8	57	38	71	30	..
Tuesday ..	26	30.13	51	49	N.W.	0	10	60	42	72	37	..
Wednesday ..	27	30.17	51	48	N.E.	0	10	56	44	64	40	..
Thursday ..	28	30.13	46	43	N.E.	0	10	57	43	67	42	0.01

Notices o Correspondents.

Books: *A C.* How much Arthur Young's "Farmer's Calendar" differs from its original may be gathered from the opening sentence of its preface, which we here transcribe:—"So much of the original work has been cancelled that the editor has to apologise for his title-page. The serial publication of the book was begun before he had realised how much of the 'Farmer's Calendar,' written more than half a century ago, is obsolete. And the name of Arthur Young has been thus committed to an almost entirely new book, not one-twentieth part of which is his own.

Carbolic Acid: *Phœnix.* It is the characteristic and efficient agent in McDougall's disinfectant; perhaps this notice may procure an intimation of where you can obtain it in quantity.

Egyptian Lentils: *Hingham.* Apply to Messrs. Booker, Mark Lane.

Leather: *Agricola.* We can find no information on the composition of leather clippings. But it is doubtless rich in nitrogenous matter. In the conversion of skin into leather there is, however, such an insolubility and fixity of character conferred upon it, that it is rendered useless as manure, except after such a tedious process of rotting and disintegration as will practically render it valueless.

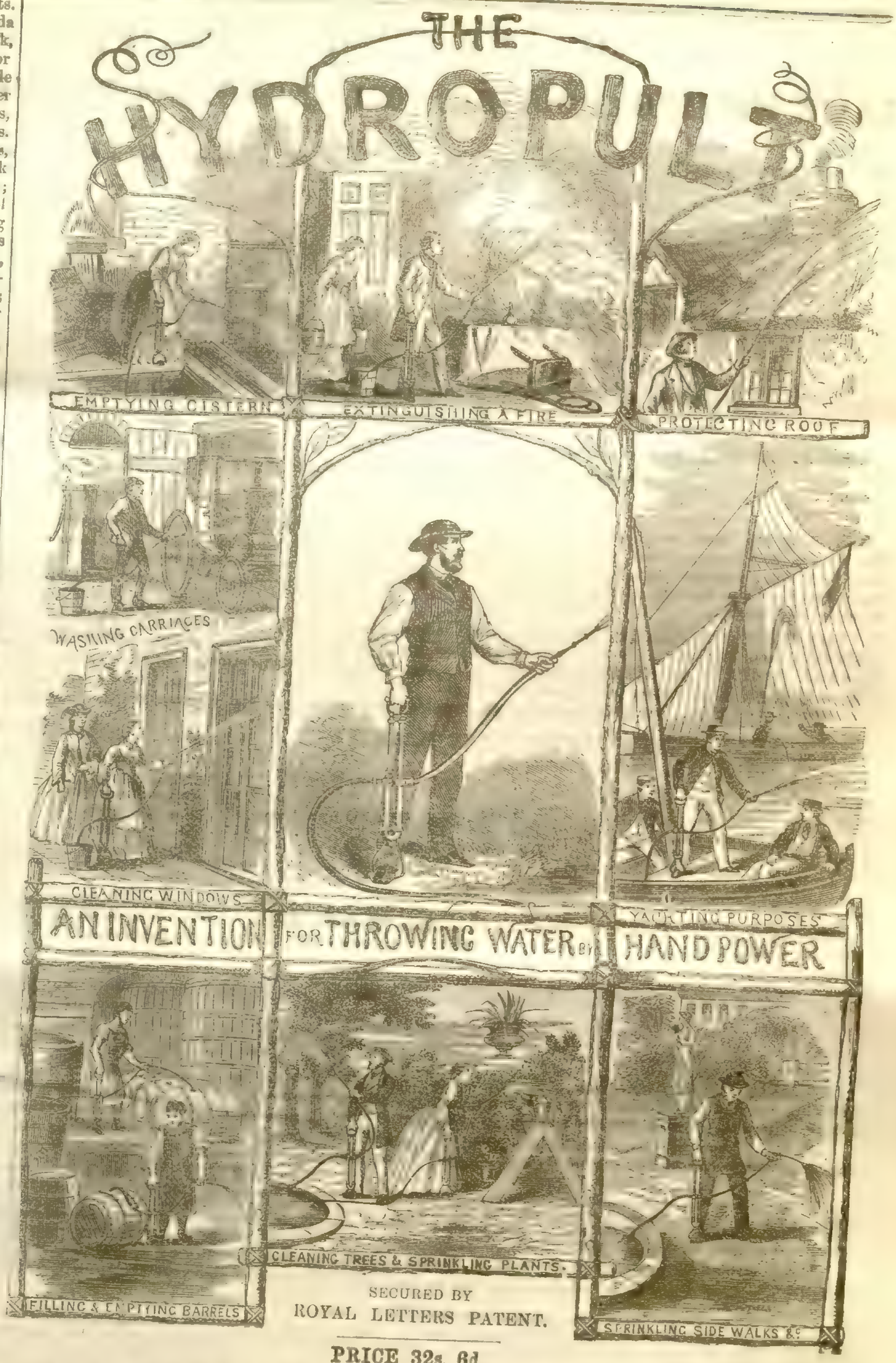

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It has often come to my knowledge that in many instances Ironmongers have actually recommended these devices as equal to, if not superior to, the HYDROPULT, from the fact that I have persistently refused to place the HYDROPULT "on sale," as is the custom of the manufacturers of the HYDROPULT imitations, and I have thereby obtained the enmity of said interested tradesmen, who unscrupulously state that which they know to be untrue; for there is no Pump in existence except the HYDROPULT, weighing but 8 lb., which will throw 8 Gallons of Water per minute a distance of 50 feet when worked by the power of one man.

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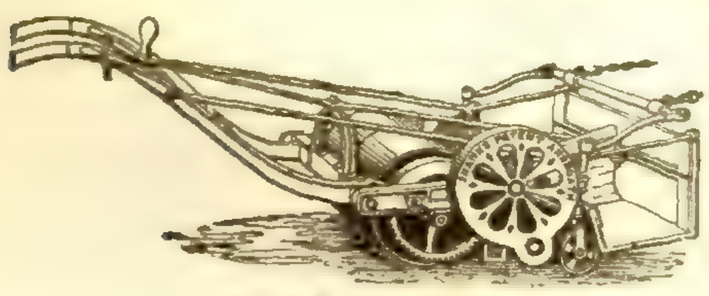

HORSE MACHINE.

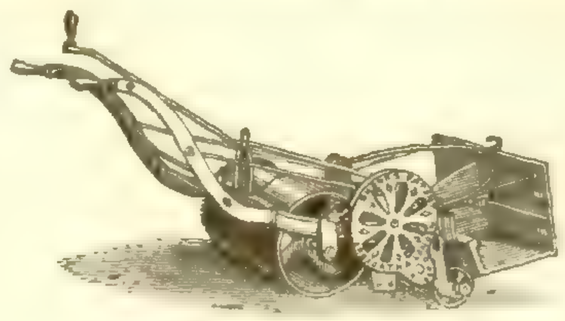

PONY MACHINE.

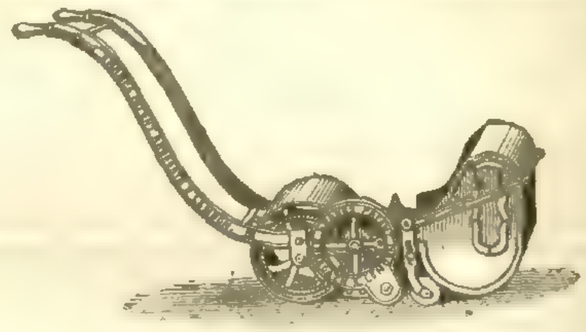

HAND MACHINE.

MOWS ON UNEVEN AS WELL AS ON LEVEL LAWNS, AND WHETHER THE GRASS BE WET OR DRY.

ALEXANDER SHANKS AND SON have had the honour this Season to again furnish their celebrated LAWN MOWERS to HER MAJESTY THE QUEEN, for the Royal Gardens at Windsor, and to HIS MAJESTY THE KING OF SAXONY, for the Royal Gardens at Dresden.

A. S. & SON have for a quarter of a century devoted their attention to the Improvement and Manufacture of LAWN MOWERS; the demand for their Machines is now unprecedented, and out of the many thousands of Machines they have manufactured and sold, they cannot point to a single instance where they have not given every satisfaction. A. S. & SON have further improved their PATENT LAWN MOWERS for this season, and have no hesitation in saying that their Machines are still, as they have always proved themselves to be, unequalled for the qualities that constitute a really good LAWN MOWER fit for the hands of the Gardener.

SHANKS' PATENT LAWN MOWERS are in daily use in the ROYAL GARDENS at KEW, WINDSOR, BUCKINGHAM PALACE, HAMPTON COURT, OSBORNE, and BALMORAL; in the GARDENS of the ROYAL HORTICULTURAL SOCIETY at KENSINGTON; in the GROUNDS of the CRYSTAL PALACE COMPANY at SYDENHAM; and in many hundreds of the principal Gardens in the Kingdom, as well as abroad, where their merits have been fully proved, and their success established.

PRICES, including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

SHANKS' NEW PATENT HAND MACHINE,

For Pushing only.

Width of Cutter.						
10-inch Machine	...	...	...	£3	10	0 } *Easily Worked by a Lady.*
12-inch Machine	...	...	...	4	10	0 }
14-inch Machine	...	...	...	5	10	0 *Ditto by a Boy.*

Silent Movement, 4*s.* extra.

SHANKS' NEW PATENT HAND MACHINE,

For Pushing or Drawing, Separately or Together.

Width of Cutter.						
16-inch Machine	...	...	...	£6	12	6 *Easily Worked by a Man.*
19-inch Machine	...	...	...	7	12	6 *Ditto by a Man and Boy.*
22-inch Machine	...	...	...	8	7	6 } *Easily Worked by Two Men.*
24-inch Machine	...	...	...	8	17	6 }

Silent Movement, 7*s.* 6*d.* extra.

SHANKS' NEW PATENT PONY and DONKEY MACHINE.

Width of Cutter.								If with Patent Delivering Apparatus.
25-inch Machine	...	...	..	£12	10	0	...	... 25*s.* extra.
28-inch Machine	...	...	...	14	10	0	...	... 30*s.* „
30-inch Machine	...	...	...	15	15	0	...	... 30*s.* „

Silent Movement, 12*s.* 6*d.* extra; Boots for Pony, 21*s.* per set;
Ditto for Donkey, 16*s.* per set.

SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.								If with Patent Delivering Apparatus.
30-inch Machine	...	...	...	£19	0	0	...	... 30*s.* extra.
36-inch Machine	...	...	...	22	0	0	...	... 30*s.* „
42-inch Machine	...	...	...	26	0	0	...	... 40*s.* „
48-inch Machine	...	...	...	28	0	0	...	... 40*s.* „

Silent Movement, 20*s.* extra; Boots for Horses' Feet, 24*s.* per set.

ALEXANDER SHANKS AND SON regret they find it necessary for the protection of their interests to call the attention of their numerous friends to the following assertions of Messrs. THOMAS GREEN & SON in their advertisement of LAWN MOWERS which has this year appeared in the *Gardeners' Chronicle* and other newspapers. A. S. & SON also particularly request attention to the following letters, in answer to these assertions:—

Messrs. GREEN have the following statement in their advertisement: "*By special appointment Sole Manufacturers to Her Most Gracious Majesty the Queen.*" In answer to this A. S. & SON subjoin the following letter from EDWARD M. BROWELL, Esq, Secretary to the Lord Steward of Her Majesty's Household:—

"Board of Green Cloth, Buckingham Palace, February 27, 1864.

"SIRS,—In reply to your request that I should write you a letter for publication, stating that Messrs. GREEN & SON had no appointment whatever, nor had any liberty or title to say that they had one, I can only repeat what I told the Gentleman who represented himself as your Agent when he called to ascertain how you could get the appointment of Manufacturers of Mowing Machines to Her Majesty, that no Warrant had been granted for about 10 years, and that *Messrs. Green had not one*, although they had lately supplied Her Majesty's Gardens, &c., with several of their Lawn Mowing Machines.

"I am, Sirs, your obedient Servant, (Signed) EDWARD M. BROWELL."

Messrs. GREEN also give a list of "Foreign Medals awarded to them for their Patent Lawn Mowers." Amongst the number is one from the "Hamburg International Exhibition, 1863." A. S. & SON subjoin the following letter from the Secretary to the Committee of the International Exhibition at Hamburg, translated into English:—

"Messrs. PETER SMITH & Co., Hamburg. (Agents for A. S. & SON.)

"SIRS,—In answer to your favour of yesterday, I beg to inform you that, after having looked myself over the list of awards during the last year's International Agricultural Exhibition, GREEN'S *Machine for Lawn Mowing did not receive* a Medal, whereas T. GREEN & SON (Leeds) were awarded with the small Silver Medal for a combined Steam-Engine with standing Boiler.

"Hamburg, February 12, 1864." "Most respectfully, (Signed) GERHARD NACHMANN, Dr.,
"As Secretary of the former Executing Committee of the International Agricultural Exhibition at Hamburg. 1863."

A. S. & SON beg to state that they are making inquiry of the Secretaries of the other Societies where Messrs. GREEN state they have received Medals, and as soon as they are able will publish the result.

Messrs. GREEN & SON also state that their "Patent Lawn Mowers are the only Machines in constant use at the Royal Gardens, Windsor, the Royal Horticultural Society's Gardens, South Kensington, the Crystal Palace Company's Gardens, Sydenham, and other places.

A. S. & SON beg to state that for many years their Lawn Mowers have been in successful operation in the Royal Gardens at Windsor; and further, *only a few weeks ago they had the honour to receive Orders for their newly Improved Machine for the same Gardens.* The following letters from Mr. EYLES, Superintendent of the Royal Horticultural Society's Gardens, and from Mr. GORDON, Superintendent of the Crystal Palace Company's Gardens, are amply sufficient to satisfy any one that Messrs. GREEN & SON'S statements on this point are also incorrect.

"Royal Horticultural Society, South Kensington, March 3, 1864.

"MY DEAR SIRS.—In answer to your inquiry, I beg to say that your Machines have been almost in constant use here during the Mowing season ever since the formation of the Gardens.

"I am, yours very truly, (Signed) GEORGE EYLES."

"Crystal Palace, Sydenham, S.E., March 29, 1864.

"GENTLEMEN,—In reply to your inquiry respecting the Mowing Machines supplied by you, I am pleased to say both the Horse and Hand Machines were in constant use during the whole of the last season, and have given great satisfaction to me and many others who saw the Machines at work. The self-acting Apparatus for delivering the Grass being a great acquisition.

"I am, Gentlemen, yours, (Signed) J. A. GORDON."

A. SHANKS AND SON feel it altogether unnecessary to make any remarks on these proceedings. The letters they have been authorised to publish are amply sufficient to convince any one that Messrs. GREEN have used incorrect statements in their Circulars and Advertisements. These statements are calculated to mislead parties in selecting LAWN MOWERS, and consequently to some extent must be prejudicial to the interests of A. S. & SON as Manufacturers.

DENS IRON WORKS, ARBROATH, April 2, 1864.

Shanks' Patent Lawn Mowers require less power to work them than any other, are all warranted to give satisfaction, and if not approved of may be at once returned.

PATENTEES AND SOLE MANUFACTURERS:

ALEXANDER SHANKS AND SON, DENS IRON WORKS, ARBROATH, N.B.

LONDON OFFICE and SHOW ROOMS, 27, LEADENHALL STREET, E.C.

A Stock of Lawn Mowers always kept at the London Depot, from which orders can be at once executed.

ILLUSTRATED PRICE LISTS OF CHAFF CUTTERS, WIRE NETTING, GARDEN CHAIRS, ETC., FREE ON APPLICATION.

The Heaviest Cropping Mangel Wurzel is

SUTTON'S LARGE YELLOW GLOBE.

SUTTON & SONS can still supply good new seed of the above at 8d. per lb., or cheaper in large quantities (carriage free).

Royal Berkshire Seed Establishment, Reading.

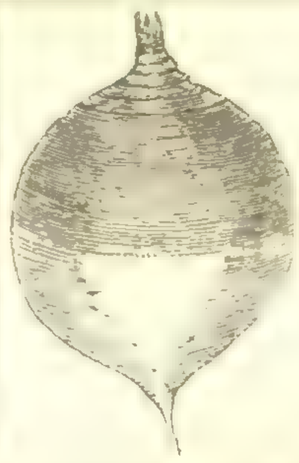

SUTTON'S CHAMPION SWEDE is ONE of the HARDIEST SORTS in CULTIVATION.

The Champion Swede being of quick growth never suffers from mildew, and does not require to be sown so early as other Swedes.

PRESENT PRICE 10d. per lb., or cheaper by the bushel. Carriage free, except small parcels.

SUTTON & SONS,
Royal Berkshire Seed Establishment, Reading.

NEW PLANTS for 1864.

E. G. HENDERSON & SON

will forward their NEW DESCRIPTIVE SPRING CATALOGUE on application, and have much pleasure in calling the attention of Amateur cultivators and others to Novelties possessing great merit in the following families, and which will prove as valuable acquisitions for the Flower Garden as many others they have previously sent out. Among the eminent raisers from whom they have purchased the property or stock of each are the following, many of whom stand foremost in their special attention to the individual flowers to which their names are prefixed, and are sufficiently known to cultivators generally to inspire a reliant confidence in their respective merits.

FUCHSIAS.—EDWARD BANKS, Esq., Deal.
VERBENAS.—Mr. WILLS and E. BANKS, Esq.
VARIEGATED GERANIUMS.—Mr. GRIEVES, Culford Hall Gardens.
PETUNIAS.—Mr. GRIEVES, Culford Hall Gardens, and others.
ZONALE GERANIUMS.—Messrs. WHEELER, WILLS, GRIEVES, and M. RABOUILLARD.
TROPÆOLUMS.—Mr. WILLS, Tarporley Park Gardens.
EARLY FLOWERING or FORCING GERANIUMS.—SPARY and CAMPBELL.
CHRYSANTHEMUMS.—Mr. BIRD.
GLOXINIAS.—Mr. BREEZE.
DIANTHUS or HYBRID PINK.—Mr. CLARK, Norwich.
BEDDING DAHLIAS.—Mr. RAWLINGS and Mr. BRAGG.

NEW FUCHSIAS for 1864.

Messrs. E. G. HENDERSON & SON have renewed pleasure in being enabled to offer a selection of FUCHSIAS, unequalled by any previous collection for the leading purposes of decoration and competition.

The most remarkable advance apparent in the present group is the larger size of the flowers, which attracted special notice at the Royal Horticultural Exhibition. The more essential properties of substance, outline and colour are equally combined in the present selection then exhibited. These varieties being the usual proved growth of two seasons, is a guarantee for their permanent merit, apart from being produced by that most eminent raiser, EDWARD BANKS, Esq.

The Report of the Royal Horticultural Society's Exhibition given in the "Cottage Gardener" of Sept. 15 states that these Fuchsias "were extremely beautiful, and decidedly in advance of the Fuchsias of the present day."

VERBENA, VELVET CUSHION.—This is a remarkable and highly interesting novelty, possessing fine properties as a bedding plant, being a hybrid between the hardy herbaceous species, V. venosa, and one of the garden varieties. The style of growth is neat and sub-erect, with a more suffruticose habit at the base than is common to the show flowers. It is closer jointed, more dwarf, and densely branched, with smaller leaves. The flower trusses are as large as the generality of the bedding varieties, and the blossoms, which at first are somewhat tubular, open to a full salver-shaped outline of the richest velvety-tinted purple-magenta colour, forming a fine relief ground for pure white, lilac, or rose, in beds or ribbon rows. The dwarf and densely-branched sub-perennial habit yields a long continued succession of bloom through the summer. Its alliance with the perennial species has imparted a hardier constitution and somewhat wiry growth (naturally calculated to resist damp and cold in the winter months), with a free tendency to form a latent autumnal growth from the root, so much so, that of plants, bare of soil, taken from the flower beds at Tarporley Park last autumn, from which the upper growth was freely cut off, the remaining shoots threw out numerous buds of great vigour, and it was from this incipient after-growth the present stock has been derived. The suffruticose habit of root-stems in this variety will, it is probable, originate a new feature in the bedding class of Verbenas, by which a hardier constitution will be obtained, with a proportionate longer season of display, without excess of summer foliage or exhaustion by autumn growth. This plant was raised by Mr. WILLS, at Tarporley Gardens, where, last summer, an entire bed attracted great attention by its especially neat and distinct densely-branched dwarf growth, and profusion of rich velvety-hued magenta-coloured bloom.

DAHLIA IMPERIALIS (ROEZL).—This exceedingly novel and interesting new plant was discovered by Mr. Roezl on the mountainous heights of Mexico, and is described by him as having a majestic pyramidal habit of growth, with elegantly feathered or pinnated leaves, and numerous large, conspicuous, drooping, white, lily-like flowers in the summer and autumn months. Mr. Roezl considers this the finest plant he has hitherto discovered in Mexico, and it is found specially valuable by its adaptation for planting as single specimens in the flower borders of villa gardens, or as groups in the decoration of pleasure grounds. The remarkable roots of this species differ from others in the tribe by each separate fang or tuber being attached to the centre crown by a long narrowed thread-like neck, which appears to diverge in a somewhat horizontal direction from the centre union.

CHRYSANTHEMUM, EMPRESS of INDIA.—A beautiful variety from C. Queen of England, pure white, three-quarters globe in shape, full in centre; a fine addition to competition trays and conservatory groups.

BOUVARDIA GRANDIFLORA.—A neat dwarf sub-evergreen greenhouse plant, with pure white, sweet, trumpet-shaped flower tubes, longer in the tube than B. longiflora, and petals as large as B. Humboldti; an early spring-flowering plant.

GARIBALDI PINK.—A beautiful dwarf free flowering variety, in Anna Boleyn style, with a richer colour, and a darker violet or purple crimson centre; flowers large and full, with well-formed pods, not subject to burst; of neat erect growth, and adapted for forcing; height 12 inches. Illustrated by Miss Sowerby.

CYTISUS RACEMOSUS ELEGANS.—An improvement upon the well-known species C. racemosus, with a similar habit of growth, and gracefully acuminate or lengthened flower spikes of rich golden yellow, forming a valuable addition to early summer flowering greenhouse plants.

DIANTHUS ROSETTE.—This plant is the fourth variety of the perpetual-flowering Mule Pink, as figured in the "Illustrated Bouquet,' and possessing the same free bushy style of growth, which is much superior to that of the old Mule Pink; and its peculiar tendency to produce successive flower spikes until the late autumn months, after which period the plants may be re-potted from the ground to mature their bloom in the frame, greenhouse, or conservatory. It forms large corymbose trusses of light salmon-rose coloured flowers, and is a valuable addition to summer and autumn flowering plants for medium-sized groups and beds.

PYCNOSTACHYS URTICIFOLIA.—A very valuable winter-flowering hothouse shrub, having ovately-acuminate leaves, with deep narrow tooth-like lobes, and numerous terminal dense trusses of sky-blue Salvia-like blossoms throughout the winter months. Its vigorous growth, free bloom, and beautiful colour, so rare in winter bouquets, will commend it to all lovers of cut flowers for portable vases, baskets, or groups for the drawing-room or warm conservatory. 3s. 6d.

CLEMATIS HYBRIDA SPLENDENS.—Large-flowered hybrid variety, between C. lanuginosa and C. viticella grandiflora. 5s.

SCHIZOSTYLIS COCCINEA, a new scarlet-flowered Tritonia-like Cape bulb. 7s. 6d. each.

PHLOX LOUISE GRELL.—The most beautiful pure white, with red-crimson flaked flower, fine bedding plant.

COLEUS MARMORATA.—A new picturesque leaved variety, resembling C. Verschaffelti in growth.

VERBENA HENRIETTE (Syn. Le Grand Boule de Neige).—The best white bedding Verbena, 9d. each; or 6s. per doz

VERBENA PALLAVICINI DI BRESCIA.—The most perfect form, and beautiful colour. 1s. 6d.

VERBENA NOBILE CAROLINA FRANZINA.—White and blood-red striped flower.

VERBENA MADAME LEFEVRE.—Beautiful variety of unequalled bedding habit; flowers red, shaded with violet. 1s. 6d. each; 9s. per doz.

VERBENA MELINDRES SPLENDENS.—Unequalled in its style, foliage, and colour, the most dazzling of all scarlets, Lord Leigh, Defiance, or any other. 9d. each; 6s. per doz.

GERANIUMS MRS. POLLOCK, SUNSET, besides many other beautiful varieties, of which we only possess the stock.

GAZANIA SPLENDENS, with several new varieties, 1s. and 1s. 6d.

IMATOPHYLLUM MINIATUM, and I. CYRTANTHIFLORUM, 5s. to 21s. each. Unique early spring and summer-flowering plants,

GLOXINIA PUNCTATA.—The most distinct and elegant variety. See illustration in the above Catalogue.

CLIANTHUS DAMPIERI SPLENDENS, 3s. 6d. and 5s. each.

FORTUNE'S NEW JAPAN CHRYSANTHEMUMS, striped, fimbriated, &c., 7 varieties for 5s.

ROSES, the new varieties of 1864.—Strong healthy plants, 2 to 3 feet high.

HEDERA JAPONICA FOL. VARIEGATA.—The new Japanese Ivy, with 40 other gold and silver-leaved varieties.

YELLOW RHODODENDRONS.—A fine collection on own roots, the only way they should be grown to flower splendidly.

ARUNDO DONAX FOL. VARIEGATA.—The most noble of variegated Grasses; 3s. 6d. each.

GYNERIUM ARGENTEUM ELEGANS.—Pure white, plume-like trusses. 8s. 6d each.

ERANTHEMUM RUBRO-VENIUM.—One of the most beautiful variegated leaved Plants of dwarf growth. 3s. 6d. and 5s. each.

LAPAGERIA ROSEA SPLENDENS.—The finest variety as a cool Conservatory Climber, with large carmine-rose bell flowers. 3s. 6d. to 7s. 6d.

SARRACENIA PURPUREA.—Large North American Pitcher-plant. 3s. each.

WELLINGTON NURSERY, ST. JOHN'S WOOD, LONDON, N.W.

New Chrysanthemums.

JOHN SALTER is now sending out his NEW CHRYSANTHEMUMS, PYRETHRUMS, HARDY VARIEGATED PLANTS, &c.

A DESCRIPTIVE CATALOGUE will be sent on receipt of two postage stamps.

Versailles Nursery, William Street, near Hammersmith Turnpike, W.

BEDDING and BORDER PLANTS.—CALCEOLARIAS, CARNATIONS, CHRYSANTHEMUMS, CLEMATIS, DAHLIAS, FUCHSIAS, GERANIUMS, PETUNIAS, ROSES, and VERBENAS.

The choicest kinds of each at the lowest prices, at Mr. TOWNSEND'S, St. Mary's Nursery, adjoining the Compasses, Hornsey, a few minutes' walk from the Hornsey Railway Station. Dealers supplied on liberal terms.

WHEELER'S LITTLE BOOK on SEEDS.

CARTER'S GARDENER'S VADE-MECUM.

New Plants.

MR. WILLIAM BULL begs to announce that he is now sending out his

Collection of NEW VERBENAS for 1864
" FUCHSIAS for 1864
" SINGLE PETUNIAS for 1864
" DOUBLE PETUNIAS for 1864
" PENTSTEMONS for 1864
" BEDDING GERANIUMS for 1864
" ENGLISH SPOTTED PELARGONIUMS for 1864
" FRENCH SPOTTED PELARGONIUMS for 1864
" FANCY SPOTTED PELARGONIUMS for 1864
" DROOPING GLOXINIAS for 1864
" ERECT GLOXINIAS for 1864

For full particulars and prices, see, SPRING LIST of NOVELTIES, which can be had on application.

Mr. W. B. also begs to announce that his NEW PLANTS from Brazil, Central America, Australia, Bombay, Java, New Caledonia and Guatemala, are now ready for delivery, an inspection of which is invited.

New Bedding Plant, COLEUS MARMORATUS, 10s. 6d. each.

New Ornamental Plant, GYNERIUM ARGENTEUM fol. VARIEGATUM, 31s. 6d. each.

Establishment for New and Rare Plants, King's Road, Chelsea, London, S.W.

Green Hollies.

BREERETON NURSERY, RUGELEY, STAFFORDSHIRE.

CORNELIUS WHITEHOUSE has pleasure in offering, from one of the largest Stocks in the Trade, 200,000 Transplanted HOLLIES, from 4 inches to 4 and 5 feet, which are well known to be extra good, rooted from this soil, are very healthy, stout, well furnished, and clean grown; a very large portion moved last May. Can supply the Trade from 4 inches to 2 feet. Cash or reference is respectfully requested from unknown correspondents.

Camden Nursery, Grafton Road, Kentish Town, London.

THOMAS ANSELL having established his Nursery as above (in consequence of the expiration of the Lease of his former one), begs to acquaint the Trade and the public generally, that his CATALOGUE for 1864 is now ready, and may be had on application; it will be found to contain a first-class Collection of DAHLIAS, GERANIUMS, CHRYSANTHEMUMS, FUCHSIAS, VERBENAS, Choice PETUNIAS, and Select AZALEA INDICA, &c.; also a very large Stock and assortment of General BEDDING PLANTS, for which he begs to solicit the favour of early orders, which shall receive his best attention, be carefully packed and forwarded to any part of the Kingdom.

DAHLIAS in sound pot roots, in great variety, expressly adapted for exportation, kept in stock throughout the autumnal, winter, and early spring months.

References required from unknown correspondents, and Post-office Orders to be made payable at the Post Office, Brecknock Place, Camden Town, N.W.

HERBACEOUS CALCEOLARIA, &c., SEED.

CHOICE CALCEOLARIA (JAMES').—This unrivalled strain has in every instance received FIRST PRIZES wherever exhibited—can be seen in bloom here. Sealed Packets, 1s. 6d., 2s. 6d., and 5s.

CHOICE PRIMULA SINENSIS FIMBRIATA.—Hayes superb strain. Sealed Packets, 2s. 6d., 3s. 6d., and 5s.

CHOICE CINERARIA.—Saved from best named varieties, and cannot be surpassed. Sealed Packets, 1s. 6d., 2s. 6d., and 5s.

HUNT'S SWEET WILLIAM.—Sealed Packets, 6d. and 1s.

SCARLET INTERMEDIATE STOCK.—True and fine. Sealed Packets, 1s. and 2s. 6d.

PANSY.—From best named varieties. Sealed Packets, 1s. and 2s. 6d.

And every other first-class Seeds. See CATALOGUE, post free.
WM. CUTBUSH & SON, Highgate Nurseries, London, N.

Indian Azaleas.

WILLIAM BARNES has the largest and most healthy stock of the above favourite plants to offer for sale, comprising the finest specimens, suitable for exhibition in this or any other country, as well as many thousands of smaller dimensions, from three-quarter and half specimens down to small plants, all properly shaped to form symmetrical specimens, and finely set with bloom. Any person forming a collection or increasing their present one will do well to visit this Nursery, where every variety up to the present date worth cultivating will be found, the whole grafted upon the stock that W. B. has proved so admirably adapted to them, after many years close observation.

PRICED LIST will be forwarded upon application post free.
Camden Nursery, Camberwell, S.—May 7.

MANGEL WURZEL SEED,
3d. PER POUND; OR CHEAPER BY THE CWT.
LARGE YELLOW GLOBE. | RED GLOBE.
ORANGE GLOBE. | LONG RED.
LONG YELLOW.

PRICED LISTS of other FARM SEEDS Gratis and Post Free
SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

TURNIP, MANGEL WURZEL, and AGRICULTURAL SEEDS.—The undersigned offer as above, of first-class selected Stocks and prime Samples, crop 1863, at lowest prices. Terms on application.

JAMES FAIRBEAD & SON, Seed Growers and Merchant 7, Borough Market, London, S.

N.B. Our LEWISHAM SWEDE again obtained First Prizes at several Root Shows this last season; one report states of them: "These Turnips were the admiration of all who saw them, being also a very even crop, although some bulbs were of immense size."

BARR & SUGDEN

12 KING ST COVENT GARDEN

Orders amounting to 21s. sent Carriage paid.

Surplus Stock of Gladioli.

2s. 6d., 3s. 6d., 4s. 6d., 6s., 9s., 12s., and 18s. per dozen.
15s., 21s., 30s., 50s., 60s., 70s., 80s., and 100s. per 100.

BARR & SUGDEN'S PAXTONIAN COLLECTIONS OF FLOWER SEEDS,

ADAPTED TO ANY STYLE OF GARDENING, SENT POST PAID.

HARDY ANNUALS.—2s. 6d., 3s. 6d., 5s. 6d., 10s. 6d., 21s., &c. Including those introduced in 1862, 1863, and 1864, 5s. 6d., 7s. 6d., 10s. 6d., 15s., 30s., &c.
HALF HARDY ANNUALS.—2s. 6d., 3s. 6d., 5s. 6d., 10s. 6d., 15s., 21s., 30s., &c.
HARDY PERENNIALS.—2s. 6d., 3s. 6d., 5s. 6d., 7s. 6d., 10s. 6d., 15s., 20s., 30s., &c.

Barr & Sugden's Collections of Vegetable Seeds for One Year's Supply.
10s. 6d., 15s. 6d., 21s., 30s., 42s., and 63s.

MIXED FLOWER SEEDS for WOODLAND WALK, WILDERNESS DECORATION, ROCKERIES, ROOTERIES, &c., 5s. 6d. per lb.; or 9d. per oz.
LILIUM LANCIFOLIUM (JAPAN LILIES), three varieties, 12s. to 18s. per dozen.
TIGRIDIA PAVONIA, 1s. 6d. per dozen, 7s. 6d. per 100.

PLANTS and PLANT CASES for TABLE DECORATION.

BARR & SUGDEN, SEED MERCHANTS, 12, KING STREET, COVENT GARDEN, W.C.

FARM SEEDS.—CARRIAGE FREE.

GRASSES and CLOVERS, mixed for Permanent Pasture, and adapted to any description of soil.
ALSIKE, RED WELSH, and other CLOVERS. Pure samples.
PACEY'S PERENNIAL, IMPORTED ITALIAN and other RYE-GRASSES. Extra cleaned.
TURNIPS, DICKSON'S PRIZE SWEDE, and others saved from picked transplanted bulbs.
MANGEL WURZEL, Select YELLOW GLOBE, OVAL, &c.

All of the very best description, and Carriage Free.

A DESCRIPTIVE PRICED CATALOGUE upon application to

JAMES DICKSON AND SONS, 102, EASTGATE STREET, CHESTER.

PRIZE MEDAL FOR SEEDS AND CEREALS.

ESTABLISHED 1800.

WILLIAM MORTON,

OLD MARKET PLACE, RIPON, YORKSHIRE,

now supplying his YELLOW BOY GREEN-TOPPED SWEDE TURNIP, grown from selected large ulbs of the Hardy Green-topped Swede, at 9d. per lb.; and his large FOSTERTON HYBRID, 8d. per lb. Price List Free.

Mixtures of GRASS SEEDS for Permanent Pasture, suitable to the various soils; ENGLISH and DUTCH CLOVERS, ARTIFICIAL GRASSES, LAWN GRASS, RYE-GRASSES, &c. Circulars (3d edition) Free by Post.

RIPON and CLARE SEED ESTABLISHMENT, RIPON, YORKSHIRE.

CARTER'S FARMER'S VADE-MECUM.

WHEELER'S LITTLE BOOK on SEEDS.

New Dahlias.

JOHN KEYNES, NURSERYMAN, Salisbury, begs to recommend the following splendid additions of New and First-class DAHLIAS, which have at all the Great Exhibitions excited such universal admiration, they having obtained 39 First-class and other Certificates. They were all raised by J. KEYNES, and are the produce of 45,000 Seedlings; have been substantially proved, and warranted the best collection ever yet sent out by one grower.

Purchasers will be liberally dealt with, and CATALOGUES with full description sent where required.

Anna Keynes (Keynes)
Fanny Purchase (Keynes)
Edward Purchase (Keynes)
John Wyatt (Keynes)
Earl of Pembroke (Keynes)
Lady Lilian Paulett (Keynes)
Hon. Miss Herbert (Keynes)
Willie Austin (Keynes)
Magpie (Keynes)
Sam Bartlett (Keynes)
Regularity (Keynes)
Polly Fawcett (Keynes)

Salisbury, May 7.

J. WATSON, St. Alban's, has much pleasure in recommending his fine new SHRUBBY CALCEOLARIAS for garden purposes; they are unequalled by any kinds in cultivation:—
CALCEOLARIA BIJOU, brilliant crimson, very dwarf
CALCEOLARIA BEAUTY of HERTS, clear amber
CALCEOLARIA GENERAL TOM THUMB, deep yellow
CALCEOLARIA STARLIGHT, fine red.
The above are warranted thoroughly shrubby. Full description given in *Gardeners' Chronicle*, p. 334. Price 30s. per dozen; the usual allowance to the Trade where six or more are taken.

NEW and IMPROVED VARIETIES of PENTSTEMONS and ANTIRRHINUMS for 1864.

PENTSTEMONS.

GEORGE SMITH, 3s. 6d.; SIGNET, 2s. 6d.; GARIBALDII, 3s. 6d.; BEAUTY, a dwarf bedding variety, deep rose pink, pure white, open throat, 2s. 6d.
These four varieties are selected as the best of several Seedlings which were submitted to the West of Scotland, "Hort. Magazine," October 1863, and noticed as "altogether a superior lot, and deserving of place in the most select collections of this favourite flower."

ANTIRRHINUMS.

GERTRUDE, 2s. 6d.; NANNETTE, 2s. 6d.; CONSTANCE, 2s. 6d. The above three varieties are selected from a large number of Seedlings, which are mentioned in the October Number of West of Scotland Magazine, as "superior and distinct Seedlings, the colours being different from any we have seen." See also "Gossip of the Garden" for October, 1863.
PENTSTEMONS, by name, 6s. to 9s. per dozen.
PENTSTEMON COMPACTUM NANUM. — Brilliant deep crimson, compact habit, 12 inches, fine bedder, 6s. per dozen. Awarded Certificate by the Floral Committee, 1862.
ANTIRRHINUMS, by name, 6s. to 9s. per dozen.
Usual discount to the Trade.
DESCRIPTIVE LIST on application.
STUART & MEIN, Nurserymen, Kelso, N.B.

The Best Early Turnip for Field Culture is the Pomeranian White Globe.

SUTTON AND SONS can supply fine New Seed of the POMERANIAN WHITE GLOBE TURNIP at 8d. per pound, or 30s. per bushel. Carriage free except small parcels.
PRICED LISTS of TURNIP SEEDS Post Free.
Royal Berkshire Seed Establishment, Reading.

SUTTON'S IMPROVED HARDY WHITE SWEDE.

This fine WHITE SWEDE is invaluable as late spring keep for Ewes and Lambs, and will thrive on any soil. It is not so coarse as the Old White Swede, unless sown too early.
Price 9d. per lb., or cheaper by the bushel. Carriage free, except small parcels.
SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

NEW HARDY WHITE SWEDE, the favourite Swede of the Flockmasters on the Hampshire, Wiltshire, and Cotswold Hills.—Grows rather coarse on some soils or when sown early; but it is very productive, hardy, and is the only Swede that can be depended upon to keep sound through the winter without storing. Excellent for late sowing and upon poor lands. Seed 9d. per lb. or 35s. per bushel, supplied by
RAYNBIRD, CALDECOTT, & BAWTREE, Basingstoke; and 89, Seed Market, Mark Lane, E.C.

BULBS FREE from WASTE in NECK or ROOT.—MANGEL WURZEL from transplanted and fully-developed roots. LARGE YELLOW GLOBE and all other sorts 6d. per lb.
WORCESTERSHIRE SWEDE, not to be beaten, 9d. per lb.; other kinds, 8d. per lb.
PRICED LISTS on application.
RICHARD SMITH, Seed Merchant, Worcester.

CHOICE ORCHIDS.

HUGH LOW & CO.

Have recently received very extensive Consignments of ORCHIDS from their Collectors and Correspondents in various Countries. Amongst them are many Novelties, the names of a few of which are appended, and gentlemen are respectfully invited to inspect them as well as the General Collection, which is of unusual extent, the Plants being cultivated in eight span-roofed houses.

ANGULOAS, from New Granada.
AERIDES DASYCARPUM.
BOLBOPHYLLUM RAMOSUM.
,, AURICOMUM.
CIRRHOPETALUM DISTANS.
CYMBIDIUM TIGRINUM.
CATTLEYAS, several unnamed Brazilian species.
CŒLOGYNE CONFERTA.
,, RHODEANA.
CŒLOGYNE, several unnamed new species.
CYPRIPEDIUM CONCOLOR.
,, species from Mount Ophir.
DENDROBIUM ALBOVIRIDE, very fragrant.
,, INFUNDIBULUM.
,, LUTEOLUM.
,, MARGINATUM.
,, OCHROLEUCUM.
,, PARISHI.
,, XANTHOPHLEBIUM.
EPIDENDRUM ATROPURPUREUM, from New Granada, as figured in Pescatorea.
,, from Guatemala.
,, species, North Brazil, very fine.
ERIA, three species, all sweet-scented.
ERIOPSIS species, New Granada.
HUNTLEYA, 21 species from New Granada.
LEPTOTES TENUE.
LIMATODES ROSEA VESTALIS, pure white.
LYCASTE, several species from New Granada.
MILTONIA PINELI.
,, ROSEA
,, several unnamed Brazilian species.
ODONTOGLOSSUM, unnamed species from New Granada.
ONCIDIUM, supposed to be O. longipes.
WARREA, species, New Granada. Probably W. bidentata, or the best variety of W. tricolor.

Large supplies have recently arrived in the finest possible condition of CATTLEYA ACLANDIÆ, MOSSIÆA, BICOLOR, MARGINATA, HARRISONIÆ, SKINNERI; ODONTOGLOSSUM GRANDE and HASTILABIUM; ONCIDIUM BICALLOSUM, CAVENDISHI, PULCHELLUM, true; all of which are on sale at very moderate prices.

CLAPTON NURSERY, LONDON, N.E.

E. G. HENDERSON AND SON'S NOVELTIES for 1864, now ready.

VELVET CUSHION VERBENA, hybridised with Verbena venosa, large truss, effective variety, with hardy constitution—fine bedder.

GARIBALDI PINK.—A richer coloured and dwarfer plant than Anne Bulleyn.

SCARLET GEM DAHLIA.—Best bedding Dahlia in its colour.

TOM THUMB DAHLIA—Rich crimson, 12 inches in height.

WHITE TOM THUMB GERANIUM.—Best of its class for pots or bedding.

UNITED ITALY VARIEGATED GERANIUM.—Foliage red, white, and green.

MRS. BENTON VARIEGATED GERANIUM.—Like Mrs. Pollock, best in its style.

PRINCESS OF WALES PETUNIA.—Most beautiful of any.

CHRYSANTHEMUM EMPRESS of INDIA, pure white, large, and beautiful.

Wellington Nursery, St. John's Wood, London, N.W.

Grass Seeds.

RICHARD SMITH is now prepared to supply MIXED GRASS SEEDS of very superior quality, suitable for all kinds of Soil.

	Per Acre.
MIXTURE for Laying down to PERMANENT PASTURE	25s. to 30s.
MIXTURE for ORCHARDS or LAND shaded by Trees	24s. to 26s.
MIXTURE for PARKS and CEMETERIES	28s. to 30s.
MIXTURE for Improving OLD PASTURE	6s. to 8s.
MIXTURE for One, Two, or Three Years' Lay	15s. to 18s.
MIXTURE for Fine LAWNS and BOWLING GREENS	per lb. 1s.

PRICED LISTS may be had on application.

RICHARD SMITH, Seed Merchant, Worcester.

Permanent Pasture Grass Seeds.

SUTTON AND SONS have still on hand some of each of the best kinds of GRASS and CLOVER SEEDS for every description of soil, and can supply them at the same prices as heretofore.

Royal Berkshire Seed Establishment, Reading.

American Nurseries, Downham Market.

DISSOLUTION of PARTNERSHIP.—Notice is hereby given, that the PARTNERSHIP heretofore existing between CHARLES GODFREY, of Romford, Essex, High Bailiff, and JAMES BIRD, of Downham Market, Norfolk, Nurseryman, under the style or Firm of "JOHN BROWN & Co." at Downham Market aforesaid, as Nurserymen and Seedsmen, was this day dissolved by mutual consent. All Debts due to and from the said Firm will be respectively received and paid by the said JAMES BIRD, who will in future carry on the Business in his own name.

Witness our hands this 29th day of April, 1864.

CHARLES GODFREY.
JAMES BIRD.

Witness, W. DANIELL.

JAMES BIRD having succeeded to the whole of the BUSINESS as above, returns his sincere thanks to the numerous Patrons and Customers for their liberal support, and trusts by strict attention to all orders confided to him, to merit a continuance and increase of the same.

☞ Please Note the Address.

COCOA-NUT REFUSE, delivered within 2½ miles of Charing Cross, at 2s. per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. BARSHAM & Co.

BARSHAM'S BRUSHES and MATS are sold in every town.

CAUTION.—Every Brush is stamped. J. BARSHAM'S Patent

Red Spider Magnified.

GISHURST COMPOUND, whether used against Insects and Mildew, on Growing Plants, or as Winter Dressing on Trees at rest, should be dissolved 48 hours before use. This gets rid of smell, and if the Solution be decanted, prevents any staining of foliage. A strength of from 1 to 2 oz. to the gallon of water is recommended for growing Plants; one from 4 to 16 oz. for Trees at rest.

Sold Retail by Nurserymen and Seedsmen, in boxes, 1s., 3s., and 10s. 6d. each.

Wholesale by
PRICE'S PATENT
CANDLE COMPANY
(Limited).

REIGATE SILVER SANDS, PEAT SOILS, LOAMS, &c., on Sale.

W. SHORT, Sand and Peat Dépôt, Reigate, Surrey.

TOBACCO PAPER, extra strong. To the Trade or Retail. Sample and price on application.

H. BROWN, 4, Commutation Row, Liverpool.

ROLL TOBACCO CLOTH.—The best and cheapest article for Smoking Greenhouses and Destroying the Fly. Price 1s. 4d. per lb.; over 10 lb., 1s. 1d.

JOSEPH BAKER, 10, Gough Square, Fleet Street, E.C.
Post-office Order payable Fleet Street.

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.

F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.

Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

Also TESSELATED PAVEMENTS of more enriched designs than the above.

WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.

To be obtained of F. & G. ROSHER, at their Premises as above.
Orders forwarded by Railway with despatch.

SILVER SAND (Best Quality) of F. & G. ROSHER, at the Addresses above—14s. per Ton, or 1s. 3d. per Bushel. 2s. per ton extra for delivery within three miles, and to any London Railway or Wharf. Quantities of 4 Tons, 1s. per Ton less.

GARDEN FLINTS for Grotto Work, 12s. and 14s. per Ton.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 570.

J. TYLOR & SONS'
GALVANIZED IRON TUB GARDEN ENGINES,
with Registered Spreader.

8 gal.	12 gal.	16 gal.
£2 13 6	£3 2 0	£3 12 6

24 gal.	30 gal.
£5 0 0	£5 12 0

Fig. 571.

J. TYLOR & SONS'
OAK TUB GARDEN ENGINES,
with Registered Spreader.

15 gal.	28 gal.
£5 12 0	£7 0 0

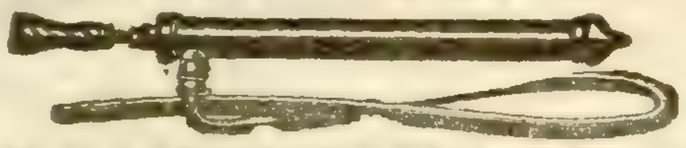

Fig. 586. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. £1 6 6 each.
No. 2. Ditto ditto .. 1 1 0 ,,
Telescope Branch Pipe for ditto .. 0 10 0 ,,

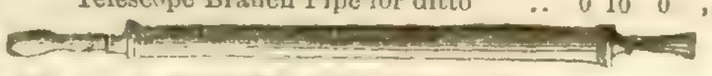

Fig. 590. Large GARDEN SYRINGE, with one rose and jet .. .. 10s. 6d. each.
,, 589. Middle Ditto ditto .. 9 6 ,,
,, 588. Small Ditto ditto .. 8 6 ,,
,, 587. LADIES' GARDEN SYRINGE, with do. 6 9 ,,

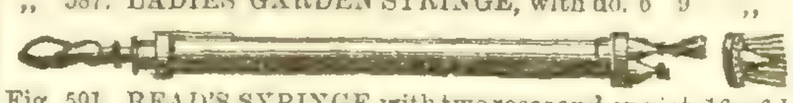

Fig. 591. READ'S SYRINGE, with two roses and one jet, 16s. 6d.
READ'S SYRINGE, with one rose and jet, 14 0
,, 592. Improved ditto ditto large 13 0

Garden Engines and Syringes of J. TYLOR & SONS' manufacture kept in stock by Ironmongers and Seedsmen in every part of the United Kingdom.

J. TYLOR & SONS, Manufacturers, Warwick Lane, Newgate Street, London, E.C.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, &c.

PROTECTION from the COLD WINDS & MORNING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide .. .. .. 1s. 8d. per yard run.
Four yards wide .. .. .. 3s. 4d. per yard.
An improved make, 2 yards wide, 1s. 9d. per yard.
An improved make, 3 yards wide, 2s. 8d. per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1s. 6d. per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.

"It is much cheaper than Mats as a covering."

Glass for Garden Purposes.

JAMES PHILLIPS AND CO. beg to submit their prices as follows:—

PROPAGATING GLASSES.

	Each—s.	d.		Each—s.	d.
2 inches in diameter ..	0	3½	12 inches in diameter ..	1	9
3 ,, ,, ..	0	4½	13 ,, ,, ..	2	0
4 ,, ,, ..	0	5½	14 ,, ,, ..	2	6
5 ,, ,, ..	0	6½	15 ,, ,, ..	3	0
6 ,, ,, ..	0	8	16 ,, ,, ..	3	6
7 ,, ,, ..	0	10	17 ,, ,, ..	4	0
8 ,, ,, ..	1	0	18 ,, ,, ..	5	0
9 ,, ,, ..	1	2	19 ,, ,, ..	6	0
10 ,, ,, ..	1	4	20 ,, ,, ..	7	0
11 ,, ,, ..	1	6			

BEE GLASSES.

	Each.—s.	d.		Each.—s.	d.
4 inches in diameter ..	0	6	9 inches in diameter ..	1	8
5 ,, ,, ..	0	8	10 ,, ,, ..	2	0
6 ,, ,, ..	0	10	11 ,, ,, ..	2	6
7 ,, ,, ..	1	1	12 ,, ,, ..	3	0
8 ,, ,, ..	1	4			

Not made above 12 inches.

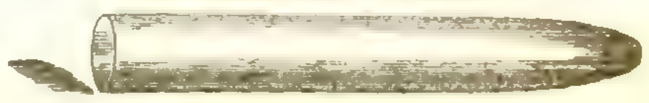

CUCUMBER GLASSES.

	Each.—s.	d.		Each.—s.	d.
24 inches long	2	0	16 inches long	1	4
22 ,, ,, ...	1	10	14 ,, ,, ...	1	2
20 ,, ,, ...	1	8	12 ,, ,, ...	1	0
18 ,, ,, ...	1	6	Made to any length.		

HAND GLASSES, WITH OPEN TOPS.

	Each—s.	d.		Each—s.	d.
12 inches	6	6	18 inches	9	6
14 ,, ...	7	6	20 ,, ...	10	6
16 ,, ...	8	6	22 ,, ...	11	6
			24 ,, ...	12	6

Painted and Glazed with 16 oz. Sheet Glass.

London Agents for Hartley's Improved Patent Rough Plate.

Linseed Oil, Genuine White Lead, Carson's Paints, Paints of various colours ground ready for use.

180, Bishopsgate Street Without, London, E.C.

"RECONNOIT'RER" GLASS, 10s. 10d. post free, shows distinctly windows and doors of houses 10 miles off; JUPITER'S MOONS, &c. For Landscape is valuable for 25 miles, is guaranteed equal to others at 3l. 3s., the enormous sales allowing division of labour to an extent hitherto quite unknown. "The Reconnoit'rer is very good."—*Marquis of Carmarthen.* "It gives me complete satisfaction, and is wonderfully good."—*Sir Digby Cayley.* "I never met an article so completely answering its maker's recommendation."—*F. H. Fawkes, of Farnley, Esq.* "An indispensable companion to a pleasure trip."—*Notes and Queries.* "We have found it fully equal to others more than four times its price."—*Field.* "I have found it effective on the 1000 yards range." *Capt. Sendey, Royal Small Arms Factory, Enfield.*—The "Hythe" Glass shows bullet marks at 1000 yards, and men at three miles; 31s. 6d. Only to be had direct from SALOM & Co., 98, Princes Street, Edinburgh. No Agents.

SMITH, BECK, AND BECK'S New MERCURIAL BAROMETER, very sensitive. Scale, 3 to 8 inches for every inch of variation, compensating tube instead of a reservoir. Price from 35s. to 42s.

Description sent free by post, or to be had on application at 31, Cornhill, E.C.

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS.—Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.

Stamp End Works, Lincoln, and 78, Lombard Street, London; also at LOWENGASSE, No. 44, Landstrasse, Vienna; and GEGENÜBER DEM BAHNHOF, Pesth.

Descriptive, Illustrated, and Priced Catalogues, Free per Post.

Special Drawings when required.

[*The best Steam Threshing Machinery made.*]

Oil Paint no longer Necessary.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.

Sold in casks of about 30 gallons each, at 1s. 6d. per gallon, at the Manufactory, or 1s. 8d. per gallon paid to any Station in the kingdom.

Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street West, E.C. from whom only it can be obtained.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—

"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles. Your obedient servant, G. GLENNY."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump, Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype trays, &c., manufactured by the Gutta Percha Company and sold by their wholesale dealers in town or country.

The GUTTA PERCHA COMPANY, Patentees, 18, Wharf Road, City Road, London, E.C.

BEDDING AND OTHER PLANTS.

THE BEST HARDENED OFF STOCK IN THE KINGDOM.

JAMES CARTER & CO.,

SEED MERCHANTS AND NURSERYMEN,

237, 238, and 261, HIGH HOLBORN, LONDON, W.C.

PART III. OF CARTER'S GARDENER'S AND FARMER'S VADE MECUM,

CONTAINING LISTS OF PLANTS OF ALL KINDS AT VERY MODERATE PRICES, WITH COMPLETE CULTURAL DIRECTIONS,

Forwarded Post Free on application.

FIRST-CLASS NEW BEDDING GERANIUMS,

Which they are now prepared to send out.

THE LATE MR. DONALD BEATON'S GERANIUMS.

It is with sincere regret that we announce the demise of the above-named highly-esteemed gentleman, whose place in the World of Horticulture we believe cannot easily be supplied. For 20 years he was looked to by all as the genius of the Gardening World, and it is admitted that his Seedling Geraniums alone will immortalise his name among the Floral public.

Ten days prior to his death, he concluded a contract with us for all the Geraniums sold by him last season to Nurserymen, for distribution in 1864, and the whole of the varieties we offer he proved in his experimental garden at Surbiton, and from a large collection these kinds alone were selected.

The Set of Mr. Beaton's Geraniums, 1 strong plant of each, for 15s.

CYBISTER (Beaton).

This Mr. Beeton considered the best Nosegay Geranium he had raised, and we may observe that for two successive years it was exhibited in the most prominent beds at South Kensington and the Crystal Palace Gardens, and universally admired. The colour of the flowers is vivid scarlet; the trusses are immense, with sometimes 200 flowers and pips on a truss; its habit is excellent, and it is altogether a first-class plant.

Price 3s. 6d. each.

LADY COLUM (Beaton).

This is the first and only Nosegay Geranium of the Christine colour, viz., delicate rose; the blooms are well thrown up above the foliage, which is slightly zonale; the flower trusses are very large, and freely produced. During the last season at the Crystal Palace it was grown in the circular basins surrounding the Crystal Fountain, where it was very effective; it is also well adapted for Greenhouse or Conservatory culture.

Price 5s. each.

BEATON'S PET (Beaton).

This was a great favourite with the late Mr. Beaton; it is a minimum in growth, rarely exceeding 6 or 8 inches in height; it is also a most profuse bloomer, with a peculiar crimson lake colour, exceedingly rich and glowing; for ribanding and general bedding purposes it will be found marvellously effective.

Price 5s. each.

MRS. WHITTY (Beaton).

We last season introduced Helen Lindsay, which was universally admitted to be much superior to the general favourite, Christine. We have now the pleasure of offering a still finer variety in Mrs. Whitty. It has a beautiful deep rose colour, with a large white eye; blossoms in profusion; foliage slightly zonale. Last season a bed of it at the Crystal Palace Gardens, planted at the special request of Mr. Beaton, produced a magnificent effect, and continued in bloom until the frost.

Price 3s. 6d. each; 36s. per dozen.

MONITOR (Beaton).

This is a remarkably fine variety, from which Mr. Beaton hoped ultimately to produce a yellow Geranium, a colour hitherto unknown in this tribe of plants; colour a deep orange scarlet; bloom freely produced, and well thrown up above the foliage.

Price 3s. 6d. each.

SNOWBALL (Keeler).

A new pure White Bedding Geranium, raised by Mr. Keeler, of Wood House, Dulwich, and who has placed the entire stock in our hands for distribution. Of the same type as Madame Vaucher, but in every respect superior; fine large truss, well up in the centre, giving a flat even surface, and both in form and colour almost equal to the old Double White Camellia. Petals pure white, good form, and of great substance. Habit very robust and compact. Foliage rich green, with dark zone; will form a most desirable pot plant for Conservatory, and is without doubt a valuable acquisition for general bedding purposes. It is the opinion of Mr. Keeler, the raiser, that it is superior to anything yet introduced to the notice of the public, and the best White Geranium ever raised by him.

Price 5s. each.

BEL DEMONIO (Keeler).

A bright lively salmon colour, of dwarf, compact, but very robust habit of growth. The free blooming habit of this variety will make it most desirable for planting in large masses or extensive riband lines. The trusses are very large, individual flowers large and of uncommon substance in petal, and blooms well up above the foliage. This variety resists the effect of sun and rain better than any before offered of this class, and was raised at the same place as the preceding splendid White variety.

Price 2s. 6d. each.

HIBBERD'S PET (Hibberd).

This we received from Mr. Shirley Hibberd, the well-known writer on Horticulture, with the following description:—"You may recommend this as the best scarlet Horse-shoe Geranium in cultivation: it is a strong grower, and throws up large trusses of bloom, slightly darker in colour than Cottage Maid." Having seen it in bloom, we can fully corroborate Mr. Hibberd's statements.

Price 2s. 6d. each.

CALCEOLARIA, PRIMULA, AND CINERARIA,

SAVED FROM THE BEST NAMED SORTS ONLY.

Price per packet, 2s. 6d.

Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET.

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

CATALOGUES are now ready, and a stock of Plants in the most perfect health, of all sizes, and at prices to suit all purposes. Sunningdale Nursery, S.W. Rail.

NEW DAHLIA EREBUS, NEARLY BLACK.

"Erebus is the best dark Dahlia yet produced."—*Garden Oracle.*

"Andrew Dodd looks pale and weak beside it."—*Gardeners' Weekly Magazine.*

"I think your Dahlia Erebus a great novelty."—*Charles Turner, Royal Nurseries, Slough.*

Plants of the above, 7*s.* 6*d.* each.

GEORGE RAWLINGS, 21, Globe Road, Bethnal Green, N.E.

F. AND A. SMITH, The Nurseries, Dulwich, Surrey, S., beg to intimate that they are now prepared to supply the following Novelties:—

FUCHSIA PILLAR of GOLD.—The best variegated variety out. Strong plants, 7*s.*; 2d Size, 5*s.*; Small Plants, 3*s.* 6*d.* each.

NEW BEDDING LOBELIAS.—Raised by Mr. Gordon at the Crystal Palace, and superior to any heretofore offered. 2*s.* each, or the set of 6 varieties 10*s.* 6*d.*

NEW ROSES of 1864.—All the best and most beautiful varieties.

BEDDING PLANTS, in great variety, including many novelties of merit, at moderate prices.

CATALOGUES of the above are now ready, and will be forwarded Post-free on application.

RUSSELL'S PYRAMID PRIMULA.—Seed of this celebrated strain is now ready, in packets, price 2*s.* 6*d.* The great satisfaction which these sorts have given in previous seasons will be fully maintained this. The flowers can be seen at the Nursery during the spring. Printed instructions for cultivation with each packet.

GEO. CLARKE, Nursery, Streatham Place, Brixton Hill, S.; and 4, Windsor Terrace, Pimlico, S.W.

GEORGE SMITH'S PRICED and DESCRIPTIVE CATALOGUE of all the leading NOVELTIES of 1864, of choice Show, Spotted, Fancy, Zonal, and Variegated Pelargoniums, Fuchsias, Verbenas, Petunias, Dahlias, Chrysanthemums, Bedding Plants, &c., is now ready, and may be had free by Post in exchange for one Postage Stamp.

Tollington Nursery, Hornsey Road, Islington, London, N.

EARLY SPRING FLOWERS, largest Stock in England and greatest variety.—WEBB'S Giant Polyanthus and Giant Cowslip, Cowslip from the Himalayas, Golden Chain Polyanthus, Florist Flower Polyanthus, American Primrose, Scarlet Primrose, Gentianella, Double Crimson Primrose, ditto Yellow ditto, ditto Purple ditto, ditto Rose ditto, ditto White ditto, ditto Lilac ditto, Double Pansy, ditto Negro Polyanthus, ditto Golden Chain ditto, ditto Pink Hepatica, Single Blue ditto, ditto White Violets, ditto Purple ditto. Seed of the above Polyanthus and Cowslip. List on application to

Mr. WEBB, Calcot Gardens, Reading.

New Hollyhocks.

WM. PAUL respectfully announces that he is now sending out Two first-rate NEW HOLLYHOCKS, selected from many thousands of Seedlings, namely:—

BEAUTY of WALTHAM.—Flowers pale silvery peach, large in size, perfect in form, and closely set on a large handsome spike: one of the finest ever raised.

RED GAUNTLET.—Very fine blood crimson, unsurpassed in colour and form, spike magnificent.

Strong healthy autumn-rooted plants, calculated to flower well this summer, 10*s.* 6*d.* each.

PAUL'S Nurseries, Waltham Cross, N.

Spring Catalogue.

WOOD AND INGRAM'S New PRICED and DESCRIPTIVE CATALOGUE of Dahlias, Pelargoniums, Zonale and Variegated Geraniums, Fuchsias, Cinerarias, Verbenas, Chrysanthemums, Petunias, Hardy and Tender Ferns, Stove, Greenhouse and Bedding Plants, &c., is now ready, and will be sent free on application.

Huntingdon Nurseries.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

MR. JEAN VERSCHAFFELT, Ghent, begs to announce that his NEW SUPPLEMENTAL CATALOGUE is now ready, and contains a great many novelties for the season. The Catalogue may be had free on application to JEAN VERSCHAFFELT, 43, Rue de la Caverne, Ghent (Belgium).

Agents in London: Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, E.C.

Continental Novelties, &c.

LOUIS VAN HOUTTE, NURSERYMAN and SEEDSMAN, Ghent, Belgium, begs to advertise his PRICE LISTS, No. 99, 100 and 102, containing the STOVE, GREENHOUSE, HARDY PLANTS, and SEEDS.

Agents in London: Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, E.C.

Giant Scarlet and White Intermediate Stocks.

ROBERT PARKER begs to offer SEED of these splendid varieties, which are far superior to the ordinary varieties of Intermediate Stock. Habit more robust and branching; flowers larger, and borne in greater profusion. If sown in April they will commence flowering in July and continue until Christmas in mild seasons. Price per packet, 1*s.*

The following Choice SEEDS are also specially recommended, having been selected with the greatest care:—

	Per packet—*s.*	*d.*
CALCEOLARIA, HERBACEOUS, finest mixed	2	6
CARNATION, PERPETUAL, finest mixed	2	6
CINERARIA CRUENTA, finest mixed	2	6
PICOTEE, PERPETUAL, finest mixed	2	6
PRIMULA SINENSIS FIMBRIATA, finest mixed	2	6
PRIMULA SINENSIS FIMBRIATA KERMESINA SPLENDENS	2	6

A SELECT PRICED and DESCRIPTIVE CATALOGUE of FLOWER, AGRICULTURAL, and VEGETABLE SEEDS, and NEW and RARE PLANTS, is published and will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

Fuchsias Blue Beauty and Lord Palmerston.

MR. WILLIAM BULL is now sending out these superb varieties.

Establishment for New and Rare Plants, King's Road, Chelsea, London, S.W.

Sutton's Lawn Grass Seeds,

AT THE CRYSTAL PALACE, AND AT THE PEOPLE'S PARK, HALIFAX.

SUTTON AND SONS have had the honour of supplying the Grass Seeds by which so many acres of Arable Land have been converted into the beautiful Park and Lawns, now so much admired at Sydenham, and at the People's Park, Halifax.

The following letter has been received, besides many others:—

From Professor LINDLEY, *Horticultural Society, London.*

"We have already made trial of your Lawn Grass Seeds, and it is only justice to say that they have proved the best we have sown for many years."

Price 1*s.* per lb.; 2*s.* 8*d.* per gallon; or 18*s.* per bushel. Quantity required for forming new Garden Lawns, 3 bushels, or 60 lbs.

Address, SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Seeds worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each.

J. DOBSON & SONS, Seedsmen, Isleworth, W.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our collection in the spring, 1862. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

J. DOBSON & SONS, Seedsmen, Isleworth, W.

DOBSON'S PRIZE PRIMULA SINENSIS SEED. Superbly Fringed. In sealed packets. 1*s.*, 2*s.* 6*d.*, and 5*s.*

J. DOBSON & SONS, Seedsmen, Isleworth, W.

Cheap Bedding Geraniums.

ALFRED FRYER offers 48 varieties of first-class BEDDING GERANIUMS for 21*s.*, basket and packing included. Amongst other popular kinds the collection will contain the following:—

Mrs. Pollock	Snowflake	Blackheath Beauty
Cloth of Gold	Eva	Madame Vaucher
Golden Fleece	Jane	Magenta
Reine d'Or	Julia	Pink Pearl
Sulphureum marginatum	Flower of Spring	Woodwardiana
Scintillatum	Bijou	Hendersoni Nana
	Aurora	Paul Labbé

Remittances requested from unknown correspondents.

Post-office Orders to be made payable to ALFRED FRYER, Chatteris, Cambridgeshire.

New Plants for 1864.

B. S. WILLIAMS has much pleasure in offering the following Novelties for the first time, descriptions of which will be found in previous advertisements, and in his NEW PLANT CATALOGUE, post free to all applicants.

NEW ACHIMENES.		NEW SINGLE PETUNIAS.	
Purpurea elegans	7*s.* 6*d.* each, or the 6 for 42*s.*	Royalty	5*s.* each
Leopard		Purple Prince	
Magnet		Duchess of Northumberland	
Scarlet Perfection		NEW ZONALE GERANIUMS.	
Vivicans		Display	5*s.* each
Eclipse		Beauty	
NEW FUCHSIAS.		Royalty	
Neptune	7*s.* 6*d.* each		
Queen of Beauties			
Gem of the North			
Minotaur			

Paradise and Victoria Nurseries, Holloway, London, N.

New Bedding Plants.

MESSRS. JOHN AND CHARLES LEE are now prepared to offer the following Novelties, which they have proved to be distinct and good:—

TROPÆOLUM COOPER'S DEFIANCE.—Is very dwarf, short jointed, slightly trailing, small leaved, and an immense bloomer. Flowers bright scarlet. A first-rate Bedder. Price 2*s.* 6*d.* each; 18*s.* per dozen; 5*l.* per 100.

GERANIUM VARIEGATED LITTLE DAVID.—Is a very pretty white-edged sport of the well-known favourite, "Little David," so useful for Edging. Price 5*s.* each.

VARIEGATED GERANIUM THE BRIDE.—This interesting novelty is adapted for small beds in conjunction with Lobelia speciosa. The habit is very dwarf, the margin of the leaves pure white, and the flowers are also pure white. A very elegant little plant. Price 7*s* 6*d.* each.

Royal Vineyard Nursery, Hammersmith, London, W.

NEW VERBENA, LORD CLIFDEN (BUNYARD'S). Colour: rosy scarlet, with a very large and clearly defined white eye; each single flower flat and clean edged; truss large and well shaped. Habit good and free, a capital bedder. Autumn struck: price for 12, 2*l.* 10*s.*; 6, 1*l.* 7*s.* 6*d.*; each, 5*s.* Spring struck: per dozen, 24*s.*, or 2*s.* 6*d.* each, package included.

Improved TOM THUMB SCARLET NASTURTIUM, 1*s.* per packet, the best bedding Annual offered.

THOMAS BUNYARD & SONS, The Old Established Nurseries, Maidstone and Ashford, Kent.

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

LIST of AWARDS, MAY 4, 1864.

FIRST-CLASS CERTIFICATES.

ASTROCARYUM MEXICANUM, from Mr. Bull, Chelsea

AURICULA BUCKSTONE, from Mr. Turner, Slough

BERBERIS HANDSWORTHIENSIS, from Messrs. Fisher Holmes & Co., Sheffield

SEDUM SIEBOLDII FOL. MEDIO-VARIEGATIS, from Mr. Salter, Hammersmith.

SECOND-CLASS CERTIFICATES.

MIMULUS UNIQUE, from Mr Bull

PANSY (fancy) MRS. H. DOMBRAIN, from Messrs. Downie & Co., Sydenham

RANUNCULUS REPENS FOL. ALBO-VARIEGATIS, from Mr. Salter

SPECIAL CERTIFICATE.

To Mr. Stone, Gr. to J. Day, Esq., for ODONTOGLOSSUM NÆVIUM, and O. PESCATOREI

The NEXT MEETING will take place on May 17.

THOMAS MOORE, Secretary to the Committee.

ROYAL BOTANIC SOCIETY.

THIRD SPRING SHOW, April 30,

AWARD of PRIZES.

6 ROSES. (Amateurs.)

1st Prize, Mr. J. Cross, Gr. to Sir F. H. Goldsmid, Bt., Regent's Park

6 ROSES. (Nurserymen.)

1st, Mr. C. Turner, Slough, Bucks
1st, Messrs. H. Lane & Son, Great Berkhampstead, Herts
2d, Mr. W. Paul, Waltham Cross
3d, Messrs. Paul & Son, Cheshunt, Herts

24 ROSES. (Cut Blooms.)

1st, Mr. W. Paul
2d, Messrs. Paul & Son

COLLECTIONS of CUT ROSES.

1st, Mr. W. Paul
2d, Messrs. Paul & Son

6 PELARGONIUMS. (Amateurs).

1st, Mr. J. Wiggins, Gr. to W. Beck, Esq., Worton Cottage, Isleworth
2d, Mr. J. Weir, Gr. to Mrs. Hodgson, The Elms, Hampstead
3d, Mr. T. Todman, Gr. to R. Hudson, Esq., Clapham Common

6 PELARGONIUMS. (Nurserymen.)

1st, Mr. C. Turner

6 AURICULAS. (Amateurs.)

1st, Mr. F. Potts, 35, Glengall Grove, Old Kent Road
2d, Mr. J. James, Gr. to W. F. Watson, Esq., Isleworth
3d, Mr. J. Butcher, 1, South Street, Camberwell

6 AURICULAS. (Nurserymen.)

1st, Mr. C. Turner

6 AURICULAS. (Amateurs.)

1st, Mr. J. James, Gr. to W. F. Watson, Esq.
2d, Mr. W. Bragg, Nurserymen, Slough, Bucks

16 MISCELLANEOUS PLANTS.

1st, Mr. B. S. Williams, Nurseryman, Holloway
2d, Messrs. A. Henderson & Co., Nurserymen, Edgeware Road
3d, Mr. W. Young, Gr. to R. Barclay, Esq., West Hill, Highgate
4th, Mr. J. Cross, Gr. to Sir F. H. Goldsmid, Bt.

HANGING BASKETS and ORNAMENTAL STANDS.

1st, Messrs. A. Henderson & Co.
2d, Mr. W. Young, Gr. to R. Barclay, Esq.

MISCELLANEOUS.

Silver Medal, Mr. C. Turner, for Collection of Roses in Pots
Ditto, Mr. C. Turner, for Collection of Azaleas
Small Silver Medal, Messrs. J. Dobson & Sons, Isleworth, for Collection of Azaleas
Ditto, Messrs. H. Lane & Son, for Collection of Azaleas
Ditto, Mr. W. Bull, Nurseryman, Chelsea, for Collection of New and Rare Plants
Bronze Medal to Mr. C. Turner, for Collection of Auriculas
Ditto, Mr. B. S. Williams, for Collection of New and Rare Plants
Ditto, Messrs. J. Dobson, for 9 Cinerarias
Small Bronze Medal to Mr. J. James, Gr. to W. F. Watson, Esq., for 6 Cinerarias
Ditto, Mr. W. Bragg, for Pansies in pots
Ditto, Messrs. J. Dobson & Sons, for Pansies in pots
Ditto, Mr. W. Young, Gr. to R. Barclay, Esq., for 6 Exotic Ferns
Ditto, Mr. C. Turner, for Bougainvillea speciosa
Ditto, Mr. J. Cross, Gr. to Sir F. H. Goldsmid, Bart., for 8 Begonias

NEW PLANTS and SEEDLINGS.

First-class Certificate of Merit to Messrs. J. Veitch & Son, for Clematis Reginæ
Ditto, Messrs. J. Veitch & Son, for Franciscea calycina major
Ditto, Messrs. J. Veitch & Son, for Dracæna Cooperi
Ditto, Messrs. J. Veitch & Son, for Primula cortusoides amœna
Ditto, Mr. B. S. Williams, for Dendrobium Dayanum
Ditto, Mr. B. S. Williams, for Dendrobium Dalhousianum superbum
Ditto, Mr. B. S. Williams, for Xanthorrhœa australis
Ditto, Mr. B. S. Williams, for Rhododendron Nuttallii
Ditto, Mr. C. Turner, for Auricula Buckstone
Second-class Certificate to Mr. C. Turner, for Cineraria Herbert
Ditto, Mr. W. Bull, for Pelargonium Eve
Ditto, Mr. W. Bull, for Astrocaryum mexicanum
Ditto, Mr. W. Thompson, Ipswich, for Collinsia verna
Ditto, Messrs. Fisher & Holmes, Sheffield, for Berberis handsworthiensis

The Gardeners' Chronicle.

SATURDAY, MAY 7, 1864.

IN continuation of our previous remarks (p. 411) on the great HORTICULTURAL EXHIBITION IN BRUSSELS, we are happy to be able to announce, that amongst the decorations conferred by the KING, on the occasion of the distribution of the prizes which took place last Sunday, that of a Knight of the Order of Leopold was bestowed upon our countryman, Mr. JAMES VEITCH, of Chelsea, who, as will be seen from the recurrence of his name in the prize list we printed last week (p. 414), was a very large and very successful contributor to the exhibition. The distinction was most honourably won, and we hope will long be worn.

Recurring for a moment to the composition of this great flower show, and comparing it with that of our own, we may point out some of its well marked features, which may be broadly stated thus. Taking novelties first, as being the most interesting department, we find the display to have been both more extensive and more varied than at our own shows. Besides the numerous select contributions of Mr. VEITCH, the Belgian nurserymen themselves, especially M. AMBROISE VERSCHAFFELT and M. LINDEN, exhibited largely; and although some of the principal prizes will find their way to England, there was very much more of interest in the home collections than could be noticed in the brief space we were able to devote to them. We have therefore recorded, in a supplementary report (p. 438) the whole of the plants exhibited under this head. Then in respect to Palms, Tree Ferns, Cycads, Dracænas, and other large-sized plants of ornamental habit, our own shows

furnish nothing which approaches either in quantity, in variety, or in size, to what was to be seen at Brussels. The noble character presented by these and similar objects, and the relief afforded to the eye by such profuse masses of elegant foliage, as a set off to the less prominent masses of flowers, combined to render them the great charms of the exhibition, taking in a general view of the whole display. The overarching isolated specimens of Tree Ferns were perhaps the most lovely features of all, and rather suggested that one was walking in some magnificent plant stove, like the Palm house at Kew, than in a temporary exhibition, of which the objects were so soon to be dispersed. A third prominent feature, almost foreign to our English shows, was to be found in the collections of hardy shrubs. Rhododendrons of manageable size, just brought into flower, formed one of the most striking of the colouring elements of the show. Hollies in great variety, not scrubby bushes, but well-shaped pyramidal specimens, and the choicer Conifers, grown in many cases in large tubs, made a grateful variety—and after all, anything which imparts a pleasing variety, and does away with the element of monotony, is to be regarded as most desirable in such a gathering as a flower show.

The Rhododendrons just adverted to, with the short-stemmed Azaleas alluded to last week, were something analogous in their effect to the Pelargoiums of our summer shows; but there were at Brussels no such Azaleas as those with which Messrs. VEITCH and TURNER have made us familiar at home; nor any specimens of flowering plants like those which go to make up our "great collections." And here, in our very strength, lies our weakness so far as regards working up an agreeable picture out of our "grand shows." Almost every plant brought to our meetings is a specimen, fit to be isolated, and the consequence is that the grandeur of the grandest of our plants is lost, utterly lost, by their being smothered and hemmed in by others nearly or quite as effective as themselves. We want smaller and less formal flowering plants as a foil to the grand specimens, and more foliage as a contrast to the whole.

These—that is, the kind of plants to be got up, and the better arrangement of them when got up—are the problems we must solve if we would make our shows more attractive and less wearisome to the visitors: of that, both the producing parties—the Societies and the exhibitors—may rest assured. The public are tiring of the present arrangements, and begin to care less for the exhibition of flowers on these occasions than for that of crinolines. How, indeed, can it be otherwise, when with some eight or ten gatherings in the short season of summer, in different parts of London, it is "ditto, ditto" all through—the same plants (regarding the productions at contiguous shows), the same formal stuck-up tables or stages, and the same incongruity of setting up. We see a group of pigmies set side by side with a group of giants, the tables suiting the pigmies moderately well, but the giants not at all; the latter probably are marshalled in two uneven ranks, and are apparently toppling over from repletion, their perpendicularity being disturbed in order to bring them a little within reach of the eye: in short, they are first set up too high, and are then pulled partly over to bring them again within sight. The end view of such a group, as one slowly advances with the crowd towards it, is anything but picturesque, from the prominence which is given to the broken flower pots and blocks and chips of wood, by which alone the plants are prevented, sometimes indeed scarcely restrained, from affectionately throwing themselves into the arms of the admiring spectators. This is all wrong. We want something very different from arrangements like these; and unless plant-exhibitors wish to see their occupation gone they must be willing to fall in with the best plan, adapted to our English customs, which can be found to supersede them. No doubt the best plan we have in England is that adopted at the Regent's Park, but even that is very defective by the test we would apply, in respect to hiding unpleasant back and side views, to relieving the eye, and to producing something like congruity in the grouping and sequence of the plants.

WINTER has passed away, and if we except what injury may yet be accomplished by a few nights of spring frost, it has done its worst in so far as our out-door collections of trees and shrubs are concerned. And although this winter has been far less severe than some which we can remember, such for example as that of 1837-8, when the thermometer went down to 4° below zero, and in some situations even lower than that, yet it has been on more than one occasion extremely cold and trying to those things which are not perfectly hardy. The meteorological tables of this Journal record the thermometer (Fahr.) so low as 8° and 7° on the nights of the 5th and 6th of January, and the mean temperature of the week was 12° below the average. Again, on the 9th of February it went down to 11°, the mean temperature of that week being 10½° below the average. And we must also bear in mind that we had this severity of weather without any snow upon the ground acting as a protection to those plants which were exposed to it. Taking into consideration the severity of the frost, and the circumstances under which it was encountered, we may fairly congratulate ourselves, if, on the one hand, our losses or injuries from frost have been inconsiderable, or, on the other, if we can point to some acquisitions of hardy plants among those introductions from foreign countries which, of late years, have been unusually numerous and important.

It may be necessary that the season should be somewhat further advanced before we can be quite certain as to the amount of our losses or gains in the matter to which we have just alluded, but we are enabled already to announce that some very important trees and shrubs of recent introduction have passed through the late winter without showing the slightest sign of being affected by the cold. On paying a visit to the Bagshot Nursery a few days ago, we observed specimens of some of the new Japanese things growing in a bleak unsheltered situation, where they appeared perfectly healthy and vigorous, looking as if the sharp frost had rather been beneficial to them than otherwise. An imported plant of the Umbrella Pine (Sciadopitys verticillata) was amongst them, and not a leaf of it appeared to be injured. The different varieties of Osmanthus ilicifolius, plants looking like Holly bushes but related to the Olive, together with the variegated forms of Euonymus radicans and Elæagnus japonicus, appear to be as hardy as our common English Furze. Ilex crenata, a new Holly with small shining leaves, which will prove an excellent plant for evergreen hedges, was also uninjured. And, lastly, we have the very great satisfaction of stating that the green-leaved Aucuba appears to be quite as hardy as the variety which has been so long in our gardens. Not a leaf of this fine plant has been injured in the smallest degree, and we may safely put it down in the list of hardy shrubs, to which it is a most important addition. Lonicera aureo-reticulata and Lilium auratum may also be added to our list of hardy plants. The former has been out all winter in the open border in Mr. JACKSON'S nursery at Kingston-on-Thames, and has not been injured. Indeed, a plant of this pretty climber has been standing in a pot all the winter, in our own garden, in an exposed situation, and has now pushed out its new leaves, evidently unharmed.

Such, then, is our experience about London, as to the hardiness of the plants we have named. Doubtless Mr. VEITCH and Mr. STANDISH could add many more names to the list we have given, such, for example, as the two Retinosporas (R. pisifera and obtusa, both quite hardy. ED.) and some of the Pines. Many of these Japanese plants having been distributed over the country, we shall be glad to learn some particulars about them from our correspondents who may have had them in the open air during the late winter. Any other information on the effects of the late severe frosts will, no doubt, be most acceptable to our readers.

Amongst the large number of new plants which are yearly introduced to this country from foreign parts, many, of course, prove unsuitable for our climate. Fashion, or a prejudice in their favour, may keep them in cultivation for a time, but they ultimately disappear and give place to others. Even these, however, do a certain amount of good. They give us a glimpse, as it were, of the productions of other lands, and afford a certain amount of gratification while we make pets of them and cultivate them. Putting these however on one side, there are many of our introductions which prove themselves to be of real value, and highly ornamental. Amongst the loads of chaff which reach us from other countries, there are always some grains of corn, which, falling on good ground, yield the most satisfactory results, and produce a marked effect upon our gardens and landscapes. We can scarcely imagine the blank which would be left in our parks and gardens, if the productions which have been introduced from foreign countries, were removed from amongst us. On this account, we gladly welcome every addition to our list of hardy plants, and express our gratification when we find that many of the late introductions from Japan are likely to prove suitable to the climate of England.

We regret to find that the late winter has done considerable damage to the Wellingtonia gigantea which was planted in the Garden of the Royal Horticultural Society by His Royal Highness the late PRINCE CONSORT. The small shoots at the ends of the branches are nearly all destroyed. The tree of the same species planted in the Garden by Her Majesty the QUEEN is also injured, although not to the same extent as the other. Luckily the leader, in both instances, is apparently safe, as well as the main stems and larger branches, so that we may expect fresh branchlets and leaves to be formed in the spring and summer. Should this be the case, and we see no reason to doubt it, these interesting trees will soon become green again, and will then show no traces of the severe nip they have had by the frosts of last winter. We rejoice to add that in other places near London the Wellingtonias are perfectly untouched.

WE print the following description of the BANQUET TO THE JURORS, on the occasion of the late exhibition in Brussels, to show how very different from what exists at home, is the relation between the cultivators of the soil and the powers that be, in that country of gardeners and gardening. The description is from *L'Echo de Bruxelles.*

The Société Royale de Flore gave a splendid banquet to the members of the Jury of the Exposition Universelle d'Horticulture, and to the learned foreigners who had assisted at the Congrès International d'Horticulture organised by the federation of the Horticultural Societies of Belgium. The Comte DE RIBAUCOURT, senator, and Vice-President of the Society, presided; and at the table of honour were placed Baron HUGEL, the Austrian Minister; FRÈRE-ORBAN, Minister of Finance; ROGIER, Minister of Foreign Affairs; VANDERPEEREBOOM, Minister of the Interior; VANDERSTICHELEN, Minister of Public Works; DUBOIS-THORN, Governor of Brabant; DE CANNART D'HAMALE, senator, President of the Royal Society of Horticulture of Malines, Vice-President of the Federation, and President of the Congrès: Comte DE LAMBERTYE; THOMAS MOORE, Director of the Botanic Garden, Chelsea; VON SIEBOLD; DE KERCHOVE DE LIMON, member of the Chamber of Representatives, burgomaster of Ghent; DUMORTIER, President of the Royal Society of Belgium; VANDEN HECKE DE LEMBEKE, President of the Royal Agricultural and Botanical Society of Ghent; HERRY, Burgomaster of Laeken, administrator of the Société Royale de Flore; REICHENBACH, Director of the Botanic Garden, Hamburgh; PLANCHON, Professor of Botany at Montpelier; BRONGNIART, Member of the Institute, Professor of the Museum of Natural History at Paris; LINDEN, Director of the Royal Zoological Gardens at Brussels; FÉE, Professor of Botany to the Faculty of Medicine of Strasbourg; PIRÉ, Secretary to the Royal Botanical Society of Belgium, and Secretary to the Congress, &c., &c. Several Members of the Senate, and of the Chamber of Representatives were present.

The first toast proposed by the PRESIDENT, was, To the KING and Royal family, who by their generous co-operation have powerfully contributed to the success of the exhibition. The toast was received with enthusiastic bravos, amidst the enlivening strains of the Brabançonne executed by the excellent band of the Guides.

M. HERRY, in the name of the Société Royale de Flore, proposed the next toast, as an act of gratitude of the Society towards the Ministers of the KING, who by divers measures which they had taken had ensured the success of the exhibition:—To the Minister of Foreign Affairs, whose solicitude for this enterprise had been manifested by numerous acts; to M. VANDERPEEREBOOM, Minister of the Interior; and to their honourable colleagues. The toast was received with applause.

M. VANDERPEEREBOOM thanked the assembly in the name of the Government. The Belgian Government, he said, which encourages all the sciences, could not remain deaf to the appeal of the Société Royale de Flore, and its co-operation must needs be had by this Society and by the Federation of the Horticultural Societies of Belgium, in instituting an universal exhibition, and an international congress. The Government has given numerous proofs of its sympathy with horticulture and botany. It has instituted schools where these sciences are taught—one of them situated at the gates of this town, which has an universal horticultural reputation. Ghent is justly named the Flora of Belgium. Thanks to the efforts of the Government, horticulture is, I do not fear to proclaim it, one of the glories of our country. But these efforts would have been unfruitful if they had not met with co-operation on the part of the particular societies. The Minister, after having recalled the origin of horticultural societies, and given homage to the numerous learned men who had responded to the invitation addressed to them, finished by proposing

as a toast—To the prosperity of foreign and Belgian Horticultural and Botanical Societies, especially the Société Royale de Flore, and the Federation of the Horticultural Societies of Belgium, who have organised this Congress and this splendid Exhibition, which will be inscribed in the historical records of botany.

The toast was duly honoured, as were also the following:—To the members of the Jury, proposed by M. Linden and responded to by Baron Hugel. To the learned, illustrious and courageous travellers who have not feared to brave the greatest dangers, and to traverse the world in order to endow Europe with these fine horticultural productions, to the rare intelligence which propagates these wonders, to the illustrious men we have the honour of seeing amongst us, and to those who do not forget that position and wealth carry with them the obligation to afford aid to science, proposed by M. de Kerchove de Limon, in the name of Belgian horticulture. To all the members of the Congress, the learned botanists and distinguished horticulturists who have aided the Congress by their knowledge, proposed by M. Cannart d'Hamale. To the organising societies for the cordial and sympathising reception given to all foreigners, by M. Brongniart, who addressed his thanks to them, both as a member of the jury and a member of the Congress. To the exhibitors, by M. Ronnberg. To Belgian horticulturists, by M. Vanden Hecke.

The guests lingered long in the saloons and in the garden, engaged in intimate conversation and discussion. The dinner itself was excellent, the wines exquisite, and the service perfect.

—— We understand that Mr. John Smith, of Kew, who has been superannuated on account of his failing sight, retires from his post as Curator of the Royal Gardens on the 16th inst. His long period of active service, extending over 44 years, has, we are told, been handsomely acknowledged in the amount of his superannuation allowance. We have already intimated that Mr. Smith's successor is Mr. John Smith, of Syon Gardens—a singular coincidence of name.

—— Mr. Bull has sent us flowers of another strain of Mimulus, which he calls Unique, quite different from the cross which attracted so much attention last year. In the samples sent to us the ground colour of the flowers is that of M. cupreus; the limb segments are quite unspotted, the throat only being yellow, and on its lower side richly spotted with crimson. The flowers are intermediate in size between cupreus and the large spotted varieties.

THE PEACH TREE AND ITS FRUIT.

A Peach, I believe, ranks next to a Pine Apple, the king of fruits; and yet how few people obtain out of doors a full crop of this most delicious fruit. I have a full crop, grown out of doors by the river side, in a hoar-frosty valley, this year. The trees are very old and very vigorous; and there is not a blighted or curled leaf upon either of them. Mr. Sturt and Lady Charlotte, my old and kind friends, have paid me a visit this week (April 21), and have reviewed the few things in my garden that I take an interest in, namely, Roses, Strawberries, Raspberries, Pears on the Quince stock, and Peaches. Of this last fruit, Mr. Sturt took away specimen leaves to show his gardener. There was not to be seen a single specimen of blister, curl, blight, or other defect on my three Peach trees. This seemed to astonish him. I cover annually with a sheet, which is a better anti-radiator than a cloud, inasmuch as it keeps the blossoms dry, and also stops back radiation. Last year I saved and brought to net 348 Peaches from these three trees. The average netted in the six previous years was 517 per annum. I have disfruited the trees this year, and taken off 1823 fruit, leaving on for the present 847 Peaches. I propose to disfruit them yet further, so as to net from 500 to 600 fruit. Of course allowance must be made for "dropping," which, I believe, proceeds from various causes, viz., from immature wood, from previous over-cropping, from hypertrophy, from hydropathy, from want of water at stoning time, from leaving on too many fruit, or from general ill health of the tree, arising from the outward violations of the weather during winter, or afterwards, either by the elements, or the hand of man, or by his neglects. Ill health often arises from destruction of the foliage by aphides.

I do not hold the doctrine of "impossibility." I remember what Napoleon I. said, "Impossible is not French." I also say it is not English, though I often hear it. On hiring a gardener, the first thing to do is to examine his dictionary, and if he has not scratched out the word "impossible," don't hire him. I bar Yorkshire, Lancashire, and Scotland, as I do not know the severity of their spring frosts after the blossoms are unsealed; but in Dorset, even in a place as exposed to wind as the Eddystone lighthouse, and otherwise a wretched situation, the results show me that "impossible" is not English at Rushton. Your readers are welcome to come and see. My heart will hold more than my house, but they shall have a good reception. I am soon going to invite to a horticultural re-union the head gardeners of the neighbourhood. Salmon and saddle of mutton always promote "unanimity."

My chief object now is to cause a greater and more sure growth of Peaches. I will therefore endeavour to say briefly what I believe is essential:—

1. If trees are old (I know nothing of young trees—mine are from 28 to nearly 45 years of age; and two are the strongest trees that I ever saw) they must be cut down; their radial and perpendicular roots must be cut off, the former to about 30 inches from the stump, the latter close. The ground must be renewed with strong loam and dung, and the trees must be let up again. Give me an old tree and a sound stump.

2. Peaches like stiff, well drained ground. Mine is light, but I water and tread it till it is as hard as a pavement. I only open the ground in a 30-inch radius round the stump. There only do I manure. Round this radius Peach trees should be mulched, both winter and summer.

3. Two or three inches of the top mould all over the border should be taken away every third year, and new maiden mould should replace it in November. If the soil is of a light character, the whole border should be rammed, to prevent quick growth. If young trees are planted, and the wood is sound, don't cut them; but, as the tops are usually unripe, do not cut off more than one-third. The harder you cut, the longer you will have to wait for a crop.

4. Beware of the barbarous act of disbudding. The foreshoots may be taken off, or spurred; and after cropping they may be removed. I firmly believe that the removal of leaves produces ill health, bare limbs, superannuation, a few Peaches under the copings, blister on the leaves, a fit of gum (aided by rind violation from the weather) and death!

Mr. Rust, of Fulham, has told you a great Peach truth—"keep the blossoms dry!" I will tell you another—you must never allow the tree in winter, or the leaves in summer, to be "violated." My sheets are put on in winter, when the weather is bad, long before blossoming time. In summer the leaves are protected by the sheets from gales of wind, to which I am exposed. Good leaves are good lungs, and good lungs are "good health."

5. If you cover with sheets, you must make up for the loss of dews by giving water at the stump. Water the stump (in hot weather, even if the nights are cold) on Monday, and, omitting the stump, water the whole surface on Thursday. If you can, take off the chill, then water the stump, and the surface may be watered at the same time. By surface, I do not mean superficial. No watering does good unless it touches all the points of the roots.

6. I thank Mr. Thompson for his late excellent article on "Peach Pruning," I have rectified my trees, as far as I can, by his advice. Fan-fashion is the best as a rule; but I grow, as case may be, Peaches on spurs, fan-fashion, or zig-zags. My object is to spread the Peaches equi-distant, four or six per foot, all over the trees; they are so spread over this year.

7. Peach growing is dependent on attention to the tree all the year round, especially to managing the shoots in the summer. Instead of disbudding, spur the shoots and leave the others for training The best Peaches grow on spurs—they are nearer "home."

Finally, don't forget the salmon and saddle of mutton, and come and see. In the natural world seeing is believing.

I may add, my three trees are 9 feet high and 54 feet in width. Two of them are as healthy, strong, and fine trees as any in Europe. My Peaches are pronounced by a gardener to be the Royal George. The sheets are put on at 1 o'clock in the afternoon, and taken off at 10 o'clock A.M. If the weather is bad they are left on all day. My Pear trees on the Quince stock, of which I will give a future account, are also covered at night. *W. F. Radclyffe, Rushton, April* 23.

COOL-HOUSE ORCHIDS.

Accidental circumstances led me some years ago to attempt to cultivate Orchids in a comparatively cool temperature, and as so many people seem now directing their attention to the same object, perhaps the details of my experience may be of some interest. To grow Orchids from such a country as New Granada I would recommend a span-roofed house, the floor of which is sunk 18 inches or 2 feet below the ground level. I think the house ought to be very small. I would divide a narrow span-roof house into divisions of not more than 12 feet long, and ventilate by air drains under the floor, so that the air would enter under the hot-water pipes. Houses facing the north may answer well, but I find a well shaded span-roof better. Such a house imitates the shady moist ravines in which these Orchids grow. At least, judging from the growth of my own plants, I flatter myself that I have imitated pretty closely the natural conditions under which they flourish in their native country.

In growing these Orchids, from the beginning of April to the end of October I hardly give any fire-heat, except what comes from an adjoining Pine pit worked with the same boiler, and from which the valves do not quite check the flow of hot water.

The following is the list of Odontoglossums I have cultivated in such a house:—

O. Pescatorei	O. grande
O. hastilabium	O. Reichenheimei
O. Insleayi	O. membranaceum
O. pulchellum	O. Ehrenbergii
O. anceps	O. Uroskinneri

All the New Granada Odontoglossums have grown splendidly in the cool house; the four last in my list are Guatemala and Mexican species, and like a little more heat. I generally remove them during the early months of the year to the Cattleya house. I imagine that the district where the Odontoglossums grow in New Granada has no very distinct dry season, and these plants never go to rest and harden their bulbs like a Cattleya.

The finest species, O. Pescatorei, crispum, odoratum, and gloriosum, have soft watery bulbs, and make several growths in a year. It is this which makes them so difficult to import, as some of our most enterprising nurserymen have lately found. Their watery bulbs rot with the heat of the coast country through which they must pass.

Continuing my list of cool-house Orchids, I would next mention the Indian Cœlogynes and the closely allied Pleiones. Cœlogyne cristata, and two unnamed kinds I have from Central India, grow well in a cool house. I have had the first, with its curious bulbs as big as bantam's eggs, and spikes of flowers with nine blossoms on them.

I believe the Pleiones grow at a higher elevation than any other Orchid. To grow them well they must be in a cool house, and as in their native country they sometimes get 30 inches of rain in 24 hours, it need surprise no one to learn that they can hardly have enough water when growing.

The Pleiones are too little known in collections. Though dwarf in growth they have most beautiful flowers, which spring up from their curious leafless bulbs in January. When well grown they flower as thick as a pot of Crocuses. Being deciduous plants they of course like a season of rest. Pleione lagenaria, Wallichii, humilis, and maculata are all well deserving of cultivation.

Next I must mention Lycaste Skinneri, whose merits and cultivation are so well known and understood that I need say nothing about them. Lycaste cruenta and Heynderyxii are also nice free-growing plan s although very inferior to L. Skinneri.

Maxillaria venusta and aromatica, and one or two unnamed species I have from New Granada, grow well in a cool house. Epidendrum aurantiacum succeeds, but it can be considered only a second-rate plant; but there are three other Epidendrums which must be ranked with Odontoglossums and Lycaste Skinneri, namely, E. vitellinum, a variety of macrochilum, and cinnabarinum. The first of these is now well known, and when nicely flowered can hardly be too much admired. E. macrochilum is a beautiful free-flowering plant, with a scent somewhat resembling that of Luculia gratissima. The white variety requires an ordinary Orchid-house. E. macrochilum roseum will grow in a cool house, but the hardiest variety is one with leaves tinted with dark crimson, which I received from Mr. Schiller's collection, and which appears to be identical with plants lately imported by Mr. Low. I think this variety has also been sold by Mr. Linden under the name of Epidendrum atropurpureum.

Epidendrum cinnabarinum is an old introduction which appears to have gone out of favour. I have certainly seen long straggling specimens of this plant in hothouses which were somewhat unsightly, but grown in a cool house near the glass it is as manageable as Dendrobium nobile, and its peculiarly coloured flowers, with beautifully fringed labellum, make it a conspicuous object in a house. I believe this plant is still to be found in old collections, and I recommend it to the notice of the possessors of cool Orchid houses. This and the variety of macrochilum will I think be found among the best of cool-house Orchids, and they both have the advantage of remaining five or six weeks in flower.

All Anguloas show a preference for cool houses by making much finer growth when placed there. I grow A. Clowesii, Ruckeri, and uniflora, of which I consider the last the hardiest. I have had the pseudo-bulbs of A. Clowesii 7 inches long in a cool house. I have a plant now showing four flowers from one bulb.

I have grown Barkeria Skinneri and spectabilis in a cool house, and very beautiful Orchids they are, but I have certainly seen them do better in a warmer place. Dendrobium speciosum and Phaius albus are quite cool-house Orchids. Both I believe bear several degrees of frost in their native countries.

Cypripedium caudatum will succeed without much heat; its variety called Uropedium Lindeni is even hardier, and will grow with the Orchids already named.

I have now enumerated all the Orchids which, as far as my experience goes, can be considered cool-house plants. There are others which grow and flower better in a much more moderate degree of heat than is generally given to them, and during their season of growth and most of the year I have successfully cultivated the following in my cool house, viz., Aerides affine roseum, A. crispum and Warneri, and an Aerides called rubrum, which I think Mr. Veitch imported from Central India. Also Lælia cinnabarina and purpurata.

These Aerides make short stout growth in a cool house, and flower finely the following season. Lælia purpurata has made the finest growths I ever saw in my cool house. Still I cannot count them as cool-house Orchids, for it does not answer to keep them in such a house as I have described during our winter months. The decrease of light is not natural to them; and they require a drier atmosphere to keep them in health. Although I would from choice place the

Aerides and Lælias I have named in a cool house from April to November, I always find it necessary to take them to a warmer and more airy house during January, February, and March.

The same treatment I find suits Sophronitis grandiflora. To flower this plant well it must be kept damp and shaded, but have plenty of air.

That many fine Orchids can be grown at small expense as to houses and fuel is a fact no longer to be doubted, but I see advertisements of Orchids to be grown in greenhouses and drawing-rooms. Disa grandiflora and the North American Cypripediums will grow in a Geranium house, but these are terrestrial Orchids.

I think the buyers of New Granada or Guatemala Orchids will be disappointed, if they expect them to grow in greenhouses or drawing rooms. Tropical Orchids generally have to endure a dry season, but they are dormant in the dry season. Being plants with no roots penetrating the ground by which they can take up moisture, Nature has provided them with pseudobulbs, in which enough moisture is stored up to keep them alive for many months, even under a tropical sun. This fact enables them, perhaps better than any other plants, to endure the dry air of a sitting room, but they will not grow in it, and must be removed to a moist atmosphere before they can make their growth.

Lycaste Skinneri will root more strongly in peat than almost any other epiphytal Orchid I know, and it is therefore possible that it might be induced to make some sort of growth in a dry room, but I think there would be a poor chance of flowers in the following season. Moisture is essential to the growth of epiphytal Orchids, and until I see an Orchid grown in a drawing room, I shall disbelieve that such a thing is possible. *W. W. B., Strete Ralegh.*

Home Correspondence.

Floral Committee Awards.—Two letters in your last week's impression seem to require a word or two in reply from me. I will take the last first; and I beg to inform "Flora," that as it has been found impracticable to adopt any definition of a new plant which could be applied with precision, the rule of the Committee has consequently been to receive and adjudicate upon any plant brought before it, to which it has not previously made an award of the first-class, and which is at the same time not common in gardens. This rule sometimes admits an old and little known subject which some exhibitor may show to be useful, and thus now and then resuscitates as it were some forgotten or very partially known plant—perhaps reintroduced after having been lost to cultivation, or perhaps merely existing in some few out of the way gardens. This explanation may account for the awards to the Genista and the Grass-tree. As to Collinsia verna, that is not an old plant. In reference to Mr. Thompson's complaint, I have to say, that if it were not possible but that the award to the Collinsia may have disturbed his bile, at least he might have saved his long tirade if he had not so impetuously jumped at a conclusion. He may rest assured that it was not from any misconception of the age of his bantling that the award in question was made, but on view of its merits as set before the Committee. In arriving at the conclusion he has drawn as to the "revelation of the motive of the award," Mr. Thompson has simply found a mare's nest. The "reporter" and the "Committee" are not synonymous, nor have they any relation to each other, and Mr. Thompson's assumption to that effect is therefore quite unwarranted. It is not my object to argue that the plant itself is not worth more than a third-class award, for probably it is, but merely to state that as shown to us it was not worth more, though the exhibitor modestly asked that it might have, not a certificate, but a medal. We have however a custom of regulating our awards by what we see, without drawing upon the imagination. [Quite right. *Ed.*] It is the exhibitor's business to put his flowers in their best dress, and he has no ground of complaint if, failing to do this, his exhibition, whatever it may be, is not appreciated. Doubtless, if we had seen Mr. Thompson's "beds of 8000 plants" we might have been converts to his opinion, but as instead of viewing them, only a few ragged samples dug up from these same "beds," and very moderately bloomed, were produced, our estimate of the plant was correspondingly moderate. As far as could be seen, this Collinsia, pretty as are its colours, has the inherent defect of spreading its two upper petals and twisting them, so that when the blue lower petals are in full view the upper ones present little more than their edges, and *vice versâ*. It was therefore held to be, as a decorative plant, inferior to C. bicolor, which has not this defect. The plants since exhibited at the Regent's Park with a parade of the "erroneous judgment" at South Kensington, were little better than those which have brought down such a weight of obloquy on our heads. As you have rather patted Mr. Thompson on the back, perhaps you will allow me to make this statement of the facts, and to add that as one of the Committee I can take no blame for having so "faintly praised" so ill-conditioned an exhibition. *Thomas Moore, Secretary to the Floral Committee.*

Gardeners' Royal Benevolent Institution.—A complaint has often been made that gardeners were not aware of the existence of this Society. To remedy this in some degree, the Committee have during the last month caused a List of the Subscribers, together with some accompanying papers, to be sent to upwards of 1000 gardeners, mostly resident in England. It was anticipated that upon this appeal being made, many would enrol themselves, and that a fresh impetus would be given to the Society. I regret to say that the result has as yet been very unsatisfactory, only six having responded favourably: not enough to pay expenses. What can be the cause of this apathy it is hard to understand, but I believe it arises more from carelessness than from any other cause. It is much to be regretted that gardeners do not more readily support their own Society, for if they did I feel sure many employers would do so too. In soliciting gentlemen to subscribe, I am frequently met with this answer—"I should be very happy to support your Society, but as I do not see my gardener's name on the list, I must decline." I am aware that there are many gardeners who cannot afford to subscribe, but there is a vast number filling first-class situations, to whom the one guinea annually cannot be an object. As you have on all occasions strenuously advocated the cause of the Society, I have addressed you on the subject, feeling sure that a few lines from you in an early Number of your Journal would be productive of good result. *Edward R. Cutler, Secretary.* [We would refer to what was said editorially on this subject in our columns of Dec. 6, 1862. There may be personal antipathy to some ill-judging officer of the Society—and we believe there is.]

Wasps.—It may be worth stating that bottles baited now with beer and sugar, or anything that will drown the queen wasps, will catch them readily. I have tried it, and hang them everywhere. The wasps frequent Ivy walls, or any place where there is honey dew. In one day the bottles produced nearly 40 wasps, and I had only three bottles in use then. *W. B.*

Ants.—These pests first made their appearance in my stove, in which they ate holes in all the young leaves. Some recommended flowers of sulphur as a cure, others guano strewn in their tracks, but all without success. At last I tried snuff, which I put in a common pepper box and sprinkled on the ants, and in a few minutes all subjected to its influence died. Afterwards I procured a larger quantity of the best Scotch snuff, and dusted both plants and flowers with it; it killed the ants in great numbers. I have also dusted with it Peach trees affected by ants when in full bloom, so as to prevent them from eating the anthers out of the flowers. The application did not interfere with the setting of the fruit in the least. Another method of destroying them, with less expense, was to allow them to form a colony, and seizing the opportunity of a bright sunny day to keep my stove shut up close; the heat brought the ants out of their hiding places in quantities sufficient to blacken the floor. I then took a small watering pot full of boiling water, and poured it upon them, which killed them instantly. I have repeated this twice since, and now very few ants infest my house. *J. D. B., Bristol.*

Woodlice in Frames.—Your Correspondent, "W. G. A.," may possibly like to try a plan with regard to woodlice in frames, which I have adopted during the last few weeks, and which at present succeeds well:—It is to take some pieces of tolerably strong wire, sufficiently long to form rings round the plants to be protected, sew lists, or paper, or any flexible material about an inch in width along these wires, then (having just turned the ends back, that they may hook into each other) soak the lists or rag in any liquid which may be annoying to the woodlice without injuring the plant, and hook the wires round it, of course taking care that they should lie on the ground so as not to allow passage for the woodlice. I have used carbolic acid myself, but this cannot be recommended in all cases, on account of the danger to the person using it, unless the bottle is only entrusted to careful hands, and the injury to the plant if the acid touches it. Should any of your Correspondents, not accustomed to the use of carbolic acid, be tempted to try it, perhaps it may save them some trouble to mention that sweet oil applied at once in case of the acid being spilt on the fingers much alleviates the pain and injury of the burn. *E. O.*

Garden Rules.—I find the following rules in force in a situation in which I lately engaged as head gardener:—First, the men, five in number, are allowed to come to their work when they please, that is to say, if they feel to want a day's holiday, they take it without consulting me, or in any way apprising me of their intentions to stay away; or if in the morning they feel disposed to repose upon their pillow for an hour or two longer, they do so, and in such cases make their appearance after breakfast, at half-past 8 o'clock. Secondly, on Saturdays, every man leaves work at 4 o'clock P.M. Fires are therefore started, houses are shut up, pits and frames are covered up, and the watering hurried over, so that every man may be ready to leave on the first sound of the bell. Under such circumstances can any man conduct a garden in a way that would be creditable to himself or to his employer? *J. C. C., Dover.*

Rhododendron Thomsoni.—Having observed in your last impression that this Sikkim Rhododendron has been flowered for the first time at Combe Royal, in Devonshire, I beg to say that it may now be seen in full bloom in the American ground here; it has been visited by several gardeners in this district, who have been unanimous in pronouncing it a very fine specimen of this beautiful plant. I may add that I have been very successful in flowering several species of these plants. *John Cornelius, Gardener to William Williams, Esq., Tregullow, Cornwall.*

Rhododendron Falconeri.—A grafted plant of this Rhododendron is now in flower in my garden, for the first time since it was planted, about ten years ago. I understand that the flowering of this kind is very rare. *B. A., Dorking.*

The Hydropult.—Mr. Button cannot pretend that I am an "interested party," neither shall he be able to say that I write anonymously. Two years since I purposely went to his office in Leadenhall Street, tried the hydropult there, was pleased with it, and ordered one. But I took the precaution of deferring payment. When I tried it in my orchard-house I was bitterly disappointed; it flung little spits of water, not so far as a 12*s.* syringe would; it flooded my boot immediately—in a word it was worse than useless. Then I tried it out of doors, with full strength upon it. At its greatest energy it threw the water 2 yards less than half the distance advertised. Hereupon I returned it, and confess that Mr. Button or his agents behaved most fairly and honourably. I have no ill-will against them, in fact I was pleased with them; I think indeed that in time the machine may succeed, but unless the hydropult differs utterly from what it was two years ago, it is a mere water pop-gun, with a leak at the butt of the ram-rod. *Richard D. Blackmore, Teddington.*

Foreign Correspondence.

Russian Eatable Fungi.—At p. 291 you express a regret at not knowing the Russian method of preparing Fungi for eating. Allow me to state that the Fungi most eaten in Russia, are: Agaricus integer, Ag. Russula, Ag. melleus, Ag. deliciosus, Ag. Georgii; Boletus edulis, B. luridus, and B. aurantiacus. Fungi are eaten in two different ways in Russia, either prepared or not prepared. All the above named Fungi, with the exception of Agaricus integer and Ag. Georgii, are grilled with butter, or oil; but those two are cured with salt and eaten after four or five months pickling, with or without vinegar, according to taste. Ag. deliciosus, Boletus edulis, luridus and aurantiacus, are boiled in water, and then kept in highly peppered vinegar, and not eaten until they are well impregnated with it. The most common method of all, especially with Boletus edulis and luridus, is simply to dry them in an oven, without preparing them at all. Fungi dried in this way are in great request by strict Catholics during Christmas time and Easter. Boletus edulis is the most recherché when grilled, or when preserved; Ag. Russula and Ag. Georgii, only when preserved. *P. Wolkenstein, Secretary of the Russian Horticultural Society, St. Petersburg.*

Exhibition of the Société Royale de Flore.—The length to which our report of the general features of this Exhibition extended, prevented us last week from going into details as to the contributions of different exhibitors; and indeed the arrangements of the show by which the collections are broken up and distributed for effect as soon as the awards are given in, rendered it impossible to do this with anything like precision. It may serve, however, as a useful record, if we give a brief resumé of the novelties shown, taking them in the order in which they appear in the official catalogue.

M. de Smet, Ghent:—*Seedlings:* Rhododendrons Rubis, Empereur de Mexique, Roi de Portugal.—*New Conifers:* Cryptomeria elegans, Japan, 1864; Cupressus Lindleyana argentea var. 1864; Retinospora obtusa aurea, Japan, 1864; R. pisifera aurea, Japan, 1864, and R. pisifera argenteo-variegata, Japan, 1864; Thuja Warreana fol. elegans var. California, 1864; Thuja pygmæa, 1863; Thujopsis dolabrata fol. var., Japan, 1863, T. dolabrata elegans, 1864, and T. lætevirens, Japan, 1864; Juniperus rigidus, Japan, 1864; Abies firma, Japan, 1863; A. polita, Japan, 1864; and A. amabilis fol. elegans var., California, 1864.

M. Esser, Aix-la-Chapelle:—*New plants not introduced to Europe previous to* 1863: Archyrorchis javanica, Java; Livistonia altissima, Sumatra; Salauma mutabilis, Sumatra, and undetermined species of Aralia, Calamus, Ficus, Kentia, Martinezia, Stadmannia, Zalacca, &c.

M. Linden, Brussels:—*New plants introduced by the exhibitor and not in commerce:* Asplenium alatum, St. Catherine; Cissus amazonica, Para; Crescentia Liboniana, Brasil; Mappa fastuosa, Philippines; Maranta picturata, Rio Purus, and M. transparens, Rio Negro; Medinilla parasitica, Philippines; Phrynium majesticum, Rio Purus; Philodendron amazonicum, Para; Rhopala elegantissima, Parana; Sphærogyne cinnamomea, Costa Rica. *New plants not introduced previous to* 1863: Alocasia zebrina, Philippines; Araucaria glauca, New Caledonia; Arundo conspicua, New Zealand; Asplenium myriophyllum, Chiapas; Ceratostemma coronarium, New Grenada; Coccoloba gigas, Brasil; Coccocypselum cupreum, Guiana; Crinum japonicum var., Japan; Cyanophyllum glaucovirens, St. Catherine; Dammara hypoleuca, Solomon Isles; Dieffenbachia pulchella, Para; Doryopteris Alcyonis, St. Catherine; Gymnostachyum

Verschaffeltii, Para; Kingia australis, Australia; Magnolia Thompsoni, Assam; Maranta picturata, Rio Purus; Oreopanax umbraculifera; Phrynium majesticum, Rio Purus; Ruellia marmorea; Rhopala nitida; Saurauja sarapiquensis; Sphærogyne latifolia; Sterculia Blancoi, &c. *New Ferns:* Asplenium myriophyllum and alatum; Alsophila denticulata, elegantissima, and gigantea; Balantium Sellowianum; Doryopteris Alcyonis and nobilis (grandis); Lomaria cycadifolia, gibba, and fluviatilis.

Mr. Parker, Tooting:—*Seedling:* Rhododendron Countess of Haddington.

M. Rodigas, St. Trond:—*Seedlings:* Sedum Rodigasii; Lilium speciosum, fol. aur. marg.; Pæonia arborea fol. cocc. var.

M. Aug. Van Geert, Ghent:—*New plants not introduced previous to* 1863: Laportea Teysmanniana, and L. stimulans, Java; Dracæna terminalis latifolia pendula, Philippines, and D. phrynioides, Madagascar; Ficus Porteana, Philippines; Saxifraga Fortuni tricolor, Japan; Dammara hypoleuca; Drosera pinnata, Australia; Miconia pulverulenta and M. Verschaffelti, Brazil; Artanthe cordifolia, Brazil; Jambosa magnifica, and J. densiflora, Sumatra; Amaryllis procera, Brazil; Fagræa imperialis, Sumatra; Climocandra obovata, Sumatra; Cycas Ruminiana, Philippines, &c. *New Ferns:* Cyathea Smithii and Lowii; Alsophila contaminans, umbrosa, and Van Geertii; Lomaria cycadifolia, gibba, and fluviatilis; Dicksonia M'Arthuri, and squarrosa; Lastrea patens; Angiopteris hypoleuca. *New Conifers:* Podocarpus Fortuni fol. var., and nubigena; Araucaria Rulei and humilis; Biota Sieboldii and elegantissima; Thujopsis Standishii, and lætevirens; Thuja Vervaeneana and pygmæa, &c., &c.

Mr. Veitch, London:—*New plants introduced by the exhibitor and not in commerce*: Maranta Veitchii, Peru; Dracæna Cooperi, New Caledonia; Gymnogramma Pearcii, Peru; Retinospora Veitchii, Japan; Primula cortusoides amœna, Japan; Eranthemum tuberculatum, New Caledonia; Pteris serrulata crispa, Japan; Marattia Cooperi, New Caledonia, &c. *Other New Plants*: Eranthemum rubronervium, Peru; Miconia pulverulenta, Peru; Dracæna sp., New Caledonia; Alocasia zebrina, Philippines; Caladium Veitchii, Borneo; Hibiscus Cooperi, New Caledonia; Sarmienta repens; Primula cortusoides alba, Japan; Dracophyllum sp. n. *Seedlings*: Rhododendron Princess Alice; Cattleya Brabantiæ; Goodyera Veitchii and Dominiana. *New Conifers*: Sciadopitys verticillata, Cryptomeria elegans; Abies firma, Alcoquiana, and microsperma; Juniperus rigida; Thujopsis dolabrata, lætevirens and Standishii; Retinospora obtusa, pisifera, lycopodioides, squarrosa, and pyramidalis; Thuja pygmæa and falcata; and Pinus densifolia—all from Japan; Abies nobilis robusta, California; Libocedrus tetragona, Patagonia; Prumnopitys elegans, Chili; &c.

M. Amb. Verschaffelt, Ghent:—*New plants introduced by the exhibitor and not in commerce*: Achyranthus Verschaffeltii, Mexico, 1864; Amaranthus versicolor, Mexico, 1864; Dieffenbachia Baraquiniana, Brazil, 1863, D. spectabilis, Brazil, 1864; and D. gigantea, Brazil, 1864; Phrynium Vanden Heckii, Para, 1863; Maranta splendida, Brazil, 1864; Caladium Leopoldii, Para, 1863, and C. albo-conspersum, Para, 1863; Amorphophallus nivosa, Brazil, 1864; Cibotium regale, Mexico, 1864; Regelia? majestica, Madagascar, 1864. *New plants not introduced previous to* 1863: Gymnostachyum Verschaffeltii, Para, 1863; Ficus Porteana, Philippines, 1863; Aspidium Ghiesbreghtii, Mexico, 1864; Zamia Baraquiniana, Brazil, 1864; Sphærogyne latifolia, India, 1863; Calamus Imperatrice Marie, Philippines, 1863; Acer japonicum—jucundum, sanguineum, princeps, and Frederici-Gulielmi, Japan, 1863; Dracæna lentiginosa, New Zealand; Smilax maculata macrophylla, Mexico, 1864, and S. lancifolia, Brazil, 1864; Caladium Duc de Nassau, Para, 1864, and C. Rougierii, Para, 1864; Saxifraga japonica tricolor, Japan, 1863; Thrinax grandis, Cuba, 1863; Asplenium ferulaceum, Cent. Amer. 1864; Amaranthus amœnus, Brazil, 1864.

M. Jean Verschaffelt, Ghent:—*New plants not introduced before* 1863: Pinanga colorata, Ceylon, 1864; Jambosa magnifica, Java, 1864; Laportea stimulans, Java, 1864; Alsophila latebrosa, Java, 1864; Chamærops multifida xanthacantha, and C. multifida melanocantha, Africa, 1864; Sedum Sieboldi medio-variegatum Japan, 1863; Echeveria agavoïdes, Mexico, 1863, &c.

M. Von Siebold, Leyden:—*New plants introduced by the exhibitor, and not in commerce:* Aralia japonica undulata; Aucuba japonica maculata mas., angustifolia aureo-variegata fœm., and medio-variegata; Cerasus Pseudo-cerasus flor. semiplenis albis, flor. plenis roseis, and flor. virescentibus; Cerasus pendula flor. roseis; Cinnamomum pedunculatum fol. var.; Distylum racemosum fol. pictis; Rhodea japonica cristata, and zebrina; Stuartia grandiflora; Citrus Daidai; Clethra barbinervis; Cleyera japonica; Damnacanthus indicus variegata; Desmodium racemosum yedöense; Diervilla grandiflora arborescens; Hydrangea Eugeniæ à fleurs bleues, and H. Thunbergii; Ilex crenata, and umbellata; Nandina domestica fruct. albis; Machilus Thunbergii; Meistera cernua; Osmanthus Aquifolium reticulatus; Pittosporum Tobira lanceolatum; Sedum Sieboldii aureum; Stachyurus præcox; Viburnum plicatum variegatum; Xylosteum Philomelæ. *New plants not introduced before* 1863: Ardisia japonica picta, 1863; Aucuba japonica pygmæa mas., 1863; Camphora officinarum longifolia, 1863. 22 *species and varieties of Japanese Maples, mostly new:* Acer dissectum fol. pinnatifidis viridibus, and fol. pinnatifidis rubris; A. japonicum petiolis viridibus, and petiolis roseis; A. Meikets; A. palmatum sanguineum fol. incisis, rubrum, carneum, reticulatum, and roseo-marginatum; A. digitatum fol. integris rubescentibus; A. septemlobum pubescens, roseo-versicolor, bicolor, argenteo-maculatum, and sponte crescens fol. viridibus; A. pictum verum, and carneum; A. atropurpureum.

Societies.

Royal Botanic: *April* 30 (*Third Spring Show*).—The National Auricula exhibition being held here on this occasion, there was a fair display of that spring favourite; and of other kinds of plants there were good collections.

Roses.—These were excellent, especially those from Mr. Turner, the distinguishing characteristics of whose plants were unusual freshness and vigour. In the different groups were admirable examples of Souvenir de Malmaison, General Jacqueminot, Victor Verdier, Senateur Vaisse, Souvenir du Comte Cavour, Charles Lawson, Gloire de Santenay, Madame Charles Wood, Comtesse Prevost, Madame Damazin, and Madame Cambacérès.

Awards.—Equal 1, Mr. Turner and Messrs. Lane; 2, Mr. Wm. Paul; 3, Messrs. Paul & Son. *Amateurs*: 3, Mr. Cross. 24 *Cut Blooms*: 1, Mr. Wm. Paul; 2, Messrs. Paul & Son. *Collections of ditto*: 1, Mr. Wm. Paul; 2, Messrs. Paul & Sons.

Pelargoniums.—Of these Mr. Turner contributed some well-grown plants, as did also Messrs. Wiggins, Weir, and Todman. The varieties did not appear to differ much from kinds named in former reports.

Awards.—6: 1, Mr. Turner. *Amateurs.*—6: 1, Mr. Wiggins; 2, Mr. Weir; 3, Mr. Todman.

Auriculas.—These were tolerably numerous, but very unequal both as regards growth and bloom. Among *Green-edged* kinds the best were Hudson's Apollo, Campbell's Admiral Napier, Page's Champion, Traill's General Neill, Oliver's Lovely Ann, and Lightbody's Sir John Moore. Conspicuous among *Grey-edged* sorts were Dickson's Duke of Cambridge, Turner's Ensign, Cheetham's Lancashire Hero, Chapman's Maria, Lightbody's Richard Headly, and Headly's Stapleford Hero. The best among *White-edges* were Smith's Ann Smith, Lee's Bright Venus, Cheetham's Countess of Wilton, Low's Maggie Lauder, Campbell's Robert Burns, and Hepworth's True Briton. Finally, among *Selfs* the best seemed to be Spalding's Blackbird, Smith's Formosa, Lightbody's Meteor Flag, Spalding's Metropolitan, Martin's Mrs. Sturrock, and Netherwood's Othello. Of *Novelties*, the best came from Mr. Turner, who furnished Buckstone (Grey edge) to which the premier prize. and a First-class Certificate were awarded; and Miss Giddings and Shakspere, to both of which Second-class Certificates were given.

Awards.—6: 1, Mr. Turner; *Amateurs*, 6: 1, Mr. Potts; 2, Mr. James; 3, Mr. Butcher. In the National Exhibition the principal prize takers were Mr. Stewart, York; Mr. Turner, of Slough; Mr. Pohlman, of Hull; Mr. Headly, of Stapleford; Mr. Wilson, of Halifax and Mr. Douglas, of York.

Stove and Greenhouse Plants.—Good collections of these were contributed by Mr. Williams, Messrs. A. Henderson & Co., Mr. Young and Mr. Cross; and of Azaleas Mr. Turner sent a handsome group, as did also Messrs. Lane and Dobson. Of the varieties shown on this occasion ample notice has been taken in former reports.

Awards.—16: 1, Mr. Williams; 2, Messrs. A. Henderson & Co.; 3, Mr. Young. 4. Mr. Cross.

Hanging Baskets.—Messrs. A. Henderson and Mr. Young exhibited tastefully filled examples of these, and we also noticed some very pretty specimens of ornamental plant stands, to which separate allusion may be made hereafter.

Awards.—1, Messrs. A. Henderson & Co.; 2, Mr. Young.

New Plants.—Foremost among these were Clematis Reginæ, a charming cross between C. lanuginosa and C. azurea grandiflora; the large variety of Franciscea calycina, Dracæna Cooperi, and the beautiful Primula cortusoides amœna—all from Messrs. Veitch. Mr. Williams furnished Dendrobium Dayanum, and a variety of the rare D. Dalhousianum, the Australian Grass tree formerly noticed, and a cut specimen of the glorious Rhododendron Nuttalli, now in blossom in his new nursery at Highgate. To all the above were awarded First-class Certificates. Mr. Turner received a Second-class Certificate for Cineraria Herbert, a white-ground variety, dark in the centre, and edged with bright purplish blue; and similar awards were given to Mr. Bull for Pelargonium Eve and Astrocaryum mexicanum; to Messrs. Fisher, Holmes, & Co., for a small yellow-blossomed Berberis named handsworthiensis; and to Mr. Thompson, of Ipswich, for his Collinsia verna, noticed in our columns last week.

Miscellaneous Plants.—Among these were groups of Cinerarias from Messrs. Dobson and Mr. James; Pansies in pots, from Messrs. Dobson and Mr. Bragg; Exotic Ferns, in excellent condition, from Mr. Young; variegated-leaved Begonias, from Mr. Cross; and small plants of Bougainvillea speciosa, from Mr. Turner. Many interesting plants were also contributed by Messrs. Williams and Bull.

Royal Horticultural: *May* 4 (*Election of Fellows*).—The following Candidates were elected Fellows, viz.:—

R. S. Begbie, Esq., Mrs. W. Brett, Miss C. Brown, Mrs. J. Cassell, Wm. Graham, Esq.; Miss Henry, Mrs. S. Hodgson, Mr. H. A. Hunt, Mrs. Leash, Mr. J. Levesque, Mr. J. J. Lowndes, Miss E. A. Maling, Mrs. G. Moore, Mrs. Nathan, Henry Edward Pellew, Esq.; R. C. Roosmalecocq, Esq.; E. Tyer, Esq.; Sir T. T. Tyrell, Bart.; and Mrs. Willis.

After the election of the Fellows just named, J. Bateman, Esq., of Biddulph Grange, Congleton, delivered an extremely interesting lecture on cool Orchids, for a report of which we hope to find room next week. At the conclusion of the lecture a vote of thanks was given to Mr. Bateman, who was also highly complimented in a short address from the Bishop of Winchester. The lecture was amply illustrated both by living specimens of Orchids and also by drawings. [The Editor much regrets that illness prevented his being present on this occasion. The reader will however of course consult Mr. Bateman's most useful, and practical, "Guide to Cool-Orchid Growing," which has just been published by Reeve & Co.]

Conspicuous among plants submitted to the inspection of the Floral Committee, who held a meeting on this occasion, was a noble specimen of Rhododendron Nuttallii, finely in flower, from Mr. Rucker. Mr. Bull sent Astrocaryum mexicanum, for which a First-class Certificate was awarded; and certificates were also given to Messrs. Fisher, Holmes and Co., for their Berberis handsworthiensis; to Mr. Turner, for his Auricula Buckstone; to Mr. Bull, for Mimulus Unique, mentioned in another column; to Mr. Salter for variegated varieties of Sedum Sieboldii and Ranunculus repens, both useful hardy plants; and to Mr. Day for the charming Odontoglossums, nævium and Pescatorei. Mr. Bateman furnished some handsome blooms of Moutans, among which a white one named Odorata rosea is really what its name implies—sweet-scented.

Garden Memoranda.

Bentley Priory, Stanmore, the Seat of J. Kelk, Esq.—This charming place, beautiful at all seasons of the year, is, as may be imagined, unusually interesting at the present time, when the young foliage, just escaped from its winter covering, presents a freshness and cheerfulness of aspect which is truly delightful. Never, in short, have the woods, especially those in the immediate neighbourhood of the mansion, appeared in better condition than they do at the present time, well thinned, as they have been this spring, so as to give the finer kinds of timber trees ample breathing room, and cleared, as they at the same time have been, of superfluous undergrowth. Woodland walks, too, so enjoyable during the heat of summer, and of which so many exist here, have also been greatly improved in appearance by means of a judicious pruning in of the evergreens with which they are bordered. A new square bowling green has been formed to the west of the fine terrace garden in front of the mansion; a green carriage drive through the woods is just being completed; and not only the mansion itself, but indeed the whole place, has lately undergone great alteration for the better.

To the tastefully finished rockwork, with its Fern-clad archway, miniature ruin, and shady glen, in connection with the little flower garden on the north front of the house, we have adverted in a former notice, and also to the extreme gaiety during summer of the principal flower garden. We have, therefore, now only to add that in the park, in front of the terrace wall of the latter, has been planted a row of brilliant crimson Rhododendrons, which, looked down upon, when in bloom, from the terrace must have a striking and excellent effect.

Under glass too things are managed with equal skill. At few places are Grapes grown in greater perfection than they are here under the care of Mr. Tillyard, Mr. Kelk's excellent gardener, who has not only succeeded in making old and new crops of them "shake hands," but in causing them to keep company for a period of at least six weeks, during the winter season. The admirable bunches of Muscat which he showed on the occasion of the "battle of the Grapes" (see p. 77, 1863) must still be fresh in the recollection of many, and not less remarkable, both as regards size and colour, have been specimens of the same variety which he has produced this last winter, and which have not been all cut till about a month ago. To be exact, the last bunch was severed from the leafless shoot on which it hung, little shrivelled and otherwise in comparatively sound condition, on the 31st of March. So much for retarded Grapes. As regards new ones, the crop in the first Vinery, consisting of Black Hamburgh, finely coloured, and covered with a beautiful bloom, was ripe about the middle of January, and is now nearly all cut. It will therefore be apparent that here at least no difficulty is experienced in having Grapes fit for table all the year round, and that at no particularly great expense or unusual trouble.

The chief points to be observed in keeping Grapes in good condition on Vines after they are ripe, are having the borders, both outside and in, in a dry state, and in having the wood of the Vines perfectly ripe and hard. As regards outside borders, they are covered here with asphalte shutters, which are applied when the Grapes are approaching maturity, and kept on until the whole of the fruit is cut.

In other Vineries are also excellent crops, all progressing towards maturity.

Peach and Nectarine houses are well filled with trees in fine bearing condition; as are also Fig and Plum houses. In the latter are the Green Gage, Jefferson,

and Victoria, the last one of the most useful varieties in cultivation; under glass it is sweeter than out of doors.

Melons and Cucumbers are grown in great profusion and perfection, and nothing could well exceed the health and luxuriance of the Pines with which several houses are filled.

In Stoves, intermixed with other plants, are Orchids, Ferns, Poinsettia pulcherrima, Euphorbia jacquiniflora; Thyrsacanthus rutilans, an extremely useful winter and early spring-flowering plant; and Musa Cavendishii, the last producing a noble bunch of fruit. The Poinsettia Mr. Tillyard finds to be one of the most valuable of all plants for conservatory decoration, and he grows it extensively for that purpose, striking it from eyes from May until July in the manner in which Vines are struck, and growing it rapidly in pits heated with fermenting material. As regards the Euphorbia, 10 and 12 plants are put into a pot, and, placed thus closely together, they make when in bloom an admirable display, producing gracefully drooping flower spikes some 2 feet in length.

The elegant Conservatory attached to the mansion is full of rich [and] varied vegetation, consisting of noble Tree Ferns, Camellias, Azaleas, and other plants, overhung with a charming drapery of creepers. Among the latter are Passion-flowers, Clematises, Tropæolums, Kennedyas, and Tacsonias. Means exist for lighting this house, when desired, during the winter evenings, with gas, and although as many as 160 burners are often in full operation in it at one time, yet no injury as regards the plants is experienced.

Out-of-doors fruit trees are now in full bloom, and there is every appearance of excellent crops both on walls and standards. Bush fruits are also equally satisfactory. The pruning of the latter is always deferred here until late in the spring, in order that small birds, which are numerous, and eat the buds, may have the chance of seizing upon shoots to be removed, and in that way save the buds on the branches to be retained.

As regards vegetables, comparatively tender sorts are more forward than in most places, a circumstance which Mr. Tillyard attributes to his plan of strewing long clean straw thinly over them in spring, so as in some measure to ward off cold east winds, and otherwise guard the young and tender leaf at a time when it most wants protection. The use of straw or long litter in this way is therefore worth attention.

Miscellaneous.

Tasmanian Tree Ferns.—In the midst of a damp forest of Gum-trees of various species, and among trees of the genera Pomaderris, Pittosporum, Eurybia, &c., are to be found many Fern trees of the genus Dicksonia—the Dicksonia antarctica being the species growing there. Many of them have more than one crown; but there is one Fern tree in particular, round the circumference of whose top I counted no fewer than 19 crowns, and I calculated that within the circumference there must be half as many more, making about 28 or 29 crowns in all. I considered this the most wonderful Fern tree in the world when I first saw it, and roughly estimated the number of crowns at 15 or 16. Now I am satisfied that it is one of the wonders of the world. Well do I remember the smile of incredulity with which many Fellows of the Linnean Society at one of the meetings received my statement that I had seen a Fern tree with 10 crowns (for I heartily dislike exaggeration); but I hope that my excellent friend your son will take an opportunity of confirming my statement by my account written on the spot. Strange to say, there is another Fern tree of the same species near the former one, round the circumference of whose top I counted, just the other day, 17 crowns, which would give a total of 25. There are also two others within 20 or 30 yards of it, the one with seven and the other with six crowns. The Fern tree with 25 crowns is a very singular one; for it seems to have been originally about 16 feet high, and to have fallen, and broken at a height of 9 feet from the ground, and then to have shot up straight from the fracture. It now stands about 8 or 9 feet high. *W. Archer in Proc. Linn. Soc.*

Vegetation of the Cliffs of Kilkee.—I send a brief account of the vegetation of the Cliffs of Kilkee and its neighbourhood. We visited Loophead at the mouth of the Shannon, and an intermediate portion of the cliffs on which Baltard Castle is situated. Five days were spent at Kilkee, one at Baltard Castle, and one at Loophead. The vegetation at the three places was so perfectly identical as to lead us to the conclusion that the same geological structure prevailed throughout, consisting of hard grits, shales, &c., a conclusion which was confirmed by a subsequent visit to Mr. Jukes of Dublin. Kilkee is situated on the west coast of Ireland exposed to the tide force of 2000 miles of unbroken seas, the waves of which roll in with such power as to furnish abundant food to periwinkles, located on rocks 200 feet above high water-mark, and to supply the wants of marine plants which cover the summits of cliffs varying in height from 150 to 400 feet. That physiological law by which plants under adverse circumstances, produce their flower and fruit, if they can do nothing else, is here strikingly exemplified. Looking at the stunted character of the vegetation, one might imagine oneself in a high alpine region, many species not attaining more than a tenth or twelfth of their usual size. Thus we find here a number of plants simulating the appearance of the inhabitants of alpine regions—*e. g.*, Aster Tripolium, in full flower, from half an inch to an inch and a-half in height; and equally stunted, not starved, forms of Samolus Valerandi, Euphrasia officinalis, Jasione montana, Erythræa Centaurium, Ranunculus Flammula, &c. The higher portions of the cliffs are cushioned by continuous tufts of the common thrift, Armeria maritima, which, when in full flower, must be exceedingly beautiful. The lower grounds are carpeted by Anagallis tenella, Ranunculus Flammula, Hydrocotyle vulgaris, &c., whilst the hill sides are dotted with generally solitary plants of Erythræa Centaurium, the broad-leaved variety; the little ridges towards the sea are lined with Glaux maritima, the drier spots being covered with Radiola Millegrana, &c. The following is a list of all the plants which were seen in flower:—Ranunculus Flammula, in great abundance in wet places, towards the lower portion of the cliffs, in company with Anagallis tenella, Juncus bufonius, &c.; Silene maritima, Spergularia rubra, var. marina; Radiola Millegrana on little elevated ridges; Polygala vulgaris, Potentilla Tormentilla, P. anserina, Sedum anglicum, the great ornament of exposed and bare rocks here and in many other parts of Ireland from the beauty of its flower and the rich decaying tints of its foliage; Aster Tripolium, many specimens in full flower, not an inch in height; Bellis perennis, Achillæa Millefolium, Senecio Jacobæa, Carduus pratensis, Leontodon autumnale, Calluna vulgaris, very sparingly; E. Tetralix, very sparingly; Jasione montana, Campanula rotundifolia, Glaux maritima, coating the seaward face of the high ridges; Anagallis tenella, everywhere in moist places; Samolus Valerandi, Euphrasia officinalis, rarely exceeding half an inch in height; Erythræa Centaurium, Thymus Serpyllum, Armeria maritima cushioning the whole of the upper surface of the cliffs; Plantago maritima, P. Coronopus, Juncus bufonius, Luzula campestris Carex flava, Aira caryophyllea, withered; Melica cærulea, very sparingly. The paucity of Grasses was remarkable. *N. B. Ward, in Trans. Botanical Society of Edinburgh.*

Calendar of Operations.

(*For the ensuing week.*)

The nights being still cold, the exposure of half hardy plants to the open air must be done with caution. Now is a good time for raising Vegetable Marrows, which might be profitably cultivated in many places which would otherwise be unproductive, as for instance on the tops of sloping banks and similar situations where little else could be grown. They should be planted about a yard apart on the summit of the banks, and allowed to grow with their heads downwards. Stations might now be prepared for them, in order that they might be planted out in about 8 or 10 days hence when all danger from frost is over.

FLOWER GARDEN AND PLANT HOUSES.

Conservatories should be gay with Azaleas and other showy plants, of which there ought to be now no scarcity. Out of doors let borders be dug, lawns kept closely mown, walks cleaned and rolled, and edgings put into proper repair for the season.

Camellias.—Keep such as are making growth well syringed. Should black-fly appear on the young shoots, which sometimes will happen, a good washing with tobacco water will soon destroy it.

Cinerarias.—A little shade during the middle of the day will be necessary in order to prolong the season of flowering. Weak liquid manure may now be given liberally, say two or three times a week. Look well to seedlings, and select such as have the most circular outline and well defined colours, and place them apart from the more common kinds for seed.

Pelargoniums.—A slight shade will now be necessary for a few hours on bright days; green fly is occasionally very injurious to them at this season, and therefore the plants should often be fumigated; tie and regulate the shoots according to previous instructions.

Pinks.—After this time, if the weather continues dry, these will require careful attention in the way of watering.

Tulips.—Protect the best bed carefully with canvas.

FORCING GARDEN.

Cucumbers.—Stop, thin, and water freely. See that the ball of earth, in such as are newly put out, is well soaked with water previous to planting.

Melons.—Encourage those newly planted out with a moist warm atmosphere, so as to get them into full growth as quickly as possible; but plants that are established should be kept cooler, admitting air on every favourable opportunity, in order to secure short-jointed fruitful growth. Keep the shoots thin and regular, pinching out any that are not wanted, but avoid stopping the main shoots until they reach the sides of the pit, when by pinching out the points the laterals will start into growth and show fruit abundantly; and by this time the plants will have gained sufficient strength to set and carry a fair crop. Do not exceed 65° at night, and admit air when the thermometer rises to 75°, but do this very carefully on cold days. Endeavour to maintain a steady bottom-heat of about 80°, and keep the soil in a healthy state as to moisture. See to providing young plants for succession crops.

Peaches.—If red spider should make its appearance wash repeatedly with the engine until it becomes thoroughly eradicated. Thin the fruit immediately the crop is stoned, leaving no more on than the trees can bring to perfection; any other course will only end in the production of small worthless fruit. Give air freely to houses in which the crop is ripening; but at the same time exclude if possible cold winds.

Pines.—Attend carefully to the bottom-heat, particularly where this is produced by fermenting materials, as tan, &c., and see that it is not allowed to rise too high, which it is apt to do after fresh materials have been added, either during bright weather or where there are pipes under the bed. Where much fire heat is used, it requires some experience to be able to keep the soil in a proper state as regards moisture, but this must be effected at any expense of attention if success is to be insured. Maintain a thoroughly moist atmosphere, but do not push young stock too fast. Avoid allowing water to lodge in the hearts of plants showing fruit, and spare those in bloom while syringing. Pot off or plant out suckers as they can be obtained sufficiently strong, and attend to keeping up regular successions.

Vines.—See that houses in which Vines are not yet started are properly cleansed, the Vines painted with the usual composition of soft soap, sulphur, &c., and everything put into proper working order: also get the rods bent in time to induce the buds to push regularly. Attend to disbudding and stopping, &c., as may be necessary, in succession houses, and see that inside borders are kept properly moist, giving tepid manure-water as may be necessary to effect this, and do not be afraid of giving too much of it to Vines in pots.

HARDY FRUIT AND KITCHEN GARDEN.

Kidney Beans.—Full crops of these may now be sown, and also of Scarlet Runners.

Leeks.—These may be transplanted as soon as they are large enough for that purpose. Let the rows be 18 inches apart, and the plants 9 inches asunder in the rows.

Lettuces.—Keep up successional sowings

Peas.—Let these be earthed up and sticked as they may require it, and others sown for succession. The latter need not be sown so thickly as those for earlier crops.

Potatos.—As soon as the young plants are fairly above ground fork up the soil between the rows, which will not only be of benefit to the Potatos, but will help to keep down weeds.

Root Crops.—If young plants of these are attacked by snails or slugs, give the ground about them a good dose of soot and lime. The best time for doing this is either at dusk in the evening or early in the morning.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending May 4, 1864, as observed at the Horticultural Gardens

April and May.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep	Wind	Rain.
Thurs. 28	21	30.196	30.076	61	40	50.5	51	50	N.E.	.00
Friday 29	22	30.171	30.014	66	38	52.0	51	50	S.W.	.00
Satur 30	23	30.095	30.111	63	38	50.5	52	50½	W.	.00
Sunday 1	24	30.159	30.011	67	47	57.0	52	50½	N.	.09
Mon. 2	25	29.828	29.742	66	50	58.0	53	52	W	.14
Tues. 3	26	29.881	29.679	60	44	52.0	51	52	N.E.	.13
Wed. 4	27	29.831	29.705	54	42	48.0	51	51½	S.E.	.00
Average.		30.023	29.904	62.4	42.7	52.5	52.4	50.9		.48

April 28—Uniformly overcast; fine.
— 29—Very fine throughout.
— 30—Cloudy, fine at night.
May 1—Cloudless and very fine; rain at night.
— 2—Densely overcast; cloudy; rain.
— 3—Densely overcast; cloudy; overcast: rain.
— 4—Drizzly, rain; overcast and cold, rain at night.
Mean temperature of the week, 2¼ deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending May 14, 1864.

May.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 8..	58.9	39.0	48.9	16	0.63 in.	2	6	8	—	6	6	6	4
Mon. 9..	61.8	39.5	50.1	15	0.60	3	9	8	1	4	11	2	2
Tues. 10..	62.0	39.8	50.4	16	0.33	6	8	5	2	5	7	3	2
Wed. 11..	62.4	40.7	51.0	16	0.52	6	7	8	1	5	5	4	3
Thurs. 12..	63.0	41.3	52.1	18	1.14	2	10	6	2	3	8	4	3
Friday 13..	63.6	39.0	51.3	18	0.66	3	8	8	1	4	8	4	2
Satur. 14..	63.3	40.9	52.1	15	0.46	4	10	3	2	8	8	2	1

The highest temperature during the above period occurred on the 12th, 1833—therm. 81 deg.; and the lowest on the 8th, 1855—therm. 21 deg.

Notices to Correspondents.

Errata: In the Report of the exhibition of the Société Royal de Flore of Brussels, in our last Number, the following misprints occur:—P. 413, col. *a*. Camellia Bononicana should be C. Bonomiana, and C. Madame Strukaloff should be C. Madame Strykaloff; col *b*. Agave Schiedigera should be A. schidigera; col. *c*. Campylobotrys Verschaffeltii should be C. Ghiesbreghtii, and Lomatia pteropus should be Lomaria pteropus; p. 414, col. *a*. Caladium Rongieri should be C. Rougieri.

Mimulus: *C. Boxall.* Large and showy, but presenting no novelty of character.

Names of Plants: *G T R.* We advise you to consult Mr. Gordon about the names of your Conifers, with which he is, to say the least of it, as well acquainted practically as any man living.—*G I.* Lastrea glabella.

Rhododendron: *A F.* Your plant raised from Indian seeds appears to be one of the forms related to R. cinnamomeum. It is too early a bloomer, we fear, to become useful as a shrubbery plant; and the flowers want the rich spotting to be found in some of the hybrids raised in this country.

Vinegar Plant: *R J M.* This is Penicillium glaucum. It may be obtained in Covent Garden Market. A portion of the "plant" only requires to be put into water sweetened with sugar or treacle, and kept in a warm room, till the liquor is acetified.

Misc.: *Mr. Newcomb's* Catalogue is placed in the Reading Room of the Royal Horticultural Society.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE, Address 89, Seed Market, Mark Lane; or Basingstoke. Samples and prices on application.

ODAMS'S BLOOD MANURE for CORN.
ODAMS'S BLOOD MANURE for ROOTS.
ODAMS'S SUPERPHOSPHATE of LIME.

MANUFACTURED BY THE PATENT

NITRO-PHOSPHATE or BLOOD MANURE COMPANY (LIMITED). Consisting of TENANT FARMERS, occupying upwards of 30,000 acres of land.
Chairman: JOHN CLAYDEN, Littlebury, Essex.
Managing Director: JAMES ODAMS.

Particulars of these Standard Manures may be obtained at the Offices.

C. T. MACADAM, Secretary, or of the local Agents.
Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow, Essex.

THE LONDON MANURE COMPANY have now ready in fine condition—

DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots.
URATE,
MANGOLD MANURE, &c., &c.

They also continue to supply GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.

Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

LAWES'S MANURES. The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per Ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from	
BURNT BONE or MINERAL PHOSPHATES ..	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American and other Cakes at market prices.

Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

PALM-NUT MEAL.—Manufactured by ALEXANDER M. SMITH & Co., Liverpool, delivered to Rail or Boat, at Liverpool, in bags of 2 cwt. each.

Marked A.M.S. L. Price £6 a ton.

Analysis and Report by Dr. Augustus Voelcker:—

Moisture	6.91
Fatty matters	26.50
*Albuminous compounds (flesh-forming matters) ..	14.98
Gum, starch, sugar, and digestible fibre	31.20
Woody fibre (Cellulose)	16.13
†Mineral matters (Ash)	4.88
	100.00

* Containing nitrogen, 2.39. † Containing silica and sand, 1.07.

"101, Leadenhall Street, London, E.C.—April 15, 1864.

"Dear Sir,—I have much pleasure in sending you the preceding analytical results, for they show that the sample of Nut-meal which you gave me for analysis possesses extraordinary fattening properties, in as much as it contains no less than 26½ per cent. of a beautiful butter like fat. You will notice that the meal contains about as much flesh-forming matters as the best Barley meal, and that the proportion of woody fibre is not large. The condition of the meal is excellent. In conclusion I beg to say that this valuable fattening meal must not be confounded with a description of cake made from Palm-nut kernels. The samples of Palm-nut kernel cake that have come under my notice were all quite inferior feeding materials. "AUGUSTUS VOELCKER, Ph.D.

"Consulting Chemist to the Royal Agri. Soc."

"To John Coleman, Esq."

Having been appointed by Messrs. SMITH, Agent for the sale of Palm-nut Meal, I shall be happy to supply samples and further information as to this valuable feeding material.

JOHN COLEMAN, 150, Leadenhall Street, E.C.

Wind Power for Pumping, Grinding, Oat Crushing, and driving other Farm Machinery.

THE PATENT WIND ENGINE (or WIND MILL) can be seen in operation daily at the Works as under, and references given to numbers of the Nobility and Landowners using the above, from half-horse to 12-horse power. A large Engine, with Pumps ordered by THE INDIA BOARD for MADRAS, may be seen with many others in course of construction.

BURY & POLLARD, Sole Manufacturers, 17, New Park Street, Southwark, London. Particulars by Post for One Stamp.

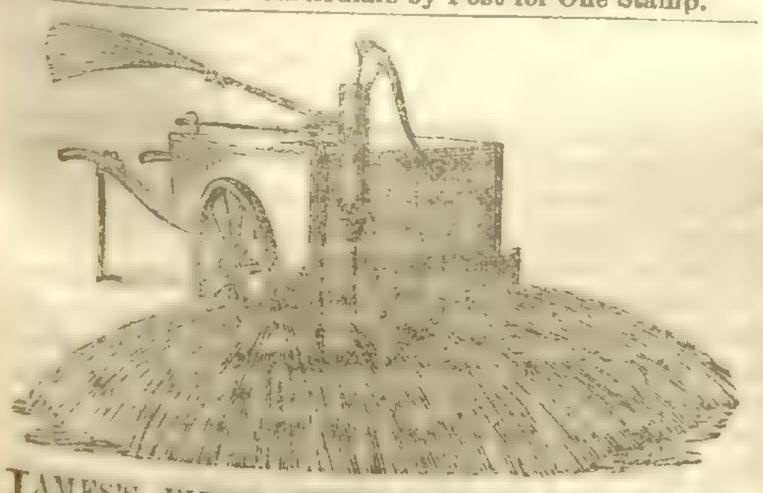

JAMES'S FIRST PRIZE MANURE CART has been Awarded 20 PRIZES. Is now fitted up to answer for LIQUID MANURE, for Supplying the STEAM PLOUGH, for WATERING STREETS, or for a FIRE ENGINE. Nearly 100 already sold.

Washing.

The last great improvement in Washing Machines is in JAMES'S new Patent PRIZE WASHING, WRINGING, and MANGLING MACHINES, awarded several FIRST PRIZES. Will Wash 20 Shirts in 20 Minutes, with much less injury than with the hand. More than 300 Sold.

Address, I. JAMES, Tivoli Works, Cheltenham.

TANNED NETTING, for the Protection of Fruit Trees from Frost, Blight, and Birds, also for the security of fresh-sown Seeds, at 1*d.* per square yard; 200 yards, 14*s.*; 500 yards, 30*s.*; 1000 yards, 50*s.* WOOL NETTING, COTTON NETTING, SCRIM CANVAS, GARDEN MATS, TULIP COVERS, GREENHOUSE SHADES, &c.

JOHN EDGINGTON & Co., 48, Long Lane, Smithfield, E.C.; and 18, Piccadilly, W. Manufactory, 108, Old Kent Road, S.E.

TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

VARNISHED FLOWER STICKS:—1 foot, 3*d.*; 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s.* 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

NETTING for FRUIT TREES, SEED BEDS, RIPE STRAWBERRIES, &c.—TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3*d.* per yard; or 100 yards, 20*s.*; 4 yards wide, 6*d.* per yard; or 50 yards, 20*s.* NEW TANNED NETTING, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 6*d.* per yard; 4 yards wide, 1*s.* per yard; ¾-inch mesh, 4 yards wide, 1*s.* 6*d.* per yard.

Can be had in any quantity of EATON & DELLER, 6 and 7, Crooked Lane, London Bridge, E.C.

RICK CLOTHS, with Poles, Pulleys, and Lines complete. A large quantity of SECOND-HAND RICK CLOTHS, left over from fêtes last season, to be sold at reasonable prices.

NETTING and SCRIMS for the Protection of Fruit Trees.

Apply early to BENJAMIN EDGINGTON, Marquee, Tent, Rick Cloth, and Flag Manufacturer, by special appointment to Her Majesty, 2, Duke Street, London Bridge, S.E.

No other Establishment.

BARNARD, BISHOP, AND BARNARDS, Norwich.

FURTHER REDUCTION in the PRICE of WIRE NETTING.

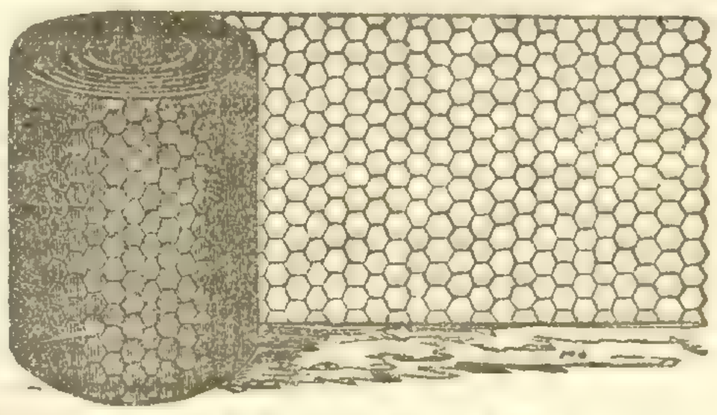

BARNARD, BISHOP, & BARNARDS beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

	Gauge.	Galvanised per yard.	Japanned Iron. per yard
2-inch mesh, 24 inches wide ..	No. 19 ..	4½*d.* ..	3½*d.*
2-inch " " " .. "	18 ..	5 ..	4
2-inch " " " .. "	17 ..	6½ ..	5
2-inch " " " .. "	16 ..	8 ..	6½
1½-inch " " " .. "	19 ..	4½ ..	4
1½-inch " " " .. "	18 ..	6 ..	4½
1½-inch " " " .. "	17 ..	7 ..	5½
1½-inch " " " .. "	16 ..	9 ..	7

All the above kinds can be made any width (under 6 feet) at proportionate prices.

Strong Galvanised Poultry Netting, 7½*d.* per yard, 3 feet Wide. Galvanised Sparrow-proof Netting for Pheasantries, 11*d.* per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1*s.* per yard.

The same with Galvanised Wire Rope, 1*s.* 2*d.* per yard.

Illustrated Catalogues, with prices of every variety of Wire Fencing and Wire Netting, forwarded free on application.

*** Wire Fencing and Netting delivered Carriage Free at all the principal Railway Stations.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.

TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c. IN ENGLAND AND WALES AND IN SCOTLAND.

The Company advances money, unlimited in amount, the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster S.W.

MESSRS. WAY AND EVANS, ANALYTICAL and CONSULTING CHEMISTS, receive PUPILS for the study of AGRICULTURAL and GENERAL ANALYTICAL CHEMISTRY.

106, Leadenhall Street, E.C.

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments, and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.

Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.

22 Parliament Street, Westminster, S.W.

LAND DRAINAGE.—WORKS of DRAINAGE of any extent are EXECUTED by the GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY, on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate, or collegiate.

Repayment may be made by the Landowner as successive portions of the Works are completed, or the outlay and expenses may be charged on the estate by way of rent charge created for such a term of years as the Landowner shall determine will best adapt the annual payment to the circumstances of the tenants.

No investigation of title being required, or notices given to reversioners or mortgagees, no legal expenses are incurred.

Works of irrigation, enclosing, wood grubbing, road-making, and farm buildings are executed in a similar manner.

Landowners desirous to execute any of the improvements by their own agents, and charge the outlay and expenses on the Estate, may obtain loans for the purpose.

Applications to be made to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, S.W.

DOG SHOW—AGRICULTURAL HALL.—Notice to Exhibitors in Classes 27, 28, 29, 30, and 35 to 51 inclusive. Entrance Fee 5*s.*

Prize Lists on application to the Secretary, Agricultural Hall, London, N.

Dog Show.

SECOND INTERNATIONAL SHOW of FOX-HOUNDS, HARRIERS, DEERHOUNDS, GREYHOUNDS, BLOODHOUNDS, POINTERS, SETTERS, RETRIEVERS, SPANIELS, MASTIFFS, and all kinds of BRITISH and FOREIGN WATCH-DOGS, VERMIN KILLERS, and PETS, to be held at the Agricultural Hall, Islington, N., on FRIDAY, SATURDAY, MONDAY, TUESDAY, and WEDNESDAY, May 27, 28, 30, 31, and June 1, 1864. Entries close May 14.

Prize Lists may be obtained on application to the Secretary, Agricultural Hall, Islington, N.

AGRICULTURAL HALL, ISLINGTON. — The HORSE SHOW will open JULY 1. Entries close on JUNE 13.

Prize Lists are now ready, and may be obtained on application to S. SIDNEY, Secretary.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.

A LECTURE, by Dr. VOELCKER, on the "NUTRITION of PLANTS from the ATMOSPHERE," will be delivered to the Members at the Society's House, 12, Hanover Square, London, at 12 o'clock on WEDNESDAY NEXT, May 11.—By order of the Council. H. HALL DARE, Secretary.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.

MEETING at NEWCASTLE-ON-TYNE, July, 1864.

LAST DAY for Entry of Stock, Wool, and Butter, 1st June.

All Certificates received after that date will be returned to the senders.

Prize Sheets and Certificates will be forwarded on application to H. HALL DARE, Secretary.

12, Hanover Square, London, W.

The Agricultural Gazette.

SATURDAY, MAY 7, 1864.

MEETING FOR THE ENSUING WEEK.

WEDNESDAY, May 11 { Agricultural Society of England.. Noon (Dr. Voelcker on Atmospheric Nutrition of Plants.)

THE objects for which the Royal Agricultural Society was incorporated are stated in its charter to have been:—(1). To republish such information given in existing books as experience has proved trustworthy. (2). To correspond with other agricultural societies, and select for publication any useful information thus acquired. (3). To bear the cost of experiments which it may direct on farms. (4). To direct attention to the improvement of implements and cottages and farm buildings, to encourage the application of chemistry, and to discourage the growth of weeds, and the spread of mischievous insects—(a strange medley, this). (5). To promote the discovery of new sorts of grain and other vegetables. (6). To collect information on arboriculture and on "every other subject connected with rural improvement." (7). "To take measures for the improvement of the education of those who depend upon the cultivation of the soil for their support." (8). To improve the veterinary art. (9). To encourage, by the distribution of prizes at its meetings, good cultivation and the breed of live stock. And (10) to promote the welfare of labourers and the improved management of their cottages and gardens.

It is to the 4th, 8th, and 9th of these objects that the attention of the Society has hitherto been mainly directed. The earliest volumes of the Society's Journal, however, indicate the guidance which this programme was throughout originally

believed to furnish; and many instances can be quoted of attention in consequence to all of them except the 7th. If any person thinks that the seventh object of the Society's Charter—the promotion of better education among farmers—is sufficiently attended to by the publication of the Society's Journal, it is sufficient to point out to him that the publication of the Journal is in obedience especially to the 1st, 2d, 3d, 4th, and 6th specified objects of the Charter—that indeed none of them could be properly attended to without some organ of communication between the directors of the Society and the agricultural world; and that the word "education" here evidently refers to the equipment and instruction of young men who are to become farmers, not to the guidance or information of those who are already tenants of the land. The interests of the tenant farmer in actual business as well as of all dependent on him are fully considered in all the objects named by the charter—information wherever it exists is to collected for him—further knowledge is to be obtained by experiment—the cultivation of the land and the improvement of our live stock are especially to be investigated and promoted, for his behoof—farm buildings and machinery are to be improved, the facts and principles ascertained by the chemist, the entomologist, the physiologist, the botanist and geologist are to be applied for his benefit—his labourers are to be better housed, and attention is to be directed to their comfort—the tenant farmer and agriculturist in actual business is considered throughout. The Society has well carried out almost all the objects which were contemplated for it by its founders. No one can say that the vast progress which in every branch of it English agriculture has experienced, has not been very much promoted, facilitated, suggested, and in many cases actually effected by the operations of the National Society. There is, indeed, but one of the ten objects specified in the charter of incorporation which has not received a fair degree of its effort and attention. That one object is "the improvement of the education of those who depend upon the cultivation of the soil for their support."

Now that attention is being directed to the singular neglect which has hitherto been chargeable upon it in this particular, discussion will no doubt arise as to the precise meaning of the words thus quoted, in which its duty is declared. Who are those "who depend upon the cultivation of the soil for their support"?—and what is that education of them, the improvement of which is one of the objects for which the Society was incorporated?

Of course the labourer, the tenant-farmer, and the landowner, all depend on the cultivation of the land for their support—and their education includes every influence which is brought to bear on them between childhood and manhood. But it is hardly likely that either the education or the class were meant in a sense so large by those who drew the Charter. It is no doubt the tenant-farmer who is specially indicated, and it is the professional education of the tenant-farmer that is referred to. And the point in the career of the future agriculturist, where we believe that the Society is bound to interfere for the improvement of his education, is that period which elapses in the life of every agriculturist between the school time of his boyhood and the time when he enters into business for himself—the period when his professional skill, knowledge, and ability are acquired. How the Society may act so as to improve the education of this kind which is now open to those who depend on the cultivation of the land for their support, is we hope the subject to which the recently appointed Committee of the Society is directing its attention.

Farmers ought to be upon their guard against the fraudulent attempts of Correspondents—members of the so-called "long firm"—writing from Manchester, Westminster, and elsewhere, who with neither cash nor character, nor reference for either, answer advertisements, and propose to buy seed corn, cattle, well-bred stock of any kind, &c. We know of cases in which pedigree Short-horns have been despatched in answer to orders from these scoundrels, and others in which live-stock has been actually shipped in obedience to their instructions, and saved from their clutches only at the last moment by the telegraph. On inquiry at the addresses given, it is ascertained that the letters sent are applied for at the local post office; and, further traced, they have been taken to the lowest haunts of a low neighbourhood where nobody answers to his name.

The following are extracts from a correspondence which luckily failed of its object, and which we publish as a warning:—

No. 1. "Broadway, Westminster, March 21, 1864.

"Sir,—I shall feel obliged by your informing me if you have a bull to dispose of similar to the one at Battersea—rich roan—in his prime and in good condition—2 or 3 years old, or upwards, to match the cow and heiffers he is intended to serve, and consists of first-class animals, roan and white. Your reply by return, with all particulars and price delivered on board steamer or by rail, which you may think best to send, will oblige Yours respectfully, P. R."

No. 2. "Broadway, Westminster, April 13.

"Sir,—I duly received yours of the 25th ult., in answer to my enquiry respecting a bull; the price is more than I should give for one. As I stated before, I do not breed for show, but with an improvement of stock. I might purchase, should you be enabled to recommend me one about two or three years old, either roan or red and white—price from 40 to 50 guineas, what you would consider well-bred for the money.

"Should you have one or two good looking dairy cows and heifers to offer, roan or red and white, that have had their 2d or 3d calf, I shall feel obliged by your informing me, and writing me every particular respecting them, stating age, colour, &c., and price for one or two delivered here or f. o. b. steamer, as business may prevent my personal inspection. Your attention will oblige, &c., &c.

No. 3. "Broadway, April 22, 1862.

"Sir,—I have yours of the 15th inst., with pedigree of a bull and cow. I am in possession of the Herd Book, and have by that means full reference to your stock as well as my private knowledge, therefore I have no occasion to refer to any one, at the same time thanking you for your remarks and kind intentions—and that you intend the best for mutual satisfaction and future dealings. I have decided to take the bull and "*Trip the Daisy*" before calving at the prices named in yours—50 and 33 guineas—both of which you may send off as early as convenient, and in the best manner for their safe conveyance here, to be entirely at my risk after you have caused them to be safely delivered at your end, addressed 'to await my orders here,'" &c.

Mr. R—— further proposes to take "*Sprightly the 2d*" after calving, and engages his correspondent to hold her on his account. He further hopes to hear soon, with an account of all charges, and he will immediately send a cheque on his bankers for the whole amount. Fortunately the letters, clever as one or two of them are (notwithstanding a slip or two as to what constitutes a "heiffer," &c.,) failed to deceive the breeder of "*Sprightly the 2d*," and she and her companions are therefore still safe at home. It is plain, however, from this and many other examples which could be named, that these rogues aim confidently and well; and it is right to call attention to the risk that is thus incurred.

TALE OF A LANDLORD.

Subterranean Nomenclature.

In the present day, when Estate-drainage and improvements of every description are advertised and undertaken by rival Companies, and a busy Metropolitan Contractor at a few days' notice pours an army of workmen upon the land from the nearest Railway Station, there is something almost ludicrously small in the picture brought to mind by the 'Works and Days' of early and individual effort made only by the Few, and under discouragement and drawback hardly credible, indeed not quite easy to make intelligible to modern ideas. But happily, our minds are so constituted that the interest of a thing is by no means proportioned to its magnitude of scale: indeed, the very opposite of this seems to suggest itself sometimes, when on looking back to the small and modest beginning—the first step that led on to a wider field of operations—we see it in the far retrospect, as we did *not* see it then, pregnant with all its after-results. It is under some such feeling that I recall a certain dark gusty morning late in November; a wild unenclosed broken stretch of—can I venture to call it—*land*, running for two or three miles, the broad wild margin on either side of a once well-beaten mail-road that threaded through it. Viewed as you travelled along, its drear aspect was such as to ordinary minded mortals communicates an involuntary shudder. Man is a part of Nature, and his feelings respond to her countenance, obey her frowns and smiles, without any formal bidding, and we cannot detach from the mind that enjoys it, any more than from the eye that takes it in, the joys or the pains of Scenery. The charm of cultivation—the delicious aspect of a well-tilled field—gladdens to the very heart's core: and its opposite does the opposite. A rugged uncouth surface, yawning gravel-pits—sand-pits—marl-pits—turf-pits, pitfalls of every kind, with the heaps of their own refuse piled alongside, grown over by the rank weed that roots itself with ease—its name is legion and its aspect diabolic—such was the scene that I recall, under the threatening drizzle of that November day.

But early as I was, before I reached the scene the battle had begun, and in earnest too. Four stout spadesmen had already broken ground; and a straight deep trench nearly a yard wide, reaching right across from side to side, with a small patch already double-dug and levelled, shewed signs of a careful beginning. The maintenance, throughout the work, of a broad trench is one of the best securities of honest double-digging: it is a condition that cannot be evaded, because its evasion cannot be concealed. In truth, its preservation is a necessity of all good cultivation whether of spade or plough, not half sufficiently kept in view: such at least was the conclusion forced upon my mind by the most impressive piece of cultivation I ever witnessed, far away in a land of Vineyards, where the Grape (—an exotic notwithstanding—) has a tendency to deteriorate, from the want of alkali in the soil, and the excessive cost of lime, which has to be brought some hundred miles, by sea. To remedy as far as possible this defect, from the home resources of a too charily compounded soil, the land is periodically dug (can I so call it?) to no less a depth than five or six feet. The workmen stand in the trench, sunk thus deeply, and throw the soil as high as their own heads from one side to the other to make the bed for the young Vine plants. Imagine a tilth six feet deep, every spadeful separately moved and aërated! Yet such is the process to which the once famous Buâl and *Sercial* are indebted, for the maintenance of undegenerated quality and flavour, even for a seven years' occupancy of the ground.

To see is to believe, and in some cases never to forget: and this was one of them; it remained by me, a permanent type, a classic memory, a gigantic fragment of cultivation truly 'Cyclopean.' Under the cloudless sky of the finest climate in the world, one drowsy afternoon, I watched this process, to be afterwards imitated in model—eighteen inches for six feet—under the drip of English November. The gods delight in contrast: life runs over with it.

Down went the rank grass and weeds into the bottom of the trench; and up rose the obstinate subsoil, sometimes hard and intractable to the pickaxe, sometimes clinging to the spade. Scarcely one square yard was like another in texture or in colour. As the light drizzling rain fell upon the levelled and divided surface, a sort of steam appeared to rise in exhalation from the sudden contact, as if a newly awakened action had already commenced between the raw fresh-exposed earth and the wholesome elements of heaven! Chemical science may describe in detail the mystic process to its audience, but no technical language that was ever coined can express the mental satisfaction with which the eye contemplates the first salutary union between things that were *meant* to meet but have never met before—the breaking up of land that has lain literally waste—*never* before upturned to the daylight and "the moist influences of the Pleiades" descending on it and into it.

But not to every mind alike does the problem present itself by any means. I soon had cause to be aware of this. As I stood and looked on, the first muttering reached my ear of a coming storm that I was little aware of having brewed. "It *is* no use I tell ye! just turn the top over, and the things 'll grow well enough at Win'uld uthout all this 'ere *double*-digging." Such was the opinion I overheard confidentially asserted between my by no means grave diggers. "Well, 'twarnt so however at the fust 'nclosure, time back: I 'elped to double-dig the Luglands plantation, as the' calls it now,—the piece as was 'lotted to Squire Grezzle, and I never thought it 'ud a beared nothing, as I turned up the motherstone and craplash, and all the rubbitch to the top, as never saw no daylight afore, *nor didn't ought*, I sez. Well, sez I, its no hodds sa lung as yere appy! for he *'ould* 'ave it done 'is own way. And the Parish 'ad theirs, *theirn*; only just the top turned over a bit: it was for all the world like a trying of 'xperiences. Well, I likes to see em: I 'avent no objection to trying of experiences, not I. And, you just see 'em now; *both* on 'em; and *mind* this; every bit o' the fencing o' the *second* 'nclosure we cut from the Squires 'llotment. What a sight o' straight well-growwd poles we had out, to be sure! and the Parish lot aint come to the *fust* cutting, not *now!*"

This was encouraging: it came from an old man whose bent form had in early youth stood six-feet-two, and who still appeared to handle the spade like a child's plaything. What a leverage there was in his arm and foot as they tore up the stubborn spadesful from the bottom, and lifted and dashed them forward. I had stood near to watch it, not without reason; and was rewarded by this passage from his 'experiences.'

"What are '*Motherstone* and *Craplash?*'" said I, minded to improve the occasion, but in a kind of meek *sotto voce*, adapted for the depth of my ignorance. The ruddy weather-beaten face raised itself from over the spade, with a compassionate reproof already gathering upon it, about to reply to the twin-question; when the heavy trot of a horse suddenly coming up behind me, but so visibly to my instructor about-to-be as to draw all his attention, nipped my lesson in the bud.

It is commonly thought that Geologists have drawn pretty heavily upon the possible forms and sounds that orthography can take, in *their* underground nomenclature. Their excuse is that if the words are rather long, and difficult to heave up, they suit the depths they belong to, both literal, *i.e.*, subterranean,—and chronological. But I venture to think a careful collector could furnish a small duodecimo volume of words of a comparatively superficial character—that is, not requiring above two spades' depth to get at them; a mere alluvial vocabulary, in fact, without quite a life's labour. Like other archæological relics they suffer by delay; for every year is helping to obliterate; a cogent argument for early collection. I tried to make a mental note, having already made my query, but I had little time for reflection, for a loud well-

remembered voice roared a morning salutation, as if a speaking-trumpet was pointed at me, adding, still in the same sort of hurricane—

"What, 'making the Wilderness blossom like the Rose,' eh, Sir? or" added the rider coming nearer, and looking into the trench, "laying a foundation perhaps?"

"Yes! metaphorically."

"Met a *what*! *Who* did you say? I left my Greek and Hebrew at home. Please interpret? tell me what you are making."

"A Plantation."

"I don't see any holes?"

"A plantation of *trees*: not rabbits: trees don't appear to me to live in holes."

"Well, ah! you're right" he rejoined, laughing: "at any rate they *die* in them sometimes! Mine do, at least, let me water them, and strike them, and protect them as carefully as I will. *Your's* will, here, anyhow, plant what you may, and how you may: Soils to' cold for 'em. What are you going to plant?"

"Larch, and Scotch and Spruce Fir, for nurses, with Chestnut, Oak, and Ash, to remain."

"Oh, ho, ho!—and Palms, and Sugar-canes, and Bananas!" shouted he in a sort of roulade of laughter: "'grow about as much, here! I know the land—I've tried 'em all—planted 'em, years ago."

"Ah, *in holes*, ready cut and waterlogged; each in his clay jar, like the Forty Thieves; and then you 'filled them up'—like Morgiana."

"Well, they *were* planted in holes certainly: Why not? tell me, why not?"

"Nay, you need not ask me! I have learnt the reason already from you. You 'tubbed' them, in clay, a little tub of clay to each; and they died—— became dead men all! and you know who has said, or sung

'O! a pit of clay for to be made
For such a guest is meet!'

"Ah, well! but trenching is expensive work, after all, especially in such a soil as this" replied he, after a few moments' silence; but I shall watch how your plan answers: and if your trees grow better than mine did, I'll"—— and here a meaning smile checked the half-uttered purpose. How often has such a smile, and the thought that suggested and suggests it, passed between man and man! If your Wheat-crop was ill planted this year you may sow it better next,—and next,—and next. But an error in the husbandry of the crop that counts its growth by decades and by centuries! Surely it is worth the discounting beforehand, by a little study of that underground life which the roots of the Forest will be living, long after the hand that planted it, is even with *their* pasturage, as they wander freely through the easy tracks and cleavage of the under soil, once uppermost, which the spade has made for them, (at an expense how light in its once for all execution compared with the *annual* preparation for an 'Annual'!) instead of leaving *them* to deal with the Subterranean mysteries of 'Mother-stone and Craplash', and struggle for years in vain at the work which the spade can do for them in a few well remunerated hours. *T.*

THE FARM LABOURER.

I HAVE long since said that good work cannot be done without proper tools, and these tools in good condition. So it is with our labourers. The Almighty gives mind, man can only give example and education. The natural minds in men are like the natural fields in agriculture. There is every degree of fertility, but they will all grow noxious weeds unless cultivated and cared for.

There can be no doubt that education has been strangely neglected in this country, and that in this respect we are sadly behind our brethren in the United States and other foreign nations. I speak now of the literature of education, for it cannot be denied that our farm labourers' children are very early instructed in the practice of agriculture. The scarecrow at 2*d.* per day passes in gradation to the management of a donkey and donkey-cart, "drives away" monster horses in dung-carts, or harvest-carts with immense piles of sheaves. It is amusing to mark his growing importance and dignity as he dictates to the leading plough-horse, or remonstrates authoritatively with an unruly pig, or admonishes unwieldy oxen to get out of his way, as his diminutive form, with a basket of food or litter, is scarcely descernible among the herd. From cleaning roots and feeding stock he rises to the hoe, the drill, or the plough, and at 21 he can take a very accurate estimate of his master's condition, and tell you whether his style of farming is leading him to prosperity or adversity. There is scarcely a man on my farm who cannot work my steam engine, drain, hedge, and ditch, thatch, and do any work on a farm, but then they have been with me during 23 years through the whole process of agricultural amendment—and yet not one of them can read fluently. They lament the want of education, and are rejoiced that our new school in connection with our new church on the heath, just got into working order, will give to their children a better chance than their parents have had before them. The penny press, the penny post (all honour to Sir Rowland Hill), and railway communication have opened up the world to the agricultural labourer, and have stimulated in him a desire for education and knowledge. It is in the long winter evenings that the necessity for intellectual occupation presents itself. I annex some statistics of what America has done and is doing for the cause of education, but we can never hope to attain to so much here. The reasons are obvious. In the United States the agricultural labourer has always received 4*s.* 2*d.* per day as wages, and very often rations or lodging. Wheat, Maize, and meat sell in the agricultural districts at 50 per cent. less than in this country, and thus cause his wages to represent in reality 6*s.* per day, or three times the amount paid in England. We see, at once, that he is under no need to send his children at a very early age into the field instead of to the school.

It is highly creditable to the people of the United States, that while they have the strongest possible objection to general imposts, they tax themselves freely for the purposes of education. I am glad to see that we are at length moving in this matter.

Our Scotch friends have always been before us in education, owing to the law compelling the heritor or landowner to contribute to a school. Hence our southern use of Scotch gardeners and stewards.

I see by statistics that the United States had, before the rupture, 1000 million (!) acres of land still to dispose of. Our United Kingdom covers an area of about 56 millions of available soil. America is evidently the working man's country.

The land granted by the States in America for the endowment of schools amounts to 50 millions of acres, nearly equal to the whole available area of Great Britain. The United States had in 1850 nearly 90,000 public schools, academies, and colleges, with school libraries conjoined, possessing 4,000,000 of volumes. Fifteen of the principal States have school funds amounting to 6,000,000*l.* The annual school expenditure in the single State of New York was for 1861, 768,454*l.* The Government expenditure for the whole kingdom of Great Britain in 1856 was only 423,633*l.*

It is estimated that at the present time there are 120,000 public schools, academies, and colleges in the United States, at which 5,000,000 of the whole population are educated (about 1 in 5 of the population), at an annual public cost of less than 1*l.* per head, as follows:—

Public schools	£0	12	0	per head
Academies	4	0	0	,,
Colleges	15	0	0	,,

Independent of private cost.

In 1850 there were—

Public schools	80,978
Academies	6,085
Colleges	239

Now increased in number to 120,000.

The schools in the States are very rarely opened more than half the year, owing to the scarcity of labour. Those who desire ample statistics of American education should read Mr. Walford's recent paper read before the British Association. *J. J. Mechi.*

THE VEGETABLE MOULD.

AËRATION of clayey soil in former times was carried out more effectually than it now is. About 65 years ago, when a boy, being in company with my father and an old agriculturist, I heard them conversing of the heavy labour under the old system of dyking the summer fallow of the Carse of Gowrie (an old lacustrine mud), that is forming the soil into low walls or high drills, a work which was commenced in the autumn and carried on at any spare time. In speaking with my father about it at that time, my impression was that the whole surface, plough-fur deep, was thrown up into these dykes, and after being exposed to the winter frost and summer drought and well aërated, thrown down by the plough and prepared by repeated working and July rains for the seed. In forming the dykes, two very heavy plough furrows were laid together as a foundation, say every 4 or 5 feet separate, and the dyke completed by spade work, as high as the clay would build. I can easily see the importance of this system of aëration. Here the potash in the soil would absorb nitrogen from the atmosphere and form nitre. The practice is exactly similar to the trenching the soil in the old city grounds of Paris, Madrid, &c., rich in potash, to obtain nitre. There the soil is formed into similar dykes, turned over every two or three years, exposed to the putrid city atmosphere, and washed for nitre every seven or eight years. The Carse of Gowrie, a silt lacustrine formation of the mud washed out of the basin of the Tay, and deposited at the river mouth, contains a large proportion of organic matter of which potash forms a part, and no doubt the air is not quite so pure as that of the mountain, yet there is no proof that an impure atmosphere is necessary to this formation of nitre, as nitrogen is abundant over all, only an abundance of potash seems necessary. This system of dyking—of aëration exposed to the winter frost and summer drought and heat—would soon exhaust the potash in the soil; it would absorb nitrogen, form nitre, which though highly nutritive to the Wheat crop, would soon become exhausted by the crops or washed away, before another round of dyking took place, and without a large addition of manure containing potash, the dyking would cease to be so advantageous. It was perhaps this that put a stop to this nitre bed system of fallowing.

I have found the clay walls of old houses in the Carse of Gowrie so strong a manure that, spread over a portion of a field which was afterwards sown of Turnips, these grew excessively to leaves, almost without bulbs. The Turnips found so much food in the ground through which their roots extended, that they seem instinctively to have thought it unnecessary to lay up a store of nourishment, as bulbs, to form a provision supply for the period of reproduction. I do not attribute the high fertilising effect of the old dry walls to nitre alone; the long aëration and dryness seems to have digested other components of the walls, and rendered them suited for plant absorption.

We old farmers have experienced the great fertilising effect of a summer fallow upon clayey and loamy soils. This operated in several ways: destroyed weeds, aërated the soil, rendering it more friable and crumbly, brought effete or dormant organic matter into action—to act chemically upon minerals so as to render both fit for absorption by plants, in other words, digested, and causing the soil to absorb a large quantity of air in an unknown state of combination, very favourable to plants; also where any considerable quantity of loose potash existed in the soil, combining with that alkali and forming nitre, one of the most active aids to vegetation. As an example of this the writer once caused soot to be spread in February over a ploughed field of alluvial clay; the man spreading it out of the cart thinly with a shovel did not make the shovel-spreads meet, leaving the ground what we call stepped, black and brown alternately. In about three weeks the black portion became white—whitened over as if by lime—from the formation of nitre, the potash of the soot combining with nitrogen from the atmosphere, and in a few weeks more (the field being for Turnips and remaining unstirred) the white portion became green from the braird and strong growth of wild Mustard (Sinapis nigra), while the interstices without soot remained brown as at first, the natural colour of the soil, the braird of Mustard on these spaces being so puny and brown as not to be visible at a little distance. So little were they visible that it would seem the nitre had stimulated the seeds dormant in the soil, to vegetate in the soot spaces. In the culture of Turnips, Beet, Potatos, by drill husbandry and repeated stirring of the soil, the effects of aëration are similar in generating nitre, though in a less degree to bare fallow.

In certain soils the summer fallowing under the usual round of ploughing and working, rendered the ground very friable and loose. This was found to be unsuited for the autumn-sown Wheat, the loose soil imbibed and held too much water during the winter, and the water in freezing, generally took a crystalline open arrangement termed honeycombed. At the commencement of the frost the stem of the plant at the surface became frozen to the soil, and thus fixed, the great enlargement by freezing of the soil underneath, but above the primary root, necessarily draw up the under rootage or fractured the stem a little below the surface. A repetition of the frost thus accomplished the complete uprooting of the plants, laying them loose on the surface. About 56 years ago, having fallowed land thus liable to throw the Wheat, immediately before sowing I made a half-loaded cart be driven along the ridges, beginning at one side and advancing at each turn about 9 inches, thus pressing the ground twice with the wheels and kneading it with the horses. The last offside rut of the wheel left the ground to look almost as if it had been ploughed, and it took about the same time thus to kneed it as to plough, but it proved effectual, perhaps the first and the best plan of firming the soil for Wheat ever adopted. Some 20 years afterwards the fluting pressing roller, taking in about a yard of breadth, was introduced, more expeditious, but less effectual in loose ground. Of course after the cart pressing, only as much harrowing was used as covered the seed, and best with the harrows turned back foremost.

In Scotland, sowing the Wheat when the ground is rather moist and late in the autumn prevents throwing out. Being worked in a moist state prevents the soil taking the honeycomb crystalline arrangement in freezing, and with late sowing, the primary root remains stronger during the winter. With earlier sowing, the primary rooting will have begun to rot away, while the secondary rooting will not have been well established, and the plant more easily thrown out. In the case of Autumn Wheat, a portion ploughed down and the other sown above in the same field and same day, the ploughed down seed gave a tall slender braird above ground, and the sown above a broad-leaved stronger short braird, and I should think the latter hardier to stand the winter. In spring the secondary rooting was in both equally superficial, the root tendrils from both proceeding from the knot at the surface of the ground, while the primary rots away. In the case of spring sowing I have found in rough cloddy ground the secondary rooting proceed not from one knot alone at the surface, but also from several points downwards below it. These several stories of roots is very rare in cereals, and only when the ground is rough and open to the air downwards.

Deep stirring and aëration would seem by Mr. Smith's experiment at Lois Weedon to have rather important effects. His process, cultivating Wheat in drills a yard wide in the seeded row and a yard wide in the deep stirred row, alternately changed every season for 15 or 16 years, and giving a return of about 36 bushels of Wheat average per acre without manure,

may seem a little strange if the measure comprise the whole ground; but if only the stripes of a yard wide in which the seeds were sown, that is, only half of the ground, the produce, only 18 bushels per acre, is nothing remarkable (even as a continued crop we must take the whole ground into account), as when the Wheat plants obtain size, the stems and ears as well as the roots spread over the whole space. It is only wide drilled Wheat, well worked between the drills, with a change of drills every crop. This system to be successful would require a good subsoil and soil a heavy loam, both containing a favourable mixture of the necessary mineral components of Wheat, the roots and probably a very rough stubble affording the necessary organic matter, assisted by the aëration and deep digging to digest the mineral. I hope Mr. Smith will resolve my doubt about the measure. This experiment, if an average of 36 bushels per acre, taking in the whole ground, has been produced, is of the highest importance; and if it can be continued it will show either that there is a magnetic attraction in the living plant extending to earth and air, and that what we are accustomed to term minerals are more diffused through the atmosphere than has been believed, or that what I have alluded to in a former letter, that plants in a healthy condition and position may receive minerals or other components by electro-magnetic currents, in a similar manner to what takes place in the transport of minerals, and especially metals which we find in veins or in crystallized spiculi and nodules in the metamorphic rock, so situated that we cannot conceive that water alone has been the transporting power. The small pendants of silver which are said to be found attached to the root tendrils of plants, in localities where silver is abundant, demand examination as bearing upon this question. Has it been rejected from the water imbibed by the plant? Has it been in solution by the water, or by the air in the soil, or has it been carried or formed by electro-magnetic currents? The formation of crystals of silver upon an old saddle hung up and forgotten for a long time in a mine, mentioned by Humboldt, would rather incline us to conclude that water was not the medium of transport. In the case of acids and alkali being reciprocally transported by electric currents along or through wires of conduction, it would seem that matter can exist in a condition of which we can form no conception, or that matter is merely aggregates of electric points of attraction and repulsion, subject to infinite modification; that these can be modified by electric impulse, and that the transmutation of metals is not an impossibility, or that acid and alkali are conditions something similar to plus and negative electricity. We cannot suppose that matter, such as we regard it, can be carried through a wire.

Here we are obliged to have recourse to the unreal or glamour conception of matter—that it is only electric points of attraction and repulsion varying infinitely in their repellent and attractive powers as acted upon physically and vitally—that what we regard the forms of things, corpuscular matter, is built up of electric groups of these points, the only real entities. We have no knowledge of what we term matter but by our senses: that of touch is only repellent; that of sight is not of the object itself but of what it repels. What conception can we have of an animal or lump of inanimate matter from receiving a rebound blow from certain of the pellets of light which had been thrown against it, those pellets which did not enter its skin or surface? This is the only information we receive from sight of the entity before us—actually no knowledge at all, but that it exists and repels certain bodies or impulses which strike against it. We weigh this entity and find that it attracts and is attracted by a large mass of the same (the earth), or is attracted or repelled by another entity as it is in an opposite or in the same condition of electricity with the other. This is a very vague knowledge, but it is all we know of matter, of the real or rather unreal character of the external world. What can we know of a ship from the spray of the wave which rebounds from its side? This is not Berkeley's ideal theory, but the actual proven fact of all we know of matter.

In the case of the mutual transmutation of the so-called matter in jars placed at some distance by an electric current through a connecting wire, it is not difficult to conceive that the flow or conveyed impulse or power of electricity might accomplish the change, the matter in the jars being of electric composition, the electric impulse only changing the electric state from acid to alkali, and *vice versâ*, in the two jars; but it is rather difficult, as I have said, to conceive the matter (matter as we regard it) to be carried on the wings of electricity through the dense body of the iron or copper wire.

To return to our subject. In the case of the Lois Weedon experiment—the continued production of Wheat—surely any good chemist might ascertain if the soil of what has been producing full crops of Wheat for some 16 years has sustained any great diminution of phosphorus, &c., as compared with the land around it, which has not been subject to this drain, or at least has been manured under the drain of production. At any rate the amount of phosphorus in the ground under trial ought to be very accurately ascertained, and kept in view for trial some years hence. What is the use of chemists, if they only present us with absurd theories, and do not solve most important matter of fact questions like this? I hope there can be no deception here, no "guano" arising from the land having been an old burial ground or ancient site of priest-residence, attracting the fat of the land towards it. I may mention, that in digging drains in the Carse of Gowrie (lacustrine clay) immediately after a full and clean crop of Wheat, I found the roots of plants fine as hair (I conceived the Wheat roots) in great abundance down in the cracks of the ground, at least 5 feet deep. This was after a dry summer, and I conceived this deep rooting was in quest of moisture. I see no reason for believing as Baron von Liebig does, that root crops such as Turnips, or even most of the Clovers, go down deeper than Wheat in dry seasons in search of food or moisture. There are many perennial plants that forage at considerable depth, Thistles, Tussilago, Marestail, Fern, Sonchus arvensis. These generally forage deeper than annuals; the Oak and Pear root the deepest among trees in this country. *Patrick Matthew, Gourdie Hill, Errol, March 25.*

NOTES ON CELEBRATED SHORT-HORNS.

No. VI.

[The following notes on Hubback's pedigree, collected from different authorities, are extracted from Mr. Hutchinson's pamphlet on the Sockburn Short-horns, reviewed some time ago in these columns.]

Hubback.—The quantity, then, that has been written about Hubback's pedigree, proves nothing, but rather tends to throw disbelief on every thing that has been said from the first. Messrs. Colling undoubtedly gave Mr. Rudd all his information, and therefore he cannot be blamed. But, in point of fact, I do not believe any thing that has been said either about this bull or Snowdon's bull. Mr. George Snowdon came to Hurworth in 1774; and admitting that his bull was then only one year old (an extreme case against my argument) it would have been 1780 before he could have begot Hubback, who was rising five years old in October, 1785, when Mr. C. Colling became possessed of him, on his first commencing breeder. Mr. Snowdon's bull, therefore, would be, at least, six or seven years old when he begot Hubback—a most unlikely circumstance truly; seeing that, in those days, bulls were all suffered to range at large, and generally, of consequence, became so dangerous at three or four years old, that they were seldom permitted to live longer. So much for the credibility of George Snowdon having brought this bull with him out of Cleveland—and of his being descended from the stock of the late Sir James Pennyman!—And further, as the mother of Hubback always went in the lanes, after she came to Hurworth,—who, I ask, can pretend to say—whose bull was the happy Sire?—*Dic mihi, magnus Apollo?* The using of Hubback was certainly a lucky hit of Mr. C. Colling—a random shaft, picked up and parted with at random—who himself did not know the real value of the bull, or would he have parted with him, after scarcely two years' use, for 30*l.* without keeping one of his begetting? Surely not.

Hubback's Pedigree. From the best authorities.

1. Major Rudd, Anno 1816.

"The bull Hubback was descended from the stock of Sir James Pennyman, Bart., of Ormsby, in Cleveland, Yorkshire, who, about the year 1770, paid much attention to the improvement of the short-horned cattle, and purchased the best bulls and cows which he could procure. He purchased several cows of Sir W. St. Quintin, of Scampston, who was then celebrated for his breed of short-horned cattle. It is probable that Hubback may have been descended from this breed, but the fact cannot be ascertained."

2. The late Mr. Robert Colling, Anno 1818, thus gives the pedigree of the cow Juno, No. 3, in his catalogue.

"Her Grandam by Hubback. G. Great Grandam by Sire of Hubbock. G. G. G. Grandam by Sir James Pennyman's bull, descended from the stock of the late Sir W. St. Quintin, of Scampton." And this is all we have from either this gentleman or his brother, directly or indirectly on the subject of Hubback's pedigree. They however, were Major Rudd's authorities for what he published in 1816.

3. Major Rudd, Anno 1821.

"I am in possession of evidence which establishes the fact that the dam of Hubback owed her propensity to fatten to an admixture of kyloe blood, and perhaps this letter will, for the first time, communicate publicly that the sire of Hubback had an intermixture of Alderney or Norman blood; Hubback, therefore, who was the *main root* of the improved short-horns, united three crosses, viz. the Dutch or old Short-horn breed, the Kyloe, and the Norman or Alderney. The sire of Hubback was descended from the stock of Sir William St. Quintin. I was intimately acquainted with Sir James Pennyman's Steward; who has repeatedly assured me that Sir James told him that this breed was a cross between the old Short-horns and the Alderney. Such then being the pedigree of Hubback, it follows that all the *improved* Short-horns are a *mixed* breed, the result of judicious crossing."

4. Major Rudd, Anno 1821.

"The sire of Hubback belonged to Mr. George Snowdon, who had been a tenant of Sir James Pennyman, and by that means derived his bull. It is certain that the late Mr. Robert Colling *believed* the descent of that bull to be from the stock of Sir J. Pennyman and Sir W. St. Quintin; for in his catalogue of his stock in 1818, he deduces the pedigrees from their stock. Of these proofs I was not apprised when my (former) Notes were published."

5. George Baker, Esq., November 9th, 1821.

"Attempts have been made, by hearsay evidence and otherwise, to question the blood of Hubback, I send you his pedigree. I have the authority of Mr. Charles Colling, to say, he always considered him a thorough-bred Short-horned Bull. Mr. John Hunter, of Hurworth, who sold his dam, with Hubback at her foot, to Mr. Basnett, of Darlington, says, his father bought her of Mr. Stephenson, of Ketton, and that she was a pure-bred Short-horn. Mr. Alexander Hall, of Sheraton-hill Top, who lived in that neighbourhood, and remembers her and the calf perfectly well; says she was a beautiful colour and handler; and when she got on to good land near Darlington, she got so fat she would not breed again. Hubback, he says, was got by Mr. Snowdon's bull, a son of Mr. Robson's bull, of Dinsdale, who was bred by old Mr. Waistell, of Burdon, a very noted breeder, and got by Mr. James Masterman's bull, of Coatham, near Darlington, and was a true-bred Short-horn.—The above gentleman will attest the same, if necessary.

"I consider the name of improved Short-horn to come from the breed of Hubback, and Mr. Maynard's cows, which, from time and judicious crossing, have brought them to their superior excellence. No cow or bull can ever be called a Short-horn with a cross of Scotch blood; for I would just as soon put the Duke of Grafton's Penelope to a Scotch pony, to breed a racer, as a cow to the grandson of Bolingbroke, out of a Galloway cow, to breed a Short-horn."

6. "*To J. Hutchinson, Esq., Stockton.*

Stockton, November 30th, 1821.

"Sir,—According to your request, I called on the 22d instant, on John Hunter, bricklayer, of Hurworth, who informed me that his father was a tenant under Madam Bland. About fifty years ago, as near as he could recollect, he left off farming and came to Hurworth, having sold off all his cattle except one beautiful little Short-horned cow, which he brought along with him. She went ever after in the lanes, he having no land. On calving to a bull belonging to Mr. George Snowdon, of Hurworth, a bull calf, she and her calf were taken to Darlington, and sold to a Quaker, who, the same day, resold her and her calf to a Mr. Basnett, Timber Merchant. He further said that a great number of gentlemen had lately made the same inquiries and had received the same answers; Mr. Baker being the last.

"I am, Sir, your humble Servant,

"Christopher Foss."

How absurd the attempt to establish any thing as *proof* or *fact*, upon such scanty, contradictory records as these! *From Mr. Hutchinson's Origin and Pedigrees of the Sockburn Short-horns*, 1822.

Home Correspondence.

The Bondage System.—I often wonder at intelligent farmers persisting in adhering to this degrading and oppressive system, which ought to be summarily abolished by the proprietors; and this could be done without raising the labour bill above the average in those districts where it does not exist. Some farmers try to ease their consciences by referring to the fact that a good many ploughmen have daughters fit for acting as bondagers. I avail myself of that fact as an additional argument for its abolition. For instance, a good many hinds have to pay their daughters the current rates of hired bondagers' wages. I have seen the eldest daughters dressed as gay as possible on Sabbath, and the younger brothers and sisters in rags. Were the farmers to abolish the practice of compelling hinds to provide field labourers, it would be a great boon even to those hinds who have grown-up families. Although my father was not bound to keep a bondager, his family worked as if they had been bondagers; but my sisters had not any claim upon my father for wages. I deduct 15*l.* 12*s.*, or 6*s.* a week, from the total wages for the bondager's board, lodging, and washing, and incidental losses through the bondager not working full time, and the bondager's wages, say nearly 13*l.* per annum. Although 28*l.* 12*s.* is not an overcharge for the cost of the bondager's contract, farmers could provide the food for much less. Had each farmer sufficient accommodation for the females who required to be imported, farmers could provide the food for much less than my estimated cost of the bondager to the hind, 6*s.* a week exclusive of the wages, say 12*l.* or 13*l.* per ann. A native of Wiltshire told me in 1859 that he and his wife were as comfortable on the Wiltshire wages as they were in Buckinghamshire on 14*s.* a-week. Of course he had a free house, and a large garden free of rent, and other perquisites in Wiltshire, whereas he had to pay house-rent off the 14*s.* a-week in Bucks. I send you a copy of my letter in the Edinburgh *Caledonian Mercury*, which shows that Northumbrian farmers had the services of two able-bodied labourers—a hind and a bondager—for the 52 weeks ending May, 1850, for 36*l.* 6*s.* 10*d.*, and a house and garden free, and the cartage of coals. I have deducted 3*l.* from the 9*l.* for the cow's keep, 2*l.* for the cartage of the coals, and the 3*l.* for the rental of the hovel. It required these sums to make a hind's wages equal to 31*l.* 3*s.* in

1850, as given at p. 742 of the second volume of Stephens's "Book of the Farm." Treating the one-room cottage and the cartage of the coals as perquisites, and putting 6*l.* instead of 9*l.* against the hind as a substitute for a cow's keep, my letter in the *Mercury* shows that a hind's wages were only 23*l.* 3*s.* and these perquisites. This 23*l.* 3*s.*, and the house and garden free of rent, and the cartage of coals, and the earnings of the bondager at 10*d.* a-day in summer and 8*d.* a-day in winter—in all 36*l.* 6*s.* 10*d.*—and the house and garden free, and cartage of coals, was all that a hind had for his own wages and for the expenses of the bondager-contract. The gross total has risen from 36*l.* 6*s.* 10*d.* and these perquisites to 57*l.* 15*s.* 10*d.* and perquisites of a house and garden free and the cartage of coals, for 1863. In an article recently published I showed that 39*l.* 19*s.* 10*d.*, and as perquisites, the liberty to feed a pig and the cartage of 6 and 7 loads of coals, was the gross total paid to a Roxburghshire hind for the 52 weeks ending May, 1854. The gross total in Roxburghshire has risen as high as 45*l.* 14*s.* 8½*d.* to 51*l.* 10*s.* 6*d.* and perquisites of house and garden free, the cartage of coals, and the liberty to feed a pig. Contrasting the different rates shows that the gross total in South Northumberland is 8*l.* and 9*l.* higher than it is in Roxburghshire. As a general rule, the majority of English ploughmen are located in houses which are grouped together as villages by men who have no interest in ploughmen, barring the punctual collection of the rent once a week or fortnightly. The condition of English ploughmen will not be what it ought to be until each farmer has his regular labourers housed at a convenient nearness to the farm steading. Winking at the compulsory bondager system in the south-east of Scotland, and in Northumberland—which is an unnecessary appendage or excrescence which ought to be abolished, and could be done without adding to the labour-bill—I like the system of management in the bondager district better than any I have seen in the counties of Worcester, Gloucester, Buckingham, Kent, and Surrey, in England. As for the condition of hinds in the Edinburgh district, the farmers might increase their wages and add to their comforts without paying a higher rate of wages. My present fellow-lodger was telling me he lodged with a hind whose wife had as much refuse as would nearly feed a pig, but the ploughmen are not allowed to keep pigs. Can you, Mr. Editor, inform me if the houses built by the late Duke of Bedford, are built at a convenient nearness to the farm steadings; or are they grouped together as villages? The building of houses on each farm in England would be an antidote for the habit of having "a pint and screw" every night. I cannot identify myself with Dr. Begg and Mr. Scot Skirving and others, who advocate each farmer having a great many cottages as a cure for the social evil peculiar to rural districts. My motto is one house for every man employed throughout the year. That implies one house for every 50 acres of arable land in Northumberland, and in the counties of Roxburgh and Berwick, and two houses for every 50 acres of arable land in East Lothian, which is let at a rental of 4*l.* per imperial acre. Mr. Morton stated in 1859, at a meeting of the Society of Arts, that some farmers in England employ one man for every 10 and 12 acres of arable land.—*Agricultural Gazette*, 1859, Dec. 10. One house for each man employed regularly throughout the year, will be a useful guide for proprietors in England. The building a greater number would ruin the vested interests in English villages, and would prompt some "red-hot agitators" to imitate Dr. Begg at Liverpool in 1858. Were such a numbe of men located at each farm steading in England, and each had a cow kept on his employer's farm, and liberty to feed a pig, as they do on Tweedside, there would not be such demands for beer and cider. Neither would there be any need for "sick clubs." A good many of my late fellow workmen on Tweedside are Odd-fellows and Foresters, but I do not know of a "sick club." *W.*

Pedigree Wheat.—Upon referring to Mr. Mechi's letter in the *Mark Lane Express* of Nov. 2, 1863, I see he states that my Wheat weighed 58½ lbs. instead of 58 lbs. as I had supposed. Will you be so good as to alter this in my letter, or in challenging it against other Wheat of 58 lbs., I might seem to wish for some advantage, whereas I have no other object but the simple truth. The Pedigree Wheat has been grown in Northamptonshire to weigh 66½ lbs. the imperial bushel. *Fred. Hallett.*

Friendly Societies.—It was not without ample reason that in a recently published letter the Chancellor of the Exchequer declared all benefit societies in "danger" which held their periodical meetings at public-houses. Several such local clubs have been known to me; one or two of them throughout the whole period of their existence—for they are not generally long-lived. The rules of some of them are now before me, and declare plainly enough the demoralising tendency of the places in which their meetings are held:—"Friendly societies will be in danger when, with the idea and theory of self-government, they allow their affairs to be in the hands of managers at a distance, whom the members can no more control than the electoral body of the country could, without the House of Commons, control the Queen's Government. They will be in danger, when their rules and tables have not been beyond all doubt ascertained by competent and instructed authority to be, not merely legal, but wise and prudent. Lastly, I fear they will very often be in danger when they transact their business at the public-house." This is what Mr. Gladstone says; and that he speaks the truth upon the last point is plain from the rules which in self-protection such Societies have laid down. I have before me the "rules and orders" of three such societies, meeting, or which used to meet, respectively, at the Swan Inn, Thornbury; at the Ship Inn, Alveston; and at the New Inn, Cromhall—all in Gloucestershire. What do these rules declare of the tendencies and risks which such places involve, and which in such places are incurred. In the book of the Thornbury Swan Inn Club, it is declared as its 28th rule that:—

"Should any member offer to lay wagers in club hours, in the club room, he shall forfeit 6*d.*; and further, on feast day or on any club night, should any member fight or strip to fight in club hours, or on the way home, on the same being proved, the offender shall forfeit 2*s.* 6*d.*, or be excluded."

Again, in the book of the Alveston Club, the 35th rule declares that

"Any member during the quarterly or anniversary meetings, who before the close of business shall get noisy, quarrelsome, or intoxicated, or who shall curse, swear, or use any abusive or indecent language, or shall refuse to keep silence after being requested to do so by the clerk or either of the stewards, shall be fined 1*s.*"

And lastly, the following is among the rules of the Cromhall Club:—

"That if any member during Society hours and in the Society room be disguised in liquor, give the lie, take the name of God in vain, curse, game, offer to lay any wager or sing, for such offence he shall be fined 3*d.*; or if he shall challenge, collar, strike, use threatening language, &c."

This is a FRIENDLY Society!—which protects its members from one another in this way! It is plain that the circumstances which make such rules necessary, are fatal to the professed character of the Society; and that as Mr. Gladstone says, and as the authors of these rules confess, those Friendly Societies which meet at public houses ere in "danger." *J. C. M.*

Improvement of Grass.—In your Paper of the 23d ult., you ask—how shall we improve a price of unproductive pasture? If I had a piece such as your Correspondent speaks of, and there was depth of soil, I should plough a 3-inch thick furrow by about 9-inches broad, then I would subsoil plough it 6 or 8-inches deep immediately after the furrow is turned up; this would loosen and lift the soil; then I would top-dress it with nitro-phosphate or superphosphate mixed with guano. After the land had been ploughed about a week I would then turn the furrow back, the Grass side upwards, and then sow fresh Grass seeds; I would then bush-harrow and roll it, and I think you will have permanently improved your pasture. *An Experimentalist.* [Will you point out any instance of the success of this management?]

Common Salt in Wheat Grain.—In last week's *Gazette* your correspondent, Mr. Edward Carroll, expresses surprise that I find so little common salt in Wheat. He cannot feel more than I do at his statement, that on the mud-lands of the Wexford Harbour Embankment Company, "when but partially reclaimed, there were extensive crops of various kinds grown for general purposes, but of Wheats more especially, and to such an extent was salt found to exist in the Wheat grains, which were in all other respects of the finest samples, that some of the millers objected to buy the same, alleging as a reason that their customers the bakers at first found the difficulty in making the bread sufficiently free from salt to satisfy their customers. But by a little more practice they found they could dispense in a great measure with the usual quantity of salt used in making ordinary bread." If samples of the Wheat in question can be procured and forwarded to me, I shall be very glad to submit them to chemical examination. A great many analyses of Wheat-grain and its ash have been made in my laboratory at Rothamsted. The amount of soda found is always very small, and it is as a rule the less, the riper the grain and the better its quality. Of chlorine again the quantity found is seldom more than what is called a trace. In 100 lb. of fine wheaten flour there is altogether not more than 12 or 13 oz. of mineral matter; and if this were all common salt it would be considerably less than the quantity which bakers are in the habit of mixing with flour in the process of bread making. *J. B. Lawes, Rothamsted.*

The Summer of 1864.—I beg to present for your acceptance a copy of a pamphlet entitled as above. It is my intention to advertise that pamphlet and the season to be expected, and I trust that this summer will bring to a climax the controversy between us, as to the existence of a substantial basis for my predictions. I quite concede that it was legitimate enough for the *Gardeners' Chronicle* at their origin in 1860, and for some time afterwards, to insist that inferences drawn from an inspection of the tabulated records of the past, could alone entitle any theory or practice of summer forecasts six months in advance to attention. But the case is altered when four successive summers have passed, each in its leading features successfully foretold, and distinctly and practically enough also, to have obtained both a hearing and attention in Mark Lane and elsewhere. The answer to Sir J. Herschel's published opinion, that no man in his senses would think of altering his conduct in the slightest particular, in consequence of any special prediction of a dry or cold, or warm or wet summer or winter, is met and answered by the fact, that some merchants do so, and on a large scale also, and that they have written to me to say so, in reply to my sending them, at their own request, an early statement of my views. I do trust therefore that if this season should on the whole result in an injurious drought throughout all or the greater part of the countries I have especially named, viz, north of France, Belgium, Holland, and a part of Germany adjacent, southern, eastern, and central England, the *Gardeners' Chronicle* will give me a fair and open encouragement to go on and endeavour to establish by successive practice, the truth of views, which I undoubtedly cannot demonstrate from an examination of the records of the past. As to those, I will even say, that an examination of them simply serves to confuse and bewilder me, and almost to make me mistrust the power which I feel I possess, of understanding in a great degree the habits of the climate under which I live. The *Gardeners' Chronicle* has been a bitter opponent—would it not now be just, that, to the extent I have named, it should be a sincere friend, if this season's prediction should turn out correct? It is to be recollected, that it is a most unusual thing that a dry season in Great Britain should be otherwise than a prolific one. It is therefore a fearless step on my part to take, to proclaim the summer now at hand to be a dry but not productive one. But if I have risked something in publishing such an opinion, I must remind you that you have, in my view, taken upon yourself the serious responsibility of telling your numerous readers, that they need fear no drought, that they may increase their highly paying stock of sheep and cattle to any extent without fear of coming difficulty, and that they may cultivate vegetables precisely in the same manner, and to the same extent as usual, and expect the same return. My views would tend to make them pause a little in this natural career. *Thomas Du Boulay, Sandgate, April* 28.

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

MONTHLY COUNCIL: *Wednesday, May* 4, 1864.—Present: Lord Feversham, President, in the Chair; Earl Cathcart, the Earl of Powis, Viscount Eversley, Lord Berners, Lord Chesham, Lord Portman, Lord Tredegar, Lord Walsingham, Sir E. C. Kerrison, Bart., M.P.; Sir J. V. B. Johnstone, Bart., M.P.; Sir Matthew White Ridley, Bart., M.P.; Mr. Acland, Mr. Raymond Barker, Mr. Barthropp, Mr. Bowly, Mr. Bramston, M.P.; Mr. Cantrell, Colonel Challoner, Mr. Clayden, Mr. Dent, M.P.; Mr. Druce, Mr. Brandreth Gibbs, Mr. Holland, M.P.; Mr. Wren Hoskyns, Mr. Hudson, Mr. Humberston, M.P.; Mr. Hutton, Mr. Jonas, Colonel Kingscote, M.P.; Mr. Lawes, Mr. Lawrence, Mr. Milward, Mr. Pain, Mr. Pope, Mr. Randell, Mr. Rigden, Mr. Sanday, Mr. Shuttleworth, Mr. Robert Smith, Mr. Thompson, M.P.; Mr. Torr, Mr. Turner, Mr. Burch Western, Mr. Wells, Professor Wilson, Mr. Frere, Professor Simonds, and Dr. Voelcker.

The following New Members were elected:—

Avery, William Howard, Stockton Grange, Shiffnal
Barton, Rev. Joseph, East Leigh, Havant
Barrass, James, Cramlington, Northumberland
Bell, William, Cramlington, Northumberland
Berrington, Arthur Davies, Pant y Goitre, Newport, Monmouthshire
Blenkinsop, Samuel, Lobley Hill, Gateshead
Bolam, Charles G., Bentinck Terrace, Newcastle-on-Tyne
Bolam, William Thos., Bentinck Terrace, Newcastle-on-Tyne
Bouverie, Philip Pleydell, Brymore, Bridgewater
Cochrane, Archibald, Langton Grange, Gainford, Darlington
Coulman, Edward, The Levels, Thorne, Yorkshire
Cowen, Joseph, Stella Hall, Blaydon-on-Tyne
Davison, Joseph, Greencroft, Durham
Ethrick, Anthony, North Hylton, Sunderland
Gamon, William, The Green, Thornton-le-Moor, Chester
Garbutt, Cornelius Durham, Gateshead
Haines, John Poole, Duntisbourne House, Cirencester
Hanny, Robert, Springfield, Ulverston
Henderson, William, Harton, South Shields
Horrell, John, Stevington, Bedford
Lee, John Bunting, Stocksfield Hall, Stocksfield on-Tyne
Melvain, Henry, jun., 26, Elswick Villas, Newcastle-on-Tyne
Newcombe, Frederick, Ravensworth, Gateshead
Nicholson, George, Winlaton, Blaydon-on-Tyne
Palmer, Charles Mark, Whitley Park, Newcastle-on-Tyne
Rayne, Charles, Newcastle-on-Tyne
Ravensworth, Lord, Ravensworth Castle, Gateshead
Ranger, Josiah, Ashdown Park, East Grinstead
Rayne, Septimus William, Newcastle-on-Tyne
Robson, John, Sunniside, Newcastle-on-Tyne
Rowlandson, Samuel, Newton Morrell, Darlington
Rose, Christopher, Zeals Green, Mere, Wiltshire
Schneider, Henry Wm., Lightburne House, Ulverston
Thompson, Thos. H., Cavil Head, Acklington
Veitch, Harry James, King's Road, Chelsea, London, S.W.
Walker, Richard C., Middlesex Grange, West Hartlepool
Waldy, William, Great Burdon, Darlington
Webster, Samuel, Wadworth Hall, Doncaster
Webb, Lankester, Combs Tannery, Stowmarket
Wilkin, Joseph, Chowden Hall, Gateshead-on-Tyne
Wood, Rowland, Clapton, Thrapston

Major-General the Hon. A. Nelson Hood was unanimously elected a Vice-President of the Society in the room of the late Lord Ashburton, on the nomination of Mr. Bramston, M.P., seconded by Colonel Challoner.

FINANCES.—Mr. Bramston, M.P., presented the report of the Committee, from which it appeared that the Secretary's receipts during the past month had been examined by the Committee, and by Messrs. Quilter, Ball, and Co., the Society's accountants, and were found correct. The balance in the hands of the bankers on April 30 was 2,836*l.*, 6*s.* 6*d.*

JOURNAL.—Mr. Thompson, M.P., Chairman, reported the following arrangements for the Weekly Meetings of the Council: Wednesday, May 11, Professor Voelcker will deliver a lecture on the Nutrition of Plants by the Atmosphere; June 8, Professor Simonds on Small-pox in Sheep.

NEWCASTLE MEETING.—Sir Matthew White Ridley, Bart., M.P., reported that the Committee had settled the programme, which would be forwarded to every member of the Society. Arrangements had been entered into with two respectable local tradesmen for an efficient supply of refreshments in the Show-yard. This report was adopted.

COUNTRY MEETING OF 1865.—The report of the Committee appointed to inspect the various sites offered to the Society at Exeter and Plymouth having been read, the Council were favoured by the attendance of the following deputations:—

Deputation from Exeter and its neighbourhood.—The Right Worshipful the Mayor of Exeter, The Right Hon. the Earl of

Devon, The Right Hon. Lord Clifford, the Right Hon. Lord Poltimore, the Hon. C. Trefusis, M.P.; Sir Stafford H. Northcote, Bart., C.B., M.P.; Sir John Duckworth, Bart.; Sir John Duntze, Bart.; R. S. Gard, Esq., M.P. for Exeter; Colonel Davie, and R. Brembridge, Esq., M.P.'s for Barnstaple; Henry Hooper, Esq., Deputy Mayor and the Hon. Treasurer; Wm. Barnes, Esq., Ex-Mayor, J.P. for Devon; J. H. Holly, Esq., J.P. for Devon; J. C. M. Stevens, Esq, J.P. for Devon; J. Daw, Esq; E. Osmond, Esq.; Dr. Brent (Chairman of the Exeter and Exmouth Railway Company. R. R. M. Daw, and Henry Drew, Hon. Secs. to the Local Committee.

Plymouth Deputation.—The Earl of St. Germans, Viscount Falmouth, Lord Churston, Mayor of Plymouth; The Solicitor-General and Walter Morrison, Esq., M.P.'s for Plymouth; Mayor of Devonport; Sir Arthur Buller and Wm. Ferrand, Esq., M.P.'s for Devonport; T. J. A. Robartes, Esq., N. Kendall, Esq., John St. Aubyn, Esq., and Richard Davey, Esq., M.P.'s for Cornwall; Sir John Trelawny, Bart., and Arthur Russell, Esq., M.P.'s for Tavistock; Sir Massey Lopes, Bart., M.P., Chairman of Local Committee; John Tremayne, Esq., and Wm. Derry, Esq., Vice-Chairmen; Edward Archer, Esq. Local Committee; T. Woollcombe, Chairman South Devon—Vice-Chairman Cornwall Railway; Henry Brown, Director of Ditto; John Wm. Woollcombe, Secretary of Local Committee.

These gentlemen having communicated to the Council the fullest local information connected with their respective districts, and having answered satisfactorily the inquiries made of them by the Council, the President expressed to them the best thanks of himself and the Council for their kindness in having attended the meeting that day, and for the deep interest they had evinced in promoting the objects of the Society.

The Deputations having withdrawn, the Council proceeded to the consideration of the particular locality best suited, under all circumstances, for holding the Country Meeting next year; and after some discussion of the respective advantages of each position to which their attention had been called, it was decided in favour of Plymouth by 24 votes to 10.

HOUSE LIST.—Agreeably with the bye-laws the Council arranged by ballot the following election list to be recommended by them for adoption at the ensuing General Meeting on the 23rd inst:

NAMES.	ATTENDANCES. (From the rising of the Battersea Meeting in 1862, to the present time.)] Monthly Councils. Total, 16.	Special Councils. Total, 3.	Weekly Councils. Total, 19.	Committees. No. of Meetings.	Committees. Attendances.
Amos, Charles Edwards, 5, Cedars Road, Clapham Common, Surrey ..	4	2	4	7	4
Arkwright, J. Hungerford, Hampton Court, Leominster, Herefordshire	3	2	3	19	6
Barthropp, Nathaniel George, Hacheston, Wickham Market, Suffolk ..	8	2	3	3	3
Bowly, Edward, Siddington House, Cirencester, Gloucestershire ..	6	0	0	0	0
Chesham, Lord, Latimer, Chesham, Bucks	12	3	6	33	16
Druce, Joseph, Eynsham, Oxford	11	2	1	3	1
Fortescue, Earl, Castle Hill, Southmolton, Devon	0	0	0	0	0
Gibbs, B. T. Brandreth, Halfmoon Street, Piccadilly, London, W. ..	16	3	3	46	37
Holland, Edward, M.P., Dumbleton Hall, Evesham, Worcestershire ..	11	2	11	43	23
Hoskyns, Chandos Wren, Harewood, Ross, Herefordshire	8	0	3	47	22
Hutton, William, Gate Burton, Gainsborough, Lincolnshire	4	0	0	0	0
Jonas, Samuel, Chrishall Grange, Saffron Walden, Essex	9	2	3	3	1
Kerrison, Sir Edward, Bart., M.P., Brome Hall, Scole, Suffolk	8	1	12	16	6
Lawes, John Bennett, Rothamsted, St. Alban's, Herts	7	0	1	5	1
Lawrence, Charles, Cirencester, Gloucestershire	6	1	0	0	0
Leigh, Lord, Stoneleigh Abbey, Warwickshire	1	0	0	12	0
Macdonald, Sir Archibald K., Bart., Woolmer Lodge, Liphook, Hants ..	11	2	4	23	7
Randell, Charles, Chadbury, Evesham, Worcestershire	14	1	1	22	14
Sanday, William, Holmepierrepont, Notts.	6	1	0	0	0
Shrewsbury and Talbot, Earl of, Ingestre Hall, Stafford	0	0	0	0	0
Shuttleworth, Joseph, Hartsholme Hall, Lincoln	12	1	0	26	13
Smith, Robert, Emmett's Grange, Southmolton, Devon	4	1	1	3	0
Towneley, Lieut.-Col. Charles, Towneley Park, Blackburn, Lancashire	3	0	0	0	0
Tredegar, Lord, Tredegar, Newport, Monmouthshire	7	1	2	0	0
Wells, William, Holmewood, Peterborough, Northamptonshire	10	0	3	21	5

Lord WALSINGHAM having moved that the Society hold their Country Meeting for 1866 in the district comprising the counties of Cambridgeshire, Essex, Hertfordshire, Huntingdonshire, Norfolk, and Suffolk, it was seconded by Mr. Bramston, M.P., and adopted.

Mr. CLAYDEN having moved that in the opinion of the Council it is undesirable that the Consulting Engineer of the Society should have business transactions with the competing firms, the motion was seconded by Mr. Druce, but an amendment having been moved by Mr. Pain that "the Council has every confidence in the Consulting Engineers, and has no reason to alter the present arrangement," a division was taken, when three votes were given for the original motion, and 34 for the amendment.

The Council then adjourned to their Weekly Meeting on the 11th inst.

Farmers' Clubs.

CENTRAL: *May 2. The Mode of Taking the Corn Averages.*—Mr. CHANDLER read a paper on this subject, from which we make the following extracts:—

1. The return of corn sold is made by the buyer only.

The purchasers of corn are the millers, factors, &c., who pay, if any, only a small proportion of tithes, and have therefore little or no inducement to make the required returns. The local millers have a more direct interest in recording the highest priced corn they buy, and forgetting to enter the low priced, so that on returning from their respective markets they may inform their customers, from the best authority, the average prices; leaving them to draw their own conclusions as to the value of the Wheat which would be required to supply the quality of flour they were in the habit of purchasing. This remark applies also to the maltsters and factors. There is another glaring inconsistency in this system. In such a season as the last harvest, the quality of the corn, especially Barley, varies to a great extent. In situations where the corn was early ripe, and got in before the wet weather, the prices of Barley have ranged very high—nearly double the price of that lying on the ground and sprouted. The best Barley being very scarce, has in many instances passed through several hands, and has been returned two or three times, with the addition, at each sale, of the cost of transit and the factor's profit. Speculators seldom invest their capital on inferior corn. It is only the best and driest that can be depended on for storing, either in bins or in sack. They therefore purchase the samples that command the highest prices in the market, and ought, under the provisions of the Corn Returns Act, to make a proper entry of it for the corn inspector. This is resold when a satisfactory profit presents itself, and is again returned by the second purchaser. These, I have reason for believing, are by no means isolated cases, and must consequently influence the averages very unjustly.

2. The secret manner in which the return papers are conducted, prevents, in a great measure, the detection of those persons who may neglect to comply with the terms of the Act.

If a seller of corn goes to the inspector, and asks him if the person (whose name he gives him as the purchaser) has given him an account of such sale, he (the inspector) tells the seller that his office is only to add up the totals, strike the average, and send it to the comptroller, politely declining to give him any further information. In looking through the list of markets at which the corn returns are taken, as published in the *London Gazette* of January last, I was struck with the insignificant quantity of corn sold in many of them. Out of the 297 markets, there are 74 in which there is no Wheat returned, and 12 others in which there is not more than 25 quarters; while of Barley, 100 have made no return, and 43 of the remainder do not exceed 50 quarters. Of Oats the returns are merely nominal. There are no returns of that grain from 163 markets, and 67 more of not more than 50 quarters; and the total sold in England and Wales is stated as under 19,000 quarters. These statistics demonstrate clearly that a small portion only is returned.

3. Before the repeal of the Corn-laws, the principal remunerative item grown on a farm was supposed to be corn, and more especially Wheat.

The experience of nearly 20 years has dispelled that delusion, and now the universal opinion is in favour of stock-breeding and feeding. The high price of meat, and its increasing consumption, demands the greatest exertions from the agriculturists to furnish a corresponding supply; and with the present commercial prosperity of this country, we may naturally conclude that it will be some years before that demand will decrease. To stock-rearing and feeding, then, the farmer will devote his energies, as the chief means by which to make his rent. I should suppose that in no previous year has there been so large a quantity of corn consumed by stock as in this. The low price of all kinds of grain, and the difficulty of finding a better market for it, has been an inducement to feed cattle with it, thereby saving the expenses connected with it in cartage, &c. There can be no doubt that it was intended by the Tithe Commutation Act to ascertain, as correctly as practicable, the average price of a bushel of Wheat, Barley, and Oats during the year. As it stands at present—this year in particular—nearly every farmer is feeding some portion of his stock with his inferior corn, sending to market that only that would command the highest price. And there is another feature in connection with this part of the subject which I had nearly overlooked. Since the introduction of improved threshing and winnowing machinery, all sorts of corn are much better separated than formerly, thereby increasing the weight of the sample, and consequently obtaining a higher price in the market, leaving more second grain to be disposed of amongst the stock at home. Incidents such as these, trifling as some may think them, have a tendency to operate unfairly in taking the averages.

4. I trust I have laid before you sufficient facts to prove that the returns should not be made by the buyer alone. I have no hesitation in saying it should be by the seller.

I will venture to suggest the following scheme, although I know that in doing so I shall lay myself open to criticism. I would propose: 1. that every grower of corn shall make a return, within —— days from the time of delivery, of all Wheat, Barley, and Oats which had been grown and sold by him, with the date of such sale, the name and address of the purchaser, and the price at which sold. 2. That districts shall be formed throughout England and Wales, similar to the Rides or Divisions of the Inland Revenue Officers. 3. That a local inspector shall be appointed for each district. 4. That the local inspector shall ascertain the names of all growers of corn within his district; to enable him to do which, he shall have a right to inspect the overseer's book in each parish for that purpose. 5. That the inspector shall, on first entering on his office, send to each of the growers of corn a printed form, with headings for the entries before mentioned; and at the bottom a declaration, that the several entries in their respective columns were correct returns of all Wheat, Barley, and Oats grown by him, sold since the date of the return he last sent to the inspector. 6. That, in addition to the return papers, envelopes with this printed direction, "To the Inspector of Corn Return, —— Division," shall be sent by the inspector to the grower. 7. That every post-office shall be the receiving place for the corn returns of each parish or hamlet in which it is situate: and that on —— day in every week the postmasters at their respective offices shall forward the corn returns received at their offices to the inspector appointed to their particular Division. 8. That every grower of corn, who shall neglect to send their corn returns, either directly to the corn inspector of his district or to his (the grower's) usual post-office, agreeably to the form before mentioned, shall be subject to a penalty not exceeding 40*s*. 9. That half the above penalties shall, on conviction of the offender or offenders, be given to the informer.

5. There is one of the evils I have alluded to, that of the non-entry of corn of home growth consumed on the farm, which I have not attempted to devise any plan to correct, for the simple reason that I could not find one that would efficiently meet it.

The difficulty is to know in what way the real value of the corn which is not taken to market can be ascertained, in order that the inspector, and through him the parties interested in it, may be satisfied of its correctness. This is a part of the subject which should not be lightly passed over, as without these returns the averages would still be very incomplete. The consumption of corn by stock, owing to the high price of meat, will undoubtedly largely increase for many years to come, which renders it more particularly requisite to make a provision to secure a proper return of it. Certainly these returns, affecting the averages to ever so small an amount on a total so large as the tithes of England and Wales, producing last year no less a sum than four millions sterling, deserve to be carefully looked after, even if the expenses of collecting them should be considerably more than they are under the present unsatisfactory manner of taking them. The average of the last 28 years was 101*l*. 1*s*. 7½*d*. It were better to have no returns at all, and pay a fixed yearly amount for tithes, rather than be subject to such variations as the present imperfect machinery produces. It is now 20 years since the introduction of the corn returns, during which time it has remained *in statu quo*—no inquiry has been made by the Legislature as to its merits or demerits. Surely it cannot be that it is so complete in its working that it requires no amendment, nor is it a defect but recently discovered. The Journal of this Club will show, that as far back as 1854, and again in 1856, the same complaints were brought against them as have been mentioned this evening, and that the Board of Trade were made cognisant of it through the deputation that waited on that honourable Board.

Reviews.

Nesbit's Practical Land-Surveying. Eleventh Edition, edited by William Burness, F.R.A.S. Longmans.

A new edition of this standard work has just been issued, re-written to some extent and re-edited throughout by Mr. W. Burness. It is an extremely comprehensive and elaborate work—the practical instructions which are given and illustrated in great detail are prefaced in every case by a discussion of the theorems on which they are founded—so that both the science and practice of surveying and of computation as applied to both the quantity and value of land, are very fully given.

Mr. Burness has done good work as editor, re-writing, correcting, and supplementing as was occasionally required, and fully justifying the reputation which as a veteran agricultural writer he had already in many ways acquired.

Farm Memoranda.

HALE HALL, NEAR WARRINGTON.—Mr. J. I. Blackburn's farm contains 242 acres—namely 48 acres in pasture, 86 acres meadow and Clover mown, 32 acres Wheat after root crops, 33 acres Oats, 10 acres Barley, 2 acres Vetches for stall feeding, 15 acres Potatos, 3½ acres Turnips, 4½ acres Mangel, garden 1 acre, homestead, occupation roads, and plantations. Customary rotation—1st, Oats; 2d, root crops; 3d, Wheat; 4th Barley, with seeds for lying two or more years. Live stock consists of 10 horses, 4 colts, 15 dairy cows, 7 heifers, 300 sheep and lambs, 30 pigs, and 4 rearing calves; total, 370.

About 250 tons of manure made annually at home, and purchase annually about 250 tons of horse and cow manure, and 70 of night soil, 11 tons of Peruvian guano, and 1 ton of prepared bone manure. Little draining has been required since the last prize was awarded for this farm.

This farm lies in a very early district; is a deep good sandy loam, very suitable for producing root crops. The surface is nearly level, with good roads through it. Lies within the range of first-class markets for disposing of produce, and of procuring manure in return. The fields are large, of proper shape, and well arranged, with good gates and posts to each. Most of the permanent improvements had been made previous to obtaining a premium for the farm some years back, but the cultivation, in many respects, is much improved. The root crops could not look more healthy or vigorous, and perfectly clean, except a small extent of early Potatos. There had been 10 acres of these; but, when inspected, the produce of 4 acres had gone to market, and the land planted with Mangels. The operation of taking up the Potatos and replanting the land were proceeding day by day then; the weight of produce and the quality very good.

The Oats and Barley very superior crops, both in height, thickness, and uniformity. Oats near 6 feet high, 27 acres of these were on a lay furrow, and, we were told, had been harrowed when 4 inches high, and had produced a good effect. 27 acres of Wheat a heavy crop, of good colour, and then stood well. A 5-acre lot of many new varieties, most of which were heavy crops. A small portion of "Hallett's Pedigree" was well headed, but thin on the ground, but the heads not so large as that represented in the supplement of the *Mark Lane Express*.

The Clover and seeds of 1st, 2d, and 3d years' lying, and mown, showed evidence of heavy produce of good herbage. The old pasture productive, and without weeds. The homestead in good keeping, with a very respectable stack-yard of new and old hay. The sam-

may be said of the implements and live stock, the same being of a useful description. We have no doubt but the cultivation and management of this farm is remunerative, both as to rent and profits, the manager being a man of both perseverance and judgment.—*Manchester and Liverpool Agricultural Society's Journal.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Month	Day of the Week	Barometer corrected to Freezing Point at Mean Sea Level. Reading of	Thermometer. Reading of Dry Bulb.	Thermometer. Reading of Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
April 29	Friday ..	Inches. 30.16	° 49	° 46	N.	0	8	° 49	° 37	° 55	° 31	Inches.
30	Saturday ..	30.14	51	47	N.W.	1	10	62	42	76	37	0.10
May 1	Sunday ..	30.19	58	52	N.W.	1	0	58	42	68	36	0.01
2	Monday ..	29.94	58	56	W.	2	10	63	51	76	49	0.60
3	Tuesday ..	29.72	60	56	N.W.	4	6	64	53	70	49	..
4	Wednesday	29.82	50	49	S.E.	1	10	62	47	74	43	..
5	Thursday ..	29.92	50	49	S.W.	1	10	53	46	50	47	0.06

Calendar of Operations.

MAY.

WEST SUSSEX: *April* 26.—Corn sowing is all over, and the earlier sown up and looking well; and so is the Wheat generally, though much of it is too thick, and with dry weather in May will get very much checked. We have not been able to get through with the spring work so lightly as we expected, as much of our heavy land got so close together that the harrows took little impression on it, and the heavier ones had to be used. The fallow land works well, and though work has been rather behind, we are likely to get all up before root sowing commences. It is now time to sow Mangel, but we find that nothing is gained by sowing sooner, as the land is cold, and the seed lies long in the ground, and perhaps the first week in May is sufficiently early; we do not think that there will be so great a breadth sown, as it rather loses in favour, though it is more convenient for keeping in store than any other root, yet we begin to think that except as a reserve for hard weather or about lambing time, and perhaps for the ewes and lambs just before they go on the Clovers for a fortnight, we need not have more. It is a heavy job to cart off in the autumn, and sometimes the land, being wet, is very much cut up with it, and corn crops do not succeed well after it generally, especially where it has come on the same land a second time; and we are disposed to depend more on Swedes and Turnips as the mainstay. We have had a fine shower to day that was much wanted, and the pastures will soon be fit to turn out upon; they are backward, and so are the Clovers, which are not generally a good plant, especially on the richer lands, for it is usual to get a better plant on stiff clay land than is got on superior rich land. Sheep have done pretty well, and lambs till lately were dear, but they now come rather fast for our demand, and they will have to be sent to London pretty freely. The quality is generally good, and the prices range from 32*s.* to 40*s.* for lambs; a great many of the fat sheep are now sold out of their wool. The market is well supplied with cattle, both fat and lean, and prices are high; and there is no doubt but the new "cattle disease" bill will be useful, and it is high time to have it, for matters were got so bad that we were afraid to send healthy stock to market, lest not being able to sell we should bring home disease, and the same was the case in purchasing, it being very common to get home disease among them. And now there will be more care taken of cattle by dealers, and they will be offered to us in better condition and healthy, and though we shall have to buy dearer, they will be worth more, and so I think it will be better for all parties. *G. S.*

Notices to Correspondents.

COW: *J. A.* An answer to your letter has been delayed by illness, and we have not yet had Mr. Spooner's advice. If you will send your full address to the Editor at Streatly, Reading, he will forward it as soon as received. In the meantime we may say the calomel and opium seem indicated by the failure of the simpler remedy.

FENCES: *W.* Wooden fencing as protection to Quicks during the first five or six years of their growth is we presume in the long run still the most satisfactory fence.

YORKSHIRE AND CHINESE BREEDS OF PIGS: *Civis* asks where a boar of the former and sows of the latter kind are to be had near London.

THE HYDROPULT,

THE HYDROPULT
Is invaluable for use in the
GARDEN
FOR
WATERING BEDS,
SPRINKLING
PLANTS,
DROWNING OUT
INSECTS,
CLEANSING
TREES FROM
SMUTS,
DRESSING
WITH
LIQUID MANURE,
ETC., ETC.

THE HYDROPULT
Is desirable in every
HOUSEHOLD
FOR
WASHING
WINDOWS,
WETTING
SIDEWALKS,
SPRINKLING
STREETS,
WASHING
CARRIAGES,
EMPTYING
CISTERNS,
FILLING
BARRELS,
A SPRAY BATH,
ETC., ETC.

AN INVENTION FOR THROWING WATER BY HAND POWER.

SECURED BY ROYAL LETTERS PATENT.

PRICE: WITH BRASS CYLINDERS AND MALLEABLE IRON STIRRUP, JAPANNED IN OAK COLOUR, **32s. 6d.**

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanized Wire Strainer, Rose, and Small Jet.
Complete as above, with Copper Stirrup, TWO GUINEAS. Packing Case, 1*s.* extra.

Weighs but 8 lbs.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.
It will draw water horizontally, if necessary, through 300 feet of Suction Hose, and force it through Delivery Hose, to an altitude of 100 feet.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

There are among Amateurs and Professors of Horticulture, differences of opinion as to the excellency and applicability of Gardening Implements. Some adhere to old devices, bitterly denouncing any innovations on ancient customs; and either from MALICE or prejudice, when governed by a spirit of EGOTISTICAL CONCEIT, criticize in a most unfair and unjust manner an Implement, the merits of which they are not capable of appreciating. In proof of the real utility and efficiency of the HYDROPULT as a GARDEN IMPLEMENT, I beg to call the attention of the public to the following unsolicited editorials from gentlemen, whose testimony must have weight with the readers of the *Gardeners' Chronicle*:—

EDITORIAL, *written by* ROBERT HOGG, LL.D., F.L.S.

THE HYDROPULT.—The great secret of successful indoor gardening consists in the free and judicious use of the syringe. A greenhouse or conservatory that does not enjoy this luxury becomes a miserable lazar house of vegetable incurables. Vermin and filth hold unbounded sway, and people become disgusted with their own want of success. Well do we recollect the former days of plant culture, the days of "collections," when the use of the syringe was yet limited or unknown. What a time for red spider, scale, and greenfly! What fumigations and consumption of tobacco and tobacco paper, washings with tobacco water, and all sort of remedies were resorted to! We regard the introduction of the free use of the syringe as one of the events in modern gardening. To this is due the success of orchard house management, Vine management, and Plant management, but the old syringe with its slow suck and squirt, is now as much out of date in modern gardening as an old stage waggon in modern locomotion. Many are the improvements and complications of the old simple syringe. We have tried several of them, but for ease in working and efficiency in result, we have not yet met with anything to equal the Hydropult, sent us by Mr. BUTTON. It is powerful in operation, and so easy and comfortable to work, that one never gets fatigued. With such an instrument plants may be kept in perfect health, and quite free from insects and dirt. We first tried it on a few Geraniums in our conservatory, which were smothered with greenfly during our temporary absence of ten days, but on our return a stout discharge from the Hydropult sent them clean off across some unknown bourne, whence they have never yet returned.

EDITORIAL, *written by the* REV. HENRY H. DOMBRAIN, A.B.

THE HYDROPULT.—When we formerly noticed this instrument, we did so from merely seeing it at the Proprietor's; since then we have had an opportunity of testing it personally, and can bear testimony to the excellence of the invention. The force with which it throws a stream of water is almost incredible; while for syringing a greenhouse, a gentle shower, as fine as that from a hand syringe, with considerable more effect, can be easily given. We have a gardener, quite of the old-fashioned school, who does not generally fall in love with new-fangled notions, but he is perfectly enchanted with the saving of labour and time that the Hydropult will be to him.

EDITORIAL, *written by* SHIRLEY HIBBERD, ESQ., F.R.H.S.

THE HYDROPULT.—This is an invention introduced in a most spirited manner by Mr. C. P. BUTTON. It is at once a fire engine and a garden engine, is always ready for use at a moment's notice, is neat and portable, weighing only eight pounds, and can be worked by a boy of moderate strength for some hours in succession without fatigue. The mechanical power employed being economised by combining the action of the hand and the resistance to the foot, between which the instrument is placed and used, as a double action pump. From the sole to the handle the Hydropult measures 24 inches. The two brass cylinders measures 12 inches in length, and 3½ inches in breadth. At the top of these cylinders India rubber tubing is attached, on one side to feed, on the other to discharge the water. It will perhaps surprise the reader to be told that this little contrivance, which is pretty as a toy, and can be carried under the arm as easily as a trumpet, will throw from seven to eight gallons of water per minute a distance of 50 feet. But it will do it, as we know from having tried it, finding the experiment an agreeable exercise, and of special service in washing down a stuccoed wall, which it accomplished quite as well as if we had sent for the parish engine. Gardeners will not need to be told the value of a portable force pump of this simple kind. It can be used to produce a powerful stream to extinguish a fire, or a gentle shower to syringe a whole houseful of plants, without the necessity of moving a single step from the position most convenient for a supply of water. Wherever a pump or syringe is needed, the Hydropult can be brought into use, to remove water from a cellar or a boat, to cleanse a cistern, wash a pavement, or drench the foliage of trees loaded with soot, or annihilate at one fell swoop the whole insect population of a plantation of Roses. But we will not enlarge upon its merits, they are obvious, and having a Hydropult in use we can say that it will soon pay for its cost in a garden, besides being always at hand in case of an emergency of any kind which may require an immediate removal or discharge of water.

The Hydropult has been recommended as an efficient and useful Fire Engine by the principal Fire Insurance Companies of Great Britain. Ordered by the War Department as Fire Engines.

It can be used for all purposes for which a hydrant or force pump is applicable, and in situations where other contrivances are useless.

Prospectus, with Testimonials, sent Free on application.

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OR

NOISELESS LAWN MOWING, ROLLING, and COLLECTING MACHINES.

BY SPECIAL APPOINTMENT,
SOLE MANUFACTURER

TO HER MOST GRACIOUS MAJESTY
THE QUEEN.

THE

FIRST PRIZE MEDAL

OF THE

INTERNATIONAL

EXHIBITION,

1862,

WAS AWARDED TO

THOMAS GREEN,

FOR HIS

PATENT

LAWN MOWERS.

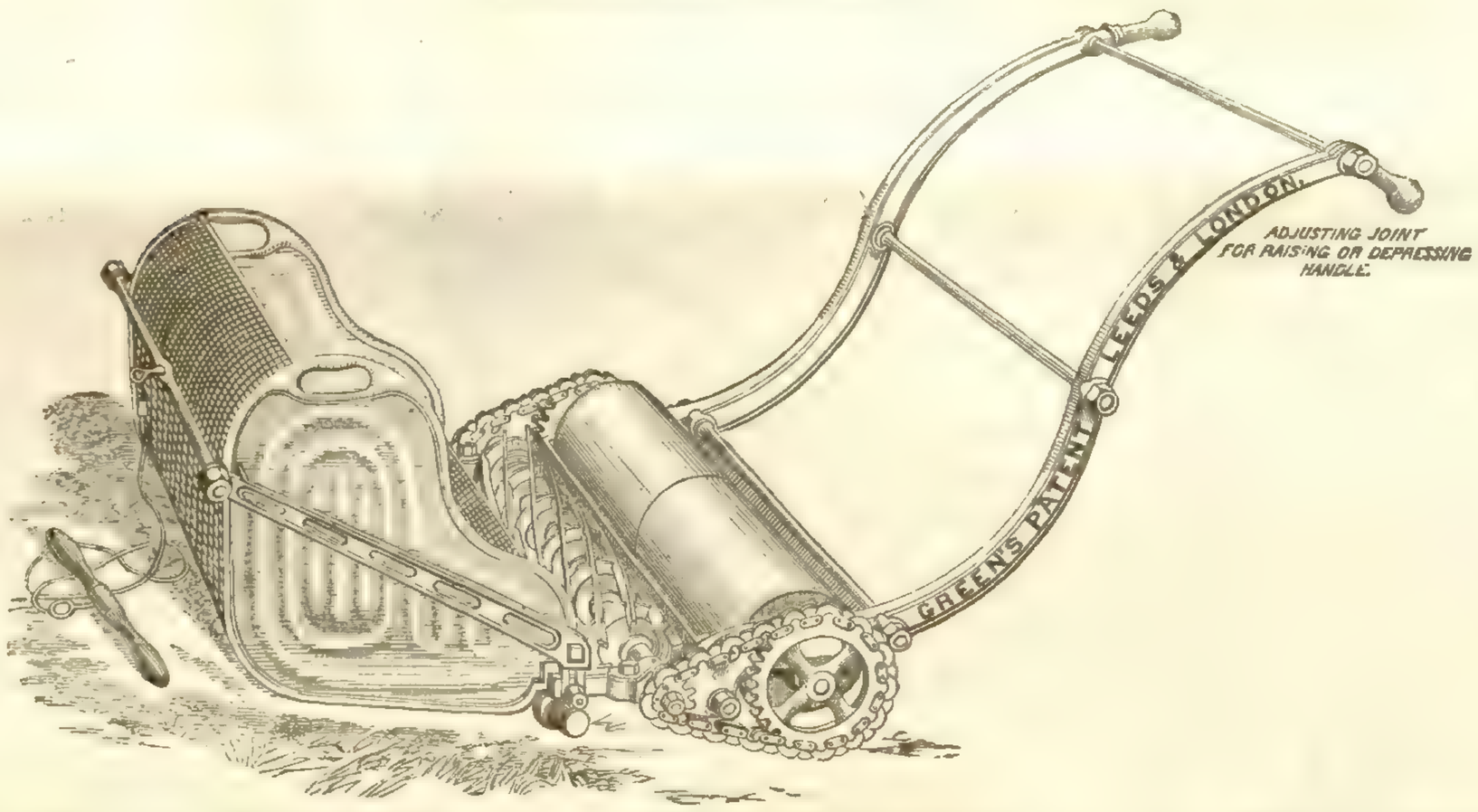

FOREIGN MEDALS

AWARDED TO

GREEN'S PATENT

LAWN MOWERS.

LIEGE, 1861.

BRUSSELS, 1861 & 1863.

NAMUR, 1862.

GAND, 1862.

LINNEENNE, 1861,
1862, & 1863.

LAEKEN, 1862.

EXTRAORDINARY and WONDERFUL IMPROVEMENTS for the PRESENT SEASON 1864.

To Cut	10	inches	...	...	Price	£3	10	0	...	...	Suitable for a Lady.	To Cut	18	inches	...	...	Price	£7	10	0	...	...	Suitable for One Person.
„	12	„	...	...		5	0	0	...	...	„ „	„	20	„	...	...		8	0	0	...	...	Suitable for Two Persons.
„	14	„	...	...		5	10	0	...	...	Suitable for One Person.	„	22	„	...	...		8	10	0	...	...	„ „
„	16	„	...	...		6	10	0	...	...	„ „	„	24	„	...	...		9	0	0	...	...	„ „

The Patentees beg to call special attention to their HORSE, PONY, and DONKEY MACHINES, which have been entirely remodelled, and embrace all the recent Improvements adopted in the Hand Machines. They cannot fail to give entire satisfaction wherever used.

Prices of HORSE, PONY, and DONKEY MACHINES, including Patent Self-Delivery Box, Traces, and Stretcher, suitable for attaching to ordinary Chain Traces or Gig Harness.

To Cut	26	inches	...	...	£13	0	0	...	...	Leather Boots for Donkey, 18s.	To Cut	30	inches	...	...	£21	0	0	...	...	Leather Boots for Pony, 22s.
„	28	„	...	...	14	0	0	...	...	„ „	„	36	„	...	...	24	0	0	...	...	„ „
To Cut	42	inches	...	...	...	£27	0	0	...	...	...	Leather Boots for Horse, 26s.									
„	48	„	...	...	...	30	0	0	...	...	...	„ „									

The 26 and 28 inches can be easily worked by a Donkey or by Two Men on an even Lawn, the 30 and 36 inches by a Pony, and the 42 and 48 inches by a Carriage Horse; and, as the Machines make no noise in working, the most spirited animal can be employed without fear of its running away, or in any way damaging the Machine.

Both the HORSE, PONY, DONKEY, and HAND MACHINES possess over all other Makers the advantage of Self-sharpening; the Cutters being steel on each side, when they become dull or blunt by running one way round the cylinder, can be reversed, again and again bringing the opposite edge of the cutters against the bottom blade, when the Machine will cut equal to new. Arrangements are made so that the cylinder can be reversed by any inexperienced person in two or three minutes.

The above MACHINES are made from the best materials, and of superior workmanship; are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England; are warranted to give satisfaction, and if not approved of can be at once returned, if sent Carriage Free to Leeds.

With regard to Messrs. SHANKS & SON'S attack upon us, we beg respectfully to refer them to our reply, which has appeared several times in this Paper.

GREEN'S IMPROVED NEW PATENT ROLLER,

FOR

LAWNS, DRIVES, BOWLING GREENS, CRICKET FIELDS, and GRAVEL PATHS,

SUITABLE FOR HAND OR HORSE POWER.

PRICES OF

HAND ROLLERS.

Diameter	30	inches;	length	32	inches	£7	10	0
„	24	„	„	26	„	4	10	0
„	20	„	„	22	„	3	10	0
„	17	„	„	16	„	2	15	0

Delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

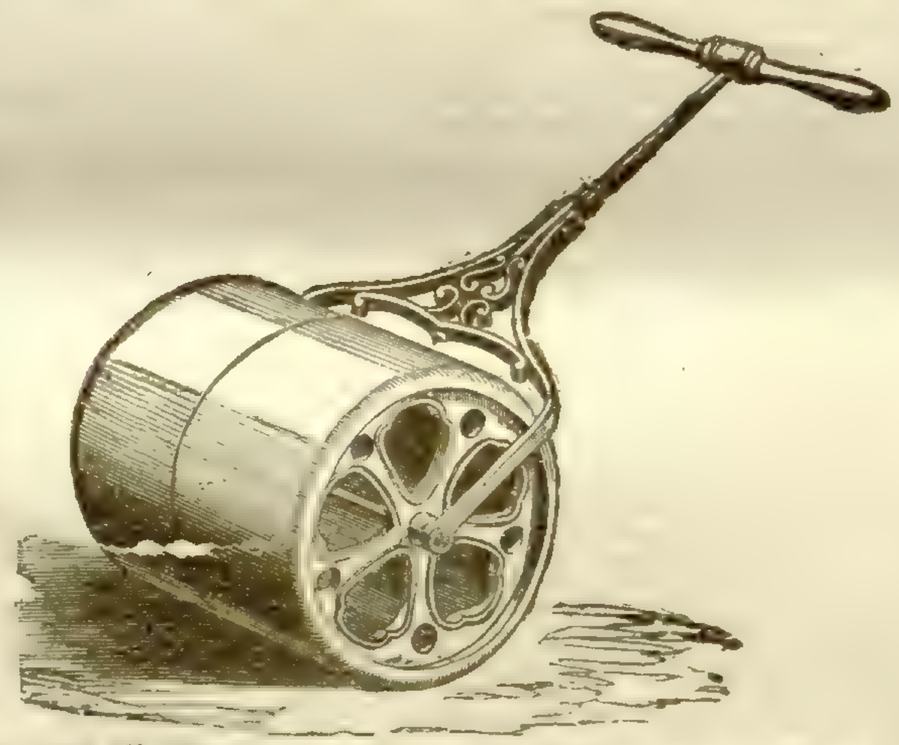

PRICES OF

ROLLERS FITTED with SHAFTS,

SUITABLE FOR PONY OR HORSE POWER.

Diameter	30	inches;	length	32	inches	£10	0	0
„	30	„	„	36	„	10	15	0
„	30	„	„	42	„	11	15	0
„	30	„	„	48	„	13	10	0
„	30	„	„	60	„	15	10	0
„	30	„	„	72	„	17	10	0
„	30	„	„	84	„	19	10	0

Delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

The above ROLLERS possess many advantages over all others; they are made in two parts, and are free to revolve on the axis, affording greater facility for turning, and the outer edges are rounded off, or turned inwards, thus avoiding the unsightly marks left by other Rollers. They are manufactured of the best materials, and are got up in a manner surpassing any ever yet brought out.

THOMAS GREEN & SON, SMITHFIELD IRON WORKS, LEEDS;
and 2, FARRINGDON ROAD (formerly 2, VICTORIA STREET), HOLBORN HILL, LONDON, E.C.
AND 19, EDEN QUAY, DUBLIN.

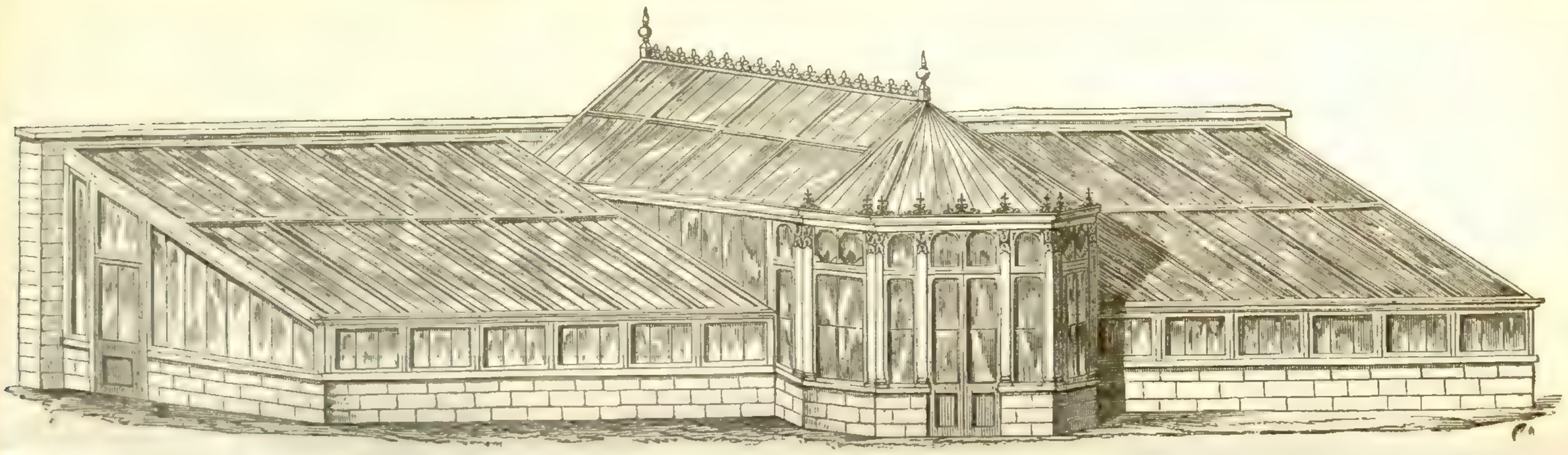

HORTICULTURAL BUILDINGS, COMBINING STRENGTH AND DURABILITY,

MANUFACTURED BY STEAM POWER MACHINERY.

LOWEST PRICES AND BEST MATERIALS.

HENRY ORMSON,

HORTICULTURAL BUILDER and HOT-WATER APPARATUS MANUFACTURER,

STANLEY BRIDGE, KING'S ROAD, CHELSEA, LONDON, S.W.,

Deeply grateful for the very liberal and kind patronage bestowed upon him, begs most respectfully to inform the Nobility, Gentry, Nurserymen, &c., that it is his determination to spare no pains to merit a continuance of their favours, and that he may be enabled to execute his extensive and increasing orders punctually, and at the lowest possible cost (agreeably with the best Materials and Workmanship), he has erected a most complete set of Steam Power Machines, peculiarly adapted for the purposes of his Trade.

H. O. begs to call attention to his superior manner of erecting every description of Horticultural Building, and he trusts by unremitting personal attention to the details of his business, by using only the very best materials, by employing the most skilful and efficient workmen, and by the most moderate possible charges, to merit a continuance of the patronage so kindly and so liberally bestowed on him for many years past.

In the **BUILDING DEPARTMENT** his object will be to adapt all erections to the particular purposes for which they are required. He will devote equal attention to the plain, inexpensive, practical erections of Pits, Orchard Houses, Greenhouses, Vineries, &c., as to the more elaborate and architectural erections of Conservatories, Winter Gardens, &c., either in wood or iron.

The **HEATING DEPARTMENT** always engages his especial personal attention, and he feels justified in saying that in simplicity, safety, durability, and economy of fuel, combined with thorough effectiveness, his system cannot be surpassed.

VENTILATION.—Knowing the absolute necessity for thorough ventilation, he makes it a matter of first consideration.

H. O. having competent Draughtsmen and an efficient Office Staff, he is prepared and will be happy to forward Plans, Estimates, and Specifications by post or otherwise, and to wait personally on any Ladies or Gentlemen who may desire to see him on their grounds.

FIRST CLASS PRIZE MEDAL
FOR ORMSON'S CONSERVATORY,
At the INTERNATIONAL EXHIBITION,

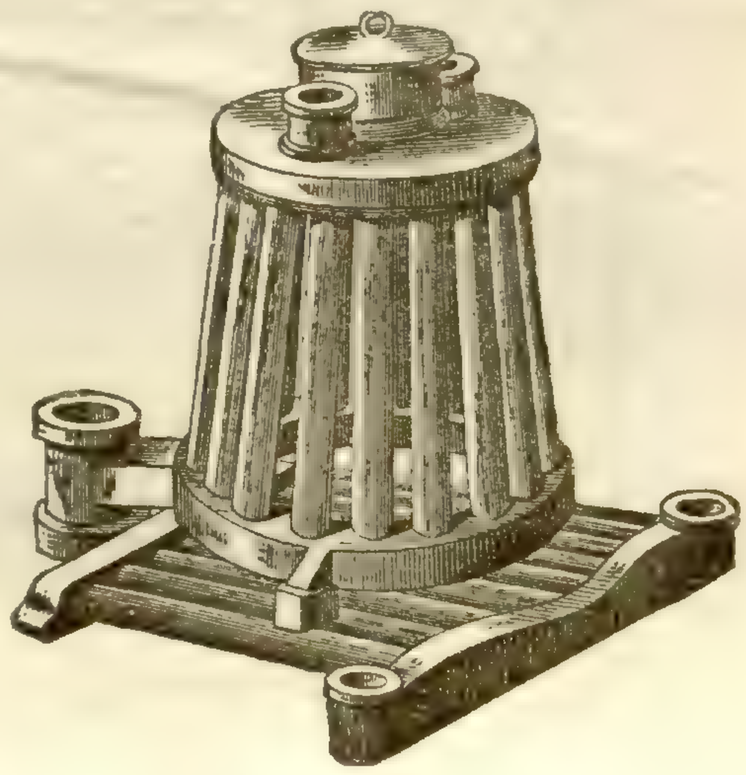

FIRST CLASS PRIZE MEDAL
FOR ORMSON'S PATENT JOINTLESS TUBULAR BOILER
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ORMSON'S

PATENT JOINTLESS TUBULAR BOILER

HAS TAKEN MORE AWARDS THAN ANY OTHER TUBULAR BOILER.

These Awards have been given by Scientific, Practical, and Competent Judges.

At the Exhibition of Boilers at the Royal Horticultural Society's Gardens, ORMSON'S PATENT JOINTLESS TUBULAR BOILER was the ONLY Boiler of any description to which an Award was given.

Other Tubular Boilers advertised in the pages of the *Gardeners' Chronicle* were exhibited to which NO Awards were given.

Plans, Specifications, and Estimates on application.

HENRY ORMSON,

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HORTICULTURAL TOOLS.

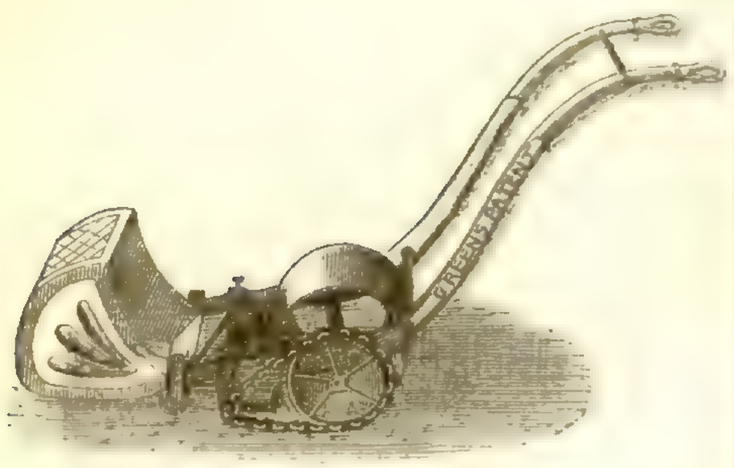

LAWN MOWERS.

GREEN'S PATENT | SAMUELSON'S PATENT
SHANKS' PATENT | BARNARD'S PATENT

DEANE'S MOWING MACHINES, with Patented Improvements, 50s., 70s., 90s., 140s.
GARDEN ENGINES, Galvanised Iron. Prices 55s., 65s., 78s., 90s., 100s., 110s.
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GALVANIZED WIRE NETTING, all sizes.
GARDEN SEATS, elegant patterns.
CAST-IRON ORNAMENTAL FLOWER STANDS, to hold Seven Vases, 27s.
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BOYD'S SELF-ADJUSTING SCYTHE, 10s. 6d.
ORNAMENTAL WIRE WORK, FLOWER STANDS, &c.

Every Implement for Garden use on the lowest terms.

DEANE'S NEW ILLUSTRATED HORTICULTURAL CATALOGUE POST FREE ON APPLICATION.

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For samples and prices apply to
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Bee Hives.

PRIZE MEDAL AND HONOURABLE MENTION AWARDED TO G. N. AND SONS, FOR BEE-HIVES AND HONEY AT THE VARIOUS EXHIBITIONS.

NEIGHBOUR'S IMPROVED COTTAGE BEE-HIVE, as originally introduced by GEORGE NEIGHBOUR & SONS, with all the recent improvements, three glasses, and thermometer, price 35s., securely packed for the country.

Several important novelties are introduced this season, including the *Woodbury Straw Bar-and-Frame Hive*, price 21s.; with window, 25s. Also *Artificial Combs*, made of a size suited to the *Woodbury Bars*, to assist in the formation of cells.

Address, GEORGE NEIGHBOUR & SONS, 127, High Holborn, or 149, Regent Street, London, W.

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WARNERS' GARDEN IMPLEMENTS.

ILLUSTRATED AND PRICED CATALOGUES MAY BE HAD ON APPLICATION.

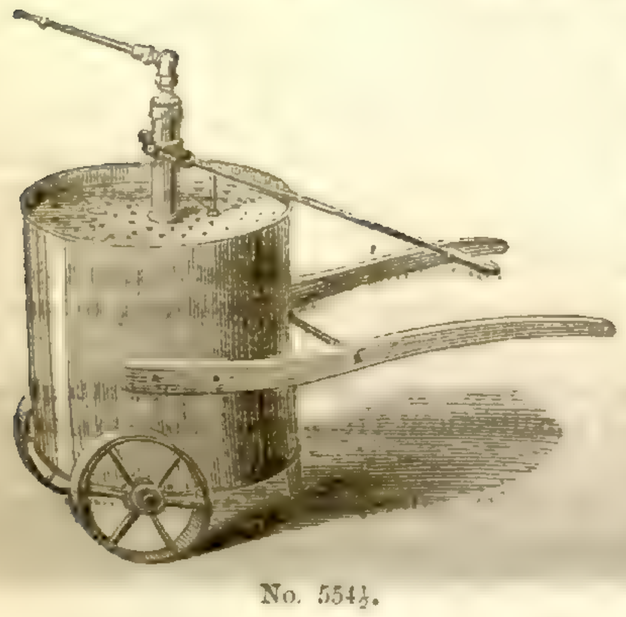

No. 554½.

WARNERS'
GALVANISED IRON GARDEN ENGINE,
WITH REGISTERED SPREADER.

10 gallons	... ...	£2 15s.
16 „	... ...	3 15s.
24 „	... ...	5 0s.

No. 85.

WARNERS'
PATENT IRON PUMPS.

2½ inch	... ...	£1 10s.
3 „	... ...	2 4s.
3½ „	... ...	2 9s.
4 „	... ...	2 18s.
2½ inch, with short barrel	...	1 1s.

No. 568½.

WARNERS'
AMERICAN PORTABLE FIRE
ANNIHILATOR
AND
GARDEN ENGINE,
£2 2s.

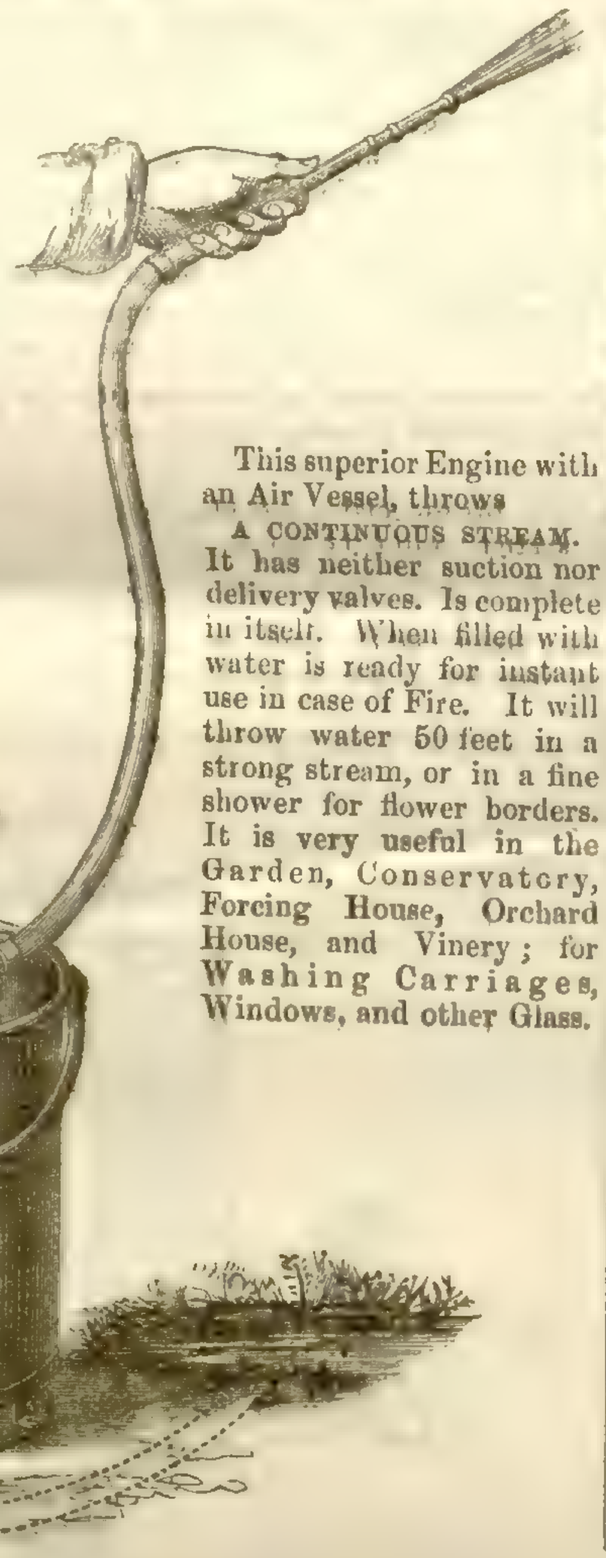

This superior Engine with an Air Vessel, throws A CONTINUOUS STREAM. It has neither suction nor delivery valves. Is complete in itself. When filled with water is ready for instant use in case of Fire. It will throw water 50 feet in a strong stream, or in a fine shower for flower borders. It is very useful in the Garden, Conservatory, Forcing House, Orchard House, and Vinery; for Washing Carriages, Windows, and other Glass.

No. 570½.

WARNERS'
SWING WATER BARROW.

20 gallons	... ...	£2 0s.
35 „	... ...	2 10s.

Saves a gardener's time when used with the water pot.

WARNERS'
PORTABLE LIQUID
MANURE PUMP,
WITH LEGS,
£2 15s.

Do. for fixing to cart, £2 5s.

Suction Pipe for Pump, 2s. 5d. per foot.

No. 42.

No. 567½.

WARNERS'
IMPROVED PATENT DOUBLE ACTION SYRINGE,
with 5 feet of flexible Suction Pipe, 21s.
Is much improved since last season.
It economises a gardener's time.
To draw from a water-pot, pail, or other vessel.

No. 590.

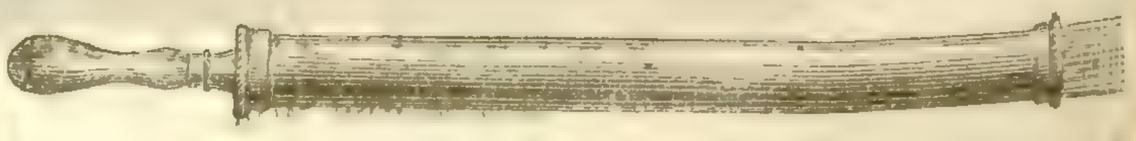

No. 557A.

WARNERS' REGISTERED DISC-VALVE SYRINGE, 9s.
FILLS QUICKLY AND EASILY.
It is well adapted for the gardener or amateur.

BARKER'S MILL, Large, 25s.; Small, 8s. 6d.
Fountain designs in great variety. Can be supplied from a cistern or main.

May be obtained of any Ironmonger, Plumber, or Seedsman in the United Kingdom, or of

JOHN WARNER AND SONS, 8, CRESCENT, CRIPPLEGATE, LONDON, E.C.

SHANKS' NEW IMPROVED PATENT

LAWN MOWING, ROLLING, COLLECTING, and DELIVERING MACHINE for 1864.

Important Improvements, combining efficiency with simplicity of construction, have been introduced into Shanks' Lawn Mowers for the ensuing season.

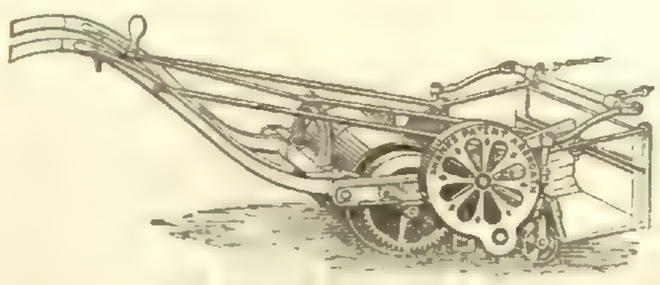

HORSE MACHINE.

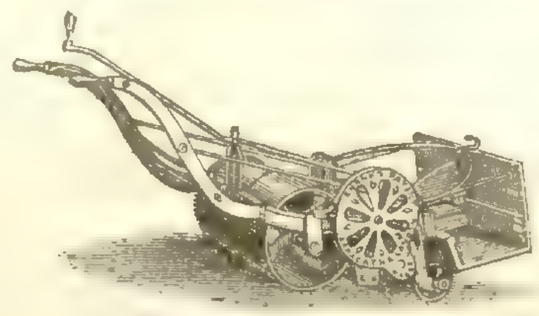

PONY MACHINE.

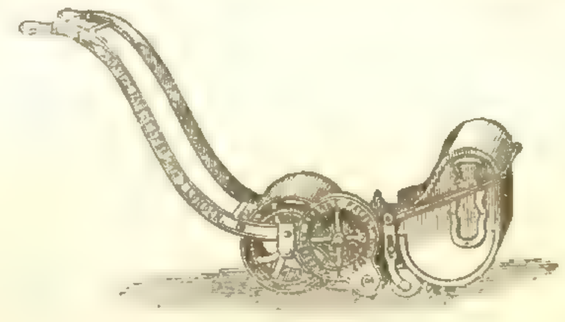

HAND MACHINE.

MOWS ON UNEVEN AS WELL AS ON LEVEL LAWNS, AND WHETHER THE GRASS BE WET OR DRY.

ALEXANDER SHANKS AND SON have had the honour this Season to again furnish their celebrated LAWN MOWERS to HER MAJESTY THE QUEEN, for the Royal Gardens at Windsor, and to HIS MAJESTY THE KING OF SAXONY, for the Royal Gardens at Dresden.

A. S. & SON have for a quarter of a century devoted their attention to the Improvement and Manufacture of LAWN MOWERS; the demand for their Machines is now unprecedented, and out of the many thousands of Machines they have manufactured and sold, they cannot point to a single instance where they have not given every satisfaction. A. S. & SON have further improved their PATENT LAWN MOWERS for this season, and have no hesitation in saying that their Machines are still, as they have always proved themselves to be, unequalled for the qualities that constitute a really good LAWN MOWER fit for the hands of the Gardener.

SHANKS' PATENT LAWN MOWERS are in daily use in the ROYAL GARDENS at KEW, WINDSOR, BUCKINGHAM PALACE, HAMPTON COURT, OSBORNE, and BALMORAL; in the GARDENS of the ROYAL HORTICULTURAL SOCIETY at KENSINGTON; in the GROUNDS of the CRYSTAL PALACE COMPANY at SYDENHAM; and in many hundreds of the principal Gardens in the Kingdom, as well as abroad, where their merits have been fully proved, and their success established.

PRICES, including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

SHANKS' NEW PATENT HAND MACHINE,

For Pushing only.

Width of Cutter.				
10-inch Machine	... ...	£3 10 0	} *Easily Worked by a Lady.*	
12-inch Machine	... ...	4 10 0		
14-inch Machine	... ...	5 10 0	*Ditto by a Boy.*	

Silent Movement, 4*s.* extra.

SHANKS' NEW PATENT HAND MACHINE,

For Pushing or Drawing, Separately or Together.

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16-inch Machine	... ...	£6 12 6	*Easily Worked by a Man.*	
19-inch Machine	... ...	7 12 6	*Ditto by a Man and Boy.*	
22-inch Machine	... ...	8 7 6	} *Easily Worked by Two Men.*	
24-inch Machine	... ...	8 17 6		

Silent Movement, 7*s.* 6*d.* extra.

SHANKS' NEW PATENT PONY and DONKEY MACHINE.

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25-inch Machine	... .	£12 10 0	... ... 25*s.* extra.
28-inch Machine	... ...	14 10 0	... ... 30*s.* ,,
30-inch Machine	... ...	15 15 0	... ... 30*s.* ,,

Silent Movement, 12*s.* 6*d.* extra; Boots for Pony, 21*s.* per set;
Ditto for Donkey, 16*s.* per set.

SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.			If with Patent Delivering Apparatus.
30-inch Machine	... ...	£19 0 0	... ... 30*s.* extra.
36-inch Machine	... ...	22 0 0	... ... 30*s.* ,,
42-inch Machine	... ...	26 0 0	... ... 40*s.* ,,
48-inch Machine	... ...	28 0 0	... ... 40*s.* ,,

Silent Movement, 20*s.* extra; Boots for Horses' Feet, 24*s.* per set.

A. S. & SON have pleasure in submitting the following List from among the hundreds of distinguished individuals, both in this country and abroad, whose patronage they have had the honour to receive:—

HER MOST GRACIOUS MAJESTY THE QUEEN,

For the Royal Gardens at Kew, Windsor, Buckingham Palace, Hampton Court, Osborne, and Balmoral.

HIS MAJESTY THE EMPEROR OF THE FRENCH
HIS ROYAL HIGHNESS THE PRINCE OF PRUSSIA
HIS GRACE THE ARCHBISHOP OF CANTERBURY
HIS EXCELLENCY THE LORD-LIEUTENANT OF IRELAND
HIS EXCELLENCY THE BELGIAN MINISTER
HIS GRACE THE ARCHBISHOP OF YORK
THE RIGHT. HON. LORD PALMERSTON.

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His Grace the Duke of Newcastle
His Grace the Duke of Marlborough
His Grace the Duke of Rutland
His Grace the Duke of Sutherland
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The Most Hon. the Marquis of Londonderry
The Most Hon. the Marquis of Ailsa
The Most Hon. the Marquis of Tweeddale
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The Right Hon. the Earl of Cawdor
The Right Hon. the Earl of Denbigh
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The Right Hon. the Earl of Mansfield
The Right Hon. the Earl of Selkirk
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Shanks' Patent Lawn Mowers require less power to work them than any other, are all warranted to give satisfaction, and if not approved of may be at once returned.

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A Stock of Lawn Mowers always kept at the London Depot, from which orders can be at once executed.

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THE BEST HARDENED OFF STOCK IN THE KINGDOM.

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CONTAINING LISTS OF PLANTS OF ALL KINDS AT VERY MODERATE PRICES, WITH COMPLETE CULTURAL DIRECTIONS,

Forwarded Post Free on application.

FIRST-CLASS NEW BEDDING GERANIUMS,

Which they are now prepared to send out.

THE LATE MR. DONALD BEATON'S GERANIUMS.

It is with sincere regret that we announce the demise of the above-named highly-esteemed gentleman, whose place in the World of Horticulture we believe cannot easily be supplied. For 20 years he was looked to by all as the genius of the Gardening World, and it is admitted that his Seedling Geraniums alone will immortalise his name among the Floral public.

Ten days prior to his death, he concluded a contract with us for all the Geraniums sold by him last season to Nurserymen, for distribution in 1864, and the whole of the varieties we offer he proved in his experimental garden as Surbiton, and from a large collection these kinds alone were selected.

The Set of Mr. Beaton's Geraniums, 1 strong plant of each, for 15s.

CYBISTER (Beaton).

This Mr. Beeton considered the best Nosegay Geranium he had raised, and we may observe that for two successive years it was exhibited in the most prominent beds at South Kensington and the Crystal Palace Gardens, and universally admired. The colour of the flowers is vivid scarlet; the trusses are immense, with sometimes 200 flowers and pips on a truss; its habit is excellent, and it is altogether a first-class plant.

Price 3s. 6d. each.

LADY COLUM (Beaton).

This is the first and only Nosegay Geranium of the Christine colour, viz, delicate rose; the blooms are well thrown up above the foliage, which is slightly zonale; the flower trusses are very large, and freely produced. During the last season at the Crystal Palace it was grown in the circular basins surrounding the Crystal Fountain, where it was very effective; it is also well adapted for Greenhouse or Conservatory culture.

Price 5s. each.

BEATON'S PET (Beaton).

This was a great favourite with the late Mr. Beaton; it is a minimum in growth, rarely exceeding 6 or 8 inches in height; it is also a most profuse bloomer, with a peculiar crimson lake colour, exceedingly rich and glowing; for ribanding and general bedding purposes it will be found marvellously effective.

Price 5s. each.

MRS. WHITTY (Beaton).

We last season introduced Helen Lindsay, which was universally admitted to be much superior to the general favourite, Christine. We have now the pleasure of offering a still finer variety in Mrs. Whitty. It has a beautiful deep rose colour, with a large white eye; blossoms in profusion; foliage slightly zonale. Last season a bed of it at the Crystal Palace Gardens, planted at the special request of Mr. Beaton, produced a magnificent effect, and continued in bloom until the frost.

Price 3s. 6d. each; 36s. per dozen.

MONITOR (Beaton).

This is a remarkably fine variety, from which Mr. Beaton hoped ultimately to produce a yellow Geranium, a colour hitherto unknown in this tribe of plants; colour a deep orange scarlet; bloom freely produced, and well thrown up above the foliage.

Price 3s. 6d. each.

SNOWBALL (Keeler).

A new pure White Bedding Geranium, raised by Mr. Keeler, of Wood House, Dulwich, and who has placed the entire stock in our hands for distribution. Of the same type as Madame Vaucher, but in every respect superior; fine large truss, well up in the centre, giving a flat even surface, and both in form and colour almost equal to the old Double White Camellia. Petals pure white, good form, and of great substance. Habit very robust and compact. Foliage rich green, with dark zone; will form a most desirable pot plant for Conservatory, and is without doubt a valuable acquisition for general bedding purposes. It is the opinion of Mr. Keeler, the raiser, that it is superior to anything yet introduced to the notice of the public, and the best White Geranium ever raised by him.

Price 5s. each.

BEL DEMONIO (Keeler).

A bright lively salmon colour, of dwarf, compact, but very robust habit of growth. The free blooming habit of this variety will make it most desirable for planting in large masses or extensive riband lines. The trusses are very large, individual flowers large and of uncommon substance in petal, and blooms well up above the foliage. This variety resists the effect of sun and rain better than any before offered of this class, and was raised at the same place as the preceding splendid White variety.

Price 3s. 6d. each.

HIBBERD'S PET (Hibberd).

This we received from Mr. Shirley Hibberd, the well-known writer on Horticulture, with the following description:—"You may recommend this as the best scarlet Horse-shoe Geranium in cultivation: it is a strong grower, and throws up large trusses of bloom, slightly darker in colour than Cottage Maid." Having seen it in bloom, we can fully corroborate Mr. Hibberd's statements.

Price 2s. 6d. each.

CALCEOLARIA, PRIMULA, and CINERARIA, saved from the best named sorts only. Price per packet, 2s. 6d.

ADDITIONAL NEW PLANTS.

SWAINSONIA SPLENDENS, each, 3s. 6d.
GOLDEN VARIEGATED BALM, per dozen, 6s.
GLIANTHUS DAMPIERI SPLENDENS, each 5s.
COLEUS MARMORATUS, each, 7s. 6d.

NOVELTIES of 1863.

NOSEGAY GERANIUMS.

LORD PALMERSTON
SPREAD EAGLE
MERRIMAC
MISS PARFITT
HELEN LINDSAY
RUBEN'S IMPROVED

The Set for 5s.

FUCHSIA, CARTER'S METEOR, each, 1s.
CERASTIUM BIEBERSTEINI, per dozen, 6s.
LOBELIA PAXTONIANA, per dozen, 6s.
,, SPECIOSA ALBA, per dozen, 6s.
LOBELIA GORDONIANA, per dozen, 6s.
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STREPTOCARPUS SAUNDERSI, each, 2s. 6d.

Carter's Original Collections of Plants from 12s. 6d. to £4 10s.

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Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET.

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

CATALOGUES are now ready, and a stock of Plants in the most perfect health, of all sizes, and at prices to suit all purposes. Sunningdale Nursery, S.W. Rail.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

BEDDING and BORDER PLANTS.—CALCEOLARIAS, CARNATIONS, CHRYSANTHEMUMS, CLEMATIS, DAHLIAS, FUCHSIAS, GERANIUMS, PETUNIAS, ROSES, and VERBENAS.

The choicest kinds of each at the lowest prices, at Mr. TOWNSEND'S, St. Mary's Nursery, adjoining the Compasses, Hornsey, a few minutes' walk from the Hornsey Railway Station. Dealers supplied on liberal terms.

RUSSELL'S PYRAMID PRIMULA.—Seed of this celebrated strain is now ready, in packets, price 2*s.* 6*d.* The great satisfaction which these sorts have given in previous seasons will be fully maintained this. The flowers can be seen at the Nursery during the spring. Printed instructions for cultivation with each packet.

GEO. CLARKE, Nursery, Streatham Place, Brixton Hill, S.; and 4, Windsor Terrace, Pimlico, S.W.

GEORGE SMITH'S PRICED and DESCRIPTIVE CATALOGUE of all the leading NOVELTIES of 1864, of choice Show, Spotted, Fancy, Zonal, and Variegated Pelargoniums, Fuchsias, Verbenas, Petunias, Dahlias, Chrysanthemums, Bedding Plants, &c, is now ready, and may be had free by Post in exchange for one Postage Stamp.

Tollington Nursery, Hornsey Road, Islington, London, N.

NEW VERBENA, LORD CLIFDEN (BUNYARD'S). Colour: rosy scarlet, with a very large and clearly defined white eye; each single flower flat and clean edged; truss large and well shaped. Habit good and free, a capital bedder. Autumn struck: price for 12, 2*l.* 10*s.*; 6, 1*l.* 7*s.* 6*d.*; each, 5*s.* Spring struck: per dozen, 24*s.*, or 2*s.* 6*d.* each, package included.

Improved TOM THUMB SCARLET NASTURTIUM, 1*s.* per packet, the best bedding Annual offered.

THOMAS BUNYARD & SONS, The Old Established Nurseries, Maidstone and Ashford, Kent.

New Bedding Geraniums.

MR. WILLIAM BULL begs to announce that a great many of his New BEDDING (ZONALE) GERANIUMS are now in blossom. An inspection is invited.

Establishment for New and Rare Plants, King's Road, Chelsea, S.W.

E. G. HENDERSON AND SON'S NOVELTIES for 1864, now ready.

VELVET CUSHION VERBENA, hybridised with Verbena venosa, large truss, effective variety, with hardy constitution—fine bedder.

GARIBALDI PINK.—A richer coloured and dwarfer plant than Anne Bulleyn.

SCARLET GEM DAHLIA.—Best bedding Dahlia in its colour.

TOM THUMB DAHLIA—Rich crimson, 12 inches in height.

WHITE TOM THUMB GERANIUM.—Best of its class for pots or bedding.

UNITED ITALY VARIEGATED GERANIUM.—Foliage red, white, and green.

MRS. BENYON VARIEGATED GERANIUM.—Like Mrs. Pollock, best in its style.

PRINCESS OF WALES PETUNIA.—Most beautiful of any.

CHRYSANTHEMUM EMPRESS of INDIA, pure white, large, and beautiful.

Wellington Nursery, St. John's Wood, London, N.W.

New Bedding Plants.

MESSRS. JOHN AND CHARLES LEE are now prepared to offer the following Novelties, which they have proved to be distinct and good:—

TROPÆOLUM COOPER'S DEFIANCE.—Is very dwarf, short jointed, slightly trailing, small leaved, and an immense bloomer. Flowers bright scarlet. A first-rate Bedder. Price 2*s.* 6*d.* each; 18*s.* per dozen; 5*l.* per 100.

GERANIUM VARIEGATED LITTLE DAVID.—Is a very pretty white-edged sport of the well-known favourite, "Little David," so useful for Edging. Price 5*s.* each.

VARIEGATED GERANIUM THE BRIDE.—This interesting novelty is adapted for small beds in conjunction with Lobelia speciosa. The habit is very dwarf, the margin of the leaves pure white, and the flowers are also pure white. A very elegant little plant. Price 7*s* 6*d.* each.

Royal Vineyard Nursery, Hammersmith, London, W.

New Hollyhocks.

WM. PAUL respectfully announces that he is now sending out Two first-rate NEW HOLLYHOCKS, selected from many thousands of Seedlings, namely:—

BEAUTY of WALTHAM.—Flowers pale silvery peach, large in size, perfect in form, and closely set on a large handsome spike: one of the finest ever raised.

RED GAUNTLET.—Very fine blood crimson, unsurpassed in colour and form, spike magnificent.

Strong healthy autumn-rooted plants, calculated to flower well this summer, 10*s.* 6*d.* each.

PAUL'S Nurseries, Waltham Cross, N.

Cheap Bedding Geraniums.

ALFRED FRYER offers 48 varieties of first-class BEDDING GERANIUMS for 21*s.*, basket and packing included. Amongst other popular kinds the collection will contain the following:—

Mrs Pollock	Snowflake	Blackheath Beauty
Cloth of Gold	Eva	Madame Vaucher
Golden Fleece	Jane	Magenta
Reine d'Or	Julia	Pink Pearl
Sulphureum marginatum	Flower of Spring	Woodwardiana
Scintillatum	Bijou	Hendersoni Nana
	Aurora	Paul Labbé

Remittances requested from unknown correspondents. Post-office Orders to be made payable to ALFRED FRYER, Chesterton, Cambridgeshire.

Bedding Dahlia.

MR. WILLIAM BULL is now offering GEM of the DWARFS (height 18 inches), at 5*s.* each, 42*s.* per dozen, or £10 per 100.

Establishment for New and Rare Plants, King's Road, Chelsea, London, S.W.

SUTTON'S IMPROVED HARDY WHITE SWEDE.

This fine WHITE SWEDE is invaluable as late spring keep for Ewes and Lambs, and will thrive on any soil. It is not so coarse as the Old White Swede, unless sown too early.

Price 9*d.* per lb., or cheaper by the bushel. Carriage free, except small parcels.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Permanent Pasture Grass Seeds.

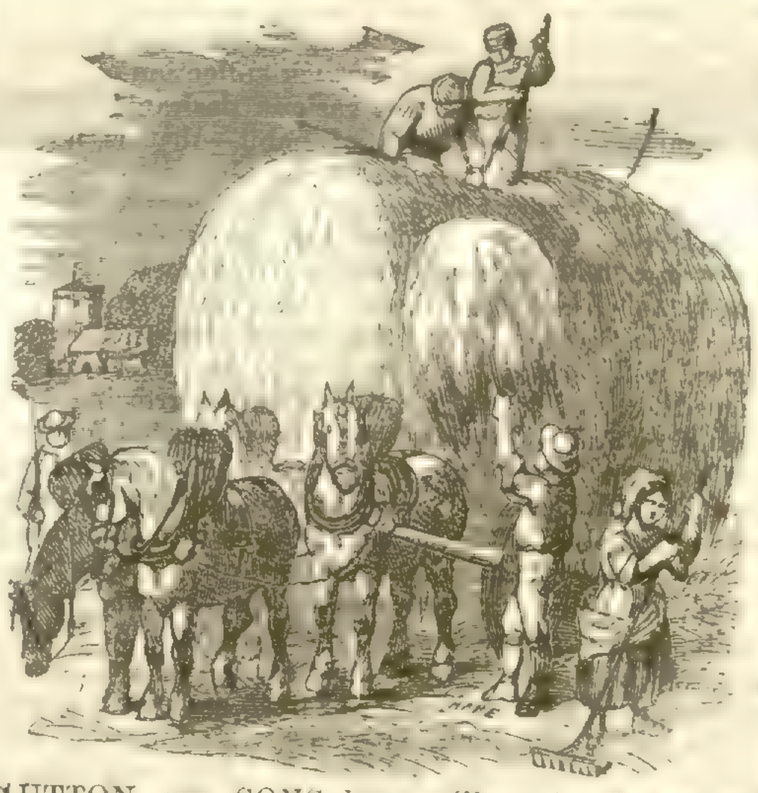

SUTTON AND SONS have still on hand some of each of the best kinds of GRASS and CLOVER SEEDS for every description of soil, and can supply them at the same prices as heretofore.

Royal Berkshire Seed Establishment, Reading.

CARTER'S GARDENER'S VADE-MECUM.

WHEELER'S LITTLE BOOK on SEEDS.

Seeds worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1*s.* 6*d.*, 2*s.* 6*d*, 3*s.* 6*d.*, and 5*s.* each.

J. DOBSON & SONS, Seedsmen, Isleworth, W.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our collection in the spring, 1862. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

J. DOBSON & SONS, Seedsmen, Isleworth, W.

DOBSON'S PRIZE PRIMULA SINENSIS SEED. Superbly Fringed. In sealed packets. 1*s.*, 2*s.* 6*d.*, and 5*s.*

J. DOBSON & SONS, Seedsmen, Isleworth, W.

UNRIVALLED CALCEOLARIA, PRIMULA, CINERARIA, CARNATION, and PICOTEE.

HERBACEOUS CALCEOLARIA, 2*s.* 6*d.* per packet.
HALF SHRUBBY CALCEOLARIA, 2*s.* 6*d.* per packet.
CINERARIA, 2*s.* 6*d.* per packet.
CARNATION, Self, Flakes and Bizarres, 2*s.* 6*d.* per packet.
PICOTEE, White and Yellow grounds, 2*s.* 6*d.* per packet.

BARR & SUGDEN, Seed Merchants, 12, King Street, Covent Garden, W.C.

J. WATSON, St. Alban's, has much pleasure in recommending his fine new SHRUBBY CALCEOLARIAS for garden purposes; they are unequalled by any kinds in cultivation:—

CALCEOLARIA BIJOU, brilliant crimson, very dwarf
CALCEOLARIA BEAUTY of HERTS, clear amber
CALCEOLARIA GENERAL TOM THUMB, deep yellow
CALCEOLARIA STARLIGHT, fine red.

The above are warranted thoroughly shrubby. Full description given in *Gardeners' Chronicle*, p. 334. Price 30*s.* per dozen; the usual allowance to the Trade where six or more are taken.

Spring Catalogue.

WOOD AND INGRAM'S New PRICED and DESCRIPTIVE CATALOGUE of Dahlias, Pelargoniums, Zonale and Variegated Geraniums, Fuchsias, Cinerarias, Verbenas, Chrysanthemums, Petunias, Hardy and Tender Ferns, Stove, Greenhouse and Bedding Plants, &c., is now ready, and will be sent free on application.

Huntingdon Nurseries.

GARDENERS' BENEVOLENT INSTITUTION.—At the MONTHLY MEETING of the COMMITTEE held on the 9th May, 1864, it was resolved:—

"That the Committee have read with great surprise a paragraph in the *Gardeners' Chronicle*, in which it is insinuated that 'personal antipathy to some ill-judging officer of the Society' retards its progress.

"That whilst it appears incredible to the Committee that so low and degrading a feeling as "personal antipathy" should hinder any one from assisting the unfortunate—they feel it their duty to remind the friends of the Institution, that the Treasurer, the Auditors, the Secretary, and the Committee are elected yearly at the General Meeting of the Subscribers.

"That at the General Meeting in January last all the officers were elected unanimously, and votes of thanks were passed to the Treasurer, Robt. Wrench, Esq., and to the Secretary, Mr. Cutler, who was re-elected for the 22d year, and whose zeal and activity in behalf of the interests of the Institution are gratefully acknowledged by all who have taken an interest in its welfare."

A list of the Office Bearers for the present year is published in the report, and may be had on application to the Secretary, 14, Tavistock Row, Covent Garden.

By order of the Committee,
JAMES GRAY, Chairman.

ROYAL HORTICULTURAL SOCIETY.
CELEBRATION of the QUEEN'S BIRTHDAY.

The Council have resolved that on the Queen's Birthday, Tuesday, May 24, 1864:—

1. The Gardens at South Kensington shall be opened to the public from 12 to 6, admission 1*s.* Fellows may obtain any number of Tickets at 6*d.* each.

2. An Exhibition shall be held, showing the various uses of Flowers for the Decoration of Halls, Drawing-rooms, Balconies, Churches, and Buildings generally, &c., also Dinner and Supper Tables, Hand Bouquets, Garlands, and Floral Devices of all kinds, for which Prizes will be awarded.

3. Provided a sufficient number of works of merit are sent in competition, One Prize of 5*l.*, Three Prizes each of 3*l.*, Six Prizes each of 2*l.*, Twelve Prizes each of 1*l.*, and Twenty Prizes each of 10*s.*, with an unlimited number of Honorary Certificates, will be given. Lady Amateur Artists and Royal Academicians will be associated with the judges.

4. Spaces for large decorations will be assigned to each exhibitor who fills up a printed application before the 15th of May. The objects must remain for two days on exhibition.

5. The Swags, Wreaths, Devices, and Garlands may be composed of Cultivated or Wild Flowers, Sprays or Leaves, or branches of any description, separate or combined. The Swags or Garlands must not be less than 8 feet long.

6. Artificial Flowers for Bouquets, &c., may be used, and with these there is no restriction as to size, and separate Certificates will be given.

7. All objects must be delivered carriage free to the Gardens; those composed of Artificial Flowers on the 23d, all others before 9 A.M. on the 24th.

8. All the Cascades and Fountains, and Minton's Majolica Fountain from the International Exhibition of 1862, will be played.

9. Three Military Bands will perform during the day, and assemble to play "God save the Queen" at 6 P.M.

NOTICES TO EXHIBITORS ON THE QUEEN'S BIRTHDAY, TUESDAY, MAY 24.

The Council have appointed the following Sub-Committees to organise the various exhibitions:—

1. FOR FLORAL DECORATIONS OF BUILDINGS, HALLS, DRAWING ROOMS, CONSERVATORIES, &C.—The Duchess of Marlborough, Lady Constance Grosvenor, Lady Caroline Kerrison, Lord Henry G. Lennox, Mr. Bateman, Mr. Bull, Mr. Kelk, Mr. Fleming, Mr. Lee, Mr. R. Redgrave, Mr. Standish, Mr. C. Turner, Mr. Veitch, and Mr. Wilson Saunders.

2. FOR THE DECORATIONS OF CHURCHES.—Lady Marion Alford, Miss Burdett Coutts Bishop of London, Bishop of Winchester, Mr. Blandy, Mr. Mould, Mr. Harry Chester, Captain Fowke, Mr. Beresford Hope, Rev. Dr. Irons.

3. FOR BALCONIES AND WINDOWS.—Rev. E. Bailey, M.A., Mr. James Bateman, Mr. John Bell, Mr. S. Haden, Mr. Henderson, Mr. Hopgood, Rev. — Parkes, M.A., Mr. F. Smith, Mr. John G. Veitch.

4. FOR DECORATIONS OF DINNER AND SUPPER TABLES.—The Marchioness of Waterford, Lady Holmesdale, Miss Challoner Miss Chalfield, Mrs. John Clutton, Mrs. Cubitt, Mrs. Kelk, Sir C. W. Dilke, Bart.

5. FOR HAND-BOUQUETS FOR WEDDING PARTIES, THE OPERA, &C.—The Marchioness of Aylesbury, The Countess of Aylesford, Lady Cecilia Bingham, Lady Dorothy Neville, Mrs. Johnson, Mr. Buck, Mr. Harding, Mr. Lucking, Mr. Harry Veitch.

6. FOR GARLANDS AND MISCELLANEOUS WORKS.—Viscountess Combermere, Lady Rokeby, Lady Augusta Sturt, Baroness L. de Rothschild, Miss Eden, Mrs. Coffin, Miss Moffat, Mrs. Poynder, Sir Joseph Paxton, Mr. Fraser, Mr. S. Redgrave.

7. FOR ARTIFICIAL FLOWERS FOR THE PERSON.—The Duchess of Buccleuch, the Duchess of Manchester, the Countess of Tankerville, Lady Taunton, Lady Sandford, Mrs. Harry Chester, Colonel Fisher, C.B., R.A.; Dr. Thos Thompson: Mr. R. Thompson, and Mr. P. C. Owen, have kindly undertaken to act as an Executive Committee for arranging the Exhibition.

Forms of application for space may be obtained from the Assistant-Secretary.

The Gardeners' Chronicle.

SATURDAY, MAY 14, 1864.

MEETING FOR THE ENSUING WEEK.

TUESDAY, May 17 { Royal Horticultural Exhibition of Fellows) at South Kensington .. 1 P.M. / Lecture on Ferns by Mr. Moore .. .. 3 P.M.

ABOUT two years ago mycologists were almost startled out of their propriety by the announcement that the curious plants belonging to the order MYXOGASTRES, distinguished by their creamy consistence when young, and the dusty contents of their fruit when old, were no longer to be referred to the vegetable kingdom, as their spores when germinating could scarcely be distinguished from the infusorial animalcules referred by authors to the genus Amœba or its allies.

The conclusion was however rather a hasty one, and was at once contradicted by the facts that the spores of some species germinate like those of other Fungi, and that there are spores resembling other infusorials in Saprolegnia and its allies, which, to say the least, were very doubtful Algæ.

DE BARY himself discovered spores similar to the swarming spores of Saprolegnia both in the mould of the Potato murrain (Peronospora infestans) and in the white rust (Cystopus) of Cabbages, and some other plants. These observations, which were communicated to the Berlin Academy in 1860, and which have already been recorded in this Journal, so far as the latter genus is concerned, were confirmatory of those made by PRÉVOST so early as 1807; as regards the former they were perfectly original, and in a memoir of considerable interest lately published in "Annales des Sciences Naturelles," series 4, vol. 20, they are greatly extended, and show at once that while infusorioid spores are not strange to Fungi, Saprolegnia and its relatives may now safely be excluded from Algæ, notwithstanding their aquatic mode of life.

Important, however, as are DE BARY'S observations respecting the swarming spores in the genera

Cystopus and Peronospora, those which relate to the resting spores in the same genera are scarcely less interesting. CASPARY some time since pointed out the production of large reticulated spores amongst the cells of the leaf, amongst which the spawn of Peronospora runs in every direction. The analogy between these and the resting spores of certain Algæ was at once apparent. The swarming spores were necessary for immediate propagation of the species; the resting spores, on the contrary, might remain months without vegetation, and so could be ready for germination in the following season. But if DE BARY's observations are completely to be depended upon, there is besides a striking resemblance between the mode of their development in Cystopus and Peronospora. The swarming spores arise apparently from a mere differentiation of the contents of certain cells, without any impregnation; while on the contrary the resting spores are due to the action of the contents of antheridia, which rest upon their surface at a certain stage of growth, and occasionally, as in Saprolegnia, penetrate the outer integument by means of a little tube. In Cystopus candidus, however, the germination of these resting spores consists in the protrusion of a sac filled with infusorioid bodies closely resembling the swarming spores. These observations in some respects require confirmation, but they are beyond doubt of immense importance.

Some subordinate points are mentioned in the same memoir. One is that the spawn of Cystopus and of most species of Peronospora, though not the Potato mould, throws out at intervals little glandiform suckers by means of which it imbibes the juices of the plant on which they are parasites. In Peronospora calotheca, which grows on the common Woodruff (Asperula odorata) the suckers are curiously ramified, a bunch going into each cell of the parenchyma by which the main threads of the spawn pass.

Another matter of importance consists in his observations upon the manner in which these parasites gain admission into the plants on which they prey. In Cystopus, Peronospora, Uromyces, Æcidium, Endophyllum, and Puccinia, &c., he has seen the germinating spores obtain admission directly by means of the stomates, the spawn often thickening very considerably immediately after the admission of the delicate germinating thread. In all these genera, and in others allied to them, the conditions which determine the germination appear to be the same. We must remember, however, that in the several genera formerly referred to Uredo and Puccinia, there are several modes of fructification. First, little cysts, called spermogones, which produce a multitude of minute bodies at the tips of little threads; these bodies, called spermatia, from a conjecture that they are the male organs, have never been known to germinate. Secondly, bodies called stylospores, either single or in necklace-like rows, which accompany or precede the true spores, differing from them in form. Thirdly, the true spores, which are often more complicated in structure. Fourthly, bodies which are produced upon the germinating threads of the spores, called sporidia, of one or more orders, which do not seem to penetrate immediately into the plant on which they are parasitic. This is not the case with the stylospores, which readily germinate, but the more readily the more recent they are, though they are able to preserve the power for some weeks, or even for some months. If, however, they are kept dry during the winter they appear to lose their vitality, except in a very few instances, if, indeed, those are beyond doubt. DE BARY has never seen the spawn of these perforate the walls of the cells. The admission is always by means of the stomates, and if the nature of the subjacent tissue is not congenial, they perish. They will germinate, indeed, on plants which are incapable of affording them the proper nutriment; and we saw last year that spores might germinate on the stigmatic surface of Barley, and produce spawn to such an extent as to induce the abortion of the germen.

On the contrary, he found that the sporidia produced upon the germinating threads of the perfect spores, when germinating in their turn, did not obtain access by way of the stomates, but by piercing the cells themselves by means of their threads. This portion, however, of DE BARY's memoir will require a separate notice. *M. J. B.*

—— WITHOUT professing to have any very strong affection for the Dahlia as an ornamental flower-garden plant, we are yet ready to admit that there are varieties of what are called BEDDING DAHLIAS, which come in very useful amongst the larger plants which are required to carry out the present system of parterre gardening. In admitting this we may add, that Bedding Dahlias are now very different objects from what they once were. Time was when the brightly-coloured sorts which were found useful in flower-beds on account of their colours, had to be pegged down to the earth to hide their gawkiness, and the display they produced was confined to such as might be yielded by a thicket of branches. Now, however, the perseverance of florists, who have forestalled the Darwinian system of natural selection by themselves selecting and breeding from the varieties which most nearly meet their wants, has secured for the flower garden a race of varieties which, while displaying florid masses of colour, present these colour masses in something approaching to a definite and symmetrical form. As the season is now again approaching for providing materials for Dahlia beds, we venture to direct attention to a few of the best sorts we fell in with last season, our memoranda being chiefly gleaned from the Chiswick collection.

Taking into account the various desirable qualities of dwarfness, gracefulness of habit—that is, neither too much stiffness nor laxity in the disposition of the 'blooms,' and fulness or quality in the 'blooms' themselves, we must give the preference to the following half dozen varieties, namely:—1, Dwarf Queen, a 3-feet plant, very free, and yielding a fine head of blossoms, the colour being amaranth tipped with white; this is a very showy Dahlia, and exceedingly effective. 2, Little Wonder, growing 3 feet high, free and showy, and every way adapted for beds; the colour a light bright red-scarlet, not quite brilliant enough to be called a true scarlet, but yet a telling colour. 3, Joy, a 3-feet plant, blush-white tipped with purple, free, and altogether the best of the light tipped sorts. 4, Queen of Summer, 3 feet high, a showy white, heavily laced with rose-purple. 5. King of Dwarfs, a 2-feet plant of capital habit, the blooms good, and of a showy purple or deep amaranth colour. 6, Pluton, 2 feet high, with large, well-formed, clear yellow 'blooms,' and a habit in every way adapted for bedding purposes. The last two sorts were perhaps hardly so much advanced as could have been wished, but their indications were all in the right direction.

A grade lower in merit, come the following half-dozen:—1, Alba floribunda nana, 3 feet, clear white, with an open eye, but good in habit; 2, Royal Purple, 2¼ feet, purple, a fine variety; 3, Sunlight, 2½ feet, showy, dark red scarlet; 4, Duke of Newcastle, 3 feet, large bright pure yellow; 5, Lilac Lilliput, 2 feet, remarkably bushy and branching in growth, with large late lilac flower-heads; 6, Variegata, 3 feet, with the leaves distinctly margined with cream colour.

Of a stiff dwarf habit, only 2 feet high, and with huge 'blooms' on short stalks set down closely amongst the leaves, the flower-heads being of a glowing crimson-red, Prince Arthur must not be overlooked in glancing over the better sorts of bedding varieties, for stiff and ungainly as is its growth, we have seen it in favourable seasons more effective than any other Dahlia used in the flower garden. Of the same habit, but also very effective in certain positions, the old purple-flowered Zelinda yet claims honourable mention; and the same may be said of the dwarf and brightly-coloured, but otherwise indifferent Crystal Palace Scarlet. Then Meteor, which was blooming well, though only a foot and half high as we saw it, was of a good clear yellow, and must not be lost sight of; nor must a very dwarf white, of about the same height as the last, called Empress of the Whites, a variety clear in colour and promising in character, but as it came under our notice, hardly enough developed to admit of a positive opinion being formed respecting it.

From amongst the foregoing, may be selected varieties adapted for all purposes where dwarf or bedding Dahlias are required—varieties which will alike give satisfaction in regard to the quality of the blossoms, and their habit of growth. But dwarf as are many of these, the process of dwarfing by selection will doubtless yet go on—certainly if a demand for dwarfer varieties is kept up. We hope to see this process judiciously applied to the Pompons.

—— At p. 147 of this Journal for the present year, we have published the statement of a Young Gardener respecting the unaccountable decay of plants belonging to various natural orders. Specimens of different bulbs which had failed were transmitted to us, and also a quantity of the soil. We are now in a condition to state that the soil itself was perfectly harmless. We have Onions thriving in it without a symptom of disease. But not only is this the case, but the bulbs, which were undoubtedly partially exhausted by the decay of the first roots which they had developed, when planted in the common soil of a border succeeded perfectly, one of them producing one of the most beautiful Hyacinths we ever saw, and all throwing up good flowers. Our correspondent therefore may be assured that the fault is to be attributed neither to improper soil nor to any disease in the plants themselves; and if he is certain that there was no neglect in watering, or any other great error in cultivation, his suspicion that they were tampered with in some way, either by the admixture of some noxious substance in the water, or by the application of water at too high a temperature, is not without probable grounds. *M. J. B.*

New Plants.

WE have received from Messrs. FISHER, HOLMES, & Co., of Sheffield, some NEW PLANTS of sufficient merit to deserve especial notice.

The first is an Abies of such singularly dwarf habit that it might almost be compared with a Heath; leaves very dark green, with a white streak beneath, rough at the edge, and no bigger than those of Menziesia polifolia. It is no doubt some sport of *Abies canadensis*, and may possibly be included in some catalogues under the name of *Abies canadensis nana*, but the leaves are much smaller than in the plants which we have seen bearing that name. We propose to call it *A. canadensis microphylla*. Messrs. Fisher & Co. raised it from seed imported from Canada, and they have found it much more hardy than *canadensis* itself, it not having suffered in the severe winter two years ago when so many Conifers were injured.

We have also received five *very nice* varieties of the *common Yew*, seedlings raised at Handsworth, viz., 1, a variegated Irish specimen; 2, what they call there *pyramidalis variegata*; 3, a "berry-bearing" *variegata*; 4, a slender green variety; and 5, a very distinct sort with the habit of an *Epacris*.

But far more important than any of these is a very hardy hybrid *Berberis* between *Darwinii* and *empetrifolia*, which promises to be one of the best evergreen shrubs in cultivation. We call it *B. stenophylla*. The branches are hairy; the spines 3-parted; the leaves very dark green, about ½ inch long, pale beneath, tipped with a short spine, and rolled backward at the edge, so as not to appear flat, but to look almost cylindrical. The flowers are of the same charming apricot colour as that which renders *Darwinii* so ornamental, but they are smaller. We are informed that in the autumn the branches are "completely covered with berries of large size," and that the plant "will grow in any exposed situation without injury, and as it strikes readily from cuttings is likely to make capital cover for game." We shall be much mistaken if the variety does not become a universal favourite. Of course it cannot be allowed to bear the barbarous name of Handsworthensis, under which it has been exhibited.

THE HORTICULTURAL CONGRESS AT BRUSSELS.

THE International Congress of the Federation of the Horticultural Societies of Belgium was opened on Sunday, the 24th of April, at 3 P.M., under the Presidency of M. de Cannart d'Hamale, President of the Royal Horticultural Society of Malines, Vice-President of the Federation, supported by the Provisional Committee, composed of M. Van den Hecke, President of the Royal Agricultural and Botanical Society of Ghent, Vice-President; M. Ronnberg, Chief of the Agricultural Department of the Ministry of the Interior, Deputy of the Government; M. Linden, Honorary Director of the Royal Zoological Garden at Brussels; M. Kegeljan, Secretary of the Royal Horticultural Society of the province of Namur, treasurer; M. Piré, Secretary of the Royal Botanic Society of Belgium, Secretary, in the place of M. Morren, who was prevented from attending by illness; M. Barlet, Librarian of the Royal Horticultural Society of Liege, Assistant-Secretary. After the names of those who had signified their intention of being present had been called, and M. Wesmael had been named second Assistant-Secretary, the President delivered the following address:—

The Federation of the Horticultural Societies of Belgium, strong in the support of the Government, has seized with eagerness the occasion of the fête which the Société Royale de Flore has organised with so much success, to bring into one focus the intelligence of all those who professionally or for amusement engage in the pursuit of our art and science. Thanks to the help which these mutually render to each other, practice may shine in contact with science, and in the result, precise and useful data may be obtained for the advancement of horticulture.

The appeal of the Société Royale de Flore has been understood; and that of the Federation has not been less comprehended. Both have been responded to in a brilliant and generous manner. The Société has seen the richest and rarest plants enter its saloons. The Federation, in its turn, has received nearly 500 adhesions to the Congress; and amongst them we are happy to count so many distinguished men, who have devoted either their learning or their practical life to the progress of the science which to us is so dear. And if the Société de Flore is made happy with the riches without end which have poured in from all parts of Europe, we salute with pleasure the learned men from all countries, and the distinguished representatives of foreign horticulture, who have come amongst us. Thanks then, to the zealous and devoted individuals who have consecrated themselves to the progress of agriculture; thanks especially to you, the botanists, who have desired to give éclat to our modest Congress by associating yourselves with our labours, and who have not disdained to offer us a friendly hand, and by your hints and useful lessons to guide us to that improvement of which horticulture is susceptible. Your debates, sirs, will be ours in this sense, that we shall gather fruits, which I am convinced will germinate in all soils, and principally in that of our fine country, the cradle of the culture of flowers, a love of which is innate in the heart of the Belgians,

and is a precious inheritance from our ancestors, the glorious remembrances of which are closely bound up with the love of our country, and of the independence and liberty for which our fathers so generously shed their blood.

Gentlemen, horticulture is no longer what it formerly was, that is to say, a blind practice turning constantly in a single circle, composed of Auriculas and Tulips, and Anemones and Pinks, and such like. The circle is greatly enlarged now; it is so vast and so extended, and comprises so many different genera of plants, and so many plants from different countries and different latitudes, that the art of gardening rests upon a basis essentially scientific. In reality all the sciences, physical and chemical, as well as natural, come to its aid, but that which rules all the others by its essential qualities, that which is the basis of all culture, is in reality, the science of Botany, with its theories, its facts, its hypotheses, and its laws. It is upon the observation of physiological facts that horticultural science is based. To claim in our days the rank of a true amateur of flowers, it is necessary to understand wonders: to know the familiar structure of the organs of plants and their functions, to possess some idea of the mechanism of their life, and of their nutrition and fecundation, to be able to account for the phenomena of respiration, and of the sleeping and awaking of plants, and lastly, to know something of their stations and habitations, and of the laws according to which they are distributed in the different regions of the earth.

Gentlemen, these few words will suffice, I hope, to make it understood that botany has now become an indispensable science for cultivating with intelligence and success the numerous plants imported into Europe from all parts of the world. Botany has, besides, many attractions, and acquires every day a new importance by its numerous relations with the philosophy of the man of nature. Let us then be thankful to the many distinguished botanists who, notwithstanding the distance and fatigue of the journey, have not feared to come to us, to initiate us in the mysteries of vegetation. Let us address to them a sincere and cordial welcome; let us congratulate them, or it would be better to say let us congratulate ourselves on seeing them among us, for they come to establish between horticulture and botany an intimate and indissoluble bond.

In the name of the Federation of Belgian societies I address to you all, with all the gratitude of my heart, an affectionate and hospitable welcome; and in the name of the horticulturists here present, I address sentiments not less affectionate and grateful to you, the botanists, who have come to guide and enlighten us by the torch of science.

This address was received with prolonged applause. The President then proposed to proceed to the final construction of the committee. A suggestion of one of the members to confirm the provisional committee in their office was carried by acclamation; and on the proposition of another member of the assembly, the following learned foreigners were invited to take a place in the committee in the quality of Vice Presidents:—M. Brongniart, Member of the Institute, Professor to the Museum of Natural History at Paris; Baron Hügel, Deputy Extraordinary and Plenipotentiary Minister of Austria; M. Fée, Professor of Botany to the Faculty of Medicine at Strasbourg; M. Santo-Garovaglio, Professor and Director of the Botanic Garden of Pavia; M. Koch, Professor to the University of Berlin, Secretary of the Society for the Encouragement of Horticulture in the Prussian States; M. Lecoq, Vice-President of the Horticultural and Agricultural Society of Andenne, Horticulturist at Seilles; Mr. Thos. Moore, Director of the Botanic Garden, Chelsea, London; Mr. Murray, Assistant Secretary and Delegate of the Royal Horticultural Society of London; M. Planchon, Professor of Botany at Montpellier; M. Regel, Director of the Imperial Gardens, Secretary of the Imperial Horticultural Society, and Deputy of the Horticultural Society of St. Petersburg, Editor of the *Gartenflora*; M. Von Siebold and Professor Reichenbach, Director of the Botanic Garden at Hamburg.

The Congress met on the 25th of April at 10 A.M. Among the communications submitted for discussion was a memoir from M. Bastin on the necessity of establishing a uniform nomenclature for kitchen garden plants. The author of the memoir proposed to establish a Latin nomenclature with the view of rendering it universal. After a debate, in which many members took part, the proposition was referred to a commission composed of MM. Van Hulle, Rodigas père et fils, Selys-Longchamps, Planchon, Pynaert, and the Count de Lambertye.

The assembly then proceeded to discuss the first question of the programme:—"Acclimatization, naturalization, and domestication of vegetables."

Mr. Cordier, Vice-President of the Botanic Society of France, made some remarks on the possibility and utility of acclimatizing several species of Mushroom.—M. Planchon protested against the term acclimatization, and would substitute that of naturalization.—M. Von Siebold agreed with the opinion of M. Planchon. He cited in support thereof the introduction of certain plants from Japan, which have been "acclimatized" in the country only because they have found the conditions of culture advantageous.—M. Lecoq asked M. Cordier if he knew any certain means for the culture of Mushrooms; he himself had made some beds which had not given good results.—M. Cordier did not know any certain means, but indicated the systems followed in England, in Italy, &c.—M. Planchon combated the abuse of thermometrical means as the expression of the temperature, in relation to vegetation.—Prof. Hoffmann, Director of the Botanic Garden at Giessen (Hesse Darmstadt), spoke of the advantages of making use of thermometrical means.—M. Regel explained the sense in which he understood the term acclimatization. He could not agree with the observations of M. Planchon.—M. Planchon admitted partly the observations of M. Regel, and acknowledged that there was such a thing as acclimatization by selection, and acclimatization by adoption.—Baron Hugel agreed with the opinions expressed by M. Regel.—The arguments invoked by M. Planchon as to the abuse of thermometrical means were opposed by M. Donckier, and defended by M. Barral, Editor of the *Revue Horticole*.—M. Schneider explained his astrometeorological theory—that of the influence of the stars on vegetation.—M. Baltet, delegate of the Society of Agriculture, of Sciences, and Belle-Lettres de l'Aube, read a memoir on the productions of the fruit garden, which he regarded as likely to acquire considerable importance in the culture and the commerce of the fruits.

The Congress reassembled at 3 P.M. The Ministers of Foreign Affairs and of the Interior, and the Governor of Brabant were present. Professor Santo-Garovaglio, Director of the Botanic Garden of Pavia, offered some remarks on the vegetation of the north of Italy, and on the Culture of Mushrooms. He explained the different observations he had made in the north of Italy, and especially in the town of Carlotta on the Lake of Como, where his studies were principally directed towards the Coniferæ.—M. Fée, Professor of Botany at Strasbourg, made some remarks relating to acclimatization and naturalization.

In reference to the second question of the programme, viz:—"Hybridization, crossing, and artificial fertilizations in general; characters of Hybrids, their sterility, their polymorphism; preservation of Pollen, &c.," M. Wesmael, Assistant-Secretary, read a letter from M. Belhomme, communicating some details relating to the preservation of Pollen. This communication gave rise to some critical observations on the part of M. Fée. The writer, he observed, did not explain how he had been able to preserve the pollen for a long time, and to verify its vitality. He had himself operated on pollen which might have passed for being completely effete or atrophied, and which had yet given some results. He was of opinion that the pollen did not act solely by the more or less normal development of the pollen tube, but that it might act equally without this, and also without the intervention of the stigma.

The 3d and 4th questions:—"Theory of the variation of species; of the origin of varieties, and of races, &c." "Dynamics of plants, and the periodic phenomena of vegetation; influence of temperature on the germination, leafing, flowering, and fruiting of plants, &c.," elicited no discussion. On the 5th question:—"Food of plants, action of the atmosphere, influence of nitrates, ammonia, phosphates; theory of manures, composts, &c.", M. Pynaert, Professor at the School of Gentbrugge, Ghent, read a long paper on the fabrication, composition, action, and use of peat earth. On the 6th question:—"Floral æsthetics; points of excellence in flowers, single and double; harmony of colours, &c.," M. Koch, Professor of the University of Berlin, editor of the *Wochenschrift*, explained his theory of the beautiful in Nature.

The 7th question:—"Coloration of plants; variegation, is it hereditary by the seed and contagious by the graft?" led to considerable discussion.

M. Von Siebold explained the observations he had been able to make during a stay of 12 years in Japan, which country, he said, had yielded more variegated plants than any other. He described its geographical and meteorological conditions; and from the fact of the exposed northern latitude (*latitude franchement boréale*) of Japan, laid down the principle that variegation was a disease. In proof of this opinion, he stated that under the tropics one could not find the same species at once green and variegated; neither in Siberia were the plants variegated. The variegation was an affection which marked the leaves of those plants that were transported out of their normal climate. "I will present to you," observed M. Von Siebold, "a work representing 800 variegated plants, found only in Japan. From whence comes this multiplicity? From a very simple fact, namely, that in Japan horticulture is millennary, whilst at home it is as yet only centenary. That explains why our normal native plants are still so little varied." M. Von Siebold then related that from among the large number of Japanese plants he had introduced, he had himself "made" three which were variegated. Each one of these had arisen from a plant with the leaves of a plain green colour, and which having suffered accidentally, became variegated. Amongst others this was the case with Sedum Sieboldi medio-variegatum, which had been brought into commerce, and had been thought a variegated plant from Japan, although in reality the fact was not so. "This Sedum does not," he observed, "come from Japan, since it was I who made it." There was yet another fact to be mentioned, viz., that the variegation was not produced directly by disease of the seeds, but by that of the plant while exposed to air and sun. To sum up: the mother plants were healthy and green, the variegated plants were chlorotic. "These," remarked M. Von Siebold, in conclusion, "are the observations I have made during my travels, and I will continue to apply them with success in the manufacture of variegated flowers." (Laughter and applause).

The theory developed by M. Von Siebold raised a very animated discussion, in which several members took part; amongst others MM. Planchon, Reichenbach, Regel, Baron Hügel, Hoffmann, Rodigas, Andre, Kolle B. Dumortier, &c.

(To be continued.)

TOWN WINDOW GARDENS.

No one can ever have been concerned at all in town gardening without being struck constantly by the persevering efforts made, under circumstances always unfavourable and often almost hopeless, for rearing a few plants and having a few green leaves to cheer the monotonous row of windows. Here one sees just inside, a pot of Musk or Primroses; there perhaps some adventurer has set up a tiny rail and ventured some pot outside, with its short-lived Creeper or its yellow and sickly Mignonette. But, unhappy as the plants often look, we meet sometimes with bright exceptions, and I can now remember in different parts of England—speaking of towns always—various lovely masses of flowers grown outside windows.

I must say that in all cases the same plan has been adopted—the method different, but the end gained the same. A box or tray of some kind has held the sunken pots, while the contents of this tray have sheltered and fed the roots contained.

But to have such a box or tray is not always an easy thing. Wood, with age will decay, and then a downfall is imminent. Tile boxes are expensive, supposing them to be handsome, and there is the fixing up, which is to so many a difficulty because they do not know how to set about it. Still, those who have once seen such window gardens desire to see them multiplied; and it was therefore a real delight to me when the kindness of their projector invited me, now some months ago, to see an experimental garden that he had just set up.

The idea had occurred to him of making some inexpensive and cut and dried plan, so to speak—something that would be plain sailing, that most working men could afford to buy, and that any would know how to set up. The invention has now been brought out by the Coalbrookdale Iron Company, and here I will quote a few sentences from the prospectus they have just issued, as it will enable me to explain more clearly afterwards what I think will be found the best way of using it.

"By producing the registered iron window gardens in iron, capacious, strong, light, lasting, and easily affixed at the outside of windows, the Coalbrookdale Company trust to meet the wishes of those who love flowers, and this down to prices that will allow the mechanic in the populous parts of London this luxury, as well as those who live in larger houses. In this way a semi-circular iron flower bed, 4 feet in width by 2 feet of projection, and 9 inches in depth, receives, besides the broken crocks, &c., for drainage, two barrowfuls of the garden mould, affording (even in cities, especially at upper windows, where the stratum of air is purer), the production of large groups of flowers in great perfection of bloom. The almost universal love of flowers, even under the most unfavourable circumstances, in London, is evident in a variety of inefficient expedients; and the Company are in hopes, therefore, that the iron window-gardens which they now offer, of great variety of size pattern and price, will meet a public want.

"Also, they submit these window gardens as affording great safety at nursery windows, a little light wiring for creeping plants being in addition, if desired, affixed at and above the outer circle of the gardens. The durability of these window gardens is insured by their being made of the best iron, either galvanised or treated with an anti-corrosive material, and the Company desire to call attention to their safety and easy mode of fixing.

"The wrought-iron bent bar supporting the window bed is first put into the wall by two holes, and fixed by cement, which is done without scaffold and from ladders, and remains to set without weight being put on it; and next day the garden bed can be lifted in from the windows on to this, no bolts being requisite.

"This done, the bed may at once receive the crocks and garden mould, and the flowers be planted.

"It is suggested that the window garden be first offered up in its place by being hung over the window sill, when the line for the wrought-iron bar to be put into the brickwork is marked underneath by the workman. The window garden is then removed until the wrought-iron bar is put in and fixed to the depth in the wall as marked on it. This should be done by a level, so as to ensure the window garden being level when placed on it.

"In the cases of the sills being part of a string course, or in any other case in which the strap of iron over the sill is inapplicable, the Company have other modes of modifying these parts, so as to meet all circumstances, and will be happy to attend to them, on sketches and dimensions being forwarded to them. In all cases however, the main support depends on the

wrought-iron bar beneath let in the wall, which forms the registered principle of support.

"The wrought-iron support is warranted in all cases equal to four times the weight of the window garden filled."

I thought it best to quote so far, as the mysteries of fixing iron things are altogether beyond my head, but I think as to the gardening in them I may perhaps say something, the same style of window-garden having been such a favourite with me.

First, then, we must remember the incalculable advantage to all town and London grown plants of being lifted up from the ground. The first time I tried the plan myself it was that there was a back garden, deep down and well-like, in which not a thing would grow. A little breakfast-room window looked out upon this "dampery," and there I got my boxes fixed, raised above the level of the surrounding walls, the plants enjoying the free current of air that now passed round them.

The way in which that garden throve attached me for life to this plan. The soot and smoke may be bad in towns, but that I don't think is the real grievance. It can after all be washed off; it is the stagnant air, or the no light in some cases—the scorching sun in others—that kills and stunts town plants. All these worst of evils, because those beyond our own remedy, it seems to me are removed by the registered iron window gardens. The one that I saw in use was filled with spring bulbs and flowers, and these, as I understood, were planted in the soil.

But I shall advise all gardeners on setting up these contrivances to use abundant charcoal drainage, and then above it a layer of cocoa-nut fibre or else dry moss or grass. The same padding I think may well extend round the front rim. The plants can then be kept in their own pots by all means, and Clematis, Cobœa scandens, and Sweet Pea, Canariensis and Ipomœa, Ivy and Convolvulus, I know will flourish luxuriantly.

Roses I have had flower well, but not in a very smoky place; Stocks, Mignonette, Lobelias, Geraniums, and Heliotropes, Arums and Fuchsias have also grown and flowered well. It is chiefly, I imagine, because they can be well watered, and because they have the great benefit of free air.

And then what a benefit they are to our little dull-looking breakfast rooms or studies, and what a very great pleasure they will give to the London artisans, than whom few are more hearty flower lovers or more interested gardeners, if they can have for their parlour window such a country-like bed of sweet flowers. *E. A. M.*

Home Correspondence.

Floral Illustrations.—I think it a pity that nurserymen and others who issue plates of the novelties they intend sending out, should not be more careful to see that these illustrations are correct. They are so often overdrawn and over-coloured that I have long ceased to have any faith in them; and if I show one to a friend, he says: "Very beautiful; if the original is only half as good, it will be an acquisition." It seems to be taken for granted that the thing itself will not be so good as represented. I have been led to make these remarks by seeing a plate of the Rose "Princess of Wales," issued by Mr. Wm. Paul, which so far as regards colour might pass for any one of the 50 new Roses lately sent out, quite as well as for the Princess of Wales, whose flowers are of a very deep crimson in the living plant, while the plate is coloured a bright vermilion scarlet. I do not say that in this instance the plate is exaggerated, but it is certainly incorrect. *Antihumbug.* [In this matter nurserymen have to depend very much on the skill of the artists they employ; moreover the colours of flowers are for the most part inimitable by the pigments of flower painters. We agree that for the sake of their own interests all possible care should be taken by those who in this manner advertise their novelties; but we do not admit that there is any intention to deceive.]

Collinsia verna.—Though Mr. W. Thompson, of Ipswich, complains in no measured terms of the award made by the Floral Committee to the plants of Collinsia verna sent for their inspection, his own remarks go far to prove the justice of that award, for he says, had the large masses of this flower in full perfection in his own grounds been seen, the "misjudgment" would have met with "an unanimous reversal." Does not Mr. Thompson perceive that the Committee can only judge of plants that are placed before their eyes; and if annuals or any other plants are sent for examination, the result will be arrived at from the condition the plants are in when examined. It is self-evident that if plants are sent not fully in bloom their true merits cannot be seen; and this was unquestionably the case with the Collinsia verna; the flower spikes were not developed, and the habit of the plant was undefined. I am sure that myself and others will be ready to admit the beauty of this flower, and to admire it; and if its habit is equal to, or even resembles that of my old favourite Collinsia bicolor, I am willing to allow that it is an annual of first-rate qualities. Probably all this may be very evident at Ipswich, but as the Committee are not gifted with long sight, and could not see so many miles from South Kensington, it is surely unfair and unjust, on such premises, to question, in the way Mr. Thompson has done, the opinion at which they arrived. *One of the Committee.*

The Hydropult.—I can say a little more in favour of the hydropult than your Correspondent, Mr. Blackmore, p. 438. I have had one in almost daily use for more than 12 months, and it has turned out very satisfactory; in fact, I have never had the least fault to find with it. We have put it out of working order just now through not knowing the construction of it. I was not aware that the valves are made of india-rubber, and having used them with rather warm water, I caused them to curl up slightly, so that the machine does not discharge the water with the same regularity which it did. For indoor work it is better liked by me and my men than anything I have had before. The temporary use of the common syringe now appears very tedious. With the hydropult I can syringe a house 40 feet by 16 feet thoroughly without making a move, and I never found a drop of water escape from it except by the proper channel. So far, therefore, it appears I have been fortunate. *Henry Joyce, Brantridge Park, Balcombe, Sussex.*——I am of the same opinion as "Veritas," (see p. 246), respecting the Hydropult, and I endorse his remarks in every respect. In consequence of the flattering advertisements I saw regarding it, I made a trial of one of the machines, and after using it three times I put it away, for the very same reason as that mentioned by "Veritas." I have since substituted one of Warner's American Garden Engines, which in my opinion is far superior to the much overrated Hydropult. My men are much pleased with the American machine, but the Hydropult they despise. I have no wish to run the implement down, I may have had a bad one, but it is certainly inferior to Warner's; it may do in a small villa garden, but it is of little use in large establishments. There is one thing I certainly object to, and that is, persons not giving their names and addresses when criticising important subjects like that now under notice. *Edward Bennett, Gr. to G. S. Foljambe, Esq., Osberton Hall, Worksop.*——I am indebted to this, and feel anxious to pay my good word honourably. I have no wish to over-rate—a course that has brought it, and brings everything so treated, into trouble at last; still less do I wish to give faint praise. I find it far more useful than a syringe; the discharge is copious, and so quickly repeated as to be almost continuous. The green flies lose their legs and are gone before they can find them again. No syringe can deliver the same quantity of water in the same time; water cannot be thrown so lightly to a distance from a syringe; nor is the jet of any syringe equal to that of the Hydropult for searching corners, and rebounding water on the under surface of the leaves of climbers; tender shoots at a distance will bear a stroke of nearly the full force of this jet without hurt, and with much benefit; it is also very easy to aim this stroke. It does not supersede syringes, but for a general house wetting none are equal to it. My gardener is a dwarf, having been burnt when a child; yet he works it with ease; the foot gets a little wet at times, and it would be an improvement if this were obviated. Still it is but slight, and less annoying than a wet shirt sleeve. It beats the syringe also in this respect—you can bathe your plants to your wish without any labour whatever to yourself, by guiding the stream from your man's working. I have had mine one year, and shall buy another when it is worn out. *Henry Cavendish Browne, Dungarvan, Co. Waterford.*

Rhododendron Thomsoni.—A beautiful plant of this Sikkim species was in full flower a short time ago at Fairlawn, near Sevenoaks, the seat of J. Ridgway, Esq.; between 40 and 50 heads of bloom were fully out on it, and although the plant was surrounded by the choicest kinds of hybrids, it stood out from among them in bold relief, and undoubtedly possessed merits to which none of them could lay claim. The colour of the flowers is rich carmine, the substance of the tube firm and leathery, and undeniably the florets are large and handsome. The plant, I believe, has flowered before at Fairlawn, but of this I am not certain. The situation is one fully exposed to the south and east. A few high shrubs shelter it from the west, and in the distance a belt of Yews might screen it a little from the north. R. Wallichianum had also flowered in the same border, but less satisfactorily; R. Edgworthii and others are also under trial out of doors. A fine plant of Desfontainea spinosa was pointed out to me as having flowered beautifully for several years, while under glass the noble R. Dalhousiæ has flowered splendidly this season. *J. R.*

Eucalyptus globosa.—A fine plant of this is now in bloom in a large conservatory here. As it has been in the same situation many years, and never previously flowered, I shall be glad to know if this is an unusual occurrence. The flowers grow singly, except one cluster of four. *J. B. T., Barton Seagrave, May 10.*

Foreign Correspondence.

The Winter on the Riviera: The Spring in North Italy.—The winter which has just passed has been one of the most severe, if not the most severe, of the present century in the south of Europe. Snow has fallen at Malta, and ice has been seen at Alexandria, at Cairo, and even at Suez. Some of your readers may feel an interest in the state of the temperature in the Riviera, the Undercliff of Western Europe, and I therefore trouble you with the following details.

The mountain chains of Switzerland and Savoy reach the Mediterranean between Genoa and Nice or Cannes under the name of the Maritime Alps. On the shore at their feet is a ledge of habitable country, which may be compared to the Undercliff of the Isle of Wight, and is known under the name of the Western Riviera. Exposed to the direct rays of the southern sun, and protected from the northern winds by mountains many thousand feet high, it enjoys a very exceptional winter climate. Indeed Palermo, which is 6° more south, must be reached to find as warm a region as the more favoured parts of the Riviera, such as Mentone and St. Remo. My excursion to Sicily, of which the details were given this time last year in your Journal, proves that such is really the case. Mentone, more especially, is the region of the Riviera where the vegetation indicates the greatest amount of winter warmth and the greatest protection from winter cold. In no other part are seen such extensive groves of Lemon trees; nor do they only occupy very sheltered ravines, or orchards protected by single walls, as in the other favoured regions of the Riviera. In the eastern bay may be seen quite a forest of Lemon trees creeping up the side of the mountain, and extending from the sea shore. Several winters passed at Mentone had familiarised me with the usually mild climate of the locality, and had led me to believe that severe cold would be fatal to its vegetation. I have been therefore quite taken by surprise to find how little real damage a very exceptional amount of cold has done.

On the 6th of February snow began to fall, with an east or north-east wind, and covered the ground an inch deep. Although the clouds dispersed and the sun shone forth the next day as usual, the temperature remained unusually low. The thermometer went down to the freezing point every night, and on the sea-shore and at the mouth of ravines leading up to the higher mountains, where they are down draughts, to four, six, or eight degrees below freezing. The snow remained on the ground on the shore, and in north aspects behind the houses, for nearly a week, a circumstance which I had never witnessed during the previous winters, and which the educated inhabitants state had not occurred for more than a quarter of a century. The results of such severe weather on the peculiar vegetation of this region are interesting.

The Olive trees which cover the mountain sides, magnificent in size, and of a hoary old age, and which constitute the chief arboreal feature of the country, were not injured in the least by the exceptional cold. This fact tallies with the extreme age of these trees; no cold ever experienced in the Riviera, even once in a century, can damage them. Many were, however, greatly injured by the unusual fall of snow. The branches of the Olive tree are generally given off near the ground, two, three, or four in number, and extend, at an acute angle, some 20, 30, or 40 feet. These branches have no pliability or elasticity; indeed, they are nearly as rigid as metal. The foliage being terminal, as in most evergreen trees, the snow which falls rests on their extremity, acting on the branch like a weight at the end of a long lever. Hence numbers of immense branches, hundreds of years old, were torn off from the parent stem and strewed the ground, occasioning great loss to the proprietors. This devastation clearly shows that Olive trees are not made to bear the weight of large masses of snow, and that such a fall must be considered a very unusual, indeed unnatural, circumstance. The Coniferæ which inhabit snowy regions have mostly branches which do not radiate far from the parent stem; these branches also, being full of turpentine, and of an elastic structure, can bend under their winter load of snow without breaking, and can thus either shake it off or give way beneath it without injury. This is another manifestation of the admirable manner in which trees are adapted by nature to the atmospheric phenomena of the region where they are destined to exist. Even could Olive trees grow and flourish in a northern climate, they would soon be despoiled of all their branches by the mere weight of the winter snows.

The Lemon trees certainly showed a more vigorous constitution than the inhabitants of the South of Europe give them credit for. Those that were only exposed to two or three degrees of frost were not injured in the least. A degree or two more killed the young shoots at the circumference of the tree, but it was only in the lower part of the coldest ravines or torrents leading up to the highest mountains that the trees were destroyed. In some such regions, however, entire orchards were killed. Although individual proprietors were thus injured by the loss of their Lemon trees, the district as a whole was not materially damaged, the immense majority of the trees having escaped. Indeed it struck me that the destruction, where it occurred, is to be explained by the proprietors having been tempted by the great profit attending the culture of Lemon trees to extend it to exposed unsheltered regions, which do not give them the protection they require in exceptional years, even on the Riviera. The fruit was destroyed in many places where the trees were uninjured, or only the small shoots nipped. I presume that two or three degrees of frost really has this effect.

In other respects the only effect of the unusual cold was to retard spring. The Roses, Stocks, Marigolds, Salvias, Anemones, Violets, Pansies, Verbenas, &c., continue to flower as usual in sheltered gardens throughout the winter, showing how slight the cold must have been a few miles from the ground, and how great the influence of the sun in protected localities. Where the Lemon trees were killed, on the contrary, every flower was destroyed to the ground.

On the 8th of April, when I left Mentone for a town in the Italian lakes, summer had regularly commenced in the Riviera. The spring flowers were passing away, and those of early June had made their appearance; the days were warm and cloudless, the nights cool and pleasant, the thermometer never going below 50°. The mountain sides were clothed in verdure, and perfumed with wild Thyme, Rosemary, and mountain Lavender; the Willows and Poplars were in full foliage. On leaving Genoa, and passing the protection of the Apennine chain, a great change was seen. Winter still reigned in the plains of Lombardy; the trees were leafless, the hedges and ground bare. Indeed, the spring was not more advanced than it usually is in England at the same time, owing evidently to exposure to the north winds. Nothing can be more dreary and monotonous than the fertile plains between Turin and Milan as I have recently seen them. They are perfectly flat, and merely divided by ditches or small canals bordered with Pollard Willows, or Poplars still devoid of foliage. Along the line of railroad these plains are principally cultivated with Rice, and the spring operations were in full operation. Part of the country was under water from artificial irrigation. The process seems to be, firstly to plough the fallow land, to divide it into sections of from 10 to 20 acres by banks of mould 1 foot high, and to let in water so as to thoroughly saturate the ground. The water is then let off, the Rice sown, and later the field is again covered with water to the depth of two or three inches.

The Italian lakes, Iseo, Como, Lugano, &c., are immediately surrounded on the north, north-east, and north-west by very high mountains, and thereby obtain that protection from the north which appears to exercise so much influence on climate. Thus summer appeared again to have been reached. The gardens were full of early summer flowers, the Hazel, Willows, Poplars in full foliage, Camellias, Azaleas, and Rhododendrons growing and flowering in the open soil; the former were 20 feet high or more and large in proportion, and covered with myriads of beautiful flowers. The temperature was about 64° all day in a north room; indeed the more I have studied the climate of the south of Europe the more convinced have I become that protection from the north and north-east has much more influence in securing a mild temperature and southern vegetation than mere latitude. *Henry Bennet, Bellaggio, Lake Como, April 17.*

Societies.

LINNEAN: *May* 5.—G. Bentham, Esq., President, in the Chair. Dr. J. Kirk was elected a Fellow; and Prof. Moris and Prof. Steenstrup, Foreign Members. The following Papers were read:—1. "Note on Cœnurus," by Dr. Cobbold.——2. "On four new genera of plants of Western Tropical Africa belonging to the natural orders Anonaceæ, Olacaceæ, Loganiaceæ, and Thymelaceæ, and on a new species of Paropsia," by Prof. Oliver. The names of the new genera were Piptostigma (Anonaceæ), two species; Rhaptopetalum (Olacaceæ), one species; Leptocladus (Loganiaceæ), one species; and Octolepis (Thymelaceæ), one species.——3. "On Walleria, a new genus of Conantheræ," by Dr. J. Kirk. Two species were described, W. nutans and W. Mackenzii, both discovered in the mountains of Eastern Tropical Africa, at an elevation of 4000 feet, and not far from the mission station of the late Bishop Mackenzie, by Mr. Horace Waller, "one of the few survivors of the ill-fated mission to which we owe many additions to the flora of that region." The Conantheræ, it was remarked, differ from other Liliaceæ in the semi-adherent ovary, and in the anthers not being versatile, and opening by pores. The amount of adhesion, however, varies, and in one of the genera the anthers open by longitudinal valves. The characters of the group were stated to be most fully represented in Conanthera and Cumingia, which differ from each other in the perianth of the one being 6-parted, of the other campanulate; in these the stamens were described as united near the apex in the manner of Solanum. Zephyra has two of its stamens abortive, and represented by curved filaments, whilst the fertile anthers are spurred at the base. Cyanella has not only the habit but the structure of this group, the ovary being half immersed in the stalk, and the stamens opening at the apices. In Pasithea the ovary is semi-adherent, but the stamens open by longitudinal valves, thus offering a transition to the ordinary structure of the Anthericeæ. Walleria likewise connects the two groups, for while retaining the staminal arrangement of Conantheræ, it has the ovary of Anthericeæ.——4. "On a Species of Chætopterus from North Wales," by J. Williams, Esq., in a letter to Dr. Baird.——5. "Note on Cygnus Passmori," by the Rev. W. Hincks.

ENTOMOLOGICAL: *April* 4.—F. Pascoe, Esq., F.L.S., in the Chair. Mr. F. Smith gave some further evidence on the supposed luminosity of Fulgora candelaria, known in China under the name of the Star of Confucius, as he had been informed by Sir John Barrow. Mr. Bates on the contrary stated that he had kept the F. lanternaria alive, but he had never found it to be luminous, nor did any tradition or rumour exist among the native Indians as to its emitting light. Mr. Butler exhibited a number of insects imbedded in amber and gum animé, of which some description was given by Mr. Newman. Mr. Pascoe made a further communication on the Longicorn beetles of New Holland, of which he described 40 new species, in addition to those comprised in a previous memoir. He also made some observations on the characters to be obtained from the structure of the underside of the body of those insects. Mr. A. R. Wallace exhibited a remarkable series of species of Papilio, collected by himself in the Eastern Archipelago, presenting some singular instances of dimorphism, trimorphism, and even polymorphism in the females of certain species of which the males appeared only under a single form. This was especially the case with Papilio Pammon, P. Memnon, and P. Ormenus. Professor Westwood exhibited a very fine Papilio from Ceram, recently received by the Museum of Oxford from the Museum of Leyden, which he considered to be a large local form of P. Peranthus, but which Mr. Wallace regarded as a distinct species. He also read descriptions of a new species of walking leaf insect from the Fee-jee Islands, and a gigantic new Heteropteryx, to which he applied the name of H. Hopei. The Rev. Hamlet Clark read some extracts from letters received from Mr. John Gray, who was collecting insects in the Cape de Verd Islands. Mr. Douglas Timins forwarded some notes on the insects observed by him during the winter months in the neighbourhood of Cannes. General Sir J. B. Hearsey exhibited a volume of drawings of the Transformations of the Lepidoptera of India, executed by one of his daughters. Mr. S. Stevens exhibited a variety of insects recently forwarded by Mr. Diggles from Moreton Bay. Mr. F. Smith read a Memoir on the Construction of the Nests of Wasps and Bees, in which he opposed the theory of Mr. G. R. Waterhouse developed in a paper read before the Society at a previous meeting.

Notices of Books.

The Summer of 1864 *: founded on the Vernal Equinox. With Observations on the Summers of England, coupled with Remarks on the Locality and Meteorology of Great Britain.* By Thomas Du Boulay.

In a pamphlet of scarcely seven pages, it cannot be expected that the subjects mentioned in the title just quoted, can be deeply entered into. In the first place the author gives the forecast of the coming season. The summer of 1864 in England promising, from the character of the Vernal Equinox, to be a remarkable one, it was considered desirable, at as early a period as was possible, to record publicly the general character of what was expected. Accordingly, in the *Mark Lane Express* of March 28, appeared the following:—"The still, warm, dry, but not productive summer of 1864." We do not see that the stillness and warmness of the season, has much to do with unproductiveness. The sum and substance of the "Forecast" is, that owing to dryness, most agricultural crops may be below the average.

The author bases his predictions on the character of the equinoctial week, or from the 18th to the 25th of March. "An ordinary equinox is followed by an ordinary summer, and predicts it; and an extraordinary equinox predicts, and is followed by an extraordinary summer, and one like it in character." Such may happen to be the case occasionally, but our author gives us no facts or figures to prove that it is generally so, either on the present occasion or in former years. In 1862 he directed attention to the numerous weather tables which had been published. We referred to a series of these, taking a portion of about 10 years, and found that the equinoctial period of 1851 was, certainly a remarkable period, 1½ inch of rain having fallen in the week. The months of May, June, July, August, September, which that period should typify, according to the author, ought to have been excessively wet; but on the contrary, the weather on the whole was fine, and the quantity of rain was less than usual. In that year the precarious basis of the "forecast" completely gave way; but that year may have been an exceptional one. Then let us take the next year, 1852. March of that year was remarkably dry, for in the whole month there fell only ¼ inch of rain, and in the equinoctial week, not one drop. Surely then the author would have predicted a very dry summer, and consequently a short crop, as he has done under similar circumstances in the present season. But what followed: in June there were only four dry days, the amount of rain for that month being nearly 5 inches; in July the supply was ample; in August and September the quantity was again much above the average; and altogether the five months typified to be dry proved exceedingly wet. The summer which the preceding equinox typified to be very wet, proved drier than usual; whilst that which the next equinox typified to be very dry proved excessively wet. Taking these facts into consideration, all that can be said of the predictions in the pamphlet before us as to the summer of 1864 is, that instead of being correct they are just as likely to prove the contrary, and are of no value whatever. ||

Of the *Useful Knowledge Society's Family Atlas* (Stanford), in our opinion the best of these valuable works now in course of publication, Parts III., IV., V., VI., and VII., are before us, and they fully maintain its high reputation. The whole work will be comprised in 20 parts in imperial 4to, at the extraordinarily low price of 2*s.* 6*d.* each coloured. What a charming present for young people!

Garden Memoranda.

MESSRS. CARTER & Co.'s NURSERY, FOREST HILL.—There is now in full bloom here quantities of the showy early flowering bulb, Ornithogalum thyrsoides, the great conical-shaped snow-white flower heads of which, borne well up as they are on stout stems, are conspicuous even at a distance, and, intermixed with other plants on a greenhouse shelf, have a fine effect. Among Pelargoniums of the zonate class in bloom Snowball stood in the first rank; it is of the same type as Madame Vaucher, but superior to that variety; it bears a fine large truss of flowers, the petals of which are pure white and of great substance. The habit is compact, the foliage rich green with a well marked dark zone on it, and altogether it must be considered an acquisition either for out or in-door decoration. Cybister is a good scarlet of the Nosegay breed; and among delicate rose kinds none were superior to Lady Cullum. Bel Demonio, Monitor, Mrs. Whitty, and Beaton's Pet, are also worthy of attention, possessing as they do bright lively colours and a good habit. Among bedding plants, of which Messrs. Carter have many thousands now out of doors hardening off for flower garden decoration, consisting of variegated and other Pelargoniums, Lobelia speciosa, Verbenas, Gazanias, Calceolarias, &c., was a golden variegated Balm which in the formation of ribbons cannot fail to be useful; it is very hardy, and in some situations might be quite as effective as Golden Chain Pelargonium. Under glass are good collections of both stove and greenhouse plants, and even of Ferns, some charming baskets of which were suspended from the roof of a house almost wholly devoted to them. These may also be seen in the window of Messrs. Carter's shop in Holborn, where, being cheap, they meet with a ready sale. Of Grape Vines a long house is crammed full, and we also noticed fine plants of all the leading varieties of them out of doors—the latter in excellent condition for fruiting. Of Clianthus Dampieri, the brilliant scarlet kind, with a large black boss in the flowers, there is here said to be an improved variety called splendens. This, however, we did not see in flower. A variegated Cobœa scandens adorned the roof of one house with interesting leafy drapery, under the shade of which Swainsona violacea, and a large collection of half hardy plants of similar description, appeared to be growing with unusual activity under the skilful management of Mr. Boston, Messrs. Carter's cultivator. Out of doors a new trial ground is being formed, which in summer will be kept gay with bedding plants. It is laid out in long straight beds, separated from each other by means of gravel walks edged with Spergula. Here new bedding plants are every season to be proved; visitors therefore will have an opportunity of forming an opinion respecting their comparative merits for purposes of out-door decoration.

MESSRS. E. G. HENDERSON'S NURSERY, WELLINGTON ROAD, *May* 6.—The fine display of hardy early bedding Tulips, for which this place has long been famous, was never better, if ever so good as at present. Time has enabled the Messrs. Henderson to perfect the selection; the steady weather of the past few weeks has allowed both the plants and their blossoms to fully develope themselves, and blanks being totally absent, the great extent occupied by the plants, nearly 300 feet by 50, affords a wondrous treat, whether gazed at as a whole or examined bed by bed. When people come from long distances to see this display, he must be rather a cold-hearted Marylebonian, who hearing of its unusual perfection, as we did, could resist the temptation to go and see. But there are more things in the Wellington Nursery, excluding the better known departments, than "are dreamt of in the philosophy" of gentlemen who tell you that the days of good hardy alpine and herbaceous plants are past, for the collection of these under the management of Mr. Jennings—than whom no man loves, grows or propagates them better, and who also does the Tulips and Florists flowers—is truly a magnificent one, taking the fashion of the day, and the ungenial air and soil of the neighbourhood into consideration. The existence of such a vast and increasing collection in a nursery which takes such a lead in the distribution of new varieties of bedding plants, is certainly indicative of a change in the public taste—a change which has indeed already set in.

Walking along the Tulip ground we passed, on the one hand, a fine border of Dodecatheon Meadia gigantea; on the other, a charming batch of Myosotis sylvatica in full beauty—a pleasant sight in St. John's Wood; whilst the space at the end of the Tulip ground is occupied by a large stock of the very best things carefully attended to, and all grown in pots, which of course prevents the attainment by the nobler species of the perfection which they attain when at full liberty in a congenial soil. But the Sedums, Saxifrages, and such little things are quite at home; and though the Irises, Aquilegias, &c., may not reward with all their charms the spirited proprietors, yet they are in the best condition to do so when planted out. In this quarter we particularly admired Dodecatheon splendida and integrifolia; a deeply-coloured new variety of Aubrietia, quickly being increased for sending out; a dark violet form of Iris pumila; Lithospermum fruticosum, of an almost unrivalled blue; with the golden-lined and silver-edged forms of Lily of the Valley; Thalictrum anemonoides fl. pl., an exquisite little thing among double flowers; and a fine collection of Trollius coming well into bloom, though in 48-pots.

Turning a corner for the purpose of devoting a few more minutes to the planted-out division of the herbaceous plants, a spot of deep dark blue was observable a little way off, which on closer inspection proved to be Gentiana verna in all its beauty—a delightful discovery, and perhaps an amusing one to those who may be able easily to grow it in some sweet country spot, where the sparrows are not black. Some fascinated customer had bought nearly the whole of it. Curiosities and pretty little doubles, such as Sagina apetala fl. pl.; the double Ficarias, white and yellow; Hose in Hose and other curious Primroses, were more abundant than we have seen them elsewhere. Pæonias in great diversity monopolise a large portion of the ground devoted to the very largest herbaceous plants and bulbs. P. tenuifolia flore pleno, with very finely cut Fennel-like leaves, was in great force, and coming into flower in a very dwarf state, some indeed beginning to open at 4 inches high, though many were larger; Ranunculus bullatus flore pleno, a very large and choice double yellow, was in flower here, as was Narcissus bicolor, perhaps second to none of its genus.

The hardy Cypripediums are now planted out and grown at the Wellington Nursery very successfully. Several yards of a border devoted to C. spectabile reminded us of an Asparagus bed, so strong were the young shoots pushing up. C. acaule was well above ground, and very plentiful, as was C. Calceolus. These when in flower will afford a treat not easily to be had elsewhere. In one of the large "cradles" devoted to variegated and singular-leaved plants was a large but rapidly dispersing batch of Chamæpeuce diacantha, a fine plant, flanked on one side by several hundred of Diotis maritima, on the other by the fine new variegated Comfrey, and in front Achillea ægyptiaca and A. Clavennæ, two plants admirably suited for planting out in summer. Among hardy variegated plants, which are always to be found here in abundance, Phytolacca decandra looked a well marked thing; but the most strikingly so of the new variegated plants was Cheirantus Marshallii variegatus, which is quite a gem. *W. R.*

Miscellaneous.

Stocks for Vines.—Shortly after the introduction of Snow's Muscat Hamburgh, a great many gardeners, and myself among the number, prophesied that it would soon slip out of cultivation, even that its excellent quality would not sustain it, owing to constitutional debility; and judging from the ordinary way in which Grapes are grown, there existed cogent reasons for the supposition. The result of my experience, after having grown it for three consecutive years, is, that I could never produce a sound bunch; more than three parts constantly shanked, while many of the berries not unfrequently remained green to the last: not grown on its own bottom, but grafted in a shoot of the Golden Hamburgh. What staggered me, and set at defiance every attempt to solve the problem, no shanking ever occurred with the Golden Hamburgh; many of the bunches exceeded 3 lb. in weight, and many of the berries were 3½ inches in circumference. We would naturally suppose, under such circumstances, the Muscat Hamburgh could find no excuse for shanking, unless under the plea of pertinacity; however, its unsatisfactory proceedings eventually led to its expulsion. Three years next June I went to see Mr. Snow, of Wrest Park, who, I am informed, stands sponsor to this Grape; and here it failed to exhibit itself to much better advantage than elsewhere. It also may be noticed, that I have never seen it produced at our metropolitan or provincial shows, in a state to deserve attention, till entering the exhibition rooms of the Edinburgh Horticultural Society last September, my eye caught the noble bunches produced by Mr. Fowler, gardener at Castle Kennedy. While telling Mr. Thomson of my unsuccessful efforts, he at once said—"Graft it on the Black Hamburgh and your troubles will cease." So, without one word more, off we started to see his performance. Judge of my surprise to find ordinary sized canes, the produce of grafts put on in 1862, each carrying six bunches, many of them considerably over 5 lb. in weight, without a shanked or deformed berry. This utilitarian stroke, if I may use the expression, at once convinced me that Mr. Thomson's experiment was a decided success, and I at once resolved to put it into execution. While discussing this matter, the conversation turned over to the question, "What is the best stock on which to work delicate growing Vines?" when Mr. Thomson at once introduced the Black Hamburgh as the best qualified for every purpose; nor does our present knowledge allow us to impugn the validity of his statement, more particularly when looking at what he has accomplished in the case of the Muscat Hamburgh. But, said he, "the Barbarossa is the worst—no Grape is found to do well on it." This I know, to my extreme regret, to be experimentally true. When this useless variety was first introduced I planted nearly the whole of our late Vinery with it, but ultimately, owing to its bad flavour, I found it necessary to cut it down, and had it grafted with the following kinds:—White Muscat of Alexandria, Golden Hamburgh, Black Hamburgh, and Lady Downes' Seedling, neither of which, with every care and attention, could be made to produce more than half a crop, and that of so miserable a description as to induce me to keep every one out of the house unless upon business. The bunches were long and straggling, the berries set imperfectly. I have nothing to complain of in the way of shanking, but the stems yearly shrivelled, and the skin became as tough as Morocco leather. The border cannot be charged with any defect, as in the same house West's St. Peter's yearly produces excellent crops. In one of our early Vineries the Barbarossa has been used as a stock for the Buckland Sweetwater, and although the effect is not so decided as in the former case, the inferior condition of the fruit fully testifies that the deteriorating influence is at work. The above detail has caused me to wander somewhat out of my way. I can only claim the liberty of having done so in my anxiety to prevent others running into the same mistake, and to support with praccal testimony the truth of Mr. Thomson's assertion. *A. Cramb, in Scottish Gardener.*

Calendar of Operations.

(*For the ensuing week.*)

SHOULD the weather set in dry, as has been predicted by some, it may be well to state that in flower gardens, and other ornamental grounds, artificial waterings will be often required; but where mulching cannot be used, if high keeping is desired, it will be of importance to stir the ground where it can be done before the water is administered, and in applying the latter be sure to do it effectually. Continued soaking must not, however, be practised; on the contrary, the cultivator must exercise his own judgment in determining when plants are suffering from drought, and when the soil is in a fit condition to receive an artificial supply of moisture. If the weather is hot, rapidly growing plants may be watered abundantly with impunity in the afternoon or evening of most days; but in the case of more delicate things, sufficient time ought to be be given for them to absorb the moisture thus applied, or the air to dry it up, for unless air as well as water reaches the roots, vegetation will not thrive, and the labour expended in watering will be thrown away.

FLOWER GARDEN AND PLANT HOUSES.

The great abundance of plants which will be in flower at this season will render conservatories and show houses very gay and attractive; great care should therefore be used to keep everything neat and clean. Insects at this season must have incessant war waged against them, for if they are allowed to accumulate the consequences will be serious. Examine the state of the borders in which permanent plants are growing, and if it appear necessary dig them over and remove some of the old soil, replacing it with fresh compost. Give Oranges and Camellias, as well as any other free-growing plants which require to be pushed on, an occasional dose of clear manure water. Plant rooted runners of Neapolitan, Russian, and Tree Violets, in beds previously prepared by the addition of fresh compost, at from 7 to 9 inches apart, and take care during the season to give them abundance of water; propagate also spring-flowering plants, such as Alyssum, Iberis, Arabis, Wallflowers, &c., to be planted in the reserve garden when rooted.

BEDDING PLANTS.—These may now be put out; begin with the hardiest and best hardened plants, such as Verbenas and Calceolarias, leaving tenderer sorts, such as Heliotropes, Petunias, Salvias, and others likely to suffer from even a slight frost, for another week or 10 days yet. Tender Annuals may also now or soon be planted; choose dull days for the operation, and water through a fine rose, to settle the soil about the roots.

RANUNCULUSES.—Seedlings will now require particular attention; every means should be adopted to ensure luxuriant growth, for according to the stoutness and vigour of the foliage will be the size of the roots, and if they take up well a good bloom may be expected from them the succeeding season. Those in beds should be kept clean, removing weeds, if any, at an early period, before their roots get entangled among those of the Ranunculuses.

ROSES.—These should now have plenty of liquid manure, and occasionally a good syringing with clean water over head.

TULIPS.—Protect choice kinds from drenching rains should they occur, and from other vicissitudes of weather.

FORCING GARDEN.

CUCUMBERS.—Stop, thin, and water freely. See that the ball of earth, in plants newly put out, is well soaked with water previous to planting.

MELONS.—Encourage those newly planted out with a moist warm atmosphere, so as to get them into full growth as quickly as possible; but plants that are fairly established should be kept cooler, admitting air on every favourable opportunity, in order to secure short-jointed fruitful wood. Keep the shoots thin and regular, pinching out any not wanted, but avoid stopping the main shoots until they reach the sides of the pit, when by pinching out the points the laterals will start into growth and show fruit abundantly; and by this time the plants will have gained sufficient strength to set and carry a fair crop. Do not exceed 65° at night, and admit air when the thermometer rises to 75°, but do this very carefully on cold days. Endeavour to maintain a steady bottom-heat of about 80° or 85°, and keep the soil in a healthy state as to moisture. See to providing young plants for succession crops.

PINES.—Attend carefully to the bottom-heat, particularly where this is produced by fermenting materials, as tan, &c., and see that it is not allowed to rise too high, which it is apt to do after fresh materials have been added, either during bright weather or where there are pipes under the bed. Where much fire heat is used it requires some experience to be able to keep the soil in a proper state as regards moisture, but this must be effected at any expense of attention if success is to be insured. Maintain a thoroughly moist atmosphere, but do not push young stock too fast. Avoid allowing water to lodge in the hearts of plants showing fruit, and spare the flowers of those in bloom in syringing. Pot off or plant out suckers as they can be obtained sufficiently strong, and attend to keeping up regular successions.

VINES.—Put everything into proper working order in late houses; also get the rods bent in time to induce the buds to push regularly. Attend to disbudding and stopping, &c., as may be necessary, in succession houses, and see that inside borders are kept properly moist, giving tepid manure-water as may be necessary to effect this.

HARDY FRUIT AND KITCHEN GARDEN.

Disbudding wall-fruit trees will now be occupying attention, and is an operation so important that we would call particular attention to it; for, by following it up carefully and judiciously during this and next month, scarcely any winter pruning will be necessary, which is of great advantage, more particularly to stone fruits, which are in general impatient of the knife; all over luxuriant shoots should be timely and entirely removed, unless they are required for filling up blanks, in which case they must be kept stopped, so as to throw strength into the weaker branches; let this process of disbudding be followed at each manipulation by powerful syringings with the garden engine for the dislodgment of insects and cleansing the trees; clean soft water will answer for most purposes, but if aphides are numerous, a solution of tobacco water must be added. If the weather is dry, water and mulch newly planted fruit trees.

BROCCOLI.—Prick out into beds preparatory to planting in quarters hereafter.

CABBAGES.—Plant out and sow for succession.

LETTUCES.—Keep up successional sowings of these as required.

PEAS.—Stake those progressing, and sow others for succession.

TURNIPS.—Make another sowing of Orange Jelly, Nonsuch, or Stone.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending May 11, 1864, as observed at the Horticultural Gardens.

May.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain
Thurs. 5	28	29.933	29.894	60	32	46.0	53	51¼	S.E.	.00
Friday 6	●	29.945	29.777	68	40	54.0	53	51¼	S.E.	.55
Satur 7	1	29.805	29.776	69	39	49.5	54	52	N.E.	.10
Sunday 8	2	29.740	29.629	56	43	49.5	55	52	N.	.02
Mon. 9	3	29.743	29.590	57	48	52.5	53	52	N.E.	.25
Tues. 10	4	29.879	29.856	61	45	53.0	53	52	E.	.02
Wed. 11	5	29.862	29.801	55	47	46.0	54	52	E.	.01
Average.		29.844	29.603	60.8	40.7	50.2	53.5	51.8		.98

May 5—Overcast; cloudy; overcast.
— 6—Foggy; very fine; heavy rain at night.
— 7—Heavy clouds; exceedingly fine; rain.
— 8—Lightly clouded; fine; very fine; cloudy; rain.
— 9—Cold rain with brisk N.E. wind; cloudy.
— 10—Partially overcast; fine; overcast; rain.
— 11—Small drizzling rain; overcast.

Mean temperature of the week exactly equal to the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending May 21, 1864.

May.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 15	64.8	41.1	52.9	14	0.46 in.	6	6	6	—	2	13	3	2
Mon. 16	66.1	43.0	54.6	15	0.34	2	7	4	1	4	12	4	4
Tues. 17	65.5	41.7	53.6	15	0.58	2	7	4	1	4	12	4	4
Wed. 18	65.3	42.7	54.0	17	0.17	2	8	5	3	3	11	5	1
Thurs. 19	66.2	43.1	54.6	13	0.50	2	8	7	2	4	5	3	1
Friday 20	66.3	43.3	54.8	18	0.44	2	7	7	3	4	10	1	4
Satur. 21	66.3	44.5	55.4	16	0.36	3	7	10	2	5	6	3	2

The highest temperature during the above period occurred on the 13th and 17th, 1833—therm. 85 deg.; and the lowest on the 15th, 1850—therm. 25 deg.

Notices to Correspondents.

BOOKS: *Grape.* Thomson's Treatise on the Vine, noticed in our columns at p. 558, 1863, may possibly suit you.

DANDELIONS: *Medicus.* As you are a Fellow of the Royal Horticultural Society you may obtain any reasonable quantity of Dandelion seed and roots in the Society's Garden at Chiswick, where the plant is flowering and spreading magnificently.

GYNERIUM ARGENTEUM FOL. ALBO-LINEATIS: *W Bull.* Very distinctly and neatly striped with creamy white. This must be an acquisition amongst variegated plants.

INSECTS: *I O.* The beetles found on your Vines are the destructive weevil Otiorhynchus vastator, which is nocturnal in its habits, and which may be caught by laying a sheet under the trees and shaking them suddenly after dark, when the insects fall to the ground and should be destroyed.—*G G.* Tortrix vitisana.—*G W.* The insects sent are the black aphis of the Cherry and the small brown garden ant, which are attracted to the aphides by the saccharine matter they emit. The trees should either be fumigated, or well syringed with tobacco water or gas tar water, and subsequently with fresh water.—*W F.* The beetles sent are the destructive Hylobius Abietis, one of our largest species of weevil. We know no better mode of extirpating them than by employing children to hunt for them at the roots and on the bark of the trees. *W.*—*G B.* The beetles which burrow underground during the day beneath your Gooseberry and Currant trees, emerging at night to feed on the young foliage, are the Weevil, Otiorhynchus sulcatus. They are very troublesome to get rid of. Beat down the ground well beneath the trees, and water it with gas tar water. *W.*

MIMULUS. *W Bull.* One of the flowers sent is very large 2½ inches across, with irregular crimson blotches around the margin, and must be very showy. Another, not quite so large, is, however, more pleasing, the limb segments having a round spot of crimson surrounded by a ring of yellow, and this bordered by an edging of crimson. The most distinct is smaller still, and more in the way of Unique: copper-coloured, with a marking of confluent dots scarcely affecting the tint of the ground-colour, the middle segment of the lower lip yellow, with three parallel bars of crimson.

NAMES OF PLANTS.—*J J S.* Cyclamen hederifolium, with young fruit only.—*Edward.* Triglochin maritimum and Trichonema Bulbocodium.—*Sigma.* Cardamine hirsuta.—*F G.* A few withered leaves, without either flower or fruit, do not enable us to recognise it. If you will be good enough to forward some flowers we shall be happy to give you the information asked for.—*Lady G C.* 1. Spiræa lævigata; 2. An imperfect morsel of some other Spiræa, we believe trilobata.—*Andrew.* One of the many forms of Oncidium maculatum, but quite smashed by the letter stamper.—*A R K.* 1. Chrysanthemum frutescens, *alias* rigidum and regale of the French public gardens and flower markets; 2. Aloe Lingua.—*J G.* Cattleya intermedia.—*Rilvare.* The Florentine Salad plant is Poterium Sanguisorba.—*T. P.* Cerasus Padus, the Bird Cherry.—*G. Bath.* We take it for Sequoia aliàs Taxodium, sempervirens.—*W. H.* 1, Arbutus Unedo; 2, no flowers; 3, specimen quite insufficient; 4, Correa speciosa.

PEAR LEAVES: *T G.* The affection on Pear leaves is very common. It is not at present ascertained whether it is merely an unnatural development of some of the leaf cells, or the immediate work of a mite, or some other minute insect, which seems probable, as there is almost always an aperture in the centre. Whatever the cause may be, it does not seem to be injurious, except when it attacks the fruit, which is sometimes the case. *M. J. B.*

SAVIN FUNGUS.—*Dios.* Your Fungus on Savin is Podisoma Juniperi communis, a parasite allied to the common Wheat Mildew.—*R D S.* Podisoma Juniperi Sabinæ. The genus, as well as the allied genus Gymnosporangium, is confined to Junipers. They are perennial, and will probably destroy your tree if not carefully pruned out. *M J B.*

VIOLET LEAF FUNGUS: *T G.* Your Violet leaves are attacked by a parasitic Fungus, Polycystis Violæ, of which you may see a figure in the last number of the Popular Science Review. It is possible that some of the spots may be caused by Æcidium Violæ, but if so, the Fungus is not yet developed. *M. J. B.*

WEIGELA ISOLINE: *W Bull.* This hybrid of Van Houtte's must be a very useful white-flowered shrub, blossoming as freely as W. rosea, and quite pure in colour until the blossoms begin to fade. The flowers you sent looked exceedingly well by artificial light, so that it would be a good plant for evening decorations.

ERRATUM: In Messrs. Low & Co.'s Advertisement of Orchids May 7, p, 432, Huntleya should be 2 species instead of 21.

ODAMS'S BLOOD MANURE for CORN.
ODAMS'S BLOOD MANURE for ROOTS.
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LAWES'S MANURES.
The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:— Per Ton.

LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
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These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

American and other Cakes at market prices.

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Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE, Address 89, Seed Market, Mark Lane: or Basingstoke. Samples and prices on application.

PALM-NUT MEAL.—Manufactured by ALEXANDER M. SMITH & Co., Liverpool, delivered to Rail or Boat, at Liverpool, in bags of 2 cwt. each.

Marked AMS. L. Price £6 a ton.

Analysis and Report by Dr. Augustus Voelcker:—

Moisture	6.91
Fatty matters	26 50
*Albuminous compounds (flesh-forming matters) ..	14.93
Gum, starch, sugar, and digestible fibre	31.20
Woody fibre (Cellulose)	16.13
†Mineral matters (Ash)	4.33
	100.00

* Containing nitrogen, 2.89. † Containing silica and sand, 1.07.

"101, Leadenhall Street, London, E.C.—April 15, 1864.

"Dear Sir,—I have much pleasure in sending you the preceding analytical results, for they show that the sample of Nut-meal which you gave me for analysis possesses extraordinary fattening properties, in as much as it contains no less than 26½ per cent. of a beautiful butter like fat. You will notice that the meal contains about as much flesh-forming matters as the best Barley meal, and that the proportion of woody fibre is not large. The condition of the meal is excellent. In conclusion I beg to say that this valuable fattening meal must not be confounded with a description of cake made from Palm-nut kernels. The samples of Palm-nut kernel cake that have come under my notice were all quite inferior feeding materials. "AUGUSTUS VOELCKER, Ph.D.

"Consulting Chemist to the Royal Agri. Soc."

"To John Coleman, Esq."

Having been appointed by Messrs. SMITH, Agent for the sale of Palm-nut Meal, I shall be happy to supply samples and further information as to this valuable feeding material.

JOHN COLEMAN, 150, Leadenhall Street, E.C.

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For samples and prices apply to
J. SHAW & Co., 29, Oxford Street, Manchester.

Paxton Works, Sheffield, Established 1736.

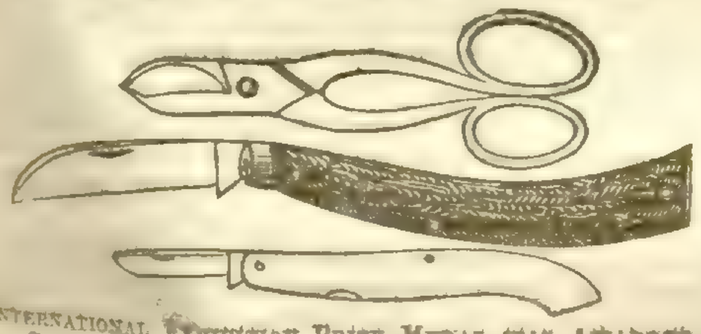

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CAUTION.—None are genuine unless marked SAYNOR. Other marks would cause disappointment, as these Knives are tempered by an improved process known only to the Makers.

To Owners of Landed Property.

A MANUFACTURING FIRM have for DISPOSAL a large quantity of ENCAUSTIC TILES damaged in the process of Manufacture, which they would be willing to deliver free on the Rail at a rate lower than the cost of the commonest description of Paving Tiles, enabling them to be used for Cottages and Farm-house Floors.

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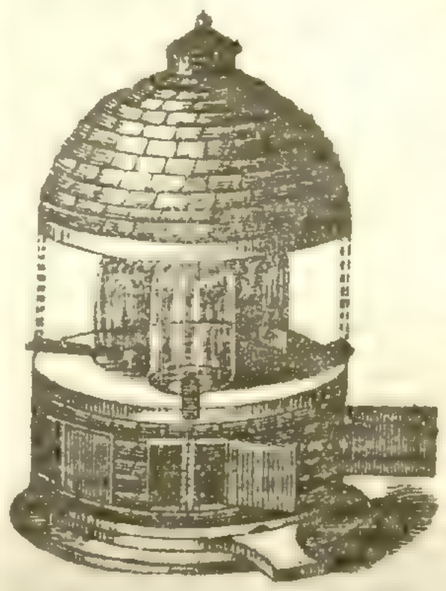

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Several important novelties are introduced this season, including the *Woodbury Straw Bar-and-Frame Hive*, price 21*s.*; with window, 25*s.* Also *Artificial Combs*, made of a size suited to the *Woodbury Bars*, to assist in the formation of cells.

Address, GEORGE NEIGHBOUR & SONS, 127, High Holborn, or 149, Regent Street, London, W.

Their newly-arranged CATALOGUE of other Improved Hives, with drawings and prices, sent on receipt of Two Stamps.

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Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments, and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.

Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.

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Incorporated by Special Act of Parliament in 1853.
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The Company advances money, unlimited in amount, the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster S.W.

THE GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY,
Offices: 52, Parliament Street, S.W.
HENRY KER SEYMER, Esq., *Chairman.*
J. BAILEY DENTON, Principal Engineer.

Under this Company's Act tenants for life, trustees, mortgagees, guardians, committees of incompetent persons, beneficial lessees, corporations (ecclesiastical or municipal), incumbents, charitable trustees, &c., may effect the following land improvements, and charge the outlay and expenses on the estate improved, by way of rentcharge, to be paid by half-yearly instalments, viz:—

1. All works of Drainage, Irrigation, Warping, and Embankment.
2. The Erection of Farmhouses, Cottages for Agricultural Labourers, and all kinds of Farm Buildings.
3. The Construction of Roads.
4. The Grubbing and Clearing of Old Woodlands, Enclosing, Fencing, and Reclaiming Land.

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No investigation of title being required, and the charge not being affected by encumbrances, no legal expenses are incurred.

The arrangements for effecting improvements are threefold:—

No. 1. The works may be designed and executed entirely by the landowner's agent, and the Company employed only to supply the loan and conduct the matter through all the official forms for charging the outlay on the estate.

No. 2. The Company will supply plans, specifications, and estimates for any improvements to be executed by the landowner's agent as under No. 1. In each of these cases the landowner will be solely under the control of the Enclosure Commissioners.

No. 3. The Company will undertake the entire responsibility of the improvements, prepare the plans, execute the works, and finally charge on the estate the actual amount expended, with their commission thereon, approved by the Enclosure Commissioners.

Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.

Works of Drainage and other improvements are also executed on commission for landowners, who merely require the skill and experience of the Company's officers and a staff in constant practice.

Applications to be addressed to WILLIAM CLIFFORD the Secretary, at the Office of the Company, 52, Parliamen Street, S.W.

MESSRS. WAY AND EVANS, ANALYTICAL and CONSULTING CHEMISTS, receive PUPILS for the study of AGRICULTURAL and GENERAL ANALYTICAL CHEMISTRY.

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MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.
SPRING SESSION, 1864.
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Council.

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Professor J. MORRIS, F.G.S., of University College, London—On GEOLOGY.
JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.
WILLOUGHBY WOOD, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.
JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.
JOHN THORNHILL HARRISON, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.
THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.
ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.
RICHARD GRIFFITHS WELFORD, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.

Applications for Admission and for further particulars may be made to the Principal.

Agricultural Hall, Islington.

SECOND INTERNATIONAL SHOW of FOX-HOUNDS, HARRIERS, DEERHOUNDS, GREYHOUNDS, BLOODHOUNDS, POINTERS, SETTERS, RETRIEVERS, SPANIELS, MASTIFFS, and all kinds of BRITISH and FOREIGN WATCH-DOGS, VERMIN KILLERS, and PETS, to be held at the Agricultural Hall, Islington, N., on FRIDAY, SATURDAY, MONDAY, TUESDAY, and WEDNESDAY, May 27, 28, 30, 31, and June 1, 1864.

By Order. S. SIDNEY, Secretary.

AGRICULTURAL HALL, ISLINGTON.
The HORSE SHOW will open JULY 1.
ENTRIES CLOSE on JUNE 13.

Prize Lists are now ready, and may be obtained on application to S. SIDNEY, Secretary.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE-ON-TYNE, July, 1864.
LAST DAY for Entry of Stock, Wool, and Butter, 1st June.
All Certificates received after that date will be returned to the senders.
Prize Sheets and Certificates will be forwarded on application to H. HALL DARE, Secretary.
12, Hanover Square, London, W.

The Agricultural Gazette.

SATURDAY, MAY 14, 1864.

OUR Correspondent "S. X." has forwarded us some specimens of a plant, with the following note, which we here transcribe for the purpose of directing attention to some important agricultural principles which we conceive to be involved in the question to which it refers:—

"S. X. will be much obliged to the Editor of the *Agricultural Gazette* to inform him the name and nature of the enclosed plant, which he never perceived before in a meadow which is now quite overrun with it. The meadow is in good heart, and for many years has given a heavy crop of hay, having been annually fed off by ewes and lambs in the spring, besides receiving abundant dressings of sewerage."

Now the plant sent was the Rhinanthus Crista-galli, the Yellow Rattle, which is usually an indicator of poor wet land, though we are informed that it is abundant in a meadow in good heart. We have then, in this case, two important points which seem to demand attention.

1st. How is the sudden appearance of the plant to be accounted for, and 2dly, what may we presume to be the real condition of the meadow in which it is so found?

1. We do not for a moment suppose that the season in which our correspondent first observed the plant was

the one of its advent in the meadow in question; on the contrary, we would rather believe that it was natural to the meadow and to the district around; and it has then been a rapid increase of it which has attracted observation. And how this increase has been brought about may perhaps be arrived at by considering that the meadow has for many years given a heavy crop of hay after spring feeding by ewes and lambs. Now, as the Yellow Rattle would form part of the rick, we have only to suppose that a season occurred, in which from wet or other causes, the hay could not be made until the seeds of the Rattle had ripened*—a circumstance indeed likely to occur where hay is taken after depasturing, and the seeds would then be sown, and so multiply the pest for another season. Whether this was precisely the manner in which this weed of pastures has been here increased to the extent indicated we are not prepared to vouch, but we feel assured that the plant has been there for a length of time, and that it has increased from allowing its seeds to ripen.

2. At first sight one should suppose, from the description, that the condition of the meadow is extremely good; still, from the evidence before us afforded by the spread of the Rattle, this indicator of impoverished soil, we feel assured that its constant hay-making has taken away more fertilising material, more phosphates, more bones, than would at first sight appear, and than are restored by the sewerage; and, if so, we conclude that the richness of the meadow is diminishing. Sheep do not add to this, but rather aid in its diminution; true, sheep manure the land so as to augment the hay crop—still, however, at the expense of the land, not of the sheep; but this very fact, thus tending to a bulky hay-making—all the more surely hastens the decadence to which we have directed attention.

The statement, however, of the feeding off by sheep in spring, and the subsequent heavy crop of hay, though a seeming contradiction to the statement just made, will, upon reflection, be found to accord with it. There may be a quantity of keep, but this of a vapid and poor kind: hay off irrigated meadows has seldom what is called "proof" in it, nor, indeed, has the faster growing herbage—in general that quality which often belongs to the less crop-producing field. We hear of the enormous crops due to sewerage, but so there would be to pure water.

Such treatment and such results, however, do not always show "good heart" when well inquired into, and we confess that we have less faith in sewage-water being capable of repairing the loss of matter occasioned by hay-making than we have in the truth of our conclusions as respects the presence of Yellow Rattle in quantity in a meadow, which are:—

a. That its sudden augmentation is due to its having seeded on the soil.

b. That its presence and well being in any meadow is an evidence of the poor condition of the soil in respect of true manurial principles.

But while we speak of the Yellow Rattle as a weed in pasture, let it not be supposed that we attribute any poisonous properties to the plant; it is said, and we doubt not most truly, to be innocuous. But, where it occurs in quantity it necessarily takes the place of better matter. It is, however, an annual, so that the not letting it perfect its seed at any time will very soon destroy it. *B.*

WE have more than once referred to THE PENRITH FARMERS' CLUB as one of the most active and energetic of our local agricultural Societies.

A collection of lectures lately read at its monthly meetings, has just been issued in the form of a pamphlet,† "presented to each member of the Club by HENRY HOWARD, Esq., President." The contents together constitute an admirable treatise on arable farming, and on the practice and principles of good tillage; and we hope it will receive a large publication outside the immediate operations of the Society to which it is addressed.

The first of these lectures is by Mr. W. S. MOFFITT, of Brisco; it is "on the cultivation of an arable farm." It advocates the laying of the cold clay lands of the county down to Grass. Commencing with the report of a conversation with the tenant of 160 acres of such land whose rent is 150*l.*, in which the unprofitableness of Wheat growing is admitted, and the cost of horse labour is asserted, and the greater economy and profit of grazing are suggested, it proceeds to declare, 1st, that all landlords ought to drain their lands, charging 5 per cent. on the outlay; 2nd, that all tenants should thoroughly clean their lands of all obnoxious weeds; 3rd, that a sufficient quantity of manure, or lime, or other artificial manure should be put on. The lecturer then proceeds to recommend that one quarter of every arable farm be properly "laid down"—converted into Grass. Of the remainder one-fifth is to be in grain crop, one-fifth is to be in Wheat or other grain, one-fifth in "seeds" for hay, one fifth in two-year old Grass, and one fifth in Oats. Instructions on the cultivation of these crops are then given, and in particular the necessity of a liberal treatment of the fallow or green crop is insisted on.

All this relates to land worth 15*s.* an acre and upwards. But what of inferior clays not worth so much? Lay them wholly down to Grass—that is Mr. MOFFITT's advice, arising first out of the climate under which Cumberland is farmed, and next out of the relative prices of grain and butcher meat. He says, towards the end of his lecture:—

"Let me impress upon the practical farmers I see before me that I have no doubt in my own mind that the rearing and breeding of stock, whether it be cows or sheep or any other animal, will pay them better than growing corn. Corn is at a discount, gentlemen. Foreigners can send us sufficient corn if we did not grow a single bushel in the county of Cumberland. But we know that foreigners cannot compete with us in breeding and rearing stock; and I would remark that the saving of labour is an important consideration for the farmer. I should not have appeared here this afternoon were it not to impress strongly upon my brother farmers to plough less, cultivate their land properly, and attend closely to the rearing and breeding of stock. If they do this, farmers will find that they will still be able to put aside a little money for a rainy day, and be ready to meet their landlords on the rent day."

The speakers on Mr. MOFFITT's paper generally admitted the soundness of his advice, which will, however, of course be received by his brother farmers in other counties under cover of the fact that the annual rainfall in Cumberland is twice or thrice what it is in our Eastern, Midland, and Southern Counties.

The pamphlet thus opens, along with an account of the tillage which alone will answer, with a recommendation that on certain kinds of soils it should be altogether abandoned, and perennial Grasses grown in place of grain and roots. This advice was not universally accepted however. Mr. NICHOLSON, who appears to own a steam plough or cultivator, was among the dissentients; and his advocacy of steam cultivation was a fair preface for the second lecture of the series, which is directly on the management of clay soils.

This most elaborate discussion of a very important subject is by Professor COLEMAN, late of Cirencester, to whom steam cultivation had been a personal experience for years, and who was well qualified by long practice, both as farm manager and as lecturer, for the task which had been laid upon him by the Penrith Farmers' Club. Like Mr. MOFFITT, he recommends thorough land drainage as the first step in the cultivation of both arable and pasture land. After that comes deep and thorough tillage, and he declares, as every body else will do who has experience of the subject, that "steam is the best cultivating power for clay soils." Thorough drainage and deep tillage occupy one-third of the discussion. Then follows a recommendation of clay burning, with a reference to the practice in this particular of General BEATSON, Mr. PUSEY, and the Cotswolds, and to the researches and the writings of Dr. VOELCKER. The management of Grass land then occupied the attention of the lecturer, and drainage, manuring, liming, and even tillage operations were discussed in connection with Grass land improvement; and the experience of Mr. CAMPBELL, of Buscot; Mr. RUCK, of Braydon; and Messrs. LAWES and GILBERT is quoted and considered. The management of live stock on clay lands is the last topic discussed in Professor COLEMAN's most comprehensive discourse, which was followed by an instructive discussion.

The third lecture of the series is on the Principles of Tillage, by Professor HARKNESS, in which all the light of chemical science is brought to bear upon the practice of the tillage farmer. Here, too, the discussion indicates the vigour and vitality of the Club; whose proceedings we have great satisfaction in thus laying before those of our readers who may be interested in the prosperity of Farmers' Clubs in other counties.

—— THE Society of Arts invite those of their members interested in the subject of cottage architecture, to a conference at their rooms, on Thursday the 26th of May, when a discussion will be taken on the actual circumstances of cottage accommodation, the causes out of which they have arisen, and the remedies for the evils which are everywhere apparent. In the same Journal which announces this invitation the judges appointed by the Society to award Mr. BAILEY DENTON's prizes for the best design for a labourer's cottage make their report. One hundred and thirty-four designs from 107 competitors were submitted to them, and Mr. J. BIRCH, of 51, Holywell Street, Westminster, receives the premium for the best of the series. The award is nevertheless accompanied by the following remarks, which cast a doubt upon the possibility of the object at which Mr. DENTON aimed:—

"Notwithstanding that the offer of these prizes has been the means of procuring so large a number of designs, we cannot but consider that no satisfactory solution of the problem proposed has been given. The possibility of erecting really good and substantial cottages for the labouring population of this country generally, with the stated accommodation, at a cost not exceeding 200*l.* a pair, all profits and expenses included, is not demonstrated by the present designs. This is shown by the remarks of the competitors themselves and by the shifts they have found themselves obliged to adopt in order to reduce the cost, as well as by those exceptional cases where, owing to some peculiarly favourable circumstances, or by omitting some feature not so important in one locality as in another, a result somewhat approaching that which is desired in the cost has been arrived at, not in any case, however, without contravening the terms of the competition in reducing the given prices of certain items."

—— WE can this week do little more than announce the publication of the First Part of the current Volume of the "Agricultural Society's Journal." Its chief feature is a very elaborate and exceedingly interesting account by Mr. H. THOMPSON, M.P., of English agricultural progress during the past quarter of a century, in which the influence of the principal events affecting agriculture during that period, are very boldly and ably discussed. Among them are the establishment and extension of agricultural societies, the adoption of free trade, the progress of the railway system, and the application of steam power to the operations of husbandry. To this Essay, which is the chief feature in this "the concluding volume of the first series of the Agricultural Journal," we shall next week direct more particular attention.

The other papers in the volume include two of the Worcester Prize Essays—reports on International meetings—a number of very interesting reports of experiment and research by Dr. VOELCKER—an elaborate discussion of many years' Wheat experiments by Messrs. LAWES and GILBERT, and several miscellaneous communications. There is also a report on education as connected with agriculture, by the Rev. J. L. BRERETON, which is the first instalment of effort due by the Society on account of the seventh object specified in its charter.

RAILWAY CARRIAGE TO AGRICULTURAL SHOWS.

PERMIT me to call public attention to the present position of exhibitors in regard to the railway facilities offered them in sending specimens of their produce to agricultural shows. Although the success of these meetings depends entirely upon the number of things exhibited, and their excellence or novelty, it is strange how little consideration exhibitors receive at the hands of the public.

If we knew the history of any new implement of practical value exhibited at the agricultural shows, we should become acquainted with such obstacles an inventor has to encounter as the casual observer little dreams of. The inventor of machinery for manufacturing purposes has only to adapt his contrivance to conditions which seldom vary, but the inventor of implements for farming purposes has to render his inventions adaptable to the ever-varying circumstances of soil and weather—to level land and hilly fields—implements that will accomplish their task on a rock, or work through a swamp.

The effect of all these difficulties is, that before one implement becomes of practical value, its inventor is subject to great cost, as the "waste heap" of broken-up models of the manufacturer too palpably show.

But great as are the difficulties and vexations attendant on bringing out one good implement, the stock breeder is subject to far greater mishance. When once an implement is perfected, the same models will produce the same machine in any numbers.

The case is, however, quite different with the stock breeder, for he is by no means sure that the same causes *i. e.*, breeding from the same animals, will give the same quality and value in the produce. The former is dealing with inanimate nature, whilst the latter has to do with the capriciousness and uncertainty of animal life.

It is quite certain that at any agricultural show the bulk of the exhibitors must be losers, in a money point of view, because the amount offered in prizes is not equal to the expenses of attending these shows, the small amount generally sold being too insignificant to mention.

Until within the last few years it was the custom of all railways to convey stock to and from the Royal Agricultural shows free. Since then a change has been made, and animals are charged for one way; but in order to entitle them to this privilege they must travel by goods train; and unless a whole truck be taken, even if only one animal has to go to the show,

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* The plant has got the name of Rattle from the loose seeds rattling in the enlarged ripened seed-capsule.

† Lecture, &c. Printed by T. J. Sweeten, 'Advertiser' Office, Penrith.

the servant cannot travel in the same truck along with his stock. Besides this, exhibitors have too often cause to complain of the want of attention and reasonable accommodation, which show animals of late have obtained from railways. The railway servants are too much engaged with the passenger traffic these animals have caused, to have time to attend to the show stock, but which are nevertheless the cause of the throng of visitors.

But why should railway companies trouble themselves about show things? What does it matter to them if an animal worth perhaps several hundred pounds be shunted backwards and forwards in a goods truck, and shook almost to pieces? Why should a railway company concern itself if an animal be unnecessarily exposed, so that it is injured, or perchance die, from the effects of rough treatment, or neglect upon its line?

In answer, we would say that railway companies are very largely interested in the success of agricultural exhibitions, and we charge them with a narrow-minded and short-sighted policy in their present treatment of exhibitors.

To enable one to form a correct estimate of the value of these gatherings, increasing new contrivances for the development of the resources of the country, and the healthful amusement of the people, it seems only necessary to point out the enormously increased traffic that must necessarily be involved in the conveyance of those recently manufactured articles and improved stock since the establishment of the Royal Agricultural Society. At the period of the establishment of that Society few modern implements were invented; whereas now the agricultural implement trade is an important branch of the national industry. As giving some faint idea of the increase in the implement trade, we may quote from Morton's Almanack, the facts that in 1852 43 firms of agricultural implement-makers made only 1610 new machines, but in 1861 these same firms manufactured 25,336. These machines do not remain in the hands of the makers, but go by rail to every part of the country. At the date of the origin of the Royal Agricultural Society no artificial manures were made; now, hundreds and thousands, if not millions of tons are annually manufactured, nearly all which pay largely for railway transit; and the same may be said of the increased traffic arising from the transit of live stock.

It may be said that the Royal Agricultural Society does not make implements nor manufacture artificial manures, neither does it breed live stock, and therefore these facts do not affect this question. But whence could have come the knowledge to invent, and the means to adopt, these new discoveries, unless an institution like the Royal Agricultural Society had existed to chronicle and nurse new ideas until they had come within the attraction of commercial enterprise?

It is to these societies, doubtless, we are indebted for the immense strides we have made; otherwise the inventor, manufacturer, and purchaser, could not have been brought together.

Coming, however, to the more direct influence of these shows upon the receipts of the railways where they are held, we may judge of the immense benefit they confer, by the number of visitors who attend the showyard, most of whom "come by rail." At Leeds 145,738 visitors attended the show, and at Battersea 124,328 visited the yard—nearly all of whom contributed their share to the railway receipts by "going by rail."

These facts show plainly that the expenses to exhibitors in attending these exhibitions are greater than the direct gain; whilst railway companies gain directly by the traffic consequent upon a show being held near its line, besides the permanent traffic resulting from the introduction of new and improved farm practices.

Railway directors are mostly gentlemen of advanced views, of large and comprehensive minds, whose enterprising spirits have made this the "iron-girt isle;" and we cannot but believe that when they thoroughly consider all the bearings of this case they will grant the same facilities they did formerly to the exhibitors of the national shows, and give stricter instructions that the specimens sent for exhibition shall have more careful attention. *An Exhibitor.*

BREEDING AND REARING OF SHEEP.

(*Concluded from page* 421.)

[The following is the remainder of Mr. Woods' lecture, partly reported lately.]

Effect of Clayed Land.—But there is another point to which I must come—a point in which all light-land farmers will take great interest. The question is—"Does clayed land materially affect the health of the ewe?"

I know the prevalent opinion is that it does, and probably it may; but I say that that is very much within the control of the flockmaster himself. I will give you some practical experience upon the matter. I have been told, time after time, that the Waterloo Farm would kill any sheep—no matter whether they were hoggets, or ewes, or any other sort of sheep—they could not live upon it, and still more unhealthy would it be if it was clayed; and as to ewes, the man would be mad who would attempt to keep them. Now, that farm has been clayed very heavily; it has been clayed, marled, and chalked. All those three materials which are held to be injurious have been brought to bear upon it, and what has been the result? Not that all the sheep died; but I can give you a fact worth your consideration. From Michaelmas, 1861, to Michaelmas, 1862 (the last year we held the farm, and consequently at a time when we had to feed entirely off Turnips grown from artificial manure on clayed land), there were on the farm 306 ewes, 340 hoggets, 100 shearlings, and we bred 352 lambs. Now comes the tug of war. Between 1861 and 1862 our loss comprised the following:—5 hoggets, 10 ewes, 3 shearlings, and 3 lambs—total 21 lost, out of 1098 sheep, including lambs, and not a single case of abortion. But I am happy to say that this good look out did not end with the occupation of Lord Walsingham. Through the kindness and fairness of our excellent tenant, Mr. Bunting, I am enabled to give you the result of his experience for the past year. He had 300 ewes upon his farm last year, and he had not a single case of abortion; his loss of ewes was only five. Now I think that is a certain proof that under judicious management, with proper feeding, the virulence of clayed land may be very much mitigated. Now, it is right to say upon what principle we went. I don't give it you as a new light; I only give the practical experience of myself and others. We only gave a limited amount of Turnips, but a large amount of dry food and some bran, and to that system I attribute the little loss we had. I do hold that upon newly clayed land the evil effects upon breeding animals is produced very much by luxuriance of the growth of Turnips, and by their containing so much matter that is indigestible by the ewe; and when there is no correcting influence, inflammation is produced, and hence abortion.

Shepherds' Dogs.—I would here call your attention to a matter that requires your serious consideration, and that is with respect to shepherds' dogs. Is it right that they should be allowed to run about where breeding ewes are, frequently disturbing and often alarming them? I believe the evil is often more serious than we are aware of, or would be willing to acknowledge. Some shepherds know how to use dogs, but with them it requires care. How is it then with a careless, lazy fellow, having a wild and badly trained dog? And then, again, with feeding or fat sheep, dogs are still less required. Quietude is what all fatting animals require, and this I am sure they do not get where dogs are prowling about.

Treatment during the Lambing Season.—The next thing is the treatment of the ewes during the lambing season:—

I believe that to keep a flock healthy up to the day of lambing you must not limit the supply of dry food. Go on with it; don't be afraid of spending an extra 5*l.* for a ton of bran, for I trust the millers will one day get it down to that price. One thing has struck me in the large flocks of Norfolk, and that is the little care that appears to be shown, or rather felt to be desirable, for the protection of the lambs. In large flocks the shepherd is frequently overworked; the lambs are often dropped in very severe weather; there is very little protection for them; there may, perhaps, be 15, or 20, or 30 pens; but there are not pens enough, and I have seen a great many lambs perish from this cause. Now, it is of great importance to every flockmaster, whether great or small, to prepare a yard for his sheep to be in. It is not necessary to have them in yards on a mild and fine night, but you should have a good and well-sheltered yard, abundantly supplied with pens, and then you can put your flock in the yard if the night becomes an unfortunate one; because I feel quite sure, and I have proved it by my own experience, that my little outlay upon this matter is well repaid by the number of lives of lambs saved. Then there is another matter which I put to you who are flockmasters, and which I ask you to be good enough to consider, viz., whether there are not—I will not say through carelessness, because it is an unkind word to apply to a most useful class of men—but through almost the anxiety of our shepherds, many ewes and lambs perish? Generally, unless the man is experienced and well up to his work, he causes the death of many lambs and ewes by injudicious haste. There can be no question whatever that Nature is the grandest nurse and the surest doctor; therefore my opinion is that you should let Nature do its own work. When the ewes are lambing, do not be in too much haste. Watch them; but give them time and they will right themselves; and never have recourse to the use of the hand until you see that the ewe has given up using her own efforts, and she appears exhausted. Then there is another matter which is, no doubt, well known, but which, to make my subject tolerably perfect, it is right to go into, viz., inflammation, which frequently follows lambing. You have seen it scores of times, no doubt. After about three days some of the ewes will begin to strain and droop, showing that a violent inflammation of the uterus is going on. Now our practice has been—and you are able to judge for yourselves how far our practice is worthy of being followed by the figures I have given you—we have immediately bathed the ewe frequently with warm water, and afterwards we often have used injections made from Poppy heads, as well as a copious supply of Day's Extract of Driffield Oils, which I believe to be one of the most valuable farmers' friends yet brought out. After that we give 3 ounces of salts, two teaspoonfuls of laudanum. In many cases that has been successful in saving the life of the ewe. Then there is another thing which deserves to be treated upon as affecting the life of the ewe and frequently of the lamb also, and that is the garget, with which you are too well acquainted. We all know that this is produced by cold. Now, our practice has been a very successful one, because we have got a most intelligent shepherd—a man whom I hold to be second to none in the kingdom in the management of a flock. If it is the black garget, he lances the udder very freely, applies common salt very copiously, and rubs it well all over the udder. After doing that, he turns the ewe and bleeds her from the large vein running up the centre of the belly, and very freely. He closes the orifice by a pin and a little tow (the same as you would in the case of a horse), and gives at once half an ounce of jalap and half an ounce of alum in half a pint of beer. In most cases he is successful, not only in restoring the ewes, but in rare cases of retaining the value and perfection of the udder also. You know other gargets are often shown you by the hardness of the udder. Now in that case we do not scarify the surface of the udder; it is not necessary; we give medicine, and we bleed; but think it would be highly improper, and without any good effect, to scarify the udder.

Value of a Good Shepherd.—In speaking on this subject, there is one thing which it will not be out of place for me to name—viz., the importance and the value of a good shepherd.

A good shepherd on a farm is one of the most important servants; a man who, if he is really a good man, deserves greater consideration than any other man employed upon the farm, for this reason—how much property that man has under his care! how much we lose if he is a careless shepherd! how much we save if he is a careful and judicious one! I will not blame the system, but I have often thought that in the annual migration of shepherds there must be something wrong, because it keeps men in a state of not knowing what they are going to do—whether they are going away or whether they are to stay. If you get a good shepherd, value him, and teach him that his place is worth keeping; pay him well, and keep him upon the farm; don't let him, as soon as he knows what to do, and what not to do, be moving about and endeavouring to find a better place; but make him feel that to be a good servant he must do his duty, and that you will reward him for doing it. Again, in the lambing season I think that more is expected of a shepherd than a man can do. Nature has a limit to which it will allow a man to go, and beyond that is treason. Frequently a person has only one shepherd, with, perhaps a page, to attend to a large flock of breeding ewes. The shepherd desires to do his duty, but he becomes worn out by sitting up night after night. He cannot attend to the ewes as he ought to do. Many a lamb has perished, not from the fault of the shepherd (because he could not help it), but because he had more to do than ought to have been expected of him.

Lambs when on the Ewes and when Weaned.—Now, the next head to discuss is the management of lambs when on the ewes and when weaned.

I believe that the first and the most important thing to do is to feed the ewes well, so that they can do their duty to the lambs; for nothing can be worse—nothing can propagate disease and more weakness in lambs, than not to keep the ewes well at a time when they ought to feed their lambs. We have frequently found, after about the third day, the lambs of some mothers more than others troubled with a certain kind of diarrhœa. A kind of whitish excrement comes from them, which has a very disagreeable smell. This is clearly produced by undigested milk, which, if not soon removed from the bowels, will produce an amount of irritation that will end in death. We give at once two teaspoonfuls of castor oil, a teaspoonful of ginger and one of magnesia, the object being to carry off the irritation, but at the same time to cool and quiet the stomach. If that does not act in the way we desire in staying the diarrhœa, we give 10 grains of powdered chalk, half a drachm of tincture of rhubarb, and 10 drops of laudanum, which rarely fails to produce the desired result. I am sure you don't want me to tell you that the way to grow good lambs is to take good care of your ewes. In the first place, get good layers, and then fold the ewes, give them Mangel and cake, and let the lambs run out. Of course, the more cake you give the ewes, the more grateful both the ewes and lambs will be for it. Then another simple little thing is the tailing of the lambs. It is a simple operation, but if performed at an improper season often produces very unfavourable results. If it happens to be an unfortunate night, with the wind in the north or the east, the lambs are liable to suffer. Our experience has told us that the best time for cutting and tailing is when the lamb is about two or three weeks old. We, of course, select a nice warm day, with a south wind, if we are fortunate enough to get it, and we watch them very carefully at night. If we find any getting stiff, or lying about more than they ought to do, we take every means to make their blood circulate freely, and consequently that generally sets them right.

Hoggets fed upon Clayed Land.—I will now give you the experience of myself and other gentlemen as to hoggets fed upon clayed land.

This year we have 230 ewe hoggets feeding upon clayed land, clayed at the rate of something like 100 loads per acre; they are in the same field that they have been in ever since Michaelmas. I state it as a practical fact, that never since those ewe lambs have been fed on those Turnips one of them has ailed anything; they have very much improved in condition and appearance. They have in addition to ground white Turnips, half a pound of cake per sheep per day, and we give them a little long hay in racks. The land used to be light-blowing sand, but I hope its blowing is stopped now. There is another thing in the feeding of hoggets which I have found during the last two or three years to be of the greatest possible importance, and that is always to give a little chaff with the cake, because we have found that it has done as much as anything possibly can do towards staying everything like diarrhœa, or running out. I know it was the practice of the late Mr. Jonas Webb to do so. He used to say, "How would you, sir, like to be fed on a piece of roast beef day after day, and no vegetables or bread with it?" He held that the chaff was the bread or vegetables to the cake, and consequently the animal not only ate it with a relish, but that it acted upon the bowels in staving somewhat the laxative effect of the Turnips. In feeding Turnips with hoggets or with any sheep, and where the sheep cut their own Turnips, it is well known how important it is to give plenty of hurdle room for the sheep to fall back. It appears as though the sheep have an instinctive knowledge that it is good for them to eat up the old and dry withered Turnips in the afternoon, to correct the effect the fresh Turnips fed in the morning might have on their bowels.

Cotton Cake.—Now, there is one matter of interest in this part of my subject, viz. cotton cake.

I am not able to give you any information on this subject with respect to hoggets, but from what little experience I have had myself, in giving cotton cake to sheep, to Down ewes, I have determined never to give another pound of it so long as I have to do with sheep. Its effect upon the sheep was that of a powerful irritant upon the surface of the skin; 17 ewes lost the greater part of the wool off their fore-quarters, and immediately I withdrew the supply of the so-called cotton cake, the irritation ceased. I have had a letter from my brother, who has the management of the Duke of Portland's model farm at Clipstone Park, and who says that his experience tells him that the same value of Linseed-cake is far more useful and valuable than cotton cake. The butchers have told him that the mutton produced upon cotton cake is more yellow—in fact, it is quite yellow compared with that produced from linseed cake. I trust that gentlemen who have had experience in feeding with cotton cake will be good enough to state to us the fact of what they have done. I would merely mention, when speaking of feeding sheep, that we have found that when some of our animals were being forced rather sharply, they began to show symptoms of crying out "Hold hard," having had enough: we then bled them very severely indeed. I will give you a fact connected with this bleeding, which occurred to me. Within the last fortnight we had a lot of sheep in such a condition that we were almost frightened. We found one dead; the consequence was that we immediately bled the others sharply, while many of them could scarcely stand. The fact has been that we have not lost a sheep since, nor has one of them ailed anything. I believe the cause of death in that one sheep was apoplexy. By copious bleeding we removed the cause, and saved the lives of our valuable sheep.

Sale of Hoggets in or out of their Wool.—The next and the last point is a very important matter, viz., as to whether it is most profitable to sell hoggets in or out of their wool.

I think this is a very simple question, and one which comes within the knowledge of every farmer. I think the answer depends upon localities and circumstances. If a man has got a lot of sheep that are fairly ripe, which will come out of their wool and handle well, show plenty of mutton, and that of the right quality, then I say, "By every possible means clip them." But if it is doubtful how your hoggets will come out of their fleeces—if there is something about them that a man don't know whether they are quite up in condition—then I think prudence says, "Don't clip them." We don't want to enter into the mystery of these matters further than this, because feed also will regulate this matter. If a man sees that his

hoggets are not quite up to the mark, if he has got plenty of Mangel, and can carry them on his layers for a few weeks or months, and make them ripe, he will be guided by circumstances. I believe that every farmer is the best judge as to whether he should sell his sheep in or out of their wool. Gentlemen, I have now gone through the heads of my subject, and I will only make one or two concluding observations. The object of a meeting of this kind is to provoke discussion. I trust I have thrown out material enough to answer that purpose, and also I trust that many gentlemen here present will not, out of a feeling of kindness and consideration for me, have the slightest hesitation in attacking any of my weak points, but that he will at once do me the favour to point out the weak parts of my address, and give me an opportunity of gathering from this meeting the information which I seek at your hands. I would also beg of you to understand that it is not necessary in an agricultural discussion to make a grand and flowing speech; that is not what is required; what we want is, that gentlemen should be good enough to give us the benefit of their opinions—that they should state those opinions in language with which they are familiar, and then I am quite sure they will convey to us their ideas in the light in which we wish to have them. If they will be good enough to do this, the object of the meeting will have been accomplished, and I shall have had my reward.—(Mr. Woods, who had spoken for nearly an hour and a half, resumed his seat amidst loud and prolonged applause).—*Norwich Mercury.*

Home Correspondence.

A Plea for Uniformity.—We hope none of your readers will suppose from the heading of our letter that we have any desire to import into your neutral columns the discussions which agitate the politico-religious world. We plead for uniformity in a smaller matter, but one nevertheless of some importance to your constituents, the agricultural public. It has lately become largely the practice of merchants, factors, landowners, stewards, and large farmers, who make a habit of attending agricultural shows, to collect together the catalogues and trade lists of the leading exhibitors, and bind them together afterwards for reference. This is at once an advantage to those who adopt the system, and also to the agricultural implement manufacturers themselves. It is a system which is likely to become more generally adopted, now that the Royal Society, with a view of diminishing the bulk of their official catalogue, propose to allow exhibitors only two lines in which to describe each article. We propose, therefore, that the exhibitors who are now preparing their catalogues for Newcastle-upon-Tyne, should adopt by common consent one uniform size of page, varying the number of pages to suit their own convenience, but adopting this suggestion to suit that of their customers. As regards the best size, we think it will be admitted that the one most likely to be generally suitable will be the one most largely used now. Looking over the lists, of which we have a large pile now before us, of every imaginable size and style, we find the royal octavo to be the favourite. It gives room for large engravings, and is equally available for small ones, on the principle that "the hole which lets in the cat will let in also the kitten." The royal octavo size has been adopted amongst others by Messrs. Clayton, Shuttleworth & Co., Messrs. James and Fredk. Howard, John Fowler (steam plough maker), Messrs. Samuelson & Co., &c. And in order that we may not preach what we do not practise, we have ourselves followed the example of these gentlemen in our new catalogue, of which we forward a copy for your criticism, begging you to add a word or two in support of the suggestion we now make. *Greening & Co., Victoria Iron and Wire Works, Manchester, May* 4.

Pedigree Wheat.—In your number of May 7, p. 445, the paragraph headed "Pedigree Wheat," and signed by me, contains a very odd mistake, for which I cannot account—the figures "58" being substituted for "65." In my letter challenging such a sample of my Pedigree Wheat as that grown by Mr. Alderman Mechi against any other half dozen English varieties of Red Wheat, I thought I had named its weight as 65 lb. the bushel, but afterwards, upon referring to his letter, found that he gave the weight as 65½ lbs. Thinking I might be supposed to wish for some slight advantage in comparing Wheats of 65½ lbs. with others weighing 65lbs. I wrote to ask you to be so good as to make the correction. The correct figures were given in my letter as published in your Number of April 16. *Frederic F. Hallett, The Manor House, Brighton, May* 9.

Turnip Disease.—The Rev. Mr. Duncan says in his Prize Essay:—"The roots of the family of plants to which the Turnip belongs are particularly subject to the attacks of insects, and these are very liable to result in tumerous and tubercular excrescences. They demonstrate the fact—a very important one in this inquiry—that the puncture or bite of these insects is not merely a simple laceration or mechanical division of the parts. By means which we cannot explain (it may be by emitting some fluid secretion of their own, or by rupturing the circulating vessels, and thereby allowing the extravasated juices to mingle, and thus become changed in their chemical composition), they have the power of originating a new action in the plant, and developing an extraneous growth in a direction and form which are not natural to it." We who were brought up on farms are familiar with the appearance of diseased Turnips caused by the attacks of insects. I had the confidence, or impudence, to write an essay on the rotations of cropping and on grub in Turnips in 1859. I read it to one of my uncles, who told me he remembered a part of a field being contaminated by diseased Turnips being laid down in it for the ewes. It is a prevalent practice to lay down Turnips for the ewes on the two-year old lea previous to its being ploughed for Oats. Suppose Turnips to be laid down last January, the larvæ would be hatched in June 1864 among the Oats, and the Turnip crop in 1865 would be ruined by the diseased Turnips grown in the summer of 1863. You stated at page 802, in 1858:—"But though the immediate cause of this affection in the Turnip crop, and to a great extent its cure, are both tolerably well established, we are still all abroad as to how the presence of a certain mineral, or the absence of another, can so act upon the root as to bring about the extraordinary contortions which this disease presents." The late Rev. James Duncan's prize essay clears up the mystery. Finger-and-toe, Ambury, and Club in Cabbages, are severally referred to. I regret to see such a valuable essay lying a dead letter. *W.*

Crops and Cropping in Ireland.—I have just returned after a tour and six months' sojourn in the south of the island, and although I cannot write fully on the subject of this heading, a few hasty remarks may interest your readers at your side of the water, for they are interested in our prosperity, as we are in theirs. The crops, so far, in many cases look remarkably well, whilst in not a few cases they look backward and seedy. Wheats, winter sown, limited in extent, but looking generally well; spring sown, so far looking better, their age considered. The late autumn and winter sowing was much protracted by a very wet but still mild winter. The spring sowing extended to as late a period as March, and because sown in good weather, and on comparatively clean land, they offer well. Oats, whether autumn or spring sown, promise remarkably well. Barley, never sown under circumstances more favourable, and if we have good harvest weather, will produce abundantly. Beans, not much cultivated, indeed I may say not at all in the districts I have been through, except some few acres sown by myself for experiment in November, and never have I seen anywhere finer looking crops up to this date. Peas scarcely cultivated except for garden purposes, though the lands are better adapted for them than for Beans. Pastures were luxuriant during the winter, but checked much by the frosts in early spring; still Italian Rye-grass very fine, and now being used considerably for stock feeding in the stalls and fields. Stock of all kinds, I mean of cattle and sheep, scarce and dear. That the store stock should be so is no wonder, because of the death of sheep for the last three years, and the paucity of young cattle rearing during the same period; and because, besides, of the great drain on the country for exportation, thus dividing with your feeders a greater share of the profits than our breeders can afford. In fact, we mistake greatly in not feeding, I mean finishing more of our stock at home, where we have foods of the best kinds at home at first cost, which your feeders have not, generally speaking. Carrots in field culture have greatly increased, and were sown under favourable circumstances; so with Mangels, for which no country equals ours. Turnip sowing prepared for to a large extent, notwithstanding the humbugging cry of Swedes starting prematurely to seed, and degenerating into Rape or "Rape-like plants," as no doubt they do when grown from bad seed, but in no other case. To guard against such impositions many of the farmers in the south have made up their minds to grow their own Swede seeds, than which nothing can be easier, as many of them now know from experience. Such being the case with the scheming seed growers at your side the Channel, and the scheming seed vendors at both sides of it, "Othello's trade is gone," and I mention this to show those worthies that "Paddy," with all his ignorance, being "ignorant because learning was denied him," is becoming "wide awake" to the trickeries hitherto played upon him, not only in regard to spurious seeds but spurious artificial manures, and spurious artificial stock feeding. But has Paddy, especially in the higher circles, awakened from his slumbers before it became too late? "Alas for his country," and the nation at large, he has not, for emigration still goes on clearing the lands of Ireland of their redundant population, leaving by far too few to cultivate the lands to produce in an adequate degree the beef, mutton, wool, pork, butter, and poultry, so much required by your well-paid and well-employed artisans, and depriving your manufacturers of Irish customers, as well as the Chancellor of the Exchequer of the consumers of exciseable articles; and perhaps, worse than all, still fil'ing the ranks of the armies and navies of what may be by-and-by our enemies, if they be not so at present, leaving our own to their chances of defending our colonies abroad, or even our shores at home, with a disaffected population—for there is no use in mincing the matter, Ireland is disaffected to the heart's core, and those who say it is not are either utterly ignorant of the state of the country, or, worse still, seek to throw dust in the eyes of the English people. This, as coming from me, may be considered rather graceless, and personally impolitic, but it is the truth, according to the best of my judgment, which I could wish some one to be able to prove erroneous. *Edward Carroll, College Hotel, College Street, Dublin, May* 2, 1864.

Healthy and Cheerful Dwelling Places.—If the situation of houses and dwelling places for the working classes was considered in proportion to its importance, we should not see so many of them badly placed. Those who build houses or construct dwellings for the working classes, should consider the health and comfort of those who may occupy them, it may be for a long time, and that every day is long and dreary where the situation is low, damp, and close. The air being in such situations heavy and impure, it should no longer be the fashion or custom to build either lodges or cottages with sleeping rooms on the ground floor. Nor should living or sleeping apartments be constructed over kitchens, laundries, or stables. Such arrangements are doubly objectionable as tending to diminish the purity of the air both in the upper rooms and also in those below, and that horses as well as those who are occupied about them, should have the advantage. Such buildings should be constructed open to the roof, and there is a deal of discomfort and bad health arising from washing and ironing being done by poor women in small inconvenient cottages; it would be a good thing if good well constructed washing houses and laundry were constructed, wherever they may be required. The situation should be open, free and airy, with a good supply of water, and it should be remembered that in making our dwellings cheerful we at the same time make them more healthy. The modern way of fitting up the interior of churches is very preferable to the old gloomy high backed pews where the younger members of the family could neither see nor be seen, and the interior of cottages would be much more cheerful and healthy with large and low windows, that the little folks may look abroad, and at the same time the rays of the sun and light be freely admitted. The ceilings of the living rooms should not be less than 8 feet high, and with a view to increase the area of the bedrooms they should be ceiled, if not entirely, partly open to the roof. Tiles are the best material for covering the roof, being warmer in winter and cooler in summer than slates, and as we ourselves no longer wear our coat collars half way up our heads with a thick wrapper round our necks, neither should we dress or shroud up our dwellings with trees and shrubs; but they should stand open, that the air may circulate freely about them. And the situation should be high, that good drainage may easily be effected. For a pair of Cottages, a good supply of water may be obtained either from drains on higher ground, or by spouting the roofs; in either case turning the water into a well-constructed tank. A drain should be laid quite round the cottage at a lower level than the foundations, and the overflow from the tank should be laid into it. The privy, pig pounds, and dust-holes should be placed at the lowest and further part of the garden. Every pair of cottages should have an oven, as baking a weekly supply of good wholesome food is at least a saving of a shilling a week to each family. A pair of cottages should have five bed-rooms, two in front, and three at the back; the centre room at the back may be let to either cottage as may be required. Newly-married people and those whose families are away, do not require but two bedrooms, and should the centre room not be wanted, it might then be let to lodgers, and as young men and boys are not so generally lodged now as formerly in farm houses, such lodging places would be found very convenient. *B. Ransley, Perreysfield Farm, Oxted, Surrey, May* 2.

Irish Agriculture.—The misfortunes which have attended Ireland's agriculture have made that country a subject of reflection to every one. Allow me to suggest through your columns that too exclusive an attention has been given by the Irish producers to those plants which produce seed corn. We may be sure that all the corn-bearing plants are like the Potato, exotics to Ireland. Why not try there the feasibility of growing exotic plants whose leaves are valuable? Though the dampness of Ireland's climate may fail to ripen fruit, it must produce the leaves of plants in great luxuriance. The cultivation of Tobacco has often been suggested; allow me to add that the Tea plant might produce its valuable product in that island if it were protected during the process of acclimatisation. Japan, where it now grows in perfection, has not a climate more different from Ireland than Virginia, yet Virginia gave Ireland the Potato. Let me say, then, to the lovers of agriculture, where damp injures the growth of corn try the Tea plant. The Tea we have from China loses much of its flavour in the long sea voyage through the tropics; we might hope then to grow a better article nearer home. *Acclimatizer.*

Cotton Cake.—Beware of purchasing dark hard cake, which contains from 50 to 60 per cent. of worthless and injurious husk. It should be of a bright yellow colour, with but few of the black particles of husk, brittle, and easily broken. Good Cotton cake can be sold at 5*l.* 5*s.* to 5*l.* 15*s.* per ton, and then it is a very valuable and economical feeding stuff. Very much depends upon the quality of seed from which it is made. If the seed has been subjected to neglect abroad, getting wet, and fermented, it cannot be made into good cake. The seed is covered with a very thick dark woody husk, to which is often attached some of the cotton wool. This ought to be removed by careful grinding, leaving the small kernel almost free from husk. It then is ground, heated, and pressed to extract the oil, after which it has a bright yellow appearance, the portions of husk that cannot be entirely removed showing dark grains. Chemical analysis proves such cake to be equally, if not more valuable, than Linseed cake.

I have used many tons of it, and continue its use. Rape cake is also very valuable. All cake is improved in value by keeping in a dry place. If you are doubtful as to quality, submit a portion to Professor Way or Voelcker, who will at once, for a trifling fee, give you an opinion as to its value and quality. The very nutritive quality of the seeds indicates how exhaustive their growth must be to a soil to which their ashes are not returned. I have reason to know that farmers have been very extensively victimised by the purchase of hard, indigestible, and unwholesome cake. In one case the so-called Rape cake contained a large quantity of irritating Mustard and other seeds, which killed a great many valuable sheep. A reference to an analytical chemist will detect such impositions. Linseed-cake is very often mixed with large proportions of bran and other cheap ingredients. Good Cotton and Rape-cake should not contain more than 15 per cent. of husk. *J. J. Mechi, May*, 1864.

Foreign Correspondence.

LYONS: *May* 5.—The following is the result of the International trial of steam ploughs at Roanne, in the district Loire in France, which commenced on the 28th of April, and was concluded on the 2nd of May. There were five entries, including Howard of Bedford, the Marquis de Poncins, M. Ganneron, Fowler, and Herr Lotz, of Nantes. The three first only came up, the two latter being absentees. The following is the award of the jury. First prize of 100*l.*, with a Gold Medal given by the Minister of Agriculture, to Messrs. Howard of Bedford. Second Prize of 80*l.*, with Silver Medal to the Marquis de Poncins. Third Prize of 40*l.*, with Bronze Medal, to M. Ganneron.

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

At the Meeting held in the Rooms of the Society in Hanover Square, on Wednesday, May 11, Professor VOELCKER read a Lecture on the *Atmospheric Nutrition of Plants*. Mr. Raymond Barker presided.

Professor VOELCKER commenced by saying:—

Theoretical inquiries like those which had been made from time to time in the nutrition of plants, at first sight might appear of very little practical interest: but on looking closer into the matter, it would be found that questions of vital importance to the farmer depended very much upon the theoretical views entertained with respect to such theoretical inquiries. He would remind them of the controversy that had been revived within the last year or two with respect to the *humus theory*, under the new name of the vegetable mould theory, and serious apprehensions were entertained by many intelligent educated people that by degrees we might relapse into the condition in which it would be difficult to grow remunerative crops on the soils of England. Those apprehensions would not possibly have been entertained if correct views existed as to the way in which plants took up their food. The old humus theory has been successfully annihilated, for after Liebig's forcible writings in exposing its fallacy, it was impossible that that theory could be maintained. Yet it was strange that up to this day the readers of respectable journals should be entertained with lengthy papers on the vegetable mould theory as it had been called—papers which were little instructive to those who had not any precise views on the subject, and anything but entertaining to those who were acquainted with the recent progress of scientific research as bearing upon the process of the nutrition of plants. With these preliminary remarks he wished, with reference to the subject of his lecture, to mention, that there was nothing he could say of the atmospheric nutrition of plants that was original, or that was of very recent date; for he confessed at the very outset that within the last five or six years no very striking discoveries had been made which bore upon the subject. He had therefore in a great measure rather to systematise previous knowledge than to make any addition either from his own investigations or from those of others. But though they had not any material additions to their knowledge, yet that knowledge had become more definite and positive, so that they could with greater certainty speak on matters of which they had formerly but indistinct ideas. It would be necessary to allude briefly to the composition of the atmosphere, as they were well aware it was a mechanical mixture, chiefly of two gases, oxygen, constituting about 21 parts in round numbers, and nitrogen 79. Mixed with these two gases were certain small proportions of carbonic acid, ammonia, nitric acid, and invariably there was also present water in the shape of watery vapour. It was interesting to notice that the most apparent constituent of the atmosphere, nitrogen, did not take any direct part in the nutrition of plants, but that it was precisely those small quantities of matters that had been overlooked for a long time, ammonia and nitric acid, that played the most important part in that process. How true was it that what was most important to the very existence of many beings was often overlooked, whilst what was most striking to the senses was not of that practical importance which at first sight it might appear to be. Nitrogen then, notwithstanding some recent experiments that had been made in France by M. Ville to show that nitrogen was assimilated in small quantities by some plants, it had been clearly proved had no direct influence in the nutrition of plants.

They had most valuable experience in these matters in the experiments of M. Boussingault in France, and of Messrs. Lawes and Gilbert in England, and it appeared most decisively from these experiments that nitrogen as an element of the atmosphere was not assimilated. Oxygen, the other great constituent of the air, had more an indirect influence in the nutrition of plants than a direct one. The plants restored oxygen to the atmosphere. They kept up the balance of oxygen which it was so necessary to restore, inasmuch as animals continually took up oxygen from the air which they required for the support of respiration. As was well known, plants restored this oxygen from the carbonic acid which, through the medium of their leaves, they absorbed during the day time. He need not dwell upon this part of his subject, for they had now such abundant proof that it was chiefly the carbonic acid of the atmosphere that supplied the carbon of the plants, or in other words that supplied the great bulk of all vegetation. It was calculated that at least three-fourths of all the carbonising plants, or of all plants, was derived from carbon. During the daytime the absorption took place continuously, and no sooner had great portions of the leaves absorbed carbonic acid than they set about the work of destroying its form, assimilating the carbon, manufacturing it into starch, gum, sugar, and other combinations found in all vegetable productions, throwing off at the same time the oxygen, and thus restoring that balance which became continually disturbed by the removal of the oxygen by animals. It was supposed that the decomposition took place by direct sun light; but that was a mistake. The reflected rays and diffused light were capable of effecting this decomposition of carbonic acid as well as direct light, so that direct sunshine was not necessary that plants might grow and assimilate carbon. A question which naturally arose at once in the mind of every intelligent observer of the fact that carbonic acid was the chief source from whence plants derived their carbon was this—"Is the carbonic acid in the atmosphere sufficient to meet all the requirements not only of plants growing in an uncultivated state, but of plants growing in a somewhat artificial or forced condition?" At first sight it would appear that the quantities of carbonic acid in the air were anything but sufficient for the purpose, for according to De Saussure's accurate and precise determinations of the amount, there were only about four parts in every 10,000 parts of air. These determinations have been confirmed by many other observers, and it was therefore not far wrong to say that the air contained in every 10,000 parts from 4 to 5 parts of carbonic acid. This was a small quantity; but when they considered the enormous volume of the atmosphere—when they considered that plants were provided with such a beautiful apparatus for absorbing the carbonic acid diffused through the atmosphere, which was constantly wafted in all directions, and driven towards the leaves of the plants—when they further considered that there was no other source from whence plants could derive their carbon, and made the calculation of the amount of carbon contained in the enormous bulk of the atmosphere—they were forced to the conclusion that the quantity of carbonic acid in the atmosphere was sufficient for most plants. This idea did not preclude the other, that carbonaceous matters in the soil were most essential for certain purposes, but it was not the carbon in the soil which mainly supplied plants with this kind of atmospheric food. Observations of the wants of plants in this respect had been somewhat enlarged of late years, and he believed he was not wrong in stating that whilst there were some plants which might entirely rely upon the carbon which they found in the atmosphere, there were others which were greatly benefited by carbonaceous matters, which they were in the habit of calling humus, and which ought to be present, or at any rate which it was desirable should be present, in the soil. He believed cereal crops were not dependent in any great measure upon any carbonaceous or organic matters in the soil; whilst root crops, Turnips, Mangels, and others, were materially benefited by the carbon present in the humus; whether it was in the shape of a prepared organic that the humus acted usefully as a source of carbon to roots, or whether it was because the humus in the soil was continually undergoing a change, and produced continually carbonic acid in the very soil which grew the roots, he left for the present undecided. Indeed, they had no very distinct experiments, nor were they easily instituted, to show that organic matters as such were taken up by plants. But this was certainly known as a fact, and it was an important one, that the air in the soil itself contained a very much larger proportion of carbonic acid than the atmosphere resting upon it.

Some years ago M. Boussingault made some very careful and interesting experiments upon the amount of carbonic acid which occurred in soils, and he found that whilst the atmosphere that rested upon the soil only gave 4 to 5 in every 10,000 parts, the air in the soil contained, in sandy soil recently manured, 217 parts of carbonic acid in every 10,000 parts. Shortly after rain the air from the same soil was again analysed, and was found to contain as much as 974 parts of carbonic acid; evidently showing that the wetting of organic matter and the rapid decomposition which through contract with the porous earth had taken place in organic matter, had led to the destruction of the humus and the formation of large quantities of carbonic acid. This threw some light upon the very startling growths sometimes noticed, especially with regard to root-crops. They knew how very rapidly young Turnips started after a good shower of rain if the land had been well dunged, the rain expelling the rapid production of carbonic acid in the soil. They looked in vain for this result in soils which had not been properly cultivated. And this led him to another remark—that plants, and root crops especially, not only took up carbon through the medium of their leaves, but also in the shape of carbonic acid in very large quantities through the medium of their roots. It was especially useful to root crops, to furnish them at an early stage of their growth with matters that furnished carbon in the shape of carbonic acid, which he believed they took up very largely through the medium of their roots. Boussingault showed that whilst in calcareous soil there were in 10,000 parts of air only 87 of carbonic acid, and in heavy clay soil only 66, there were in pasture soils as much as 179 parts of carbonic acid to every 10,000 parts of air. Thus it would be seen that in all these instances, the quantity of carbonic acid in the soil was very much larger than the quantity resting immediately above it. In the next place he had to direct attention to perhaps the most important constituent of the atmosphere—he alluded to atmospheric ammonia. For a very long time this had been entirely overlooked; and it was very pardonable, since the quantity was so small that it could not be determined with anything like precision, and it was necessary to have recourse to the examination of the rain or dew to ascertain anything like an approximation to the truth. Perhaps the correct determinations were those that were obtained in France by M. Bineau, and also by M. Boussingault, who had done so much for the progress of scientific agricultural chemistry. According to M. Bineau, 1,000,000 parts of air contained only about two-tenths part of ammonia. The amount varied in different seasons, but not in different humus—the total amount of ammonia present in the atmosphere did not vary at all in the humus, but it did vary in different times of the year. According to the researches he had mentioned, the rain which fell upon an English acre carried upon the land about 22 lbs. of nitrogen, both in the shape of ammonia and nitric acid. Indeed the amount of nitric acid in the atmosphere was somewhat larger than the amount of ammonia; but as both were small they might safely be taken together. Twenty-two pounds upon an acre was a very small amount, and they had to consider the very important question whether this quantity was sufficient for the requirements of plants. They pursued a very extensive series of experiments bearing upon this matter, and from them it followed that whilst there were some plants which might find a sufficient quantity of nitrogen in the shape of ammonia or nitric acid in the atmosphere in order to grow luxuriantly, there were others which were decidedly benefited if in addition to the atmospheric ammonia or nitric acid, they were supplied through the medium of the soil with an additional quantity, either of ammoniacal salts, nitrates, or organic matters producing on gradual decomposition either nitric acid or ammonia.

It was well known that the cereal crops were more than any others benefited by ammoniacal fertilizers, whilst those plants that were not in the same manner benefited by the ammoniacal fertilisers were those which they were in the habit of calling green crops. An interesting inquiry arose as to how it was that the cereal crops were especially benefited by ammoniacal manures supplied to the soil, and not root crops. It would seem that in the greater development of the leafy part of the green crops was the reason why they were more capable of assimilating the atmospheric food ammonia or nitric acid than cereals. So it would appear at first sight, and so they might judge perhaps correctly. But it was known that in certain soils ammoniacal manures were most useful even for Turnips or Mangels. It was plain therefore that it was only under certain conditions that root crops might be thrown entirely upon atmospheric resources for this description of food. When plants like Turnips grow rapidly, it was generally the case that the soil contained a considerable quantity of organic matter, it was then that the leaves became rapidly developed. But when for some reason or other, a deficiency of organic matter occurred, as was often the case in sandy soils, ammoniacal matters were supplied with great utility even to root crops. Although therefore it might be said that ammoniacal manures did not benefit as a rule root crops—that atmospheric ammonia was sufficient in those cases, they had to be careful how they generalised observations which might be the rule in many instances. He knew as a positive fact that in sandy soils ammoniacal salts might be applied with great advantage to the growth of Swedes, Turnips, and other crops; but there were other instances in which those manures were wanted entirely. How necessary it was then that they should have precise and accurate observations upon these important matters. And how necessary that they should not be satisfied with general statements like those which had been made, and very frequently by men eminent as scientific observers, but wanting the qualification in their minds which would allow them to become the guides of practical men. These generalisations were most useful, but reducing them to practice was another matter. There were many theories which were extremely beautiful, simple, or interesting to all who took an interest in the progress of farming, but which, labouring under the one great defect that they were not sufficiently minutely carried out in all their ramifications, were not fit to serve the farmer as rules to guide him in his operations.

The sum and substance of his observations upon atmospheric ammonia amounted to this, that whilst they knew that under certain conditions and for certain crops—conditions which had as yet still more minutely to be examined—they had sufficient food of that description in the atmosphere, there were other crops, and more especially cereal crops, which did not find sufficient ammonia and nitric acid in the air to grow with sufficient rapidity and to produce sufficiently remunerative crops without the addition of nitrogenous manures to the soil. Upon the great influence of water, whether in the shape of watery vapour, dew, or direct rain, as necessary food to plants he need not dwell, but he passed on to another effect of the atmosphere on vegetation. The observations he had hitherto made all tended to show the direct influence which the atmosphere had in the nutrition of plants, but there was another part which it played on the growth of vegetables, which might be called the indirect one. This was perhaps quite as great as the direct effect, for although they might supply abundance of food to plants, if the condition of the soil was such that the plants could not grow, the food itself was of no avail. Now, the indirect part played by the atmosphere was so great in its effect that they might say positively that all soils that were not penetrated by air were unproductive, no matter how much food there might be otherwise contained in it. Cases were constantly brought under his notice of soils sent to him for examination which were characterised as unproductive, but which turned out to contain abundance of all the mineral constituents required for the growth of plants, and which required only to be thoroughly penetrated by the air in order to furnish an unlimited quantity of food. The atmosphere really exercised a most beneficial effect both on the inorganic and organic constituents that occurred in the soil.

He had alluded to the large quantities of carbonic acid present in the air which was naturally contained in the soil, but this could not be produced unless the air found its way into the soil. An excess of organic matter in the shape of decaying roots or leaves indeed was so injurious that many soils which on account of their retentive powers were not easily penetrated by air, and which contained much organic matter, were decidedly improved by burning away altogether that matter. At first sight this would appear a great waste of useful material in clay soils, and certainly it was a waste in some sense, but if it produced a beneficial effect greater than the sacrifice made they could scarcely call it a waste. He made these observations because serious doubt had been entertained respecting the utility of burning. There were some soils so difficult to penetrate by air that the organic matter could not be destroyed in any other way, while its presence in an imperfectly aërated condition was rank poison to the growing plant. It was certain that the destruction of the sour humus as it had been called—though in a chemical point of view all humus was acid—had been attended with most beneficial effects, and when recourse could not be had to proper means of aëration, this destruction had been practised with very great advantage to the succeeding crop, even in the case of a crop which, like the Turnip or Mangel, would be otherwise benefited by the presence of carbonaceous matters in the soil. But when they could effect the destruction of the organic matters by the atmospheric oxygen, the practical result, he had no doubt, would be greater. Not only did the air, and more especially the atmospheric oxygen, act upon the organic matters in producing carbonic acid, but it also had an important effect upon them in producing nitrates in the soil. The quantity of organic nitrogen in the soil was very large. Some years ago he made an experiment with the view of ascertaining how much nitrogen was present after the Clover crop had been removed, and he had ascertained that it was equivalent to rather more than the amount of nitrogen present in 8 cwt. of Peruvian guano—that was taking 1 acre. It had been found that the Clover crop was the most excellent preparation for the succeeding Wheat—and it was known now as a fact, that in growing a good crop of Clover a very large amount of root was left in the soil. It could not be maintained that the nitrogen, to the whole extent he had stated, would be available in the shape of nitric acid; yet, if only one half became so available, the reason would at once be seen why Clover was such an excellent preparation for Wheat, and why a good crop of Clover was almost invariably followed up by an abundant crop of corn. But in order that the beneficial effect should take place, it was most essential that the soil should be penetrated by the air—that after growing a good crop of Clover immediate steps should be taken to work the soil, and the better the soil was worked by proper machinery the sooner the Clover ley was broken up, the sooner the atmospheric air entered the soil, the more rapidly were the nitrogenous constituents of the roots destroyed, and the more abundant were the nitrates found in the soil. He never examined soil that had been well penetrated by air, in which large quantities of nitrates were not invariably present. So much with regard to the indirect influence of the atmosphere in the nutrition of plants.

The indirect influence of the air on mineral matters was also most important, especially in the case of clay soils. Clay soils in many cases contained an abundant store of mineral food, which was as essential as atmospheric food to the growth of plants, but in many cases it occurred in a locked up condition, in which it was of little or no avail to the

growing plants, and it was only when the air thoroughly penetrated the soil that it became available. It was by the introduction of atmospheric oxygen and carbonic acid that many mineral compounds belonging to the double silicates of alumina and alkaline, of ammonia and lime were gradually decomposed. In consequence of this remarkable composition the surface of the soil becomes more porous and powdery, and a stiff clay soil was by proper aëration reduced into fine earth, and at the same time there were produced the food so much wanted for the growth of the plant, and that condition which enabled the plant to absorb more abundantly atmospheric food, for the more porous the soil was, the more readily did it absorb ammonia and carbonic acid from the atmosphere. The atmosphere supplied an abundant store of food in a direct way to all plants; it also supplied nutriment in an indirect way in operating upon the organic matters of the soil producing carbonic acid and nitrates in the soil. It operates upon the mineral constituent of the soil, eliminating from them the insoluble matters of a mineral character, and rendering available the important soluble mineral constituents found in all plants; and lastly, while effecting all these beneficial changes in the soil itself, it materially improved its mechanical condition, in virtue of which the soil acquired the power of availing itself more perfectly of the food existing in such great abundance in the atmosphere itself. In bringing the lecture to a conclusion he stated that he had been unable, from insufficient data, to introduce any new matter, but had rather confined himself to the reproduction of old well-known facts in a brief manner. All that he could attempt to do was to give a brief account of what was positively known with respect to the atmospheric nutrition of plants.

The lecture was received with loud cheers.

In reply to Mr. Frere,

Professor VOELCKER stated that good Peruvian guano contained from 14 to 15 lb. of nitrogen per cwt.

Mr. HOLLAND, M.P., observed that in the management of the Clover crops, the roots containing so large an amount of nitrogen, attention should be paid to the increase of the roots, but if the Clover was fed off the plant was killed and the root not formed.

Professor VOELCKER observed that after two years Clover crops, by leaving the plant standing for seed in the first year, more nitrogen was actually obtained than when it was immediately fed off.

Mr. COLEMAN suggested that the comparative injury from feeding might depend in a great measure upon the mode of feeding, and the objection might be obviated by the method which was certainly the most economical as far as the animal was concerned, and passing rapidly over the ground—allowing the crop to reach 6 or 8 inches, and then at once feeding off, giving say one day to one spot.

On the motion of Sir J. JOHNSTONE, seconded by Mr. HOLLAND, M.P., the thanks of the Society were voted to the Professor for his very clear and useful lecture.

BATH AND WEST OF ENGLAND.—At the usual monthly meeting of the Council on the 7th inst., Mr. POOLE said that as the Royal Agricultural Society of England had resolved to visit Plymouth in the year 1865, it appeared to be the wish of the Council of the Bath and West of England Society that they should go as far out of the way of the Royal as they possibly could, so as not in any way to interfere with the success of the great national exhibition. In order to enable them to do this, however, it would be necessary to alter or suspend those rules of the Society which, among other things, divided the area of their operations into an eastern or western division, and required that the annual meetings for exhibitions should be held in different towns in successive years, alternately in each district. With this view he formally handed in a series of resolutions which he should move at the next annual meeting.

At this stage of the proceedings the following communication, from the Mayor and authorities of the city of Hereford, was read:—

"St. John's Street, Hereford, 5th May, 1864.

"DEAR SIR,—We are directed by the Mayor of Hereford to invite the Council of the Bath and West of England Society to hold their annual meeting in 1865 at the city of Hereford. A copy of the resolutions passed at a meeting held on Wednesday, the 4th May, 1864, is sent herewith.

"We are also directed to state that the required amount, viz., 900*l.* shall be duly paid to your bankers.

"We beg to inform you that the requisite sites for holding the show, for trial ground for implements, &c., will be ready for inspection at any time; and we shall be obliged by your letting us know when we may have the honour of seeing the deputation from your Council to view the same.

"Should your Council determine upon holding their meeting in this city in 1865, we trust that our arrangements will be found satisfactory. We remain, &c.,

"J. T. OWEN FOWLER
"THOMAS DUCKHAM } Hon. Secs.

"To H. St. John Maule, Esq."

The proposal contained in this invitation was very cordially received, but after considerable discussion it was held that no formal decision could be arrived at, till the annual meeting had affirmed the propriety of the changes contemplated by Mr. Poole in the motions of which he had given notice.

A deputation, however, was appointed to visit Hereford, on the 19th inst., for the purposes mentioned in the invitation.

The Programme of the Bristol meeting was brought up and confirmed. The open judging of Stock and Poultry will commence at 10 o'clock on the morning of Monday, June 13; the Implement and Arts Departments will open at the same hour; the Horticultural Department will open at 1 o'clock. On the other days all departments will open at 9 a.m., and close at 6 p.m. Of the trial of steam ploughs, &c., full information will hereafter be announced. A new and interesting feature will be the ring or circle, in which the horses will be paraded for at least half-an-hour, at 12 o'clock and 4 o'clock daily. The shoeing of horses will commence at 10 o'clock on Wednesday, at portable forges in the yard. The annual Banquet will take place on Wednesday, under the presidency of Earl Fortescue; the chair to be taken at 5 P.M., instead of 4 P.M. as formerly.

Reviews.

Agriculture, Ancient and Modern: A Historical Account of its Principles and Practice exemplified in their Rise, Progress, and Development. By "The Old Norfolk Farmer." J. S. Virtue, City Road, and Ivy Lane, London.

We have read the first part of this work with very great interest. It is the production of a man who has studied the history of agriculture with that full appreciation which experience has given him of the practical bearing of the lessons which it teaches, upon the existing relations of landowners, farmers, and labourers.

We have in No. I. of the monthly series, which is ultimately to issue in two large octavo volumes, an account, (1), of the origin both of property in land, and of the various tenures by which it has come to be held; (2), a history of the value of land in this country at successive periods; (3), a discourse on the aggregation and subdivision of land; (4), an argument for cottage allotments; (5), a chapter on the farm labourer, his rights and duties; (6), an elaborate history of the poor laws and of tithes; (7), and the Part concludes with an account of the game laws. These subjects are all discussed from the "Old Norfolk Farmer's" point of view.

And the readers of our contemporary, the *Mark Lane Express*, where his essays and opinions on current agriculture have so long been published, will perfectly understand from this, that along with general good will and an interest in the progress of agriculture as a whole, there is throughout a keen pursuit of the interest of the tenant farmer.

And as it is upon *his* prosperity that that of the whole agricultural community hinges, all this is perfectly consistent with a fair and even-handed judgment of the relations between him and those on either side of him, with whom he is connected. While therefore the lease and tenant right are strongly advocated, the illustrations which are given of the author's views prove the influence of these agencies on the value of the landlord's property, as well as on that of the tenant's interest in it; and while the tendency to an excessive subdivision of the land and to the multiplication of small farms is condemned in the public interest, there is a whole chapter devoted to an illustration of the advantage of large gardens and allotments to labouring men, whose daily wages in the service of a man of capital should still remain their chief maintenance.

The following extracts illustrate some of the subjects discussed in the work:—

1. *On Leases.*—"The question of the necessity of leases, and of their advantages to both landlords and tenants has been well ventilated of late years, and is well understood by most persons conversant with farming upon the modern system, and no liberal or enlightened landlord refuses to grant leases to his tenants; nor will any improving tenant entrust his property, by expending it in the necessary permanent improvements on a farm, from which the caprice, or the cupidity, of the landlord might eject him at six months' notice without a shilling remuneration. The danger of such a dismissal is no imaginary one, instances of it being of too frequent occurrence in the country. A recent case in a northern county—in which one of the best farmers in England, and whose family had occupied the farm for many years, was thus summarily ejected without the whisper of a complaint of his conduct, either in the management of his farm, or his conduct to his noble landlord, and after expending a great part of his property in permanent improvements—is sufficient to open the eyes of the farmers to the danger."——"We have no hesitation in saying that, if the predecessors of Mr. W.'s late landlord had acted upon the same principle in dealing with their tenants, the estate would not be now worth half its present value. The only safe plan that the present holder of the land can pursue, is to avail himself of Mr. W.'s improvements, and get as much out of the land as possible without expending a shilling upon it in improvements, the profits of which he would probably be deprived of by an ejectment, to make room for another tenant at a farther advance of rent—the landlord's profit upon his outlay.

"Any man conversant with rural affairs is able to judge, as he rides along the high roads, of the nature of the tenure by which the land is held. He has nothing to do but to look over the hedges to determine whether the land is held on lease or at-will. It is astonishing that the owners of land cannot see, by the different appearance of the fields, the impolicy of preventing the tenants from improving their farms by making it unsafe for them to do so. The interests of landlords and tenants are inseparable, and one cannot secure an undue advantage over the other."

"The value and importance of granting suitable and long leases is sufficiently exemplified by the results on those estates on which it is the practice. Any man, for instance, in passing through the county of Norfolk, where long leases, as a rule, prevail, will be struck both with the high state of cultivation which the fields present, and the wealth, ease, and independence of the occupiers. Perhaps the Holkham property is an exceptional case, the farms being in general very large, and the tenants unusually wealthy. The farm-houses are more like gentlemen's seats than the dwellings of husbandmen, and the fields are many of them large enough to constitute a good sized farm. But it may be safely assumed that the highly prosperous condition of the Holkham estate, which has increased three or four times in value since the late proprietor succeeded to it, is entirely owing to the liberal principle on which he acted in letting his farms, and the 21 years' leases on which they were invariably held. The policy of this was proved by the result; for, probably, there is not a landlord in the kingdom who has had less trouble with his tenants, or whose tenants have more cheerfully, at the expiration of their leases, agreed to pay the advanced rent which the diminished value of money rendered reasonable.

"The Earl of Yarborough's property in Lincolnshire is another instance in point. Following the example of the 'Holkham chieftain,' he has increased its value from 3000*l.* to 30,000*l.* a year. Most of the farms in Lincolnshire are large; and although the custom of the county has generally been against leases, the lands being held from year to year, a tacit understanding exists between landlord and tenant, which is seldom broken. We may also mention the Duke of Bedford's estate at Woburn as a proof of the advantage of granting leases. The late Francis Duke of Bedford was the friend and coadjutor of Mr. Coke, afterwards Earl of Leicester, and adopted his system in every respect. His unfortunate death in 1801, put a stop to many of the more public measures which he adopted for the improvement of agriculture. But although his immediate successor did not profess himself an agriculturist, he pursued the same liberal course with his tenantry, and the present proprietor follows in their steps. The consequence is, the estate has increased in value, until it realises 100,000*l.* a year.

4. *On Allotments.*—"That the bestowment of cottage allotments acts upon the mind of the labouring classes as a powerful stimulant to exertion and a desire to rise above the condition of poverty, which a sole dependance upon the wages he receives as a husbandman, sooner or later, almost inevitably involves, there cannot exist a doubt. Those who apprehend that it will render the labourer more independent, and less willing to obey his employer, or fulfil the duties of his station, take a very ignorant and narrow view of human nature. Any plan, on the contrary, which reforms the habits of the peasantry by enabling them profitably to occupy their leisure without having recourse to dissipation and vice, necessarily makes them better, and not worse servants, even if gratitude be left out of the question. We maintain that the concession of a plot of ground binds the peasant more strongly to his employer; whilst the increasing habit of industrial occupation makes even his regular employment as an agricultural labourer less onerous to him.

"It is in those cases where the plot of ground (as in Ireland and in France) becomes the sole support of the husbandman that habits of idleness are displayed. Without sufficient employment to occupy the whole of his time he has no stimulus, when his Potatos are planted, or his Oats sown, to find other fields for exertion, because his neighbours around him, being equally poor, can afford him no means of improving his condition. We have ample evidence in both countries that the system of small farming is injurious to a country; whilst the occupier is far worse off in every respect than the agricultural labourer of England. The only thing wanted by the latter is the allotment of land, to make his position comfortable and advantageous both to himself and to his employer, whose direct interest it is to see that those he employs have no reason to complain."

The section on the Game-laws exposes with great energy the evils inflicted by the "gamekeeper." The following passage gives the substance of the author's opinion on this subject:—

"To abolish entirely the game laws, and allow every one to range the country for the purpose of killing game without reference to the owner or occupier of a farm, would be productive of as much evil as the present system. The appropriation of the land renders it unbearable, if not impossible, that it should be liable at all times to be overrun by any one who can purchase a gun or keep a dog. The interests of agriculture, and therefore, of the country at large, require that trespasses on private property should not be allowed on any pretence whatever, and that the game should belong—not as property, but as of privilege—to the owner or occupier of land, as they can agree between them. It is, therefore, against the excessive preservation of game, and the restriction laid upon the farmer who feeds it, that the observations are directed, and from which all the accompanying evils originate.

"These are comprehended in—first, the injury sustained by the farmer and the nation at large in the destruction of crops; secondly, the encouragement given to poachers; thirdly, the employment of gangs of keepers; fourthly, the demoralisation of the lower classes; fifthly, the lowering of the character of the landowners."

The illustrations of these five points are for the most part taken from Mr. Corbet's powerful lecture on Game Preserving, read some years ago before the London Farmers' Club.

The work is illustrated with a number of plates and wood engravings, which are rather artistic embellishments than instructive drawings. The whole will, we doubt not, prove to be, what the first Part promises for it, a liberal, intelligent, and instructive discussion of the whole range of English agriculture.

Miscellaneous.

The Consulting Engineer to the Agricultural Society.—The entries of implements for the Newcastle Meeting of the Royal Agricultural Society are considerably below those made for Worcester last year. There may be many reasons offered for this. Newcastle is too far off, or the exhibitors have been there already, or the conditions are not so satisfactory as they should be, and so forth. At any rate the conduct of this department came under considerable discussion again on Wednesday, when Mr. Clayden's wholesome proposition as to the consulting engineer having no business transactions with the competing firms was lost by an immense majority. It is, however, a significant fact that the motion was seconded, in the absence of Mr. Fisher Hobbs, on duty at Roanne, by Mr. Druce, who has frequently acted as a judge of implements at the Royal shows. But, unfortunately, instead of being argued as an open question, the point was still taken as personal; and Mr. Pain, in very questionable taste, went so far as to move an amendment of confidence in the present official, whereas the original resolution should have stood or fallen on its own merits; as it will have to, sooner or later. So far the Council have by their act sanctioned a very dangerous principle, while it must be their duty to see this carried out as conscientiously as possible. If the appointed referee of the Society be permitted to take commissions from the competitors, it must be distinctly laid down that these do not exceed the customary trade per-centage, or otherwise a very palpable advantage is made of the position. Great as will be the good that will follow even this partial agitation, we must still regret that the inquiry was not proceeded with, as it would have been very desirable to have had the opinions generally of the manufacturers on the subject. But the latter would seem to be losing all chance of a hearing; for, although Mr. Exall is compelled to retire from the Council, no successor from the same interest has been selected. *Mark Lane Express.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. Slatter, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	May	Inches.	°	°				°	°	°	°	Inches.
Friday ..	6	29.96	50	48	S.E.	1	10	67	41	67	13	0.15
Saturday ..	7	29.82	57	53	N.	2	1	62	48	73	46	0.00
Sunday ..	8	29.74	52	49	S.E.	3	10	59	40	79	32	0.21
Monday ..	9	29.60	47	46	N.E.	1	10	54	45	60	44	0.08
Tuesday ..	10	29.61	56	53	N.E.	1	9	56	45	67	43	..
Wednesday	11	29.88	50	49	N.E.	0	10	58	47	73	43	0.07
Thursday ..	12	29.79	64	59	N.E.	1	5	68	49	74	45	..

Notices to Correspondents.

Cattle Melon: *Several Correspondents* continue to apply for seed. We have more than once referred them to *Mr.* Blundell, Bursledon, Southampton.

W. J. Atkins. Give the cow some Cotton-cake, which is binding in its nature, and repeat the opium and chalk and gentian occasionally. *W. C. S.*

Deer. *G. B.* A small octavo volume by W. C. Spooner, V.S.

Entray: *F. H. S. and others.* We are endeavouring to obtain some reliable information relating to the establishments mentioned, viz., M. de Sora's and that of the Prince Tour et Taxis. The result shall be published in an early number. There are several large entrepots in France, where poultry is kept on a large scale, but where it is merely prepared and killed for market, after being bought at the various markets.

THE HYDROPULT,

THE HYDROPULT
Is invaluable for use in the
GARDEN
FOR
WATERING BEDS,
SPRINKLING PLANTS,
DROWNING OUT INSECTS,
CLEANSING TREES FROM SMUTS,
DRESSING WITH LIQUID MANURE,
ETC., ETC.

THE HYDROPULT
Is desirable in every
HOUSEHOLD
FOR
WASHING WINDOWS,
WETTING SIDEWALKS,
SPRINKLING STREETS,
WASHING CARRIAGES,
EMPTYING CISTERNS,
FILLING BARRELS,
A SPRAY BATH,
ETC., ETC.

AN INVENTION FOR THROWING WATER BY HAND POWER.

SECURED BY ROYAL LETTERS PATENT.

PRICE: WITH BRASS CYLINDERS AND MALLEABLE IRON STIRRUP, JAPANNED IN OAK COLOUR, **32s. 6d.**

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanized Wire Strainer, Rose, and Small Jet.
Complete as above, with Copper Stirrup, TWO GUINEAS. Packing Case, 1s. extra.

Weighs but 8 lbs.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.
It will draw water horizontally, if necessary, through 300 feet of Suction Hose, and force it through Delivery Hose, to an altitude of 100 feet.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

There are among Amateurs and Professors of Horticulture, differences of opinion as to the excellency and applicability of Gardening Implements. Some adhere to old devices, bitterly denouncing any innovations on ancient customs; and either from MALICE or prejudice, when governed by a spirit of EGOTISTICAL CONCEIT, criticize in a most unfair and unjust manner an Implement, the merits of which they are not capable of appreciating. In proof of the real utility and efficiency of the HYDROPULT as a GARDEN IMPLEMENT, I beg to call the attention of the public to the following unsolicited editorials from gentlemen, whose testimony must have weight with the readers of the *Gardeners' Chronicle*:—

EDITORIAL, *written by* ROBERT HOGG, LL.D., F.L.S.

THE HYDROPULT.—The great secret of successful indoor gardening consists in the free and judicious use of the syringe. A greenhouse or conservatory that does not enjoy this luxury becomes a miserable lazar house of vegetable incurables. Vermin and filth hold unbounded sway, and people become disgusted with their own want of success. Well do we recollect the former days of plant culture, the days of "collections," when the use of the syringe was yet limited or unknown. What a time for red spider, scale, and greenfly! What fumigations and consumption of tobacco and tobacco paper, washings with tobacco water, and all sort of remedies were resorted to! We regard the introduction of the free use of the syringe as one of the events in modern gardening. To this is due the success of orchard house management, Vine management, and Plant management, but the old syringe with its slow suck and squirt, is now as much out of date in modern gardening as an old stage waggon in modern locomotion. Many are the improvements and complications of the old simple syringe. We have tried several of them, but for ease in working and efficiency in result, we have not yet met with anything to equal the Hydropult, sent us by Mr. BUTTON. It is powerful in operation, and so easy and comfortable to work, that one never gets fatigued. With such an instrument plants may be kept in perfect health, and quite free from insects and dirt. We first tried it on a few Geraniums in our conservatory, which were smothered with greenfly during our temporary absence of ten days, but on our return a stout discharge from the Hydropult sent them clean off across some unknown bourne, whence they have never yet returned.

EDITORIAL, *written by the* REV. HENRY H. DOMBRAIN, A.B.

THE HYDROPULT.—When we formerly noticed this instrument, we did so from merely seeing it at the Proprietor's; since then we have had an opportunity of testing it personally, and can bear testimony to the excellence of the invention. The force with which it throws a stream of water is almost incredible; while for syringing a greenhouse, a gentle shower, as fine as that from a hand syringe, with considerable more effect, can be easily given. We have a gardener, quite of the old-fashioned school, who does not generally fall in love with new-fangled notions, but he is perfectly enchanted with the saving of labour and time that the Hydropult will be to him.

EDITORIAL, *written by* SHIRLEY HIBBERD, ESQ., F.R.H.S.

THE HYDROPULT.—This is an invention introduced in a most spirited manner by Mr. C. P. BUTTON. It is at once a fire engine and a garden engine, is always ready for use at a moment's notice, is neat and portable, weighing only eight pounds, and can be worked by a boy of moderate strength for some hours in succession without fatigue. The mechanical power employed being economised by combining the action of the hand and the resistance to the foot, between which the instrument is placed and used, as a double action pump. From the sole to the handle the Hydropult measures 24 inches. The two brass cylinders measures 12 inches in length, and 3½ inches in breadth. At the top of these cylinders India rubber tubing is attached, on one side to feed, on the other to discharge the water. It will perhaps surprise the reader to be told that this little contrivance, which is pretty as a toy, and can be carried under the arm as easily as a trumpet, will throw from seven to eight gallons of water per minute a distance of 50 feet. But it will do it, as we know from having tried it, finding the experiment an agreeable exercise, and of special service in washing down a stuccoed wall, which it accomplished quite as well as if we had sent for the parish engine. Gardeners will not need to be told the value of a portable force pump of this simple kind. It can be used to produce a powerful stream to extinguish a fire, or a gentle shower to syringe a whole houseful of plants, without the necessity of moving a single step from the position most convenient for a supply of water. Wherever a pump or syringe is needed, the Hydropult can be brought into use, to remove water from a cellar or a boat, to cleanse a cistern, wash a pavement, or drench the foliage of trees loaded with soot, or annihilate at one fell swoop the whole insect population of a plantation of Roses. But we will not enlarge upon its merits, they are obvious, and having a Hydropult in use we can say that it will soon pay for its cost in a garden, besides being always at hand in case of an emergency of any kind which may require an immediate removal or discharge of water.

The Hydropult has been recommended as an efficient and useful Fire Engine by the principal Fire Insurance Companies of Great Britain. Ordered by the War Department as Fire Engines.

It can be used for all purposes for which a hydrant or force pump is applicable, and in situations where other contrivances are useless.

Prospectus, with Testimonials, sent Free on application.

CHARLES P. BUTTON, PROPRIETOR,
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To Seed Merchants and Nurserymen.

SAYNOR AND COOKE, PRUNING and BUDDING KNIFE MANUFACTURERS, beg respectfully to say that they WILL NOT BE UNDERSOLD by any House in the Trade. They also warrant one of their Knives to last two of any other make.
Paxton Works, Sheffield.

Hydraulic Suction Pumps, Garden Engines, Syringes, &c.

CAUTION.—The well-known reputation of
READ'S ENGINES, MACHINES, and SYRINGES, has led to the nefarious practice of Manufacturers selling Syringes as "READ'S PATENT."

R. READ begs to caution the Public against being deceived by such false representations, as these instruments, upon trial, will be found defective and useless.

READ'S SYRINGES have the Royal Arms, and address, 35, Regent Circus, London, W. Descriptions sent Post Free.

To Gardeners, Stewards, &c.

FOR PRICE LISTS of the PATENT WATER BALLASTING PARK, FIELD, and GARDEN ROLLERS, which are now acknowledged to be superior to all others, apply to

Messrs. AMIES & BARFORD, Queen Street Iron Works, Peterborough, Patentees and Sole Manufacturers.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 570.

J. TYLOR & SONS'
GALVANIZED IRON TUB GARDEN ENGINES,
with Registered Spreader.

8 gal.	12 gal.	16 gal.
£2 13 6	£3 2 0	£3 12 6

24 gal.	30 gal.
£5 0 0	£5 12 0

Fig. 571.

J. TYLOR & SONS'
OAK TUB GARDEN ENGINES,
with Registered Spreader.

15 gal.	28 gal.
£5 12 0	£7 0 0

Fig. 586. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. £1 6 6 each.
No. 2. Ditto ditto .. 1 1 0 ,,
Telescope Branch Pipe for ditto .. 0 10 0 ,,

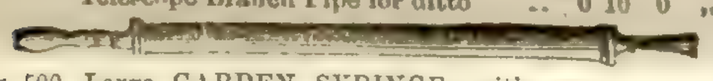

Fig. 590. Large GARDEN SYRINGE, with one rose and jet .. .. 10s. 6d. each.
,, 589. Middle Ditto ditto .. 9 6 ,,
,, 588. Small Ditto ditto .. 8 6 ,,
,, 587. LADIES' GARDEN SYRINGE, with do. 6 9 ,,

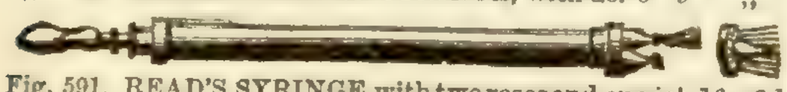

Fig. 591. READ'S SYRINGE, with two roses and one jet, 16s. 6d.
READ'S SYRINGE, with one rose and jet, 14 0
,, 592. Improved ditto ditto large 13 0

Garden Engines and Syringes of J. TYLOR & SONS' manufacture kept in stock by Ironmongers and Seedsmen in every part of the United Kingdom.

J. TYLOR & SONS, Manufacturers, Warwick Lane, Newgate Street, London, E.C.

Exhibition Prize Medal, 1862.

MUSGRAVE'S PATENT SLOW COMBUSTION STOVE.

This Stove is the nearest approach to Warming by Hot Water

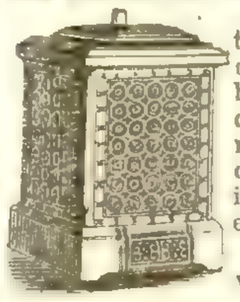

It will burn in Churches from Saturday till Sunday evening, without attention during the hours of worship. In Halls will burn day and night for weeks, with little care. Capable of Warming a large Apartment for 24 hours, at a cost of 3d.; and deserving of special attention, because of its safety, healthfulness, durability, and extreme simplicity.

It is also made for small Conservatories, with a vapour chamber.

For particulars of the above, and of MUSGRAVE'S PATENT STABLE and COW HOUSE FITTINGS, which attracted so much attention at the Exhibition, address,
MUSGRAVE BROTHERS, Ann Street Iron Works, Belfast.

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T. G. M.'s PATENTED BUILDINGS combine all the modern improvements, are most effectually ventilated by means of his unequalled Apparatus, can be made either plain (and which are at the same time elegant in appearance), or of the most elaborate design. They can be fixed as permanent buildings, or made to be portable.

T. G. M.'s HEATING APPARATUS continues to give the greatest satisfaction for its heating qualities and small consumption of fuel.

ILLUSTRATED CATALOGUES of the above, Glazing without Putty, Garden Engines, &c., sent upon application.

Exhibition Prize Medal, 1862.

HOTHOUSES for the MILLION.—On the principle invented and patented by Sir Joseph Paxton, M.P., combining simplicity, cheapness, excellence, and durability. Span-roof Houses, painted three coats, and glazed with English Sheet Glass, ready for fixing, 21 ft. by 13 ft., 24l.; 43 ft. by 19 ft., 73l. 5s.; 64 ft. by 25 ft., 161l.

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Also, A HANDBOOK on VINE and FRUIT TREE CULTIVATION, 2d Edition, price 1s.; post free, 1s. 1d.

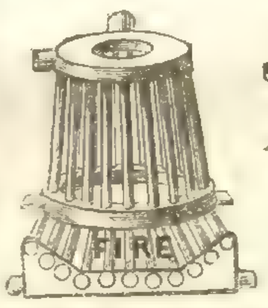

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JOHN TOOLEY, late 21 years with J. WEEKS & Co.
TUBULAR BOILERS,
All Sizes on the most Improved Principles. Valves, &c.
References in England, Ireland, and Wales.
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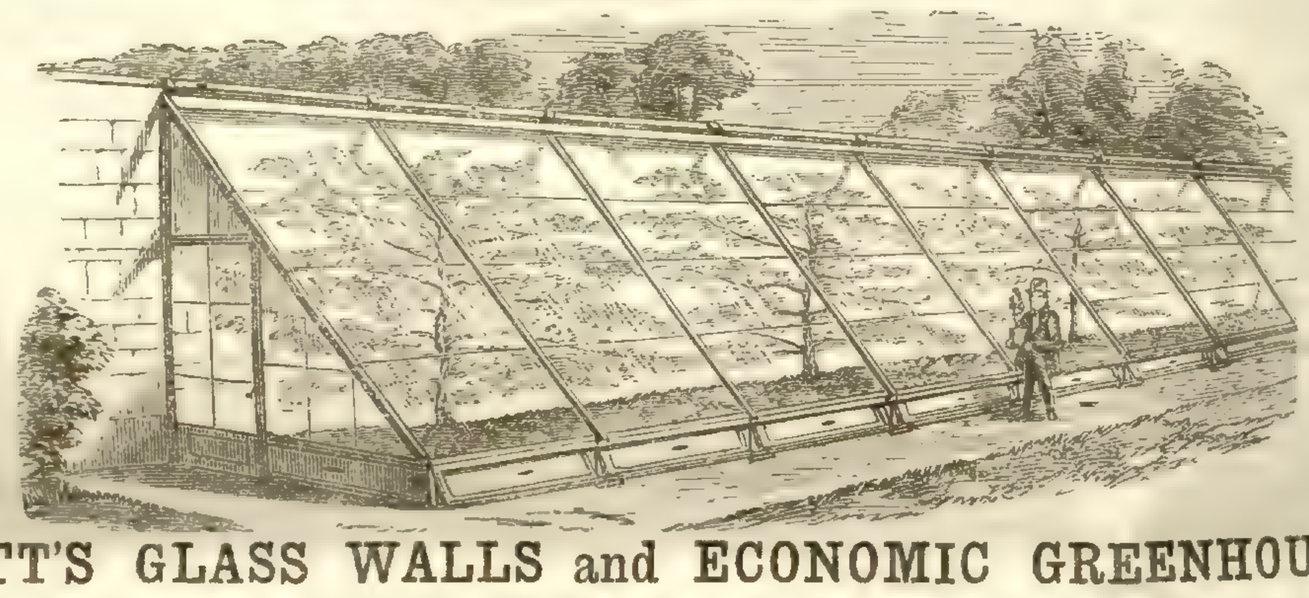

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Designed to meet the suggestions of JAMES SCOTT, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

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LAWN MOWING AND ROLLING MACHINES.

EVERY MACHINE WARRANTED.

PRICES OF MANUAL POWER MACHINES.

To Cut 12 inches, suitable for a Lady	£4	12	0
To Cut 16 inches, suitable for One Boy	6	10	0
To Cut 19 inches, suitable for One Man & Boy	7	0	0
To Cut 22 inches, suitable for Two Men	8	0	0
To Cut 25 inches, suitable for Two Men	11	10	0

PRICES OF PONY POWER MACHINES.

To Cut 22 inches	£8	15	0
To Cut 25 inches	11	10	0
To Cut 30 inches	14	14	0

These Prices include Free Delivery to any Railway Station in Great Britain.

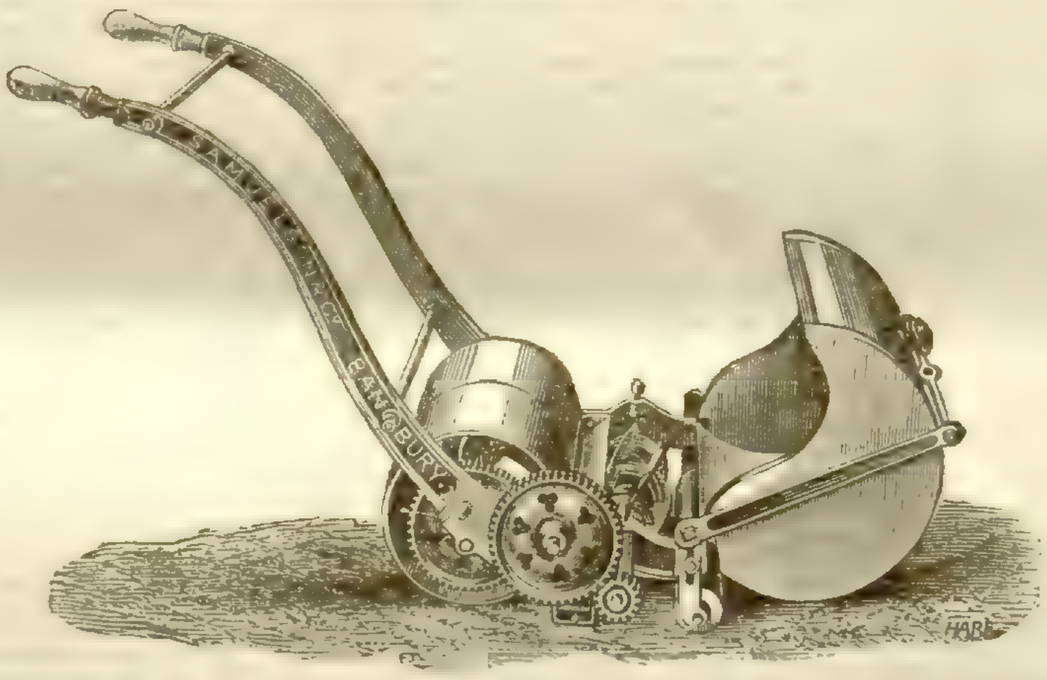

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ROYAL GARDENS,
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In again submitting their LAWN MOWERS to the notice of purchasers, Messrs. SAMUELSON & Co. wish to state that they do not make annual changes in the principle of their LAWN MOWERS. Experience has fully proved that the general design on which their MACHINES have been built for many years past is the best, and their attention has been given therefore rather to substantial improvements in manufacture, reduction of the draught, and increase of durability by the use of malleable iron in place of cast metal, than to the production of ephemeral novelties. Their MACHINES are superior to all others for lightness of draught, elegance, and efficiency under all circumstances of ground and weather, being self-cleaning, and not liable to derangement in the gearing. Selections from several thousand Testimonials free on application.

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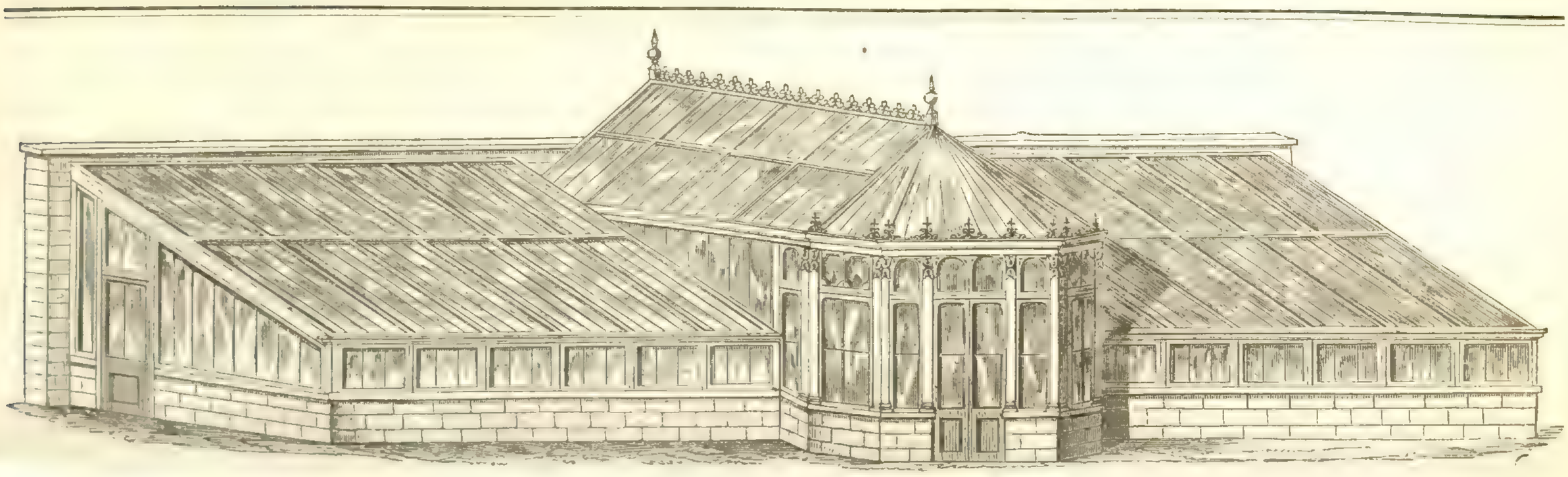

HORTICULTURAL BUILDINGS, COMBINING STRENGTH AND DURABILITY,

MANUFACTURED BY STEAM POWER MACHINERY.

LOWEST PRICES AND BEST MATERIALS.

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HORTICULTURAL BUILDER and HOT-WATER APPARATUS MANUFACTURER,

STANLEY BRIDGE, KING'S ROAD, CHELSEA, LONDON, S.W.,

Deeply grateful for the very liberal and kind patronage bestowed upon him, begs most respectfully to inform the Nobility, Gentry, Nurserymen, &c., that it is his determination to spare no pains to merit a continuance of their favours, and that he may be enabled to execute his extensive and increasing orders punctually, and at the lowest possible cost (agreeably with the best Materials and Workmanship), he has erected a most complete set of Steam Power Machines, peculiarly adapted for the purposes of his Trade.

H. O. begs to call attention to his superior manner of erecting every description of Horticultural Building, and he trusts by unremitting personal attention to the details of his business, by using only the very best materials, by employing the most skilful and efficient workmen, and by the most moderate possible charges, to merit a continuance of the patronage so kindly and so liberally bestowed on him for many years past.

In the **BUILDING DEPARTMENT** his object will be to adapt all erections to the particular purposes for which they are required. He will devote equal attention to the plain, inexpensive, practical erections of Pits, Orchard Houses, Greenhouses, Vineries, &c., as to the more elaborate and architectural erections of Conservatories, Winter Gardens, &c., either in wood or iron.

The **HEATING DEPARTMENT** always engages his special personal attention, and he feels justified in saying that in simplicity, safety, durability, and economy of fuel, combined with thorough effectiveness, his system cannot be surpassed.

VENTILATION.—Knowing the absolute necessity for thorough ventilation, he makes it a matter of first consideration.

H. O. having competent Draughtsmen and an efficient Office Staff, he is prepared and will be happy to forward Plans, Estimates, and Specifications by post or otherwise, and to wait personally on any Ladies or Gentlemen who may desire to see him on their grounds.

FIRST CLASS PRIZE MEDAL
FOR ORMSON'S CONSERVATORY,
At the International Exhibition.

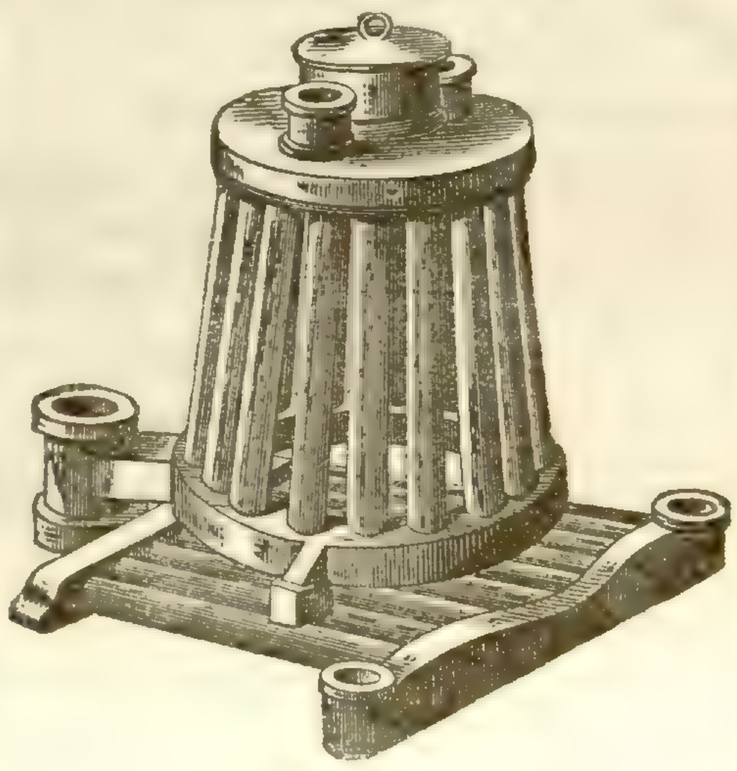

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ORMSON'S

PATENT JOINTLESS TUBULAR BOILER

HAS TAKEN MORE AWARDS THAN ANY OTHER TUBULAR BOILER.

These Awards have been given by Scientific, Practical, and Competent Judges.

At the Exhibition of Boilers at the Royal Horticultural Society's Gardens, ORMSON'S PATENT JOINTLESS TUBULAR BOILER was the ONLY Boiler of any description to which an Award was given.

Other Tubular Boilers advertised in the pages of the *Gardeners' Chronicle* were exhibited to which NO AWARDS were given.

Plans, Specifications, and Estimates on application.

HENRY ORMSON,

HORTICULTURAL BUILDER TO HER MAJESTY, AND HOT-WATER APPARATUS MANUFACTURER TO THE COMMISSIONERS OF HER MAJESTY'S ROYAL PALACES AND PUBLIC BUILDINGS, AND TO THE ROYAL HORTICULTURAL SOCIETY,

STANLEY BRIDGE, KING'S ROAD, CHELSEA, LONDON, S.W.

New Bedding Plant.

COLEUS MARMORATUS, one of the best and most distinct Novelties of the season, 10s. 6d. each, or Four Guineas per dozen.

Mr. WILLIAM BULL's Establishment for New and Rare Plants, King's Road, Chelsea, London, S. W.

WHEELER'S LITTLE BOOK on SEEDS.

CARTER'S GARDENER'S VADE-MECUM.

Rhododendrons.

CRIMSON, WHITE, PURPLE, AND SCARLET.

CHARLES NOBLE has RECEIVED the AWARD of the Royal Horticultural Society as under FOR RHODODENDRONS.

FIRST PRIZE, 1861.
FIRST PRIZE, 1862.
FIRST PRIZE, 1863.

CATALOGUES are now ready, and a stock of Plants in the most perfect health, of all sizes, and at prices to suit all purposes.

Sunningdale Nursery, S.W. Rail.

Giant Scarlet and White Intermediate Stocks.

ROBERT PARKER begs to offer SEED of these splendid varieties, which are far superior to the ordinary varieties of Intermediate Stock. Habit more robust and branching; flowers larger, and borne in greater profusion. If sown in April they will commence flowering in July and continue until Christmas in mild seasons. Price per packet, 1s.

The following Choice SEEDS are also specially recommended, having been selected with the greatest care:—

	Per packet—s.	d.
CALCEOLARIA, HERBACEOUS, finest mixed	2	6
CARNATION, PERPETUAL, finest mixed	2	6
CINERARIA CRUENTA, finest mixed	2	6
PICOTEE, PERPETUAL, finest mixed	2	6
PRIMULA SINENSIS FIMBRIATA, finest mixed	2	6
PRIMULA SINENSIS FIMBRIATA KERMESINA SPLENDENS	2	6

A SELECT PRICED and DESCRIPTIVE CATALOGUE of FLOWER, AGRICULTURAL, and VEGETABLE SEEDS, and NEW and RARE PLANTS, is published and will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

F. & A. SMITH,

THE NURSERIES, DULWICH, SURREY, S.,

BEG TO ANNOUNCE THAT THEIR

CATALOGUE OF NEW AND RARE PLANTS

for the present season is now ready, and will be forwarded Post Free upon application.

It contains DESCRIPTIVE LISTS of their NEW ZONALE GERANIUMS, PETUNIAS, GLOXINIAS, PRIMULAS, CINERARIAS, and their superior NEW BEDDING LOBELIAS, with all Novelties of Merit sent out by other raisers.

FUCHSIA PILLAR of GOLD.—The best variegated variety yet sent out, 3s. 6d. to 7s. 6d. each.

PRIZE MEDAL FOR SEEDS AND CEREALS.

ESTABLISHED 1800.

WILLIAM MORTON,

OLD MARKET PLACE, RIPON, YORKSHIRE,

Is now supplying his YELLOW BOY GREEN-TOPPED SWEDE TURNIP, grown from selected large Bulbs of the Hardy Green-topped Swede, at 9d. per lb.; and his large FOSTERTON HYBRID, 8d. per lb. NEW TURNIP SEEDS (Various), BROAD-LEAVED and LONG-STALKED RAPE SEEDS, WHITE MUSTARD, WURZEL SEEDS.

MIXTURES of GRASS SEEDS for Permanent Pasture, suitable to the various soils; ENGLISH and DUTCH CLOVERS, ARTIFICIAL GRASSES, LAWN GRASS, RYE-GRASSES, &c. Circulars (Third Edition) free by Post.

RIPON and CLARO SEED ESTABLISHMENT, RIPON, YORKSHIRE.

COOL ORCHIDS.

HUGH LOW & CO.

Have received by Royal Mail Steam Ship *La Plata*, 32 Cases of ORCHIDS from their Collector in Guatemala, and they contained amongst other things a very large quantity of ODONTOGLOSSUM GRANDE and LÆVE, and LÆLIA SUPERBIENS. The Plants are in the finest possible condition, and are on Sale at very low prices.

H. L. & Co. have also to hand, per P. & O. Steamer *Delhi*, many fine Novelties from Moulmein, and quantities of known Choice ORCHIDS, such as DENDROBIUM CHRYSOTOXUM, ALBO SANGUINEUM, EBURNEUM, TORTILE ROSEUM, LUTEOLUM, PARISHI, INFUNDIBULUM; AERIDES LOBBI; BOLBOPHYLLUMS, CIRRHOPETALUMS, &c., &c.

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THE BEST HARDENED OFF STOCK IN THE KINGDOM.

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237, 238, and 261, HIGH HOLBORN, LONDON, W.C.

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CONTAINING LISTS OF PLANTS OF ALL KINDS AT VERY MODERATE PRICES, WITH COMPLETE CULTURAL DIRECTIONS,

Forwarded Post Free on application.

FIRST-CLASS NEW BEDDING GERANIUMS,

Which they are now prepared to send out.

THE LATE MR. DONALD BEATON'S GERANIUMS.

It is with sincere regret that we announce the demise of the above-named highly-esteemed gentleman, whose place in the World of Horticulture we believe cannot easily be supplied. For 20 years he was looked to by all as the genius of the Gardening World, and it is admitted that his Seedling Geraniums alone will immortalise his name among the Floral public. Ten days prior to his death he concluded a contract with us for all the Geraniums sold by him last season to Nurserymen, for distribution in 1864, and the whole of the varieties we offer he proved in his experimental garden at Surbiton, and from a large Collection these kinds alone were selected.

The Set of Mr. Beaton's Geraniums, 1 strong Plant of each for 15s.

CYBISTER (BEATON).—Price 3s. 6d. each
LADY COLUM (BEATON).—Price 5s. each
BEATON'S PET (BEATON).—Price 5s. each

MRS. WHITTY (BEATON).—Price 3s. 6d. each; 36s. per dozen
MONITOR (BEATON).—Price 3s. 6d. each

SNOWBALL (KEELER).—Price 5s. each
BEL DEMONIO (KEELER).—Price 2s. 6d. each
HIBBERD'S PET (HIBBERD).—Price 2s. 6d. each

For descriptions of the above, see *Gardeners' Chronicle*, May 7 and 14, 1864.

CALCEOLARIA, PRIMULA, and CINERARIA, saved from the best named sorts only. Price per packet, 2s. 6d.

ADDITIONAL NEW PLANTS.

SWAINSONIA SPLENDENS, each, 3s. 6d. | GOLDEN VARIEGATED BALM, per dozen, 6s. | CLIANTHUS DAMPIERI SPLENDENS, each, 5s. | COLEUS MARMORATUS, each, 7s. 6d.

NOVELTIES of 1863.

NOSEGAY GERANIUMS.

LORD PALMERSTON
SPREAD EAGLE
MERRIMAC

MISS PARFITT
HELEN LINDSAY
RUBEN'S IMPROVED

The Set for 5s

FUCHSIA, CARTER'S METEOR, each, 1s.
CERASTIUM BIEBERSTEINI, per dozen, 6s.
LOBELIA PAXTONIANA, per dozen, 6s.
,, SPECIOSA ALBA, per dozen, 6s.

LOBELIA GORDONIANA, per dozen, 6s
ECHEVERIA METALLICA, each, 3s. 6d
STREPTOCARPUS SAUNDERSI, each, 2s. 6d

Carter's Original Collections of Plants from 12s. 6d. to £4 10s.

☞ SPECIAL LIST of AGRICULTURAL SEEDS forwarded gratis on application.

New Plants.

MR. WILLIAM BULL begs to announce that he is now sending out his
Collection of NEW VERBENAS for 1864
" FUCHSIAS for 1864
" SINGLE PETUNIAS for 1864
" DOUBLE PETUNIAS for 1864
" PENTSTEMONS for 1864
" BEDDING GERANIUMS for 1864
" ENGLISH SPOTTED PELARGONIUMS for 1864
" FRENCH SPOTTED PELARGONIUMS for 1864
" FANCY SPOTTED PELARGONIUMS for 1864
" DROOPING GLOXINIAS for 1864
" ERECT GLOXINIAS for 1864

For full particulars and prices, see SPRING LIST of NOVELTIES, which can be had on application.

Mr W B also begs to announce that his NEW PLANTS from Brazil, Central America, Australia, Bombay, Java, New Caledonia and Guatemala, are now ready for delivery, an inspection of which is invited.

New Bedding Plant, COLEUS MARMORATUS, 10s. 6d. each
New Ornamental Plant, GYNERIUM ARGENTEUM fol. VARIEGATUM, 31s. 6d. each
Establishment for New and Rare Plants, King's Road, Chelsea, London, S.W.

Seeds Worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1s. 6d., 2s. 6d., 3s. 6d., and 5s. each.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our Collection in the Spring, 1862. In sealed packets, 1s., 2s. 6d., and 5s.

DOBSON'S PRIZE PRIMULA SINENSIS SEED, Superbly Fringed. In sealed packets, 1s., 2s. 6d., and 5s.
J. Dobson & Sons, Seedsmen, Isleworth, W.

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

LIST of AWARDS, MAY 17, 1864.

FIRST-CLASS CERTIFICATES.

ACER FROM JAPAN, from Mr. Veitch, Chelsea.
AGAVE SCHIDIGERA, from Mr. Williams, Holloway.
AUCUBA JAPONICA FOL. MARGINATIS, from Mr. Bull, Chelsea.
CORDYLINE BANKSII, from Messrs. J. & C. Lee, Hammersmith.
GENETYLLIS SP., from Mr. Veitch.
GLEICHENIA HECISTOPHYLLA, from Mr. Bull.
GYNERIUM ARGENTEUM ALBO-LINEATUM, from Mr. Bull.
LILAC DR. LINDLEY, from Messrs. J. & C. Lee.
PELARGONIUM CLIPPER, from Mr. Bull.
RHAPHIOLEPIS OVATA, from Mr. Veitch.

SECOND-CLASS CERTIFICATES

COLEUS MARMORATUS, from Mr. Bull and Mr. Williams.
CYPRIPEDIUM PEARCII, from Mr. Veitch.
DIEFFENBACHIA BARAQUINIANA, from Mr. Williams and Mr. Bull.
DIEFFENBACHIA GRANDIS, from Mr. Bull and Mr. Williams.
PEPEROMIA ARIFOLIA, from the Society's Gardens.

SPECIAL CERTIFICATE.

ORNITHOGALUM THYRSOIDES, from Messrs. Carter & Co., Holborn.

The NEXT MEETING will take place on June 1.

THOMAS MOORE, Secretary to the Committee.

The Gardeners' Chronicle.

SATURDAY, MAY 21, 1864.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, May 24 { Linnean (Anniversary) .. .. 1 P.M. / Royal Horticultural (Hall and Decorations, &c.) at S. Kensington Noon Table
WEDNESDAY, — 25—Royal Horticultural (Conversazione) 9 P.M.

THE dry weather of 1862 was very destructive to CONIFERS. We have seen many instances of its ravages, and amongst others a fine specimen of Cupressus macrocarpa, of 17 years' growth, in our own garden, fell a victim. We had indeed for some time suspected that the drought was not the primary cause of mischief, but we had hitherto neglected to examine our Cypress, in the hope that it might send up shoots from below. This morning, however, we have received from the neighbourhood of Exeter a portion of the trunk of a Cryptomeria japonica, which was 20 feet high, and which suddenly began to fail last September, exactly like our Cupressus. In this case, however, one small branch at the base which had taken root survived, and as a neighbouring large Sequoia and Wellingtonia, together with another Cryptomeria of still larger dimensions, remained healthy, it seemed improbable that all the mischief had arisen from drought. On examination, it appeared that there was a sheet of white mycelium between the bark and wood, exactly as in the Larch tree of which an account was sent to us last year by Sir PHILIP EGERTON, and whose history was recorded in this Journal, p. 244, 1863. As some large Beech trees formerly occupied the ground on which the Conifers were planted, there can be no doubt that the roots of the Cryptomeria have come in contact with the old decaying roots of the Beech trees, and have in consequence become diseased.

The death of the Cryptomeria accorded so exactly with that of our Cupressus that we proceeded at once to cut it down, and we found that its condition was just the same, a thick sheet of mycelium investing a large portion of the lower part of the trunk. It was evident, however, that the evil was of no recent origin, for thin black lines, which so often occur in wood infested with Fungi, penetrated to the very centre, and many portions of the upper part of the trunk, which the mycelium had not yet reached, showed symptoms of disease. On one side, indeed, the bark had evidently been dead for two or three years, as no wood had been deposited.

The tree suffered slightly from the frost of 1861, during which it lost its leader, but the mischief evidently was of early date, and arose undoubtedly from the attack of the roots by Fungi. So long as a portion of the tree remained in health, and there was a plentiful supply of nourishment, everything seemed to go on well; but drought came, the supply of moisture was cut short, and in consequence the whole gave way, as if by some sudden stroke.

In all probability a great portion of the deaths of Conifers last year attributed to drought, depended upon the cause we have just pointed out. Such cases teach us very powerfully that we ought never to plant young trees where old ones have been cut down, without most carefully grubbing up the roots. The least portion left behind may cause the death of some valuable tree when we least expect it.

IN another column we publish a very interesting letter from Mr. WYKEHAM MARTIN, of Leeds Castle, respecting the new mode of HEATING, which was described in our Journal for this year at p. 78. We have ourselves had an opportunity of inspecting the plan, which in point of economy and efficiency is scarcely to be equalled. Everything seems to thrive admirably on the tile floor; but for those things which may be supposed to succeed better when their roots are not confined, a deep border runs at the back of the house, and another down the centre. The fire, which need consist only of two or three refuse pieces of wood, when made up at night requires no watching, and when it is allowed to go out entirely for the purpose of experiment, or for regulating the heat, it is astonishing how long the tile floor retains a sufficient degree of temperature.

The main feature, however, of the plan, is getting a genial bottom-heat for a border in front of the house, a circumstance of inestimable value in the cultivation of Vines, which often suffer seriously from the great contrast between the temperature to which the roots are exposed, and that in the interior of the house, where the shoots and blossoms are developed. Shanking, spotting, branch-roots, leafwarts, and other maladies arise frequently from this cause alone. It is clear, however, that the border may be applied to many other purposes. Without the aid of frames it will doubtless answer for Capsicums, Tomatos, and other plants which are grateful for more bottom-heat than we can in general give them, but with the aid of frames we have facilities for producing early salad, Peas, and other vegetables, which increase in value directly in proportion to their precocity, and for Cucumbers and Melons, few conditions can be imagined more favourable.

It is obvious, moreover, that the plan might be introduced on a large scale in the middle of a garden, without any hothouse, which would materially diminish the expense. Experience would suggest numerous modifications.

On looking over a list of the temperatures registered from two thermometers, one of which was plunged in the warm border at a depth of 8 inches, the other at the same depth in the border in front of a short range of hot-houses continuous with that over the hypocaust, we find that from March 12 to May 6 inclusive, the mean temperature in the open ground at 8 inches was 51.454, while that of the warm border was 77.127, giving a difference of 25.7828.

The heat was sometimes more than is requisite, but it is to be observed that in the wall which separates the vault under the border from that under the house, there are four large shutters or valves, moving on a central horizontal axis, which may be opened or shut with the greatest ease, and by means of these the heat may be regulated with the requisite nicety. As the house was not built till the beginning of March, there has not been much time for practical results, but everything we saw at the beginning of April, and especially the Strawberries, looked well and healthy on the tile floor, and some Kidney Beans which were sown a few days before the house was complete, on the 12th of March, yielded a fine crop on the 4th of May. It has been necessary to water the border twice only since the hypocaust was in action. As the soil which is in contact with the tile-roof of the hypocaust does not get dry, it is not necessary to have so great a depth of soil as was at first anticipated.

It is obvious that some care must be taken to regulate the fire properly, or the bottom-heat will be occasionally greater than is desirable. A little experience will show the just method to be observed in opening and shutting the valves, and the times when the fire may be safely put out entirely or reduced to a few embers. A thermometer must be in constant use, but with a very slight degree of intelligence we believe that this method of heating will be an immense boon to the cultivator.

MR. BATEMAN'S LECTURE ON COOL ORCHIDS

DELIVERED AT SOUTH KENSINGTON, MAY 3, 1864.

A WELL-KNOWN traveller to whom, at a period now somewhat remote, I was indebted for the honour of my introduction to the Royal Horticultural Society, once observed to me, "that he had the greatest contempt for the ancients, because they had no Epiphytes! Even Pliny," he added, "who seems to have been a collector and a sensible man in other respects, would not have known a Cattleya from a Burlingtonia had such things come in his way!" Here I think my friend was somewhat too hard upon the ancients, whose ignorance of Orchidology resulted necessarily from their ignorance of the countries where alone Epiphytal Orchids are found, whereas the ignorance and indifference of the moderns in regard to these fascinating plants continued unabated up to the very close of the 18th century, notwithstanding the vast superiority of their geographical knowledge and their constant intercourse with all the chief Orchid-producing countries of the world. This will at once appear if we compare the world as it is known to ourselves with the comparatively small portion of it that was known to the ancients. In this map (Mr. B. exhibited a modern map of the world) we have the world as corrected up to the latest discoveries of Captain Speke, and on which its Orchid-producing regions are indicated by a red tint which varies in its intensity according as the yield of Orchids in the several portions may be great or small. The redder the tint the more numerous the Orchids. Thus many portions of Australia are just tinged with red, while throughout the Spice Islands, the peninsula of Cochin China, and Nepal, the colouring is intense. Hindostan is less conspicuous, but in Ceylon and Nepal the deeper tint reappears. In Africa the lighter hue is spread over a large portion of what was supposed not many years since to be an arid desert, but from which Captain Grant and others have lately brought most interesting samples of Orchideous Epiphytes. In Sierra Leone, and along the course of the Niger, Orchids swarm, as is likewise the case in Madagascar. But it is perhaps in America, within the tropics, that Orchids are most abundant. Here all the republics stretching along the vast chain of the Mexican and Peruvian Andes are—at least in an Orchideous sense—*red* republics! Turning now to the world, as known to the ancients (Mr. B. exhibited a map of the "*Orbis veteribus notus*," according to Strabo), we see at a glance that the range of their geographical knowledge fell short of the Orchid-bearing lines. Of America of course they knew nothing; Europe has no Epiphytes, neither has Africa in that portion with which the ancients were familiar—no, nor yet India.

Under these circumstances we need not wonder at the Orchid-ignorance of the ancients; that of the moderns is less easily explained! It prevailed, as we have seen, up to the close of the last century, and might have continued almost to the present hour had it not been for the labours of a Brown or of a Lindley, more especially of the latter, from whom, indeed, the science of Orchidology may be said to have sprung. The publication of his "Genera and Species" was as great an era to the botanist as the appearance of his memorable paper "On the Cultivation of Epiphytes of the Orchis family,"* was an event never to be forgotten by the "grower.

It was at least an era to me—then an undergraduate at Oxford—for it opened out to me a new field of interest and enjoyment which, after the lapse of more than 30 years, is as fresh now as at the very onset of my horticultural career. In the paper to which I refer, Dr. Lindley begins by describing the interest that attached to the plants of which it treats; he next points to the ill-success that had hitherto attended all our attempts at their cultivation, and then proceeds to explain the causes of our failure. And in order to do this he passes in review all the Orchid-producing countries of the world, and finds that the hottest if dry, and the dampest if cold are destitute of this tribe of plants. Heat and moisture are therefore the essential conditions of their artificial cultivation, and in order to grow them with any prospect of success he recommends an atmosphere damp to saturation, and a temperature of scarcely less than 80°, which he observes is that of the countries in which such plants are mostly found, *with the exception of the species inhabiting the Andes of New Granada*. It was rather, however, to the rule than to the exception that we were then disposed to look, and with these instructions from head-quarters we set to work to build our Orchid houses. Convinced that Epiphytes were fond of heat and moisture, we thought it was impossible to give them too much of either, and therefore, as may readily be supposed, our first structures were perfect Pandemoniums. At all events I can answer for my own, and that at Chiswick was quite as bad. After a while, however, we discovered that such an intolerable amount of heat was neither indispensable nor indeed desirable, and we therefore reduced the temperature to the point at which it stands in the best managed collections of

* Horticultural Transactions. Second Series. Part I., 1832.

the present day—those I of course mean, in which East Indian Orchids are grown.

In this way perfect success for a time seemed to crown our efforts. Orchid growing became an absolute mania, and so long as our supply of new plants was derived from the sultry islands of the East Indian Archipelago or the hot coasts of the South American continent, all went well. So soon however as these sources began to fail, and we were obliged to go for novelties to the higher regions of the interior, then it was that we experienced our first reverse. Guatemala was the earliest country with a mild climate to which our attention was seriously directed; for here Mr. Skinner—always an enthusiast in everything connected with natural history—was known to have established himself, and thanks to his energy and liberality, we speedily received in the form of living plants abundant evidence of the richness of the Orchideous Flora of that beautiful country, which he had then made his adopted home. It happened indeed that the Guatemala plants were of a mixed character, some—from the coast—delighting in a good amount of heat, while others—from the highlands or "nubes" as they are called—were naturally exposed to a temperature not a whit higher than that of our ordinary greenhouses. But, however varied the climate of their natural habitats, they were all—on their arrival in England—indiscriminately huddled into the same stove, where if some perished others did well, and we were but too ready to ascribe the loss of the former to the circumstance of their being a set of intractable things that did not even so much as know when they were well off. But the difficulty of which we had now the first mild indications, began to make itself more seriously felt as the cool Orchid-producing countries began to be more and more visited by collectors. Mr. Barker's importations from Mexico almost evaporated in the course of a few years, while a still more wholesale destruction awaited the discoveries of Warscewicz in New Granada and Peru. Indeed, in such ill odour at last were the finest Orchids of these glorious countries, that sundry Odontoglossa which, if we but had them alive, might now be weighed—carat for carat—against the choicest gems in Mr. Hancock's shop, were sold at Stevens's Rooms for sums that would scarcely suffice to purchase a bouquet at a stall in Covent Garden!

It cannot be denied that there were those amongst us, who had a shrewd suspicion that something was wrong. From Mr. Skinner, from poor Warscewicz, and from other disappointed collectors, words of warning reached us, but in vain, and it was not until Dr. Lindley took the matter in hand—indeed scarcely even then—that any serious impression was made upon the minds of cultivators; yet it seems strange that evidence so unimpeachable as that adduced in the 'Orchidaceæ Lindenianæ,"* in behalf of a cooler system of treatment for Orchids from cool localities, should have failed to command assent. In the pamphlet referred to Dr. Lindley remarks: "It is evident indeed that these Columbian species have no affection for a high temperature, and that many prefer a low one. No fewer than 13 occur between 10,000 and 11,000 feet, where, Humboldt tells us, it is as cold as the mean of the month of March near Paris; 19 where the mean is that of May in the same city; while the mean temperature of the zone between 5000 and 6000 feet, where the largest proportion exists, is only that of Paris in August, according to the same authority."

I had myself, at an early period, experienced what should have been a very useful lesson as to the power of certain Orchids to endure cold, and their inability to endure heat. It was, I think, in the midst of the severe winter of 1837-38 that I received a box of Orchids from Oaxaca, and which arriving at that season, and after an exposure for a night and a day on the top of a coach, I quite gave up as lost. As however they appeared green, I did just place them in the stove, under the impression that when thawed there would speedily be evidence enough to show that death had done its work. My amazement may therefore be conceived when I found that they evinced no symptoms of distress, but actually began to push roots and leaves! This they continued to do through the winter and spring, and I considered my plants secure; but when the severity of winter had passed, and a higher temperature began to prevail, then for the first time they seemed to pine, and in less than a twelvemonth nearly all had disappeared. Another lesson pointing in the same direction might have been drawn from a plant of Oncidium deltoideum, a Peruvian species, which after having nearly disappeared altogether, was at length accidentally met with near Liverpool, flowering finely in a greenhouse. But even this hint, broad as it was, met with no attention, and the poor Oncidium, having proved itself a species of rare beauty, was at once transferred from the greenhouse, where it had flourished, to a stove, where it died. At this distance of time it seems all but impossible to understand such fatuity, but I believe our reasoning—if we reasoned at all—might have been thrown into the form of a syllogism, thus:—

The East and West Indian Orchids succeed under hot treatment.

But these Mexican and Peruvian plants are Orchids;

Therefore the Mexican and Peruvian plants must succeed under hot treatment.

I shall not waste your time by pausing to explain the fallacy of such reasoning, I prefer to show you how by little and little our inveterate prejudices at length gave way.

It was, I believe, on the Continent that the first decided move was taken in the direction of cool treatment—induced, perhaps, to some extent by the greater economy of fuel which it is there necessary to practise. At all events it was in the collection of M. Linden himself. that the earliest triumphs of the new system were achieved, and it was in his houses that many of the most beautiful Odontoglossa, figured in "Pescatorea,"* flowered for the first time. Among ourselves Messrs. Jackson, of the Kingston Nursery, are entitled to the credit of having first adopted the cool system, and in looking through the old numbers of the Botanical Magazine I am astonished to find how many N. Granada Orchids are mentioned as having flowered in their establishment. Here, indeed, the *débris* of Warscewicz's sales found refuge for a time, but when the Kingston collection of Orchids was broken up, these treasures passed into other hands and other treatment, under which they perished—of course! The next rational move was made by Messrs. Veitch, at whose nursery in the King's Road I first saw the cool system at work, and great was my astonishment at the sight of plants such *e. g.* as Odontoglossum grande, in the most vigorous health, which I had never before beheld except in a weak and sickly state. This may have been some five or six years ago. Mr. Rucker and Mr. Day followed in the same direction, and succeeded perfectly even in their first attempts; while the last to move, to his shame be it spoken, was Mr. Bateman himself, who is now anxious to condone his past folly by teaching you in a few minutes what it cost him so many tedious years to learn.

Having now reached the point at which the principle of cool treatment may be regarded as established, it only remains for me to say a few words as to its details, and these will naturally arrange themselves under the heads of—1, House; 2, Temperature; 3, General Management. As regards the first, *i.e.*, the House, I would only observe that it should be low and small, and if possible face the north. The latter condition is easily complied with in most gardens, where a few yards of back wall, usually appropriated to sheds, may be covered with lean-to sashes (glazed with Hartley's rough plate), and then, two or three yards of hot-water piping being introduced, your cool Orchid-house is at once complete.† Next, as regards Temperature. This should be as equable as circumstances will permit; that is to say, during the daytime in winter it should not fall below 60°, while during daytime in summer the less it rises above 70° the better. In the night of course the temperature will fall considerably, and even if it sink below 50° no harm will be done. Lastly, as regards the General Management. Under this head comes humidity, which is an indispensable condition of success, and which must be kept up more or less, both summer and winter, by continually damping the floor and the shelves. On the latter, wet Moss should be kept constantly strewn, the evaporation from this being highly beneficial. Insects, such as woodlice, cockroaches, snails, thrip, scale, &c., must be rigidly excluded or kept in check, otherwise success is not to be thought of. The fumes of tobacco, even to the extent that many other Orchids would readily endure, are most injurious to the Odontoglossa and other cool Orchids, causing their leaves to fall off.

The plants themselves may be grown—according to circumstances—either on blocks of wood or in pots, the Odontoglossa always preferring the latter, while most of the Epidendra are safest on the former. When pots are used, they should be filled up to at least two-thirds of their depth, with large broken potsherds (so as to admit air to enter, and water to escape freely), and for the residue, in which the roots of the plant will be turned, no mixture is superior to the following: Take of broken potsherds two parts; of chopped Sphagnum one part; of fibrous peat well beaten, so that the earthy portion may fall out, one part; then mix the whole together and set your plant thereon, taking care that it stands well up above the rim of the pot. In this way water which, during summer especially, may be freely given, will pass readily away, without any risk of causing the roots to damp off or decay.‡ The pots moreover in which the plants grow should stand on other pots (inverted), placed in a saucer of water, both for the sake of humidity and of security from woodlice.

Nor let it be supposed that cool Orchid houses are luxuries not to be enjoyed in London or in other large towns. So far from this they might easily be fixed (in 19 out of 20 London houses) to the back of the building, and entered from the landing on the stairs, or they might be placed in the backyard. In this way Dr. Cauty, of Liverpool, has contrived in the very centre of the town to find room for two or three little Orchid houses, which answer perfectly, in the space where one would look to find nothing but dust-bins and coal-holes. Nay, there are yet other and even greater facilities, for Mr. Skinner has kept Lycaste Skinneri some years in a drawing-room, where it still flowers and flourishes, and Major Trevor Clarke has succeeded in flowering Odontoglossum grande in the open air! These, however, are exceptional cases, and for the vast majority even of cool Orchids, no doubt a special receptacle must be provided.

And now that we have overcome the difficulties which so long beset the cultivation of a most beautiful section of a most beautiful family, we may reasonably wish to inquire to what extent the importation of living plants may be expected to add to our treasures, and here beyond all doubt there is a splendid prospect before us! The illustrious Humboldt, whom I had the pleasure of meeting at Berlin in the year 1836, specially directed my attention to the beauty and profusion of the Orchids of equatorial America. It is of these that he himself speaks in one of his works, remarking that "although such plants are scattered through every part of the torrid zone, from the level of the sea to the height of 10,000 or 11,000 feet, yet it must be admitted that in the number of species, the colouring of their flowers, delicious fragrance, rich foliage, and brilliant flowers, none can be compared to those that inhabit the Andes of Mexico, New Granada, Quito, and Peru, where the shade is moist and the breezes mild, the mean temperature of the year at an elevation of between 4800 and 6600 feet, being from 64° to 69°." To the same effect may be quoted the testimony of the authors of the "Flora Peruviana," who assert that upwards of a thousand species might be found in Tarma, Huanoco and Xauxa alone!

In fact, these most beautiful of plants, like those most beautiful of birds—the humming-birds,* seem to cling with a marvellous partiality to the vast Andean chain which stretches from the frontiers of Mexico to the confines of Peru. These mountains are—geologically speaking—of recent date; the Orchids, therefore, that inhabit them must likewise be comparatively recent; indeed, no fossil Orchid has ever been discovered, although Ferns, with which in these days Orchids are invariably associated, have been found in countless myriads in the palæozoic strata. Nor need we be surprised at this circumstance, for if flowers be indeed, as has been touchingly said, "God's smiles," we should scarcely expect to have seen an earlier place in the programme of creation assigned to our Orchids, which are of little, if any, known utility to man, and have nothing but their beauty to commend them to his notice. They were not therefore called into being until he who alone could appreciate their varied charms was about to appear upon the scene.

In the earlier part of this lecture I had occasion to notice the ignorance and indifference in respect to Orchids that prevailed in Europe almost up to the very close of the 18th century. This indifference however did not extend to the settlers in the New World, for scarcely had the Spaniards discovered America than the wondrous beauty of the Orchids attracted their attention, and the names by which many of the plants are still known, *e. g.*, Flor de Muertos, Flor de Corpus, Flor de los Santos, &c., attest the devotional uses to which many of the most beautiful were, and still are applied. Indeed the altar of a Roman Catholic church in an Orchid country is the point to which a plant collector should first direct his steps, and it was actually in this way that Lycaste Skinneri and many of our present favourites were first discovered! The same feeling in regard to Orchids may be noticed in the curious work of Hernandez on the "Natural History of New Spain" (published early in the 17th century), from which I have copied the frontispiece (this was exhibited on a greatly enlarged scale), wherein all the most striking productions, whether animal or vegetable, of the country are grouped, with a disregard to proportion and perspective that might have done honour to the Chinese! Here are all the most remarkable beasts and birds and trees and flowering plants. Of the latter only three are given, but the place of honour in the centre is assigned to what can be none other than Stanhopea tigrina (the Flos lyncea of Hernandez), supported on the right by Tigridia pavonia, and on the left by a second Orchid, in which we at once recognise the *flor de corpus* or Lælia grandiflora.† Both these plants are already in our collections, but a multitude of others of equal interest remain to be introduced. (Mr. B. directed particular attention to drawings of Epidendrum erubescens, E. Frederici Gulielmi, &c., as special objects of desire; he also exhibited a model, by the nuns of Santa Anna in Guatemala, of E. cnemidophorum, of which plants have been recently introduced). Meanwhile the search goes bravely on, for already there are half a dozen or more collectors in quest of cool Orchids in the countries to which I have so

* Orchidaceæ Lindenianæ, or notes upon a collection of Orchids formed in Columbia and Cuba, by Mr. J. Linden. By John Lindley, F.R.S., &c., London: Bradbury & Evans, 1846.

* *Pescatorea, Iconographie des Orchidées*, par J. Linden, Bruxelles, 1851-60.

† For plan and section of such a house see Mr. Bateman's "Guide to Cool Orchid Growing." Reeve & Co., 1864.

‡ For full details of Orchid cultivation, many of which are alike applicable to hot plants and to cool, see Mr. Williams's Orchid Grower's Manual. London, 1862.

* Mr. Gould informs me that two-thirds of the known species of humming-birds inhabit the Mexican, New Granada, and Peruvian Andes, on which they are most abundant at the height of from 5000 to 10,000 feet; precisely the zone that is most prolific in Orchids! In Mr. G.'s splendid work on the Trochilidæ many species are represented as fluttering around, or sucking honey from various Orchids.

† The vernacular names of these two Orchids are respectively "Itzumacha" and "Cortico-atzonte-coxotchil," which should go far to reconcile us to the hardest Greek or Latin names that any botanist has yet inflicted!

frequently had occasion to advert. Unfortunately there is a peculiar difficulty attending the transmission of the plants, which have to perform a long journey by land before they can be placed on ship-board; consequently by far the larger proportion of the contents of the boxes hitherto received by the Messrs. Low, M. Linden, and others, were found, on opening them, to have entirely perished. Still there were a few survivors, for which collectors must be prepared to pay a high price if they choose to be the first to appropriate these treasures. These remarks are however only intended to apply to the Columbian or Peruvian Orchids. From Guatemala large supplies of the primest favourites have been received, and may now be obtained at a very reasonable rate. With these, the cool Orchid grower should therefore begin, and by the time he is sure of being able to manage them, we may hope that other kinds will be within his reach.

But at this point "surgit amari aliquid;" the question cannot but intrude itself as to how long all this pleasant excitement is to last? Attacked, as we have seen, in their mountain fastnesses by such a host of collectors, the Orchid supplies must at length fail. It may not be in 10 years or in 20 that we shall receive our last novelty; but still, sooner or later, the time must come. And the same question may well be asked in regard to all other plants, and indeed in regard to all other departments of natural history. How long, then, will it be ere, for lack of new materials on which to work, our Lindleys and Reichenbachs, our Benthams and Hookers, will find their occupation gone? How long ere not an insect will be left for a Bates or a Wallace to capture or to classify? How long can a constant succession of new birds be found to supply the splendid publications of an Audubon or a Gould? And how long will the marvellous sagacity of the Cuviers and Owens of the period be able to expend itself in the study of new forms of animal life, whether recent or fossil?

It will be a tame, monotonous, and effete world when nothing is left for the traveller to explore, or for the man of science to investigate, or for the collector to import. The naturalist will then cease to declaim on the inexhaustible fecundity of nature, and even the Christian will expatiate with diminished emphasis on the marvellous diversity of the works of God. To what quarter, then, shall we turn for relief? Must we patiently abide until the atoms shall have met in secret conclave, and arranged to reconstruct the universe in accordance with all the latest improvements of modern science? Or must we wait in weary expectation until some development hypothesis shall have hatched a new insect, or some theory of natural selection reared a new plant? If so, we must prepare to have our patience sorely strained, for all these theories that are credited with such vast achievements in the days of old, seem for the present to have struck work. Or in the absence of "fresh fields and pastures new" in the domain of nature, must we reconcile ourselves to the prospect of a sensuous, material, or mechanical age, in which the love of pleasure, or the greed of gain, or the pride of art will be the master passions of the human breast! God forbid! But no; for those who have studied in the school of a higher philosophy there are better things in store. For to them it has been announced by an authority that cannot err, that when the appointed hour shall have struck, that voice so mighty in operation will be heard once more, and the solemn words "Behold, I make all things new" will kindle into being ten thousand forms of animal and vegetable life, and change, as in a moment, the whole face of the world! Change—as a vesture is changed—change but not annihilate. For the instincts of our nature, the analogies of science, and the teaching of Scripture alike lead us to believe, that however dread the ordeal through which this our earth may be destined to pass, it will at length emerge from its fiery baptism in more than its primeval beauty, and adorned, as a bride for her husband, in all the glories of the new creation. A majestic vision will be then disclosed of the power and wisdom and goodness of God, such as no eye hath seen, no ear heard, and which no tongue can adequately tell, but which to His faithful people will be an ever-fruitful source of love, and joy, and wonderment, and adoration through all the festal ages of the world to come.

THE HORTICULTURAL CONGRESS AT BRUSSELS.

(*Concluded from page* 461.)

On the 26th of April, the sitting commenced at 10 A.M.

In reference to the 8th question of the programme, "History of horticulture, explorations, introductions, &c.," M. Bommer addressed to the Congress a communication relative to the introduction of hardy plants.—M. Bastin made some additions to the note he had previously presented upon the nomenclature of vegetables.—M. Fritsch communicated a note upon the dynamics of plants.—M. Van de Corput read a note upon the utility of squares and public parks.—A further debate took place respecting M. Von Siebold's theory of the cause of variegation in plants, in which Baron Hügel, M. Von Siebold, M. Rodigas, M. Planchon, and M. André took part.—M. Bommer was of opinion that distinction should be made between leaves which were streaked (panachées), and those which were coloured (colorées). He also invited attention to the utility of Vaccinium amœnum, a species which produced excellent fruit, and was at the same time ornamental; and to that of Urtica (Böhmeria) nivea, a textile species, from the fibres of which the fine Chinese cambric was said to be woven. This plant had lived two winters in the Botanic Garden at Brussels.—M. Dumortier added some remarks on the utility of introducing new fruits. He asked M. Von Siebold if it would not be possible to introduce the famous sky-blue Grape, of which so much had been said.—M. Von Siebold intimated that he had received some of the Vines producing the Grapes of which M. Dumortier had spoken. When he quitted Yedo, on the 7th of May last, the plants were in a promising state; and he engaged to send a case of suckers to the Société Royale de Flore, upon his return to Japan. He was convinced the horticulturists of Belgium would know how to turn them to good account. M. Von Siebold added that he should always preserve a pleasant remembrance of Belgium, who, by her magnificent exhibition, had proved that she was the Flora of the two worlds.—M. Planchon thought that Urtica nivea was not the plant which furnished the Japanese with the tissue of the fine cambric. In his opinion it was the produce of Böhmeria utilis.—M. Kolb spoke at some length upon the introduction of plants among the ancients.—M. Entz Ferenez, Director of the National Nursery at Buda, gave a historical account of the horticulture of Hungary.—M. Hednielsky, Professor of the Société Imperiale d'Horticulture at Moscow, offered some remarks on the history of horticulture in Russia.—M. de Puydt, Secretary of the Société d'Horticulture at Mons, read a paper upon the necessity of giving a definitive signification to the words, hothouse (serre chaude), greenhouse (serre temperée), coldhouse (serre froide), &c. He afterwards entered at some length upon the subject of botanical geography.—M. Rodigas fils insisted upon the necessity of knowing the degree of moisture necessary to the different kinds of houses indicated by M. de Puydt.—M. Wesmael called attention to the defective manner in which the catalogues of horticulturists were often compiled.

M. Rodigas presented the report of the commission named on the preceding day to examine the proposition of a uniform nomenclature for vegetables. The commission, while acknowledging the utility of nomenclature, rejected the proposition because it was not considered as being one which was realisable by the Congress.

On the re-assembling of the Congress at 3 P.M., M. Rodigas invited the attention of physiologists to this fact, that he himself was able to prove:—namely, that having grafted Cratægus Oxyacantha upon Sorbus Aucuparia, the graft had dried up, but that some time after a bud of the Cratægus appeared higher up.—Several members spoke upon this subject, and mentioned similar facts which they had observed in other plants.

In reference to the 11th question: "Insects and other injurious animals; their destruction," M. de Selys-Longchamps called attention to the only efficacious means of destroying insects hurtful to agriculture, namely, the protection of useful insectivorous birds.—M. Fée and M. Brongniart concurred, and spoke of the measures taken in France for the protection of insectivorous birds.—M. Wesmael thought that protection should be equally extended to granivorous birds.—M. B. Dumortier suggested that the Committee should express the desire of the assembly, that measures should be taken for the protection of these classes of birds in Belgium. This proposition was received with applause; and the Committee undertook to make known the wish of the Congress to the Minister of the Interior.

A very animated discussion followed upon the causes of disease in the Potato and Vine, in which M. Kolb, chief gardener of the Royal Botanic Garden, and Delegate of the Bavarian Horticultural Society at Munich; M. Fischer, Professor and Director of the Botanic Garden at Berne; M. B. Dumortier, M. Planchon, and M. Brongniart took part.

The President then observed with regret that the time had arrived for the sitting to close. If, he said, the Congress had not produced more profitable results, it had at least secured the great advantage of establishing relations of amity between the learned men of different countries who were interested in horticulture.

M. Rauwenhoff, Secretary and Delegate of the Royal Netherlands Society for the Advancement of Horticulture, Professor of Botany at Rotterdam, in the name of the foreign members of the Congress expressed his gratitude for the welcome and sympathising reception they had received. He congratulated the learned men who had met together on the relations which had been established between them—relations which, while they gave rise to regret at parting so soon, induced a desire for speedy reunion. He thought, therefore, it ought to be announced that the Royal Netherlands Society intended to organise for next year an international horticultural exhibition, and measures would be taken to make it as fine and as important as possible, worthy of being compared with that of Brussels. This exhibition was to take place at Amsterdam, in the newly built Palace of Industry. M. Rauwenhoff concluded by saying, "I can assure you that those who come will be well received in Holland, for we shall be proud to have you amongst us. On separating, then, let us say, not 'Adieu,' but 'Au revoir!'"

Upon the proposition of M. de Selys-Longchamps, the assembly with acclamation gave a vote of thanks to the Committee, and the Congress then closed.

Home Correspondence.

Bottom Heat.—I have finished the hothouse, of a ground plan of which you were good enough to give a woodcut at p. 78 of this year's volume, and am happy to say that it seems likely to be very successful. You will see by the description of it given at that place, that it is heated on an entirely new principle, at least so far as hothouses are concerned, being that of the ancient hypocaust by which the Romans heated the ground floor of their villas. The fire is not only carried under the floor of the house (which is made of three courses of tiles bedded in cement, with 9-inch supports every 3 feet 6 inches), but also under the Vine border. Hence not only is heat provided, but it is provided in a new form, viz., that of bottom heat, both within the house and without. As I do not profess to be a gardener, but only a mechanic, I will confine myself to the mechanical effects, and refer you for the horticultural part of the matter to our mutual friend "M. J. B." [see p. 483] who kindly paid me a visit for the purpose of inspecting my contrivance. Mechanically speaking, then, I find the new mode most economical in fuel. I burn in it the roughest cord wood, and of that a very small quantity. I was fearful at first that the earth on the Vine border would get very dry where it came in contact with the tiles; but I was agreeably surprised to find that it continues to increase in moisture from the surface, where alone it dries by evaporation, down to the very tiles themselves. The border has been watered twice only since the 12th of March, when the fire was first lighted. The fire continues to burn without any superintendence from 7 or 8 o'clock till 6 the next morning, being thus "a real comfort to gardeners," as the advertisements used to term the American soothing syrup for mothers. I have lately (since April 20) discontinued the fire during the day, but nevertheless at 6 o'clock this afternoon (April 25), the earth in the border inside the house was at 88°. That of the border outside at 1 P.M. was 89°. The floor in the inside of the house has an area of about 351 feet; the border outside of about 300. I am trying this year Strawberries, French Beans, Cucumbers, Figs, Melons, Standard Tomatoes (*tomates à tige raide*), Capsicums, and Early Carrots. Everything looks healthy, and though the fire was lighted on the 12th of March only, the French Beans are nearly ready to gather. I have a border 2 feet wide at the back, and another 4 feet wide down the centre, the whole width of the house being 13 feet. Since my new house was finished I have found that Lord Eversley, a distinguished horticulturist, has for the last three years warmed his Vine border on a large scale by admitting the surplus heat of the house under a chamber roofed with tiles, and that the result has been most satisfactory, the border in the late severe winter being never below 68°. The cost of the whole floor (670 feet of surface, including the space under the front wall) and the warming apparatus, has proved, as nearly as it can be severed from the general cost of the house, 18*l*. 10*s*. The first outlay is therefore very moderate, as well as the expense of fuel. I ought to add, that as compared with any other mode of heating, 4*l*. worth of paving tiles to form a path must be deducted from the total of 18*l*. 10*s*., for the whole floor being of tiles no path is needed. To those who may be disposed to build houses of this description I would give one caution. The floor, as it contains three courses of tiles bedded in cement, is very heavy when wet, and therefore the staging by which it is supported, as an arch by its wooden centre, until the cement is set and it gets dry, must be tolerably stiff. My man put an insufficient one at first, so I had to rebuild that portion of the outside border. *C. Wykeham Martin, Leeds Castle, Maidstone.*

The Weather Prophets.—According to Mr. Plant, of Birmingham, our last winter should have been remarkable for its length and severity—it ended by being remarkable for its mildness up to Jan. 2, and then not remarkable for its severity; from Jan. 4th to the 9th—the thermometer registering 22° of frost on the morning of the 6th—the frost was no more than agreeably severe, in fact about the average of our English winters. On the 12th of January thaw commenced, and on the 15th the weather resumed its December mildness. In February we had some agreeable but not severe frosts, from the 4th to the 10th, and then our winter ended—certainly one of the most agreeable winters I ever remember. Why has not Mr. Plant published in the *Times* the cause of the failure of his prognostications? So much for Mr. Plant. Our spring prophet is a Mr. Shepherd, author of the "Climate of England." He tells us "there is no foundation whatever for the statement that we shall have a mild and genial spring. The general character of the spring, summer, and autumn will be very bad indeed. I admit it is melancholy enough for me to stand alone, and foretell a cold wet year, but Nature will take care of herself." We have had the finest—the most perfect English spring I ever remember; clouds and rain, but not too cloudy; drought, but not too droughty; frosts, but not too frosty. So much for Mr. Shepherd. Our

summer prophet is Mr. Du Boulay; we are to have, according to him, a summer dry and unproductive. We have commenced it with copious rains, so that at this moment (May 16) everything belonging to vegetation is luxuriant beyond expectation. I hope at the end of the summer to have to record the failure of Mr. Du Boulay's prophecies. *Observer.*

Water Weed.—I enclose you a portion of weed taken from a reservoir that supplies our house. It having been noticed that the water for some short time at this period of the year usually became fetid, a member of the family was induced to examine the reservoir, and at some inches below the surface of the water he found an abundance of the enclosed weed, which no doubt had communicated its offensive flavour to the water. The reservoir is on a chalk soil, and has been in use for many years. Any information as to the name of the plant and its qualities will be gladly received by us. *W. B. H.* [This is the common Chara. Will some kind friend advise our Correspondent how to destroy it? The fetid effluvium from it is said to be extremely unwholesome.]

Rhododendron Falconeri.—I much fear that the rather profuse flowering of my Falconer Rhododendron (noticed in your columns, p. 438) may so weaken the plant that it is in danger of not surviving another year. Would you recommend me to apply a dressing of manure on the surface immediately?—or is it the fact, as commonly supposed, that manure is injurious to Rhododendrons? The effect of the huge compound trusses when fully expanded last week was very striking. *B. A.* [Give it now a good *mulching* of cow-dung, and keep it damp till the heats are over.]

Flower Markets.—Will you allow me space in your paper to try and impress two parties with the benefits to be derived from going with the age. It is impossible not to observe the great use now made in London houses of flowers for decoration; if you move in Society it is difficult not to hear every one crying out about the want of a flower market; if you go to Covent Garden, it is not impossible you may see a carriage panel smashed by the crush at the one flower shop. Now I have not an unkind word to say respecting Mr. Buck; his flowers are good, Miss Buck's bouquets are elegant, and their prices are not unreasonable; but still one house cannot feed London balconies and conservatories, and ladies are all saying, "I do not know where to go to; I cannot face Mr. Veitch's beautiful establishment; I have not the assurance to enter such a show place, and ask for a half-crown Geranium. Please use your influence with the Council of the Horticultural Society, and get them to establish a flower market at South Kensington." Now it appears to me that such a scheme is in every way feasible at the present moment. Let the Council set apart on each side of the new orchard-house entrances spaces, say 30 feet by 30 feet, to be let by tender to nurserymen for the sale of flowers. I believe that the nurseryman would arrange with a conservatory builder and get a house put up as an advertisement, and thus two trades would be benefited and the public secure an immense boon. It may be said that the great houses will not condescend to sell single plants—fancy, Roses at a shilling. I believe they know their own interest, and would only be too happy. If they refused, smaller houses would jump at such a chance. Let the Council send circulars to Mr. Veitch, Mr. W. Paul, Mr. Smith, Mr. Henderson, Mr. Hopwood, Mr. Bull, Mr. Buck, Mr. Lee, Mr. Salter, Mr. Williams, Messrs. Paul & Son, Carter, Barr & Sugden, and 50 others known to them, and let us see if they have not a dozen acceptances. I would further suggest that the sellers should mark the prices, and they would be saved trouble, and soon have their stock disappear. *A Male F.R.H.S.*

Aquariums.—Can any body tell me what is the cause of a sudden disease which has appeared in my aquarium. The latter has been built about 12 years. It holds about 60 gallons of water; has a supply pipe, so that in warm weather I change the water sometimes three or four times a day; has only Vallisneria growing in it. Some of my fish (roach, dace, gudgeons, carp, gold fish, minnows) I have had four or five years. Suddenly all but four are dead from fungous disease. A medical friend says that they have been struck with some malady of a typhoid character, because the extremities are bloodshot, and that in his opinion it arises from my having stirred up the deposit (which had collected under the gravel) when I had the aquarium cleaned out about a month since. I am inclined to think so too, as I remember two years ago losing some fish after a cleaning out. If this theory is true, it would imply that the fish should be removed whenever the deposit has to be touched. There are a few snails. *D.*

Ants (see p. 390).—I agree with "M. D." that no paste poisons will destroy these pests. I have also strewed guano, turpentine, and gas water in their runs, and bored very smooth holes, but all to no purpose. For some years I did not trouble myself about seeing them in my houses, and I considered that they did but little harm, but finding that a Nectarine tree on the back wall of a house did not set its fruit so well as I could have wished, and observing that it was overrun with ants, I examined it closely, and found that the ants were destroying the pollen. About the same time I received some Orchids from London which were infested with mealy bug; and I soon found that the ants were very busy in distributing it over the whole collection. I therefore determined to wage a war of extermination with regard to them. I found on examination that they had taken possession of no fewer than 12 houses, besides some pits. All the means alluded to above were tried without avail; but at last a successful bait was laid. A quantity of small birds were shot and placed in their runs, and on pots frequented by the ants. In less than 10 minutes after placing the birds there they were so covered with ants as to be invisible; the bait was one moving heap of ants, which we knocked into a bell glass, birds and all, and emptied them into the fire. I do not exaggerate when I state that in this way we destroyed in a short time more than a gallon measure full of them. Fresh birds were of course replaced in the runs, until the whole of the ants were destroyed. I am now nearly free from them, and had it not been that some extensive alterations that we have been engaged in this winter occupied my attention and prevented my following the scheme closely, I believe that I should have destroyed every ant in the place; as it is we have cleared nine houses effectually. This method I can therefore confidently recommend to "M. D.'s" attention, and I trust that he will try the plan, and report on its efficacy hereafter in your pages. *Edw. Bennett, Gr. to G. S. Foljambe, Esq., Osberton Hall, Worksop.*

——My Grass-plot has been much injured by ants throwing up hills all over it, and I have tried many things without success till this spring. My plan, which has been successful, is as follows:—I make a pan full of a strong solution of soft soap, say a dessert spoonful to a quart of water. I let it stand a day, and then, when the sun is shining and the ants are near the surface, I open the tops of the nests, and when they swarm up pour the solution quickly over them from a tea cup till the ants are dead, which does not take long, as it quickly kills them. As many of the ants are from home, or deep in the ground, the process must be repeated a few times. It does not injure the Grass at all, but rather does it good. The soft soap requires a little hot water put to it first to dissolve it. *B. B.*

Clianthus Dampieri.—I see that you mention this fine plant in your account of Messrs. Carter's Nursery, p. 463. That it deserves general cultivation must be admitted. Its handsome foilage alone might recommend it; but its glorious scarlet flowers cannot fail to attract the attention of everybody. It is reported to be difficult to manage, and I fear not without good foundation. I sowed seeds of it this spring, and only a few came up, and those to my disappointment damped off before they had made a third leaf. As it is a plant which all should possess, a hint from Mr. Boston, Messrs. Carter's manager, as to the best mode of growing it would doubtless be acceptable to many. *J. Baxter, Merevale, Atherstone.*

Foreign Correspondence.

Central Society of Agriculture, Horticulture, and Acclimatation.—The spring flower-show of this Society has just been held at Nice, in a garden remarkable for its magnificent groves of Orange trees, and we are happy to state that it more than equalled the expectations of its promoters. The Emperor, who takes much interest in the Society, forwarded two gold medals for distribution on this occasion; the Prince of Monaco, Prince Troubetskoi, and the ladies of Nice also contributed three gold medals for competition, in addition to the usual prizes offered by the Society. Amongst contributors of plants who stood in the first rank was Mr. Edwin Stuart, to whom was unanimously awarded the Gold Medal of Honour, destined by the Emperor to be given to the most meritorious exhibitor. This raiser's seedling Pelargoniums formed one of the chief attractions of the show, and for richness and delicacy of colour and fine form they could not well be surpassed. Some of the plants were also marvellous specimens of fine culture. Baron Vigier exhibited a superb collection, and received a gold medal as the most successful cultivator of exotic plants. Some very fine varieties of Azaleas and Rhododendrons likewise were shown in great perfection. The popular Alphonse Karr, celebrated alike for his writings and bouquets, exhibited a very handsome *corbeille* of flowers, which was universally admired. To M. Emile Thomas and M. Sacco were awarded the other gold medals, for their general collections of plants. The display of cut Roses was unusually fine, and comprised many new and first-rate varieties, of large size and extraordinary beauty. In this class Mrs. Freeman, an English lady, carried off the 1st prize. As a whole, the exhibition was entirely successful, and affords a stimulus for the farther exertions of the Society, whilst it augurs well for the "Grand Concours Regionale," announced to take place on the 1st May, 1865, to which the Emperor will contribute a prize of 6000 f. and a silver cup. This favoured climate, and the well-known attractions of Nice, will doubtless induce a large number of the lovers of horticulture to be present at this fête, which we understand is to be international.

Societies.

Royal Horticultural: *May 17 (Election of Fellows).*—The following candidates were elected Fellows, viz.:—

J. Ashbury, Esq.; Lady Isabella Atherley, Miss Ruth Baker, The Countess of Bradford, Mrs. Edward Charrington, Mrs. Cosier, E. S. Dale, Esq.; J. Day, Esq.; Lady Donaldson, Lieut.-Colonel A. C. Fisher, R.E., C.B.; H. C. Rothery, Esq.: Hon. and Rev. Charles F. O. Spencer; Mrs. Verelst, Lady Vivian, General W. Watkins, J. F. West, Esq., and Mrs. White.

A highly instructive lecture on Ferns was delivered on this occasion by Mr. Moore, able Curator of the Apothecaries Garden, Chelsea, but owing to the large amount of space occupied by Mr. Bateman's lecture on Cool Orchids, published in another column, we are unable to find room for a report of it this week.

Foremost among plants shown to the Floral Committee, which also held a meeting on this occasion, was a basketful of the noble-looking Ornithogalum thyrsoides, to which allusion was made last week (p. 463). This came from Messrs. Carter & Co. of Holborn, who received a special Certificate for it. To a charming Acer from Japan, with red-coloured finely-divided leaves, from Messrs. Veitch, a First-class Certificate was awarded; similar marks of distinction were also conferred upon the following plants from the same firm, viz., Rhaphiolepis ovata, a valuable white-flowered hardy evergreen shrub; and a pale rose-coloured species of Genetyllis. To Cypripedium Pearcii (an undescribed species, we believe, but have not examined it), also from Messrs. Veitch, a Second-class Certificate was awarded. From Mr. Bull came a prettily variegated variety of Pampas Grass; a zonate-leaved brilliant scarlet-flowered Pelargonium named Clipper, and a new variety of Aucuba named A. japonica marginata. To all these were awarded First-class Certificates. To the same exhibitor were also awarded Second-class Certificates for Dieffenbachia Baraquiniana, a variety with polished ivory-white stems, and slightly blotched leaves, whose midribs are also white, and to a spotted stemmed kind of Dieffenbachia, called grandis. From Mr. Bull also came the handsome Gleichenia hecistophylla, to which a First-class Certificate was awarded; and Coleus marmoratus, a kind with pale green leaves edged with brown, to which a Second-class Certificate was awarded. To Messrs. Lee were given First-class Certificates for a Lilac named Dr. Lindley, a handsome kind, with great branching heads of deep lilac blossoms; and for the handsome Dracæna Banksii in flower. From Mr. Williams, of Holloway, came a singular looking Agave, named schidigera, to which a First-class Certificate was awarded, and Second-class Certificates were given to the same exhibitor for Dieffenbachia grandis and Baraquiniana and for Coleus marmoratus. A lemon blotched-leaved Aucuba, called bicolor elegans, and two handsome seedling Amaryllises were also furnished by Mr. Williams, together with many other interesting plants. From the Society's Garden came Peperomia arifolia, a variegated-leaved plant, to which a Second-class Certificate was awarded.

At the ordinary meeting of the Society, which took place on April 20, a paper on Disbudding Orchids, by Mr. J. Sherratt, gr. to James Bateman, Esq., F.R.H.S., was communicated. The author said:—"I beg to call your attention to the very important results obtained by the application to Orchid-growing of the old principle of disbudding. As all cultivators of Orchids are aware, it will not unfrequently occur that a plant, from having been unduly excited during the summer or autumn months, will commence a fresh growth late in the year, and at the very time that it ought to betake itself to rest: the growth thus obtained being generally weak, and therefore incapable of producing flowers. It so happened that at Knypersley, in October and November of last year, we had three plants, viz., Cœlogyne pandurata, Peristeria elata, and Epidendrum Stamfordianum, that had made a most vigorous summer growth, and might, therefore, be reasonably expected to flower freely at the proper season; but, to my great disappointment, all three, instead of flowering or resting, began to push new shoots. As I felt convinced that if these were allowed to go on there would be no chance of any flowers for at least 12 months to come, I determined to break off the young shoots, and try what enforced rest would do. Nor had I to remain long in suspense, for, in the case of the Epidendrum, no sooner were the young shoots removed than three flower stems (not yet out of bloom) began to make their appearance. As regards the Cœlogyne no further movement took place until spring, when strong fresh shoots, each enclosing a flower-spike, developed themselves. Lastly, as to the Peristeria, which was the latest to move, I have just discovered that, together with the young shoots of the season, several robust flower-scapes are rapidly coming forward. As I only experimented on three plants, and as the experiment succeeded in every case, I think Orchid-growers may congratulate themselves on having now open to them an additional power of control over their plants. I need scarcely remark that considerable knowledge of the habits of different species will be requisite, or the practice indicated may lead to serious mischief; but, judiciously applied, I have no doubt it may be of very great service. The three plants on which I operated are now exhibited to the Fellows of the Society."

Notices of Books.

Rambles in the Deserts of Syria, among the Turkomans and Bedaweens. 8vo, pp. 336. London, 1864. John Murray, Albemarle Street.

The present and future prospects of Turkey, with her extensive dependencies, are matters of considerable importance to the nations of Europe, and a continual

source of solicitude to British statesmen. Everybody seems to be aware that the power of Islam is on the wane, and it is generally supposed that some parties are looking with covetous eyes at the inheritance of the sick man, who every now and then has shown spasmodic symptoms of vitality, just sufficient to raise the hopes of friends and to disappoint them. The battles at Citate and other places in Wallachia, the Russian hosts compelled to raise the siege of Silistria, and the noble defence of Kars, cast a transient gleam of sunshine upon the fading fortunes of the Turks, but those who never wished well to the Ottoman Empire suffered this last barrier to Russian aggression to be removed.

Englishmen, however, who have little faith in the regenerating effects of war, still thought it possible to advance the material prosperity of the people, and at the same time their civilisation, by fostering trade and agriculture. British capitalists readily furnished money for the encouragement of industrial projects of various kinds, and strove to maintain the credit of the state, but it is feared that the system of corruption and oppression has eaten too deeply into the vitals of the constitution, and that habits of indolence and luxury are too thoroughly engraved in the national character, for the few honest and capable men, such as Fuad Pacha, to effect any real improvement.

Such, we take it, are the conclusions of the gentleman to whom we are indebted for the very interesting book before us; and it is a matter of some regret that a person, apparently so well qualified to give an opinion on various important matters, has thought it desirable to withhold his name, for after all, a man's name is to some extent a voucher, which gives additional value to the views and statements that he brings forward.

The primary object of our author is (as the title of the book denotes), to give an account of his own adventures amongst the wandering Bedaween tribes, from whom he seems to have experienced the greatest hospitality and kindness. His frank and fearless bearing, his capital riding, his knowledge of their language and modes of thought, and perhaps his agreeable manners, and evident desire to promote their welfare, contributed to win for him the good will of these simple children of the desert. He evidently enjoyed also the advantage of an excellent introduction, but of what nature, or whence derived, he gives no clue for conjecture. The book is written in the form of letters, 20 in number, dated from various places, and embracing a period of about four years, viz., from Oct. 1858 to Nov. 1862, a period, which, it will be recollected, included the unfortunate collision between the Druses and the Maronite Christians, and the massacre of Damascus.

The first letter is written from Beles, on the right bank of the Euphrates, just at the point where that river, having made its nearest approach to the great sea, from which it is distant about 140 miles, takes a bend to the south-east.

"The country was woodless, houseless, and uncultivated, and inhabited only by the wildest tribes, who are poor, and brave, and subsist by levying black mail from passing caravans. To check their predatory propensities, Ibrahim Pacha, when ruling over Syria, some 20 years ago, brought a tribe of African Bedaweens, of tried fidelity and good conduct," a measure which for a time answered well. The Hanadi, who are still employed as a sort of desert police, number about 1700 fighting men, and it was the traveller's first care to seek for Haji Batran their chief. The rascal came galloping up, with a troop of about 60 men, in open order, brandishing their long spears and feigning an attack, which might have disturbed the equanimity of a less knowing person than our hero, who recognised the bronzed features and loud laugh of the burly chief. This was early in the day, but Haji Batran declared that it was unsafe to proceed till dark, because the two great tribes Anezi and Shammar had been fighting, and it was prudent to keep out of their way, so they crept cautiously to the top of a small mound, and scanned the horizon, and finding no Arabs in sight, the tents were pitched. At dark they mounted, and an eight hours' ride brought them to a tumulus on the banks of the Euphrates. "Here we are soon introduced to Jedaan, the military sheikh of the Anezi, and his tribe, and the charms of Bedaween life are at once unfolded to us." Arab mares of the purest blood and of the most enduring quality; untold hours in the saddle; rides mostly performed by night through the trackless desert, the pole star for a guide; frequent alarms, which usually, however, led to no actual danger; with a few rather serious perils, mares and men at times famished, and often parched with thirst; camels' milk by way of food and drink; and one most alarming encounter, make altogether a sufficiently exciting narrative.

These wild Bedaween tribes have a wondrous love of freedom and very little taste for steady labour; they are light-fingered people, and their hands are against every man, yet are they by no means savages; on the contrary, they have their laws, and they are subject to the influence of public opinion, in some matters most strict, though in others not according with our notions. Theirs is a pastoral life, and they pride themselves on the little change their customs have undergone since the days of Esau and Ishmael. Among them retaliation for the shedding of blood is considered a duty, unless a ransom for blood has been paid, and, strange to say, little distinction is made between assassination, killing in battle, and accidental homicide.

Plainly it would be an immense advantage to themselves, and would render them a strength to the Government, instead of a constant source of annoyance and alarm, if these sons of the desert could be induced to cultivate their not unfruitful soil; and this Mr. A (an anonymous author), frequently urged upon his Bedaween friends. The Government also offers certain privileges if they will adopt this course. But a deep-rooted distrust of their Turkish rulers prevails; and besides, those who cultivate must be protected against the incursions of marauders, for nobody will care to sow if his enemies or neighbours are to come and pasture their mares upon his growing crops. Unfortunately Haji Batran seems to think his policy is to sow the seeds of discord and stir up strife, lest his vocation of policeman should be deemed unnecessary; so he sets his face against agriculture, and too successfully. When the guardians turn robbers, one asks, "*Quis custodiet ipsos custodes?*"

At one period it seems that Haji Batran and his tribe had received no pay for their services for a considerable time (a very usual circumstance, for all local payments are suffered to get frightfully into arrear), so he threatened to indemnify himself by making a raid upon the nearest tribe, and this he eventually did, killing a number of innocent men and taking their goods as a prey; and the worst of it was that he evidently thought he had done a smart thing. Of course complaints were made, but when the time came for a new governor to be appointed, his first act was to condone the past offences of his police, and, taught by past experience, he takes care to pay them regularly now.

Mr. A. appears to have been admitted into the bond of brotherhood with many of these Bedaween sheikhs, and it carried him, by a kind of freemasonry, through many dangers. It enabled him often to use his influence with one set of friends in behalf of others, even for the restoration of stolen property; and so long as he fell in with tribes connected in the remotest degree with his friends, he was always acknowledged as a brother, and met with the utmost kindness—a singular feature in Arab life.

Mr. A. gives a very clear account of the Druse and Maronite atrocities, written in the letters dated from Aleppo and Damascus, immediately after the massacre at the latter place; and as he had every facility for obtaining information, it is to be presumed that we have here a trustworthy account of these deplorable affairs. It seems that the Maronites and Druses settled on Mount Lebanon, are not always located in separate districts, but in many places form a mixed population. The former are fully three times as numerous as the latter. These however are braver. The Maronites look to French support, and are very arrogant, and were the first aggressors. Reports were circulated that the Druses were to be exterminated, so they determined to be beforehand, and under the influence of fear and fanaticism, resorted to treachery, and proceeded to acts of the most dreadful cruelty. Ahmed Pacha, the governor, though a skilful general, was singularly wanting in decision of character and moral courage. He made no attempt to check the insurgents. A colonel of irregular troops actually joined the insurgents with all his men, and they behaved like demons. When the time of retribution came, Ahmed Pacha was ordered to be shot for his moral cowardice, together with this colonel and 117 other officers and soldiers—and of nearly a thousand others, some were hanged, some sent to hard labour for life, and some for 20 years.

Fuad Pacha is praised by Mr. A. for his energy and honesty, but there are few indeed who deserve praise; our countryman Lord Dufferin is very highly spoken of.

Hearing that some Christian women had been carried off from Damascus, and would probably be sold for slaves, Mr. A. sets out on the most romantic errand possible to try and recover them, hoping by his extensive influence with many tribes to rescue at least some of these unfortunates from a miserable fate. This generous attempt was not unattended with danger. Indeed, Mr. A. very nearly lost his life. This is, of course, a very exciting part of the book, and the reader is as much carried away as if he were mounted on one of those fleet mares. However, the hero lives to tell the tale, and we think the whole of his 20 letters will be perused with very great interest, for they are full of life and valuable information.

Since writing the above we have had the satisfaction of meeting with a friend who has travelled in Syria, and who fully confirms the opinion we had formed of the writer, whose views, he says, agree very closely with his own.

Miscellaneous.

Edinburgh Botanic Garden.—This garden is about to receive an extensive addition by the incorporation with it of the Experimental Garden adjoining it to the south. The Experimental Garden was established by the Caledonian Horticultural Society, but was assisted by a Government grant of 200*l.* from 1833 to 1858. In 1857 the society, finding itself in difficulties, memorialised the Board of Works to take the lease off their hands, and in 1858 these difficulties were increased by the withdrawal of the grant. After repeated delays the Council of the society have received an offer of 1000*l.* from the Board for surrender of the lease, and for the large hall, Winter-Garden, and gardener's house, on condition of the society paying the arrears of rent due to the Office of Woods, which have accumulated to nearly 850*l.* At a meeting of the society, held recently, it was resolved to accept this offer. Sir W. G. Craig, who presided, expressed his confidence that the Board of Works would use the additional ground in such a way as to confer a great boon on horticultural science. The great herbarium in the Botanic Garden, second only to that of Kew, was almost destroyed for want of accommodation, but in the great hall of the Experimental Garden it would be admirably exhibited for study and consultation. The Winter Garden, when filled with the half hardy plants of the Botanic Garden, would be one of the most beautiful resorts for the public during the winter; and a great part of the new ground would be set apart as an arboretum, which would be of great importance to proprietors of land, and to the numerous students of botany in Edinburgh University, which is the greatest medical school of the kingdom. Although the arrangement was not an altogether favourable one for the society, it was one which would be of great benefit to the public, and would render the Botanic Garden of Edinburgh one of the best equipped establishments of the kind in the world. *Times.*

The Flower Sermon.—In accordance with an old and honoured custom of preaching on the Whitsun Tuesday in each year, from a text having a special reference to flowers, a sermon, popularly called the "flower sermon," has been delivered in the ancient church of St. James, Mitre Court, Aldgate. The church was crowded, the congregation being principally composed of the parochial school children and their teachers. The Rev. W. M. Whittemore, M.A., the rector, preached from the text, "As the Lily among Thorns so is my love among my children." The discourse, which was purposely simple, was at the same time impressive.

Destruction of Mr. Baker's Herbarium.—In the disastrous fire which occurred a few days ago on the premises of the Messrs. Baker, of Thirsk, the valuable herbarium of Yorkshire plants in the charge of Mr. J. B. Baker, the author of the "Flora of North Yorkshire," has been totally destroyed, only one of the walls of the botanical room being left standing. Scientifically, this is a great loss, and one which it will require many years of labour to replace. *Country Paper.*

Beddome's Ferns of S. India.—In our notice of the first part of this work, on 1st August, 1863, we say (quoting from the preface) that it can only be had by forwarding subscriptions to India. We now find that the work can be had by application to Mr. Van Voorst, Capt. Beddome having sent him copies of the first six parts.

Paris Parks (see p. 1184 of our last vol.).—Another spacious park for the recreation of the population of Paris is being opened on the Buttes St. Chaumont. All the houses in the Rue de Crimée and those on the high ground over the quarries have been taken down, and the ground is being levelled at the entrance to the park, which is to be opened about the centre of the Rue de Crimée. A railway has been constructed to assist in bringing up earth. The 55 acres which the Government is transforming into a public park are composed of hillocks and ravines, surmounted by a lofty hill. At present it is an uncultivated waste, commanding a magnificent view. The municipal authorities, struck with the beautiful landscape seen from the highest part of the park, resolved to construct there a wide boulevard, which will describe a curve, beginning at the upper part of the Rue de Crimée, and ending at the Rue Fessard. It is to be 72 feet wide, to be lined with houses on one side, with a handsome railing on the other, which will separate it from the park, to which access will be obtained by a grand marble staircase. This curved boulevard or terrace will have a corresponding walk on the side of La Villette, which will be formed by a segment of the same circle, and will commence at the Rue Puebla, and, as this terrace will be composed of several curves, the park of the Buttes St. Chaumont will be bounded by a series of curved lines. Vast reservoirs are to be established at 300 feet from the terrace, which will serve to supply the cascades and basins so refreshing during the extremely hot weather sometimes experienced in Paris. *Daily Paper.*

Edible Coniferæ.—The cone of the Araucaria Bidwillii (native name Bunya Bunya) of Northern Australia, is produced on the extreme upper branches. It is large, measuring 9 to 12 inches in length, and 9 inches diameter; on coming to maturity, the seeds are readily shed; they are from 2 to 2½ inches long, by ¾ of an inch broad; sweet before being perfectly ripe, and after that resembling roasted Chesnuts in taste. They are plentiful once in three years; and when the ripening season arrives, which is generally in the month of January, the aborigines assemble in large numbers, from a great distance around, and feast upon the seeds. Each tribe has its own particular set of trees, and of these each family has a certain number allotted, which are handed down from generation to generation with great exactness. The Bunya Bunya is remarkable as being the only hereditary property which any of the aborigines are known to possess, and it is therefore generally respected by the settlers. The Italian Stone Pine (Pinus Pinea) has edible seeds, which are eaten at dessert under the name of Pine nuts. They

are largely used for consumption in Italy, under the name of Pinoli molese. They come chiefly from Tuscany and from the Province of Ravenna, and are thought to give a peculiar relish to wine. In the south of Europe they are also called pignons doux. Athenæus speaks of the imports of the seeds of the Stone Pine into Egypt. They are brought to market at Lisbon strung upon threads like beads, and suspended upon a girdle round the waist. The seeds of P. Lambertiana of North America, and those of Pinus Gerardiana of Thibet and Affghanistan, are also eatable when fresh. In Switzerland, the seeds of the Siberian Stone Pine (Pinus Cembra) are used in some places as food, and in others as an article of luxury; and the shell being very hard, and requiring some time and skill to separate it from the kernel, the doing so forms an amusement for some persons in the long winter evenings, as separating the films from the kernels of the Walnut does in the Tarantaise. The kernels of another species, Llave's Pine (Pinus Llaveana) are eaten in Mexico, and those of the Imbricate-leaved or Chilian Pine (Araucaria imbricata) in Chili. The piñones of the Cordillera Pine are nutritive and farinaceous, in flavour resembling a roasted Chestnut. They are found in great abundance in the Chilian part of the Cordillera, and have become so necessary an article of consumption among the Indian tribes, that, whenever the crop is scanty, or the snow precludes their access to some of those parts where they have been accustomed to collect them, they are subject to considerable inconvenience. As the seeds will keep long, they are often imported into the southern districts of Chili, and, when boiled, are eaten by the country people, either hot or cold. With the exception of one or two trees near the coast, which have been planted, it is only found in the interior of the Indian country, south of the Biobio. The Indians of that neighbourhood subsist entirely on the seed of the Araucaria, which they harvest and bury in pits for winter use. The name of the tribe is derived from that of the tree which affords their food, *Technologist*.

Seedling Grapes.—The saying is common amongst us that "Two blacks cannot make a white," which may or may not be true, but the fact is indisputable that Mr. Thomson has procured a golden-coloured seedling Grape from the Black Hamburgh, in every other particular the same as the parent. That it is virtually of itself a spontaneous product is beyond the limits of denial; no admixture of pollen could possibly have occurred, as no other Grape in the garden was in flower at the same time. So, in technical language, this change of colour may be expressed by the word "sport," or "frolic," and there is every reason to suppose that it will continue to perpetuate itself. With regard to flavour it is necessary that the subject be approached with extreme caution. The opinions formed at the time of my visit are—the skin somewhat thinner than the Black Hamburgh, hardly so firm in the flesh, equal to it in flavour, and the berries not quite so large. The Vine appeared to be rather in a struggling state, young, and apparently overcropped, so that when this pressure is removed, by liberal cultivation the quantity of the fruit will proportionately increase. This new introduction, so far as I have been able to judge, is on an equality with its parent, and I have no hesitation in saying it will take a high position as a light-coloured variety. From what I could see, it does not shrivel at the stem after reaching maturity, like its congener the old Golden Hamburgh. But in saying this I would not have it to be inferred that the value of that variety has declined in my estimation. The departure in Mr. Thomson's case from a certain type of colour, without the intervention of pollen from any foreign source, is not a solitary instance. Exactly the same thing has happened with Mr. Dodds, gardener to Sir J. Greville Smith, Bart., Ashton Court, Bristol, with this slight difference, that Mr. Dodd's seedling is of a white instead of a golden colour. In answer to my inquiry, Mr. Dodd has forwarded the following reply:—"My white seedling Hamburgh was raised in 1861 from the produce of three extraordinarily large berries. By no probability whatever could they have been fertilised with any white variety, so at most it can only be considered as a sport. Who can prove that the Black Hamburgh was not originally produced from some white Grape?" I was disappointed in not having seen Mr. Thomson's other seedling Grape, the Duchess of Buccleuch, as I have invariably heard it spoken of as being of excellent quality. The bunches, I am informed, average from 12 to 15 inches in length, and set freely, and it is well adapted for early forcing in pots. The length does not include the footstalk—only the bunch itself. *A. Cramb, in Scottish Gardener.*

Calendar of Operations.

(*For the ensuing week.*)

Now is a good time to apply liquid manure to all growing crops. Guano is most useful mixed with water. Over a couple of pounds of it pour as much water as will fill a watering-pot; stir it up, leave it for a few hours to settle, and then use it in a clear state. It answers all purposes for all crops that require manure. The time of applying it is when plants are beginning to grow, and until they have arrived at maturity, and the best way is to give it in the shape of small quantities at a time and often; under such treatment it is surprising what progress young crops make in a comparatively short space of time.

FLOWER GARDEN AND PLANT HOUSES.

Seldom have Lilacs, Laburnums, Scarlet Thorns, Wistaria sinensis, and hardy spring flowering plants of all kinds blossomed in greater profusion than they are doing this year, and at present shrubberies everywhere have a gay and dressy appearance. See therefore that walks, borders, and lawns, are rendered equally attractive by means of good keeping. Indoors shading and watering will require particular attention.

AURICULAS.—Many of these are still in good bloom, and should be well attended to. Those going out of flower will not need so much water, but still take care that there is a proper supply; gather seed as it ripens, and preserve it carefully.

CALCEOLARIAS.—Shade from bright sunshine, and keep clear of insects.

CARNATIONS AND PICOTEES.—Tie up the flower-stems as they advance; in dry weather supply the plants well with moisture, stir the surface of the pots occasionally, remove dead foliage, top-dress beds or pots which may require it, using a mixture of good loam and well-decomposed manure.

CINERARIAS.—Plants going out of bloom should be supplied less liberally with water and kept cool; those still in flower will need the treatment previously recommended.

FUCHSIAS.—Plants reserved under glass for the purpose of border decoration may now be planted out. Those required as specimens in pots will well repay any attention bestowed on them now in the shape of stopping over-luxuriant growth, training, &c., by the more elegant appearance they will present when in flower. Supply water liberally, occasionally using liquid manure.

HOLLYHOCKS.—Support such as need it; encourage liberal growth by the usual means, such as stirring the soil and applying weak liquid manure, especially to those for competition.

PELARGONIUMS.—These will now be coming finely into flower. Shade is essential to brilliancy of colour and preservation of bloom; keep the house clear of bees. Attend carefully to watering, and maintain as far as possible a moist atmosphere round the plants, by damping the floors, stages, &c., occasionally.

FORCING GARDEN.

CHERRIES.—Spare lights placed now over trees of May Duke against walls would forward the crop very much without farther trouble than drawing the lights a little apart during sunshine, and pushing them close and closing the ends with canvas during the night. They must, however, be securely fastened during stormy weather.

FIGS.—In favourable weather let these have plenty of air during the day, and abundance of water, and, except where fruit is ripening, use the syringe freely.

MELONS.—This season has been remarkably favourable for early Melons, and with many these will be ripened, and the crop gathered in time to admit of a second set of plants being turned out in the same pit. This is much preferable to the plan of obtaining a second crop from the same plants; they will succeed if planted before the middle of next month.

PEACHES.—Forced trees in pots that have ripened a few early fruit, should be kept in the house till the beginning of next month at least to finish their growth. Give them plenty of water, and syringe once a day.

PINES.—Now is a good time to go through the whole stock of succession Pines, beginning with the largest. Let them be taken out of the pits, and turn them out and examine their roots in order to see if a shift is required. After the larger plants have received attention, follow with those of smaller size, putting them into larger or smaller pots according to the amount of vigour they possess. Some of the old tan will probably require replacing with new material; but it is requisite to use caution as to the depth of fresh tan at this season, for fear of overheating, and burning the roots. If the temperature of the old tan is not much below 85°, it will be sufficient to turn it over to the depth of a couple of feet. In replacing the plants, take care to keep such as are likely to fruit in the autumn by themselves as much as possible, in order that when wanted they may be removed without disarranging the whole pit. Plenty of room must be allowed to prevent the plants from becoming drawn.

VINES.—Houses in which Grapes are ripening should be kept at 90° or even higher, with sun heat, but if allowed to fall down to 70° at night, so much the better. On nights following clear sunny days like the present little or no fire will be necessary; avoid overcropping, and take care to keep red spider in check.

HARDY FRUIT AND KITCHEN GARDEN.

At present the weather is unusually favourable for all out-door operations. With respect to wall fruits, favourable reports are received from all quarters, and appearances warrant the same conclusion being arrived at with regard to standard fruits. In the kitchen garden too prospects are equally encouraging.

CAULIFLOWERS.—If beds of these are becoming overcrowded, and the weather is too dry for transplanting, pull out a few of the larger plants, otherwise the whole will be injured.

CELERY AND LETTUCES.—Plants of these lately pricked or planted out—indeed, most small plants that have recently been transplanted, will now while the weather is hot and dry require regular watering, and so will crops of Turnips and other Seedlings as they come up.

ONIONS.—A bed or border may now be prepared to receive thinnings when they are ready; and a bed of the Silver-skinned may yet be sown in light poor soil to come in for pickling.

PEAS AND BEANS.—As soon as these show flower, pinch off their tops and stir the ground well between the rows. Water freely, and if time will permit throw a little soil over the wet parts to prevent the earth from caking or cracking.

STRAWBERRIES.—Water well between the rows, and mulch with some sort of rough litter.

WALL TREES.—See that no insects establish themselves on these; young shoots must also now receive attention. Never cut out or otherwise remove too much of the summer growth at once; it is much better to begin in time, and stop the strongest shoots only at first, pursuing the removing process with caution throughout the whole of the growing season.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending May 18, 1864, as observed at the Horticultural Garden.

May.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 12	6	29.871	29.779	65	36	50.5	53½	52	N.E.	.00
Friday 13	)	30.096	29.979	73	34	53.5	54	52½	N.E.	.00
Satur. 14	8	30.100	30.099	75	44	59.5	55	53	N.E.	.00
Sunday 15	9	30.122	30.079	83	43	63.0	■	53½	E.	.00
Mon. 16	10	30.173	30.148	82	40	61.0	57	54	N.E.	.00
Tues. 17	11	30.194	30.158	81	42	61.5	57	54	S.E.	.00
Wed. 18	12	30.214	30.153	83	43	63.0	58	55	N.E.	.00
Average.		30.187	30.056	77.4	40.3	58.8	55.7	53.4		.00

May 12—Fine; dry air; fine at night.
— 13—Fine; very fine throughout.
— 14—Fine; very fine; fine
— 15—Very fine; very hot and dry; fine at night.
— 16—Very fine; hot and dry; fine.
— 17—Slight haze; very fine; dry slight haze; fine.
— 18—Very fine; excessively dry air; fine throughout.
Mean temperature of the week 6 deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending May 28, 1864

May,	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 22 .	65.5	43.1	54.3	17	0.30 in.	6	7	4	3	3	10	3	2
Mon. 23..	67.7	44.9	56.3	13	0.53	1	7	6	3	3	9	4	5
Tues. 24..	68.3	44.0	56.1	11	0.54	3	8	6	1	5	11	3	1
Wed. 25..	66.3	43.7	55.0	15	0.64	3	11	3	2	1	11	5	2
Thurs. 26..	67.1	43.1	55.1	17	0.48	3	10	4	1	3	12	3	2
Friday 27..	65.8	45.2	55.5	21	0.63	2	10	5	3	2	11	2	3
Satur. 28..	67.6	44.8	56.2	15	0.97	—	10	8	1	5	7	5	2

The highest temperature during the above period occurred on the 28th, 1847—therm. 91 deg.; and the lowest on the 23d and 25th, 1863—therm. 26 deg.

Notices to Correspondents.

BOOKS: *W P S.* Lindley's Synopsis of the British Flora—provided you *really* understand the meaning of technical terms. It you do not, books are useless to you.

CORYDALIS SPECIOSA: *F G.* This yellow-flowered species was found on the banks of the Amoor river, and has flowered at Glasnevin. It is one of the finest of its family.

FUNGI: *C H W.* Your Fungus is the state of Cladosporium known under the name of Fumago foliorum. It grows on a sugary excretion on the leaves, and should be sponged off where practicable. If suffered once to get a footing it is very difficult to eradicate. The beams and wooden uprights probably have the common form of Cladosporium, from whence possibly the spores have fallen on the leaves. *M. J. B*

GARDENERS: *Red Hand.* A better man does not exist. He is an excellent gardener, capable of managing any place in Great Britain. He is a strict disciplinarian, and requires his people to do everything in a business-like manner.

MILDEW: *G C.* This is a large word. Uredo suaveolens has a peculiar scent, and so has the common Bunt, but we cannot attribute any peculiar smell to mildew in general. Possibly the scent of which you complain, morning and evening, arises from the presence of Chara in some shallow pools or ditches. *M J B.*

NAMES OF PLANTS; *J P S.* The seeds are those of Ailantus glandulosa, and the plants may be intended for feeding the new silkworm.—*J F.* Cytisus biflorus.—*Herbst.* 1, Pinus cembroides; 2, Abies Kæmpferi; 3, Retinospora obtusa.—*C W.* Salix Caprea.—*A Sub.* 1, 3, 4, Different forms of Selaginella Martensii; 4, is that called Danielsiana; 2, Selaginella serpens, sometimes called mutabilis or jamaicensis; 5, S. rubricaulis.

PEACH HOUSE: *J. C.* We much regret to say that the inquiry is undecypherable.

SHADING GREENHOUSES: *T C.* In such hot bright weather as we are now experiencing, shading is of very great advantage to almost all plants under glass, the excessive heat which is generated being distressing to the foliage, while means are not always at hand to keep up sufficient moisture in the atmosphere, or to keep down the temperature by ventilation, though both should be done as far as practicable. The best shading you can adopt is single or double tiffany or scrim; the latter being thicker is preferable for the Fern house. Such shading may be fixed for the summer; but it thicker material is used it should be mounted on rollers, so as to be rolled up in dull weather.

VARIEGATED DAHLIAS: *H B.* The variety known as Variegata, with white-edged leaves, is much more effective as a variegated plant than Lilacina variegata, which has the leaves blotched in the centre with pale greenish yellow.

VINES: *W L.* We are afraid that your Vines are afflicted with mildew in an incipient state. At least on minute inspection we see spores which appear to be those of the Oidium, though the plant is not thoroughly developed. If the leaves and young bunches look mealy, apply sulphur at once, but at the same time be sure that the leaves do not wither from some other cause, as direct sunlight, or drought consequent on radiation. *M J B.*

VINE LEAF EXCRESCENCES: *T B.* Your Vine leaves have got the leaf-wart. It generally arises from a bad condition of the roots, but is not immediately mischievous. If, however, the roots are really unhealthy, you must expect shanking and spotting. *M J B.*

VINE SCALE: *O H.* Your young pot Vines are affected with the common Vine scale, which is producing myriads of young. You must take immediate measures to get rid of it. You should, however, have carefully removed the scale in winter, when it is visible enough on the bark. *M. J. B.*

MISC: *Correx.* No. 21 of 1862. Full price will be given for the above.

ODAMS'S BLOOD MANURE for CORN.
ODAMS'S BLOOD MANURE for ROOTS.
ODAMS'S SUPERPHOSPHATE of LIME.

MANUFACTURED BY THE PATENT

NITRO-PHOSPHATE or BLOOD MANURE COMPANY (LIMITED). Consisting of TENANT FARMERS, occupying upwards of 30,000 acres of land.

Chairman: JOHN CLAYDEN, Littlebury, Essex.
Managing Director: JAMES ODAMS.

Particulars of these Standard Manures may be obtained at the Offices. C. T MACADAM, Secretary, or of the local Agents.
Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow, Essex.

THE LONDON MANURE COMPANY have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c

They also continue to supply GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

LAWES'S MANURES.
The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
American and other Cakes at Market prices.
Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

Manures and Feeding Stuffs.
RAYNBIRD, CALDECOTT, AND BAWTREE.
Address, 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

PALM-NUT MEAL.—Manufactured by ALEXANDER M. SMITH & Co., Liverpool, delivered to Rail or Boat, at Liverpool, in bags of 2 cwt. each.

Marked A.M.S. L. Price 6*l.* a ton.

Analysis and Report by Dr. Augustus Voelcker:—

Moisture	6.91
Fatty matters	26.50
*Albuminous compounds (flesh-forming matters)	14.93
Gum, starch, sugar, and digestible fibre	31.20
Woody fibre (Cellulose)	16.13
†Mineral matters (Ash)	4.39
	100.00

* Containing nitrogen, 2.39 † Containing silica and sand, 1.07.

"101, Leadenhall Street, London, E.C.—April 15, 1864.

"Dear Sir,—I have much pleasure in sending you the preceding analytical results, for they show that the sample of Nut-meal which you gave me for analysis possesses extraordinary fattening properties, inasmuch as it contains no less than 26½ per cent. of a beautiful butter-like fat. You will notice that the meal contains about as much flesh-forming matters as the best Barley-meal, and that the proportion of woody fibre is not large. The condition of the meal is excellent. In conclusion, I beg to say that this valuable fattening meal must not be confounded with a description of cake made from Palm-nut kernels. The samples of Palm-nut kernel cake that have come under my notice were all quite inferior feeding materials.

"AUGUSTUS VOELCKER, Ph. D.,
"Consulting Chemist to the Royal Agricultural Society."
"To John Coleman, Esq."

Having been appointed by Messrs. SMITH Agent for the sale of Palm-nut Meal, I shall be happy to supply samples and further information as to this valuable feeding material.
JOHN COLEMAN, 150, Leadenhall Street, E.C.

W. S. UNDERHILL'S NEW PATENT IRON FENCE for GARDENS, LAWNS, &c.
Manufactory: Newport, Salop.
Warranted the strongest and most durable Fence ever offered at corresponding prices. It is easily repaired if broken from accidents; can be rolled up most compactly when not in use, is admirably adapted for exportation, and can be had of any height and mesh required, at prices from 4*d.* to 1*s.* 6*d.* per yard and upwards.
For further particulars apply at the Manufactory; or of the London Agent, Mr. R. WINDER, 18, Abingdon Street, Westminster, S.W.

To Owners of Landed Property.
A MANUFACTURING FIRM have for DISPOSAL a large quantity of ENCAUSTIC TILES damaged in the process of Manufacture, which they would be willing to deliver free on the Rail at a rate lower than the cost of the commonest description of Paving Tiles, enabling them to be used for Cottages and Farm-house Floors.
To Owners of Landed Property taking a quantity, they would be supplied at a very low rate.
Apply to X. Y. Z., Ironbridge, Shropshire.

Drainage, &c.
MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &C., IN ENGLAND AND WALES, AND IN SCOTLAND.
The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W.

DRAINAGE LOANS are made by the GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY to the Owners of Freehold Estates, Life Tenants, Trustees, Incumbents, Bodies Corporate, &c., for all works of Agricultural Drainage, as well as Irrigation, Enclosing, Road Making, Wood Grubbing, and Farm Buildings, sanctioned by the Enclosure Commissioners.
The advances are repaid by way of Rent Charge on the Estate created for such a term of years as the Landowner shall determine will best adapt the annual charge to the circumstances of the Tenants.
No investigation of Title being required, or notices given to Reversioners or Mortgagees, no legal expenses are incurred.
The Company either supply the money expended by Landowners in works designed and executed by their own Agents, or they undertake the entire improvement by their experienced staff, supply the weekly advances required, and charge on the estate the actual outlay in the works, and their commission thereon.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

MIDLAND FARMERS' CLUB.—At a Public Meeting of Agriculturists and others, held at the Hen and Chickens Hotel, Birmingham, on Thursday, May 12, 1864, R. C. CHAWNER, Esq., in the Chair, the following Resolutions were unanimously agreed to:—

Proposed by the CHAIRMAN, seconded by Mr. H. WIGGIN,
1. That it is advisable to form a Midland Farmers' Club.

Proposed by Mr. T. B. WRIGHT, seconded by Mr. JOHN LOWE,
2. That Richard Croft Chawner, Esq., be requested to act as President for the current year.

Proposed by G. C. ADKINS, Esq., seconded by Mr. JAMES BALDWIN,
3. That the Mayor of Birmingham (W. Holliday, Esq.), C. M. Caldecott, Esq., Wm. James, Esq., H. Luckcock, Esq., and Mr. T. B. Wright be requested to act as Trustees.

Proposed by Mr. T RYLAND, seconded by HOWARD LUCKCOCK, Esq.,
4. That Mr. H. Wiggin be requested to act as Vice-President for the present year.

Proposed by Mr. R. L HUNT, seconded by Mr. W. LORT,
5. That Mr. J. Shackel be requested to act as Treasurer for 1864.

Proposed by Mr. H. WIGGIN, seconded by Dr. BODDINGTON,
6. That the following Gentlemen form the Committee for the present year:—

Adkins, G. C., Esq.	Chattock, H. H., Esq.	Lowe, Mr. Henry.
Adkins, Mr. H.	Conchman, Mr. C.	Lowe, Mr. John.
Aston, Mr. W., (Seisdon.)	Fowler, Mr. R., jun.	Masfen, Mr. R. H.
Baldwin, Mr. James.	Fowler, Mr. W., jun.	Mathews, Mr. J.
Beach, Mr. W. A.	Harris, Mr. Thomas.	May, Mr. G. A.
Bourne, Mr. W. Kempe.	Horley, Mr. T., jun.	Osborne, Mr. Henry.
Browning, Mr. C. L.	Keeling, Mr. C. R.	Ryland, Mr. Thomas.
Burman, Mr. T. T.	King, Mr. John.	Saxelby, Mr. T.
Chance, Mr. T. H.	Lees, Mr J. H.	Scott, Mr. W. J. B.
	Lort, Mr. W., jun.	Smith, Mr. Joseph.
		Turner, Mr. George.

Proposed by Mr. C. L. BROWNING; seconded by Mr. W. J. B. SCOTT—
7—That Mr. J. B. Lythall be appointed Secretary for the current year.
R. C. CHAWNER, Chairman.

The Chairman having vacated the Chair, it was proposed by HOWARD LUCKCOCK, seconded by Mr. JOHN KING, and carried unanimously—That the best Thanks of this Meeting be given to R. C. Chawner, Esq., for his kindness in presiding this day.

BATH and WEST of ENGLAND SOCIETY, for the Encouragement of Agriculture, Arts, Manufactures, and Commerce. Established 1777.
Patron:—H.R.H. The Prince of Wales, K.G.
President, 1863-1864:—The Rt. Hon. Earl Fortescue.
THE ANNUAL EXHIBITION of STOCK, IMPLEMENTS, POULTRY, WORKS of ART, and HORTICULTURAL SPECIMENS, will take place at Bristol, on June 13, 14, 15, 16, and 17.
By order of the Council, H. ST. JOHN MAULE, Secretary.
May, 1864. 2, Wood Street, Bath.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE-ON TYNE, July, 1864.
LAST DAY for Entry of Stock, Wool, and Butter, 1st June. All Certificates received after that date will be returned to the senders.
Prize Sheets and Certificates will be forwarded on application to
12, Hanover Square, London, W. H. HALL DARE, Secretary.

The Agricultural Gazette.

SATURDAY, MAY 21, 1864.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	May	23	General Meeting of the Royal Agricultural Society of England—Noon
THURSDAY,	—	26	Conference on Cottage Building—
FRIDAY,	—	27	Society of Arts—(11.30 A.M.—4 P.M.)
FRIDAY,	—	27	Dog Show at the Agricultural Hall,
SATURDAY,	—	28	Islington.

DR. VOELCKER'S instructions in the proper use of guano as a manure are the newest and most immediately useful of the contents of the new number of the Agricultural Journal. Everybody has been putting guano in with his Mangel Wurzels during the past few weeks, or will soon be putting it in along with Turnip seed. Dr. VOELCKER tells us that both the mechanical and chemical condition of the manure may be improved. Guano should be thoroughly ground or reduced to powder, in order to its full usefulness in the soil to which it is committed. And it is rendered less liable to waste if damped with five per cent. of its weight of oil of vitriol. The way to do it is to dilute the oil of vitriol in the first place with its own bulk of water, then pour both over as much sawdust as will easily take them up—this sawdust to be afterwards mixed with the guano. "I am convinced," says Dr. VOELCKER, "that if the suggestions which I offer are carried into practice, a considerable saving in the expense of the guano will be realised, for it will then be applied to the land in an improved mechanical condition, and in a state of increased chemical efficacy.

MR. THOMPSON'S instructive Review of English Agricultural Progress in the new number of the Agricultural Society's Journal, refers to the history of the Society as among the most efficient causes of that progress. It discusses the influence of steam power, now so generally employed in agriculture, as having also exerted an important influence; and it refers to the effects of free trade—of the tenure of land—and of the artificial manure manufacture, as powerfully efficient in the same direction. The progress itself is very well illustrated by the history of an ideal farm out of condition, with that of the various steps by which an intelligent farmer of the present day would undertake its improvement. This clever sketch we have transferred to our columns. And we shall in successive Numbers refer to the various influences and particulars which are enumerated as having furnished both the means and the methods by which the improving farmer is now equipped.

One of the points where Mr. THOMPSON has most elaborately illustrated the proposition which he advocates, is THE VALUE OF THE PRIZE SYSTEM as wielded by the Agricultural Society in the case of the agricultural machine manufacture. It is in the form of a critique of Mr. MORTON'S paper read last December before the Society of Arts, that this portion of his performance appears. Doing ample justice to the spirit in which that paper, and especially its attack upon the prize system, had been written, Mr. THOMPSON nevertheless confidently argues, on the three points wherein its attack for the most part consisted, that (1), the month of July is as well adapted as any other for trials which the Society's judges conduct; (2), that the shortness ot these trials has practically and in the long run not been found to mislead the award; and (3), that the "excessive character of the prize system," though inevitable, is by no means fatal to the uselulness and efficiency of prizes as seen, not only before the Society's judges, but on the race-course and elsewhere.

It is declared that the experience of 17 of the Society's country meetings proves that the weather and the condition of the land has been generally favourable during the trial week in July—that a constantly increasing number of purchasers are guided by the judges' awards, made under these circumstances—that the opponents of the prize system fix their attention too exclusively on the defects from which no system can be free—that the effect of the prize system has not been to depose the old established firms, which have in fact been benefited by the influence of the periodical official inspection of their manufactures which the Society has thus conducted, for it has checked in the bud many a fallacious plausibility which might as a novelty have interfered with the regular progress of their trade.

We shall reserve till another occasion a discussion of the value of a quiet and careful examination and report by competent judges, as compared with that of a wholesale trial and prompt award—fully admitting that there are many points in which the latter has its advantages. At present let us just enumerate two or three of the particulars in which Mr. THOMPSON'S argument appears to us open to objection.

His discussion of the subject commences with a reference to the Suffolk drill. Now, we believe it may be asserted, that notwithstanding the large sums of money won as prizes by Messrs. GARRETT & Messrs. HORNSBY, in their competition for these awards the Suffolk drill is just what it was when the Society was formed. No implement has altered less in form—it was as efficient then as now, and somewhat cheaper. And then, as now, SMYTH who has hardly ever been a prize man has always been by far the largest maker.

Take other examples:—The harrows which last year won the prizes of the Royal Agricultural Society are precisely the same in form and principle as those exhibited by Mr. HOWARD, Sen., at the first meeting at Oxford. GARDNER'S Turnip-cutter, the best of all such tools, is the same now as then. Has the plough been materially improved? We doubt it. The prize plough at Warwick, to which Mr. MORTON referred before the Society of Arts, was, we understand, in the form in which it received the award of the Society's judges inefficient. And those which were immediately purchased in consequence of that award had to be recalled by the manufacturer. Of course we do not refer to this as any disparagement now of these ploughs—they are as as good as those of the best of the rival manufacturers—but the incident is a very great disparagement in our opinion of the value of an award made after a few hours' trial of the implement.

Perhaps it may be objected that these particular examples are among the class of exceptional cases, instances, and points, to which Mr. THOMPSON alleges that the opponents of the prize system confine their attention, in disregard of the broad and general aspect which the progress of the agricultural machine manufacture during the existence of the prize system has presented. We believe that the prize system in the earlier years of the Society was of very great service to the

manufacture, to purchasers, and (which is a point of comparatively little interest to us on a general review of the subject), to the fortunes of the competing manufacturers.

Now however agriculturists are less generally in need of official guidance; they are less and less guided by the official award of merit. And both the makers and the buyers depend more upon the performance of their tools when at work under ordinary circumstances before the general public, than on the opinion formed by three selected gentlemen during a few hours' official examination.

Sufficient credit is not given by Mr. THOMPSON, in our opinion, to the discernment of the ordinary agriculturist, quickened as that must be by self interest; and too much is given to the effect of a prize, the influence of which, whether on the trial field or the racecourse, is open to well-founded doubt.

His allusion to racing seems to us altogether inappropriate; and in fact suggestive of the worst evils of the system which is in question. Machine making is not a sport or pastime. Implements are intended for every-day use, and are expected to last the farmer a lifetime, or nearly so. Besides, is it quite so clear that racing (as at present conducted at least) has improved the breed of horses? Have not the pages of the Royal Agricultural Society's Journal expressed a contrary opinion? Fox hunting, where the only prize is a "brush," may probably have done so, or at least prevented deterioration—but a whole season's testing in the hunting-field, with a merely honorary distinction as its reward, is directly opposed to the short racing trial on which the award of a premium of 500*l.* by the Society's judges has heretofore been guided.

MESSRS. WRIGHTSON and GREY, members of the Royal Agricultural College and lately students at that Institution, make a very able defence in another column of the professional education which is offered there. They appear however to have read our recent remarks on this subject, as if all our criticism had been directed against the present condition of the Institution. In this they are altogether mistaken. The "monstrous failure" that we referred to was the failure confessed by Dr. VOELCKER when he gave it for his opinion that practical farming is better learnt from a tenant farmer than on the College farm.

Dr. VOELCKER left the College some time ago. We presumed that his opinion had arisen out of his experience when resident at Cirencester, and we pointed out how that experience unavoidably had led to that opinion. The only teacher of practical agriculture while Dr. VOELCKER resided at the College (and of his ability and efficiency there is not a doubt) had nevertheless a task put upon him which was beyond the power of any one man to perform. Daily lectures in the theatre, and daily lectures in the field, are more than any one responsible for the profitable management of 500 acres of land can undertake. And if 100 students have to acquire all their knowledge of farm practice from a single teacher on a farm under these circumstances, comparatively few of them are likely to succeed.

Mr. GREY speaks confidently of the success which nevertheless was achieved under Mr. COLEMAN'S instructions, hampered though he must have been by his many other duties.

Dr. VOELCKER'S opinion however no doubt arose out of the fact that a great number of the students thus placed had failed to acquire a practical knowledge of farm management. For the acquirement of this practical knowledge accordingly he would have them spread abroad in twos and threes over the face of the country, where every one of them might have the almost undivided instructions of a practical tenant farmer. And he would confine the work of the College to instructions in the sciences which can be illustrated and taught in theatres and lecture rooms.

This we imagine to be the view he holds, and on which we commented. And we repeat it is a monstrous failure that is confessed when an Institution equipped for the especial purpose of agricultural instruction is admitted to be beaten by the practical farmer; who, whatever may be said of the advantages of undivided attention to the smaller number of pupils, does in most cases really regard the one or two whom he receives as a nuisance, borne only for the sake of the large premiums which they pay. The authorities who have the management of the Royal Agricultural College do not, we believe, think with Dr. VOELCKER in this matter. They too, we understand, consider that if the Institution cannot teach practical farming, it must be pronounced a failure. Since the period to which Dr. VOELCKER'S experience refers, and on which no doubt his judgment has been formed, great efforts have been made to supplement the practical instruction in which he pronounces collegiate institutions necessarily deficient. The farm manager, who formerly had the responsibility of all the practical education upon his hands, now confines his attention to the field classes; and in the lecture-room the students receive the instructions of a number of lecturers, each especially acquainted with his own department, who come successively into residence for the purpose of a full discussion of it.

The College is now devoting more of its attention than ever it has done to practical instruction in agriculture. In this it is obviously fulfilling the purposes for which it was established. This needs more and more to be regarded as its essential object, and so, more and more, will its usefulness be admitted and its success ensured.

And *so* let us add, more and more will it be able to claim under the charter of the Agricultural Society that countenance and support which the National Society has hitherto refused it. For it seems plain, upon a perusal of that charter, that the education which under it the Society is bound to promote is not the general or ordinary but the professional education of the agricultural class. And desirable as the object contemplated by the Rev. Prebendary BREBETON undoubtedly is—important as it may be to establish county public schools for the children of farmers, and of the middle classes generally—we earnestly hope that the Society will not embark in any great scheme of this kind, altogether foreign as it would be to the scope and purpose of its incorporation, and to the powers which it either possesses or can wield.

Mr. HOLLAND seemed to us to state the thing most fairly when he put the promotion of good public schools for middle classes as a duty upon those individual members of the society whose social position authorised them, or enabled them, or required them to act for their several counties or neighbourhoods; leaving the Committee of the Agricultural Society to report upon the possibility of corporate action on the part of the Society, with exclusive reference to the period for *professional* education which elapses between school days and the tenancy or management of a farm.

—— WE know of further examples of the activity of the common cheats, as they may now be called, who are endeavouring on false pretences to procure livestock from well-known breeders. Mr. READ, of Elkstone, had the other day an application for a "first-class Hereford cow," from a man who writes from Holloway; and we see that Mr. SMITH, of Lower Wick, Worcester, has also been applied to from High Cross, Tottenham. A request for prepayment, followed by an examination of the cheque which will be sent in answer to it, before the animals are despatched, is the only perfect safeguard.

AGRICULTURAL EDUCATION.

AFTER reading your article of the 30th April on the Agricultural Education of the Royal Agricultural College, and seeing that it has not yet provoked a reply, I cannot remain silent; and trust that my remarks will find a place in your columns, as they are in the cause of truth.

Not having seen the speech of Dr. Voelcker's referred to, I must assume that the text of your article fairly expresses the tenor of his speech, and I challenge him or any one else to show that the opinion therein expressed is well founded.

I can understand Professor Coleman's silence. He does not wish to blow his own trumpet; but I feel sure that he might confidently challenge any tenant farmer in the United Kingdom to show pupils who (in a two years' course) have received more full instruction in practical agriculture, or have kept a more strict account of the practice on the farm, than have some of those taught at the College. And I say that the College may well challenge any inquiry into the opportunity that students have and have had of learning practical agriculture.

Let people stick to facts and not trust too much to opinions hastily formed, and if they do so they will find the facts in this case strongly in favour of the Royal Agricultural College as compared with private tuition. I do not say this of the average of tenant farmers only, but of the better class of private tutors in agriculture.

I should like any one to show wherein the advantage lies with the private pupil over the student at the Royal Agricultural College.

The only objection to the system at the College that I have ever seen urged with any force, is the supposed undue relation of the sciences to practical agriculture (a difficult question and not to be hastily decided), which let me say is entirely beside the point at issue, viz., the relation which the instruction in the practice of agriculture at the College, bears to that given to private pupils by tenant farmers.

Permit me now, as a member of the College who has studied agriculture there, both under Professor Coleman and Mr. Fletcher, to point out briefly some of the advantages which a student at the College has over one with even the best of practical farmers in acquiring a knowledge of farm practice itself.

No one acquainted with the College of late years will affirm that economy has been neglected on the farm; if they do, the College accounts and the state of the farm, which certainly never had the appearance of being farmed for show, are proof enough to the contrary. But the practice on the farm is not, I think, challenged; the only point challenged is the opportunity afforded the students of becoming acquainted with the practice of the farm, and before coming to any conclusion on this point, it would be well to take a look at the facts of the case.

Let any one who wishes to know what has been done by the students examine the farm and cultivation books of those who have obtained prizes; these will, I doubt not, compare favourably with those of any pupils on private farms; and I believe few farms, if any, will be found where so searching an inspection into the accounts is permitted to or required of the students.

It may be imagined that because the private pupil has more time to devote to practical agriculture, that therefore he has the advantage; but I believe the experience of all who have tried both will go to show that although the time on the College farm must be economised, yet much more is gained by a business-like walk round the farm, inspecting each operation and taking notes of it and the time men have been employed at each, than would be or is gained by the loiterer on the tenant's farm, where the student feels that he has more time than enough. Those acquainted with human nature with will grant that this is very generally the case.

It would however be easy to show (were it not trespassing too much on your space) that the examinations at the College under anticipation of which the operations on the farm are inspected and noted, tend greatly to quicken and increase habits of observation and regard for detail.

I might also dwell on the advantage arising from conversation among the students on the facts observed; no one will doubt that where a number of young men are thrown together much is gained by comparing notes.

You sir, I am sure, will readily admit that the discussion of the merits of this and that operation, calculating the cost and so forth, does more to impress the facts on the mind than any other kind of teaching; far different is it with the arguments and questions of the tenant farmer and his pupil, in which the former considers in most cases that his opinion ought not to be disputed.

I would in conclusion remark how superior is that teaching where the teacher makes teaching his special business, to that which may be expected from the farmer, whose time and thoughts are naturally more occupied with his own interests than in those of his pupil; and to reiterate your words, let the Royal Agricultural College drop its distinguishing title altogether if it cannot compete with the ordinary practical farmer in the work of practical agricultural education.

I hope that some who have tried both will come forward, and give their experience on the subject.
G. W. Gray.

As one who has had some insight into the means usually adopted by young men seeking an intelligent knowledge of their business as farmers, I have felt considerable interest in the remarks upon this subject which have appeared in the last numbers of your valuable Paper. One thing however is certain, that although it is often asked, "how is such knowledge to be obtained?" the question seems to belong to that numerous class specified by Sir Walter Scott as "more easily asked than answered." Now the knowledge required to make an efficient and money-making farmer, however it may differ from that required by a merchant or professional man, has still certain points in common with such pursuits, requiring in the first place a well balanced mind; 2d, shrewd judgment; 3d, knowledge of mankind; 4th, a knowledge of the minutiæ of his business; 5th, a knowledge of collateral subjects which may influence that business, and after all, and indeed what is included in the foregoing—experience. Such business qualifications take many years to develop. To look for any system of agricultural education which in the course of two, three, or four years will bestow on a young man such qualities is as absurd as it is unprecedented in the instruction for any other occupation. Boys in the middle walks of life receive a very similar education while at school, however diversified their future profession may be. A sound English education, intermixed with Classics and Mathematics, has been found by universal experience to be the best calculated for developing the mind. It is at the conclusion only of this period, say at the age of from 16 to 18 years, that special studies relating to the boys' future course of life are commenced. Those who

up to this time have been school companions must now part company. Some prosecute their abstract studies at our Universities, others repair to medical colleges, others to the study of engineering, and some to counting houses and manufactories to learn the customs of trade and commerce. The youth which we are interested in is intended for Agriculture, and the difficult question arises, "What is the best plan to give him the necessary knowledge?"

What is the nature of agriculture? Baron Liebig answers—"Agriculture is both an art and a science."

Now, an art is a practice which may be learnt simply by observation and imitation; such as ploughing, sowing, and all agricultural operations. Therefore the practice of agriculture is an art, and has no sympathy with science. All may be learnt by mere observation and imitation, and I maintain that a man with such knowledge may be a successful farmer, and further, that the great bulk of farmers may be so described.

What then does Liebig mean, and what does the popular opinion refer to, when they join in saying that agriculture is both an art and science. It means that to advance agriculture we must have something more than mere imitation of the practice of others—that we must know the reason of natural phenomena, and the laws which govern them, before we can pretend to modify usages connected with them.

We must know why it is wrong to bleed and purge for every disease before we give up so time-honoured a custom. We must be convinced that it is absurd to rub salt on a cow's back after calving before we dare undertake the responsibility of such an omission. We must be sure that nitrate of soda and ammoniacal salts have an exhaustive effect on soils before we can prevail upon ourselves to give up so apparently advantageous a top dressing. We must somehow or other try to find out why rotations of crops are necessary, and if they really *are* necessary, for they are frequently inconvenient to adhere to. Somebody ought to look after the causes of Clover sickness and the Potato disease. We should much like to know whether Messrs. Lawes and Gilbert or Prof. Liebig are right about the capabilities of the soil. These are a very few of the questions which belong to the science of Agriculture, and a true student of agriculture must know something of the bearings of such questions before he can be called master of his occupation. Without it usage is his master; with it, he is the master of usages.

It is only those who have vigorously applied themselves to such studies who know how deeply and generally the physical sciences must be ransacked before a sound judgment can be given upon the reasons of phenomena. Every chemist knows that a grounding in general chemistry must precede agricultural chemistry, and scientific men in general know that a man must have a knowledge of principles before he can apply principles.

For these reasons I lay it down as indisputable that to be a scientific agriculturist you must have a sound scientific education. Returning to our youth, who is intended for a farmer, it is evident that he must be taught both the practice and the science of agriculture. For the former I recommend a sojourn with an agriculturist of from two to three years, and for the latter, a course of instruction in physical sciences. I have been extremely sorry to notice the somewhat disparaging manner in which the Royal Agricultural College of Cirencester has been lately spoken of as a place where practical farming could not be taught. I shall not enter into the discussion of this question, but simply give it as my opinion that with attention in the lecture room and on the farm more advantages are given to the youth there assembled than any private farmer can bestow; while the high moral standard inculcated and the society of men similarly engaged, are advantages much superior to the solitary life of the "mud" student, who is very liable to become indolent in mind and body, and to seek release from *ennui* in low company.

There is no place in England more calculated to give sound notions of science both in its general and special applications to agriculture than this noble institution.

I cannot, however, recommend the College course as the only means of instruction for the young farmer, simply on account of its being too short in duration; but two years with a good farmer, and two years spent at Cirencester, would, I feel confident, turn out first-rate men, ready to commence on their own account. That four years so spent should make long-headed, experienced farmers, no one will pretend to say; nevertheless, judging from the remarks of some writers, they appear to be looking out for a system which in so short a time is able to send out men of not only knowledge, but experience.

To such I would point to our Medical Colleges. Do they pretend to send out men who can at once combine knowledge with experience? Are our military colleges calculated to turn out cautious veterans? Does engineering education at once fit a man for all practical difficulties? Does an agricultural education give a man the knowledge of when and how to buy and sell and contend with every difficulty of season. Unhesitatingly, no. It is well remarked that no man truly learns farming until he commences for himself. I certainly find it so, although I spent four years with a successful and experienced farmer, and two years at the Royal Agricultural College of Cirencester. *John Wrightson, F.C.S., M.R.C.A., Spring House, Tadberge, Darlington.*

ARE NOT DUNG HEAPS UNNECESSARY?

Most decidedly so, except under particular circumstances. I have now had the experience of several years, during which the bulk of my manure has been taken from under the animals in the covered sheds, and at once applied to the soil. The resulting crops give unmistakeable evidence of the correctness of this practice. If fermentation is so necessary in a dung heap, why does the sheep fold act so well without it? My custom is as follows. Our straw is cut up by steam power into 2-inch lengths. The action of cutting, splits most of it, so that the spongy inside of the straw is at once rendered available to absorb the urine. The outside of the straw we all know is glass, and impervious to moisture. The cut straw is applied as litter from day to day, care being taken not to use more than will get thoroughly saturated and intermixed with the solid manure—in fact, enough to keep the animals clean. If you put in too much it will heat and ruin the health of your stock. It is trodden, when so intermixed, into a sort of hodge-podge, which when applied to the soil will beat the best guano ever used—in the production of crops, and in the matter of profit. The manure is allowed to accumulate under the animals for a month or two, according to the temperature of the season. In winter it may remain long; in the summer or warm months you must remove it more frequently, having a watchful eye to the heat of the mass and to the comfort of the animals. If the manure is too warm, it takes the animals off their feed and endangers their lungs, much as a pig get the heaves or lung disease by lying on hot dung and then becoming exposed to atmospheric change. When the manure is removed it is completely saturated, so much so, that my practical neighbour says—"Mr. Mechi, your dung, although made under cover, is much more wet than ours, which is exposed to rain and the water from buildings."

It is highly desirable that this manure when taken out from the sheds should be at once carried to and spread on the land; for being so amply saturated it can take up no more moisture, and therefore a shower of rain washes the soluble portions out of it. If we have no land ready, we place it close to our great tank, so that any washing from it goes into the tank, and is thus economised. The floors of my sheds are all, of course, well brick paved. In farm yards the earth to a very considerable depth absorbs much of the farmers' wealth in the shape of soluble manure, and so we need not wonder at his preference for the sheepfold, where the soil gets every portion of the manure.

Manure is so costly to produce that we should certainly take as much care of it as we do of bird's dung (guano), for I presume that no farmer would see, with indifference, the latter washed away by the rains. Where is the difference? I cannot distinguish it.

I am always sorry to hear a farmer complain of having too much straw, or, as this last winter, complaining that for want of rain he could not make manure. It is evident that such a man does not keep enough stock; for although I grow an immense quantity of straw, and have all my manure made under cover, and a portion of my stock on sparred floors, I never have quite straw enough, and generally purchase an extra stack or two.

I venture to predict that the time is coming when an open farm-yard and a dung heap will be an event of other days.

I am sorry to see so little summer-made beef. The consumption of green food with cake under shelter should go on during summer. Why not continue making good manure all the year round? *J. J. Mechi, May 16.*

JUDGMENTS AT CATTLE SHOWS.

The following is extracted from a letter by the late Mr. Bates, of Kirkleavington, published in the *Farmers' Journal* of Nov. 25, 1844:—

"That by extra feeding the worst of animals may be forced forward to gain the applause of incompetent judges, there wants no proof; but how they are fed, whether on Indian Corn, which I have never used, or what other forcing keep, we are not told, but this I am certain of, that a cow, the Rev. Mr. Berry said, produced 16 quarts per meal, or twice a day, of milk at Mr. Whittaker's, never produced more than four quarts, or ¼ of the quantity when going in my cow pasture at Kirklevington, and that immediately after calving.

"Having furnished Mr. Whittaker with very many valuable Short-horns, some at less than a tenth of their value, and not a twentieth part of the cost of what he had paid for much worse animals; and in vain urged him to send them to my second Hubback, that he might see the difference between his produce and that of Frederick (267 in first volume of Herd Book, and 1016 in the second volume of Herd Book), he wished me to buy Gambier (2046) of him, being by Bertram, and having the Daisy blood, and from Lady Matilda, the highest priced cow bought at Mr. Charge's sale in 1828; I did so, and paid him double the price that I paid for Belvidere (1706 in 3d volume of Herd Book) which I bought soon after; and having both bulls in use at the same time, and having eight steers by each bull. I kept the 16 together, invariably, on the same keep, till the 19th of October, 1835, after they were two years old; when for want of keep, I sent the eight by Gambier to Yarm Fair, and they were sold at 12*l.* 12*s.* each. On the evening of the same day I offered the eight by Belvidere to the same person, that they might be fed together, at 17*l.* each, and he refused them.

"At the Easter previously, I had desired two graziers from the neighbourhood of Morpeth, who were attending Darlington Market on Easter Monday, to put a value on each of the eight steers, all going loose in the same straw yard, where they had gone all winter, eating Wheat straw; they valued those by Gambier at 9*l.* each, and those by Belvidere at 10*l.* 10*s.* each. On the 13th of May following, the eight Gambier steers averaged by measurement 36 stones each, and those by Belvidere 42 stones each. The eight steers by Belvidere were turned out in the day to a Grass pasture, very bare, and got straw at night, all the autumn of 1835, till January the 12th, 1836—12 weeks—and they were then not so good as they were at Yarm Fair, the 19th of October previous. They had afterwards a few Turnips (not 2 stones per day each) and some damaged Linseed, the cost of which did not exceed 1½*d.* per week besides straw and the cost of labour in boiling the Linseed, and for a few weeks at first got a little bran mixed with it to induce them to eat it—and when so learnt, got only chopped straw mixed with the boiled Linseed, which was bought by public auction.

"These cattle were sold in Leeds market the first week in June, and averaged 34*l.* each, averaging near 90 stones, each, of 14 lbs. per stone; those by Gambier, having the Galloway polled blood, &c., were sold 13 weeks afterwards at Wakefield, at 21*l.* 10*s.* each, making a difference in the price of the two lots of 12*l.* 10*s.* per head each; 100*l.* difference in the value of eight steers; no small consideration in the profits of grazing, besides three months longer keep.

"I meant to have reversed the cows to each bull the following year, and then seen the difference, but Gambier got no calves after the first year (not unusual in this tribe of cattle). I, however, put the cows that were to Gambier, the following year to Belvidere, and kept the produce in steers, in much the same manner as in the former year's breed, and sold them in the same market that the Gambier steers were sold at (viz., Wakefield), and above three months earlier; being sold in May, and got within 5*s.* per head of the price the Belvidere steers were sold for the previous year; the prices of beef per stone nearly the same both years—1836 and 1837. This proves, by a sure test, the contrast between Frederick's blood and that of Belvidere.

"Now this is a test of value far different to what 'Correspondent' proposes. The opinions of men, unless they have judgment, and honesty to act uprightly, is of no estimation whatever; as a proof in point, I need only refer Mr. Parkinson, jun., himself, to his decisions, and that of his coadjutors, Mr. Torr, of Lincolnshire, and Mr. Anthony Maynard, at Richmond, last summer, at the Yorkshire Agricultural Society's Exhibition (and these three took every pains in examining the different animals), and the decisions of the judges at the Durham Agricultural Society's Meeting at Stockton, within two months of the former, where the same bulls were again exhibited as at Richmond, and where one, unnoticed at Richmond, was placed before the two that got the first and second premiums at Richmond. After such frequent bare-faced, unprincipled conduct in men, to say nothing of the total want of judgment altogether, it behoves the conductors of agricultural societies to take some other mode of ascertaining merit than the opinions of men incompetent to such a task, and appointed by men who are the exhibitors themselves. Mr. Parkinson, jun., himself, had certainly great reason to be dissatisfied with the decisions of the judges at Durham, in 1843, when Sir Thomas Fairfax himself was placed in the back ground, and a bull placed before him, without the least character of a good Short-horn—but the decisions at Durham, in 1843, were praiseworthy in comparison to those at Stoton, in 1844.

"I have never had any hand in appointing judges at agricultural shows in my life, and no person of judgment has said, or can say, I ever received a premium to which I was not entitled. But not a few have seen, and said, how improperly my stock has been treated at public exhibitions.

"I exhibited cattle at the Tyneside Agricultural Society's meetings, from its first institution in 1804 to 1812, but never showed my best cattle, and was successful at every show (and those exhibitions were held sometimes thrice a year) till the last show in 1812, and I then showed better animals than I had ever showed before. One of the judges told me afterwards, that those who influenced the proceedings, decided in the room, before they went out to examine the stock, that I should never have another premium in that Society, however excellent the stock I exhibited; and this gentleman, and others who knew the determination come to, advised me never to exhibit again, and for 26 years afterwards I never did till the York meeting in 1838, although I continued my subscription to the Tyneside Society till it was dissolved.

"In 1819, seven years after I had ceased to show, a breeder of Short-horns, removed to the northern part of Northumberland from Tyneside, dined with me at the same table at Berwick-upon-Tweed, and after dinner he asked me, before a very large company, how my stock was going on, and I said I had not exhibited since 1812, and knowing the resolution that we came

to, 'that I was never to have a premium, however excellent the stock I exhibited.' He then said, 'You ought not to reflect upon me seven years afterwards, for I avow myself to have been the proposer of that resolution;' and he set to work to defend himself and those who acted with him, 'justifying their conduct' by saying, 'that they were perfectly right in so doing, as they had none of my blood, and having, for so many years, given me premiums, it was time to put a stop thereto, and act for their own interest alone, and help the sale of their own stock; this ended two years afterwards in the breaking up of the Agricultural Society in Tyneside; and the Short-horned cattle of that district, from having been the best shows I ever knew, far exceeding any in the present day, as a whole, became the worst of any district I know of; for in 1837, at the Hexham Show, there was not even the vestige of a good Short-horn from Tyne side in Northumberland, and the premiums were nearly all carried away by strangers from other districts; and with the decline of good Short-horns, the agricultural produce of the district fell off to less than one half to what I had known it on many farms, and probably never again will become equal to what it once was, while in other parts of the kingdom the agricultural improvements have greatly advanced. This ought to be a warning to all other agricultural societies to prevent the conductors thereof being governed by selfish motives, to advance their own interest, instead of the public advantage; for I have held, and ever will hold, that the prosperity of the landed interest, I mean landlord, tenant, and labourer conjointly, tends to the prosperity of every other class in the state.

"I must add further, that I showed Mr. Whittaker, Mr. Fawkes, of Farnley Hall, and others with them, the Belvidere steers to which I have referred above, in the spring of 1836, while feeding here; and showed them Norfolk's dam, feeding in the same Hemble—she stood with a cow by son of 2d Hubback (2683), whose dam cost 8*l.* in a two years old heifer, and this cow was only 48 stone at Christmas, 1835, and was when sold at Leeds, estimated at 84 stones, having gained 36 stones (of 14 lbs. per stone) in 20 weeks, and increased in value in the estimation of the butcher, who bid 12*l.* for her at Christmas, to be worth 32*l.*—being 20*l.* increased value in 20 weeks; while Norfolk's dam did not increase in weight one-fourth as much, and was sold, I think, at 27*l.* or 5*l.* less than the cow by son of 2d Hubback; this I pointed out to the above gentleman, and desired them to examine Norfolk's dam's rumps, as they had no fat upon them whatever, and yet it pleased the breeder of Norfolk to say that was owing (want of fat on his)—Norfolk's—rumps) to second Hubback; but they then had ocular demonstration before them that it arose from Norfolk's dam."

A REAPING MACHINE TOUR.

MR. GRAY, Brownrigg, has kindly put into our hands a jotting of his recent remarkable tour, in which he exhibited in the principal counties of Scotland, and in Northumberland, the capabilities of his new improved reaping machine. Introductory to his narrative, he says:—

About the end of harvest, 1858, shearers got very scarce—the best hands, as usual, having gone off to Berwickshire, leaving me with a few bothy girls, their cousins, brothers-in-law, &c., to cut a field of Oats, and one of spring Wheat. They formed altogether a very happy family party; but I found the cost of shearing per acre rather too much, and determined to have a reaper before another year. The difficulty was to get one that would give less bother than shearers. Bell's was the only one at work in the district, and from anything I could learn its working was not very satisfactory. The price, too, was high—about 45*l.*—and the stoppages and breakages frequent. Mr. Hope, Fenton Barns, informed me that a machine was made which could cut Grass as well as corn, and that the price was 25*l.* I made some inquiry, and ordered one. Mr. Hope, Fenton Barns, and Mr. Boushiell, Bonnington, got machines at the same time. I could not get on with the Grass cutting at all, and had to get a man down from Stirling to give me a lesson. We were then so successful that I secured the agency for the district, and the public, pleased, ordered 45 machines, which were all delivered in time for harvest. I had never seen the machine cutting corn, so that everything was again to learn. I soon found cutting round a field of good Barley was not satisfactory, and commenced cutting one side only. The man began gradually to improve in his delivery, and by breakfast time was making a very fair sheaf. The girls (minus their cousins this year) did not seem to like the change, and were making a mess of the lifting, so I promised the best lifter during the harvest a new gown, which produced a magical effect, and I think 15*s.* was never better spent than in buying that piece of cloth. Except opening up the fields, and 2 or 3 acres of very badly twisted corn, I cut the whole of my crop—about 100 acres—and 25 acres of Clover hay. Breaking one knife bar was the only accident. The drawback was the punishment of the horses from overdriving, which was obviated next season by putting on another machine, as I thought it safer to invest 25*l.* in another machine than risk killing a pair of horses worth 80*l.* The machines delivered in 1859 gave general satisfaction, and in 1860 I sold 186. On these machines various improvements were effected, but from errors in judgment, and carelessness in manufacture, they gave general dissatisfaction. The one I got for myself was taken away by Sir G. G. Suttie, and I got one which had been delivered to Mr. Scott, Garvald, but which he was anxious to get rid of, and in doing so parted with as true a working machine as ever was made. I got the first prize with it at Longniddry in 1860, was beat at Yester 1861, but it was the only machine that cut through the wet Barley without choking, when drawn out among those on the short list for a final trial.

Having succeeded in cutting the corn and laying it off in sheaves, it occurred to me to take a step in advance and lay the sheaf off the tilting-board on to the band, and at once save the labour of lifting the sheaves, and the loss from straggling attending that operation. To effect this without putting on extra machinery, and thus increasing the draught on the horses, was my great object.

[Mr. Gray proceeds to describe the details of his invention for the inserting of the band at the end of the tilting-board. We may mention that one great advantage claimed by Mr. Gray, in the simultaneous delivery of the band and the sheaf, is that it saves the loss that is always occasioned by having the sheaves turned twice over.]

Under every system of reaping corn a band has to be made for every sheaf, so that, whether cut by the hook or by machines in the usual way, or under my system, we are equal as far as band-making is concerned. The only advantage I claim over the other systems is that old wives, young boys or girls can make the bands in any part of the field where good corn for making bands is to be had. In some parts of fields the corn is often too short, and the twist has to be made on the heads, causing a loss, and in others partly rotten and unfit for bands. Or the bands may be made by the usual hands on dewy mornings or wet days, when nothing else can be done, and when the weather is favourable the whole strength on the farm is available for tying or stooking—only one being required to put in the bands. Under the ordinary system of laying off the sheaf, the different parts of the work I calculated thus:—Making the bands, 3-12ths; lifting sheaf and laying it on the band, 4-12ths; tying and stooking, 5-12ths—total, 12-12ths. Under my system, the lifting of the sheaf and laying it on the band is unnecessary, therefore 4-12ths, or 1-3rd of the whole labour is saved—that is 33⅓ per cent. Saved by no heads being left, and therefore no gathering or raking required, 6¼—total saving, 40 per cent.

In the lower district of this county the people following the machine generally work in threes. Two women make the bands and put the sheaf on the band, and the man ties and stooks. In the higher district and in other parts of the country, one woman and one man work together. The three follow the machine, and, say that their stent is 100 yards long, each of the three, on arriving at the end of their stent, has travelled 100 yards, or, collectively, 300 yards has been travelled. The three then march back, gather up the heads that are scattered about, and perform a journey of another 300 yards; or a total of 600 yards has been gone over by one person to lift, tie, and stook 100 yards in length of a cut made by the machine. Under my system only one is required, who ties and stooks as he goes, and having no heads to gather, does not require to come back, and lift 100 yards of a cut by travelling 100 yards. By working in threes and gathering back the ground is travelled over six times; by working in twos, four times; by one working, and no gathering, one time. A great deal of travelling can also be saved by drawing at a steady pace, and filling the machine. When the horses are fast driven, a machine capable of cutting 5 feet 3 inches seldom cuts more than 4 feet. By driving the horses steadily, 4 feet 9 inches can easily be done, thus saving both horses and workers of about 1-5th of the travel.

With these preliminary remarks, I now proceed to give as brief an account as possible of a journey undertaken for the purpose of showing, as far as it was practicable at the end of the season, the advantages of the improved reaper.

After a tolerably successful *début* at Amisfield, and also exhibiting at Brownrigg on the 19th and 21st, the machine was sent to Dunbar on the 22d, where it was shown at work on the farm of Mr. Brodie, Spott, in the presence of a large number of the farmers in the neighbourhood.

In the further prosecution of my journey, I made arrangements to take with me a pair of good horses, with a man and boy to rake and drive, and a girl to follow the machine and put in the bands.

On Wednesday the 23d the machine was exhibited in the Edinburgh Corn Exchange, and on the following day it was put to work on the farm of Mr. Herdman, Fala—the crop being a fair one of Wheat. The weather was rainy, but the trial proved a very successful one. In the afternoon the horses and machine went on to Kirkliston, west of Edinburgh.

Friday 25th.—At work on the farm of Mr. Dudgeon, Kirkliston. Cut Barley, very much laid and twisted. The trial a severe one, but came off very well. The same day cut Wheat on the farm of Mr. Salmond, Wheatlands. Part of the crop a good deal straggled; but when otherwise the machine made excellent work.

Saturday 26th.—Cut Oats and Wheat on the farm of Mr. Thomson, Paddock Hall, Linlithgow, where there was a large turn out of spectators. The performance of the machine, particularly on a heavy crop of Wheat, seemed very much to astonish some of the parties present, as reaping machines have not become general in this part of the country.

Monday 28th.—The weather extremely wet and disagreeable. Cut Oats and Wheat very much twisted, on Glen, the property of the Duke of Hamilton, Stirlingshire. The trial, both on account of the weather and the character of the crop, was not so favourable as I could have wished. The horses travelled on to Stirling that night.

Tuesday 29th.—The weather no better. Cut Wheat on the farm of Mr. Robertson, Cames. The riggs were of the old fashioned kind, and the water standing in pools between the furrows. Also cut Beans. I may mention that the plan adopted in this part of the country is to twist three or four of the stalks from the Beans around the sheaves, thus rendering it unnecessary to make "whuppies." A large number of the farmers, and almost all the implement makers in Stirling were present. The machine worked well, and seemed to give general satisfaction.

Wednesday 30th.—The weather still bad. Cut Wheat—a fine crop—on the farm of Mr. Wingate, Longcarse. The work well done, notwithstanding the wet. The horses, &c., proceeded the same afternoon to Dunfermline.

Thursday, October 1.—Cut Oats—partly heavy and partly a light crop—on the farm of Mr. Finlay, New Farm. For almost the only time in my journey, the horses were not forward in time. There was a large attendance of farmers and others, and the work excellent.

Friday, November 2.—Cut a quantity of Oats, kindly kept for the purpose, on the farm of Mr. Prentice, Bankhead, near Kirkcaldy. The weather had by this time cleared well up, and there was a corresponding improvement in the quality of the work done. We had a large attendance of spectators, amongst others the Earl of Rosslyn, who seemed much interested in the work. The horses went on to Cupar the same night.

Saturday 3d.—Cut a light crop of Barley on the farm of Mr. Bell, Dron. This was the largest meeting we had in the whole journey, the spectators including the principal people in the district. The horses went on to Newburgh the same night, where they remained.

Monday 5th.—Cut Oats on the farm of Mr. Howieson, Newbigging, near Perth. The land very soft and unsuitable for the machine, and the horses, from their long journey forward, showed, for the first time, symptoms of being fagged. The work, however, was well done, and all present seemed much pleased. I may mention here that the horses and workers were put up the same night with Mr. Hall, late of Amisfield Mains.

Tuesday 6th.—Cut a goodish crop of Oats on the farm of Mr. Robertson, North Dowald. Part of the field extremely unsuitable for a reaping machine, and the grain much laid and twisted, but the work done in a way that surprised every one.

Wednesday 7th.—Trucked the horses and machine from Crieff to Glasgow per rail, where they arrived same day. After the machine had been exhibited in front of the Corn Exchange, went out to Bishoprigg, about two miles from Glasgow, where we cut black Oats on the farm of Mr. Craig, Bachley, in the presence of a large number of farmers and others. The furrows were extremely deep, notwithstanding which the machine did its work well. The horses returned same night to Glasgow, and next morning left for Hamilton.

Thursday 8th.—Cut Black Oats on the farm of Mr. Fleming, Ormiston. The land lying in high ridges, and the water standing in the furrows, but splashed, and made very fair work. The horses travelled on to Lanark.

Friday 9th.—Cut the finest Oats we had met on our journey on the farm of Mr. Mitchell, Spitland. There was a large attendance. The work very well done. Travelled on to Biggar same afternoon.

Saturday 10th.—Cut a very short crop of Oats on the farm of Mr. Mackenzie, Hillriggs. Succeeded, notwithstanding the shortness of the straw, in placing the band regularly beneath the sheaf. Horses went on to Peebles.

Monday 12th.—Cut Wheat—a splendid crop—on the farm of Mr. Nicol, of Kerfield, near the Tweed. The Wheat was nearly 7 feet in length, and much laid, but the work was as usual done well.

Tuesday 13th.—Expected to get grain at Galashiels, but was disappointed.

Wednesday 14th.—Cut a fine crop of Oats, grown on newly-reclaimed land, on the farm of Mr. Simson, Blainslie, Lauder. On the same field one of Samuelson's self-delivery reapers was at work. The pace of both implements seemed to be nearly equal.

Thursday 15th.—Cut a splendid crop of bearded Wheat on the farm of Mr. Torrence, Sisterpath, near Dunse. Samuelson's self-deliverer, and Brigham & Bickerton's one-horse side-deliverer were also at work on the farm.

Friday 16th.—Cut Barley—very short in the straw—on the farm of Mr. Crow, Scrimerston, near Berwick. The meeting not having been locally advertised was not very well attended. On an adjoining field belonging to Mr. Crow, saw one of Fowler's steam ploughs at work, which was going splendidly.

Saturday 17th.—Tried to get corn at Alnwick, but did not succeed, and sent on the machine to Wooler fair to be exhibited there.

Monday 19th.—Cut a goodish crop of Oats on the Farm of Mr. Hardie, Ross, Northumberland. The machine did its work well, and every one present seemed well satisfied with it.

There being no more uncut grain in the district, I now determined to turn the horses' heads homewards. They accordingly arrived at Brownrigg on the following day—Tuesday, the 20th—after performing a journey of not less than 500 miles, and cutting on an average three or four hours a day during the month that they had been from home. They travelled the whole journey on foot, except from Crieff to Glasgow, and notwithstanding their heavy work came home in first-rate condition—travelling forty miles the last day.

I cannot conclude this brief note of my tour without expressing my obligations to those gentlemen who in many cases reserved corn for me at some inconvenience to themselves, and also for the great personal kindness which I everywhere received. In almost every place where the machine was exhibited, the spectators seemed well satisfied with its performance, and in many cases I was publicly thanked on the ground for the trouble I had taken in bringing the machine. I cannot avoid mentioning, at the same time, that what seemed to give great satisfaction to those present was the steady rate at which it was driven without fagging the horses. It says not a little for the quality of the machine, and also for the care with which it was managed, that notwithstanding the unfavourable circumstances in which it had to work on many occasions, and the long journey it had made, it came back to Brownrigg as sound as it left, never, during the whole time having had a single breakage. *Haddington Courier.*

Home Correspondence.

Town Sewage for Railway Embankments and Cuttings.—Experience teaches us many things, and I will endeavour to show how our railway embankments and cuttings may be made to realise, during the six growing months, a very large rental, possibly as much as from 5*l.* to 10*l.* per acre, according to situation. I speak practically in this matter, for I have a bricked dome to my great tank, about 30 feet across and 9 feet

high; it is covered with earth, and although I sowed Grass seeds upon it they struggled for an existence on this dry bank, much as we see on the dry south side of the railway cuttings and slopes in dry weather. It at length occurred to me to throw a jet of my sewage on to it occasionally, and the result is an abundant supply of succulent and nourishing Grasses. The railways might thus be made the medium for conveying sewage from town to country, and they might tap the passing pipes, and apply their contents to the fertilization of an immense area, thus increasing their revenue. We should then no longer see the dried up or withered Grass burned by sparks from the engine. I throw out this hint for general consideration. My practical use of sewage from my house and from my animals convinces me more and more after 15 years trial, that we are comparatively ignorant of the great results that can be produced by the contents of our town sewers. By feeding sewaged Italian Rye-grass for two years, we may afterwards grow immense crops of food for man, either vegetable or cereal. A rotation in which this system is practised, would overwhelm us with with meat, bread and vegetables. At present our ideas are absurdly erroneous in this matter of sewage, always believing that it is only good for Grass, forgetting that if that sewaged Grass will carry four times as many animals as the unsewaged, we not only have that increase of meat and manure, but on breaking up the Grass for cereal or pulse crops, we have a mine of abundant production. I hope that the House of Commons Committee on Town Sewage, now about sitting, will take evidence on this question, and also that they will get engineering evidence as to the cost of conveying the sewage to the most suitable areas around our metropolis and towns. As I have said before, a pipe 4 feet in diameter brings from Loch Katrine to Glasgow (40 miles), a daily supply of water amounting to 23 millions of gallons, equal to one-fourth of the whole water supply of London. The fall of the pipe is 5 feet per mile. The cost, including bridges and other necessary works, was 10*l.* 8*s.* per yard. The Charing Cross Railway cost 1000*l.* per yard. Surely we cannot object to pay something to obtain our food, as well as to obtain a ride. The comparison, as to cost and importance, appears to me to be ridiculous. We should never forget the value of meadows irrigated with water only; in Hampshire 4*l.* and 5*l.* per acre is paid for land flooded with trout-stream water. Surely, when we administered the same dose, saturated with a hundred good things, it will have a much greater value. *J. J. Mechi, Tiptree, May* 17.

Preserving Roots.—Considering it of much importance to have our roots fresh and succulent late in the season, as mine are at this period, I will give my experience on this matter. It is the greatest possible mistake to store roots in a dry condition, and free from soil; they die and then rot, the same as we ourselves should when our vitality had departed. They are never in a better condition to store than when the sticking clay comes up attached to the roots of the bulb—the more clay the better—you will find this clay full of fine white living fibres, proving that the vitality of the plant still remains. Your great object should be to keep this earth and these fibres in a moist condition by preventing evaporation. Nothing will do this better than soft Barley straw, not loosely and carelessly thrown on the clamp, but laid straight as thatch. The additional cost is only 9*d.* per acre, or 7*s.* on a clamp, and it may save many tons of roots from rotting. Having thatched the clamp we then cover it well with earth that has been ploughed up round the clamp, leaving some pipe holes at the top. It is a great mistake to throw the Mangel or roots into small heaps on the field when pulled, and let them lie waiting for carting. The earth gets dried and falls from them on a second handling. They ought to be pulled, and at once thrown into the cart, and conveyed to the clamp. I look upon this as most important, the earth attached to the roots being retained. Every root should be, in our southern or eastern counties, pulled up and clamped or placed in mounds for feeding before the 9th of November. The quality is thus preserved. We know what numerous losses are incurred by the use of frozen Turnips. If we purchase roots in this neighbourhood to bring home, the price is usually 20*s.* per ton; surely at that price they are worth preserving. I observed to-day that the Mangel bulbs taken from the clamp had the wet clay sticking to the roots, the bulb being as juicy, heavy, and crisp, as when taken up more than six months since. A friend of mine having a very fine piece of white Turnips which he wished to preserve for his cows pulled them, and placed the bulbs touching each other, with the tops on, on a pasture close to the homestead. The Turnips fibred in the Grass, the foliage protected the bulb in the severe frost, and his Turnips remained available. They occupied a very small space when so packed. It is a great mistake to uncover the top of your clamp in the spring. Keep out the air. *J. J. Mechi, May* 16.

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

Agricultural Education.—The following is an abridgement of the discussion upon Agricultural Education which took place after the delivery of Mr. Holland's lecture.

After Sir Edward Kerrison, M.P., and the Rev. Prebendary Brereton had referred to the middle-class public schools lately established in Suffolk and in Devonshire—

Dr. Voelcker said, that having been practically engaged in the education of agriculturists, and taken interest in their welfare, he wished to make a few observations confirmatory of the views expressed by Sir Edward Kerrison.

In the establishment of schools, then, he would guard the managers against the great rock upon which many establishments had split, namely, the attaching of farms to the schools. He was convinced that the practical education which was given on the farm to the small tenant-farmers' sons was much better acquired at home than upon a farm attached to a school. The farm, moreover, was an expense which fell heavily upon schools, and without it he believed, with some little care, schools could be made self-supporting. They required to be supported by the influential men of the county; and such support as Sir Edward Kerrison had suggested that this Society should give would be most appropriate and beneficial to such schools; but it was in vain to hope that anything like a good practical education could be given in any establishment especially set aside for the instruction of the farmer. It was impossible to instruct three or four pupils together in one business. Wherever there were a number of lads brought together, they would be sure to do anything but what they ought to do. In school they could be kept under perfect control; so also in the lecture-room; but that could not be done on the farm. The thing was practically impossible, to give to a number of young men instruction in classes upon a farm. It was well that there should be establishments for the sons of gentlemen and landed proprietors, who required to have an insight of the higher branches of farming; and a different kind of education illustrated by a system of farming that had been described, though not very appropriately, as 'experimental farming.' The sons of wealthy farmers required to be specially instructed in the great art of making experiments, and of deriving advantage from a more careful observation than was perhaps needful on the part of the small tenant-farmer, for the simple reason that the latter had not the means at his command of bringing into play a superior standard of education. At present, it was the small tenant-farmers' sons who experienced the difficulty of finding proper schools for their instruction, and the great aim should be in such schools to give rather a general than a special education. A lad who, up to his fifteenth or sixteenth year, was instructed in the elements which were usually taught in general schools, and in addition perhaps the elements of natural science, especially of chemistry, would, when occupied upon the farm, practically turn out a much better agricultural chemist, and a more careful observer of the facts of natural history, than the lad who was instructed with special reference to his occupation in the elements of a particular branch of science, such as chemistry or botany. What was needed was a good education in the elements of natural science; and in its chief branches it should be provided in these schools. This would be a very useful addition to the general plan of instruction; but anything like providing the means of giving what was usually called practical instruction on the farm he was convinced would in the end turn out a failure, and entail a great expenditure of money upon the managers of the institution.

Professor Coleman, with regard to the education to be derived from having large classes upon a farm, entirely agreed with Professor Voelcker, that there was a difficulty in commanding the attention of the students and making the instruction sufficiently personal to be of value.

At the same time that much information might not be derived by students from the teaching of the farm, he could not admit. If success in practical farming depended so much upon local experience, and the practice depended largely on soil and climate, it would be absurd to suppose that instruction upon a farm, whatever its situation and soil, would fit the student to take charge of a farm and embark a large amount of capital upon it where the conditions were altogether different. But that much useful general information available for futdre development with reference to special cases was thereby conveyed, he did certainly believe.

Mr. Wren Hoskyns said the truth was, that the subject of agricultural education was one that had always presented considerable difficulties, partly arising out of a sort of ambiguity in the expression, itself, and partly from the nature of the class to which it was applied. With regard to the expression, "agricultural education" might be taken to mean the education either of the farmers or their sons—two classes which Mr. Brereton had very wisely separated.

But there was yet another question, viz., what was the special education of a person for agricultural practice? If the question merely concerned the education of the son of the farmer, he should then agree that education ought to be general and not special, that he would thereby be better adapted for the practice to which he would afterwards have to apply his knowledge. His knowledge and his practice would be more analytical and intelligent in every way, and more conducive to his own advantage and the profit of others, than if he were merely brought up to it by an education of a special character. But the question brought before the Committee of the Royal Agricultural Society — the question that Mr. Holland probably intended—was rather larger than this. It was a question how far education might itself be so adapted and directed as to convey some special advantage to agriculturists as a class. Now that embodied a very considerable difficulty, because he was not sure whether they were right in speaking of farmers as a class at all. For how could they classify under one head a body of men extending from the occupier of 30, 40, or 50 acres, up to the person who might be the owner of 2000 or 3000 acres, where he was absolutely farming himself without the assistance of any tenant-farmer? The class was, in fact, so extensive, that any attempt to legislate, so to speak, for such a class would be entirely futile, because the body to which the legislation would apply would require a hundred or more different modes of treatment. That which would apply to the rich man who was farming his own land, and this was now a rare class comparatively, would not apply to the smaller and poorer occupier. Need he remind them of Lord Macaulay's jeremiad over the decay of the former class? And he (Mr. W. Hoskyns) deeply regretted it, inasmuch as it had reduced the question of farming so much to a mere question of tenancy and the occupation of another person's land, which involved very different considerations, and did not go to the root of the improvement of the whole country, but rather to how a certain quantity of land should be treated in a manner the most profitable to the person who held it and during the period he held it. But the question of education, if attempted to be applied to the wealthier class of agriculturists, would be regarded as almost a presumptuous interference, because they were well able to educate their own sons, and were assumed to be well educated themselves.

The very separation, however, of that portion of the agricultural classes from consideration necessarily reduced the question to the education of the poorer class of farmers, who, Professor Voelcker said, must be the special subject of consideration.

Now, there was a greater difficulty respecting the education of that class than, perhaps, of any other body of men in the country. This was, first, because they were so widely separated from each other, and thus completely severed from the influence of education being brought to bear upon them individually; and next, because the practice of agriculture—that was to say, constant occupation from 6 o'clock in the morning until 6 o'clock at night in the business of the farm—was so exceedingly detrimental to the exercise of the mental faculties during the remainder of the day. Unless, indeed, a portion of the early part of the day were cut and carved out, and absolutely devoted to the purposes of intellectual culture of some kind, the attempt to put books in the evening into the hands of persons who had been the whole day occupied upon a farm, a plantation, or an estate, was almost futile. They must, therefore, in their deliberations in the committee, and even at that moment, address themselves to this point—what were the means by which they could bring educational influences home to the farmers?

Besides the establishment of schools, which had been practically and usefully discussed that morning, there was another important matter for the committee to consider, viz., how to bring to bear upon the home life of the poorer class of farmers, and particularly their sons, through the aid of this Society, the most powerful educational influences.

When, after the death of Mr. Pusey, the discussions took place respecting the Journal, an opinion which found some favour was that of cutting up the publication into smaller dimensions, so that it should be more available for practical home reading, converting it as it were into a sort of "Half-hours with the best Agricultural Authors." Thus it was hoped to bring before the agricultural mind, with little difficulty, subjects that would evoke and excite intelligence, in reference to the particular pursuit in which it was engaged. When he acted as a Juror during the International Exhibition, he remembered being asked by foreign members of the jury what was the amount of the agricultural produce of England? What were the particular productions of the east or the north of England? and a number of other questions which it struck him at the time no English farmer ever asked, and which he was afraid very few of them would be able to answer, particularly such as related to agricultural statistics. But to French, Germans, Austrians, Portuguese, Americans, and Canadians alike—to all he was obliged to return the humiliating reply that we had no means of ascertaining what was the agricultural produce of the country; and so surprised were these gentlemen, that they seemed to be really incredulous of the fact. He had alluded to this subject because it was one of the matters which he should like to see occupy the attention of the farmer and his sons, leading as it would to the question of what was the agricultural produce of other countries? He had often heard farmers who suffered from low prices speak of the quantity of foreign corn that was imported into the country; and they did so evidently without any knowledge of what was the best course for them to take under the circumstances, simply because they had no means of ascertaining what the resources of the world were in respect of the different kinds of grain, in Barley as compared with Wheat, or Oats as compared with Barley; what kind of climate was most suitable for Barley or Oats; and how far competition was likely to be greater or less in different kinds of grain. He had glanced at these topics because they were constantly spoken of by farmers in the markets, and in conversation with their landlands and each other, and he had remarked that farmers took a great degree of interest in them. He feared, however, that this Society had not quite done its duty in bringing these subjects forward in a manner that would add to the enjoyment of their pursuit, although they were topics to which farmers would most readily address themselves. He thought something might be done by the Society in this respect through the medium of the contributions to the Journal, and the chemical and veterinary questions that came before the Society; for these were subjects upon which they were periodically put in possession of a certain amount of knowledge, and he was of opinion that that knowledge might be made more generally available, by its being disseminated amongst the agricultural schools in such a form that it would also reach the agricultural home, and thus materially assist in developing the intelligence of the farming classes. Most cordially did he hope that success would attend the labours of the committee of the Society.

The Chairman, Lord Feversham, returned the thanks of the meeting to Mr. Holland, to whom, he said, they were greatly indebted, not only for his lecture, but for having proposed a committee of the Council of the Royal Agricultural Society to consider the important question of education, and observed that he could not entertain a doubt that important results would ensue through the instrumentality of that committee. He, for one, should be extremely gratified if they felt it their duty to recommend some general practical plan upon the subject, and also considered it expedient to propose that some prizes should be offered by the Society for the most proficient of the pupils educated at the proposed schools.

Mr. Wells observed that the preponderance of opinion expressed that day was rather against giving special instruction, either in the new or existing schools, for the education of the agricultural classes. He should be glad, however, to see the special education of agriculturists as far as possible promoted; and he thought, without attaching farms to the schools or colleges, such a special education might to a certain extent be imparted. Every farmer now-a-days found himself obliged to dabble a little in science, and it was most painful to witness the amount of capital that was wasted in the country, owing to ignorance in scientific matters. If, therefore, the elements of chemistry and a rudimentary knowledge of the steam engine were specially encouraged in these schools, he considered that it would be a very advantageous thing. He should be glad to find, therefore, that the committee proposed some scheme that embraced rather a more special system of education for the agricultural

classes than was furnished by the middle-class schools of the country.

Mr. Holland said it was satisfactory to find that they were all agreed in one point—namely, that the basis of instruction for a well-educated Englishman, whatever his after profession, should be public and liberal, including all branches of natural science as well as mathematics. Still, there was this difficulty, that after the lad quitted school, if he had to become a farmer, he must have practical knowledge, and that practical knowledge must be connected with science. Science and practice must go together, and the difficulty was how that was to be given to that very large and scattered class to which Mr. Wren Hoskyns had referred. The class might be narrowed by remembering that those who farmed their own land, or were occupiers of very large farms with ample capital, were more or less blended with the class above them. That therefore would diminish the number of those to whom they would have to pay attention; and if they looked to the small farmers, Mr. Brereton had marked out a limit, in his pamphlet on education connected with agriculture, and drawn the line at the holders of farms of from 300 to 500 acres, just to show that the object was to assist those who were not able from circumstances to take advantage of the institutions which were already in existence for the classes immediately above them. That difficulty was still staring them in the face; but he trusted that as the question of education had now been fairly mooted, they would not leave the lad who was intended to be a farmer in the lurch, after having assisted to give him the benefit of a good education, and perhaps encouraged and stimulated him by means of prizes in connection either with agriculture directly, or with the natural sciences, all of which were connected with agriculture, but that they would be able to hit upon some plan for aiding those who were obliged to gain a practical knowledge of their profession immediately after leaving school, and give them an opportunity of improving their knowledge in the sciences connected with their profession.

Farmers' Clubs.

Wayland and Watton: *The Restoration and Improvement of Exhausted Arable Land.*—Mr. J. Mayhew lately read a paper on this subject.

By exhausted arable land he meant land that had through ill-treatment or otherwise lost its productiveness—that was, the constituents necessary to fully develop the crop had been so reduced that there was not sufficient available food left in the soil to produce and mature a bountiful yield. To a certain extent exhaustion might arise from the production of an unusually abundant crop, although the previous treatment might have been liberal.

With regard to the means of restoring and improving the exhausted arable lands, and how to apply them, the means possessed were the various manures combined with a thorough system of clean and efficient cultivation. The manures consisted of natural manure, natural manure enriched by feeding with artificial food, and artificial manure. Many farmers endeavoured to convert their straw into farmyard manure at the lowest cost, with little regard to its value when so made, and frequently it was little better than straw saturated with rain water. He was opposed to the straw-yard method of feeding cattle. Even if a small portion of roots, mixed with cut hay or Cotton cake (which for cattle he believed was almost valueless) were given, it was so thoroughly assimilated by the animal that the manure so made, compared with that made by grazing stock, was of but little worth. Therefore, if they depended upon merely natural manure, he believed they would suffer an annual deterioration in the productiveness of their arable lands, while by persisting in such treatment, land that would otherwise be moderately productive would in the course of years cease to pay the cost of cultivation, and be productive of positive loss. In enriching natural manures by artificial food, the main consideration was that limit in expenditure ensuring the greatest profit. To attain the maximum profit by such feeding, they must confine themselves to a moderately liberal use of those feeding stuffs containing the greatest percentage of flesh-forming qualities. He held, also, that their stock should be of varied character, whereby they would to some extent obviate heavy loss not unfrequently occasioned by diseases spreading among stock of the same kind, but would ensure with more certainty an average amount of feeding profit. Therefore all the stock should be fed with a portion of grain or artificial food, the quantity being proportionate to their then condition, and the purposes for which they were intended.

The choice of artificial manures among so large a variety was somewhat puzzling.

Among the vegetable class he believed Rape-cake to be, from its more special adaptability to the Wheat crop, the best substitute for farmyard dung. For general farm crops on many soils, guano was highly valuable. But from the ammonia it contained, and its volatile nature, it had a tendency on light lands to force the crops too rapidly, and thus engender disease and indifferent yield. Its general value was greater by applying it with other portable manures. Compound manures properly manufactured he regarded as of great value. He now came to the knotty point—what was the relative value of natural and artificial manures, and how should they be applied? The first step was to manufacture at a moderately liberal cost the greatest amount of enriched natural manure, to do which they must produce abundant root and green crops. For this he would use chiefly artificial manures, which were decidedly better than farmyard manure, where rapid growth and bulk were to be combined. As to the question what proportion of the root crop was to be consumed on the land, and what to be carted off to the cattle sheds—on a farm of 240 acres of light and useful arable land there would be each year 60 acres available for roots. He recommended that one-third should be cropped with Beet, one-third with Swedes, and one-third with common Turnips, reversing them every four years. Thus there would be twelve years between the same kind of roots being twice grown on the same land, which would ensure healthier and larger crops. An equal average of these three roots would give a greater weight of flesh-forming food than if the main crop were common Turnips, and would allow of a greater proportion being removed to the cattle sheds without decreasing the supply left on hand for sheep feeding. And what paid so well at the present day as meat making? He would remove all the Beet, one-third of the Swedes, and a small portion of the common Turnips; of course having regard to the bulk of the crop and other circumstances. Thus about half would be stored for the feeding of cattle, and the other half for the feeding of sheep would be on two-thirds of the land, by which means 40 acres would be folded for the succeeding crop, and on the remaining 20 acres of Beet land he would apply a fair dressing of artificial manure—about 24*s.* per acre—which had always ensured for him as good a crop of Barley as the sheepfold. The 30 acres of roots removed from the soil he would thus apportion—15 acres to 20 grazing beasts, 4 acres to 10 store ditto, 5 acres to cows, &c., and 6 acres would be held in reserve. The beasts to be grazed should be well-conditioned and well-bred, as ill-bred and poor animals would require about 20 weeks to fit them for the butcher, during which time they would consume 7½ cwt. each, at a cost of 26*l.* 5*s.* (charging one-third to the manure) for the 20 beasts. These beasts would make from 10 to 15 cwt. of manure each per week; taking the average at 12½ cwt., the total amount would be 12½ tons each, which would be charged with 1*l.* 6*s.* 3*d.* as the third of the cake bill, increasing the cost of the manure by about 2*s.* per ton; but it should be remembered that the cake given replaced a considerable quantity of natural food, and would enable 15 beasts to be kept in the place of 12 without cake. The young beasts he would give half the quantity of cake and half the quantity of roots; consequently their manure would be less in bulk and inferior in quality. He charged their manure with a quarter instead of a third of the cake, which would amount to 10*s.* each beast; and assuming them to have made 10 tons of manure each, the increased cost for artificial feeding would be 1*s.* per ton. From his own returns he found that the sum left for produce of farm had averaged 4*l.* per head, and the young beasts had left 2*l.* after paying for their cake. From these calculations 30 beasts would show a clear return, for the 19 acres of roots, of 105*l.*, and adding 31*l.* 5*s.* charged to the manure, the total would be 136*l.* 5*s.*, or 7*l.* 3*s.* 2*d.* per acre, from which must be deducted the extra expense of carting and storing the crop at a cost of 13*s.* per acre. Thus the young beasts would leave 6*s.* 6*d.* per acre more for the roots as direct profit than those grazed. Crediting the higher fed animals with producing a more beneficial manure than that of the cheaper fed ones, he considered that at least 1*s.* 6*d.* of the cost of cake consumed by the former should be charged to the manure the second year after its application, amounting to 13*s.* 4½*d.* per beast, equal to 17*s.* 6*d.* per acre for the roots, giving the grazing beast an indirect advantage of 11*s.* over the young beast. Notwithstanding that these calculations showed the profits from each description of beast to be so evenly balanced, he still adhered to the conviction that they could not safely depend upon enriching their natural manures without feeding the grazing stock, as they invariably undervalued a superior article and overvalued an inferior one. Still, in extreme high feeding, the cost of the manure was so great that it ceased to be remunerative, and he believed it would be sounder economy to supply any deficiency with artificial manures. Cows, pigs, and all stock usually kept in a farmyard would also yield more profit by being fed liberally. With regard to sheep feeding as a means of manufacturing enriched natural manure, half the crop grown, as he had assumed, would, with the aid of artificial food, be sufficient under ordinary circumstances to feed 16 score of hoggets for 20 weeks. Were the same average of oilcake given them as was given the beasts, their aggregate consumption would be 15 tons, costing 157*l.* 10*s.* Charging one-third to the manure, which would be 52*l.* 10*s.*; this upon the 40 acres folded would be 26*s.* 3*d.* per acre. To leave the same price as the beasts for the roots consumed, they would be required to pay 19*l.* 16*s.* 10½*d.* per score, including cake, and leave for direct profit 10*s.* per head. Thus, within a fraction, they must pay 1*s.* each per week. Supposing the manure of the two kinds of stock to be of equal value, it would require 13 tons of bullocks' manure (without calculating the value of the litter, which would be 1*s.* 6*d.* per ton of manure), costing 2*s.* extra per ton for feeding with cake, to be equal to the 26*s.* 3*d.* charged to the soil for the sheep-fold.

Having noticed the folly of placing rich and costly manures in lands to feed an abundance of weeds, to the great injury of the crops, and having stated that he had not referred to the claying of light lands because he had not had much experience in such application, Mr. Mayhew recommended the carrying of all farmyard manure direct to the land in a raw state, thereby avoiding waste in bulk and in manurial constituents through fermentation, and that it should be mainly applied to the Wheat crop, for which it was better adapted than any other manure, by doing which they would materially assist the succeeding root crop, and consequently make an improved system of farming to a certain extent self-supporting. In conclusion, he said he was opposed to the extreme use of artificial manures, and to extravagant feeding; that his reasons for advocating good and liberal farming were based on the conviction that it yielded the largest net percentage returns for capital employed, believing also that the followers of such a system had fewer "bad seasons," as they were called, than the followers of either of the extremes, avoiding in a great measure the danger of disease arising from a highly artificial and over-luxuriant growth, and yet giving their cultivated plants that vigorous constitution which enabled them to withstand the vicissitudes of our climate, to which many crops on the exhausted arable land were obliged to succumb, or they became so weak and sickly that they failed to produce remunerative returns.

The following discussion then ensued:—

Mr. Goulder thought the foundation of good farming was cleaning and claying, and that it was a dangerous system to work the artificial manures until they had clayed the light land. He differed with Mr. Mayhew as to cotton-cake, which he thought might be used to great advantage both in the growth of the animal and for making manure. He agreed with Mr. Mayhew in thinking it a very expensive item to cart the roots from the land, and it was better to give growing beasts a limited quantity, and consume all they could with the hoggets fed highly on cake. Nothing would improve their land so fast as feeding sheep highly. He had discontinued his flock, and expected to grow more corn from keeping hoggets and dropping the ewes; he was satisfied that the ewes impoverished the soil unless they were kept very high, besides which there was a large risk attending the ewe flock. He preferred guano used in conjunction with a certain amount of superphosphate—say, two-thirds superphosphate and one-third guano, from which more could be grown than from guano alone.

Mr. Gates stated that his experience had not been favourable to claying. He had clayed with a very stiff clay a bright, sharp, sandy soil, and found that the clay did not mix with the soil, but was frequently left exposed by the sand blowing away.

Mr. Woods concurred with Mr. Mayhew in stating what a bad thing it was to have ill-bred animals, remarking that every man of discernment knew that it was easier to keep a well-bred animal than a bad one, though the latter were easier to buy. There could be no question as to the advantage of giving beasts cake, on which subject Mr. Mayhew's conclusions had been very fairly made. With regard to the statement that ewes impoverished land, he (Mr. Woods) asked, why was that so? It was the farmer's own fault if that were so. Why did they not feed their ewes better, in which case he was sure they would do the land as much good as other animals. As it was, they fed the ewes with the refuse food of the farm, and then expected them to improve the land and give a similar return to what was obtained from the hoggets that were much more highly fed. Mr. Mayhew had very properly advocated the growing of green food; but he must have made a mistake in saying there should be little expense gone to in producing green crops. No crop was more difficult to produce, and none more remunerative than a good crop of Clover and Vetches, but it could only be produced at some expense. A friend of his had said that he looked on the improvement of exhausted arable land as a matter that might be put in a nutshell—that if the land was a strong, cold, clayey land it should be drained, it should be well manured with good manure; if it was light land, it should be cleaned, clayed, made to grow good Turnips, and the Turnips should be fed off with cake. With regard to what Mr. Gates had said about claying, he thought that Mr. Gates could hardly have gone the right way to work, and that had the clay been used in sufficient quantities, and applied at the right time of the year, after being sufficiently exposed to the action of the air, he (Mr. Woods) was confident it would have been so pulverised that it would have been readily incorporated with the soil. He had clayed some land, putting on 100 loads per acre, and there were no lumps of clay to be found in that. He did not concur with Mr. Mayhew as to the desirability of applying raw manure to light land, but he agreed with Mr. Mayhew in saying they should save their farmyard manure for their Wheat. He thought they would hardly think it right to apply raw muck under such circumstances. The question was whether there was power in the light soils sufficient to decompose the raw muck without leaving it to lie during the winter months. He had very great doubts upon the subject. Mr. Mayhew had not said whether he approved of hoeing the Wheat, which was undoubtedly a very good thing. He held that good and well-made farmyard manure was the basis of all farming, as it was the only manure that would restore the vegetable humus that had been taken out of the soil by repeated cropping. With regard to artificial fertilisers, he thought they were things whose use required much care and caution. As to cotton-cake, he believed it to be a very dangerous food if not properly used, and he knew a most intelligent farmer who had lost eight or ten well-bred yearlings entirely, as he believed, through the use of cotton-cake. Mr. Johnson's system of growing Turnips and corn alternately, for the purpose of improving his land, was certainly a novel one; and if he had succeeded in growing corn every two years he had done more than Mr. Mechi ever did.

Farm Memoranda.

Dunse.—The past month has been much drier than it usually is; the total rainfall only amounting to 97 hundreths of an inch. The proverbial "smiles and showers" made their appearance in the second week, and under their influence, Grass and corn improved amazingly. On the 9th a drought set in, which continued for a week from that date; during which period there were two rimy mornings, and although the frost was not severe, Grass began to disappear. But during the night of the 15th we had a gentle rain, which, when it ceased between 6 and 7 o'clock next morning, amounted to more than ¼ of an inch. This, being followed by a mild day, had a very beneficial effect on the crops; besides softening the clods sufficiently to allow of sowing being proceeded with. The weather continued showery till the 19th, when there was a stiff breeze from S.W.—indeed in the height of the day, quite a gale; the evening however was calm and fine. The two following mornings were dewy, and the days were summerlike. The weather became colder on the 24th, but continued dry till the end of the month, with the exception of a slight shower on the 26th.

Labour.—Labour, which in the beginning of the month was considerably in arrear, is now pretty forward. The first half of the month was occupied, on most farms, in completing Oat and Barley sowing; after which every one was busy planting Potatos for a time. However, as was to be expected, there is a diminished acreage of this crop. Besides this, rolling, sowing Grass seeds, and stirring fallow have been vigorously prosecuted; and for these important operations the weather has been all that could be desired.

Cattle.—Feeding cattle have made good progress during the month, and Swedes are still of good quality. Potatos, which are almost unsaleable here, have been largely used as an auxiliary to the Turnips, and with their assistance cattle may be held for some time yet.

Sheep.—Most farmers now have their sheep on Grass; but unless there is more growth soon, many will be forced to clip and sell immediately. A very general practice this Spring has been that of netting the hoggs on the fallow break; and in some cases they are still eating cut Swedes there. With the exception of a few stragglers most low country flocks have finished lambing. The lambs are making little progress just now, because of the scarcity of Grass; and it is telling much more on their dams, which, besides losing condition are casting their wool, and also "coating," which involves a great deterioration in quality. The weather is now favourable for washing and clipping, and many have already made a beginning.

Corn.—The Corn trade may be said to be *in statu quo*, though in the first three weeks of the month, good Barley brought a fair price for seed purposes. For other sorts there is no demand; however, the supply is dwindling rapidly, and stackyards are nearly emptied.
A. C. T., Merse of Berwickshire.

Miscellaneous.

Clean Trucks.—The prevailing ailment in sheep, known amongst farmers under the name of "Epp," is now becoming a matter of such magnitude as to awaken the serious attention of all breeders and feeders of stock, entailing an amount of mischief to the animal and anxiety to the farmer as to call out for some searching inquiry into "cause and effect." The effect is so apparent to most farmers who have anything to do with either breeding or feeding as to require but little comment, because its contagion is so sure, and its consequences upon the animal so disastrous, as to tell its own tale unmistakeably. An impression, founded upon facts, which prevails amongst intelligent and close observers of events is, that this complaint is widely spread amongst farmers by the want of that cleanliness in railway trucks which the agricultural public have a right to expect in the use of railway transit. For instance, a farmer may send 300 or 500 sheep to either York, Leeds, or Wakefield fairs, in railway trucks, perfectly healthy and free from any complaint. Those sheep may be put into trucks hot with contagion, from which sheep badly "Epped" may have just emerged; the natural consequence is that those 300 or 500 take the complaint. But the mischief does not rest with the 300 or 500. Doubtless they are sold in various lots, and each lot conveys to each homestead a secret and insidious enemy, dealing much mischief to the new lot purchased, and not unfrequently from want of thought, in their being mixed with the purchaser's old stock, communicate the contagion to them also, adding a most depreciating and embarrassing amount of evil and loss to farmers. Can no plan be devised by which these thickly contagioned trucks can be purified and made clean? Are there no chemical agents which can be brought to bear against this evil? or are the railway companies so much wrapped up in mineral and goods traffic as to think that they are doing their duty to the public when they carefully cover and protect merchandise, yet leave our beasts, sheep, and pigs exposed uncovered to all weather, inhaling a miasma left behind by the last discharged occupants? Surely this important subject demands a remedy. It is reasonable and expedient to keep the carriages cleanish for all sorts of bipeds, so it is to be hoped that quadrupeds will demand a share of official attention. *A Boroughbridge Farmer, in the Richmond Chronicle.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

Day of the Week.	Day of the Month.	Reading of Barometer corrected to Freezing Point at Mean Sea Level. At 9 A.M., Railway Time.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday ..	May 13	30.03	57	53	N.E.	1	0	64	45	76	40	0.00
Saturday ..	14	30.17	63	59	N.W.	0	0	65	42	80	38	..
Sunday ..	15	30.16	68	63	S.W.	0	1	72	52	89	45	..
Monday ..	16	30.18	70	65	S.W.	1	0	73	50	92	47	..
Tuesday ..	17	30.20	69	62	E.	0	0	72	50	84	45	..
Wednesday	18	30.24	..	..	E.	0	0	75	49	91	44	..
Thursday ..	19	30.21	77	70	E.	0	0	80	49	95	48	..

Notices to Correspondents.

CLOVER DODDER: *R J.* It occurs in patches in light Clover fields, and when these are seeded its seeds are mixed in the bulk. They can be separated by sieves.

CATTLE FEEDING: *Agricola.* Received; for next week. Mr. Hulder, of Woking, feeds 1500 to 2000 per annum.

THE HYDROPULT,

THE HYDROPULT is invaluable for use in the GARDEN for WATERING BEDS, SPRINKLING PLANTS, DROWNING OUT INSECTS, CLEANSING TREES FROM SMUTS, DRESSING with LIQUID MANURE, ETC. ETC.

THE HYDROPULT is desirable in every HOUSEHOLD for WASHING WINDOWS, WETTING SIDEWALKS, SPRINKLING STREETS, WASHING CARRIAGES, EMPTYING CISTERNS, FILLING BARRELS, A SPRAY BATH, ETC. ETC.

AN INVENTION FOR THROWING WATER BY HAND POWER.

SECURED BY ROYAL LETTERS PATENT.

PRICE: WITH BRASS CYLINDERS AND MALLEABLE IRON STIRRUP, JAPANNED IN OAK COLOUR, **32s. 6d.**

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanised Wire Strainer, Rose, and Small Jet.

Complete as above, with Copper Stirrup, TWO GUINEAS. Packing Case, 1s. extra.

Weighs but 8 lb.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.

It will draw water horizontally, if necessary, through 300 feet of Suction Hose, and force it through Delivery Hose, **to an altitude of 100 feet.**

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

There are among Amateurs and professors of Horticulture differences of opinion as to the excellency and applicability of Gardening Implements. Some adhere to old devices, bitterly denouncing any innovations on ancient customs; and either from MALICE or prejudice, when governed by a spirit of EGOTISTICAL CONCEIT, criticise in a most unfair and unjust manner an Implement, the merits of which they are not capable of appreciating. In proof of the real utility and efficiency of the HYDROPULT as a GARDEN IMPLEMENT, I beg to call the attention of the public to the following unsolicited Editorials from gentlemen, whose testimony must have weight with the readers of the *Gardeners' Chronicle*:—

EDITORIAL, *written by* ROBERT HOGG, LL.D., F.L.S.

THE HYDROPULT.—The great secret of successful indoor gardening consists in the free and judicious use of the syringe. A greenhouse or conservatory that does not enjoy this luxury becomes a miserable lazar house of vegetable incurables. Vermin and filth hold unbounded sway, and people become disgusted with their own want of success. Well do we recollect the former days of plant culture, the days of "collections," when the use of the syringe was yet limited or unknown. What a time for red spider, scale, and greenfly! What fumigations and consumption of tobacco and tobacco paper, washings with tobacco water, and all sort of remedies were resorted to! We regard the introduction of the free use of the syringe as one of the events in modern gardening. To this is due the success of orchard house management, Vine management, and Plant management, but the old syringe with its slow suck and squirt, is now as much out of date in modern gardening as an old stage waggon in modern locomotion. Many are the improvements and complications of the old simple syringe. We have tried several of them, but for ease in working and efficiency in result, we have not yet met with anything to equal the Hydropult, sent us by Mr. BUTTON. It is powerful in operation, and so easy and comfortable to work, that one never gets fatigued. With such an instrument plants may be kept in perfect health, and quite free from insects and dirt. We first tried it on a few Geraniums in our conservatory, which were smothered with greenfly during our temporary absence of ten days, but on our return a stout discharge from the Hydropult sent them clean off across some unknown bourne, whence they have never yet returned.

EDITORIAL, *written by the* REV. HENRY H. DOMBRAIN, A.B.

THE HYDROPULT.—When we formerly noticed this instrument, we did so from merely seeing it at the Proprietor's; since then we have had an opportunity of testing it personally, and can bear testimony to the excellence of the invention. The force with which it throws a stream of water is almost incredible; while for syringing a greenhouse, a gentle shower, as fine as that from a hand syringe, with considerably more effect, can be easily given. We have a gardener, quite of the old-fashioned school, who does not generally fall in love with new-fangled notions, but he is perfectly enchanted with the saving of labour and time that the Hydropult will be to him.

EDITORIAL, *written by* SHIRLEY HIBBERD, ESQ., F.R.H.S.

THE HYDROPULT.—This is an invention introduced in a most spirited manner by Mr. C. P. BUTTON. It is at once a fire engine and a garden engine, is always ready for use at a moment's notice, is neat and portable, weighing only 8 lbs., and can be worked by a boy of moderate strength for some hours in succession without fatigue, the mechanical power employed being economised by combining the action of the hand and the resistance to the foot, between which the instrument is placed and used, as a double action pump. From the sole to the handle the Hydropult measures 24 inches. The two brass cylinders measure 12 inches in length, and 3½ inches in breadth. At the top of these cylinders India rubber tubing is attached, on one side to feed, on the other to discharge the water. It will perhaps surprise the reader to be told that this little contrivance, which is pretty as a toy, and can be carried under the arm as easily as a trumpet, will throw from seven to eight gallons of water per minute a distance of 50 feet. But it will do it, as we know from having tried it, finding the experiment an agreeable exercise, and of special service in washing down a stuccoed wall, which it accomplished quite as well as if we had sent for the parish engine. Gardeners will not need to be told the value of a portable force pump of this simple kind. It can be used to produce a powerful stream to extinguish a fire, or a gentle shower to syringe a whole houseful of plants, without the necessity of moving a single step from the position most convenient for a supply of water. Wherever a pump or syringe is needed, the Hydropult can be brought into use, to remove water from a cellar or a boat, to cleanse a cistern, wash a pavement, or drench the foliage of trees loaded with soot, or annihilate at one fell swoop the whole insect population of a plantation of Roses. But we will not enlarge upon its merits, they are obvious, and having a Hydropult in use we can say that it will soon pay for its cost in a garden, besides being always at hand in case of an emergency of any kind which may require an immediate removal or discharge of water.

The Hydropult has been recommended as an efficient and useful Fire Engine by the principal Fire Insurance Companies of Great Britain. Ordered by the War Department as Fire Engines.

It can be used for all purposes for which a Hydrant or Force Pump is applicable, and in situations where other contrivances are useless.

Prospectus, with Testimonials, sent Free on application.

CHARLES P. BUTTON, PROPRIETOR,

HYDROPULT SHOW ROOM, 27, LEADENHALL STREET, LONDON, E.C.

LAWN MACHINE AS AT WORK, MOWING, &c.

LATEST IMPROVEMENTS
IN
LAWN MACHINES.

SHAW'S PATENT FLEXIBLE LAWN MACHINE, for MOWING, ROLLING, and COLLECTING at the same time. With Boyd's Patent Self-cleaning and Sharpening Brush.

IS THE ONLY ONE of which the Cutters are SELF-REGULATING, and free to follow all inequalities of ground, with the certainty of leaving a perfectly uniform length of Grass.

IS THE ONLY ONE in which the Pushing Handles are SELF-ADAPTING to any height and convenience of workman, without varying the height of Cutters.

IS THE ONLY ONE which can be used as a ROLLER ONLY, without risk of injury to the Cutters.

Is fitted with BOYD'S WELL-KNOWN PATENT SELF-CLEANING and SHARPENING BRUSH, which keeps the Cutters effective whether the Grass be wet or dry.

Packs away, when done with, in less than ONE-HALF THE SPACE of any other Mower, and is therefore safer from injury.

Full particulars, Drawings, Prices, &c., post free, on application to the PATENTEE and MANUFACTURER,

JOHN SHAW, JUNCTION WORKS, LEEDS,

Who was Principal Manager for many years of One of the largest Lawn Machine Manufactories in England.

LONDON AGENTS:

MESSRS. JOHN BOYD AND CO., 76, CANNON STREET WEST

WARNERS' GARDEN IMPLEMENTS.

ILLUSTRATED AND PRICED CATALOGUES MAY BE HAD ON APPLICATION.

No. 554½.

WARNERS'

GALVANISED IRON GARDEN ENGINE,

WITH REGISTERED SPREADER.

10 gallons	£2	15s.
16 ,, ...	3	15s.
24 ,, ...	5	0s.

No. 35.

WARNERS'

PATENT IRON PUMPS.

2½ inch	£1	10s.
3 ,, ...	2	4s.
3½ ,, ...	2	9s.
4 ,, ...	2	18s.
2½ inch, with short barrel	1	1s.

No. 568½.

WARNERS'

AMERICAN PORTABLE FIRE ANNIHILATOR

AND

GARDEN ENGINE,

£2 2s.

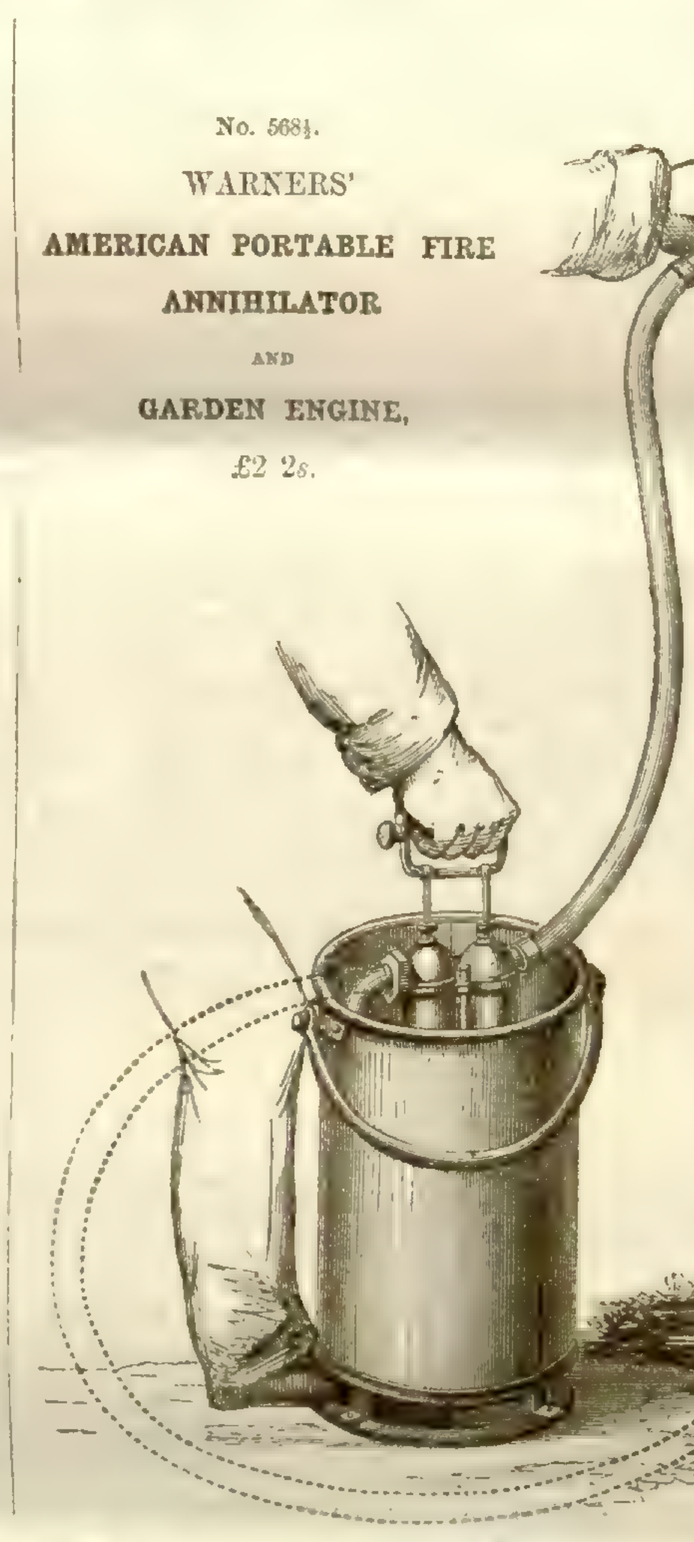

This superior Engine with an Air Vessel, throws

A CONTINUOUS STREAM.

It has neither suction nor delivery valves. Is complete in itself. When filled with water is ready for instant use in case of Fire. It will throw water 50 feet in a strong stream, or in a fine shower for flower borders. It is very useful in the Garden, Conservatory, Forcing House, Orchard House, and Vinery; for Washing Carriages, Windows, and other Glass.

No. 579½.

WARNERS'

SWING WATER BARROW.

20 gallons	£2	0s.
35 ,, ...	2	10s.

Saves a gardener's time when used with the water pot.

WARNERS'

PORTABLE LIQUID MANURE PUMP,

WITH LEGS,

£2 15s.

Ditto for fixing to cart, £2 5s.

Suction Pipe for Pump, 2s. 5d. per foot.

No. 42.

No. 567½.

WARNERS'

IMPROVED PATENT DOUBLE ACTION SYRINGE,

with 5 feet of flexible Suction Pipe, 21s.

Is much improved since last season.

It economises a gardener's time
To draw from a water-pot, pail, or other vessel.

No. 590.

BARKER'S MILL, Large, 25s.; Small, 8s. 6d.

Fountain Designs in great variety. Can be supplied from a Cistern or Main.

No. 557A

WARNERS'

REGISTERED DISC-VALVE SYRINGE. 9s.

FILLS QUICKLY AND EASILY.

It is well adapted for the Gardener or Amateur.

May be obtained of any Ironmonger, Plumber, or Seedsman in the United Kingdom, or of

JOHN WARNER AND SONS, 8, CRESCENT, CRIPPLEGATE, LONDON, E.C.

CARTER'S GARDENER'S VADE-MECUM.

WHEELER'S LITTLE BOOK on SEEDS.

Seeds Worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1s. 6d., 2s. 6d., 3s. 6d., and 5s. each.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our Collection in the Spring, 1862. In sealed packets, 1s., 2s. 6d., and 5s.

DOBSON'S PRIZE PRIMULA SINENSIS SEED, Superbly Fringed. In sealed packets, 1s., 2s. 6d., and 5s.

J. Dobson & Sons, Seedsmen, Isleworth, W.

Golden Chain Geraniums, &c.

WILLIAM HUSSEY begs to offer the above fine Plants, at 21s. per 100; also the undernamed. TOM THUMB GERANIUMS, 14s. per 100; BRILLIANT do., 14s. per 100; BIJOU, 18s. per 100; SHOTTESHAM PET, 18s. per 100; CRIMSON IVY-LEAF, 18s. per 100; CALCEOLARIA AUREA FLORIBUNDA, 15s. per 100; LOBELIA SPECIOSA, 15s. per 100.

Horticultural Gardens, Norwich,

Choice Tricolor Geraniums for Pot Culture.

ALFRED FRYER offers the following 12 Choice Tricolor, Gold and Silver-leaved varieties, for 21s. Basket and package included.

Mrs. Pollock	Glow-worm	Golden Harkaway
Sunset	Argus	Golden Tom Thumb
Mrs. Milford	Picturata	Golden Vase
Rainbow	Silver Chain	Silver Nosegay

Remittances requested from unknown correspondents.

Address, Alfred Fryer, Chatteris, Cambridgeshire.

Scarlet Geraniums.—To Nurserymen and Others.

HAWKINS and BENNETT, Fruiterers, Florists, &c., beg respectfully to invite an inspection of their splendid stock of fine-grown Dwarf SCARLET GERANIUMS, consisting of Tom Thumbs, Sutton's Perfection, and Christinas, in large and small pots. Price per post on application to

Hawkins & Bennett, Fruiterers and Florists, Twickenham, S.W.

J. WATSON, St. Alban's, has much pleasure in recommending his fine new SHRUBBY CALCEOLARIAS for garden purposes; they are unequalled by any kinds in cultivation:—

CALCEOLARIA BIJOU, brilliant crimson, very dwarf.
CALCEOLARIA BEAUTY of HERTS, clear amber.
CALCEOLARIA GENERAL TOM THUMB, deep yellow.
CALCEOLARIA STARLIGHT, fine red.

The above are warranted thoroughly shrubby. Full description given in *Gardeners' Chronicle*, p. 334. Price 30s. per dozen; the usual allowance to the Trade where six or more are taken.

Vine Duchess of Buccleuch.

ROBERT PARKER begs to announce that he has arranged for the distribution of the stock of this very distinct and valuable EARLY WHITE GRAPE, and that the plants will be sent out early in autumn. Full particulars as to its qualities will be given in future advertisements. In the meantime, and during the whole of the season, visitors to the Gardens of Dalkeith Palace will have opportunities of seeing and judging of its merits, as a large quantity of pot and permanent Vines are now fruiting at that establishment.

Strong Planting Canes, 21s. each; Extra strong Fruiting Canes, 42s. each. Orders are now being booked, and will be executed in strict rotation.

Exotic Nursery, Tooting, Surrey, S.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.

The Stock having been purchased by John Standish, strong Plants will be sent out in the first week of June, price 15s. to 31s. 6d. each.

Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.

Royal Nurseries, Ascot, Berks.

Indian Azaleas.

WILLIAM BARNES has the largest and most healthy stock of the above favourite plants to offer for sale, comprising the finest specimens, suitable for exhibition in this or any other country, as well as many thousands of smaller dimensions, from three-quarter and half specimens down to small plants, all properly shaped to form symmetrical specimens, and finely set with bloom. Any person forming a collection or increasing their present one will do well to visit this Nursery, where every variety up to the present date worth cultivating will be found, the whole grafted upon the stock that W. B. has proved so admirably adapted to them, after many years close observation.

PRICED LIST will be forwarded upon application post free.

Camden Nursery, Camberwell, S.—May 28.

HERBACEOUS CALCEOLARIA, &c., SEED.

CHOICE CALCEOLARIA (James').—This unrivalled strain has in every instance received First Prizes wherever exhibited—can be seen in bloom here. Sealed Packets, 1s. 6d., 2s. 6d., and 5s.
CHOICE PRIMULA SINENSIS FIMBRIATA.—Hayes' superb strain. Sealed Packets, 2s. 6d., 3s. 6d., and 5s.
CHOICE CINERARIA.—Saved from best named varieties, and cannot be surpassed. Sealed Packets, 1s. 6d., 2s. 6d., and 5s.
HUNT'S SWEET WILLIAM.—Sealed Packets, 6d. and 1s.
SCARLET INTERMEDIATE STOCK.—True and fine. Sealed Packets, 1s. and 2s. 6d.
PANSY.—From best named varieties. Sealed Packets, 1s. and 2s. 6d.
And every other first-class Seeds. See CATALOGUE, post free.

Wm. Cutbush & Son, Highgate Nurseries, London, N.

E. G. HENDERSON and SON'S SPRING CATALOGUE for 1864 will be forwarded on application.

Amongst many beautiful plants for the Flower Garden and Conservatory described in the above Catalogue are the following:—

ARUNDO DONAX, 1s. 6d. each.
" VARIEGATA, 3s. 6d.
ACHIMENES (TYDÆA) "RACHEL," 3s. 6d.; splendid.
AZALEA SOUVENIR DU PRINCE ALBERT.—The most distinct, 10s. 6d. to 21s.
ANTIRRHINUM.—New Italian double-flowered, 1s. 6d.
BOUVARDIA GRANDIFLORA, and other new ones.
CLEMATIS SPLENDENS (Lanuginosa hybrid), 5s.
CHRYSANTHEMUM EMPRESS of INDIA, 3s. 6d.
COLEUS MARMORATUS, 3s. 6d.
ERANTHEMUM RUBRO-VENIUM, 3s. 6d. and 5s.
DAHLIA (New Bedding) SCARLET GEM.—For style of growth and model of blooming habit, see Illustration in Catalogue.
DAHLIA, New rose-coloured bedding variety.
GARIBALDI PINK, rich deep rose-coloured, 3s. 6d.
PAMPAS GRASS (G. elegans), New Silver, 3s. 6d.
FUCHSIAS.—Banks's new varieties.
GERANIUMS.—New variegated tricolor-leaved varieties.
GERANIUMS WHITE TOM THUMB and BEAUTY, with other kinds.
GERANIUMS.—Mr. Beaton's beautiful bedders, and other Continental Nosegay varieties.
GLOXINIA PUNCTULATA, 5s.; see figure in the Catalogue.
HEDERA (IVIES), 40 varieties and species, gold and silver margined or blotched; climbing or shrubby habits.
LAPAGERIA ROSEA, 1s. 6d., 2s. 6d., 3s. 6d., 5s.
" SPLENDENS, 3s. 6d. to 7s. 6d.
PHLOX LOUIS GRELL, beautifully striped, 1s. 6d., 2s. 6d.
PERPETUAL MULE PINK, ROSETTE.
PYCNOSTACHYS URTICIFOLIA, 3s. 6d.
ROSES, New Kinds of 1864, strong, healthy, 2 to 3 feet in growth, 3s. 6d.
SARRACENIA PURPUREA (PITCHER PLANT), 3s. 6d.
VERBENAS, VELVET CUSHION and BEAUTY; MADAME LEFEVRE; NOBILE CAROLINA FRANZINA; HENRIETTE (best of all Whites); MELINDRES SPLENDENS (dazzling); PALLAVICINI DI BRESCIA.
TROPÆOLUMS.—Beautiful and free blooming varieties.

Wellington Nursery, St. John's Wood, London, N.W.

New Plants for 1864.

B. S. WILLIAMS has much pleasure in offering the following Novelties for the first time, descriptions of which will be found in previous advertisements, and in his NEW PLANT CATALOGUE, post free to all applicants.

New Achimenes.

Purpurea elegans, Leopard, Magnet, Scarlet Perfection, Vivicans, Eclipse — 7s. 6d. each, or the 6 for 42s.

New Fuchsias.

Neptune, Queen of Beauties, Gem of the North, Minotaur — 7s. 6d. each

New Single Petunias.

Royalty, Purple Prince, Duchess of Northumberland — 5s. each

New Zonale Geraniums.

Display, Beauty, Royalty. — 5s. each

Paradise and Victoria Nurseries, Holloway, London, N.

Two Hundred and Fifty Guineas in Ten Prizes.

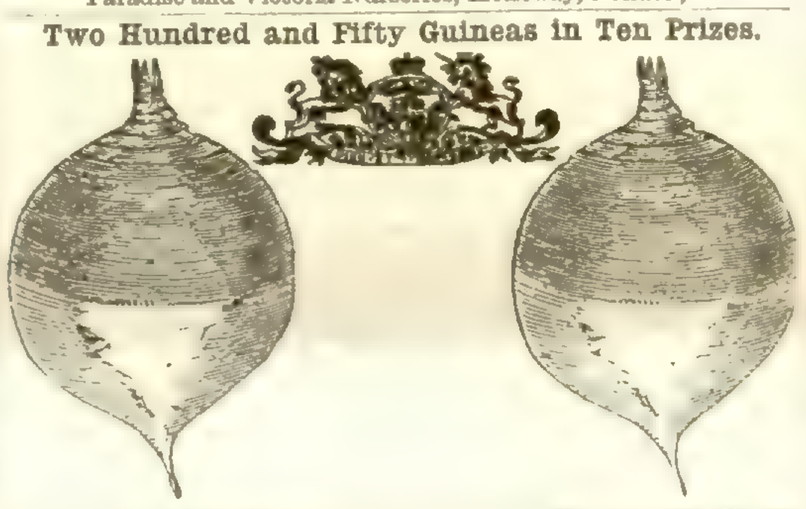

For Five Years Successively His Late Royal Highness the Prince Consort's Prize Cups have been Awarded to

SUTTON'S CHAMPION SWEDES at the Royal East Berks and South Bucks Agricultural Societies, and many other valuable Prizes in various Parts of the Kingdom.

Sutton's Champion Swede is one of the hardiest sorts in cultivation. The Champion Swede being of quick growth never suffers from mildew, and does not require to be sown so early as other Swedes.

EXTRACTS FROM LETTERS RECEIVED.

R. Milward, Esq., *Southwell.*
"Your Champion Swede proved most excellent."

J. W. J. Bartram, Esq., *Little Weedon.*
"Your Champion Swede has given great satisfaction, having been a splendid crop, and kept well through the severe frosts."

J. Stratton, Esq., *Broad Hinton.*
"With your Champion Swedes I won a prize of 10*l.* last year."

Mr. Thos. B. Palmer, *Escrick.*
"Your Champion Swedes are as sound and as good in colour as the day I got them up; I have sufficient to last till the 12th of May."

Mr. H. Hammond, *Market Place, Masham.*
"Your Champion Swede obtained the first prize at the Masham Show, the 10th of September last."

Mr. J. B. Reece, *Harpswood.*
"I took the Shropshire Challenge Cup, likewise the Bridgnorth District Cup, with your Champion Swedes."

Wm. Sadler, Esq., *Ferrygate, Durham.*
"The Champion Swede is cutting out everything here."

The above are only a few of the numerous Letters received in testimony of the excellence of Sutton's Champion Swede.

This celebrated variety still maintains its high character for hardiness, symmetry of form, and great weight per acre.

New Seed from Selected Roots now ready, 10*d.* per pound or cheaper by the bushel, prices of which may be had on application. Carriage free, except small parcels.

Sutton & Sons Royal Berkshire Seed Establishment, Reading.

The Gardeners' Chronicle.

SATURDAY, MAY 28, 1864.

MEETINGS FOR THE ENSUING WEEK.

Wednesday, June	1	Royal Horticultural (First Great Exhibition) at South Kensington	2 P.M.
Thursday, —	2		
Thursday, —	2	Linnean	8 P.M.

THE prospects of an abundant CROP OF FRUIT are at present of a very favourable kind. We have not had such a show of blossom on our trees for several years. In all parts of the country near London which we have had an opportunity of visiting, the orchards have been literally loaded with flowers; and as we have thus far escaped our usual spring or summer frosts, the fruit is setting most abundantly. Nor is this profusion of bloom confined to what are commonly called fruit trees. All our other trees and shrubs which are grown for ornament only have been most gay with flowers.

The causes which produce the effects we have noticed are well worth the study of all who are interested in horticulture, and it is these causes to which we would direct the attention of the readers of this Journal. The amount of secretions which are formed and stored up annually by plants for the production of their flowers and fruit depends upon certain natural laws. For example, if we take our annual crops, such as Wheat, Barley, and other common kinds of grain, we find that if the season be favourable—that is, if we have a sufficient quantity of moisture to supply their wants during the period of growth, and a sunny summer and autumn, we are sure of having an abundant harvest. In this case the secretions of the plants are formed and expended in one season. With perennial plants, however, such as our common fruit trees, this is not so. In the latter the secretions are formed and laid up in store during one year to be used in the following one. Take the Apple or the Pear as an example of this class, and let us see what happens in so far as they are concerned. If the season be a wet and cold one, the leaves may be as numerous and as green and healthy-looking as they are in better years, but they do not perform their functions well; a less amount of the proper juices of the plant are laid up in store, and, as we say in common language, the wood is not well ripened. When the next season comes round, the trees are thinly covered with blossom, and oftentimes the flowers, after having been formed, drop off from want of nourishment. We cannot have fruit, simply because its elements are wanting in the tree—the wood has not been ripened during the previous year.

As this is the way in which Nature works, it follows that it is not difficult to explain how it happens that we have such an abundant promise of fruit this year. Last summer and autumn were remarkably favourable for the formation of the secretions of all the trees and shrubs which grow in the open air in England. It is true that if we refer to the tables of temperature which are published weekly in the *Gardeners' Chronicle*, we shall find that the mean temperature of the summer and autumn of 1863 was rather below the average of other years. But these results are given by taking the average temperature of day and night together. The nights were often very cold, while the days were clear and warm, and while the cold nights did little or no harm, the warm and sunny days produced the most beneficial effects upon all our flowering shrubs and trees. The summer and autumn, which enabled the farmer to gather an abundant crop of grain into his barns, also enabled the leaves of our trees to form and lay up in store a supply of matter which they are now expending in the production of flowers and fruit. In this way our orchards have been covered with bloom, and in due time the branches of the trees will bend down heavily laden with the fruit.

We believe there is more room for improvement amongst gardeners in this kind of knowledge than in almost any other kind connected with their profession, particularly as regards the artificial cultivation of exotic fruit trees. Already it would appear the culture of the Vine is thoroughly understood by all good English gardeners. They can make it bear its fruit abundantly and almost at any season they choose. Whether the knowledge which enables them to do this has been gained by studying the requirements of the plant, or has been hit upon accidentally, we do not now stop to inquire; that they have acquired it is quite certain. When the requirements of other exotic fruit trees are as well known as those of the Vine are, we may expect similar satisfactory results.

Perhaps we may return to this subject, as we believe it to be of the greatest importance to all who take an interest in the successful practice of horticulture.

GREAT doubts have long existed respecting the FUNCTIONS OF SPIRAL VESSELS, and allied vascular tissues. While some have maintained that they are the main ducts of the sap, others have asserted as strongly that their office is simply to convey air to different parts of the plant.

Thus much at least is certain, that as they are mere modifications of cellular tissue, they are, in an early stage at least, filled with fluid containing a greater or less quantity of granular matter, and that in some later stage of growth they contain air.

This degree of information however by no means satisfies the question as to their proper function. Monsieur GRIS and Monsieur DELIMIER therefore have done good service to science in undertaking a closer examination of the subject, and one which is more satisfactory than those which have hitherto been published, though their conclusions, which differ from each other, are not decisive.

The method which M. GRIS has employed, is to inject the vessels with a fluid, which by its chemical reaction may indicate what is really the nature of their contents. This he has been enabled to do by means of a preparation first proposed by Monsieur FEHLING to indicate the presence of glucose, which consists of sulphate of copper, solution of caustic soda, tartrate of soda, and potash, in certain proportions. This remains perfectly clear when boiling, and gives on the addition of a very small quantity of glucose, a red precipitate of oxydule of copper, which, observed under the microscope, is found to consist of little clots of a deep brown or almost black. A small quantity of sap mixed with the liquid exhibits the same appearance as glucose.

Now, if thick fragments of the wood of Chestnut, Birch, Poplar, or Laburnum, are steeped for a few seconds in this fluid, a thin microscopic slice shows that there is a deposit of oxydule of copper on the walls of the large vessels, a fact which is even observable with a common lens.

As this precipitate is generally very abundant on the walls of the cells of the medullary rays, M. GRIS concludes naturally that the lymphatic

vessels, in which a similar reaction takes place, contain a fluid which at all events closely resembles that in the cellular tissue of the same plants.

He has found, moreover, that the spirals of the reticulated, annular, spiro-annular, and other allied forms of vascular tissue, show in their interior a similar reaction, a fact which confirms Monsieur TRECUL'S notion as to their tubular structure.

This obtains in plants belonging to many natural orders, and is apparently very general, but he does not find that the fibrous cells which occur in the leaves of certain Orchids, or the remarkable utricles in Mammillaria and Echinocactus, have a similar structure. Monsieur GRIS has further established the fact, that the spiral vessels do contain sap at other times than the spring, though he does not deny that at the same time they may contain bubbles of air, or even a stratum of air lining the surface of the cavity, though his observations at present do not go so far as to prove that they are not sometimes quite destitute of fluid.

A week after Monsieur GRIS' first memoir was presented to the Academy, one by Monsieur DELIMIER was forwarded, with a view to show that at certain seasons the vessels contain air only. By means of a bladder of compressed air fitted accurately near the base of truncheons of certain plants, as the Vine, Maple, Acacia, Peach, and Lime, he was enabled with great ease to force a quantity of air through the vessels, which did not drive any fluid before it. By placing a coat of water on the upper section of the truncheon, he could see the bubbles proceeding very clearly from the apertures of the vessels, whatever the length of the specimens might be. This was the case in the month of March, but in April air would no longer pass through them, apparently in consequence of their being filled at that period with sap. At the end of May however the air passed through the vessels as before.

In plants with evergreen leaves, as the Bay tree and Camellia, when attached to the apparatus, if the slightest puncture be made in one of the most delicate nerves of the immersed leaves, there is an abundant escape of gas, whatever the season of the year may be, which seems to indicate that in these plants the vessels contain air alone. This however does not apply to vessels in their earliest stage of growth, when, as said before, they are nothing more than cells.

There is no doubt of the good faith of either party. Except in external reticulated cells, such as those which are so abundant in the aërial roots of Orchids, it is difficult to conceive that any cells surrounded by others filled with fluid can be absolutely void of moisture. A quantity, therefore, sufficient to produce the reaction mentioned by M. GRIS may exist in the cells, or rather may bathe their walls without militating greatly against the notion that their principal function is that of air-tubes, like the tracheæ of insects. So long, indeed, as they are living structures, a certain quantity of moisture must exist in their walls, so that the truth probably lies between the two statements. To which it inclines the most, must be the subject of future investigation. *M. J. B.*

WE have to remind our readers that the competition for the LADIES' PRIZES offered this year by the proprietors of this Journal, will take place on Wednesday next at the great exhibition of the Royal Horticultural Society, to be holden at South Kensington. We may refer to the remarks at pp. 147 and 340 of our present volume, for the details of the competition, the chief conditions of which may be epitomised thus:—

1. Two prizes of 10*l.* each are offered.
2. The competition is to take place amongst ladies only.
3. The prizes are offered for the best single plants, examples of actual indoor-cultivation, and which have been grown in a room for six weeks previous to the exhibition.
4. The plants are to have been cultivated by the exhibitors themselves, and to be suitable for drawing-room decoration.
5. Flowering plants and foliage plants are to compete on equal terms, but the two prizes must go to the best dissimilar subjects, and to different competitors.
6. The plants may have been grown in pots or boxes, or baskets, or aquaria, or in any other convenient contrivance, so that they comply with condition 3.
7. Notice of the intention to exhibit is to be sent to the Garden Superintendent at South Kensington by the 28th of May (this day), and the plants are to be sent in on June 1st by 9, and to be ready for adjudication by 10 o'clock.

We trust we may see a spirited competition; for the fact that Ladies can and do grow plants in every way worthy of such rewards as are offered, does not admit of any doubt whatever.

We may also take this opportunity of again inviting the attention of the raisers of new Roses to the 5*l.* PRIZE FOR THE BEST ENGLISH SEEDLING ROSE, offered annually by ourselves in the present and four succeeding years. We refer for full particulars to pp. 699 and 1011 of our Volume for last year, but for the convenience of exhibitors we repeat the conditions which were laid down last autumn, after a careful comparison and digest of the various suggestions which Rose-growers were so good as to offer. The conditions were:—

1. The Rose may belong to any class, but preference will be given to Hybrid Perpetuals and Teas. It must be scented.
2. The full double globular or cupped form will be required, and form will take precedence of any other quality.
3. Free vigorous growth and abundant bloom will be insisted on.
4. Where merit is otherwise nearly equal, preference will be given to a pure white or yellow, or an intensely dark colour. Purity or intensity of colour will be held essential.
5. The Rose must be absolutely of English origin, and not let out.
6. Three trusses of each seedling, with buds and leaves, will be required at least once in the season.
7. The summer trusses may be shown at any of the meetings of the Floral Committee, but others will be required later as evidence of the perpetual character. The award will be made at the last meeting of the Committee in the month of August.
8. If in any one year no prize can be awarded, the amount will go in augmentation of that of the succeeding year.
9. The decision of the Floral Committee is to be final.

We shall be gratified to see these prizes well-contested for; and we hope that at least in succeeding years, when there shall have been time for the raiser of seedlings to have set about the work with a definite object, some really good sorts, which may supply the desiderata of Rosarians, may result from the stimulus which this competition may supply.

—— THE first of the GREAT FLOWER SHOWS, held in the Regent's Park last Saturday, the general features of which are described elsewhere, furnished the usual quota of NEW PLANTS, and these we now propose to pass briefly in review. Though none of them stood out with remarkable prominence, there was, as will be seen, a considerable number of subjects which may be expected to become useful in our gardens.

Taking the plants in flower first, and of these the hardy ligneous class, we have however to record a decided acquisition in the Japanese Raphiolepis ovata, an evergreen shrub, which now comes before us with the stamp of complete hardiness. This plant is one of vigorous growth, and is remarkable for the thick firm substance of its dark green, roundish ovate, excessively blunt leaves, as well as for the profusion of its large white, racemed, rosaceous, red-stamened flowers. Upon this Raphiolepis, as we learn, the past long and trying winter has made no impression whatever, so that it may be set down as perfectly hardy in our climate.

Then there was a new double Scarlet Thorn, much superior to any which had previously come under our notice in the combined characters of depth of colour and doubleness. The blossoms were in fact fully double, and the colour a very bright and deep carmine red, so much so, that we regard the variety as greatly superior to the ordinary double Hawthorns, with pinkish red flowers. Stuartia grandiflora, another hardy shrub which was shown, and one of Japanese origin, will doubtless be an acquisition in its way, its white blossoms, like small single Camellias, being very freely produced. To these hardy ligneous plants must be added a remarkably handsome hardy perennial herb, bearing the name of Aubrietia Hendersoni. This will be one of the most lovely of rock plants, forming dwarf close tufts of greyish lance-shaped sparingly-toothed leaves, and bearing a profusion of flowers set down close to the tufts of foliage, and of a deep violet-purple colour with a white eye, reminding one of the pips of the deep-coloured Verbenas in the style of Mrs. Moore. The closer habit, and the rounder and far deeper coloured flowers of this Aubrietia, places it far in advance of any of those commonly known in cultivation. Less novel perhaps, but equally rare, and of remarkable interest to the growers of rock plants, were the examples of Gentiana bavarica, but unfortunately the dulness of the morning and some accident of travel, prevented these from expanding their blossoms of brilliant blue, so that by the visitors generally this lovely plant was not sufficiently appreciated.

Of half-hardy plants, there was Ornithogalum thyrsoideum, to which allusion was made at p. 486; this was brought in a very effective mass, and a showy telling plant it is when the thyrsoid spikes of bloom are thrown up strongly as was the case on this occasion, the growth having all the appearance of being that of freshly imported bulbs. We may however state for the encouragement of those who may fear to grow this Ornithogalum, lest there should be a falling off next year, that a gentleman of our acquaintance has by careful culture of the leaves one season succeeded in throwing sufficient vigour into his bulbs to get a very good display of blossoms in the second year after their importation. And this is the secret of growing bulbs with success, namely, to take care of the leaves; the flowers will then take care of themselves.

A species of Genetyllis from the Swan River, with a remarkably neat branching habit, small blunt regular decussate ciliated leaves, and nodding heads of flowers surrounded by oblong ciliated bracts of a pink colour, is likely to make a good distinct greenhouse shrub, perhaps less showy than tulipifera, but in neatness of aspect certainly its superior. Then the Peruvian Cypripedium Pearcii, with its running rhizome, its long linear recurved grassy channelled leaves, and its green-veined, spotted-rimmed, tail-petaled flowers, of which mention was made last week,—evidently a very free-flowering plant, for all its suckers were showing bloom-spikes,—though deficient in colour, must be regarded as a very interesting species, doubtless adapted to cool treatment, remarkably distinct in aspect, and probably hereafter destined to take a higher award than in its present state has been accorded to it. We may also mention a small-flowered Sollya, with slender hairy stems, lance-shaped leaves, sometimes toothed, and abundant small bluish-lilac flowers. Cordyline Banksii too, with its broad grassy leaves, and its abundance of small white sessile flowers in a scapeless twice branched panicle, a yard high and 2 feet across, deserves to be recorded as a good greenhouse plant of the hardiest character.

New hothouse plants in flower were not plentiful. The most remarkable were the bright red Anthurium Scherzerianum, a beautiful dwarf Orontiad recorded by us in former years, but we believe not yet sent out; Pitcairnia tabulæformis, a Mexican plant, with a rosulate tuft of spathulate green leaves lying flat on the soil, and a short central raceme of light orange tubular blossoms; and an Anthurium-like plant under the obviously erroneous name of Massonia cannæfolia, having ovato-lanceolate stalked leaves, and a tallish scape bearing a white ovate spathe and a white spadix, but not at all equal in beauty to the well-known Richardia æthiopica.

Plants not in flower were more numerously shown, and there were some good things amongst them. Of the hardy herbaceous series the most remarkable was the striped-leaved Gynerium argenteum, called albo-lineatum, the leaves of which are very distinctly marked with white lines, and which when it comes to form a mass such as we see in the common form, must be a very telling object. Then there was the Sedum Sieboldii medio-variegatum, with yellow-centred leaves, which M. Von Siebold told the Congress at Brussels the other day that he himself had "made"—a pretty little plant in its way. Amongst hardy shrubs there were some interesting forms of Aucuba, besides the broad green-leaved japonica and himalaica. For example, there was a green-leaved form with long narrow sparingly-toothed leaves, 5 inches long and about 1¼ inch wide, to which one exhibitor had attached the appropriate name of longifolia; this was a very distinct-looking and handsome evergreen, and will become a favourite. There was also a broad-leaved deeply-toothed variety, in which the leaves were irregularly bordered with a yellowish-green hue, sometimes becoming almost golden; this was indifferently called marginata, aureo-marginata, and limbata, the latter name being perhaps the most current in this country, and is doubtless the handsomest of all the variegated Aucubas, on account of the breadth of its foliage, and its well defined and constant markings. Prumnopitys elegans, a hardy Chilian Conifer noticed at pp. 6 and 26 of our last year's volume, was produced in the form of healthy young plants of about a foot in height; they were of erect habit, with distichous leaves, and something of a Yew-like aspect. And there were examples of one of the handsome cut-leaved variegated forms of Japanese Maple, named Acer polymorphum dissectum fol. roseo-marginatis.

Of greenhouse plants the most novel exhibitions were the striped-leaved New Zealand Flax, Phormium tenax variegatum, which has the leaves boldly and definitely striped with cream colour; and the Gymnogramma Pearcii, described at p. 340. There was also a fine plant of Agave schidigera, which has been noticed in our report of the Brussels exhibition. Coleus marmoratus, a form of C. Verschaffeltii with bright green patches on its leaves, said to be hardier than the latter, of which it is a sport, but though the foliage is enlivened by the intermixture of green, it is not so rich-looking as Verschaffeltii itself. Then a Camella japonica, with white-edged leaves, may be a pretty plant for conservative walls, if it be only as hardy as the type.

Palms were represented by Stephensonia grandifolia and Astrocaryum mexicanum, both species of bold character, and having spiny stems. Stove plants were plentiful. That which will probably be the most useful to cultivators was the New Caledonian Dracæna Cooperi, a recurved-leaved sort with the fine colours and markings of the best forms of terminalis, quite

different from and much superior to a plant known as D. latifolia pendula, also shown, for which it has been sometimes mistaken; it differs in its longer, narrower, and more shining leaves, and in their more decidedly and uniformly recurved position, as well as in their deeper and brighter colouring. In D. latifolia pendula the colours are more dull, and the leaves are broader, the older ones only assuming the drooping character. What looked like a green form of this latter, was shown as D. robusta; it had broad leaves, a vigorous habit, and slightly-marked red margins. Another Dracæna, which might be called limbata, had narrow erect bronzy-polish leaves with a narrow border of red. Two of the Brazilian Dieffenbachias introduced by M. Verschaffelt, were brought forward, but the plants were not yet sufficiently developed to show their true character. D. Baraquiniana, with its ivory-white stems and midribs, was one of them; and D. grandis, with the leafstalks mottled, was the other. Both will doubtless hereafter prove to be good plants of their class. A dwarf Maranta called striata, introduced from the Philippine Islands, was remarkable for the profuse and well-marked white streakings on its leaves. Finally, we may mention that Gymnostachyum Verschaffeltii, which was shown by several persons, has established its distinctness—as a broader-leaved and more vigorous variety doubtless—from the plant grown in England last year under the provisional name of Eranthemum rubronervium.

The display of artificial flowers, which took place in the Lecture-room, comprised some very commendable imitations in wax, paper, and other materials, and formed an interesting episode of this first great exhibition of 1864.

—— We understand that the Birmingham Rose Show of the present year, which will be the third annual exhibition of Roses held in that town, is to take place in the Town Hall, on the 7th and 8th of July. This Rosarian gathering has been hitherto so successful that it has become one of the established floral institutions of the midland districts. We heartily wish the exhibition of the present year as full a share of success as its predecessors have realised. The schedules of prizes may be had on application to Mr. Forrest, Queen's Chambers, Cherry Street, Birmingham.

MEXICAN VEGETATION.

Vegetation in Mexico varies with the temperature. From the burning shores of Vera Cruz and Mazatlan to the icy summit of Popocatepetl there are three distinct and well-defined climates, giving a nomenclature to as many different regions, namely, the hot, the temperate, and the cold; and a traveller may in a single day pass from the region of perpetual snow to the heat and vegetation of the tropics. No country possesses a richer flora. The Cactus everywhere displays its gorgeous scarlet or bright yellow blossoms, either bursting from rocky crevices or rising from the sandy soil on stems growing to a height of 20 feet. Convolvuli, which oppress the senses by their heavy perfume, grow in such wild profusion as to stifle the growth even of the sturdy Maize. A passionate admiration, which amounted almost to an idolatry, of flowers was strangely blended in the Aztec people with a religion of blood. "Six thousand human victims were annually immolated on the altar of Huitzilopchtli; and at the inauguration of the grand temple of the god, 33 years before the Conquest, 7000 were slaughtered. The procession extended to a length of four miles." (Chevalier's Mexico.)

Of all the vegetables which furnish nourishment to man, the Banana is the most prolific. A single cluster often contains 160 to 180 pods, and weighs from 60 to 80 lbs.; a piece of land 120 yards square, Humboldt says, will produce 4000 lbs. weight of fruit, while the same area will rarely produce more than 30 lbs. weight of Wheat, or 80 lbs. of Potatos. Maize is, however, the most important of the cereal productions of Mexico. It is indigenous, and thrives even at an elevation of 8400 feet. It is the principal food alike of human beings and of the lower animals—the luxury of the rich and the necessity of the poor. In the valleys the returns of Maize range from 125 to 250 for one; and the best irrigated land has been known to produce 500 for one. In the hot region two and sometimes three crops are raised within the year. The agriculture being yet extremely rude and imperfect, and water being the only fertiliser, this amazing increase must be referred to the fertility of the soil. The Indian makes holes in the ground with a stick, drops in the seed, and in 90 days he plucks the ripened ears; and he can repeat the process throughout the year, according to his wants. Of all the indigenous products of America, Maize is perhaps the one which has proved of the greatest value to Europe. The gold which Columbus presented to his sovereign as the most precious production of a country abounding in precious things, did not typify its real wealth; it was more appropriately represented by the golden ears of Maize which he brought from the distant land.

The Coffee tree grows wild in many parts of Mexico. Excellent Coffee has been produced in the states of Jalisco, but the best is grown in the state of Vera Cruz, and it is said to be equal to that produced in any other part of the world. It is grown in great quantities and of the best quality along the whole Pacific coast. For its successful cultivation Coffee requires a peculiar climate; the mean yearly temperature must be at least 68°, and the thermometer should never fall below 55°. The best situations for its growth, therefore, are not sultry alluvial plains, but mountain slopes with an elevation of about 4500 feet. It is said to thrive best on soil which has been covered for ages with primeval jungle. Large portions of the temperate regions of Mexico fulfil all the required conditions, and, judging from the great success of the recent Coffee cultivation on the Neilgherry Hills and other equally favourable localities in British India, Mexico might supply Europe with some of the finest qualities which have ever been imported.

Cotton was found by the Spaniards among the indigenous plants of Mexico. The clothing of the people was made exclusively from it. Its cultivation fell off after the conquest, but there was a time when the export of Cotton from Mexico exceeded that from the United States. The plant still grows in almost every part of the country, even on the high lands, 5000 feet above the sea, but the finest qualities are produced in the moist coast regions. It can be grown to an almost unlimited extent on the banks of the Bravo del Norte, and also in the state of Vera Cruz, and over the whole extent of the Pacific coast. The Cotton plant of Mexico possesses the valuable property of not being injured or checked by frost, but continues flowering and forming pods until it is found expedient to root it up. Some of the varieties are said to be very fine, particularly one which is raised on the west coast between Acapulco and Columa, where both the soil and climate are highly favourable to its growth. Vast regions on both sides of the Cordillera are admirably adapted for Cotton cultivation, as are the table-lands of moderate elevation. White labour might be there advantageously employed, as the lands lie beyond the range of malaria, and the climate is perfectly salubrious. It was with considerable surprise that we noticed the remarks made by M. Thiers in the recent debate on Mexico in the French Legislative Chamber on the impossibility of cultivating cotton by reason of the pestilential climate. Such an opinion can have no application to the districts above referred to. The annual production is certainly at present inconsiderable, not even meeting the requirements of the factories established in the country, and does not much exceed in the aggregate 25,000 bales; but no doubt can be entertained of the capability of Mexico to produce sufficient to supply the world if the requisite labour could be obtained. *Quarterly Review, April*, 1864.

NOTES ON GARDENS.—No. VIII.

Royal Botanic Garden, Edinburgh.

Past the entrance gate, very like that of a nunnery, and very unlike that through which one would expect to enter a great national garden—by the curator's house to the right, and the visitor finds himself in a sort of Botanical College, his ideas rapidly expanding as to the possible duties connected with, and the desirable appurtenances of a botanic garden. First, there is a very useful museum, established and supported I believe chiefly through the exertions and liberality of Professor Balfour, who presented his own collections, and has worked up the museum to its present very creditable state without any aid from the Government. Geological botany, particularly that of the old red and carboniferous periods; the plants of Scripture—drawings and specimens; fibres, woods, and medicinal and economical products of the vegetable kingdom; illustrations of structural botany, &c., are all very well represented in this museum, though it has been established only about a dozen years. Then there is the large class-room,—a very large one—with the best arrangements for both teacher and pupils. In it I had a glance into some large cases of diagrams, fully equal both in execution and quantity to the other unique facilities possessed by the Edinburgh garden, for the teaching of botany. The number of pupils that attend Professor Balfour's lectures is generally between 200 and 300.

Probably the houses should form the next subject of remark, but before reaching them I was taken possession of by the interest of the out-door department, the arrangements of which are so vast and so varied, that one who tries to examine them thoroughly during a single visit will have little time for the rest. First there was a natural arrangement of hardy medicinal and economical plants; then a very extensive Linnean garden of hardy exotics on a light sandy soil; and next a still larger garden of hardy exotics arranged according to the natural system, the soil a heavy clay. This difference between the soils of the two largest arrangements is of course very conducive to the preservation of the collection, plants perishing in one garden from the peculiarities of a season surviving in the other, and *vice versâ*. Awful to relate there were no "Calcies," no "Tom Thumbs," no "Verbenias," covering acres. Nor did I at all regret to find that the thousand-folding of plants which are abundantly placarded by the possessors of most windows between Whitechapel and the shores of Clew Bay was considered beneath the dignity of this great garden. May a square yard of its surface never be converted from its present purpose of yielding interesting variety, and illustrating the world's vegetation, to that of "farming" certain individual species, and thereby excluding a host of others equally beautiful! So great is the demand for specimens to illustrate the lectures given in the garden that the arrangements already mentioned, and also a very good British garden, are quite unable to meet it, and in consequence there is a considerable space devoted to growing in quantity the annual and perennial plants most required for illustrating the natural orders, parts of plants, &c. Of course each student is supplied with a specimen, or so much ground would not be required for this purpose.

A large and special compartment for spring bulbs must prove a very charming feature during the spring and early summer months; indeed, some parts of the garden must then be of quite a cœrulean hue from the number and size of the beds of Scilla, Muscari, &c., which are in it. This mode of accommodating spring bulbs by giving them a position where they may remain undisturbed, is of course the only satisfactory way of growing these beautiful things, which one rarely sees well managed. A snug compartment was devoted to some of the best herbaceous things, such as the finer species of Aquilegia, Helleborus, &c. Along with these were several new, scarce, or unnamed plants, such as "Himalayan Wheat," a fine hardy Cineraria, and several Caryophyllaceous and Labiate plants which had proved ornamental. Along some of the borders I noticed lines of the best Hellebores, mixed with other good herbaceous plants, and particularly associated with several fine varieties of Orobus vernus—great favourites of Mr. McNab's, which he grows in quantity. These borders must, when the plants are in flower, exhibit such a display of good hardy species as we have no opportunity of seeing in the neighbourhood of London.

In the pond a "water weed" had gone wild, but fortunately it was the lovely Aponogeton, which almost covered the water with healthy leaves, sprinkled here and there with its sweet flowers. The plant, I understood from Mr. McNab, had been in the pond for many years, seeded abundantly every year, and flowered nearly the winter through. There are springs in the bottom of the pond which prevent the water from freezing except in very hard weather, and of course this accounts for the plant doing so well. Would it not be possible to add a very desirable charm to quiet waters in the south of England by the introduction to them of this plant, fit to act as maid of honour to Queen White Water Lily?

Some fine plants and beds of Astragalus Tragacantha were to be seen in front of the houses. Along the front of the great range of glass which runs across the garden, was a border containing Lilies, choice bulbs, Tritomas—lately extensively honoured by the distinguished patronage of "bedders out," Oxalids, Dorema asafœtida, and numerous interesting plants which require a little more warmth and shelter than are afforded by the exposed beds and borders. Lilium monadelphum speciosum, a very favourite plant with Mr. McNab, was planted at intervals along this border. The larger growing Ferns, such as Pteris caudata, Struthiopteris, three or four species of Osmunda, &c., &c., were finely and plentifully grown in various parts of the garden, planted in small circular beds, or as single specimens, the soil being covered with sphagnum and stones.

Passing to taller things there was a tolerably extensive Rose ground, and large plantations of Rhododendrons and American plants; but the space, about 16 acres, does not permit of a complete collection of hardy trees and shrubs being grown, though there is a very excellent selection. The collection of Coniferæ is, I believe, as complete as any in the country, though some of its chief ornaments were destroyed by the great frost of 1860. There were good specimens of many of the older introductions, and very thriving plantations of all the recent ones. I noticed one particularly good Wellingtonia, about 12 feet high, amongst them.

The principal range of glass consists of ten fine houses, backed by seed rooms, specimen rooms, gardeners' rooms, and such like offices. There is a space in the centre of the range that was originally intended for a Palm house; but that, for good reasons, having been built in another part of the garden, the site still remains—no doubt to be filled up some day with a useful structure, and thus complete the already very imposing range. *William Robinson.*

(To be continued.)

PEARS.

In March I received a kind letter from Mr. Rivers, saying, that as I managed Strawberries so successfully, he dared say that I should like to try my hand at Pears on the Quince stock. I received them in a few days afterwards, with directions for planting. Fourteen of them were planted March 24 of this year; and six more (including a duplicate of Josephine de Malines, which, with Beurré Superfin, are his two greatest favourites) arrived, and were planted 10 days afterwards. The trees are beautiful specimens of dwarf pyramids and dwarf bushes. Their fruit buds were formed but were not expanded. I planted 13 of them 16 inches in advance of my south wall, and seven of them in a yard, in front of a wall, east aspect. I put the latest Pears in front

of the south wall, as they will require more sun to ripen them. The sorts sent were:—1. *Bergamotte d'Esperen*, described as far superior to Knight's March Bergamot; March to May. 2. *Beurré Bachelier*, an excellent hardy variety of Glou; December. 3. *Beurré d'Aremberg*, December to January. 4. *Beurré Diel*, December. 5. *Beurré Hardy*, October. 6. *Beurré Begmont*.—This Pear is not described in his Fruit Catalogue, to which, for full descriptions, I must refer the reader. I wrote for the description of this: "A nice variety of Beurré Rance; I have not yet catalogued it; it is as large as Beurré Rance, and of a reddish brown; I believe it to be a good thing: late." 7. *Doyenné d'Eté*, small; the very best early Pear; remarkably handsome; July. 8. *Doyenné d'Alençon*; January to May. 9. *Doyenné Gris*; November. 10. *Duchesse d'Orleans*, called also Beurré St. Nicholas; of the flavour of Gansel's Bergamot; October. 11. *Duchesse d'Angoulême*, a noble Pear; generally insipid from a wall; November. 12. *Josephine de Malines*, rich aromatic flavour; in Mr. Rivers's opinion unequalled; February to May. 13. *Madame Millet*; April to June. 14. *Passe Colmar*; December to January. Ten days later these came:—15. *Comte de Lamy*, one of our most delicious Pears; October. 16. *Beurré Defais*; December. 17. *Beurré Mauxion*; September. 18. *Marie Louise* (*D'Ueele*); October. 19. *Beurré Superfine*; end of September. 20. Duplicate of *J. de Malines*.

All these were planted according to the following instructions:—"These are all on the Quince stock, and owing to the peculiarity of my soil are full of buds. An odd thing with this stock is, that, if the trees are removed just as the fruit buds are opening, they will still bear fruit. Those from the pots, with balls, we manage as follows:—Press them and loosen them thoroughly with the hands; in planting, give them some good stuff, and when the hole is three-parts full, pour in hard 2 or 3 gallons of water, and then fill in the remainder of the soil: do not tread down till a week afterwards, unless just to steady the tree, which you may do gently with the foot. They will scarcely feel removal. Treat those not in pots the same way." I did as I was directed. I gave them half a barrow of new rich maiden earth and black manure in equal parts, and ended with the conviction that, planted so late in such a situation as mine, the result must be "nil." I had them covered over head at night with cloths, and I have saved a glorious crop of fast growing Pears. No. 1 had no bloom buds; No. 13 was a masterpiece in bloom; but the set fruit is destroyed by frost; No. 2 had but few bloom buds; and I think they will fail; but, all the others are a glorious success thus far. Some of these are not more than 2 feet, or 2½ feet high; and yet I have taken off from them full a hundred Pears, leaving on four times as many as must remain. The crops of all the 17 are good, and more than the trees can bear; but the crops of these are marvellous, namely, Nos. 3, 4, 5, 6, 7, 10, 11, 15, 16, 17, and 18.

No. 17 set 334 Pears: the plant is 37 inches high. Seventeen of the trees are disfruited down to 173 Pears, or rather over 10 Pears per tree. I find by Mr. Rivers' letter this morning that "Pears should not be disfruited till June or July. He says Pears have this season set a wondrous crop, but in every cluster are some that are much more advanced in growth than others; and these are often full of maggots, the pistil having been punctured by some insect in the centre of the flower. In a few weeks these will fall off." The others will have a full crop. Mr. Rivers recommends biennial removal and root pruning of these small dwarf Pears on the Quince stock.

All who have seen these plants here have pronounced them lovely in bloom or wonderful in crop. The Editor of the *Dorset County Chronicle* was so kind as to let me call my neighbour's and fellow-countymen's attention to them in substance much as the above. I am really very much obliged to Mr. Rivers for these "pet" plants, and I will do my best to bring the fruit to perfection. *W. F. Radclyffe, Rushton, May* 22.

P.S.—For sheets put on Peaches at 1, read 4 o'clock P.M., and taken off at 10 A.M.; by this arrangement the wall cools and heats gradually. Quick transitions are bad for them.

MR. MOORE'S LECTURE ON FERNS,

DELIVERED AT SOUTH KENSINGTON, MAY 17, 1864.

THE observations which, with your permission, I shall now have the honour to make, bear reference to a group of plants which has latterly become popular in a remarkable degree. These plants are the Ferns. I claim for them at the outset, that they are in every way worthy of the popularity which has been accorded to them; and I claim this on the ground that they present to us an almost endless variety of the most beautiful and graceful forms of vegetation with which we are acquainted.

The contrasts which occur amongst them are remarkable. Thus, while some of them rival in nobility of character even the most noble order of the Palms, some, on the other hand, are so delicate in their construction, that one might read almost the smallest print through the translucent substance of their leaves. Not a few of them are lofty and umbrageous trees, prominent amongst the glories of tropical forests; while others are tiny objects, barely distinguishable from the humble Mosses amongst which they grow. Throughout these and the thousands of intermediate forms which lie between, and which, independently of their variety of aspect, exhibit an almost infinite variety of structure, there is to be traced a family likeness which is undeniable when its features have been carefully scanned. So that, with attention, it is barely possible to mistake a Fern for any other plant. There is, however, to be found amongst the species of which this great family is composed, besides the family likeness, a distinct individuality of character, which is transmissible and transmitted through an indefinite succession of generations. It is by means of this individuality that we are enabled to refer each Fern as it comes before us, to its place in those systems of classification which have been devised to enable one person to speak on the subject intelligibly to another.

There are many aspects in which the Ferns might be presented to notice. I might, for example, take a geographical view, and explain the peculiarities of the Ferns of the different countries of the world, pointing out how one species, as in the case of Dicksonia abrupta, may be only known to occupy some isolated spot on the earth's surface, while another, like our common Bracken, may prove to be almost cosmopolitan. Indeed, to trace the dispersion of a well-known Fern over the surface of our globe, and to note the changes which it undergoes as it passes from one clime to another, all the while preserving an unmistakeable identity, observing at the same time the reasons which may be discoverable for the changes that occur, would be a most interesting and intellectual employment for those who might have leisure and inclination to enter upon it.

I might take up the subject in a purely botanical point of view, and show how each genus differs from the allied genera, and each species from its kindred species; and even this, though sometimes voted dry work by those who see little beauty in Nature's productions—dry, I suppose, because it is often carried on by the aid of a Hortus Siccus—is not after all so dry an occupation but that it may rivet the attention and call into pleasurable activity the observing faculties of those who may have the courage to take it up.

I might treat of the Fern tribe from a horticultural point of view, and the associations of this room seem to suggest that this might be the most proper course to take. But then, so varied are the habits and requirements of Ferns, so numerous the Ferns themselves, that any attempt to explain how the various species should be cultivated would I fear become wearisome, if it were not in a great measure unintelligible. It may indeed be stated in a general way that Ferns delight in shade and in moisture—abundant moisture at the root, and abundant moisture in the atmosphere—needing however at the same time perfect drainage, in order that the water thus freely imparted may not become stagnant. But even to this sound general rule there are plentiful exceptions. Some Ferns, the Osmundas for example, are aquatics, and delight in bogs and watery places, where moisture is ever present. To these, drainage in the sense applied to the culture of other Ferns, is consequently of little importance. Others, like the species of Cheilanthes and Gymnogramma, are so impatient of water in contact with either their roots or their fronds, that the least overdose is fatal to them. It will thus be seen that no general statement would be sufficient, while a detailed statement might prove tedious.

I must scarcely venture to hint at one other aspect of the subject, or I might point out how, in the eyes of sundry enthusiastic lovers of Ferns, the 50 or so species which are found in our own country, expand into hundreds upon hundreds of varieties, as an unusual twisting of a stalk here, or the shallower or deeper cutting of a frond there, or the abnormal growth of an ear, or a tooth, or even a tail, on some part of the frond, may modify its usual aspect. I must be content now to leave this fascinating branch of my subject, with the remark, that the changes which some of our common species undergo are really marvellous, while not less marvellous is the variety of metamorphosis that takes place, and the constancy of many of these deviations from the normal form.

Seeing, then, that there are difficulties in the way of dealing profitably here with either the purely geographical, or the botanical, or the horticultural, or that other aspect of the subject to which I have alluded, I propose to cut the knot by first of all tracing the development of a Fern from the spore; and then, since there is so much uncertainty and confusion amongst amateurs respecting the application of the names of Ferns, by endeavouring to explain the principles which regulate their application.

Now a spore, though not regarded as being strictly the analogue of a seed, may for our present purpose be considered as its equivalent. It is the separable atom from which a young plant may be developed. And very interesting it is to watch this development of the spores, the more so as it is an experiment which can be indulged in without cost, and is one involving scarcely any trouble. The formula is this. Take a common dinner plate and pour some water into it; place this plate in a window; set in it a pot filled with earth which has been baked, but subsequently moistened; invert over the pot a glass shade with its edge resting in the water, and the apparatus is complete. Then, after waiting a day or two for the earth to absorb moisture, take some Fern spores and scatter them thinly over the surface of the earth in the pot, replace the glass shade, and await the issue. Take care, however, that it is spores that are sown, and not their empty covers, for these last will never yield a young Fern. And yet they are so small that even those who may be in some measure aware of the dust-like and almost invisible character of the spores may well be excused for mistaking the one for the other. The best way to make acquaintance with the true spores is to take a portion of a Fern frond in fruit, let us say of the common male Fern, just at the time the membrane that overlies the little heaps of fructification is changing to the leaden hue which indicates approaching ripeness; then lay this portion of frond between some sheets of white paper under moderate pressure; the Fern as it dries will burst its spore-cases, and the infinitesimal dust which is then to be discovered scattered about the paper consists of spores. To return to our experiment: If the window in which the apparatus is placed be a sunny one, the warmth will make the action all the brisker, but in that case a screen to ward off the sun's rays must be put over the glass. Soon—that is in two or three weeks or so—if real ripe spores and not empty spore-cases have been sown, there will appear little flat green scale-like bodies. These are the seedling Ferns. The scales will enlarge, various unseen changes will take place, and anon a little frond will spring up, then another and another will follow, till at length a perfect plant is formed. To watch these dust-like atoms, so small as to be reputedly invisible, awakening into life, to tend the tiny germs as they day by day gain size, and step by step assume their parent form, is an occupation in which methinks no one could engage without finding it full of absorbing interest. And it has this quality, which should be a special recommendation in the eyes of an audience assembled here—that it is pure experimental horticulture.

The spore of a Fern has been already described as an almost invisible atom—an organised atom, however, containing the germ of life. In regard to its form, which is variable, it is commonly either roundish or angular or kidney-shaped. In regard to its composition it is made up of a minute quantity of cellular matter enclosed by a double membrane, the inner delicate, the outer brittle in texture; the outer one being sometimes smooth, sometimes diversified by markings consisting of prominent lines or of wart-like protuberances. When the spore is exposed to moisture, accompanied by a certain degree of warmth, the inner membrane swells, bursts the outer shell, and is protruded in the form of a little tubular pouch, whose contents acquire a green colour. This tubular pouch becomes divided by cross partitions, new cells are thus formed, and these again become multiplied, so that the prothallus or germ frond in its earlier stages, is converted into a row of cells, with one or two rootlets near its base. The cells at the apex however go on dividing frequently both in a transverse and in a longitudinal direction, and the germ-frond thus becomes developed into a thin cellular plate or scale-like body, which lies horizontally on the surface of the earth. The basal portion speedily withers, but the broader upper portion becomes thickened, and produces hair-like fibres on its lower surface. At this stage the germ-frond is usually of a roundish heart-shaped figure, with a deep notch in front, sometimes undulated at the margin, and having the fibres already mentioned growing beneath at the hinder part. Besides these fibres, however, if the under surface is closely examined there will be found upon it little wart-like excrescences of two distinct kinds. These bodies bear the names of antheridium, and pistillidium or archegonium. The antheridia are the smaller of the two, and most abundant near the base; they are built up of a few aggregated cells, and the central cell of each becomes transformed into a globular [illegible] of still smaller cells, each one of which contains a flat spirally twisted spermatozoon inclosed in a minute bladder-like cell or vesicle. As the antheridia approach maturity, the inner cells become dissolved, and when they become fully ripe, the vesicles and their contents swell until they burst through the apex, and then the spermatozoon, protruding through a rupture of its containing vesicle and becoming free, darts out with a rapid motion. The pistillidia, which are mostly placed in the front part of the germ-frond, are fewer in number than the antheridia, and also larger and more elongated than they, being composed of several layers of cells so placed as to surround a tubular cavity or canal, closed at first, but subsequently open, and at the bottom of which lies the germinal cell. Into this canal one of the vagrant spermatozoa finds its way, the canal closes, and a bud is formed, from which springs up the young plant.

The first frond that arises from the bud or growing point is small in size, and very unlike those produced by the plant when mature, but still it is erect and leaf-like, and altogether different from the flat horizontal scale which has been spoken of as the germ-frond or prothallus. Each succeeding frond is larger than the preceding, and assumes more and more the perfect character of the species, until at length after a variable lapse of time, a few months in the case of one or two annual species, and some years in that of others, the most perfect form appears. New spores are then borne upon these mature fronds, and the cycle is complete.

Now, in a perfectly developed Fern, such as we have traced through its various progressive stages, there are four parts or organs especially distinguishable. These parts are—the root, the stem, the fronds, and the fructification.

The roots of all ferns are fibrous, the older parts becoming more or less wiry in texture, the younger parts generally clothed with a down of velvety hairs. In those Ferns which, like our common Polypody and the well-known Hare's-foot, have a creeping habit, the roots are chiefly produced from the underside of the stem, and in plants of this habit they not only act as feeders to the plant, but also as holdfasts to retain it in the position in which it grows, this being very commonly on the trunk of a tree, or on the bare and often perpendicular surface of a rock. In Ferns which have an erect caudex, like that of our common male Fern, or like those of the Tree Ferns of the tropics—these latter not differing from the former in the nature of their growth but only in the degree of their development, the roots are protruded equally on all sides of the stem, and at length strike down into the soil, overlying and crowding upon each other as the plants acquire age and the stems gain height. In Ferns of this character, young roots are successively protruded from amongst the bases of the mature fronds, and if the conditions are favourable they at length completely cover those which were formed at an earlier period of the growth of the stem. The trunk of a Tree Fern in a healthy thriving state is thus coated with young roots in the process of overlying and intertwining with those which have been previously formed. This indeed is often so much the case that the root fibres form a thick buttress around the base of the trunk.

The stems of Ferns are of two kinds. One form, called a caudex, is very commonly erect; the other, called a rhizome, is nearly always creeping, but it does not therefore follow that all creeping-stemmed Ferns are rhizomatous, for in truth in many cases the stems of creeping Ferns are truly caudiciform in structure. It would be out of place here to enter upon a minute description of the anatomy of Fern stems: I will rather describe in a few words the more obvious differences observable between the caudex and the rhizome.

In the form of stem to which the term caudex is applied, the apex consists of the rolled up undeveloped fronds, which incurve on all sides towards the centre. Both in the stem itself and also in the stipes or stalk of the fronds, that particular kind of vegetable tissue of which wood consists is formed: but in the Fern stem this tissue is not consolidated into a close mass, as occurs in our timber trees, but forms thin plates or bundles embedded in the softer cellular matter which forms the bulk, the harder woody portions being found at or near the circumference. It is these which become overlaid by the root fibres in those stems which persist for a number of years, and the formation of these overlying rootlets may be readily observed in almost any of the caudiciform species met with in our Ferneries. Some part of the bulk of a caudex is frequently due to the persistence of the bases of the stipites; but this is not always the case, for in certain true Ferns these fall off, leaving a clean scar, marked only by the greater prominence of the ends of the woody bundles which have communicated with the stipes, and which are generally disposed on some uniform plan. These scars, which mark the position of the fallen fronds, are in some cases disposed with so much regularity, that they appear like a series of elegant carvings, and add in no inconsiderable degree to the beauty of the plant. In the greater number of the known Ferns having caudiciform stems, the stem itself is dwarf; such, for example, as occurs in our common Lady Fern, the fronds of which die away in winter, leaving only the caudex, buried or scarcely elevated above the surface of the ground. Sometimes even in these dwarf-habited species the caudex is almost if not quite simple, giving off no side branches, but confined in its growth to the development of the central bud or crown. Generally this is the habit of our Polystichums, which are consequently less readily increased by division than many other Ferns. It is to this tendency towards terminal rather than lateral development, that we seem to be indebted for those beautiful Tree Ferns which are the glory of their race, often rising to a height of 50 or 60 feet, or even more, in their native forests. However, in the greater number of species the caudex is but little elongated, and lateral growth sets in, so that the plant becomes a tuft of clustering crowns.

I have already alluded to the mode of increasing the caudiciform Ferns by dividing the separate crowns which they form by natural branching; but it is interesting to know that in some species at least recourse may be had to a more artificial process if the rapid propagation of the plant is desired. I do not now allude to the mode of inducing offshoots by destroying the growing point or heart, though this may be done; but it has been ascertained in the case of the Hart's-tongue Fern—and the same rule must surely apply to many others, at least of the evergreen species, which do not become quite dormant—that the caudex may be cut into small fragments, each of which will generate a bud or buds, and become an independent

plant. If the caudex of a Hart's-tongue Fern is examined, it will be found that not only does the base of the stalk of the frond adhere to the stem—for several years, perhaps, after the leafy portion has decayed and passed away, but this persistent portion continues quite fresh and succulent, so that on an old stem there are a considerable number of these living stipe-bases present. Now, if the stem is cut up longitudinally, and so that a portion of it, not too small, is retained with its rind uninjured in connection with one of these stipe-bases, and this is planted, and treated like a root-cutting for example, it will produce a plant. Every one of the stipe-bases so treated will yield a young plant if the manipulation has been carefully executed. It is no doubt from this facility of forming buds, which seems to reside in the cut edge of the bark of the stem, that many cultivators do not hesitate to cut through or quarter some choice or valuable Fern which has formed but a single crown, and find a compensation for the present and transient disfigurement of their plant in the possession of a duplicate available for a brother cultivator.

Most caudiciform stems have an upright, or at least an upward tendency, but not all of them. I may illustrate this by a reference to three of our common British Lastreas. Thus, Lastrea dilatata has normally an upward growing crown with the fronds set shuttlecock fashion,—by which I do not mean that it never grows laterally, or even downhill, if fixed for instance in a dyke-wall, or on a bank where it cannot help itself, but, that if growing in an open level space it will naturally take this upward direction. Then Lastrea spinulosa, which some of our ablest botanists profess to be not able to distinguish from dilatata, if planted on the level will creep along the surface, slowly but surely, throwing its fronds erect from the apex of the stout caudex, which in a few years will have progressed some distance from the point whence it started. Lastrea Thelypteris, a species in which the character of the stem is the same as in the species I have already named, runs much more freely and more extensively, the caudex being at the same time much more slender. Many other creeping stems of the caudiciform structure might be instanced if time permitted.

In rhizomatous stems the growth is different. The apex is here in advance of the youngest fronds, instead of being formed by them; the fronds are developed singly at intervals, the youngest being always some distance behind the growing point; and they are always or nearly always articulated, that is to say they are so attached, that when decay sets in they separate spontaneously at a natural joint. The rhizome is very commonly branched, and varies greatly in bulk; it affords a very ready means of propagating those species in which it occurs.

But it is time to pass on to the more important organs, the fronds, for just as it is the blossoms for the sake of which we cultivate Roses or any other popular flowers, so it is for the sake of the fronds that we cultivate Ferns.

The fronds may be considered as the leaves of the Fern, though they are not exactly analogous to leaves, since they themselves bear in almost all cases all that is borne by the plants in the shape of fructification. Before they are developed, the fronds of all true Ferns are coiled up in a circinate or involute manner; and this is perhaps the most ready means of distinguishing Ferns from flowering plants, none of the latter having their young leaves disposed in this manner. No better or more useful mark by which to distinguish a Fern at sight can be pointed out to the uninitiated than this involution of the young leaves; for though the fact of the absence of anything like flowers may be a more positive distinction, there is this difficulty, that it is not always available, since the flowering plants one meets with, either in the garden or in a country ramble, are not perpetually in blossom. The practised eye can indeed at once distinguish the fronds of a Fern from the leaves of a flowering plant simulating its appearance; but the novice cannot do this, and hence it is not uncommon to find in amateur herbaria the leaves of some umbellifer doing service as a Fern, or those of some other cut-leaved plant on which insect eggs have been deposited, mistaken for a Fern in fruit. A safe preventive of such errors would be to see that the young leaves in the heart of the plant from which the specimen was gathered, were coiled up in the circinate or crozier-like manner.

Fern fronds are very variable in character; indeed, it is this amount of variety which throws a charm over the plants as objects of cultivation. In a full-grown frond there are usually two parts to be distinguished, the lamina or leafy portion, and the stipes or stalk, but the stalk is not always present. The lamina is sometimes undivided, and Ferns of this simple character may be met with varying in diameter from half an inch to a foot or more. In other cases it is partially cut, or once, twice, or even thrice cut; and sometimes it is still more divided. The fronds of some Ferns are wholly sterile, while some are wholly fertile, and of a different and usually a more contracted form. In others there is no perceptible difference, beyond the presence of sori, between those which are sterile and those which are fertile.

In the stipes are embedded certain plates or bundles of woody tissue, which are tolerably constant in their position at the same elevation in cases where the stems of any particular species are about equal in vigour. It has been proposed indeed to make use of these woody bundles as discriminative characters, but since they vary at different elevations in the same stem, this cannot be done with safety. They have, however, another and more important application, for after being carried up through the rachis, they branch out so as to form the veins, which traverse the leafy divisions of the frond, and we shall see presently that these veins are very important in the economy of the plant, for besides forming its framework on which the more delicate cellular parts are, as it were, spread out, they give rise to the adventitious buds, which in some species appear in great numbers either on the rachides or on the upper surface of the fronds, and what is still more significant, they give rise also to the fructification. At certain determinate points along the course of the veins, constant in the same species under whatever conditions it is developed, the aggregations of spore-cases called sori, appear. In the absence of blossoms, which in the case of flowering plants serve to afford the characters on which their classification is based, many modern Pteridologists have proposed to take the relation between the sori and the venation, and the modifications which the latter undergoes, as the basis of the classification of Ferns. In this view I concur generally, though it is fair to state that some of our highest authorities take a different view.

It may be well to explain, that in order to render intelligible the differences which occur in the venation, the name of 'vein' is given to those branches which proceed direct from the midrib, while those which proceed from the vein are called 'venules;' and those which proceed from the venules, 'veinlets.' Thus the first second and third series of branches proceeding from the midrib are readily referred to, and if it happens that others beyond these have to be spoken of, the expression 'ultimate veinlets' is found sufficient to distinguish them.

The venation of Ferns may be classed under three heads—the free, the connivent, and the reticulated. Free venation is that in which, when the veins have once diverged from their point of origin, whether that be a midrib or simply a vein entering the leaflet at its base, they do not, however much they may branch, again become united. If there is a midrib the branches or veins are usually either simple or once or twice forked; but if there is no midrib, the veins occupy the leaflets by a series of dichotomous (that is, two-forked) branchings. Most of our British Ferns have free venation. Connivent venation is that in which the veins or venules meet in direct lines from opposite directions and coalesce at an angle more or less acute, and are then continued onwards, or not, in the form of an excurrent or outward pointing veinlet. This is very well represented in Nephrodium molle, a common plant in our Fern houses. Reticulated venation is that in which the veins are united into a network, and occurs in great variety, giving rise to much diversity of opinion as to the limits or value of many modern genera which are based upon it. If the branches from the midrib are of nearly uniform strength, and united in meshes which are tolerably regular in form, the venation is said to be uniformly reticulated, but if there are given off a series of stronger veins directed towards the margin, with finer ones united in a network between them, the venation is said to be pinnately reticulated. It is also important to observe whether the venules all unite, or whether within the meshes there are some veinlets which are free at the point.

The lower part of the stipes commonly, and sometimes also the upper, as well as the crown in most caudiciform stems, and sometimes the whole surface of a rhizomatous stem, may be clothed with hair like or chaffy scales. These scales are very constant in their presence and their general character, and are of considerable use in the discrimination of species. In some of the larger growing Ferns, the species of Dicksonia and of some allied genera especially, the hair-like scales are very abundant, and those of a species of Cibotium are collected in the East, and employed as a styptic. Some Fern scales are beautiful objects for examination under a microscope.

We must pass on to the fructification, as it is called, though as the reproductive bodies which the Ferns produce are rather of the nature of buds than of seeds, the term is perhaps not very well chosen. That however is a question which need not now be dwelt upon. Of what is called the fructification, the spore which has already occupied our attention may be taken as the integer. The spore then is produced, along with myriads of kindred spores as dust-like and atomic as itself, within a casket, which is called the spore-case, or sometimes the capsule. The spore-case is a hollow body which in the true Ferns is furnished with an elastic jointed ring, more or less developed, which girts it in either a vertical, a horizontal, or an oblique direction. These cases are collected into groups of various character, usually round, oblong, or linear in form. The groups are called sori, that is to say, "heaps" of spore-cases. The point, or line, or surface, on which the sorus stands is the receptacle, an organ to which I attach very great importance. It is usually confined to some determinate part of the veins, but in one group, that to which Acrostichum belongs, it is universal, occupying the whole surface, both veins and intervening spaces. In some species the sorus or heap of spore-cases is without any covering. In others it is covered either by the turned-over margin of the frond or by a special membrane called an indusium, or else it lies within an investing membrane placed beneath it called an involucre, or is sunk in a hollow cup-like cavity. Those without a cover are called naked sori, those which have a cover lying over them are called indusiate sori, and those which lie within a cup or investing membrane are called involucrate sori. In by far the larger number of known Ferns the fructification is seated on the under surface of the frond, but in a few instances it has been observed on the upper surface; in certain groups, Trichomanes and its allies for example, it is projected beyond the margin, and in another, formed of the genus Vittaria, it is sunk in a furrow of the margin.

The classification of Ferns to which I proposed to advert, and which I must touch upon but briefly, lest I should become wearisome, rests very much upon characters derived from the spore-cases, the receptacles, and the veins. The primary divisions depend on the presence or absence of the ring or annulus, girting the spore-case, which has been already mentioned. This character eliminates the Marattiaceæ and Ophioglossaceæ, called Pseudo-Ferns, in which there is no ring, from the Polypodiaceæ or true Ferns, in which the ring is present. The peculiarities of this ring give rise to the secondary series of divisions, of which the Polypodineæ form much the larger group, and are distinguished by having the ring vertical and nearly complete. The third series of divisions rests mainly on the nature of the receptacle, and the form and covering of the sorus. Let us glance at the manner in which these facts are applied.

Commencing with the Polypodiaceæ, and with that portion of it called Polypodineæ, precedence should be given to the group in which the fructifying force is most completely developed. This is the group of which Acrostichum is the type, and in it we find the whole under surface, and sometimes also the upper surface, either of distinct fertile pinnæ or of distinct fertile fronds, crowded with spore-cases, attached not only to the veins, but also to the cellular spaces which lie between them. In this group occurs the simple-fronded Elaphoglossum and Hymenodium, the Lomaria-like Lomariopsis and Stenochlæna, as well as the noble-habited Acrostichum itself. Next to this comes the group typified by Platycerium, or the Elk's-horn Fern, which bears great amorphous effuse patches of sori, and has curious polymorphous fronds, and an epiphytal habit. The receptacles of these shapeless sori consist of a fine network of parallel and closely contiguous veins lying between the main veins in the fructifying parts.

Having disposed of those in which the receptacle is universal or effuse, we come to the more numerous groups in which it is localised in some definite part of the fronds, and takes a definite form. We find that here the receptacles are distributed on three different plans, some forming lines crosswise the direction of the veins, some forming lines parallel to the veins, and some forming dots either at the end or at some point along the course of the veins. The transverse series includes two groups, represented respectively by Lomaria, Blechnum, &c., and by Pleurogramma, Monogramma, and their allies, in which the receptacles are placed near to the midrib; but the first group is indusiate, while the second has no indusium. Then there are several transverse-fruiting groups, in which the receptacle is marginal or nearly so, and remote from the midrib. That represented by Tænitis, Drymoglossum, and Tæniopsis, and that represented by Vittaria, are both without indusia; but in the former the receptacle is submarginal, in the latter it lies in a furrow or slit at the very edge of the frond. Those typified respectively by Lindsæa, Adiantum, Cheilanthes, and Pteris are indusiate, Lindsæa having the indusium opening on the outward margin, while the rest open on the inward margin; Cheilanthes and Pteris having the receptacle on the frond itself, the former punctiform, the latter linear; and Adiantum having its receptacle not directly on the frond but on the indusium, and becoming inverted along with it, so that the spore-cases when *in situ* are upside down. Two other groups, represented by Woodwardia and Meniscium, have short transverse scattered sori, the first indusiate, the second naked.

Then, in the series in which the receptacles, and consequently the sori are parallel to the veins, and not parallel to the midrib, we have first the group containing Asplenium, Diplazium and Scolopendrium, in which the sori are lateral on the veins; and that typified by Didymochlæna, in which they are dorsal on the veins. Then come the naked-fruited groups represented by Hemionitis, in which the linear receptacles are joined like net-work; and by Gymnogramma, in which they are linear, and merely simple or forked. And finally there is the spuriously indusiate group, represented by Platyloma, in which the receptacles are linear, but so close together that the spore-cases become laterally confluent into a broad marginal band.

Of the punctiform series with naked sori Polypodium is the type, and with it go such genera as Goniophlebium, Phlebodium, Drynaria, Pleopeltis, Niphobolus, Nothochlæna, &c. Then comes an indusiate series: first, that group typified by Aspidium, Lastrea, Polystichum, &c., in which the indusium is reniform or peltate, attached by the centre or sinus; then that typified by Cystopteris, wherein the indusium is attached crosswise by its base; and that represented by Davallia, Microlepia, &c., in which the indusium is attached both by its base and sides, forming a sort of cup or cyst. There is here, besides, an involucrate series, in which the membranous cover lies beneath and folds over the spore-cases; this consists of the Dicksonia group, in which the sori occupy two valved cups at the margin of the segments, and the Woodsia group, in which the sori occupy cups at the back of the fronds. So we complete the Polypodineæ.

The Cyatheineæ which consist principally of Tree Ferns, differ from those previously mentioned in having the spore-cases compressed so that the ring becomes obliquely vertical, and in the receptacles being punctiform and elevated. They comprise Thyrsopteris, in which the fructifications are arranged in a thyrse like manner on distinct contracted pinnæ, and Cyathea and Alsophila, in which they are dorsal, the first being involucrate, the second naked.

The Matonineæ form a small group represented by Matonia, a remarkably handsome Malacca Fern, with a tall slender polished shaft, and a fan-shaped frond. In this the ring is broad, sub oblique, and nearly complete, the sori oligocarpous, and the indusia umbonato-hemispherical.

In the Gleichenineæ, of which Gleichenia is the type, the ring is complete, and obliquely transverse, the fronds rigid, and the sori dorsal: while in Trichomaneineæ, represented by Trichomanes and Hymenophyllum, while the ring is similar in direction, the fronds are (usually, at least) pellucid, and the sori is extrorse-marginal, that is to say, set outwardly in reference to the edge. The Schizæineæ too, of which Schizæa and Lygodium are types, have a horizontal ring, but it is placed at the very apex of the spore-case, and looks like a radiately striated crown.

The Ceratopteridineæ, personified by Ceratopteris, are peculiar plants, being aquatic annuals with dimorphous fronds; their spore-cases have a very broad ring, which is sometimes rudimentary, sometimes more than half complete.

Then, finally, as far as regards the true Ferns, come the Osmundineæ, in which the two-valved spore-case has only the rudiments of a transverse ring near the top.

Of the Pseudo-Ferns both the Marattiaceæ and the Ophioglossaceæ want the ring of the spore-case. The former have dorsal fructifications on normal fronds, the latter marginal fructifications on very much changed contracted fronds. The former too are sub-divided into those with oblong distinct bivalved sori, as in Marattia and Angiopteris; those with circular concrete sori, as in Kaulfussia; and those with universal connate sori, as in Danæa.

I have already mentioned that Ferns vary in the most remarkable manner. Variability appears to be especially the character of those of our own country. Whether this apparent result arises from the sported forms being more observed and sought after here than elsewhere, or whether from any peculiar condition of our climate, I am unable to say, but the fact remains, that whilst the sports and monstrous forms of the thousands of foreign Ferns, so far as we know anything about them, may be almost counted by units, we can reckon ours by hundreds, though some half century of species only exist as the basis from which all this variety has been produced. Time will not permit that I should do more than refer to this part of my subject, but I have selected a few illustrations to show that in speaking of the metamorphoses as marvellous, I have not at all exaggerated. [Numerous curious varieties of the commoner British Ferns were exhibited.]

I would strongly recommend the study of the Ferns, our wild Ferns especially, to those whose time may hang heavily on their hands. They will find it a very enchanting occupation. The country rambles which must be taken in search of materials will not be less pleasant and healthful to the body than the discrimination of the species will be engaging and expansive to the mind. But I must warn the inexperienced who may engage in the pursuit, that they must not be led astray by the "darling" little specimens they are sure to find in plenty, but which have no other recommendation than the sympathies they excite in the breast of those who gather them, for they are, I am sorry to say, utterly worthless as regards the acquirement of a knowledge of Ferns. Let fair-sized, mature, fertile specimens be sought for and carefully preserved, and then the study will be easy, for there is no lack of trustworthy guides to be found amongst the books which are devoted to the subject on which I have so imperfectly discoursed.

Home Correspondence.

Heating.—I greatly rejoice in the success which Mr. Martin has achieved in working out his system of bottom heat. For that success fully confirms the efficacy of a very important portion of a more complete system, and capable of a much wider application, which I communicated to you some two years since, and to which, in a postscript to my letter on Cottage Building in your Journal (Nov. 28, 1863), I referred in the following words:—"Let me add that my system of heating frames and hothouses, and of warming large rooms, is now so perfected in my mind, and by sufficient experiments, that for a fair remuneration, which would enable me to give the time and expend the money for the purpose, I am prepared to show the public—1. That at a first cost of not more than 18*l.* or 20*l.*, and with an expenditure of fuel of not more than 2*d.* or 3*d.* a day, a hothouse of 60 feet by 20 feet can be sufficiently heated, partially (and that to any extent you please) with moist bottom heat, and throughout with heat from above; 2. That consequently a room of that size, or larger, may with less fuel than this be sufficiently warmed; 3. That steaming food for cattle can thus be effected at less cost than at present; 4. That sheds for drying in uncertain weather either Grass or corn can with my mode of heating them be profitably erected; and 5, that a way is thus opened, especially where peat can be had for fuel, for a profitable establishment of glass culture on some of our wildest heaths and most barren moors." By placing a steam chamber above the smoke chamber I obviate the necessity of so thick a covering as Mr. Martin uses for the latter, and the advantage of moist bottom-heat for Pines and other plants, you know far better than I do. The heat communicated by my

little stove is such that through the few nights of severe frost last winter no snow lay on the ground within 4 feet of my frames. By the combination of the use of steam with that of smoke for warming large buildings, I feel certain of obtaining the advantage of Mr. Goldsworthy Gurney's mode of heating, together with that of the Roman hypocaust, and at comparatively trifling cost. *Henry Moule, Fordington.*——[Mr. Martin says there is a misprint of some consequence in his letter published at p. 485. The mean temperature of Lord Eversley's Vine border during the severe winter was 60°, not 68°].

Cool Orchids.—I have read the report of the lecture delivered by Mr. Bateman at South Kensington on this subject; and one impression produced on my mind by reading the few lines which only bear practically on the subject of their cultivation, is that Mr. Bateman has never seen what he calls cool Orchids grown well. It may be that his own plants are better grown and flowered than Mr. McMorland's or Mr. Dawson's, but in this case it would have been more satisfactory if cultivators could have seen them exhibited at the lecture. When an improved method of growing Orchids is so strongly recommended, it is only fair that the lecturer should produce examples of his own growing. If this is more than ought to be expected of one who admits he is the last in the field, it seems rather extraordinary for the youngest disciple to take upon himself to lecture, and to write, with such meagre experience, a guide to cool Orchid growing. The mean temperature recommended by Mr. B. is 60°. Many think this rather warm than cool. I hope no one will follow the advice to build low houses with northern aspects until Mr. B. can show cool Orchids finer in growth and stronger in flower than those now to be seen. One of the most remarkable practical points in the lecture is, that it is now found that the mountain Orchids from Mexico and New Grenada do not like sun. They must therefore, I suppose, all or nearly all grow on the northern sides of mountains, and in deep ravines, where the rays of the sun never penetrate. This is information which, if correct, opens up a new field of speculation. *Robert Warner, Broomfield, Chelmsford, Essex.*

The Royal Horticultural Society's Flower Market.—I have seen, with some surprise—though the *quasi*-horticultural doings at the West-end of town almost fail to excite surprise, whatever their extravagance—the proposal (at p. 486) of a "Male Fellow" for the institution of a flower market in the gardens at South Kensington. My first impression was that your printers had been less careful than usual, and that the word "male" was a misprint for "mad;" but on second thoughts I gave up this solution, and came to the conclusion that the proposition was part and parcel—it is so like all the rest of the new dodges—of the deliberate attempts now being made to render the gardens ridiculous to those who have a love for horticulture, and to assimilate them as much as possible to such amusing establishments as Cremorne, &c. A flower-market indeed! Why cannot the incapables at South Kensington, as they are bound to do, if they are honest, after taking care of Horticulture, provide the Fellows, and be content to provide them, with a garden equal at least to an average private garden, and leave the nurserymen and florists to the pursuit of their proper callings. A flower-market, indeed! They had far better set up an Apple stall, and then they might be creating a market for the Society's own horticultural produce, and putting something into, instead of emptying, its coffers—as must be the result of such bungling extravagances as building 1500*l.* worth of Orchard houses merely to form "entrances" and to kill Orchard fruits, or instituting "floral fêtes" of sham flowers to be deservedly chronicled—as has been done by the leading journal—as total failures. "I hope I don't intrude." *Paul Pry.*

Andaman Island Plants and Best Mode of Packing them.—I have just received from the Andaman Islands a quantity of Orchids, together with other plants and seeds, many in form and appearance different from any I ever saw before. They were obtained at some risk, from the savage character of the people, and the officer was not experienced in the mode of packing; still they are looking up tolerably well. What they may turn out time will show. They were packed in powdered charcoal that had been exposed to the glaring sun some time, and soldered down in a large tin case enclosed in a stout wooden box. Many when washed looked quite green and fresh, and I hope may grow. I suspect the Orchids will be nearly the same as those found in Moulmein. The Ferns are alike, but there are others I know nothing about. I most probably may have more sent me. Wardian cases are out of the question, but perhaps some one will tell me the best means of packing them under difficulties, for at present all is in confusion there. An Indian officer states that he never beheld such splendid timber as is there—clean trunks to an enormous height, of woods finer than teak, which England would do well to secure for backing her iron plates. *X. X.*

Variegated Elms.—I enclose two twigs from a Chinese Elm about 30 feet high. The green leaf is on young shoots on the bottom of the main stem. All the upper part from a height of 4 feet is variegated. The variegation showed after a severe winter a few years since. Is it usual for this Elm to show this variegated appearance as it grows old? [We do not know.]

Societies.

ROYAL BOTANIC, REGENT'S PARK: *May* 21 (*First Great Exhibition.*)—A gloomy morning succeeding a thunderstorm which took place on the previous night, doubtless kept away from this great gathering hundreds of visitors, who otherwise would have been present. But if the attendance was comparatively limited, plants for exhibition were furnished in unusually large numbers, and such specimens! We may yet see greater variety and more striking novelty, but we can scarcely ever hope to see better gardening. There was not an ill grown plant in the tent. The Roses, the Azaleas, the Orchids, and the various groups of "stove and greenhouse plants," were one and all wonderful examples of horticultural skill.

Stove and Greenhouse Plants.—With the general appearance of exhibitions of these most of our readers are now familiar. Among the different subjects shown in this class many well-known forms were as a matter of course recognisable; but we did see, and with admiration, one striking novelty in the shape of a fine bush of Clerodendron Thomsonæ from the nurseries of Messrs. Jackson, of Kingston. Few persons acquainted with this only in a small state could have conceived that it would have made an effective exhibition plant; but that such is the case was universally admitted, its scarlet flowers, half-hidden by a snow-white calyx, produced in gracefully drooping racemes in great profusion, appearing to much advantage, even at a distance. Of blue Leschenaultias there were a few fine specimens, especially one in an admirable collection of plants from Mr. May, who was fortunate enough to land them safely in the exhibition tent, after a journey all the way from Rugeley in Staffordshire. We also noticed many magnificent specimens of the charming Stephanotis floribunda, Acrophyllum venosum, Everlastings, Chorozemas, and Hederomas. The Phlox-like Leptodactylon californicum formed a conspicuous object in some groups, which were also in some instances further ornamented by the addition of noble examples of Medinilla magnifica, loaded with the great drooping thyrses of its pinkish salmon inflorescence. Statice profusa, a deep purple kind of comparatively recent origin, proves to be a good addition to the class to which it belongs. More interesting, however, to many were doubtless the magnificent specimens of plants remarkable for their fine foliage, which characterised the collections of Messrs. Lee, Williams, Henderson, and Young. Among these were grand examples of Alocasia metallica, and the handsomely-variegated variety of A. macrorhiza; and Caladiums, of which the most striking were Belleymei, with leaves coated as it were with frosted silver, and the better varieties of bicolor, the foliage of which was splashed and spotted with carmine. Dieffenbachias also attracted considerable attention, as did also Cyanophyllum magnificum, on some of which the leaves were unusually large and fine. Intermixed with these were Theophrastas, Cordylines, Dracænas and Ferns, the latter including many remarkably fine Gleichenias.

Awards.—16 plants: 1, Mr. May; 2, Mr. Peed; 3, Mr. Wheeler. 10 plants: 1, Mr. J. Fraser; 2, Mr. Rhodes; 3, Messrs. Lee; 4, Messrs. Jackson. *Amateurs.*—1, Mr. Green; 2, Mr. Chilman; 3, Mr. Kaile 6 plants: 1, Mr. Page; 2, Mr. Penny; 3, Mr. Kemp; 4, Mr. Cross. 15 Fine-foliaged and flowering plants: 1, Messrs. Lee; 2, Mr. Williams; 3, Messrs. A. Henderson & Co.; 4, Mr. Young.

Orchids.—Of these there was the usual bank; but with one or two exceptions, there was a general absence of very large specimens. Among them we noticed the rare Peruvian Odontoglossum Phalænopsis, with narrow grass-like leaves, and large yellow-eyed white and rose-coloured blossoms, flat and beautifully marked; also one or two well-flowered specimens of O. nævium and of O. Pescatorei, the last quite a gem in the class to which it belongs. Of Anguloa Clowesi we observed one plant with no fewer than eight fully expanded bright yellow flowers on it; and there were some grand examples of Calanthe, Vanda, Aerides, Saccolabium, Lælia, Dendrobium nobile, D. aggregatum, and other well-known plants. Vanda gigantea was also present, but not in good condition; and we remarked among other species of Phalænopsis the rare delicate pink-flowered P. Schilleriana. Cypripediums, among which were some well-flowered plants, included an example or two of C. Hookeræ, an East Indian kind, with prettily variegated leaves and greenish flowers, with broad expanded rosy-purple petals. Of rarities, among Dendrobes there were Dalbousianum and Dayanum, the last certainly, as shown, in all respects inferior to either macrophyllum or anosmum.

Awards.—20 plants: 1, Mr. Baker; 2, Mr. Milford. 12 plants 1, Mr. Penny; 2, Mr. Page; 3d, Mr. Peed. 6 plants: 1, Mr. Williams: 2, Mr. Jackson; 3, Mr. Rhodes. *Amateurs*—1, Mr. Wiggins; 2, Mr. Green; 3, Mr. Chilman; 4, Mr. Wheeler.

Azaleas.—Most of those exhibited on this occasion were literally "mountains of bloom," a remark especially applicable to the fine specimens furnished by Messrs. Veitch and Mr. Turner, both of whose groups consisted of plants of great size. It was universally admitted, however, that their appearance was far from being natural, owing to the stiff formal manner in which their branches were tied in; indeed, so even and regular was their surface, and so perfect was their conical shape, with not a green leaf to be seen, that their general aspect, especially when viewed from a distance, was more that of huge crinolines than plants. Let us hope, therefore, that a more tasteful mode of training may be as soon as possible subtituted for that just noticed. It may however be said that we know what we have, but not what we shall get. Nevertheless some change seems absolutely necessary; and we feel sure that the two great growers in question will be the first to seek for it. Among varieties there was little new; of well known kinds we noticed a magnificent specimen of the double-flowered Glory of Sunning Hill. When shall we see an equally fine plant of the new double white sort called Flag of Truce? There was also a wonderfully fine plant of the old yellow sinensis from Mr. Carson.

Awards.—8 plants: 1, Messrs. Veitch; 2, Mr. Turner; 3, Mr. J. Fraser; 4, Mr. Rhodes. *Amateurs.*—1, Mr. Carson; 2, Mr. Melluish; 3, Mr. Page; 4, Mr. Cross. 6 plants: 1, Mr. Green; 2, Mr. Penny; 3, Mr. Wheeler; 4, Mr. Kaile. *Nurserymen.*—1, Messrs. Veitch; 2, Mr. Turner; 3, Messrs. Lane & Son; 4, Mr. J. Fraser.

Roses.—Notwithstanding the trying circumstances as regards weather to which these have been subjected of late, never have collections in pots been shown in better condition than on this occasion. Mr. Wm. Paul's plants were truly magnificent, and Messrs. Lane's and Paul & Son's were also fine. Those from amateurs were less satisfactory. Cut Roses, of which many boxfuls were shown, both by Mr. Wm. Paul and Messrs. Paul & Son, were all that could be desired, and the day being dull they preserved both their freshness and delicious perfume to the very close of the exhibition. As respects kinds we saw nothing different from what have often been noticed in former reports.

Awards.—10 plants: 1, Mr. W. Paul; 2, Messrs. Lane; 3, Messrs. Paul & Son. 6 plants (*Amateurs*): 1, Mr. Terry; 2, withheld; 3, Mr. Cross.

Heaths.—Among these there is still a great want of novelty. We did, however, observe a rather new kind called Spenceri, which promises to be an acquisition, and among old varieties were some fine plants of the true tortiliflora. Next month, when the finer summer flowering varieties are in bloom, we hope to be able to record the names of a few good kinds.

Awards.—10 plants: 1, Messrs. Jackson; 2, Mr. Rhodes; 3, Mr. Baxendine. 8 plants: 1, Mr. Peed; 2, Mr. Page. 6 plants: 1, Mr. Chilman; 2, Mr. May; 3, Mr. Wheeler.

PELARGONIUMS.—Those shown by Mr. Bailey, of Shardeloes, on this occasion were so extraordinary both as regards flower and fine growth as to throw all others comparatively in the background. Nevertheless, his able competitor Mr. Nye also had good plants, as had likewise both Mr. J. Fraser and Mr. Turner. Mr. Bailey's plants measured upwards of 4 feet in diameter, and about 2 feet in height. Such specimens confer on the cultural instructions which he gave in our volume for last year (see p. 725), increased value, and render the names of the plants he showed on the present occasion worth recording. They were Sir Colin Campbell, Monarch, Rose Celestial, Etna, Desdemona, The Belle, Sanspareil, and Lord Clyde. Among spotted varieties, the best were perhaps Sanspareil, Osiris, and Spotted Gem. Fancy kinds we shall find in better condition at the next exhibition. Among Seedlings, Commander, Edgar, John Hoyle, Pretty Mary, Cicero, and Rubens received First-class Certificates; and to Mrs. Ford, a rose and white Fancy variety, a Second-class Certificate was awarded.

Awards.—10 plants: 1, Mr. Bailey; 2, Mr. Nye; 3, withheld; 4, Mr. Weir. 12 plants: 1, Mr. J. Fraser; 2, Mr. Turner. 6 Fancy sorts: 1, Mr. Turner; 2, Mr. J. Fraser. *Amateurs.*—1, Mr. Bailey; 2, withheld; 3, Mr. Weir.

Rhododendrons.—A small group of these was furnished by Messrs. Lane; and from Mr. Noble, of Bagshot, came among others, a glorious new white kind named The Queen, which in its way must long stand in the first rank. It is, we believe, a seedling from album elegans, crossed with some other light sort. It is said to be very hardy, and a comparatively late bloomer.

Calceolarias.—Collections of herbaceous varieties of these, extremely well grown and flowered, came from Messrs. Dobson and Mr. James. They consisted, for the most part, of the usual spotted varieties; but in Messrs. Dobson's lot was a crimson scarlet, called Incomparable, which deserves mention on account of its bright colour, and Mr. James had a clear yellow sort named Mr. Eyles. Cluster, crimson spotted on a buff ground; Conqueror, crimson scarlet on a yellow ground; Miss Smith, and Kelly, were also all varieties well worth growing.

Miscellaneous Subjects.—Foremost amongst these was a terra cotta basketful of little Alpine plants, sent from York by Messrs. Backhouse. They were intended to have been shown in the chinks and crevices of little moss-covered rocks, as they are often found wild, but during their journey to London by railway the rockery was upset, and some of the plants were much injured. Among those nevertheless produced in good condition were Aquilegia alpina, the prettily dwarf-growing Myosotis alpicola, the prettily veined-leaved Goodyera pubescens, the little bright blue Gentiana bavarica, the pink Primula farinosa, finely in flower; the orange and violet Linaria alpina; and Androsace villosa, the last with minute pink-eyed round snow-white blossoms. From Messrs. Barr & Sugden came various Fern cases, and neat-looking rustic plant stands. Mr. Williams furnished a group of Yuccas, Cordylines, Dracænas, Agaves, and similar plants, of which he has an admirable collection. Various new and rare plants, some of them Ferns, and others remarkable chiefly for the beauty of their leaves, also came from Mr. Bull, and we noticed some extremly well grown Lycopods and Ferns from Mr. Young, of Highgate. Pansy blooms came from Messrs. Downie Laird & Laing, from Mr. Hooper, from Mr

Watson of Dunse, and others. Finally Messrs. A. Henderson & Co. sent hanging baskets; and from Mr. Treen, of Rugby, came cut blooms of Verbenas.

Of new plants an account will be found in another column. Some very showy Seedling Pelargoniums were produced, but these we shall soon have another opportunity of reporting on.

We may add that Mr. John Waterer's exhibition of American plants is already in considerable beauty, and that only a few days of bright sunshine are required to have it in perfection. It promises to be even finer this year than on any previous occasion.

Royal Horticultural: *May* 24.—An exhibition was held in one of the arcades adjoining the Conservatory on this occasion, with the view of showing the various uses which may be made of flowers for the decoration of halls, drawing-rooms, dinner-tables, balconies, churches, &c. Although a considerable number of subjects, consisting chiefly of dinner-table ornamentations, were staged, yet of novelty either in material or design there was none; and with the general appearance of the exhibition, which was supported principally by dealers in table ornaments, disappointment was evidently experienced by many of the visitors. Mr. March's Crystal Jardinières or drawing-room tables for cut flowers, shown by Messrs. Banting, of St. James Street, formed conspicuous objects, as did also the large quantities of glass vases and other ornamentations in the same material from Messrs. Naylor & Co., Princes Street, Cavendish Square; and Messrs. Dobson & Pearce, of 19, St. James's Street. Mr. Robson, gr. to Lady Holmesdale, showed a cage-like table ornament with twisted glass ribs, between each of which was a vase full of flowers; and what is called the Holmesdale flower stand, for the decoration of the dinner table, shown by Lady Holmesdale, was highly commended by the judges for good taste and arrangement. Some tin-cased gilt wicker baskets, suitable for the centres of round tables, filled with gay flowers, and really very pretty, came from Lady Hume Campbell; and in some of Messrs. Dobson & Pearce's glasses various kinds of flowers were very tastefully arranged by Mr. Drewitt, gr. to Mrs. Cubitt, of The Denbies, near Dorking. Among them were Fortune's white Banksian Rose and the reddish buff flowered Sikkim Rhododendron Bedfordianum, together with Abelia floribunda and other examples of interesting plants. From Mr. Lucking came little baskets of plants for room decoration, and examples of March's glass stands neatly filled with Roses, Toothed Lycopod, Lily of the Valley, Isolepis gracilis, and Ferns, were also furnished by the same exhibitor. Some neat alabaster paste vases filled with Ferns, and ornamented on the sides with human figures, flowers, and fruit, were shown by Mr. Bull; who also contributed collections of plants for halls and churches, consisting of Dracænas, Rhopalas, Grevilleas, Palms, Musas, Yuccas, Aralias, Alsophila excelsa, Araucarias, and similar plants. A rather pretty design for the decoration of the dinner table was shown by Miss Wint, of 8, Gloucester Terrace, South Kensington. It was in the way of March's; but instead of one support it had three made of twisted glass, and the upper tray and vase at top which they supported, were tastefully filled with flowers, as was also the circular tray at the base; this was called the Victoria flower stand. Wire cornucopias, filled with dried Moss and flowers, also came from the same exhibitor. The Weeks' flower stand, formerly described in our columns, was furnished by Mr. Helbronner. Bouquets made of shell flowers were produced by Miss Beaumont; and of paper bouquets and plants made of that material, examples came from Miss Wetherfield, of Henrietta Street, Covent Garden, Miss Hughes, 45, Albany Street, and others. Charming vasefuls of rice paper flowers were, as usual, shown by Mrs. Stoddart.

An ornamental screen with upright trelliswork, covered with artificial Ivy leaves, surmounted at top by a wreath of Stephanotis and Passion-flowers, was shown by Miss Yates, of 3, Baker Street, Portman Square. This was fastened to a boxful of artificial plants, and altogether had a natural and very pleasing appearance. From Mr. Bull came boxfuls of living zonate-leaved Pelargoniums, of different kinds, for the decoration of balconies; and various iron and terra cotta contrivances for similar purposes were furnished by the Coalbrook Dale Company. Wardian Cases and pretty looking rustic vases for Ferns and plants of that description were likewise shown by Messrs. Barr & Sugden, of King Street, Covent Garden.

As regards churches, Mrs. Mould, of Onslow Crescent, showed an Easter Cross ornamented with white Pinks; and a wall decoration, consisting of circles made of the flowers of Guelder Rose, rose-coloured Pelargonium, and Laburnum, so placed as to intersect one another, also came from the same exhibitor. A pasteboard cross decorated with Lily of the Valley was furnished by Miss Gray, of Onslow Crescent; and against the wall of the arcade were chancel screens made of berried Holly for Christmas, and Box ornamented with different kinds of flowers for Easter. These were the work of the Misses Sutherland, of Coombe, who also had a neat Cross made of Wheat ears, and other interesting devices, chiefly in Holly.

The words "God save the Queen," made of wild flowers, were furnished by little boys of Spencer School, Wimbledon; and the same words in purple Rhododendron blossoms on a green ground were also shown, in the shape of a "swag," or large wreath, the only one apparently exhibited.

May 25 (*Election of Fellows*).—The following candidates were elected Fellows, viz.:—

Viscountess Boyne; Hon. Frederick Calthorpe, M.P.; G. H. Fitzroy, Esq.; P. Gadban, Esq., Consul General for Turkey; Miss Heron, Miss Laing; A. H. MacDougall, Esq.; Lieut.-Colonel R. H. Magenis; W. J. H. Money, Esq., Mrs. Brice Pearse; W. Russell, Esq.; Mrs. John Stapleton; S. Vaughan, Esq.; and A. Walls, Esq.

Notices of Books.

How to Lay Out a Garden, &c. By Edward Kemp, Landscape Gardener, Birkenhead Park. Third Edition. Bradbury & Evans. 1864.

The task of an author, we are told, is either to teach what is not known, or to recommend known truths by his manner of illustrating them. The latter would seem to have been the object that Mr. Kemp had in view when he prepared the excellent work now before us, of which we hail with pleasure the appearance of a new edition (the third), greatly enlarged, and illustrated with numerous additional plans and sketches of gardens and garden objects.

When noticing this work on a former occasion, we expressed our belief that it was one of the best books on pure garden design in the English language. Our opinion remains unchanged. There may indeed be more learned and classic works on the subject of landscape gardening; but we doubt if there is one that contains so much useful information and practical details, relative to the laying out of a garden, as are to be found in this unpretending volume.

The first part of the book, which professes merely to be suggestive, is devoted to a consideration of the various characteristics most generally desirable in a place of residence, but which are sometimes overlooked, or not so much attended to as they ought to be. The most important are the selecting of a site for a house, and the means of access to it; the nature and appearance of the surrounding property; the character of tthe soil; the supply of water; the aspect most desirable for a house and garden, &c. These and several other points are fully discussed, and will be found well deserving the attention of every one about to purchase an improvable property, with the view of forming it into a permanent residence.

The second part tells us "what to avoid," and shows that negative rules are sometimes of importance. For want of such beacons, it is truly observed, many a person who has gardened for himself has irretrievably spoiled his place before discovering his error. The most prevalent mistake is attempting too much, of which we have in our time seen some glaring examples, attended with the very same results as Mr. Kemp has described. Under this head it is remarked: "The effect of a garden may be marred by the formation of numerous flower beds, or groups of mixed shrubs and flowers, on the lawn. This is a very common failing, and one which greatly disfigures a place, especially as where intended only for flowers such beds usually remain vacant and naked for several months in the year. Flower-beds, too, when introduced in any quantity on a lawn, have an exceedingly artificial appearance, and interfere sadly with all ideas of breadth, harmony, and repose."

In a small garden the employment of rockeries, or other rustic objects in connection with the house, or in its immediate neighbourhood, is objectionable; and for this reason: "Every house must be regarded as a work of art, whatever may be its class or merit, and there would consequently be a want of harmony in associating it with anything composed of or resembling the uncultivated parts of nature. However ingeniously it may be contrived or executed, therefore, a rockery near a house must be considered radically wrong; and though great skill should be used in adaptation, or a variety of fortunate circumstances eventually awaken interest, these can never wholly atone for a fundamental error."

In this way many errors that are frequently committed are pointed out, in order that they should be specially guarded against. Among these may be noticed the adoption of too great a mixture of styles in gardens. Unsuitable ornaments, such as figures, bridges, flag-poles, groups of stones, &c., all manner of eccentricities, and in fact everything partaking of the nature of a sham, must be avoided by persons who have any desire to obtain credit for correct taste.

"What to attain" embraces a wide field for discussion, and forms the subject of the third part of the book. Here we have the general principles laid down upon which the art of landscape gardening mainly depends for being practised with success. We have also the rules that are applicable to them fully explained and illustrated, where it was considered necessary to do so, by a variety of neatly drawn plans and sketches, which will be found well deserving of careful study and attention. But it must not be supposed that the knowledge of these rules will enable any one to lay out a garden according to order, as it is obvious that every place will have some peculiarity belonging to it which will require a certain manner of treatment. Hence the landscape gardener must be guided by other circumstances, as well as rules. He must know the nature of the ground and the appearance of the surrounding scenery; the aspect and style of the residence; and the wants and wishes of the proprietor. These having been ascertained, he is then enabled to display his taste and skill by modifying some one or other of the rules, and adapting them in such a manner as to produce not only the best effect, but to harmonise with existing objects.

Nature is the great school of landscape gardening, but Mr. Kemp is not one of those who would carry the principle of imitation of Nature very far, or into minor matters. On this point we subjoin the following excellent remarks:—"To regard a garden otherwise than a work of art, would tend to a radical perversion of Nature. It is and must remain that which its proximity to the house alone enables it to be. No ingenuity can convert it into a forest glade or a glen. Nor is such a transformation to be wished for, were it possible, any more than that a dwelling should be transmuted into a hut, or a den, or a cave. A garden is for comfort, and convenience, and luxury, and use, as well as for making a beautiful picture. It is to express civilisation, and care, and design, and refinement. It is for the growth of choice flowers, and the preservation and culture of exotic trees and shrubs, with novel and interesting and curious habits, which could not be reared without the most assiduous guardianship and attention. In these respects it is fundamentally different from all natural scenes.

"Reflections such as these will make it plain that they who would imitate Nature in gardens, must do so in another way than by copying her piece-meal. They ought, indeed, to be imitators, but not copyists, transcribing her spirit, and not her individual expression—her general countenance or aspect, and not her particular features. An artist, be he a painter or a landscape gardener, or an amateur in either branch, should go to Nature to study principles, gathering up snatches of scenery, and storing them in his memory or his portfolio for future adaptation and use. He should note all that pleases him, and endeavour to understand how and why it influences his mind. By thus filling his brain with numberless beautiful little pictures or images, and his intellect with the foundations and sources of pleasure in his art, he will come from Nature doubly primed to give practical utterances to his imaginings, and prepared to embody in a composition the finer touches and more artistic and spiritual elements which he has collected from such a variety of sources. It is in this way that the imitation of Nature will be but the ennobling of art; the airy elegance and flying graces of the one being engrafted on the more substantial characteristics of the other."

The preceding extract will enable our readers to form some idea of the pleasing and attractive style in which the book is written. After laying down the principles upon which the art of landscape gardening is based, Mr. Kemp proceeds to show how they are to be applied, and for this purpose he gives a variety of plans and details, from his own practice, in which he explains the peculiar features of certain places he had to alter and improve, and the manner in which their incongruities were treated. His remarks on architectural gardening, for which the taste appears to be gradually increasing, are full of good sense, and merit particular attention. Its proper sphere is stated to be the immediate neighbourhood of the house, and as an accompaniment to styles of architecture. Whether the latter is a variety of Grecian or Italian, the garden ought to be distinguished by symmetry and regularity. It should exhibit a strict observance of rule, and a prominent indication of art, so as to harmonise with the house and other architectural objects. It specially demands that everything should be good and nicely finished, that the plants be of the best and most carefully selected kinds, the Grass evenly laid, the figures and beds and edgings of walks neatly and accurately cut, and all the lines, whether of walks or edgings, extremely straight or regular.

Respecting other kinds of gardening, some beautiful designs and explanatory details of great interest are given, but for these we must refer our readers to the book itself, in which they will find all the information they can possibly require about the laying out and arranging of flower and kitchen gardens; rock, Fern, and Rose gardens, as well as of those attached to suburban villas, &c. Indeed nothing has been omitted to render the work a perfect guide, that might be confidently referred to on every subject connected with the formation of a garden, and the furnishing of it with the most tasteful and fitting accompaniments for its enrichment. We therefore cordially recommend it as being indispensable, not only to the young gardener, but to all who take an interest in gardening, and desire to acquire a knowledge of the principles upon which the beauty and attractiveness of a garden so much depend.

In conclusion we will merely add that the book is beautifully printed, and has a capital index, which is of itself a great recommendation.

Watts's Excellent Dictionary of Chemistry, Part XV. which has just appeared (Longmans), contains, among other matters, a capital article on Heat, by Mr. George Foster.

Miscellaneous.

Exhibitions of American Plants.—The fine show of Rhododendrons and other American shrubs in the gardens of the Royal Horticultural Society, which has been supplied by Messrs. Waterer & Godfrey, from the almost inexhaustible riches of the Knap Hill Nursery, is to be formally opened to-day. It takes place in a monster tent just constructed, which is some 300 feet long, 120 feet wide, and 55 feet high, and is supported by two iron masts. The display therefore is very extensive, and the choice picked specimens of fine hybrid Rhododendrons with which the tent is crowded, produce a gorgeous effect. The exhibition in the gardens of the Royal Botanic Society in the Regent's Park, which is supplied by Mr. John Waterer of Bagshot, opens on the 6th of June.

Orchids.—We understand that Mr. Robert Warner's fine specimens of Cattleya Mossiæ are now in full bloom, and that any lover of Orchids will be allowed to inspect them. We may add that the display at present made by them is magnificent, and will well repay a visit to Broomfield, which is near Chelmsford.

St. John's Bread.—M. Jules Prévet has given in the *Mondes* the following notice of this plant, more commonly called the Carob tree, its botanical description, and its uses. The Carob (Ceratonia Siliqua) belongs to the family of Leguminous plants. It is a tree which grows principally along the whole of the coast of the Mediterranean. The fruit of the Carob is of a soft sweet pulpy texture. Poor people and children who eat it as food, have every appearance of good health; and animals to whom it is given are fat, glossy, and very much esteemed, on account of their firm juicy flesh. In Egypt, a refreshing but mucilaginous beverage is made from its fruit, and also very agreeable brandy. M. Chevalier, who has recently analysed it, states that its fruit, which is flat, brown, and from 15 to 30 centimetres long, contains water, a sort of vegetable albumen, a kind of gum, cellular matter, a small quantity of fatty matter, resin, some acetic acid, resulting perhaps from the fermentation of a part of the sugary matter, an acid analogous to malic acid, tannin, some uncrystallisable sugar, several salts, phosphates, chlorides, sulphates, potash, lime, and traces of silex and oxide of iron. Instead of Chicory, so fatally called the poor man's Coffee, which is so frequently adulterated, and so unpalatable and unwholesome, M. Prévet proposes to substitute the Carob, torrefied and powdered, as a very wholesome food, agreeable, requiring no sugar, and which could be sent to market at an extraordinarily cheap rate. Coffee, which is an excitant, and antisoporific, which stimulates the secretion from the kidneys, and produces a well-known complaint amongst women, could be well replaced by an infusion of torrefied Carob, which acts at the same time as a tonic and sedative, producing in the pit of the stomach a gentle and beneficial warmth, and having no effect whatever on sleep, &c. Its nutritive properties recommend it as a suitable diet for children. In Africa, where the Carob tree is very abundant, the infusion might be given to troops, who in time would very probably prefer it to spirituous liquors, which only debilitate them.

Singular Case of Parasitism.—In June, 1861, M. Wagner found under the bark of a young Elm which was dead in the neighbourhood of Kasan, some white footless worms, which from their organisation were plainly the larvæ of some insect. Each of these larvæ was itself filled with minute larvæ. In that there was nothing remarkable, for it is well known that cases of parasitism in insects are very common. But what struck M. Wagner was, that the larvæ enclosed were the facsimiles, in the minutest details, of those that contained them. This similarity would lead to the conclusion that the larvæ enclosed represented a second generation formed by the larvæ that enveloped them. Here then is a case of alternate generation still more astonishing than that in Aphides. In Aphides without sexes, false eggs form in an organ which is analogous to the ovary of individuals with sexes, whilst in the footless larvæ found by M. Wagner, the false eggs were formed in the fatty mass. This body is divided into a number of lobes, each of which is enclosed by its own membranes, and forms what M. Wagner calls embryonic portions, a term for which we substitute *pseudova* (false eggs). The development of a false egg appears to resemble very much that of a real egg. M. Wagner has observed three other species of the same kind, all presenting this curious method of reproduction. The perfect insect is at present unknown. From the appearance of the larvæ they would appear to belong to the order of Diptera. *Les Mondes.*

Calendar of Operations.

(*For the ensuing week.*)

THE present is a good time for thinning annuals. If the plants are allowed space, they will develop themselves properly, which cannot be the case when they are crowded together. Such kinds as Nemophilas, Clarkias, Eschscholtzias, Erysimums, and others, which are not only beautiful, but well known, may be freely thinned out. In planting out those which have been raised in frames, it must not be supposed that when they are placed in the ground they may take their chance. Choose, if possible, showery weather for the operation; it will save much trouble and disappointment. Dry and keen winds are seriously detrimental to plants of the description we now allude to; and the trouble of previously potting in small pots, and gradually hardening, will be amply repaid by their size and vigour during the summer; for it will be apparent to every one, that the annual which can be placed where it is to flower, with a ball of soil and a mat of roots, will have great advantage over one which has hardly a particle of earth attached to its fibres when planted.

FLOWER GARDEN AND PLANT HOUSES.

Climbing or trained plants while growing will require constant attention in the way of thinning and stopping. As soon as the weather shall have become more genial, air must also be freely admitted, and pot plants, especially fine specimens, must be allowed abundance of room. Maintain a moist temperature, and see that nothing suffers for want of water. Inspect carefully young stock, especially that for blooming next winter. Early-sown Chinese Primroses and Cinerarias may be had in flower in October and November.

CARNATIONS AND PICOTEES.—Before the plants have made large roots place sticks to them. When deferred to a later period, thrusting in the stick often destroys some of the roots. Attend to watering, which must always be done effectually, taking care that the soil does not shrink from the sides of the pot, so as to allow the water to drain away without benefiting the roots.

DAHLIAS.—These will now be all planted out. The soil should be rich and well worked. If not done stake as soon as possible.

PINKS.—Place small neat sticks to these, and top-dress the beds with good decomposed manure.

POLYANTHUSES.—Shade and moisture are absolutely necessary for these at this season. Save seed from the best-formed flowers.

RANUNCULUSES.—Water between the rows—not often, but when it is done, let it be well done. Keep the beds free from weeds, and occasionally flood the walks round them.

TULIPS.—Attend to hybridising. Well-formed flowers, on the outside beds, or good breeders, exposed to the influences of light, sun, and air, may be successfully crossed. Seedlings should be marked as they bloom.

FORCING GARDEN.

MELONS.—Where the fruit is swelling the soil should be kept in a properly moist state, and every means should be used to preserve the foliage in perfect health, as there is no possibility of obtaining good flavoured fruit unless the leaves are kept in health. Keep the Vines thin, and prevent their being encumbered with useless laterals, and remove any decaying leaves at once, as these when left only serve as a harbour for insects. There is yet time to secure a good crop in dung beds, and if any of the frames which have been used for getting up bedding-out plants can be spared for this purpose, the plants should be got out at once.

PEACHES.—Forced trees in pots that have ripened a few early fruit, should be kept in the house till the beginning of next month at least to finish their growth. Give them plenty of water, and syringe once a day.

PINES.—Where these are grown on the planting out system, it should be remembered that the soil ought to be entirely renovated once in three or four years; the time for this operation must be left to the judgment and convenience of the cultivator; but if all, or nearly all of the older plants in any pit have perfected their fruit, such is an excellent opportunity for the purpose, and this is a very favourable time of year for the operation. The younger plants (which have been put in, one after another, as vacancies occurred) after being well watered, may be carefully lifted with balls, and set in a close shed while the soil is being changed. But if any remain of those which have already shown fruit, they may be left standing, with a small mound of earth about their roots. Or if they are not very far advanced, they may, for appearance sake, be removed with balls to the back row; as they do not suffer if it be carefully done. The soil should consist of about one-third of the best peat that can be obtained, and two-thirds of rich turfy loam, with an admixture of sand, according to the requirements of the other materials. The plants of the back row should be planted before the soil is put in for the second one; and the remaining rows proceeded with in the same order, that none of the soil be needlessly compressed. If the new soil is moderately moist, it will be better to withhold water from the roots for a few days, to allow the plants to make an effort of their own; and until they are thoroughly re-established a moister atmosphere must be kept up, and the pits shaded rather more than usual.

VINES.—A liberal supply of air is the best preventive against scorching. In finally regulating the Grapes of the latest crops, which are intended to hang through the winter, rather more should be cut away than from those intended for earlier use, that the bunch when ripe may hang looser. This will detract a little from their appearance, but the free circulation of air amongst the berries will do much to preserve them from injury in damp weather.

HARDY FRUIT AND KITCHEN GARDEN.

Water where necessary, and keep down weeds among growing crops.

CELERY.—A first planting of early Celery may now be put in. Do not spare rich compost, decayed leaves, cow manure, &c., for the bottom of the trench.

LETTUCE.—Prick out as wanted, when old crops are done with remove them, and manure and dig the ground.

ONIONS.—An occasional dusting with soot, on damp evenings, has been found highly beneficial to these. Thin out, and hoe between the rows.

PEAS.—Continue to sow for late crops.

POTATOS.—Stir the soil between the rows, and earth up as requisite.

RADISHES.—The Turnip-rooted are best to sow now. The Black Spanish where liked, may be got in for winter use.

TURNIPS.—These come in well as successional crops. The Snowball, Orange Jelly, and Stone, are excellent.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,
For the Week ending May 25, 1864, as observed at the Horticultural Gardens.

May.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 19	13	30.195	30.165	81	43	62.0	59½	56	S.E.	.00
Friday 20	14	30.165	29.928	82	44	63.0	60	56½	S.W.	.16
Satur 21	○	30 009	29.945	63	44	53.5	60	57½	N.E.	.01
Sunday 22	16	29.981	29.947	74	35	54.5	59	57	N.E.	.00
Mon. 23	17	30.139	29.929	60	26	43.0	60	57	N.E.	.00
Tues. 24	18	30.224	30.174	60	30	45.0	58	56	N.	.00
Wed. 25	19	30.051	29.886	71	42	56.5	58	56	N.	.00
Average.		30.109	29.996	70.1	37.1	53.9	59.2	56.5		.17

May 19—Very fine; with heavy dew; very dry air; fine at night.
— 20—Very fine; wind changed to S.W.; thunderstorm at night rain.
— 21—Rain; fine throughout.
— 22—Fine; cloudy; fine; cool at night.
— 23—Cloudy and rather boisterous; fine; frost at night.
— 24—Fine but cold; hot sun and cold north wind; slight frost at night.
— 25—Hoar frost early A.M.; fine; cloudy; fine at night.
Mean temperature of the week 2½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,
During the last 38 years, for the ensuing Week, ending June 4, 1864.

May and June.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 29 .	66.9	44.8	55.3	13	0.97 in.	3	12	3	2	7	6	4	7
Mon. 30..	68.0	45.2	56.6	16	0 34	3	8	6	1	3	9	4	4
Tues. 31..	69.1	45.1	57.1	14	0.48	2	8	7	1	5	8	5	2
Wed. 1..	68.2	44.1	56.1	13	0.27	1	11	4	—	5	11	3	3
Thurs. 2..	68.4	45.0	56.7	16	0.87	1	4	3	5	3	10	6	5
Friday 3..	69.0	44.4	56.7	17	0.91	1	4	5	1	5	14	3	5
Satur. 4..	69.1	44.8	57 0	14	0.76	2	5	2	2	4	11	8	4

The highest temperature during the above period occurred on the 3d June, 1846—therm. 85 deg.; and the lowest on the 31st May, 1857—therm. 32 deg.

Notices to Correspondents.

ASTS: *Mr. Bennett* says that in reading over his communication (see p. 486) he sees that he has omitted to state that the birds which are used as traps for these pests should be cut open before being placed in the runs.

BOOKS: *Amateur.* Thompson's Gardeners' Assistant will doubtless answer your purpse.

BRITISH PLANTS: *G S T.* You will probably get the plants you inquire about of Mr. Sim, Footscray, Kent, if indeed some of them are procurable anywhere.

DOUBLE CARDAMINE: *C J D.* There are both a double purple-flowered and a double white-flowered variety, known in cultivation. Yours, found wild near Chorley some few years ago, and which makes a very useful border flower, is a good deal like the purple one occasionally met with, but we have none at hand to compare it with. We have not heard of a second double purple variety like the distinct smaller sort you mention.

GOLDEN-LEAVED PELARGONIUMS: *Mary.* The best of the golden-edged Pelargoniums with a red zone which has yet been made public, is that called Lucy Grieve; but Mrs. Pollock is good—very good, and more plentiful. We prefer Cloth of Gold amongst the yellow-margined sorts which are not also zoned with red.

MELON LEAVES: *J P.* Your leaves are scorched, either by the sun or by dryness at night in consequence of radiation. It is very possible, however, that they would have felt neither had they not been constitutionally weak. Scorching and withering can be guarded against; but no one knows how to remedy constitutional weakness. There is no Fungus on your leaves. *M. J. B.*

NAMES OF PLANTS: *A J.* Polemonium cœruleum; *vulgò*, Jacob's Ladder.—*S S.* Rheum crispum.—*Tavistock.* 1, Hebenstreitia dentata; 2, Crotalaria semperflorens.—*Y E R.* Onosma echioides.—*R S.* 1, Saxifraga Cotyledon; 2, Veronica saxatilis; 3, Saxifraga palmata; 4, S. hirta?—*Bertie.* 1, indeterminable; 2, Spiræa prunifolia fl. pleno; 3, Asplenium Adiantum-nigrum acutum; 4, Woodsia obtusa.—*Eastbourne.* Glaucium luteum—a mild narcotic of no importance.—*A Subscriber.* 8, Adiantum Capillus-veneris; 9, Adiantum formosum.—*M.* Ligustrum sinense. *S.*—They are all varieties of Polygala vulgaris, which is very sportive in regard to its colouring. *J D.* 1, Dryas octopetala; 2, Potentilla rupestris.—*C. K. F.* Æsculus flava.—*G. S.* It is certainly Rhododendron theiflorum. Your informant can't know anything about the species of this glorious genus.—*L E R.* 1, Spiræa hypericifolia; 2, Spiræa opulifolia; 3, a deformed Narcissus poeticus.

PYRETHRUMS: *J J H.* You should make your selection of the new double Pyrethrums now, or very shortly. We believe Mr. Salter's collection is or will soon be in bloom.

RHODODENDRON FORTUNI: *Bromley Palace.* We are obliged to ask you to wait for an answer till next week, as we have no flower in our herbarium, and you have sent no leaf.

VINE DISEASE: *G B C.* We have examined your Vine leaves and Grapes very carefully. Though the upper leaves look white, it is only from the hairs, not from any mould. Your Vines are evidently affected with the disease called Chlorosis, but why they are so affected it is impossible to tell without personal examination, and perhaps after examination we might be as little able to point out the cause. Water one of your Vines with a *weak* solution of sulphate of iron (copperas), and see if it has any effect, but do it cautiously. There must, however, be some local cause, as more than one variety is affected, and this you may, perhaps, be able to discover. *M. J. B.*

WATERING: *Subscriber.* The best time to water a garden at this season of the year is in the evening, because the moisture is not then so speedily dissipated.

WATERING CONTRIVANCES: *Dover.* Don't buy it. Experto crede Roberto.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
SPRING SESSION, 1864.
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Professor J. MORRIS, F.G.S., of University College, London—On GEOLOGY.
JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.
WILLOUGHBY WOOD, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.
JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.
JOHN THORNHILL HARRISON, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.
THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.
ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.
RICHARD GRIFFITHS WELFORD, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.
Applications for Admission and for further particulars may be made to the Principal.

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For particulars, apply to him, at 52, Parliament Street, Westminster.

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MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

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"THE REARING of CALVES." By THOMAS BOWICK, Britannia Farms, Bedford (late Stoneleigh Abbey Farm).
By special permission of the Royal Agricultural Society of England, a reprint from their Journal of the above Essay is now before the public, by Messrs. DAY, SON, & HEWITT, 22, Dorset Street, Baker Street, London. Price, by post, Three Stamps, or Five Copies for Twelve Stamps. This celebrated Essay should be in the hands of all Breeders, from the large Dairy Farmer down to the Cottager with his One Cow.
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"Mr. Bowick's Essay, in a concise way, goes into the question of the construction of the Calf-house, the condition of the Cow before Calving, the best season for Calving, the Feeding of Calves, the Quantity of Milk and other food, the Health and Disease of the Young Calf, the Spring and Summer Feeding, &c. We recommend the perusal of the Essay to those who are employed in rearing calves."—*Mark Lane Express*, November, 1863.
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"The Essay will be very acceptable to Farmers, in general and a better two-penn'worth it would be impossible to recommend. It ought to be sown broadcast over England; and no farmer, bailiff, or servant in husbandry should be without it."—*Worcester Herald*, 2d January, 1864.
*** Address: DAY, SON, & HEWITT, 22, Dorset Street, Baker Street, London, W.

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Admission 2*s.* 6*d.* until 6 P.M.

DOG SHOW OPEN THIS DAY, and MONDAY, TUESDAY, and WEDNESDAY.

ADMISSION after 6 P.M. on SATURDAY, One Shilling.

ADMISSION, DOG SHOW, MONDAY, TUESDAY, and WEDNESDAY, 1*s.*

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Admission, SATURDAY, May 28, 2*s.* 6*d.* until 6 P.M., and after 6 P.M. 1*s.*; and on MONDAY 30th, TUESDAY 31st, and WEDNESDAY, 1st June, 1*s.*

SECOND INTERNATIONAL DOG SHOW.
Open from 9 A.M. to 9 P.M.

AGRICULTURAL HALL, ISLINGTON.—The HORSE SHOW will open July 1. Entries close on June 20.
PRIZE LISTS are now ready and may be obtained on application to S. SIDNEY, Secretary.

BATH and WEST of ENGLAND SOCIETY, for the Encouragement of Agriculture, Arts, Manufactures, and Commerce. Established 1777.
Patron:—H.R.H. The Prince of Wales, K.G.
THE ANNUAL EXHIBITION of STOCK, IMPLEMENTS POULTRY, WORKS of ART, and HORTICULTURAL SPECIMENS, will take place at BRISTOL, on JUNE 13, 14, 15, 16, and 17.
President, 1863-1864:—The Rt. Hon. Earl Fortescue.
The CATTLE and POULTRY will be OPENLY JUDGED, on MONDAY, JUNE 13.
THE OTHER DEPARTMENTS WILL BE OPEN AS FOLLOWS:
STEAM ENGINES and MACHINERY in MOTION; The ARTS and HORTICULTURAL DEPARTMENTS.—MONDAY.
STEAM PLOUGHS & CULTIVATORS, MOWERS & REAPERS, to work from 11 to 3 o'clock, on TUESDAY and WEDNESDAY.
HORSE SHOEING, at Portable Forges.—WEDNESDAY.
The ANNUAL MEETING and BANQUET, on WEDNESDAY.
The HORSES paraded in the Circle at 12 and 4 daily.
The Band of the Royal Marines (by permission of Colonel Gascoyne, C.B.,) will play on Monday, Tuesday, and Wednesday; and the Band of the Grenadier Guards, (by permission of Colonel Lambert,) on Wednesday, Thursday, and Friday.
ADMISSION:—On MONDAY, TUESDAY, and WEDNESDAY, 2*s.* 6*d.*; THURSDAY and FRIDAY, 1*s.*
HENRY ST. JOHN MAULE, Secretary, 2, Wood Street, Bath.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE-ON TYNE, July, 1864.
LAST DAY for Entry of Stock, Wool, and Butter, 1st June. All Certificates received after that date will be returned to the senders.
Prize Sheets and Certificates will be forwarded on application to H. HALL DARE, Secretary.
12, Hanover Square, London, W.

The Agricultural Gazette.
SATURDAY, MAY 28, 1864.

MEETING FOR THE ENSUING WEEK.
WEDNESDAY, June 1—Agricultural Society of England.. Noon

As we are going to press, a conference on the subject of COTTAGES FOR THE LABOURING CLASSES is being held in their public rooms by the Society of Arts. We hope to give a report next week of any suggestions which may be made or information that may be given on this occasion in connection with the several points to which the Society is anxious that attention should be directed. How fully the discussion is to embrace every side of the question appears from the following programme of the discussion.

The points to be illustrated in succession are the following:—

1. The insufficient number of habitations for the labouring classes in town and country,
2. The badness of the existing accommodation.
3. The effects arising from this state of things, viz.:—
   (*A*) Religious, moral, and social.
   (*B*) Sanitary.
   (*C*) Economic.
4. The causes to which these evils may be, or have been, attributed, such as—
   (*A*) The Law of Settlement.
   (*B*) The Poor Laws.
   (*C*) Tenure of property, such as mortmain, leasehold system, tenancy for life, &c.
   (*D*) Legal difficulties affecting the transfer of property.
   (*E*) Difficulty of providing proper dwellings at a cost which will be remunerative to capital in town and country.
5. Remedies:—
   (*A*) What can be done by Legislation?
   (*B*) What can be done without Legislation?
   (*C*) What assistance, if any, can the Society give in either of these directions?

It is plain, as regards the last question on this list, that the Society are answering it themselves in a very effective manner. The public discussion of difficulties by those best qualified to assist in their removal is the best assistance that can be given *ab extra* towards the solution of those difficulties which are thus pointed out.

And, for the rest, it has been more than once pointed out in these columns that the difference between the field and the garden value of land is the cottage-building landlord's great resource and help. Ten acres of land divided into large gardens for a hamlet of 20 or two dozen new cottages may be worth but 15*l.* per annum to the farmers: they are however worth from 60*l.* to 80*l.* per annum to the tenants of the cottages. And the difference between those two sums represents a capital sum of 900*l.* to 1300*l.*, which is a contribution of 30*l.* to 40*l.* per cottage towards the cost of their erection. Add to this the interest of the tenant farmer in having labourers near their work, which should make him willing to bear his share of the annual cost of cottages upon the farm; and it appears to us that in country districts there is little real difficulty in the way of those owners of land who may lament the insufficiency of cottage accommodation on their land.

The man-engine in the Cornish mine, by which half an hour suffices to take the miner to and from his work, in place of the hour or two at either end of the day wasted in climbing up and down the ladders, has added a full third to the efficiency of his labour. A cottage on the farm, compared with one in the village three miles off, is like a man-engine in contrast with the ladders. A labourer fresh to his task can accomplish it more satisfactorily than one who does an hour's work before beginning it. And the tenant farmer on this ground may well be expected to bear his share in the burden of supplying the cottages by which the value of his labourers is so much increased to him, and the profitableness of his farm is increased.

The plans and details of construction by which cottage builders should be guided are well illustrated in Mr. BAILEY DENTON'S valuable lecture on the subject, reported in the Journal of the Society of Arts for May 13.

WE saw the other day several fields covered with 12 to 14 tons of Grass per acre. It stood as high as a walking stick, and as thick upon the ground as it could grow. Of a dark green colour, and still succulent from end to end of every stalk, with the flower spike barely through, it was then the very best green food that could be given to milk cows. And for this purpose it was being sold. Cow keepers in the neighbourhood were coming all day long and carrying it away, paying 1*s.* a rod, or at the rate of 8*l.* per acre for it on the spot. And many tons (from 6 to 30 daily) were being sent in to London cow houses; 25*s.* a ton being charged for it delivered there.

One piece which had been cut the previous evening had yielded 29 cwt.; it was 500 square yards in extent. Another piece had been cut the day before, and had yielded 65 cwt. it was 80 yards long and barely 15 wide. In the former case the produce had been after the rate of fully 14 tons per acre: in the latter it had been about 13 tons per acre.

Twenty acres or more had been already cleared, and the land cut earliest (in the end of April), is already covered nearly 2 feet high again. A second cut will be ready there before the middle of next month, a third towards the end of July, and a fourth in September. Perhaps a fifth may be obtained, or the last growth may be grazed upon the land.

The particular field to which we are alluding now, was sown in the autumn of 1862. It yielded four, and some of it five crops last year—12, 10, 7, and 5 tons per acre respectively; and it looks as strong and well this year as ever it has done. The land is worth barely 30*s.* per acre naturally; it is a light soil, shallow, and on gravel—but, richly manured, as near London it may be, it lets in the neighbourhood for 2*l.* and upwards. There are some 240 acres thus in Grass, for the most part in Italian Rye-grass. The enormous productiveness of that plant under favouring circumstances has probably hardly anywhere as yet been fully realised; but it may be well to describe the circumstances under which the produce witnessed in the case referred to has been obtained.

The land in question, about 300 acres in extent,

is let to the Croydon Board of Health, and they have sublet it to their tenant Mr. MARRIAGE for a term of nine years at 5*l.* per acre. It lies near Beddington railway station, about two and a-half miles from Croydon. Mr. MARRIAGE receives the whole of the sewage of Croydon for the use of this land; and passing the whole (about one million or more gallons a day) over the surface of the land, he thus removes from it its noxious and fertilising elements, and converts the filthy turbid ditch-water which comes on to the farm into the clear and limpid stream which leaves it.

The greater part of this land lies on a very uniform and regular slope below the point at which the sewage is received. The channel which brings it is about 6 feet wide, and the stream is usually about 18 inches deep. The water is dark enough to render a white card invisible at about 4 inches deep in it. It is not so filthy as the sewage either of Edinburgh or of Rugby; and this it owes in part to a preliminary separation of much of the solid contents of it, which takes place at the filter-beds below the town—so that only the soluble matters or particles in easy suspension are carried to the farm. There, by the ordinary plan of occasional stops placed in the channel, it is made to flow down furrows about 16½ yards apart, from which by other stops it is gradually poured out over the intervening lands. The slope is so uniform that this is easily effected. Much of the water sinks through into the gravel subsoil, much of it pours over the surface, and excepting the loss by evaporation in the one case, and by final infiltration in the other, both the water which flows and the water which sinks, reappears in the ditch along the lower edge of the field. This ditch carries it to fields which lie upon a lower level—so that the sewage undergoes a double process of filtration over and through the soil before it leaves the farm. Mr. MARRIAGE is responsible for any nuisance that may be charged upon the farm; but although legal proceedings were taken some years ago against the Board of Health because of the nuisance they were guilty of when only a small piece of land had been used, none has yet been proved or even charged against Mr. MARRIAGE and his farm. The land, laid out as described, is sown with Italian Rye-grass in the spring or autumn. In the latter case, as soon as the plant is fully established the field receives the water at intervals of a few days during the winter. One million or more gallons have to be used and purified every day, so that at short intervals every field is continually throughout the year being flooded. In the first year it yields about four cuttings, as already described, and in the second year as many. In the third year the plant begins to disappear, and natural Grasses take its place. It has, however, hitherto appeared to be the best policy to plough the land up as soon as the Rye-grass fails, and to resow. In the third year accordingly it is grazed hard down in the spring, ploughed up, and a green crop is taken and either resown in the autumn on the removal of that crop or sown with a corn crop and Grass seeds in the spring. There are 240 acres of the 300 within reach of the water, and of these some 180 to 200 acres are continually under Grass and irrigation. A field which we had seen in the spring of 1862, then in its first crop of Italian Ryegrass, but not covered with a good or even plant, owing to the rough management which alone was possible in the outset, is now covered with various natural Grasses which have taken its place. This field is now being ploughed up, will yield a crop of Turnips, and probably be sown down again in 1865.

Besides the growth of Grass for sale, a herd of 40 cows, with other young stock and many horses, is kept upon the farm for its consumption. And thus, as well as by the expedient of hay-making whenever that is necessary, any irregularities of demand for the produce which may occur are met. No difficulties of the kind have, however, yet proved very formidable.

The large produce, probably 8000 tons or more of green food, annually disappears as fast as it is grown; and there will no doubt prove to be room enough in the demand of 3,000,000 of people for all the produce which will one day similarly arise out of a proper use of the 20,000,000 cubic feet per diem of sewage water, which is about the quantity in the way of the Metropolitan Board of Works.

—— WE call attention to the fact that Wednesday, June 1st, is the last day on which entries can be received by Mr. HALL DARE, at the Society's rooms in Hanover Square, of stock for exhibition and competition at Newcastle in July.

PIG FEEDING.

No doubt you have seen the following extract, which I have cut from a weekly paper, but as all your numerous readers may not have seen it, I take the liberty to reproduce it for their especial edification:—

"A farmer near Dorchester has now the enormous number of 3000 pigs. He breeds and purchases to keep up his stock. One week he bought 600 pigs. They are fed partly on Wheat."

It certainly is a novel announcement, but like a new novel, I suppose it is "too strange not to be true." I regret the name of this spirited pig breeder is not given, as no doubt the number of visitors to see such a farm would rival those edified by studying the system of the kind and considerate Alderman of Tiptree Hall.

I beg to consult you, sir, under very peculiar circumstances. I have a large family, and have left the army, intending to adopt agriculture as a profession, at home, or in one of the colonies, but am sadly puzzled to determine where it is likely to pay best? I have consulted many friends; some say, "See what has been done at Auchness Farm, what is now done by Alderman Mechi, and you may do the same, if you take the same means;" others say, "go to Ireland, where land is better, and everything cheaper than in England." Some recommend Canada, near the lakes, others New Zealand or Tasmania.

I have an excellent general knowledge of agricultural pursuits, having long studied and watched the best systems, while I have an enthusiastic love for the life of a farmer, to which I can bring a working capital of a few thousands.

I have studied many standard agricultural works, but that which has most startled me is Mr. Mechi's "How to Farm Profitably," according to which the best paying stock for the farmer is swine. From this I have been induced to consider seriously if a pig breeding farm on a large scale would be likely to pay well? I mean to grow crops to be exclusively consumed by breeding sows, selling off their progeny when weaned, or as soon after as possible, while some should go to market as "roasters." The various roots, corn crops, pulse, Grasses, and vegetables should be grown on the farm, and properly prepared and cooked; while various sorts of offal may be advantageously purchased for feeding say 200 breeding sows.

If Cobbett was near the truth in saying a cow could be kept on one rood of cultivated ground, then I should like to know how many breeding sows one acre should keep?

There can be no doubt pig breeding economically and judiciously managed must pay; then arises the question, On what scale, and under what circumstances is it most profitable?

Two friends of mine, one in the extreme west of Ireland, and one in Hants, reclaimed large tracts of land by adopting the Mechian system of purchasing corn largely to fat pigs merely for the manure; but this, though part of my plan, is by no means its chief feature. I certainly want what Mr. Mechi would call "pig pudding," and urine to improve my land, but I must also have a certain profit by each sow.

I "go the whole hog" with the worthy Alderman on draining deep and clean cultivation, liquid manure, large fields, house feeding all stock, cooking, warmth, and comfort for them, keeping them on boards, &c., but the difficulties are, applying the liquid manure, building the houses, reconstituting the farm. I do not find landlords willing to listen to all this, yet I believe the time is coming when such things must be done by landlord or tenant, under an encouraging lease, which very few will grant. *Agricola.*

THE VEGETABLE MOULD.

IN the cooler portions of the temperate zone there is greater difficulty than in warmer regions in restoring the vegetable mould when much exhausted by improvident agriculture, or in improving it when naturally defective. Irrigation, the all powerful fertilizer in the warmer climates, is liable, if carried out extensively in our cooler localities, to have injurious effects by lowering the temperature, and at the same time disposing the Cereals, Grasses, Legumes, Potato, to blight—to disease caused by Fungi or by animalcule destroyers. The Cereals around a small lake in this neighbourhood were almost every season blighted by red and brown varieties of Fungi, and the blighting removed by drawing off the water forming the lake by a tunnel. The same fungous disease termed mildew is well known to prevail around millponds, and stagnating pools, but apparently not so much near running water, or even extensive lakes. In the case of rapid streams the motion may affect the atmosphere favourably, while the force must increase the temperature; and in large lakes the commotion of the waves must produce something of the same effect, while in the small lakes and ponds very little wave commotion takes place. Moisture rises from stagnating pools often as a steaming fog, and lodges on the low ground adjacent, causing some atmospheric change favourable to the growth of Fungi. Under extensive irrigation Cereal blight will no doubt prevail, and the Gramineæ might also suffer. The prevalence of Fungi upon the leaves and stems of Grasses has been found highly detrimental to cattle.

In some of the warmer sand districts in continental regions of higher latitude than 40°, irrigation during the dry hot season will be highly beneficial. In winter also, when the growth is dormant from cold it is found advantageous, where easily practicable, to lay the old Grass pastures under river water, more especially when the water contains lime in solution, or carries a little floated mud. This is a common practice in Holland, and other low flat countries. But generally in all the moister countries of low temperature, such as the British Isles, summer irrigation, except very partially carried out, or with the highly nutritious drainage of cities, may be quite as injurious as beneficial. If followed to any considerable extent, the loss by mildew and a lowered temperature may more than balance the gain of irrigation. Even Mechi's liquid dressings, if generally carried out, must act in the same direction. But this would have little influence compared to extensive Grass-field irrigation effected by steam power or by windmill power, which latter I have seen in use in Holstein. Irrigation may also in cooler climates affect the health of the population, as it does in the warmer, though to a less extent. In the case of rivers or stagnating water giving out miasma, it has been found that muddy water, even water containing the washings of farmsteads, is more wholesome than clear water, probably from the deodorising and purifying effect of earth matter or mud.

The natural high road to the improvement of the vegetable mould by irrigation not being generally judicious in the moist and cool climate of the British Isles, at least unless hot water be obtained by deep Artesian bores, the other means of its improvement are various and much dependent upon local opportunities. To succeed in this the judicious farmer, having his improvements protected, will look around him and observe his opportunities. He will pursue an easy rotation of crops, have always heavy crops with the produce as much as possible returned as manure: proper drainage; clean and careful tilth; deep stirring, especially when the subsoil is good, so that the air and roots of plants may penetrate deep into the soil; procure large manures where possible, and where large manures cannot be obtained, a judicious selection of small manures in order to obtain large manures; he will use plenty of cake with feeding stock, and especially have the Grass land laid down rich of manure. Also in the case of light sand, claying the ground if good clay can be obtained near. On the coast, beach-sand, composed of comminuted shells, as is found on some parts of the west coast of Ireland, forms an excellent manure. I have known this carted a considerable number of miles into the interior, and esteemed much more than seaweed, which, however, every farmer near the coast should do his utmost to secure when drifted ashore.

As an illustration of utilising local opportunities, I may here state the method pursued by one of my sons in Holstein, to improve the more arid sand portion of his ground, where before his occupancy, the vegetable mould had been much exhausted. Having a considerable portion of land under coarse Grasses, Carices, &c., upon a formation of peat or peat earth, and where the dammed up water of mills prevents drainage and aëration, he adopts the plan of stripping off, as he requires it, the surface of a portion of the ground about 3 inches deep, that is the coarse Grass sward and a portion of the peat earth. This is taken to the dry sand fields and is well mixed with fresh cattle and horse manure from the farmstead, and with town manure from Altona, about two loads of the peaty sward for one of the manure, and a large hill formed, fully 5 feet high, of the compound. This remains for about six weeks till it has thoroughly heated, when it is spread and ploughed in for a crop. Here the heating corrects the preservative acid of the peat, digests the mass, and the whole becomes an active manure. The portion of the meadow thus stript of the sward, receives a surface dressing of city manure, and without ploughing is sown with proper seeds, and in two years becomes clothed with superior Grasses to those of the original sward. As the moss is in some places accumulating, this supply will not soon fail. This system was once practised in Scotland, introduced by the North Frieslanders, when the greater part of their own country being submerged, they colonised the lowlands of Scotland, bringing with them their language and customs, about the same time that the old Germans of Anglen, now Schleswig-Holstein, colonised and gave their language and name to England. I have found the language of the Island of Sylt, off the shore of Schleswig (a remnant of the ancient Nordic Friezland), almost the same as our broad Scotch. For the purpose of making manure my son also keeps a flock of several hundred sheep. These during the day follow the shepherd (not driven) over the uninclosed pastures, and at night lodge in one of the old German barns: the walls of which, for aëration, are of warped twigs. This barn is bedded with the same moss turf sward, and the bedding renewed every few days till the depth of about 4 feet, when the heated mass is removed and immediately applied to the land (an excellent manure) and a new bedding begun. In the depth of winter the sheep are here fed with hay, straw, Turnips. Having good sea marl in different parts of the ground, in spare time, generally during strong frost, a portion of the ground receives a dressing of marl upon the old Grass, about

60 waggons to the acre. This is spread and remains exposed to the atmosphere all summer, when the field is broken up in autumn for a cereal crop. This exposure to the air is necessary that the acridity of the marl may be corrected. This marling is seldom or never repeated. Without this application of marl, or being limed, the greater portion of the land will not grow Clover. The only crop that does not benefit by the marling is Oats, which apparently suffers by the marl rendering the soil too loose. This the pressing machine might perhaps correct. Numbers of the old farmers are averse to marling. They say it enriches the father and impoverishes the son. No doubt it hastens the digestion of the vegetable mould, renders it more immediate food for the plant, and thus requires a greater supply of large manures to balance the greater consumption. It is, however, valuable as promoting the growth of Clover and other lime plants, which are especially calculated to improve the quality and increase the bulk of the manure.

In going over last summer to Holstein, partly with a hope to meet and converse with Baron von Liebig upon the vegetable mould, I observed a rather interesting fact respecting the Rye plant, so much sown on the lighter soils of Germany, and the staff of life in the north of Europe. In going through several Rye fields belonging to my son, of a superior kind of Rye, I endeavoured to select the most prolific ears and best developed grains in this cereal, which presents, like other plants under the culture of man, considerable variety. I found it more disposed to have vacant spaces in the ear than any other kind of grain. This led me to examine more minutely into the cause of the vacancies, and I came to the conclusion that it was owing to the defective fecundation. In fields of Wheat I found a few ears of Rye scattered amongst the Wheat, with strong stems and large ears, but with very few or no grains in the ear. I also found a few scattered ears growing on the public roads in the same unfruitful condition, but especially given to the production of the Fungus disease *Ergot*. I also knew that in the blooming season, in time of a gentle breeze, smoke clouds of the pollen of Rye are seen driving along the Rye fields, exactly the same as in this country we observe along fields of Rye-grass. These facts led me to conclude that Rye, and also Rye-grass, are gregarious plants; that the pollen of a particular ear goes to fecundate other ears and not itself; that Rye cannot exist like other cereals in solitude; that the pollen clouds are necessary to fecundation. Rye is perhaps the cereal that has been longest cultivated in fields by man, and this fact goes so far to prove the adaptation power of organic life to circumstance. *Patrick Matthew, Gourdie Hill, April* 25, 1864.

WHAT IS AGRICULTURAL CONDITION?

IN reading Mr. Thompson's able article in the last number of the Royal Agricultural Society's Journal, I was led to inquire, what is agricultural condition? how can a money value of such condition be ascertained?—as being two questions very often essential in the settlement between in-coming tenants and their predecessors, and which, if they could be readily answered, would tend very much to encourage good farming towards the end of a lease, and I think the succeeding narrative of Mr. Lawes's continued experiments on Wheat culture will assist me in finding the answer. Now the general repair of buildings, fences, &c., can be readily ascertained. The cleanliness and proper cultivation or aeration of the arable lands can be seen and valued, or their deficiency estimated. But the unexhausted manure, left or supposed to be left, has been a fertile source of dispute and annoyance, and several unsatisfactory methods have been devised to ascertain its value. Mr. Lawes's elaborate figures prove that on his soil cleanliness and proper cultivation will ensure a minimum of 16 to 20 bushels of Wheat as the natural productive capability of the soil. Mr. Smith, of Lois Weedon, has shown that the annual capability of his soil is double this amount. It is probable that all soils as generally left after a white crop, taken by an outgoing tenant, are reduced to this natural minimum of condition, and that the variation of this minimum of corn-bearing capability is one of the chief reasons for the variation of rent in different lands. It is also highly probable from these experiments that any farm cultivated on the alternate system (*i.e.*, two-course or four-course) will produce the same amount of corn one year with another, according to the season, from half the land as if the whole were grown annually with corn, but of course at only half the expense of seeding, harvesting, &c. Hence the usual stipulation, besides keeping the land clean, that the tenant shall not take two white crops running, and shall leave half his land in fallow or some fallow crop ready for a corn crop. This, if the fallows or fallow crops have been unmanured, appears to be the minimum amount of condition in which land can or ought to be left. Cleanliness and good tilth should be exacted; any manurial condition left in the land unexhausted by a corn crop should be paid for—the incoming tenant being entitled to have half his land (where suited to alternate husbandry) in a condition to produce what I have called its minimum capability of corn, and being equally ready to pay for any extra amount left him, as he does for the artificial manure and labour applied to the root crops, and in many cases for part of the cake consumed in previous years. How this can be satisfactorily ascertained and valued I propose to consider in a future letter, if you think the subject suited to the pages of the *Gazette*, together with some observations on the manufacture of manure in the rotation of crops which will arise out of the discussion, founded as well on a lengthened experience as on the articles above referred to. *J. B. M.*

LIME-WASHING SLATED ROOFS.

EVERYTHING that tends to keep the animal frame comfortable, either by warmth in winter and coolness in summer, tends to increase the farmer's profit. I assume that every farmer who knows his own interest will take care to make plenty of manure in summer as well as in winter by soiling or shed feeding animals on green food cut into chaff or short lengths, taking care to add to it some cake or corn. Any man who does not cut up into short lengths his green crops for soiling, omits to economize a valuable article of food. This remark applies especially to my strong crop of Tares, with self-sown Wheat, two feet high. Assuming then that we have plenty of young and old bullocks under slated roofs, those slates will feel almost as hot as fire when the summer sun shines upon them, for their dark colour absorbs the heat; whiten them by applying limewash, and they will be perfectly cold. Try the experiment on a single slate, and then lay your hand on each—you can scarcely bear to keep it upon the unlimed slate. Oh! but then the rain will wash it off! No, it will not, nor will all the rains that fall through the year—of course I assume that you limewash them in a dry day; it dries on in less than an hour when the sun shines. It is well to make the limewash pretty soup like, not quite so thick as thick gruel. But if rain will not wash it off, the winter's frosts will gradually remove it, so that it must be done once a year; May is a good time. There is one other advantage in lime-washing slates or tiles—it destroys vegetation, and your tiles and slates will always look new, however green and old, and, being freed from vegetation, will shoot the water more quickly. The slated roofs of my own house are whitened annually, and the lead work painted white, which prevents its buckling or cracking. Consequently the upper rooms are pleasantly cool, instead of being like an oven. The same remark holds good for cottage roofs, especially desirable in those low roofed chambers; and where there is no fire-place, or deficient ventilation in a crowded bedroom, which is too often the case, a couple of 2-inch or 3-inch drain pipes put through the wall near the ceiling, will cause a pleasant ventilation and prevent a corrupt atmosphere and fevers. They may be closed at will. The philosophy of lime-washing is that white reflects or repels the heat, just as they wear white cotton in hot climates; black absorbs it. London is a hot-bed in summer, and bugs thrive well in the super-heated upper chambers of poor neighbourhoods. The lime-washing hint may be safely taken in such cases. Our thin brick built cottages for labourers in the country are hot in the summer, and very damp in the winter, each heated brick absorbing, perhaps, half a pint of water from driving rains, and in cold weather the water draws inward to the warmer rooms, causing many diseases. Now if these brick cottages were well lime-washed (the pores of the bricks filled in fact with lime), they would not only repel heat in summer, but also partially resist wet in winter, the smooth limed surface drying off the water more quickly. Whenever intelligence increases, landlords and tenants too, who have a great horror of high poor rates, will look to these little but important matters, which, with drainage and pure water, will prevent many an industrious labourer and his family from becoming heavily chargeable to the parish either as an indoor or out-of-door recipient of poor-rate. Benevolent individuals who desire to do good, will be spared the pain and charge of the miseries resulting to their poorer neighbours by neglect in these matters. *J. J. Mechi, May*, 1864.

Thin brick houses should be painted white or cemented.

STEAM CULTIVATION.

[Mr. Robert Ransome read a paper on this subject before a Suffolk Farmers' Club in the beginning of the year, from which we make the following extracts.]

THE advantages of a deep and thorough cultivation of the soil, judiciously carried out, have, from the earliest periods, been exemplified in the increased fertility of land under garden culture, as compared with similar land less carefully cultivated. But whilst the advantages of spade husbandry are everywhere admitted, it cannot be disputed that, by the cost of labour, its application on a broad scale is placed entirely out of the reach of the British farmer; for this reason many have been the attempts of ingenious and persevering men to find a method of extending these advantages by substituting for the spade the subsoil plough, the trenching plough, and every conceivable form of broad-share plough, scarifier, cultivator, and grubber. The great advantage of the autumn cultivation of stubbles by means of the scarifier was early drawn attention to by the agriculturists of this country; but although Biddell's and other scarifiers fulfilled, as implements every requirement, that system of culture was not established on an extended scale. The reason for this failure lay in the circumstance, that to obtain the full benefit of the system it was necessary to employ the scarifier immediately after harvest, whilst the number of horses which a farmer could afford to keep not being sufficient to complete all the scarifying desirable during the fine weather, he was either compelled to subject only a small portion of his farm to this treatment, or else to protract his labours so far into the autumn, that the land, having become wet, was more damaged by the treading of the horses than benefited by the stirring. From these causes farmers, although still keenly alive to the advantage of more thorough tillage than they had at command, were constrained to continue in the old paths until the power of steam should be placed at their disposal. I shall endeavour to show how, from small beginnings, the application of steam to tillage purposes has steadily advanced, until by its aid it has become possible to obtain on a large scale, at a reasonable cost, the more perfect cultivation and enlarged fertility which have been hitherto the distinguishing attendants of spade husbandry.

History of Steam Cultivation.—Although for very many years frequent attempts have been made, and amongst others by Messrs. Heathcote, Parkes, Fiskin, Lord Willoughby d'Eresby, the Marquis Tweeddale, Messrs. Usher, Romaine, Hannam, &c., to cultivate by steam power, it is only within recent times that these attempts have won any considerable amount of public attention. In the year 1852 Mr. John Fowler applied to Messrs. Ransomes & May, of Ipswich, to aid him in developing his plan of draining by a windlass moved by horse power. In the course of experiments for this object, which ultimately issued in the steam power draining windlass exhibited by Mr. Fowler, of Lincoln, in 1854, his and their attention had been directed to the probability of carrying out more successfully than had up to that time been done the problem of steam cultivation, by means of an endless rope, and an implement balanced upon an axle carried by two wheels, so as not to require turning at the headlands. With an apparatus of this description, manufactured and in a great degree designed at the Orwell Works, Mr. Fowler competed for the Royal Agricultural Society of England prize at Chelmsford in 1856, and produced work at 7*s.* 2½*d.* per acre, which, according to the opinion of the judges, would have cost by horse power 7*s.* per acre. Simultaneously with this, great attempts were made by the advocates of cultivation by means of rotatory implements, to carry out that system by steam engines travelling over the land and cultivating it by an implement forming part of the engine—of which class were the cultivators of Mr. Romaine and Mr. Usher. In Mr. Boydell's plan the engine was employed to drag any implement after it. Although much ingenuity was applied, the result was not successful, and the system may now be said to be abandoned. The remarks made in the Royal Agricultural Society of England's Journal, reporting the trials of Mr. Fowler's draining machinery at the Lincoln Meeting, attracted the attention of Mr. Smith, of Woolston, to the advantage of employing steam instead of horses to draw a peculiar form of cultivator. This gentleman had previously given great attention to the use of scarifiers drawn by horses, and was firmly persuaded of the superiority of that implement over the plough, if a suitable draught power could be provided. With these views he attended the Carlisle Meeting of the Royal Agricultural Society of England in 1855, and there gave to me an order for a windlass, and a seven-horse power steam engine for steam tillage, to be designed by and made under the direction of Mr. Fowler, at Messrs. Ransomes & Sims' Works at Ipswich. This machinery was made and successfully worked in a field near that town, drawing one of Biddell's ordinary scarifiers. It was sent to Mr. Smith in December, 1855, and in February, 1856, he reported at the Society of Arts, that with it he could scarify to a depth of 7 inches, at the rate of 2½ acres per hour, and at a cost of 6*s.* 3*d* per acre, exclusive of wear and tear, which he estimated to add one-fourth more to the cost. From that time to the present, and with slight modification of the original apparatus, Mr. Smith has continued to cultivate his own farm at Woolston with the most satisfactory results, and to introduce his system of culture by similar apparatus widely and successfully. Meanwhile, Mr. Fowler was urging on his experiments with the greatest zeal and energy, and in 1856, at the Paris Exhibition, he received for an apparatus made at the Orwell Works the first public recognition of success, by the award of a gold medal. In 1857 he received the Highland Society's prize of 200*l*; and in 1858 at Chester, for work done with an apparatus jointly constructed by Messrs. Ransomes & Sims, and Messrs R. Stephenson & Co., he received the Royal Agricultural Society's prize of 590*l*. About this date, Messrs. Howard, of Bedford, entered the field as manufacturers of Mr. Smith's apparatus, with which they continued associated until 1861. Since then they have been manufacturing an apparatus upon the roundabout principle with which Mr. Smith originally commenced, but further improved and developed in some of its mechanical details, especially in avoiding the necessity of turning the implement at the end of each furrow. I have thus briefly traced the rise of modern steam tillage to the period of the Chester meeting, about which time it may be said to have first become fairly established in public opinion as a successful invention. This opinion has never receded, but has daily strengthened, and it may be interesting to inquire what causes had, in the years 1856-57-58, operated to induce public opinion to regard as successful in 1858 that which, three years previously, had been regarded so differently. It is clear from the Royal Agricultural Society of England's Journal, that up to the Chester Meeting all Steam Cultivation was judged on the narrow basis of its actual cost in comparison with horse tillage—the far more important considerations of the value of the increased power placed at the disposal of the farmer, and of the improved producing powers of the soil when cultivated at the precise period of the season most favourable for tillage, were only imperfectly recognised, and not allowed to enter as a credit in the calculation in favour of steam. But during these three years Mr. Fowler had exhibited his apparatus at the meetings of local societies in various parts of the kingdom, always leaving behind him more or less land tilled by various implements, and often this was placed in the middle of a field, which had to be finished by horse-power; thus enabling the occupier of the land to compare its condition under both processes, and to see on which part the crops were heaviest. Mr. Smith was also cultivating his farm at Woolston, and freely admitting visitors to see the operations and hear his earnest expositions of his theory of cultivation. Customers had been found for apparatus on both Fowler's and Smith's plans; and with more or less success, as measured solely by first cost, they managed to cultivate each year a considerable breadth of land.

Steam Cultivation at Euston.—Mr. Ransome then quoted a number of examples from the Journals of the advantages of steam cultivation, and continued as follows:—

But we need not go out of our own country to find examples

of profitable steam cultivation. Mr. Kersey Cooper, of Euston, purchased in 1861 a second-hand and very much damaged set of steam tackle, with which he commenced cultivating a large farm in his occupation at Bowbeck. The farm is about 900 acres in extent, nearly all of which is arable; 250 acres are stiffish clay, 250 acres are mixed soil, and the remainder, which was originally heath, has the characteristics of light new land. The experience of the first season was marked by continual breakage, as might be expected from such an apparatus, but nevertheless about 250 acres were cultivated at a cost of 5*s*. 9*d*. per acre for fuel, oil, and wages, including carting of water, which employs one horse about half his time. At the end of this season Mr. Cooper was so satisfied with the value of the work, that he purchased a new twelve-horse power self-moving steam-engine, a new rope, and improved his windlass ready for the spring season of 1862. In that year, and on various days between the 18th of February and the 27th September, 407 acres were cultivated, of which 219 were done twice over, making in all 626 acres, at an average cost for fuel, wages, and oil, of 2*s*. 8¼*d*. per acre, the highest cost being 3*s*. 6*d*., and the lowest 2*s*. 4½*d*. The root crops following were the best that Mr. Cooper has ever grown, and every corn crop was very satisfactory. In the year 1863, the season's work was commenced on February 3d, and the last day's work was on September 24th, between which dates 376 acres were cultivated or ploughed with Fowler's balance plough. Of these 376 acres, 144 were cultivated twice, and [illegible] three times, making a total of 553 acres, the highest cost being 3*s*. 6*d*., and the lowest 2*s*. 8*d*. per acre. On the field of 33 acres, which is heavy land, and was worked three times, and deeper than ever it had been before in this generation, a very thick crop of wild Oats sprang up after the first stirring, but were completely eradicated by the second crossing. All the corn crops after this cultivation were very good, and the root crops were better than those on adjoining horse-cultivated fields; of the land ploughed, 70 acres were sown with Rye and Tares, for spring feed, and 44 acres with Wheat. I saw these crops about two weeks back, and nothing could look better; indeed they presented a marked contrast to similar crops on land tilled by horse-power on the same and adjoining fields. In reckoning the above costs—Wages are 12*s*. 9*d*. per day; horse for water, 2*s*. half-day's work; coals, 10*s*.; oil, 1*s*.; in all 25*s*. 9*d*. per day. On several occasions, Mr. Cooper has got over 12 acres per day, but he estimates 10 acres per day as a reasonable day's work. With Mr. Fowler's plough he did 7½ acres per day, but as the rope was nearly worn out, the stoppages were, in his opinion, quite equal to 1½ acres per day. The implements used for cultivating were a 10-tine and 6-tine scarifier of the ordinary description, covering 4½ feet in width, and travelling at a speed of 100 yards per minute. The rope, which cost 69*l*. at the commencement, was after the above 1429 acres had been done, nearly worn out, and useful only for fencing, thus giving an average cost of 10*d*. per acre. The wear and tear of points and shares has not been more than it would have been by horse tillage, nor the wear of the engine more than it would have been at threshing. When Mr. Cooper purchased the apparatus, he reduced his horses by selling eight in the second year, and has just sold four more, and has since not only performed the usual work of the farm, but has carted 8550 loads of clay an average distance of a quarter of a mile, which work he used formerly to perform by hiring. In a letter which I received last Friday, Mr. Cooper says:—"I am more and more satisfied of the superiority of steam tillage over horse labour. Since you were here, I have sold four more of my young cart horses, and am now forwarder with my work than I ever remember being at this season. You will further observe a great increase in the quantity of clay carted since you were here. Since then I have kept six men on constantly filling, and 10 horses carting it, which I hope to continue for another month, and then again in the summer, when I have put in my root crops. The quantity of clay I have given you has all been carted within 18 or 19 months. This work was formerly put out to carters to do for me, at 7*d*. and 8*d*. per yard." Mr. Ransome read several letters written to himself by gentlemen who have had experience of steam cultivation. The following is a brief summary of the letters. Mr. Chambers of Colkirk Hall, Fakenham, found the cost per acre, by steam cultivation, to be from 3*s*. 6*d*. to 4*s*.; he was satisfied that he got an improved result in his crop. Mr. Slater of Cheveley Hall, said, last year he hired a 10-horse traction engine, and a Fowler's cultivator, and cultivated 70 acres of light land 7 inches deep at 7*s*. per acre; he was thoroughly satisfied with the result, but he saw the necessity of removing fences, and having larger fields, and he was doing that as far as practicable. Mr. King, of Thorpe Hall, Scole, had been able to reduce the number of his horses one-fifth; he had ploughed 6 acres a day with the apparatus, at a cost of 5*s*. 2*d*. per acre for wages, fuel, water, and oil; and could do 6 acres per day in autumn when the ground was had, and 10 acres per day in the spring. Mr. John Ferguson, of Wretham, said he considered the steam cultivation of the soil, particularly stiff retentive soil, a most wonderful improvement upon the old plan. He had tried it on very light sandy soil in Norfolk, and on very stiff clays in Lincolnshire. The result was not so good on the light sandy land, but on the heavy land the effect of steam cultivation combined with thorough draining was almost magical; people came miles to see splendid crops of Wheat where nothing but weeds used to grow, and the consequence was that the steam cultivators were becoming very much the fashion in that district of Lincolnshire, and the farmers were willing to pay any reasonable price per acre to have their fallows done and let their horses remain idle. He found the cost of cultivating 200 acres of light land was 3*s*. per acre, and about 1*s*. per acre more for wear and tear.

And now in anticipation of the future. Are agriculturists to anticipate very great mechanical improvements in the apparatus employed, or a great diminution of its cost?

How can farmers on small means avail themselves of its advantages? Briefly it may be said that in this country, wherever a fair return is to be secured by its use, capital is always forthcoming in some way or other devised by the occasion; but the more obvious ways are—first, in those cases where a farmer has the capital to buy but not acreage enough to employ the apparatus—that he should plough for his neighbours on the farms adjoining his, or in places conveniently approachable. Secondly, by partnership between two or three farmers on adjacent farms—priority of use each season might be determined by lot—and the advantages of the partnership are far greater than at first sight appears. Thirdly, by hiring the apparatus of men who make it their business to plough for hire. This may, in some cases, be carried out; and, indeed, it now is: but I do not believe it will become so general a system as threshing has become, because a large portion of the advantage of the steam tillage lies in saving of horse keep, and in increased crops, the benefit of which can not be seen beforehand.

Home Correspondence.

Hiring Markets.—I observe that Mr. Dunlop, M.P., has got permission to introduce a bill to regulate the hiring of servants. It is strange that so many people of influence persist in selecting the different classes of operatives as subjects for comment. The supposed necessity of abolishing hiring markets was discussed at a meeting of the Highland Society in 1860, a report of which is given at page 297 of the *Agricultural Gazette* for 1860, and you allowed me to vindicate the continuance of hiring markets at page 632 for 1860. The ministers of the United Presbyterian Church had a special meeting (on May 6), on social morality. I stated a few weeks ago in an Edinburgh paper—If sufficient intelligence cannot be found among respectable rustics to enable them to suggest practical remedies for the present prevailing social evils, it cannot be found among those who cannot enter into the feelings of the working classes.—There is much room for improvement in the several modes of buying and selling of labour. Register offices ought to be established in every market and provincial town, and in every agricultural parish, as auxiliaries to "mops," feeing, and hiring markets; but the country is not prepared for such a sweeping and radical change as the summary abolition of public hirings. Hiring or engaging ploughmen through the medium of register offices alone implies the necessity of ploughmen being able to address strangers by letter. The majority of the most accomplished ploughmen would prefer working a hard day's work to sitting down to state to strangers in writing that they are open to engagements. Allowing a discount for being devotedly attached to my native district, I consider the modes of hiring in the counties of Roxburgh, Berwick, and Selkirk only require the establishing of the requisite number of register offices to satisfy the most fastidious. A good many farmers engage those who give satisfaction for another year about a fortnight before the public hiring days. In the event of popular employers having a vacancy, it is a prevalent practice for ploughmen on adjoining farms to offer themselves for the vacancies. If the farmers or their stewards know the applicants to be men of good character and good workmen they are engaged at the farm-steadings; but if the applicants are strangers the bargain is closed at the hiring markets, on condition that their employers report favourably of them. This is applicable to Kelso annual hiring on the first Friday of March, where the "speering-out" system is in force. A good many stewards introduce to their masters men whom the stewards are either acquainted with, or others are who recommend them to the farmers and stewards. The Scotch word "speer," and the English word "recommend," are synonymous terms in a hiring market. There is a register office in Kelso for farm servants. A great many people labour under the mistaken idea that it is the general practice for farmers and ploughmen, who are satisfied with each other, to go to the market to negotiate about a re-engagement for another twelvemonth. It is only those hinds who are changing masters and who have not got another employer that go to a public hiring for an engagement. But here is what is the cause of so much confusion at public hirings. Where a good feeling prevails between employers and employed, the farms are worked on "the taking and giving systems." That is, the hinds do not scruple to work overtime when required from the commencement of the busy season in spring till the end of harvest. The farmers reciprocate such favours by not exposing the yearly servants to the inclemency of pelting snow and rain, and by indulging them with a holiday on such occasions as the annual hiring markets and pleasure fairs. Thus hundreds of men who are re-engaged privately at home go to the public hirings to meet with their relations, friends, and sweethearts. The "speering-out" or recommending system was so general a few years ago that first-class servants of good character and in the prime of life would have little chance of being offered a situation by strangers requiring yearly servants. I suppose that this is still the general practice. Such a mode of hiring is better than the register-office system, but would-be legislators and reformers are not aware of it. As a general rule in some districts, a public hiring is a focus for a radius of nearly 20 miles. A good many of my schoolfellows in 1839, 1840, 1841, and 1842, and nearly all my relatives, are located within that radius. Aged ploughmen and their wives make arrangements to meet their married sons and daughters on such occasions, and because a few men allow themselves to display a little exuberance of feeling in a rustic manner, would-be reformers suggest that respectable servants and their wives must be deprived of their rights—the exercising their judgment as to the propriety of going to a public hiring. The upper and middle classes ought to perform the several duties which devolve upon them as proprietors and as employers, and abolish the degrading influences and ruinous practices inseparably connected with horse-racing and other amusements before they meddle with hiring markets. If hiring markets and pleasure fairs are to be abolished, I beg to suggest that the relationship of master and servant must be placed on a different footing. English labourers' small wages demand as little broken time as possible. Being day labourers, they are paid for overtime; but the case is different in Scotland, where the farmers can demand the services of yearly and half-yearly servants by night and day when grain is fit for harvesting. And farm servants cannot demand extra pay for working eight and nine days a week. Are would-be reformers prepared to better the working man in these respects? *W., Edinburgh.*

Roots and Oxygen.—The reading of Prof. Voelcker's lecture "On the Atmospheric Nutrition of Plants" has reminded me of a phenomenon which I observed some years since, and of which I sought an explanation in vain at the time. I observed that in a railway cutting through a stratum of the lower green sand, in which the water had stood, and of which it had been drained by the excavation, that where the roots of Willow trees had penetrated below the original water level in the ferruginous soil, a deoxidising process had taken place; or in other words, the iron had been deprived of its oxygen, to all appearance by the agency of the root. Can this be explained? Again, an urn containing burned bones was discovered; among the bones was found a small knife, supposed to be Saxon, say 750 A.D. Though the iron implements discovered in the gravel at the same spot were very much corroded, the knife in the bones was but slightly oxidised. In one case the living root deoxidises the soil, in the other the dead charred bones prevent the oxidation of the knife. *J. C. C.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

THE ANNUAL GENERAL MEETING of the member of this Association was held May 23 at their offices, 12, Hanover Square, under the presidency of Lord Faversham. There were also present amongst others, Lord Walsingham, Lord Portman, Professor Voelcker, Mr. Raymond Barker, Mr. Fisher Hobbs, Mr. Robert Smith, Mr. Astbury, Mr. Beale Browne, Mr. Frere.

The election of Members of the Council, which was the first business, led to no alteration in the list submitted, which included the names of Earl Fortescue and the Earl of Shrewsbury and Talbot.

Lord PORTMAN proposed Sir Edward Kerrison as President for the ensuing year. He said it had been some years since they had had a member of the House of Commons at the head of their body, but the Society had numbered amongst its Presidents Lord Eversley, and the present Speaker of the House of Commons, and the gentleman he now proposed had been a most active and useful member of this association.

The motion was seconded by Mr. FISHER HOBBS, and unanimously carried; and the Vice-Presidents and Trustees were re-elected.

The following report was read by Mr. H. HALL DARE, the Secretary:—

REPORT OF THE COUNCIL.

The Council have the gratification of announcing that, since the last general meeting in December, his Royal Highness the Prince of Wales has allowed his name to be enrolled in the list of your governors.

During the past five months the names of five governors and 136 members have been removed from the list by death and retirement, while one governor and 232 members have been elected, so that the Society now consists of

78	Life Governors
45	Annual ,,
1343	Life Members
4013	Annual ,,
17	Honorary ,,

Making a total of 5496, being an increase of 53 names.

The Council have elected Major-General the Hon. Alexander Nelson Hood as a Vice-President, in the room of Lord Ashburton, deceased.

The half-yearly statement of accounts to the 31st December, 1863, has been examined and approved by the auditors and accountants of the Society, and together with the balance sheet for the whole year 1863, and a statement of the country meeting account for Worcester, has been published in the last number of the Journal. The funded capital stands at 16,488*l*. 17*s*. 10*d*. in the New Three per Cents., 3000*l*. has been placed on deposit at interest with the Society's bankers, and the current cash balance in their hands on the 1st inst. was 2836*l*. 6*s*. 6*d*.

Papers have been read at the weekly meetings by Mr. Lawes, on 'Salt used as a Manure;" by Mr. Hughes, on "The Cultivation and Management of Clay Farms;" by Mr. Holland, M.P., on "Agricultural Education;" and by Prof. Voelcker, on "Nutrition of Plants by the Atmosphere."

A committee has been appointed to consider the measures which ought to be taken for the improvement of the education of those who depend upon the cultivation of the soil for their support, this being declared by the Charter as the seventh national object to be prosecuted by the Society.

The Lords Commissioners of Her Majesty's Treasury having applied to the Society for assistance in carrying out their design of presenting some sheep to the Viceroy of Egypt, who is anxious to improve his native breeds by crossing, a selection was made under the direction of the President; and a communication has been received of the safe arrival of the sheep at Cairo.

A special committee having been appointed to consider the question of the dates of calving, the Council have approved on their recommendation, that any alteration in the date of calving would be inconvenient and thus unadvisable.

The arrangements for the Newcastle Meeting, to be held during the week commencing Monday the 18th July, are proceeding satisfactorily. The showyard will be open as under:—

	s.	*d*.
Monday	10	0
Tuesday	2	6
Wednesday	2	6
Thursday	1	0
Friday	1	0

The Council have determined that the Annual Country Meeting in 1865 shall be held at Plymouth.

The district for the Country Meeting of 1866 will include the counties of Cambridgeshire, Essex, Hertfordshire, Huntingdonshire, Norfolk, and Suffolk.

By order of the Council,
H. HALL DARE, Secretary.

On the motion of Mr. Childers, seconded by

Mr. Sutton Weston, the report was unanimously adopted.

A vote of thanks was accorded to the auditors on the motion of Lord Walsingham, seconded by Mr. Clutton, and was briefly acknowledged by Mr. Corbett.

The CHAIRMAN having invited suggestions for the consideration of the Council,

Mr. DUCKHAM expressed an opinion that there was frequently a scarcity of judges in some of the classes, and urged that members should send in names.

Mr. FISHER HOBBS quite concurred in the observation, and announced that the list would be open to the 1st of June.

Mr. BEALE BROWNE congratulated the Society upon the new regulation with respect to the shearing of sheep before exhibition.

The cordial thanks of the Society having been given to Lord Faversham for presiding, the CHAIRMAN, in acknowledging the compliment, referred to some of the points touched upon at the December meeting. With respect to the opinion of Mr. Sidney, that the duty of Editor of the Journal was rather to insert contributions and revise the productions of others than to write for the publication and introduce papers of his own, nothing had been said which would lead the Council to accept that as the view of the Society. Another suggestion of the same gentleman was that the funded property of the Society should be appropriated to providing large premises, with library and museum, but it was a question whether the amount of funded property would be sufficient for such a purpose, even if the members were willing that it should be so appropriated. Mr. Morton's statement that the seventh object of the charter, with reference to agricultural education, had not as yet been taken into consideration by the Council, was a very important one, and a committee had been appointed on the subject, but had not yet presented its report. As to one of the points submitted by Mr. Duckham, the Council had reason to hope that railway companies might adopt measures to facilitate the removal of valuable live stock after exhibition, but the difficulty they had to contend with was in the accommodation of the large number of visitors to the shows. The other point, with regard to the dates of calving, had been under the consideration of the committee, but it was found that it would not be competent or advisable so far as this great Society was concerned to make the alteration suggested.

The proceedings then terminated.

Farmers' Clubs.

CHESHIRE FARMING.—This was the subject of a recent lecture by Mr. Thomas Rigby, of Fenny Wood Secretary to the Association.

Mr. RIGBY said his remarks owed their origin partly to the somewhat cynical reflections upon their monthly discussions made by Sir Harry Mainwaring at the last public meeting of the Cheshire Agricultural Society, when he referred to the Over Agricultural Society, and described its members as self appointed and rathr self-conceited critics of the proceedings and views of their brother farmers, and very much too forward in their advocacy of certain points which he thought decidedly adverse to their interests, instancing draining, boning, sheep feeding, high-bred cattle, and broad-breasted bulls.

1. *Boning and Draining.*—After taking a review of Cheshire farming from 1800, Mr. Rigby proceeded to say that the application of bones as a manure to Grass land was the commencement of an era of progress which continues to exert a more decided influence upon practical farming than does draining.

The palpable advantage of draining any kind of pasture land without an after dressing of bones is but small, unless it is intended to subject it to a course of tillage. As a foundation to build upon, it has many advantages. The roots of Rushes, for instance, are robbed of their life blood by it. The aëration of the soil which it causes enables it to filter out of the rains of spring and the snows of winter all the fertilising properties they contain. In wet seasons it is drier and warmer, and in dry seasons the soil immediately below the surface will be found more moist than in undrained land. But although, as a rule, the fertilising properties of bones or other manures will be more quickly assimilated in drained than in undrained land, yet their action is very beneficial, even on the wettest and coldest clay land. The immense amount of money expended annually by farmers in this application, and the high rate of interest they are willing to pay their landlords for an outlay of this kind, is a clear indication that they have a high estimate of their value, and must think a larger percentage of profit may be realised by their aid than without them. Bones were not much used in the first 30 years of the present century. Their price was very low comparatively, but they were roughly ground, and longer in coming to profit. He had a receipt in his possession, dated May 17, 1833, for six tons of "bone waste," at 65*s* per ton. The late Mr. John Marshall, of Norwich, has the credit of being the first to use it in this neighbourhood. It is said that he tested its utility by sowing part of a pasture field on his farm at Broken Cross in the form of the initials of his name, and the result was so decided that "J. M.," inscribed in living green, could be clearly seen nearly a quarter of a mile away.

2. *Shorthorns.*—On the subject of Shorthorn cows his opinion might open more space for discussion than the other two were likely to do in the absence of Sir Harry Mainwaring, for he was free to say that he had sacrificed too much of the milking properties of their stock to beauty of colour and form, and perhaps to fattening propensities.

He liked to see the mild-eyed, velvet-skinned, dolesome-looking Shorthorn; and as a feeder of beef he did not mind how nearly the cattle he purchased were related to "Royal Dukes" and "Duchesses," or even to "Royal Butterflies;" the nearer the better, the first cost being equal; but if he wanted milk and cheese, he would rather have his stock related to the short-legged, roomy-bodied, and rather thick-horned Cheshire cows of 1800, to the Ayrshire, or even the Welsh cow, and would prefer their being matched to the son of his neighbour's best milking cow than to a bull of Bates' or of Booth's Shorthorned cows will sell for more money as barrens than cross breeds, and will feed more quickly perhaps, but they cost more to purchase or to rear, and must have better keep; and as a comparison of profit and loss to the dairy farmer, he was inclined to think that the balance would be against their account, except under circumstances specially favourable to them.

3. *Agricultural Improvement.*—After a few words on sheep farming—the lecturer maintaining that that description of farming had realised the most sanguine expectations—Mr. Rigby said that a few years ago, Mr. Donald, the enterprising agent of Mr. R. E. E. Warburton, furnished some particulars of the progress made in the neighbourhood of Great Budworth in the previous 12 years.

In 1844, on 800 acres, 276 cows were kept in 1856, on the same land, 412 cows were kept. 1845, 220 cows were in the bare fallow; in 1856, none. 996,000 draining tiles had been put in three farms, and a large sum of money expended on bones. No school in 1844; now every youth in the parish has access to education. It is but justice to say that this progress was then in advance of the progress making in the county generally, but it is only an average report of the progress now being made in every district; and an abstract of the whole would run thus:—Since A.D 1800, the number of stock kept in the county is at least double if not treble; the weight of cheese made is even of greater proportion; the quantity of young stock reared even exceeds the proportion of cows in increase, and sheep have increased at least a hundredfold. Some may be ready to say that Wheat is neither of so good quality nor so abundant in quantity since the practice of marling was discontinued. But we now seldom see bare fallows, and they have now only one year's rent to pay for this crop, while they generally had two. Turnips and Mangels were then almost unknown; and since the railways have offered easy access to manufacturing towns, what Potatos have not been sent there! Most, if not all, of which is due to the practice of draining and boning. Looking at the great competition there is for farms, we might infer that the prospects for farmers were most cheering. Let but the faintest whisper of a farm being "To let" be uttered, and applications from would-be tenants literally pour in upon the agent or owner, who has only to name his rent. This state of things, however, does not arise from the profitable nature of the occupation alone, but from the fact that every man thinks he can farm, and because every other branch of business or profession is so crowded as to necessitate incessant striving for subsistence in almost every rank and class.

4. *Farm Lettings.*—The question of leases and yearly tenancy is not so clearly defined and mutually agreed upon as is desirable perhaps, but in the majority of cases that part of the feudal relationship which begat considerateness in the landlord and confidence in the tenant largely prevailed; and the cases are very rare where undue advantage is taken of a tenant's outlay and enterprise.

Considering the competition there is for farms, rents are rather moderate as a rule. He had a great respect for landowners as a class, and had had to do with as honourable gentlemen as any in Cheshire as landlord and agent, and of them and of their conduct to himself as tenant he had nothing but what was commendatory to say; so he must not be supposed as speaking from any sore or ill feeling in saying that the restrictions sometimes placed upon farmers are most injurious to their interests. When it is actually forbidden to sell hay or straw, the farm cannot be worth so much per acre to the tenant except it be of the stiffest and wettest clay. There are times when an enterprising tenant expends more of his capital in bones or draining than leaves him enough wherewith to purchase extra stock and other requirements, and it would be more convenient to stop an extra gate and send the mowers into the field if he were allowed to convey the hay into money. Under any circumstances, it would be better both for landlord and tenant if the surplus straw of a farm was sold, and its value applied to the land in bones. A prohibition on the sale of Turnips and Mangels is injurious when near a market. So, also, is the refusal to allow judicious eradication of useless fences, or cut down stunted or full-grown hedgerow trees; and the over preservation of game and the petty annoyance of gamekeepers are rather more provocative than agreeable. Then, again, an undefined position as to compensation for unexhausted improvements made upon a farm is not so satisfactory as an equally drawn agreement, nor is this in its turn so satisfactory as a liberal lease.

5. *Cheese.*—The present prices of cheese, beef and mutton, and of wool, afford the best prospects for the tenant-farmer.

It is fortunate that Cheshire is not a corn-growing county. Wheat, at 6*s*. per bushel of 75 lbs. is not quite so good a thing, even with the large yield of last year, as cheese at 70*s*. to 80*s*. per cwt.; and it would be their interest to increase the make, and especially to try to improve its quality. Two years ago America sent to this country very large cargoes of cheese, of greatly improved quality to what she previously sent. Last year, however, the importations were very much reduced, nor did the quality equal that of the preceding year. He had extracted the following from an American paper, to show that English cheesemakers will have need to put forth their best efforts to compete profitably with American cheese in our own markets:—"In the United States of America dairy farming is rapidly extending, and greater attention is yearly bestowed upon the production of cheese suited to the English market. The principal dairy State is that of New York. By the last statistical returns there were upwards of one million cows in that State. The quantity of butter annually produced exceeds 90 millions of lbs., whilst that of cheese amounts to nearly 40 millions of lbs. The average price obtained during the last four years for choice cheese is estimated to have been 3½*d*. per lb., and at this price the profits from dairy husbandry are stated to be higher than can be obtained from any other kind of farming produce." It is in this last sentence that we see the most serious opposition, for with all our improvements we should not find much profit in the manufacture of cheese at 3½*d*. per lb.; and yet in the "good old times" cheese has been sold in Cheshire for even less than this. He held in his hand a sale note of a dairy of Cheshire cheese, dated January 18, 1780, which ran thus:—"Jno. Bebington, bought of H. Ackerley, his dairy of cheese, No. 68, 14 cwt., at 23*s*. 6*d*.—18*l*. 19*s*.;" and our old dairymaids confess the modern practice of making cheese to ripen for market in six or eight weeks avoids the loss of weight to which they were exposed in keeping 12 months or more. Many of them aver that the winter keep of a dairy of cheese reduced its bulk as much as the loss of one row across the cheese-room. The quality of our cheese, however, is our chief concern. We have outlived the time when it was said that the pasturage of stock on boned land spoiled its flavour, and the time when the rushy land, and old rest pasture in particular, were said to be the only good cheese lands. "But there is room for greater improvement; and there is the advantage that the better the quality the higher will be the price obtained, although the quantity made may be doubled and trebled. In almost every other production, large arrivals to market cause prices to fall; but cheese of first-rate quality is almost an exception to the rule, as it will displace butter and butcher's meat. But he fancied he heard some dairymaid saying, "How are we to make better cheese? Don't we always try to do our best with every cheese we make, and yet its quality varies, and won't come right?" No doubt, this is a most perplexing question, which scientific inquiry has not yet answered, and which seems to scoff at imaginary rules or principles. He was disposed to think that the making of first-class cheese is almost a natural gift—or at least that it only follows a natural aptitude for the work, accompanied by close observation and sound judgment in the arrangements and details; and even in such case is more likely to follow early training than any amount of after apprenticeship. The daughters and servants of a house where first-class cheese is made generally prove good dairymaids themselves, while the number of those who excel that have not had these advantages is but limited. Much may be done, however, by the exercise of care and judgment. As in cookery or confectionary, widely different results may result from the use of the same materials. We find the same necessity for the "right woman in the right place" in the dairy, as for the men on the farm; and this being found, their prospects are just now of the most promising order. So also are the prospects of the grazier and rearer of young stock. The price of store cattle is certainly high, but so also is the price of beef and of calving cows; and so long as the two continue in the same proportion, there is no occasion for despondency.

6. *Farm Servants.*—There is just one star in the horizon which does not shine with the same degree of promise—he alluded to domestic farm-servants.

An intelligent merchant conversing with him some years ago remarked, "You farmers have no trouble with your servants." Perhaps they would not cordially assent to that, but when they saw the book entitled "The Greatest Plague in Life," they might surmise the subject on which such a book would treat. Certainly "our servants" are the prevailing subject of complaint. "The men are ignorant, unmannerly, conceited, neglectful, independent, and of very rambling habits after working hours. The women are all these and worse too" it is said. Of course, exceptions are admitted, "but the cases are very rare," is the reserve. Without doubt there is much ground of complaint; but it may also be doubted whether masters and mistresses are entirely free from blame. Granting that servants are uneducated and ignorant, are these facts always kept in view? There is, as a rule, too much impatience and greater severity of censure than their shapelessness or blunderings deserve, and more neglect of their morals than is justifiable. Indeed, the complainings made in their hearing are rather calculated to exasperate them than to improve, and the remedy lies largely with masters and mistresses themselves. He had very little faith in school training while the home influence remains what it is in the majority of cases. To be born in a cottage with only one or even two bed-rooms, and to be reared in it with five or six or a dozen brothers and sisters, and with parents who have themselves been reared in the same manner, is not the best guarantee for future modesty of demeanour or self-respect of character. Then, the training of the servants, if there be any in the first place they get, is not always improving. Nor is the example of masters and mistresses always such as they may profitably imitate. In many farm-houses all the interest taken in them is founded on the amount of work they may be got to do. In many, he was glad to say, there is an observance of the Sabbath enforced as far as practicable, and an attendance at a place of worship enjoined. But there were few who consider their sympathies and their feelings in that kindly affectionate way which, without display, makes an impression on their hearts, and ensures their interest and esteem. Some of the best managers of female servants are women who talk freely, it is true, but without undue familiarity with their maids, of their family, their friends, and their prospects; and he had invariably noticed a respectful obedience and respect on the part of the servant commendable to both. But, in making these observations, he assumed no prerogative. His object was to incite discussion and thought, and produce a kindly consideration for their servants in place of the wholesale condemnation now so general.

Mr. WILD, Weaverham, concurred in almost all the remarks made by Mr. Rigby during the delivery of his excellent lecture. With regard to draining, he had heard it said that the Cheshire farmer drained his land too much; but he (Mr. Wild) never yet saw a yard of over-drained land. He admitted that on some lands draining made very little improvement. If land undergoes tillage after draining, and is properly managed afterwards, it will be worth double in value. Years ago, there was a great objection to ploughing old meadow land; but he maintained at that time that such a course not only made the land hide-bound but also hide-bound the tenant and the landlord as well.

Mr. MORETON (Weaverham) said that land was the best bank farmers had. Too much cannot be done at it either in the way of boning or draining. Formerly, farmers used to lay down land to improve it; now they break it up. He agreed with Mr. Wild that keeping land down had a tendency to make tenant, landlord, and land as well hide-bound. Farmers ought not to be tied down to one course of tillage—they ought to have a little of everything.

Mr. WILLIS (Darnhall) said no draining would pay if the drains were taken across the butts, as he had seen in some instances. Leases of 14 years were worse than none at all; and with regard to farm-servants, he thought a great mistake was made by masters and mistresses in expecting too much from them. If the master would now and then put himself in the position of the servant, and candidly look at the relative duties of each, he would have more consideration for his servant than is often the case.

Mr. MORETON (Marton) thought that a farmer could not too highly value a good servant. He was sorry to see men who had lived all their lifetime on a farm turned away in their old age, and find it necessary to seek the workhouse in which to end their last days.

Reviews.

The Journal of the Royal Agricultural Society of England. Vol. XXV., Part I. J. Murray.

We have already referred generally to the contents of this number of the Journal, and particularly to one or two of the Papers which it publishes. The reputation of the Part will no doubt arise chiefly from Mr. Thompson's interesting History of Agricultural Progress during the past quarter of a century. Professor Voelcker's contributions to its pages also add greatly to its interest, and the extremely elaborate history of their Wheat experiments by Messrs. Lawes and Gilbert add greatly to its value. The essays on Hop Culture and on Cider making will give a certain local interest to its pages. And the reports of International meetings, late though they are, will make its pages interesting in other countries.

The most startling facts which it relates are those collected by Mr. Thompson in illustration of English agricultural progress. And the most remarkable of these are those which show that no progress whatever has been effected. It appears from this research that the number of British sheep sent to market has been for the last ten years stationary, if not retrograde. To this extraordinary circumstance, and the influence which it ought to exert on our farm practice, we shall hereafter direct particular attention; meanwhile let us extract the statement which Mr. Thompson makes of our produce so far as it relates to sheep. Comparing the decimal periods ending 1842, '52, and '62 respectively, he says, of the supplies to the metropolitan markets, that "there has been an increase in the annual supply of cattle of 27 per cent.; and similarly comparing the 3d period with the 2d, that there has been a further increase of 22½ per cent. In the case of sheep, however, the increase in the 2d period was only 11½ per cent.; and in the 3d period, there has been a falling-off of 116,642 head annually, or 7 per cent. of the whole number of sheep brought to market! This diminution in the supply has occurred, too, when, in consequence of the high prices of both wool and mutton, there has been a strong inducement to flockmasters to increase their production to the utmost extent. The deficiency may to some extent be accounted for by the largely increased quantity of meat sent to Newgate and Leadenhall markets. The supplies sent to these markets consist partly of meat killed in the metropolis, the live stock having been purchased in the Metropolitan Cattle Market: this has already been taken into account. The remainder consists chiefly of meat conveyed by railway.

"Comparing a return lately obtained from the principal Railway Companies which convey meat to the metropolis with a return furnished by the same companies 10 years ago, it appears that the quantity of meat so carried has increased during the intervening period about 37 per cent. Supposing this to consist of beef and mutton in equal proportions, the additional 13,400 tons carried would give 6700 tons of mutton, representing—if 80 lbs. be the average dead weight of a sheep—a goodly flock of 187,600 head.* If mutton form the larger portion of the consignments, as appears probable (say as 5 to 3), the number of sheep conveyed by rail to the metropolis as dead meat now would be 234,500 more than were similarly carried ten years ago. The falling off in the number shown at Smithfield during the same period was 116,642, leaving a balance of increase of 117,858. This increase in the number of live and dead sheep brought to market in the metropolis is not, however, derived from our own country; as it will be seen in Table (D.) that the average importations of sheep in the four years ending 1862 had increased by 119,658 over the average importations in the four years ending 1852; so that, judging by the supplies sent to the metropolis (no bad test), it is pretty certain that the number of British sheep sent to market has been for the last ten years stationary, if not retrograde.

"The supply of meat sent by railway consists, to a great extent, of prime joints, and consequently represents a greater number of head of live-stock than an equal weight of meat sent to market in the ordinary way (by the carcase). This consideration, however, cannot affect our calculation to any appreciable extent. Take the case of 100 sheep slaughtered at Norwich, where this trade is largely carried on. The forequarters of the whole 100 sheep are now consumed at Norwich, and the same consuming power would formerly have been supplied by 50 sheep slaughtered and wholly disposed of there. The other 50 would have been sent to London alive; whereas now the inhabitants of Norwich are willing to purchase the inferior joints at a lower price, and the consumers of the metropolis are also willing to pay for the privilege of having the hindquarters of the whole 100 sheep without the inferior joints. It is, therefore, a mere transfer of the best parts of the animal to the best market, and does not of itself give any indication either of increase or decrease in the number slaughtered.

"The slow rate of increase of our home-grown supplies of sheep becomes still more striking if we compare the number sent to the Metropolitan Market now with the number sold in Smithfield Market 40 years ago. In 1822 the number of cattle sold in Smithfield Market was 142,043, and of sheep, 1,340,160. In 1862 the number of cattle brought into the Metropolitan Market was 304,741, and of sheep 1,498,500; so that whilst the cattle have increased 114 per cent., the sheep have increased not quite 12 per cent!

"Strong corroborative evidence of the increasing scarcity of sheep is afforded by the great rise which has occurred in the price of mutton within the last 10 years.

"This great advance in the price of meat offers a strong inducement to farmers to add to the numbers of their live-stock of all kinds; but in the case of sheep, the long period during which their rate of increase has failed to keep up with the increase of consumption, makes the augmentation of our sheep-stock one of the most important farming questions of the day."

To this, which Mr. Thompson properly names as one of the most important farming questions of the day, we invite the attention of our readers.

What alterations are advisable in our farm management in consequence of the present scarcity and price of mutton and of wool?

* No accounts are kept of the relative proportions of beef and mutton forwarded by railway.

Farm Memoranda.

An Ideal Farm: "Wet, Foul, and Poor."—Mr. H. S. Thompson, M.P., thus describes the progress of improvement on a farm out of condition taken in hand by an intelligent man—"an advanced and improving agriculturist in 186—."

It may be well to premise that the entire description of this imaginary farm is derived from the writer's own observation and farming experience, though of course not all collected at one time or in one place.

The first object is to make the land dry; and our entering tenant is informed that "this farm cannot be drained; that all methods have been tried, but that it is as wet as ever; and that it's of no use wasting any more money upon it." He examines the drained fields, which are of three kinds. One is on a hill-side, and the drains are carried across the slope. He finds that in consequence of the deadness of the fall in the drains, and the sharpness of the slope of the land itself, the water not only makes its way into the drains but out of them again, and that the adjoining land is, as represented, wet as ever. He resolves to drain this land sufficiently up and down the hill to ensure the fall in the drain being more than a match for the fall of the land.

The second drained field is a strong loam, though in its present sodden state it has all the appearance and most of the attributes of the stiffest clay. Here the drains have been placed in the furrows, as the lands were high and beautifully rounded, and the previous tenant considered himself deeply in their debt for preserving a portion of his crop from the baleful influence of the stagnant water which remained all the winter in the intervening furrows. He therefore, in his care to preserve their form, rather added to than diminished their rotundity. On examination it is found that the reason why this land won't drain is solely its defective form. When land is flat each square foot of surface has only to dispose of the rain which falls upon it, but if laid in high-backed ridges a large portion of the rain runs into the furrows, and carries with it the finer particles of soil and manure, thus effectually choking the natural pores and interstices of that portion of the land where the bulk of the water is accumulated. After a few heavy rains these furrows hold water like a dish, and the vegetation for some feet on each side of them is starved and stunted. On digging into this land it is found to have thin veins of sand which contain much water, and it is of importance to tap these Lilliputian springs as low as possible without incurring too much expense. Our *novus homo* consequently resolves to put in his drains 4 feet deep, and the mains 6 inches deeper. The curvilinear shape and irregular width of the lands make it necessary to neglect them altogether, and he lays out his drains 10 yards apart, having regard to the best obtainable fall, mentally resolving gradually to reduce the height of the lands until the whole can be brought to a level surface.

The third and last attempt at drainage that had been made on the farm was in a field of pure unsophisticated clay. Both tenant and agent were convinced it would not answer, but some meddlesome friend of the owner had insisted on digging a hole in the field, which, though covered with a flag on which a substantial coating of clay had been well trodden down, was unaccountably found after a time to contain water; and it was difficult to say why water shouldn't find its way into a drain as well as into a hole. So a few acres were to be tried, as the cost would not be great, for everybody knew that it was of no use to drain clay deep, and inch pipes would be quite sufficient to carry off all the water there would be. In order, however, effectually to stop the mouths of all objectors, a small portion was to be done 4 feet deep. The lands were 18 feet wide, so a few drains were put in at a depth of 4 feet up every alternate furrow, and the remainder up each furrow at 2 feet deep. Both did good at first, but where the drains were in alternate furrows, and therefore 12 yards apart, the intermediate furrows held water all the winter. The shallow drains were the first to show symptoms of failure, and after a year or two deteriorated rapidly. In a few more years even the deep drains became less efficient, and the triumph of the anti-drainers was complete.

But the farm was now in possession of a man who was never satisfied until he could ascertain the cause of failure, and he saw at a glance that the deep drains were too wide apart. The slowness with which water percolates through really strong clay is such that wide drains cannot in ordinary seasons remove the surplus water of one rainfall before another comes. He therefore resolved to drain this land at 6 yards' interval, and as the cost of deep drains at this width would be heavy, he determined to put his tiles 3 feet deep, considering a bed of dry soil of that depth sufficient for any of our ordinary crops. On examining the old drains to ascertain the cause of their deterioration and inefficiency, he found that though in general well laid, there were places where the ends of adjoining tiles were not exactly on the same level or in the same line of direction, either in consequence of a little carelessness in the filling in, the occurrence of a large stone which it would have been laborious to remove or work round, or the removal of a smaller stone whose bed had not been sufficiently solidly filled up. In these cases the narrow channel afforded by inch pipes was sufficiently interrupted to check the flow of the water, and cause a deposit of silt, which eventually became cemented by a ferruginous deposit, and permanently reduced the effective width of the pipe. In the shallow drains these results were much aggravated by their nearness to the surface. A short drought was sufficient to open wide fissures down to the tiles, and the first heavy shower washed so much fine soil into the drains between the joints of the tiles that the run of water was unable to remove the deposit, and the action of the drains from that time became more and more feeble and ineffective.

There were two modes of avoiding these evils, viz., the use of collars or of larger pipes. He found that 2-inch pipes could be obtained at little more cost than inch pipes and collars, and after duly balancing their respective merits, the tendency of drainage-water on clay land to form a hard ochreous deposit, decided him in favour of the wider conduit, using collars only where a piece of boggy ground or running sand made it necessary to take additional precautions against silting-up. In such places it was found to be desirable to use long collars, making them overlap more or less according to the urgency of the case.

Whilst planning his drainage operations, our farmer was not content to have his ideas bounded by what he saw on the surface, but followed with his mental vision the great ramification of roots upon which all plants depend for their stability and nourishment. He considered the description of materials collected in Nature's great laboratory, the decaying vegetation, the decomposing manure, and the various combinations of mineral elements. He knew that if a supply of water were long withheld, all the elaborate subterranean machinery would be brought to a stand; and on the other hand, that if water were always present, new and injurious combinations would take the place of the natural and healthy cookery for which the apparatus was designed. But when once the stagnant water was removed from below, then each successive shower would distribute to the greedy rootlets their ready-formed food, at the same time that it prepared more by bringing together the elements of nutrition which lay around, only waiting for this connecting link in order to work afresh at the task of elaborating the supply of materials for the growth of the leaves and stems above. Nor was this all—stagnant air is as bad as stagnant water, and the frequent descent of rain through the soil is required to displace from its pores the vitiated air, to be quickly renewed by a supply fresh from the atmosphere, which is as necessary for the healthy underground growth of vegetation as for the proper action of the lungs of animals. Arrangements were therefore made for the thorough drainage of the farm, on the principle that it was an object worthy of the utmost skill of the husbandman to secure as much as possible the sinking of the rain into the land as it fell and where it fell.

(*To be concluded in our next.*)

Miscellaneous.

The late Mr. Beadel.—The name of James Beadel has been familiar to landed proprietors and agriculturists for the last 30 years, as head of the well-known firm of Beadel & Sons. There were few men more thoroughly acquainted with land, its value and requirements, and few indeed on whose word both tenant and landlord were more content to rely. He had long been a Commissioner of the Essex turnpike roads, attending the meetings occasionally, and assisting by his practical advice. He was, too, one of the founders of the Central London Farmers' Club, to the success and usefulness of which he contributed by his lectures, being ever ready to use his influence for carrying out on the farm the views and principles he broached in the club-room, especially in respect to covered homesteads, which were adopted by his efforts and under his superintendence on several large estates. By these things he will be remembered as one of the practical agricultural improvers of the day, while in private life the qualities of his heart and his frank open bearing will cause him to be widely mourned as a friend. He was born on the 2d December, 1799, at Witham, where his family had been settled for many years. He claimed descent from Bishop Beadel, of Kilmorey, in Ireland, who was also

native of Essex. Mr. Beadel retired from business about two years before death, owing to an attack of paralysis. He was elected a member of the Society of Arts in 1852. *Journal of Society of Arts.*

Diseased Cattle.—Professor Gamgee has just delivered, at the Royal Agricultural College at Cirencester, six lectures on the Plagues of Animals, and their prevention. They will shortly be published in a complete form by Mr. Hardwicke. The work will also contain the report of the International Congress of Veterinary Surgeons at Hamburgh.

Mr. Lawes and Agricultural Progress.—In the past twenty-five years agriculturists have bridged over and successfully passed the great gulf which separates the rule of thumb from the rule of three. The man who paved the way for their advance, and manfully led the van through year after year of costly, intricate, and ill-appreciated labour, was Mr. Lawes, of Rothamsted. He it was who taught us that the soil has a natural standard of fertility, which enables it without the aid of manure to produce year after year a certain number of bushels of Wheat or other grain. On his own farm at Rothamsted, though the land is by no means of first-rate quality, this average is about 16 bushels of Wheat per acre, and has not diminished, though 24 crops of corn have been taken successively, of which the last 20 have been Wheat. This has been done not only without the application of any kind of manure, but also without the intervention of any fallow or fallow crop. It must be borne in mind that this average produce varies, within certain limits, according to the character of the season, and that it may be reduced by bad management, such as improper seeding or foulness of the land. But, with fair play, all land has a certain standard of natural produce. Such is the important proposition which Mr. Lawes has worked out under the eyes of the nation, and which must in future form the basis of all rational farming. In order to appreciate the full importance of this discovery it is only necessary to look at the new light thus thrown on the nature and capabilities of the soil. Twenty years ago, what could be more unintelligible than the terms used to describe the comparative fertility of different farms? Such a one was said to be in "high condition;" such another was "out of condition." Who could define "condition"? It was considered a kind of mystery, of the real nature of which the experienced practical man was favoured with occasional glimpses, but which it was hopeless to attempt to explain to the uninitiated. Now that we know that land has a natural store of the materials required for the production of grain, which confers upon it a certain moderate standard of fertility, we have the key to the solution of this mystery. *Mr. Thompson, M.P., in the Jour. of the English Agri. Soc.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday ..	May 20	30.16	74	67	S.E.	2	0	79	55	91	49	..
Saturday ..	21	30.03	53	53	N.	1	10	77	49	88	46	0.21
Sunday ..	22	30.00	63	60	N.W.	2	9	64	51	67	46	0.00
Monday ..	23	29.95	60	58	N.W.	1	..	69	48	82	41	..
Tuesday ..	24	..	..	..	N.E.	..	..	..	..	..	..	..
Wednesday	25	30.04	64	55	N.W.	2	8	65	30	79	31	..
Thursday ..	26	30.00	65	55	N.	..	..	..	..	..	..	..

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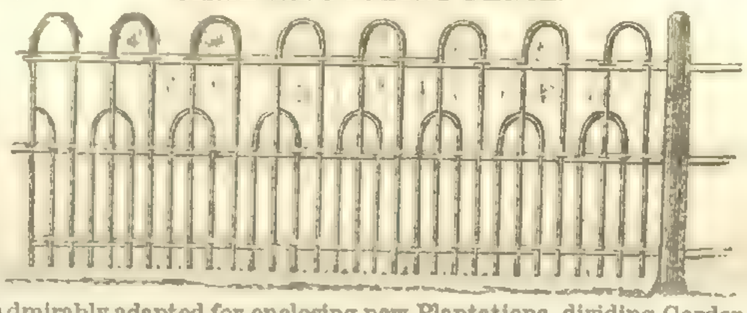

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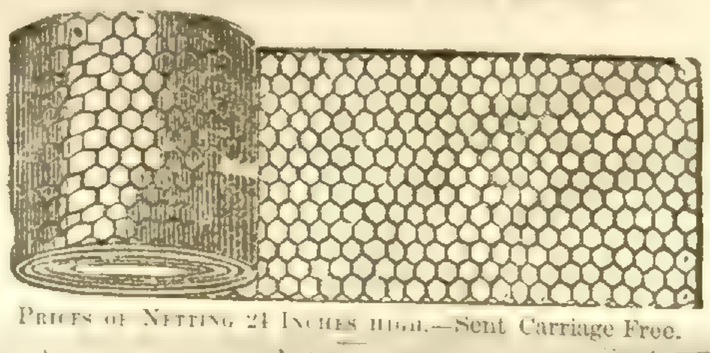

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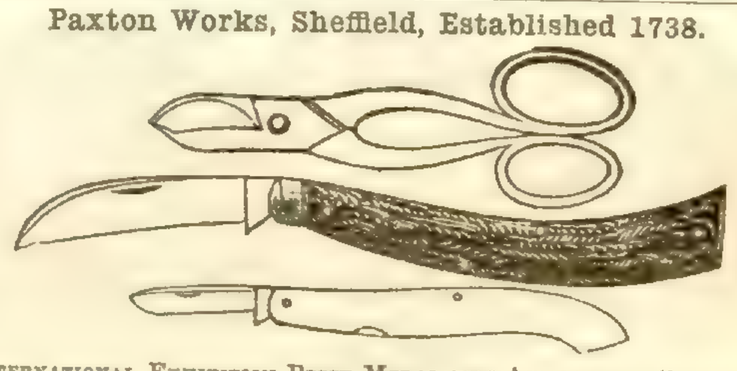

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Fig. 570.
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with Registered Spreader.
8 gal. £2 13 6 — 12 gal. £3 2 0 — 16 gal. £3 12 6
24 gal. £5 0 0 — 30 gal. £5 12 0

Fig. 571.
J. TYLOR & SONS'
OAK TUB GARDEN ENGINES,
with Registered Spreader.
15 gal. £5 12 0 — 28 gal. £7 0 0

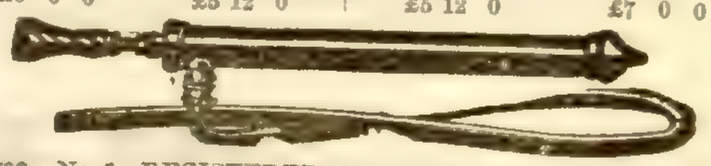

Fig. 586. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. £1 6 6 each.
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Fig. 590. Large GARDEN SYRINGE, with one rose and jet .. .. 10 6 each.
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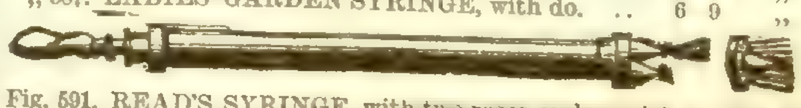

Fig. 591. READ'S SYRINGE, with two roses and one jet .. 16*s.* 6*d.*
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To Cut 12 inches, suitable for a Lady	.. ..	£4 12	0
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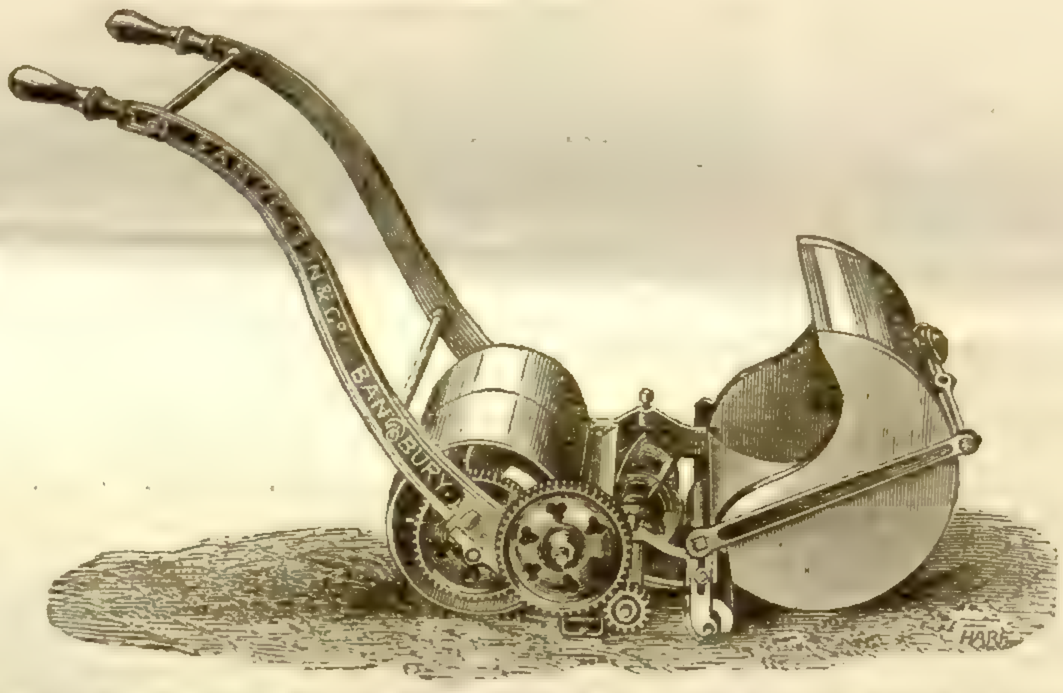

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PRIZE OFFERED by HIS GRACE the DUKE of BUCCLEUCH, the President.

CLASS 1.—12 FINE FOLIAGED and FLOWERING PLANTS, 6 each. (Open.)
1st Prize, Mr. James Veitch, Royal Exotic Nursery, Chelsea, 25*l.*
2d, Messrs. J. & C. Lee, Vineyard Nursery, Hammersmith, 15*l.*
(NOTE.—The 2d Prize was offered, and is awarded by the Society.)

CLASS 2.—12 STOVE and GREENHOUSE PLANTS in FLOWER. (Amateurs.)
1st, Mr. William May, Gr. to J. Spode, Esq., Rugeley, 15*l.*
Equal 2d, Mr. B. Peed, Gr. to Mrs. Tredwell, Lower Norwood, 10*l.*
Equal 2d, Mr. A. Morse, Gr. to T. Canning, Esq., Westbury on Trym, Bristol, 10*l.*
3d, Mr. John Green, Gr. to Sir E. Antrobus, Bt., Cheam, S., 7*l.*

CLASS 3.—12 STOVE and GREENHOUSE PLANTS in FLOWER. (Nurserymen.)
1st, Mr J. Fraser, Lea Bridge Road, Leyton, 10*l.*

CLASS 4.—6 STOVE and GREENHOUSE PLANTS in FLOWER. (Amateurs.)
1st, Mr. H. Chilman, Gr to Mrs Smith, Epsom, 6*l.*
2d, Mr. A. Ingram, Gr. to J. J. Blandy, Esq., Reading, 4*l.*
3d, Mr. T. Page, Gr. to W. Leaf, Esq., Streatham, 3*l.*

CLASS 5.—6 STOVE and GREENHOUSE PLANTS in FLOWER. (Nurserymen.)
1st, Mr. O. Rhodes, Sydenham Park Nurseries, S.E., 6*l.*
2d, Messrs. T. Jackson & Son, Kingston, S.W., 3*l.*

CLASS 6.—ORCHIDS: AERIDES, VANDA, SACCOLABIUM, 6 distinct kinds. (Open.)
1st, Mr. George Baker, Gr. to A. Basset, Esq., Stamford Hill, 6*l.*
2d, Mr. C. Penny, Gr. to H. H. Gibbs, Esq., Regent's Park, 4*l.*
3d, Mr. Wm. Milford, Gr. to E. McMorland, Esq., Haverstock Hill, 2*l.*

CLASS 7.—ORCHIDS: CATTLEYA and LÆLIA, 6 distinct kinds. (Open.)
1st, Mr. Wm. Milford, Gr. to E. McMorland, Esq., Haverstock Hill, 6*l.*

CLASS 8.—ORCHIDS: ONCIDIUM, MILTONIA and ODONTOGLOSSUM, 6 distinct kinds. (Open.)
(No Competition.)

CLASS 9.—ORCHIDS: CYPRIPEDIUM and UROPEDIUM, 3 distinct kinds. (Open.)
1st, Mr. C. Penny, Gr. to H. H. Gibbs, Esq., Regent's Park, 3*l.*
2d, Mr. Wm. Milford, Gr. to E. McMorland, Esq., Haverstock Hill, 2*l.*
3d, Mr. G. Baker, Gr. to A. Basset, Esq., Stamford Hill, 1*l.*

CLASS 10.—ORCHIDS: MISCELLANEOUS, 9 distinct kinds. (Amateurs.)
1st, Mr. Wm. Milford, Gr. to E. McMorland, Esq., Haverstock Hill, 9*l.*
2d, Mr. George Baker, Gr. to A. Basset, Esq., Stamford Hill, 7*l.*
3d, Mr. C. Penny, Gr. to H. H. Gibbs, Esq., Regent's Park, 5*l.*

CLASS 11.—ORCHIDS: MISCELLANEOUS, 9 distinct kinds. (Nurserymen.)
1st, Mr. B. S. Williams, Holloway, 7*l.*
2d, Messrs. T. Jackson & Son, Kingston, 6*l.*
3d, Mr. S. Woolley, Cheshunt, Herts, 5*l.*

CLASS 12.—ORCHIDS: MISCELLANEOUS, 6 distinct kinds. (Open.)
1st, Mr T. Page, Gr. to W. Leaf, Esq., Streatham, 6*l.*
2d, Mr. C. Penny, Gr. to H. H. Gibbs, Esq., Regent's Park, 4*l.*
3d, Mr. Wm. Milford, Gr. to E. McMorland, Esq., Haverstock Hill, 2*l.*

CLASS 13.—AZALEAS, 9 distinct kinds. (Amateurs.)
1st, Mr. A. Morse, Gr. to Thomas Canning, Esq., Westbury on Trym, near Bristol, 12*l.*
2d, Mr. S. M. Carson, Gr. to W. R. G. Farmer, Esq., Cheam, S., 9*l.*
3d, Mr. A. Ingram, Gr. to J. J. Blandy, Esq., Reading, 6*l.*
Extra, Mr. T. Page, Gr. to W. Leaf, Esq., Streatham, 2*l.* 10*s.*
Extra, Mr. Wm. Kaile, Gr. to The Earl of Lovelace, Ripley, Surrey, 1*l.* 10*s.*

CLASS 14.—AZALEAS, 9 distinct kinds. (Nurserymen.)
1st, Mr. C. Turner, Slough, 10*l.*
2d, Mr. J. Veitch, Chelsea, S.W., 7*l.*

CLASS 15.—AZALEAS, 6 distinct kinds. (Open.)
1st, Mr. C. Turner, Royal Nurseries, Slough, 6*l.*
2d, Mr. C. Penny, Gr. to H. H. Gibbs, Esq., Regent's Park, 4*l.*
Equal 3d, Mr. J. Fraser, Lea Bridge Road Nurseries, Leyton, 3*l.*
Equal 3d, Messrs. H. Lane & Son, Nurserymen, Great Berkhampstead, 3*l.*

CLASS 16.—AZALEAS, 3 new kinds, sent out in 1862 and 1863. (Open.)
1st, Mr. C. Turner, Royal Nurseries, Slough, 5*l.*

PRIZE OFFERED by Mr. KELK, Member of Council.
CLASS 17.—AZALEAS, 3 distinct kinds in 6-inch pots. (Open.)
1st, Mr. C. Turner, Royal Nurseries, Slough, 5*l.*

CLASS 18.—RHODODENDRONS, 6 distinct kinds in pots. (Open.)
(No competition.)

CLASS 19.—ROSES, in pots, 12 distinct kinds. (Nurserymen.)
1st, Mr. Wm. Paul, Waltham Cross, 10*l.*
2d, Messrs H. Lane & Son, Great Berkhampstead, 7*l.*

CLASS 20.—6 ROSES, in pots, distinct kinds. (Amateurs.)
1st, Withheld.
2d, Mr. T. Terry, Gr. to A. G. Puller, Esq., Youngsbury, Herts, 5*l.*

CLASS 21.—6 distinct ROSES, HYBRID PERPETUALS, in 9-inch pots. (Open.)
1st, Mr. C. Turner, Royal Nurseries, Slough, 4*l.*
2d, Messrs. Paul & Son, Old Cheshunt Nurseries, Herts, 3*l.*

CLASS 22.—6 TEA-SCENTED ROSES, in 9-inch pots. (Open.)
1st, Messrs. Paul & Son, Old Cheshunt Nurseries, Herts, 4*l.*

PRIZE OFFERED by Mr KELK, Member of Council.
CLASS 23.—3 SPECIMEN ROSES, in 6-inch pots. (Open.)
1st, Messrs. Paul & Son, Old Cheshunt Nurseries, Herts, 5*l.*
Extra Prize awarded by the Society to Mr. Charles Turner, Royal Nurseries, Slough, 2*l.*

CLASS 24.—CAPE HEATHS, 6 distinct kinds. (Open.)
1st, Mr. O. Rhodes, Sydenham Park Nurseries, S.E., 5*l.*
2d, Mr. T. Page, Gr. to W. Leaf, Esq., Streatham, 3*l.*
Equal 3d, Mr. H. Chilman, Gr. to Mrs. Smith, Epsom, 2*l.*
Equal 3d, Mr. B. Peed, Gr. to Mrs. Tredwell, Lower Norwood, 2*l.*

CLASS 25.—PELARGONIUMS, 12 distinct kinds. (Nurserymen.)
1st, Mr. J. Fraser, Lea Bridge Road Nurseries, Leyton, 8*l.*
2d, Mr C. Turner, Royal Nurseries, Slough, 6*l.*

CLASS 26.—PELARGONIUMS, 9 distinct kinds. (Amateurs.)
1st, Withheld.
2d, Mr. J. Wiggins, Gr. to W. Beck, Esq., Isleworth, 6*l.*

CLASS 27.—PELARGONIUMS, 6 FANCIES, distinct kinds. (Open.)
1st, Mr J. Fraser, Lea Bridge Road Nurseries, Leyton, 5*l.*
2d, Mr. C Turner, Royal Nurseries, Slough, 4*l.*

CLASS 28.—PELARGONIUMS, 3 distinct kinds, sent out in 1863. (Open.)
1st, Mr. C. Turner, Royal Nurseries, Slough, 3*l.*

CLASS 29.—6 CAPE GERANIUMS, distinct kinds. (Open.)
(No competition.)

CLASS 30.—PANSIES, 12 distinct kinds in pots. (Open.)
1st, Mr. H. Hooper, Vine Nursery, Bath, 2*l.*

CLASS 31.—PANSIES, 24 Cut Blooms. (Open.)
1st, Messrs. Downie, Laird, & Laing, Nurserymen, Forest Hill, 1*l.* 5*s.*
2d, Mr. Hy. Hooper, Vine Nursery, Widcombe Hill, Bath, 15*s.*
Extra, Mr. E. F. Kingston, Fry's Belle Vue, Wells Road, Bath, 10*s.*

CLASS 32.—VERBENAS, 12 distinct kinds in pots. (Open.)
(No Competition.)

PRIZES OFFERED by LADY DOROTHY NEVILL.
CLASS 33.—PITCHER PLANTS, 3 SARRACENIAS. (Open.)
1st, Mr. T. Baines, Gr. to H. Nicholls, Esq., Bowden, Cheshire, 3*l.*
Equal 2d, Mr. J. Veitch, Royal Exotic Nursery, Chelsea, 2*l.*
Equal 2d, Mr. B. S. Williams, Paradise and Victoria Nurseries, Holloway, 2*l.*

PRIZES OFFERED by LADY DOROTHY NEVILL.
CLASS 34.—3 PITCHER PLANTS (not SARRACENIAS) (Open.)
1st, Mr. J. Veitch, Royal Exotic Nurseries, Chelsea, 3*l.*

CLASS 35.—NEW or RARE TENDER PLANTS in FLOWER.
FIRST CLASS CERTIFICATE.
Imantophyllum miniatum pictum, from Mr. W. Bull, Chelsea.
SECOND CLASS CERTIFICATE.
Stangeria paradoxa fœmina, from Messrs. Jackson & Son, Kingston.
COMMENDATION.
Helichrysum argenteum, from Mr. S. M. Carson, Cheam.
SPECIAL CERTIFICATE.
Ornithogalum thrysoides, from Messrs. J. Carter & Co., Sydenham.

CLASS 36.—NEW or RARE TENDER PLANTS NOT in FLOWER. (Open.)
FIRST-CLASS CERTIFICATES.
Gymnostachyum Verschaffeltii, from Mr. Bull and Mr. Williams.
Cycas Ruminiana, from Mr. Bull.
Anæctochilus Petola superba, from Messrs. Jackson & Son.
Sarracenia rubra, from Mr. Williams, Holloway.
Dracæna Cooperi, from Mr. J. Veitch, Chelsea.
Gymnogramma Pearcii, from Mr. J. Veitch, Chelsea.
Stephensonia grandifolia, from Mr. J. Veitch, Chelsea.
SECOND-CLASS CERTIFICATES.
Nephrodium molle cristatum, from Mr. W. Bull.
Maranta striata, from Mr. J. Veitch.
Drosera sp., from Mr. J. Veitch.
Eranthemum sp., from Mr. J. Veitch.
COMMENDATIONS.
Pteris albo-lineata angusta, from Mr. W. Bull.
Dracæna Ehrenbergii, from Mr. W. Bull.
Dracæna robusta, from Mr. J. Veitch.

CLASS 37.—NEW ORCHIDS in FLOWER. (Open.)
FIRST-CLASS CERTIFICATE.
Phalænopsis grandiflora aurea, from Mr. Williams.
SECOND-CLASS CERTIFICATE.
Cypripedium Hookeræ, from Mr. Williams.
COMMENDATION.
Eulophia sp. Caffraria, from Mr. Salmon, Gr. to J. Kayess, Esq., West Ham.

CLASS 38.—NEW or RARE HARDY ORNAMENTAL PLANTS. (Open.)
FIRST-CLASS CERTIFICATES.
Aucuba (longifolia), from Mr. J. Veitch.
Prumnopitys elegans, from Mr. J. Veitch.
Lastrea Standishii, from Mr. J. Veitch, and Mr. Williams
Athyrium Filix-fœmina diffisso-multifidum, from Messrs J. Ivery & Son, Dorking.
SECOND-CLASS CERTIFICATES.
Athyrium Filix-fœmina Fieldiæ lancifolium, from Messrs. J. Ivery & Son, Dorking.
Polystichum aculeatum acrocladon, from Messrs. J. Ivery & Son, Dorking.

CLASS 39.—NEWLY INTRODUCED PLANTS that have received special recognition from the Floral Committee during 1861, 1862, and 1863. (Open.)
FIRST-CLASS CERTIFICATES.
Mr. B. S. Williams, Holloway, for Cibotium princeps.
Mr. W. Bull, Chelsea, for Cibotium princeps.
SECOND-CLASS CERTIFICATES.
Mr. J. Veitch, for Anthurium Scherzerianum.
Mr. B. S. Williams, Holloway, for Sphærogyne latifolia.
THIRD-CLASS CERTIFICATE.
Mr. J. Veitch, Chelsea, for Pandanus elegantissimus.
FOURTH-CLASS CERTIFICATE.
Mr. J. Veitch, Chelsea, for Aucuba japonica vera.
FIFTH-CLASS CERTIFICATE.
Mr. J. Veitch, Chelsea, for Thujopsis lætevirens.
SIXTH CLASS CERTIFICATE.
Mr. B. S. Williams, for Alocasia zebrina.

CLASS 40.—SEEDLING FLORISTS' FLOWERS and GARDEN HYBRIDS. (Open.)
FIRST-CLASS CERTIFICATES.
Fancy Pelargonium Ann Page, from Mr. Turner, Slough.
Pelargonium John Hoyle, from G. W. Hoyle, Esq., Reading.
Azalea Vesuvius, from Mr. Veitch.
SECOND-CLASS CERTIFICATES.
Pelargonium Sunny Memories, from G. W. Hoyle, Esq.
" British Sailor, from G. W. Hoyle, Esq.
" Profusion, from G. W. Hoyle, Esq.
Fancy Pelargonium Mrs. Dorling, from Mr. C. Turner.
Rhododendron Princess of Wales, from Mr. M. Young, Milford.
COMMENDATION.
Pelargonium Exhibitor, from G. W. Hoyle, Esq.

CLASS 41.—GROUP of PLANTS, showing effective arrangement for Decorating a Small Conservatory. (Open.)
1st, Mr. Charles Turner, Royal Nurseries, Slough, 10*l.*

CLASS 42.—MISCELLANEOUS. (Open.)
1st, Messrs. Barr & Sugden, Wardian Cases for Window and Table Decoration, 2*l.*
Equal 2d, Messrs. J. Backhouse & Son, York, Alpine Plants, 1*l.* 10*s.*
Equal 2d, Messrs. J. Backhouse & Son, York, Group of American Osmundas, 1*l.* 10*s.*
3d, Miss E. A. Maling, 34, Alfred Place, Brompton, Patent In-door Plant Case, Filled with Plants, 1*l.*
Extra, Messrs. J. Ivery & Son, Collection of Hardy Ferns, 2*l.* 10*l.*
Extra, Mr. Charles Turner, Collection of 12 Boxes of Cut Roses, 2*l.* 10*s.*
Extra, Messrs. Paul & Son, Collection of Cut Roses, 1*l.* 10*s.*

PRIZES OFFERED by SIR C. WENTWORTH DILKE, Bart., V.P.R.H.S.
THREE GROUPS of FRUITS and FLOWERS for DECORATION of DINNER-TABLE.
1st, Mrs. Worthington Bliss, 26, Eccleston Square, 10*l.*
2d, Miss March, St. James's Palace, 7*l.*
3d, Miss Wait, Kensington Gate, 3*l.*
Highly Commended: Lady Holmesdale.
Do., Mrs. Cutbush, Highgate.
Highly Commended for the Side Groups only: Viscountess Combermere.
Do., Lady Emily Peel.

LADIES PRIZES OFFERED by the PROPRIETORS of the *GARDENERS' CHRONICLE* for SINGLE PLANTS Grown in a Drawing-room, by Ladies only, for Drawing-room Decoration.
1st, Mrs. Dombrain, of Deal, Adiantum, 10*l.*

WHEELER'S LITTLE BOOK on SEEDS.

CARTER'S GARDENER'S VADE-MECUM.

New Plants for 1864.

B. S. WILLIAMS has much pleasure in offering the following Novelties for the first time, descriptions of which will be found in previous advertisements, and in his NEW PLANT CATALOGUE, post free to all applicants.

NEW ACHIMENES.
Purpurea elegans, Leopard, Magnet, Scarlet Perfection, Vivicans, Eclipse — 7*s.* 6*d.* each, or the 6 for 42*s.*

NEW FUCHSIAS.
Neptune, Queen of Beauties, Gem of the North, Minotaur — 7*s.* 6*d.* each

NEW SINGLE PETUNIAS.
Royalty, Purple Prince, Duchess of Northumberland — 5*s.* each

NEW ZONALE GERANIUMS.
Display, Beauty, Royalty. — 5*s.* each

Paradise and Victoria Nurseries, Holloway, London, N.

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CHOICE CALCEOLARIA (JAMES').—This unrivalled strain has in every instance received FIRST PRIZES wherever exhibited—can be seen in bloom here. Sealed Packets, 1*s.* 6*d.*, 2*s.* 6*d.*, and 5*s.*
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PANSY.—From best named varieties. Sealed Packets, 1*s.* and 2*s.* 6*d.*
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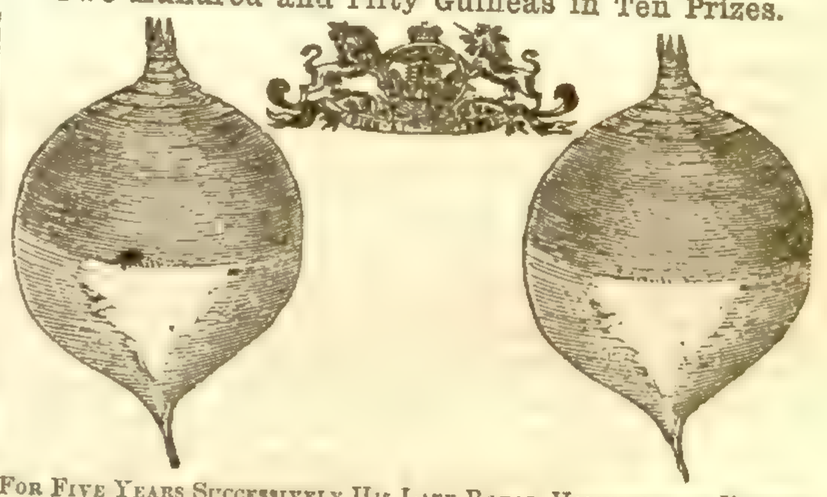

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SUTTON'S CHAMPION SWEDES at the ROYAL EAST BERKS and SOUTH BUCKS AGRICULTURAL SOCIETIES, and many other valuable Prizes in various Parts of the Kingdom.

SUTTON'S Champion Swede is one of the hardiest sorts in cultivation. The Champion Swede being of quick growth never suffers from mildew, and does not require to be sown so early as other Swedes.

EXTRACTS FROM LETTERS RECEIVED.

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J. W. J. BARTRAM, Esq., *Little Weedon.*
"Your Champion Swede has given great satisfaction, having been a splendid crop, and kept well through the severe frosts."

J. STRATTON, Esq., *Broad Hinton.*
"With your Champion Swedes I won a prize of 10*l.* last year."

Mr. THOS. B. PALMER, *Escrick.*
"Your Champion Swedes are as sound and as good in colour as the day I got them up; I have sufficient to last till the 12th of May."

Mr. H. HAMMOND, *Market Place, Masham.*
"Your Champion Swede obtained the first prize at the Masham Show, the 10th of September last."

Mr. J. B. REECE, *Harpswood.*
"I took the Shropshire Challenge Cup, likewise the Bridgnorth District Cup, with your Champion Swedes."

WM. SADLER, Esq., *Ferrygate, Drem.*
"The Champion Swede is cutting out everything here."

The above are only a few of the numerous Letters received in testimony of the excellence of SUTTON'S Champion Swede.

New Seed from Selected Roots now ready, 10*d.* per pound or cheaper by the bushel, prices of which may be had on application. Carriage free, except small parcels.

SUTTON & SONS Royal Berkshire Seed Establishment, Reading.

The Gardeners' Chronicle.

SATURDAY, JUNE 4, 1864.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY,	June	7	Royal Horticultural (Election of Fellows), at South Kensington .. .. .. 3 P.M. Lecture on London Cottage-window Gardening, by the Rev. E. Bayley .. 3 P.M.
SATURDAY,	—	11	Royal Botanic (Second Exhibition of Plants, Flowers, and Fruits) .. .. 2 P.M.

IN the "Proceedings of the Royal Horticultural Society" for May, there is a notice of some flowers of the TREE PEONY or MOUTAN, which had been exhibited at a late meeting of the Society by Mr. BATEMAN. It is announced that "in order to give the Fellows and the public generally an opportunity of judging for themselves of the attractiveness of these plants, the Council propose to devote to their cultivation a portion of the space in the new conservatory that is to form the approach to the South Kensington Gardens from Exhibition Road; and Mr. BATEMAN has presented to the Society a splendid collection of Moutans for the purpose of furnishing that space." If this matter be carried out in the right way, the Fellows of the Society and the public, will have a sight presented to them which cannot fail to be one of a most enjoyable kind. And, what is of great importance, the plants will be in full bloom at that season of the year when many of the Fellows are in London, and when they have the opportunity of visiting their garden.

There are few persons in this country who have any idea of the splendour of these gorgeous

flowers. The more common varieties, that is, those which we have had in cultivation in our gardens for many years, beautiful though they undoubtedly are, give but a faint idea of the beauty of those other kinds which have been lately introduced. The flowers of the older sorts are mostly light coloured—white, blush, or pink, and they are generally only semi-double. It used to be said that the Chinese had a yellow variety, also one with black flowers, and a double blue one, which, however, was only to be met with in the EMPEROR's garden. The latter produced blooms of extraordinary size, each having from 100 to 1000 petals. When China was partially opened to foreigners in 1842, a search was made for these famous Moutans, and many new kinds—more than 30 we believe—were discovered and introduced to England. Amongst these, it is true, there was no real yellow or true blue; but there were dark and light purples, lilacs, and many shades of red of great beauty. One was almost black in colour, indeed it was known as the Black Moutan amongst the Chinese, while another was straw-coloured, and was called the Yellow Moutan. Most of the flowers of these plants were very double, and one at least was sweet-scented; the latter was amongst those exhibited by Mr. BATEMAN the other day, and was named "odorata rosea." Some of these varieties produce flowers of unusual size, and we dare say, were their petals counted, they might prove as numerous as those of the plant in the EMPEROR's garden, to which we have alluded.

With such beautiful plants in our hands, it may naturally be thought that good use would have been made of them in this country. Such, however, has not been the case. Instead of producing a marked and charming effect in our gardens, they have been almost entirely neglected. There were two drawbacks to their successful cultivation—they were slow to propagate, and could not be multiplied like Verbenas and Geraniums; and they required a little knowledge in order to cultivate them successfully. The result has been that many of these fine things have either been entirely lost to Europe, or can only be met with on the continent, where they are more appreciated than they have hitherto been with us, and where, indeed, several new varieties have been produced.

But there is no real difficulty either in the cultivation or in the propagation of the Tree Peony to frighten a good English gardener. In a late article, at p. 1082 (1863), when noticing Mr. BATEMAN'S successes, we remarked that "the Moutan is a fair example of a class of beautiful plants, which, although perfectly hardy in England, yet require some slight protection from our spring frosts, and perhaps a little higher temperature in summer to enable the wood to become well ripened." It is indigenous to a country where the winter months are as cold as our own, but where the springs are early and the summers warm. All it requires, when in cultivation with us, is a slight protection from spring frosts and a little extra heat during the period of growth in summer, should that season prove wet and cold; and a cold winter during which the plants enjoy a period of rest. This is all; and all this can be easily and cheaply given by a moveable covering of glass. With regard to propagation, all we can say is that the Chinese gardeners propagate it freely by grafting on the roots of the single-flowered herbaceous Peony. And further, they can afford to sell the plants in the markets in full bloom, at a very cheap rate.

In LOUDON's "Arboretum et Fruticetum Britannicum" there are several large plants of the Tree Peony noticed as growing in the vicinity of London, which, in former days, would seem to have been quite "lions" in their way. "One of the largest Tree Peonies within 10 miles of London stood, till lately, in the grounds at Spring Grove, where it was planted by Sir JOSEPH BANKS. It was 6 feet or 8 feet high, and formed a bush 8 feet or 10 feet in diameter in 1825. North of London, the largest plant in the country (P. Moutan papaveracea) is at the seat of Sir ABRAHAM HUME, at Wormleybury, in Hertfordshire. It is 7 feet high, and forms a bush 14 feet in diameter, after having been planted 30 years. It stands the winter, in general, very well; but, if the flower-buds swell too early in February, it becomes advisable to cover the plant slightly with a mat. In the year 1835 this plant perfected 320 flowers; but it has been known to bear three times that number."

If these remarkable plants were produced in the olden time, and before the late Sir ROBERT PEEL had conferred on horticulturists his boon of cheap glass, what may we not do now? Let our readers only picture to themselves a row of such plants on each side of the conservatory approaches at South Kensington. What a grand effect would be produced if each plant was only half as large, and had only half as many blooms upon it as that fine old plant of Sir ABRAHAM HUME's. And then the brilliant and varied colours of the new kinds—white, and all shades of red, lilac, and purple, would produce an effect which it would be difficult for any one to imagine who is unacquainted with these plants. If the Royal Horticultural Society is able to produce these Peonies in perfection, and there is no reason why it should fail to do so, it will accomplish two objects at one time: it will afford a rich treat to the Fellows and the public in London, at a time when flowers are really wanted; and it will show to others that it is possible to accomplish the same thing in any part of the country. We repeat again that all that is wanted is a slight protection in spring, a warm summer to ripen the wood, and cold in winter so that the plants may go completely to rest. All forcing of the plants, drawing them up by heat and shade, or inducing them to grow when they should be at rest, must be carefully avoided.

THE WEATHER during the month just ended has been remarkable for an unusually high day temperature from the 14th to the 20th inclusive; and on the contrary, for nights as unusually cold so late as the 29th and 30th. On the 13th and 14th, the maximum temperature during the day was respectively 73° and 75°; but on the 15th, it was as high in the shade as 83°, and 82° on the 16th; on the four consecutive days it was 81°, 83°, 81°, 82°. During that period, the lowest temperature at night averaged about 43°. The heat of the ground rose from 54° to 60°. With this amount of warmth, such things as Kidney Beans and Scarlet Runners, which will not vegetate in cold soil, soon appeared above ground, but only to receive a severe check; for, on the night of the 29th, the thermometer fell to 25°, or 7 degrees below the freezing point, and on the following night it indicated 28°, or 4 degrees below freezing.

The wind during the month blew from the north 4 days, N.E. 14, E. 4, S.E. 5; altogether from north and easterly directions 27 days. It blew only one day from its usually most prevalent quarter, the south-west, one from the south, and two from the west. Previous to the 29th, when the thermometer fell so low, the air was excessively dry, and there was no moisture to form clouds to prevent the radiation of heat from the surface of the ground. The long succession of N. and N.E. winds brought a large amount of cold air from these quarters. Under such conditions frost may be apprehended, judging from what has been observed of these winds of late years, even in summer, but more especially if they continue to blow after an unusual outburst of heat, as they did recently. The air thus acquired a very high temperature, became highly rarified, and lighter in proportion to that temperature, and consequently was easily displaced by the colder and heavier air pressing from a northern quarter. If one or two unusually warm days and nights occur whilst northerly winds are prevalent, such are especially to be feared, and the probable consequences should be guarded against as far as pssible.

The heat gives buoyancy to the air and puts it in a condition to take flight as soon as a colder current begins to press upon it, and the more the air of a locality is heated above the temperature of an adjoining body of air, the more completely will it leave the latter in possession of that locality, and the tender vegetation which it may contain to the unmitigated chill of a cold, frosty current: a circumstance which often happens.

The high temperature just recorded exceeds any that has occurred in May for the last 36 years, with the exception of that in May 1833. On the 12th of May in that year the thermometer was 81°, and 86° on the 15th and 17th; therefore three degrees higher than in the present year. As regards the other extreme, the thermometer at night was only lower in May for 36 years in the following instances:—1852, on the 2d, 25°; and 28°, 27°, and 30° on the 3d, 4th, and 5th respectively; but in 1856, May 4th, it fell to 21°; but it has not been observed so low as in this year so late in the month.

Pears and Apples being well in leaf do not appear to have suffered much. Peaches and Nectarines on walls are safe. Plums and Cherries will probably drop their fruit a good deal, but the real extent of mischief done will only be made known after some days of hot sunshine. French Beans and Scarlet Runners are destroyed in some cases, the upper leaves of Potatos are blackened, but the stems are not generally killed. In short, the injury done does not seem to be so great as has been known to occur in May of some previous years.

THE KNAP HILL AMERICAN PLANTS are the world's wonder, and when we inform our readers that the very cream of them have been gathered together beneath a huge tent in the Gardens of the Royal Horticultural Society at South Kensington, we think little more need be said to induce crowds to go and see them. Nor will they be disappointed; beneath a stately canvas covering, 350 feet in length and 150 feet in width, supported by two iron pillars or masts some 60 feet in height, thousands of these charming plants are now in full blossom, producing a display of floral beauty seldom witnessed so near the smoke and dust of our great metropolis.

The tent in which these glorious treasures are contained has been designed by Captain FOWKE, and is a wonderful example of engineering skill applied to tent construction. It has a straight gravelled promenade, 32 feet in width, sunken down its centre, on either side of which are banks of Rhododendrons, separated from each other by means of straight gravel walks 8 feet in width, the whole being encircled by an outside walk and boundary border of choice Conifers. Among the latter are some unique examples of dwarf Firs, thriving plants of the lovely Cupressus Lawsoniana, Abies Nordmanniana, and other favourites of a similar kind.

It is to the Rhododendrons however we wish now to direct special attention. The beds of peat in which they are growing are all edged with turf, which not only serves to relieve the eye, but to set off their gay colours to increased advantage. In the middle of the central promenade is a grand mass of some of the finer sorts, and at a little distance from each end of it are noble standard trees of the well-known kind called Roseum elegans, the growth of half a century, with heads of bloom 8 feet in diameter, and trunks 5 inches through. These last occupy raised turfed mounds.

As regards sorts, among scarlets or deep crimsons the most brilliant are Blandyanum, Brayanum, atrosanguineum, Archimedes, Vandyke, Barclayanum, and John Waterer.

Different shades of rose comprise Titian, Roseum pictum, Towardii, Sir C. Napier, and Elfrida.

Among light-coloured sorts the most conspicuous are album elegans, delicatissimum, and album grandiflorum.

Of salmon-coloured varieties, Lady Eleanor Cathcart still stands at the head, its charming trusses of Geranium-like blossoms readily distinguishing it from all others with which it may be associated.

Purples consist of Nero, Lord John Russell, Currieanum, Sir I. Newton, and Ne Plus Ultra.

Among lilac kinds, the best is the semidouble Fastuosum, Onslowianum, and Everestianum, the last an old, but still useful kind.

Of pale-centred crimson-edged varieties, a class justly much prized, the best are Concessum, Alarm, and Bylsianum.

Exquisitely beautiful as the exhibition just alluded to is, we think that it would have had a still more charming effect had the deep crimson sorts with which it abounds been relieved by bright whites or yellows. The latter are chiefly yellow Azaleas, whose wavy petals want breadth, and consequently do not bear contrast with the rich red kinds of Rhododendron. As for the so-called *whites* they are in all cases stained with some shade of red—with a single glorious exception. We allude to a new variety, called Mrs. John Clutton, whose pure complexion, and matchless form, are scarcely equalled among the finest of the race. The shape of its corolla may indeed be regarded as more faultless than that of any Rhododendron hitherto raised, equalling the finest of the Chinese Azaleas. Of other glorious varieties the name is legion; but the following more especially demand separate notice—viz., Mrs. W. Bovill, an intense salmon-crimson sort, which cannot fail to be an acquisition; Lady F. Crossley, in the same way; and Charles Bagley, brilliant crimson.

It is in the class of whites, however, that new kinds are most wanted, and therefore we hail Mrs. Clutton as a most important acquisition.

The way of growing these magnificent plants is

now pretty well known. All of them have extremely small fibrous roots, containing in themselves no reservoir of moisture, and therefore they require to be continually surrounded by dampness. In the presence of dryness the little rootlets just mentioned wither and never revive. Dampness seems indeed to be more important to them than soil; for they are sometimes found growing on the branches of trees like Epiphytes in climates where the air is unceasingly charged with moisture. What the cultivator has to do therefore, in providing for his American plants, such as those we have been describing, is to keep them below the surface of the surrounding ground, so that what rain falls may be retained in it, and to give them a kind of soil which offers little resistance to the passage of their fine hair-like roots.

We may add that the beauty of the magnificent exhibition of these plants which Messrs. Waterer & Godfrey have had this season at Knap Hill, has unfortunately been greatly impaired by the frosts of last week, which not only destroyed the bloom, but in many instances even the young shoots. The tender shoots of other plants have also suffered.

—— The fine show which took place on Wednesday at South Kensington, though remarkable for the splendour of many of the collections exhibited, and for the general absence of inferior specimens, did not present so much novelty as is sometimes met with at these gatherings; and indeed many of the New Plants which were exhibited have been already noticed in our remarks of last week (p. 506). The prizes offered for plants grown indoors by ladies did not induce the competition we had expected to see. The result, indeed, was a walk over the course for one of the two prizes offered, by an Adiantum which had not much to recommend it. However, the ice being broken, it is reasonable to anticipate that there will be less hesitancy in entering on the competition another year.

Amongst the New Plants shown in flower, the most remarkable was a fine form of Imantophyllum miniatum called pictum, of which a vigorously-bloomed plant was exhibited. It differed from the usual form, in the base of the orange-salmon segments having pale-coloured margins, so that a striped appearance was given to the heads of flowers. Another plant of considerable interest was the curious Fern-like Stangeria paradoxa, of which a female plant with one of its oblong ovate woolly cones—the first of this sex we have seen exhibited—was present. There was also a dwarf-habited Helichrysum, with white lanceolate woolly leaves, and large roundish white flower-heads, which may become a useful greenhouse plant. It bore the garden name of argenteum. Some seedling Statices were shown, but there was nothing amongst them equal in quality to the hybrid S. profusa. The Genetyllis and Sollya, mentioned in our previous notice, were again shown.

The most important subject in the group of plants not in flower, was Cycas Ruminiana, a very elegant Philippine species with a short and rather slender stem, and fronds of glossy green, composed of numerous long narrow pinnæ, altogether having a well-marked and Fern-like character. Under the name of Sarracenia rubra, was shown a very pretty little plant, with erect narrow compressed pitchers, the upper end of which was changed from green to white, and elegantly veined with red. There was a so-called Eranthemum, with the habit of Gymnostachyum Verschaffeltii, but instead of a fine net-work of red veins, this had the costa and primary veins marked out by bolder lines of red; and there was, too, a Drosera, with long-stalked oblong-ligulate leaves, beautifully fringed over with red-tipped glands. We noticed a large-leaved form of Macodes Petola called superba, in which the dark green leaves were beautifully veined, so as to leave open spaces of the ground colour. And besides these there were Dracæna Cooperi, Gymnogramma Pearcii, Stephenia grandifolia, Agave schidigera, Sedum Sieboldi medio-variegatum, Phormium tenax variegatum, Gymnostachyum Verschaffeltii, the new Dieffenbachias, and various others, which have been noticed by us on previous occasions.

New Orchids were not numerous. The yellow-tipped form of Phalænopsis grandiflora, here called aurea, in which the greater part of the lip is of a decided yellow colour, was the most beautiful. Cypripedium Hookeræ, with its finely-spotted leaves, and broad purple-petaled flowers, and Cypripedium Pearcii, remarkable for the dark moustache which surrounds the top of its column, were also shown. There was besides a very curious but by no means showy plant, said to have come from Caffraria, and which was probably a species of Eulophia. This latter singular plant had long tapering bulbs, bearing at top about three long channelled leaves, which were finely serrated at the edge, and had much the aspect of narrow leaves of a Pine Apple; and springing from below the base of the pseudo-bulbs rose a tall flowering stem, 6 feet high, bearing a long raceme of flowers, in which the sepals were brown and recurved at the tips, the petals convergent green veined with red, and the lip long and protruding, of a pink colour, stained with red at the base.

Another group of novelties consisted of what were called Hardy Ornamental Plants, and here were several fine things, but mostly such as have been already noticed. For example: the beautiful form of Aucuba called limbata or marginata; the long narrow green-leaved Aucuba, sometimes shown as longifolia; Prumnopitys elegans, Lastrea Standishii, Gynerium argenteum albo-lineatum, and such like. Besides these there was a pretty hardy Fern, Athyrium Filix-fœmina diffisso-multifidum, with tasselled fronds and jagged pinnules; and a tasselled form of Polystichum aculeatum, known as acrocladon. A glaucous-leaved Retinospora, called Veitchii, was too young for a decided opinion to be formed respecting it, but it looked as if it might have been a selected seedling, intermediate between R. obtusa and pisifera, but with very glaucous branches.

Of Seedlings, we shall endeavour to say something next week.

EXHIBITION FLOWERS.

The Verbena.

Few flowers have been so much improved of late years as the Verbena. At one period it was looked upon merely as a brilliant flower, suited for massing together or forming ribbon borders, for which purposes many varieties are well adapted; but it is its qualities as an exhibition flower that I have now to treat of. Those who have seen at the various shows good collections of Verbenas, nicely arranged and well shown, must acknowledge that no florists' flowers are more effective. The great variety of brilliant and delicate colours which are combined in the Verbena add a charm which is rarely to be met with among the ordinary races of florists' flowers. Not only is the Verbena one of the requisites of an autumn show, but, during the months of July, August, and September, it may be made to play a conspicuous part in the decoration of the greenhouse; while the delicate perfume which a few well-bloomed plants will impart to the house is at all times agreeable.

In selecting plants to grow under glass for the purpose of cutting blooms for exhibition, I would advise the strongest and most robust looking plants to be chosen. These should be potted singly into 4-inch pots, and placed in a cool frame for about three weeks, during which time the plants will have grown sufficiently to be twice stopped. A week after the second pinching in, they should be shifted into their blooming pots, which should be about 6 inches across. The compost I prefer is leaf-mould, old rotted frame manure, and good loam, in about equal proportions. When the bloom buds are visible they should be removed from the frame to a cool, well ventilated greenhouse, and a neat stick should be put to every shoot for the double purpose of keeping the plants tidy, and the trusses erect. It must be borne in mind that it is essential that every head of bloom should be supported, for if a truss once becomes one-sided it is useless for exhibition purposes.

Another matter which the grower must on no account neglect is the smoking of the frames or greenhouse immediately a green fly is seen, for if the plants ever become infested with this pest, the collection had better be destroyed, as the plants never recover sufficiently to produce good blooms. During hot weather the floor of the greenhouse should be occasionally sprinkled, and a slight shading should be used, or the more delicate colours will suffer.

It will be perceived that at the top of each shoot three buds will be produced. The two side ones should be removed as soon as they can be taken hold of with the thumb and finger, for the purpose of increasing the size of the remaining one. This removal of the smaller buds also prevents the plants from growing tall and scraggy, as after the one bloom-head is cut, fresh eyes will push out lower down the stem, and from these flowers will be produced throughout the season, and the plants will be more compact and handsome.

The following list contains the best varieties for growing in pots, and for cutting for exhibition. In fact, I have here given the names of the entire collection I am myself growing, except seedlings, of which this year I have upwards of four thousand, all in pots, and to be bloomed under glass, which method I consider the only one by which the exhibition kinds can be properly tested.

Annihilator.—A finely-formed brilliant crimson, flushed with purple, the eye white, large, and circular; an extra fine variety.

Apollo.—A useful back row flower, always good, but the colour is not generally pleasing, being a dull flesh, with pale crimson centre.

Black Prince.—Colour deep plum, with large lemon-coloured eye; good in form, and very distinct.

Cato.—A very pleasing sort; colour pale flesh, with light purple centre; a distinct variety.

Countess of Bradford.—Mauve, with white eye; a good and pleasing variety, and one which looks well in a stand.

Decorator.—Glossy crimson, with lemon-coloured eye; very good.

Emperor.—A useful sort; dull red, striped and shaded with deep crimson; very constant.

Firefly.—Brilliant scarlet, with yellow eye; a fine blooming variety.

Foxhunter.—Scarlet, with pale yellow eye; free large truss; extra fine.

Fairest of the Fair.—Pure white, with bright purple eye; a most chaste and beautiful kind, by no means a free grower, yet it should be in all collections.

Géant des Batailles.—Although not strictly a show variety, it is so good in many points, and so constant in producing fine trusses, of a peculiar shade of colour much required in a collection, that that no grower should be without it. The variety is too well known to require description.

Gloire de mon plaisir.—A rich crimson with lemon-coloured eye; constant and good; truss rather small.

King of Verbenas.—A strong growing kind; colour shaded crimson, with large white eye; of fine form, the truss large; extra fine.

L'Avenir de Ballent.—A grand variety; colour shaded pink with crimson centre; large truss and good habit; very attractive, and extra fine.

Lizzy.—A pleasing pink with white eye; a free bloomer.

Lord Elgin.—Dark maroon with white eye; distinct and pretty; requires good growth.

Lord Leigh.—Fine large scarlet with large lemon coloured eye; one of the best; extra fine.

Lord Craven.—Deep purple, or the colour of a ripe damson. This is one of the varieties (although not possessed of a good eye—a deficiency, in my opinion, fatal to an exhibition variety), which will find its way into every collection.

Mrs. Moore.—Without doubt the best of all the blue purple kinds yet sent out; the form is excellent; the eye is also large and white, and the surface of the flower smooth, but the truss is not large; the colour is most pleasing, being a bright blue purple.

Magnificus.—A fine back-row flower; colour dull lilac; a very finely formed truss, which is its chief recommendation.

Mad. Hermann Stenger.—A well formed flesh-coloured sort with pale red centre; a pleasing kind.

Mrs. Bayley.—Rosy crimson of a peculiar shade, with white eye; distinct.

Nemesis.—An excellent variety, colour rosy scarlet; the truss is finely formed, but the flowers want a bolder eye; still a very useful variety.

Pauline.—A chaste shade of rosy purple, with fine white eye, of exquisite shape.

Reine des Fleurs.—A delicate pink of a peculiar shade, with white eye; very pleasing.

Rose Celestial.—Another shade of pink, smooth, and of fine form, with a circular white eye.

Ruby King.—A very fine kind, but wanting a large eye; the segments are circular and stout in substance. Like Lord Craven its qualities must bring it into all collections.

Rose Imperial.—A large well-formed flower; colour deep pink with crimson centre.

Reine des Amazons.—Blush with crimson centre; truss large and well formed; extra fine.

Sylph.—Flesh colour with pale crimson centre; fine in form, a free bloomer, and constant; an extra fine variety.

Venus.—Pure white with purple centre; truss small, but very chaste.

The raisers of Verbenas having given the public little or no opportunity of seeing their productions during the past year, I cannot be expected to speak much of their new varieties. All I can say is, that the following, which are sent out this spring, are decided improvements on all I have seen:—

Alexandra.—White, striped with purple.

Blue Beard.—Grey blue, large and fine.

Mauve Queen.—Mauve, with white eye.

Model.—Scarlet, the eye perfectly circular, and very large.

Modesty.—Blush, with crimson centre; the best of the light varieties.

Monarch.—Lavender, with large white eye; very bold.

Startler.—Brilliant crimson, of very fine form, and with a circular white eye; large truss.

Wonderful.—Very similar to the above, but deeper in colour.

Charles James Perry, The Cedars, Castle Bromwich.

HARDY FERNS AND BOG PLANTS.

The past winter has been of unusual severity in Devonshire, and any plants which have survived the frosts of January and February, would endure any ordinary winter in other parts of England. The collection of British and exotic Ferns at Becky Fall, affords an opportunity of giving a list of Ferns which may be considered hardy.

It will be perhaps better to give a brief description of the position in which the Ferns are planted at Becky Fall, for some which are now flourishing there can hardly be recommended for general cultivation, as few places offer the same facilities for growing kinds requiring much shade and moisture. I allude particularly to the various kinds of Trichomanes and Hymenophyllum, which, to be satisfactorily cultivated, must either have the natural rocks and water as in such a place as this, or some elaborate artificial imitation of Nature, such as may be seen at Messrs. Backhouse's nursery at York.

Becky is pretty well known to tourists in the West of England. It stands at the higher end of a narrow valley on the southern slopes of Dartmoor. The hills on each side are steep or even precipitous in some places, and densely wooded with Oak and Birch. The woods on the right of the valley shade off into the rocky slopes of a moor covered with Heath and Furze. The steepness of the hill confines the view to the beautiful valley beneath, which all looks as wild and untouched by man as it must have been at the time when the ancient Britons found one of their last refuges in these highlands. The stream rushes in a succession of falls and rapids over and among immense granite boulders, which are densely covered with Mosses and Ferns. A path leads down the right side of the valley, winding among granite rocks, or zig-zagging where the excessive steepness of the descent requires it. The Ferns are chiefly planted along this path. The aspect of this side of the valley being nearly north-east, the shady aspect and the numerous springs which break out on the side of the hill, prevent the ground ever being dry, added to which the average yearly rainfall of the place exceeds 50 inches. There is therefore an unusual degree of humidity, which causes the vegetation to assume a peculiar character. The wild Ferns become quite epiphytal, and with the Mosses clothe the limbs of the trees in dense masses. Lichens hang in long grey and green draperies from the branches. The rocks are covered with Stonecrop, Mosses, and Whortleberry. Here grow on moist rocks Hymenophyllum unilaterale and tunbridgense. Osmunda regalis grows among rocks by the water with almost tropical luxuriance, its fronds sometimes 8 feet long, drooping in the clear rapid stream.

Almost all the Ferns I am about to mention survived

the winter of 1862-63. I shall have to note that many have been injured or killed during the late winter, when the thermometer was as low as 9° on two occasions. The Ferns are mostly planted in hollows between the rocks, but advantage has been taken of this immense natural rockwork to give all varieties of situation and degrees of moisture suitable to the different plants. In shady hollows, where trickling streams of water make their way between the rocks, are beds of Polypodium Dryopteris and Phegopteris, and in more exposed places, P. Robertianum. In similar situations are thick tufts of Cystopteris bulbifera, fragilis and alpina, the free growing American Cystopteris tenuis, and several plants of the lovely C. montana, the best of the genus.

The pretty Woodsia obtusa is planted in clefts of the rocks, also Woodsia ilvensis and alpina. In the cracks of a wall, where the path is raised to cross a deep hollow, are planted Asplenium acutum, which is apparently dead; also A. alternifolium, septentrionale and fontanum; the last seems almost to have naturalised itself in this position. In a shadier place are Asplenium marinum, and its fine South American variety A. lætum, with A. Hemionitis—the last is dead; Polystichum angulare, with its many varieties, among moist exposed rocks; and P. Lonchitis with fine fronds 15 inches long. Polystichum flexum grew freely on exposed rocks, but is quite dead.

Lomaria chilensis, magellanica and alpina have all been much injured by the winter, and every frond killed; the plants, however, are all living, and probably would not have suffered so much if planted in a drier spot. Lomaria Spicant, with varieties strictum, crispum, and others, are at home among wet rocks. Lomaria fluviatilis also seems hardy. Lomaria Patersoni, in a very shady crevice, was much injured by the frost, but is now making new fronds; this is a very pretty and distinct little Fern.

Lastrea cristata, intermedia, and dilatata are growing everywhere. Lastrea frondosa, Sieboldi, and opaca all injured, but living. Lastrea Thelypteris, planted by little streams of water, runs its caudices under the soil and springs up many feet distant from the parent plant. Lygodium scandens is quite dead, but L. palmatum on a wet bank is growing freely. L. mexicanum, a very handsome species, has lately been planted, but cannot yet be pronounced hardy. Large tufts of those two handsome American Ferns, Onoclea sensibilis and Adiantum pedatum, grow on wet banks; and in similar places the Himalayan Onychium lucidum is growing freely.

Cyrtomium falcatum is much injured, perhaps killed. Woodwardia orientalis seems in an equally bad state. Woodwardia aspera, and W. radicans whose last year's fronds are more than 6 feet long, are dead. Woodwardia caudata, areolata, and virginica, are all hardy. The two last are among the most striking plants in the collection. Scolopendrium vulgare and its many varieties, are planted in shady hollows; also Scolopendrium reniforme. In peaty beds by running water are Osmunda spectabilis, cinnamomea, Claytoniana and interrupta, all growing very finely. In similar situations are Struthiopteris pennsylvanica and germanica, as well as Dicksonia antarctica, the latter quite dead.

Athyrium Filix-fœmina is also here, with many strange varieties, of which A. Frizelliæ is one of the most remarkable. Polypodium alpestre and its very pretty variety flexile, is growing well on moist banks.

Planted in a crevice of rock, but a good deal exposed, is Platyloma atropurpureum, growing splendidly, with fronds 15 inches long. This Fern ought to be in every collection. It is perfectly hardy, the fronds remaining uninjured during the most severe weather. It is not to be obtained at many nurseries. The plants here are marked as having come from Messrs. Backhouse. Platyloma rotundifolium and flexuosum are apparently quite dead. Gleichenia alpina, planted in a wet place, seems the hardiest of Ferns; it continued to uncurl its fronds during the frost. This is a dwarf species, but interesting as a hardy example of a curious genus. The finest of the Gleichenias, I mean hecistophylla, survived the winter of 1862-63, but is now dead; the others were also tried, namely Gleichenia Speluncæ, rupestris, flabellata, dicarpa, and dichotoma, but were killed with 5° of frost.

In a very dry crevice is planted Nothochlæna vestita. This Fern is often placed in a hothouse for the encouragement it would seem of scale insects, which are generally to be found on it. Here about 10 plants were planted two years ago. The Fern remains evergreen during winter, and not a frond was injured with 20° of frost. It is now making quantities of young fronds.

In a little cavern under a rock is Adiantum reniforme in dense tufts.

At one point a small waterfall tumbles over the rocks above the path, with dripping shady hollows around it. Here Adiantum Capillus-veneris and A. peruvianum survived two winters; also Todea pellucida and Niphobolus Lingua—now all killed. Here also are planted many New Zealand and South American Film Ferns. The following have been proved to be hardy—Trichomanes anceps, on rocks; Trichomanes venosum, on stumps of trees; Hymenophyllum humile, demissum and its variety nitens, and Trichomanes exsectum. Most of these Ferns have hardly been planted long enough to show their character, but the three last are undoubtedly very fine plants; H. demissum has made fronds 16 inches long.

Here the path leaves the labyrinth of rocks, and views open of the lower part of the valley. The path now descends to the stream at a point where the water falls by a pretty cascade into a clear pool below. Near here Trichomanes radicans has been planted, and the place seems to suit it admirably; the fronds are covered with seed. A too presumptuous water-ouzel has also taken a fancy for the spot, and almost smothered the Fern with its thick mossy nest. Looking back over the list of Ferns, I would particular recommend Woodwardia virginica and areolata, Platyloma atropurpureum, and Nothochlæna vestita.

It would be occupying too much space to enumerate all the herbaceous rock and bog plants here, and so few people cultivate them that the list would possess no general interest. Philesia buxifolia and Desfontainea spinosa are growing freely, with Tropæolum speciosum trailing over them. Lapageria rosea, though killed to the ground, is making many fresh shoots. Such plants of Cypripedium spectabile, pubescens, Calceolus, and the Siberian Cypripedium macranthum, are perhaps hardly to be seen elsewhere in England. Several Hellebores are very handsome; as are Gentiana verna and cruciata, and five or six other kinds. On wet rocks are several beautiful Alpine plants—Soldanella alpina and montana, Primula farinosa, and alpina, with large dark flowers.

In the higher part of the path several places have been arranged for the cultivation of Bog Plants. It is so difficult to imitate the conditions under which bog plants grow, that their beauties are little known to horticulturists. Here some hollows in the side of the hill were puddled with wet peat, and then great turfs and hummocks from the natural bogs on the moors were brought with wild plants on them, to which many foreign species were added. The arrangement answered admirably, and many curious plants were successfully grown, but the difficulty experienced now is to prevent the Grasses and other strong-growing plants overpowering the weaker. In the natural bogs the cattle eat these Grasses, and allow the small plants a chance of springing up, but this influence being removed, the more delicate plants get worsted in the "struggle for existence," as Mr. Darwin would say. The only plan yet found to obviate this, is to constantly pull up the Grasses by hand, an unsatisfactory process, and one which requires great care and knowledge of the plants. If any ingenious horticulturist will suggest any other plan, the collector of these bog plants will feel much obliged.

Among the most beautiful are Parnassia palustris, caroliniana, and some other foreign kinds, with Drosera dichotoma, Whittakeri, anglica, rotundifolia, and others. Cephalotus follicularis was killed by the past winter, but two of the North American Pitcher plants are growing well: Sarracenia variolaris and flava. In announcing these remarkable plants as hardy, I ought to say that it is probable that their roots were not frozen when the temperature of the air was 9° above zero, for the water which supplies the bog comes from deep springs in the granite, and never freezes, and the rocks and trees around would prevent much radiation.

I wonder that Sarracenias, which are plants so remarkable in structure, are not more often cultivated. The use of the pitchers to the plants does not seem generally known. I think there can be no doubt that all pitchered leaves are insect traps. All the pitchers I have examined, whether of Nepenthes, Cephalotus, or Sarracenia, contain sweet secretions which attract insects, and the insects when drowned in the water become food for the plant. It is most interesting to observe the modification of the lips of the pitchers adapting them to retain different insects in the trap. In Nepenthes there is generally an overhanging lip, like the eaves of a roof, all round the inside edge of the pitcher. I have often observed small beetles try to surmount this, and in their struggles fall back into the water. In Cephalotus there are a row of stiff curved thorny projections, arranged as one sometimes sees spikes on the top of a wall to prevent people getting over. In Sarracenia the inside of the pitcher is covered with hairs like plush all pointing downwards, to which insects attach their feet with difficulty. This is best observed in Sarracenia purpurea, which seems specially adapted for the catching of blue-bottle flies. The pitchers of Sarracenia variolaris are generally full of wasps. I am assured that in Borneo there are pitchers so large that rats are found drowned in them.

How and why, Nature has twisted the leaves of plants into these strange forms, is worthy of further inquiry, but it would be a digression in this paper. I should like to see the subject treated in the same manner as has been so successful in the "Fertilisation of Orchids," and if Mr. Darwin would turn his attention to it, I think that in the forms of Pitcher plants he would find many points fitted to his ingenious speculations. *W. W. B., Strete Ralegh.*

Home Correspondence.

Clianthus Dampieri.—I would advise your correspondent (see p. 486), to sow one seed only in a 3-inch pot in October, and to place the pots on a dry airy shelf in a cool greenhouse. When the plants have grown from 1½ to 2 inches high, and before the roots have got at all confined, shift them into 48-sized pots, and replace them on the shelves, being careful not to overwater them during the winter months. Here they may remain until they show signs of starting into strong growth, which will generally be (when no artificial heat has been given except to keep out frost) about the end of February. Then shift again into 24-sized pots, always taking particular care not to disturb the old ball or roots, and if possible to leave all the drainage attached. By the end of April the plants will be ready to receive their final shift into No. 8 sized pots, or into a border prepared for their reception, which, where practicable, is preferable. Seeds sown in February and treated as above often make good plants, and bloom well the same season; but those sown in the autumn make by far the strongest plants, and come into bloom much earlier. My opinion is that most growers spoil this fine shrub by taking too much care of it during the early part of the year, and by keeping it in a warm or close house, by which means a weakly growth is induced, which is very liable to cause the plant to die off entirely on the setting in of the first hot spring day. After the final shift the plants should stand as near as possible in the same position as they did before; and they should not be turned about with the idea of giving all the parts of the plants an equal share of light. I have often found them die off after having been moved, unless they were replaced in the same position as regards light which they occupied before. I could only account for the failure by supposing that the rays of the sun acted too strongly on the portions of the succulent branches that had not previously been subjected to them. The most suitable soil for this plant is a mixture of half yellow fibry loam, to which is added another half consisting of equal portions of silver sand, fibry peat, leaf-mould, and charcoal, all well blended together. For the final shifting use it chopped much coarser than for plants in a smaller state, and in all the shiftings take particular care to have thorough drainage. *T. C. Boston, Crystal Palace Nursery, Forest Hill.*

Horticultural Distinctions.—I find the following suggestion as to what may be called the conferring of Horticultural Degrees, in the new Midland *Florist's Guide*. The subject seems to be worth consideration, although it is launched with some rather hard words in reference to the Royal Horticultural Society; and perhaps some good use might be made of it. The writer observes:—"For some years we have thought it a disgrace to horticulturists, that notwithstanding the important fact connected with the pursuit, that it can boast a larger range of literature than any other science or calling save the Church [no, no], yet it is utterly without any College, Club, or Institution to which scientific attainments in some form or other connected with gardening, alone should earn admission. Artists and sculptors have their Royal Academy, and the R.A. denotes high position as an artist or sculptor. Law has its degrees; so also has medicine as well as the Church. Astronomers, Geologists, and other sections of the scientific world have their institutions, to be connected with which is a coveted honour by many; and although gardeners and florists know that a Royal Horticultural Society and a Royal Botanic Society exist, membership with either holds out no stimulant to young men to push forward to the higher pinnacles of their profession, and win a fellowship which carries honour with it. Why then are we without such a goal? With the strong band of distinguished gardeners, practical clear-headed horticulturists, and collectors who have braved the dangers of the tropics in search of new things for us, ought we not to have a fellowship amongst such men to distinguish them from the ruck? What has the Horticultural Society been doing to lose sight of this? Let them enlist new sympathy at once by considering how best this proposition may become a fact. Let us see the Horticultural Society cling to the true interests of horticulture, by developing its varied resources, and no step it could take would, we are assured, do more to raise it in the estimation of the public, than by seeking to establish a badge of honour for its brightest ornaments." The argument by which the writer supports his proposition is that the letters F.R.H.S. do not in these days bear the meaning which plain F.H.S. bore in former days. They do not even indicate that those persons to whose names they are attached care one iota for gardening as a science, but simply that the pockets of these individuals are long enough to pay the small fee by which such an appendage is purchaseable. And this being so, I concur in the suggestion that some plan might be devised by which honourable distinction might be conferred on the leading horticulturists of the day, and on their successors, without changing Kensington Gore into Cremorne, which is evidently about to take place, if the rational part of the Fellows do not bestir themselves. As there is some scheme in process of maturation to aid in the training or professional education of the rising generation of gardeners, in connection with Chiswick Gardens, I do not see any objection, but prospective advantages in the Royal Horticultural Society taking a further step, and devising some mark of honour (perhaps corresponding in character to a university degree) to be conferred for horticultural acquirements on those who occupy the front rank in the horticultural world. I shall be glad to hear the opinion of your readers on the details and general bearings of this question, so interesting to those who are horticulturists at heart. *X. Y. Z.*

Collecting Wild Plants.—I observe at p. 367, that "printed copies of the conditions of prizes offered by

the Royal Horticultural Society, South Kensington, for county collections of dried plants, were laid on the table" of the Botanical Society of Edinburgh, at their meeting on March 10. Let us hope that the resolution given in the May Number of the "Proceedings of the Royal Horticultural Society (vol. iv.,' pp. 90-92), has reached Edinburgh by this time. That there was abundant reason for remonstrance can be proved. Thus in Babington's Manual (Edition, 1843, p. 194) we read of Menziesia cœrulea :— "Sow of Athol, Perthshire; nearly if not quite extirpated by an Edinburgh Nurseryman;" and in Bentham's Handbook (1858), p. 346: "In Britain, only on the mountain called the Sow of Athol in Perthshire, where it is becoming exceedingly rare, if not already extinct." These quotations show that the Hookers, the Babingtons, Berkeley, Bentham, and our Manchester and Norwich friends, had some grounds for the apprehensions which they expressed. The professors of Botany both at Oxford and Cambridge have signed the remonstrance which was forwarded by Professor Babington. Could not these gentlemen prevail on the authorities of their Universities, and on the Council of the Royal Horticultural Society, to unite in proposing examinations and offering prizes at the several local middle-class examinations, which shall encourage the study of native botany without destroying the habitats of the rarest species? *F., Roydon Hall, Diss.*

Cool Orchids.—I have read Mr. Bateman's lecture on the above subject, and am bound to say that I was disappointed. There was an absence of anything practical in the report I read. I quite agree with Mr. Warner that "the mean temperature recommended by Mr. B., 60°, is rather warm than cool." *B. F., Manchester.*

Distributing Wild Plants.—Can "Vide, Hull," (see *Gard. Chron.*, 1864, p. 366), send me seeds of Viola stagnina? If he can and will, or will send me plants, I will owe him a day's work in harvest, until I pay him. If "Vide" has plants to send, Sutton, the small parcel carrier of Aldersgate Street, has, no doubt, an agent in Hull as well as in Diss; and a small parcel (if too large for post), entrusted to him would reach me at Diss, *viâ* London, for less money, and probably quite as soon as if sent direct per railway. *F., Roydon Hall, Diss.*

Flower Market.—It was quite a pleasure to see once again our old friend "Hope I don't Intrude,", though I must confess that on this occasion I fear that I have either trodden on his own particular corn, or must assume that with age has come a little acidity of temper. I will not quarrel with him for saying I am a mad F.H.S.; I will not quarrel with him for saying it is one of the schemes of the present management,—though our friend Paul, had he been as active as he used to be, might have learnt from several of the best men in the trade that this subject was discussed once before when the gardens were being laid out, but the space did not then shape itself conveniently. I must, therefore, assume, from the hard words and want of argument, that Paul has this time had to adopt the Old Bailey brief—"No case, abuse plaintiff." But now, Master Pry, will you kindly say how is it that every street has its wandering cart (accompanied by its wandering minstrel with a hoarse voice)—how is it that people, horrified at buying vegetables or fish at the door, may yet be seen sending their servants to the aforesaid cart for a little decoration. How is it, Master Pry? Why, London has no flower market. Paris has three large ones at least. I repeat again, let the Horticultural Society furnish the opportunity for the trade to supply the public there, and three good things will be accomplished: the trade will be commercially benefited, the public will be convenienced, and the Horticultural Society will receive an addition to their funds. *A Male F.H.S.*

Garden Notes: Rushton.—I did not peruse the *Gardeners' Chronicle* of May 7 till a few days since, when I found the excellent Peach article by Mr. Radclyffe. What is there stated, as regards the productiveness and fine condition of his own trees, is so truthful that confirmation by an eye-witness may seem almost superfluous. But having a vivid recollection of the pleasure I experienced during a visit to my worthy and respected friend in the summer of last year, I pray being permitted to say a few words on the splendid horticulture I saw there, although months have elapsed since. The name of Rushton has become almost a "household word" among horticulturists, from the frequent contributions of sterling merit by Mr. Radclyffe to this and other gardening periodicals—and no wonder. The thorough practical knowledge displayed in these articles always brings out points that cannot fail to be appreciated by the reader. The garden attached to the rectory at Rushton is most unfavourably situated, although in the mild climate of Dorset; it slopes towards the west; there is the house and some high trees on the east side, so that the sun has no power till after mid-day; at the bottom, on the west side, is a wide stream, which, in rainy times, overflows the adjoining meadow, and renders it a marsh, thus generating damp and cold, that prove a most difficult case to deal with. But these obstacles are contended against with such indefatigable perseverance and energy that every one who visits the garden leaves it delighted, and with feelings of the highest respect and esteem for the good pastor that superintends it. My visit last year was not at a propitious time; frosts, evidently arising chiefly from the cause above stated, had prevailed up to June. Black blight had wrought fearful havoc among the Roses, and worse than all, a terrific hail-storm, one of the most violent ever known in that county, had a few days previous to my arrival riddled the foliage of all kinds of trees and plants, as if it had been battered by shot from a gun. These catastrophes were alluded to by Mr. Radclyffe in several of his articles at the time. My kind rev. friend felt disappointment. Who could help feeling it under similar circumstances? But, like a true Briton, he did not despond. "We shall have some Roses here bye and bye," he said to me one evening while looking over the plants; and I know for certain that in the autumn of last year some of the finest Roses ever grown were produced in this same garden. The Peach trees, like everything else, had suffered from the hail, but they showed unmistakeable signs of vigour and good management; there were probably about 600 Peaches on the three trees, which are old ones, all so round, firm, and perfect—a sight beautiful to look at. I have the authority of Mr. Radclyffe himself that the fruit turned out to be everything that could be desired. Then there were the Strawberry beds; these were in full fruit at the time of my visit—I ought to say perfection, as far as my ideas are able to reach to that point. La Constance, Marguerite, Rivers' Eliza, Trollope's Victoria, and Eclipse were delicious, for they say the proof of the pudding is in the eating. It is, however, with Roses that Mr. Radclyffe's name has become inseparably connected; as a champion of the Manetti stock he has verified the position he has assumed by rearing plants that are truly marvellous. Notwithstanding the adverse circumstances he had to contend with last year, and by which hundreds of plants were seriously affected, there were specimens of Anna Alexieff, Chabrillant, and some others of the most hardy of the hybrid perpetuals literally loaded with bloom; his Triomphe de Rennes and Solfaterre were the best I ever saw. The new Roses on trial, of which he himself has given an account, were progressing favourably; of the care taken to ascertain the exact merits of the numerous kinds sent out annually it is impossible to speak too highly. Mr. Radclyffe's experience is a safe and invaluable guide to all Rosarians. As an enthusiastic lover of the Rose myself, I tender sincerely my thanks to this Journal for the liberal prize offered to encourage English Roses. We begin to know how small a per-centage of the French novelties yearly sent out are worth having [Hear! hear!]; there is room then for something to be done in this way. Like Mr. Radclyffe, I do not think "impossible" ought to be in the horticultural dictionary, and the time is not distant when our gardens will be decorated with first-class Roses of English productions, and of course with English names. I do not think that I stand alone when I express a strong feeling of desire to see among English names to English Roses the honoured one of Mr. Radclyffe, to whom so much is due. I am sure such men as Mr. W. Paul, Mr. Rivers, Mr. Wood, and others would, if it lay in their power, be ready to pay so simple a tribute of respect to the first Rosarian of the day—nor is such quite without precedent. The name of Mr. Reynolds Hole has been bestowed upon a Rose as an acknowledgment of his exertions as a Rosarian and originator of the Rose shows, but this Rose was a French production, and, like many others, has not turned out so well as could be wished, but this does not reflect at all on Mr. Standish. Hence my suggestion must be coupled with a condition, or something very like it—which is that the consent of Mr. Radclyffe himself, must be obtained before his name is attached to the flower. *Adolphus H. Kent, Bletchingley.*

The Winter.—At page 436, your Correspondents are invited to report on the effects of the late winter upon Japanese and other plants. As my garden is 400 feet above the sea-level, and fully exposed to E. and N.E., the thermometer registered as low within a degree or two on the days mentioned as is stated in the editorial remarks, but though so exposed the soil is quite dry, and at no time retentive of wet. Lonicera aureo-reticulata was uninjured, but is planted on the west side of the house, which is the most sheltered side; while L. flexuosa, on the other side, was killed to the ground: it has broken out from the bottom since. Ceanothus floribundus was quite killed; Eugenia Ugni, slightly injured; Colletia bictonensis, Desfontainea spinosa, Arundo Donax variegata, Farfugium grande, Lilium lancifolium rubrum, were not in the least affected; the bulbs of the last being about 4 inches in the ground. The foliage of Farfugium died off before the severe frost came. Of Conifers, Cupressus elegans, recently planted, was the only one that suffered; Thuja Lobbii, T. gigantea, Taxus coriacea, Libocedrus chilensis, Juniperus drupacea, J. Bedfordiana, Wellingtonia gigantea, now from 10 to 11 feet high, were not in the least affected by the low temperature. The other Conifers reported after the severe winter of 1860—1 are all thriving. *Adolphus H. Kent, Bletchingley.*

Style of Public Gardens.—In the current century art has effected wonders, and that of horticulture amongst the rest has undergone vast changes. New trees, new flowers, new esculents, new and improved methods of production, propagation, and cultivation have enriched the archives of horticulture, but the taste for laying down ornamental gardens has in many instances not been improved, either by the introduction of laboured illustrations of design in geometrical form, or by striking contrasts in the intervals of walk and alley. Imported from Italy, Holland, and France, straight avenues with rows of trees or shrubs, levels with slopes in right lines, sometimes a formal curve, balustrades and statuary, all these have been adopted in public horticultural grounds; and in point of fact, nothing can be more appropriate where the enceinture of a suburban palace will not admit of a freer or more diffused mode of ornamentation. Fountains, cascades, and basins are also most valuable accessories wherever there is a natural supply of water, provided that due discriminative taste is [brought to bear upon the right use and allocation of these artificial and often beautiful and effective adornments. In the centre of all art there ought to appear evidences of advance. Accordingly we have public gardens—Kew, Regent's Park, and the renowned Horticultural Society's Gardens at Chiswick and South Kensington. These do or ought to contain all that is valuable, tasteful, and novel within the whole sphere of the science. It is true that floral innovations have been made in the parks and Kensington Gardens, but these form no part of the actual institutions of horticulture. For the gratification afforded to the public by such embellishments, with their gay flowers and healthful walks, we are indebted to the Commissioners of Woods and Forests. The Horticultural Society, at its Gardens at Chiswick, has for many years been regarded as the great promoter of improved horticulture; and these gardens, with their conservatories, and collections of fruits, trees, and flowers, were certainly well adapted as a school of gardening, being out of the smoke of London, the extent and form of surface moreover being calculated for the object; but the garden at Kensington is wholly unsuited for anything beyond a floral exhibition of potted and bedded plants, being within the great mantle of smoke, and being also too circumscribed and surrounded by lofty houses. Recent changes, moreover, such as the planting of Poplars throughout the space, both detached and in long ranges, adds not to the ornament of the place; and while these are the least graceful of trees, they are the most noxious to vegetation beneath their shadow. Again, long ranges of Yew have been planted in such a manner as to exclude all view of the geometrical parterres, and to cast a funereal shade over an elaborate garden. Possibly this innovation was made to chasten the grand effect of the geometric beds, which, however brilliant in rich flowers, and in various coloured and glittering knot walks, was generally condemned by lovers of horticulture and the old English garden. The Royal Botanic Garden of Regent's Park is quite a different affair; with its array of shrubs, its varied lawn, its range of glass and botanical collections, it assures the presence of something agreeable in the old English style, so that for a small inclosure it realises the object of its institution. The botanical collection, too, under the present manager, Mr. Robinson, is well arranged, carefully attended, and much advanced. Kew is however the real representative of a fine national garden. Here the old Palace does not impose too much formality in walks and terraces, nor offend the admirers of national gardening by an excess of ridiculously fine-drawn geometrical figures, interlaced with bands of various coloured gravel and gaudy walks; while no other place contains so much connected with the science of horticulture and botany. But it is a question whether Kew might not be improved by good taste in landscape gardening. The frequent introduction of Poplar trees in many public places, in Regent's Park (the new flower walk), on the mound of Buckingham Palace, and in its rearward court; in the Horticultural garden at Kensington; and lastly, on the causeway opposite the Brompton Museum, requires some comment. Of all foresters, Poplars are the least graceful, and afford least shade. We never find them on the Parisian Boulevards. The Plane, the Lime, the Elm, and the Chestnut are there chiefly chosen, because they the are wide spreading, and gay in their aspect; whereas, Poplars, with their spire-like columnar form, are least calculated to grace even any architectural structure with which they may be associated. Our most improved national garden and school of horticulture is Kew, now as it stands; and to the Government is due the credit of providing that place of instructional resort. Seeing, therefore, that the field of knowledge in this department is so restricted, it is of great importance that no bad taste be intruded into these treasured inclosures. There is ample scope for diversity of arrangement, for pleasing intermixture of design, for striking contrast in the wild luxuriance of tree, shrub, and flower, as there also is for variety of surface, without violating the evidences of Nature. The perfection of art is to keep in accord with her rules. By skill and care, we can improve and enrich the flower, the fruit, the shrub, the tree; so we can fashion a garden or parterre, and combine therein the trim, the wild, and, if there be scope enough, the grand and majestic. For the instruction of the public, then, such places of resort ought to be treated with caution, since elaborate works of objectional design will spread through imitation, whilst evidences of good taste will strike deeper root among amateurs, whose tendencies are more refined. *Joseph Newton*, 30, *Eastbourne Terrace, Hyde Park.*

Royal Horticultural Society's Garden, South Kensington.—I presume it was the "Male Fellow" alluded to by your correspondent "Paul Pry," who conceived the "dodge" practised

at the Gardens last Saturday; which was that Fellows' privileged tickets were only admitted to the tent, and the holders once penned in there, were not allowed to enter the Gardens except by the payment of 1s. each, extra. Visitors to Cremorne, Madame Tussaud's Wax Works, &c., will be familiar with this system; but to old—and not "mad"—Fellows of the Society and their friends, it is as disgusting as it is out of place, and all will feel obliged to you for permitting the expression of this opinion to appear in your columns. *F.R.H.S.* *May* 30, 1864. [We learn from the Assistant Secretary that "this arose from some misapprehension of orders. It was not intended that privileged tickets should be required to pay twice, but unless purchased previously they were to be charged 2*s.* 6*d.*, which would have been still heavier, although not open to this complaint." We regret to be obliged to call attention to other laches. What ingenious gentleman, for instance, presiding over the ticket department, issues tickets such as those of last Wednesday. Justice will not be done unless he is called to account.]

Societies.

ROYAL HORTICULTURAL: *June* 1 (*First Great Show*).—This was admitted by all to be one of the best exhibitions ever held under the auspices of the Society, and the numerous table decorations placed in competition for Sir Wentworth Dilke's prizes, together with Messrs. Waterer & Godfrey's magnificent exhibition of American plants, noticed in another page, all contributed to render this great gathering pre-eminently interesting to all true lovers of horticulture. Although the day was unfortunately overcast and cold, there was a good attendance of visitors, and in the morning H.R.H. the Princess of Wales honoured the exhibition with her presence.

President's Prizes for Fine-Foliaged and Flowering Plants.—The first of these was bravely won by Mr. James Veitch, who furnished a noble group, in the centre of which was a fine specimen of Dicksonia antarctica, surrounded by Azaleas beautifully in flower, a very fine white Ixora with the blossoms scarcely sufficiently expanded, and the orange Ixora amboinensis, together with Dipladenias, Allamandas, Crotons, Palms, and a fine example of the variegated variety of Alocasia macrorhiza. To Messrs. Lee was awarded the second prize for plants of the description just indicated. They consisted of Rhopalas, Alocasia Lowii, beautiful specimens of Cordylines, Theophrastas, Cyathea Smithii, the handsome-leaved Oreopanax dactylifera, and Heaths of different sorts.

Awards.—1, Mr. Veitch; 2, Messrs. Lee.

Conservatory Decoration.—The only group of plants exhibited illustrative of tasteful arrangement in small conservatories or greenhouses, was one furnished by Mr. Turner, of Slough. It occupied a corner in one of the arcades, and certainly well deserved a 1st prize, which was awarded it. On the two sides of the angle forming the corner in question were banks of gay flowering plants, such as Standard and other Fuchsias, Pelargoniums, Calceolarias, and Roses, and in front of these was a circular mass of similar materials, out of the centre of which rose a rustic device in the form of a tree-stump, the ends of whose shortened branches supported vases full of Fuchsias beautifully in bloom, growing up from among Moss and Fern. On the outsides of the vases were Fir cones and other ornamentations of that description, which when well varnished as these were, last long, and have a pretty appearance. Supports of this kind might be put together by almost anybody, and when overrun with creepers, or otherwise tastefully decorated as in this case, are infinitely superior to ordinary unsightly greenhouse stages.

Stove and Greenhouse Plants.—Of these large numbers were exhibited, and among them were some magnificent plants of Dipladenia, Allamanda—chiefly grandiflora, Statice profusa and Holfordii; Pleroma elegans, a glorious Melastomad, with circular violet purple blossoms, each as large as a crown piece; Ixoras, among which we noticed the orange sort called Griffithii; the universal favourite, Stephanotis floribunda; various Hedaromas, of which the best was tulipiferum; Everlastings, and other well-known plants, the names of which have often appeared in former reports.

Awards.—12: 1, Mr. May; equal 2, Mr. Peed and Mr. Morse; 3, Mr. Green. Nurserymen: 1, Mr. Fraser. 6: 1, Mr. Chilman; 2, Mr. Ingram; 3, Mr. Page. Nurserymen, 6: 1, Mr. Rhodes; 2, Messrs. Jackson.

Pelargoniums.—Of these there were some noble exhibitions, both of fancy and ordinary sorts. Among the last Etna and Lord Clyde are two of the most brilliant; Lucifer is a fine rose, as is also Lady Canning; and of light kinds, Desdemona, Empress Eugenie, Prince of Prussia, and Fairest of the Fair were conspicuous. Among spotted sorts few beat old Sanspareil; Osiris, Mr. Marnock, and Beadsman, are however valuable additions to this class. Viola deserves a place in every collection on account of its distinct colour. Among Fancy sorts Lady Craven and Ellen Beck, crimson and white; Cloth of Silver and Mrs. Hole, light sorts; together with Clemanthe, Edith, Reliance, Multiflorum, and Clara Novello were conspicuous.

Awards.—12: 1, Mr. Fraser; 2, Mr. Turner. Amateurs, 1. withheld; 2, Mr. Wiggins. Fancies, 6: 1, Mr. Fraser; 2: Mr. Turner. New kinds: 1, Mr. Turner.

Azaleas.—The blooms of these have now become sufficiently thin to show a few green leaves, which could not be seen earlier in the season, but which help to break up the too formal appearance of the plants. Among large specimens were fine examples of Sir C. Napier, Chelsoni, Criterion, Juliana, Purpurea, Gledstanesii, Gem, Perfecta elegans, Ardens, Rosea superba, Magnifica (a good white), Extrani, and last but not least, the handsome Petuniæflora, and the double-blossomed sort Glory of Sunning Hill. The last is as fine among salmon-coloured sorts as Flag of Truce is among whites and both are very double.

Awards.—9: 1, Mr. Morse; 2, Mr. Carson; 3, Mr. Ingram; extra, Mr. Page and Mr. Kaile. Nurserymen: 1, Mr. Turner; 2, Mr. Veitch. 6: 1, Mr. Turner; 2, Mr. Penny; equal 3, Mr. Fraser and Messrs. Lane. New kinds: 1, Mr. Turner. Mr. Kelk's Prize: 1, Mr. Turner.

Orchids.—These were furnished in great variety and in excellent condition. Among Dendrobiums was an excellent specimen of Dayanum from Mr. Baker, and, seen in the high state of perfection in which this was shown, it was really a fine kind, well worthy of a place beside either macrophyllum or anosmum, to both of which it is related. From Mr. Milford came the handsome hybrid Cattleya Dominiana, and of Lælia purpurata there were some grand specimens. Oncidium ampliatum majus was also shown in unusually good condition, as were likewise the various kinds of Vandas, Aerides, Saccolabiums, Lady's Slippers, and Odontoglossums, especially the handsome O. citrosmum, and the singular-looking prettily-spotted O. nævium. Of the red Trichopilia crispa there were one or two well bloomed plants. Mr. Williams had the rare Phalænopsis rosea in wonderful health; also the canary-coloured Cattleya citrina; and Mr. Milford again showed his fine plant of Odontoglossom Phalænopsis, previously mentioned by us at p. 510. From Mr. Wilson came a remarkably vigorous well-managed specimen of Cypripedium caudatum, with 10 flowers on it, each of whose singular tail-like appendages could not measure less than 2 feet in length. The handsome terrestrial Orchis foliosa was contributed in good condition by Mr. Penny, and of Uropedium Lindeni we noticed one plant from Mr. Baker.

Awards.—Aerides, Vanda and Saccolabium, 6: 1, Mr. Baker; 2, Mr. Penny; 3, Mr. Milford. Cattleya and Lælia, 6: 1, Mr. Milford. 9: 1, Mr. Milford; 2, Mr. Baker; 3, Mr. Penny. Nurserymen: 1, Mr. Williams; 2, Messrs. Jackson; 3, Mr. Woolley. 6: 1, Mr. Page; 2, Mr. Penny; 3, Mr. Milford. Cypripedium and Uropedium: 1, Mr. Penny; 2, Mr. Milford; 3, Mr. Baker.

Sarracenias placed in competition for Lady Dorothy Nevill's Prizes.—These consisted of purpurea, variolaris, flava, and Drummondi, of which there were some good plants, well furnished with long upright cornucopiæ-like pitchers.

Awards.—1, Mr. Baines; 2, Mr. Veitch; 3, Mr. Williams.

Pitcher Plants not Sarracenias competing for a Prize offered by the last-named Lady.—The only examples of these came from Mr. Veitch, and consisted of Nepenthes Dominiana, Rafflesiana, and another unnamed sort.

Collections of Recently Introduced Plants.—Mr. Veitch sent the singular Anthurium Scherzerianum, the pink and white variegated-leaved Hibiscus Cooperi, the variegated variety of Aralia Sieboldi, a crested variety of Pteris serrulata, Pandanus elegantissimus; Todea superba, a fine mass covered with a bell glass; the Japanese Thujopsis lætevirens, the green-leaved Aucuba japonica vera, Cryptomeria elegans, and the white-flowered Eranthemum tuberculatum. From Mr. Williams came Cibotium princeps, Sphærogyne latifolia, with leaves nearly as large and handsome as those of Cyanophyllum magnificum; Colocasia albo-violacea, and zebrina, the last with prettily mottled stems; the variety of Dracæna ferrea called grandis, and other interesting plants. Mr. Ivery had various pretty varieties of Athyrium Filix-fœmina; and from Mr. Bull came the variegated Musa vittata, Anthurium leuconeurum, Variegated Bamboo, Lastrea Standishii, a crested variety of the Royal Fern, Chameranthemum Beyrichii variegatum, and other fine plants.

Roses.—These consisted of well grown medium sized beautifully bloomed plants, all of which indicated a great improvement on the tall lanky specimens shown in some collections last year. Among the sorts were handsome examples of Louise Peyronny, Madame Damazin, Paul Ricaut, Narcisse, Coupe d'Hébé, Jules Margottin, Charles Lawson, Souvenir d'Elise, Madame Willermoz, La Reine; Anna Diesbach and Lælia, both with blooms nearly as large as those of a Moutan; Lord Raglan, and other well known kinds. Among kinds grown in 9-inch pots were fine examples of Senateur Vaisse, with five fully expanded blooms on it; and others, such as Victor Verdier, Prince Camille de Rohan, a nearly black kind, and Beauty of Waltham, though in small pots, were equally well flowered. Of Teas, Messrs. Paul & Son showed Marquis Foucault, yellowish white; President, Homer, Niphetos, Mansais, and Souvenir d'un Ami. Nice bouquets, consisting chiefly of light-coloured kinds, came from the Rev. W. F. Radclyffe. Cut Roses were also good, and the weather being favourable they preserved their freshness and beauty to the end of the day.

Awards.—12 Plants: 1, Mr. Wm. Paul; 2, Messrs. Lane. 6: 1, withheld; 2, Mr. Terry. 6 H. P. in 9-inch Pots: 1, Mr. Turner; 2, Messrs. Paul & Son. Ditto, Teas: 1, Messrs. Paul & Son. Mr. Kelk's Prize for plants in 6-inch Pots: 1, Messrs. Paul & Son. Extra, Mr. Turner.

Heaths.—Conspicuous among these were some fine plants of tricolor Wilsoni, certainly one of the best of its class; exquisita, Massoni, eximia, mutabilis, and ventricosa magnifica, a bright rosy flowered sort, prettily tipped with white. This latter is really a charming variety.

Awards.—6: 1, Mr. Rhodes; 2, Mr. Page; equal 3, Mr. Chilman and Mr. Peed.

Miscellaneous subjects.—Foremost among these was a panful of Alpine plants from Messrs. Backhouse, of York, of which some notice was taken at p. 510. In addition to names there given, we may mention those of Dianthus alpinus and Fischeri, the former a charming Pink, very dwarf, with flowers as large as a shilling; Cypripedium acaule, and Calceolus; a very small Gleichenia, and the Holly Fern; Erinus alpinus, covered with pink blossoms; the Bee (?) and another kind of Orchis; Cystopteris montana, Primula involucrata, and other interesting little plants. The same nurserymen also showed two or three varieties of the Royal Fern (Osmunda regalis). From Messrs. Barr & Sugden came some neat plant cases, and various ingenious contrivances in rustic pottery, for which a first prize was awarded. A handsome plant case was shown by Miss Maling. From Mr. Ivery came a very fine collection of rare British Ferns and their varieties; we also noticed some Strawberries, Juneating Apples, and a Moscow Queen Pine-Apple, from Mr. Floud, of Aberdare, weighing 5 lb. 13 oz.—a good weight it will be admitted for this early season of the year. Finally, from Messrs. Carter & Co. came another fine basketful of their Ornithogalum thyrsoideum, favourably noticed by us on former occasions, and Messrs. Downie, Laird, & Laing, showed some fine Pansies.

Ladies' Prizes.—For the two prizes of 10*l.* each, offered by the Proprietors of this Journal to ladies for plants of their own cultivation, only one exhibitor came forward, viz., Mrs. Dombrain, of Deal, who showed a tolerably pretty example of Adiantum cuneatum in a "Paxtonian" basket. This was stated to have been growing since August, 1863, in an ordinary living room with a south aspect, where both gas and fire were burned; it nevertheless looked perfectly healthy and well, showing conclusively that this kind of Fern, which is one of the prettiest of its class, is thoroughly adapted for room ornamentation. Other fair combatants for these prizes signified their intention, we believe, to enter the lists, but withdrew on the morning of exhibition. Let us hope that the handsome prize Mrs. Dombrain has won, may induce a more general display of courage next time.

Dinner-table Decorations.—Of these there was an admirable exhibition, which was in all respects a great improvement on that of last year. Most of the contrivances staged were well supplied with flowers, but there was a general deficiency of fruit, an item of decoration quite as essential in this case as flowers, and which we hope to see better supplied on another occasion. The three devices to which the 1st prize was awarded came from Mrs. Worthington Bliss, of 26, Eccleston Square. They were made of glass; each of them consisted of a stout upright stem, surmounted by a vase, a little way below which was a circular tray supported by a couple of neat brackets, on which hung two glass baskets by the handles. These, together with the vase and tray, were all tastefully ornamented with flowers, as was also the round circular base which upheld the whole. The height of the centre piece when dressed was 3 feet 9 inches, and that of the side pieces 3 feet. In appearance they were light and elegant; if they had any fault it was that the base seemed too small to support the top. The second prize set came from Miss March. This was also of glass, and in the way of, but perhaps not so elegant as, the same lady's first attempt at decorations of this kind. The third prize lot was likewise of glass, in the form of cornucopiæ, rising out of a circular base. These, which were extremely pretty, were supplied by Messrs. Naylor, 7, Princes Street, Cavendish Square, and were most tastefully decorated with flowers by Miss Wait, of Kensington Gate. This exhibition, in the opinion of many, should have been placed second. A set of beautiful glass decorations, highly commended by the judges, came from Lady Holmesdale, and similar praise was also bestowed on three devices, likewise for table ornament, contributed by Mrs. Cutbush. These consisted of flower-capped upright glass stems, and little saucers of flowers held in position by means of stout wire. A fringe of Isolepis, hanging from these little brackets, set off the whole to excellent advantage. White china figures, supporting baskets of flowers, were furnished by Viscountess Combermere; and numbers of devices in Minton's white chinaware were shown by Mr. Good, of South Audley Street, and Messrs. Phillips, of Oxford Street. From Lady Emily Peel came a set of decorations in this kind of ware. From Messrs. Naylor & Co. came a variety of tasteful ornaments in glass, and in a set of their stands various kinds of flowers were handsomely arranged by Lady Katherine Fielding. Numerous other contrivances for table ornament of less importance than those just named were also exhibited. We may mention that of the many blossoms employed for dressing the stands, few beat those of the common Corn-flower (Centaurea Cyanus). Its lively blue flowers set off the others to much advantage.

CRYSTAL PALACE EXHIBITION: *May* 28.—A grand display of horticultural produce was brought together on this occasion. Orchids, Stove and Greenhouse plants, Azaleas, Roses, Heaths, Tall Cacti, and Pelargoniums have seldom been finer, and there was the usual amount of New Plants. In all these exhibitions, however, we saw little or nothing that has not been

previously noticed by us. Of fruit, considering the season, there was a fair display.

A few good Pines were shown, among which we observed a Smooth-leaved Cayenne from Mr. Wallis, Astle Park, Cheshire; and a Queen and Black Antigua from Mr. A. Henderson, Trentham, for which prizes were awarded.

Among Grapes, several excellent dishes of Black Hamburghs were exhibited: those from Mr. Meredith, which took the 1st prize, were magnificent; Mr. Henderson's, which received the 2d prize, were also very fine. Prizes were also awarded to Mr. Petch, Mr. Wallis, and Mr. Hill; the latter had three fine bunches, weighing together 8½ lbs., but not sufficiently coloured. Mr. Meredith had a 1st prize for a splendid basket of 18½ lbs., in which the berries were large and beautifully coloured; Mr. Hill was 2d; and Mr. Clement, East Barnet, 3d. Muscats were not sufficiently coloured. Mr. Horwood had both 1st and 2d prizes for them, Mr. Embery being 3d. Of Melons, the best Green-fleshed was a hybrid Cashmere from Mr. Meredith; and Mr. Enstone was first in Scarlet-fleshed sorts.

Peaches were very good. Grosse Mignonne, from Mr. Joyce, was very large and fine, and was awarded a 1st prize; the 2d and 3d going to Mr. Taylor, East Barnet, and Mr. Turner, Slough, for the same variety.

Nectarines were also good. Mr. Evans, gr. to C. Newdegate, Esq., M.P., and Mr. A. Henderson had 2d prizes, the former for Elruge, and the latter for Violette Hâtive.

In Figs, Mr. Cross, The Grange, Alresford, was 1st with Brown Turkey, and Mr. Dawson, Broadlands, 2d with the same kind.

Beautiful dishes of Cherries were shown by Mr. Henderson, whose sorts were Circassian and Elton.

Strawberries were very fine. Mr. Smith, of Twickenham, was 1st in single dishes, with Sir Charles Napier; and in three dishes with the same kind, Empress Eugénie and British Queen, Mr. Budd, of Cobham Hall, was 2d. Mr. Smith had also some well fruited plants in pots. Lastly, Mr. Mortimore, gr. to A. Smee, Esq., Carshalton, had an extra prize for White Juneating Apples, and Citron des Carmes Pears.

LINNEAN: *May* 24.—G. Bentham, Esq., President, in the chair. The Treasurer read a general statement of the Society's accounts, from which it appeared that the balance in favour of the Society on the year's account was 407*l.* 15*s.* 3*d.* The Secretary reported that since the last anniversary the Society had lost by death 11 Fellows and 4 Associates, and by withdrawal 4 Fellows; while 29 new Fellows and 2 Foreign Members had been elected. At the ballot which ensued, J. Bateman, Esq., T. Bell, Esq., Dr. J. E. Gray, Dr. R. C. A. Prior, and Dr. C. Wallich, were removed from the Council; and in their place the following were elected:—Dr. W. Baird, D. Hanbury, Esq., J. Lubbock, Esq., G. MacLeay, Esq., and F. P. Pascoe, Esq. The following officers were afterwards re-elected, namely:—G. Bentham, Esq., President; W. W. Saunders, Esq., Treasurer; and G. Busk, Esq., and F. Currey, Esq., Secretaries. Thanks were severally voted to the President for his address, with to the Secretary for his obituary notices, both of which were directed to be printed.

ENTOMOLOGICAL: *May* 2.—F. P. Pascoe, Esq..F.L.S., in the chair. The Secretary exhibited an extremely rare British moth, Hydrilla palustris, taken in Quy Fen, Cambridgeshire, on May 29, 1862, by Mr. R. S. Schofield; a single specimen had only previously been recorded, captured by Mr. Dunning. Captain Cox gave an account of the collection of drawings of larvæ of British Lepidoptera made by Mrs. Cox, and described the classification of the larvæ which he had adopted, founded upon their colours, clothing, or spined character. He also exhibited a number of larvæ which he had found in vast numbers infesting a bran bin of large size, in which they formed tubular galleries. It was suggested that they were the larvæ of Aglossa pinguinalis. Mr. Wallace exhibited a box of butterflies, of the genus Papilio, collected by himself in Celebes, showing a remarkable modification in form to which, with a single exception, every species of Papilio found in that island was subject, namely, in having the fore wings of a more falcate form, with the fore margin much more arched and the extremity more pointed than in the examples of the same species taken in India or the adjoining islands of the Indian Archipelago. This he attributed to the perpetual attempts made by the insects to escape by rapid or zigzag flight from persecution by birds, which was affirmed to be favoured by such a form of wing. This assumption was, however, doubted by Professor Westwood, who denied that such a form of wing in British insects was connected with peculiar or rapid powers of flight, and who asserted that if increased powers of flight were induced, the muscles at the base of wings, and consequently the thorax itself, would be enlarged. This was, in fact, especially the case in the genus Charaxes, of which he exhibited a number of species of the greatest rarity from the Oxford Museum, several of which, unique in this country, had been received from the Zambesi, collected by the Rev. H. Rowley. Mr. Newman, and several other entomologists present, also objected to Mr. Wallace's views as to the cause of this curious peculiarity. A remarkable paper by Captain Hutton, "On the Reversion and Restoration of the Silkworm," was also read. The author had for several years past been occupied in India, with experiments on the common silkworm, Bombyx Mori, in order to effect its regeneration from its present debilitated condition, which had in fact rendered necessary the introduction of other kinds of silkworms in their stead in the great silk establishments of France and Italy.

Notices of Books.

Saxby's Weather System, or Lunar Influence on Weather. By S. M. Saxby, Esq., R.N. Octavo, pp. 120. Longman & Co.

The author considers himself entitled to more credit for his system than meteorologists have hitherto given him, and the greater part of the work is occupied to prove that such is the case, and that it is a correct one. In Chapter 11, at p. 100, we find it explained; and that is necessary before we can make any remarks upon it. The following, the author states, is what Europe now hears of as "Saxby's weather system:"—

"I found that the moon never crosses the earth's equator or reaches her position of stitial colure, without a marked disturbance of the atmosphere occurring at the same period. Therefore I began by combining these lunar changes, actual weather disturbances, into the relationship of *cause* and *effect*.

"In considering the cause, there was little difficulty in tracing it to disturbance of the electric system of the globe at such periods, in consequence of changes in the effect produced in our atmosphere by variations in the intensity of the attraction of the sun or moon, or both, as they vary their positions with respect to the earth. I had before me as a guide the well-known and recognised influence of the moon's attraction upon the tides.

"I find that the phases of the moon, properly so called, do not perceptibly affect the weather.

"That the period of new moon has a marked influence on the weather when occurring near the periods of lunar equinox or lunar stitial colure, and that this influence is heightened considerably if at the same time the moon be in perigee. That the mere fact of her being new or in perigee is of no importance at any other times. So that when the lunar equinox or stitial colure, occurs at the same period as the new moon in perigee, the greatest atmospherical disturbances to which our earth is liable may then be expected with certainty of fulfilment.

"Now, either the moon crosses our equator, or is at her stitial colure (or greatest distance from our equator) about once in a week (it is possible that one of each may happen in the same week, according to the inclination of her orbit), therefore there is an atmospheric disturbance from this cause, say once a week, and it is *invariably* traceable, as will presently be further explained.

"So that this 'weather system' is extremely simple. I fear many distrust it on account of such simplicity. For if we condense the definition of the above theory it is mainly a question of the moon's declination.

"The method in which the weather is affected by the forces of the sun's and moon's attraction, is the necessarily resulting sudden condensations of moisture in the atmosphere, or in the increased evaporation of moisture, according as the air is in a state of positive or negative electricity in a district, when disturbed by the sudden affection of the whole electric system at the periods above denoted.

"Now, sudden condensation of moisture in the atmosphere produces a partial vacuum, into which surrounding air necessarily rushes; hence the periods of lunar equinox, or colures, are periods of 'atmospheric disturbance,' the intensity of such depending much on localities; and where such condensations or evaporations occur upon a large scale, some days may elapse before equilibrium is restored.

"High winds at these periods are not always accompanied by falls of mercury in the barometer, since no accumulation of the electric fluid (which is imponderable) can increase the weight of the atmosphere.

"A rising or steady barometer is not to be trusted at these periods, as severe gales frequently occur at such times without influencing that instrument. But a falling barometer at these times should never be disregarded."

In order that the author's system might be better appreciated and more generally understood, the plainest language, such as that employed by Howard in his "Climate of London," had better have been employed. Such terms as apogee, perigee, moon's equinox, stitial colure, &c., might have their meanings expressed by words that every one could most readily understand. The moon's orbit has not always the earth in its centre, consequently she is sometimes much nearer the earth than at other times. When nearest she is said to be in *perigee*, "near the earth;" when farthest from the earth the term *apogee* is used. Of the moon's equinox and declination an idea may be formed from the course of the sun. Everybody in this part of the world knows that he rises high in summer, but creeps low, not much above the horizon, in winter; and at the equinoxes in March and September, he follows a middle course between these extremes, rises due east, sets due west, is 12 hours above our horizon, and 12 hours below it. With the sun these conditions occur twice a year, with the moon twice a month. When her declination is 0° she is on the equator, and follows the path of the sun at the time of the equinoxes; but from this she declines either north or south, and appears either higher, as the sun does at midsummer, or lower, as he does at midwinter; but instead of being six months in passing from the extreme highest to the extreme lowest, the moon accomplishes the same in about every fortnight. Howard calls her highest and lowest positions respectively her full north declination and full south declination; and mean declination, her equinoctial position. The term *stitial colure* employed in the work before us means the extreme departure from the equinoctial position, or the full north and full south declination according to Howard.

It is when the new moon is in the position nearest to the earth, or *perigee*, at the time either of the lunar equinox, or else when she is at the extremes of her declination, that the greatest atmospheric disturbances are to be expected. By the Nautical Almanack, or by Hannay's, any one can see when such combination of circumstances will occur. By the former work they can be seen four years in advance. The following are the days in the present season, "on which, according to the author's weather system, the weather may reasonably be expected as *liable to change most probably towards high winds or lower temperature*, being especially periods of *atmospheric disturbance:* 1864.—June 4, 12, 19, 25. July 2, 9, 16, 22, 29. August 5, 13, 19, 25. September 2, 9, 15, 22, 29. October 6, 13, 15, 19, 26. November 2 and 3, 9, 15, 23, 30. December 6, 13, 20, 27. Persons can observe what these periods may prove to be. In the mean time, we think the system is a step in the right direction.

Catalogue of Fruits of the American Pomological Society.

This is stated to be a catalogue of fruits recommended for cultivation in the United States and the Canadas, and is in two divisions. The first division embraces those States lying north of the southern line of Virginia, Tennessee, Missouri, &c., and east of the Rocky Mountains, including the Canadas. The second division includes the States south of the above line, and west of the Rocky Mountains. We have, however, only the first division before us; and in a note at the end it is explained that in consequence of the distracted state of the country since the last meeting of the Society, the committee have not been able to collect a sufficient amount of information to justify them in attempting to prepare the second or Southern Division of the Catalogue. We understand that the author, a capital man, is Mr. Barry, of Rochester, U.S.

The arrangement of the varieties is alphabetical, according to the nomenclature adopted by the Society. Synonyms are given in a few instances only. The tabular form has been adopted to obviate the necessity of repeating the names of varieties several times, as would be required if a separate catalogue were made for several sections. It has, we are informed, been decided by the Committee not to attempt at this time to give descriptions of the fruits recommended, but simply to indicate the season of maturity, use, and a few other particulars of importance, which require but little space. Accordingly we have columns for the number, name, season, and use; then, columns representing 24 States, besides the Canadas, several of the States being divided into two or three districts, so that in all there are columns for 35 districts. The State or district in which any variety is recommended, from the collected reports obtained by the Society, is designated by a star (*); and in cases where a variety is recommended as being of great superiority in any locality, two stars are made use of.

We can learn from this catalogue the season of the respective varieties named in it, as well as their use: for example, Apples, whether for the kitchen, for cider, or for market—those not designated for these purposes being regarded as dessert sorts; but neither their particular qualities nor their size are given, so that we can only infer the general merit and estimation of each variety from the number of stars appended to its name, denoting the greater or less extent of its cultivation We may mention a few which appear to be more especially cultivated in a great number of States, and over a vast extent of country:—Red Astrachan, Early Harvest, Fall Pippin, Gravenstein, Large Yellow Bough, Yellow Newtown Pippin, Rhode Island Greening, Boston Russet (under the name of Roxbury Russet), and Summer Rose. We observe that the most universally cultivated Apple in England, the Ribston Pippin, is only marked for four districts out of the 35, namely Canada West, Maine, New York West, and Vermont. As in Europe, warm countries seem not to suit it. There are 178 varieties of Apples enumerated.

The Pears have columns for their season, use, and for the stock in regard to such as will succeed on the Quince; and 35 columns headed with the districts as in the case of the Apples. The list contains 122 varieties, the greater part consisting of Flemish kinds, but with a considerable number of American. Some of the more universally cultivated varieties are the following:—Williams's Bon Chrétien (or Bartlett as it is called in America), Belle Lucrative, Beurré Diel, Easter Beurré, Beurré Giffard, Bloodgood, Doyenné d'Été, Flemish Beauty, Citron des Carmes, Seckel, Urbaniste, Vicar of Winkfield, Buffum. The Louise Bonne (of Jersey) has obtained very extensive cultivation, whilst its rival in this country, the Marie Louise, is only marked as

recommended for three districts, namely — Illinois North, Maryland, and Massachusetts.

We must very briefly notice the other fruits; but we may be allowed to make a few remarks on the Cherries, because some new American varieties have been greatly spoken of, and have been introduced into England, and that being the case it may be interesting to know what honour they receive in their own country as compared with well known good sorts of European origin. The American Amber and American Heart have each only a single star out of 35 localities, whilst the May Duke has 18, and the Bigarreau 14. Osceola is only patronised in New York West; Sparhawk's Honey has only a single vote in its favour; and Tecumseh one. Red Jacket has 4. Governor Wood appears to be most approved of all the native sorts, for it has 12 marks, or only two short of the Bigarreau, and being new there is a probability that it will equal, or perhaps exceed the latter. Its merits will doubtless be ascertained this season in England.

Of Peaches, the clingstone sorts have by far the greatest preference. The Early York, George the Fourth, both melting and American, are, however, in good estimation; and, amongst European varieties, the Grosse Mignonne. The cultivation of Nectarines appears to be very limited, and the same may be said of Apricots. Plums are more generally cultivated, and there are some good American varieties, such as the Washington and Jefferson; still, with the exception of the former, they are not recommended for so many districts as our Coe's Golden Drop, and the Greengage.

Of native Grapes, the Catawba, Concord, Delaware, Diana, and Isabella appear to have the preference. With reference to the European sorts, it is stated that very few of the local committees have made any report.

As already observed, this catalogue does not afford information as to the particular qualities which the respective varieties of fruits possess; but it shows at a glance the general estimation in which they are held, judging from the number of districts marked wherein their cultivation has been approved, and the extent of this up to 1862. Many of the newer States could not be expected as yet to furnish reports of the newest kinds of fruits; but these, previous to the above date, had been rapidly gaining introduction throughout those vast countries where till but recently cultivated varieties of fruits did not exist.

Currants appear to be in greater estimation than Gooseberries. Among the new sorts of the former, La Versaillaise has rapidly taken the lead. The Orange or Brinckle's Orange Raspberry appears to be most extensively cultivated. Of Strawberries, Wilson's Albany has obtained the greatest number of marks of recommendation.

Miscellaneous.

Exhibitors' Society.—The following notice has been sent us. At a meeting held in London, April 28, 1864, Mr. C. Turner in the Chair, it was resolved to form a Society of Exhibitors, to offer suggestions to the different Societies for the arrangement of their Schedules of Prizes, and to protect and advance the interests of exhibitors generally. That members subscribe 2*s.* 6*d.* per annum, payable in advance. That a general meeting of the members be held as soon as convenient after the last of the great exhibitions. SUBSCRIBERS.—Mr. Baker, Mr. Bester, Mr. Charles Lee, Mr. Chilman, Mr. Cutbush (Barnet), Mr. Cutbush (Highgate), Mr. Masters, Mr. Milford, Mr. Page, Mr. Penny, Mr. Reed, Mr. Rhodes, Mr. Shrimpton, Mr. Smith, Mr. Smith, Mr. Taylor, Mr. Turner, Mr. Wheeler, Mr. Wiggins, Mr. Williams, Mr. Young. *O. Rhodes, Sydenham Park, Hon. Sec.* (*pro tem.*).

Yew (Taxus baccata, L.), or *Yeugh*, in Chaucer and other old authors spelt *ewe*, in Aubrey's Wilts *ewgh*, Ang. Sax. *iw*, Old High Germ. *iwa*, Germ. *eibe*, Span. and Port. *iva*, Fr. *if*, Wel. *yw*, from Med. Lat. *ivus*, *iva*, or *iua*, an abbreviation of *ajuga*, which was a misspelling of Lat. *abiga*, a plant mentioned by Pliny (b. xxiv. ch. 20) as being the same as the Gr. χαμαιπιτυς, and called so from its causing abortion. These names of the Yew we find so inextricably mixed up with others that mean Ivy [See Ivy, p. 416] that dissimilar as are the two trees, there can be no doubt that their names are in their origin identical. How they came to be attached to these trees, the Yew and the Ivy, is the difficulty. Apuleius (ch. 26) speaking of Chamæpitys, says "Græci chamæpityn Itali abigam, alii cupressum nigram vocant." Bruusfels, too, says of the Chamæpitys (b. i. p. 161) "ego autem cipressen existimavi." The Yew seems to have been taken for this black Cypress, and in this way to have acquired the terms *abiga* and *ajuga*, and *iua* and *iva*. But we learn from Parkinson (Th. Bot. p. 284) that the Forget-me-not, a weed of cornfields, was "called in English Ground Pine and Ground Ivie, after the Latin word *Iva*." This term Ground Ivy was assigned by others to a small labiate plant, the Hedera terrestris, and Ivy regarded as the equivalent of Hedera, and subsequently transferred to the Hedera Helix, our present Ivy. The origin of Ajuga seems to have been a mere error of the copyist in transcribing the passage from the 24th book of Pliny. For, as distinct as are *abiga* and *ajuga* in our modern print, the b of abiga might be written so as to look like a v or u, and the word made to appear auiga, which, if the i were not dotted might be as easily read aiuga as auiga. Thus by a train of blunders Pliny's *abiga* becomes *ajuga*, and *ajuga iua* or *iva*. This *abiga*, *ajuga* or *iua* was, as Pliny tells us, the same as the Greek Chamæpitys. The Yew tree gets the name of Chamæpitys through a remark made by Apuleius, and thereby as its synonym, that of *iua*, or *iva*. The Ground Pine, from its terebinthinate odour, also gets the name of Chamæpitys, and thereby as its synonyme that of *iua* or *iva*. But from chamæ being equivalent to terrestris, this name *iua* or *iva* passes over to a weed called, from the shape of its leaf, and creeping habit, Hedera terrestris, and the equivocal word Hedera conveys it to the shrub called Ivy. Some of the dictionaries give a pretended Celtic *iw*, green, as its root. There does not appear to be any such word. *Prior's Popular Names of British Plants.*

A New Grain.—It is stated in the *Carlisle Patriot* that in consequence of the publication of several letters by Mr. Gillbanks, describing the scarcity of wild-fowl and other once numerous birds, and ascribing it to the disappearance of their natural food, attention has been directed to the subject. Some gentlemen in Her Majesty's service, during their explorations in a wild part of our North American possessions, were struck with the pertinacity with which immense flocks of wild-fowl and other game haunted certain localities. It was found on investigation that they came to feed on a sort of rice which was indigenous to the place, and renewed itself by shedding its seed in the alluvial deposit. Some of this grain has been sent to Mr. Gillbanks, who will experiment on the same, and report the result. It is said to differ from the "paddy," or national rice of China.—*Pharmaceutical Journal.* [This is, of course, the well-known Zizania aquatica.]

Calendar of Operations.

(*For the ensuing week.*)

As many as 7° of frost were registered at Chiswick on the night of the 29th ult., a very unusual circumstance at this season of the year. It need not therefore be wondered at, that crops which were in active growth and full of sap have suffered, especially Potatos Scarlet Runners and dwarf Kidney Beans, the tops of which have been partially killed. At Bagshot young shoots of Rhododendrons have been killed, and even in exposed situations those of common Laurel. Early vegetable crops have also been hurt in other localities, as well as some of the more tender bedding plants. As soon as the full amount of damage done has been ascertained, it will be necessary to take energetic steps to repair it, or the evil results of this late May frost may not be overtaken this season. Wall fruits do not appear to be injured.

FLOWER GARDEN AND PLANT HOUSES.

As soon as the conservatory and other show houses are relieved of superfluous stock, nothing will remain but to carry out a cleanly system of cultivation, and to introduce fine specimens from other houses or pits. All available surfaces should be moistened morning and evening, thorough ventilation obtained, except when the wind is very cold, and a thin canvas screen should be kept on during bright sunshine.

ASTERS.—Shift any that may require more room into larger pots, and others may now be pricked out into open beds, protecting them, if possible, from cold winds until they get somewhat established.

AZALEAS.—Where these have been forced for the purpose of producing an early winter bloom, they should now be placed in a cooler situation, for if left too long, after they have set their flower buds, in a high artificial temperature, they will, in all probability, make a second growth, which is highly detrimental, if not fatal, to the production of next year's bloom. Encourage a free growth in the young stock, and all plants going out of flower, by placing them in a rather high and moist atmosphere.

DAHLIAS.—No exertion must be spared to promote the growth of these plants, for the quicker the growth the finer the flowers. Let the ground between the plants be forked over occasionally, and in dry weather do not spare the watering pot.

FUCHSIAS.—Early plants of these are now in perfection, and whether grown as small plants, for decorative purposes, or as large specimens for exhibition, they are alike useful and interesting; keeping the plants well watered, and shaded during bright sunshine, are the only things necessary. Late-flowering plants should receive a shift when required.

FORCING GARDEN.

CUCUMBERS.—If early Cucumbers are exhausted with much bearing, and infested with thrip or spider, prune them freely, and shut up and shade every morning by 10 o'clock, after a free circulation of air. Let them be syringed before shutting up. The thermometer, with careful shading, may be allowed to rise to 95°; this course, persisted in for a little while, will kill or drive away the insect pests, and throw the plants into new growth.

MELONS.—This season has been remarkably favourable for early Melons, and with many these will be ripened, and the crop gathered in time to admit of a second set of plants being turned out in the same pit. This is much preferable to the plan of obtaining a second crop from the same plants; they will succeed if planted at once. Plants swelling their fruit should be kept moist, but avoid frequent waterings of the soil by giving good soakings; examine the stems frequently for canker, and apply quick-lime to the affected portion immediately it is perceived, first scraping off the decayed part; avoid also, as much as possible, cutting or mutilating the plants, and causing bleeding, which is the ordinary cause of this disease.

PEACH-HOUSE.—Give plenty of air day and night, and syringe heavily morning and evening, except where fruit is ripening. Persist in constant stopping.

PINERY.—Use the syringe in earnest to all the stock, shutting up as much solar heat as possible, and giving abundance of air to young and growing plants. Be careful to shade the fruiters slightly, in order to insure a greater amount of atmospheric moisture, which of course is dissipated by free ventilation.

VINERIES.—Early houses will now be cut, or in cutting, in many places. Do not hurry the plants into a resting state; nothing will be gained in point of earliness next year by such a course; rather endeavour to keep the leaves well fed, as long as the vital forces are at work, and to this end allow laterals to ramble awhile if so inclined. Ventilate late houses freely by 6 or 7 o'clock in the morning, and keep a little air on all night, if the thermometer can be maintained at 65° without the aid of fire heat. Keep floors and all surfaces wet, in preference to much syringing, if a fine bloom is desired.

HARDY FRUIT AND KITCHEN GARDEN.

Constant attention will be necessary to keep down insects on fruit trees. Vines on walls or buildings must be attended to, as to disbudding, stopping, &c. Apricots must be well examined for the grub, and Peaches judiciously thinned both of wood and fruit.

BROCCOLI.—Sow now some good white kind to supply the table during October and November. It is a good plan to sow some Cape Broccoli in drills, prepared after the manner of a Celery trench. The seed should be dropped in patches about a foot apart, to be afterwards thinned to about three plants in a patch. Sow a little more of Knight's Protecting, and a sprinkling of some very late spring Broccoli; it may serve to prolong the succession next spring.

CELERY.—Every attention should now be paid to Celery plants; they must have abundance of water in every stage. Those pricked out from the seed bed should have well prepared beds, the surface of which, for 2 inches deep, should consist of well rotted manure, soaked with water, and rolled or pressed level previous to pricking out the plants. If the weather proves sunny they should be shaded with boughs.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending June 1, 1864, as observed at the Horticultural Gardens.

May and June.	Month's Age.	Barometer. Max.	Barometer. Min.	Temperature of the Air. Max.	Min.	Mean	Temperature of the Earth 1 foot deep.	2 feet deep	Wind	Rain
Thurs. 26	20	29.990	29.947	60	36	48.0	58	58	N.E	100
Friday 27	21	30.050	29.992	68	37	52.5	57½	56½	W	100
Satur 28	22	30.017	29.900	68	42	55.0	58½	56½	N.	100
Sunday 29	23	29.978	29.844	67	25	46.0	58½	57	N.E.	100
Mon. 30	24	29.995	29.763	62	28	45.0	57	56	S.	100
Tues. 31	25	29.732	29.694	67	40	53.5	56	56	N.E.	36
Wed. 1	26	29.767	29.689	68	35	46.5	56	55½	E.	100
Average.		29.932	29.832	64.3	34.7	49.5	57.3	56.5		.31

May 26—Cold dry N.E. wind; fine; rather cloudy; fine.
— 27—Fine; low dusky white clouds; very fine; whirlwind, fine
— 28—Overcast; fine; very fine throughout.
— 29—Partially overcast; fine; sharp frost at night
— 30—Frosty ice on shallow water; cloudy and cold; slight frost
— 31—Overcast; densely clouded; heavy rain at night.
June 1—Overcast; fine; overcast.

Mean temperature of the week 6½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending June 11, 1864.

June.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds.
Sunday 5..	70.6	47.0	58.8	22	0.90 in.	N. 2, N.E. 7, E. 2, S.E. 1, S. 6, S.W. 10, W. 1, N.W. 1
Mon. 6..	66.6	48.0	57.3	20	0.28	N. 5, N.E. 7, E. 2, S.E. 2, S. 4, S.W. 11, W. 4, N.W. 4
Tues. 7..	68.6	47.2	57.9	15	0.53	N. 3, N.E. 9, E. —, S.E. —, S. 4, S.W. 12, W. 3, N.W. 3
Wed. 8..	70.0	47.0	58.5	15	0.45	N. 4, N.E. 8, E. 1, S.E. —, S. 3, S.W. 16, W. 4, N.W. 2
Thurs. 9..	69.8	47.7	58.8	20	1.48	N. 1, N.E. 7, E. 3, S.E. 2, S. 4, S.W. 15, W. 3, N.W. 3
Friday 10..	71.2	47.5	59.3	18	0.95	N. 1, N.E. 9, E. 3, S.E. 2, S. 4, S.W. 9, W. 1, N.W. 4
Satur. 11..	71.6	48.3	60.0	13	0.47	N. 1, N.E. 6, E. 3, S.E. 3, S. 6, S.W. 9, W. 10, N.W. —

The highest temperature during the above period occurred on the 6th and 7th, 1846—therm. 90 deg.; and the lowest on the 9th, 1861—therm. 34 deg.

Notices to Correspondents.

INSECTS: *W M.* The larger species of Otiorhynchus is O. sulcatus, and the smaller one O. notatus.—*Skolasticos.* Your young fruit of the Pears are attacked by the larvæ of a small two-winged midge called Sciara Pyri by Kollar. We have never before seen it. The eggs were deposited by the parent in the embryo fruit at the time of flowering. Every Pear should be picked up as soon as it falls to the ground and burnt, or the small yellow larvæ will at once make their way into the ground to undergo their transformations. *W.*

NAMES OF PLANTS: *J E R.* Smyrnium Olusatrum and Antirrhinum Asarina.—*B & S.* Melampodium divaricatum. —, —, *and Co.* There is no doubt that it is a very fine thing, but we must decline expending on it the time required for determining its name, which may take some hours, until you furnish better materials and all the information you have regarding its history.

RHODODENDRON FORTUNI. We have to thank *A. G.* for flowers of what *is said* to be this plant, and very ugly they are. Can no one favour us with an authentic specimen?

POPLAR COTTON: *Enniscorthy.* The well-known substance, which envelopes the seeds of every kind of Poplar, is worthless for all textile purposes.

THUJOPSIS BOREALIS: *G F W.* Your plants of Thujopsis borealis have probably suffered early in the year from some chill. The effects of cold do not always declare themselves at once. As your pots are well drained, it is not likely that they should have suffered from being water-logged. The appearance of the specimens seems to indicate cold as the cause rather than any defect in the soil. *M. J. B.*

MISC. Full price will be given for the number of Sept. 19, 1863.

BATH and WEST of ENGLAND SOCIETY, for the Encouragement of Agriculture, Arts, Manufactures, and Commerce. Established 1777.

Patron:—H.R.H. The Prince of Wales, K.G.

THE ANNUAL EXHIBITION of STOCK, IMPLEMENTS, POULTRY, WORKS of ART, and HORTICULTURAL SPECIMENS, will take place at BRISTOL, on JUNE 13, 14, 15, 16, and 17.

President, 1863-1864:—The Rt. Hon. Earl Fortescue.

The CATTLE and POULTRY will be OPENLY JUDGED, on MONDAY, JUNE 13.

THE OTHER DEPARTMENTS WILL BE OPEN AS FOLLOWS:

STEAM ENGINES and MACHINERY in MOTION; The ARTS and HORTICULTURAL DEPARTMENTS—MONDAY.

STEAM PLOUGHS & CULTIVATORS, MOWERS & REAPERS, to work from 11 to 3 o'clock, on TUESDAY and WEDNESDAY.

HORSE SHOEING, at Portable Forges—WEDNESDAY.

The ANNUAL MEETING and BANQUET, on WEDNESDAY.

The HORSES paraded in the Circle at 12 and 4 daily.

The Band of the Royal Marines (by permission of Colonel Gascoyne, C.B.) will play on Monday, Tuesday, and Wednesday; and the Band of the Grenadier Guards, (by permission of Colonel Lambert,) on Wednesday, Thursday, and Friday.

ADMISSION:—On MONDAY, TUESDAY, and WEDNESDAY, 2*s.* 6*d.*; THURSDAY and FRIDAY, 1*s.*

HENRY ST. JOHN MAULE, Secretary, 2, Wood Street, Bath.

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.

Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.

22, Parliament Street, Westminster, S.W.

THE WEST of ENGLAND LAND DRAINAGE and INCLOSURE COMPANY.

ESTABLISHED IN THE YEAR 1844, AND INCORPORATED BY SPECIAL ACT OF PARLIAMENT, 11 & 12 VICT., C. CXLII.

Chairman—The Right Hon. the Earl of DEVON, Powderham Castle.

Deputy-Chairman—WILLIAM PORTER, Esq., Hembury Fort, Honiton.

TERMS MUTUALLY ADVANTAGEOUS TO LANDLORDS AND TENANTS.

Lands Drained and improved without any expense whatever to the Owners, a small increased Rent paid by the Tenants being sufficient to meet the only payment which Landlords are required to make, viz., merely the interest of from four to five per cent. on the loan, this Company's Act not requiring them to pay off the principal; all expenses may be a permanent charge on the property, or made redeemable at any time, or liquidated over any term of years.

Tenants for Life and Mortgagors can likewise Drain and Improve their Estates without any expense to themselves.

The Works are undertaken by the Company, who keep in constant employ a very extensive and experienced staff of Engineers, Surveyors, and Workmen; or Proprietors may avail themselves of the powers of the Act only, and get the Works executed under their own superintendence, or by Agents appointed by themselves.

Outfalls through adjoining lands are obtainable under the Company's Act.

Works are also executed by the Company for parties advancing their own Capital or not wishing to borrow the money.

FREDERICK BRODIE, Secretary, Castle Street, Exeter.

Offices: Castle Street, Exeter; 30, Parliament Street, London.

THE LANDS IMPROVEMENT COMPANY.

Incorporated by Special Act of Parliament in 1853.

2, Old Palace Yard, Westminster, S.W.

TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.

The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

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The Agricultural Gazette.

SATURDAY, JUNE 4, 1864.

MEETING FOR THE WEEK.

WEDNESDAY, June 8—Agricultural Society of England.. Noon

—— A LARGE portion of the present number of the *Agricultural Gazette* is worthily occupied with a report of the Conference before the Society of Arts on dwellings for the labouring class, and with a report of Mr. BAILEY DENTON's excellent lecture on the same subject. We have to acknowledge with thanks our obligations both to the Journal of the Society for the abridged report of their proceedings, which has been here given, and to Mr. BAILEY DENTON for the use of the valuable series of engravings with which his lecture was illustrated.

It will be seen that the discussion before the Society was for the most part confined to the question of dwellings for labourers in town. Much of the argument relating to the subject does however apply equally to the difficulties in the way of rural cottages. And a report both of the first day's discussion and of the second day's conference, which we hope to give next week, thus properly claims a place in our pages.

THAT was a capital home thrust of Mr. CORBET, into those who were the other day discussing the present method of taking the corn returns before the London Farmers' Club:—"He did not know whether or not the meeting were aware that they had been discussing agricultural statistics for the last hour"—"Was the Club prepared to declare itself in favour of agricultural statistics? He had frequently observed that when that expression was used, farmers immediately fired up; but to his mind it certainly appeared that by the experience of that evening, 'agricultural statistics' and 'corn returns' meant very much the same thing."

Good service is done by any one who shall point out particular examples of the benefit which agriculturists will themselves derive from a more accurate knowledge of the farm produce of the country than is now possible, and Mr. CORBET's illustration is quite a case in point. The general proposition that an accurate knowledge of the truth, whatever it may be, must be universally beneficial, seems to us, however, so self-evident, that hardly any particular example of it seems an adequate illustration of it; and the whole result of that perfect publication of the truth from year to year, which we shall ultimately have, will no doubt be witnessed rather in the greater safety of commercial operations generally, and in the greater certainty of agricultural guidance, and of farm progress generally which will ensue from it, than in any special instance of immediate profit, which will be ever directly traceable from it. Particular examples of great profit are indeed the proof, if any were needed, of a general loss and injury. They are the result of exceptional knowledge or exceptional luck, coincident with or consequent on general ignorance. Great prizes are only met with in lotteries, where the many suffer. And agricultural statistics will tend not to benefit individuals, but to hinder irregularities of price, and to distribute the profits of the year more fairly over the months and more fairly over the multitude.

When the subject was last discussed before the Society of Arts, we showed from the quantities and dates and prices realised of all the corn sales of 1846, on a number of large farms, how little the great wave of price which occurred in May of that year benefited the tenants of those farms. Those tenants had, in fact, by their large sales when corn was low, and their abstinence from sales when corn was high, created that great wave of price by which agriculturists were so little benefited, and by which the general course of trade was so much injured.

The present writer was then in the occupation of 300 acres of arable land. His corn harvest of the previous year, got in in bad condition, was sold, as straw was needed, during winter. Much of the Wheat had indeed been warehoused during the period of lowest prices, but had to be sold early in the spring because of its bad condition. When prices rose in April and May of course he resolved, as regarded the remainder of the Wheat in rick, that he would not lose the high prices then obtainable for lack of that patience in which he had been so signally deficient during the period of low prices. And the upshot was that one half the crop was sold before the great wave of price had reached him, and the other half was sold *after the great wave of price had passed him!* And so it was with the thousand and one of farmers generally who had done the very same—who had in fact with him raised that wave by their ignorant behaviour in the market—picking their own pockets for the benefit of the very few who had the wisdom or the luck to sell.

These irregularities of price by which the great majority suffer for the benefit of the very few are the result of that ignorance which correct agricultural statistics will remove. At present individuals endeavour to obtain information for personal advantage; and agricultural journals obtain imperfect reports for the general good: and thus this ignorance is less than it otherwise would be—and the injury it does is not so great. When Government shall at length consider that the subject is of imperial interest, no doubt the necessary inquiry will be more generally made, and its results more generally published.

Mr. CAIRD, M.P., is next Tuesday again to call the attention of the House of Commons to the importance of the subject, and to detail a plan by which he proposes that a first attempt should at length be made. He proposes to inquire into the extent of the several crops, not over the whole country, but only over so many characteristic and typical portions of it, say 100,000 acres each. Fifteen such typical portions would represent the whole country fairly, and they would amount in all to one-tenth of the estimated extent of cultivated land in the island. In a memorandum which he has published on the subject, he says:—

There have been three objections hitherto urged to the collection of Agricultural Statistics:—

1. The cost.
2. The inquisitorial character of the inquiry.
3. The difficulty of obtaining accurate returns.

(1). By the plan now to be submitted the cost is not expected to exceed 3000*l.* a year—an amount which, compared with the object, is not worth a moment's consideration.

(2). Neither the names nor the boundaries of individual farmers will be known, and neither the persons making the inquiry, nor those to whom the results are communicated, can tell the precise farms to which the returns refer. The complaint of inquisitorial inquiry cannot therefore arise.

(3). The typical districts will be fixed quantities, say 100,000 acres each, laid down on the Ordnance maps. Every acre within that limit will be exhausted, so that absolute accuracy will be attained.

It appears that successful experiments have already been made in Scotland of the mode of collection now proposed. And Sir HARRY JAMES, the head of the Ordnance Survey by whom they were made, is prepared to conduct with his staff the whole inquiry.

We cordially hope that Mr. CAIRD's proposal may be favourably received; and that whether it be accepted as a final and ultimate solution of the problem, or only as a preliminary and experimental approach to a solution, it may this summer be submitted to the test of a trial, for which there is still ample time to make the requisite preparation.

AS STRONG AS IRON, and as strong as steel, are common expressions. Those who are well acquainted with iron and steel will tell us that both are subject to many influences materially affecting their strength. Agriculturists have now so much to deal with iron in various forms that "a little knowledge" of iron would certainly not be "dangerous." Such a knowledge would rather be economical, as it would point to the means of avoiding many costly disasters to machinery. More especially is it necessary that farmers should understand certain elementary points in this part of the strength of materials, as one or two dangerous fallacies about iron have obtained some currency.

What engineers call the breaking strength of any material is simply, as its name implies, the dead pull, or dead weight, that would break a bar. This weight may of course be applied either tensionally, that is to say by pulling; or it may be applied in the contrary direction to crush the bar; or it may be laid on transversely, as when the bar is used as a beam, fixed or placed on one or more supports,—the weight being applied transversely to the longitudinal axis of the bar. There are also other kinds of stresses, such as those of shearing and torsion. "Shearing" is the kind of stress undergone by the rivets of the rivetted joints of a boiler, or by a pin in a forked joint. The ultimate resistance of a given size of rivet to this transverse force is the same as, or very little less than, the resistance to pulling. "Torsion," or wrenching, is the stress undergone by an object when twisted. A revolving shaft is thus subjected to torsion, which is itself a special form of tensile stress.

If a piece of india-rubber be taken, and stretched by pulling, the force, or the load, or the stress, is applied tensionally. If squeezed between the two fingers, it is subjected to a force having a tendency to crush the piece of india-rubber. If the supposed strip be nailed at its two ends, say horizontally, while its centre is left free, and a force be now applied to it—like, for instance, that by the finger to a harp-string—it is subjected to a load or stress transverse to its length.

Very good wrought iron bars will stand as much as 30 tons to the square inch, while some will break with about 20 tons under a tensile stress. The average breaking strength of fairly good wrought iron may be taken at 24 tons to the square inch cross section. A cubic inch of the same iron will stand about 28 tons before being completely crushed. Under a transverse load, the iron will break at an amount which will infinitely vary, with the distance between the supports, the shape of the beam, and various other influences.

It must never be forgotten that, long before the iron object is broken, it takes what engineers call a "permanent set." That is to say, it elongates, not merely temporarily, but also permanently. The same is the case with even such an elastic material as our piece of india rubber. If stretched sufficiently far, or sufficiently long, or sufficiently often, it does not come back to its original shape or length. It takes a permanent set; it is rather longer than before being stretched. With about 12 tons to the square inch of its cross section, our iron bar will take a slight permanent set, and this set will go on increasing until the bar be broken. Under pressure the bar will take a permanent set at 15 tons to the square inch. This tensile "limit of elasticity," as it is termed by engineers, will vary for different kinds of wrought iron from 10 to 12, and to even 15 tons on the square inch.

A full consideration of this "limit of elasticity" is of the utmost importance. All successful machines, engines, bridges, roofs, &c., have been built upon the assumption of its existence. That is to say, each square inch of the iron is loaded with only one-half of what would give it a permanent set. In our case this is 6 tons to the square inch. A good boiler, made of wrought iron plate that would stand 24 tons to the square inch before breaking, is constructed of such proportions that it may only undergo 3 tons to the square inch. In this case a complicated train of both mechanical and chemical force is continually striving to break its bonds.

It must be remembered that the ultimate breaking weights we have given were obtained by experimenting or testing iron in a particular way, the conditions of which are rarely obtainable in practice. The weights, under which the bars were broken, were *gradually* applied. To illustrate this we will suppose a rather light pair of ordinary beam scales, in one of which scales is placed a 10 lb. weight. These 10 lb. shall represent the ultimate strength, under a gradually applied load, of a bar of iron. If 10 lb. be now placed in the opposite scale very gradually, say ounce by ounce, the two scales will gradually and quietly come into equilibrio. This is the way in which have been broken the bars that gave an ultimate resistance of 24 tons per square inch under a tensile stress. But only 5 pounds, if *suddenly* placed in the opposite scale, will also raise the 10 pounds for a moment. And 12 tons, if suddenly applied, will break the bar that would only be broken by 24 tons, if these 24 tons were gradually applied. In the same way, the 1-inch square bar that would be injured, and perhaps strained beyond its elastic limit by 12 tons gradually applied, would undergo the same effects from only 6 tons, if this amount be suddenly applied. The main explanation is sufficiently simple. The gradual load has increased from 0 or zero up to (say) 24 tons; the impulsive force began its work at a rate of 12 tons. This law is, however, modified by various practical circumstances, when acting up to the breaking point, but it may be taken as strictly correct up to the elastic limit or proof strength of the material. We may however say with some confidence that a bar that would be uninjured with a gradually applied load of 12 tons, will be broken if this load be suddenly applied. The *safe* load under a passive strain is therefore 6 tons, and the *safe* load under an impulsive force is only 3 tons, as the safe working load, under ordinary circumstances, is only taken at one-fourth of the breaking load.

In a certain work on farm implements, which has, and deservedly so, much currency amongst agriculturists, we find it stated—"With reference to the opinion that severe tensile strains are injurious to the bearing powers of wrought iron, the experiments of THOMAS LLOYD, Esq., of Woolwich, go to prove that this is not correct, but that the tensile strain of wrought iron is not injured by breakages up, even to four times in succession." This is only in one sense true. The breaking strength under a load *gradually* applied, was found to be actually increased by the bars being broken. They first broke at about 33, and at the fourth breakage at as much as 39 tons. They were rendered harder, and at the same time brittle. Our india-rubber illustration will show how this took place. If we stretch or pull the india-rubber band, it of course elongates in the direction of its length. But it also contracts laterally at the same time. Its pores at last get more or less closed up. The same action takes place when a bar is stretched beyond a certain limit. It is rendered harder and more brittle. A rod of glass $1\frac{3}{4}$ inch in diameter will stand the same gradually applied load as an iron bar 1 inch in diameter. But the glass rod will be shivered to fragments by a blow. The peculiar effect of the lateral contraction in hardening wrought iron, appears to have been first pointed out in a paper on the testing of chain cables, read a few weeks ago before the Society of Arts.

The practical lessons to be learnt from the above remarks are manifold. In the first place, it is clear that iron may be injured without, for the time being, showing any marked sign. A wire rope may have been unduly strained by working on heavy ground; it is not, perhaps, extraneously broken, but it must give way at the next jolt. There is also little doubt that iron is much more liable to get broken during frosty weather, and more especially by sudden jolts. The immense importance of, and indeed necessity for, avoiding sudden strains is also clear, and more especially is this caution necessary in frosty weather. Under no circumstances should either engine-work or machinery be started suddenly. Merely in this way—only one of many ways—can a careful attendant save an annual income to his employer. The penny-wise economy that keeps down the wages of a valuable servant of this kind, may be defined as a diversion from its true source of a mere per-centage of the iron-founder's future bill. *P.*

RURAL COTTAGES.

THE following are extracts from Mr. Bailey Denton's lecture read May 11, before the Society of Arts. We take them from the report in the Society's Journal—and we have to thank Mr. Denton for the use of the engravings by which they are illustrated.

1. *On the Accommodation to be given.*—Experience enables us to adopt with security for cottages the following dimensions of space:—

Height of lower rooms, 8 feet; height between floor and ceiling of upper rooms, 7 feet 6 inches.

LOWER ROOMS.			
Living room	Area, 150 ft.	Cubic contents	1200 ft.
Scullery	,, 80 ft.	,, ,,	640 ft.
UPPER ROOMS.			
Parents' bedroom	Area, 120 ft.	Cubic contents	900 ft.
Boys' ,,	,, 90 ft.	,, ,,	675 ft.
Girls' ,,	,, 80 ft.	,, ,,	600 ft.

The ventilation which will render these spaces sufficient is gained by having a fire-place and window in each room, with the door entering directly from the porch, passage, or stairs. Practically, all minute refinements in the art of ventilation are found inapplicable. In addition to these desiderata, each cottage should be provided with a pantry within the dwelling, having a command of a free passage of air through it. The scullery, and not the living room, should have a copper and sink for washing, which should be the property of the owner of the cottage; an oven is a desirable addition, but it is not essential. The out-offices should consist of a small barn, for wood and coal; a privy detached, with facility for emptying it; and an ash-pit, so connected with the privy that the ashes may be used to prevent effluvium. The whole premises should be perfectly drained. All the roof-water should be preserved, and a command of well-water should be provided also. The yard and walks (if any) should be paved or gravelled, so as to preserve cleanliness within the dwelling.

These details of accommodation shortly supply the sanitary data upon which cottages of the best class should be built.

We will now consider how far the rules generally accepted on sanitary grounds may be modified to meet the varying conditions of the labourer, and thereby secure more extended accommodation.

No one can deny that in all cases where families of labourers consist of children of both sexes, it is essential to decency that three bedrooms should exist, but the possession of this advantage is so often abused, and so difficult to adjust to the actual condition of village populations, that it becomes us to consider whether we are not straining too much after one character of dwelling, while there are others which deserve equal attention, and which if they received it would secure a more perfect fulfilment of our good intentions.

The argument used in favour of building no other than cottages with three bedrooms is, that there already exist so many dwellings with deficient accommodation that it behoves us to supply a full number with a maximum amount before we descend to less. This view would be sound if it were not known to all experienced men that, owing to the difficulty of allotting suitable habitations to different-sized families, and the impracticability of shifting families already in possession of dwellings to fit prescribed rules, half the newly erected cottages are misappropriated. It is found, in fact, to require the harshness of positive compulsion to remove a large family out of a small hovel into a full-sized cottage, while a well-to-do labourer, with a tidy wife and no children, will greedily seize a cottage with more bed-rooms than he can occupy, in order to secure the comforts of a new structure. The motive which actuates each is explained by the circumstance that while both are equally able to work, the man with few or no children is better able to pay for increased accommodation than the man with a large family. For the same reason, when a labourer with a large family does occupy a cottage with three bedrooms, he is frequently found to crowd his family into two rooms out of the three, and to let the third.

The modifications to be sought are not the reduction of space in the required rooms, nor in the dimensions of walls and timbers, but in the establishment of a better and more certain mode of assorting the dwellings to the circumstances of the labourer. It will not be by any refinements in the mode of building, nor by the substitution of concrete walls for brick walls, nor hollow walls for solid ones,* that the real difficulty can be removed.

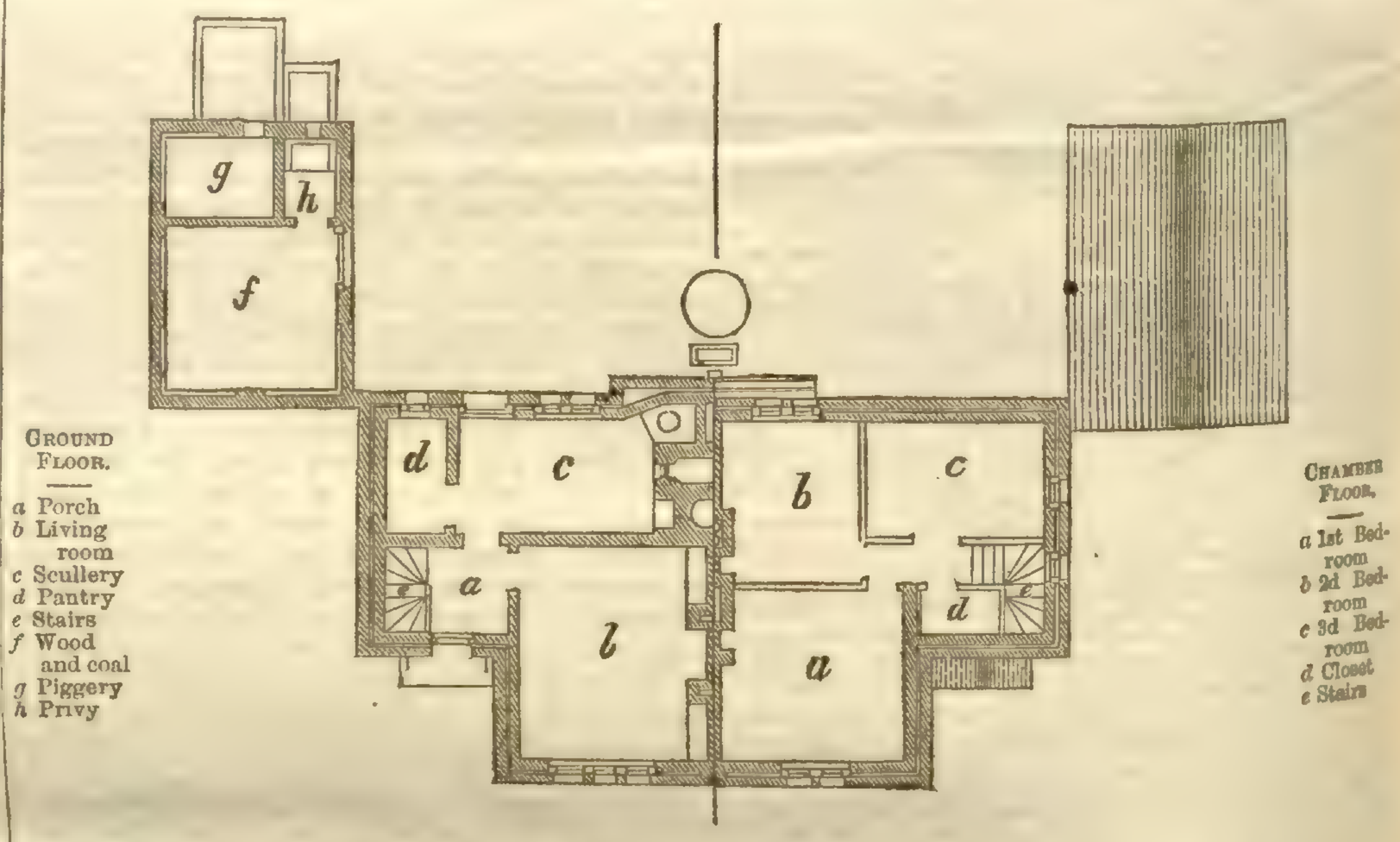

No. 1.—MR. ROBSON'S COTTAGES.

It is admitted on all hands that the rent due for cottages is the great difficulty we have to contend with; and as a larger structure of equal durability and convenience must always cost more to build than a smaller one, it is self-evident that if we are to adjust cottage accommodation to the requirements and circumstances of farm labourers, the adoption of one uniform size of cottage is the way to defeat the object. Moreover, as it happens that labourers having the largest families and requiring the most accommodation are those that can least afford to pay for it, it is equally clear that we must encourage every other means at command of providing for them than by the erection of new cottages. The alteration of existing cottages appears to be the better way of meeting the difficulty.

2. *The Duke of Bedford's Cottages.*—The late Duke of Bedford, in 1849, published, in the Journal of the Royal Agricultural Society of England, the designs and particulars of the several kinds of cottages he was erecting on his Bedfordshire and Devonshire estates. He had directed his surveyor to prepare plans of cottages, suitable for families of different sizes, singly and in blocks, and some most excellent designs will be found in the tenth volume of the Agricultural Society's Journal. Among them will be found the following plans.

* We may, with benefit, study to increase the labourers' comforts without increasing the expense in the cost of their dwellings, and this has already been partly done in the attainment of dryness by means of hollow walls. A very good specimen of cottage so built (see woodcut above) has been erected for the Earl of Pembroke, near Wilton, by Mr. Robson.

The engraving below shows a block of four cottages, in which two have two bed-rooms, and two, three bed-rooms each. No. 2 shows a pair of cottages, in which each has a single bed-room.

3. *Sir H. Dashwood's Cottages.*—On Sir Henry Dashwood's estate, in Oxfordshire, may be seen some excellent cottages (see p. 540), which contain three bed-rooms, but one is placed on the ground floor and two above, and scullery, pantry, &c., form a lean-to. The Cottage Improvement Society have issued a design with a similar arrangement of rooms, with the exception that the bed-room occupies the lean-to, in the place of the scullery, and has no fire-place in it; the plan, therefore, cannot be considered so good as that adopted at Kirtlington. They are figured at No. 4 in juxta-position.

Captain Dashwood, under whose direction the cottages on the Kirtlington estate were erected, thus explains the advantages of the design:—

"The downstair bed-room is adopted because it is found that a farm labourer, though requiring a third bed-room at one stage of his family's growth, does not require it for any length of time, as his family are either very young, or, as soon as able, go out to service. The ground-floor bedroom can, at such time, be used for a lodger; or when the parents get old they can retire to this room and admit a married child, or even another couple, to help to pay the rent. The old woman, by looking after the children, enables the young wife to attend to work, and the old man can help to gain a living by doing duties which frequently devolve on children to the loss of their education.

"The advantages of this plan are—

"First—That of enabling old and young people to reside under one roof, thereby securing nearly all the advantages of two cottages.

"Second—It secures greater privacy from the position of the rooms, as under ordinary circumstances the parents would sleep below and the children above, and the partition walls would be constructed of brick, and not lath and plaster, as is the case with ordinary three-roomed cottages.

"Third—It secures greater warmth and less draught; and

"Fourth, the third down-stairs room will be found available, if required, as a workshop, or as a bedroom, especially suitable for a crippled child or an aged parent."

A modification of the same arrangement of sleeping

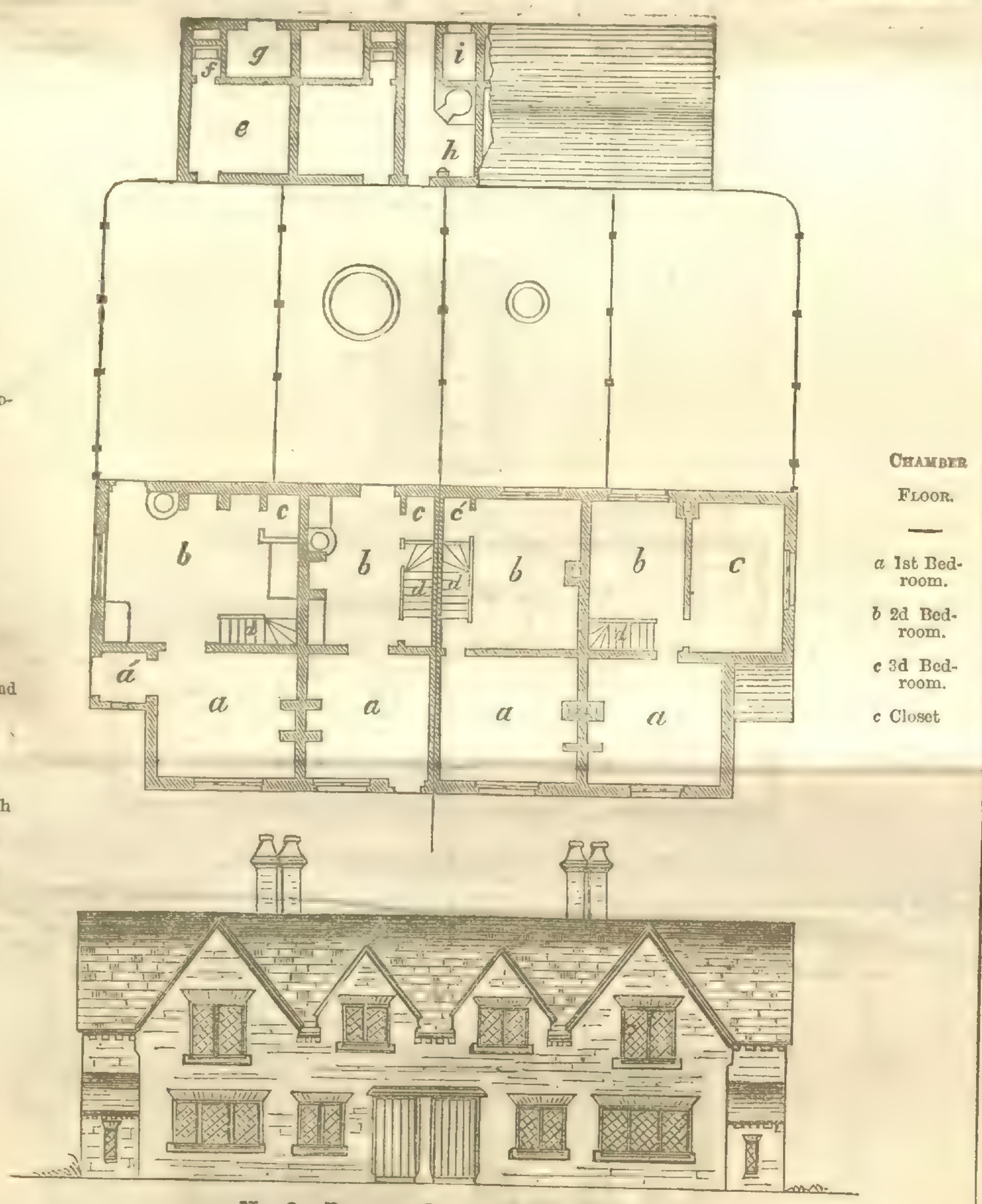

No. 2.—Duke of Bedford's Cottages.

This Block of Cottages is furnished with a Drying Ground for each Tenement, and has a common Rain-water and Well.

rooms is shown by the woodcut (see p. 540) of a cottage designed by the writer, in which the scullery forms a small covered yard, extending from the cottage to the outbuilding. The advantage of this arrangement is, that, the yard and scullery being one, and under cover, the former is always dry, and the latter more spacious than under ordinary circumstances, while the room (*i.e.* yard) is so constructed that it cannot be misappropriated as a living room.

4. *Mr. Benyon's Cottages.*—Some cottages, erected on the Culford estate, near Bury St. Edmund's, by the Rev. E. K. Benyon, have an arrangement with respect to the scullery which will recommend itself. Mr. Benyon says—"I have just completed these cottages at a cost under 200*l.* I have put the bakehouse and washhouse out of doors, as this prevents any steam from getting into the bed-rooms, and the back kitchen is made small, so as to prevent its being made a living room, which I have found to be the case in some cottages that I have built, in which the larger front room has only been made use of to hang up the family photographs." The cost quoted by Mr. Benyon evidently does not include every detail. The woodcut, page 541, shows Mr. Benyon's arrangement.

5. *Lady Kerrison's Cottages.*—Provision for married people without children, and for old couples whose children have left them, is a desideratum of importance; and the single bedroom cottage, erected by the Duke of Bedford (woodcut 3), is a very good one for the purpose.

But the plan suggested by Lady Caroline Kerrison is perhaps superior, inasmuch as the bedrooms are all on the ground floor, and are therefore more suitable for old people than bedrooms upstairs.

Lady Kerrison's plan is shown at page 541.

Reduced to figures, we shall find that three-bedroom cottages will cost from 130*l.* to 150*l.* each; those with two bed-rooms from 90*l.* to 130*l.* each, and those with one bedroom only from 70*l.* to 100*l.* The mean return required to repay principal and interest in 30 years may be taken at 8*l.* a-year for the first, 6*l.* 12*s.* for the second, and 5*l.* for the last description of cottage.

Improvement of Cottages.—With respect to the improvement and alteration of old cottages to meet the requirements of the present day, much has been done and much more can be done.

The best practical illustration of this fact is to be found at Broadlands, the estate of Lord Palmerston, where everything that can conduce to the comfort of the labouring poor has been studied with the greatest possible interest. Lord Palmerston has said, and proved, that "it is not necessary to pull down old cottages to build new ones. A great deal can be done, at a moderate cost, in improving the old ones." His lordship added, when he said this, "That the effect of improving these dwellings is almost marvellous. In the first place, the comfort of a man's house depends on the tidiness of a man's wife, and on the mode in which she tries to make him comfortable. But there is a temper of the human mind which is denominated recklessness. When a thing seems impossible, it is given up in despair. When a cottage is in such a 'ramshackle' state that it is impossible for the wife to keep it clean, she becomes a slattern; everything goes to ruin; the man is disgusted, and flies to the beershop."

At Broadlands, Lord Palmerston has personally superintended the enlargement and alteration of his old cottages, so as to render them free from those objections which are so repugnant to good feeling. Sufficient bedroom accommodation, good drainage, and ventilation have been his primary objects, while the poor man's comfort has been studied by the substitution of boarded for stone or brick floors, and by the provision of those little conveniences, such as cupboards and shelves, which we all know how to appreciate in our own houses. Several local societies have been established in different parts of England for the purpose of encouraging the improvement of existing cottages. It would be difficult to specify them, but in most cases the object has been to advance money to their poorer owners of cottages for the purpose of inducing them to build bed-rooms to existing tenements; and one society went so far as to offer a bonus or gift of 5*l.* to such owner as would add an additional bed-room.

The rules laid down by the Inclosure Commissioners for the advance of money to landowners for cottage building in no way extend to the conversion of or addition to existing cottages; and the facilities for getting money for the purpose of erecting new cottages are therefore one reason why so little attention is paid to the improvement of existing structures. This is to be regretted.

7. These remarks bring us to the third part of the subject—the advantages of good cottages to the labourer, the tenant farmer, and the landowner, who, being mutually benefited, must severally contribute to the return due to the provision of good cottages.

The advantages to the labourer by the acquisition of a good cottage are, nevertheless, considerable. He will have greater comfort and improved health; but although these benefits will render him physically better able to do his work, they do not enable him, in nine cases out of 10, to earn more wages, and thereby to pay more rent. If his cottage is placed on or near the field of his labour, he will gain more time in which to work in his garden and enjoy his home, and to this extent he is pecuniarily benefited. But, with this advantage, the utmost a labourer can pay in the way of rent is from one-sixth to one-seventh of his earnings; and assuming his wages to be, as in Hants or Dorset, 10*s.* per week, with double wages at harvest,

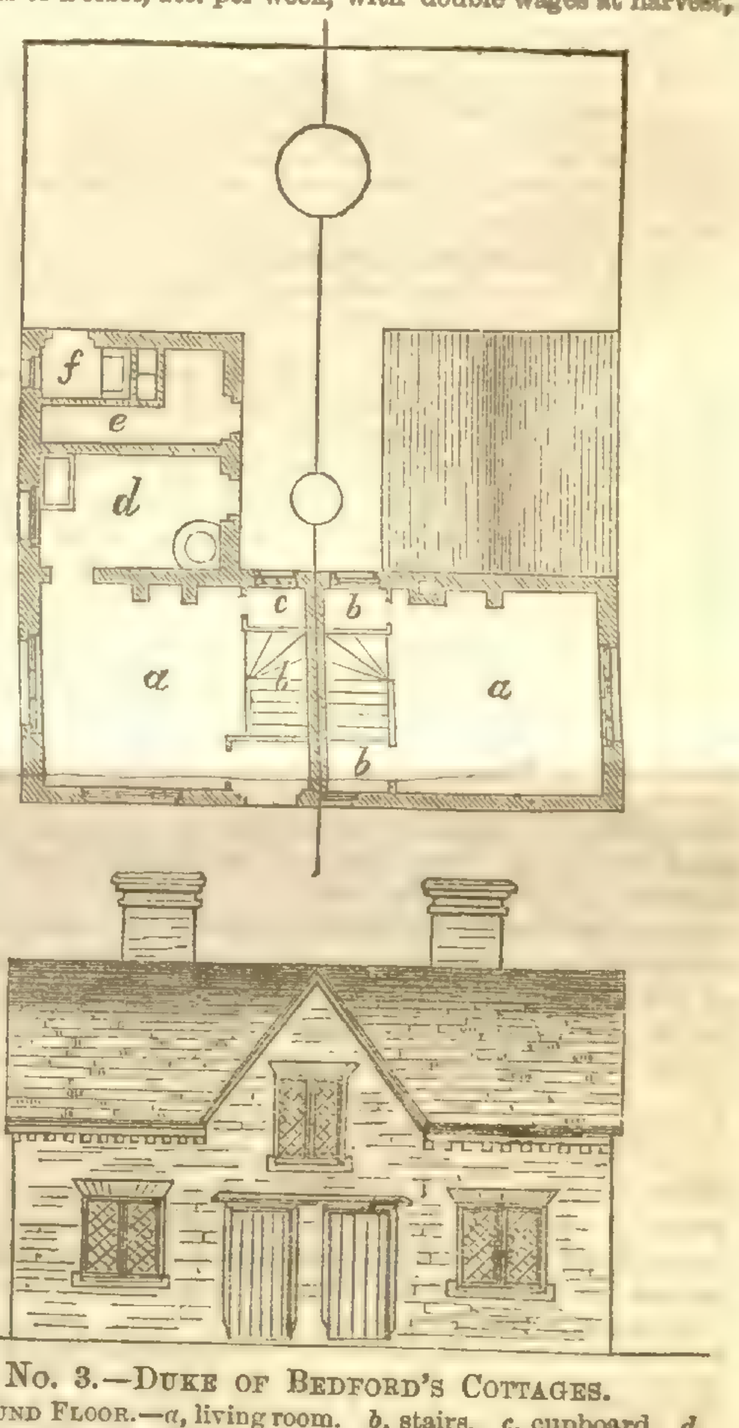

No. 3.—Duke of Bedford's Cottages.

Ground Floor.—*a*, living room. *b*, stairs. *c*, cupboard. *d*, scullery. *e*, wood and coal. *f*, privy. Chamber Floor.—*a*, bed-room. *b*, closets. These cottages are furnished with drying grounds, and have a rain-water tank and well in common.

it follows that 1*s.* 6*d.* per week represents the amount he can set aside for rent. In the Midland Counties, by the same rule, the proportion due to rent will be 1*s.* 9*d.*, and in the Northern Counties 2*s.* per week. There is an advantage however to the labourer in a comfortable cottage which he may not directly acknowledge or appreciate, and therefore for which he would be disinclined to pay. One of the certain effects of a comfortable home, with the cleanliness and tidiness which it begets in his wife and children, is to keep him from the public-house, and thereby to avoid the expenditure of his earnings in beer.

The advantages of well-built and well-placed cottages to the tenant-farmer, in securing labour at the time and at the place where it is wanted, can hardly be overrated. Well-placed cottages will not only secure the farmer a choice of his labourers, but will secure him that protection for his stock and property which the presence of selected men on the spot will be sure to gain. He will moreover save the time and strength of his labourers by securing that portion of both which would otherwise be expended in walking to and from the farm.

The advantage to a landowner of a good cottage tenantry is quite equal to, though not so manifestly direct in its results as, that to the labourer and the tenant-farmer.

The best cultivated districts, and those which owe their high rents to the superior treatment of the land, have arrived at their present condition from the superior character of the local labourers. The good habits which comfortable and cleanly homes beget, not only secure the superior cultivation and the improved rental which results from it, but they engender a respect for property generally, and are opposed to the evils of poaching and petty depredations which characterise certain demoralised districts. On these grounds the landowner can afford to debit himself with a part of the return due for good cottages. It is very much to his interest to recognise the fact in this light, for it will be a sorry day for him when cottages can be erected at such a price as will enable the labourer alone to satisfy the builder, and induce speculators to run up cottages wherever and whenever it may suit their purposes.

There is one way in which the landowner may contribute to the rent of a cottage in a tangible manner without a con-

tribution of money, which might be more generally adopted. It is by adding a rod of land to each cottage occupied by an able-bodied labourer, and charging him only an agricultural rent for it. The value of land of moderate fertility to a labourer for gardening is 9*d.* a pole, or 6*l.* an acre, if it immediately adjoins his cottage. The value of the same land for farming may be taken at 2*l.* an acre or 3*d.* a pole; if, therefore, the cottager pays but 3*d.*, and he is benefited to the extent of 9*d.* a pole, the difference of value will be 20*s.* a-year for the rod, which the landlord will thus practically contribute towards the cottagers' rent.

THE DWELLINGS OF THE LABOURING CLASSES.

IN accordance with a circular letter issued by the Council of the Society of Arts, a Conference on this subject was held on Thursday the 26th, and Friday the 27th May, commencing each day at half-past 11 o'clock. The Chair was occupied by William Hawes, Esq., Chairman of the Council.

A very influential meeting of noblemen and gentlemen assembled in accordance with the invitation of the Society. The following report of the proceedings of the first day is abridged from the full account of them given in the Society's Journal.

The discussion was taken under the following heads:—

1. On the insufficient number of habitations for the labouring classes in town and country.
2. On the badness of the existing accommodation.
3. On the effects arising from this state of things, viz.:—
   (*A*) Religious, moral, and social.
   (*B*) Sanitary.
   (*C*) Economic.
4. On the causes to which these evils may be, or have been attributed, such as—
   (*A*) The Law of Settlement.
   (*B*) The Poor Laws.
   (*C*) Tenure of property, such as mortmain, leasehold system, tenancy for life, &c.
   (*D*) Legal difficulties affecting the transfer of property.
   (*E*) Difficulty of providing proper dwellings at a cost which will be remunerative to capital in town and country.
5. Remedies:—
   (*A*) What can be done by legislation?
   (*B*) What can be done without legislation?
   (*C*) What assistance, if any, can the Society give in either of these directions?

The CHAIRMAN, in opening the proceedings, said there could be no doubt they would all agree in the importance of the subject to come before them for discussion, and in the vastness of the interests connected with it, and also in the opinion that it strictly belonged to this Society to use every means in its power not only to promote discussion, but, if possible, to suggest some plan by which the existing evils might be remedied. He referred to the difficulties in the way of any such plan; and as to the question if it was thought they could assist by an appeal to the legislature, he was directed by the Council to state that they would only be too happy to co-operate in promoting whatever the Conference might think best in that direction. If, however, it should be thought more good could be done without legislation, then the Journal of the Society would be open to communications and practical suggestions from those who would forward them to the secretary: and the rooms of the Society, and the services of its officers, would be at the disposal of those who desired to take active practical steps to forward the great object they had in view, viz., the improvement of the dwellings of the poor, by which their comforts might be increased, the value of their labour enhanced, and their families raised in their social position in the country. He now begged to invite observations on the first subject, viz.:—"On the insufficient number of habitations for the labouring classes in town and country."

Mr. GEORGE GODWIN said, his writings on the subject went to prove the truth of these two first propositions. But he had not been listened to. Houses described ten or twelve years ago as having in every room a separate family; houses of ten and twelve rooms, containing 40 or 50 people, remained in the same bad state. The children brought up in the dwellings he had described were educated downwards, and must necessarily grow up pests to society.

The Rev. THOS. PYNE said that, in many country districts, the state of things was as bad as in London and large towns. He did not believe the public generally were aware of the wretched character of the dwellings of the working classes.

Mr. MARSH, M.P., remarked that, while they must be unanimous on the two first propositions, and must all agree that the houses were as bad as they could be, it was worthy of notice that the dwellings were in many cases the same as they were years and almost centuries ago. It was therefore a consolation that they were met to deal with an evil which had not sprung up lately, but one which had existed from time immemorial.

Mr. W. H. BODKIN (Assistant Judge) said—As he was unable to remain till they came to the subject of the "remedies," he would direct the attention of those who had thought what remedies, legislative or otherwise, should be adopted, to the fact that much of this crowding of families in one room—so graphically described by Mr. Godwin, was to be attributed to the desire of the poor themselves to underlet the house which they occupied. He had seen houses which were well constructed, and where the rooms were adapted to the accommodation of a family with decency and comfort, but the disposition to get a portion of the rent repaid induced the occupiers to underlet the rooms to others, and caused the evils arising from crowding to which allusion had been made. He mentioned this because one of the most important points in considering the remedies would have reference to the mode of controlling this overcrowding.

The CHAIRMAN then read the following resolution, as embodying the opinion of the meeting on the two first propositions, viz.:—

"That it is the unanimous opinion of this meeting that there is at present, in town and country, a very insufficient number of dwellings for the labouring classes, and that the accommodation is bad and unsuitable for the classes now occupying these dwellings."

The resolution having been unanimously agreed to, the CHAIRMAN called attention to the next subject under the first head, viz.:—"The effects arising from this state of things—religious, moral, and social, sanitary and economic." A large quantity of evidence on this subject was related.

Mr. S. REDGRAVE thought the deteriorated condition of the health of female domestic servants must have been remarked, the seeds of ill-health having been sown in early life, arising from the unhealthy habitations in which they were brought up during their youth.

Mr. C. WREN HOSKYNS said it was notorious that the want of sufficient cottages in the country often obliged the agricultural labouring population to walk several miles to their work. The walking alone was nearly equal to a day's march of a soldier, in addition to which the day's labour had to be performed, although, under such conditions, the labour must necessarily be of a very deteriorated character. The economic effect, as against the farmer, was to make wages higher where the labourers lived at a distance from their work, and to make the article of labour supplied inferior to what it would be under more favourable conditions.

The following resolution was adopted:—

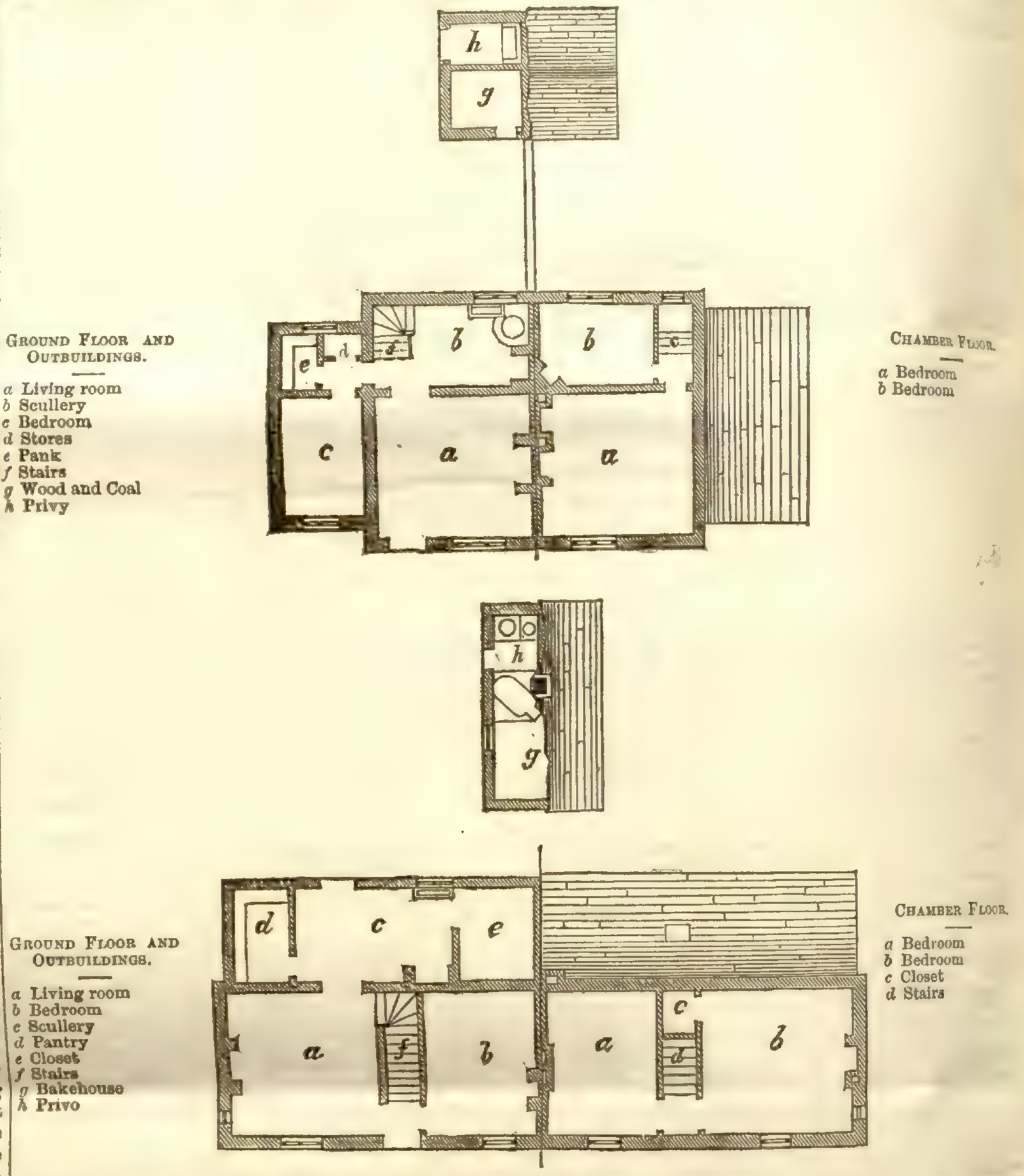

No. 4.—SIR HENRY DASHWOOD'S COTTAGES.

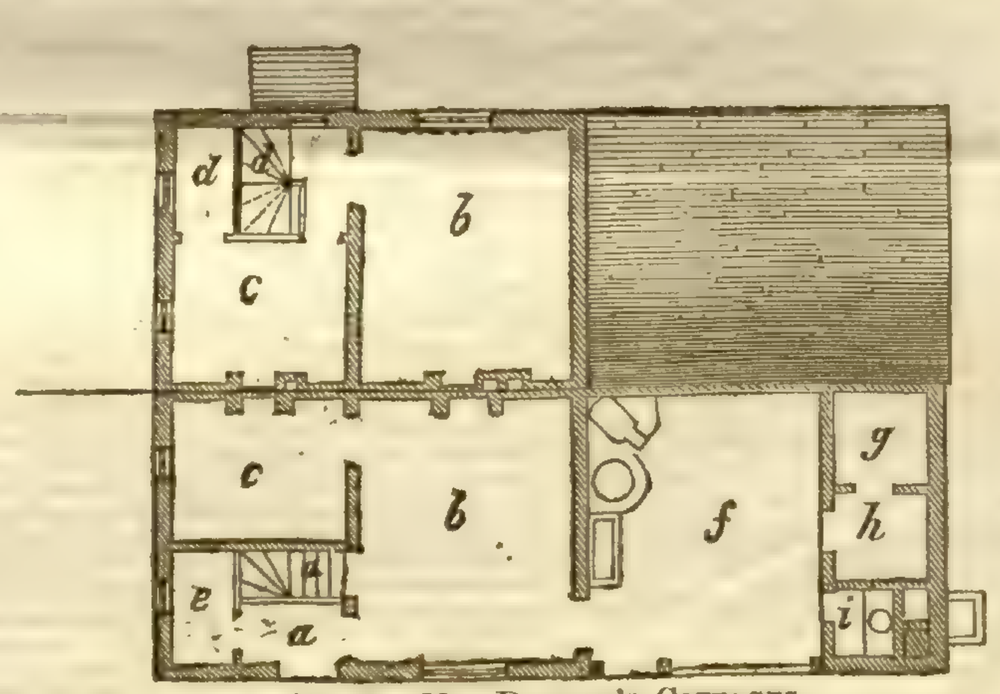

No. 5.—MR. DENTON'S COTTAGES.

"That the evil effects arising from this state of things in a religious, moral, social, sanitary, and economic point of view, in the opinion of this meeting demand the immediate and serious attention of the country."

The CHAIRMAN said they now came to the consideration of a much more important point, viz.:—"The causes to which these evils may be or have been attributed: such as the law of settlement—the poor laws—tenure of property: such as mortmain—the leasehold system—tenancy for life, &c.; legal difficulties affecting the transfer of property; difficulty of providing proper dwellings at a cost which will be remunerative to capital in town and country."

Lord BERNERS said—At one period of his life he held the opinion that a country gentleman did his duty if he saw that the parish in which he lived was put into a perfect state with regard to the cottages and their condition; but on further looking into the subject, he found that what were called "model parishes" were the worst that could be. That was where builders ran up a few cottages, which were let at high rents to persons of questionable character, who had been driven out of the close parishes and congregated in a mass in the open parishes; and that was one of the reasons why he felt satisfied—after a good deal of consideration of the matter—that the abolition of the laws of settlement and removal would be a great boon to the working classes. He thought that a cottage occupied by a family should not have less than three sleeping rooms: but it was desirable that in country parishes there should be different classes of cottages, one of which should consist of ground floor only, for the occupation of aged people, and which could be let at a very low rent; another class at a little higher rent, and be adapted for young married people; but that, for the generality of cottages, there should be three sleeping rooms.

Mr. JOHN DILLON said—The operation of the Poor Law was vitally connected with the question, and was one of the causes they were now inquiring into. It was very properly urged that in the existing state of the law of settlement and removal it was not to the interest of the landed proprietors to build good cottages on their estates, and that they really injured their estates thereby. He believed that to be an effective cause of the stagnation of improvement in the houses of the labouring population; the spirit of the Poor Law was that a man should not be allowed to perish without assistance from his fellow-creatures; the consequence of this was, a fear was created that the certainty of assistance would lead the poor not to exert themselves to provide for their own maintenance; and to counteract that fear various measures had been resorted to, such as the scanty dietaries of the poorhouse; but he thought they might substitute an opposite influence to this, viz, the love of home. Make a workman's home comfortable and happy, and a source of domestic enjoyment, and the love of home would operate far more powerfully than the fear of the workhouse as an incentive to him to support himself. With the proprietor of a large estate, and a man of fortune, the motive was strong to make his dependants as happy and as contented as possible, but there was the latent fear present, that if he encouraged population around him he would have to pay for it in poor's rates, and would to that extent injure his estate by providing residences for his workpeople. This he regarded as one of the main causes of the present state of things, for, after all, those engaged in commercial life knew that self-interest would prevail; and if, by the alteration of the poor law, they could make it to the interest of the landowner to provide good cottages on his estate, and to promote the building of good houses in his neighbourhood, they would succeed in the end they sought better than by any other means that could be devised. He would, therefore, suggest a uniform rating for unions of parishes in the first instance, which might afterwards be extended to the whole country, from which he believed the most beneficial results would accrue.

Mr. KINIE could bear testimony to the fact that the town in which he lived was crowded with agricultural labourers, who had to walk several miles to their work on estates, where there were not more than two or three cottages. The result was, that while in the suburban parishes the poor's rates were not more than 1*s.* or 2*s.* in the pound, in the town to which the agricultural population was driven the rates were as high as 3*s.*, 4*s.*, and 4*s.* 6*d.* in the pound. He felt certain that, if the law of settlement were altered, the difficulty of getting landowners to provide cottages would be removed.

Rev. J. B. OWEN thought that, considering the vast number of dwellings of the industrious classes that had been removed in and about London for railway purposes, it should go forth as a suggestion from this Conference, that, upon the principle of compensation recognised in all other matters, railway companies were bound to provide cheap trains, at such hours, morning and night, as would enable the labouring classes of towns to occupy suburban dwellings, by means of which a vast amount of the evils arising from crowded habitations might be obviated.

Lord LYTTELTON, after remarking on the extreme multifariousness of the subject, said a very able article lately appeared in the *Saturday Review*, in which it was proposed to abolish the whole law of settlement and removal entirely, and replace it by one short Act of Parliament, which was very ingeniously sketched out. The principle on which it was based was undeniable, viz., that the support of the labourer ought to come out of the proceeds of his labour, and that he should, therefore, be relieved by the parish where he had laboured for a certain time. But the question was whether this would not lead to as much litigation as the present law. For the purpose of this Conference they might pass a resolution as to the undoubted effects of the law of settlement on the building of cottages. He should have no hesitation in supporting such a resolution, from a conviction that the utmost freedom of the circulation of labour would be beneficial to the labouring man.

Mr. FREDERIC GOLD-MID, while agreeing in the effects produced by the law of settlement, questioned whether a remedy would be found under a system of national rating. The true evil was the inadequacy of wages. In the manufacturing districts the wages were from 25*s.* to 30*s.* per week, while in Dorsetshire, Wiltshire, Kent, and other counties they did not exceed 10*s.* or 12*s.* per week. Under such circumstances they must see the utter impossibility of labourers paying sufficient rent to provide themselves with proper dwellings.

The CHAIRMAN then submitted the following resolution, as expressive of the opinion of the meeting on these points:—

"That in the opinion of this meeting the present lamentable state of the dwellings of the labouring classes is materially induced by the Law of Settlement and the limited area of Poor-Law rating."

The CHAIRMAN then invited discussion on the next two subjects, under the head of "Causes," viz.:—"Tenure of Property," and "Legal Difficulties affecting the Transfer of Property."

Mr. THOMAS HARE said: On these points, they were now considering the effects of the want of a prime necessity—the means of repose, decent association, and where a family could be brought up with something like home feelings. Why was it that to the present day the progress of industry, and the vast wealth produced by labour, with the vast wages fund of the country—how was it that these could not be brought to bear to provide this article of prime necessity? It was mainly this, that the laws of transfer of property stood in the way of enabling the working classes to obtain this necessary requirement. The cottager had not only to pay the fair return upon capital, but was obliged to contribute to those of his own class who did not pay at all, or who actually injured the property. He had to pay for the repairs necessary on a change of tenancy, and in addition, he must pay for the collector who took the rents. There were also legal expenses and ejectments, besides legal expenses in the case of defaulting tenants. All these things were charged upon the poor tenant, and these he would escape, if, instead of being the tenant of another, he were his own tenant. Whence arose this difficulty? It consisted in the laws relating to the transfer of property. In the transfer of merely a suite of rooms in Lincoln's Inn 50*l.* was very easily expended. He thought they were in a position now with regard to property which enabled them to commence a better system. Under Lord Westbury's Act they could have an undefeasible title by registration. Suppose they took a plot of ground, they could obtain an indefeasible title from the Land Transfer Office, and they need not go back farther than that title. Upon such plot of land they could erect blocks of houses with numerous stories, each floor varying in rent as they went higher up, so as to suit all classes of occupants, and these floors might be conveyed each in a separate page of the register to different owners. It was found by experience that chambers erected in this manner would only cost 9*d.* per cubic foot. If they had 2000 cubic feet in two rooms, that at 9*d.* per foot would amount to 75*l.*, adding 25*l.* as the proportion for expenses of land, they had a total of 100*l.*, and for that 100*l.* the two rooms might be purchased by the working man by the process adopted by building societies, so as to be abundantly profitable to him. By the payment of 3*s.* per week he became the immediate possessor, and in 15 years he became the owner of those premises, in addition to paying 6 per cent. on the capital expended.

Lord LYTTELTON had no doubt the views of Mr. Hare on this

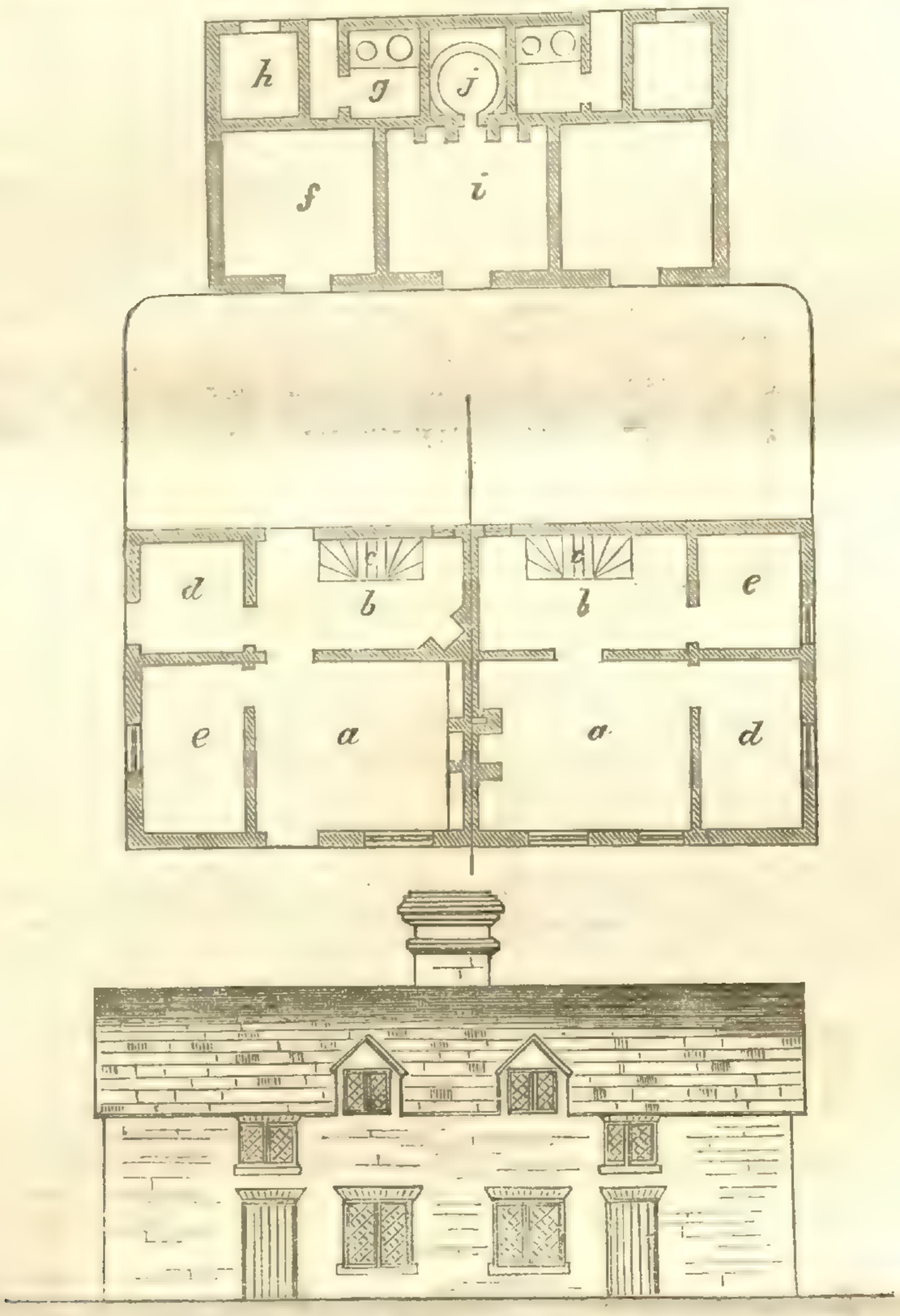

GROUND FLOOR AND OUT BUILDINGS.

a Living room
b Scullery
c Stairs
d Pantry
e Bedroom
f Wood shed
g Privy
h Pigsty
i Bake house
j Oven

CHAMBER FLOOR.

a 1st Bedroom
b Landing
c Stairs
d 2d Bedroom
e 3d Bedroom

No. 6.—MR. BENYON'S COTTAGES.

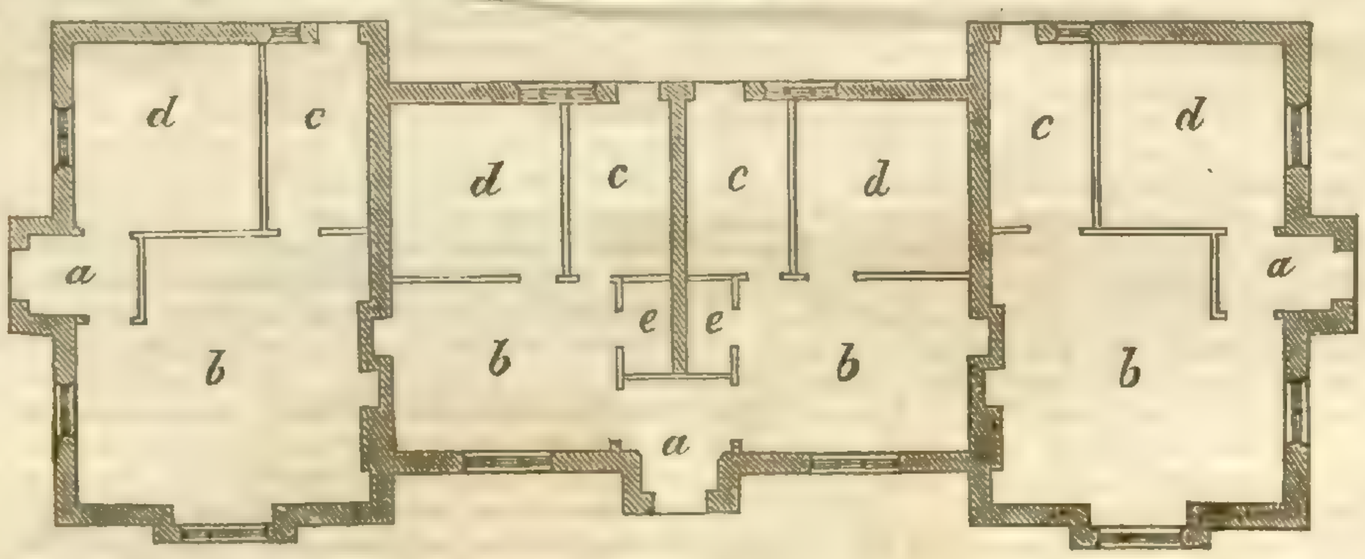

No. 7.—LADY KERRISON'S PLAN.

a, Porch. *b*, Living room. *c*, Scullery. *d*, Bedroom. *e*, Closet.

question were quite correct. The system propounded by Mr. Hare was applicable to dwellings for the poor, because only recently Parliament had passed a statute affecting the transfer of property on a larger scale. At the same time, the plan laid down was so simple and obvious in its nature, that it was by no means one of the most difficult parts of the subject to deal with. Mr. Murphy had said, if they had good people they would get good houses; on the contrary, it was a lamentable part of the subject, that people who would appreciate good houses could not get them without paying an exorbitant rent. Most landlords were desirous of doing what they could in the way of religious teaching, but he had been told by a clergyman that they might do all they could, but the single bedroom beat them. Birmingham might be mentioned as a town presenting a remarkable exception to the general crowding of the population. It was part of the habits of the people. The town was full of small, ugly houses, which would accommodate poor families, and not more than one family dwelt in a house. That was in itself an enormous advantage, and contributed to the better sanitary and moral state of that town.

The CHAIRMAN then read the following resolution, which was carried:—

"Resolved, that the tenure of property and the legal difficulties attending its transfer, and the obstacles they interpose in obtaining sites, impede the labouring classes from becoming possessors of suitable dwellings, buildings separately, or as portions of larger buildings."

The CHAIRMAN then invited remarks on the remaining proposition under this head, viz.:—The difficulty of providing proper dwellings at a cost which will be remunerative to capital in town and country."

Mr. WESTGARTH thought the principle of association which had been found to work so well in other directions, might be beneficially applied in the present case. No doubt the feeling of most Englishmen was to have an independent home, but if they could not effect that to the full extent they desired by the principle of association, they might greatly increase their home comforts. Mr. Westgarth proceeded to lay before the meeting a plan for large buildings, containing four or five floors, and capable of accommodating 200 or 300 persons with the most approved sanitary arrangements, which he said could be obtained by the moderate contributions of the many. In such buildings he proposed that there should be a large hall common to the inmates in general. He attached as much importance to the hall as to any point in the plan, as being a counterpoise to the public-house. Having also advocated a large kitchen in common, he added that Mr. Corbett, of Glasgow, had shown what could be done by the pence of the many in procuring the best articles of food at the cheapest rate. He thought, if those principles were adopted, the saving to a working man with a family would be one-third, and to the single man one-half of the present cost for the necessaries of life. He was much gratified to find that the results arrived at by Mr. Hare entirely corresponded with his own views, particularly with regard to that great want of the working man, viz., two good rooms to live in, of which he might possess himself at a cost of 100*l*. Those buildings, he said, might be carried out by joint-stock companies, and his calculations were that, after providing for repairs, insurance, and public rates, the property would give a return to the promoters of 6 or 7 per cent.

Mr. Alderman WATERLOW called attention to the accounts of the Society for Improving the Dwellings of the Labouring Classes, the dividend of which Society had varied from 1½ to 11¾ per cent., which gave an average of 4 per cent. If that Society, which started when the duty was on glass, and when there were many acts in the statute-book which interfered with building operations—if that Society had been able to pay a dividend of 4 per cent. from the time it commenced, in spite of all mistakes, any society of this kind starting now ought to pay an average dividend of 5 per cent. They had to thank the legislature for the facilities afforded to association by the passing of the Limited Liabilities Act, and under such facilities they should endeavour, each in his own district, to associate to provide for the particular wants of that district. In order to illustrate his meaning, and give practical evidence of what might be done, he had been fortunate enough, within the last month, to start a society in his own district of Highgate. Less than a dozen gentlemen met, and at that meeting an association was formed, and a capital of over 3000*l*. subscribed. At the succeeding meeting the articles of association were agreed to, and at the next meeting they would be incorporated—all of which had been done at an expense of less than 25*l*., which was paid by voluntary contribution, leaving the capital entire for the object for which they were banded together. He should add, in both the companies he had assisted in forming, professional gentlemen had offered their gratuitous services to aid in promoting this object. Associations in various parts of London might be formed in this way at very little expense, and great advantage resulted from a local knowledge of each district, in the acquaintance with and the selection of sites suitable for the purpose in hand, and in that way he was persuaded a great deal might be done towards remedying the evils they were met to consider. There was one point he could not help alluding to, as tending to increase the difficulty of building houses for the working classes in towns—that was the tendency of the architects, in designing dwellings of this class, to make them of too ornamental a character.

Mr. HENRY MAYNARD remarked that he had indulged in cottage building as an amateur, and like others had found it expensive. He was pleased to hear the opinion of Alderman Waterlow, that 5 per cent. would be returned upon investments in dwellings for the poor. Although his own cottages had not brought him anything like that return, he was led from experience to believe, that by association and a due regard to the details of construction, dwellings of this class might be made to yield a fair return. He then alluded to the Cottage Improvement Society of Hastings, in which the capital invested amounted to 17,000*l*., the result of which showed, he believed, that an average of 5 per cent. was returned; and he was of opinion that an institution formed under the auspices of this Society, paying a dividend of 4 per cent. in half yearly instalments, would meet with abundant support. He thought, from what they had heard to-day, there was every encouragement to proceed in this work, for they had never found that any well-planned project for the improvement of the moral and social condition of the people of this country had been long without supporters.

Dr. GREENHILL referred at length to the history of the Hastings Society.

Mr. MORTIMER pointed out the prejudicial operation of the existing Building Act for the metropolis. He thought the remedies would be of a very limited character whilst that oppressive enactment remained in force.

Mr. GATLIFF mentioned, as the result of the experience of the Metropolitan Association, of which he was secretary, that the most unprofitable part of their operations had been the building of lodging houses for single men. This had been a considerable clog upon the profits of the association. They had expended about 15,000*l*. in those buildings, which did not return more than a half per cent, while the family dwellings gave a return on the average of 5 per cent. More recently-erected family dwellings had paid upwards of 6 per cent. With regard to the security of these investments, he added that during the last 20 years the association had received 90,000*l*. in rents, and the bad debts had not amounted to ½ per cent.

The CHAIRMAN then read the following resolution as representing the opinion of the meeting on this head of the subject:—

"That by proper attention to economy, by building to the extent only required by each district, and by the utmost care in avoiding unnecessary outlay in preliminary expenses, proper dwellings for the labouring classes can be provided which will realise in towns a fair dividend on the capital expended; and that although in rural districts, commonly speaking, the pecuniary return for capital invested in labourers' dwellings, considering the rate of their wages and their general circumstances, and the cost of repairs, can only be moderate, yet it may be regarded as satisfactory, when the consequent improvement of the character of the occupants, their comfort, their health, and the additional value of their labour are taken into account."

In submitting this resolution, the CHAIRMAN added: he had intended to offer some remarks on this part of the subject, as he confessed he did not agree with some of the views expressed in the course of the discussion, although he believed the resolution fairly represented the feelings of the meeting. He would, therefore, take the opportunity of saying a few words at the next meeting to relieve himself of any apparent inconsistency with respect to this resolution.

SOWS AND BREEDING ANIMALS.

"AGRICOLA" must bear in mind that the demand for "pork" is a limited one, but for "bacon," much more extensive. Young pigs, too, can always be sold, but will it not answer his purpose to let his young pigs grow into "porkers" or fat hogs? The latter are less exhaustive of the food, and leave richer manure than the former. Breeding sows, like cows, are much more hazardous than growing or fattening animals, and I know of very many heavy losses lately of cottager's sows, that have died some time after parturition from fever, &c. Breeding animals require a peculiar management, particularly a great variety of food, containing all the requisites for building up the animal frame, such as food containing bones, lean flesh, and fat; in fact, all the various components of the animal frame. How well Mr. Horsfall has illustrated and explained this in his papers on dairy management, Vols. 17 and 18, Royal Agricultural Society's Journal.

There is too commonly a fatal mistake made as to animals approaching parturition, and the remark holds good for sheep and cows as well as pigs, and no doubt applies to the human family. High feeding continued to the very time of parturition too frequently produces, after parturition, destructive fever. For the three or four weeks before, and a week or two after parturition, the food should be spare and of a cooling nature. This I have observed as the invariable practice of successful breeders. I was very much struck with a remark made to me by the home bailiff of a gentleman who has 150 splendid Alderney cows near Brighton. About 25 cows are allotted to each farm, and six weeks before each cow calves she is removed from the care of her usual attendant and brought home to be "starved," or rather to be fed on limited quantities of non-exciting food. "Sir," said this man to me, "we dare not trust the cows to their regular feeders. We can't make them starve them; they are so fond of seeing them well fed: we have found by experience that it won't do, in their condition, to trust them with their usual attendants." After parturition, for some time care must also be taken not to over feed. Some farmers administer salts or cooling and reducing medicine, where they do not starve.

A neighbour of mine had this spring some very well fed and healthy ewes, and continued feeding them high with corn, cake, and roots, both before and after parturition. He consequently lost many sheep and lambs, and has now found out his mistake. Observation and experience have taught me that Grass, however abundant and good, is by no means so "forcing" or nutritive as dry food, such as corn, cake, or malt combs. I placed a young ewe, having two lambs, in a 5 acre pasture, where she had an unlimited supply of Grass. I soon found that neither she nor her lambs progressed so rapidly as those I fed on cake, corn, malt combs, and bran, although the latter were limited as to their supply of Grass. Some time after lambing, when the excitement of parturition has passed away, the mother's food can hardly be too rich and plentiful, provided it contains all the elements required for the growth and development of its progeny.

To return to sows: I have observed that those having the range of a small pasture, or some green lanes, generally do well. Beware, however, of exposing thinly clad animals to atmospheric vicissitudes; a place for warmth or shelter, if provided, will soon be availed of when the necessity for it arises. Animals, like ourselves, soon feel atmospheric changes, and will find out suitable shelter if we provide it; but I almost fancy that some farmers do not give their animals credit for so much sensibility, or we should not see them shivering at a gateway, and in vain imploring their owners to give them shelter. Thick-hided and well-haired mountain animals, which have survived their companions, as well as their own climatic trials, can "stand" our southern open fields, and can "stand" the tormenting summer flies, better than our well-bred Short-horns or hairless pigs. The losses, however, caused to well bred stock by atmospheric exposure by want of shelter or by neglect, is sometimes awful. A sudden north-easter after a warm morning gives chill and "a cold" which soon ripens into pleuro-pneumonia—in plain English, the blood is thrown upon or congested in the lung, producing irritation, inflammation and destruction. Immediate attention or a Turkish bath may afford relief, but whenever an animal has a cold or cough, away with it at once to a shed far distant from the homestead, and even then slaughter it before you get to the infectious stage. A visitor told us the other day that a friend of his who had a splendid herd of 100 cows lost 60 of them, all from one cow "catching cold," and then getting lung complaints. "Heaves" in pigs is much the same complaint, and dangerously infectious. I never had "heaves" among my pigs, except in one or two instances where, being in an unpaved shed, they rooted a hollow in the floor, in which they half buried themselves. Rising up from these holes, cold struck the heated side, and away went the lungs. Allow your pigs to bury themselves in hot dung in cold weather, and they are almost sure to get the "heaves." Again, allow your pigs to huddle together on soft Barley straw in a confined hovel, badly ventilated, and they will get from the putrescent air fever or disease. Good reedy Wheat straw, or a wooden floor with slits or openings, and air circulating under it, will prevent all this. On our exposed and elevated farm, called familiarly in Essex "cold Tiptree Heath," we must not take liberties with our stock. An easterly or north-easter is a too costly affair to indulge in. I have noticed that among the 98 candidates for admission to our Royal Agricultural Benevolent Institution, one of the prominent causes of distress is "Losses by stock." By the by, I hope we shall have a successful anniversary dinner at the London Tavern on the 1st June, under the able presidency of Lord Stanley; and although it is too late for the dinner this year, I shall be very happy to put on my list for next year the names of those kind agriculturists who may desire to patronise my pet child. Turning to sheep, it is a great mistake to suppose that they are insensible to cold. Give them the chance, and they will soon select a warm shed in cold weather, even with their long wool on. In summer they will choose shade. It is a great mistake (very often made) not to give sheep access to water. My sheep, eating succulent Italian Rye-grass, and in addition cake, &c., drink a great deal of water, according to temperature, &c.; even in high Clover I give them the option of drinking. Pure water is a great boon to all stock. *J. J. Mechi, May* 30, 1864. P.S. Bear in mind that pigs in summer attract flies, which feed upon them and with them. They are therefore undesirable near to your residence, filling it with flies. *J. J. M.*

THE CATTLE IMPORTATION AND DISEASES BILLS.

THE House of Commons Committee met again on Tuesday. Since the last sitting Mr. Bruce had retired, and Mr. Thos. Baring, the Under-Secretary of State for the Home Department, who has been appointed in his place, occupied the chair on the occasion.

Mr. BIRCH, medical officer of the Fulham district, represented the views of the Association of Officers of Health of the Metropolitan district, with respect to the two Bills. Their views as embodied in a report were to the effect that there was a serious amount of disease amongst the cows in metropolitan dairies, and that the diseased animals were slaughtered for human food. A large number of diseased animals was daily imported to London and exposed for sale, and the diseases from which they were suffering were often of a dangerous character. The Association had reason to believe that much of the disease produced in human beings was due to the consumption of the flesh of such animals. They were of opinion that the evil might be checked by a more complete and systematic mode of inspection, especially at the time the animals were slaughtered. The principal diseases by which the cattle were attacked, were the foot and mouth disease, pleuro-pneumonia, parasitic and tubercular diseases. The Association regarded the provisions of the Cattle Diseases Prevention Bill as a very great improvement, inasmuch as they would subject to a more complete and careful inspection all animals sent to fairs and markets. The medical officer of health had full power to inspect meat, and the power was exercised as far as possible, but there were still great defects in the present law. Inspection of cattle at markets and fairs as proposed by the Bill would prevent diseased animals being sent to market, and would to a great extent check the sale of diseased meat. But there were a number of diseased cattle which did not pass through any market whatever, and in order to meet their case, he would suggest that the officers of health should have the same powers as the market inspectors. Marked instances had come under his notice of persons suffering from diseases caused by using unsound meat. The slaughtering of cattle in London should be limited to certain places, so that the medical officers might have an opportunity of making frequent inspections of them.

In answer to Lord Naas, he stated that in his opinion the killing of sound animals should be confined to licensed slaughter houses, and that diseased animals should be sent to "knackeries." The effect of diseased meat on the human form could be distinctly traced, but might be difficult of proof with scientific exactness.

To Mr. Caird: He did not think that pleuro-pneumonia and the foot and mouth disease had increased during the last few years amongst cows in London dairies, and this was owing to the inspection of cow-houses and the better precautions taken by cow-keepers. The health of the Fulham district had materially improved in the last few years, but that was due to the operation of improved sanatory regulations.

To other members of the Committee: A large portion of the cattle which was brought into London in a diseased condition contracted the disease in the transit from farms, and in those cases, even though the disease had been so recently contracted, the consumption of the meat would be injurious, while the evil might be difficult of detection. He could not say positively that a case had occurred of death from eating unsound meat, but there had been of late a large increase of carbuncle, which he attributed to that cause. A great many of what were called first-class butchers in London sold diseased meat. In all stages of pleuro-pneumonia the meat was injurious to health. The pigs in his district were fed upon all kinds of offal and putrid matter, and a great deal of mortality took place in the piggeries in consequence.

Dr. LINTON, Physician and Professor of Physiology at St. Thomas's Hospital, deposed that the diseases in animals seriously affected the nutritive qualities of the meat. There was no doubt evidence of diseases in the human subject from the consumption of the flesh of animals which had suffered from pleuro-pneumonia and foot and mouth disease. Animals affected by parasitic diseases would communicate those diseases to those who used the meat, and tape-worm and measles were imparted in that way. These diseases were chiefly taken in consequence of eating raw or partially cooked meat, and in meat well cooked the danger was to a great extent destroyed, especially in the early stages of the disease. Tape-worm had not, in his opinion, increased in the metropolis.

Dr. LETHEBY, Medical Officer of Health to the City of London, stated that he had had great opportunities of noticing the quality of meat sold in London, and of becoming acquainted with the nature of the diseases of cattle. The Commissioners of Sewers had upon his advice appointed inspectors to seize all animals suffering from parasitic disease, acute inflammatory disease, pleuro-pneumonia in all its stages, small pox, all animals that had taken physic, and all flesh that was in a state of putrescence. In the last three years 600,000 lbs. of meat had been seized in London, being at the rate of 1 ton per week, and of this 354,000 lbs. were of animals diseased, 152,000 lbs. animals which had died either from accident or disease, and the remainder consisted of flesh in a putrescent state. The two principal means of preventing disease were the disinfection of those things, particularly railway trucks, with which the cattle were brought into contact, and the separation of diseased from sound cattle. Convictions now frequently failed in consequence of the vagueness of the law as to what constituted the exposure of meat for sale. At the request of the Coroner he had examined the case of a man who died at Kingsland in 1860, and he found that the man had been eating sausages, and that 64 persons had been made ill through eating sausages purchased of the same person. The sausages were made from a cow that had suffered from pleuro-pneumonia, and to the consumption of that meat the calamity was traceable. Proper inspection would have the effect of deterring people from sending diseased meat to market, and animals would have a chance of being cured.

In answer to Mr. Caird, Dr. Letheby stated that he would recommend chloride of lime, which was inexpensive, as a disinfectant for railway trucks. He would have all diseased meat sent to the public market or slaughter house seized and condemned, and further than that, would make the person sending it responsible.

The Committee then adjourned.

Home Correspondence.

Disbelief of Tile Clay-draining.—I should have thought that after seeing the drains in my stiff plastic clays discharging water after rains during 20 years, we should hear no more the old cry of "drains are of no use in that strong loam," but I find that I am mistaken. Very recently a vestry meeting was held to increase the rating of a farm in my neighbourhood, which had been drained (with company money), and the homestead fitted with barn machinery, mill stones, &c., worked by a fixed steam engine. The vestry meeting, consisting of nine farmers, presided over by a large farmer, who is also an extensive land valuer, increased the rateable value 5*s.* an acre for the machinery and spring draining, but pooh-poohed the stiff clay drainage as being of no use on such soil, and, therefore, although it cost 5*l.* per acre, it escaped rating, very much to the surprise and not a little to the satisfaction of my friend who had executed it, and who was present, and who said to me afterwards, with a significant shrug of the shoulders—"What would the Scotch farmers have said to this had they been present?" I need hardly say that this extraordinary disbelief is an expensive luxury, costing our county of Essex annually a very considerable sum. I must exempt from this charge some whom I know have within the last six years given up their old prejudice, and now find the benefit of their change of opinion. *J. J. Mechi, June,* 1864.

Farm Capital.—Will Mr. Mechi be kind enough to answer the following questions which have suggested themselves to my mind, from a consideration of some articles from the pen of that gentleman, which appeared a short time ago in your valuable paper, recommending farmers to reduce the size of their holdings and to increase their outlay in artificial manures and feeding materials. Take a farm, say 150 acres of land, an average farm situated in any part of the country with which Mr. Mechi is best acquainted. How much of this farm would be grass and how much arable? What would be the rent and what the rates? How many horses would be required to cultivate it upon the four-course system? What stock would the tenant keep? What would be his average corn crops, and what would be his expenses for one year? And what his receipts, including all his sales? Supposing he wished to follow Mr. Mechi's advice, would he cultivate his farm on the same system, or would he adopt a different plan of cropping it, and would he require more or less, or the same number of horses? What amount of cake, corn, &c., would he buy? What amount of farmyard manure would he make, and what amount of artificial manure would he buy? What stock would he keep? What would be his average corn crops? What his total expenses—what his total receipts, and what his profits? I take the liberty of asking these questions, because I am at a loss to know how and where a farmer makes his profit; that he does make a profit, and a tolerably good one, seems clear to me, from the fact that whenever a farm is to be let it is almost always secure to command an advance of rent. *C. F. P.*

The Patent Nitro-Phosphate or Blood Manure Company (Limited).—May I beg the insertion of this letter to say that the fire that occurred at the Company's Works was confined to the vitriol works, part of which only were destroyed. The buildings in which the manures are manufactured remain uninjured, and are in full operation, and no interruption to the Company's business will take place. *C. T. Macadam, Secretary,* 109, *Fenchurch Street, May* 26.

Cattle Melon.—A correspondent inquires where the Cattle Melon seed can be had. I procured some from a seedsman of Southampton, 97 per cent. of which failed, although I took the precaution and care of placing each seed in a pot in a conservatory. Like Peter Pindar's razors, which were made for sale and not to shave, so seeds are often prepared for the like purpose, the seller forgetting to ticket them, "not warranted to grow." *Henry Dixon, Dorward's Hall, Witham, May* 24.

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

MONTHLY COUNCIL: *Wednesday, June* 1, 1864.—Present, Lord Feversham, President, in the chair; the Earl Cathcart, Earl of Powis, Lord Berners, Lord Chesham, Lord Leigh, Lord Tredegar, Hon. H. G. Liddell, M.P.; Hon. A. H. Vernon, Sir J. V. Johnstone, Bart, M.P.; Sir William Miles, Bart., M.P.; Sir M. White Ridley, Bart., M.P.; Sir Watkin W. Wynn, Bart, M.P.; Mr. Amos, Mr. Arkwright, Mr. Raymond Barker, Mr. Barnett, Mr. Bowly, Mr. Bramston, M.P.; Mr. Buller, M.P.; Mr. Cantrell, Colonel Challoner, Mr. Clayden, Mr. Dent, M.P.; Mr. Druce, Mr. Exall, Mr. Brandreth Gibbs, Mr. Hamond, Mr. Fisher Hobbs, Mr. Holland, M.P.; Mr. Hudson, Mr. Humberston, M.P.; Mr. Hutton, Colonel Kingscote, M.P.; Mr. Laurence, Mr. Milward, Mr. Pain, Mr. Randell, Mr. Rigden, Mr. Shuttleworth, Mr. Robert Smith, Mr. Thompson, M.P.; Mr. Torr, Mr. Wallis, Mr. Western, Professor Wilson, Mr. Frere, Professor Simonds, and Dr. Voelcker.

125 New Members were elected.

FINANCE.—Mr. Barnett reported that the Secretary's receipts during the past month had been examined by the Committee and by the Society's Accountant, and were found correct. The balance in the hands of the bankers on the 31st May was 2601*l.* 11*s.* 2*d.*

JOURNAL.—Mr. Thompson, M.P., Chairman, reported that the Judges of Essays had in Class I. awarded the prize of 50*l.* to the paper written by Mr. Henry Evershed, Park Hall, Gosfield, Halstead.

No. 422 is Highly Commended and No. 421 Commended.

In Class II. the prize of 25*l.*, offered by Sir C. Domvile, for the best paper on "Suburban Farms" is awarded to the Essay bearing the motto. "Urbis amatorem Fuscum solvere jubemus."

In Class VII. the prize is awarded to Mr. George Jones.

DISCUSSIONS.—Wednesday, June 8, at 12: Professor Simonds on Rot in Sheep. Wednesday, June 22, at 12: On the System of Farming best adapted to meet the increasing Demand for Live Stock.

AGRICULTURAL IMPLEMENTS.—Colonel Challoner, Chairman, reported that the Committee recommended to the Council that a circular containing the following resolution be sent to each intending exhibitor of ploughs at Newcastle, and that the standard of excellence in ploughs should be thus defined:—"That the plough should cut the sole of the furrow perfectly flat, and leave the land side clean and true; should lay the furrow slices with uniformity, with perpendicular cut of the land side, leaving a roomy horse walk; that it should have an efficient skim-coulter, be light in draught, simple, strong, and economical in construction." Whilst stating for the information of exhibitors the most approved standard of excellence in ploughing, it will still be open to the Judges to award a portion of the money to trials of ploughs intended to cut furrow-slices of different forms or to lay them in various positions. This report was adopted.

CHEMICAL.—Mr. Dent, M.P., reported that Professor Voelcker was continuing his manurial experiments on Clover and Grass seeds, and upon soils of different descriptions. A new and cheap source of potash has lately been discovered in Germany; the crude material contains about 20 per cent. of sulphate of potash, and could be supplied at a very low price. A sample of Angamas guano was shown to the Committee, containing from 25 to 28 per cent. of ammonia, average Peruvian guano containing 16 to 17 per cent. The analysis of a material introduced by M. Bizant for converting straw into nutritious food under the term Tanned Straw, was placed before the Committee by Professor Voelcker. It contained the following ingredients:—

Moisture	14.25
Oil	8.68
Albuminous compounds	15.51
Gum, mucilage, &c.	43.20
Woolly fibre	11.32
Mineral matter	7.00
	100.00

The price of this tanning material was rather above 1*s.* per lb.

GENERAL NEWCASTLE COMMITTEE.—The Earl of Powis reported the recommendation of the Committee, that in addition to the usual force of Metropolitan police, four additional constables be applied for to act as a night watch in the showyard; that two grooms be allowed to the Stewards of Stock in lieu of an Assistant-Steward; that there should be placards on the ends of the sheds, painted on tarpauling, instead of those hitherto used, which were of paper.

Mr. Fisher Hobbs having informed the Council that a number of agriculturists from the various "Concours" in France would probably attend the meeting at Newcastle, moved that tickets for distinguished foreigners be issued under the direction of the President, as at the Battersea meeting, which was seconded by the Earl of Powis, and carried.

On the motion of Colonel Challoner, seconded by Lord Chesham, Mr. W. Burgess (firm of Burgess & Key), 95, Newgate Street, E.C., was elected a member of Council, in the room of Major-General the Hon. A. N. Hood, elected a Vice-President. A committee consisting of the Earl of Powis, Lord Chesham, Lord Portman, the Hon. H. G. Liddell, M.P., Sir William Miles, Bart., M.P., Mr. Barnett, Mr. Dent, M.P., Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Humberston, M.P., Mr. Milward, Mr. Pain, Mr. Randell, and Mr. Torr were appointed to recommend the names of Judges of Live Stock to a special Council, which would assemble on the 15th inst.

GLOUCESTERSHIRE AGRICULTURAL.—The third year this Society has become migratory it has chosen the queen of watering places, Cheltenham, as the place to hold its meeting this year, and the show is fixed for the 22d and 23d of June.

The Cheltenham people having given every encouragement to ensure its success, the committee have increased the prizes offered to a considerable extent; and this, together with the facts that a grand horticultural show is to be held at the same time, and adjoining the cattle yard, and a large dog show in close proximity, leaves little doubt that this meeting will be the most successful the Society has ever had.

The entries are, we hear, well filled. Lord Ellenborough, of Southam, whose estate lies near, has consented to be the chairman.

THE INTERNATIONAL DOG SHOW.—There has during the past week been exhibited at the Agricultural Hall, Islington, one of the most perfectly illustrative collections of the various breeds of Dogs that has ever hitherto been seen. And, well arranged, with ample space for easy access in this noble hall, the exhibition has been enjoyed by many thousands of spectators. The various classes of Sporting dogs have been arranged on the ground floor, and the very numerous classes and various breeds of Toy dogs have been exhibited in the galleries.

The former division has included large and excellent classes of Pointers, a good show of Setters, especially of the class of Irish Setters, a fair show of Greyhounds, a capital class of Retrievers, a noble collection of Bloodhounds, some excellent specimens of Deerhounds and of Mastiffs, a very uneven and untrue class of Mount St. Bernards, and a very imperfect though tolerably numerous class of Foreign hounds. The other hounds have been in great force; there was a fine collection of Clumber Spaniels, and there were a few entries from packs of Foxhounds and Harriers. The Newfoundland dogs were a fair class. The Prince of Wales's comparatively small black dog in this class (presented to him in the island) corrects the idea prevalent of the Newfoundland as a great black and white dog.

The whole collection has exceeded above 1000 entries. H.R.H. the Prince of Wales has been among the exhibitors, prize-takers, and spectators. The imperfect Foreign classes by which the International character of the Show is claimed, require for the future to be fostered by greater liberality in the Prize Lists.

Calendar of Operations.

JUNE.

GLOUCESTERSHIRE.—Except the occasional thunder storms which fell during last week the weather has continued uninterruptedly dry. The effect of this lengthened time of dry weather is that all field operations are particularly forward. Nearly all the spring planted Barley, Oats, and Beans are growing fast, and appear very promising, though we fancy we can observe in some places indications of a check in its growth for the lack of moisture. The Wheat plant cannot as a whole be spoken so favourably of, for whilst a good deal has sustained no injury, or has partially recovered the effects of the severe weather earlier in the spring, there is a large quantity, more especially upon the exposed parts of the Cotswolds, looking very thin and weakly; indeed so much is this the case that many fields have been ploughed up and planted with other crops, and complaints are made that even now some fields are losing stock. Owing to the dry weather last year at the time the artificial Grasses were planted, very little of the plant germinated, and the unusual dryness of the present spring has prevented the little left progressing, so that the chance of a heavy crop of seed hay is entirely hopeless. We never remember to have seen so great a failure as the seed crop now exhibits. Grass is more promising, yet not likely without an immediate fall of rain to be anything approaching to an average crop. The preparation of the land for the root crop is in a very forward state. Mangel Wurzel planted early is up and looking well. Though a good deal is yet in the ground, and will have to wait for rain before it can germinate, Swede planting is progressing. The successful exhibitor of Barley for the Messrs. Blizard's 25 guinea cup, is Mr. Henry Hone, of Stoke Orchard, near Cheltenham, who won the prize with an exceedingly fine sample. Notwithstanding a shortness of keep, live stock generally appear to be doing well. As an exceptional case, and as a caution to those who may have land growing "meadow saffron," we mention an unfortunate fact of a farmer near Stroud, who lost this week six yearling beasts, and others not expected to recover, from eating this poisonous plant. Seldom have the fruit trees presented so gorgeous an appearance as they have this season by their exeessive inflorescence. Grain of all sorts is selling very low, Wheat being nearly unsaleable. Live stock seems scarce, and sells well, but should the present dry weather continue we may expect the shortness of food will affect prices adversely. *J. M. R.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
Friday ..	May 27	Inches. 30.07	60°	54°	N.	2	3	58°	34°	70°	29°	..
Saturday ..	28	30.04	57	53	N.	0	6	62	46	79	41	..
Sunday ..	29	29.85	57	53	N.W.	2	10	61	44	80	38	..
Monday ..	30	29.98	54	50	S.W.	1	9	58	36	70	29	..
Tuesday ..	31	29.74	55	52	S.W.	1	10	58	43	74	37	..
Wednesday	June 1	29.79	54	51	S.W.	0	8	55	43	67	43	0.31
Thursday ..	2	29.75	58	54	N.E.	1	8	60	42	80	38	..

Notices to Correspondents.

BLACKER ON SMALL FARMS: *T F.* It was published in 1837 by W. Curry, jun., Sackville Street, Dublin.

CATTLE MELON: *A Joint Subscriber.* Many of the seeds sent are dead. You will see that another correspondent joins with you in your complaint.

PIG FEEDING: *Amicus* advises "Agricola," before risking his fortune in the way he is thinking of, to get up the very serious subject of Pig disease and death. Who, for example, would wish to be a Pig Farmer in Germany, just now? Whatever this gentleman does, he had better feel his way first. If one has to lose, it is so much better to lose 1000*l.* than 5000*l.* Better to burn one's fingers than to be utterly consumed.

WELSH EWES: *A Regular Reader* says—Can any of your correspondents oblige me by informing me of the smallest proportion which he has ever known of lambs born to a flock of ewes on a mountain farm (say in North Wales), after such a winter, for example, as the last. Thus, what is the lowest number that would be expected to be born and to be reared out of a flock of 200 ewes?

NEW SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.

THE HYDROPULT is invaluable for use in the GARDEN for WATERING BEDS, SPRINKLING PLANTS, DROWNING OUT INSECTS, CLEANSING TREES FROM SMUTS, DRESSING with LIQUID MANURE, ETC. ETC.

THE HYDROPULT is desirable in every HOUSEHOLD for WASHING WINDOWS, WETTING SIDEWALKS, SPRINKLING STREETS, WASHING CARRIAGES, EMPTYING CISTERNS, FILLING BARRELS, A SPRAY BATH, ETC. ETC.

THE HYDROPULT,

PRICE: WITH BRASS CYLINDERS AND MALLEABLE IRON STIRRUP, JAPANNED IN OAK COLOUR, 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanised Wire Strainer, Rose, and Small Jet.
Complete as above, with Copper Stirrup, TWO GUINEAS.

Weighs but 8 lb.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.
It will draw water horizontally, if necessary, through 300 feet of Suction Hose, and force it through Delivery Hose, to an altitude of 100 feet.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

In proof of the real utility and efficiency of the HYDROPULT as a GARDEN IMPLEMENT, I beg to call the attention of the public to the following unsolicited Editorials from gentlemen, whose testimony must have weight with the readers of the *Gardeners' Chronicle*:—

EDITORIAL, *written by* ROBERT HOGG, LL.D., F.L.S.

THE HYDROPULT.—The great secret of successful indoor gardening consists in the free and judicious use of the syringe. A greenhouse or conservatory that does not enjoy this luxury becomes a miserable lazar house of vegetable incurables. Vermin and filth hold unbounded sway, and people become disgusted with their own want of success. Well do we recollect the former days of plant culture, the days of "collections," when the use of the syringe was yet limited or unknown. What a time for red spider, scale, and greenfly! What fumigations and consumption of tobacco and tobacco paper, washings with tobacco water, and all sort of remedies were resorted to! We regard the introduction of the free use of the syringe as one of the events in modern gardening. To this is due the success of orchard house management, Vine management, and Plant management, but the old syringe with its slow suck and squirt, is now as much out of date in modern gardening as an old stage waggon in modern locomotion. Many are the improvements and complications of the old simple syringe. We have tried several of them, but for ease in working and efficiency in result, we have not yet met with anything to equal the Hydropult, sent us by Mr. BUTTON. It is powerful in operation, and so easy and comfortable to work, that one never gets fatigued. With such an instrument plants may be kept in perfect health, and quite free from insects and dirt. We first tried it on a few Geraniums in our conservat[illegible], which were smothered with greenfly during our temporary absence of ten days, but on our return a stout discharge from the Hydropult sent them clean off across some unknown bourne, whence they have never yet returned.

EDITORIAL, *written by the* REV. HENRY H. DOMBRAIN, A.B.

THE HYDROPULT.—When we formerly noticed this instrument, we did so from merely seeing it at the Proprietor's; since then we have had an opportunity of testing it personally, and can bear testimony to the excellence of the invention. The force with which it throws a stream of water is almost incredible; while for syringing a greenhouse, a gentle shower, as fine as that from a hand syringe, with considerably more effect, can be easily given. We have a gardener, quite of the old-fashioned school, who does not generally fall in love with new-fangled notions, but he is perfectly enchanted with the saving of labour and time that the Hydropult will be to him.

EDITORIAL, *written by* SHIRLEY HIBBERD, ESQ., F.R.H.S.

THE HYDROPULT.—This is an invention introduced in a most spirited manner by Mr. C. P. BUTTON. It is at once a fire engine and a garden engine, is always ready for use at a moment's notice, is neat and portable, weighing only 8 lbs., and can be worked by a boy of moderate strength for some hours in succession without fatigue, the mechanical power employed being economised by combining the action of the hand and the resistance to the foot, between which the instrument is placed and used, as a double action pump. From the sole to the handle the Hydropult measures 24 inches. The two brass cylinders measure 12 inches in length, and 3½ inches in breadth. At the top of these cylinders India rubber tubing is attached, on one side to feed, on the other to discharge the water. It will perhaps surprise the reader to be told that this little contrivance, which is pretty as a toy, and can be carried under the arm as easily as a trumpet, will throw from seven to eight gallons of water per minute a distance of 50 feet. But it will do it, as we know from having tried it, finding the experiment an agreeable exercise, and of special service in washing down a stuccoed wall, which it accomplished quite as well as if we had sent for the parish engine. Gardeners will not need to be told the value of a portable force pump of this simple kind. It can be used to produce a powerful stream to extinguish a fire, or a gentle shower to syringe a whole houseful of plants, without the necessity of moving a single step from the position most convenient for a supply of water. Wherever a pump or syringe is needed, the Hydropult can be brought into use, to remove water from a cellar or a boat, to cleanse a cistern, wash a pavement, or drench the foliage of trees loaded with soot, or annihilate at one fell swoop the whole insect population of a plantation of Roses. But we will not enlarge upon its merits, they are obvious, and having a Hydropult in use we can say that it will soon pay for its cost in a garden, besides being always at hand in case of an emergency of any kind which may require an immediate removal or discharge of water.

THE GREENHOUSE and CONSERVATORY HYDROPULT.

A NEW AND BEAUTIFUL IMPLEMENT,

Weighing scarcely 3 lbs.,

AND SPECIALLY ADAPTED FOR USE IN THE GREENHOUSE AND CONSERVATORY.

Price 30s.,

Complete with Brass Cylinders and Copper Stirrup, 2½ feet Suction and 3 feet Delivery Hose, Strainer, Rose, Jet, and Fan.

This NEW IMPLEMENT must necessarily supersede SYRINGES and other devices of the kind, for it will be found much more effective in its operation.

A LADY CAN WORK IT FOR HOURS WITHOUT FATIGUE

HYDROPULT SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.
WAREHOUSE and OFFICES, 27, LEADENHALL STREET, LONDON, E.C.
CHARLES POMEROY BUTTON, PROPRIETOR.

NEW GRAPE, ROYAL VINEYARD.

TO BE SENT OUT IN SEPTEMBER NEXT.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Feels great pleasure in being able to introduce this important acquisition. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and **the best Grape that has been raised of late years.**

B. S. W., to meet an extensive demand, has prepared a large Stock, which will be in excellent condition, and ready for distribution in September. Early orders are respectfully solicited. A List of those who have favoured him with orders will be published shortly.

PRICES:

Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

Dr. HOGG's *Report on the Royal Vineyard Grape:*

"Bunches hard and well set, sometimes long and tapering, and sometimes short ovate. Berries large and roundish ovate, skin white and somewhat transparent, showing the texture of the flesh through it, remarkably thin, and adhering closely to the flesh; so thin is it, that the whole berry may be eaten without any inconvenience being caused by the skin. Flesh firm and crackling, with a fine Sweet-water flavour. It is a fine looking Grape, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society."

For the opinions of the Horticultural Press, see *Gardeners' Chronicle*, April 9.

A correct COLOURED ILLUSTRATION by ANDREWS will be sent in exchange for 12 Postage Stamps.

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E. G. HENDERSON & SON

Will select choice varieties from the following sections, at 10*s.* 6*d.* for 50, and 21*s.* for 100 plants. In these selections many fine varieties will be included. The plants are strong and of extra quality. Purchasers will please to specify such sections as may not be required, and others particularly desired.

ANTIRRHINUM	GERANIUM	PANSIES
BOUVARDIA	HELIOTROPE	PENTSTEMON
CALCEOLARIA	HOLLYHOCK	PETUNIA
CHRYSANTHEMUM	LANTANA	SALVIA
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With Coloured-leaved Plants.

Descriptive Spring Catalogue forwarded on application.

WELLINGTON NURSERY, ST. JOHN'S WOOD, LONDON, N.W.

THE BRISTOL MEETING

OF THE

BATH AND WEST OF ENGLAND SOCIETY.

SUTTON & SONS,

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Respectfully invite the attention of their friends and the public generally to their MAGNIFICENT STAND in the SHOW YARD, including a Collection of 1000 distinct sorts of SEEDS in Glass Cases, Labelled with their Botanical and Popular Names. A large Collection of SEEDS for Agricultural purposes. Specimens of 250 sorts of GRASSES for Permanent Pasture and other purposes, all grown by SUTTON & SONS in their grounds at Reading. A Collection of AGRICULTURAL ROOTS, as also a large number of Models from Growing Specimens of the same, including Sutton's Champion Swedes, Sutton's improved varieties of Mangel Wurzel, Sutton's Imperial Green Globe and other Turnips, &c.

Orders will be received at the Stand for the celebrated Champion Swede and other Turnips.

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PRIZE MEDAL FOR SEEDS AND CEREALS.

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MIXTURES of GRASS SEEDS for Permanent Pasture, suitable to the various soils; ENGLISH and DUTCH CLOVERS, ARTIFICIAL GRASSES, LAWN GRASS, RYE-GRASSES, &c. Circulars (Third Edition) free by Post.

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VIOLA DEVONIENSIS,

A NEW PERPETUAL BLOOMING SWEET-SCENTED VIOLET.

MESSRS. JAMES SCLATER & CO.,

DEVON NURSERIES, near EXETER,

Are now prepared to offer this superb VIOLET, particularly recommending it to those who cultivate Violet flowers for sale, as the largest flowered Violet known. Very hardy and robust, blooming profusely and perpetually from September to April; the flowers extra large; colour of the darkest blue, and very sweet scented; the flower stem generally over 6 inches in length, and stiff; the foliage large and thick, bunching splendidly.

A Circular of TESTIMONIALS to be had on application, one of which is as follows:—

From Mr. G. B. CARLISLE, *General Fruiterer, St. Martin's Street, Exeter.*

"For the past three years I have received from September to April a constant supply of bunches of those beautiful Violets. The flowers are large, of the darkest blue, very sweet scented, the stems stout and long. The bunches of this Violet sell in preference to any other sort, and I have sent them to the furthest parts of the Kingdom. (Signed) GEORGE BYRON CARLISLE."

Strong Plants now sending out at 12s. per dozen, or 60s. per 100.

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Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

Per pkt.—	*s.*	*d.*		*s.*	*d.*	Per pkt.—	*s.*	*d.*		*s.*	*d.*
PRIMULA ..	2	0	and	3	6	INTERMEDIATE STOCK.. ..	0	6	and	1	0
CINERARIA ..	1	6	and	2	6	BROMPTON do.	0	6	and	1	0
CALCEOLARIA	1	6	and	2	6						

The above Seeds are saved with great care, and can be warranted to give satisfaction.

Paradise and Victoria Nurseries, Holloway, London, N.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE post free on application.

Paradise and Victoria Nurseries, Holloway, London, N.

To the Trade.—Deutzia crenata fl. pl.

THOS. CRIPPS, NURSERYMAN, Tunbridge Wells, will be happy to supply plants of the above new and handsome hardy double pink flowering Japanese Shrub, well established in pots, 9*s.* per doz., or 50*s.* per 100. LASTRÆA STANDISHII, new and beautiful hardy Japanese Fern, 5*s.* each. COLEUS MARMORATUS, 2*s.* 6*d.* each. LONICERA AUREO-RETICULATA, fine strong last year's plants, in pots, 2 to 3½ ft., 6*s.* per doz., or 42*s.* per 100.

Seeds Worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each.

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J. DOBSON & SONS, Seedsmen, Isleworth, W.

Indian Azaleas.

WILLIAM BARNES has the largest and most healthy stock of the above favourite plants to offer for sale, comprising the finest specimens, suitable for exhibition in this or any other country, as well as many thousands of smaller dimensions, from three-quarter and half specimens down to small plants, all properly shaped to form symmetrical specimens, and finely set with bloom. Any person forming a collection or increasing their present one will do well to visit this Nursery, where every variety up to the present date worth cultivating will be found, the whole grafted upon the stock that W. B. has proved so admirably adapted to them, after many years close observation.

PRICED LIST will be forwarded upon application post free.

Camden Nursery, Camberwell, S.—June 11.

CARTER'S GARDENER'S VADE-MECUM.

WHEELER'S LITTLE BOOK on SEEDS.

The Gardeners' Chronicle.

SATURDAY, JUNE 11, 1864.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY,	JUNE	14	Royal Horticultural (Floral Committee), at South Kensington .. .. Noon
			(Election of Fellows) at do. .. .. 3 P.M.
			(Lecture on Pelargoniums, by Mr. Wilson Saunders) at do. .. .. 3 P.M.
THURSDAY,	—	16	Linnean .. .. 8 P.M.

FOUR hundred blossoms of CATTLEYA MOSSIÆ at one view! This is a sight truly worth a journey from the Land's End to witness, and it is a sight that might have been witnessed a few days since, if it may not even now, in Mr. WARNER'S Orchid House at Broomfield, near Chelmsford. And such blossoms too! Not puny things with washed-out colours, or pallid from sweltering in excessive heat, but located in a ventilated house quite enjoyable, and presenting richly-marked colours in marvellous variety, and in all the vigour of robust health—the individual flowers measuring some 7 or 8 inches across, and the petals, in some cases, being as much as 3 inches in breadth. Mr. WARNER has certainly learnt the secret of managing Cattleya Mossiæ to perfection; and consequently such a picture as his show-house presented at the time of our visit, is not, we venture to say, to be paralleled in England! or Europe!! or the world!!!

No one who has not seen a large display of these charming Cattleyas in blossom at the same place and at the same moment, can have any idea of the endless variety which occurs amongst them. Scarcely two plants are alike, and some are most remarkably distinct from each other, so that in future it will not be enough for the Orchidophilist to place Cattleya Mossiæ in his collection: he must make up his mind how many of its forms he will admit, and then set about seeking out those which best suit his fancy.

Cattleya Mossiæ is distinguished amongst growers by its summer-flowering habit, and by the rich purple or violet-rose veining of its orange-stained lip. The veining differs in intensity of colouring and in the amount of space which it occupies in the several varieties, and the orange stain takes on more of yellow or buff as it is brighter or duller in tone, and is confined within the tubular portion of the base of the lip, or brought forward to the front edge at the part where the lip expands, but these purple veins and these orange stains are always to be found. It is chiefly in the modifications which these two features undergo that the differences between the several varieties occur, though the varied shades of colour, from pure white to deep rosy blush, which the sepals and

petals assume, yield other marks of distinction. So great indeed is the variety which exists, that for the sake of discriminating those most worthy of cultivation it has been found desirable to distinguish them by name; and the following are some of those with which we made acquaintance during an hour's saunter through the houses at Broomfield a few days since. It will be remembered that they are all forms of Cattleya Mossiæ, differing in size, in colour, and in marking:—

venosa: a very handsome variety, distinct-looking from there being very little orange present, and from the markings of deep violet rose being evenly distributed; sepals and petals deep blush, the petals becoming paler towards the margin; lip marked with lines of violet rose, beautifully fringed, extending nearly to the margin, the base very slightly stained with orange.

aureo-marginata: large-flowered; sepals and petals deep blush; lip with deep violet rose centre, and yellow base, the yellow stain continued so as to form a broad margin to the upper expanded portion of the lip.

Napoleonis: a very telling variety from its roseate tinge and the erect habit of its full-sized flowers; sepals and petals deep blush; lip large, mottled purple in front, and deep orange at the base, with a broad margin of pale blush.

purpurata: large-flowered; sepals and petals deep blush; lip large of a very dense and nearly uniform violet rose, orange at the base and having a pale frill or margin.

Blakei: sepals and petals deep blush, the latter frilled towards the points; lip orange-buff at the base, and mottled violet rose in front, the markings passing out nearly to the edge, so that there is no sharply defined pale frill.

superba: dark blush sepals and petals, the latter narrow and very slightly frilled; lip large, prominently stained with deep orange at the base, the front part brighter, and the centre veined and somewhat mottled with violet rose, leaving a broadish irregular pale margin.

striata: a curiously marked sort; sepals and petals deep blush, with paler veins, producing a motley striated appearance; lip motley rose striped throughout with dark purple rose, the margin paler and venosely striated, the orange tint confined to the base.

Helenæ: remarkable for its high-coloured flowers; sepals and petals deep blush mottled with dark purple rose; the lip a rich motley purple, orange at the base, and parti-coloured at the margin.

elegans: rather small in size, but lively and effective in colouring; sepals and petals deep blush; the lip small with bright orange-yellow base, and the central portion marked sparingly with veins of violet rose surrounded by a broad pale edge.

flammea: rather small but richly coloured, the petals and lateral sepals less spreading than in other forms; sepals and petals deep blush, the latter frilled towards the tip; lip small, very deep rich orange at the opening, dense violet rose in the centre, the orange intermingling therewith and producing a fiery crimson, the purple broken up with white in front, and irregularly margined with blush.

complanata: a large-flowered variety, but remarkable for the almost total absence of frilliness on the petals, and especially on the lip; sepals and petals rather deep blush; lip broad and spread out at the apex, a good deal stained with orange at the base, but faintly mottled and veined with purple over the centre, leaving a broad pale blush-tinted edge.

Victoriæ: a very large and beautiful variety, the sepals and petals large, of a blush tint, the lip deep purple rose, with bold orange marking at the base, and narrow even margin of blush.

conspicua: large-flowered; sepals and petals blush; lip richly marked with violet-rose, dashed with orange at the base, and having an irregular broadish pallid border; it blooms in great profusion.

splendens: large flowered; sepals and petals blush; lip rich full purple rose with orange base, the margins blush, and very much frilled.

Lawrenceanæ: large flowered with erect stalks; sepals and petals blush, the petals very broad and considerably frilled; lip large, slightly stained with orange in the interior, rich deep violet rose slightly veined and mottled in front, with a narrowish and nearly even frill of blush. It is in the way of *splendens*, but rather smaller in the lip, with the throat more expanded.

grandiflora: a large-flowered variety; sepals and petals blush, the petals less frilled than in some forms, the lip a deep rich purple rose, slightly stained at the base with orange, and having a narrow even edge of pale blush.

aurea: a small-flowered variety, with the sepals and petals blush, less spreading than in most other forms; lip small, strongly marked with buff orange at the base extending forward to the front edge, and having broken violet-rose lines in the centre, surrounded by a very broad pale margin which is almost white inwards, and tinged with blush on the extreme edge.

aurea grandiflora: sepals and petals blush; lip marked with a bar and a few broken lines of violet rose, and very much stained with orange at the base, and towards the upper part of the margin; a large-flowered form.

Rothschildiana: one of the larger-flowered forms; sepals and petals blush; lip very bright orange at the base, with rosy-purple lines and splashes over the centre and a broad irregular white margin; the petals are finely denticulate.

grandis: the largest of all the forms in respect to the size of its lip; sepals and petals pale blush; lip mottled violet rose, with an irregular blush-coloured edge, the base stained with buff orange.

marmorata: one of the finest light-coloured sorts and one of the largest flowered; sepals and petals pale blush, the latter very broad; lip large light rose broken up into marbled markings covering the whole surface, except a narrow fringe at the edge; it is a good deal stained with deep orange at the base, and the margin is not only strongly frilled but conspicuously fringe-toothed.

fimbriata: one of the largest-flowered of the whole series, and prettily though not heavily marked; sepals and petals rather pale blush, the latter broad and a good deal frilled throughout: lip very much frilled, marked with a bright orange stain at the base, and in front decorated with broken veins of violet rose on a white ground, the extreme edge being blush; the lip is thus distinctly edged with blush.

Mooreana: a beautiful variety, well marked by the clearly defined narrow white border of its lip; sepals and petals pale blush; lip dense violet rose, moderately stained with orange at the base, and having a narrow even frill of white.

Williamsii: a large-flowered variety; sepals and petals blush-white; lip finely mottled with rose, stained with orange at the base, and having a broad pale margin; the flowers are amongst the palest in the series, and very beautiful.

Marianæ: small-flowered, but very distinct and chaste; sepals and petals white; lip with a bright yellow stain at the base, prettily mottled with violet rose in the centre, and broadly and evenly margined with white.

Cattleya Wageneri, a small-flowered sort, with the sepals and petals white, and the lip also white with the yellow markings only, and no purple, quite agrees with C. Mossiæ in its season of flowering, and in everything but wanting the purple markings of the lip.

If one's attention could not but be arrested by the magnificence of the spectacle to which we have referred, and it would have been impossible to see it without being struck with admiration, if not with astonishment, there was an equal treat in store for the horticulturist in the observation of the remarkable health, the happy-looking condition, so to speak, of the plants throughout the collection. No sign of languishing, but robust growth, pushing, progressing, or maturing everywhere. One particular specimen from amongst the Cattleyas, that referred to under the name of conspicua, was a mass upwards of 2 feet across, and bore 30 of its noble flowers. Another was a Dendrobium chrysotoxum with 18 spikes—a mass of rich golden yellow; and a capitally bloomed and healthy-looking D. Devonianum bore numbers of its softly tinted and most exquisite blossoms. There were also intermixed such things as Lælia purpurata, Schilleriana, and grandis; Aërides Fieldingii; Saccolabium præmorsum; Dendrobium clavatum; Vanda suavis, and tricolor; Chysis bractescens; Anguloa Ruckeri, Odontoglossum citrosmum, and some graceful habited Oncidiums, whose colours formed a happy contrast to the rest.

The houses are all small, low, and span-roofed, never overheated, and heated by means of a more than sufficient power of boiler and pipe surface, and hence heated beneficially both for the plants and for the pocket. Mr. WARNER'S prescription for preventing ill-health amongst his plants, is FRESH WARM AIR: NO STAGNANT AIR OR MOISTURE, and the plants bear testimony that he is a good physician to them.

In one division were gathered what Mr. WARNER more especially calls his "cool Vinery Orchids." This is a low span-roofed house like the rest, covered with Vines bearing a capital crop of Grapes, and with the leaves so trained as just to screen the plants without the use of blinds. It has a fixed roof with a few side ventilators; and the rule adopted as we were told is—40° MINIMUM IN WINTER, AND IN SUMMER AS MUCH NATURAL HEAT AS THE SEASON AFFORDS, with ventilation. In this house Lycaste Skinneri was revelling, its leaves a yard long; Odontoglots had formed pseudo-bulbs half as large again as those of imported plants; Arpophyllums were in sturdy vigour; and Pleiones, which had been flowering some time since, now presented a perfect picture of healthy foliage. Wonderful! most wonderful!!

A PEAR tree was shown to us a few days since in a very curious condition. The ground beneath it was strewed with dead leaves of a very dark brown, inclining to black; almost all those on the tree were more or less in the same condition, added to which the fruit was either cracked, or its surface rough and disfigured.

The cause of all this at first seemed very obscure, but on a closer examination we found that it arose undoubtedly from a very minute Fungus, which was described some years since in the Transactions of the Horticultural Society of London under the name of Ascomyces bullatus.

A few days before some blistered Peach leaves were communicated, which exhibited an unmistakeable growth of Ascomyces deformans, and we have since seen several Peach trees attacked in the same manner. Most cases of Peach blister, which is in general considered by gardeners to be the consequence of cold winds, are referable to this cause, where they are not clearly produced by plant lice; and as the affection is no less injurious to the Peach tree, whose young branches are often as much affected as the leaves, than it is to the Pear tree, it is very well to caution our readers against both.

In the Peach tree the malady is plain enough from the first day of its appearance, before the Fungus is developed; but in the Pear tree it is not obvious at first, though the Fungus is matured much earlier. If, however, yellowish blisters appear on the upper surface of the Pear leaves, and on turning the leaf over the cavity beneath is found to be lined with a dead white bloom, it may safely be concluded that the Ascomyces is present. A precisely similar affection occurs on Walnut leaves, though not to such an extent as in general to prove injurious to the tree. It is of great importance the moment the disease appears to pick off every infected leaf, and to burn the whole, that the gathered leaves may not prove a fresh source of mischief.

While hunting for other specimens, our attention was called to a Poire d'Aremberg which looked sickly, and both on the young fruit and the leaves we found black or olive patches of incipient Cladosporium dendriticum, which we fear will prove destructive to our hopes of fruit, which was promising enough a few days since. We fear that where the Cladosporium attacks trees, it in general prevails to such an extent as to make the removal of the diseased leaves impracticable, and unfortunately we know of no chemical agent that will reach a parasite which makes its way into the air from the under surface of the cuticle.

Our misfortunes, however, were not over, for our attention was then called to a Catillac heavily laden with fruit, but which did not look in a satisfactory condition. Here the leaves were decaying at the tips or sides, and a microscopical examination showed that we had no Fungus to deal with, but a hopeless case of Chlorosis, arising probably from something which did not agree with the plant. This called to mind "J. P.'s" Melon leaves, of which we gave a report May 28, 1864; and we take this opportunity of informing our correspondent that we have just seen a frame of the variety known as Princess Alexandra, which, from a state of extreme apparent health, is just assuming the chlorotic condition, which was remarkable in his case. The cultivation was irreproachable, and we must refer it to one of those vexations which are so common to the cultivator, and of which the most skilful cannot always discover the cause, much less the remedy.

While on the subject of disease, it may be interesting to some of our readers to notice the fact that a quantity of double German Wallflowers, especially those with dark flowers, have gone off in a very curious way. Early in the year we lost several from the attack of a species of mould belonging to the genus Polyactis: but now, when the spikes are about half developed, all the flowers suddenly perish from the little white Peronospora parasitica, which is so common on the leaves of Cruciferæ. We have seen a species of the genus before on the petals of a Scabious, but this wholesale destruction of flowers by an allied parasite is entirely new to us. The little snow-white threads with their scattered spores sparkle on the dark ground, and are a very pretty object under a powerful lens. *M. J. B.*

THE Azaleas which have been exhibited at our Metropolitan Flower Shows of late years, and this

year in particular, are certainly most extraordinary productions. Their size and form tell us that an immense amount of labour has been expended in their training as well as in their general culture, and we are compelled to acknowledge that the results which have been obtained show a very great amount of horticultural skill. It is not every gardener who could produce such marvellous specimens as those which we saw exhibited at Regent's Park and at South Kensington a few days ago. This, however, is all the praise we can give. We think that the skill displayed might be better directed, and that the results are not worthy of the labour and expense required to produce them.

The form in which these plants are trained is very stiff and unnatural. It has not inaptly been compared to a huge extinguisher, or less gallantly to a fashionable article of a lady's dress. Indeed we happened to hear one sarcastic individual remark that each plant ought to be crowned with a fashionable bonnet, so that the "make up" might be complete. To be serious, we almost wonder that our great societies should encourage such a system by giving prizes for these plants, or that gardeners should waste their time in producing them.

In addition to the ugly form which we have just condemned, it would appear to be part of the system to hide the foliage. The flowers are spread out and tied all over the surface so that scarcely a green leaf is allowed to be visible. Surely this is wrong. According to our ideas foliage here and there contributes as much, or nearly as much, to our enjoyment of the beauty of a plant as its flowers; and when both are combined, as Nature intends them to be, the one heightens the effect produced by the other. By all means, then, let us have an opportunity of seeing the leaves of our plants as well as their blossoms.

Our English visitors to the great Brussels exhibition in April last, some of whom were deputed by the Royal Horticultural Society, had an opportunity of seeing that a show may be made interesting and effective without such huge specimens of scaffolding as those we have just been describing. It is to be hoped, therefore, that means will be taken to encourage and develope the skill of our cultivators in a new and more healthy direction. By all means let us have, at these shows, plants in the highest state of cultivation, large as well as small, but more natural in form, and with their leaves developed and visible to the eye as well as their flowers. The public, that great body that "pays" and supports these horticultural exhibitions, evidently takes a view of the matter somewhat similar to our own. At first, and for a time or two, it may be astonished at those great examples of horticultural skill—those "pillars of light," and "mountains of snow," as they are called in the "Proceedings of the Royal Horticultural Society"—but the surprise soon wears off, and the gem ceases to attract or to please. Any attentive observer may see that this is now the case at our London flower shows. In our most crowded exhibitions there is generally plenty of room in front of these large "specimens," which people have seen so often. If one happens to see a crowd a-head, he may be almost certain the attraction is Roses, Orchids, Geraniums, or something strange or new. And that people are not entirely led away by gorgeous colours and huge size, is clearly shown by the great interest which was taken in the little collection of Alpine plants which had been sent up by Messrs. Backhouse, of York. There was a crowd of delighted admirers in front of these plants all the afternoon. It was a charming little group, and we hope it will not be the last of its kind which will be sent in to give interest and variety to our flower shows.

— The Seedling Garden Flowers exhibited on the 1st instant at the South Kensington Show, belonged chiefly to three or four groups—those of Azaleas, Rhododendrons, Petunias, and Pelargoniums.

Amongst Indian Azaleas there was from Mr. Veitch a very fine variety, called Vesuvius, which is a good deal in the style of Mr. Veitch's superb seedling Stella, that is to say, one of those bright orange scarlets in which the upper segment is suffused with a distinct violet tinge. Flowers of this character are novel and very beautiful, and the present was a fine and no doubt a first-class variety, though we somewhat hesitate to adopt an opinion which we heard expressed, namely, that it was probably the best of its class, for that would place it above Stella, which we are hardly prepared to do. It, however, well deserved the First-class Certificate which it gained.

Then, amongst Hardy Rhododendrons, Mr. Young had one called Princess of Wales, which had some merit, as well as novelty of character. It was a light-centred flower with a border of pale purple and spotted, a new style amongst the pale-centred class.

Amongst the Petunias one called striata purpurea, shown by Mr. Holland, who is well-known for his capital strain of this flower, was a very delicate variety of considerable promise, but required more growth. It had a rosy ground-colour, and was marked by broad bands of white.

The majority of the subjects shown were, however, of the Pelargonium race, and of these, amongst what are called the "show" varieties, was one of great beauty, and of a most distinct character, called John Hoyle. The shape of this flower, and the texture and substance of its petals, were in every respect unexceptionable; the colour was a rosy scarlet shaded and deeply veined with maroon crimson, the upper petals being entirely of a deep rich maroon except a narrow sharp edge of carmine. This is undoubtedly, so far, the crack flower of the year, and far outdistances all the rest, richly meriting the First-class Certificate which it received. The other most noticeable sorts of this class were British Sailor, a fine deep purplish rose with white centre, in the way of Diadem, but darker; Profusion, a well-formed soft rosy carmine with dark blotch, white centre, and pale rose lower petals; Sunny Memories, a smooth orange scarlet, with dark maroon blotch, pale lower petals, and white throat; and Exhibitor, a deep rose with dark blotch, white throat and pinkish under petals, remarkable for its prolificacy of bloom, and likely to be useful as a market plant. The Fancy Class received one or two useful additions, in Anne Page, which was a very pretty bright rosy carmine flower, the lower petals blush with small spots; and Mrs. Dorling, which bore a good truss, and had upper petals of a deep rosy carmine, and lower petals slightly tinted with carmine. Blair Athol, with dark ruby-red flowers, was not in good condition, but had desirable qualities about it. The first-named, however, was the best.

Of the class of Zonates there were several very nice flowers shown, but as it takes much to beat those already known, these did not meet with much favour from the censors. Sir Fitzroy Kelly, a pretty light scarlet; Enamel, in the way of Blackheath Beauty; Princess of Wales, a scarlet zonate white-edged variegated resembling Fontainbleau; and Eve, a very pleasing pale rose-pink, were among the most deserving of mention. The latter, which has now been shown on two or three occasions, promises to become an acquisition; it certainly improves on acquaintance.

We ought also to mention the Tropæolum called Cooper's Defiance, a very bright scarlet of the Lobbianum class; but of course, beyond the fact of its brilliant colour, no idea could be formed of its utility when planted out.

New Plants.

277. Trichinium Manglesii, *Lindl. Bot. Reg.* 1839, *n.* 28 *in not.*; *Bot. Mag. t.* 5448.

The existence of this beautiful herbaceous plant was made known in the Botanical Register for May, 1839; but it has only of late appeared in gardens from Swan

River, where it grows wild. Mr. Thompson, of Ipswich, who has been the fortunate raiser, writes of it thus:—

"The Trichinium Manglesii is from Bunbury seed; from a large quantity of the heads I picked out about a dozen perfect seeds, which yielded three or four plants. The root seems perennial, and throws up several branched stems, 18 inches or more high, the branches erect, elongated, and each bearing a handsome head of flowers, of which this woodcut gives a good idea. The copious white hairs, so characteristic of the genus, with which the florets and bracts are clothed, give a singular aspect to the plant, and contrast effectively with the amaranth-purple or mauve-coloured petals. Under the lens these hairs are pretty objects, owing to their denticulations.

"The germination of the seed revealed a peculiarity worthy of note. The plumule, instead of arising from between the two unequal seed leaves as in most plants, is emitted from a point considerably below them. The same thing I find occurs in Dodecatheon Meadia.

"I send you a small head of the Trichinium. Unless it ripens seed I see no chance of increasing my stock."

We earnestly hope it may succeed, as it is a *most* lovely thing.

ORCHARD MANAGEMENT.—No. V.

In the education, so to speak, or training up, of young trees for future usefulness, it is necessary, as in the human subject, to begin very early to lead them in the proposed direction; and as I am fully convinced that surface cultivation is indispensably necessary to the perfection of good management, so also the endeavour to keep the roots near the surface is a perfectly legitimate object. I therefore recommended (p. 365), for the furtherance of that object, that the roots should be spread out on the surface of the ground, and well covered with some good compost, in order that they might find plenty of nourishment and a genial medium in which to extend laterally. If this were not present, they would probably penetrate deeper into the earth, and in these early stages that ought to be prevented, and by attention and care it may be done. When permanently planted, they will of course do this to a certain extent, but it is not then of so much consequence, if there is only an abundance of surface roots to be acted upon by surface cultivation. In order still further to assist the development of surface roots in the young stocks, the covering of compost, should be well mulched over in March, with some good rotten manure.

I fear that these details will appear to some to be tediously minute, and the reasons given for them unnecessary as being in general so very obvious, but I am not clear that these things are so well understood by our younger brethren in the profession as might be supposed. Nor is this to be much wondered at, when we consider how much more is now expected from a gardener than would have been considered necessary in the younger days of the generation now passing away; thus, as there is so much more to acquire, it is to be feared that the fundamental principles of practice are often but imperfectly acquired. I have therefore been more minute in detail than may be needful to many practical men, in the hope of placing a few of those principles before others in a plain unscientific manner, and as a sort of antidote to the confusion of ideas often caused by the intricacies of ribbon border and parterre planting, which absorb so much more than their due share of the time and talents of modern gardeners, to the exclusion of many matters of much greater importance to them in the long run.

The beds in which the stocks are planted will require to be kept clear of weeds, and in the next year should have a top dressing of good compost, remembering all this time to leave the branches to develope themselves freely and unchecked by pruning, which will produce a corresponding development of roots, and increase the size of the stem. Two years in this bed, with such liberal treatment, ought to do wonders for them. In October it will be best to lift them very carefully, guarding them especially from injury to the roots; this is best done by taking out a deep trench at one end, and undermining the roots, in which manner the trees will come out much easier and with far less injury than when the soil is taken off from the top. Previous to replanting, the roots must be carefully examined, and every one which has a downward inclination must be closely pruned off—not shortened, but entirely removed. A bed having been prepared for them as before recommended, and in a situation where they can be allowed to stand until their final removal into the orchard, they should be placed as before on the surface of the ground, at a distance of not less than 3 feet apart each way; or if there were only a limited number under preparation, and space was no object, I should prefer 4 feet apart every way. Great care must again be taken to spread out the roots equally, and to see that they do not cross each other. The whole must then be covered with a sufficient depth of fresh compost, mulching as before advised. A little pruning of the branches may here be allowed if they are very much overgrown, but we must remember that we want a good sized stem to graft upon, as well as a good stock of roots to force up the scion into a vigorous growth, and therefore caution must be used in reducing the branches at this stage, lest we check the roots, and through them the enlargement of the stem.

I must again urge the importance of performing this planting operation as early in October as possible, and my reason is that I find when thus early planted an emission of roots will take place immediately, and consequently the tree will scarcely feel the removal; but on the contrary when late planting is resorted to, the emission of roots is by means so certain, and the tree is thrown

into an unnaturally dormant state, and although not killed, much time is lost in the future. It has often occurred to me that the temperature of the earth has very much to do with the *rationale* of planting. According to the tabular observations on the temperature of the earth recorded in Dr. Lindley's Theory of Horticulture (a book which every young aspiring gardener should thoroughly study), I find that the earth temperature of October is greater than in any succeeding month up to June, a fact which in my opinion speaks volumes in favour of early planting, and deprecates the practice of leaving it until those months when the earth temperature is the lowest.

If the foregoing directions have been complied with, it is only reasonable to conclude that in the following season the growth of the stocks will be such as to bring them into the requisite condition of size and strength for grafting, and that they will possess a great abundance of strong healthy roots, capable of yielding a vigorous development. At the proper season, then, they should be grafted. This operation should not be performed until the sap is in brisk motion; about the middle of April in most seasons will be a suitable time, but it may be done at the end of March in early seasons, and as late as the first week in May in backward seasons; but whatever season is selected, let the stocks be then, and not until then, carefully cut off at 3 inches from the surface of the ground, and grafted at once with the selected scions, which should be about 6 inches in length. In cases where the grafting of Apples is performed so near the surface of the ground, I do not advocate the use of grafting clay, but recommend the operator to bank the stock round with soil, so as to leave only the two top buds of the scion projecting. This soil should be pressed very firm, and after a time it will be necessary to go round and see that it has not all en away from the grafts, or cracked open; it may falso be necessary to apply a slight covering of very rotten manure, or any other light compost, the more effectually to exclude the air.

And now a word on the selection of scions, which may appear a trivial matter, but is in point of fact a very important one, and requires more than usual attention to minutiæ, or in other words to those trifles which constitute perfection. In the first place the middle of a shoot always forms the best scion; in the next, those shoots should always be cut from the extremities of healthy trees in full bearing, not from young luxuriant trees by any means, if it can be avoided—not because this would be any real detriment, but simply because the tendency to produce bearing wood will be longer deferred. If however it is desirable to propagate from choice sorts growing on old and debilitated trees, perfectly healthy shoots of a sufficient size may be obtained by shortening one of the large branches, and these will be equally eligible with the shoots from the extremities of bearing trees, because from the very condition of old worn out trees any shoots they may produce will be certain to possess the tendency to form fruitful wood. These shoots should be cut off a month or so before being required for grafting, and laid in under a north wall, or in a shady place: the reason being that it is found in practice to be desirable to have the sap in the stock considerably in advance of the scion.

The physiology of this matter has often puzzled me very much, but I have arrived at the conclusion that a great principle is involved, which is founded on sound practical deductions. When we take a scion from a plant in full action, say for example an Azalea, and graft it on to a stock also in full action, it is necessary to place them in a confined space with a high and moist temperature, so that both stock and scion may be kept in an excited state until the union is effected between them. As a further analogous illustration, I will instance the case of grafting Vines by approach, in which case it is necessary that both stock and scion (if I may so call it) should be in a free state of growth, when no bleeding will follow the cuts, and the union is easily effected, without the necessity of a confined space or a high moist atmosphere, because both have a separate source of vitality. But in the case of deciduous plants, like Apples, the practice must be altogether different. Here the operation must be performed under perfectly natural conditions, and any artificial excitement would only result in failure. We therefore take a scion from a tree when it is in quite a dormant state, before the sap is on the move, and adopt means to preserve its vitality by placing it in a cool temperature, in which condition the vessels, not being distended with sap, are in the most natural state to receive the ascending sap from the stock. On the contrary, if the scion were taken at the time it was required for use, and from a tree in which the sap had risen, it would be as full of sap as the stock, and therefore would not possess the inherent power of absorbing so readily the ascending sap, probably for want of a supply of leaves to elaborate it, and also of a confined atmosphere to preserve their vitality. This appears to me to be the reason why it is deemed proper to cut scions a month or so before grafting them. I may be mistaken, but I would advise my younger brethren to give the subject a thought now and then in the course of their practice. *John Cox.*

HYBRIDISATION OF FRUITS.

An ancient friend of Gil Blas laments that the Peaches, which, in his boyhood, were as big as Pumpkins, diminished sadly in size in his old age. Most of us have felt as he did with regard to the fruits of boyhood. By careful crossing Bakewell improved the ragged bony sheep of his youth into the full-fleeced fleshy sheep of the present day, and there is no reason why the present race of fruits should not by the means he employed be improved into a race nearly as big as the youthful Pumpkins of Gil Blas' friend.

The introduction of orchard houses has removed the obstacles which have hitherto existed; the uncertainty of out-door cultivation has been too disheartening to the English fruit grower, and our fruit gardens, with few exceptions, owe the introduction of improved varieties to foreign cultivators, who appear to have depended more upon chance than any skilfully arranged system; their efforts have however given very satisfactory results.

The Acton Scot Peach, a hybrid obtained by crossing the Early Nutmeg and Royal George Peach, raised by Knight, and more recently the Victoria and Prince of Wales Pears, raised by Mr. Huyshe from the Marie Louise and Gansel's Bergamot, show that there is no lack of success in England, where skilful hands and heads are at work; these efforts have however been isolated, and it is during the years to come that the most important results may be expected from this interesting branch of horticulture.

In a well stocked and well cultivated Orchard house all the materials for the raising of seedlings exist, and as Peaches hold the first rank among refined fruit, I will begin with them. The earliest Peach known is the White Nutmeg, but valuable on that account only, the fruit being small and inferior; it should be improved by crossing with Grosse Mignonne, Noblesse, or Royal George; and to obtain size, with the Pavie de Pomponne or Catherine; probably the produce of the first generation will be a disappointment, but patience is a most needful virtue in everything connected with pomology, and the third or fourth generation may repair the defects of the first. Following the White Nutmeg we have the Red Nutmeg and Petite Mignonne, the latter a most delicious Peach, but now too small; it has a great tendency to reproduce itself, but, fertilised with the large varieties already named, a very valuable early fruit may be hoped for.

The Early Ann, Early York, and Acton Scot are all excellent early Peaches, but too small. The Early York reproduces itself from seed with little variation, and is likely with careful crossing to give the best results; it should be allied to the largest known varieties, irrespective of season of maturity.

The Shanghai Peach promises to be a valuable hybridiser; it is very large, very hardy and very productive, the flesh particularly firm and solid, withal a good melting Peach; a good market fruit ought to be raised from this variety.

It seems like gilding fine gold to improve the flavour of the Noblesse, but if crossed with the Stanwick Nectarine this result is possible. To obtain size combined with flavour, the Grosse Mignonne, Noblesse, Galande, and Royal George should be crossed with the large Clingstone Peaches. Some of the Pavies in the south of France are enormous, and as a melting Peach will produce a Pavie from seed, and a Pavie a melting Peach, some good hybrids may be obtained.

To prolong the Peach season the late American varieties, will be valuable; some of these will hang on the trees till November, and present an imposing exterior on the dessert table; they will not, however, bear the test of "degustation." They should be crossed with the Grosse Mignonne, Noblesse, and the Walburton Admirable.

The Desse and Boudin may be improved by an alliance with Stanwick Nectarine and Noblesse Peach.

Dr. Lindley, when the Stanwick Nectarine was introduced, pointed out its great value as a hybridiser. Crossed with the Pitmaston Orange, the Elruge, and the very precocious Fairchild's Early Nectarine, some fine varieites will probably be obtained.

A race of late Nectarines originating from the Peterborough a late melting sort has been raised here; though large and handsome its flesh is too tough. Crossed with melting Peaches and the Stanwick Nectarine, the season of good Nectarines, fully equal in quality to the earlier kinds, may be prolonged until November; the very large Newington Nectarine will probably prove the parent of some fine melting varieties if allied to the freestone sorts.

In the orchard house here are now 110 seedling Peaches and Nectarines, nearly all bearing fruit with the help of glass and pot culture; this satisfactory result has been obtained in the short space of from three to five years.

I had the good fortune two years since, when attending the Fruit Congress at Namur, to be introduced to M. Gregoire-Nelis. This gentleman has earned a just reputation for the excellence of his seedling Pears; he was good natured enough to give me a history of his efforts, but he did not say that he had hybridised any varieties, his system consisting in the selection of the largest pips from the finest and best flavoured fruits. If by this simple method so many good and diverse varieties have been obtained, a careful and systematic hybridisation should give vastly superior results.

The Doyenné d'Eté is the earliest of all Pears, small, with an agreeable but not superior flavour; it is an abundant bearer and should be crossed with either Jargonelle, Beurré Giffart, Bon Chrétien (Williams), Beurré Superfin, or Louise Bonne d'Avranches, all possessing qualities in which it is deficient. The old fashioned Lammas, Green Chisel, and Citron des Carmes will probably be the parents of fine early Pears crossed with larger and finer varieties. The Jargonelle and Beurré Giffart, fertilised with their hardier cousins, may produce seedlings hardy enough for the North of England, without the protection of a wall.

The enormous size of the Uvedale's St. Germain renders it a most important parent; crossed with Beurré Superfin, Jargonelle, or Marie Louise, the produce may possibly possess the delicate flavour of the latter, combined with the enormous size of the former, a result most devoutly to be desired, as our Pears may then at all events be as big as Pumpkins.

The best of our winter Pears, Winter Nelis and Josephine de Malines, are too small; hybridised with either Beurré Diel, Triomphe de Jodoigne, Duchesse d'Angoulême, or Easter Beurré, a greatly improved progeny may result. During February we have the delicious Bergamotte d'Esperen; this is too small, and should be crossed with Gansel's Bergamot, Beurré Rance or Easter Beurré; in March and April the two last are large enough, but their flavour is not superexcellent. The recent introduction of Madame Millet has provided an excellent Pear for May, and Bezi Mai and Morel will last till June, but though they look well on the dessert table, they must not be tried by any other organ than that of sight; crossed with high-flavoured Pears they will probably prove the parents of late varieties equal to Beurré Superfin, a very high standard.

There is a tendency in some Pears to reproduce their race. The Beurré d'Aremberg is remarkable for this quality; the seedlings of this variety raised here differ from the parent only in the season of maturity. The excellent characteristics of the Passe Colmar are inherited by its descendants, and this quality will prove an important guide to the hybridiser. Before closing my notes on Pears I may mention that Beurré Clairgeau and King Edward's, from their size and beauty, are undeniable; but they want flavour, and should be crossed with those of better quality.

If you will allow me, I will at some future time offer you some remarks on Plums, Apples, and other fruits. In the present race for improvement in all things, it would be a sad pity that Pomology should lag. I may here remark that pot cultivation under glass is indispensable; out of doors the experimentalist would generally reap nothing but disappointment. To carry out hybridising successfully, many varieties of fruit must be collected; and as not more than three or four fruit on a plant will be needed, a moderate-sized pot may be used. The names of the parents from which seedlings are raised should be preserved, and the most minute attention given to all particulars connected with the races of seedlings, as the results are necessarily very slowly developed, and probably, to produce very marked progress, some generations of fruit must pass. *T. Francis Rivers, Sawbridgworth, Herts.*

NOTES ON GARDENS.—No. IX.

Royal Botanic Garden, Edinburgh.

(*Continued from page* 507.)

The houses in the Eastern division were chiefly devoted to the culture of Orchids, general stove and medicinal plants, tropical fruits, &c. The Edinburgh garden is so famed for a rich collection of the two last-mentioned classes of plants, that I was led to devote most of the short time spent in the houses to seeing as many of these as possible, doubtless missing numerous plants more likely to attract a general plantsman. In addition to fine samples of the commoner and indispensable medicinal things, I noticed the ornamental Saccharum violaceum; a plant 8 feet high or so of Theobroma Cacao; plants of the Bread fruit and Jack fruit; several Bananas and Plantains bearing good bunches of fruit; Janipha Manibot and Cinnamomum verum; a fine plant of Caryophyllus aromaticus, the Clove tree; Hebradendron gamboiodes; Myristica moschata, about 7 feet high; the true Cubeba officinalis, sent some years ago from Java to the garden; with the Litchi, Longan, Durio, Mangosteen, Cæsalpinia Sappan, Chinese Tallow Tree, and numerous others equally interesting. Many large Ferns were also to be seen in the warm wing of the main range. Amongst them a remarkably fine Cyathea arborea, several species of Alsophila, Angiopteris, Hemitelia, &c.

In the cooler houses I noticed various species of Chamærops, Charlwoodia, Dracæna, and a good specimen of Cordyline indivisa. One house was devoted to Azaleas and Camellias, many of them very large, and all in excellent condition; then came a house assigned to extratropical trees and shrubs, such as the Camphor, a plant about 20 feet high; various species of Podocarpus, very tall; large Acacias, Dacrydiums, Phyllocladus asplenifolia, and many other examples of the less hardy Coniferæ, such as Frenela Hugelii, Retinospora squarrosa, Widdringtonia cupressoides, and others. The other divisions were chiefly occupied with green-

house plants—Pelargoniums, Fuchsias, and popular garden things; Banksias, Hakeas, and Dryandras were also plentiful, some of them fine old plants. There was also a house of Heaths and Epacrises, with some of each genus of unusual size, and a plant of Erica melanthera between 12 and 14 feet high.

In the private department or "back houses" of the garden was a remarkably rich and varied collection of plants, quite enough in fact to make a very excellent public department. I shall merely mention those which most attracted my attention. Of the Ouvirandra there were several fine plants growing in tubs, in a house containing also a number of Nymphæas and other aquatics. The largest Lattice-plant measured more than a yard across, with leaves from 15 to 20 inches long, and very abundantly produced; I understood the temperature of the water ranged from 60° to 70°, and it was by no means limpid or frequently changed. I think I am rather under the mark as to the dimensions of this remarkable plant. Of Cocos nucifera there were some vigorous young plants from 4 to 8 feet high, and along with them other choice things in the Palm line, such as Euterpe edulis, Areca rubra, Latania rubra, Oreodoxa regia, with a lot of Cycadaceous plants, including Stangeria paradoxa and other scarce species. Medicinal and other plants of like interest, again cropped up here in unusual abundance, many of them seen by me for the first time. For instance, Adansonia digitata, the Baobab, a promising young plant; Myroxylon Pereira; the Gutta-percha plant, Isonandra gutta; Strychnos nux-vomica; and healthy specimens of the deadly Ordeal Bean, Physostigma venenosum, sent from Calabar to the garden; the Mustard plant of Scripture, Salvadora persica; with several species of Nepenthes; and the "Doom bark" tree. In the propagating division was a goodly stock of young Palms; of Cinnamomum verum, Quassia amara, and other useful plants not often increased. Clerodendron Thomsonæ var. major, which had flowered in the garden during the season, and was considered much finer than the older form, was also here. Though no large house is specially devoted to Ferns, yet in various places in this department there was an extensive collection of exotic species, with many rarities, of which I can only mention Dictyopteris varians, Cionidium Moorii, and Lycopodium Hookeri. Various species of Hymenophyllums and Trichomanes were grown in a glass case in a pit devoted to Ferns requiring a high temperature, In this back region I also saw the Marsileas—ægyptiaca and macropus; Cinchonas—Calisaya, micrantha, nitida, and, if I mistake not, one or two other species; several interesting aquatics, such as Chætophora endiviæfolia, Eriocaulon septangulare, Pilularia globulifera; a collection of the new Japanese introductions; houses of young Heaths and other hard-wooded stuff; Sarracenias, Dionæa, Cephalotus, some curious Droseras, and others of that ilk.

In the same enclosure were the cool pits, frames, &c., a great portion of them occupied by a fine collection of Alpines, with numerous duplicates of many rare things. Primulas, very abundant, and well grown; alpine Grasses, rare Carices, good Ranunculi, all the British Pinguiculas, British Orchids, &c., were observed. Lobelia inflata, being I suppose much wanted for lecturing purposes, was planted out in a pit in quantity; and the Jalap plant was similarly grown. Parochetus communis, a pretty little creeper, was also amongst the alpines—a reintroduction I believe. Near at hand was a complete collection of British Ferns, species and varieties, with a large stock of the Woodsias and rarest things; and large pans of Ophioglossum vulgatum, Botrychium Lunaria, and the British filmy Ferns. There was a large collection of bulbous and tuberous rooted things in the same quarter; amongst them the new Alliums McNabianum and Murrayanum from California; Chrysobactron Hookeri, and quantities of good things of like interest. Of Narthex Asafœtida there was a fine stock, raised from a plant which had flowered in the garden. In the old Palm house were noble plants of the tenderer Conifers, with Knightia excelsa, Cupania Cunninghami, Palms requiring a rather cool treatment, remarkably fine plants of Gleichenia Speluncæ, dichotoma, and flabellata; with noble looking specimens of Alsophila excelsa, not long imported.

The new Palm house, which is about 100 feet long by 60 broad, and 72 feet high, cost between 6000*l.* and 7000*l.*, and was finished in 1858. For nearly 40 feet high the building is of fine stone, with large arched windows; the roof being a glass and iron curvilinear dome, in two stages, rising 35 feet above the stone sides. A neat iron gallery runs round the sides at 35 feet from the floor; and there is one at the base of the upper dome, but not for the public, besides exterior ones for repairs, &c. Externally the building is very beautiful and dignified, the latter character of course arising from the large use of solid masonry, which is useful also in retaining heat, and gives an amount of shade very congenial to the Palms. Of these I think I may say there were nearly 100 species. From Sagus Rumphii, Livistonia chinensis, and Caryota urens, nearly 50 feet high, and many others almost rivalling them, down to the lowest, there are "all sorts and sizes" of Palms, in the most luxuriant health, perfectly free from a spot of disease, or even of dust, and all grown in tubs too, some of them 6, 7, and even more than 8 feet in diameter, and with their contents weighing from 6 to 8 tons each; yet they seemed as much under control as the contents of a Wardian case could be. And such "tubbing"—no sign of any indecision about it—no evidence of hankering after the monstrosities of prize-tub competitors—no indication of a relapse into the good old tea-chest style, but a perfect display of simple excellence in that way. The tubs used are of strong oak, round and well-proportioned, and while looking at least as well as any other pattern, are much more convenient for the cultivator. Sphagnum was placed on the surface of the soil in these great tubs; I suppose for the purpose of keeping moist the surface roots, but being neatly laid on it was also much more agreeable to the eye than large surfaces of swashed earth. The amount of skill and labour which has overcome all the difficulties of huge plant culture, and placed the Palms in the very superior state in which they are, must have been very great. From its stateliness of exterior, fine proportions, and above all from the perfect condition of the plants, I was impressed at the time with the superiority of this house to any other of the kind which I had seen, and the impression still remains. The house is equally creditable to architect and manager, and quite worthy of rearing its head amongst the many fine sights that may be enjoyed from the Calton Hill, from which, by the by, I first saw its dome. Apropos of fine sights, there is a grand view of Arthur's Seat, with the foreground well wooded, to be had from the garden.

The health of the plants in the indoor department was very striking, especially in the main range and more unmanageable compartments. This is the more remarkable when one takes into consideration the immense number of species from all sorts of climes that have to be humoured and accommodated in those houses. The feat of keeping such a protean collection in fine health is one of far more difficult attainment than the growing, no matter how wonderfully, of specialties whose requirements are known to a hair's breadth, the difference being comparable to those observed between the movements of an "awkward squad" on its first parade, and the mechanical accuracy displayed by a "duty" company of guardsmen.

Fully aware of the impossibility of making myself acquainted with the vast contents of this garden, or of giving a sufficient idea of them in such an essay as the present, I find myself obliged to curtail inconveniently much information which I had acquired. I had "booked" the names of as many noticeable plants as would alone fill the space occupied by my "notes" on the garden; but fearing the landscape gardener's "effacing fingers" may precede my narrative I must, for the present at least, reluctantly forego the pleasure of recording them, as well as of a dissertation on the Messrs. Lawson's vast nursery, one or two other Edinburgh places, and the Glasgow and Belfast Botanic Gardens, all of which I had the privilege of examining. I feel that to do them full justice would run my tale so far into futurity as to render the latter portions of it stale and useless. So next for my gleanings on the shores "of you sweet Dublin bay."
Wm. Robinson.

Home Correspondence.

The late Frosts in Nottinghamshire.—June the 1st, 1864, will long be remembered by gardeners in this county. On the morning of the day in question frost caused such havoc as has no parallel, so late in the season, within the memory of the oldest inhabitant. The thermometer at Osberton, four feet from the ground, stood that morning a trifle above 20°, thus indicating 12° of frost. Early in the morning the sun broke forth, and continued to shine brightly during the day; by the evening, therefore, the full effects of the frost could be ascertained; the young growths of Yews, Rhododendrons, Ivy, Portugal and common Laurels, Ash, Andromedas—many of the more valuable Pinuses, Lavender, Walnuts, Mulberries, &c., are either killed or severely injured; the Apple crop, the most promising remembered in this part of the country for years, is nearly destroyed, while the slaughter made amongst French Beans, Potatos, &c., is appalling. On the walls the fruit crop, a very bountiful one, is perfectly safe, and, although 25,000 bedding plants were turned out, I believe I have not lost one dozen. For the benefit of young gardeners I may, however, remark, that all beds, as soon as they are planted and watered, are protected with Yew boughs, a plan which I consider should be adopted by all, for the following reasons, viz.: it protects the plants from hot sunshine, cold cutting winds, and frost, and it prevents the ground from getting parched up; had my beds not been protected, my loss might have been serious; as it is, the only plants injured are those which the boughs did not sufficiently cover. My Perillas, Tropæolums, Amaranthus, &c., were fortunately, however, not put out, although I had bedded out plants equally tender. So much confidence have I in the method of protection just alluded to, that two beds of Mrs. Pollock Geranium were trusted under this covering, and did not receive the least injury. In this neighbourhood the season has been particularly dry and hot. Such weather near Sherwood Forest tends to baffle the skill of both farmers and gardeners; a season unusually hot by day, cold by night, accompanied by cutting winds, and without rain for weeks, and lastly, characterised by the severe frost of the past week, renders success a laborious task. The following record of temperature during 13 nights, commencing with May 24, may not be without interest:—

May	24	..	24°	May	31	..	36°
,,	25	..	35°	June	1	..	20°
,,	26	..	34°	,,	2	..	25°
,,	27	..	24°	,,	3	..	33°
,,	28	..	32°	,,	4	..	32°
,,	29	..	39°	,,	5	..	31°
,,	30	..	29°				

Edwd. Bennett, Gardener to G. S. Foljambe, Esq., Osberton Hall, Worksop, Notts.

Flower Market.—The "Male Fellow," who takes so deep an interest in the marketing of flowers at Kensington—because it brings them near his own door probably, and would be a personal convenience to him—has, notwithstanding his Old Bailey experience, not succeeded in making out his case. Though getting in years, I can assure him that I go about a good deal even now, if not so much as of yore, prying into odd corners, and sometimes peeping where I am not wanted. My opinion respecting his project is indeed founded on what I have heard during some of these visitations; and it is to this effect, that "the best men in the trade" would laugh in his face if he would only propose to them personally to send shilling plants to his market. I am not to be caught with chaff, and so it won't do to tell me that the subject has been discussed before, and then fly off with the assumption that it was therefore approved. No, no, Mr. "Male," that won't do. Besides, has "Male Fellow" never heard of a certain Floral Hall established in the very heart of London, and abandoned as a flower market because it wouldn't pay? Then about these "best men:" if they are so eagerly approving, how is it that some of them—and some "best" names are very blandly brought in in a former letter (p. 486)—how is it that some of them do not now press forward to support and urge on the carrying out of the proposition? Perhaps the idea might be expanded, and we might have Orchard-house trees sent up ticketed with their prices too. Eh? If flowers, why not fruits or fruit trees? I have nothing to say *per se* against the institution of a flower market at the West-end, if the residents want such accommodation, and I could amuse myself sometimes by popping in; but I do protest against the poor Royal Horticultural Society being dragged into all the wild schemes hatched in the atmosphere of South Kensington, and being led on to expend its income and its energies upon objects utterly beneath the notice of a scientific body, whilst its proper objects, the improvement of horticulture and the advancement of horticulturists, are left to languish for want of support, and its one scientific garden is allowed to run waste for want of the "10*l.*" which would put a better face on it. I do protest—whether the scheme comes from within or without the sanctorium—against the foisting upon the Society such a derogatory work as the institution of a flower market, when at this very moment Chiswick is lying waste for want of action in the matter of an important scheme for the better practical education of young gardeners, which has, I am told, been carefully matured. Let the market, I say, go amongst the other curiosities "over the way;" or at least, let the Museumites or the Commissioners—from whichever source the inspiration comes—wait till the 'sick man' has departed before they seek to turn a penny out of his inheritance. Let them hold back, and not, with so little regard to common decency, lay themselves out to occupy the dead man's shoes. I "intrude" this remark, because it really does not require one to poke about with his umbrella to be able to guess that the projectors of this notable scheme, foreseeing the collapse which is imminent (and which, who knows? they may be helping on), seek to form a nucleus which may be developed into a profitable speculation when the melancholy "event" has happened. If this sunshiny weather lasts, I shall be able to move about freely—happily I have no corns—and 'Male Fellow' shall in future have no reason to regret my want of activity.
Paul Pry.

Zizania aquatica.—In your last Number there is a short notice of the endeavours made by my friend Mr. Gillbanks to introduce the Zizania aquatica into cultivation in our northern swamps and lakes as food for game. It is well known that this fine and productive plant grows in extreme abundance in the swamps to the west of Lake Superior, and farther to the north in Rupert Land and the Red River colony in North America. It there sheds its seeds into the water, where they vegetate abundantly. Probably, therefore, the same result might be obtained in England and Scotland. All the seed, a considerable quantity, given to Mr. Gillbanks has proved to have lost its vitality. The loss is doubtless caused by the seed having travelled in a dry state. Sir Joseph Banks found the same difficulty in getting living seeds, but ultimately had them conveyed in water. He then raised the plant, which continued to reproduce itself for some years. It was ultimately destroyed by changes in the property, and there is reason to fear that no living plants of Zizania exist in Europe. It is plain therefore that attempts must be again made to have the seed conveyed to England in a damp state, unless this notice should cause the discovery that the plant is still living in some curious garden. *C. C. B.*

Cool Orchids.—Your correspondent "B F." says (p. 533) that there is an absence of anything practical in Mr. Bateman's lecture on cool Orchids. About two months ago Mr. Skinner presented me with a plant of

Lycaste Skinneri with two buds on it. It had only been landed from Guatemala a few days, but I was told that it might be kept in a comparatively cool place. I put it just within my library window. In about a fortnight the buds gradually opened, and two magnificent flowers have been in bloom for six weeks. Surely there is something practical in the fact of this wonderful exotic plant flowering in this manner without any of the treatment supposed to be indispensable to the cultivation of Orchids, viz., the use of hot-water pipes, syringing, steaming, &c. To me, who never had an Orchid before, not even in my greenhouse, the pleasure conveyed was something quite new to the senses. *Lovell Reeve, Sutton, June 6.*

Ferns v. *Flowering Plants.*—In one passage of my discourse on Ferns published at p. 508, I find a general remark which, in the condensed form it was necessary to adopt, scarcely expresses the meaning intended. I learn also that its intention has been mistaken, so that perhaps you will allow me in a few words to put the matter right. It is said that the fronds of all true Ferns have a circinate vernation, and that no flowering plants have their young leaves thus disposed. The term TRUE FERNS was used purposely to exclude the pseudo-Ferns, some of which, *e. g.* the Ophioglossaceæ, are not circinate in vernation; and in respect to flowering plants, the meaning was, that none likely to be mistaken for Ferns have this kind of vernation—the exceptions occurring amongst the antediluvian-like order of Cycads. *Thomas Moore, Chelsea.*

Collecting Wild Plants.—The statement made by your correspondent (p. 532), quoted from Babington's Manual (edition 1843, p. 194), respecting Menziesia cœrulea being "nearly if not quite extirpated by an Edinburgh nurseryman," on the station called the Sow of Athol, is incorrect. I accompanied the late Mr. James Cunningham, of Comely Bank, the nurseryman I suppose referred to, when he visited the station in question about 30 years ago, which was the only visit he made to it, and I can affirm that it was not unduly robbed; on the contrary hundreds of plants were left. I can only attribute the extirpation of the plant in the station just named, to the constant raids made on it by botanists and collectors, in consequence of the publicity given to it in our various British Floras and otherwise. *Menziesia cœrulea.*

Horticultural Plagiarism.—Any one conversant with the horticultural literature of the day cannot fail to have remarked the extent to which this sin is practised and tolerated. A. is a clever practical horticulturist, perhaps a genius in his way, but for want of early practice or education an indifferent writer; nevertheless his facts are valuable, and he is induced by his friends to lay them before the public. B., probably a common-place man, but business-like, shrewd, and educated, seizes on A.'s facts, and by a few verbal alterations presents them as his own, probably politely abusing A. (the man from whom he filches his knowledge) as a foil to discovery. This, which represents the commonest and most unprincipled of plagiarists, I will designate Class 1. Again: C. is a clever practical horticulturist, who never writes; D. knows nothing of horticulture, although he writes constantly on the subject. Living near to C. he visits him constantly and "draws" or pumps him. One of the C. class said to me the other day, "D. is a wonderfully clever man. He comes here and talks to me by the hour, and the next paper I take up I find my very words to him recorded in his article. What a memory he must have!" This is Class 2. But a deeper lot than either of these is in work. E. moves in three different circles, practising the arts of B. and D., and is tolerated in each on account of his supposed skill in the others. A friend remarked to me at a scientific *soirée* the other evening, "E. is a great horticultural writer." "Pardon me," I replied, "you mean a great —— writer." "Oh no!" rejoined he, "I beg to undeceive you there; he really knows nothing on that subject." This is Class 3. The errors these men commit are often ludicrous, and the mischief they do is incalculable. Writing usually anonymously, they assume an authority which throws the mere reader, who does not always stop to think, off his guard, and he swallows the bait whole. As a practical horticulturist, I hail with delight the prospect of a better education for the rising generation of horticulturists by means of the Educational Committee recently appointed by the Royal Horticultural Society. If fairly carried out, I anticipate that we shall soon find practical knowledge and literary skill combined in a higher degree, and then the shams and flunkeys of horticulture will be consigned to a merited oblivion. *Hortus Siccus.*

Societies.

ROYAL HORTICULTURAL: *June 7 (Election of Fellows).*—J. Bateman, Esq., in the chair. The following candidates were elected Fellows, viz.:—

H. Bebb, Esq., Rev. M. Brock, Mrs. Boulton, Miss Clough, Miss Clutton, Miss K. E. Clutton, Mrs. Constable, W. Crookes, Esq.; Lieutenant-Colonel W. C. Erskine, C B.; Mrs. Gordon, Major Hall, R. P. Hodgson, Esq; Mrs. Lewis, H. C. Lopes, Esq.; Mrs. Plimsoll, Mrs. Potter, Miss Eleanor Roberts, Mrs. John Shaw, Mrs. Waters, C Westerton, Esq.; and Miss Williams.

A short but interesting lecture on the subject of "London Cottage Window Gardening," was delivered on this occasion by the Rev. E. Bayley, Rector of St. George's, Bloomsbury. It consisted of a history of the window gardening and clean and tidy room movement, originated a year or two ago by his curate, the Rev. S. H. Parkes, in the poor district of Little Coram Street, the most aristocratic inhabitants of which Mr. Bayley said were costermongers. Under Mr. Bayley's active superintendence this movement to improve the dwellings and condition of people of the description just named by holding floral exhibitions and offering prizes for the best flowers and the tidiest rooms, described at length in Mr. Parkes' "Window Gardening," has been crowned with very great success.

"All women, and nearly all men, love flowers, and it was wonderful," Mr. Bayley said, "how much affection for them was infused into the children of parents who cultivated plants." The occupation was also stated to have a spiritual influence on those who followed it. "In a lone room," said Mr. Bayley, "at the top of one of the houses where every room was the dwelling of a family, there dwelt an aged woman, whose scanty pittance of half-a-crown a week was scarcely enough for her bare livelihood. The visitor, Mr. Parkes, observed, with some surprise, a Strawberry plant growing and flourishing in a broken teapot that stood on the window-sill. He remarked from time to time how it grew, and with what care it was tended and watched. At length, one day, he said to this poor woman, 'Your plant does well; you'll soon have some Strawberries on it.'—'It's not for the sake of the fruit I do it,' replied the woman.—'Then why do you take so much care of it?' he asked.—'Well, Sir,' she replied, 'I'm very poor, too poor to keep any living creature; but it's a great comfort to me to have that living plant.'"

The first floral exhibition seems to have been a characteristic one. It was held in the Bible Mission Rooms. Out of 140 plants registered a month before, 94 were displayed. Green tissue paper made the forms look like flower-stands. Each exhibitor delivered his own plant, with a card upon it containing his name and address. Tea-pots, cracked and antique, jugs with broken noses, washing-basins, and other domestic vessels, served as flower pots, which were decked in gaudy scraps of paper-hanging. The terms of admission were—exhibitors, free; adults, one penny; children, one halfpenny. Two pounds were taken at the door for admissions; and this sum made the scheme self-supporting, paying all expenses. The prizes ranged from 1*s.* 6*d.* to 5*s.* Encouraged by the success of this show, the next, in the following year, was made a comparatively grand affair. Russell Square was then for the first time opened to the folks of Little Coram Street. The prizes ranged from 1*s.* to 10*s.*, for Fuchsias, Geraniums, and annuals. Exhibitors were admitted free to the Square, along with persons who paid 1*s.* entrance. After six in the evening, everybody who could afford to pay a penny was free to enter the square gardens. Lord Shaftesbury gave away the prizes, before an audience of 2000 persons. Not a flower-bed was trodden, not a sprig of a shrub was broken, by the thousands who roamed through the inclosure for a penny apiece. The only evidence, said Mr. Bayley, of the presence of so great a crowd being there, was a little scratching of the gravel. This first show in the square therefore proved in all respects highly successful.

The flower show for the present year is to take place on July 13. Prizes are offered as follows:—

CLASS I.—Persons living in the Little Coram Street District.
CLASS II.—Persons living in other parts of the Parish.
CLASS III.—Domestic Servants, (who Mr. Bayley said were excellent gardeners.)

To each of the above Classes the following Prizes will be given:—

	1st Prize.	2nd Prize.	3rd Prize.
Fuchsias ..	10*s.* 0*d.*	5*s.* 0*d.*	2*s.* 6*d.*
Geraniums ..	10 0	5 0	2 6
Annuals ..	10 0	5 0	2 6

CLASS IV.—Children in National, Infant, Sunday, Parochial, and Ragged Schools.

To the above Class the following Prizes will be given:—

	1st Prize.	2nd. Prize.	3rd Prize.	4th Prize.
Fuchsias	7*s.* 6*d.*	5*s.* 0*d.*	2*s.* 6*d.*	1*s.* 0*d.*
Geraniums	7 6	5 0	2 6	1 0
Annuals	7 6	5 0	2 6	1 0

CLASS V.—For Plants of any sort not entered.

1st Prize.	2nd Prize.	3rd Prize.	4th Prize.
10*s.* 0*d.*	5*s.* 0*d.*	2*s.* 6*d.*	1*s.* 0*d.*

RULES.

(1.)—Exhibitors under Classes I., II., III., and IV. must send in their names and addresses, with the names and numbers of the Plants they intend to exhibit, on or before Saturday, June 11th; and Plants not so registered shall not be allowed to compete in those Classes,

(2.)—Plants may be registered at Bloomsbury Vestry any morning between the hours of ½-past 10 and 12; and at Mrs. Beardon's, 12, Little Coram Street, during the hours of business.

(3).—The Registered Plants must remain in the parish, and under the care of the Exhibitors, from the 11th day of June until the day of Exhibition.

(4.)—All Plants sent to the Exhibition must be marked with the Number of the Class to which they belong.

(5.)—No Gardener or Flower Dealer may compete.

Mr. Bayley stated that this year he had entered about 450 names, and some 800 plants. The interest excited in these flower shows is, therefore, greatly on the increase.

In order to be sure that the plants to be exhibited were the required time in the growers' possession, and to prevent fraud, at which, however, there was stated to be little or no attempt, Mr. Bayley said that this year he has caused to be passed round the stems of the plants a piece of tape, the ends of which he secures to the pot by means of sealing wax. This answers perfectly for all plants except annuals, in dealing with which there is as yet some little difficulty.

Among plants grown by the London poor, the chief favourites are said to be Balm, Lavender, Thyme, Peppermint, Myrtle, Musk, Fuchsias, Geraniums, and annuals. Other plants, however, also receive attention. "A labouring man (said Mr. Bayley) in Little Coram Street cultivated Dahlias so successfully that Mr. Sowerby, of the Botanic Gardens, Regent's Park, gave him a number of the more choice kinds to experiment upon. 'Old Man,' or Southernwood, thrives everywhere. Sweet William, Stonecrop, and Nasturtiums do well. Creeping Jenny is suited to windows and pots. The Virginian Creeper grows well in a large pot. Major Convolvulus trained by the windows has been seen giving much pleasure to the infirm women of a ward of a workhouse as they watched day after day for a bud to appear. Minor Convolvulus grown in a pot at the top of a house caused great amazement by the closing of its small blue flowers at bed-time. Virginian Stocks and Scarlet Runners flower well. A Leek planted by a woman in St. Giles's Workhouse on the 1st March in a pot, when exhibited in Russell Square Gardens in July was three feet high. A piece of potato planted in a pot greatly delighted and astonished a poor woman by growing into potatos 'in little bunches in the earth.' A ragged-school boy ripened from a cutting seven strawberries. The horse-shoe Geranium thrives best in towns, the fancy kinds all fading fast or becoming covered with aphides."

The Assistant-Secretary then performed some experiments intended to illustrate the effects of chloroform on Sensitive plants. On the table were specimens of Mimosa pudica and Desmodium gyrans, a plant of Neptunia plena, Dionæa muscipula, and one or two others. He explained the mode in which the motions in these plants take place, adopting the views of M. Fée and others, who hold that they originate in some nervous influence in the cells of the plant analogous or similar to that of the cells in the lower orders (such as the jelly-fish and sea anemones) in the animal kingdom. He mentioned some experiments or circumstances which forbade the idea of their being due either to electricity, or light, or heat, or any external influence, and enumerated facts which seemed to point to the possession of some nervous power by the plant itself. The fact of its irritability being influenced by anæsthetic agents was one of these, and the experiments he exhibited were performed to illustrate this. He exposed a plant to the influence of chloroform, and after some time, on removing it from the vessel, it had lost its irritability. He then attempted to restore it by exposing the plant to the influence of nitrous oxide, or laughing gas.

The Chairman then drew attention to some plants furnished by Mr. Williams, of Holloway, and especially to two fine specimens of Lilium giganteum, from Mr. Hally, of Blackheath. The cone-like inflorescence of Gunnera scabra was also exhibited to the meeting.

Notices of Books.

The Battle of the Standards. 8vo. Pp. 79. By John Taylor. 1864. Longman & Co.

It is a great pity that this book, written and completed with care, and involving a question of much practical importance, should be marred by the introduction of a text of Scripture, totally inapplicable to the subject, and grotesquely commented upon, in this fashion. So "that the people who maintain a perfect and just weight, and a perfect and just measure, may expect lengthened days in the land which God giveth them." Whence it is inferred that "the inhabitants of this country, who have had the same measures of length, capacity, and weight, from the earliest times, have in consequence enjoyed a long and unbroken series of peaceful governments." Apart from this arrant bosh, there is a good deal of curious information on a mooted question of the present day. Shall we keep our old English measures, or adopt the French?

Mr. Taylor, with pardonable enthusiasm, gives Sir John Herschel's reasons for believing that the Pyramids of Egypt were constructed with a view to astronomical observations, which seems almost certain from the fact, that six out of the nine pyramids of Gizeh have the narrow passages, by which alone they can be entered, inclined at certain angles to the horizon, so that at the bottom of every one of these passages, the *then* Pole Star must have been visible at its lower culmination.

Next, Mr. Taylor gives the measurements of the Great Pyramid as made by various English and French *savans*. The differences noted by these observers are brought into wonderful harmony by the recent observations of Colonel Howard Vyse, who found that a casing of black marble, or what we should call swinestone, which once covered the building, had to be allowed for. Then he proceeds to show, by an array of figures, that these established measurements of the pyramid bear certain relations to the diameter of the earth; and further, that an English inch is to a nicety the 500,000,000th part of the earth's diameter: which we must admit to be a sufficiently striking coincidence.

If it be considered desirable to take the polar diameter for our base, Sir John Herschel suggests that a very perfect modulus would be made by the addition of a 1000th part to our present inch.

Further, in the King's chamber of the Great Pyramid,

there is a porphyry vessel called the Pyramid coffer; and on measuring this very accurately, it "was found to contain 128 pecks or 32 bushels of Wheat, and though a vessel of this capacity is not in existence with us at present (it is argued), we must have had such a measure in earlier times, since we daily make reference to it, for when we say eight bushels of Wheat make a quarter, we affirm it to be the fourth part of some entire measure, which is exactly equal in capacity to the Pyramid-coffer."

But it is not upon such grounds as these that the question of changing our weights and measures ought to be decided. The *Times* of last July drew a ludicrous picture of the dismay and confusion such a change would bring into every British household. "Every one of these familiar terms (yards, inches, pints, &c.), it says, will be not only obsolete but illegal, inasmuch as the obstinate use of them will involve fine and imprisonment. It is no use to urge that other countries have undergone this revolution, and survive. What are France, the Zollverein, and Portugal to us? They are accustomed to revolutions, earthquakes, and wars, &c."

Again, it is found in practice, that the French system of weights and measures is most inconvenient. This will be evident from the mere inspection of the English and French series of weights—"In the first there are 7 weights, viz, 1 lb., ½ lb., ¼ lb., 2 oz., 1 oz., ½ oz., ¼ oz. In the second there are 12 weights required, viz., 500 grammes, a 2 hectos, two of a hecto each, ½ hecto, 20 grammes, two of 10 grammes each, 5 grammes, 3 grammes, and two of 1 gramme each," and to weigh ¼ of a livre we must take three of these weights.

But what say our own scientific men? Prof. Playfair, in an article written in the Edinburgh Review nearly 50 years ago, says:—

"Ten has indeed no advantage as the radix of numerical computation, and has been raised to the dignity which it now holds, merely by the circumstance of its expressing the number of a man's fingers." And he goes on to show that for the measurement of the circumference of a circle, and for all circular measures, the decimal scale is most abhorrent. Mr. John Quincey Adams, a commissioner appointed by the United States for this very purpose, says:—

"The decimal scale can be applied only, with many qualifications to any general system of metrology. Its natural application is only to numbers; and time, space, gravity, and extension, inflexibly reject its sway. It is a contrivance of man for computing numbers, and not a property of time, space, or matter. Nature has no partialities for number ten, and the attempt to shackle her freedom with it will for ever prove abortive."

These remarks are principally directed against the decimal division of things that are utterly indivisible by 10.

Professor De Morgan insisted on the necessity of "keeping distinct decimalization and metricalization, two things often confounded. He was as much for decimal division as any person could be, but the metre was objectionable. It arose from a mere fanciful connection with the quadrant of the meridian, and is of no practical consequence to any man alive." "You might as well (said the Professor, with polished irony) try to subdivide the distance from the earth to the moon."

The Astronomer Royal said that "if he had a new nation to create, with a new system of weights and measures, he would give them the binary scale throughout."

"It is a very remarkable circumstance that the habits of every individual inure him to the comparison of some definite portion of his person with the existing standards in use. There are few English men or women but could give a yard, foot, or inch measure from their own arms, hands, or fingers with great accuracy."

On the whole, then, it seems to be generally agreed in England that the inch, foot, and mile are excellent measures for the purposes for which they are used, and there is no objection to the use of decimal multiples and sub-multiples. Our weights and measures of capacity are arranged according to the binary scale, to the great convenience of buyers and sellers, and it is our humble opinion that the man who would alter them makes a grand mistake.

The *Botanical Magazine* for May contains portraits of: *Alströmeria Caldasii*, a very handsome species of the scandent section to which the name of Bomarea is given; it comes from the Andes of Quito, whence it was received by Mr. Veitch, and is a smooth climber with ovate-lanceolate leaves, and many-flowered terminal umbels of pale orange flowers spotted internally with red.—*Waitzia corymbosa*, a remarkably handsome Everlasting from the Swan River, introduced by Mr. Thompson, of Ipswich, probably an annual, with erect stems simple or sparingly branched at the base and terminating in a corymb of flower-heads, each about an inch across, and varying like our common annual Everlasting, in having the involucral scales, white or yellow or rose-coloured, the white form being the plant which has been called Morna nitida. This looks as though it would be a useful garden plant.—*Dendrobium barbatulum*, a pretty round-petaled, white-flowered Dendrobe of erect habit, said to be synonymous with the D. Fytchianum described at p. 100.—*Echinocactus Scopa*, one of the curious species of cylindraceo-clavate dwarf Cacti, cultivated years ago in our gardens.—*Dendrobium infundibulum*, a fine white-flowered species from Moulmein, described by Mr. Bateman at p. 1194 of our volume for 1862. It is nearly related to D. formosum, and has been partially distributed, as already mentioned, under the name of D. moulmeinense.

The present month's issue of the same work contains: *Æchmea distichantha*, a South American Bromeliad, with long linear-oblong channelled spiny leaves, and panicles of short distichous spikes of flowers, of which the sepals are rose-coloured and the petals purple, excepting which the whole inflorescence is coloured red.—*Trichinium Manglesii*, a Swan River herb, noticed in another place, with oblong spathulate root-leaves, and spicate oblong heads of pretty purple flowers, which are singularly hairy. "At present it has been only treated as a greenhouse plant, but there is no reason why it should not be employed as a summer annual, as are many Australian plants, to the great advantage of our flower borders."—*Cattleya Lindleyana*, a pale Lælia-like Bahia species, with slender terete pseudo-bulbs, 6 or 8 inches long, supporting one or two linear-lanceolate leaves, and bearing solitary terminal blush flowers, which have linear-lanceolate sepals and petals, and a broadish lip of rather deeper tint, tinged with cream colour towards the base, and marked in front with a few lines of purple spots.—*Thibaudia sarcantha*, a charming Vacciniaceous shrub from New Grenada, somewhat doubtfully identified with the Psammisia sclerophylla of Planchon and Linden, from which it would seem to differ in the more fleshy flowers and pedicels, as well as in its erect not pendulous habit, and its smooth not pubescent branches. Here the branches are pendulous, the leaves fleshy coriaceous, and the flowers pendulous in terminal and lateral corymbs; they have thick clavate pedicels, and articulated therewith thick green fleshy calyces, and urceolate fleshy corollas, the swollen portion of which is red, and the contracted limb green.—*Dendrobium Farmeri var. aureo-flavum*, a Moulmein plant, with bright yellow flowers and an orange pubescent lip without spots, very brilliant and very handsome, of which Sir W. Hooker remarks that it was sent by the Rev. C. S. Parish, with the following note:—"'What if I were to say that Dendrobium Farmeri and D. chrysotoxum were one and the same? I know both of them extremely well, having had them growing for three years. There is no mistaking the two without the flowers. Two days ago, on going down into my garden, I was astonished and could hardly believe my eyes at seeing a panicle of the golden flowers of D. chrysotoxum proceeding from the bulbs of D. Farmeri!—the only difference being that the labellum is here rather pointed, and not so round as in D. chrysotoxum.' Dr. Lindley, too, has a remark, or rather offers a conjecture, somewhat to the same effect, when he says in his Contributions to the Orchidology of India—'D. Farmeri is scarcely distinct from D. chrysotoxum, although its flowers are tinged with pink, and its lip less abundantly fringed.' I fear both one and the other of these botanists," continues Sir W. Hooker, "have placed too much confidence in *colour* in the present case; for not only is the nature of the pseudobulb quite different (multangular in D. chrysotoxum, deeply quadrangular in D. Farmeri), but the curious deep velvety fringe of the lip of D. chrysotoxum has nothing resembling it in the labellum of D. Farmeri. This I take, therefore, to be a yellow-flowered variety of the latter, and quite distinct from D. chrysotoxum."—*Desmodium Skinneri var. albo-nitens* (albo-lineata in one place), the plant introduced by Mr. Verschaffelt under the name of Rhynchosia albo-nitens, and figured under that name by Lemaire in *L'Illustration Horticole* (1861, t. 290). It is a Mexican climber, of free habit, the leaves marked with white down the centre, and the flowers small, purple, in numerous subpanicled racemes. The Desmodium to which Sir W. Hooker refers it comes from Guatemala.

In the *Florist and Pomologist* for May is a figure of a *Bomarea* called *multiflora*, evidently the same as the *Alströmeria Caldasii* of the Botanical Magazine, above noticed; and in that for June is a capital picture of *Diadem Pelargonium*, the finest of last year's novelties amongst these popular flowers. In the text are some interesting papers by Mr. Fleming, of Cliveden, on house decoration and table decoration, by means of plants and flowers.

The figures in the corresponding numbers of the *Floral Magazine* are *Azalea Forget-me-not*, a spotted purplish red; *Hyacinth Robert Fortune*, too distinctly margined with white; a group of striped *Italian Verbenas*; *Camellia Comte de Gomer*, a fine rose-coloured sort striped with crimson; a group of *Early Tulips*: *Rose Madame Victor Verdier*, said to be very deep; the white variety of *Lapageria rosea*; and finally a group of *Cinerarias*, some of the latter incorrectly coloured, one especially named *Flower of the Day*, omitting a crimson zone between the purple and white of its florets, which forms one of its chief merits, and is an earnest of the production some day of a new class of varieties with tricolor florets.

A new Part of the *Useful Knowledge Society's Family Atlas* (the 8th) has appeared, and a capital number it is, containing part of Wales, and other English counties, with the Turkish Empire, and Kingdom of Greece.

BOOKS RECEIVED.—The new number of the *Pharmaceutical Journal*, Second Series (Churchill), contains among other good matter a paper by De Vry on the Cinchona Barks of British India, and a very full account of the last meeting of the Society, which we may congratulate upon its flourishing condition.——The first part of Mr. Bateman's fine work on Odontoglossums has also just been received. This will be fully noticed hereafter.

Garden Memoranda.

MR. JOHN WATERER'S AMERICAN PLANTS.—Mr. Waterer's magnificent exhibition of these, which is held as usual in the Gardens of the Royal Botanic Society, Regent's Park, was formally opened to the public on Monday last. The plants as a whole were in excellent condition, and it is expected that the display will last equally good for at least a week or 10 days yet to come. The high-coloured Rhododendrons are now in full beauty, and intermixed with and well contrasted as they are with others of light colours, the effect produced is extremely striking, especially when viewed from the highest end of the tent, from which the whole mass of bloom can be looked down upon, and seen at one glance. When we state that upwards of 100 yards in length and as many in width have been wholly devoted to these gay flowering shrubs, some idea of the grandeur of the display may be conceived. The whole has been thrown into borders and beds of tasteful forms by suitable gravel walks, neatly edged with turf, and wherever room could be found on the gravel, turf mounds have been raised, on which have been placed noble standard and other Rhododendrons, most of which are of great age and size; thus situated they break the sameness which would otherwise to some extent prevail, and have a very imposing appearance. Among high-coloured Rhododendrons the gem of the exhibition is decidedly Annihilator, a magnificent kind; this is loaded with great trusses of flowers, whose glowing colour renders them conspicuous from all parts of the exhibition. Next in rank, both as regards size and brilliancy, is J. Whitworth, one of the very best of high-coloured sorts; Admiration is also a good kind; as are likewise John Waterer, Blandyanum, Titian, Ornatum, Vandyck, Roseum grandiflorum, and various high-coloured seedlings not yet named. Everestianum, as we stated last week, is still one of the best lilac varieties with greenish white eye, and among whites album elegans stands pre-eminent, being a good late and free bloomer. The best of all whites is however Minnie, a fine kind, which when better known cannot fail to be a favourite; it is a good trusser, and the flowers individually are of excellent shape. In Beauty of Surrey we have a useful addition to bright orange crimson kinds; it has a black blotch in the upper petals, setting off the truss, which is good, to excellent advantage. Elfrida is another distinct looking sort, with rosy salmon-spotted flowers in the way of Lady Eleanor Cathcart. Of the crimson and white class Bylsianum and Alarm stand at the head; both kinds have beautiful richly-coloured blossoms, white-centred, with a crimson margin. Prince Albert, a chocolate-coloured kind, though not showy, will be found useful for the sake of variety, and Nero and Lord John Russell are also good dark varieties. Of the roseum elegans breed Onslowianum is a valuable variety. There is no want of further examples of every tint and shade; but of the sorts at present in flower those just named are the most striking.

Miscellaneous.

Rugby Rose Show.—We observe that this is announced to take place on the 21st of June, under the Presidency of the Duke of Rutland, and a long list of distinguished patrons. It is stated that the entries will close on the 13th of this month. Several of the leading Rose growers in the South have, we believe, signified their intention of exhibiting; there therefore can be little doubt that the gathering will be a highly interesting one. Schedules of prizes, which vary from 5*s.* to 10*l.*, may be had of Mr. Treen, Victoria Nursery, Rugby.

Packing Orchids.—The following information, founded upon his 30 years' experience, has been kindly communicated to the Society by Mr. George U. Skinner, as the best mode of packing Orchids for transmission from Central or South America to this country. It may be useful to others as well as the Society's collectors:—"I have always found the best mode of packing plants for importation is with the Tillandsia, which will be found in all the high regions of Central and South America. It should be collected alive, *i.e.*, in a healthy state; kept for two days in a shady place, exposed to the air, but not the sun; when perfectly dry, lay a layer in the bottom of the box, then plants carefully placed, not too crowded; then another layer, and so on till the case is quite full; then a thick layer—this protects the plants from any great heat, or any cold; and the plants should then come with a matting over them to protect them from wet or salt water, and come on deck at any season, as it is far better than the steamy hold of any ship." *Proceedings of Roy. Hort. Soc.*

Balsam of Peru.—We passed some Balsam trees in the afternoon, each with a lot of calabashes stuck on its trunk to catch the drug which trickled from the wounds in its bark. I picked up a few of the fruit under one of these trees. Our second day's journey was not so long as the first—I think not more than about 12 miles. The Balsam trees occurred occasionally during the whole way. We stopped at a hut in the forest surrounded by a small clearing, the owner of which, like all the inhabitants of the Montaña, makes part of his living by gathering Balsam. The trees were very plentiful here, and generally of a large size. Their average height is about 70 feet, and the trunk is sometimes upwards of 2 feet in diameter a yard from the ground, and generally rises to a height of 40 feet without branching, so that it is impossible to get at either foliage or fruit without cutting down the tree. On the day after our arrival I got the man's permission to have a tree felled; he did not charge me anything for the tree, but stipulated that I should pay two of his sons a dollar each for felling it. I selected an old tree, nearly 2 feet in diameter. There was a sprinkling of pods upon it, but it was not by any means loaded. The pods are so loosely attached to the branches, and so brittle in themselves, that nearly all of them were shaken from the tree, and many broken to pieces by the shock of the fall. I found them to be approaching maturity, the seeds being fully developed, but I am afraid not ripe enough to grow. I had another smaller and more vigorous tree cut. The foliage of this was much larger than that of the older tree, and also a little different in form, but it bore no fruit. The specimens I send will sufficiently show the difference in the foliage of the two trees, and it is also sufficiently explained by the greater luxuriance of the younger. As I have already said, it is impossible to reach the foliage of any of the trees unless by felling them; but I examined the leaflets of many trees from specimens picked up from the ground, but saw nothing to induce me to believe that the balsam is produced here by more than one species. The young trees have always larger foliage than the old ones; but the difference was constantly the same as it was in the individuals I had felled. The trees never make a very dense head of branches and foliage; but in the old ones, which have been much bled, it is very thin; many of the small twigs are dead, and the living ones are covered with lichens. When a tree is about to be bled, two sloping notches are made in its trunk quite through the bark, and meeting in a sharp angle at their lower end, leaving thus a point of bark between them untouched. The bark and wood is hollowed out a little immediately under this point, and the calabash cup is inserted under it. The process is repeated all over the trunk at close intervals up as high as a man can reach; I have seen as many as 20 cups on a tree. The piece of bark and the cups I have sent will show the process better than I can describe it. When the lower part of the trunk of a tree is too full of scars and wounds for any fresh cuts to be made, a rude scaffold is sometimes made round the tree, and a new series of notches made higher up. From time to time, as may be necessary, the balsam-gatherer goes round the trees with a pair of flask-shaped bags made of raw hide, slung over the back of a donkey. Into these bags the contents of the calabash cups are successively poured, and the cups are re-inserted under the point of bark, and left to be again filled. The balsam is sent down to the ports on the river in these hide bags, when it is transferred to the tins. I could not learn which were the best months for the flowing of the balsam, one person saying that it was in July, another in March, and so on, scarcely two agreeing; but the bleeding goes on during at least eight months of the year, from July to March or April. When the balsam is flowing well, I was told that "one moon" sufficed to fill the cups. Respecting the time of the flowering of the tree, individuals differed as widely as they did about the best time for the production of the balsam. I think I was told that it flowered in every month of the year, each person asked giving a different month; and several asserted that it did not flower at all. *J. Weir, in Proc. Roy. Hort. Soc.*

Charge of Manslaughter against a Herbalist.—At the Centra Criminal Court, May 11 (before Mr. Justice Williams), John Stevens was indicted for the manslaughter of William Probee. Mr. Poland conducted the prosecution, and prefaced the examination of witnesses with a statement, to the effect that the prisoner, formerly a grocer, was now a medical botanist, in High Street, Whitechapel, and held himself out as an agent of Dr. Coffin, a herbalist. He was charged with causing the death of William Probee, a lad of 15, by administering to him improper and dangerous medicines under circumstances which would be related in evidence. The law on the subject, he observed, had been laid down by the late Justice Buller, who on one occasion said he took it to be quite clear that if a person not of medical education undertook to administer medicine which might have a dangerous effect and thereby caused death, such a person was guilty of manslaughter. The prisoner was defended by Mr. Serjeant Ballantine and Mr. Sleigh. It was proved in evidence that on Sunday, March 20, the deceased, William Probee, was taken ill, and that in the evening his father went to consult the prisoner, and brought back a bottle of medicine, a box of pills, and a powder. The patient took the whole of the mixture, the powder, and eight of the pills the same evening. On Tuesday he was much worse, and a powder was obtained from the prisoner, which was given to the boy. The next day he was worse, and Dr. Monk was then called in, and prescribed some medicine, but it was not given to the boy, as the father "had much faith in the prisoner." Mr. Cumming, a surgeon, was also called in, and sent some medicine, but this was not given, and the prisoner continued to see the boy until his death, which took place six days after taking the medicine first prescribed by the prisoner. Mr. Serjeant Ballantine, in addressing the jury on behalf of the prisoner, contended that the whole question was one of opinion. Medical practice of late years had undergone a complete revolution, and homœopathy had taken the place of blood-letting. The prisoner contended that he had made no mistake, and that the remedies he had used were proper; if he was in error in selling capsicum, then every patent medicine vendor in the kingdom was liable to be indicted. Mr. Justice Williams, in charging the jury, said, that if the prisoner had been guilty of an unlawful act in the administration of the medicine, he was undoubtedly responsible for his conduct, and was guilty of manslaughter. The first question the jury would have to decide was this, whether they were satisfied that the death of the deceased was attributable to that unlawful conduct; and that the death of the deseased was the result of the medicine administered to him by the prisoner after the latter had undertaken the treatment of the case. The law of the land upon the subject was this, that there was no distinction whatever to be drawn between the case of a man who had qualified in the ordinary way for the practice of medicine, and a person who had not done so. Whether a medical attendant were authorised or not to act as such, made no difference; he was not responsible criminally for any mistake of judgment which might be imputable to him, unless that mistake of judgment could fairly be attributable to gross ignorance or want of skill on his part. The most eminent practitioner that ever lived had made and might make a mistake in the treatment of a particular patient, and he was no more responsible for that mistake than any other practitioner would be of lesser skill. In other words, if it were a mere mistake of judgment, he would not be responsible; but if the mistake he had made would not have been made but for his want of skill, then he was answerable for the consequences, because no man had a right to undertake the treatment of the disease of another, unless he was possessed of competent skill and judgment. Therefore, the inquiry was divisible into two branches,—first, was it made out to the satisfaction of the jury that the death of the boy, William Probee, was caused by improper medicines administered to him by the prisoner after he had undertaken the treatment of the case? If they were satisfied that the medicine was a proper medicine, and that that medicine had not superinduced the death, of course there would be an end of the inquiry; but if they should be of opinion that the death was attributable to the administration of the medicine, then would come the inquiry, was the administration of that medicine the result of ignorance and want of skill? The case was undoubtedly one of first-rate importance, because it was most salutary for the interests of the public that an unqualified person, acting ignorantly and without skill, should be punished for manslaughter if death resulted from his acts. The jury then returned a verdict of Not Guilty, and the prisoner was discharged. *Pharmaceutical Journal.*

Calendar of Operations.

(For the ensuing week.)

LET shifting, if necessary, be done early, in order that the pots may be well filled with roots before the approach of winter. A compost, consisting of three parts fibrous peat, in a lumpy state, one part free turfy loam, and a little silver sand, will suit most kinds of half-hardy plants with the exception of Heaths, which succeed best in peat without any admixture except that of a little silver sand. In potting take care to secure thorough drainage. The crocks should be carefully placed to provide various outlets for the water; these, again, should be protected by a smaller size of pounded crocks and charcoal; and finally, the rough of the compost should be selected to place the ball on. This mode of arranging the parts of the compost, as also the drainage, will be found advantageous, if not absolutely necessary, where liquid manure is constantly used.

FLOWER G RDEN AND PLANT HOUSES.

Now is the time to encourage rapid and sturdy growth in young Correas, Epacrises, Pimeleas, Chorozemas, Leschenaultias, Polygalas, Heaths, &c. A constant stopping of gross shoots will be necessary, in order to equalise the distribution of sap and encourage the lower parts of the plant to develope themselves. Out of doors, early bulbs now ripening, if turning yellow, should be taken up, or the greater portion of their leaves trimmed away. Verbenas, Petunias, and such things should be frequently pegged down where it is requisite to cover the surface of the beds speedily.

AURICULAS.—Give abundance of air, and protect the plants from heavy rains.

BALSAMS AND COCKSCOMBS.—These must now be encouraged to grow freely, giving them a little weak liquid manure occasionally, and accommodating them with larger pots as they may require them.

DAHLIAS.—Replace at once with fresh plants, such as may have been killed by the late frosts, and secure them from injury by wind; also water overhead as well at the root in fine weather.

GLOBE AMARANTHUS.—These may receive the same treatment as Balsams and Cockscombs.

FORCING GARDEN.

FIGS.—Give abundance of water or liquid manure, if in pots or tubs.

MELONS.—Set shy sorts, and sprinkle frequently to keep off red spider.

MUSHROOMS.—Let old beds be examined as soon as they begin to go out of bearing. If, upon removing the soil, the dung appears decayed or exhausted, the bed should be immediately renovated; but if, as often happens, the beds are found in good order, solid and full of spawn, they should be watered moderately with tepid water, if they are found to require it, and in a day or two afterwards the surface should be covered with 2 or 3 inches of loamy soil. In hot weather the house should be kept as cool as possible, without throwing it open; in order to assist in effecting this, the paths and walls should be sprinkled frequently with cold water, and the evaporation allowed to escape at the top. Continue to collect horse-droppings, and let them be stored up to make new beds, or to renovate old ones.

PEACHES.—Give frequent waterings to these in their last swelling; continue to pinch luxuriant shoots, and to use the syringe liberally.

PINES.—In shifting let great attention be paid to having complete drainage; no after-management will compensate for the omission of this. Take care to thin growing stock in due time, giving abundance of room to plants approaching the fruiting period. Pines swelling fruit will now enjoy liberal waterings of clear liquid manure once a week, with fine syringings occasionally, more especially between their stems.

VINES.—Follow up former directions. Grapes just colouring should be assisted by a high temperature in fine weather, accompanied, however, with abundance of air; a moderate amount of fire heat should be provided should the weather become wet or cold.

HARDY FRUIT AND KITCHEN GARDEN.

Give the wood of Peaches a thorough thinning; don't reserve a shoot more than is wanted for next year. This, and keeping down insects, is the way to obtain success. Disbud Figs, retaining no more wood than is required for next season. Be sure to select for bearing, the shortest-jointed shoots.

CELERY.—Take advantage of the present showery weather to prick out young plants.

PEAS.—Sow for succession as may be required. Maclean's improved sorts are well adapted for mid-season work.

RIDGE CUCUMBERS.—These, Gourds, and Vegetable Marrows may be planted now; the first two in the usual way on prepared beds of rich soil, with the temporary protection of handlights; the last in vacant places where proper stations for vigorous growth can be secured. In preparing the beds for Ridge Cucumbers, some pieces of Mushroom spawn may be laid on a layer of half-rotted dung a few inches from the surface; by the time the leaves of the Cucumbers have extended themselves over the bed, the Mushrooms will appear beneath them, and thus be protected from the heat of the summer's sun.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending June 8, 1864, as observed at the Horticultural Gardens

June.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 2	27	29.788	29.724	62	48	55.0	57	56	E.	.00
Friday 3	28	29.807	29.797	62	39	50.5	57	56¼	N.E.	.07
Satur 4	●	29 914	29.876	69	35	52.0	57	56⅜	N E.	.26
Sunday 5	1	29.935	29.848	71	49	60.0	58	57	N.E.	.00
Mon. 6	2	29.971	29.921	75	36	55.5	59	57	W.	.02
Tues. 7	3	29.994	29.908	80	44	62.0	60	57	W.	.00
Wed. 8	4	29.906	29.814	79	41	60.0	61½	58	W.	.00
Average.		29.902	29.827	71.1	41.7	56.4	58.5	56.8		.35

June 2—Lightly overcast; fine; dry slight haze; overcast.
— 3—Rain; fine at night.
— 4—Clear, quite cloudless; exceedingly fine; rain at night.
— 5—Very fine; cloudless; exceedingly fine; mild at night.
— 6—Very fine, with a few light clouds; fine throughout.
— 7—Very fine, hot and dry; fine.
— 8—Very fine; sultry; very fine throughout.
Mean temperature of the week 1 1-5th deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending June 18, 1864.

June.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 12 .	70.9	49.1	60.0	18	0.78 in.	—	7	3	2	7	13	3	3
Mon. 13..	71.8	48.4	60.1	18	0.56	1	5	6	1	2	12	9	2
Tues. 14..	73.3	48.6	60 5	17	0.48	1	3	6	1	6	11	9	1
Wed. 15..	72.9	48 8	60.3	16	0.38	1	5	7	2	4	10	3	6
Thurs. 16..	72.5	49.0	60.2	17	0.46	3	3	8	1	10	7	3	3
Friday 17..	72.9	48.0	60.5	21	0.80	2	4	4	—	7	10	6	5
Satur. 18..	72.7	49.9	61.3	19	0.81	4	2	4	3	6	6	10	3

The highest temperature during the above period occurred on the 12th and 13th, 1842—therm. 90 deg.; and the lowest on the 15th, 1850—therm. 30 deg.

Notices to Correspondents.

FIGS: —. Leaves of Fig trees differ considerably on the same plant; but that you sent is too deeply lobed for either the White Ischia or the White Marseilles.‖

GRAPES: *A B.* You will be aware that Muscat Grapes generally do not set so freely as the Hamburghs; but the Bowood Muscat sets just as well as the White Muscat of Alexandria.‖

GYMNOGRAMMAS: *Alpha.* There have been various instances of the same fronds producing distinct portions coloured respectively by the golden and silver powder, and we have heard of distinct fronds—gold and silver—being produced on one plant, but we have never heard of the spores of gold Ferns producing a crop of the silver, or *vice versâ*. Even such cases as those referred to are, comparatively, very rare.

NAMES OF FRUITS: *H C L.* Dumelow's Seedling or Wellington Apple.‖

NAMES OF PLANTS: *G.* Viburnum Lentago.—*G S T.* 1, Myrrhis odorata; 2, Peucedanum Ostruthium; 3, Pimpinella magna. — *Buitenzorg.* Actinodaphne scleroptera, we believe; certainly not Camphoromœa laxa.—*Enquirer.* Eriophorum angustifolium, common in boggy places.—*A W.* Half-grown twigs of Willow, wanting both flowers and mature leaves, are not safe specimens to name; yours appear to be: 1, Salix aquatica; 2, S. cinerea.—*Justitia.* No. 1, not received; 2, not in a state for determination; 3, Pyrus Aria.—*Peter Gray.* Your seedling Rhododendron is not better than Dalhousiæ, which it much resembles. It is not desirable to name such a variety until its qualities—good or bad—are better known. Besides, bad packing has ruined the two flowers both in colour and form. We like the foliage.—*J B.* Carex pallescens.—*A J.* The blue one is certainly Polemonium cœruleum; the white seems to belong to P. lacteum, a variety?—*Anon.* 1, Peucedanum palustre; 2, Chærophyllum temulum; 3, Stachys arvensis; 4, a bit of Populus tremula. —*J M.* Luzula nivea—a Rush, not a Grass.—*Truro.* 1, Cynosurus cristatus; 2, Lolium perenne; 3, Holcus mollis; 4, Poa trivialis—all the commonest of the common.—? *St. Asaph.* Ornithogalum pyrenaicum and Anthericum serotinum.—*C E F.* Pyrus Aria.—Answers to one or two correspondents are unavoidably deferred till next week.

STRAWBERRIES: *G L.* Your Strawberry is of the Chili breed and partakes too much of the nature of the original as regards a large hollow core. This is evidently an objection, although it may possess tolerably good flavour; of the latter, however, in packed and travelled Strawberries we cannot fairly judge. We thought it not equal to Sir Charles Napier, even making allowance for deterioration from carriage.‖

THE LONDON MANURE COMPANY have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
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They also continue to supply GIBBS'S PERUVIAN GUANO NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
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	Per ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
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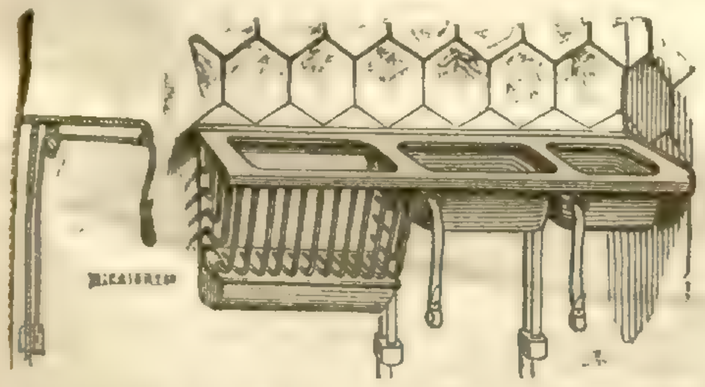

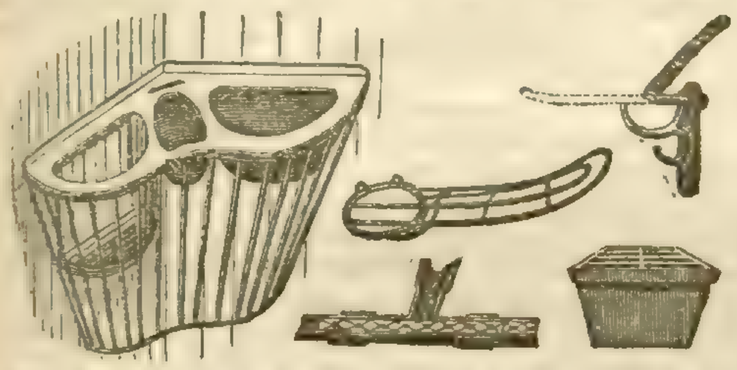

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ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.
SPRING SESSION, 1864.
President.—The Right Hon. the Earl BATHURST.
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Rt. Hon. the Earl DUCIE. | EDWARD HOLLAND, Esq., M.P.
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Drawing.—JAMES MILLER.
SPECIAL LECTURERS.
J. BAILEY DENTON, M. Inst. C.E.—On DRAINAGE.
Professor J. MORRIS, F.G.S., of University College, London—On GEOLOGY.
JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.
WILLOUGHBY WOOD, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.
JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.
JOHN THORNHILL HARRISON, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.
THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.
ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.
RICHARD GRIFFITHS WELFORD, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.
Applications for Admission and for further particulars may be made to the Principal.

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MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

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2, Old Palace Yard, Westminster, S.W.
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Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
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For particulars, apply to him, at 52, Parliament Street, Westminster.

THE MIDLAND FARMERS' CLUB.—The FIRST GENERAL MEETING of the MIDLAND FARMERS' CLUB will be held at the Odd Fellows' Hall, Temple Street, Birmingham, on THURSDAY, June 23, at 2 o'Clock.
Subject for Discussion:—"The PRESENT POSITION and FUTURE PROSPECTS of ENGLISH AGRICULTURE," which will be introduced by R. C. CHAWNER, Esq, the President.
A DINNER will be provided on this occasion for Members of the Club at the Acorn Hotel, Temple Street, at 4 o'Clock punctually. Tickets, 2*s.* 6*d.* each, exclusive of Wine. An Early application for Tickets, at the Bar of the Hotel, is particularly requested.
Members will be enrolled on the day of the Meeting, for which purpose the Secretary will attend at the Cattle Show Offices, 13, Temple Street, from 12 until 2 o'Clock.
June 11. JOHN B. LYTHALL, Secretary.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE, 1864.
The LOCAL EXECUTIVE COMMITTEE have arranged for a Registry of Lodgings and other Accommodation for Visitors to Newcastle during the Show, to be kept by Messrs. C. BROUGH, Academy of Arts, Blackett Street, and G. MURAS, 4, Northumberland Street, to whom applications must be made.
R. DODDS,
E. I. J. BROWELL,
WALTER JOHNSON,
JACOB WILSON,
} Hon. Local Secs.

The Agricultural Gazette.
SATURDAY, JUNE 11, 1864.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	June	13	Bath and West of England Society Show at Bristol. Entrance to the Yard, 2*s.* 6*d.*
TUESDAY,	—	14	
WEDNESDAY,	—	15	
THURSDAY,	—	16	Do. do., entrance 1*s.*
FRIDAY,	—	17	
WEDNESDAY,	—	15	Norfolk Agri. Society—Meeting at Lynn.
			Royal Agri. Society of England .. Noon

—— An appeal against a rate made by the overseers of the parish of Brinkworth, Wiltshire, in accordance with the recent valuation list made by the assessment committee of the union, was heard on Thursday before the Court of Queen's Bench. It appeared that the farms in that parish had been rated upon their actual rentals. The farm of the appellant (146 acres) was thus assessed on a gross rental of 300*l.*, while a neighbour's farm of the same quality of land (244 acres) was assessed on a rental of only 400*l.* a year; and so, on the same principle, several other farmers, occupiers in the same parish, were rated less than the appellant, who contended that the lands should have been rated on their net annual value, not on the actual rentals paid. This contention was allowed by the Court, who decided that the right test of annual value is not the actual rental but such rent as could reasonably be expected to be paid. The judgment accordingly was for the appellant.

—— We have to express our regret that the publication of a letter from Mr. SMITH, of Woolston, on Mr. RANSOME'S recent lecture on steam cultivation, also of a further discussion of the question "What is Agricultural Condition?" by our correspondent "J. B. M.," has been unavoidably postponed.

THE agricultural event of the coming week will take place at Bristol. The Bath and West of England Agricultural Society there hold their annual exhibition; and it is confidently expected to be a very great and successful agricultural gathering. Those of us who were present at the Bristol meeting of the Royal Agricultural Society of England will probably see that the illustration of the agriculture of a mere province which the coming week will witness—far exceeds in the extent, the value, and the quality of the articles exhibited the effort of the national society 20 years ago. This will be owing not merely to the unquestionable advance in agriculture which has been witnessed since that time; but also to the extraordinary energy and activity of that new lease of life which within that period the provincial society seems to have acquired.

And it is not only in its annual show of live stock and of implements that this great access of power and life is seen—the Journal of the Society vies as closely with that of the National Society as the show of the one approaches that of the other. The current Number of it which has just been issued, illustrates a number of points in its management, in which it might be copied with advantage by its rival. Besides the subjects proper for agricultural discussion at any time, such as Precocity of Development in Breeding Animals, here discussed with great ability by Professor BROWN, V.S.; the Natural History of Plant Parasites, by Professor BUCKMAN; and Arboriculture, by M. DE LA TREHONNAIS, the topics of the day and of the locality occupy immediate attention. Thus it is *apropos* of the Gloucestershire meeting that Mr. MORTON writes on Gloucestershire farming, and that Mr. HARRISON discourses of dairy management. And it is

apropos of a subject which has only lately been brought into agricultural prominence, that the Rev. J. L. BRERETON writes on middle class education. And besides the six substantial articles which have been thus referred to, there is a note book of as many pages appended, in which there have been collected for the readers of the volume, the chief items of agricultural value which have since the last issue appeared in agricultural literature elsewhere. Dr. VOELCKER and Professor DAUBENY, Professors THURY, of Geneva, and A. H. CHURCH, of Cirencester, Messrs. HARDING, C. W. JOHNSON, BLENCOWE, FRERE, WHITLEY, and others, are thus made to contribute to the agricultural information of the Western Counties; and these have distributed among their cultivators the agricultural information of the whole country, as well as the special contributions commissioned from selected agricultural writers.

Of the two Gloucestershire papers, that by Mr. MORTON has been written to illustrate the extraordinary advance in the arable farming of the district, and the comparatively stationary character of its pasture farming during the past 50 years, and especially during the past 20 years of his acquaintance with it. It appears that Gloucestershire experience proves the increasing fertility of the plough land under the ordinary agricultural management of the county. But it also proves that the produce of grain and meat which has so marvellously increased under arable culture has no corresponding counterpart in the produce of the Grass lands of the county. There is no such increased stock kept per 100 acres, nor is there any such increased annual produce from the stock which is maintained upon the Grass lands of the county as there is upon its arable lands. The object of the paper accordingly is to urge upon the owners of the dairy land of Gloucestershire the safety and the policy of such an extension of arable culture as would not alter, but facilitate and improve the dairy management of the farms. In order to the full and profitable development of the dairy system, it needs that at least one quarter of the land be arable.

It is however Mr. HARRISON'S paper on Dairy Statistics that readers will more especially receive as the leading article of this number of the Journal. It is one of the most important contributions which have for many years been made to the exact knowledge of English agriculture.

In a dairy of 60 to 90 cows on one of the best dairy farms of the Vale, an exact record of the produce of milk, cheese, butter, and bacon, has now for nine years been kept; and the lessons which these statistics teach on the policy of various details of management—on the value of breed or family descent—on the cost and profits of breeding from 2-year-old and 3-year-old heifers respectively—on the profits of dairy husbandry generally—and on the importance of a large percentage of plough land on the dairy farm, are of the very highest value and importance. The following are among the conclusions to which this paper leads us:—

1st. That it is desirable for the dairy farmer to rear his own stock, so that he may improve his herd, and, by using superior bulls, that the calves he has to sell may be of more value for rearing.

2d. That it is to his advantage to wean his heifer calves early, and, by his liberal treatment, to encourage their growth and bring them into the dairy at a little over two years old.

3d. That winter-dairying may be successfully carried on, and that by liberal feeding the cows will give almost as much milk as in the summer, without materially affecting the summer's yield.

4th. That a certain portion of arable land attached to every dairy farm—probably one-third—would greatly assist the farmer in supplying liberal feeding.

5th. That, as a considerable portion of the value of the food purchased goes to enrich the land, the farmer who uses much oil cake and other purchased food is improving the staple of the land.

6th. That it is to the advantage of the landlord to encourage liberal feeding, as tending to this improvement of his estate.

7th. That for this purpose he should erect suitable buildings for comfortable winter-housing of the stock, and encourage the breaking up of a portion of the poorer Grass lands.

The Frocester Court statistics will be quoted by all future writers on dairy husbandry as the first attempt which English agriculture has witnessed on so large a scale at the substitution of exact and recorded observation for that mere impression, vague belief, and rule of thumb by which our very respectable achievements in dairy husbandry have hitherto been accomplished.

We hope to publish Mr. HARRISON'S paper at length hereafter. Meanwhile we are glad to have had placed in our hands a series of lectures which that gentleman has been lately giving at the Royal Agricultural College on the same subject. The interest of that ultimate publication of such a course, in separate form, which will we hope be hereafter carried out, will not, we believe, be injured by the abridged syllabus of the several lectures which we hope to lay before our readers in successive numbers of the *Agricultural Gazette*.

THE Royal Agricultural Benevolent Institution may now be regarded as firmly established on the noble list of this country's charities. Founded but a few years ago by Mr. Alderman MECHI, and educated though a very promising youth by his unwearied labours, it has now attained its full majority, and is surrounded by troops of friends in all classes of the agricultural world, who lend their assistance and their patronage to its praiseworthy labours of love. Lord STANLEY, who presided at its annual meeting the other day, informs us that its income is now 3000*l.* per annum, that its funded property is 8000*l.*, and that it has already between 30 and 40 pensioners on its list. His lordship did not confine himself to a description of the charity, but pronounced a very able defence of the principle on which it is established. Indiscriminate charity has been well described as creating the distress which it relieves, but as failing to relieve all the distress which it creates. No such charge can be brought against the Agricultural Benevolent Institution, or against any of the professional charities which it resembles. As well might you expect a man to be made more reckless of his life at sea because of the institution of the Life-boat, as imagine the farmer less careful of success on land because of the institution of this Charity. To remove, however, the somewhat degrading idea of mere charity, as far as possible, Lord STANLEY proposes that as in the corresponding Gardeners' Benevolent Institution, the preference should be given at elections, on its foundation, to those candidates who have themselves contributed to its funds, and thus acquired a right to its advantages.

The other point referred to by the Chairman is one to which our readers and agriculturists generally ought to direct their attention. It appears that while certain counties, Essex, Middlesex, and Hampshire furnish hundreds of subscribers to this charity, others, as Yorkshire, Lancashire, and Cheshire, have very few. This defect or deficient agency is one of easy remedy. Lord STANLEY'S own words are these:—"Wherever there is a landlord or a land agency there we ought to have a friend and a supporter." We hope that Mr. SHAW, the Secretary, will have these words widely published, and that means will be taken to authenticate and authorise the efforts of any who may be disposed to call the attention of the agricultural body of his neighbourhood to the propriety of those claims which this charity makes upon their benevolence.

ADMIRAL FITZROY thus calls attention to the possibility of foreseeing the weather during harvest time:—

As the hay-making season is beginning, and harvest will soon follow, with usual anxieties among the agriculturists about dry or rainy weather, may I ask you to remind so large a class of the community that by keeping a very brief but regular tracing of the barometer and thermometer on paper ruled in small squares (say the tenth of an inch in size), and noted only once a day—at about eight in the morning,—much insight into coming change or continuance of weather may be easily obtained? Once a day gives a more useful line or trace than oftener would do, as its angles, with the squares, show states of atmosphere more uniformly and evidently. Air, like surface of water, is not moved, depressed, or raised suddenly, nor does it, after being so waved or undulating, regain a quiet, balanced, and nearly level condition at once Such a diagram, with its explanation, is given in my report for this year, presented recently to Parliament.

I do not mean the paper entitled "Weather Forecasts," which is not mine in any way.

In useful connexion with these suggestions to farmers may be observed that there are sound reasons, in theory as well as practice, for saying that the veering of wind "with the sun," or "right-handed," as a sailor would say, foretells drier or better weather, and that its "backing against the sun," or "left-handed," indicates rain, or wind, or both together. The turn of the winds in Ireland, Scotland, or Cornwall is usually in advance of Midland English Counties and eastern coasts from half a day to two days—a useful forerunner.

AGRICULTURAL NOTES.

BY MR. ALDERMAN MECHI.

TWENTY-TWO YEARS' EXPERIENCE IN DRAINING.—In 1842 I drained most of my farm. On the stiff clay side (plastic yellow clay, like bird-lime in winter and cast-iron in summer, too strong to make bricks, free from lime, but abundantly supplied with iron-rust), I drained 32 inches deep and 12 feet between the drains—the lower part of the drain filled with small stones to the depth of ten inches, and above or rather over the stones a 2-inch pipe, which binding against the sides of the drain, prevented any surface soil falling in among the stones. Well, it seemed an odd fancy, and just as it was finished Mr. Josiah Parkes's able paper and the 4 feet drainage made me think I had committed a folly, and so, after having drained about 75 acres in this way, my further drainage was done at wider intervals and deeper, with pipes alone. Twenty odd years have rolled away, and year by year my labourers and myself have watched closely every field and every drain, and we have noted that the closely-drained land with tile and stone is always forwarder and more quickly dried than the wider and more deeply drained; that it harrows more freely and friably, and requires less harrowing than the wide drained, and every drain works as perfectly as it did 20 odd years since.

Now do not for a moment let it be supposed that I am condemning the modern system of deep draining with pipes alone, which I know to be efficient, especially in soils having any friability; but I am convinced of this—that on our very stiff clays, especially in wet climates, it is most desirable to have the drains near to each other, say 18 feet or less, and also to have ample sized pipes, not merely for the purpose of draining the land, but for ventilating the subsoil. It is on this principle that I consider my close stone and tile drains so effective, and it is on this principle that I advocate, where opportunity offers, to fill the drain with porous material, or stones—the "area of porosity" in the drain, which I once propounded as a theory, has still a strong hold on my mind and on those of my more practical labourers, who say "Ah, sir, there is nothing like your first drainage: see how regularly the corn dies or ripens in colour, even in the furrows, and see how well it works after winter."

A great deal of draining work is being done by Messrs. Eddington, of Chelmsford, by a powerful engine working a mole plough, at 3 feet deep and 16½ feet intervals. No pipes are put in, but a tunnel larger than a tumbler is formed by the mole forcing its way and compressing tightly the earth or walls of the tunnel. Although I had considerable doubt about its success, especially in our collapsing and uncertain clays, I have seen and know of so many instances of its success that there can be no mistake about it. A good deal has been done in my own neighbourhood. It is a cheap, quick, and effective way of getting rid of surplus water by a tenant farmer, who has no compensation for drainage,—from four to seven acres can be done in a day. The cost, including horse and manual labour, coals, hire of engine, &c., is under 2*l.* per acre. I believe out of this 16*s.* to 18*s.* per acre is for the hire of engine, with drivers, &c. The drains are, I believe, one rod (16½ feet) apart.

The compression must be intense, for, on cleaving through the soil, the upper surface is moved and shaken like a small earthquake, and, no doubt, this breaking or lifting in addition to the cutting knife above the mole must admit water freely to the conduit.

The Messrs. Eddington let out many engines for this purpose, and for ploughing, threshing, &c.

I again commend my friends who farm very stiff unctuous clays, in cold wet elevated districts, to have their drains near to each other. In our cereal southern districts we have the advantage of many wide cracks in the soil. *J. J. Mechi.*

BIRDS AND TREES.—Although a decided enemy to hedge row timber, I am a great advocate for shrubberies, parks and plantations, judiciously placed at wide intervals, so as to afford climatic shelter, and proper refuge for the feathered tribe. I look upon birds as real farmer's friends, and not only encourage them in my shrubbery, but give to 300 fowls free access to all my fields. I hope that the ladies will take due note of this, in justice to me, for I know that I have been looked upon as a perfect savage in the destruction of those miserable old ugly Pollards and misshapen hedge-row trees which surround the paddock-like fields of Devonshire and other counties, and absorb the farmer's means. I am very fond of taking enlarged views, seeing in the distance a noble farmery, ample fields, rich crops, neat hedge-rows, variegated shrubberies and plantations, and now and then a noble tree; and I cannot for the life of me comprehend the gratification of wending my way for miles between hedge rows so high that the country is lost to my view even in a carriage, except an occasional glimpse of a four-acre field over the gateway.

I am a great advocate for winged game and rooks, for although they may cost us a trifle during the winter season or seed time, they certainly do us a more than compensating amount of good. When visiting the French department of the International Exhibition, I was very much struck by the inspection of a paper or volume containing an account of the food of a great variety of birds during each week of the year; and saw at once how much man was indebted to these interesting creatures for their destruction of the enemies to his crops.

Each bird was there (stuffed) as well as the description of its food. During the hatching season, the quantities of grubs, caterpillars and flies, carried by larks only to their young, are very great. Ground game do not eat insects, therefore I say little about them, except that a boiled rabbit or roast leveret is very nice now and then. *J. J. Mechi.*

UTILIZATION OF TOWN SEWAGE.—A Sewage Committee of the House of Commons is now sitting, and a very valuable mass of engineering evidence will be given to the public, enabling them to form an opinion of the practicability of conveying sewage to a considerable distance at a very small cost. Two eminent

hydraulic engineers, Mr. West and Mr. Hawkins, tell us that there will be no difficulty in pumping sewage, and that the cost of raising it to an elevation of 300 feet (nearly the height of St. Paul's, certainly higher than the Monument), would be from 13*s.* to 14*s.* per 1000 tons, or three-eighths of a penny per ton. We can easily imagine what a pressure and jet we should get from water or sewage at such an elevation, but if the required height were only 100 feet, we should get about 8 tons for a penny; but there would be pipes to lay down, the sewage to pay for, and the profits of a company, but even so, I expect that sewage could be laid down on the farm at three halfpence per ton. In my opinion the great value of sewage is the water. One hundred tons of water per acre represent a rainfall of 1 inch; and we know that such a rainfall for Grass land during the growing and summer months would be cheap at one penny per ton, or 8*s.* 4*d.* per acre; leaving out of the question the valuable sewage elements. It appears from Mr. Cuthbert Johnson's evidence, that the sewage water from Croydon never freezes in winter, therefore it must thus have a much higher temperature than the air and thus stimulate vegetable growth; for on the temperature of the earth depends in a great degree the growth of the plant.

I have a strong evidence of this in my conservatory, where, in the vicinity of a passing flue, my Camellias luxuriate and flower in November and December, at least two to three months earlier than those on the opposite side, where there is no subterranean heat.

Altogether, I anticipate that we shall get from this Committee, when the evidence is published, a most valuable mass of information on the sewage question.

One thing is quite certain, that to feed the people of the great metropolis, and the animals which they employ, the produce from six millions of acres, landlord's measure, is annually required, and, as I have said before, it appears to me most unfair that the results of such a consumption should not return to the lands which have been thus stripped of their produce and their fertility.

Mr. Cuthbert Johnson said on Thursday, in answer to a question from Mr. Caird—"If they applied the sewage to land in their own possession they would have no difficulty in letting it for 15*l.* per acre."

This reply has reference to 300 acres of land, which the Board of Health let only 4 years ago to Mr. Marriage, at 5*l.* per acre. Surely this is a real landlord's question, if the application of town sewage is to increase so rapidly the value of land.

Mr. Johnson lives at Croydon, where the value of the land for farming purposes is under 2*l.* per acre. *J. J. Mechi.*

HOW TO MAKE GOOD HAY.—I give my experience in this matter, and submit it to the criticism of my keen practical friends. I lay down as a principle that good hay should be green. If the cut Grass were immediately desiccated or dried artificially it would be green. It is the long exposure to the sun's rays that takes away its colour, and gives evidence of improper making. I lay down as another sound theory that Grass immediately after cutting should be either flying in the air by means of the machine, or be on the cock. As fast as the Grass is cut it is immediately sent flying into the air; and we keep on at this all day until the approaching fall of dew, before which time it must be put on the cock, for the dew is almost as bad as rain. A lady's dress or veil in the summer evening will give evidence of this. Grass after cutting should never be allowed to lie on the swathe or rake row, or lie spread over the ground. The damp from the earth prevents its making, whereas on the cock it heats slightly and makes much quicker than even when exposed to the sun on the ground.

I will give an instance of this. Two-thirds of a field of Grass were put into large cocks, the other third left on the rake row. It was on a Saturday, the weather being brilliant from Saturday to Monday. On Monday we carted, and it was found that the cocked Grass was much forwarder than the rake rowed, which had in consequence to remain out longer.

It is easy to understand this, for, in dry weather, you will always find damp under any covering you put over the soil. I commend this question of flying in the air or putting on the cock to our Scotch, Irish, and Lake Country friends, whose mountains give them frequent rainfall or a fine moist Turnip atmosphere.

It is easy to understand that scattering the separated blades of Grass high and rapidly through the air is, in fact, like blowing a gale of wind through them, and the Grass is thus quickly deprived of its moisture without losing its colour and quality by long exposure to the sun's rays. If dried artificially it would get heat without sunshine, which is just the north country and Irish condition. I would impress upon our machine-makers to increase the rapidity of motion of their circular rakes, so as to give an ample throw or spread without causing the horse to walk fast or trot. This is especially necessary with heavy crops, which I hope all my practical friends grow, and which I know they will be sure to have when they use town sewage for irrigation. A friend of mine who drives four-in-hand had such an immense crop of hay in his park, that he worked his tedding machine and his horses at full gallop, and thus got a splendid hay crop. The horses were ridden *en postillion*. In getting heavy crops of Italian Rye-grass into hay, it is absolutely necessary to have rapid motion; and I need hardly say that this Grass will bear cutting and carting earlier than meadow Grass.

Our mutual friend, Mr. Dickenson, got up a capital and extensive crop of hay during the miserably wet season of 1860 by the means I have suggested. If it rained, which was almost constantly, the hay was on the cock; an hour or two dry, the cocks were opened—several machines constantly going when the slightest opportunity presented itself.

As to stacking, those who have a covering can choose their own time. I observe that all keen hay-makers take care to have the carts heavily laden some time before unloading, for the bottom and middle of the stack, so that it should thus get a preliminary heating, as it is likely to have the greatest pressure and the most difficult escape of heat. I consider the drying in the air and the heating in the field cock the two important matters—and I need hardly say if you have not a rick cover if should be thatched immediately it is finished. It is easy to understand that hay when cocked in large cocks only occupies probably one-tenth or less of the space of the field, therefore if one inch rainfall takes place, it only gets one-tenth of the rain that it would have if spread over the field. The larger the cocks the less the injury from rain, but the cocks must be opened on every favourable occasion. We only want to get the moisture out of our Grass, preserving its colour and qualities. There is no place where they understand making hay so well as near London. The size of their ricks, the care with which they are pulled, or plucked so as to have a solid outside, and the neatness of thatching and cutting out, deserve imitation as well as admiration. *J. J. Mechi, June*, 1864.

DWELLINGS OF THE LABOURING CLASSES.

THE following report of the second day's Conference on this subject before the Society of Arts is abridged by permission from the Society's Journal.

The Chairman, W. HAWES, Esq., said: To-day the business before them was the consideration of the fifth head under which the subject to be submitted to the Conference had been divided, viz., "Remedies: A. What can be done by legislation? B. What can be done without legislation? and, What assistance, if any, can the Society give in either of these directions?"

On the ground of the many general benefits which would ensue were the labouring population well housed, and on the ground that Parliament already interferes and legislates for the regulation of labour in factories and mines, also for carrying the working classes on railways at less than the regular fares, and in the construction of houses generally—advances large sums for school buildings, and to encourage education—spends large sums annually in the maintenance of prisons, and lunatic asylums, and other establishments rendered necessary by the vice and crime so often engendered in the present bad buildings in which the working classes were condemned to live; confines and holds in custody thousands who would have earned an honest livelihood had they been brought up from infancy in proper dwellings, there was no force in the abstract objection to Government interference, if it could be shown that the object was a national one—he submitted that they could, and without new legislation, materially aid in promoting the object in view. At present money was advanced on loan, through the Public Works Commissioners, at a low rate of interest, to landed proprietors for drainage and other improvements; and public works of various kinds might be assisted on the same terms, proper security being taken for the repayment of the loans. Now, suppose that by such assistance a portion of the capital requisite for this special class of buildings could be obtained at such a low rate of interest as would just turn the scale and make their erection a good commercial speculation—could anyone doubt that there would be plenty of builders ready to provide ample and proper accommodation for the working, as they now do for the upper, classes? Supposing, for instance, such a block of buildings as that represented by the model on the table cost 100,000*l.*, and that an income of 8 per cent. could be obtained from it, it was clear that if one half of that sum or 50,000*l.* could be borrowed from the Government at 3½ per cent., the interest on the other half would be raised to such a figure as would induce builders to supply the rest and enter upon such speculations. If the moiety of the 100,000*l.* was repayable by a sinking fund in 30 years, the other half would still bear a high rate of interest, and by such legitimate means commercial speculation would be excited in this direction. In conclusion, then, he would say in reply to the question—What could be done by legislation? that relief for fiscal burthens on this kind of property could be afforded, and could be justified in the interests of the State; and, secondly, as to What could be done without legislation? that there was authority under existing Acts by which money could be lent for the purpose of building dwellings for the industrious classes, which, if brought into operation, might fairly be expected to yield most beneficial results. Do not let it be said we lend money to the landlord to improve his property, and refuse to lend money to find a decent house for the workman. He therefore hoped, in considering this question, they would not treat it as one for the benefit of the working classes alone, but that they would regard it from a broader point of view, as a measure of most pressing urgency, and calculated to confer most important benefits on the whole nation.

Dr. HANCOCK (of Dublin) called attention to the differences in the legislation on this subject in England, Scotland, and Ireland. Scotland was in this respect in advance of the other portions of the United Kingdom. The next question was—Why had not those powers in Scotland and Ireland been more extensively exercised? He thought the reason the owners of entailed estates had not done more was indicated in one of the resolutions passed on the previous day—viz., that the Law of Settlement stood in the way. The effect of the Law of Settlement was that it attached the liability to the wrong place—viz., where a person was born. That, in itself, was destructive to the increase of labourers' habitations.

Mr. THOMAS HARE explained the provisions of the Bill to which he had alluded on the preceding day (see page 541), "An Act for amending the law of tenure and conveyance of certain real property within the limits of the metropolis, and for facilitating the acquisition and transfer of certain lands, tenements, and real estate therein, and especially of dwellings and interests of smaller value, and for extending the benefits of the law hereafter to other parts of the United Kingdom." The Chairman had suggested loans by the Government for these purposes; and he would add clauses to the proposed Bill to that effect. Such assistance might be given directly to the working classes. By the repayment of 3*s.* per week—half the present rent of inferior accommodation—in 15 years a man could redeem a mortgage of 100*l.*, and pay 6 per cent. upon the money borrowed. What could be more profitable than that, both for the State and the people? And what better security could be afforded for the repayment of the money?

Rev. A. W. THOROLD was satisfied this object could only be successfully accomplished on a commercial basis. With respect to legislation, the Chairman had laid down another proposition, equally true—that no Act of Parliament would affect either the value of land or the value of labour and materials for building. All they wanted from the Legislature was to assist them as far as possible in removing the obstacles which were admitted on all hands to stand in the way of this movement. He had no doubt an Act, such as Mr. Hare had sketched, would make land more available for these objects.

Mr. HARRY CHESTER invited attention to the Acts which had been passed from time to time to afford facilities for conveying sites for schools, &c. It was therefore, he apprehended, competent for them to ask the Legislature to afford similar facilities for the provision of sites for cottages.

Mr. J. GREGSON, M.P., agreed with the provisions of the Bill submitted by Mr. Hare, for facilitating the easy transfer of small properties. He thought, however, that a permissive bill was seldom of much value. As to compelling railway companies to purchase more land than they required, he thought Parliament would never pass such a measure as that. The statement that building societies as a whole had not been successful was opposed to the impression he had always entertained. The Chairman was quite right in saying they must not look to benevolent principles for the accomplishment of their object; the commercial principle was the only one that could be relied on. Then the next question came, how were they to construct these houses so as to make them commercially remunerative? One way of doing so was by means of loans from the Government, on the system pointed out by the Chairman. Referring to the returns of this description of houses, published by Mr. Twining, he found that the rents were on the average so low that he was afraid they would scarcely pay a rental to provide a sinking fund for the repayment of the loan.

Mr. G. GODWIN, F.R.S, thought it would be well that a short resolution should be proposed to the effect that it was desirable the supervision in the case of lodging-houses should be extended to all houses occupied by more than two families. This might be opposed to the maxim that "an Englishman's home is his castle," but it already existed where more than one family lived in one room.

Dr. GREENHILL thought it better not to wait for assistance from Government, but to carry out the plan of buying up and improving unhealthy houses by means of joint-stock companies, which, if properly managed, were able to pay a dividend of 4 or 5 per cent. This rate of interest was not sufficient to induce merchants or builders to invest their money in such schemes as a commercial speculation, but it would be found a convenient mode of investment for persons who had no more profitable mode of employing more money. This was the case at Hastings, where about one-half of the capital of the Cottage Improvement Society (now amounting to 17,000*l.*) was subscribed by ladies, who received a regular half-yearly dividend at the rate of 5 per cent. per annum, without risk, trouble, or expense, and with the additional satisfaction of making their money useful to the community by helping forward the great work of sanitary reform.

Sir CHRISTOPHER RAWLINSON said the great question in his mind was, if Government advanced money at 3¼ per cent., whether cottages could be erected to pay 5 or 6 per cent. That was the whole difficulty. He had built cottages at a cost of 110*l.*, for which he now got 4*l.* 4*s.* rent per annum, and that could not be said to be remunerative. With regard to London, he thought the case was not one of so much difficulty. The opportunities of association were so much greater, and, from the higher wages of labour, there was a better prospect of obtaining remunerative results.

Mr. G. H. WHALLEY, M.P., thought a short Act might be introduced, by arrangement with the Enclosure Commissioners, for giving the same facilities for borrowing money for the building of cottages that were now afforded in the case of drainage.

Mr. C. AKROYD said, as a large mill-owner and employer of work-people, he had erected 100 cottages for the workmen attached to some mills near Halifax. These cottages consisted of three classes. No. 1, costing about 120*l.*, was let at 5*l.* 15*s.* His object was to attract the best workmen to the neighbourhood, and in order to do that, it was necessary to have a better class of cottages for them to live in, and the results, he was happy to say, were satisfactory both to the employer and the employed. He thought large employers of labour would find it to their interest to erect this class of buildings for themselves. His second experiment was carried out at Haley Hill, where he purchased ground to the amount of 10,000*l.* The erection of houses to cover the whole of that plot would have amounted to a serious sum; therefore the problem he set himself was this—"Can I induce the workpeople in my neighbourhood to join me in the erection of a superior class of cottages on this land, so that, in the end, they may themselves become the proprietors of those cottages?" In conjunction with his workmen he formed the Akroydon Building Society, and placed themselves in communication with a benefit building society in the locality, to ascertain the terms on which it would advance money for the erection of blocks, on plans to be mutually approved by himself and the workmen as future occupiers and owners. Terms were arranged under which the building society advanced money, which, by a payment of 3*s.* per week, was to be repaid in 12½ years. In his first experiment, for the sake of economy, the houses were built back-to-back; but in the second case he was determined to carry out the "model cottage" in every respect, and he found it was impossible to build such a house as he wished to see the better class of workmen live in, for less than 190*l.*, including land. It might be said that failed to provide a cheap class of house for the poor; but indirectly it did so, as it was found the superior workmen vacated existing cottages elsewhere, leaving them to be taken up at a lower rental by others. He had great pleasure in stating that a new town was rapidly springing up in the neighbourhood, peopled by the best class of workmen. As soon as a block was finished he was repaid for the land by the building society, and in that way he gradually recovered the whole of his expenditure. The plan adopted at Halifax had been successfully initiated in other places, particularly in Leeds, where large plots of land had been purchased on which dwellings of superior design would be erected. It might be said that in some instances building societies had been failures, but for his own part he was amazed at the development of the co-operative system. In three towns in the West Riding of Yorkshire no less a sum than 1,200,000*l.* had been raised in this manner. If that were so, they might look to those building societies to advance much of the capital required. The money was borrowed in many instances at 3 and 4 per cent., and they paid their proprietors 5 per cent. These societies were a sort of savings bank, and there were great inducements to deposit capital in them. He thought the system he had pointed out was capable of indefinite extension in country towns.

Rev. S. TENISON MOSSE (of Dover) said, having seen the evil effects of crowding of dwellings in his own town, he made application to the Government, and succeeded in obtaining

a site of 7 acres at the price of 250*l.* per acre, all expenses included. He then started a society, under the Limited Liability Act, for raising funds for building cottages on that site, but owing to various causes he did not succeed in getting a sufficient number of shareholders, although he promised them 5 per cent. for their money; for he held it was the commercial principle which must be brought before the public in this matter. Upon the issuing of the prospectus, showing a dividend of 5 per cent., shares to the amount of only 1000*l.* were taken, upon the fourth of which, however, he entered into a contract for six pairs of cottages. By means of loans to the amount of 3,200*l.* in addition, he succeeded in planting 24 cottages, and had paid off the 1750*l.* to Government for the purchase of the land. If the plan suggested by the chairman, of borrowing public money at 3½ per cent., with a sinking fund of 1½ per cent. or higher, according to the returns, were followed, he had no doubt within two years he should be able to plant 100 cottages where there were now only 24.

With reference to the co-operative system which had been advocated, there was no doubt artisans in towns earning good wages might eventually become the owners of the houses, but to ask even 5*d.* a week from the agricultural labourer for such a purpose, would be asking him to do an impossibility, and the monied classes must be satisfied with a lower rate of interest to enable the labouring class to live with comfort and decency.

Mr. Alderman WATERLOW thought the attention of Parliament should be drawn to the question of furthering the equalisation of the poor rates He wished the meeting to consider the bearing it would have on this particular class of property. There had been some dwellings of this kind erected in the Tower Hamlets and in Shoreditch, in both of which districts large numbers of the labouring classes lived, consequently the poor-rates were very high. The legislature might at least equalise the poor rates to the extent of making each town pay one rate throughout its area. If that were done in the metropolis it would be a great benefit to the labouring classes, because it would reduce their rates materially, Another point was, Parliament should be asked to consider whether with regard to local rates, the man of limited income was not entitled to some concession, as was now the case with regard to government taxes. He would suggest that a reduction in the local rating upon tenements under the rent of 5*s.* per week should be made.

Mr. H. W. FREELAND thought Mr. Alderman Waterlow had hit the right nail on the head in his remarks on the subject of rating, and Parliament might do much towards cheapening the cost of transfer of small properties of this kind.

The CHAIRMAN then read the following resolution, as embodying the views of the meeting:—

"Resolved,—That the legislature can promote the erection of proper and sufficient dwellings for the labouring classes:—

"1. By loans at low rate of interest, repayable within a limited time and under proper security and conditions, for building dwellings and cottages upon the precedent of the Dwellings of Labouring Classes (Ireland) Act, 1860 (23 Vic, c. 19), and other similar acts of the legislature.

"2. By assimilating the law of this country with that of Ireland and Scotland (Tenure and Improvement of Land (Ireland) Act, 1860, 23 & 24 Vic., c. 153, Act for Facilitating the Building of Labourers' Cottages, 1860), in giving facilities for obtaining advances on the security of settled estates.

"3. By throwing upon public companies requiring houses inhabited by the labouring classes, for their own commercial purposes, the obligation of erecting an equal number to those destroyed.

"4. Improvement of Lodging-house Act, as regards provision for sanitary purposes, and giving greater power to inspecting officers.

"5. By giving facilities to owners of property, under disabilities (such as tenants for life, minors, &c.), for conveying sites for building cottages upon the principle of the Montgomery Act in Scotland (10 Geo. III., c 31) and the Tenure and Improvement of Land in Ireland (23 and 24 Vic., c. 153).

"6. By cheapening the cost of title and transfer of property, so far as affects cottage property.

"7. By enabling cottage property and labourers' houses in towns, and the sites of such property, to be registered under local authorities as personal property, transferable as to local registry alone, in the same manner as Government stocks and railway shares.

"By abolishing the law of settlement, and extending the present limited area of assessment for local taxation, so as to equalise the payments of all classes."

Mr. AKROYD objected to Government loans for building cottages, and contended that the objects could be better effected by the co-operation of the working classes themselves.

The resolution was then agreed to. It was further resolved—

"That the Council of the Society be requested to take steps for giving effect to the recommendations of this Conference."

Upon the motion of Mr. AKROYD, a vote of thanks to the Chairman for the able and courteous manner in which he had presided over the proceedings of the Conference was passed by acclamation, and the meeting adjourned.

AGRICULTURAL EDUCATION.

I HAVE little to add to what has already appeared in your columns from the pens of my late fellow students on the subject of agricultural education; but so strongly do I feel with them in all the opinions they have expressed, that I cannot refrain from adding my testimony to their truth, if you will allow me to do so through the medium of your Paper.

Time was, if report be true, when the object of the farm attached to the Royal Agricultural College was to show to the students every variety of practice and every breed of animal, until the place wore such a unique appearance as to be the laughing-stock of the neighbouring farmers. But this is no longer the case; and, although it does not yet pretend to be a model farm, the fallacy of the old method of management is acknowledged, and, with the exception of a few plots annually chosen for experiments, the whole of the land is treated as enlightened Cotteswold agriculturist would approve. The principles of stiff land farming can never be experimentally and thoroughly taught on the College Farm, because it happens to comprise little or no really strong clay land. Nor is there the possibility of students gaining as much practical knowledge of cattle feeding and dairying as is desirable, since the College is situated in a district as eminently suited as it is celebrated for sheep. Whether the site was well chosen by the first founders of the institution is perhaps a question; but there it is. Now the object of an agricultural education is to place the student in possession of an intelligent knowledge of the details of every branch of the "art and science" of agriculture, so that, when the time arrives for him to commence business, he may not find his choice of a farm, which is at best very limited, still further narrowed by inability on his part to cope with the difficulties of any particular department of his profession.

After having spent two years on a stiff-land farm in the midland counties, and two years afterwards at the College, I have arrived, on mature consideration, at the opinion that four years cannot be laid out to better advantage by a student of agriculture than in the following way. Let him devote one year to the acquisition of a knowledge of cattle management (including dairying, stall feeding and grazing), and of the principles of cultivation of the soil—of strong land especially. This must be done by residence with a tenant farmer; and during this year let him be as practical as possible, put his hand to everything, and become acquainted with all the details of labour in the field and in the barn. The knowledge he has now gained will be a sound foundation for the superstructure of scientific teaching that must next be raised upon it during two years' residence at the Royal Agricultural College—a superstructure whose first form is that of the detached blocks of the pure and perfectly general sciences, afterwards by degrees fitted and dovetailed into each other, and cemented together with a well-tempered mortar of practical agriculture; for surely one who is ignorant of pure chemistry can form no idea of the meaning of 10 per cent. of monocalcic phosphate of lime, or ever appreciate rightly the analyses which it is universally considered ought to accompany the sale of guanos.

But, after reading what has been said and written of the deficient instruction in practical farming at the College, our student will, I am sure, be astonished at the important place assigned to it there, and at the efficient manner in which he will hear every department of it discussed, and find every detail of it illustrated, as far as the capabilities of the farm permit. All he has learnt with the tenant farmer will be recalled to his mind and clothed with fresh interest; he will see the rationale of this practice, the doubtful nature of that, the improvement that might be made on the other, and the reasons of one and another failure, and I do not hesitate to say that the real value to him of the year already spent with the tenant farmer will be doubled before he leaves the College, and this entirely owing to the practical instruction he will receive, and the sharpening of his wits against those of his fellow students. It appears to me monstrous to suppose that two years with a farmer, who it is confessed very rarely care a straw for the advancement of his pupils, can be compared with the same period passed at the College, where every pains is taken to direct his studies, where emulation serves to stimulate effort, and the whole atmosphere is one of thought and progress.

I have supposed the student to be one who intends to do something, for every one knows there are plenty of young men who might be with a farmer till Doomsday, or at college till Doomsday, and leave evidence of nothing but total failure in their case; the education of such it is useless to discuss.

After his college course is completed he will hardly be fit to take a farm. If he devotes another year to practical agriculture, I believe, for reasons above stated, he cannot do so better than by remaining in residence at the College. It is less expensive than residence with a farmer, and he reaps the benefit of special lectures, or any others he may wish to attend.

Permit me, in conclusion, to remark, that I believe instruction in the sciences connected with farming could not be made less general than is done at the College without inflicting real injury on the students and on agriculture itself, by distributing over the country men possessing a store of shallow information, consequently wiser in their own conceits than seven times the number of men who could render a reason, and certain to bring discredit, wherever they move, on those sciences which are destined to renovate agriculture. *Arthur James Hill, M.R.A.C.*

AGRICULTURAL STATISTICS.

ON Tuesday evening, in the House of Commons, Mr. CAIRD moved his resolution in favour of Agricultural Statistics. He said:—

He had been much impressed with the extent to which this country was now dependent on foreign sources for its supply of food. The change had been very extraordinary in the last few years. The importations of foreign Wheat and flour for the 10 years previous to 1838 were considerably less than the present average yearly import. The imports for those 10 years were 6,200,000 quarters, while the average imports of the last five years were 9,000,000 quarters. The diminished price of corn on the one hand, and, on the other, the increased price of butchers' meat, dairy produce, wool, butter, and vegetables of all kinds, coupled with the increasing cost of labour, naturally caused a gradually diminished growth of corn. It was difficult to estimate the effect of the change which was thus overspreading the country. If each farmer took away one-tenth of his land from corn, and let it out in Grass, we should require from 4,000,000 to 5,000,000 quarters of corn more to be imported than before, and that very process might be going on without our having the slightest knowledge of the change. But if we had the acreage under each crop we should know the extent of the change, and how it was gradually being brought about. He had always argued that the advantage to our own farmers of such a knowledge would be as great as to any other class. The farmer was to a great extent not only a seller but a purchaser of foreign corn. During the last four years the fluctuations which had taken place in the cost of foreign corn had been extraordinary. In 1860 and 1861 our imports of corn cost upwards of 40,000,000*l.* In 1863 and that part which was now remaining of 1864 up to next harvest—which, of course, was partly a matter of estimate—it would be found, he believed, that we should not pay more than 20,000,000*l.* A difference amounting to something like 20,000,000*l.* must seriously affect the whole monetary interests of the country, and if they looked to the commercial and shipping interests, it would be seen that the transport of such a vast weight of corn was a matter of immense importance. In one year we should require three millions of tonnage in another a million and a-half. He appealed to the benefit which the country had derived from the agricultural returns collected with such success in Ireland. The Chancellor of the Exchequer had more than once borne testimony to their value. But the Irish returns, though most important, must nevertheless be looked upon as incomplete until they should have the returns from Great Britain also. He believed if the system were once in operation most satisfactory statistics might be obtained from the office of the Registrar-General But he had turned his attention to another mode of obtaining them, a mode which had been tried for two successive years in two different counties in Scotland with perfect success. He would select 10 districts in England, one in the south, one each in the south-west, midland, and south-east, in the west, midland, and east, and in the north, north-west, and north-east. Each of those districts might contain 100,000 acres, and so far they should insure absolute accuracy. He had proposed 15 sample districts for the whole of Great Britain, those districts containing 1,500,000 acres, which would represent about one-tenth of the whole of the cultivated surface of Great Britain. It was a convenient quantity, but was not material to his object. All that was material was that the same sample districts should be taken each year in succession, for by doing so they would be able to find out the changes which were taking place in the cultivation, and if there were a fifth or a tenth of increase, that would be an indication that a like increase had taken place in the cultivated acreage of the whole country. The whole cost would not exceed 3000*l.* a year, and such a small sum was hardly worth mentioning in comparison with the advantages to be derived from the possession of correct statistics. The second advantage of the plan was that it would entirely do away with the complaint as to the inquisitorial character of the inquiry, because the officer, taking the Ordnance map of 100,000 acres, and filling up that map as cultivated, need not know the name of a single farm or farmer. The returns so obtained of the surface of the country might be procured early and published towards the end of July, and the country would then be in possession of what it never had before—a satisfactory basis, on which every one interested in the purchase and sale of corn could calculate for himself what would be the probable result of the harvest about to be reaped. Towards September, when some criterion might be arrived at as to the probable yield of the harvest, the same officers as had made the inquiry in the previous part of the year would again inquire as to what would be the probable produce of the crop when threshed. Having developed the plan he suggested, he would now place his motion before the House, not asking the House to bind itself to that plan or any other plan, but only desiring that, as the question was of so much importance to the public generally, and as the returns could be procured for so very moderate amount, the House would agree to the principle expressed in the resolution which he now moved—"That in the opinion of this House the collection and early publication of the agricultural statistics of Great Britain would be advantageous," &c.

Colonel BARTTELOT could perfectly understand, if the collection of these statistics would only cost 3000*l.* a year and be of the great advantage described by the hon. gentleman, that the House might agree to such a resolution as that now proposed; but if the statistics would only be inaccurate and fallacious, he could see no advantage in collecting them. An estimate could not give an accurate account of actual produce. Moreover, the feelings of the people on whose grounds the officers would have to go ought to be taken into account, and their feelings were adverse to statistical returns of this nature.

Mr. PACKE agreed in what had fallen from the hon. gentleman who had just sat down; and as he had never heard what benefit would be derived from such a plan as that now proposed by those whose private concerns would be inquired into, he must oppose the motion. People connected with farms knew very well that they could not tell within many quarters what the produce of their land would be, and he therefore believed that the 3000*l.* a year would be thrown away. Such an inquiry as that proposed ought not to be made without the consent of the producers, and he did not see why a farmer should have his stock inquired into more than a shopkeeper.

Mr. PAGET said that having been for 40 years engaged in calculating what the probable yield of the harvest would be, he was certain that a very close guess might be made at it by this proposal. The objection to the taking of acreage of corn had considerably subsided; and he believed that the tenant-farmers had no objection to the acreage of their growing crops being known. Every landlord and every steward must know, and it could not signify to the tenant-farmer that the general public should know it. The gallant colonel opposite said that taking returns for these sample districts would not give a fair idea of what was being done all over the country; but, with the geological map in hand, it would not be at all difficult to mark out a sample district which would give the information desired. Of course weather which suited the lias strata would not be so good for the sandstone; but by taking a fair sample of the lias districts, it would not be difficult to ascertain what was going on in the same kind of lands all through the country. The practical form in which the hon. gentleman had embodied his proposition removed many of the difficulties which had formerly stood in the way, and the sum of 3000*l.* would be very little to pay for the valuable information which might be obtained. One result of the collection of this information would be that it would tend to reduce the inequalities of price throughout all the country, and would thus confer a great benefit on the small farmers particularly, whose interest it was to be able to take their produce to market regularly and get a fair average price for it. Centainly, nothing would tend more to make prices steady throughout the country.

Lord HOTHAM agreed very much with his gallant friend that it would hardly be practicable to arrange any such "type" districts as would give a fair representation of the yield of the whole harvest.

Mr. DENT deprecated as much as the noble lord speculation on the part of farmers, but then he believed the main causes of it to be the fact that they were so entirely in ignorance of what was likely to be the average of the crops throughout the country. He should wish, he might add, to see a return made not only of the crops but of the stock.

Mr. HUBBARD said he did not think the outlay of 3000*l.* or 4000*l.*, or even 100,000*l.* ought to stand in the way of their being procured if possible, particularly when we recollected that in one season 20,000,000*l.* was laid out in the purchase of corn alone, and that we had to compete with other nations in the markets of Europe and America. So far as the feelings of the farmers were concerned, he must say that he thought it was a point on which a good deal of misapprehension

prevailed. There was no person more interested in having accurate returns than the farmer himself.

Mr. THOMPSON pointed out that the acceptance of the resolution of his hon. friend would not in any way bind the House to a specific plan. He was of opinion that it would be advisable for the sake of removing prejudices, to confine the information to the amount of the acreage. That information, which was of great importance, might be collected at a comparatively trifling expense, and with little or no jealousy on the part of the farmers. The acreage being fixed, and it being known that the difference in the crops did not amount to more than 10 bushels an acre in a bad, as compared with a good season, every man might be able to form a fair judgment for himself as to whether in any particular year the yield approached the ascertained *maximum* or *minimum*.

Lord NAAS said that in Ireland no difficulty had been experienced in ascertaining the acreage and the amount of stock, but the attempt to get at the amount of produce had not been equally satisfactory, the estimates in the same parish varying at times as much as 50 per cent.

Mr. M. GIBSON said that he could not regard this as a mere abstract resolution. If it were passed his hon. friend would, he imagined, understand it as an encouragement, if not an approval of his plan. We had no knowledge at present beyond a mere estimate either of the acreage under cultivation in the whole kingdom, or of the quality of the soil in various parts of the country; therefore, he thought that it was going a great way to assume that the proportion between the typical districts in two successive years would hold good for the whole country. In Ireland we had estimates of the extent of land under cultivation similar to that which his hon. friend had referred to for England; but an examination of the whole of Ireland showed that those estimates were entirely erroneous. Probably the estimate of 15,000,000 acres for England was equally wrong. In Ireland the estimate of the land under Barley was greater by one-fourth than the largest quantity actually sown, and too much land by about one-fourth was supposed to have been cultivated with Potatos. The fact was that the plan of his hon. friend had not been long enough before the House. He would not go the length of condemning it; on the contrary, he guarded himself from the assertion that it might not prove hereafter to have great merits. But before it was adopted in whole or in part it was absolutely necessary to see that the calculations rested upon accurate data. Now in Scotland he found that in the typical counties the increase from 1855 to 1856 in the acreage under Wheat was at the rate of 34 per cent.; whereas over the whole of Scotland the increase was at the rate of nearly 37 per cent. In Ireland in the same years the increase in the typical counties was 14 per cent, while over the whole country it was nearly 19 per cent. Between 1856 and 1857 the increase in the acreage under Wheat was 3½ per cent. in the typical districts, while over the whole of Ireland it was little less than 6 per cent., or nearly double the amount. Taking the difference between the years 1859 and 1860 in the Irish typical districts it was 2½ per cent., whereas over the whole of Ireland it was only ½ per cent.; so that if the typical districts were taken in that year as an indication of what was going forward in the country, the increase would have been represented at five times its actual amount. This showed how difficult it was to select typical districts. He was quite prepared to admit that the collection of agricultural statistics was most desirable, and that the interests of this country, both agricultural and mercantile, would be greatly benefited by them. At the same time he did not see the slightest necessity for any resolution whatever on the point. He himself had proposed resolutions, but then he had always some definite plan in view; and unless the House were prepared to carry out a definite plan they ought not to sanction this resolution.

Mr. BASS thought there must be some misapprehension on the part of the right hon. gentleman and members opposite as to the proposition of his hon. friend. When he heard the President of the Board of Trade acknowledge that it would be most desirable to have these statistics collected, he was in hopes that he was about to propose that they should be taken not over one-fifteenth of the kingdom, but over the country at large. The right hon. gentleman quoted figures to show that a discrepancy of 5 per cent. existed between the returns as given by the typical districts and those extending over the whole of the country. What did that difference amount to? One million in 20. But what was the extent to which the country was at present in the dark for want of these statistics? Writers of eminence had declared that the general average produce of Great Britain and Ireland was only 6,500,000 qrs. of Wheat. The very highest authority in the kingdom, Mr. M'Culloch, on the contrary, placed the quantity of Wheat at upwards of 13,000,000 qrs. The late Sir G. Lewis, a few years ago, invited general co-operation in ascertaining the number of persons that could be fed in this country, and surely it must be of equal importance to know what they were to be fed with, and what proportion of their food was derived from our own country.

Mr. HEYGATE said all they wanted to know was an accurate account of the various descriptions of ground under different crops every year, and the quantity of live stock, so that they might trace the increase or decrease of the agricultural wealth of the country.

Sir G. GREY said he believed there was scarcely any difference of opinion upon the principle involved in the proposition of his hon. friend. The Government were fully convinced of the advantages of agricultural statistics in the United Kingdom, and agreed that they ought to be collected and published at the earliest period. But the noble Lord (Naas) had shown that these statistics would be of very little value if they did not extend over the whole country. The Government objected to this proposal because it did not advance one step towards the practical attainment of the object in view. If he had misconstrued his hon. friend, and if he thought the returns should be compulsory and should include the United Kingdom, then his hon. friend ought to bring in a Bill, and the House would know the means by which he proposed to carry out his object. The Ordnance map would no doubt give facilities for obtaining these statistics, but the plan in itself was one which the House ought not at present to adopt.

Mr. CAIRD, in reply, said there was a gradual progress of opinion among the farmers in favour of agricultural statistics, and he believed they would work more cordially with a voluntary system than under an Act of Parliament. Many modes of obtaining agricultural statistics had been proposed, and he should himself very much prefer a complete system. But what he was anxious to do was to get the Government to give up its supineness, and compel them to act by a resolution of that House. If he desired any recommendation for his mode of action he would refer to the authority of the right hon. gentleman on a similar occasion 20 years ago, and if a subject had been under discussion for 20 years assuredly it was high time to act.

The House then divided on the question "That the question be now put:"—

For putting the question	74
Against	62
Majority	12

The result was received with cheers.

The question was therefore put, and the resolution of Mr. Caird was agreed to.

THE CATTLE DISEASES AND CATTLE IMPORTATION BILLS.

THE Select Committee of the House of Commons reassembled on Tuesday, Mr. T. Baring in the chair. Prof. SIMONDS was recalled. He did not think separation alone could be relied upon as a means of preventing the spread of the disease. Vaccination was in his opinion no preventive of small-pox. Insurance returns afforded no reliable data with respect to disease, the inspection being defective, and the offices open to a good deal of deception. There should be two schedules to the Bill, the one including rinder pest and small-pox, which should come under the more stringent regulations, and the other glanders, pleuro-pneumonia and scab, with regard to which he would only impose a penalty not exceeding 20*l*. Pleuro-pneumonia could be checked to a great extent by separation, by feeding the animals well to strengthen the constitution, and by treatment first with nitrate of potash, and afterwards with the sulphate of potash. He did not advocate administering aperient medicines or blood-letting. The disease could not be detected by the farmer during the period of incubation. It usually began with cough, the refusal of food, and unhealthy appearance about the coat. The animal might live 24 or 25 days, or it might live as many weeks. Sometimes a portion of the lung became detached and locked up in the healthy lung, and in that case the animal went to the butcher in an apparently good condition. He would exclude measles from these measures because the disease was not contagious, was easily detected, and was confined to pigs. Importers for their own protection had an inspection instituted before the cattle were put on board ship. In cattle from Hamburg, Holstein, and Cologne, sanitary measures were taken in case of pleuro-pneumonia and foot and mouth disease, and there was examination on the frontiers, and along the roads, so that there was good security against diseased cattle coming from those ports. The exposure for sale of cattle having pleuro-pneumonia or scab ought to be prevented, as those diseases were infectious. Placing diseased animals in a particular part of the market would give no security. Very few fat animals come to the market affected with pleura, but when they were found infected (and there should be inspection at the market) they should be sent to a public slaughter house. It would be very dangerous to give a railway official power to prevent the transmission of animals to their destination. He would only inflict penalties where persons "knowingly and wilfully" sent cattle for sale in a diseased state. It would be difficult in many parts of the country to find properly qualified inspectors under the Bill—they should be veterinary surgeons, and with the necessary qualifications they would be able to command high salaries. The present system of inspection on importation was a good system, but badly carried out. There should be an appeal from the inspector to the Royal College of Surgeons for England, and to the College of Veterinary Surgeons for Scotland. Great care was necessary in the selecting of qualified inspectors in the country, for it had frequently happened under the present law that animals imported were kept in quarantine, sometimes for as long as 10 days, without having any disease whatever. In March 1859, 104 head of cattle arrived here, and were pronounced by inspectors to be diseased. He examined them, and reported them to be perfectly sound, but the inspector would not allow them to pass the wharf, so they were put on board again, taken back to Holland, reshipped to Hull, brought up by railway, and sold in the London markets. Foot and mouth disease ought to be entirely excluded from both the Cattle Diseases Bill and Cattle Importation Bill. He did not think there was any reason to extend the Bill to cattle from Scotland or Ireland, that the penalty of 20*l*. would be sufficient to prevent importation of animals suffering from pleuro-pneumonia, and it was unfair to place those portions of the United Kingdom under restrictions from which the remaining part was free. He was inclined to think that no restrictions would materially check pleuro-pneumonia in this country, but at the same time it might be advisable that there should be an examination of cattle coming from Ireland and Scotland by competent inspectors.

To Colonel Barttelot: He did not think there was really much diseased cattle privately sold in this country. There was no doubt a considerable trade in animals killed in consequence of the disease of pleuro-pneumonia, even when the disease had arrived at an advanced stage, but there was no proof whatever that the eating of such meat was injurious to human beings.

To Mr. Beecroft: There was little or no advantage in inoculation for pleuro-pneumonia—the operation could not, as he had observed in his former evidence, be properly termed inoculation; it was merely productive of a little counter irritation. His experience from direct experiment was that the disease appeared after the inoculation, probably to the extent of 10 per cent. of the animals treated. It was not, as far as he was aware, a disease that ever reappeared in the same animal, but inoculation practised did not convey the disease.

To Mr. Alderman Salomons: It might be prudent to have inspectors at Scotch and Irish ports. If there was to be any inspection it should take place before animals were shipped.

To Lord Naas: He did not know that Scotch and Irish cattle were more affected with pleuro-pneumonia than English cattle. It was a well known fact that store cattle from Ireland were commonly attacked with pleuro-pneumonia, but that was owing to the hardships and privations they underwent upon the voyage.

Mr. HALL MAXWELL, the Secretary of the Highland Society, stated that that body objected to the power given by the Bill to constables, railway officials, and others, to the whole system of inspection at fairs and markets, and to the insertion of the foot and mouth disease in the schedule. They considered that there was no occasion for the legislation proposed, and the House of Commons had decided in 1857, when a less stringent measure was proposed, and when there was much more disease, that further legislation was incompatible with the legitimate operation of trade. The exposure for sale of an animal affected with pleura should be subject to a penalty of 20*l*., but he would entirely exclude foot and mouth disease from the Bill. So far from advocating the omission of those clauses which gave the Privy Council power to act in cases of emergency, he should be willing to extend it to unknown diseases, for they would never make an order without good cause. He did not agree with Professor Simonds that those clauses should be limited to small pox and rinder pest. Inspection at fairs and markets would be inapplicable in many cases from the impossibility of finding a sufficient number of competent inspectors, and to legislate for small cases while the principal cases were left untouched was absurd. The penalty for exposure was sufficient to prevent animals affected with pleura being brought to the market, and it should be competent for the authorities of the market, the person at the next stand, or any one else to take proceedings in such cases. The Cattle Importation Bill established an unfair difference between land-borne and sea-borne cattle, which must tend to throw a large proportion of the trade into the hands of the railway companies. Dr. Gamgee's calculations were based upon unsound data. The insurance returns did not afford any indication of the mortality throughout the country. Dr. Gamgee, too, had not sought information from the corn dealers of Edinburgh, as was proved by a document he had, signed by 20 persons, who represented the whole of the trade from which it appeared, but instead of 908 cases of disease in 1861-62, there were only 791, and only 189 of those were condemned as unfit for human food.

The Committee adjourned till Friday.

Home Correspondence.

Steam Cultivation.—In your Journal of last week we find in a paper on Steam Cultivation, read to the Suffolk Farmers' Club by Mr. R. Ransome, of Ipswich that the names of Mr. King, of Thorpe Hall, Scole; and Mr. Ferguson, of Wretham, Thetford, are given as farmers who have been very successful in cultivating their land by steam. As other manufacturers' names are given in the paper referred to, where the purchaser had successfully adopted steam, and no mention is made of ours, we beg leave to inform your readers that the sets of apparatus used so successfully by Mr. King and Mr. Ferguson are both of our manufacture, and as a further proof of the success of our apparatus we may state that Mr. King's set alluded to is the third set we have manufactured for the same family, one of whom informed us he had cultivated 690 acres of land without a single breakage. *James & Frederick Howard, Britannia Iron Works, June* 3, 1864.

Cottages.—A remark made in the *Agricultural Gazette* some time ago to the effect that "if the rents of the cottages of the poor were raised, they would not thank those who built them more commodious dwellings," calls for some notice, in order to place the question in its true light, with reference to an additional tax on the labourer's moderate wages. In calling public attention to the defects of the cottages of the working classes, it was never supposed converting hovels (inferior to those provided for animals) into respectable houses, was to be at the cost of the labourer reducing his pittance, already small, to the starving point. The indirect benefit received by the agricultural and horticultural interest from the moral and physical improvement of the working classes resulting from a better description of cottage, enabling them to live more like human beings, should be considered ample compensation for any additional expenditure of money in so good a cause. To neglect any longer the crying evil which is demoralising the working population, will entail on the United Kingdom a fearful responsibility, and bring its own punishment. The seeds are already sown, and the plants growing strongly, which, if not quickly eradicated, will smother all the finer feelings of our nature, and produce a deplorable state of society throughout the land. It is to be feared men and women outwardly keep up an appearance of order and decent behaviour too much resembling the "whited sepulchre." Unless the education of mind and body are equally attended to in all schools, the labour of ministers and schoolmasters will be in vain—truthfulness and honesty of purpose do not flourish amongst either the upper, middle, or lower classes. The great principles on which all human actions should hinge, appear to be forgotten in the busy race of life—love to God and love to our neighbour. *Falcon.*

Italian Rye-grass.—We have a piece of Italian Rye-

grass, very similar in bulk to that you describe in the *Agricultural Gazette* of the 28th ult., which is growing on land of a very poor and gravelly nature. It had been planted with trees for many years, as being unfit for cultivation, until five years since, when it was broken up and sowed with Italian Rye-grass and Alsike Clover. Since that time it has given four cuttings every year. The first crop of the present season, fully 3 feet high, has been in course of removal, as required for the horses, during the last three weeks. The portion first cut is now grown again nearly one foot, and will be ready for re-cutting when the whole of the first crop is removed. The peculiarity of this case is that it has continued equally good for five years, and on very strong burning soil; the only explanation is that we every year (in February) give a top-dressing of farm-yard manure with a sprinkling of seeds, and during the summer irrigate it immediately after cutting, not with sewage, for there is none available, but with pure water. *Sutton & Sons, Reading.*

Comparative Trial of Swedish Turnips, 1863.—The following were planted under precisely similar circumstances of soil, tillage, and manure upon patches of ground alongside each other (for the purpose of testing the goodness of stocks and growth) :—

No.	Variety.	Weight per acre of uncleaned roots.		Weight per acre of cleaned roots	
		Tons.	cwt.	Tons.	cwt.
1	Skirving's Purple-top Swede..	18	4	16	0
2	Improved Hardy White Swede	18	6	13	14
3	Matson's Purple-top Swede ..	15	16	13	11½
4	Inwood's Hardy Purple-top Swede	13	0	8	5
5	Green-top Swede; seed lately imported from Sweden	13	13	12	3

Upon weighing a portion of each in November last year, the result was as recorded, and it will be seen there is a great variation in the calculated weight per acre. Skirving's Purple-top Swede, a variety too well known to need description, stands first upon the list. The Hardy White Swede is about equal in gross weight, but it has a much larger proportion of root and top. Matson's, a very handsome Purple-top, comes next. Then a small good-shaped Green-top Swede, the seed lately imported from Sweden; and last by a long way the Inwood's Purple-top, a favourite in this district from its keeping well through the winter, but, judging from this trial, of very inferior productiveness. It may be said that weight is not the only criterion of value, but that "proof" in feeding and hardiness to withstand frost are important elements in the value of the Swedish Turnip. This is quite true, but weight of produce in a feeding crop must be always considered a most important item. We are continuing similar experiments this season, and in due time we shall be pleased to report the result to you. *Hugh Raynbird* (*Raynbird, Caldecott & Rawtree*), *Basingstoke, May* 17.

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

SMALL-POX IN SHEEP.—At the meeting of the Society on Wednesday last, Mr. Raymond Barker in the chair, a lecture was delivered by Professor Simonds, of the Royal Veterinary College, upon small-pox in sheep. Before the lecture it was announced by Mr. Thompson, M.P., that the subject for the 22d would be "The Chemical Properties of Water for Economical Purposes," by Prof. Voelcker, in place of the one previously fixed for that day, namely, "Species of Farming best adapted to meet the increasing demand for Live Stock."

Professor SIMONDS prefaced his remarks by observing that the question with which he had to deal possessed considerable interest to the farmer from the rarity of the affection and in consequence of the fatality amongst the animals which were the subject of the disease. After meeting the objection to the term "small-pox" by showing its close analogy with the disease so named of the human subject—pointing out, however, at the same time, as the result of conclusive experiment, that the disease was not capable of being communicated from the sheep to human beings, or even to other animals, domestic or wild, or, on the other hand, from human beings to sheep—the lecturer proceeded to discuss the origin of the disease. The notion had been entertained by some, especially during the outbreak in Wiltshire in 1862, that its origin was spontaneous, but the impossibility, by any combination of known causes, of manufacturing a special poison had been ably argued by Dr. Budd before the British Association in 1863, and it was remarkable that the present generation knew nothing of the affection in this country till 1847, although it had been in existence from the earliest times in almost every other part of Europe, and had been described by the earliest continental writers. It was brought here in 1847 by some sheep believed to be healthy, but in which the morbific matter existed in a dormant condition, and that he had clearly traced in a publication afterwards brought out by him. Since then, however, his attention had been drawn to a work of a Dr. Fuller on small-pox and measles in the human subject, from which there could be little doubt that sheep-pox was raging about 1710 or 1711 on the South Downs of Sussex, but how it came or what means were used to get rid of it there were no means of knowing. The outbreak of 1847 extended to 1850, and lastly came the outbreak in 1862 in the county of Wiltshire. As to the manner in which the disease was then introduced, the theory of Dr. Gamgee that it was communicated from animals driven along a Roman road was only to be supported by the supposition that those animals came down from the clouds, and after doing the mischief were taken up again, for they could not be traced before or after. There was no positive proof of how the disease came, but it was then raging in Hanover and the adjacent parts of the Duchy of Lauenberg, and at that time we were drawing our supplies from Hamburg and Tonning, the chief port of Schleswig and Holstein, and some animals in which it was incubated might have found their way. in spite of the efficient sanitary precautions, to this country. It was well-known too that butchers had been in the habit of drawing their supplies to a considerable extent from the metropolitan market for the supply of various parts of England, including nearly all the large towns. Thus a few diseased sheep might have found their way to the West. It was quite possible that as the malady became developed the purchaser endeavouring to make some salvage sold the sheep for manure, and that its origin might be accounted for in that way was supported by the facts that there was a large manure manufactory in the neighbourhood where the epidemic existed, that offal was commonly carried to the manufactory along a canal which passed through the very estate on which the sheep were first affected, and that, spanning the canal at a point where the animals fed upon the bank, was a bridge through which only one barge could pass at a time, so that one might be delayed while another passed through. Besides this he visited the manufactory after he was consulted about the flock, and found there heads, legs, and portions of the bodies of the sheep with the skin on. The lecturer proceeded then to trace the disease from the period of incubation through its various stages, observing that in the vesicular stage the animal did not die, but that if it was not fatal in the preceding or papular stage, it was sure to be fatal in the ulcerative or subsequent stage. As to the remedy, separation and good management were no doubt of some advantage, but they had been extolled, for the examination necessary for the measure to be effectual would be almost an impossibility where the flocks were large. The letters from Norfolk and Cambridge, by which the attention of the Government was called to vaccination, were calculated to mislead, for it appeared from what he had himself heard and seen, that the vaccination alleged to have taken place was no vaccination at all. Some 3000 or 4000 sheep were said to have been vaccinated by one man in a week or ten days. Where was the lymph to come from? The man carried it about in an ounce phial. In a few cases the animals were afterwards inoculated, and they took the disease. He recommended inoculation, or as it was more properly called ovination, but at the same time that separation and other means of abating the severity of the disease should not be neglected. The inoculated disease was infectious, but not in anything like the same degree as the natural disease, and practically, therefore, did not spread the malady.

A vote of thanks to the lecturer closed the proceedings.

BATH AND WEST OF ENGLAND.—At the Council Meeting on the 5th inst., a letter from the Royal Agricultural Society, on the subject of Agricultural Education, was referred to the Journal Committee.

The Meeting of 1865.—The Deputation who visited Hereford on the 19th ult., for the purpose of ascertaining the nature and extent of the accommodation offered by the authorities of that city for the Society's Meeting in 1865, reported that the site known as the race course, about 23 acres in extent, was in every respect eligible, and that the fields for the trial of implements were not only contiguous to one another, but within a distance of a quarter of a mile from the proposed show yard. The deputation reported very favourably on the courtesy and cordiality with which they were received and entertained by the local authorities, and the Council resolved that, subject to the suspension of the rules by the annual meeting, of which formal notice had been given by Mr. Poole, the invitation from the city of Hereford be accepted. It was also resolved to recommend to the annual meeting the election of Colonel Clifford as a member of the Council.

The Bristol Meeting.—Mr. Pitman, on behalf of the Railway Arrangements Committee, reported on the steps taken with the view of obtaining travelling facilities for persons visiting the exhibition, and a deputation was appointed to wait on the authorities of the several Railway Companies for the purpose of soliciting additional accommodation on the Monday, when, owing to the great interest excited by the public judging of the cattle and poultry, the yard will most probably be visited by a very large number of agriculturists from a distance, more especially as the charge for admission has this year been reduced to 2*s.* 6*d.* The deputation proceeded, at the close of the meeting, to wait on the railway authorities, and were fortunate in obtaining the promise of the Bristol and Exeter Company to run a special train from Exeter and intermediate stations on the Monday, and of the Great Western to run a special train from Stroud and intermediate stations on the same day. Most encouraging assurances were given as to the prospects of the various departments of the forthcoming exhibition, which is expected to be the largest and most successful that the Society has ever held.

Reviews.

Le Brome de Schrader. Memoire lu à la Société Impériale et Centrale d'Agriculture de France. Par M. Alphonse Lavallée. Williams & Norgate. London.

In this pamphlet, M. Lavallée calls attention to a *Bromus*, of American origin, which appears from his experience to be productive both of Grass and hay, and to be good food for milch cows. A first cut of its green Grass was over 8 tons per acre; the other three cuts were together barely 9 tons per acre. This we presume to have occurred in well cultivated land. It is not by any means an extraordinary yield; and does not justify to the English reader the extraordinary enthusiasm of the writer on behalf of this species of Brome Grass.

Of its milk-giving properties, it appears that the quantity yielded by cows immediately increased 18 per cent., when they were changed from Lucerne to an equal ration of the Brome Grass; and that it went back again some 10 per cent. when the Lucerne was resumed.

It is plain that our Italian Rye-grass, under liberal cultivation, will greatly exceed the new *Bromus* in its produce; and that, apart from any information on the richness of the milk, the mere quantity of the milk obtained from its consumption is a very fallacious indication of the merits of the latter as food.

Farm Memoranda.

MERSE OF BERWICKSHIRE.—The past month opened with a low temperature, caused for the most part by easterly winds and rimy mornings. The 5th was milder, and in the forenoon there were a few peals of thunder, accompanied by heavy showers. The 6th was wet but cold, and the wind having returned to the east vegetation made little progress for some time. The 13th and 14th were beautiful days, and on the latter the wind changed to the S.W., and there was a gentle rain in the evening, which had a very beneficial effect on all our crops. On the 16th, which was sultry, a thunderstorm travelled round us, but did not reach us; and on the 17th the heat was oppressive. On the 18th it reached its climax, the self-registering thermometer marking a temperature much higher than any experienced during last summer. The 19th was cooler, with fog in morning and evening. The morning of the 20th was the same; but about 7.30 thunder approached, and we had a smart shower of rain, after which the forenoon was bright and warm; however at 1 P.M. thunder again burst upon us, when there was a destructive shower of hail, some of the stones being more than three-quarters of an inch in diameter; this was followed by a deluge of rain, which saturated the soil in a short while. The wind having changed to N.W. the weather became colder and continued so to the end, the two last mornings of the month being very frosty.

Crops.—Grain crops have made considerable growth during the month, with the exception of a few late sown patches of Barley, which require showers and warmth, winter-sown Wheat especially, and early sown Oats were most luxuriant till the late frosts nipped them.

Beans are looking strong and vigorous.

Potatos pushed through the ground rapidly during the warm weather, but have made moderate progress since; indeed, they have been damaged by the frost in some instances.

The sowing of Turnips is well advanced, and in the earlier sown fields a healthy braird is to be seen. But where they were sown within a few days of the thunder storm, the drills are so battered that they will probably be a weak plant.

The crop of Grass has at present the appearance of being short, and in general there is a want of broad-leaved Clovers. However, showers and growing weather would improve the crop vastly. In nothing did the hot weather work a greater change than in pastures, but they are again beginning to look bare this cold weather.

Old Grass has stood well all through and is keeping a heavy stock. The Grass seeds have sprung up well and promise to be a more equal plant than we have in young pastures this year. *A. C. T.*

Calendar of Operations.

JUNE.

CHATTERIS, ISLE OF ELY: *June* 8.—During the last few weeks the weather has been very variable. During the early part of May we had cold stormy weather, but there was an absence of frost. This was followed by intense heat, with the thermometer for several days as high as 81° in the shade. Subsequently to this cold again returned, but not as before, for severe frosts were experienced for several nights. After the five hot days we had a deluge of rain, accompanied by the most terrific thunder and lightning. Our lands were thoroughly soaked, and the underdrains were discharging the surplus water running at full hole. This, and the immediate return of cold and frost, proved too much for our high lands, and gave a paleness to some of the Wheats and more especially to the Barleys. The weather is again warmer, but gentle rain would be highly beneficial to vegetation, to mollify and break the hard crust which has now formed on the surface of our lands which were so fearfully soaked, and which tends to check the full development of cereal plants. The whole plant is upon the whole promising, although the prospect

is not so hopeful as it was a month ago. Where too bulky a crop was expected, there is now but little fear of its being laid. The thinner crops are lighter than was anticipated. It is a common occurrence to hear farmers exclaiming, "How the Wheats have thinned themselves during this cold weather." Whether this will be for the better or otherwise, remains yet to be seen. Doubtless on the best crops and on the best lands, it will be to the advantage of the crop, but we cannot at present venture the opinion that it will be so on others. Oats are a better and a stronger plant than last year, especially in hot gravelly fen lands. Copious rains generally suit Oats, more particularly on this description of land. We have 94 acres of Polands looking very vigorous and generally a full plant. The wireworm was less destructive this year than usual. Next week we shall expect to see them showing corn. Barley, as already intimated, has suffered to some extent from the excessive rains of last month, so immediately followed by cold and frost. But the plant is good and the crop thick upon the ground, and should the weather be favourable for the earing we may get as abundant a yield, and a better quality than were the plant grosser and the straw more bulky. Beans and Peas are blossoming very well, and give promise of a good average crop of straw, but it is too early to give an opinion as to the probable yield. Potatos have been seriously injured by the severe frosts, and it is very doubtful whether they will recover sufficiently to produce anything approaching to a good crop. Mangels are a good plant generally; we are now singling ours with the hoe; warmth and genial weather is what they now require. Hay-making has commenced, and some fields are cleared on the old lands; the crop is heavy, but on seed lands far otherwise. We never had our plant of seeds so bad; the young plants were destroyed by the excessive drought of last summer. Pastures for cattle have been good, and the land has carried a good stocking. The trade for lean cattle has been only [illegible], arising from a deficiency of Grass keeping in some of the grazing districts, the rains having been so very partial. Wool has experienced a heavy decline, but probably may again rally, if farmers are not in too much haste to effect sales. The corn trade rises and falls as the weather is warmer or colder; but we see no prospect of such an abundance as was ingathered last year, and shall not therefore be surprised to see prices with the new harvest stiffen. We gathered our first ears of Wheat, where the ear had shot about half its length above the sheath, on the 4th inst., the same day as we gathered the first last year. We then commenced cutting Wheat on the 29th July. There is therefore the prospect again of a tolerably early harvest. *A. S. R.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Reading of Dry Bulb.	Thermometer. Reading of Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday ..	June 3	29.83	65	52	N.E.	0	10	61	49	78	47	0.08
Saturday ..	4	29.93	61	56	N.E.	0	0	61	37	66	31	..
Sunday ..	5	29.92	66	60	S.W.	1	2	66	43	82	36	..
Monday ..	6	29.95	66	61	W.	3	5	66	51	79	44	..
Tuesday ..	7	29.96	69	59	N.E.	0	10	70	46	85	40	..
Wednesday	8	29.93	68	60	N.W.	1	10	72	53	88	47	..
Thursday ..												

Notices to Correspondents.

ANTHOXANTHUM, &c.: *Rusticus.* It is a very poor Grass, and ought not to be sown except in a very small proportion. A week after blooming is too early to cut. The seeds of most Grasses will drop out under a very light threshing when fully ripe—and are separated from their chaff by a very light winnowing. We strongly advise you *not* to attempt the gathering seed yourself, but to trust to a good seedsman.

COLTSFOOT: *Drumwark.* Perseverance in pulling all the flower-heads in early spring, and in cutting off the leaves as soon as and whenever they appear, will ultimately destroy the plant, and this is the only remedy if the land be already laid down. If it be still fallow, then care should be taken to remove the roots of the plant before laying it down to permanent Grass.

FARM BAILIFF: *Mr. T. Bowick's* advertisement last week should have contained the words "apply to." It does not refer to himself.

LICE ON CATTLE AND CALVES.—Grease well rubbed in will destroy them—or a decoction of tobacco will destroy them—or the ointment used for mange may be employed:—Sulphur vivum, 4 oz.; linseed oil or train oil, 8 oz.; oil of turpentine or oil of tar, 2 oz. Mix and rub well in.

NEW SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.

THE HYDROPULT is invaluable for use in the GARDEN for WATERING BEDS, SPRINKLING PLANTS, DROWNING OUT INSECTS, CLEANSING TREES FROM SMUTS, DRESSING with LIQUID MANURE, ETC. ETC.

THE HYDROPULT is desirable in every HOUSEHOLD for WASHING WINDOWS, WETTING SIDEWALKS, SPRINKLING STREETS, WASHING CARRIAGES, EMPTYING CISTERNS, FILLING BARRELS, A SPRAY BATH, ETC. ETC.

THE HYDROPULT,

PRICE: WITH BRASS CYLINDERS AND MALLEABLE IRON STIRRUP, JAPANNED IN OAK COLOUR, 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanised Wire Strainer, Rose, and Small Jet.
Complete as above, with Copper Stirrup, TWO GUINEAS.

Weighs but 8 lb.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.
It will draw water horizontally, if necessary, through 300 feet of Suction Hose, and force it through Delivery Hose, to an altitude of 100 feet.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

In proof of the real utility and efficiency of the HYDROPULT as a GARDEN IMPLEMENT, I beg to call the attention of the public to the following unsolicited Editorials from gentlemen, whose testimony must have weight with the readers of the *Gardeners' Chronicle*:—

EDITORIAL, *written by* ROBERT HOGG, LL.D., F.L.S.

THE HYDROPULT.—The great secret of successful indoor gardening consists in the free and judicious use of the syringe. A greenhouse or conservatory that does not enjoy this luxury becomes a miserable lazar house of vegetable incurables. Vermin and filth hold unbounded sway, and people become disgusted with their own want of success. Well do we recollect the former days of plant culture, the days of "collections," when the use of the syringe was yet limited or unknown. What a time for red spider, scale, and greenfly! What fumigations and consumption of tobacco and tobacco paper, washings with tobacco water, and all sort of remedies were resorted to! We regard the introduction of the free use of the syringe as one of the events in modern gardening. To this is due the success of orchard house management, Vine management, and Plant management, but the old syringe with its slow suck and squirt, is now as much out of date in modern gardening as an old stage waggon in modern locomotion. Many are the improvements and complications of the old simple syringe. We have tried several of them, but for ease in working and efficiency in result, we have not yet met with anything to equal the Hydropult, sent us by Mr. BUTTON. It is powerful in operation, and so easy and comfortable to work, that one never gets fatigued. With such an instrument plants may be kept in perfect health, and quite free from insects and dirt. We first tried it on a few Geraniums in our conservatory, which were smothered with greenfly during our temporary absence of ten days, but on our return a stout discharge from the Hydropult sent them clean off across some unknown bourne, whence they have never yet returned.

EDITORIAL, *written by the* REV. HENRY H. DOMBRAIN, A.B.

THE HYDROPULT.—When we formerly noticed this instrument, we did so from merely seeing it at the Proprietor's; since then we have had an opportunity of testing it personally, and can bear testimony to the excellence of the invention. The force with which it throws a stream of water is almost incredible; while for syringing a greenhouse, a gentle shower, as fine as that from a hand syringe, with considerably more effect, can be easily given. We have a gardener, quite of the old-fashioned school, who does not generally fall in love with new-fangled notions, but he is perfectly enchanted with the saving of labour and time that the Hydropult will be to him.

EDITORIAL, *written by* SHIRLEY HIBBERD, ESQ., F.R.H.S.

THE HYDROPULT.—This is an invention introduced in a most spirited manner by Mr. C. P. BUTTON. It is at once a fire engine and a garden engine, is always ready for use at a moment's notice, is neat and portable, weighing only 8 lbs., and can be worked by a boy of moderate strength for some hours in succession without fatigue, the mechanical power employed being economised by combining the action of the hand and the resistance to the foot, between which the instrument is placed and used, as a double action pump. From the sole to the handle the Hydropult measures 24 inches. The two brass cylinders measure 12 inches in length, and 3¼ inches in breadth. At the top of these cylinders India rubber tubing is attached, on one side to feed, on the other to discharge the water. It will perhaps surprise the reader to be told that this little contrivance, which is pretty as a toy, and can be carried under the arm as easily as a trumpet, will throw from seven to eight gallons of water per minute a distance of 60 feet. But it will do it, as we know from having tried it, finding the experiment an agreeable exercise, and of special service in washing down a stuccoed wall, which it accomplished quite as well as if we had sent for the parish engine. Gardeners will not need to be told the value of a portable force pump of this simple kind. It can be used to produce a powerful stream to extinguish a fire, or a gentle shower to syringe a whole houseful of plants, without the necessity of moving a single step from the position most convenient for a supply of water. Wherever a pump or syringe is needed, the Hydropult can be brought into use, to remove water from a cellar or a boat, to cleanse a cistern, wash a pavement, or drench the foliage of trees loaded with soot, or annihilate at one fell swoop the whole insect population of a plantation of Roses. But we will not enlarge upon its merits, they are obvious, and having a Hydropult in use we can say that it will soon pay for its cost in a garden, besides being always at hand in case of an emergency of any kind which may require an immediate removal or discharge of water.

THE GREENHOUSE and CONSERVATORY HYDROPULT.

A NEW AND BEAUTIFUL IMPLEMENT,

Weighing scarcely 3 lbs.,

AND SPECIALLY ADAPTED FOR USE IN THE GREENHOUSE AND CONSERVATORY.

Price 30s.,

Complete with Brass Cylinders and Copper Stirrup, 2½ feet Suction and 3 feet Delivery Hose, Strainer, Rose, Jet, and Fan.

This NEW IMPLEMENT must necessarily supersede SYRINGES and other devices of the kind, for it will be found much more effective in its operation.

A LADY CAN WORK IT FOR HOURS WITHOUT FATIGUE

HYDROPULT SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.
WAREHOUSE and OFFICES, 27, LEADENHALL STREET, LONDON, E.C.
CHARLES POMEROY BUTTON, PROPRIETOR.

GREEN'S PATENT SILENS MESSOR,

OR

NOISELESS LAWN MOWING, ROLLING, and COLLECTING MACHINES.

BY SPECIAL APPOINTMENT,
SOLE MANUFACTURER

TO HER MOST GRACIOUS MAJESTY
THE QUEEN.

EXTRAORDINARY and WONDERFUL IMPROVEMENTS for the PRESENT SEASON 1864.

GREEN'S PATENT LAWN MOWERS have carried off every Prize that has been given in all cases of competition, and were the only Machines Highly Commended at the Royal Horticultural Society's Great Shows, held at South Kensington, May 21, June 11, and July 2, 1862. (No Prizes were given.)

Illustrated Price Lists free on application.

GREEN'S IMPROVED NEW PATENT ROLLER,

FOR

LAWNS, DRIVES, BOWLING GREENS, CRICKET FIELDS, and GRAVEL PATHS,

SUITABLE FOR HAND OR HORSE POWER.

PRICES OF

HAND ROLLERS.

Diameter	30	inches;	length	32	inches	£7 10	0
,,	24	,,	,,	26	,,	4 10	0
,,	20	,,	,,	22	,,	3 10	0
,,	17	,,	,,	16	,,	2 15	0

Delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

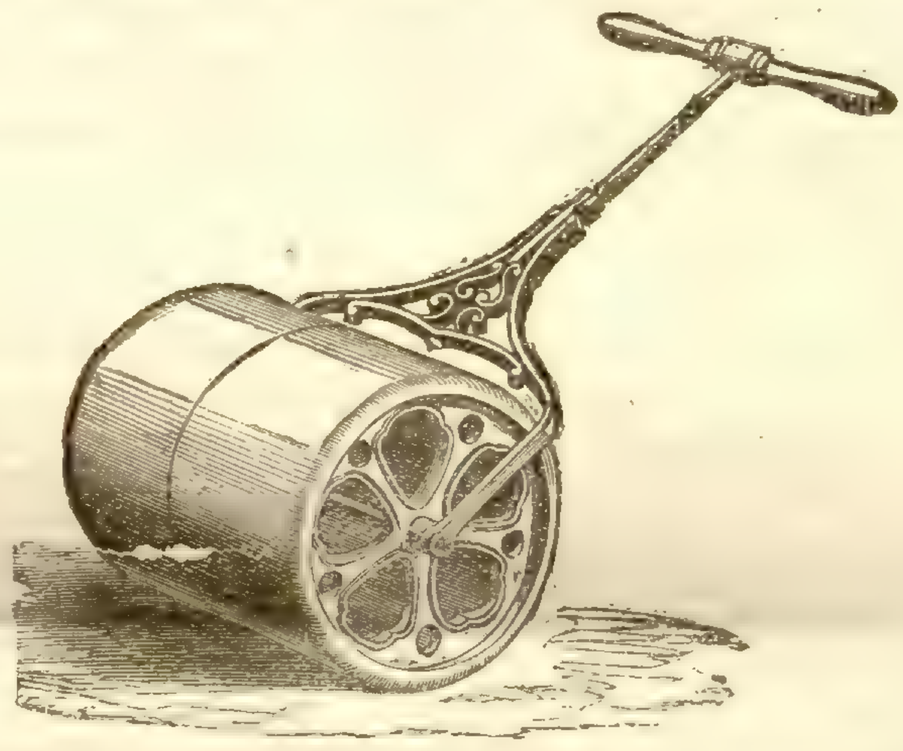

PRICES OF

ROLLERS FITTED with SHAFTS,

SUITABLE FOR PONY OR HORSE POWER.

Diameter	30	inches;	length	32	inches	£10 0	0
,,	30	,,	,,	36	,,	10 15	0
,,	30	,,	,,	42	,,	11 15	0
,,	30	,,	,,	48	,,	13 10	0
,,	30	,,	,,	60	,,	15 10	0
,,	30	,,	,,	72	,,	17 10	0
,,	30	,,	,,	84	,,	19 10	0

Delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

The above ROLLERS possess many advantages over all others; they are made in two parts, and are free to revolve on the axis, affording greater facility for turning, and the outer edges are rounded off, or turned inwards, thus avoiding the unsightly marks left by other Rollers. They are manufactured of the best materials, and are got up in a manner surpassing any ever yet brought out.

THOMAS GREEN AND SON, SMITHFIELD IRON WORKS, LEEDS;
and 2, FARRINGDON ROAD (formerly 2, VICTORIA STREET), HOLBORN HILL, LONDON, E.C.
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LAWN MOWING AND ROLLING MACHINES.

EVERY MACHINE WARRANTED.

PRICES OF MANUAL POWER MACHINES.

To Cut 12 inches, suitable for a Lady ..	..	£4 12	0
To Cut 16 inches, suitable for One Boy ..	..	6 10	0
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To Cut 22 inches, suitable for Two Men	..	8 0	0
To Cut 25 inches, suitable for Two Men	..	11 10	0

PRICES OF PONY POWER MACHINES.

To Cut 22 inches	..	£8 15	0
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To Cut 30 inches	..	14 14	0

These Prices include Free Delivery to any Railway Station in Great Britain.

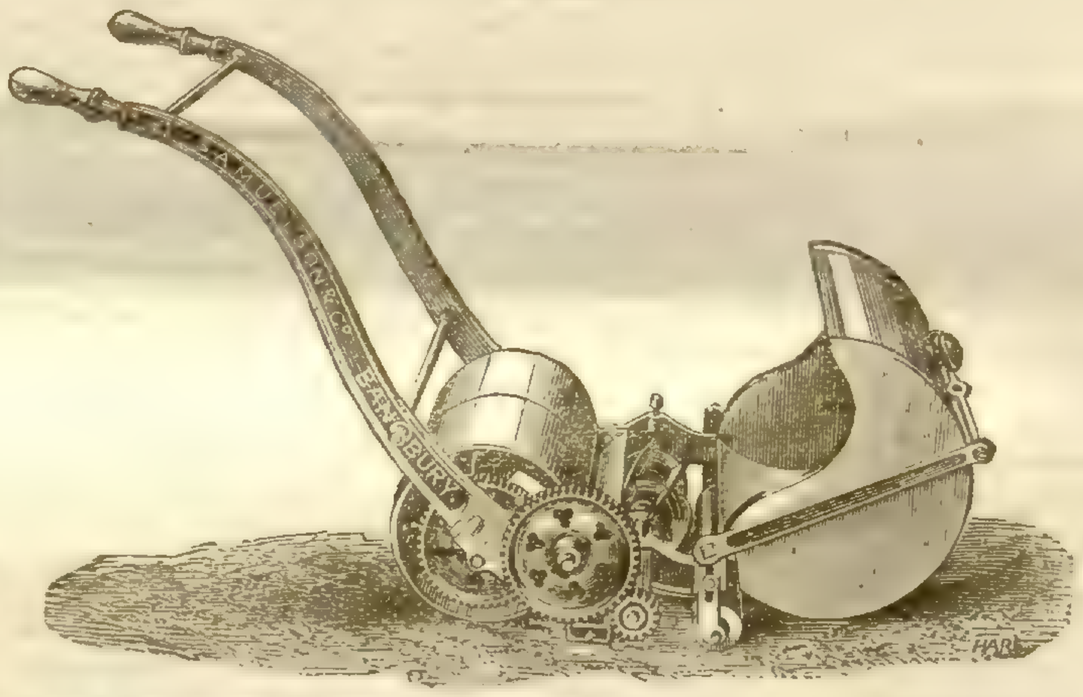

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ROYAL GARDENS,

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In again submitting their LAWN MOWERS to the notice of purchasers, Messrs. SAMUELSON & Co. wish to state that they do not make annual changes in the principle of their LAWN MOWERS. Experience has fully proved that the general design on which their MACHINES have been built for many years past is the best, and their attention has been given therefore rather to substantial improvements in manufacture, reduction of the draught, and increase of durability by the use of malleable iron in place of cast metal, than to the production of ephemeral novelties. Their MACHINES are superior to all others for lightness of draught, elegance, and efficiency under all circumstances of ground and weather, being self-cleaning, and not liable to derangement in the gearing. Selections from several thousand Testimonials free on application.

SAMUELSON AND CO., BRITANNIA WORKS, BANBURY. LONDON OFFICES: 18, CANNON STREET, E.C.,
AND OF ALL SEEDSMEN AND IRONMONGERS.

WHEELER'S LITTLE BOOK on SEEDS.

CARTER'S GARDENER'S VADE-MECUM.

Choice Perennials and Biennials.

E. G. HENDERSON AND SON offer the following SEEDS for present sowing, of first-class quality :—

PERFECTION SWEET WILLIAM, of splendid colours, form, and variety, mixed, 6*d.* and 1*s.* per packet; 10 selected varieties, 5*s.*; in self colours separately, 1*s.* and 1*s.* 6*d.* each. A beautifully coloured plate of these, 2*s.* 6*d.*
CARNATIONS and PICOTEES, yellow and mixed, 2*s.* 6*d.*
PANSY, best English, 1*s.*, 1*s.* 6*d.*, and 2*s.* 6*d.*
" French Blotched, 1*s.* 6*d.* and 2*s.* 6*d.*
ALPINE AURICULA, 1*s.* and 2*s.* 6*d.*
ENGLISH named do., 2*s.* 6*d*
HOLLYHOCKS, best mixed, 1*s.* and 2*s.* 6*d.* In 12 varieties do., 2*s.* 6*d.* and 4*s.* per packet.
STOCKS, INTERMEDIATE, scarlet and white, 6*d.* and 1*s.* each.
" " ALBERT, new purple, 1*s.*
" " ALEXANDRA, new White Intermediate, 1*s.* per packet.
BROMPTON STOCK, white, purple, and scarlet, 3*d.* each.
LARGE-FLOWERED EMPEROR STOCK, mixed, 1*s.*
HYBRID GIANT CAPE STOCK, mixed, 6*d.*
WALLFLOWER, GERMAN, double mixed, 1*s.*
" " in 10 varieties, and separate colours, 4*s.*
" English Blood-red, 6*d.*

Wellington Nursery, St. John's Wood, London, N.W.

Vine Duchess of Buccleuch.

ROBERT PARKER begs to announce that he has arranged for the distribution of the stock of this very distinct and valuable EARLY WHITE GRAPE, and that the plants will be sent out early in autumn. Full particulars as to its qualities will be given in future advertisements. In the meantime, and during the whole of the season, visitors to the Gardens of Dalkeith Palace will have opportunities of seeing and judging of its merits, as a large quantity of pot and permanent Vines are now fruiting at that establishment.

Strong Planting Canes, 21*s.* each; Extra strong Fruiting Canes, 42*s.* each. Orders are now being booked, and will be executed in strict rotation.

Exotic Nursery, Tooting, Surrey, S.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.

The Stock having been purchased by JOHN STANDISH, strong Plants will be sent out in the first week of June, price 15*s.* to 31*s.* 6*d.* each.

Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.

Royal Nurseries, Ascot, Berks.

Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

Per pkt.—	*s.*	*d.*		*s.*	*d.*	Per pkt.—	*s.*	*d.*		*s.*	*d.*
PRIMULA ..	2	0	and	3	6	INTERMEDIATE STOCK.. ..	0	6	and	1	0
CINERARIA ..	1	6	and	2	6	BROMPTON do.	0	6	and	1	0
CALCEOLARIA	1	6	and	2	6						

The above Seeds are saved with great care, and can be warranted to give satisfaction.

Paradise and Victoria Nurseries, Holloway, London, N.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c., amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE post free on application.

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UNRIVALLED CALCEOLARIA, PRIMULA, CINERARIA, CARNATION, and PICOTEE.
HERBACEOUS CALCEOLARIA, 2*s.* 6*d.* per packet.
HALF SHRUBBY CALCEOLARIA, 2*s.* 6*d.* per packet.
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For the opinions of the Horticultural Press, see *Gardeners' Chronicle*, April 9.

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The Gardeners' Chronicle.

SATURDAY, JUNE 18, 1864.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY,	June	21	Royal Horticultural (Election of Fellows), at South Kensington .. .. 3 P.M. (Lecture on Conifers, by Mr. Murray), at do. .. .. 3 P.M.
WEDNESDAY,	—	22	Alexandra Park Company Floral Exhibition.
THURSDAY,	—	23	

IT is curious that so little should have been done by physiologists in general with respect to the changes which take place in FRUIT, after it has arrived at that degree of maturity when it either separates naturally from its stalk, or when it has arrived at such a state as makes it necessary for the horticulturist to secure his crop. Previous changes have been frequently investigated, but this, which may possibly be of some economical importance, and which at any rate is of much scientific interest, has been almost entirely passed by till it was taken up by M. CAHOURS, who lately laid before the French Academy a paper on the subject.

After the fruit is gathered, every source of nourishment or support is cut off except from the air, and it is by respiration alone that its vitality can be maintained for the completion of those chemical changes which do not depend on mere decomposition in a lifeless mass.

M. CAHOURS proposes to himself to determine three principal points. 1. The nature and ratio of the gases contained in the soft parts of the fruit. 2. The action of these parts on oxygen, the gas of respiration, alone, or mixed with nitrogen. 3. The action of the same gas upon the different parts of the fruit.

It appears from his observations that perfectly ripe Apples, Oranges, and Lemons, when placed in oxygen or a mixture of oxygen and nitrogen in which the former predominates, or in atmospheric air, consume a portion of oxygen, always giving out carbonic acid gas, but in greater quantities when exposed to light than in a dark chamber. The higher the temperature the greater is the proportion of carbonic acid. When however decomposition has commenced, the quantity of this gas increases rapidly, so that it cannot be wholesome to live, as many market gardeners and cottagers do, in a house where every room from the roof to the floor is laden with fruit.

The expressed juices contain in different fruits

a variable quantity of carbonic acid and nitrogen, the proportion of the former varying more than the latter. Not a trace of oxygen, hydrogen, carbonic oxide, or carburetted hydrogen appeared in the expressed juice. A question arises as to the origin of the contained gases, and it appears most probable that they are the result of fermentation, a process which frequently takes place in over-ripe fruit, as is plain from the production of yeast globules, which we have frequently seen in Grapes, and sometimes in other fruit.

M. CAHOURS has moreover proved that in an atmosphere of nitrogen under a bell glass, which excludes atmospheric air, carbonic acid is formed in perfectly sound fruit, notwithstanding the absence of any external oxygen from which it could be in part derived, and he concludes therefore that it is not due to slow combustion, during which the oxygen of air is consumed.

In fruit like Services and Medlars, where the process of bletting takes place, and without which the fruit is not eatable, it is only after vitality has ceased that the requisite chemical changes for economical purposes take place, changes which are sometimes promoted, or at least attempted to be promoted, by sprinkling the fruit with some fermented liquor. "Air then enters the cells and acts first of all upon the sugar, causing alcoholic fermentation with disengagement of carbonic acid and formation of alcohol, which is in its turn acted upon by the acids of the fruit, thus forming a true ether, which produces the aroma of the fruit. The air then attacks the cell itself, which becomes coloured yellow by the azotised membranes of which it is formed."

We are indebted to an admirable article in the *Reader* of May 21, 1864, for the above extract from a memoir of M. FREMY'S, and for the greater part of the matter, which has merely been abridged and put into a form adapted to the purposes of this Journal; omitting, however, the part which relates to M. CHATIN'S views of less immediate interest. A short abstract of the memoir of M. CAHOURS, from *Comptes Rendus*, will also be found in the *Illustrated News* for April 30, of the present year. *M. J. B.*

THE IMPROVEMENT OF OUR FLOWER SHOWS is a matter of such vital importance to horticulture—at least to that department which bears on the cultivation of flowers and flowering plants—that it ought to engage the serious attention of all who are in any way connected with gardening pursuits, now that the summer exhibitions are at their height. The advantage of giving attention to the subject just now, consists in this, that we can actually see the point to which we have attained, and by employing a little honest criticism may arrive at a tolerably correct estimate of our deficiencies.

We are sure it may be laid down as a basis upon which this subject can be discussed, that our deficiencies do not lie in the department of cultivation. In respect to the growth or production of plants and flowers, British gardeners always acquit themselves like men; and with the stimulus of exhibitions to prompt them, are in no danger of losing the pre-eminence they have won. But there is room for improvement in the "getting-up," so to speak, of the materials so admirably cultivated, and this is the point where, in a special sense, the cultivators of exhibition plants may contribute their quota of improvement. Familiar as we now are at our shows with monster specimens, we could not do without at least a considerable proportion of such as these; and familiar as we are, too, with blossoms in profusion almost overloading our specimens, we could not tolerate plants on which the blossoms were scanty; but we could well afford to dispense with not a little of the formality in training with which we have unfortunately at the same time become familiar. We might admire a fine specimen of some evergreen shrub, trimmed in moderately by the knife to, let us suppose, a pyramidal outline, in which, however, there still remained some play of light and shade from the slight inequalities of the spray, when we could never bring ourselves to admire the same kind of shrub clipped evenly and smoothly to the form of a cone. And so we could admire an Azalea, for instance, in which the spray, while preserving something of its natural massing, had been disposed so as to take a conical general outline, when we could not admire the training of a plant which had been put into steel hoops, and resembled nothing so much as a huge crinoline. Some year ago there was a great outcry about the forest of stakes used for tying out exhibition Heaths and plants of similar character, but nothing half so rigidly formal was ever perpetrated among Heaths as now appears unblushingly amongst the poor Azaleas.

Of course it is not to be supposed that the huge plants of all kinds brought to our shows—Azaleas, Pelargoniums, Heaths, Roses, &c.—can be moved from place to place uninjured, without support, and in many cases that support must be considerable in amount; but it may be laid down as one guiding principle for the cultivator, that the less support necessary to a plant—other points being equal—the greater has been the merit in respect of its cultivation; and as a second, that the less rigidly formal the arrangement of the branches under that necessary amount of support, the greater has been the merit in respect of its training. If, as we have said, in regard to the cultivation of their plants British gardeners always acquit themselves like men, we must add that it would be an advantage in respect to the training of them, if they could be persuaded, not indeed to appropriate the garments, but to listen to the advice of the gentler sex.

The great deficiency, however, of our flower shows lies in the arrangement of the plants after they have been grown and transported to the place of exhibition with so much care and cost. This defect has indeed grown up with the growth of the exhibitions themselves, and is perhaps inseparable from the customs which obtain amongst us. Nevertheless it is a defect, and a great and palpable defect, and one which all who are concerned in the future of flower shows should lend their aid to remedy.

The chief evil may perhaps be best indicated by the statement that our flower shows are literally a blaze; there is no relief, or no efficient relief, to the intense and universal glare, which is oppressive almost beyond endurance if the day is hot, and the show-room crowded. Respecting this evil there is, however, a fact and a fallacy to be distinguished. That we have too great a preponderance of bright colours, and too little of refreshing green, is a fact which one glance at such an exhibition as that which we have described at p. 412, would impress for ever on the mind. But that we could do with flowering plants in a less floriferous state is a fallacy. That it has taken possession to some extent, of the public mind, is, however, evident from the passing remarks one hears at a flower show. "The colours are too oppressive," says one, looking all the while with intense admiration at the huge blazing crinoline Azaleas. "But I do like to see the green leaves amongst the flowers," says another, who is gazing with satisfaction on a plant with scantier flowers. Nevertheless, what says the horticulturist calmly looking on, and taking measure of the cultural skill displayed? Why that B. has had his thinly-bloomed plants less under control than A., who brings his out, apparently all flower, scarcely a leaf being visible; and consequently that A. has shown more skill and carries off more credit than B. Now what is the great use of our exhibitions if they are not to act as tests and stimulants to bring out horticultural skill? Reduce the test, and be content with paucity of bloom, and what comes of it? Why, even the casual looker on, who so much admires the "green leaves among the flowers," would learn to point to a thinly-bloomed plant as poor and paltry compared with specimens within his recollection, and would walk away disgusted if he found that such were the best productions the gardeners of England could set before him. No, the change we want is not to lessen the blaze by thinning our plants of flowers; we must have our plants up to the highest standard of cultural skill, and if they CAN be brought out smothered with blossoms, we must have them so. But we must have a foil for all this brilliancy. We must have all our bright-coloured mass-flowering plants, such as Azaleas, Pelargoniums, &c., set in separate, small, distributed, and if need be well-balanced groups, with a background of green leaves, whether that background be composed of the Ferns and foliage plants which now form parts of our shows, as seems most desirable, or whether it be made up of additional material employed solely as a setting for the floral gems. We must also increase the non-floral element of our great shows by inviting more Palms, and Pothods, and Arads; more Yuccas, and Agaves, and Dracænas; more Cycads, more Conifers, yea, even more hardy Evergreens, such as collections of Hollies, collections of Box, collections of Aucubas, collections of Yews, and such as these. They all have their use, and might indeed very well be supplemented in the earlier displays, by collections of what are called hardy Rhododendrons, which would give variety of colour.

Our monster plants, or at least a goodly number of them, we could not spare, but we do not want them set up in long dreary banks about which no one cares to linger. Let us rather have little groups of them kept apart by groups on different levels of some of the various other objects of exhibition at which we have hinted—and the list of which could be indefinitely extended—so as to change the aspect of the show at every step, and then we might hope to see visitors taking as much interest in the *modes* of the plants as in the *modes* of their fellow visitors. Above all, let us have an unlimited number of these large flowering plants and of large spreading Palms and Ferns, placed as single objects where the view of their beauty may not be obstructed: that is to say, let us have them elevated on appropriate stands, amongst groups of low plants placed well beneath the eye. And let us have infinitely more low-growing plants than now, set low—plants interesting in themselves, and useful as a surrounding for the more valuable and conspicuous specimens.

It will be said, perhaps, that such a change would lead to the occupation of much more space than we devote to our present exhibitions, and would sacrifice more time than could be found under our present system. Very probably it would be so, and why not? We must do something to keep up the interest of our exhibitions, or they will either cease to be, or will cease to hold the prominent position they have hitherto done. As to space, that would, however, be readily provided by covering, as we long ago suggested, an area of sufficient size with a ridge-and-furrow roof of glass, supported on iron columns, screened by tiffany or calico, and closed at the sides by canvas. This would secure the comfort of the visitors—a primary condition of fitness; it would set off the plants and flowers to the very best advantage—another leading condition; and it would render the plants secure against accidents of wind and weather—another most essential condition. We have no faith in monster tents, which, striking an average, secure neither the one nor the other of these necessary conditions; and as to the much talked-of superiority of canvas over other coverings for setting off the plants, we say that while it may be all very well in fair weather it is wretched in foul weather, and could not under any circumstances be superior to a properly shaded roof of glass.

But then, the time! It is impossible no doubt to learn with sufficient exactness the nature of the plants to be brought forward, to admit of allotting to them beforehand the respective positions in which they would yield the best effect; and unless this could be done, and done readily, it would be a hopeless task to attempt to arrange, in the way we have sketched, one of our large exhibitions within the few matin hours, needlessly and heedlessly limited at some of our leading shows, which pass before the visitors assemble; for collections must to some extent be broken up, and besides the arrangement, there is the judging to be got through, which latter must be done while the collections are intact. We do not see how this difficulty is to be got over without an extension of time; and notwithstanding the exhibitors' late protest, and admitting all they urge, we submit to them that they should fall in with some plan for the extension of time, if they do not desire to see exhibitions come to an end. As a rule, these great flower-shows don't pay, and that is a state of things which cannot be lasting. What we would suggest is, either that the plants should be brought in by noon of the previous day, the bulky ones being set as near where they would be required as possible to save trouble, that they should be judged immediately, and that the night and morning then should be set apart for re-arrangement, and that the visitors should be admitted perhaps by noon of the second or show day. Or else, that the exhibition should remain open for a week, the plants being brought in and judged as now, and then arranged in the night and morning before opening to the public. Though a month earlier than such an exhibition would be likely to take place here, we saw nothing in the case of the Brussels Show to lead us to infer that any damage further than would arise from a single day's show would be likely to result from the extension to a week, all reasonable care being taken to harden stove plants, and to give valuable rarities proper precautionary shelter. For ourselves, too, we enter a protest against any more

formal lines of stages, and against elevating any large proportion of the plants at all. Let us have them well beneath the eye, and we can then afford to have the more distant ones cut off from view by the visitors, inasmuch as every change of position will bring a new picture within sight.

We commend this whole subject to the careful consideration of the Committee appointed to re-organise the shows of the Royal Horticultural Society, and also to that of the newly-formed Society of exhibitors.

RIGHT is right; and no strength of assertion, no community of custom, can transpose wrong into right. It is from the point of view which this truism suggests, that we notice here a popular delusion which exists on the question of PELARGONIUM *versus* GERANIUM, and to which our attention has been drawn by the following cutting from one of the cheap horticultural publications which a correspondent has sent to us along with an inquiry as to the fact in dispute. The quotation referred to is as follows:—

"Without making any distinction—which would only be etymological—between zonale and zonate, it will always be needful to keep Geraniums separated from Pelargoniums, and to use both designations as descriptive of things that are very distinct from each other. The literary dons at the Horticultural adopt the word Pelargonium for all classes indiscriminately, and some of the great trading firms adopt the word Geranium for all classes indiscriminately—and both are wrong. Let us limit the meanings of words, especially when we have a choice of words for every purpose, and we shall make much better use of them than by such loose and unthinking habits as at present prevail."

Unfortunately this critic, though well meaning, is wrong in his facts, and so his whole argument falls to the ground. The matter might not, indeed, have been worth attention in this place were it not that amateurs, in speaking of these plants, and nurserymen and florists in compiling their catalogues, so frequently fall into the same error.

The answer is simple enough, and may be thus stated:—The naming of plants is a business which devolves upon scientific botanists, and must be done in accordance with a well-understood code of laws. Names so given, and which receive the sanction of the leading men engaged in the science, are unassailable. In the days of LINNÆUS the name Geranium was applied to a group of plants comprising what are now called Geraniums, Pelargoniums, and Erodiums. As the number of plants referable to the group became more and more numerous, the exigencies of science required that they should be more completely discriminated, and accordingly, in 1787, L'HERITIER remodelled the family, and distributed the species as they remain to the present day. His arrangement has been adopted by all the subsequent leading botanists, from DE CANDOLLE in 1824, to HARVEY in 1860, and BENTHAM & HOOKER in 1862. The names in question have therefore full and complete sanction, and are to all intents and purposes established.

Thus much introductory to clear the way for an application of the facts to the immediate question before us. We may put them in the form of an argument, thus:—

Geraniums are plants with perfectly regular flowers, and ten perfect stamens.
But the so-called "Scarlet Geraniums" have neither regular flowers, nor ten perfect stamens.
Therefore they are not Geraniums.

Or the proposition may be varied and put in this form:—

Pelargoniums have irregular flowers with the calyx prolonged at the base into a nectariferous tube which is adnate (joined lengthwise) to the stalk, and only seven or fewer perfect stamens.
The so-called "Scarlet Geraniums" possess all these characters which mark Pelargoniums.
Therefore they are Pelargoniums.

The proof that they are Pelargoniums and not Geraniums is perfectly easy. To say nothing of their irregularity, which the florists, however nearly, have not yet quite obliterated, let one of their flowers be taken and the stalk cut through just behind the calyx, and then the nectariferous tube will be evident. This is proof enough; for one might cut the stalks of all the Geraniums to be met with, whether among the showy perennial garden species, as G. iberieum, pratense, &c., or the common native weeds to be found everywhere, as G. columbinum, Robertianum, &c., without finding a nectariferous tube in the stalk of any of them. These latter are the only true Geraniums; and the name has now nothing to do with any of the more tender plants cultivated so extensively both for exhibition and bedding-out purposes. To these latter the name of Pelargonium belongs, and quite as much to the one set as to the other. We cannot therefore admit that "the literary dons at the Horticultural" are wrong in respect to this question; neither do we think it desirable or necessary that the name Geranium should bear a popular signification, distinct from and at variance with that which it bears in the records of science.

—— THE introduction of NEW ORNAMENTAL TREES AND SHRUBS, whether by seed-raising or by importation, is one of the most interesting of horticultural pursuits. We are therefore glad of the opportunity to notice certain plants of this class adapted for garden decoration, to be found in some of the French nurseries, our information being mainly derived from an account of them by M. PÉPIN, in the *Revue Horticole*. Most of the plants referred to were growing in the establishment of M. DAUVESSE, of Orleans.

One of the most remarkable of the novelties referred to was a fine hardy variety of Ceanothus, called *C. azureus latifolius*; this had been selected from a bed of seedlings which had been raised from C. americanus, fertilised by C. azureus. The plant is described as being now abundant enough for distribution, and as having erect-growing stems and branches; oval leaves, hoary beneath and toothed at the margin; and long compact thyrsoid panicles of flowers, which open pale blue, but become deeper coloured as they get older. These flowers are produced from June till October or November; and it is recommended that the plants should be cut down annually, this treatment causing them to throw up young shoots, which bear very fine panicles of flowers. From the scarcity of blue flowers at certain seasons, and the profuse and continuous blooming of this new Ceanothus, M. PEPIN concludes that it will be found useful for making contrasts, both in the shrubbery and the flower borders, and that it will take a prominent place amongst decorative plants. It is said to increase readily by cuttings and layers, and also by seeding, but the seedling plants are not to be relied on to reproduce either the early and continuous blooming qualities of the parent or the lively and decided colour of its flowers.

Another interesting plant of the same establishment is a *white-flowered variety of Spiræa Fortuni*—that species which has been introduced to commerce under the name of S. callosa. This variety is remarkably handsome, its white flowers being as numerous as those of the type, and disposed in a sort of corymb. Planted alternately with S. Fortuni itself, which is rose-coloured, the contrast is said to be very fine. Both the bark and leaves are paler-coloured than the type.

Then there is an *Acer Wageneri laciniatum*, a variety of Maple, which M. PÉPIN concluded had been obtained by seeds from Acer eriocarpum, one of the finest of the American Maples. The young wood of this new tree is purple and glaucous, and its leaves, which are very much laciniated, are glabrous above and white and downy beneath. This variety, the writer observes, from its light and carved foliage, will not fail to be chosen for the ornamentation of parks.

Another shrub of garden interest is *Maclura aurantiaca*, with the leaves streaked with white. This is new, and remarkably effective. M. PÉPIN also refers to *Fontanesia Fortuni*, a plant brought from China by Mr. FORTUNE, as being hitherto rare, but now extensively grown by M. DAUVESSE, and forming a fine shrub, with foliage having much resemblance to that of certain species of Japanese Privet, vigorous in habit, and flowering abundantly.

It is, we learn, to M. DAUVESSE, that we are indebted for the elegant dwarf *Thuja* (or Biota) *orientalis aurea*, which was picked out from his seed beds of Thuja orientalis in 1845. And in 1861, he obtained in a similar way, *Cupressus Lawsoniana nana*, a variety which assumes a pyramidal form, and has short branches and a compact habit, which give to it a novel and peculiar appearance.

We may also mention as a desirable addition to our hardy ornamental trees, a very handsome *Red-flowered Locust tree* (Robinia Pseud-Acacia) of which information has reached us from another source. This tree has been obtained by M. VILLEVIEILLE, nurseryman at Manosque in the department of the Basses Alpes, and must prove a very decided acquisition. The flowers are as fragrant as those of the parent, and this quality, together with their colour and the elegance of the foliage, cannot fail to render the Red Locust a favourite amongst flowering trees.

NEW PÆONIES.

M. ROUILLARD, in the *Journal de la Société Impériale et Centrale d'Horticulture*, has given a very copious account of some new Pæonies raised by M. Guérin-Modeste, of Charonne, accompanied by some cultural remarks. Some very handsome seedling Tree Pæonies were produced from M. Guérin-Modeste's garden, at the spring exhibition of 1863; and at a later period several very meritorious varieties of Chinese herbaceous Pæonies were submitted for examination. This induced M. Rouillard to visit the collection which had yielded such interesting novelties.

The herbaceous and Tree Pæonies of China are well known to rank amongst the most ornamental plants which have found a place in our gardens. Their large flowers, disposed in elegant disorder, or with graceful regularity, assume the most varied colours, and are appreciated not only by florists, but also by artists, who produce them in their ornamental designs. The plants are, moreover, very hardy, and they have an indefinite longevity.

The Tree Pæonies thrive in peat earth, either pure, or mixed with fertilising substances, and generally in any sweet porous garden earth rendered fertile by well-decayed manure. They commence growing so early in spring that the first shoots and flower-buds are sometimes destroyed by frosts if not protected. Nevertheless they generally develope themselves, in spite of such accidents, from the lower eyes, which give fresh flowers, and in all cases the plants themselves are not affected in respect to their vitality. Some persons cultivate Tree Pæonies in conservatories, in prepared earth which is renewed from time to time; and thus sheltered from all hurtful atmospheric influences they develope in perfection their splendid flowers, the duration of which is prolonged by means of shading.

The herbaceous Pæonies succeed in nearly all soils having sufficient depth for their strong roots. They have the advantage of flowering after the Tree Pæonies, so that the flowering season may be prolonged from the beginning of May to the end of June.

All Pæonies love water, and principally the herbaceous sorts, which ought not to lack it, not only from the moment where the flower buds commence to form till they have perfected their flowers, but also from the beginning of August, continuing until the rains of autumn, to favour the production at the base of the stem of strong eyes, capable of yielding vigorous flowers in the following season. To secure the flowering of Pæonies in full perfection, it is essential to place them in very open positions, but where they may not receive the sun during the hottest part of the day.

When masses of the herbaceous Pæonies have become strong, and the ground has been exhausted by them, it is indispensable to take them up and separate them, preserving for planting portions having two or three strong roots, and the eyes well fed, and then to change their position; this operation should take place every six, eight, or ten years. As a general rule, when the flowers become few and diminish in size, the roots should be transferred to fresh soil. In the case of certain varieties it is beneficial, when the young stems are rising in spring, to take away the weakest, leaving only those which are more vigorous.

The multiplication of Chinese Pæonies is easy. All of them may be increased by division. However, as the tree varieties grow slowly, and one would have to wait many years for the tufts to become strong enough to be divided, it is found better to propagate these by grafting. To this end, strong roots of herbaceous varieties are procured; these are kept growing, and then grafted, a branch with one or more buds being inserted upon the side of the root. The grafted roots are put under bell-glasses or in frames, placed by preference in a north aspect, and the grafts soon become united, and commence to grow promptly, producing roots for themselves. The grafting is performed from the middle of July to the middle of September.

Few raisers of seedlings take this genus in hand, because it requires so much space to grow the large number it is necessary to plant out, in order to have a fair prospect of gaining some remarkable novelties, and it is besides necessary to wait for their flowering for seven, nine, or ten years, and even more in the case of the Tree Pæonies. However, MM. Guérin-Modeste, Verdier Père, Mathieu, and Lémon, of Paris; Thomas, of Saint Denis; Hiss, of Versailles; Callot, of Douai; Parmentier, of Enghien, and several others, among whom the Italian growers must be especially mentioned, have obtained many new Tree Pæonies as well as herbaceous varieties, magnificent sorts not yet distributed. To these must be added those introduced direct from China by Mr. Fortune. Several of these varieties of Tree Pæonies remain as yet without equal in respect to the regularity of their form and the beauty of their colours.

Many Pæonies, both ligneous and herbaceous, are to be found in commercial catalogues; but, as in the case of all flowers of which the varieties are numerous, one has to restrain one's choice to those among them which are most perfect, rejecting those which are inferior.

Among the new Pæonies M. Guérin-Modeste has obtained, are several herbaceous varieties—M. Malet, M. André, Zoé Verniory, Dr. Nestor Pelassy, Madame de Vatry, and Princesse Nicolas Bibesco, which were distributed in 1863, and others which will not be distributed till the present year. Of Tree Pæonies he has raised the following:—

Charles Rouillard.—Vigorous; leaves yellowish green; flowers very large, nearly full, brilliant fiery rose, softer rose towards the edge; a magnificent variety, with very fine flowers, and not yet in commerce.

Henri Pingard.—Vigorous; leaves glaucous green; flowers very large, nearly full, rose amaranth towards the base of the petals, pearly white at the top; a magnificent flower, not yet in commerce.

President Brongniart.—Vigorous; leaves glaucous green, tinted yellow; flowers large, well raised in the centre, rose amaranth, softer towards the outside, velvety white, very lightly tinted with carnation towards the centre; a superb variety, of which the flowers are of excellent form. This variety was let out in 1863.

Du Mont de Courset.—Vigorous; leaves deep green; flowers large, nearly full, clear satiny amaranth of uniform shade; a very fine variety, not yet distributed.

The herbaceous varieties noticed by M. Rouillard were the following:—

M. Malet.—Amaranth purple, shaded with delicate salmony pink; very full.

M. André.—Rosy purple, shaded with light salmon pink and rosy purple centre; nearly globular.

Madame de Vatry.—Rosy purple, the centre creamy yellow intermingled with delicate rose; very full.

Zoé Verniory.—Light rosy purple, the centre cream colour with rosy tips; very full.

Aspasie.—Yellowish white, very lightly tinted with rose; full and very elegant.

Lais.—Pearly white, scarcely tinted with rose, the centre yellowish, sometimes marked with purple; very full and delicate.

Marion Delonne.—Rosy purple, with white and creamy salmon at the centre, some petals marked with lively purple; very full.

Dr. Nestor Pelassy.—Amaranth purple, tipped with clear white intermixed with small petals of lively red; full and very fine.

Phryné.—Lively purple tinted with bright carnation, yellowish towards the centre; new and delicate, very full.

Princess Nicolas Bibesco.—Light rosy purple, creamy yellow mixed with rosy purple at the centre; the colours soft and agreeable, very full.

NOTES ON GARDENS.—No. X.

ROCKVILLE, DUBLIN, THE SEAT OF T. BEWLEY, ESQ.

NOW-A-DAYS, when it is a too general rule to cultivate in quantity a few plants as familiar to the eye as the common Daisy, it is a delightful treat to find a place where some interesting family of plants is taken in hand, where its choicest gems are cherished—gems which, while capable of captivating the humblest lover of plants, may also furnish interest to the scientific, or a figure to the Botanical Magazine.

Perhaps the very sea of floral monotony by which we are surrounded may have had a good effect by stimulating men of wealth and taste to take an opposite course, and revel in rarity; but be the cause what it may, places where specialties and novelties are thoroughly well cared for, are fortunately easily to be found in the neighbourhood of London and some other large cities. Thus one displays a mine of Orchideous wealth, another glows with the most wondrously painted "foliage plants," and a third is adorned with the most graceful of Nature's garnishings in their illimitable diversity. At Rockville all these are done, some of them in an unrivalled manner, and much more besides. The Orchids alone are of great value, and sufficient to make the fame of a ducal garden; the "plants of remarkable foliage" for condition and numbers I have never seen surpassed; I believe Rivers himself has no such orchard house, which at Rockville combines the comforts and advantages of a winter garden and Persian fruit grove; while for Ferns and a Fernery you might go from Buenos Ayres to Borneo, and examine all the glass erections from St. Petersburg to the sunny shores of the Mediterranean Sea, where such things cease to be a luxury, without finding a more unique scene, or one in which Ferns—from the largest arborescent species downwards—look or do better, or are more richly displayed than in the great Fernery at Rockville.

I shall say nothing of the out-door or the vegetable gardening part of the place, as the great interest of the vast indoor department quite absorbed my time and taste—but proceed at once to the Orchid houses, passing by a sort of half-grot half-greenhouse structure, planted with the Killarney Fern, a lot of rockwork with Alpines, creepers, &c., and a border devoted to young specimens of the rarer Coniferæ, and nursing them previous to final planting out. So, commencing with the Orchids, I first entered the Cattleya house, built—as all the houses now used for growing Orchids at Rockville have been—since my last "look round" three years before. The house is about 24 feet long by 16 feet wide and 10 feet high, substantially built, and remarkably neatly fitted with all requirements generally supposed to be necessary, and a few not included in "general suppositions." In the first place it is double-roofed, which of course much economises the heat, and preserves a greater equality of temperature than is attainable in a house of the ordinary type. With respect to the "feel" of the house—a point to be quickly observed by a connoisseur in such matters—I may say that it seemed to be sweetly congenial to the inmates.

The double roofs so prevalent at Rockville, are I believe, the result of Mr. Bewley's own experiments, and the system adopted is different to that used elsewhere, as the space between the two roofs is made as air tight as possible; the inner roof being fixed, and glazed with clear sheet glass, and the outer sashes made of a convenient size to take off for the purpose of cleaning, glazing, painting, &c.; the glass used being Hartley's true rough plate. There is a space of 4 inches between the two roofs. The ventilation is managed by a small triangular shutter in each gable, kept shut by an india-rubber spring or "accumulator" fastened on the outside, while inside a small cord is attached to the topmost point of the shutter, and fastened to a hook screwed to the stage, so that air may be given from half an inch to the opening of the whole shutter—18 inches—an ingenious and capital mode of ventilating houses of choice things. There are also ventilators built in the walls at the lowest point, having ornamental gratings outside the house, and small wooden doors within, which can be opened from 1 inch to 12. All the ventilating is done from the inside with the greatest facility. The walls are coated with Roman cement, which is found much cleaner and more durable than common plaster, which indeed seldom hardens in Orchid houses, and whitewash or any other colour is apt to wash off, discolouring the leaves, &c. There is a back or private walk in this and all the Orchid houses, where the plants are cleaned and most of the work done, leaving the main walks free for visitors, a very thoughtful arrangement, considering the number of visitors who avail themselves of Mr. Bewley's liberality, and flock to Rockville to be charmed by his wonderful plants and plant-houses. A plentiful supply of tepid water is laid on to this as to all the houses, drawn from taps placed on the sides of the front and back walls. Everything in fact in this and the adjoining Orchid houses is arranged with an eye to convenience and neatness, the painting, finishing, and keeping being done in such a way as is rarely or never seen in glass houses, the result being that nothing in the neighbourhood of the loveliest things known to us mars their beauty or offends the eye. What a contrast to the piggery of surroundings in which one occasionally sees fine plants!

The plants in this house were quite worthy of the care and and expense bestowed on them, and amongst a number of fine specimens I must find room to mention a few, beginning with Lælia superbiens, a huge mass in a very large pot, formerly well known in the Ealing Park collection; Lælia elegans in great variety, with one fine form from Mr. Reed's collection; and several large and healthy specimens of Lælia purpurata. There was a grand plant of the true Cattleya pallida; with Cattleya labiata, nearly a yard across, having shiny stout pseudo-bulbs, and showing well for flower, quite a match for Mr. Hanbury's once famous plant; also grand specimens of Cattleya Mossiæ in variety. Arpophyllum giganteum was of great size, and had been found to do best in a cool house with an abundant supply of water. Miltonia Regnellii and M. Regnellii purpurea, two rare and beautiful plants were also here, and a large bush of Vanda teres, which had flowered freely, and is grown rather cool at Rockville, along with Vanda cœrulea. Here were also Oncidium sarcodes in variety, one said to be particularly fine; Cypripedium Schlimii, Epidendrum prismatocarpum, Cattleya lobata, a good plant of the true Lælia Schilleriana, Cattleya Aclandiæ tigrina, and fine plants of the older Odontoglots, such as O. grande, with a host of other beautiful and valuable species, all in blooming health.

From the Cattleya house you enter the West Indian house, a single span about 16 feet square and 10 feet high, with double roof and fittings similar to those of the Cattleya house, but having a series of shelves for bringing the plants nearer to the glass. In this house the best West Indians might be counted by the score; these being recent importations from Mr. Bewley's own collector, including a stock—I shall be under the mark by saying 50—of that most gorgeous of Cattleyas, superba, with its lovely violet-tinted sepals, rich ruby lip and orange markings. Some specimens were 2 feet across—pansful of vigorous growth. The chaste little Ionopsis paniculata was abundant and in variety, a plant, by the by, which we have hardly yet seen in perfection in a cultivated state, as on a single imported spike the remains of nearly 200 flowers have been counted. There was a plant of Oncidium Papilio with between 20 and 30 flower spikes; a fine specimen of Oncidium Lanceanum with some beautiful and distinct varieties; the somewhat rare Paphinia cristata, nearly always in bloom; and probably the largest company of Burlingtonia candida to be found together in cultivation. *Wm. Robinson.*

(To be continued.

Home Correspondence.

Rose Information.—I cannot but be gratified by Mr. Kent's notice of me and of Rushton (see p. 533). I must not, however, accept the title of the first Rosarian of the day. That distinction belongs to Mr. Hedge, of Reed Hall, and to many others, whose superiority I am glad to acknowledge. A painstaking Rosarian would be ample praise. By painstaking, the Roses, so afflicted last year, are now in most abundant, and, I may say, magnificent bloom. I have had large parties here this week who read your paper and the *Dorset County Chronicle*, and they have expressed themselves much gratified. To-day (June 11) my old friend Sir Edward Baker and a party from Rauston honoured my gardens with a review of Peaches, Strawberries, and Roses, and seemed highly pleased. As Mr. Kent has pronounced me to be a "safe authority," I have thought it might be of advantage to Rose propagators, nurserymen, and amateurs, to say that the following Roses should be largely propagated, viz:—Senateur Vaisse, Comtesse Cecile Chabrillant, Madame Boll, Victor Verdier, John Hopper, Maurice Bernardin, Duc de Rohan, Duc de Cazes, Prince Camille de Rohan, Charles Lefebvre, Madame Boutin, Madame C. Wood, Madame Julie Daran, L'Eblouissante, Madame Clemence (properly Florence) Joigneaux, Maréchal Vaillant, François Lacharme, Beauty of Waltham, and General Washington, a good and grand fall Rose. These varieties have been thoroughly tried here, and may be called truly splendid and also constitutional Roses. They are now in abundant and beautiful bloom. The 13 first are especially grand and good here at all points. There are some good Roses of last year. I have budded a good many Briars and some Manetti stocks with the first I name, a valuable Rose for its colour, and of fine growth and foliage, and a free bloomer; it is a much improved Frederick the 2d. Alfred de Rougemont and Le Rhone are as yet the two best of last year. These are very good and can be safely propagated: Vainqueur de Goliath, Lord Macaulay, President Lincoln, Madame Freeman, a beautiful white Rose, and a better grower than M. Bonnaire, Baron de Rothschild, Peter Lawson, glowing scarlet, and Mrs. W. Paul. These 7 are as yet the best, and I have no hesitation in recommending them. The following are also good, viz., Souvenir de Charles Montault, and Jean Goujon. These two have not yet been quite full; but they are good growers and good garden varieties. Mr. W. Paul sent me a bloom of Lord Herbert, a superior Rose of fine colour and perfect in shape; but I have no specimen here to enable me to recommend it from experience. As regards Roses of 1864, I have, as yet, only bought André Leroy, which has not yet bloomed. A light Rose has been sent out for this, which is very dark, as figured in the Florist. I should say that the above is a perfectly safe direction. I have others, which have not yet bloomed; of these, if worthy, I will speak hereafter. *W. F. Radclyffe, Rushton.*

Hanging Baskets.—The accompanying is a representation of one of the cheapest and simplest of hanging baskets or vases, namely the top of an earthen bread-

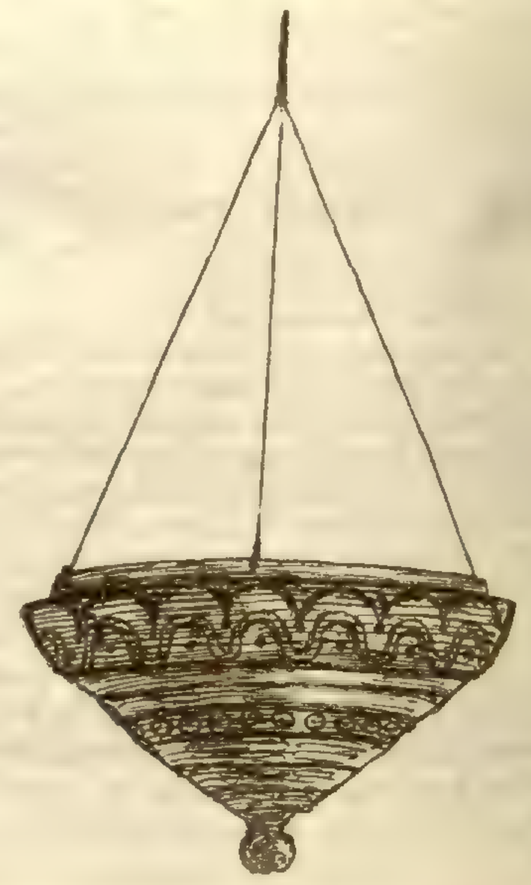

pan. In Bristol they are quite as ornamental as this, especially those which are deeper than the common kind. *Somerset.*

Large Cattleya Mossiæ.—Your notice of the Orchids at Broomfield has induced me to send you some account of a plant of Cattleya Mossiæ that we have now in bloom. Our best plant measures three feet in diameter, and two feet in depth, and in shape is about half a ball; it has 99 flowers upon it, 96 of which are now in full beauty, two are faded, and one unexpanded, beside which several have been removed. *F. Harrison, Osmaston Manor, Derby.*

Lord Kenyon's Favourite Cucumber.—Two years ago I lost the stock of a Cucumber which I had from a private source, under the name of Lord Kenyon's Favourite. I have since tried five nurserymen, and have failed in replacing it. It was 9 inches long, perfectly smooth, with no handle or neck, and of a very dark shiny green on the sunny side, which went well into the flesh. One grand peculiarity connected with it was its scent; one cut perfumed the whole room. In this particular all that I have had subsequently under the name have broken down. Can any one help me out of my difficulty? *T. S. U., Staplehurst.*

Flower Market at South Kensington.—Alas! Paul, you seem to have quite forgotten your education. In my last letter I had to remind you that gentlemen do not call names, and now you are reduced to imputing motives, a course equally unheard-of among gentlemen. Why are your motives to be more pure than mine? Surely gentlemen can, without descending to Billingsgate, discuss questions. I advocate a flower market on the spare land at South Kensington—land not belonging

to the Royal Horticultural Society, though lent to it for the time. You object to two opinions, but surely it is not necessary for you to forget that you are a gentleman. Fie for shame, Master Pry; put up your umbrella and hide your blushes, and I will forgive you. Again, you misquote me strangely, I hope not purposely, for it would indeed lower you in my opinion, Master Paul, if I thought you did so purposely. I never proposed that the Horticultural Society should spend a farthing on the proposed flower market; on the contrary, I simply suggested that space should be set apart to be let to the trade. What for? Why, for the very purpose of strengthening the resources of the Society, and enabling it to expend the 10*l.* you say, Master Pry, is wanting. I believe that such spaces would willingly be paid for by the trade, would be a convenience to the public, and an attraction to the Fellows. Master Paul, you seem to be very positive that the "best men" would laugh at the idea of sending "shilling plants,"—let such a person send guinea plants and he will find buyers, if the plants were worth the money, as I have no doubt they would be; but still I have heard it said that one "best man" sells 40,000 plants a-year at a shilling, or less; and further, all the world, including even you, Master Pry, will admit, I suppose, that displays are profitable—look at the business obtained by Messrs. Waterer and Godfrey and Mr. John Waterer from showing their beautiful Rhododendrons—look at the profit derived from showing for a certificate down to a small mite, a new bedding-out plant. *A Male F.H.S.* [Nothing can be more true. *J. L.*]

The Laying out of Kew.—"But it is a question whether Kew might not be improved by good taste in landscape gardening," says Mr. Newton. Truly this is a question of easy solution, though too much money has now been spent in almost everlasting structures, inexplicably arranged, to leave any hope of Kew ever becoming a well laid out garden. The million surrounded by the floral charms of Kew, will however hardly find time to quarrel with the taste of those who conduct us by a noble walk to nowhere, and may possibly be in a mood to admire the genius required to make or suggest a vista, but as the plants will not be so attractive on the margin of the new lake, it may not be out of place to wish that before that piece of water is presented to the public in a finished state, some person with a little taste in such matters may be employed to modify the outline and singular aspect which it not long ago presented, suggesting the undirected labours of a party of turf cutters or canal makers. *W. H. S.*

Societies.

Royal Botanic, Regent's Park: *June* 11 (*Second Great Show*).—Orchids and stove and greenhouse plants were produced on this occasion in great profusion and in excellent condition; but Azaleas and Roses in pots were considerably inferior to those shown here in May last. Cut Roses were, however, all that could be desired, as were also Pelargoniums, and there was a good exhibition of fruit. The day being favourable there was a large attendance of visitors.

Stove and Greenhouse Plants.—Among these were some admirable examples of Allamandas, especially of grandiflora, of which Mr. Chilman had an unusually finely-flowered plant. From Mr. J. Fraser came a huge Phœnocoma proliferum in robust health, and covered with bright rosy blossoms; other kinds of Everlastings were also present in great numbers. Gompholobium polymorphum was shown in the form of a bush by Mr. Cutbush, of Barnet; and some excellent Ixoras, Dipladenias, Stephanotis, Pleromas, Vincas, and Heaths, came from Messrs. Whitbread and May. The former also furnished the pretty Aotus gracillima, covered with long spikes of bright brown and yellow blossoms. Among plants not in flower, Messrs. Lee had beautiful examples of Cyathea Smithii and other Ferns, Pandanus elegantissimus, Cordyline indivisa, a graceful plant with long handsome foliage conspicuously ribbed with orange; the noble-looking deep green-leaved Neottopteris australasica, one of the Bird's Nest Ferns; the singular bronzy-leaved Alocasia metallica, Rhopalas, and plants of a similar description. From Messrs. A. Henderson & Co. came, along with Anthuriums and other fine-leaved plants, a charming example of Alocasia macrorhiza variegata, and not less remarkable was a large collection of handsome-leaved plants from Mr. Williams, of Hollowny.

Awards.—16: 1, Mr. Whitbread; 2, Mr. May; 3, Mr. Peed; 4, Mr. Wheeler. 10: 1, Mr. J. Fraser; 2, Mr. Rhodes; 3, Messrs. Lee; 4, Mr. Cutbush. *Amateurs.*—10: 1, Mr. Chilman; 2, Mr. Green. 6: 1, Mr. Page. Extra, Mr. Cross. *Fine Foliaged Plants.*—1, Messrs. Lee; 2, Messrs. A. Henderson & Co.; 3, Mr. Williams.

Orchids.—In collections of these we noticed a small plant of the new Dendrobium Parishii, a variety in the way of macrophyllum, but with flowers much smaller in size and redder in colour than those of that species. This came from Mr. Williams, who showed a good specimen of the pretty terrestrial Orchis foliosa. From Mr. Page came Oncidium ampliatum majus in beautiful condition, bearing three noble spikes of clear yellow blossoms; also a good plant of Orchis foliosa. Mr. Penny had the Holford variety of Saccolabium guttatum, with two gracefully-drooping spikes of purple-spotted white flowers; also the spotted buff Dendrobium albo-sanguineum, and a fine Cypripedium villosum. From Mr. Green came a small specimen of the charming Arpophyllum giganteum, with little rosy shell-like blossoms, the neat symmetrical arrangement of which on the upright spikes which upheld them, was the admiration of everybody; Mr. Chilman contributed a good Saccolabium guttatum; Mr. Peed, Trichopilia coccinea, the rich yellow Dendrobium chrysotoxum, and the snow-white purple-lipped Lælia purpurata. In a fine group from Mr. Milford, came Anguloa Clowesii with seven large yellow Tulip-like blossoms; the Bornean Cypripedium Stonei, with pale straw-coloured flowers, stained and spotted with reddish-brown; Dendrobium formosum, with large yellow-stained pure white blossoms; Lælia grandis and Brysiana, the last apparently a variety of purpurata; and the rare Odontoglossum Phalænopsis. Mr. Baker had a magnificent specimen of Cattleya Mossiæ, which could not measure less than three feet across and two feet in height, literally loaded with blossoms of the largest and gayest description; also the canary-coloured Cattleya citrina, Aerides Lobbii, with two branching spikes of rich rosy flowers; a grand plant of Odontoglossum citrosmum, with seven spikes of pink flushed delicate white blossoms; the pretty Dendrobium Farmeri, and the orange-scarlet Saccolabium curvifolium. From Mr. Wiggins came some handsome Aerides; Mr. Whitbread and Mr. Wilson also showed some well-grown plants.

Awards.—20: 1, Mr. Baker; 2, Mr. Milford; 3, withheld; 4, Mr. Peed. 12: 1, Mr. Penny; 2, Mr. Page; 3, Mr. Green; 4, Mr. Chilman. 6: 1, Mr. Williams; 2, Mr. Jackson; 3, Mr. Woolley. *Amateurs.*—6: 1, Mr. Fairbairn; 2, Mr. Wilson; 3, Mr. Wiggins; 4, Mr. Whitbread; 5, Mr. Wheeler.

Roses.—Concerning those in pots we have nothing to record, but of the beauty of the cut blooms it would be difficult to say too much; they were brilliant in colour, large, and preserved their freshness well throughout the day. Among them were charming examples of Lord Clyde, of which Messrs. Paul & Son had fine blooms; Senateur Vaisse, and other fine deep crimson sorts; among yellow kinds nothing beat Celine Forestier, of which most of the boxes contained blooms.

Awards.—10 in pots: 1, Mr. Wm. Paul. 6: 1, Mr. Terry. 25 Cut Blooms: 1, Mr. Turner; 2, Messrs. Paul & Son; 3, Mr. Mitchell. *Amateurs.*—1, Mr. Excell; 2, Mr. Morris; 3, Mr. Terry. 24: 1, Mr. Turner; 2, Messrs. Paul & Son; 3, Mr. Mitchell.

Azaleas.—Those exhibited on this occasion were certainly past their best; nevertheless the pleasing intermixture of leaves and flowers which they possessed rendered them by no means unattractive.

Awards.—6: 1, Mr. Whitbread; 2, Mr. Carson; 3, Mr. Cross; 4, Mr. Page. *Nurserymen.*—1, Mr. Turner; 2, Mr. J. Fraser; 3, Mr. Rhodes.

New Plants.—Among these there was little that had not been shown before. From Messrs. Veitch came Lilium auratum, a pretty Lomaria from Manilla, the white-blossomed variegated-leaved Kæmpferia Roscoeana, Eranthemum tuberculatum, and Gymnogramma japonica. Messrs. Jackson sent the prettily veined-leaved Anæctochilus Petola superba, and Stangeria paradoxa fœmina. From Mr. Williams came a fine variety of Cattleya amethystoglossa, a Californian Yucca, the orange-blossomed Imantophyllum borbonicum, Dracæna Ehrenbergi, and a species of Hechtia. Mr. Bruce Findlay sent from the Botanic Gardens, Manchester, a large leaf of some showy Alocasia; Mr. Watson, St. Albans, sent Astelia bivittata in blossom, and the rare Gleichenia Cunninghami. Mr. Bull contributed a handsome Caladium, named Van den Heckei, Pandanus furcatus, a variegated variety of Polygonatum verticillatum, a crested variety of Nephrodium molle, Cycas Ruminiana, and the white-blossomed Rhododendron tubulatum.

Pelargoniums.—Mr. Bailey again showed wonderfully fine plants of these. They consisted of Spotted Gem, Desdemona, Lord Clyde, James Lodge, Guillaume Severyns, Flora, Sanspareil, Glowworm, Nestor, and Lord Palmerston. Of fancy varieties the same exhibitor had Arabella Goddard, Princess Royal, M. Rougière, Crystal Beauty, Lady Craven, and Clemanthe. The names of other sorts shown on this occasion have frequently already appeared in our columns.

Awards.—12: 1, Mr. J. Fraser. 10: 1, Mr. Bailey; 2, Mr. Nye; 3, Mr. Wiggins; 4, Mr. Donald. *Fancy Sorts.*—6: 1, Mr. J. Fraser. *Amateurs.*—6: 1, Mr. Bailey; 2, Mr. Cox; 3, Mr. Donald; 4, Mr. Weir.

Fuchsias.—Of these one or two collections were exhibited, consisting of medium-sized well-bloomed plants, which however we yet hope to see in better condition when the season is further advanced.

Awards.—6: 1, Mr. Cannell; 2, Mr. Cross; 3, Mr. Young.

Calceolarias.—Messrs. Dobson showed a few good plants of these, the names of which did not appear to greatly differ from those given by us on former occasions.

Seedlings.—Among these the following received Certificates, viz., Pelargoniums Sensation, Duke of Cambridge, Meteor, and Rival, from Messrs. Dobson; Pelargonium Clown, from Lord Dufferin's gardener; The Rover, Ann Page, and Dreadnought, all Pelargoniums of considerable merit, from Mr. Turner; Pelargonium Fairy, from Mr. Holland; Blair Athol and Amazon, two fine Pelargoniums, from Mr. Nye; and British Sailor, Mary Hoyle, and Publicola, from Mr. Hoyle. From Mr. William Paul came his beautiful Rose called Princess of Wales; and from Messrs. Downie, Laird & Laing, Pansies John M'Nab, William Moffatt, and Nethercote; Messrs. Smith, of Dulwich, sent some seedling Lobelias, among which alba speciosa, conspicua, Blandina cœrulea and Magenta received Second-class Certificates; and from Messrs. E. G. Henderson came a prettily striped Petunia named Volunteer, and a handsome variety of Phlox Drummondi.

Heaths.—Of these, some well grown plants were exhibited, especially of Massoni, tricolor Wilsoni, which is one of the best of its class, and ventricosa magnifica, a profuse blooming rosy pink kind tipped with white.

Awards.—10; 1, Mr. Rhodes; 2, Messrs. Jackson. 8: 1, Mr. Peed; 2, Mr. Page. 6: 1, Mr. Chilman; 2, Mr. Wheeler.

Ferns.—Charming groups of these filled up shady recesses with excellent effect, and served to vary and enhance the general appearance of the exhibition. Among them were some remarkably large Gleichenias, Cyatheas and Dicksonias. Of British kinds, Messrs. Ivery had a highly-interesting collection, to various fine varieties of Athyrium in which certificates were given.

Awards.—1, Mr. Williams; 2, Mr. Bull; 3, Mr. Young; 4, Mr. Stone.

Miscellaneous Subjects.—Among these were cut blooms of Pinks from Mr. Hooper, of Bath; Pansies from Messrs. Downie, Laird & Laing, Fergie, Howse and Weymouth; hanging baskets tastefully filled with variegated and other plants from Messrs. A. Henderson and Mr. Young; rustic window boxes and other handsome room ornaments in the way of plant cases from Messrs. Barr & Sugden; Caladiums from Mr. Young; beautiful cut blooms of herbaceous Pæonies from Mr. Salter and Messrs. Paul & Son; Amaryllis from Mr. Williams, and various interesting plants from Mr. Bull.

Pine Apples.—Providences, though good for the season, were not remarkable either for fine form or heavy weight; of Queens, one or two fine fruit came from Mr. Chitty and Mr. Floud, gr. to R. Fothergill, Esq., Aberdare; a Prickly Cayenne, unripe, also came from the last-named exhibitor. We likewise noticed a Smooth-leaved Cayenne, weighing 4¾ lbs., from Mr. Taylor; a Black Antigua and a Cayenne from Mr. Young, stated to have been ripened without bottom-heat.

Awards.—Providences: 1, Mr. Bailey; 2, Mr. Smith. *Queens*: 1, Mr. Floud; 2, Mr. Chitty; 3, Mr. Turner; 4, Mr. A. Henderson. *Other sorts*: 1, Mr. Taylor; 2, Mr. Floud; 3, Mr. Henderson; 4, Mr. Chitty; 5, Mr. Jefferson; 6, Mr. Wallis.

Grapes.—Of these there were 25 dishes of Black varieties, 18 of White, and three of Grizzly Frontignan. Wonderfully fine Black Hamburghs, large both in bunch and berry, and finely coloured, came from Mr. Hill of Keele Hall, and Mr. Meredith of Garston, and good bunches of the same variety were also contributed by Messrs. Powell, Henderson, McKay, Cruickshanks, Wallis, Miller, and Penny; of Black Prince magnificent clusters came from Mr. Hill and Mr. Meads, gr. to R. Currie, Esq., Minley Manor, Farnborough. These were so perfectly equal in point of merit that the Judges awarded them equal first prizes. Mr. Hill's three bunches weighed together 8 lbs. 8 ozs., and Mr. Meads', 8 lbs. 10 ozs.; each of the clusters measured about 15 inches in length, they were finely coloured, and were altogether beautiful specimens of first-rate Grape-growing. From Mr. Pottle came well-ripened bunches of Black Prince, and Mr. Allport sent good specimens of West's St. Peters. Of Golden Hamburgh and Buckland Sweetwater there were some finely ripened bunches, and Mr. Meads, Mr. Drewitt, and Mr. Bailey showed famous examples of Chasselas Musqué, not a berry of which exhibited any symptoms of cracking. Mr. Beasley, Twyford Abbey; Mr. Bennett, Champion Hill, and Mr. M. Henderson contributed fine specimens of Grizzly Frontignan. Muscadines came from various growers, as did also Muscats, which were for the most part unripe. From Mr. Meads came very fine bunches of Trentham Black.

Awards.—3 bunches of Black Hamburgh: 1, Mr. Hill; 2, Mr. Meredith; 3, Mr. Powell; 4, Mr. Henderson; 5, Mr. McKay; 6, Mr. Cruickshanks. Extra, Mr. Wallis, Mr. Miller, and Mr. Penny. 3 bunches of Black Prince, or West's St. Peter's: Equal 1, Mr. Meads and Mr. Hill; 2, Mr. Pottle; 3, Mr. Allport. 3 bunches of Muscadine: 1, Mr. Hill; 2, Mr. Henderson; 3, Mr. Young; 4, Mr. Turner. Extra, Mr. Miller and Mr. Horwood. 3 bunches of Chasselas Musqué: 1, Mr. Meads; 2, Mr. Drewitt; 3, Mr. Bailey.

Peaches.—These were for the most part large and well coloured. They consisted of Gallande, Royal George, Noblesse and Barrington. Some fine fruit of the last, unfortunately a little bruised, came from Mr. Wills, gr. to Sir P. G. Egerton, Bart., M.P.

Awards.—1, Mr. Allen; 2, Mr. Petch; 3, Mr. Ruffett; 4, Mr. Stone. Extra, Mr. Masters, Mr. Henderson, and Mr. Knight.

Nectarines.—These were confined to Elruge, Hunt's Tawny, and Violette Hâtive, of all of which good fruit was contributed.

Awards.—1, Mr. Allen; 2, Mr. Lynn; 3, Mr. Masters; 4, Mr. Petch; extra, Mr. Turner and Mr. Gardiner.

Cherries.—A beautiful dish of Black Circassian was contributed by Mr. Henderson, of Trentham, and there were also fine dishes of Elton and Belle de Choisy from other growers. From Mr. Wilson, of Warwick, came Governor Wood, a white American variety, but too dull in appearance, we fear, ever to become a general favourite.

Awards.—Black: 1, Mr. Henderson; 2, Mr. Beck; 3, Mr. Lynn. *White*: 1, Mr. Enstone; 2, Mr. Henderson; 3, Mr. Lynn.

Strawberries.—Of these Mr. Smith and Mr. Pottle showed magnificent fruit of Queen, Sir C. Napier, and Rifleman. From Mr. Turner, of Slough, came a fine looking seedling named Sir J. Paxton, which will doubtless become a favourite. In general appearance it somewhat resembles President; it is said to have a fine musky flavour, and to be nearly as early as

Keens' Seedling. Mr. Fraser again showed Reeves' Eclipse well fruited in pots.

Awards.—4 dishes: 1, Mr. Smith; 2, Mr. Pottle.

Melons.—Among these by far the best was a Hybrid Cashmere from Mr. Meredith, of Garston, near Liverpool. It was a medium sized fruit, oval in shape, with whitish-green deliciously flavoured flesh, and a thin golden yellow skin. Among red fleshed kinds, Scarlet Gem still stands at the head.

Awards.—Green-flesh: 1, Mr. Meredith; 2, Mr. Bailey; 3, Mr. Ruffett; 4, Mr. Sawkins. *Scarlet*: 1, Mr. Simmonds; 2, Mr. Beck.

Figs.—From Mr. Ruffett came a good dish of Lee's Perpetual, and Mr. Pottle sent fine fruit of White Marseilles.

Miscellaneous Fruits.—One or two collections were shown by Mr. Masters, Mr. Pottle, and others, consisting of Pine Apples, Grapes, Peaches and Nectarines, Strawberries, and Melons.

ROYAL HORTICULTURAL: *June* 14.—Sir Wentworth Dilke, Bart., in the Chair. The following candidates were elected, viz.:—

S. Bowring, Esq.; I. Corbière, Esq.; J. Cridland, Esq.; L. Dell, Esq.; J. S. Forbes, Esq.; Major Grant, W. A. Irvine, Esq.; Mrs. Charles Jones, Sir N. J. Knatchbull, Bart.; Mrs. Low, J. Maynard, Esq.; H. T. Morton, Esq.; Mrs. St. Auburn, C. Waring, Esq.; W. Waring, Esq.; and C. M. Webster, Esq.

At a meeting of the Floral Committee held on this occasion, Mr. Turner received a Special Certificate for a Collection of Pelargoniums; also a Second-class Certificate for Edgar, a dark fancy kind, with a light eye. The Rover, a Fancy like the last, but lighter in colour, received a First-class Certificate; and to Silver Mantle, rose and white, was given a Second-class Certificate. Second-class Certificates were given to Mr. Hoyle for Publicola, a crimson-coloured Pelargonium with white eye and dark top; and Mary Hoyle, salmon pink with white eye and black spot on the upper petals. To Mr. Bull was awarded a Second-class Certificate for Pelargonium Achilles, a brilliant scarlet variety without any horse-shoe mark on the leaves. The same exhibitor also received a First-class Certificate for Pleione Schilleriana, a small greenish yellow-flowered kind, streaked with brown. To Mr. Hally, of Blackheath, was given a similar award for a bright scarlet zonate Pelargonium called Venus, with a slight yellow marbled variegation on the foliage. Messrs. E. G. Henderson received a Special Certificate for a collection of beautifully tricolor red-zoned Pelargoniums, in which was a pretty variety called Captain Meade, to which a Certificate was also given. From Messrs. Veitch came fine examples of Lilium auratum, a standard plant of the scented Pelargonium Lady Plymouth, and other interesting plants.

Mr. Wilson Saunders then delivered a very interesting and instructive lecture on Pelargoniums, of which the following is a condensed report. He commenced by pointing out the difference botanically between Pelargonium and Geranium, a full account of which will be found in another column. He then alluded to the geographical distribution of Pelargoniums, which he said all came from the Cape of Good Hope, with the exception of a very few, which were natives of New Holland, St. Helena, Canaries and Abyssinia. One, called Endlicherianum, came from Asia Minor, and it was remarked that as this was nearly hardy, it might yet be the parent of a race less tender in constitution than any we are now in the habit of cultivating. As regards duration, Pelargoniums were stated to be either perennials or annuals, and the difference of form among them was most remarkable, not only in the stems but also in the leaves. As regards stems, some were spiny, gouty, climbing, and succulent; and with respect to the leaves, in addition to the peculiar shape which some of them took, nearly all of them were deliciously scented. The flowers next engaged the lecturer's attention. They were stated to embrace different shades of yellow, white, pink, purple, scarlet, crimson, and very dark brown. Some of them gave out an agreeable odour at night; and it was remarked that when the flowers were perfumed the leaves were scentless. With respect to introduction, the first Pelargoniums, consisting of triste, cucullatum, capitatum, and a few others, made their appearance amongst us about 238 years ago, but they appeared in larger numbers between the years 1790 and 1810, since which period few additions to their numbers have been made. With regard to the Pelargonium in an economical point of view, it was mentioned that some are astringents; that one of the tuberous-rooted species allied to triste is eaten by the Kaffirs; and that in the south of France and in Algeria, an essential oil is obtained from P. Radula rosea. For gardening purposes, Mr. Saunders divided the species into groups as follows, viz.:—1, sorts remarkable for the beauty of their blossoms; 2, kinds worth attention on account of the beauty of their leaves; 3, species valuable for the scent yielded by their leaves; and 4, species remarkable for the odour of their flowers. These were then compared with some of the best florists' varieties contributed by Mr. Turner, and allusion made to some of the species from which they originated.

With respect to hybridization, Mr. Saunders stated that it was not at all certain when the first hybrids among Pelargoniums were raised, but he remarked it was certain that many existed at the latter end of the last century, and we might perhaps not be far from the truth in saying that some were known 100 years ago. The first no doubt were the result of chance, through the agency of bees or other accidental circumstances. The scarlet Fothergill Pelargonium was raised by Dr. Fothergill, in 1780; and during the first ten years of the present century some very marked improvements upon the original species had taken place—indeed the commencement of the present races of florists' varieties had been started. Colour was there, spotting and marking were present, but size was wanting, except in one or two instances, as well as shape and substance of petal.

The fine Pelargoniums which now annually grace our exhibition tables were next adverted to, the sections into which they are divided pointed out, and the names of some of the principal raisers mentioned. Among these was Mr. Hoyle, of Reading, from whom the following letter was read:—

"My acquaintance with Pelargoniums commenced 32 years ago, when I began to cultivate them; and for the last 24 years I have annually raised a batch of seedlings numbering some 10 or 12 hundred.

"One of the first I possessed was Davyanum, at that time a prime favourite, but it would be considered now to have scarcely one good point, though at that time a good deal of progress had been made. I possess some petals gummed on paper about 40 years ago, and in shape they remind one of the sails of a windmill. To estimate correctly what has been done, it is necessary to compare the best examples of the present time with the figures which floral and botanical works have given us from time to time; the early numbers of the "Florist," especially the first volume, give several examples. Improvement it will be seen has been great in all points in reference to a good flower; form, colour, substance, abundance of bloom and size—each of these might furnish much matter for remark. I believe however that there is yet plenty of room for further progress, and that the Pelargonium may be as much advanced in the next 20 years by judicious and persevering cultivation, as it has been during the last 20 years; it is just that time since the idea was given me that a purple with a white eye was a desideratum, and for 18 years I have tried all I could to procure it, and I have the reward of my perseverance in that beautiful flower called Diadem. Some progress has been made with the Scarlet class, and soon it will be a rarity to see a Show flower with a dull eye. It is usual to call those varieties that are spotted on the lower petals French; but there are many that have not that origin. Years before the introduction of the French varieties I had raised Saracen, Nonsuch, Ocellatum, and Sanspareil, the last still always 'one in the ring,' and with its white sport Fair Rosamond will long be grown for exhibition."

Mr. Saunders next proceeded to indicate some of the points which should characterise a good florist's variety, and briefly alluded to the propagation of some of the Cape species.

The concluding part of his subject will perhaps have most interest in the eyes of raisers. He said:—

"Having now shown shortly what has been done with the Pelargonium to the present time, I think we may glance at the future, and looking to the various characters of the species, see where progress may still be made by judicious crossing and selection. Although, as I have pointed out, more than 200 years have elapsed since the first Pelargonium was introduced, and nearly 100 years since the first crosses were noticed, yet with the knowledge we now possess of hybridization, and the advantage of selection, there can be no doubt that a very few years would effect great results in any new series of experiments for the further improvement of the Pelargonium, commencing with the species themselves. It is most desirable that these attempts should be made, knowing as we now do how valuable the Pelargonium is as a flower contributing to the gratification of such numbers of persons.

"To effect improvements in constitution, habit, foliage, flowers, &c., I would suggest experiments on the following species:—

"*P. Endlicherianum.*—Crosses from this plant may be expected to possess a nearly hardy constitution, and although it is of a low almost herbaceous habit, yet it forms a woody kind of root stem, with large and conspicuous flowers, good qualities for the hybridizer to work upon.

"*P. patulum.*—Here we have a plant with long almost trailing stems of a woody nature. It grows very quickly, and would clothe the side of a conservatory in a short space of time. Its flowers are small and inconspicuous, but properly crossed an improvement would soon take place here, and large blossoms might be expected, which would make the plant a very acceptable addition to our greenhouses.

"*P. peltatum, the Ivy-leaf.*—This beautiful and graceful species, with numerous shining succulent leaves, beautifully zoned with darker colour, and very free growing and trailing stems, is well worthy of more attention on the part of floriculturists. Some pleasing crosses have been produced, such as lateripes, hederinum, and scutatum, &c.; sufficient to show how ready the plant is to yield to the wishes of hybridizers. Much, I feel confident, might be done with this plant.

"*P. schizopetalum and Bowkeri.*—These have deeply laciniated petals, very elegant in outline and large in size. The flowers are dull in colour, but if they could be brightened by judicious crossing, very charming plants would be the result, and could a shrubby character be given to them, novelties would be obtained of a most striking character.

"With respect to shape of leaves, most of our hybrid Pelargoniums with very showy flowers have leaves bearing a great similarity to each other. As the leaves of many of the species are so very varied in outline and so elegant, why should not attempts be made to produce beautiful leaves with beautiful flowers? There is a very wide field open here for crossing and producing new and valuable varieties.

"Again, as the Pelargonium offers such varied and grateful perfumes in the leaves, why should not this character be imported into the leaves of the large and fine-flowered sorts. This would not be a difficult matter, and would certainly much add to the interest of the plant."

The lecture was amply illustrated by living plants of Cape species obtained from Mr. Saunders' extensive and fine collection of them at Reigate; and by some admirably-grown plants of florists' varieties from Mr. Turner.

LINNEAN: *June* 2.—George Bentham, Esq., President, in the chair. The President nominated J. J. Bennett, Esq., Dr. Hooker, J. Lubbock, Esq., and W. W. Saunders, Esq., Vice-Presidents for the ensuing year. Dr. Welwitsch exhibited a series of Aroideæ from Angola, principally to show the successive metamorphoses which occur in the leaves of Amorphophallus and some allied genera. The following papers were read:—"On the Conantheræ," by J. Miers, Esq. In 1863 Dr. Leybold proposed to establish a new order of Monocotyledons under the name of Tecophileaceæ, agreeing with Iridaceæ in the structure of the perianth and root, but distinct in the number, introrse direction, and dehiscence of the anthers. Mr. Miers thought it might be assumed, though it had not been stated, that the chief feature on which Tecophileaceæ would rest, was the semi-inferior character of the ovary and capsule, which would place it between Liliaceæ and Iridaceæ. The sterility of three of its stamens was stated to be not peculiar to Tecophilea, but to occur also in the liliaceous Albuca, Brodiea, Leucocoryne, and in some degree in Zephyra and Cyanella; while the partial inferiority of the ovary was also an aberrant and variable character, seen in many genera, particularly in all the Conantheræ. The object of the author was to show that Tecophilea really belongs to the latter group, and has no claims to be regarded as a distinct family. The Conantheræ as proposed by Don included Zephyra, Pasithea, Conanthera, and Cummingia, and was then distinguished from the Asphodeleæ in Liliaceæ by a semi-inferior ovary and inarticulated pedicel. Endlicher added Echeandia. Zephyra singularly accords with Tecophilea; and of its six stamens two are sterile. The anthers of Conanthera and Cumingia are all fertile, and remarkable for being shaped precisely like the sterile anthers of Tecophilea. The Conantheræ are further distinguished, among other points of structure, by having a solid semi-globular tuberose root, and nearly radical leaves. Pasithea, on account of its fingered or branching root, and other peculiarities, must be excluded, and evidently belongs to the Anthericeæ, where probably Echeandia should also be placed; but Cyanella, hitherto placed in Anthericeæ, must rank with the Conantheræ. This group of Conantheræ might without inconsistency remain a distinct tribe of the Liliaceæ, following the Alliæ and Anthericeæ, nearly in the manner in which it has been well classed by Lindley in his "Vegetable Kingdom." It would consist of Zephyra, Tecophilea, Conanthera, Cumingia, and Cyanella. If thought desirable on account of its very peculiar characters to consider the group as a distinct family, the name Conantheræ or Conantheraceæ has a prior claim to that of Tecophileaceæ. The author then gave a full diagnosis of each genus from his own careful observation, and also a list of the species.——"2. On the individual sterility and cross impregnation of certain species of Oncidium," by Mr. John Scott; communicated by C. Darwin, Esq. This paper consisted of an account of various experiments carried on in the Edinburgh Botanic Garden, the result of which is thus summed up, the species employed being O. microchilum, two plants, ornithorhynchum, and divaricatum cupreum:—

O. ornithorhynchum by O. microchilum (2); 8 flowers fertilised, 3 capsules obtained, all good.
O. microchilum (2), by O. ornithorhynchum; 12 flowers fertilised, no capsules.
O. ornithorhynchum by O. microchilum (1); 8 flowers fertilised, 5 capsules, 4 of them good.
O. microchilum (1) by O. ornithorhynchum; 12 flowers fertilised, 2 capsules, neither good.
O. divaricatum cupreum by O. microchilum (2); 6 flowers fertilised, 3 capsules, all good.
O. microchilum (2) by O. divaricatum cupreum; 18 flowers fertilised, no capsules.
O. divaricatum cupreum by O. microchilum (1); 6 flowers fertilised, 4 capsules, all good
O. microchilum (1) by O. divaricatum cupreum; 6 flowers fertilised, 2 capsules, both good.
O. microchilum (1) by O. microchilum (2); 6 flowers fertilised, 5 capsules, 4 of them good.
O. microchilum (2) by O. microchilum (1); 6 flowers fertilised, no capsules; and again 12 flowers fertilised, no capsules.
O. microchilum (1) by its own pollinia; 24 flowers fertilised, 1 capsule, not good.
O. microchilum (2) by its own pollinia; 24 flowers fertilised, no capsule.

——3. "Notes on British Fungi," by F. Currey, Esq.
——4. "On Sloetia, a new genus of Moraceæ from Sumatra and Singapore," by Mr. Salpig Kurz, curator of the Herbarium of the Botanic Garden, Calcutta;

communicated, with a note, by Dr. Anderson. The plant in question, Sloetia Sideroxylon, yields some of the valuable timber known as Ironwood in the Dutch East Indian possessions. Messrs. Teijsmann and Binnendyk, in describing another tree, Eusideroxylon Zuageri, which produces Ironwood, enumerate the species known to them to afford the same class of timber, namely Eusideroxylon Zuageri, T. et B.; Namia vera, Miq.; Intsia amboinensis, Thouars; Cassia florida, Vahl.; Memecylon ferreum, Bl.; Stadmannia Sideroxylon, D.C.; Dodonæa Waitziana, Bl.; and Sloetia Sideroxylon, T. et B. The last, the Artocarpus elongatus of Miq., was the plant now described by Mr. Kurz.——5. "Descriptions of new species of Hymenopterous insects from the islands of Sumatra, Sula, Gilola, Salwatty, and New Guinea, collected by Mr. A. R. Wallace," by F. Smith, Esq.; communicated by W. W. Saunders, Esq.——6. "On the structure and homologies of the Renal Organs in the Nudibranchiate Mollusca," by Albany Hancock, Esq.——7. "Description of new tubicolous Annelids in the collection of the British Museum, Part 2," by Dr. Baird.

Notices of Books.

The Stream of Life on our Globe. By J. L. Milton, M.R.C.S. 1864. Robert Hardwicke, 192, Piccadilly. Pp. 614, 8vo.

The lively and ingenious writer of the book before us had a notion that people in general feel decidedly interested in the results of modern science, and that were it not for some very unnecessary drawbacks, they would take considerable pains to understand many of those questions of interest which so often come into discussion in the present day. So he wrote a series of papers for that "deservedly favourite Journal, 'All the Year Round,'" taking special care, that if not deep, his style should at least be popular and amusing, and above all that it should be entirely divested of dogmatism and all alarming Greek compounds. The result is just what might be expected, viz., for the most part a very readable book, containing numerous quotations from the celebrities of the day, whose pet notions are usually turned adroitly into ridicule, but with so little dogmatism, that the reader is often at a loss to know what is meant for banter and what for earnest.

The book itself commences with Geology, the importance of which study to the well-being of the world is very properly insisted on, and Hugh Miller is referred to in the preface, as giving an admirable description "of the difference he saw during his wanderings, between the crops growing over different kinds of rocks. The desolating famine of 1846, which cost the country over 50 millions sterling, was in Scotland confined to the primary districts." "It was geology, and geology only," he says, "that discovered gold in Australia."

Following the lamented Hugh Miller, Mr. Milton traces the beginning of life upon our globe through six great geological days or epochs with fanciful sunsets, midnights, mornings, &c., "à discretion," during which the earth is prepared for the habitation of man. Thus far he is plainly in earnest. This brings us in the second chapter to the first traces of man upon the earth. Mr. Milton says:—"It puzzles us to understand how man managed at all, for it seems beyond dispute that some of the earliest races at least, instead of being giants and warriors, were puny and feeble, possibly also degraded and stupid. How could he cope with these monsters? Yet nothing is more certain than that for ages he warred upon them with the flint-arrow and spear, leading the wretched precarious life of the savage." This of course introduces us to M. Boucher de Perthès, the caves of Chokier and Brixham, the fossil jawbone of Moulin-Quignon, M. Quatrefages, Dr. Falconer, the Danish kitchen-middens, the Neanderthal skull, and all the rest of it.

Next, the Lake Dwarfs of Switzerland have to be discussed, and the mound-builders; after that the wanderings of Scythians, Phœnicians, gipsies, and Jews, both black and white. In the chapter on language, Prof. Max Müller's "wonderfully seductive" theory comes in for an amount of chaffing which none but the unthinking public can suppose that it deserves. "As soon as ever a language is fairly formed, it becomes subject to a fatal form of phonetic disease which is often so virulent that it will eat away the whole body of a word, and leave nothing behind but decayed fragments. No love can guard it from the assaults of its natural foe, no veneration protect it from that downfall which sooner or later awaits any spoken tongue. Eternal change, ceaseless decay, such is the doom of the most polished, as of the rudest tongues. In the time of Horace the old Roman tongue was obsolete—as obscure as some old Saxon chronicle to us. The Salian priests could hardly understand their own hymns." Sir William Jones, a sound scholar and a truly wonderful man, found that the Sanskrit was a language more perfect in its structure than the Greek, more copious than the Latin, more exquisitely refined than either, and came to the conclusion that all three sprung from a common source. Professor Max Müller asserts that these are only 3 out of 8 children born of what he calls the Aryan tongue. "This word of might, Aryan," says Mr. Milton, "comes from *Ar*, to plough or open the soil—the old English *ear*, used in the sense of plough by Shakspeare. It was the root of the Latin word for plough, and the assumption that these Aryans overran a country is often based on the fact that the root of their name, *Ar*, has been found in the language of the country." The Professor says:—"The people with whom language grew up knew nothing of datives and accusatives," a statement, says Mr. Milton, "which must make many of our schoolboys conceive an intense admiration for such a wonderful people."

In the chapter on the cuneiform inscriptions, the labours of Germans in general, and Professor Grotefend in particular, are spoken of with wonderful plainness of speech, which most people would call audacity. The Rev. Charles Forster again appears to have given a very common-place solution of the mysterious figure in the Behistun carvings, singularly at variance with that offered by Colonel Rawlinson. The Colonel supposes the figure in question to represent the God Ormuzd, who hovers overhead in a most mysterious looking vehicle, holding the Zodiac in his hand. Mr. Forster, better taught, sees "no god at all, but simply a likeness of the artist himself, executed by his own hand, and representing him seated, as he worked, in a strong Palm-leaf crate, lowered from the edge of the cliff and resting against a small platform," and further says that instead of the Zodiac he has got a cymbal in his hand, which he is beating with might and main, asserting also that he is drunk; and this view is confirmed by the legend, of which Mr. Forster gives the interpretation.

Mr. Darwin's views of course come in for some smart rubs. Some of these are very fair, but this part of the book strikes us as weaker than that which precedes it. "The possibility that man is only a more favoured beast," which is a notion that most men very properly kick at, is we think not badly treated by Professor Müller. "Language is our Rubicon, and no brute will dare to cross it. Language is something more palpable than a fold of the brain, or an angle of the skull. It admits of no cavilling, and no process of natural selection will ever distil significant words out of the notes of birds or the cries of beasts." The chapters on the laws of life, food, and digestion, mental labour, dreams, nervous force, and vital power are we think the most valuable part of the work, for here Mr. Milton is on his own ground, and speaking from his own experience; but we confess to have been thoroughly tired with his account of all the celebrated giants and Daniel Lamberts, and his attempt to show that genius is not generally hereditary. Of the two concluding chapters we think "Life in the Waters" decidedly weak, and "Life in the Stars" by no means brilliant.

Watts' Dictionary of Chemistry, Part XVI. (Longmans), 8vo, is a capital number, reaching from *Hyalosiderite* to *Iodides*. The article on *Hydrogen* is particularly good; as are all those relating to Chemical Neology.

Decandolle's Prodomus, Vol. XV., is out, and contains Lauraceæ, Begoniaceæ, Datiscaceæ, Papayaceæ, Aristochiaceæ and Stackhousiaceæ. It is a work of wondrous labour, very skilfully prepared, and to the student of Systematical Botany priceless.

BOOKS RECEIVED.—Parts 4, 5, and 6 of *A History of the World*, by Philip Smith, B.A. Having already expressed a very favourable opinion of this work, and having moreover given a few extracts from the first numbers, to show how the author was carrying out his plan, and the way in which he brings modern information to bear upon his subject, we need say nothing further than this, that the three new Parts before us fully maintain the high character we had previously formed. The condensation required in order to bring this history within reasonable compass imposes a restraint, which is perhaps more felt in the three latter than in the three former Parts; for these treat of comparatively barbarous nations, but those of the refined and intellectual Greeks, and the country which was the cradle of all that is most beautiful in art and literature. The three Parts before us contain the history of Greece traced through the mythical age, the Hellenic States and colonies, and the Persian wars, and carry us on through the rivalries between the Greek republics to the battle of Mantinæa, which finishes the first volume. Plans of Marathon, Salamis, and Platæa are given in one Part, and maps are promised to accompany the next.——*A Manual of Diet and Regimen;* by Horace Dobell, M.D. The physician is constantly asked a multitude of the most common-place questions respecting the management of his patient, and has to go over the same wearisome course 50 times in a day, and still he finds that he has omitted to mention some things of importance. To obviate this inconvenience, Dr. Dobell has drawn up a few simple rules for the clothing, sleep, meals, and diet of his patient, and for warming and ventilation, &c., which are to be observed in all cases, unless the physician writes "No," in the margin, against anything not suitable for any particular case. Tables of diet are drawn up under the care of Mr. Farrants, an eminent chemist and authority in such matters, so arranged that the right proportion of flesh and bone and fibre and fat-producing substance should be taken, and the medical man only writes "No" against any food which he may object to, such as pork or veal, or turnip; any mode of cooking food, as for instance baked, or fried, or salted, or any table of diet. The notion is not a bad one, except that some doctors would be sure to write "No" against almost every item in the book.

Miscellaneous.

Dropmore.—On Monday last there died a lady whose life had been so prolonged and whose career had been so much associated with long bygone events that, though cheerful and active, in the full enjoyment of all her faculties, and with a keen interest in passing events, her existence was almost forgotten. Lady Grenville, only daughter of the first Lord Camelford, born in London in 1772, and married 20 years later to Lord Grenville, died in London last Monday, 92 years afterwards. Her last appearance in public was on Saturday last, when she seemed to be in her accustomed health and spirits. She was taken ill the same night, and only survived till Monday. Her large estates are left, in accordance with the wish of her husband, Lord Grenville, who died not less than 30 years ago, to the Hon. George Fortescue, brother of the late and uncle of the present Earl. Her memory will long be dear to all who knew her beautiful place at Dropmore, the glorious Conifers growing there, and the kind manner in which the public was admitted to examine them.

Transporting Roses to India.—As the importation of exotics from the best nurserymen not unfrequently fails, occasioning considerable loss and disappointment to Indian horticulturists, it may be worth mentioning that an experimental consignment of Roses from Edinburgh reached Lahore last season in excellent order. The facts connected with their transport were as follows:—Mrs. Prinsep wrote to Scotland for a selection of Roses; these, to the number of 36 plants, including eight varieties, viz., Scarlet Moss, Mrs. Bosanquet, Cloth of Gold, Madame Williams, Aimée Plantier, Yellow Straw, Common Moss, and Cabbage, were packed in August by Mr. M'Nab, I believe, of the Royal Botanic Garden, Edinburgh, and transmitted by screw steamer, *viâ* the Cape to Calcutta, reaching Lahore early in January. The case was a simple but thick deal box, without tin lining for outer covering, and the cavity was about a foot square. The cuttings, with rootlets attached, were about 10 inches long, and were closely packed in dry Moss (Sphagnum), six in a row, separated by four wooden partitions, extending half across, alternately from either side. When this box was opened, 15 of the Roses had died by desiccation, but 19 survived, and had thrown out rootlets in transit; these were from 2 inches to 1½ inch in length. The cuttings were potted and placed in a lower room for four days, where the direct rays of the sun could not reach them. Twelve vigorous plants of this consignment were lately shown to me in Sir Robert Montgomery's garden; two of them have flowered. Some of the Roses have been sent to Murree and some to Dalhousie. The success which attended this experiment is encouraging, and the same mode of transport is worthy of trial with regard to fruit and ornamental trees. Dr. Jameson reports that on one occasion, 75 per cent. of plants thus packed reached the Saharunpore garden in good order. *Dr. Cleghorn, in Proceedings of Botanical Society of Edinburgh.*

Cusso, Kusso, or Kousso.—This is an article which is entirely new to a Pharmacopœia published in the United Kingdom. It has been likewise introduced into the secondary list of the Materia Medica of the recently issued United States Pharmacopœia. The plant which yields it is Brayera anthelmintica. It belongs to the natural order Rosaceæ. The flowers only are officinal, and are directed to be obtained from Abyssinia. The flowers are described as "small, reddish brown, on hairy stalks, outer limb of calyx five-parted, the segments ovate, reticulated." The segments are, however, not ovate, as thus stated, but oblong, or oblong-lanceolate, as may be seen by the drawing. They have a fragrant balsamic odour, and their taste is at first but slight, although ultimately somewhat acrid and disagreeable. The flowers have been found to contain a small quantity of a peculiar volatile oil, bitter acrid resin, two kinds of tannin, and a substance called kwoseine, and other matters of no importance. The medicinal properties appear to be essentially due to the bitter acrid resin, and doubtless to some extent, to the volatile oil and tannin. M. Pavesi, and subsequently M. Vée, have obtained a principle from Kousso, which they have termed koussine, and which they describe as yellow, bitter, and uncrystallizable. Is this the active principle? Kousso has been in use as an anthelmintic in Abyssinia for more than two centuries, and it is very highly valued in that country. It was introduced into Europe about the year 1847, and when first tried in England, France, Germany, and Switzerland, great expectations were raised as to its valuable medicinal properties. More recent trials, however, do not tend to confirm the extravagant notions then formed, and hence we regard this remedy as still upon its trial, and one which was well worthy of being placed in a secondary list of the Materia Medica, but scarcely in so prominent a position as it has obtained in the British Pharmacopœia. The conflicting results which have been experienced from the employment of Kousso are doubtless, in part, due to its varying age when administered, as its properties appear to be sensibly depreciated by keeping. The

only officinal preparation is the infusion, which should be taken in the morning fasting, and the last meal of the previous evening should have been slight. *Prof. Bentley in Pharmaceutical Journal.*

The Manchester Field Naturalists' Excursion to Middlewood.—On Saturday, the 14th of May, this Society selected the above romantic district for their first excursion this season; and although Disley and Middlewood are now familiar to most of the members, yet their attractions are always sufficient to bring a numerous party. Glimpses of Middlewood may be had by the traveller as he passes along the Buxton line. It is situated chiefly on the west side of the railway, between Hazel Grove and Disley. For visitors from Stockport or the neighbourhood, the pleasantest plan is to take the rail to Disley, then alight, and at once start off for the wood, which is reached after a pleasant walk through some half-dozen meadows. Arrived there, abundant work will be found for the most industrious naturalist, and if the object be only to enjoy a pleasant walk we venture to assert that this will be found one of the most attractive in the neighbourhood. At this season the wood is one rich carpet of wild flowers, the wild Hyacinth, Lychnis, Sweet Woodruff, Forget-me-Not, and others, being mixed with luxuriant tufts of Ferns. In this wood may be found the Beech-Fern (Polypodium Phegopteris), and near the water-wheel at the south end the Hart's-Tongue (Scolopendrium vulgare) grows very fine. It may be well to remind our readers that the Sweet Woodruff (Asperula odorata) gives a delicious aromatic fragrance when dry. It is well worth the trouble of collecting a handful for the handkerchief drawer. The common English snake (Natrix torquata), which is quite harmless, may frequently be found in Middlewood. It is most abundant near the water-wheel, amongst the old mines. No danger need be feared, as this snake cannot bite, having no teeth that can harm, and it is also without venom. After a couple of hours spent in the wood the company passed on to the Red Lion Hotel, Hazel Grove, where tea was provided. After tea the custom of former seasons was again adopted, and L. H. Grindon, Esq, the Honorary Secretary, was invited to address the members. He said it was very refreshing to ramble forth into the fields once more and commence the enjoyment of a season which seemed so full of promise. He must congratulate the members on the increasing prosperity of the Society. This had been abundantly shown by the crowded meetings they had witnessed during the winter, when, as they all knew, some of the *soirées* were so numerously attended, that the committee had had to turn their attention to the importance of obtaining more extensive accommodation than that which was afforded at the Athenæum Library Hall. He would call their attention to a paragraph in the circular which was well worth being put into practice. It read as follows:—"It has been suggested to the Committee that members who join in the excursions might add to the beauty and interest of the country round Manchester, by taking with them any surplus roots and seeds they may possess, especially of native plants brought from a distance, and also living fresh-water mollusca, and depositing them in places where they would be likely to become permanently established. No confusion would be caused, since the Flora and Fauna of the neighbourhood are now both well-known, and the introduction of new species would be a set-off also against any possible lessening of the abundance of those produced spontaneously. Members are invited to collect seeds, &c., for this especial purpose when at a distance from home, and also to enrich the neighbourhood by a judicious sowing of the seeds of exotic plants." Now, if the members would carry out these suggestions they would make up for anything they might gather, and they would also have the pleasure of looking forward to another season, when the spots visited might be expected to give some evidence of the "seed scattered by the way." Considerable efforts had been made late years to naturalise plants, and with great success. No danger need be anticipated that our flora would be in any way confused through bringing in new plants, as nothing absolutely original would be likely to be propagated, and it would be a source of pleasure if, years hence, we could visit some of our favourite walks, and find plants which had sprung from seeds of our own scattering. The lecturer then described the botanical peculiarities of various plants which had been collected, including the wild Cherry, Mercurialis, Adder's Tongue, and others. He alluded to the appearances of plants at different seasons guiding the operations of the farmer, and sometimes the horticulturist, as, for instance: if the Ash-tree is in full leaf, we may put our greenhouse plants out in the open air; and so, when the Ash-tree loses its leaves, we must not delay taking all tender plants in-doors. *Manchester Paper.*

Calendar of Operations.

(For the ensuing week.)

As has been previously observed, see that sickly or badly rooted specimens, if any, are kept free from red spider; also that young stock is not allowed to suffer from want of pot room, and during bright weather attend carefully to watering, giving weak liquid manure to all plants in free growth that are likely to be benefited by it. Such stove plants as may have been removed to conservatories or greenhouses while in bloom should be replaced in heat as soon as their beauty is over, in order to permit their young wood to get ripened before short days set in.

FLOWER GARDEN AND PLANT HOUSES.

Out of doors trimming, staking, and pegging down must be well followed up at this period where neatness and order are essential. See that sufficiently strong stakes are applied to plants with heavy foliage. Keep Roses as much as possible free from insects, and if time can be spared dead blooms should be removed.

AZALEAS.—Shift any of the young growing plants that require more pot room, give plenty of air, shade in hot weather, and syringe daily. Set plants that have done growing out of doors, in some airy situation—to rest and harden their wood.

AURICULAS.—These should be kept quiet and cool. Green fly is very troublesome at this season; to destroy it effectually, fumigate several nights in succession.

CARNATIONS AND PICOTEES.—If a cool shady border can be spared it will retard the early kinds, thereby getting all in at one time, if desired, or the late ones may be kept some time in this manner.

CALCEOLARIAS.—Shrubby and half shrubby kinds that have flowered may be cut back, and placed in a cool place, partly shaded, to make cuttings.

CINERARIAS.—Those that were cut down early will now be throwing up suckers. Take cuttings, as soon as ready, and insert them in small pots in a nice sandy compost; place them in a cool frame or under a hand-glass; keep them close and sprinkle occasionally to prevent flagging; pot off as soon as rooted into a light compost, composed of two parts loam and one leaf-mould; add sand liberally. Sow seeds in a shady situation, and prick off as soon as the plants are large enough to handle.

CAMELLIAS.—Plants on which the bloom buds are forward, and that do not require shifting, may be set out of doors in a shaded situation. Shift all that require it. Syringe daily in hot weather.

DAHLIAS.—A constant attendance to watering and securing the young plants from wind is all that will have to be done for a few weeks. Towards the end of the month thinning of the side shoots and mulching the plants with rotten manure will have to be done. Commence destroying earwigs, before there are blooms for them to disfigure.

POINSETTIA PULCHERRIMA.—This is so much admired during the winter months, that too much care can scarcely be bestowed on it. Plants of it may now be partially dried off preparatory to their being cut down. As soon as the young shoots have fairly started again, let the plants be taken out of their pots, their balls reduced, and repotted in the same sized pots as before. When the latter are filled with roots, a last shift into 9-inch pots may be given They may then be placed in a cold pit, and kept close for a short time, after which air may be freely admitted until the beginning of September, when they should be replaced in the stove. The great point is to get the wood well ripened; that secured, a fine display of large brilliantly-coloured floral leaves may with confidence be expected.

FORCING GARDEN.

MELONS.—In the case of fruit ripening, a dry airy temperature must be kept up to ensure high flavour. Keep the shoots of succession crops thin, pinching off in time all extraneous growth. In watering great caution is necessary; where the fruit is approaching maturity cover the surface of the bed with flat tiles or slates to prevent evaporation.

ORCHARD HOUSE.—Persevere with syringing twice daily; attend well to watering; give plants that are well rooted and in small pots liquid manure three times a week; stop the shoots and remove all that are superfluous; give all the air possible.

PINES.—Air should now be given liberally to young stock. The plants should not, however, be exposed to drying winds by giving back and front air while the temperature is below the average, as it is at present, for that would not serve the end in view; but a moderate circulation should be secured whenever the weather is favourable. This, with careful attention to the state of the roots, keeping the bottom heat regular, the soil in a nice healthy state as to moisture, and giving a liberal supply of manure water to such as are well rooted, will be found much more conducive to robust growth than exposing the plants too freely, which would probably check and throw them into fruit prematurely.

VINES.—See that bunches for use late in the season are severely thinned, and also that the crop left is not too heavy in proportion to the strength of the Vines. Where the fruit is swelling, be careful to maintain a moist state of the atmosphere, and give every possible attention to the roots, keeping the border in a healthy state as to moisture, and if watering is found necessary, use good strong manure water. Give abundance of air where the fruit is colouring, and do not allow plants in pots to remain in the house to cause damp. Where the fruit is ripe and expected to hang for some time, the atmosphere of the house should be kept as cool as possible; but a little fire heat will probably be necessary occasionally in order to keep the atmosphere dry.

HARDY FRUIT AND KITCHEN GARDEN.

Attend to previous directions in regard to the thinning and stopping the young shoots of all trained fruit trees, and now make the final thinning of Peaches and Nectarines, of course leaving the heaviest crop on the most vigorous trees and strongest branches. As a general rule, no two fruit should be left together. Plums of the large kinds, as well as the finer sorts of Pears, should also be thinned if the crop is too heavy. Young Peach and Apricot trees, when making over-vigorous leaders, should have the points of the branches shortened, to encourage them to make other shoots less vigorous, and of a fruitful character; this will obviate the necessity of shortening them back at the winter pruning.

LETTUCES.—These are everywhere very fine this year. Continue to plant out from early sowings, and to keep up successional crops.

PEAS.—A sowing or two of these should be made; Veitch's Perfection, Ne Plus Ultra and Victoria are good kinds.

SCARLET RUNNERS.—If not already done, sow at once for a main crop; also a good breadth of French Beans.

STRAWBERRIES.—These will require attention. Layer the runners intended for pot culture early, as well as those required for making new plantations. All spare runners may be cut away, and keep the plants free from weeds.

WINTER GREENS.—One of the most important operations in the kitchen garden is to see that there is a good breadth got in of Brussels Sprouts, Savoys and Broccoli for autumn use; therefore if these are not already planted they must be got in at once. The main plantings, however, to stand through the winter will be better deferred for a week or two yet; as when put in too early the plants become gross, and are much more liable to suffer from frost.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending June 15, 1864, as observed at the Horticultural Gardens

June.	Moon's Age.	Barometer.		Temperature.					Wind	Rain in inches
				Of the Air.			Of the Earth			
		Max.	Min.	Max.	Min.	Mean	1 foot deep.	2 feet deep.		
Thurs. 9	5	29.927	29.797	73	39	56.0	61½	58½	S.W.	.00
Friday 10	6	29.880	29.872	78	40	59.0	61½	59	W.	.03
Satur 11	7	29.93	29.757	72	39	55.5	61½	59	W.	.00
Sunday 12	D	29.797	29.725	73	41	57.0	61½	59	W.	.06
Mon. 13	9	29.615	29.578	69	35	52.0	61	59	W.	.46
Tues. 14	10	29.587	29.484	70	47	58.5	60	59	S.	.08
Wed. 15	11	29.709	29.495	72	39	55.5	60	59	S.	.16
Average.		29.778	29.669	72.4	40.0	56.2	60.8	59.0		.79

June 9—Very fine, cloudy and warm; cool at night.
— 10—Very fine throughout; dry air with brisk wind; slight rain.
— 11—Light clouds and fine; very fine; cold at night.
— 12—Light clouds; very fine; rain at night, and cold.
— 13—Overcast; heavy showers; thunder-storm; fine; rain; cold at night.
— 14—Very fine; clouds in dense dark masses; rain.
— 15—Cloudy; heavy showers; rain and some hail; fine, but cold at night.

Mean temperature of the week 3½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending June 25, 1864.

June.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds.							
						N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 19	70 9	49.2	60.0	21	0.62 in.	2	3	3	2	4	15	6	3
Mon. 20	72.1	49.1	60.6	18	0.46	2	4	2	2	6	11	9	1
Tues. 21	73.8	51.0	62.4	16	0.68	1	5	4	3	1	19	4	1
Wed. 22	73.4	49 5	61.5	16	0.59	—	3	2	1	2	16	9	5
Thurs. 23	72.3	47.3	59.8	15	0.44	1	2	4	1	3	17	5	5
Friday 24	73.8	49.3	61.6	15	0.72	1	3	4	1	2	15	9	3
Satur. 25	72.7	49.6	61.1	19	0.72	—	2	6	2	5	13	6	4

The highest temperature during the above period occurred on the 19th and 22d, 1846—therm. 93 deg.; and the lowest on the 23d, 1851—therm. 35 deg.

Notices to Correspondents.

DECIDUOUS FOREST TREES: *A B C.* Cut their roots now. Thanks.

GRAPES; *D A.* The Grapes arrived in a state quite unfit for examination. All that we can say about them is that there is no mould on them, and that it (the affection) appears to be that form of shanking which attacks young bunches, sometimes even before the flower has well fallen. We have little doubt that the fault lies in the condition of the roots. All shanking we believe arises from that source, while rust is due to atmospheric conditions.—*J W.* Your former letter must have miscarried. Your present contains no details, but only four or five brown withered Grapes with the glands on the stalks much exaggerated. It does not seem to be any form of shanking. *M J B.*

KILMARNOCK WILLOW: *Ignoramus.* It will not live in dry chalky soil, which yours seems to be, as far as we can judge from that part of your writing which we have succeeded in decyphering.

NAMES OF PLANTS: *H Coggeshall.* Pyrus Aria, the Beam Tree.—*J B.* Don't know; no flower or other evidence.—*F M K.* The specimen has been accidentally overlooked, for which we sincerely apologise. It is a leaf of some Echium, not nameable without flowers.—*Urbs intacta.* 1, Holcus lanatus; 2, Poa trivialis; 3, Vulpia bromoides.—*Amateur, Doncaster.* 1, Arenaria ciliata; three other specimens *without numbers* consisting of two Saxifrages, indeterminable without much better specimens, and a wretched morsel of Œnanthe peucedanoides.—*E W H.* 1, Kennedya monophyda; 2, Habrothamnus fasciculatus; 3, Callistemon speciosus; 4, some Asperula: but we must ask for a better specimen, and in fruit.—*Gertrude.* Chiococca anguifuga, *not* densifolia—the Cainca of the Brazilians, a plant with powerfully diuretic roots.—*Lymington.* Jasminum gracile.—*A 20-years Subscriber.* 1, Ornithogalum aureum; 2, Linaria purpurea; 3, Erica melaleuca.

ORCHARD HOUSES: *A B.* No answer worth having can be possibly conveyed through the columns of a newspaper. We most strongly advise you to consult some one of the many very skilful hothouse builders of the day.

RHODODENDRONS: *H C.* Your seedling white is a very handsome variety.

ROSE LEAVES: *Amateur.* Your leaves are attacked by a parasitic Fungus, *Asteroma Rosæ.* This Fungus originates beneath the cuticle, and we know of no means of stopping its growth. *M J B.*

MISC.: *R S G.* No man living understands those things better than Sir Wentworth Dilke.—*Cork.* It is very possible that the beautiful variegation in your Potato leaves may be constant. If so they will be interesting to lovers of such accidents. Be sure and let the tubers be thoroughly well ripened, and do not on any account allow the leaves to be pulled off.

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These Oats were raised from a very fine sample in 1862, which was hand-picked 27 times, and weighed 48 lb. the imperial bushel. They were drilled (3 bushels per acre), on the 24th February, 1863, cut July 20, and yielded on a very thin poor soil upwards of 80 bushels of Oats, and 185 trusses (36 lb.) of most excellent feeding straw per acre; while the ordinary Black Tartarian Oat, on the other part of the same field, ripened a fortnight later, yielded of grain a less crop, weighing 25 per cent. less per bushel, and of straw 120 trusses per acre.
The Canadian Oats were again hand-picked, to ensure *perfect* purity, and drilled on the above field February 17 of this year. Upon the same field, 1863:—

	Kernel.	Husk.	
Canadians	69.43	30.57	per cent.
Tartarians	70.79	29.21	

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The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.
Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

THE MIDLAND FARMERS' CLUB.—The FIRST GENERAL MEETING of the MIDLAND FARMERS' CLUB will be held at the Odd Fellows' Hall, Temple Street, Birmingham, on THURSDAY, June 23, at 2 o'Clock.
Subject for Discussion:—"The PRESENT POSITION and FUTURE PROSPECTS of ENGLISH AGRICULTURE," which will be introduced by R. C. CHAWNER, Esq., the President.
A DINNER will be provided on this occasion for Members of the Club at the Acorn Hotel, Temple Street, at 4 o'Clock punctually. Tickets, 2*s.* 6*d.* each, exclusive of Wine. An Early application for Tickets, at the Bar of the Hotel, is particularly requested.
Members will be enrolled on the day of the Meeting, for which purpose the Secretary will attend at the Cattle Show Offices, 13, Temple Street, from 12 until 2 o'Clock.
June 11. JOHN B. LYTHALL, Secretary.

GREAT EASTERN RAILWAY.
ESSEX AGRICULTURAL SHOW at HARWICH, THURSDAY, June 23.
On JUNE 22 and 23 RETURN TICKETS at SINGLE FARES will be issued to HARWICH from London, Maldon, Braintree, Haverhill, Sudbury, and all the intermediate Stations, available for the Return Journey up to and including FRIDAY, June 24.
On THURSDAY, June 23, ADDITIONAL TRAINS will be run as under:—
A SPECIAL TRAIN will leave London at 8.30 A.M., for Harwich, calling at Stratford, Romford, Brentwood, Ingatestone, Chelmsford, Witham, and Kelvedon, in connection with Trains from Maldon and Braintree, returning from Harwich at 8.15 P.M.
A SPECIAL TRAIN will leave Sudbury at 8.40 A.M., calling at Bures, Chappel, and Mark's Tey, and in connection at Chappel with a Train from the Colne Valley Railway; returning from Harwich at 8.30 P.M.
A SPECIAL TRAIN will leave Colchester at 9.0 A.M. for Harwich, calling at the intermediate Stations; returning from Harwich at 7.0 and 9.20 P.M.
On the Down Journey Passengers will be enabled to alight at Dovercourt, but on the Return Journey they will have to start from the Harwich Station.
Horses and Cattle will not be conveyed to or from Harwich by Passenger Trains.
The 9.10 A.M. Train from Manningtree to Harwich, and the 11.0 A.M. Train from Harwich to Manningtree will not run on Thursday, June 23.
London—June 18. By Order, J. B. OWEN, Secretary.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE, 1864.
The LOCAL EXECUTIVE COMMITTEE have arranged for a Registry of Lodgings and other Accommodation for Visitors to Newcastle during the Show, to be kept by Messrs. C. BROUGH, Academy of Arts, Blackett Street, and G. MURAS, 4, Northumberland Street, to whom applications must be made.
R. DODDS,
E. I. J. BROWELL,
WALTER JOHNSON,
JACOB WILSON,
} Hon. Local Secs.

The Agricultural Gazette.

SATURDAY, JUNE 18, 1864.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, June	22	Royal Agricultural Society of England (Dr. Voelcker)	Noon
THURSDAY, —	23	Gloucestershire Agricultural Society at Cheltenham.	
FRIDAY, —	24		

THE utmost agricultural exhibition which all England could achieve by means of its National Association, 20 years ago, was gathered together in a small field behind the Victoria Rooms at Clifton. Now, the Agricultural Society of a few western counties, when it holds its annual meeting in the same locality, has to enclose a large portion of the adjoining Durdham Down, where it covers many acres with four-fold the number of agricultural implements shown in 1843, with as fine a show of Herefords and Devons as was ever gathered together, with an excellent show of Shorthorns, and with a fair display of our various breeds of Horses, Sheep, and Pigs.

In addition to all this there is a collection of pictures and of works of art, of lace, &c., the manufacture of the West of England—a poultry show—and a magnificent horticultural display. Surely never did entrance fee command a greater variety or extent of enjoyment and instruction, suited to the tastes of visitors from either town or country.

The Bath and West of England Agricultural Society, the oldest institution of the kind, dating from 1777, had gradually dwindled until, 14 or 16 years ago, it was in the predicament of administering a prize fund of barely more than 100*l.* per annum, and of being dependent upon the efforts of a very few old friends. In 1850 Mr. T. D. ACLAND published a letter to Mr. W. MILES, M.P., advocating a proposal for the establishment of annual agricultural meetings, to be held successively in different towns of the West of England. The English Agricultural Society had held a successful meeting in Exeter, and the farmers of the West had benefited by the inspection of implements by GARRETT, HORNSBY, CROSSKILL, RANSOME, and other manufacturers; but—"when would they meet again?"

At Taunton, in 1852 the Bath Society, now called the Bath and West of England Society, held the first of its migratory meetings for the purpose of thus collecting customers and manufacturers together. The first volume of its annual Journal was issued that year, and Dr. VOELCKER was appointed Consulting Chemist to the Society.

Since that year meetings have been held at various towns in the district, and in one instance at Cardiff, a town beyond the proper district of the Society—and with what constant success the following figures will declare:—

Date.	Town.	Entries of Live Stock.	Entries of Implements.
1855.	Tiverton	588	1107
1856.	Yeovil	519	1038
1857.	Newton Abbot	682	1106
1858.	Cardiff	636	960
1859.	Barnstaple	599	1127
1860.	Dorchester	599	1453
1861.	Truro	419	1121
1862.	Wells	419	1160
1863.	Exeter	567	1863

This year the entries of Implements exceed 2500, and those of live stock reach 545. The attendance which the show-yard has this year attracted is also unprecedented; and altogether the meeting rivals those of the National Society, not in the earlier years of its career, but in any of those which preceded its Chester meeting. The following was the attendance on the first three days of the week:—

Monday, paying	2*s.* 6*d.* each	2419
Tuesday, ,,	2*s.* 6*d.* each	4540
Wednesday, ,,	2*s.* 6*d.* each	11300

The sum received on these days thus amounted to 3072*l.* 4*s.*, as nearly as possible the same as was received on the first three days of all the four immediately preceding shows, at Exeter, Wells, Truro, and Dorchester, put together.

The Society may be congratulated on a most successful annual gathering. A report, in more detail, of its Bristol exhibition, is given in another page.

THE ROYAL AGRICULTURAL COLLEGE.

The following remarks were made the other day by Mr. R. Russell, of Leven, at the close of a short course of lectures there.]

I TRUST you will accept this imperfect sketch of the principles upon which a rotation of crops is founded as a token of my good will towards the success of this Institution. I am only sorry that my business prevents me from entering more minutely into the subject. I am glad, however, that I have had the opportunity of visiting the College and examining its working. It is a great privilege, I consider, that you enjoy in being educated where you can learn all that literature or science has as yet done for the art of cultivation. The greater part of the knowledge at present available can, I am persuaded, be picked up here with less expenditure of time and labour than in other institutions, where anything bearing upon agriculture must be taught in a very indefinite way. But in saying this I would by no means wish to over-estimate the advantages of the education which you acquire either in the lecture rooms or fields of Cirencester before you begin to put your knowledge to practical use. When you enter upon life and begin to manage land for yourself, you will find you have still much to learn as well as a little to unlearn—that the special peculiarities which determine the most economic systems of management in various localities demand careful study and consideration. It ought always to be borne in mind that the science, or explanation, of agricultural practices is still very imperfect, for were it otherwise the occupation of the chemist as an explorer were already gone. Indeed, it behoves every one to study the peculiarities of the systems of farming that are most generally followed in his own district. My experience has ever been that large farmers who have had a good general education, and have had their wits and observations sharpened by self interest, are guides that may be generally safely followed. Practical men, who have had no scientific training, may often confound causes and effects, but they seldom fail to grasp the substance of the matter. There is one thing that ought to be guarded against, namely, being puffed up with so-called scientific knowledge, and despising what may be the results of long accumulated experience.

There is a good deal said and written now-a-days on agricultural education, as if this were really a royal road to success in farming; no doubt if kept in its place it will bear good fruit, but the less conscious you are that you already possess any advantage over those with whom you are in after years to come in competitive contact, the more likely are you to turn the stores of solid information you have laid in to the best account. At the same time I do assure you that I am not disposed to undervalue the advantages which you have in studying here. On the contrary, having had opportunities of seeing the character and completeness of the education taught at Cirencester, I confess that I have envied the privileges of its recipients. As one of the examiners for the Highland Society's diploma, I, along with some of my coadjutors, have been struck with the rare proficiency of some of our diploma holders who were educated here. This fact so far satisfied me that this Institution is effectively answering the end its supporters have in view. For my own part I do not see any reason why you should not yearly turn out diploma holders by the dozen, instead of as at present in ones or twos; nor why many more of you should not take the Highland

ociety's diploma, were it to secure no other end than o show your parents or guardians that a good use has been made of golden opportunities. There never was so great a thirst or desire for agricultural knowledge as there is in the present day, and I do not know where it can be so well satisfied as at this Institution. Any honorary distinction which you have the means of acquiring here, will certainly be looked upon as a good omen or promise of your future success in life, as it will afford a strong presumption that you will display the same diligence in business as you have done at college.

I must candidly confess that the Highland Society, in imposing certain courses of study on its diploma holders, places this Institution at a disadvantage. For example, you may study agriculture practically here on the College Farm during your two years' course, but all this teaching is not recognised as practical teaching—over and above it you must remain other two years under the instruction of a practical farmer. Now, this I consider a mistake, for from what I have seen of the farm, I have no doubt you may learn the outlines of Cotswold farming as well here as on any other farm in the neighbourhood, and so derive from the practical teaching of the College, as much advantage as could be gained on any one farm elsewhere. If not—if your own farm is not a source of strength or profit to the Institution—in my opinion the sooner the connection between it and the College is dissolved the better; there is little advantage in doing anything by halves. On a Cotswold farm it is not to be expected that you can learn the Berwickshire or the Lothian system of farming, but only the very best management of the district.

The agricultural training in the University of Edinburgh does not aim at teaching two things—science and practice, which appear to one in some measure incompatible. The teaching there, however, has not been devoid of fruit. I have no doubt that such men as Mr. Caird, Mr. J. C. Morton, Professor Wilson, Mr. M'Lagan, and others, who attended the agricultural classes in Edinburgh, look back with gratitude to the instruction received there. In fact, agricultural education, like general education, ought to precede practical instruction. Many of you are sufficiently tasked with chemistry, agricultural engineering, as well as other branches of study which can be best learned here. My own opinion is, if you learn these well, you learn quite as much as can be expected of you. So much the more extensive or thorough your knowledge of the principles of agriculture becomes, so much the more likely are you to attain to eminence in carrying them out practically in after years.

The rudiments of the science of medicine, law, or any other learned profession, are taught in lecture rooms—but the lawyer only really begins to learn his profession when he begins to practise at the desk or at the bar—the medical man when he takes to the hospital or a regular town or country practice. So it is with the agricultural student, however liberal his education may be, over and above all his other acquirements. Skill and business habits must at last reign supreme, else all the rest will come to a poor account indeed. Practice can alone teach you these, but they will be all the more easily acquired after your minds have been exercised under so efficient a system of training as the permanent studies of this Institution afford.

I am very glad indeed that I have snatched a little time from business to visit this Institution. It has given me much pleasure to observe the order and discipline which prevails, and I have no doubt that in after years this will form one of the most pleasant and profitable aspects in which you will view your residence here. You have the best opportunity of acquiring the most liberal education, and from personal observation and examination since I came here, I am glad to find so many students far advanced in the knowledge of what relates to the art.

DR. ANDERSON ON PHOSPHO-GUANO.

AT a recent meeting of the East Lothian Agricultural Club, Mr. Hope, of Fenton Barns, intimated that he had applied to Professor Anderson, asking the following questions:—

1st. Do you consider phosphate in a soluble state manufactured from bones, or boneash, or coprolites, of equal value to those in phospho-guano, Baker's Island, Bolivian, Sombrero, or Kooria-Mooria guano treated with sulphuric acid? and is there any difference in the insoluble phosphates obtained from these substances, and, if so, what?

2d. Are the phosphates in Peruvian guano, considering the fine state of subdivision in which they are found, and the source whence derived, of less value on the soil than soluble phosphates from mineral substances?

3d. Is the ammonia in bones and Bolivian guano of equal value to that in phospho guano? If not, wherein consists the difference?

4th. Is the pure ammonia found in sulphate of ammonia of the same value as the ammonia in Peruvian guano?

5th. What would be the value of dissolved bones showing the following analyses:—

	I.	II.
Soluble bi-phosphate of lime	15.49	21.43
(Equal to ordinary bone phosphate rendered soluble	24.16	33.44)
Insoluble phosphates	8.52	4.88
Hydrated sulphate of lime	43.46	45.07
Alkaline salts	3.02	3.82
Silica	2.04	4.78
Organic matter, ammonia, and moisture	25.71	19.43
	100.00	100.00
Ammonia	2.75	0.64

If valued in the same way as phospho guano, when is it considered worth 11*l.* 15*s.* per ton?

6th. Is a manure obtained from boneash, Bolivian or Sombrero guano, with 35 or 40 per cent. of soluble phosphates, and 2 or 3 per cent. insoluble, of more value to the farmer than a manure made from the same substances with 20 or 30 per cent. soluble and 10 to 15 per cent. of insoluble phosphates?

The following is Dr. Anderson's reply:—

1st. Soluble phosphates derived from bones, boneash, and coprolites are chemically and mechanically identical, and ought therefore to produce the same effect in the soil. The point in which they do differ is in the cost of production. A ton of coprolites costs 2*l.*, or even as little as 1*l.* 10*s.* when large contracts are made, while a ton of boneash, containing the same amount of phosphates, costs about 4*l.* 10*s.*, and, the acid being the same in both cases, it is obvious that the manufacturer can produce soluble phosphates from the first at a much lower price than from the second of these substances.

2d. There can be no doubt that the value of a manure depends to some extent on its state of division, and the farmer shows his appreciation of the advantages to be derived from it by giving a higher price for bonemeal than for inch or half-inch bones. On this principle the phosphates of a guano must clearly be more valuable than those in inch bones or even in bonemeal; but I do not think they can be considered as valuable as soluble phosphates; for no mechanical subdivision, however great, can ever admit of the phosphates being so thoroughly incorporated with the soil as they can be when they are rendered soluble in water.

3d and 4th. These questions may be answered together, and I may state that I always have held, and still continue to hold the opinion that the nitrogen in bones, guano, and sulphate of ammonia is of the same manurial value, although in the last form it acts more quickly, and is therefore to be preferred when a rapid effect is desired. It seems to me that the experiments made last season by the Haddingtonshire Farmers' Club tend to confirm this opinion, and to show that the ammonia in Peruvian guano is as valuable as that in sulphate of ammonia. The question, however, is one which still admits of investigation in the field, and I have at present some experiments in progress which I expect will throw further light on the subject.

5th. As regards the value of the two samples of dissolved bones of which you give the analyses, it is not possible to give a definite answer without knowing the amount of organic matter they contain separate from moisture. Assuming, however, a fair proportion in both cases, and also that the manures are equally dry and well manufactured, we have then a case in which a valuation-table may be legitimately employed. In order that there may be no misunderstanding, I assume the average phospho-guano to contain, according to the analysis of Dr. Voelcker, 38.8 per cent. soluble phosphates, 2 insoluble phosphates, and 3.8 ammonia. Further, I shall select the values formerly in use for the different constituents of manures, except that I shall take 20*l.* per ton as the value of soluble phosphates in place of 30*l.* I need not enter on the discussion of the exact accuracy of these values, because it will be immediately seen that this is of minor importance for the use to which they are to be applied. According to this system, No. 1 must be valued as follows:—

24 tons	soluble phosphates, at 20*l.*	£483
8 ,,	insoluble, at 7*l.*	56
43 ,,	sulphate of lime, at 1*l.*	43
4 ,,	alkaline salts, at 1*l.*	4
10 ,,	organic matter, at 10*s.*	5
2.7 ,,	ammonia, at 60*l.*	162
	Price of 100 tons	£753

No. II. ON THE SAME PRINCIPLE.

33 tons	soluble phosphates	£668
5 ,,	insoluble	35
45 ,,	sulphate of lime	45
4 ,,	alkaline salts	4
0.6 ,,	ammonia	36
8 ,,	organic matter	4
		£792

PHOSPHO-GUANO ON THE SAME PRINCIPLE.

38.8 tons	soluble phosphates	£776
2 ,,	insoluble phosphates	14
36 ,,	sulphate of lime	36
2 ,,	alkaline salts	2
20 ,,	organic matter	10
3.8 ,,	ammonia	228
		£1066

By this calculation 100 tons of phospho-guano are estimated at 1066*l.*, but the price charged is in reality 1175*l.*; hence

1066 : 1175 = 753 : 829.

Consequently, if 11*l.* 15*s.* be the proper price of phospho-Peruvian guano, then No. I. should, if it is equally well made, be worth 8*l.* 6*s.*; and No. II., by the same mode of calculation, is worth 8*l.* 14*s.*

6th. I think a manure containing 35 to 40 per cent. of soluble phosphates made from boneash, Sombrero phosphate, or Bolivian guano, as a general rule more valuable to the farmer than one containing 20 or 30 per cent. soluble and 10 or 12 insoluble phosphates made from the same materials.

This is particularly true of a manure made from Sombrero phosphate, which is a purely mineral substance, so that its insoluble phosphates have but little manurial value. As under this head I understand you wish me to add to the information asked in your letter my opinion as to the value to the farmer of a manure made from these materials, containing 35 per cent. soluble phosphates, 3 or 4 insoluble, and 4 of ammonia, I may state that if dry and well manufactured, I think it worth to him about 10*l.* per ton. Of course, there will be more difference according to whether it be made from mineral matters or guano, in consequence of the greater value attaching to the insoluble phosphates in the latter case; but when their quantity is so small, this is not great.

There are several other respects in which my views have been misunderstood, and it has even been supposed that I consider it impossible to give an accurate estimate of the value of a manure. So far from entertaining this opinion, I believe it perfectly possible to do so, provided an accurate method be adopted. I have always pointed out that the valuation-tables formerly in use gave only an approximation, and were not to be rashly employed. In my "Elements of Agricultural Chemistry," published in 1860, I stated (p. 257) that, "strictly speaking, each individual manure should be valued according to a plan special to itself, and deduced from its own standard market price;" and again (p. 264), when explaining the use of valuation-tables, I said—"Although the data just given must always form the basis of the valuation of a manure, there are a variety of other circumstances which must be taken into account, and which gave great scope for the judgment and experience of the valuator. Of these the most important is the proper admixture of the ingredients and the condition of the manure as regards dryness, complete reduction to the pulverulent state, and the like. A certain allowance ought always to be made for careful manufacture; and, on the other hand, when the manure is damp or ill reduced, a small deduction (the amount of which must be decided by the experience of the valuator) ought to be made on account of the risk the farmer runs of loss from unequal distribution, and the extra cost of carriage of an unnecessary quantity of water." Finding that the valuation-tables, the use of which I thus explained, were rashly used and without the slightest reference to the points just adverted to, I published in the "Transactions of the Highland and Agricultural Society," in the end of 1862 or beginning of 1863 (not having the numbers by me while I write, I cannot give the exact date), a paper in which special reference was made to this point, and I stated that I no longer employed these tables, and explained the reasons which had induced me to abandon them. On referring to all I have written on the subject, I believe it will be found that my views have always been substantially the same. Whatever I have written has been for the purpose of guarding the farmer against misapprehension and promoting his interests to the best of my ability. *Thomas Anderson. To George Hope, Esq., Fentonbarns.*

STEAM CULTIVATION.

IN your Paper last week you gave us some extracts from Mr. Robert Ransome's paper on Steam Cultivation, and here is an extract from them:—

"The remarks made in the Royal Agricultural Society's Journal, reporting the trials of Mr. Fowler's draining machinery, at the Lincoln Meeting, attracted the attention of Mr. Smith, of Woolston, to the advantage of employing steam instead of horses to draw a peculiar form of cultivator. This gentleman had previously given great attention to the use of scarifiers drawn by horses, and was firmly persuaded of the superiority of that implement over the plough, if a suitable draught power could be provided. With these views he attended the Carlisle Meeting of the Royal Agricultural Society of England in 1855, and there gave to me an order for a windlass and a seven-horse power steam engine for steam tillage, to be designed by and made under the directions of Mr. Fowler."

Now, this is by no means true, for Mr. Fowler had nothing whatever to do with the engine. I contracted with Mr. R. Ransome for one of the Messrs. Ransome's ordinary seven-horse power engines, to be delivered by the 11th of October, 1855, and to be paid for ready money; and after an introduction to Mr. Fowler by Mr. R. Ransome, I contracted with the former gentleman to supply me with a windlass according to a direction I then gave to him, viz., two drums to be strongly framed together, to be put in motion, one in one direction and the other in the other, by a pinion to be driven by a steam engine, to be supplied by the 11th of October, 1855, and paid for ready money. Here is some positive evidence upon the point.

In answer to some inquiry about the windlass, Mr. Fowler wrote thus: "Oct. 8, 1855. I fear the tackle will not be ready before the end of the month. I was at Ipswich on Saturday and they promised it in about a fortnight." By this I saw that Mr. Fowler was employing the Messrs. Ransome to make the windlass. In a few days after the receipt of this I received the engine, and at once forwarded my money according to the contract, and at the same time I inquired about the windlass. On the 23rd Oct. 1855, the Messrs. Ransome sent a receipt for the money for the engine, and write this about the windlass: "We are making some tackle under the direction of Mr. Fowler, to whom we would refer thee." You see that they would not acknowledge me as a customer. This flatly denies Mr. R. Ransome's statement that I gave the order to him, but to make the case more clear I will go on.

On the 28th of December, 1855, Mr. Fowler wrote thus:—

"I am much obliged by your cheque for 78*l.* on account of steam windlass."

On the 2d of February, 1856, the Messrs. Ransome sent to me an account of 127*l.* 10*s.* for a windlass, two anchors, and three snatchblocks. This windlass, two anchors, and three snatchblocks, with some rope,

was what I had for my 78*l.*, the sum for which Mr. Fowler contracted to supply them.

You see that although the Messrs. Ransome deny me as a customer on the 23d October, 1855, they try to make a customer of me on the 2d February, 1856. I informed them at once that I had nothing to do with them, and that it was Mr. Fowler with whom I had contracted to supply the windlass. Here is their reply to my letter:—

"Feb. 23d, 1856.

"We are obliged by the favour of the 21st respecting account, and have written to Mr. Fowler on the subject."

There the matter ended with them, and so it did with Mr. Fowler, for I had paid him the 78*l.*, the sum of my contract, and I paid him no more, proving clearly that I stood by my contract, and that it was Mr. Fowler to whom I gave the order for the windlass. His after conduct towards me was not such that would be likely to induce me to give more than my contract.

I must now tell you that the windlass supplied had to be completely overhauled before I could work it; in fact, it was not in working order at all; new pulleys upon both the windlass and engine were required. The speed was too fast by half. The engine was completely mastered. The Biddle tried thus at Ipswich could not have done much, and you all know that two anchors and snatchblocks cannot work the roundabout, the Woolston system—turning the implement at the implement at the land's end; they never turned the Biddle with them. Then why does Mr. R. Ransome try to dispossess me of the credit of originating my Carlisle windlass? I did not make it, neither did Mr. Fowler make it; but I did originate it; for what purpose else did I go to Carlisle? I travelled to that place, 250 miles, for no other purpose. Mr. Thomas, then living at Liddlington, and Mr. Bennett, the Duke of Bedford's steward, travelled all the way from Bletchley station with me. On our journey there I explained to them what I was going to do, and told them that I would find some manufacturer or other who should make the windlass for me before I came back; therefore it is not creditable on the part of Mr. R. Ransome to try to deprive me of this little honour. The facts about it are plain; here they are.

My No. 3 cultivator was patented March 19, 1855; made and tried with horses in June, 1855. I travelled from Bletchley station to Carlisle, 250 miles, on the Monday of Carlisle Royal Agricultural Society's Show, on purpose to find some manufacturer to make for me a windlass. On my arrival at Carlisle, at 5 P.M., I went direct to the trial yard. The first person that I knew that I saw was Mr. R. Ransome. "Ah, Mr. Smith, what do you do here all this way from home?" was his inquiry. "I am come to buy a steam engine," was the reply. "Then," said he, "let us supply you with it." "Yes, but I want some windlasses for ploughing by steam power." After explaining to him the kind of thing I wanted, he said "Let us see Mr. Fowler." We met with him against the threshing going on. After an introduction I explained to him what I wanted, and told him that I should pay ready money for it, so that if it was good for nothing it should be my loss. The only stipulation was that the rope and tackle should be able to stand a 30-horse power pull. Upon this Mr. Fowler contracted with me at once. There was not a single word named as to who was to make it, and I expected that Mr. Fowler was to make it himself, for at that time I did not know that he had not works of his own. The tackle was supplied according to order in December, 1855, and paid for according to agreement; it now stands safe and sound under my shed, but before I could work it I had to regularly overhaul it, as well as have made a set of new anchors, and some additional snatchblocks, thus completely shattering Mr. Fowler's chance as to being the first to originate successful steam-cultivating apparatus: where was his cultivator or his plough? My No. 3 was in existence when I went to Carlisle, but he had nothing of the sort. Mr. R. Ransome tells us something about my working that "in February, 1856, I reported to the Society of Arts that with it I could scarify to a depth of 7 inches at the rate of 2½ acres per hour, and at a cost of 6*s.* 3*d.* per acre, exclusive of wear and tear, which I estimated to add one-fourth more to the cost. From that time to the present, and with slight modification of the original apparatus, Mr. Smith has continued to cultivate his own farm at Woolston with the most satisfactory results, and to introduce his system of culture by similar apparatus widely and successfully." Yes, and to prove the correctness of the latter part of the words quoted above about successful application, I will give a full report of my operations, and of this year's cropping on my farm:—

HEAVY LAND.

Field No. 1. In 1863, Clover fed on down to March, 1864. Steam cultivated once, 7*s.*; horse cultivated twice, 2*s.* each time. Total, 11*s.* per acre. Barley looking well.

Field No. 2. Clover being fed on.

Field No. 3. Steam cultivated once, 7*s.* per acre, and that the total cost for Beans. They are a full crop and look clean and well.

Field No. 4. Steam cultivated and drilled at one operation, cost 7*s.* per acre. Wheat looks well. No manure whatever used on this land except for Beans, and that nothing but straw and water, the straw the produce of the land the preceding year.

The total cost per acre for nine years on each of these fields has been, including steam and horse operations, No. 1, 3*l.* 16*s.* 10*d.*; No. 2, 3*l.* 17*s.* 4*d.*; No. 3, 5*l.* 14*s.* 4*d.*; No. 4, 5*l.* 3*s.* 10*d.* Nos. 3 and 4 were very rough at starting. They are all now very clean. I need not trouble you about the operations and cost on my light land; they have been equally cheap and successful; it is now well cropped and clean. Now, let my brother horse farmers divide the figures representing each field by 9, and tell me whether they could keep that land always in crop and clean at double that cost. Here then is enough to substantiate Mr. R. Ransome's statement about my success, but in future let him be more generous than to try to rob me of the credit of originating my Carlisle windlass. Fowler did draining, and that's all; he and Howard are followers of mine in steam cultivation. The former had nothing at Carlisle in the shape of steam cultivating apparatus; neither had he until long after my doings in Dec. 1855 and Jan. 1856, stated then at the Society of Arts. The latter we know all about, they claim nothing as original starters. To that extent they act fairly. *William Smith, Woolston, Bletchley Station, Bucks, May* 30, 1864.

HOW MUCH SEED PER ACRE SHOULD WE SOW?

THIS question can only be properly answered by each farmer on his own fields and in his own climate, after he has tried comparative quantities on those fields, under the same circumstances as to manuring, &c. But has each farmer tried comparative quantities either on a small scale or on a large one?

When in Hampshire the other day, a very extensive farmer told me that their quantity of seed per acre was Wheat, 3 bushels; Barley, 4 bushels; Oats, 5 bushels. This rather astonished me, but knowing that their land was light, I said, "I presume you have arrived at these quantities, after proper comparative trials." The colour came up into my friend's face, and he candidly confessed that he had not tried any other quantity, but followed the custom of the country. "Well," I said, "follow my example and feel your way down to a proper quantity by small comparative experiments, which will only involve a little trouble. Half an acre in each field will be enough for a comparative test." He promised to do so.

To show how seldom such experiments are made, I refer to the annexed dialogue which took place between myself and a large party of some of the best farmers in Cumberland in September last. This conversation proves unmistakeably that farmers, generally, have not tested the relative quantities by moderate experiments, much to their own loss and to the injury of their country.

Mr. Caird, who is a good authority, gives us only an increase of 8 for 1. That is, we sow 1 bushel or one kernel, and get nine in return.

I would defy any one to obtain so little as nine kernels from a good one placed in well cultivated and properly manured soil. I have now on my farm a very instructive instance of the proper quantity of seed per acre under varying circumstances. On a 13-acre field, 1 bushel of Wheat per acre, drilled after a Bean crop, appears to be the right quantity. On a Clover field adjoining, which produced in 1863, 3 tons of Clover hay per acre, was then top-dressed with shed manure, and when the after crop was sufficiently advanced was fed off by calves eating cake, &c., 1 bushel of Wheat per acre is far too much seed. On this field 1 peck per acre appears to be the right quantity; and although this may surprise many, it is quite open for inspection to any of my brother agriculturists who desire to see it, and will make the necessary application.

On four lands in this 7-acre field, I desired my labourers to dibble one kernel in a hole at intervals of 4½ inches, which is now the distance between each plant. Every kernel came up, and tillered so strong, that you may commonly find from 20 to 40 stems from each kernel, and although it looked thin when it first came up, it is now the thickest crop in the field, and it is the opinion of my labourers as well as of myself, that it will be the best half acre in the field. The dibble holes were made by a dibble given to me by Mr. Hallett, having a projecting collar to prevent the holes being deeper than 1½ inch. It is a great improvement on the ordinary dibble, as the point is small, and the dibble does not glaze or compress the sides of the dibble holes. Instead of a return of 9 for 1, I shall expect on these 4 lands a return of at least 200 for 1. It was dibbled in October. This experiment has strengthened my conviction that, according to our manuring and time of sowing, so must we vary our quantity of seed. In this case 2 pecks of Wheat, drilled per acre, would have been an ample quantity. I am of opinion, that the drills should be not more than 5 to 6 inches apart, so as to have the seed well dispersed.

On a field of Oats, after Tares and Cabbage, I have dibbled 1½ peck per acre against 8 pecks, and it is progressing favourably, although sown a fortnight later. Also on a field of Barley after Mangel a few lands have 1½ peck per acre against 6 pecks

Surely each farmer will ascertain for himself, irrespective of ancient customs, by a small comparative trial, what quantity suits his land best. That we generally sow too much seed for our modern high farming there can be no doubt. I said to an eminent brewer yesterday—"We shall have a fine Barley crop, I think;" he said—"I fear there will be too much Barley;" and, asking him the cause of his fear, he said—"Some of it is laid already, and it will be of interior quality, unfit for malting."

There is great truth in this remark, for on comparing my crop with my neighbour's three years since, the difference in quality alone was 12*s.* 6*d.* per quarter. I sold mine for malting at 50*s.* His was sold for 37*s.* 6*d.* Barley was then dear. I sowed 6 pecks; my neighbour sowed 10 pecks.

I could multiply these cases extensively. Too thick sowing is a most serious loss to agriculture. My usual quantities are—Wheat, 1 bushel; Barley, 1½ bushel; Oats, 2 bushels; and as I farm more highly I must reduce my quantities. No one can lay down a rigid rule for all soils, climates, modes of farming, and varying seasons, but we may safely accept a few general principles:—

That very early sowing must be thinner sowing.

That very highly manured or naturally fertile land requires a smaller quantity of seed.

That cold elevated and late districts require a more ample seeding, although on cold, undrained, and weedy lands, a full crop cannot be expected.

That the quality of seed, whether arising from season or selection, has very much to do with the measure sown.

I know some farmers who sow tail or inferior thin seed. In my case, I not only dress it very close, but after getting it quite clear and free from light kernels, pass it through the blowing machine, so as to have only for my seed the very finest and heaviest kernels. In fact, to do with corn, what we do with cattle, begin with the right parent.

I certainly feel very much indebted to Mr. Hallett, for I adopt his plan of selecting first the finest ears, and then the finest kernels from those ears. Agriculture owes much to that talented and persevering gentleman, and I have some very fine Wheats, from seed raised from his stock—and I find no difficulty in selling his Wheat, weighing 65 lbs. per bushel; I find that it makes capital bread.

In conclusion, let us not forget that a bushel or acre in one county may mean 3 bushels or 3 acres in another county. In Carlisle a bushel means 3 imperial bushels, and Scotch, Irish, and Cheshire acres, are all much larger than the imperial acres to which this paper refers. How frequently a plant of young Clover is smothered and destroyed by a laid Barley crop. I remember a farmer near me getting so angry at losing his Clovers sown in Oats that he determined only to sow 1 bushel of Oats to save his Clover—not caring much about the Oats.

He told me to his surprise (but not to mine) that he had the finest crop of Oats that he ever grew. From a bushel of Oats dibbled I had a very fine crop of corn and straw. An Oxfordshire farmer looking at it said: "What a quantity of straw you have, Mr. Mechi; how much seed did you sow?" "One bushel." "Well," said he, "I sow 5 bushels! and have not so much straw as you have." At this I was not at all surprised, because I know that we get more weight of straw from thin than from thick sowing. *J. J. Mechi, June* 1864.

[The following conversation may here be quoted from a report of one of Mr. Mechi's public meetings in Cumberland:—]

Mr. Mechi.—I say to you, farmers of Cumberland, make the experiment for yourselves, and be convinced, for it is a very vital and important question for the British farmer and the British public. Let me ask you a question. How much do you think is the natural increase of ordinary crops throughout the kingdom for every bushel you put in of Oats, Barley, or Wheat! *Mr. Bogue.*—One hundred. *Mr. Mechi.*—You say a hundred. *Mr. Bogue.*—The Bible says so. *Mr. Jefferson.*—Seven. *A Voice.*—Eighty-eight to one. *Mr. Mechi.*—Mark you, one gentleman says seven, and another eighty-eight to one. This is a nice illustration. Any more opinions? *Mr. Bogue.*—Thirty to one. *Mr. Lawson.*—Ten. Some one else.—Ten. *Mr. Mechi.*—I see several long heads before me that have as yet remained silent. *Another Voice.*—Forty. *Mr. Gate* said they would get about fifty to one. *A Farmer* asked if Mr. Mechi meant the average of the county. *Mr. Mechi* said he would take that. *Several Voices.*—"About eight." "Twelve." *Mr. Bogue.*—What grain do you refer to? *Mr. Mechi.*—Wheat, Barley, and Oats. I'll tell you my opinion by-and-bye. *A Voice.*—Six and three-quarters Wheat only *Mr. Mechi.*—Does that gentleman alter his opinion about the eight-eight. The previous *Voice*—No. *Mr. Donald.*—Seven to one. Another *Farmer* said seven to one, and he had applied as much guano to his land as he had been paying rent. *Mr. Mechi*, after a pause for further replies, said.—I will tell you what Mr. Caird, who has collected statistics throughout the kingdom, says—that if you sow 1 bushel or one kernel you get an average of nine, counting the one grain in the nine Mr. Jefferson, therefore, had guessed it to a nicety. The increase is eight to one. If any one put a perfect kernel of Wheat in the ground, do you think it would only produce nine? How many kernels do you count to the ear? Several *Voices*—Forty. *Mr. Jefferson.*—I have seen fifty this year. Other *Voices*—Fifty-two. Fifty. *Mr. Mechi*—I have known them 110. Do you believe you can put a kernel of Wheat into the ground and that it will produce no more than nine? I ask that question. *Mr. Blackburn.*—It will produce above 100 on good land. *Mr. Mechi*—Does it not branch and tiller? *Mr. Blackburn.*—It would not produce so many without tillering.

WHAT IS "CONDITION?"—No. II.

IT has long been proved practically as well as theoretically that the most necessary ingredient in manures for roots and fallow crops is phosphorus (bone-dust) and minerals; for corn crops, ammonia or nitrogen. As, under the English system of alternate husbandry, the former are generally returned to the land in a great degree by the manure, and the latter is to a great extent dissipated by the growth of corn or removed by its sale, we will first confine our attention to the nitrogenous manures. We find from Mr. Lawes' experiments that under ordinary circumstances 5 lbs. of ammonia will produce a bushel of Wheat. We also

find that average land properly tilled and aërated will absorb yearly from the rain and the atmosphere sufficient of this substance to produce from 16 to 20 bushels of Wheat annually, *i. e.* from 80 to 100 lbs. of ammonia or its equivalent in nitrogen. Now, Prof. Voelcker and the chemists tell us that about 22 lbs. is contained in the annual rainfall, the rest must be absorbed from the atmosphere during the fallow season. And we have seen that the greater or less capability of absorbing or retaining this manure for the use of crops is a chief criterion of good or bad land.

If we take the average land of this country, worth about 1*l.* an acre, or 30*s.* including tithes, rates, &c., we shall find these rough estimates sufficiently accurate for our purpose. We start then with our land out of condition, but clean and capable of bearing after a corn crop some 16 to 20 bushels of corn. But the incoming tenant will not sow corn on a stubble. He has half his land either in fallow or fallow crop, roots or Clover, &c. He therefore takes to this half of his land with one year's ammonia already stored in it, and he therefore takes to it with two years' productive capacity, *i.e.*, irrespective of any manure, with a capacity of producing 30 to 40 bushels the first year. That this is borne out by facts I think proved—1st, by the general estimation of a clean fallow; 2nd, by the knowledge that Clover and roots abstract no ammonia from the soil, but rather increase it; 3rd, by a statement a fortnight ago made by Professor Voelcker, that he had found 80 or 90 lbs. o ammonia stored up in the roots of a thick crop of Clover. We may conclude then that an average agricultural crop of corn is double the amount of the natural productive power of the land, that is from 4 to 5 quarters, instead of 16 to 20 bushels; and that [this extra produce is derived by the storage in the land of from 80 to 100 lbs. of ammonia, either naturallly or artificially. Mr. Lawes proves that 14 tons per acre of his farmyard dung, or 400 lbs. of nitrate or salts of ammonia, produce artificially a full agricultural crop. These contain, each of them, as near as can be ascertained, 100 lbs. of ammonia, therefore 100 lbs. ammonia on his land in addition to its natural capacity, produce an additional crop of 20 bushels an acre. We can go one step further. Professor Voelcker has shown in an able article on the prices of manures, that this ammonia can be purchased in guano or in nitrate of soda at 6*d.* the lb., so that 50*s.* worth of manure in value will produce these extra 20 bushels, and this at present prices is no bad return for the outlay. Now, if I have made my position clear thus far, I think I have arrived at the data from which to ascertain the value of farm-yard manure: the substance so called may have any value as a manure—from rotted straw, which has been washed all the winter in an open yard, to the best box dung. Mr. Lawes' farm-yard dung was worth, as above stated, 50*s.* for the 14 tons, or about 4*s.* per ton. I find analyses of well made dung varying from 10lb. of ammonia to 40 lb. per ton, or in value as above, from 5*s.* to 20*s.* I fear a great deal of dung, if analysed, would be found little better than rotten straw. Therefore, when a tenant takes to a heap of dung at a calculation, he is entitled to know, not the weight of straw and water it contains, but the amount of actual manuring matter or ammonia, of which the above straw and water are excellent retainers and absorbents, but little valuable for their own sakes. This value we will proceed to ascertain—excluding from our calculations the value of the straw, which is not to be taken off, but including all the manurial properties of the dung left in the yards, and the unexhausted value of any former applications beneficial to the future crops beyond what we have stated the incoming tenant to be entitled to, viz., a clean cultivated fallow. *J. B. M.*

PLUCK: MONEY: JUDGMENT.

MR. DAINE lately gave an address on these as the three requisites for taking and successfully managing a farm, before the Tarporley Farmers' Club. The following is an abridgment of his lecture. He said:—

1. I will reverse the order in which I have given them to you, and begin with Judgment. Now, suppose a farmer is about taking a farm, clearly he requires a certain, nay, indeed, a great amount of judgment, and the more so if he is about taking one of a different soil and in a different climate to that he has been accustomed to. Many great mistakes have been made by men going to take farms at a distance, and not understanding the climate or the capabilities of the soil, and following out that mode of farming which they had been accustomed to. It is well known that good Scotch farmers have soon altered their first views and modes of farming, not from any want of farming ability, but from the difference in climate, soil, custom of the country, as regards labour. And if most of our Cheshire farmers were to go to Scotland or the south of England, they would be equally out of their reckoning, in fact, we sometimes see men in almost the same neighbourhood quite at fault when going from a light-land farm to a stiff clay. Judgment, then, as to the soil and situation of a farm is of primary importance. If the farm is of a similar nature to that you have been accustomed to, you ought to have a good idea as to the yearly value; but if in a neighbourhood away, be careful, if possible, to consult some trustworthy and practical man living near such place. Being satisfied, then, as to the farm suiting you, the next consideration is the rent and other burdens, such as tithe, poor-rate, land tax, &c.

One very false guide, and one but too often taken by tenants, is the success of the last occupier. If a man makes money upon a farm, or leaves for a larger one, numbers will apply and be ready to take it, almost without viewing it, or asking the rent, whereas if a tenant or two breaks, or is poor, it is looked down upon as a poor farm, not worth taking, or which must be taken at a greatly reduced rent. As to letting farms by tender, we very strongly condemn the practice, as being neither to the interest of landlord or tenant. Every good farmer is not necessarily a good valuer of land; and we often find in this age of competition for farms, that those who have the least capital, and are not celebrated for ability or management in their own neighbourhood, will for the sake of getting a farm, go a distance away, and, well armed with testimonials—and perhaps one from their own landlord, who is only too glad to get quietly rid of a bad tenant—will offer more for a farm than they know it ought to be let for, trusting to their power of giving the farm a good whipping, for a change of fortune, when after a few years they are prepared to go away, and leave the farm ready for some poor wight, born with a silver spoon in his mouth, and who, having plenty of money and pluck, comes to dearly buy judgment. We have often heard the foolish remark made that landlords know too much about farming. We only wish they knew more; for if ever the saying is true that "a little knowledge is a dangerous thing," it applies in all its force to those landlords who know that every 3 acres of land will summer and winter a cow, every cow will yield 4 cwt. of cheese a year and feed a good calf too—that every acre of Turnips will give 30 tons—every acre of Grass 2 tons of hay—Oats, 50 bushels to the acre and 2 tons of straw; and those farmers who cannot come up to this standard, no matter the quality of their land, are deficient in the knowledge of their business, are clownish clodhoppers. No; give me a landlord who practically understands the risks, the expenses, the liabilities, the losses, and the anxieties, which a farmer every year of his life is subject to. At the risk of being thought non-progressive and one-sided, I will go still further and say that, if farmers' rents were to be adjusted according to the profits which landlords make from lands in their own occupation, with all the appliances of intellect, scientific acquirements, chemistry, steam ploughs, &c., the change would be in favour of the tenant. But, happily for both landlords and tenants, a better state of things is dawning, and landlords are beginning better to understand their own business, and to leave less to a third party.

Your judgment must also be brought to bear as to the capital required to stock such a farm as you are looking after. If you are about to take a poor worn-out farm, or one that requires a considerable outlay, and your landlord cannot, or will not, lay out the requisite capital, then clearly, as a matter of business and common honesty to yourself and family, you ought to have security for any money you spend in permanent improvements. Many suggestions have been made as to what is called tenant-right, but I think on reflection you will find nothing to work so well in practice, and to the mutual advantage of both landlord and tenant as long leases. If at the commencement of your lease you lay out your money in buying bones or other manures, draining, ridding up fences, &c., you know what length of time you have to regain your outlay with interest. Having then agreed upon the terms and taken your farm, your judgment will now have a wide field of action. If your farm be suited for a dairy, as the great majority of Cheshire farms are—especially in South Cheshire—then your chief business will be the selection of your cattle, and your judgment will be put to the test as to your knowledge of the milking properties of a cow. We would say buy such a stock as your land will carry. If your land be good, sound, rich land, then it will carry well-bred and large cattle; if wet or thin-skinned land, then Welsh, or Ayrshire, or cross-bred small cattle will be more suitable. But in any case select such as will fill your cheese-tub rather than adorn with their marbled beauty the butcher's stall. On poor or medium soils it is questionable whether any breeds will leave more profit than properly selected Welsh cows and crossed with a well-bred Shorthorned bull. It has been said by some that after the first cross from such stock, if continued to be crossed, they will begin to deteriorate. This I must question as requiring proof. I know a dairy stock which has been thus crossed for more than twelve years with good effect; and I know a farmer who a few years ago, when entering on a farm, bought nearly 50 head of cattle, the greater part of which were from Wales, and cost, when bought in April and May, about 11*l.* per head; the other part were Shorthorns, and cost from 16*l.* to 17*l.* each. The farm is only of very medium quality, and during the summer the Welsh beat the Shorthorns in milking; but the greatest difference was during the following winter and spring. The same food which kept the Welsh in fair store condition half-starved the Shorthorns, and during spring the Welsh fed good calves and did well afterwards; the Shorthorns had scarcely strength to calve, and the best part of summer was over before they got in condition, and of course made poor notes. But, whatever sort of cattle you buy, buy such as show a tendency to milk rather than feed, as experience will testify that your well-fed, thin-thighed, lean-fleshed cow will yield you from ½ cwt. to 1 cwt. more cheese during the season than your broad-breasted, thick-thighed, high-bred, showy cow. Let your judgment also be directed to the fact that, if you wish to make a large quantity of cheese, your cows, both before as after calving, must be kept up to the mark with proper nourishing food, so that after feeding good calves you may commence to make a large cheese; and to continue your good start, you must turn out to good dry pastures—well manured, and thus of good herbage. To keep up your make of cheese in the autumn, when Grass begins to fail, demands your special attention; and I know of nothing better or more economical than having a proper supply of common Turnips, grown after Rye and Vetches, early Potatos, or grown as a self crop.

2. *Money.*—We now come to the second part of our subject before mentioned—viz., Money or Capital, which is certainly an important commercial commodity. It must be owned that no definite sum can be named, because so much depends upon the other two requisites, but 8*l.* an acre is not a high estimate, although many do well with less, and some do badly with more. One with judgment and energy or pluck will make 20*s.* go as far as another deficient in these respects can make 30*s.* go. But you will not only require sufficient money to merely stock your farm and furnish your house—many expenses will follow; and if you want the money for your produce as soon as it is produced, or perhaps before, you will often be compelled to sell at considerable loss. I shall not be out of place by here remarking that the experience of many good farmers—and my own little experience and observation fully bear it out—has led them to thrash out and sell, as soon after harvest as possible, nearly all the corn they have to sell, especially Wheat and Barley. With a little spare capital, also, you may often buy things which will pay you well for the buying, whilst without that little surplus you may be compelled to sell when markets are at the worst, although your judgment tells you you ought to hold on. We have heard the matter discussed by practical farmers whether it is better for a tenant to pay interest for draining and boning, or do it at his own expense. Now, where land wants draining, and where bones will answer, there is no doubt as to the outlay paying good interest; but, without a lease, we cannot see the wisdom of a tenant going to this expense. A noble landlord, a few years ago, asked his steward who was expending so much money on one of his farms, and on being told the tenant, asked whether he had a lease. "Oh, no," replied the steward, "he has quite as much confidence in you as in a lease," when the nobleman nobly replied, "I am glad to possess the confidence of my tenants, and although it is true I shall never take advantage of them, but should on the contrary think it my duty to assist them, yet my life is uncertain, and I cannot say what unforeseen circumstances might compel my successor to resort to."

3. Time compels me to go on to the third requisite—viz., Pluck. This article, like fire and water, is most useful when kept within proper bounds, and, when not tempered by judgment and supported by money, becomes ruinous to its possessor; but still, on the farm, as well as on the battle field, it is an indispensable requisite. I know of instances—and I dare say many of you can call others to mind—of men who possessed both money and judgment, and who have had good and cheap farms offered to them on beneficial terms, but who lacked the necessary pluck to embrace the opportunity.

Pluck or spirit is an indispensable requisite for an improving farmer. One will take a farm, and with open hands receive every penny which comes in, but, like the grave, which always cries "give," "give," will return nothing. Another will judiciously expend all he can honestly lay hold of, and will reap a hundredfold. We can now call to mind the case of two farmers who had each a fourteen years' lease of adjoining farms—the one had the pluck to expend a considerable amount in ridding up fences, purchasing manures, keeping good cattle, buying the best seeds, employing an adequate amount of labour, &c., and at the end of his lease had accumulated a pretty handsome sum, while on the other hand, the penurious neighbour who had nailed every copper that came to his hand, had not added a single gold to his original stock. It unfortunately happens that those farmers who have the most money have the least pluck to use it, and how this can be accounted for I do not know, except that Nature is not extravagant in her gifts, and those to whom she gives the cash she withholds the sense to use it. We are told "He that observeth the wind shall not sow, and he that regardeth the clouds shall not reap;" and so there are weak-minded people who have not the pluck to lay out their bit of money for fear the wind might blow it away or the rain wash it off—who would rather stick their talent in their old desk, and, like the man of old, let it remain only a talent still than lay it out on their land, doing good to themselves, their neighbourhood, and their country.

As a finish to this part of the subject, I cannot do better than refer you to the pluck contained in the following advice—"Whatsoever thy hand findeth to do, do it with all thy might."

AGRICULTURAL NOTES.

By Alderman Mechi.

Sewage Utilisation and Extension of Grass Land.—The longer I reflect upon this question as illustrated by my own practice, the more am I convinced of its agricultural importance as a means of increasing the farmer's profit and enhancing the value of the landlord's land. Sober men of these two classes are frequently asking me "Will it pay? How is it to be got on the land? Who is to do it? How much ought we to have per acre?" and so on. First, as to the difficulty of applying it. The evidence recently taken before a parliamentary committee will show that it is as easily conveyed as water, and that it can be delivered to a farmer for about 2*d.* per ton, or at most 2½*d.*

Then comes the question, will it pay the farmer at that price? This is the most important point of all, and I am able to answer that London sewage will pay if delivered to the farmer at 2*d.* per ton, or even at 2½*d.* per ton, speaking after a long experience in this matter. The most paying crop for sewage is Italian Rye-grass. In the absence of town sewage it answers my purpose, after sowing 3 cwt. of guano and 2 cwt. of salt, to wash it with 100 tons of water (a rainfall of 1 inch). The putting on of this water costs me more than one penny per ton, or 11*s.* per acre. If I have sewage I wash it in with sewage, but if I have been exhausting my sewage, the washings are scarcely stronger than water.

Let us remember that when we can attach our pipe to the sewage main, we at once do away with the need for expensive tanks, pumps, and the daily working expense of our engine. Take my own case—for coals, engine driver, and wear and tear of machinery and interest upon steam engine and tank, is not less than 16*s.*, or 1*d.* per ton. This would be saved, because the pressure would be always ample in the supply main pipes; and by attaching a full sized air vessel at the connection with the main, there would be an ample jet from the distributing hose, like that from a fire engine.

Our only expenses would then be as follows, according to the quantity we desire to put on. In my case it would be:—Paid capital: 15 yards of 3-inch iron pipe to each acre, at 4*l.* 5*s.* per ton. Freight from Scotland, 10*s.* 6*d.* Cartage, &c., (?) The 15 yards thus cost at 1*s.* 9*d.* per yard, 1*l.* 6*s.* 3*d.* Lead for joints, every 3 yards is five joints, at (?) Man jointing, digging, &c. (?) Cost of hydrant, and fixing one hydrant to each 11 acres, is per acre (?) 200 yards of gutta percha hose at 5*s.* 6*d.* = 7*s.* So that at all events we may safely estimate the fixed expenditure at 2*l.* per acre; and the interest and wear and tear on this at 20 per cent. (an excessive allowance); our annual charge for this would be 8*s.* per acre, or 2*s.* each watering for four waterings. To sum up for each day's watering:—

	£.	s.	d.
Wear and tear, and interest on fixed capital	0	2	0
Two men	0	4	0
Paid for sewage, 200 tons at 2*d.*	1	13	4
For two acres	£1	19	4

Or for a sewage rainfall of 1 inch, or 100 tons per acre, 19*s.* 8*d.*

When I laid down my pipes iron was cheap, and my 3-inch pipes, in 9 feet lengths, cost me 4*l.* 5*s.* per ton in Newcastle; freight and cartage brought it up to 5*l.* Now I think they are considerably dearer. There would of course be many fields that could be irrigated by open gutters; but even so I find that they cost 3*l.* per acre; and where we have to pay so much per ton for our sewage, it appears to me to be more economical and more safe to use the hose and jet, for in passing through or rather along gutters it is apt to sink down through veins of sand and gravel, and is not so equally distributed.

If we desire to make our sewage stronger, we have only to sow broadcast daily before watering from 1 to 3 cwt. of guano and 2 cwt. of salt, or some nitrate of soda, or all three, and the result is unmistakeable. For ordinary crops of Grass, &c., I should recommend 200 tons of sewage at each dressing, for this is admitted by all to contain the elements of 3½ cwt. of guano, and before we irrigate we should, in the case of using London sewage, sow broadcast superphosphate of lime in accordance with Liebig's admirable advice; seeing that the bones of meat, poultry, and game do not go into the sewers, and that the sewage, minus the bone element, is diminished in value 75 per cent.

On the extension of Grass land, owing to town sewage, I will speak in another paper.—*J. J. Mechi.*

A Two-horse Steam Engine.—I hold it as a sound principle that no farm, even of 100 acres, if highly farmed, can do without steam-power, and also lay down as a principle this maxim—"Never use a man where you can use a horse, and never use a horse where you can use steam." The reasons are obvious—a man costs 2*s.* a day, or more than a horse, and has only 1*s.* 4*d.* of his power—a steam horse costs only 1*s.* per day, and can do twice as much work as a horse. I say nothing of water power, because we cannot use it in the south for want of fall.

Now, although I have a fixed steam engine of considerable power, I am almost inclined to have a smaller portable one as well, for, during summer, when we are cutting up green food, we do not always require the great engine, but lighting a small fire in the little engine, we could cut up Grass, Clover, Tares, or roots at small cost.

If you keep much stock, as I do, and give them all their food prepared or cut up, they will never be sufficiently supplied by hand-power. The cost is too great and the working of the chaff-cutter too unremitting and exhausting. The steam horse has no muscles to fatigue—you may work him incessantly, provided he is amply fed with coal and water.

But does a steam horse cost in the first instance more than a real horse? On the contrary, barely half the price; and as to durability, I have no hesitation in saying that it will very far outlast the real horse.

What we want is a very neat, and easily fixed engine—the accompanying drawing [not sent] illustrates one of two horse-power that may be purchased for 45*l.*, and is, I consider, most useful. I remember seeing one, a three horse-power engine, on the horizontal principle, at the Cockermouth Show, costing only 50*l.* It was by a Kendal manufacturer.

These small engines require little expense in fitting or fixing, and will do much work. The vertical ones occupy a very small space. *J. J. Mechi.*

Reform of Country Privies.—Independent of the propriety and profit of applying all excreta to the soil, there is the consideration of cleanliness and absence of offensive odours. Experience has taught me that earth is the greatest deodoriser, and it is certainly the cheapest. On the other hand water is the great decomposer or liberator of all smells. It sets up fermentation and putrefaction, and encourages the escape of the most offensive smells. Therefore instead of making our privy cesspools below the surface of the soil, and thus inviting the water to come in, the floor of the receptacle for our excreta should be raised just above the surface of the earth, so that no moisture enters it except our natural excreta, and that this should fall upon some dried earth. We are indebted very much to the Rev. Mr. Moule for pointing out to us that a pailful of dry earth will absorb and sweeten much excreta—a boxful of powdered dry earth and a half-round trowel, would relieve us of those horrid stenches which are common to nearly every farm privy, in spite of the honeysuckle or sweet briar that encases it.

A friend told me that a cartload and a half of dried earth absorbed for six months the excreta of a school of 55 boys. The earth was occasionally turned over and dried, and beat all the guano as a fertiliser.

Our youth should be taught to believe that the production of their food is dependent upon the utilization of their excreta. It is not improper to talk of these matters; on the contrary, it is becoming every day more necessary and justifiable. *J. J. Mechi, June*, 1864.

COTTAGE BUILDINGS.

The value of the information and of many of the opinions elicited at the late Conference on the subject of the dwellings of the labouring classes, can scarcely be fully estimated. At all events evidence was then afforded not only of a great advance already made in cottage improvements, but of the way being open to still further progress. Nevertheless there was equally strong evidence afforded on that occasion that the great object is yet unattained, without the attainment of which the expectation is utterly futile that such improvement will ever become in any degree co-extensive with the urgent demand for it. For no one on that occasion attempted to show how good cottages may be made good property by making them yield in their rent a fair return on the capital invested in them. And until this be done, landowners generally will not build to the extent that is needed. Some men of benevolence, with money at their command, will do so, but many more will be unwilling: many too are quite unable. It cannot be expected in the present state of things that any large proportion of our men of property will lay out 200*l.*, or even 150*l.* on a cottage for which they shall receive only 2*l.* 12*s.*, 3*l.*, or 3*l.* 10*s.* per annum. And yet the agricultural labourer, to whom and to whose cottage I would especially refer, cannot in his present condition afford out of his wages to give a higher rent than this. There are very many cases, moreover, in which, with the average rate of wages, even if he were placed in a cottage with a sufficient number of rooms, and those of sufficient size for decency and comfort, the cottager would be utterly unable either to furnish or to warm them.

The attempts to meet this difficulty appear to me to have been hitherto made in the wrong direction. The idea has been that while improving the cottage as to healthiness, and decency, and comfort, you must bring down the cost of building, either by the device of double cottages or of blocks of cottages or of hollow walls, &c., to the standard of 100*l.*; out of which sum I see it sometimes even proposed to allow 20*l.* as builder's profit! Now my firm conviction is, that in the ordinary mode of building cottages, and if we seek the improvement of the building by itself and irrespectively of other improvements, that one object—the general improvement of the dwellings of the labouring classes—is entirely unattainable. We must combine with it two other objects, between which and this there is so intimate a connection that one without the other can scarcely be effected. These are, 1st, the improvement of the religious, moral, and mental condition of the cottager; and 2dly, the improvement of his income and of his comforts through the economical arrangements of his cottage, and from the produce of the ground attached to it, to such an extent as shall enable him to pay for it a rent which shall be a fair interest on the outlay. Of the former of these two objects I shall now only remark that it is of little avail to provide a good cottage for the drunken, the lazy, and the dishonest; and further, that so long as extra payments at harvest and at other times are made in beer or cider, there will in these be so many temptations, especially to the young, to drunkenness, extravagance and dishonesty. Let us get rid of such customs and of the public-house together, and let us give a man at his home means of comfort and opportunities of improving his condition, such as I am about to propose (and that without taking for this any of the time due to his master), and there is, with God's blessing, a good prospect of our forming a class of labourers that, for sobriety, honesty, intelligence, and industry, shall be the strength and pride of the country. For the cottager in small towns, or in the suburbs of large towns indeed, similar aid might be provided. But I now speak only of the agricultural labourer or the cottager in agricultural districts. And, with respect to the second of the two objects which I have mentioned, which must necessarily be taken in connection with that of cottage improvements, there should, as Mr. Denton very justly observes, be attached to every cottage a quarter of an acre of land. If this be done, not in the form of a distant allotment but of a garden close to the house, then I am confident that a good cottage could be built for 120*l.* or 150*l.*, for which an agricultural labourer shall be willing to give 6*l.* rent, and in the suburbs of a town, for a cottage with only the eighth of an acre attached to it, there are many who would gladly give for it 10*l.* a-year. If, for instance, the Prince of Wales would, on his property in this parish, at a cost not exceeding 1100*l.*, erect eight cottages to an acre, his Royal Highness migh get from them a rental of 80*l.*, and have the pleasure of helping to raise up a happy peasantry.

The value of the produce which a cottager may raise from a quarter of an acre of land so situated and used as I propose, is yet I think little understood. So is the improvement in his moral and social condition which would almost of necessity be effected, even in the work of raising such produce. So is the increase of wealth to the country, by opening up, as this would, amongst the working classes new branches of industry. So is the increased value of the labourer to his employer, which would thus be obtained. And so, lastly, if such a plan as I propose should ever become general, is the enlarged home market for many manufactured goods which would spring up among a peasantry so improved as they would be in condition and healthy tastes.

Let me attempt to show that this is not a baseless vision. The gross produce of market gardens in the neighbourhood of London is sometimes above 200*l.* an acre. This is obtained partly by high manuring and by well skilled cultivation, and partly by a good market. What then, if a cottager instead of having, as is frequently the case, no manure, or scarcely any, could apply to his quarter of an acre manure the worth of which should be from 5*l.* to 8*l.* a year? And what, if at the same time, with very little cost of labour to himself, he could cultivate fruits and vegetables which in a short time would be sure to command a good market? Might he not fairly look for produce in the proportion of two-fifths of 200*l.*? This would be 20*l.* a year. Or look on it thus:—An acre of Red Currant trees planted 4 feet asunder, and trained as espaliers, or kept well pruned and well manured, will yield produce worth 50*l.* A very experienced gardener tells me I might say 70*l.* a year. But the produce of 50*l.* a year is a fact, that has been repeated again and again. Now, for such fruits the large preserving houses in London (and these, if there were the supply, would soon spring up elsewhere) would for this and similar produce offer a ready market. The care of the bushes would require very little of the cottager's time. His wife and children could pick the fruit, and besides the money to be obtained from this source, common vegetables of almost every kind, if only the ground be kept well manured, might be grown between the bushes. Besides this, let a perch of ground be lightly railed in for the purpose, and let a shed be attached to one of the walls of the cottage, and let the cottager's wife keep as many fowls as she well can in that space. If during the winter the hens partake of the warmth which I propose to introduce into the cottage walls, and if they have a little flesh of any kind given with grain they will commonly lay almost all the year round, and either in the food thus produced or in money, several pounds a year might by the wife with very little labour be added to the income—enough almost of itself to pay the rent—and why should not in this way the supply of eggs which now comes to us from France be raised by our cottagers? Let not the suspicion or distrust of the farmers withhold this advantage. The temptation to theft of Barley, which I know is dreaded by them, would in this practice be as nothing compared with that which the public-house affords. And if not, then on the other side the sale of Barley for this purpose might soon become considerable; besides which, another perfect substitute for guano would thus be manufactured at our very doors. From these two sources 20*l.* to 25*l.* a year might with almost certainty be added to the cottager's present resources.

But now let me give some idea of the cottage which would help in effecting this addition to the cottager's income, and the consequent improvement

in his condition. I will take one calculated for a large family, and which I should think would be considered a first-class cottage, but one the estimate given me for which does not exceed 130*l*. Like Lady Caroline Kerrison's cottages it would have no rooms overhead; but from those it would differ in this, amongst other features—that there would be in it two levels. The principal living room (15 ft. by 10 ft.), with a pantry or scullery at its side, would be on the lower level, and would form a "lean-to" against that which would be the main portion of the building. This portion would consist of four rooms, divided into two pairs by a passage 3 feet wide. Three of these would be bedrooms, one of them 10 ft. square, the other two 9 ft. by 7 ft. each; and the fourth, a sitting-room, would be 10 ft. by 8 ft. The floor of these rooms and of the passage would stand 2½ ft. higher than that of the "lean-to." Their outer walls would have a basement of 2½ ft., built with a hollow of 14 or 18 inches. This would be carefully covered down with slate or tile, well mortared, to keep in the smoke, and above it the walls would rise 7 feet to the eaves, having a hollow of four inches. The upper course of the bricks forming the inner portion of the wall would be perforated for ventilation of the rooms. By this arrangement fuel may be economised to such an extent that with 1 cwt. of coal or coke, or with a corresponding quantity of wood per week, the cooking for the family, the baking, the washing and ironing may be done; and whenever it should be required, the three bedrooms and the other sitting-room may be warmed, and to say nothing of other advantages resulting from this, full half the ordinary supply of bedclothes might thus be saved. This can be done by fixing a patent vapour-fed cottage range in the "lean-to" against the basement of the hollow wall.* Ordinarily the smoke from this range would pass either upwards through an earthenware pipe, or horizontally through a small portion of the basement into an underground chamber of the same depth as the basement outside the cottage, from whence it would escape by an earthenware pipe; but whenever it should be wished to warm the four it would be made to pass all round the basements, escaping at the end also by an earthenware pipe. For I have for some time ascertained the fact that if only you give smoke room it will pass away horizontally more easily than when it ascends perpendicularly, and that it passes away so slowly as to leave almost all its heat in the bricks of the chamber or large flue. By this means heat is radiated from the basement under the floor, and the 4-inch hollow in the upper part of the wall becomes a hot-air chamber. Heat is thus economised to such an extent that by the passing of the smoke through the basement for a very short time the rooms would be warmed sufficiently for some hours. At the same time, because the ventilation of the rooms would be effected by the passage of the foul air into this chamber thus warmed, all unpleasant or injurious draughts would be obviated. Again, if the bricks now wasted on ornamental but too often smoky chimneys should be used in forming a chamber for the smoke outside the cottage, such as I have referred to above, either a drying shed might be formed or a hotbed; and by means of it "Hothouses for the Million" might in towns and the suburbs of towns become a reality. The advantages of two levels, instead of upstair rooms, especially in times of sickness, will easily be seen; and the objection sometimes made to bedrooms on the ground floor, because of their liability to dampness, is obviated by the drying effect of the basement.

An objection may probably be made to the extent of the roof in the case of two levels. But there are things to set against this; amongst them the larger supply of good water thus afforded, enough if properly provisioned for all the purposes of any family. Thus far, however, there is in this kind of cottage only a more economical arrangement—though this of itself is no trifling advantage. But I will now in the last place show how, while in addition rendered more healthy than any cottage can be with the present sewage arrangements, such a cottage can, together with its garden, be made profitable to the cottager to the extent I have stated. Everything like a cesspool or a foul ditch or drain would be obviated by the adoption of my "earth system for the removal of excrementitious and other foul matter."† At the end of the passage between the two pairs of rooms there would be an "earth closet" within the building, and a similar one outside. Everything offensive is in these closets deodorised, an advantage is gained in their use, which in times of sickness is scarcely to be estimated; the whole of the house manure removed to the garden with perfect ease and scarcely any labour, and the value of manure thus preserved is not less than 1*l*. per head per annum. Let this be added to the fowls dung and the sink water, and the produce it may be of the pigstie, and the cottage garden may be manured as highly I think as any garden in the neighbourhood of London. The form and arrangement of cottages on this plan and system may of course be modified and greatly improved by men of more practical knowledge than I possess. But of the correctness and truth of the principles which I have here laid down, there is not in my own mind a shadow of doubt. Any general extension of cottage improvement lies I am certain in this direction. May many soon perceive it and be led to pursue it! *Henry Moule, Dorchester.*

* These ranges are manufactured by McDowall, Steven, & Co., Glasgow, and by Taylor & Son, High East Street, Dorchester.

† See Journal of Royal Agricultural Society, March 1863. Journal of Society of Arts, May 1863. *Mark Lane Express* for the last week in May, 1864.

Home Correspondence.

Hints on Feeding.—In the management of our live stock, notwithstanding that the chemists have by analysis given us the exact component parts of the various articles of diet from which beef, mutton, and pork are produced, and although we have everywhere, from the practical business man to the amateur, live stock kept, yet so little attention has been paid to the times of feeding, and the quantity and variety of food given, that little definite knowledge has been ascertained as to the economical results obtained in the increase of animals fed at particular times, and with different quantities and sorts of provender. As we before observed, great trouble has been gone to to know what food contains the most fat and flesh-forming principles. Furthermore, all stock keepers are aware of the value and importance of carefully bred animals, still the best method of administering this food, so as to get the maximum of increase at the least cost, is a subject full of interest and practical value. We hear sometimes of as much as 28 lbs. of oil-cake being consumed per diem by one beast, and one feeder gives 2 pecks of meal per day, whilst another of equally extensive experience gives less than half this quantity; another gives roots *ad libitum*, but one feeds without any, and depends upon hay and meal. With sheep we know of cases where a quarter of a pint of corn is daily used to each, or 2 oz. of cake. On the next farm the quantities used are perhaps two or three times as much. In the one case the owner argues that a smaller quantity given over a greater length of time yields the best results, and the one who uses the larger quantity is of the opposite opinion. In regard to the using of large quantities of food at once we may mention a circumstance that came under our observation some time ago. Our surprise was excited by the well-doing of some little pigs that were running about the yard; for although they had very little food given to them they were nearly fit to kill for pork. At first we began to account for the improvement from the breed of pigs; but the question was soon cleared up, by noticing the fact that these pigs ate a good deal of the droppings from some show beasts! The beasts were being fed with any quantity of meal and cake that they could be induced to eat, and a large quantity no doubt passed through their stomachs unappropriated—and hence the rapid growth of the pigs. On the other hand, it very often occurs that those who give the minimum quantity of food for fattening are disappointed in not getting their animals fit for the market at the expected time; and thus the food has not exercised its greatest force, and is consequently to some extent wasted. Now it follows that in either case food is consumed uselessly, and it is the absence of data of the proper quantity that can be given to advantage that we would hope to provoke some discussion upon; for it is manifest that food passing through the bodies of animals unassimilated must be wasted; and on the contrary food given in too small quantities to exert the full power it is intended to effect, is not economical. We could wish that the subject would be taken up by some scientific man who would experiment upon the several quantities used, and accurately report thereon. Space does not now allow, or we would say a few words upon the attendance on fattening animals and the times of feeding. *Scrutator.*

The Present Relationship of Master and Servant.—I feel surprised at Mr. Dunlop, M.P., attempting to frame an enactment which would, were it adopted as law, do a great deal of injury, and cause much confusion. A solicitor in Durse told some ploughmen who consulted him respecting their master's tyrannical conduct, that the law authorises farmers in Scotland to compel the ploughmen, if necessary, to plough 10 hours a day, or work 10 hours in the field at any kind of work which requires horse-power. But in the event of an arbitrary spirit arising between employers and employed, the law authorises a ploughman, in the event of his master compelling him to work ten hours in the field, to leave the horses at the expiration of ten hours' work, which would compel the farmer to take the horses to and from the field, and also groom and feed them. Again, in the event of a ploughman being absent from work through illness, the laws already enacted compel, if necessary, a farmer to pay a ploughman engaged for six months his wages in full in cases of illness which do not exceed six weeks in the six months, and a ploughman engaged for a year can claim his wages in full in cases of illness which do not exceed 12 weeks in the twelvemonth. The present laws only require to be enforced, when necessary, to protect both masters and men respecting the number of hours of labour during a day, and the deducting of wages in cases of illness. What more protection can be necessary for ploughmen on extensive arable farms? I know of a farmer who paid a hind's wages for 12 of the 13 consecutive weeks that yearly servant was off work one twelvemonth. That gentleman farmer was a Writer to the Signet before he became the occupier of a farm; so it is likely he is well acquainted with the law. He told the hind that he was legally bound to pay him for 12 of the 13 weeks. I know of a female bondager who went home to her father's house when unwell. She expected she was entitled to the whole of her wages. The lawyer she consulted asked her if she went home of her own accord, or if her master requested her to go home. He told her that the hind was not legally bound to pay the wages during her absence at her father's, owing to her going home of her own accord; but she could have claimed them had she resided with her hind-master, or been ordered by him to go home. Approving of cottage ploughmen being paid part of their wages in kind, and it being well known that every farmer in the United Kingdom ought to have his regular staff of labourers located in houses adjacent to the farm-steadings, I need not occupy space in arguing to prove that twelve months for married men and six months for single ploughmen are short enough engagements. Suffice it to refer to the well known fact that each of a great many ploughmen has a cow of his own fed on the farm where he is employed and resides. Very few hinds in the south-east of Scotland receive more than 5*l*. of cash in a twelvemonth. Some of the gentlemen farmers in East Lothian pay each hind only 1*l*. of cash in the twelvemonth. Suppose, by way of illustration, a dispute to arise between a master and servant. It is the general rule in the bondager district on Tweedside, for the farmers to pay each hind the half of his hind wages in advance, with the exception of the Oatmeal, which he gets at intervals. Each hind gets 20 imperial stones of Oatmeal, 9 or 12 bushels of Barley, 3 bushels of Peas, and one cartload of coals, at the Whitsuntide term. Hinds are paid these items before they prove themselves suitable workmen. Each hind has from 1000 to 1800 yards of Potato drills planted with his own seed, and a cow and a pig. I am describing a system I am pleased with, barring the bondager contract, to show that a year is a short enough engagement. Again, the present law authorises farmers to demand the services of their servants at any hour from Monday morning till Saturday night during harvest. A farm steward in East Lothian discharged a hind about a twelvemonth ago for refusing to take the horses to the smithy in the evening after the hind had finished his day's work of 10 hours! But the sheriff decided in favour of the hind. Had it been the lot of Mr. Dunlop, M.P., to be a ploughman, he would have been as firmly bound to the farm as a soldier is to the Queen. He would have to be in the stable at 6 A.M. in winter, and work out of doors from daylight till dark, with the exception of an hour at midday. Having to attend the stable at half-past 7, or 8 P.M., where he would have to remain nearly an hour, from about 9 P.M. till 6 A.M. during the week, and the Sabbath is all the leisure time Mr. Dunlop would have for courting his future wife. I beg to suggest that members of Parliament get copies of Dr. Strachan's "Addresses on Illegitimacy." Acts of Parliament will not be a remedy for the deplorable results of masters and mistresses not recognising courtship as a necessary part of our social system. *W., Edinburgh.*

Societies.

BATH AND WEST OF ENGLAND: BRISTOL.

THE very best of all the shows and meetings of a merely provincial society that has ever happened within our knowledge has been held during the past week at Bristol. A show of implements corresponding to at least two-thirds in mere bulk of a fair exhibition of the machine manufacture as now given at the meetings of the national society, and a first-rate show of live stock and poultry, are here supplemented by a horticultural exhibition, one of upholstery and works of usefulness, and one of pictures, lace, and china, and works of ornament and taste. The performances of a military band, and the occasional exhibition of the horses which are put through their paces in the ring, are other features of the meeting, and the whole is arranged with that taste and skill, and superintended with that hearty energy and good will which seem inseparable from the proceedings of the Bath Society.

We are not about to rediscuss the prize system, or to ascertain what share it may have had in promoting the progress in the machine manufacture which the Bristol Show of 1864 indicates when compared with that of 1843. In all probability this share has been very large, and the absence of one or two great firms, in particular those of Mr. Fowler and Messrs. Burgess & Key, seems to indicate that it may still be needed to stimulate the rivalry of the manufacturer, wherever machinery for a particular purpose has only lately been invented and applied. The fulness and merit of the exhibition generally however prove that it is not now needed for the great mass of agricultural machinery in general, in order to the insurance of a first rate show of implements. This we have had on Durdham Down, and in fields near Horfield during the past week. The solitary locomotive engine shown in 1843 by Messrs. Ransome, which travelled out to Frenchay and there came to grief by running off the road, is here represented by Mr. Aveling's well known road engine drawing a train of waggons, and by a large number of portable engines driving threshing machines, and exhibited by all the leading makers. The mowing and reaping machines of Mr. Cranston, Messrs. Hornsby, and many others, and the steam cultivators of Messrs.

Howard are entirely new classes of machines, which have arisen during the interval. As regards the less important novelties of 1843 which have since developed, mention may be made of the chain harrow, then represented by a flexible coat of mail, sprinkled with discs, of which Mr. Smith, of Deanston, then predicted the success, and which, in its present shape of an interlaced surface of angular rings, is now in very general use.

The implements shown at work, if we exclude those in motion in the yard, were confined for the most part to mowers, hay-tedders, and rakes. Howard's steam cultivator was very successfully in operation in a field of poor stiff clay, near Filton, known to us for the last 20 years as a remarkably hard, intractable bit of land, where it shattered and moved to a depth of 6 or 8 inches the hard clay that would have beaten a double or triple team of horses. And near this are the Grass fields, and one of Rye, on which the reapers and mowers were employed.

Green Rye was very successfully cut and laid in swathe or sheaf by some half-dozen reapers. The success of the hand-sheaf reapers was the chief feature of the show. Cuthbert's work and that of Hogg, near Exeter, and Page, of Devonshire, with their tilting apparatus was very good. Mr. Hornsby brought out a remarkably light swathe reaper and a very light sheaf reaper, both of which did good work. The extreme weight of machines of this class is an evil needing to be abated. The roughness of surface in agriculture makes heavy tools more liable to breakage than light ones; and the extreme lightness of Mr. Hornsby's reaper is not likely to prove inconsistent with sufficient strength. This firm has also entered the lists with a new mowing machine, which made very fair work on a poor light crop, which was on that account the more difficult to mow; but the best work in the field was that done by Wood's mower under the management of Mr. Cranston. A novelty in hay tedders was exhibited by that gentleman as an American invention. Instead of a barrel carrying all the pikes or forks by which the Grass is lifted, thrown and scattered—where the labour of moving the whole is constantly incurred for the sake of every separate fork in succession, these forks are in this instance moved separately. Eight light forks thus keep up a kicking action of very much the same kind as is exhibited by the heels of a trotting horse, which are here kept going at apparently the rate of say 12 miles an hour, while the machine which carries them moves forward at the rate of only three or four miles an hour. There is thus a rapid succession of kicks at the rate of about eight or nine miles an hour over the surface of the ground, which toss whatever is lying on it high and far. The whole is light, worked by a pony, and covers a greater width than the ordinary tedder. Its action is very amusingly effective, and attracted a great deal of attention in the trial field.

We have no prize list to announce. The Society does not award prizes. This, however, has not hindered the exhibitors from taking every opportunity which the Society has afforded for the exhibition of their machines—in competition for the great prize of commercial success which was "on offer" in the field and yard; many were looking on who had come to choose reapers and mowers for the coming harvest—confident, as all good practical men will always be, in the superiority of trusting to their own eyes and judgment rather than to those of the official judges.

We must not omit mention of the large collection of instruments and tools, of household and domestic use, in the yard. Among them is Haucock's butter squeezer, by which, without handling the butter, it is forced through small holes into clean water, and thus effectually both washed and hardened.

THE LIVE STOCK classes of most of the breeds of Cattle are remarkably well filled. About 40 Devons compete in six classes, of which the old bull and the two older female classes are remarkably fine. The prizes are given in the list below. The decisions of the judges were not always approved, and, in particular, the award in the case of Class II., the two-year-old bulls, is open to dispute; there were thicker, better grown animals in the class than that to which the 2d prize was given. The show of cows and older heifers was remarkably fine and good, and those classes were very deservedly generally commended. The 1st prize in the young heifer class is easily won by Major-General Hood's heifer the *Rose of Denmark*. The Shorthorns numbered 57, eight old bulls, seven under three-years-old and 13 yearlings, a remarkably good class; 10 cows, 8 heifers in calf, a first-rate class; and 11 yearling heifers. It is worthy of note, that excepting several well-known names, Hewer, Garne, Peel, Stratton, and Woodward, many of the prizes go to new men and into new districts. Messrs. Hosken, of Hayle, take the 1st prize in old bulls, with a rather coarse-headed red bull, which was removed from its stall on the second day owing to illness. Close beside it stood the noble second prize white bull HENGIST, of pure Booth blood, which most men would prefer; and beyond it again the grand old bull, now not looking in show condition, LORD OF THE HAREM, lately purchased by Mr. Woodward, which has never had the rank assigned to him when he has deserved. A very large and good class of young bulls brought Mr. Fawcett, of St. Alban's, into the first rank; his white bull of pure Booth blood taking the 1st prize, Messrs. Stratton and Hewer standing 2d and 3d. The show of cows and heifers is remarkably good; Mr. Sharpe's beautifully even white cow, wonderfully good at both ends, especially forwards, and with well arched rib, takes the 1st prize; Mr. Bowley's fine roan being 2d; and Mr. Stratton's large and long *Lady Hinda*, 3d. In the first rate class of older heifers, Mr. Stratton is 1st, Mr. Logan, of Newport, 2d and 3d, and there is not an inferior animal competing with them. In the younger Heifer class, Mr. Logan, whose sale takes place on the 7th of July, is 1st, with *Charlotte 4th*. Messrs. Garne and Stratton being 2d and 3d.

The Hereford classes are unusually well filled. There has rarely been better competition for the prizes of any society. The awards of Devon judges are not, however, always satisfactory, and in some classes, both male and female, the 1st and 2d animals should have changed places. Messrs. Arkwright, Baldwin, Duckham, Taylor occupy the first rank. Mr. Wigmore's dark red two-years-old bull, first in his class, handles too hard; and if Mr. Baldwin's, on the other hand, is rather soft, he is nevertheless better in this, as well as other respects, than the animal placed above him. Mr. Duckham's young bull, out of his celebrated cow *Carlisle*, which was 1st in her class at the Royal Agricultural Society's shows in three successive years, well deserves his honours. The female classes are remarkably good. Upwards of 40 Herefords are shown.

The Sheep classes include no less than 160 entries, and there is a fair show of Leicesters, Cotswolds, and Downs; with good classes of West Country Downs, Dorsets, and Mountain sheep, the especial breeds of the country. The prize list is given below.

About 80 entries of Pigs include a capital exhibition of Berkshires, the best of all the bacon breeds. Messrs. Hewer, Joyce, Bailey, with the Royal Agricultural College, compete successfully. One of the best in the yard is Mr. Stewart's black Berkshire sow, 3 months old, a model of perfection.

The Horse show includes 70 entries, about one half of them for agricultural purposes. The Duke of Beaufort's dark brown Clydesdale stallion SIR ROBERT is the finest of all the classes—a remarkably powerful, well-made horse, with good and vigorous action. Mr. Miles thorough-bred stallion ROUBLE may be mentioned as most worthy of note in the other classes. There is hardly any competition in Ponies. We conclude with the following list of the Judges' awards.

STOCK.—DEVONS.

CLASS 1. Bulls above 3 years.—1st, Mr. S. P. Newberry, Honiton; 2d, Lord Clinton, Beaford. Highly commended: Mr John Sobey, Trewolland, Liskeard.

CLASS 2. Bulls not exceeding 3 years.—1st, Mr. J. A. Smith, Bradford Peverell, Dorchester; 2d, Mr. W. Taylor, East Harptree. Highly commended: Mr. W. Harvey, Trelissick, Hayle.

CLASS 3. Bulls not exceeding 2 years.—1st, Mr. J. W. Buller, M.P., Downes, Crediton; 2d, Mr. J. Bodley, Crediton; 3d, Mr. J. Bodley.

CLASS 4. Cows in calf, or in milk.—1st, Mr. J. Merson, Brinsworthy; 2d, Mr. Walter Farthing, Stowey Court; 3d, Mr. J. A. Smith, Bradford Peverell. The judges commended the whole of this class.

CLASS 5. Heifers in calf or in milk, not exceeding 3 years.—Mr. J. A. Smith, Bradford Peverell; 2d, Mr. J. W. Buller, M.P., Downes; 3d, Mr. W. Harvey, Trelissick. Highly commended: Mr. C. Hambro, Milton Abbey, Blandford. This class was generally commended by the judges.

CLASS 6. Heifers not exceeding 2 years.—1st, Major-General the Hon. A. N. Hood, Cumberland Lodge, Windsor; 2d, Mr. W. Harvey, Trelissick; 3d, Mr. J. W. Buller, M.P. Highly commended: Mr. J. A. Smith, Bradford Peverell.

SHORT-HORNS.

CLASS 7. Bulls above three years.—1st, Messrs. W. Hosken and Son, Hayle; 2d, Mr. Jonathan Peel, Knowlmere, Clitheroe. Commended: Mr. William Woodward, Ashchurch.

CLASS 8. Bulls not exceeding three years.—1st, Mr. W. Woodward, Northway House; 2d, Mr Jonathan Peel, Knowlmere Manor.

CLASS 9. Bulls not exceeding two years.—1st, Mr. E. A. Fawcett, Childwick Hall, St. Alban's; 2d, Mr. R. Stratton, Wall's Court, Stapleton; 3d, Mr. W. Hewer, Sevenhampton. Highly Commended: Mr. G. Garne, Churchill Heath.

CLASS 10. Cows in calf or in milk.—1st, Mr. R. Sharpe, Courtlands, East Grinstead; 2d, Mr. E. Bowly, Siddington, Cirencester; 3d, Mr. R. Stratton, Wall's Court. Commended: Sir W. Miles, Bart., Leigh Court.

CLASS 11. Heifers in calf or in milk, not exceeding three years.—1st, Mr. R. Stratton; 2d, Mr. J. Logan, Maindee House, Newport; 3d, ditto. Highly Commended: Mr. E. Bowly. Commended: Mr. E. Alderson Fawcett, Childwick Hall.

CLASS 12. Heifers not exceeding two years.—1st. Mr. J. Logan, Maindee House; 2d, Mr. G. Garne, Churchill Heath; 3d. Mr. R. Stratton. Highly Commended: Mr. R. Sharpe, East Grinstead. Commended: Mr. J. Logan, Maindee House.

HEREFORDS.

CLASS 13. Bulls above 3 years.—1st, Mr. J. H. Arkwright, Hampton Court, Leominster; 2d, Mr. J. A. Hollings, How Caple, Ross.

CLASS 14. Bulls not exceeding 3 years.—1st, Mr. J. Wigmore, Weston-under-Ponyard, Ross; 2d, Mr. J. Baldwin, Luddington, Stratford-on-Avon. Commended, Mr. Henry Higgins, Woolaston Grange, Lydney.

CLASS 15. Bulls not exceeding 2 years.—1st, Mr. T. Duckham, Baysham Court, Ross; 2d, Mr. W. Taylor, Showle Court, Ledbury; 3d, Mr. W. Taylor.

CLASS 16. Cow in calf or in milk.—1st, Mr. John Baldwin, Luddington; 2d, Mr. H. Higgins, Woolaston Grange, Lydney; 3d, Mr. T. Thomas, St. Hilary, Cowbridge. Highly Commended: Mr. H. Higgins. This class was Commended generally.

CLASS 17. Heifers in calf or in milk, not exceeding 3 years—1st, Mr. James Taylor, Stretford Court, Leominster; 2d, Mr. John Baldwin, Luddington; 3d, Mr. T. Taylor, Stretford Court.

CLASS 18. Heifers not exceeding two years.—1st, Mr. John Baldwin; 2d, Major-General the Hon. A. N. Hood; 3d, Mr. Andrew Rouse, Boughton Knight, Downton Castle.

SHEEP.—LEICESTERS.

CLASS 19. Yearling Rams.—1st, Mr. Joseph Gould, Poltimore, Exeter; 2d, Mr. Thomas Tremain, Trevarthian, Newlyn, Ladoc. Highly Commended: Mr. Tremain and Mr. Joseph Gould.

CLASS 20. Rams of any other age.—1st, Mr. J. Tremain, Trevarthian, Newlyn, Ladock; 2d, Mr. Thomas Potter, Thorverton, Cullompton.

CLASS 21. Pens of 5 two-teeth Ewes.—1st, Mr. Joseph Gould, Poltimore; 2d, Mr. James Buller, M.P., Crediton.

COTSWOLD.

CLASS 22. Yearling Rams.—1st, Mr. John Gillett, Fawler, Charlbury; 2d, Mr. Edward Handy, Sierford, Cheltenham.

CLASS 23. Rams of any age.—1st, Mr. Edward Handy.

CLASS 24. Pens of 5 two-teeth Ewes.—1st, Mr. John Wells, Hampnett, Northleach; 2d, Mr. Thos. Beale Browne, Salperton Park. Commended: Mr. John Wigmore, Weston-under-Penyard, Ross.

LONG-WOOLLED.

CLASS 25. Yearling Rams.—2d, Mr. George Kingdon Radmore, Pitt Farm, Thorverton.

CLASS 26. Rams of any other age.—1st, Mr. George Radmore; 2d, Mr. George Radmore.

CLASS 27. Pens of five two-teeth Ewes.—1st, Mr. John Wigmore, Weston-under-Penyard, Ross; 2d, Mr. John William Miles, Kingsweston.

SOUTHDOWNS.

CLASS 28. Yearling Rams.—1st, the Earl of Radnor, Coleshill, Highworth; 2d, Mr. R. N. Grenville, Butleigh Court, Glastonbury.

CLASS 29. Rams of any other age.—1st, Mr. J. Farquharson, Langton House, Blandford; 2d, the Earl of Radnor.

CLASS 30. Pens of five two-teeth Ewes.—1st, the Earl of Radnor; 2d, his Grace the Duke of Beaufort.

ALL OTHER DOWNS.

CLASS 31. Yearling Rams.—1st, Mr. James Rawlence, Bulbridge, Wilton, Salisbury.

CLASS 32. Rams of any other age.—1st, Mr. James Rawlence; 2d, Mr. Edmund Olding, Amesbury.

CLASS 33. Pens of five two-teeth Ewes.—1st, Mr. James Rawlence; 2d, Mr. James Rawlence.

SOMERSET AND DORSET HORNS.

CLASS 34. Yearling Rams.—1st, Mr. A. J. Pitfield, Eype, Bridport; 2d, Mr. Thomas Danger, Huntstile, Bridgewater.

CLASS 35. Rams of any other age.—1st, Mr. Thomas Danger.

CLASS 36. Pens of five two-teeth Ewes.—1st, Mr. Thomas Danger, Huntstile, Bridgwater; 2d, Mr. A. J. Pitfield, Eype, Bridport.

MOUNTAIN SHEEP.

CLASS 37. Rams of any age.—1st, Mr. William Taylor, Harptree Court; 2d, Mr. Robert G. Paramore, Bratton Court, Minehead.

CLASS 38. Pens of five Ewes of any age.—1st, Mr. Jonathan Peel, Knowlmere Manor; 2d, Sir Thos. D. Acland, Bart., Holnicote.

HORSES.—FOR AGRICULTURAL PURPOSES.

CLASS 39. Stallions not exceeding eight years.—1st, Mr. Elias Potter, Chedzoy, Bridgwater; 2d, Mr. Robert Jacob, Baltonsborough, Glastonbury. Highly commended: Mr. James Shepherd, Stogursey, Bridgwater.

CLASS 40. Mares and Foals, or in foal.—1st, Mr. Henry Hitchcock, Chilterne, Allsaints, Heytesbury; 2d, Mr. William Taylor, Harptree Court.

CLASS 41. Colts or Geldings, foaled in 1862.—1st, Mr. John Feaver, Stoney Littleton, Bath.

CLASS 42. Fillies foaled in 1862.—1st, Mr. Joseph Pyke, Cherhill, Calne.

CLASS 43. Thorough-bred Stallions.—1st, Mr. John William Miles, Kingsweston.

CLASS 44. Mares and Foals, or in Foal, for Hunters.—1st, Mr. Robert Cozens, Pilton, Shepton Mallet; 2d, Mr. Clement Champeney, Theab, Wells.

CLASS 45. Mares or Geldings foaled in 1860.—1st, Captain J. Simpson Ballard, The Verlands, Cowbridge; 2d, Mr. William Hewer, Sevenhampton.

CLASS 46. Colts foaled in 1863.—1st, Mr. Charles H. Williams, Roath Court, Cardiff. Commended; Mr. William Gapper, Duddlestone, Taunton.

CLASS 47. Fillies foaled in 1863.—No prize awarded.

PONIES.

CLASS 49. Stallion Ponies of any breed, not exceeding 13 hands high.—1st, Mr. Edward Lloyd, Neath, Glamorgan.

CLASS 50. Mare Ponies of any breed, not exceeding 13 hands high.—1st, Mr. Thomas Baker, Lynton, Barnstaple.

PIGS—LARGE BREED.

CLASS 51. Boars not exceeding 2 years.—1st, Mr. William Bradley Wainman, Carhead; 2d, Mr. Heber Humfrey, Kingstone Farm, Shrivenham.

CLASS 52. Boars not exceeding one year.—1st, Mr. W. Yells, jun., Highworth, Wilts; 2d, Mr. Arthur Stewart, Saint Bridge, Gloucester.

CLASS 53. Breeding Sows in Farrow, or that have Farrowed.—1st, Mr. Wm. Hewer, Sevenhampton, Wilts; 2d, The Royal Agricultural College, Cirencester. Highly Commended: Mr. Arthur Stewart, Saint Bridge. Commended: The Royal Agricultural College.

CLASS 54. Pens of two Breeding Sows, not exceeding 9 months.—1st, Mr. Wm. Hewer, Sevenhampton; 2d, Rev. Henry G. Bailey, Swindon. Commended: Mr. Wm. Hewer. The whole of this Class was highly commended.

SMALL BREED.

CLASS 55. Boars not exceeding 2 years.—1st, Sir Massey Lopes, Bart., M.P., Maristow, Devon; 2d, Mr. William Taylor, Harptree Court.

CLASS 56. Boars not exceeding 1 year.—Sir Massey Lopes, Bart., M.P.; 2d, Mr. Edmund Coles, Stone Farm, Yeovil. Highly Commended: Mr. George Tucker, Ipplepen, Newton Abbot. Commended: Mr. W. Bradley Wainman, Carhead.

CLASS 57. Breeding Sows in farrow, or that have farrowed.—1st, Mr. W. Bradley Wainman, Carhead; 2d, Mr. Edmund Coles, Stone Farm, Yeovil. Highly Commended: Mr. Robert Fookes, Milton Abbas, Blandford. Commended: Mr. Edmund Coles, Stone Farm, Yeovil; Sir Massey Lopes, Bart., M.P.

CLASS 58. Pen of two Breeding Sows, not exceeding 9 months.—Sir Massey Lopes, Bart. Highly Commended: Messrs. T. W. & C. Hardwick, Lower Court, Long Ashton. Commended: Mr. G. Kingdom Radmore, Thorverton.

EXTRA STOCK.—CATTLE.

1st, 2*l*., Mr. Robert Rendle, Gatel Farm, Guernsey, a cream-colour Jersey heifer in calf.

SHEEP.

1st, 1*l*., Mr. A. J. Pitfield, Bridport, Dorset, a pen of three Dorset horn ewes.

HORSES.

A prize to Mr. A. Emmrett, Tudor Lodge, Bristol, for a roan mountain pony.

PIGS.

A prize of 1*l*. to Mr. A. Stewart, Saint Bridge, Gloucester, for a black Berkshire sow.

SUPPLEMENTARY PRIZES OFFERED FOR STOCK

By the Local Committee and the Society of Merchant of the City of Bristol.

CLASS 59, Bull, Cow, and Offspring, the Calf not exceeding 6 months of age.—1st, Mr. Richard Stratton, Wall's Court.

CLASS 60. Bull Calf above 5 months and under 12 months old.—1st, Mr. G. Hitchman, Long Ashton, Bristol; 2d, Mr. Wm. Perry, Oswald, Cholstrey.

CLASS 61. Heifer Calf above 5 months and under 12 months

old.—1st, Mr. R. Stratton, Wall's Court, Stapleton; 2d, Mr. Walter Farthing, Stowey Court, a red heifer calf.

SHEEP.—SHROPSHIRE DOWNS.

CLASS 62. Yearling Rams.—1st, Lady Willoughby de Broke, Compton Verney, Warwick.

CLASS 63. Rams of any age.—1st, Mr. P. W. Bowen, Shrawardine Castle, Shrewsbury.

CLASS 64. Pens of Five two-teeth Ewes.—1st, Mr. P. W. Bowen, Shrawardine Castle.

LONG-WOOL COUPLES.

CLASS 65. Pens of Ten Long-wool Couples.—1st, Mr. John Wigmore, Weston-under-Penyard; 2d, Mr. George Limbrick, Horton, Old Sodbury.

SHORT-WOOL COUPLES.

CLASS 66. Pens of Ten Short-wool Couples.—Mr. Ralph Neville Grenville, Rutleigh, Glastonbury.

HORSES.—FOR AGRICULTURAL PURPOSES.

CLASS 67. Stallions, not of the Suffolk breed.—His Grace the Duke of Beaufort, Badminton, Chippenham, Wiltshire.

The competition for prizes offered for shoeing was unusually intense; no fewer than 26 entering the lists, and the work thus occupying the whole day, and being witnessed by thousands of spectators. The winner took 29 minutes to make a near fore-shoe, point the nails, fit the shoe, and put it on. The winner of the 2d prize did his work in less time by two minutes, but the workmanship was inferior. Glover was 39 minutes in completing the work. The following is the prize list:—

1st, 3 guineas, E. Warry, Shepton Beauchamp; 2d, 2 guineas, F. Dunkerton, Shepton Mallett; 3d, 1 guinea, H. J. Glover, Shepton Beauchamp, an apprentice to Mr. Warry, who took the first prize.

We must not forget to add that one side of the yard was worthily covered by a row of shedding, under which a goodly show of seeds and agricultural produce was arranged by Messrs. Carter, Foster, Sutton, and Wheeler; all well-known firms in the seed trade. The stands of Messrs. Sutton and of Messrs. Wheeler were especially illustrative of the enterprise and resources of the exhibitors.

At the annual meeting in the Council tent on Wednesday, Lord Taunton was appointed President; a number of Herefordshire gentlemen were elected on the Council; a proposal to extend the district of the Society was negatived, it being understood that the Society was nevertheless willing to accept invitations from towns in the West of England outside of it. And in accordance with this its annual meeting next year is to be in Hereford.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday ..	June 10	29.91	67	60	N.W.	1	2	71	48	87	41	0.15
Saturday ..	11	29.84	67	60	S.W.	2	5	69	52	84	47	0.05
Sunday ..	12	29.77	59	55	S.	3	10	66	50	78	45	..
Monday ..	13	29.69	61	56	S.W.	0	10	64	46	81	39	..
Tuesday ..	14	29.56	58	55	S.W.	2	10	67	48	83	48	..
Wednesday ..	15	29.60	62	58	S.W.	1	10	68	51	74	44	0.05
Thursday ..	16	30.86	66	61	W.	1	5	68	49	70	43	0.00

Notices to Correspondents.

IRRIGATION: *Subscriber.* You speak of "Wheat" land—of course irrigation is only adapted for Grass lands, and it is of service only when there is a large body of water; "a gallon a minute" is for irrigation purposes altogether useless. Will you state the case more precisely?

NEW SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.

THE HYDROPULT is invaluable for use in the GARDEN for WATERING BEDS, SPRINKLING PLANTS, DROWNING OUT INSECTS, CLEANSING TREES FROM SMUTS, DRESSING with LIQUID MANURE, ETC. ETC.

THE HYDROPULT is desirable in every HOUSEHOLD for WASHING WINDOWS, WETTING SIDEWALKS, SPRINKLING STREETS, WASHING CARRIAGES, EMPTYING CISTERNS, FILLING BARRELS, A SPRAY BATH, ETC. ETC.

THE HYDROPULT,

PRICE: WITH BRASS CYLINDERS AND MALLEABLE IRON STIRRUP, JAPANNED IN OAK COLOUR, 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanised Wire Strainer, Rose, and Small Jet.
Complete as above, with Copper Stirrup, TWO GUINEAS.

Weighs but 8 lb.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.
It will draw water horizontally, if necessary, through 300 feet of Suction Hose, and force it through Delivery Hose, to an altitude of 100 feet.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

In proof of the real utility and efficiency of the HYDROPULT as a GARDEN IMPLEMENT, I beg to call the attention of the public to the following unsolicited Editorials from gentlemen, whose testimony must have weight with the readers of the *Gardeners' Chronicle*:—

EDITORIAL, *written by* ROBERT HOGG, LL.D., F.L.S.

THE HYDROPULT.—The great secret of successful indoor gardening consists in the free and judicious use of the syringe. A greenhouse or conservatory that does not enjoy this luxury becomes a miserable lazar house of vegetable incurables. Vermin and filth hold unbounded sway, and people become disgusted with their own want of success. Well do we recollect the former days of plant culture, the days of "collections," when the use of the syringe was yet limited or unknown. What a time for red spider, scale, and greenfly! What fumigations and consumption of tobacco and tobacco paper, washings with tobacco water, and all sort of remedies were resorted to! We regard the introduction of the free use of the syringe as one of the events in modern gardening. To this is due the success of orchard house management, Vine management, and Plant management, but the old syringe with its slow suck and squirt, is now as much out of date in modern gardening as an old stage waggon in modern locomotion. Many are the improvements and complications of the old simple syringe. We have tried several of them, but for ease in working and efficiency in result, we have not yet met with anything to equal the Hydropult, sent us by Mr. BUTTON. It is powerful in operation, and so easy and comfortable to work, that one never gets fatigued. With such an instrument plants may be kept in perfect health, and quite free from insects and dirt. We first tried it on a few Geraniums in our conservatory, which were smothered with greenfly during our temporary absence of ten days, but on our return a stout discharge from the Hydropult sent them clean off across some unknown bourne, whence they have never yet returned.

EDITORIAL, *written by the* REV. HENRY H. DOMBRAIN, A.B.

THE HYDROPULT.—When we formerly noticed this instrument, we did so from merely seeing it at the Proprietor's; since then we have had an opportunity of testing it personally, and can bear testimony to the excellence of the invention. The force with which it throws a stream of water is almost incredible; while for syringing a greenhouse, a gentle shower, as fine as that from a hand syringe, with considerably more effect, can be easily given. We have a gardener, quite of the old-fashioned school, who does not generally fall in love with new-fangled notions, but he is perfectly enchanted with the saving of labour and time that the Hydropult will be to him.

EDITORIAL, *written by* SHIRLEY HIBBERD, ESQ., F.R.H.S.

THE HYDROPULT.—This is an invention introduced in a most spirited manner by Mr. C. P. BUTTON. It is at once a fire engine and a garden engine, is always ready for use at a moment's notice, is neat and portable, weighing only 8 lbs., and can be worked by a boy of moderate strength for some hours in succession without fatigue, the mechanical power employed being economised by combining the action of the hand and the resistance to the foot, between which the instrument is placed and used, as a double action pump. From the sole to the handle the Hydropult measures 24 inches. The two brass cylinders measure 12 inches in length, and 3¼ inches in breadth. At the top of these cylinders India rubber tubing is attached, on one side to feed, on the other to discharge the water. It will perhaps surprise the reader to be told that this little contrivance, which is pretty as a toy, and can be carried under the arm as easily as a trumpet, will throw from seven to eight gallons of water per minute a distance of 50 feet. But it will do it, as we know from having tried it, finding the experiment an agreeable exercise, and of special service in washing down a stuccoed wall, which it accomplished quite as well as if we had sent for the parish engine. Gardeners will not need to be told the value of a portable force pump of this simple kind. It can be used to produce a powerful stream to extinguish a fire, or a gentle shower to syringe a whole houseful of plants, without the necessity of moving a single step from the position most convenient for a supply of water. Wherever a pump or syringe is needed, the Hydropult can be brought into use, to remove water from a cellar or a boat, to cleanse a cistern, wash a pavement, or drench the foliage of trees loaded with soot, or annihilate at one fell swoop the whole insect population of a plantation of Roses. But we will not enlarge upon its merits, they are obvious, and having a Hydropult in use we can say that it will soon pay for its cost in a garden, besides being always at hand in case of an emergency of any kind which may require an immediate removal or discharge of water.

THE GREENHOUSE and CONSERVATORY HYDROPULT.

A NEW AND BEAUTIFUL IMPLEMENT,

Weighing scarcely 3 lbs.,

AND SPECIALLY ADAPTED FOR USE IN THE GREENHOUSE AND CONSERVATORY.

Price 35s.,

Complete with Brass Cylinders and Copper Stirrup, 2½ feet Suction and 3 feet Delivery Hose, Strainer, Rose, Jet, and Fan.

This NEW IMPLEMENT must necessarily supersede SYRINGES and other devices of the kind, for it will be found much more effective in its operation.

A LADY CAN WORK IT FOR HOURS WITHOUT FATIGUE.

HYDROPULT SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.
WAREHOUSE and OFFICES, 27, LEADENHALL STREET, LONDON, E.C.
CHARLES POMEROY BUTTON, PROPRIETOR.

NEW GRAPE, ROYAL VINEYARD.

TO BE SENT OUT IN SEPTEMBER NEXT.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Feels great pleasure in being able to introduce this important acquisition. It was raised several years since, and wa fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years.

B. S. W., to meet an extensive demand, has prepared a large Stock, which will be in excellent condition, and ready for distribution in September. Early orders are respectfully solicited. A List of those who have favoured him with orders will be published shortly.

PRICES:

Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

Dr. Hogg's *Report on the Royal Vineyard Grape:*

"Bunches hard and well set, sometimes long and tapering, and sometimes short ovate. Berries large and roundish ovate, skin white and somewhat transparent, showing the texture of the flesh through it, remarkably thin, and adhering closely to the flesh; so thin is it, that the whole berry may be eaten without any inconvenience being caused by the skin. Flesh firm and crackling, with a fine Sweet-water flavour. This is a fine looking Grape, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society."

For the opinions of the Horticultural Press, see *Gardeners' Chronicle*, April 9.

A correct COLOURED ILLUSTRATION by Andrews will be sent in exchange for 12 Postage Stamps.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

INSTITUTED 1838.

The TWENTY-FIRST ANNIVERSARY FESTIVAL in AID of the FUNDS of this Institution will take place at the LONDON TAVERN, Bishopsgate Street, on FRIDAY, July 8.

The Right Hon. Charles Lawson, Lord Provost of Edinburgh, in the Chair.

BOARD OF STEWARDS.

George Child, Esq., *Chairman.*

His Excellency the Lord Lieutenant of Ireland, K.G.
His Grace the Duke of Buccleuch, K.G.
His Grace the Duke of Roxburghe, K.T.
The Most Hon. the Marquess of Tweeddale, K.T.
The Most Hon. the Marquess of Bowmont
The Right Hon. the Earl of Haddington
The Right Hon. Viscount Dalrymple
The Right Hon. Lord Portman
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The Right Hon. the Lord Advocate, M.P.
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James Caird, Esq., M.P.
Henry Cutler, Esq.
Arthur Dickson, Esq.
Charles Fisher, Esq.
Finlay Fraser, Esq.
A. E. Henderson, Esq.
William Hurst, Esq., Jun.
John B. Innes, Esq., W.S.
Colonel Jeakes
Frederick Kennedy, Esq.
Joseph Kitchin, Esq.
J. E. C. Koch, Esq.
Stuart H. Low, Esq.
Charles Lawson, Esq., Jun.
Henry Graham Lawson, Esq., M.A.
William Miller, Esq., M.P.
Daniel Nash, Esq.
William Paul, Esq.
The Rev. Charles Parker, M.A.
Captain Robertson, R.N.
A. A. Robinson, Esq.
John Shaw, Esq.
The Rev. Dr. George Smith
Wm. Baxter Smith, Esq.
Martin H. Sutton, Esq.
Archibald Turnbull, Esq.
Charles Turner, Esq.
R. C. Ward, Esq.
Anthony Waterer, Esq.
John Waterer, Esq.
A. C. Wheeler, Esq.
Edmund Wilder, Esq.
B. S. Williams, Esq.
Samuel Wright Wright, Esq.

Tickets, One Guinea each, to be had of the Stewards and the Secretary. The Gallery will be opened for the admission of Ladies (Tickets 7*s.* 6*d.* each), of which a limited number only will be issued. Dinner to be upon table at 6 o'clock precisely.

14, Tavistock Row, Covent Garden, W.C. EDW. ROGER CUTLER, Secretary.

THE ATTENTION of FELLOWS of the ROYAL HORTICULTURAL SOCIETY is particularly invited to the following CORRESPONDENCE:—

No. 1.—To Andrew Murray, Esq.

Acton Green, Turnham Green, June 22, 1864.

Sir,—Will you be good enough to inform me whether the Four Advertisements in the sixth column of the first page of the *Times* of yesterday, commencing—

"Her Royal Highness the Princess of Wales; Horticultural Gardens, June 23; Messrs. Toole and Paul Bedford; Mumbo Jumbo,"

were inserted by the authority and with the knowledge of the Council.—I am, Sir, your obedient Servant,

JOHN LINDLEY, F.R.H.S.

No. 2.—To Dr. Lindley.

Royal Horticultural Society, South Kensington, W., June 22, 1864.

Sir,—The Four Advertisements in the sixth column of the first page of the *Times* of yesterday's date, commencing "Her Royal Highness the Princess of Wales," &c., *were* NOT *inserted by the authority and with the knowledge of the Council* of this Society.—I am, Sir, your most obedient Servant,

ANDW. MURRAY.

The Advertisements here referred to are the following:—

HER Royal Highness the Princess of WALES will OPEN the GRAND FETE and BAZAAR to be held in the Arcades on the South Side of the Horticultural Gardens, in AID of the Building Fund of the FEMALE SCHOOL of ART, in Queen Square, Bloomsbury, on Thursday next and two following days.

1. Purses containing 5*l.*, collected by ladies in aid of the fund, will be received by Her Royal Highness at the opening of the Bazaar.
2. The Band of the Royal Grenadier Guards will play during each day.
3. A variety of theatrical, musical, and other entertainments will be provided by amateurs and renowned professionals, who have kindly promised to give their services in aid of the fund, among WHICH MAY BE ENUMERATED MUMBO-JUMBO, a new burlesque by a new author, in a new theatre, with new scenery, new dresses and appointments, and by a new company.
4. RICHARDSON'S SHOW, with two startling new dramas by the renowned company of amateurs late of the International Exhibition.
5. Promenade Concerts.
6. The PEEP-SHOW AND PAUL-Y-TOOLE-Y-TECHNIC Institution; proprietors, Toole and Paul Bedford (by permission of B. Webster, Esq.)
7. The White Lilies of the Prairie in their world-renowned entertainment.
8. The International Dow Show.
9. The New Zealand Chief.
10. The Piping Bullfinch (late of the International Exhibition), &c.

Admission on Thursday, June 23, by tickets purchased before the day, 5*s.*; or by payment at the doors, 7*s.* 6*d.* Open at 11 o'clock.
On Friday, June 24, 2*s.* 6*d.* Doors open at 12 o'clock.
On Saturday, June 25, 1*s.* Doors open at 12 o'clock.

HORTICULTURAL GARDENS, June 23d, 24th, and 25th.—GRAND FETE and BAZAAR. The Blazing Burgee—Briganzio the Brigand—The Port Admiral. *The Blazing Burgee, an excellent substitute for butter at breakfast.* Don't run up tailors' bills, but run up and see Briganzio the Brigand. *The Port Admiral doubles up his enemies and bruises his perambulators. All at the Richardson's Show; one continued round of mystery, murder, crime, virtue, felicity, and revelry.* Every Quarter of an hour.

MESSRS. TOOLE and PAUL BEDFORD have generously offered their invaluable services (with the kind permission of B. Webster, Esq.) for the GRAND FETE and BAZAAR in AID of the Building Fund of the FEMALE SCHOOL of ART, Queen Square, Bloomsbury, on the 23d, 24th, and 25th June, in the Southern Arcades of the Royal Horticultural Gardens. "*A Norrible Tale*," "*The Peep-show*," *and the Paul-y-Toole-y-technic Institution, with Lectures on* "*Eye Hart*," by these eminent professors, at intervals, from 2.30 to 4.30 each day.

MUMBO JUMBO will make his débût on Thursday, 23d, and two following days, at the BAZAAR in AID of the BUILDING FUND of the FEMALE SCHOOL of ART, Bloomsbury, at the New Theatre, in the Royal Horticultural Society's Gardens.

RUGBY ROSE SHOW, JUNE 21.

AWARDS of the JUDGES.

Class A. Open.—Seventy-two Varieties.

No. 1. 1st Prize, Mr. B. R. Cant, of Colchester, Silver Cup or 10*l.*; 2d, Messrs. Paul & Son, of Cheshunt, 5*l.*; 3d, Mr. James Mitchell, Sussex, 3*l.*; 4th, Mr. John Cranston, Hereford, 2*l.*

Twenty-four Varieties.

No. 2. 1st, Mr. B. R. Cant, Colchester, Silver Cup or 4*l.*; 2d, Messrs. Paul & Son, 2*l.*; 3d, Mr. Wm. Draycott, 1*l.*; Extra, Messrs. H. Lane & Son, Berkhampstead, 10*s.*

Twelve New Roses of 1863 and 1864.

1st, Messrs. Paul & Son, 1*l.*; 2d, Mr. B. R. Cant, 10*s.*

Twelve Tea Roses.

1st, Messrs. H. Lane, 1*l.*; 2d, James Mitchell, 10*s.*

Twelve H. P. Roses.

1st, Messrs. H. Lane & Son, 1*l.* 10*s.*; 2d, Messrs. Paul & Son

Twenty Pot Roses.

1st, Messrs. Paul & Son, Silver Cup, or 7*l.* 7*s.*; Extra, Messrs. H Lane, for four boxes of Roses, 10*s.*

Class B.—Amateurs.

No. 6. 1st, Mr. C. J. Perry, Silver Cup or 6*l.*; 2d, Thos. Laxton, 4*l.*; 3d, C. N. Newdegate, Esq., M.P., 2*l.* No. 7. 1st, C. J. Perry, 2*l.*; 2d, E. Hunt, Leicester, 1*l.*; 3d, C. N. Newdegate, Esq., M.P., 10*s.* No. 8. 1st, John Lane, Esq., The Lawn, Rugby, 1*l.*; 2d, Rev. E. H. Pochin, Stileby, 10*s.*; 3d, Mr. J. Chapman, Rugby, 5*s.*

Class C.—Cottagers.

1st, John Dicks, Weedon, 1*l.*; 2d, Absolem Tyrrell, 12*s.*; 3d, W. Hobley, Newton, 8*s.*; 4th, Mr. Wm. Gilbert, 5*s.*

Judges.—W. Barnes, Nursery, Camberwell; R. Ruffett, Gardener to the Right Hon. Viscount Palmerston, Brocket Hall.

W. H. Treen, Hon. Secretary.

Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

	Per pkt.—*s.* *d.*	*s.* *d.*		Per pkt.—*s.* *d.*	*s.* *d.*
PRIMULA ..	2 0	and 3 6	INTERMEDIATE STOCK.. ..	0 6	and 1 0
CINERARIA ..	1 6	and 2 6	BROMPTON do.	0 6	and 1 0
CALCEOLARIA	1 6	and 2 6			

The above Seeds are saved with great care, and can be warranted to give satisfaction.

Paradise and Victoria Nurseries, Holloway, London, N.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE post free on application.

Paradise and Victoria Nurseries, Holloway, London, N.

Seeds Worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our Collection in the Spring, 1862. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

DOBSON'S PRIZE PRIMULA SINENSIS SEED, Superbly Fringed. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

J. Dobson & Sons, Seedsmen, Isleworth, W.

CARTER'S FARMER'S VADE-MECUM.

WHEELER'S LITTLE BOOK on SEEDS.

The Gardeners' Chronicle.

SATURDAY, JUNE 25, 1864.

MEETING FOR THE ENSUING WEEK.

Wednesday, June	29	}	Royal Horticultural (Great Rose Show and Floral Committee), at South Kensington.
Thursday, —	30	}	
Saturday, July	2	{	Royal Botanic (Last Exhibition of Plants, Flowers, and Fruits) .. 2 P.M.

Two large importations of Lily Bulbs, supposed to include a large quantity of Lilium auratum, have been lately sold by Mr. Stevens, the well-known auctioneer of King Street, Covent Garden.

We draw attention to these sales for two reasons; first, if the bulbs alluded to should really prove to be that magnificent species, it will soon be sold at a reasonable rate, and will consequently be brought within the reach of all who wish to add it to their collections. Our second reason for drawing attention to the circumstance is one of considerable horticultural interest, owing to the manner in which these bulbs were sent home. They came, in common packing cases, round the Cape of Good Hope, in the hold of a sailing vessel, and must have been at least four or five months at sea. When the boxes were unpacked in London, the bulbs were found to be in most excellent condition—indeed most of them were as plump and fresh as if they had been dug up and brought in from some suburban nursery on the morning of the sale. We had an opportunity of examining the manner in which they had been packed, and we shall therefore endeavour to describe it for the information of our readers. It is well worth notice, both on account of its value in a horticultural point of view, and on account of the theory of the operation.

The stems of the Lily, like those of many other bulbs and tubers, die off in autumn after having perfected their blossoms and laid up a supply of nourishment in fresh bulbs for the production of leaves and flowers in the following year. For several months during autumn, winter, and early spring the bulbs remain almost dormant in the ground, neither adding to their resources nor diminishing them. This state of repose is natural to these plants, and it is only by our giving heat and moisture in an artificial way that they can be induced to grow at this period of the year. It therefore follows, as a matter of course, that this is the proper season to send bulbs from one part of the world to another. The importations to which

we have just alluded had, no doubt, been dug out of the ground just after the plants had completed their summer growth, and when they had gone to rest for the winter, and this was one of the reasons of the successful result. Then they were on their voyage at that season of the year during which they are not naturally inclined to grow, unless they are compelled to do so by artificial means. Thus far, therefore, the importer had gone to work in the right way.

Having taken the bulbs out of the ground at the proper season for sending them home, the next matter to be attended to was the best mode of packing them. And here, too, a better method could not have been hit upon than that employed in the instance in question. They were packed in *dry earth*. This earth had two important properties; it was to a certain extent a non-conductor, and preserved the bulbs from the effects of sudden changes of temperature, and while it kept them in a plump and healthy condition, it absorbed any superfluous moisture and prevented them from rotting.

Such is the theory of the matter, and certainly the success which attended the experiment was most complete. We have no means of knowing whether the merchant who sent these cases home knew anything about the theory and practice of horticulture, but he certainly did the work as theory would have directed, and well deserves the success which attended his venture.

In a horticultural point of view this matter is also of considerable interest. We learn how easily and how cheaply plants of this kind may be sent from one part of the world to another, even if the voyage should be a long one. It is not necessary to have WARD'S cases to introduce such thing as Lilies in quantity, even from such far-off countries as Japan; nor is it necessary to send the consignment by the expensive, although speedy, overland route. All that is required is to take up the bulbs at the right season of the year, and to pack them in the proper way. A common deal box, which any carpenter can make, and a little dry earth, is all that is required. In this condition the bulbs may be sent home in the hold of a ship like common merchandise, safe alike from the rude kicks of sailors and from the spray of the ocean. But suppose the conditions in which our bulbs were placed to be somewhat different, suppose that they had been taken out of the ground at the wrong season of the year—in spring, for example, just when the season of growth was approaching, and had been packed in wet instead of dry soil, the results would have been very different and not nearly so satisfactory. In the latter case the bulbs would certainly have commenced to grow during the voyage, and most probably would have been found dead on arriving at their destination.

A little knowledge of the habits of plants, so as to enable one to know how to treat them, is oftentimes of great importance to those who endeavour to send them to distant countries by sea. It frequently depends on the application of this knowledge whether the plants reach their destination alive and healthy, or dead and worthless. As regards the Lilies we have alluded to, the lucky importer has been well rewarded on account of his having possessed and applied this kind of knowledge, for the two consignments realised, we believe, the large sum of nearly 1000*l*.

—— THREE or four new INDIAN AZALEAS which have been exhibited during the present season are of sufficient merit to claim a few separate remarks.

First and foremost we should place Mr. VEITCH'S Stella, a large and well-formed flower, remarkable for its substance, and of a most telling colour, being one of the richest and brightest orange-scarlets to be found in the family, and marked with a Cactus-like glow of rich violet over the upper segments. It will thus be seen that the colouring is something like that of Duchesse Adelaide de Nassau, but the form is vastly superior. Another variety of the same style of colour, and from the same source, called Vesuvius, has been equally successful with the former in gaining a First-class Certificate, though at a later period of the year. We believe this also will prove a variety of superior character; but when we saw the two together the early part of the season, Stella was decidedly the better of the two. We have very little hesitation in recommending both of these, and none at all in the case of Stella.

Then Mr. IVERY'S Fascination is by no means badly named, for it is one of the most lovely varieties we have seen, in respect to its colouring. When we add that its flowers were shown as smooth as cardboard, and perfect in respect to form, we shall have said enough to recommend this also. The colour is a beautiful bright rose, broadly and distinctly bordered with white, with the upper segment richly spotted. It is deeper and brighter than any of the white-edged varieties, with the exception of the semi-double Belgian, Souvenir du Prince Albert, of which latter, by the by, though it has not this season been well shown in England, we have seen some finely-coloured and finely-developed flowers elsewhere.

Another variety of considerable merit was the Excelsior of Messrs. F. & A. SMITH, a smooth-flowered rose, conspicuously spotted on the upper segment. Mr. TODMAN'S Lord Derby too, is one which deserves a word of praise for its decorative qualities, the flowers being remarkably bright, and rose colour spotted with crimson, large, freely produced, and exceedingly effective.

Mr. KINGHORN'S Meteor is another flower of the season which must not be passed over. It is one of the bright orange scarlets, moderately spotted, something after the style of Mars, and, therefore, very showy.

Finally, as a companion to Flag of Truce, a double white, which continues to improve the longer one is acquainted with it, we must mention a Belgian sort, called Roi des Doubles, a close, double, crispy, bright and lively rose-colour, very showy, and one of the finest of its race for decorative purposes.

Some new Belgian varieties we hope to notice hereafter.

—— We understand that the formation of the NEW GARDENS AT SANDRINGHAM, the Norfolk residence of H.R.H. the PRINCE OF WALES, is being pushed forward rapidly under the superintendence of the gardener, Mr. CARMICHAEL. The walls are now in course of construction, and a range of forcing houses 300 feet long, with four others of 100 feet each, are to be commenced immediately by Mr. GRAY, of Danvers Street, Chelsea.

CHERRIES.

WHEN I think of Cherries, I seem to be cogitating on things that were and are not, for I go back in thought to my boyish days, some fifty years since, when numerous old trees of May Duke, Archduke, and Bigarreau Cherries, planted by my grandfather, were a little past their prime, but bearing, as most old trees do, large and delicious fruit. The size of these trees may be imagined when I state that from six to eight bushels were often gathered from one tree; and from "the old Bigarreau," now in the last stage of decay, I think I remember hearing that 10 bushels had been in one abundant season gathered. All this now seems like a dream, for owing to the destruction of birds of prey by the gamekeepers, and I half suspect from their having been driven away by the noise of the railway, fruit-loving birds have increased to such an enormous extent that Cherries grown in the usual way on standards are devoured before they are ripe. To illustrate their rapacity at the present day, I may mention that in July of last year I was led to look at two fine young standard Bigarreau Cherry trees literally covered with fruit. I calculated that their produce would be from two to three bushels. I thought of old times, and "mentally ejaculated" there will this year be enough for us all, meaning birds and self. This was on Saturday. On the Monday following I again visited my trees—not a Cherry was left, but the ground was covered with stems; the birds had evidently made our day of rest a day of thorough enjoyment—instead of sweet Cherries I had sweet songs, not quite satisfactory to one's fruit appetite. I ought to say that for some years past, this voracious conduct of our "feathered friends" has been not the exception but the rule, much to my discomfort; for it seems to me a sort of fixed idea that what we dearly loved in boyhood, we fancy we love in old age. As far as Cherries go, this is with me quite true, for there is something about these first-fruits of summer very charming—so bright, so cheery, so nice, but only when they are gathered from the trees with one's own fingers and eaten at once; gathered Cherries lose all their freshness of flavour in a very short time.

It is now some few years since I cast about to find some means of providing myself with ripe Cherries, and for the last two or three seasons I have had the pleasure of gathering them from the end of May till the end of August, ay, even later. I have accomplished this by a very simple mode of culture—merely by planting the trees in pots, and placing them in my "Cherry house," a span-roofed structure 14 feet wide. A house of this width, 5 feet high at the side, 10 feet high in the centre, and from 30 to 40 feet in length, would supply a large family the whole of the summer with such fine and ripe Cherries as are rarely gathered from trees in the open air now-a-days.

All the kinds of Duke Cherries, such as the May Duke, Empress Eugénie, Archduke, Nouvelle Royale, a fine large late Duke, Duchesse de Pallnau, the Blanchoury Cherry and some others, if grafted on the Cerasus Mahaleb, may be planted in the borders of the house as pyramids; they may be kept in a compact and fruitful state by pinching in their young shoots to three or four leaves all the summer, but such sorts as Early Purple Guigne, the finest and largest early Cherry known, the Belle d'Orleans, of equal excellence with the above when grown under glass—they are both too delicate for open air culture except in warm and dry climates—should be grown in 13 and 15-inch pots, as must also the other fine kinds of Heart and Bigarreau Cherries, such as Knight's and Warder's Early Black Cherries, the Black Tartarian, the Bigarreaus of sorts, and some of the late Guigne Cherries, which are so fine in the south of France and in South Germany. All these sorts of Hearts and Bigarreaus are generally grafted on the common Cherry stock, so that their growth is too vigorous to be controlled unless they are grown in pots. They would if planted out burst through the tallest roof. If, however, they are confined to pots and cultivated as pyramids, they form by summer pinching the most fertile and beautiful of fruit trees. My trees are at this moment covered with their rich-coloured fruit from "top to toe."

I have mentioned my "Cherry house" advisedly, for Cherries should have a house devoted to them, for more than one reason. If they are placed among other orchard house trees their fruit ripens so early, and is so tempting both to birds and boys, that it is almost impossible to preserve them till fully ripe; the former make their way through the open ventilators as freely as if the trees were in the open air, and the latter—well, any boy, whether gentle or simple, that can keep his fingers from a ripe Cherry must be of a very philosophic temperament—will pick them. My practice is to open the ventilators as soon as the Cherries commence to ripen, to cover the apertures with double netting, and not to close them till Cherries are over, *i. e.* towards the end of August; the free and constant admission of air gives flavour to the fruit. The door is always kept padlocked, and the key delivered only to a confidential man, who gives the trees water when they require it. *T. R.*

RESULTS OF MR. RICHARD SPRUCE'S TRAVELS.

MR. SPRUCE left Liverpool on the 7th of June, 1849, and reached Pará on the 12th of July. After spending three months in exploring the environs of that city, he ascended the Amazon to Santarem, at the mouth of the Tapajoz, and in November of the same year went 70 miles farther up, to Obydos, where the Amazon is at its narrowest and deepest. Starting from Obydos, he explored the Trombetas, and its tributary the Aripecurú, as far as the cataracts of the latter, in lat. 0° 47′ N., fixing five latitudes by astronomical observations, and making a map of these previously unknown rivers.

Returning to Santarem in January 1850, he remained there exploring the lower part of the Tapajoz and adjacent parts of the Amazon until October, when he started up the Amazon for the Barra do Rio Negro, where he arrived after a voyage of 63 days, 30 whereof were spent in the channels to the south of the great island of Tupinambaráua.

The greater part of the year 1851 was occupied in studying and collecting the rich vegetation of the lower part of the Rio Negro, and of the Amazon for a few days' journey up; and in November he started for the head-waters of the Rio Negro, in a boat of about 9 tons burthen, which he had fitted up expressly with that object.

Early in January, 1852, Mr. Spruce reached the village of Saõ Gabriel, situated about midway of the cachoeiras, or cataracts, of the Rio Negro, and after remaining there some seven months, he proceeded up the large river Uaupés, which had been scarcely known to Europeans, even by name, until Mr. Wallace's adventurous exploration of it the preceding year. Mr. Spruce found the Uaupés to possess a more novel and beautiful forest-vegetation than any other part of South America, and his collections include several undescribed genera, besides many species notable for their beauty and the value of their products.

Mr. Spruce remained on the Uaupés until March 1853, when he sailed out of it into the Rio Negro, and up the latter river beyond the Brazilian frontier, to San Carlos del Rio Negro. This village was his head-quarters during his stay in Venezuela, which extended to November 1854, or more than a year and a half. During that time he made two expeditions to the Orinoco, one by way of the Casiquiari, and the other by the portage of Pimichin and the Atabapo. On the former of these, besides examining the Casiquiari, both ascending and descending, he explored its tributary the Pacimoni to its source, among the lofty and picturesque mountains called Iméi and Tibiali; as also the river Cunucunúma, which bathes the western foot of the immense granite mass of Dinda, and enters the Orinoco a little below the bifurcation of the Casiquiari.

On his second visit to the Orinoco, he went as far down as to the cataracts of Maypures, rendered famous by the narrative of Humboldt and Bonpland. There and elsewhere in the region of the Upper Orinoco and Rio Negro he gathered many of the plants discovered by those illustrious travellers, and which had not been seen since by any botanist. He also constructed maps of the hitherto unsurveyed rivers, Cunucunúma and Pacimoni.

Leaving Venezuela, he descended the Rio Negro, and reached the Barra do Rio Negro about the end of 1854, after an absence of above three years. Having reposed there over two months, he took advantage of the steamers which had been lately established on the Amazon, to ascend that river beyond the Brazilian frontier, to Nauta in Peru, near the mouth of the

Ucayali; and from thence he went in canoes up the Marañon and its tributary the Huallaga to Tarapoto, a large and thriving town in the ancient province of Maynas. In the lovely valley of Tarapoto, which like many similar ones in the eastern roots of the Andes, will one day be the site of a magnificent city—when the immense resources of the Amazon valley and its unrivalled fluvial system shall have been fully developed—he remained nearly two years, and collected there, besides a vast variety of other plants, no fewer than 250 species of Ferns, in an area of only 50 miles in diameter.

In March 1857, Mr. Spruce left Tarapoto for Ecuador, descending the Huallaga to its confluence with the Marañon, then ascending the latter river and its affluents the Pastasa and Bombonasa to Canelos; finally through the forest of Canelos on foot to the village of Baños, at the foot of the volcano of Tungu-ragua. In this disastrous journey, which occupied a hundred days, he had to abandon all his goods in the forest, to escape perishing of hunger at the passage of swollen rivers.

Making Baños his head quarters, he devoted above six months to the exploration of the forests and paramos of its huge volcano, and of the upper part of the valley of the Pastasa.

In January 1858, he removed to Ambato, which for more than two years was his point of departure for excursions to Quito, Riobamba, &c., and to various points in the eastern and western cordilleras of the Quitenian Andes; although his movements were much harassed and restricted by the revolutionary state of the country, during nearly the whole of that period.

In 1860, Mr. Spruce communicated a valuable paper to the Royal Geographical Society, on the mountains of Llanganati, in the eastern cordillera of the Quitenian Andes. (Journal for 1861, p. 163-84.) He has also communicated numerous important papers to the Linnæan Society.

In 1860 he was occupied for some months in procuring seeds and plants of the Cinchona succirubra, or Red Bark plant, for cultivation in India—a task which was confided to him by Mr. Clements R. Markham, on behalf of Her Majesty's Government. Mr. Spruce displayed great zeal and resolution in performing this arduous service, while suffering from the effects of rheumatic fever, and his labours received the unqualified approbation of the Secretary of State for India.

His elaborate report on the expedition conducted by him to procure these seeds and plants (accompanied by a meteorological journal, and a complete sketch of the vegetation of the Cinchona forests), is by far the best that has appeared on this subject in any language; and has been invaluable as a guide to the cultivation of these precious plants in India. It covers 112 printed pages.

Afterwards, his broken health seeming to require a return to a warm climate, he removed to the plain of Guayaquil, and his active labours as a botanist may be said to have closed with the picking up of a few plants in that neighbourhood during the year 1861, and during 1862 at Chanduy, on the coast, near Punta Santa Elena, where an exceptional rainy season, coming after an interval of 15 rainless years, enabled him to make a small but interesting collection of the ephemeral plants which under the influence of the rains sprang up on the desert, and also of several curious trees and shrubs whose blackened stems had not for some years past put forth even a leaf.

The results of this long course of travel (whose objects were at first purely botanical) comprise from 6000 to 7000 species of flowering plants and Ferns, whereof a very large proportion were entirely new to science, especially among the trees, whose timber and other products were also ascertained to be in many cases of great value. Several new species may be instanced, and one entirely new genus, of trees producing the best kind of caoutchouc, which is now extracted from them in large quantities by the Brazilians, but was not before, until Mr. Spruce pointed the trees out on the Rio Negro and elsewhere. His specimens of all these plants are preserved in the principal public and private collections in the world, and are, therefore, perfectly accessible for the purposes of science. A very large collection of cryptogamic plants—perhaps the largest ever made by any single collector—still remains to be worked up.

Mr. Spruce's MSS. contain, besides notes on all the plants collected, vocabularies of 21 native languages of the Amazon valley, meteorological observations, barometric levellings, &c., throughout the regions visited, maps of three rivers which had not previously been surveyed, notes of travel, of the aspects and capabilities of the various countries, of the customs, food, trade and agriculture of their inhabitants, &c.

[NOTE BY MR. BENTHAM, PRESIDENT OF THE LINNEAN SOCIETY.—Mr. Spruce, before his expedition to South America, was well known for the zeal and assiduity with which he collected, and investigated, in various branches of botany, especially in the muscology of Yorkshire and the Pyrenees. His researches into the vegetation of the interior of South America have been the most important that we have had since the days of Humboldt: not merely for the number of species he has collected, amounting to upwards of 7000, but for the number of new generic forms with which he has enriched science; for his investigations into the economic uses of the plants of the countries he visited; for several doubtful questions of origin as to interesting genera and species which his discoveries have cleared up; and for the number and scientific value of his observations, made on the spot, and attached to the specimens preserved; all which specimens have been transmitted to this country, and complete sets deposited in the national herbarium at Kew.]

NOTES ON GARDENS.—No. XI.

ROCKVILLE, DUBLIN.—(*Continued from p.* 580).

BEFORE leaving the West Indian house I should have alluded to a plant of one of the best varieties of Mango, planted out and in flourishing condition. The East Indian house is another double-roofed structure, containing a fine collection of Vandas, Saccolabiums, Aërides, &c., with some other plants of great rarity and interest, and among them the curious scaly-spotted "unknown plant," which Mr. Williams used to exhibit at the London shows a couple of years ago, and which then excited so much curiosity. This very singular plant is said to have been found by M. Porte growing round the trunks of trees on which he first met with the fine Phalænopsis Schilleriana, to which plant, indeed, the queer unknown bears a striking resemblance in its markings. M. Porte has stated that it bears very beautiful flowers, in the absence of which some have thought it to be a Ficus, others a singular form of Hoya. Not being elsewhere in the country, it of course adds much interest to Mr. Bewley's wonderful collection. Here was also a novelty in the way of aquatic accommodation—an ornamental tank for the Ouvirandra, with plate-glass front, white polished marble columns, back, and ends, and having also slabs of the purest white marble for placing under the leaves to fully display their peculiarity.

This not being my first visit to Rockville I had expected much, but the creation and filling with such fine plants of these houses in one department quite surpassed all my anticipations. A very marked improvement too was visible in the state of the Orchids, and not less so with any other class of plants. In a glass case was a profuse mass of Lindsæa Lowii [Polybotrya?] with its variously formed fronds of the most glossy green running over and clinging to pieces of tufa. Lindsæas grown as this plant was are beautiful indeed. There was a specimen of Vanda Roxburghii 6 feet high, a splendid and probably a matchless specimen, with Vanda Batemanni, a noble plant from the late Mrs. Lawrence's collection; Vanda suavis in quantity; and some rare and beautiful varieties of Vanda tricolor. Here too was Platycerium Wallichii, a fine Fern from Moulmein, and very scarce if indeed elsewhere in the country, partaking of the characters of P. Stemmaria and P. grande, having the fertile fronds of the one and the barren ones of the other species. Phalænopses were largely grown in a neat kind of shallow pan suspended from the roof, and were in vigorous health. Of the true Aërides nobile there was a fine plant; with a good variety of Cypripedium Stonei; Dendrobium Dayanum, macrophyllum giganteum, formosum, and others; Uropedium Lindenii, and a capital specimen of Angræcum eburneum. In this, as in the other Orchid houses, the plants were in rude health, perfectly free from spot, or any symptom of disease, while in point of cleanliness one might fairly conclude that the last Coccus was only to be found in his geological mantle, having perished in the "struggle" with the sponges, which, by the by, must be extensively developed at Rockville to keep such an immense collection in the cleanest possible state.

Near to or adjoining the new Orchid houses was a very neat greenhouse, with double span-roof, 30 feet long and 20 wide, the roof of Hartley's rough plate glass, and the fittings most convenient and tasteful. The platforms were covered with fine washed sea-gravel and supported by neat cast-iron columns. This house contained a collection of Orchids requiring cool treatment; large bushy specimens of Gleichenia dicarpa, scandens, microphylla, semivestita, and others; with Beaucarnea stricta and B. recurvata about 6 feet high, probably the largest specimens of these in cultivation. In this neat house was also a well-arranged case of Trichomanes radicans and Andrewsii, with the fronds depending gracefully from and contrasting well with pieces of tufa, stalactite, &c.

I now come to what formerly was the great Orchid house, but these plants having been removed to the smaller ones—more in the Day and Rucker style—which have been described, it is now used as a great stove, with Ferns, fine-leaved plants, climbers, Arads, &c. It is a noble span-roofed stove, nearly 140 feet long by 20 feet wide, in three divisions, with entrance corridor 8 or 9 feet square, where a book is kept in which the visitors enter their names. In the porch was a case on each side containing Trichomanes trichoideum, reniforme, exsectum; Hymenophyllum demissum, and several others of both genera. Exactly opposite the entrance was a noble plant of Cibotium Schiedei, with large masses of Eucharis amazonica near it; fine examples of Alsophila infesta and obtusa, the former very rare; and a remarkable specimen of Davallia aculeata, 3 or 4 feet through and 2½ high. I noticed also in this first division of the great stove many plants distinguished by their rarity or fine condition. Amongst them was Hemitelia horrida, Calamus micrantha, Cibotium princeps, the rarer kinds of Asplenium, Cheilanthes, Nothochlæna, &c., mixed up with Selaginellas, and flowering stove plants. Climbers looked freer, cleaner, and much better managed on the roof of this great stove than I had seen them elsewhere. In the first division Hexacentris mysorensis and lutea, Clerodendron Thompsonæ and Thunbergia Harrisii were trained on the roof with other climbers. In the second division were many good things in the Palm and Cycad way, including Cycas intermedia, Zamia Forsteri?, with hard corded and furrowed leaves; Plectocomia spectabilis, very beautiful; Ceroxylon niveum, Arecas, Oreodoxas, Elæis, Astrocaryon, &c. From the roof of this division Hoya imperialis and grandiflora, with Stephanotis, were gracefully and naturally depended, and not rigidly tied to the wires as is generally the case.

Nearly full of extraordinary specimens of fine-leaved plants was the third division, so healthy and perfect, that they might be taken promiscuously and staged for a London exhibition with every prospect of success. On the roof Allamanda Schottii was very fine, as was Hoya campanulata; while Cissus discolor fell in free and natural flakes, in some parts so much so as to completely obliterate the usual conventional hothouse aspect. In this compartment was a case devoted to Anæctochili in vigorous health, and including amongst them Anæctochilus Maulii and A. petola cuprea; good specimens of Caladium Belleymei and the better species; Musa vittata, Maranta Warscewiczii, and Adiantum trapeziforme, 5 feet through; with other very large specimens of Adiantums, and Platycerium grande, Stemmaria and biforme. Amongst the finer plants in this house must be mentioned a variety of Alocasia metallica, with leaves of a more circular outline and darker bronze than the normal form; Crotons of immense size and rich colour; Pandanus javanicus variegatus, a grand plant about 7 feet through; Thamnopteris nidus, very fine; and a full collection of Selaginellas, the best kinds of which, such as Lyallii, Lobbii, atroviride, and, indeed, all the species worth growing, were far better done in the vicinity of a pond at the upper end of this house than I have seen them elsewhere. Round this pond was a piece of rockwork, from which sprang a sort of double arch crossing the basin, and bearing Goniophlebium subauriculatum and Reinwardtii, with other Ferns and Lycopods; while round the water scrambled Piper nigrum, Peperomias, Pothos argyrea, Scindapsus pictus, Solenosterigma bicolor, neat Ferns, Selaginellas, &c. Right against the end wall of this third division was built a piece of rockwork reaching to the top of the house and having passages through underneath, leading on the one hand to the Trichomanes house, and on the other to a most conveniently arranged potting shed, where choice and tender plants might be attended to without bringing them in contact with the open air. This rocky end of the house was also beautifully covered with Arads; Æschynanthus, very effective on it too; Monstera deliciosa, a huge plant climbing over the rocks; Cissus, Hoya, Campylobotrys, the lustrous Selaginella lævigata, Lygodium scandens, Maregravia dubia, Philodendrons, and indeed most plants in cultivation, which could lend grace or variety to such an arrangement. So humid and congenial to those plants was the atmosphere in their neighbourhood, that the roots of Ficus and other plants hung in flakes, and with their white-tipped spongioles were anything but unpleasing. To enter the house devoted to the Killarney Fern, as before indicated, the visitor passes under the rockwork and soon enters a very charming little cave-like structure, with Trichomanes radicans planted by the hundred over rugged slopes, arches, fissures, &c., mixed with the Maiden-hair Fern; the light admitted by stained glass windows. Emerging from this interesting structure, and crossing a walk, the orchard house, a truly noble one, which I shall attempt to describe in my next paper, presented itself. *Wm. Robinson.*

(*To be continued.*)

Home Correspondence.

Exhibition of Azaleas; a Critic criticised.—Vigorous criticism, suggested by practical experience or knowledge of a subject, exerts a very beneficial influence upon whatever profession it is applied to, but the vague, unpractical, and vacillating manner in which certain horticultural matters are commented upon by some of your critics now-a-days is certainly neither edifying nor truthful. One year a particular form is regarded as a *sine quâ non*, is declared to be a "model of perfection," and the next it is said to be positively "ugly;" at one time people are delighted with the "mountains of bloom," and at another their taste and ideas are outraged because there are no green leaves to be seen. One cannot but pity the cultivator whose nose is thus laid hold of in an attempt to lead. In an article of June 11, upon Azaleas, after tardily acknowledging the skill of the growers, and playing with their fancy to describe the shape of the plants, your critics wonder that our great societies should encourage a system which gives prizes to plants which are so ugly. Now, knowing something of the cares and anxieties of an exhibition, I beg that you will in turn allow me to criticise your critic. At page 579 of last year's *Gardeners' Chronicle* it is maintained that "a pyramidal outline is the *sine quâ non* of form for exhibition plants," Orchids excepted. My employer, who has a keen eye for symmetry, entertains this very opinion. The proportion which we aim at when

putting a plant into a pyramidal form, is to have it about the same height, or slightly more, as it measures through the bottom, and the form is what I might call half of an ellipse of those dimensions, presenting the same appearance from whatever side it is viewed; this is the style of plant which my employer exhibited at the Regent's Park and Kensington Gore. They were flowered equally well all round, having no real face or back. Let me ask your critic if this is the form which he terms "ugly?" Time will make these plants more broken and loose in surface, but does your critic understand the difficulty of carrying loose and natural specimens to an exhibition, without the "forest of stakes," which he has so frequently growled and snapped at? Again, his taste is displeased by an overabundance of bloom upon the "huge specimens,"—then why has he not recorded his enjoyment and admiration of many of those plants which might be observed showing lots of "green leaves," and which were not in the large collections of "huge specimens?" In this matter I must tell him that if cultivation is to be the test of merit, he cannot always enjoy the sight of green leaves. If size of bloom, substance, and colour of flower must be the test of merit, would he be good enough to inform me how to get these qualities, along with green leaves, upon such varieties as Chelsonii, Arborea purpurea, Triumphans, Coronata, Juliana, Perryana, Empress Eugénie, Carnea superba, &c. Such varieties as Iveryana, Criterion, Barclayana, exquisita, Gem, variegata, lateritia, dilecta, &c., grow naturally before blooming, and certainly the effect of the bright new foliage upon those colours is very pleasing. Again, ripeness of wood is the secret cause of large well-coloured blooms. Let me ask, are you prepared to forego the fine quality of bloom for the sake of green leaves, in such varieties as do not naturally produce them before flowering? Again, he reverts to the great horticultural show held in Brussels in April last, to show that the pyramidal style is not needed, or not the thing we want. Does he consider the half spheroidal form of the Belgian specimen Azalea, a more natural one than that of our own, and what does he think of the quality of flower, as compared with the flowers upon our "huge specimens of scaffolding?" Again, he affects to say that Azaleas cease to attract, because he does not observe such stagnant crowds of visitors in front of them as is to be seen where Orchids, Roses, Alpines, &c., are placed. This is not difficult to explain, a collection of Azaleas is nearly as effective at a distance of 20 or 30 yards as it is at 2 or 3 yards off, and visitors who see them from different points, are not under the necessity of stopping in front of them, to put on their eye glasses before they can see their beauty. What would our May shows be without these offensive Azaleas? In conclusion, I think that a little friendly discussion as to shapes of Azaleas would be very acceptable, or at least to the "great grower." Should plants assume a spheroidal, oval, pillar, fan, or pyramidal shape, certain it is that the "public" will not purchase any shape but the latter from the establishment whence these remarks are forwarded. *Z. Stevens.*

Specimen Orchids and other Plants.—In the collection of Henry E. Gurney, Esq., of The Priory, Nutfield, are individual plants rivalling the marvellous specimens described in page 553. At Kensington last year 10 from this collection obtained a higher position at the Show than even Mr. Warner's. Now these plants have been reared in a house by no means the very best possible for their cultivation, and what is more, mixed with a great variety of other stove and fine-foliaged plants, such as Caladiums, Begonias, tropical Ferns, Dracænas, &c., all equally deserving of notice and in superb condition. One Cattleya Mossiæ measures 3 feet 6 inches in diameter, and had, when I saw it a few days ago, 50 expanded blooms, many of them 7 inches across, with petals 3 inches wide, the colour being equally perfect. Saccolabium guttatum, with seven spikes, some of them over a foot long; Saccolabium Blumei majus, with 12 spikes; Dendrobium Devonianum, now going off, has been very fine. Is not this wonderful? yet all this has been accomplished by the patient persevering industry of Mr. Lovell, the intelligent gardener. As Mr. Lovell proposes to exhibit the best of the fine-foliaged plants at the forthcoming show of the Blechingley and Nutfield Cottage Garden Society, any notice of them now would be premature, much as they are deserving of it; but in the report of the Show I hope they will receive their due share of attention. *Adolphus H. Kent, Blechingley, Surrey.*

Stagnant Waters.—The catastrophe at Sheffield has awakened public attention to the state of insecurity of reservoirs, and similar artificial constructions for the preservation of water throughout the country; and while the subject claims so much notice, I should like to be permitted to call attention to certain facts relating to these artificial accumulations of water in reservoirs, lakes, and ponds, not only in reference to the stability of the dams and embankments, but to the danger and impolicy of retaining large areas of stagnant water for merely ornamental purposes. It is not a century since a landscape gardener, named Brown, gained a great reputation in England for a certain aptitude in taking advantage of local circumstances, to form lakes and extensive sheets of water; accomplishing his purpose generally by damming up a small rivulet, or by throwing an embankment across a valley and arresting the natural drainage of a district. The fashion of making lakes, and of widening streams, spread very much amongst the landowners of the country, and the proprietors of very many of the fine estates in the kingdom, who were without the coveted possession of a lake, sought the services of "Capability Brown," and thousands of acres of rich alluvial land were inundated and lost to the productive resources of the country. The love of an English gentleman for his home, his pride in his estates, and his fondness for aquatic sports, explain, and in a degree justify, the adoption of a fashion which was deemed to add so much to the picturesque beauty of his park, and which afforded the opportunity of manly recreation, and helped perhaps to teach our Rodneys, and Nelsons, and Howes, their early lessons in naval tactics. But times are changed in half a century, a great revolution has taken place in our social habits, a country gentleman is no longer confined to his estate by the difficulties and expenses of transit. The sea, owing to the facilities offered by railways, is now within a few hours' journey of the dweller in the most inland district. The sea has become the home lake, while Windermere, Katrine, and Killarney are within easy reach; and, the truth must be told, our dirty ponds at home are beginning to be disregarded. I submit that the time has arrived for considering the propriety of continuing to preserve the weedy sheets of stagnant water bequeathed by "Capability Brown," invaded, and choked as they all are by Anacharis, as well as by other weedy aquatic plants, which makes the keeping of a lake as expensive as a parterre, and still leaves it in an unsatisfactory condition as regards purity, while it remains dangerous, as being liable to break through the imperfectly surveyed embankment, dangerous to the health of the owner, in consequence of the miasmatic exhalations which emanate from such waters, perilous in the same degree, and from the same causes, to the people of the locality, and injurious in its influence on the climate and agriculture of the neighbourhood. The humidity of the air in England is one of the objections urged against our climate. Fogs and mists are more prevalent in low wet districts, and river valleys, than in well-drained, dry, or upland places; every acre of water gives so much evaporating surface, and contributes its proportion of humidity to the air; and not only is the rainfall of a locality increased by the spread of water, but the temperature of the district is reduced; waterlogged land is several degrees colder than dry and cultivated soil, and the evil influence of artificial water reaches both air and land contiguous to it. The remedial influence of drainage and cultivation on local climate is well illustrated in Lincolnshire and the adjoining counties; of the meres and swampy wastes, which formerly spread far and wide over the level lands of these counties, many of them exist only in tradition. Whittlesea, over which passage boats sailed, is now a highly farmed and flourishing district; its lighthouses, rich farmsteads; the ruffs, reeves, bitterns and snipes have disappeared; the emaciated ague-stricken people of former years are succeeded by a sturdy and healthy race of men, and Lincolnshire is now one of the richest, healthiest, and driest counties in England; but Appold's centrifugal pump is kept at work; mechanical means are unceasingly in action, to rid the country of its recognised evil—stagnant water. I have dwelt on the evils of stagnant water, and commented on the impolicy of its preservation for mere purposes of pleasure. Recognising the immense importance of securing an abundant water supply to the country at large, I think that the whole subject deserves legislative investigation and action. Immense bodies of water hanging over towns must always be attended with danger. The shock of an earthquake, the collapsing a water-spout, or an unusual fall of rain or snow, may precipitate a disaster like that at Sheffield. The water-shed of England is to be found in the northern counties. A glance at Mr. G. J. Symons' British Rainfall shows us that the fall of rain in Cumberland trebles that of the home and Midland counties. Are the impediments to its conveyance from the northern lakes to London, and our large towns north of it, inseparable? *W. I., Belvoir.*

Cool Orchid Growing.—Now that this is engaging everybody's attention, allow me to place Dendrobium speciosum in the foremost rank in this respect, which I am sure it well deserves. Many believe it to be a very shy-flowering Orchid, and one only managed well by a few, consequently we seldom meet with it now in collections, except, perhaps, in some out of the way corner. All it requires is a cool house, with little or no shading, and a liberal supply of water at the roots while growing, which it does very fast, and that is a point in its favour, as it gives ample time through the summer months to get the bulbs well matured, and blossom buds ripened before autumn sets in, after which little water at the roots is needed; on the contrary, as dry an atmosphere as can possibly be kept, consistent with due consideration for the health of the other inmates of the house, will suit speciosum best, and predispose the plant to blossom freely. During the last six years I have never had it miss flowering but once. I showed it at the Manchester Botanical and Horticultural Society's Show in May, some four years ago, with from 40 to 50 spikes of bloom open at one time on it. I had a great deal of trouble in retarding it till so late in the season, but I was determined to show what a fine effect this plant was capable of producing, and well rewarded I was for my trouble, for it was the admiration of all who saw it. During my engagement with Messrs. Lucombe, Pince, & Co. I had two or three large specimens of it under my care, which used to flower freely every year, and were among the chief attractions in their show house during the months of February and March. I may mention that Mr. Dominy, Messrs. Veitch's foreman at Exeter, used to grow and flower this plant first-rate. Mr. Sherratt, gardener to J. Bateman, Esq., Knypersley Hall, Cheshire, is likewise a successful grower of it. At the time of my visit about 12 months ago he had a charming little specimen of it literally covered with blossom. I never saw one so small managed so well before. Mr. Sherratt told me that he kept it in a cool Vinery during the autumn and winter, after which he introduced it into a gentle heat, which made it flower profusely. *G. Toll, Gardener to J. A. Turner, Esq., M.P., Pendlebury, Manchester.*

Improvement of Flower Shows.—I am not aware whether it was intended to invite suggestions on the subject of the leading article in your Paper of Saturday last, bearing upon the desirableness of introducing some new features into our great flower shows or not, but I cannot help observing that I cordially agree with your remarks, and think that it is absolutely necessary, in order to keep up the interest of the patronisers of the shows, and at the same time to help forward the good cause of educating their taste, to do away with the stereotyped edition of raised stages and blank backgrounds. The object appears to me by no means difficult of attainment, and I like the idea of a permanent erection with a ridge-and-furrow roof on the score of economy; but in order to break the monotony of what I would call a straight-lined appearance, I think it should be raised in the centre, and also high enough to allow of festoons of chainwork whereon to train some of our hardy strong-growing climbers, such as Wistaria sinensis, and its white variety; Madame d'Arblay and other strong-growing Roses. The Virginian Creeper, and even Honeysuckles might be admitted, together with others which do not occur to me at the moment, all of which could be planted in beds formed around the base of the pillars supporting the roof; the beds should be planted with hardy evergreens of various sorts, bearing in mind to vary the foliage as much as possible. Some of the beds also at intervals might be covered with large blocks of stone to form rockwork for the purpose of introducing plants of hardy strong-growing Ferns. All the beds should be raised about 3 feet above the surface level, and each should have a level verge of turf, about 3 feet wide, on which to place the plants for exhibition. The evergreens in these beds would form a living background for the show plants, and would conduce to supply the deficiency of green of which you so justly complain. But in order to relieve the sameness of these beds it would be possible to introduce fountains of a light and graceful character, with only a medium volume of water, not cascades or powerful jets, so that spray might be avoided. One in the centre, and smaller ones at the extremities would suffice to give variety to the scene, and the space around them would form a congenial atmosphere for the show of Orchids. I think that the ground level should be preserved for the broad gravel walks intersecting the beds, not only because the level surface would be much pleasanter to walk upon, but also because if a *coup d'œil* were attempted by undulations of surface, we should still be open to the objection of presenting so great a mass of colour to the eye at once as to cause that oppressiveness so much complained of, and I think the remedy would be found in striving after more natural conditions rather than highly artistic combinations, and in so arranging matters that new beauties should be continually displayed in detail, the whole at the same time forming an agreeable and continuous promenade. I merely offer these suggestions as what occurs to me on reading your very just observations on the subject, which is one in every way worthy of the serious attention of all who are interested in the advancement of the profession, for which flower shows have already done so much, and are capable of doing still more. *John Cox.*

——I heartily approve of your article on this subject. I agree with you, that shows are doomed unless some alteration is made in them. I enter my protest too against "crinolines." At the same time, I fear that exhibitors are not yet prepared to have their collections broken up, though to this it will come, and, in the interest of the exhibitors, the sooner it comes the better, for the flowers will be shown off to greater advantage than they are at present. Beg of the societies to grapple boldly with the subject; also persuade them to give good prizes, and say that the plants must be delivered on Monday afternoon in time for the judges, and that they cannot be removed until Saturday morning. The public then would have time to study the exhibition, and purchasers would be ten times as numerous as they now are. In the mean time, I venture to suggest that the numbers in the first class of great flowering plants should be reduced—say in reference to Azaleas—to six, and let the societies say that these plants will only be shown on the front row. Exhibitors will be required to fill up the back rows with foliage plants; in fact let — feet of frontage be allotted for each Azalea, with the corresponding space behind, by the aid of which the exhibitor may display his Azaleas and his taste in the selection of tints; and when I remember what Mr. Veitch did many years ago in a "group, and what Mr. Turner did at the last

show at South Kensington, I have no fear of want of taste. *An Old Correspondent.*

Hardiness of Japanese Plants.—Referring to inquiries in your paper of the 7th of May last, we beg to state that plants of Retinospora pisifera and obtusa, which were planted out last year in our nurseries here, have survived the past winter without sustaining the slightest injury, and are at present in vigorous growth. It is but right, however, to mention that they were protected with a mat for three or four days during a severe storm in the end of December. R. pisifera is 3 feet 3 inches, and obtusa 3 feet 7 inches in height. We may mention that our specimen plant of Wellingtonia gigantea, which is 10½ feet in height, 3 feet in girth at the ground, and measures 29 feet round the branches, has withstood the winter without any damage, as it has done all the winters since being planted many years ago. Lonicera aureo-reticulata, Euonymus radicans fol. var., Bambusa Metake, and Arundinaria falcata are also quite hardy with us. If not giving too much trouble, we should feel very much obliged by being made acquainted with the names of the various trees which have from time to time been publicly planted throughout the country by her Majesty and the late Prince Consort, with their sites and dates of planting. This, we venture to imagine, might prove interesting to many. *Edwd. Sang & Sons, Kirkcaldy.*

Clianthus Dampieri.—Like Mr. Boston (see p. 532), I have succeeded in growing this well in a pot, and therefore the following notes on its cultivation may not be altogether uninteresting to those who wish to grow this plant under similar circumstances. I commenced in April by filling about one-third of a 3-inch pot with charcoal broken rather small for drainage, and then completing the operation with a soil composed of two parts good loam, one part peat earth, and one part charcoal broken small, the whole being well mixed together. The soil was pressed rather firmly and made into a little cone in the centre of the pot; this was pressed down so as to make it firm; a hole was then made in the centre of it about a quarter of an inch deep, and one seed was dropped in and covered with a little charcoal dust, peat, and sand mixed together. The pots were then placed on a shelf in the greenhouse, and very little water was given until the plants came up. In watering I always poured it gently round the rim of the pot, never allowing it to rise high enough to touch the stem of the plant. This is, I believe, most important, as a contrary practice is probably the cause of so many failures from damping off taking place while the plants are young. When they were about 2 inches high they were shifted into pots two sizes larger than those they occupied, and in September they received their final shift into pots similar in shape to those sometimes used for Hyacinths, *i. e.*, rather deeper than common pots. Great care was taken not to break the ball of earth, which is easily done in shifting in consequence of there being few roots to hold the soil together. After receiving their final shift they were replaced in the greenhouse, and during the winter months were given only just sufficient water to prevent them from being dust dry. When the syringe was used for other plants, we never allowed a drop of water to touch them if we could avoid it. In February they began to grow a little, and from that time they received more water, and they were in bloom in April, and were admired by all who saw them. *J. S. B. S.*

Kensington Flower Market.—Since "A Male F.R.H.S." has intrenched himself behind a heap of "bad names" and "impure motives," I will leave him there; but in doing so I venture with your permission to intrude so far as to say:—1. That there is a wide difference between his proposed market and the American exhibitions he refers to. I am glad, however, to learn on such high authority that so much business is done at the latter; the proprietors of the magnificent plants deserve it all. 2. That he has adroitly shifted his ground by taking in "guinea" plants. I read the first argument thus: that "ladies" would not venture to go to "Veitch's" for a "shilling" plant, and hence the use of a market. I remark here that while the growers will not be at the trouble to send their "shilling" plants, they will not trust their guinea ones in his market. 3. That he should ask the officials how far the prospect of business drew the shilling-plant men when they were invited to "do" the bedding out at South Kensington; he should take great care to master the grand total of applicants, which was, I may say, quite as "grand" as any sensible person would have expected. 4. That he should ascertain how it is that the men so deeply interested (as he says) in this market question make no sign in his favour; surely there has been time enough for them to do so. How is it that hey are so insensible to their interests? I quit the subject by thanking you, Mr. Editor, for the opportunity you have afforded me of expressing my opinion on this proposal—so ridiculous and derogatory in as far as the Royal Horticultural Society is concerned. I think you can bear me witness that what I have said has been at least disinterested. *Paul Pry.*

Lord Kenyon's Cucumber.—In answer to "T. S. U.," I beg to say that I have this desirable kind for private use. It does not sell so well in the market as other kinds, but for flavour it is unrivalled; it is worthy a place in every garden. I have sent some seeds of it to the Royal Horticultural Gardens for trial. *Joseph May, Seedsman, 15, Waterloo Road.*

Gardeners' Royal Benevolent Institution.—To my great surprise I learn that at the approaching annual festival of the "Gardeners' Benevolent Institution," it is expected that there will be a dearth of fruit for dessert, and that therefore a great portion of it will have to be purchased. I learn, moreover, that this is annually the case! but surely this ought not to be so. This of all public dinners is especially remarkable for the beauty of its flowers and fruit, and being in behalf of gardeners, they should make interest with their employers to be allowed to present a dish of Grapes, or a Pine, or some fruit worthy of their skill, as some slight mark of gratitude for the charitable exertions made in behalf of their class—about eight Pines and a like number of dishes of Grapes, with a little of any other fruit, would be all that is required, and it does seem hard if the wealthy horticulturists of the United Kingdom cannot furnish that gratuitously upon such an occasion. It can only require to be known to be at once acceded to. Your aid, so often and generously given in former years, will be most valuable in this, when we expect an extra muster, especially of our Scotch brethren, to support the well-known Lord Provost of Edinburgh, who will kindly preside. *One of the Oldest Subscribers to the Gardeners' Benevolent Institution.*

Societies.

Royal Horticultural: *June* 21.—(*Election of Fellows*).—The following candidates were elected, viz.:—

E. Johnston, Esq., Mrs. George Lacon, Mrs. Macniel, Mrs. Sturch, Mrs. Joseph Taylor, and J. Turner, Esq.

The Assistant-Secretary then delivered a short lecture on Conifers, which was amply illustrated by living plants, photographs, and coloured drawings, the last from Messrs. Lawson's fine work the Pinetum Britannicum, now in course of publication. The sections into which Conifers are divided first engaged the lecturer's attention, and then some account of the geographical distribution and other particulars respecting some of the more common kinds of Pines, Firs and Cypresses, contained in these great groups, was given. The quality of the wood of certain kinds of Conifers was slightly touched upon, and in reference to that of Cedar of Lebanon and Deodar. it was remarked that in one instance where the one was grafted on the other, and of course grown under similar circumstances, small portions of both stock and graft were broken scientifically in order to test the relative strength of their timber, and the result was considerably in favour of that of the Deodar.

Rugby Rose Show.—The first exhibition of Roses held here took place on Tuesday last in a field a short distance from the town. The exhibition was in many respects a good one, although not so extensive as we expected to have seen it; nevertheless, some very fine collections were shown in both the amateur and nurserymen's classes. The Roses generally were large and fresh, but paler in colour than usual at this early period. In Mr. Cant's 1st prize collection of 72 varieties, some very fine blooms were staged, viz., Beauty of Waltham, Le Rhone, La Tour du Crouy, Mad. Caillat, François Lacharme, Maurice Bernardin, Comtesse Cecile de Chabrillant (very fine and beautifully striped), Mad. Julie Daran, Souvenir d'un Ami, Devoniensis, Monte Christo, President, Souvenir d'Elise (a charming bloom), Maréchal Vaillant, Prince Camille de Rohan, Victor Verdier, Cloth of Gold (very fine), and Comtesse Ouvaroff. Messrs. Paul & Son's collection of 72 had excellent examples of Mad. C. Crapelet, Amiral Gravina, Lælia, Lord Canning (a fine variety), General Castellane, Monte Christo, François Louvat, Duc de Rohan (beautifully marbled), Lord Clyde, Madame C. Wood, Triomphe de Rennes, Beauty of Waltham, and Baronne Gonella (very fine). In Mr. Mitchell's display were good blooms of Madame Pierson, Peter Lawson, Gloire de Santenay, Prince Camille de Rohan, Catherine Guillot, Francis the First, Senateur Vaisse, Madame C. Wood, and Madame H. Jacquin. Mr. Cranston showed fine flowers of John Hopper, Peter Lawson, François Lacharme, Comtesse Cecile de Chabrillant, Turenne, Souvenir d'Elise, and Professor Koch.

Awards.—1, Mr. Cant, Colchester; 2, Messrs. Paul & Son, Cheshunt; 3, Mr. Mitchell, Maresfield; 4, Mr. Cranston, Hereford.

The collections of 24 were well shown. Mr. Cant's stand had fine flowers of Jean Goujon, President, John Hopper, François Lacharme, and Maurice Bernardin.

Messrs. Paul & Son showed nice blooms of Madame Furtado, Lord Clyde, Prince Camille de Rohan, Maurice Bernardin, and Baron Adolphe de Rothschild. Mr. Draycott had Anna de Diesbach, Charles Lefebvre, Le Rhone, and Madame Boll, in good condition.

Awards—1, Mr. Cant; 2, Messrs. Paul & Son; 3, Mr. Draycott, Humberstone.

In the classes for 12 new Roses Messrs. Paul & Son showed fine blooms of Lord Canning, Lord Clyde, Baron Adolphe de Rothschild, and Deuil du Prince Albert; and Mr. Cant had excellent specimens of Rev. H. Dombrain, Jean Goujon, Baron Lassus de St. Genies, and L'Eclatante.

Awards.—1, Messrs. Paul & Son; 2, Mr. Cant.

In collections of 12 Teas, Messrs. Lane & Son showed beautiful blooms of Niphetos, President, Souvenir d'un Ami, and Marquis de Foucault; and Mr. Mitchell, Souvenir d'Elise, Triomphe de Rennes, Comte de Paris, and Comtesse Ouvaroff.

Awards.—1, Messrs. Lane & Son; 2, Mr. Mitchell.

The Amateurs' Classes were well filled, and the competition more spirited than with the nurserymen. In collections of 36 varieties, Mr. C. J. Perry was 1st with an excellent stand, containing fine blooms of Madame C. Wood, Madame Clemence Joigneaux (large and fine), Charles Lawson, François Lacharme, General Jacqueminot, Gloire de Dijon, André Leroy d'Angers (very distinct), Charles Lefebvre, La Reine, Senateur Vaisse, Madame Boll, John Hopper, and Paul Ricaut. Mr. T. Laxton had good blooms of Anna de Diesbach, Lord Palmerston, Yellow Provence, Madame Knorr, Madame Furtado, Beauty of Waltham, and Coupe d'Hébé. Mr. Newdegate's stand contained nice examples of Madame Willermoz, Gloire de Vitry, Lord Raglan, Senateur Vaisse, Maurice Bernardin, and Anna de Diesbach.

Awards.—1, Mr. C. J. Perry, Castle Bromwich; 2, Mr. T. Laxton, Stamford; 3, C. N. Newdegate, Esq., M.P., Arbury.

In Collections of 18, Mr. Perry again stood first with beautiful blooms of André Leroy d'Angers, Charles Lefebvre, Madame Boll, Gloire de Dijon, Senateur Vaisse, Mad. H. Jacquin, and Mad. Schmidt. Mr. Hunt also had good specimens of General Simpson, Jules Margottin, Charles Lefebvre, and Lord Raglan. Mr. Newdegate also had pretty flowers of Madame Rivers, Turenne, and Victor Verdier.

Awards.—1, Mr. C. J. Perry; 2, Mr. Hunt, Leicester; 3, C. N. Newdegate, Esq., M.P.

Alexandra Park Horticultural Exhibition.—The second great flower and fruit show held under the auspices of the Alexandra Park Company, took place in their grounds on Wednesday and Thursday last, and as far as collections of gay plants were concerned the exhibition was a complete success. Owing to the weather being unfavourable, however, and partly no doubt to this new place of public resort being as yet but little known, visitors were scarce.

Stove and Greenhouse Plants.—These were plentiful and in admirable condition, some of the Allamandas, Stephanotis, Everlastings, Ixoras, and similar plants being all that could be desired both as regards health and bloom. A class, too, framed especially for the intermixture of plants in and out of flower, arranged for effect, was well supported, and quite answered the end in view, considerable taste being displayed in the setting up of their plants, not only by those to whom prizes were awarded, but also by less fortunate competitors. Tree Ferns from Mr. Williams and others, with noble heads of luxuriant foliage supported on massive trunks, served also to break the uniformity which prevails more or less among round-headed plants, and gave character and interest to this portion of the show. Fine-foliaged and variegated plants were likewise as usual very attractive, especially some of the examples of Alocasia macrorhiza variegata, whose large green leaves, boldly splashed and painted with white, were wonderfully fine, as were also some specimens of the bronzy-leaved A. metallica. Encephalartos and other Cycads from the garden of Mr. Yates, of Highgate, and others, also contributed to the interest of the occasion; and one or two plants which have not been shown before this season deserve perhaps a moment's notice. One was Allamanda violacea, a variety possessed of no particular beauty, but useful on account of its colour, which is purplish pink, pale in the petals, but darker in the throat. This came from Mr. Peed. The other is Roella ciliata, an old fashioned plant producing pale blue cup-shaped blossoms, each ornamented inside near the base with a darker blue band. The only drawback connected with this otherwise pretty plant is a disposition in the foliage to become rusty. That in the specimen from Mr. Wheeler however, now under notice, had not that fault, showing that under skilful management this little favourite may be even elevated to the first rank among ordinary exhibition plants. From Mr. Baines, gr. to H. L. Micholls, Esq., Bowdon, Cheshire, came some extremely well managed specimens of Ixora javanica, the pale mauve-coloured Bougainvillea glabra in the form of a bush, and other plants, which, although far travelled, had a cleanness and freshness about them which was quite delightful.

Awards.—12: 1, Mr. Chilman; 2, Mr. Peed; 3, Mr. Baines; 4, Mr. Wheeler. 8: 1, Mr. J. Fraser; 2, Messrs. Lee; 3, Mr. Williams; equal 4, Mr. Cutbush and Mr. Rhodes. 6: 1, Mr. Baines; 2, Mr. Chilman. Fine-foliaged plants, 12: 1, Mr. Williams; 2, Messrs. Lee; 3, Messrs. A. Henderson. 10: 1, Mr. Baines; 2, Mr. Taylor; 3, Mr. Donald; 4, Mr. Young; extra, Mr. Wheeler. Plants effectively arranged: 1, Mr. Williams; 2, Messrs. A. Henderson; 3, Messrs. Lee; 4, Mr. Taylor.

Orchids.—Although these were not shown so largely as we have seen them on other occasions this season, nevertheless what were produced were in good condition, and were as usual very attractive. From Mr. Wilson, of Enfield, came the handsome Cattleya superba; Mr. Peed had a well-flowered Lælia purpurata; Mr. Williams again showed his fine plant of Orchis foliosa; Mr. Woolley furnished Sobralia macrantha, the yellow Dendrobium clavatum, the Fox-brush Aërides, and the clear yellow Oncidium flexuosum, a most useful kind for cutting from for bouquets. In other groups were good examples of Odontoglossum citrosmum, different varieties of Bearded Lady's Slippers, and other well-known kinds.

Awards.—15: 1, Mr. Wilson; 2, Mr. Peed; 3, Mr. Baines. 8: 1, Mr. Williams; 2, Mr. Woolley; 3, Mr. Rhodes. 6: 1, Mr. Woolley; 2, Mr. Wheeler; 3, Mr. Chilman.

Ferns.—Of these, in addition to the Tree sorts above alluded to, were some grand examples of ordinary kinds. Mr. Williams, of Holloway, had very fine specimens of Gleichenia, especially of G. semivestita and dichotoma; also Todea africana, Cibotium princeps, and others. We likewise noticed an interesting group of British sorts from Mr. Williams, in which were many charming crested and other varieties.

Awards.—12: 1, Mr. Williams; 2, Mr. Woolley; 3, Messrs. A. Henderson. 10: 1, Mr. Young; 2, Mr. Taylor; 3, Mr. Holland. 6 Tree kinds: 1, Mr. Williams; 2, Messrs. Lee, Hardy sorts: 1, Mr. Williams.

Azaleas.—Of these a few good plants were contributed by Mr. Turner and others. Among them were Gem, still in good bloom, and the beautiful rosy-flowered variety called crispiflora.

Awards.—9: 1, Mr. Peed; 2, Mr. Penny. 6: 1, Mr. Turner

Cape Heaths.—Among these were some well-managed plants, especially Parmentieri rosea from Mr. Peed. We

also noticed good specimens of obbata, ventricosa magnifica, and other fine kinds.

Awards.—10: 1, withheld; 2, Mr. Rhodes. 8: 1, Mr. Peed; 2, Mr. Wheeler; 3, Mr. Chilman. 6: 1, Mr. Wheeler; 2, Messrs. Cutbush; 3, Mr. Rhodes.

Pelargoniums.—Both Fancy and other kinds of these were shown in fine condition by Mr. J. Fraser; among the former Cloth of Silver and Delicatum were loaded with blossoms, as were also Undine, Sarah Turner, Celestial and Musjid, dark kinds. Mr. Wiggins likewise furnished some good plants, among which were Lord Clyde, Mira, alba regina, Leviathan, Rembrandt, and Lady Taunton. Some two-year-old Seedlings were also shown, among the best of which were Legras, Antonina, Isabel, Fidelia, album formosum, Excelsior, and Pet. Scarlet sorts were numerous, chiefly from the neighbourhood of Finchley; with the exception of one or two good pink and salmon kinds all were well known sorts. Their chief fault was too much flatness of shape, many of them being tied closely down on wire trellises.

Awards.—9: 1, Mr. J. Fraser. 6: 1, Mr. Wiggins. Fancy sorts: 1, Mr. Fraser. Scarlets: 1, Mr. Catling; equal 2, Mr. Duke and Mr. Pettit; 3, Mr. McElroy; 4, Mr. Carter.

Fuchsias.—Of these considerable numbers were shown, principally small plants, but some of them extremely well flowered. Standard varieties were also shown, and made a good display. Among sorts the most remarkable was Conspicua, bright red with a snow-white corolla, the two colours contrasting well with one another. Prince Imperial appeared to be a useful dark variety.

Awards.—6: 1, Mr. Hayes; 2, Mr. Bartholomew; 3, Mr. Turner. Standards: 1, Mr. Turner; 2, withheld; 3, Mr. Young; 4, Mr. Bartholomew.

Achimenes and Gloxinias.—One or two collections of these were shown in good condition; novelty however among them appeared to be scarce.

Roses.—A few were shown in pots; but by far the best were contributed in the shape of cut blooms. Triomphe de Rennes and Celine Forestier were conspicuous among yellows, and of crimson sorts there were some glorious examples, which for size or brilliancy of colour have seldom been equalled. Foremost among these were Olivier Delhomme, nearly scarlet; Lord Macaulay, Madame Crapelet, Baron Adolphe de Rothschild, Alphonse Damaizin, Beauty of Waltham, Charles Lefebvre, François Lacharme, Gloire de Santenay, John Hopper, Le Rhone, Lord Clyde, Lord Raglan, Maurice Bernardin, Princess of Wales, Lord Herbert, and other equally fine kinds. To light Hybrid Perpetuals, Virginal is a good addition; but more are wanted in the same direction. Alba rosea is a good light Tea. These and others, however, we hope to see again at the forthcoming great Rose shows.

Awards.—12: 1, Mr. Wm. Paul. 10: 1, Mr. Terry. 18 new varieties: 1, Messrs. Paul & Son. 50 cut blooms: 1, Messrs. Paul & Son; 2, Mr. Turner; 3, Mr. Wm. Paul. 24: 1, Messrs. Paul & Son; 2, Mr. Wm. Paul; 3, Mr. Turner; 4, Mr. Fraser. 30: 1, Rev. V. Knox Child; equal 2, Mr. Moffatt and Mr. Sawkins; 3, Dr. Cooper; 4, Mr. Wm. Corp. 18: 1, Mr. Corp; 2, Mr. Moffatt; 3, Mr. Wm. Lane; 4, Mr. Norgrove.

Miscellaneous Subjects.—Among these were some extremely well-grown Sarracenias from Mr. Baines, of Bowdon; Caladiums and Lycopods from Mr. Young, Highgate; various cut blooms of Pansies from Messrs. Downie, Laird, and Laing, and others; and Pinks, Picotees, and Carnations from Mr. Turner and others.

New Plants.—Among these the greatest rarities were some reddish-purple, or rather purplish-violet varieties of Clematis lanuginosa, from Mr. Townsend, of St. Mary's Nursery, Hornsey. One was called C. l. venosa, another C. l. violacea, and of the two the last was the best; it is nearly of the same colour as Pleroma elegans, and, when better known, cannot fail to be a great favourite. Mr. B. S Williams showed a group of new plants, most of which have been reported on in former numbers. From Mr. H. Williams came a purple Petunia, prettily streaked with white; and Messrs Veitch had some new plants, among which was a young plant of Lilium auratum in a comparatively small pot, with no fewer than nine blooms on a single stem. So much for the profuse way in which this glorious Lily flowers.

Table Decorations.—The best three devices for the decoration of dinner tables came from Mrs. Cutbush, and will be found fully noticed in our report of the last show at South Kensington. The next best three were contributed by Miss Williams of Holloway, who showed March's stands charmingly decorated with both fruit and flowers. Other devices were also exhibited but these were the most remarkable.

Hanging Baskets.—Of these there were one or two exhibitions, allusion to which has been frequently made in former reports, and examples of Rosher's stately artificial stone vases on pedestals, dressed gaily with flowers by Mr. Cutbush, Mr. Williams, and others, were also exhibited, as well as other neat garden contrivances in stone from the same manufacturer.

Fruit.—Though not plentiful, some of the exhibitions in this department were excellent. The Black Hamburghs from Mr. Meredith and Mr. Henderson, and the Black Princes, three bunches of which weighed 10 lb. 6 oz., from Mr. Hill, were in every way wonderful specimens of good Grape growing. There were also some good Peaches and Nectarines.

Pine Apples.—Some well-grown Queens came from Mr. Young, gr. to C. Bailey, Esq., M.P., and the best Providences also came from the same cultivator. Good Ripley Queens, and Smooth-leaved Cayennes likewise came from Mr. Henderson and Mr. Penny.

Awards.—4 fruit: 1, Mr. Young; 2, Mr. Penny; 3, Mr. Henderson. 1 Providence: 1, Mr. Young; 2, Mr. Smith. 1 Queen: 1, Mr. Young; 2, Mr. Grant; 3, Mr. Rochford. 1 any other variety: 1, Mr. Henderson; 2, Mr. Wallis; 3, Mr. Boise.

Grapes.—Mr. Meredith's single dish of Black Hamburgh was, as well it might be, the admiration of everybody, and not less perfect was his basket of 10 lb. of the same variety. Both bunches and berries were large, black as jet, and covered with a beautiful bloom. A bunch of this variety from him also gained the 1st prize for fine flavour. Muscats, though fine, were in most cases not quite ripe. Collections of Grapes were furnished by Mr. Henderson and Mr. Meredith, and we noticed some good exhibitions of Golden Hamburgh and Buckland Sweetwater. Among new varieties was a bunch of Duchess of Buccleuch, stated to have been cut from a Vine in a pot started in January last. It is a white Grape, with long handsome bunches, the flavour of which is excellent, resembling somewhat that of a Frontignan. The cluster in question weighed 1 lb. We also noticed a bunch of Chavoush, another new white variety; but this we had not an opportunity of tasting. Some extremely good bunches of Black Hamburgh were sent from Castle Kennedy by Mr. Fowler, gr. to the Earl of Stair.

Awards.—3 dishes: 1, Mr. Meredith; 2, Mr. Embry; 3, Mr. Fowler. 1 dish Black Hamburgh: 1, Mr. Meredith; equal 2, Mr. Sawkins and Mr. Hyde. 1 dish any other Black: 1, Mr. Hill. 10 lbs. Black: 1, Mr. Meredith; 2, Mr. Woolley; 3, Mr. Henderson. Muscats: 1, Mr. Turner; 2, Mr. Hayes; 3, Mr. Embry. Any other White Grape: 1, Mr. Hyde; 2, Mr. Fowler; equal 3, Mr. Hill and Mr. Bland. Best flavoured Black: 1, Mr. Meredith; 2, Mr. Weir; 3, Mr. Wallis. Collection: 1, Mr. Henderson; 2, Mr. Meredith.

Peaches.—These were chiefly Royal George, Noblesse, Royal Charlotte, Early Newington, and Violette Hâtive.

Awards.—2 dishes: 1, Mr. Ford; 2, Mr. Allen; equal 3, Mr. Hill and Mr. Sage. 1 dish: 1, Mr. Ford; 2, Mr. Brown; equal 3, Mr. McLellan and Mr. Wallis; extra, Mr. Wills.

Nectarines.—Among these, Scarlet, Downton, Elruge, and Violette Hâtive were conspicuous, and of Hunt's Tawny we observed a dish of good fruit.

Awards.—2 dishes: 1, Mr. Allen; 2, Mr. Masters; equal 3, Mr. Dawson and Mr. Hill. 1 dish: 1, Mr. Brown; 2, Mr. Dawson; 3 Mr. Masters; extra, Mr. Wills.

Cherries.—These were chiefly Eltons; but we noticed one good dish of Black Circassian, and one or two of May Duke.

Awards.—White: 1, Mr. Turner; 2, Messrs. Lane; 3, Mr. Knight. Red: 1, Mr. Henderson; 2, Mr. Meredith; 3, Mr. Turner.

Melons.—Among these the best flavoured were Mr. Meredith's Hybrid Cashmere, Marquis of Ailsa, Windsor Prize, and Scarlet Gem.

Awards.—Green-fleshed: 1, Mr. Sawkins; equal 2, Mr. Meredith and Mr. Ford; equal 3, Mr. Simmonds and Mr. Kaile. Scarlet-fleshed: 1, Mr. Martin.

Figs.—Fine dishes of Brown Turkey were shown by Mr. Fowler, Mr. Brown, and Mr. Henderson.

Strawberries.—Among these were President, Oscar, Marguerite, Comte de Paris, Sir C. Napier, British Queen, Admiral Dundas, and Mr. Turner's fine looking new kind called Sir J. Paxton.

Awards.—3 dishes: 1, Mr. Kaile; 2, Mr. Turner; 3, Mr. Martin.

Miscellaneous Collections.—Three of these were contributed, one by Mr. Henderson, another by Mr. Dawson, and a third by Mr. Turner. They contained Pine Apples, Grapes, Peaches, and Nectarines, Cherries, Strawberries, Melons, and Figs.

Awards.—8 dishes: 1, Mr. A. Henderson: 2, Mr. Dawson; 3, Mr. Turner.

Fruit Trees in Pots.—Of these Mr. Lane had an interesting collection, in which were Vines loaded with fruit. The same grower also had a collection of Grapes, in which were some fine varieties, the fruit of which were stated to have been ripened in a large span-roofed vinery in his nursery at Berkhampstead. Mr. Fraser also showed fruit trees in pots.

THIRSK NATURAL HISTORY.—We mentioned at p. 487 the destruction of Mr. J. G. Baker's Herbarium. It appears that not only the herbarium but also the library of that gentleman, and about 8000*l.* worth of property, together with the whole of the reserved specimens belonging to the Botanical Exchange Club connected with this Society, of which Mr. Baker was Curator, were also consumed.

To obviate the necessity for suspending the operations of the Exchange Club, Mr. W. Foggitt, of Thirsk, has kindly presented a stock of duplicates for the nucleus of a new collection. The other members are also asked to gather examples of any scarce species, such as are likely to be required for exchange, in addition to those enumerated in the printed list of Desiderata for 1864.

The following is the Curator's report on the scarce plants distributed this year:—

"As in previous years I propose, along with our annual list of desiderata, to offer a few remarks relative to some of the plants which have passed through my hands during the past year, as before, restricting the observations to a brief notice of plants of critical interest, and to species sent from provinces or subprovinces from which they are not registered in the Cybele Britannica.

Anemone Pulsatilla.—Sent by Miss Atwood from Broadway, Worcestershire. It is not given in Cyb. Suppl. as a plant of the Mid Severn sub-province.

Caltha Guerangerii, Boreau.—This plant is described by Boreau (Flore du Centre, 3 edit. p. 21) as having the appearance and general character of C. palustris, but a looser habit of growth, stems tinged with reddish brown, broadly reniform strongly crenate-dentate upper leaves, sepals narrowed at the base, and with an interval between them in the expanded flower, oval anthers, which are lanceolate after the emission of the pollen, long yellow stigmas, and reddish brown carpels, with a long divergent beak. C. palustris M. Boreau describes as having faintly toothed reniform upper leaves, broad sepals which are but slightly narrowed towards the base, and short beaked carpels. C. Guerangerii is noticed by Mr. Syme in the new edition of English Botany, and there are specimens in the distribution this year which show more or less fully the characters attributed to it from Hampstead, Middlesex, gathered by Mr. Syme, from Wallasey, Cheshire, gathered by Mr. Bean, and from the neighbourhood of Thirsk, gathered by myself. I saw the narrow-sepaled plant in flower last Spring in several places and thought that it passed by gradual stages into the ordinary cup-flowered form.

Delphinium Ajacis, Reich.—Thanks to Mr. Hanbury there is this year a good supply of the Cambridgeshire Delphinium, most of the examples of which show well the points in which the plant differs from the true Consolida. The latter is figured by Mr. Syme in the new edition of English Botany, from a Jersey specimen.

Barbarea intermedia.—Mr. T. R. A. Briggs sends this year a specimen from Devonshire, from a quarry between Saltash and Plymouth, and I saw it last year in Surrey, in a field of Trifolium incarnatum and in a second North Yorkshire Station.

Viola tricolor.—I have distributed a series of specimens to show the range of Cornfield Pansies which we have in North Yorkshire, which come under this species, as the name is commonly applied. Of the extremes of the series, No. 1 comes near to or is identical with the French V. Lloydii, and No. 5 is the ordinary British representative of V. arvensis, whilst the others are intermediate stages of gradation.

Drosera obovata.—Mr. G. E. Hunt sends this year a supply of specimens from Sligichan in the Isle of Skye. I have only seen it previously from Braemar.

Arenaria norvegica.—Of this species and Cerastium nigrescens, we are indebted to the Rev. A. M. Norman this year for a good supply of specimens from the original Shetland stations.

Hypericum undulatum, Schousb.; *H. bœticum*, Boiss.; *H. decipiens*, Watson.—This interesting addition to the British flora, discovered by Mr. T. R. A. Briggs, in boggy ground in common wood, and two other adjacent stations in the vicinity of Plymouth, Devonshire, has already been noticed in the Journal of Botany and the new edition of English Botany. Its characters are as follows:—Rootstock creeping widely. Stem 2 or 3 feet high, slender, with four slightly winged angles. Leaves oblong oval, amplexicaul, thickly studded with pellucid dots, and with a network of pellucid veins. Panicle loosely corymbose, the long lateral branches often with only two or three flowers. Sepals always erect, lanceolate, acute or bluntish, with pellucid veins and dots, and sometimes, but not always, with black dots on the back and along the edges. Petals elliptical or obovate, as large as those of H. perforatum, tinged with red on the outside, slightly dotted with black on the edges. Styles about as long as the ovary, in the fully expanded flowers half as long as the capsule. From H. perforatum it differs by its quadrangular stem, broader leaves with network of pellucid veins, broader and blunter sepals and styles only half as long as capsule; from H. dubium by its closely dotted leaves and erect sepals; from H. quadrangulum by its less robust and less decidedly winged stem, more dotted leaves, larger petals and differently shaped sepals, and from all three by the much fewer and more distantly placed flowers of the panicle. It is already known as a plant of Spain, Madeira, the Azores, and the North of Africa.

Hypericum lineolatum, Jordan.—Of this plant, which is stated to differ from H. perforatum principally by having the petals marked with black lines upon their outer surface, I have distributed a few specimens from the neighbourhood of Thirsk, along with the normal form. I have seen it from Carnarvonshire (G. E. Hunt), and Northumberland (W. H. Brown).

Rubus saxatilis.—Sent by Mr. T. R. A. Briggs, from a hedgebank in Common Wood, Devonshire. It is not given by Mr. Watson as occurring south of the Severn province.

Herniaria hirsuta.—Sent by Mr. Bromwich, from a roadside at Kenilworth, Warwickshire, but as the station is in the neighbourhood of a tanyard where foreign bark is used, and he has gathered Heliotropium europæum and Amaranthus retroflexus in the same vicinity, he does not regard the plant as truly indigenous.

Tillæa muscosa.—Sent by Mr. Briggs from an old slate quarry at Colwell, near Egg Buckland, Devonshire. New to the Peninsula province.

Galium erectum var. diffusum.—Under this name I have distributed from a hillside at an elevation of 500 feet at Cleves near Thirsk, North-east Yorkshire, a plant with the following characters. Stems three feet long, quadrangular, slightly thickened at the nodes, smooth throughout or somewhat hairy below, prostrate, and rooting at the base, spreading or loosely ascending above, with numerous spreading branches from the lower part, so that the stems form a tufted and entangled mass. Leaves on the primary stem seven or eight in a

whorl, spreading at right angles from the stem or reflexed. Well developed leaves of the primary stem about a line broad, the broadest part being about two-thirds of the distance from the base to the apex, in colour grass-green, the edges rough with forward pointing prickles, the midrib opaque, or in the younger leaves translucent. Branches of the stem varying from erecto-patent to divaricate at right angles, in luxuriant plants even the lower ones producing flowers, the separate panicles narrowly pyramidal and not numerously flowered, and the whole of the bracts of the upper branches often half as long as the peduncles they subtend. Lobes of the corolla spreading or reflexed, in colour almost pure white or tinged with pink, broadly lanceolate, with an apiculus, in well-developed flowers 1-16th of an inch broad by 1-8th deep. Styles varying much in adhesion, free to the base or united up to the middle in the same plant. Fruit pedicels always erecto-patent, the angle not exceeding 45°, the pedicel two to four times as long as the fully matured fruit. Fruit oval, beautifully shagreened under a lens, but smooth to the touch. From G. erectum it differs principally by its habit of growth, by the relative development and position of its flowers and leaves, and by its thinner leaves with translucent midribs, in which it recedes in the direction of G. Mollugo. There are four French plants described intermediate between erectum and Mollugo, but this does not quite agree with any of them.

Borkhausia taraxacifolia.—Sent by Mr. W. Bean from a limestone quarry at Hutton Bushel, North-east Yorkshire. It is not given by Mr. Watson as occurring to the north of Suffolk and North Wales.

Chenopodium rubrum and *botryoides.*—Mr. H. C. Watson sends a series of specimens of these plants with which he writes:—These examples of C. rubrum and botryoides "are sent in order to assist in correcting some confusion of their names which has lately gained currency on the labels of specimens and in printed books. A small variety of C. rubrum, which is usually found on the gravelly or muddy margin of ponds frequented by geese, has been frequently mis-labelled with the name of C. botryoides, apparently on account of its nearly entire and fleshy leaves, although its inflorescence is the short dense spike of C. rubrum. This variety is consequently named C. rubrum var. pseudo-botryoides on the labels, and by other accompanying specimens it is shown to pass gradually into the typical form of C. rubrum, not into C. botryoides. The specimens of this latter very local species were gathered by Mr. Watson and Mr. Boswell Syme on the shore of Pegwell Bay, in East Kent, in September last. The only other localities certain for C. botryoides are those of Gravesend in the same county, where the plant was found by Mr. Syme, in 1852, and the long known one of Yarmouth, in Norfolk. To these counties that of Essex will probably be added, although some doubt still attaches to the records in that county. In most or all of the other alleged localities it is the variety of C. rubrum which has been misnamed botryoides."

Polygonum Raii.—Gathered last autumn by Mr. T. J. Foggitt, on the coast of Durham, near Seaton Carew, and by Mr. W. H. Brown and myself on the Northumbrian shore between Seaton Sluice and Blythe. It is considered in Cybele to require confirmation as a plant of the east coast.

Spiranthes æstivalis.—Sent by Mr. Hanbury, from the recently discovered station in Guernsey, a swamp called the Grand Mare.

Carex eriocterum, Poll.—Mr. Hanbury sends examples from the Cambridgeshire station, which he thus describes:—"It grows on chalk of our Gogmagog hills, at an elevation of 230 feet, associated with C. præcox. It is spread rather sparingly over a space of about 400 yards in length."

Carex inflata, Bab.—Mr. G. E. Hunt sends from the Hale Moss station a range of specimens, from which I have drawn up the following description. Root rampant; stems 1 foot to 1½ foot high, slender, with obtuse angles; leaves glaucous, channelled, only a line or rather less wide, flat or involute at the edges; bracts leaflike; male spikes usually two; fertile spikes one or two, erect, sessile or slightly stalked; glumes lanceolate, acute or apiculate, deep chestnut brown, with a green midrib; fruit pale green, ovate, narrowing gradually upwards into a beak, which is about half as long as the fruit, the spike being 1½ to 1⅞ inch long, and the fruit 1-16th of an inch broad by 2 to 3 lines long, and even when ripe erecto-patent only. It seems to me that Mr. Hunt is right in referring the plant to ampullacea rather than vesicaria. The only appreciable difference between involuta and ampullacea is in the fruit, which in the latter is subglobose and narrowed into the beak suddenly, so that the lower fruits spread almost at right angles from the axis when fully ripe. In C. vesicaria the stems are scabrous and acute-angled, the leaves flat and from two to three lines broad, the fruits fewer in number in a spike, and separately considerably larger than in the other two, for they measure one-eighth of an inch broad by a quarter or upwards long, the beak being from one-third to one-quarter as long as the rest of the fruit.

Introductions.—The only noteworthy aliens sent in the parcels of this year are Galinsoga parviflora *Cav.*, a Peruvian Composite plant which is now plentiful as a weed in some parts of the North of Germany, from waste ground at Kew (Rev. W. W. Newbould): and Malva parviflora from a heap of manure near North Sandwich, Kent (J. T. B. Syme)."

Notices of Books.

The Student's Manual of English Literature. Edited by Dr. William Smith. London: John Murray, 1864. Pp. 492, 8vo.

A work of considerable merit, entitled "Outlines of English Literature," was written in 1846 by Mr. Thos. B. Shaw. This gentleman had been educated at Shrewsbury School, under the late Dr. Butler, Bishop of Lichfield, and graduated at St. John's College, Cambridge, in 1836. He became tutor in a family, and afterwards proceeded to St. Petersburg, where he was appointed a Professor of English literature and Lector of the University. His lectures were eagerly attended. Princes and Grand Dukes were his pupils, and he lived respected and honoured by all till 1862, when his brilliant career was unfortunately cut short by death at the early age of 49.

The work of which we speak was originally undertaken at the request of the authorities of the Imperial Alexander Lyceum, and intended for the use of the pupils of that establishment. The present edition was intended to form one of Mr. Murray's excellent Student's Manuals, for which purpose it had been well nigh rewritten. It is the fruit of Mr. Shaw's later years and mature judgment, and arranged as it is with the well known editorial skill of Dr. Smith, this work will be found a most valuable addition to the student's library. To students who are preparing for the examination of the India Civil Service, the University of London, and the like, this Manual will be indispensable, and, as far as we can judge, it deserves the highest praise. A companion volume is to be published, divided in the same way, and containing a selection of choice passages from the writers noticed in this work, so that illustrative pieces may be read with the biographical and critical notice of each author, a manifest advantage to the student. A work of this kind to be really useful must be brief, and at the same time comprehensive. In a very few pages we have a bird's-eye view of Anglo-Saxon, Anglo-Norman, and early English literature. The second chapter is devoted to the age of Chaucer, and to our taste is extremely well written, and we think it particularly valuable, because few young men have the skill to read for themselves and form their own estimate of this charming but difficult author. But we have not space to specify. There is enough to awaken the curiosity and to interest the youthful mind, and at the same time to guide his path over the wide and seemingly-trackless field of English literature. There are 24 chapters and an index.

Monographia Hymenomycetum Sueciæ. Scripsit Elias Fries. Vol. 2, pp. iv. and 356, 8vo, 1851-1863.

No mycologist perhaps has been placed in such favourable circumstances for the study of the higher orders of European Fungi as the author of the important work before us, of which we have just received the final instalment, nor has any one studied this very difficult branch of botany with such assiduity and success. With the exception of a few southern forms, Sweden possesses the greater part of the European Hymenomycetous Fungi, and in far greater profusion perhaps than any other part of the Continent. For no less than 55 years the learned Professor has made them an especial study, though with something of the discouragement of Wordsworth's maiden, whom there "were very few to love." These higher Fungi, indeed, have been greatly neglected on the Continent, insomuch that Fries himself writes that with the exception of the British botanists they have met with little attention.

He accounts for this neglect in various ways. Partly because of the difficulty of preparing useful dried specimens, a difficulty which, however, is, we think, needlessly exaggerated, partly from the necessity of studying the species repeatedly, and in different localities; partly, again, from the supposition that the species are extremely difficult of determination, though when the main divisions are once mastered, there are not more definite species in nature. Another drawback, perhaps, is that the microscope seldom affords any definite characters for their determination; and, lastly, because there is not the same hope of novelties that there is in other branches of mycology.

Mr. Berkeley has, however, pointed out in his "Outlines of British Fungology" that far the better course is to commence with the higher species, in illustration of which he brought forth a pithy observation from Monte Christo, and Fries here adduces a sentence of like import from Linnæus, to the effect that natural instinct teaches us first to become acquainted with the more perfect forms, and then with those which are more remote, "naturalis instinctus docet primum nosse proxima, dein remotissima."

Our author's object in this work is to give more perfect descriptions of the Swedish species than have hitherto appeared, and such descriptions as may be in perfect accordance with the figures deposited in the Museum of Stockholm, which now amount to more than 1200, copies of many of which we have received through the kindness of Professor Fries.

This is not, however, all that the volume contains. Besides descriptions of several new species, it refers to the species of his various works, which may be regarded as classical, almost all the figures of Krombholz, Harzer, Letellier, Briganti, and others, which is a great boon to practical mycologists.

It should be observed that our Author has confined his descriptions to the Agaricini. Of the other divisions he gives a mere list, with the exception of characters of a few new species.

Professor Fries estimates the species of Agaricini, of which from 2000 to 3000 are known, at 10 times that number, but we fancy that he has greatly overrated them.

As 100 copies only of this work were printed, the whole stock will soon be exhausted. Indeed, it is almost impossible now to obtain the first part of the second volume. Those who are so fortunate as to possess it already, should procure the remaining part immediately, either through Bonnier of Stockholm, or Kœhler of Leipsig.

Garden Memoranda.

Messrs. Ivery's Nursery, Dorking.—Among the beautiful specimens of Wellingtonia in this Nursery, is one with 12 perfect cones. These cones were first noticed about Midsummer last year, but did not attain perfection in the autumn; they have remained uninjured all the winter, and are now firmly set. They are all growing round the main stem at the end of the growth of 1862. Although these cones are apparently in perfect condition, it is possible that they are abnormal, caused by the frequent removal of the plant. A very fine plant of Lonicera aureo-reticulata stood out all the winter in an exposed situation in the same nursery. Mr. Ivery states that, with the exception of the severe frost in February, it continued to grow the whole time, the frost only taking off an inch or so of the new shoots.

Miscellaneous.

Birmingham Rose Show.—The third annual exhibition of Roses at Birmingham is fixed for Thursday and Friday, the 7th and 8th of July; and from all we can learn, the prospects of a fine display of the Queen of Flowers are all that the most enthusiastic admirer can desire. With a wise liberality the committee have added fourth prizes in all the classes. The great merit of nearly every stand exhibited at this great Midland Counties Show at its past meetings renders this step a very fair and judicious one. The prize list has also been generally revised and amended. We trust that the persevering efforts of the committee will be rewarded by still increasing success; and that, good as the first and second displays have been, they may be surpassed by the forthcoming one. We would only further add that no entry of intention to exhibit can be made after Friday next, the 1st of July.

Orchids which have Flowered in the Collection of R. Warner, Esq., Broomfield, Chelmsford, during the Month of May.—Phajus Wallichii, with 10 fine spikes of bloom, lasts a long time; 2 Lycaste Deppei, one a large plant showing upwards of 60 flowers—to flower this plant well it must be thoroughly rested in a cool house; 5 Calanthe veratrifolia, which makes such a good exhibition plant; 6 Dendrobium primulinum; 2 D. Jenkinsii; 3 D. aggregatum majus, and a plant of D. chrysotoxum, with 16 fine spikes of bloom; 3 of the lovely D. Devonianum. In our opinion, this is one of the gems of the whole order, and a rival for the famed Wardianum, which has been in flower. Had a good show of 12 D. macro-giganteum, of which there appear to be several varieties; had one with a growth nearly a yard long, and with upwards of 30 flowers on; also D. macro-majus, and the old macrophyllum, which is inferior to the two preceding; giganteum is the best; 4 D. anosmum; 3 D. tortile, two varieties, one of a deeper colour and larger flowers than the other; 4 D. crepidatum, and 2 D. pulchellum; the last-mentioned likes Indian house treatment; several varieties of Phalænopsis amabilis, both in flowers and foliage; some have leaves of a purple hue on the under side, dark green above, others light green; some are lanceolate-obovate outline, others obovate, and one or two almost orbicular; those with leaves approaching the obovate or orbicular outline are the best varieties; the flowers differ both in size, colour, and substance. Nine Java and Borneo varieties of P. grandiflora; the Borneo variety is of flimsy texture, bad form, and a good deal of yellow colour in it; the Java variety is of excellent form and substance, and of firm texture: have a plant of Java variety with six leaves, some feet long, with 20 flowers expanded, and others not yet open. The rare Portei, the only plant of which in cultivation is to be found in this collection; it is certainly a lovely object; it has had 23 flowers on, though most of them are now gone off; the foliage is somewhat similar to P. amabilis, the flowers are about 1½ inches across, sepals and petals pure white, lip of a delicate pinkish hue; it grows and flowers luxuriantly; treated as the others. Several varieties of P. Schilleriana; one has leaves a foot long, and had a spike of 23 flowers, each flower measuring 3 inches across; some have beautiful bands of silvery white stretched across the upper surface of the leaves with remarkable precision, while in others the silvery bands are nearly obliterated, and the leaves present a comparatively dull appearance. There are variations also in the flowers: some are of a deep rose colour, some light, and some are larger and of better form and substance than others. 9 Cattleya Skinneri, just

going off; had one plant with 55 of its bright mauve-coloured blossoms on; we have this day (May 26) 300 flowers of Cattleya Mossiæ expanded, and many more buds not opened; and being of infinite variety in size, colour, and form, present a gorgeous bank of flowers, contrasting beautifully with each other. Some of the plants have 19 or 20 flowers on, and one plant with even 30 flowers on, growing in a pot 12 inches in diameter across the top. Some of the flowers measure 8 inches across; some have dark pink sepals, some light, some intermediate; but it is in the labellum where is the greatest variation; in some crimson predominates, dark or light; in others orange, and in others there is a beautiful and harmonious combination of both, and some are quite light; some have a clear white fimbriated margin to the lip, in others this is not so distinct; in fact, they are of endless beauty and variety, baffling all description. 4 Cattleya Williamsii: it is one not very generally known; it is of the Mossiæ section, sepals and petals pure white, lip rich bright crimson, backed up by light sulphur-yellow, with pure white fimbriated margin. 1 C. amethystina, 1 C. ianthina, 2 C. labiata splendens, now in full bloom, have 15 flowers on. I think it to be a very superior variety of Mossiæ rather than of labiata. 3 Lælia Warneri, 1 Cattleya elegans, 5 L. purpurata, too well known to need any description, have one plant with 33 flowers on; 1 L. flava, 2 L. cinnabarina, lovely thing, nice show plant; 1 Broughtonia lilacina, pretty little thing, flowers light mauve; 2 Lælia grandis, sepals and petals light buff, lip cream white with streaks of dull purple in interior; 5 Cypripedium barbatum, 2 ditto ditto nigrum, 1 ditto ditto Crossii, a variety of very ornamental foliage; 1 C. Hookeriæ, flowers not very attractive, foliage good; 4 C. villosum, and 5 the curious hirsutissimum; 4 fine plants of Oncidium sphacelatum grandiflorum, which when well flowered is a very showy thing; 3 O. papilio, 2 Harrisonianum; 3 pulchellum, which requires a good moist heat; 2 O. ampliatum majus, 1 O. leucochilum, 1 O. species (Bahia), 1 Cyrtochilum flavescens; the Cyrtochilums appear to require starving into flower; 8 Chysis Limminghii, 3 ditto aurea, 4 ditto bractescens, 1 Epidendrum alatum, 1 ditto Hanburyi, 1 Ansellia Zulu, is a plant pretty generally known, though we are informed it has never been flowered in this country until this year; the flower-spike is similar to a Phajus spike; it is now 4 feet in length, and as it is not yet finished growing, the spike will rise to 5 feet, or perhaps more; it already shows for 30 flowers, which are about 1½ inches across; sepals and petals light green and brown, lip white with some pinkish marks in the interior; it is not possessed of much beauty. Anguloa Ruckeri with several flowers expanded; A. Ruckeri, Clowesii and eburnea flourish in a cool house, where they are making a growth superior to that produced in a warm temperature. Have 6 plants of Odontoglossum citrosmum roseum, and 1 of the old variety with 5 fine spikes, bearing in all 65 flowers. This is one of the Odontoglossums that will not endure cool treatment. 4 O. nævium, grown cool under the shade of Vines; it delights in moisture: O. membranaceum, nice thing, and 1 odonto [What can this mean?] was one of the finest of this remarkable race; both are grown with nævium. 1 Cymbidium pendulum, with spikes upwards of 2 feet long and 33 flowers expanded on 1 spike at one time; 4 Trichopilia crispa, large plant with 30 or 40 flowers on; we have 2 or 3 varieties of this plant: 4 T. suavis, 4 T. coccinea, and large plant of T. tortilis; 8 Saccolabium retusum, 3 Aërides (foxbrush), one with spikes upwards of 2 feet long; 1 A. Warneri, 4 A. virens, which on account of its sweet scent and delicate tinges of colour is a great favourite with us; 3 Vanda tricolor, 11 flowers on a spike; 6 V. suavis, one spike showing for 14 flowers; 3 V. insignis, and 3 of the curious V. cristata, which succeeds best on logs; 1 Chelonanthera gibbosa, 3 Rodriguezia secunda, 1 Sobralia macrantha, a gorgeous thing. *Extract from Mr. W.'s Gardener's Note Book, for May last, published in the Proceedings of the Royal Horticultural Society with numberless misprints here corrected.*

Transportation of Fish Ova to the Antipodes—The following extracts from letters on the transportation of valuable fish to the Antipodes, the first explaining the method adopted, and the second the result, are of sufficient importance to persons interested in Natural History pursuits to be worth recording in our pages. The original letters were addressed by Mr. James A. Youl to the *Times*:—1. Jan. 21, 1864. "Notwithstanding all the efforts made by the fishermen, we were unable to obtain a single ripe fish so long as the severe frost lasted, which appears to have prevented the spawning fish from leaving the sea and ascending the tributaries of the larger rivers to deposit their spawn. This bears out the opinion expressed very recently by Mr. Frank Buckland 'that the salmon is a very knowing fish,' and would not, therefore, quit the estuaries so long as the spawning beds were frozen and unfit for the reception of the ova." Ripe ova were obtained from Scotland, Lancashire, Worcestershire, and Wales, from fish which had ascended the rivers a few days after the breaking up of the frost. The ova were received between 5 A.M. and 10 A.M., and were placed safely in the ice-house of the Norfolk by 4 P.M. "The boxes in which the ova are packed are made of inch pine, 11¾ inches long, 8¾ wide, and 5¼ deep, perforated with holes top, bottom, and sides, to allow the water from the ice as it melts to flow into the boxes, and percolate through the Moss and ova inside. The manner of packing is as follows:—A couple of handfuls of charcoal are spread over the bottom of the box, then a layer of broken ice, after this a bed or nest of wet Moss is carefully made and well drenched with water; the ova are then very gently poured from a bottle which is kept filled with water; the box is now filled up with Moss, and pure water poured upon it, until it streams out from all the holes; another layer of finely pulverised ice is spread all over the top of the Moss: the lid is then firmly screwed down. As soon as this process is completed, it is most desirable, in my opinion, that the boxes should be placed in immediate contact with ice. One hundred and sixty-four boxes, containing above 90,000 ova so treated, were firmly packed at the bottom of the ice-house, covering the entire space. Upon these a solid mass of ice was piled, to the height of 9 feet, so that as long as any ice remained the ova would derive benefit from it."——2. *June* 4, 1864. "I have just received a telegram from my friend Mr. Edward Wilson that the salmon ova by the Norfolk arrived safely at Melbourne, and have been transmitted to Tasmania, and were showing signs of life in the breeding ponds of the River Plenty.

Calendar of Operations.

(*For the ensuing week.*)

As daylight and sunshine have now arrived at their climax for this season, stove plants which are in a growing state should be supplied with the maximum amount of heat and moisture, that they may the sooner complete their growth, and have a longer period to ripen it in. Water should be freely and frequently sprinkled on every evaporating surface, with a view to counteract the drying effects of abundant ventilation. Incessant exertions must be made to keep insects in check, particularly red spider. The blooming season of many plants may be retarded by pinching off the earliest flowers, thereby husbanding their strength and inducing them to make a longer season of growth. Forcing pits should now be actively employed in forwarding Achimenes, Gloxinias, Balsams, Cockscombs, Globe Amaranths, and other plants for immediate and autumnal display.

FLOWER GARDEN AND PLANT HOUSES.

Out of doors the most pressing work at present will be that of keeping the place in order. The old surface of walks should be loosened a little with a sharp rake, and then receive a slight sprinkling of fresh clean gravel; the best time for the operation is when they are in a medium state between wet and dry, as the roller is then more effective in restoring the hard smooth surface than when the gravel is too dry. In connection with the repairs of the walks, any irregularities in the edges should be put right; and the edgings, whether of Grass or Box, or other evergreen, should be repaired and clipped.

CAMELLIAS.—Plants that have completed their growth and set their bloom buds, as many of the early flowering kinds will have done, should be removed to a cool airy house to harden their wood. Late growing sorts must be still kept warm and close.

HOLLYHOCKS.—These should be mulched and then thoroughly watered; the latter operation should be continued once or twice a week if dry weather should set in.

PANSIES.—Take off young cuttings as they are obtainable, and strike them under small glasses in a shady situation.

PINKS.—Water copiously should dry weather prevail. During the time the buds are swelling, weak liquid manure may be applied beneficially.

PELARGONIUMS.—With many it is now no small matter of anxiety to prolong the bloom of these, and if we can assist them but slightly, that will afford some satisfaction. Many of the finest kinds are now in perfection, and it is most desirable that shading should be attended to carefully, for one sunny day may injure the flowers beyond hope of remedy. It is equally desirable that the atmosphere of the house should be kept cool.

FORCING GARDEN.

CUCUMBERS.—Pay great attention to thinning and regulating the shoots; go over them at least twice a week, as they soon get crowded if neglected a few days. Guard against red spider, by syringing the plants and frequently sprinkling every part of the house. Attend to plants in frames. Keep linings well made up; earth up, peg out, and train shoots of growing plants. Water when necessary.

MELONS.—Keep up the top temperature, and a bottom heat of 85°, and a moderately moist atmosphere to the successional plants, and give occasional waterings. Those plants which are ripening their crops will require less water and a drier atmosphere. If it be desired to obtain another crop from them, care must be taken that the soil does not become too dry; water should be given to the under portion of the soil, by means of holes made with a tin tube.

ORCHARD HOUSE.—Syringe twice daily, taking care to wet the undersides of the leaves as well as the top. It is important that this is well attended to, otherwise, even though syringed well overhead, the undersides of the leaves may be devoured with red spider. Attend to the thinning of the fruit. Thin and stop shoots, not retaining more than is absolutely necessary for another year. Ventilate freely.

PEACHES.—Continue to keep insects in check, using the syringe freely to keep down the red spider, and tobacco smoke to destroy thrips. The foliage must be kept healthy, to ensure success in the crops of this and future seasons. Should mildew make its appearance in the late house, dust the plants with sulphur immediately.

PINES.—When the bottom heat is declining, it may be recruited by surfacing the beds with a few inches of new tan; as, independently of its own fermentative power, it absorbs a considerable quantity of heat from the sun, and attracts the roots to the surface, where they revel amongst the new material. In addition to these advantages, it checks evaporation, economises labour in watering, and keeps the roots in a more equable state of moisture during hot weather. The syringe must be freely used every fine afternoon, and the pits shut close for an hour or two, to compensate the plants for the loss they sustain by evaporation during the day.

VINES.—Let late Vines be supplied with a sufficient amount of heat and moisture to keep them growing at a healthy rate.

HARDY FRUIT AND KITCHEN GARDEN.

Persevere in the system of gradually removing all superfluous shoots from wall fruit trees, and in order that the proper balance between the crop and the capability of producing it may be maintained, it will be necessary to disbud more or less severely according as the trees are vigorous or weakly; for example, vigorous trees, full of life, and evidently having a vast accumulation of sap, must have an outlet, or else there will be a risk of obtaining only strong unfruitful wood. Stop and thin therefore with great caution.

CABBAGE.—Sow now for Coleworts. The Rosette is one of the best.

CELERY.—Earth up this as it requires it, selecting a dry day for the operation.

ENDIVE.—Sow now for a first crop.

POTATOS.—Let these be earthed up as they require it, using a three-pronged hack instead of a sharp draw hoe, which it is a common practice to use, although it is liable to cut off the young strings which lie near the surface of the ground. The soil for earthing should be drawn from the centre of the space between the ridges.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending June 22, 1864, as observed at the Horticultural Garden

June.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 16	12	30.034	29.811	74	46	60.0	60¼	59	W.	.60
Friday 17	13	30.078	30.033	76	44	60.0	61	59	S.W.	.16
Satur 18	14	30.112	29.957	75	45	60.0	62¼	59¾	W.	.01
Sunday 19	○	30.225	30.199	74	39	56.5	62	59½	W.	.00
Mon. 20	16	30.252	30.190	74	50	62.0	62¼	59¾	W.	.00
Tues. 21	17	30.116	30.066	71	44	57.5	63	60	W.	.00
Wed. 22	18	30.122	30.036	70	50	60.0	62¼	60	S.W.	.00
Average.		30.129	30.031	73.4	45.4	59.4	62.0	59.5		.15

June 16—Clear and fine; fine throughout, warm at night.
— 17—Uniformly overcast; cloudy and fine; overcast; rain.
— 18—Rain; very fine throughout.
— 19—Fine; very fine, cold at night.
— 20—Fine; very fine; warm at night.
— 21—Fine, with brisk wind; partially clouded; fine.
— 22—Fine; brisk wind; partially clouded and fine.
Mean temperature of the week 1 1-3d deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending July 2, 1864.

June and July.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 26.	73.8	50.2	62.0	19	0.69 in.	1	2	4	2	2	14	10	3
Mon. 27..	72.0	48.6	60.3	13	0.80	4	2	2	2	3	17	8	—
Tues. 28..	73.3	49.3	61.3	15	0.65	3	2	6	1	3	12	5	6
Wed. 29..	72.8	48.6	60.2	10	0.22	3	4	3	1	—	16	6	5
Thurs. 30..	72.7	48.3	60.0	12	0.80	—	6	4	1	4	11	6	6
Friday 1..	72.3	51.7	62.0	18	1.18	3	5	5	4	4	11	5	5
Satur. 2..	73.3	51.5	62.4	14	0.22	2	5	3	—	5	10	9	4

The highest temperature during the above period occurred on the 30th, 1862—therm. 91 deg.; and the lowest on the 28th, 1862, and 30th, 1863—therm. 34 deg.

Notices to Correspondents.

INSECTS: *E A M.* The small fallen Apples have been infested by the caterpillars of a sawfly, Tenthredo testudinea, which laid its eggs in the embryo fruit whilst in flower. We know no other means of checking the mischief than by collecting the Apples as soon as they fall, and before the grubs have escaped, and burning them. *W.*

NAMES OF PLANTS: *Verna.* 1, A Fuchsia without flowers; 2, Centranthus ruber, with white flowers; 3, Not to be found; 4, Quite crushed to pieces.—*An Old Subscriber.* Holcus mollis; Festuca elatior; and Avena flavescens, we believe. None of these had either leaves or numbers.—*J H M.* Primula cortusoides.—*G. Bath.* The specimen is certainly not plicatum; possibly some form of prunifolium. Whence comes it?

ORCHARD HOUSES: *Belfast, W.* As we have no experience in the matter you inquire about, and do not know any one who has, we can only advise you to consult Mr. Rivers.

ROYAL HORTICULTURAL SOCIETY.—We must refer enquirers to the Daily Papers for the events at South Kensington since the Garden has been permitted to fall into the uncontrolled hands of Mountebanks; Horticulture being discarded in favour of Mumbo Jumbo, and similar personages, with whom we have not the honour to be acquainted.

STRAWBERRIES: *B W Knight.* Your Strawberry, Princess of Wales, is very large, irregularly round, flattened, and sometimes cockscomb-shaped, deep red; seeds not deeply embedded; flesh bright red next the outside, pale at the centre, hollow at the core in the larger specimens; flavour very good, better than that of many of the very large varieties.

MISC.: Two shillings will be given for a Copy of October 15, 1853.

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MANUFACTURED BY 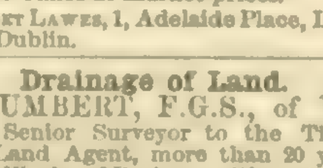 THE PATENT

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The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per ton
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
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LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
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Drainage of Land.

MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

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MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
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THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.
The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.
Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses of the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W.

THE GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY.
Offices: 52, Parliament Street, S.W.
Under this Company's Act tenants for life, trustees, mortgagees, married women, committees of incompetent persons, beneficial lessees, corporations (ecclesiastical or municipal), incumbents, charitable trustees, &c., may effect the following Land Improvements, and charge the outlay and expenses on the estate improved, by way of rent charge, to be paid by half-yearly instalments, viz.:—
1. All works of Drainage, Irrigation, Warping, and Embankment.
2. The Erection of Farmhouses, Cottages for Agricultural Labourers, and all kinds of Farm Buildings.
3. The Construction of Roads.
4. The Grubbing and Clearing of Old Woodlands, Enclosing, Fencing, and Reclaiming Land.
The owners of estates, not entailed, who may be desirous to avoid the expense or inconvenience of a legal mortgage, may also charge their Estates with an outlay in improvements under the simple and inexpensive process of the Company's Act.
The term of years for the rentcharge is fixed by the landowner, so as to adapt the amount of annual payment to the circumstances of the parties, the term for landing works being limited to 31 years.
No investigation of title being required, and the charge not being affected by incumbrances, no legal expenses are incurred.
The alternative modes for effecting improvements are threefold:—
No. 1. The works may be designed and executed entirely by the landowner's agent, and the Company employed only to supply the loan and conduct the matter through all the official forms for charging the outlay on the estate.
No. 2. The Company will supply plans, specifications, and estimates for any improvements to be executed by the landowner's agent as under No. 1. In each of these cases the landowner will be solely under the control of the Enclosure Commissioners.
No. 3. The Company will undertake the entire responsibility of the improvements, prepare the plans, execute the works, and finally charge on the estate the actual amount expended, with their commission thereon, approved by the Enclosure Commissioners.
Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.
Works of Drainage and other improvements are also executed on commission for landowners, who merely require the skill and experience of the Company's officers and a staff in constant practice.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Office of the Company, 52, Parliament Street, S.W.

Land Drainage, & other Agricultural Improvements.

MR. BAILEY DENTON, C.E., maintains a large Staff for the Execution of Land Improvements by a commission of 5*s.* per acre for Under Drainage, and a fixed charge for Outfall and other works.
For particulars, apply to him, at 52, Parliament Street, Westminster.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.
SPRING SESSION, 1864.
President.—The Right Hon. the Earl BATHURST.
Council.
Rt. Hon. the Earl BATHURST. | Rt. Hon. T. H. SOTHERON ESTCOURT, M.P.
Rt. Hon. the Earl DUCIE. | EDWARD HOLLAND, Esq., M.P.
Hon. WILLIAM BATHURST.
Principal—The Rev. JOHN CONSTABLE, M.A. Trin. Col. Camb.
Farm Manager.—J. L. FLETCHER.
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Assistant to Chemical Professor.—R. WARINGTON, Jun., F.C.S.
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Mathematics and Surveying.—The Rev. W. MEREDITH LANE, B.A., Scholar of Trin. Coll. Camb.
Drawing.—JAMES MILLER.
SPECIAL LECTURERS.
J. BAILEY DENTON, M. Inst. C.E.—On DRAINAGE.
Professor J. MORRIS, F.G.S., of University College, London—On GEOLOGY.
JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.
WILLOUGHBY WOOD, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.
JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.
JOHN THORNHILL HARRISON, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.
THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.
ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.
RICHARD GRIFFITHS WELFORD, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.
Applications for Admission and for further particulars may be made to the Principal.

ROYAL AGRICULTURAL COLLEGE CLUB.
The ANNUAL DINNER of this Club will be held at the Queen's Head Hotel, Newcastle-upon-Tyne, on WEDNESDAY (July 20) during the week of the Meeting of the Royal Agricultural Society.
Tickets to be had at the Bar of the Hotel up to Tuesday evening, July 19. Members are allowed to introduce friends.
JACOB WILSON, Hon. Sec. pro tem.
Manor House, Woodhorn, Morpeth.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE, 1864.
The LOCAL EXECUTIVE COMMITTEE have arranged for a Registry of Lodgings and other Accommodation for Visitors to Newcastle during the Show, to be kept by Messrs. C. BROUGH, Academy of Arts, Blackett Street, and G. MURAS, 4, Northumberland Street, to whom applications must be made.
R. DODDS,
E. I. J. BROWELL,
WALTER JOHNSON,
JACOB WILSON,
} Hon. Local Secs.

HORSE SHOW.—AGRICULTURAL HALL, LONDON.
OPENING DAY and PUBLIC JUDGING.—FRIDAY, July 1, at 10 o'clock A.M. Admission Half a Crown.
HORSE SHOW.—Admission, SATURDAY, at 9 A.M., Half a Crown.
HORSE SHOW.—A PARADE of PRIZE HORSES every afternoon.
HORSE SHOW.—Each Class will be Exhibited in the Tanned Ring once a day.
HORSE SHOW.—FORTY THOROUGH-BRED STALLIONS.
HORSE SHOW.—TWENTY ROADSTER STALLIONS.
HORSE SHOW.—SIXTY-NINE HUNTERS in THREE CLASSES.
HORSE SHOW.—THIRTY-FIVE WEIGHT-CARRYING COBS.
HORSE SHOW.—NINETY PONIES in THREE CLASSES.
HORSE SHOW.—ARABS, BARBS, TURKS, CHARGERS, HACKS, STATE CARRIAGE HORSES, &c.
HORSE SHOW, AGRICULTURAL HALL.—Admission, MONDAY, TUESDAY, and WEDNESDAY, July 4, 5, and 6. One Shilling.
HORSE SHOW, AGRICULTURAL HALL.—SEATS to be had in the ORCHESTRA to VIEW the JUDGING and DAILY PARADE. One Shilling.
By order, S. SIDNEY, Secretary.

The Agricultural Gazette.
SATURDAY, JUNE 25, 1864.

WE have been requested to publish a long correspondence between Mr. HALLETT, of Brighton, and Mr. SHIRREFF, of East Lothian, commencing so long ago as February 9, and arising out of an article on Plant Improvement by the latter gentleman, which appeared in this Journal on Feb. 8 under his own signature (see No. 6 *Agricultural Gazette*, 1864). The letters are not of public interest, and we are, therefore, unable to find room for them. It appears, however, that Mr. HALLETT and his advisers having read this article as a personal attack, conveying charges of "fraud" and "imposition," which were intended for himself, lost no time in instructing his solicitors to demand the withdrawal of the offensive terms. Mr. SHIRREFF's reply to this demand is the only essential portion of the long series of letters which followed; and we are glad to give the following extract from it, in order that the misunderstanding which has taken place may be corrected.

Mr. SHIRREFF, who denies that his use of the objectionable terms could be construed into a personal attack, nevertheless expresses himself as follows:—

"In writing the article in question I had no intention of giving offence to Mr. HALLETT, or of casting imputations on him; and if I have exceeded the bounds of fair discussion, I have no objection to withdraw anything improper which may have dropped from my pen."

We hope that the persona discussion which has thus terminated, will not check that public discussion of the important subject of plant improvement which none are better able to prosecute than Messrs. HALLETT and SHIRREFF.

A LETTER upon a "New System of Drainage" was read at a late meeting of the Agricultural Society at Belfast from Mr. ROBIE, of Kilbarchan, Paisley, which deserves some attention. This gentleman very properly describes land drainage as underground irrigation; its object being to withdraw the subsoil water, in order that the rainwater may traverse soil and subsoil, and so replenish the earth and feed the roots by which it passes.

This is done by having an outfall below the subsoil which it is desired thus to irrigate—an empty space into which the whole water of the soil may press—and above which the weight of that water is urging it downwards. It appears, however, that in certain river-side meadows with deficient fall considerable fertilising effect has followed a land drainage made 3 or 4 feet deep, even though the main drain enters the running water of the river 2 or 3 feet below its surface—a fertilising effect which is alleged to be equally striking with that which follows a deep drainage where the main delivers water into a ditch lower than itself; and Mr. ROBIE, who is aware of Mr. BOWICK's success in thus draining river-side meadows near Kenilworth, pronounces it a new system of drainage—one which combines the two established systems of ELKINGTON and DEANSTON. We do not see in what way it can be said to resemble ELKINGTON's method, which acted merely by tapping reservoirs of subsoil water: whereas this seems to be a contrivance for letting a body of water more freely into the subsoil.

Assuming, however, the facts to be as they are alleged to be, it is possible that something more than the plain and obvious action of the weight of the water in the soil above the outfall, which is the sole operating cause in ordinary drainage, may be in operation here. If a vessel of water be connected by a tube below it with an exit on the same level as that at which the water stands in itself, and that exit pipe be subjected to the action of a rapid current of water across its mouth, the adhesiveness of the particles of water to one another may to some extent tend to pull the water along the tube out of the vessel; and in this way a running river passing over the mouth of a buried drain will tend in some slight degree to pull the water along the drain out of the subsoil in which it is lodged. The first effect however, of opening a drain into the river below the surface of the water in that river, will be to send the water back along the drains till it stands in them throughout the field at the level of the river surface. If the surface of the land be 1 foot higher than the surface of the water, then, whether those drains are made 1 foot or 3 feet deep, the water will stand just 1 foot from the surface when drained as it did before it was drained. The pulling action of a sluggish stream passing the mouth of the buried main cannot be denied—but how small its drainage influence must be can hardly be expressed.

The effect of drainage, 3 feet or 4 feet deep, and buried in water to within 1 foot of the surface, must indeed be attributed wholly to the 1 foot drainage which is thus provided, and which would be more cheaply furnished to the land by a set of open furrows 12 inches deep.

—— IT will be seen from the report in another page, that the Committee sitting on the Cattle Diseases Prevention Bills, after the evidence of Mr. CONGREVE, of Rugby, Chairman of the Central Farmers' Club, and others, have taken the foot and mouth disease off the schedule of those diseases which are to render cattle liable to the operation of the Bills in question.

—— THE attendance at the meeting of the Bath and West of England Society on Durdham Down last week was unparalleled. The total number of visitors to the yard during the five days was 88,138, and the receipts close on 6000*l.*

The following figures contrast the Bristol meeting with its immediate predecessors :—

			Visitors.	Receipts.
First Day.				
1864	Bristol		2,419	£336 12 0
1863	Exeter		325	111 2 0
1862	Wells		181	58 17 0
1861	Truro		152	53 3 6
1860	Dorchester		178	63 0 0
Second Day.				
1864	Bristol		4,540	540 15 0
1863	Exeter		2,143	270 7 0
1862	Wells		268	47 3 6
1861	Truro		639	120 12 6
1860	Dorchester		659	135 15 6
Third Day.				
1864	Bristol		18,300	2104 17 0
1863	Exeter		4,326	525 9 0
1862	Wells		4,392	533 6 6
1861	Truro		7,278	898 10 10
1860	Dorchester		5,080	656 14 9
Fourth Day.				
1864	Bristol		41,704	2080 19 0
1863	Exeter		9,952	1188 12 0
1862	Wells		6,508	780 13 10
1861	Truro		8,429	1017 1 5
1860	Dorchester		5,938	697 15 0
Fifth Day.				
1864	Bristol		10,574	913 5 0
1863	Exeter		18,207	878 0 3
1862	Wells		4,004	188 10 1
1861	Truro		12,923	619 17 7
1860	Dorchester		10,803	516 1 7

—— WE learn that Mr. BOWLY, of Siddington, and Mr. RICH, of Didmarton, have purchased Capt. GUNTER'S 7TH DUKE OF YORK, the bull that has been used on their herds during the past two years. The purchase money, 500 guineas, is another illustration of the high prices BATES'S blood commands.

SEWAGED ITALIAN RYE-GRASS.

THE longer I farm the more I become impressed with the vast importance to the farmer and to the country at large of the value of this Grass when watered abundantly with sewage, or guano and other manures washed into the soil. I am now cutting a heavy second crop. My working horses get no other food than as much as they can eat of this Grass (112 lbs. per day), cut up by steam power into short lengths or chaff. "Sir," said my horseman to me the other day, "there is no food that will keep our horses in such condition as this." This is quite true, judging by their vigour and appearance. As Italian Rye-grass contains 25 per cent. of dry matter, it follows that, eating 112 lb. of it per day, our horses get 28 lb. of dry substance. Given to our cows it produces the most perfect butter, free from any rankness. I have also got about 77 head of calves, yearlings, and fat bullocks fed with it, and it is so satisfying that it takes them off their cake, if we allow them all they will eat of it.

It also makes the very best hay, if cut at the right time and got up green. It certainly pays me better than corn, and I shall gradually increase my quantity to 50 acres—making sewage by washing in guano, &c., and feeding a good deal of it on the land, for I find that folding ewes upon it, allowing their lambs to range outside the hurdles during the day, answers well; and I consider that any food that will put condition on to milking ewes must be first rate.

As to profit, my horses at 10*s.* per week are paying me (each horse consuming 7 cwt. per week), about 28*s.* 4*d.* per ton. As we grow fully 20 tons at the two principal cuttings, it requires no conjuror to show that it is a profitable operation. The carting and cutting up and feeding out costs about 2*s.* to 2*s.* 6*d.* a ton.

The cost of an acre I put down at 13*l.* 14*s.*; I miss the cheap town sewage. But there is another and very important result of growing sewaged Italian Rye-grass—the after condition of the land on which it grows. The first year of its growth we mow it and carry it off; the second year it is fed with sheep, eating cake, &c.), and irrigated. It supports during six months 16 sheep to the acre.

The third year (it being a biennial plant) we break it up, and find unmistakeably that those fields so treated surpass in durable fertility and productive power any other fields on the farm. It is felt for several years—I suppose and believe that the subsoil becomes improved by the saturation and chemical action of our sewage passing through it. At present high prices of meat and butter it certainly, under the circumstances I have mentioned, pays best to make meat, although the very making of that meat enables us to grow great corn and Pulse crops when we break up the Grass. If we wish to continue the land in Italian Grass we should sow some seed in it annually or biennially, and also some white Clover. It would be interesting to know how many tons of Grass would produce a ton of beef or mutton fit for the butcher. I value it at double the price of Mangel Wurzel, and 2½ times the price of Turnips, because it contains twice as much dry matter as the former, and 2½ times as much as the latter; and I consider this a tolerably safe way of testing their relative value. One thing is certain, Italian Rye-grass never purges or disagrees with any stock, if given at a proper growth, but if you let it run to seed, or get old and tough, it will kill young calves. It balls or winds into masses in the first stomach, and they cannot get it up to chew the cud. They suddenly jump up and die. It is best cut up into short lengths for all ruminating animals, and in fact I am more and more convinced by practice that it pays to cut up all green food, if of any length. The animals' stomachs will hold more, it packs closer, and they get on much faster than with long food. The same remark holds good in comminuting roots or chaffing straw, and I know the same rule applies as forcibly to strong pasture or meadow Grass in the growing season. There is great truth in the common farm-saying, that a bullock or horse turned out in high feed has five mouths.

I need hardly say that it is the greedy feeding and consequently excessive rapid growth of the Italian Rye-grass during the growing season that renders it so profitable. It gives us, under sewage, a crop of hay, or a heavy mowing every five or six weeks. In fact it gives us great crops, and fertilises the soil without the heavy expenses of ploughing, hoeing, &c.

Italian Rye grass is considered by most south country farmers an exhausting crop, because their rain-fall is small and it is a very greedy drinker, and they have no irrigation. I know some successful men, however, who sow it in their corn crop, take one good feed or mow in the spring, when it has drunk up all the winter's rains, and then plough it up and take Turnips or some other crop. This is the best way where there is no irrigation, for there can be no second growth in crop without it. I carefully weighed an acre of my first cut a few years ago, and found it to be 15 tons per acre, equal to quite four tons of hay. The second crop or cut is generally eight to ten tons; the third crop is always comparatively inferior in our hot months and dry climate; we have capital feed afterwards in the autumn, and as this Grass is such an exhauster of moisture it soaks up the autumn rains, and keeps the land dry enough for feeding, which it would not be under other circumstances. There is one remarkable property or power about this Grass, which is not possessed by Clovers or fine Grasses. No crop of corn, however heavy, can smother or kill the young plants. If sown in the spring, and hoed or harrowed in, you are sure to have a crop next spring, however puny, and then it may look up when the corn crop is removed.

We cannot over-feed or over-manure it during winter and early spring and the first two cuttings; after that it wants a thunderstorm every week rather than manure. Unless very wet it will struggle to run to seed in July and August. During these critical months for green food wise farmers will fall back upon a heavy crop of Cabbage, planted out in February or March on a piece of land heavily manured and deeply trench ploughed.

Cabbages are just the opposite of Italian Rye-grass—they luxuriate in heat, provided the land has been deeply disturbed and filled with moisture and manure in winter or before. They are however very grateful for sewage; nothing pays better for it except Italian Rye-grass. I was very much struck to see in my Cabbage crop last autumn several so large that they touched each other.

I found there was a little leakage from one of my subterranean iron sewage pipes, and in an exact line with the sewage was an enormous crop of Cabbages. Nice cool Cabbages in hot weather are the very *beau ideal* of acceptable food to animals. We pass them through Bentall's pulper for our indoor stock. They are a very valuable meat and especially milk-producing crop. *J. J. Mechi, June*, 1864.

WHAT IS "CONDITION?"—No. III.

I AM aware that in giving the theoretical value of a dung heap I am risking the loss of attention of practical farmers; but if I can succeed afterwards in proving the conclusions arrived at to be true in practice, I shall recover it again, and this I hope to do by examples of neighbouring farms. Unfortunately the data upon which I am now to proceed, have hardly been sufficiently investigated, or if they have I have had no access to any report of them. I shall beg any one who thinks these researches worth following up, to read a very able article written by Mr. Lawes in the Royal Agricultural Journal, Vol. 8, for 1847, to whose accuracy and research I shall appeal for the confirmation of my figures. In this article he has shown that in fattening cattle the more nitrogenous foods are the most valuable, *i.e.*, supposing always the food given to an animal to be wholesome and fattening, its effects will be in proportion to the nitrogenous constituents, the other, or oily matters which enter into their composition, being generally in excess. He proceeds to prove from well-conducted experiments that about one-sixth part of the nitrogen consumed is carried off by the animal in its increased weight—the other five-sixths being lost or excreted; from this one-sixth he calculated the fattening value of the food. We will now consider the manuring value of the residue. It has long been surmised that a portion only of the five-sixths which were not incorporated by the animal in the form of meat was recovered in the manure—in fact, was wasted in the same way as the bushel of corn which requires 5 lbs. for its production, and retains but 1 lb. in its composition when ripe. This question, which was taken up by M. Boussingault, has been settled by the experiments of M. Reiset, a French gentleman, as reported in Royal Agricultural Journal, No. 51, of last year. He has determined with sufficient accuracy for our present purpose that about 2-6ths of the nitrogen are expired by the breath or through the skin, leaving but little over 3-6ths or one-half for the manure. Here then we arrive at a basis for our calculations. Allowing for some little waste, which always must take place in the most careful management, one half the nitrogen consumed will be left in the manure, and will if preserved be the measure of the value of that manure. We have already seen in a former letter that the value of the nitrogen in ammonia or ammoniacal combination may be taken at 6*d.* the lb., and that it is well worth purchasing on the farm at that price. We can also generally ascertain how many tons of hay, corn, roots, cake, &c., were consumed during the last winter, the remains of which constitute the value of the dung either in the yard or on the land. The amount of nitrogen contained in these feeding scuffs is also sufficiently known; the only guess or estimate which will be required to be made, will be the allowance or deduction from the full theoretical value in consequence of the washing or exposure of the dung while making in the yards. One half the quantity of nitrogen consumed is the outside value of the manure, from which no runnings have escaped, and which has suffered no exposure to the air. It is probable, from Professor Voelcker's analyses, that at least 30 per cent. from this full value should be deducted where it has been exposed for months to the sun and rain, and where the runnings have escaped into the neighbouring pond or road. A valuer would probably take off 10 per cent. as a medium allowance where common care and precaution have been taken, and sufficient straw used to prevent evaporation. Therefore for every ton of hay he would allow $\frac{2 \text{ p. cent.}}{2}$ = 100 lb. &c., or 50*s.*; for every quarter of Barley, &c., at $\frac{4 \text{ per cent.}}{2}$ 6 lb., or 3*s.*; for Beans, at $\frac{5 \text{ per cent.}}{2}$ 7*s.* the quarter: oilcake, $\frac{5 \text{ per cent.}}{2}$ 5*l.* the ton, deducting from the whole 10, 20, or 30 per cent. as above for any want of economy in the manufacture. This method of estimating the value will apply equally whether the food was consumed by sheep on the land or by cattle and pigs in the yard. Less deduction would probably be requisite in the case of folded sheep, because the dung is usually ploughed in behind them, and little loss can occur. It would also apply to very excessive manurings, where one crop of corn had been taken off, but had not exhausted the manure. It was shown in a previous letter that a soil, the natural actual productive power of which was 16 bushels, or 32 bushels every two years, would require one year with another 40 lb. of nitrogen to increase the crop to 40 bushels. Suppose on any such field an excessive dose of 100 lb. of nitrogen had been followed by a good crop of five to six quarters, there still would remain the difference between the 40 or 80 lb. of nitrogen so removed by the crop, and the 100 put into the soil; this would remain an unexhausted manure in the land, and should be valued accordingly. But this will be more apparent when we come to consider the application of the above method of valuation to actual farms, in connection with a somewhat different rotation of crops and the method of manure making. I hope to prove the practical value of these suggestions by comparing the few returns of food consumed, and the effect of the manure made from it, with which I have been favoured, by showing how near the actual prices of several of these substances correspond with their feeding and manuring values thus arrived at (which is the best criterion of the truth), and to prove that the 10 per cent. deduction made above from the full value is a reasonable and fair approximation to the actual loss. *J. B. M.*

CATTLE IMPORTATION AND CATTLE DISEASES BILLS.

THE SELECT COMMITTEE OF THE HOUSE OF COMMONS to which these Bills are referred, sat again on Tuesday the 14th, Mr. T. Baring presiding.

Mr. CONGREVE, who rented a farm of 1000 acres in Warwickshire, near Rugby, of which he grazed over about 300 acres, stated that he presided over a meeting of the Farmers' Club in London, at which the Cattle Diseases Prevention Bill was discussed, and a most decided objection was expressed to the foot and mouth diseases being included, and he believed that to bring that disease under any restrictive measures would interfere with the trade and enhance the price of meat by reducing the number of cattle brought to market. It was difficult to say whether a penalty should be imposed in the case of pleuro-pneumonia, even when a diseased beast was knowingly sold, for the animals must be got rid of in some way. His practice was, whenever he found one of his animals with pleura to send it to a fair and sell it at once; but if there was a penalty he should be obliged to sell it to a butcher. In his opinion pleura was not very catching, and in proof of this he mentioned a case where he had purchased 13 oxen at Havre, one of which became attacked with pleura, but though he grazed them together all the time and brought them to London together, not one of the others showed the slightest symptoms of the disease; and this he said was not a solitary instance. He did not think any distinction could be drawn between beasts sold at a store market

and at a fat market. No man in his senses would buy a beast with pleuro-pneumonia to graze. He had never had sheep-pox on his farm, but should think from what he had heard that it was very catching, and that stringent regulations ought to be imposed to prevent the diseased animals mixing with the healthy ones. He would prevent animals with scab being brought into a store market if he could, but he did not think it would be possible. The principal objection to the Cattle Disease Bill was that part which related to the foot and mouth disease, and which gave power to an inspector or common policeman to stop a whole herd of cattle because he saw, or fancied he saw, symptoms of disease with some of them. Some regulation for the cleaning of trucks would tend to prevent infection, but he was certain there was no effective prevention of foot and mouth disease. It arose from some atmospheric cause and the predisposition of some animals to it. Two beasts perfectly healthy might be sent up in the same truck, and one might take the disease and the other not. In the case of pleura the best treatment, if the animal had anything on him, was to kill him at once, but if he was so poor as to be valueless to the butcher, then it might be advisable to attempt a cure.

By Mr. HOLLAND. If care were taken that the inspectors should be competent persons, that would do away with his objection to the Bill as far as pleura was concerned. The cleansing of trucks might prevent the spread of disease to some extent, but not in all cases. He advised a gentleman who purchased some cattle at Birmingham to send to London to have the trucks cleansed with chloride of lime and whitewashed, and that was acted upon, yet when the cattle reached Smithfield they were attacked with the distemper as badly as any other animals in the market.

By Sir W. MILES. He had not seen much of pleuro-pneumonia, and it was possible that the animals he had mentioned as affected by it had only the common lung disease. A large body of men in Lancashire and the Midland Counties had given it as their opinion that the price of meat would be increased if foot and mouth disease were included in the Bill. Pleura was a fatal disease, but the foot and mouth disease, except in some rare instances, was not. If the foot and mouth disease were struck out of the Bill, the farmers and graziers would be content.

Colonel BARTTELOT: They did not consider that there was any necessity for legislation at all upon the subject, inasmuch as it was every grazier's interest to take the best care of his cattle. He did not think that the restrictions would be of use in the case of pleura, for the disease was a long time latent, and was very difficult to be valueless to the butcher, then it might be advisable to attempt a cure.

By Mr. LESLIE: In the instance he had given from his own farm he bought the animals at Havre in April for about 17*l.* 10*s.* apiece, and after grazing them till now he sold the ox with pleura for 15*l.* The flesh would not be injurious as human food, and he should be very happy to dine off the animal himself.

The room was then cleared, and upon its being reopened the Chairman announced that the Committee had decided to strike the foot and mouth disease out of the Bill.

Mr. WILSON, of Peterborough, gave evidence to the same effect as that obtained from the last witness, observing that the great objection of the farmers of his neighbourhood had been removed by the decision at which the Committee had just arrived. They were of opinion that restrictions ought to be enforced with regard to scabbed sheep.

Dr. GAMGEE was recalled and examined with reference to the statements of Mr. Hall Maxwell in contradiction of his evidence as to the dairymen of Edinburgh. He stated that his information was derived from several of the leading dairymen in Edinburgh, including Mr. Haddo. He had also been assisted in preparing his statistics by two gentlemen, formerly pupils of his own in Edinburgh—Professor Murray, of the Royal Agricultural College of Cirencester, and Mr. Macgregor, Veterinary Surgeon of Seton Delaville. Since reading Mr. Maxwell's evidence he had received a communication from Mr. Haddo vouching for the correctness of his facts, stating that they were confirmed by subsequent observations, that he had taken pains to ascertain the truth, and there was no doubt that pleuro-pneumania had prevailed and continued to prevail amongst the dairy stock of Edinburgh. The dairymen had suffered considerable losses on that account, and animals were got rid of to the butcher as soon as the disease was seen, or, when they were in a very bad condition, to the pig feeders. He had received similar letters from the two young gentlemen whose names he had mentioned. A meeting was held last year at the New Veterinary College in Edinburgh to consider what measures it was expedient to take with the view of checking the disease. On that occasion a large number of dairymen were present, and one of them, when he mentioned the number of animals that had died from pleura, exclaimed "you may double that." Mr. Murray, a solicitor of Edinburgh, and the father of Professor Murray, had sent him a letter stating that in consequence of Mr. Hall Maxwell's evidence, he had visited 13 dairymen in Edinburgh and found that though they had signed the document denying the accuracy of Dr. Gamgee's evidence, they had never read those statistics themselves, and had given their signatures only because they were instigated to do so by a Mr. Macintosh, who went round to them on Mr. Maxwell's behalf, telling them that the object was to defeat Dr. Gamgee's Bill. Some of them told him that they were still suffering from pleuro-pneumonia.

The cross-examination of Dr. Gamgee was postponed till the following Friday, the Committee not having Mr. Maxwell's documents before them.

Mr. DUNCAN, a butcher of Glasgow, gave evidence in favour of a clause entitling a butcher who purchased an animal and who found upon slaughtering it within four days of the purchase that it was diseased, to recover the price from the seller. In Paris nine days were allowed Such a clause would not, in his opinion, prove a restriction on the cattle trader for the benefit of the butcher.

At this stage the Committee adjourned.

Friday, June 17.—Upon the reassembling of the Committee, Professor GAMGEE was examined by Lord NAAS. He stated that John Prentice, one of the Edinburgh dairymen whose names appeared upon the document laid before the Committee by Mr. Maxwell, had personally furnished him with information at various times during the last four or five years. Mr. Morton, another of the signataries of the memorandum, has also supplied him with facts; and though he did not received evidence directly from Mr. Andrew Simpson, he receive information with respect to that person's dairy from Mrs. Simpson, who managed it. Mr. Prentice supplied him with information as to the number of animals lost by disease in the year, not only with respect to his own dairy, but with respect to several others. He had now the materials for stating the number lost in Mr. Prentice's case; but the facts were embodied in his report to the Government at the time. He had plenty of evidence to prove that his inquiry was properly conducted, and that the greatest care was exercised in obtaining accurate information. He contended that his facts were unassailable, and the more they were inquired into the better they would be satisfied. The dairymen signed Mr. Maxwell's document without knowing anything about what they were doing.

A number of letters were here put in by Mr. Caird from dairymen in Edinburgh, contradicting the statement of Dr. Gamgee that he obtained the information from them upon which he founded his report to the Privy Council.

Professor GAMGEE said he hoped his facts were not to fall upon such evidence; for if he could have put the writers to their oaths, he was satisfied that the result would have been very different. He thought he had succeeded in amply refuting all the charges that had been made against him, and if other measures were wanting for his vindication, that would be matter for future consideration.

Mr. SWAN, of Edinburgh, stated that during the last year there had passed through his hands from 18,000 to 20,000 horned cattle, and between 80,000 and 90,000 sheep. It was seldom that beasts affected with pleura came into the market—not one in 500. He did not apply the statement to dairy cows, because they were much more susceptible of the disease for various reasons. Scab in sheep was easily cured, but as it was an infectious disease the sheriffs of counties in Scotland ought to be empowered to compel a man to keep animals so affected apart from sound ones, and in such places that they could not affect his neighbours' flocks. He approved of the clause with respect to the cleaning of waggons and steamboats used in the conveyance of cattle. He never found a foreign beast affected with pleura. When this Bill was brought in, he sent round circulars to every county in Scotland, and the answers he received showed that there was a great mitigation of disease in Scotland. As the Bill stood, however, unless great care was exercised, cases of considerable hardship would arise under it.

THE VACCINATION OF SHEEP.

[The following on this subject is abridged from Prof. Simonds' recent lecture on the Small-pox before the Agricultural Society of England.

IN order to determine the preventive value of vaccination, the Government purchased 200 sheep, which were placed under the supervision of Mr. Marson, the Surgeon of the Small-pox Hospital, and myself. Those sheep were placed on a farm then in my occupation, in the immediate neighbourhood of London, and Mr. Marson and myself undertook to carry out a series of experiments upon them, in order to ascertain whether vaccination is protective or not. The Government had this question forced upon it by communications which appeared in the public papers at the time, strongly recommending the vaccination of sheep. The recommendations were chiefly from some agricultural gentlemen in the counties of Norfolk and Cambridge, and from surgeons in the latter county. I will deal with these two cases separately.

First, with regard to the recommendations which came from the Norfolk agriculturists, foremost among the persons who wrote to the papers was Mr. Henry Overman, of Weasenham. That gentleman said in effect that during his late father's life the small-pox in sheep showed itself in their neighbourhood, and that his father vaccinated the whole of his flock; that the sheep took vaccine disease; that they were protected from the affection; and that any man who preferred inoculation to vaccination was little better than a madman. Statements also came from other persons, but simply to the effect that they had vaccinated their sheep, that they did not take the disease, many of the parties not saying whether or not the sheep had ever been exposed to it. But, coming back to Mr. Overman, I have to make public what is, perhaps, known only to a very few individuals. Mr. Overman's own expression—I mean the late Mr. Overman—and the words were used at a meeting of an agricultural society held in Norfolk, in 1848—was, that as a letter of sheep, when the disease showed itself in his immediate neighbourhood, he conceived it to be his duty to send his animals out as free from disease as he possibly could, and therefore he had recourse to vaccination. He goes on to say—I now quote his own words—"I had 800 sheep vaccinated; I am very glad I did so, for I have not had any disease among them. I had subsequently to that 20 score of lambs vaccinated," making altogether 1200 in round numbers. 1200 sheep were vaccinated, he said, and none of them had taken the disease.

Now I have good reason to believe that these 1200 sheep of Mr. Overman's were not vaccinated at all. The same individual who did these sheep also vaccinated, as it was said, a large number of sheep for Mr. Hudson, of Castleacre, a member of the Council of this Society. He likewise vaccinated, as he called it, a large number of sheep for many individuals in that neighbourhood; so that, in all probability, he operated upon not less than from 3000 to 4000 sheep. Now, I might ask any one who knows anything at all about the matter, where in the world did the lymph come from to vaccinate 3000 or 4000 sheep in the course of about two or three weeks? But I find that this individual had no difficulty whatever about it. He carried his lymph at that time in phials which were filled to the brim. He used this material on the sheep generally, and he used it on Mr. Overman's sheep, with the exception of about 12. According to an admission of Mr. Overman himself made to me there were certainly not more than 12 of his sheep that were vaccinated from points in the ordinary way, and he said, "I did not see any difference between the vaccination done by points and that done by this fluid, and I am satisfied, therefore, that my sheep have been vaccinated." I have already stated that a number of sheep were done in the same manner for Mr. Hudson. In the course of a short time Mr. Hudson's sheep, being exposed to the influence of natural small-pox, took the disease, which went on rather severely in his flock. He then had recourse to inoculation. The person who was consulted, and who inoculated the sheep, knew practically little or nothing about the matter, or perhaps even worse than that—he presumed that he knew a great deal, and the result was, that these sheep of Mr. Hudson were done in a manner the most objectionable. If that individual had tried to kill sheep he could not have adopted a more effectual system for the purpose; for, instead of taking the smallest point of a lancet, or a needle, and just soiling it with the virus, and introducing the virus with one puncture under the skin, so as not to draw blood, he made large incisions inside the arms of these poor sheep, inserting in those incisions bits of tow charged with lymph and pus—and that he called inoculation. Until I went down and witnessed this for myself, I never saw so painful a scene. Besides those which died, there were others which suffered from the sloughing of wounds, the loss of an ear, the loss of an eye, and so forth; so that many of the surviving sheep might as well have died as lived, so far as the pecuniary question was concerned. Well might inoculation carried on in this manner have got into disrepute in Norfolk.

A natural outbreak took place also upon a farm of Mr. Muskett, of Narford. The gentleman who vaccinated sheep from a bottle, went there and vaccinated Mr. Muskett's sheep, after the natural disease had appeared. The result was, that in a flock of a thousand ewes the disease went on unchecked, and he lost 400 out of the thousand. I turn now to the case of Mr. Overman's sheep. Mr. Overman sent two sheep, after being pressed to do so, to the farm of a neighbour, in whose flock the disease existed; and those two sheep were both inoculated on that farm, one of them by a farmer who I do not hesitate to say at that time performed the operation of inoculating far better than many so-called veterinary practitioners—I mean Mr. Cooke, of Litcham. Mr. Cooke inoculated one of Mr. Overman's sheep, and Mr. Baldwin, a veterinary surgeon of Fakenham, inoculated the other. Both sheep took the disease, and passed through its several stages, and the result was in no way different from what was observed in hundreds of other sheep that were unprotected or had been even vaccinated. But Mr. Overman, in his letter to the *Norwich Mercury*, absolutely denied that these sheep did take the disease. I, knowing the facts of the case, then pressed Mr. Overman into a corner. I said, "Now, Sir, will you send five of your lambs on to such a farm, and have them exposed to the disease; and send five other lambs to the Veterinary College, picking them out yourself as the most successful cases of vaccination?" He agreed to do so. However, a little circumstance arose which prevented this arrangement from being carried out. That circumstance was this: On the very farm where the two sheep were sent that were inoculated, the one by Mr. Cooke, and the other by Mr. Baldwin—the same gentleman who had vaccinated Mr. Overman's sheep, and vaccinated, as it

was called, Mr. Hudson's sheep, and other sheep in that neighbourhood, was asked not to vaccinate these sheep, but to inoculate them. Being a surgeon he was supposed to know more about the matter than anybody else. I do not know how he proceeded; but three weeks after his so-called inoculation, I myself saw the sheep, and found many of them in the earlier stages of the disease; whereas, if they had been properly inoculated, they would have been in the third stage and recovering. This proved to me that many of the sheep had not been really inoculated, but that the natural disease was going on. I communicated this fact with the greatest innocence to Mr. Overman, saying that I found that the sheep in question had not been properly inoculated, and that the natural disease was proceeding. Mr. Cooke also chanced to say the same thing to Mr. Overman at Lynn market, when Mr. Overman directly turned round and said, that as we had impugned the inoculation of the sheep he declined to send either the five sheep to the farm, or the five to the Veterinary College, to be tested. A report has been prepared by me, and will be in the hands of Government to-morrow, in which the whole of the facts are stated. I there give Mr. Overman's own letter to me, and quotations from his letters to the *Norwich Mercury*, in order to show all the facts as I have now epitomised them; so that, as far as West Norfolk vaccinations are concerned, they are not worth a snap of the finger. There were, however, a few sheep properly vaccinated in Norfolk, by Mr. Rose, a surgeon; seven or eight by Mr. Joy, another surgeon; a few more by another surgeon; and also some by a veterinary surgeon, Mr. Smith, of Norwich. A small number of sheep were thus legitimately vaccinated, proper lymph being used, and every care taken; and the unanimous opinion of these gentlemen was, that vaccination was of no avail, because it was found that both by exposure and by inoculation these sheep took the disease. With the exception, therefore, of about 35 sheep out of 3000 or 4000, there were no sheep really vaccinated in Norfolk in 1848; and in those few instances, vaccination by no means protected the animals against the natural infection.

I now come to Mr. Ramsay, surgeon, of Shelford, Cambridgeshire, who in 1862 wrote a letter to the *Standard* newspaper, which afterwards found its way into the local papers. Mr. Ramsay wrote also a letter to the *Times*, in 1848, setting forth the great value of vaccination. He says, in his communication to the *Standard*, that he vaccinated a large number of sheep for Mr. Jonas Webb, Mr. Samuel Jonas, Mr. Hurrell, and other gentlemen; and he leads his readers to infer that these sheep were perfectly protected against infection, and that vaccination is, therefore, a thing which ought to be had recourse to in order to stay the progress of the pest in Wiltshire. Curiously enough, as if he had gone out of his way to give me a thrust in the side, he wants to know whether vaccination is not to be preferred, although Mr. Simonds is an advocate for inoculation. He is backed up in his opinion by Mr. Sprague, surgeon of Kimbolton, Huntingdonshire, who, at the time of the operations in 1848, was his assistant, and who writes a letter in support of the view which Mr. Ramsay had promulgated. Mr. Ramsay assumed that the reason why his vaccination was successful was, that he had recourse to what in technical language is called retro-vaccination: that is to say, he had taken the vaccine lymph from the human subject; and with that lymph he had vaccinated a cow; and, having obtained the produce of the lymph from the cow, he had afterwards vaccinated with it the sheep. With regard to retro-vaccination, I will only say that the experience of Mr. Ceeley, Mr. Marson, and myself, and the experience, I believe, of all Continental men who have ever tried retro-vaccination, is, that there is rather a loss by it than a gain. If you take a quantity of lymph from the arm of a healthy child, and introduce it into a calf, supposing it takes, you get very little increase of the material. Mr. Ramsay twitted me about these things in the public papers, and through other channels, in 1848. At last I said to him, "Well, will you allow any of your sheep which have been vaccinated on this improved plan to be subjected to the counter proof of inoculation?" At length, through Mr. Ellis, of Triplow, in Cambridgeshire, I was enabled to get Mr. Ramsay himself to select two sheep which he had vaccinated, and send them to meat the College; and he wrote a letter to the *Times* in which he stated that he had done so. So that about the selection of these two sheep by himself there can be no doubt whatever. What was the result? I took one of the sheep and inoculated it with some old sheep-pox virus which I had had by me for 16 weeks, during which time it might have been supposed to have lost its power, and I produced disease from it. The animal went through all the stages of the sheep-pox, and when it arrived at the vesicular stage I took lymph from it, and inoculated the other animal, and with the same result. These two sheep were sent back to Mr. Ellis, who acknowledged the receipt of them. I wrote a letter to Mr. Ramsay, saying that he was at liberty to test those sheep by any subsequent inoculation, or exposure to the disease, if he thought fit; that they were not protected when they came to London, but that they were protected now. Yet, in the face of this fact, that gentleman again came before the public as an advocate for the vaccination of sheep in 1862.

Now I have said sufficient to show that the public have been misled to some extent as to the effects of vaccination, and for this reason I think the Government deserves great credit for having determined to test the thing on a large scale. With regard to our own experiments I would epitomise them by saying that in every individual instance in which Mr. Marson and myself have been able to produce the vaccine disease, that, in every case in which we have exposed animals after the most successful vaccinations to natural small-pox, they have taken it, and in every case in which we have subjected them to the counterproof of inoculation they have taken it, and the disease has not been in the least degree mitigated by the previous vaccination. We have found this also, which is a very important point, that not more than 35 per cent. of the sheep are liable to the vaccine disease. We hear nothing about 35 per cent. or 50 per cent. in the vaccinations of Mr. Ramsay and Mr. Sprague with their hundreds of sheep. They speak as if they were all successfully vacinated, and as if every sheep were just as susceptible of the vaccine disease as the human subject. In answer to that, I repeat that we have found that not more than 35 per cent. of sheep are liable to take the vaccine disease, and that vaccination has no influence whatever in checking infection.

Home Correspondence.

Pig Feeding.—Mr. Mechi and "Amicus" give excellent advice to "Agricola," but neither seems to give the detailed information he asks. He wants to know where agriculture pays best, whether in England, Ireland, or Canada? Next he evidently wishes to know what system is best for him to adopt, as he means to embark in it as a matter of business, and make it his sole pursuit. I am not myself a farmer, but I take much interest in the subject, and did my other avocations allow of it, I should gladly settle in the country, which I hope one day to do. I cannot think that any one who writes in the style of "Agricola" would be so rash as to go headlong into such a heavy branch as pig-breeding on a very large scale without first feeling his way, and, I should hope, seeing his way very clearly. Probably he has been induced to ask the advice of practical farmers by seeing that one farmer keeps so many as 3000 pigs. I, for one, should be glad to go and see this farm, if I only knew where to find it. Surely Mr. Mechi does not mean to suggest that it could possibly answer for "Agricola" to rear and feed for bacon the progeny of 200 breeding sows? There is a rapidly increasing demand for animal food now, and the Royal Agricultural Society are about to discuss "The System of Farming best adapted to meet the increasing demand for Live Stock." To my thinking, the practical way for doing this is to follow the example of the Dorsetshire farmer; but with great public advantage this very important subject may, by your kind permission, be ventilated in your columns, for very few farmers seem to know much about the "discussions" of the Royal Agricultural Society of England. The questions raised by "Agricola" may lead to definite and practical results. As the letter of "C. F. P." in your succeeding issue proves, others seek for information on such subjects, and it is evident by the example of many besides Alderman Mechi that when such men embark in farming they do it well; being unincumbered with old prejudices, for they bring nothing into the business but the proved teachings of science and skilful careful management. We have some foreshadowing of this in the views of "Agricola," for although I have often heard of a sheep-breeding farm, and a Short-horn-breeding farm on very large scales, I never before heard of a pig-breeding farm. *Civis.*

Short of Straw: Burned Clay Ashes; Grass Land.—With high prices for wool, mutton, and beef, and low prices for Wheat, calculating men are laying down more land to Grass, especially where they can get town sewage, or other means of irrigation; and I venture to predict that, with the facile use of steam power, many a brook or spring will be availed of for this purpose, especially when water millers are bought out, and the general drainage and outfalls improved. At present an irrigator dare hardly look at a rivulet above ground, for the miller's rights appear to extend to everybody's territory, or rather acquitory (to coin a new word). This is one of the many trammels that encumber that young giant called agricultural progress. But to return to my subject, if we are to have Grass on very heavy wet clays, and feed much stock in winter with hay, cake, &c., we must have some shelter and bedding; and, in the absence of straw, this bedding must be either sparred floors or burned clay ashes—dry brick-dust in fact—for we must not tread and poach heavy land in winter, either in justice to ourselves or to the animals. Well, we all know that a dry brick will absorb nearly half a pint of water, and I know, and so does Mr. Randall, who practises it extensively, that brick-dust, ashes, or burnt clay, form an admirable and healthy bed for stock, absorbing all the fluid and keeping the animals dry and healthy: moreover, when saturated and carried to your fields as manure for root and green crops, or indeed for any crop, it is guano's superior in every respect. The alkalies of the clay, set free by burning, are essentially the necessary food for root and green crops. Now the cost of a cubic yard or ton of clay ashes should not be more than from 9*d.* to 1*s.* at most, and is, as compared with the necessary quantity of straw, quite an advantage. I have been a great clay burner, much to my own advantage. My affection for sparred floors remains undiminished; while fat hogs on straw suffer insupportable heat, causing fever, &c., during summer, they would, on open sparred floors, with ample circulation of air under them, lie in comparative comfort and content. Just now, owing to the fly question, and the proximity of my farm buildings to my residence, I am abstaining from pork for the four summer months, especially as beef sells so well. But when I had an immense number of 10 score hogs on sparred floors, over a tank 6 feet below them, and a lime-washed roof over them, it was pleasant to see them lying on their sides at full length, breathing very quick and short, the lungs being compressed by the large quantity of internal and loose fat, as may be illustrated by very stout gentlemen requiring the Banting remedy). Under these melting circumstances we used to turn our fountain jet upon them (a spray of 100 gallons per minute) to their great delight and to our profit, for their skins became as clean as the back of my hand, and their appetites marvellously improved, so that they "went on" to complete fatness—their appetites improved by the shower-bath. It strikes me that this jet washing might, in very hot weather, be advantageously applied to our bullocks on boards, for we know how much they enjoy a warm summer rain, and, indeed, I believe it to be highly conducive to their health and progression—I shall try it. On the first two or three applications, especially at the first, the animals are alarmed by the shower bath or rush of water, but when accustomed to it, they, like ourselves, enjoy the process in hot weather. *J. J. Mechi, June*, 1864.

Cattle Melon.—Permit me to say that I am not the seedsman referred to in your Number of the 4th inst. by Mr. Dixon, of Dorward's Hall, as having supplied him with non-growing seeds; those which I have sent out my customers inform me have come up well in the open ground without any of the care he appears to have bestowed upon his. My stock was presented to the late firm of Page & Toogood by Mr. Blundell, and came into my possession at the assignment in my favour. *W. Toogood, Southampton.*

A Hint for the Chancellor of the Exchequer.—Diseased Meat—Diseased Milk.—Can nothing be done to relieve town dwellers from the abominations (worse than the sewage which they will keep all to themselves and the fishes) of almost carrion flesh, and cruelly unwholesome milk, the baby's beverage? Professor Gamgee may cure sick animals, but his art can't reach "death in the pot," of which there is now increasing danger for adults and infants. These growing evils may be truly ascribed to various causes, but we have now only to deal with their pernicious effects, so we must not allow red tape routine or circumlocution to interpose with the suppression of patent scandals and gross evils merely because they are of long standing. I can respect "vested rights" and freedom in trade, but only when they are honest. The real question is, can nothing be done summarily and openly to mitigate the growing evils? Surely some means may be devised for extending the Ægis of the British Constitution to the British million in items so vitally important as those of their daily meat and drink. I know 'tis unpleasant to recommend taxation; but still if something in this way is necessary as a means for preserving the public health, the well-being of many must be considered before the privileges of the few. Bad meat, bad milk, bad bread must at all risks be kept out of the public markets, and if the Legislature see fit to go about this in earnest, if they cannot entirely succeed, they certainly may to a large extent, by bringing all dealers in articles of food liable to adulteration under the ban of the law—butchers, bakers, milk sellers, &c., should all be required to take out an annual license; this has worked admirably with a much poorer class—the cab-drivers—men who live absolutely by manual labour. I would apply the Chicory test to milk, by requiring those who only watered that fluid—and who that sells it does not? to affix in large letters the following notice—"This is sold as a mixture of water and milk," and through the machinery of the police, or peripatetic inspectors, watch and ward may be kept over the "milk walks," power being taken to treat bad milk in England, as it is most properly treated in France—turned on the streets—to "waste its sweetness (?) on the desert air," dealers would soon find it more to their advantage to sell pure milk at a fair price rather than risk total loss by diluting it, and thus retailing poison openly "at full price." Vendors of meat can surely afford a small tax as well as grocers, publicans, brewers, &c.; by this means every man legally authorised to offer animal food for sale would be known to the Government, and for trivial offences their licenses should be marked, for gross ones they should be forfeited. The Chancellor of the Exchequer may thus obtain some accession of revenue, which may prove crumbs of comfort for farmers, when next the right hon. gentleman ventures to think seriously about easing the malt-tax. Very great and salutary protection may thus be easily and cheaply obtained for the public stomach, and if the public health really demands stringent measures for its preservation, honest men cannot complain, for my suggestion can only reach rogues. *Nemo.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

On Wednesday the lecture was upon the "Chemical Properties of Water for Economical Purposes," and was delivered by Prof. Voelcker. Lord Feversham occupied the chair.

Prof. Voelcker observed that—

Whilst abundance of fresh air, a good supply of pure water, and a sufficiency of wholesome bread were unquestionably the three greatest material blessings which a kind Providence had supplied to man, it was strange that people were so unconcerned about the water supply. It was admitted in theory that it was most important for the country, as well as for towns, to have an ample supply, and yet people were found, particularly in the country, who paid little regard from whence they obtained their water, or what quality they used. In his present lecture he proposed to confine his remarks to the use of water in its ordinary condition, excluding from his notice its application in various other forms, such as ice and steam. As showing how little regard was paid by persons to the importance of examining into the condition of the water they used, he mentioned that he had examined many well waters at Cirencester, and found them impregnated with the most nauseous animal matters and mineral substances, several containing three times as much impurity as the thick liquid which Mr. Mechi largely applied to his land; and thus, he said, health was injured at the same time that there was a great waste of that which would be most beneficial in promoting luxuriant growth upon the land. The drainage of Cirencester, which was in other respects a healthy place, was so bad that in many streets the water was contaminated with injurious substances, and the better classes would not reside there, because where this bad water was found the people were occasionally visited with fever. The same thing was true of separate houses, and in illustration of the point he mentioned a case that occurred to himself of a house in the country which he was warned from on account of the great number of deaths from low fever that had occurred in it. He found on examination that the water was very bad indeed; it was supplied from a surface spring, and there was no doubt that the drainage from the offices and the yard found its way into the well. He took the house; by walling over the surface well, and by compelling the servants to use only the water of a deep well in the yard, he maintained his family in perfect health. Bad water occurred more frequently than was generally supposed—during the past year he had received a good many samples for analysis which were unfit for drinking purposes. It was necessary to consider the qualities in water which were most esteemed for drinking purposes, for washing, and cooking, and brewing. The four qualities most esteemed in drinking waters were, the absence of any putrescent organic matter; the absence of any discoloration due either to suspended fine clay, which gave a muddy appearance, or to dissolved organic matter, such as was found in peaty districts softness, and coolness. The absence of putrescent matter was accounted for in many waters through the perfect filtration they had undergone in passing through a porous rock or a considerable bed of a porous sandy soil. Surface springs generally contained dissolved organic matters. A bad smell was always indicative of something wrong in water, but its absence did not prove the fitness of the water for drinking purposes. It was not, however, all organic matter that was injurious, though its presence was never desirable, for in all cases it had an injurious effect upon the leaden pipes by which the water was conveyed to houses. A good plan for testing the presence of organic matter was by evaporating two pints to 2 ounces. If the water became discoloured during evaporation, it would generally be found that it contained an amount of organic matter which rendered it injurious to health, and if it remained clear or only slightly coloured, the absence of injurious quantities of organic matter might be assumed. To complete the test, water should be evaporated to dryness, and then if the deposit gave off a smell like burnt feathers, which was a characteristic of nitrogenous matters, they had proof; organic substance was of animal origin, and such water should be at once rejected for drinking purposes. Softness in water was also due to composition. Nowhere in Nature was water found in a perfectly pure state. Even rain water contained atmospheric impurities, which, though useful in an agricultural point of view, were undesirable for drinking purposes. Rain water was an excellent dissolvent for chloride of sodium and the sulphates of magnesia and soda, but it also dissolved certain mineral matters which were ordinarily regarded as insoluble; carbonate of lime, one of the principal constituents of hard water, was scarcely soluble in pure water, but rain water invariably contained carbonic acid in solution, and in virtue of that became a solvent of carbonate of lime. The presence of this acid in rain water accounted therefore for the quantities of carbonate of lime in all spring and well waters in localities upon the chalk formation, or where calcareous rocks prevailed. Hardness of water was chiefly due to the presence of bicarbonate of lime, but that was merely transient hardness, readily removable, whereas sulphate of lime or gypsum imparted a permanent hardness. The presence of a large quantity of carbonate of lime was by no means injurious to human health, nor was there any evidence that other mineral waters were. Surface waters were invariably cold in winter and warm in summer, whilst water from deep springs had an uniform temperature. Waters that had an uniform temperature had a more uniform composition than those which varied at different seasons, the former dissolving in its long descent as much lime as it could, while the latter was left to be affected by purely local circumstances. Thus the temperature of water became indirectly an indication of its good qualities for drinking purposes. Water for cooking and washing should be essentially soft, in the one case because the lime neutralised in a great measure the soap, causing it to curdle, and destroying its detergent qualities; and in the other because the leguminous and albuminous properties of the matter boiling united and formed with the lime of the water an insoluble combination, and in that way Peas and Beans sometimes would not boil soft, and the whole of the properties intended to be extracted from meat and tea could not be obtained. Bicarbonate of lime in making tea should not be used, or it would give a soapy flavour. Water could be rendered soft on a small scale by the addition of a little carbonate of soda, but hard water required purification if intended to be used in feeding steam boilers. To correct the rapid deposit of carbonate and sulphate of lime in boilers, and by preventing the action set up in that case upon the iron, which often resulted in explosion, Clarke's process of adding powdered lime was a very good one, but the most effective of all was the caustic soda process adopted at Woolwich. With regard to the action of water on leaden pipes, there were three conditions by which they could account for the action of some waters upon lead: the presence of organic matter; the presence of alkaline salts or alkalies; and the absence of carbonic acid. Carbonate of soda and potash also acted upon lead, and so did lime. Some waters contained what might be called protecting salts, carbonate and sulphate of lime, but there were others which were very rich in those salts and yet acted strongly on lead. In laying down water supply pipes great care should be taken not to put them in cement, but to surround them with gravel—the lime acted upon the lead, and by inattention to this point pipes were frequently eaten away. A good protection was to throw over the leaden pipes a few pieces of zinc, which would be attacked first, but that could not be recommended for drinking purposes. The danger of water containing lead was much less than was believed by some; there was no proof of any case of injury to health from that cause; only a small quantity could find its way into the water, and that was rapidly and certainly removed by standing and filtration.

Professor Voelcker closed his address at this report, reserving for a future occasion some remarks that he had intended to make upon the qualities most esteemed in water supplies for irrigation.

The Gloucestershire Agricultural Society will surely have no cause for regret because Cheltenham was selected for their annual gathering. The collection of live stock, implements, &c., exhibited here on Wednesday and Thursday of this week are alike creditable to the neighbourhood and locality included in the Society's limits. The result of the meeting at the Spa grounds will doubtless prove remunerative to the promoters and supporters of the Society. Following so immediately the important and successful gathering of the Bath and West of England Society on Durdham Down, near Bristol, it is most gratifying to observe the excellent quality and quantity of the various breeds of stock which had been forwarded for exhibition at Cheltenham. The missing breeds of cattle and sheep, and falling off of numbers of all heads of stock, are fairly atoned for in the superiority of many and most of the animals sent to the Cheltenham Show. Beginning with the Short-horns, we have beasts from the herds of all those breeders in the locality who are already distinguished for their success at the Royal and other agricultural meetings. The Herefords appear in great force, and certainly as a class merit the encomiums which were freely passed upon them from all sides. The Sheep likewise present altogether such a creditable appearance, that it is to be regretted the flock owners of this locality do not display greater desire to compete at more distant meetings. This remark applies more especially to the Cotswolds, which it must be allowed have latterly been nearly absent at the Royal and other large gatherings.

In Pigs we have a goodly array of animals, chiefly composed of Berkshires, which breed of swine prevails in this neighbourhood.

Of the Horses, too much praise must not be asked; following somewhat in the shoes of the large provincial Society, they have not attracted such good animals to the yard as we should expect to find at a meeting in the immediate vicinity of the most celebrated horses in the West of England. The Cart Horses are few in number and inferior.

Commencing with the Short-horns we find Mr. Woodward taking a 1st prize with a square thick animal of nice quality—more perhaps a farmer's than a show beast; still as this animal ran 3d or was commended at Bristol, and gets the local committee prize also here for the best bull in the yard, we must consider it a very deserving beast. Mr. Hewer gets a 2d with a very different looking animal, one light in shape, make, and colour. The 3d prize in this class also goes to Mr. Woodward, probably from lack of competitors.

Mr. Bowly, of Siddington, shows an exceedingly promising bull calf; if it is behind its neighbours in condition, it certainly can compete with them in growth of body, limbs, and coat, and being also correct in shape it is entitled to the 2d prize awarded.

Mr. Stratton, of Short-horn celebrity, commences his fortunes well at this show by taking a first for his superior, very perfect bull calf, which in colour, quality, and form cannot be well surpassed. In Class 4, again, the name of Stratton appears as entitled to a prize for bull, cow, and calf.

We are also glad to observe the Rev. E. Williams receiving a premium for his trio.

For the best heifer under three years Mr. Bowly fairly is rewarded; "Musical" is really very useful, and exhibits the qualities for which this herd has long been celebrated-viz., quality, size, and condition.

Mr. Holland, of Dumbleton, and Mr. Woodward, also receive prizes in this class. If size and weight ruled the decision of the judges, No. 22, a heavy fine cow, the property of Mr. Ewes, would have received recognition notwithstanding her horns are disposed to join again with her person; but we have yet to learn what it is that guides judges in the selection of some animals, for surely Mr. Stratton's cow, No. 29, 3 years and 4 months, might have merited reward.

In Class 6, this gentleman is rewarded for his disappointment, as he gets a prize for the best breeding heifer, and a nice animal too, well entitled to the same. Mr. Logan has also a nice animal, which receives the 2d prize; Mr. Stratton again slips in for a 3d; and Mr. Woodward is justly commended for an animal of great merit, had her condition been better.

Mr. Logan exhibits and receives 1st prize in Class 7, a very perfect looking heifer, good in colour, coat, and shape. Earl Radnor receives a 3d in the same class for an older, coarser beast, inferior to Mr. Stratton's heifer, No. 42, which is altogether as good as can be.

In Class 8, Messrs. Bowly and Stratton run neck and neck with two as perfect heifer calves as need be seen. The judges had greater difficulty in awarding a prize here than in rejecting Mr. Holland's No. 47, "Duchess of Dumbleton," 7 months and 3 weeks, The latter animal, although good in some respects, is woefully narrow and pinched in behind the shoulders.

In the Milch Cow Class, Mr. E. Bowly exhibits three rare roomy well-grown animals. If quality of coat with excellent form were all the judges sought, one or more of these animals must have received distinction, but as milk has perhaps a good deal to do with it, Mr. Morris, of Maize Moor Court, very justly becomes entitled to the reward for his exceedingly commendable pair of red cows—the latter apparently possess all the qualities required in this class.

The Hereford Class is remarkably well filled; perhaps the grandest animals in the yard are Messrs. Holling's "Chieftain the 2d," and Taylor's "Tambarine." The former receives the 1st prize for as fine a specimen of a Hereford bull as could be exhibited. Such a carcase, enveloped in a hide of dappled brown, with a head like a deer, mild eye, lots of throatiness, and limbs so delicate that it is surprising how they can support such a huge frame. The next beast, No. 59, is likewise a splendid specimen of this popular breed, and although not so long or quite so growing as Mr. Holling's bull, is an animal not to be despised, and is justly entitled to the distinction he has won. In the next Class for Herefords, Mr. Read, of Elkstone, gets the 1st prize for his 2 years and 5 months old bull "Peremptorily," a good straight lengthy beast, of the real and familiar hue, his coat forming a strong contrast to the mottled ground around him. Mr. Taylor, of Ledbury, receives a 2d and 3d prize in this Class for two useful beasts; the smaller animal might fairly exchange rewards with No. 65, for he certainly has the neatest form, and stands better upon his fore pins than his more fortunate neighbour.

In the Bull Calves of the Hereford Class we observe a most praiseworthy animal (No. 69), the property of Mr. Perry, of St. Oswald; in form, shape, and colour this animal scarcely has an equal. Mr. Bradstock's bull calf possesses many excellent points, and might fairly dispute the reward with its companions in this class.

The prize for the Bull, Cow, and Calf in Class 12 is assigned to Mr. Wigmore, and certainly he should claim it, for although the dams in the other lots are exceedingly good, the males hardly are deserving the merit which might belong to them.

The Breeding Cows of the Hereford breed are extremely good. Mr. Jos. Craddock takes 1st prize, also the Local Committee's prize, for his 5 years and 6 months old "Queen Bess," a magnificent animal, straight, wide, and deep. Messrs. Perry and Wigmore likewise merit the distinction their cows have attained.

The Breeding Heifers in Class 14 are very good. Messrs. Bennett and Read again appear as successful competitors.

Class 15 is justly passed by. The judges certainly were right in withholding the prizes offered to this class.

For Heifer Calves under a year old, Mr. Perry receives a 1st prize, for a deservedly perfect little animal, as neat as a pin. Mr. Read gets a 2d in this class.

In the Fat Cattle Class the Earl of Radnor takes the lead with a fine steer, and Mr. Pike runs a good second; the latter also carries off the next prize for his 5-year old fat cow. We cannot understand the usefulness of the rule required to exhibitors in this class, for it does not appear very probable that a heifer could stand a good chance against an animal of twice its years. It was quite refreshing to look once more upon a really fine specimen of the noble Cotswold. Mr. Beale Brown's 2-year-old ram is a fine specimen of this most valuable breed, almost faultless in shape. Mr. Fletcher, of Shipton, exhibits a very fine ram also in this class, but Mr. Handy, who takes the second prize, can lay claim to the best quality of wool. This after all is the greatest feature to be sought for in a sheep at the present time; may be Mr. J. King Tombs might have claimed this superiority if his very superior closely shorn ram could have given evidence of the quality of his jacket.

In the Cotswold Shearling Rams we have numerous good animals competing, and again Mr. Handy carries off the prizes.

For the best five Cotswold Breeding Ewes and Rams, we find Mr. Smith, of Bibury, first with his grey-faced, even headed, well shaped pen, Mr. John Lane well deserving reward for his pen of most useful sheep, which exhibit the qualities for which he has been so long celebrated, and Mr. Cole deservedly commended.

With only one competitor against him, Mr. John Lane again takes the prizes for ewes with lambs by their side.

If the Cotswolds truly represent their native locality, how creditable it is to find the short-wool sheep taking the position they do here. What can be finer than the specimens of Downs sent from Coleshill—whether it be the best ram of any age, a shearling ram, or pen of breeding theaves, there Lord Radnor's name appears. The appearance of these animals reflects credit upon all who are interested in bringing them out, and not the least to the shepherd who has displayed such great skill in shearing the sheep. The Duke of Beaufort sends some very superior animals in this class, though not equal in condition or form to those from Coleshill. Mr. Playne contributes some useful roomy Downs, but before they can hope to compete with such animals as we have described, much remains to be done in the way of feeding and trimming at home.

The Shropshire Downs, deservedly popular and taking sheep, appear only in the name of E. Holland, Esq., M.P.; this is to be regretted, as without compe-

tition there can be no merit in winning. The Dumbleton rams might be better specimens of this breed, and their condition could be vastly improved.

In Oxfordshire Downs we have fair competition. Mr. Wallis, of Bampton, takes the prizes for both a 2-year and 5 months old and a shearling ram, both creditable specimens. Mr. Hobbs, of Maisy Hampton, shows a fine, somewhat coarse, though useful roomy ram.

Fat Sheep again are not very numerous. Mr. Read receives the prize for three Cotswold shearhogs, and Mr. Radnor for his exquisite pen of three symmetrical fat beauties, beating the Duke of Beaufort and Mr. Playne, who is again too low in condition.

The collection of Swine is really most excellent for the neighbourhood. Of White Pigs there were but a few, and those not of the first order, but the Berkshire were in great force, and most deservedly preserved the reputation they possess for size and quality. In the Breeding Sow Class we found some first-rate specimens from all the familiar breeders in this part of England—Hewer, the Royal Agricultural College, Sadler, Stewart, and Baily. In adjudicating the prize for breeding sows, the judges must have been influenced by size, and somewhat regardless of form, or how could Mr. Stewart's large faulty sow have been preferred to the perfectly-shapen, correctly-moulded "Sukey," the property of the Royal Agricultural College. The judges at Bristol and Cheltenham certainly differ in their taste and notions. Mr. Stewart deservedly gets a prize for his young Berkshire boar, but certainly is not entitled to distinction for his coarse mis-shapen breeding sow.

Mr. Hewer shows some nice young Sows in a pen of three, taking 1st prize, and the Royal Agricultural College came in again here 2d, for a nice neat pen of the like number. Mr. Baily exhibits and takes a prize with a very useful boar; and last, but not least, the Royal Agricultural College gets a 1st for a sow with seven pigs by her side, and well do they deserve the praise bestowed upon them.

We now have a few words to say upon the Horses. Then first for the Cart-horses. The collection under this head was not creditable to the locality or Society. In the award of prizes I should beg to differ with the judges in their selection of mare and foal; the 2d prize animal certainly should have had 1st. Earl Radnor's Suffolk would scarcely have been admitted into a show-yard in an eastern county—her fore legs ought to have disqualified her for distinction at Cheltenham. Mr. Woodward's roan mare certainly is entitled to greater praise, even if she does lack a little activity.

In Stallions we had the Duke of Beaufort's Gray, which animal very properly had to yield the palm to Mr. Barnet's old horse "Sir Peter Laurie;" the latter a very fine shaped handsome beast. Major Williams fairly takes a prize for his powerful hunting mare "Perfection."

The Cobs and Ponies were nothing extraordinary; Mr. Ed. Holland, of Prestbury, gets a 1st for his clever well-shaped Brown Cob, and Mr. Fred. Marshall for his fine stepping pony.

In the Implement Department we find many names amongst the exhibitors already well known to fame, as, for instance, Cambridge; P. & H. P. Gibbons, of Wantage, who receive a prize for their portable threshing machine with steam engine; Messrs. James Savory, of Tewkesbury, for a cider mill, and also a very handy threshing mill and engine; Humphries, of Pershore, again gets a prize for a threshing machine; Lane, of Cirencester, for his cake-breaker. Richmond & Chandler's chaff-cutter is again in the front rank. Messrs. Savory, of Gloucester, exhibit a very simple and substantial steam engine, which fully deserves the distinction given to it; and C. F. Wells's one-horse cart is justly entitled to a prize, being a really strong, serviceable implement, fit for its work. Great credit is due to Mr. Isaac James, of the Tivoli Works, for his collection of implements, which fully entitles him to the prize of 10*l*. A portable gap drill for mending the rows of Turnips or other green crops, appears both handy and suited for the purpose. Messrs. Baker & Co., of Gloucester, take a prize of 20*l*. for their assortment of implements. Messrs. Seaman & Mallony also exhibit implements of apparently excellent quality and workmanship.

The stands of Messrs. Wheeler & Sons and John Clare form attractive features at the exhibition; the seeds and Grasses under both stands are arranged with the usual good taste, and do much credit to the exhibitors.

In addition to the exhibition of agricultural stock, there is a show of Dogs, numbering some 400 animals. A brilliant collection of flowers may be viewed in another direction, or the weary sight-seer may find rest within the cool shade of the massive stone temple which stands in the centre of this busy scene.

One or more military bands add cheerfulness to the scene by their occasional outbursts of popular airs and tunes, and elegant and graceful forms hang on the arms of exquisite protectors, or recline on the many seats provided for loungers. Country men and women jostle their more tender fellow creatures, and struggle through the crowd indifferent to everything but the one object of their pursuit—probably the animal or animals from their respective localities—for loud are the praises some of these worthies bestow upon individual lots. The members of the Society with their friends dined together in a capacious tent, erected upon the implement ground; although the tables were not so well filled as they might have been, it cannot be said that life or humour were quite absent at that board, for hurrahs and cheers might be heard issuing from the direction of the feast, and we hope that all possible success may attend the Gloucestershire Agricultural Society, and that the promoters and subscribers will continue to meet under the same happy auspices for many years to come.

Reviews.

Tales and Traits of Sporting Life. By Henry Corbet. Rogerson & Tuxford.

Mr. Corbet has here collected a number of very readable sketches and tales; and his publishers have issued them in a very well printed little volume, illustrated with clever coloured lithographs as Frontispiece and Vignette. The biographies of J. Gully, old John Day, and the Chifneys, the accounts of Mr. Merry's establishment, and of the great horse and hound show, and a concluding paper on the Breeding of Hunters and Hacks, are among the more substantial pieces of general interest. There is besides these a very racy description of Goodwood, and a number of lighter sketches illustrative of the many sides of sporting life. We extract a passage from the concluding pages on the breeding of Hunters and Hacks:—

"Farmers will tell you that, as a rule, breeding 'nags' does not pay; as, under the circumstances, it would be rather a curious thing if it did. As a rule, breeding such stock does not answer, because they are bred without any rule at all. In these days, if a tenant wishes to rear a good beast, he takes especial care to secure the services of a good bull, as with the same ambition he will bid up for a Cotswold shearling, or a Southdown ram. If moreover, he really means to succeed, he will be almost as scrupulous in selecting a dam, and thus provided, he gives the principle he is testing a fair trial. But take the case of rearing a riding-horse, and how does the self-same man proceed? In nine times in 10 'just anyhow.' He puts anything he may happen to have with any thing that may happen to come in the way. As often as not he scarcely looks at the horse he uses, but takes the word of some roving blacksmith, or broken-down coper who travels the country with an animal 'best calculated to perpetuate the breed' of weeds and screws. Then the foal, when he does come, is cultivated much after the same fashion, or, that is, left pretty much to shift for himself. You will see him fighting for his own in the farmyard amongst a lot of store bullocks, as likely as not with a hip down, or a hole in his side from the thrust of a playful Hereford, and doing as well as he can on that grand specific, a due allowance of Bean straw. The result of this wonderful system is surely logical enough. At a year old the young nag is half-starved, sulky-headed, big-bellied, narrow-framed thing, with most probably a blemish or an eyesore of some sort to complete his personal experience, and with a general expression and carriage as lively as that of Rosinante, or Dr. Syntax's Dapple. Very naturally the breeder of such a prodigy is more than anxious to sell him, but quite as naturally can find nobody willing to buy him; until, without heart, mouth, or action—under-bred, under-fed, and half-broke—the butcher gets him thrown in with his next half-score of beasts, or the village apothecary, on the spur of some hapless moment, is brought to believe that the colt may suit him! And thus it happens that breeding nags does not pay—with rather less outlay and attention devoted to such a business than one would bestow on a sitting of Cochin China eggs, or a litter of terrier puppies."

Science and Practice in Farm Cultivation. By Prof. James Buckman, F.L.S., F.G.S. No. 3. *How to Grow Good Clover.* R. Hardwicke, 192, Piccadilly.

The several chapters of this section of Professor Buckman's work describe the Clover family generally, the farm species of Clovers, the varieties of Red Clover, the Clover allies, the Clover sickness, and Clover weeds and parasites. It is the Clover sickness and the weeds and parasites we sow with our seed that are the great difficulty in the way of growing good Clover. Let us hear what Mr. Buckman says on the former of these subjects:—

"In considering the important question involved in the term 'Clover sickness,' we would first direct attention to the fact that crop Clover is a derivative plant which has been so forced that it is many times larger and more juicy and succulent than the wild plant from which it sprung. This derived nature (the propensity, as it were, for fattening) can only be maintained by a continuance from one generation to another of those luxuries to which the cultivated family has been accustomed; hence, then, if seed be brought from a richer soil to a poorer, or from a warmer to a colder climate, we may expect that its plants grown amid Barley and drawn up during the summer would have but a poor constitution to withstand the rigours of winter; but can we in such a case say that the land is Clover sick, that is, sick of growing Clover?

"Of course the seed here supposed will grow better in one place than in another, as, for example, we have traced some American seed of broad-leaved Clover grown by itself in a deep rich soil in the Vale of Gloucester, where the climate is so much milder as to be a fortnight before the elevated land of the Cotswold Hills and producing an abundant crop; while the same forming part of a mixture of 'seeds' with Rye-grass and Plantain on the hills, the two latter have taken possession of the soil, and the Clover made no progress at all; whilst other seed, under precisely the same circumstances, has done remarkably well.

"That there is much reason for these conclusions will be found in the fact that the more seed we import from warmer climates the more difficult is it found to make the land produce a plant; still importation is rapidly on the increase, because warmer climates can produce seed more certainly and in greater quantity than we can at home.

"The difficulty of growing from foreign seed increases in proportion to the thinness of the soil and the backwardness of the climate, so that the elevated districts on the stony Cotswolds just adverted to present, perhaps, more of the so-called Clover-sick land than any other of like extent.

"The seed of Clover, then, has become more and more pampered—more the offspring of large crops from deep alluvial soils under the tropical summer heat of the south of France and the United States, where it is grown as a self-crop and not fed merely on what the corn could not carry away; and so while this enervation, or, if preferred, this civilisation, of plant has gone on, we expect its seed all at once to withstand the shock of a lower temperature with constant climatal changes and cutting winds; and if it does not succeed, we say that the land is Clover sick, when, in truth, it is the seed that sickens under these new and trying conditions. As well may we say that the Northern States sicken of the negro, because he there dies out so rapidly, or that the warm south sickens of humanity, because those who are unacclimated sicken and die there."

This is the first explanation offered of the phenomenon called Clover sickness—but others are also suggested; the gradual abandonment of paring and burning, by which mineral food for the plant is prepared, and by which much mischievous insect life is destroyed, is one; and the following are the conclusions arrived at:—

"1. That the larger induced plant of our cultivated Clovers has not, as a rule, that perennial constitution of the smaller wild species.

"2. Even its induced habit is much deteriorated by transportation under adverse climatal circumstances.

"3. The seed itself is often full of weeds, which, by gaining the mastery, kill out the young Clover plant.

"4. This effect is enhanced by growing Clover with Barley, in which, if not smothered, it must become weakened.

"5. We ought not to expect to grow Clover where we have taken away the necessary substances for its growth in the corn crop."

Farm Memoranda.

AN IDEAL FARM: "WET, FOUL, AND POOR."

(*Concluded from p.* 518.)

THE next step was to form some plan for stocking and cropping the land. Previous experience as an occupier of strong land enabled the tenant to lay down certain maxims or axioms which he proposed to take as his guides. He had convinced himself, 1st, that corn-growing alone would not pay at present prices. 2d. That the breeding and fattening of sheep had for many years been more profitable than any other branch of farming; and that although this was clearly not a sheep-farm, still, with proper arrangements, it might be made to carry a moderate number of sheep with advantage both to the pocket of the occupier and the condition of the land. 3d. That horse-keep is the item which it is most difficult to keep down on clay farms, and which, if not resolutely dealt with, will effectually keep down the farmer's profits.

The plan now adopted was to buy in a sufficient number of ewes in the autumn to run on the old Grass land through the winter, at the rate of about one to the acre. In ordinary seasons they maintained themselves without extra keep until Christmas, from which time they received a small feed of Oats daily until lambing time. After lambing, Turnips or Mangel, previously stored on the Grass, were given them, with corn or cake, until the winter Tares or Clover were ready to commence. By the time these were consumed Rape was ready, and by selling off the lambs fat from time to time, and continuing the allowance of corn or cake to the ewes, all the lambs and most of the ewes were sold fat to the butcher by the time the Rape was done and the land had to be ploughed for Wheat. This plan had the advantage not only of realising in a short time a handsome profit from the sheep, but of leaving the Clover, Tare, and Rape land in first-rate condition for a crop of Wheat. It also promoted the great object of spreading the horse labour more uniformly over the year, as the land was broken up as the green crop was consumed, and the press of work avoided which usually occurs at the time of Wheat sowing. It thus became practicable to employ the whole team immediately after harvest in preparing the land for Swedes and Mangel Wurzel, the acreage under root crop being reduced to

a minimum by the growth of green crops for summer consumption. The following was the method followed:—As soon as the corn was out of the field, the stubble was scarified or breast-ploughed so lightly as to make sure of being able to burn in small heaps all that was pared off. After spreading the ashes, 12 loads per acre of manure fresh from the yards were distributed evenly over the surface, and ploughed in with a good deep furrow, of such a width as to stand nearly or quite on edge. Thus it remained fully exposed to the weather during the whole winter; and as soon as dry weather set in in spring, a turn or two of the harrows, followed by a light grubber, destroyed the annual weeds, and the land was ready for sowing. Four cwt. of guano per acre sown broadcast and harrowed in with the seed, which was drilled on the flat at 3 feet between the rows, completed the operation. The tilth thus produced was superior to that obtained in any other way on strong clay; and though the land had only been winter-fallowed, any want of mellowness was made good during the early summer by frequent and thorough horse-hoeing, first shallow and then deeper, as more and more mould was formed. The advantages obtained by this system of growing roots were numerous:—1st. By securing an early seed-time, so that the crop was sufficiently mature to be removed from the land in October for storage at the homestead or on the Grass for ewes and lambs in the spring. 2d. By carting the manure on the land early in autumn, before the solidity produced by the drought of summer had been lost. 3d. By the great economy of horse labour in growing a fallow crop with only one ploughing, leaving the rest of the rough work to be done by the powerful though wayward team, frost, snow, wind, and rain.

Good crops of both Swedes and Mangel Wurzel were grown in this way at moderate cost; the only difference in cultivation being that the Swedes were sown a month later, and that instead of 4 cwt. of guano per acre, 2 cwt. of guano and 2 cwt. of superphosphate were sown broadcast at the time of sowing. But the heavy expense of carting a whole root crop from the land prevented the tenant from growing any considerable acreage of either; his great object being to introduce as much as possible into the management of clay land that characteristic feature of light land farming which constitutes the great difference between them in point of profit, viz., manuring the land by sheep instead of the dungcart.

The management of the corn on this farm soon became the topic of conversation. From an average yield of two to three quarters per acre the Wheat crop soon rose to four and even five, and the spring corn improved in proportion. Yet, when asked what he did to his corn, the farmer said, "Nothing! but hoe it;" and when pressed on the subject of manure his invariable answer was, "If you take care of your land, the corn will take care of itself." These seemed but simple answers, but they meant much. The consumption of green crops on the land in summer has already been described; the improvements he introduced into the making and keeping of his manure have yet to be told. The two together evinced that care for his land of which he spoke so oracularly, and which produced him such a bountiful return at the time of harvest. But he set great store by his hoeing. In a dry spring, when Wheat carried a splendid colour on good land, it used to turn yellow and sickly on this strong clay, even where well drained; and our farmer said it was all from want of hoeing. He explained it thus: if land is in good condition, and free from staguant water, the roots of the Wheat-plant will grow all through winter, and will extend over a considerable surface by the time when dry weather usually sets in. As soon as clay begins to dry it begins to crack, and the fissures are wide enough entirely to break off the small roots and sever the plant from a large portion of its supply of food. Hence its change of colour and loss of vigour during the dry weather, which is on all other grounds favourable to its healthy development. This can only be prevented by horse-hoeing, not a single shallow hoeing, or rather sliding over the surface, which only shaves off a few annual weeds, but hoeings repeated until a good covering of mould can be obtained. When he had accomplished this, he used to boast that his clay would carry the Wheat up to harvest better than any light land in the country.

The arrangements for stocking and managing the Grass land on this farm were worthy of attention. It contained a good deal of inferior pasture, but no Grass good enough to fatten a bullock; and the previous plan had been to buy in young cattle in the spring, when most other graziers were doing the same, and when consequently in nine years out of ten they were bought dear. They had to be sold out again in the autumn, when many other farmers were selling too; so that the tenant generally returned from the fair grumbling that he had scarcely got more than he gave for his stock, and that his summer's Grass was all but thrown away. The difficulty on this land was that cattle could not be fattened at Grass; and if made up in winter, they either required more Turnips than it was profitable to grow on such a farm, or if fed solely on corn and cake, it was difficult to make them pay their way. The new tenant's first attempt was to give his bullocks cake at Grass, but some of them would not eat it; and even with this assistance the Grass was not good enough for the purpose, and the cost was considerable. He therefore tried another plan, which turned out a complete success. He bought yearling heifers in May, and a young bull to run with them at Grass. The bull was taken from them in August, so that none should calve later than May. The heifers remained in these pastures until severe weather set in, when they were taken into the strawyard, and received once a day a feed of roots, if there were any to spare; if not, 2 lb. of linseed cake daily, which, at 12*l.* per ton, cost 1*s.* 6*d.* per week. If in-calf heifers were very dear in the spring, he occasionally sold a few just before calving, for as much money as if they were prime fat; but his usual course was to let the calves run with their dams all the summer. When taken up in October they were so fat and their points so well developed that they looked like prize beasts in miniature; and by keeping them well through the winter and spring they were eagerly bought by the butchers in June, when the winter-fed cattle had been nearly all slaughtered, and the grass-fed had not yet come in. The heifers were disposed of as follows:—a few that promised to be first-rate milkers were taken into the dairy; the greater part were sold for winter-feeding, and from their age and growth were worth about 2*l.* more than when bought in a year and a-half before. The value of two summers' Grass for a young heifer on pasture of this quality was rated at 4*l.*; linseed-cake for 20 weeks, at 1*s.* 6*d.* = 1*l.* 10*s.*; so that the heifer when sold had cost about 5*l.* 10*s.*, from which, if her increased value be deducted, 3*l.* 10*s.* would be left as the cost of the calf. These calves received as much cake as they would eat, which did not exceed 1 lb. per day at first, and 3 lb. at the latter end of the time, averaging 2 lb. per day, at a cost of 1*s.* 6*d.* per week, or for the 34 weeks 2*l.* 11*s.* per head. Taking an average consumption of two stone of roots per day for 34 weeks, each calf would consume three tons of roots, which, at 7*s.* per ton = 1*l.* 1*s.* These items, added to the keep of the heifer, made a total cost of 7*l.* 2*s.* each. The straw and attendance were considered to be well paid for by the manure.

The price at which these yearlings sold varied of course with the markets; but in consequence of their first-rate quality, and their light weights, which exactly suited the butchers during the hot weather, they were always worth 1*s.* per stone more than the average price of fat beef; and they generally fetched 1*l.* per month of their age, varying from 12*l.* to 16*l.* per head: one year the whole lot averaged 16*l.* each, their age being 14 months. In all cases they left a handsome profit. The peculiar advantages of this system were thus described by the tenant. He said that when he took his half-fat cattle to market, he had to run after his customers; now they ran after him. Besides, it suited him better to feed cattle that ate 2 lb. of cake per day than those that ate six: he always fancied that the big beasts ate not only their share of the cake, but his too. As to the meadow-land, the present occupier made a point of mowing as small a number of acres as possible; but in order to keep the acreage down, he said it was necessary to keep the condition up; and as the field of Clover which had formerly been mown for winter fodder for the horses was now given up to the sheep, it was necessary either to mow more of the Grass, or to put up with a smaller stack of hay, unless the land could be made to produce more per acre. This the tenant did not think a very difficult task, when he was told that the usual yield from 20 acres of meadow was about 15 tons of hay. He saw that the land required liberal treatment for some years; and he therefore dressed it the first season with two cwt. of guano and 1 cwt. of nitrate of soda per acre, following it up the next year by a heavy dressing of well-made manure. He also took care that the land should be cleared by the 1st of March, as he had often seen a crop of hay ruined from the meadow being eaten bare in April. If drought sets in in May, land so treated becomes parched for want of its natural covering, and the Grass receives so severe a check that it recovers very slowly; and if the season continues dry, the ultimate result is half a crop of hay, stacked some weeks later than usual, and no after-grass. After two years of the treatment above mentioned, the Clovers and finer Grasses sprang up so as completely to change the character of the herbage in these meadows. They also produced half a ton more hay per acre.

The last point to be noticed in the management of this farm is the treatment of the manure. In consideration of the spirited exertions of the new tenant, his landlord consented to roof over a small fold yard as an experiment; and the manure thus made was tested against an equal quantity made in the ordinary way. The result was so decidedly in favour of the former, that after some years' experience the tenant declared that he would rather pay for covering the yard himself than be deprived of the benefit derived from it. The cost of the roof was about 5*s.* per superficial yard of the space covered; and the increased value of the manure was found to be from 25 to 30 per cent. The advantage, however, did not end there, as there was considerable saving of expense by not carting the manure into heaps, or turning it once or twice in the heap, as had been the previous custom. It remained in the yard undisturbed until wanted, and was then in first-rate order for carting on to the land, whether applied to the Grass or for a fallow crop.

WHITFORD, NEAR FARRINGFORD.—Mr. Askell's farm of 660 acres, includes of Wheat, 120 acres, receiving 1½ cwt. of nitrate of soda; of Barley, 80 acres; of Oats, 20 acres; of Beans, 20 acres; of Potatos, 2 acres, receiving 8 tons of farmyard dung per acre; of Rape, 10 acres; of Turnips, 35 acres, receiving 2½ cwt. of superphosphate per acre; of Swedes, 55 acres, receiving 8 tons per acre of farmyard dung, 1 cwt. of guano per acre, and 2 cwt. of superphosphate per acre; of Mangels, 2 acres, receiving 2 cwt. of superphosphate per acre; of Clover, 20 acres; and of permanent Grass, 160 acres. The farm-yard dung is enriched by the consumption of purchased cattle food to considerable extent. The farm consists of 100 acres of clay, 100 acres loam, 300 acres moory soil, some on very thin white gravel subsoil, 160 acres Grass land, plenty of lime in the soil—plant Clover on the clay and loam, mixed seeds on the low or moory land, which is let lie in Grass two years, then broken up for Wheat. The clay land is farmed in the following system:—1st, fallow and dunged; 2d, Vetches and Turnips; 3d, Oats; 4th, Clover; 5th, Wheat; 6th, Beans; 7th, Wheat; 8th, early Turnips; 9th, Wheat, with Trefoil sown for early feed previous to the fallow. The loamy land: 1st, Swedes, dunged and ploughed in the autumn previous; 2d, part Beans, and part Scotch Wheat; 3d, Barley; 4th, part Clover, and the other part Vetches; 5th, Wheat. The moory land: 1st, Turnips, breast ploughed in spring; 2d, Barley; 3d, seeds; 4th, seeds fed with beast; 5th, Wheat. A heavy stock is kept, and a great quantity of artificial manure is used—guano and superphosphate, and some raw bones. A great quantity of corn and some oilcake is used to feed out all stock. Good artificial manures, used properly, are considered to pay very well.

Miscellaneous.

Adulterated Butter.—The facts were shortly these:—In July, 1862, the plaintiff was desirous to embark 1500*l.* in some business, and advertised accordingly. In consequence of such advertisement it was represented to him that the defendant had discovered a process whereby rancid and impure butter could be rendered as good as Dorset by the introduction of water. From the defendant's books it appeared that, whereas he had purchased 407 cwt. of butter, he had sold double that quantity—viz., 814 cwt.; and the plaintiff alleged that the statement was made to him many times by the defendant, that water only was mixed with the butter. Ultimately it became known to him that the process was not upon rancid but good butter, and not by water only, but by materials technically known as "flare" and "milk"—that is beef and pork fat. The plaintiff had been to Ireland with the defendant, and purchased a large quantity of Irish butter, and subsequently to its becoming known to him what the real nature of the process was, he also discovered that it was not a profitable business, and that the article would not sell in the market. Accordingly the plaintiff applied to the defendant for a dissolution and repayment of his 1500*l.*, which being refused, this bill was filled on the 29th of November, 1862. On the 3d of December an injunction was moved for to restrain the defendant from pledging the credit of the firm or contracting without the plaintiff's consent, when, by consent, an order was made for sale and dissolution, and 1131*l.* 17*s.* 8*d.* was paid into court. The answer had been put in, and the stock sold for 14*l.* The case now came on at this hearing. For the plaintiff it was contended that on the ground of fraudulent misrepresentation he was entitled to dissolve the partnership. The process was not what the defendant represented it; it was not profitable, and it was not a secret, for the defendant had communicated it to two parties previously, who had advanced money to him; in fact, it was a well-known process. The plaintiff's folly or credulity was not a ground to refuse him relief. If a party in selling a business made a false representation, the purchaser, in an action, would be entitled to damages. The Vice-Chancellor said his opinion was that the plaintiff could not come into a court of equity under the circumstances, assuming that he could prove the allegations in the bill. If the plaintiff or his agents believed that by the mere introduction of water the weight was to be doubled, there was no limit to their credulity; but as there was a limit to that of his Honour, he did hesitate to believe that any man of common sense could credit such a statement. It was admitted that the Food Adulteration Act not only made it illegal to adulterate an article, so that it was injurious to health, but also to sell as a certain article that which had been adulterated by the admixture of any other substance, although such substance was in itself harmless. He knew this before he entered into the partnership, and it was obvious that if such a transaction had taken place with regard to milk, that would have been against the provisions of the Act. But that was not all. The plaintiff said that until he entered into the business he knew nothing about any other agent than water; but he then discovered that there was a positive violation of the law, and he ought then at least to have insisted on a dissolution, but by his acts he said, "I have no objection to go on if it is profitable;" he supplied the money to buy "flare" and "milk," and when it turned out not to be lucrative wrote the letter of November, 1862, in which he expressed his desire not to go on while the market was in its then present state. By the answer it appeared that the parties had been very nearly settling the matter, and it was much to be regretted that they had not. Assuming that the plaintiff had a legal remedy,

he could not come here on the present facts. *Times Report, abridged, of Riddell* v. *Smith, May* 30, *before Vice-Chancellor Sir R. T. Kindersley.*

Elementary Schools.—I repeat, that if the elementary schools were generally under the charge of respected and efficient teachers, no injury would be done to the child of the higher class by sitting for a while on the same bench, and learning the same lesson, with the child of his father's subordinate; and it might be that many a kindly and pleasant association would spring up in after-life from the recollection of this early intercourse. *Rev. Prebendary Brereton, in the Journal of the English Agricultural Society.*

Calendar of Operations.

JUNE.

WESTER ROSS: *June.*—Although somewhat later of being sown than usual from the long continuance of adverse weather in spring, the crops were laid down in good condition, and brairded beautifully and promisingly. Since then we have had extreme alternations—one week unusually hot and forcing, the next so piercingly cold that the growth and progress of the previous week were very much lost, and the pleasing verdure of spring exchanged for the unpromising aspect of winter. About a fortnight ago we were rejoicing in the heat of summer; at the end of May there was a fall of snow which continued nearly throughout the whole day, enshrouding hill and dale in its covering of white, and up till now the higher hills all around have generally been covered with snow. Again, there is a thorough change. With June a moderate and genial rain continued to fall for several hours, afterwards it was mild and balmy. With a continuance of warm weather the growth would now be rapid, as there will for some time be no lack of moisture. Wheat on cold damp soils is thin and patchy, and must fall considerably short of a full crop. On dry soils in good condition it is close and healthy, and although not far advanced for the season promises to be a good crop. Oats look well everywhere, except on poor, ill-cultivated, and exposed fields, where for the time the braird has almost disappeared before these sore blasts. Barley, which in its earlier stages is greatly more delicate than Wheat or Oats, has ill borne the severities of the season. In this neighbourhood there are only a few fields of good Barley to be seen, but a continuation of genial weather would yet work wonders. We have no doubt but a top-dressing of guano or nitrate of soda would have been well repaid. Potatos, which have not been so largely planted this season, are coming above ground strongly and vigorously. Swedes have been somewhat retarded by the cold, but are now brairding satisfactorily. They are still continuing to increase in favour, and occupy a larger breadth annually. For some three weeks we will be busily occupied in preparing the ground for, and sowing common Turnips. Fortunately the soil this season admits of easy tilth, and becomes admirably pulverised. The hay crop on the whole is light, and pastures are well eaten. Grain and stock continue to maintain the same relative disproportionate value, but a little time will rectify this, as the breadth of Grass is gradually increasing by a corresponding lessening of the area for white crops.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATER, Streatley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level. Reading of	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday ..	June 17	30.09	64	61	W.	1	9	68	52	81	45	..
Saturday ..	18	30.01	67	63	N.W.	3	10	70	57	85	50	0.13
Sunday ..	19	30.24	63	60	N.W.	1	10	68	51	82	44	..
Monday ..	20	30.24	63	58	S.W.	1	9	66	46	77	39	..
Tuesday ..	21	30.19	67	61	N.W.	3	5	69	55	86	51	..
Wednesday ..	22	30.13	68	60	S.W.	2	8	67	52	79	45	..
Thursday ..	23	30.24	60	58	S.W.	1	10	66	51	84	47	0.11

Notices to Correspondents.

BAILIFF.—We want two good men in this capacity; one to take the orders of a Cotswold farmer, another to have the management of a large Irish farm.

NEW SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.

THE HYDROPULT is invaluable for use in the GARDEN for WATERING BEDS, SPRINKLING PLANTS, DROWNING OUT INSECTS, CLEANSING TREES FROM SMUTS, DRESSING with LIQUID MANURE, ETC. ETC.

THE HYDROPULT is desirable in every HOUSEHOLD for WASHING WINDOWS, WETTING SIDEWALKS, SPRINKLING STREETS, WASHING CARRIAGES, EMPTYING CISTERNS, FILLING BARRELS, A SPRAY BATH, ETC. ETC.

THE HYDROPULT,

PRICE: WITH BRASS CYLINDERS AND MALLEABLE IRON STIRRUP, JAPANNED IN OAK COLOUR, **32s. 6d.**

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanised Wire Strainer, Rose, and Small Jet.
Complete as above, with Copper Stirrup, TWO GUINEAS.

Weighs but 8 lb.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.
It will draw water horizontally, if necessary, through 300 feet of Suction Hose, and force it through Delivery Hose, to an altitude of 100 feet.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

In proof of the real utility and efficiency of the HYDROPULT as a GARDEN IMPLEMENT, I beg to call the attention of the public to the following unsolicited Editorials from gentlemen whose testimony must have weight with the readers of the *Gardeners' Chronicle*:—

EDITORIAL, *written by* ROBERT HOGG, LL.D., F.L.S.

THE HYDROPULT.—The great secret of successful indoor gardening consists in the free and judicious use of the syringe. A greenhouse or conservatory that does not enjoy this luxury becomes a miserable lazar house of vegetable incurables. Vermin and filth hold unbounded sway, and people become disgusted with their own want of success. Well do we recollect the former days of plant culture, the days of "collections," when the use of the syringe was yet limited or unknown. What a time for red spider, scale, and greenfly! What fumigations and consumption of tobacco and tobacco paper, washings with tobacco water, and all sort of remedies were resorted to! We regard the introduction of the free use of the syringe as one of the events in modern gardening. To this is due the success of orchard house management, Vine management, and Plant management, but the old syringe with its slow suck and squirt, is now as much out of date in modern gardening as an old stage waggon in modern locomotion. Many are the improvements and complications of the old simple syringe. We have tried several of them, but for ease in working and efficiency in result, we have not yet met with anything to equal the Hydropult, sent us by Mr. BUTTON. It is powerful in operation, and so easy and comfortable to work, that one never gets fatigued. With such an instrument plants may be kept in perfect health, and quite free from insects and dirt. We first tried it on a few Geraniums in our conservatory, which were smothered with greenfly during our temporary absence of ten days, but on our return a stout discharge from the Hydropult sent them clean off across some unknown bourne, whence they have never yet returned.

EDITORIAL, *written by the* REV. HENRY H. DOMBRAIN, A.B.

THE HYDROPULT.—When we formerly noticed this instrument, we did so from merely seeing it at the Proprietor's; since then we have had an opportunity of testing it personally, and can bear testimony to the excellence of the invention. The force with which it throws a stream of water is almost incredible; while for syringing a greenhouse, a gentle shower, as fine as that from a hand syringe, with considerably more effect, can be easily given. We have a gardener, quite of the old-fashioned school, who does not generally fall in love with new-fangled notions, but he is perfectly enchanted with the saving of labour and time that the Hydropult will be to him.

EDITORIAL, *written by* SHIRLEY HIBBERD, ESQ., F.R.H.S.

THE HYDROPULT.—This is an invention introduced in a most spirited manner by Mr. C. P. BUTTON. It is at once a fire engine and a garden engine, is always ready for use at a moment's notice, is neat and portable, weighing only 8 lbs., and can be worked by a boy of moderate strength for some hours in succession without fatigue, the mechanical power employed being economised by combining the action of the hand and the resistance to the foot, between which the instrument is placed and used, as a double action pump. From the sole to the handle the Hydropult measures 24 inches. The two brass cylinders measure 12 inches in length, and 3½ inches in breadth. At the top of these cylinders India rubber tubing is attached, on one side to feed, on the other to discharge the water. It will perhaps surprise the reader to be told that this little contrivance, which is pretty as a toy, and can be carried under the arm as easily as a trumpet, will throw from seven to eight gallons of water per minute a distance of 50 feet. But it will do it, as we know from having tried it, finding the experiment an agreeable exercise, and of special service in washing down a stuccoed wall, which it accomplished quite as well as if we had sent for the parish engine. Gardeners will not need to be told the value of a portable force pump of this simple kind. It can be used to produce a powerful stream to extinguish a fire, or a gentle shower to syringe a whole houseful of plants, without the necessity of moving a single step from the position most convenient for a supply of water. Wherever a pump or syringe is needed, the Hydropult can be brought into use, to remove water from a cellar or a boat, to cleanse a cistern, wash a pavement, or drench the foliage of trees loaded with soot, or annihilate at one fell swoop the whole insect population of a plantation of Roses. But we will not enlarge upon its merits, they are obvious, and having a Hydropult in use we can say that it will soon pay for its cost in a garden, besides being always at hand in case of an emergency of any kind which may require an immediate removal or discharge of water.

THE GREENHOUSE and CONSERVATORY HYDROPULT.

A NEW AND BEAUTIFUL IMPLEMENT,

Weighing scarcely 3 lbs.,

AND SPECIALLY ADAPTED FOR USE IN THE GREENHOUSE AND CONSERVATORY.

Price 35s.,

Complete with Brass Cylinders and Copper Stirrup, 2½ feet Suction and 3 feet Delivery Hose, Strainer, Rose, Jet, and Fan.

This NEW IMPLEMENT must necessarily supersede SYRINGES and other devices of the kind, for it will be found much more effective in its operation.

A LADY CAN WORK IT FOR HOURS WITHOUT FATIGUE.

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CARTER'S GARDENER'S VADE-MECUM.

HERBACEOUS CALCEOLARIA, &c., SEED.

CHOICE CALCEOLARIA (JAMES').—This unrivalled strain has in every instance received FIRST PRIZES wherever exhibited—can be seen in bloom here. Sealed Packets, 1*s.* 6*d.*, 2*s.* 6*d.*, and 5*s.*

CHOICE PRIMULA SINENSIS FIMBRIATA.—Hayes' superb strain. Sealed Packets, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.*

CHOICE CINERARIA.—Saved from best named varieties, and cannot be surpassed. Sealed Packets, 1*s.* 6*d.*, 2*s.* 6*d.*, and 5*s.*

HUNT'S SWEET WILLIAM.—Sealed Packets, 6*d.* and 1*s.*

SCARLET INTERMEDIATE STOCK.—True and fine. Sealed Packets, 1*s.* and 2*s.* 6*d.*

PANSY.—From best named varieties. Sealed Packets, 1*s.* and 2*s.* 6*d.*

And every other first-class Seeds. See CATALOGUE, post free.

WM. CUTBUSH & SON, Highgate Nurseries, London, N.

New Roses.

WM. PAUL can confidently recommend the following five NEW ROSES raised or introduced by him. In Beauty of Waltham, Princess of Wales, and Red Rover, he believes that he has succeeded in obtaining a race altogether free from that debility of constitution which renders almost valueless some of the most beautiful Roses of the day.

BEAUTY OF WALTHAM, H.P. (W. Paul).—Flowers cherry colour to bright rosy carmine, cupped, large and full, very hardy and very sweet. Obtained the premier prize at the National Rose Show, Royal Horticultural Gardens, as the best New Rose of the year; the same award at Stamford. Price 2*s.* each.

LORD MACAULAY, H.P. (W. Paul).—Flowers variable, ranging from scarlet crimson to rich plum colour, thick in the petal, large, full, produced abundantly and in rapid succession; habit good, foliage handsome, a splendid Rose. First-class Certificates from the Royal Horticultural and Royal Botanic Societies of London. Price 5*s.* to 7*s.* 6*d.* each.

LORD HERBERT, H.P. (W. Paul).—Flowers rosy carmine, the petals reflexing at the summits, in the way of Beauty of Waltham, large, full, finely formed, and altogether of first-rate excellence. First-class Certificate from Royal Botanic Society of London. Price 7*s.* 6*d.* each.

PRINCESS OF WALES, H.P. (W. Paul).—Flowers vivid crimson, presenting to the eye an unusual body of colour, owing to the thickness of the petals, cupped, large, very double, and remarkably smooth. Growth and constitution free, hardy, and vigorous; foliage handsome. Quite first-rate. Price 7*s.* 6*d.* each. A coloured plate by Andrews for seven postage stamps.

RED ROVER (W. Paul).—Flowers fiery red, flowering up to Christmas; not very double. Growth extraordinarily vigorous; forms a splendid Pillar Rose, 2*s.* 6*d.*

OPINIONS OF THE PRESS.—"It (Princess of Wales) has a most vigorous healthy habit; the colour is of the deepest and brightest crimson, and the form of the young bud, opening bud, and half-blown bud, very near perfection."—See *Gardeners' Chronicle*, Leading Article, July 25th, 1863.

"Mr. W. PAUL exhibited cut specimens of a Seedling H.P. Rose, Princess of Wales, bright carmine rose, which was much admired."—*Journal of Horticulture.*

The best of the NEW FRENCH ROSES, 36*s.* to 42*s.* per dozen. Fine vigorous plants of the old and popular sorts, 9*s.* to 18*s.* per dozen.

PAUL'S Nurseries, Waltham Cross, N.

Seeds Worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our Collection in the Spring, 1862. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

DOBSON'S PRIZE PRIMULA SINENSIS SEED, Superbly Fringed. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

J. DOBSON & SONS, Seedsmen, Isleworth, W.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.

The Stock having been purchased by JOHN STANDISH, strong Plants will be sent out in the first week of June, price 15*s.* to 31*s.* 6*d.* each.

Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.

Royal Nurseries, Ascot, Berks.

Vine Duchess of Buccleuch.

ROBERT PARKER begs to announce that he has arranged for the distribution of the stock of this very distinct and valuable EARLY WHITE GRAPE, and that the plants will be sent out early in autumn. Full particulars as to its qualities will be given in future advertisements. In the meantime, and during the whole of the season, visitors to the Gardens of Dalkeith Palace will have opportunities of seeing and judging of its merits, as a large quantity of pot and permanent Vines are now fruiting at that establishment.

Strong Planting Canes, 21*s.* each; Extra strong Fruiting Canes, 42*s.* each. Orders are now being booked, and will be executed in strict rotation.

Exotic Nursery, Tooting, Surrey, S.

Extra Strong Grape Vines from Eyes.

LUCOMBE, PINCE, AND CO., having this season a splendid stock of strong VINES fit for immediate planting, propagated from Eyes taken from their large experimental Vinery, can offer fine healthy, short-jointed Canes, 6 to 9 feet long, of all the leading kinds, at from 3*s.* 6*d.* to 7*s.* 6*d.* and 10*s.* 6*d.* each.

L., P. & Co. have one of the largest Stocks in the Trade of Extra Strong Vines, with Canes 9 to 11 feet long, and proportionally strong, rom which purchasers can advantageously select those suitable for ruiting finely next season. Liberal Compensation for Carriage.

Exeter Nursery, Exeter.

CARTER'S FARMER'S VADE-MECUM.

A MAGNIFICENT FIELD OF

Pure White Canadian Seed Oats in full Ear, and 3½ feet high, June 11, 1864, at

MR. HALLETT'S MANOR FARM, BRIGHTON (within 200 yards of St. Mark's Church, Kemp Town), is now OPEN to INSPECTION. This Field adjoins the Lodge (at the entrance gates of the Manor House), where a sample of the Oats sown may be seen upon presenting Card with Address.

These Oats were raised from a very fine sample in 1862, which was hand-picked 27 times, and weighed 48 lb. the imperial bushel. They were drilled (3 bushels per acre), on the 24th February, 1863, cut July 20, and yielded on a very thin poor soil upwards of 80 bushels of Oats, and 185 trusses (36 lb.) of most excellent feeding straw per acre; while the ordinary Black Tartarian Oat, on the other part of the same field, ripened a fortnight later, yielded of grain a less crop, weighing 25 per cent. less per bushel, and of straw 120 trusses per acre.

The Canadian Oats were again hand-picked, to ensure *perfect* purity, and drilled on the above field February 17 of this year. Upon the same field, 1863:—

	Kernel.		Husk.	
Canadians	69.43	..	30.57	per cent.
Tartarians	70.79	..	29.21	per cent.

Japan Flax.

THIRD SHIPMENT, just arrived.—The finest Material ever introduced for tying Plants, Flowers, &c. The highest Testimonials from the first-class Gardeners of the United Kingdom. Supplies can be obtained from every Wholesale Seed Firm in London. For Free Samples apply to Importer, JOHN ALLISON, 22, Lawrence Pountney Lane, London, E.C.

CATERPILLARS, GREEN and RED FLY, &c.—All who wish to preserve their Fruit Trees, Rose Trees, Plants, &c., should use "WHITEHOUSE'S GARDENER'S FRIEND," an effectual destroyer of Insects. In boxes, 6*d.*, 1*s.*, and 2*s.* each; and in quantities to suit large gardeners at reduced prices. Carriage paid for orders of 5*s.* value and upwards

Prepared by G. H. WHITEHOUSE, Chemist, 19, High Street, Bradford.

ROYAL HORTICULTURAL SOCIETY.

ROSE SHOW,

WEDNESDAY and THURSDAY,

JUNE 29 and 30.

AWARDS of the JUDGES.

CUT ROSES.

CLASS 1.—72 kinds of CUT ROSES, 1 truss of each. (Nurserymen.)
1st Prize, Messrs. Paul & Son, Cheshunt, 6*l.*
2d, Mr. B. R. Cant, Colchester, 4*l.*
3d, Mr. Wm. Paul, Waltham Cross, 3*l.*
4th, Mr. J. Mitchell, Maresfield, Sussex, 2*l.*
Extra, Mr. J. Keynes, Salisbury, 1*l.*

CLASS 2.—48 kinds of CUT ROSES, 3 trusses of each. (Nurserymen.)
1st, Mr. Charles Turner, Slough, 4*l.*
2d, Messrs. Paul & Son, Cheshunt, 3*l.*
Equal 2d, Mr. Wm. Paul, Waltham Cross, 3*l.*
3d, Mr. John Keynes, Salisbury, 2*l.*
4th, Mr. B. R. Cant, Colchester, 1*l.*

CLASS 3.—24 kinds of CUT ROSES, 3 trusses of each, Hybrid Perpetuals. (Nurserymen.)
1st, Mr. J. Keynes, Salisbury, 2*l.* 10*s.*
2d, Messrs. Paul & Son, Cheshunt, 2*l.*
3d, Mr. B. R. Cant, Colchester, 1*l.* 10*s.*
4th, Mr. J. Fraser, Lea Bridge Road, Leyton, 1*l.*
Equal 4th, Mr. C. Turner, Slough, 1*l.*

CLASS 4.—24 kinds of CUT ROSES, 1 truss of each. (Nurserymen.)
1st, Mr. Charles Turner, Slough, 2*l.*
2d, Mr. J. Keynes, Salisbury, 1*l.*
3d, Mr. B. R. Cant, Colchester, 10*s.*
Extra, Mr. J. Fraser, Leyton, 7*s.*

CLASS 5.—48 kinds of CUT ROSES, 1 truss of each. (Amateurs.)
1st, J. T. Hedge, Esq., Reed Hall, Colchester, 6*l.*
2d, Mr. A. Moffat, Gr. to Viscount Maynard, Dunmow, 4*l.*
3d, Mr. W. Ingle, Gr. to C. G. Round, Esq., Colchester, 3*l.*
4th, Mr. H. Exell, Gr. to J. Hollingsworth, Esq., Maidstone, 2*l.*
Extra, Thomas Laxton, Esq., Stamford, 1*l.*

CLASS 6.—24 kinds of CUT ROSES, 1 truss of each. (Amateurs.)
1st, J. T. Hedge, Esq., Reed Hall, Colchester, 4*l.*
2d, C. M. Worthington, Esq., Caversham Priory, Reading, 2*l.*
3d, Mr. H. Exell, Gr. to J. Hollingsworth, Esq., Maidstone, 1*l.*
4th, Mr. W. Ingle, Gr. to C. G. Round, Esq., Colchester, 10*s.*
Extra, Mr. J. Morris, Gr. to Miss Crawshay, Caversham Park, Reading, 7*s.*

CLASS 7.—18 kinds of CUT ROSES, 1 truss of each. (Amateurs.)
1st, The Rev. J. Knox Child, Little Easton, Essex, 3*l.*
2d, Mr. W. Plester, Gr. to Mrs. Rush, Bishops Stortford, 1*l.* 10*s.*
3d, R. B. Postans, Esq., Brentwood, Essex, 15*s.*
4th, Dr. Cooper, The Limes, Slough, 10*s.*
Extra, The Rev. Henry Helyar, Pendomer Rectory, Yeovil, 7*s.*

CLASS 8.—12 kinds of CUT ROSES, 1 truss of each. (Amateurs.)
1st, The Rev. J. Knox Child, Little Easton, Essex, 1*l.* 10*s.*
2d, Mr. J. Churchfield, Gr. to R. L. Cherrington, Esq., Carshalton, 1*l.*
3d, Dr. Cooper, The Limes, Slough, 10*s.*
Extra, Mr. William Plester, Gr. to Mrs. Rush, Bishops Stortford, 7*s.*
Extra, R. B. Postans, Esq., Brentwood, Essex, 7*s.*

CLASS 9.—18 NEW ROSES 1863-4, single trusses, distinct kinds. (Open.)
1st, Mr. J. Keynes, Nurseryman, Salisbury, 2*l.*
2d, Mr. J. Fraser, Nurseryman, Leyton, 1*l.* 10*s.*
3d, Mr. William Paul, Paul's Nursery, Waltham Cross, 1*l.*
4th, Messrs. Paul & Son, Old Nursery, Cheshunt, 15*s.*

CLASS 10.—12 TRUSSES of any new kind of 1863. (Open.)
1st, Mr. J. Keynes, Nurseryman, Salisbury, 1*l.* 10*s.*
2d, Mr. W. Paul, Nurseryman, Waltham Cross, 1*l.*

CLASS 11.—12 TRUSSES of any kind except of 1863. (Open.)
1st, Mr. J. Keynes, Nurseryman, Salisbury, 1*l.* 10*s.*
2d, Messrs. Paul & Son, Old Nursery, Cheshunt, 1*l.*
3d, Mr. W. Ingle, Gr. to C. G. Round, Esq., F.R.H.S., Colchester, 10*s.*
4th, J. T. Hedge, Esq., Reed Hall, Colchester, 7*s.*

CLASS 12.—12 YELLOW ROSES, single trusses, not less than 6 kinds.
1st, J. T. Hedge, Esq., Reed Hall, Colchester, 1*l.* 10*s.*
2d, Messrs. Paul & Son, Old Nursery, Cheshunt, 1*l.*
3d, Mr. B. R. Cant, St. John's Street Nursery, Colchester, 10*s.*

CLASS 13.—12 TEA-SCENTED and NOISETTE ROSES. (Amateurs.)
1st, J. T. Hedge, Esq., Reed Hall, Colchester, 2*l.*
2d, C. M. Worthington, Esq., Caversham Priory, Reading, 1*l.* 10*s.*
3d, Mr. W. Ingle, Gr. to C. G. Round, Esq., Colchester, 1*l.*

CLASS 14.—12 TEA-SCENTED and NOISETTE ROSES. (Nurserymen.)
1st, Messrs. Paul & Son, Old Nursery, Cheshunt, 1*l.* 10*s.*
2d, Mr. B. R. Cant, St. John's Street Nursery, Colchester, 1*l.*
3d, Mr. William Paul, Paul's Nursery, Waltham Cross, 15*s.*

CLASS 15.—12 DISTINCT KINDS, single flowers. (Open.)
1st, Mr. J. Keynes, Nurseryman, Salisbury, 1*l.* 10*s.*
2d, Mr. C. Turner, Nurseryman, Slough, 1*l.*
3d, Mr. B. R. Cant, St. John's Street Nursery, Colchester, 15*s.*
Extra, J. T. Hedge, Esq., Reed Hall, Colchester, 7*s.*

CLASS 16.—DECORATED BASKET or VASE of ROSES. (Open.)
1st, Mr. W. Adcock, Gr. to Mrs. Forbes, Petersfield, Hants, 3*l.*
2d, Mr. C. Turner, Royal Nursery, Slough, 2*l.*
3d, Miss Wint, 8, Gloucester Terrace, South Kensington, 1*l.*

CLASS 17.—6 BOUQUETS of ROSES, 6 distinct kinds. (Open.)
1st, J. T. Hedge, Esq., Reed Hall, Colchester, 3*l.*
2d, Mr. C. Turner, Royal Nursery, Slough, 2*l.*
3d, Mr. William Paul, Paul's Nursery, Waltham Cross, 1*l.*

CLASS 18.—6 kinds of MOSS ROSE. (Open.)
1st, Messrs. Paul & Son, Old Nursery, Cheshunt, 1*l.*
2d, Mr. William Paul, Paul's Nurseries, Waltham Cross, 15*s.*

(PRIZES OFFERED by MR. WILSON SAUNDERS, Honorary Secretary.)

CLASS 19.—3 TRUSSES of any HYBRID PERPETUAL ROSE. (Open.)
1st, Mr. J. Keynes, Nurseryman, Salisbury, 2*l.*
2d, Mr. B. R. Cant, St. John's Street Nursery, Colchester, 1*l.*

(PRIZES OFFERED by MR. WILSON SAUNDERS, Honorary Secretary.)

CLASS 20.—3 TRUSSES of TEA or NOISETTE ROSE. (Open.)
1st, Mr. B. R. Cant, St. John's Street Nursery, Colchester, 2*l.*
2d, Mr. William Paul, Paul's Nursery, Waltham Cross, 1*l.*

CLASS 21.—24 ROSES, not less than 10 distinct kinds, in pots not exceeding 8 inches in diameter. (Open.)
1st, Mr. Charles Turner, Royal Nurseries, Slough, 6*l.*
2d, Messrs. Paul & Son, Old Nursery, Cheshunt, 4*l.*
3d, Mr. William Paul, Paul's Nursery, Waltham Cross, 3*l.*

CLASS 22.—20 NEW ROSES, not less than 10 distinct kinds, in pots not exceeding 8 inches in diameter. (Open.)
1st, Mr. William Paul, Paul's Nurseries, Waltham Cross, 6*l.*
2d, Messrs. Paul & Son, Old Nursery, Cheshunt, 4*l.*

MISCELLANEOUS.

Extra, J. Veitch, Chelsea, for Collection of Lilium auratum, 1*l.* 10*s.*
Extra, Messrs. Barr & Sugden, Covent Garden, for Plant Cases filled with Plants for Hall, Table, and Drawing-room Decoration, 1*l.*
Honorary Extra, Mrs. Mitchell, of 13, Milton Terrace, Wandsworth, for Roses Modelled in Wax.

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

LIST of AWARDS, June 29, 1864.

FIRST-CLASS CERTIFICATES.

CANNA NIGRICANS, from Mr. W. Bull, Chelsea.
CLARKIA PULCHELLA INTEGRIPETALA FLORE-PLENO, from Messrs. Carter & Co., Holborn.
GEONOMA GHIESBREGHTII, from Mr. Bull.
PELARGONIUM (NOSEGAY) AMY HOGG, from Mr. W. Paul, Waltham Cross.
PELARGONIUM (NOSEGAY) REBECCA, from Mr. W. Paul.
PELARGONIUM (ZONAL) FAUST, from Mr. Bull.
PELARGONIUM (ZONAL) HECTOR, from Mr. Bull.
PELARGONIUM (ZONAL) MADAME RENDATLER, from Mr. Bull.

SECOND-CLASS CERTIFICATES.

PELARGONIUM ((NOSEGAY) BEAUTY OF WALTHAM, from Mr. W. Paul.
PELARGONIUM (ZONAL) PSYCHE, from Mr. Bull.
PELARGONIUM (ZONAL) RED RIDING HOOD, from Mr. Hally, Blackheath.
PELARGONIUM (ZONAL) ROSAMOND, from Mr. Bull.
ROSE GLOBOSA, from Mr. W. Paul.

COMMENDATIONS.

PELARGONIUM (ZONAL) ENAMEL, from Mr. Hally.
VERBENA VELVET CUSHION, from Messrs. E. G. HENDERSON & SON, St. John's Wood.

SPECIAL CERTIFICATE.

To Mr. J. Walker, Thame, for a Collection of AURICULA-EYED SWEET-WILLIAMS.

THOMAS MOORE, Secretary to the Committee.

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

The Next MEETING of this Committee for the Exhibition of NEW PLANTS and SEEDLINGS will be held in conjunction with the Great Show, which will take place in the Gardens of the Society on JULY 6. Sub-committees will be appointed to adjudicate upon the subjects exhibited.

Class 46 is for NEW OR RARE TENDER PLANTS IN FLOWER.
Class 47 is for NEW OR RARE TENDER PLANTS NOT IN FLOWER.
Class 48 is for NEW ORCHIDS IN FLOWER.
Class 49 is for NEW OR RARE HARDY ORNAMENTAL PLANTS.
Class 51 is for SEEDLING FLORIST'S FLOWERS, and GARDEN HYBRIDS of all kinds.

The subjects exhibited in the above Classes must be in the Gardens by half-past 8 o'clock on the morning of July 6. They may be entered without previous notice; but a detailed statement of their names, IN WRITING, accompanied by the Exhibitor's address, must be handed in BEFORE NINE O'CLOCK. Any person may exhibit.

Seedling Flowers exhibited as novelties MUST BE NAMED.

THOMAS MOORE, Secretary to the Committee.

Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

Per pkt.—	*s.*	*d.*		*s.*	*d.*	Per pkt.—	*s.*	*d.*		*s.*	*d.*
PRIMULA ..	2	0	and	3	6	INTERMEDIATE STOCK.. ..	0	6	and	1	0
CINERARIA ..	1	6	and	2	6	BROMPTON do.	0	6	and	1	0
CALCEOLARIA	1	6	and	2	6						

The above Seeds are saved with great care, and can be warranted to give satisfaction.

Paradise and Victoria Nurseries, Holloway, London, N.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE post free on application.

Paradise and Victoria Nurseries, Holloway, London, N.

The Gardeners' Chronicle.

SATURDAY, JULY 2, 1864.

MEETING FOR THE ENSUING WEEK.

WEDNESDAY, July 6 } Royal Horticultural (SECOND GREAT EXHIBITION and Floral Committee), at South
THURSDAY, — 7 } Kensington.

WE have the gratification of announcing that the COCOA NUT TREE HAS PRODUCED A RIPE NUT, in the palatial gardens of His Grace the DUKE of NORTHUMBERLAND at Syon House, under the skilful management of Mr. FAIRBAIRN. This is, we believe, the first time that so interesting an event has occurred in Europe, and we are sure that all true gardeners will welcome the little stranger with feelings of admiration.

ABOUT two years since, as we were travelling in a third-class carriage to Wales, we fell in with an intelligent workman from Manchester, with whom we soon entered into conversation. We hold that it is a very foolish habit in our countrymen to shut themselves up, as it is said, in the Bastille of their rank, inasmuch as we are of Sir WALTER SCOTT's opinion, that there is no one with whom we may chance to meet, if his leading notions are drawn out, from whom we may not derive some information which we should have been sorry to have missed.

On the occasion in question our conversation turned on the love of Manchester artisans for plants, and even for some of the obscurer tribes of Cryptogams. My companion told me that many of them, for example, were well acquainted with Mosses, that they would employ their leisure in going any practicable distance for a species which they had not seen before, and that some of them whose earnings would admit of such an expenditure would even make excursions to Wales or the English Lake Country in search of novelties.

The neighbourhood of Manchester indeed, not to say Lancashire in general, is peculiarly rich in Mosses. In the Report of the Manchester Field-Naturalists' Society for the year 1863 now before us, we have a list of Mosses occurring in the surrounding district which far surpasses any that could be made in the greater part of our midland counties, and the knowledge of the locality of many of the species is due to the researches of humble native naturalists. The number of species

recorded in the pamphlet amounts to 264, some of which, as Tetrodontium Brownianum, Schistostega osmundacea, Leskea latebricola, &c., are not of common occurrence. Discelium nudum was first discovered near Manchester.

The attention, however, of the Society in question is not confined to any one branch of Botany or Natural History, but is turned in every direction which may afford rational instruction and recreation, in the true sense of the word, to a numerous and intelligent population. For this purpose, lectures, monthly excursions, and soirées are provided; programmes of the excursions, and their probable points of interest, being previously published so as to give ample opportunities of selection. The excursions especially, which, if the weather serves, are numerously attended, are a great point of attraction; and if they yield no novelties, which can scarcely be expected in a district so thoroughly explored, they at least send the members home with a fresh appreciation of the beauty of the manifold works of creation, all made in wisdom; and we doubt not that to a greater or less extent all who participate find "sermons in stones and good in everything." We should ourselves have rejoiced to have been present when a double variety of the white Wood Anemone, in our opinion one of the choicest ornaments of the spring garden, was found abundantly. But we would even go a step farther, and rejoice in the lecture "on autumnal phenomena of plant-life" at one of their *soirées*, which led very generally amongst the members to the collection of autumnal-tinted leaves of various kinds. It is often customary to run down the mere collector; but if objects are sought out even for their intrinsic beauty, without any peculiar reference to any scientific interest which may be connected with them, we are far from thinking that the employment is mere vanity. We are of the faction which believes that there is something which smooths down the rough places of human nature, even in the æsthetic aspect of the outward world. There is a passage so much to the purpose on this subject in Mr. GLADSTONE'S lecture on WEDGWOOD, at Burslem, that we prefer copying it to inflicting our own crudities on the reader. The passage, slightly abridged, runs thus:—

"Beauty is not an accident of things, it pertains to their essence; it pervades the wide range of creation; and wherever it is impaired or banished we have in this fact the proof of the moral disorder which disturbs the world. Among all the devices of creation there is not one more wonderful than the profuseness with which the mighty Maker has been pleased to shed over the works of his hands an endless and boundless beauty.

"And to this constitution of things outward, the constitution and mind of men, deranged although they be, still answer from within. Down to the humblest condition of life, down to the lowest and most backward grade of civilisation, the nature of man craves, and seems as it were ever to cry aloud for something, some sign or token at least of what is beautiful, in some of the many spheres of mind or sense. This it is that makes the Spitalfields weaver, amidst the murky streets of London, train canaries and bullfinches to sing to him at his work; that fills with flower pots the windows of the poor; that prompts, in the humbler classes of women, a desire for some little personal ornament, certainly not without its dangers (for what sort of indulgence can ever be without them?), yet sometimes, perhaps, too sternly repressed from the high and luxurious places of society. But indeed we trace the operation of this principle yet more conspicuously in a loftier region: in that instinct of natural and Christian piety, which taught the early masters of the Fine Arts to clothe, not only the most venerable characters associated with the objects and history of our Faith, but especially the idea of the sacred person of our Lord, in the noblest forms of beauty that their minds could conceive or their hands could execute.

"It is, in short, difficult for human beings to harden themselves at all points against the impressions and the charms of beauty. Every form of life that can be called in any sense natural, will admit them. If we look for an exception, we shall perhaps come nearest to finding one in a quarter where it would not at first be expected. I know not whether there is any one among the many species of human aberration that renders a man so entirely callous, as the lust of gain in its extreme degrees. That passion while it has full dominion excludes every other; it shuts out even what might be called redeeming infirmities; it blinds men to the sense of Beauty, as much as to the perception of justice and right; cases might even be named of countries, where greediness for money holds the highest sway, and where unmitigated ugliness is the principal characteristic of industrial products. On the other hand I do not believe it is extravagant to say that the pursuit of the element of Beauty, in the business of production, will be found to act with a genial chastening and refining influence on the commercial spirit; that up to a certain point it is in the nature of a preservative against some of the moral dangers that beset trading and manufacturing enterprise; and that we are justified in regarding it not merely as an economical benefit—not merely as that which contributes to our works an element of value, not merely as that which supplies a particular faculty of human nature with its proper food, but as a liberalizing and civilizing power, and an instrument in its own sphere of moral and social improvement."

The marked change which was produced at Hitcham by Professor HENSLOW'S encouragement of everything that fostered in his parishioners, especially those of younger years, a love of everything beautiful in Nature and art, was very striking, and where it is carried out, as it was in his case, with singleness of purpose and personal purity of example, there can be little doubt of its success.

It is on this account that we have been so much interested in the little work* before us, and have dwelt upon it at such an unusual length. *M. J. B.*

THE art of photography is now doing for our trees what it has been doing for several years past for their owners and admirers; it is producing representations of the originals in a style which leaves the pencil sketches of our most talented artists very far behind. We are led to make this remark from having had an opportunity of seeing a very remarkable and beautiful collection of photographs exhibited in the Council Room of the Royal Horticultural Society, which had been brought together to illustrate a lecture on Conifers delivered by the Assistant Secretary, Mr. ANDREW MURRAY. No trees which we cultivate in our parks and pleasure grounds are more admired than the graceful and beautiful Pines, and it was of course examples of these trees which were represented by the photographs to which we allude. All who feel an interest in Conifers—and who does not?—should endeavour to obtain a view of these pictures.

It is not every one who can find it convenient to travel so far as the Indian Himalayas, where the Deodar is at home, or to the "Mariposa Grove" in California, where the King of the Forest has been reigning for two or three thousand years. But a visit to the Council Room at South Kensington, where photographs of these trees are hanging on the walls, will enable any one to form a good idea of such magnificent vegetable productions, as they appear in the countries to which they are indigenous. Having, ourselves, had an opportunity of seeing the Deodar growing in the Himalayan forests, we can assure our readers that the pictures in question give an excellent idea of the originals from which they were taken. An artist sketching such trees with the pencil may fail to give such an idea, or may draw somewhat on his imagination to make up his picture, but the photograph produces the subject in an unerring way, even to its minutest details—form, general outline, beauties and defects, are all fixed upon paper exactly as they exist in nature. Hence, on looking on a picture of a tree taken from nature by the photographic art, we have the satisfaction of knowing that we are looking on an exact copy of the original, only reduced in size.

In the same collection our home examples of the more remarkable Conifers, native and exotic, are represented in a most interesting way. One of the most beautiful in the room is that of Abies cephalonica, which grows in the grounds of DANIEL GURNEY, Esq., of North Runcton, Norfolk; this photograph had been sent in by the Hon. WARREN VERNON, and has a note upon it, stating that it was taken on a "wonderfully still day." This portrait is an admirable one, and will well repay a careful inspection. The beautiful Araucaria imbricata at Dropmore, 60 feet in height, "with Mr. FROST under it," is well represented, and had been taken on a windy day. A lake at Dropmore surrounded by Pine trees is also an admirable production; so is also what appears to be a corn-field in harvest time, backed with a forest of Pines. Nor must we omit to notice a group of Cedars, 800 yards long, also taken at Dropmore. This, we are informed, was taken "on a windy day," and it needs no pencil note to make us acquainted with the fact.

From Scotland we have pictures of Abies Douglasii, one of the most important of DOUGLAS'S introductions, showing its present appearance at Glenalmond; of A. Menziesii taken both at Glenalmond and at Keilour in Perthshire; and of A. Albertiana and A. Nordmanniana from G. PATTON, Esq., of The Carnies. The last-named species has been remarkably well taken, and is well worth examination. A. Pichta and Pinus Cembra are both well represented.

There are in the collection some representations of groups of Scotch Firs of great interest; one in particular taken in Oakage Park, belonging to the Earl of LICHFIELD, is nicely done; and there are other groups of equal merit unmarked with the names of their owners, or the localities where they were taken. "Fir trees in snow" is very characteristic; indeed, in these pictures we do not only get a true representation of the trees themselves, but we also see the circumstances under which they have been photographed. As we look upon them we almost see the kind of day which it happened to be on which they were taken, whether it was calm or windy, or whether the season was spring, summer, autumn, or winter.

The names of the gentlemen who had succeeded in taking these beautiful photographs of our favourite Pine trees, were written on some of the works. Amongst them we observed those of the Hon. WARREN VERNON, THOMAS PATTON, Esq., of Glenalmond, G. PATTON, Esq., of The Carnies, the Earl of LICHFIELD, R. S. HOLFORD, Esq., and Dr. CLEGHORN. There were, no doubt, several other exhibitors of whose names we did not take a note, as the collection was a large one.

The subject is, we venture to think, full of interest to every English gentleman. By means of this valuable art, we shall now be able to form a good idea of the appearance which our exotic trees present in their native habitats; and we shall also be able to make exact pictures of their appearance at different stages of their growth with ourselves. We shall take their *cartes de visite* when they are young, middle aged, or fully grown; and as we send to those who are far away, a little sun picture of their relations or friends, we shall be able to send them at the same time a representation of some well-remembered tree which used to throw the shade of its friendly branches over the lawns or pleasure grounds of their old home.

We may add that on the walls of the Society's rooms there are, or were a few days since, some excellent coloured drawings of Pines, taken from the well known collections of Bicton and Dropmore, for the purpose of illustrating LAWSON'S "Pinetum Britannicum," several Parts of which have been already published. Araucaria imbricata, Wellingtonia gigantea, Cedrus Deodara, Cryptomeria japonica, Cupressus macrocarpa, Abies Douglasii and Abies Menziesii, are represented as they are now growing in these celebrated Pinetums.*

DURING the recent visit of their Royal Highnesses the PRINCE and PRINCESS OF WALES to Cambridge, a special exhibition of the Horticultural Society of that town took place; and HER ROYAL HIGHNESS was pleased on this occasion to distribute the School of Art Prizes to the successful competitors.

We notice this local Exhibition here, mainly for the purpose of remarking that of the 1000*l.* or thereabouts which were taken at the gates, a sum of 300*l.* was presented by the Society to the School of Art, and a similar sum to the charities of the town. Previous to this, at least 500*l.* had been presented by this Horticultural Society to the charitable institutions of Cambridge. All honour to it for so worthy a distribution of its surplus funds!

The course of action adopted in this matter is suggestive of a new field of operations for the various floral and horticultural societies which abound throughout the country. They may, such at least of them as are fortunate enough to be successful, also become charitable; and, from this point of view, we would particularly recommend to their notice a charitable institution intimately connected with horticulture itself, namely, the ROYAL GARDENERS' BENEVOLENT INSTITUTION. Many a flourishing Horticultural Society among those which are scattered throughout the length and breadth of

* Manchester Field-Naturalists' Society. Report of the Committee for the year 1863; with accounts of the Excursions and the Soirées, &c. Manchester, 1864. Price 6*d.*

* Is there no hope of some enterprising publisher taking in hand a pictorial Dendrological work?

the three kingdoms, might very well afford to present this excellent charity with its donation of 5*l.*, or 10*l.*, or 20*l.*, and in this way materially aid the Institution in the carrying out of its benevolent operations. The next anniversary meeting of the Gardeners' Benevolent Institution, which, in the person of its excellent Chairman, may be said to have a peculiar connection with horticulture, affords a capital opportunity for country societies, and metropolitan ones too, to profit by this suggestion.

Reverting to the Cambridge Horticultural Society, we may mention, that at the dinner which took place after the exhibition above referred to, and which was presided over by Richard Headly, Esq., a testimonial was presented to the indefatigable Honorary Secretary, Mr. C. E. Brown. This consisted of a handsome silver salver, beautifully chased, and bearing the following inscription :—

PRESENTED
BY THE
CAMBRIDGE HORTICULTURAL SOCIETY
TO
C. E. BROWN, Esq.,
HONORARY SECRETARY,
IN ACKNOWLEDGMENT OF HIS SERVICES ON THE OCCASION
OF THE VISIT OF THEIR R H.
THE PRINCE AND PRINCESS OF WALES,
June 8, 1864.

In the course of his remarks, in acknowledgment of the gift, Mr. Brown took the opportunity to explain that since the Society had established its open shows, it had presented to the various charities of the town the large sum of 800*l.*, besides the donation of 300*l.* which had been handed to the School of Art, and 100 guineas appropriated towards the erection of the new Guildhall; and this without reducing the permanent fund. The object of the Committee, he said, had not been so much to increase the funds of the Society as to improve its character and usefulness by enlarging its prize list, and then to aid its poorer neighbours by assisting the charities of the town. We wish we could point to similar examples of success nearer home, and to benevolent impulses of an equally unquestionable character.

—— At the meeting of the Royal Irish Academy on Monday last, Dr. Moore produced Irish specimens of the Neotinea intacta of Reichenbach, a plant formerly referred to Aceras, and a very interesting addition to the Flora of the United Kingdom. This pretty little Orchidaceous plant, which has hitherto been known as a native of Greece, Malta, Algiers, the south of Germany, and Portugal, has lately been found to extend its geographical range to Galway in Ireland, where it has been found by Miss More. It is well known that in the south-western counties of Ireland there are found several plants belonging to the Flora of the south of Europe, and that of North America, which are not to be met with elsewhere in the British Isles. They seem to form the solitary outposts in respect to the geographical distribution of the plants belonging to those Floras. Thus, besides the Neotinea now discovered in Galway, another pretty little Orchid, the Neottia gemmipara or Spiranthes cernua, grows in the county of Cork; this was at one time considered to be confined to Ireland, but is now known to be also a North American species. Again, in the county of Galway occurs the pretty little aquatic Naias flexilis, another plant of the North American Flora. In Kerry appear some of the Saxifrageæ of the Pyrenees; and finally several of the Pyrenean species of Ericaceous plants extend from Kerry through Galway to Mayo. It is not many years since that another little Orchid, the Epipogium aphyllum, up to that time unknown as British, was found in Herefordshire. These facts should act as encouragements to the diligent explorers of our native Flora.

—— The presence at Chiswick of the 1500 visitors, who, on Monday last, as elsewhere mentioned, found their way to the Strawberry Fête, notwithstanding the very meagre announcements that such a gathering would take place, the undisguised want of sympathy on the part of the authorities, and the absence of all attempts to give anything like a popular character to the meeting, is a fact which in itself is sufficient to negative the assertion and assumption that the members of the Horticultural Society and their friends cannot be induced to go so far west as Turnham Green. Of the fête itself we say nothing here, except that if a little heart had been thrown into it, it might have been a complete success; for we can at least believe the evidence of our senses as to the enjoyment with which many of the visitors promenaded in the old garden as in days of yore, and the satisfaction with which many others inspected the admirable examples of horticultural skill to be found in the departments devoted to fruit and flower culture. That the company would have been much more numerous there can be no doubt, had as much publicity been given to the fête as to the fooleries of Mumbo Jumbo, and the other mountebank exhibitions, which are fast bringing the Garden at Kensington into contempt.

New Plants.

278. Urceolina aurea.

U. aurea, foliis oblongis petiolatis utrinque acutis, scapo tereti, umbellâ multiflorâ, floribus pendulis tubo gracili unciali limbo inflato altè 6-partito laciniis basi imâ connatis saccatis apice ovatis æqualibus imbricatis, staminibus exsertis.

This most charming bulb has been sent by Mr. Pearce from Peru, and has been lately flowering in the nursery of Messrs. Veitch. It forms two broad oval leaves, and a tapering scape a foot or so high, on the top of which appears an umbel composed of gracefully nodding flowers. These are the purest yellow, with the tips only green, and a very slender green tube. The ovary is deep green, ovate, triangular, 3-celled, with 14 ovules arranged in two rows in each cell. The general manner of growth when in flower is that of a Phycella, or some such plant. If it should prove obedient to cultivation, which we do not doubt, it will be a perfect gem in a conservatory.

We retain the excellent name Urceolina, even although also employed in Zoology, in preference to Collania, a queer travesty of the name of an Italian Botanist.

ORCHARD MANAGEMENT.—No. VI.

When the buds of the scion break, it will be best to let the two grow on for a time until well developed, and then the strongest must be retained and the other removed; and as growth advances, every facility should be afforded for the production of a strong robust growth by mulching, and even the application of water in a parching season. If the stem and roots are possessed of that strength of development which it has been the object of the foregoing routine of culture to produce, they will have no difficulty in driving up the shoot to a height of seven feet the first season. The best height at which to cut them back for the formation of the head will be six feet from the ground; any, therefore, which do not attain that height must not be headed back, but the point of the shoot must be forced to break the following season and stopped at the proper height, so as to cause the young bud to break and form the commencement of a head the same season. The side shoots however, which will inevitably push out all up the stems, must be diligently rubbed off.

Those shoots which attain the height of 7 feet the first season after grafting, stand in the best position of all for the speedy formation of a handsome head, and will always be a season in advance of those which do not attain to that height the first year. Having then this for a standard, the operator will do well to consider what object is to be aimed at in his future manipulations, and to do this he must remember that the growth of the first three years from the season of shortening back to the required height, must be devoted to the formation of what I will call the framework, from which the bearing branches will radiate equally in all directions, and on which they will be lifted up into the beneficial influences of the sun and air. As years advance this framework will become greatly extended; and I would here observe that care should always be taken to keep these (by such time) large interior stems quite clear of growth. Nothing whatever is gained by permitting small shoots to develope themselves and produce fruit in the interior of the trees, where they are so entirely shaded by the exterior branches. Such fruit is invariably of inferior quality, and should never be permitted to divert the nourishment from the fruit which is more favourably placed to receive advantage from it.

The framework alluded to must be formed from the four buds on the top of the shoot; and now the operator will be able to appreciate the advantage of having a good store of accessible roots to back up the rather roughish handling to which the stems will have to be subjected. In the first place, every bud, as it breaks, must be rubbed off except the four at the top, and these four, when they have grown 5 or 6 inches, must be cut off with a sharp knife within a quarter of an inch of the stem. This will cause a cluster of young shoots to break out at the base of each, but very soon the whole number must be reduced to eight, which should be selected of equal strength, and in such a position as to form the commencement of a well balanced head. It is necessary to observe here that the shoots selected should not only be equidistant, but also such as have a horizontal tendency of growth rather than a vertical one. Some sorts are naturally more inclined to that habit than others; but it is quite possible to give the shoots, even of the stiffest upright growers, a horizontal direction if they are taken in hand when in a young and pliable state, which may be effected by gradually drawing them down to sticks fastened to the stem, or what is better still, as being more in accordance with the means by which nature acts, by suspending gradually-increasing weights to the shoots; but, however effected, it is important that this matter should be attended to, because in after years the trees will invariably fill up in the centre. There is never any difficulty to be contended against in that point; and our exertions must be centred upon the production of a wide-spreading framework, on which to carry the lower branches outwards into the influence of the sun and air. It is at this stage of growth that the tendency to do so must be given, so that the lower shoots may have a due proportion of strength diverted to them to enable them to push outwards their ulterior fruit-bearing branches.

With liberal mulchings of rotten manure and good soakings of soft water in very dry weather, these eight shoots ought to make good progress, although there are some sorts which obstinately refuse to do so the first year, and some even will not do it at all, and these are more properly the subjects for pyramids and espaliers, on which point, by the by, we have something yet to learn. The habit of some kinds is so gross that no restriction we can put upon them will turn them to a profitable use, and on the other hand nothing will entice some varieties to develope themselves largely, so that it is highly important that a proper selection should be made of sorts suitable for the purpose desired. I might enlarge much on this important point, but for the present I leave it, only observing, in returning to our subject, that the chief care necessary for the rest of the season will be to keep all extra shoots which push out continually removed, and to secure those which are retained from the effects of high winds. The next season the shoots should be shortened to somewhere near a uniform length of 18 inches. I am quite aware that it is a constant practice in ordinary management to shorten them much more, even to six inches or less, under the idea that strength is thereby given for the future developments of growth. But this, with the object we must keep in view, is retrograde practice; because what we want is a large interior diameter, and to shorten the shoots so closely will only bring the tree back into the position in which it stood at the beginning of the season; and as in either case only the two extreme buds should be allowed to grow out, it is obvious that no strength is lost; and also that by leaving the shoots long, much advantage is gained in the important matter of lateral development as a counterpoise to the tendency to fill up in the centre—a tendency which we are all glad to avail ourselves of when required, and which is in reality the very base upon which we act, and depend upon to supply deficiencies.

The surface dressing must be kept up, and every means taken to strengthen the trees for the next season's work, which will be heavy. In pruning at this point let the shoots be shortened to 14 or 18 inches, according to strength, and the previous liberal treatment for the encouragement of the roots should enable the buds to break freely. When they have grown a few inches they should be disbudded, but at this point it must be done more with reference to the equal distribution of the ultimate fruit-bearing branches rather than mere lateral extension, although the latter must be kept in view, for which purpose some should be left at the extremities and others more or less near the base of the shoots. For this no plain rule can be laid down, but much must be left to the judgment of the operator. The simple object to be kept in view should be to retain only those shoots which will form a well furnished head, but by all means the leaving of them too near together must be avoided.

At this stage the trees will be in the best possible condition to be removed to their permanent destination in the orchard, because the next year the shoots must not be shortened at all; and it is only reasonable to conclude that they will then commence to form fruit buds for bearing the following year, and the operation of lifting and replanting will form just that sort of check which would be likely to induce the tendency to form fruit buds; while at the same time, if the operation is performed with the necessary care, and in October, as before urged, it will not materially check the further development of branches likewise.

We have now, in accordance with Mrs. Glasse's recommendation, caught our hare, *i.e.*, we have brought our trees into the best condition for permanent planting. We have obliged them to do their work of preparation in a limited space, thus allowing the best use to be made of the contemplated site until the trees are ready to grow off into usefulness at once; besides giving ample time for the preparation of compost. I have no doubt but many will say this is a very tedious process, and so it is; but Nature will not be hurried in ordinary out-door management, although she may be controlled and directed. This idea occurred to me very forcibly the other day, and I thought it had a bearing on my subject. It was when looking at the magnificent Azaleas brought forward by Messrs. Turner and Veitch. What years of labour, what constant attention and care must have been bestowed upon them! and with what glorious results we all know. Can it be doubted that an equal amount of time, care, and attention bestowed upon fruit trees, with an equal amount of skill in taking advantage of their natural habits of growth, would result in the production of something in the fruit department superior to anything we have yet seen? It is worth all the trouble. Nothing great was ever achieved without hard labour, self-denial, and patient endurance; and young gardeners must divest themselves of the idea that they can attain to great results by a *coup de main*. The very nature of the materials upon which they operate forbids it. *John Cox.*

Home Correspondence.

The Horticultural Society in 1827.—Will you allow me to transcribe into your pages the following passages from a letter addressed to the conductor of the *Gardeners' Magazine*, in 1827, which seem to apply

almost as much to the Royal Horticultural Society of the present day, as it did to the non-royal body in Loudon's time. The extracts are these:—"The Horticultural Society and its garden were established for purposes over which fashion ought to have no control; not only to supply the tables of the rich with the luxuries of the vegetable world from every quarter of the globe, but to add to the comforts of the poor, to naturalize in the garden of the cottager the less luxurious but more valuable productions of Flora and Pomona, and to teach them how to make the best use of the spade and the watering-pot. I would ask you whether these objects are more likely to be advanced by the admission of 2800 well-dressed persons to promenade and eat ices and fruit in the garden, than by giving a free access to the garden to every member of the Society, allowing him to send to it, without reserve, every person eager for information on horticulture, at all times, and having those constantly in attendance who are able to give the information which is sought for, as well as specimens of whatever may be necessary to aid the inquirer in his researches as far as the benefit of horticulture is concerned. You seem to think that there is as much propriety in the Society breakfasting as you term it, once a year in this garden, as dining in a tavern. This argument is more specious than solid. In the first place it was not the Society that breakfasted in the garden, but every one who could pay a guinea, provided they could pass muster before the tribunal of the ladies patronesses,—persons who have no particular regard for horticulture; who went to the gardens not to examine the advancement of the art, or to hear of its prosperity, but merely to see and to be seen, and so obtain a subject for conversation in the fashionable coteries of the succeeding week. Sir, I am not fond of taverns nor of tavern-dinners, but I think one dinner of the Society at the Freemasons' Tavern, even dull as it has hitherto been, worth 500 of the fêtes in the garden on the 23d of July. At the dinner real gardeners are present, scientific men capable of appreciating the labours of the Society are present; the dessert which is displayed is examined as to its value in a horticultural point of view, as well as eaten; the conversation it excites is connected with the objects of the Society, and the meeting together of 200 or 300 individuals, actuated by the same useful motives, gives an impulse to the future exertions of the Society, which it never can obtain from 20 times the sum which has been thrown into its treasury by the late fête. You must forgive me for differing from you *in toto*, in your remark that 'it is obviously allowable and praiseworthy to call in the influence of fashion as an auxiliary support to useful institutions.' Now, so far from believing that fashion is a useful auxiliary to such an institution as the Horticultural Society, I think the Society has been degraded by receiving any aid from such a source. The objects of the Society, if steadily pursued, are sufficiently important to insure its permanence and prosperity, and to obtain funds adequate to its support, if its affairs be administered with suitable economy." How much the tone of these remarks suggests that they might have been written within the last few days. *X. X.*

Mumbo Jumbo at South Kensington.—Your few trenchant animadversions in last week's paper on the degenerate position into which the Royal Horticultural Society has allowed itself to lapse, will have gained you the thanks of all lovers of horticulture *pur et simple*, who like myself have watched, with regret and dismay, the gradual decline of an Institution till lately looked up to and respected as the presiding genius of English horticulture. One is reminded of that other sad instance of degeneracy, in a kindred subject, so touchingly lamented by the first of horticultural poets:—

> . . . Omnia vidi
> In pejus ruere, ac retro sublapsa referri, &c.
> *Virg. Georg.* i. l. 200.

Indeed, I consider myself fortunate, for the present at least, in not being a Fellow of the Royal Horticultural Society, any more than an associate of its statistical sister; as in either case I must have subscribed myself, what I will not deny that many are pleased to think me notwithstanding, an *A. S. S.*

Rose Information.—Madame C. Crapelet may be added to my former list of Roses (see p. 580); it is an excellent example of deep smooth petals. Jean Goujon is now out on a Briar budded last year; it is very good, but shows its eye. Triomphe d'Alençon, a red Baronne Prévost, is worthy of propagation. I do not propose now to name the still good old kinds, but merely to mention such of the new sorts as are worthy of extensive propagation. I will begin with Deuil du Prince Albert, a Rose of royal and national interest; it is well formed, and by the appearance of its blooms and foliage, I think it must have been derived from Patrizzi; from its drooping habit and colour, and mournful aspect, it is well adapted for a funeral Rose; it is of medium size. Mr. W. Paul is a smallish clear deep red Rose, nicely shaped, and admirably adapted for bedding and window gardens: for which purposes Mrs. W. Paul, a finer Rose, is also well suited. I have 20 plants of these two now blooming side by side. I see but little difference as to their efflorescence; all the blooms on both sorts are single, *i. e.* not in clusters; the plants are scarcely a foot high, and on counting three plants of Mr. W. Paul, I found that the first had 13 expanded blooms on it and five not open; the second had 16 blooms expanded, and eight not open; the third had 12 blooms expanded, and 14 not open; the 20 plants in full bloom were, and are still, a very pretty sight. Olivier Delhomme is a very clear scarlet, and of perfect form; it is one of the best. L'Esmeralda is in leaf, sepal, bud, and bloom, a slightly modified Jules Margottin—one of England's very best Roses; it is good, but not so much so as J. Margottin, of which I have a great many in magnificent bloom. Princess Alice is in the way of Belle de Bourg la Reine, but hardier, and a better grower; it is good, of the same colour, and has a shelly appearance, but not quite so good in quality of petal. Notre Dame de Fourvières is a large Rose of a shining flesh colour, such as M. Audot; it is of good growth, and has handsome foliage; in shape it is what may be called a Flanders mare; it is not my style, but some people might like it. Professor Koch, very rich cherry crimson, is fine and a good grower. Vicomte Vigier, when full, is excellent, and another instance of deep petals. Sœur des Anges is fine, and is blooming well; it is a modified Duchesse d'Orleans, sometimes much better, and hitherto oftener inferior to the parent. Both are better bloomers in the autumn than in the torrid heat of summer. Duc d'Anjou is much like Prince Leon in bloom and leaf; but it is bomb-shaped and shallower at the edges. These Roses may be propagated. I cannot [at present recommend any more. I have others yet to bloom. Don't forget what I stated last year, and now repeat with ten plants in full bloom before me—Alfred de Rougemont is *the* great A 1 of its year. I was quite right last year in marking these as extra extra, viz. Charles Lefebvre Maurice Bernardin, Duc de Rohan, Prince Camille de Rohan; they are blooming in grandeur and great profusion. Add to these Alfred de Rougemont; John Hopper, Madame Julie Daran, Olivier Delhomme, and the older varieties, Senateur Vaisse and Comtesse Cecile de Chabrillant, and you have ten of the very best. *W. F. Radclyffe, Rushton.*

The Royal Horticultural Society.—I find *inter alia* in the New Charter of this Society, the following introductory clause. (I). "Whereas the Horticultural Society of London, hereinafter referred to as 'the said Society,' was incorporated by Royal Letters Patent under the Great Seal of our said United Kingdom, bearing date at Westminster the 17th day of April, in the 49th year of the reign of his late Majesty King George the Third, *for the purpose of the* IMPROVEMENT OF HORTICULTURE *in all its branches, ornamental as well as useful.*" I am curious to hear how the Council reconciles with this declaration, on which the Charter of the Corporation rests, the feats of Mumbo Jumbos, tight rope dancers, blazing Burgees, Brigands, and all the other vulgar absurdities which have so intensely disgusted of late that public which has really at heart the improvement of Horticulture. I suppose there can be little doubt that the Charter of the Society will by these acts be declared to be forfeited, whenever any Fellow chooses to bring the matter before the Law Courts. *Eboracensis.*

Lady Downes' Grape.—Is this Grape apt to go off during its second swelling, just previous to beginning to colour? I have a Vine of it planted in a house along with Black Prince, Hamburgh, and Sweetwater, all of which are doing and looking remarkably well, and always have done so; but last year, just about this time, the Lady Downes began to show symptoms of some disease, and this year it is far worse. The Vine cannot look in better condition, the foliage being very healthy. The bunches, too, are large, and the berries wonderfully fine; indeed I was congratulating myself on their fine appearance. On cutting open the berry, however, it shows some disease resembling the Potato malady, the outward sign of which is dark discoloration of the skin. I may also add that the roots are well protected, the border being covered with glass. Any information respecting this highly important Grape will greatly oblige me, as my employer intends planting it in a new house, if satisfactory proof be furnished of its good qualities. *A Young Gardener, Merthyr Tydvil.*

Strawberries.—It is not generally known that fully ripened Strawberries without sugar or cream are quite as beneficial for us as the Grapes so much used in North Germany, the effects sought being the same, namely, an innocuous, gentle, and constant purgative, which carries off the undigested mucus, the source of so much ill health to all weak stomachs. *Somerset.*

Royal Horticultural Society.—I find that the damage done to the garden by the late Mumbo Jumbo proceedings has not been great. Your informant nevertheless, was right when he said that "beds were trampled on and flowers broken;" for in the neighbourhood of the south arcade a Dahlia bed has suffered some damage of that description. The edges of the stone steps leading from the Council Room into the garden have also had pieces chipped off them in one or two places, from, it is said, rolling beer barrels down them. All this, however, is not much, considering that some 24,000 persons were present during the three days on which the garden was delivered up to the South Kensington mountebanks. *K., June* 27.

Orchids.—I wish to correct an error, inadvertently made in my communication last week. At page 604 it is stated that 10 Orchids from the collection of H. E. Gurney, Esq., of Nutfield, took a higher position at the Royal Horticultural Society's Show than Mr. Warner's. It should have been—6 obtained the first prize at South Kensington, and that 10 obtained a higher award than Mr. Warner's at the Crystal Palace three or four years ago. I am not aware that Mr. W. has exhibited since then. *Adolphus H. Kent, Bleckingley.*

Societies.

ROYAL HORTICULTURAL: *June* 27 (*Strawberry Fête in the Society's Garden at Chiswick*).—The gates of this garden, once of world-wide fame, were thrown open on Monday last to Fellows of the Society and their friends, who assembled on its recently-mown tree-clad lawn, to eat Strawberries under leafy boughs, and listen to sweet music from the band of the Royal Middlesex Militia, which played during the afternoon. Some objection had been made by a few to this meeting, on the ground that it was scarcely in accordance with the objects of the Society, and that visitors would not go to the Garden at Chiswick. Most people, however, entertained a different opinion, and that the latter were right, at least as far as attendance is concerned, the result fully proved; for no fewer than 1500 persons were present on Monday last, all of whom seemed to so thoroughly enjoy the treat afforded them as to remind one of by-gone times. Now, therefore, that the experiment has been made and proved successful, let us hope that whenever any one of our perishable summer fruits is in season a similar meeting may be convened, in order that Fellows may have an opportunity of personally inspecting and testing the merits of the different varieties under circumstances most favourable to their full development. On the present occasion the Strawberries, just gathered from the beds on which they grew but an hour before, were served out to those who applied for them in the confectioner's tent, in which above a thousand punnets were sold, the buyers of them wandering about the grounds on the freshly trimmed-up walks, or sitting under trees in groups until the shades of evening compelled them to retire.

As regards other matters we may mention that in the large conservatory there is this season every appearance of an excellent crop of Grapes, the berries of which are already as large as peas. The young so-called varieties of Muscat too, to be proved this season by the Fruit Committee, are also looking well. Moreover, in the compartment recently formed for the trial of plants under the Floral Committee, the beds have all been planted, comprising among other things many novelties which in autumn cannot fail to yield much interest. All the varieties we understand are to be legibly named, and the order of merit bestowed on them by the Committee affixed to them.

It is clear therefore that useful instruction not only in regard to fruits but with respect to flowers also, ought to be found here by all who care to seek for it.

June 29 *and* 30 (*Great Rose Show at South Kensington*).—A magnificent exhibition of Roses, with which was incorporated the National Rose Show, was held here on Wednesday and Thursday last, and although the weather was by no means favourable, there was a tolerably good attendance of visitors. The Roses were arranged on stages, backed with green baize, in the North Arcade, right and left of the Conservatory, in which latter were the plants adjudicated on by the Floral Committee, and bouquets of Roses set up in epergnes and other contrivances for table decoration. Of the latter, a most tasteful centre-piece came from Mr. Adcock, gr. to Mrs. Forbes, of Petersfield, Hants. It consisted of a round wire base, filled with Moss, Fern, and Grasses, from among which rose a slightly serpentine wire stem clothed with Lichen and Moss, supporting a vase full of Roses, well selected as to colour, resting on a Moss-covered cushion, the whole presenting an appearance at once graceful and natural. Its only fault was its being somewhat frail and shaky when touched; but greater strength might evidently easily be given to it. It received a 1st prize, which it well deserved. The 2d prize design, a glass epergne charmingly decorated with Roses, Ferns, and Isolepis, came from Mr. Turner, of Slough; that which was placed 3d, a short stout frosted glass pillar supporting a basket of Roses, was furnished by Miss Wint, of Gloucester Gate. Other contrivances, though pretty, were less remarkable.

Of bouquets of Roses shown in Hyacinth glasses there was a fair display, and among the five trusses required to be contained in each bouquet were many favourite Roses. We noticed in particular, Comtesse de Chabrillant, Senateur Vaisse, Prairie de Terre Noir, a deep velvety crimson variety; Prince Camille de Rohan, one of the blackest of Roses; Madame Furtado; Madame Crapelet, rosy crimson, many blooms of which were shown on this occasion in excellent condition; Celine Forestier and L'Enfant Trouvé, two fine yellows; Madame Bravy, white with pink centre; and Madame Vidot, the last and Mrs. Rivers still two of the best of all delicate peach-coloured Hybrid Perpetuals.

Awards.—1, Mr. Hedge; 2, Mr. Turner; 3, Mr. Wm. Paul.

Of Moss Roses two or three boxfuls were contributed, but their somewhat unequal appearance when placed together rendered them as a whole by no means attractive. Let us hope that to the improvement of this class of

Roses more attention may soon be directed than has lately been bestowed upon it.

Awards.—1, Messrs. Paul & Son; 2, Mr. Wm. Paul.

Of Tea and Noisette Roses some good exhibitions were communicated, in which were fine blooms of Madame Bravy; Rubens, also a creamy white sort tinged in the centre with pink, but looser than the last; Madame Willermoz, a charming variety; Madame Falcot, an improvement on Safranot, as far as doubleness is concerned; Madame William, a fine yellow, but not shown on this occasion in good condition; Vicomtesse Decazes, and Gloire de Dijon, sorts too well known to require remark; President, large and fine; Marquise de Foucault, creamy white, in this instance flushed with rosy salmon; Gloire de Bordeaux, pink; Celine Forestier, a yellow Noisette, of the beauty and brightness of which we have often spoken in favourable terms; and Narcisse and Le Pactole, still good large pale yellows. Among rich deep yellows was Miss Gray, a fine bloom of which was shown by Mr. Hedge of Colchester, who also had Aurora, a large showy Tea; Louis de Savoy, and L'Enfant Trouvé.

Awards.—1, Mr. Hedge; 2, Messrs. Paul & Son; 3, Mr. Cant. Teas: 1, Messrs. Paul & Son; 2, Mr. Cant; 3, Mr. William Paul. Amateurs: 1, Mr. Hedge; 2, Mr. Worthington; 3, Mr. Ingle.

In the class of 12 trusses of any kind, Mr. Keynes of Salisbury, showed magnificent blooms of Charles Lefebvre, a deep velvety crimson Rose of the very first class. Other three blooms of this variety were also shown in another class by the same exhibitor, and were the admiration of all who saw them, as well they might be, for never were Roses shown in better condition or more perfect than these were. Messrs. Paul & Son had Mrs. Rivers and Comtesse de Chabrillant, the last unusually rich in colour and extremely beautiful, the petals overlaying one another with that wonderful regularity for which this Rose is remarkable. The same variety was also furnished by Mr. Hedge and Mr. Cant, of Colchester, and by Mr. Lawrence, of Chatteris; from Mr. Ingle, of Colchester, came Prince Leon; and Mr. William Paul had Lord Macaulay, a fine new variety, somewhat similar to Charles Lefebvre. Louise Margottin, a rosy peach-coloured fine double new Rose, was shown by Mr. Keynes; and among other kinds we noticed Eugène Lebrun and Lord Clyde, both brilliant crimson sorts.

Awards.—Single Blooms: 1, Mr. Keynes; 2, Mr. Turner; 3, Mr. Cant. Extra, Mr. Hedge, 12 trusses: 1. Mr. Keynes: 2, Messrs. Paul & Son; 3, Mr. Ingle; 4, Mr. Hedge. 12 trusses of new sorts: 1, Mr. Keynes; 2, Mr. Wm. Paul. *Amateurs.*—1 truss: 1, Rev. J. K. Child; 2, Mr. Churchfield; 3, Dr. Cooper. Extra, Mr. Plester and Mr. Postans.

In collections of 72 varieties there were, as a matter of course, multitudes of splendid Roses such as many have only an opportunity of seeing at great shows like that under notice. Conspicuous among crimsons in Messrs. Paul & Son's exhibition were Madame Charles Wood, Madame Crapelet, Louis XIV., Alphonse Damaizin, François Lacharme, Baronne Adolphe de Rothschild, Olivier Delhomme, one of the most brilliant and fine of comparatively new Roses; Professor Koch, Senateur Vaisse, Lord Clyde, Le Rhone, Gloire de Santenay, Madame Julie Daran, Maurice Bernardin, Lord Canning, Souvenir du Comte Cavour, and Lord Macaulay. Among yellows we noticed Celine Forestier and Narcisse; among white sorts Madame Willermoz; and among rose-coloured kinds Jules Margottin, Comtesse de Chabrillant, Charles Lawson, Madame Boll, Louise Odier, and La Ville de St. Denis. Bright crimson sorts in Mr. Cant's collection, which was placed second, consisted of nearly the same varieties as those just named, to which may be added Prince Leon, Paul Ricaut, General Jacqueminot, and La Brillante; of delicate pink kinds he had fine blooms of Madame Vidot and Caroline de Sansal; and of yellows Gloire de Dijon and Marquise de Foucault. In large groups from other exhibitors were also remarkably fine blooms, among which were Cloth of Gold, William Griffiths, the pure white Hybrid Perpetual Louise Darzens, and others.

Awards.—1, Messrs. Paul & Son; 2, Mr. Cant; 3, Mr. Wm. Paul; 4, Mr. Mitchell; extra, Mr. Keynes.

In the class of 48 Roses, three trusses of each, most of the leading varieties were well represented. Among others were Eugène Verdier, a white tinged with pink, and beautiful in the bud state; Mdlle. Bonnaire, in the same way; Beauty of Waltham, a charming crimson sort; John Hopper, in some instances a very fine Rose, but apparently somewhat variable; Louise Margottin, salmon pink; and Maréchal Vaillant, a good crimson sort, which when better known, cannot fail to be a favourite.

Awards.—1, Mr. Turner; equal 2, Messrs. Paul & Son, and Mr. Wm. Paul; 3, Mr. Keynes; 4, Mr. Cant. *Amateurs.*—1, Mr. Hedge; 2, Mr. Moffatt; 3, Mr. Ingle; 4, Mr. Exell; Extra, Mr. Laxton.

Collections of 24 varieties were rich in fine blooms of such sorts as Maurice Bernardin, Senateur Vaisse, William Griffiths, Mrs. Rivers, Imperatrice Eugénie, a good rose-tinted white; Gloire de Santenay, Alfred de Rougemont and Monte Christo, both rich dark crimsons; Lælia, peach, nearly as large as a Pæony; Madame Vigneron, and others.

Awards.—3 trusses of each: 1, Mr. Keynes; 2, Messrs. Paul & Son; 3, Mr. Cant; equal 4, Mr. J. Fraser and Mr. Turner. 1 truss of each: 1, Mr. Turner; 2, Mr. Keynes; 3, Mr. Cant; extra, Mr. Fraser. Amateurs: 1, Mr. Hedge; 2, Mr. Worthington: 3, Mr. Exell; 4, Mr. Ingle; extra, Mr. Morris.

In the class of 18 varieties the best blooms came from the Rev. Knox Child, who furnished Madame Boll, Gloire de Santenay, Mrs. Rivers, Comtesse de Chabrillant, Olivier Delhomme, Gloire de Vitry Souvenir de Malmaison, Jules Margottin, Eugène Bourcier, Madame Knorr, Senateur Vaisse, Boule de Nanteuil, Madame Vigneron, Victor Verdier, Gloire de Dijon, and Madame Vidot. The other classes in which Amateurs showed were also equally ably supported, Mr. Hedge, of Reed Hall, contributing as usual glorious blooms of most of the kinds just enumerated.

Awards.—1, Rev. J. K. Child; 2, Mr. Plester, 3, Mr. Postans; 4, Dr. Cooper. Extra, Rev. H. Helyar. *New Roses.*—1, Mr. Keynes; 2, Mr. Fraser; 3, Mr. Wm. Paul; 4, Messrs. Paul & Son.

Of Roses both old and new, in 8-inch pots, there was a good assemblage; but of new sorts the blooms were not in sufficiently good condition to enable us to form a fair estimate of their respective merits. Louise Margottin and Lord Macaulay are the sorts to which first and second prizes were awarded. Some prizes offered by Mr. Wilson Saunders were carried off by Mr. Keynes, Mr. Cant, and Mr. Wm. Paul.

June 29 (*Floral Committee*).—From Mr. Wm. Paul came some handsome nosegay Pelargoniums, to two of which, viz., Amy Hogg and Rebecca, First-class Certificates were awarded, and a Second-class one to Beauty of Waltham, from the same exhibitor. Mr. Paul also received a Second-class Certificate for a new purplish-crimson Rose called Globosa, which promises to be an acquisition. From Messrs. E. G. Henderson came various plants, among which was a pretty purplish-crimson Verbena named Velvet Cushion, which was commended. Various Zonal Pelargoniums came from Mr. Hally, of Blackheath, the best of which were Red Riding Hood and Enamel. Messrs. Carter contributed handsome bouquets of their fine double-blossomed Clarkia integripetala, to which a First-class Certificate was given. A charming set of Scarlet Pelargoniums, among which the best, perhaps, were Faust, Hector, M. Rendatler, Psyche, and Rosamond, came from Mr. Bull, who had other rare and interesting plants to which Certificates were awarded. Mr. Townsend again showed some violet purple blossomed varieties of Clematis lanuginosa; and from Messrs. Veitch came some magnificently-bloomed plants of Lilium auratum.

Fruit was confined to the remarkable Cocoa-nut ripened at Syon, from His Grace the Duke of Northumberland; to this allusion is made in another column. It received, we believe, a special award, and was, as it deserved to be, an object of universal interest.

CRYSTAL PALACE ROSE SHOW.—This took place on Saturday last, and the day being fine it was numerously attended. The different exhibitions, both from Nurserymen and Amateurs, were in admirable condition, and elicited general admiration. As both varieties and exhibitors were nearly the same as those mentioned above, any repetition of their names here would be superfluous.

THE GREAT FLOWER SHOW AT YORK: *June* 15 & 16.—The Sixth Annual Exhibition was a complete success, and the interest excited may be estimated by the receipts, nearly 1400*l.* having been taken at the gates; some fully 20,000 persons attended on the second day, many hundreds of whom were gardeners from almost every part of Yorkshire, as well as from Lancashire and surrounding counties.

The York Show is *the* Summer Show of the North of England, and is little inferior to the Metropolitan exhibitions, and so much is it looked forward to, that gardeners, both professional and amateur, strain a point to get there. The expenses of the Flower Show and Gala exceed 1000*l.*, and the committee consist of professional gentlemen and tradesmen connected with the city of York, who, with their courteous Secretary, Mr. Wilson, appear determined to carry out the exhibitions in a most liberal spirit, and are not afraid of their pockets suffering, which they sometimes do.

Their exhibitions are now of national importance to the midland and northern districts, as the only exhibition in the year in these districts where summer-blooming plants can be seen in the highest perfection, and where there is a chance of meeting new and rare plants. Six large and handsome tents were filled, and the centre tent, an exceedingly handsome lofty circular one, with a circular stage rising tier upon tier, was filled with noble specimens of stove and greenhouse plants, the whole being surmounted by statuary and flags.

In the Class for 12 Stove and Greenhouse Plants, Mr. Wm. Cole, Nurseryman, Manchester, was 1st, and in his collection were superb examples of Ixora javanica, coccinea superba, and alba, Dracophyllum gracile, and Allamanda cathartica; 2d, Mr. Richards, gr. to Lord Londesborough, Grimston Park, for some very fine plants, especially Mahernia incisa, 3 feet through and exquisitely flowered, and an Ixora odorata; 3d, Mr. Baines, gr. to H. Micholls, Esq., Manchester, who had Acrophyllum venosum, Erica tricolor Wilsoni, and Hederoma tulipiferum, very fine indeed; 4th, Mr. Foster, gr. to the Hon. P. Dawnay.

Some good Orchids were exhibited, and Mr. Charles Remmery, gr. to T. Jones, Esq., Manchester, took the 1st prize for 6 Orchids, and 2d prize for 3 Orchids. Amongst them were Cattleya Warneri and Wagneri, the latter a large white with pale yellow lip, both exquisitely beautiful; Phalænopsis amabilis, a noble plant of Phalænopsis grandiflora, a very fine plant of Saccolabium ampullaceum, Dendrobium Devonianum, Chysis Limminghi, and Lælia purpurata in fine character. An extra prize for a group of 12 Orchids was awarded to the same cultivator, in which was the very rare Trichopilia crispa marginata, Odontoglossum nævium majus, and Cypripedium grandiflorum. Mr. Micholls contributed a noble example of Cattleya Mossiæ superba, and good specimens of Dendrobium Devonianum and Lælia purpurata.

Some capital Azaleas were shown, although rather late for them. The best came from Mr. Cole and Mr. Micholls, the former being first for six plants, with Iveryana, a very fine plant of Gem, Chelsoni, variegata superba, Beauty of Reigate, and Juliana. Mr. Micholls was 2d, with Gem, Juliana, Iveryana, Stanleyana, coronata, and Gledstanesi.

There was a fine lot of Exotic Ferns, the principal exhibitors being H. Micholls, Esq.; Messrs. E. P. Dixon & Sons, Hull; Mr. Baines, Museum Gardens, York; and Mrs. Starkey.

Some very fine Heaths also came from Lord Londesborough's garden, Mr. Cole, and G. J. Yarborough, Esq., Amongst them were fine examples of jasminiflora, ventricosa coccinea minor, ferruginea superba, Massoni, eximia superba, and tricolor Wilsoni.

The Pelargoniums, as usual, formed the chief features of the exhibition. The 1st prize, for 12 plants, again fell to Mr. Henry May, nurseryman, Bedale, for some superbly flowered plants, such as are rarely seen away from the London exhibitions. These consisted of Lord Clyde, Leviathan, Rose Celestial, Desdemona, Sir Colin Campbell, Gem of Roses, The Belle, and Angelina. 2d, Mr. George Edward, Nurseryman, York, in whose collection were fine examples of The Bride and Ariel. 3d, J. Richardson, Esq., York. Six Spotted and French Pelargoniums: 1st, Mr. Henry May, with very fine plants; 2d, Henry Steward, Esq., York, in whose lot was a glorious plant of William Bull, and Sweep, a very effective stage plant; 3d, Mr. G. Edwards. Six Pelargoniums (Amateurs): 1st, Henry Steward, Esq., with exceedingly well-grown plants of Viola, very finely coloured; Beadsman, Desdemona, Monarch, Peacock, and Leviathan, with flowers of fine colour, size, and substance; 2d, J. Wilson, Esq., Nunthorpe Hall, with some fine plants, but rather too tenderly grown, as the flowers were not up to the mark in quality.

Mr. May's fancy Pelargoniums, which took the 1st prize, consisted of Hebe, Acme, a very fine example of Countess of Waldegrave, Lady Craven, Princess Royal, Mdlle. Patti, Modestum, Sarah Turner, and Madame Dolby, and were a fine even lot of plants. 2d, the Hon. P. Dawney; 3d, Mr. George Edward.

Some very fine ornamental plants were exhibited; and in the collection from H. Micholls, Esq., which took the 1st prize, were fine specimens of Anæctochilus Lowii, Ananassa sativa variegata, Cordyline indivisa in fine character, a huge Alocasia metallica in fine foliage, Dasylirion acrostichum, Sarracenia flava, and Dionæa muscipula. 2d prize to Messrs. E. P. Dixon & Sons, whose collections included fine examples of Yucca quadricolor, Sphærogyne latifolia in good character, Gleichenia Speluncæ, and Yucca aloifolia variegata. 3d, Mr. Baines, in whose lot were very fine plants of Dracæna Rumphii, and Yucca aloifolia variegata.

In the Class for 6 Stove and Greenhouse Plants there was a spirited competition. The 1st prize was awarded to Mr. Richards for a finely flowered Stephanotis floribunda, a well bloomed Aphelexis macrantha purpurea, a capital monster Polygala acuminata, a fine Erica odorata alba, Azalea Juliana, and a very fine example of Azalea Cavendishii well flowered; 2d, Mr. G. Houghton, gr. to T. Kendall, Esq., Cheadle, in whose lot was an extraordinary Franciscea confertiflora, 4 feet high and as much through, covered with flowers; a very fine blue Leschenaultia, Ixora coccinea, Phænocoma prolifera, poorly flowered, and two fine Azaleas. It was a hard race between the two collections, but the former justly won.

New and rare plants are encouraged here, and very properly, for they form one of the great features of interest of the exhibition. We would suggest another year that prizes be offered for the best new stove plant, greenhouse plant, Fern, and hardy plant respectively, say four prizes for each. This arrangement would bring out more plants and exhibitors; and it is of so much importance that new plants should be encouraged that we recommend the Council to adopt our suggestion. Almost all the exhibitors grow the new things, but for the first year or two the plants cannot be got large enough for the other collections.

The best new plant there was a very fine strain of Lilium auratum, sent by Mr. Fowler, gr. to the Earl of Harewood, and it was most deservedly admired. Next in point of interest was a superbly flowered example of Clianthus Dampieri, shown by Mr. G. Houghton of York, and which ought not to have been passed over unnoticed by the judges. It is a difficult plant to grow in such perfection as shown at York. Gymnostachyum Verschaffeltii, a new Ixora, and Musa vittata, were also in this class.

Some fine fruit was exhibited; the first, second, and third prizes for collections were awarded respectively to the gardeners to Lord Londesborough, the Earl of Zetland, and Lord Wenlock. Some good Pines were shown, especially by Mr. Bashford, Bowdon, Cheshire, which took the first prize, and by Mr. Batger, gr. to John Gott, Esq., Leeds, which took the second prize.

Mr. Cawkell, gr. to J. G. Riddell, Esq., took the 1st prizes for Black and White Grapes; and Mr.

Kirk, gr. to Sir Charles Wood, Bart,, the 2d prizes for each. We noticed Josling's St. Alban's, very fine in colour but rather small in the bunch.

Mr. Thomson, gr. to his Grace the Duke of Buccleuch, Dalkeith, sent, not for competition, two bunches, from plants grown in pots, of his Seedling Grape Duchess of Buccleuch. The bunches sent were 12 inches long, and each weighed 2½ lbs. They were not quite ripe, but evidently have a strong Frontignan aroma when quite ripe, and are of a pale amber colour. We understand that it grows much larger when planted out, and is very free and hardy. It looks like a valuable Grape. The judges awarded a Certificate of Merit.

Some good Melons were exhibited, and Trentham Hybrid Green-flesh, shown by Mr. Kirk, gr. to Sir Charles Wood, Bart., M.P., obtained the 1st prize.

Some good collections of British Ferns were shown by Mr. Lazenby, gr. to J. Buckle, Esq., York; Messrs. Dixon & Sons; and Mr. Baines, Curator of the Museum, York, and prizes were awarded in the same order. There were several other interesting features well deserving of notice, but we are unable to find space, except to observe that paper flowers, so very natural as to deceive many, were exhibited by Miss Harris, Micklegate, York. A group of Ten-week Stocks was particularly deceptive, and this collection, together with a display of flowers and fruit in leather, were much admired. Mrs. Thomas, of Cheltenham, and Mr. George Dale of York, also contributed a good collection.

BOTANICAL OF EDINBURGH: *May* 12.—Prof. Balfour in the chair. Amongst the communications which were read was a *Notice of a new variety of Athyrium Filix-fœmina*, by Mr. John Sadler, who also exhibited a living plant. This remarkably beautiful variety of the common Lady Fern had been collected by Mr. James Cosh, in 1862, by a road-side in Stirlingshire. In the spring of last year Mr. Sadler had sown spores taken from the plant, some of which had germinated, but as yet exhibited none of the peculiarities of their parent. A specimen had been transmitted to Mr. Moore, of the Chelsea Botanic Garden, who pronounced it an undescribed variety; and as the Queen amongst Lady Ferns, recommended that it should be called Victoriæ. The fronds are from ten to eighteen inches in length, and crested at the apex. The pinnæ are also crested, but instead of being single, as in most other varieties, they leave the rachis in pairs, and at such an angle that each alternate pair overlap each other, so as to give a beautiful plaited appearance to the whole frond. The author was indebted to Mr. John Dawson and Mr Paterson for his specimens.

June 9.—Prof. Balfour in the chair. The following donations to the Museum at the Botanic Garden were noticed:—From Mr. J. Thomson, specimens of the Jew's-Ear Fungus (Exidia Auricula Judæ); from P. White, Esq., Midcalder, dissections of five genera of plants (framed); from Dr. M'Rae, *Oranges said to be the produce of trees grafted on the Laurel, at Teneriffe.* [We should like to hear more of this.] The following communications were read—I. *Recent Botanical Intelligence.* By Prof. Balfour. He first noticed the experiments of M. Gris and M. Dalimier in regard to the vessels of plants. The former showed that glucose was present in the vessels, and the latter that in their perfect state the spiral vessels contained air. M. Cloez and M. Gratiolet found that the gas exhaled from aquatic plants exposed to light in ordinary water slightly impregnated with carbonic acid contains besides oxygen, a notable quantity of nitrogen. M. Cloez also states that the coloured parts of plants do not decompose carbonic acid. M. Belhomme finds that in dicotyledons pollen grains may preserve their fertilizing property for a period varying from one to three years, and monocotyledons even to six years. Dr. Asa Gray is satisfied that the two genera Astragalus and Phaca must be united, and that the genus Phaca must be merged in Astragalus. It is in the botany of America that the distinction between Phaca and Astragalus is most pressing, and where the data for the answer are most largely to be found. While extra-tropical Asia is the focus of true Astragalus, that of Phaca is in America, mainly in North America, with an extension along the Andes into South America; while the flora of the Russian empire enumerates 168 species of Astragalus (of which more than nine-tenths are bilocellate or nearly so), and only six species of Phaca. Dr. Gray recognises, in a paper read to the American Academy of Arts and Sciences, 66 species of the Phaca series, and 52 of Astragalus proper. Moreover, rather less than half of the latter are completely bilocellate by a dorsal septum, and at least half a dozen of different groups have been or might be referred to Phaca. Dr. Asa Gray concludes that Phaca must be merged in Astragalus, and that, since in, perhaps, the majority of Phacæ, there is no intrusion nor peculiar tumidity of the seminiferous suture, the subtribe Astragaleæ of De Candolle has no valid foundation, so that Astragalus is merely a genus of the Galegeæ. In a paper on the variability of the Pear by M. Decaisne, given in the Annales des Sciences Naturelles, the author maintains that there is no evidence of the degeneration of our fruit trees in consequence of the continual propagation by grafting. The facts stated by those who contend for degeneration may be explained in various ways—such as climates or soils unsuited for the particular wants of the varieties, bad culture, or improper grafting. Our ancient Pears, so justly esteemed for a century or two, are still the same as they were at first. The Crassane, Saint Germain, Doyenne, Chaumontel, Bon Chrétien, &c., have lost none of their qualities. If they are neglected, it is only because cultivators are looking after novelties. M. Decaisne also maintains that it is not true that the seeds of good varieties of fruit, when sown in ordinary soil, have a tendency to go back to a wild state and produce crab fruit. Professor Balfour also called attention to papers by M. Leo Lesquereux and Professor Dawson, on the fossil plants of the coal formation, and the Devonian epoch of North America. ——II. *Remarks regarding the use of the Betel-nut.* By Professor Archer. Professor Archer described the manner in which the Betel-nut is prepared and used in the East as a masticatory, illustrating his remarks by a series of preparations from the Industrial Museum. The Betel-nut is the produce of Areca Catechu, a Palm of considerable size. It is estimated that upwards of 50 millions of the human race chew the nut.——III. *Notice of New Station for Corallorhiza innata near Edinburgh.* Communicated by Professor Balfour. Corallorhiza innata has of late years disappeared from several places around Edinburgh through drainage, but recently it has been discovered by Mr. E. V. Sandilands in considerable quantity in boggy ground on the north-western side of the west Dalmahoy Hill. Specimens were shown in a living state. Professor Balfour also remarked that notwithstanding the numerous botanists who collected plants in Scotland, there were very few if any instances of stations being destroyed by them. The injury caused had been chiefly by those who collected plants (especially Ferns) for sale. Many of these collectors came from England, where the mania for Ferns was excessive. He maintained that the recent remarks made as to the destructive propensities of Scotch botanists were erroneous, and must have been written by some one who knew nothing of the facts of the case. ——IV. *Letter from Mr. W. Bell, Saharunpore, dated 17th March*, 1864. Communicated by Prof. Balfour. I delayed answering your last letter until the seed collectors had returned from the hills, expecting that they would bring some seeds of Gentians and other plants which I had previously observed, but they are such a lazy apathetic set of people that unless a thing comes to hand readily they take no trouble in gathering it. Enclosed are a few seeds of Acacia Catechu and of a Barleria. The wood of the Acacia is of a deep brown colour, close-grained, hard, and very heavy. The leaves of the Barleria are held in high repute amongst the native doctors for their efficacy in intermittent fever. They have a bitter taste. The cryptogamic flora of this district is very scanty—about half a dozen Ferns, the same number of Mosses, two Marchantias, one Parmelia, and two Lecideas.——A letter was read from Mr. A. Denham, Agri-Horticultural Society's Garden, Madras, in which he states that there are eight acres devoted to the cultivation of the different kinds of cotton, and that he is hybridizing them with a native variety. R. Trail, Esq., Aberlady, sent living specimens of Erica vagans var. multiflora gathered by him near Ardrishaig, Argyllshire, in October, 1861. Mr. J. Sadler exhibited specimens of Glyphomitrium Daviesii, which had been collected by Mr. D. Black at Ardtun, Mull. Mr. J. Cross, gr. to Lady Ashburton, sent fresh cuttings of an upright form of Juniper allied to the Swedish, which grows abundantly on the Downs, near the Grange, Hampshire. Mr. A. Robertson, Ballydruin Gardens, sent dried specimens of Lastrea fœnisecii. Mr. P. Robertson exhibited a plant of Thuiopsis borealis in fruit. Mr. M'Nab placed on the table several interesting Alpine plants, including Fragaria lucida, from the Himalayas; he also exhibited a flower of Cereus grandiflorus, night-flowering Cereus, which had been immersed in water for five days, and still remained in an expanded state. Mr. F. B. W. White exhibited specimens of Asperula taurina, collected near Corstorphine Hill in a naturalized state. Mr. W. R. Hay noticed specimens of Cardamine pratensis, producing as many as four flowers on the same axis, separated from each other by extensions of the internodes, so as to appear like a series of coloured verticillate leaves at different heights on the peduncle.

Notices of Books.

Nesbit's Practical Land-Surveying. Eleventh Edition. Pp. 486. Edited by W. Burness, F.R.H.S. Longman & Co. 1864.

This is a first-rate treatise on Practical Land Surveying, edited by an experienced Professor of the art. Nesbit's has long been considered a standard work, and the fact that it has reached its eleventh edition speaks volumes as to its merits. Land-surveying, like everything else, has partaken of the improvements of the age, and methods for attaining greater accuracy are adopted. The treatise before us leaves nothing to be desired. It is in fact a text-book of the best kind for those who would study or teach this important branch of education. First, there is a short course of Geometry, comprising the definitions and necessary problems and theorems; next a description of the instruments employed, and the right method of using them; then we are carried through a thorough course of land-surveying, with the mapping of large estates, directions for the construction of sea embankments, &c. The whole illustrated by figures where necessary, and several folding maps; and about 80 pages are devoted to the subject of Railway Engineering.

Seemann's Journal of Botany, for the month of May (No. XVII.), is illustrated by a plate of a new British Fern, the *Asplenium Adiantum-nigrum obtusum*, of which the following account is given by Mr. Moore:—"Since the time of Willdenow, the existence in Europe of an Asplenium somewhat intermediate in character and aspect between A. Adiantum-nigrum and A. montanum, has been known. This Fern was called A. obtusum by Willdenow himself, A. Fosteri by Sadler, and A. Serpentini by Tausch, but is now considered as a form or subspecies referrible to A. Adiantum-nigrum, including a goodly array of synonyms besides those just mentioned. In the 'Index Filicum' the name of A. Adiantum-nigrum, γ obtusum, is employed; but some authors, as Heufler and Milde, prefer that of A. A. Serpentini, or A. A. serpentinum. This Asplenium Serpentini belongs to the triangular, tripinnate series of Aspleniums, and though varying much in the size and breadth of its parts, is rather small-pinnuled in its most marked and characteristic states. It has the pinnæ straight and spreading, as compared with those of the variety or subspecies acutum, in which they are connivent; and from the more typical forms of Adiantum-nigrum, which have the base of the segments incurved, it differs, according to Heufler, in having the base of the segments recurvate. In some of its forms the segments are blunt and firm, in others blunt and of thinner texture, and in others again more or less acute; but even those forms which are narrow and obtuse, thus acquiring a wedge-shaped outline, are often acutely toothed at the apex. In outline, the pinnules vary from ovate-obtuse to ovate-acute or even almost acuminate, the segments in the former case having a short broad-ovate or ovate-oblong figure, and in the latter approaching more or less nearly to linear, but without any of the peculiar features of acutum, in which the segments are more strictly linear. The surface is of a dull opaque green, not lucid, as in acutum, and the fructification is crowded and generally becomes confluent. Till recently, this plant was chiefly known as a native of Croatia, Dalmatia, Hungary, Bohemia, and Saxony, extending to Italy and probably also to South Africa and Abyssinia. The name Serpentini was given to it from its being found on serpentine rocks. When, therefore, some two years since, Mr. A. Christie sent me from the serpentine range dividing the counties of Aberdeen and Banff, a small-pinnuled form of the common black Maidenhair, I was quite prepared to expect that this interesting Fern might be yet added to our Flora. And this expectation was soon realised, for very shortly after, Mr. Christie, who had renewed his researches, sent me specimens of the true plant undistinguishable from authentic examples for which I am indebted to the kindness of Prof. Braun and Dr. Sturm. The fact of the discovery of Asplenium Serpentini as a British plant was recorded in the early part of last year, the specimens having been gathered in the autumn of 1862." Amongst the other articles are a Synopsis of the Phanerogamic Flora of Spitzbergen, by Mr. A. J. Malmgren; and an account of the genus Ascobolus, with descriptions of the British species, and several woodcut figures, by Mr. M. C. Cook.

No. XVIII. of the same work contains a figure of *Boussingaultia gracilis*, a new species from Brazil, described by Mr. Miers, who remarks:—"The genus Boussingaultia was founded in 1825 by Kunth, on a plant from the Ecuador region, which was then described and figured by him; he placed it in Chenopodeæ, pointed out its affinity to Basella and Anredera. Subsequently the family of the Basellaceæ was established by Moquin Tandon, who placed Boussingaultia there, in his suborder Anrederea, recording at the same time two other species from Mexico. All the plants of this family, comprised under six genera, belong to the New World, except those of the genus Basella, which is Asiatic. The discovery of a new species of Boussingaultia from Brazil is therefore interesting, for all the plants above mentioned are confined to the western side of the American continent. It is true that Tweedie sent a plant from Buenos Ayres, supposed to be cultivated, and which was referred to Kunth's type of the genus; but it was probably the plant now about to be described, which forms a fourth species of the genus." This new Boussingaultia bears long, very slender, and densely-flowered racemes, and was gathered by Mr. Weir in the province of S. Paulo. The same number contains the conclusion of Malmgren's Synopsis of the Flora of Spitzbergen; and a very interesting list of plants known to produce double flowers, compiled by the Editor.

In the numbers of the *West of Scotland Horticultural Magazine*, published during the last two months, we find some useful remarks by Mr. Doig and others, on Trees and Shrubs suited for exposed situations on the sea-shore; a few notes on Pears and Apples which succeed in the north of England, by Mr. Bell, of Bretton Hall, Yorkshire; together with remarks on modern flower-gardening, on the education

of the eye, and on the improvement of plants by change, &c. Mr. Bell's remarks, above alluded to, are as follows:—"Some time ago I promised to jot down a few notes concerning Pears that have ripened thoroughly, and been of good quality, on standard trees grown in the gardens here. Anything that succeeds well here, will, I think, have an equal chance in the west of Scotland, as I believe your climate to be almost as good as we have here, and your soil, from being carefully selected and thoroughly drained, a good deal better than our cold wet clays. I don't know of anything, however, more capricious than Pears. Peaches and Apricots, or almost any other fruit, in a good season, will be good anywhere, but I have often observed particular varieties of Pears very good in one place, and quite worthless at another a short distance off, where the conditions did not appear to differ materially. It appears to me that, where it could be done, the best plan would be to plant a good many sorts, and as soon as they were fairly proved to regraft those found unsuitable. I have, however, found those I shall name generally good in all places where I have met with them. The past dry summer just suited our cold damp soil, and I never tasted finer Pears anywhere. Hacon's Incomparable, in season in November and December, bergamot-flavoured, a good bearer and first-class Pear. The Beurré Nantais, in season in November, fine in appearance, and is equal to anything. Beurré d'Amanlis, October and November, extra size, fine bearer, and always good. Beurré Easter, December and January, better from a standard than a wall, excellent. Beurré d'Aremberg, December, free bearer, and good quality. Maréchal de la Cour, extra size, most excellent; tree requires to be regularly root-pruned. Williams's Bon Chrétien, September and October, large and good looking, musky flavour, much liked by some, very free bearer. Louise Bonne (of Jersey), October; free bearer, very good here in a fine season. Marie Louise, in some seasons very good here, from standards, invariably so from wall trees. Glou Morceau, November and December, generally good, though sometimes it does not ripen sufficiently here on standards. Beurré Diel, though not often very good here is invaluable for cooking, as it is a very handsome fruit and keeps good a long time; free bearer; it is worth growing. I could name many others, but all these I have proved to be first-rate in this not very favourable locality. If you should be planting Apples you will find Cox's Orange Pippin one of the very best. Here the tree grows and bears freely fruit of a superior quality. As a proof of its usefulness I may state that in the cold seasons of 1860 and 1861 it was almost the only Apple that we had fit to eat."

As usual the *Scottish Gardener* contains several papers of practical value. In the numbers before us we find good sensible articles on the culture of Neapolitan Violet, Spinach, Celery, winter-flowering stove plants, early spring Pine Apples, and such like useful subjects; whilst upon the state of horticulture in Scotland, Mr. W. Thomson has the following remarks:—"I observe with pleasure that nearly all our Scotch nobility and gentry are members of the London Horticultural Society, but it has always been a source of regret to me that, with a few noble exceptions, they do nothing for the encouragement of horticulture by the instrumentality of any similar society in their own country. Many of them may at one time have been supporters of the Caledonian Society; yet from want of support of some sort, it has for many years ceased to be more than a name, and now that the grounds and houses, once the property of the latter Society, are transferred to the Royal Botanical Gardens, I suppose the corporation is or will be dissolved. In these circumstances I am tempted to suggest that an effort should be made to reconstruct the old 'Caledonian Society' by a union with the 'Horticultural Society of Edinburgh,' the latter having plenty of health and vigour in its constitution, which could be mingled with the old associations and aristocratic connections of the former. In this way a thoroughly efficient Society might be brought into operation, not necessarily having a garden as formerly, but devoting its attention to the reward of merit in every department of horticulture. There is no more certain means of frittering away any good that horticultural Societies can do than by having two or three in a city like Edinburgh, yet from a variety of causes such has unfortunately been the state of matters for years, and such it will continue unless an effort is made now in a proper spirit. I am confident that if a good basis could be agreed upon, and our landed proprietors and others interested in such matters appealed to, there would be no lack of funds to enable the managers to give as liberal awards to subjects of merit as they do in London. It cannot be flattering to our national pride to observe what splendid awards are given at shows in such provincial towns in England as York, Bishop Auckland, and elsewhere, and there is no reason why exhibitions of the same description should not be as successful in Edinburgh, except the divisions that at present exist amongst those who ought to be united in supporting one efficient society. I have thrown out these hints with the sole object of calling the attention of all those interested to the matter, in the hope that a true desire to promote an important branch of rural economy that is every day becoming of greater importance, may lead all parties to smooth over any difficulties they may see in the way of forming one society that shall be worthy of being called national." We wish our northern brethren every success in any attempt they may make to reorganise a really efficient and practical Horticultural Society.

The *Midland and Northern Florists' Guide* has commenced its promised series of portraits of our leading florists, by that of Mr. C. Turner, of Slough, which was given in the May Number. The likeness, which is a good one, produced by photography, is accompanied by a memoir which reads "fast," and though highly complimentary is, to say the least, in questionable taste. We can, however, agree with the writer in his estimate of the four-fold claim Mr. Turner has upon the regard of florists:—1. As an exhibitor his success is without a parallel; 2. As a censor his decisions have been ever received as the righteous sentence of an upright judge; 3. As a tradesman he is entirely to be depended on; and 4. As a friend he is hearty, sincere, and unselfish—the pleasant companion, the generous host. Among the other papers are some remarks on the Sweet William; "July," says the writer, "is its season, and then it is in its glory. A bed of first-rate Sweet Williams is truly worth seeing, and I earnestly commend this flower to those who have not taken it in hand. There are two strains of Sweet William in cultivation worth growing, viz., Hunt's strain, originated by Mr. J. Hunt, of Wycombe, Bucks, the well-known Tulip grower, which are of a very fine form and varied in colour, but without the distinct white centre, peculiar to the other strain known as the Auricula-eyed, which are confined as yet chiefly to shades of crimson with a large white centre, and are very attractive. There is a strain known as the Perfection Sweet William, which I am told beats the Auricula-eyed, and which has been originated by Mr. Melville, of Dalmeney, near Edinburgh, but I am unable to say if it does or not." Then Mr. Henry Mayle asks the Fuchsia raisers of the present day what they are doing; and he answers for them—"simply sacrificing quality to size; breeding cart instead of racehorses; for the majority lately sent out are to my taste rough and ugly. Size seems to be the only desideratum now-a-days, with great, wide spreading crinoline corollas." He further recommends them to "go back fifteen years, and start afresh with a good breed," such as the splendid Champion of England and the graceful King Charming. There is besides a good deal of information about exhibitions of florist's flowers, especially Auriculas and Tulips, which must make this little serial a pleasant monthly visitor in the home of a true florist.

Garden Memoranda.

MR. SALTER'S NURSERY, WILLIAM STREET, HAMMERSMITH.—At no season of the year is this nursery without interest. Late in autumn there is the usual grand exhibition of Chrysanthemum; it is well known to contain one of the best collections of hardy variegated plants in the country; lately it has been the scene of a magnificent display of herbaceous Pæonies, of which Mr. Salter has an admirable selection; and now the houses are gay with most beautiful examples of Pelargoniums of the Nosegay section, one of the handsomest of the many groups into which this genus is divided. Among them the following are well worth attention, viz., Improved Titian, rosy salmon; Woodwardii, similar in colour, but perhaps a shade darker; Amelina Griseau and Mr. Lierval, white flushed with salmon, the one differing a little from the other in amount of colour, but both handsome; Germania, clear salmon red; both French and English varieties of Merrimac, the first rosy crimson with a fine truss of bloom; the last equally good, but a little different in shade of colour. In addition to these there are also Prince Christian, rosy pink; Flora, delicate peach; Comet, a vivid scarlet with a white eye; Lady Blanche, white; St. Fiacre, salmon; Helen Lindsay, rose and white, a fine kind for bedding purposes; Eugène Mezard, white, deeply flushed with salmon; Cybister, scarlet; Lord Palmerston, crimson; Spread Eagle, glowing orange scarlet, a dwarf neat sort; Mdlle. Sidonie, rosy lilac; Model, deep rose; Imperial Crimson; and Madame Pauline Gaspard, rose. These are all excellent varieties worthy of being added to any collection, each head of showy blossoms being quite a bouquet in itself.

Of the effect produced by the Pæonies while in blossom, it is impossible to speak in too high terms. They were the admiration of all who saw them, and lasting as they do for several weeks together in full beauty, just before the usual bedding plants come into blossom, they become quite an acquisition to our gardens. A list of all the best kinds may be found in Mr. Salter's catalogue, which can be had on application to him. In colour they comprise nearly every shade from pure white to deep crimson; and among them are some fine yellows. Planted singly they are handsome; but in masses they are magnificent.

Miscellaneous.

Subscription to Replace Mr. Baker's Library.—The following circular has been addressed to the Botanists of Great Britain and Ireland by a Committee, consisting of Messrs. J. T. Boswell Syme, W. Carruthers, Rev. W. W. Newbould, E. Newman, and H. C. Watson:—On the night of May 7 the adjoining dwelling houses and business premises of Mr. J. G. Baker and his brother, were utterly destroyed by fire, the two families barely escaping with their lives. The amount of insurance was small in comparison with the value of the property destroyed by the very rapid conflagration. Among other losses of greater monetary value, were the botanical library and collections of Mr. J. G. Baker, gradually accumulated during the several years in which his leisure hours have been so assiduously and usefully devoted to botanical science; as also important manuscripts yet unpublished. Under these painful circumstances it is felt by his botanical friends, that some expression of sympathy and condolence ought to be offered to Mr. Baker, in the appropriate form of a subscription by the botanical public towards replacing his lost books. They trust that all true lovers of botany will enter into this feeling; and that by adding their individual subscriptions to the general fund, they will testify their appreciation of Mr. Baker's past disinterested services to botany and botanists, and assist in enabling him to continue the same in future years. A very small amount may serve to replace some one lost book or other object, so that no botanist need be deterred from a modest offering, in case other claims upon him at this time should interfere to prevent a larger one. A few botanists resident in or near London, and acquainted with Mr. Baker, have formed themselves into a local committee to carry out the proposed object; the metropolitan centre offering more facility for conferences, and for postal correspondence, than would be found elsewhere. They are kindly allowed to refer also to Professors Babington, Balfour, Oliver, and other leading botanists, as fully approving the step thus taken. But it is the wish and trust of the committee, that the offering to Mr. Baker should be a testimonial of respect and sympathy from the widest circle of botanists in this country. A printed copy of the subscription list, up to August 1, will be then sent to each subscriber, by way of closing the appeal. The committee earnestly request other botanists to assist in obtaining the addition of botanical names thereto as generally and numerously as possible. The proper postal addresses of several botanists not being known to them, they must in some degree trust to the kind co-operation of other parties, even in simply making this Circular and its purpose generally known. Subscriptions by cheque or post-office order will be received by any of the committee. Post-office orders should be made payable to Mr. John Thomas Boswell Syme, at the district office, Adelaide Road, London, N.W. Sums under 5*s.* can be remitted in postage stamps.

Iron Ligatures on Trees.—In 1839, during a severe gale, a large Ash, standing in the policies of an estate on the banks of Loch Koillsport, Argyleshire, was torn in two by the storm; the rupture extended from where the branches diverge from the trunk for some feet downwards, thus rent as it were on both sides but still keeping together. The tree being a favourite specimen, a broad hoop was made to bind it together, and, if possible, to save it. The hoop was about 2½ inches broad or so, made in two halves, but assisted by a sort of hinge at one side, and formed a very tight fit for the limit, or rather the top of the trunk, and being got round it was bound tight by a screw bolt, until it began to sink into the bark, and the two divisions were brought once more together. At the time the operation was being performed I felt very doubtful of the success of it; one thing, however, that went a great way to dispel this idea in the outset was the close and exact fit of the two sides, and the tight manner in which they were brought together, bark and wood, and secured, preventing ingress of air or wet. But then the action of the iron brought a doubt, and made me think the tree in question would be a short-lived one. Many years afterwards I happened to be in the same district, I remembered the tree and visited it, and found it not only in good health, but the iron hoop nigh covered with wood and bark, about half an inch or so being then all that was visible, and which ere now I have no doubt is entirely covered. *J. L., in Botanist's Chronicle.*

Calluna vulgaris in Newfoundland.—When I read the note from *Silliman's Journal*, by Asa Gray, quoted in the *Journal of Botany* for January, 1863, relative to the common Ling, Calluna vulgaris, having been lately discovered in the State of Massachusetts, with the further notice that De la Pylaie had, at an earlier date, mentioned it as a native of Newfoundland, I intended to send you a note confirming the correctness of the latter part of the sentence, but, like more good intentions, it was not carried out at the proper time, and consequently lost sight of. I have, however, been again reminded of the circumstance, by seeing in the last number of the *Natural History Review* a short article on the same subject, by H. C. Watson. I shall, therefore, without more delay, endeavour to record my story, which establishes the fact that our common Ling Heath is found in Newfoundland. In the year 1852 Mr. Ensor, of Dublin, brought to me from Newfoundland a number of plants of Sarracenia purpurea, and along with them two tufts of the common Ling Heath, which he told me grew in considerable quantities on a boggy part of his property, near to the place where he had dug out the plants of Sarracenia. I had the Newfoundland Heaths planted, one of which luckily grew, and is still living in this garden. It is what we would call a slender-growing variety if found in Britain, and what is more remarkable, either from being long accustomed to be covered with snow in winter, or from being naturally more tender, it is constantly nipped on the points of its shoots by frosts; besides, the foliage gets browned from some cause,

whilst Irish plants growing near it remain unscathed. *Dr. Moore, in Seemann's Journal of Botany.*

Arnica.—As this article is entirely new to the Pharmacopœias of the United Kingdom, although well known and much employed in Prussia and some other parts of Germany, in Italy, and in the States of North America, it will be necessary for me to make a few remarks on its botanical and geographical sources, its characteristics, and reputed medicinal properties. Arnica-root is directed to be employed in the British Pharmacopœia; but on the Continent and in America the flowers are preferred, and ordered in all but one of the preparations which are there officinal. We are ignorant of the reason why the root is ordered in the British Pharmacopœia. We should have preferred the flowers, because they would be more likely to be uniform in their properties from being gathered at a definite period; while the root, from being collected at different periods, will necessarily vary considerably in its strength. The plant from which this article of the Materia Medica is derived is the Arnica montana, Linn., and belongs to the natural order Compositæ. It is a native of the mountainous districts of Europe, and of certain parts of North America and Asia. The so called Arnica-root is really the rhizome, to which numerous small rootlets are attached. The rhizome is more or less twisted, rough from the scars left by the leaves which it formerly bore, somewhat cylindrical in shape, from one to three inches in length, and two to three lines in thickness. From this, numerous small rootlets arise, of variable length, generally two or more inches, and about the thickness of a common knitting-needle. Both the rhizome and rootlets have a brownish colour externally. The odour is peculiar, feebly aromatic, and disagreeable; and the taste somewhat peppery, bitterish, and nauseous. The root has been found to contain volatile oil, acrid resin, extractive, gum, and woody fibre. The extractive matter of Arnica-flowers, which is doubtless similar to that of the root, is said to be identical with cytisin, a poisonous principle obtained from the seeds of the common Laburnum tree. Mr. Bastick has also obtained from Arnica-flowers a peculiar alkaloid, which he has named Arnicina. The properties of Arnica appear to depend essentially upon the acrid resin, although these are doubtless modified to some extent by the volatile oil and extractive. Arnica is very highly valued as a remedial agent in certain parts of the Continent. It is regarded as a most useful stimulant in typhoid fevers, and in various debilitated conditions of the system; in paralysis, amaurosis, and other nervous affections, &c. The trials which have been made in this country of its remedial virtue do not in any material degree confirm the extravagant encomiums which have been passed upon it on the Continent. The dose of our officinal tincture is from two fluid drachms to a fluid ounce, every three or four hours. The tincture of Arnica-flowers, and also that of the root, have been much employed as a domestic remedy in this country and elsewhere, as an external application in sprains, bruises, &c. The experiments of Dr. Garrod, however, lead to the conclusion that its efficacy is entirely due to the rectified spirit employed in its preparation, as he found that about the same remedial effects were produced upon certain bruised surfaces by the application of either simple rectified spirit or tincture of Arnica. Altogether, so far as present experience leads us in this country, we have reason to believe that the virtues of Arnica, both as an external remedy and for internal administration, have been vastly over-rated. *Prof. Bentley, in Pharmaceutical Journal.*

Calendar of Operations.

(For the ensuing week.)

As tender kinds of greenhouse plants complete their growth, they may be set by themselves in houses or frames, of which the sashes can be easily put on or removed. In such a situation they can be freely exposed to sun and air, but at the same time may be covered when the weather is excessively wet. In staging the plants, they should be so arranged that they shall shade only the pots of those which are behind them. The hardier kinds of greenhouse plants may be set in the open air, without any kind of shading. It is a mistake to place established plants behind a north wall, during any portion of the summer; but, on the other hand, it is essential that the pots be protected from the sun. When the plants are necessarily out of doors during this season, they should be plunged in beds of sifted coal-ashes; but take care to place them far enough apart to ensure a free circulation of air amongst them.

FLOWER GARDEN AND PLANT HOUSES.

This is a good time for grafting or inarching Oranges, Camellias, Azaleas, choice Rhododendrons, &c. For grafting, forward ripe shoots of this year's growth are generally selected; but of small weakly growing kinds, it is preferable to take a portion of two-year-old wood along with the shoot. Until a junction is effected, the plants should be plunged in a close moist heat, rather stronger than that required for growing them in, and carefully shaded. Many other puny-growing, fine-rooted, stove and greenhouse plants may with great advantage be grafted on stronger growing species of the same family; amongst these we may mention Gardenia radicans, Ixoras, Chorozema Henchmanni, Pimeleas, Leschenaultias, &c.

ACHIMENES.—These deservedly rank among the most beautiful of ornamental plants; their flowers are produced in great abundance for months in succession, and the plants themselves are of the easiest possible culture. While growing, they like a warm moist atmosphere; but during their flowering season they do perfectly well in a comparatively cool and dry situation, such as a close greenhouse or conservatory, where they are almost always in blossom. As regards soil, light turfy loam, peat, leaf-mould, thoroughly decayed cow-dung, and silver sand suits them perfectly.

AMARYLLIS.—These glorious bulbous plants merit more than ordinary attention. When we consider their large handsome flowers, scarlet, crimson, or white striped with crimson, we may well class them amongst the most beautiful objects for the decoration of a conservatory or greenhouse. They succeed perfectly in any light, tolerably rich soil, in which there is a good proportion of fibry loam. Twenty-four sized pots suit them best. The only point requiring special attention is when to re-pot. This should correspond with the time at which the bulbs are to be started into growth. When the foliage dies at the tips, water should be gradually withheld, until the leaves have become quite decayed, when the bulbs should be kept dry till fresh leaves have reappeared. Some, however, never die down; they therefore require to be kept constantly in an intermediate or warm greenhouse, in a growing state, and shifted when the pots have become too small for the bulbs and roots, using at each shift as much fresh soil as possible.

ANNUALS.—Late-sown kinds intended for autumn flowering, should be thinned out or transplanted, before they crowd one another, and become too weak to support themselves.

CARNATIONS, &C.—Perhaps no plants are more generally useful than the hardier kinds of Carnations, Picotees, and Cloves. Their beauty and fragrance not only recommend them to a prominent place in flower beds, but render them invaluable for glasses or bouquets. If pipings of them are taken off about this season, they sometimes strike as freely as Pinks; but the operation will be more certain to succeed if the handlights are set on a slight hotbed, or the pots plunged in a frame where there is a gentle bottom-heat. Points which require special attention are, that the cuttings be taken not later, on any account, than the expanding of the first flower; and that they be carefully shaded from every ray of sunshine. The most certain method of propagating them is by layers; but it is equally important that it should be done early, as the plants root sooner, and thereby become better established before winter.

CHINESE PRIMULAS.—Old plants of these should now, after their partial repose, be shaken carefully out of the old soil, repotted in light sweet compost, moderately rich, and placed in a warm frame for a few days, till they have begun to produce roots into the new soil, after which they must be removed to a position near the glass in a cold frame, and kept close till the plants are thoroughly re-established. These plants succeed best in moderate-sized pots.

FORCING GARDEN.

PEACHES.—Admit a free circulation of air through all the houses during fine weather; but where the fruit is just ripening, ventilating during the night and in damp weather should be effected by means of the front, keeping the top sashes closed to prevent damp cold dews from setting on the fruit. The foliage in the early houses should be kept in a healthy state as long as possible by syringing, and guarding against insect depredations.

PINES.—Having selected, to meet the demand in winter and early spring, those plants which are now showing or flowering, and those which shortly promise to follow their example, a portion of the strongest and best rooted of those remaining should be picked out to succeed them; these should be potted immediately if they require it, and grown on steadily without any check; any of the smaller plants which are in immediate need of potting should also be attended to. Keep up an uninterrupted succession by planting a few suckers occasionally in a brisk bottom-heat. Where the planting out system is practised, there is no difficulty in keeping up the succession if all vacancies are filled up as they occur with the best plants selected from among the successions.

VINES.—As the Black Hamburgh is somewhat liable to shrivel after it is ripened, and as it is thereby deteriorated in quality, it is advisable to shade during very hot sunshine. Where the crops are swelling let the state of the borders be frequently examined, especially of those which are covered with tarpauling or other material. If the soil is dry let the surface be carefully loosened with a fork, and watered with liquid manure. Examine the bunches of swelling crops, thin crowded clusters, and remove any small berries, which will only spoil the sample if they are allowed to remain.

HARDY FRUIT AND KITCHEN GARDEN.

As every available means should be adopted for stimulating the various crops into vigorous growth, let due use be made of liquid manure, if this valuable auxiliary is available. This is the best time of year to make use of it, by applying it to every plant which it is desirable to stimulate into very vigorous growth, as the object in the cultivation of plants for the sake of their roots, stems, or leaves, is to induce a luxuriant growth, and to prevent or retard the production of flowers or seeds.

CELERY.—Plant out now for the main crop. Earth up that now put out, choosing a dry day for the operation.

LETTUCES.—Successions of these must be kept up as required.

TURNIPS.—A good breadth of these may now be sown.

WATERCRESSES.—A supply of these for autumn and winter may be easily obtained by planting some strong young tops, about 4 inches long, in a line at the foot of a north wall. The cuttings should be of pieces which have protruding roots from the joints. Watercresses will grow freely in such a situation; and in many places where there are no artificial beds, and where natural ones are a considerable distance off, these will be found useful.

WINTER GREENS.—Take advantage of showery weather, like the present, to plant out Broccoli, Savoys, and other winter greens, if not already done. Walcheren Broccoli, planted the beginning, middle, and end of the month, will come into use during autumn and continue good up to Christmas.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending June 29, 1864, as observed at the Horticultural Garden

June.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind	Rain.
Thurs. 23	19	29.964	29.917	69	42	55.5	61½	59½	W.	.17
Friday 24	20	30.165	30.100	66	52	59.0	61	59½	W.	.00
Satur 25	21	30.043	29.917	72	53	62.5	61	59½	S.W.	.08
Sunday 26	22	29.925	29.876	73	34	53.5	61	59½	N.E.	.02
Mon. 27	23	30.124	30.058	67	39	53.0	60½	59½	N.W.	.06
Tues. 28	24	30.159	30.030	71	52	61.5	61	59½	W.	.02
Wed. 29	25	30.020	29.858	75	53	64.0	61½	59	N.W.	.46
Average.		30.043	29.969	70.4	46.4	58.4	61.7	59.4		.41

June 23—Densely overcast; dark clouds and heavy showers; fine.
— 24—Very fine; fine; overcast at night.
— 25—Uniformly overcast; rain at night.
— 26—Rain; overcast; fine; cold, nearly freezing at night.
— 27—Fine; dusky and white clouds; overcast and fine, rain.
— 28—Overcast; cloudy; rain.
— 29—Very fine; overcast; rain in the afternoon; overcast.
Mean temperature of the week 2½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending July 9, 1864.

July.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 3.	74.2	50.7	62.5	16	0.78 in.	—	6	2	1	3	12	10	4
Mon. 4..	75.8	50.6	63.2	13	0.33	—	2	4	1	8	12	9	2
Tues. 5..	77.4	51.0	64.2	16	0.59	1	5	—	5	6	11	9	2
Wed. 6..	76.2	51.3	63.6	16	0.45	1	1	4	2	6	15	7	3
Thurs. 7..	73.7	51.4	62.6	20	0.34	2	2	4	4	5	14	6	1
Friday 8..	74.1	50.0	62.1	19	0.48	—	2	5	2	2	13	8	6
Satur. 9..	74.0	49.6	61.8	17	0.82	4	1	3	1	3	8	11	7

The highest temperature during the above period occurred on the 5th, 1852—therm. 97 deg.; and the lowest on the 9th, 1863—therm. 33 deg.

Notices to Correspondents.

DISEASED LEAVES: *L T D.* One of your Rhododendron leaves, that with the white spots, has a Fungus upon it belonging to the genus *Depazea*; the other leaves and those of the Pansies have no Fungus on them. We believe that in both cases the plants have been affected by frost, possibly as early as last November. The effects of frost do not always show themselves at once. You possibly have not had the drought which has been so prevalent in certain districts of the Midland Counties in England. If you have, as we know from experience, it would have aggravated early mischief. *M J. B.*

EDDOES: *J T S.* Eddoes are the fleshy underground corms or tubers of various species of Arads, especially of Caladium esculentum. They are also called Cocos, and are much cultivated in the West Indies.

FANCY DAHLIAS: *Novo.* If the growers and fanciers won't recognise the inconvenience of so meaningless a name, and adopt something more intelligible, we cannot help you further than we have already done by suggesting in our previous volumes a practical and practicable remedy. The objection to this word "fancy" as the definition of a class of varieties is quite as strong in the case of some other florists' flowers, as in that of the Dahlia.

HORTICULTURE: *Ignoramus.*—The word Horticulture means garden cultivation; Horticultural signifies of or belonging to garden cultivation. The use of Horticultural Gardens is to exhibit the various results of Garden cultivation.

NAMES OF PLANTS: *G. Bath.*—We will give you an answer next week. It is because the enquiry is rather difficult that our health will not permit us to undertake it this week.—*Richard T. Key.* Habenaria viridis; Pinguicula vulgaris; Lysimachia nemorum; Trollius europæus.—*Somerset.* Syringa Emodi.

PRIMULA CORTUSOIDES: *Z.* This old favourite is likely to originate a race of very popular hardy border spring flowers. The large-flowered and high-coloured varieties introduced from Japan by Mr. Veitch, of which that called amœna is the best, show every disposition to break away both in respect to colour and form, and we shall not be surprised to see some very beautiful things produced amongst the seedlings.

ROSE-SHOWING: *Subscriber.* The competition amongst separate varieties of Roses, three blooms of each, is a very interesting feature of a Rose show, but the plan adopted does not as yet bring so many competitors as it should do. Doubtless it would be wise to increase the number of prizes. If some dozen of prizes were offered, and separate classes opened for amateurs and dealers, this feature of the show would be more likely to expand to its due proportions, and thus serve to give variety to an exhibition, which, however beautiful, is rather open to to the charge of monotony. We shall not be satisfied till this unnecessary sameness is broken up by the interspersion of great urns and vases filled with massive and flowing wreaths, and bouquets such as the climbing and Noisette varieties would supply, introduced as a mere set-off to the show flowers.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.
Address, 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c.
They also continue to supply GIBBS'S PERUVIAN GUANO. NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

LAWES'S MANURES.
The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
American and other Cakes at Market prices.
Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

HOWARDS' CHAMPION PLOUGHS, HOWARDS' STEAM PLOUGHS and CULTIVATORS, HOWARDS' HARROWS, HOWARDS' HORSE RAKES, HOWARDS' HAYMAKERS, &c., will be exhibited at the Newcastle Meeting of the Royal Agricultural Society of England, July, 1864.
Full particulars may be had free on application to JAMES & FREDERICK HOWARD, Britannia Iron Works, Bedford.
London Office—4, Cheapside, E.C., three Doors from St. Paul's.

NEW IMPROVED PREMIUM WIRE NETTING.
Great Improvement with Reduced Price.

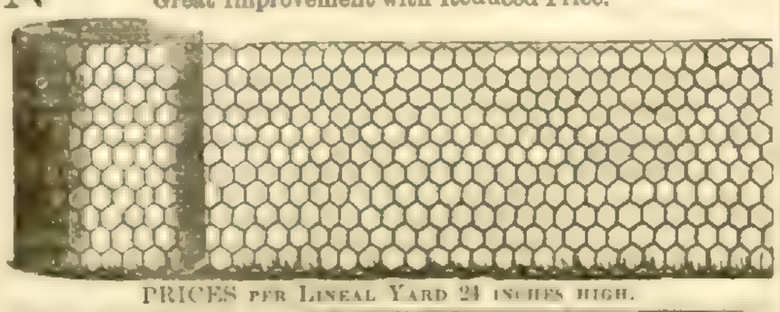

PRICES PER LINEAL YARD 24 INCHES HIGH.

Size of Mesh.	Mostly used for	Light. Jap	Light. Gal	Medium Jap	Medium Gal	Strong. Jap	Strong. Gal	Extra Strong. Jap	Extra Strong. Gal
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
2½ in.	Hares, Dogs, Poultry	0 3	0 4	0 3½	0 5	0 4½	0 6	0 5½	0 7
2 in.	Game or Poultry Netting	0 3½	0 4½	0 4	0 5	0 5	0 6½	0 6½	0 8
1½ in.	Small Rabbits, Hares, &c.	0 4	0 4½	0 4½	0 6	0 5½	0 7	0 7	0 9
1¼ in.	Smallest Rabbits ..	0 5	0 6	0 5½	0 7	0 7	0 9	0 9	0 11
1 in.	Pheasantries, &c. ..	0 9	0 11	10½	1 1½	1 3	1 6	1 9	2 0
½ in.	Aviaries, &c.	1 0	1 3	1 3	1 6	1 6	1 9	..	..

Quantities of 100 yards or upwards delivered free to nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland and Ireland.
*** Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally
IRON HURDLES, CONTINUOUS BAR FENCING, IRON and WIRE FENCING, FENCING WIRE, FIELD and ENTRANCE GATES, GARDEN ENGINES, GARDEN ROLLERS, GARDEN SEATS and CHAIRS, CAST IRON VASES, and every description of HORTICULTURAL and AGRICULTURAL MACHINES, TOOLS and appliances
Lists Free on application. Every article guaranteed to be satisfactory.
J. B. BROWN & Co., 18, Cannon Street, City, London, E.C.

BARNARD, BISHOP, AND BARNARDS,
Norwich.
FURTHER REDUCTION in the PRICE of WIRE NETTING.

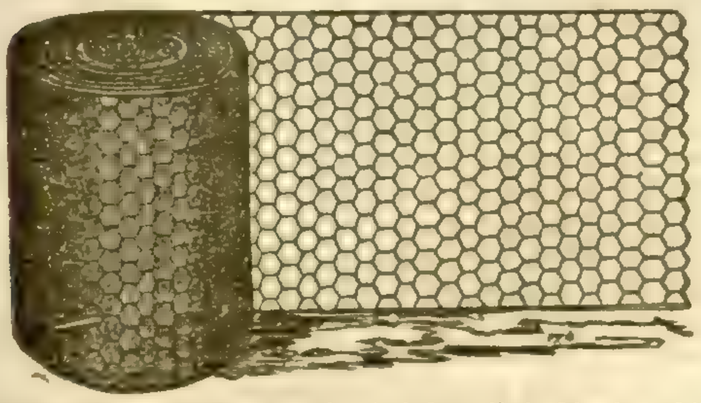

BARNARD, BISHOP, & BARNARDS beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

	Gauge.	Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide	No. 19 ..	4½d. per yd.	3½d. per yd.
2-inch " " "	.. " 18 ..	5 "	4 "
2-inch " " "	.. " 17 ..	6½ "	5 "
2-inch " " "	.. " 16 ..	8 "	6½ "
1½-inch " " "	.. " 19 ..	4½ "	4 "
1½-inch " " "	.. " 18 ..	6 "	4½ "
1½-inch " " "	.. " 17 ..	7 "	5½ "
1½-inch " " "	.. " 16 ..	9 "	7 "

All the above kinds can be made any width (under 6 feet) at proportionate prices.
Strong GALVANISED POULTRY NETTING, 7½d. per yard, 3 feet wide GALVANISED SPARROW-PROOF NETTING for Pheasantries, 11d. per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.
Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1s. per yard.
The same with Galvanised Wire Rope, 1s. 2d. per yard.
Illustrated Catalogues, with prices of every variety of Wire Fencing and Wire Netting, forwarded free on application.
*** Wire Fencing and Netting delivered Carriage Free at all the principal Railway Stations

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, &c.
PROTECTION from the SCORCHING RAYS of the SUN.
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1s. 8d. per yard run.
Four yards wide..	3s. 4d. per yard.
An improved make, 2 yards wide ..	1s. 9d. per yard.
An improved make, 3 yards wide ..	2s. 8d. per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1s. 6d. per yard run.
ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.
"It is much cheaper than Mats as a covering."

FLOORING, MATCH BOARDS, DEALS, &c., as low as advertised. White Batten, 9l. per 120, 12 feet; Yellow ditto, 10l. ditto ditto; ¼ Floor Boards, well prepared, from 11s 6d per square; Matched Lining, from 12s.; Venetian Blind Laths from 8s. 6d. per 100 feet super.—CHARLES CUTLER, Surrey Sawing and Planing Mills, Church Street, Kennington.

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS, Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.
Stamp End Works, Lincoln, and 78, Lombard Street, London; also at LOWENGASSE, No. 44, Landstrasse, Vienna; and Gegenüber dem Bahnhof, Pesth.
Descriptive, Illustrated, and Priced Catalogues, Free per Post.
Special Drawings when required.
[*The best Steam Threshing Machinery made.*]

Paint no longer necessary.
HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.
Sold in casks of about 30 gallons each, at 1s. 6d. per gallon, at the Manufactory, or 1s. 8d. per gallon paid to any Station in the kingdom.
Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street West, E.C., from whom only it can be obtained

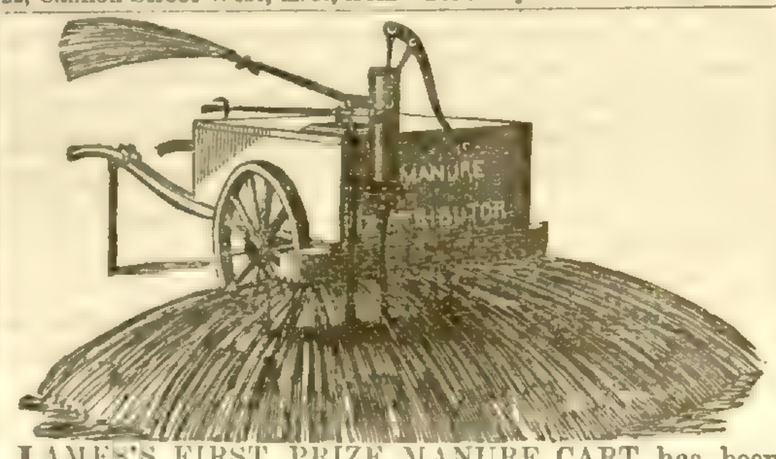

JAMES'S FIRST PRIZE MANURE CART has been awarded 20 PRIZES. Is now fitted up to answer for LIQUID MANURE, for supplying the STEAM PLOUGH, for WATERING STREETS, or for a FIRE ENGINE. Nearly 300 already sold.
Washing.
The last great improvement in Washing Machines is in JAMES'S new Patent PRIZE WASHING, WRINGING, and MANGLING MACHINES, awarded several FIRST PRIZES. Will Wash 20 Shirts in 20 Minutes, with much less injury than with the hand. More than 300 Sold.
Address, I. JAMES, Tivoli Works, Cheltenham.

Drainage, &c.
MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

THE WEST of ENGLAND LAND DRAINAGE and INCLOSURE COMPANY.
ESTABLISHED IN THE YEAR 1844, AND INCORPORATED BY SPECIAL ACT OF PARLIAMENT, 11 & 12 VICT., c. CXLII.
Chairman—The Right Hon the Earl of DEVON, Powderham Castle.
Deputy-Chairman—WILLIAM PORTER, Esq., Hembury Fort, Honiton.
TERMS MUTUALLY ADVANTAGEOUS TO LANDLORDS AND TENANTS.
Lands Drained and improved without any expense whatever to the Owners, a small increased Rent paid by the Tenants being sufficient to meet the only payment which Landlords are required to make, viz., merely the interest of from four to five per cent. on the loan, this Company's Act not requiring them to pay off the principal; all expenses may be a permanent charge on the property, or made redeemable at any time, or liquidated over any term of years.
Tenants for Life and Mortgagors can likewise Drain and Improve their Estates without any expense to themselves.
The Works are undertaken by the Company, who keep in constant employ a very extensive and experienced staff of Engineers, Surveyors, and Workmen; or Proprietors may avail themselves of the powers of the Act only, and get the Works executed under their own superintendence, or by Agents appointed by themselves.
Outfalls through adjoining lands are obtainable under the Company's Act.
Works are also executed by the Company for parties advancing their own Capital or not wishing to borrow the money.
FREDERICK BRODIE, Secretary, Castle Street, Exeter.
Offices: Castle Street, Exeter; 30, Parliament Street, London.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.
The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

DRAINAGE LOANS are made by the GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY to the Owners of Freehold Estates, Life Tenants, Trustees, Incumbents, Bodies Corporate, &c., for all works of Agricultural Drainage, as well as Irrigation, Enclosing, Road Making, Wood Grubbing, and Farm Buildings, sanctioned by the Enclosure Commissioners.
The advances are repaid by way of Rent Charge on the Estate created for such a term of years as the Landowner shall determine will best adapt the annual charge to the circumstances of the Tenants.
No investigation of Title being required, or notices given to Reversioners or Mortgagees, no legal expenses are incurred.
The Company either supply the money expended by Landowners in works designed and executed by their own Agents, or they undertake the entire improvement by their experienced staff, supply the weekly advances required, and charge on the estate the actual outlay in the works, and their commission thereon.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

ROYAL AGRICULTURAL COLLEGE CLUB.
The ANNUAL DINNER of this Club will be held at the Queen's Head Hotel, Newcastle-upon-Tyne, on WEDNESDAY (July 20) during the week of the Meeting of the Royal Agricultural Society.
Tickets to be had at the Bar of the Hotel up to Tuesday evening, July 19. Members are allowed to introduce friends.
JACOB WILSON, Hon Sec. pro tem.
Manor House, Woodhorn, Morpeth.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE, 1864.
The LOCAL EXECUTIVE COMMITTEE have arranged for a Registry of Lodgings and other Accommodation for Visitors to Newcastle during the Show, to be kept by Messrs. C. BROUGH, Academy of Arts, Blackett Street, and G. MURAS, 4, Northumberland Street, to whom applications must be made.
R. DODDS,
E. I. J. BROWELL,
WALTER JOHNSON,
JACOB WILSON,
} Hon. Local Secs.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
NEWCASTLE MEETING, JULY, 1864.
PROGRAMME.
WEDNESDAY, THURSDAY, FRIDAY, and SATURDAY,
JULY 13, 14, 15, and 16:—
Trial of Steam Cultivators and Field Implements on Benton Farm
SATURDAY, JULY 16:—
The Trial-Yard, for Brick and Tile Machines only, open from 9 A.M. till 6 P.M.; admission, 5s. each person.
MONDAY, JULY 18:—
Cattle-Yard open from 8 in the Morning, at which hour the Judges will commence inspecting the Live Stock, and making their awards.
The Implement-Yard open from 8 in the Morning.
Admission—Members free; Non-Members, 10s.
The Show-Yards will be closed at 6 in the Evening.
*TUESDAY and *WEDNESDAY, JULY 19 and 20:
The General Show of Cattle, Horses, Sheep, Pigs, and Implements, open to the Public from Six o'clock in the Morning till Six in the Evening. Admission, 2s. 6d. each person.
* Public Working of Steam Cultivators on land in the neighbourhood of the Show Yard.
THURSDAY and FRIDAY, JULY 21 and 22:—
The General Show of Cattle, Horses, Sheep, Pigs, and Implements, open to the Public from Six o'clock in the Morning till Six in the Evening. Admission, 1s. each person.
FRIDAY, JULY 22:—
General Meeting of the Members in the Show Yard at 10 o'clock.
By order, H. HALL DARE, Secretary.
12, Hanover Square, London, W.

The Agricultural Gazette.
SATURDAY, JULY 2, 1864.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	July	4	} Horse Show at Islington.
to			
WEDNESDAY,	—	6	}
TUESDAY,	—	5	—Ripon.
WEDNESDAY,	—	6	—Royal Agri. Society of England (Noon).
WEDNESDAY,	—	6	} N. E. Agri. Society at Belfast.
THURSDAY,	—	7	
FRIDAY,	—	8	
FRIDAY,	—	8	—Suffolk.

A CORRESPONDENT informs us that he has a stream which at the lowest runs "4 gallons a minute," which our observations on pure water for irrigation have led him to believe might be with advantage carried in a pipe to farms on a lower level. This, including a dam, might be done for about 600*l.*, or for 1*s.* per acre per annum. He has been further encouraged by the remark of one qualified to give an opinion that being within two or three miles of the Edinburgh slaughterhouses, the lower part of these farms would be remunerative if turned into permanent Grass.

Our Correspondent should examine the meadows below Edinburgh at Craigentinny, where, not 4 gallons per minute, but 10,000 to 20,000 cubic feet per hour—and this, not pure water, but foul with the waste of 80,000 people—are poured over the land continually, or for hours together. He should also go to the lands near Grange, on the south side of Edinburgh, and compare the quantities of comparatively pure water to which the large and early produce of Grass is there due, with the stream which he proposes to carry at an expense of 600*l.* for the use of "farms." It seems to us that he must have made a mistake as to the quantity of water at his command, for it would be utterly absurd, except for the saving of life, or possibly for the production of steam power, to spend 600*l.* in the utilisation of 4 gallons of water per minute.

Irrigation has been found to answer near Edinburgh, where the produce of the cow must be unusually valuable, for the cost of her food seems to be greater near Edinburgh than anywhere else on the face of the earth. They pay enormous prices there for green food, and carry it long distances; and it may well be that land "within two or three miles of the Edinburgh slaughter-houses" would pay to lay down in

Grass, notwithstanding the high rents now paid for it as arable land. But it will only be in cases where an enormous surplus of water is at command, not for merely moistening the roots of Grasses, and ensuring growth in drought, but for floating the whole surface with a skin of running water, as is done at Craigentinny, Grange, and many other places with great increase of the natural productiveness of the meadow.

THE great meetings at Newcastle, Stirling, and Sligo will come off during this and the ensuing month. Crowds of English, Scotch, and Irish spectators will attend them — drawn together neither by vague curiosity alone nor yet by desire for information only—the anxiety to know whether this or that will *win*—whether BOOTH or BATES; RIGDEN or Lord WALSINGHAM; FOWLER, SMITH, or HOWARD; HOWARD, RANSOME, or HORNSBY; COLEMAN or BENTALL—which of these is to be the winner of the prize—unquestionably attracts a multitude. How large a proportion of the whole have thus a definite curiosity to satisfy—how many come to inform themselves on the question of merit and to purchase — how many for mere agricultural enjoyment and a holiday—we need not attempt to determine before admitting, as may readily be done, that the PRIZE SYSTEM may be considered one great stimulant and attraction at these meetings. And as *they* are a great and successful agency for agricultural progress, *it* may fairly claim part of the credit for the improvement thus effected. So far therefore, and whether the prizes are awarded properly or not, the prize system is efficient. And although there is necessarily a considerable margin of uncertainty, connected with everything under judgment, around the definable and recognisable qualities and merits which it may possess, so that, in addition to the indisputable nucleus of merit which everyone admits, it will bulk larger and stand higher on the scale to one eye than another:—notwithstanding that there is thus an uncertainty about the official position which may be given to it, arising out of the circumstances of its examination, and out of the personal peculiarities of the judges—so that its place may not be wholly owing to intrinsic worth, as certainly it ought to be—yet the advantages of award by men selected for their ability, the advantages of the stimulant thus applied to exhibitors, and of the guidance thus offered to spectators, are so great that the prize system, as a rule, is not likely ever to be given up.

The exceptions to that rule are where, on the one hand, the same objects come up year after year—when the goal has already been achieved, and there is no room for further progress—or on the other where the indefiniteness or uncertainty is so great that no such examination as these meetings enable is at all likely to determine merit. Live stock certainly obeys the "rule"—many kinds of agricultural machinery appear to us as certainly, on one or other of the grounds just stated, to be among the "exceptions." Messrs. RANSOME, HOWARD, and HORNSBY are to submit their ploughs at Newcastle to examination for the determination of their relative merits—we believe that both the grounds on which these exceptions rest apply to them. These ploughs will be the same as we have seen for many years: themselves nearly perfect, their differences are good for nothing: and such as they are, they cannot be ascertained in a few hours' trial under one set of circumstances. Let the trial be *professedly* a ploughing match—as it *really* is—in which prizes are awarded to the men, not to the makers, for their skill, and it will be equally efficient in attracting spectators, for that is its sole utility at present.

The steam plough trial is another in which great interest is taken. We do not think much of the trustworthiness of a day or two's examination here: but the machinery is new, and it is possible that the stimulant of a favourable award may yet be able to push the invention beyond its present limits. And we would retain this still upon the list of subjects submitted to official trial, not only on this ground, but because it seems from recent experience at Bristol that the offer of official distinction is still necessary to ensure the presence of exhibitors. We can hardly suppose that Mr. FOWLER would have been absent from the show-yard on Durdham Down if any of his rivals had had a chance of carrying off a prize for the best steam cultivating apparatus on English ground. The fitness of the prize system as applied to implements thus has to be determined, piece by piece, with reference to each class of machinery by itself. It ought not to be condemned, and can hardly be defended, as a whole. As its work becomes accomplished in many departments of the field, its agency ought to be directed more exclusively, and with all the greater efficiency, to the others; and thus those who direct it will be the more likely to do good without any mixture of that evil which is now chargeable upon them.

As to the live stock, as we have said, it is not in the least likely that they will ever be withdrawn from the present plan of awarding distinction. And yet there is ample ground for the same sort of criticism here to which the system as regards machinery is obnoxious. Mr. BATES's letter, published some weeks ago, was conclusive on this subject. And his own judgment, as for instance on the Shorthorn bull Sir THOMAS FAIRFAX, lately given here, shows how liable the ablest men are to err, and how true his own dictum may be that 100 men are fit for the office of Prime Minister for one that knows how to act as Cattle Judge.

Perhaps the best illustration of this that we can give is the case of the *Duchesses* and other heifers shown at Canterbury and elsewhere, along with Mr. AMBLER'S *Woodrose* in 1861. Duchess 77 (2 years old at Canterbury), was 2d in her class, *Woodrose* was first. The *Duchess* was 1st in her class at Pontefract, Mr. BOOTH'S *Queen of the Vale* being 2d, and *Woodrose* nowhere. This is one instance of conflicting judgment.

Again, the twin *Duchesses* 78 and 79 were 1st and 2d at Canterbury in the young class—the roan being first and the white second. They were 2d and highly commended at Bishop Auckland shortly afterwards, the white being placed before the roan; they were 2d and highly commended at Dumfries, the roan being placed before the white; they were 2d and highly commended at Ulverstone, the white being placed before the roan; and so at Alnwick, and at North Lancaster: *Duchess* 77, nearly one year older, but shown latterly in the same class with them, being in all these cases first.

The difference of opinion as to 77 and *Woodrose*, and again as to the twins 78 and 79, are a curious chapter in the history of cattle-show judgments.

We at the time obtained from many of the judges engaged the grounds on which their judgment rested; and these, after the lapse of so much time, and taking every care to avoid the identification of the writers, which might perhaps lead to personal displeasure, we now publish. The following, on the merits of the twin heifers and their elder sister Duchess 77, is from a very able and well-known Short-horn breeder:—

"My decided opinion of Captain GUNTER'S twin heifers is that the white is by far the best, having a better back and more substance than the roan, without being inferior in any important particular. The older heifer is, I believe, inferior to both. Depend on it, this heifer [77] has been over estimated; she has tolerable rumps and good loins, but her knees are close together, thin through the chest, and altogether deficient in her fore quarters; besides, the thigh and twist are not perfect, the flesh not coming well down to the hock—in fact she is a good sample of the BATES blood, a fine, gay-looking heifer, but which will not bear a close scrutiny. I know it will be said 'what hair and quality?' this is certainly very fine and highly desirable, but let us not lose sight of substance and a level carcase for fine hair and gaudy loins; this will certainly grow into what we call a patchy cow. Of course you will be guarded as to what you put into print, as I shall be sorry to provoke controversy."

Take now the differing opinion of another equally well-known judge on the relative merits of the twin Duchesses:—

"I have no objection to stating my opinion respecting the decisions which I have been a party in giving at the different Shows respecting the Duchesses. Duchess 77, ever since I first saw her, which was at ——— last year, has been an especial favourite with me. I stood out for her against *Stanley Rose*, but the other two judges thought differently and went against me. The week following they were shown at the Yorkshire Show, and that decision was reversed. Shortly after they were shown at Ulverstone, and Duchess 77 was again the winner by different judges, therefore I had my satisfaction.

"This year the three Duchesses came first before me, at ———. We were unanimous in giving 1st prize to Duchess 77, but contrary to my opinion the 2d prize was given to Duchess 79, Duchess 78 3d: it was the best class I ever had before me. Among them were Mr Booth's *Queen of the Vale*, Ambler's *Woodrose*, Lady Pigott's *Empress of Hindostan* and *Stanley Rose*, &c. Therefore you may see wherever I have been a party in giving the prize to Duchess 79 (white) in preference to Duchess 78 (roan) it has not been with my consent.

"In giving my opinion respecting the three Duchesses, it is difficult to draw a fair comparison, inasmuch as there is seven months difference between 77 and the twins, and none can tell what seven months of good keep may do, and one has an advantage in one way, the others in another, but they all agree in being of the best quality I have laid my hands upon this year, and I have acted as judge in one capacity or another 14 times. Duchess 77 has not had as good a chance lately, being nearly up to her time of calving has in part spoiled her shape, and made her fore-quarters look rather defective to a person who has not seen her before.

"In regard to my giving preference to Duchess 78 to Duchess 79, the latter I consider has no advantage in any way to the other, except a little larger, and horns of better colour; my favourite is a better handler, of finer bone, and has a gayer and a more aristocratic look, especially in walking, and what I dislike the most is the way 79's horns stand, having too much the appearance of a steer, which, in my opinion, takes as much off the price of any breeding Short-horn as almost anything else. I would not use a bull with horns standing erect in that way if I had him given. Any competent person going round among the best herds will soon see the fatal effect where a bull of that kind has been used."

We have yet one or two other testimonies on this subject. At another show the same year, when the *Duchesses* 77, 78 and 79, and *Woodrose* were shown, and when the cup was awarded to one of the Duchesses, the following account was given of the decision by one of the judges:—

"The judges were and I fear would be thought a very long and tedious time by those outside the ring, in coming to a decision as to which to place first for the Cup as the best female animal at the show. For, considering the class of animals competing, it certainly required some one well versed in Short-horn matters to find out any little defect there might be in several of them, especially the three *Duchesses* and *Woodrose*, which were selected for the best, and then came the rub as to which of the four to place first. My opinion at that time was that 78 (roan) was the best and most perfect in form, style, and quality; and it being their first journey from home, and only a very short one, they all looked as well as they possibly could, and certainly very great credit is due to Mr. KNOWLES and those who had the care of them, for no animals could be better brought out than they were. Duchess 77, no doubt owing to her being so heavy in calf, was somewhat out of form, which gave her juniors a great advantage, and the same was the case with *Woodrose*, Mr. AMBLER'S beautiful heifer. I have seen them often since, and now consider 79, the white twin, the best. Her travelling seems to have improved her, and she has now much the wider girth of the two, which in my opinion is a very essential point in a Short-horn, and ought never to be overlooked. When last I saw them together, late in September, there was something superior in 79 over 78 that I cannot describe. I have given you the grounds of my decision as well as I can describe them, and it it is of any service to you, you are quite welcome to make what use of it you think proper."

Lastly, we have the history of a case in which 77, 79, and 78 came together in one class, and when 77, the older heifer, was placed 1st; 79, the white twin, 2d; and 78, the roan twin, nowhere. The writer gives his judgment as follows:—

"I am afraid you have undertaken a difficult task in bringing before the public the satisfactory reasons which have induced judges more than once to reverse decisions relative to the merits of the two rival Duchesses. It must be manifest to all that their merits are nearly equal, or such contradictory adjudications would not have been given. Duchess 77 is a beautiful roan, Duchess 79 is a creamy-coloured white, both possessing superb frames and beautiful proportions of great uniformity; both very handsome, and of exceeding fine quality in flesh and offal. Which had the preponderance of the finest and best points? '77th has the handsomest and best head, but her neck is longer and thinner than 79, and not so perfectly set to shoulder and chine—her chine certainly is not so good, neither do her ribs spring so well from her back as 79, and all her underneath parts are to my mind much inferior to 79, nor can her girth be so great (this we subsequently proved by the tape); the loin, rumps, and teats of 77 are uncommonly fine and broad, certainly superior to 79, but again she falls off comparatively in flank and twist. As a whole, 77 is the more magnificent animal of the two, but she does not possess so great uniformity as 79, nor does she denote a greater weight; her colour, too, is preferable, but I cannot get over perfection of form and symmetrical proportions, and these are more prominent in 79 than 77, and however fashionable the colour of 77, I must decide in favour of 79 as having a slight advantage in preferable points.' These were my grounds for arriving at the decision I gave."

It is very rarely indeed that a judge either will or can thus give the reason in detail which guides their decision; and it is plain from the quotations already given that a great deal of any award is due indefinitely to the degree in which any animal approaches the varying ideal of perfection which every judge conceives for himself. The Canterbury decision, the only one in which *Woodrose* was

placed above the *Duchesses*, was in all probability *generally* voted to be a mistake. At the Yorkshire Agricultural Society immediately after, as at the Selby meeting immediately before, the decision was reversed. Cattle judgments, as well as implement judgments, are thus not necessarily true or just; but the margin of liability to error and injustice must in both cases be very wide indeed before on that ground only the prize system will be abandoned.

We conclude with one extract more on the merits of *Duchess* 77 and *Woodrose*. The writer says:—

"With respect to the Pontefract decision I think the very great majority of breeders of first-class Shorthorns agreed with the decision between Duchess 77 and Woodrose. I believe the authorities at Watkinson Hall will be found among the number. *Woodrose* is a good thick useful heifer, but there is not the *style* about her that there is about Duchess 77. The latter beats all that I have seen shown this year in quality. A heifer of Mr. R. Booth's was placed 2d to Duchess 77. She has not the quality that Duchess 77 has, but is quite as good as *Woodrose*, and more symmetrical.

"In judging animals we give it to the best animal at the time we see them. In young growing animals a month sometimes makes a great difference when one is improving and another going back. Perhaps next year Mr. Booth's heifer may be as good or better than Duchess 77, and if so it will be acknowledged."

We agree with the writer in his further assertion that something should be done to prevent breeding animals being exhibited in the very fat state they are at present. The judges cannot get over it. The fat ones, if they are equally good, are sure to win. We would give prizes for heifer calves, yearling heifers, and for cows that had at least two calves. This would save many a valuable animal.

PRESENT APPEARANCE OF THE CROPS.

Essex: *Tiptree Hall, June* 27.—Said a Yorkshire coachman, who was driving me, "We shall have plenty of corn this harvest, for we have plenty of sour milk." I replied, "What has sour milk to do with the crops?"—"Well," he said, "we always find that when there are plenty of thunderstorms we get a good crop." This occurred many years ago, and I have since noted the observation was a correct one. Although our present Wheat crop can hardly be so large as that of last year, still it promises to be a full average crop. Barleys are good. Oats short and wanting rain, which may still help them up to an average. Beans are in excellent condition, and entirely free from any fly or insect, which is unusual and remarkable. Mangel and Turnips plant well; Potatos and vegetables are good—the former on light lands require rain; altogether it is more a heavy land than a light land season, and we know that it is from the stiff lands that we get so much Wheat. The hay crop is moderately good; with a fine time to get it up. Harvest will be general in this county, I think, by the 1st of August. On the forward lands it may be quite a week earlier than that. Severe white frosts destroyed the flag of the Wheat, and in some cases caused a benefit by checking its over luxuriance. Fortunately these frosts were accompanied by very dry weather. *J. J. Mechi, June* 27.

Gloucestershire: *Cullabine Farm, Dumbleton, near Evesham, June* 28, 1864.—In compliance with your request that I would give you my opinion as to the state of the crops this season, I must say that from personal observation and from what I have heard other farmers say, within a circuit of 10 miles, there is a great deficiency in the growing crop of Wheat, and a great deal of it must be much below an average crop; in the early spring, when the plant should have been tillering, it was attacked by the grub to a great extent; in most cases it was filled up with White Talavera Wheat, which is a failure. It is like a great deal of late planted Wheat in 1862, it looks like a lot of blighted Grass that never came into ear, neither will this. I am happy to say, however, that there are exceptions; many of the early planted crops will grow an average crop, anything over that will be rare. The early planted Barley is looking well, and does not appear to suffer from the very dry cold season; but many late crops are very light indeed. Spring Beans, should the fly not take them, I think will be an average crop on all the best cultivated farms, but the winter Beans are a total failure. Peas, which we are growing to a large extent, in consequence of the severe frost killing winter Beans, are looking remarkably well, and will be an abundant crop. Oats are grown very little in this neighbourhood. Winter Vetches have afforded very little keep this season, having suffered, and in many cases been quite killed, by frost; many complaints have been made as to whether the seed planted was the true Winter Vetch. Mangel Wurzels are not looking at all well; in many instances the greater portion of the seed is now only making its appearance, and must be a very light crop; but of course the old adage, half a loaf is better than no bread, holds good; and where gappy they should be filled up with Cabbage plants. I have planted 40,000 Cabbage plants this season, from the early portion of which we are now cutting a few for the sheep intended for exhibition at Newcastle. I will mention that I think Cabbage growing has not that general attention paid to it which it deserves. I consider that Cabbage might with management, could a little of the prejudice be rubbed off men's minds as to its exhausting qualities, which could be remedied by using plenty of farm-yard manure, and so returning to the land what it takes from it, be grown to very great advantage. One of the farms I cultivate is naturally a very stiff cold clay, but with a liberal supply of muck, I know I have grown many times 40 tons of Cabbage per acre. I have a plot of ground now planted with Cabbage; it is a very thin stone brash, such as our Hill Farm is in some parts composed of. This small piece is contiguous to the farm buildings, and being an odd corner is under spade husbandry; the soil is very thin indeed, and rests directly on the rock; it has been under Cabbage five years out of the last seven, and I have taken three prizes with Cabbage grown on it three years out of that period against that grown on land worth more than double the rent. After each Cabbage crop it has had a liberal dressing of good rotten farm-yard manure: the plants this year were put in in the middle of April, being half Wheeler's Imperial (a very early and good Cabbage), the other half Drumhead planted in alternate rows; the first named are what I am now cutting, to give the others room (they are growing so vigorously). After having hoed them I applied about 3 pints of liquid manure, and no other has been used; my later planted ones are suffering from the drought. I find that if Cabbage plants when planted in dry weather had only 1 pint of water applied directly to the roots it would save them; I kept planting and watering for five days, when there came a slight rain. I thought that would be sufficient and save labour, so left off watering; not so—when I left off watering, the plants ceased growing. Swedes are much affected by the fly, and I hear of many planting a second time—perhaps rather prematurely. The whole of the green crops and Grass want rain badly. The hay crop is very light in most localities, and keep is getting short. *Charles G. Clarke.*

I enclose two or three ears of Wheat, which I consider to have suffered from the frost 27th of May; there is a great deal of such among the crops. [The tops are withered].——*Didmarton, Chippenham, June* 29.—I regret that I cannot report favourably of the appearance of the crops in this neighbourhood, chiefly the light soils on the edge of the Cotswold Hills. Some of the Wheat, where exposed to the north-east, suffered much from the late winter frosts, but yet much looked well during the spring; the greatest part, however, has come into ear unevenly, looks thin, and short and weak in the straw. The spring Wheat looks rather better in proportion than the winter, but altogether I consider the Wheat will be under average. Barley and Oats not bad colour, but very short in straw; the drought (as very little rain has fallen here) and cold nights stopped the growth of straw and development of the ear, and the yield must be very much under average. Beans and Peas not much grown here; they appear variable. Potatos much cut by the severe frost, which they can scarce recover. The season was favourable for cleaning the land and sowing the roots. Mangels a tolerable plant; Swedes, early sown, look very patchy, having come up at intervals; but the whole, with patience and expensive care in hoeing, may yet be a fair crop if more rain comes. All the hay crop (Sainfoin being the best) is very light indeed; the artificial is well made, but most of the English is yet to be secured. Grass keep is very bare, much like the summer of 1844, and all the cattle have to work hard for a living; but horned stock have done fairly when supplied with water; sheep not so well, many lots of lambs have gone off with scour and debility, although no expense has been spared in providing for them; but some kind of insidious fever seems to mar all our efforts, and appears more prevalent of late years. As stock should now be the great object, losses of such create anxiety, and the coming winter's keep must be well looked after. *Stiles Rich.*

Kent: *Marten, near Dover, June* 27.—The Wheat in our neighbourhood, generally speaking, looks well, though in many fields it is thin in plant. The spring corn also looks like an average crop. Peas above an average unless they are attacked by dolphin. The crops of Clover and Sainfoin have been short, but I think secured in good condition. Turnips and Mangel have come up well, and at present seem clear of fly, &c. On the whole I think the present prospects would lead us to hope for average crops. *Mark Sandford.*

Northumberland: *Anick Grange, Hexham, June* 27.—All the cereals are I think looking well on dry free soils; on poor and strong clays they are very indifferent, but on good land I think there is every prospect of a full average if weather continues fine. Harvest will not be general before the end of August. Winter sown Wheat is just showing out of the shot blade, and early Barley just getting clear of the blade, and this only in early situations. Clover cuts up very light in general. Meadows are not started yet, but will prove a fair crop I believe. Potatos look vigorous and promise well. Of Turnips it is too early to speak, they have brairded very irregularly in some places, having been in some instances to sow over again, but on the good Turnip lands I believe they are generally good. *Thomas P. Dods.*

Warwickshire: *Milcote, Stratford-on-Avon, June* 27.—Except on the deep rich loams, the prospect of a crop of Wheat is not encouraging. On the Turnip soils (owing to the general failure of the Clover and mixed seeds sown in 1863) much of the Wheat is growing after Barley, which is a bad antecedent for it, and the wireworm has committed great devastation on the plant drilled after Clover and Rye-grass, therefore the crop is thin, short, uneven, and does not promise to be good. The plant on the clay was much injured by frosts, and on these soils it is thin, weak, and unsatisfactory. Barley, where early sown, is a good crop on land suited to it, but the complaint is general of its having done badly on the heavier soils, or where it was planted late. Peas promise an abundant yield, and are early. There is a better appearance for Mangel than has been for several seasons, as the plant is regular, and has grown rapidly. Turnip growers have been much plagued by fly, and many fields have required resowing, but it is too early to speak of the probabilities of this crop. The hay is about half the usual quantity, and only a small portion of it gathered. Potatos are of excellent quality, and very productive. *J. C. Adkins.*

DAIRY FARMING.—No. I.

[The following are abridged extracts from the first of a series of lectures given at the Royal Agricultural College, by J. T. Harrison, Esq., of Frocester Court, Stonehouse, Gloucestershire.]

(1.) *What Land is most Suitable for Dairy Farming?*—In our search for a satisfactory reply, let us examine first of all the districts of England most famous for cheese and butter making. We find them extending from the borders of Devon and Dorset, through Somersetshire, branching between the Cotswolds and the Chalk Downs, through Wiltshire by the Vale of White Horse, through Berks, Oxfordshire, Bucks, and Beds into Cambridgeshire, in which district excellent cheese is made, but on the whole it is perhaps more famous for butter and grazing. On the opposite side of the Oolitic range from Somersetshire by Gloucestershire, Warwickshire, Leicestershire, through Nottinghamshire, Lincolnshire, and Yorkshire, and on the eastern side of the Pennine Chain, and through Derbyshire, Cheshire, and Lancashire on the western side, we find the principal cheese-making districts of England.

There does not seem to be any cheese making to speak of in Ireland, as that article is imported into it, and is sometimes sold at a high price in Dublin. Much excellent butter, however, is made and largely exported to England.

The first lesson then we learn from this examination is, that whilst butter, as the chief produce of the dairy, is made over a very extensive area, the cheese-producing district is of much more limited extent.

I am aware that I am open here to the objection that the Ayrshire experience is opposed to this conclusion, and that Mr. Harding's observation in 1859 to the Ayrshire Agricultural Association "that he was satisfied that whether he made cheese at Dalzig, among the mountains; at Canning Park, among forced Grass; or among the Heather at Corwar, where Mrs. Mason is making the desert to blossom as the Rose, there was no material difference whatever. His opinion was that good cheese, with good management, in the hands of a person who has something in the upper storey, can be made anywhere, whether at the Land's End in Cornwall, or at Caithness, in the extreme north of Scotland."

To this I readily assent, with this proviso, that the land if not naturally suited for cheese making must be made so artificially. The point I am now enforcing is that some soils appear naturally fitted for cheese making, and that they are of limited extent, and the larger portion of our island is not so fitted.

A number of tables are then quoted of Dr. Voelcker's and Dr. Playfair's analyses, showing the great variety of composition which milk exhibits under the different circumstances in which cows are placed as to food. The lecturer then discusses the various circumstances affecting the growth of the different Grasses which constitute the chief food of dairy cows—Messrs. Lawes and Gilbert's researches showing the beneficial influence of phosphates and mineral manures on the growth of Clovers, and the effect on the other hand of ammoniacal manures in encouraging the growth of Grasses to the destruction of the Clovers.

(2.) *How to Grow Clover among the Grasses.*—With the results quoted from direct experiments, the experience of the Cheshire and Lancashire dairy-farmers corresponds. That experience is that the application of bones covers the ground thickly with Clover, Trefoil and succulent Grasses, in lieu of the thinly planted and very innutritious pink-pointed Grass which previously occupied the soil; whilst the quantity of cheese is in some cases doubled, and the quality improved.

Dr. Voelcker remarks: "On the porous land of Cheshire and similar soils on the new red sandstone formation, the result of boning is very striking; not only do bones there bring out White and Red Clover, but promote an abundance of the growth of succulent Grasses. The Clover itself becomes very luxuriant, and thus helps to increase the produce."

Now what is there in these leguminous plants, these Clovers, Trefoils, &c., that distinguishes them from the graminaceous plants?

Messrs. Lawes and Gilbert's experiments prove that

they are eminently nitrogenous, and remarkable for the quantity of lime they contain. When abundantly supplied with mineral manures to their roots they seem to have power pre-eminently of abstracting ammonia from the atmosphere; which is shown not merely by themselves being highly nitrogenous, but, as found by Dr. Voelcker, by leaving a larger amount of nitrogenous matters in the soil than existed before their growth, thus providing specially grateful food for the succeeding white crops when grown in rotation.

The Graminaceæ, on the other hand, require a liberal supply of ammoniacal manure to their roots, and when they have got it do not return the compliment by becoming highly nitrogenous themselves, but are chiefly composed of fat-forming and heat-producing elements. Professor Way suggests that the ammonia, which is so largely required by them as manure, acts as a carrier to the silica, nitrogen being exhaled as it is deposited.

A table, giving the composition of the ash of a number of Grasses and Clover, is quoted in illustration of these views.

As instances of the effects of ammoniacal manure, it is a common saying in Gloucestershire that when a person is putting a heavy dressing of farmyard manure on the Grass land he is poisoning the land, resulting in spoiling the cheese. No doubt more care is required in making cheese, but mowing the first year after manuring will generally remedy the mischief when there is plenty of mineral manure in the land.

Again, a highly improving dairy-farmer in Leicestershire dressed a piece of land heavily with sewage manure. When the cows were turned into it his dairyman could not make cheese at all, and went in great distress to his master, who resided at Derby, to tell him he must give up his situation. His master, however, told him to purchase a skimming dish and skim the milk till the cheese would stand; he did so and succeeded.

This is quite in accordance with what we might expect from Messrs. Lawes and Gilbert's experiments; the luxuriant Graminaceæ had smothered the Clovers, &c., enriched the milk as to butter, but seriously injured it for cheese.

I find that Professor Johnston estimates that the farm parts with as much earthy phosphates as is contained in 56 lb. of bone dust, in the milk of each cow, in its urine, and in the bones of each calf reared and sold off. It is therefore, he says, quite reasonable to expect benefit from a manure which restores these phosphates to the soil.

But, according to Dr. Voelcker, on land which is cold and wet, and rests on a poor undrained subsoil, bones often produce no effect. A great many pastures in the West of England, in Somersetshire and Devon, a considerable portion of the Grass land in Gloucestershire, and some of the heavy land in Shropshire, cannot be improved by bones. And Mr. Caird remarks that there is something in the soil of Cheshire peculiarly favourable to the action of bone manure; as in other dairy counties, where the same withdrawal of the phosphates has been long going on, an equally good effect, it is said, has not followed the application.

These observations of Dr. Voelcker and Mr. Caird seem almost obviously to point out the reason for the difference; which, I believe, is, that whilst the new red sandstone of Cheshire did not probably originally contain so much phosphate of lime as the lias clays and other later formations, it likewise, from its porous character, could not so well retain it.

We are brought then to this point in our investigation, that there must be something in the land of the natural cheese-making districts which is peculiar to it, and that something seems to be phosphate of lime; which thus becomes most highly important in our present inquiry.

The lecturer then proceeds to discuss the value of phosphorus and lime in the economy of Nature, and the presence of both in certain minerals, organic remains, and geological formations.

(3.) *Natural Sources of Phosphates—the Food of Clover.*—I believe I may truly assert that as the carboniferous system contains the great vegetable deposit of the earth's structure, so the secondary contains the great storehouse of animal fossil remains, in the condition most suitable to secure the continued fertility of the earth for the benefit of man. For in the form of superphosphate of lime it seems to be the basis of successful agriculture.

Consider the important part this manure (from whatever source obtained) plays in the agriculture of the present day. By means of it much of the Wolds and Downs of the country have been changed from mere sheep-walks into well cultivated fields, green with the luxuriant Turnip crops, or golden with the rich harvest of corn. Good crops of roots being secured, we have the plentiful supply of food for the sheep, yielding us its wool and mutton, and leaving behind a rich ammoniacal manuring for the succeeding corn crops.

It is from the secondary formation that coprolites, now so extensively used in the manufacture of phosphate of lime, are obtained, and the phosphate of lime found near Farnham, in Surrey, in such abundance as to be largely used in agriculture for fertilising soils, occurs exclusively, according to Mr. R. Austin, in the upper green sand and gault, and Lyall remarks, "it is doubtless of animal origin and partly coprolitic, probably derived from the excrement of fish."

I may mention here a remark made to me by an intelligent Cotswold farmer during a discussion at one of our Kingscote meetings; it was that the soil of the Gloucester Vale would be manure to their hill farms; at the time I thought little of it, but he meant it, and he was right. I have no doubt that certain beds of the lias formation, which by its producing, in many cases, cheese year after year without extraneous assistance, possibly for centuries, and without marked diminution in its capabilities of continuing the production, are so supplied with phosphate of lime that if used as marls on the oolitic farms they would prove excellent manures.

Reference is then made to the fact that the fossil remains of the older formations are shells or crustaceans, whose outer armour contains little or no phosphate of lime. The dairy districts, accordingly, belong almost exclusively to the secondary formations, in which phosphate of lime abounds, through the remains of vertebrate animals.

(4.) *Recapitulation.*—We found that whilst butter is made throughout the United Kingdom, the district for cheese making is of limited extent. This led to inquiries as to the variations in the composition of milk under different circumstances, and we found there was conclusive evidence of the influence of food upon the quality of milk. This again directed our attention to the effect of manures on the growth of Grasses, and we found that Messrs. Lawes and Gilbert's experiments and Cheshire experience both pointed to phosphate of lime as the manure encouraging the growth of those Grasses which increase the quantity and improve the quality of the cheese made from them.

Further, some lands were found to be greatly improved by the application of bone manure, whilst others were not benefited, although cheese had for very many years been made from them, by which large quantities of phosphate of lime must have been carried off. And the conclusion seemed a reasonable one that there must be a large supply of bone earth in such land, and the question arose—how came it there?

On examining, then, the geology of the district, it appeared that the surface of England where the secondary formation crops out, coincided with the cheese-making districts.

We found that, whereas the transition rocks contained the great depository of crustacean and vegetable remains, the secondary formations were remarkable for their valuable vertebrate animal deposits in a condition most suitable to ensure the continued fertility of the soil.

And we remarked that whilst the primary rocks are azoic, and devoid of animal remains of any kind, the Silurian rocks contain remains only in the shape of carbonate of lime, and that the fossils of the old red sandstone and carboniferous systems are nearly in the same condition, those of the secondary formation are distinguished by vertebrate animal remains containing much phosphate of lime.

And lastly we remarked the striking fact that the mammals, or milk-producing animals of the higher order, do not appear on the earth's stage until we reach the times of the tertiary formation.

Let us consider, then, what lessons we may learn from this investigation.

The first I think is, that on taking a farm we should not neglect or despise without careful investigation the system of agriculture pursued in the neighbourhood. Those following it may not always be able to give a satisfactory reason for their practice, which has possibly been arrived at by a trial and error process continued through ages. The rule of thumb system is therefore the best to begin with, cautiously introducing innovations on the old system.

The second, which is especially important to those of you who are intending to emigrate, is to encourage a habit of observation. You will possibly have to deal with an entirely new country, where there is no local experience to guide you. Observe well, and make yourselves masters of the practice at home, and as far as possible of the causes which have led to it.

The third lesson is that you cannot too eagerly pursue scientific knowledge of every description, not only for the pleasure it affords, but because it is practically useful. Chemistry, Geology, Botany, and Zoology, of which I regret to say my own knowledge is so superficial, are all of them invaluable. They proceed together as it were hand in hand, each assisting the other, and together, I am more and more convinced, combining to prove the omnipotence, omniscience, wisdom, and goodness of the Almighty Creator of the universe, whose hand we should ever see and acknowledge in the kind provision made for our daily wants, as well as in the wonders of creation that we see around us.

CATTLE IMPORTATION AND CATTLE DISEASES BILLS.

THE SELECT COMMITTEE to which these Bills are referred reassembled on Thursday, Mr. T. Baring in the chair.

Mr. BROWN deposed that he was a farmer residing near Chippenham, and that he kept a large number of sheep. The powers exercised by the Privy Council had tended to check small pox in sheep, and they would be of greater service if they were stronger. The importation of diseased sheep ought to be stopped, and a penalty inflicted in cases where a man brought bad sheep into the store market. A fine of 20*l.* would not be too heavy. The manner in which Professor Gamgee had treated the small pox in the Wiltshire flocks was deserving of great credit. He knew that Professor Simonds recommended inoculation, but it had often failed, and in his opinion ought to be prohibited. The best plan was either to kill the diseased animals or separate them from the flock. Six of his sheep had been vaccinated for the purpose of stopping infection, but they were afterwards inoculated, and two of them died. He did not think that they would have taken the disease at all had they not have been inoculated. Vaccination was the best means of stopping the spread of the disease, but with Dr. Gamgee he looked to the destruction of the animal in the worst cases. The decision of the farmers of Wiltshire assembled in public meeting to discuss the question of smallpox in sheep was decidedly opposed to inoculation. The power given to the Privy Council to order the destruction of diseased sheep was very valuable. The power exercised by the Government could not be too strong, as the prevention of disease was a most important matter.

Mr. KILLBEE, a salesman and grazier of Liverpool, was examined by Lord Naas, and said that having had considerable experience he was of opinion that pleuro-pneumonia was on the decrease, the number of cattle affected with that disease this year being not more than one per cent., whereas eight years ago it amounted to no less than six per cent. The violence of the disease was now much diminished. It would be impossible to enforce the greater part of the clauses of the Cattle Diseases Bill, as, if they were carried out, the result would be an intolerable interference with trade. The law as it stood was quite sufficient for all purposes. The proposed inspection, even if it could be acted upon, which he did not believe, would be worthless. His experience with regard to sheep was limited, but he knew that scab broke out in an irregular way. The public were already sufficiently protected with regard to both diseased cattle and sheep, and that further legislation was not therefore required, he believed was the general opinion of the trade. They were unanimous in scouting the idea that the store market required any legislative protection. Animals brought to the markets by steamboats certainly arrived in a much better state than those brought by rail. Pleuro-pneumonia did not affect the quality of the meat at all. He sent the carcase of a cow affected with pleura to Professor Muspratt, a chemist of Liverpool, and after the application of the usual tests, that gentleman gave it as his opinion that the flesh was good and wholesome food. That cow was known to have had the disease for ten days previously to being killed. There was no difficulty at all in curing scab in sheep, and the expense was very trifling; the most expensive part of the operation being the tobacco water. Butchers would not buy diseased animals, and their judgment might be taken as sufficient. He approved of the inspectors being appointed, as in Liverpool, by the corporation. Inoculation was a perfect farce. The best remedy for pleuro-pneumonia was the knife. He objected to anything which would check the importation of cattle, and he preferred an action at law in a remedy to going before the magistrates under Act of Parliament. The animal, part of which he sent to Dr. Muspratt, might have pulled through altogether, or it might have lived only three or four days. He believed the flesh of an animal a long way advanced in pleura to be fit for human food. The Bill, in his opinion, was altogether useless. The animals got much bruised and injured in railway trucks, and therefore for a journey not exceeding 30 miles it was much better to let the animals walk than to send them by railway. He did not consider it necessary to inflict a penalty in the case of a man bringing to market animals affected either with pleura or scab, and he objected entirely to any inspection of live stock. Under the provisions of the Bill half of the animals brought to market would have to be slaughtered. No amount of science would enable any one to detect the extent of the disease until the animal was dead. Scab was communicated without contact with diseased animals, but when it was detected it could be cured in a very short time. He would not have scabbed sheep excluded from the market, for although it was a contagious disease the meat was none the worse for it. Scab was often the result of overdriving. He had known sheep driven 30 miles, which were all right when they started, but which were afterwards found to have the disease. There might, for all he knew, have been incipient disease with those sheep at first. He had heard it stated that scab had its origin in a parasite, but it was of little consequence to him how it came, when it could be easily cured as soon as discovered.

Mr. MARK AINGER, cattle salesman and grazier of Dublin, had had considerable experience of pleura ever since it first appeared, and in his opinion it was due to atmospheric causes. The practice generally followed in Ireland was to send cattle affected with disease to market at once. The loss on store beasts was very great, but with fat cattle it was insignificant. Experienced men would readily detect pleura. No legislation would prevent its spread, and anything that Parliament might do would in all probability be mischievous to trade. The provisions of the Cattle Diseases Bill would be very harassing and annoying in operation, and no practical good would be effected. He had 1040 beasts and 750 sheep, and the amount of pleura had been reduced from 22 per cent. in the first two years to one

in 250 now. The graziers of Ireland were generally of opinion that the disease was gradually declining.

Mr. GARNETT, a large farmer of Meath, who represented the graziers of Leinster, gave similar evidence.

The Committee then adjourned till Friday.

THOROUGH-BRED HORSES.

ON Tuesday last Mr. P. Wyndham moved in the House of Commons to discontinue the system of the Queen's Plates hitherto given for races, on the ground that the system has tended rather to the deterioration of the race horse in this country. He quoted Mr. Dickenson from the Journal of the English Agricultural Society, as follows:—

"Great advances have been made in the breeding of cattle, sheep, and pigs, in every part of the United Kingdom during the last 40 years. What is the case with regard to horses? Have they not retrograded in the same degree? Can the present race of horses be compared with those bred 40 years since? The cart horse, perhaps, is the only class that can bear the comparison. There is a cause for this which I shall mention hereafter. Formerly Royal Plates of 100*l.* each were given for competition all over England, for four-year olds, 10st. 4lb; five years, 11st. 6lb; six and aged, 12st.; decided in four mile heats. Our horses were then the envy of the whole of Europe. These Royal Plates, for high weights and long distances, brought up our horses to this point of excellence; so long as they were so given so long we kept our supremacy, but by some unfortunate influence the conditions were altered, and lighter weights and shorter distances allowed. From this point I date, under my own observation, the commencement of the deterioration of our thorough-bred horses, and consequently those in everyday use."

The motion was ultimately withdrawn, after Mr. Newdegate, Sir R. Peel, General Peel, Lord Palmerston and others had spoken. The following is General Peel's speech as given in the *Times*:—"I disagree with the opinion that the breed of horses in this country has deteriorated. I have been for at least 40 years a breeder of this class of horses, and if my authority is worth anything it is certainly opposed to that of Mr. Dickenson. The hon. member's proposal is that the grant for Queen's Plates should be put an end to, 'as it no longer encourages the breed of good horses.' Now, I requested the hon gentleman to postpone his motion, and I did so because on the 1st of next month there is a show of horses in this town, and I believe there will be 300 hunters, 42 thoroughbred horses, with hacks and horses of every description. I wanted the House to judge for itself whether the breed of horses had fallen off or not. In the Easter vacation I went to see two studs of horses—one belonging to a noble lord who unfortunately did not run first, but ran second for the Derby. He had 36 horses in training, and I think 18 of them would have carried me. I don't think I can give better proof of the quality of the present breeds of horses. My other visit was paid to the hon. member for Hythe (Baron Rothschild), who possesses as fine a stud of horses as can be seen anywhere. So far from the breed of horses having fallen off, I believe there never was a time when thorough-bred horses were more surely going back to that size and power which formerly distinguished them. Objection is taken to the racing of two-year-olds. And what is proposed? Why, to do away with all the races for old horses, all the weight-for-age races, and to abolish the Queen's Plates. I say it is impossible to tell to what degree these Queen's Plates encourage the breed of horses. You cannot judge of this at all by the number of horses which run for them. After horses have passed their third year, a man is inclined to ask, 'What can I do with them?' 'Oh!' he thinks, 'I can race them for Queen's Plates;' and this attaches a value to these horses which otherwise they would not possess, and without which they might go out of the country. But then it is said, 'These horses ought to run longer distances and with heavier weights.' Well, I say in reply that Admiral Rous is quite right, and that if you do so you will have none but common hacks running for Queen's Plates. No man would run good horses in four-miles heats with heavy weights for 100*l.* At the same time, horses now-a-days are as capable of running four-mile heats with 10 stone on their backs as they ever were. Well, then, 40 years ago I recollect it was thought a miracle when a two-year-old won the Feather Plate at Newmarket. Now, nothing else wins. I had much rather that the two-year-olds did not run in these races, but the fact I mention shows how the breed has improved. If the breed of horses has fallen off, buyers must certainly be extraordinary people, because they now give higher prices for thorough-bred horses than they ever gave before. Look at the prices fetched for yearlings at sales during the present year, including that of the Royal studs at Hampton Court. Depend upon it the public do not give these higher prices for brutes. Among the starters for the last Derby there were four or five of the finest horses that have run for many a year—certainly as fine as have run during my recollection. In my opinion there is nothing in the world like a thorough-bred English horse; and if you tried to produce large coach-horses you certainly would not improve the breed. I recollect the match of 200 miles in 10 hours that Mr. Osbaldeston won at Newmarket. Did he choose great hunters or strong half-bred horses? Not at all. Every horse he rode was a thorough-bred, and he did not care what they were; he took any horse which had had any training, and never varied in this choice. He rode each horse four miles, his riding weight being 10 stone. One horse carried him four times. It went 16 miles in 32 minutes, and no half-bred horse would ever have done that. Well, then hon. members say, 'Why should the public give this money for Queen's Plates?' Now I am prepared to make this proposal to the Government:—They give 3300*l* a year in Queen's Plates. But they take 7000*l.* a year in the tax levied on racehorses. Why put an additional tax on racehorses? Why not let them pay the exact tax that other horses pay? If this is done, owners of racehorses don't want the Queen's Plates. There is no class of people who enter more into the free-trade spirit than racing men. We have not sought to shut out foreign horses. We have always upheld free-trade for the turf; we have challenged foreign horses to come over here and compete with ours; and we have even given them weight because it was thought that they hardly stood upon equal terms with English horses. It is true that in France at present they have better horses than they used to have, but these horses are every one of them of English bloods. There is not a single country abroad where country-bred horses run—all of them are English bred, and buyers come to England for them. I can only say again that I think the hon. member is quite wrong in holding that our breed of horses has deteriorated, and is still more at fault in the manner in which he seeks to rectify this supposed deterioration—that is to say, by doing away with Queen's Plates, the only races left for old horses to run in. If the Government have determined to reconsider the question of weights and distances, I only hope that they will consult those who are the best judges of what is likely to promote the interests of racing. I should not have ventured to express these opinions if I had any interest in the question; but, as I no longer own a horse of any description, I have no personal interest in the matter whatever, except what arises from my great desire to assist in any measures that may improve the breed of English horses."

We add the following letter from Admiral Rous, which appeared in Wednesday's *Times*:—

"There can be but one opinion among all persons who are interested in the turf—that the grand object in breeding is to combine good size, great strength, and power of endurance with superior speed. This has never been lost sight of. Our motto is 'Fortes creantur fortibus et bonis.' We have succeeded in establishing a breed with one-fifth more speed and more strength than the original stock—an increased average stature from 14 hands to 15½—in 13 generations from the first imported stallions, Darley Arabian, Byerly Turk, without a drop of mixed blood, and we have a firm conviction, with ready proof, that no horses in the world can be compared to them.

"On the authority of Abd-el-Kader and my Indian friends, the race of Zad-el-Rakeb, the gift of Solomon to the tribe of Azed, has not degenerated since 1720, when the calibre of the English racehorse was probably on a par with the barbs which now adorn the Gibraltar meeting. Admit this fact, and it is patent to every racing man that the best of these 'divine horses' which, according to Eastern history, descended as a heavenly gift from Adam to Ishmael, Ishmael to Solomon, from Solomon to Mahomet, and from Mahomet to our own times, cannot compete with the Anglo-Arabian at a difference of five stone; a thoroughbred butcher's hack will beat the Flower of the Desert any distance under 100 miles.

"If there is a depreciation, why ascribe it to the abolition of heavy weights, or to the substitution of shorter courses? The natural solution would be that it is owing to the sale of our most valuable stock to every country in Europe, to China, to Australia, New Zealand. But we have enough left to challenge all the world. The Emperor and the French Government are liberal in their racing prizes, and promote the improvement of the Anglo-Arabian on national grounds. They well deserve success. In Great Britain, under the cold shadow of the Crown and the Government, doling out a miserable donation in the shape of encouragement, we not only hold our ground, but we advance with rapid strides. In 1843 the total amount of stakes, plates, and matches was 199,000*l.*; in 1863 it was above 250,000*l.* without including the Royal plates.

"The deterioration of horses is a pure fiction. Stockwell, King Tom, Young Melbourne (Nabob, sold to France), and many other stallions are framed to gallop under 20st.; the first charges 100*l.*, King Tom 75*l.* next season for the chance of a foal. You may see in Lord Glasgow's and Baron Rothschild's stables 20 horses up to 18st.; 60 years ago you could not have found five thoroughbred horses of this description in the United Kingdom. Fine yearling colts fetch at auction from 450 to 800 guineas, if they appear likely to stay a distance and to carry heavy weights. That ought to be a sufficient answer to those persons who imagine that light weights and short courses are detrimental to the breed, and encourage 'leggy weeds.' How can we improve our system?

"The 2700 brood mares produce about the same number of 'leggy weeds' as other domestic animals in proportion to the first class. In the human race there is a difference much greater to their discredit. As there is a national prejudice against converting horses into beef, some are kept on in training to take their chance in short races for the amusement of their owners. If 'those who pay the fiddler have a right to call the tune,' why are they to be abused by certain amateurs, who rarely subscribe to a racing prize, and who are never troubled with a trainer's bill? These gentlemen profess a horror for short courses, and a predilection for the old four-mile Queen's Plates, which broke down so many horses that they were revised in 1833, 1847, and 1861. Although I deprecate a return to the barbarous system, I am a strenuous advocate for two national prizes to test the capabilities of endurance—small sweepstakes, added to plates of 2000*l.*, to be run for at Newmarket, one the Round Course for four years and upwards, in the 1st October; the other in the Houghton Meeting, the Beacon Course, for any horse carrying 11 st., the winner of the first plate 7 lb. extra.

"It is an axiom in racing, both with man and horse, that the constant habit of carrying heavy weights destroys quick action. The speed of the fastest man would be a nullity if he were employed for a year as a heavy porter.

"Tailors, from the life they lead, and from never wearing heavy boots, preserve their speed. They can give 10 yards in 100 to any of the industrious classes who carry heavy burdens, as weight on the shoulders deadens the elasticity of the sinews, and stiffens the muscles of the legs.

"It is equally destructive to the speed of horses. Train the fastest horse at Newmarket under 11 st., and in six months he will entirely lose his racing form. Emblem and Emblematic, the winners of the Liverpool Steeplechases, cannot beat a moderate three-year-old at even weights for two miles. When horses lose their speed without any apparent cause, the trainers ascribe it to the decay of nature or to the effects of age. In 99 cases out of 100 it is owing to exercising them under heavy lads, who have been retained in their service from charitable motives.

"I admit that horses famed for running long distances are scarce, because the game is so seldom played. The heroes of old were generally small horses. The celebrated Gimcrack, in 1765, stood 13 hands 3½ inches. Latterly we have bred more for size and strength. From the days of Rubens, Castrel, and Selim (1810), we have looked for speed to win the valuable one-mile sweepstakes; but size and strength will be served when great weights are to be carried. In 1824 the speedy and magnificent Sultan beat the stout Centaur on the Round Course at 12st. and 11st. 9lb.; but the same year Centaur turned the tables on him at 9st. 3lb. and 9st. on the Beacon Course, and had the big one extended at the turn of the lands.

"Mahratta, a large, powerful horse, which could not get six furlongs at light weights in good company, could carry me, riding 17st., four miles under 11 minutes. He afterwards turned out a very stout hunter. This convinces me that a great-framed racehorse which would be beaten 500 yards in four miles by a clear-winded small horse, carrying 7st. 7lb. each, would reverse the case to the same amount at 16st. when the little one could not act under the weight. Therefore, by gaining great size and strength we have adapted the Anglo-Arabian to carry heavy men across the country, and at the head of their regiments; this is the national view of the subject. It may be difficult to procure such horses, because foreign agents will give 600*l.* for any thoroughbred horse up to 14 stones which can bend his knees, to supply royal and imperial stables on the continent.

"As the price of young stock depends in great measure on the amount of prizes *in prospectu*, every withdrawal of public money affects their value. The present Royal Plates (insignificant as they appear), are boons to the breeder, and afford amusement to our country friends. Their abolition would be a drop of water to the revenue, which derives a great income from the turf. Calculate the sum of money which the Treasury receives in eight days from the dense crowds at Ascot and Epsom.

"Nobody imagines that in an assembly of sensible and thoroughbred gentlemen Mr. Percy Wyndham's motion will find support.

"13, Berkeley Square, June 27."

AGRICULTURAL QUESTION.

CAN ANY ONE DOUBT THE ADVANTAGE OF AIRING THE SUBSOIL?—And, above all, of draining it and irrigating it? Dig below the 5 inches of ploughed soil in undrained clays and you bring up a lump of dense putty, as heavy as lead, and as impervious. Place it on the surface, it dries almost as hard as cast-iron; it shines, and then cracks by contraction; by-and-by down comes a shower, and your once stubborn and unmanageable mass disappears in a circle of friable crumbs.

To a reflecting mind at all acquainted with chemistry, what a volume this disintegrated clod opens up! and how its elements seem to reprove neglectful man for so long preventing their development and utilisation by the thousand and one affinities of sunshine, dews, frosts, and other aeralities (to coin a word).

We can now understand why the old man on his death-bed bid his sons dig for the imaginary treasure which he told them had been deposited in his field. They searched, but not in vain, for deep and frequent cultivation brought them money's worth by greatly increased crops. So it will to the British farmer, and so it does to me, and as I look at my teeming corn crops, nearly 6 feet high, throwing up their heads thickly and evenly till they look like a serrated floor, I know that in that great last effort of nature, their roots now find in what was once the unwholesome and unaërated subsoil the elements of a completed growth. They do not exhibit the too common appearance of an ill assorted regiment, where lank grenadiers and little riflemen intermix in incongruous proximity.

How sagaciously and profitably has that excellent man, the Rev. Mr. Smith, of Lois-Weedon, carried out deep cultivation. He does not poison his plants by placing them on the raw subsoil, but ploughing back the top soil on that they grow, whilst the naked uncovered subsoil is dug, manured, aerated, and prepared to form an improved subsoil, when the top soil shall be turned back upon it.

I am more and more confirmed in my conviction that the general cultivation of this kingdom is under five inches, more shallow, in fact, than the depth of a common wine glass—that depth must be measured in the solid earth—when broken up, and set on edge by the plough, it appears deeper. How does this five inches accord with the requirements of my friend Dixon's Parsnip, whose roots ran down 13 feet 6 inches in one season!

My bailiff was examining the drainage on my neighbour's field (a Wheat stubble, or a stiff clay) and found abundant roots of the Wheat crop 5 feet below the surface. So it is with many of our crops. Surely, then, the roots would thrive all the better by finding down below manure, air, and circulating water. *J. J. Mechi, June*, 1864.

FARM LABOURERS IN SCOTLAND.

[The following remarks were made in the House of Commons the other day on this subject.]

(1). AN important change had of late years taken place in their position. In former days, when farms were much subdivided, the farm servant was regarded as a member of the farmer's family. There was then no great difference between the master and man, and they lived together on intimate terms. The farm servant, if a man of good character, steady habits, and

industry, could fairly look forward to escaping from a menial station and becoming a farmer himself on a small scale. During the last half century, however, this state of things had undergone a complete change; and so wide had the interval become between the farmer and his labourers that it was almost impossible for any of the latter to rise from the lower to the higher rank. There were nowadays very few small farms to which a labourer could aspire. He had endeavoured to maintain the old system, but generally it was dying out. Agriculture was becoming more and more a manufacture; it required a large amount of capital in order to carry it on; and the tendency was for small farms to be absorbed in the large ones. In social position the farmer was raised far above his servants. He was a man of means, and could not have his labourers sitting and living with him as members of his family. Hence the servants lived quite apart from the farmer. They were stowed away in out-houses, with the liberty, perhaps, of lounging by the kitchen fire. They were thus in a great measure removed from the control and supervision of the master when their daily work was over. They were exposed to all sorts of temptations of a demoralising character, and were almost entirely precluded from reading or otherwise improving themselves. They had scarcely any means of rational entertainment, and were reduced to the mere gratification of their sensual desires. The bothy system had been loudly and vehemently denounced of late years; but for his own part he could not altogether join in this condemnation. He could not but see that when properly regulated they led to the farm servants being kept under a certain degree of wholesome restraint, and guided in the right way. On the other hand, the system of putting lads away into lofts and such like places, where they were left to their own devices, without any opportunity of improving their minds, without the means of proper recreation, and with full scope for their loose desires, was very objectionable. As to the feeing-markets, no one who knew anything about them could deny that they were attended with most mischievous effects. *Mr. Dunlop, M.P.*

(2). I differ from my hon. friend with regard to the gradual change which he asserts to be taking place in Scotland. My hon. friend says that the small farm system is disappearing, or is likely to disappear. Now, my own observation and experience leads me to say that it is quite the contrary. The more minute and perfect the system of farming adopted, in order to work them to a profit, the more likely is the system of small farms to increase than to diminish. The arable farms in Scotland and the north of England 16 or 20 years ago were much greater in extent than they were at present. Very large farms have not had a tendency to increase. My hon. friend is quite mistaken on that point; and I think if he would obtain information on the point before legislating on the subject, the conclusion at which he will arrive be different from that which he has expressed. I have not found that hitherto in Scotland among the farmers or farm labourers there has been a tendency to change shown at the end of six months. I have had men with me for upwards of 20 years, and I believe if my hon. friend will make inquiry amongst the large farmers in any part of Scotland, he will receive an ample corroboration of my statement. The truth is, that sensible farmers who know their business are too glad to keep good workmen, and in Scotland good workmen are only too glad to remain with good masters. I take that to be the general experience of Scotland with regard to this matter. Possessing an extensive knowledge of farm servants in Scotland, I can confidently state that I do not know a more respectable class of men than the married farm servants in that country, and any proposal that would tend to sever the connection which now exists between that class of men and their employers, by giving such power as my hon. friend proposes to enact, of dismissing a male farm servant at a month's notice, would in my opinion be highly objectionable. At present he has a house provided for him as part of his yearly wages, and it would be very inconvenient both to the farmer and the farm servant to introduce a system of this kind without much care and consideration. I have made these observations as a practical man, knowing a good deal on the subject, and I hope my hon. friend will take counsel upon the matter before he ventures to introduce another Bill next session. *Mr. Caird, M.P.*

Home Correspondence.

Clover Hay, with or without Italian Rye-Grass.—I am asked by a Scottish Correspondent how we make our Clover hay. I reply: it is, after cutting, allowed to remain untouched for two days, if fine; on the third day it is put into large cocks, remaining for two days to heat. The cocks are then opened, and the Clover spread round about and turned or lifted, and again put on the cock before the evening dew falls. This is repeated according to weather, making the cocks larger, taking care to have the crop always on a small space of ground, so that it can be readily re-cocked—in fact that it may occupy so small a portion of the ground as only to receive one-tenth or less of any rain that may fall. The addition of Rye-grass rather facilitates the making of the Clover. We like both to heat well in the cock, afterwards on the loads, and finally on the lower part of the stack before it receives the whole superincumbent weight. In the stack we insert vertically a sack filled with straw, and gradually raise it as the stack rises, the object being to form a chimney for the escape of heat from the heavily compressed portions of the stack. We never found any mould or injury from the insertion of these sacks, and they are a great safeguard against firing. In large stacks we put two or more chimneys. It is desirable in every stage to protect your hay as much as possible from either rain or dew. Beware of letting either your Clover or Italian Rye-grass become too old before cutting. We always hoe out any weeds from our Clover in the spring, and when those which have escaped the hoes show their heads in the Clover, women pull them up and carry them off to the headland. This latter operation only costs from 1*s.* to 2*s.* per acre, and pays admirably in the growing and after crop. Eradicating weeds and thus preventing their seeding is always a profitable operation. The crop we intend to grow is then not compelled to sit down to its dinner with a number of strong and hungry competitors. *J. J. Mechi.*

Green Peas for the London Market.—Railways have approximated places as well as individuals, so that at 44 miles from London I compete with the market gardener in its vicinity, and grow annually some 6 to 10 acres of Peas. It is good for the poor of our neighbourhood, affording employment to women and children, who get 9*d.* per sack of three bushels for picking the Peas when tolerably well podded. The parties who purchase them pay from 6*l.* to 9*l.* per acre, according as they are late or forward. The bines and unfilled pods make capital hay, and are estimated at 3*l.* to 4*l.* per acre. The land is thus early set free for Turnips or Rape. It is remarkable, that taken after sewaged Italian Rye-grass, the crop is always most abundant, with scarcely a weed to be seen. The cost of the Peas is as follows:—

Picking per sack (12 pecks)	0*s.*	9*d.*
Carriage by rail to London	0	9
Salesmen's commission	0	6
	2	0

The growers get 2*s.* per bag, and if they sell at 4*s.* 6*d.* the buyers get 6*d.* Special Pea trains are sent to suit the Saturday morning and Saturday evening markets. The salesmen in town furnish the empty sacks without additional charge. The farmer carts the Peas to the station. It is not unusual to see more than a hundred women and children picking in a 6-acre field. Pea-picking season empties the village school, and attracts to the field old and young. *J. J. Mechi, June* 1864.

Expenses of the First Year of a Crop of Italian Rye-grass on my Farm:—

	£	*s.*	*d.*
1 years' rent, rates, and tythe	2	5	6
3 bushels of seed (sown in previous crop of corn)	0	18	0
8 cwt. of Peruvian guano, at 14*s.*	5	12	0
6 cwt. of salt, at 1*s.* 2*d.*	0	7	0
4 cwt. of superphosphate	1	4	0
Irrigation, 4 dressings at a cost of 9*s.* for labour, coals &c., each dressing of 100 tons	1	16	0
Miscellaneous expenses of the farm	1	2	6
Labour cutting up, attendance on live stock, horse labour, &c.	1	5	0
	£14	10	0

I have just measured and weighed our second cutting, and it yields 8½ tons per acre, equal to 2¼ tons of hay. This is the growth of 4 weeks and 4 days. It would have been much heavier could I have spared it a week longer. The first cutting was over 12 tons per acre. *J. J. Mechi.*

Laying Land to Permanent Pasture.—In a recent number of the *Gardeners' Chronicle* you say "you do not join in the cry that has lately been raised for laying down land to Grass," and you therein state your reasons. It is certainly a subject requiring mature consideration, as it may possibly happen just as you have managed to get your land in pasture, a reaction may take place in the price of corn, although I by no means think it probable. At any rate the experience of the past few years has shown that the English crop, whatever it may be, no longer serves to exercise much influence on prices, and that the people of the country can be cheaply served with bread stuffs. If it is so, and it cannot be denied, the English farmer may as well say at once "so much the better," and endeavour to adapt his position to meet this new state of things, viz, that it does not matter what his crop may be, the public will have cheap bread. Very well, then; let him look this fact fairly in the face, and ask himself, how is he to meet it? I suppose I shall not be considered presumptuous in stating that hitherto very much attention has been directed to the production of corn; and a well-known Correspondent (Mr. Mechi) states that the unescapable expenses attached to arable land amount to at least 5*l.* per acre, and he is probably quite within the mark. But he bases his calculations on arable land being cultivated with horse-power, I believe; and that with Wheat under 40*s.* per quarter is not to be thought of in the heavy lands of this country. You will say that I have run away from my subject, and commencing by writing about laying down land to Grass, I am finishing in talking about steam. Exactly so. I shall be obliged if you or some other kind friend will inform us, as to whether it is right, with the advantages of steam power at our disposal, to diminish the cost of cultivation, and increase the produce of our heavy lands. Whether it is worth while, in consequence of low prices of corn, and dearness of all kinds of stock, to lay such lands down to Grass, for the purposes of more stock keeping. *W. S.*

One-roomed Cottages and Labourers' House Rents.—Owing to my being brought up in houses on y one story high, with only one apartment on the ground floor, and not a sufficient number of joists in some of them to support a floor for an attic, such experience prompts me to read with interest the discussions on labourers' houses. The fact that labourers cannot pay a high enough rental for a good house is palmed upon the public as a plausible pretext for some not building houses, and for others building too small ones. A good many people wonder at Lord Palmerston's general popularity. The explanation is found in the fact that his extensive and varied knowledge is blended with common sense. His lordship stated at Romsey in 1859:—

"It is quite true that Mr. Dutton and myself have built some very good double cottages for the labourers on our respective properties, but I have heard it said by many that these buildings are altogether too expensive, and that they do not pay, and that other people could not afford to erect them. Now, in the first place, I hold that observation to be founded on fundamental error. When I build a good farm-house for a tenant I do not expect rent for that house separate from the farm. Well, the cottage for the labourer ought to be looked upon as a part of the appurtenances of a farm, just as much as the buildings for cattle, or any of those other erections essential to the land. How can the land be well cultivated if the labourers are not well housed? if they are obliged to trudge three or four miles in order to get at their work, and the same distance home again? It is manifest that they must be not only exhausted physically, but that their time must be wasted in walking to and from their work, and that the farmer does not get from them his money's worth for the wages he pays. Therefore I consider that, in providing a farm with accommodation for the number of labourers to be employed on it, you are giving facilities to the tenant to cultivate his farm, and increasing the value of the farm which you let to a good tenant."

Lord Palmerston's statements are borne out by remarks on "Time of Ploughmen," in Morton's New Farmers' Almanac for 1864, page 27. Although I recognise the maxim that "knowledge is power," and that "ignorance is weakness," I have written as if I believed that "ignorance is bliss." A good many scholars appear by their statements to have a total disregard of the proprieties of civilised life. A married couple with a large family of boys and girls, and a foreigner called a bondager, all herding together in one apartment, ought to have shocked a graduate of Glasgow University so much that he would be found denouncing such a barbarous practice, forced upon the people by farmers and their wives who have the accomplishments of ladies and gentlemen. Instead of denouncing such a custom, this graduate of Glasgow University, after serving an apprenticeship as a "mud student," and afterwards renting a farm, wrote the "Book of the Farm," and stated in it that "a second sitting-room in a hind's house is an unnecessary appendage to it; it will never be used as such. When in the second story it will be converted into a sleeping room, and when on the ground floor into a meal or Potato store, besides the beds that may be put into it. The fire will never be kindled in it, and it will become damp and cold. It is only when the labourer is a fixed resident, holding directly under the landlord, that he will furnish his second room on the ground floor comfortably, and warm it by occasional fires." To do justice to the subject, it would require a discursive and apparently irrelevant article for publication. For example, a proprietor or tenant-farmer charging house-rent is just like taking money out of one pocket and putting it into the other. As Lord Palmerston states:—"If you get a shilling a week from the labourer it is more to impress upon his mind that he is earning the accommodation you give him, rather than from any idea that it is to repay the expense of the erection. It is not like building houses in a town, which are built to be let at a profitable investment, but it is an addition to the value of the farm." I select this subject for comment as a supposed suitable reply to the recent harangues about education. I claim a practical knowledge of living in "one-room houses" with and without attics. Scotch farm servants are compelled to "sit up with the corpse" in the event of a death. My father died on a Monday morning, and his body had to lie within a few feet of the fireplace till the following Thursday. The man who succeeded my father as steward resided in that house till May 26, 1863. The consequences of a family living in one room are humiliating; because the habits of people so circumstanced are regarded as chronic, or something like it. Mr. Chambers, of Glenarmiston, stated at a meeting of the Architectural Institute:—"It was not a question of mere expense, but the habits and even prejudices of the rural population must be studied, else a great deal of money and a great deal of science may be expended, merely to produce a failure." (!) It ill becomes a successful publisher to forget the pit from whence he was dug. Mr. Chambers voluntarily stated that his father was a very poor man of the working class in Peebleshire. Each of Mr. Chambers's houses is merely a one-room house with a garret. Let Mr. Chambers and his wife and family fancy themselves compelled to live in such a place, and try to avoid the "free and easy" habits common to rustics brought up in one-room houses. *W., Edinburgh.*

Haymaking.—In a late number of the *Gardeners' Chronicle*, I notice some observations on haymaking by Mr. Mechi, which do not quite embrace the *rationale* of the subject, as if given by a practical farmer. First it is not the momentary tossing through the air by the teasing out turning machine that the cut Grass is dried,

but by the light-strewn exposure of it upon the stubble-sward, so that the drying air may have full access to every blade, underneath as well as above. Here a second or third operation of the tedding machine, as the hay, especially of Clovers and other legumes, becomes drier, is certain to break a portion of the leaves into fragments so small as to fall down amongst the stubble roots and be lost. Again it is especially necessary, as Mr. Mechi states, to throw the drying hay into cocks every evening, when during the night dew is expected to fall, but for a reason Mr. Mechi does not explain. When left on the ground exposed to the dew, the vitality of the cut Grass is to a considerable extent recovered, and half of the next day is past before this renewal of life is overcome, and the plant reaches the point of advancement in desiccation it had before the falling of the dew. In the cock, during the night, the plant, instead of being resuscitated, is smothered, and often entirely deprived of life by a slight heating, and when spread out, as soon as the dew on the sward is exhaled, soon becomes dry enough for the larger cock. In Scotland we manage these matters better than you do in England, [!] and to which we are led by having, in the hay season, a moister and cooler atmosphere—less drought and more rain. When ready for the larger cock, in which it might receive much damage in our ticklish climate before being ready for the large stack, we use the kills or bosses, upon which we build our grain ricks, an erection in the form of the letter A, but with three legs, from 11 to 14 feet high, and at bottom nearly 5 feet wide, with three bars around the uprights about 15 inches separate and from the ground, as in a common paling. We lay a few short branches of straw around these kills for the hay to rest upon free from the damp of the ground, with sometimes a low door to windward to admit of air. We then build about a ton of hay upon each of these with as little tramping as possible, the cock rising to the height of about 20 feet, and we cover it at top with a little straw tied down by two straw ropes. In this cock-rick the drying goes on for several weeks, the branches below or door admitting air, and the slight heating of the rick drawing up the air and giving it out above, along with the evaporating moisture of the hay. A few props are generally used to prevent the swaying of these tall, slender ricks, and to assist in aërating. In this way the hay can be secured sooner and more successfully in variable weather than in any other way, and as soon as the hay in the ricks is sufficiently dry, it is driven home and put in a large stack or sold. A different plan is sometimes adopted in the east of Europe. As soon as the Clover hay is cut, which grows luxuriantly for a number of years in succession in their excellent clay-marl soils, they throw the cut Clover, as soon as cut, into large cocks to heat to such an extent as kills life. When heated thus far they spread it out, and life being extinct it dries in a remarkably short space of time. It is said that this heating of the green Clover cooks the hay so as to render the woody matter in the stem much more digestible and of superior feeding power. We have now splendid hay-making and Wheat-blooming weather, but owing to the frost in the end of last month and beginning of this checking the growth while sufficient moisture was in the ground the crop of Wheat will be light. *Patrick Matthew, Gourdie Hill, Errol, N.B., June* 27.

Societies.

HIGHLAND AND AGRICULTURAL: *June* 22, *Half Yearly Meeting.*—Mr. Mitchell, of Alloa, the senior director of the Society, took the chair. 101 new members were elected.

The Stirling Show.—Mr. HALL MAXWELL reported about the forthcoming show, that the whole of the contracts had been made, and, in fact, the whole of the expenditure connected with the Show was in the hands of local contractors. He was now in a position to state very nearly how the entries stood. At Kelso they had 245 head of cattle, and for the Stirling Show there were already entered 386. At Kelso the horses were in an exceptional state, because for the first time there was a section for thorough-bred horses. The whole number of horses at Kelso was 127, and they had for Stirling 158 horses. In sheep they had 532 at Kelso, against 586 for Stirling. Last year there were 49 swine shown, and the number for Stirling was 66. In all, they had at Stirling 1196 head of stock already intimated and arranged for, against 953 head of stock at Kelso last year. 1101 implements were entered for Kelso; and up to the present time they had only 802 for Stirling. He was certain, however, that the number would be still further increased.

The Inverness Show of 1865.—Mr. HALL MAXWELL then said that, in regard to the Show to be held at Inverness in 1865, the arrangements, so far as they could be perfected up to this time, were in a very satisfactory state.

Chemical Department.—Dr. ANDERSON said they had as usual during the past six months performed a large number of analyses for members of the Society, and they had also been actively occupied in investigations and examinations regarding the Potato, particulars of which would be published in the Transactions for July. Progress had likewise been made in the examination of the cheeses of Scotland; and a series of analyses on the Turnip had been completed, which, he expected, would prove of great interest, connected as they were with a series of former experiments upon particular kinds of manures. Several new inquiries had been commenced, more particularly a set of experiments upon the Bean crop in various stages of its progress, similar to what he had made regarding Turnips and Wheat.

Mr. HARVEY, Whittingham, said that some time ago Dr. Anderson had stated that super-phosphates were worth 30*l.* a ton, but in writing a letter not many months ago to a gentleman who was now in the room, Dr. Anderson lowered the price of phosphates to 20*l.* a ton. He (Mr. Harvey) believed that this might be shown to be quite right; but he thought, for his own sake and for his own credit, that Dr. Anderson should explain to the members of the Society how he had arrived at the conclusion that superphosphates, which were formerly worth 30*l.*, were now only worth 20*l.*

Dr. ANDERSON said he presumed Mr. Harvey's observations referred to a letter which he had some time ago written to Mr. George Hope of Fentonbarns, at that gentleman's own request, in regard to the value of superphosphates from different sources. In that letter he (Dr. Anderson) stated exactly what he had done on previous occasions on this matter, and had repeated, what he had frequently stated, that in his opinion simple phosphates, from whatever source they were derived, were identically the same, whether they were made from bones or beneash, or from coprolites. Therefore they must infer that the superphosphates ought to produce the same effect upon the soil. This was the scientific aspect of the question, and these were the views which he had constantly held in regard to the phosphates. But at the same time he had thought it necessary to remind the farmer that there was a commercial view of the question also, and that the manufacturer could, from the cheapness of the materials, produce simple phosphates from coprolites at a much lower price than he could produce them from any other source. If the farmer choose to prefer simple phosphates derived from bones, he must understand distinctly that he must of necessity pay for them a higher price than he would pay if he took them in the state of coprolites. This was simply a commercial question, which perhaps after all did not fall within his province; but at the same time it was one that was essentially connected with the matter referred to. They could see no prospect of reducing the price of bones so as to bring the phosphates derived from them down to the same price as the phosphates manufactured from coprolites. He knew farmers were averse to using coprolites. He thought that in some respects there had been a prejudice against them; but the serious point to him always had been this—that the manufacturers, so long as the farmer would not recognise the difference in price, would always endeavour to pass off to him the phosphates derived from coprolites at the price of the phosphates from bones; whereas, if the farmer was contented to take the coprolites, he would soon find that the price he had to pay must necessarily be smaller than for the phosphates not from bones

Mr. M'LAGAN, Pumpherston, said he thought Dr. Anderson had made it sufficiently clear to them that chemically and mechanically superphosphates were the same, whatever might be the source from which they were derived; but there was a question more important to practical and scientific men, and it was the physiological question—would both kinds of superphosphates produce the same effect upon the plants? He knew that opinions differed very much in this country and in England regarding this point, but he thought it was necessary that they should have the question answered ere they could speak correctly regarding the value of these manures. He thought it was too hard, and not altogether fair, to press Dr. Anderson here, as a purely scientific man, upon the point that has been raised, because the question could not be answered by a man of purely scientific attainments, but must be answered by experiments in the laboratory and in the field. He believed it would be much better if, instead of trying to upset scientific opinions on this matter, practical men would do their best to assist scientific men in their experiments and investigations. He for one would be most happy to enter into any experiments that might be thought to solve the knotty point whether superphosphates derived from coprolites were of as much value to the farmer in the field as superphosphates derived from bones. He thought that question had not yet been solved, either in the laboratory or in the field; and his own opinion was that it would be well were this Society to take some steps in the way of having experiments made with the view of deciding the point. He thought the question put by Mr. Harvey was a very simple one, and from the answer to it he understood Dr. Anderson to have said that at one time of his career superphosphates were worth 30*l*, but that now they were worth only 20*l*. He thought if Mr. Harvey would refer to the schedules published by the manure-makers and compare the prices, he would find that all manures had in recent years been much reduced in price. And one reason for this reduction had been that the substances from which these manures had been derived were now increased in number, and had consequently become much cheaper than they were some years ago. Accordingly the products of the manures had also become cheaper, and he could easily conceive that if five or ten years ago superphosphates were selling at the rate of 30*l.* per ton, it was not remarkable that they should now be selling at 20*l.*, when they took into consideration the number of new materials that had been discovered for forming these manures.

Mr. HARVEY begged to say that manures had not been reduced in price.

Mr. M'LAGAN said that superphosphates had been much reduced in price, but it was quite true that Peruvian guano had not been lowered.

Dr. ANDERSON said he might add a word or two to what he had already said. As regarded the soluble phosphates derived from coprolites, he had to repeat once more that they were chemically and mechanically identical. The scientific man, having made this statement, had done all that it was possible for him to do; and when he was asked to draw a conclusion from them, he should say that, as far as science would enable him to draw it, these substances would produce the same effect on the soil; but it remained for actual field experiments to determine whether this scientific conclusion was correct. Should it not prove to be correct, then science received a new starting point, and it went to work with some further inquiry to ascertain what was the reason why those results which it should have anticipated had not proved correct in actual practice; and it was in this way that both science and practice almost always advances.

The Cattle Diseases Bill.—Mr. HALL MAXWELL laid on the table a copy of the Cattle Diseases Prevention Bill, as altered and printed by the directors, and laid before the Select Committee of the House of Commons.

He stated that the objections and proposed amendments by the Society had reference—1st, To the introduction of the foot-and-mouth disease into the Bill; 2d. To the powers proposed to be vested in railway officials, servants of rival dealers, and constables; 3d, To the proposed subjection of great fairs and markets to official inspection That the committee has excluded foot-and-mouth disease from the schedule attached to the Bill; that it is understood the powers to railway servants, &c., will be reported against, and that there is every probability that the inspection of fairs and markets will meet with the same fate. In that case, the Society would be successful in having established the whole of its objections to the satisfaction of the committee. The directors had gone further; they had pointed out to the Home Office that in one respect the Bill was deficient, and had suggested clauses for the purpose of strengthening the hands of municipal authorities, and of checking the abuse of private slaughter-houses, by forcing all animals under disease, or carcases of animals which had been killed when in disease, through public slaughter-houses subject to strict inspection, and by imposing heavy penalties on all parties sending such animals or carcases to any private slaughter-house. This proposal had been favourably entertained by the Home Office, and was laid before the committee by the Secretary of State. The other measure under the consideration of the committee was the Cattle Importation Bill, by which it was sought to alter the existing law and to subject the sea-borne part of the home trade to the same restrictions as are imposed on the foreign trade To this the Society objected on the ground that, in Scotland, the result would be so great a difference in favour of railway transit, as materially to interfere with the competition for carriage now afforded by steamers. This view had been given effect to by the Committee, and the clause affecting the home trade had been deleted. The general result was that, so far as the decisions by the Committee are known, they have been entirely corroborative of the views held by the Society. He had only to add that the Society was much indebted to Lord Elcho for the able and zealous manner in which, throughout the whole proceedings, he had promoted the views of the directors, and given the secretary every assistance in his power.

Agricultural Education.—The SECRETARY read the following report on Agricultural Education:—On the 6th April, the directors remitted to a committee of their number, and to the Council on Education, a letter addressed to the Board by Mr. Milne Home, and containing certain proposals in reference to agricultural education. Subsequent communications were sent by Mr. Home to the Secretary for the use of the council and committee—the last of these was received on the 9th May, and all of them were circulated. The committee, after several meetings, and the consideration of information in reference to some of the public schools in Scotland, reported,—1. That the council and committee cannot recommend the Society to interpose for the purpose of introducing into parish or other elementary schools the teaching of agriculture. 2. The council and committee are not satisfied that the same objections apply to the proposal encouraging, by prizes, the agricultural education of more advanced youths in provincial academies; but further information is required before the council and committee can come to any decision. The answers received from the head-masters are in some respects satisfactory, but no step can be taken till these gentlemen have been able to bring the subject under the consideration of their respective Boards of management.

Mr. MILNE HOME moved the adoption of the following motion:—"That this meeting, recognising the expediency of extending the means of obtaining agricultural education in Scotland, and likewise the duty of the Highland Society to attempt something more than it has hitherto effected for that object, returns thanks to the directors for the interim report now presented by them, and reserves consideration of the questions raised in the report till the final report has been presented as promised by the directors."

Some discussion took place on the question whether the Society ought to encourage education in parochial schools, Mr. Milne Home being in favour of that course, and Mr. Wilson of Edington Mains, Mr. Hope of Fenton-barns, and others being against it. Ultimately, Mr. Milne Home consented to omit the following clause from his motion—"And likewise the duty of the Highland Society to attempt something more than it has hitherto effected for that object."

The motion of Mr. Milne Home, as amended, was then unanimously agreed to. *Abridged from the Scottish Farmer.*

Reviews.

Agriculture, Ancient and Modern, &c. No. 2. By the Old Norfolk Farmer. J. S. Virtue, Ivy Lane.

The Second Part of this serial work commences with a history and discussion of the Theory of Agriculture. It describes the rise and progress of the principles and practice of good agriculture in England, Scotland, Ireland, France, and Prussia. The chief feature in the history of English agriculture is the account given of Tull and his system of husbandry. The figures illustrative of Scottish and Irish agricultural progress are not sufficiently descriptive of the present time. Quotations of the statistics of Irish agriculture could be obtained later than 1858.

One of the most important points referred to in the account of French agriculture is the subdivision of land among a multitude of small proprietors. The following passage quoted from Arthur Young, seems to be opposed to the opinion of Mr. Caird, M.P., given in the House of Commons the other day, and quoted elsewhere:—

"The great evil of small farming is the total inability of the holders to make those improvements which are continually being discovered in rural economy. Arthur Young has graphically described this inability of the small farmer in the following words:—'Let me ask of the advocates of small farms where the little farmer is to be found who will cover his whole farm with marl at the rate of 100 or 150 tons per acre; who will drain all his land at the expense of 2*l.* or 3*l.* per acre; who will pay a heavy price for the manure of towns, and convey it 30 miles by land-carriage; who will float his meadows at the expense of 5*l.* per acre; who, to improve

the breed of sheep, will give 1000 guineas for the use of a single ram for a single season; who will give 25 guineas per cow for being covered by a fine bull: who will send across the kingdom to distant provinces for new implements, and for men to use them; who employ and pay men for residing in provinces where practices are found which they want to introduce on their farms? At the very mention of such exertions, common in England, what mind can be so perversely framed as to imagine for a single moment that such things are to be effected by little farmers? Deduct from agriculture all the practices that have made it flourishing in this island, and you have precisely the management of small farms.'"

The work maintains its character as a full and instructive history.

Miscellaneous.

The Improving Farmer in 1864.—Without doubt he patronises steam, and thus economises horse labour—thrashes his grain in less time—dresses it better for market—leaves less in the straw. He also chaffs his fodder, slices or pulps his roots, and crushes his horse and cattle corn; the result being economy of feeding material, saving of manual labour, and improvement in the condition of his live-stock. Is it seed-time? His drills are so accurate in their work that the horse-hoe can follow when the weeds are yet so young that they are exterminated by the passage of the knives, yet without risk to the young corn. The iron harrows, before and after sowing (zigzag, diagonal, or chain), do more work at one turn than the old country blacksmith's implements did at two or three. If the land be too light, there are the smooth-roller, the fluted-roller, and the clod-crusher. Should it be hay-time or harvest, there are the mowing and reaping machines, the hay-spreaders, the horse-rakes, the steel forks, the improved harvest carts, the Dutch barn, and the rick-stands. This *resumé* might be extended to a tedious length, but it is unnecessary. *Mr. Thompson, M.P., in the Journal of the English Agricultural Society.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Month.	Day of the Week.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction	Wind. Force, 0—6	Amount of Cloud, 0—10.	In Shade. Max.	In Shade. Min.	Reading of Self-Registering Thermometers. Max. in Sun.	Reading of Self-Registering Thermometers. Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
June		Inches.										Inches.
24	Friday	30.18	..	..	S.W.	2	10	..	..	..	..	..
25	Saturday	30.00	63	61	N.W.	3	10	65	49	..	43	0.05
26	Sunday	29.93	66	63	N.W.	3	7	69	56	79	54	0.05
27	Monday	30.11	64	57	N.W.	3	6	68	46	81	40	..
28	Tuesday	30.14	67	61	N.W.	1	9	67	48	76	43	..
29	Wednesday	30.03	69	64	N.W.	0	5	68	55	75	50	0.02
30	Thursday	29.90	64	58	W.	8	8	71	57	82	54	0.01

Notices to Correspondents.

CHARCOAL: *Oswestry.* It is by itself of very little use; but as attracting ammoniacal matters from the air and elsewhere, it may be applied as a dressing over the ground, and will produce a certain effect. Thus it will tend to increase luxuriance of growth in corn crops when applied in early spring.

MANGEL WURZELS: *Kerry.* It would be worth while sending children along the rows to crush the maggot in the leaf before it has committed much mischief. The Turnip-fly is not to be cured. Mr. Rowley's drill for dusting the rows with lime is almost the only attempt worth mentioning. A painted board, on wheels drawn over the rows will catch myriads of the flies as they jump when it overshadows them. And a fresh coat laid over its underside after being drawn over every two or three rows will keep its power perfect. The best plan, however, is to get the land into such condition as will hasten the plant through this dangerous period. The water drill for the seed helps this.

NEW SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.

THE HYDROPULT is invaluable for use in the GARDEN for WATERING BEDS, SPRINKLING PLANTS, DROWNING OUT INSECTS, CLEANSING TREES FROM SMUTS, DRESSING with LIQUID MANURE, ETC. ETC.

THE HYDROPULT is desirable in every HOUSEHOLD for WASHING WINDOWS, WETTING SIDEWALKS, SPRINKLING STREETS, WASHING CARRIAGES, EMPTYING CISTERNS, FILLING BARRELS, A SPRAY BATH, ETC. ETC.

THE HYDROPULT,

PRICE: WITH BRASS CYLINDERS AND MALLEABLE IRON STIRRUP, JAPANNED IN OAK COLOUR, 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanised Wire Strainer, Rose, and Small Jet.
Complete as above, with Copper Stirrup, TWO GUINEAS.

Weighs but 8 lb.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.
It will draw water horizontally, if necessary, through 300 feet of Suction Hose, and force it through Delivery Hose, to an altitude of 100 feet.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

In proof of the real utility and efficiency of the HYDROPULT as a GARDEN IMPLEMENT, I beg to call the attention of the public to the following unsolicited Editorials from gentlemen whose testimony must have weight with the readers of the *Gardeners' Chronicle*:—

EDITORIAL, *written by* ROBERT HOGG, LL.D., F.L.S.

THE HYDROPULT.—The great secret of successful indoor gardening consists in the free and judicious use of the syringe. A greenhouse or conservatory that does not enjoy this luxury becomes a miserable lazar house of vegetable incurables. Vermin and filth hold unbounded sway, and people become disgusted with their own want of success. Well do we recollect the former days of plant culture, the days of "collections," when the use of the syringe was yet limited or unknown. What a time for red spider, scale, and greenfly! What fumigations and consumption of tobacco and tobacco paper, washings with tobacco water, and all sort of remedies were resorted to! We regard the introduction of the free use of the syringe as one of the events in modern gardening. To this is due the success of orchard house management, Vine management, and Plant management, but the old syringe with its slow suck and squirt, is now as much out of date in modern gardening as an old stage waggon in modern locomotion. Many are the improvements and complications of the old simple syringe. We have tried several of them, but for ease in working and efficiency in result, we have not yet met with anything to equal the Hydropult, sent us by Mr. BUTTON. It is powerful in operation, and so easy and comfortable to work, that one never gets fatigued. With such an instrument plants may be kept in perfect health, and quite free from insects and dirt. We first tried it on a few Geraniums in our conservatory, which were smothered with greenfly during our temporary absence of ten days, but on our return a stout discharge from the Hydropult sent them clean off across some unknown bourne, whence they have never yet returned.

EDITORIAL, *written by the* REV. HENRY H. DOMBRAIN, A.B.

THE HYDROPULT.—When we formerly noticed this instrument, we did so from merely seeing it at the Proprietor's; since then we have had an opportunity of testing it personally, and can bear testimony to the excellence of the invention. The force with which it throws a stream of water is almost incredible; while for syringing a greenhouse, a gentle shower, as fine as that from a hand syringe, with considerably more effect, can be easily given. We have a gardener, quite of the old-fashioned school, who does not generally fall in love with new-fangled notions, but he is perfectly enchanted with the saving of labour and time that the Hydropult will be to him.

EDITORIAL, *written by* SHIRLEY HIBBERD, ESQ., F.R.H.S.

THE HYDROPULT.—This is an invention introduced in a most spirited manner by Mr. C. P. BUTTON. It is at once a fire engine and a garden engine, is always ready for use at a moment's notice, is neat and portable, weighing only 8 lbs., and can be worked by a boy of moderate strength for some hours in succession without fatigue, the mechanical power employed being economised by combining the action of the hand and the resistance to the foot, between which the instrument is placed and used, as a double action pump. From the sole to the handle the Hydropult measures 24 inches. The two brass cylinders measure 12 inches in length, and 3½ inches in breadth. At the top of these cylinders India rubber tubing is attached, on one side to feed, on the other to discharge the water. It will perhaps surprise the reader to be told that this little contrivance, which is pretty as a toy, and can be carried under the arm as easily as a trumpet, will throw from seven to eight gallons of water per minute a distance of 50 feet. But it will do it, as we know from having tried it, finding the experiment an agreeable exercise, and of special service in washing down a stuccoed wall, which it accomplished quite as well as if we had sent for the parish engine. Gardeners will not need to be told the value of a portable force pump of this simple kind. It can be used to produce a powerful stream to extinguish a fire, or a gentle shower to syringe a whole houseful of plants, without the necessity of moving a single step from the position most convenient for a supply of water. Wherever a pump or syringe is needed, the Hydropult can be brought into use, to remove water from a cellar or a boat, to cleanse a cistern, wash a pavement, or drench the foliage of trees loaded with soot, or annihilate at one fell swoop the whole insect population of a plantation of Roses. But we will not enlarge upon its merits, they are obvious, and having a Hydropult in use we can say that it will soon pay for its cost in a garden, besides being always at hand in case of an emergency of any kind which may require an immediate removal or discharge of water.

THE GREENHOUSE and CONSERVATORY HYDROPULT.

A NEW AND BEAUTIFUL IMPLEMENT,

Weighing scarcely 3 lbs.,

AND SPECIALLY ADAPTED FOR USE IN THE GREENHOUSE AND CONSERVATORY.

Price 35s.,

Complete with Brass Cylinders and Copper Stirrup, 2½ feet Suction and 3 feet Delivery Hose, Strainer, Rose, Jet, and Fan.

This NEW IMPLEMENT must necessarily supersede SYRINGES and other devices of the kind, for it will be found much more effective in its operation.

A LADY CAN WORK IT FOR HOURS WITHOUT FATIGUE.

HYDROPULT SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.
WAREHOUSE and OFFICES, 27, LEADENHALL STREET, LONDON, E.C.
CHARLES POMEROY BUTTON, PROPRIETOR.

Extra Strong Grape Vines from Eyes.

LUCOMBE, PINCE, AND CO., having this season a splendid stock of strong VINES fit for immediate planting, propagated from Eyes taken from their large experimental Vinery, can offer fine healthy, short-jointed Canes, 6 to 9 feet long, of all the leading kinds, at from 3*s.* 6*d.* to 7*s.* 6*d.* and 10*s.* 6*d.* each.

L., P. & Co. have one of the largest Stocks in the Trade of Extra Strong Vines, with Canes 9 to 11 feet long, and proportionally strong, from which purchasers can advantageously select those suitable for fruiting finely next season. Liberal Compensation for Carriage.

Exeter Nursery, Exeter.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.

The Stock having been purchased by JOHN STANDISH, strong Plants will be sent out in the first week of June, price 15*s.* to 31*s.* 6*d.* each.

Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.

Royal Nurseries, Ascot, Berks.

Vine Duchess of Buccleuch.

ROBERT PARKER begs to announce that he has arranged for the distribution of the stock of this very distinct and valuable EARLY WHITE GRAPE, and that the plants will be sent out early in autumn. Full particulars as to its qualities will be given in future advertisements. In the meantime, and during the whole of the season, visitors to the Gardens of Dalkeith Palace will have opportunities of seeing and judging of its merits, as a large quantity of pot and permanent Vines are now fruiting at that establishment.

Strong Planting Canes, 21*s.* each; Extra strong Fruiting Canes, 42*s.* each. Orders are now being booked, and will be executed in strict rotation.

Exotic Nursery, Tooting, Surrey, S.

New Roses.

WM. PAUL can confidently recommend the following five NEW ROSES raised or introduced by him. In Beauty of Waltham, Princess of Wales, and Red Rover, he believes that he has succeeded in obtaining a race altogether free from that debility of constitution which renders almost valueless some of the most beautiful Roses of the day.

BEAUTY OF WALTHAM, H.P. (W. Paul).—Flowers cherry colour to bright rosy carmine, cupped, large and full, very hardy and very sweet. Obtained the premier prize at the National Rose Show, Royal Horticultural Gardens, as the best New Rose of the year; the same award at Stamford. Price 2*s.* each.

LORD MACAULAY, H.P. (W. Paul).—Flowers variable, ranging from scarlet crimson to rich plum colour, thick in the petal, large, full, produced abundantly and in rapid succession; habit good, foliage handsome, a splendid Rose. First-class Certificates from the Royal Horticultural and Royal Botanic Societies of London. Price 5*s.* to 7*s.* 6*d.* each.

LORD HERBERT, H.P. (W. Paul).—Flowers rosy carmine, the petals reflexing at the summits, in the way of Beauty of Waltham, large, full, finely formed, and altogether of first-rate excellence. First-class Certificate from Royal Botanic Society of London. Price 7*s.* 6*d.* each.

PRINCESS OF WALES, H.P. (W. Paul).—Flowers vivid crimson, presenting to the eye an unusual body of colour, owing to the thickness of the petals, cupped, large, very double, and remarkably smooth. Growth and constitution free, hardy, and vigorous; foliage handsome. Quite first-rate. Price 7*s.* 6*d.* each. A coloured plate by Andrews for seven postage stamps.

RED ROVER (W. Paul).—Flowers fiery red, flowering up to Christmas; not very double. Growth extraordinarily vigorous; forms a splendid Pillar Rose. 2*s.* 6*d.*

OPINIONS OF THE PRESS.—"It (Princess of Wales) has a most vigorous healthy habit; the colour is of the deepest and brightest crimson, and the form of the young bud, opening bud, and half-blown bud, very near perfection."—See *Gardeners' Chronicle*, Leading Article, July 25th, 1863.

"Mr. W. PAUL exhibited cut specimens of a Seedling H.P. Rose, Princess of Wales, bright carmine rose, which was much admired."—*Journal of Horticulture.*

The best of the NEW FRENCH ROSES, 36*s.* to 42*s.* per dozen. Fine vigorous plants of the old and popular sorts, 9*s.* to 18*s.* per dozen.

PAUL'S Nurseries, Waltham Cross, N.

CARTER'S GARDENER'S VADE-MECUM.

Seeds Worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our Collection in the Spring, 1862. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

DOBSON'S PRIZE PRIMULA SINENSIS SEED, Superbly Fringed. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

J. DOBSON & SONS, Seedsmen, Isleworth, W.

Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

Per pkt.—*s.* *d.*	*s.* *d.*	Per pkt.—*s.* *d.*	*s.* *d.*
PRIMULA .. 2 0	and 3 6	INTERMEDIATE STOCK.. .. 0 6	and 1 0
CINERARIA .. 1 6	and 2 6	BROMPTON do. 0 6	and 1 0
CALCEOLARIA 1 6	and 2 6		

The above Seeds are saved with great care, and can be warranted to give satisfaction.

Paradise and Victoria Nurseries, Holloway, London, N.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE post free on application.

Paradise and Victoria Nurseries, Holloway, London, N.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

Choice Exotic and Hardy Ferns.

EDWIN COOLING has a fine stock of particularly healthy well-grown Plants to dispose of, on very moderate terms. Also a few specimens suitable for exhibition. PRICED LIST free on application. Parties requiring COLLECTIONS of FERNS will be liberally treated.

Mile Ash Nurseries, Derby.

Preliminary Notice.

CLEMATIS JACKMANI and C. RUBRO-VIOLACEA have received two First-class Certificates, awarded by Royal Horticultural Society, August 4, 1863. Will be sent out this coming Autumn by Messrs. GEO. JACKMAN & SON. Orders will now be taken and executed in strict rotation.

Further particulars (with EXTRACTS from the LEADING HORTICULTURAL PAPERS) with price, will be given in future Advertisements.

Woking Nursery, Surrey.

A MAGNIFICENT FIELD OF

Pure White Canadian Seed Oats in full Ear, and 3½ feet high, June 11, 1864, at

MR. HALLETT'S MANOR FARM, BRIGHTON (within 200 yards of St. Mark's Church, Kemp Town), is now OPEN to INSPECTION. This Field adjoins the Lodge (at the entrance gates of the Manor House), where a sample of the Oats sown may be seen upon presenting Card with Address.

These Oats were raised from a very fine sample in 1862, which was hand-picked 27 times, and weighed 48 lb. the imperial bushel. They were drilled (3 bushels per acre), on the 24th February, 1863, cut July 20, and yielded on a very thin poor soil upwards of 80 bushels of Oats, and 185 trusses (36 lb.) of most excellent feeding straw per acre; while the ordinary Black Tartarian Oat, on the other part of the same field, ripened a fortnight later, yielded of grain a less crop, weighing 25 per cent. less per bushel, and of straw 120 trusses per acre.

The Canadian Oats were again hand-picked, to ensure *perfect* purity, and drilled on the above field February 17 of this year. Upon the same field, 1863:—

	Kernel.	Husk.
Canadians	69.43 ..	30.57 } per cent.
Tartarians	70.79 ..	29.21 }

SHARPE'S IMPROVED LARGE SWEDE DEVONSHIRE GRAY STONE TURNIP, LINCOLNSHIRE RED GLOBE TURNIP, WHITE GLOBE TURNIP, GREEN GLOBE TURNIP.

CHARLES SHARPE & Co., Seed Growers, Sleaford, have fine stocks of the above to offer, of their own growth. Price to the Trade on application.

NEW and GENUINE TURNIP SEEDS in quantity.
SKIRVING'S KING of the SWEDES.
DIXON'S IMPERIAL SWEDE PURPLE TOP.
SKIRVING'S IMPROVED SWEDE PURPLE TOP.
E. P. DIXON & SONS, 57, Queen Street, Hull.

Stones or Sprotbro Cabbage Seed.

JOHN SCHOLEY, NURSERYMAN and SEEDSMAN, Pontefract, has the above to offer to the Trade, his own growing of 1863. The above Cabbage is the earliest and best that supplies the Leeds and Manchester Markets.

Price per lb. 1*s.* 6*d.*, or 7*l.* per cwt. About 15 cwt.

HERBACEOUS CALCEOLARIA, &c., SEED.

CHOICE CALCEOLARIA (JAMES').—This unrivalled strain has in every instance received FIRST PRIZES wherever exhibited—can be seen in bloom here. Sealed Packets, 1*s.* 6*d.*, 2*s.* 6*d.*, and 5*s.*
CHOICE PRIMULA SINENSIS FIMBRIATA.—Hayes' superb strain. Sealed Packets, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.*
CHOICE CINERARIA.—Saved from best named varieties, and cannot be surpassed. Sealed Packets, 1*s.* 6*d.*, 2*s.* 6*d.*, and 5*s.*
HUNT'S SWEET WILLIAM.—Sealed Packets, 6*d.* and 1*s.*
SCARLET INTERMEDIATE STOCK.—True and fine. Sealed Packets, 1*s.* and 2*s.* 6*d.*
PANSY.—From best named varieties. Sealed Packets, 1*s.* and 2*s.* 6*d.*
And every other first-class Seeds. See CATALOGUE, post free.

WM. CUTBUSH & SON, Highgate Nurseries, London, N.

CLEMATIS FORTUNII and STANDISHII.—These, perhaps the most magnificent of all Mr. FORTUNE'S importations from Japan, are now ready to be sent out in strong plants, 15*s.* and 21*s.* each.

Also ARUNDO CONSPICUA, a worthy rival of the Pampas Grass, flowering very freely three months earlier in the season than that old favourite. Strong plants 18*s.*, 24*s.*, and 30*s.* per dozen.

CHARLES NOBLE, Sunningdale Nursery, Bagshot.

J. SCOTT'S SPLENDID NEW FUCHSIAS of 1864 constitute one of the finest Collections ever offered to the Public, and are now offered at 9*s.* per dozen sorts, being a great reduction on the Catalogue price, which will be sent to all applicants on receipt of 6 postage stamps.

NEW JAPANESE VARIEGATED SAXIFRAGE, 2*s.* 6*d.* each.

Merriott Nurseries, Crewkerne, Somerset.

NEW BEDDING PLANTS.
Wellington Nursery.

NEW VARIEGATED GERANIUMS and other novelties are to be seen bedded out largely in this establishment.

The VELVET CUSHION VERBENA is a fine advance among bedding plants.

E. G. HENDERSON & SON, St. John's Wood, London, N.W.

UNRIVALLED CALCEOLARIA, PRIMULA, CINERARIA, CARNATION, and PICOTEE.
HERBACEOUS CALCEOLARIA, 2*s.* 6*d.* per packet.
HALF SHRUBBY CALCEOLARIA, 2*s.* 6*d.* per packet.
CINERARIA, 2*s.* 6*d.* per packet.
CARNATION, Self, Flakes, and Bizarres, 2*s.* 6*d.* per packet.
PICOTEE, White and Yellow grounds, 2*s.* 6*d.* per packet.

BARR & SUGDEN, Seed Merchants, 12, King Street, Covent Garden.

Prize Plant Cases.

BARR AND SUGDEN'S PLANT CASES, elegantly filled with Plants for Window and Table Decoration, 10*s.* 6*d.* to 210*s.* These were awarded First Prize at Royal Horticultural Fête and Flower Show, and at Royal Botanic Flower Show. Rustic Window Boxes, 10*s.* 6*d.*; Rustic Window Gardens, 21*s.*

BARR & SUGDEN, Seed Merchants, 12, King Street, Covent Garden (opposite the Garrick Club), W.C.

PRIZE MEDAL FOR SEEDS AND CEREALS.

ESTABLISHED 1800.

WILLIAM MORTON,

OLD MARKET PLACE, RIPON, YORKSHIRE,

Is now supplying his YELLOW BOY GREEN-TOPPED SWEDE TURNIP, grown from selected large Bulbs of the Hardy Green-topped Swede, at 9*d.* per lb.; and his large FOSTERTON HYBRID, 8*d.* per lb. NEW TURNIP SEEDS (Various), BROAD-LEAVED and LONG-STALKED RAPE SEEDS, WHITE MUSTARD, WURZEL SEEDS.

MIXTURES of GRASS SEEDS for Permanent Pasture, suitable to the various soils; ENGLISH and DUTCH CLOVERS, ARTIFICIAL GRASSES, LAWN GRASS, RYE-GRASSES, &c. Circulars (Third Edition) free by Post.

RIPON and CLARO SEED ESTABLISHMENT, RIPON, YORKSHIRE.

NEW GRAPE, ROYAL VINEYARD.

TO BE SENT OUT IN SEPTEMBER NEXT.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Feels great pleasure in being able to introduce this important acquisition. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years.

B. S. W., to meet an extensive demand, has prepared a large Stock, which will be in excellent condition, and ready for distribution in September. Early orders are respectfully solicited. A List of those who have favoured him with orders will be published shortly.

PRICES:

Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

Dr. HOGG's *Report on the Royal Vineyard Grape:*

"Bunches hard and well set, sometimes long and tapering, and sometimes short ovate. Berries large and roundish ovate, skin white and somewhat transparent, showing the texture of the flesh through it, remarkably thin, and adhering closely to the flesh; so thin is it, that the whole berry may be eaten without any inconvenience being caused by the skin. Flesh firm and crackling, with a fine Sweet-water flavour. This is a fine looking Grape, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society."

For the opinions of the Horticultural Press, see *Gardeners' Chronicle*, April 9.

A correct COLOURED ILLUSTRATION by ANDREWS will be sent in exchange for 12 Postage Stamps.

The Gardeners' Chronicle.

SATURDAY, JULY 9, 1864.

MEETING FOR THE ENSUING WEEK.

WEDNESDAY, July 13 { Royal Horticultural (Strawberry Fête), at South Kensington.

WE have been favoured with information from several Correspondents who have had some of the late JAPANESE INTRODUCTIONS in the open air during the past winter, and all agree in reporting these plants as having passed through the trial unharmed. Considering the number of these new trees and shrubs, and the beauty of many of them, this is a matter of no small importance. From the knowledge we possessed of the hardy nature of some plants formerly introduced from the same country, these pleasing results were not quite unexpected. We have long known how hardy and how useful the common Aucuba is; and Mr. BARRON, of Elvaston Castle, had proved the beautiful Thujopsis dolabrata to be as hardy as the Scotch Fir. With regard to the Thujopsis, Mr. NOBLE, of the Sunningdale Nursery, has remarked that plants of this species which had been in the open air without shelter of any kind, appeared to be much more vigorous and healthy looking than others which had been protected under glass.

It may be regarded as a general rule, that the plants which are indigenous to countries where the winters are as cold or colder than our own, will prove hardy in our climate, provided our summers are hot enough to enable such plants to ripen their young shoots. And, *vice versâ*, plants which are indigenous to countries whose winters are milder than ours, will probably prove to be tender in England. As a general rule this will prove to be so. And further, as many of our readers have learned by experience, sometimes dearly purchased, if an attempt be made to cultivate plants in a higher temperature than that which is natural to them, they usually become unhealthy, and eventually die out altogether. It therefore appears that excessive heat is as injurious to some plants, as cold is to others; and

while some require a periodical season of rest and dryness, others prefer a high and even temperature, with much moisture, all the year round.

To all general rules, however, we believe there are certain exceptions, and this applies to the proposition which we have put forward in the remarks we have just made. We can point to one country at least which has winters apparently much milder than ours, yet its vegetable productions, when introduced into England, appear to be unaffected by the greater degree of cold which they are called upon to endure. The country we allude to is the one we have already named, which has lately opened its ports to foreign commerce, after having been almost shut up for upwards of 200 years. From all that we can learn, the winters of Japan are not nearly so cold as our own, and yet the trees and shrubs imported from that country appear to be nearly, if not quite hardy here.

Our information regarding the climate of Japan, although perhaps not quite so full as we might wish it to be, is still sufficient to enable us to draw the conclusion we have come to. The following table kept by Dr. HEPBURN, an American Medical Missionary at Kanagawa, will give a good idea of the temperature of the central portion of the Japanese Empire.

1860.	Thermometer, Fahr. Average at Sunrise.	At 2 P.M.	Highest.	Lowest.	Clear days.	Cloudy days.	Rainy days.	Rain, in inches.	Snowy days.	Snow, in inches.	No. of earthquakes.
January	30	47	59	18	19	9	3	3	1	1	1
February	32	47	58	19	14	9	3	3	1	1	1
March	40	51	69	30	9	12	10	5	0	0	2
April	49	64	76	36	16	4	6	2	0	0	1
May	58	69	80	44	18	7	4	1	0	0	2
June	67	76	87	54	10	11	9	3	0	0	1
July	75	82	92	68	17	4	13	6	0	0	2
August	75	87	92	69	21	4	10	5	0	0	1
September	72	80	89	62	14	6	5	2	0	0	1
October	57	70	84	50	15	7	7	3	0	0	1
November	45	58	68	36	18	6	6	3	0	0	1
December	38	50	71	22	19	5	7	3	1	1	1

It will be seen by this table that during the months of January and February—the coldest of the year in Japan—the temperature ranged between 18° and 59° in the year 1860, when these observations were made. In some seasons it probably sinks a little lower than it did at that period, but we feel assured that, if we except the extreme northern parts of the Empire, the winters in Japan are much milder than our English ones. In the island of Yesso, which is the most northern of the Japanese group, the winters are said to be of long duration and extremely cold; in that island, therefore, it is not improbable the thermometer sinks quite as low during winter as it does in England. But most of the plants to which we have alluded, as having proved hardy with us, inhabit the central portions of the country, near where the above thermometrical observations were recorded. This is one example, therefore, of a race of plants which are capable of enduring the rigours of a winter much more severe than that to which they are subjected in the country to which they are indigenous—an exception to a very general rule.

The student of natural history or vegetable physiology is naturally inclined to inquire into the cause which produces such a remarkable exception to a very general natural law. That the exception exists, as we have stated it does, cannot be doubted; how it is so, or what the cause is which produces this curious state of affairs, we are unable to explain. There are many of the operations which are going on continually in the great laboratory of Nature, of which we are entirely ignorant. It may be that the productions we write of had, at some earlier period, a more northern home. They may have inhabited the bleak mountains of Manchuria, on the main land of Asia, where the winters are excessively cold, and when they migrated to a more genial country they may have retained much of their hardy constitution, which enables them to withstand our severe English winters. All this is of course mere conjecture. The cause is a mystery, but the effects are plain and of great value.

It will be observed that the Table we have given above has one division placed at the right hand side for a purpose happily scarcely necessary in English meteorological tables. This is the earthquake column, and shows the number of shocks that had been felt during the year. In the month of June there were no less than 11 shocks, and during the year the total number felt was 32! When we take into consideration the number that occurred during the hours of sleep, which were not felt and registered, we may have some idea of the activity of the volcanos of this extraordinary country. It may be that these subterranean fires have some effect upon the climate of the country at the present day, and render the winters less cold than they have been at an earlier period of the world's history. There can be no doubt, however, that one of the principal causes of the temperate climate is to be found in the rapid currents which flow in a northerly direction from the Pacific Ocean, and mix with the waters which surround and run between the various islands of Japan. These islands occupy a position on the eastern side of Asia, not unlike that of the British islands on the west of Europe, and are subject to influences of a like kind.

ON former occasions we have called attention to some curious cases of the PROTRUSION of the CELLULAR TISSUE in Apples and Broccoli from the ruptured cuticle, and its assumption of an entirely new form. We do not, however, remember to have seen any case so curious as one which occurs in Pears just received from Besborough. The surface of the fruit is sprinkled with white leprous rather concave spots, of curious forms and sizes, often with a definite dark border. At first sight we fancied that it must be some exaggerated form of the Fungus Ascomyces bullatus, which is this year so destructive to Pear trees. A glance, however, with a good pocket lens convinced us that this was not the case, as the disc consisted of irregular apparently branched bodies, closely resembling some species of the well-known genus Ceratium. We still therefore imagined that we had a Fungus before us, but to our surprise, on submitting a portion to the compound microscope, we found the white bodies to consist entirely of cells arranged irregularly, and scarcely adhering to each other. Some were simple cells with a broad transparent border; while others of various sizes, but generally larger and angular, had a compact mass of protoplasm within a thick wall pierced everywhere with simple or branched pores, and were evidently modifications of the ordinary grit-cells. What has induced this change we know not, nor have we had an opportunity of examining the condition of the cells before the swelling mass had ruptured the cuticle. They are now perfectly colourless, but they may possibly have been bleached since they were exposed to the influence of the atmosphere. The case, however, is extremely curious, and we are much obliged to our correspondent for its communication, though we can give him no information as to its cause or probable duration, as it is entirely without precedent.

Since the above was written we have seen an instance of the same disease attacking the fruit of an Easter Beurré in the Earl of WESTMORELAND's garden in Northamptonshire. The fungoid appearance is still more striking in the fresh than in the dried specimens, the white tufts being very distinct from the brown stratum from which they arise. The disease bears a striking resemblance to that known by the name of Lichen in man. The component cells under the microscope, when the angular outline is not very determined, remind one forcibly of the spores of some Truffle. Another form of the disease occurred on the same tree, in which the spots were very diffuse, and instead of bearing tufts, the brown stratum was studded with little white flat angular facets, as if it were cracked. The appearance under the microscope of the cells of which these spots were composed, was just the same as in the former instance. A very similar affection occurred in our own garden on a red early Apple, but in too advanced a stage to admit of any close comparison. The component cells in this case seemed more broken up, and not so completely separated from each other, a circumstance perhaps to be expected from the very different characters of the tissue. We found only three diseased Pears on the tree, but these were even more strongly affected than those from Besborough. It is to be hoped that the malady cannot now spread any further, as the diseased fruit must be quite valueless. *M. J. B.*

—— LAST week (p. 625) we stated that the COCOA-NUT TREE had been induced to produce a ripe nut at Syon under the skilful management of Mr. FAIRBAIRN. It should have been added that a considerable share of the credit of the event belonged to Mr. SMITH, who was head gardener at Syon until his removal to Kew, about two months ago. Mr. FAIRBAIRN, who has now the management of Syon Gardens, was, we believe, Mr. SMITH's foreman.

—— The arrival in London of Mr. RICHARD SPRUCE, after 15 years' absence in South America, during which he has been engaged in the explorations of which some account was given at p. 602, is announced. The valuable collections he has made of flowering plants and Ferns have been for the most part distributed, but the arrangement of the extensive Cryptogamic collection is not yet complete.

—— Another traveller botanist has lately returned from South America, namely Dr. SEEMANN, who has been occupied in Venezuela, in the exploration of the River Tocuyo. He has found extensive coal beds, the coal resembling Welsh steam coal in appearance, and valued in London at 30*s.* per ton.

—— We may mention that a very useful, simple STUDENT'S DISSECTING MICROSCOPE has been constructed by Mr. MATTHEWS, of Portugal Street, Lincoln's Inn. It is fitted in a neat mahogany box, which serves as a stand, and being only about four inches long and less than an inch in thickness, is not at all cumbrous for the pocket. It may be recommended to travelling botanists for its portability and utility.

—— We regret to have to announce the DEATH OF MR. DANIEL FERGUSON, for 28 years the efficient and much respected Curator of the Belfast Botanic Garden, which took place on the 5th inst. Mr. FERGUSON was a native of Perthshire, and was for some time foreman in the Glasgow Botanic Garden, where he assisted in getting up the specimens for Sir WILLIAM (then Dr.) HOOKER'S lectures. It was, we believe, on Dr. HOOKER'S recommendation that he was appointed to the charge of the Belfast Garden. We understand that the Directors have signified their intention to appoint Mr. W. HOOKER FERGUSON, son of the late Curator, who has had much training and experience at Kew, to the vacant office.

—— Of recent foreign and colonial BOTANICAL APPOINTMENTS, we may record the following:—Mr. PRESTO has been entrusted with the charge of the Botanic Garden in Trinidad, in succession to M. CRÜGER, who died in February last. Dr. PRINGSHEIM, of Berlin, has been appointed Director of the Botanic Garden at Jena, the charge of which has been given up by Professor SCHLEIDEN. Dr. ARESCHOUNG has succeeded to the post of Director of the Botanic Garden at Upsala, which had been resigned by Dr. ELIAS FRIES. Intelligence has also been received of the deaths of Professor TREVIRANUS, of Bonn, "the oldest professor of botany" in Germany; of M. TURCZANINOFF of Charkow, the author of numerous botanical papers in the Transactions of the Moscow Academy; and of M. C. F. LESSING, the writer of some excellent papers on the Compositæ.

—— Some NEW TULIPS of good quality were brought forward at the recent National Tulip Show held at Nottingham on May 25, which may be considered as the great show of the season, though as it turned out, too late for the south of England. The following Seedlings obtained Certificates of the first-class, namely:—*Alice*, from Mr. BARBER, one of STORER'S Seedlings, a flamed bizarre bearing much resemblance to Dr. Hardy, but brighter in the beam. *Beatrice*, from Mr. HAYNES, a feathered byblœmen with fine short cup and good form, beautifully marked with violet, the feathering good. *Bishop of Lincoln*, from Rev. S. CRESSWELL, a fine feathered byblœmen, in the style of Bessie, but much darker. *Bridesmaid*, from Rev. S. CRESSWELL, a superb flamed rose, well-marked and extra fine. *Giurgero*, raised by Mr. MARRIS, a very fine flamed byblœmen, bright, pure, and of fine form. *Jefferson Davis*, from Mr. PARKINS, one of STORER'S Seedlings, a fine plated feathered bizarre, very pure, and fine in form. *Lord Belper*, from Mr. HAYNES, a first-class bizarre breeder. *Princess Alexandra* from Mr. LYMBERRY, a flamed rose of good form, stout and pure, with fine dark anthers.

Much information concerning various other flowers exhibited, will be found in a report of the exhibition in the *Florists' Guide*, where amongst other varieties are mentioned:—*Lymberry's Great Britain*, a feathered bizarre of fine form and very pure, the feathering first-rate; *Cresswell's Bride*, a very bright scarlet feathered rose, well marked, but small; *Storer's General Lee*, a bizarre of very fine form, perfectly pure, and well marked: *Hepworth's Leviathan*, a red feathered bizarre, very regularly marked, the feathering reaching to the base of each petal; *Willison's William Dean*, an exquisitely marked feathered bizarre, with

the feathering marked to the base both inside and out, but shown rather small in size. The National Tulip Show is to be held next year in Birmingham.

At another Tulip Show held in Nottingham on May 23, it is stated that Mr. T. Wesley exhibited a curious specimen of a flamed Tulip with five perfect flowers on one stem!

ORANGE-GROWING IN MALTA.

I read with much interest your remarks last year (see p. 1175) upon the desirability of introducing the Orange more extensively as a fruit-bearing plant into your houses, and I am of opinion that if more attention were devoted to its management, it would become not only a useful but also a highly ornamental shrub in England.

Those who have seen ripe crops in December or January of the Mandarin or Blood Orange, as I have seen them in Gibraltar, Malta, and Italy, will agree with me that a more graceful and ornamental plant would be difficult to be found; and I think when well grown and trained as a standard and planted out, its appearance, even without fruit, is much less objectionable than that of deciduous trees, such as Peaches or Nectarines, during their season of rest.

I have had the management of an Orange grove for three years and a half in Malta, and have been very successful, having increased the produce from 8000, which used to be about the annual crop, to 18,000, the number gathered last year. It would be a decided pleasure to see such a crop on trees in England, or at least something approaching it, and I certainly think it might be realised.

The Pine Apple when first cultivated in England seemed difficult, till by attention, perseverance, and skill, it has even been induced to surpass in flavour fruit grown in countries to which it is indigenous. Any one accustomed to the taste of Grapes grown in our Vineries would not hesitate in deciding in their favour when compared with the flavour of the same kind of fruit grown on the shores of the Mediterranean. Let us hope, therefore, for a similar improvement in the Orange.

In our Orangery here, some of the trees were transplanted and surrounded by a wall to preserve them from the north-east winds, which sweep across the island with resistless force, and make sad havoc of vegetation exposed to their fury.

The total number of our trees is about 200, small and large. From one Mandarin, 8 feet high, 9 feet wide and 4 feet through, grown in front of a wall with a south-east exposure, I gathered 583 Oranges. The trees in front of this wall endure a temperature in the months of July and August of from 135° to 140° Fahr. the reflected rays being thrown back upon them from the wall. Yet the Mandarins seem to delight in such a heat. The average temperature in exposed places without any special reflection during these months ranges from 100° to 110° at midday. The fruit then is about the size of a pigeon's egg.

In order to give your readers an idea of the system of culture pursued in Malta, it is necessary, however, to begin at the beginning.

The rock of Malta is a soft sandstone, having on its surface about a quarter of an inch of hard crust, impervious almost, if not totally so, to water. This crust must be removed by picking with a tool like a pickaxe, but shorter and thicker in the wings, in order to allow the rains of winter, which percolate through the soil, to be absorbed and stored in the ground, afterwards to be evaporated during the summer months, thereby keeping the lower roots nice and moist. After the picking process is completed, and the boundary walls erected, the inclosed space is then filled level with broken stone rubbish, broken fine on the surface to prevent the soil working through.

The walks are then built in with stone, and on the margins of these are laid down canals of hewn stone 7 inches wide by 9 inches deep, outside measurement, with a grooved canal 4 inches square cut in the stone and cemented at the joints to allow the water to run for irrigation. The soil is then filled in to the height of 3 feet 6 inches, or in other words to the surface of the canals. The Orangery is then ready for planting; this should be performed in June, because then the spring's growth is complete, and it is just before irrigation commences. The plants stand 15 feet apart in double or treble rows. This is generally the measurement for Blood and Portugal Oranges; 12 feet is sufficient for Mandarins.

The Seville Orange should not be planted amongst the kinds just mentioned, as the emissions or exudations from its roots are said to be injurious to their health.

If planted in December, when the autumn wood is made (for there are two distinct growths of young wood, viz. March and April, October and November), they would then be in danger of being damaged by the cold and cutting winds of January and February. For the same reason pruning is effected in June, as under those winds sometimes 2 feet of the tops of the branches are killed.

After transplanting is effected, irrigation commences, but the wounds of pruned trees are allowed to dry before they are watered, the drying process generally occurring in a few days. In June the fruit is about the size of a blackbird's egg. Thermometer at noon in the shade, 80°; at night, 61°.

During July westerly winds prevail; the air is then very absorbent, and consequently irrigation must be attended to more frequently, in order to prevent the fruit from dropping off.

The end of July and beginning of August is about the hottest time of the year; the sirocco winds from the deserts of Sahara and Lybia then prevail, sometimes seriously injuring vegetable life. The animal system, too, for a few minutes during these winds when at their worst, feels as if charged with electricity, and seeks, but seeks in vain, for relief. Not a leaf is seen to move, yet its noise is like the rustling of a lady's silk dress, and it beats upon the face like the heat from a warm oven. The effect upon the Orange is such that the leaves in half an hour after assume a yellow tint, curl up, and hundreds of the fruit drop. The best way to assist the trees after such depression is to give them a good syringing at sunset. The average temperature in the shade, 88½°; night, 68°.

In September there is a slight change; clouds begin to rise, the air gets a little cooler, and refreshing breezes are gladly hailed. Watering, which forms the chief summer's work, instead of being repeated every 10 or 11 days, may now be let run to 15. The average temperature at noon in the shade is 84°; night, 65°.

From June to the end of September, owing to the quantity of dust which is carried about by the winds, the trees are syringed every evening to keep the pores of the leaves open and clean.

In October the fruit is at its full size, and towards the end of the month it will begin to colour; rain is generally looked for about this time, and consequently manure is dug in, consisting of goat, sheep, and horse dung mixed, to keep the soil warm during winter. This is done every third year.

Owing to alterations and other impediments I was obliged to defer manuring till late in January, and then used cow manure, and found it to assist the swelling of the fruit admirably during summer. Temperature at noon in the shade, 75°; night, 63°.

In November, after the rains have set in—and they come down with tropical vengeance—the repeated thunder-storms purify the air, and vegetable nature seems once more to awake like a giant refreshed. Whilst the fruit of the Orange is ripening, new wood is being made, to be again mutilated by a scourge in another form. Average temperature in November and December at noon in shade, 62°; night, 50°.

During January and February the trees are again at rest, but the wood just made, owing to the salubrity of the weather, is forced on, and being succulent is but ill adapted to stand strong gusts of wind.

In enclosed places the winds coil and recoil round the garden, doing more injury to the plants than a direct force would do. February is the coldest month in Malta, the thermometer sometimes falling to 32°. Average at noon in shade, 57°; night, 46°.

March generally sets in rough; trees planted near the north-east coast suffer very much from the spray of the sea, which is sometimes carried like a mist for two miles to the interior of the island. As with the sirocco, so with this, the best remedy is syringing with fresh water, which prevents the salt from injuring the foliage; the unripe wood by concussion is rendered quite black, resembling the foliage of Dahlias after a night's frost.

Such are some of the difficulties to be encountered during winter.

About the middle of March the trees begin to show flower, the weather becomes more mild, heavy rains assume the character of light showers, and about the middle of April the rains cease for the season; the trees about the latter period are in full flower, when the flowers are thinned from the tree for purposes of distillation. When there is a good crop of bloom the trees are quite white, resembling Deutzia gracilis, such is the profusion of flowers with which they are adorned. In the morning Orange groves are surpassing delightful, but as the sun gets hot the scent becomes oppressive. Just as the blooms are open they are attacked by the Barbary bee, an insect which buries itself in the flower, and gnaws the outer coating of the young fruit. As the fruit increases in size the mouth-prints of these pests become more visible; when it is ripe they have the appearance of rust. Thermometer in the shade at noon, 68°; night, 49°.

As there are only six months of the year which may be termed rainy months, *i.e.*, from the end of October to the middle of April, some idea of the quantity of water required for irrigation and of the labour involved may be formed, especially in places where there are no aqueducts or natural streams.

The water is collected from the streets and fields during winter in reservoirs, and in summer it is raised by a man with a rope suspended across a pulley; two buckets are attached to the ends, so that one is filling at bottom, whilst the other is being emptied into a trough from whence it runs round the canals to the place of irrigation, another man being stationed to conduct the water from the canals to the basins round the trees.

In December and January the Mandarins may be said to be in perfection; if allowed to hang longer than the latter month they get very pithy and tasteless.

The Blood Red, Blood Egg, and Portugal Oranges increase in perfection as they hang on the tree from Christmas to May, afterwards they begin to shrivel from evaporation, and wither up, owing to the increased temperature. *William Robertson.*

THE GREAT ROSE SHOW AT SOUTH KENSINGTON.

After being nearly smothered with crinoline, after a wearisome journey, after my horse dancing at the guard's whistle and nearly running away with me, after a feverish night, in which I reviewed and re-reviewed the different classes of most beautiful Roses; it occurred to me that a few words, "nothing extenuate; nought set down in malice" respecting the late Rose Show at South Kensington, might be acceptable to your readers.

I did not look into the amateurs' Roses, but in passing along I saw some very fine boxes of blooms, worthy of the palmiest days of Rose growing. Being a Censor in the Nurserymen's classes, I had a good view of their productions; and I must say that a finer or better lot of Roses, some in fine condition, and some in very fair condition, were never before to my knowledge exhibited. Where all did so well, it would be needless to specify at great length. The awards, which I believe to be fair, and made after great scrutiny and trouble, will show our opinions, whether right or wrong. After a splendid and hospitable *déjeûner*, given us by the Society, I bolted, as "listeners hear no good of themselves." No doubt had we a stethoscope such phrases as the following might have been heard in the breasts of the disappointed, viz., "Great shame!" "Always served the same!" "Don't know a Rose from ragged Jack!" "Hang me if this ain't my last 'go'! These latent ventriloquistical ejaculations, accompanied by "fantastic configurations of the physog.," pass off in a few days, and all again is good humour and preparation for the next tournament. I don't at present feel a twinge of conscience; and I hope my painstaking and able *confrères* are equally quiescent.

There were some boxes with very fine Roses in them to which the highest honours would have been awarded had their condition been equal to their size and formation. Messrs. Paul & Son's 48 trebles were all good and in good condition. Amongst them Lord Clyde and Charles Lefebvre especially caught my eye. Among the Hybrid Perpetuals Madame Furtado and Monte Christo (a bad grower) were conspicuous. The first and second prizes of three trusses of Tea, or Tea-scented Roses, were the best I ever saw, viz.: Souvenir d'Elise and Madame Willermoz. The box, however, that in my eye stood "precipuè et pre-eminens," was in Class 11, containing Mr. Keynes' 12 Charles Lefebvre's. It was a Rose show in itself, and must have gratified every one.

The 12 trusses of any new kind, viz., Louise Margottin and Lord Macaulay, were very good, and occasioned grave reflection. The first were choice in colour, of uniform size, and well grown; the others were well grown, not of uniform size, of great substance, but a little rough at the edges. I have no doubt that this will be a great and long-standing favourite, as it is a first-class Rose.

When Queen Elizabeth went to Winchester College, she asked a boy when he was last flogged; to which he replied:—

"Cur, Regina, jubes veterem renovare dolorem?"

So I will not refer more than is meet to my *contre-temps*. As my office was to see the Roses were not in duplicate, I could do no less than do my duty, especially as my *confrères* reminded me that we should be finely laughed at, if caught napping. We were obliged to disqualify a very fine box of Roses, belonging to a most honourable and high-minded man, to whom I attach no blame. I cannot say where the blame rests, but I suggest that a man should be allowed to stand by each lot of Roses till the place is cleared. It is impossible to suppose that Madame Charles Crapelet could have been placed with two Baron Gonellas intentionally by the exhibitor; a grey and two black horses would not have been more conspicuous. Very different from this was the case of another disqualification, where two Roses were tied together with matting to make a single truss. In one or two instances I found Roses improperly named, as Monsieur de Montigny for Baronne Prevost. I pointed it out to my *confrères*, but both were of opinion that where Roses were not in duplicate, they should not be disqualified for a misnomer. Let more care, however, be taken in future, otherwise it may affect the interests of spectators desirous of becoming purchasers.

There is only one thing that I could suggest as an improvement, viz., a prize for the finest array of any one, or more Yellow Roses—a gorgeous and golden display (open). I would, as regards admitting any one during adjudication, suggest that two policemen should stand, one at each end of the class under adjudication, and keep the coast clear for the judges. The pressure at last became quite a nuisance. *W. F. Radclyffe, Rushton.*

[It is a very absurd custom to let in the visitors at so early an hour as is now done. There is abundant time for them to enjoy themselves and the exhibition after 2 P.M., and none too much time for the judging between 10 and 2. At present everything is hurried and thrown into confusion, for no purpose whatever but to satisfy a whim.]

THE CULTURE OF THE PERPETUAL CARNATION.

The following remarks on the culture of these now popular and useful flowers, for which we are indebted to the Continental florists, are abridged from *L'Horticulteur Français*:—

THE Perpetual Carnation, on account of its vigour, accommodates itself to all soils, but it prefers open manured ground through which water will pass readily. The soil should be rather freely manured, and the manure dug in deeply. The surface of the ground should be occasionally broken up with a hoe, especially after much rain, in order to break the crust which hardens under the action of the sun. They require water but seldom, but it should be given plentifully.

In order to obtain strong plants, cuttings should be put in at the end of April or the beginning of May; they will then yield a very fine show.

To preserve the plants for several years, and to keep them dwarf, it is necessary to shorten each flower-stalk, after the bloom is over, to some 2 or 3 inches above its base. In this way there will be obtained every year a great quantity of flowers.

To enjoy the flowers in winter the plants should be put in an orangery or temperate greenhouse, giving them air as freely as possible. They ought only to go into the house when in flower or bud, because the buds restrain the ascending growth of the stalks. If, on the contrary, they are put in the house with the flower-stalks not yet provided with their buds, these stalks will lengthen out, and in the spring yield only some mis-shapen flowers, while the plants will be poorly furnished.

In the month of October the plants should be repotted with fresh earth in pots of 5 or 6 inches in diameter. They afterwards require shading for 8 or 10 days, and should be removed to the house only when they become liable to suffer injury from frost. Those plants which do not produce buds may be wintered in a pit, which can be covered with a frame and mats during intense cold, but it is necessary to avoid too much moisture; or they can be left in the open ground, where they will survive if the ground is well drained. In this case it is a prudent measure to cover them with straw, in order to shelter them from the sun, which is so fatal to plants when they have been frosted.

The following are new Perpetual Carnations, sent out in the spring of the present year by M. Alégatière, of Lyons:—

Secretary Cuzin.—Slate colour, and fiery scarlet; new shade of colour.

Madame Bondet.—Straw-yellow, strongly bordered with a fine violet colour; flowers very large.

Madame Pecoud.—Fiery orange, edged with slate colour; new shade.

Robert Fortune.—Pure white, heavily bordered with amaranth; dwarfish, vigorous, and free-blooming.

Ernest Benary.—Deep fiery scarlet, striped with maroon; very fine.

President Faivre.—White, with a broad cerise band; flowers enormous, and well formed. This vigorous and abundant flowering variety is quite an acquisition amongst the Perpetuals.

Home Correspondence.

Snakes.—Can any of your correspondents inform me how the noise commonly known as hissing in snakes is produced? They are extremely plentiful in this district, and this summer I have had occasion often to handle them whilst alive (both the ringed snake and viper), but never heard the noise produced till a few days ago, when a specimen of the common snake (Natrix torquata), hissed loudly and repeatedly, both whilst I held it in the air by the tail, and whilst allowed to rest partly on the floor. I trust that your readers will excuse my application should this matter be one well known; but I have been unable to find the explanation in any of the books on reptiles that I have access to; and I have heard so many reasons given for the noise that I should be very glad to know the true cause. *E. O.*

Royal Ashleaf Potato.—This is I find first-rate; it is early, handsome, a good cropper, and of excellent quality. It will supersede the excellent but fitful old Ashleaf. Mr. Steggall's judgment concerning it is quite correct. It is a strong grower, and the greens withstood perfectly sharp hoar frosts, from which other sorts suffered. From 11 Potatos I cut 43 sets, which came up without a miss. An Apple and a Potato can be cooked in more ways than any other fruit or vegetable. Without a good Potato and without a silver fork a dinner is not a dinner. *W. F. Radclyffe, Rushton.*

Mumbo Jumbo—I understand that the tomfoolery of this potentate was not sanctioned by the Royal Horticultural Society [Of course not], and that measures have been taken to prevent the renewal of so degrading an exhibition. Some day I may reveal its secret history. In the meanwhile I hope you will find room for the following extract from the Parliamentary proceedings of July 1, as given in the *Times*. *A Disgusted F.H.S.*—"Mr. Ayrton said that up to this time he had been under the impression that the Department of Science and Art confined itself to the collection of the odds and ends which make up the exhibition at South Kensington. (A laugh). But it would seem that the Department was now applying itself to literary pursuits, in order to combine science, art, and literature. It had published a book entitled *Mumbo Jumbo; or, the Mountains of the Moon on the Gaboon.* (Laughter). He had had the misfortune to read that production, and certainly it was the most remarkable compound of nonsense he had ever perused in his life. (A laugh, and 'Hear.') At first one might suppose that there was some concealed wit in it—some lurking fun or humour in it; but there was none. It was a concatenation of nonsense such as might be expected to come from a combination of children of 12 years of age, writing a dramatic sketch under the superintendence of some grown person devoid of sense. (Much laughter.) The thing would not deserve any consideration but for one circumstance. A well-conducted and respectable person connected with the Museum, had been asked whether it was true that he was to take a part in the representation of the drama of *Mumbo Jumbo; or, the Mountains of the Moon in the Gaboon;* and whether in order to make himself more interesting in the eyes of the enlightened audience he was to make his face as black as a coal. (A laugh.) He replied that this performance was under the patronage of the Coles, and that it would be necessary for him to blacken his face to that extent, even though he might look foolish. He said he had a wife and children and had no chance; he was compelled to make a fool of himself on the occasion. (Laughter and 'hear.') Under these circumstances he had to ask the right hon. gentleman whether public servants at South Kensington, who might be respectable considering the salaries they received, had been obliged to blacken their faces, and take a part in the coarse monstrous and senseless performance that he was told had taken place in the Royal Horticultural Gardens. He did not know whether hon. gentlemen had been present at the performance, if so the House might have the advantage of hearing a better account than he had been able to give of the affair. He had only read the production. That was quite enough to make him avoid the Royal Horticultural Gardens on the occasion. (Laughter and 'hear, hear.') It was really a serious thing if respectable public servants had to make fools of themselves. Such a proceeding would be in the last degree degrading to our sense of public decency, and to the refinement and feeling which was supposed to exist in this country. (Hear.) He hoped the right hon. gentleman would give the House an assurance that the Science and Art Department would not embark in literary pursuits or dramatic performances. (Cheers.)"

Sun-stroke on Grapes.—In your Paper just received I see an inquiry as to the behaviour of the Lady Downes' Seedling Grape, at the crisis of the final swelling. It becomes discoloured, looks as if pinched by negro fingers, and of course is worthless. I believe that this results simply and solely from sunstroke. Muscat of Alexandria does the same, if fully exposed at a dangerous angle, and at the critical period, to the midsummer sun. Let your correspondent shade his bunches, as we have done, to obviate the evil, and I think it will not extend. The Grape is a most valuable and a very handsome fruit, but like other thick-skinned fruits it has a flaw in its armour at the time of most rapid expansion. *Richard D. Blackmore, Teddington.*

Cool Treatment of Orchids.—I can fully endorse all that Mr. Bateman has written on this subject, having seen his plants in the cool house at Knypersley growing most luxuriantly; they were perfect pictures of health and beauty, amply repaying the small outlay that had been incurred in providing a house so well adapted and so congenial to their growth, and reflecting great credit on Mr. Sherrat's skilful management. The following is a list of Orchids that have made great progress here in a house where a miscellaneous collection of soft-wooded plants are grown in a mean temperature of 55°, viz., Lycaste cruenta, L. Skinneri, Oncidium Wentworthianum majus, O. leucochilum, Odontoglossum citrosmum, O. pulchellum, O. grande, Maxillaria punctata, M. tenuifolia, Phaius grandiflorus, P. Wallichii, P. maculatus, Cypripedium barbatum, C. insigne, Brassia verrucosa, B. Wrayæ, Zygopetalum Mackaii, Dendrobium Paxtoni, Epidendrum crassifolium, and Cælogyne cristata. These plants were taken from a mean temperature of 75° on the 30th of April, 1863, and placed at once in the cool house in a mean temperature of 50°. During the hottest part of the summer the temperature ranged from 50° to 65°, with abundance of air; the roof, front and ends of the house were smeared over with a mixture of chalk and milk to prevent the direct rays of the sun from doing injury to the foliage; this also causes a nice subdued light to fall on the plants, which they appear very much to enjoy. There they received the same treatment as the soft-wooded greenhouse plants that principally occupy the house. The pseudo-bulbs of Odontoglossum citrosmum measure 5¾ inches round the largest part of the bulb, whilst the bulbs grown in a mean temperature of 75°, are only 3½ inches. Mr. Warner states last year, page 173, that O. citrosmum requires more heat than most others; now with me it has done better than any of the others in a cool house. Oncidium Wentworthianum measures 8½ inches round the largest part of the pseudo-bulb, and 3½ inches lengthways. I cut off three dead flower spikes that had lasted in great beauty for nearly seven months; they had borne 315 well expanded and beautiful flowers; there were then three more spikes on the plant, promising to be even finer than the three preceding ones, and I have no doubt that the plant will produce three times the quantity of spikes, and three times the amount of blooms, after it has had another season's growth in a cool house. Oncidium leucochilum measures 9 inches round the largest part of the pseudo-bulb, and 5¾ inches lengthways; this is three times the size of the bulbs grown under the former treatment. There is a very strong flower spike on each side, at the base of the large pseudo-bulbs, showing to what perfection this most beautiful Orchid can be brought, if grown in a cooler temperature, instead of stewed to death in an East India house. This, with O. Wentworthianum and many other valuable Orchids, have been dragging out a miserable existence under the warm system, ever since the year 1838; they have made more progress in less than one year under cool treatment than in the whole 24 years they were in vapour baths. I am quite convinced that many Orchids will stand from 10° to 25° of frost without receiving the slightest injury. During the very severe frost of 1860-1861 a large plant of Phaius Wallichii was left in a shed, and endured from 18° to 25° of frost for more than a week before I noticed its unfortunate position. I was very much afraid when I saw it that I should lose it. I immediately applied the usual remedy for frozen plants, namely syringing it heavily with cold water until the frost was got quite out of it; the plant was then placed in a cool dark place for a short time, and to my delight it soon began to show signs of returning animation. It was then placed in a vinery in a temperature of 60°, when it made rapid growth, and it is now in a cool house, a very fine plant. *J. Wills, Gr. to Sir P. Grey Egerton, Bart., M.P., Oulton Park, Tarporley, Cheshire.*

Govenia lilacea.—Mr. Skinner has shown me a flower spike and leaves of this pretty pale-flowering Orchid, said to have been imported in March last from Guatemala, and grown in a back kitchen in loose sandy soil with plenty of drainage, the pot being set in a saucer having always half an inch of water in it. The temperature was about 65°; it had been in flower 23 days, and is in good condition now, only a few of the first flowers having dropped off. *Geo. Eyles.*

Foreign Correspondence.

AN EMIGRANT'S LIFE IN NEW ZEALAND: *Rahaia Terrace Station, March* 22, 1864.—I am happy to say I am quite well, and at last have found employment, as you shall hear. After I had written my first letter, which I despatched as soon as I landed, I thought I would not write again until I had got a permanent situation, or, as they say here, "billet;" but I did not hear of one before the 1st of January, at which time my boxes were not off the ship. This situation I must tell you was 70 miles from Christchurch, and I could only get up there by walking, so I had to set off with nothing but the clothes I stood in and my blanket, and walk there, and it was quite an uncertainty as to whether or no I obtained this situation. However, to make short of the story, I arrived there in two days' walk, and was taken on. Well, the first job I had to do was to hoe up 2 acres of Potatos, and so I stuck to that until I finished them; and then I had to go and help the shearers, chop wood, fetch water, kill sheep, clean stables out, clean horses, &c., and after that I was put on as shepherd for a short time. Well, I am happy to say I gave satisfaction, and have continued as shepherd ever since. I am now second shepherd on the station, having been promoted, and get better pay and better living; so I hope now I shall get on. In the shearing time we had 45 men at work on the station, and we had such a small hut to sleep in that we had to lay on the bare floor (no beds, not even straw), one on the top of the other, just like a lot of pigs; and there were such swarms of fleas—I killed 145 in five nights off one blanket. What would you have said to that? They used to have hurdle races up and down my legs, and when thirsty, set to and had a suck at my blood. Well, I was on the station for two months. I could neither get pens, ink, nor paper, or else I should have written, so you see it was not my fault. One day I received a note saying that my boxes were lost, and that if I did not go and look after them I should in all probability lose them altogether; so off I had to trot again down to port, which was 80 miles, and I walked 160 miles in seven days, and found them after a good deal of trouble, but they had been opened at the bottoms and several things taken out; that journey cost me rather over 5*l.* This is an awfully expensive place; no one can live in the ordinary way under 15*s.* a day, and then live in the plainest manner possible. Well, as soon as I got back again, one of our shepherds left, and I put in for his billet, which was at our out station, in the snowy mountains, and after waiting a day or two our overseer came and told me I had given every satisfaction and I might go for a month on trial; so off I set with my sheep, having 2935 to take care of, and to yard and tail every night and morning, and then follow them all day, Sundays and all, wet or dry, from sunrise to sunset; and I tell you the days did seem awfully long and lonely, but I don't mind them now. Fancy, I never had a clean shirt on from the 1st of January until about the 7th of March, by which

time I managed, after waiting patiently, to get my portmanteau up the country. I have two dogs, one which the station finds me, and one which I bought for 15*l.*—rather a long price, is it not? but people think nothing of giving 30*l.* for a dog. I knew a man up in the Mackenzie country, who sold his sheep dog for 65*l.*; only fancy that! I am sorry to say that since I bought mine I have been very unfortunate indeed, for the other day a man drove a dray over the toes of the hind foot of my dog, and I am afraid I shall have to kill it, and if so it will be a sad loss to me, as I have no money to buy another with yet, although I have one in my eye, but the man wants a much longer price than what I gave for my present one. I have written to Messrs. A. & B., and ordered them to send me out two knives, for we cannot get them here, and they are absolute necessaries; we cannot do without them. I am such a distance from town that I can only go once a year. When you write to —— be sure and tell him I do not know what I should have done if I had not had the telescope he gave me; it is a first-rate one. (*From the son of an English Country Gentleman in New Zealand.*)

Societies.

Royal Botanic, Regent's Park: *July* 2 (*Third Great Show*).—This, the third and last great exhibition of the season held under the auspices of this Society, took place on Saturday last, and, as far as fine plants and excellent fruit were concerned, it was perfectly successful, the Black Grapes especially being wonderfully fine, and Stove and Greenhouse Plants, Orchids, Pelargoniums, Fuchsias, and Ferns, exhibiting all the freshness and beauty of appearance which they possessed earlier in the season. The day, too, being fine there was a large attendance of visitors.

Stove and Greenhouse Plants.—Among these we noticed a remarkably well-flowered specimen of Rhynchospermum jasminoides in the form of a neat bush, in luxuriant health, and emitting a fragrance which was quite delightful. This came from Mr. Kaile, gr. to Lord Lovelace, who had also the pretty rosy-flowered Azalea called crispiflora. With the different varieties of Kalosanthes, all showy autumn plants, several collections were ornamented; and there were likewise abundance of Allamandas, Stephanotis, Dracophyllum gracile, Dipladenias, Polygalas, Everlastings, Vincas, and Pleroma elegans, one of the handsomest of Melastomads, with violet purple surprisingly persistent blossoms, each as large as a crown piece. In Mr. Collyer's collection of 16 plants there were, in addition to other things, the clear yellow Gompholobium splendens, a pretty plant when well flowered as this was; and from Mr. May came a wonderfully fine specimen of the salmon-coloured Ixora salicifolia; also neat examples of white Ixora, Statice imbricata, and a flesh-coloured Cape Heath called Erica venosa. Mr. Williams had a prettily flowered plant of Statice profusa, one of the most free-flowering and useful of the genus. Of other stove and greenhouse plants an excellent collection was contributed from Hastings by Mr. Gilbert, gr. to E. S. McMurdo, Esq. It consisted of medium-sized plants charmingly in bloom, trained, but not too stiffly, and set up with a skilfulness as to contrast of colour which did the exhibitor credit.

Awards.—16: 1, Mr. Whitbread; 2, Mr Gilbert; 3, Mr. May. 10: 1, Mr. Fraser; 2, Messrs. Lee; 3. Mr. Williams; 4, Mr. Rhodes. Amateurs: 1, Mr. Gilbert; 2. Mr. Peed; 3, Mr. Chilman; equal 4, Mr. Green and Mr. Wheeler; 5, Mr. Ingram. 6: 1, Mr. Kaile; 2, Mr. Page; 3, Mr. Cross.

Fine-foliaged Plants.—These were shown in large numbers, and their beauty and variety rendered them objects of general admiration. Among them were Rhopalas, various kinds of variegated Yucca, Theophrasta imperialis, Cycads of different sorts, Palms; Caladiums, of which Wightii, Chantinii, Belleymei, and the little speckled argyrites were the most conspicuous; the gracefully growing orange-veined Cordyline indivisa, Alocasia metallica, and A. macrorhiza variegata; very fine bushes of Croton angustifolium, Cyanophyllum magnificum, the ample deep green-leaved Anthurium acaule, and the white-veined A. leuconeurum; Pandanus elegantissimus; the singular brownish deeply cut-leaved Oreopanax dactylifolium, and the large curiously perforated-leaved Monstera deliciosa.

Awards.—10: 1, Messrs. Lee; equal 2, Mr. Williams and Messrs. A. Henderson; 3, Messrs. Jackson. Amateurs: 1, Mr. Baines; 2, Mr. Fairbairn; 3, Mr. Taylor; 4, Mr. Young.

Ferns.—These, together with the plants just enumerated, formed as it were a background to the exhibition, and set off the flowering plants to increased advantage. The shady nooks and recesses in which they were placed were by no means the least attractive portions of the show. Among varieties contributed under this head there was little that has not been previously reported on. We may however add, that in health and general luxuriance of growth some of the plants exhibited may have been equalled but never excelled.

Awards.—12: 1, Mr. Williams; 2, Mr. Bull. Amateurs: equal 1, Mr. Young and Mr. Martin.

Cape Heaths.—These were furnished in admirable condition, especially collections from Mr. Rhodes of Sydenham, which were well grown and beautifully bloomed, and altogether well deserving of the 1st prize which was awarded them. Mr. Peed likewise showed good plants, as did also Mr. Wheeler and Mr. Page. Among the different varieties were good examples of Savileana, loaded with charming little polished rosy blossoms; obbata, Massoni, Aitoniana, Candolleana, the comparatively new kind called Spenceriana; nobilis, a yellowish-buff kind; Vernoni, Paxtoni, metulæflora bicolor, and others.

Awards.—10: 1, Mr. Rhodes; 2, Messrs. Jackson. Amateurs: 1, Mr. Peed; 2, Mr. Baxendine. 8: 1, Mr. Wheeler; 2, Mr. Page; 3, Mr. Chilman.

Roses.—Cut blooms of these were all that could be desired, and elicited general admiration. Among them some of the most conspicuous were Madame Charles Crapelet, M. Julie Daran, Triomphe de Caen, Maurice Bernardin, Gen. Washington, M. Clemence Joigneaux, Adolphe Rothschild, Lady Canning, Olivier Delhomme, Gloire de Santenay, Lord Clyde, La Brilliante, John Hopper, Beauty of Waltham (wonderfully fine), Maréchal Vaillant, Eugène Lebrun, Senateur Vaisse, Madame Charles Wood, and Louise Margottin.

Awards.—50: equal 1, Messrs. Paul & Son and Mr. Turner; 2, Mr. Cant; 3, Mr. Fraser; 4, Mr. Mitchell. 25: 1, Mr. Ingle; 2, Mr. Exell; 3, Mr. Wright. 24: 1, Mr. Turner; 2, Mr. Cant.

Fuchsias.—Several collections of these were shown, well-flowered, and otherwise in good condition. Some of the groups were, however, disqualified on account of the pots in which they were grown not being in accordance with the regulations. Sorts with white corollas were confined to examples of Madame Cornelissen. Among dark sorts were Lord Elcho, Prince Leopold, Comte Cavour, and Sir R. Peel. Light varieties comprised Minnie Banks, Wiltshire Lass, and Queen of Hanover.

Awards.—6: 1, Mr. Cross; 2, Mr. Weston.

Orchids.—Of these an attractive bank was furnished by the usual growers of them. In large groups were magnificent plants of Lælia purpurata, Cattleya amethystoglossa, different sorts of Aerides, Odontoglossum citrosmum, Lady's Slippers in great variety, the new Dendrobium Dayanum, the green-tailed Dendrochilum filiforme, the red Trichopilia crispa, Calanthe Masuca, Barkeria melanocaulon, Vanda Batemanni, and various Oncids and Brassias. In smaller collections Mr. Penny had a wonderfully fine Cattleya Mossiæ; also Lælia elegans and Brysiana, and Sobralia superba, the last with rich deep purple blossoms. Mr. Williams had as usual a good collection, as had also Mr. Beck, Mr. Ingram, Mr. Woolley, and Mr. Parker. From the last named exhibitor came a good plant of Acineta Humboldti.

Awards.—20: 1, Mr. Baker; 2, Mr. Milford; 3, Mr. Peed. 12: 1, Mr. Penny, 2. Mr. Page, 3, Mr. Chilman. 6: 1, Mr. Williams; 2, Mr. Parker; 3, Mr. Woolley. Amateurs: 1, Mr. Wiggins; 2, Mr. Ingram; 3, Mr. Wheeler. 12: 1, Mr. Fraser.

Pelargoniums.—These were again furnished in admirable condition, especially by Mr. Bailey, who has at all the shows held here this season, produced surprisingly fine specimens. Scarlets were also shown, and made a fine display. For names of varieties we must refer to former reports.

Awards.—10: 1, Mr. Bailey; 2, Mr. Wiggins. 6: 1, Mr. Bailey. New: 1, Mr. Bailey; 2, Mr. Fraser. Fancies: 1, Mr. Fraser. Amateurs: 1, Mr. Bailey; 2, Mr. Shrimpton. Scarlets: 1, Mr. Catlin; 2, Mr. Pettit.

New Plants.—Few of these were shown that have not been noticed already in our columns. Mr. Bull received First-class Certificates for Canna nigricans, a dark-coloured seemingly useful kind, Geonoma Ghiesbreghtii, Salpichlæna volubilis, the singularly cut leaved Ophioglossum palmatum, and Araucaria Rulei. The same exhibitor had also various other interesting rarities, to which attention may be directed hereafter. From Mr. Leach of Clapham, came a variety called superba of the charming terrestrial Orchid Disa grandiflora; Messrs. A. Henderson furnished a variety of Gardenia florida with leaves prettily variegated with white; Messrs. Low sent Erica Lindleyana and venusta, both promising varieties; Mr. Townsend showed violet purple flowered varieties of Clematis lanuginosa; Mr. Williams a handsomely variegated Hemerocallis, a Beaucarnea, a narrow-leaved Yucca, a variegated variety of Mimulus cupreus, and Nidularia Innocentii; Mr. Parker contributed a shrub, stated to be hardy, called Chimaphila maculata; Mr. Ivery various fine varieties of hardy Ferns; and Mr. Davidson a variegated Laurel.

Seedlings.—To a few of these Certificates were given. Among varieties thus distinguished were Pelargonium Clipper, a brilliant scarlet sort from Mr. Bull; a Pansy named Yellow Beauty, Pink British Queen, and Carnation Duke of Cambridge, from Mr. Hooper, of Bath; Petunia Indiana, and a prettily striped sort called striata perfecta, the former from Messrs. Smith, Dulwich, the latter from Mr. Holland, of Isleworth; Fuchsia Lucrezia Borgia, a kind with wide spreading corolla, streaked with red and violet, from Messrs. E. G. Henderson; a crimson Rose, called Dr. Lindley, from Mr. Wm. Paul; Verbena Earl of Aylesford and Velvet Cushion, the former from Messrs. Perkins & Son, the latter from Messrs. E. G. Henderson; Calceolaria Beauty of Herts, from Mr. Watson, of St. Albans; and another Calceolaria, named Charmer, from Mr. Bull.

Fruit.—That which excited most admiration, as well it might, was an exhibition of Black Prince Grapes from Mr. Hill, gr. to R. Sneyd, Esq., of Keele Hall, Staffordshire. It consisted of six bunches, three of which weighed 13 lbs. 10 oz., and the other three 11 lbs. 10 oz., all of them measuring some 17 or 18 inches in length, well shouldered, and in colour as black as sloes. Could skilful Grape-growing be carried farther? Surely these, and other almost equally fine productions from the same excellent exhibitor, proclaim him to be one of the most successful cultivators of the Vine in Europe. Worthy of association with Mr. Hill is also Mr. Meredith, of Garston, near Liverpool, whose Black Hamburghs have from time to time astonished even first-class Grape growers themselves. Their matchless colour, great size both of bunch and berry, plumpness and symmetry of form, readily distinguish them as "Meredith's" even among multitudes of what might well be called first-class Grapes. Long may the two cultivators who have just been named enjoy their well-earned reputation.

Pine Apples.—Among these were some fine Providences, one of which, from Mr. Bailey, of Shardeloes, weighed 12¼ lbs.; excellent Queens came from Mr. Young, gr. to C. Bailey, Esq., M.P.; Mr. Henderson, gr. to the Duke of Sutherland at Trentham; and Mr. Hall, gr. to Earl Scarborough; and we also noticed some good fruit of Enville and other kinds.

Grapes.—In addition to those mentioned above were some very fine bunches of Black Hamburgh from Mr. Sawkins, the only fault belonging to which was that they were scarcely sufficiently well coloured; Mr. Henderson had wonderfully good Black Hamburgh, as had also Mr. Embry and others. Of Golden Hamburgh and Buckland Sweetwater we noticed some fine bunches; Mr. Pottle, gr. to B. D. Colvin, Esq., had beautiful examples, scarcely ripe, of Trebbiana; and Grizzly Frontignan was also shown in excellent condition, as was also Mr. Thomson's fine new Grape Duchess of Buccleuch, of which favourable reports have already appeared in our columns.

Peaches.—These were for the most part large and fine, but in many instances greatly injured by carriage; several meritorious exhibitions justly failed to obtain prizes on this account.

Nectarines.—Among these were many excellent dishes; those consisting of Violette Hâtive and Elruge were especially large and fine.

Melons.—The season being favourable for these, examples of most of the best sorts were shown. Among Scarlets, the Windsor Prize stood at the head; and among Green-fleshed kinds, the best was Meredith's Hybrid Cashmere.

Figs.—Among these were very fine examples of Brown Turkey and Brunswick.

Cherries.—These consisted chiefly of Elton, Bigarreau, May Duke, and Black Circassian, beautiful fruit of which came from Mr. Henderson, of Trentham.

Strawberries.—Among these we noticed admirable exhibitions of Oscar, Sir C. Napier, Eleanor, British Queen, Admiral Dundas, Empress Eugénie, Crimson Queen, Keens' Seedling, Marguerite, Alice Maude, Goliath, Sir Harry, La Constante, Cuthill's Princess of Wales, Wonderful, an immense bearer, and Mr. Turner's new sort called Sir Joseph Paxton.

Miscellaneous Collections.—Conspicuous among these was a well varied and excellent display of fruit from Mr. Henderson, gr. to the Duke of Sutherland, at Trentham. It comprised admirable Black Hamburgh Grapes, Figs, Enville and Cayenne Pine Apples, three bunches of the Chaptal Grape, a showy white variety, the clusters of which are long and tapering; Melons, Peaches, Nectarines, and Strawberries. From Mr. Penny, gr. to H. Gibbs, Esq., St. Dunstan's, Regent's Park, came beautiful Peaches and Nectarines, very fine Black Hamburgh and Muscat Grapes, three bunches of which weighed 9 lbs. 13 oz.; a Queen Pine Apple weighing 3 lbs.; Melons, Strawberries, and other fruit, all of first-rate quality. In other collections there were also beautiful Grapes, Peaches, Strawberries and Cherries.

The names of exhibitors who were successful in obtaining prizes for fruit will be found in our advertising columns.

Royal Horticultural: *July* 6 (*Second Great Show*). This was in all respects an excellent exhibition; Stove and Greenhouse Plants were abundant; there was a fair amount of Fancy and other Pelargoniums; Fuchsias comprised some noble standards, as well as well-grown small plants; of Orchids there were the usual contributions; the supply of New Plants and Seedlings was satisfactory; and of fruit there was a highly interesting display. Their Royal Highnesses the Prince and Princess of Wales and other members of the Royal family honoured the exhibition with their presence in the morning before it was opened to the public.

Stove and Greenhouse Plants.—Among these were some charmingly-bloomed examples of Dipladenia crassinoda, and we also noticed one plant of the now seldom seen D. splendens. Of Pleroma elegans, one of the best of hardy greenhouse plants, many beautiful specimens were contributed; Allamandas and Stephanotis were also in admirable condition, as were also Everlastings, Statices, and Kalosanthes, the last giving life and colour to our greenhouses in autumn, and when skilfully associated with fine-leaved plants, producing a large amount of gaiety.

Awards.—12; 1, Mr. J. Fraser; 2, Messrs. Lee; 3, Mr. Williams. 6: 1, Mr. Rhodes; 2, Messrs. A. Henderson. 9: 1, Mr. Peed; 2, Mr. Chilman; 3d, Mr. May; extra, Mr. Wheeler. 6: 1, Mr. Ingram; 2, Mr. Page.

Plants remarkable for the beauty of their Foliage.—Among these were charming specimens of Variegated Yuccas, Cordylines, Rhopalas, Pandanus, Oreopanax, Alocasias, Theophrastas, and plants of that description, intermixed with noble specimens of Ferns, among

which one of the most striking on account of its glossy ample bright green leaves was Neottopteris or as it is sometimes called Thamnopteris australasica. This came from Messrs. Lee.

Awards.—9: 1, Mr. Baines; 2, Messrs. Lee. Variegated, 9: 1, Messrs. Veitch; 2, Messrs. A. Henderson; 3, Mr. Young.

Caladiums.—Of these there was a considerable assemblage, and being well grown, they were by no means unattractive. Veitchii, Lowii, Belleymei, argyrites, Chantinii, and Wightii still occupy the first rank among them; but some of the varieties of bicolor and others also well deserve attention.

Awards.—1, Messrs. Veitch; 2, Messrs. A. Henderson.

Ferns.—These comprised some wonderfully fine Gleichenias, a genus which now possesses many beautiful species. Cibotium princeps also appears to be a favourite with cultivators. Among others were Marattia elegans and Adiantum cardiochlæna, two useful, distinct looking kinds. Of variegated sorts, Mr. Bull had a small group, in which were different varieties of Pteris tricolor, argyræa, and cretica albo-lineata. Of hardy kinds, Messrs. Ivery and Salter furnished beautiful examples, and of Trichomanes and Hymenophyllums, a small group of beautiful specimens came from Mr. Watson, of St. Alban's.

Awards.—12: 1, Mr. Bull; 2, Mr. Martin; 3, Mr. Young. British: 1, Messrs. Ivery; 2d, Mr. Salter.

Lycopodiums.—When well managed these equal in beauty some of the smaller growing Ferns, and without them a Fernery would lose much of its attractions. What, for instance, makes so nice an indoor edging as Toothed Lycopod, or a better covering for soil in small borders, or even in Wardian cases? For the ornamentation of the latter some of the larger growing sorts are also often employed with advantage. From Mr. Young came an interesting example of the close growing L. apodum, carpeting the surface of a large flat pan with a dense mass of vivid green.

Awards.—1, Mr. Higgs; 2, Mr. Young; 3, Mr. Ingram.

Orchids.—Among these there was little that has not received notice already in our columns. Of the beauty of Lælia purpurata, and of the different varieties of Cattleya Mossiæ it is difficult to speak too highly, and there were also some good Oncids and Dendrobes. Varieties of Lady's Slipper have also increased wonderfully of late years, and some of them are really beautiful. The pale green-tailed Dendrochilum filiforme seemed to excite considerable attention; and we noticed a small plant of white Phaius, which has not been shown before this year.

Awards.—Aerides, Vandas, and Saccolabiums: 1, Mr. Baker; 2, Mr. Milford. Cattleya and Lælia: 1, Mr. Milford; 2, Mr. Baker. Various, 9: 1, Mr. Williams; 2, Mr. Parker; 3, Mr. Woolley. Amateurs: 1, Mr. Baker; 2, Mr. Milford; 3, Mr. Penny. 6: 1, Mr. Wiggins; 2, Mr. Baker; 3, Mr. Page. Anæctochilus: 1, Mr. Ingram.

Pelargoniums.—From Mr. Bailey again came wonderfully fine plants, among which one of the most conspicuous was Lady Canning, a beautiful soft rose with white eye, and blotched in the upper petals. Etna and others were also in excellent condition. Queen of England, from Messrs. Dobson, is a pretty white sort with two small rosy crimson spots in the upper petals; the same exhibitors had also Perdita, Lord Clyde, and the spotted rose-coloured kind called Leotard. From Mr. Wiggins, gr. to W. Beck, Esq., came Maid of Honour, a lilac sort with white eye and dark top, well worth attention on account of its distinctness of colour; Regina formosa, rose with white eye and blotched top petals; and Eurydice, white blotched with red in the top, were in the same collection. Fancy kinds were likewise well flowered, and there was a fair display of Scarlets. Mr. Salter's Nosegay varieties, of which some account was given last week, received a first prize. Among white Zonal sorts the best were Virgo Marie, and Madame Vaucher, and conspicuous among different shades of Scarlet were Woodwardii, Leonie, Comte de Morny, Rose Rendatler, Martin Gireau, Attraction, Monsieur Martin, Aurora, and Rubens; the two last rosy salmon-colour. Of variegated-leaved sorts Mr. Fraser and others had good collections, in which the best were Mrs. Pollock, Mountain of Snow, and Alma; others, in the way of Golden Chain, as shown appeared to be no improvement on that still useful variety.

Awards.—5: 1, Mr. Bailey; 2, Mr. Wiggins. 6: 1, Messrs. Dobson; 2, Mr. J. Fraser. Fancies, 6: 1, Mr. Bailey; 2, Mr. Shrimpton; 3, Mr. J. Fraser. Scarlet: 1, Mr. J. Fraser; 2, Mr. Salter. 6; 1, Mr. Duke; 2, Mr. Hawes. Variegated, 12: 1, Mr. Fraser; 2, Mr. Bally. Nosegay: 1, Mr. Salter.

Fuchsias.—From Mr. Higgs, gr. to Mrs. Barchard, came three Standards at least 10 feet in height, with clean, straight stems, and fine heads of flower. Mr. Young, gr. to R. Barclay, Esq., showed small standards, among which the best was M. Cornelissen, a sort with a white corolla, apparently well suited for this description of growth. From Mr. Cannell came well-managed yearling plants, not large, but beautifully flowered. Finsbury Volunteer is a good sort with violet corolla and red sepals; among light sorts were Prince Alfred and Reine Blanche.

Awards.—6: Mr. Cannell; 2, Mr. Green. New: 1, Mr. Cannell. Standards: 1, Mr. Higgs; 2, Messrs. Lee; 2d, Mr. Young.

The subjects brought before the Floral Committee were on this occasion shown in classes. Amongst new plants in flower the most remarkable were Erica Lindleyana, and Nidularia Innocentii, both from Mr. Williams, of Holloway, to which First-class Certificates were given. The Heath bore some resemblance to gemmifera elegans, but was brighter coloured, the red at the base being deeper, the green tips more decided, and the flowers somewhat larger; as a summer-flowering Heath of the Massoni style it will be a very useful plant. The Nidularia was a good stove Bromeliaceous plant, with longish green leaves, and bright red bracts, some of them tipped with green, the flowers purple; from the endurance of the colours of their bracts plants of this character are very useful for decoration. Mr. Veitch had Linum Chamissonis from Chili and Peru, a dwarf sub-shrubby perennial with a good deal the aspect of a St. John's Wort, its deep orange-yellow flowers being narrow petaled and stained with red outside; though a free flowering plant, this did not appear to carry a head of bloom, and hence it only received a Commendation. A similar award was also given to an Ixora, which had sprung up amongst soil from Moulmein, shown by Mr. Baines, gr. to H. L. Micholls, Esq., of Bowdon, and which, when more thoroughly developed, will probably become a useful plant. It appeared to be of free-flowering character, with something the habit of crocata and coccinea, but with flowers more salmony than the former and paler than the latter. A curious plant, with ovate obtuse mucronate leaves, clothed like the stem with white silky hairs, and bearing a spike of yellowish green flowers, called a Clianthus, was shown by Mr. Cox, gr. to J. Tyrrell, Esq., of Exeter.

In the Class of New Plants not in Flower, First-class Certificates were given to the following subjects, namely, to Gardenia florida variegata, from Messrs. Henderson & Co., of Pine Apple Place, a beautifully-marked plant, with most distinct and well defined variegation; to Salpichlæna volubilis, a climbing Lygodium-habited Blechnoid Fern, quite distinct in character, and to Ophioglossum palmatum, a remarkable tropical Adder's-tongue, with broad fingered fleshy fronds, both from Mr. Bull, of Chelsea; and to a glaucous-leaved species of Beaucarnea, from Mr. Williams. An Anthurium from the Society's own collection, one of the plants collected by Weir, with winged stalks and cordate leaves of a rich velvety shaded green marked by whitish ribs, a plant which might have received a higher award, as it will certainly one day deserve it, received a Second-class Certificate. Pandanus Blancoi, from Mr. Bull, a slender elegant long-leaved glaucous species of Screw Pine, received a similar award; and a Commendation was given to Mr. Watson, of St. Albans, for a large grassy-leaved plant, having a pair of pale-coloured ribs on each leaf, and called Astelia bivittata. In the same group Mr. Bull had young plants of a Conifer, under the name of Araucaria Rulei, which would have received a high award if they had been large enough to have shown satisfactorily that they were identical with the dried specimens which had been sent over from Australia along with them, the true plant being evidently one of first-class quality. Two Dammaras from the same exhibitor, Moorei, with long narrow gracefully recurving leaves, and hypolenca, with blunt leaves glaucous beneath, were not enough developed; and the same may be said of two Bornean species of Anæctochilus, also from Mr. Bull, one of which especially, called magnificus, appeared likely to become a very beautiful object. In this group Mr. Veitch had Selaginella involvens, and a variety, argentea variegata; and Messrs. E. G. Henderson & Son Sedum Sieboldii medio-variegatum, all of which we understood the Committee had previously dealt with. There was also Iresine Herbstii, from Messrs. Herbst & Stenger, shown as a bedding plant, a soft-looking herb, of a deep brownish-red colour, with red ribs, the leaves kidney-shaped and cupped, or sometimes bilobed. Their cupped form gives them a somewhat starved or pinched-up appearance, which we fear may militate against the use which was suggested might be made of the plant.

The class of New Orchids was not numerously filled. The best plant shown was Dendrobium infundibulum, one of the kinds with black-haired stems and large white flowers, blotched with orange on the lip, in the way of D. formosum; this came from Mr. Williams. Another interesting plant shown by Mr. Bull, was the purple-petaled Cypripedium Hookeræ, which is as remarkable for its handsomely mottled leaves as for its neatly coloured flowers. Both these received First-class Certificates. Mr. Stone, gr. to John Day, Esq., of Tottenham, showed the curious Phalænopsis (or Polychilus) cornu cervi, a Javanese and Moulmein plant, with a curious clavate flattened spike having the flowers set in marginal notches, the flowers themselves rather small, with yellowish green sepals and petals, and a white lip, all marked transversely, the former with deep red brown, the latter with purple. Mr. Veitch also again showed the free-blooming though pale-coloured prettily marked black-moustached Cypripedium Pearcii.

Of Hardy Ornamental Plants nothing very remarkable was produced. The highest awards—First-class Certificates—fell to a couple of Ferns from Messrs. Ivery & Son; the first Polystichum aculeatum acrocladon, a fine crested form of this hardy evergreen species; the second, Polypodium vulgare pulcherrimum, a variety of the semilacerum stamp with crenated secondary segments. Messrs. Jackman & Son, of Woking, showed cut blooms of their two fine Clematises already certificated, namely Jackmanii and rubro-violacea, so marvellously like those produced last week from another source, as to suggest the idea of a common origin. They had also some further novelties from the same crosses, to one of which C. Viticella pallida, a broad petaled lilac with reddish bars, a Second-class Certificate was given; while two others, C. Viticella Mooreana, and C. V. amethystina, with narrower and more recurved petals, the first a deep violet, the second a paler violet blue, were each Commended. A Commendation was also given to a Japanese Quercus from Mr. Veitch, an evergreen of free habit, in the way of Q. glabra, but of which further information respecting its hardiness is needed. Mr. Williams showed Hemerocallis Kwanso foliis-variegatis, a well-marked variegated plant, very near the variegated variety of H. fulva; and Mr. Davidson, gr. to J. F. Marson, Esq., Highfield Park, Hants, had a Variegated Laurel with a kind of motley-yellowish venation, and blistered surface, which did not present a very healthy-looking appearance.

Seedling garden flowers were numerous, the most generally attractive being perhaps a large group of Zonal Pelargoniums from Mr. Bull, and another of the tricolor zoned series from Messrs. E. G. Henderson & Son. The varieties were not however considered sufficiently distinct to receive awards. The subjects which were selected for this distinction, were Fuchsia Lucrezia Borgia, a fine large flower with a mottled purplish red striped corolla, from Messrs. E. G. Henderson & Son; Picotee Princess of Wales, a delicately tinted light edged sort from Mr. Turner; and a Pansy called Snowball, white with dark eye, from Mr. Hooper of Bath. A Zonal Pelargonium called Mr. G. Natchet, from Mr. Salter of Hammersmith, a bright scarlet with a very large truss, received a Second-class Certificate; and a Commendation was given to the same exhibitor for another called Ornement des Massifs, a kind of crimson carmine recommended for its colour. Second-class Certificates were also given to Mr. Watson for Calceolarias Beauty of Herts and General Tom Thumb, the first a light orange shaded with brown, the second a very dwarf bright yellow, both likely to be useful for bedding purposes. There were two good white Zonal Pelargoniums from Mr. Keeler of Dulwich, called Noble and alba floribunda, but they did not appear to be superior to Madame Vaucher and other white sorts already known. Two stands of Pansies were shown by Mr. E. J. Lowe, of Beeston.

Miscellaneous Subjects.—Collections of plants of economic interest came from Mr. Bull and Major R. T. Clarke; fine boxes of cut Roses from Mr. Turner, Messrs. Paul, Mr. Fraser, Mr. Moffatt, Mr. Sawkins, and others; Carnations, Pinks, and Picotees from Mr. Turner, Mr. Hooper, and Mr. Weymouth; Lilium auratum from Messrs. Veitch; cut Verbenas from Mr. Cannell; Sarracenias from Mr. Baines; Heaths from Mr. Rhodes; variegated Begonias from Mr. McLellan; and plant stands and hanging baskets from Messrs. Barr & Sugden, Miss Williams, and Messrs. A. Henderson & Co.

Pine Apples.—Of Providences and Enville some fine examples were shown, and we also noticed some well ripened Queens, one of the best of which came from Mr. Grant, of Finchley.

Grapes.—Foremost among these must be mentioned Mr. Hill's fine bunches of Black Prince alluded to in another column. Large and fine specimens of Black Hamburgh came from Mr. Meredith, and Mr. Petch had beautifully ripened bunches of the same variety. From Mr. Sawkins and Mr. Henderson also came handsome fruit of this useful kind. Grizzly Frontignans were furnished by Mr. Beasley, and we also noticed some bunches of West's St. Peter's. Among White Grapes were some very good bunches of Golden Hamburgh, a variety apparently likely to fulfil all that was said in its favour when it first made its appearance. Both here and at Alexandra Park exhibitions of it have been highly satisfactory. Among other white sorts were Buckland Sweetwater, three bunches of which weighed together 6 lbs. 3 oz.; these came from Mr. Hill. Three bunches of Chaptal, a variety shown by Mr. Henderson, were much admired for their beautiful clean look and long tapering shape. Muscats, excellent bunches, but scarcely ripe, came from Mr. Sage, Mr. Turner, and Mr. Embry. Duchess of Buccleuch would have received a Certificate, but the judges were precluded from giving one, that distinction having been conferred on it before. Grapes in pots were shown in admirable condition by Messrs. Lane, who also furnished illustrations of a new mode of training them. It consisted in surrounding the plant with an open circular wire trellis about 3 ft. wide at bottom, and becoming narrow towards the top, thus causing the plant to assume the form of a cone. The young shoots are led from the main stem outwards to the wire hoops to which they are fastened; in this way the fruit is well displayed to view, and the branches and leaves have room for ample development.

Peaches.—These seem to have been unusually large and fine this year. Among them were beautiful specimens of Noblesse, Barrington, Royal George, and Violette Hâtive.

Nectarines.—Violette Hâtive, Elruge, Hunt's Tawny, and Pitmaston also appear to be excellent in quality this season, and many fine dishes of them were shown.

Cherries.—Of Black Circassian Mr. Turner had unusually fine fruit, and good dishes of May Duke and Elton were also contributed.

Strawberries.—The six best dishes came from Mr. Bailey, who furnished Bicton Pine, a white sort Oscar, Sir C. Napier, Filbert Pine, a variety of which

Mr. Bailey speaks in high terms; Wonderful and Admiral Dundas. From Mr. Kaile, gr. to Lord Lovelace, came some very large fruit of Sir C. Napier, one berry of which weighed nearly 2 oz. Mr. Turner had his seedling named Sir J. Paxton; and from Mr. Ingram, Royal Gardens, Frogmore, came a seedling named Fairy Queen, a pine-shaped fruit of excellent flavour.

Figs.—Among these we noticed remarkably fine examples of Brunswick, from Mr. Robinson, Reading; Brown Turkey were also good.

Melons.—Windsor Prize was the best among scarlet-fleshed sorts, and Golden Perfection and Meredith's Hybrid Cashmere among green-fleshed varieties.

For a list of prizetakers in fruit see an advertisement in another column.

Notices of Books.

Travels in Siam, Cambodia, and Laos; by the late M. Henri Mouhot. Two vols. 8vo. Pp. 604. John Murray: 1864.

The lamented gentleman to whom we are indebted for these remarkably interesting volumes was a French naturalist of good education and with many accomplishments, well skilled in photography, a capital draughtsman, and so thoroughly devoted to science and the love of foreign travel that he left his English wife and home in Jersey, regardless of the perils and hardships which such an expedition must necessarily entail, to explore the almost unknown and pestilential regions which lie between the peninsulas of Burmah and Cochin China.

M. Mouhot possessed so many excellent qualities that he became a favourite wherever he went. English and French, the Catholic missionaries and the natives of the country, the kings and mandarins, almost invariably were charmed with his society, and helped him forward in his work. These latter classes of gentry, of course, were highly gratified with the presents which our traveller distributed with a liberal hand. After three years of great success, during which he had uninterruptedly enjoyed the best of health, though his servants were often suffering, he fell a victim to jungle fever, towards the close of 1861, while *en route* for the provinces south-west of China, and died to the inexpressible grief of all his friends.

A short memoir prefixed to the first volume informs us that M. Henri Mouhot was born at Montbeliard, the birth place of Cuvier and Laurillard, and perhaps it was owing to this circumstance that his attention was first directed to natural history, a study to which he was absolutely devoted. At the age of 18 he went to St. Petersburg, and became a teacher or professor, but soon quitting literary pursuits, he gained so much celebrity as an artist practising photography, that he needed no other means of support. M. Mouhot had traversed Russia from St. Petersburg to Sebastopol, from Warsaw to Moscow, in pursuit of his pleasing art. He had also visited most of the countries of Europe, but still thirsted for knowledge, and longed for a wider field of research, and if possible for a field less explored by foreign travellers. An English book on Siam fell opportunely into his hands, and decided his destination, and the great Geographical and Zoological Societies of London gladly availed themselves of M. Mouhot's valuable assistance, and aided him in the prosecution of an object which was evidently so dear to his heart. They could not have made a more judicious choice, for with all the high principle and kindliness of heart which are to be found in the character of the English gentleman, our traveller combined that *gaieté du cœur* so characteristic of the French nation, which enabled him to sing in the midst of difficulties and dangers. Though a Protestant, M. Mouhot fully appreciated the self-denying labours of the Catholic missionaries, and won the affection of these devoted men wherever he met with them. Our traveller's courage and enthusiasm sustained him to the last, amidst many discouragements. In his last letter he writes: "I wish to cross the whole network of mountains which extend northward, see what lies beyond them, visit China or Thibet, and see the Calmucks or the Irkoutsk. But alas! I cannot trust 'my dear insects,' as you would say 'my dear children,' to the king of Louang Prabang." It is some consolation to know that M. Mouhot's merits were appreciated by the Royal Geographical Society.

We now proceed to give a slight sketch of this interesting work, premising that one of its charms is this, that there are nearly 100 excellent illustrations taken from photographs and sketches made by the author on the spot. These are spoken of by the members of the Geographical Society as "exceedingly curious and interesting:" as "admirably done, exhibiting representations of some remarkable monuments, evidently of Buddhist origin."

The moment a book is opened describing these singular countries, one stumbles upon the strangest sounding names, Bangkôk, Udong, Phû Quoc, Komput, Battambong, &c.—a foretaste of many strange things that are to follow. M. Mouhot landed at Bangkôk the capital, the Venice of Siam, on the deep river Menan, mother of waters, so deep that the largest vessels can coast along its banks without danger, under the very boughs of the trees, which are filled with singing birds and insect life. Our traveller was presented to the King of Siam, Somdel Phra by name, reminding us of the Pharaohs of old. This singular personage gave a great dinner to the Europeans, on the anniversary of his birthday, and walked round the table chewing betel, and chatting with his guests. He was about 56, and had reigned since 1851. The first part of his life was passed in complete retirement in a monastery, for Buddhists think it necessary that the rulers of nations should prepare themselves for supreme power by a life of repose and sanctity. The king mastered the history and geography of his country, and then turned to the study of astronomy, natural philosophy, politics, and philology. Besides the dialects of Siam and Indo-China, he is familiar with Sanscrit and English, and has written treatises in the latter language. Articles from his pen have appeared in English journals at Hong-Kong, and his Majesty is a member of the Asiatic Society of London.

"A singular institution peculiar to Siam, Cambodia, and Laos exists in a second king, slightly inferior to the other, and having a sort of reflected authority, the limits of which are not easily defined. His official title is Wangna, a word which literally means the youngest king. He has his Court, mandarins, and little army, but in reality is merely the first subject of his colleague. His chief prerogative is exemption from the customary prostration, instead of which he salutes the king by raising both hands in the air." The present Wangna leads the life of a rich noble and learned European. At Bangkôk there is a splendid pagoda called Wat-chang, a picture of which from a photograph is given. Our traveller visited Aynthia, the ancient capital, and proceeded a considerable distance up the river Menan. Here also he found the ruins of magnificent pagodas or temples, and at Mount Phrabat, where is preserved the footprint of Buddha.

After seeing the country of the Laotians, a fine race of people, M. Mouhot returned to the capital, engaged a vessel, and cruised along the gulf of Siam to Chantaboum, Komput, and Udong in Cambodia. Near the island of Koman he witnessed a submarine volcanic eruption. At Komput he had a most flattering reception from the first king. On being presented with an English walking-stick gun, which had been brought as a present for the king, and which attracted his attention, his Majesty asked what it cost? but the Abbé who acted as interpreter, replied—"Sire, I dare not ask. In Europe no one tells the price of what he gives." At Udong the second king was still more gracious, and evidently was greatly pleased with his visitor, and asked how he liked his city, meaning his Royal Palace, &c. The polished Frenchman replied:—"Sire, it is splendid, and presents an appearance such as I have never seen elsewhere."

The king pressed him to remain one day longer, adding, "It will give me pleasure, to-morrow you will dine with me; on the day after I will take you to see the town of the first king, and in the evening we will have a play." The play, however, was not much worth seeing.

M. Mouhot remained three months among the savage Stiens, and gives some sketches and information about them, in part derived from the missionaries. The country swarms with wild beasts, and the inhabitants defend themselves with poisoned arrows, the poison they use being extremely rapid in its effects. At Ongcar, the ancient capital of Cambodia, our traveller was amazed to find the most magnificent temple, of which he gives a thorough description, with measurements and many drawings. The architecture of this temple of Ongcar-Wat is grand enough to show that it must have been built in a time of wonderful prosperity, during the reign of powerful princes, and by a people enjoying a very high degree of civilisation. The people tell you "it is the work of Pra-Eun, the king of the angels," or, "it is the work of the giants." Some say "it was built by the leprous king," others affirm that "it] made itself." Dr. Hodgkin "believed that the remains in question would be found equal in value to those which had recently been explored in Central America."

"What strikes the observer with not less admiration than the grandeur, regularity, and beauty of these majestic buildings, is the immense size and prodigious number of the blocks of stone of which they are constructed. In this temple alone are as many as 1532 columns. What means of transport, what a multitude of workmen must this have required, seeing that the mountain out of which the stone was hewn is 30 miles distant!"

The Annamites of Chantaboum pay their tribute of six ticals (18 francs) a-year to Government in eagle-wood, the Siamese in gamboge, the Chinese in gum lac. The eagle-wood diffuses a powerful odour when burnt. It is used at the incremation of the bodies of princes and high dignitaries. It forms in the cavities of the Aquilaria Agallocha of Roxburgh, a tree the wood of which is white and soft. The tree must be cut down and split to find the eagle-wood. M. Mouhot found that a peculiar odour was emitted by those trees which contained the treasure, and also that a hollow sound, on striking the trunk, was a further indication of its presence. M. Mouhot thinks the famous "durian," or "dourion," deserves its title of king of fruits. Our readers are aware that this strange fruit has the most exquisite taste combined with the most disgusting smell, which can only be compared to putrid flesh.

The last journey of M. Mouhot was directed towards the wild country and people in the interior of Laos. His route lay across rivers, through dismal swamps and the rankest tropical vegetation, where only elephants could force their way, varied occasionally by mountain passes, where the cold was keenly felt, and then ravines and swamps again. The elephants showed wonderful sagacity, but the intrepid traveller evidently felt misgivings sometimes, aroused less by the natural impediments in his way, than by reflections on the degradation of the people he met with, and the extortions of the petty mandarins.

He could scarcely have made any progress had not a friendly mandarin been travelling the same road with a party of elephants escorting a nearly white one (a sort of demigod, supposed to contain the soul of a deceased prince). The poor animal was honoured with cakes and dainty food in golden baskets, and died of indigestion. M. Mouhot reached Louang Prabang, in lat. 21°, and was proceeding in a N.E. direction, when he was attacked by fever, which he records in his journal, and 10 days later he added these few touching words, "Have pity on me, oh my God!"

Miscellaneous.

New Holland Plants: The Acclimatization Society of Victoria.—His Excellency the Governor, at the instance of the Right Hon. the Secretary of State for the Colonies, has addressed various inquiries to this Society, from among the answers to which we select the following:—The Victorian timber trees, with few exceptions, are not likely to bear the climate of Britain; and in the South of England and Ireland, where a few species have been acclimatized, they can only be viewed as objects of curiosity or ornament. But in warmer regions, especially beyond the tropics, where it is of importance to raise trees in woodless districts, none could be chosen for this purpose surpassing, and but few equalling, certain species of ours in rapidity of growth. Thus in Natal, and in other countries where fuel is excessively scarce, they might be raised most readily from seeds in the utmost profusion. In some of the lower regions and plateaus of the Highlands of India our trees would be equally eligible for raising shelter plantations, and furnishing, finally, fuel and material for artisans. The most important timber tree which we can offer is the Blue Gum tree (Eucalyptus globulus). It is most readily raised from seeds; and the seedlings, when a few months old, are easily transplanted during cool and humid weather. In rapidity of growth this tree excels perhaps all other trees of the globe; in regard to size it must be reckoned amongst the most gigantic productions of the vegetation of the world; for durability of its timber, and its resistance against decay as well in water as underground, it is excellent, and it is eligible for most purposes where a hard and heavy wood is needed. The tree, although chiefly a natural production of humid valleys, nevertheless resists well the influence of great heat and of hot winds. Several other Eucalypti are of nearly as much importance for introduction into several of the British colonies. Thus the Red Gum tree (Eucalyptus rostrata) grows also with remarkable celerity, and is recommended especially for plantations in depressed ground. Its wood is extremely durable, very suitable for underground work, piles of wharves, &c., susceptible of an excellent polish, and affords superior fuel. It is, like all other Eucalypti, most readily raised from seeds. Eucalyptus amygdalina is also a timber tree of quick growth, and besides is remarkable for the extreme abundance of volatile oil in its foliage. The Stringy Bark tree (E. obliqua) is the most to be recommended where a tree is sought for extensive plantations on barren ranges, and where a fissile wood for fencing purposes is required; it attains also gigantic dimensions, and its stem is almost invariably of a beautiful straightness. The bark furnishes material for rough paper. The other large Eucalypti eligible as timber trees are E. goniocalyx, E. corymbosa, E. botryoides, E. Woollsii, E. coriacea, E. Leucoxylon, E. Gunnii, E. viminalis, E. odorata, and E. persicifolia. The last is the famous Ironbark tree, so singular for the toughness and durability of its wood. Some Acacias of Victoria are also of great celerity of growth, amongst which A. mollissima is the most eligible. It is, however, neither a large nor a lasting tree, but of great value for the quick shelter it affords when raised for protection of other plantations; it yields, moreover, a gum similar to gum arabic, and also a good kind of tanner's bark. The West Australian Acacia lophantha, generally introduced here, is also highly suitable for the quickness of its growth and readiness with which it can be raised as a temporary shelter tree, though never attaining a large size. Of all our Acacias, however, the most valuable is the Blackwood tree, Acacia melanoxylon, on account of its beautiful wood, which has been with the greatest advantage used for elegant and durable cabinet work, for railway carriages, &c. The tree attains great dimensions in fertile, especially irrigated, ground, and is readily raised from seeds. Acacia homalophylla, though but a small tree, is much sought for its dark, scented, heavy wood, well known as the Myall-wood; this plant is restricted to the desert country. As far as known, the only plant restricted to these parts of Australia, and not merely used as a substitute for other species in the Materia Medica, is the Sassafras tree of Victoria and Tasmania (Atherosperma moschatum). Its bark is a powerful tonic, of which the efficiency seems mainly to rest in a peculiar alkaloid; it yields also a volatile oil, of which the especial therapeutic properties have to a great extent as yet to be

ascertained. The tree can, however, only be naturalised in deep, springy, forest ravines, of countries with a climate analogous to that of Tasmania and of the southern parts of Victoria. It is, however, not to be overlooked that several Acacias, especially A. pycnantha and A. mollissima, yield a copious supply of gum similar to that of gum arabic; and as both trees are of extremely easy growth, they might even on that ground deserve the attention of cultivators abroad. The native Cypress Pine (Callitris verrucosa), a tree easily and rapidly growing in sandy soil, yields a kind of Sandarach resin. The myrtaceous trees and shrubs are all more or less rich in æthereal oil, which in many instances greatly resembles the medicinal Cajeput oil. Eucalyptus amygdalina has yielded nearly 4 lb. of oil from 100 lb. of fresh leaves; several other species yield also a large return of oil, which has proved most useful for admixture with other essential oils in the manufacture of soaps. Melaleuca linearifolia has furnished 1¾ lb. from 100 lb. of leaves and branchlets. These oils have attracted attention as not only medicinally valuable, but also as solvents for various kinds of superior varnish resin, and for illuminating power (vide Jurors' Report Vict. Exhib. 1861). As medicinal products, the astringent gum resins of various Eucalypti likewise deserve attention, all species exuding more or less of this substance. There are plants in this country yielding excellent substitutes for the following drugs: Gratiola, Mezereum, Winter's Bark, Mint, Gentian, Lobelia, Althæa, &c. The Cyperus vaginatus, a Sedge of extreme abundance in some of the humid depressions of the colony of Victoria, produces a remarkably tenacious fibre, which by the aboriginal population was once largely employed for cordage and for making their fishnets. This plant is certainly deserving introduction into other countries. The Australian Flax (Linum marginale) seems to have no claims to be introduced elsewhere in preference to that species which has been cultivated for ages, unless for its perennial duration. Two fibrous plants introduced here appear to hold out the greatest prospect for lucrative introduction into several other regions of the globe, viz., the New Zealand Flax, Phormium tenax, which could be cultivated without any protection in the southern parts of Britain, and which may be grown in inundated places not readily available for other cultivation; and, secondly, the Rhea, Böhmeria nivea, from which the Chinese grass-cloth is made. The latter plant has proved quite hardy and luxuriant in Victoria. Both are most easily grown and multiplied, and ought to be naturalised in all tropical and temperate latitudes. The fibres of Sida pulchella, Brachychiton populneum, Pimelea axiflora, and several Stipa Grasses, although not without value to us here on the spot, are apparently not of sufficient importance to entitle their respective plants to an introduction into other countries. Of culinary vegetables indigenous to Victoria, we have three kinds of Spinach. One of these, Tetragonia implexicoma, is a litotral plant, and for practical purposes similar to the well-known New Zealand Spinach. It is perennial, expanding and climbing to a wide extent, and might be advantageously transferred to every sandy and rocky seashore of the globe, wherever it will prove hardy. Seeds are very seldom obtained, and hence the plant has to be exported in a living state. The second is identical with the New Zealand Spinach, Tetragonia expansa; it belongs not only to the Victorian sandy coast, but also to the desert. By means of seeds it can without difficulty be introduced, as is well known, into other countries; it occurs wild also on the sub-tropical east coast of Australia, and therefore might be introduced into hot climates. The third kind of Spinach alluded to is that of Chenopodium auricomum. This plant is still more valuable than the Tetragoniæ, being more palatable and more nutritive; it grows also in tropical Australia, and will thus endure the climate of many warm parts of the globe. Of fruit plants we have scarcely any deserving introduction elsewhere, unless perhaps the Quandang, Santalum acuminatum; for although it is far inferior to the ordinary fruits commonly under cultivation, the fact of its being a desert plant, not becoming parched by sirocco-like winds, entitles it to consideration. Of forage plants we have some excellent Grasses, well deserving of introduction abroad; thus for countries of warm climate the perennial Kangaroo Grass, Anthistiria australis, would be eligible, as well as Panicum decompositum, and several other Grasses, chiefly belonging to the genera Panicum, Danthonia, and Agrostis, of which seeds can be obtained with ease. An excellent tender Swamp Grass is Danthonia nervosa, and a splendid Forest Grass the recently discovered Festuca dives. For countries with a colder climate three of our taller and yet tender-leaved Alpine Grasses might advantageously be selected, viz., Festuca Hookeriana, Danthonia robusta, and Hierochloe antarctica. A magnificent American Fodder Grass, Bromus unioloides, has become sufficiently plentiful here in cultivation to renders eeds available for re-distribution.

Calendar of Operations.

(For the ensuing week.)

ALTHOUGH in-door gardening loses much of its interest in summer, when Nature is so prodigal of her beauties in the open air, still many will find great nterest in adorning their windows with choice productions. Nothing can have a finer effect in a drawing-room or sitting-room than flowers bloomed well in pots and tastefully trained; and windows filled with plants convey a sense of refreshing coolness to the apartment. In order that they may have a good effect, however, the most scrupulous cleanliness must be observed, or their health will soon suffer. All decaying leaves should be removed as they appear, and no flowers should be allowed to die upon the stalk. By removing flowers as soon as their beauty is impaired, neatness and good taste are consulted; but this is not all, for by stopping the tendency to produce seed, more flowers will often be produced. Mignonette in pots soon becomes shabby if this rule is neglected; but by picking off every spike of flowers when it is elongated and bare, laterals will quickly reward the pains taken, and keep up an air of healthfulness. Among common plants Scarlet Pelargoniums are very valuable for window gardening. Fuchsias also amply repay the grower for window culture, and boxes filled with Stocks, Pelargoniums, yellow Calceolarias, and Mignonette, when well managed make an admirable display. By a little forethought and daily attention the window, even without a balcony, may thus be made very attractive until frosts appear again, and bulbs now dormant demand and repay our care.

FLOWER GARDEN AND PLANT HOUSES.

Many of the plants belonging to conservatories and greenhouses will now be set out of doors. Care must be taken that they are thoroughly attended to with water, and worms kept out of their pots. Good depths of cinder ashes are efficient for this purpose, yet even these should be lime-watered occasionally.

CHRYSANTHEMUMS.—These should now receive their final shift, say into 11-inch pots, well furnished with good drainage. Let the compost to be used consist of two-thirds turfy loam and one-third well-decayed manure, to which should be added sufficient sand or grit to render the whole porous. Stake and replace the plants where they were set before, and take care that they at no time suffer from want of water. They may also be occasionally watered with guano or other liquid manure.

CINERARIAS.—Seedlings should be pricked off into 3-inch pots as soon as they are sufficiently large to handle. Suckers may also be taken from old plants.

ORCHIDS.—Afford these a thoroughly moist atmosphere; repot any that seem to require it; and sponge the foliage to keep it clean as often as may appear necessary.

PELARGONIUMS.—Plants that are getting out of bloom should be watered sparingly, and exposed fully to sun and air in order that the wood may be properly ripened before heading down. In cutting, leave, say three eyes on each shoot; afterwards, the stools should be kept rather dry for some time. Those in bloom should be carefully watered and shaded. Fumigate on the first appearance of green fly.

ROSES.—Now is a good time to commence budding. The shoot from which the buds are to be taken should not be cut from the tree until the operator is ready for action. Let the buds then be cut out, inserted, and tied immediately.

FORCING GARDEN.

MELONS.—Young plants must have careful attention in keeping the shoots thin and regular over the bed, for there is no time to be lost after this season, if a crop is to be secured. Earth up as the roots reach the outsides of the hills, using strong loam, and making it quite firm, so as to avoid rank growth. Plants swelling their fruit should be kept moist, but avoid frequent waterings of the soil by giving good soakings. Examine the stems frequently for canker, and apply quick-lime to the affected portion immediately it is perceived, first scraping off the decayed part; avoid also, as much as possible, cutting or mutilating the plants, and causing bleeding, which is the ordinary cause of this disease. Plants that have ripened their fruit and are in good health, if cut back, and the soil well soaked with tepid water, will soon start into growth, and set a second crop. They should not be allowed, however, to carry many fruit.

PINES.—If not already done, plants expected to show fruit next January should have their final shift at once, in order to get the pots well filled with roots, and the growth completed before winter; for if they are kept growing it will be uncertain if they will show fruit early in spring. Indeed there is no sure means of inducing Pines to show fruit at that season, except getting the growth well matured in autumn, and allowing them a short rest, giving no more water to the soil than is just sufficient to keep the roots in health, and then subjecting them to a brisk heat. Treated in this way a supply of fruit at the expected season may be calculated upon with tolerable safety, but owing to the want of convenience and necessary means or other causes, the plants are often kept growing when they should be at rest, and the result generally is that the plants start into growth in spring instead of showing fruit. Give plenty of clear manure-water to all the stock, except such as is being kept dry with a view to getting it to show fruit soon, and endeavour to secure rapid growth, now that it can be done without etiolation. Keep the atmosphere thoroughly moist, but avoid heavy syringings. Plants growing in the open bed must be well supplied with water at the root, giving a thorough soaking of manure-water as often as may be necessary.

VINES.—Attend to previous directions, keeping cool and moist where the fruit has been cut, in order to preserve the foliage in a healthy state as long as possible, and get the Vines well charged with organized matter, which will be of the utmost importance to next season's crop. Give plants fruiting in pots a liberal supply of manure water; also those being prepared for the same purpose next season. Keep a sharp look-out for insects everywhere, and lose no time in destroying them.

HARDY FRUIT AND KITCHEN GARDEN.

Proceed with fastening in the young wood of wall trees, and see that they are perfectly clear of insects; also stop any gross shoots and endeavour to secure a fair supply of bearing wood all over the tree. Gross shoots that were stopped early in the season should be divested of all laterals except one, or, if they can be spared, removed altogether. Keep the breast-wood on Pear and other wall or espalier trees closely stopped in.

BRUSSELS SPROUTS.—If not already done, a good breadth of these should be planted on rich deep soil; for if not got in at once, the crop will be but poor, and it is very desirable to secure a good supply of this most useful winter green.

CABBAGE.—Sow now some seed of the Enfield Market for spring cutting.

SPINACH.—Keep up successions, by sowing every three weeks or so where the demand for this is great.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending July 6, 1864, as observed at the Horticultural Garden.

June and July.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 30	28	29.932	29.892	72	40	56.0	62	59½	N.W.	.00
Friday 1	27	29.939	29.929	69	41	55.0	61½	59½	N.W.	.00
Satur 2	28	29.927	29.575	71	47	59.0	61½	59½	N.W.	.14
Sunday 3	29	29.719	29.588	71	40	55.5	61½	60	N.W.	.18
Mon. 4	●	29.995	29.923	75	40	57.5	61	60	W.	.00
Tues. 5	1	30.026	29.997	76	36	56.0	62	60	N.W.	.00
Wed. 6	2	30.104	30.092	77	48	62.5	62	60	N.W.	.50
Average.		29.934	29.856	73.0	41.7	57.3	61.6	59.8		.82

June 30—Fine; overcast; dry air with brisk N.W. wind.
July 1—Fine; partially clouded; dry and clear; overcast at night.
— 2—Fine; overcast towards night; rain.
— 3—Fine; partially clouded; showery; overcast at night.
— 4—Fine; very fine; fine at night.
— 5—Fine throughout the day; coldest at night, only 4 deg. above freezing.
— 6—Very fine; cloudy; overcast; rain at night.
Mean temperature of the week 5½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending July 16, 1864.

July.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 10	74.7	50.5	62.6	15	0.48 in.	2	3	2	1	4	12	6	8
Mon. 11	74.8	50.8	62.8	10	1.07	4	1	4	1	5	9	8	
Tues. 12	75.6	50.7	63.1	12	1.10	1	2	6	—	5	10	8	6
Wed. 13	74.0	51.4	62.7	13	0.92	—	4	5	—	2	22	4	1
Thurs. 14	76.4	51.1	63.8	14	0.64	—	4	3	1	6	13	10	1
Friday 15	78.2	50.3	63.2	20	1.46	1	4	3	—	4	18	6	2
Satur. 16	75.7	49.7	62.7	15	1.60	2	3	5	—	2	18	7	1

The highest temperature during the above period occurred on the 14th, 1847—therm. 93½ deg.; and the lowest on the 16th, 1863—therm. 34 deg.

Notices to Correspondents.

APPLE TREES: *W S.* We regret to say your English is so bad that we cannot make out your meaning.

BIRMINGHAM ROSE SHOW: We learn with satisfaction that this exhibition has been a most decided success, but unfortunately the report which has been sent to us did not arrive in time for publication to-day.

BRITISH COLUMBIA AND VANCOUVER ISLAND SPAR, LUMBER, AND SAW MILL COMPANY: *E S.* Your circular is an advertisement.

DISEASED GRAPES: *J O.* Your Grapes are affected with rust, spotting, and shanking. Both the latter we believe arise from the same cause—some defect about the roots. We see no Fungus. One form however of spotting is caused by a Fungus against which no remedy is known. The other form of spotting will most probably cease when the roots are healthy, and not sooner. *M J B.—Sub.* and *A. F.* They have shanked—probably from the soil being too cold or too wet.

INSECTS: *M J B.* The small jumping insect sent (found on the Hop plant) is one of the small Cicadellina in the pupa state. It doubtless sucks the juices of the Hop. The Cimicidans are a species of Phytocoris, allied to danicus, and are most probably even more injurious to the Hop than the former. The third insect is a Longicorn beetle, Callidium Alni, which we believe to be quite harmless.—*Alpha.* The Carrots infested with *rust* are attacked by the larvæ of a small two-winged fly, Psila Rosæ. The plants attacked should be carefully picked out and burnt. Before sowing the Carrot seed it would be well to give the ground a dressing of spirits of tar mixed with sand. *W.*

NAMES OF PLANTS: *G.* As far as it is possible to solve such an enigma, all flowers being absent, we should say that the plant may be the Indian Viburnum involucratum. It has nothing to do with macrocephalum.—*Old Subscriber.* 1, Poa trivialis; 2, Bromus mollis, starved; 3, 4, Holcus lanatus.—*J B.* Festuca or Vulpia Myurus; Carex acuta; Eleocharis multicaulis, both alike; Potamogeton pectinatum. No numbers to any of the specimens.—*C B.* The tree appears to be the cut-leaved form of the Mulberry, which is very variable in the shape of its leaves. The flowering plant is Phytolacca icosandra, which has borne the garden name of Bucelia violacea.

PAINT FOR IRON: *T.* That used at Trentham consists of two-thirds Stockholm tar, and one-third gas tar, mixed and applied hot. A little fresh slacked quick-lime added to the boiling tar gives it greater consistency.

ROSES: *R D, Hampstead.* The "Spring Rose of Shanghae" is one of the best climbing Roses which the Chinese cultivate. It is much used by them to cover walls or verandahs. In this country it may be trained on pillars or walls as other Roses are; it grows well in any good garden soil, and, as its name implies, it blooms very early in the season.

STRAWBERRIES: *Rivers' Royal Hautbois.* We have been favoured by our experienced friend, the Rev. Mr. Radclyffe, with a dish of this excellent Strawberry, upon which we have only to remark that it thoroughly deserves its reputation. The Hautbois flavour is enough mitigated to suit all palates; there is no more acidity than must be present in all Strawberries; and the flesh is most tender and delicate.

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DISSOLVED BONES,
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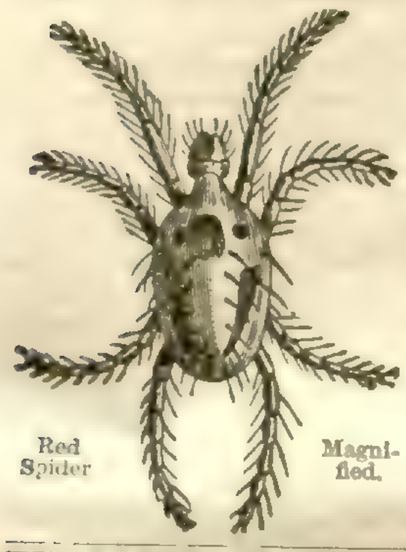

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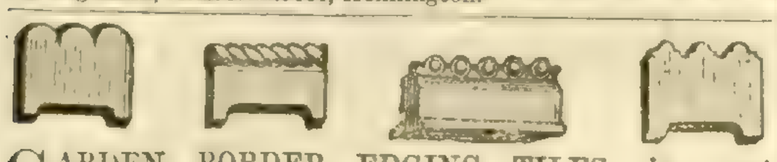

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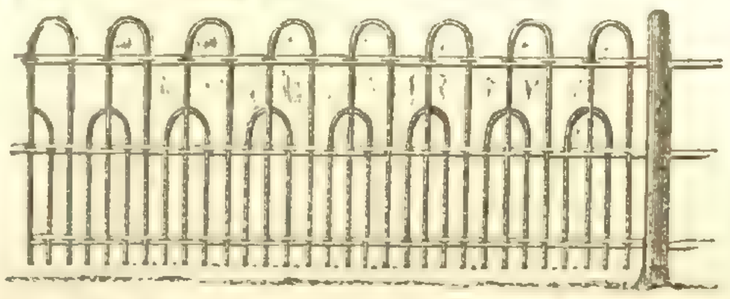

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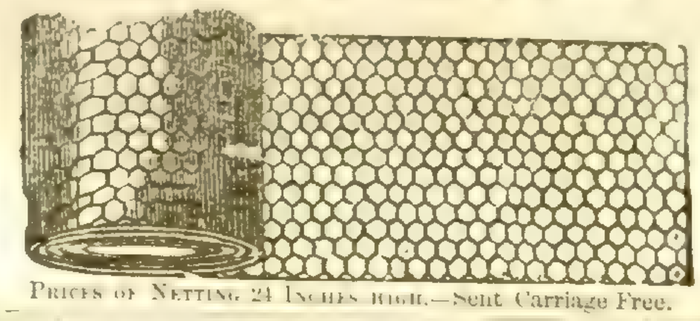

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MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5s. per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

Drainage, &c.
MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

ROYAL AGRICULTURAL COLLEGE CLUB.
The ANNUAL DINNER of this Club will be held at the Queen's Head Hotel, Newcastle-upon-Tyne, on WEDNESDAY (July 20) during the week of the Meeting of the Royal Agricultural Society.
Tickets to be had at the Bar of the Hotel up to Tuesday evening, July 19. Members are allowed to introduce friends.
JACOB WILSON, Hon. Sec. pro tem.
Manor House, Woodhorn, Morpeth.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE, 1864.
The LOCAL EXECUTIVE COMMITTEE have arranged for a Registry of Lodgings and other Accommodation for Visitors to Newcastle during the Show, to be kept by Messrs. C. BROUGH, Academy of Arts, Blackett Street, and G. MURAS, 4, Northumberland Street, to whom applications must be made.
R. DODDS,
E. I. J. BROWELL,
WALTER JOHNSON,
JACOB WILSON,
} Hon. Local Secs.

ROYAL AGRICULTURAL SOCIETY of ENGLAND
NEWCASTLE MEETING, JULY, 1864.
PROGRAMME.
WEDNESDAY, THURSDAY, FRIDAY, and SATURDAY, JULY 13, 14, 15, and 16:—
Trial of Steam Cultivators and Field Implements on Benton Farm
SATURDAY, JULY 16:—
The Trial-Yard, for Brick and Tile Machines only, open from 9 A.M. till 6 P.M.; admission, 5s. each person.
MONDAY, JULY 18:—
Cattle-Yard open from 8 in the Morning, at which hour the Judges will commence inspecting the Live Stock, and making their awards.
The Implement-Yard open from 8 in the Morning.
Admission—Members free; Non-Members, 10s.
The Show-Yards will be closed at 6 in the Evening.
*TUESDAY and *WEDNESDAY, JULY 19 and 20:
The General Show of Cattle, Horses, Sheep, Pigs, and Implements, open to the Public from Six o'clock in the Morning till Six in the Evening. Admission, 2s. 6d. each person.
* Public Working of Steam Cultivators on land in the neighbourhood of the Show Yard.
THURSDAY and FRIDAY, JULY 21 and 22:—
The General Show of Cattle, Horses, Sheep, Pigs, and Implements, open to the Public from Six o'clock in the Morning till Six in the Evening. Admission, 1s. each person.
FRIDAY, JULY 22:—
General Meeting of the Members in the Show Yard at 10 o'clock.
By order, H. HALL DARE, Secretary.
12, Hanover Square, London, W.

The Agricultural Gazette.

SATURDAY, JULY 9, 1864.

MEETINGS FOR THE TWO FOLLOWING WEEK.

WEDNESDAY, July	13	to	Trial of Implements at Newcastle.
SATURDAY, —	16		
MONDAY, —	18	to	General Meeting of the Royal Agricultural Society of England at Newcastle.
FRIDAY, —	22		

A FIRST-RATE experiment is about to be made at Aldershot, in the utilisation of what may be called Town Sewage. The only approach to a solution hitherto of the difficulties which surround this problem has been where, as at Craigentinny, Rugby, and elsewhere, large quantities of water, containing all the waste of a population, have been poured over comparatively small quantities of land. A slope of sandy soil, where both surface and constitution enable the rapid passage of a perfect flood of the diluted liquid, seems hitherto to have been best fitted for the useful conversion of the filthy stream. Grass grown and irrigated thus has yielded an enormous and a profitable produce of capital cow food.

Now at Aldershot there are several concurrent circumstances which seem to indicate a more than usual prospect of success. There is land to be had for nothing—it is a gradual slope of a porous sand and gravel—the manure is the waste of an adult and well-fed population—it is diluted with less than half the water per adult that is supplied per head of all ages to the population of our great cities—and there is a bonus paid for the removal of the nuisance. Hitherto we believe that bonus has been paid to the Aldershot Manure Company; but the faults and difficulties of their processes for the extraction of the fertilising portion of what passes through their hands, together with the difficult sale and low market value of the manure which they thus manufacture, and together with the annoyance and expense of actions and indictments to which they have been subject, have, we understand, resulted in the new arrangement, by which Mr. BLACKBURN, of Aberdeenshire, a gentleman whose name in connection with questions of liquid manuring is already well known to readers of this

Journal, undertakes the work of removing and utilising the waste of Aldershot. His object is not to make a manure, but to grow Grass and milk for sale. One hundred and sixty acres of gradually sloping heath below the level of the camp have been allotted to him, and on to this farm some 700 tons a day of the drainage of the two camps will be delivered.

The land is now being torn up by heavy ploughs and teams, 18 to 20 inches deep. A furrow, 10 to 12 inches deep, is turned, and the subsoil is stirred 8 inches deeper by a subsoil plough. The whole of that ferruginous pan of concrete which has hitherto held water after rain upon the surface of that sandy heath is being broken up, and the drainage of the land is being thus effected. When a certain tilth has been thus provided, and the scanty growth of Ling which naturally covers the land has disappeared, the land is levelled and sown with Italian Rye-grass. Pumps worked by a 12-horse-power engine will receive the sewage; and, arranged as to direction of their thrust, and as to size of pipes, &c., so as to avoid as much as possible the friction which makes pipe irrigation so costly a labour, they will drive this sewage through underground piping to a hydrant in every 5 acres of land. Surface pipes will conduct it from these hydrants to stations in every 1.25 acres, and thence a man will distribute two or three hundred tons per acre evenly every day by hose. Two or three such waterings to every cutting of Italian Rye-grass will, it is believed, create under the dry summer sun of Surrey as large and quick a growth as that Grass has anywhere exhibited. And if so, there is stuff enough and land enough to convert the 200,000 tons of Aldershot sewage into at least 30 or 40,000 tons of Grass, and at the same time convert the sandy waste into a rich and fertile soil.

Besides the pipe irrigation, which will be gradually adopted and extended as it proves to be successful, there is an arrangement for carrying all the remainder of the sewage over the land on the plan of ordinary irrigation; shedding it by ordinary ridge and furrow over the surface of the land. The soil is however so extremely porous that it has been feared the filthy stream would not travel sufficiently over the surface, but would immediately lose itself in the soil alongside its channel; and thus not be dealt with by a sufficient quantity of soil or surface to disinfect it and abate the nuisance, which is of course the main purpose of the authorities in the arrangement which has been made with Mr. BLACKBURN. It is this which has led to the intended adoption of steam power and underground pipes over a portion of the farm —the remainder, however, being available for the common water-meadow plan of operation.

It is Mr. BLACKBURN'S intention to adopt a rotation of three years. Italian Rye-grass, sown in the autumn of this year, will yield four or five cuttings during 1865 and 1866; broken up in the autumn of that year it will, in 1867, yield a crop of Potatos, and in the autumn of 1867 it will be again sown down for 1868 and 1869.

Although the operations at the Camp farm have been thus described in some detail, it must be understood that they are for the most part, hitherto, but plans. The experiment is only going to be tried. Some few acres of land have indeed been already sown, and 60 or 70 have been already subsoiled; some portion of the expenditure on buildings has been already incurred, but nothing can be done until the filthy stream is delivered on the land, and that has not yet been done. On its arrival it will find steam pumps ready to deal with most of it, and a waste pipe ready to convey the rest of it. And so, 20 or 30 acres at a time, it is confidently believed that the land will be gradually converted from an utter waste into a fertile field; and that which is now a nuisance and a plague will be converted into valuable and wholesome produce. Mr. BLACKBURN'S experiment is certainly one of great agricultural and of great social interest.

SOME weeks ago a question of the very greatest agricultural importance at the present day was announced for discussion at one of the weekly meetings of the Royal Agricultural Society of England. The altered management of light soils indicated by the present prices of meat, and wool, and grain, on which a paper was to have been read, is the point which every light land farmer in the country is anxiously considering, and on which he would gladly have been enlightened. It was, therefore, with great regret that we found the announced lecture had been abandoned, and that another, important as the subject is—"on Water and its Uses"—had taken its place.

The facts are that our population are better paid than they were, and they want better food and clothing than once satisfied them. A greater demand has thus raised the prices of meat and wool; and these are now sold at prices which, taking into account the contingent advantages of growing them, are unquestionably profitable.

There is no more profitable stock than sheep. The sheep fold is something more than a manuring, or all the arguments on first principles which go to prove the value of town sewage would not have been the failure that they are. It is an improvement of the texture as well as of the composition of that great extent of light land which is cultivated in this country, and mutton and wool are now high enough in price to make an extension and an intensification of sheep farming the great problem of the day.

Some years ago a paper appeared in the Journal of the English Agricultural Society on the question, "How to increase the quantity of meat?" The writer pointed out that the first plan was to increase the fertility of the soil, then to direct it towards the growth of the best cattle and sheep crops, then to consume these by the best bred animals, and to carry on the growth and fattening of them on the best and most economical plan. Do all this and you will have a maximum of meat produce from the land. It is not enough that you introduce the Hereford ox, or the Cotswold sheep, or the best meat makers in the world, and displace any of the rival breeds which waste more food in their growth. You must increase the home produce of that food, and that hinges on increasing the fertility of the soil, on the adoption of a suitable rotation of crops, and on buying the best seed. The drainage and texture of the land, the economical use of home and artificial manure. the improvement both of tillage and of plants, and in fact the whole range of agriculture thus lay within the scope of the lecture as originally announced; and we hope that the subject will yet be taken up piecemeal by the Society, and that a series of lectures may be announced during another session, which will thus go over the whole ground which lies within the scope of the first announcement.

APPEARANCE OF THE CROPS.

ESSEX: *Maldon, June* 30.—The longest days being passed with but little sunshine and summer heat, and with very little rain for the last six weeks to the present date, June 27, augurs not so good a prospect for the Wheat crop as was anticipated it would be a few weeks since, when, notwithstanding the coldness of the spring, it betokened in the view of myself and many others a full crop, equal to last year. At that stage of its growth the Wheat plant generally luxuriates during cold and dry weather; but at midsummer, and throughout the longest days (beneficial as it may be to some other crops, Peas and Beans, &c.), it suffers from it, and the ears are thereby often rendered more or less partially abortive from protracted or imperfect blossoming, as was the case more particularly in the cold summer of 1862. Hence the Wheat crop this present season, I conceive, will be far below the average of last year's, notwithstanding the better condition of the soil, and its being a very thick plant from a full quantity of uncommon superior seed being sown. On examination of the ears, especially those of the tenderest kinds, such, for instance, as the fluff-chaffed variety and some others, many of the should-be perfect grains are found to be abortive or false from injury when in blossom, or from not blossoming at all, say in many to the extent of one-third of the entire ear. Unfortunately too for the British farmer this occurrence, with some other mishaps, are not uncommon in this uncertain climate at this period of the Wheat's progress. The blossom will be found in those injured ears still enveloped within the chaff, never having expanded or made, or will make, its appearance at all, having produced only a yellowish powder, commonly called the "red-gum," and that particularly on the side of the ear whence the cold winds and frosts have mostly prevailed. A pretty correct estimate may be made, even at this early period, of a crop of Wheat, by ascertaining the average number of all the ears and grains, both great and small ones, that are contained on a square yard. If, for instance, it were possible, as many assert it is, that there are contained on some lands 600 ears of worth, grown and to be counted on a square yard (which, by the bye, is a very thick crop, and what I set down as almost impossible), and 20 grains, which is a very low estimate, acknowledged by some unobserving farmers and others, are proved to be found sound (perfect ears, be it observed, contain on an average from 50 to 100), consequently 12,000 grains would be the number grown on one yard, or 363,000 on a rod; which, at 20,000 to a quart, amounts to not less than 18 quarts, omitting fractions, to the rod, or 28,800 quarts, or 360 pecks, or 90 bushels, or 11 qrs. 2 bushels per acre! If, however, only 300 ears can be found of all sorts with this average of 20 grains in each, which I contend is a more reasonable supposition, then of course only half as much would be realised, viz., 5 quarters 5 bushels; but the probability is rather as I calculate for truth, that a much less average than either of those quoted will be found to be most correct, and I will venture to predict that not more than 250 ears, with an average of 15 grains, will be the extent throughout of ordinary crops, viz., 3 quarters per acre, which is under average. *A. Hardy.*

GLOUCESTERSHIRE: *Royal Agricultural College, Cirencester, July* 2.—A district with a surface composed chiefly of stone brash, light loam and transported clays, the whole resting upon a limestone basis, is ill adapted to withstand a continuance of hot, dry weather, therefore it is not surprising to find a large proportion of the crops in this neighbourhood much affected by the drought which has prevailed for more than two months. The Wheat has suffered less perhaps from the weather of the last three months than from the check it received in the winter. In consequence, much of this crop, on cold and thin soil, was marked throughout the spring by weak and scanty growth, from which it has never recovered. On most of the heavy land the Wheat has always maintained a good colour; the straw, though perhaps shorter than usual, is very stiff, but owing to irregularity in growth, and therefore in its length, the heads are uneven. Still there is good promise of a yield fully up to, if not a little over the average. On the light poor soils the Wheat is in a very different condition. In many places the crop is very thin, the straw light, the ears small and irregular.* The yield without doubt will be under the average. It is certain that the breadth of Wheat in this district falls somewhat short of its regular proportion, owing partly to the failure of last year's seeds, and the low price of this grain. Many agriculturists preferred keeping some of their Grass down a second year. The price of Wheat has also to some extent influenced the trade in nitrate of soda and other top dressings, as their application to Wheat this season has not been at all general. The land intended for spring corn was so thoroughly pulverised and mellowed by the frosts in January and February, that a better tilth perhaps was never obtained for both Barley and seeds. The Barley went in somewhat deep, but judging from the appearance of that which was sown early, this was no misfortune, as the crop looks healthy, and promises to be rather more than an average yield. On the other hand, where the Barley was sown late, or tilth deficient, it is short and needs moisture, and unless speedily improved by rain must give a small yield. All Grass and Clover seeds have suffered considerably from the drought, which will probably lead to another partial failure in most of the young Clover layers. The Oats (of which we have a large breadth) generally seem injured by the dry weather. The growth of straw is very short, frequently the heads may be seen issuing from stems barely a foot in height. Since it is the practice in this district to harvest the Oat crop very early, in order to preserve the nutritious qualities of the straw for feeding purposes, a short growth is almost as serious as a deficiency in grain. There can be no doubt the yield of grain and bulk of straw must be far below an average. The Bean crop has been so checked that it is probably already too late for rain to be of great benefit to it. With a full and abundant blossom there needed but our accustomed rainfall to have insured heavy pods; at present there appears little probability of Beans generally attaining maturity. The Pea crop in some localities looks promising, in others we find it thin and inclined to ripen prematurely. The crop is not nearly so heavy as last year, and will probably not reach an average. The hay crop on the Cotswolds probably never was lighter. In some cases we hear of 4 or 5 cwt. to the acre; few persons have cut over half a ton, and the chance of lattermath seems no better, for our Clover and Grass fields wear a uniform scorched appearance. Vetches were never more valuable than they have proved this season, but for a good breadth of these on many farms not one acre of seeds would have been cut yet. The drought checked the growth of Vetches on all descriptions of soils, and caused them to turn off and wither near the ground earlier than usual. Mangels, early Turnips and Swedes have all been grown under similar difficulties. The first of these crops has failed in some places, and a great portion of the first sowing of Turnips and Swedes having fallen a victim to the fly, the ground has been resown. The second sowing with the later roots are in many places thriving, still they all want rain. Cabbages are not very extensively grown about here; judging from the present appearance of two acres of plants upon this farm, the crop seems eminently adapted for a dry season. The Cabbage plants were dibbled on the 30th March upon bouts, 30 inches apart, 16 tons of manure containing a mixture of night soil, was applied per acre. The Cabbages have been twice deeply horse-hoed, ditto hand-hoed, and at this time the plants cover the entire ground, their large dark-green leaves betokening a heavy yield of valuable material just at the season when we most need it. The scarcity of keep is telling upon

* A large per centage of ears in all our Wheat fields have been injured either by frost in an early stage of their growth, or have been stricken since they burst forth, as from two to three corns at the point of these ears are withered, and the husk wears a whitish look.

all live stock. On our hills sheep can scarcely maintain their condition, and only those persons who have a wide run of Sainfoin, or meadows attached to their farm, can do anything like justice to their lambs and other young stock. For the last month our horses and cattle have been upon short rations of Vetches; the latter are cut into chaff with straw and inferior hay, in the proportion of one each of hay and straw to two of Vetches, which mixture answers remarkably well. Our flock has been tolerably free from disease; we were particularly fortunate during the lambing season; out of 200 breeding ewes, 184 dropped 244 lambs, with the loss of one ewe and two lambs; since then we have had a few casualties amongst the ewes, and half a score of lambs have died within the past month or five weeks from the effects of sudden changes in the atmosphere, the cases being confined to animals of weekly constitution, or those with organic disorders. *J. Lynch Fletcher,*

Hampshire: *Eling, Southampton, June* 29.—The promise of the Wheat and other crops is by no means so favourable in this neighbourhood as it was a month ago, owing no doubt to the low temperature which has since prevailed. At one time the Wheat crop bid fair to rival that of last year, now it must be put down as at least 25 per cent. less. The Wheat on the gravel failed most and earliest. The following may be accepted as an approximate to the truth:—Wheat about an average; Barley, rather under; Oats average; Peas, partially blighted and deficient; Beans, under average; Hay, average and well secured; Roots, doubtful at present, owing to the want of rain. *W. C. Spooner.*

Surrey: *Hoe Bridge, Woking, June* 29. — With regard to the crops in this neighbourhood, I think we have a fair prospect for the coming harvest. The Wheats which are principally white, viz. Talavera, Chedham, Rough-chaff, &c., have come well into ear, and the blooming season has been favourable. I think we have promise of a full average crop. Barleys also are looking well, except those put in late, they having suffered materially from the dryness of the season. Oats not much grown here; early Peas a good crop, but late ones almost, and some quite destroyed by vermin (green-fly). Beans not much grown, and the few we have very poor indeed, some being fed off by sheep, and the land to be sown with Rape or Turnips. The weather still being exceedingly dry, feed is getting very short indeed. Upland hay not more than half a crop, but well secured. Meadow hay also very light, but quality good, and now being carried in fine order. Mangels and Potatos are looking unusually well, and give promise of a full crop. Swedes and Turnips where up, are looking well, but we have heard considerable complaint of the fly taking them off in some l calities. On the whole, I think we have seldom had the prospect of a better crop, nor have we seen the country looking more beautiful than at the present time. *Edw. Hilder.*

AN IMPORTANT AGRICULTURAL QUESTION.

Which exhausts the land most, a ton of meat, worth, at 7*d.* per lb., 65*l.* 6*s.* 8*d.*, or a ton of Wheat (4¼ qrs.) worth, at average prices, 56*s.* per qr., or 12*l.* 12*s.* per ton?

Feeling sure that there could not be much difference, I consulted Professor Voelcker, who most kindly sent me the annexed letters confirming my opinion. When a ton of Wheat is sold off the farm, it leaves nothing behind it except exhaustion and two tons of straw worth as manure 19*s.*; but when a ton of meat quits the farm, it has left behind it nine-tenths of the manurial elements of the food consumed to produce it (see Liebig), or probably 30 to 40 tons of very valuable manure. Looking at the relative price of each I think that, so far as exhaustion goes, it settles the question in favour of the meat.

But then arises another important question. How much food is required to produce this one ton net of butcher's meat, and at what cost, as compared with the cost of producing an equal value in Wheat?

Taking Turnips as a means of making mutton, it requires 300 tons to produce 1 ton of meat, net dead weight. This is supposing the animals are on the fields, unsheltered; if with shelter, 200 tons are said to produce the same result. The acreage to produce 300 tons of Swede Turnips would not, on an average, be less than 20, because I have seen tables calculated to show that the average of Turnip crops does not reach 15 tons per acre of available bulbs. Now these 20 acres of Turnips would cost on an average in rent, rates, tillage, manure, &c., not less than 10*l.* per acre, or 200*l.*, including every expense up to the feeding of the animal, I hardly know whether I dare class or include in this expense shelter, attendance and losses by death, or casualties, so that we have thus for our 20 acres of Turnips a return in meat of 65*l.* 6*s.* 8*d.*, or 3*l.* 5*s.* 4*d.* per acre. However surprising this may appear to the uninitiated, it corresponds singularly, but exactly enough, with the prices which our sheep dealers are willing to pay for Swede crops in this neighbourhood, their price varying from 2*l.* to 4*l.*, according to crop and other circumstances.

Taking the estimate at 15 tons per acre, this would give the price per ton, at 4*s.* 4*d.* Mr. Morton, in his able paper "On Increasing our Supplies of Animal Food," Royal Agricultural Society's Journal, vol. 10, p. 359, says that he only got 3*s.* 4*d.* per ton for his root and green crops after paying for a considerable quantity of oil cake, and (p. 355), that it took 200 tons of this green and root food to make 1 ton of meat, and he says "this is a result singularly similar to some other tolerably extensive and very trustworthy specimens of experience given hereafter."

Well, then, having shown that it has cost us 200*l.* to produce 65*l.* 6*s.* 8*d.* worth of meat, and the manure from the consumption of 300 tons of Swedes, which Mr. Lawes values at 4*s.* per ton, or 60*l.*, let us see what the 65*l.* 6*s.* 8*d.* would cost us in Wheat—5¼ acres would produce this amount, and the cost of my Wheat crops per acre being, according to my book (p. 23), about 8*l.* per acre—we should thus get in Wheat 65*l.* 6*s.* 8*d.* at a cost of 42*l.*, but we also get exhaustion and no manure. As no man could go on losing money for ever by Turnips for the sake of accumulating manure in his soil, it appears to me that we must come to the conclusion that we must take out by corn what we put on by green crops, and that the mixed husbandry principle, so admirably treated of in Mr. Morton's Prize Essay, and so well carried out in Norfolk, Lincolnshire, &c., must be the rule, at all events in our southern and cereal counties.

We are very much indebted to Mr. Lawes for his most clear, copious, and elaborate investigations on sheep, pig, and bullock feeding in the Journals of the Royal Agricultural Society:—Vol. 10, p. 276; vol. 12, p. 414; vol. 13, p. 178; vol. 14, p. 459; vol. 16, p. 45; vol. 21, p. 433; vol. 22, pp. 189 and 200; vol. 23, p. 191. These will well repay a close examination and teach us the value of food for animals under varying circumstances. I would also recommend a reference to Mr. Horsfall's papers on Stock and Dairy Management in Vols. 17 and 18. I may allude to the feeding question in a future paper. I have reason to believe that in the moist, misty, and hilly districts of the north and west, and also in Ireland, Turnips pay better than in the south and east of England. Both Turnips and Grass can be there more cheaply and more abundantly produced and of more succulent quality. *J. J. Mechi, June,* 1864. [300 tons of good Swede Turnip ought to produce nearly 2 tons of meat.]

PROFESSOR VOELCKER TO ALDERMAN MECHI.

I. Assuming your animal to contain 75 per cent. of water, which I think is not far from the truth, we have 25 per cent. of dry matter in meat (live weight). In Wheat there is only 10 to 12 per cent. of water, nevertheless, the 25 per cent. of dry animal matter contains quite as large a proportion of valuable mineral matters as the 88 or 90 per cent. of dry matter in Wheat, and certainly more nitrogen. If the nitrogen in the meat and in the Wheat is considered to have been taken entirely from the soil, the removal of a ton of Wheat will not exhaust the land quite so much in available that is active nitrogen as 1 ton of meat. 1 ton of Wheat contains a smaller amount of valuable mineral matters, and less active nitrogenous matters than 1 ton of meat (live weight), and if these mineral and nitrogenic matters, containing nitrogen, are restored again to the land, a ton of meat will give to the land more essential fertilising matters than 1 ton of Wheat. The difference in the exhaustion of the land by the removal of valuable mineral matters and active nitrogen in 1 ton of meat and in 1 ton of Wheat, however, is not great, but it is certainly somewhat greater in the case of meat than in the case of Wheat.

II. I hope you will have been able to make out my last note, and bear in mind that my calculation is based upon the supposition that the animal is reared from its earliest days of existence on the farm from which it is sold three or four years afterwards in the shape of butchers' meat. The question of greater or less exhaustion of the land by the removal of 1 ton of meat or 1 ton of Wheat assumes quite a different aspect if animals are merely got ready for the butcher, and bought in when nearly full grown. Such animals return, speaking roughly, at least three-quarters of all the manurial materials which they take from the land in the shape of food: the increase in weight of the animals is chiefly derived from constituents of food, which the plants obtained wholly from the atmosphere. Looking at the question in this point of view, a ton of Wheat exhausts the land at least three times as much as a ton of butchers' meat.

CATTLE IMPORTATION AND CATTLE DISEASES BILL.

The following are extracts from Mr. J. Giblett's evidence, as corrected. Mr. J. Giblett called in, and examined: I have been a cattle salesman for nearly 40 years; certainly more than 37 years. About 14,000 beasts pass through my hands in the course of the year; taking it on an average for many years together, from 12,000 to 14,000. All of them are sold at Copenhagen Fields market, or the main part of them. They are generally fat beasts; but in sending fat beasts, there are many sent in a lean condition, which are sometimes sold for stores. I have never ceased attending that market for 37 years. I have never missed one Monday but on two occasions, when it was necessary for me to travel to Scotland. Many beasts come in a very lean condition, that are sold for stores.

The Chairman.—With respect to the Cattle Importation Bill, upon which I was examining the last witness, do you concur in the opinion that the foot-and-mouth disease should not be a reason for stopping beasts imported from abroad?

I have had a life's experience on the subject, and I know that the foot-and-mouth complaint was very prevalent long before there were any cattle imported into England at all. I have seen the operation of it every day, and legislation on the subject is perfectly futile, I am convinced, by my practical experience; and I have come to the conclusion that practical experience will arrive at as right conclusions as any medical testimony can give. I believe it to be an atmospherical influence. I believe that many animals are liable to the foot-and-mouth complaint, which is neither more nor less than fever, which is engendered from the beast having travelled and exposed, as each gentleman here no doubt is aware, sometimes 48 hours at a time by railway, to be shunted off to allow others carriages to pass, coming out of warm sheds, fed by artificial food that is of a highly heating character, and exposed to variations of the atmosphere. I believe that alone, irrespective of any disease, would have the effect of producing the foot-and-mouth complaint; and it is a very great blessing that it does show itself, according to my judgment, in the extremities, instead of attacking the vital parts. The complaint passes off after it reaches the extremities. I never knew an animal to die with the foot-and-mouth complaint in my life. It is true that I have had a great many killed that were in a bad state, which, if I had had to keep them might have died. I do not at all consider that it deteriorates the quality of the food: it does to a very trifling extent diminish the value a butcher would give for a fat ox if it had the foot-and-mouth disease. If he was going to kill it immediately, certainly 10*s.* would be the extent of the difference.

With regard to the provisions in the Bill as to pleuro-pneumonia, do you object to the penalty which is put upon persons for sending beasts with pleuro-pneumonia into markets?

No, certainly not; I would be the first to hold up my hand in favour of a penalty being inflicted on anybody who sends a bullock, either to a fat market or to a store market, in a very bad state. There are cases when there are symptoms of incipient disease, the animal having the lung complaint to a small extent, which are difficult to detect, and it may not be dangerous. For instance, I have sold beasts, that I have afterwards understood had the lung complaint, at 32*l.* and 33*l.* each, and the food considered to be perfectly good; but I have seen beasts in a very lean and a very bad condition exhibited for sale, when I should have liked to have seen a penalty inflicted.

At present, I think, in the Metropolitan Market, the inspector or clerk of the market has power to kill and dispose of any beasts suffering from pleuro-pneumonia? Yes.

Do you approve of that?—Yes.

Mr. Cox.—In any stage of the disease?—No. He has the power, in the case of an animal in a very bad state, to cause it to be killed, and I should think that a very wholesome and proper power. Even if it were in rather a good condition, if it were suspicious, he might then order it to be killed and sent to a certain slaughter-house, and then to be subject to the decision of the meat inspector as to its being fit for human food or not.

If this clause, putting a penalty on sending beasts with pleuro-pneumonia into the market, passed into law, it would not be operative excepting the beast was so far gone as to be palpably the subject of that disease; because, putting aside the question of inspection, the person who would bring the complaint—a man having cattle in the neighbourhood—must see that the animal had pleuro-pneumonia, otherwise he could not bring the case forward?—I think that there ought to be a penalty in all bad cases; but I think, at the commencement of a disease, it is so difficult to detect, that a grazier may send his beasts away without knowing it, and beasts that are worth 30*l.* each. I do not in the least believe that the meat is in the slightest degree injurious, where it is only the commencement of the disease. In direct answer to your question I may say that, in a bad case, I think there ought to be a public inspector, and a power given to the inspector to have them killed.—The inspector, or any authority of the market?—Yes. There ought to be an appeal to a veterinary surgeon. I am content with an appeal to the Veterinary College myself, as to those cases.

What is your opinion with respect to scab? Would you put a penalty on sending sheep with scab into the market?

My attention more particularly, especially for many years past, has been directed to beasts; but I should be very sorry to see a stringent law preventing sheep with scab, except in very bad cases. I have known sheep worth 3*l.* each have the scab, and I think if a penalty were to be levied on persons sending such sheep into market it would be very serious.

Would those sheep which you have seen be from abroad or at home?—I have seen a great many, and I have had a great many, principally from home.

From abroad?—Yes, many from abroad also, some years since.

The outside loss which the importer would suffer would be that the sheep with scab would be killed at Blackwall, instead of being sent to Copenhagen Fields?—I should particularly wish that such sheep should be killed, but not that the whole cargo which came with such sheep should be stopped.

You have no objection to killing the affected sheep as long as the others might pass?—Certainly not; I would not allow meat to be passed until it came under the notice of the inspector. I have sold a million and a half sheep in my time.

You would not allow sheep actually affected with scab to be sent the market?—That is rather a difficult question to answer, without I explain my views. There are very bad cases of scab, which I would not allow to be sent into the market at all, but there are other cases which might be pronounced as scab, where there is a little irritation in the skin. You may see it the size of a shilling. I think to attach a penalty to sheep having scab in its skin of that character would be very improper. In seriously bad cases I think that scab should not be allowed to be sent into the market; but in cases such as I have described, where the skin is slightly affected, I think it would be cruel to inflict a penalty on a sheep worth 3*l.*

It would be a question of the degree of the disease?—I think so entirely, and so I think as respects the lung disease. That is my practical conviction of what is proper.

With regard to sheep sent to market to be sold as store sheep, I suppose you would exclude from those any sheep with scab?—Certainly, I would.

Mr. Cox: In any stage?—In any stage. If I may be allowed to make an observation, I may say that any legislation about the foot and mouth complaint would be perfectly impracticable as regards England. I have known one-third of the whole supply of immense fairs to be affected with it; and I have known that many of the persons going to these fairs would prefer buying them with the foot and mouth complaint, than buying those that had not the foot and mouth complaint, for these reasons. They buy them at a little less price (say a few shillings each), 10*s.* or 15*s* less. If they had bought those that were perfectly sound, by the time that they travelled them home they would be sure to have the foot and mouth complaint. I am often employed to buy beasts. I do not mind buying them with the foot and mouth complaint. I know the effect of it. It is merely a passing evil I believe it to be atmospheric influence, the same as vegetation is affected; the same as Potatos. I think it is improper to call it disease.

Do you consider that the restrictions in respect to small pox are proper and right?

Certainly; the stronger you make them the better.

With respect to measles in pigs, is that a complaint which can be detected by examination?—I never saw a case, neither do I understand pigs in any way.

Have you any other observation to make respecting either of the Bills?—I have heard many exaggerated statements made which, I think, would be scouted by

practical men. If you want evidence on the subject you can have practical men, the best authorities in England, who would ridicule much of the evidence that is given. For my own part, I do not attach the importance to the veterinary evidence on the subject that I do to practical experience; for I find, if you take six, you will find three diametrically opposite to the other three. These are my convictions, and I think that we practical men, from our daily observation, know a great deal more on the subject than they do. I would not speak thus boldly if I did not feel fortified by a conviction of the truth. I can prove the foot-and-mouth complaint was very much worse before one foreign oxen was brought into England in 1839. I then sold a large quantity of oxen. I have known that 40 or 50 were killed in a day in the market; and the slaughter-houses then were very close to Smithfield. They could not travel a few hundred yards; they were obliged to be killed in the market and trucked away. I believe it is dying out, and becoming far less frequent than it used to be, the same as the disease in Potatos; and most distinctly do I believe it to be an atmospheric influence. I certainly think it is contagious and infectious. I am convinced it does not damage the food, nor render it at all unwholesome. In fact I have seen the carcases of a great many beasts that have been killed in a bad state with the foot-and-mouth complaint, and I never saw a beast more clear; so I consider the foot-and-mouth complaint is in a great measure an emittance of the evil. When once it takes the extremities it prevents its attacking any vital part, and it becomes a passing evil. I think I have most distinctly stated that I consider importers most unjustly treated. It is my duty to claim on the part of those who consign large quantities of cattle to me from abroad that they should be treated fairly, and they ask and expect to have their Bill assimilated to the English Bill, and that the particular diseases against which inspectors could act should be duly scheduled in the Importation Bill. We think less than that would be unfair to the public at large.

Do you consider it would be perfectly safe and proper to land such cattle as appeared to be sound, retaining in quarantine those that were affected?—Yes; those that were highly affected with the foot-and-mouth complaint, whether they arrived at the wharves, or by the railway from Scotland, or whether they arrived from abroad, I would not allow the beast to go away in a very bad state, with their hoofs cracked, and so on; but in a rather bad state, in a state that is bad, and yet not very bad, I would have them conveyed away in carriages.

My question was, do you consider it perfectly safe to land the others?—Certainly; it would stop every fair in England if this Bill were carried out in the way in which it is laid before us. I have been a great deal concerned with the Smithfield Agricultural Show, and it would stop our show. We had 80 oxen in the Agricultural Hall last Christmas affected with the foot-and-mouth complaint. It would stop the show at Battersea, and the Royal Agricultural Show elsewhere; there were more than 150 cattle affected with the foot-and-mouth complaint at Battersea. I am at a loss to express myself; but, in fact, the term ridiculous arises in my mind every time I read the clauses that are proposed.

Mr. THOMPSON.—I think you stated that a fat ox that had the foot-and-mouth disease was just as good, and worth as much money as one that had not this disease?—The meat is worth as much money to the butcher.

You mean, of course, on the premises of the farmer?—I was alluding then to the markets as a seller, and I qualified that by saying, "nearly as much, about 10*s.* a-piece less."

In your great experience you must, of course, have often seen cattle that have been driven with the foot and mouth disease, that have come with their hoofs off, and their tongues in such a state that they could not eat?—I have seen them driven in such a state, and think they ought to have been carried.

In fact, the whole animal was in a state of great fever?—I have seen them so often.

When in that state, you would not say that an animal was in a fit state for food, or anything approaching the value of an animal not affected with it?—Yes; I would say "give it proper rest," and it would be in a fit state for food; because I have attempted to show you my belief, which is, that the emittance of the evil at the foot gets rid of the disease to a great extent.

You say there is less foot-and-mouth disease in beasts imported from the Continent than in those imported from Scotland?—Yes.

Are you not of opinion that that may be in consequence of the regulations which now prevent the importation of diseased cattle with mouth-and-foot disease from the Continent, and none of these regulations applying to Scotland?—I know we find them more healthful there, In Oporto they do not know what the foot-and-mouth complaint is.

As to North Germany especially?—There I find from reports I have received that they are more healthful, and in Holland particularly.

And in Prussia?—In some parts they are affected with it, but in Holland they are much more free than we are.

Would not the entire removal of any restriction on the importation of animals affected with the foot-and-mouth disease be likely to lead to a large increase of the importation of such animals from those ports?—It would not be their policy to send them if they knew they had the foot-and-mouth complaint, because there is a very rapid deterioration in the animal, and they are very generally inspected before imported.

But they do send them now, even with the risk of being stopped?—I should think in many cases they have taken it on the voyage. They may have had it in their system, but the voyage has caused it in many cases where the animal has been quite sound and where it has been landed with the foot-and-mouth complaint. I have often been down at Gravesend to meet the Scotch boats many years since, when the foot-and-mouth complaint was much worse than it is now. I have seen a large cargo of beasts there in perfect health. I have seen the same beasts landed at the wharves, and I have seen a large proportion of them affected with the foot-and-mouth complaint; that helps to convince me that it is an atmospherical influence. I know that in a sharp east wind it is much worse than at any other time. I was in the market yesterday, with a large quantity of beasts, and last Monday there were 6000, when I was in very active operation; I only saw three with the foot-and-mouth complaint.

HORSE BREEDING AND KEEPING.

[The following is an abridgment of Mr. Barthropp's valuable paper read recently on this subject before the Framlingham Farmers' Club.]

IN the first place, whether we breed cart horses or hunters, in order to stand a fair chance of success, it is necessary to have some fixed principle to go upon, and this I think cannot be arrived at without some knowledge of physiology as applied to breeding. Admitting the theory that the sire and dam have each their different influences to exert upon their progeny, the breeder must endeavour to make use of this knowledge to his own advantage.

1. Hitherto the farmers of Suffolk have contented themselves with the celebrity of their cart horses.

There has, however, during the last few years been a great depreciation in the value of these horses, and, except in a few particular cases, we do not hear of Suffolk horses and colts making very tempting prices at the Michaelmas sales. Taking into consideration then the falling off in the supply from Ireland, and the great dearth of good weight-carrying horses throughout England, why should not the Suffolk breeder follow the example of his Yorkshire and other northern brethren, and turn his attention to the breeding of the class of horse for which there will always be a sale? It may be said that heavy-land farmers have not room to keep their colts till they are fit for the dealer. But why, again, should not some of our large light-land men, who have plenty of marshes near the sea, invest some of their capital in buying up promising one and two year old colts, and thus fill up the gap between the breeder and the dealer? This custom is pursued to a great extent in Yorkshire and other horse producing counties. There are several reasons why the breeding of "riders," as they are called, has frequently disappointed the Suffolk breeder. First, they are not particular enough as to the mares they breed from, but expect the horse to do nearly everything; and if they are lucky enough to possess a good mare, they are frequently induced, by some chattering half-drunken horse leader, to put their mare to the first horse that comes into their yard; whereas, if they would trouble themselves to think whether the horse would suit their mare or not, or ask some friend who really does know the points a horse ought to possess to advise them thereon, the chances are they would be spared much annoyance, as well as certain loss. Again, the Suffolk breeder, good manager as he may be of his sheep and bullocks, does not generally pay that attention to his young "rider" he ought to do; the consequence is, the unfortunate colt has to shift for himself "about the yards," and is very very lucky if he has not some rather serious blemish long before the time comes for him to be turned into money; his owner is consequently disgusted, and vows he will breed no more "riders." There are enterprising men in this neighbourhood; let them then go into the north, or, if they have not confidence in their own judgment, let them commission some good judge to select for them one or two good, young, sound, well-shaped mares, with proper action, good temper, and whose pedigree they can depend upon; for remember how much the dam has to do with it. Let them select a stallion with equally unexceptional qualifications. Let them take care of the produce, giving it a liberal allowance of corn during the first year, at any rate; and remember never to allow it to lose the flesh in the winter that it has gained during summer. And I can see no reason why as good horses should not be bred in this part of Suffolk as in any other county, for a dry climate is natural and favourable to the horse.

2. And now, perhaps, I may be expected to describe what I call a good, well-shaped mare.

Now, almost all men fancy that they know something about horseflesh, and would think me very impertinent were I to question their judgment. I am free to admit that the generality of men know a good from a bad-looking horse; but it is only those who have a natural taste that way, and who have given the subject great attention, who can look a horse over point by point and give you an opinion worth having. If, then, it is difficult with a horse before you to understand what would at once strike the eye of the judge as points of excellence, how much more difficult must it be for me to convey to you by any words of mine what I consider ought to be the shape and make of the "hunter brood mare." First, then, as to size. The most valuable horses are those that can carry the most weight; and although it does not always follow that the 16-hand horse can beat one of 15 hands, yet most men like to be on a horse high enough to enable them to see what is on the other side of the fence as they come to it; I therefore think the hunter brood mare should not be less than 15½ hands. It is sometimes said, "A horse does not go on his head," and that it is not an important feature; but I think a good head is a great setting off to a horse. I would have it well proportioned to the size of the horse, and care not so much for a "pretty head" as a good intelligent-looking one, no matter if it is rather long, provided it is lean, with a kindly expression of eye, nicely hung on the neck, clear between the jaws, to admit of the trachea, or windpipe, having full play, and free from all thickening of any kind; the neck should be light, yet running gradually to strong, well-laid shoulders; the back should be of moderate length, with ribs springing well from the chine, a well-arched loin, two long hind quarters; the tail "on the top of his back," as it is called, is pretty enough to look at, but I believe the horse with rather drooping hind quarters will be found the fastest. The thighs should be full and muscular, running down into clean, big hocks, flat hind legs, good fetlock joints and feet. It is important that the mare has deep, as well as good springing ribs, muscular, not fleshy shoulders, good deep brisket with plenty of room for the lungs to play, arms well developed, and standing square on good flat fore legs, the sinews of which should be free from all appearance of fleshiness, but be hard and wiry feeling, and running into strong fetlock and pastern joints, with feet free from all appearance of contraction or flatness. This description of the essential points of a horse is, perhaps, a very imperfect one, but I know not what to say about it, further than, above all things, secure good oblique shoulders, and strong thighs and hocks. Nice straight fore legs are doubtless very desirable; but I would rather put up with a horse with arched fore legs, and that was a little cross-ankled, provided his shoulders and hind legs were good, than have the best formed fore legs ever seen, with upright short shoulders; remember, however, that it is not every horse with high withers that is desirable, but the shoulders should be long and well laid into the back.

3. The chief points of excellence I have enumerated in the mare are, in all respects, the same in the stallion, with, perhaps, the exception that his form should be more compact, his joints more firmly knit, and his general appearance denoting the possession of great power in comparatively small compass, and he must be thorough-bred.

As to the necessity of this, I find Mr. Corbet, in his Essay in the "Journal of the Bath and West of England Society," saying, "The great improver, then, of his species is the thorough-bred horse; and as a maxim, if you expect the produce of the half, or even three-parts, bred mare to be worth rearing, you must put her to a sire as pure as Eclipse himself. There may be occasional exceptions, but these are not to be trusted or taken as precedents. When certainly we see a fine powerful three-parts bred horse, with plenty of substance and style about him, a good head, fine shoulders, clean hocks, and so forth, we feel willing enough to have more like him. But in this case we have a forcible illustration of the fallacy of the proverb; for 'like does not get like.' Put the clever three-parts bred stallion to the equally clever three-parts bred mare, and can we do so with the assurance that they will produce anything as good as themselves? Most decidedly not." I must say I quite agree with Mr. Corbet in his opinion; at the same time it does not necessarily follow that because a horse is thorough-bred that he is fit to breed from, for there are lots of brutes travelling through the country with, perhaps, "a long pedigree, and a flaming account of what their sire or grandsire may have done, or even perhaps themselves may have accomplished over a short course with a light weight," that are, nevertheless, the very reverse of what a thorough-bred horse should be for getting hunters. Some years since I took great interest in the study of the stud-book, and I then could tell you the pedigree of almost every horse of note, and whether his blood was celebrated for speed or lasting qualities. Of late years I have been out of the way of it; I have, therefore, requested a friend of mine, well versed in the stud-book lore, to tell me the best strains of blood for hunting purposes. He says the chief strains are the Touchstone, Melbourne, Birdcatcher, Emilius, and Blacklock. Of these Touchstone is more especially adapted for racing purposes than for hunting, being very speedy, with very powerful quarters, but with upright shoulders, and badly formed fore legs. The shape is singularly to be seen in all his stock, which are generally sound in wind, and usually bays or browns: the old horse himself was never known to get a chesnut. His blood comes to us now chiefly through Orlando, and his sons Trumpeter, Diophantus, Zuyder Zee, Chevalier d'Industrie, Fitz-Rowland, &c. The Melbourne blood is remarkable for size, substance, fine open oblique shoulders, and good legs and feet, and whole dark colours; for country purposes it is difficult to find better from these good points. There are more large horses unsound in their wind than small ones of every breed, and for this reason the Melbourne blood has some few detractors, but it is staying blood unquestionably; and when we see such animals as Canezou, Blink Bonny, Meteora, Mentmore Lass, Mentmore, Middlesex, Cannobie, Prime Minister, and Oulston, we can afford to look leniently on the faults of others; the latter three, with Young Melbourne, Arthur Wellesley, and one or two others, are the stallions now covering by him. The Birdcatchers are mostly undersized horses, and in colour strongly incline to chestnut with silver hairs; they are neat, level horses, on short legs, but have too often small hocks, disposed from their formation to be curby, and when a horse can be found without these drawbacks with sufficient size, and a mixture of larger blood, it is quite the sort for hunting purposes. Stockwell, the grandest of his descendants, is free from them, but Rataplan, his own brother, has the curby formation, as had Daniel O'Rourke. Many good hunters were got by Birdcatcher in Ireland; but in the days of his popularity many horses were fathered on him which he never got; and if not in the stud-book, Birdcatcher pedigrees are not always to be trusted. The Emilius blood is always to be prized for country purposes, being of medium size and generally strong, thick, symmetrical horses, with true formation and fine "Orville" heads. Agreeable (formerly covering in Essex) was an example of this, as was Recovery, who was selected to be modelled for the St. James's Park statue. Emilius's half-brother, Muley, is also notable for the great size of his stock; and I have a great opinion of the staying qualities of the blood for hunting purposes. Blacklock, himself a very big horse, and a very good one, comes to us chiefly through his sons, Brutandorff and Voltaire, the former the sire of Hetman Platoff, both father and son the sires of large, upstanding, coaching-looking stock in the north—and the latter the sire of Voltigeur and his brother Barnton, alike handing down the family character in the size and hardy colours and constitutions of nearly all their stock. On the turf they do not come to early maturity, and are more distinguished for staying qualities than for speed. There are a few strains distinct still from these. The Ion blood (himself a beautiful horse) comes to us through Wild Dayrell and Pelion, highish horses, and the latter with indifferent forelegs. The Dr. Syntax blood we have (crossed with Touchstone) in Newminster and in Newcastle, a double cross of it, a small horse, Knight of Avenel and Malcolm; it is undeniable for gameness, but generally too small for country purposes. The size, colour, and shape of Melbourne and Emilius, with some staying, game, blood like Tramp, Catton, or Whalebone blood, is the mixture to be sought after for country purposes. Having now, very imperfectly I allow, brought before you the subject of breeding and rearing a better description of riding horse than we are accustomed to see in this neighbourhood, I must leave it to the judgment of individual members of this club to determine whether they will travel out of the usual routine of bullocks and sheep, and substitute as a part of their farm stock one or two good brood mares, and this not merely as a matter of fancy, but with a desire to profit.

4. As my name has been associated for several years with the Suffolk cart horse, it would, perhaps, not be

right that I should entirely pass the subject over, especially as it is in accordance with the text on the card.

What, then, has been said as to the shape of the hunter and riding horse applies equally to the cart horse, with the exception of the shoulders; for whilst you cannot well have the shoulders of a riding horse too oblique, those of the cart horse ought to be more or less upright, so as to allow him to throw his weight into the collar. It is equally important with cart horses as with others that attention should be paid to their breed, selecting those that are remarkable not only for their form, but for the hardiness of their constitution, and for their activity. With regard to stallions, it is frequently said, and with much truth, that they are made too fat. Now, for myself, I would never breed from a travelling cart stallion that was not fat, for I know enough of the business to be certain that his owner would have made him fat if he could Now, as it costs no more to keep a good horse than a bad one, and as there is an immense difference in the value of the two animals, and as the cultivation of land by steam will no doubt go on to increase, I see no prospect of the breeding of inferior cart horses becoming a very profitable business. I would, therefore, strongly advise you to breed only from good mares and by the best stallions. By adopting this course you will have a fair right to expect the produce to be worth rearing, and the difference you will have paid for the service of the horse of 10*s*., or even 1*l*., will be amply repaid you in the increased value of the foal. Some three weeks back there were something like a dozen cart stallions shown on the market hill in this town, and I feel certain that it would be cheaper to pay even 5*l*. for the use of some of those horses than to have the services of the others gratis. As to the rearing of foals, I think they should be kept well, especially if promising fillies; they will then be ready for sale should an opportunity offer: if not, they will be fit for work at an earlier age, say in the autumn of their second year, when two of them may do the work of one horse. But, remember, never let a colt be knocked up; if you do, he is almost sure to be a slug all his life; in fact, no horse should ever be overdone.

5. The feeding of cart horses is a most important item in the economy of the farm.

The question is, What is economy? Certainly not starvation, or keeping the horse below his work; but rather keep him above his work. It is scarcely necessary for me to speak of the various methods of feeding cart horses, as it must vary with the nature of the soil. Where stover is so plentiful that you can allow it *ad libitum* no doubt a horse will do very well with the bushel of Beans per week, with chaff; but there are not many farms where it would be convenient to allow such a supply of stover. Good fresh Bean or Pea straw cut into chaff with the stover, and an allowance of Beet-root cut with Gardner's cutter, will be found a more economic mode of feeding, in my opinion. In this neighbourhood Carrots are not much grown, but where they are they are unquestionably first-rate and cheap food for horses. I have heard of horses being kept in good condition with Beet-root and stover without corn, but I never could find it would do so with my own horses. One great point I think is, that the horse drivers do not spend so much time with their horses as they ought to do; another is, that generally there is not sufficient stable room to allow of the horses being kept under cover, as it must be wrong when a horse has been at work all day in winter that he should be turned out into an open yard at night, and exposed to any amount of rain or snow. A shed in the yard is of little use, as one or two horses are sure to be masters over the others, so that if they attempt to get under cover they only get driven out or kicked, and very often a farrier's bill is the result. So desirable, indeed, do I feel it to be that no water should be allowed to fall on a horse's back after his day's work is done, that I venture to assert that a horse in a loose box or covered yard would do better on a bushel of corn per week, than with 5 or 6 pecks if exposed to the vicissitudes of our climate in an open yard.

(To be concluded in our next.)

Home Correspondence.

The Cattle Disease Bill and the Importation of Diseased Cattle and Unwholesome Meat Bill.—These two Bills are now under examination by a Committee of the House of Commons. They are Bills of great importance to the agricultural interest, inasmuch as they contain a series of rules and regulations respecting the transit of stock, *i. e.* all domestic animals, and their exposure for sale in our fairs and markets. It does not yet appear to be taken up by the graziers and breeders of stock as a question of peculiar concern to them; but if they are not on the alert, or their firm friends in the Senate do not protect them, they will find it one of the most unjust, obnoxious, and perplexing laws ever enacted against the farming interest. Taking the two Bills consecutively we find as follows:—That any person who shall turn out, or place any stock upon open commons, open fields, roads, &c., or in fields insufficiently fenced, or upon any person's premises without leave, or shall drive them along any highway without great care, or shall expose for sale in any fair, market, or other place, "having reasonable cause to suspect the existence of disease in any animal," he shall be liable to a penalty not exceeding twenty pounds, and any justice may upon complaint order such stock ("cattle") to be removed to a place of safety, and to be kept there at the owner's cost, together with costs of removal. "Cattle inspectors" are by a subsequent clause appointed, whose duties, amongst many others, are to examine and seize, and remove in order, and at costs as above stated, any stock on their way to, or may be exposed in any market or fair, &c., or any stock intended for human food "he may deem to be affected with any contagious or infectious disease." Any person offering any obstruction to such seizure and removal is liable to a penalty of five pounds; and these inspectors are further empowered under a general Order in Council to seize and destroy diseased cattle or stock, or "meat, skins, hides, horns, hoofs, or other parts of cattle, or of hay, straw, fodder, or other articles likely to propagate infection." They have also power to order constables, and others, &c., to remove or aid them in such removal or seizure. In all this arrogancy of power these men act upon their own judgment, humour, and responsibility. No provision is made against their errors or wrong-doing. Then railway servants, on their own *ipse dixit*, can refuse permission for stock to enter their stations, &c. (because, as may be surmised), they are by another clause compelled to purify and cleanse out every truck in which cattle have travelled before it is again loaded. Carriers and innkeepers must do the like with their carriages or premises where cattle (stock) have been confined, under a penalty of 10*s*. for each head of stock. The second of these Bills—the Importation of Diseased Cattle and Unwholesome Meat Bill—places all importations into our ports upon the same footing, whether they come from "parts beyond seas, or be removed by sea from one part of the United Kingdom to another part thereof," and it provides for the examination of all animals or parts of animals or fish in whatever state, dried, salted, or otherwise, and all articles of package imported, &c., and for their condemnation and destruction, all by inspectors. Then further, for the examination "of all meat, poultry, game, fish, and animal substances intended for food," and for its destruction. Now, supposing all this is truly requisite (which we by no means allow), is it reasonable to trust all this power to a class of men to be called cattle inspectors? We think it cannot for a moment be tolerated. Then there is the power given to railway officials, carriers' servants, to refuse carriage to animals they may deem diseased. What a scope for rival dealers or malicious drovers, or bribery to these officials to induce them to refuse loads of cattle, &c. Then again the Scotch transits or Irish transits, and our own transits from port to port. The former would altogether relinquish transit by sea, and the latter could only export to Port Patrick, or Holyhead, or Liverpool, &c., under the same rules as for salted fish from Nova Scotia, or dried tongues from Archangel. This is simply absurd. Ireland, Scotland, and our own ports must certainly be left out, or all must travel by rail except Ireland. The foot and mouth disease is very properly excluded. There are many good regulations in the Bills. The cleansing of railway carriages and steamboats and layers, &c., is very commendable. The provision to compel all parties engaged in carrying stock to provide them with water is very proper and good. The main features of the Bills are good. Protection and careful supervision is much needed, but surely such can be accorded without perpetrating rank injustice. Why are all parties connected with the removal, sale, or disposal of stock to be at the mercy of a large class of petty officials for the most part unfitted for their work, as not knowing the peculiarities of the various diseases, or the appearance of meat under its various phases of putridity, &c. *O. F.*

Scotch Broadcasting.—A northern correspondent complains of weeds and asks me whether it would not be better to drill. In reply, I say that broadcasting is one of the weak points in Scotch farming, and is only justifiable where great stones or obstructions would prevent the use of the drill. Broadcasting is quite out of date in the south, for by it we lose the great benefit of the horse hoe. When a dry bright day or a good weed-killing day offers in the spring, away goes my man at break of day with Garrett's horse-hoe, which I have used nearly 20 years; and by sunset he had clean hoed 20 acres of Wheat, cutting everything up between the rows, which are 9 inches apart. The horsehoe covers a space of 7 feet 4 inches. Ten to 12 acres are considered a day's work, but with an extra pair of horses, and an extra 1*s*. for the man, we got over 20 acres. The same remark applies to Beans. This is by far the best and cheapest means of keeping our land clean, and the hoes cultivate, on their second use, almost as deep as the plough. Care must be taken to hoe before the spring fibres work in between the rows—to cut these would be injurious to the crop, either corn or root crops. We harrow our Beans well when about one inch out of the ground, and horse hoe them twice when further advanced in growth. The hand hoe is used in the rows. It does not pay to permit weeds to grow among your corn. *J. J. Mechi, July* 1864.

Corn Grown at Tiptree Hall Farm: Harvest of 1863.

	acres.	qr.	bus.
Thorne Field (red)	8	58	2
Willow Field (white)	6¼	46	0
Eleven Acres (red)	11	70	0
Ash Field (red)	6¼	29	4
Holly Field (red)	11¾	66	3
Nine Acres (Rivett)	9¼	58	0
Black Sandys & Pond Field (Barley)	13¼	83	4
Nine Acres Chapel Field (Oats)	9	80	0
Thirteen Acres (Beans)	13	82	4
Oak Field (Beans)	5¼	36	0
Elm Field (Peas)	6	24	0
Peas picked green for London market	11		
Italian sewaged Rye-grass, fed, cut green, part made into hay	12½	643	1
Red Clover, hay 2¾ tons per acre	7½		
Tares, mowed green, followed by 3½ acres of Cabbage, and 3 acres of Turnips	6½		
Beans, cut green for stock	1		
Swedes (25 cart-loads per acre, estimated at 18 tons per acre)	5		
Mangel Wurzel, 25 tons per acre	13½		
Pasture made into hay, 2 tons per acre	5		
Pasture fed	1½		
Farm Buildings, Stack-yard, &c.	1½		
Roads, Fences, Water-courses, &c.	11¾		
Garden, Shrubbery, &c.	4¼		
	177		

The two first fields of Wheat, sold immediately after harvest, produced 16*l*. odd per acre, besides the straw left. All the Beans, Oats, and part of the Barley were consumed upon the farm, also the hay, and straw, roots, Grass, &c. The quantity of meat made upon the farm was about 200 lbs. per acre over the whole farm. *J. J. Mechi, June* 21, 1864.

Iron Hurdles.—Eighteen years or more ago I bought of Messrs. Garrett a number of 15-feet iron hurdles on wheels, at 25*s*., and here they are still, almost as good as ever. Well, my farm neighbours looked at them for 17 years, and have at length come to the conclusion that for sheep folding, &c., they are a real economy, taking time, cost, and efficiency into consideration; and I see them purchased and used by those who once thought me an extravagant farmer. I have no doubt that iron fencing will also soon be considered cheaper than even a Thorn fence, especially as land becomes more scarce and more valuable. Iron fences have no roots to draw the land and no bulk to occupy it. *J. J. Mechi, July*, 1864.

Sewaged Italian Rye-grass.—I wish to correct an error that I made. I said that my farm horses consumed 112 lbs. daily. It should have been 168 lbs. every 24 hours. That would be 10½ cwt. weekly, or 42 lbs. of dry substance in 24 hours. At 10*s*. per week (the usual cost of feeding a large farm horse in full or heavy work) this would give a value of nearly 20*s*. per ton for the Rye-grass. They have no other food so long as we have enough of the Grass. They consume a like quantity of sewaged meadow Grass when fed with it alone. *J. J. Mechi.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

Monthly Council: *Wednesday, July* 6.—Present, Lord Feversham, President, in the Chair; the Earl Cathcart, Lord Chesham, Lord Leigh, Major-General the Hon. A. Nelson Hood, Sir Montague Cholmeley, Bart., M.P.; Sir J. V. B. Johnstone, Bart., M.P.; Sir Matthew White Ridley, Bart, M.P.; Mr. Acland, Mr. Raymond Barker, Mr. Barnett, Mr. Barthropp, Mr. Bowley, Mr. Burgess, Mr. Cantrell, Colonel Challoner, Mr. Dent, M.P.; Mr. Druce, Mr. Fisher Hobbs, Mr. Hudson, Mr. Hutton, Mr. Jonas, Colonel Kingscote, M.P.; Mr. Milward, Mr. Pain, Mr. Randell, Mr. Thompson, M.P.; Mr. Torr, Colonel Towneley, Mr. Burch Western, Prof. Wilson, Mr. Frere, Prof. Simonds, and Dr. Voelcker.

Four hundred and five new members were elected.

Mr. Fisher Hobbs' motion that all persons nominated at the Monthly Council in July, shall have the privileges of Membership at the Newcastle Show, on paying the current year's subscription, was seconded by Mr. Torr, but lost on a division by 11 noes to 10 ayes. Mr. Dent, M.P., then moved that all persons nominated at the Weekly Council on the 12th should be elected at an adjourned Monthly Council to be held the same day, which was seconded by Mr. Pain and carried.

Finances.—The Hon. General Hood, Chairman of the Committee, presented the Report, from which it appeared that the Secretary's receipts during the past month had been examined by the Committee, and by Messrs. Quilter, Ball, & Co., the Society's accountants, and were found correct. The balance in the hands of the bankers on June 30 was 2817*l*. 3*s*. 11*d*. The balance-sheet for the quarter ended June 30, 1864, and the statement of subscriptions and arrears, were laid on the table, the amount of arrears then due being 737*l*.

Journal.—Mr. Thompson, M.P., Chairman, reported that the Committee recommended that 20*l*. be given to the widow of the late Professor Henfrey, as an indemnity for the loss of a paper on the "Structure of the Roots of the Turnip," written for the Journal, and lost during the interregnum in the Secretaryship.

In Class III., Breaking up Pastures, the prize of 20*l*. was awarded to Mr. Charles Belcher, Little Coxwell, Faringdon.

The winner of the prize in Class II., announced at last Monthly Council (the name not being sent in as usual), has since repaired the omission, and announced himself as Mr. Bligh Monck, Coley Park, Reading.

Newcastle Meeting.—The complete plan of the Showyard was laid on the table, the contractor having reported the whole of the sheds covered in, and all in readiness for the opening. On the motion of Lord Chesham, seconded by Mr. Torr, the Council resolved on ordering a separate refreshment room for Members of Council.

Judges.—Additional names were added in various classes, and it was resolved that a sum of 20*l*. be allowed for a report on the stock exhibited.

The following noblemen and gentlemen were appointed on the General Plymouth Committee:—Feversham, Lord, Chairman; Fortescue, Earl of; Powis, Earl of; Chesham, Lord; Portman, Lord; Tredegar, Lord; Hood, Hon. Major-Gen. A. Nelson; Vernon, Hon. A. H.; Lopes, Sir Massey, Bart., M.P.; Macdonald, Sir A. K., Bart.; Ridley, Sir Matthew White, Bart., M.P.; Acland, Thos. Dyke; Arkwright, J. Hungerford; Barnett, Charles; Bowly, Ed.; Bramston, T. W., M.P.; Cantrell, Charles S.; Challoner, Colonel; Dent, J. D., M.P., Gibbs, B. T. Brandreth; Hobbs, Wm. Fisher; Holland, E., M.P.; Hoskyns, C. Wren; Kingscote, Colonel, M.P.; Milward, Richard; Plymouth, Mayor of; Pain, Thomas; Pope, Edward; Randell, Charles;

Shuttleworth, Joseph; Tremayne, John; Turner, George; Thompson, H.S., M.P.; and Torr, William.

ROYAL DUBLIN EXHIBITION: *Flax Machinery.*—There are few implements of more importance at this exhibition than those designed for the manipulation of Flax, now more than perhaps ever before (at least during the present century), cultivated in Ireland. Those implements to which my present remarks apply, are what are called "breakers" (or buffers), and "scutchers." Of the first there are three most worthy of notice, namely Friedlander's, Rowan's, and an American design exhibited by Lawson & Sons, Leeds. Rowan's and the American are composed of fluted metal rollers between which the Flax is passed once, and comes out with the coarse woody matter completely crushed and loosened, so much so as to render the scutching process easy of accomplishment. That of Friedlander is composed of what are called buffers, elevated by a revolving toothed axle, and let fall alternately on the Flax plant on a flinted platform.

In this case the fibre is merely crushed or flattened without having the woody matter in any manner transversely broken, as in the case of the other two. Both Rowan's and Friedlander's are accompanied by scutchers, consisting of drums, on which are placed beaters to liberate the woody matter and tow from the fine fibre. The beaters in Rowan's are one end rather rigid, but on the other more flexible, being an improvement inasmuch they do not press heavily against the Flax in their revolutions, or endanger the fine fibres being injuriously broken.

Those on Friedlander's are toothed, if I may so express the little cup-like appendages placed in lines along the drum, in front of which are metal plates which are tightened and loosened by screws, as the state and condition of the Flax may deem necessary for the first and second beatings. To an ordinary observer unacquainted with them the respective merits of these machines would be quite mysterious. To obviate this difficulty the exhibitors of Rowan's and Friedlander's machines agreed to have them tested last week by a Mr. McMaster, who brought some good Flax of his own growing and saving on which to test them. I was rather fortunate in being present during the most important period of this test, being the only man either directly or indirectly connected with the press having had this chance, for it was but a chance. Although the tests were not in my mind conducted so as to do adequate justice to the machinery respectively, I have seen quite enough to enable me to judge, of which I would purchase myself did I want such. But believing that, as already said, the trials were not, perhaps they could not, under the circumstances be fairly conducted, I will reserve my own impressions, and leave your readers to form their own conclusion on the results the following figures will indicate. Flax operated upon by each set, 56 lb :—

TIME SPENT BY ROWAN'S:	Minutes.
Streaking for breaking ..	23
Breaking	10
Streaking for scutching	21
Rough scutching	26
Fine scutching	59
Total	139
Gain in time	21
	160

TIME SPENT FRIEDLANDER'S:	Minutes.
Streaking for breaking ..	0
Breaking or buffing ..	26
Streaking for scutching	36
Rough scutching	55
Fine scutching	43
	160

PRODUCE. ROWAN'S:	lb.	oz.
Fine fibre	10	3
Fine tow	2	0
Coarse do.	3	0
Waste ..	40 1	
Haybands	0 12	
	40	13
	56	0

PRODUCE. FRIEDLANDER'S:	lb.	oz.
Fine fibre	9	4
Fine tow	2	0
Coarse do.	3	0
Waste ..	41 0	
Haybands	0 12	
	41	12
	56	0

In as far as the foregoing can be relied upon, there has been lost in Friedlander's in time nearly 14 per cent. and in fine fibre over 10 per cent. But a question now presents itself—what was the marketable value of the fine fibre of each? On this I am not going to offer any opinion. In justice to Friedlander's, I must say that the boy employed working them was not capable of doing work so quickly as the man working Rowan's. I must in justice to Rowan also say that a portion of the work done by him, for example, what is called the streaking or fitting in handfuls for the breaking and scutching, could be done by cheaper hands than those of the man at work, for little boys or girls could do the "streaking" equally well.

As this notice, if it ever sees the light itself, will be sure to meet the eyes of the authorities connected with the Exhibition, I would suggest another trial conducted in a more perfect manner, and that the American breaker be also tested with the other breakers, as, judging from what I had seen done by it occasionally, I would say it would do its work more quickly than either of them, nor am I aware of its work being less efficiently done either.

In concluding these hasty remarks I would advise your Irish readers, especially those in the West, South, and Midlands, to be cautious in selecting these breaking and scutching machines till it be practically proved which will give the best quality of fine fibre, as one shilling difference in the price of a stone of Flax, especially where much of it was to be prepared, would soon compensate for the extra labour expended in working, or the extra price paid for one set over another. Prices of breakers and scutchers:—Rowan's breaker, 25*l.*; scutcher, 24*l.* Friedlander's breaker, 30*l*; scutcher, 35*l.*

Amongst the other implements connected with the Flax manipulation are three turbines or horizontal water wheels, two only of which are at work. It is to be hoped the directors of the Exhibition will also put to a fair test the practical working power of these useful implements. *Edward Carroll, College Hotel, College Street, Dublin, June* 28.

Farmers' Clubs.

ST. AUSTELL: *Grass Land.*—Mr. OLIVER, of Penhallow, read the following paper at a recent meeting of this Club:—Should a farmer now-a-days complain of the low price of grain—which he is certainly justified in doing—he is likely to meet with this sharp retort from consumers, "Why don't you lay your land down to Grass, that we might have shamble meat cheaper? surely the price of beef and mutton is high enough!"—thinking, no doubt, in their ignorance of agriculture, that by increasing the breadth of Grass land we should increase the quantity of stock; but, as practical agriculturists, you are fully aware that the arable land of this country will carry a much larger amount of stock, when properly cultivated, than when laid down to permanent pasture. If, therefore, in a national point of view, cereal crops will pay the expense of cultivating, such land should not be laid down permanently to Grass; for by so doing there would be a diminution of both labour and produce. Moreover, should these suggestions be adopted, consumers in this country would find themselves rather awkwardly situated in winter, when foreign stock cannot reach our shores, if winter fattening was discontinued, as it must necessarily be, on grazing farms.

(1). In treating on the subject of Grass land, I do not intend to confine my observations to permanent pasture, but to Grass land generally, and will commence with seeding.

Previous to seeding, the land should be carefully freed from weeds; and in order to accomplish that object, as well as to preparing a compact and suitable seedbed, the surface should be well pulverized. In selecting seed, particular attention should be paid to the kinds of Grass found to flourish, and such as are readily eaten by stock on adjacent land of similar quality; for it is surprising what effect soil and climate have on vegetation. Grasses which are eaten by cattle with avidity off certain soils will be rejected when grown on soils of a different character; hence the necessity of studying nature in the selection of seed. Seedsmen, however, frequently proffer a mixture regardless of the character of both soil and climate, which to me "savours strongly of the shop." I have seen many fields, that have been injudiciously seeded down for permanent pasture with those mixtures, rendered almost valueless for many years—although heavily manured—by the coarse, inferior Grasses domineering over the finer sorts, so that it has been found necessary to rip them again at a considerable sacrifice. Old Grass land, in the light soil and humid climate of Cornwall, is generally found to abound in soft Grasses, chiefly of inferior quality, ill adapted to the fattening of either cattle or sheep, especially woolly soft Grass (Holcus lanatus), which is of little value. It is, therefore, necessary to introduce some of the harder kind of Grass, such as the Fox-tail, Catstail or Timothy Grass, which appear to be well adapted to our loam soils; Cocksfoot, a Grass calculated to keep the digestive organs in order; rough-stalked meadow-Grass, &c. These Grasses should, however, be but sparingly used with Italian and Common Rye, mixed with different kinds of Clover (especially Cornish Mail, which will remain much longer in the land than any other variety), so that when the short-lived sorts die off, those which I have named, with others indigenous to the soil, may fill up the vacancy. The quantity of seed recommended by seedsmen is, I am persuaded, much too great. Grass crops suffer from being planted over-thick, in the same proportion as grain or root crops. Much care is required in sowing Grass seeds. It should be done by broadcast machines; and even then, to ensure its being rapidly sown—which is a matter of great importance—the land should be twice sown, by taking half the machine's breadth only at a turn. Rich soils, intended for permanent pasture, should be sown about the end of July, without a corn crop. Good arable land should be sown about the middle of May with a corn crop, or earlier if with Wheat, and the crop be forward. Light, plain land, which should be but seldom tilled, is most profitably seeded down about the middle of July, without a corn crop, adding two quarts of Rape-seed per acre, which affords much keep in the autumn or following spring. I would observe, by the way, that when coarse, upland pastures require to be "renewed," and are broken up for that purpose, the natural or indigenous Grasses should by no means be destroyed, since Grasses of a superior order cannot long exist on elevated poor land; and while it is impossible to purchase the seed of many of the native Grasses, it is more economical to propagate from plants.

(2.) The manuring of Grass land is a very interesting question: its effects are really wonderful. "Muck" is said to be the mother of manure. We will, therefore, first consider its varied effects, which will, of course, in great measure depend on its preparation, composition, and application.

This brief paper will not admit of my dilating on the two former questions; but with regard to the latter, I would observe that, in order to improve a coarse, old pasture, dung should be well fermented, or, still better, decomposed, by being previously mixed with rich calcareous or aluminous soil, and applied in the autumn, the Grass being first eaten close. Should it, however, be desirable to increase the quantity, recently made and slightly fermented manure should be supplied in the spring. On rich, arable land, I consider that farm-yard manure is most profitably applied on the second year's Grass, slightly fermented, in the spring; but on plain arable land I think it would be more advantageously applied in a similar manner to the first year's Grass. As a rule, I am decidedly of opinion that farm-yard manure is most profitably applied to Grass land, taking into consideration the facilities afforded for its application, in the autumn and spring, when teams would frequently be unemployed—economy of labour being a matter of great importance. Many persons are of opinion that when dung is applied to the surface of land, much of its manuring properties escape into the atmosphere. Experience and observation have, however, long taught me to think otherwise; and Professor Voelcker has lately, by a series of experiments, distinctly proved that it is benefited by exposure. Some years since I manured a field, in February, with recently made yard manure. We had a continuance of cold dry wind for about two months after. During that time the manure was frequently brush-harrowed, so that it had the appearance of short, dry straw; nevertheless, its effect was manifest long before any rain fell, and afterwards it was extraordinary—so much so, that I feel confident that I never applied manure to greater advantage. Lime is, no doubt, a valuable rectifier of rich old Grass lands, by acting upon and decomposing inert vegetable matter, and neutralizing acidity; but I consider it to be much more valuable when mixed with salt, having seen some wonderful effects from the application of that compound, to which sand is a great acquisition. I mix equal quantities of fish salt and quicklime, and then cover the heap with half the quantity of sea-sand, which prevents evaporation, fermentation being very great for many days; but when it has subsided I mix the whole well together, and subsequently apply it to the land, by means of a manure distributor, with great effect. If land be mossy, it should be well harrowed with a close, short-tined harrow previous to spreading the manure, and subsequently be chain-harrowed and rolled. Peruvian guano and nitrate of soda are both very stimulating manures for Grass land; but since they have a tendency to promote the growth of coarse Grass, old pastures so manured in the spring should be eaten close with stock up to the middle of June, in order that the finer Grasses may have an opportunity of taking their place, or the pasture is sure to become coarse, when the manure is frequently blamed, instead of the management. Grass produced by these manures is readily eaten by both cattle and sheep. Bone, however, I consider to be generally the best manure for Grass land in Cornwall, our humid climate being rather calculated to produce quantity than quality; and since a large amount of dairy produce and young stock is annually exported, requiring, for its production, a large quantity of bone-earth, that constituent must necessarily be employed to keep up the fertility of the soil; for, although there may not be a very perceptible falling off in the quantity of Grass, the quality frequently becomes inferior, from want of phosphate of lime, which, no doubt, is also essential to the health of stock. There are many instances in this county where the judicious application of bone manure has caused old Grass land to carry double the quantity of stock that it formerly did, and that, too, of very superior quality. Previous to application, bones should, if convenient, be slightly decomposed, either by fermentation, by mixing with the heap a quantity of liquid manure, the mass being well covered for a time by ashes or mould, which, when fermentation has ceased, should be carefully mixed, or sulphuric acid may also be used for the purpose; or it may advantageously be mixed, some months previous to being spread on the land, with way-soil or the cleaning of ditches. Bone manure should be applied early in spring, old Grass land being well harrowed before and after. Such land should subsequently be cut for hay, since the bone will for a time interfere with the feeding of stock; and long Grass has a tendency to fix and bury the undecomposed pieces of bone. Adulteration is, no doubt, a great check to the application of artificial manure generally, which, in many cases, is difficult to detect, save in the deficiency of our crops. The safest plan, therefore, is to patronise respectable manufacturers, and not suffer ourselves to be gulled by vendors offering cheap goods, which are not unfrequently nasty.

(3.) The stocking or cutting of Grass land requires some consideration, which will, of course, depend greatly on its character.

I consider, however, that, under all circumstances, it is unwise to eat young seed plants with sheep until they have taken a firm hold on the land, since sheep are apt, by biting close, to pull up a considerable number and injure others. Young cattle are, therefore, preferable to take the first cropping, since, while fastening the land, they do not bite close. Grass intended for permanent pasture should not be cut the first year, but be stocked close, in order that the finer Grasses may have an opportunity of taking their place, which are frequently smothered when the crop is cut. Old pasture land should be occasionally mown, but in all cases early; otherwise rank Grasses are sure to domineer over the finer varieties, and the sward consequently becomes coarse. On shallow, quick, arable land, the first year's seeds should be cut. If eaten, the land, being exposed to the scorching sun, frequently produces but a light crop of Grass, while, if shaded, it would have produced a heavy crop of hay.

(4.) The mechanical condition of Grass land is a subject worthy of notice, since it has great effect on the character of its produce—light land being congenial to the growth of bent and inferior Grasses generally, while firm land is favourable to the leguminous Grasses and those containing the largest amount of nutriment.

I therefore consider it prudent to stock our dry old pastures heavily with mixed stock during the winter, and find that the part which gets the greatest amount of treading invariably produces the best quality of Grass the following summer. My old pastures, at Trescowe, are frequently infested with the grub of the cockchafer and other worms, which render portions of the land very light, thereby exposing themselves to the prey of rooks, and at times apparently destroy all the Grass of a considerable breadth of land; but for many years past, on discovering the location of the grub—which is perceptible from the dry, coarse nature of the Grass—when the land is very wet in winter, I have roots carted on it, and there consumed by cattle, treading the land very firm, which entirely destroys the baneful effects of the insect, and causes the land to produce Grass of superior quality for many years. Grass land is frequently rendered too light through the instrumentality of earthworms, by driving into the subsoil and depositing the fine mould on the surface—a valuable process if kept within bounds, but, like miners generally, they are apt to do great injury by cutting off a sufficient supply of water. They must, therefore, either be destroyed or their effects counteracted by some mechanical means. The mole is, no doubt, very useful in destroying grub and various kinds of worm which injure our cultivated crops. Moles will occupy land no longer than they find food. I have seen many crops of both grain and roots saved through their instrumentality, but am not aware that I ever saw one injured by them. The chain-harrow is an excellent implement for spreading the earth deposited by them on the surface. Nature's little drainers, the earthworm and the mole, bring to mind the necessity of draining wet land previous to laying it down to Grass. Stagnant water not only prevents the growth of superior Grasses, but promotes the growth of those of an opposite character. All wet, low land should, therefore, be drained and trench-ploughed previous to being laid down to permanent pasture.

(4.) In conclusion, I would observe that I consider it desirable, with the existing price of agricultural produce and labour, to increase the breadth of Grass land in Cornwall in the following manner:—

1st. By allowing arable land to remain four or five years out to Grass, instead of breaking it up at the end of two or three years, as is now commonly done. By adopting that plan much better crops would be grown than at present, and there would be less complaint of Clover-sick land, rotten roots, and light

grain; while the expense of cultivation would be considerably diminished. Much land in Cornwall would produce good pasture for four or five years, that is not sufficiently strong to lay down permanently to advantage. 2d. A considerable quantity of our elevated thin soils, kept under the plough, certainly cannot be properly cultivated with the present price of grain. Such land should be boned, laid down to Grass, and not tilled, save with the view of renewing the pasture: and that should not be hastily done, since the decay of certain Grasses frequently makes room for those of a superior order. 3d. Much of our deepest, best arable land might undoubtedly be laid down to permanent pasture with advantage; but since laying down land for permanent pasture is an expensive process, and is a permanent improvement to the farm, enhancing its rental value, I consider that it is only fair and reasonable that landlords should assist their tenants in accomplishing this desirable object, by supplying the necessary quantity of bone manure, the tenant paying, say, 5 per cent. on the outlay. If that system was adopted, the value of an immense quantity of land in this county might be doubled; whilst landlords, their tenantry, and the community at large would be greatly benefited. Permanent improvements are certainly the duty of landowners, and not of tenant farmers.

THE LONDON HORSE SHOW.

WHOEVER first suggested the proposition of holding a Horse Show in the spacious Agricultural Hall, the idea that such a show if properly or even fairly managed must turn out a great card arose simultaneously in the minds of very many persons, who thought that the building, the metropolitan locality, and the season of the year, all combined to ensure success. Thus we are by no means surprised at the large number of the entries or the large number of visitors to the show. Within the widely extending precincts of this great metropolis there are a larger number of admirers of the animal, and a larger number of good horses than can be found in any equal spot in the whole world besides. The very fact that upwards of 40 English thoroughbred stallions, some of which were of the very highest class, and but few inferior animals, were brought together, was alone a sufficient security for a crowd of spectators, particularly at the present time, when so much discussion on the subject has been going on, and when an opportunity has offered for contrasting with them a very respectable show of Arabs, to a great extent the parent breed. The locality of the show, and the public interest it has excited, has enabled the daily press to offer to all our readers an account of the general features of the exhibition and some of the prominent merits of the prize horses. It will be unnecessary for us to follow in the same beaten track, and more interesting we imagine to render our observations of a more general character, and thus, whilst giving praise where praise, we think, is due, we shall not be deterred from criticising some of the weak points, or rather to point out where improvement is required, and how it may be afforded. We must bear in mind that the Show was not held under the auspices of any national society pledged to the improvement of the breed of horses, but is rather a commercial speculation, the risk being taken by a body of shareholders to whom the spacious building belongs, whilst the labours of making the necessary arrangements and appointments were supposed to be undertaken by the directors, but devolved in fact on a very few individuals only. The success of the Show, in addition to the circumstances set forth at our commencement, may be attributed to a liberal scale of prizes offered to exhibitors. Thus the sum of 250*l.* was devoted to the class of thoroughbred stallions, and attracted no less than 42, whilst for hackney stallions there were 21 competing for the 50*l.* distributed amongst them.

The 1st prize was given to the Earl of Stamford's Citadel, a fine chesnut 5-year-old horse by Stockwell, rather high on the legs, but with a good deal of bone, and though not distinguished in the racing world, well adapted for a hunter with a suitable weight, or for getting hunters out of bony weight-carrying mares. We presume the prize was given on the principle that this horse best combined the usually considered distinct qualifications of getting horses alike for the turf, the chase, and the park. The 2d prize was given to Mr. Wyatt's Nutborne, the Leeds prize winner and the favourite for the Derby four years ago, but who broke down in the race, although he had defeated the winner as a two-year-old. Now as the turf is first mentioned in the conditions for the prize, and as an additional 50*l.* is placed at the disposal of the judges for rewarding horses specially adapted for getting hunters, hacks, or troopers, we presume that the turf was intended to take precedence, and if so we do not think the 1st prize should have been given to Citadel in the presence of first-class race horses, such as Nutborne and Caractacus, who were great winners themselves, though not yet old enough to be the sires of winners. Caractacus, the winner of the third prize, although the conqueror of such mighty horses as Buckstone and The Marquis, is comparatively a low horse, being about 15¼ hands, but with wonderful muscular power, and with a back, loins, and quarters that we seldom witness. He must have a remarkably good constitution, for he appeared full of flesh, if not fat. The 50*l.* placed at the disposal of the judges was divided between the smart and park-like looking Neville, the handsome but rather slight Newcastle belonging to Lord Stamford, and Mr. Blenkison's Amsterdam, whilst the small portion of 10*l.* was given to one of the most extraordinary-looking horses in the show, a powerful brown horse by Warlike, called The Czar. We use the word extraordinary advisedly, inasmuch as though we may see fresh winners of the Derby, the Oaks, and the Leger, year after year, it is very seldom indeed that such a weight-carrying thorough-bred horse as this comes under public notice. As we watched the proceedings of the judges, we certainly thought, from the long period this horse was under their attention, from his capital action, good forelegs, compact and powerful frame, and from the additional information afforded by the catalogue (with which the judges also were furnished), that he had been regularly hunted for the last six years, that such a rare animal for getting hunters would have been rewarded by something more than 10*l.* There were some good names and good horses that were necessarily passed over; amongst which those handsome horses Horror and The Hadji, and Lord Stradbroke's fine carriage-looking Great Eastern, and many others.

Reviews.

Farming in India, considered as a pursuit for European Settlers of a Superior Class. With Plans for the Construction of Dams, Tanks, Weirs, and Sluices. By Lieut.-Col. Greenaway, of the Madras Staff Corps. Smith, Elder, & Co.

A thoroughly practical book, full of information, both general on climate, and on relations with natives, and particular on the management of the land, and on the cultivation of crops, on wet farming, dry farming, hill farming, buildings and machinery, live stock and labour.

There is no doubt a very considerable public interested in the subject of Colonel Greenaway's book; and it will give them just the information required to enable the intending colonists of India to make a living by agriculture. Of course making a living there is something very different from what satisfies the English agriculturist. It means realising enough by a few years' industry to enable a return to a better climate for that remainder of life which Indian seasons may have left you. And on the causes of failure and the insurance of success in such an aim as this there is ample information here. The following is Colonel Greenaway's enumeration of the former:—

"Judging from these several cases which have occurred within my own knowledge, the causes of the failure of Europeans in India are of the same character as would end in failure elsewhere. For the sake of greater distinctness they may be summed up as follows:—

"**Ignorance of the work undertaken**, which may arise either from the want of training and experience, the want of technical knowledge of the particular work to be done (a defect that may be easily remedied), or deficiency of administrative capacity for work in general.

"Neglect of one's own business, whether occasioned by a disposition naturally given to indolence, or by over-confidence in servants. The latter is hazardous, however carefully the servants may have been selected.

"Want of caution in the choice of one's servants. Going ahead too fast, and so getting into debt. Disproportion of means to ends; and this may arise either from the inadequacy of one's capital at the first, from the creation of an establishment or plant above one's requirements, from over-building, or the employment of expensive processes in place of cheap ones, which would do as well, or from employing two men to do the work of one.

"Personal extravagance, and other vices on which it is not necessary to enlarge, but for which India offers but too much opportunity.

"Rashness in experimentalising, an error particularly liable to beset young and ardent men with strong views about reforming abuses, dispelling the darkness of barbarism, or urging the march of civilisation into a gallop.

"Rashness in speculation, caused by being in too great a hurry to grow rich.

"General incompetency, or 'muddleheadedness.'"

"Being too fine a gentleman to attend to one's dirty work, or too much occupied with the development of great ideas to take any interest in details."

It appears then that any one not afflicted with "muddle-headedness," and possessed of sufficient resolution, bodily vigour, and capital, may find India as good a field for the profitable investment of all three as any in the world.

It is the object of this book to remove the ignorance which the author places first on the list of difficulties. And to this end he gives instruction in the cultivation of Rice, Sugar Cane, Chillies, Cotton, Coffee and Tea, with less upon the last-named crop than we had expected, but with ample details and estimates of all the others.

There is a great deal of information on irrigation, drainage, and live stock, and, in fact, the book is written by a thoroughly practical man. It would have been more easily useful had it been provided with an index.

The following extract on the value and nature of labour will be of interest probably to those who stand a grade lower than the majority of those to whom the book is especially addressed:—

"There is at present a great scarcity of good subordinates in Southern India. Discharged soldiers, runaway sailors, and nondescripts, form the majority of the Europeans available for foremen or overseers, and there is no mincing the matter, that as a general rule they are an unsatisfactory lot.

"A really intelligent, sober, and trustworthy European overseer would be cheap at 400*l.* a year on any large plantation. As it is, however, East Indians and Portuguese are often preferred; or, where the planter is himself well conversant with the vernacular and the habits of the people, natives of unmixed breed. Indeed, wherever there is such a thorough mutual understanding between the parties, I believe that the Hindoo proper is really the best and most efficient subordinate that can be expected in the present state of the labour market.

"It is, however, much to be wished that a better class of young Englishmen should be introduced into the country in the subordinate grades. It is not for want of inducement that they do not immigrate. They may expect salaries ranging from 10*l.* to 30*l.* per month, houses to live in, rent-free, a better status, and pleasanter work than they could enjoy as mechanics in England.

"A respectable and trustworthy European, once known, is certain of always finding good employment in India. The difficulty of course is to become known; also the distance and expense of the journey doubtless deter many young men of the class most likely to succeed from turning their attention to such a mode of life, unless previously guaranteed a good situation.

"Of course the difficulties may be overcome. A young man might find his way, say to the Wynaad, for example, with testimonials in his pocket from well-known persons—from the clergyman of his parish, or from parties in England having Indian connections.

"Planters and men occupying influential situations in India, engineers in charge of works, and so forth, must have some relations at home; there must be some young men in the parishes where those relations reside who would be glad enough to take service in India under the conditions mentioned above. It would be worth the while of the young man or his family to raise the sum requisite to give him such a start. 100*l.* would be sufficient, with ordinary economy, both for passage and outfit, as far as Madras, Bombay, or Cochin, whilst from the date of his landing in India, his expenses should be paid by his employer.

"Surely it would be worth the while also of the planters, who are incessantly grumbling at the inefficiency and worthlessness of their subordinates, to take a little trouble, and even go to a little expense, to import young men of decent training, who come, as the Scotch say, of kenned folk; who possess respectable relatives to be shamed by their misconduct. Surely such young men would be preferable in all respects to anything now procurable (as a general rule) in Southern India. They would speedily acquire the necessary knowledge of the language, easily picked up in youth, and would be able to comprehend the character of the natives far better than the discharged soldiers can do, whose experience has been limited to the barracks and bazaars of large stations, where native life is seen in its worst, its ugliest, and its least characteristic form. Men whose first years in the country have been so spent, are found, as a rule, incompetent to understand natives, usually unfriendly towards them, and often disposed to be tyrannical over them. They have been prejudiced against them by that early association with their very worst orders; and their minds have seldom been sufficiently cultivated to be able to adopt liberal and enlightened views contrary to what they fancy to have been the teaching of their own experience. They thus enter upon their new duties at great disadvantage. The natives, who are extremely sensitive and wonderfully quick in reading character, are at no loss to recognise the feelings of such Europeans towards themselves; they also regard them as contaminated by their former associations. Respectable natives, especially of the agricultural class, look down upon camp-followers as the very scum of the earth, and it is proverbial to ask whether any good can come out of a cantonment bazaar. For these reasons, even without fault of his own, the ex-militaire is often thrown into a hopeless position, every decent native shrinking from him, while he is sought out by the worst and vilest, who call him 'My Lord,' flatter his vanity, pander to his passions, and make him the tool of their own roguery.

"Several exceptions, indeed, I have known—men who in spite of temptation, and very severe temptation, and of difficulties all but insuperable, have maintained their integrity. Their names recur to me as I write, and their example is invaluable, both as redeeming the class to which they belonged, from universal dislike and contempt among the natives; and as illustrating the value of a really good European subordinate to his employer."

Farm Memoranda.

DAIRY FARMING IN CHESHIRE.—The following reports are taken from the Journal of the Manchester and Liverpool Agricultural Society, just published:—

1. *Crouchley Farm.*—Mr. W. Whitlow's farm contains 238¾ acres, viz., 127½ acres in pasture, 40 acres meadow and Clover (mown), 17 acres Wheat, 29 acres Oats, 19 acres Potatos, 2¾ acres Swedes, 2 acres homestead, orchard, and garden, 1 acre road and plantations. Customary rotation: 1st, Oats; 2d, root crops; 3d, Wheat; 4th, Oats, with Clover and seeds.

Live stock consists of 5 farm horses, 4 colts, 60 dairy cows, 2 bulls, 5 heifers, 120 sheep, 40 pigs, and 12 rearing calves; total, 248. Purchases annually bones

and artificial manure, principally bones, to the amount of 100*l.*, which is applied to Clover, root, and pastures.

Farm has been drained by the landlord, 4 feet deep and 18 feet apart. A stone quarry has been filled up, gaining 4 acres of land, and at a cost of 200*l.*, principally at the expense of the landlord.

This farm lies in a good locality for roads, canal, railway, and markets, and also in a good climate. The soil a good loam. Part of the farm with a subsoil of red sandstone, but the greater portion a subsoil of marly clay; the surface undulated. The farm has been completely remodelled by the late and present owner. An entire new farm house, outbuildings, and homestead. Old fences eradicated and new ones planted, new gates and posts put down, and the land well drained, with the exception of some small portions. Those improvements all made previous to claimant's occupation. The fences, gates, posts, roads, and premises are in first-class order, showing that the claimant has taken proper care of them, the new fences being mostly 5 feet high, 4 feet thick at bottom, and trimmed to a hog mane shape, and clean from weeds.

This claimant is a considerable grower of early Potatos; 15 acres of these had been planted, but were mostly taken up and sold, and the land planted with Swedes. A few left for seed were promising for a heavy produce; 4 acres of late varieties were looking well. The Swedes (2¾ acres) had had all the plants taken from them, for planting after the early Potatos, and looked ragged, but having plenty of manure below would soon recover.

Wheat, a first-class crop, thick, strong, and of good colour. 20 acres of Oats, a portion rather light, but the greater portion a full average; a 10-acre field of Oats, a first-class crop. The Clover of first year (17 acres) very superior, the second crop coming well on. Meadows productive of good herbage. Grass of second, third, and fourth year's lying, and pastured, showing the good effect of bone manure, being full of white Clover. A field of 40 acres, old pasture, one-half a good pasture, the other half not so good.

The out-buildings and homestead are extensive and substantial, but are complicated, and not so convenient as they might have been. The live stock, implements, and machinery for threshing, cutting, steaming, and feeding, show that the claimant possesses a proper knowledge of his profession, and a perseverance to carry out all things in a proper manner.

(To be continued.)

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer. Dry Bulb.	Wet Bulb.	Wind. Direction.	Force, 0—6.	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	June	Inches.	°	°				°	°	°	°	Inches.
Friday ..	1	29.93	61	53	N.W.	3	S	67	51	88	45	..
Saturday ..	2	29.82	61	54	S.W.	2	10	65	51	78	49	..
Sunday ..	3	29.60	63	53	W.	4	10	67	51	81	46	0.13
Monday ..	4	29.99	68	60	W.	2	5	66	49	78	42	0.05
Tuesday ..	5	30.02	68	60	N.W.	3	0	69	51	80	45	..
Wednesday ..	6	30.14	63	57	N.	0	5	70	42	82	38	..
Thursday ..	7	30.13	64	59	N.W.	2	5	69	43	84	41	..

Notices to Correspondents.

REAPER: *A B.* wants a good Reaping Machine, one that wil work well on hilly lands as well as on level. Will any one state his experience?

NEW SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.

THE HYDROPULT is invaluable for use in the GARDEN for WATERING BEDS, SPRINKLING PLANTS, DROWNING OUT INSECTS, CLEANSING TREES FROM SMUTS, DRESSING with LIQUID MANURE, ETC. ETC.

THE HYDROPULT is desirable in every HOUSEHOLD for WASHING WINDOWS, WETTING SIDEWALKS, SPRINKLING STREETS, WASHING CARRIAGES, EMPTYING CISTERNS, FILLING BARRELS, A SPRAY BATH, ETC. ETC.

THE HYDROPULT,

PRICE: WITH BRASS CYLINDERS AND MALLEABLE IRON STIRRUP, JAPANNED IN OAK COLOUR, 32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanised Wire Strainer, Rose, and Small Jet.
Complete as above, with Copper Stirrup, TWO GUINEAS.

Weighs but 8 lb.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of one man.
It will draw water horizontally, if necessary, through 300 feet of Suction Hose, and force it through Delivery Hose, to an altitude of 100 feet.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

In proof of the real utility and efficiency of the HYDROPULT as a GARDEN IMPLEMENT, I beg to call the attention of the public to the following unsolicited Editorials from gentlemen whose testimony must have weight with the readers of the *Gardeners' Chronicle*:—

EDITORIAL, *written by* ROBERT HOGG, LL.D., F.L.S.

THE HYDROPULT.—The great secret of successful indoor gardening consists in the free and judicious use of the syringe. A greenhouse or conservatory that does not enjoy this luxury becomes a miserable lazar house of vegetable incurables. Vermin and filth hold unbounded sway, and people become disgusted with their own want of success. Well do we recollect the former days of plant culture, the days of "collections," when the use of the syringe was yet limited or unknown. What a time for red spider, scale, and greenfly! What fumigations and consumption of tobacco and tobacco paper, washings with tobacco water, and all sort of remedies were resorted to! We regard the introduction of the free use of the syringe as one of the events in modern gardening. To this is due the success of orchard house management, Vine management, and Plant management, but the old syringe with its slow suck and squirt, is now as much out of date in modern gardening as an old stage waggon in modern locomotion. Many are the improvements and complications of the old simple syringe. We have tried several of them, but for ease in working and efficiency in result, we have not yet met with anything to equal the Hydropult, sent us by Mr. BUTTON. It is powerful in operation, and so easy and comfortable to work, that one never gets fatigued. With such an instrument plants may be kept in perfect health, and quite free from insects and dirt. We first tried it on a few Geraniums in our conservatory, which were smothered with greenfly during our temporary absence of ten days, but on our return a stout discharge from the Hydropult sent them clean off across some unknown bourne, whence they have never yet returned.

EDITORIAL, *written by the* REV. HENRY H. DOMBRAIN, A.B.

THE HYDROPULT.—When we formerly noticed this instrument, we did so from merely seeing it at the Proprietor's; since then we have had an opportunity of testing it personally, and can bear testimony to the excellence of the invention. The force with which it throws a stream of water is almost incredible; while for syringing a greenhouse, a gentle shower, as fine as that from a hand syringe, with considerably more effect, can be easily given. We have a gardener, quite of the old-fashioned school, who does not generally fall in love with new-fangled notions, but he is perfectly enchanted with the saving of labour and time that the Hydropult will be to him.

EDITORIAL, *written by* SHIRLEY HIBBERD, ESQ., F.R.H.S.

THE HYDROPULT.—This is an invention introduced in a most spirited manner by Mr. C. P. BUTTON. It is at once a fire engine and a garden engine, is always ready for use at a moment's notice, is neat and portable, weighing only 8 lbs., and can be worked by a boy of moderate strength for some hours in succession without fatigue, the mechanical power employed being economised by combining the action of the hand and the resistance to the foot, between which the instrument is placed and used, as a double action pump. From the sole to the handle the Hydropult measures 24 inches. The two brass cylinders measure 12 inches in length, and 3½ inches in breadth. At the top of these cylinders India rubber tubing is attached, on one side to feed, on the other to discharge the water. It will perhaps surprise the reader to be told that this little contrivance, which is pretty as a toy, and can be carried under the arm as easily as a trumpet, will throw from seven to eight gallons of water per minute a distance of 50 feet. But it will do it, as we know from having tried it, finding the experiment an agreeable exercise, and of special service in washing down a stuccoed wall, which it accomplished quite as well as if we had sent for the parish engine. Gardeners will not need to be told the value of a portable force pump of this simple kind. It can be used to produce a powerful stream to extinguish a fire, or a gentle shower to syringe a whole houseful of plants, without the necessity of moving a single step from the position most convenient for a supply of water. Wherever a pump or syringe is needed, the Hydropult can be brought into use, to remove water from a cellar or a boat, to cleanse a cistern, wash a pavement, or drench the foliage of trees loaded with soot, or annihilate at one fell swoop the whole insect population of a plantation of Roses. But we will not enlarge upon its merits, they are obvious, and having a Hydropult in use we can say that it will soon pay for its cost in a garden, besides being always at hand in case of an emergency of any kind which may require an immediate removal or discharge of water.

THE GREENHOUSE and CONSERVATORY HYDROPULT.

A NEW AND BEAUTIFUL IMPLEMENT,

Weighing scarcely 3 lbs.,

AND SPECIALLY ADAPTED FOR USE IN THE GREENHOUSE AND CONSERVATORY.

Price 35s.,

Complete with Brass Cylinders and Copper Stirrup, 2½ feet Suction and 3 feet Delivery Hose, Strainer, Rose, Jet, and Fan.

This NEW IMPLEMENT must necessarily supersede SYRINGES and other devices of the kind, for it will be found much more effective in its operation.

A LADY CAN WORK IT FOR HOURS WITHOUT FATIGUE.

HYDROPULT SHOW ROOMS, 142 and 143, CHEAPSIDE, E.C.
WAREHOUSE and OFFICES, 27, LEADENHALL STREET, LONDON, E.C.
CHARLES POMEROY BUTTON, PROPRIETOR

Vine Duchess of Buccleuch.

ROBERT PARKER begs to announce that he has arranged for the distribution of the stock of this very distinct and valuable EARLY WHITE GRAPE, and that the plants will be sent out early in autumn. Full particulars as to its qualities will be given in future advertisements. In the meantime, and during the whole of the season, visitors to the Gardens of Dalkeith Palace will have opportunities of seeing and judging of its merits, as a large quantity of pot and permanent Vines are now fruiting at that establishment.

Strong Planting Canes, 21*s.* each; Extra strong Fruiting Canes, 42*s.* each. Orders are now being booked, and will be executed in strict rotation.

Exotic Nursery, Tooting, Surrey, S.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.

The Stock having been purchased by JOHN STANDISH, strong Plants will be sent out in the first week of June, price 15*s.* to 31*s.* 6*d.* each.

Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.

Royal Nurseries, Ascot, Berks.

Extra Strong Grape Vines from Eyes.

LUCOMBE, PINCE, AND CO., having this season a splendid stock of strong VINES fit for immediate planting, propagated from Eyes taken from their large experimental Vinery, can offer fine healthy, short-jointed Canes, 6 to 9 feet long, of all the leading kinds, at from 3*s.* 6*d.* to 7*s.* 6*d.* and 10*s.* 6*d.* each.

L., P. & Co. have one of the largest Stocks in the Trade of Extra Strong Vines, with Canes 9 to 11 feet long, and proportionally strong, from which purchasers can advantageously select those suitable for fruiting finely next season. Liberal Compensation for Carriage.

Exeter Nursery, Exeter.

New Roses.

WM. PAUL can confidently recommend the following five NEW ROSES raised or introduced by him. In Beauty of Waltham, Princess of Wales, and Red Rover, he believes that he has succeeded in obtaining a race altogether free from that debility of constitution which renders almost valueless some of the most beautiful Roses of the day.

BEAUTY OF WALTHAM, H.P. (W. Paul).—Flowers cherry colour to bright rosy carmine, cupped, large and full, very hardy and very sweet. Obtained the premier prize at the National Rose Show, Royal Horticultural Gardens, as the best New Rose of the year; the same award at Stamford. Price 2*s.* each.

LORD MACAULAY, H.P. (W. Paul).—Flowers variable, ranging from scarlet crimson to rich plum colour, thick in the petal, large, full, produced abundantly and in rapid succession; habit good, foliage handsome, a splendid Rose. First-class Certificates from the Royal Horticultural and Royal Botanic Societies of London. Price 5*s.* to 7*s.* 6*d.* each.

LORD HERBERT, H.P. (W. Paul).—Flowers rosy carmine, the petals reflexing at the summits, in the way of Beauty of Waltham, large, full, finely formed, and altogether of first-rate excellence. First-class Certificate from Royal Botanic Society of London. Price 7*s.* 6*d.* each.

PRINCESS OF WALES, H.P. (W. Paul).—Flowers vivid crimson, presenting to the eye an unusual body of colour, owing to the thickness of the petals, cupped, large, very double, and remarkably smooth. Growth and constitution free, hardy, and vigorous; foliage handsome. Quite first-rate. Price 7*s.* 6*d.* each. A coloured plate by Andrews for seven postage stamps.

RED ROVER (W. Paul).—Flowers fiery red, flowering up to Christmas; not very double. Growth extraordinarily vigorous; forms a splendid Pillar Rose, 2*s.* 6*d.*

OPINIONS OF THE PRESS.—"It (Princess of Wales) has a most vigorous healthy habit; the colour is of the deepest and brightest crimson, and the form of the young bud, opening bud, and half-blown bud, very near perfection."—See *Gardeners' Chronicle*, Leading Article, July 25th, 1863.

"Mr. W. PAUL exhibited cut specimens of a Seedling H.P. Rose, Princess of Wales, bright carmine rose, which was much admired."—*Journal of Horticulture.*

The best of the NEW FRENCH ROSES, 36*s.* to 42*s.* per dozen. Fine vigorous plants of the old and popular sorts, 9*s.* to 18*s.* per dozen.

PAUL'S Nurseries, Waltham Cross, N.

Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

Per pkt.—*s. d.*	*s. d.*	Per pkt.—*s. d.*	*s. d.*
PRIMULA .. 2 0	and 3 6	INTERMEDIATE	
CINERARIA .. 1 6	and 2 6	STOCK.. .. 0 6	and 1 0
CALCEOLARIA 1 6	and 2 6	BROMPTON do. 0 6	and 1 0

The above Seeds are saved with great care, and can be warranted to give satisfaction.

Paradise and Victoria Nurseries, Holloway, London, N.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE post free on application.

Paradise and Victoria Nurseries, Holloway, London, N.

Seeds Worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our Collection in the Spring, 1862. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

DOBSON'S PRIZE PRIMULA SINENSIS SEED, Superbly Fringed. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

J. DOBSON & SONS, Seedsmen, Isleworth, W.

DILLISTONE AND CO., Sturmer and Woodlands Nurseries, near Halstead, and only one mile from the Haverhill Junction of the Great Eastern and Colne Valley Railway, beg to offer 12 distinct and most beautiful HARDY CLIMBERS, all well-established, from 18 inches to 3 feet high, for 9*s.* They consist of the finest CLIMBING ROSES, JASMINES, PASSION FLOWERS, HONEYSUCKLES (in some rare kinds), CLEMATIS and IVIES (a most beautiful collection), &c., &c. Post Office Orders must accompany the order from strangers.

A CATALOGUE for one stamp is now in the press, of New and Rare Plants of 1864, at reduced charges. We possess all the greatest novelties.

A CATALOGUE of GENERAL STOCK and a WHOLESALE CATALOGUE of STOCK, each for one stamp.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 56 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

Ferns for the Conservatory to be Sold by Private Contract.

FOR SALE, a splendid COLLECTION of fine-grown FERNS—Specimen Plants—including many of the most popular kinds of Exotic and British, among which are Dicksonias, Adiantums, Woodwardias, Diplaziums, Davallias, Blechnums, &c. A rare opportunity of establishing a Fernery.

A List and particulars of size and price by applying to Mr. S. APPLEBY, St. John's Nursery, Balby, Doncaster; or to Mr. CLAYTON, Gardener, Cantley Hall, Doncaster.

HERBACEOUS CALCEOLARIA, &c., SEED.

CHOICE CALCEOLARIA (JAMES').—This unrivalled strain has in every instance received FIRST PRIZES wherever exhibited—can be seen in bloom here. Sealed Packets, 1*s.* 6*d.*, 2*s.* 6*d.*, and 5*s.*

CHOICE PRIMULA SINENSIS FIMBRIATA.—Hayes' superb strain. Sealed Packets, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.*

CHOICE CINERARIA.—Saved from best named varieties, and cannot be surpassed. Sealed Packets, 1*s.* 6*d.*, 2*s.* 6*d.*, and 5*s.*

HUNT'S SWEET WILLIAM.—Sealed Packets, 6*d.* and 1*s.*

SCARLET INTERMEDIATE STOCK.—True and fine. Sealed Packets, 1*s.* and 2*s.* 6*d.*

PANSY.—From best named varieties. Sealed Packets, 1*s.* and 2*s.* 6*d.*

And every other first-class Seeds. See CATALOGUE, post free.

WM. CUTBUSH & SON, Highgate Nurseries, London, N.

SEEDSMEN BY APPOINTMENT Sutton AND Sons

THE BEST SORTS of CABBAGE SEEDS, in packets, 6*d.* each sort, Post Free, sufficient to raise a thousand plants of each,

SUTTON'S IMPERIAL
EARLY BLENHEIM
SUTTON'S DWARF COMBE

NONPAREIL, EARLY YORK, ENFIELD MARKET, WHEELER'S IMPERIAL, and other old sorts, 3*d.* per pckt; DRUMHEAD CATTLE CABBAGE, 2*s.* 6*d.* per lb.

SUTTON & SONS,
Royal Berkshire Seed Establishment,
Reading.

CLEMATIS FORTUNII and STANDISHII.—These, perhaps the most magnificent of all Mr. FORTUNE's importations from Japan, are now ready to be sent out in strong plants, 15*s.* and 21*s.* each.

Also ARUNDO CONSPICUA, a worthy rival of the Pampas Grass, flowering very freely three months earlier in the season than that old favourite. Strong plants 18*s.*, 24*s.*, and 30*s.* per dozen.

CHARLES NOBLE, Sunningdale Nursery, Bagshot.

Preliminary Notice.

CLEMATIS JACKMANI and C. RUBRO-VIOLACEA have received two First-class Certificates, awarded by Royal Horticultural Society, August 4, 1863. Will be sent out this coming Autumn by Messrs. GEO. JACKMAN & SON. Orders will now be taken and executed in strict rotation.

Further particulars (with EXTRACTS from the LEADING HORTICULTURAL PAPERS) with price, will be given in future Advertisements.

Woking Nursery, Surrey.

UNRIVALLED CALCEOLARIA, PRIMULA, CINERARIA, CARNATION, and PICOTEE.
HERBACEOUS CALCEOLARIA, 2*s.* 6*d.* per packet.
HALF SHRUBBY CALCEOLARIA, 2*s.* 6*d.* per packet.
CINERARIA, 2*s.* 6*d.* per packet.
CARNATION, Self, Flakes, and Bizarres, 2*s.* 6*d.* per packet.
PICOTEE, White and Yellow grounds, 2*s.* 6*d.* per packet.
BARR & SUGDEN, Seed Merchants, 12, King Street, Covent Garden.

CARTER'S GARDENER'S VADE-MECUM.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

At a GENERAL MEETING of the Members of this Institution, held on WEDNESDAY, the 13th inst., at the Bedford Hotel, Covent Garden, for the purpose of Electing Three Pensioners on the Funds, the following was the result of the Ballot.

No.	Candidates' Names.	Age.	Vote.
1	Benjamin Collins	65	534
2	Cuthbert Embleton	61	559
3	John Boswell	67	216
4	Mary Bray	56	762
5	William Ker	63	498

The Meeting then declared MARY BRAY, CUTHBERT EMBLETON, and BENJAMIN COLLINS, as having the greatest number of Votes, duly Elected Pensioners of this Society.

By order, EDW. R. CUTLER, Sec.,
July 16, 1864. 14, Tavistock Row, London, W.C.

ROYAL HORTICULTURAL SOCIETY.

STRAWBERRY FETE, JULY 13, 1864.

LIST of AWARDS.

CLASS 5.—STRAWBERRIES, 3 dishes, distinct kinds.
1st Class Certificate to Mr. P. Lydiard, Batheaston, Bath.

CLASS 9.—3 dishes of British Queen.
1st Class Certificate to Mr. J. R. Hale, Orpington, Kent.

CLASS 11.—1 dish of the British Queen.
1st Class Certificate to Mr. P. Lydiard, Batheaston, Bath.
2d Class Certificate to Mr. W. Warder, 181, Brompton Road, S.W.

CLASS 17.—Any other variety. Single dish.
1st Class Certificate to Mr. P. Lydiard, Batheaston, Bath.
2d Class Certificate to Mr. W. Warder, 181, Brompton Road, S.W.
3d Class Certificate to Mr. P. Lydiard, Batheaston, Bath.

CLASS 19.—Best Strawberry for Culinary purposes. Single dish.
1st Class Certificate to Mr. P. Lydiard, Batheaston, Bath.

CLASS 20.—Heaviest single Strawberry.
1st Class Certificate to Mr. P. Lydiard, Batheaston, Bath.

CLASS 21.—Heaviest 12 Strawberries.
1st Class Certificate to Mr. P. Lydiard, Batheaston, Bath.

PRIZE MEDAL FOR SEEDS AND CEREALS.

ESTABLISHED 1800.

WILLIAM MORTON,

OLD MARKET PLACE, RIPON, YORKSHIRE,

Is now supplying his YELLOW BOY GREEN-TOPPED SWEDE TURNIP, grown from selected large Bulbs of the Hardy Green-topped Swede, at 9*d.* per lb.; and his large FOSTERTON HYBRID, 8*d.* per lb. NEW TURNIP SEEDS (Various), BROAD-LEAVED and LONG-STALKED RAPE SEEDS, WHITE MUSTARD, WURZEL SEEDS.

MIXTURES of GRASS SEEDS for Permanent Pasture, suitable to the various soils; ENGLISH and DUTCH CLOVERS, ARTIFICIAL GRASSES, LAWN GRASS, RYE-GRASSES, &c. Circulars (Third Edition) free by Post.

RIPON and CLARO SEED ESTABLISHMENT, RIPON, YORKSHIRE.

NEW GRAPE, ROYAL VINEYARD.

TO BE SENT OUT IN SEPTEMBER NEXT.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Feels great pleasure in being able to introduce this important acquisition. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years.

B. S. W., to meet an extensive demand, has prepared a large Stock, which will be in excellent condition, and ready for distribution in September. Early orders are respectfully solicited. A List of those who have favoured him with orders will be published shortly.

PRICES:

Strong Planting Canes, 21s. each. | **Strong Fruiting Canes, 42s. each.**

Dr. HOGG's *Report on the Royal Vineyard Grape:*

"Bunches hard and well set, sometimes long and tapering, and sometimes short ovate. Berries large and roundish ovate, skin white and somewhat transparent, showing the texture of the flesh through it, remarkably thin, and adhering closely to the flesh; so thin is it, that the whole berry may be eaten without any inconvenience being caused by the skin. Flesh firm and crackling, with a fine Sweet-water flavour. This is a fine looking Grape, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society."

For the opinions of the Horticultural Press, see *Gardeners' Chronicle*, April 9.

A correct COLOURED ILLUSTRATION by ANDREWS will be sent in exchange for 12 Postage Stamps.

The Gardeners' Chronicle.

SATURDAY, JULY 16, 1864.

MEETING FOR THE ENSUING WEEK.

TUESDAY, July 19 { Royal Horticultural (Floral Committee), at South Kensington .. .. .. Noon; (Lecture on Roses, by Mr. Radclyffe), at do. .. .. 3 P.M.

IF there were no other country in the world than our own; if BOTANY had no relation to any other science; if there were no such branch of knowledge as Botanical Geography; if no interest attached to the question how the plants which now cover the face of the globe arrived at their present distribution; or, to place the matter on the very lowest point of consideration, if there were no other end in the study of the members of our Flora than to distinguish the individuals of which it is composed, or to afford an agreeable and innocent occupation, it would be of little consequence on what particular theory the preparation of works which undertake to catalogue and describe the plants which occur in any given district, might rest as its foundation. Inasmuch, however, as matters of great scientific import are intimately connected with a correct discrimination of the members of which the vegetation of any country is really composed, and more than half the benefit which is to be derived from their study as a mental discipline will slip out of our hands where loose and unphilosophical views prevail, and partial knowledge can only lead to partial results, it is of no small consequence whether the views of the writer of such works may be sound or unsound, and whether his studies have been confined or not to the vegetation of a portion only of the globe.

It has often been said that too great laxity in the definition of species, and an excessive love of hair-splitting, is ultimately of greater benefit than

the contrary, because things which have once been confounded are not so easily separated, as those which have been wrongly dissevered can be reunited. Such an opinion however rests on a very limited view of the proper scope of science. But, apart from this, every opportunity of increased knowledge of plants in the different conditions under which they occur during a wide geographical range, and every experiment which is undertaken with a view to ascertain the limits of species under cultivation, tend to show that we are far more likely to err in the direction of hair-splitting than of ill-advised union of species. The interesting experiments which Monsieur DECAISNE—formerly it should be observed, a decided advocate for minute distinctions—lately undertook respecting the species of the genus Pyrus, led to extreme results, so extreme indeed that the angels of science would almost fear to tread in his footsteps. The common operations of the nurseryman, apart from hybridising, show how easily races, or, as they are often called by florists, peculiar strains, will arise under his selection, and we can scarcely deny that as great powers of elimination exist in Nature as in art. The excessive division of species which many botanists exercise in such genera as Mentha, Hieracium, Salix, Rosa, and Rubus, is so obviously against reason, not to say common sense, that it must indispose students, who should chance to begin with them, to believe in botany as a science at all. Divide and sub-divide as the theorist may, it is impossible for him to hit upon any definite characters such as shall at once indicate the species or even the section with anything approaching to certainty. The 36 species of British Rubi are in our opinion quite enough to make most students throw botany to the dogs, and have none of it. FRIES, with all his acuteness, has gone, as we believe, too far in this direction, and we were much interested in finding almost a confession to this effect in the part of his Monograph of Swedish Fungi just published.

"Though the limits of species amongst the gill-bearing Fungi, as Mr. BERKELEY has well observed, are more strictly definite than in almost any natural group, they are so unstable amongst the brittle Russulæ (Russulæ fragiles), that in my system I have reduced them to very few, and have sometimes been desperately inclined to unite all. Seeing that this path is merely subjective, and that many species are really distinct though obscured by intermediate forms, I have thought it more candid to bring forward those forms as specific which are most prominent and recognised by most, while many ambiguous ones have been omitted altogether. I advise, therefore, beginners to neglect doubtful forms till they have learnt to distinguish the more clear and typical species." (Monographia Hymenomycetum Sueciæ, vol. 2, p. 205.)

The more abundant any species may be, and the more widely distributed, as a rule, the more numerous will be the forms. A wise caution may be taken from another passage of FRIES in the same work, at p. 183. "Russula integra is extremely variable, surpassing in the number of individuals all the others, on which account it may give rise to the proposition of many species. Students should, however, be very cautious, not only in the proposition of new species in this direction, but how they refer its forms to those really definite, though rarer kinds."

A perusal of the numbers of the illustrated edition of Mr. BENTHAM's "Handbook of the British Flora," so far as they are already published, has led to these remarks, as it seems to us to offer almost everything that a student can want, while it avoids the most dangerous quicksands. The illustrations are admirable, and though uncoloured quite sufficient for the accurate determination of species; the dissections, though necessarily limited in number, are admirable, and such as cannot fail to be of great assistance in the correct appreciation of the natural orders to which the plants belong; and not to mention some peculiarly striking parts, as the remarks on Umbelliferæ, besides many valuable scattered remarks, the divisions and specific diagnoses are so well defined that they not only facilitate the ready determination of a plant, but are most useful as an exercise of the mind. It is, we conceive, impossible to use them carefully and conscientiously, without realising something of the benefit which is so admirably described as derivable from the study of Botany, in an article on Botanical Lesson Books in the Natural History Review for July 1864. After mentioning other advantages to be derived from Botany properly studied, the reviewer adds: "Lastly, it has been forcibly pointed out by the late Professor HENSLOW that the study of Botany is the most simple and sure means of training the mind to those habits of accurate observation, methodical comparison and classification, which are essential to the medical man, and which he gets in no other way during his medical curriculum."

Nor are the advantages confined to any one profession, but are alike important whatever may be the line which we may take; and in none we believe more important than to any one who has ambition enough to wish to shine as a scientific cultivator, in contradistinction to the mere man of routine, or tradition. Practice alone will enable him to recognise in a seed bed promising individuals, while he at once roots up those which will yield only common forms; practice will enable him to point out varieties which no botanist's eye could readily appreciate, but it will not lead him to see the true bearings of difficulties which meet him in the course of his practice, and which can only be conquered by powers of reasoning, which must have previously received a fitting education. No rule of thumb or light of Nature will avail him in vegetable pathology; and without accurate powers of distinguishing nice matters which lie out of the common road, he is quite as likely to take the wrong as the right course. A person who cannot see the drift of the argument by which it appears that the Cedars of Lebanon, Atlas, and the Himalayas, are really forms of one and the same species, is not likely to understand such knotty points as are sure sooner or later to meet him in the more difficult departments of horticulture; and in consequence, since he must of necessity do something, he is quite as likely to take the wrong as the right course in seeking for a remedy. Numberless cases come before us in the course of correspondence, no less surprising for the error they involve, than the strange answers with which the examiner meets, as recorded in the article just mentioned, under the prevalent system of botanical instruction.

Mr. BENTHAM may perhaps be charged with too great a propensity for uniting species. The only instance, however, in which we should have any doubt is the union of Sedum rupestre and S. reflexum, but different as the extremes are, we have no doubt that he has good grounds for his opinion. Without a very extensive herbarium it is almost impossible to judge of the various phases through which the same species may pass, and in some cases, as in Mentha, he would perhaps have been justified in going even farther.

Without having recourse to foreign species, should any one seek for a justification of similar unions, we would recommend simply (to take a single example) an examination of the series of Cerastium alpinum in the Hookerian Herbarium, and almost any amount of change may pass current. Or to take a British species in its native soil, as, for example, Galeopsis Tetrahit. We have seen a bed of it in Aberdeenshire, which might have afforded at least half a dozen quite as good species as are made out of Rosa canina or Rubus fruticosus.

Mr. BENTHAM, however, has little hesitation about dividing, where Nature really seems to suggest distinction. While Barbarea vulgaris, præcox, and stricta appear as one species, Ulex europæus is kept apart from U. nanus, and Lychnis vespertina from L. diurna. On the other hand experiment has shown the identity of the supposed species known as Primrose, Cowslip and Oxlip, while the sagacity of Mr. DARWIN has indicated the real meaning of the differences which exist amongst individuals of these supposed species.*

Our Flora, though, unlike most insular Floras, especially where the continent is remote, it can boast of scarcely a single species peculiar to itself, has yet many interesting points as presenting the extreme western limit of species. Physospermum cornubiense, Cnicus tuberosus, Lobelia urens, Phyteuma spicatum, Linaria supina, Lathyrus tuberosus, and Bupleurum falcatum are instances of plants which affect only a few isolated spots, but are evidently the remains of a Flora which existed when island and continent were one. The instances where the limit extends as far as America, as in Erica vulgaris, are no less interesting.

Every opportunity is taken by Mr. BENTHAM to elucidate such matters, which, together with the accurate definition of genera and families, forms a marked feature of the work, a work, let us add in conclusion, which for the soundness of the views which it is calculated to impress, and the facilities which it offers for accurate diagnosis, we should wish to see in the hands of every student and master gardener.* *M. J. B.*

* Mr. DARWIN speaks of thumb-eyed individuals. It should be thrum-eyed, the word thrum meaning a thread, and is still used in that sense by weavers.

A FEW days ago a morning contemporary, in order to demonstrate the impossibility of something which we now forget, remarked that "we may as well expect to see PALM TREES growing on the banks of the Thames." To those who are only acquainted with the species of Palms which are indigenous to tropical regions, and which require a high temperature, the reasoning in question was quite conclusive. In order to see examples of this class, we must be contented with a visit to the noble Palm houses of the Kew or Edinburgh gardens, unless we prefer a journey to the East or West Indies. And we remark, in passing, that if any one wishes to have an idea of what a tropical forest is like, he may obtain a fair one by placing himself in the centre of the Kew Palm house, where many of the larger specimens have been planted out, or have had their tubs plunged to the ground level. It is true that more cleanliness and neatness prevail at Kew than is usually met with in an Indian forest. The visitor must therefore fill in a portion of the picture himself in order to make the resemblance more complete. He must imagine large trees to be lying about in every direction, some of which are living and growing, and others rotting where they have fallen. In some places the shade is so dense that the sun's rays are unable to penetrate, and no green herbage is able to exist below it; while in others, where the trees are less densely grouped together, the brushwood covers the ground so closely that it is difficult to cut a passage through it.

But a visit to the Royal Gardens at Kew will solve another problem—it will enable any one to see for himself that Palm trees, or at least, a Palm tree, may be made to grow out of doors "on the banks of the Thames." Just inside the main entrance to the garden, on the right hand side of the broad walk, there is a Palm growing which has been in that situation for 14 or 15 years, and is now really an effective and striking object on the lawn. It receives the protection which a garden mat can afford during the winter months, and that is all; indeed, this slight protection is given more with the object of preventing its broad leaves from being torn by the wind, or broken down by the snow, than as a safeguard against cold. And we may add that Kew is not the most favourable place in England for the growth of Palms in the open air, so that if such a thing can be done there, it can be done as well, and even better in many other places.

Another remarkable specimen of this Palm is growing in the grounds of Osborne House, in the Isle of Wight, where, we believe, it is an object of much interest to her Majesty the QUEEN and the Royal Family. It is even much larger and finer than the Kew plant, owing, no doubt, to the more favourable nature of the climate of the Isle of Wight.

The history of this Palm is as follows. Travellers who visited the Chusan Archipelago when the central portions of the coast of China were opened to foreign commerce in 1842 and 1843, were much struck with the very unusual appearance of the vegetation of the country. The ordinary indigenous trees were not of that tropical kind which were common in the more southern portions of the empire, but resembled more those met with in temperate countries like England. The Oak, Chestnut, Elm, and the Pine, were scattered over hill and valley, and gave a character to the landscapes. Here and there, however, were groups of a species of Bamboo, and a goodly sized Palm, which tended to give a kind of tropical character to some portions of the scenery. If one were to imagine groups of Bamboos and Palms amongst our English woods, an idea of the scenery we are describing would be obtained. It was a curious sight to see, after a snow storm on a winter day, the broad leaves of a Palm tree

* This is not the place for minute detail, but one or two matters which have struck us may be mentioned in a note. The scales are omitted in Cuscuta europæa. Though minute, we have never seen a specimen in which they are altogether wanting, and their form is distinctive. Lathyrus Aphaca is not always a corn-field weed. We have seen it for several successive years in Fir plantations. Cheiranthus has sometimes as bright-coloured flowers as Matthiola. Andromeda polifolia used to grow abundantly round Whittlesea Mere in Huntingdonshire, before it was drained. Hypochæris maculata is abundant in a district of the extreme north of Northamptonshire. Trifolium hybridum is naturalised in Northamptonshire and Aberdeenshire. Tilia parvifolia forms the greater part of the underwood on the thin scaly land south of Stamford, a wild district almost without a house 30 years ago. Some of the woods where the Lime abounds are blue with Columbine whenever the underwood is cut down.

bending beneath a load of snow. To one who had been accustomed only to see Palm trees in the hothouses of a cold climate, the sight was very remarkable.

In 1848 or 1849 two cases were filled with young plants of this Palm and sent home to the Royal Garden at Kew. Sir WM. HOOKER was requested to forward one or two plants to Osborne House to be presented to his Royal Highness the late PRINCE CONSORT, who was well known to take a great interest in things of this kind. The plants reached England in safety, and the specimens we have alluded to formed part of the contents of these cases, and have been growing in the open air ever since. During the last 15 years many thousands of imported plants and seedlings raised in this country have been distributed over England and on the Continent, where this Palm is even more highly prized than it is with us. It was at first usually known as the "Chusan Palm," but latterly, having in the mean time flowered at Kew, it has been figured and described in the "Botanical Magazine" under the name of Chamærops Fortuni.

We shall return to this subject to make some observations as to the treatment which the Palm should receive in our gardens in order to make it a most attractive object on the lawn, such as it now is at Osborne House, and at Kew.

THE following correspondence respecting the ROYAL HORTICULTURAL SOCIETY'S GARDEN at South Kensington has been made public:—

"Windsor Castle, July 6.

"DEAR SIR,—I have received the commands of the QUEEN to beg you will inform the Council of the gratification which HER MAJESTY received from her visit to the Horticultural Gardens. HER MAJESTY was truly glad to see the improvements that are now in progress, which when completed will go far towards realising the wishes of the PRINCE CONSORT, and must conduce so much to the success which he anticipated for the Society when he procured their establishment at South Kensington.

"Considering the interest the PRINCE always took in these gardens, and how much the Society owes to his active support and assistance, it would be exceedingly gratifying to HER MAJESTY if the Council shall resolve that his birthday, which falls on the 26th of August, should from henceforth be observed by the Society as a holiday, on which free admission to the gardens should be allowed to the public. The QUEEN does not doubt that the Council will readily adopt this suggestion, and she desires me therefore, to request that you will be good enough to bring the subject before them at their next meeting. Yours, &c., C. GREY."

"A. MURRAY, Esq."

"Royal Horticultural Society's Gardens, July 9, 1864.

"DEAR SIR,—I have submitted to the Council your letter of the 6th of July, expressing the gratification of her Majesty the QUEEN at the improvements now in progress in the gardens of the Royal Horticultural Society, and suggesting that free admission to the gardens should be allowed to the public on the 26th of August, in the present and subsequent years, in order to mark the anniversary of the birthday of his Royal Highness the PRINCE CONSORT, the founder of the Gardens, to whom the Society is so much indebted for its present state of prosperity.

"The Council direct me to request you to express to the QUEEN the great pleasure they have in giving effect to HER MAJESTY'S wishes at all times, and at the same time their desire to show their deep sense of the obligation of the Society to the PRINCE CONSORT. The Council will, therefore, take immediate steps for arranging that the 26th of August in each year shall be kept henceforward by the Society as a holiday, in the hope of assisting towards bringing to the mind of the present and future generations the virtues of the PRINCE and his great services, especially to the working classes; and I beg you to assure HER MAJESTY that the Council will endeavour to give a hearty welcome to all who will visit the Royal Horticultural Society's Gardens on that anniversary.

"I have, &c. "A. MURRAY."

"General the Hon. C. GREY, &c."

—— M. BONARD, in a recent number of *L'Horticulteur Français*, gives an account of a very ornamental plant for garden decoration, which he calls NICOTIANA WIGANDIOIDES. It is now the fashion, he says, to cultivate ornamental foliage plants, and he thinks that this is a fashion of which we need not complain, for in former days the capricious goddess has favoured the evergreens, and the turn of the flowers may in due time come. When that eventuality occurs, those plants which make a great display, and have persistent foliage, and elegant fragrant flowers will not be neglected; and such as this, according to M. BONARD, is the Nicotiana to which he alludes. Planted in the spring in the open ground, it developes itself vigorously, and attains as much as 8 or 10 feet in height in the course of the year. Its stem bears large leaves, measuring some 2 feet in length, and 1 foot in breadth, and sufficiently numerous to give the plant a well-furnished appearance; the young leaves, moreover, have a silvery appearance, on account of the compact white down which clothes them, and which completes their ornamentation.

This plant, it is said, far surpasses the famous Ferdinanda, whose leaves are like elephants' ears, wanting support. It rivals the Wigandia of the Caracas, which it excels in vigour and robustness. As with many of its congeners, this Nicotiana continues to grow during winter, unless, indeed, it is preferred to use the stems and leaves for destroying insects. In an Orangery where frost did not penetrate, MM. BALTET, of Troyes, had an enormous floral bouquet developed last winter. The plant was in spring placed in the open air, where it produced a novel and very fine effect. In the sample of the flowers sent to Paris, the colour was a dull yellow. When it is remembered that this plant is a Tobacco, it will be understood that the production of seed is most abundant. The Nicotiana wigandioides, when isolated in the middle of a flower bed or basket, or grouped on a lawn, or collected in masses, in appropriate parts of the flower borders, is considered by our French neighbours as a splendid decoration for the garden.

—— Every flower, says the proverb, has its perfume; but this is not quite true. The truth is more nearly reached when it is said that each country has its special vegetation. Thus Russia, which is poor in the more highly-developed species of plants, possesses a very varied cryptogamous vegetation. M. P. WALHENSTEIN, secretary to the "Société Horticole de Russie," has lately made out a list of the principal MUSHROOMS generally eaten in Russia, in which he mentions Agaricus integer, Russula, melleus, deliciosus, and Georgii; and Boletus edulis, luridus and aurantiacus. The Russians have two different ways of eating Mushrooms, namely, raw and cooked. Agaricus Russula, A. melleus, and A. deliciosus are broiled with butter or oil. On the other hand, Agaricus integer and A. Georgii are put into a kind of brine, and are eaten after they have remained there for four or five months. Some persons add a little vinegar. The three species of Boletus undergo an analogous preparation, but instead of being pickled in a simple brine, they are put into vinegar which has been previously boiled, and is strongly flavoured with pepper. Agaricus deliciosus sometimes undergoes the same kind of preparation; and Boletus edulis and B. luridus are dried in an oven. These Fungi afford a food which is much sought for at Easter and Christmas by the Catholics, who are said to be very numerous in Russia. So, at least, says the *Revue Horticole*.

—— A NEW WALNUT was presented at a meeting of the Société Impériale d'Horticulture in March last by M. GUYOT, of Villeneuve, proprietor of the castle of Montalivet-Lagrange, near Sancerre. These fruits, gathered from a Walnut tree which came accidentally upon the ruins of an old castle, had rather a square than an oblong shape; their shell was thin, and the kernel well-formed. Although this Walnut showed some differences from other varieties, the Committee of Arboriculture abstained from giving it a name. The tree was about 20 years old. The quality of its fruit was not the only important character that it presented, for it came late into growth, something like the St. Jean Walnut.

—— We find in a northern contemporary the following remark respecting the MUSCAT HAMBURGH GRAPE:—"We are clearly of opinion that the Muscat Hamburgh, when properly managed, will do best on its own roots." Two cases are quoted in support of the opinion thus advanced — Mr. FOWLER'S Grapes were all that could be desired, and Mr. HENDERSON of Wemyss Bay had fruit no less remarkable for finish; and these were both "on their own roots." The question is of some importance, and it would be desirable to ascertain what general verdict thereupon is to be found on the evidence which may be producible.

NOTES ON GARDENS.—No. XII.

ROCKVILLE, DUBLIN.—(*Continued from page* 603.)

THE transition from Trichomanes culture to Fruit growing—from the little cave-like damp and gloomy structure to an ornamental light dignified, excellently arranged, and well-constructed orchard house 84 feet long, 60 feet wide, and 19½ high, was a surprising one, independent of the contrast in size. Here were fruit trees of most obtainable sorts in a perfect state of health and utility; here the finest orchard house I have ever seen; here a result produced, which were it the only one resulting from Mr. Bewley's taste, and boldly successful deviations from the usual measure-me-right style of garden architecture, would at once stamp the place as one of mark, and repay a visit from any don of the profession.

The roof is formed of three spans, of which the central one is the highest by about two feet; and roof air is given by ventilators 5 feet long and 1 deep, hinged to the ridge board and worked by line and pulley. The sides are glazed to the ground, and lateral ventilation is abundantly provided for by the sashes, which are all moveable, being hung on pivots in the centre.

The house is divided into three parallel beds: the central one about 18 feet wide, the others somewhat less; and walks of convenient size separate the beds, which are slightly raised above the floor. Along the sides and ends run narrow borders somewhat higher than the great central beds. The house is sufficiently heated to keep out frost, and if frost never threatened it, a wise measure it was to provide for the drying of the atmosphere in winter (as the moist climate of Ireland makes it very necessary there that cool houses should be well dried at that season), and thus ensure its being a most agreeable promenade. The sashes are of iron; the house is painted white, lined with blue, and is heated—as are all the great houses at Rockville—on Weeks's admirable plan, and that most satisfactorily, if the verdict of those on whom the care of the valuable collection is reposed, be the best criterion.

The beautiful and pendulous fruit of the Strawberry must produce a rich and tempting margin all round the interior of this noble house in spring, as beneath the furrow plates on each side, across the ends, &c., there are shelves placed for their accommodation, amounting in the aggregate to about 1000 lineal feet. Eight inches wide and one and a-half inches deep are these shelves, small slips dividing them into compartments 12 feet long; outside they are neatly finished and painted, inside they are well lined with pitch, to afford an opportunity of easily feeding the Strawberries with weak liquid manure. A border at the warmest end was planted with a choice selection of Orange trees, Limes, Shaddocks, Citrons, Lemons, &c., while the opposite end and side borders, about four feet wide, were planted with the newer kinds of Peach, Nectarine, &c., including some promising seedlings, and with here and there a nice bush of Eugenia Ugni and Eugenia apiculata, and the Loquat and Guava of large size.

In the centre beds, planted out at 12 feet apart, were perhaps some of the finest standard Peach and Nectarine trees to be anywhere found, in the most vigorous and fertile condition, about 10 feet through and as much high, allowed to assume their natural shape, for which liberty they were certainly none the worse, as it was stated in their favour that more than 200 fully developed and finely flavoured fruit had been in many cases gathered from a single tree. Figs were successfully grown in the corners, while on the roof at judicious intervals young Vines in a bearing state were doing graceful duty.

Here and there were well grown plants of ornamental character, favour being notably shown to good permanent things, to the disadvantage of "soft stuff," and the great relief of those whose brains are likely to be softened by being unable to escape from the violent hues of some of the "blazing Burgees" comprehended in that well understood though not very scientific term. But it is in winter that the house would yield most help to the cultivator, and most interest—apart from fruit growing—to the visitor, as independent of the dwarf Chrysanthemums which may, and I believe are, grown round the margins of the borders, the number of things usually "stood out" during the summer that may be comfortably housed in it when the fruit-tree leaves are shed, must be enormous. At all times such a house, more cheery, light, and airy than the conservatory, more congenially moist and convenient than the greenhouse, must be of incalculable use to the cultivator.

From the orchard house the Fernery is entered, and except that it is a few feet higher than that structure, it very much resembles it externally, being also built in three spans, but having a double roof glazed with Hartley's rough plate glass, with 4 inches of interspace dividing the two roofs. It is 60 feet long, the same number of feet broad, and 22 feet high. Internally—here I am at once brought to a standstill for want of descriptive power, similes, metaphors, &c., being all hopelessly intangible, and were it not for a cowardly horror of consigning the unique scene to the limbo of "things more easily imagined than described," I might quietly place it in that very full receptacle. Better, however, the rudest attempt than that.

To give the reader some idea of its general aspect, I will ask him to suppose the rude aborigines of some favoured antipodean valley to have, centuries ago, like the Goths, "with rough strength and hurried stroke smote an uncouth animation out of the rocks which they tore from the Moss of the moorland, and heaved into the darkened air the pile of buttress, and rugged wall" to form such fanes as their brethren of northern Europe delighted in: that time as usual has done its work of ruin, and the gale sprinkled the old walls with spores of the most distinct and beautiful Ferns; that majestic Tree Ferns spring from the long deserted floor, rivalling in height the remaining pillars, while the dwarf, graceful, and motley crew of Adiantums, Cheilanthes, Nothochlænas, and their many pretty allies spring up around in all their beauty, "from gray but leafy walls, where ruin greenly dwells," and in their wild variety and extraordinary verdure scramble over rocks and walls, line niches and arches, spring from between stones and out of chinks, crop beautifully and abundantly from the stems of some Tree Ferns, presenting in doing so an interesting picture of life upon life, without the struggle for existence being so painfully evident as it is when we look upon a plant on the eve of perishing from the fangs of a tropical

Cuscuta, or the distorting and often death-clasping folds of a Liana.

The singularly fascinating effect of the scene is produced by the entire breadth at the extreme end of the house being a mass of rockwork, with niches, numerous and varied recesses, and a winding path over its summit, from whence a peep may be had into the crests of some of the finest Tree Ferns in Europe; by the gutter beams of the roof valleys being supported by rugged pillars, from which spring rugged arches, thus dividing the house into centre and side aisles; while round the sides pointed rustic arches are again raised, and by the entrance end too, being as verdantly wild as could be desired. Above all, by the wonderful capacities of the house for Fern growing—capacities which are not surpassed, if equalled, in any clime, or in any other artificial enclosure. I am sure those who have visited Rockville during the past 12 months will agree with me that never before or since have they seen Ferns, especially the finer arborescent species, in such a perfectly healthy and spotless state, and the same may be said of numerous flowering plants which flourish here and there among their—in this case more favoured—rivals.

The hot-water pipes are placed between the rock and arch work of the sides and the glass, and are thus kept out of sight, while the air passes over them from the ventilators which are fixed in the short brick wall, and then through and over the arches, rockwork, &c., into the body of the house. I should have said that the sides and all are fixed in this house, unlike the orchard one, but the double roof is so conducive to the preservation of an agreeable temperature and moisture, that ventilation is very gently and sparingly admitted. Most deliciously pure, still, and agreeable was the atmosphere, which combined with the free and luxuriant vegetation to remind one of Darwin's impressions of the quiet gloom of the depths of a Brazilian forest.

My peregrinations through the Fernery were of a flitting character, from the number of prominent beauties that presented themselves. Here a cave of choice Ferns would attract attention, there a noble Tree Fern in the distance, thus compelling a "from pillar to post" movement; whilst on a distant ledge some old friend would appear quite in a new character, more beautiful than ever.

One of the first things met with was a mass of Ficus stipularis, drooping so abundantly from archways that it was necessary to push it aside to get through. Trichomanes radicans soon appeared lining a cave, but Trichomanes radicans is so abundantly planted at Rockville that one might fancy the Irish localities had all united there, and a cargo had afterwards found its way from Madeira to enrich the garden. Next came a great niche of Maiden-hair Fern, mixed with the common Hart's-tongue, the graceful leaves of the Maiden-hair contrasting beautifully with those of the Scolopendrium; while near at hand, on a receding group of rock, seedling Ferns of every age and size abounded, and drooping over them were Goniophlebiums and Platylomas, mixed with Tradescantia.

Approaching the pass over the end of the house, the fine-leaved varieties of Begonias—which are unequalled for forming most doleful exhibition groups—appeared in a state that at once commanded forgiveness. They wrapped their roots around, and ran from stone to stone, displaying a perfection of colouring and freedom of outline, to which as seen in pots they are perfect strangers. Nothing could be more pleasing than the wild streaks of light produced among the Ferns and other greenery, by some of these Begonias straying about in this rhizomatous manner.

On ascending the ingeniously constructed defile, which leads for many yards over the end rockwork, the vegetation was found to be most luxuriant and diversified. Many choice Ferns were to be seen, probably turned out of pots, and for the first time free since they left their native wilds. Begonia fuchsioides—always a good and graceful thing if well managed—was here to be seen of surpassing beauty, drooping naturally from a high ledge, and bearing a shower of its bright buds. The sloping sides at the back of the pass were covered with Hoyas, Bignonias, Tillandsias, Arads, &c., with here and there a mass of Begonia in great vigour, jutting boldly from the face of the stones.

The crest of a magnificent Dicksonia now came into view, and called attention from the rocky end to the central parts of the house. The plant was 20 feet across the crest, and the most perfecsly healthy Tree Fern I have seen. It was planted on the floor, as were most of the Tree Ferns, in a mass of peat and rough stones, and so firmly had the roots grasped this mass, that the whole might have been removed almost as easily as if the plant had been in a tub. Beyond the Dicksonia could be seen Rhopalas and the Rice Paper plant in fine condition, growing amongst trailers and climbers and Bananas, while lower down Asplenium marinum grew in quantity from the recesses.

A little further on a noble plant of Dicksonia squarrosa, 14 feet high, and feathered from top to bottom, came into view—a plant worth a house to itself. Though an aged specimen it has never borne a fruiting frond at Rockville, and it is said that one in such condition has never been found in any Fernery, so it is probable that the removal from the main stem of the branches which it gives off, is the only means of propagating this very desirable species.

Before descending, Marantas, Algerian and other Ivies, Alsophila guianensis, and other Ferns, were seen. Then emergence was effected between masses of red granite and tufa near a handsome group of conglomerate quartz, from the chinks of which Leucostegia chærophylla, Cheilanthes, Nothochlænas and Selaginellas grew, with Asplenium zamiæfolium, and Polypodium spectabile; while standing singly was a noble specimen of the Silver Tree Fern of New Zealand, with a stem 8 feet in the clear, and near it a variety of Cyathea medullaris, 12 feet across. At the base of the Dicksonia seen from the mound, Woodwardia orientalis was growing; and from a rocky bank near, Woodwardia radicans depended, having the young plants at the apex of the fronds of great size, and in one or two cases doing in their turn the work of reproduction. Acrophorus hispidus scrambled wildly over a pile of stones in one place, and near it Begonia Queen Victoria covered 5 feet of a nearly perpendicular mass of red granite, the roots clinging to the stone like those of Ivy.

From a group of purple conglomerate sprang the shaft of one of the most elegant of Tree Ferns, Alsophila Macarthuri; and near it a fine specimen of Alsophila australis, canopied over a moss-covered heap of the old red sandstone, which, it may be noted, is famous stuff on which to raise young Ferns from spores. Here and there on the gutter-beam arches were many of the best species of Begonia, with abundance of Maiden-hair, and in some places a lot of the Killarney Fern; while at the base, Balantium Culcita was very fine, with Asplenium Fabianum. Lastly, Cyathea medullaris rose from the floor, covered with black chaffy scales, and spread out a crest more than 20 feet in diameter. A fine Bourbon and some other Palms were also to be seen, with the Cinnamon, Cassia, and other not very commonly grown stove plants. *William Robinson.*

(To be continued.)

THE CULTURE OF THE AMARYLLIS.

IT is generally known that the culture of bulbs receives much attention in the establishment of M. Van Houtte. The genus Amaryllis (Hippeastrum) especially, has always been one of the favourite flowers cultivated there. Indeed, the blossoms are carefully hybridised, and all the resources at command are put under contribution to improve the quality of the seedlings annually produced. The magnificent collection which received the gold medal at the Universal Exhibition at Brussels last spring, and which were exhibited by M. Beaucarne of Eenaeme, were obtained, from M. Van Houtte, as we learn from his new bulb catalogue, whence the following particulars are taken:—

The Amaryllis bulbs pass the winter on the shelf of a temperate greenhouse. They are kept in pots in the earth in which they have grown, without water. At the beginning of spring, about February, they are repotted in fresh earth, composed only of decayed leaf-mould, mixed with a little sand. The old soil is entirely removed, so that the bulbs are quite naked. In doing this a piece of rod is used, by the aid of which the earth adherent to the roots is cleared away, so as not to injure them. All rotten or broken roots are carefully picked off, and the finger is passed under the base of the bulb, to clear away any dead parts hanging there, the old loose skins of the bulbs being also carefully removed. Thus dressed, the bulbs are repotted. When the bulbs are dry these skins or coats do not adhere strongly to them, but when the plant is in full vegetation, and the bulb is swelling, it recovers its former firmness, and the coats will then form a solid mass with the bulb.

In repotting, the bottom of the pot should be furnished with potsherds, and the top of the bulb being held with one hand, the roots hanging down into the pot, the earth should be dropped in gently round it, until all the roots are buried. The bulb is only to be buried up to the neck, and the earth should only be moderately heaped up. This operation finished, the pots are after a few days placed in the temperate house or hot house, but no water at all is given to them until they start, and even then very little must at first be given. On the contrary, when vegetation is progressing with all its force, the waterings must be abundant. The pots should be placed in the temperate or hot house, according as it is required that the flowers should be more or less early.

During the flowering period, the grower may, if he wishes, fertilize his Amaryllids; but once fertilized, the flowers pass away rapidly, and after having borne seeds it is rare that the bulbs flourish the following year. The bulb becomes exhausted by seed-bearing, and after the seeds have reached maturity it will be seen to have grown lean, and that its dress—its coating—is too large for it.

After flowering, the plants with their pots should be plunged in the full sun, in garden soil, or in old tan, continuing the waterings so long as the vegetation is vigorous, but afterwards discontinuing them altogether, and restricting the plants entirely to such moisture as falls from the sky. In plunging the pots in the garden soil, it will be useful to draw out the pot for an instant from the hole which it is intended to occupy, and, with the aid of a pointed stick, to bore a second hole in the ground at the bottom, corresponding with the orifice for the drainage of the pot. This hole, from penetrating deeper into the earth, will hinder the earthworms from introducing themselves into the pot and afterwards overturning the earth in it. The earthworm tires the roots by its incessant peregrinations, if it does not occasion other damage.

The pots are to be removed from this position as soon as the atmosphere grows cool, and they are then to be placed, without receiving a drop of water, on some elevated shelf of the greenhouse, where the leaves will wither, and the bulbs again become dried. In this way the plants are brought into that state of repose which is altogether indispensable if it is desired that the flowers should create astonishment in the following season.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE Anniversary Dinner of this Charity took place on Friday last, the 8th inst. The Right Hon. Charles Lawson, Lord Provost of Edinburgh, presided, and proposed first the health of "Her Most Gracious Majesty the Queen," and then "The health of their Royal Highnesses the Prince and Princess of Wales, and other members of the Royal Family." He afterwards gave the "Army and Navy," and then came to what he characterised as the most important toast of the evening, viz., "Success and Prosperity to the Gardeners' Royal Benevolent Institution." In reference to gardeners, he said: "It often happens that some hard-working member of the profession is overtaken by misfortune, his age embittered by sickness, and nothing to look to but the kindness of those who are unwilling to see an honest, good man go without a helping hand when he needs one. Happily the Gardeners' Benevolent Institution exists, and its history is well known to most people. My friends Mr. Wrench and Mr. Cutler kindly consent to continue their services as Treasurer and Secretary; and of the 24 members forming the Committee of Management, one-third of that number are always practical gardeners. Now, I hope no one will esteem it a fault on my part when I say, if all the well-to-do gardeners were to come honourably forward and subscribe their mite towards an institution eminently their own, they would only be doing by their less fortunate brethren what reason, ordinary kindness, and duty should prompt them to do. I hope that all our landed gentry will consent to become subscribers to this Society—every one should, indeed, who enjoys the luxury of flowers, fruit, and vegetables. The ladies, especially, ought to think of the poor gardeners, whose hands have reared the flowers which give them so much pleasure, and enhance so beautifully their charms; but with the gardeners it is a positive obligation, and I trust that ere long such will be the success of the Gardeners' Royal Benevolent Institution, that not a single gardener or gardener's widow in the country, who may be in true misfortune, may have to ask twice, or ask in vain, for its sheltering protection."

The LORD PROVOST, after proposing "The Health of the excellent Treasurer of the Institution, his esteemed friend Mr. Wrench," remarked that it was most creditable to find Mr. Wrench, while even yet immersed in the anxities of business, holding a responsible office in an Institution of this kind, and he hoped that he might long have health and strength to continue in the same honourable course.

The Lord Provost's health was next drunk most enthusiastically, and in returning thanks he said, among other things: "Permit me to say a word in praise of what I consider a noble feature in the English character—it is free from all prejudice, and in this forms a brilliant example to your neighbouring fellow countrymen north of the Tweed and across the Channel. In this great city you invite all and sundry—Scotch, Irish, foreign—no matter where they come from they are all welcome, and welcome to do as they choose. I call this a grand national characteristic, and to it London is in no small measure indebted for the proud position she holds among the nations of the world, even England herself, indeed, for her greatness; and, to compare great things with small, I am indebted for appearing here this evening. I shall long remember the agreeable entertainment we have just had, and again thank you most warmly for your kindness to me."

The health of the Ladies, who mustered strongly in the gallery, was next given, and the meeting terminated. We understand that upwards of 400*l.* were collected on this occasion.

Home Correspondence.

Water Pumps.—The long continued drought has caused great demand for water. We have long since emptied all the rain cisterns. The pump water is impregnated with lime to such a degree as to render it unfit for garden purposes; and it has occupied the constant time of at least one man to carry water from the river. The path being immediately in front of the windows makes this process still further objectionable, and I imagine a pump would facilitate the labour—the garden is about 22 feet above the river, and the distance, following the surface of the soil, about 60 yards. One person tells me that a 4-inch suction-pump, and a 2-inch pipe, lead or iron, will suffice; another, that it must have an additional valve at the river; another, that the distance is too great for a suction-pump. Will any of your readers who have had experience in these matters give me advice? *M. P.*

Rosary v. *Rosery.*—For some time authors have been drifting into the practice of omitting all punctuation in their title pages. Still later we have another innova-

tion in the cover of "Our Mutual Friend," where Mr. Dickens's artist has absurdly placed a dot over the capital I in "Friend." The compiler of the advertisements of the Crystal Palace Company, or the reader of the *Times*, is now desirous of changing Rosary into Rosery (see *Times*, July 8). Surely this is undesirable, for even the most ardent lover of phonetic spelling would pronounce Rosary to be nearer the proper pronunciation than Rosery. Worcester's is the only Dictionary I possess, and I always find he gives both ways when at all doubtful. Rosary with him is a bed of Roses, a garland of Roses, a chaplet. These are strange times. Horticultural Societies don t now always mean Societies for the encouragement of flowers and fruit, but societies for teaching ladies how to skate, for the filling of beds with powdered bricks slates spar and other substances instead of flowers, for the encouragement of fancy fairs, buffo singers, &c. Surely, Mr. Editor, it is time we had another dictionary compiled, giving these new meanings. I am only a working gardener; still these changes often draw a sigh. *A. G. S.*

Officinal Plants, &c. at Exhibitions.—Endeavouring to fall in with, and assist in carrying out the views respecting the Royal Horticultural Society, promulgated at pages 109 and 110 of their Proceedings, I sent well-grown specimens to the Show on July 6 of the medicinal and officinal plants named in the accompanying list. I should have sent many other things in addition to this collection, but was anxious to send only well-grown plants. Judge of my surprise to find, that although entered in the miscellaneous class, not the least acknowledgment was made. With such a want of harmony betwixt theory and practice, how is one to know what to do? The collection consisted of:—

Betel Pepper, Piper Betle.
Croton Oil Plant, Croton Cascarilla.
Vanille, Vanilla planifolia.
Patchouli Scent Plant, Pogostemon Patchouli.
Cabbage Palm, Euterpe edulis.
Cotton Plant, Gossypium herbaceum.
Lemon Grass, Cymbopogon Schœnanthus.
Chocolate, Theobroma Cacao.
Ginger, Zinziber officinale.
Coffee, Coffea arabica.
Green Tea, Thea viridis.
Black Tea, Thea Bohea.
Bitter Quassia, Quassia amara.
Sugar Cane, Saccharum officinarum.
Violet Sugar Cane, Saccharum violaceum.
Cubebs, Piper Cubeba.
Cinnamon, Laurus Cinnamomum.
Black Pepper, Piper nigrum.
Gamboge, Xanthochymus pictorius.
Balsam of Peru, Myrospermum Pereiræ.
Fijian "Boro dina," Solanum anthropophagorum.

William Bull, Chelsea, July 7.——I was not aware that my collection of medicinal and officinal plants had met with the least recognition from the Horticultural Society until I saw the award of 1*l.* announced in the *Gardeners' Chronicle* of last Saturday. Even now I am at a loss to know why such a collection should have been stigmatised with a 3d prize when there were no other plants of a similar character in the exhibition to receive a 1st or a 2d. I may add that it is doubtful whether a similar collection could have been exhibited by any one else in the United Kingdom, excepting the Curators of some of our botanic gardens. *William Bull, July* 11.

Tobacco Manufacture.—Being about to emigrate to Queensland, I contemplate the growth and manufacture of tobacco, and should feel particularly obliged if any of your correspondents would in your pages give me some information as to the particular process or processes necessary to render it fit for consumption. The growth of the plant I am fully acquainted with, but its preparation afterwards, so as to render it similar to what we use in England, as Cavendish, shag, bird's-eye, &c., is what I want to know. Perhaps some one could refer me to a publication which would give me these particulars. *M. P. M.*

Nurserymen's Assessments.—Last autumn I had three hothouses erected at our country nursery; now, in consequence of putting up these additional houses, the parish authorities have come to the determination of assessing the place much higher than previously. Can they legally do so? I have always been given to understand that hothouses could not be taxed. What with the keeping them constantly in repair, painting and glazing, I consider that they cost quite enough without having to pay more for them. Besides, there is always the risk to run from hail storms. I should therefore feel obliged by your giving me some advice on the subject. *Assessed Taxes.* [You have increased the value of the land, and the authorities are probably right. Consult a solicitor before you appeal.]

Hissing of Snakes.—In answer to "E. O." I beg to state that I last year caught on different days three adders. Before taking them up I always hit them a little about the head with a Furze bush. Each, while undergoing that punishment, hissed lustily. I kept one of them for some days out of doors, and it hissed only when poked with a stick and annoyed; from which facts I consider that they only hiss when very angry; and no doubt, as White of Selborne has recorded, a disagreeable smell is emitted, though being in the open air I did not perceive it. As they opened their mouths wide to hiss, I suppose the noise is produced by their tongue, much in the same manner as it is with ourselves. *W. R. Tate, 4, Grove Place, Denmark Hill, Camberwell.*

Orchids under Vines.—Some of your readers have misunderstood the meaning of your remarks (p. 553), respecting my Orchids. Most of those who have written since on the subject seem to imagine that they meant to imply that no one had any plants to equal mine in size. Now my largest plants were not referred to by you. The object of your observations was evidently to describe a large and varied collection of Orchids, with foliage plump and firm, and plants profusely in bloom, grown not in "stew-pans," but in such well-ventilated houses that no close stifling feeling, so common in Orchid houses, is experienced, and in which any one can inspect the plants hour after hour with enjoyment. The question at issue is not as to whether my collection is better than some one else's, or whether some one has not grown plants faster than I have done. Lovers of Orchids like to increase the number of growers of them, and nothing is so likely to induce people to do this as prominently putting cases forward where Orchids are grown and flowered well, without excessive heat. The second principle enforced was, that any one having a Vinery might grow many Orchids to great size of bulb and perfect health under the shade of the Vines. Some may say, "Well, you have described the value of the shade of Vines for the Orchids, but what of the Grapes?" I shall be pleased in August and September to see any grower of Orchids who may like to test the quality of my Grapes. *Robert Warner, Bloomfield, near Chelmsford.*

Foreign Correspondence.

Textile Materials.—Sydney, N. S. Wales, Woollahra, Jan. 21, 1864.—Last Mail I had the pleasure to address you in answer to a query in your issue of June 27, 1863, p. 604, on the subject of fibre from Queensland. By that opportunity I forwarded a specimen of the plant, viz., Sida retusa, and pointed out its geographical range in this country. I now forward specimens of the fibre which has had no more preparation than soaking in water for 16 days. This was grown on the spot, the property of Sir Daniel Cooper. In my last I directed attention to other fibres indigenous to this country. Sida retusa has the reputation of coming from the "Mauritius," and its extensive dissemination is readily accounted for—being like that of the little Coleoptera "Dermestes lardarius" (Bacon Beetle), which finds its way to every port by every ship, even on the torrid Gallipagos Islands, the abode of the land-tortoise and iguana. So it is with this freely seeding plant and pest to the agriculturist—wherever hay is sent from the fields where Sida retusa grows, the chances are that the means of propagating this plant go also. *E. S. Hill.*

Societies.

Royal Horticultural: *July* 11 (*Election of Fellows*).—The following candidates were elected, viz.:

The Marchioness Dowager Ailesbury, Miss Bligh, Mrs. Col. Brooke, W. C. Brooks, Esq., Col. W. Burlton, C.B., Miss Cubitt, Rev. A. Du Cane, W. Gillett, Esq., W. Hooper, Esq., Lady Ouseley, Lady Parker, Mr. F. Perkins, Miss Reeves, W. Rigby, Esq., H. Robertson, Esq., M.P., D. T. Robertson, Esq., the Very Rev. Dr. Rock, R. H. Say, Esq., J. Thompson, Esq., Mrs. Webb, Miss Webb, J. A. Youl, Esq., and G. H. Jay, Esq.

July 13 *and* 14 (*Strawberry Fête*).—This was by no means well supported, almost the only exhibitor being Mr. Lydiard, of Bath, who showed, as he always does, large well ripened fruit. In Classes 1, 2, 3, 4, 6, 7, 8, 10, 12, 13, 14, 15, 16, 18, 22, 23, 24, and 25, there were no exhibitors. In Class 5, collections of three dishes of distinct kinds, a First-class Certificate was awarded to Mr. Lydiard. In Class 9 the same exhibitor showed three dishes of British Queen; and in Class 11 one dish of the same variety. In Class 17, viz. one dish of any variety not named in the schedule, Mr. Lydiart had a 1st prize for Myatt's Eleanor, and a 3d for Victory of Bath. In Class 19, viz. the best dish for culinary purposes, Mr. Lydiard was 1st with Myatt's Eleanor. In Class 20, viz. the heaviest single Strawberry, a 1st prize was awarded to Mr. Lydiard for British Queen, weighing 1 oz. 8 dwt. In Class 21, heaviest 12 Strawberries, 1st to Mr. Lydiard, for Myatt's Eleanor, weight 12¼ oz.

Associated with this meeting was an exhibition of Bouquet holders, among which by far the most important was one presented to her Royal Highness the Princess of Wales some time ago by the Maharajah Dhuleep Singh. Others came chiefly from dealers.

Entomological: *June* 6.—H. T. Stainton, Esq., F.L.S., V.P., in the Chair. Mr. Morris exhibited some leaves of the Sugar Cane from the Island of Mauritius, where the canes are infested to an alarming extent by a species of Coccus, very similar to the common Vine Coccus, and which has been supposed to have been introduced from Belgium or France. Various suggestions were made by different members as to the most effectual means of getting rid of the pest, Mr. Morris stating that he had been strongly advised to recommend diluted carbolic acid as a wash. Mr. F. Smith exhibited a series of drawings of the nocturnal Lepidoptera of India, executed by native artists with a wonderful degree of perfection, for Major Atkinson; also a Bombus, captured at Deal, which appeared distinct from any described British species. He also exhibited a series of nests, six in number, formed by a colony of Vespa germanica during a space of 38 days in the months of September and October, 1862. These nests were of the most fantastic shapes, some being cup-shaped, others like pillars, one resembled a stalactite cavern, and one was a fair resemblance of Stonehenge. The nests were built in cubical boxes, and it appeared that the fantastic direction of the combs was owing to wires placed in various positions, of which the wasps took advantage by way of support. A notice was read of the destruction of queen wasps during a long period of years, showing the effect of temperature on the development of those insects. Thus in some cold and bleak springs, very few queens could be seen, but in congenial seasons vast numbers were killed, as in 1841, when as many as 581 dozen of queens had been collected and destroyed. Mr. F. Smith objected to this wholesale destruction of the wasps, considering that they were, on the whole, serviceable rather than destructive animals. Professor Westwood exhibited some exceedingly minute four-footed Acari which had been found during the present spring infesting the buds of Black Currant trees, and completely destroying the embryo blossoms, by Mr. Chapman, of Glasgow. He also exhibited a new butterfly from Singapore and Assam, forming a new genus which he described under the name of Liphyra Brassolis. Mr. McLachlan exhibited a case bearing larva of the Coleopterous genus Clythra, found upon Thyme on Box Hill. A note was read from Mr. Trimen describing a case of mimetic resemblance, exhibited by a species of spider observed on Senecio pubigerus at the Cape of Good Hope, and referring to the object of such resemblance: the colour and markings of the spider so closely resembling the flower of this species of Ragwort as to deceive the butterflies of the genus Hipparchia, which it catches and devours on their alighting on the apparent blossom. Mr. Tegetmeier made some observations on the economy of hive bees with reference to their adopting and cleaning out old comb, and also as to their eating pollen. Major Parry exhibited a remarkable monstrosity occurring in an exotic stag-beetle, both antennæ of which were trifid. Mr. Stanton exhibited the pupa of the small moth Anchinia verrucella, which greatly resembles the chrysalis of a Pieris, being attached by the tail and girt round the body. Dr. A. Wallace gave an account of the successful rearing and weaving of the silk of the Bombyx Cynthia on the Ailantus tree at Colchester. Mr. F. Walker communicated a memoir containing descriptions of new species of Chalcidites of the genus Smiera from the Amazons.

Birmingham Rose Show.—This, the third annual gathering, was held in the Town Hall on Thursday and Friday the 7th and 8th inst., and was in all respects as complete a success as its predecessors. The competition among nurserymen was not perhaps so close as at the last show; but, whatever deficiency there might be in that department, it was fully made up by the amateurs, who showed considerably better than on any previous occasion. Throughout the entire show the blooms were good. New flowers of the last three years were conspicuous in all the principal collections.

The Silver Cup, value 10*l.*, for 96 varieties, was awarded to Messrs. Paul & Son, of Cheshunt, who showed fine blooms of Triomphe de Rennes, Gloire de Santenay, Madame Boutin, Sœur des Anges, Alphonse Damaizin, Olivier Delhomme, Clement Marot, Lord Canning, Lord Clyde, Madame Julie Daran, Madame Caillat, Duchesse de Morny, and Louise Margottin. Mr. John Keynes, of Salisbury, was second with good blooms of Madame Charles Wood, Madame Emain, John Hopper, Professor Koch, Olivier Delhomme, Le Rhone, Laurent Descourt, and Celine Forestier. In 48 kinds, Mr. B. R. Cant, of Colchester, had beautiful flowers of Le Rhone, Charles Lefebvre, Comtesse Cecile de Chabrillant, Francis I., La Brillante, Madame C. Wood, Marechal Vaillant, Maurice Bernardin, Monte Christo, Souvenir du Comte Cavour, Cloth of Gold, Triomphe de Rennes, Madame Falcot, President, Madame Willermoz, and Souvenir d'Elise. Messrs. Paul & Son had excellent examples of Lord Canning, Lælia, Comtesse Cecile de Chabrillant, Anna de Diesbach, John Hopper, Jean Bart, Gloire de Santenay, and Baron Gonella. In 24 varieties, Mr. Cant was again first, with fine specimens of Charles Lefebvre, Madame Julie Daran, Maurice Bernardin, Prince Camille de Rohan, Devoniensis, and Souvenir d'un Ami. Mr. Keynes also had good blooms of Charles Lefebvre, Madame Clemence Joigneaux, John Hopper, Duc de Rohan, and Baronne Adolphe de Rothschild.

Awards.—Nurserymen, 96: 1, Messrs. Paul & Son; 2, Mr. John Keynes. 48: 1, Mr. B. R. Cant; 2, Messrs. Paul & Son; 3, Mr. J. Keynes. 24: 1, Mr. B. R. Cant; 2, Mr. Keynes; 3, Mr. G. Batley; 4, Mr. W. H. Davis.

In the classes open only to Nurserymen resident in the counties of Warwick, Worcester, or Stafford, the awards were as follows:—

24 varieties: 1, Mr. W. H. Treen; 2, Mr. G. Batley; 3, Mr. R. H. Vertigans. 12 varieties: 1, Mr. W. H. Treen; 2, Mr. Geo. Batley; 3, Mr. W. H. Vertigans.

In the Amateurs' classes of 48 kinds, Mr. S. Evans, of Arbury, was 1st, with a good stand, containing fine blooms of Madame Furtado, Louise Magnan, General Washington, Madame C. Wood, La Fontaine, and Gloire de Santenay. Mr. Perry had good specimens of Gloire de Vitry, Maréchal Vaillant, Madame Clemence Joigneaux, John Hopper, La Fontaine, and General Simpson. In 24s Mr. E. Hunt, Leicester, showed nice blooms of Anna de Diesbach, Madame Vidot, Comte de Nanteuil; while Mr. Evans had good flowers of Madame C. Wood, Madame C. Crapelet, and Lord Raglan. In 18s, Mr. Evans stood 1st with nice

examples of Louise Peyronney, Madame C. Wood, and Madame C. Crapelet; Mr. W. Brown having Auguste Mie, Comtesse Cecile de Chabrillant, Lord Raglan, and Madame Boll.

Awards.—48: 1, Mr. S. Evans; 2, Mr. C. J. Perry. 24: 1, Mr. E. Hunt; 2, Mr. S. Evans; 3, Mr. C. J. Perry and Mr. E. Sage, Atherstone. 18: 1, Mr. S. Evans: 2, Mr. W. Brown; 3, Mr. E. Hunt; 4, Mr. R. Garnett. 12: 1, Mr. Sage; 2, Mr. Hunt; 3, Mr. C. E. West; 4, Mr. Perry.

In the Classes open only to Amateurs residing within 15 miles of Birmingham, the awards were as follows:—

24: 1, Mr. W. Brown; 2, Mr. C. J. Perry; 3, Rev. P. M. Smythe and Mr. R. Garnett, equal. 12: 1, Mr. W. Brown; 2, Mr. T. B. Wright; 3, Rev. P. M. Smythe; 4, Mr. C. J. Perry.

In the Class open only to Amateurs resident within three miles of Birmingham, the awards were:—

1, Mr. H. Lowe; 2, Mr. G. Sansome; 3, Mr. G. P. Wragge; 4, Mr. W. Sturge.

Two Classes were provided for new Roses, open to all comers. In the various collections were very fine specimens of Duc de Rohan, John Hopper, L'Eblouissante, Peter Lawson, Madame Emain, Comtesse Courcy, Le Rhone, Lord Clyde, Alphaide de Rotalier, Madame Caillat, and Louise Margottin:—

Awards.—24: 1, Mr. Keynes; 2, Mr. Cant; 3, Messrs. Paul & Son; 4, Mr. Batley. 6: 1, Mr. Keynes; 2, Mr. Keynes; 3, Mr. Cant; 4, Messrs. Paul & Son.

We must not omit to speak in high terms of an extensive collection of Roses sent by Mr. Cranston of Hereford, not for competition; also of a beautiful collection of Verbenas from Mr. C. J. Perry, consisting for the most part of seedling varieties of considerable merit.

The large hall, with its most convenient galleries, affords an admirable opportunity for displaying various objects of interest in connection with gardening, and several well known makers in Birmingham support the Committee, thus making the Rose show of unusual interest.

On this occasion Messrs. George Baker & Co., Chester Street, Birmingham, contributed a very extensive display of garden ornaments in wire work, especially such things as summer houses; ornamental garden pots and saucers in wire of various colours, and certainly the neatest and most ornamental we have seen for table decoration; wire-work chairs of graceful pattern and inviting ease; arm chairs of the same pattern, all just what ladies would delight in using. Also, flower stands in endless variety, garden seats of all patterns, two beautiful summer houses, and a quantity of other garden utensils. This large collection was greatly admired.

Mr. Charles Bryan, Worcester Street, Birmingham, sent a large display of China and earthenware articles for window, drawing room, and conservatory decoration. These consisted of garden seats, suspending baskets, Mignonette boxes, vases, brackets, and a host of other things made in earthenware, but a clever imitation of rustic wood-work. Some Fern cases were much admired and must become popular.

Mr. Thomas Rabone, Birmingham, exhibited a large collection of barometers, thermometers, hygrometers, and Admiral Fitzroy's storm glasses, of great interest, the maker adapting himself very much to the construction of such things connected with horticulture.

Messrs. Mapplebeck & Low sent a large collection of garden tools, which proved of great interest to the visitors. Amongst them was a very cheap transplanting apparatus, consisting of a pair of trowel-formed blades, and handles in the form of short-handled garden shears, an admirable invention for the use of ladies and amateurs, and appropriately named "a transplanter."

Mr. James Jackson, New Street, Birmingham, contributed a large collection of light and elegant ornamental flower stands, glasses, and vases in glass and china, of all patterns and colours, for drawing-room and dinner-table decorations. A novelty arrested our attention, which will be found useful in building walls where climbers are wanted. This is Foxley's patent corrugated bricks, made of the ordinary brick size, with a semi-circular projection along the centre of each, through which holes have been drilled for receiving wires for fastening climbers.

Messrs. Gough & Sylvester, Mr. Spurrier, and Messrs. Derry & Jones sent collections of silver and plated table ornaments for flowers, &c., many of them exceedingly beautiful, and intended for drawing-room and dinner-table decoration.

One other invention deserves especial notice; Mr. Pumphrey sent several of his Paxton Garden Engines, which may be best described as an improved form of the Hydropult. It is more finished in workmanship, is represented to be less liable to derangement, and from the construction of the piston draws water a greater distance than the Hydropult; the foot accommodation is also superior.

BLOOMSBURY FLOWER SHOW.—The fourth exhibition of plants, belonging to the working classes resident in the parish of Bloomsbury, and the second distribution of prizes for clean and tidy rooms, took place, under the presidency of the Rev. Mr. Bayley, on Wednesday last, the 13th inst., in Russell Square, and was perfectly successful, the day being fine, and the attendance of visitors satisfactory. Under a tent pitched on the Grass, beneath the shade of lofty trees, was a considerable assemblage of plants, not remarkable for fine growth or bloom, but all of them clean and healthy. They were shown in Classes: I. being for persons living in the neighbourhood of Little Coram Street, one of the very poorest of districts; II. for persons living in other parts of the parish; III. for domestic servants. In each of these classes were awarded prizes for Fuchsias, Pelargoniums, and Annuals. Class IV. was set apart for children belonging to the National, Infant, Sunday, Parochial, and Ragged Schools; and Class V. included odds and ends not provided for in the departments just enumerated. The prizes offered varied in amount from 1*s.* to 10*s.*, and the competition for them was extensive, indicating the interest which the poor take in the movement. The bulk of the plants exhibited consisted of Pelargoniums and Fuchsias; but we also noticed examples of Creeping Jenny, Yellow Calceolaria, white and crimson Pinks, Petunias, Hydrangeas, Dahlias, Verbenas, what are called Nettle Geraniums, Kalosanthes, Orange trees, Balsams, Mignonette, Musk, Asters, and French and African Marigolds. These were chiefly in clean-washed garden pots, which seem to have superseded spoutless teapots, china mugs, basins, and other appliances which characterised the first shows held under Mr. Bayley's superintendence. We, however, observed a little round tub filled with Potatos, Radishes, and a tuft or two of Virginian Stock; a sprig of Yew, kept alive some three years in a clear glass bottle, from a nurse in a workhouse; boxfuls of Ferns, and even shells filled with the same favourite tribe of plants; hanging baskets made of three-deep Strawberry punnets fastened together; table decorations, consisting of baskets ornamented with Fir cones, bearing a living plant of Acacia armata, surrounded by dried Grasses, with Oak galls strung on wire like beads; hanging wire baskets supporting finely bloomed plants of blue Lobelia; and finally a representation of a villa called Bloom Grove, in the form of a square box filled with plants thrown into groups by means of miniature gravel walks edged with shells and surrounded by an imitation red brick wall, with round white stone-topped pillars and entrance gate of the same colour, the whole being tastefully executed, and really very pretty. These, and here and there a little plant of red-leaved Coleus, formed the materials of which the flower show chiefly consisted. Even the children's department was well supported, and excited much interest. A twin sister of this exhibition is the clean and tidy room movement, which has also been instituted for the social improvement of the labouring classes, and prizes for this as well as for the flowers, were awarded in the evening to the successful competitors by Lord Shaftesbury. Concerning this, Mr. Bailey says:—"Last year prizes for clean and tidy rooms were offered for the first time by way of experiment through a section of the parish. Eighty-six persons gave in their names as competitors. This year the prizes have been extended to the whole parish, and 304 persons have competed for them. The competitors," Mr. Bayley adds, "value our visits, and only complain if they are not paid sufficiently often. My experience, after regular visitation of the rooms, is that a decided improvement has taken place in their condition in that part of the parish to which the movement of last year was confined. The sanitary effect of such improvement cannot but be good. The moral effect is, I am persuaded, excellent."

Notices of Books.

Species Filicum; being Descriptions of all known Ferns, Illustrated with Plates. By Sir William Jackson Hooker, K.H., &c. London: Dulau & Co., Soho Square.

A short time since we announced the issue of the first part of the fifth volume of this most useful book, and we have now to state that with the second part, which has since appeared, Sir W. Hooker has completed his arduous undertaking of describing all the known Ferns. The portion now before us consists of 190 pages of letterpress, including not only an index to the volume, but also an index to the genera and principal groups contained in the whole five volumes. These are accompanied by eight plates, representing as many species of the gymnogrammoid and acrostichoid groups. The text comprises the few concluding pages of Polypodium, and the genera Jamesonia, Nothochlæna, Monogramma, Gymnogramma, including Dictyogramma, Syngramma, and Selliguea; Brainea, Meniscium, Antrophyum, Vittaria, Tænitis, Drymoglossum, Hemionitis; and finally, Acrostichum, which is made to take in the whole of the Acrosticheæ of authors, excepting Platycerium, which stands by itself. In an Appendix is added the genus Matonia, which is referred to the Cyatheaceæ.

On the conclusion of a work so important as this to the students of Ferns, we may be excused for quoting the author's final explanations as to the plan and principles by which he has been guided, as they throw much light upon the character of the work:—

"It is with no ordinary feeling of satisfaction that the author has brought to a conclusion the five volumes constituting the '*Species Filicum*' (accompanied by 304 plates, representing 522 species), being descriptions of the known Ferns, particularly of such as exist in the author's herbarium, or are with sufficient accuracy described in works to which he has had access.' This title is further explained in the preface to the first volume as including—(1) such species as the author has had the opportunity of examining himself; (2) those which have been universally received, and which his own observations have tended to prove are justly to be regarded as distinct by references to satisfactory figures; and (3) a considerable number of which he has neither seen figures nor specimens, but which are given upon the authority of botanists of name and character, though often imperfectly characterised.

"It is just 20 years since the author commenced this laborious undertaking, and during its progress his chief regret has been that he has, especially in the earlier volumes, introduced so many species merely on the ground of the name and celebrity of the author, going as far back as Swartz (1806), and Willdenow (1810), and which still remain in the category of species *non ritè cognitæ*. Of late years the number of bad or dubious species has increased to an alarming degree, consequently increasing the difficulty of the tyro in determining the good species; so that we require to be more guarded than ever in the selection of what ought to be maintained and what discarded. The excellent Dr. Grisebach has prefaced his account of the genus Hymenophyllum in his 'Flora of the British West Indian Islands,' with the remark. 'I omit several West Indian species of Hymenophyllum, and a few of Trichomanes, named by Dr. Van den Bosch, upon the same materials as I had before me, and published lately after his death (in the Nederl. Kruidk. Arch. 1863), because, judging from the descriptions, they are not well founded.' It is indeed well known that there is a tendency amongst botanists of the present day to increase the number of species (and genera too), on insufficient characters; an error often indeed arising from incomplete specimens, and want of suites of specimens which would show the modifications to which they are liable.

"On the limits of the genera of Ferns, it is needless for me to remark here. Every author is entitled to entertain his own views upon the subject, I have endeavoured to maintain such as may best preserve the natural grouping of the species, and be attended with the least difficulty to the working student."

The Species Filicum was originally designed to include the Osmundaceæ and Ophioglossaceæ, but has been brought to a close without them. It is, however, announced that the author, if life and health be spared to him, will prepare a volume to be entitled *Synopsis Filicum*, with brief characters of the sections, genera, and species of Ferns (omitting all really dubious ones), giving general habitats, and references for more complete information to the Species Filicum itself. In this Synopsis will be embodied the needful corrections, alterations, and additions which have accumulated during the 20 years progress of the larger work. The Schizæaceæ, Osmundaceæ, Marattiaceæ, and Ophioglossaceæ, all omitted from the present volumes, will be also added. What a luxury for Fern students will be this one-volume Synopsis of all the Ferns! We heartily trust the accomplished author may be spared to produce it.

Guide to Cool-Orchid Growing. By James Bateman, Esq. Pp. 16. London: Reeve & Co.

This useful and suggestive shilling pamphlet the author observes is not intended for botanists, but has been compiled with the view of assisting the admirers of cool Orchids in the formation and management of collections restricted to that particular section of the family. To this end there are given, first, an alphabetical list of genera, with brief directions for culture; and secondly, a list of cool Orchids already imported which are worth growing, the native country and time of flowering being added. Among the latter we notice the little Mexican Govenia liliacea mentioned last week at p. 652. This terrestrial genus Mr. Bateman explains may be treated like the Eastern Calanthes, only of course they must not be kept so warm. We notice a short piece of good advice to importers who are novices, which runs thus:—"In regard to Orchids imported for the first time, the cultivator must chiefly be guided in his treatment by the information supplied by the collector as to the *position* (*i. e.* whether epiphytal or terrestrial or both) in which the several species were found, and their *elevation* above the sea-level. A rise of 500 feet within the tropics may be taken approximately to be equivalent to a diminution of one degree of temperature." The notes on culture are brief, and special rather than general.

De Nederlandsche Boomgaard, &c., &c. [*The Dutch Fruit Garden: written and published under the Direction of the Society for Regulating and Improving the Varieties of Fruits, at Booskoop.*] Groningen: J. B. Wolters.

We have received the first part of this new work, containing Nos. 1 to 4 inclusive, each number consisting of a chromo-lithographed plate, with descriptions in Dutch, in which language, according to the Prospectus, the work is to be published.

In the numbers before us eight varieties of Apples are figured and described:—1st. *The English Winter Gold Pearmain*, which is the same as the King of the Pippins. 2d. *Pariser Rambour*, the same as the Reinette du Canada, to which are given most of the synonyms

in the Horticultural Society's Catalogue of Fruits. 3d. *Ribston Pippin;* in the figure the eye is particularly well represented. This well-known, and in this country generally much esteemed fruit, is not found to be first-rate on the continent; nor is it so good in the south of England as it is in the north, in its native county of Yorkshire, or the south of Scotland, or, indeed, from a south wall in well sheltered gardens even far northward in that part of the kingdom; there it is crisp, melting, and juicy. The nearest approach to that condition, southwards, is when the fruit is grown on a west aspect, in soil sufficiently drained, but never allowed to get too dry. The Dutch describe its flesh as being firm, fine, with a sugary acidity, and a peculiar rosemary perfume; first-rate quality, both for table and kitchen use; and it is recommended because, owing to the firmness of its flesh, it bears carriage or transportation without losing its good appearance, which they say, and we know, is not the case with the insipid soft-fleshed foreign Apples imported into this country. Instead, therefore, of these we may expect from Holland large importations of Ribston Pippins, for there it is stated the trees grow well, form handsome standards and pyramids, are very fruitful, and the fruit meets with a good and ready sale.

No. 4 is *Baumann's Reinette,* Baumann's rothe Winter Reinette, Couronne des Dames d'Enghien. This is a middle-sized, handsome Apple, red and streaked; flesh tolerably firm and fine, juicy, pleasant, with a refreshing but not sharp acidity; season December to April; first-rate for table and kitchen use. Raised by Van Mons in Belgium, and named after the Messrs. Baumann, of Bolwiller.

No. 5, *Scarlet Nonpareil.* We do not think this is the correct sort, with which neither the description nor the figure agrees. The stalk is too long; and the eye is too close and small. The flesh is described as being not unlike that of "de overal beroomde Wijker-pippeling"—the universally celebrated Wyker Pippin, which is our Golden Reinette. The figure is more like a small form of this, than a Scarlet Nonpareil.

No. 6, *Paradijs Dubbele Zuren,* Rother Eisen Appel, Rother drei Jahre dauerender Streifling, Pomme rouge rayée durable trois ans, Rother Calvillartiger Süszappel. This is represented as a longish kitchen Apple, above the middle size, red, [streaked on the shaded side on a yellow ground; season March to April, but in a remark it is stated that it will keep well throughout the whole of June—a remark not agreeing with the term of its duration as implied by one of its synonyms, Pomme rouge rayée *durable trois ans.* It is described by Dittrich, Systematisches Handbuch der Obstkunde, p. 457, who states that Professor Credo of Marburg made this valuable fruit first known to the pomological public; that it ripens in January; and that it keeps well without shrivelling over two years. In the present work it is stated that its origin is not known, but that it was described by Knoop as an old sort. It resembles the Norfolk Paradise.

No. 7, *Ermgaarde Zoete* or Zoete Hermingard? Origin not known. It is much esteemed in the Overmaasche part of South Holland, and also in the province of Overyssel. Above medium size, oblong-ovate, marbled and streaked with pale and deep red, sprinkled all over with small grey dots; flesh fine, moderately firm, not very juicy, sweet, and of a yellowish colour; season January to April. First-rate for kitchen use—an exception to what is generally the case with sweet Apples.

No. 8, *Landsberger Reinette;* obtained by Councillor Burchard, at Landsberg, on the Wartha. Rather large, broad at the base, brownish yellow, third-rate for the table, first-rate for kitchen use; season November to January.

The chromo-lithographed figures of these fruits are admirably well done; we have seen no fruits represented by that process that could be at all compared with them.

Garden Memoranda.

CASTLE KENNEDY, STRANRAER, WIGTONSHIRE, ONE OF THE SEATS OF THE EARL OF STAIR.—This fine old place has been greatly improved, as far as landscape gardening is concerned, within these last 20 years, and even now many alterations for the better are being effected under the care of the gardener, Mr. Fowler. The grounds are very extensive and varied, and are remarkable among other things for their innumerable terraces and fine avenues.

A handsome new Castle is being built, and further works of a comprehensive character in connection with it are contemplated. Twenty acres are already exclusively devoted to the cultivation of coniferous plants, of which there is a rich and extensive collection, the climate and soil being very suitable for the growth of this highly ornamental class of plants. Of Deodars and Araucarias there are fine avenues, of which three are about 80 feet wide and 400 yards in length. The trees of which they consist vary from 15 to 25 feet in height.

The American ground is also extensive and well stocked with the finest sorts of Rhododendron, Azalea, Kalmia, and other plants of that description. One plant of Rhododendron, viz. Thomsonii, has had this season on it from 40 to 50 heads of bloom.

In the kitchen garden an extensive range of forcing-houses was erected a few years ago, the borders in which, both outside and inside, are thoroughly aërated and drained. The Vines in these houses are now producing magnificent crops of fine fruit. The Black Hamburghs in them weigh from 4 to 5 lbs. a bunch; Muscat Hamburghs are also very fine. One bunch of White Nice is unusually large. Golden Hamburghs are also excellent, both as to bunch and berries, the colour justifying the name which it bears. This is considered here to be one of the finest Grapes in cultivation, but it is said that until the Vine has attained strength and age, neither bunch nor berry swell or colour well. Peaches and Nectarines are also well grown, but what would be of most interest to many would be the Fig house; there, on the back wall, is a plant bearing a large crop of beautiful fruit in all stages of growth, and this is stated to be of a kind peculiar to this place, called the Castle Kennedy Fig; a fine variety, some of the fruit of which are stated to measure as much as 11 inches in circumference, and three fruit of it gathered for the Glasgow Show on the 8th of June weighed over 18 ounces. It is reported to be both earlier and more prolific than any of the other sorts in the house. Visitors to Castle Kennedy should not miss inspecting the houses where they can see this fruit and judge for themselves.

It should be added that these beautiful grounds are open to the public, and that they are yearly visited by thousands.

Adverting again to Coniferæ, it may be mentioned that Mr. Fowler has succeeded in obtaining a golden variegated variety of Araucaria imbricata, which grows equally well as the ordinary kind, to which it has no disposition to return. It forms a charming tree, and when it becomes known cannot fail to be a favourite. *J. L.*

Miscellaneous.

Important Sale of Orchids.—We find that at the late sale by Mr. Stevens of Mr. Day's *duplicate* Orchids, the following remarkable prices were realised, the whole producing nearly 600*l.*:—Lælia Schilleriana splendens, Mr. Day's fine variety, 10*l.* 10*s.*; also another specimen, 8*l.* 10*s.*; Cypripedium Dayanum, rare plant, 6*l.* 5*s.*; Angræcum sesquipedale, 24*l.*; Dendrobium macrophyllum giganteum, fine plant, true, 5*l.* 15*s.*; Cœlogyne cristata, 7*l.*; Lælia purpurata, fine plant, Backhouse's variety, 7*l.* 5*s.*; Sobralia macrantha, Woolley's dwarf variety, 7*l.* 5*s.*; Odontoglossum Pescatorei, 14*l.* 10*s.*; Cypripedium hirsutissimum, very fine plant, 6*l.* 5*s.*; C. superbiens (Veitchianum), 5*l.* 5*s.*; Aerides nobile, in flower, 5*l.* 10*s.*; Phalænopsis Schilleriana, fine plant, 6*l.*; Saccolabium guttatum giganteum, Bunney's variety, 8*l.* 10*s.*; Cattleya Schilleriana, 6*l.*; C. Warscewiczii, dark lip, 5*l.* 5*s.*; Saccolabium guttatum giganteum (var. Halfordianum), true, 26*l.* 5*s.*; Cypripedium villosum, fine plant, 7*l.* 10*s.*; C. Dayanum, 7*l.*; Aerides Veitchianum, true, 7*l.* 5*s.*; Lælia elegans, splendid dark variety, like L. Turneri, 8*l.*; Aerides Fieldingii, fine plant, 6*l.*; A. Larpentæ, 5*l.* 5*l.*; A. Schroederi, fine plant, 28*l.*; Dendrobium Falconeri, true, 5*l.* 5*s.*; Saccolabium guttatum giganteum, Bunney's variety, 6*l.* 10*s.*; Odontoglossum nævium, 6*l.* 10*s.*

Cultivation of Window Flowers.—A Society has recently been established in Nottingham, to encourage the cultivation of window flowers and plants, more particularly in the neighbourhood of Narrow Marsh.

Preservation of Cinchona Trees.—A letter from a gentleman owning a district in New Granada, containing trees of Cinchona, has been put into my hands by Mr. Markham. It shows very satisfactorily that the reprobation of the practice of extirpating these trees, which has found utterance in England, is beginning to produce a salutary effect in South America. The letter is from Don Narciso Lorenzano, and is dated Bogotá, March 4, 1864. He writes to his correspondent (—Griffiths, Esq.) as follows:—"I have to thank you for having sent me a copy of the 'Edinburgh Review' of last year, in which I have had the satisfaction of reading the article on the cultivation of the Quina trees in the East Indies. Permit me to congratulate you on the successful result of this undertaking, which partly ensures the supply of so precious a drug for the future. It appears to me that the principal motive which induced the Government of India to commence this cultivation, after overcoming so many difficulties, was the fear that the Quina trees would be extirpated, in consequence of the disorder and waste that is allowed in the woods, where they are destroyed by the barbarous method of pulling up the roots. Fortunately this destructive method, which, without any doubt, would extirpate this precious plant in a few years, is only practised in the forests of Pitayo, where it is due to the immoderate desire of making money which has taken possession of the Indians, who own the greater part of the land. But in none of the other establishments for the collection of bark, in this country, has a similar scandal been repeated. On the contrary, beneficial rules are observed for the conservancy of the woods, more especially in those where I have a proprietary interest. The method consists in leaving a part of the trunk, about three feet in height, whence shoots may sprout, and in clearing away the surrounding trees to enable the rays of the sun to penetrate. By this means most of the trees that are cut down quickly shoot up, and the rays of the sun penetrating to the cleared ground, the seeds which fall from the tree germinate freely. Thus we have the satisfaction of seeing, in the forest worked on this principle, that the trunks of cut trees send out new shoots, and that the young plants grow vigorously. This result gives us full confidence that the good kinds of quinas, which exist in the country, will be permanently preserved. From the above considerations we may conclude that there need be no fear that humanity will see itself deprived of this precious medicine, seeing that as well in Bolivia as in Peru, Ecuador, and New Granada, the rule of cutting the bark according to a fixed plan is observed, and care is taken that the woods are replenished with increased numbers of plants of the best species, while some experiments have been made in forming plantations on land where the best conditions for their growth are found. From all this we hope that in a few years we may see magnificent results." There can be but one opinion as to the inexpediency of continuing the "barbarous practice" referred to, whatever comes of the question as to the comparative produce of the root-bark. *Howard in Pharmaceutical Journal.*

Polymorphism in the Papilionidæ.—Polymorphism, or dimorphism, differs from simple variability in this—that the offspring differ from the parents in a considerable degree, and in a manner more or less constant and regular; so that, of the offspring of a single pair, some will resemble their parents, while others will differ from them; but the differences will be tolerably fixed and definite, and intermediate varieties will never occur. A large and handsome Malayan butterfly, Papilio memnon, is a good case of dimorphism. The male is nearly uniform bluish black, with rounded hind wings, and never varies. One portion of the females resemble the males in shape, but are coloured brown or ashy, and with more or less white markings on the hind wings. Another set of females are found, however, which differ remarkably in the shape of the wings, the under ones being lengthened behind into a large spoon-shaped tail; and they have also white lines radiating from the base of the wing. Intermediates in form or colour between these two kinds of females never occur. These very distinct kinds of female insect do not produce young like themselves only; for, from eggs laid by one of them, both kinds of butterflies are produced, as well as the male, which is different from either. It is just as if a blue-eyed flaxen-haired white man had two wives, one a straight-haired red-skinned Indian squaw, the other a woolly-headed coal-black negress; and all the boys from either mother were real white boys just like their father, while all the girls were either pure negro or pure Indian; but the Indian mother should sometimes have negro daughters, and the negro mother Indian daughters. Such a thing seems absurd and contrary to nature; yet this is exactly what takes place in the butterfly called Papilio memnon—the males are always exactly like the male parent, while the female offspring of each mother are partly like and partly unlike herself. The butterfly called Papilio pammon, inhabiting all parts of India, is another case. It is nearly black, with a band of white spots along the margin of the fore wings and across the middle of the hind wings. Some of the females are exactly like the male, having only a small additional red spot behind. The most abundant females are, however, quite different, having a large white and brick-red patch on the hind wings and a row of red spots. This was long supposed to be a different species named Papilio polytes; but, from the eggs laid by it, Papilio pammon was produced as well as others resembling itself; and a further proof is that no male of P. polytes has ever yet been found, although the species is very common. There is, however, in India, yet another butterfly, named Papilio romulus, of which no male has ever been found, although female specimens exist in every collection; and, from a careful examination of this insect, the author was convinced that it was really a third form of the female of Papilio pammon. To parallel this case, we must suppose that our white man has a third wife, white like himself, and that the children of both white, black, and red wives, if boys, are all alike white; but, if girls, may be white, black, or red, and often without any regard to the colour of their mothers. Further east, in the Moluccas and New Guinea, there is a butterfly named Papilio ormenus, which has also three kinds of females, but in this case all are different from the male; just as if our supposed polygamist had an oblique-eyed yellow Chinese wife in addition to his black and red partners. The more exact parallel would be, however, to suppose an island inhabited only by white men, with black, red, and yellow women, and that, after many generations had passed away, the men all remained pure white, and the women of their respective colours and races equally pure. This would exactly represent the phenomena of polymorphism, which is the ordinary course of nature in several species of insects in various parts of the world, and will sufficiently show that it is quite a different thing from simple variation, with which it has hitherto been confounded. *Wallace in Nat. Hist. Review.*

Orchid Nomenclature.—A revolution, or at least a strange disturbance, threatens the Orchideous empire so peaceful until now. The brand of discord has been thrown among the high aristocracy of its very numerous population. A terrible reformer, innovator we should say, has just appeared, who puts in doubt a great part

of the nomenclature, established so justly, and so clearly, principally by Dr. Lindley, and which till now has been adopted generally, and almost without question by all who employ themselves with the charming plants of this family, be they botanists or amateurs. Already in his different works, within the last few years, an author, whom it is unnecessary to name, has placed here and there signs which indicate the beginning of this reformation, or rather this deep disturbance, of the grounds of which we cannot judge, for the facts are simply indicated without comment in the 6th Vol. of the "Annales" of Walpers, the indication of which work is sufficient to point out the hardy innovator. We sincerely wish this author would withdraw his advanced opinions. Here are some of these changes:—A great number of species of Cattleya (Aclandiæ, Skinneri, luteola, labiata (with Mossiæ, &c.,) pumila, citrina, Forbesii, Perrinii, &c.), according to the author, become Epidendrum! The specific names are nearly all preserved, and this is fortunate. Lælia (superbiens, purpurata, Brysiana, grandis, lobata, xanthina, rubescens, peduncularis, autumnalis, &c.,) become Bletia! Brasavola (cuspidata, Martiana, amazonica, angustata, tuberculata, Perrinii, cordata, nodosa, venosa, Digbyana, glauca, &c.); and the Schomburgkias (Lyonsii, marginata, crispa, rosea, undulata, tibicinis, &c.,) are also Bletia. Nor let us forget that the Barkerias (elegans, Lindleyana, melanocaulon, spectabilis) also become Epidendrum. We hope that such strange reforms will have the same fate as those of M. Klotzsch among the Vacciniaceæ and the Begoniaceæ. Nevertheless it does not become us to blame such revolutions, and we await a more competent authority than ours, in this case of Orchids, to raise its voice and pronounce on the validity of such opinions, which according to our ideas are almost indefensible from a scientific point of view. The union under one name of the two genera Cattleya and Lælia has indeed for a long time been called for, inasmuch as they differ only in the number of their pollen masses, the first having four, the second eight. Besides, it often happens in certain species that of these eight, four (two pairs) are more or less abortive. Let us conclude, in the case of Cattleya, with the admirable C. Leopoldii, which we may without exaggeration call the king of its genus; and in that of Lælia, with our magnificent L. Brysiana, which certainly has nothing in common, notwithstanding the opinion of M. Reichenbach, jun., with Lælia purpurata, another wonder of the genus: it will be seen from the foregoing list, that these two plants figure in the German orchidology as Bletias (do not laugh!); whilst the first, which we do not find mentioned, will perhaps be called an Epidendrum. *Lemaire, in L'Illustration Horticole.*

Gooseberry Caterpillar.—Take one ounce of hellebore powder and two ounces of powdered alum, dilute these first in a small quantity of water, so as to get them thoroughly mixed, then add a gallon of water. Apply the mixture to the bushes affected, either by wetting them with a syringe or waterpot, over the upper surface of the leaves. The caterpillar will drop soon after feeding upon the leaves. I have made use of the same proportion for a number of years, and I have always found it most effectual. Hellebore powder will destroy these pests by dusting them dry, but it cannot in this way be applied so regularly over the leaves as when diluted. The principal use of alum is to cause it to adhere to the leaves. The price of Hellebore powder is 1*s.* 6*d.* per lb., and alum 4*d.* One gallon would do from 10 to 12 full-sized bushes; it is therefore by no means an expensive affair. It is, however, very requisite to keep a vigilant eye over the bushes in watching their first attacks, and applying the remedy as soon as the insects are observed. If only applied to those bushes which are seen to be attacked, the first or second good shower of rain makes the leaves as clean as if nothing had been done to them. *J. Webster, in Florist and Pomologist.*

Calendar of Operations.

(For the ensuing week.)

At p. 656 it is stated in reference to Roses, that now is a good time to commence budding; the objects contemplated by budding Roses should however be well understood before the work is begun. If it is intended only to make the performance subservient to the production of standards, then we would suggest the inquiry, whether in the locality indicated standards are desirable or not. A blind preference for a Rose tree with a tall stem and a heavy head, has been very prevalent of late years, and has often been indulged without regard to good taste or appropriateness. Now, many begin to be of opinion, that in itself, a standard Rose is not so elegant as a common well-trained bush, or one grown in the pillar fashion. A leafless stem, requiring a strong stake for its support, as all standard Roses do, has certainly little beauty or ornament about it; while a Rose growing on its own roots, and trained pyramidally to the height of 5 or 6 feet, is a magnificent object when in bloom. What then is the end or purpose to be answered by standard Roses? The answer is, they are only useful or desirable when a display is required above the heads of more lowly plants, and in such cases they may be introduced with fine effect. An avenue of standard Roses may be made a fine object, when there is a good undergrowth of smaller productions; or single standards may be introduced with advantage when space is limited, since they allow of flowers being grown underneath them. But even where standards are clearly desirable, it should be remembered that they ought to be placed in a finished state in the spots they are intended to occupy. Budding is the work of a nursery. Those who bud merely for amusement, may however find abundant opportunity of indulging in their favourite pursuit, besides that of forming standards.

FLOWER GARDEN AND PLANT HOUSES.

The hardier sorts of stove plants will form the most suitable decorations for conservatories during the next two months. Go over twiners frequently, and regulate their growth before the shoots get entangled; but avoid keeping them tied too closely, for they are never seen to advantage unless they are allowed to hang from the roof in a natural and graceful manner. Sickly specimens must be frequently examined for insects, and means used to get rid of them as soon as they are perceived, otherwise they will spread to adjoining plants, and be more difficult to eradicate than if taken in time. Young stock in stoves will now be growing rapidly, and must be afforded sufficient space to allow perfect development of foliage and the formation of compact handsome specimens. The atmosphere of warm plant houses can hardly be kept too moist, and the plants should be sprinkled overhead morning and evening, and every available surface kept constantly damp. Out of doors attend to staking such of the herbaceous plants as require it before they get blown about and injured, and do not huddle the stems together, as is too frequently done. Early flowering bulbs will now or soon be ready for taking up; they should not be left in the ground after the decay of the foliage.

CARNATIONS AND PICOTEES.—The most forward may now be layered; they should be put down in light soil, consisting principally of leaf-mould. Those shoots which apparently will not get sufficiently strong, may be taken off, and treated in the same way as Pink pipings. Take every opportunity of fertilising blooms for seed; do not cross a Picotee with a Carnation, and prefer those which have broad, stout, well formed, and smooth petals. The risk is considerable, even under these circumstances; but the gratification arising from the production of one first-rate flower repays all the trouble.

CHIRONIA FLORIBUNDA.—This is a plant well deserving a place in every collection; possessing, as it does, rich pink flowers of considerable size and beauty, and a good foliage, it is a matter of surprise that we do not oftener see it than we do. It is a plant of easy cultivation, requiring only to be potted in a mixture of turfy loam and peat, and to be placed where it has plenty of light and room.

CHRYSANTHEMUMS.—As was stated last week, these should now receive their final shift. Let the compost to be used consist of two-thirds turfy loam and one-third well-decayed manure, to which should be added a little sand or grit. Stake and replace the plants where they were set before, and take care that they at no time suffer from want of water. They may also be frequently watered with liquid manure.

DAHLIAS.—Remove all misshapen blooms, and place neat stakes round the main stem, to which the lateral shoots may be attached, otherwise they are apt to be twisted off by rough winds.

PINKS.—Occasionally examine pipings under hand-glasses; remove any which have contracted mouldiness, and carefully extract all weeds from amongst them.

FORCING GARDEN.

FIGS.—Trees that have been kept dry while ripening the first crop, and are now cleared, should be well watered at the root, and if there is any appearance of red spider, the leaves should be thoroughly washed with the engine. Give manure-water to trees showing a heavy second crop, and keep the atmosphere moist by frequently sprinkling the passages, borders, &c. Keep the shoots thin and regularly tied in so as to avoid confusion, and expose all parts of the tree equally to light. Where the fruit is ripening attend to previous directions, and keep the atmosphere and borders as dry as can conveniently be done. Assist trees in pots by giving them a liberal supply of manure water.

PINES.—So far this has been a favourable season for securing well-ripened high-flavoured fruit; such varieties, however, as are apt to spoil at the bottom before the upper pips are coloured should be kept as dry as possible immediately that they show the slightest signs of colouring, keeping the atmosphere also as dry as can be done without injury to the rest of the stock; slight fires may be used on cloudy days, giving a little air to dispel damp, and to keep the atmosphere in motion. Look well to securing a supply of fruit for late autumn and early winter use, which is sometimes a difficult matter. Prepare the plants for showing by keeping them dry at the root for a fortnight or so, after they appear to have completed their growth, and expose them fully to the sun, in order to give them a rather severe check. Those expected to show fruit in October and November should be encouraged to make free growth for the present. Be very careful in supplying young stock with water, as any neglect in this respect will probably result in its showing fruit prematurely; and attend to potting suckers in succession as regularly as they can be obtained.

VINES.—Grapes intended to hang through the winter should be thinned very freely, and, if necessary, they should be gone over a second time, leaving them so that the berries, when fully swelled, will scarcely touch each other. Only a moderate crop should be left on the Vines; for, to ensure success in keeping Grapes fresh and in good condition till next March, the Vines must be in first-rate health. Keep the atmosphere of houses where the fruit is colouring in active circulation, leaving a little air on at night, to prevent damp. If red spider appears inclined to be troublesome, wash the pipes, &c., with a mixture of soot and lime, and if the colour is objectionable add a little soot.

HARDY FRUIT AND KITCHEN GARDEN.

Shorten breast wood on Pears on walls and espaliers, and lay in young shoots of Peaches and Nectarines. Gather orchard fruit as it becomes ripe. Strawberry runners for forcing next season should be potted and placed in a close shady pit until the plants get established.

ASPARAGUS.—This may still be watered freely with liquid manure. On dry, friable soils salt may be used with advantage for this crop; but not on strong clays, as it keeps the ground wet in winter, and rots the roots.

BROCCOLI.—Let planting of this be finished now, as soon as possible.

CELERY.—Plant out for a main crop, and earth up early plantations as they require it, selecting a dry day for the operation.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON,

For the Week ending July 13, 1864, as observed at the Horticultural Garden.

July.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs. 7	3	30.122	30.082	74	35	54.5	62	60	N.W.	.09
Friday 8	4	30.017	30.1·6	65	41	53.0	61	60	N.E.	.00
Satur 9	5	30.091	29.988	68	50	59.0	61½	60	N.E.	.00
Sunday 10	6	30.033	30.025	70	49	59.5	61½	60	S.E.	.00
Mon. 11	7	30.047	30.046	81	49	65.0	62	61½	E.	.00
Tues. 12	8	30.096	30.039	77	49	63.0	63	60½	E.	.00
Wed. 13	9	30.046	30.016	76	42	59.0	63	60½	E.	.09
Average.		30.064	30.043	73.0	45.0	59.0	62.0	60.2		.10

July 7—Densely overcast; cloudy; fine; cold at night.
— 8—Fine; dry air; cloudy, with brisk N.E. wind; overcast at night.
— 9—Light clouds, and fine throughout.
— 10—Dry haze; fine throughout.
— 11—Fine; very fine, dry air; fine at night.
— 12—Uniformly overcast; very fine.
— 13—Densely clouded; very fine; overcast at night.
Mean temperature of the week 3½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending July 23, 1864

July.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 17 .	75 9	51.5	63.7	13	0.56 in.	2	—	2	2	4	17	8	3
Mon. 18..	74.6	50.4	62.5	18	1 22	—	—	1	1	5	19	6	5
Tues. 19..	72.8	50.7	61.8	21	0.60	2	1	1	1	7	15	8	2
Wed. 20..	72.5	50.6	61.6	22	0.72	1	1	3	—	1	19	11	2
Thurs. 21..	73.2	50.6	61.9	17	0.54	2	1	3	1	5	13	10	3
Friday 22..	73.1	51.5	62.3	22	1.37	3	3	2	1	3	14	10	2
Satur. 23..	73.8	52.1	63.0	19	0.70	1	6	5	2	3	11	6	4

The highest temperature during the above period occurred on the 17th, 1834—therm. 94 deg.; and the lowest on the 18th, 1863—therm. 27 deg.

Notices to Correspondents.

BOOKS: *S K.* Probably "Babington's Manual of British Botany" will suit you, if you understand how to use such books. If not, you had better first master "Oliver's Lessons in Elementary Botany," which are based upon the late Professor Henslow's schedule system of teaching. See also a Leading Article published to-day.—*A R H.* M'Intosh's "Orchard and Fruit Garden" will most likely supply what you require. It is not expensive.

CHISWICK GARDEN: *W M.* Visitors are admitted by printed orders obtainable from Fellows. The garden is open on every day except Sunday, from 9 in the morning till 6 in the evening.

INSECTS: *Alpha.* Pour a gallon of spirits of tar gradually on a barrow of sand, mix them well together, and sow over the surface of the field intended for Carrots. The above quantity will suffice for 60 or 70 square yards.—*J S., Kew.* The Silver Firs are infested with one of the minute woolly-bodied species of Coccidæ (Chermes coccineus?). The remedies against Aphides and scale insects should be employed. *W*

LILIUM AURATUM: *Jamie.* The original plants were one-flowered, as stated in the account you refer to; but now that the plants have acquired something like their natural strength, they are found to bear eight or ten flowers on a stem. So much the better.

NAMES OF FRUIT: *G C B.* Your Strawberry is apparently Sir Charles Napier.

NAMES OF PLANTS: *N N.* 1, Dictamnus Fraxinella; 2, Centaurea depressa; 3, Agrostemma Githago; 4, Malope trifida. *J H.* Polypodium alpestre flexile, a very well marked and handsome Scottish Fern, which some consider to be a distinct species.—*M W.* 1, Galium verum; 2, Galium Mollugo: 3, Geum rivale.—*Francis T.* Fraxinus integrifolia, a monster of the common Ash.—*B W.* Some Brasavola, and probably B. grandiflora, as far as the mere flower will enable us to judge.

PEAS: *W H., Maidstone.* The variety you have sent us is sold in Covent Garden Market under the name of Prizetaker.

PLANT TUBS: *Subscriber.* There is no objection to using slate tubs for large Camellias, except perhaps that they are heavier than wood, and make the plants all the more cumbersome to move about. We doubt if there has been anything yet contrived better adapted for planting, or better looking than round Oak tubs, a little narrowed downwards. Certainly there was nothing of any particular merit brought out when the Royal Horticultural Society offered a prize for the best tub some two or three years ago. We cannot recommend makers; but any horticultural builder would no doubt supply you; or you will occasionally find plant-tubs advertised.

VERBENA: *G C, Bath.* Your seedling is a very beautiful one, if constant, as from the trusses sent it appears to be. It is the counterpart of striata perfecta, only marked with carmine instead of lilac, and is the best red-striped Verbena we have seen. You should send specimens (three trusses) to the Floral Committee, which meets at South Kensington next Tuesday.

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The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
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Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
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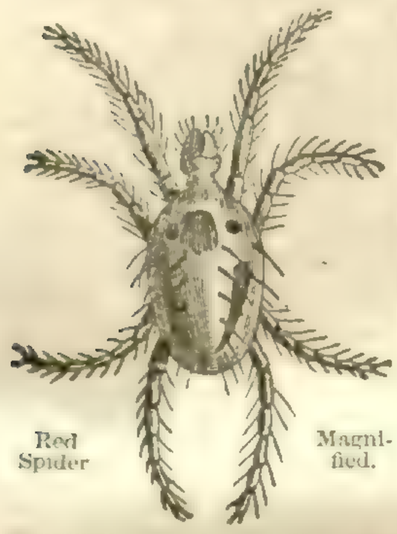

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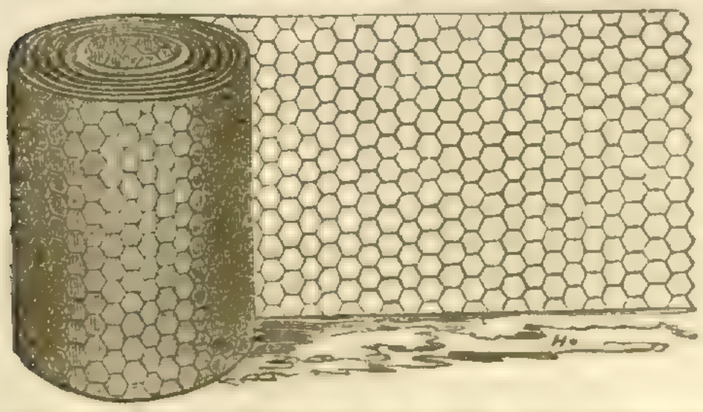

BARNARD, BISHOP, & BARNARDS beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

	Gauge.	Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide	No. 19 ..	4¼d. per yd.	3¾d. per yd.
2-inch " " " .. "	18 ..	5 "	4 "
2-inch " " " .. "	17 ..	6¼ "	5 "
2-inch " " " .. "	16 ..	8 "	6½ "
1½-inch " " " .. "	19 ..	4¾ "	4 "
1½-inch " " " .. "	18 ..	6 "	4½ "
1½-inch " " " .. "	17 ..	7 "	5½ "
1½-inch " " " .. "	16 ..	9 "	7 "

All the above kinds can be made any width (under 6 feet) at proportionate prices.
Strong GALVANISED POULTRY NETTING, 7½d. per yard, 3 feet wide. GALVANISED SPARROW-PROOF NETTING for Pheasantries, 11d. per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.
Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1s. per yard.
The same with Galvanised Wire Rope, 1s. 2d. per yard.
Illustrated Catalogues, with prices of every variety of Wire Fencing and Wire Netting, forwarded free on application.
*** Wire Fencing and Netting delivered Carriage Free at all the principal Railway Stations.

HOWARDS' CHAMPION PLOUGHS, HOWARDS' STEAM PLOUGHS and CULTIVATORS, HOWARDS' HARROWS, HOWARDS' HORSE RAKES, HOWARDS' HAYMAKERS, &c., will be exhibited at the Newcastle Meeting of the Royal Agricultural Society of England, July, 1864.
Full particulars may be had free on application to JAMES & FREDERICK HOWARD, Britannia Iron Works, Bedford.
London Office—4, Cheapside, E.C., three Doors from St. Paul's.

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS, Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.
Stamp End Works, Lincoln, and 78, Lombard Street, London; also at LOWENGASSE, No. 44, Landstrasse, Vienna; and Gegenüber dem Bahnhof, Pesth.
Descriptive, Illustrated, and Priced Catalogues, Free per Post.
Special Drawings when required.
[*The best Steam Threshing Machinery made.*]

Oil Paint no longer necessary.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.
Sold in casks of about 30 gallons each, at 1s. 6d. per gallon, at the Manufactory, or 1s. 8d. per gallon paid to any Station in the kingdom.
Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street West, E.C., from whom only it can be obtained

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

THE WEST of ENGLAND LAND DRAINAGE and INCLOSURE COMPANY.
ESTABLISHED IN THE YEAR 1844, AND INCORPORATED BY SPECIAL ACT OF PARLIAMENT, 11 & 12 VICT., C. CXLII.
Chairman—The Right Hon. the Earl of DEVON, Powderham Castle.
Deputy-Chairman—WILLIAM PORTER, Esq., Hembury Fort, Honiton.
TERMS MUTUALLY ADVANTAGEOUS TO LANDLORDS AND TENANTS.
Lands Drained and improved without any expense whatever to the Owners, a small increased Rent paid by the Tenants being sufficient to meet the only payment which Landlords are required to make, viz., merely the interest of from four to five per cent. on the loan, this Company's Act not requiring them to pay off the principal; all expenses may be a permanent charge on the property, or made redeemable at any time, or liquidated over any term of years.
Tenants for Life and Mortgagors can likewise Drain and Improve their Estates without any expense to themselves.
The Works are undertaken by the Company, who keep in constant employ a very extensive and experienced staff of Engineers, Surveyors, and Workmen; or Proprietors may avail themselves of the powers of the Act only, and get the Works executed under their own superintendence, or by Agents appointed by themselves.
Outfalls through adjoining lands are obtainable under the Company's Act.
Works are also executed by the Company for parties advancing their own Capital or not wishing to borrow the money.
FREDERICK BRODIE, Secretary, Castle Street, Exeter.
Offices: Castle Street, Exeter; 30, Parliament Street, London.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.
The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

THE GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY,
Offices: 52, Parliament Street, S.W.
Under this Company's Act tenants for life, trustees, mortgagees, guardians, committees of incompetent persons, beneficial lessees, corporations (ecclesiastical or municipal), incumbents, charitable trustees, &c., may effect the following Land Improvements, and charge the outlay and expenses on the estate improved, by way of rentcharge, to be paid by half-yearly instalments, viz.:—
1. All works of Drainage, Irrigation, Warping, and Embankment.
2. The Erection of Farmhouses, Cottages for Agricultural Labourers, and all kinds of Farm Buildings.
3. The Construction of Roads.
4. The Grubbing and Clearing of Old Woodlands, Enclosing, Fencing, and Reclaiming Land.

The owners of estates, not entailed, who may be desirous to avoid the expense or inconvenience of a legal mortgage, may also charge their Estates with an outlay in improvements under the simple and inexpensive process of the Company's Act.
The term of years for the rentcharge is fixed by the landowner, so as to adapt the amount of annual payment to the circumstances of the tenants, the term for building works being limited to 31 years.
No investigation of title being required, and the charge not being affected by incumbrances, no legal expenses are incurred.
The arrangements for effecting improvements are threefold:—
No. 1. The works may be designed and executed entirely by the landowner's agent, and the Company employed only to supply the loan and conduct the matter through all the official forms for charging the outlay on the estate.
No. 2. The Company will supply plans, specifications, and estimates for any improvements to be executed by the landowner's agent as under No. 1. In each of these cases the landowner will be solely under the control of the Enclosure Commissioners.
No. 3. The Company will undertake the entire responsibility of the improvements, prepare the plans, execute the works, and finally charge on the estate the actual amount expended, with their commission thereon, approved by the Enclosure Commissioners.
Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.
Works of Drainage and other improvements are also executed on commission for landowners, who merely require the skill and experience of the Company's officers and a staff in constant practice.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Office of the Company, 52, Parliament Street, S.W.

ROYAL AGRICULTURAL COLLEGE CLUB.
The ANNUAL DINNER of this Club will be held at the Queen's Head Hotel, Newcastle-upon-Tyne, on WEDNESDAY (July 20) during the week of the Meeting of the Royal Agricultural Society.
Tickets to be had at the Bar of the Hotel up to Tuesday evening, July 19. Members are allowed to introduce friends.
JACOB WILSON, Hon. Sec. pro tem.
Manor House, Woodhorn, Morpeth.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.
MEETING at NEWCASTLE, 1864.
The LOCAL EXECUTIVE COMMITTEE have arranged for a Registry of Lodgings and other Accommodation for Visitors to Newcastle during the Show, to be kept by Messrs. C. BROUGH, Academy of Arts, Blackett Street, and G. MURAS, 4, Northumberland Street, to whom applications must be made.
R. DODDS,
E. I. J. BROWELL,
WALTER JOHNSON,
JACOB WILSON,
} Hon. Local Secs.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.—GREAT SHOW of HORSES, CATTLE, SHEEP, PIGS, and AGRICULTURAL IMPLEMENTS, at NEWCASTLE-UPON-TYNE, JULY, 1864.

	ADMISSION.		
MONDAY, July 18 ..	10s. 0d.	WEDNESDAY, July 20	2s. 6d.
TUESDAY, July 19 ..	2s. 6d.	THURSDAY, July 21 ..	1s. 0d.
FRIDAY, July 22	1s.		

For further particulars see Programmes, which may be had on application to H. HALL DARE, Secretary.
12, Hanover Square, London, W.

The Agricultural Gazette.

SATURDAY, JULY 16, 1864.

MEETINGS FOR THE ENSUING WEEK.

Agricultural Meeting at Newcastle. Free to Members of the Royal Agricultural Society of England.

MONDAY,	July	18	Open judging in the Cattle Yards. Admission 10s.
TUESDAY,	—	19	Admission 2s. 6d.
WEDNESDAY,	—	20	
THURSDAY,	—	21	Admission 1s.
FRIDAY,	—	22	

AFTER a quarter of a century of travelling to and fro, having visited every coast and almost every county of the island, the Royal Agricultural Society of England revisits Newcastle. During the 16 years which have elapsed since its former meeting there, our agriculture has been wonderfully altered, intensified, improved. This has been done perhaps rather by the extension of what was already known and practised in 1846, than by the influence of anything altogether new; but many of our now common practices had then been only just adopted, and others have been very much improved, so that the great increase of produce which English farms now on the average yield, may be fairly attributed to agencies which have grown to their present efficiency during the period which has since then elapsed.

No doubt the Society has not merely reflected, it has stimulated the various changes which farm practice has during this period witnessed. The annual exhibitions which it has carried to one county after another of what all England can and does accomplish in the way of improved agricultural live stock and improved agricultural machinery have both urged that rivalry among exhibitors to which these improvements are due and made them known throughout the country as soon as they have been accomplished. No single agency, however, that can be named stands in anything like the same rank among the causes of our agricultural progress, with the use of guano and of artificial manures which has grown up since 1846, without the help of the Agricultural Society. Guano, bonedust, coprolites—the phosphoric acid of all these and the ammonia of our coal beds, still outrageously wasted—these are the real causes of our greater produce now than then.

Next to these in rank stand the various improvements that have been effected in the tillage of the land. In 1846, at the Newcastle meeting, Mr. PARKES delivered a lecture on land drainage which included pretty nearly all that is known on the subject even now. But since then he and many others, no longer writing and talking, have been actively engaged in carrying their ideas into practice; and the first step to thorough tillage—placing the subsoil and the soil in their best relations to the water which falls upon them or rises through them—has during the past 16 years been taken with immense advantage over large tracts of country. Manures and drains are at once the raw material of our manufacture, and the greatest improvement which has been effected in our machinery; and it is to these, but little aided by the operations of the Society, that the increase of our manufacture has been chiefly due.

Next to these come the further improvements which have been made in the tillage of the soil; and it is to machinery for this purpose that the Society this year directs by its prize list the attention of its exhibitors. We have accordingly a great competition in steam ploughs and cultivators, a very great competition in ploughs, and a great show of cultivators, harrows, and other tillage implements.

The week of the Newcastle meeting commenced

on Wednesday last, in large and well-adapted fields near the Benton Quarry station, about five miles north of Newcastle. Here are collected for trial:—(1) FOWLER'S 12-horse-power engine and anchor, working a four-furrow plough; (2) SAVORY'S 12-horse-power engine, carrying its double windlass in drums around its boiler, and working any tool from any anchorage; (3) HOWARD'S 10-horse-power engine and double windlass, working either plough or cultivator; (4) FOWLER'S two 7-horse-power engines, one at either end of the furrow, uniting their effort on the four-furrow plough travelling to and fro between them; (5) SAVORY'S two 10-horse power engines, one at each end of the furrow, carrying the rope wound on drums surrounding the boilers and drawing any tool—FOWLER'S, HOWARD'S, or STEEVENS'—that may be desired, to and fro; (6) COLEMAN'S 10-horse-power engine, with two cultivators, each drawn to and fro alternately, and each accomplishing one half in length of the furrow between the engine and the anchor; and (7) COLLINSON HALL'S pair of extremely neat, though probably too light, 7-horse-power engines, drawing cultivator or plough to and fro by means of his linked iron draught rod. Besides these, 17 swing ploughs, 30 wheel ploughs, 5 subsoil ploughs, 3 paring ploughs, and 5 diggers, also seek the judges' verdict. Messrs. C. S. READ, H. B. CALDWELL, Prof. J. COLEMAN, F. SHERBURN, Jun., and D. K. CLARK, C.E., have undertaken the adjudication of the steam cultivation prizes; and Messrs. T. P. DOD, E. WORTLEY, and T. P. OUTHWAITE, award the premiums offered for horse ploughs. Their task is an extremely difficult one, but by careful trials over sufficient extent of land and gradual weeding of the inferior competitors, the problem at length becomes narrowed and more manageable. The issue will however not be known until next week.

In the meantime it may be stated as already obvious enough, that the trials of horse ploughs and those of steam cultivators do, from the very first, proceed upon altogether different principles. Probably there never was more beautifully executed work than some of the ploughing done on Wednesday and Thursday. Each furrow slice stands square, or with a sharper crest, unbroken from end to end, each precisely like its neighbour, the surface chiselled or machine-planed into furrows of perfect uniformity and symmetry.

This is on a hard dry Clover stubble, where the plough needs a firm hand to hold it to its work. But how does Mr. SAVIDGE, of Sarsden, a successful cultivator, report his operations with the steam plough this week upon his farm? He says:—"We are now *bursting up* our Clovers in preparation for Wheat-sowing." It is no longer painted polished surfaces or clean cut slices that the tillage farmer wants; and we doubt very much if one pennyworth is ever added to the produce of the country by these repeated competitions amongst ploughs, in which the last touch to the perfection of a polished and a well cut surface, a thing utterly worthless agriculturally, becomes the turning point on which the award of the prize is made to hinge.

The competition among steam ploughs is much more satisfactory if not more interesting; and the use of two engines, both actuating the tool going to and fro between them, which has at length been successfully exhibited, is quite the leading feature of the trial so far as it has gone as yet. Of this a full report will be made next week. It must suffice at present to say that of the two principal trials, when (1) FOWLER'S large engine, and (2) his two smaller engines, drawing his 4-furrow plough, and (3) SAVORY'S large double-drum engine drawing HOWARD'S plough, and (4) his two single-drum engines working STEEVENS' plough, were engaged — the work done by HOWARD'S plough (No. 3), thoroughly good, was also the neatest and best-looking; that (No. 4) done by STEEVENS' plough over very hard and track-marked ground, deeply and thoroughly moved, was extremely rough. FOWLER'S work, as deep as any, and presenting a perfectly uniform character, was broken up a good deal more roughly than No. 3, and with an expenditure, so we are informed, of very considerably less coal in the case of No. 2, notwithstanding that two engines were engaged.

As we write, another competition is going on, in which FOWLER'S 3-furrow plough, worked by one of his smaller engines, driven much beyond its nominal power, is doing wonderfully fine and thorough work in competition with HOWARD'S plough driven by CLAYDON'S 10-horse power engine. HOWARD'S plough in this competition is turning over a more solid and well made furrow slice, in which the seams of green however are not so perfectly buried, and it is more easily balked on crossing a hard track-way across the land. FOWLER'S work presents a more broken surface, the green is well buried, and the work looks as if it were already a scarifying ahead of HOWARD'S on the way to tilth.

On these trials of ploughs and cultivators, and on the merits of the live stock to be exhibited on Monday next in the yard on Town Moor, a report will be made next week.

THERE is a district of low-lying river-side land between Tarvin and Wervyn, in Cheshire, which is a very striking illustration of the mischief done to land by water-mills. Within a few miles nearly a dozen mills are planted along its course, making the full use of a sluggish stream, whose bed is thus utterly valueless for that drainage of the valley for which Nature had provided it.

The water is above the level of the land almost everywhere along its course, and in the few exceptions, the fall, if any, is not more than one of inches. Here then is a case where the new system of river-side drainage referred to in another column ought to be put in operation. Drainage 4 feet deep, communicating with an outlet pipe, though it delivers its flow 3 feet below the surface of the water, would be here efficient, if the experience of Mr. BOWICK and the reasoning of Mr. ROBIE are to be accepted as generally true. The latter gentleman professes to find the explanation which the former needs in the existence of springs in those river-side meadows which have thus been drained. These springs find their easiest outlet through the drains thus opened, and the mischief done by them is thus removed. There remains however the drainage of the ordinary rainfall through the land to be accomplished. The mischief done to it in a case where the subsoil is full up to the level of the river cannot be thus removed; or cannot be more effectually thus removed than it would be by surface furrowing as deep as the circumstances would permit.

It is not thus, accordingly, that the river lands at Wervyn have in places been successfully laid dry. A real 4-feet fall has been obtained by taking a main up from low enough upon the river course past the mills to certain meadows a mile or two above them.

These meadows are isolated by embankment both from the mill lead, and from the natural water-course, and through their midst a main drain 4 feet deep is carried into which parallel drains gradually ebbing from 3 feet 6 at their lower end to about 30 inches at the upper carry the drainage of the land.

These meadows are peat covered with from 6 to 12 inches of alluvial soil. The drainage is perfectly efficient, notwithstanding that on one side the water is within a foot of the land, and on the other side the water is a foot or two above the land. There is a true drainage through the outfall provided by the main which passes the mills upon the course of the stream. And the high level of the water becomes actually an advantage instead of a great injury of the land. By means of it the drainage pipes are used in droughts to flood the subsoil. After dry weather the whole of the peaty subsoil is so far dry that pits sunk between the drains will hold no water above the level of the adjacent drainage channels. A plug is then put in the main at the lowest outfall of any particular field, and water being let in at the upper end from the natural water-course, in a very few hours the water is found to rise in these pits to very nearly the level of the river all through the meadow. When this is thus accomplished the supply is cut off, the plug is taken out, and the drainage proceeds as before. Two good purposes are thus accomplished, the Grass is fed, and freshened, and the fluffy ferruginous deposit in the drains, which seems to be inseparable from peat-land drainage, is washed out. Nearly a cart-load of this muddy deposit, which would soon choke the pipes, has been taken at a time in this way from the outfall of only a few acres of land by this occasional flushing of the drain pipes.

This drainage*, whether accompanied or not by floodings of the subsoil in this way during drought, has greatly improved the Wervyn meadows. And where bone-dust has been also applied, a very great improvement has been effected.

We shall hereafter give further information on the immense improvement effected in Cheshire pastures by the use of bones. Boiled bones, ground small, applied at the rate of from 8 to 20 cwt. per acre, never fail to produce a great improvement. The land immediately bears a great produce of White Clover among its Grasses: and everything—Grass, Clover, even Thistles, Rushes, and every kind of weed is eaten down bare by the dairy cattle.

The effect of bones on these river-side meadows is seen not only in this improvement of the quality and quantity of the desired produce, but also wherever the land is occasionally grazed by the gradual disappearance of weeds. Bone sawings in smaller quantity and PROCTOR'S Grass-land manure, essentially we presume a superphosphate, also effect a very great improvement; but the chief and lasting benefit seems to be derived, especially in the case of poor clay land pastures, from a heavy dressing of boiled bones.

The great exception to the general rule of the stationary Grass-land agriculture of this country is to be found in Cheshire, where drainage and bone-dust have together made as great a difference in the dairy produce of the county as artificial manures and cattle feeding and land drainage have elsewhere made in the corn produce of many of our arable districts.

On three farms near Wervyn, where in 1853 64 cows were milked, there are now at least double the number. And on one of these, keeping 14 cows with difficulty, there are now 30 cows in milk, 18 young heifers to be brought to the pail next spring, six farm horses, and a lot of pigs.

This farm is 169 acres in extent, of which 50 acres are arable. The rent is now nearly double what it was 12 years ago, owing to per-centages on landlord's outlay during the interval; and as labourer and tenant also benefit, all classes may be congratulated on the advantages which in this case energetic agriculture has conferred.

THERE is many a farm, and especially many a dairy farm, whose stock cannot be displaced without considerable loss, on which the failure of the green crop and the lightness of the hay crop seem certain during the ensuing winter to inflict considerable injury. We know one milking nearly 100 cows, where about one-third of the land is arable, and where the dependance has more and more been placed upon Swedes and Mangel Wurzel and straw during winter, and the dairy stock has been increased to the utmost, capable of being kept thus, and on a minimum extent of hay during winter, in order that the profits of summer grazing may be realised to the utmost. The Mangel Wurzel crop is there, as very generally, a failure; the Swedes are also for the most part a failure; the hay crop is there, as everywhere, extremely light. What is the tenant to do? He has resown his Mangel land and Swedes with Aberdeenshire Yellow Bullock Turnip. He will save every bit of straw for litter, and pass it through the chaff-cutter, and the roots through the Turnip pulper, in order to the utmost economy in the use of both as food. He will sow his stubbles with Turnips and Rape and Vetches, so as to have late autumn and early spring keep, in order on both sides to diminish the winter period when he is to be dependent on his diminished supplies. And if needs be, he can, when driven to it, sell at the best market he can find some of the least valuable of his dairy stock.

It is probable that he and others thus situated might do more than all this. The Cabbage plant ought to be more generally cultivated than it is, and especially on dairy farms. There are hardy sorts of the Drumhead Cabbage which profess to stand a certain degree of frost. And the Early York and other sorts of Spring Cabbage will in mild winters come very early into use in April. We should recommend in such a case as has been just described, planting out this Drumhead Cabbage early next month over any well tilled well dunged land. The crop will be ready by the end of Autumn, and it will be then at its hardiest to stand the frost, and by its means hay and hardier winter food may be saved in December and January, and perhaps all through the season. A large plot of Early York Cabbage also should be planted out in September, on any well done and sheltered spot, half field half garden, and will be useful for the cows in milk before the Grass is ready; and it too will thus help to economise the more valuable winter keep set apart for the cows when they first come into milk. The Cabbage plant seems to us now, as we come into August, to be the most likely means we have of supplying the deficiency of winter keep which is now obviously threatening us. And we hope that there is abundant supply in seed beds of true Drumheads throughout the country, for the demand which is certain to arise.

* Executed, we believe, by Mr. JOHN PALIN, land agent, of Chester.

APPEARANCE OF THE CROPS.

CAMBRIDGESHIRE: *Chatteris, July* 4.—Wheat: generally a good crop of straw, and a good ear. A few of the heaviest fields a little laid. With suitable weather there is the prospect of a good average crop, and it might easily prove more than this. But our country is so fickle that until we get the crop harvested we fear to express any decided opinion. Last year our crop was not so heavy as was reported in other districts; the present appearance this year is decidedly superior to last. Oats: this crop is unfavourably reported of. On the gravelly fen lands the Poland Oats were put in with manure, and the water drill are decidedly a good crop. Other varieties of Oats on other soils are much complained of. They are short in the straw, and only look like producing a light crop. Barley: the Barleys were injured by the heavy rains in May and the subsequent cold frosty nights. They have much improved, and will probably be an average crop, but not equal to last year. Beans: the crop of straw is good, but we hear complaints in some localities of the blossom not setting well, and in some instances where set, of the pods not filling well. What we have been able to examine personally are not suffering in this respect, but are fairly podded, and appear like yielding an average crop. Peas: as far as we have seen this crop promises well; and should it continue free from attacks of fly will afford a good yield. Mangels: growing well, and in most instances a good plant. Turnips: not grown. Coleseed: the early sown injured by fly; the later sown a very good and healthy plant. Potatos: on inferior Potato land a poor crop; on better soils more promising. Hay: on old pasture lands a heavy crop; seeds only a poor crop. *Alfred S. Ruston.*

DORSETSHIRE: *Bradford Abbas, Sherborne.*—Never before do I remember such a long continuance of dry weather; for the last nine weeks we have had scarcely anything of rain better than an occasional passing shower, commencing with great promise, but ending in complete disappointment and a hot sunshine. Still our light lands have proved more holding than stiffer soils, as much of the lias of the county of Somerset is cracked so much as to let in a hot sun and a drying atmosphere to the roots of plants already too dry to grow. The brashes and sands of the Dorset oolites present good promise of Wheat and Barley, the ears however, of both will be short, and I fear they are not free from insects, among which the aphis has been particularly busy. Beans and Peas flowered remarkably well, but when not very early sown will be a complete failure; the haulm of the Pea has dried up at the bottom, just as the plants came into flower, and coincident with this the aphis has sucked the verdure out of the flower and fruit, so that perfecting a pod has been to a neighbour so utterly impossible as to induce him to plough the whole in preparatory to sowing Turnips. Beans have in some places been attacked by the black dolphin, Aphis fabæ. My crop has been free from this pest, but can scarcely form a pod for lack of moisture. In roots the Mangels have come up very irregularly, but when stimulated into quick germination by the application of superphosphate, they still show a vigorous leaf; mine too are at present free from the leaf-mining grub, Anthomyia betæ, though both these and the Swedes are not free from an attack of the larvæ of some species of Noctua, which I am sorry to say is gradually but surely becoming a great pest. My Swedes want rain, but where I used 3 cwt. to the acre of superphosphate (Proctor's special), sown broadcast and well mixed with the soil, I have found such decided advantage over drilling with the seed as to induce me in future to act even more than I have yet done on Prof. Voelcker's dictum—to incorporate all manures with the soil. Our hay-making is well done, but the yield though good is below an average, and lattermath for miles is more bare and brown than in midwinter. When will the rain come is an anxious question. Harvest will be early, but if the prophets are to be right who tell us we shall have to suffer from too much wet, then the prospects of the farmer for 1864 will not be so cheering as they were two months ago. Flax, which is here grown in some quantity, promises a good crop of fibre, but much of the seed will fail to ripen. *J. B.*

NORTHAMPTONSHIRE.—Owing to the very small quantity of rain we have had in this district during the spring and summer, the corn on the light porous soils is very deficient. The loss of plant in the Wheat crop on land of that kind was very great, and many pieces have been ploughed up, and Barley has been substituted. Much of that remaining is very thin, very full of Poppies and other weeds, and cannot fail to yield badly. The Barley crop is equally unpromising, being very short in both straw and ear; and, owing to the want of moisture, it is ripening prematurely in some parts of the fields. The severe frosts checked the corn but not the weeds, and where Clover seeds have been sown, and hoeing could not be resorted to, the weeds have obtained the mastery, and both in quantity and quality the corn will be deficient. The Oats, too, in nearly all cases and on all soils, are very short, and on some of the weakest and hottest land they will not get into bell. On the whole, they are decidedly a bad crop. On the clay soils, however, and also on the strong loams, I am able to report much more favourably both of Wheat and Barley. There was a partial loss of the Wheat plant on some of the tilths, but generally there is every appearance of a good average crop. Some of the Barley, too, is looking very well, particularly that which was sown early on the stale furrow. Of Beans and Peas there is an unusually large breadth sown, owing to the almost total failure of the Clover last year. The Beans on strong land in good condition have bloomed and set well, are so far free from fly, and promise well for a crop; but in those cases where they have been tried on land of a lighter character, they have suffered by the dry weather, and will be inferior. Peas of the early varieties, where early sown, have escaped the fly and promise fairly; but the later kinds are covered with fly, and will be of little or no value either for corn or fodder. On the whole it is generally considered that there will be a deficiency in comparison with last year of one-fourth in the Wheat, and of one-third in both Barley and Oats. Of Mangel there is generally a good plant, but owing to the unfavourable weather it has not made much progress. Most of the early sown Turnips have been destroyed by the fly, and those sown more in season have come up very irregularly. On the best Turnip soils there is a fair plant, but on the stronger land there is a very indifferent crop, and their growth is scarcely perceptible. Indeed, the crop generally is in a very precarious state, and a few more days of the present drying weather will be fatal to a large portion of it. The crop of hay is on the whole a very light one. The meadows and the best uplands, where laid early, have yielded well, but the seeds have not produced half a crop, and many of the inferior uplands have been equally unproductive. It is nearly all secured, and is of fine quality, and unless we very soon have a thorough soaking rain, that and other artificial food must be resorted to, or great losses will be sustained among the stock, as the pastures are getting very much dried up. Up to the last few days, however, stock has done well, and beasts and sheep on good land are generally in a forward state. *Owen Wallis, Overstone Grange, July* 12.

OXFORDSHIRE: *Lodge Farm, Sarsden, near Chipping Norton, July* 12.—In giving you a short report of the growing crops in this neighbourhood, I am happy to say they are on the whole satisfactory, yet I fear the Wheat has suffered much on the thin stone brash and sandy soils for want of rain, and I have heard of many complaints of thin Wheat on the Cotswold hills on the deep and red soils; many fields of Wheat looking well last April, now show the "drill marks" too far, and the yield will be much under last year. The early sown Barley and Oats are a good standing crop, but the late planted is a poor prospect. Rain is much wanted for the corn and pastures. The crops of seeds and Grass are light, but secured in good order. On this as well as other steam-ploughed farms, the crops are quite an average except roots, which up to this time make but a poor show for want of moisture. I may here state for the information of those who wish to commence steam cultivation, that all our spring work, about 200 acres, besides 120 acres grubbed for a neighbour, has been done without any serious breakage, and 50*s.* will put our 12 months work in order. We are now bursting up our Clover lea with the grubber for Wheat, making what is called in some parts a pin fallow. *Matthew Savidge.*

SURREY: *Carshalton.*—Wheat: a good average crop. Barley: a fair crop, but beginning to suffer from dry weather. Oats: a light crop. Peas: short straw, but well podded. Beans: none grown. Potatos: well and healthy as yet; require rain. Mangel: a good plant. Turnips: coming badly, and slowly. Hay: a very light crop, pastures very bare. *James Arnot.*

WEST SUSSEX: *July* 11.—We have had very dry and not genial weather for several weeks, and pasture Grass that was so plentiful in the early part of summer has now got very short, and unless rain come soon our prospects altogether will be far from promising. There has been a good crop of meadow hay, and all got in in good order. The Clover crop has not been very good in many places, and perhaps we may say the whole is about an average as to quantity, but the quality better than usual. Wheat looks fair, but is now turning off for harvest, and will be fit to cut 10 days earlier than was expected a week ago, and is not likely to yield so well on that account; the straw is rather unequal in length, and the weather during the flowering time was very rough, which will be rather against it. That which was thinnest during the winter now looks far best, and does not suffer so much from the intensely dry weather that we have lately had. Some of Hallett's Pedigree, drilled a little over 1 bushel per acre, looks better than any other that we have got. Whether it is the sort or the thinner sowing that is the cause might be doubtful. I think it is both. I think there is no doubt but it will yield better than the rest, whatever the quality may be; and we often hear that millers don't like it. Barley is good, and perhaps will be the only crop likely to come up to an average this year; a great deal of it would have been down and spoiled but for the dry weather. Oats are very short in the straw, but the ear looks fairly, and the yield may not be much below an average. Peas are almost a failure, and a good many are being cut up for hay, or fed off by sheep to make room for Turnips; there has not been so bad a season for them for many years. Beans, I believe, are not much better, but there are not many hereabout. Potatos look still healthy, but are not likely to be a heavy crop; we have heard of disease, but don't think there is much of it yet. Mangel has come on slowly, but as it is now well established, and does not, like many crops, suffer from dry weather, we may expect it to do well. Swedes and Turnips, where sown in good time, have come on very well; but it cannot be expected that the later sown can come up without rain. Our markets are well supplied with lean stock sheep, and over done with mutton, and the latter has been a stiff sale, which has acted upon the sale of the former, but prices have not given way much. Lean cattle are not so plentiful as they were, and prices are still high. Our wool fair took place on Wednesday, June 29, and there was a large amount of business done at rather better prices than were expected; all good flocks, with a fair proportion of tegs, sold for rather over 2*s.* per lb. The Duke of Richmond's was sold at 2*s.* 1½*d.* Down ewes alone about 1*s.* 11*d.* There seemed a disposition to buy any quantity at these prices; I believe all was sold, except when some sellers thought fit to speculate for a rise. The attendance was very large, and though the fair has been only a few years established it has become one of the most important, and has been of great advantage to the farmers of this neighbourhood. Labourers have been better employed than usual, there being several public works going on; and there has not been so many spare ones for haymaking, but the fine weather has, with the mowing and haymaking machines, got through it very favourably, and there will be more done in this way every year. Where the mowing machine has been used it has given great satisfaction. Some have let the grass at 1*s.* 4*d.* per acre to a party of two men, giving them three horses (so as to have one resting) and the machine. And the men have earned good wages, from 4*s.* to 5*s.* a day, and the work is not near so hard for them as mowing with the scythe. One cuts odd corners and keeps the machine knives in order, while the other drives. So that the cost is about 2*s.* 8*d.* per acre, exclusive of tear and wear of machine; and the price for mowing with scythe has been about 4*s.*, leaving 1*s.* 4*d.* for machine. They do about from 7 to 8 acres a day. This plan insures that care is taken of the machine, and it is the liability to break in careless hands that makes many object to their use. One party who hires one says he gets two trusses an acre more after them, and that at once pays all cost. Harvest will begin about the end of this month. *G. S.*

AGRICULTURAL MEMORANDA.

SCOTCH AND ENGLISH STOCK FEEDING.—I very often have conversations on this subject with intelligent Scotch agriculturists. They say, "If we give our bullocks more than 2*l.* worth of corn and cake during the period of their fattening, we diminish the value of our Turnip crop. We in Scotland look to stock for our profit, and not to corn." Now I do not think that this is sound reasoning, because it is admitted, and I have observed, that the Scotch corn crops might be very much heavier than they are, and they certainly would be had they a better supply of rich manure produced by the feeding with a large quantity of cake and meal, and a small quantity of Turnips. The Scotch custom now is to give a bullock almost as many Turnips as it can eat, say 150 lb. per day, with straw in addition, and during the latter stages of fattening a few pounds of meal or cake. By this system there is not enough of imported food consumed to repair the exhaustion caused by the sale of the corn crops, which we all know are those which mainly exhaust the land—by being sold from the farm. The question really is, whether the half of the crops of Turnips removed from the field for consumption in the yards, aided by the said small quantity of cake or corn, will sufficiently restore the elements removed by the corn crops? I say, and believe most decidedly, not—at least not sufficiently to force, what is always the test of profit, a maximum crop of corn. The Norfolk, Lincolnshire, Cambridge, and other south-country men understand this question thoroughly, and therefore "go in" for such a consumption of cake as astonishes our north-country friends, who look upon it as extravagance and waste, and say that the animals cannot appropriate it. Hence the weak crops of corn which I have too often noticed in the north as compared with Norfolk and Lincolnshire. We really do not half farm; for I can see an enormous difference in my own crops, according to the quantity of cake consumed, and especially where I use the manure from under the boarded floors, unmixed with any straw, and carried direct to the land. It is as though painted on a map. Let us remember that when more cake is given, less Turnips are consumed—there is no mistake about that; and consequently a great many more cattle can be kept and a proportionate increase of manure will result, much to the advantage of the crops. It is true our Turnips will show a smaller money value, but we get our return in manure and corn. Selling, as I did, some fields of my Wheat at 16*l.* per acre just after last harvest—even at 44*s.* and 46*s.* per quarter, I come to the conclusion that corn pays, and I look to that as my mainstay, and upon stock as necessary evils to produce it. Besides, I got 2 tons of straw per acre as food or litter for my cattle. Turnips will not pay the cost of

producing them; a very fine crop of Turnips sold to be fed on the land without cake does not in Scotland, as an average, fetch more than 5*l.* to 7*l.* 10*s.* per acre, which is less than their cost; therefore, in reality, we must look to corn for our remuneration, and endeavour by the cheapest means to increase its produce. Those means are, in my opinion and practice, to consume with every bushel of Turnips, Grass, or other green crop, at least from 4 to 6 lbs. of Rape or Cotton-cake, and steamed straw, and to add, for young growing animals, a little bran and malt combs or some Beanmeal. Manure made in this way surpasses all guano in effect and cheapness. I have now a field of Mangel dressed with such manure. On one acre I added 3 cwt. of Peruvian guano, but there is no sign in the crop of its having been put on, showing that our home-made manure renders its use unnecessary; possibly and probably it may show in the after crop of corn. The consumption of Turnips only or mainly, does not supply manure enough for the corn side of the farm, at least not ample or rich enough to produce maximum crops, which it should be always our aim to grow. It is true that our Scotch friends use much artificial manure, but at a considerable cost. We have Mr. Lawes's authority in the Society's Journal to show that there is no artificial manure so cheap as the manure made by feeding fattening animals. In conclusion, it is bad policy to gain 1*l.* on our Turnip crop, and lose 1*l.* 10*s.* on our corn crops. Again, it is quite clear that the more manure we make from imported cattle food, the less will be the want of purchased manures. A ton of guano costs 13*l.* Mr. Lawes tells us that the manurial value of a ton of decorticated Cotton cake after consumption is 6*l.* 10*s.*, of Rape-cake 4*l.* 18*s.*, of Linseed cake, 4*l.* 12*s.*, and of Lentils 4*l.* 5*s.* As the loss upon these feeding stuffs cannot be more than 20 to 30 per cent., it appears clear to me that it is much more profitable to consume a quantity of these, rather than to pay 13*l.* for a ton of guano, which, after all, is deficient in some important manurial ingredients. I never feed green or root crops, or pasture without giving cake. *J. J. Mechi, July* 1864.

PLOUGHMEN'S TRICKS.—In this county each ploughman attends to his own horses, and I often say that they are almost as fond of their horses as of their wives, for they certainly will (at your expense) indulge them with an unlimited supply of food if you do not control them. This makes the horses dainty, and much food is in consequence spoiled or wasted. I have seen most woeful waste on many farms, where the hay and green Tares, Clover, &c., are pulled out and trodden under foot, instead of being, as in my case, all passed through the chaff-cutter and given in mangers. Our Oats and Beans are also ground into meal and mixed with the cut food. When it is considered that the farm horses on arable heavy land farms consume under ordinary cultivation one-fifth of the whole (landlord's) acreage of the farm, it is time to see how we can economise their food. The head ploughmen are very fond of having the best team, and if they have one horse that is not quite to their mind, especially an old one, you will soon see it get thin and weak, and wonder how it is. If I suspect such a case I have the horse taken from the care of his usual feeder, placed in another stable or shed, and fed by another man. The result generally is that the lean horse becomes again fat and vigorous. An excellent workman of mine, but not of a good temper, had a hasty tempered and free horse placed under his care. He and his driver soon disagreed, although I never was allowed to see it, and the horse soon became unmanageable, irritable, and poor in condition, and was condemned to be sold, at a great sacrifice, of course. Suspecting something wrong, I placed him under different treatment, and found with kindness and good food he soon became a very valuable animal. My man looked sheepish, and felt the reproof without my expressing my displeasure to him, except in mild but significant terms. Each ploughman should have his corn in his own care under lock and key, or they will sometimes plunder each other. Horses should always be kept well up to their work, without being fat. Avoid having a vicious man as your horseman, who may damage one of your very best animals in a way that is not easily detected except in its serious results. As to ploughing, you should be always "plumbing the depth" of the cultivation, for your own satisfaction. There is nothing that ploughmen dislike and avoid so much as the subsoil. It is there that the hard work has to be done both for man and horse—and it is there that I am always most determined that the work shall be done. In dry weather it is a series of concussions, breaking up in blocks; when wet it is like drawing a plough through adhesive putty, but it must be done if you mean to farm profitably. A ploughman is happy, and so are his horses, when the plough glides complacently and evenly just above and on the old pan on which the sole has slid for many a year—a sort of paved floor in fact. I remember the late Sir John Conroy showing me his "probe," an iron-pointed stick with a sort of guard at the proper height. With this he probed and tested the ground to see whether the 18-inch trenching had been properly done, or he declined to pay for it. I always carry my probe or stick when walking over the fields, and am always more or less annoyed by finding shallow cultivation. In fact, we want a 40 horse-power engine to do what is really necessary in cultivation. If you clear away the soil from a square yard of ground, you will soon find out whether your ploughman has done his duty or sloped and undulated his plough. I mention these matters for the benefit of amateur farmers like myself. *J. J. Mechi, July*, 1864.

AN AGRICULTURAL LIBRARY.—I am so frequently asked questions by amateur farmers, and by some practical ones too, that I am led to conclude that they have not an agricultural library.

A fifty pound note spent for such a purpose would be a most profitable investment. For my own part I am always a learner—and should feel "quite at sea" without my books of reference, of which I annex a list. I remember visiting a large school, mostly sons of agriculturists, and on looking at the library naturally inquired for the books on agriculture. "I am ashamed to say, I have not one," was the reply of the worthy master.

I hope this hint will not be lost on our Middle-class Colleges, which are, so happily, being established in Suffolk and elsewhere.

It seems strange that all the sciences are taught except one, the most important of all, and on which all the others depend, namely that of filling the stomach cheaply and abundantly. Science should be the parent of agricultural art as well as of others far less important, and we ought to feel shame if we do not avail ourselves of the advantages offered to us by the great lights of agricultural science and development.

The interchange of facts and experiments in our now numerous agricultural publications can be of no avail to those who never read them. I am sometimes asked—"How can you content yourself on that small Tiptree Farm?" I reply—"Every wrinkle in a pig's face has a charm for me." And I also ask—"Did you ever see two sheep or two pigs exactly alike?" And I quote the cases of men who, with 1500 sheep, knew every one of them, and they never saw two sheep alike any more than we see any two human beings exactly alike. Some learned judges have been very much astonished to find that every Welsh shepherd could swear to his own sheep, and detect one if stolen and placed in another flock. Their gait, manner, expression of countenance, &c., vary as much as in human beings.

Besides all this, I am in good and intellectual company, with the literature of Liebig, Lawes, Voelcker, Way, Tull and Tusser, Parkes, Davis, Smith, Morton, Stephens, Huxtable, Denton, and many others, who have made their mark and done good service to the cause of agriculture. They are my companions and instructors in my hours of reflection and retirement from the mere ceremonies and duties of life. *J. J. Mechi, July*, 1864.

Stephens' Book of the Farm.
Morton's Encyclopædia of Agriculture.
The Journal of the Royal Agricultural Society. 24 vols.
Rhum's Dictionary of the Farm.
Caird's English Agriculture.
Morton on Soils.
Morton's Arthur Young's Calendar.
Baron Liebig's—Chemistry in Relation to Agriculture
" Principles of Agriculture
" Modern Agriculture
" The Natural Laws of Husbandry
" Letters on Chemistry.
Loudon's Encyclopædia of Agriculture.
Bailey Denton on Draining.
The Agricultural Works of the Rev. S. Smith, of Lois Weedon; Mr. Hewitt Davis; the Rev. A. Huxtable; Mr. Sanderson.
Johnston's Lectures on Agricultural Chemistry and Geology.
Tull's Horse-hoeing Husbandry. By Cobbett.
R. N. Bacon on Norfolk Husbandry.
Lavergne's Rural Economy of Great Britain and Ireland.
Low on Landed Property.
Dixon's Law of the Farm.
Chronicles of a Clay Farm. By C. Wren Hoskyns, Esq.
Wye Williams on Combustion.
Armstrong on Boilers.
The Science and Practice of Agriculture. By Thomas Skilling Dublin.
Agricultural Chemistry. By Alfred Sibson.
Agricultural Science applied in Practice. By W. Wallace Fyfe.
The Field and the Fold; or, a Popular Exposition of the Science of Agriculture. By the Rev. Edwin Sidney, M.A.
Outlines of Modern Farming. By Robert Scott Burn.
The Duty and Office of Land Steward, and showing the way to Plenty. By Edward Lawrence: A.D. 1716.
The Whole Art of Husbandry. By J. Mortimer. 4th edition. A.D. 1716.
The New Farmers' Calendar. By a Farmer and Breeder. 5th edition, 1804. (Written, I believe, by a Mr. John Lawrence).
Warnes, Dickson, and others on the Growth of Flax and Use of the Seed.
Essays on the Elevation, Improvement, and Education of the Labouring Classes. By Cooper and Bond.
Several pamphlets on the Utilization of Town Sewage. By Mr. Halkett, Mr. Shepherd, Mr. Ellis, and others.
Comte de Gourcy's Agricultural Journeys in France, Belgium, &c.
Andrew Cornyar (Dublin) on the Theory and Practice of Modern Agriculture.
Alfred Sibson on Food, Feeding, and Manure.
An Inquiry into the Relative Value of Various Kinds of Food. By H. & T. Procter, of Cathay, Bristol.
Cameron's Chemistry of Agriculture.
The Farmers' Magazine.
The Agricultural Gazette.
The Farmers' Herald.
The North British Agriculturist.
The Mark Lane Express.
Bell's Weekly Messenger.
The Irish Farmers' Gazette.
The Magnet.
The Scottish Farmer.
Morton's Farmer's Almanack.
The Transactions of the Highland Agricultural Society.
The Journal of the Bath and West of England Agricultural Society.

WHAT IS "CONDITION?"—No. IV.

THE following are examples from four different farms of the value and actual produce of the nitrogenous constituents of the food consumed remaining in the manure, and so applied to the corn crops grown on these farms. One half of the nitrogen consumed being taken as the amount of such residue, as explained in Number 3, page 610:—

FARM.	No. 1.	No. 2.	No. 3.	No. 4.
Amount of arable land .. acres	100	350	150	63
Amount of arable land manured yearly by sheep	25	100	40	21
Amount of arable land manured yearly by cart dung	25	100	34	
Amount of arable land in corn crop yearly	50	160	75	42
Food consumed yearly. (One-half of nitrogen contained therein.)				
Hay by horses and cattle ton	25 5	180 37	30 6¼	110 21
Corn by horses and cattle ,,	5 2	56 25	10 4¼	16 7
Grains, malt dust or cake ..	..	90 9	..	150 3
Barley by pigs .. .. ton	5 2	16 7	11 4¼	20 8
Roots	400 0¾	2000 5	600 1½	400 1
Guano and town dung	..	9	4	..
Nitrogen remaining in dung .. .. .. cwts	9¾	92	29¼	40
Deduct for evaporation, water, &c.	1	10	3	12
Remains applied to corn crops	8¾	82	26¼	28
*Nitrogen applied per acre to corn crops .. .. lbs.	17	56	35	150
Extra corn produced per acre by the above dressing, if 5 lbs. produces 1 bush. .. bush.	3½	11	7	30
Two years natural produce of land	32	30	32	48‡
Total corn grown per acre ..	35½	41	39	78
Wasted in harvesting, birds, &c.	3½	4	4	6
Total threshed and sold per acre every alternate year .. bush.	32	37	35	72‡
*Value of nitrogen applied per acre at 6*d.* per lb.	8*s.* 6*d.*	1*l.* 8*s.*	17*s.* 6*d.*	3*l.* 15*s.*
Value of 1 load of cart dung at 20 loads per acre manured ..	10*d.*	1*s.* 5*d.*	1*s.* 2*d.*	3*s.* 9*d.*

† In 3 years. ‡ In 3 years.

The actual crops realised by the four gentlemen whose returns I have tabulated, coincide very remarkably with the theoretical amounts there indicated as due to the amounts of nitrogen consumed and excreted on their several farms. No. 3 is the least accurate; his annual produce does not exceed 4 quarters of Wheat per acre, or its equivalent 5 quarters of Barley. His land, however, is not quite so good, and his farming is decidedly more slovenly. Having made the necessary allowance for the land, I can only attribute the loss of a sack per acre more which he ought to grow to the Couch which is feeding on the land at the expense of the Wheat. He keeps a large stock and buys town dung, which is included in the Table. The first three farm on the regular 4-course system. No. 4 has for some years adopted a 3-course system—two years corn (Barley after Wheat), third year roots, highly manured; his crops are quite equal to the estimated amount of 78 bushels for the two years. The remaining remarks apply to all four farms. It will be seen I have taken one half of the nitrogen contained according to the best analyses in the food consumed, either in the yards, or by sheep on the land, as remaining in the dung; and probably where land is ploughed directly behind the sheep this amount is actually secured. This is, however, by no means true of yard dung. The greater part of the liquid from the cowhouse of No. 4 is run at once into a tank, and pumped over the Grass land. I have allowed 50 per cent. off this, equal to 25 per cent. off the whole manure made, for this loss. In the yards of the other three the manure suffers the usual exposure to sun and rain, and lies some months before it is applied to the land. I feel fully warranted by Professor Voelcker's experimental analyses at Cirencester, in deducting 10 per cent. from the original value for this depreciation. In estimating the natural productive power of these farms at 16 bushels per annum, *i.e.*, 32 bushels every two years, or 48 in three years, I have taken the actual produce of one of the fields which was cultivated for several years under the Lois Weedon system, and have allowed for a distant part of farm No. 2 being somewhat inferior to the rest, as before stated. The amount of this natural produce, added to the amount due to the manure applied, is the full crop the land may reasonably be expected to bear one year with another; from this however must be deducted the loss sustained by the ravages of wire-worm—of birds when ripe, of shedding at harvest and mice in the rick. My own experience tells me that the sack per acre I have deducted on this head is not too large an allowance; the net result coincides, as I have said, with the actual produce of three out of the four farms tabulated. These observations will, I trust, enable the reader to understand the Table, and to compare with them results arrived at in his own practice. In many parts of England they may not tally so accurately. If any one pursuing this investigation will assist me with further data I shall be glad of the opportunity of comparing them. Before proceeding I would call particular attention to the

value of a cart load of dung as it comes out in the last line. In calculating this (which has no bearing on the theory of the total value of the manure per acre, but merely shows how small a proportion of nitrogen is carted at a considerable expense) I have taken the total nitrogen in the manure (excluding the sheep-dung) and divided it among the number of acres treated with cart-dung, and have supposed that the dressing has amounted to 20 loads per acre. Of these 20 loads, as they are generally taken from the yard, three-fourths in weight will be water, and one-fourth straw, in which whatever manurial matter exists is incorporated. Town dung, which I used to purchase myself at 5*s.* per load, is probably better than any of the farm-yard dungs here tabulated; but I much doubt if any farmer buys manure in the cheapest market when he buys at this price, even in idle times when his teams are not otherwise wanted. It is also worth observing that the manure applied by No. 4, though sufficient for a far greater crop of Wheat than five quarters per acre, only produces that quantity the first year; the remainder of the unexhausted dung being preserved in the land, and producing its full effect in the Barley crop of the succeeding year—this is a light Barley soil. If, as I hope, these figures will bear the test of inquiry, and are near the truth, they will bear us out in the following conclusions:—

1st. That the amount and value of manures left in the yard or in the land can be ascertained and practically estimated.

2d. That cleanliness and good cultivation are more conducive to a full agricultural crop of corn than the usual application of dung.

3d. That supposing the land to be clean and thoroughly cultivated, half-a-crown spent in manure will produce an extra bushel of corn, worth 5*s.* at present price, without materially increasing the other expenses of the farm.

4th. That on the average land we have been considering, such a fallow will produce 16 bushels of Wheat, worth now 4*l.* more than if it had borne a corn crop. These are the questions as arising between landlord and tenant that I proposed in my first letter to examine (page 515), and to these I have directed attention; and the answers as deduced from Mr. Lawes's and M. Reiset's articles above referred to seem to correspond with the results of farm practice. This correspondence of theory with practice is the great test of the truth and correctness of either, and I hope thus to fortify my ideas in a future letter, when we come to consider the bearing of the theory above mentioned—that one-half of the nitrogen consumed goes to enrich the dung, and one-sixth to fatten the animal—upon the next question, whether at present prices dung can be made profitably at 6*d.* per lb. for nitrogen, and the consequence, if it can, that an extra 5*s.* worth of corn can be grown for half-a-crown—in other words, whether it pays to maintain a high condition in land. *J. B. M.*

AGRICULTURAL EDUCATION.

[The following is an abridged report of the discussion which took place on this subject before the Highland and Agricultural Society.]

Mr. Milner Home moved "That this meeting, recognising the expediency of extending the means of obtaining agricultural education in Scotland, and likewise the duty of the Highland Society to attempt something more than it has hitherto effected for that object, returns thanks to the directors for the interim report now presented by them, and reserves consideration of the questions raised in the report till the final report has been presented as promised by the directors."

He said that he had proposed this motion with the view of not committing the Society to certain opinions expressed in the report.

In consequence of the express reference made to one point in that report, and likewise of there being what appeared to him an important omission, he thought it necessary to bring those points under the attention of the meeting, for the purpose of justifying the motion which he submitted to the meeting.

It was said in the report that the committee could not at present recommend the encouragement of the teaching of agriculture in elementary schools; and there was no reference whatever to any assistance being given to the universities. Now, with regard to the first point, he knew there were considerable differences of opinion as to the expediency of encouraging agricultural instruction in the elementary schools. At the same time, he was aware that some of the directors of the Society were of opinion that such instruction, if it were of a simple and practical character, might be encouraged without detriment to these schools, and with very great advantage to the rural classes, whose children attended them. He had letters from several members of the Society on this very point—one from the convener of a northern county, who took a great interest in this question, and who strongly advocated the propriety of encouraging agricultural instruction of a simple character in the parish schools. A nobleman, likewise an old member of this Society, whom he would wish to see more frequently at their general meetings than he had been for some years past, advocated the same view of encouraging agricultural instruction in the parish schools. With these testimonies before them, it was a pity that the Society, by approving of this report in an unqualified manner, should decide against such instruction in these schools. He might also allude to the fact that some eight or 10 years ago an experiment was made in these very schools. The matter was brought before the Highland Society, when they not only approved of such instruction being given, but gave prizes to the best students in these schools. Passing to the second point, regarding the inquiries which had been made of the rectors and trustees of the provincial academies throughout the country—he was glad to find, from what was stated in the report, that the answers had been satisfactory. He knew that most of those schools were attended by the sons of farmers from 10 to 18 years of age. In many of them, even now, chemistry and botany were taught; and he felt certain that, if the Highland Society declared itself favourable to the extension of such instruction in these schools, that instruction would be given. There was a third point to which no reference was made in the report, but which he thought deserving of the consideration of the committee. In the University of Edinburgh there was a chair, the only chair in Scotland instituted expressly for the teaching of agricultural science. They were aware that the endowment of that chair was miserably small, and that the attendance of students at it was likewise wretched. Now, he thought it desirable that means should be taken by the Highland Society, if in their power, to make it a more efficient class, and it appeared to him that one method of doing so was to offer to the most diligent of the students who might attend, prizes of 20*l.* to 30*l.*, on ascertaining that these students came up to the standard of agricultural knowledge which the Council of the Society might fix. He understood that in the University of Aberdeen there was a weekly lecture on agriculture, but where, from the peculiar constitution of the lectureship, no fees could be taken. There also prizes might be offered to the students, and perhaps an addition made to the lecturer's salary, which would be an encouragement to men of talent to take the appointment and make the class efficient. It appeared to him that there was a sufficient surplus of the Society's funds, which would enable them at all events to make a beginning. He was quite aware that to do the thing efficiently it would require 500*l.*, 600*l*, or 700*l.* a year so as to extend the advantages of agricultural education throughout the country in the Universities, provincial academies, and elementary schools. That could not be done in a day or a year; but a beginning ought to be made, and as the surplus of the Society increased, means might be taken further to carry out this object. He wished to impress upon the directors that this Society was not simply an agricultural society. In virtue of its original charter it was solely agricultural; but it also held an educational charter, and by virtue of that charter it is distinctly an educational as well as an agricultural society, having gone to the Crown for the express purpose of obtaining the high prerogative of encouraging agricultural education in Scotland. And therefore he said that a part of its power, influence, and pecuniary resources ought to be laid out in promoting the objects of the educational charter as much as the objects of the agricultural charter. But when he saw in the accounts of last year the miserable sum of 8*l.* as the whole that was expended under the educational charter, he said this Society did not come up to what was required in that specific charter. Instead of 8*l.*, it should expend 800*l.* Of course, no one would expect it to expend that sum at present; but to expend the paltry sum of 8*l.* was neither worthy of the Society nor fulfilling the requirements of the country. He intended to have moved the appointment of a special committee to consider this question, but the report he had heard read had induced him to follow the course of proposing the motion he had made. He looked upon the report as a harbinger and a pledge that the directors would not lose sight of this great question, but would carry it forward, and that a report should be brought forward at next half-yearly meeting of a more complete character, pointing out in what way the committee proposed that this agricultural education should be encouraged, and to what extent they might draw upon the funds of the Society to carry out this object.

Mr. M'Lagan, of Pumpherston, said he had great pleasure in seconding Mr. Milne Home's motion. He did so most heartily, because he thought the directors had now taken a step in the right direction, and by this report they had given the Society a pledge that they would proceed with this matter, and would not rest till it was put on a satisfactory basis.

Mr. Wilson, Edington Mains, said it was very proper for the Society to direct attention to the furthering of the professional education of the farmers of the country; but he looked with very great dislike indeed at any proposal that this Society should interfere with the education of the parochial or other elementary schools of the country. He thought that was out of their line altogether.

Whatever the directors and members of the Society in their private capacity might think it proper to do, he did not think that this Society, constituted for certain specific purposes, should go out of its way to interfere with those old interests of the country, the parochial schools. The limited time which the children attending were usually there was, he thought, all required, or more, for the ordinary branches of elementary education; and any attempt to interfere with these to give them such a smattering of agricultural education as could be imparted would, he thought, be a very unwise thing. He had no hesitation in expressing his humble opinion that for this Society to encourage such a thing would be both injurious in itself and apart altogether from the proper functions and ends of the Society. And then, with regard to the proposals as to the more advanced schools, these were matters which would require to be very deliberately and carefully considered indeed before the Society plunged into proposals of that kind. For instance, the teachers and managers of certain institutions had been applied to for information. That was exceedingly good, and the more information they had upon this subject the better. But they would be immediately met with this difficulty, that if they began with certain institutions, and encouraged certain branches of education in these, they came athwart certain commercial questions. These institutions were commercial undertakings, and if they began to patronise some and overlook others, they would come immediately in contact with difficult and delicate matters. The Society would, therefore, require to consider everything very carefully before mixing themselves up with matters of that kind. He certainly thought, however, that there was a proper field for this Society to prosecute, and in which they had already made a beginning. He had listened in that room to statements which involved a manifest fallacy. He had heard it stated in that room that there appeared to be a reluctance on the part of the farmers of Scotland to take advantage even of such opportunities of education as were already open to them. Now, he by no means admitted that. There were, as they all knew, scientific and other classes open to the agricultural part of the population, as to every other portion of the community; and he believed that among the students attending these classes there would be found a very fair proportion indeed from the farmers of Scotland. Where, for instance, did such a man as his friend Mr. M'Lagan get his education? Although there were no institutions in Scotland for teaching those subjects that had a direct bearing on agriculture, every farmer had an opportunity of sending his sons, after they had received an ordinary education, to the scientific classes of the various Universities, where they might obtain a very effective education indeed. Something certainly was wanted in Scotland in the way of showing more directly the bearings of science on the art of agriculture than was done at present, and therefore he thought he could go along with the motion now under the consideration of this meeting for the purpose of inquiry. But he did not think they were now in a position to go very rashly into plans for expending the funds of the Society upon agricultural education. The subject would require to be very carefully and deliberately considered before any steps of that kind could be taken; and he did not think it was altogether a correct report of what had already been done to measure it by the 8*l.* appearing in the report as expended in that direction. Certainly, as yet, there had not been many young men presenting themselves to the Society for examination by the Education Committee. A good many more, however, had presented themselves for examination than had obtained a diploma, for he believed they had been pretty rigid in awarding that honour. But he thought that had been useful in guiding young men as to the branches of study to which it would be well that they ought to direct their attention. Then this was a thing that must necessarily require time before its influence could be fully felt; and he did not think it was fair to say that this was a failure because, as yet, a comparatively small number of young men had presented themselves for examination.

Professor Anderson said he felt a very great interest in the subject of agricultural education, and he had no hesitation in saying that good effects would arise from the mooting of the question at present. Like Mr. Wilson, he was very far from considering the results of the educational scheme of the Society as indicating a failure.

The number of candidates who had presented themselves had been considerably larger than the number which had obtained diplomas, and the reason why the number of successful competitors had been so small was that the Society had adopted a very high standard. It might be, in fact, a question whether in some respects the standard had not been a little too high; but he should be sorry to see anything done to give diplomas to men of low standing. He did not consider that the number who had obtained diplomas was disappointing. They must bear in mind that the idea of an agricultural diploma was a comparatively new one, and that they could not expect that all at once the number would be large. He might state that during the first ten years in which the University of Edinburgh granted degrees of M.D., the number of gentlemen who received degrees amounted only to 16 or 17, being at the rate of about 1¾ yearly. When they bore in mind that the degree of M.D. was an established degree, the value of which was fully recognised, they would see reason to conclude, he thought, that the number of gentlemen who had come forward for their diploma was not so small as to be considered altogether a disappointment.

Mr. Hope, of Fentonbarns, was not at all satisfied with the terms of Mr. Milne Home's motion. He should protest against that Society being turned into a large educational establishment. He thought that education, both in primary schools and in grammar schools, was the business of the State and not of that Society.

He should like to see a thorough national system of education, but it had always been the religious element that had prevented it being carried out. He did not see that there was any great want of funds in Scotland. Mr. Milne Home had alluded to the Church of Scotland. That was merely the church of one-third part of the people of Scotland, but he for his part should like a national system of education for the whole.

Mr. Miller, of Leithen, agreed to the first part of the motion. If Mr. Milne Home meant that the funds of the Society were to be applied in the manner indicated in his speech, by paying parish schoolmasters—by paying perhaps Free and United Presbyterian schoolmasters—and introducing science into the education of these schools, he thought that would interfere materially with the efficiency of these schools; and if agriculture was to be taught in these schools, what was to prevent medicine, engineering, or anything else being taught, thereby knocking on the head the grand object of the schools—namely, simple elementary education. The Education Committee of that Society pointed out the means that they thought necessary to acquire an agricultural education. These means were within the power of almost every man in Scotland, universities being situated west, east, and north. There was no necessity for the Society doing anything in these places. The means were at present before the public. As to the Agricultural Chair, its object was to bring into practical use all the education that was to be got at these Universities. But if instituted they were to set about the encouragement of agriculture in this way, they would probably have to get chairs instituted at Aberdeen, St. Andrew's, Glasgow, and Edinburgh. The Society was not able to do that. He moved the approval of the report as an amendment to Mr. Milne Home's motion.

Mr. Wilson seconded the amendment.

Mr. Milne Home thought that every one in the room had expressed a desire to increase the means of agricultural education. He had no objection to leave out the second clause of the motion, but certainly there ought to be no doubt as to the first question. Mr. Milne Home concluded by agreeing to omit the following clause from the motion—"And likewise the duty of the Highland Society to attempt something more than it has hitherto effected for that object."

Mr. Miller then withdrew his amendment, and the motion of Mr. Milne Home, as altered, was unanimously agreed to.

THE CAMP FARM, ALDERSHOT.

Manure, they say, is food *minus* growth; *i. e.*, food, *minus* not only so much of it as becomes actually built up in the growing frame, but diminished also by so much as is expired and wasted into the air in the growing process. Now, in the case of the adult animal, any growth is little more than a merely fattening process; and in the case of the adult animal—man—or at least in the case of any considerable number of men, growth may be considered absolutely nothing. In such a case, therefore, manure is just food *minus* so much as is wasted from the lungs and skin into the air. But looking on manure as the food of plants, none of all this wasted part is needed by the growing crop from the soil or from the manure with which the farmer replenishes it. The air itself

supplies the growing crops with just those matters, moisture and carbonic acid, which are wasted by the lungs and skin; and it therefore follows that, under the circumstances referred to, the manure returned to the soil represents the whole of the food which has been taken from it.

Now at Aldershot, more perhaps than any other place, we have an adult population. The waste of that camp, if properly economised and returned to the land, would reproduce the food which the Commissariat Department gathers and administers. All around that camp, too, there lies the best possible machine by which this waste, as raw material, may be re-manufactured into the food of which it thus appears as the complete representative.

A soil which is a mere machine for the growth of plants, is of itself entirely barren. It is a mere collection of particles, themselves valueless as food for plants, which together make the sponge, standing ground, warehouse manufactory, by which, the requisite raw material being supplied, the crop may be made and grown. The land around Aldershot answers to this description. It is a porous, almost barren sand; and it is so much the better for the purpose which is here required of it. In very wet weather the water collects in pools upon its surface; but that is because at 4 to 12 inches beneath the surface there is a ferruginous pan, as impervious as concrete. Break through that, and you dig from 10 to 20 feet before you come to water, through sandy beds, which are porous and need no drainage. The surface is partly covered with Ling and Heath, and, where used as a parade and review ground, this Ling is destroyed, and leaves the land a sheer white sand. Here, then, is a good machine, a porous soil on gradual slopes, nowhere very steep—and here is the best possible raw material for the agricultural manufacture, the waste of a well-fed camp. The land is to be had for nothing—the waste is to be given with a premium to any one who will take it away. What can be desired more than this as a good field for agricultural enterprise? Hitherto contractors of various classes have supplied the Commissariat with straw and food for stabling and for barracks at market price; and have paid, we believe, 4*d.* per week per horse for the removal of stable dung, and received a certain premium—some hundreds of pounds per annum—for the removal of all the other waste. The Aldershot Manure Company have received all the waste of urinals and latrines; have erected or dug filters, where a small quantity of lime water is mixed with the sewage, and the sediment is thrown out and dried, under the impression that it is worth the cost, and the remainder flows away still a filthy stream. The results of the operation are twofold. The Company are involved in suits for damages and in indictments for nuisance, on account of the imperfect nature of their process of disinfection; and the resultant manure is not considered by the neighbouring farmers of very great value. The proceeds of their manufacture are thus insufficient, even with the bonus which they receive from Government, to secure an adequate return. It is thus understood that they are about to abandon their contract, and the ground is thus open for another arrangement.

The principle of the new arrangement is that the land is itself the proper disinfectant of the sewage; and that the returns must be obtained not by the sale of the manure but by its use.

Mr. Blackburn, a gentleman of Aberdeenshire, who has in his own county had considerable experience in the utilisation of liquid manure—who has, in fact, been so convinced of the superior efficiency of manure applied in the liquid form, that for a long time he has been in the habit of washing manures into the land by water applied through underground piping—has at length induced the War Office to attempt at once the abatement of a great nuisance by its conversion into a great advantage. He has obtained from them the lease of about 170 acres of the waste land lying on a gentle slope towards the public road on the eastern edge of the camp grounds, and lying for the most part below it; and to this land the whole of the waste of the permanent camp, and a large portion of that from the north camp, is to be brought by piping. The amount, taking the average supply of water per head at 15 gallons per day, will exceed 700 tons of liquid a day. This, although a dilute manure, is many times as strong as the London sewage, where the supply of water is 40 or 50 gallons daily per head of all ages. This liquid comes on to Mr. Blackburn's Camp Farm at two points. At one of these farm buildings, chiefly cottages and cow-houses, are being erected, and there it is proposed to erect a 12-horse-power engine for the purpose of driving the liquid which there arrives, or so much of it as is proposed to be there utilised, through iron piping for distribution through hose over the land. The remainder from this supply will flow on and join the other on the lower ground, where it will escape, or be used on the ordinary shedding principle of a common water meadow.

Mr. Blackburn's experience at home and inquiries elsewhere have led him to adopt large under-ground piping for the avoidance of friction, so that two or three-horse power is all that he expects to require in the first instance for pumping three or four hundred tons of water on the two or three acres per diem on which he intends to apply it. The question of coals and wear of engine against interest of money invested in a more costly system of pipes, leads, in his case, to the adoption of large pipeage for the avoidance of friction. To this end, also, the pumps are to be placed so as to thrust as nearly as possible in the direction in which the water is to leave them, and all the pipe junctions are made by large quadrants, so no abrupt change of flow or angle in the pipage will lead to difficulty of motion. There will be a hydrant to every four acres, and from each hydrant surface pipes carried on wheels will fit to one another and to each hydrant, so as to convey the liquid to the centre of every acre or thereabouts. Thence gutta percha hose, directed by a man, will carry it at his will over the surface, so that he will be able to distribute 200 to 300 tons daily with great ease.

Mr. Blackburn is now preparing his land for use. To this end he is with teams of four and six horses drawing a heavy and strong Scotch plough, and turning over a furrow slice some 10 or 12 inches deep by 18 to 20 inches wide; and following this is a strong sub-soil plough, tearing up the furrow in its wake, eight to ten inches deeper. The ferruginous pan of brown and black concrete is thus broken through, and when the weather has had its will of it, the whole will be a porous sandy pebbly bed, some 18 inches deep, into which the water will sink readily—so readily, in fact, that it is feared even 700 tons of water daily would disappear from the side of an ordinary irrigation carrier, without extending over a sufficient surface to make a fertile field, and so yield a profitable produce. It is on this ground chiefly that Mr. Blackburn has adopted the plan of distribution by hose in the first instance, leaving whatever remainder may pass his pumps for use as in ordinary water meadows.

His operations are at present confined to a few acres only of his farm. If he shall succeed in getting 20 or 30 acres brought into fertility annually, he will attain his object with less risk and smaller outlay than if he attempted to realise his plan over the whole extent at once.

The plant by which he expects for the most part to convert the waste of the camp into food for the camp is Italian Rye-grass. This, one of the grossest feeders and one of the best cattle foods we have, is admirably adapted for the purpose. Sowing down some 20 acres with it in the first instance, and applying 400 or 500 tons per acre, at intervals of a week or thereabouts, twice for every cutting of this crop to every acre, he will get rid of at least 300 tons of liquid daily through the summer, for the cuttings will follow one another at intervals of four or five weeks. And if the experience of other places is likely to be realised at Aldershot, 40 or 50 tons of green food will be obtained per acre where now a scanty coat of Ling is all that Nature yields. This will be the produce of the first and second year of every crop. In the spring of the third year the 20 acres sown 30 months before will be ploughed up, and a Potato crop will be grown to come off early, so that the land may receive the seed of another Italian Rye-grass crop, which will yield, as before, in the fourth and fifth years, an enormous produce of green food.

That is the scheme. The land is being deeply and thoroughly stirred, and on that is hinged the confident expectation both that the nuisance of the camp will be entirely abated, and that the roots of the growing crop will be amply fed. The liquid will be poured over it from pipes, and any surplus unmanageable by the pumps will flow on the ordinary shedding principles over the surface of the land. Italian Rye-grass seed has been sown, and the pestiferous particles from urinal and latrine will find in the growing plant the agency which will build them up in new and useful forms; and luxuriant green crops, as great a contrast to the waste around them as the filthy stream is to the pure and wholesome milk which will come from the cow-house to which these green crops will be daily carried, will flourish where an utterly barren waste now prevails.

Confident in the instances which already exist to prove the soundness of Mr. Blackburn's plans, he already foresees all this; and we foretell that his Camp Farm, Aldershot, will be one of the most striking example farms of the country—one of the most remarkable forerunners of the many attempts which, following it, will be then successfully made at the solution of the great agricultural problem of the day—the utilisation of town sewage. *Oxford Journal.*

Home Correspondence.

Grass Land.—In your last Saturday's Paper you published a paper read by Mr. Oliver, of Penhallow, on "Grass Land," in which he stated that manure laid on Grass was benefited by exposure to the atmosphere. As there was no discussion on Mr. Oliver's paper, I will trouble you with a few remarks on the subject. The circumstance which appears to have led Mr. Oliver to this belief was that having put manure on some Grass land which was exposed for a long time to a dry atmosphere, so much so that it became like short dry hay, to his great astonishment he found (this appears to have been Mr. Oliver's first experiment) the Grass greatly benefited by the manure before the rain came. Mr. Oliver ought to be aware that this is no proof that the Grass would not have been much more benefited by the manure had it had the advantage of a good shower and damp weather after it had been laid on the Grass, from which it would have derived all the nutrition the manure contained, instead of which the gases evaporated a most essential portion of nutrition the manure contained, but notwithstanding Mr. Oliver is of opinion the exposure to a dry atmosphere benefited the manure, and therefore the Grass received more nutrition. As this is a subject of great importance to farmers, I should be glad to hear the opinion of some practical gentleman on this matter, as it may lead some into error, which I think is already too prevalent; but, judging from what I often see in the north of Yorkshire, many of the former appear to be of Mr. Oliver's opinion, as it is common for them to leave the manure for days on their summer fallows before ploughed into the ground, and as Mr. Oliver says, I have seen it like short dry hay. *H. Harrison, York, July* 12.

New System of Drainage.—I have just seen a copy of your Paper of the 25th ult., in which there appears a short comment on a letter of mine in the *Ulster Journal*, in relation to the drainage of flats with a defective outfall. From the stand-point of the writer of the remarks the views are correctly reasoned out but the facts seem not to be fully admitted, neither is the theory advanced adequate to account for the copious flow of water found to issue from the drains. I cannot agree with the writer in saying that the discharge of the water from the drains is due to the current of the stream pulling the particles of water therefrom; or that a flat whose surface is one foot above an adjacent stream, would be as well drained by open furrows one foot deep as by drains 3 or 4 feet below the surface of the water into which they flow. In refuting the former opinion, I may shortly state that the drains executed by Mr. Bowick, now of the Britannia Farms, Bedford, are discharged by a vertical shaft a short distance from the water's edge; and therefore cannot owe their action to the cause assigned. In relation to the latter opinion, it might be partially tenable, if in draining low ground such as that referred to, there were no more water to discharge than the rainfall proper of the area drained; but it may be truly affirmed that no such case occurs, for the rains that descend on the hills and rising grounds, often at great distances, pass to a large extent into the strata of the earth, and re-appear in low-lying vales, and produce the numerous swamps and marshes that are found in almost every district. If this fact is admitted, the action of the drains appears more explicable, and less paradoxical. Some days ago I had some conversation on the subject with an intelligent agriculturist in Renfrewshire, who denied the facts *in toto*. "Water," replied he, "can never rise above its level;" an axiom to which no denial can be given; but on reminding him of the artesian well, as well as the Elkington system (which are identical in principle though differing in detail), he was somewhat staggered in his opinion. I farther referred him to the fact of springs that are frequently found to issue from the bottom of lakes and rivers, that have often been fatal to venturesome persons when the whole is covered with ice, but which is so weak over the spots referred as to be unable to support the super-incumbent weight. Analogous cases are found in dry land as well as water, but we are not inclined to assert that the action or the effects so well illustrated on the Avon and other places, are entirely owing to the explanation given, neither would we say that the system of drainage indicated would operate alike in every description of strata, or in every locality possessing a swamp holding stagnant and sour water. I may again pen a few lines on this novel subject, for new it is in every sense of the word. *David Robie, Kilbarchan, Paisley, July* 5.

Clover Hay with or without Italian Rye-grass.—Mr. Alderman Mechi's reply to a Scotch correspondent, "How to make Clover hay," must have gladdened the hearts of several of our old "Paddy-go-Easies" of the Emerald Isle, who laugh at science as love does at locksmiths. The practice thus indicated by the worthy Alderman was with little exception practised in Ireland at least half a century ago; indeed, I believe ever since the use of Red Clover as a separate hay crop has been known here. It may be adopted in a few places still by some old-fashioned fellows who hate innovation, but by none else that I can learn of. As my present purpose is not to write on haymaking, I will say no more about it now, beyond that I have seldom found the ordinary broad-leaved Clover fit to cut for hay when grown with Italian Rye-grass till the Rye-grass itself had become all but valueless for hay. But I have found the Trifolium incarnatum well adapted for such purpose when sown in autumn on a suitable soil without a corn crop. In saving the hay I have always studiously guarded against letting it lie in the swathe for two days, or more than a part of a day, no matter how fine the weather. However, as the nature of our forage plants must differ from that of yours, as our soils and climate differ, Alderman Mechi may be right in England, whereas such a practice would be looked upon as quite wrong in Ireland. I quite agree in the advice you give to "King" regarding the crushing between the fingers of the insect found working in the leaves of the Mangels. It adopted as soon as the small white blotch appears, little or no injury will be sustained by the crop. I also agree with you when saying, "the Turnip-fly is not to be cured" when his ravages once set in. To guard against such attacks, I have for a long time deferred Swede sowing to a rather late period, and then, to make up for lost time, sowed seed rather abundantly, and forced the

plants into the rough leaf by the application of stimulating manures. Trench ploughing in autumn I found to have good effect when followed by fine tilth and heavy rolling in spring with Crosskill's clod-crusher. The freshly painted board you recommend I have found to be of some little service in trapping the beetles in their jumps as drawn along the lines. Indeed I found a cheaper trap in the board repeatedly smeared over with Linseed-oil and turpentine without any paint, and latterly whenever I used such smeared board I dispensed with the turpentine also. *E. Carroll, Dublin, July* 5.

Cottages.—Beer houses are the real hindrances to progress as regards the labourer; there are one or two in every village, and is it to be wondered at that we have hovels instead of dwellings fit for a human being to live in? Wages in my late district have greatly risen within these 10 years, but unfortunately there is little improvement in the adult labourer, except where the employer is strictly determined to forbid drunkenness under the penalty of dismissal on the next pay day. The 200 or 300 acre men are greatly annoyed, and the larger farmers are obliged, through the introduction of the steam-engine, to have a superior staff to manage and attend upon their great improvements, but the plodding man must still jog on as well as he can, and this is done only by great exertion, and not without serious trouble. With regard to cottages or dwellings for farm labourers we have them in this district sufficient; I mention the names of two or three landlords—Colonel Lindley, Captain Eyers, of Shaw House; Miss Wasey, of Prior's Court; and many others, friends to the industrious poor. Cottage rent, 2*s.* per week, or 5*l.* from Michaelmas to Michaelmas. Living rooms, scullery, proper closets, three bed rooms, well with water, oven for two houses, and a large garden to each house. No lodgers allowed. *F. Chieveley, Newbury.*

The Bondager System of the Border Counties of Scotland.—The great demand for animal food has quite revolutionised agriculture. The Turnip crop is now the principal moving power on well managed arable farms. Owing to so many sheep being sold to the butcher before they are 15 months old, the Turnips require to be pulled, rooted, and topped, put into heaps, and cut by machines into small slices. It was a prevalent practice before the extensive cultivation of Turnips for most farmers to keep one servant for assisting to milk the cows, and she filled up her time in the barns, and as a domestic servant. This servant is called an "Ootins-lass." Each farmer to board and lodge the present requisite number of female labourers would be merely an extension of the "ootins-lass" system in the "good-old times" which Dr. Begg has expatiated so much about. Had I anything to do with these arrangements, I should prefer the bothy-system. Our ideas about domestic economy demand that each family and their domestic servants must have a residence for their exclusive use. Field labourers living in a furnished residence called a bothy, occupy the same position on a farm that noblemen's servants do in the "hall," and in their sleeping and sitting apartments. Farmers providing the labourers with board or the labourers doing it themselves are merely matters of arrangement and detail. The East Lothian farmers provide furnished lodgings, and give each bothyite 11*d.* and 1*s.* for each day's work. The amount of wages paid in each, depends on the amount of payment in kind. One crack farmer pays each bothyite 11*d.* a day in summer, and furnished bothy, coals, "plenty of sweet milk," and a few Potatos planted. I see nothing for it but for landowners to compel their tenants to abolish the compulsory bondage system. It is a singular coincidence that a disgraceful act of tyranny should have occurred on the farm which was occupied by the late Mr. Dawson, who was the first farmer that sowed Turnips on raised drills. It was the demand for field labourers that originated the bondager system. I observe in an Edinburgh paper that Margaret Young worked 140 days for the half year ending May 25, 1864. This corroborates my statements in former letters. In my calculations of the supposed earnings of a bondager at 10*d.* a day, in the *Agricultural Gazette* for 1863, p. 37, I set down 12*l.* 10*s.* 10*d.* for 301 days; 1*l.* 16*s.* for 12 days in harvest at 3*s.*, and 10*s.* for the 12 days' board—in all 14*l.* 16*s.* 10*d*, and 16*l.* 14*s.* as the supposed earnings of a bondager at 1*s.* a day, &c. I put 5*l.* against the hind for the land allowed for growing Potatos. I do not remember my father having more than 14 six-bushel sacks of Potatos off the 1500 yards of Potato drills. I have seen him have only seven and eight sacks. Notwithstanding that last year was a good Potato season, a good many would not have more than a ton of Potatos. Potatos were sold in East-Lothian last season for little more than 2*l.* a ton. By referring to the *Agricultural Gazette* for 1863, p. 37, 2d col., you will observe: A. required the bondager to earn 16*l.* 14*s.*, and 5*l.* against the hind for the Potatos, to make the gross total, in connection with the general rate of wages, equal to 47*l.* 5*s.* 2½*d.*, and perquisites of house and garden free, the cartage of coals, and the liberty to feed a pig. The bondager's board, lodgings, and washing, and the hind's expenses connected with going to hiring markets for a bondager, time, and the bondager's wages of 12*l.* to 13*l.* have to be deducted from this precarious and uncertain gross total! Mark, Mr. Editor, that several pounds must in a good many cases be deducted from this gross total. In short, with regard to a payment in kind, I consider that the house and garden, the cartage of coals, a cow's keep, the liberty to feed a pig, and food in harvest, are the only items which farmers ought to give in exchange for labour. I was much pleased with a letter in the *Scottish Farmer* by Mr. Gray, late of Dilston, who also disapproves of farmers giving each hind a given number of yards of drills for growing Potatos. *W., Edinburgh.*

Reviews.

The Quarterly Journal of Science, No. III. J. Churchill & Son, New Burlington Street.

The present number contains less of immediate agricultural interest than its predecessor. The agricultural chronicler refers to cattle sales and prices as illustrative of the value set on the momentum which pedigree confers on breeding animals—to the operations of agricultural societies—to the subject of agricultural education—to the recent review of agricultural progress, by Mr. H. S. Thompson, M.P.—to town sewage and its difficulties—to the collection of agricultural statistics—and to the subject of rural cottages. In addition to an extremely full record of scientific progress in various departments, there are interesting papers on the moon's surface, on gun cotton, on certain fresh-water fossils in Crete; on the use of the ophthalmoscope; on acclimatisation; and on copper mining in Tuscany; an exceedingly interesting series of original articles and reviews. From the first of these we extract Mr. Nasmyth's account of the useful services rendered by the moon:—

"Let us not suppose, because the moon is thus unfitted for animal or vegetable existence as known to us, that it is necessarily a useless waste of extinct volcanos. Apart from its value as 'a lamp to the earth,' it has a noble task to perform in preventing the stagnation that would otherwise take place in our ocean, which would, without its influence, be one vast stagnant pool, but is now maintained in constant, healthy activity, through the agency of the tides that sweep our shores every four-and-twenty hours, bearing away with them to sea all that decaying refuse which would otherwise accumulate at the mouths of rivers, there to corrupt and spread death and pestilence around. This evil, then, the moon arrests effectively, and with the tides for a mighty broom, it daily sweeps and purifies our coasts of all that might be dangerous or offensive.

"But there is still another duty that she fulfils—namely, in performing the work of a 'tug' in bringing vessels up our tidal rivers. Dwellers in seaports, or those who reside in towns situated up our tidal streams, have excellent opportunities of observing and appreciating her value in her towing capacity; and, indeed, it may with truth be said that no small portion of the corn with which we are nourished, and of the coal that glows in our firesides, is brought almost up to our very doors by the direct agency of the moon."

The paper on acclimatisation also possesses a certain agricultural interest. The following are extracts from Dr. Collingwood's article on the subject:—

"Among the useful animals to which the Société d'Acclimatation have directed special attention, the yak is conspicuous, a native of Thibet—a creature possessing a most valuable skin or fleece, and which is found to breed very readily in the Garden of the Society; and, although it at present yields but little milk, it is hoped that in time the influence of domestication may render it more valuable in this as in other particulars. Several prizes are offered for the breeding of these animals, viz., two prizes of 2500 francs each, for any one who shall produce by the 1st of December, 1865, four yaks of pure blood, of a year old, and of his own breeding; also other prizes of 1800 and 1200 francs, for crosses between yaks of pure breed and mountain cattle (vaches de travail); as well as smaller prizes for such animals as shall prove apt as beasts of labour or of burden.

"Similar experiments are in course of trial upon Angora and Egyptian goats, Caramanian and Merino sheep, &c., which are reported to be in a fair way to success; and encouragement is held out by prizes of various amounts, for the production of small flocks of these animals, for the purest breed, and the heaviest producible fleece.

"The gathering together in good condition, and in sufficient numbers to establish a species, of foreign animals and plants is necessarily a very slow and delicate process, and much time must obviously be expended before very decided results can be expected."

As to the Acclimatisation Society of Melbourne, it is declared that:—

"The herd of Camels brought from India, at an expense of 120*l.* per head, had become scattered, and were in a fair way of being annihilated under the various exploratory expeditions. Such of them as could be saved have been collected at Mr. Wilson's station, at the Wimmera, where they are now breeding regularly, and forming the nucleus of probably a large herd, available at some future day, either for exploration or for conveying the products of remote stations to the more arid districts.

"Reports have reached us of the failure of the first attempts to naturalise the Peruvian alpaca, and out of 300 introduced, five years since, from Peru, and purchased by the New South Wales Government for 15,000*l.*, all have died, and their progeny, 330 in number, are in an unhealthy condition—so much so that in the colonial legislature it was determined to get rid of the cost of keeping them, and disposing of them at once, by auction or otherwise. But on the other hand the official report of the Society prepared in the present year shows that another attempt is likely to have a more successful issue. It is there stated that the little flock of llamas and hybrids imported from England, and under the care of Mr. Duffield, have been diligently cared for. They have been crossed with pure alpacas, and young ones of the second cross are now being dropped. Since landing, their numbers have increased from 19 to 56. Thus, while the camels suffered from being too greatly scattered, the alpacas failed from too great concentration.

"The Angora goat has been received from the Paris Society, and is rapidly multiplying; they are being crossed with the common goat in considerable numbers. The Cashmere goat also has been imported by an enterprising gentleman at Maryborough, who is now experimenting with it. Various breeds of sheep, some of which shows signs of a peculiar adaptability to a hot climate, are also under experiment."

Farm Memoranda.

Dairy Farming in Cheshire.—2. *Tattenhall Hall.*—Mr. G. Jackson's farm contains near 322 acres, namely, 194 acres pasture, 14½ acres meadow (irrigated), 14 acres new meadow covered with dung water, 9½ acres Wheat after Oats, 26½ acres Oats, 10 acres Barley, 5 acres Beans, 2 acres Potatos, 14 acres Swedes, 2 acres Mangels, 1 acre garden and orchard, 3½ acres homestead, plantation and occupation roads.

Rotation adopted—1st Oats, 2d Wheat, 3d root crops, 4th Barley, 5th Clover. The same repeated, and then allowed to lie 10 years.

Live stock consists of 7 horses, 2 nags, 4 colts, 80 dairy cows, 3 bulls, 18 feeders, 21 heifers and stirks, 168 sheep and lambs, 54 pigs, and 11 rearing calves; total, 368.

Previous to 1858 boned most of the old Grass land, and since then has spent, on an average, 104*l.* annually on bones, mostly applied to seeds, and also 11*l.* 4*s.* per annum, on an average, on superphosphates and other fertilisers, and applied to root crops. Has sod-drained 16 acres of old Grass land, and 25 acres with horse-shoe tiles, at my own cost. Landlord has tile drained 215 acres, and filled up 7 pits. Erected entire new farm buildings on a new site; repaired and improved the house, spending on the whole 4000*l.*, including the drainage, &c.

The following has been done by the tenant, exclusive of the draining and boning:—Filled up 31 old pits, and most of the drains put in by landlord. Supplied the boulders for nearly a quarter of a mile of road in connection with the homestead and high road. Made 706 yards of new occupation road through the farm, and covered it with hard materials. Pulled up the old foundations of old homestead, and excavated the new. Carted the old materials to the new site; carted sand and coals for making the new bricks; pulled up the old pavement, and carted the stones and sand for paving the new farm-yard, and formed the ground for paving. Made 4 acres of waste land, including the old site, into a meadow. Levelled and prepared for irrigating 1½ acres of land, for meadow, which had previously been a bog. This farm lies in a good climate, with good roads around it, and not far from a canal, a railway, and good market. The soil varies much, from a good loam on a sandy bottom, to a very tenacious clay soil, on a very stiff, solid, clay subsoil. The surface is gently undulating, giving good fall for the drainage, which appears very effective. Most of the old fences have been eradicated, and new ones planted, which are very clean and growing well, some from 4 to 5 feet high, thick and healthy. Nothing is said in the certificate of eradicating the old fences, or of planting the new ones, but a very great length of both have been done in the last seven or eight years. The fields are now of a good size and shape, and convenient to approach from the new occupation road, which is in good order. One old fence, between two Grass fields, had many gaps in it, but we were told it was to be eradicated soon. The foot-paths through the farm are laid in better lines, more convenient for the travellers, and the land less liable to trespass.

The root crops all clean and healthy. Wheat a clean heavy crop, strong, of good colour, and nearly ripe. Beans, in 20-inch drills, were clean, healthy, and well set with pods. Oats and Barley fine crops, only about half an acre of the latter had some annual weeds in it; Oats ready for cutting. Clover of first year, the heaviest crop we have seen; it was then in cutting, having been pastured, we were told, till the middle of June. Pasture land mostly showed evidence of bone manure, and the irrigated meadows seemed productive of a fair quality of herbage. The live stock were all of a useful sort for the various purposes intended. The new farm buildings are the best arranged of any we have yet seen, for health and convenience of feeding, watering, and all other operations of thresning, steaming, &c., and also for the storing of fodder corn and roots. Implements of a useful sort and in good order.

House, dairy, and premises around in neat order, with every convenience for carrying on the process of cheese making, with the least labour, and for producing a good article. The cheese room had a very respectable

appearance, its contents proving the ability and perseverance of master, mistress, and dairymaid.

3. *Stanthorne, near Middlewich.*—Mr. C. Davenport's farm is 120 acres, mostly a strong loam soil on clay, it is disposed to 54 acres pasture, 15 acres meadow, 8 of which are covered with dung water. Wheat after Potatos 17 acres, Oats 20 acres, Potatos 10 acres, Turnips 1 acre, orchard and garden 1 acre, plantation and roads 2 acres. Rotation of crops on this farm—Oats, green crop, and then Wheat.

Stock on this farm, 4 horses, 1 colt, 23 dairy cows, 5 heifers and stirks, pigs 20, rearing calves 9, sheep and lambs 50; total stock, 112 heads. Buys usually about 40*l.* worth of these manures, viz., raw bone, guano, and horse dung, annually. Has drained 90 acres with 2½-inch, 3-inch, and 4-inch tiles; does not state the landlord has been at any of the expense thereby incurred; has built shipponing for 20 cows, cart house, and press house; these cost claimant 50*l.* Landlord found timber in the rough; has eradicated 2000 yards of old fences, and planted 1100 yards of new fences, landlord finding Quicks; has made a new road through the centre of the farm three-quarters of a mile long, at claimant's own cost, expended on that 15*l.*; drawn all materials for new buildings; filled up 16 pits, and gained 1 acre of land thereby. This year has made a granary over the cart-house, expense of that 30*l.*, of which the landlord has allowed the claimant 10*l.*

This farm is mostly a strong loam soil; the 54 acres pasture are in 5 fields, and in good condition; the 15 acres meadow is in two enclosures, are old turf, and in a productive state, and apparently well manured; the 10 acres of Potatos are in two fields, show healthy for a good crop, cultivation mostly in beds, and not free from weeds. The Turnips fair ordinary cultivation. Wheat after Oats medium crop; field after Potatos good crop, but not first-class. Oats, 20 acres, are in three fields; those after Wheat a good crop, but not the best; another field after Wheat medium crop; one field after the same crop last year short in the straw, seeds sown under. The new fences planted by this claimant are growing well, and all the old fences on the farm are well attended to. The farm is in regular and convenient sized fields, in consequence of the eradication of old fences and the new ones planted. The different buildings named by claimant in his certificate seem to be of a useful character, and the new road, as alluded to, and made by him, is quite suited to the occupation of the land. It is in a good state and a great convenience. The orchard, garden, and other conveniences about the yards and house are apparently well attended to.

NOTE.—Since receiving this claimant's certificate we have made inquiries, and have obtained further particulars; 180,000 tiles were used in draining the 90 acres. Claimant's landlord paid for them at the kiln. All other expenses (amounting to 202*l.* 10*s.*) were paid by claimant for labour in the draining, pulling up drains, &c., generally 3 and 4 feet deep, in places more.

4. *Lower Whitley, near Northwich.*—Mr. J. Rigby's farm contains 60 acres, namely 30 acres pasture, 10 acres meadow and Clover (mown), 1 acre Wheat, 6 acres Oats, 3 acres Barley, 8 acres Potatos, ½ acre Swedes, ½ acre Mangel, 1 acre garden, orchard, and homestead. Customary rotation: 1st, Potatos; 2d, Potatos; 3d, Wheat; 4th, Barley or Oats; 5th, Clover and seeds, for lying a few years.

Live stock consist of 3 horses, 1 colt, 17 dairy cows, 7 heifers, 25 pigs, and 11 rearing calves; total, 64.

Purchase annually from 50*l.* to 60*l.* worth of bones, guano, and horse manure. Have drained 28 acres with pipes and tiles, have eradicated 1422 yards of old fences, and filled up 2353 yards of old ditches, and planted 690 yards of new fences. Filled up two pits, gaining 2½ acres from old fences, &c.

This farm is not in a bad climate, though elevated much above the sea. Is not well accommodated with good roads, and is a considerable distance from markets, nor very near a canal or railway. The soil varies much from a fine loam to a stiff clay; appears properly drained. The surface irregular, some portions a steep incline; surrounded on every side with limber trees, and, as an arable farm, there are too many upon it, though many have been removed by eradicating old fences. Too much vermin in the shape of rabbits. Seven acres of the Potatos early ones, and mostly gone to market, and the land planted with Mangels, or Swedes. The first planted covering the ground, clean and vigorous. Only 1 acre of Wheat a good crop, 3 acres had lost root, was ploughed up, and the land sown with Barley, a heavy crop. Oats a heavy crop. Clover of 1st year had, we were told, been pastured till the middle of May, the stacks showing good produce. The second crop full of Clover. Second and third year's seeds, pastured, and full of White Clover, showing evidence of bone manure. An old pasture, on a thin clay soil, and another on a better soil, produced good herbage, from the application of bones.

The house and homestead in proper keeping. The outbuildings old, and not of the best construction for convenience or of sufficient extent, but in tolerable good repair. Fences, gates, and posts, in proper repair, as well as the occupation roads. The dairy stock and pigs well selected for profit. The working stock and implements of a useful sort, and the best of all, the claimant has several sons, who appear to all pull together in the right direction with their parents.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	July	Inches.										Inches.
Friday	8	30.14	63	59	N.W.	2	10	70	44	87	39	..
Saturday	9	30.11	54	50	N.E.	2	10	66	44	81	37	..
Sunday	10	30.05	66	61	N.E.	2	10	65	52	83	49	..
Monday	11	30.07	62	59	N.E.	3	6	72	53	87	47	..
Tuesday	12	30.12	57	55	N.W.	2	10	76	52	95	49	..
Wednesday ..	13	30.03	57	54	N.E.	2	10	69	49	90	41	..
Thursday	14	30.10	65	57	N.E.	0	0	69	48	87	42	..

Notices to Correspondents.

BLACK GRASS: *G A.* It is impossible to say if you will be liable to it. A well cleaned, horse-hoed Bean crop is a good fallow crop, and we should suppose you might sow Wheat safely enough on that ground after it. Drill it 10 or 12 inches apart, and you can easily keep it clean. June 17 is not an exceedingly early period either for Potatos or for Wheat to be in bloom.

CARCASES AS MANURE: *Broome.* Cut them up into fragments with a sharp knife and lay them in layers with plenty of sandy mould in an ordinary shaped dung-heap. In a month or two turn them over, having put plenty of additional mould beside the heap to throw in with it as it is turned. The flesh will have rotted away, and the bones can be thrown out to be charred, broken, and reduced to superphosphate with one-third their weight of sulphuric acid.

CATTLE DISEASES: *Sub.* "Spooner on the Sheep;" "Youatt on the Ox and Horse." The two latter are the volumes issued by the Society for the Diffusion of Useful Knowledge. The articles on Cattle Diseases in "Blackie's Cyclopædia of Agriculture" are by Mr. Spooner, of Southampton.

CONVERSION OF PASTURE: *Mead.* If the soil is very light and sandy it is better to dig in the turf—*one* spit deep. If it is more loamy than sandy, pare and burn.

DRILLING ON THE FLAT OR ON THE RIDGE: *X Y Z.* We have to-day received the *first* contribution from Mr. Wilkins' pen this year. Flat drilling is adopted in dry districts and on easily dried up soils—because under it a less surface is exposed to the drought. Ridge drilling is to be preferred chiefly on account of the easier, earlier, and more efficient operation of the horse-hoe where the rows of plants are raised above the general level—but also because the manure, whether farm dung or land manure, may, if it be so desired, be more directly applied to the nutrition of the young plant; and it will therefore be generally adopted, excepting where there is danger of drought. On this last account you had better drill on the flat of your farm, south of a line from Hereford to Hull.

HEATING OF MEADOW HAY: *K* asks "Can any of your readers tell me what is the proper heat for a stack of meadow hay to come to after it has been together about a week? Should a thermometer, placed in the middle of it, rise as high as 100° Fahrenheit?

LUCERNE: *Young Farmer.* If you can top dress it after the first cut with good rotten dung, and dig it or horse hoe it in between the rows, you cannot do better. If you have no farm dung spread 2 cwt. of Peruvian guano over it, out of a liquid manure-drill or water-cart.

PEA-STRAW: *P P P Wills.* It is nutritious fodder, and would be readily eaten along with sound hay, chaff, and Mangel Wurzel by cows.—Mr. Chadwick has not that we are aware published a "work" on neglected mechanical powers. The paper by him which we printed some time ago was read at one of the Royal Agricultural Society's meetings.

PLEURO-PNEUMONIA: *Agricola.* It has been treated fully in the pages of the R. A. S. Journal by Professor Simonds and others, and also noticed from time to time in this *Gazette.* The great secret of successful treatment is to take the complaint in its earliest stage—counter-irritation, oily laxatives, febrifuge medicine, followed by tonics, have proved successful; but if the animal is three parts fat we recommend the butcher's knife. We have no faith in nostrums. *W C S.*

SMUT: *A B.* The remedy is—washing the seed in some caustic wash, as blue vitriol (1 lb. to a gallon of water for a sack of Wheat). Some Wheats are more delicate and liable to it than others. Reaping machines are no doubt to be had for hire in some districts.

Glass for Garden Purposes.

JAMES PHILLIPS AND CO.

beg to submit their prices as follows:—

REDUCED PRICES OF PROPAGATING GLASSES.

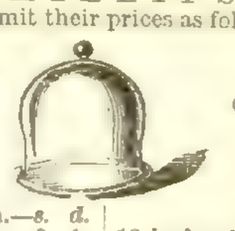

	Each.—s.	d.		Each.—s.	d.
3 inches in diameter ..	0	4	12 inches in diameter ..	1	6
4 " " ..	0	5	13 " " ..	1	10
5 " " ..	0	6	14 " " ..	2	3
6 " " ..	0	7	15 " " ..	2	9
7 " " ..	0	9	16 " " ..	3	0
8 " " ..	0	10½	17 " " ..	3	6
9 " " ..	1	1	18 " " ..	4	0
10 " " ..	1	2	19 " " ..	4	6
11 " " ..	1	4	20 " " ..	5	0

BEE GLASSES.

	Each.—s.	d.		Each.—s.	d.
4 inches in diameter ..	0	6	9 inches in diameter ..	1	4
5 " " ..	0	8	10 " " ..	1	8
6 " " ..	0	10	11 " " ..	2	0
7 " " ..	1	1	12 " " ..	3	0
8 " " ..	1	4			

Not made above 12 inches.

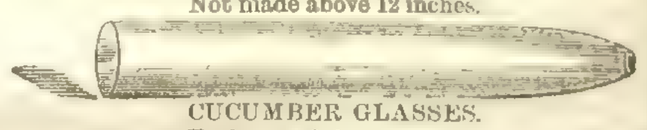

CUCUMBER GLASSES.

	Each.—s.	d.		Each.—s.	d.
24 inches long	1	9	16 inches long	1	0
22 " "	1	7	14 " "	0	10
20 " "	1	6	12 " "	0	8
18 " "	1	4	Made to any length.		

HAND GLASSES, WITH OPEN TOPS.

	Each.—s.	d.		Each.—s.	d.
12 inches	6	6	18 inches	9	6
14 "	7	6	20 "	10	6
16 "	8	6	22 "	11	6
			24 "	12	6

Painted and Glazed with 16 oz. Sheet Glass.

London Agents for HARTLEY'S IMPROVED PATENT ROUGH PLATE.

LINSEED OIL, Genuine WHITE LEAD, CARSON'S PAINTS, PAINTS of various colours ground ready for use.

180, Bishopsgate Street Without, London, E.C.

HAND GLASS FRAMES (Loose Tops).

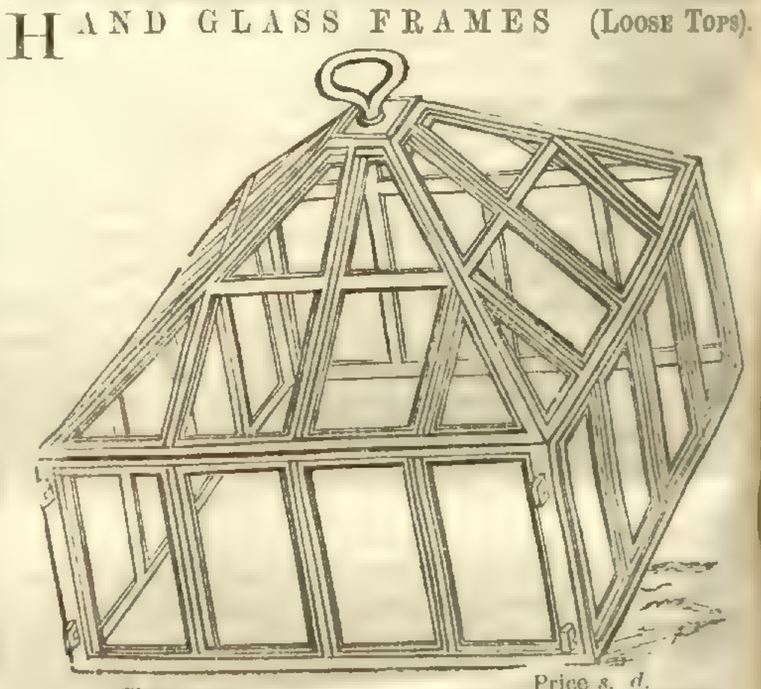

Size.	Price s.	d.	
14 by 14	4	0	Each
18 by 18	5	9	"
20 by 20	6	6	"
22 by 22	7	6	"
24 by 24	8	6	"

Delivered Free to any Station in England if 12 or more are ordered.

J. JONES & SONS, 6, Bankside, London, S.E.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

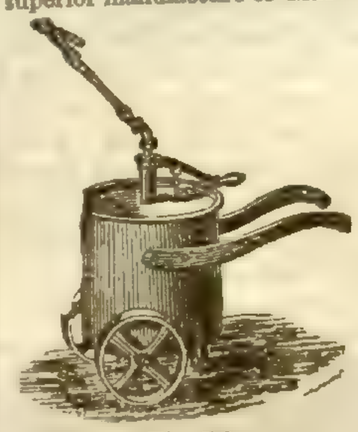

Fig. 570.

J. TYLOR & SONS'

GALVANIZED IRON TUB GARDEN ENGINES, with Registered Spreader.

8 gal.	12 gal.	16 gal.
£2 13 6	£3 2 0	£3 12 6
24 gal.	30 gal.	
£5 0 0	£5 12 0	

Fig. 571.

J. TYLOR & SONS'

OAK TUB GARDEN ENGINES, with Registered Spreader.

15 gal.	25 gal.
£5 12 0	£7 0 0

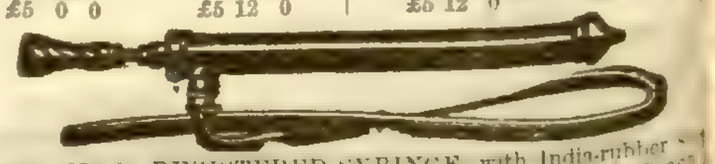

Fig. 586. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. £1 6 6 each

No. 2. Ditto ditto .. 1 1 0 "

Telescope Branch Pipe for ditto .. .. 0 10 0 "

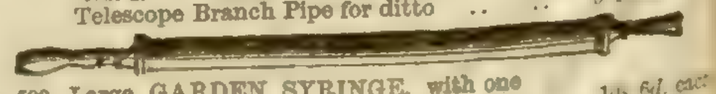

Fig. 590. Large GARDEN SYRINGE, with one rose and jet .. .. 10s. 6d. each

" 589. Middle Ditto ditto .. .. 8 6 "

" 588. Small Ditto ditto .. .. 6 9 "

" 587. LADIES' GARDEN SYRINGE, with do. .. 5 0 "

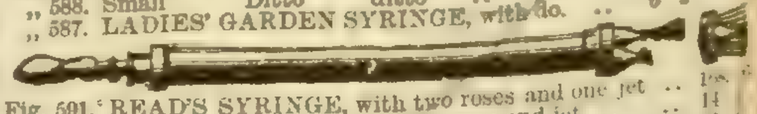

Fig. 591. READ'S SYRINGE, with two roses and one jet .. 18s.

READ'S SYRINGE, with one rose and jet .. .. 14 "

" 592. Improved ditto ditto large .. 13 "

Garden Engines and Syringes of J. TYLOR & SONS' manufacture kept in stock by Ironmongers and Seedsmen in every part of the United Kingdom.

J. TYLOR & SONS, Manufacturers, Warwick Lane, Newgate Street, London, E.C.

HOT-WATER APPARATUS,

WITH TRUSS'S PATENT PIPE JOINTS.

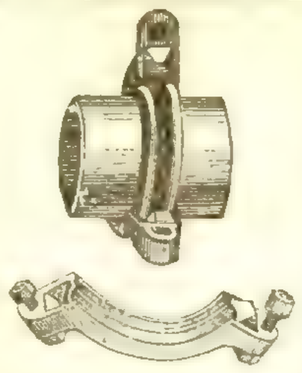

T. S. TRUSS, C.E.,

53, GRACECHURCH STREET, LONDON, E.C.

By means of these Joints the work is executed in less than half the time required for Socket Joints, and alterations can at any time be made, or the entire Apparatus removed and erected elsewhere with the greatest facility. A considerable saving in cost is also effected.

These Joints have been used for several years, giving entire satisfaction, and may be seen in use at the Royal Horticultural Society's Gardens, Chiswick, and many other places in Horticultural and Public Buildings. They are also exhibited at the Society's Gardens, South Kensington.

For a few prices, see last week's advertisement.

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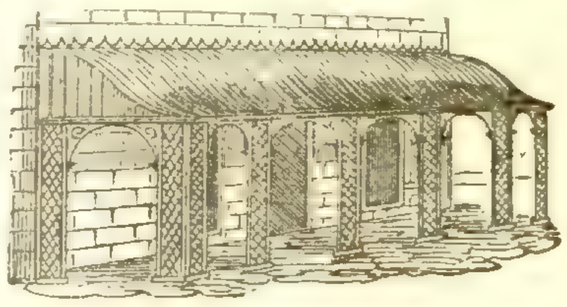

Apply to COTTAM & Co., Manufacturers, Iron Works, 2, Winsley Street (opposite the Pantheon), Oxford Street, London, W.

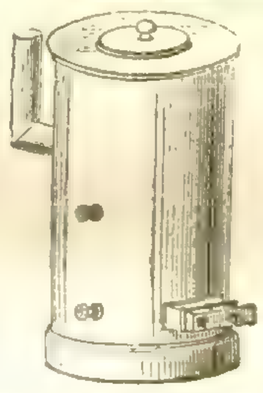

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for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the Patentee's Warehouse, 155, Cheapside, London, E.C.

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Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

LAWN MOWING MACHINES FOR 1864.

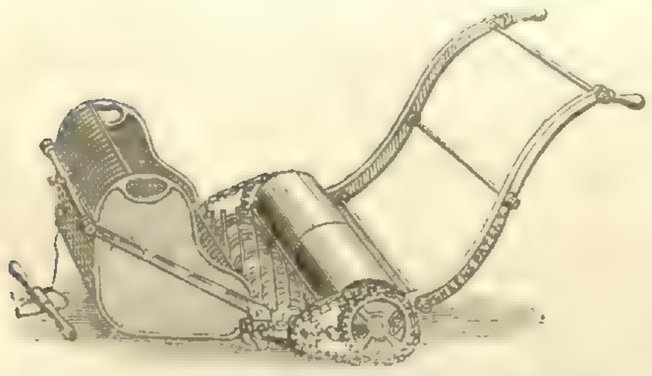

GREEN'S MACHINE.

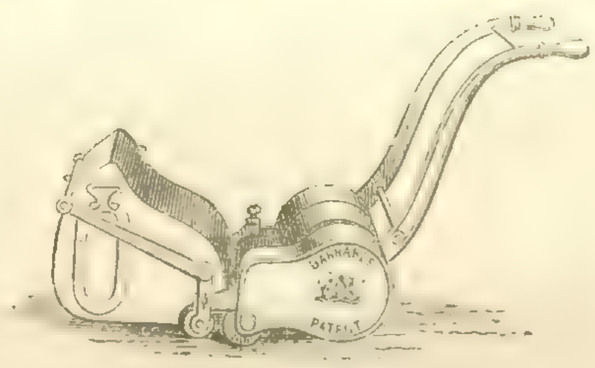

BARNARDS' MACHINE.

SHANKS' MACHINE.

GREEN'S HAND MACHINE.

Size.	Easily Worked.	Price.	Size.	Easily Worked.	Price.
10-inch, 12-inch, 14-inch	*By a Boy* ..	£3 10 0 5 0 0 5 10 0	18-inch ..	*By a Man* ..	£7 10 0
16-inch ..	*By a Man* ..	6 10 0	20-inch 22-inch 24-inch	*By two Men*	8 0 0 8 10 0 9 0 0

SHANKS' HAND MACHINE.

Size.	Easily Worked.	Price.	Size.	Easily Worked.	Price.
10-inch, 12-inch	*By a Lady* ..	£3 10 0 4 10 0	19-inch ..	*Man and Boy* ..	£7 12 6
14-inch ..	*By a Boy*	5 10 0	22-inch, 24-inch	*By Two Men* ..	8 7 6 8 17 6
16-inch ..	*By a Man*	6 12 6			

PRICED LISTS OF HORSE, PONY, AND DONKEY MACHINES, ON APPLICATION.

A specimen of each of the above described Machines which have been brought out for the season will always be on view at their Offices, 18, Cannon Street, and thei Warehouse, 16, Laurence Pountney Lane, quite close to the Offices, for the inspection of those who may wish to select for themselves in preference to leaving the selection to J. B. B. & Co. A stock of Machines will also be kept on hand, from which orders can be at once executed.

*** *Every Machine sent out is Warranted to give ample satisfaction, and, if not approved of, may be exchanged for any other size of Machine, or for the Machine of any other Maker, or may be at once returned unconditionally.*

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REDUCED TARIFF FOR SHEET GLASS AND HORTICULTURAL GOODS.

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IT IS EQUALLY ADAPTED FOR ALL DESCRIPTIONS OF EXTERNAL WORK.

3 *Cwt. Free to most parts.*

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(Postal Address); Also 31, ST. JAMES'S STREET, S.W.

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H. FREEMAN, Horticultural Works, Triangle, Hackney, N.E.—Good substantially-made GREENHOUSES glazed, ready for fixing, 42 feet by 13 feet, 50*l.*; 21 feet by 13 feet, 28*l.*; 12½ feet by 10 feet, 15*l.* A handsome CONSERVATORY, 46 feet by 19 feet, for Sale, price 130*l.* A large assortment kept. Estimates given for any branch in Wood or Iron.

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HOT WATER PIPES, from Stock, per yard:—2-inch, 1*s.* 4*d.* 3-inch, 2*s.*; and 4-inch, 2*s.* 7*d.* BENDS, from Stock, 1*s.* 7*d.*, 2*s.* 6*d.*, and 3*s.* 3*d.* each. THROTTLE VALVES, 10*s.* 6*d.*, 13*s.* 6*d.*, and 15*s.* each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day. A discount to the Trade.

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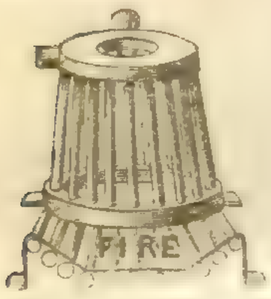

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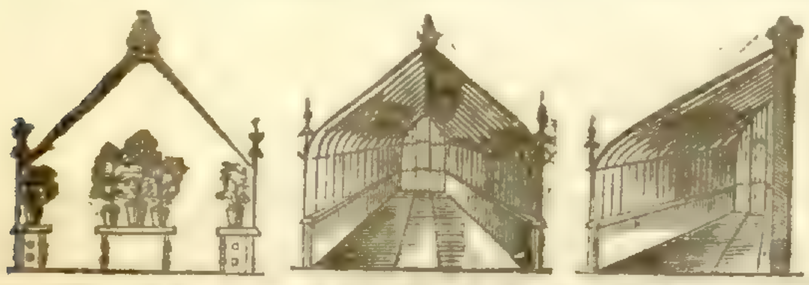

best Wrought Iron, Sash Bars, Gutters, and Pillars. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water-tight Roof insured.

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

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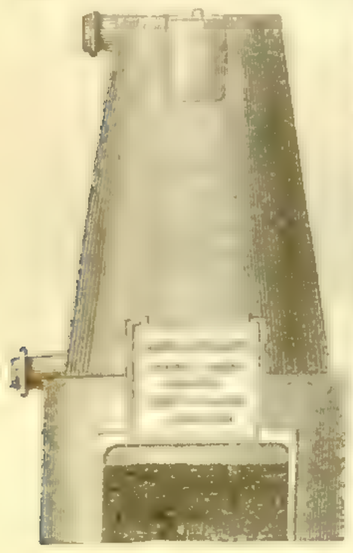

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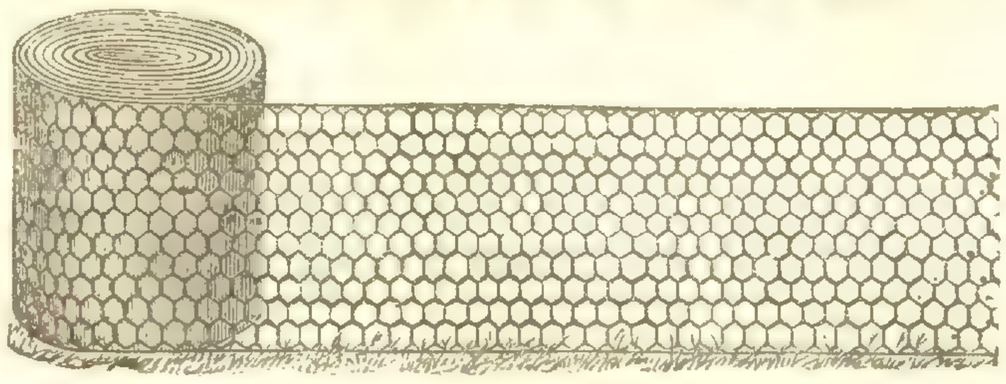

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2¼ inch	Hares, Dogs, Poultry ..	3*d.*	4*d.*	3¾*d.*	5*d.*	4½*d.*	6*d.*	5½*d.*	7*d.*
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1⅝ inch	Small Rabbits, Hares, &c.	4*d.*	4¾*d.*	4¾*d.*	6*d.*	5½*d.*	7*d.*	7*d.*	9*d.*
1½ inch	Smallest Rabbits	5*d.*	6*d.*	5¾*d.*	7*d.*	7*d.*	9*d.*	9*d.*	11*d.*

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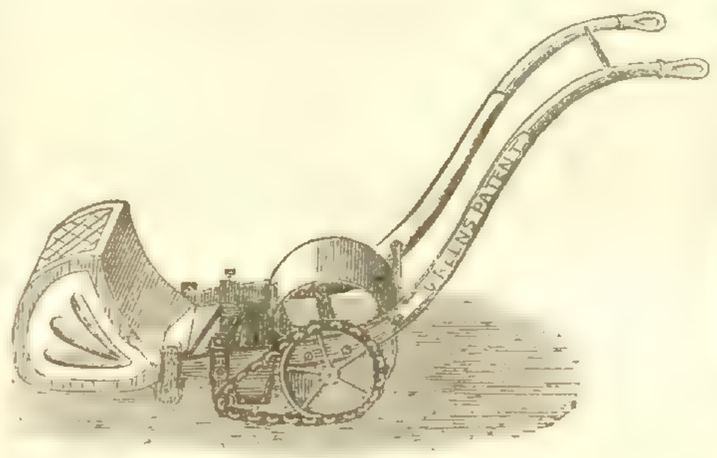

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Sizes and Prices on application.

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OLD ST. PANCRAS ROAD, LONDON, N.W.

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TANNED GARDEN NETTING.—Inch Mesh, 1*d.* per yard; in pieces containing 400 to 500 yards. Small quantities, 1½*d.* per yard. TOBACCO PAPER, price to the Trade on application.
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TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

VARNISHED FLOWER STICKS:—1 foot, 3*d.*; 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s.* 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

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EDGINGTON'S RICK CLOTHS for 50 years have maintained their celebrity as the best.
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A liberal Discount to the Trade.
INTERNATIONAL EXHIBITION, 1862, Class XIX.
Honourable Mention.

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PROTECTION from the SCORCHING RAYS of the SUN.
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and rom morning frosts. To be had in any required lengths.

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Four yards wide..	3*s.* 4*d.* per yard.
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An improved make, 3 yards wide ..	2*s.* 8*d.* per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.
ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.
"It is much cheaper than Mats as a covering."

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Universal Microscope. Price £5 5s.

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31, Cornhill, E.C.; late 6, Coleman Street.
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STUART AND MEIN, NURSERYMEN, Kelso, N.B., have received an importation of the above, of first-class quality. It is the cheapest and most economical article in use. Price 56*s.* per cwt. cash. Sample may be had on application.

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BEFORE you BUILD any more GARDEN WALLS, see the NEW PATENT CORRUGATED BRICK, invented and manufactured by I. FOXLEY, acknowledged to be the best thing for the purpose by gardeners who have seen it. No nailing required, no fixtures of iron, copper, &c. Perfect training is obtained, and the Trees can be kept clean and free from Insects.
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F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.
Illustrated Price Lists free by post. The Trade supplied.

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Very Important for Lovers of Flowers.

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T. Cuthbert, Esq., Clayton Square, Liverpool, says in his testimonials deposited with Sir Joseph Paxton, Devonshire House, Piccadilly, London, that flowers cultivated with Mr. Muller's Fertilising Powder were the best he ever had seen.
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TO BURN THE HYDRO-CARBON OILS.
PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.
They are more easily trimmed and refilled than any other Lamp with similar burner.
There is no danger of chimneys breaking, and the chimney cannot become smoked.
For designs of the above, adapted for the DINING-ROOM, DRAWING-ROOM, HALL, or LIBRARY, see Number 2 of this Journal. A REALLY GOOD LAMP.
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SEWELL AND CO. are now making their Annual Reduction of Stock, and invite the attention of ladies to many great bargains in PLAIN and FANCY SILKS, GRENADINES, BAREGES and MUSLINS, SEASIDE, TRAVELLING, and YACHTING DRESSES. All at prices considerably below their value.
Compton House, Frith Street, Soho, W.

The Lightest Articles for Summer Wear.

THRESHER'S INDIA GAUZE WAISTCOATS.
THRESHER'S INDIA TWEED SUITS.
THRESHER'S KASHMIR SHIRTS.
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Avoid Medicines.—They always aggravate Chronic Complaints but DU BARRY'S delicious health-restoring
REVALENTA ARABICA FOOD invariably and effectually cures them. Extract from 60,000 cures:—Cure No. 58,216, "of the Marchioness de Bréhan, Naples, of a fearful liver complaint, wasting away, with a nervous palpitation all over, bad digestion, constant sleeplessness, low spirits, and the most intolerable nervous agitation, which prevented even her sitting down for hours together, and which for seven years had resisted the careful treatment of the best French and English medical men."—Cure No. 1771. "Lord Stuart de Decies, Lord Lieutenant of Waterford, of many years' dyspepsia."—Cure No. 49,842. "Fifty years' indescribable agony from dyspepsia, nervousness, asthma, cough, constipation, flatulency, spasms, sickness, and vomiting. Maria Jolly."—Cure No. 47,121. "Miss Elizabeth Jacobs, Nazing Vicarage, Waltham Cross, Herts, of extreme nervousness, indigestion, gatherings, low spirits, and nervous fancies."—Cure No. 54,816. "The Rev. James T. Campbell, Fakenham, Norfolk, of indigestion and torpidity of the liver, which had resisted all medical treatment."—Cure No. 54,812. "Miss Virginia Zeguers, of consumption." In Tins, 1 lb., 2*s.* 9*d.*; 2 lb. 4*s.* 6*d.*; 12 lb. 22*s.*
BARRY DU BARRY & Co., 77, Regent Street, London, W.C.; also FORTNUM & MASON, Purveyors to Her Majesty; at PHILIPS'S, Tea-dealers; BATTY'S; PETTY & WOOD'S; ABBIS'S, 61, Gracechurch Street, E.C.; 4, Cheapside, E.C.; 63, 150, and 298, Oxford Street, S.W.; 54, Upper Baker Street, W.; 330, 440, and 451, Strand, W.C.; 55, Charing Cross, S.W.; and all Grocers and Chemists.

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EXCELLENT FLORIST and SEED BUSINESS, near London, 250*l.* Stock and Lease, or a Managing Partner with 500*l.* would be taken.
LAND WANTED, 5 to 100 acres, and some Plots to Let.
COTTAGE and GARDEN WANTED, near good Fishing and Rail. Rent moderate.
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WANTED to RENT, for a Term of Years, within four or five miles of London, a Small NURSERY or FLORIST'S BUSINESS, with Jobbing attached, or a Piece of Ground suitable for establishing the same.
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TO BE LET, the HOLMESCALES FARM, comprising near 400 acres, of which about 360 are Pasture and Arable. Is remarkably healthy for Stock, being well watered with a running stream in almost every field; is also in high condition in every respect, having been eleven years, ending 1863, in owner's occupation, who expended largely in Drains, Fences, Bone Manures, Permanent Grass Seeds, Buildings, Turbine Water Wheel of about 8 horse-power, new House, containing large Drawing Room, Dining Room, &c.
The situation of Holmescales is 3 miles south-east from the Oxenholme first-class Station on the Lancaster and Carlisle Railway, 5 miles from Kendal, 5 from Milnthorpe Station, 7 from Kirby Lonsdale, 2 miles from the Lancaster and Kendal Canal, and within easy distances from three good Markets for the Sale of Fat and Lean Stock.
This Farm is worthy the attention of a first-class agriculturist, and the wishes of an eligible applicant as regards Lease, Shooting, &c., will be fully considered.
Possession at the usual times early in 1865, but special arrangements can be made for immediate entry if required.
Apply at the Farm to Mr. ROBERT KNOWLES, the present occupier, and agent for owner. The Postal Address is Holmescales, Milnthorpe

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Choice Orchids: Imported and Established.

MR. J. C. STEVENS has been favoured with instructions to SELL by AUCTION, at his Great Rooms, 38, King Street, Covent Garden, W.C., on WEDNESDAY and THURSDAY, July 20 and 21, at half-past 12 o'Clock precisely each day, some of the scarcest and choicest ORCHIDS in cultivation; including the grand ODONTOGLOSSUM TRIUMPHANS, two Plants of Odontoglossum Phalaenopsis,

Paphinia tigrina	Miltonia Regnelli
Cattleya Warneri	Perasteria Humboldtii
" Wagneri rosea	Schomburgkia undulata
Cymbidium eburneum	Epidendrum leucochilum

An IMPORTATION of ORCHIDS from MEXICO and other parts in splendid condition, including magnificent masses of

Lælia autumnalis	Odontoglossum Cervantesii
" anceps	" maculatum
" albida	Oncidium nebulosum
Epidendrum vitellinum	

An IMPORTATION from Mons. J. LINDEN'S COLLECTIONS, including good plants of

Odontoglossum hastilabium	Epidendrum atro-purpureum
" auro purpureum	verum
Galeandra Devoniana	Maxillaria venusta, &c.

Also a small IMPORTATION of established ORCHIDS, STOVE and GREENHOUSE PLANTS, &c. from the Continent.
On view the Morning of Sale, and Catalogues had.

To the Trade.

MR. J. C. STEVENS will SELL by AUCTION at his Great Rooms, 38, King Street, Covent Garden, on THURSDAY, July 21, the following Specimen TREE FERNS and other rare Plants, in lots suitable for the Trade:—

6 Cyathea medullaris	6 Dicksonia squarrosa
24 " dealbata	8 " antarctica
4 " Smithii	24 Todea pellucida
52 Dracæna Veitchii	3 Lomaria discolor
56 " Banksii	12 Hymenophyllum dimissum,

and the whole of the stock of the rare and beautiful ASTELIA BIVITTATA, consisting of the magnificent Specimen Plant and 14 young ones.
On view the Morning of Sale, and Catalogues had.

Brixton.

TO GENTLEMEN, AMATEUR FLORISTS, AND OTHERS.
MR. J. WILLMER begs to announce that he has received instructions from Joseph Venables, Esq., to SELL by AUCTION, on the Premises, Hohe House, Acre Lane, Brixton, on SATURDAY, July 23, at 3 o'Clock (punctual time), the whole of his costly COLLECTION of TULIPS, CARNATIONS, and PICOTEES; Tulip Stage Cabinets, Cloth Rollers, several One and Two-Light Boxes and Lights. On view the Morning of Sale.
Catalogues on the Premises, and of the Auctioneer, Springfield Nursery, Sunbury, S.W.

English Wool Sales in London.

BRADBURY AND COOK will offer by PUBLIC AUCTION at the Wool Sale Rooms, 34a, Moorgate Street, on WEDNESDAY, July 20, about 1500 Sacks of ENGLISH WOOL, comprising some of the best flocks from Kent, Sussex, Cambridgeshire, Hertfordshire, Wiltshire, Dorsetshire, Somersetshire, Devonshire, and Cornwall; and which will include a large assortment of good half-bred Wool; also some superior South Down; and lots from very choice flocks, combing and clothing.
The Wool will be shown in bulk on the Morning of the day of Sale at the West India Docks.
Catalogues can be had the day previous on application to BRADBURY & COOK, Wool Brokers, 17, Basinghall Street, London, E.C.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND'S MEETING AT NEWCASTLE, 1864.

STANDS 98 & 213.

RANSOMES & SIMS, ORWELL WORKS, IPSWICH,

WILL EXHIBIT A COLLECTION OF

THEIR IMPLEMENTS AND MACHINERY,

EMBRACING PLOUGHS, HARROWS, MILLS, ROOT CUTTERS, ENGINES AND THRESHING MACHINES.

HOTHOUSES BY THE ACRE.

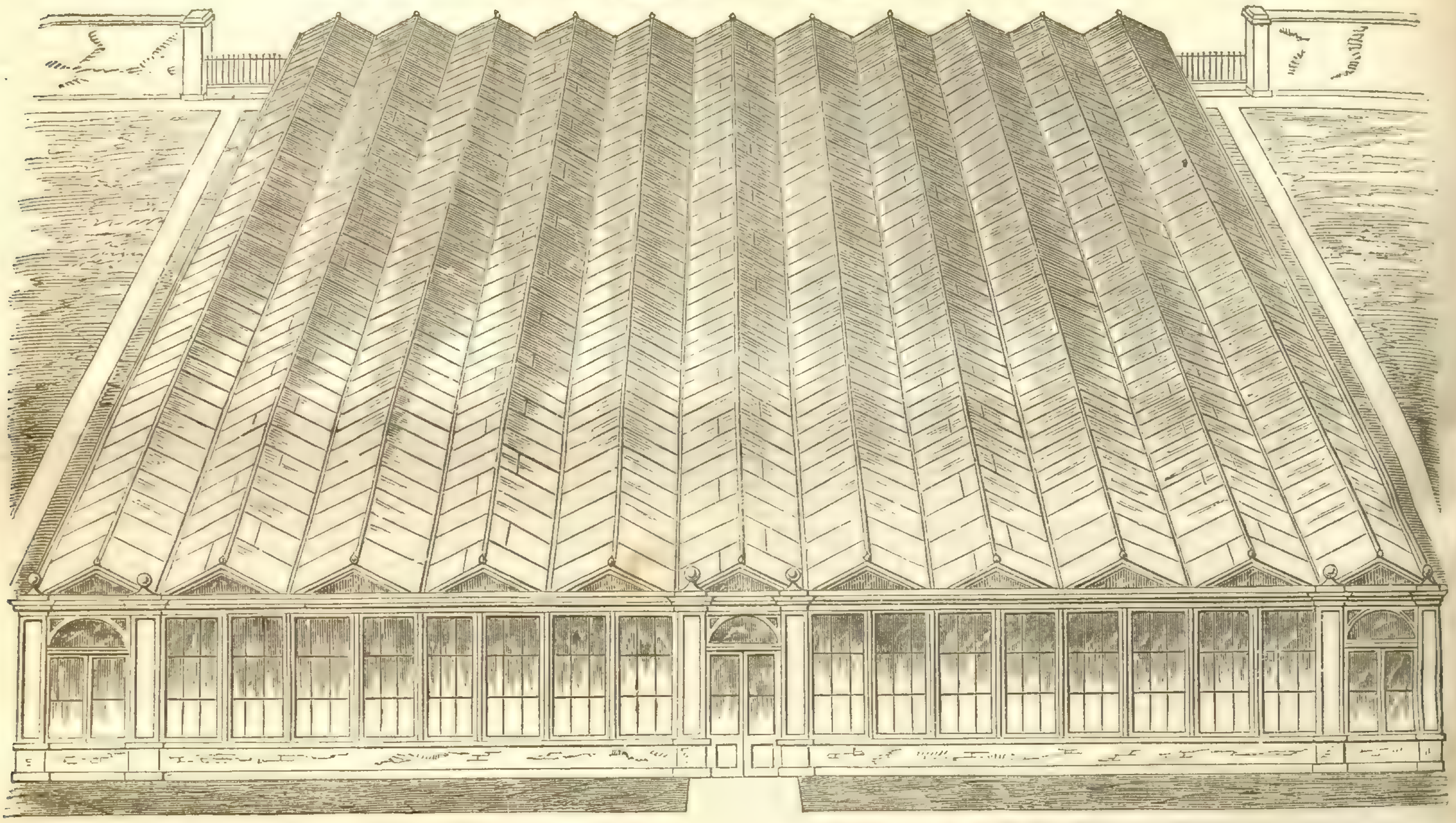

FRUIT, FLOWER, AND KITCHEN GARDENS UNDER GLASS.

The extremely variable and uncertain nature of the climate of Great Britain renders the supply of garden productions so very precarious, that it is high time the energies of the Horticultural Architect were directed to the arrangement of a cheap, simple, and effective structure which would obviate the defects of climate and insure in all seasons an abundant supply of common culinary vegetables; and also of those garden luxuries which our present state of civilisation has rendered indispensable to the comfort of every gentleman's home.

HENRY ORMSON has devoted much time to the consideration of this subject, and flatters himself that his designs for covering large spaces will entirely supply the desideratum, and that they will be found not only thoroughly efficient for the purpose contemplated, but that the prices at which he can erect them—manufactured by steam power machinery—will be so reasonable as to defy competition, while the workmanship and materials will be of the most superior description. PLANS and ESTIMATES given on application for covering ¼ of an acre, ½ an acre, ¾ of an acre, an acre, or any greater or less extent of ground which may be considered desirable.

HENRY ORMSON, HORTICULTURAL BUILDER, STANLEY BRIDGE, KING'S ROAD, CHELSEA, LONDON, S.W.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

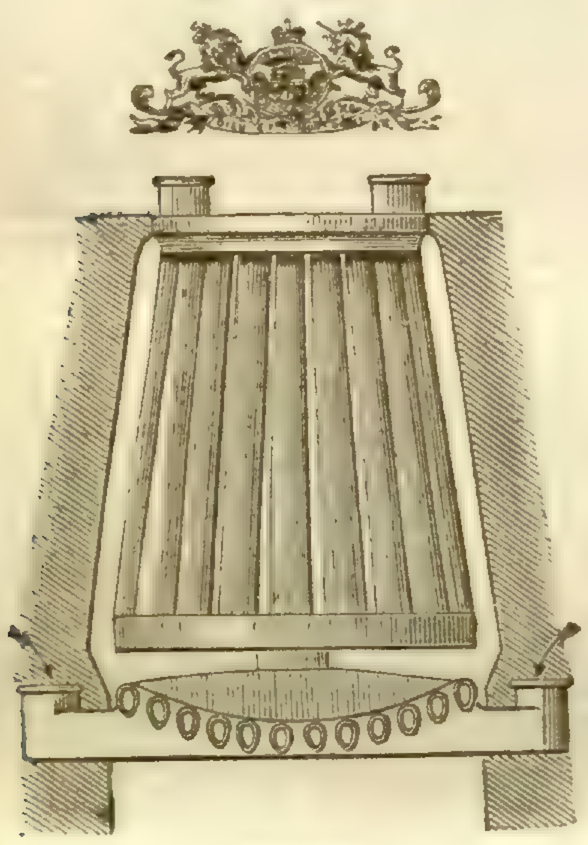

SECTION.

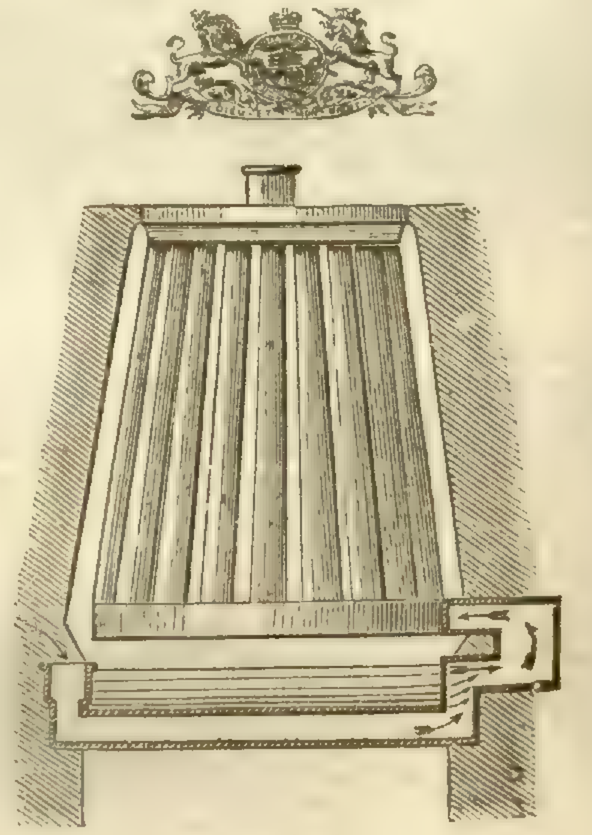

SECTION.

ORMSON'S

PATENT JOINTLESS TUBULAR BOILER

Is now from PRACTICAL TESTS allowed to be the best ever invented for EFFICIENCY, POWER, and ECONOMY, and from the following FACTS it will be manifest to every person's understanding that it must be infinitely more safe for carrying out the ONE BOILER system than any other UPRIGHT TUBULAR BOILER. For instance, the ordinary old-fashioned JOINTED UPRIGHT TUBULAR BOILERS made by ALL other Manufacturers, having 20 tubes for the Boiler, and 12 tubes for the Waterway Furnace bars, would have 64 joints made of cement and rope yarn ALL exposed to the direct ACTION OF THE FIRE, whereas in ORMSON'S PATENT THERE IS NOT ONE JOINT upon which the FIRE CAN ACT, hence the great advantage and security of this PATENT.

These Boilers are made of various sizes so as to suit the amateur or for heating the LARGEST ESTABLISHMENTS ON THE ONE BOILER SYSTEM.

HORTICULTURAL BUILDINGS OF EVERY DESCRIPTION MANUFACTURED BY STEAM POWER MACHINERY. LOWEST PRICES AND BEST MATERIALS.

Plans, Specifications, and Estimates on application.

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THE GARDENERS' CHRONICLE
AND
AGRICULTURAL GAZETTE.

A Newspaper of Rural Economy and General News.—The Horticultural Part Edited by Professor Lindley.

No. 30.—1864.] SATURDAY, JULY 23. [Price Fivepence. STAMPED EDITION, 6d.

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Nurseries, King's Acre, near Hereford.

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PAUL AND SON draw attention to their ROSES in POTS, fit for immediate planting. The plants of this year's New Roses are particularly fine. Prices on application.
"Old" Cheshunt Nurseries, Cheshunt, N.

Roses.

PAUL AND SON'S Unrivalled COLLECTION continues in FULL BLOOM. Particularly fine just now are the Teas, Noisettes, and later flowering Hybrid Perpetuals. Visitors may reach the Nurseries by Trains from Bishopsgate to Cheshunt (one mile) or Waltham (two miles from the grounds). Flies and Omnibuses at the latter.
"Old" Cheshunt Nurseries, Cheshunt, N.

Roses.

WM. PAUL'S ROSES are NOW in BLOOM. Admirers of this Flower are respectfully invited to visit the Nurseries. The Four leading Prizes of the present year have been awarded to his Collections. Entrance from the Platform, Waltham Station (Great Eastern Railway), half-an-hour's ride from London.
Waltham Cross, Herts, N.

Roses.

EDWIN HOLLAMBY begs to announce that his unrivalled Collection of the above, containing many new and splendid varieties, is NOW in FINE PERFECTION. A visit is respectfully solicited.
The Nurseries and Seed Establishment, Tunbridge Wells and Groombridge, Kent.

New Roses.

WM. PAUL respectfully invites attention to his large and vigorous Stock of NEW ROSES, now offered at lowest advertised Prices. Priced Descriptive CATALOGUE free by Post.
PAUL'S Nurseries, Waltham Cross, N.

THE NEW ROSES for 1864.—Several Thousands of splendid Plants now ready. For List of Sorts and Prices, apply to
BENJAMIN R. CANT, St. John's Street Nursery, Colchester.

Roses, &c.

FRANCIS AND ARTHUR DICKSON AND SONS beg to intimate that their large and fine COLLECTION of ROSES (which embraces all the novelties and every variety of merit yet introduced) is NOW in FULL BLOOM, and they invite the inspection of their Patrons and all Cultivators of this popular and beautiful flower.
Having recently formed a large "Rosarium," in which all the choicest varieties of the most popular classes are grouped, purchasers will find this an excellent medium for selection and comparison. Their Geometric Flower Gardens are now also gay with the choicest and most beautiful Bedding Plants, and their Nurseries generally will, they think, repay a visit.
The "Upton" Nurseries, Chester.

Roses.

H. LANE AND SON beg to inform their Patrons that their extensive COLLECTION of ROSES (7 Acres in one piece) is NOW in FULL BLOOM at their Balshaw Nursery, 1¼ mile from the Home Nurseries.

Vines Fruiting.

H. LANE AND SON have still to offer VINES in pots, with from 5 to 15 bunches of fine fruit.
To be seen at their Home Nurseries.

Coniferæ.

H. LANE AND SON'S superb COLLECTION of the above, including the finest lot of ARAUCARIAS in Europe, RHODODENDRONS, AZALEAS, TREES, SHRUBS, &c., to be seen at their Home and other Nurseries, Great Berkhamsted.
The Home Nurseries are within 10 minutes walk of the Berkhamsted Station, London and North-Western Railway, where Conveyances meet all Trains.

Orchard Houses.

MESSRS. RIVERS AND SON invite all those interested in ORCHARD HOUSE CULTURE to Inspect their numerous houses, now full of bearing Trees.
Nurseries, Sawbridgeworth, near the Harlow Station, Great Eastern Railway.

CALANDRINIA UMBELLATA.—We have now a bed of this charming plant, about 60 feet long, in FULL BLOOM; and feel assured that in its own colour (pure magenta crimson) it has no rival in cultivation. Thus grown, it forms in the full sunshine a glowing mass of dazzling brilliancy that is almost painful to the eyes to look upon!
The entire bed stood unprotected during the whole of the late long and trying winter.
Fine Flowering Plants in pots, 25s. per 100, 4s. per dozen, 6d. each.
JAS. BACKHOUSE & SON, York Nurseries.

CLEMATIS FORTUNII and STANDISHII.—These, perhaps the most magnificent of all Mr. FORTUNE'S importations from Japan, are now ready to be sent out in strong plants, 15s. and 21s. each.
Also ARUNDO CONSPICUA, a worthy rival of the Pampas Grass, flowering very freely three months earlier in the season than that old favourite. Strong plants 18s., 24s., and 30s. per dozen.
CHARLES NOBLE, Sunningdale Nursery, Bagshot.

Good Seeds, Carriage Free, at Market Prices.

SUTTON AND SONS,
SEED GROWERS and MERCHANTS,
Royal Berkshire Seed Establishment, Reading.

Genuine Garden and Agricultural Seeds.

JAMES CARTER AND CO.,
SEED FARMERS, MERCHANTS, and NURSERYMEN,
237 and 238, High Holborn, London, W.C.
ESTABLISHED 1800.

Ripon and Claro Seed Establishment.

WILLIAM MORTON,
Old Market Place, Ripon.
PRICE CURRENT of AGRICULTURAL SEEDS free by Post.

RAYNBIRD, CALDECOTT, AND BAWTREE,
SEED FARMERS and MERCHANTS,
89, Seed Market, Mark Lane; and Basingstoke.
Prize Medals, 1851, for Wheat; 1862, for "Excellent Seed Corn and Seeds."

CARTER'S GARDENER'S VADE-MECUM.

WHEELER'S LITTLE BOOK on GRASSES.
Gratis and Post Free.
J. C. WHEELER & SON, Seed Growers, Gloucester.

ALOCASIA MACRORHIZA VARIEGATA, well variegated Plants, 7s. 6d. each; 60s. per dozen.
THOMAS JACKSON & SON, Nurseries, Kingston, S.W.

NEW PLANTS of 1864.—CATALOGUE of above at greatly reduced prices for one Stamp.
WM. DILLISTONE, Munro Nursery, Sible Hedingham, Essex.

General Plant Catalogue.

WM. CUTBUSH AND SON'S DESCRIPTIVE PRICED GENERAL PLANT CATALOGUE is now ready, post free.
Highgate Nurseries, London, N.

HARDY HERBACEOUS PERENNIAL SEEDS.—12 Packets of beautiful varieties, 2s. 6d.; 15 do., 3s. 6d.; 25 do., 5s. 6d.; 50 do., 15s.; 100 do., 30s.
BARR & SUGDEN, Seed Merchants, 12, King St., Covent Garden, W.C.

J. IVERY AND SON beg to announce that their DESCRIPTIVE PRICED CATALOGUES of AZALEA INDICA, HARDY BRITISH FERNS, ROSES, CONIFERÆ, GRAPE VINES, and SEEDS, may be had on application at their Dorking Nursery.

UNRIVALLED CALCEOLARIA, PRIMULA, CINERARIA, CARNATION, and PICOTEE.
HERBACEOUS CALCEOLARIA, 2s. 6d. per packet.
HALF SHRUBBY CALCEOLARIA, 2s. 6d. per packet.
CINERARIA, 2s. 6d. per packet.
CARNATION, Self, Flakes, and Bizarres, 2s. 6d. per packet.
PICOTEE, White and Yellow grounds, 2s. 6d. per packet.
BARR & SUGDEN, Seed Merchants, 12, King Street, Covent Garden.

PRIZE PLANT CASES, elegantly fitted up, 10s. 6d. to 200s.
RUSTIC WINDOW GARDENS, 15s. to 30s.
RUSTIC MIGNONETTE BOXES, 10s. 6d. to 21s.
RUSTIC STANDS and TABLES, 15s. to 105s.
PAXTON HANGING BASKETS, 10s. 6d. to 21s.
CONSERVATORY HANGING BASKETS, 3s. 6d. to 21s.
BARR & SUGDEN, Seed Merchants, 12, King Street, Covent Garden, W.C.

New Spotted and Blotched Prize Hybrid Mimulus, 1s. per packet; Trade packets, 2s. 6d., 3s. 6d., 5s., and 10s. 6d.
BARR AND SUGDEN offer with confidence the above superb strain of MIMULUS; the stock of which they have just purchased from Mr. Bull. The Seed has been saved from the beautiful varieties which Mr. Bull has this season been exhibiting at the great London Flower Shows.
BARR & SUGDEN, Seed Merchants, 12, King Street, Covent Garden, W.C.

New Hybrid Spotted Herbaceous Calceolaria, 2s. 6d. per packet; Trade packets 5s, 10s. 6d., and 21s.
BARR AND SUGDEN offer the above CALCEOLARIA as the finest strain in the country.
BARR & SUGDEN, Seed Merchants, 12, King Street, Covent Garden, W.C.

ORCHARD-HOUSE TREES, Fruiting in Pots—PEACHES, NECTARINES, APRICOTS, CHERRIES, PLUMS, PEARS, APPLES, VINES, and FIGS.
RICHARD SMITH, Nurseryman and Seed Merchant, Worcester.

VINES.—Strong planting CANES of all the leading varieties, at 3s. 6d. each, offered by
B. S. WILLIAMS, Paradise and Victoria Nurseries, Holloway, London.

Charlotte Rothschild Pine.

B. S. WILLIAMS has much pleasure in stating that he has secured a fine supply of this valuable and rare PINE, stated to be the finest in cultivation.
Also a fine Stock of BLACK JAMAICA and SMOOTH CAYENNE PINES. Prices on application.
Paradise and Victoria Nurseries, Holloway, London.

Vines—Extra Extra Strong.

FRANCIS AND ARTHUR DICKSON AND SONS have now ready for sending out, some 1500 extra fine well ripened VINES of all the new and leading kinds, TRUE TO NAME. Many are as thick as the "little finger," and if planted immediately a season will be gained. A better lot of Vines they believe were never grown. Inspection invited. Price from 3s. 6d. to 15s. each, according to kinds and strength. List of kinds on application.
"Upton" Nurseries, Chester.

Japanese Nurseries, Biggleswade, Beds.

NEW JAPANESE CHRYSANTHEMUMS.—The above curious and beautiful flowers, lately introduced by Mr. ROBERT FORTUNE, are now ready for sending out. Striped, Spotted, Yellow, and Bronze, perfectly hardy, 12s. and 18s. per dozen. Mixed, unnamed, 9s. T. AYRES, Biggleswade.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.
*** Part II. (Exotic Ferns) will be issued as early as possible.
Foot's Cray Nursery, S.E.

FERNS.—A large Collection from 6d. to 5l. each; FERN CASES, filled complete, from 4s. 6d. each; GOLD and SILVER FISH, from 4s. to 12s. per dozen, 2l. per 100, 18l. per 1000; CANARIES and FOREIGN AVIARY BIRDS, CAGES, &c.
R. GREEN, 154, Kingsland Road, N.E.; and Bedford Conservatories, Covent Garden Market, W.C.

Calceolaria, Cineraria, Primula.

E. G. HENDERSON AND SON offer SEED of the above in first-class quality, per packet, 1s., 2s. 6d., and 5s. each. The CALCEOLARIA is now magnificently in bloom at the Nursery; the others in their respective seasons.
Wellington Nursery, St. John's Wood, London, N.W.

To the Trade.

INTERMEDIATE STOCK SEED.—SCARLET and WHITE, fine strain.
E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

SCARLET INTERMEDIATE STOCK, Covent Garden variety, 1s. per packet.
PURPLE INTERMEDIATE STOCK, ditto, 1s. per packet.
HUNT'S SUPERB SWEET WILLIAM, 1s. per packet.
BARR & SUGDEN, Seed Merchants, 12, King Street, Covent Garden, W.C.

GLYCINE SINENSIS.—WANTED, Two Standard GLYCINES, for removal at proper time.
E., *Gardeners' Chronicle* Office, London, W.C.

To Radish Growers.

WANTED, 2 or 3 Quarters of Good New LONG SCARLET RADISH SEED. Must be warranted good stock and growth. Sample and lowest price to
R. LYNE, Esq., 41, Westbourne Park Road, Bayswater, London, W.

Italian Tripoli Onion.

CHARLES SHARPE AND CO., Sleaford, have Seed of the true variety to offer, their own importation direct from Italy.
Price to the Trade on application.

Rape Seed for Sowing.

CHARLES SHARPE AND CO., Sleaford, can offer a fine sample of the above, English Seed, saved in 1863.
Price on application.

The Best Turnips for Feeding off Early.

SUTTON'S LINCOLNSHIRE RED GLOBE.
SUTTON'S IMPERIAL GREEN ROUND
POMERANIAN WHITE GLOBE
EARLY SIX WEEKS
Price 8d. per lb., cheaper by the bushel.
Carriage free, except small parcels.
SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

The Best Substitutes for Swedes.

SUTTON'S GREEN-TOP YELLOW HYBRID and SUTTON'S PURPLE-TOP YELLOW HYBRID, price 9d. per pound, or cheaper by the bushel.
Also, YELLOW TANKARD TURNIP, 10d. per pound (cheaper by the bushel.)
These are equal in quality to the best Yellow Swede, and will stand the winter if not sown too early. Carriage free except small parcels.
SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Stones or Sprotbro Cabbage Seed.

JOHN SCHOLEY, NURSERYMAN and SEEDSMAN, Pontefract, has the above to offer to the Trade, his own growing of 1863. The above Cabbage is the earliest and best that supplies the Leeds and Manchester Markets.
Price per lb. 1s. 6d., or 7l. per cwt. About 15 cwt.

NEW and GENUINE TURNIP SEEDS in quantity.
SKIRVING'S KING of the SWEDES.
DIXON'S IMPERIAL SWEDE PURPLE TOP.
SKIRVING'S IMPROVED SWEDE PURPLE TOP.
E. P. DIXON & SONS, 57, Queen Street, Hull.

SHARPE'S IMPROVED LARGE SWEDE. DEVONSHIRE GRAY STONE TURNIP, LINCOLNSHIRE RED GLOBE TURNIP, WHITE GLOBE TURNIP, GREEN GLOBE TURNIP.
CHARLES SHARPE & Co., Seed Growers, Sleaford, have fine stocks of the above to offer, of their own growth. Price to the Trade on application.

Chivas' Orange Jelly Turnip.

CHIVAS AND WEAVER (late GEORGE CHIVAS) acquaint agriculturists that they are supplying the above TURNIP, grown with scrupulous care, from a Stock which they have been improving for several years; the characteristics of the variety are now generally recognised, viz:—Rapidity of Growth (may be sown till the middle of August), highly Nutritious and particularly Hardy. To secure the genuine article direct application is recommended. Price 1s. 6d. per lb.; 20 lb. delivered free at any Railway Station.
Chester, July, 1864.

NATURAL GRASSES: their Names and Derivations; Quality, Produce, Elevation, Situation, Soil, Use, Peculiarity, Season, Growth, Increase, Time of Flowering, Price, &c. Free for One Postage Stamp.
RICHARD SMITH, Seed Merchant, Worcester.

Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

Per pkt.—	s.	d.		s.	d.
PRIMULA	2	0	and	3	6
CINERARIA	1	6	and	2	6
CALCEOLARIA	1	6	and	2	6

Per pkt.—	s.	d.		s.	d.
INTERMEDIATE STOCK	0	6	and	1	0
BROMPTON do.	0	6	and	1	0

The above Seeds are saved with great care, and can be warranted to give satisfaction.
Paradise and Victoria Nurseries, Holloway, London, N.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens.
A DESCRIPTIVE and PRICED CATALOGUE post free on application.
Paradise and Victoria Nurseries, Holloway, London, N.

New Hardy Annual for Spring Flowering.
COLLINSIA VERNA.

W. THOMPSON, SEEDSMAN, Tavern Street, Ipswich, begs to announce that he is now prepared to supply the Trade with fine SEED of the above beautiful novelty for autumnal sowing. Its charming sky-blue and white flowers are among the first to greet the returning spring, and precede considerably those of any other species. It received a Second-class Certificate at the Regent's Park Exhibition, April 30; and was referred to in conspicuous terms in a leading article in the *Gardeners' Chronicle* of same date.
Prices and full description will be sent on prepaid application. A Coloured Plate for 6 Stamps, or gratis to purchasers of a certain quantity.

SHANKS' NEW IMPROVED PATENT

LAWN MOWING, ROLLING, COLLECTING, and DELIVERING MACHINE for 1864.

Important Improvements, combining efficiency with simplicity of construction, have been introduced into Shanks' Lawn Mowers for the ensuing season.

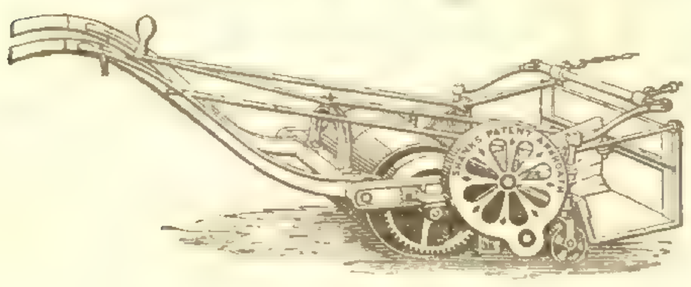

HORSE MACHINE.

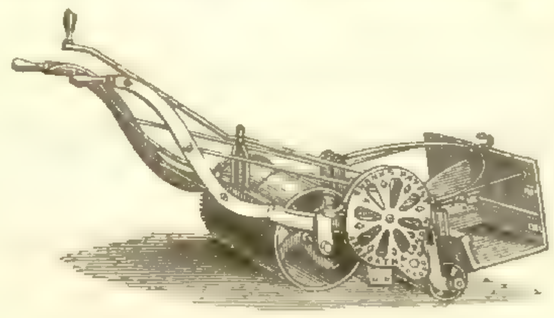

PONY MACHINE.

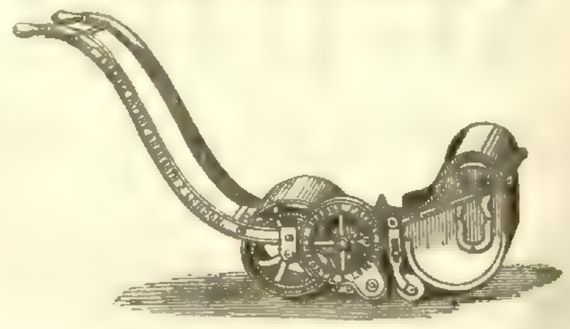

HAND MACHINE.

MOWS ON UNEVEN AS WELL AS ON LEVEL LAWNS, AND WHETHER THE GRASS BE WET OR DRY.

PATRONIZED ON FIVE SEPARATE OCCASIONS THIS SEASON BY

HER MAJESTY THE QUEEN, AND BY HIS MAJESTY THE KING OF SAXONY.

PRICES, including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

SHANKS' NEW PATENT HAND MACHINE,

for Pushing only.

Width of Cutter.		
10-inch Machine	£3 10 0	*Easily Worked by a Lady.*
12-inch Machine	4 10 0	
14-inch Machine	5 10 0	*Ditto by a Boy.*

Silent Movement, 4*s.* extra.

SHANKS' NEW PATENT HAND MACHINE,

For Pushing or Drawing, Separately or Together.

Width of Cutter.		
16-inch Machine	£6 12 6	*Easily Worked by a Man.*
19-inch Machine	7 12 6	*Ditto by a Man and Boy.*
22-inch Machine	8 7 6	*Easily Worked by Two Men.*
24-inch Machine	8 17 6	

Silent Movement, 7*s.* 6*d.* extra.

SHANKS' NEW PATENT PONY and DONKEY MACHINE.

Width of Cutter.		If with Patent Delivering Apparatus.
25-inch Machine	£12 10 0	25*s.* extra.
28-inch Machine	14 10 0	30*s.* ,,
30-inch Machine	15 15 0	30*s.* ,,

Silent Movement, 12*s.* 6*d.* extra; Boots for Pony, 21*s.* per set;
Ditto for Donkey, 16*s.* per set.

SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.		If with Patent Delivering Apparatus.
30-inch Machine	£19 0 0	30*s.* extra.
36-inch Machine	22 0 0	30*s.* ,,
42-inch Machine	26 0 0	40*s.* ,,
48-inch Machine	28 0 0	40*s.* ,,

Silent Movement, 20*s.* extra; Boots for Horse's Feet, 24*s.* per set.

Shanks' Patent Lawn Mowers require less power to work them than any other, are all warranted to give satisfaction, and if not approved of may be at once returned.

PATENTEES AND SOLE MANUFACTURERS:

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LONDON OFFICE and SHOW ROOMS, 27, LEADENHALL STREET, E.C.

A Stock of Lawn Mowers always kept at the London Depot, from which orders can be at once executed.

GREEN'S PATENT SILENS MESSOR,

OR

NOISELESS LAWN MOWING, ROLLING, and COLLECTING MACHINES.

BY SPECIAL APPOINTMENT,
SOLE MANUFACTURER

TO HER MOST GRACIOUS MAJESTY
THE QUEEN.

THE
FIRST PRIZE MEDAL
OF THE
INTERNATIONAL
EXHIBITION,
1862,
WAS AWARDED TO
THOMAS GREEN,
FOR HIS
PATENT
LAWN MOWERS.

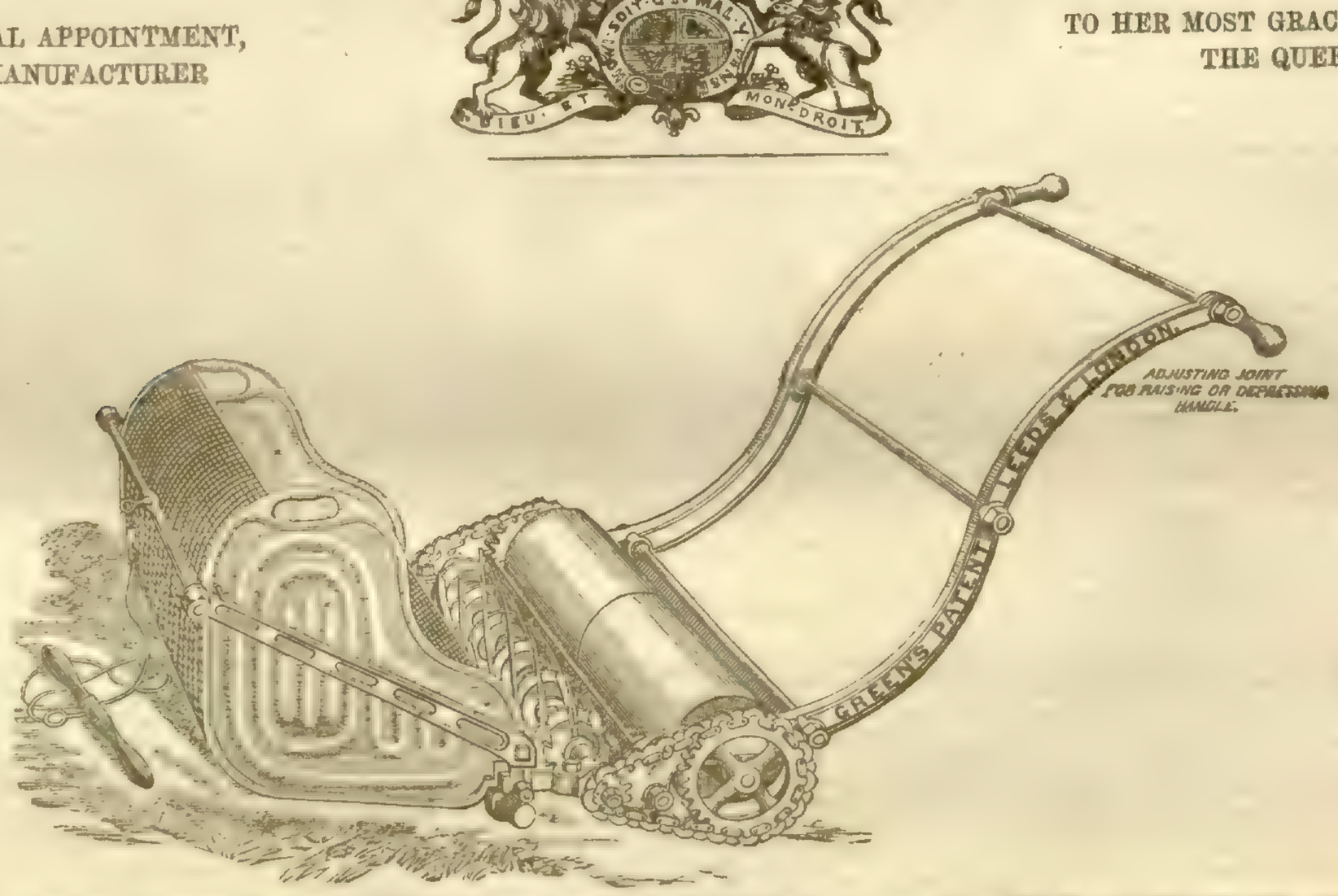

FOREIGN MEDALS
AWARDED TO
GREEN'S PATENT
LAWN MOWERS.
LIEGE, 1861.
BRUSSELS, 1861 & 1863.
NAMUR, 1862.
GAND, 1862.
LINNEENNE, 1861,
1862, & 1863.
LAEKEN, 1862.

EXTRAORDINARY AND WONDERFUL IMPROVEMENTS FOR THE PRESENT SEASON 1864.

ILLUSTRATED PRICE LISTS may be had on application to

THOMAS GREEN AND SON, SMITHFIELD IRON WORKS, LEEDS, YORKSHIRE;
or 2, FARRINGDON ROAD, HOLBORN HILL, LONDON, E.C.; or 19, EDEN QUAY, DUBLIN.

Exhibition Prize Medal, 1862.

HOTHOUSES for the MILLION.—On the principle invented and patented by Sir Joseph Paxton, M.P., combining simplicity, cheapness, excellence, and durability. SPAN-ROOF HOUSES, painted three coats, and glazed with English Sheet Glass, ready for fixing, 21 ft. by 13 ft., 24*l.*; 43 ft. by 19 ft., 73*l.* 5*s.*; 64 ft. by 25 ft., 161*l.*

Illustrated Circulars, with Prices, can be had on application to SAMUEL HERRMAN, 7, Pall Mall East, London, S.W.

Also, A HANDBOOK on VINE and FRUIT TREE CULTIVATION, 2d Edition, price 1s.; post free, 1s. 1d.

Exhibition Prize Medal, 1862.

MUSGRAVE'S PATENT SLOW COMBUSTION STOVE.

This Stove is the nearest approach to Warming by Hot Water.

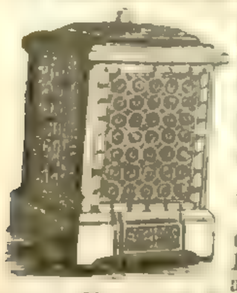

It will burn in churches from Saturday till Sunday evening, without attention during the hours of worship. In Halls will burn day and night for weeks, with little care. Capable of Warming a large Apartment for 24 hours, at a cost of 3*d.*; and deserving of special attention, because of its safety, healthfulness, durability, and extreme simplicity.

It is also made for small Conservatories, with a vapour chamber.

For particulars of the above, and of MUSGRAVE'S PATENT STABLE and COWHOUSE FITTINGS, which attracted so much attention at the Exhibition, address,

MUSGRAVE BROTHERS, Ann Street Iron Works, Belfast.

Card.

SAMUEL N. McGERROW,
GENERAL HORTICULTURAL BUILDER,
Knotty Ash, near Liverpool.

Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

W. J. HOLLANDS, IRON MERCHANT,
31, Bankside, London, S.E.

HOT WATER PIPES, from Stock, per yard:—2-inch, 1*s.* 4*d.* 3-inch, 2*s.*; and 4-inch, 2*s.* 7*d.* BENDS, from Stock, 1*s.* 7*d.*, 2*s.* 6*d.* and 3*s.* 3*d.* each. THROTTLE VALVES, 10*s.* 6*d.*, 13*s.* 6*d.*, and 15*s.* each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day. A discount to the Trade.

Heating by Hot Water.

HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, TUBULAR, and Elliptic, from 24*s.* each. Improved Boilers and Iron Stands to use without brickwork, 56*s.* each. Valves from 10*s.* 6*d.* each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at

Mr. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S. Price List on application.

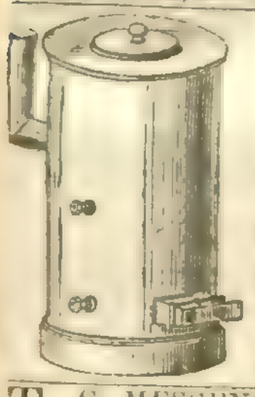

RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the

Patentee's Warehouse, 155, Cheapside, London, E.C.

Price complete from 3*l.* 10*s.*

Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

T. G. MESSENGER, HORTICULTURAL BUILDER and ENGINEER, Loughborough.

T. G. M.'s PATENTED BUILDINGS combine all the modern improvements, are most effectually ventilated by means of his unequalled Apparatus, can be made either plain (and which are at the same time elegant in appearance), or of the most elaborate design. They can be fixed as permanent buildings, or made to be portable.

T. G. M.'s HEATING APPARATUS continues to give the greatest satisfaction for its heating qualities and small consumption of fuel.

ILLUSTRATED CATALOGUES of the above, Glazing without Putty, Garden Engines, &c., sent upon application.

Heating by Hot-Water.

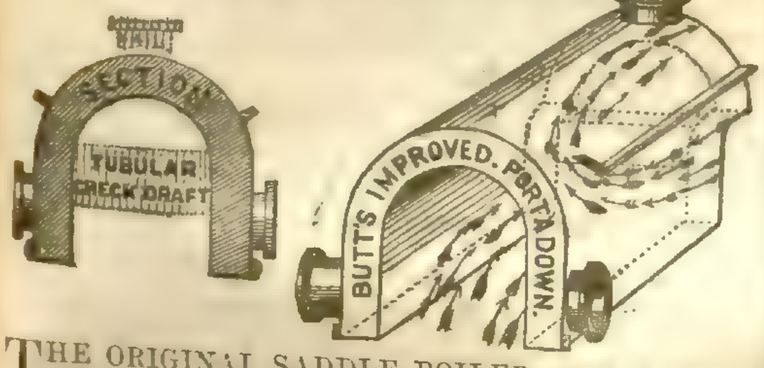

THE ORIGINAL SADDLE BOILER, with Improved Tubular Check Draft, Flued Ends, and Ribbed Sides, for Heating Greenhouses, Vineries, Forcing Pits, Public Buildings, &c. These Boilers possess increased heating surface capacity, power, economy in fuel, and are the only class of Boilers, all points considered, when properly fixed, that can be relied upon with safety for Heating Greenhouses, &c., to any extent, by Hot Water, and at a moderate price.

Gardeners interested in such work should write for List of Testimonials, sent Post Free on application to FREDERICK WILLIAM BUTT late of London, Portadown, Ireland.

Greenhouses.

FOR SALE (SECOND-HAND), a capital LEAN-TO RANGE, 82 feet long by 15 feet wide, in three compartments, well adapted for Vineries or Show-houses.

The owner's Grounds are 10 minutes drive from Chelmsford Railway Station, where they may be seen any day before 12 A.M.

The Range or part may be purchased.

For price and particulars apply to F. H. P. DENNIS, Horticultural Builder, &c., Chelmsford, Essex.

BEFORE you BUILD any more GARDEN WALLS, see the NEW PATENT CORRUGATED BRICK, invented and manufactured by I. FOXLEY, acknowledged to be the best thing for the purpose by gardeners who have seen it. No nailing required, no fixtures of iron, copper, &c. Perfect training is obtained, and the Trees can be kept clean and free from Insects.

License granted to make the Bricks in certain localities, and further information on application to I. FOXLEY, Stony Stratford, Bucks.

Glass for Garden Purposes.

JAMES PHILLIPS AND CO.
beg to submit their prices as follows:—

REDUCED PRICES

OF PROPAGATING GLASSES.

	Each.—*s.*	*d.*		Each.—*s.*	*d.*
3 inches in diameter	0	4	12 inches in diameter	1	6
4 " "	0	5	13 " "	1	10
5 " "	0	6	14 " "	2	3
6 " "	0	7	15 " "	2	9
7 " "	0	9	16 " "	3	0
8 " "	0	10½	17 " "	4	0
9 " "	1	1	18 " "	4	6
10 " "	1	2	19 " "	5	6
11 " "	1	4	20 " "	6	0

BEE GLASSES.

	Each.—*s.*	*d.*		Each.—*s.*	*d.*
4 inches in diameter,	0	6	9 inches in diameter	1	8
5 " "	0	8	10 " "	2	0
6 " "	0	10	11 " "	2	6
7 " "	1	1	12 " "	3	0
8 " "	1	4			

Not made above 12 inches.

CUCUMBER GLASSES.

	Each.—*s.*	*d.*		Each.—*s.*	*d.*
24 inches long	1	9	16 inches long	1	2
22 " "	1	7	14 " "	1	0
20 " "	1	6	12 " "	0	10
18 " "	1	4	Made to any length.		

HAND GLASSES,

WITH OPEN TOPS.

	Each.—*s.*	*d.*		Each.—*s.*	*d.*
12 inches	6	6	18 inches	9	6
14 "	7	6	20 "	10	6
16 "	8	6	22 "	11	6
			24 "	12	6

Painted and Glazed with 16 oz. Sheet Glass.

London Agents for HARTLEY'S IMPROVED PATENT ROUGH PLATE.

LINSEED OIL, Genuine WHITE LEAD, CARSON'S PAINTS, PAINTS of various colours ground ready for use.

180, Bishopsgate Street Without, London, E.C.

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.

F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.

Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

Also TESSELATED PAVEMENTS of more enriched designs than the above.

WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.

To be obtained of F. & G. ROSHER, at their Premises as above.
Orders forwarded by Railway with despatch.

SILVER SAND (Best Quality), of F. & G. ROSHER, at the addresses above—14*s.* per Ton, or 1*s.* 3*d.* per Bushel. 2*s.* per ton extra for delivery within three miles, and to any London Railway or Wharf. Quantities of 4 Tons, 1*s.* per Ton less.

GARDEN FLINTS for Grotto Work, 12*s.* and 14*s.* per Ton.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 570.

J. TYLOR & SONS'
GALVANIZED IRON TUB
GARDEN ENGINES,
with Registered Spreader.

8 gal.	12 gal.	16 gal.
£2 13 6	£3 2 0	£3 12 6

24 gal.	30 gal.
£5 0 0	£5 12 0

Fig. 571

J. TYLOR & SONS'
OAK TUB
GARDEN ENGINES,
with Registered Spreader.

15 gal.	28 gal.
£5 12 0	£7 0 0

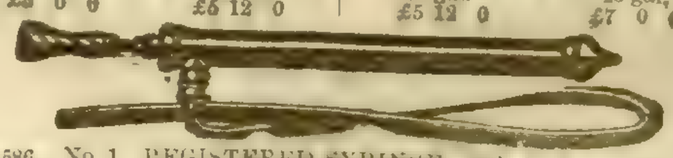

Fig. 586. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. £1 6 6 each.
No. 2. Ditto ditto .. 1 1 0 "
Telescope Branch Pipe for ditto .. .. 0 10 0 "

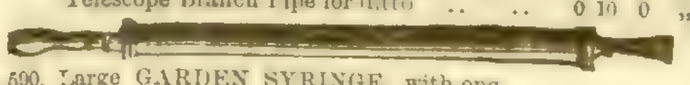

Fig. 590. Large GARDEN SYRINGE, with one rose and jet .. .. 10*s.* 6*d.* each.
" 589. Middle Ditto ditto .. .. .. 9 6 "
" 588. Small Ditto ditto .. .. .. 8 6 "
" 587. LADIES' GARDEN SYRINGE, with do. .. 6 9 "

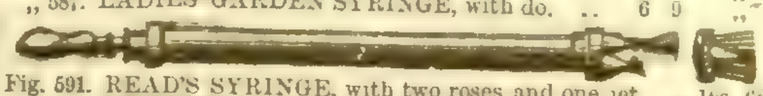

Fig. 591. READ'S SYRINGE, with two roses and one jet .. 10*s.* 6*d.*
" 592. READ'S SYRINGE, with one rose and jet 14 0
" 592. Improved ditto ditto large .. 13 0

Garden Engines and Syringes of J. TYLOR & SONS' manufacture kept in stock by Ironmongers and Seedsmen in every part of the United Kingdom.

J. TYLOR & SONS, Manufacturers, Warwick Lane, Newgate Street, London, E.C.

To Seed Merchants and Nurserymen.

SAYNOR AND COOKE, PRUNING and BUDDING KNIFE MANUFACTURERS, beg respectfully to say that they WILL NOT BE UNDERSOLD by any House in the Trade. They also warrant one of their Knives to last two of any other make

Paxton Works, Sheffield.

SHAW'S TIFFANY.

For samples and prices apply to
J. SHAW & Co., 29, Oxford Street, Manchester.

FLOORING, MATCH BOARDS, DEALS, &c., as low as advertised. White Batten, 9*l.* per 120, 12 feet; Yellow ditto, 10*l.* ditto ditto; ¼ Floor Boards, well prepared, from 11*s* 6*d.* per square; Matched Lining, from 12*s.*; Venetian Blind Laths from 8*s.* 6*d.* per 100 feet super.—CHARLES CUTLER, Surrey Sawing and Planing Mills, Church Street, Kennington.

The Hydropult Challenged.

WINTON'S "HYDROPNEUMATIC" FIRE and GARDEN ENGINES are acknowledged to be superior in every respect to the Engine of the above name. Sold everywhere.

HYDROPNEUMATIC, £1 15*s.* Lady's ditto, £1 10*s.*

JOHN G. WINTON, 13, Gladstone Street, St. George's Road, Southwark, London, S.E.

Hydraulic Suction Pumps, Garden Engines, Syringes, &c.

CAUTION.—The well-known reputation of

READ'S ENGINES, MACHINES, and SYRINGES, has led to the nefarious practice of Manufacturers selling Syringes as "READ'S PATENT."

R. READ begs to caution the Public against being deceived by such false representations, as these instruments, upon trial, will be found defective and useless.

READ'S SYRINGES have the Royal Arms, and address, 35, Regent Circus, London, W. Descriptions sent Post free.

BARROWS AND CARMICHAEL, Banbury, MANUFACTURE STEAM CULTIVATING APPARATUS, the cheapest, most simple, and successful Tackle out.

PORTABLE STEAM ENGINES, more simple in construction, efficient at work, and consuming less coal than the old-fashioned Engines usually made.

THRESHING MACHINES, which will astonish those who work the ponderous and complicated Machines now so generally used.

TANNED GARDEN NETTING.—Inch Mesh, 1*d.* per yard; in pieces containing 400 to 500 yards. Small quantities, 1½*d.* per yard. TOBACCO PAPER, price to the Trade on application.
H. BROWN, Seedsman, 4, Commutation Row, Liverpool.

TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

VARNISHED FLOWER STICKS:—1 foot, 3*d.*; 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s*, 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

NETTING for FRUIT TREES, SEED BEDS, RIPE STRAWBERRIES, &c.—TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3*d.* per yard; or 100 yards, 20*s.*; 4 yards wide, 6*d.* per yard; or 50 yards, 20*s.* NEW TANNED NETTING, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 6*d.* per yard; 4 yards wide, 1*s.* per yard; ¾-inch mesh, 4 yards wide, 1*s.* 6*d.* per yard.

Can be had in any quantity of EATON & DELLER, 6 and 7, Crooked Lane, London Bridge, E.C.

EDGINGTON'S RICK CLOTHS for 59 years have maintained their celebrity as the best.

EDGINGTON'S MARQUEES and TENTS are the prettiest.

EDGINGTON'S MARQUEES for hire are the most elegant and capacious.

EDGINGTON'S GARDEN NETTING is the cheapest and most durable; 1*d.* per square yard in quantities of 250, 500, and 1000 yards.

Samples of material free on application. Be particular—FREDERICK EDGINGTON & Co., Thomas Street, Old Kent Road, London, S.E.

INTERNATIONAL EXHIBITION, 1862, Class XIX.
Honourable Mention.

BENJAMIN EDGINGTON, MARQUEE, TENT, RICK CLOTH, and FLAG MANUFACTURER by Special Appointment to her Majesty.—MARQUEES, TEMPORARY ROOMS and AWNINGS, for Dinners, Balls, Parties, &c., on HIRE, lined, boarded, lighted, and elegantly decorated. RICK CLOTHS, New and Second-hand, with Poles, &c., complete. NETTING for Fruit Trees; Scrims for Greenhouse Blinds, &c. Be particular to address,

BENJAMIN EDGINGTON (only), 2, Duke Street, London Bridge, S.E.
No other Establishment.

To the Trade.

HOOPER'S ETRUSCAN HYACINTH VASES.—The new designs for the coming season, in these SUPERB ORNAMENTS are now ready, and List of Prices may be had on application.

Notwithstanding the unprecedented beauty and novelty of the designs of last year, those of the present will be found to far eclipse them, and must be looked upon as marvels of the Potter's art. The most perfect and exquisite delineations of ancient Grecian Figures, both upon dead and brilliant surfaces, and likewise imperishable gold and other ornaments, are included amongst their embellishments. In spite of these improvements, however, the prices are not raised.

H. & Co. beg to inform those of their customers, who being supplied last season out of the first lot of Vases, complained of imperfection in the glazing, that such improvements have since been made in their manufacture as to render them in that respect, as in every other, PERFECT.

Early orders are solicited to ensure supply, as last year H. & Co. were quite unable to fulfil the whole of the orders received for them.

HOOPER & Co., Covent Garden Market, London, W.C.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—

"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles.—Your obedient servant, "G. GLENNY."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.

The GUTTA PERCHA COMPANY, Patentees, 18, Wharf Road, City Road, London, E.C.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, &c.

PROTECTION from the SCORCHING RAYS of the SUN.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1*s.* 8*d.* per yard run.
Four yards wide	3*s.* 4*d.* per yard.
An improved make, 2 yards wide ..	1*s.* 9*d.* per yard.
An improved make, 3 yards wide ..	2*s.* 8*d.* per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.

"It is much cheaper than Mats as a covering."

TERRA COTTAS always on Sale, viz.:—FOUNTAINS, VASES, STATUES, FLOWER POTS, TRACERY, CHIMNEY TOPS, PAVING TILES, &c., at

J. R. BLASHFIELD'S Galleries, Praed Street, Paddington, W.

HORTICULTURAL TOOLS.—Lawn Mowers, Garden Rollers, Garden Engines, Syringes, and Tools of all kinds; Wire Netting, Prize Churns, &c., delivered carriage free; Price List free.

BURGESS & KEY, 95, Newgate Street, E.C.; Works, Brentwood, Essex.

SMITH, BECK, AND BECK'S GREENHOUSE and HOTBED THERMOMETERS.—These Instruments are of the very best construction, and at moderate prices.

31, Cornhill, E.C.

Universal Microscope. Price £5 5s.

SMITH, BECK, AND BECK,

31, Cornhill, E.C.; late 6, Coleman Street.

*** Catalogues sent on receipt of 6 postage stamps.

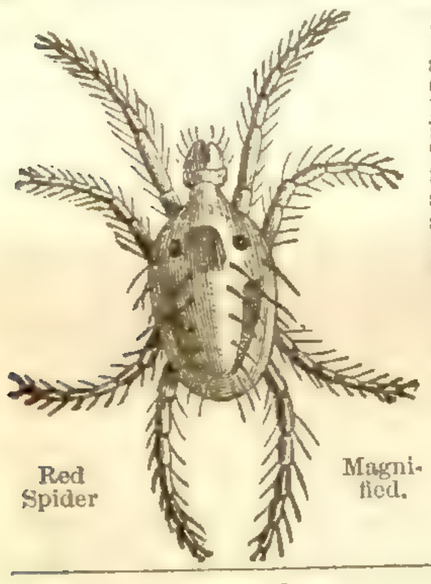

Red Spider — Magnified.

GISHURST COMPOUND, whether used against Insects and Mildew, on Growing Plants, or as Winter Dressing on Trees at rest, should be dissolved 48 hours before use. This gets rid of smell, and if the Solution be decanted, prevents any staining of foliage. A strength of from 1 to 2 oz. to the gallon of water is recommended for growing Plants; one from 4 to 16 oz. for Trees at rest.

Sold Retail by Nurserymen and Seedsmen, in boxes, 1s., 3s., and 10s. 6d. each.

Wholesale by
PRICE'S PATENT
CANDLE COMPANY
(LIMITED).

COCOA-NUT REFUSE delivered within 2½ miles of Charing Cross, at 2s. per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. BARSHAM & Co.

BARSHAM'S BRUSHES and MATS are sold in every town.

CAUTION.—Every Brush is stamped, J. BARSHAM'S Patent.

TAN GRATIS.—In the immediate neighbourhood of Covent Garden Market.

ESSEX & SONS, 28, Stanhope Street, Clare Market.

PEAT SOILS, various excellent kinds, on SALE by the Truck Load at moderate prices.

W. SHORT, Sand and Peat Depôt, Reigate, Surrey.

REIGATE SILVER SAND, 7s. 6d. per ton; packed, 16s. per ton, delivered to Reigate Station. First-class Peat Soils, Loams, Bog Mould, &c., Sand Stone for Ornamental Rock Works.

N.B. Loaded Trucks can be sent direct through to almost all the Railway Goods Stations in Great Britain.

W. SHORT, Sand and Peat Depôt, Reigate, Surrey.

REIGATE SILVER SAND, 12s. per ton, at Swan Place, delivered five miles, or to any London Wharf or Railway, 16s. per ton, or 1s. 6d. per bushel (sacks at cost price, or on hire).

Kentish and other Peats, Yellow Loam, Leaf Mould, Sphagnum Moss, and Cocoa Fibre Refuse.

J. KENNARD, Swan Place, Old Kent Road, London, S.E.

Preliminary Notice.

CLEMATIS JACKMANNI and C. RUBRO-VIOLACEA have received two First-class Certificates, awarded by Royal Horticultural Society, August 4, 1863. Will be sent out this coming Autumn by Messrs. GEO. JACKMAN & SON. Orders will now be taken and executed in strict rotation.

Further particulars (with EXTRACTS from the LEADING HORTICULTURAL PAPERS) with price, will be given in future Advertisements.

Woking Nursery, Surrey.

CARTER'S FARMER'S VADE-MECUM.

A MAGNIFICENT FIELD OF

Pure White Canadian Seed Oats in full Ear, and 3½ feet high, June 11, 1864, at

MR. HALLETT'S MANOR FARM, BRIGHTON (within 200 yards of St. Mark's Church, Kemp Town), is now OPEN to INSPECTION. This Field adjoins the Lodge (at the entrance gates of the Manor House), where a sample of the Oats sown may be seen upon presenting Card with Address.

These Oats were raised from a very fine sample in 1862, which was hand-picked 27 times, and weighed 48 lb. the imperial bushel. They were drilled (3 bushels per acre), on the 24th February, 1863, cut July 20, and yielded on a very thin poor soil upwards of 80 bushels of Oats, and 185 trusses (36 lb.) of most excellent feeding straw per acre; while the ordinary Black Tartarian Oat, on the other part of the same field, ripened a fortnight later, yielded of grain a less crop, weighing 25 per cent. less per bushel, and of straw 120 trusses per acre.

The Canadian Oats were again hand-picked, to ensure *perfect* purity, and drilled on the above field February 17 of this year. Upon the same field, 1863:—

	Kernel.		Husk.	
Canadians	69.43	..	30.57	per cent.
Tartarians	70.79	..	29.21	per cent.

CARTER'S GARDENER'S VADE-MECUM.

Seeds Worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1s. 6d., 2s. 6d., 3s. 6d., and 5s. each.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our Collection in the Spring, 1862. In sealed packets, 1s., 2s. 6d., and 5s.

DOBSON'S PRIZE PRIMULA SINENSIS SEED, Superbly Fringed. In sealed packets, 1s., 2s. 6d., and 5s.

J. DOBSON & SONS, Seedsmen, Isleworth, W.

Sow in July.

DOBSON'S HYBRIDISED CALCEOLARIA is unequalled in the Kingdom. New Seed just harvested, from 500 differently marked Varieties. Our celebrated Strain has taken all the First Prizes everywhere for the last 10 years. In sealed packets, 1s. 6d., 2s. 6d., 3s. 6d., and 5s.

DOBSON'S PRIZE CINERARIA and PRIMULA, sealed packets, 1s., 2s. 6d., and 5s.

J. DOBSON & SONS, Woodlands Nursery, Isleworth, W.

ROBERT PARKER begs to offer the following, all of which are well-grown, clean, and healthy plants:—

		s.	d.
AZALEA INDICA, Stocks for Grafting	per 100	20	0
ALOCASIA METALLICA	each	7	6
CLERODENDRON BALFOURII	,,	10	6
RHODODENDRON COUNTESS of HADDINGTON ..	,,	21	0
,, JAVANICUM	,,	2	6
,, NUTTALI	,,	2	6
TRITOMA GRANDIS	,,	5	0
,, UVARIA GLAUCESCENS	,,	1	6

Intending purchasers are invited to inspect the general stock of Plants. DESCRIPTIVE and PRICED CATALOGUES of SEEDS and PLANTS are published, which will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

HERBACEOUS CALCEOLARIA, &c., SEED.

CHOICE CALCEOLARIA (JAMES').—This unrivalled strain has in every instance received FIRST PRIZES wherever exhibited—can be seen in bloom here. Sealed Packets, 1s. 6d., 2s. 6d., and 5s.

CHOICE PRIMULA SINENSIS FIMBRIATA.—Hayes' superb strain. Sealed Packets, 2s. 6d., 3s. 6d., and 5s.

CHOICE CINERARIA.—Saved from best named varieties, and cannot be surpassed. Sealed Packets, 1s. 6d., 2s. 6d., and 5s.

HUNTS SWEET WILLIAM.—Sealed Packets, 6d. and 1s.

SCARLET INTERMEDIATE STOCK.—True and fine. Sealed Packets, 1s. and 2s. 6d.

PANSY.—From best named varieties. Sealed Packets, 1s. and 2s. 6d.

And every other first-class Seeds. See CATALOGUE, post free.

WM. CUTBUSH & SON, Highgate Nurseries, London, N.

Extra Strong Grape Vines from Eyes.

LUCOMBE, PINCE, AND CO., having this season a splendid stock of strong VINES fit for immediate planting, propagated from Eyes taken from their large experimental Vinery, can offer fine healthy, short-jointed Canes, 6 to 9 feet long, of all the leading kinds, at from 3s. 6d. to 7s. 6d. and 10s. 6d. each.

L., P. & Co. have one of the largest Stocks in the Trade of Extra Strong Vines, with Canes 9 to 11 feet long, and proportionally strong, from which purchasers can advantageously select those suitable for fruiting finely next season. Liberal Compensation for Carriage.

Exeter Nursery, Exeter.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.

The Stock having been purchased by JOHN STANDISH, strong Plants will be sent out in the first week of June, price 15s. to 31s. 6d. each.

Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.

Royal Nurseries, Ascot, Berks.

Vine Duchess of Buccleuch.

ROBERT PARKER begs to announce that he has arranged for the distribution of the stock of this very distinct and valuable EARLY WHITE GRAPE, and that the plants will be sent out early in autumn. Full particulars as to its qualities will be given in future advertisements. In the meantime, and during the whole of the season, visitors to the Gardens of Dalkeith Palace will have opportunities of seeing and judging of its merits, as a large quantity of pot and permanent Vines are now fruiting at that establishment.

Strong Planting Canes, 21s. each; Extra strong Fruiting Canes, 42s. each. Orders are now being booked, and will be executed in strict rotation.

Exotic Nursery, Tooting, Surrey, S.

Choice Seeds for Present Sowing.

ROBERT PARKER begs to offer the following, all of which are warranted new and the finest possible quality of their several kinds:

	Per packet—s.	d.
CALCEOLARIA, Herbaceous, mixed	2	6
CINERARIA, from named varieties, mixed	2	6
STOCK, Scarlet Intermediate	0	6
,, White, ditto	0	6
,, Giant Scarlet, ditto	1	0
,, White, ditto	1	0
PRIMULA SINENSIS FIMBRIATA, mixed	2	6

A PRICED and DESCRIPTIVE CATALOGUE of SEEDS and PLANTS is published and will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

PRIZE MEDAL FOR SEEDS AND CEREALS.

ESTABLISHED 1800.

WILLIAM MORTON,

OLD MARKET PLACE, RIPON, YORKSHIRE,

Is now supplying his YELLOW BOY GREEN-TOPPED SWEDE TURNIP, grown from selected large Bulbs of the Hardy Green-topped Swede, at 9d. per lb.; and his large FOSTERTON HYBRID, 8d. per lb. NEW TURNIP SEEDS (Various), BROAD-LEAVED and LONG-STALKED RAPE SEEDS, WHITE MUSTARD, WURZEL SEEDS.

MIXTURES of GRASS SEEDS for Permanent Pasture, suitable to the various soils; ENGLISH and DUTCH CLOVERS, ARTIFICIAL GRASSES, LAWN GRASS, RYE-GRASSES, &c. Circulars (Third Edition) free by Post.

RIPON and CLARO SEED ESTABLISHMENT, RIPON, YORKSHIRE.

NEW GRAPE, ROYAL VINEYARD.

TO BE SENT OUT IN SEPTEMBER NEXT.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Feels great pleasure in being able to introduce this important acquisition. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years.

B. S. W., to meet an extensive demand, has prepared a large Stock, which will be in excellent condition, and ready for distribution in September. Early orders are respectfully solicited. A List of those who have favoured him with orders will be published shortly.

PRICES:

Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

Dr. HOGG'S *Report on the Royal Vineyard Grape:*

"Bunches hard and well set, sometimes long and tapering, and sometimes short ovate. Berries large and roundish ovate, skin white and somewhat transparent, showing the texture of the flesh through it, remarkably thin, and adhering closely to the flesh; so thin is it, that the whole berry may be eaten without any inconvenience being caused by the skin. Flesh firm and crackling, with a fine Sweet-water flavour. This is a fine looking Grape, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society."

For the opinions of the Horticultural Press, see *Gardeners' Chronicle*, April 9.

A correct COLOURED ILLUSTRATION by ANDREWS will be sent in exchange for 12 Postage Stamps.

NEW PLANT CATALOGUE.

JAMES VEITCH

BEGS TO ANNOUNCE THAT HIS

CATALOGUE OF NEW AND BEAUTIFUL PLANTS FOR THE PRESENT SEASON

IS NOW READY, AND WILL BE FORWARDED POST FREE ON APPLICATION.

ROYAL EXOTIC NURSERY, CHELSEA, S.W.—July 23.

ROYAL HORTICULTURAL SOCIETY,

SOUTH KENSINGTON.

EXHIBITION of HORTICULTURAL IMPLEMENTS,
MAY 20, and until AUGUST 24, 1864.

LIST of AWARDS.

CLASS 2.—**GARDEN SEATS in IRON and WIRE.**
Insufficient Competition.

CLASS 4.—**GARDEN SEATS in WOOD and IRON combined.**
Insufficient Competition.

CLASS 11.—GARDEN STOOLS in MAJOLICA or any other material (Not mentioned in the Schedule).
Insufficient Competition.

CLASS 14.—GARDEN VASES in TERRA COTTA.
Insufficient Competition.

CLASS 17.—GARDEN VASES in POTTERY WARE.
Insufficient Competition.

CLASS 18.—**GARDEN VASES in IRON.**
Insufficient Competition.

CLASS 23.—GARDEN THERMOMETERS of ALL KINDS, famous for accuracy and good workmanship.

Mr. L. Casella, 23, Hatton Garden, London, for Thermometer with Black Tin Frame and China Dial, price 9s., First-class Certificate.

CLASS 24.—**GARDEN THERMOMETERS of all kinds, famous for accuracy and cheapness.**

Mr. L. Casella, for Thermometer with Box-wood Indicator, Second-class Certificate.

CLASS 25.—GEOTHERMAL THERMOMETERS

Mr. L. Casella, for Geothermal Thermometer with Brass Tube, price 25s., First-class Certificate.

CLASS 26.—RAIN GAUGES.

Mr. L. Casella, First-class Certificate.

CLASS 27.—**GARDEN BAROMETERS of any kind.**

Mr. L. Casella, for Upright Barometer, First-class Certificate.
Mr. L. Casella, for Aneroid Barometer, Second-class Certificate.

CLASS 28.—GARDEN HYGROMETERS of any kind.

Mr. L. Casella, First-class Certificate.

CLASS 38.—GARDEN MOWING MACHINES drawn by hand.

Messrs. Thomas Green & Son, 2, Farringdon Road, Holborn Hill, First-class Certificate.

But the Judges consider the extra knives and small rollers disadvantageous to the machine.

CLASS 39.—GARDEN MOWING MACHINES, drawn by a Pony.

Messrs. T. Green & Son, First-class Certificate.

The foot-note to Class 38 applies to the Machine exhibited in this Class also.

CLASS 43.—GARDEN ROLLERS for One Man.

In this Class there were four Exhibitors, but the Judges did not consider the Rollers of sufficient merit to warrant them in making any award. They consider the division in the small rollers a positive disadvantage.

CLASS 47.—GARDEN ENGINES with Two Wheels, Zinc Tub.

Messrs. T. B. Brown & Co., Second-class Certificate.
This was awarded for the improved principle of fixing the leverage, and consequent easy working.

CLASS 49.—HYDROPULTS of all kinds.

The Hydropults exhibited were considered by the Judges inferior to the Garden Engines, not being so convenient for garden purposes, and requiring double the power to work them.

CLASS 50.—INDIA-RUBBER HOSE for Watering Gardens.

Messrs. J. Warner & Sons, 8, Crescent, Cripplegate, London, Second-class Certificate.

CLASS 54.—GARDEN PUMPS (Fixtures).

Messrs. J. Warner & Sons (Warners' patent), First-class Certificate.

CLASS 56.—GARDEN PUMPS (Moveable).

Messrs. J. Warner & Sons, for Barrow Pump with Two Wheels, First-class Certificate.
Messrs. J. Warner & Sons, for Galvanised Iron Pump on Iron Tripod, Second-class Certificate.

CLASS 59.—GARDEN WATERING POTS, small, in Tin or Zinc.

The pots exhibited in this class were not considered fit for the purpose.

CLASS 61.—**GARDEN POTS in TERRA COTTA.**

The pots exhibited in this class were not considered worthy of a Certificate.

CLASS 62.—GARDEN POTS in MAJOLICA for Conservatories.
Insufficient Competition.

CLASS 63.—FANCY GARDEN POTS in any material.
Insufficient Competition

CLASS 79.—**PRUNING SAWS.**

Mr. W. H. Mitchell, 3, Britannia Place, Limehouse, E., for Pruning Saw to shut up, Second-class Certificate.

The Judges considered the principle worthy of commendation.

CLASS 82.—MODELS of GREENHOUSES, FORCING HOUSES, and CONSERVATORIES, showing the best method of ventilation and heating.

The Judges did not consider the model exhibited offered any advantages over houses at present in use.

CLASS 83.—**BOILERS for HEATING.**

The Judges did not consider the Boilers exhibited possessed any advantages over those in general use.

CLASS 85.—HOT-WATER PIPES, showing the different systems of Jointing.

Those exhibited were considered well adapted for Steam, but too expensive for Hot Water.

CLASS 86.—STOP-VALVES for HOT-WATER PIPES.

Mr. T. G. Messenger: Horticultural Builder, Loughborough, for Messenger's Patent, First-class Certificate.

CLASS 90.—GARDEN TOOLS of any kind not mentioned in the Schedule.

Mr. J. T. Oakley, 202, Grange Road, Bermondsey, for Garden Engine with wood tub, without wheels, Second-class Certificate.
J. Reynolds, for Improved Fence for Training Plants, &c., Second-class Certificate.

The following Classes not mentioned in the foregoing List were represented, but the Judges did not deem the articles exhibited of sufficient merit to warrant them in giving any award:—20, 21, 29, 34, 52, 53, 57, 64, 87, 88, and 89.

THE BEST SORTS of CABBAGE SEEDS, in packets, 6*d.* each sort, Post Free, sufficient to raise a thousand plants of each.

SUTTON'S IMPERIAL
EARLY BLENHEIM
SUTTON'S DWARF COMBE

NONPAREIL, EARLY YORK, ENFIELD MARKET, WHEELER'S IMPERIAL, and other old sorts, 3*d.* per pckt; DRUMHEAD CATTLE CABBAGE, 2*s.* 6*d.* per lb.

SUTTON & SONS,
Royal Berkshire Seed Establishment,
Reading.

DILLISTONE AND CO., Sturmer and Woodlands Nurseries, near Halstead, and only one mile from the Haverhill Junction of the Great Eastern and Colne Valley Railway, beg to offer 12 distinct and most beautiful HARDY CLIMBERS, all well-established, from 18 inches to 3 feet high, for 9s. They consist of the finest CLIMBING ROSES, JASMINES, PASSION FLOWERS, HONEYSUCKLES (in some rare kinds), CLEMATIS and IVIES (a most beautiful collection), &c., &c. Post Office Orders must accompany the order from strangers.

A CATALOGUE for one stamp is now in the press, of New and Rare Plants of 1864, at reduced charges. We possess all the greatest novelties.

A CATALOGUE of GENERAL STOCK and a WHOLESALE CATALOGUE of STOCK, each for one stamp.

BURTON-UPON-TRENT FLORAL and HORTICULTURAL SOCIETY.

The SECOND EXHIBITION of the above Society will take place on WEDNESDAY, August 24. The First-class and Extra Prizes will be open to all England.

EXTRA PRIZES.

	First.	Second.	Third.
Collection of Roses (24-kinds, 3 trusses of each*)	£3 0 0	£1 10 0	£0 15 0
Ditto Dahlias (24 varieties)	1 10 0	0 15 0	0 7 6
Ditto Fancy ditto (24 varieties)	1 10 0	0 15 0	0 7 6
Ditto Hollyhocks (12 varieties) shown in spikes	2 0 0	1 0 0	

* A truss of Roses is to consist of one shoot cut from the wood of the current year's growth. Any addition to the original truss will disqualify. In cases where Roses bloom singly—that is, without surrounding buds, a single Rose may be shown, and will be accounted as a truss.

Exhibitors for the Extra Prizes will not be allowed to compete for similar subjects in the other class.

Non-Members subject to an entrance fee of 10*s.*

Schedules and other information may be obtained on application to the SECRETARY, 81, High Street, Burton-on-Trent.

ROYAL HORTICULTURAL SOCIETY.
FLORAL COMMITTEE.
LIST of AWARDS, July 19, 1864.
FIRST-CLASS CERTIFICATE.

PETUNIA STRIATA PERFECTA, from Mr. Holland, Gr. to R. W. Peake, Esq., Isleworth.

SECOND-CLASS CERTIFICATES.

ASPLENIUM TRICHOMANES SUBEQUALE, from Mr. Holland.
PELARGONIUM HIGHGATE RIVAL, from Mr. Windsor, Gr. to Lord Dufferin, Highgate.
ROSE (H.P.) DR. LINDLEY, from Mr. W. Paul, Waltham Cross.
VERBENA GLOW-WORM, from Mr. C. J. Perry, Castle Bromwich.
VERBENA SNOWBALL, from Mr. C. J. Perry.

SPECIAL CERTIFICATE

Collection of 24 varieties of VERBENA, from Mr. C. J. Perry.

The NEXT MEETING of the Committee will take place on Tuesday, August 16. THOMAS MOORE, Secretary to the Committee.

The Gardeners' Chronicle.

SATURDAY, JULY 23, 1864.

IT seems almost impossible to say anything new about VINES, but the case which we have now to report, if known to others, has hitherto escaped our observation. It sometimes happens that some single plant proves unhealthy in a house; the leaves never acquire a good colour, the bunches are abortive, or the fruit shanks or spots without its being possible to assign any reason for its difference from its neighbours. There is perhaps no appreciable difference in the position or soil, and yet the plant is always unhealthy, and there is no alternative save to root it out without pity. Such cases often come to us from correspondents, and in our ignorance, we are obliged rather to ask for information than to give it. The case before us however is of quite a different nature, because it is only a portion of the plant which is affected. The roots are in good order, there is no mistake about the treatment, and the crop upon the greater part of the particular Vine is healthy, and has no tendency to shank or spot; but there is one particular branch which, from the earliest budding in spring, has never gone right for the last five or six years. The young leaves are almost colourless, and as vegetation proceeds they never acquire a general green tint, but isolated patches only of their disk form a small quantity of chlorophyll, the rest either showing an unhealthy transparent appearance or withering altogether. The young Grapes swell partially after the flowers have fallen; about three in each bunch acquire their proper size, and contain one or two seeds, the rest remain small as currants, and are perfectly seedless. The depauperated Grapes however, are good in point of flavour, better in fact than the few which appear more normal in point of size.

On examining the particular branch, it is not possible to observe the slightest difference; the affection is perfectly local, and its cause as obscure as that of the variegated branches which appear on plants which are otherwise of the usual green tint. It is most probable that the disease, which depends on some constitutional change, would be propagated if it were attempted to raise plants from the eyes of the diseased shoot. It is not however likely that any one should make the experiment, as there are no merits about the diseased part which would suggest its multiplication, except for the mere purpose of ascertaining whether the malady is capable of propagation.

The case however is interesting, because it shows that disease in vegetables may arise from local causes which it is impossible to trace, and that we are not to assign at once to bad management every failure in the garden. *M. J. B.*

MANY of our readers, we imagine, have perused with pleasure the highly interesting "Notes on Gardens" that have appeared from time to time in our columns; and some of them, probably, are looking forward with the pleasing hope of soon having a holiday that will enable them to satisfy their curiosity, and see with their own eyes a few of the rare and beautiful things that our intelligent correspondent Mr. ROBINSON has pointed out as being worthy of notice, either on account of their singular form, their elegant appearance, or as examples of the skilful manner in which they are cultivated in the justly celebrated gardening establishments at York, Edinburgh, and Dublin.

It is, however, to what is stated at page 507, respecting the lovely "WATER WEED," APONOGETON DISTACHYON, in the pond of the Edinburgh Royal Botanic Garden, that we wish particularly to direct the attention of all who are fond of aquatic plants. We scarcely know a water plant that is more attractive than this Aponogeton, or better adapted for enlivening, with its long deep-green floating leaves, and curiously formed spikes of sweet-scented white flowers, the deep margins of a lake, or other ornamental piece of water; and we are surprised to find it is not more frequently employed for such a purpose, nor more commonly grown in our fountains and garden ponds.

Originally from the Cape of Good Hope, this plant has been generally considered to be a tender exotic, and has been treated as such; but it has now been ascertained that, under certain conditions, it is sufficiently hardy to endure the open air both in England and Scotland, and has become "acclimatized," if such a thing were possible, at Edinburgh. There we know it has lived for many years, producing seed in abundance, and flowering nearly the winter through. This is ascribed to the presence of springs in the bottom of the pond in which it grows, preventing the water from freezing except in very severe weather; but our experience with this favourite aquatic, for more than 30 years, leads us to believe that it is not so much to the circumstance of springs being in the pond that the plant thrives so well and escapes being killed by frost, as to the depth of water in which it is placed, and by which it is protected. In this opinion we are confirmed by the explanations that are given in the "Theory of Horticulture" of the conditions under which true aquatics exist. It is there observed, that "plants growing entirely under water are to some extent protected from those great and sudden changes of temperature to which ordinary land plants are frequently exposed; at the same time, however, water plants are very often injured by cold, and it not unfrequently happens that on a cold winter's night plants in a pond will be greatly injured, or even killed, whilst those in a neighbouring pond will remain quite uninjured. * * * Water is cooled either by evaporation, or by contact with cold air, but it differs from the soil in the facility with which it is moved, and the readiness with which currents are formed in it. When the surface of water is in any way cooled, it becomes heavier or denser, and a kind of circulation is immediately established, the cold water descending, and the warmer water rising to its surface. In this manner then, so long as the cooling influences continue, the water goes on sinking in temperature, the whole body of it getting colder; this, however, does not continue after it has arrived at a temperature of 40°; when this is the case, all circulation in the water ceases, because if the surface water is then cooled still lower, it no longer continues to contract and become denser, but on the contrary expands, so that it then remains floating on the surface. It follows from this very interesting fact, that when on a cold winter's night the surface of a pond is cooled, the whole body of water sinks in temperature to 40°; after that, the surface only continues to get colder, and a film of ice is soon formed, while the water below continues at a temperature of 40°. In consequence of this kind of circulation, and the facility with which it is produced, a body of water is easily cooled down to within 8° of freezing, but when once it has arrived at that point, its further cooling proceeds

very slowly, even although the cold becomes much more intense; for the water below is in fact protected from contact with the cold air by the film of ice at the surface, and ice is so bad a conductor of heat that the freezing of the water under the ice goes on very slowly. * * Water plants, therefore, are in fact preserved from cold by the coating of ice which forms over the surface of the pond in which they grow; if the water is deep they are seldom injured; but if it is shallow, and the cold long-continued, the whole depth of it will in time freeze, and the plants will be more or less injured."

These are facts of the highest importance, and well deserve consideration. If they are borne in mind, we venture to say, no difficulty will be experienced in growing this charming plant in any part of the kingdom. We have had it for years past in a little fountain near London, where it flowers almost continuously, and scents the surrounding air with its grateful and delicious perfume, resembling that of the Hawthorn. Our plants are about 18 or 20 inches under the surface of the water, and although their leaves are annually killed during winter, after being incrusted with ice perhaps 6 or 8 inches thick, yet, on the return of mild weather, new leaves gradually make their appearance, and show the plants to be as healthy and strong as ever, only requiring a renewal of the soil in the pots in which they are grown.

We would not, however, have it supposed from this that our favourite plant has changed its nature. On the contrary, we believe its delicate tissues are as susceptible of being injured by frost as they were on the day of its first introduction into this country; and if the conditions in which we have found it to flourish in all its native beauty are not attended to, we fear the attempts that may be made to cultivate it in shallow water will end in disappointment.

AT p. 678 we gave a description of the fourth annual FLOWER SHOW FOR THE WORKING CLASSES which was held in Russell Square, Bloomsbury, under the presidency of the Rector, the Rev. E. BAYLEY, B.D. Having had an opportunity of attending this Exhibition, we take the liberty of bringing the matter once more under the notice of our readers. Horticultural Societies have done a great deal to develop and encourage that practical knowledge of the requirements of plants which is now possessed by our English gardeners. The productions which are common at our Exhibitions, in our gardens, and in our flower markets, if compared with those which one remembers some 20 or 30 years ago, fully prove this. But, as a rule, our great horticultural bodies do not reach directly the lower orders of the people. The prizes which they usually offer are competed for and carried off by amateurs, nurserymen, and the gardeners of the upper classes of society. And the main object, or what at least ought to be the main object of these Societies, is the advancement of everything in any way connected with gardening or gardeners.

Horticultural Societies amongst the working classes in large towns have quite a different object in view. They encourage a love of flowers amongst the poor. In "Little Coram Street District," in the heart of London—it would be all but impossible to rear those splendid specimens which are brought forward at our fashionable horticultural fetes. The difficulty is to keep plants alive in such places, and it was really wonderful to see the condition the plants were in which were brought to the last Bloomsbury Flower Show. One could not help feeling that, all things considered, cultivators of those hundreds of pet plants which were arranged in the tent, deserved nearly as much praise for their care and skill as some of our best gardeners. These shows do a great deal of good in another way. By inducing the working classes to cultivate plants in their rooms, they provide them with a source of happiness to which they had probably been entire strangers. They create an interest in home, and in the operations which are going on in the vegetable kingdom, which, to quote the words we observed painted on one of the flags in the tent, must lead "onwards and upwards." Listen to an anecdote related by Mr. BAYLEY in a lecture he delivered lately at South Kensington. "In a lone room, at the top of one of the houses where every room was the dwelling of a family, there dwelt an aged woman, whose scanty pittance of half-a-crown a week was scarcely enough for her bare livelihood. The visitor, Mr. PARKS, observed, with some surprise, a Strawberry plant growing and flourishing in a broken teapot that stood on the windowsill. He remarked from time to time how it grew, and with what care it was tended and watched. At length one day he said to the poor woman, "your plant does well; you'll soon have some Strawberries on it." "It's not for the sake of the fruit I do it," replied the woman. "Then why do you take so much care of it?" he asked. "Well, sir," she replied, "I'm very poor, too poor to keep any living creature, but it is a great comfort to me to have that living plant."

No one, not even the most illiterate, can cultivate plants without being led to study and reflect. Such a question, for example, as the following must soon be presented and explained. "Why does a Geranium grow sickly if it is kept in a dark place, or if its leaves get smothered with dust; and why does it repay the care which is spent upon it in keeping it clean and in giving it, now and then, a little sun and fresh air? Then, if cleanliness and fresh air be good for plants, may they not be equally necessary and beneficial to the owners of such plants themselves?" In this way the growth of plants in rooms, and what Mr. BAYLEY calls the "clean and tidy-room movement" go hand in hand to promote the health and happiness of the people.

Some of the plants in this show of the working classes, had evidently been but a short time in the possession of the exhibitors, while others showed they had been room-plants for several years. It is a curious fact that most of the things which have been found to grow and bloom best in a London atmosphere were exotics. Fuchsias and Geraniums appear far better suited for this purpose then such plants as Roses and many other plants indigenous to England. Besides these, Southernwood, Musk, Pinks, Moneywort, Nasturtiums, Mint, and the well known "Nettle Geraniums," were the principal plants exhibited.

We may suggest that in future exhibitions—and we hope there will be many of them—more prominence might be given to the different classes. If this were done it would add greatly to the interest of the Exhibition in so far as the visitors are concerned. This year there were five classes:—Class I. for Persons living in Little Coram Street District (the poorest portion of the parish); II. Persons living in other parts of the Parish; III. Domestic Servants; IV. Children in National, Infant, Sunday, and Ragged Schools; and V. For Plants of any sort not entered. Although there were small handbills about describing the different classes, not one person in fifty saw them. Our suggestion is that large placards or ornamental flags should be placed in a conspicuous part above or behind the collections, in order to show, at a glance, to what class the exhibitors belong. While the mere number of the class affords but little interest, it would be very different were the visitors to see that in one part of the tent the competitors were those who lived in the densest or poorest part of the parish, in another that it was domestic servants, and in a third that it was children belonging to the different schools.

The excellent Rector of Bloomsbury and his assistants deserve the best thanks of all who feel an interest in the happiness and welfare of the working classes. We are glad to find the movement is not confined to Bloomsbury, but that others are following the good example in different parts of London as well as in some of our provincial towns. All success to movements like these; we gladly welcome their annual exhibitions; and in the words of a contemporary we hope they will prove to be "hardy annuals, flourishing in the midst of smoke and toil."

—— THE BEADED OR CORRUGATED BRICKS which have been patented by Mr. FOXLEY, of Stony Stratford, and of which a sample has been sent for our inspection, appear likely to be useful in the construction of garden walls intended for fruit trees. They are well made light-coloured bricks, with three half-inch apertures pierced through their substance lengthwise, so that they are hollow, and they have in the centre of one face a stout horizontal bead an inch in diameter, and projecting about half an inch from the surface, this being pierced with small vertical holes placed about an inch apart. It is intended that these beaded bricks, which is perhaps a better name than corrugated, should be used in alternate courses with common plain bricks, and with this view they are made of the ordinary size. As the ribs or beads project half an inch at such frequent intervals, they will serve to keep the branches at that distance from the general surface of the wall, while the holes pierced through them are intended to be used for tying in the branches at once without the addition of either wires or nails. Thus walls erected with them, will not only have an ornamental appearance, but will not be liable to get defaced by nail holes; and while the trees will have all the advantages of warmth and protection, the fruit will not be liable to be disfigured by pressure against the wall, nor the branches by accidental blows from the hammer. The manufacturer states that 1000 of these beaded bricks are required to 3500 common ones. They are made with the bead either vertical or horizontal, but the latter is preferred for general use.

—— WEIGELA HORTENSIS NIVEA is a name given by M. VON SIEBOLD to a fine ornamental Japanese shrub, which he has introduced to the gardens of Europe. It is a plant of vigorous habit, and is described as having the leaves large and strongly veined, and the flowers very large, of a pure snowy white, retaining their purity during the whole time of flowering. Both this, and Mr. Fortune's white Weigela, will be valuable for the purpose of contrasting with the deeper-coloured kinds already common in gardens.

—— The growth of ORCHIDS IN ROOMS has been engaging the attention of continental cultivators as well as our own; and some time ago M. HENNING of Chemnitz in Saxony, made known the results of his experience in the matter. M. HENNING has it is said cultivated a collection of 200 plants with no other precaution than that which is ordinarily taken in Northern climates, namely, to have the windows with double frames, and without having recourse to any special means of heating. At the season when the sun has great power, his plants were protected with gauze, and it was not forgotten to give them a little air, even in winter. Proofs are multiplying that these plants are more docile than at one time they were thought to be.

—— Among the New Flowers of the year deserving of attention, *L'Horticulteur Français* mentions:—1. DOUBLE-FLOWERED POTENTILLAS, raised by M. LEMOINE, of Nancy, who has earned great reputation in the production of these flowers. They consist of: Dr. Andry, with enormous flowers of a deep orange with scarlet veins; Louis Van Houtte, very large velvety crimson-scarlet; M. Daudin, dwarf, with large crimson red flowers; M. Rouillard, large transparent vermilion; V. Lemoine with enormous incurved convex flowers, garnet coloured shaded with vermilion, and bordered with yellow; William Rollisson, with large flowers of Indian yellow, bordered and shaded with very lively reddish orange. 2. Varieties of BOUVARDIA LEIANTHA from the same source: grandis, carmine orange, with flowers three times larger than the type; floribunda, with very abundant flowers in magnificent panicles, and larger than in other hybrids, of a cochineal rose during summer, and carmine orange in autumn; and splendida, with the habit of the variety called Hogarth, and the fine colour of leiantha itself.

—— In May last, at a meeting of the *Société Impériale d'Horticulture*, one of the members described a means which he had employed for the DESTRUCTION OF ANTS. This consisted in the use of a solution of arsenious acid (acide arsenieux) mixed in the proportion of one-tenth with sugared water. Another member proposed the use of carbonic oxide (oxyde de carbon), but this substance was objected to on account of the danger attending its use. M. BOISDUVAL advised the use of a mixture of benzine and water to be poured into the ants' nests; but, asks M. VERLOT, the reporter of this meeting, is there no fear that if this were used it might not present some inconveniences in the case of delicate plants? At least those who are troubled by the visits of ants, might try these and such other remedies as they suggest, and report the result.

NOTES ON GARDENS.—No. XIII.

ROCKVILLE, DUBLIN.—*(Concluded from page 676.)*

FROM the Fernery the visitor passes by a side door, and soon reaches the conservatory—an elegant curvilinear one, built against the dwelling house, and glazed with the best plate glass, but not of remarkable interest, except from its being well filled with such plants as conservatories rarely exhibit, and always containing some choice pickings from the very unique structures that have been described—before any of which it was built.

Another feature yet remains to be alluded to, and one the existence of which I was not aware of till ushered into it. It is a sweet and singular little garden, bounded on one side by the great stove, and on the other for about 160 ft. by a glazed rustic arcade, from which you look through pointed Gothic arches of beautiful tufa into the garden. The borders on either side of the walk through the arcade were planted with Camellias, Sikkim and Bhotan Rhododendrons, Myrtles, Roses, Loniceras, and many such plants, that enjoy conditions intermediate between those afforded by the greenhouse and the open air. Along the front of the arcade ran a border planted with the choicer kinds of Roses, mostly on their own roots: the pillars of the arcade to be eventually covered by the climbing varieties, and with Honeysuckles, Clematis, Gold and Silver Ivies, &c. On the little lawn enclosed by this arcade were flower beds; standard Rhododendrons, some of the rarer Conifers, and a fine spreading Beech with a seat underneath. At one end was a bank with Tea and China Roses, backed by Ivy-covered rocks; at the other, arches and rocks modified to suit the British and other hardy Ferns, while along and parallel with the side of the great stove was a

border devoted to choice Rhododendrons, and edged with small Heaths, Sedums, &c.

Elevated on the walls at the Fern-growing end, Woodsia hyperborea, Asplenium septentrionale and fontanum, with other small but more common Ferns, were growing charmingly; while near at hand a sort of bog accommodated Osmunda spectabilis, regalis, and cinnamomea. Amongst the Ferns was a fine specimen of the singular Athyrium F.-f. Frizelliæ, which was originally obtained from the "Devil's Glen," in Wicklow, and fell to the lot of Mr. J. Bain, of the College Botanic Gardens—just the person into whose hands a curiously-choice thing ought to fall.

It may be useful to name some of the plants flourishing in the arcade. They were as follows: — Double flowering Chinese Peaches in variety, Benthamia fragifera; Berberis nepalensis, Bealii, and Wallichii; Chamæbatia foliosa, Bignonias, Clematis, Daphnes, Escallonias, Jasmines, Oleas, Passifloras, Skimmias, Spiræas, Viburnum macrocephalum, Weigelas, Wistaria, Yuccas, Azaleas, Rhododendron Nuttallii and retusum, the latter very fine, with others; variegated Acers, and many other plants suited to the situation. The whole was of recent construction, and will of course gain many charms from increasing age and growth. It is one of the great improvements carried out at Rockville during the past few years.

The condition of an individual who would attempt to digest during a single day the result of the labours of hundreds of men cleverer than himself, as exhibited at an industrial exhibition, would not be by any means an enviable one towards the close of his well-meaning experiment. In some such condition did I emerge from the examination of Mr. Bewley's plants; but with the conviction that the time could not have been better spent than in seeing, on the whole, the finest collection of exotics to be found in any private garden of the United Kingdom. So, calling to mind a passage from Loudon, written some 30 years ago, in which it is stated that the chief things to be found in the gardens of Irish gentlemen of that time were Potatos, I smiled, and bid good-bye to Rockville. *Wm. Robinson.*

HARDIVILLÉ'S NUMÉROTEUR.

Of the numerous inventions which appear every year there are few which are lasting, for truly good inventions are rare. The subject of this note, the Numéroteur Hardivillé, is however (observes M. Carrière in the "Revue Horticole," whence the following account is condensed), a good one, and we are convinced that we benefit those who are occupied in horticulture in making it known.

Horticulture is a science so vast, and embraces subjects so different, that however good a man's memory may be it is insufficient, and hence it becomes necessary to give it mechanical aid. Among the means employed are tickets or labels written upon parchment or paper, or small pieces of wood, &c.; but these are soon effaced, and are very liable to get lost or displaced. A very good plan frequently adopted consists in the use of small bands of lead, which are rolled round the stems or branches of the plants. Upon this lead a number is marked, corresponding with a catalogue, in which the name and any particular remarks are entered. This method is sure; but to carry it out several things are necessary. First there is wanted a series of numbers from 1 to 10, or rather from 1 to 9, the zero, combined with other figures, making the numbers 10, 20, 100, &c. Then this series of numbers must be fixed upon a block of wood, and the figures have to be impressed upon the leads by means of a small hammer. So that to mark the leads we want—1st, a pair of scissors to cut the metal; 2d, a set of numbers; 3d, a block to receive them; and 4th, a hammer to strike and indent the figures in the leads. This apparatus, therefore, becomes troublesome, especially when it is necessary to change its place, as is the case when it has to be used in different parts of a large garden, or in a field. Besides, it suffices for one of the little figures to be lost to render the whole series useless. A consideration of these inconveniences induced an ingenious cutler, M. Hardivillé, of the Rue St. Jacques, in Paris, to invent the Numéroteur, or Numbering Pincers, which bears his name.

This instrument in its general form resembles a large pair of scissors, in which the blades instead of being cutting are flat and blunt, with the upper extremity prolonged. On the inner side of the upper of these blades is fixed a series of 10 figures arranged in order, from 1 to 9, followed by 0. These figures are placed at the end of small steel shanks screwed into the blade, and upon the opposite blade, which is flat, the figures are marked in hollows, so that, without groping, one is able to effect with certainty any necessary numerical combinations. A pressure of the blades suffices to indent the figure in the piece of lead that has been placed between them, and the lead is then withdrawn and placed in the same way beneath whatever other figure or figures may make up the number required. The blades of these numbering pincers work upon a movement similar to that of a pair of scissors, the alternate opening and shutting of the curved portion or handle also opening and shutting the two opposite blades, so that it is only necessary to put the plate of lead straight with the figure which is wanted, and then to make a pressure, to have this figure indented on the lead. At the end of one blade, in a line with the figures, is a small punch, with which, if necessary, to pierce the lead, in order to admit of passing through it a wire thread, by which it may be suspended.

To complete this instrument M. Hardivillé has added, on the side of one of the branches, a small blade, which by means of a spring adapted to the other branch, forms a pair of scissors with which to cut the leads. When the scissors are not needed, the spring is unfastened, being made to do so easily and quickly, and the blade then tightens itself against the branch of the pincer without any trouble. At the base is a moveable spring which serves to open the branches.

Thus we see that this instrument is very complete, but its value is augmented by its not being complicated,

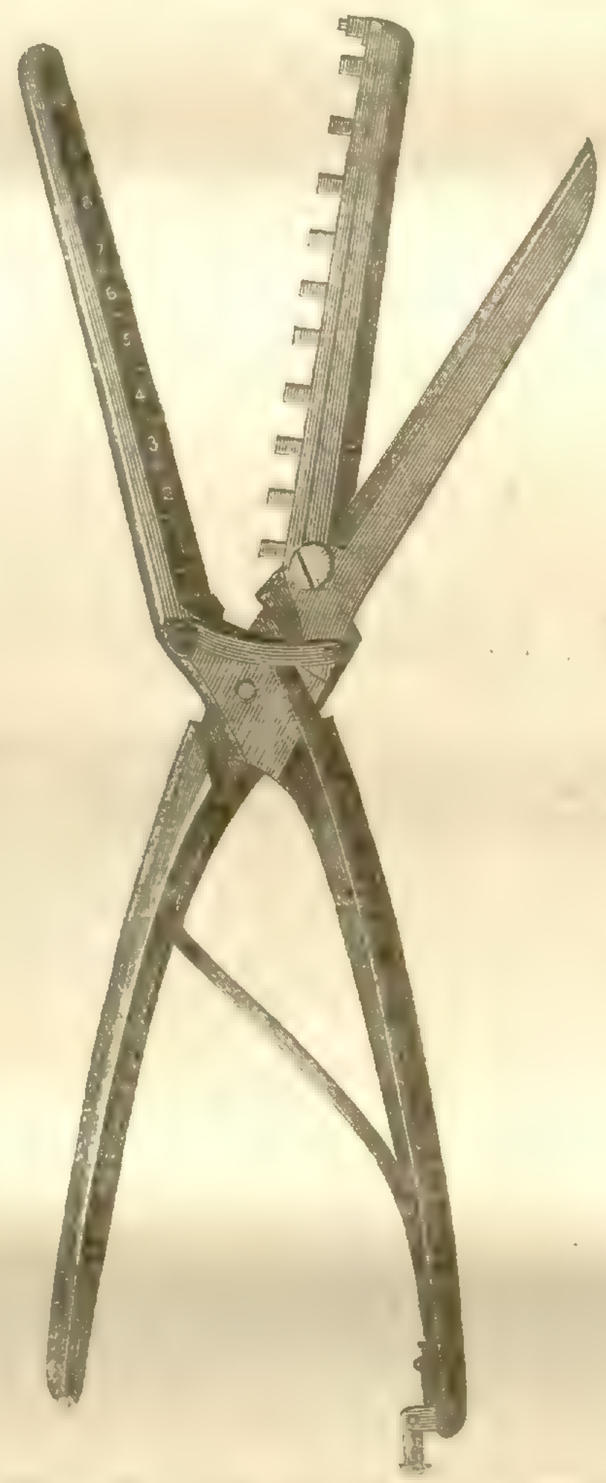

and especially by its being of a reasonable price—10 francs. We do not hesitate, says M. Carrière, to say that by this invention M. Hardivillé has rendered a real service to horticulture, and we do not doubt that his numbering pincers will find their way into the hands of horticulturists generally, since they are the best which have been produced up to the present time.

THE MISTLETO ON THE OAK.

The Viscum album but rarely "gains a settlement" on the Oak tree—as seldom in our own day as in the Druidical times of old, when its very rarity heightened the veneration with which it was regarded when found. "Est autem id varum admodum inventum, et repertum magnâ religione petitur," says Pliny in his Natural History (lib. xvi. c. 44). In an excellent note by Dr. Giles in his translation of "Richard of Cirencester," (p. 432), he gives the opinion of Dr. Daubeny, "that Mistleto-growing Oaks were exterminated after the Druids were destroyed." (N. & Q., vol. ii.) It is highly probable that this was the case, but since all their Oaks too have been gone centuries since, it can make no difference as to its occurrence at the present time. Whatever may be the conditions necessary for the germination and growth of the Mistleto on the Oak, they must be such as rarely coincide, or it certainly would be much more common in this county. Oak may be considered the weed of Herefordshire; Oak timber and Oak bark form two of our chief exports. Oak woods and Oak trees border Mistleto-abounding orchards very generally, and the trees themselves are often mingled in very close alliance; indeed it would not be too much to say, from the great abundance of Oaks in the vicinity of orchards, that the birds must sow the Mistleto seeds upon them more frequently than upon any other kind of tree in the county. Nevertheless, so far as is known, there are but two instances of its growth on the Oak in Herefordshire, the one in Eastnor Park, which has been so well known for many years, and the other in an outlying district of the county at Tedstone Delamere, discovered by Dr. Cradock in 1857.

The occurrence of the Mistleto on the Oak is at once so rare and so interesting, that I have not confined myself to this county in my inquiries about it, but have taken some pains to ascertain its existence, at the present time, in all the instances which have been recorded as occurring in England. The following instances I have been able to get well authenticated:—

No. 1. *The Oak at Eastnor.*—Ten days since [March, 1861] I visited this Mistleto-bearing Oak. It is situated by the side of the drive leading from the Park up the Ridgeway Hill towards Malvern, about 200 yards beyond the Lodge. The Oak may be some 80 or 90 years old, and the Mistleto grows freely upon it. It is most luxuriant high up in the tree where three large branches grow very near each other, having in each instance destroyed the bough beyond the place where it is situated. It is also growing in four other places in the tree, one fresh yearling plant shooting straight out from the main stem of the tree about 12 feet from the ground. One large bunch of Mistleto growing in a large branch many feet from the main stem was dead and decaying, but without having killed the branch. The Mistleto plants are of both sexes, and the females bear berries freely. It is more slender and pendulous, with smaller and thinner leaves; or in other words, it is not so stiff and rigid and short-jointed as it usually is when growing on the Apple tree. During the 12 years I have known this tree the Mistleto has increased upon it, and the Oak is already beginning to show signs of suffering severely from the parasite. Upon the large Moss-covered branches it was curious to observe the great number of Mistleto seeds which had been deposited by the birds.

No. 2. *The Oak at Tedstone Delamere.*—In 1853 Dr. Cradock (Principal of Brazenose College), discovered the Mistleto growing on a thriving Oak in the parish of Tedstone Delamere. It had been known for some time before by a woodman, who kept it a secret, but occasionally produced a piece of it on particular occasions. The incumbent of the parish, at this time the Rev. Gregory Smith, M.A., has kindly sent me the following description of its present appearance:—"The Mistleto is still growing where Dr. Cradock observed it, on an Oak some 60 years old, and there it has been, according to the woodman, for some 30 years or more. The Mistleto grows in one bunch of five stems from the trunk of the tree, about 50 feet from the ground." It does not bear berries, although from the small portion Mr. Smith was good enough to inclose, it is the female plant.*

No. 3. *On a fine Oak at Badams Court, Sedbury Park, near Chepstow,* the Mistleto is also now growing luxuriantly. G. Ormerod, Esq., has kindly forwarded the following description of its condition at this time. "The Mistleto is still growing on an Oak here; the tree is about 85 years old and situated on the northern mound of Badams Court, once a moated mansion of the Herberts, or Ap Adams of Beachly and Llanllowel, but now forming part of the Sedbury Park estate. There is only one branch of Mistleto on the tree, but it has become very luxuriant, and has now a diameter of at least three feet. It is more thin and straggling in its growth than it usually is on the Apple tree, though it is very healthy and bears berries freely. It grows from the side of a large branch some yards from the main stem of the tree and about 20 feet from the ground. The Oak itself is healthy and vigorous, and does not seem to be injured by the parasite." (April 5, 1864.)

No. 4. The Mistleto is also now growing on an *Oak at Burningfold Farm, Dunsfold, Surrey.*—The proprietor of the estate, W. Layland Woods, Esq., has been good enough to send me the account of its present condition. "The Mistleto at Burningfold grows on an Oak not less than 150 years old. The tree is more upright than spreading, and the branch grows on the side of an upright limb at about 50 feet from the ground. There is only one branch on the tree; it has grown there for many years, but in January 1849 it was broken very severely by a high wind. However, it flourished afterwards better than before; it is nearly three feet long, of a pendulous nature, not growing so rigid as Mistleto usually does. During the past summer a sparrow built her nest in the midst of the bunch. It does not injure the tree at present, but has in fact been the means of its preservation, for the Mistleto branch saved the tree from the axe some years ago. The Oak grows alone in a piece of pasture, but another which formerly stood near it has spoilt the beauty of the tree. The soil of the district is the weald clay of Surrey and Sussex, where the Oak used to flourish and abound." (April 19, 1864.)

No. 5. *On an Oak in Hackwood Park, near Basingstoke,* Mistleto has long been known to grow.—C. Hooper, Esq., of Eastrop House, Basingstoke, has very kindly obtained for me the following account of this tree. "The first Lord Bolton (grandfather of the present Lord) sent a specimen of the Mistleto from this tree to Sir Joseph Banks, who gave an account of it in the Philosophical Transactions. The Oak is still a fine large tree, but evidently very old and reduced in size from what it formerly was, but whether this is from the presence of the Mistleto or from storms it is difficult to say. The Mistleto grows near the middle of the tree at a considerable height from the ground, and in several places among the branches." (April 28, 1864.)—Mr. Hooper had not seen the tree himself, but

* I have since learnt that there is but little Mistleto in the neighbourhood of the tree. The nearest Mistleto-bearing tree is a Pear tree, about 100 yards from the Oak; and this in itself is an example of rare occurrence.

described it from a sketch which had been shown to him by Mr. Hill, of Basingstoke.

No. 6. *The Plymouth Oak.*—On recent authority, that of Mr. Edward Lees as quoted by Mr. T. W. Gissing in the Phytologist (vol. i. p. 151), it grows in an Oak tree not far from Plymouth, by the side of the South Devon Railway. A single bush grows in the topmost branches of a scraggy Oak tree. It is the first wood that occurs by railway north of Plymouth, and two or three miles distant from that town. I am unable to state whether this Oak is still in existence with the Mistleto upon it. The authority for it, however, is so good and so recent, that I am prepared to have faith in it.

These are all the instances of the growth of the Viscum album on the Oak that I have been able to authenticate, or believe in, as existing at the present time. I fully thought to have been able to give some examples of Mistleto Oaks in this paper, which had not been recorded before, but one after the other, they have all failed me, and I have had, on the contrary, to reduce those before known to this small number. *Dr. Bull, in Transactions of Woolhope Naturalists' Field Club.*

(To be continued.)

TOBACCO CULTURE.

IN reply to the inquiry of "M. P. M." at p. 677, a correspondent has sent us the accompanying information, taken from the *Canada Farmer*, of June 15, 1864. The information consists of extracts from an essay issued by the proprietors of a Tobacco warehouse in Kentucky, in reply to inquiries which had been addressed to them respecting the management of the Tobacco crop:—

Seed.—Among the various names, we give the preference to the Blue Prior. It does not produce such a long leafy staple as many other varieties, but, all things being equal, it yields a finer fibre and richer texture than most varieties, and is alike adapted to manufacturing and shipping.

Plant Bed.—In open weather in January February or March, select a rich spot of virgin soil; clean the surface of all leaves; burn thoroughly, so as to destroy all wild seeds; then dig 3 or 4 inches deep, thoroughly pulverising the soil, incorporating the ashes with the burnt earth; rake smooth, removing all litter, and sow at the rate of one tablespoonful of seed to 100 square yards of surface. Mix the seed in dry leached ashes, say 1 quart of ashes to the spoonful of seed. It is best to sow the bed both ways—now rake again, then tramp with the feet and cover with green brush without leaves. Remove the brush after the frost is out of the ground, and the plants begin to cover the bed.

Preparation of the Soil.—This crop requires the best soil. "New ground" or virgin soil yields the finest manufacturing leaf; but old well-manured land will give a larger yield and a richer heavier article, which will be sought by the exporters. The soil should be thoroughly cultivated before the crop is planted. The ground having been well ploughed and cross-ploughed and harrowed, you will lay it off 3½ feet each way, and raise a small hill in the check. You are now ready for

Planting the Crop.—This you will do the first "season," after your plants are large enough—when the first leaves are 3 or 4 inches long, just as you plant Cabbages, replanting, of course, until you get a stand. You will find many impediments in the way of getting a stand. Field cultivation will bring into requisition the plough and hoe. The ground should be stirred at least once a week, and not a weed or sprig of Grass be permitted to show itself. The last step in this process, or the "laying by of the crop," consists in drawing up the earth carefully around the plant with the hoe. At this stage your first planting will begin to "come into top," or has attained sufficient size to be topped. Topping is simply arresting the growth of the plant by taking out the bud, and is best done when the terminal bud alone has to be removed; if it goes beyond this point much of the strength of the plant has been expended in the formation of leaves that are lost. "Prime" off the under leaves up to the first good leaf, which is usually a hand's breadth from the top of the hill; then top, leaving 10 leaves at first topping, and reduce as the season advances.

Suckering and Worming.—So soon as the growth of the plant is arrested by topping, it will throw out "suckers" just above the foot-stalk of the leaves around the main stalk. These, with the horn worm, will demand vigilant attention. Never let them get a start. Once a week will ordinarily suffice to keep them under. In the midst of this struggle with these two formidable enemies you will find the first planting thicken and changing its colour, losing some of its clear deep green. The leaf, if folded between the thumb and finger, will break readily. These are some of the evidences that it is ripe and ready for the knife.

Cutting.—The cutting process is very simple. Split the main stalk down to within 2 inches of the bottom leaf, then with one down stroke cut the plant off just below the bottom leaf, and in raising place it on the ground, resting on the top leaves; so soon as it "falls," or wilts sufficiently, gather up and lay eight or 10 plants together with the hands to the sun. The best cultivators do not scaffold in the field, but "hang" on sticks, one end in the ground, and remove directly to the barn.

Curing.—The curing of the crop is one of the most important steps in its whole treatment, and most difficult to describe. If house room is plentiful it may be cured with but little firing, indeed without firing, but if house room is an object, heavy firing is necessary; it is always necessary when a dark rich colour is desired. Do not begin with large fires. Keep constant gentle fires until you attain the desired colour; then press your fires day and night until the entire leaf is thoroughly cured. It now hangs until you are ready for the next step, and until it comes in "case" for

Stripping.—Whenever the leaf is soft enough not to break or crumble in handling, "strike down" and bulk; removing the plants from the sticks, you lay it in bulk, the tails slightly lapping over to preserve the "order." Now, put your best judge of the article to sorting; he will take off all ground leaves, lugs or cullings, and the strippers will separate the different grades, putting the bright in one lot, separating the long from the short of the same class, the dark heavy shipping leaf to itself, the fine dark manufacturing to itself, &c. Tie in hands of from five to seven leaves, wrap smoothly with a slip or short leaf, make the tie not over 1½ inch long. Hang on sticks and "hoist" in barn. When it has thoroughly dried and again comes in case or "prizing order," that is when the leaf is soft and the main rib is sufficiently dry to break readily for one-third its length, from the larger end, bulk down as follows: Raise a platform on your barn floor, cover with boards, over them a layer of dry straw, and lay one or two hands at a time, heads out, a course the length desired for the bulk; then a similar course, so as to have the tails about to meet; then a third course with heads about midway the first, and the fourth with heads midway the second, repeating this until the work is completed. Cover with boards and straw, and put weights on. You are now ready for

Prizing.—Procure a good strong cask of well-seasoned timber; the drawn staves are the best; avoid Poplar and all soft, brittle wood for staves. The prizing process is an important one, and we recommend the following mode:—Get a piece of board cut to fit the inside of the cask, say 6 or 8 inches at the broadest point, lay this in the cask and pack the first course with the heads against the straight edge of your board, the Tobacco of course laid at right angles with it. This course being completed, place the board on the opposite side and pack as before; next place the board at right angles with its first position and pack as before—then opposite this last position and repeat the process, and so continue until the work is completed. You will always find straight samples drawn from hogsheads thus packed. Never put into the hogshead more than one hand at a time, and let that be carefully straightened and pressed in the hands of the attendants of the packer before it reaches him.

If your Tobacco is ripe, rich, and of fine fibre, from 1200 to 1500 lbs. is enough to put in a hogshead. If very fine or bright, 1000 lbs. is heavy enough. In "turning out" your hogsheads, leave space enough to secure well the top head; see that it is well fitted and securely "lined;" then nail all the hoops, and mark your name plainly on both heads and across the staves, putting on it your private number. Note in your memorandum book the quality and order of each hogshead, and furnish your commission merchant with a copy of it.

Home Correspondence.

Continental Nurseries and Rose Growing Establishments.—The following notes made during a recent visit to some of the principal continental nurseries and Rose grounds, may not be without interest to your readers. In the magnificent establishment of M. Dauvasse, Ceanothus azureus latifolius was about 3 feet high and 4 feet in diameter, forming a remarkably fine and effective bush, with some 20 or so beautifully compact panicles of flowers on it, not quite fully developed, but sufficiently so to enable me to arrive at the conclusion that it is a first-rate plant; it stood in the open quarters, and Mr. D. assured me that it was perfectly hardy; it struck me as being much more dense and beautiful in its foliage than any other of the species I had seen before. The variegated Maclura aurantiaca I did not think much of, as I detected very little of the variegation mentioned in it. A few of the plants were streaked with white, but certainly not half so beautiful and effective as Acer Negundo variegatum. Spiræa callosa alba is, however, a real gem, and when better known will most certainly be planted extensively. I noticed a bed of it with innumerable corymbs of almost pure white flowers; in fact it was one dense mass of green and white, and apparently was likely to continue in that condition for a long time. When cheap enough this will make a capital bedding-out plant. Acer Wageneri laciniatum appears also to be an advance upon some of the other Maples. In the same establishment I also remarked in the way of variegated plants, Weigela amabilis variegata, and W. rosea variegata, both distinct and good. The striped-leaved white Jasmine I also thought to be very pretty. Here I noticed the wreath-like horizontal mode of training Apple trees, carried out on a considerably large scale in lines parallel with the walks; they were tied down to wires, and every shoot is pinched in to two buds; they were bearing a fine crop, and Mr. D. informed me that they scarcely ever failed. The wreath was about 16 inches from the surface, thereby getting the benefit of the full ground heat in this very fine climate. Pyramidal Pears on the Quince were also producing fine crops of fruit. I observed also an enormous crop of Plums, ripe enough for market, on what he called the Early Favourite. This was on July 4. But the most complete and interesting modes of training the Apple, Pear, Peach, and hardy Vines I ever remember to have seen were in operation at the fine grounds of Messrs. Jamin & Durand, at Bourg la Reine, and I would recommend all interested in fruit cultivation who visit France to make a call at this place. Here were grand specimens of the blue or rather violet Clematis shown at South Kensington recently, viz., lanuginosa violacea. I measured one flower, and found it to be 6 inches in diameter. My principal object, however, was to see what I could find fresh amongst Roses. In this I was unfortunately a little too late, and could not see many improvements upon our established favourites, especially after viewing the fine show of them the other day at South Kensington. I must not omit, however, to mention two new ones which M. Jules Margottin showed me amongst a large batch of selected seedlings, viz., Charles Margottin, which is both deeper and richer in colour than the old Jules Margottin, and very large, full, and beautifully cupped. This will, doubtless, turn out to be really good. The other is to be called Baronne de Meno; it is in the way of Madame Rivers or Victoria, viz., nearly white and globular; if it will open well it is very promising and distinct. We want light varieties, the recent one being too much of the crimson stamp. My suggestion to Mr. M. was that we wanted quality—not quantity, and something in the way of good whites and yellows. Here, as well as at Eugène Verdier's extensive Rose grounds, were thousands of seedlings, one, two, and three years old, but I did not observe in those in bloom anything particularly striking. *A. Godwin, The Nurseries, Ashbourne.*

American Blight in Australia.—Perhaps you may think the following letter on this subject, received this morning from a horticulturist well known in the neighbourhood of Melbourne, worthy of a place in your Paper. The writer, Mr. Carson, says:—We have had a very bad year for American blight on the Apple trees—so much so that we have been applying Gishurst Compound with the garden engine, and in doing so I noticed a fact that may interest you, viz., that all the trees that had been dressed with Gishurst in previous seasons were clean or nearly so, while trees that for 10 years had never been blighted nor dressed were this year covered as with snow. The spread this season is beyond anything I have ever known; it is a hard matter to find a clean tree, but I am determined if possible to keep it down. My success with the Orange family has been so complete—three dressings in two weeks in the spring, with a solution not stronger than 2 oz. to the gallon, will carry the trees through the summer clean. We do this when the fruit is gathered, and before the growth starts for the following season, and have no further trouble with them. *G. W.*

Water Pumps.—Your correspondent "M. P." need have no apprehension of obtaining a supply of water from the river, and in sufficient quantity, by a lift pump 4 inches in diameter. The perpendicular height to which he requires the water to be raised (22 feet), is not objectionable, excepting only as to the power required, nor is the lineal distance, 60 yards, of any consequence to its action provided the pipes and joints are perfectly sound, and the suction pipe large enough. I recommend 3-inch suction pipes for every 60 yards. A valve at the mouth of the pipe in the river might be useful in case repairs were necessary. I advise "M. P." to put himself into the hands of an intelligent plumber or engineer in his neighbourhood. *An Old Engineer, Manchester.*

Horticulture, Croquet, and Fireworks.—I am not a reader of the "Owl," but from a quotation from that oracle, given in a daily contemporary, it would appear that a deputation of young ladies lately waited on the authorities of the Horticultural Gardens, to ask leave to play croquet on their lawns. It is said that they were most courteously received, but at the same time informed that THE GARDENS WERE FOR HORTICULTURE, not "husbandry." Is this true? If it be, I shall begin to hope the Council are coming (not too soon) to their proper senses; but I am doubtful if this Owlslight is to be trusted. How say you? I notice also one or two remarks which seem to be deserving of attention in the account given by the *Times* of the *soirée* which followed the scanty *fête* on the 13th; first that the floral decorations of the conservatory were not "artificial," but "the best specimens Chiswick could afford of splendid flowers pressed into temporary service," so that the fashionables find the old garden useful; and second, that the Horticultural Society in its attempts to astonish the Royal visitors, might have been more happy than in trying to illuminate their little cascade—after Niagara too, and, as the writer puts it, "might have shown them flowers for instance." I think so too; but, considering the composition of the managing body, it is perhaps not to be wondered that the leading idea should be illumination. *An Old F.H.S.*

The Present Drought.—We now all feel what a thoroughly dry season the present is; but probably few have realised in figures the extent of this calamity, for probably it will prove to be little else. Taking

your own Tables, as published weekly, I find that the rainfall at Chiswick for the first half-year of 1864, has been only 7.71 inches, many weeks having had no fall whatever; the highest fall in any one week having been 1.85 inch, viz., for the week ending March 9. Looking to your Tables of the rainfall for 23 years (*Gardeners' Chronicle*, Jan. 16, 1864), the average of the first six months appears to have been 10.625 inches; so that the fall to June 30, 1864, has been in defect about from ¼ (say 29 per cent.) to ⅓, and judging from present appearances, will not soon be made good. The years in which there has been an equal deficiency have been 1847, 1850, 1855, 1857, and 1858. *G., Bath.*

Orchids in Vineries.—I can fully endorse the statement of Mr. Warner (see p. 677) relative to the growth of Orchids in Vineries. I have seen them cultivated for years in this way without affecting the Grapes in the slightest degree, and I can assure your readers that I have seen finer specimens in every respect grown under this treatment than one usually finds in those "stew-pans" which have so long been considered indispensable to their successful culture. *J. M. Bothwell.*

Officinal Plants, &c., at Exhibitions (see p. 677).—Had Mr. Bull written to you to confess his astonishment at having received a prize for the poor lot of medicinal and economical plants shown by him at South Kensington the other day, and at the same time sent the pound so miserably "won" to the Gardeners' Royal Benevolent Institution, I must say it would have been a more dignified course than the one he has pursued. Why, there are only two or three plants named in the list Mr. Bull has thought worth while to send you, which are at all difficult to obtain, and none of those mentioned are difficult to cultivate. Had he sent good Clove, Nutmeg, and Strychnine plants—not to mention others equally desirable—and been "put off" with a 3d prize, then there would have been cause to complain. I hope that if "some" or any of our Curators of botanic gardens are not in possession of a better lot of medicinal plants than those exhibited by Mr. Bull, they will have sense enough to refrain from exposing such a poverty of interest, in your columns. *Dodecatheon Jeffreyi.*

Societies.

Royal Horticultural: *July* 19 (*Election of Fellows*).—The following candidates were elected, viz.: H. L. Bischoffsheim, Esq.: F. D. Blake Bourne, Esq.; Hon. Mrs. E. Fellowes, Mrs. T. Ferguson, W. Leask, Esq.; H. A. Merewether, Esq.; W. Mort, Esq.; Miss Reeve, J. R. Tetley, Esq.; P. O. Whitehead, Esq.; and Mrs. F. Green.

The following interesting lecture on Rose Culture was delivered on this occasion by the Rev. W. F. Radclyffe, Rector of Rushton, near Blandford, Dorsetshire. He said:—

I thank the Council of the Society for the high compliment which they have paid to me in asking me to give a short, popular, and useful lecture on matters connected with the Rose. As the time is limited, and as "a great book is a great evil," I can only select. I will endeavour to avoid prolixity, laxity, and obscurity. Nothing new can I say—nothing that has not been said before, and said much better. The best lectures on the Rose are the noble works of Rivers, W. Paul, and Cranston—works that should be in the library of every Rosarian. Good, however, as these works are, I am persuaded that nothing but experience can make a man a first-rate Rosarian. I will endeavour to speak from experience, making this observation, that all, or almost all that I shall say, has been given already to the public in my published articles from time to time.

1. *Soil.*—The best soil for Roses, and also for such stocks as I possess, is friable loam. Where this soil exists not naturally it may be approached by an admixture of stiff soil, sand or ashes, and black manure, in equal parts. Oak trees, Roses, and Strawberries have all an affinity for clay; I had nearly said they were convertible terms. Still, even where there is not a particle of clay, which is the case where I live, certain Roses on suitable stocks with good high cultivation and attention may be grown, and very fine Roses too. There are also some Roses that cannot be grown without an admixture, of clay. I need scarcely say that these are Roses which, though good in themselves, are not fit for the public generally.

2. *Planting.*—Much depends upon how this is done. Briar Roses should not be planted deeper than 4 inches. Indeed, if people would mulch the plants in a radius of 18 inches, they may be planted nearer the surface. Manetti Roses should be planted over the collar of the bud, and hence they should be propagated sufficiently low that the radius of the roots may not be deeper than 6 inches.

3. *Staking and Tying.*—All freshly planted Roses, especially if exposed to wind, require to be staked and tied. Iron stakes are the best; but I use for small plants thatcher's spars, 6*s.* 6*d.* per 1000, and for strong plants I use hurdle shores at 7*s.* per 100. For tying I use matting. Where winds do not prevail, after the first year ground plants and 2 feet standards (the most convenient height where numbers are to be packed away) will not require staking and tying. If ground plants are grafted they must always be staked and tied, or the weight of the flowers will break them off at the point of union.

4. *Rose Stocks.*—The Dog briar, the Manetti stock, and the Celine stock are all good stocks for certain Roses under certain circumstances. Roses are volatile things, and all rules admit of exceptions. In the Rosary there is not, as in courts of law, "rule absolute." As regards the Celine stock, I know but little of it. Mr. Wood, of Maresfield, kindly gave me four specimens of the Duchess of Norfolk on this stock, ranging with shoots of one year's growth, from 12 feet to 12 feet 9 inches high. They bloomed admirably last year at their full height. This year I shortened them to 9 feet, and they have again bloomed well. I budded the Duc de Rohan—a splendid vermilion Rose, on the Boursault Amadis last year, and it has thrown up a fine truss and bloomed well.

As regards the Briar stock, it is an admirable stock for strong lands, and better than the Manetti stock for dwarf and moderate growers; but if land is light, or shallow, unless you can afford to replenish constantly, and also to mulch, you had better have Roses on the Manetti stock. This stock is suited to strong growers and to all lands. Though an Italian stock, it is in well-drained grounds, the hardiest of all stocks. In such inferior land as mine, Roses budded *in loco* on the Briar and manured very highly, bear no comparison with purchased Manetti Roses for earliness, abundance, and largeness of flowers, and for lateness and continuity of flowers. Still, put Briar Roses in suitable lands, and they will do splendidly for you. For pole purposes, the Manetti stock is, I think, the best.

5. *Pruning.*—Some people prune on a particular day, and prune all Roses alike. Excellent rules are given for the pruning of all families in the three works before referred to. It must not, however, be forgotten that Roses in the same family require very different pruning. Among the Bourbons there is a world-wide difference between Acidalie and La Quintinie. As regards a Briar Rose, in the spring of its first planting, or whenever it is moved, it is a rule that it must be cut hard, whether it be for a pole, wall, or standard; for lack of this, Briar Roses frequently fail. Till, however, the sap rises and the eyes swell, you must never prune.

As regards Manetti Roses, they often fail from being cut hard. From first to last prune them as hybrid Chinas, whether pot plants or monstrous plants. If their wood and skin is injured, then you must cut them down to sound wood and sound skin,

6. *Growth and Hardihood.*—These two are requisite for England. Some that have China blood in them grow well, but yet they are not hardy. As a rule the thorned Roses are hardier than the smooth-skinned Roses. Of course there are exceptions in both cases. When, therefore, you see a novelty described as thornless, remember it may be no recommendation. I ventured some years ago to say in an article that none but vigorous growers would suit the English; and the consequence has been that raisers of seedlings have erased the words "dwarf" and "moderate," and now nearly every Rose is described as "vig." I am told that some of the new Roses of 1864 described as "vig." are very dwarf and bad growers. "Moderate" in the fine lands of nurserymen will be dwarf in 95 lands out of 100, and "dwarf" means death. The two best moderate growers, and both of them hardy and excellent, are the well-known Géant des Batailles and Pauline Lansezeur.

7. *Watering.*—Roses suffer much in torrid weather from lack of water. Before watering, the ground should be surface-stirred, and sufficient water poured on to touch all the points of the roots. If the surface is kept superficially stirred, it will be moister than when kept corked down tight, because a lesser quantity of rain, and the night-dews, which are in the ratio of the sun's heat, will be able more easily to penetrate the soil.

8. *Syringing.*—A great many of the miseries of Roses would be got rid of if the trees were regularly syringed from the earliest appearance of the leaves. By keeping the lungs clean you preserve the health of the plants. The leaves of plants are externally and internally conducive to health. Syringing is the best thing to keep down fungi and aphides, and also to prevent the mischief of honeydew, which if not washed off as soon as perceived, will, by the sun's extraction of the fluid parts, leave a viscous concrete that will destroy the functions of the leaves.

9. *Fungi.*—These are a numerous family. The two most destructive are Orange fungus and White fungus. Orange fungus must be pinched off by hand before the nucleus bursts and spreads its spores over the leaves, and white fungus must be destroyed by sulphur (the black sulphur is best), or by a solution of 2 oz. of blue vitriol in a little hot water, and then mixed with a bucketfull of cold water and poured from a watering-pot, with the top on, over the leaves. This is the most effectual remedy. There is also another misery, "black blight." This is called by some a fungus. It may be so, but I could never perceive the spores of fungus. It proceeds, I believe, from excess of moisture and a low state of temperature; also from checks of weather. I am led to think this, because I never remember seeing it under glass, which is no preventive of white fungus. It is less mischievous than either of the other two miseries. When it occurs early in the year, if the leaves are universally affected, stirring the ground deeply, or removing the plant to estop the rising sap, are probably the best preventives of mischief.

10. *Wind.*—Roses cannot have too much air and too little wind in the growing season. At other times it is beneficial. Great havoc every year is committed on my Rosary by the destruction of leaves by wind. This season the wind has been quiet, but in 10 of the months of last year there were from one to five gales.

11. *Novelties.*—Do not give up such good and hardy Roses as the Géant and Baronne Prevost. They have outlived hundreds at my residence, and are as good and healthy as they were 12 years ago.

> "Tis good to be on with the new love
> Before you are off with the old."

No question, good Roses come out yearly, but we want not only good Roses, but better than we have got. We also want more distinct Roses.

As regards form, we want more deep cups and globes. As regards colours, we want true purples, (now supplied by Alfred de Rougemont), full-sized, pure whites and creamy autumnal whites, yellow Hybrid Perpetuals, variegated Hybrid Perpetuals, high coloured Teas, and more full-sized, full, very dark Roses. In the dark line we have Empereur de Maroc, small, beautiful, and full; Princesse Mathilde, dark, shelly, beautiful, but not full; Francis Arago, full and good; Alfred de Rougemont and Prince Camille de Rohan, both very dark, full, and extra fine. There is one new Rose very interesting, tolerably dark, and also good—a Rose of Royal and national interest, Deuil du Prince Albert, or the Mourning of Prince Albert. Mr. Rivers has well said, in a letter to me, that it is, from its darkness and mournfully pendulous habit, well adapted to represent the Royal and national, and I may almost say, world-wide sorrow at so sad an event. I caused it, at Mr. Rivers's suggestion, to be mentioned to her Majesty by my friend Lord Rivers, and I cannot but think that this Rose, and such like dark Roses as I have mentioned, would be very appropriate to adorn the Mausoleum, and also suitable to this Royal Garden, so indebted to her Majesty and the late Prince Consort.

Lastly: *Selection of Roses.*—I think you cannot do better, if you do not know the Roses, than state to the nurserymen what are your circumstances and wants; and though they cannot for several years be quite sure about them, I am certain they will not wilfully deceive you. The old "stuff" they know well; but they cannot, in the case of novelties, till they have passed through severe winters and unpropitious summers, tell their true value or worthlessness. I think nurserymen should take some security from the raisers of seedlings that the Roses are according to description; and I also think that they should make inquiry as to the "suppressio veri," as well as take security against the "expressio falsi."

It now only remains to thank you for your kind attention, and to hope that what I have said may create true Rosarians. Your well-known love of the Rose must be my apology for this prolonged address.

July 19 (*Floral Committee*).—Few subjects were produced on this occasion, but among them were one or two of considerable interest. Of Roses Mr. Wm. Paul furnished blooms of Dr. Lindley, a highly promising shaded velvety-crimson kind, to which a Second-class Certificate was awarded. The same exhibitor also had blooms of Rosea elegans, a lively carmine Rose, but not sufficiently full; and with it were some fine blooms of Lord Macaulay and of Princess of Wales, which have from time to time been favourably noticed by us. Hamlet, Lord Canning, and Lord Clyde, all crimson Roses, were contributed by Messrs. Paul & Son. To Mr. Perry, of Castle Bromwich, was awarded a Special Certificate for a collection of cut blooms of Verbena, among which Glowworm, scarlet with white eye, and Snowball, a good formed white with a green eye, received Second-class Certificates. A Petunia from Mr. Holland, of Isleworth, named Striata perfecta, received a First-class Certificate. Its flowers, which are of a deep purplish rose colour, and of medium size, have each five stripes or rather distinct bands of white in them, radiating from the centre to the circumference. For young examples of Asplenium Trichomanes subæquale, a Second-class Certificate was also awarded to the same exhibitor, who had likewise one or two plants of a little red Cyclamen, called Peakianum. To Highgate Rival, a rich, rosy salmon-coloured zonal Pelargonium, from Mr. Windsor, gr. to Lord Dufferin, a Second-class Certificate was given. Messrs. Carter contributed a pretty light crimson Clove Carnation, named Goliath; and Mr. Bull had a violet purple Achimenes, called Leonie; the last named exhibitor likewise sent a variety of Bearded Lady's Slipper, called Cypripedium superbiens, and a red spotted orange-coloured Tropæolum, named Gold Belt. From Mr. Young, of Highgate, came one or two Seedling Gloxinias; and we also noticed a few small Ferns from other exhibitors.

Linnean: *June* 16.—G. Bentham, Esq., President, in the chair.—St. George J. Mivart, Esq., exhibited a specimen of a curious monstrosity of Digitalis purpurea, apparently a fusion of several of the terminal flowers into one cup-shaped corolla, with median floral prolification, the adventitious branch just about to pass through the open carpels. The following papers were read:—1. "Description of the skeleton of a Dinornis presented by Dr. Gibson to the Museum of the Yorkshire Philosophical Society," by T. Allis, Esq. The specimens were obtained by Dr. Gibson, through his brother, a resident of New Zealand; and consisted of a skeleton of the Moa, as well as an Apteryx, and some of

its eggs. These arrived in York about the end of May. On unpacking the boxes the skeleton was found nearly perfect, and the condition of the bones excited astonishment. All that was learned of the history of the skeleton was that it was found in a sandhill, sitting on its eggs. Besides the bones of the parent bird, there were some small detached, and at first sight puzzling, bony plates; but on closer examination of one of them it was found to be the ilium of a very young bird, the progeny of the adult. There were five of these bones, four belonging to one side of the bird, showing them to be portions of the skeleton of four different chickens. By the aid of photography it was determined to take a permanent record of the state in which the bones had come to hand. A copy of these photographs was presented to the Society. One of them represented, among others, the following bones, connected together by cartilage, namely, the three vertebræ adjoining the sacrum with their left ribs, and the bones of the inner toe of the left foot. The other showed the femur, with the still flexible ligament which secured its head in the socket, and a portion of skin on the outer edge. Two vertebræ were exhibited to illustrate an interesting part of the history of this particular bird: the first dorsal representing the condition of all the vertebræ below it, and the first of the cervical representing in a greater or less degree the condition of the neck bones. It would appear that as the bird was undergoing the process of entombment in its grave of sand, it became alarmed at the accumulating weight which pressed upon it, and this induced it to extend its neck, and to lower its head to search out and remove, if it had been possible, the incubus which oppressed it; that this act caused the head to be buried in the sand just at that point at which it was of sufficient depth to exclude effectually all atmospheric influence, while the neck itself was just out of that protecting depth, for at one extremity of the neck the head was in the most perfect state of preservation, and at the other extremity the dorsal vertebræ were equally well preserved, the intermediate portion being the only injured part. "We are not so certain as we could wish," continued the writer, "as to what species our bird belongs to. Dr. Gibson has carefully measured the leg bones, and does not find them agree in all respects with any described by Professor Owen, but the difference may possibly be only sexual." The most striking peculiarity of the skeleton was stated to be its great strength, especially in the neck. The cervical vertebræ were described as wanting those acicular processes which are found on the under side of these bones in the ostrich, and bear a greater resemblance to those of the emu.——2. "On the sexual relations of three forms of Lythrum Salicaria." By C. Darwin, Esq.——3. "Notes on the sterility and hybridisation of certain species of Passiflora, Disemma and Tacsonia." By Mr. John Scott; communicated by C. Darwin, Esq.——4. "On the Œsophagus of the Ruminantia." By Dr. Rutherford; communicated by Dr. J. Anderson.——5. "On a Peloria and semidouble flower of Ophrys aranifera." By Dr. Masters.

ENTOMOLOGICAL: *July* 4.—A. R. Wallace, Esq., Vice President, in the Chair. Mr. Tegetmeier made some interesting observations on the economy of the honey bee, and exhibited a bar from a tenantless hive which, during the first half of the month of May last, had been visited by workers from an adjacent hive, which had cleaned out the cells of the old comb left in the hive, which they had securely fixed in its place by new wax at the top and sides of the bar. This he considered preliminary to an intended swarm, which would have subsequently taken possession of the empty hive, thus leading to the idea that it was the swarm of workers which led the queen whilst swarming, and not, as was commonly supposed, the queen which led the swarm. He also exhibited a curious series of the cells of bees of abnormal shape, with a view to prove that their hexagonal form was not the result of instinct, but that each cell was always commenced as a hemispherical cup, and that the hexagonal form was necessarily assumed in consequence of the cell being surrounded by six other equal sized cells. Mr. F. Smith objected again, as he had already done on several previous occasions, to this view of the subject, maintaining that the base of the truly hexagonal cells of the common wasp was flat. A communication was read from Mr. S. Stone as to the manner in which he had induced the colony of wasps (Vespa germanica) to form the curious series of structures exhibited at the preceding meeting. These were built by a small colony of workers attempting to build brood comb affixed to wires placed in various directions, and from which they were removed to another box, when the structure was completed without any eggs being deposited. Mr. Stainton exhibited a new species of Tineidæ, belonging to the genus Gelechia, for which he proposed the name G. Lathyri, it having been reared by Mr. Brown of Cambridge, from larvæ which fed upon Lathyrus pratensis. Prof. Westwood stated that he had succeeded in rearing Aglossa farinalis from the larvæ found in great profusion in a bran bin by Captain Cox. A Paper by Mr. Rowland Tremen containing descriptions of 15 new species of Butterflies from South Africa was read. The first number of a new volume of the Society's Transactions has just appeared, containing Major Parry's Monograph on the Lucanidæ, with 12 plates.

Notices of Books.

A Monograph of Odontoglossum, by James Bateman, Esq., F.R.S., F.L.S., etc.; Author of "The Orchidaceæ of Mexico and Guatemala." Imperial folio, in numbers each containing five Coloured Plates. London: Lovell Reeve, Henrietta Street, Covent Garden. 1864.

When, some 50 years ago, Humboldt, in association with his fellow traveller Bonpland, and assisted by Kunth, the eminent Prussian botanist, commenced the publication of their great work on the new genera and species of plants inhabiting equinoctial America, very little was known of the Orchidaceous epiphytes of that glorious country. The known species forming the superb genus to the illustration of which Mr. Bateman is devoting himself, amounted in all, even so lately as April, 1833, to five only. We suppose he himself cultivates in his rich collection at least 100. And certainly no genus of even the Orchidaceous race so well deserves to be admitted within the realm of Horticulture, in which it most fortunately happens that they all find themselves perfectly at home. It is vain for the Old World to contend with these Americans for the palm of Beauty. Its Air-plants and Dendrobes are quite inferior to the species of Odontoglossum.

We will only beg those who dispute this statement to cast an eye upon the species figured most admirably in this Mr. Bateman's first number, especially the *O. Phalænopsis*, with the inimitable great half-transparent variegated flowers of which no Butterfly-beauty would venture to compare herself. We observe that *O. nebulosum*, although another glorious plant, yet scarcely equal for richness of tints to the species just mentioned, produced the other day at Mr. Day's sale the sum of 14*l.* 10*s.*

Most fortunately, the constitutional peculiarities which at first opposed a barrier to the successful cultivation of these plants have now become thoroughly understood, and we do not find that it is attended with more difficulty than that of a Pelargonium. People naturally thought that natives of the tropics would insist upon a tropical atmosphere. No mistake could be greater. Hear what Mr. Bateman says, in speaking of O. nebulosum.

"It was at Munich, in the year 1835, that I first became acquainted with this fine Odontoglossum, having, through the kindness of Professor Von Martius, been allowed to examine the rich collection of dried specimens that Baron Karwinski had then recently brought home with him from Mexico. Two years afterwards living plants were sent to me from Oaxaca, which happening to arrive in the midst of that remarkably severe winter, 1837-38, I naturally expected would have been destroyed on their way; so, far, however, from this being the case, they appeared to have sustained little or no injury from the cold, and on being placed in a stove they soon began to push both roots and leaves. All went well so long as the temperature of the house did not exceed 70°, but when the winter had passed away, and they had to face the intense heat at which the Orchid houses of that period were ordinarily maintained, they then quickly lost their vigour, and before a twelvemonth had passed were all gone—victims, like a multitude of other invaluable plants, to our then ignorance of the conditions under which alone the Orchids of cool countries could be expected to thrive."

Of this O. nebulosum our author writes thus:—"I am not aware that this plant ever flowered in this country until within the last year or two; certainly no figure of it has ever been published in any English botanical periodical. I have, however, found in a French work (the 'Illustration Horticole'), under the name of O. maxillare, what is obviously the same as the plant represented in the plate. I should myself have probably fallen into the same mistake as Professor Lemaire, had I not enjoyed the opportunity, which he unfortunately had not, of examining the original specimens in Dr. Lindley's herbarium, and from which that able botanist drew up his description (in the 'Folia Orchidacea') of the two species. O. maxillare, of which Dr. Lindley only examined a single flower, though he made a most careful drawing, is shown by a glance at the latter to be a totally different thing; it has moreover, I fear, long since disappeared from our collections. In Dr. Lindley's description the flowerscape is said to be terminal, which in Nature it never is, although from the way in which Karwinski's wild specimen was glued together, it certainly presents that appearance in the herbarium. The column, moreover, and the base of the sepals and petals are said to be pubescent, though nothing of the kind is visible to the naked eye when the flowers are fresh. With a powerful magnifying glass pubescence may certainly be seen."

In addition to what has already been stated about cultivation, we take the following excellent advice:—"As most of the Odontoglossa require to be treated in the same way, I transcribe, from the 'Guide to Cool Orchid Growing' (Reeve, 1864), the following instructions for the culture of the genus:—'They will all succeed perfectly in a low lean-to house facing the north, the mean temperature of which need not exceed 60°. They should stand on a shelf of slate or stone, near the glass, but should always be protected from the direct rays of the sun. Constant humidity should be maintained by damping the shelves and floors, but the plants themselves will only require water in moderation, and what is given to them should pass away freely, for if it stagnates, or if the compost in which they grow becomes sodden, the roots will immediately decay. A gentle evaporation is greatly assisted by placing layers of Moss—to be kept damp of course—on the shelves whereon the plants stand. Odontoglossa cannot endure wooden blocks, but will thrive in a compost of which one-half consists of small broken potsherds, the remainder being a mixture of shredded Sphagnum (dusted with fine sand) and fibrous peat. About one-third of the entire depth of the pots may be filled with this mixture, the other two-thirds containing nothing but large pieces of broken pots, so as to admit as much air as possible to the roots. The pots in which the plants are grown should stand on other pots (inverted) placed in saucers of water, in order to secure humidity and protect them from wood-lice. Nearly all the species flower during the winter and spring months, a circumstance that greatly enhances their value. Many, *e. g.*, O. pulchellum, are deliciously fragrant, and the flowers of nearly all the species remain in perfection for weeks, whether left on the plants or cut for bouquets. In so vast a genus we shall, no doubt, meet with many idiosyncrasies, but nine-tenths of the species will flourish under the treatment indicated above, and which may be regarded as suitable to the majority of cool Orchids. Most Odontoglossa are, like the Masdevallias, very impatient of the knife, and cannot therefore be rapidly multiplied. They have also a peculiar aversion to fumigation by tobacco, which causes their leaves to fall off.'"

Who will not now take the Odontoglots into special favour?

Dictionary of Natural History Terms, with their Derivations. By David H. M'Nicoll, M.D. Lovell Reeve & Co., Henrietta Street, Covent Garden. 1863. Pp. 584. 8vo.

A good work of this kind has long been a decided desideratum, and Dr. M'Nicoll deserves the thanks of the whole body of students of botany, entomology, zoology, &c., for the very useful book which he has furnished.

There are hosts of unreasonable people, with the merest smattering of knowledge, who inveigh against the practice of giving hard Latin and Greek names to plants and insects; but those gentlemen have no notion of the exceeding difficulty there is in assigning characteristic and distinguishing names to the hundreds of thousands of objects with which nature supplies us. In fact, nature's variety beats man's inventive power, in the way of nomenclature, hollow. Mr. Bates, in his recent visit to the river Amazons, found 8000 plants and insects that had never been noticed or scientifically named before. Botanists and entomologists are usually glad to call a plant or insect by the name it bears in its native country; or, they select some peculiarity about it which they try to express in a Greek or Latin form; or they adopt the name of the person with whom it happens to be associated, as the discoverer or describer, &c. We have instances of each of these classes of names occurring in abundance in the book before us. Thus:—

"*Aúcuba* (Bot.), the original Japanese name of the shrub.

"*Pteran'dra* (Bot.) πτερόν, plume or feather, ἀνήρ, ἀνερος, ἀνδρος, a stamen; a genus of Malpighiaceæ.

"*Malpi'ghia* (Bot.) P.N. from M. Malpighi, Professor of Medicine at Bologna; typical genus of the splendid Nat. Ord. Malpighiaceæ."

When once people know the derivation, meaning, and history of a hard name, it is found that they no longer complain, but rather seem to enjoy its strangeness, and soon get it imprinted on their memory. It so happens that these proper names have been very extensively used in memory of Englishmen, or distinguished naturalists of other countries; and the names of the latter are not always euphonious to British ears. Nobody could object to the five consecutive names we find in page 42—Barringto'nia, Bartholi'na, Barto'nia, Bartra'mia, Ba'rtsia, whatever they might say to Kaulfus'sia and Kiggela'ria, but, if there were any occasion, the public would assimilate them, just as easily as they have adopted Fu'chsia and Eschscho'ltzia.

Scarcely second to the difficulty of meaning, and indeed closely connected with it, is the difficulty of accentuation. Young hands are constantly tripping, to their great annoyance, and even the sages in the science are not always agreed on this subject. Dr. M'Nicoll modestly says: "In regard to accentuation, I cannot hope to please all, since, in some cases, I have failed to satisfy myself. The attempt has been made to reconcile the claims of the rules of composition on the one hand, and of euphony on the other." Dr. M'Nicoll's work gives a brief explanation of above 15,000 names and terms used in Natural History, and usually in a single line. It will be invaluable to those for whose use it was written. He hopes "it will solve the difficulties of at least the younger students of the Natural History Sciences. It has the merit, at any rate, of being the first attempt of the kind." As such, Dr. M'Nicoll deserves great credit, for it is extremely well done.

Garden Memoranda.

Broom House, Fulham, the Residence of the Right Hon. Laurence Sulivan.—Of the many charming suburban villas on the banks of the Thames, this is one of the very prettiest. On the garden front is a terrace richly ornamented with gay flowers in beds on gravel, a well-kept lawn beautifully adorned with clumps of evergreens, and magnificent specimens of ornamental trees, shady walks here and there, from which delightful glimpses of the Thames can be obtained through leafy boughs; and last, but not least, a natural rockery, decorated with hardy Ferns and flowering plants. On the north or entrance side is Grass land, on which stand some fine timber trees, conspicuous among which are Cedars of Lebanon, Acacia, Birch, Copper Beech, Horse Chesnut, and Elm.

To the hardy Fernery, just alluded to, belongs special interest, on account of the tasteful way in which it is arranged, and being partially under trees, these favourite shade-loving plants succeed well in it. The rockwork of which it consists is constructed of run bricks coated over with cement, the stations for the plants being in many instances Moss-covered hollow stumps of old Elm trees. These, when filled with good soil, form suitable receptacles not only for Ferns but also for many kinds of flowering plants.

The terrace garden during the greater portion of the year is a blaze of flower. Early in spring it is gay with Tulips, Hyacinths, Crocuses, and other early blooming plants, such as Pansies, Alyssum, Iberis, Arabis, Catch-fly and Forget-me-Not. In the first or second week in May, according to the season, these are cleared away to make room for the usual kinds of bedding plants. Among Scarlet Pelargoniums for out-door purposes the greatest favourites here are Boule de Feu or Attraction, and Preston Hall, the last a showy sort with a well marked horseshoe leaf; in the variegated class one of the most useful still is Alma; Rubens, pink, and Stella are also considered excellent. Of Verbenas, Blue Bonnet is one of the best in its class, as is also Purple King, an old, but still not easily beaten variety. Yellow Calceolarias, and other kinds of both Verbenas and Pelargoniums, are also at present blooming in the greatest possible profusion.

After the beauty of these plants is over, Pompon Chrysanthemums are turned out into a few of the most conspicuous beds. These are struck from cuttings put in in the last week in June, and they often flower well even up to Christmas.

In front of a wall by the side of a walk is a handsome ribbon border, consisting of Christine Pelargonium next the wall; then Pelargonium Brilliant, yellow Calceolaria, Purple King Verbena, and Cerastium, the last nearest the walk.

Of Heliotropes, there is a nice bed of some dwarf dark variety; of white zonal Pelargoniums, the best is Madame Vaucher, and of yellow leaved sorts, the most effective is still Cloth of Gold.

With respect to fruit, both on standards and on walls, there is an excellent crop; Peaches and Nectarines unprotected are a little less in size than those in a cool Orchard house, but not much. In short it is evident that the command of a little heat in these structures would be an advantage. Even unwarmed, however, they are found to be extremely useful for many purposes in early spring. Mr. Rust's new yellow Peach called Thames Bank, of which favourable reports have already appeared in our columns, promises this season to ripen some fine fruit, and other seedlings of Mr. Rust's are also in course of trial. Figs and Grapes are likewise good.

In the Fruit Room are coloured drawings of most of the new sorts of Pears grown at Broom House, and in Mr. Rust's cottage are beautiful specimens of the different kinds of woods grown on the estate, nicely put together and framed and glazed, as are also cases of preserved moths captured in the neighbourhood of Fulham, all subjects in which Mr. Rust takes much interest.

Of Melons in frames we noticed an excellent crop, growing in good friable loam. Melons here are never shaded, and the sort liked most is the Bromham Hall, which among green-fleshed varieties still stands in the first rank. Mr. Rust, the gardener, considers that two causes which contribute most to failure in Melons are using cold water, and not keeping up sufficient bottom heat.

Strawberries have been very plentiful here as elsewhere this season. The ground on which they are planted is heavily manured and trenched in April, and plants which had been forced are turned out in rows 3 feet apart and 18 inches asunder in the row. All runners are kept cut closely in, and a crop of Lettuces is generally planted between the Strawberry plants the first season. The following spring the hoe is passed through them several times, and after a good soaking of rain and the removal of the intermediate crop, every inch of ground is covered, or rather mulched with long stable litter. This retains moisture in the soil, and by being applied early the straw becomes bleached quite clean before the fruit is ripe. One advantage attending wide planting is that the fruit can be gathered without danger of being trampled upon. The plantations are allowed to stand three years, sometimes four, and then the plants are destroyed. Under this system large crops of fine fruit are obtained. Among sorts grown are Keens' Seedling, Bicton Pine a white kind, La Constante, Myatt's Eleanor, and Elton. Of these La Constante is the greatest favourite; the plants are dwarf, produce few runners, and bear enormously.

Scarlet Runners are cultivated here without stakes. They are sown in April in rows 3½ feet apart, and after they come up the plants are regularly stopped once a week or so during May and June. When the weather begins to set in warm they are mulched with stable litter; they generally begin bearing about the beginning of this month, and keep on producing pods all through August and most of September. In exposed situations, or where stakes are scarce, this mode of culture is well worth consideration.

Peas have been a good crop, but the present dry weather is affecting them greatly. The ground for late Peas here is always trenched, it being found that by that means they are better enabled to withstand vicissitudes of weather, than in ground treated in the ordinary way. Here the Abergavenny Marrow is considered the most useful Pea for late work; but in many instances early sorts are sown for that purpose with advantage.

Seakale, as grown here, makes a useful rotation crop. It is taken up in autumn and put away into any spare corner, covered with litter to keep frost from it; for forcing, a brick pit is filled with leaves about the first week in November; the roots are taken from their store, placed above the leaves, and covered with about 9 inches in depth of mould; fresh lots are introduced into the pits at intervals of about a fortnight all through the winter, and covered with short clean straw and wooden shutters. For new plantations pieces of the roots cut into lengths of some 4 or 5 inches are buried among coal ashes; and the first week in April, when beginning to sprout, they are planted in well-trenched ground, in rows 2 feet apart, and 18 inches asunder in the row. Spinach and Lettuces are planted as intermediate crops, and are off the ground before the Seakale wants the room they occupy.

Other kinds of Vegetables are also treated with equal skill, and not only the kitchen garden but also the ornamental department reflects great credit on Mr. Rust's management.

Miscellaneous.

Flowers v. *Foliage*.—Are there any people who entertain a real affection for flowers? If so, then how does it come to pass that flowers, at one time the greatest favourites, are after a few years of popularity no longer looked at; in common parlance gone out of fashion? Our great nurserymen are the first to find out in which direction the taste is tending. As soon as a plant ceases to be inquired for, they get rid of it at any price, to fill its place with the few favourites of the public; and the effect is, that plants which were seen in every garden, though their price was high, become extremely scarce and finally disappear altogether from the nurseries. Fashion, in this as in other things, is never without a reason for adopting an innovation. The Cactuses, of which, at one time, shiploads came to our shores, were discarded because they were such spiny irritating things, and which, in public gardens, you were requested not to touch. The Aloes, now only seen in all their diversified forms in Prince Salm-Dyck's magnificent works, had to make room for less interesting types, because you had to wait for a series of years before many of them flowered; popular opinion declared it was a whole century. Such plants might be in their place in antediluvian times, when people as old as Methuseleh were plentiful, but scarce fit garden pets when human life seldom reaches fourscore years. Then came the reign of the Dahlias, a brilliant and prosperous one, but suddenly cut short by the startling discovery that they flowered late in the autumn, and were apt to be killed by the first night-frost. "Besides," a sentimental lady was heard to say, "they always remind one that summer is past, and winter is coming on." Last autumn, when enjoying the fine show of Chrysanthemums in the Temple Gardens, we trembled at the very thought that somebody who has a voice in the fashion of flowers should find some argument why this lovely sight should not be seen; why the Chrysanthemum with its marvellous variety of colour, much more the "Pride of London" than the little humble Saxifrage of that name, should be banished for some new untried favourite, perhaps not half so well adapted to the atmosphere of our capital. As long as one set of flowers is superseded by another, there is, perhaps, not much to complain of, but a fashion is gradually creeping in well calculated to create alarm. Endeavours are now being made to persuade us that it is but a depraved taste to admire flowers at all; that it is the foliage on which Nature has lavished the greatest beauty, and that here real taste has proper objects for gratification. The Ferns were the first of this class of plants which gained a footing amongst us. The elegant and graceful tracery of their foliage was so bewitching that a perfect rage for them sprang up, and during the last 10 years more books have been written about them than since botany became a science. The species indigenous to our island have been illustrated in every imaginable manner—in bulky volumes, as in "The British Ferns Nature Printed," and in portable companions, as in "The British Ferns at One View." There is hardly a publishing house that has not aided us in undertanding the subject by issuing one or more volumes, and there are few eminent botanists who have not given us the benefit of their experience in this branch of study. The success which the Ferns achieved was the greatest triumph of flowerless plants over flowers ever recorded. It was the commencement of a rage for fine-foliage plants, as gardeners call them—of that phyllomania now spreading through the length and breadth of Europe. All plants with variegated leaves became much sought after. A species which would not be looked at if preserving the natural green of its foliage, became at once an object of interest if labouring under a kind of albinism so as to make it appear mottled. But white and green was not enough to cause variety; the eye wanted more; and during the last few years the whole of the globe, inhabited and uninhabited, has been searched for plants with leaves having more than two colours—if possible, all those of the rainbow. The search has been productive beyond expectation, and we have now in our Caladiums, Aroms, Begonias, Marantas, Cannas, and others, an endless series of these favourites. The latest development of phyllomania seems to be decidedly towards large and hard-leaved plants; all that are soft and weedy are to be cast aside. Here horticulture has hit upon inexhaustible stores, and amongst them the most majestic of all known plants, the great Palm tribe. This royal race has not yet received due attention amongst us. At Kew we certainly have the largest conservatory ever built for their reception, but we cannot boast of the most numerous collection of Palms. Continental establishments with fewer means than our great national one, and not favoured by so mild a climate as our own land, outnumber us. The value of Palms for decorative purposes on stair-cases in large halls and ball-rooms, as frequently seen abroad, is very great. One of the finest ball-rooms we ever entered was in tropical America, where, in a grove of young Cocoa-nut Palms, the tips of the over-hanging leaves had been tied together by gay-coloured ribbons, thus forming magnificent arches. The ground underneath having been floored and the whole brilliantly lit up, this natural ball-room produced a magical effect. We at once perceived how correct those are who maintain that the prototype of Egyptian, Grecian, and Gothic architecture was a Palm grove, as we find it almost too slavishly copied in the great Temple of Edfou. *Athenæum.*

Fertilising Power of Pollen.—M. Belhomme states that the pollen of monocotyledons preserves its properties for a much longer period of time than that of the dicotyledons. He experimented upon the following natural orders; Leguminosæ, Rosaceæ, Myrtaceæ, Umbelliferæ, Cacteæ, Cruciferæ, Malvaceæ, Solanaceæ, and Boraginaceæ of the latter group, and he found the pollen as fertile at the end of three years as it was at first. His experiments on Monocotyledons were made upon the Liliaceæ and Amaryllidaceæ, the pollen grains of which retained their fertility for a period of six years. Fertile and barren pollen may be readily distinguished. If the grains have lost their fecundating property, they feel like dry powder when placed upon the palm of the hand; if, however, they still possess it, they adhere to the hand, and seem as though they had been slightly moistened.

Podophyllum peltatum belongs to the natural order Ranunculaceæ. It is only found in a wild state, in the States of North America, where it is widely spread, extending from New England to Georgia. The plant may be also commonly seen in the botanic gardens of this and some other countries of Europe. Podophyllum root or rhizome occurs in pieces of variable length, and from two to four lines thick, averaging about that of a common goose quill. At intervals, when not too much broken up, it presents large irregular, more or less flattened tuberosities, from the lower surface of which brownish-coloured rootlets arise, or, when these are detached, their former position is marked by whitish, more or less projecting scars. The pieces are either nearly smooth or much wrinkled longitudinally, of a reddish-blackish or yellowish-brown colour externally, and internally whitish or yellowish. They break with a short close fracture; have a sweetish and frequently somewhat narcotic odour, and a nauseous, slightly acrid, bitter, and feebly narcotic taste. Podophyllum has been frequently analysed, and with somewhat conflicting results. The most important constituents, however, are two resinous principles, one of which, according to Lewis, is soluble in alcohol and insoluble in ether, and the other, constituting four-fifths of the whole, is soluble in both alcohol and ether. There is some difference of opinion in North America as to the relative purgative properties. The experiments of Mr. Harvey Allen led him to regard the resin which was soluble in both alcohol and ether, as alone possessed of any active purgative properties. In the British Pharmacopœia the resin obtained from Podophyllum by means of rectified spirit is officinal; hence, if the presence of two resinous principles be confirmed of different degrees of activity, our Pharmacopœia preparation will contain them both, as they are both soluble in alcohol. Podophyllum resin is described in the British Pharmacopœia to be "almost entirely soluble in pure ether," but we do not find the officinal resin as soluble as there stated. Besides these resinous principles, the alkaloid berberine, together with saponin and another alkaloid, have been recently

discovered by Mayer in Podophyllum. In America Podophyllum rhizome and its preparations, and more especially that of the resin under the name of Podophyllin, have long established their reputation as active and certain cathartics, Podophyllin has also been very extensively employed for some years in this country, and in other parts of the world, and is now, by almost universal testimony, regarded as a most valuable cathartic and cholagogue. In many cases it is applicable with perfect safety where mercury has been hitherto indicated and alone used. The griping effects which are frequently experienced by its use may be readily prevented by combining it with small doses of extract of henbane. The dose of Podophyllum resin of the British Pharmacopœia is from a quarter to half a grain, or even in some cases a grain. There can be no doubt but that Podophyllum is a very valuable addition to our British Pharmacopæia; indeed we have no hesitation in stating that it is by far the most important new remedial agent introduced into that volume. *Prof. Bentley in Pharmaceutical Journal.*

Hæmanthus, or Blood-flower.—This is one of the old and much-neglected plants, and one that is now very seldom seen. I cannot think why it should be so, for I know of no plant of more easy culture than the Hæmanthus, and one that will repay any one so well for the little attention it requires. It is one of the Cape bulbous-rooted plants, and, consequently, requires but little artificial heat. Any one that has got a greenhouse or vinery may grow it in perfection. My own practice of growing the Hæmanthus is as follows:—I always grow it in a late vinery, with the exception of the time the plants are in flower, when they are taken to the conservatory. I invariably give a long season of rest, which is generally from August till February. I consider this the most important point to make sure of fine strong heads of bloom. During the time they are at rest, they require but little water—just as much as will keep the leaves from shrivelling. For large specimen plants, I pot them only once in two or three years, as I find they flower much freer for being a little stunted in the pots. The best time for potting is when the plants are starting into growth. The most suitable soil is one of open texture. I use the following:—one-half rough turfy loam, and the other half equal parts of rotten cowdung, fibrous peat, charcoal, and sand, with good drainage, and an abundance of water during the growing season. They are propagated by dividing the roots, or from seeds; if by the former, it ought to be done when the plants are at rest. There are several varieties of the Hæmanthus, but to my fancy puniceus is by far the best. *A. Ingram, in Florist and Pomologist.*

Poisoning by Buttercups.—An inquest was recently held at the Bull Hotel, Dartford, before Mr. C. J. Carttar, coroner, on the body of a child named Sarah Elizabeth Heron, aged 6 years. It appeared by the evidence of the mother and father of the child, that some time before death the deceased had complained of feeling very unwell, and in great pain about the body and legs. The mother afterwards discovered that the deceased had been eating Buttercups from a field close by, and sent for a powder from a chemist's; but as the deceased vomited a great deal, and presented every appearance of having been poisoned, the parish surgeon (Mr. Martin) was sent for, but that gentleman did not arrive at the house till the child was dead. A *post mortem* examination had been made, which proved the deceased had been poisoned by eating Buttercups; and the jury returned a verdict to that effect.

The First Salmon in Australia.—I am in a position to report that our great Salmon-hatching experiment is proceeding most prosperously. The bulk of the late consignment of ova per Norfolk were forwarded to Tasmania, breeding ponds according to the newest piscicultural lights having been there prepared for the precious charge, and by the last advices many young Salmon had burst from the eggs, and many thousands more were expected. The Trout ova also were doing equally well. Small as is our own portion of this enterprise, it is not the less interesting. It is conducted by our Acclimatization Society, and an ice-making factory at North Melbourne is the scene of operations. A sort of inclined plane of pans, half filled with gravel, is so placed as to allow a continuous stream of water from melting ice to ripple over each pan, in which, spread upon the gravel, lie the ova. These ova are about the size of small peas, and are of a pale rose colour. Some nine or ten of them have died each day, but about ten days ago [May 16] among the births appeared the first Salmon in Australia. The *Argus* had a leader upon the illustrious young stranger. How he looked, how he struggled, and wriggled—not nearly so long as a finger-nail, with the adherent torn ovum still hanging about him,—and how he went to sleep as deep as he could plunge into the gravel, were all faithfully described. Day by day bulletins issued, announcing how he was getting on, until one irreverent and sceptical fellow ventured to doubt whether he was a Salmon at all, impiously insinuating that the proprietor of the ice works had slipped a tadpole into one of the pans to hoax the President of the Acclimatization Society, and asserting that time would yet show the first Australian Salmon to have four legs. Since however some 150 or 160 other metamorphoses from eggs to fish have taken place; all are healthy and strong, and (as is the nature of the creature), are gradually absorbing the appendant ova which once contained them. The first thing a Salmon parr does after he breaks from his prison is to eat it. If this great experiment prove successful the gratitude of our colonists is due to Mr. Youl and to Money Wigram & Co., for to these gentlemen is due almost all the glory of this success, after so many discouraging failures. *Melbourne Correspondent of the Times.*

Calendar of Operations.

(For the ensuing week.)

REMOVING breastwood from Pear trees on walls must occasionally engage attention; but in doing this the reciprocal action that ought to exist between roots and leaves must not be lost sight of. Operating too severely at any one time should always be avoided, for the entire destruction of any considerable portion of the leaves of a tree is sure to affect its roots, and altogether disarrange its functions. If to-day, for instance, a fruit tree is loaded with superabundant shoots, and if to-morrow they be all cut off, the tree will not recover the shock for weeks. The progress of the roots becomes arrested, the healthy foliage which invigorated them having been removed. Summer pruning, both of wall trees and espaliers, must nevertheless be done, and may be easily done well. The young leaves on the upper ends of shoots appropriate sap for their own growth, and return little or nothing to the roots; therefore they may be cut off with advantage. They are robbers not nurses. Thinning and farther shortening may afterwards be commenced, and carried on by degrees. As this is being proceeded with, the leaves at the bases of the shoots will begin to thrive better in consequence of more exposure to light and dews, and their gradual increase will compensate for the diminution of foliage consequent on the reduction of the shoots.

FLOWER GARDEN AND PLANT HOUSES.

The present dry weather will in some places render daily waterings necessary; even grass will be burnt up if rain does not soon begin to fall. Indoors shading, removing dead blooms and leaves, damping floors, and keeping everything scrupulously clean, are operations which will now demand attention. See also that nothing suffers from want of water.

AURICULAS.—Seedlings which were put out in pans or boxes in spring will now have attained considerable size, and may be potted off singly. Let the soil used be good loam and leaf mould well mixed, together with a little silver sand, and when potted let the plants be set in the shade until they have become somewhat established.

CARNATIONS AND PICOTEES.—Layering must now be proceeded with as rapidly as possible, it being a point of great importance to get the plants well rooted and established before placing them in their winter quarters. More of next year's success, as to fine healthy growth, &c., depends on attention to this matter than many people are aware of. All seedling plants should be marked and layered, noting their various properties, as to form, colour, texture, pod, &c.; should any seedling, otherwise fine, have serrated petals, it will be advisable to propagate it, as growing it in another situation may to a certain degree remedy this defect; even some of our best varieties will come occasionally (when poorly grown) very rough on the edge. As the blooms decay, extract the faded petals from the calyxes.

ORCHIDS.—Stanhopeas will now require attention, in the way of renovating the material in which they are growing, and otherwise putting them in order for the season. Other kinds will now do with less water than when they were in active growth.

PINKS.—Continue to plant out rooted pipings on beds of well prepared soil, but not too rich. A second crop of pipings may also be inserted where an increase of stock is required. Seed may also be gathered, retaining rather long stalks; tie half a dozen together, and allow them to get well dry, after which the heads or pods of seed may be put in small paper bags, which may be fastened round the stems, and then hung up in a dry airy situation till wanted.

FORCING GARDEN.

CHERRIES.—Let no exertion be spared that will contribute to keep the foliage healthy and clean as long as possible, by maintaining a cool moist atmosphere. Take care that the soil of the borders inside the house does not get too dry, or this will cause the plants to shed their leaves prematurely; and, on the other hand, do not allow it to get too wet, or the half-ripened buds will burst.

FIGS.—When these are ripening the house must be kept somewhat drier, but at the same time the state of the soil must be carefully watched, lest it gets too dry and causes the swelling fruit to drop off. Beware of red spider, which is particularly apt to establish itself at such a crisis, when the swelling fruits are making large demands upon the energies of the plants, and are thereby checking in some measure their vigorous growth. This is an evil which must be carefully guarded against.

MELONS.—Plants swelling fruit should be kept moist, but avoid frequent waterings of the soil by giving good soakings. Plants that have ripened their fruit and are in good health, if cut back, and the soil well soaked with tepid water, will soon start into growth, and set a second crop. They should not be allowed, however, to carry many fruit.

PINES.—If not already done, plants expected to show fruit next January should have their final shift at once, in order to get the pots well filled with roots, and the growth completed before winter. Give plenty of clear manure-water to all stock, except such as is being kept dry with a view to getting it to show fruit soon, and endeavour to secure rapid growth, now that it can be done without etiolation. Keep the atmosphere thoroughly moist, but avoid heavy syringings. Plants growing in the open bed must be well supplied with water at the root, giving a thorough soaking of manure-water as often as may be necessary.

STRAWBERRIES.—Take care to secure sufficient runners for forcing. Better have too many than too few.

VINES.—Early Vines which have completed their growth, ripened their leaves, and are showing an evident desire to go to rest, should have as much air as possible, lest the present hot weather should induce them to start again into growth. The side, front, and back upright ventilators should always remain open; and where a sufficient amount of ventilation is not attainable by these means, the lower ends of the sashes should be propped up, so as to ensure a free circulation of air through the house. In very wet weather also this plan is preferable to that of sliding down the top sashes, as it is not less essential to keep the soil dry than it is to keep the atmosphere cool during the season of rest. To this end the outside border should from this time be covered with a tarpauling or some other contrivance during rainy weather.

HARDY FRUIT AND KITCHEN GARDEN.

Until rain comes little can be done in this department in the way of planting. Even winter greens, in some places have not yet been planted on account of the drought, which has rendered the soil quite unfit to receive them.

CELERY.—This may still be planted. Some prefer what is called the Scotch plan, viz., beds of from 4 to 6 feet in width. These beds, which often succeed crops of Peas, are trenched two spits deep. The bottom spit receives plenty of raw manure or half-rotten leaves, and the top one old manure. The principal secret in growing very tender and crisp Celery, irrespective of size, is to sow it rather late, and grow it very quickly by means of plenty of manure and moisture. Whether in rows or beds, the young plants will not succeed without plenty of water.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending July 20, 1864, as observed at the Horticultural Garden.

July.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain
Thurs. 14	10	30.086	30.052	80	36	58.0	62	61	E.	.00
Friday 15	11	30.081	30.064	79	47	63.0	62¼	61	E.	.00
Satur 16	12	30.106	30.096	76	39	52.5	63	61	E.	.00
Sunday 17	13	30.120	30.043	82	44	63.0	63	59	S.E.	.01
Mon. 18	14	30.070	30.038	82	44	63.0	63½	61½	E.	.00
Tues. 19	○	30.035	30.028	86	46	66.0	64	61½	N.E.	.00
Wed. 20	16	30.056	29.999	87	47	67.0	65	62	W.	.00
Average.		30.082	30.047	80.1	43.3	61.7	63.3	61.0		.01

July 14—Uniform haze; hot and sultry; fine at night.
— 15—Slight haze; fine; hot and sultry with very dry air; thunder
— 16—Uniform haze; hot and dry; fine; cool at night.
— 17—Dry, slight haze; overcast, thunder in evening; showers.
— 18—Fine; very fine; overcast at night.
— 19—Fine; wind variable; hot and dry; fine.
— 20—Very fine; hot and sultry; fine.
Mean temperature of the week 1 deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending July 30, 1864.

July.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 24 .	72.5	52.0	62.2	14	1.16 in.	1	7	4	2	5	12	4	3
Mon. 25..	73.8	49.4	61.6	10	0.36	2	6	3	—	2	10	12	3
Tues. 26..	73.5	50.6	62.0	18	1.22	2	2	4	2	5	13	7	4
Wed. 27..	74.6	51.3	62.9	17	0.99	2	3	5	2	4	12	7	3
Thurs. 28..	76.2	51.4	63.8	19	1.39	2	3	3	3	1	11	11	4
Friday 29..	75.8	50.8	63.3	16	1.31	4	5	4	1	4	18	5	3
Satur. 30..	75.1	50.4	62.7	16	0.88	4	4	3	1	2	10	9	5

The highest temperature during the above period occurred on the 25th, 1841—therm. 92 deg.; and the lowest on the 30th, 1863—therm. 35 deg.

Notices to Correspondents.

DISEASED THORNS: *Diss.* Your Thorns are attacked by a Fungus, Æcidium laceratum. It would be an extreme measure to cut down the trees; if practicable you may gather the affected leaves and burn them. *M. J. B.* A box from some correspondent has been lost in the post, the envelope arriving empty.

DUTCH FRUIT GARDEN: *Pomona.* This size is quarto; on each plate two or more sorts of fruit is represented—each by three drawings, one showing the eye, another the stalk, and the third a section from eye to stalk. Each number, with one plate, costs about 10*d.*, but after the issue of the 12th number the price is to be increased.

HORSE-MUSHROOM: *W P.* This name is applied to Agaricus arvensis, of which large quantities are used in London and our large towns, while in Italy it is preferred to the pink-gilled A. campestris. The latter is doubtless the more delicate of the two, but the former is not unwholesome, and is known by its paler gills and by its turning yellow when bruised.

INSECTS: *A B.* The Wheat ears are infested by the Wheat aphis or dolphin, A. granaria, which in certain seasons like the present is developed to a much greater extent than ordinary. If very numerous they will certainly suck the juices out of the grains, which will shrivel up and become useless.—*C K.* The small fly found in groups on the leaves of your Cherry trees is one of the minute frog hoppers, belonging to the genus Typhlocyba. Their habits are similar to those of the aphides, except that they are far more active, leaping and flying with great agility. Syringe with lime water.—*Anon.* Your Rose leaves have had the parenchyme eaten off by the slimy larvæ of a small saw-fly with black wings, Selandria æthiops. Syringe the leaves well with lime water, if any of the larvæ still remain on the leaves. *W.*

NAMES OF PLANTS: *R B.* 1, Halimodendron subvirescens; 2, Cotoneaster frigida.—*T Smith.* Ficus stipulata.

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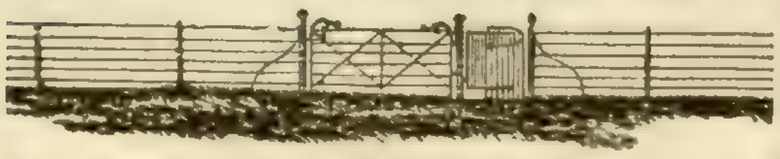

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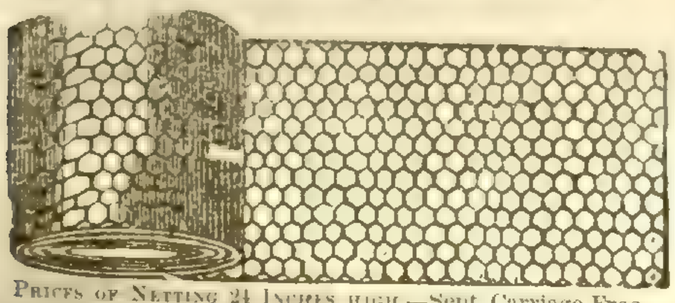

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The Agricultural Gazette.
SATURDAY, JULY 23, 1864.

THE first revisit of the Royal Agricultural Society has been an entire success. Newcastle, which in 1846 could receive the farmers of England pretty comfortably in its lecture rooms and halls, and allotted about 10 acres of its moor for the accommodation of their implements and live stock, has during the past week altogether overflowed with visitors, and has had to set apart four times as much land for the exhibition which they have come to see. These great annual gatherings can no longer now be marshalled for anything like organised agricultural discussions; and Mr. PARKES or Professor JOHNSTON, whose addresses upon land drainage and manures were 18 years ago among the leading features of the meeting, would hardly now obtain a hearing. The throng and general excitement are too great; and all that the Society can do is to give the multitude sufficient opportunity for the self-directed examination of the agricultural results which are displayed.

These are referred to in the following pages in detail; and it must suffice here to point out the extraordinary merit of the Show at both ends of the agricultural scale over the whole of which it extends.

Agriculture may be said to begin with the tillage of the soil and end with the manufacture of meat; and Mr. FOWLER's steam plough standing at the one end of the manufacture, and Mr. CRUICKSHANK's Short-horn "FORTH" standing at the other, may be thus considered to include between them its whole scope, extent, and range. Every line upon the scale which separates these extremes has been well represented at this meeting, but the best and most numerous illustrations of the whole are those of tillage implements on the one hand and of Short-horn stock upon the other.

Never before has so good a collection or so thorough an examination of tillage implements been made, and never before have better classes of Short-horn cattle been exhibited. We must refer our readers to the detailed account of our reporters for particulars of both. Of the former however two remarks may here be made. One is that the excellent quality and easy management of the steam tillage accomplished by many of the rival manufacturers must convince the farmer of plough land how thoroughly practical and efficient a thing steam cultivation has at length become. Mr. FOWLER's method of two engines, one at each end of the furrow, co-operating in their pull upon the tillage tool going to and fro between them, is a great step in advance of all previous experience, and worthily receives the prize offered for the best application of steam power to the tillage of the land. And the other remark must refer to the small advance which the prizes of the Society and the competition of manufacturers have made in the form and merit of the plough. Mr. HOWARD exhibited his two general-purpose ploughs—the one which took the leading prize in 1846, and the other taking the leading prize in 1864—side by side. In some particulars the latter is no doubt an improvement on the former—in others, in our opinion, it is inferior. The former will, we believe, turn a squarer cut and therefore better furrow slice than the latter; but this has been made to turn the slice more perfectly, giving it a higher crest and probably a better outside for that half hour's inspection which in a racing trial it receives, and it wins the prize accordingly. Judging however from these two implements, the prize system has done very little good to ploughs during the past 18 years.

The yards have been thronged with spectators throughout the week. On Monday 720 visitors paid 10*s.* each; on Tuesday 10,224, and on Wednesday 15,947 paid 2*s.* 6*d.* each. The number of visitors to the yard on Thursday, the first of the shilling days, was 55,569; so that the Meeting, which was on the first three days favoured with bright and breezy weather, has quite maintained the high average attendance of the last few years.

WE are about to issue our annual circular of inquiries as to the prospects and probabilities of the coming harvest, and our correspondents will be requested to make their reports with reference to what is an "average" crop. But an "average" crop, as now understood, is not the average crop which satisfied us 10 or 15 years ago. It will, therefore, be understood that the word "average" will refer to the crops of the last six years:—1858 and 1859 were good years; 1860, 1861 and 1862, were very bad years; 1863 was a remarkably productive year. The average of the six last years may be considered a fair and standard crop; and if our correspondents declare of this year's crop that it is at, below, or above *an average*, it will be understood that they are referring to the average produce of 1858-63. This memorandum on the subject is published in consequence of the following note from Mr. W. WOODWARD, of Northway House, Tewkesbury. He says:—

"I shall be most ready to send you a report of crops, &c., of my locality when I return home, end of next week, from Newcastle, &c. Had you not better ask your contributors, in their information, to adopt a fixed number of years for average, now so vague a term without it, as 8, 10, or 12 years, or twice these numbers, so as to take two, three, or four courses of crops of a 4, 5, or 6-field rotation? What would now be thought a moderate crop, would 30 years ago have been considered a very large one; indeed, were it not so, how is our draining outlay and large cost of purchased manures to be paid for?"

THE GREAT AGRICULTURAL MEETING AT NEWCASTLE.

THE business of the Meeting commenced on Wednesday of last week, when the tillage implements, including steam-cultivators, ploughs, harrows, scarifiers, rollers, &c., which this year are submitted to examination by the Society's judges, were removed from the yard to the farm near Benton Quarry, about 4 miles north of Newcastle, where they were to be tried. Seven or eight fields of a hard and apparently undrained but tolerably friable soil, resting for the most part, however, upon a yellow clay, had been here provided. They were chiefly a foul Clover stubble, carrying in one or two cases an exceedingly foul and matted growth both of common and the so-called Onion Couch, with a grassy growth in one instance nearly a foot high. This was for testing the ploughs, both drawn by horses and by steam power; and a recently-ploughed fallow was also provided for the trial of harrows and rollers.

1. STEAM CULTIVATORS.—These were in the first place submitted to a preliminary canter. To each was allotted about 1½ acre in Field A—about 16 or 20 acres of comparatively light soil with a good deal of Couch among its Clover. And here accordingly, not so much for the satisfaction of judges as for that of the exhibitors, in order that their tools might prove to be in working order, there appeared:—

1. Savory's 12-horse-power double-drum engine—in which two narrow drums, about 6½ feet in diameter, surround the boiler and are worked by two cylinders alternately to and fro—the one uncoiling while the other coils the rope, which passes from the one to the other around an anchorage at the far end of the furrow, while any implement is drawn to and fro along that furrow. It is a cumbrous looking tool—its parts apparently not yet very compendiously packed; and

he whole rather adapted, as it seemed to us, for mining or quarry work, than for agriculture. The rope coils itself several strands deep upon the drums, which are capable of carrying 400 or 500 yards apiece, and thus of cultivating a furrow of that length. It here drew Howard's cultivator to and fro, and made very rapid work, thoroughly stirring and shaking the land, but leaving it with its grassy surface still too much upwards, as it grew. We may mention here that a capital testimony to the general usefulness of this engine, its adaptability to every sort of work and tool, was given by its selection by the judges for use in drawing all the tools, when they were subjected to the test of the dynamometer.

2. Savory's two engines, each with a drum around its boiler, and capable of winding on it the whole length of its rope one strand deep. They are of 12-horse power, and have been worked for a long time by Mr. Bomford, of Pitchill, near Evesham, whose labouring men, as engineers and stokers, accompanied them and worked them here. Here again rapid and successful work, but neither very deep nor very even, was accomplished with Steevens' 4-furrow plough.

3. Coleman's engine of 12-horse power, drawing his well-known cultivators, two of these tools being alternately actuated by the engine, each being drawn one half the distance, and drawn back the one to the midway of the furrow, and the other to the furrow end, while each alternately is at work. The advantage is that the pull is in every case direct, and the draught back of the empty tool is the only strain upon the anchor at the furrow end, or on the rope around it which connects the two cultivators. The disadvantage is that two tools, each requiring a man upon it, are employed, and that the rope is coiled upon rather small drums upon the engine framing. Mr. Coleman's cultivators made very thorough work.

4. Fowler's 14-horse power engine, working his large balance plough with digging breasts, made very good and excellent work indeed, striking the attention of any one walking across the field, the more for its being the first plot where the soil was wholly inverted and broken up.

5. Fowler's two nominally 7-horse power single cylinder engines, one at each end of the furrow, drawing a 3-furrow balance plough between them. Here each engine is constantly at work, and both are engaged all the time in pulling, the one directly, the other around the clip drum of "the one" as a pulley. Very good work was made; and this plan is evidently a step in advance upon the double engine system which Fowler and Savory have hitherto adopted. When two engines are employed and only one is in use at a time, each must be of greater power; and the waste by radiation is constant in the case of each, notwithstanding that each is only half its time at work. The fuel consumed must therefore be greatly in excess in the latter case. A comparison however of Fowler and Savory in this respect has not been perfectly fair here, for Fowler's engines were worked by accomplished stokers, and Savory's by agricultural labourers. The saving of coal must nevertheless be very great, and the first cost for engines of the requisite power must be considerable; and there is this further advantage—that neighbours may combine their engines, in Fowler's case, for work of any special difficulty, the engines being at the same time of just the right power for threshing purposes.

It is the slack-gear apparatus by which the rope is kept constantly tight by the draught of the plough itself that enables Fowler to adopt his double co-operating engines.

6. Howard's tools—cultivator and 4-furrow plough—were drawn by Clayton & Shuttleworth's 10-horse-power engine. His cultivator was not drawn so fast as where Savory's engine worked it, and the work, though thorough and deep, was not tossed about enough to make it a thoroughly good shatter of the land. Nothing could be better or more efficient than his ploughing.

7. Collinson Hall's linked rope, in which links of iron of a certain length are jointed and pulled by a revolving polygonal drum of the right size, was also shown, and two extremely neat and compact compendiously packed little engines, made by Turner, of Ipswich, were shown to work it—a cumbrous old timber framed 3-furrow plough of Fowler's being the tool. Unfortunately, however, the sides of the polygon were 3-16ths of an inch longer than the links! and thus the rope repeatedly broke, and Mr. Collinson Hall had it withdrawn from the competition. An extremely ingenious method of carrying the rope on polygonal frames the one within the other, so as to present the whole in sufficiently small compass, was exhibited. And no exhibitor displays more ingenuity in the devices by which the difficulties of his system are overcome, or more good nature over the failures which accident and misadventure occasionally interpose, than Mr. Hall.

We now come to Field B, of perhaps 12 acres, with a furrow apparently 400 yards long. Here Savory's double engines drew Steevens's plough to and fro and Howard's 4-furrow plough to and fro, each accomplishing one half the extent. Steeven's had by much the hardest half of the field, with a well-worn trackway down it, which he thoroughly tore up, making indeed apparently his best work there; for it was extremely rough and often half turned, over the rest of it, and exhibited a great contrast to Howard's ploughing, which was as good as it could be, laid evenly and well, with a 6 or 7 inch furrow, with only an occasional failure in the hollows of the ridges. His plough is very easily guided, and each frame of ploughs, held up by coiled springs, is kept to its work when down, not only by its own weight but by a catch, which the ploughman, either by hand or by his own weight upon his seat, thrusts underneath the axletree of the pair of wheels next to him, so that the whole of the hinder half of the framing must be lifted before the ploughs can be lifted out of work.

We now come to Field C, of about 16 acres, at least 500 yards long. Fowler's 14-horse power engine, and his two 7-horse power engines were both at work here, and made excellent ploughing from end to end of the field, and on the far side Savory's single engine with double drums worked Howard's plough. Both here and in Field B, about 4 acres apiece were allotted to the competitors. Savory's engine could not accomplish so great a length of furrow as the other. Howard's ploughing was the best in the field—as deep as any, and laid in rather narrower slices, which thus lay not so flat. The whole of the ploughing in this field was well done, 7 and 8 inches deep.

In Field D, Howard and Fowler had a racing trial over about 4 acres apiece, the one with Clayton's 10-horse power engine and a 4-furrow plough, and the other with one of his nominally 7-horse power and 3-furrow plough drawn to and from the anchor. This engine was working up to 100 lbs. and more of steam, and making from 150 to 200 revolutions per minute. The work of Howard's plough was thoroughly good—the furrow-slices were cut perfectly, laid evenly; but the plough was occasionally baulked when crossing a hard trackway. In Fowler's ploughing, also as deep and good, the edge of the furrow slice was broken, and the Clover more perfectly buried, and it was more perfectly accomplished across the roadway. Towards the end of his trial, however, the rate was too rapid for the quality of the work, which was left very rough. Fowler's 14-horse power single engine, working a 4-furrow plough at not so great a rate, made some very good ploughing in this field.

In Field E, Mr. Richardson, of Hibaldstone, worked Fowler's 8-horse power engine with separate clip drum attached in front and actuated by a rope-strap of peculiar construction. This was the apparatus for small occupations first shown at the Battersea meeting. It was working Fowler's balance plough with the digging breasts on, and it was making very excellent work. At the bottom of the field Coleman was at work with his cultivator, working across the ridges, which none of his competitors essayed to do, and intent apparently upon the quality rather than the quantity of his performance. And the best grubbing or stirring of the land accomplished by any of the rival machines at Benton, was done here by him.

In the adjoining Field F, while Coleman was quietly accomplishing good agriculture in the midst of a very foul piece of hard land, his rivals Fowler and Howard, the one under Mr. Greig's, and the other under Mr. Sutton's jockeyship, were tearing on at a racing trial, in which the former with his nominally 7-horse power engine, working up to from 110 to 120 lbs. of steam, and making sometimes nearly 300 revolutions a minute, was driving his digger with 5 tines down hill and 4 tines up hill, and the latter with a 10-horse power Clayton's engine was driving his 4-tine cultivator as fast as it could go, the engine making as many revolutions as the other, with, curiously enough, the steam indicator persistently stationary at about 55 lbs! In the course of the trial the fly-wheel of Fowler's engine, having lost its pin, flew off at the rate of 30 miles an hour, doing happily no harm either to itself or any one; and Howard's cultivator, meeting a land-fast stone, was thrown aside, and its driver, who, however, re-took his seat, was somewhat alarmed. Fowler had the steeper land. Howard accomplished his plot first, about 8 acres in 5¼ hours! and the advantage as to the quality of the work was, in our opinion, decidedly with the latter. The quality of Howard's cultivating, which is rarely sufficiently rough, is improved by its speed. That of Fowler's digging is best when slowest; speed tends to make the frame unsteady, and to diminish the depth and thoroughness of the digging.

In the last field of the steam cultivation, G—an extremely hard bit of land covered with long Grass above and matted with Couch below—Fowler's double nominally 7 horse-power engines, one at each end of a long furrow, worked his digger very efficiently. Savory's double engines worked Howard's cultivator very efficiently, without however making quite disturbance enough in the material moved, which fell back too much in its place again. And Fowler's 14 horse-power engine worked his balance-plough with three enormous digging breasts and threw the furrow-slice about in an extraordinary way.

In the whole course of these very thorough trials of the implements, no breakage of any account took place, and no accident of any importance happened.

In this last field Mr. Aveling showed his extremely simple and ingenious rope-porters at work. They are a light and high pair of wheels, sufficiently far apart, and carrying between them a light iron rod, as a gun is carried between the wheels of its carriage. This rod has a hook at one end, and a handle at the other. The wheels are wheeled over the rope as it is trailed behind the tool when leaving the engine, the hook picks it up in front of the wheels, and the handle holds it behind. It is thus attached to the rope and travels with it of itself from one end to the other of the field. One pair of wheels is thus attached by a boy at the engine at intervals of about 40 yards, and on the return journey they are easily detached as they arrive. What the labour to the engine of drawing 10 or 12 of these light rope porters to and fro may be in the case of a wet surface of land remains to be determined; in the meantime it is a great relief to the porter boys, who are by far the hardest worked people in the steam-cultivated field, and nothing can be more effective or lighter looking than these handy contrivances for accomplishing a very important work. It must be noted that these porters will only be available on level or uniform land. When hillocks intervene, the rope might drag on the land between two distant rope-porters.

Later on in the course of the trials the harrows and drags used in steam cultivation were subjected to trial, and some very good work was made by those employed by Fowler and by Howard. Ashby's rotatory harrows were also tried across some of the ploughing which had been done by steam.

THE DYNAMOMETER.—The implements were also submitted to the test of Mr. Amos's extremely ingenious and effective dynamometer. The nature of this instrument may perhaps be somewhat apprehended from the following description:—The revolution of a revolving button pressing against the surface of a revolving disc are counted in the ordinary way by wheels. The disc is made to revolve according to the rate of movement of the tool that is being tested, and the button presses against the centre of the disc, or is pulled out to the circumference of the disc according to the strain upon the tool. When the strain is nothing, however fast the disc may revolve, the button, being at its centre, is stationary. When the strain and the velocity are both considerable, then the button counts a great deal, both because the disc revolves fast, and because the button is at the end of a long radius from the centre of the disc.

The ordinary arrangements for making the disc revolve according to the motion of the tool, and for counting the revolutions of the button, are adopted, but the position of the button is regulated according to the strain, in a very ingenious way. Two horizontal pulleys, 18 feet apart, are fastened on to a stationed horizontal beam, and a third, so placed as to deflect the rope passing between them 12 inches out of the straight line, is midway between them. This third pulley is kept in its place by a strong spring behind it, and when the strain upon the rope is very great, it tends to push back the middle pulley against the spring. It is the deflection of this pulley which regulates the position of the button. When at rest the button stands at the centre of the disc, but it would not do for it to recede inch by inch along the radius of the disc for every inch of deflection of the pulley, because it is plain that it would need much greater increase of pull to deflect the pulley its last inch than it needed to deflect its first inch. The rapidly increasing strain needed to produce a uniformly receding pulley is however properly indicated at the disc by the successive inches of deflection upon the portion of the button being in like manner rapidly multiplied by means of a cam of suitable form so placed as to urge the button one unit outwards from the centre of the disc for every unit of pull added to the strain upon the rope. The length of furrow travelled by the tool, and the time occupied in the traverse, are both observed, and the number indicated by the counter as the combined result of speed and strain becomes a perfect indication of the labour required in the case of any tool to produce a certain result. And by means of a certain formula the quantity of horse-power engaged is known.

In this way it was ascertained that the quantity of power put forth by each engine in working itself and in working its tackle employed to draw a Fowler's 3-furrow plough at a given rate was 11½-horse power In the case of Mr. Coleman's apparatus, 20-horse power in the case of Savory's double engines, 15-horse power in the case of Howard's stationary engine, drums, and all round rope, and 13½-horse power in the case of Fowler's double engines. A further account of these experiments and others will be given hereafter.

We add here that to Mr. Fowler's double "7-horse power" engine uniting to actuate a plough between them is awarded the 1st prize of 100*l.* for the best application of steam-power to tillage. The other awards will be seen below.

Mention must be made of the cultivator and double ridge plough of Mr. Williams, of Baydon, Wilts. They did occasionally deep and thorough work, but are cumbrous and heavy tools.

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2. HORSE PLOUGHS.—In an adjoining field, which we may call "H" (a field of clean Clover stubble), some 50

ploughs were on Thursday and Friday set to work, and this seemed to be by far the most attractive part of the whole scene to the majority of visitors. Five light-land swing ploughs, 10 light-land wheel ploughs, 10 general-purpose wheel ploughs, and as many general-purpose swing ploughs; 10 heavy-land wheel ploughs, and two heavy-land swing ploughs, five subsoil ploughs, three paring ploughs, and five diggers were exhibited. Ridges were allotted to each, the men being allowed to correct with the hand the first three furrow slices, and thereafter to do the best they could with a pair of horses without correction. A furrow slice, 5½ or 6 inches by 9, 6½ or 7 by 10, and 9 or 10 by 15, was cut in the several competitions, and there never was better work done by ploughmen either at the shallow or the greater depth.

The judgment was very properly assumed to proceed upon a rectangular slice being truly cut and properly laid, the level of the subsoil being left plane and unribbed. This is in correction of the mischievous tendency which has prevailed of late years to erect the land in high-crested furrow slices, by making it deepest on the land side of the cut, so that that angle shall be acute.

The following are our notes as we walked across the land.

1. Page, of Bedford, pipe beam, light handled wheel plough; furrow about 5½ by 9 inches; slice laid on a perfectly level bottom, straight and true, without attempt at erecting a crest.

2. Cooke, of Lincoln, ploughing rather shallower, very good level at bottom, no feathering.

3. Turner & Bishop, of Woburn, rather deeper, perfectly level; the best ploughing of the three.

4. Howard's, of Bedford (B), angle iron beam, furrow slices slightly crested; bottom hardly so level as the others, but the ploughing done the best of the four.

5. Ransomes, of Ipswich (R. N. E.,) trussed beam, perfectly level at bottom; cut slightly deeper than No. 4, and ploughed as well.

6. J. Stalker, of Penrith, not quite level at bottom; slices soon broken.

7. Hunt & Pickering, of Leicester, (G. W. O.) hardly so deep, perfect work; not so wide a furrow slice, ploughing as good as can be.

9. Gregory, of Westacre, an old-fashioned Scotch plough; work deeper and rougher, and therefore no doubt really better than the others, though it will not rank so high.

11. Gregory again; deep, wide, and rough work.

Between Nos. 11 & 12 Hancock's Digging Plough was tried, in which the furrow-slice is turned at twice, and the ground left in a beautifully worked condition, already almost perfectly tilled at one operation. It does magnificent and excellent work, and the implement may be used to turn the soil either altogether, or retaining each half at its own depth, the top being kept at top. It is only fair to say of it that it is of very heavy draught, and that neither ploughmen nor horses will much like it, and also that the trial ground was exactly the land in the state best adapted for the use of this implement.

12. Balls, of Rothwell, "Criterion" plough, made very beautiful work, neat and level at top and level below, but with a crested furrow slice, managed by under cutting on the land side.

14. Ransome (R. N. E.) perfectly level and true work both above and below.

15. Busby, of Bedale, good work and level below, perhaps a little under-cut, so as to obtain somewhat of a crest.

17. Sellar, of Huntly, good ploughing, but not level at bottom, and crested.

18. Seaman, of Worcester, work not level at bottom.

20. Howard's B B, good straight ploughing, but not level at bottom.

21. M'Gregor, of Aberdeen, not quite to the proper depth.

23. Hunt, of Leicester, under-cut on land-side, and extremely unlevel at the bottom; furrow slice excessively crested

24. Ransome (R. N. F.) perfectly level and square, and well ploughed its full depth.

25. Busby, of Bedale, level and good ploughing.

26. Trotter, of South Acomb, a Northumberland swing plough, ploughing 7 to 8 inches deep; not quite evenly held.

27. M'Gregor, very good ploughing, but not quite level at bottom, and presenting accordingly a crested furrow-slice.

28 Howard's, also presented somewhat of a crested furrow slice, but this was the result rather of pressure into the shape, than of unlevel cutting of the slice from off the subsoil.

29. Warren's wooden beam plough, not quite level below.

31. Stalker of Penrith, very good work. Howard's 2-toothed subsoiler made very good work in the wake of this plough.

32. Sellar, Huntly, good 9-inch deep work.

33. Ransome's swing plough, work square, deep and good. Howard's digger as a subsoiler, made pretty good work here.

34. Cooke of Lincoln, very square good ploughing.

35. Armstrong of Penrith, unlevel work at bottom, some good subsoiling by Bentall here.

36. Hancock's pulveriser plough already referred to, made some very good work here.

37. Seaman of Worcester, made some high crested work, not to the full depth of the ploughing alongside, but the slices were squeezed and shattered, and the work was very well done, though it must have been laborious.

39. G. Sellar, of Huntly, did some very deep and heavy work, 10 inches deep.

41. Ransome's: furrow slices 10 inches by 15 or 16, the deepest work in the field, and furrow slices perfectly cut, and as square as possible, the bottom of the work perfectly level. The plough went from end to end of the furrow, doing this magnificent work without the handles being held, so truly had it been set.

42. Balls, of Rothwell, not full depth, very good work however, but not so deep as it should be, nor wide enough for the depth it was.

43. Hunt & Pickering: furrow slice about 7 inches deep, extremely crested.

44. M'Gregor, Aberdeen, very good, about 9-inch work, straight and broken well, rather crested.

45. Howard's: barely 10 inches, very level below and squarely cut, first rate ploughing.

48. M'Gregor, not full depth; plough not properly set, and work very uneven.

The dynamometer was used to test the strain in the case of some of the work done by these ploughs. The numbers are comparative only, obtained by a counter in the same way which has been already described:—

General Purpose Swing Plough.

	Up Furrow Draught.	Down Furrow Draught.
Howard's	29.60	25.25
Ransome	—	25.42
M'Gregor	21.3	25.54

Deep Work, 10 *inches by* 15.

Ransome, R R G	54 05	58.75
Howard, B B B	60,345	66.725

General Purpose Wheel Plough, Furrow 6½ inches by 9½.

Ransome	22.09	20,76
Howard	18.75	22.75
Busby	24.125	23.55
Seaman	23.67	20.28
Hunt	20.84	20.02
Ball	20.02	20.36

We must not conclude our account of the ploughing in this field without referring to the absence of Messrs. Hornsby as exhibitors of ploughs. On the last occasion, at Warwick, when tillage implements were submitted to the Society's trials, this firm suddenly appeared as plough makers, having adopted the convex mould-board which had been long known, especially in the carse land districts of Scotland. The decision of the judges on that occasion in favour of the high-crested furrow-slices which these convex mould-boards tend to create, placed them at once in the front rank of ploughwrights. And now, after four years of doubtless successful manufacture, they retire, refusing to submit to a judgment from competition which might possibly reverse the former decision. The case is no doubt an illustration of the commercial value of the Society's awards. But it is a pity that the award on that occasion should not have been submitted to revision by another court, for at present it appears that the private benefit of what may have been an accidental award is too considerable to be risked, notwithstanding that the subject is of public interest, and ought to lead to the public benefit.

3. HARROWS AND ROLLERS, &c.—We have now to go into another fallow field (I.) lately ploughed, in which harrows and rollers have been tried. The cultivator, roller, and harrow are tried in succession, and the judges standing by while one of these tools is drawn to and fro before them endeavour to ascertain by notes of the work and of the construction of each which is to be recommended for adoption by the farmer. Seaman's, of Worcester, in which longitudinal zig-zag bars, cross pieces of piping between them, and teeth at the intersection of both, are kept together by transverse rods passing through teeth and bar and piping, and the whole screwed up by nuts at the end of these rods, seems to unite compendious packing, strength, and simplicity in perfection; Bentall's harrows, in which the longitudinal bars are formed of angle iron for greater strength; Ransome's, in which a rivetted framework carries teeth by screw and nut and boldfast for each, every part being the counterpart of its neighbour, and any loss or wear being thus easily corrected or replaced; Williams', in which the frame is produced by the angular intersection of straight rods which would collapse in a parallel-ruler fashion, were they not kept at a certain angular divergence from one another by a transverse rod in front and another behind; Howard's, in which these longitudinal bars are crossed by repeated cross-bars, and the tines are fastened by screw head and nut to each—a washer with bent flange holding the nut fixed; and many others with waving, straight, or crooked bars respectively are here competing for the verdict of the judges. That verdict is given in the prize list below.

We can only add that besides ordinary harrows Mr. Ashby shows his rotatory harrows both under horse and steam draught and that they made good work; and chain harrows and Green's angle harrows for the same purpose, in which a surface of alternate rhomboids and hooks operates on the land over which it is drawn, are also exhibited. Ransome's flexible harrow, in which, if one row of teeth be lifted by any unusual obstacle they will *set* the succeeding row, so that it shall dig the more into the ground at that point, seems likely to be a useful tillage implement. Howards showed the Norwegian harrow, doing capital work under steam-power.

Rollers have not altered since the Warwick meeting, and, indeed, we remember Coleman's corrugated discs and Crosskill's toothed discs, the latter both of one size and of two sizes alternating, and Cambridge's simple discs—strung 10 or 15 on a single axle—so long ago as the Chelmsford Meeting, and even before then. Cultivators are not so much in competition as they might be. Dr. Ager's digging machine is exhibited—but it is not likely to come into general use, being unfit for anything but the lightest land, where there is no difficulty and no assistance beyond the tillage tools of ordinary arable culture required.

We add here the following awards by the judges of implements, which were not made known till Monday and Tuesday of the week following the trials:—

JUDGES OF IMPLEMENTS.—*Steam Cultivators.*—Messrs. D. K. Clark, C.E., H. B. Caldwell, J. Coleman, C. S Read, and F. Sherborn, Jun. *Brick and Tile Machines and Miscellaneous.*—Messrs. W. Tindal, and Gibson Martin. *Ploughs.*—Messrs. T. Dods, E. Wortley, and T. B. Outhwaite. *Cultivators, Clod Crushers, Rollers, and Harrows.*—Messrs. John Hickin and John Thompson.

PRIZES.

Iron beam plough, fitted with two wheels, Ransomes & Sims, 7*l.* 10*s.*
Plough (general purposes), James & Frederick Howard, 15*l.*
Iron beam plough, with two wheels, Ransomes & Sims, 7*l.* 10*s.*
Iron beam plough (swing), Ransomes & Sims, 7*l.* 10*s.*
Iron beam plough (swing), Ransomes & Sims, 15*l.*
Heavy land swing plough, McGregor & Humphrey, 7*l.* 10*s.*
Turf or stubble paring plough, Hunt & Pickering, 10*l.*
Patent subsoil plough, Edmund Hammond Bentall, 10*l.*

SILVER MEDALS.

Subsoil pulverizer plough, J. & F. Hancock.

HIGHLY COMMENDED.

Plough, James & Frederick Howard
Iron beam plough, Ransomes & Sims
Plough, James & Frederick Howard
Swing plough, James & Frederick Howard
Cotgrease plough, Ransomes & Sims
Two-wheeled plough, William Bushby
Excelsior iron plough, Seaman, Larkworthy, & Co.
Heavy land plough, William Ball & Son
Scotch ridging plough, Rev. Wm. F. Wharton

COMMENDED.

Iron plough for light land, William Ball & Son
Light land iron plough, Hunt & Pickering
Iron plough for general purposes, William Ball & Son
Heavy land wheel plough, McGregor & Humphrey
General purpose swing plough, McGregor & Humphrey
Subsoil plough, Ransomes & Sims
Plough, Ransomes & Sims

PRIZES.

Cultivator, E. H. Bentall, 12*l.*
Cultivator, Coleman & Morton, 10*l.*
Cultivator, Charles Clay, 8*l.*
Clod crusher, Beverley Iron and Waggon Co., 9*l.*
Clod crusher, Crosskill & Sons, 6*l.*
Clod crusher, William C. Cambridge, 5*l.*
Roller, Amies & Barford, 7*l.*
Roller, Beverley Iron and Waggon Co., 3*l.*
Harrows, Messrs. J. & F. Howard, 8*l.*
Harrows, Messrs. J. & F. Howard, 7*l.*
Harrows, Messrs. J. & F. Howard, 5*l.*

HIGHLY COMMENDED.

Cultivator, Coleman & Morton
Clod crusher, Amies & Barford
Roller, Amies & Barford
Harrows, Ransomes & Sims
Chain harrow, J. & F. Howard
Chain harrow, W. Cambridge

COMMENDED.

Cultivator, Corbett & Son
Roller, Hunt & Pickering
Roller, Hill & Smith

SILVER MEDALS.

Grain separator, A. B. Childs
American grist mill, Riches & Watts
1 set draining tools, Burgess & Key

PRIZES.

Tile Machine, John Whitehead, 5*l.*
Brick Machine, John Whitehead, 10*l.*
Brick Machine, J. D. Penfold, 5*l.*

HIGHLY COMMENDED.

Blast Delivering Apparatus for Chaff Cutters, Amies & Barford

PRIZES.

1st prize for best application of Steam Power for the Cultivation of the Soil, John Fowler, 100*l.*
2d prize for ditto John Fowler, 50*l.*
1st prize for best application of Steam Power adapted for small occupations, John Fowler, 50*l.*
2d prize for ditto, J. & F. Howard, 25*l.*
Best Plough for Steam Power, John Fowler, 20*l.*
2d Best ditto, J. & F. Howard, 10*l.*
Best Cultivator for Steam Power, John Fowler, 17*l.* 10*s.*
Steam Cultivator and Ridging Plough combined, J. & F. Howard, 12*l.* 10*s.*

SILVER MEDALS

For improvement in the construction of Steam Plough, William Steevens
For Cultivator for Steam Power, Coleman & Morton

HIGHLY COMMENDED.

For improvements in Double Engines (Savory's Patent), Richard Garrett & Son
For Rope Porters, John Fowler
For Two-furrow Steam Plough, for extra deep tillage, J. & F. Howard

PRIZES.

Harrows for Steam Power, J. & F. Howard, 20*l.*
Best Windlass for Steam Power, John Fowler, 15*l.*
2d Best ditto, J. & F. Howard, 10*l.*
3d Best ditto, W. Savory & Son, 5*l.*
Best Anchor for Steam Power, John Fowler, 20*l.*
Rope Porter for Steam Power, Aveling & Porter, 10*l.*
Ditto, ditto, Coleman & Morton, 5*l.*

COMMENDED.

Norwegian Steam Harrow, J. & F. Howard
Rope Porters, ditto

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4. THE MACHINERY IN MOTION.—This part of the general exhibition of Implements is exhibited in a field adjoining to the main yard—the several firms taking up their stations in a continuous line around the edge of it.

The following exhibitors may be enumerated here:—

Messrs. Garrett show threshing machines with their rapidly worked fanner, sending its current of air to several different parts of the machine; the whole driven by their 8 horse-power moveable engine.

Mr. Wilson, of Lime Street, London, shows his conical stone mill at work.

Mr. Corbet, of Wellington, Salop, exhibits root pulper and washer for steam power.

Messrs. Ashby, of Stamford, show small engine, threshing machinery, chaff cutter, &c.

Messrs. Tuxford, of Boston, exhibit several engines of different power—Appold's rotary pump, traction engine, threshing machine, &c.

Mr. Williamson, of Kendal, shows threshing machines, turbine, &c.

Picksley & Sims, of Legh, show small engine, and shafting for wheels to drive bone mill, with oscillating pistons driving the contents of the hopper holding the bones up against the grinding cylinder—a very efficient tool.

Marshall, of Gainsborough, shows two engines and threshing machine.

Mr. Cranston, of 1, Temple Row, Birmingham, exhibits his patent arrangements for building and ventilating greenhouses.

Messrs. Holmes, of Norwich, show engine, saw mill, threshing machines provided with long conical Clover rubber, receiving the Clover heads and pods from the machine at its larger end, and gradually beating the seed out, delivering the whole at the lower and smaller end into elevators, which pass the whole through the winnowing part of the machine.

Amies & Barford, of Peterborough, exhibit their well-known steamers; also chaff-cutter with blast delivery of the cut chaff.

Mr. Wright, of Boston, shows cheap corn elevators, in which chain and rope netting is used in an endless web as a carrier.

Messrs. Barrett & Exall exhibit a small engine and threshing machine.

Messrs. Hornsby, of Grantham, show good engines and threshing machines, at as well appointed a stand as there is in the yard.

Mr. Barrow, of Banbury, shows Mr. Smith's, of Woolston, windlass and grubber for steam cultivation.

Messrs. Ruston & Procter, of Lincoln, exhibit two engines and threshing machines.

Messrs. Clayton & Shuttleworth, of Lincoln, exhibit a number of their well-known engines and threshing machines, also corn mills, saw mills, and traction engines.

Messrs. Richmond & Chandler, of Salford, show steam engines and chaff cutters.

Messrs. Aveling & Porter, of Rochester, exhibit their traction and travelling waggons.

Mr. Humphries, of Pershore, shows a threshing machine driven by Clayton's engine.

Bradford, of Fleet Street, shows a number of washing machines driven by a small engine.

Pollard's (late Peill's) windmill, in which the angle which the vanes present to the wind is capable of self-regulation, in order to the maintenance of a given power under varying force of air, stands in the middle of the yard, and there is ample wind for it.

Powis & James' (Victoria Works, Blackfriars Road) beautiful sawing and wood-cutting machinery is exhibited at a well-appointed stand.

Messrs. Riches & Watts, of Norwich, show engines and small threshing machines, elaborate corn separator by the action of a number of screens, &c:

Weighell, of Pickering, shows a small engine and simple threshing machine

Underhill, of Oswestry, shows a 6-horse power engine with threshing machine, saw mill, &c.

Roby, of Bury St. Edmund's, a good engine and threshing machine.

Whitehead, of Preston, powerful and elaborate double piston pipe and tile machine and pug mills.

Oldham, of Hull, bone mill driven by Roby's engine.

Pinfield, of Rugby, Ainslie's patent pipe and tile machine, in which two cylinders revolving in towards each other push the clay through the dies, and a rotatory radial set of wires cut the stream of pipes or tiles into lengths.

Hunt & Pickering, of Leicester, small upright engine, working corn crushers and chaff cutters.

Maynard's, Cambridge, chaff cutter, cutting the straw as fast as it comes from the threshing machine.

The Beverley Iron Company—engines, bone mills, corn crushers, in which the serratures on the acting cylinders have a cutting as well as crushing action given to them by the cylinders being laid obliquely to each other.

Hayes, of Elton—corn sheaf elevator.

Turner, of Ipswich, two small engines, working threshing machines and corn crushers.

Brown & May, of Devizes, small engine and threshing machine.

C. Powis—saw mill.

Porter & Co., of Lincoln, compendious, cheap, and efficient portable gas works, adapted for homesteads and houses.

The whole of these at work made a busy scene, and attracted a great company of spectators.

We have not space to give a detailed description of the Implement yard this week. The machines which have been submitted to trial by the judges are described elsewhere. The Catalogue of the Implements is hardly such a bulky volume as it has hitherto been. The leading manufacturers, most of them coming from a great distance, have been satisfied with a less abundant illustration than usual of their manufactures. And there is perhaps an unusual preponderance of stands exhibiting smaller articles of domestic use.

The judges to whom was allotted the duty of seeking out novelties for Silver Medals have given them to a grain separator and a grist mill, both of them American inventions, exhibited by A. B. Childs, of New Oxford Street; and to a set of draining tools by Burgess & Key; all of them having been exhibited for several years. The corn separator, however, is in some respects new, the multiplication of screens being now the leading feature of it; it is especially adapted for dealing on the great scale, as in mills and warehouses, with large quantities of grain. The grist mill, on the other hand, is strictly a farmstead machine. A conical longitudinally-grooved case-hardened iron core revolves within a heavy iron cover, carrying spirally arranged ridge lines approaching as near as may be to the cone. The corn is fed in at the small end and is delivered at the other end, well ground at the rate of 16 bushels an hour—requiring eight-horse power in that case to work it. It is a capital tool for turning odds and ends of threshing days to use in a barn. And it may be applied for reducing cake or any kind of grain to meal. Its cost is 25*l*.

The set of draining tools rewarded—and very worthily rewarded—by a medal, for a better does not exist, is the set known as Parkes & Co.'s.

Among the many reaping machines exhibited by different makers is one shown by Brigham & Bickerton, of Berwick, in which there is a simple attachment behind the driving wheels by which a pair of wheels draws out continually twine from a box, and cuts it off in lengths, dropping it just under the sheaf that is being swept off the platform by the revolving rakes. The ingenuity of the contrivance deserved a recompense at the hands of the judges.

Some general remarks on the implements exhibited will be found in a leading article.

THE CATTLE YARDS.

These were opened to visitors on Monday morning. The whole space enclosed (upwards of 40 acres), strikes one as unnecessarily large; the rings, especially the one where the horses are paraded, are excessively large, and the empty space is everywhere excessive. The show, in fact, is not so large as it has been for many years. If we except only the short year at Canterbury, the average entries of live stock have varied from 1400 to 2000, and the number of implement exhibitors has varied from 240 to 360. This year the live stock catalogue enumerates 1099 entries, and that of implements 260 stands. A comparatively short show, however, though it be, it is in great excess in almost every respect of the meeting of the Society 18 years ago; and the monster exhibitions which some years have witnessed are after all less instructive, *less manageable*, and not so much enjoyed as those which, being within less compass, the visitor can carry away in his mind and memory.

Comparatively small as the show of live stock is, a very large and laborious organisation is needed for its proper management. The commissariat, under Mr. Jacob Wilson's superintendence, deals with some 70 tons of straw and 20 tons of hay. This is stowed away in 14 lb. bundles and in 28 lb. trusses respectively; the latter, being cut and tied in 14 lb. and 7 lb. trussses, are collected in a yard, and a daily supply of Vetches and of Clover is also brought in. Every man in charge of stock is provided with a sheet of tickets, authorising him to receive daily 28 lb. of straw and 14 lb. of hay for every horse, cow, or bull in his charge—while 7 lb. of hay is allowed for every head of younger stock, and 14 lb. of straw and 3½ lb. of hay for every head of sheep stock. Corn and cake are either provided by the exhibitors themselves or supplied to them at a fixed tariff. Every morning and evening each man, coming in succession to the clerk in charge, hands in his ticket for what he has been authorised to receive, and a couple of men stand ready to throw out to him hay or straw, or to deliver to him Clover or Vetches at his desire. In this way in about an hour's time at either end of the day, about 10 tons of straw, 4 tons of hay, and 1600 bundles of Grass are supplied—and each day's tickets, preserved and arranged, becomes a voucher to the heads of the department of the proper administration of the material at their disposal.

SHORTHORNS.—Although some of the less important of our breeds of live stock are not so fully represented as they have been at previous meetings, nothing of the kind can be said of the Shorthorns. There never was a nobler exhibition of this the leading breed. 28 old bulls, 14 younger bulls, 33 yearling bulls, 20 bull calves, 13 old cows, 15 heifers, 28 yearling heifers, and 21 heifer calves, in all 175 head, competed for the Society's prizes—and Messrs. Wiley, Parkinson, and Robinson had not finished their labours until 2 or 3 o'clock in the afternoon. Where the three gentlemen in charge of Herefords and Devons had only two or three animals in a class on which to decide, and completed their examination in two minutes, these took more nearly two hours sometimes to decide, and long after the four or five best of the class had been selected, hesitated tediously over the final determination.

Class 1. Twenty-eight *Old Bulls*, including some animals of extraordinary merit, were first placed in the ring. The 1st prize goes to Mr. Cruickshank, of Sittyton, for FORTH, a 4½-year-old roan, bred by Mr. Stirling, of Keir. He stood first in the young bull class at Battersea, since which time he has grown wonderfully in mere mass and bulk, at the same time that he has retained his perfect evenness and symmetry of form. One of the shortest-legged animals in the yard, he carries undoubtedly the heaviest body—wonderfully fine in front and bosom, of enormous width everywhere, he is a perfect cylinder from the front for a long way backwards. He is excessively fat, but thick with firm good flesh all along the back and ribs, and enormous on the flank and bosom, but comparatively light behind.—Viscount Strathallan takes the 2d prize for Fosco, a long white bull, possessing with excellent quality of flesh great depth of body both in front and behind. He had been previously exhibited at Perth, where he took the Challenge Cup for the best bull in the yard. He is more in breeding condition than FORTH, and deeper and better, especially in the hind-quarters.—The 3d prize goes to Mr. D. R. Davies, of Knutsford, for EBOR, also a roan, 3 years and 9 months old, with perfect quality of flesh, firm and yet elastic to the touch, with a well covered back and well sprung ribs.

Besides these many other good animals could be named; Mr. Linton's long and straight-backed HUGO, a dark red roan.—Lord Kinnaird's PRINCE LOUIS, a 3-year-old roan, with remarkably protuberant bosom, very thickly covered all along the back and rib, and highly commended at Battersea.—Mr. Peel's deep-bodied white bull HENGIST, remarkably small in the bone of the leg, with large hips, good deep twist, rather flat sided, and perhaps short in the hind quarters.—Sir M. W. Ridley's massive roan bull PRINCE LOUIS, of great and even width all along the back, perhaps not quite deep enough in the fore quarter.—Mr. Harrison's (Penrith) white bull PRINCE PATRICK, long and rather loosely put together, but with fine protuberant bosom.—Mr. Claydon's highly commended red and white bull MARQUIS CORNWALLIS 2D, straight and deep, with great hips, deep twist, and heavy flesh. Nearly the whole class might well have been commended as a collection of magnificent specimens of the breed. If one is to be singled out as especially inferior to the rest it was No. 11, exhibited by the Rev. J. Storer, of near Daventry, PATERFAMILIAS, good neither in form nor quality, whose children are not likely to inherit anything good from himself, whatever they may owe to his ancestry.

The Second Class of 14 *Two-year-old Bulls*, though only one half the number of Class 1, occupied the judges for quite as long a time. The prize went to Mr. Stirling, of Keir, for ROYAL BUTTERFLY 11, bought at Colonel Towneley's sale last March for 425*l*. He is a light roan, gay-looking, large framed, young bull, better in front than behind, with a most beautiful head and countenance, of great length, wonderfully well arched ribs, good bosom, rather light in the hind quarter, and perhaps from not being right on his hind feet appearing hardly straight to the end, but slightly drooping to the tail. He was nevertheless undoubtedly the most stylish bull of the lot, and the decision in his favour was no doubt perfectly right.

The 2d prize goes to Mr. Peel for ABBOT OF KNOWLMERE, a 2½ year old roan, showing hardly the same substance and mass of body, but a very good stylish animal with perfectly true and level back, hardly so big behind as some others in the class.

Mr. Eastwood takes the 3d prize for HERO, a white bull, long, deep and massive, and thick everywhere.

No. 29, Mr. Gell's MASTER GOLDSCHMIDT, is another very evenly covered on a good frame. And No. 30, Mr. Middleborough's LORD PAM, shorter than some others, but deep and massive, was very properly commended, and with the three prize animals occupied the judges a long time in settling the order of precedence.

The Yearling Bull Class contained no fewer than 32 animals.

The first prize goes to Mr. Willis of Carperly, near Bedale, for a good roan bull, BARON CROSSLEY, a large and massive animal, of great width forwards. The second prize is taken by Mr. A. J. Balfour, of Preston-kirk, for PRINCE EATH, of a dark rich roan colour the third prize goes to Mr. R. Booth, for PRINCE OF BATTERSEA, rather a smaller animal than some others in the class, and in our opinion beaten by Mr. Fawkes's LORD SURREY, a much more massive animal, of great length and depth, and carrying a remarkably fine coat. The class was a very puzzling one to deal with, and occupied the judges nearly two hours.

Class 4, *Bull Calves*, included 20 entries. Lord Braybrooke's straight, deep, heavy flanked white bull calf VOLUNTEER takes the first prize; Mr. Booth's BRITISH CROWN, a large deep massive animal, remarkable for thick and deep fleshy hind quarters, is second; and Mr. Harrett's (Kirkwhelpington) TALLEYRAND, only six months old, is third. He is of beautiful quality, carries a good coat, is wide in front and deep behind. The whole class is a very fine one, and many of our best breeders show well in it. Mr. Fawkes of Farnley Hall, Mr. Pawlett of Beeston, Mr. Peel of Knowlmere Manor, Mr. Bowly of Siddington, Lady Pigott, the Duke of Devonshire, Mr. Atherton of Speke, and others, show excellent stock.

We come now to Class 5, the *Cows* of the Shorthorn breed, 13 large and massive animals, forming one of the finest collections of this class of the breed that has ever been exhibited. The 1st prize goes to Sir M. W. Ridley for *Evelina 4th*, a very large framed animal of great width of back, unusually good for a cow in thickness of twist and thigh, and extraordinarily level and wide all along and *across* her back. The 2d and 3d prize go to Mr. Douglas, of Athelstaneford, for two red cows of very beautiful quality. The higher prize goes to the larger animal of the two, but inferior to the other in quality forward, exhibiting a coarser shoulder and less depth and protuberance of bosom. The 3d prize cow is the finer of the two in these points, and is possessed of wonderfully fine quality of flesh. Mr. Bowley, of Cirencester, shows *Songstress*, and her daughter *Musical*, two good specimens of his capital herd in this class; and Mr. Stratton, from the same county, exhibits *Luna* and *Maid of Honour*, roan and red roan cows of good size and quality. The whole class is first-rate.

The Heifers in Calf and in Milk form a class 15 in number, and Mr. Douglas takes the 1st prize with *Pride of Athelstone*, of the very highest breeding, and of similar stamp to the cows already described. Mr. Lambert's *Queen of Beauty*, a white heifer, already a winner at the Durham county show, takes the 2d prize, and the 3d goes to Mr. Stratton's large massive grand and straight heifer *Diadem*. Mr. Eastwood's *Bampton Butterfly* and *Double Butterfly*, both dark rich roans of great size and evenness, form a beautiful pair in this class; and Mr. Dugdale's *Kent Cherry*, bred by Mr. Hales, may also be named as a great beauty.

The Yearling Heifer Class is very large and good, and occupied the judges a very long time. Mr. Foljambe's roan *Gipsy Queen* takes the 1st prize; Messrs. Mitchell's roan *Blue Belle* the 2d; and Mr. Eastwood's *Royal Butterfly's Pageant* the 3d. Besides these there are such animals as Mr. Booth's somewhat smaller heifer *Lady Fragrant*, Mr. M'Intosh's *Princess*, a *Duchess* heifer with first-rate coat, life-like bearing, well arched rib; Sir M. W. Ridley's short-legged *Lady Fanny* and many other first-rate animals in this class. Twenty four *heifer calves* next came into the ring, and were more promptly divided into two divisions, the rejected and the reserved. The first prize was ultimately awarded to Sir A. Rothschild's rather small 10 months old red heifer, wide and straight, whether looked at from above or from the side, both ground plan and side elevation representing true parallelograms, in the latter case however perched up as it seemed to us on legs a little too long for the depth of the frame above them.

The second prize goes to Lord Feversham, for a somewhat younger calf of better colour and coat, and remarkably straight to the end of back, and thereafter with as true and rectangular a hind quarter as can be.

Mr. Douglas takes the 3d prize with a large and massive heifer just short of 1-year old, *Princess of*

Athelstane. Lady Pigot is an exhibitor in this class. *Circassian Queen* carries a good coat, and is a large and well made heifer. Besides these, Colonel Pennant, Mr. Dent of Neasham Hall Farm, Mr. Wood of Stanwick, Lord Feversham, and Mr. B. Kennedy, of Ulverstone, are exhibitors, most of them of two or three in the class.

The following are the awards in the Short-horn classes. Judges :—Messrs. Parkinson, Wiley and Robinson.

SHORT-HORNED.

CLASS 1. For the best Bull, above 3 and not exceeding 6 years old.—1st, 25*l.*, Amos Cruickshank, of Sittyton, Aberdeenshire; 2d, 15*l.*, Viscount Strathallan, Perthshire; 3d, Silver Medal, D. R. Davies, of Mere, Knutsford, Cheshire. Highly Commended: John Charlesworth, of Headfield, Dewsbury. Commended: John B. Booth, Killerby; Joseph Dent, Neasham; John Clayden, Saffron Walden.

CLASS 2. For the best Bull, above 2 and not exceeding 3 years old.—1st, 25*l.*, William Stirling, M.P., Perthshire; 2d, 15*l.*, Jonathan Peel, Clitheroe; 3d, Silver Medal, Richard Eastwood, Clitheroe. Highly Commended: Robert Gell, Grimston Lodge, York.

CLASS 3. For the best Bull, above 1 and not exceeding 2 years old.—1st, 25*l.*, Thomas Willis, of Manor House, Bedale; 2d, 15*l.*, A. J. Balfour, of Whittingham, Prestonkirk; 3d, Silver Medal, Richard Booth. Highly Commended: F. H. Fawkes, of Farnley Hall, Otley. Commended: J. Charlesworth, of Headfield, Dewsbury; George Garne, Chipping Norton; R. E. Oliver, of Sholebrooke Lodge, Towcester.

CLASS 4. For the best Bull Calf, above 6 and not exceeding 12 months old.—1st, 10*l.*, F. H. Fawkes, of Farnley Hall; 2d, 5*l.*, Richard Booth; 3d, Silver Medal, Robert Hannett, of Kirkwhelpington, Newcastle-upon-Tyne. Highly Commended: Lord Braybrooke.

CLASS 5. For the best Cow, above 3 years old.—1st, 20*l.*, Sir Matthew White Ridley, Bart., M.P., of Blagdon, Northumberland; 2d, 10*l.*, James Douglas, of Athelstaneford; 3d, Silver Medal, Richard Stratton, of Wall's Court, Bristol. Highly Commended: J. Bowstead, of Beech Bank, Penrith. The Class generally commended.

CLASS 6. For the best Heifer, in Milk or in Calf, not exceeding 3 years old.—1st, 15*l.*, James Douglas; 2d, 10*l.*, William Lambert, Haydon Bridge, Northumberland; 3d, Silver Medal, Richard Stratton. Highly Commended: R. Eastwood, of Thorney Holme. Commended: Richard Eastwood, Adam Dugdale, of Rosehill, Burnley; A. J. Balfour, of Whittingham, Prestonkirk; William White, of Barrell, Bedale.

CLASS 7. For the best Yearling Heifer.—1st, 15*l.*, G. S. Foljambe, Worksop; 2d, 10*l.*, A. & A. Mitchell, of Allon, Clackmannan; 3d, Silver Medal, Richard Eastwood, of Thorney Holme. Highly Commended: Richard Booth, of Warlaby; W. R. Brometh, of Cockeford, Tadcaster; the Duke of Montrose. Commended: A. & A. Mitchell, of Allon; David M'Intosh, of Havering Park, Romford.

CLASS 8. For the best Heifer Calf, above 6 and under 12 months old.—1st, 10*l.*, Sir A. de Rothschild, Bart., Tring; 2d, 5*l.*, Lord Feversham; 3d, Silver Medal, James Douglas, of Athelstaneford, Drem. Highly Commended: T. E. Pawlett, of Beeston, Sandy; Sir A. de Rothschild. Commended: John B. Booth, of Killerby; Lady Pigot, of Branches Park; John Wood, of Stanwick Park; Richard Eastwood.

HEREFORDS.—We now come to much smaller classes—the awards of the judges attracting comparatively few spectators—and on both grounds perhaps the order of precedence being more rapidly awarded. Forty-three head are here arranged in 8 classes—five old bulls, three younger bulls, six yearlings, and five calves, seven cows, six heifers, five yearlings, and six calves. The breed is very well represented. The 1st prize in the *Old Bull* Class goes to Mr. Taylor, for TAMBARINE, a very thick fleshed short-legged massive animal, which had already won many distinctions, having been first in the 2-year old class at Worcester, and first both at the Wells and Exeter meetings of the Bath and West of England Agricultural Society. The 2d prize goes to Mr. Meredith, for SUNBEAM. Besides this we have Mr. Turner's BOLINGBROKE, with not so straight and even a back as its successful competitor; and General the Hon. A. N. Hood's GARIBALDI, also somewhat defective—not quite true in the back, and a little hollow behind the shoulder.

Of the three 2-year old Bulls Mr. Baldwin's BATTERSEA takes the 1st prize, as he had done before at Battersea, as a bull calf, and at Ludlow and Hereford the same year—being again 1st at the Exeter show of the West of England Society last year, and 2d at the Worcester meeting as a yearling; and 2d this year at Bristol: he is a very level, true, and even grown animal—thick, with good meat along the ribs and back, where thick meat is wanted—he is of great depth in front, and not so fat as some of the stock is shown in some of the classes. Mr. J. M. Read's PEREMPTORILY, which stood 1st at Cheltenham the other day, is here passed over. Mr. Pitt's SAN JACINTO, which takes the 2d prize, is a very even well-made bull, rather light behind, but thick over loin and under flank. In the yearling class Mr. Duckham takes the 1st prize easily with COMMODORE, 1st at Bristol and at Newport, a wonderfully arched rib and back, both thickly covered. He is a grand and massive animal, standing on fine small legs. Mr. Wright's LION takes the 2d prize. Five bull calves are shown. Mr. Wright again takes the prize with SIR JOHN, not a very large calf, but with good hindquarters and flank.

In the *Cow* Class Mrs. Rea shows a capital pair of large-framed cows, for which she takes the 1st and 2d prizes; both of these had been shown last year at Worcester, where the 2d prize cow here was second in her class, and the 1st prize cow here was one of the best pairs of cows. Mr. Read's cow *Theora* is rather too fat. Mr. Pitt's light red *Sunshine* (Commended) is one of the most beautiful animals in the yard for fine shoulder and bosom. The *Heifer* class contains six entries. Mr. Baldwin's *Duchess of Bedford* 2d, 1st prize, was 2d in her class at Worcester, 2d at Hereford, and 2d at Bristol. Mr. Taylor, near Leominster, shows two good heifers in this class, with one of which he takes the 2d prize. Mr. Read's highly commended *Miss Southam* is a heavy-fleshed large-framed heifer, of great width and depth forward, and with good flank.

Mr. Baldwin is again first in the *Yearling Heifer* Class. His *Miss Hastings* 2d is a very even and symmetrical heifer. She was 1st in the calf class at Worcester, 1st at Bristol, and 1st at Hereford. Mr. Baldwin's stock has been extremely successful at this meeting. Major-General A. N. Hood takes the 2d prize for *Crown Princess.* The calf class contains half a dozen good specimens of the breed, of which those shown by Mr. Monkhouse and Mr. Knight are respectively 1st and 2d.

DEVONS are represented in eight classes by 34 entries. In the *Old Bull* Class, Mr. Farthing takes the 1st prize with VISCOUNT, one of the finest bulls we imagine ever shown of any age or breed. He is in the first place a very large and massive animal, placed on shorter legs than are hardly ever seen. His long, deep and symmetrical frame is covered thickly with good quality of flesh. Seen from the front so as to take in the great mass of bosom and great width and length of body, he is a very remarkable animal. Mr. Merson's 2d prize, YOUNG SALISBURY, is also a long and broad and heavy animal, somewhat light in the hind quarters and rather drooping at the rump. Both these bulls are, however, excessively fat.

The *Younger Bulls* comprise four entries. Mr. Smith's 1st prize, CONSTITUTION, is the best made up of the lot for show. He is wider, somewhat shorter and apparently thicker and fuller than the rest, but somewhat narrow and deficient in the thighs; Mr. Farthing's 2d prize, STOWEY, is a good thick and deep bull forwards, rather more slender and slighter behind.

The *Yearling Bull* Class contains only five entries, Mr. Farthing taking 1st and 2d prizes with two good Devons. Only three *Bull Calves* are shown, Mr. Turner, of Exeter, taking the prize with his 7 months old FREDERICK 2D.

There is a large class of *Cows*, Mr. Azariah Smith, near Dorchester, being 1st, and Mr. Farthing 2d. The former is a very large-framed heavy cow, and, being successful in a very large and good class, this is the greater distinction. Mr. Smith also takes the 3d prize, and the whole class is commended.

In the *Older Heifer* class five entries appear, Mr. Farthing and Mr. Hambro being 1st and 2d. The *Yearling Heifers* include five entries, of which two are from Windsor, and the Hon. A. N. Hood takes the 1st prize with one and is commended for the other. Mr. Turner, of Exeter, takes the 2d prize. Mr. Farthing is the only exhibitor of heifer calves; the oldest of these takes the prize.

The SUSSEX breed is arranged in four classes, and represented by 13 animals, Messrs. Marshall and Jenner being the only exhibitors. The former takes one 1st and three 2d prizes, the latter three 1st and one 2d prize. Mr. Marshall is, besides, highly commended twice, and Mr. Jenner is highly commended once. Thus 11 out of the 13 animals are distinguished, and this, being by judges of Herefords and Devons, is a very high honour to the breed.

The old bulls are altogether coarser looking animals than the Devons, neither equal in symmetry of frame nor in quality of flesh. A good Sussex bull is in fact to all appearance a large-boned coarse Devon. Mr. Jenner's 1st prize cow is a large, well made, good dairy looking cow, and in useful dairy condition.

The judges of Herefords, Devons, and Sussex stock are Messrs. Franklyn, Keary, and Gough, and the following are the awards:—

HEREFORD.

CLASS 9. For the best Bull, above 3 and not exceeding 6 years old.—1st, 25*l.*, W. Taylor, of Showle Court, Ledbury; 2d, 15*l.*, J. Meredith, of The Hildre, Shrewsbury. Highly Commended: J. A. Hollings, Ross.

CLASS 10. For the best Bull, above 2 and not exceeding 3 years old.—1st, 25*l.*, John Baldwin, of Luddington, Stratford-on-Avon; 2d, 15*l.*, George Pitt, of Chadnor Court, Dilwyn, Herefordshire.

CLASS 11. For the best Bull, above 1 and not exceeding 2 years old.—1st, 25*l.*, Thomas Duckham, of Baysham Court, Ross; 2d, 15*l.*, Edmund Wright, of Halston Hall, Oswestry.

CLASS 12. For the best Bull Calf, above 6 and not exceeding 12 months old.—1st, 10*l.*, Edmund Wright; 2d, 5*l.*, T. S. Bradstock, of Cobrey Park, Ross.

CLASS 13. For the best Cow, above 3 years old.—1st, 20*l.*, Louisa Rea, of Westonbury, Pembridge; 2d, 10*l.*, Louisa Rea. Commended: George Pitt.

CLASS 14. For the best Heifer, in milk or in Calf, not exceeding 3 years old.—1st, 15*l.*, John Baldwin, of Luddington; 2d, 10*l.*, James Taylor, Leominster. Highly Commended: J. M. Reed, of Elkstone, Cheltenham.

CLASS 15. For the best Yearling Heifer.—1st, 15*l.*, John Baldwin; 2d, 10*l.*, to Major-General the Hon. A. N. Hood.

CLASS 16. For the best Heifer Calf, above 6 and under 12 months old.—1st, 10*l.*, J. Monkhouse, of the Stow, Hereford; 2d, 5*l.*, A. R. B. Knight, of Downton Castle, Ludlow. Commended: Philip Turner, of the Leen, Pembridge.

DEVON.

CLASS 17. For the best Bull, above 3 and not exceeding 6 years old.—1st, 25*l.*, Walter Farthing, of Stowey Court, Bridgewater, Somersetshire: 2d, 15*l.*, J. Merson, of Brinsworthy, North Molton.

CLASS 18. For the best Bull, above 2 and not exceeding 3 years old.—1st, 25*l.*, J. A. Smith, of Bradford Peverill, Dorset; 2d, 15*l.*, Major-Gen. the Hon. A. N. Hood, Windsor. Commended: Walter Farthing.

CLASS 19. For the best Bull, above 1 and not exceeding 2 years old.—1st, 25*l.*, Walter Farthing; 2d, 15*l.*, Walter Farthing. Commended: G. Turner, of Beacon Downs, Exeter.

CLASS 20. For the best Bull-Calf, above 6 and not exceeding 12 months old.—1st, 10*l.*, George Turner.

CLASS 21. For the best Cow, above 3 years old.—1st, 20*l.*, J. A. Smith; 2d, 10*l.*, Walter Farthing. Highly Commended: J. A. Smith, of Bradford Peverell, Dorchester. The class commended.

CLASS 22. For the best Heifer, in milk or in calf, not exceeding 3 years old.—1st, 15*l.*, Walter Farthing; 2d, 10*l.*, Charles Hambro, of Milton Abbey, Blandford.

CLASS 23. For the best Yearling Heifer.—1st, 15*l.*, Major-General the Hon. A. N. Hood; 2d, 10*l.*, George Turner, of Beacon Downs. Commended: Gen. the Hon. A. N. Hood.

CLASS 24. For the best Heifer-Calf, above 6 and under 12 months old.—1st, 10*l.*, Walter Farthing.

SUSSEX.

CLASS 25. For the best Bull, above 1 and not exceeding 6 years old.—1st, 10*l.*, George Jenner, of Parsonage House, Udimore, Rye; 2d, William Marshall, of Manor House, Bolney, Cuckfield.

CLASS 26. For the best Cow, above 3 years old.—1st, 10*l.*, George Jenner; 2d, 5*l.*, William Marshall. Highly Commended: George Jenner.

CLASS 27. For the best Heifer, in milk or in calf, not exceeding 3 years old.—1st, 10*l.*, William Marshall; 2d, 5*l.*, George Jenner. Highly Commended: William Marshall.

CLASS 28. For the best Yearling Heifer.—1st, 10*l.*, George Jenner; 2d, 5*l.*, George Jenner. Highly Commended: William Marshall.

CHANNEL ISLAND Stock is exhibited in considerable number of excellent quality, chiefly by Mr. Dumbrell, of Ditchling, Sussex, a large dairy farmer for the Brighton market, who milks probably a larger stock of Guernsey cows than any other man in the country. He exhibits no fewer than 9 animals out of the 20 which are shown, and he takes all the 1st prizes and two 2d prizes, besides a high commendation. They are very beautiful dairy stock. His bull, of a dark and light brownish grey colour, takes the 1st prize. His cow, one of the largest in her class, takes the 1st prize; both his heifers are in like manner rewarded.

The NORFOLK POLLED BREED is very well represented—long, heavy, large, and useful stock they are; great massive red bulls, large and roomy cows, and a capital class of heifers, they are one of the best illustrated breeds here. Lord Sondes, Sir E. Kerrison, and Sir W. Jones divide the prizes among them, and we are greatly indebted to them for continually at these shows keeping before us the quality of one of the most useful dairy breeds in the country.

We now come to Scotch breeds; and first of the AYRSHIRES: two old bulls, six younger bulls, seven cows, eight heifers, and eight yearling heifers, competed for the prizes. They constitute a very fine show of the breed, the female classes being especially good, and the older heifers perhaps the best of all illustrative of the breed. In this class the Duke of Hamilton takes the 1st and 2d prizes with two of the larger and more Short-horn like of the class, with horns pointing upwards, no black points, a lighter red and white, and larger size than the rest.

The ABERDEEN BREED is well illustrated by the stock chiefly of Mr. McCombie, large and heavy, massive and meaty; thickest in the best parts.

The WEST HIGHLAND Classes are not well filled, few in number, and in some cases deficient in quality. Two 3 and 4-year-old bulls, two yearling bulls, and four cows were shown. His Grace the Duke of Athol takes nearly all the prizes; the herdsmen are in this case more interesting to the spectator than their stock.

GALLOWAYS are very fairly represented by seven old bulls, three yearling bulls, four cows, and four heifers. They are a very neat, well-made breed of stock, very like the Norfolk, barring the colour, which is black; and indeed, as north-country gentlemen declare, the Norfolk is just a middling Galloway of a red colour! Whatever merits, however, as a meat maker the Norfolk breed possesses in comparison with its black cousins, it is certainly superior as a dairy breed. The Galloways are a capital butcher's breed, and we are indebted to the local committee of Newcastle-on-Tyne for the prize list, which has brought out from Messrs. Roper, Shennan, Graham, and others so good a show of Galloways.

The judges of the Channel Island and other breeds are Messrs. John Hudson and Fisher Hobbs.

The judges of the Scotch breeds are Messrs. Glennie, Murdock, and Fullerton; and the following are the awards:—

CHANNEL ISLANDS.

CLASS 29. For the best Bull, above 1 and not exceeding 6 years old.—1st, 10*l.*, James Dumbrell, of Ditchling, Hurstpierpoint; 2d, James Dumbrell. Highly Commended: James Dumbrell. Commended: J. R. de Trafford, Croston Hall, Preston; James Dumbrell.

CLASS 30. For the best Cow, above 3 years old.—1st, 10*l.*, James Dumbrell; 2d, 5*l.*, Lawrence Fowler, of Little Bushey Farm, Hertford: 3d, Silver Medal, to Thomas Wilson, Shotley Bridge, Gateshead. Highly Commended: R. Eastwood, of Thorney Holme. Commended: William Parker, of Carlton Hall, Penrith.

CLASS 31. For the best Heifer in milk or in Calf, not exceeding 3 years old.—1st, 10*l.*, James Dumbrell, Sussex; 2d, 5*l.*, James Dumbrell.

AYRSHIRE.

CLASS 32. For the best Bull, calved before the 1st of January, 1863. 1st, 20*l.*, John Stewart, of Benside Cottage, Strathaven, Lanarkshire; 2d, 10*l.*, John Stewart.

CLASS 33. For the best Bull, calved after the 1st of January, 1863.—1st, 20*l.*, William Scott, of Cranberry, Ecclefechan; 2d, 10*l.*, Duke of Hamilton and Brandon. Highly Commended: Duke of Hamilton and Brandon.

CLASS 34. For the best Cow, above 3 years old.—1st, 15*l.*, Duke of Hamilton and Brandon; 2d, 5*l.*, Duke of Hamilton and Brandon. Highly Commended: Duke of Hamilton and Brandon. Commended: David Tweedie, of Castle Mains, Crawford, Lanarkshire.

CLASS 35. The best Heifer, calved before the 1st of January, 1863.—1st, 10*l.*, Duke of Hamilton and Brandon; 2d, 5*l.*, Duke of Hamilton and Brandon. Commended: John Stewart.

SCOTCH POLLED,

(EXCEPT GALLOWAYS).

CLASS 37. For the best Bull, calved before the 1st of January, 1863.—1st, 20*l.*, Robert Walker, of Hillside House, Portlethen, Aberdeen; 2d, 10*l.*, Alexander Paterson, of Mulben, Keith, Elgin.

CLASS 38. For the best Bull, calved after January 1, 1863.—1st, 20*l.*, William McCombie, of Tillyfour, Aberdeen.

CLASS 39. For the best Cow, above 3 years old.—1st, 15*l.*, William McCombie; 2d, 5*l.*, William McCombie.

CLASS 40. For the best Heifer, calved before January 1, 1863.—1st, 10*l.*, William McCombie; 2d, 5*l.*, William McCombie.

SCOTCH HORNED.

CLASS 42. For the best Bull, calved before January 1, 1863.—1st, 20*l.*, Duke of Athole; 2d, 10*l.*, Viscount Boyne.

CLASS 43. For the best Bull, calved after January 1, 1863.—1st, 20*l.*, Duke of Athole; 2d, 10*l.*, Duke of Athole.

CLASS 44. For the best Cow, above 3 years old.—1st, 15*l.*, Duke of Athole; 2d, 5*l.*, Duke of Athole.

OTHER ESTABLISHED BREEDS.

(Not including the Short-horn, Hereford, Devon, Sussex, Channel Islands, Ayrshire, Scotch Horned, or Polled Breeds.)

CLASS 47. For the best Bull, above 2 and not exceeding 6 years old.—1st, 10*l.*, Lord Sondes; 2d, 5*l.*, Sir Edward Kerrison, Bart, M.P., Scole.

CLASS 48. For the best Bull, above 1 and not exceeding 2 years old.—1st, 10*l.*, Barnabas Collins, of Hunston, Ixworth, Suffolk; 2d, 5*l.*, Lord Sondes.

CLASS 49. For the best Cow, above 3 years old.—1st, 10*l.*, Lord Sondes; 2d, 5*l.*, Lord Sondes; 3d, a Silver Medal, Sir Willoughby Jones, Bart., Cranmer Hall, Fakenham. Highly Commended: Sir Edward Kerrison, Bart, M.P. Commended: Herbert Salt, Methley Park, Leeds; Sir Edward Kerrison, Bart., M.P.

CLASS 50. For the best Heifer, in milk or in calf, not exceeding 3 years old.—1st, 10*l.*, Lord Sondes; 2d, 5*l.*, Sir Willoughby Jones, Bart. Highly Commended: Lord Sondes. Commended: Sir Edward Kerrison, Bart., M.P.

CLASS 51. For the best yearling Heifer.—1st., 10*l.*, Barnabas Collins, of Hunston, Ixworth, Suffolk; 2d, 5*l.*, Sir Willoughby Jones, Bart. Highly Commended: Lord Sondes; Commended, Sir Edward Kerrison, Bart., M.P.

THE SHEEP CLASSES.

Perhaps there is no more interesting division of the mighty and successful Agricultural Show at Newcastle than that appropriated to the Sheep. The agricultural naturalist and lover of zoology are alike interested in a collection of native animals such as we find exhibited here. It is only at the annual gathering of the Royal Agricultural Society that the majority of us have really an opportunity of forming a knowledge of the various breeds of sheep in the United Kingdom. It is not the especial privilege, nor is it within the means of us all, to travel over this varied country to acquaint ourselves with the animals peculiar to certain districts, and therefore we feel particularly indebted to the Agricultural Society of England for affording us such an excellent chance of becoming familiar with the sheep of these islands.

Under sheds U, V, W, X, Y, we find some nine sections of sheep, numbering between 650 and 670 head. The Cotswold and Shropshire Downs are in greatest force; but perhaps the show of Leicesters is as good as of any Class present. The latter, we are aware, stood high in the estimation of northern flockowners, as tups of this breed are much used with Mountain or Cheviot ewes, and thus we find a class specially confined to the "Border Leicester," a new title to many breeders from our Midland and Southern counties. Lincoln and other long-woolled sheep (not qualified to compete as Leicesters or Cotswolds) take a good position; the specimens sent for exhibition chiefly hailed from Lincolnshire and Yorkshire, a circumstance not without interest in these days of dear mutton and high priced wool. Downs are well supported by both short and long-woolled varieties. The far-famed meat-producing evenly formed Southdowns still represent the counties of Sussex, Norfolk, and Berks. The Oxford Downs are as fine a lot of sheep as can be desired, and the West Country Downs well sustain their character for size and shape. Of Cheviots, Black-faced, and other mixed breeds, there is a good assortment. The pure white fleece and countenance of the Mountain Cheviot contrast strongly with the dusky face and fleece of the Horned Mountaineer or the coal-black head of the long-woolled Scotch sheep. We don't know whether the shape or colour of the head and jacket of the mixed breed interested us most. But the animals in this class certainly lay claim to features we do not desire to see reflected in the celebrated breeds of this country.

LEICESTERS.—When we find the distant counties of Devon, Beds, and Northampton contributing Leicesters to an agricultural show in the extreme north of England, we need say but little upon the universal popularity of this valuable breed of Sheep. The estimation in which they are held is best evidenced by the wide district over which they are found, and why, may we ask, should this be so? Because an animal of small bone, compact frame, with great aptitude to fatten and come to a heavy weight, and, lastly, a valuable fleece of wool upon its back, is justly pronounced perfect, and therefore profitable.

With no less than 43 *Shearling Rams* in Class 74, the judges of Leicester sheep had no easy task to perform in bestowing the 1st prize of 20*l.* upon the most worthy of that number. This distinction fell to Mr. Borton, of Barton House, Malton, for a useful young sheep with a good chest and crest, but deficient upon the tail and leg. The same exhibitor showed three neat animals in the same class. The 2d prize was adjudged to Mr. E. Pawlett, for his compact, clean-made sheep, with wide ears and Roman nose. This gentleman also showed four comrades to his prize animal of creditable form. The Silver Medal was borne away by Lieut.-Colonel Inge, Thorpe Constantine, Staffordshire.

We next examine Class 75 (*Leicester Rams of any age*), and here let us remark upon the striking and singularly clear development of the frontal and eye bones of a really fine bred Leicester. To our mind it is one of the most telling points in this breed of sheep; it needs not a great judge to look along that rank of Shearlings first alluded to to observe a vast variety of shape and outline in the physiognomy of the different rams, and we would strongly urge the importance of the point in connection with the character of the Leicesters. Mr. Ward Creswell, of Ravenstone, Ashby-de-la-Zouch, is richly deserving the reward bestowed upon his beautiful 3 years and 4 months old ram. The flesh and fat of this animal extended a good 6 inches beyond the usual limit of flesh upon a sheep's-tail, and the ribs on either side were equally as well cased; it was otherwise with the 2d prize animal, No. 599, a 3 years and 3 months old sheep, the property of Mr. John Borton. Here any deficiency about the tail or side of the rib was amply repaired by the great width of chest and perfect shape and condition of the neck, back, and loin; to look down upon this animal reminded one of the lines of a jolly-boat. The 3d prize, a Silver Medal, was awarded to No. 605, Mr. G. Turner's shearling ram, from Beacon Downs, Exeter, Devonshire.

Five Pens of *Shearling Ewes* competed for the prizes offered in Class 76, and were examined by the judges with great patience and care, all being subjected to the closest scrutiny. The 1st prize was awarded to Mr. S. Wiley, Brandsby, York, for his pen of five growing shearlings, and Lieut.-Colonel Inge received 2d prize for five short, high conditioned animals, with good jackets, and Mr. Thomas Marris was commended for his shearling ram No. 608.

COTSWOLDS.—Class 77 included 29 *Shearling Rams* of the Cotswold breed; we cannot express our admiration of these as a class, and it is to be regretted the breeders of this highly valuable animal do not display greater willingness to exhibit the magnificent animals which they speak of and own with so much pride in their own localities.

Mr. E. Handy gets the 1st prize for his 1 year 3 months and 2 weeks old Shearling Ram No. 614; this animal has a good crest and erect head, and so has the 2d prize animal, No. 639, the property of Mr. J. Wells, of Hampnett, Northleach, whose sheep fails behind the shoulder, but has a good coat. The 3d prize goes to Mr. E. Handy. Mr. Wm. Lane, of Broadfield, near Cirencester, was deservedly commended, and we must think the animals of the Broadfield flock merit greater notice than they appear to have received at Newcastle. Mr. Beale Brown exhibits some taking rams in this class, having coats and heads good enough for the most fastidious. The rams of any age of this breed again bring honours to Salperton, Mr. Brown getting the 1st for his magnificent animal; and we are glad to congratulate Mr. Wm. Lane upon receiving the 2d prize for his fine sheep, clad in wool of superior quality to the Salperton breed. Our breeders must not forego size for quality, and we would venture to assert that had Mr. Wm. Lane's sheep exhibited more growth and carried their heads higher, he would have had more cause for congratulation. The 3d prize, a Silver Medal, goes to Thomas Beale Brown, Esq., and Mr. William Lane is commended for his creditable sheep.

Class 79 comprises 13 Pens of 5 *Shearling Cotswold Ewes*, all very creditable specimens. Mr. Thomas Wells may, we think, congratulate himself upon receiving the highest honour in this Class. No. 653, Ewes of the Broadfield flock, in our estimation are most deserving this distinction; some of the pens are somewhat uneven, and this must reconcile Mr. Lane to the position he holds here.

LINCOLN.—In the Lincoln and other Long-woolled Sheep we have 15 competitors, but many of the animals lack condition. Mr. Robert Wright, of Nocton Heath, carries off the 1st and 2d prizes, and Mr. John Lynn, of Stroxton, Grantham, both breeders from Lincolnshire, take the third honour.

The *Rams of any Age* of the Long-woolled Breed, under Class 81, were in one or two cases peculiarly striking and interesting from their enormous size and coarseness; the 1st prize, No. 685, the property of Mr. Bumpstead Marshall, of Branston, at Lincoln, was a perfect mass of fat, it was impossible to trace the line of neck or to separate the head from the huge body; the 2d prize animal, No. 687, the property of the same gentleman, was a still larger beast, and, according to estimation, would weigh as much as a Shetland or Orkney ox. Such huge sheep are not very taking, and we preferred the three pens of 5 ewes each in Class 82, in which Mr. G. F. Howard, of Temple Bruer, Lincoln, receives the 1st prize, and Mr. T. Marshall gets the 2d.

The OXFORDSHIRE DOWNS next claim our attention. The *Shearling Rams* in Class 83, numbering 23 head, are a fine lot of sheep, with plenty of size and growth; many of them appear good wool producers; others, again, are far too close and short in this material. Mr. Howard's five sheep exhibit this failing, and though they are roomy growing animals, stand too high on the leg, and are altogether too loose for our liking. The Duke of Marlborough's lot also lack compactness of form, and appear low in flesh. Mr. Geo. Wallis, of Shifford, near Bampton, Oxon, exhibits seven exceedingly praiseworthy sheep, and very properly takes a 1st, 2d, and 3d prize, with his Nos. 700 and 704, two fine animals, possessing all the characteristics of an Oxford Down, with heads of the proper shape and colour, surmounted with the correct top knot, and their bodies clothed in a fleece of a quality and substance to be admired. Six rams of this breed, and of any age, in Class 84, deserve special comment, and Mr. Wallis again steps in for a 1st and 2d.

The pens of ewes of the same flock present a most marvellous contrast. Mr. Henry Overman gets a 1st prize for shearling ewes, perfect in shape and condition, but so delicate in colour and frame that it is impossible to believe they are of the same family or flock as the before named excellent rams of Mr. Wallis; and therefore the 2d prize pen, No. 729, a thorough pure lot of Oxfordshires, appear strangely different to their neighbours from Weasenham. Mr. Overman's sheep we venture to think might quite as fairly compete in either the Shropshire or Hampshire Down Classes. Lot 728, the executors of Mr. Treadwell, of Winchendon, Bucks, are a commendable pen.

The SOUTHDOWNS commence with 29 *Shearling Rams* in Class 86; it needed much careful inspection and observation to select the prize animals from such a good collection of sheep, and therefore we are not surprised that considerable discomfort and doubt arose in the minds of many interested in the decision of the judges. The Duke of Richmond, Lords Walsingham and Radnor ran a very near race with Mr. Rigden for the honours. The Merton Hall sheep were perfect in condition and compact in frame. The 1st prize animal, No. 739, has hind quarters at least 1½ inch higher than the fore. The same fault was visible in the 2d prize ram, No. 737, from Merton likewise. The 3d place was awarded to No. 733; this struck us as being in every respect the more desirable animal, with plenty of length, flesh well put upon a fine grown frame, the only fault perhaps was a little slackness behind the shoulder. Mr. Rigden's and Lord Radnor's sheep pleased us as having more ear than either the Duke's or Lord Walsingham's animals. The older rams of this breed were splendid specimens. Mr. Waters, of Motcomb, Sussex, received the 1st, and Mr. Rigden the 2d prize.

The *Shearling Ewes* of the same flock would fascinate any man having an eye to symmetry and colour. Lord Walsingham again comes in for 1st, for his pen of high conditioned animals, although they appear again a little too low in front. The Duke of Richmond receives the 2d prize for his even pen, and Lord Radnor is highly commended for as fine a pen of shears as could be desired. We must report our admiration of the Coleshill breed.

SHROPSHIRE.—With no less than 46 *Shearling Rams* in the Shropshire breed, the patience of the judges again was taxed to the utmost. Perhaps a finer collection of these sheep was never before witnessed. The ruling feature (wool) influenced the decision of the authorities very properly. All close-woolled animals, no matter how good their frame might be, had to succumb to the fuller fleece, and therefore No. 784, Mr. Thornton, of Pitchford, Shrewsbury, received the highest distinction for his 1 year, 3 months, 1 week old sheep; Mr. Matthews, of Mountford, Shrewsbury, the 2d; and Mr. John Coxon, of Freeford, Staffordshire, 3d. Mr. Byrd, of Stafford, for "Canterbury," and Mr. Smith, of Sutton Maddock, Shropshire, were highly commended; together with Mr. Mansell, of Adcott, Shrewsbury.

Shropshire Rams of any other Age.—Mr. Coxon gets the 1st for a 2 years and 3 months old sheep; Mr. P. W. Bowen, of Strawardine Castle, Shrewsbury, 2d; E. Holland, Esq., M.P., most deservedly highly commended for his good animal "Patentee the 4th;" and Messrs. Simpson, of Spofforth, Wetherby, Yorkshire, and J. Hanbury Bradburne, Lichfield, are likewise highly commended.

The *Shearling Ewes* of this breed are very excellent. Mr. Matthews receives the 1st prize, Mr. H. Smith 2d, and E. Holland, Esq., 3d. Lord Wenlock and Messrs. James and Edward Crane are highly commended.

HAMPSHIRE and other short-woolled sheep, not qualified to compete as Southdowns or Shropshires, are shown in three classes. Mr. W. B. Canning, of Elston, Devizes, takes a 1st Prize for a ram of splendid quality. Mr. Stephen King gets a 2d, and this gentleman is again highly commended for his ram, No. 844, from Bockhampton, Lambourne, Berks. In the older rams of the Hampshire breed we are glad to see Mr. Humfrey, of Oak Ash, near Wantage, in his old place, with 1st prize; Mr. Rose, of Zeals Green, Wiltshire, receiving the 2d. Mr. Humfrey is again commended for his exceedingly useful sheep. The prizes for shearling ewes in the same flock go, 1st, to Mr. W. B. Canning, 2d to Mr. Humfrey, and Mr. King is commended.

MOUNTAIN CHEVIOTS, included in Class 84, present a strange contrast to the fore-named breeds of sheep; the advantage of encouraging a breed of sheep so very different from the varieties now universally admired must depend wholly on their hardiness and the circumstances of their district. Their frames appear

loose and ill-adapted to carry meat, and the wool is of indifferent quality, and the animal savours far too much of the profitless sheep of the East to please us; at the same time we must allow the specimens exhibited at Newcastle show that some care has been devoted to the rearing and selecting animals of superiority, as the lots before us vary extremely in condition and character. Thus for instance, Mr. T. Elliot's, of Jedburgh, *Shearling Ram*, is very superior to many around him, and pleases one with his snowy whiteness and aquiline nose and length of tail. No. 878 again is a more pleasing looking ram.

The *Older Sheep* of this breed possess some redeeming points. No. 882 has a most elegant head and aristocratic profile, and is a long roomy sheep. 886 and 877 must certainly have strayed into the show yard, for they never could have reached their present condition excepting by hard living.

The *Ewes* of this flock are clean and white as could be seen some are roomy, but all too loose to recommend themselves to us.

The BLACK-FACED *Shearling Rams* in Class 98, demand more notice, and in every respect command our attention. It is impossible to regard these animals otherwise than as the natural and proper denizens of the mountainous regions which they inhabit; their dark countenances adorned with horns, as formidable as they are perfect; fleeces long and full, of dark hue, screen any fault there may be in their frame, so that the animals appear perfect, and certainly may be styled wonderfully handsome, and correct objects for the pencil of our greatest artists; the 1st prize, 897, is a magnificent animal, so also is 895, the coat of the latter is immense. In Class 99, the rams of any age of the mountain breed, 909, the 1st prize, a sheep of 5 years and upwards, the property of Mr. Ward, of Forest Hall, Kendal, Westmoreland, is a perfect picture; the 2nd prize, 907, is also a splendid animal, and perhaps surpasses his neighbour in the length and weight of his jacket.

The *Shearling Ewes* of the same family are peculiarly interesting and taking, with their elegant and pretty spotted countenances. Classes 121 to 127 are made up of Border Leicesters and Herdwicks, the breeds before referred to.

The following is the prize list of the Sheep Shows:—

LEICESTER.

CLASS 74. For the best Shearling Ram.—1st, 20*l*., John Borton, of Barton House, Malton, Yorkshire; 2d, 10*l*., to T. E. Pawlett, of Beeston, Sandy; 3d, Silver Medal, to Lieut.-Col. William Inge, of Thorpe Constantine, Tamworth. Highly Commended: John Borton.

CLASS 75. For the best ram of any other age.—1st, 20*l*., R. W. Creswell, Ravenstone, Ashby-de-la-Zouch; 2d, 10*l*., R. W. Creswell; 3d, Silver Medal, George Turner, of Beacon Downes, Exeter. Highly Commended: George Turner. Commended: R. W. Creswell.

CLASS 76. For the best Pen of 5 Shearling Ewes, of the same flock.—1st, 15*l*., Samuel Wiley, of Brandsby, York; 2d, 10*l*., Lieut.-Col. William Inge. Commended: Thomas Morris, of The Chase, Ulceby, Lincolnshire.

COTSWOLD.

CLASS 77. For the best Shearling Ram.—1st, 20*l*., Edward Handy, of Sierford, Cheltenham; 2d, 10*l*., John Wells, of Hampnett, Northleach; 3d, Silver Medal, Edward Handy. Commended: William Laue, of Bromfield Farm, Northleach.

CLASS 78. For the best Ram of any other age.—1st, 20*l*., Thomas Beale Browne, Salperton Park, Northleach; 2d, 10*l*., William Lane; 3d, Silver Medal, T. Beale Brown. Commended: William Lane.

CLASS 79. For the best Pen of 5 Shearling Ewes of the same flock.—1st, 15*l*., John Wells, of Hampnett, Northleach; 2d, 10*l*., William Lane. Highly Commended: William Lane.

LINCOLN AND OTHER LONG-WOOLLED.

(Not qualified to compete as Leicesters or Cotswolds.)

CLASS 80. For the best Shearling Ram.—1st, 20*l*., Robert Wright, of Norton Heath, Norton, Lincolnshire; 2d, 10*l*., Robert Wright; 3d, a Silver Medal, John Lynn, of Church Farm, Stroxton, Grantham. Highly Commended: Thomas Bampstead Marshall, of Branston.

CLASS 81. For the best Ram of any other age.—1st, 20*l*., Thomas Bampstead Marshall; 2d, 10*l*., Thomas Bampstead Marshall. Highly Commended: Robert Wright, of Norton Heath.

CLASS 82. For the best Pen of 5 Shearling Ewes of the same flock.—1st, 20*l*., R. G. F. Howard, of Temple Brever, Lincoln; 2d, 10*l*., Thomas Bampstead Marshall. Highly Commended: R. G. F. Howard.

OXFORDSHIRE DOWN.

CLASS 83. For the best Shearling Ram.—1st, 20*l*., George Wallis, of Old Shifford, Bampton, Faringdon; 2d, 10*l*., George Wallis; 3d, George Wallis.

CLASS 84. For the best Ram of any other age.—1st, 20*l*., George Wallis; 2d, 10*l*., George Wallis, Commended: John Bryan, of Southleigh, Witney; John Bryan; George Wallis.

CLASS 85. For the best Pen of 5 Shearling Ewes of the same flock.—1st, 15*l*., Henry Overman, Weasenham, Rougham; 2d, 10*l*., Duke of Marlborough. Highly Commended: The Executors of the late Samuel Treadwell, of Upper Winchendon, Aylesbury. Commended: William Hemming, of Coldcott, Moreton-in-the-Marsh.

SOUTHDOWN.

CLASS 86. For the best Shearling Ram.—1st, 20*l*., Lord Walsingham; 2d, 10*l*., Lord Walsingham; 3d, a Silver Medal, William Rigden. Highly Commended: Lord Walsingham. Commended: Lord Walsingham.

CLASS 87. For the best Ram of any other age.—1st, 20*l*., John Waters, of New Court, Eastbourne; 2d, 10*l*., William Rigden; 3d, a Silver Medal, Duke of Richmond. Highly Commended: the Earl of Radnor. Commended: William Rigden.

CLASS 88. For the best Pen of 5 Shearling Ewes, of the same flock.—1st, 15*l*., Lord Walsingham: 2d, 10*l*., Duke of Richmond. Highly Commended: Earl of Radnor, Lord Walsingham, Sir Thomas Barrett Lennard, Bart., of Belhus Hockley, Romford; Duke of Richmond.

SHROPSHIRE.

CLASS 89. For the best Shearling Ram.—1st, 20*l*., Edward Thornton, of Pitchford, Shrewsbury; 2d, 10*l*., Henry Matthews, of Montford, Shrewsbury; 3d, Silver Medal, John Coxon, of Freeford, Lichfield, Staffordshire. Highly Commended: Sampson Byrd, of the Lees Farm, Stafford; Thomas Mansell, of Adcott, Shrewsbury; Edward Thornton, Thomas Horton, of Harnage Grange, Shrewsbury; John Coxon, of Freeford; Henry Smith, of Sutton Maddock, Shiffnal. Commended: Thomas Mansell, Edward Holland, M.P.: Sampson Byrd, Thomas Horton, Henry Smith.

CLASS 90. For the best Ram, of any other age.—1st, 20*l*., John Coxon, of Freeford, Lichfield; 2d, 10*l*., Pryce William Bowen, of Shrawardine Castle, Shrewsbury. Highly Commended; Joseph Simpson, of Spofforth Park, Wetherby; Edward Holland, Esq., M.P. Commended; John Hanbury, Bredburne, of Pipe Place, Lichfield.

CLASS 91. For the best Pen of 5 Shearling Ewes, of the same flock.—1st, 15*l*., Henry Matthews, Shrewsbury 2d, 10*l*., Henry Smith; 3d, a Silver Medal, Edward Holland, Esq., M.P. Highly Commended: James and Edward Crane, of Shrawardine; Henry Matthews, Shrewsbury: Lord Wenlock. Commended: J. & E. Crane.

HAMPSHIRE AND OTHER SHORT-WOOLLED.

(Not qualified to compete as Southdowns or Shropshires.)

CLASS 92. For the best Shearling Ram.—1st, 20*l*., William Browne Canning, of Elston Hall, Devizes; 2d, 10*l*., Stephen King, Bockhampton, Lambourne, Berkshire. Highly Commended: Stephen King. Commended; W. B. Canning.

CLASS 93. For the best Ram of any other age.—1st, 20*l*., William Humfrey; 2d, 10*l*., Christopher Rose, of Zeal's Green, Mere, Wiltshire. Highly Commended: William Humfrey.

CLASS 94. For the best Pen of 5 Shearling Ewes of the same flock.—1st, 15*l*., William Browne Canning; 2d, 10*l*., William Humfrey. Specially Commended, Stephen King.

MOUNTAIN.—CHEVIOTS.

CLASS 95. For the best Shearling Ram.—1st, 15*l*., Thomas Elliot, of Hindhope, Jedburgh, Roxburghshire; 2d, 5*l*., John McGregor, of Riggshead, Lochmaben, Dumfries; 3d, Silver Medal, Robert Boreland, of Auchencairn, Thornhill.

CLASS 96. For the best Ram of any other age.—1st, 15*l*., John Robson, of Bymass, Rochester, Northumberland; 2d, 5*l*., John Robson.

CLASS 97. For the best Pen of 5 Shearling Ewes, of the same flock.—1st, 10*l*., Robert Borland; 2d, 5*l*., Thomas Elliot; Robert Shortreed, of Attonburn, Kelso.

BLACKFACED.

CLASS 98. For the best Shearling Ram.—1st, 15*l*., William Ward, of Forest Hall, Kendal; 2d, 5*l*., Henry Walton, of Appletree Shield, West Allan, Haydon Bridge. Highly Commended: A. Wearing Long, of Mint Cottage, Kendal.

CLASS 99. For the best Ram of any other age.—1st, 15*l*., William Ward; 2d, 5*l*., George Hedley, of Otterstone Lee, Bellingham. Highly Commended: C. Summers, of Whitfield, Haydon Bridge.

CLASS 100. For the best Pen of 5 Shearling Ewes, of the same flock.—1st, 10*l*., Christopher Armstrong, of Ashgillside, Alston, Cumberland; 2d, 5*l*., John and William Dodd, of Padaburn, Rosehill, Northumberland. Highly Commended: William Ward.

THE PIG CLASSES.

To the lovers and admirers of the porcine family the exhibition of swine at Newcastle must be both interesting and satisfactory. It is the quality rather than the quantity of pigs exhibited in the 15 classes devoted to these animals which deserves our special notice, and justifies us in pronouncing this collection of stock as highly superior.

The correct outline, lengthy, low, and lusty frame, is equally as well preserved in the mammoth swine from Yorkshire as it is perceptible in the less wieldy pigs of Berkshire, and found prevailing in all the smaller breeds on exhibition here. We have still to complain of a scarcity of hair upon the carcases of many excellent animals, and are not surprised or disappointed to find the judges awarding prizes in nearly every case to pigs with the most coat, although there are specimens of hairless swine of great merit hard by. To our mind a pig forfeits all claim to distinction if it lacks coat, and we would exclude animals in such condition from all honours. This unnatural appearance in swine is purely the result of too close feeding, and sometimes breeding, and it is time steps were taken to check a state of things as unfortunate as it is unsightly.

The 1st prize boar in Class 101 (No. 969), the property of Mr. H. Harrison, of Leeds, needed but a little more hair to make him a perfect animal; his head and shoulders were excellent. No. 968, which took the 2d prize, also had a splendid head, and only wanted a tail to make him complete. In Class 102, Boars of a small white breed, Mr. Geo. Mangles received the 1st prize, for a first-class little pig, with lots of flesh; and the 2d prize went to Mr. T. Dunlop Findlay, of Easter Hill, Glasgow, for his small headed good haired animal.

The *Boars of a small black breed* were well represented by animals from Messrs. Sexton and Crisp, both exhibitors from Suffolk, the former gentleman received the 1st and 2d prize for two nice animals; they might have been more taking had hair occupied the place of the shining mixture over the bodies. The Berkshire Boars in Class 104, numbered 13. The Rev. Mr. Baily, of Swindon, Wilts, took the 1st and 2d prize with two growing useful animals; and Mr. Stewart, of Saints Bridge, Gloucester, received the 3d for his excellent little boar pig; the quality and shape of the latter animal deserved and received the highest commendation. Messrs. Sadler, J. K. Tombs, and Allender, are also exhibitors in this Class. In the next Class, for Boars not eligible for the before named Classes. No. 1009, a large white animal, fairly receives distinction.

Class 106 includes 13 Sows of the large white breed. Some of these animals are of prodigious size. The 1st prize goes to Mr. W. B. Wainman, of Carhead, Yorkshire, for his useful sow, No. 1012; the 2d prize also falls to this exhibitor's lot for an equally good animal with six bad pigs by her side; and No. 1016, Mr. John Hickman, of Hull, justly receives the 3d prize for his 2 years and 3 months old sow with 11 huge pigs at her side. Sows of the same hue, of a small breed, are well represented in Class 107. Mr. Wainman gets the first honour here; Mr. Stearn, of Wickham Market, notorious as a pig breeder, justly receives the 2d prize; and Mr. T. Dunlop Findlay, the 3d. Small sows of the black breed, hail chiefly from Suffolk; Mr. Stearn, Mr. Crisp, and Mr. Sexton, of that county, divide the honours between them.

The *Berkshires* number only 14 breeding sows; the competition in this class might have been more severe. A. Stewart, Esq., of Saint's Bridge, is justly entitled to the distinction assigned to his animals "Dido" and "Mrs. Gamp;" no pigs on the ground display more growth or quality for their age, and we must think the Saint's Bridge pigs will be heard of at future shows, and not in a position to be ashamed of. Mr. Allender receives the 3d prize for a useful sow with pigs by her side; and the Royal Agricultural College sow "Selina," is most fairly and highly commended.

The next class, for Breeding Sows not before eligible, comprise 11 animals of fair merit; the honour here goes to Mr. W. B. Wainman for another huge Yorkshire pig. Three lots compete in Class 111, for 3 sows of the large white breed, and Mr. Wainman again comes with some loose growing animals. In the two following classes, for 3 sows of the small white and small black breed, only two entries appear in each class. Colonel Douglas Pennant wins in the first class, and Mr. Sexton in the small black breed.

Class 114 includes 8 Pens of 3 sow each of the Berkshire breed. The 24 animals exhibited here are not by any means first-rate specimens of this celebrated breed. The 1st prize is gone where we should have given the 2d; and Mr. Druce, of Eynsham, Oxon, has to content himself with the inferior prize, Mr. J. K. Tombs receiving the 1st. Mr. Sadler, of Calcutt, Cricklade, shows a pen of 3 excellent sows, and the Royal Agricultural College exhibits 3 sows which do not disgrace that Institution.

The following are the awards of the judges:—

CLASS 101. For the best Boar, of a Large White Breed.—1st, 10*l*., Henry Harrison, of Cross Hills, Leeds; 2d, 5*l*., R. B. Duckering, of Northorpe, Kirton Lindsey. Commended: John Hickman, of 21, Prospect Place, Hull.

CLASS 102. For the best Boar of a small white breed.—1st, 10*l*., G. Mangles, of Givendale, Ripon; 2d, 5*l*., T. D. Findley, of Easterhill, Glasgow; 3d, Silver Medal, S. Geater Stearn, of Brandeston, Wickham Market. Highly Commended: William Parker, of Golden Lion Inn, Bradford.

CLASS 103. For the best Boar of a small black breed.—1st, 10*l*., to George Mumford Sexton, of Wherstead Hall, Ipswich, Suffolk; 2d, 5*l*., to G. M. Sexton.

CLASS 104. For the best Boar of the Berkshire breed.—1st, 10*l*., the Rev. Henry G. Baily, of Swindon, Wilts; 2d, 5*l*., the Rev. Henry G. Baily; 3d, Silver Medal, Arthur Stewart, of Saint Bridge, Gloucester. Highly Commended: George Mandor Allender, Lea Grange, Winslow, Bucks.

CLASS 105. For the best Boar of a breed not eligible for the preceding classes.—1st, 10*l*., William Bradley Wainman, of Carhead, Cross Hills, Yorkshire; 2d, 5*l*., C. W. Graham, of 1, Blackburn's Buildings, York Road, Leeds.

CLASS 106. For the best Breeding Sow of a large white breed.—1st, 10*l*., W. B. Wainman; 2d, 5*l*., W. B. Wainman; 3d, Silver Medal, John Hickman. Commended; Stephen Blakey, of Westgate, Otley.

CLASS 107. For the best Breeding Sow of a small white breed.—1st, 10*l*., W B. Wainman; 2d, 5*l*., Samuel Geater Stearn; 3d, Silver Medal, T. D Findlay, of Easton Hill, Edinburgh.

CLASS 108. For the best Breeding Sow of a small black breed.—1st, 10*l*., G. M. Sexton, of Wherstead Hall, Ipswich; 2d, 5*l*., S. G. Stearn; 3d, Silver Medal, S. G. Stearn. Highly Commended: T. Crisp, of Butley Abbey, Wickham Market.

CLASS 109. For the best Breeding Sow of the Berkshire breed.—1st, 10*l*., Arthur Stewart; 2d, 5*l*., Arthur Stewart; 3d, Silver Medal, George Mander Allender, of Lee Grange, Winslow. Highly Commended: John L. Fletcher, of the Royal Agricultural College, Cirencester, Gloucestershire.

CLASS 110. For the best Breeding Sow of a breed not eligible for the preceding classes.—1st, 10*l*., W. B. Wainman; 2d, 5*l*., W. B. Wainman; 3d, Silver Medal, Henry Keyworth, Woodhouse Moor, Woodhouse.

CLASS 111. For the best pen of 3 Breeding Sow Pigs of a large white breed, of the same litter, above 4 and under 8 months old.—1st, 10*l*., W. B. Wainman; 2d, 5*l*., John Hickman.

CLASS 112. For the best pen of 3 Breeding Sow Pigs of a small white breed, of the same litter, above 4 and under 8 months old.—1st, 10*l*., Col the Hon. Edward G. D. Pennant, M.P., Penrhyn Castle; 2d, 5*l*., Lord Wenlock.

CLASS 113. For the best pen of 3 Breeding Sow Pigs of a small black breed, of the same litter, above 4 and under 8 months old.—1st, 10*l*., G. M. Sexton; 2d, 5*l*., S. G. Stearn.

CLASS 114. For the best pen of 3 Breeding Sow Pigs of the Berkshire breed, of the same litter, above 4 and under 8 months old.—1st, 10*l*., J. K. Tombs, of Langford, Lechlade; 2d, 5*l*., Joseph Druce, of Eynsham. Highly Commended: W. J. Sadler, of Bentham, Calcutt, Wilts.

CLASS 115. For the best Pen of 3 Breeding Sow Pigs of a breed not eligible for the preceding Classes, of the same litter above 4 and under 8 months old.—1st, 10*l*., George Mangles 2d, 5*l*., Joseph Wilson, of Manor House, Woodhorn, Morpeth

THE HORSE CLASSES.

There was no division of the Newcastle Agricultural Show which promised us more interest and pleasure than the collection of Horses. The Northern Counties have always been esteemed the breeding and rearing grounds of the best animals this country produces. If a line were drawn across the map of England which should sever the counties of Derbyshire and Northamptonshire, there is no locality south of this line, and west of Suffolk, celebrated for any particular breed of horses. It is true some of our Midland and Western Counties produce a useful class of heavy animals for agricultural and other draught purposes, yet we know of no special breed in any part of these localities that can be selected for direct comment by us. Almost every county in England doubtless rears a fair proportion of horses or ponies, but it is not in every direction that we hear of perfect and distinct varieties, and this unquestionably arises partly from natural disadvantages, and from indifference and neglect of localities.

On the hills and plains of Devonshire we find a rare breed of Ponies, deservedly celebrated for their hardi-

ness of constitution, great power and substance, excellence in shape, large bone, and wonderful endurance. The Exmoors, bred with such great care, reared and trained, as they now are, by many energetic men in that county—justly deserve the position they hold amongst the hackneys of this country. From Wales we receive large importations of Ponies and underbred Cobs, but so little attention is paid to the breeding and rearing of all descriptions of horse stock in the principality, that the breeds for which that country was so long celebrated, have degenerated rather than advanced. The counties bordering on Wales raise some useful Cart Horses, but sufficient attention is not paid by these neighbourhoods to breeding to entitle them to special distinction. Suffolk and Norfolk can vie with any county or district in the United Kingdom, in the patience and perseverance they have devoted towards maintaining and improving the valuable breed of horses for which these counties are so justly celebrated.

The original sorrel or chesnut horse of the eastern counties possesses many excellent qualities, and has so endeared itself to the inhabitants of those parts that we are proud and happy to believe the animal will never lose its colour, distinction, and characteristics. Apart from that locality we are aware the admirers of the Suffolk horse do not increase, and there is a notion that they are neither so enduring or hardy as the coarser bred draught horses of England. We prefer the animal in his native county, where we know it as active, honest, and enduring, yet we must allow the Suffolk breed has many characteristic points which require improving. The counties of Lincoln and York breed and rear probably more good horses than all the other districts of England put together; most of our best carriage horses and hunters hail from those counties, and Lancashire, Carlisle, and the counties around the Clyde are also famous for their horse stock. We therefore expected to find the Class lists at Newcastle filled with the sires, dams, and offsprings of Clydesdales, Clevelands, and the powerful draught horses of the manufacturing districts. Of the 170 horses entered, 10 competed for the 100*l.* prize offered to thorough-bred Stallions, 50 animals of various ages appeared in the classes assigned to Hunters, the Hackneys mustered only 9, and the Ponies 4. The heavy Draught horses, and those for agricultural purposes, were represented by four or five fair specimens of the Dray type, 12 pure Clydesdales, and 51 beasts of different ages for Farm use, and lastly 16 excellent Suffolks of the genuine colour and form. The absence of the valuable and powerful Clevelands caused us great disappointment, and we could wish the Classes for Dray Horses and even the Clydesdale lists also had been better filled. In the Hunter Class we were pleased to observe one or two very good Brood Mares, to our mind very superior animals to the two sires which competed for the 25*l.* prize offered for Hunter Stallions. The special prizes assigned to Hunters attracted some 25 or 30 animals of various ages and character, many of them rare samples of the true English hunter; others would have received more praise had they exhibited greater bone, and so come up to our notion of what a hunter ought to be.

The Roadsters and Hackneys did not muster very strong; still there were some good specimens of this useful stamp.

In Ponies a more miserable exhibition could scarcely be imagined; the three animals we saw on the ground were lost within the extensive ring or course staked out for exercising and exhibiting the horses.

Thoroughbreds.—The 100*l.* prize was not ill bestowed upon the sire of "Stockwell." Messrs. C. & J. Moffitt's "Laughing Stock" is not an every-day horse. We never looked upon a better middle piece, back or loin; but one objection could we make to this magnificent animal—his neck, perhaps, is somewhat short. The 2d prize horse "Cavendish" did not excel one or two of his comrades, but we think rather came behind them, with his thick and heavy shoulder. The "Knight of Avenel's" son "Sir Walter Scott," No. 390, is a beautifully topped horse, the beau ideal of an Arab in outline and head. The 3d prize was awarded to Sir Charles Monck, for his 8-year-old bay horse "Gamester," an animal with as fine a middle and well turned stern as could be found.

Hunters.—The Brood Mares in Class 54 won our heart; the 1st prize animal is the very model of a hunter's dam, long, low, and roomy, with plenty of substance. The 2d prize is a smaller animal, with a light head and neck, and well arched ribs. "Miss Ashton," an old-fashioned mare, with many good points, deserved more attention than was bestowed upon her, and the grey-tailed "Cara," No. 396, cannot be a bad one, if the adage be true that a "grey hair in a tail" betokens excellence.

Hackneys.—The two Hackneys in Class 55 we cannot extol; the bay long-backed "British Queen" we preferred when out of the shed to the sour-countenanced "Fanny."

Ponies.—The 1st prize for a Stallion Pony went to Messrs. Norman & Son, for their clever-looking "Jack;" the dark-brown cob "Glengary" we should prefer, with his big bony legs and strong frame.

Agricultural Horses.—The Class for Agricultural Stallions (not being Suffolks or Clydesdales) did not impress us very much. The 2d prize horse, No. 420, "England's Glory," the property of Mr. Matthew Read, is a really fine beast. Perhaps the animal is a little cobby in appearance, All the horses in this class deserve commendation. The 2-year old entire cart colts in the next class we did not admire, though the 1st prize animal, No. 424, certainly was marvellously big for his age.

The Mares and Foals in Class 60 were very second-rate. The old dark brown mare "Jolly," No. 429, deserved reward for the very good colt at her side. A nice 2-year old cart "filly" in Class 61 received the prize. In the next class we found but one competitor, and that a really stocky white gelding, a dray horse of the old school.

The grey 2-year old Stallion in Class 63 was worthy the distinction assigned to him, and the grey Mare with colt by her side, in the next Class, is likewise entitled to reward.

Suffolks.—We had specimens from Suffolk from Classes 66 to 69 inclusive. The 1st prize entire horse, "Talbot," the property of Mr. E. Cottingham, of Dunningworth Hall, Suffolk, is to our mind the best sample of this breed we have seen of late; his compact, neat frame is well supported on short bony legs. The ungainly, lanky quarters and thighs of this breed, are very likely to be perpetuated in colts by sires like Mr. C. Boby's "Conqueror." The mares of this breed we like the best. No. 444 is as well proportioned, nice an animal as need be.

Clydesdales.—The Clydesdale stallions well support the character of this celebrated breed. If the specimens at this show are somewhat heavier and more hairy about the legs than we expected to find them, they certainly do not lack activity, nor are deficient in action. In our opinion there is not a finer object in the horse collection than Mr. Grierson's "Benicia Boy." The head, neck, shoulders, loin, and quarters of this creature are faultless, and his frame is supported on limbs worthy the animal. It is when these mammoth Clydesdales move that one appreciates and applauds them; their action is so free, and, like a good stock, they walk or trot with apparent ease. A few such animals imported into our western and midland counties with a fair proportion of these north-country mares, would be a matter for national congratulation.

Amongst the Hunters exhibited, we must not fail to endorse the opinions of the Judges in their award to Mr. W. H. Clark, of Hook, Yorkshire; his light bay gelding "Sprig of Nobility" is an aristocratic beast. Here we have great size, substance, strong loins, fine shoulders, perfect head, powerful limbs, enough bone, and withal lots of breed. We should have no objection, though, to Nos. 485 and 490, both short-legged clean-looking animals; the whole class of Hunters were most creditable to the neighbourhood and counties around Newcastle. In the Colts and Fillies one or two superior beasts took our fancy. The 1st prize gelding, No. 499, did not strike us as deserving this honour. No. 503, a bay filly, the property of R. W. Hodgson, of Gateshead, certainly had the best frame and carcase in the class; her bone appeared a little small, but her strength and make, and withal such action, should have placed her higher up. The white-legged gelding, 502, moved cleverly and deserved all the praise bestowed upon him.

In the Roadster and Hack Classes we took much interest in, and regretted the entire animals of the first variety numbered so few. The 1st prize in the award for Hacks fell to Mr. Forster, of Gateshead, for his old-fashioned clever-looking "Multum-in-Parvo." The old horse showed work still, he made the circuit of the ring after a style not easily imitated. No. 511, a dark chesnut Cob, moved quickly, and received much praise from the bystanders.

The show of horses in Class 135, for the best pair of animals for Agricultural purposes, attracted some worthy competitors; the grey and bay geldings, No. 525, richly deserved the prize; the latter horse had not his superior in the yard. A pair of creams matched well, and moved cleverly, but we thought them somewhat under-sized. The remaining lots of horses demanded no special notice, nor do we care much for expressing opinions upon young growing animals. Enough animals have been enumerated by us to satisfy our readers that the horse stock at Newcastle was not unworthy the North and the occasion. The breeds that are not represented at this show, we trust may receive greater consideration upon a future occasion, and in directions where prizes have been withheld, we hope greater inclination will be exhibited to claim the liberal rewards proffered by the Royal Agricultural Society.

The following are the awards of the judges:—

CLASS 52. For the best Thorough-bred Stud Horse, having served Mares during the Season, 1864, and best calculated to improve and perpetuate the breed of the sound and Thorough-bred Horse for General Stud purposes.—1st, 100*l*, C. and J. Moffitt, of Kirklington Park, Carlisle; 2d, 25*l.*, E. G. Simpson, of Leven Bridge, Yarm. Highly Commended: Sir Charles Monck, Bart., of Belsay.

HUNTER.

CLASS 53. For the best Stallion, Thorough-bred, suitable for getting Hunters, whose regular charge for serving half-bred Mares during the season 1864 has not exceeded 5 guineas.—1st, 25*l.*, Joseph Casson, of Middleton Lodge, Uphall, Edinburgh. Second prize withheld.

CLASS 54. For the best Brood Mare, with foal at foot, or in foal, for breeding Hunters.—1st, 15*l.*, John Brown, of Wiggonby, Wigton; 2d, 10*l.*, William T. Scarth, of Keverstone Grange, Darlington. Highly Commended: C. Moffat, of Crosby-on-Eden, Carlisle.

HACKNEY.

CLASS 55. For the best Brood Mare, with foal at foot, or in foal, for breeding Hackneys.—1st, 15*l.*, Richard Britton, of Leeds Pottery, Leeds; 2d, 10*l.*, Francis Cook, of Thixendale, Malton, Yorkshire.

PONIES.

CLASS 56. For the best Stallion, not exceeding 14 hands.—1st, 15*l.*, Robert Norman & Son, of High Close, Aspatria, Cumberland; 2d, 5*l.*, W. and S. Hodgson, of Rodderup, Penrith.

CLASS 57.—Prize withheld.

AGRICULTURAL AND DRAY HORSES.

AGRICULTURAL.

Not qualified to compete as Suffolk or Clydesdale.

CLASS 58. For the best Stallion, foaled before Jan. 1, 1862.—1st, 20*l.*, Samuel Strickland, of Headley Hall, Tadcaster, Yorkshire; 2d, 10*l.*, Matthew Read, of Beamish Burn, Chester-le-Street, Durham; 3d, Silver Medal, Robert Orange, of Bedlington, Northumberland.

CLASS 59. For the best Stallion, foaled in the year 1862.—1st, 15*l.*, Samuel Strickland, of Headley Hall; 2d, 10*l.*, John Henderson, of Hossley Hill, South Shields.

CLASS 60. For the best Mare and Foal.—1st, 20*l.*, John B. Dixon, of Holling Farm, Ebchester, Northumberland; 2d, 10*l.*, Samuel Thompson, of Peel Hall Farm, Skipworth, Selby.

CLASS 61. To the owner of the best 2-year-old Filly.—1st, 15*l.*, John Eden, Esq., Beamish Park, Fence Houses, Durham; st, 20*l.*, Matthew Reed, of Beamish Burn.

DRAY.

CLASS 63. For the best Stallion, foaled in the year 1862.—1st, 15*l.*, William Dickman, of Lumley, Fence Houses, Durham 2d, 10*l.*, withheld.

CLASS 64. To the owner of the best Mare and Foal.—1st, 20*l.*, William Dickman, of Lumley, Fence Houses.

SUFFOLK.

CLASS 66. For the best Stallion, foaled before the 1st of January, 1862.—1st, 20*l.*, Edward Cottingham, of Dunningworth Hall, Saxmundham; 2d, 10*l.*, Charles Boby, of Alton Hall, Ipswich.

CLASS 67. For the best Stallion, foaled in the year 1862.—1st, 15*l.*, Henry Giles, of Croxton Park, Thetford; 2d, 10*l.*, William Thompson, jun., Thorpe, Colchester.

CLASS 68. For the best Mare and Foal.—1st, 20*l.*, Sir T. B. Lennard, Bart., of Belhus Aveley, Romford; 2d, 10*l.*, Sir Edward Kerrison, Bart., M.P., Suffolk.

CLYDESDALE.

CLASS 70. For the best Stallion, foaled before January 1, 1862.—1st, 20*l.*, Anthony Grierson, of Kilhead, Annan, Dumfriesshire.

CLASS 71. For the best Stallion, foaled in the year 1862.—1st, 15*l.*, David Riddle, of Kilhowie, Duntocher, Dumbartonshire; 2d, 10*l.*, Robert Moffat, of Dormansteads, Brampton, Cumberland.

CLASS 72. For the best Mare and Foal.—1st, 20*l.*, James Marr, of Alderstone, Mid Calder; 2d, 10*l.*, John Muir, of Lockfergus, Kirkcudbright.

CLASS 73. For the best 2-year-old Filly.—1st, 15*l.*, Duke of Hamilton and Brandon.

STOCK JUDGES.

Thoroughbreds and Hunters.—J. Cookson, H. Thurnall, C. N. Nainby.
Hackneys and Ponies.—C. Bedford, Hon. G. Lascelles.
Agricultural and Drays.—T. Brooks, G. Botham, J. H. Bland.
Suffolks and Clydesdales.—H. Crosse, J. Steedman.
Leicesters and Lincolns.—J. B. Thompson, L. Borman, T. Greetham.
Cheviots, Border Leicesters, Black Faced, and Herdwicks.—W. Aitchison, William Smith, J. Bowstead.
Cotswolds.—J. H. Bateman, R. Lord.
Oxford and Hampshire Downs.—F. Budd, R. J. Newton, E. Little.
Shropshire.—J. Woods, J. Price.
Southdowns.—J. H. Fookes, J. S. Turner, P. Purvis.
Pigs.—J. Woolf, D. Nesham, J. Moon.
Wool.—T. Clayton. Jason Gurney.
Butter.—F. Hannam, J. Marshall.
Inspector of Shearing.—S. Druce.

VETERINARY INSPECTORS.

Professor Simonds. | Professor Varnell.
Assistant.—R. L. Hunt.

APPEARANCE OF CROPS.

DEVONSHIRE: *Tawstock, North Devon, July* 13.—Wheat: doubtful average, ear much infested with insects, occasional thin fields. Barley: good; where early sown on free soils in fair condition, not otherwise. Oats: short; season too dry and warm for. Hay: light, well saved. Potatos: finer than known for many years, no disease as yet. Swedes: good; regular full plant. Common Turnip: seed time too recent to judge. Mangel: irregular, backward. Want rain.

FIFESHIRE: *Grange, Kinghorn.*—I have to state that the crops in this district as a whole are light, as the heather has of late, though very dry, been very ungenial and barren, consequently crops have not progressed favourably. Wheat, Barley, and Oats, all under average. Beans, full average. Potatos under average and late. Early sown Turnip, irregular; late sown, promising. Harvest from present appearance will be at least 10 days later than last year. *Walter Veitch.*

FORFARSHIRE: *Ferryden Farm, Montrose, July* 16.—I am sorry I cannot report more favourably of the crops in this quarter; they have suffered greatly for want of rain, there will not be half the bulk of last year. Wheat is thin on the ground, but may yield pretty well, having had favourable weather for flowering. Barley considerably under an average. Oats very deficient, too short to be cut by the reaper. Potatos blanky, and looking very bad what has grown. Turnips much in want of rain, on several farms have required to be resown. Hay about half a crop, but quality excellent, having had fine weather for making it. *Alex. Bell.*

Notices to Correspondents.

RUST ON WHEAT: *A Subscriber.* We fear there is no help for your friend, but a well grown and vigorous crop is probably less liable than another to the mischief, and so far good agriculture may diminish the liability to rust. The works of the Rev. M. J. Berkeley, his writings on the diseases of plants, contain all that is known on the subject.

WILD FLAX: *Sub.* Next week.

ERRATUM: *Essex Crop.* The last line of Mr. Hardy's report last week, on the appearance of the crops, should read 3 quarters, 4 bushels, 1 peck, 3 quarts, and not 3 quarters only.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND'S MEETING AT NEWCASTLE, 1864.

STANDS 98 & 213.

RANSOMES & SIMS, ORWELL WORKS, IPSWICH,

WILL EXHIBIT A COLLECTION OF

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BARNARD'S NOISELESS LAWN MOWER.

This MACHINE differs from all other Lawn Mowers, in being constructed without either Gear-wheels, Chains, or Levers, the power being transmitted to the Cutters by a loose intermediate wheel, with an India-rubber tyre, which is placed between a plain-faced driving wheel and pinion; it is very certain in action, and at the same time so simple that it cannot be deranged.

When the MACHINE is drawn back, the intermediate wheel throws itself out of work, and the Cutters cease to rotate. The Cutters have steel on both sides, and when blunt can be reversed, bringing the sharp edges forward. It is perfectly noiseless, both in its forward and backward action, and works with considerably less power than any other Machine for the purpose yet introduced.

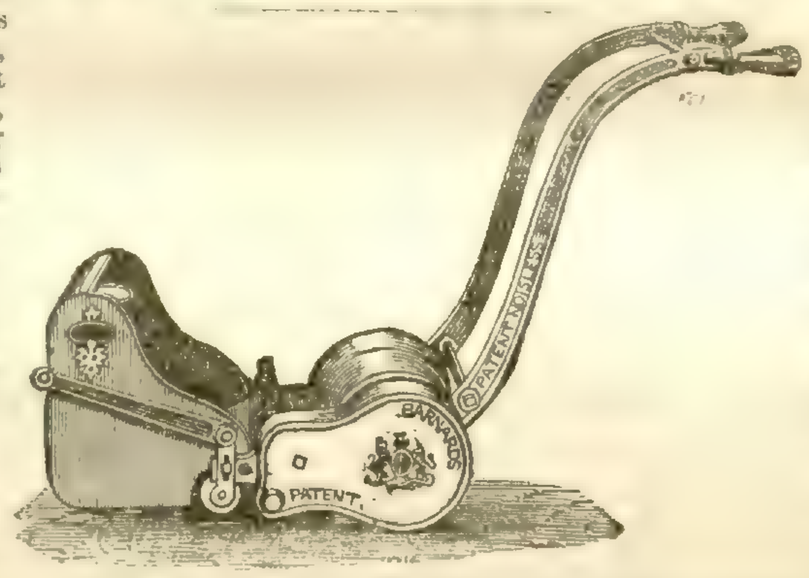

The India-rubber tyre will last from one to two seasons, and can be replaced at a cost of a few pence. An extra tyre is sent with each Machine.

The iron work of Grass-box is Galvanized, which prevents its being destroyed by rust, to which this part is so liable from its contact with damp Grass.

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The Miniature Lawn Mower, Cuts 8 inches Suitable for the very smallest Grass plots or Edgings.		£2 10*s.* 0*d.*
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To Cut 12 inches.	Suitable for one person	4 10 0
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NEW OVAL TUBULAR BOILER,

acknowledged by practical judges to be a great improvement on every form of Tubular Boiler yet introduced. It has proved itself superior to all other Boilers for quickness of action and economy of Fuel, doing its work with one-third less the amount required by any other.

Extract from Report in Gardeners' Chronicle *of International Exhibition, May 24, page 476.*

"The upright form of Boiler is usually made on a circular plan, but the oval form given to Mr. GRAY'S variety of it is said to be preferable in consequence of its bringing the tubes in closer contact with the fire. The usual form of a furnace being a parallelogram rather than a square, it seems feasible that the Boilers on the oval plan should bring the tubes more completely within range of the burning fuel; and this being so, the change, though a slight one, is no doubt an improvement."

They are made of all sizes, which, with prices, may be had on application.

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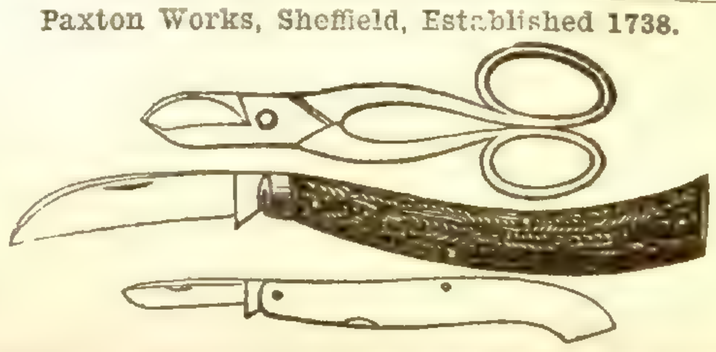

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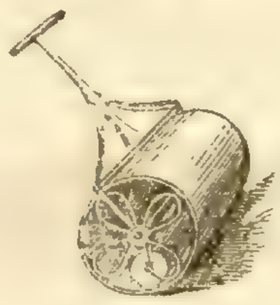

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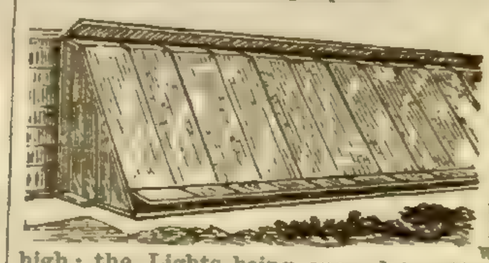

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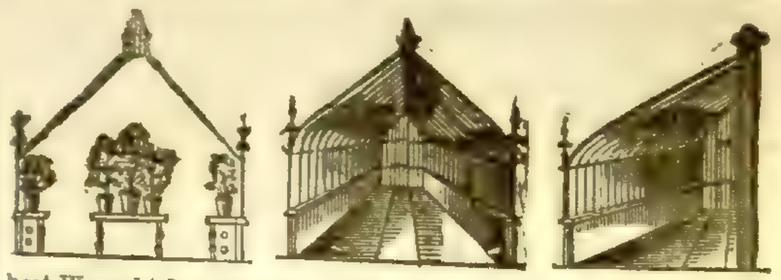

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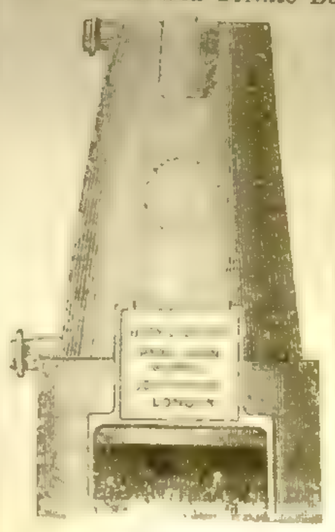

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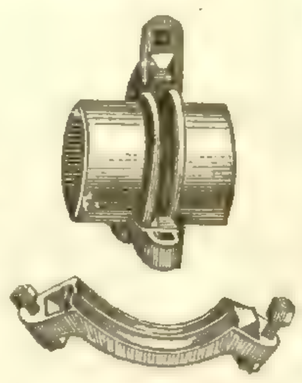

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By the use of these Joints the Apparatus is easily altered or removed without injury to either Pipes or Joints.

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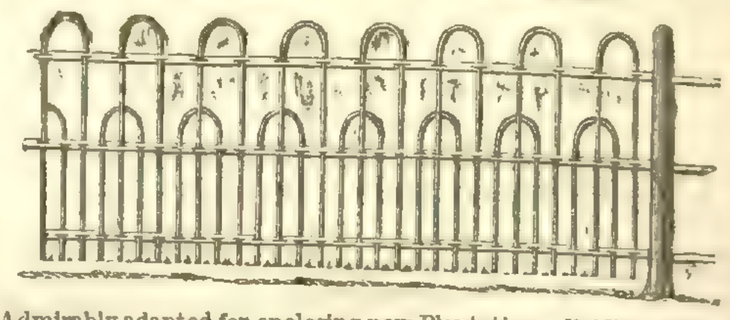

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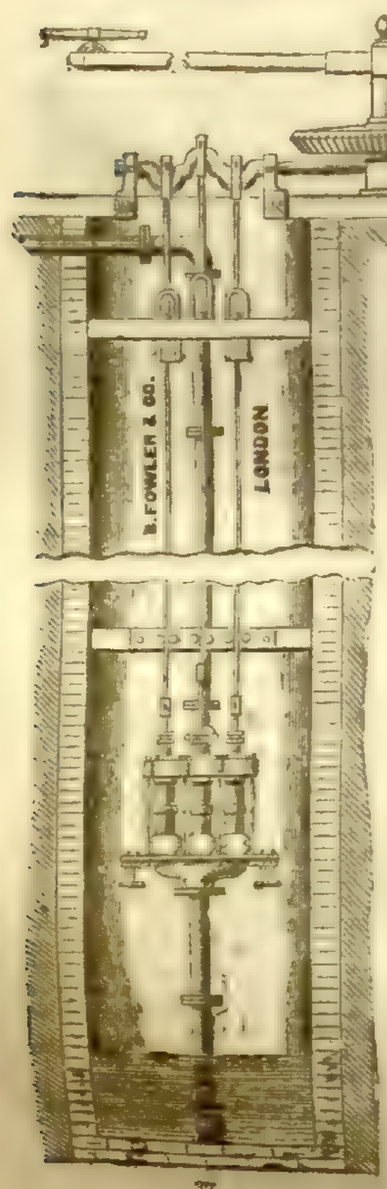

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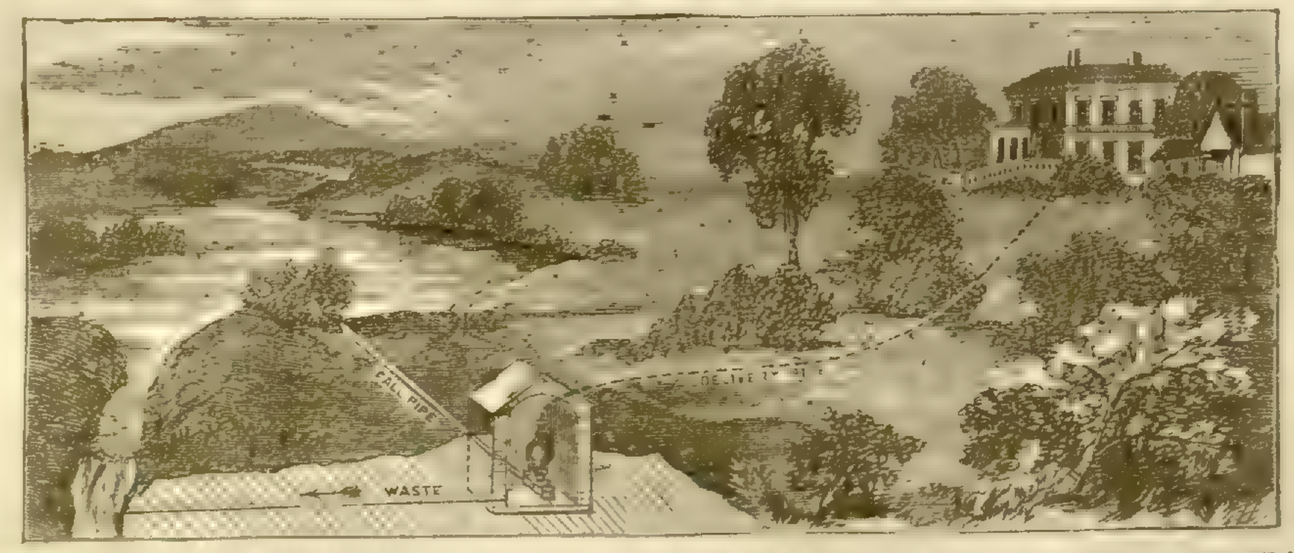

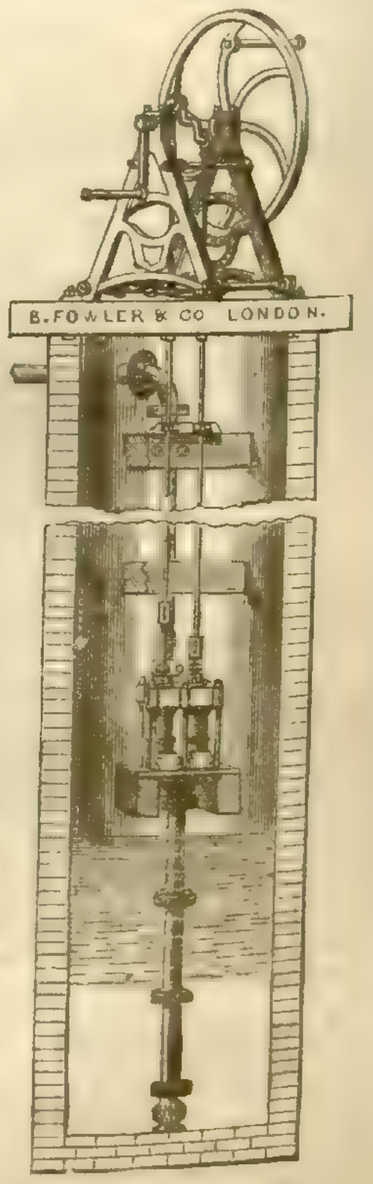

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IV. The Circassian Exodus.
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For such purpose this office will be kept open daily from 10 to 3 o'clock, and will be closed on the 5th day of September next, or as soon as 781 applicants shall have made application.

The following printed papers, in connection with the present sale, may be obtained at this office, viz.:—

1. Copies of the Act and regulations, with directions.
2. Form for paying the deposit at the Bank.
3. Form of letter of application, enclosing the Bank deposit receipt.

G. S. Walters, Agent-General of South Australia, the officer appointed for Sale of Land under the Act.

No. 5, Copthall Court, London, E.C., April 30, 1864.

N.B. The land orders to be issued in London are transferable by endorsement.'

The proceeds of the sales, less 10 per cent. for expenses, are to be applied to the improvement and government of the territory.

All future sales will take place in the Colony by public auction, at the upset price of 20s. per acre.

Sales by Auction.

Importation of Orchids

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MR. J. C. STEVENS will SELL by AUCTION at his Great Rooms, 38, King Street, Covent Garden, W.C., on TUESDAY, July 26, at half-past 12 o'Clock precisely, by order of G. U. Skinner, Esq., who has received per "Tasmanian," a small CONSIGNMENT of PLANTS from Guatemala, and a few BARKERIAS, which arrived in a former packet, with the first collection made by the Ornithological Society's Agent in Costa Rica, all in excellent health; and Mr. Skinner offers them without reserve for whatever they may fetch. He begs to call the attention of Amateurs to the CATTLEYAS in particular, being two distinct habitats of many hundreds of miles apart, and very apparent in the form of the pseudo-bulbs.

A small importation from India of VANDA ROXBURGHII, also 50 fine established ORCHIDS, in the best possible health, from one of the oldest established collections in the country, comprising amongst many others fine varieties of Cattleya Ruckeri, Phalænopsis Schilleriana, Aerides Lobbii and Warneri, Cypripediums, Vandas, &c.

On view the Morning of Sale, and Catalogues had.

Warwickshire.

MR. MARSH has been favoured with instructions from the Trustees of "The Aston's Estates' Act, 1863," to SELL by AUCTION, at the Bull Hotel, Nuneaton, on SATURDAY, August 6, at 2 for 3 o'Clock in the Afternoon, valuable and important FREEHOLD PROPERTY, distinguished as the NUNEATON and ATTLEBOROUGH ESTATES, comprising FOUR capital DAIRY FARMS in a high state of Cultivation, with good Residences and Agricultural Buildings; important COAL SEAMS; RED and BLUE BRICK and TILE WORKS of superior quality; valuable STONE QUARRY; BUILDING and ACCOMMODATION LAND; the "DOUBLE PLOUGH" INN, and other Property, together extending to about 1200 ACRES, producing the very inadequate Rental of upwards of £2500 per annum; also the Moiety of the Manors of Nuneaton and Attleborough, in TWENTY LOTS, as follows:—

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Lot 2.—An Old Public House, known as the "Double Plough" Inn, with Stabling and other Buildings; also Cottage and Solicitor's Office adjoining, situate in Church Street, Nuneaton. Let at Rentals amounting to 20l. per annum.

Lot 3.—A most desirable Arable and Pasture Farm, in the Hamlet of Attleborough, with good Residence and Outbuildings, containing upwards of 360 Acres of Land, in the occupation of Mr. George Beale as yearly tenant, at 587l. 10s. per annum.

Lot 4.—A Capital Tithe-free Farm, on the high road from Nuneaton to Hinckley, with convenient Farm House and Outbuildings, and about 160 Acres of Land. Let to Mr. Joseph Cross, as yearly tenant, at 262l. 10s. per annum.

Lot 5.—A very superior Arable and Pasture Farm, in the Parish of Nuneaton, with good Residence and Outbuildings, and about 225 Acres of Land, in the occupation of Mr. Joseph Ward, as yearly tenant, at 428l. 8s. 8d. per annum.

Lot 6.—A superior Arable and Pasture Farm, in the Hamlet of Attleborough, with good House and Outbuildings, and about 220 Acres of Land. Let to Mr. Joseph Thompson, with Lots 7, 8, and 9, as yearly tenant, at the rental of 560l. 7s. 6d.

Lot 7.—A Piece of Meadow Land, of about 1 Acre, situate at Attleborough, adjoining the Trent Valley Railway, well adapted for Building purposes.

Lot 8.—A capital Enclosure of rich Meadow Land, of about 11 Acres, abutting on the high road from Nuneaton to Attleborough, admirably adapted for the erection of Manufacturing Premises or as Accommodation Land.

Lot 9.—A capital Enclosure of Meadow Land, adjoining Lot 8, of a similar description, and containing about 11 Acres.

Lot 10.—A very valuable Freehold Estate, containing about 26 Acres of Land, with one of the best Blue Brick and Tile Yards in the County, and all requisite Manufacturing Buildings thereon; also Two Coal Shafts, now sunk about 30 yards, and where first Seam Coal is abundantly obtained. Let to Mr. Thomas Hardy as yearly tenant.

Lot 11.—A Freehold Piece of Meadow Land, known as The Wharf, with frontage to the Coventry Canal and Nuneaton and Hartshill Road.

Lot 12.—A Freehold Piece of Meadow Land, of about 5¼ Acres, known as Copper-Mine Close, adjoining the Nuneaton and Hartshill Road, and let to Mr. George Cross at 18l. per annum.

Lot 13.—A Freehold Plot of Ground, in Bond Street, Nuneaton, with a frontage of about 40 feet thereto, contiguous to the Railway Station, and well adapted for Shop Property.

Lot 14.—A valuable Freehold Estate, situate on the Turnpike Road from Atherstone to Nuneaton, comprising an extensive Stone Quarry of superior quality, with frontage to the Coventry Canal, and within a mile of the Railway Station; also Two Small Holdings, Red Brick and Tile Yard, Cottage and Garden, Wharf and part of "Punch Bowl" Inn. Let to different Tenants, and producing rentals amounting to about 312l. per annum.

Lot 15.—Two Freehold Enclosures of Meadow Land, with Barn thereon, having extensive frontages to the Coventry Canal, adjoining the Nuneaton and Atherstone Turnpike Road, and containing about 15 Acres, in the occupation of Mrs. Hurst, at 52l. per annum.

Lot 16.—A compact Freehold Property of about 14 Acres, in the occupation of the Trustees of Mr. John Cross, at 33l. 10s. per annum.

Lot 17.—A Valuable Freehold Property, situate near Abbey End, comprising a 2-Bay Barn and other Buildings, and about 30 Acres of Land, in the occupation of Mr. Thomas Iliffe, at 98l. per annum.

Lot 18.—A Piece of Garden Ground, known as Middle New Mill Field, containing about 4 Acres, in the occupation of Mr. James Biddle, with Lot 19, at 31l. 17s. 6d. per annum.

Lot 19.—A Piece of Garden Ground, called Bottom New Mill Field, containing about 4 Acres, and let to Mr. James Biddle, with Lot 18.

Lot 20.—The Moiety of the Manors or Reputed Manors of Nuneaton and Attleborough.

The Land on the Farms is in a high state of Cultivation and of superior quality; the Buildings good, and the Tenantry highly respectable; the other property, as well as the Farms, are within a short distance of the Railway Station, where daily communication can be had several times to the Market Towns of Coventry, Leicester, Birmingham and Warwick, and in the midst of the Atherstone and other Hunts.

May be viewed by permission of the Tenants, and Particulars, Plans, and Conditions of Sale may shortly be obtained of Messrs. Nicholson & Herbert, Solicitors, Spring Gardens, Charing Cross, S.W.; of Algernon Wells, Esq., Solicitor, Founders' Hall, St. St. Swithin's Lane E.C.; of Messrs. Field & Bignold, Solicitors, Norwich; of Messrs. Reynolds & Palmer, Solicitors, Yarmouth; of Messrs. Hoddings, Townsend, & Lee, Solicitors, Salisbury; of H. Radford, Esq., Solicitor, Atherstone; and at Mr. Marsh's Offices, Charlotte Row, Mansion House, London, E.C.; or will be forwarded on application.

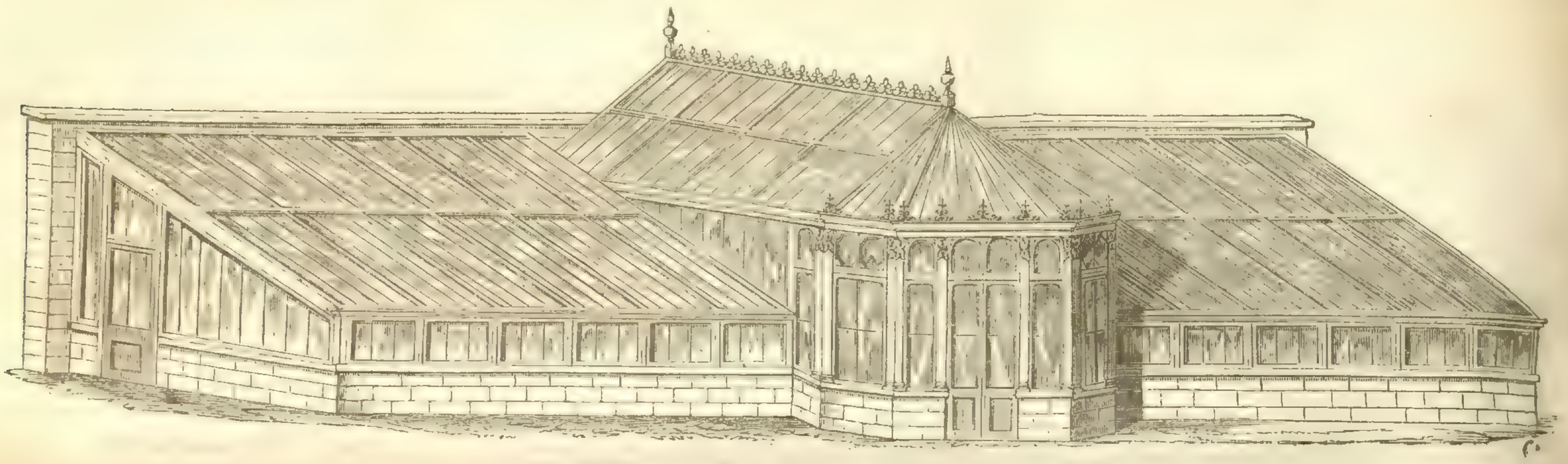

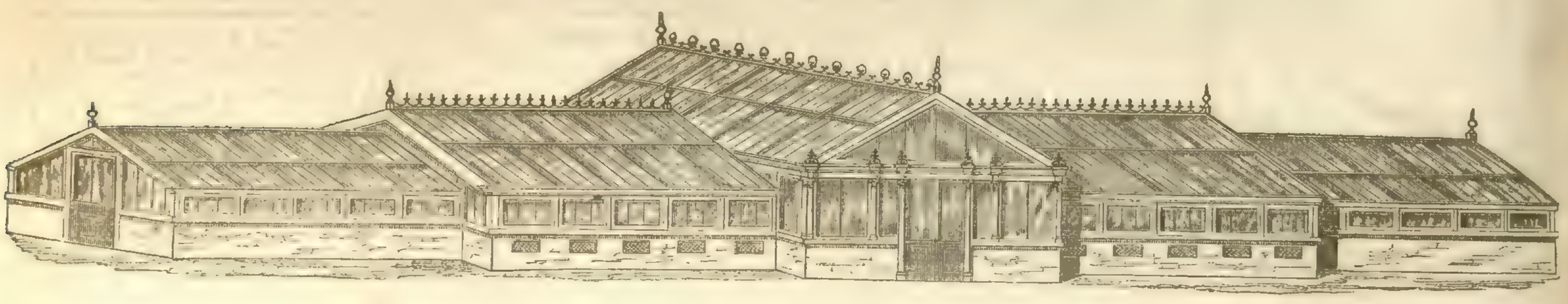

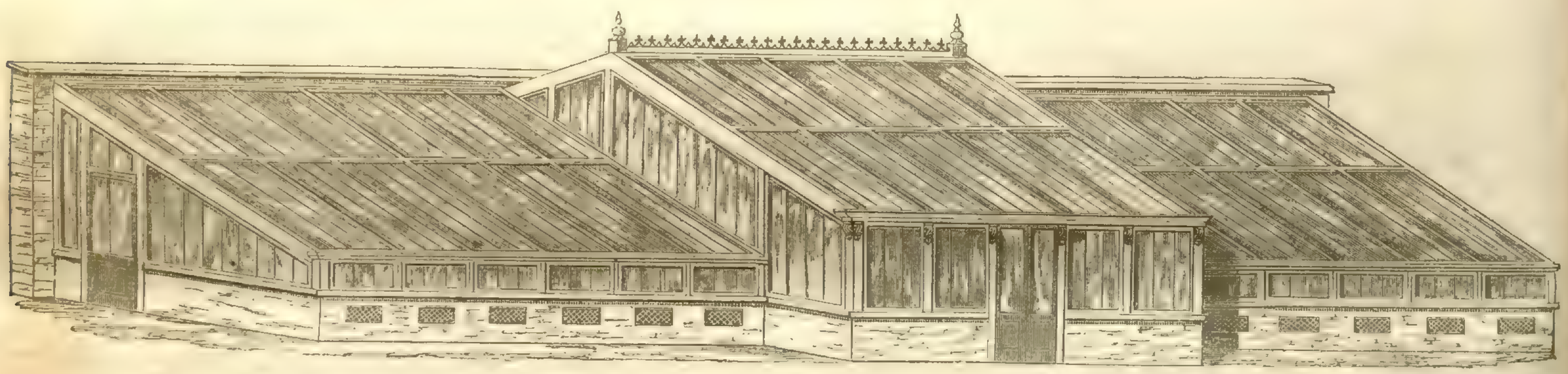

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have become so universally adopted on account of their superior power, great safety, and economy.

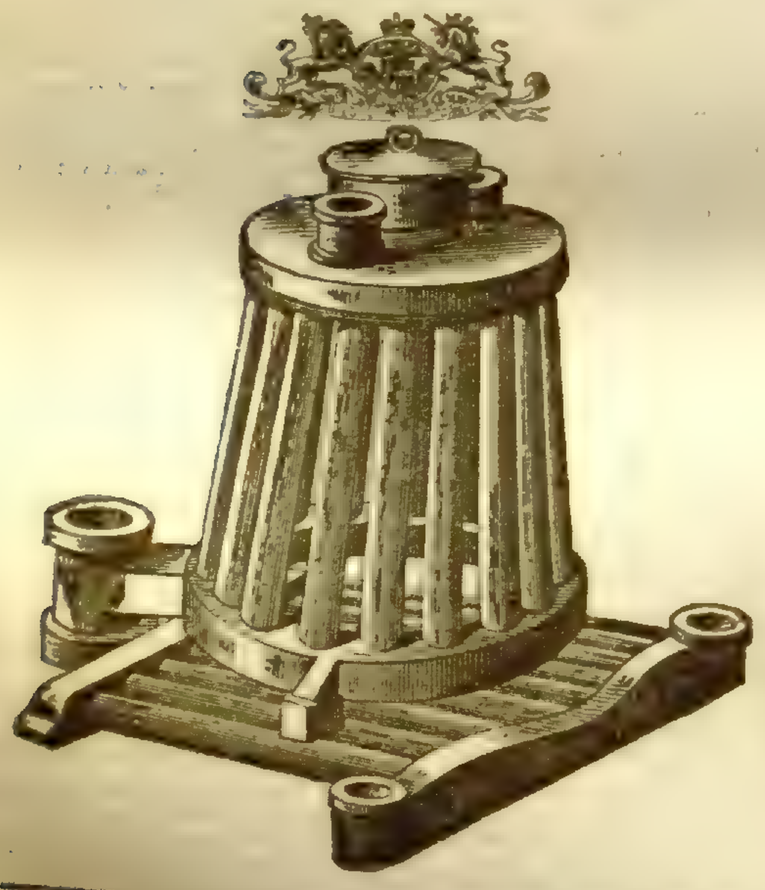

ORMSON'S No. 1 BOILERS	are heating upwards of	250	feet of Pipe.
ORMSON'S No. 2 BOILERS	"	600	"
ORMSON'S No. 3 BOILERS	"	1300	"
ORMSON'S No. 4 BOILERS	"	3500	"
ORMSON'S No. 5 BOILERS	"	7000	"

Boilers of larger sizes if required to heat 12,000 or 15,000 feet of Pipe.

IRON and WOOD CONSERVATORIES of the most chaste and elaborate design; VINERIES, PINERIES, PEACH HOUSES, FORCING HOUSES, GLASS CASES for WALL TREES, PITS, &c. designed and built, combining all the latest Improvements, so as to answer their intended purposes without risk of disappointment.

Plans, Specifications, and Estimates on application.

HENRY ORMSON, HORTICULTURAL BUILDER TO HER MAJESTY,

AND HOT-WATER APPARATUS MANUFACTURER TO THE COMMISSIONERS OF HER MAJESTY'S ROYAL PALACES AND PUBLIC BUILDINGS, AND TO THE ROYAL HORTICULTURAL SOCIETY.

STANLEY BRIDGE, KING'S ROAD, CHELSEA, LONDON, S.W.

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THE GARDENERS' CHRONICLE
AND
AGRICULTURAL GAZETTE.

A Newspaper of Rural Economy and General News.—The Horticultural Part Edited by Professor Lindley.

No. 31.—1864.] SATURDAY, JULY 30. {Price Fivepence. STAMPED EDITION, 6*d*.

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Roses in Pots.

PAUL AND SON draw attention to their ROSES in POTS, fit for immediate planting. The plants of this year's New Roses are particularly fine. Prices on application.
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PAUL AND SON'S Unrivalled COLLECTION continues in FULL BLOOM. Particularly fine just now are the Teas, Noisettes, and later flowering Hybrid Perpetuals. Visitors may reach the Nurseries by Trains from Bishopsgate to Cheshunt (one mile) or Waltham (two miles from the grounds). Flies and Omnibuses at the latter. "Old" Cheshunt Nurseries, Cheshunt, N.

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THE NEW ROSES for 1864.—Several Thousands of splendid Plants now ready. For List of Sorts and Prices, apply to
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WM. PAUL (Son and Successor to the late A. PAUL), can recommend with confidence this fine hardy English HYBRID PERPETUAL ROSE. The colour is light vivid crimson; the flowers are large, the petals of great substance, and very smooth. It has received a First-class Certificate from the Royal Botanic Society of London. Strong plants, 7*s*. 6*d*. each.
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MESSRS. RIVERS AND SON invite all those interested in ORCHARD HOUSE CULTURE to Inspect their numerous houses, now full of bearing Trees.
Nurseries, Sawbridgeworth, near the Harlow Station, Great Eastern Railway.

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B. S. WILLIAMS has much pleasure in stating that he has secured a fine supply of this valuable and rare PINE, stated to be the finest in cultivation.
Also a fine Stock of BLACK JAMAICA and SMOOTH CAYENNE PINES. Prices on application.
Paradise and Victoria Nurseries, Holloway, London.

Vines—Extra Extra Strong.

FRANCIS AND ARTHUR DICKSON AND SONS have now ready for sending out, some 1500 extra fine well ripened VINES of all the new and leading kinds, TRUE TO NAME. Many are as thick as the "little finger," and if planted immediately a season will be gained. A better lot of Vines they believe were never grown. Inspection invited. Price from 3*s*. 6*d*. to 15*s*. each, according to kinds and strength. List of kinds on application.
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SEED FARMERS, MERCHANTS, and NURSERYMEN,
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ESTABLISHED 1800.
Ripon and Claro Seed Establishment.

WILLIAM MORTON,
Old Market Place, Ripon.
PRICE CURRENT of AGRICULTURAL SEEDS free by Post.

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Prize Medals, 1851, for Wheat; 1862, for "Excellent Seed Corn and Seeds."

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ALOCASIA MACRORHIZA VARIEGATA, well variegated Plants, 7*s*. 6*d*. each; 60*s*. per dozen.
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PURPLE INTERMEDIATE STOCK, ditto, 1*s*. per packet.
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*** Part II. (Exotic Ferns) will be issued as early as possible.
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The CALCEOLARIA is now magnificently in bloom at the Nursery; the others in their respective seasons.
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To the Trade.

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SKIRVING'S KING of the SWEDES.
DIXON'S IMPERIAL SWEDE PURPLE TOP.
SKIRVING'S IMPROVED SWEDE PURPLE TOP.
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CHIVAS AND WEAVER (late GEORGE CHIVAS) acquaint agriculturists that they are supplying the above TURNIP, grown with scrupulous care, from a Stock which they have been improving for several years; the characteristics of the variety are now generally recognised, viz:—Rapidity of Growth (may be sown till the middle of August), highly Nutritious and particularly Hardy. To secure the genuine article direct application is recommended. Price 1*s*. 6*d*. per lb.; 20 lb. delivered free at any Railway Station. Chester, July, 1864.

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Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

	Per pkt.—*s*.	*d*.		*s*.	*d*.		Per pkt.—*s*.	*d*.		*s*.	*d*.
PRIMULA	2	0	and	3	6	INTERMEDIATE STOCK	0	6	and	1	0
CINERARIA	1	6	and	2	6	BROMPTON do.	0	6	and	1	0
CALCEOLARIA	1	6	and	2	6						

The above Seeds are saved with great care, and can be warranted to give satisfaction.
Paradise and Victoria Nurseries, Holloway, London, N.

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B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens.
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Also ARUNDO CONSPICUA, a worthy rival of the Pampas Grass, flowering very freely three months earlier in the season than that old favourite. Strong plants 18*s*., 24*s*., and 30*s*. per dozen.
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CHOICE CALCEOLARIA (JAMES').—This unrivalled strain has in every instance received FIRST PRIZES wherever exhibited—can be seen in bloom here. Sealed Packets, 1*s*. 6*d*., 2*s*. 6*d*., and 5*s*.
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And every other first-class Seeds. See CATALOGUE, post free.
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GLASS AND COLOUR MERCHANT,

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PRESERVE JARS.

REDUCED TARIFF FOR SHEET GLASS AND HORTICULTURAL GOODS.

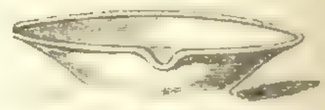
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LAWN MOWING, ROLLING, COLLECTING, and DELIVERING MACHINE for 1864.

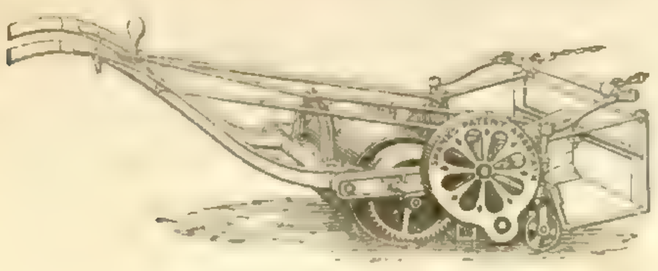
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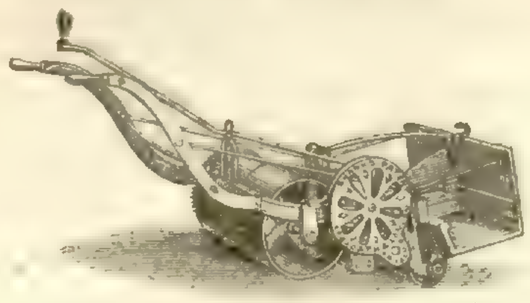
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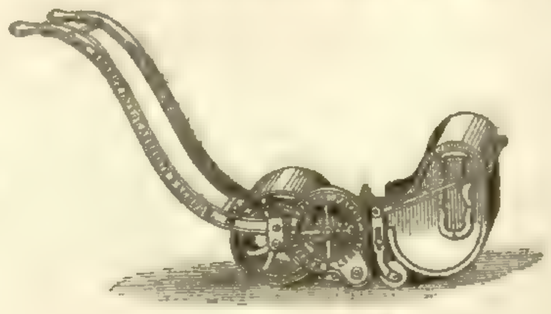
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PATRONIZED ON FIVE SEPARATE OCCASIONS THIS SEASON BY

HER MAJESTY THE QUEEN, AND BY HIS MAJESTY THE KING OF SAXONY.

Illustrated Price Lists sent Free on application.

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ALEXANDER SHANKS AND SON, DENS IRON WORKS, ARBROATH, N.B.

LONDON OFFICE and SHOW ROOMS, 27, LEADENHALL STREET, E.C.

A Stock of Lawn Mowers always kept at the London Depot, from which orders can be at once executed.

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OR

NOISELESS LAWN MOWING, ROLLING, and COLLECTING MACHINES.

BY SPECIAL APPOINTMENT,
SOLE MANUFACTURER

TO HER MOST GRACIOUS MAJESTY
THE QUEEN.

THE

FIRST PRIZE MEDAL

OF THE

INTERNATIONAL

EXHIBITION,

1862,

WAS AWARDED TO

THOMAS GREEN,

FOR HIS

PATENT

LAWN MOWERS.

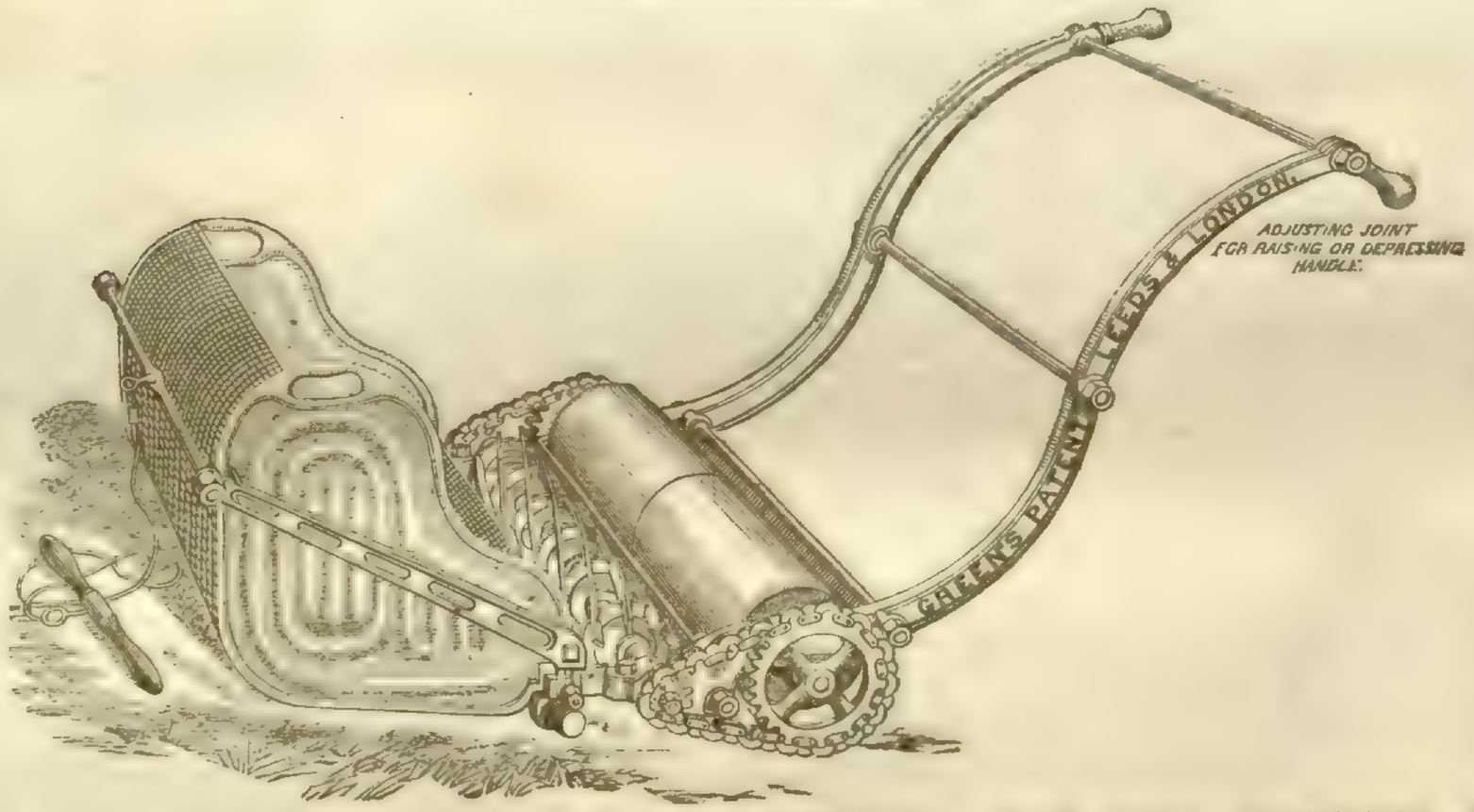

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AWARDED TO

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LIEGE, 1861.

BRUSSELS, 1861 & 1863.

NAMUR, 1862.

GAND, 1862.

LINNEENNE, 1861,

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LAEKEN, 1862.

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THOMAS GREEN AND SON, SMITHFIELD IRON WORKS, LEEDS, YORKSHIRE;
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HOT-WATER APPARATUS,

WITH TRUSS'S PATENT PIPE JOINTS.

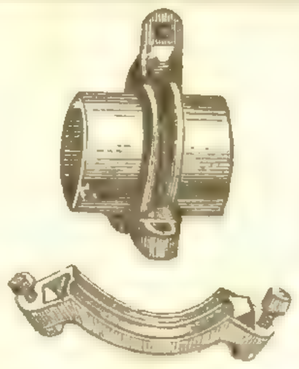

T. S. TRUSS, C.E.,

53, GRACECHURCH STREET, LONDON, E.C.

By means of these Joints the work is executed in less than half the time required for Socket Joints, and alterations can at any time be made, or the entire Apparatus removed and erected elsewhere with the greatest facility. A considerable saving in cost is also effected.

These Joints have been used for several years, giving entire satisfaction, and may be seen in use at the Royal Horticultural Society's Gardens, Chiswick, and many other places in Horticultural and Public Buildings. They are also exhibited at the Society's Gardens, South Kensington.

For a few prices, see last week's advertisement.

ESTIMATES, PLANS, AND PRICE LISTS FORWARDED ON APPLICATION.

ST. PANCRAS IRON WORK COMPANY,

OLD ST. PANCRAS ROAD, LONDON, N.W.

BY ROYAL LETTERS PATENT.

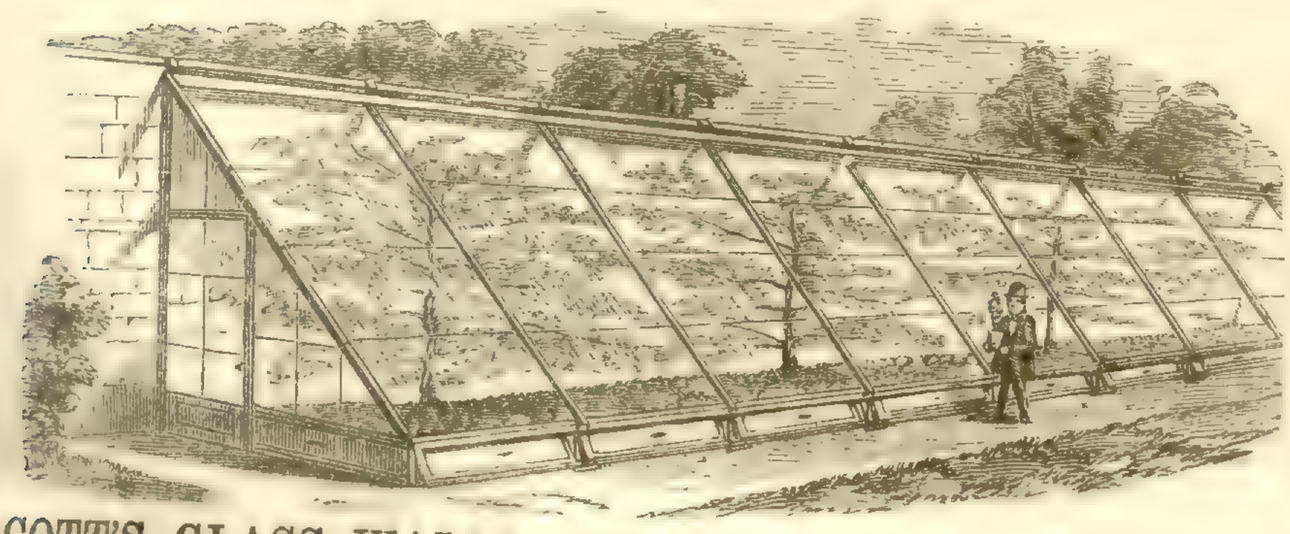

SCOTT'S GLASS WALLS AND ECONOMIC GREENHOUSES.

Designed to meet the suggestions of JAMES SCOTT, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES GREENHOUSES HOTHOUSES	PINE and MELON PITS VASES VERANDAHS	BALCONIES IRON SASHES IRON HURDLES	GATES TANKS HOT-WATER WORKS

PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. Lists Free.

ST. PANCRAS IRON WORK COMPANY, OLD ST. PANCRAS ROAD, LONDON, N.W.

COTTAM'S

CONTINUOUS IRON FENCE, HURDLES, and FIELD GATES,

MADE OF SUPERIOR IRON (NO CINDER IRON USED) IN THE BEST MANNER.

PARK ENTRANCE GATES, and RAILING of CAST and WROUGHT IRON COMBINED,

IN VARIOUS STYLES.

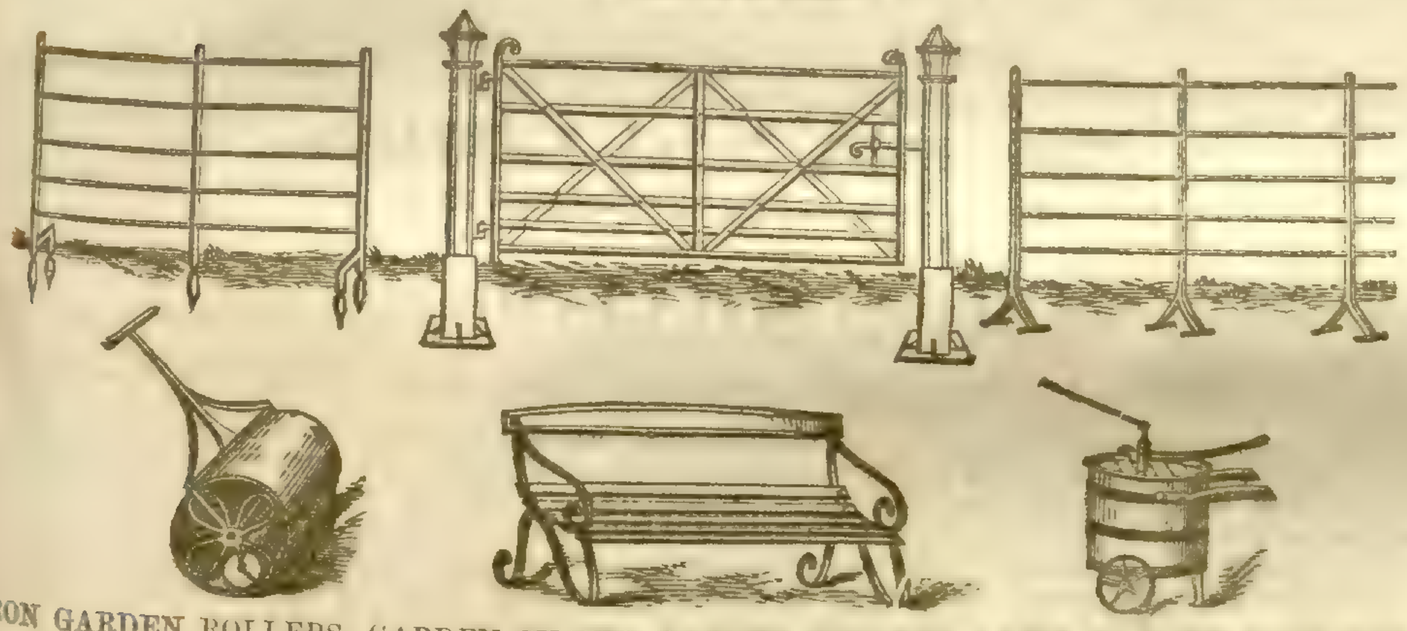

IRON GARDEN ROLLERS, GARDEN CHAIRS, GARDEN ENGINES, LAWN MOWING MACHINES, WIRE WORK, PUMPS, and every description of Implements for Horticultural and Gardening purposes.

VERANDAHS, GREENHOUSES, CONSERVATORIES, HOT-WATER APPARATUS, &c.

The Improved IRON MANGERS and RACKS for Stables, HARNESS BRACKETS, &c.

Illustrated CATALOGUES and DRAWINGS free on application to

COTTAM AND CO., ENGINEERS and IRON FOUNDERS,

2, WINSLEY STREET (OPPOSITE the PANTHEON), OXFORD STREET, LONDON, W.C.

Card.

SAMUEL N. McGERROW,

GENERAL HORTICULTURAL BUILDER,

Knotty Ash, near Liverpool.

Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

W. J. HOLLANDS, IRON MERCHANT,

31, Bankside, London, S.E.

HOT WATER PIPES, from Stock, per yard:—2-inch, 1s. 4d.; 3-inch, 2s.; and 4-inch, 2s. 7d. BENDS, from Stock, 1s. 7d., 2s. 6d., and 3s. 3d. each. THROTTLE VALVES, 10s. 6d., 13s. 6d., and 15s. each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day. A discount to the Trade.

Heating by Hot Water.

HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, TUBULAR, and Elliptic, from 24s. each. Improved Boilers and Iron Stands to use without brickwork, 50s. each. Valves from 10s. 6d. each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at

Mr. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S. Price List on application.

Hothouses, Conservatories, &c.

H. FREEMAN'S HORTICULTURAL WORKS, Triangle, Hackney, N.E., established upwards of 20 years. Good substantially made GREENHOUSES, glazed ready for fixing, 42 feet by 13 feet, 50*l.*; 21 feet by 13 feet, 28*l.*; 12½ feet by 10 feet, 15*l.*

A large assortment kept. Estimates given for any branch in Wood or Iron.

West of England, Ireland, and Wales.

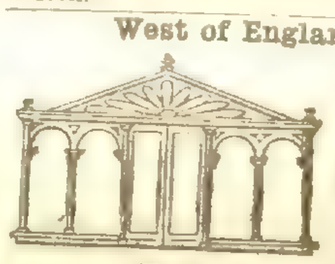

VINCENT SKINNER (*late Partner with* J. WEEKS & Co.), HORTICULTURAL BUILDER and HOT-WATER APPARATUS MANUFACTURER, HEATING on the ONE-BOILER SYSTEM. Plans and Estimates on application.

VINCENT SKINNER, Bridewell Street, Bristol.

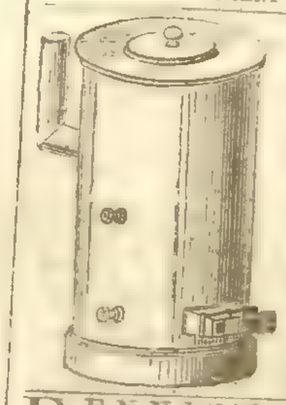

RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the Patentee's Warehouse, 165, Cheapside, London, E.C.

Price complete from 3*l.* 10*s.*

Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water-tight Roof insured.

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

For Prospectus, &c., address T. H. P. DENNIS, Horticultural Builder, Hot-Water Engineer, &c., High Street, Chelmsford, Essex.

HEATING by HOT WATER.—Public and Private Buildings, Manufactories, Conservatories, &c., heated on the most improved system, combined with perfect Ventilation. Baths fitted upon economical principles connected with Kitchen Ranges, ready for use night or day without extra fire. Success in all cases guaranteed. Estimates free. References to hundreds of the Nobility & Seats, Botanical Societies, Public Buildings, Banks, Manufactories, &c.

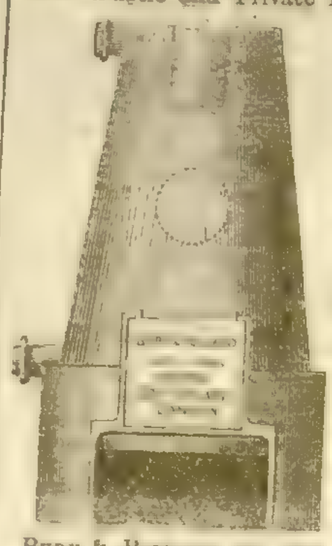

BURY AND POLLARD

(Successors to John R. Peill),

Sole Manufacturers of the Improved CONICAL BOILERS which require NO BRICKWORK, and which Boilers have for their durability and economy attained a celebrity far surpassing any other Boilers ever invented.

Park Iron Works, 17, New Park Street, Southwark, London, S.E.

N.B. Patent WINDMILLS for Pumping and Driving Farm Machinery, from half Horse Power upwards. To be seen daily at work as above.

BURY & POLLARD are now making a powerful Windmill for the India Board, with Pumps for Cotton Irrigation.

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.

F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.

Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

ALSO TESSELATED PAVEMENTS of more enriched designs than the above.

WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.

To be obtained of F. & G. ROSHER, at their Premises as above.

Orders forwarded by Railway with despatch.

SILVER SAND (Best Quality), of F. & G. ROSHER, at the addresses above—14*s.* per Ton, or 1*s.* 3*d.* per Bushel. 2*s.* per ton extra for delivery within three miles, and to any London Railway or Wharf. Quantities of 4 Tons, 1*s.* per Ton less.

GARDEN FLINTS for Grotto Work, 12*s.* and 14*s.* per Ton.

TAN GRATIS.—In the immediate neighbourhood of Covent Garden Market.
ESSEX & SONS, 28, Stanhope Street, Clare Market.

PEAT SOILS, various excellent kinds, on SALE by the Truck Load at moderate prices.
W. SHORT, Sand and Peat Depôt, Reigate, Surrey.

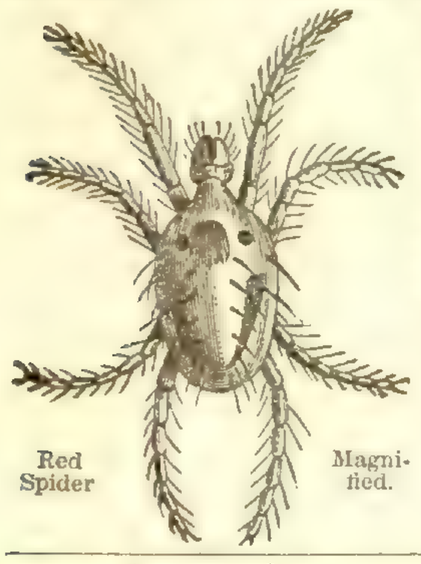

Red Spider — Magnified.

GISHURST COMPOUND, whether used against Insects and Mildew, on Growing Plants, or as Winter Dressing on Trees at rest, should be dissolved 48 hours before use. This gets rid of smell, and if the Solution be decanted, prevents any staining of foliage. A strength of from 1 to 2 oz. to the gallon of water is recommended for growing Plants; one from 4 to 16 oz. for Trees at rest.

Sold Retail by Nurserymen and Seedsmen, in boxes, 1s., 3s., and 10s. 6d. each.

Wholesale by
PRICE'S PATENT CANDLE COMPANY
(LIMITED).

COCOA-NUT REFUSE delivered within 2½ miles of Charing Cross, at 2s. per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. BARSHAM & Co.

BARSHAM'S BRUSHES and MATS are sold in every town.

CAUTION.—Every Brush is stamped, J. BARSHAM'S Patent.

A MAGNIFICENT FIELD OF
Pure White Canadian Seed Oats in full Ear, and 3½ feet high, June 11, 1864, at

MR. HALLETT'S MANOR FARM, BRIGHTON (within 200 yards of St. Mark's Church, Kemp Town), is now OPEN to INSPECTION. This Field adjoins the Lodge (at the entrance gates of the Manor House), where a sample of the Oats sown may be seen upon presenting Card with Address.

These Oats were raised from a very fine sample in 1862, which was hand-picked 27 times, and weighed 48 lb. the imperial bushel. They were drilled (3 bushels per acre), on the 24th February, 1863, cut July 20, and yielded on a very thin poor soil upwards of 80 bushels of Oats, and 185 trusses (36 lb.) of most excellent feeding straw per acre; while the ordinary Black Tartarian Oat, on the other part of the same field, ripened a fortnight later, yielded of grain a less crop, weighing 25 per cent. less per bushel, and of straw 120 trusses per acre.

The Canadian Oats were again hand-picked, to ensure *perfect* purity, and drilled on the above field February 17 of this year. Upon the same field, 1863:—

	Kernel.	Husk.	
Canadians	69.43	30.57	per cent.
Tartarians	70.79	29.21	per cent.

DILLISTONE AND CO., Sturmer and Woodlands Nurseries, near Halstead, and only one mile from the Haverhill Junction of the Great Eastern and Colne Valley Railway, beg to offer 12 distinct and most beautiful HARDY CLIMBERS, all well-established, from 18 inches to 3 feet high, for 9s. They consist of the finest CLIMBING ROSES, JASMINES, PASSION FLOWERS, HONEYSUCKLES (in some rare kinds), CLEMATIS and IVIES (a most beautiful collection), &c., &c. Post Office Orders must accompany the order from strangers.

A CATALOGUE for one stamp is now in the press, of New and Rare Plants of 1864, at reduced charges. We possess all the greatest novelties.

A CATALOGUE of GENERAL STOCK and a WHOLESALE CATALOGUE of STOCK, each for one stamp.

NEW HARDY CLIMBING PLANTS.

CLEMATIS JACKMANNI, First-class Certificate,
CLEMATIS RUBRO-VIOLACEA, First-class Certificate,
Awarded by the Royal Horticultural Society, August 4, 1863.

The following is the Report of the Floral Committee:—

"CLEMATIS JACKMANNI.—This was one of a batch of Seedlings raised by Messrs. JACKMAN, the result of a cross between C. lanuginosa and C. Hendersoni and atro-rubens, the first being the female parent. They were lovely, hardy climbers, with large flowers, which, in the present variety, were of a deep bright violet, and consisted of a variable number of from four to six sepals. It was considered quite an acquisition. The plants flower from July onwards to the autumn."

"CLEMATIS RUBRO-VIOLACEA.—This was from the same batch of Seedlings as the foregoing, and differed chiefly in its intense maroon shaded, reddish violet flowers, which were remarkable for the rich velvety appearance of the surface."

The following is an Extract from the *Gardeners' Chronicle* Newspaper, Nov. 21, 1863:—

"The recollection of some hardy hybrid forms of Clematis shown at South Kensington during the past summer has served us as a reminder that, amongst hardy Climbers, the Clematis already occupies a very high position. Cut flowers of two of them exhibited on the occasion referred to (August 4, 1863), obtained each a unanimous Award of a First-class Certificate, and well they deserved it, for certainly nothing in their way could be more beautiful.

"We transcribe from our notes some particulars of these two varieties, which were named respectively C. Jackmanni and C. rubro-violacea, and which will be found well worthy introducing wherever hardy flowering climbers are cared for. C. Jackmanni had the leaves ovate, of moderate size (that is, rather over 2 inches long, as well as their stalks slightly hairy. The flowers were spread open 4, or sometimes 5 inches across, with from four to six sepals of a roundish, obovate form, terminating in a little point; these sepals were downy on the lower surface, and of an intense violet purple on the upper, the colour being remarkable for its rich velvet-like appearance; at the back, near the centre of each sepal, were three ribs, extending from the base to the apex, these being represented by three channels on the upper surface, which was rugose and veiny.

"C. rubro-violacea differed in having its leaves smooth, and its flowers a trifle smaller, and of a rich, reddish-tinted violet, almost a maroon when fresh opened, but assuming the violet tint as they became older, though always retaining a reddish hue as compared with the former. The sepals were here, if possible, even more remarkable for their lustrous velvety surface.

"These seedlings were bred from lanuginosa, the female plant, crossed with the two very distinct sorts already mentioned. We have seldom seen anything more beautiful, the lustrous richness of the colours very much enhancing their beauty."

The *Gardeners' Chronicle*, January 9, 1864, on Meritorious Novelties in New Plants, mentions—

"C. Jackmanni, an English hybrid, with flowers of the richest velvety purple—decidedly front-rank plants."

"The Journal of Horticulture," August 11, 1863, remarks:—

"C. Jackmanni, a beautiful broad-petalled violet flower. C. rubro-violacea, a finely-formed reddish violet-coloured flower, very distinct. Both these varieties will prove a great acquisition to our list of hardy climbers."

GEORGE JACKMAN & SON, Woking Nursery, Surrey, have much pleasure in offering to the public for the first time these beautiful seedling Clematis; and they consider it is quite unnecessary for them to comment further on their sterling merits, after the above conclusive and high testimonials of their excellence and beauty. Orders will now be taken, and the plants will be sent out strictly in rotation in the month of October.

Plants, 15s. each. | Plants, extra strong, 21s. each.
The usual allowance to the Trade.
Two Coloured Drawings may be had post free for 24 Stamps.

For Present Sowing.

SUTTON'S IMPROVED ITALIAN RYE-GRASS, 6s. per bushel, or cheaper in large quantities.

This is the best season for sowing Italian Rye-grass to ensure Sheep Feed very early in the spring.

TRIFOLIUM INCARNATUM (Early Crimson), 5d. per lb., or cheaper in large quantities.

☞ A Mixture of the above will be found very useful for mending Clover and Grass Seed sown for mowing next spring.

MUSTARD SEED for Sheep Feed in October and November, or for Green Manure.

RAPE.—New Seed at reduced price.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

THE BEST SORTS of CABBAGE SEEDS, in packets, 6d. each sort, Post Free, sufficient to raise a thousand plants of each.

SUTTON'S IMPERIAL
EARLY BLENHEIM
SUTTON'S DWARF COMBE

NONPAREIL, EARLY YORK, ENFIELD MARKET, WHEELER'S IMPERIAL, and other old sorts, 3d. per pckt; DRUMHEAD CATTLE CABBAGE, 2s. 6d. per lb.

SUTTON & SONS,
Royal Berkshire Seed Establishment,
Reading.

CALANDRINIA UMBELLATA.—We have now a bed of this charming plant, about 60 feet long, in FULL BLOOM; and feel assured that in its own colour (pure magenta crimson) it has no rival in cultivation. Thus grown, it forms in the full sunshine a glowing mass of dazzling brilliancy that is almost painful to the eyes to look upon!

The entire bed stood unprotected during the whole of the late long and trying winter.

Fine Flowering Plants in pots, 25s. per 100, 4s. per dozen, 6d. each.

JAS. BACKHOUSE & SON, York Nurseries.

CARTER'S FARMER'S VADE-MECUM.

Choice Seeds for Present Sowing.

ROBERT PARKER begs to offer the following, all of which are warranted new and the finest possible quality of their several kinds:

	Per packet—s.	d.
CALCEOLARIA, Herbaceous, mixed	2	6
CINERARIA, from named varieties, mixed	2	6
STOCK, Scarlet Intermediate	0	6
„ White, ditto	0	6
„ Giant Scarlet, ditto	1	0
„ White, ditto	1	0
PRIMULA SINENSIS FIMBRIATA, mixed	2	6

A PRICED and DESCRIPTIVE CATALOGUE of SEEDS and PLANTS is published and will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.

The Stock having been purchased by JOHN STANDISH, strong Plants will be sent out in the first week of June, price 15s. to 31s. 6d. each.

Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.

Royal Nurseries, Ascot, Berks.

Vine Duchess of Buccleuch.

ROBERT PARKER begs to announce that he has arranged for the distribution of the stock of this very distinct and valuable EARLY WHITE GRAPE, and that the plants will be sent out early in autumn. Full particulars as to its qualities will be given in future advertisements. In the meantime, and during the whole of the season, visitors to the Gardens of Dalkeith Palace will have opportunities of seeing and judging of its merits, as a large quantity of pot and permanent Vines are now fruiting at that establishment.

Strong Planting Canes, 21s. each; Extra strong Fruiting Canes, 42s. each. Orders are now being booked, and will be executed in strict rotation.

Exotic Nursery, Tooting, Surrey, S.

NEW PLANT CATALOGUE.

JAMES VEITCH,

ROYAL EXOTIC NURSERY, CHELSEA, S.W.,

Begs to announce that his CATALOGUE of NEW and BEAUTIFUL PLANTS for the present Season is now ready, and will be forwarded Post Free on application.

It contains full descriptions of the following CHOICE SELECTION, all of which can be confidently recommended as being of sterling merit, and desirable acquisitions in their respective classes:—

ANTHURIUM SCHERTZERIANUM (Schott).
AZALEA (INDICA) STELLA.
AZALEA (INDICA) VESUVIUS.
AZALEA (INDICA) COMET.
BERBERIDOPSIS CORALLINA.
BLECHNUM NITIDUM CONTRACTUM.
BOMAREA MULTIFLORA.
CAMELLIA JAPONICA VARIEGATA.
CAMELLIA SASANQUA VARIEGATA.
CEANOTHUS VEITCHIANUS (Hooker).
CYPRIPEDIUM PEARCII.
DRACÆNA COOPERII.
DRACÆNA LIMBATA.
DRACÆNA ROBUSTA.
ERANTHEMUM COOPERII (Hooker).
ERANTHEMUM TUBERCULATUM.
ERANTHEMUM SANGUINOLENTUM.
GYMNOGRAMMA (DICTYOGRAMMA) JAPONICA.
GYMNOGRAMMA PEARCII (Moore).
LEPTOPTERIS (TODEA) SUPERBA (Moore).
MARANTA STRIATA.
PANCRATIUM ZEYLANICUM.
PLANERA ACUMINATA (Lindley).
PRUMNOPITYS ELEGANS (Philippi).
PTERIS SERRULATA CRISTATA.
RETINOSPORA SQUARROSA, TRUE (Siebold).

ROYAL EXOTIC NURSERY.—July, 1864.

PRIZE MEDAL FOR SEEDS AND CEREALS.

ESTABLISHED 1800.

WILLIAM MORTON,

OLD MARKET PLACE, RIPON, YORKSHIRE,

Is now supplying his YELLOW BOY GREEN-TOPPED SWEDE TURNIP, grown from selected large Bulbs of the Hardy Green-topped Swede, at 9d. per lb.; and his large FOSTERTON HYBRID, 8d. per lb. NEW TURNIP SEEDS (Various), BROAD-LEAVED and LONG-STALKED RAPE SEEDS, WHITE MUSTARD, WURZEL SEEDS.

MIXTURES of GRASS SEEDS for Permanent Pasture, suitable to the various soils; ENGLISH and DUTCH CLOVERS, ARTIFICIAL GRASSES, LAWN GRASS, RYE-GRASSES, &c. Circulars (Third Edition) free by Post.

RIPON and CLARO SEED ESTABLISHMENT, RIPON, YORKSHIRE.

NEW GRAPE, ROYAL VINEYARD.

TO BE SENT OUT IN SEPTEMBER NEXT.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Feels great pleasure in being able to introduce this important acquisition. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years.

B. S. W., to meet an extensive demand, has prepared a large Stock, which will be in excellent condition, and ready for distribution in September. Early orders are respectfully solicited. A List of those who have favoured him with orders will be published shortly.

PRICES:

Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

Dr. HOGG'S *Report on the Royal Vineyard Grape:*

"Bunches hard and well set, sometimes long and tapering, and sometimes short ovate. Berries large and roundish ovate, skin white and somewhat transparent, showing the texture of the flesh through it, remarkably thin, and adhering closely to the flesh; so thin is it, that the whole berry may be eaten without any inconvenience being caused by the skin. Flesh firm and crackling, with a fine Sweet-water flavour. This is a fine looking Grape, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society."

For the opinions of the Horticultural Press, see *Gardeners' Chronicle*, April 9.

A correct COLOURED ILLUSTRATION by ANDREWS will be sent in exchange for 12 Postage Stamps.

Permanent Grass Seeds
FOR ALL SOILS.

SUTTON AND SONS can supply good fresh SEEDS for immediate Sowing as under:—

PERMANENT GRASS SEEDS
For Laying down New Pastures (including CLOVERS in full quantities), 30*s.* per Acre.

PERMANENT GRASS SEEDS
For Mending New Pastures, which may have been injured by the Corn crop, 12*s.* per bush.

Royal Berkshire Seed Establishment, Reading.

Seeds Worth Growing.

DOBSON'S PRIZE CALCEOLARIA SEED is unequalled in the kingdom. In sealed packets, 1*s.* 6*d.*, 2*s.* 6*d.*, 3*s.* 6*d.*, and 5*s.* each.

DOBSON'S PRIZE CINERARIA SEED.—Ten First Prizes awarded to our Collection in the Spring, 1862. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*

DOBSON'S PRIZE PRIMULA SINENSIS SEED, Superbly Fringed. In sealed packets, 1*s.*, 2*s.* 6*d.*, and 5*s.*
J. DOBSON & SONS, Seedsmen, Isleworth, W.

ROBERT PARKER begs to offer the following, all of which are well-grown, clean, and healthy plants:—

AZALEA INDICA, Stocks for Grafting	per 100	20*s.*	0*d.*
ALOCASIA METALLICA	each	7	6
CLERODENDRON BALFOURII	„	10	6
RHODODENDRON COUNTESS of HADDINGTON ..	„	21	0
„ JAVANICUM	„	2	6
„ NUTTALI	„	2	6
TRITOMA GRANDIS	„	5	0
„ UVARIA GLAUCESCENS	„	1	6

Intending purchasers are invited to inspect the general stock of Plants. DESCRIPTIVE and PRICED CATALOGUES of SEEDS and PLANTS are published, which will be forwarded to applicants.
Exotic Nursery, Tooting, Surrey, S.

Choice Flower Seeds for Present Sowing.

F. AND A. SMITH beg to offer the following saved from their CHOICE and SUPERIOR COLLECTIONS, and can warrant them genuine and of the finest quality.

	Per pckt.,				
CALCEOLARIA, from selected flowers	1*s.*	0*d.*	..	2*s.*	6*d.*
CINERARIA, from selected flowers	1	0	..	2	6
GERANIUM, Show and Fancy	1	6	..	2	6
GERANIUM, Zonale	1	0	..	..	
GLOXINIA, extra fine	2	6	..	..	
MIMULUS, choice hybrid	..		..	0	6
PANSY, from show flowers	1	0	..	2	6
PANSY, from fancy flowers	1	0	..	2	6
POLYANTHUS, extra fine	1	0	..	..	
PRIMULA SINENSIS FIMBRIATA	1	0	..	2	6
STOCK, INTERMEDIATE, Scarlet and Purple ..	1	0	..	2	6

The Nurseries, Dulwich, Surrey, S.

CARTER'S GARDENER'S VADE-MECUM.

BURTON-UPON-TRENT FLORAL and HORTICULTURAL SOCIETY.

The SECOND EXHIBITION of the above Society will take place on WEDNESDAY, August 24 The First-class and Extra Prizes will be open to all England.

EXTRA PRIZES.

	First.	Second.	Third.
Collection of Roses (24-kinds, 3 trusses of each*)	£3 0 0	£1 10 0	£0 15 0
Ditto Dahlias (24 varieties)	1 10 0	0 15 0	0 7 6
Ditto Fancy ditto (24 varieties)	1 10 0	0 15 0	0 7 6
Ditto Hollyhocks (12 varieties) shown in spikes	2 0 0	1 0 0	

* A truss of Roses is to consist of one shoot cut from the wood of the current year's growth. Any addition to the original truss will disqualify. In cases where Roses bloom singly—that is, without surrounding buds, a single Rose may be shown, and will be accounted as a truss.
Exhibitors for the Extra Prizes will not be allowed to compete for similar subjects in the other class.
Non-Members subject to an entrance fee of 10*s.*
Schedules and other information may be obtained on application to the SECRETARY, 81, High Street, Burton-on-Trent.

RUGBY HORTICULTURAL and COTTAGE GARDENERS' SOCIETY.
President, The Rev. Dr. TEMPLE.

The ANNUAL SHOW of the above Society (open to all England), will be held at Rugby on TUESDAY, August 30.
Upwards of 120 Prizes in Class 5 will be offered for Plants, Fruits, Cut Flowers, Vegetables, &c., including a Silver Cup of the value of Six Guineas, with Second and Third Prizes of Three Guineas and One Guinea, for the best Collection of 8 Stove or Greenhouse Plants in Flower.
Entries to be made on or before the 23d August next. Schedules of Prizes and further particulars may be obtained on application to
JOHN S. SAVAGE, WM. MASON, } Hon. Secs.
Rugby, July 30.

ROYAL HORTICULTURAL SOCIETY.
SOUTH KENSINGTON.
AUGUST SHOW.

1. A Show limited to new, extremely rare, or very beautiful Plants will be held in the Conservatory on WEDNESDAY, August 24, and will remain open until Monday Evening, August 29.
2. The object of the Council in inaugurating this Show is to Exhibit to the Fellows and the public the number of new, rare, and beautiful Plants brought before the Floral Committee during the last three years.
3. Exhibitors must state the price at which they are prepared to sell the specimens exhibited or other specimens of the same kind.
4. Purchases will be made by the Council to be distributed by Ballot or otherwise among the Fellows at a suitable period.
5. All plants must be delivered before 8 o'Clock on the morning of the Show.
6. For further information and schedules apply to Mr. EYLES, Royal Horticultural Society's Gardens, South Kensington.

The Gardeners' Chronicle.

SATURDAY, JULY 30, 1864.

BY the kindness of Monsieur NAUDIN and other friends we have under cultivation all the six species of CUCURBITA, which he has characterised in the 4th series of Annales des Sciences Naturelles, and several varieties of the more common species. Cucurbita perennis has a perennial tuberiform root, and if capable of being impregnated by either C. maxima or C. Pepo might afford a useful article of cultivation. In its present condition, with the habit of not flowering till the second year, it is a mere object of curiosity, especially as its fruit will not set without artificial impregnation. C. digitata has quite a different habit from the rest, and should it prove hardy would make an elegant covering for trellises.

It is not however to these rare species that we are indebted for the observations contained in the present article.

Amongst other varieties M. NAUDIN sent seeds of a variety of C. Pepo, under the name of C. oviformis, which has the remarkable habit of forming fruit on the tendrils. The cold nights have not proved favourable to it, and we were afraid that we should have no opportunity of examining this curious matter. A variety, however, of the same species known under the name of Courge de Touraine, a variety with enormous seeds surrounded by a thick welt, has given us occasion to satisfy our curiosity.

Our attention was first drawn to the plant by the fact that the tendrils, whether simple or divided, had a tendency to form a leafy lamina. We had previously seen a tendril represented by a small though perfect leaf in a variety of Cucurbita moschata, known as the Portmanteau Gourd, or Pleine Courge de Naples, which perfected its fruit in our garden in the ungenial summer of 1861, though the varieties of this species are in general impatient of our climate, a circumstance the more to be regretted as they greatly surpass in excellence every form of C. maxima (not excepting its variety C. ovifera) and C. Pepo.

Now authorities have differed much as to the nature of these tendrils. The BRAVAIS thought that they were accessory buds, GASPARRINI and others believed that they were leaves or stipules, but PAYEN, entering deeply into the distribution of the bundles of vessels which usually pass into the foot-stalk of a leaf, showed that whereas three in general concur in this purpose, in Cucurbits two only go into the footstalk, while the third goes at the right or left hand into the tendril, thus showing that it is really a separate portion of the leaf itself. In a few instances a left-hand tendril is formed, as well as one at the right hand, and then one bundle only goes into the leaf.

PAYEN'S observations were made on the Melon, but we find them completely confirmed in the variety of C. Pepo, known as Coucourzelle—in our opinion the best of all Vegetable Marrows—and in other varieties which we have studied. We observe, moreover, that the bundle which enters into the tendril uniformly branches at the point of entrance, and thus forms the outer of the two bundles, whether to the right hand or left, which enter into the footstalk of the leaf next in order of the whorl.*

It is to be observed that the tendril is in some varieties at the right, in others at the left of the leaf. In some forms of C. maxima this difference seems to be constant to the variety, but though in the Coucourzelle we find it to the left, and in the Touraine mostly to the right, we find on one plant of the latter that the tendril in one branch is constantly to the right, and in another as constantly to the left, differences which, in addition to the instances in other Cucurbits where two tendrils are produced, of which we have seen no instance in the culinary Gourds, seem very strongly to confirm the views of PAYEN.†

In the Touraine Gourd just mentioned a flower is formed at the point where the tendril branches, and it is clear that this arises from the stalk of the flower being soldered to the base of the tendril. The two are quite distinct in colour and appearance. But this is not all. Sometimes a second flower is formed at the next division of the tendril, and we conceive that this also must arise from a ramification of the plant proceeding from the axil of the leaf being soldered to the tendril at the same time with the flower. In this case every division of the tendril bears a leafy lamina. In one case indeed we have seen a distinct shoot rising from behind the flower.

This view of the coalition of flower branch and tendril is confirmed beyond doubt by a plant of the Portmanteau Gourd, in which a strong branch is perfectly confluent below with an ill developed tendril, the two being perfectly defined and distinct from each other.

Such coalitions not unfrequently take place between the stalks of the flowers, and we have thus occasionally perfect flowers with twice the number of parts.

Some question has arisen as to the nature of the floral envelopes. A case was figured in this Journal (1858, p. 685), in which there were five permanent leaves in room of the small divisions usually considered as sepals at the top of the Custard Vegetable Marrow. It is not uncommon, however, for these to become quite foliaceous. In C. moschata they are always more or less so, and in a plant of the Portmanteau Gourd in our garden they form five distinct broadly expanded leaves. In C. Pepo var. Coucourzelle they are generally more or less pinnate, though in most varieties almost setaceous. In a variety of C. maxima from Vienna, under the name of Kiachta, they are apt to be transformed into expansions exactly similar to the yellow corolla. A blossom is now expanded on a Touraine Gourd in which the divisions of the corolla are more or less distinct, and where most deeply divided inclined to be pinnated, while they are far greener than usual, and in this case, as in several others, one or more of the stamens are transformed into distinct petals. Where there is no appearance of two flower stalks being soldered together, the number of divisions of the sepals and petals varies very much. On the whole we are inclined to regard the bell-shaped flower as corolla rather than calyx, though it really seems of little consequence whether the outer appendages are considered as bracts or sepals.

We have still a curious case to mention: a seedling of the Touraine Gourd came up with very crumpled cotyledons, which were held together for a long time by the shell. There was not the slightest appearance of any plumule, nor has any been developed. An attempt, however, was made in this direction by strong roots being thrown out from the edge of the seed leaves, and we fully expected that a bud would be formed there. The weather has, however, been so dry, and the nights so cold, that in spite of every care no further growth has been made.

All attempts have failed under M. NAUDIN'S experiments to produce hybrids between the four well-known species C. maxima, Pepo, moschata, and melasperma. The variety Coucourzelle however has the more or less pinnated sepals and spotted leaves of C. moschata, and we have sometimes fancied that on these accounts, as well as from its peculiar excellence, it might possibly be a hybrid. The plants themselves vary greatly in habit, some throwing out long runners, others resembling the Bush Squash, and enormously productive on a congenial soil, where the roots can run deep in search of constant moisture. *M. J. B.*

* Compare Stocks in Annals of Nat. Hist. xviii., p. 110.

† Amongst other instances we may observe that in C. maxima it is to the right in the varieties Valparaiso, minima, Chypre, and Ohio; to the left in ovifera. That in C. Pepo it is to the right in Coucourzelle and mostly in Touraine; to the left in the Brazil Sugar Gourd and Asparagus Pumpkin, but in some plants of the former to the right; and, finally, that in C. moschata it is to the left in the Portmanteau Gourd, and a small early and hardy variety sent by M. NAUDIN.

IN an article drawing attention to a HARDY PALM which has been growing in the open air for many years at Osborne House in the Isle of Wight, and at Kew, we promised (p. 675) to offer some observations on its cultivation. We shall now endeavour to fulfil the promise then made, in the hope that our remarks will prove useful to those who would like to have a Palm tree growing on their lawns or in their pleasure grounds.

The Chusan Palm is able to bear any amount of cold which we are likely to experience in the southern parts of England, and it may even withstand our winters in the more northern parts of the kingdom and in Ireland. It requires, however, a higher summer temperature than we usually have in this country to enable it to grow with that rapidity which it does when at home. In its own country the summers are much warmer than our English summers are. From some tables of temperature in our possession it appears that in the course of the months of July and August, which are the hottest in the year, the thermometer stands not unfrequently at 100 Fahr. in the shade, and sometimes even a few degrees higher. The heat during these months is almost insupportable to Europeans, who rarely venture out of doors without some protection from the sun's rays. The springs too are early, and the season altogether is longer and finer than it is with us. It is the early spring, warm summer, and sunny autumn which enables the Chusan Palm to grow rapidly in its native country.

The heat of an English summer is therefore scarcely great enough for the Chusan Palm when treated entirely as a hardy plant. Hence if we put a small plant of it out in the open ground it grows very slowly, and many years must elapse before it attains sufficient size to become an attractive object in the garden. This is, probably, the reason why the plant is so seldom seen on our English lawns. But it is one of those difficulties which are easily overcome when the cause of the slowness of growth is explained and understood. Our plant, then, is one of those which will grow

fast enough if we can give it by artificial means a long season and a high summer temperature, such as it has in the country to which it is indigenous This can easily be done by cultivating it in a warm greenhouse for a few years, say four or five, until it becomes large enough to produce an effect when planted out upon the lawn. The spring of the year is the best time to plant it out, as it then has the summer and autumn before it to enable it to accustom itself to its new quarters. It will go on growing, although not so rapidly as before, and its appearance will well repay the care which has been expended upon it.

There is one matter connected with this mode of management which ought to be carefully attended to. The roots must not be allowed to become matted and twisted in small pots, as is frequently the case with pot plants, and these roots should be carefully spread out when the plant is planted in the open ground. The growing of specimen plants in pots, and allowing the roots to become matted together and twisted like a corkscrew before they are planted out, is fatal to many of our finest things, more particularly to our new introductions. The roots get a spiral inclination, which they cannot shake off; they do not spread themselves out to take a firm hold of the earth, and the first gale of wind tears them out of the ground. As a general rule, we advise all persons to avoid planting these specimen plants. We only recommend the Palm tree in question to be cultivated as a pot plant, for a time, owing to its requirements in so far as summer heat is concerned, and for the objects we have explained. But it is easy to adopt this mode of culture, and at the same time avoid the matted roots and corkscrew system to which we have alluded. It is probable that in some favourable localities, such as Devonshire and Cornwall, for example, the greenhouse cultivation which we have recommended may not be necessary. We shall be glad to have the experience of any of our readers in that portion of the kingdom, or indeed from any other part where this Palm is growing in the open air.

The Chusan Palm may also be made to form an attractive object in a conservatory. With the hardier kinds of Tree Ferns, the handsome Dracæna lately introduced to our gardens by Messrs. LEE, of Hammersmith, and many other plants remarkable for their tropical-looking foliage, together with this Palm, a grand and imposing effect would be produced. With these might be mixed Camellias, Acacias, and other nearly hardy spring-flowering plants, and in this way a winter garden of great interest would be formed. Plants of the kind recommended are of easy cultivation, they are not liable to be injured, and are consequently just the things for public gardens in large towns.

IT is admitted that the French excél in the culture of ASPARAGUS, both in the open air and in forcing. But, like the English, they consider that it takes four years before a plantation can generally be in proper condition for cutting. This is a long time to have little or no return from the ground; and if the period by any mode of cultivation could be considerably shortened, say by one year, such a mode would deserve attention, and ought to be made known. Such a saving of time has been effected by JEAN-BAPTISTE CARBOU, who details his mode of proceeding in the *Revue Horticole*. He alludes to what is stated by M. CARRIÈRE, that Asparagus takes four years before it produces shoots proper for cutting under the most favourable circumstances. But by his own mode he has obtained in the second year shoots measuring from 2½ to 2¾ inches in circumference, a size which, it will be admitted, is quite large enough for use.

His mode of proceeding is this:—He selects the seeds from the best-grown stems, and takes only the finest berries on these stems. In March the seeds are sown on a border made up with vegetable mould mixed with one-third of decomposed hot-bed manure, and covered with the same mixture. After the plants are up they are thinned by removing all that have a weakly appearance; fifteen or twenty days later the plants are thinned a second time, and somewhat later they are thinned for the third and last time, always removing the weakest plants, and so contriving that finally they shall stand from 4 to 5 inches apart.

It is of the utmost importance, says M. CARBOU, that the greatest care possible should be given to the Asparagus seedlings, in order that they may be fit for planting out after the first year, that is to say when they are one year old, because at this period the roots, being rather short, are in less danger of having their spongioles bruised or broken off in the course of taking up.

In March, the ground having been previously prepared, trenches 2 ft. 3 in. to 2 ft. 7 in. wide, and 15 or 16 in. deep, are dug out; and with the soil in the bottom of the trenches a layer of from 8 to 10 in. thick of half-rotted dung is mixed; on this mixture the crowns are placed at a foot apart, and 9 or 10 in. from the sides of the trench; this admits of two rows in each trench. The crowns are covered with between 3 and 4 inches thick of a mixture similar to that in which the seeds were sown; and when the Asparagus has pushed a little, but before it appears above ground, the vegetable mould is covered with an inch or two of common soil.

Before planting, the roots are carefully inspected in order to make sure that none of them are rotten or decayed, and if any such are found they are invariably rejected, as are likewise those that have too many eyes or buds, which would only produce a crowd of weak shoots. Those only are planted which have their buds full and plump.

In the November after planting, and after having cut the stems nearly to the ground, the crowns are bared and then covered with a new layer of the mixture above mentioned (vegetable mould and rotten dung). By these means, and by attending to the growth of the stems during the summer season, the most satisfactory results are obtained. In the third year stems are often seen from 3 to 3½ inches in circumference.

M. CARBOU'S success mainly depends on the care which he takes in rearing the seedling plants, and especially by thinning out the weakest so as to give the stronger a better chance of becoming vigorous sets before they are planted out when one-year-old, instead of allowing the seedlings to crowd, draw up, and starve each other. They are also kept clear of weeds at all times, and this is easily done by means of salt, which may be applied for that purpose any time during the growing season; for whilst it will kill almost every kind of weed, it will promote the growth of the Asparagus. ||

—— THOUGH the season has not been so remarkable as some which have preceded it for the production of novelties amongst exhibition PELARGONIUMS in their various classes, there have nevertheless been a few new varieties of remarkable beauty brought before the admirers of this flower, to some of which it is our present object to invite attention. In doing this we must not omit to mention Mr. HOYLE'S *Diadem*, the crowning beauty of the season of 1863, a spotted, white-centred purple of consummate perfection, and probably at this moment the premier Pelargonium existing in our gardens. It is interesting to learn, as we do learn from the remarks of the raiser, as quoted by Mr. WILSON SAUNDERS in his lecture on this deservedly popular flower, that the production of this variety is the result of 18 years' application, during which period Mr. HOYLE'S skill and forethought has been brought to bear upon successive generations of seedlings.

The leading novelty of 1864, amongst the larger flowered varieties known as Show Pelargoniums, is undoubtedly that called *John Hoyle*, a flower of remarkable quality and richness, very different from, but very little if at all behind Diadem in excellence. It is not only large but well formed, not only well formed but rich, varied, and glowing in colour, the upper part being of a dense velvety maroon, with a narrow, well-defined margin of bright carmine, and the lower a rosy scarlet, freely shaded and veined with maroon crimson. Though not approaching to this flower in smoothness and general excellence, yet for its distinct and cheerful colour—a white-eyed salmony-pink with black-spotted upper petals, we have no doubt that *Mary Hoyle* will be welcomed by the growers, inasmuch as it bears large and very attractive flowers, the only defect of which is a little roughness on the edge. These are the most distinct; but there are other good average flowers of the year, as *Publicola* a carmine crimson, *British Sailor* in the way of Diadem, *Profusion* a rosy carmine, and *Sunny Memories*, an orange scarlet. These are from Mr. HOYLE'S collection, and among the show Pelargoniums he has had the exhibitions very much to himself, though doubtless there may be other good things in different establishments.

What is called the Fancy class has received a few additions, but nothing very strikingly distinct, though some are of good average quality, chiefly remarkable for their sturdy constitution:—Thus, *Ann Page*, *Silver Mantle*, and *Mrs. Dorling* will be found useful amongst the light flowers; and *Edgar*, *The Rover*, and *Blair Athol* amongst the darker ones. We have see no prominent novelties of the spotted class; the most effective was *Peter Barr*, a salmony flesh-colour with large almost black spots, telling as to colour, but wanting in quality.

Mr. BULL had a flower of novel character, which may prove the commencement of a new group likely to be as effective, we think, as that of the spotted-flowered varieties now so plentiful. It was called *Il Bacio*, and was evidently one of the French breed. The flowers were fairly formed, and of a glowing carmine crimson with a white centre and a pencilled bar of deep crimson extending backwards from the middle of the lower petals into the very centre of the flower, crossing the white base. The marking, therefore, so far as it is developed (on the three lower petals) may be said to have been radiate, thus presenting a new feature in this popular family.

—— PINGUICULAS are pretty little botanical curiosities, well worth cultivating by those who delight in the beauties of nature, but yet they are seldom seen in a cultivated state, for being bog plants, it is not often that accommodation for them is to be found in the garden. The *Botanists' Chronicle*, a little penny monthly serial we have mentioned on one or two previous occasions, states on the authority of a North Wales botanist, whose initials, W. P., are readily deciphered, that any of the species of this pretty genus may be easily cultivated by the following method, which he has successfully adopted. The plants are to be collected during their season of rest, any time between November and March, at which period of the year they resemble bulbs, and can be picked off the surface of the bogs and moors in abundance. A saucepan or other vessel is to be filled with finely broken pieces of peat earth, as much water poured in as the peat will absorb, and the bulb-like bodies or hybernacula placed on the surface, not buried, but just steadied on the top, when, if kept supplied with moisture, they will soon strike their fibres down into the soil, spread their leaves upon the surface, and make a beautiful appearance in their season.

—— A Correspondent of the *Botanists' Chronicle* describes a very singular abnormal growth of the WOOD ANEMONE, A. nemorosa. The rhizome of one of these plants was observed to produce a scape, which grew to the height of a couple of inches, and was there attached to and supported what appeared to be another portion of rhizome. This latter part, thus peculiarly situated, was about half an inch long and horizontal; it bore at one extremity a few immature leaves just bursting from the bud, and two scapes about a couple of inches long, each bearing a perfectly-formed flower of a deep purple colour. It is not stated where this curious monstrosity was met with, but one or two habitats have been recorded for a purple-flowered variety of the Wood Anemone.

—— Two very curious seedling sports of the FUCHSIA have been sent to us by Mr. BULL, of Chelsea. The plants were, we understand, raised two or three years ago, and have respectively since that time remained quite constant to the peculiar character they have put on. In one of the forms the calyx with its tube and sepals are developed in the normal condition, but there is no corolla; while the stamens and pistil are present, but unequally developed. In this case, in the place of the petals there are to be found alternating with the sepals nothing beyond four small rudimentary processes. This variety is consequently apetalous, as happens constantly in some of the other species of this family.

In the other form the change is different. There is the usual calyx tube and sepals, and the stamens and pistil are in a normal condition; the petals also are present, and in their proper place, alternating with the sepals, but instead of being flat and together converging to form the usual cup-like corolla, they are each of them rolled up separately in the form of a funnel, which is attached at the angle of the sepals by a stalk-like base. These petals are of the usual violet colour, and the effect of the flowers is altogether very droll. The changes are curious instances of the plasticity, shall we say, to be from time to time found manifesting itself in the vegetable world—manifestations which frequently mock at the fanciful existences we are so ready to dignify with the title of species. In these instances, however, the changes which have been developed do not add to the beauty of the flowers.

—— The species of ISOËTES have been again occupying the attention of Dr. A. BRAUN, who had already published various detached remarks upon this interesting cryptogamic genus. These more recent researches, which have been made known in the *Proceedings of the Berlin Academy*, are founded on specimens collected last summer by Drs. ASCHERSON and REINHARDT in the island of Sardinia, which, with the adjoining islets, is particularly rich in these plants. The division of the Linnean genus into three—*Isoëtes*, *Cephaloceraton*, and *Isoëtella*, which has been proposed by some recent writers, is not adopted by Dr. BRAUN, who instead thereof proposes to group the species under the natural subdivisions of terrestrial, amphibious, and aquatic.

NOTES ON GARDENS.—No. XIV.

BOTANIC GARDEN, OXFORD.

IT was a lovely morning towards the end of June on which I began a ramble through the Oxford Botanic Garden and its appendages, having by my side a flesh-and-blood Hortus Britannicus, that kindly cleared away for me such mystifications as I met with. The garden is the oldest in the British Isles, having been founded through the liberality of "Lord Henry Danvers, Baron

of Dauntsey, in the county of Wilts, and Earl of Danby in Yorkshire," on the 25th of July, 1632, exactly 232 years ago. My guide was Mr. William H. Baxter, son of the author of "Baxter's British Phænogamous Botany," and once the valued assistant of Loudon.

Though the garden is now in charge of Mr. W. H. Baxter, the author of the fine work just mentioned is still active on the scene of his more than half century of labour; and, though long ago retired from the curatorship, he still tends a few favourite British plants, takes loving care of the vast herbarium and library, is fully alive to the charms of a new Fern, and now and then adds a new work to his own library, of which Loudon says, "certainly it is by far the most complete that we have ever seen in the possession of any British botanic gardener," and which now numbers 3000 volumes. How few of man's occupations would not pall from such a length of labour!

If the familiar saying, that a man who plants a tree has not lived in vain, is as true as it is beautiful, then Mr. Baxter, sen., may count that his days have been spent most usefully, for daily does he walk under noble specimens of his own planting. And this reminds one of what fleeting things we are. "Hewers of wood," and for a time "Lords of Creation," we plant the tiny seed which springs into a mighty organism of almost iron strength, and for centuries sheds its leaves over our children's graves. But, why go to a tree to contrast it with man's fugacity,

> "When we think that paper, even a rag like this,
> Survives himself, his tomb, and all that's his?"

The spot at which I took out my note book may not have been the orthodox one for a beginning, but a more interesting one it could not be. It was in a space on the south side of the garden, about 50 feet long by 40 broad, outside of the massive walls which enclose the greater part of the latter in a square. The greater part of the space is taken up by an oval aquarium, in which hardy aquatics are better managed in a small space than I have seen them in any other garden. The water is always kept pure and at one height, by a continual flow. The tank is of brick and cement, and has brick cradles built in it to within a few inches of the surface of the water, in each of which a robust species, such as one of the Typhas, is put; and thus the rambling rampant things are kept very distinct. A step is placed round the inner margin of the tank, on which the smaller species growing in pots may be stood. Orontium aquaticum, a beautiful American water Arad, was doing finely, the pot being plunged rather deep. This however I have never seen in such perfection as at Henfield—also the only place in which I have seen the Canadian Rice flourishing. At Henfield too, Calla palustris was charmingly done in a deep cavity with a muddy bottom, shaded over by trees. I remember having seen single stems of it running 4 and 5 feet straight along the soft mud, with a string of its striking white spathes, and both these and the leaves of twice the usual size. There are muddy banks of ditches in most country places in which this little "Lily of the Nile" would make a pleasing alien. In water I have not seen the plant do well, or the flowers worth looking at. By the by, any one who lives near the Rye House, Broxbourne, and strays into the gardens there at this season, will probably see several thousand plants of a very fine aquatic, Sagittaria latifolia flore-pleno, in flower there. It is a perfectly hardy plant, and when growing in rich mud with a little water, a very stately one.

But to return to our aquarium. Almost every obtainable hardy aquatic was flourishing in it, and amongst them Nuphar pumila, advena, and Kalmiana; Cicuta virosa, rarely seen doing well in botanic gardens; Jussiæa grandiflora, and many others of interest.

This spot is in a line with the grand old entrance gateway, and consequently a view may be had right through the garden, the eye first meeting a pair of massive pillars, beautifully capped and wreathed with foliage and flowers, placed one on each side of the entrance to the main garden. A few steps beyond them are two old Yews, one on each side of the walk, which were planted by the elder Bobart, the first gardener, and for a long time clipped into shape as a pair of giant sentinels. These trees in bygone days were known as the "Yewmen Guard," and were the "subject of much rival wit in the University," several old ballads concerning them being preserved in the Ashmolean Library.

Beyond these the main walk is bordered by trees and shrubs, and half-way towards the entrance there is a circular aquarium, on the right of which a greet Manna Ash carries the eye upward to the tower of Magdalen College, the noblest of Oxford's towers. From many parts of the place this tower is a glorious object, rising apparently from the garden itself, from which it is indeed only divided by the High Street. Turning round, the visitor looks on Merton and Christ Church Colleges, vast and noble piles; while to the right, amongst other buildings, the dome of the Radcliffe Library appears, and then the famous Christ's Church walk, with its fine old trees, almost runs up to the garden.

All the associations that learning, architectural beauty, or hoary age can give, might here take their rise, but there are yet more plants to be talked of from the little stand-point I have selected, as it is here the alpine and many allied plants are arranged, on a series of little brick steps built against the wall of tall shrubs which shelter and almost surround the spot. By being elevated in this way the little plants are of course more easily examined, not to speak of other advantages. Some tiny British plants which cannot be kept long in their "proper places" in the garden, are here allowed to go wild, while in some parts Saxifraga hypnoides grows all round the pots of alpines, keeps them moist, and as a plunging material looks as much more pleasing, as it is more verdant, than coal ashes.

Well, most of the plants on this bench were of great interest, but especially so half a dozen fine pots of Cypripedium spectabile, just past its best, but yet more beautiful even in its decadence than many of the species exhibited at our shows are in their prime. Mr. Williams and others have brought out Orchis foliosa; why not some exhibitor surprise us with a dozen fine plants of this species* in a large pot of moist peat? There were Trilliums in good style, Parnassias in the same; Gaultheria Nummularia, seen for the first time; Mazus Pumilio, a little gem full of flower; Meconopsis aculeata, a fine new plant; the indispensables—Sedums, Saxifragas, and Sempervivums—very abundant; rare British plants, in some cases fresh from their native localities, and among them Dianthus Caryophyllus from Rochester Castle; Helianthemum canum, polifolium, and others; and many choice Alpines which I have alluded to in previous papers, and shall not now repeat their names.

Passing into the wall-enclosed portion of the garden, between the pillars previously alluded to, and turning to the right to go round the garden walls, a border of Carices in single line is seen, but the wall looks so respectable and dignified, and the climbers seem so fond of it, that I must give it a few words. Built of large slabs of cut stone, it is of great thickness and about 12 feet high, having a coved Gothic cornice on each side under an elevated Gothic coping, "and forms," says Loudon, "the noblest garden wall, speaking architecturally, which we have seen in any country." It is in perfect preservation, and likely to remain so for ages. From between the blocks here and there outcrops a rare British plant, which if it could write would certainly leave on record as decided an opinion of its "location" as Loudon has done. It is impossible in this country to have a complete garden without a good wall, and yet some of our new and large establishments are almost completely deficient of such accommodation. Making way to the Fern border, which runs along half the eastern side of the garden, a quantity of Equisetum Telmateia was met with, of great height and beautifully branched. The plant was allowed to run wild at the end of the Fern border, and neither indoors nor out was there a plant more graceful than some well-developed individuals of this wilding!

The hardy Ferns, of which there is a very complete collection, are finely grown in a border along the east wall about 7 feet wide, shaded on the other bank by the British trees and shrubs. Osmunda regalis cristata was very fine, and near it an old and vigorous plant, which has been in the garden for nearly 100 years, of the common Royal Fern, with the American Osmundas and Struthiopteris pennsylvanica, abundant and about 4 feet high. Splendid plants of the curious varieties of Scolopendrium were plentiful; the red form of Athyrium F.-f. plumosum was of large size, while A. F.-f. corymbosum was more than a yard high. Here and there on little stony knolls were excellent specimens of such things as Ceterach; Asplenium fontanum, which here stood the winter of 1861; Cystopteris montana; Asplenium refractum; Cystopteris regia; Aspidium Lonchitis; and Lastrea rigida, a yard in diameter. All lovers of Ferns in Oxford must much enjoy a walk in front of this fine Fern border, the charm of which is by no means lessened by its being shaded over by all our best and rarest British trees and shrubs, of quite unusual size and age. The Glastonbury Thorn and the true Service tree, Sorbus domestica, were particularly fine, the latter an old specimen, 40 feet high.

Peeping into the shade among the British trees, one could see Impatiens Noli-tangere and I. fulva covering the ground—another example of a way they have at Oxford of permitting a thing which will not remain behind a label, and forget the eternal law of Nature—change, to take its own way, and congregate on walls, in the shade, or where it will. A large collection of New Holland and such plants, out for the summer, is passed by; and then the range of buildings (consisting of the Professor's house, herbarium, lecture room, telescope room, library, &c.), which run along the end of the garden on its north side, and give it such dignity and character. Four of the greenhouses are raised against these buildings, and exactly in the centre of the range is the entrance gateway, the finest and most interesting thing of its kind in any British or perhaps any other botanic garden. The first stone was laid in 1632 by the then Vice Chancellor of the University, and the gateway was subsequently completed under the direction of Inigo Jones. On the right and left, as the garden is entered from the High Street, a figure may be seen—one of Charles I., and the other of Charles II., but from this point the vista down the garden to our old standpoint, the Alpine and aquatic oval, is so pretty that these gentlemen receive but little eye-worship.

Just inside this Danby Gateway, to the left, is probably the oldest and finest specimens of the Christ's Thorn in the country; while here and there along the front of the buildings Jaborosa integrifolia, the Wall Rue, Mandrake, and Squirting Cucumber appear gregariously; with Lavatera Olbia, a showy Malvad in one warm corner; Arundo Donax, very fine, in another, and so on, till another turn is made to the left along the west wall, where a fine group of the arborescent Sempervivums, turned out on the walk for the summer, appeared, with a Dasylirion 18 feet across standing amongst them. On the next wall Ephedra monostachya, the Currant Vine, Vitis riparia, and V. Labrusca, Colletias, and Aucuba japonica vera were in good style, with here and there along the border some fine thing in a semi-wild state. For instance, Corydalis lutea cropped out of the wall at intervals, and in other places the wall seemed to grow out of a bank of it. The large globular fruit of the Mandrake lay on the ground; Meconopsis cambrica, full of flower, might be counted by the score; Viola biflora grew along the bottom of the wall; Cardamine impatiens, in shade of bushes; a beautiful large white-flowered Allium, probably A. neapolitanum, appeared about the base of Wistaria, well worth growing as an ornamental plant on warm soils; Dentaria pinnata; Salix lanata, in great vigour; and now and then a plant of Lathyrus Sibthorpii, a highly coloured early flowering hardy Everlasting Pea, which has been grown in the garden for the last 60 years, but is not yet much in cultivation elsewhere. On the walls in various parts may be found Hieracium amplexicaule, Linaria vulgaris var. Peloria, Linaria purpurea, Erigeron acris, and Sedum dasyphyllum, in addition to the plants already mentioned.

Wm. Robinson.

* This used to be done in former days by Mr. Barnes.—Ed.

THE PASSE CRASANNE PEAR.

A well-executed figure of this Pear has been given in a recent Number of *L'Horticulteur Français* (vol. xiv. t. 12), the sample represented being a handsome depressed obovate fruit, the produce of a young tree.

According to the authority just quoted, the Passe-Crasanne is a Pear of a robust vigorous thick-set and freely-branching habit of growth. It succeeds either grafted upon the Quince or upon the free stock, and hitherto its fertility has been all that could be desired. The branches form a very open angle, sometimes even a right angle with the trunk; they are short, and often thorny; the bark is brown speckled with ash-colour, and spotted with numerous creamy-red lenticular markings; the leaves are roundish-oval and saw-toothed; and the flowers, before quite open, are tinted with rose at the back of the petals.

The fruit is large, roundish, and depressed, sometimes angular; its skin is thickish, deep-green, dashed with pale red, and marked with brown patches, taking on a yellowish shade when mature. The stalk is firmly fixed in a deepish cavity; and the eye is somewhat contracted, with but slight indication of the calyx lobes. The flesh is fine and delicate, becoming somewhat less so towards the centre, melting, juicy and sweet, with a slight briskness, and a fine and agreeable aroma. The period of maturity is variable, extending from December till March.

According to M. Baltet, this is one of our most valuable of modern Pears; and it has won for M. Boisbunel fils, of Rouen, a gold medal from the Société Impériale et Centrale d'Horticulture. The tree will, it is said, succeed in all situations favourable to the Pear, doing equally well in warm or cold exposures. The fruit withstands wind perfectly, and last year, though gathered late, was found firmly attached to the branches, notwithstanding the great dryness of the year 1863.

FLOWER SHOWS.

As the lookers on at our floral exhibitions are reasonably supposed to be the parties whose gratification is chiefly sought, it may surely be permitted to them to express their opinion on the important subject of the arrangement of plants and flowers, so as to afford at once the best display to the exhibitor, and the greatest attraction to the beholder.

I speak at present only as a beholder, and if I am compelled to speak as one who has become very weary of the old cone-shaped even surface of colour, and the long rows of these floral pyramids, resembling nothing in nature, it is with the strongest faith that the capability for something better and more in accordance with the principles of true taste, lies really at the foundation of these exhibitions, and will develop itself before long. I believe also that your Journal, always a favourite with me, may be made a channel for disseminating these principles of taste, if writers qualified not only by a natural sense of beauty, but by some artistic skill, will render what service they can to the exhibitor by suggesting what is wanted by the beholder, and so leaving the exhibitor to supply the demand as best he can. If, having done our best in this way as beholders, our requirements should appear fantastic or chimerical, we must both remember that it is often by suggesting an impossibility, that a possibility even more advantageous is brought about.

In order to attain the end desired, it is important to consider what are the elements of beauty, for, after all, beauty is the thing we want; and of these the first undoubtedly are colour and form. Next to these we have to consider harmony and proportion, and always variety. Colour we already have in our floral exhi-

bitions. Colour, indeed! but without harmony, because of the absence of relief; but in form we are most defective, and hence the want of proportion, symmetry, grace, loveliness—all that charms the eye in the aspect of nature.

Let us first consider colour. Those who have studied the subject are aware that each of the primitive colours —red, blue, and yellow—has its natural and harmonious contrast, and that when the sight is confined too long to any one of these, it positively aches for want of the relief afforded by the opposite colour. Take scarlet as an example. Look for some time at scarlet, then turn to green, and this natural want, with its natural relief, is fully realised. Hence the arranging of colours according to their true relations of contrast not only gratifies the eye, according to natural law, but actually enhances the value of each colour so contrasted, bringing it out as it were in its extreme power of beauty; while on the other hand, each colour loses in force and value by being either wrongly contrasted, or placed amongst too much of its own kind, so disposed as to be in any way deprived of its natural and necessary relief. Artists are well aware of the fact of one coloured object being killed, as they call it, by another, and this so easily, that a work of high merit may sometimes be destroyed in effect by the overpowering colour of a very inferior production.

As a large proportion of the flowers exhibited at our shows display more or less of red under its various aspects of scarlet, crimson, or pink, it is evident that no small amount of green must be wanted, not only to relieve the eye, but actually to bring out and set off the red. According to the same rule yellow will require purple, and blue will require orange, all which contrasts can be obtained by certain modifications—as, for instance, in the greens of certain kinds of foliage, which often verge upon purple, and still more frequently upon blue. But in this particular instance the contrast of blue and yellow may generally be obtained by the flowers themselves, so that the green of foliage may be left exclusively for the relief of red.

It is not here, however, so much as in form and variety, that I believe we shall find the great defect of our floral exhibitions. Of form I have already ventured to speak, and especially of that unnatural and ungraceful form, the cone, or pyramid, which appears to be so universally aimed at by exhibitors, and which is so seldom found in Nature, and is so little pleasing where it is found.

It is very difficult to give that consideration to form which the importance of the subject demands, so long as we are necessarily confined to long straight lines for the placing of flowers for exhibition. But suppose we deviate from these lines. Suppose we take a circle or an oval to fill up, and imagine ourselves in possession of some little island, surrounded, instead of water, by mere space.

There is, perhaps, no object in nature more beautiful than a little wooded island towering up in the centre with tall spiral trees, and fringed about the edges with light feathery foliage drooping down, and so shading off the central mass. Within the deep recesses of this embowering green we will suppose little gems of beauty, something for the eye to rest upon with concentrated attention, such as the cottage, the garden, or the village church,—the temple, the alcove, or even the boatman's hut; something there must be to arrest and fix the eye, something to vary the monotony of the green, something to think about, and the more beautiful the better. Without such objects, tastefully disposed, the picture of the island would be dull and tame. But, on the other hand, with such objects alone, and accompanied by no relief, the picture would be artificial, staring, wearisome to look at, and utterly devoid of attraction; and this it would be, quite independently of all individual beauty in the objects themselves.

Now, if some spirited and tasteful exhibitor would just work out this idea for the sake of showing what can be done by contrast, and by harmony and proportion in arrangement, but chiefly by following out some of the natural laws of beauty, it seems to me that a deeper and more intellectual interest would attach to our exhibitions than in their present state they are able to afford. Such an exhibitor might imagine himself constructing a little island of beauty. He could place his tall and perhaps variegated plants in the centre; Ferns would be especially required for bowery and feathery effect; while in and amongst these his flowering plants might be placed, with effects enhanced a hundredfold by relative and surrounding circumstances.

I am not prepared to say how far even Orchids might be placed to advantage up and amongst the overspreading foliage; but I do know by frequent experiment that the drawing of a bare Orchid in its pot bears no comparison as an object of beauty to the drawing of the same Orchid placed amongst foliage, with such surroundings as its natural condition would afford.

It might be difficult, under the present circumstances of our floral exhibitions, to arrange any great number of these objects of interest, which I have compared to little islands of beauty, and still more so to render them commodious for public inspection; but even one attempt at the carrying out of this, or any other idea in advance of the old style, would give interest to our exhibitions for next year; and even from some slight errors in a new course advantage is sometimes derived. It is I believe the idea which is so much wanted in our exhibitions, and, without some leading idea, however well we may work, or even fight, we can never accomplish anything worth attaining—certainly nothing in the way of beauty; and without beauty—genuine beauty—in some way or other embodied, our flower shows can have no lasting charm. There must be something in these exhibitions to keep up the interest they are well worthy of exciting, and to make them repay the visitor for the trouble and expense of going to see them. For the mere florist they are perhaps well enough as they are, but certainly not for that vastly greater proportion of visitors who go for the sake of finding something to admire, and who above all things want that natural and healthy refreshment which beauty, under its most favourable aspects, is so well calculated to afford. *S. S. Ellis, Rose Hill, Hoddesdon.*

THE MISTLETO ON THE OAK.

(*Concluded from page* 700.)

I will now notice all the other instances which I have found recorded in books, and shall be able to show that most of them have ceased to exist, either from the removal of the Oaks, or the death of the Mistleto in them. The Frampton Mistleto-bearing Oak, as one of the most recently discovered, shall head the list.

In the third volume of "Notes and Queries," Mr. Buckman states that Mr. Baker, the then President of the Cotteswold Field Club, and himself, were taken by Mr. Clifford to see an Oak near Frampton-on-Severn in which Mistleto was growing:—"The tree was a century old, and the branch, with a good bunch of Mistleto on it, was about 40 years old." This example no longer exists. In answer to a letter of inquiry about it, Mr. Clifford, of Frampton Court, has politely written to say:—"A large party of us went to examine the Mistleto Oak yesterday, and were sorry to find that the branch of the tree on which it grew was decayed and the Mistleto dead. The tenant intends to observe whether the Mistleto grows again upon it." (April 19, 1864.)

Jesse, in his "Scenes and Tales of Country Life," (1844) states that Mistleto then grew on an Oak near Godalming, in Surrey; at St. Dial's, near Monmouth; near Usk; and also at Penporthlenny, Goitre, Monmouthshire. I have been unable to learn the fate of the Godalming Oak, but through inquiries which have been made for me with great diligence and perseverance, I am able to state positively that the Mistleto-bearing Oaks in the three Monmouthshire localities named no longer exist. "The Oak at St. Dials which bore Mistleto, was cut down by the bailiff about twelve years since, and the owner of the estate, Sir Lionel Pilkington, dismissed him immediately for doing so." The Mistleto Oak, near Usk, can be heard of up to five years since, and shortly afterwards it is reported to have been cut down with its neighbours. The loss of the Goitre example is thus sadly accounted for by a gentleman who kindly wrote about it—"I remember about 25 years ago there was a very large bush of Mistleto growing in an Oak in the parish of Goitre, but it was most sacrilegiously cut down and hung up over the President's chair at the Cymrygyddian held at Abergavenny. I saw it there myself, as no doubt hundreds of others did also." (J. M. N. April 19, 1864.)

In 1817, Mr. Dickson, at the Linnean Society, stated that he had seen Mistleto growing in an Oak four miles from Maidstone, by the side of the Medway, but since this has never been recently confirmed, it has most probably ceased to exist.

The late Mr. Loudon, also, was shown it in an Oak on the estate of the late Miss Woods of Shopwyke, near Chichester, but this tree can no longer be heard of. It has doubtless passed away with its observer, and the proprietor of the land it grew upon.

Mr. Dovaston, in Loudon's Magazine of Natural History (vol. v. p. 203), says he saw it at the Marquis of Anglesea's Park, at Plas Newydd, Isle of Anglesea, "hanging almost over a very grand Druidical cromlech." (Lees' "Botanical Looker Out.") But this not only wants recent confirmation, but is indeed denied by the statement in the same book, that Mistleto is not now to be found on the Island.

The following examples are interesting, though they have never been publicly recorded, nor are they any longer in existence:—

The late Sir Hungerford Hoskyns, Bart., of Harewood, in this county, saw the Mistleto growing on an Oak in the parish of St. Margaret's, near Moorhampton, and used to tell the anecdote that when staying at Moccas, he mentioned the fact to Sir George Cornewall, Bart, who would not believe it. As usual in those days, a wager was to decide the point, and the next morning both gentlemen rode off to the tree. Since Sir George paid the 10*l.* we may be quite sure the Mistleto was there upon the Oak, though it has never since been heard of.

It formerly grew on an Oak in Rockingham Forest, near Moorshay Lawn, Northamptonshire, where the tree was notched for the convenience of climbing up to get the Mistleto. (J. Percival Smith, Esq.)

It grew some years since on the lower bough of an Oak in the Vale of Neath, Glamorganshire, about two miles below Aberpergwm House, but the Oak was afterwards blown down in a storm.

It grew on an Oak at Mersham Hatch, near Ashford, Kent, where the tree was cut down; it grew on another Oak at Ledbury, which was also cut down accidentally; and it also has grown upon several other Oaks, if the most positive statements of trustworthy intelligent people are to be relied on; but it is unnecessary now to mention them further, since they have never been noticed publicly, and are admitted no longer to exist.

Mr. Edwin Lees ("Phytologist," 1851, p. 357) thinks "that Mistleto occurs much more frequently on the Oak than is generally imagined, but that the instances are not made known." The present inquiry about it gives a result precisely the reverse. The belief in its frequent occurrence is very general; it is the fact that fails. Many persons have seen it, and are sure of it, but no one can show the tree with the Mistleto on it. Time after time have I followed up the most precise statements to my repeated disappointment. "The Mistleto on the Oak," writes an energetic searcher for it in Monmouthshire, "is like a ghost, it vanishes into thin air when you try to grasp it; everybody has seen it long ago, but the tree is always cut down, or somehow or other the result is—*nil*." Most woodwards will tell you, and in good faith too, that they have seen it, and indeed will generally mention the exact tree and the place where it grows, but the result of their further examination has always been the same; for some cause or other the instance fails, and the Mistleto can never be shown on the Oak. The tree has been felled or blown down, or it may be the isolated bunch of wild Ivy or Honeysuckle which deceived them is revealed now the leaves are off the trees. Or perchance where nothing is found, as most frequently happens, they have been misled by a cluster of small twigs from the Oak branch itself, and indeed at certain periods of the year they do resemble Mistletoe more closely than would be credited by those who have not closely observed them. In some instances the mistake has arisen from one tree being intermingled with another—the Mistleto bush is in the Oak tree, but it is found to be upon a branch of Maple, or Thorn, or Apple tree.

I cannot do better than insert here the following lively passage from the letter of one of our members. It shows at once very graphically his own zeal in the pursuit of science, and the caution essentially necessary in dealing with facts of rare occurrence. I regret that the excellent sketch sent with it must be omitted. "You, of course, will be particular in verifying every case of its occurrence on the Oak, and the following instance of my experience will only be valuable to you in proportion to your capacity of enjoying the spectacle of pain in others. After our Annual Meeting, I was staying with a friend whom I knew to have a very excellent practical acquaintance with Natural History. I asked if he had met with Mistleto on the Oak. He at once said he knew of one example which he had discovered himself two years before. It was growing on a scraggy bush of Oak that overhung the edge of a quarry in a coppice wood. I was glad to accept his offer to point it out to me, and we made a special pilgrimage to see it. I was to climb, and tear, and scuffle through the underwood and briars, so as to come round on the top over the brink of the quarry, whilst my friend remained below to point out the position; with difficulty I got there, creeping down on all fours, and there sure enough it was, as pretty and healthy a bunch of Mistleto as I ever saw. I thought I would have a specimen, not quite believing my own eyes (though both would have made affidavit of its genuineness on the spot); with much trouble and care at length I got hold of the branch and was immediately struck by something unusual in the colour of the bark (the leaves were not out), so I at once tasted and found it Apple; one single small branch was growing out from under the stock of this Oak bush, the exact counterpart of all the other shoots. My disappointment you may conceive, but not the chagrin of my kind guide, who had treasured up for two years the knowledge of this magnificent 'find,' and in his own parish too!"

A writer in the "Quarterly Review (Vol. 114, p. 219) speaks of the Mistleto as "deserting the Oak" in modern times. "It is now so rarely found on that tree as to have led to the suggestion that we must look for the Mistleto of the Druids, not in the Viscum album of our own trees and orchards, but in the Loranthus europæus, an allied parasite, which is frequently found growing on Oaks in the south of Europe." A very unnecessary confusion, it seems to me, has been created between the plants, and I purposely avoid entering further into the subject for the reason given in the Review. "There is no proof that the Loranthus ever grew further north than at present; whilst the Mistleto figures not only in the traditions of the Celts, but in those of northern nations."

P.S. While this paper has been in the press, I have been assured that the Mistleto grows on an Oak in the Bishop's Park, at Farnham, Surrey (Mr. Findlay), but have not had time to make inquiries about it. *Dr. Bull, in Transactions of Woolhope Naturalists' Field Club.*

DIDYMOPANAX (ARALIA) PAPYRIFERA, AND ITS CULTURE.

Abridged from a communication by M. A. Stelzner in the *Hamburger Garten und Blumenzeitung.*

THE Didymopanax papyrifera, better known under its former name of Aralia papyrifera, is an interesting plant in two respects—utility and ornament. As

regards the first, it is now generally known that its pith constitutes the substance called improperly Rice paper. This was not known in Europe 30 years ago. [At an earlier period than that]. The first small leaves of it that were brought to London from China, were formed into a bouquet of artificial flowers, which sold for 50*l*. There was then no certain data as to the plant from which it was made, nor its mode of preparation. Microscopical examination showed that it was a cellular tissue analogous to that which constitutes the pith of plants generally. It was thought that the plant of which the pith was thus employed by the Chinese was a leguminous one belonging to the genus Æschynomene. Sir William Hooker, however, determined it to be an Araliaceous plant, and assigned it to the genus Aralia; but latterly it has been made the type of the genus Didymopanax.

As an ornamental-foliaged plant the Didymopanax papyrifera holds a distinguished rank. At the present time, there are none of these that grow in the open ground during summer that, as regards proportion and breadth of foliage, remind us of the magnificent Palm family. With the latter neither the Solanum, Uhdea, Cosmophyllum, Gunnera, &c., can be compared for size and appearance. This defect may, however, be supplied by the plant which forms the subject of this article. According to M. Stelzner, it surpasses for effect all the plants just named, when it is properly cultivated. When well grown, its stately form, and its leaves upwards of 3 feet in diameter, of firm texture, capable of resisting the force of the wind, render it one of the most imposing plants that can be cultivated for open air effect in the summer season. Unfortunately, up to the present time, cultivators generally have persisted in treating it as a hothouse, or at least as a greenhouse plant; a weakly languishing growth has been the consequence, and many have left off growing it on that account; but it would exhibit itself very differently if it were merely protected in a cold house during winter, and planted out in the open ground for the summer, either on lawns or in groups. In the latter case its growth is very vigorous and rapid, especially if watered occasionally with liquid manure, consisting of a solution of guano or any other similar liquid.

The best plan for making the most of its decorative capabilities is to plant this Aralia in a basket, which can be easily plunged in the soil in the open air in summer, and taken up in the autumn. The plants thus removed can be placed in the greenhouse during winter, where amongst other plants it will prove very ornamental, from the noble appearance of the plant, and the extraordinary breadth of its foliage. Treated in this way, M. Stelzner says he has seen plants bear 6° or 7° Fahr. below freezing, without their foliage being in the least injured. From his experience he informs us that the Didymopanax papyrifera is an excellent stock for different species of Aralia, difficult to cultivate otherwise. Beneficial results have been obtained by grafting upon it the Aralia leptophylla, elegans, peltata, and the beautiful A. dactylifolia. Possessing so many advantages, the Didymopanax ought to occupy a high rank in the lists of plants with ornamental foliage. It is important to remark that it is easily propagated by the roots.‖

Home Correspondence.

Officinal Plants, &c., at Exhibitions.—In your last week's impression Mr. Dodecatheon Jeffreyi has evidently meant to be very severe, but nothing is easier than to make an attack under a pseudonym. As to the Gardeners' Royal Benevolent Institution, to which excellent charity I am an annual subscriber, and also a donor, I hold that Institution in such high esteem that I submit the following proposition to Mr. D. J.:—The Royal Horticultural Society will hold an Exhibition of Rare Plants on the 24th of next month, and if Mr. Dodecatheon Jeffreyi can then exhibit a collection of plants, of the same sorts which I exhibited, and better cultivated (I confine him to these particular plants, being those against which he speaks so strongly), I will hand over to the Gardeners' Royal Benevolent Institution the sum of 20*l*.; but if Mr. Dodecatheon Jeffreyi fails to do this, he shall hand over to the Institution a similar sum. I make this proposition from its being inferred that the plants I showed are easily obtained and more easily grown. In my former communication I thought I had sufficiently and distinctly stated that I could have exhibited other plants, but only selected such as were well grown specimens. *William Bull.*—When persons make statements in a public paper, it should be with an endeavour to lead and not mislead. If the former is the desire of the writer the motive is good, but if the latter the motive is bad. I venture to make these remarks in reference to a statement made by Mr. Bull (p. 677) respecting some plants shown by him at the July Show of the Royal Horticultural Society. Mr. Bull states—"I sent well-grown specimens to the Show on July 6, of the medicinal and officinal plants named in the accompanying list"—a list, allow me to remark, that does not contain one rarity. "Judge of my surprise, that although entered in the Miscellaneous Class not the least acknowledgment was made;" and then Mr. Bull goes on to say, "With such a want of harmony betwixt theory and practice, how is one to know what to do?" One is really inclined at first sight to cry out with the million, "what a shame!" but a little investigation into the matter will show that Mr. Bull was not so badly treated after all. I think it may also be shown that Mr. Bull has committed some mistakes in order to make his case appear worse than it was. First, it is stated that the plants were all well grown specimens. I saw them at the show, and can say they were good nursery plants, and not specimens at all, in the general acceptation of the term. Then it is stated that they were entered in the Miscellaneous class, and in his second letter that they were "stigmatised" with a 3rd prize. It would have been more dignified to have said "awarded" a 3rd prize. These awards seem to have perplexed Mr. Bull, because there were no plants of a similar character to receive first and second prizes; but it is scarcely possible to believe that Mr. Bull is so ignorant of the meaning of the term "Miscellaneous" as to think it meant a class specially for officinal and medicinal plants. He must have known, however much he pleads ignorance of the fact, that it is the omnium gatherum of an exhibition, and open to all plants not specially mentioned in other classes—at least so says the schedule. To have required a first and second prize for plants of a similar character would be, therefore, quite gratuitous. Moreover, I find that instead of the judges being very stingy, as Mr. Bull's letter would lead the public to believe, they were extremely liberal on this occasion, having awarded (see p. 648) three equal 1st prizes, one 2d, four 3ds, and one extra in this class, although they might with justice to all have awarded only one of each. I must also remark that Mr. Bull's second letter, dated July 11, proves his first to be altogether a mis-statement of the case. Now, Mr. Editor, I wish to remark, as a judge of Horticultural Exhibitions, and having a considerable knowledge of the men who generally have to decide the vexed questions of first, second, and third, that they do it with a degree of fairness that cannot be questioned, and that if they make a mistake, as all men are liable to do, it is not intentional but an error in judgment. Such statements, therefore, as that Mr. Bull has thought fit to make have a tendency to bring a class of men who deserve well of their brother gardeners into disrepute, and to make the office of judge so odious that respectable men will not be found to undertake it. Mr. Bull first makes a statement that his plants did not get a prize, which is untrue. He then makes a statement that they were stigmatised with a third prize—which is equally untrue—or at least a misapplication of words; and, lastly, he appears quite ignorant as to what subjects were eligible to take 1st and 2d prizes in a miscellaneous class—a state of ignorance in which I do not believe. *Qui.* [Mr. Bull seems to have been, in the first instance, led away by an unofficial letter, having no bearing whatever on the prize schedule under which he exhibited. As to the actual award in this case, that seems to have rested with the judges; and from our knowledge of the men who act in this capacity at the principal London shows, we should have full confidence in their decisions. Whether or not the Society should do more for this class of subjects is altogether another question.]—Being one of the judges of miscellaneous plants shown at South Kensington on the 6th inst., I beg to say that so far from Mr. Bull's collection being passed by us unnoticed, we examined it most attentively, in order to find out the particular merit, if any, of every plant that it contained, and all of us were unanimous that there was nothing in it to particularly recommend it. I am surprised that Mr. Bull should consider his plants equal to those in other collections exhibited in the Miscellaneous Class, against which, although Mr. Bull appears to be ignorant of the fact, they were placed in competition by himself. Mr. B. states that in exhibiting them he endeavoured to carry out views promulgated in the Society's Proceedings (see pp. 109, 110). These I have read carefully, and I admit that the introduction of the kind of plants therein mentioned would add greatly to the interest as well as to the relief, as regards light and shade, of our horticultural shows. I do not, however, for one moment imagine that "pigmy plants," such as were exhibited by Mr. Bull, are invited; on the contrary, fair-sized specimens that would give the company some idea of their natural habits, productions, or appearances, are doubtless what are wanted. *Richard Ruffett, Brockett Hall, Welwyn.*

The Gardeners' Benevolent Institution.—Thanks to the *Gardeners' Chronicle*, the dessert supplied by the gardeners to the festival on the 9th was abundant and sumptuous, so much so that not one half of what was exhibited on the tables was used. The whole of those fine trophies of fruit that adorned the high table were left untouched, and on all the other three tables there was a great deal more than was required. As this fruit was supplied by the gardeners at your solicitation for the benefit of the Institution, will you be kind enough to inform me and many others who are curious to know, what became of all that surplus, and whether it was sold in aid of the funds of the Society. *An Old Subscriber.* [We do not know. Perhaps the Secretary or some of the Committee will satisfy our Correspondent.]

The Working Men's Flower Show Movement in Manchester.—Allow me to send you a few particulars respecting a flower show just held in Manchester, of a character similar to one or two exhibitions recently described in your Paper, and showing what can be done by a little effort even in the smokiest and dreariest of back streets. The parish of St. Andrew, Aucoats, Manchester, covers 62 acres, and contains 16,070 people, or nearly 270 per acre, and every 12th or 13th of whom resides in a cellar. The district is rarely visited by persons living in other parts of the town, except for purposes of business or philanthropy, and it must be confessed there are no attractions either in the buildings or the population that would draw any one that way upon other grounds. The Rev. Canon Richson has for years laboured to amend the condition of the parish, and latterly he has received invaluable aid from his curates, especially Mr. Holland. Early in the spring of this year, it was determined to see what could be done in the way of establishing a small natural-history class in connection with the Central Improvement Society that meets in the school-room, and especially to make an effort to encourage the love of plants. and the cultivation of them, as a solace amid the interminable bricks and mortar. Two or three gentlemen of large botanical and horticultural experience lent their aid to Mr. Richson. A capital evening meeting was held, commencing about 9 P.M. (for not much earlier are the poor people of this district free from their work), and the arts of seed-sowing, bulb-planting, and training and tying up to sticks, &c., made practically intelligible to a large company, literally of all sorts, men, women, and children, young and old. It was determined at the same time to hold a flower-show, at which the result should be exhibited, and on Saturday last this was accomplished. About 300 plants were shown, all in pots, and comprising Fuchsias, Geraniums, Roses, Musk-plants, Wallflowers, Stone-crop, Aloes, and several others, with here and there a little Fig-tree, and several thriving young Elders. A Lilium lancifolium had six buds upon it, and would probably have been in bloom, but the poor fellow who grew the plant had been taken ill, and was unable to attend to it. A queer thing, lank and weak with the excessive warmth of the kitchen in which one Gideon Jowett had nursed it tenderly, turned out on minute scrutiny to be a Stock. Mignonette, Hydrangeas, Chrysanthemums, and a trough or two of Kidney Beans, gave pleasing variety to the display. Prizes were given for the best plants in every class, and special ones for vegetables, such as Lettuces, which, wretched as they were, really did infinite credit to those who could drag such things out of soil deserted even by Grass and the last-to-yield of weeds. A short time ago, one fine summer's evening, about 40 of these earnest and striving people accompanied the writer a little way into the country in order to learn something about trees and wild flowers. To show that the lesson had not been lost, there were at the exhibition several pretty bouquets of hedgerow and meadow plants, brought from a distance of at least two or three miles. Prizes for the best collections of dried leaves of native plants, laid out neatly so as to show their forms and differences, had also been offered, but the competitors were too diffident to exhibit until more should be done. There is every hope and prospect that the good work thus commenced will be persevered in. No effort will be spared to incite the people to further effort. A hearty interest in such simple and inexpensive pleasures will do them more good, and increasingly so day by day, than the providing of any amount of mere amusement, which leaves them uninstructed, and supplies no employment for the hands. There is the vast pleasure, too, for them of possession. "I reared this plant"; "this is mine, the flower that took t' prize at 'xhibition!" After helping to adjudicate the prizes, I spent the afternoon at Biddulph Grange. In the midst of the thousand charms of that lovely place, with the new and fascinating on every side, I could not but feel the more how deeply it behoves every lover of plants and flowers to strive, each in his own way, to let his sweet and perennial pleasures be shared in, be it ever so humbly, by the poor inmates of the Aucoats and London cellars. *Leo. H. Grindon, 14, Charlotte Street, Manchester.*

Tobacco Manufacture.—Your correspondent's communication from the "Canada Farmer" on Tobacco Culture (p. 700) is very valuable, and I feel greatly obliged for it, but there is no mention of the manufacture of it for consumption. What I particularly wish to ascertain is what process it undergoes, here or elsewhere, after the leaf is properly prepared; in fact, what is mixed with it, and how it is rendered into Cavendish or roll, as in these states it is always moist and of a sweetish taste. Also, does not the leaf undergo some preparation before being cut up into shag, bird's eye, &c., as well as for cigars? Any information on these points is what I more particularly require, and I shall feel greatly obliged by any hints from a real manufacturer, as I expect to leave England in about a month or six weeks. *M. P. M.*

Horse-hair Bags for Figs.—I have just seen in the garden of a relative at Chichester some horse-hair bags for preserving Figs; they are said to answer capitally. I can get no information as to whence they were obtained, as my relative purchased them with the house some 30 years ago. They are about eight inches wide by ten long, and have a string run through the top; they can therefore be readily opened or closed as required. *D.*

Foreign Correspondence.

An Emigrant's Life in New Zealand: *Rakaia Terrace Station, Canterbury, May* 12, 1864.—Doubtless you will have heard of my safe arrival in this colony,

after a very pleasant voyage of 108 days from port to port, and with only just enough bad weather to let us know what a storm at sea is like. I was some little time before I got any employment after my arrival, but at last I got a job of haymaking, which only continued a short time, and then I was nearly three weeks before I got anything else to do. I heard of J., and wrote to him to learn if I could get anything to do where he was, and after waiting a week got a letter to say that if I liked to come 70 miles up country I could find employment. So off I set, with nothing but my blanket and the things I stood up in. I walked there in two days, and was taken on to work the next morning, hoeing Potatos; and then shearing began, and I had to fill up the sheep pens from 4 A.M. till 7 P.M. This lasted for nearly a month, and awful hard times these were too, I can tell you: at night no bed to lie on, nothing but one blanket under me and one over me, and thousands of fleas, so that hardly any sleep could be had, and I got up next morning as tired as I had been the night before. However, I managed to get over that difficulty. After shearing, one of our shepherds left, and I applied to the overseer to let me go on as shepherd, which after a while he consented to, and I have remained so ever since. I have now over 5000 sheep under my charge, and two dogs. I go out at 5 A.M. until sundown. It is an awfully lazy job, as one has to walk so very slow, and the days appear very long; they seem as though they would never come to an end.

The country is as flat as a table for upwards of a hundred miles square, and we can see houses 70 miles off easily when it is a clear day. This is a very windy climate, and when it blows you have to be very careful with your sheep; they will drive for miles before the wind. To-day (May 12) we have had an awful gale from the south-west, with rain, hail, and snow. All the mountains are covered with snow, and look very grand indeed. They run the whole length of the colony. Where I live is just at the foot of Mount Hutt, in a little wooden house with another shepherd, and we scarcely ever see anybody to speak to for months at a time, so that this is a most lonely place. My employer, a very good sort of man indeed, and one of the leading men in the colony, owns upwards of 12,000 sheep, and has rather over 35,000 acres of land, besides any amount of land in Christchurch. The land up here is not fit for agricultural purposes, as it is so stony. The squatters never make any hay of colonial Grass, as it is so wiry. The sheep eat only the short Grass close to the stones. The long Grass grows in large tussocks; some of it is 1½ yard long, but the generality of the Grass or tussocks is about 1 foot long. There are no trees whatever except in the bush, nor shrubs either; the land is nothing else but Grass and Reeds, look which way you will. I have found the telescope most useful; in fact I could not do without it. The rifle I have not used since I landed. You remember sending me a book called the "Canterbury Settlement." Well, that book is as full of untruths as it possibly can be; and this I have found to be the case with all that I have read. *G. E. F.*

Notices of Books.

Autumn Rambles in North Africa. By John Ormsby, of the Middle Temple. Pp. 298. 8vo. Longmans. 1864.

IN the present day a professional man who has the means, thinks a vacation tour indispensable. If young and vigorous he often passes his holiday admiring the beauties of Switzerland, climbing mountains, and breathing the pure Alpine atmosphere. Mr. Ormsby had many a time done this, but under the impression that *toujours perdrix* was monotonous fare, bethought him that Marseilles was very near, and from thence to Algeria was but a couple of days' steaming, and then—what a charming novelty would greet his every sense. And, sure enough, there he saw "*bonâ fide* Arabs, the old familiar figures of that charming story book of childhood, the Arabian Nights, which has left more pictures behind it than many a work of greater ability since perused."

The thought was certainly a happy one, and was carried out in a very moderate space of time, with very little real inconvenience, and at a very moderate cost, and it was the most thorough change that can well be conceived. He lands at Philippeville, and proceeds to Constantina and Batna, as Hannibal crossed the Alps, according to the schoolboy joke, "on the top of the diligence," and at once he makes for the Atlas, and mounts the *Pic des Cèdres*, and everything serves to remind him that he is in a charming land, where wild beasts are not confined in cages, but roam at large. He visits the old Roman city of Lambessa, and recognises in the Prætorium the most perfect and beautiful relic of Roman colonization in North Africa, and could well understand that the Garden of the Hesperides was situated in a valley of Mount Atlas, when he had seen the rich luxuriance and beauty of the glens of the Auress. It is the district west of the river Triton which Herodotus describes as being, above all the rest of Libya, woody and infested by wild beasts. "This is in fact the preserve out of which Jules Gérard made his best bags." Lions, however, proved scarcer than one would expect; indeed each lion requires a large tract of country for his hunting ground, so that they are perforce widely scattered, and being a strictly nocturnal animal, he is not often to be seen before sunset. They don't think much of a lion in Algeria; he says: "I asked a woodman, who spent the greater part of his life up in the forest, if he ever saw lions there, and he answered, 'Quelquefois, monsieur,' just as if he was speaking of rabbits."

At El Kantra our traveller found the town a collection of huts built of sun-dried brick, with flat roofs of Palm stems, plastered over with mud, and having little windows, or rather air holes, of fantastic patterns. The women seemed to constitute the working classes. "The branch of industry which flourishes most in the city, is lying at full length and meditating. The capacity an Arab has for this occupation is astonishing. He never seems to tire of it, and never demands any relaxation." Mr. Ormsby next explores the Djebel Mitlili, and gets a shot at a splendid Feshtall, the maned moufflon of the Atlas, a magnificent wild sheep, with horns thicker at the base than a man's arm, and more than two feet long, following the curve. And then, from the top of the mountain, the view he had longed for was before him. "There lay the Sahara, a vast tawny plain, dotted with black spots like a huge leopard skin, to quote the old similitude, stretching away southwards an unbroken flat on to the dim blue line where the sky came down to meet it."

About halfway between El Kantra and Biskara is one of the "remarkables" of Algeria (as the old travellers quaintly call them), the great salt mountain of El Outaia. "This is no mere hill with lumps of salt cropping out of it, but an honest *bonâ fide* mountain, probably at least four or five miles in circumference, and seven or eight hundred feet high, with peaks, precipices, valleys, grottoes, and all things proper to a mountain, entirely composed of pure rock-salt. There can be no doubt that this is one of the series of salt hills which Herodotus mentions as standing at intervals of 10 days' journey all along the ridge of sand, stretching from Thebes to the pillars of Hercules."

Incidentally we learn that "the Arab dog is a terrible nuisance, but he has one redeeming quality,—he is an arrant coward, and holds a stone in great awe. No traveller ought ever to approach an encampment or douar without providing himself with half a dozen heavy stones, and if he delivers a good family shot into the first pack that rushes at him he may be let pass."

Mr. Ormsby considers the little territory called "La Grande Kabylie," a district about 80 miles by 60 in extent, the very Switzerland of North Africa. It is a rugged mountainous region, inhabited by a fine race of men, as different as possible from the Arabs of the plain, and perhaps of Vandal origin. "Figs and Olives grow here in abundance, every village had its row of oil jars, each big enough to contain the whole 40 thieves, and its cleverly constructed oil-press standing in the middle, like the stocks in an old English village; and every villager we met had the hood of his bernous stuffed with dried Figs, of which, with a jolly *bonhomie*, he would generally thrust a handful into our hands."

It seems that "Dr. Shaw was aware of the fact that lions were eaten in Barbary; but the Oxford philosophers made him cut out all allusion to it in his travels, on the ground that it was an inversion of the natural order of things, lions being made to eat men, and not *vice versâ*. Nevertheless the custom obtains to this day, and not among the Arabs only. The day of my arrival at Tebessa some Arabs brought in a fine beast they had killed, and next morning we breakfasted on lion at the auberge where I put up. The flesh is like poor, stringy, strong-flavoured veal."

Whether this savoury fare had anything to do with it or not, Mr. Ormsby had an inordinate longing for a ramble with the lion-hunters, which is delightfully told; and it is worth while for the tourist to know that "it is possible for a man who has dined on Monday in London, by making the best use of express trains and quick steamers, to put himself in a position to be dined on by a lion in Africa on the following Friday evening," an immense advantage to a vacation tourist. This ramble with the lion hunters is very exciting, and extremely well told throughout, though the "noble beast" omitted to make his appearance. We could, doubtless, amuse the reader with some extracts from this chapter, and the next, entitled "a Derby Day with the Arabs," but it would be scarcely fair to the book, of which enough has been said to show that it ought by all means to be procured; for it will prove capital reading to the tarry-at-home traveller, as well as being invaluable to the Algerian tourist. The story of the poor old horse is quite pathetic—we *must* make room for it:—"My companion left me while he went to fetch his horse. He returned leading an animal, which only by courtesy could be described as a specimen of horse-flesh. He bore at best the same relation to a horse that an old hulk, undergoing the process of breaking up, does to a ship. How anybody on a fine autumn evening, not too warm, could prefer such a mount to walking, I was at a loss to imagine, and I looked as much, when Mr. C. hastened to explain that his matchless steed was devoted to a nobler service than that of bearing burdens. To be a lure for lions was the mission of his declining days, and he had been purchased for that purpose for the sum of 2*s.* 6*d.* English money. His coat, white with age, made him a conspicuous object at night; and his efficiency as a bait was increased by a chronic cough, which signalled his whereabouts with the regularity of a minute-gun. This explanation lent an unexpected interest to the animal; but it also suggested a destitution among the lions of the Mahouna for which I was unprepared; and then arose the question—might not a lion with an appetite up to the mark of such a scarecrow, look with favour upon a moderately succulent Christian?"

Our House and Garden. By Cuthbert W. Johnson, F.R.S. 8vo. Pp. 282. William Ridgway, Piccadilly.

This little book is written with the laudable intention, if possible, to make home more charming, by directing attention to many things of interest about the house and garden, which otherwise might not be observed; "and by rendering some of its surroundings better understood."

A gentleman is in bed, when the servant taps at the door to call him, but instead of getting up forthwith, or it may be while dressing, he ask himself the question, Why do we use feather beds and blankets? and eventually he comes to the conclusion, that it is because they answer the purpose of keeping us warm, better than some other things, which are not non-conductors. At breakfast the same spirit of inquiry is manifested; the fire, the coals, the tea-kettle, the sugar, cream, and coffee, and even the orange marmalade, supply him with food for thought and talk, till he takes a turn in the garden, and observes the plants, and the Grass, and insect life around him, in the same style. There is a good deal of useful information, and several curious facts are quoted from the *Gardeners' Chronicle*, and publications of that class. From its style we should think the book was probably intended for young people. We say this however in no way of disparagement.

The Grammar of House Planning, by a M.S.A. and M.R.S.A. A. Fullarton & Co., Edinburgh and London. 1864. Pp. 190, 8vo.

During the last 20 years very considerable improvements have been made in domestic architecture, and in all that can add to the comfort and convenience of houses. Wise people therefore, who are intending to build should obtain the best advice, and avail themselves of those inventions which are found to answer in practice, and are most approved. Many people fancy they could choose a site and plan a house, but a mistake made here is usually a life-long trouble, for very few have the chance of rectifying errors of this kind, when once they are committed.

Of course there are first principles of house-planning, which never can be violated with safety, and the book before us endeavours to point these out. The writer appears to have given lectures on the subject, and has probably contributed to the pages of the "Builder," and similar publications, for he has been permitted to reprint extracts from these papers. The principles laid down are the result of observation and experience, and they are founded on good sense. Aspects and prospects, he says, are chief elements in choosing a site, but "architects in general pay little attention to the former, and admirers of rural scenery think of nothing but the latter." Of course you can't have all your rooms with a south-east aspect, which is undoubtedly the best, any more than the late Mr. Herring could have a south wall, for Peaches, running all round his garden, but assuredly the cheerfulness and even the healthiness of a house depends greatly upon considerations of aspect.

"Trees close to the house are absolutely pernicious, but if planted at a proper distance they compose its finest ornament. They should be considered as aids to show off the house and its appendages, instead of becoming the principal objects of attraction in themselves. Their disposition should be such as to create a perfect whole when seen in connection with the house itself.

"No more fitting or beautiful and poetic appendage to an architectural scene can be conceived than a refined and cultivated garden of choice flowers—those beautiful objects sent expressly to gratify the senses, and in the formation and adornment of which are united in perfection, the graces of colour and shape, freshness, and fragrancy."

Drainage; prevention of damp, which is better than its cure; ventilation; windows and their position; the position of the doors of a room, and subjects of the like kind, are all treated of, and well. A quantity of woodcuts and plates are given, showing plans of gentlemen's villas and cottagers' houses, figures of approved tiles for floors and roofs, traps for drains, &c. Indeed there is valuable information on the proportion of rooms and their decoration, lighting, and everything that can make a house pleasant and comfortable.

In Parts 12 and 13 of Dr. William Smith's *Dictionary of the Bible* there is an excellent article on the Locust of Scripture; and the nine different words which have been supposed to represent so many distinct species, or different stages of growth of the locust, are exhaustively discussed. Our readers are aware that there are persons at this day who gravely assert that the locusts which formed part of the food of the Baptist were not the insect of that name, but the long sweet pods of the locust tree (Ceratonia Siliqua), *Johannis brodt*, "St. John's bread," as the monks of Palestine call it. Locusts are, however, still used as food, and travellers tell us, "the Hottentots are glad when the locusts come, for they fatten upon them." At page 133 we learn, "There are different ways of preparing locusts for food; sometimes they are ground and pounded, and

then mixed with flour and water and made into cakes, or they are salted and then eaten; sometimes smoked, boiled, or roasted, stewed, or fried in butter. Dr. Kitto (Pict. Bib. note on Lev. xi. 21), who tasted locusts, says, they are more like shrimps than anything else; and an English clergyman, some years ago, cooked some of the green grasshoppers, Locusta viridissima, boiling them in water half an hour, throwing away the head, wings, and legs, and then sprinkling them with pepper and salt, and adding butter, he found them excellent. How strange then, nay, "how idle," to quote the words of Kirby & Spence (Entom. i. 305) "was the controversy concerning the locusts which formed part of the sustenance of John the Baptist. . . . And how apt even learned men are to perplex a plain question from ignorance of the customs of other countries."

We find in the *Botanical Magazine* for July, capital figures of the following subjects, namely:—*Macleania speciosissima*, a warm greenhouse shrub flowered by Mr. Bateman at Biddulph Grange, and received by him from the establishment of M. Linden, under the name of Thibaudia elliptica, but "certainly not that plant of Ruiz and Pavon." It is an evergreen shrub with long pendent branches, clothed with ovate distichous coriaceous leaves, and bearing nodding tubular flowers, several from each axil, so that they are crowded for some distance along the under-side of the branch, while the leaves spread right and left over them. The corolla is upwards of an inch long, bright scarlet tipped with yellow, tubular and five-angled, and slightly ventricose a little above the base. Mr. Bateman remarks that it requires the heat of a warm greenhouse, and should be placed in a large pot, which ought to stand on a bracket or shelf near the glass. When thus placed the long straggling branches hang down gracefully and flower abundantly. And thus flowered, the plant is very beautiful.—*Dendrobium marginatum*, a Moulmein epiphyte, introduced by the Rev. C. S. Parish to the nursery of Messrs. Low & Co., and flowered last April by Mr. Rucker. It forms a cluster of angular stems as thick as a swan's quill and a foot high, and bears linear lanceolate leaves, and lateral flowers, in pairs, of moderate size, the sepals and petals white, the lip three-lobed with the central lobe wavy and having a cinnabar-coloured disk and a white border.—*Micranthella Candollei*, a Melastomaceous shrub, from the Andes of Peru, and requiring greenhouse culture. It has rather large ovate acuminate five-nerved rusty-haired leaves, and a terminal many-flowered panicle of changeable purplish flowers, each about an inch across.—*Meconopsis aculeata*, a fine Indian Poppywort, native of the high mountains of Kumaon, at an elevation of 11,000 feet, and of Kashmir, at an elevation of 10,000 to 14,000 feet. The plant, which is sparsely clothed with spreading hair-like prickles, has radical cordate or ovate variously lobed leaves, and oblong pinnatifid cauline ones, all of these variously lobulate. The flowers are large, two inches or more across, of a rich purple-blue with golden stamens, solitary in the axils of the bracts, thus forming a long raceme in which the upper flowers expand first. The root is supposed to be perennial.—*Cymbidium tigrinum*, one of many new Orchids sent from the Malay Peninsula by the Rev. C. S. Parish, to the nursery of Messrs. Low & Co. It was found upon rocks in the Tenasserim mountains, at an elevation of 6000 feet above the sea level. Sir W. Hooker observes: "I have here adopted Dr. Lindley's character for the genus Cymbidium, but what are its limits I do not understand;" and he quotes a remark of Mr. Bateman, to the effect that the compact pseudo-bulbs and few-flowered spikes are very unlike anything in the genus with which he is acquainted. In the plant figured the pseudo-bulbs are clustered, roundish or ovate, as large as walnuts, with three or four oblong-lanceolate slightly twisted leaves. The scape is radical, about a span long, bearing about three flowers, which are large, but with the parts comparatively narrow. The sepals are spreading linear-oblong yellowish green; the petals similar erect and nearly parallel with the upper sepal; the lip large three-lobed, the side lobes erect purple within, the middle lobe recurved broad-oblong, white barred transversely with dark purple.

The present issue of *Seemann's Journal of Botany* contains a plate representing five new British Mosses, the species figured being *Hypnum imponens*, *Funaria microstoma*, and *Seligeria calcicola*, *calcarea*, and *pusilla*; these are described by Mr. W. Mitten. There are also papers on the flowers of Euphorbia amygdaloides, by Mr. W. G. Smith; an account of Mr. Spruce's Botanical Explorations; and some remarks by Professor Babington on Alsine pallida, a near relation of Alsine (Stellaria) media, the author observing that he concurs with those who combine A. pallida, media, and neglecta, "to form the species Stellaria media, Vill." The Editor has some observations on certain genera with a one-celled ovary referred to Hederaceæ. These genera are Arthrophyllum, Bursinopetalum, Pukateria, and Cuphocarpus; and reasons are given for transferring the three first permanently and the latter provisionally to the order Cornaceæ. The remaining papers are an official report on the Botanical Department of the British Museum; an account of the analysis of Indian Cinchona bark and leaves; some reviews; and the usual scraps of correspondence and botanical news.

The *Florist and Pomologist* figures *Graham's Yellow Perfection Wallflower*, a large-flowered single bright-yellow variety, obtained by Mr. F. J. Graham, of Cranford, after many generations of careful seeding and selecting. The object set out to be attained was, we are told, to produce a variety in which the flowers should be of a pure yellow colour, of large size, and of good form. These points of excellence have all been attained, and the flower, being one of the sweetest of its race, possesses all the elements of popularity. In the decoration of the spring garden this bright coloured sort, when it comes to be distributed, will form an excellent companion for the large deep blood-coloured variety now common everywhere. This number is unusually full of papers of interest. In an article on Spring Flower-gardening the writer observes: "I aver I have no faith in the prophetic vision of those who proclaim a speedy return to the system of mixed beds. The method has passed away; all our decorative gardening now tends towards the other pole of design." Doubtless this is true, to some extent at least. Parterres will not disappear from the garden system, and it is not necessary they should, but we don't want all the garden parterre-ized. Let us rather still have our parterres in appropriate places, and none more appropriate than terraces and similar spots isolated and detached from the rest of the garden; let us have our lawns free from glaring colour spots, and the inroads of the bedders; and let us have our flower borders too, wherein a succession of beauties not fitted for colour-grouping, but blooming on in turn from spring till winter, may constantly reward our care. This is the sort of reform which is needed. Mr. Fleming has a fourth paper on House Decoration; and "Quo" gives further chronicles of his Town Garden. Salad culture, especially that of Watercresses—a crop extensively grown in Buckinghamshire—is commented on by Mr. Bailey; Bedding Pelargoniums, Pears, Pot Verbenas, &c., come in for attention; and there is an account taken from the *Abeille Pomologique*, of the Abbé Dupuy's experiments in growing Pears on the Hawthorn stock. The plantation was made in November, 1862, the stocks having been grafted in the March previous. They were planted at 20 inches apart, in a shallow calcareous soil, which is friable to the depth of from 3 feet to 4 feet 6 inches; and they are intended to be trained in *cordon vertical*. The result which was noted in October, 1863, seems to have been pretty much in proportion to the vigour of the plant, the most vigorous being unfruitful, and the less vigorous ones more or less fruit-bearing. The following sorts are recorded as having "no fruit buds:"—Beurré d'Angleterre, Beurré Bosc, Beurré Bretonneau, Beurré Diel, Doyenné Doré, Duchesse de Berri, Fondante des Bois, Jalousie de Fontenay, Beurré Gillot, Jaminette, Marie Louise, Royale d'Hiver, Sageret, Sans Pepins, Van Marum, Virgoulouse. The following bore "some," or "a few" fruit buds:—Angleterre d'Hiver, Blanquet à longue queue, Bergamotte Cadette, Catillac, Beurré Duval, Beurré Esperen, Beurré Gillot, Marquise, Surpasse Meuris. The following were "full" of fruit buds, or had "many," or "plenty" of them:—Brown Beurré, Winter Nelis, Carmélite, Fondante de Charneux, Vicar of Winkfield, Double Philippe, Fusée, Henriette Bouvier, Louise Bonne of Jersey, Marquise, Martin Sec, Milan Blanc, Beurré Moiré, Nouveau Poiteau, Passe Colmar, Passe Colmar François, Paternoster, Bezi de Caissoy, St. Germain, Sylvange Thouin, Tonneau.

In the *Floral Magazine* are figures of:—*Azalea (indica) Souvenir du Prince Albert*, a semi-double Belgian variety, which, from its well-contrasted colours, will doubtless be a good decorative plant, though it has not yet been well shown in England; the flowers are of a bright salmon rose, very distinctly edged with white.—*Auricula Lord Clyde*, a dark maroon flower of good form, but with somewhat angular paste. It is remarked that "a considerable difference of taste exists between northern and southern growers as to what constitutes a good Auricula for exhibition, the former having been in the habit of greatly reducing the number of the pips, as the individual flowers are called, so as to make a truss consist of but three or five flowers, and looking more to the quality of the pip than to the size and effect of the plant as a whole; while the latter have regarded these as essentials, and have been more inclined to obtain large flowers than small ones. The friendly intercourse that has taken place between them both, in their exhibitions, has had the good effect of modifying both these views, and we doubt not that permanent good will result from it. There can be no question that refinement is the one remarkable characteristic of the Auricula; and if a flower be naturally coarse, or be made so by cultivation, it very materially detracts from its beauty; and moreover the effect of high stimulants on the Auricula is to alter completely the character of the colour, so that they are, for these reasons, to be avoided. We think, too, that the opinion is now winning its way amongst northern growers, that to cut down the number of pips, as they have been in the habit of doing, is also wrong, inasmuch as it gives them a very bald appearance."—*Ornithogalum thyrsoides*, an old-fashioned and long forgotten half-hardy Cape bulb of great beauty, lately reintroduced to the notice of cultivators by Messrs. Carter & Co., and more than once noticed by us.—*Fuchsia Cloth of Gold*, a sport of the well-known old favourite Souvenir de Chiswick, which is spoilt as an ornamental plant by the white-edged leaves thus associated with its bold crimson and purple flowers; but becomes of course all the more interesting to those who are touched with the mania for variegated plants.

Miscellaneous.

A Road-side Inn in the Rocky Mountains.—Well, Jack told me he was coming the other day, from the Warhoe diggings in California, overland to Florence in the State of Missouri. It was somewhere in the Rocky Mountains, I think. It was at night, and he was huddled up in a stage coach, asleep, and dreaming of bears, wolves, and wild Indians. Suddenly the coach broke down, but fortunately close to a little tavern. Jack Moseley rubbed his eyes and thought he was still dreaming, when, alighting, he found himself in front of the precise model of an English wayside inn. There was the bench, there was the horse-trough in front; there were the red and white blinds to the windows; there was the bar, with its big cheese in full cut, its pork pies, its row of gaily-painted kegs of cordials, and its well-polished beer-engine. There was the little parlour, with its neatly-sanded floor, its triangular spittoons, its rack of churchwarden pipes, and its coloured prints of fights for the championship, racing cracks, and Sir Tatton Sykes in top-boots, affably conversing with his trainer, who was bald-headed, white-cravated, and respectful, in drab gaiters. There was a grinning ostler, there was a stout potboy, there was a spruce waitress; there was positively a one-eyed bulldog on the premises. On the coffee-room blinds there flourished the approved golden legends as to chops and steaks that were always ready, dinners that were to be dressed, neat wines and soda-water; but wonder of wonders! what do you think the sign was? Not the "George Washington," not "The Jefferson," not the "Bold Digger," not the "Big Nugget," not the "Lucky Placer;" but the "Osbaldistone Arms." The landlord was an American born, but his grandfather had been a groom in the Osbaldistone family in England. He subscribed to *Bell's Life* and the local Yorkshire papers regularly, and his little house looked as though some magician had suddenly caught it up from the English north country and dropped it down in the middle of the Rocky Mountains. *Dickens's All the Year Round.*

The Best Whitewash.—Mr. Ritchie, a Boston (U.S.) master-builder, after 40 years' experience, comes to the following conclusions respecting the best whitewash:—1. For rough outside walls—those exposed to the weather—the best mixture is clear lime and water. Any animal or vegetable substance diminishes the adhesion and durability of the wash. 2. But if the wall be hard and smooth, the wash is improved by a mixture of very fine sand—as much as will mix and can be applied. 3. For inside walls an addition of a little glue—say a quarter of a pound to three pailfuls—increases the adhesion. If it be desired to have the walls very white, the whites of eggs may be used in the place of the glue. *Builder.*

Oysters.—Oysters appear to have been known to the ancients as well as the modern populations of the globe, for we find that they were not only held in esteem by the Athenians, but were eaten extensively by the Romans, who in all probability knew quite as much about their cultivation as we do at the present day. To give the history of the oyster as it was bred, cooked, and eaten in the days of Horace, Cicero, Seneca, &c., would require a volume of monstrous size, and would be quite beyond the space at our disposal; so we shall dismiss the subject in observing that the wealthy Roman, Sergius Orata, was the originator of artificial oyster breeding. He it was who formed the enormous beds of oysters at Baia, and who carried his culture of these shell-fish to such an extent both here and in Lake Lucrinus, that he was prosecuted for "trespass," by the celebrated orator Considius. It must also be stated, to the credit of the English "natives," that the Romans who first became acquainted with them in the time of Agricola, preferred them to their own, and gave to them the name of "Rutupians," from that of the locality—Richborough (Rutupium)—in which they were found. In zoological parlance the oyster is termed Ostræa edulis; most probably our term oyster is a corruption of the generic title, which was also the Latin name. The Greeks called it ὄστρεον, and used the shells as we use the balls of a ballot-box, the shell being termed ὄστρακον; the expression ostracise was thus originated. Being possessed of a double conch which opens and closes by means of muscles and a hinge, it is said to belong to the class of bivalves, and from having its gills arranged in folds it is designated a Lamellibranch. The oyster must have existed for many centuries before a trace of civilisation appeared in Europe,—nay, before even man himself came upon the scene. From the writings of the late Edward Forbes, we learn that "the discoveries of geologists open scenes of regret to the enthusiastic oyster-eater, who can hardly gaze upon the abundantly entombed remains of the apparently well-fed and elegantly-shaped oysters of our Eocene formation, without chasing 'a pearly tear away,' whilst he calls to mind how all these delicate beings came into the world and vanished to so little purpose." Near Reading, in Berkshire, there exists a fossil bed of oysters, the specimens from which possess all the features of our best modern ones. This bed extends over more than six acres of ground and averages two feet in thickness; but, large as it is, it bears no comparison to those which volcanic action sometimes tilts

up along the shores of the South American continent, beds which in some instances are nearly 30 yards deep, and cover an area of 70 square miles. So much for the distribution of the oyster in time. As regards its present geographical range, we may say that it extends from Iceland to Naples and the Adriatic. It is not found in Greenland, but exists abundantly on the North American coasts; McAndrew has found it in Vigo Bay and off Gibraltar; and in his valuable report we find it stated that O. edulis is found from Britain to the Mediterranean, at depths varying from 4 to 40 fathoms. The oyster does not belong to the eastern hemisphere, and judging from the huge quantities contained in the Danish kjökkenmöddings, it must have had a wider European range during the "stone" period than it has at present. Vegetable food is the kind it loves, and when this is abundant, the oyster fattens. It affects a warm temperature, and does not reach perfection in cold climates. Hence it is, as Mr. Buckland states, that the oysters on the west of France, which are warmed by the Gulf Stream, have the advantage over our "natives." A sandy or muddy bottom, and comparatively shallow water, are most congenial to the adult oyster's tastes. It is as yet a question whether it will live in fresh water as well as in salt; but, from the evidence of Dr. Kemmerer, it would appear that fresh water only influences it as to flavour, and has no effect upon its growth, fattening, or virility. Very extensive beds exist all round our coasts, but the most important are those of Kent and Essex, and the Milton, Queenborough, Rochester, and Faversham beds are too well known to need any description from us. Suffice it to say that such is the importance of this branch of commerce, that 700,000,000! of oysters are annually consumed in London alone, and quite as many if not more in the provinces. Now, supposing we value them at 6*d.* a dozen, which is certainly below the ordinary selling price, we shall then have an annual expenditure in England of about three millions sterling in oysters alone! *Popular Science Review.*

Ancient Hair-Doctors.—But it seems that in all times ladies and gentlemen losing their hair believed in the possibility of a remedy, and where there was a demand there was, of course, a supply. The Ediths and Rowenas of the Saxons consulted the doctors about their hair, and so did the Julias and Æmilias of the Romans before them. The treatment was rather different in those days, but probably not less successful than that of our time. We may doubt whether the Lady Rowena put her hair in curl-papers; we may be sure she went to bed with her nose full of sowbread, serenely confident that she knew how to keep her hair on her head. "In case that a man's hair fall off, take this same wort (Sowbread) and put it into the nostrils," says Apuleius. He adds, soon afterwards, "It also is well beneficial for heart ache;" possibly he might have said, with equal truth, for "the thousand natural ills that flesh is heir to." But in any case it is no small thing to know how your hair may be made to grow, and your heart cured of its aches, by one and the same remedy. But not content with acting upon the hair indirectly through the olfactory nerves and brain, Apuleius and the Saxon leeches occasionally recommend local applications. They mention especially water-wort. "If a man's hair fall off," they say, "take this same wort, pound it in oil, smear then the hair therewith, it soon becometh fast." The assertion is rather vague as regards time, especially when we consider that the Saxons were a patient people. We are more precise in these days; "a month's trial will suffice to convince the most sceptical of the infallible virtues of the pommade Philocome;" and "we need ask the afflicted to buy no more than one bottle of the oil of the Esquimaux chiefs." *Dickens's "All the Year Round."*

Death of Mr. Geo. Dods.—We have to announce with regret the death of Mr. Dods, aged 38 years. The fine collections of stove and greenhouse plants which he was wont to exhibit at our great metropolitan shows when gardener to Sir John Cathcart, at Englefield Green, will doubtless still be fresh in the recollection of many. After leaving Sir J. Cathcart he became a nurseryman at Epsom, where for several years he has carried on that business successfully, until last Wednesday night, when death put an end to a long and severe illness. He was a warm and sincere friend, and his early death is a real loss to good gardening, of which he was an energetic supporter.

Calendar of Operations.

(For the ensuing week.)

No time should now be lost in putting all houses, pits, or frames in thorough repair before short days have arrived, or cold wet weather has set in. Let all glazing be seen to at once; also painting where needed. Inside white-washing, although manageable at all times, may likewise now be done, and before applying it see that abundance of sulphur is mixed with it. No one need be afraid of using any amount of it on cool surfaces. The repairing and cleansing of flues, where such still exist, will of course also suggest itself, and the examination of boilers or other apparatus where suspicion may rest should likewise be proceeded with forthwith.

FLOWER GARDEN AND PLANT HOUSES.

Out of doors there will now be abundance of work requiring immediate attention. Tall plants may require additional staking and tying to preserve them from breaking down. Many beds and patches of early flowering annuals will now be past their best, and should be removed, filling their places with the gayest things that can be selected from the reserve garden. These matters should not be neglected even for a day, as a garden should at all times, if possible, present a scene of progressive beauty; to this end, therefore, every effort should be made to conceal or alter anything which would give it a declining or fading appearance. Advantage should be taken of favourable weather to do many operations in the reserve garden, such as thinning and transplanting young annuals, biennials, and perennials, and various shrubs which stand too close in their seedling beds. The propagation of many plants, of which a great quantity is required, is sometimes rendered difficult by their tendency to produce nothing but flowering shoots; by closely cutting in a few of the plants, this difficulty will be obviated, as they will thereby be induced to throw out strong young shoots, which will strike with the greatest facility. This hint applies to Lobelias, Petunias, Delphinium grandiflorum, and many other plants of a similar character. Although flowers of all kinds are, at this period, most abundant out of doors, yet some large and well-grown specimens of choice things will always furnish interest under glass. To accomplish this, however, skilful modes of culture are necessary if perfect success is to be attained. Climbers, too, must at all times receive attention. Stopping gross wood is by far too much neglected. Above all, secure a thorough freedom from insects; all this, however, presupposes plenty of labour, directed with judgment.

CHRYSANTHEMUMS.—The watering of plants of these which are being prepared for early winter flowering should be carefully attended to, or they will lose their lower leaves, by which the appearance of the plants will be spoiled, and the production of useless suckers encouraged. Old plants which were planted out for the purpose of layering, should now have the points of the shoots pegged down; after this preliminary operation the points will re-erect themselves, and in a week's time they may be layered in small pots, plunged immediately under the bent portion of the shoot. Established plants will also now require attention; see that they do not suffer from want of water.

DAHLIAS.—Trap earwigs, and remove all badly-formed buds as they appear.

PELARGONIUMS.—Cuttings may be taken of some of the best varieties, as they will strike now, in the open ground, with greater freedom than they will at any time during the year if coddled up by bottom heat and so forth; besides this the plants they produce are healthier, more robust, and form handsome specimens in a shorter space of time. Proceed by loosening the soil of a south border, and by mixing a little sand with it if required; afterwards insert the cuttings 3 inches apart, fastening them well with the thumb and fore finger. If the weather keeps dry, it will be necessary to water them occasionally; but, if possible, defer this till their bases are healed over. As soon as they have made a few fresh leaves, they can be taken up, potted into 3 and 4-inch pots, and placed for a few days in a close frame; after which they may be gradually exposed to sun and air.

RANUNCULUSES.—Beds from which the roots of these have been taken up, should be dug roughly or ridged in order to sweeten the soil by exposure to sun and air.

FORCING GARDEN.

MELONS.—Plants in dung frames will require considerable attention. Keep the bottom-heat as regular as possible, and endeavour to secure sufficient warmth from the linings to allow of giving plenty of air while the weather is fine. Water very cautiously, and only when a fresh supply is absolutely necessary, and then give enough to moisten the whole mass of soil.

PEACHES.—The wood will probably be ripe in the early house by this time. Give therefore all the air possible. Give trees from which the fruit has just been gathered a good washing with the engine to clear the foliage of dust.

PINES.—Plants intended to furnish the winter and spring supply of fruit must be treated with considerable care and judgment, in order to insure their showing at the proper time, or rather to do all that can be done to insure this, for the most experienced growers cannot always succeed in getting plants to fruit at the desired time. Attend to previous directions on this point, and continue to select the most promising plants. keeping them dry at the root, and fully exposed to light so as to check their growth, aad induce a comparative state of rest for a few weeks. And those that have well-matured their growth, if wanted to fruit at once, should be kept close and warm, affording them a brisk bottom heat, and properly moistening the soil about the roots. Those intended to supply ripe fruit late in spring, if not considered sufficiently strong, may be encouraged to grow freely for some time yet, as if these can be got to show in November, they will be sufficiently early. Attend carefully to plants swelling their fruit, giving plenty of manure water at the root, and keeping the atmosphere warm and moist. Attend to the watering of recently potted stock, as if too much is given the fresh soil is apt to become sodden, and if too little the old ball becomes so dry that it is not easy to get it properly moist again, and in either case the check which the roots sustain frequently throws the plants into fruit prematurely. Get all succession stock requiring more pot room shifted as soon as circumstances will allow, in order that it may be well established in the pots before winter.

VINES.—Should wet weather set in, it will be unfavourable for Grapes that are ripe and expected to hang in good condition for a long time, and where the borders are of a strong adhesive nature, it will be advisable to cover with something to throw off heavy rain; where, however, the soil is of a light nature, and such that the water will drain through it freely, this will be unnecessary. Use gentle fires where fruit is colouring, with a moderate circulation of air, and on fine days too much air can hardly be given at this stage. In dull weather fire heat will also be necessary where fruit is swelling.

HARDY FRUIT AND KITCHEN GARDEN.

Continue to fasten in young wood of wall trees, and to see that they are perfectly free from insects; also stop over-luxuriant shoots, and endeavour to secure a fair amount of bearing wood all over the tree. Gross shoots that were stopped early in the season may now be divested of laterals. Keep the breast-wood on Pear and other wall or espalier tress closely stopped in.

CABBAGE.—Sow now some seed of the Enfield Market or some other sort for spring cutting.

SPINACH.—Sow a little Prickly now for use late in the season.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending July 27, 1864, as observed at the Horticultural Gardens

July.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain
Thurs. 21	17	29.915	29.829	81	49	65.0	66	63	S.W.	.10
Friday 22	18	29.868	29.855	76	50	63.0	65	62½	S.W.	.00
Satur. 23	19	29.968	29.943	79	43	61.0	65	63	S.W.	.00
Sunday 24	20	29.924	29.814	78	46	62.0	65	62½	S.W.	.12
Mon. 25	21	29.791	29.613	73	50	61.5	64	62½	S.W.	.03
Tues. 26	22	29.910	29.742	77	39	58.0	64	62½	S.W.	.00
Wed. 27	23	29.964	29.848	78	52	65.0	64	63	S.W.	.00
Average.		29.905	29.806	77.4	47.0	62.2	64.7	62.7		.25

July 21—Fine; very fine; sultry; fine; rain in the evening.
— 22—Very fine; cloudy; overcast.
— 23—Very fine throughout.
— 24—Fine; very fine; overcast; rain at night.
— 25—Rain; fine; rain at night.
— 26—Very fine; dry air; fine; cold at night.
— 27—Very fine; quite cloudless; very fine.
Mean temperature of the week 1·10 deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending August 6, 1864.

July and August.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 31	75.0	50.6	62.8	14	0.66 in.	2	5	2	—	4	15	8	2
Mon. 1	76.1	50.9	63.5	18	1.23	1	3	7	2	3	13	8	1
Tues. 2	76.0	52.0	64.0	18	1.03	1	4	3	—	8	14	5	3
Wed. 3	74.9	50.9	62.9	19	0.38	3	4	3	2	4	16	5	1
Thurs. 4	75.7	51.3	63.5	17	0.85	2	3	4	3	4	16	5	1
Friday 5	74.0	51.4	62.7	18	0.88	1	4	1	2	5	15	6	3
Satur. 6	72.9	51.1	62.0	18	0.58	—	6	3	1	5	13	8	2

The highest temperature during the above period occurred on the 2d, 1856—therm. 92 deg.; and the lowest on the 1st, 1862—therm. 36 deg.

Notices to Correspondents.

BOOKS: *Dodecatheon.* We find on inquiry that there has been no second edition, properly speaking, of Mr. Smith's Fern Catalogue. A few remaining copies seem to have changed hands on the retirement of the publisher, and to have been issued with a new title page. Another edition is in preparation.

EVERGREENS: *W P.* Favour us with a *precise* case, and we will give you a precise answer.

FERN SPECIMENS: *J H.* If our correspondent will attach any reasonable meaning to the words "fair-sized mature fertile specimens," as distinguished from the "darling little specimens" which Mr. Moore has said are "utterly worthless" in the study of these popular plants, he will no doubt arrive at the intention of the passage quoted from the lecture printed at p. 509, which we cannot doubt was to discourage the gathering of seedling immature fronds, especially of the larger species, not old enough to be fertile, or enough developed to show the normal features of the plant. We get many specimens sent to us in this state—very pretty and very much prized by the finders, but very far from being fairly recognisable examples of their respective species; a similar experience on the part of the lecturer, no doubt led to the remark in question. If a frond is mature and fertile, the main conditions of usefulness for the purpose of study are fulfilled.

MELONS: *T Ellis.* Your medium-sized nearly round bright yellow coloured Melon, with white flesh and thin rind, upon being cut proved to be scarcely ripe, and therefore no correct opinion could be formed of its merit. It is however a fine looking promising variety, which we should like to see again in better condition.

MILDEWED ROSES: *Thomas.* Your Roses are infested with Erysiphe pannosa. It is too late to apply any remedy now. Flowers of sulphur should be dusted on the moment it makes its appearance, when it looks like a little white meal sprinkled over the plant. *M. J. B.*

NAMES OF FRUITS: *W G.* Your Apple is the Easter Pippin or French Crab.‖

NAMES OF PLANTS: *Alpha.* 1, Triticum junceum; and 2, Schizanthus porrigens, apparently: but in both cases the specimens were insufficient.—*Jane.* Gymnogramma sulphurea.—*C Darwin.* A large-flowered form, sometimes met with in cultivation, of Convolvulus sepium.—*Subscriber.* An Alströmeria, but too much crushed for identification. —*V.* Physianthus albens.—*H S.* The specimen is insufficient; it looks very much like a rankly grown Cardamine.—*R Draper.*—1, Lepidium Draba; 2, 3, Diplotaxis tenuifolia. —*J. Carter & Co.* Next week.—*A B.* 1, Medicago sativa; 2, Genista tinctoria.—*B S.* The specimen sent was too incomplete.

SEEDS: *G.* The little bodies, said to have been voided from the bladder, are certainly seeds of the Raspberry, as you suppose.

THE NUMÉROTEUR. *W B Page.* We do not know that the Numéroteur can yet be obtained in England. The maker is M. Hardivillé, cutler, Rue St. Jacques 218, Paris.

VEGETABLES FOR EXHIBITION: *W F S.* A dish of cultivated Mushrooms would be clearly admissible in a tray of vegetables for exhibition at a local show: and would count equal to or before either Turnips, Carrots, Beet, or Parsnips if the quality were good.

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Samples and prices on application.

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DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c.
They also continue to supply GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
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	Per ton.
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LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

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American and other Cakes at Market price.
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T. B. RYDER, Secretary.
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CHEAP TRAINS BY ALL RAILWAYS.

			Admission.
TUESDAY,	August 2,	IMPLEMENT TRIALS,	1*s.* 0*d.*
WEDNESDAY,	„ 3,	SHOW YARD OPEN ..	2 6
THURSDAY,	„ 4,	Do., ..	.. 1 0
FRIDAY,	„ 5,	Do., ..	.. 1 0

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GREAT SHOW of SPORTING and other DOGS, THIS DAY, SATURDAY, July 30, and on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY NEXT, August 1, 2, 3, and 4.
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Clergymen and Teachers are requested to communicate with the General Manager for terms for the ADMISSION of SUNDAY SCHOOLS to the Alexandra Park.

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PIC-NIC and PLEASURE PARTIES will find the beautiful grounds of The Grove a most delightful place. The Restaurant is now open.

The Agricultural Gazette.

SATURDAY, JULY 30, 1864.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	Aug. 1	}	Meeting of the Highland Society at Stirling.
to			
THURSDAY,	— 4	}	
WEDNESDAY,	— 3	}	Meeting of the Yorkshire Agricultural Society at Howden.
to			
FRIDAY,	— 5	}	

THE principal chalk district in England presents a generally unbroken hill side along a great part of its north-western edge where it joins the sands and clays lying, literally as well as geologically, below it. The rounded hill tops in which, as a table land, it terminates, stand,—for the most part bare and grassy downs,—some 400 feet above the richly wooded lowland of the green sand and Gault and Kimmeridge clays. The only exception to the continuity of this line of hills in Berkshire is at Wallingford, where it is cut asunder by a valley running south and west, through which a passage is provided for the Great Western Railway and the river Thames. And from the river or the rail, especially on its south-western side, you see that the high downland is divided by occasional western and south-western valleys into finger-shaped ridges, whose bold and abruptly terminating headlands almost overhang the water.

In the parish of Moulsford, at the very end of one of these ridges, on the highest point of it, probably 400 feet above the river, standing out unsheltered into the midst of the northern and north-eastern winds, which have been so prevalent during the past few months, there was dug in the dry absorbent chalk some five or six years ago a shallow conical hole, probably 10 yards across and 5 feet deep. It was made an impervious cup by dint of successive layers of puddled clay and pounded chalk; and its purpose was to supply the down-fed flocks with water which would otherwise have to be provided for them by laborious carriage from the Thames. We are describing the position and formation of one of many such drinking places which are provided in chalk down districts where wells are generally hundreds of feet deep, and where the labour of providing water for the live stock of the farm, in severe droughts such as we have this summer been experiencing, is excessive.

These exposed drinking places, standing where no water can run into them, and where the loss by evaporation must be a maximum, furnish a striking illustration of those extraordinary compensatory powers of our climate which come into operation for the safety, or we might rather say, the salvation of vegetable life during drought; and for that reason we refer to them here and now. The generally excellent promise of the Wheat crop on the dry and shallow chalk soils of Berkshire, and the promising character of even many of the spring-sown corn crops there, must be an astonishment to any man who considers what very little rain has fallen since May upon this dusty and absorbent district, and who forgets the lesson which is taught us by these drinking ponds perched up upon the highest points within it.

They are generally made in autumn, and are in the first place filled with snow. This is carted up and rolled into them and piled upon them, on the first opportunity. It melts and forms a first supply, and this gradually during the spring months is found to accumulate. Thereafter during the summer months it diminishes, but hardly ever altogether disappears. The one in Moulsford parish, just referred to, was in early spring about two-thirds full. The water has now nearly all dried up, and the tenant has covered it with straw, lest the soft mud, which is all that it contains, should dry and crack; and so this drinking cup, for such it is, should become leaky and be spoiled. But consider what that cup, not dry even now, after so many weeks of drought, has done. Till within the last fortnight or three weeks it has every day supplied a flock of 700 sheep and lambs with their daily water, and it has daily been exposed to the full force of drying winds and scorching sun ever since the month of May. The shepherd does not ascribe the unusual failure of the pond to want of rain—that, indeed, could not explain the exceptional occurrence of such a thing, for the evaporation *always* exceeds the rainfall during summer; and there is the daily consumption by the flock of 30 or 40 cubic feet of water—perhaps an inch in thickness over the surface of the pond—to be added to the natural waste.

He says it is not due to lack of rain that the drying air and thirsty flock have licked up the water of the pond; but it is owing to lack of nightly dews. The cold, harsh, northern and north-eastern winds which we have had so much, do not bedew the land like the damper southern and south-western airs. And no doubt the latter, on clear nights must, on passing over exposed spots, such as those selected for these "dew-ponds"—as they are called—have to give up much of the water which they hold.

Has any one experimentally investigated the phenomena of the Berkshire dew-pond?—actually observed what addition to its water supply has thus in a single night been made?—ascertained by actual observation on some clear night, the diminished temperature of that surface film of water in the pond which is supposed to become bedewed, and which indeed must often rise more than half an inch in a few hours in this way, in order to explain the non-exhaustion of the pond by thirsty sheep, and still more thirsty sun and air?

We should be glad to lay before our readers the particulars of such an investigation if any such has been made. Meanwhile they may be assured that whether the phenomena have been carefully examined and described or not, they exist; and that the dews which under extraordinary conditions must be so abundant, do, under the ordinary circumstances of our growing crops and pastures, materially hold in check the otherwise rapidly destructive influence of a drought.

OF all the subjects which come before the naturalist few are more curious and interesting than those insect forms which, from their ravages, have been denominated blights. Of these none are more numerous in species or individuals than those belonging to the genus Aphis of naturalists, to which belong the plant lice, green, black, or brown, and other "dolphins" of the unlearned.

So numerous are the reputed species of these, that almost every tribe, nay, every species, of plant may become the breeding place of one or more, and our cultivated plants being grown in masses sometimes present such hosts of them as to cause them to be referred to as the blight of that particular plant. Thus we have them named after the plants on which they abound as follows:

Aphis fabæ—the Bean louse, called also black dolphin.
Aphis pisi—Pea-plant louse.
Aphis rapæ—the Turnip-plant louse.
Aphis humuli—the Hop-bine louse.
Aphis granaria—Wheat louse, grain louse.

Now, we know that Beans, Peas, Turnips, Hops, and others are constantly liable to attacks of these creatures, but our grain crops are generally so free from a louse pest that we may well be excused

for now directing particular attention to this form, seeing that at the present time it is occupying our Wheat fields to an alarming extent. Within the last three weeks reports have constantly reached us of the appearance of a blight in the ears of different Wheat crops, which, indeed, induced us to examine our own Wheat with unusual care, and there we succeeded in tracing, but only to a slight extent, the prevalence of an aphis. On Saturday last we were invited to examine a piece of Wheat in the neighbourhood of Sherborne, Dorset, and we shall not soon forget the appearances which were presented to us.

The plant was clean in the stem, stood up remarkably firm and well, the ears were evenly long and well-grown, and all in fact in such a condition as, if viewed only a few days before, would have led us to predict a yield of as much as 40 bushels per acre; but now the plant louse has possession, to what extent may be guessed from the fact that we counted no less than 260 of these creatures in a single ear, and upon going into the field the fine heads look dirty to a disgusting degree.

On a more careful examination of the affected ears of corn, they appeared to taper upwards in a somewhat unusual manner from about the middle, and this was soon accounted for from the fact that the aphides were most abundant on the upper half, apparently because this part had notadvanced to the degree of growth and ripeness of the lower portion of the ears, and consequently these insects were battening upon those very juices which otherwise might have filled up the ear, but which we now fear will reduce a crop of so much promise, fully to the extent of 2 quarters per acre.

That this is very general, at least throughout the west, we know not only from report but personal observation, and we fear that it will have a very prejudicial effect upon the yield of the later sown Wheats; the earlier sown, now hastening into ripeness, are tolerably free, as the pest, even if it attacked them, would not greatly multiply as the ears ripened and dried, as the creatures live entirely by the suction of the sap of the part of the plants upon which they fix themselves, which they do by puncturing the epidermis, and so sucking out the verdure as long as any remains. When, however, it begins to dry they either leave it or die. In some gathered heads now before us they have died, as the corn is quite dry; and in the field were many heads of corn dried and whitened from lack of moisture, and these were free from the insects; but these dried ears would amount to as much as the seed used for the crop. It is more than probable that these creatures may be met with most seasons; in moister ones than the present only very rarely. But this year has been highly favourable to the development of plant lice of every description, and no creature on the face of the globe is endowed with greater powers for rapid increase than are these. It is by virtue of this that they sometimes appear so suddenly and in such quantities as to induce the belief that they are specially sent to us, when observation will soon teach us that they go through their various stages of growth on the very plants on which they are found, occasionally sending out exceptional winged forms from one plant to another, and so spreading the pest in virtue of only natural laws.

CURTIS, in his admirable work on farm insects, quotes Mr. MARKWICK as having "found the aphides or dolphins, as they are called in some counties, infesting Wheat-ears in the second week of July, 1797. Mr. KIRBY also reported this aphis to be sufficiently common upon Barley and Oats as well as Wheat in the same year." With us it is on the exterior of the Oat, just where the flower is joined to the pedicel, as also in the chaff scales, but we conclude the Oat to be less convenient to the creature than the Wheat, and the Barley less so still, so that it is even rarer on the latter plant. CURTIS himself says: "On July 12, 1842, I detected many of the apterous (wingless) aphides amongst the chaff of the Wheat ears apparently sucking the stem, they were brown and shining. And on looking over some Wheat fields at Cranford with Mr. GRAHAM (in the middle of August, 1845), we found numbers of the aphides in every stage of growth, from minute ones that were just born to the full-sized and winged parents."

This creature then is no new visitant, it is doubtless a part of our native insect fauna, though there are seasons when from the weather being suitable, or when its enemies—for it has parasites which keep it under—are not numerous, it assumes, as in the present year, an unusual degree of importance. We can only hope that the injury done may not be so great as we suppose, as against such creatures, minute as they are, and indeed because they are so, we are all but powerless; still, by being in time with our work, by getting in our seed early, we may, perhaps, escape much of this as well as other evils to which the backward farmer is so much exposed. *B.*

ON the very important subject of the TURNIP FLY we are asked by a correspondent to announce that he is in possession of a secret dressing for the Turnip seed by which the attack of the fly on the young plant is altogether prevented. His friend, who farms about 800 acres, tells him that he has not lost a plant of Turnip by the fly for 40 years, and gave him his receipt for preparing the seed. The great drawback to his method of doing it was, that the seed must be used in the next day or two or it would be spoiled. He has now, however, been making experiments for the last 7 or 8 years, with the view of overcoming this difficulty, and is happy to say he has this season succeeded. He has this season sown seed side by side, prepared and not prepared; the prepared seed comes up days sooner than the other and grows stronger plants, and although the ground was swarming with flies, and they might be seen perched among the plants almost everywhere, they did not touch these. The plants from the seed not prepared came up much more slowly, and were devoured as soon as they made their appearance.

Now, this is just the case in which all influence of any publicity we can command must be used for the purpose of putting readers on their guard against what is certain to mislead them. Our Correspondent no doubt writes in good faith, and is confident that he has that which is a genuine safeguard against the attack of the fly—we are equally confident that no dressing of the seed will be of any avail whatever for the prevention of the fly—the taste of the young leaves will be equally attractive to it, and will be altogether unaffected by whatever may be wrapped around the seed.

APPEARANCE OF THE CROPS.

ABERDEEN: *Huntly, July* 16.—It is too early with us to give a decided opinion of the grain crops. As far as they have come they are promising, but perhaps a fortnight later than last year. They are likely at present to be an average crop, but not up to the crop of 1863. Hay will be under an average; Potatos look healthy; Turnips are now making rapid progress; Pasture Grass has been abundant. Sunshine, such as we have had this week, with occasional showers, would greatly brighten the prospects of the harvest. *James Macdonald.*

AYRSHIRE: *July* 14.—1. Wheat, generally thin, owing to the severity of the spring frosts; considerably less than average. 2. Oats, very thick, but short of straw, owing to drought; will be an average crop I think. 3. Barley, Bere, Rye, &c.: of these crops I need scarcely report, as little or none are grown in this district. 4. Beans promise to be a fine crop, generally thick and healthy. 5. Potatos very healthy, and those already raised turning well out; will probably be considerably above average; no appearance of disease yet. 6. Turnips and Mangels; the former generally looking well, but likely to suffer soon from drought, as the land is already so dry as to have checked their growth; the latter healthy though not forward. 7. Hay, generally a very miserable crop, not more than one-third of a good crop; thin of root, and, owing to the dry weather in May, did not thicken. Pastures are likewise exceedingly poor, and in most cases in this neighbourhood house feeding for dairy stock has had to be resorted to. Rain is much wanted for pastures and green crops. *Andrew W. Ralston.*

BEDFORD: *Biddenham, July* 14.—I consider the Wheat and Barley promise an average crop, but I cannot give an opinion upon the effect the present cold nights may have upon the quality. Oats, Beans, and roots of all descriptions are below an average crop through the want of rain, and I do not recollect the pastures so bare of keeping at this season of the year. *William Lavender.*

CHESHIRE: *Spital Cottage, Wirral, July* 21.—So far as my observation goes, and from inquiries made, I believe the following will be about correct. With regard to the maggot mentioned it is new here; eggs seem to have been laid by some insect at the root of Cabbage or Turnip, which turn to a bunch of white maggots, and they entirely destroy the fibre of the plant. I have lost some thousand garden Cabbages in my fields this year from the pest. Hay crops quite one-third short of an average. Pastures have been very unproductive all the season, and are now bare. Wheat: rather short in the straw and thin on the ground, but healthy and promising (about an average). Oats: generally very short in the straw and inferior, a few fine exceptions. Barley: not much grown. Beans have been most promising, but the late hot dry weather has stopped their growth, and the yield cannot yet be predicted with certainty. Peas: none grown. Mangel Wurzel: various. Swedes: fair but rather late; this crop is beginning to suffer in places (my own are affected) from white maggots, which destroy the fibre and are particularly destructive this year among Cabbages in fields and gardens. Potatos: good crop, and no disease at present. *W. B. Burnham.*

DEVONSHIRE: *Tavistock, July* 19.—The promise of crops has been considerably reduced by the continued hot and dry weather which we have had, and which here is so very unusual. Wheat is short in the straw—indeed the same remark applies to all corn crops; and, except where the spring corn was put in early, and on land in good condition, the whole must be light. On clay lands in poor condition many Oats are scarcely more than a foot long; and Wheat put in on wet land is a very light inferior crop. The hay crop is very light, probably half an average. Mangels are very variable, on the whole not good; and the same may be said of Swedes and Turnips, for during the excessive heat and drought of the last six weeks no progress has been made. *John Benson.*

ESSEX: *Walton-on-the-Naze, July* 20.—Along the eastern coast of this county and for several miles inland the crops of Wheat, Barley, Oats, and Beans promise full and abundant crops. Occasionally where the cultivated soil rests upon gravel they are light, as they are everywhere this dry summer under the same conditions. Barley, especially, ripening too fast to be of good quality for malting purposes. Upon the chalky clays which form a large portion of the land in the northern parts of this county, the prospect for harvest is equal to and I think beyond an average yield, the only drawback being damage to the Wheat from red-gum, amounting perhaps to 1-10th of the grain. Root crops: Mangels are very variable—very good upon deep mixed soils, and bad upon light. Of Turnips, nothing can be predicted at this early period, but if rain does not come soon Swedes must be a failure. The heavy land farmer will this year have a great advantage over the cultivator of light. Beans short but well podded. Peas not generally good. Harvest will partially be ready in 10 or 12 days; generally it will not commence before the second or third week in August. Hot dry weather in July is favourable for the ripening of grain. No rain here since July 3. *Henry Dixon, Dorward's Hall, Witham.*

HAMPSHIRE: *Bursledon, Southampton, July* 18.—The Wheat crop since coming into ear has never shown over an average; but as we approach harvest the chance of an average crop daily diminishes. Barley under average; the crop is going off prematurely, and must therefore prove under an average both in quantity and quality. The Oat crop, which at one time also promised a full crop, will now be considerably under an average. Peas very irregular; the early sown a fair crop; later sowings will yield no kinds, and is being cut for hay, fed by sheep, &c. Beans various and under average. Roots: the early sown Mangels, Swedes, Carrots, &c., are in some instances a good plant, but the root crop as a whole is not likely to prove an average if rain came immediately, as the season is too far gone. Hay under an average, but well got up; after Grass and feed unusually short and bad. Potatos sound, but small and short crop. *Joseph Blandell.*——I give you below a brief summary of our agricultural prospects. Wheat varies very much, some very good, some very bad; promises to fill well, and in that case will be an average crop, but nearly one-third less than last year. Barley and Oats: the early sown generally good, later sown vary much: will be rather under average. Peas, early sown fair, backward very bad; under average. Turnips and Swede crop: the best at a standstill for want of rain; the main crop will be utterly lost, unless a thorough ground rain within 10 days. Mangel indifferent. Potatos a full average, forward, and at present free from disease. Hay excellent in quality, but one third deficient in quantity. Wheat harvest will commence partially about the 25th inst., and become general within a few days afterwards. *J. T. Twynam, Winchester, July* 14.

HEREFORDSHIRE: *Baysham Court, Ross, July* 14.—In our early spring all kinds of vegetation appeared to promise an abundant yield as a reward for the labours of the husbandman, and the cultivation of the land was in a most forward state from the very favourable nature of the weather for out-door operations, but unfortunately for our growing crops that state of weather has continued without intermission, and the stock farmer is now driven to his wit's end to know what to do for green food; his store of winter keep is and will be very light, as the pastures where spring grazed and afterwards kept for mowing were thoroughly burnt up, and the idea of mowing generally abandoned. The other pastures not producing more than an average of half the swathe of former years, and the Clovers proving one of the worst crops ever seen, will all tend to increase his cares for many months to come, and although the condition of the hay and Clover secured is extremely good, the quality is much impaired from over-ripeness before mowing. The anxious desire has been that a bountiful Providence would bless his efforts with some genial showers, or what would be still better, a good soak of rain; but that desire has been thwarted, and the cold easterly winds of spring, and frosty nights followed by a hot burning sun by day, have rapidly told upon not only the pastures but all other growing crops. The

Wheat crop will be one of the worst for some years past, as a heavy crop is quite the exception, and is only to be found where planted early with the land in good first-class condition; a few crops of early planted spring Wheat are occasionally to be found very good, but as a rule there will be a great deficiency in these crops, which have for several years been planted to a very considerable extent. The early planted Barleys are good, the later are, like the spring Wheat, wretchedly bad, and many acres of each have been grazed off the land, ploughed, and put to Rape or Turnips. The same may be said of Peas, and the Bean crops will also be very much below an average. The Vetches are burnt up and blighted. The Mangels are a thin bad crop, and although in some cases, where the land was of a very fine tilth, the Turnips and Swedes are a good plant, and despite the dryness of the weather grow well, yet the general crop is so far a failure. There will be an abundant crop of fruit, both Apples and Pears, although not so great as at one time expected. The Hops have until within a few days promised well, but many have now become blighted, and fears are entertained respecting the general crop, this being a most precarious time upon that uncertain plant. There are some cases of the lambs suffering with a complaint which for the past few years has carried off many hundreds from the flocks of this and adjoining counties. This adds to the embarrassment of the flock-master. The cattle stock do wonderfully well, considering the apparent want of food. *T. Duckham.*

Herts: *Near St. Alban's, July* 18.—Wheat: various, good crop on heavy land, light crop on gravel, early sown much missed in the ear; ten bushels per acre below last year. Barley: various, good crop on deep soils, light and blighted on gravel. Oats: short in straw, and deficient in crop. Peas: fair crop, but injured by the drought and vermin. Beans: average, but injured by the fly in places. Hay: scarcely half a crop, second Clovers unpromising. Turnips: a good plant, but very late. Mangels: a good plant, but stopped by the drought.

Kent: *Isle of Thanet, July* 19.—Rain is at present much wanted for most of our crops; green food of every kind is scarce; the deficiency of water on many farms is seriously felt, and if we do not get rain soon the supply of winter keep will be very short. Mangels and Swedes have planted well, but in consequence of the dry weather their growth (particularly the latter) is very slow; but little of the common Turnip seed has vegetated, and it is now quite useless to sow again. Clover and Grass hay has been secured in fine condition, but the crop has been generally light, and we have no prospect of any second cut of Clover, and can have but little rowen or aftermath of any kind without rain soon. Wheat again promises to be a great crop, though not equal to last year, as it is in many places a thin plant, and generally short in straw. Barley, considering the dry weather, looks well, and on good tilths, where it has been well managed and duly cared for, will be an abundant crop; on thin poor soils, and where it has been cross-tilthed, it is showing a tendency to ripen prematurely, and is of two or three colours. Oats are much shorter of straw than usual, and will prove deficient in quantity and quality. Some are already cut, which is a week sooner than their appearance indicated a fortnight since. The common Hog Peas, particularly where planted early, are good; other varieties will be a poor crop and an inferior sample. Winter Beans bid fair to be an average crop, but nearly all the Beans planted in spring are very inferior. Potatos are at present free from disease, though all the early sorts are very small, and rain is much wanted for the late ones. Fruit of all sorts is more than usually abundant. *Wm. Manser.*

Lancashire: *Holker, Newton in Cartmel, July* 15.—I think the crops of grain in this neighbourhood will be about an average. There is not so much straw as usual, but I think the grain looks well, and if the present fine weather lasts it will continue to improve. The hay crops (especially the sown Grass) are light but very well secured. For some time the Grass crops were at a stand still, but they are now growing fast and look promising. I travelled from Fleetwood to London, and from London to Leeds last week, and I thought the grain crops generally were light, and I could see no green crops. *Geo. Drury.*

Lincolnshire: *Long Sutton.*—I think the following remarks upon our harvest and green crops will apply to all the marshland and Fen districts. Wheat: the Wheat crops equal if they do not excel those of any part of the country. They are full, well grown, and with but a few exceptions possess a good average caring, but by no means equal to last year. In many parts of the Fens they are too heavy and rank. A few warm sunny days are much wanted to cause the ears to fill better, otherwise the grain will be coarse in quality. Oats: the Oat crop is a very irregular one; some few splendid crops are to be seen, but as a whole it cannot be a full average crop. Barley: the Barley crop is a much more extensive one than I have ever known, and to all appearance likely to prove well. The cold weather has not injured it. Beans: the Bean crops flowered most profusely, and as there was a full plant everywhere a large crop was anticipated. Much disappointment however has arisen owing to the pods not setting. It will not yield an average produce. Peas: the Pea crops are good and promise well. Both Beans and Oats are nearly free from aphis. Potatos: this is likely to be a good and yielding crop. Some early varieties are now lifting. Mangels: this is a very defective crop, being thin and backward. Swedes: this is a very irregular crop. The fly has been active. It will not be a full average. Turnips: these came up well and look promising. Coleseed is only now seeding, but as the land is in good order and weather more suitable a fair crop may be looked for. Clovers and seeds have yielded but poor crops, and much difficulty was experienced in getting it in order for stocking. Hay is a very short crop and is making slowly. The weather for the past month has been very cold and free from rains. *J. Clarke.*——*Caistor, July* 19.—The Wheat is a light crop, much less than last year in bulk, but, I think, is promising to be good in quality, the dry weather is in favour of its being good in quality; I think I shall have part ready to begin cutting in three weeks, but I believe it will not be general before a month (but will partly depend upon the weather). Barley on good land is doing well, and will be a full crop, but on light sandy land is suffering from the dry weather and will be deficient. Oats generally will be a light crop. The winter Beans will be a fine crop; but the spring Beans will be deficient. The Turnips are suffering partly from the wireworm, and the dry weather is much against them; we have plenty of plants where the wireworm does not attack them. We have little or no Mangels in this neighbourhood; the season generally has been too cold for them. *Jas. E. Dixon.*

Mid-Lothian: *Pumpherston, Mid Calder, N.B.*—Wheat in appearance is scarcely an average. Barley, full average. Oats after Grass, under average in length of straw; after green crop, full average. Beans, full average. Turnips, promising in appearance. Potatos, very good in some fields, very deficient in others, the settings being affected by dry rot; upon the whole under average. Hay considerably under average. *Peter McLagan.*

Morayshire: *Forres.*—Notwithstanding the peculiarity of the season, crops in general have a very promising appearance. The Wheat is vigorous, and has been in bloom for the last eight days under a brilliant sunshine. To-day the temperature in the sun is 115°. On some farms the crop is less extensive than usual. This is what might be expected; for although the crop of last year was excellent in quality, and very abundant, yet that of the previous three years was, on account of the cold seasons, very deficient. Barley promises to be a full crop, and the present appearance is not inferior to that of last year. Oats appear very unequal in many parts, and generally there will be a deficiency of straw, particularly where the crop has succeeded Grass. Beans and Peas are not generally cultivated in this county. Notwithstanding 22 rainy days in June, and five rainy days in the first week of July, yielding altogether about 4½ inches, the hay crop is under an average, showing that moisture, even on a soil open and congenial, must be accompanied with heat in order to secure a heavy crop of hay. Turnips, including Swedes, have been unusually difficult to manage this season. A great extent was laid down during the month of May, the ground became very dry towards the middle of that month, and the ravages of the fly were unusually great; then followed the frost at the end of the month, indicating 3° of frost here on the 30th, and 4° on the last day of May, which was fatal on many farms, particularly in the upland districts, where resowing became general. The mode of laying down the crop the second time was somewhat diversified; that most successful was to pass the harrows along the drills, and disturbing the soil; then a dusting of fermented bone-meal, Peruvian guano, phospho-guano, or dissolved coprolites was applied, to the value of about 20*s.* per acre; these manures were most successful in the order in which they are named, except that the guanos were equal, the latter being hardly better than lime-shells, dissolved with about four times their bulk of decayed weeds, and at about a fourth part the cost of the dissolved coprolites. After applying the manure the drills were set up afresh, and the seeds immediately sown. Another mode was to harrow down the drills, set them up afresh, and sow the seeds without any second manuring. The weather being quite moist, some parts were sown without the drills being disturbed any farther than by the operation of the sowing machine. According to the last method the Turnips will come to the hoe fully three weeks later than by the first mode, the second mode as to growth intermediate. The most of these second sowings of Turnip are now being singled, and the Turnip crop generally has a healthy appearance. The Potato crop looks very unequal, and generally speaking, the plants appear so feeble that an average can hardly be expected, even where late in coming up, and where they escaped the frost in May. Drumhead Cabbages are generally a failure from canker at the root. Mangel Wurzel, on account of the recent late seasons, is almost entirely given up, and reckoned inferior to Swedes in our climate. *John Grigor, Forres, Nurseries.*

Norfolk: *Denver, July* 16.—The present appearance of the crops in this district is various. They are looking well on the lands that are well farmed, except where they have been eaten down with game all winter. They have never overcome the constant nibbling they have undergone, look spiry and thin, and cannot be more than three-quarters of a crop, and some not more than half, and this is not all, for when the crop is destroyed the place is filled with weeds. Barley is looking well on the cool-bottomed lands, but on the gravelly and light soils it will ripen prematurely. It is changing colour very fast, and if rain does not come very soon a deal of the Barley will be injured. Oats are the worst crop I ever remember; many of them not worth harvesting, and will be cut and given to cattle. Beans and Peas promise fairly if the lice do not meddle with them. There are a few on some of the Beans. The late-sown Beans have flowered well, but whether they will form pods this dry time, I cannot tell at present. The pastures cut a sorry figure, and the seeds are burnt up, but still the stock have done well up to the present time. *Thos. Brown.*

North Wilts: *Swindon.*—The appearance of the crops in this neighbourhood is quite equal, perhaps I may be justified in saying superior, to those I have seen in other districts, which may be accounted for in some measure by our different soils being able to withstand the dry weather we have had the last three months better than many others, and perhaps we have had our share of the light storms that have fallen during that time, having had 4½ inches of rain, or about 1½ inch in each month. On the best farmed deep land the Wheat is good, and likely to be over average; on the thinner and poorer soils, it is weaker and rather scrawly; there is also more red gum or injury from the Wheat-midge than last year, especially under the hedges and sheltered places, and in a few instances I have seen some white blight, both of which will affect the yield; still on the whole I expect a full average crop of Wheat in this neighbourhood. The Barley generally looks promising, with the exception of some late planted, but I think there is less late Barley this year, as the root crops were consumed earlier than usual this spring. Oats are not so well spoken of, as the Barley being very short of straw, the pulse crops will also grow less straw than the last few years; but there has been a thick blossom, and it is yet too early to speak of the produce. The root crops are quite as promising as one can expect under the circumstances. If we get rain soon it is not too late for a good crop; but if the present drought continues much longer, we may have a considerable failure; where they have been put in with the liquid drill (as nearly all our district is), there is a good plant up to the present time, but where not I hear the case is different. The Clover and Grass varies considerably, some good, and some light, on the whole a moderate crop, and where due patience has been exercised some first-rate hay has been made. The cow leases are got very bare of Grass, and as a natural consequence the yield of milk is already fallen off to some extent, and with no immediate prospect of rain, the stockmaster must soon become anxious for the welfare of his stock. *T. A., July* 12.

Staffordshire: *Mitton, Penkridge, July* 20.—Wheat is thin on the ground, and ripening irregularly. Barley is the best crop: I think a good one. Oats vary very much; generally a light crop. Peas, a fair crop. Beans are drooping the last few days, and I fear the upper pods will not fill. Turnips: prospect bad; a considerable breadth sown, but few plants large enough to hoe. Hay all gathered in fine condition; the crops very light, and aftermath suffering greatly from drought. *Thomas Byrd.*

Suffolk: *Framlingham.*—Our prospects are very fine. Wheat: very good indeed, but not equal to last year. Barley: very fine and heavy, in places lodged. Beans and Peas good. Oats: none grown. Potatos: not grown, but in gardens very good. Clover and Grass very light crops. A commercial gentleman told me that in his rounds he found East Suffolk a most favoured district. Our Mangels are very promising. Turnips: no report yet. Swedes: scarcely grown on our heavier soils. The sand-land districts have given unfavourable reports all through the spring, and do not give a better appearance. A neighbour made the tour to West England, Wales, and home by Oxford; saw nowhere so fine a prospect as in "home, sweet home." Our harvest will not be early, say middle of August. Barleys quite green, and Wheats in blossom. Since writing I have heard many observations of the damage to our Wheat by the midge. I had before heard of it, but did not think much of the reports. To-day having heard more of them, think it right to apprise you of it. *Geo. Edwards.*

Wilts: *Avebury, Chippenham.*—I am pleased to say, I can give you a more favourable account of the appearance of the crops than a week ago. The last few days have been much more congenial than when so very cold and frosty nights. Wheat, Barley, and Oats, I think, will be an average crop. Beans and Peas very doubtful. Hay crop very short, made well. Swede and Turnips not lost, provided we get rain shortly. *Geo. Brown.*

Worcestershire: *Vale of Evesham.*—In reply to your request I beg to say that the Wheat on the strong well cultivated soils is very good, a full average crop; but on the poor shallow soils it has withered away lately in patches, is very irregular in height, and will be a poor crop. The Barley on almost every description of soil is looking well, and will be a full average crop. The Oats are very promising. The autumn-planted Beans were an entire failure; those that were planted the early part of February are very fine and good, but the late plants are very much covered with

blight and small in the pods and poor. Peas are variable; some very good, and others almost a failure from the long continued drought and blight. Vetches are tolerably good. Hay a very light crop on the uplands, but better on the meadow land. A great proportion of the Clover failed last season, so that the quantity mown was unimportant, but it was secured in good condition. The cutting of Oats and Barley will commence next week, and some of the early Wheat will be ready for the hook and sickle about the 5th August. The Mangels have again failed to a very large extent. The Swedes and Turnips are poor at present, wanting rain. Apples are plentiful but small, and the Pears are a poor crop, the cold weather causing them to fall off the trees, in some instances completely blackened through the core. Stock of all descriptions are doing well on the "roast meat" and plenty of water, but rain is very much wanted. ——, *Elms, near Pershore.*

YORKSHIRE: *Outwood Hall, near Wakefield.*—Wheat: very healthy, but rather late, and very thick on the ground; likely to yield a good average crop. Barley: particularly promising, but late. Oats: particularly promising, but late. Beans: seldom have looked better or cleaner. Turnips: very backward for want of rain, and do not promise a good crop. Hay: light crops, but well got. Clover: very fair crops and well got. Peas: few grown in this neighbourhood, but what are now on the ground, good. We have a steam-ploughing company in this district, which is doing great things and answers very well, both to the company as to remuneration, and to those employing the implements. *Henry Briggs.* —— *Rainton, near Thirsk, July* 14.—Wheat is mostly a thin crop, though lately much improved, very much below the last year in bulk; as to yield too soon to offer an opinion. Barley fair crop, though not bulky in straw. Oats decidedly bad. Beans very good in appearance, but yet much flower upon the stem. Meadow hay light crop. Broad Clover (mown) fair crop. Turnips generally backward; those sown in May mostly destroyed by Turnip fly and sown over; those early in June are doing tolerably well, but grow slowly. The weather has been much too cold for the rapid growth of Turnips. We have now, yesterday and to-day, fine sun and genial heat, and I greatly hope that we are now going to have summer weather. *Peter Stevenson.*

WHAT IS CONDITION?—No. V.

ALL investigators of agricultural truth have had to lament, whether farmers, or writers on farming, the great discrepancy of recorded results and practice. Nature is ever ready to answer questions put to her, and does answer them, but it is in a way and language of her own. Seasons will vary, crops will vary, animals will fat one year faster than another. The routine of farm work is always varying, and so does the master himself; for how often have we not seen one man grow rich and another poor on the same land and under, to all appearance, similar circumstances. It is from this ever uncertain quality of Nature's answers, or rather from an inability to read them with any certainty, that we are driven to the use of averages, relying upon the corrective power of each result over the others. We took refuge in this expedient in ascertaining the truth of our first proposition, that one-half of the proteine in the food was excreted in dung. We shall have to rely on it again for the second truth—that one-sixth of it is assimilated in the increased flesh of a fatting animal; or, in other words, as 1 lb. of nitrogen is contained in 28 lbs. of meat (dead weight) that 6 lbs. of nitrogen consumed will produce 28 lbs. of increase, or 4½ times its own weight. In the results of feeding, which have been from time to time published in the Royal Agricultural Society's "Journal," I find instances of much larger produce than this, but they are generally extreme results of very carefully conducted experiments on picked animals, and under the most favourable circumstances. I think the average I have taken is what most farmers would expect to realise from a proper mixture of wholesome food given to ordinarily good stock. I find it generally received that a bushel of Barley will make a stone of pig meat, and that a quarter of Beans per week to 100 sheep, when penned on good aftermath, will increase them 2½ lb. each. Each of these results will be in the ratio above stated of 4½ lb. of meat for each lb. of nitrogen consumed in the food, or 28 lb. of meat for every 1 lb. assimilated out of six so consumed. Of course these figures will vary, as I have said just now, with the temperature, the season, the attendance and the quality of the animal; in these is the farmer's judgment shown by selecting the one and controlling the other. I believe, from my own experience and what I can gather from others, sufficient margin has been left for ordinary cases of ill success, and that in the hands of a man up to his business they will generally be exceeded. Now supposing them to be true, and that every pound of nitrogen so consumed will produce 4½ lb. of butcher's meat, worth at present prices 2*s.* 6*d.*, we have the means of ascertaining whether any and which of the favourite feeding stuffs can be economically employed for that purpose, as far at least as this constituent of the food is concerned. I keep the attention fixed upon this constituent of the food as of the dung, not because I think it the most necessary or the most fattening ingredient of the food; far from it. I believe the carbonised or fatty ingredients to be so; but because among the recognised foods which are found by experience to be wholesome and profitable, these constituents are generally found in excess of the demands of the animal; and the nitrogenous or flesh-forming constituents were likely to be deficient. I have therefore for convenience sake left them entirely out of consideration for the present. The following then are the calculated values of the common feeding stuffs, including the manurial value, but exclusive of the necessary expenses of attendance, interest of money invested, and any serious loss by death, or contagious disease:—

	Containing of Nitrogen.	Should produce of Meat.	Worth, at 6*d.* per lb.	Add Value of Dung.	Total Value.
	lbs.	lbs.	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Hay, 1 ton	40	180	4 10 0	0 10 0	5 0 0
Indian Corn, 1 ton ..	88	396	9 18 0	2 4 0	10 2 0
Oilcake, 1 ton.. ..	105	466	11 13 0	2 12 0	13 15 0
Beans or Peas, 1 qr...	28	126	3 3 0	0 7 0	3 10 0
Barley, 1 qr.	16	72	1 16 0	0 8 0	2 4 0
Malt dust, 1 sack? ..	3	13	0 6 6	0 1 6	0 8 0
Roots, or, Green food } 1 ton ..	3	13	0 6 6	0 1 6	0 8 0

Does experience, the great test of truth, bear out these figures? Do they represent with any accuracy the feeding and manuring values of the several articles? I think to a great extent they do. I think the generally allowed feeding value of hay at 3*l.* the ton, and the common price of roots, 6*l.* per acre, are as near as may be in the same proportion to their calculated values, as the above are the actual prices of cake and grain. Such being the case there would appear to be a large margin of profit on feeding animals for market, but from this calculated profit heavy deductions have to be made. I have mentioned the items of interest of money, attendance, risk of death or disease; to these must be added the liability to error in judgment in buying lean stock which weighs heavily on the inexperienced — the fact that lean stock is bought at a higher price per lb. than is realised by the fatted animal; and in the case of any but a farmer entering on the business, the difficulty of procuring the needful accommodation, and the purchase of straw or some substitute. These, I think, are sufficient reasons to deter the consumer or the butcher from all attempts at fattening their meat for themselves, although to a certain extent it might pay them, and has been done—but on the other hand I rely on the figures I have quoted as showing that a farmer possessing the necessary accommodation, capital, and judgment, need not be deterred by any anticipated loss from increasing to the utmost his live stock on his land; they promise him a satisfactory interest for his money, with his manure for nothing. And on mere commercial considerations I think no other conclusion could be expected. The farmer has so complete a monopoly of the meat market, that the competition of the world at large has little or no influence on this produce. Now if this is so, and our previous calculations hold good, that 1*l.* worth of nitrogenous manure per acre, or 40 lbs. weight of nitrogen, will produce one extra quarter of Wheat, we can ascertain how much stock a farmer should fat to realise this extra quarter over the acres he has annually in corn. This amount we have seen would remain as the residue from the consumption of 2 tons of common hay, half a ton of Indian Corn, rather less of oilcake, or from about 3 quarters of Beans and Barley, and half an acre of good root crops. And by taking the same figures in connexion with our former conclusion, that where 1 lb. of nitrogen was consumed, 4½ lb. of meat ought to be produced, and ½ lb. left in the dung, we shall see that about 9 lb. of meat fatted should produce 1 lb., or rather over 40 stone dead weight of increase to manure 1 acre. And this residuary manure, which in a former letter was shown to be cheap at 6*d.* the pound, I now venture to assert can be had for nothing. Cautioning the reader again, as I did in my former letter, that these results can only be expected from moderate good land, worth at least 1*l.* per acre; that it must be well farmed, clean, and pulverised; that the manure made in the yards must be protected with the utmost care, and the whole management of the farm conducted with judgment, accuracy, and economy. And who of us does not fail in some of these particulars? Who ever succeeds in realising all that he contemplated? Surely here are reasons enough for shortcomings without accusing the elements or the blight, the game or the vermin, as causes of an ill success. If we faithfully follow the teaching of Nature, and take pains to use the knowledge we possess, we shall find materials of success within our power sufficient to counterbalance those over which we have no control. And I venture to assure my brother farmers that one secret of success is to maintain a high condition in their land. *J. B. M.*

AN IMPORTANT WARNING.

CALVES KILLED BY EATING THE HEADS OF ITALIAN RYE-GRASS.

As my painful experience in this matter may be useful to some of my brother agriculturists, I communicate it for their information.

I generally wean and rear about 30 Short-horn calves annually, and hitherto very successfully—selling them fat at 26 months old at an average of 22*l.* each. This year we in no way differed from our usual mode of feeding, except that instead of cutting up their food we turned them out recently on some Italian Rye-grass which had been previously mowed for hay, and then guanoed and sewage-irrigated.

The calves were in excellent condition, and well fed, according to my usual custom; in fact, were removed from a bit of pasture where they received Cotton-cake, malt combs, and bran.

After being on the Italian Rye-grass for a week or 10 days, four of them appeared stupid, and did not feed well. They also had a short, dry cough.

We attributed this to a cold from the severe white frosts, and easterly winds. They were removed to a shed, fed on cut Rye-grass, &c., and recovered. Subsequently others were attacked and received a dose of salts, but did not recover, and died after paroxysms of suffering and violence. On a post-mortem examination of the large, also of the third or digesting stomach (called locally the Thumble crop), there was in the latter, and especially in the fourth stomach or abomasium, considerable inflammation. The veterinary surgeon and ourselves finding both stomachs filled with Cotton cake and Rye-grass, came to the conclusion that it was the Cotton cake that caused the death, and accordingly I alarmed my worthy suppliers by taking to them the stomachs and claiming the amount. The remaining calves were deprived of their cotton cake, and confined to some very nice luxuriant Rye-grass, some of it in seed heads on which the veterinary surgeon predicted they would do well. However, after another 48 hours, all the calves looked queer, with a short cough, an attempt to discharge some food from the mouth, a very hot tongue, short breathing and yawning, with eyes watering, and uneasy movements indicating pain—lying down, rising up, &c., and within 24 hours two more died. On examining the stomachs, no cotton cake, nothing but nice looking Rye-grass heads in short lengths could be found. This was extremely perplexing: the cotton cake was acquitted, nor could we convict the Rye-grass, because similar calves at home were daily fed with Italian Rye-grass, luxuriant, cut into chaff and mixed with the usual addition of cotton cake, malt combs, and bran. After taxing our faculties in various ways to account for it, I suggested that the only difference could possibly be that in one case (at home) the animals were compelled to consume the lower or smooth portion of the Rye-grass as well as the spiked or bearded and seeded top. In the field I noticed that the calves invariably and naturally, when put upon a fresh piece, take off the tops, and thus fill their stomachs with irritating substances, hard to digest, and unaccompanied by the proper proportion of smooth stem; possibly the heads contained too much stimulating matter; whereas the happy amalgamation of the rich head and poorer stalk appears to have preserved the health of the animals which had cut up food. The turtle soup, unmitigated by a bulky but comparatively unnutritious substance, appears to have caused stagnation, inflammation and death. Had these animals been limited to a given space in a given time, and thus consumed the whole plant, no danger might probably have arisen. An agricultural friend assured me this morning that both he and a neighbour had lost stock under similar circumstances, only that it was very rich old pasture instead of Rye-grass.

On our poor stiff-clay pastures, although richly sewaged and guanoed, I have never sustained loss. We know that the Rye-grass under sewage grows rapidly, and is what is called rank or succulent, and yet it never purges or scours animals. We observed that the third and fourth stomachs were highly inflamed, although nearly empty, while the rumen or great stomach, although full of food, did not show signs of inflammation. Whether we must attribute the irritation to the dry, tough, spongy condition of the seed heads or to their chemical composition I must leave to wiser heads, hoping that they will enlighten me. It is well-known on our heath that if young geese at this seed-ripening period go "a benting," that is, taking off the dry seed-heads of ordinary heath Grass, it will kill them, unless they first get a good feed of dry corn. Old geese are not in such danger. Several of my neighbours have lost calves and sheep lately. How far this is owing to the very dry weather is also worth considering, for these losses do not occur when there are occasional showers—at least that is stated to me by my bailiff and some of my neighbours. I have lost 10 out of 30 of my nice Short-horn calves, say not less than 60*l.*, besides the injury done to the 20 which are recovering. Their stomachs appear sore for some time after the attack, as indicated by their short stomach cough; and they lose flesh, and are weak from medicine and the necessity for feeding them moderately on cooling and succulent food. I have reason to know that even cows, horses, bullocks, lambs, and sheep are in danger under similar circumstances. Altogether both my bailiff and myself have come to a decided conclusion that it pays to cut up everything, especially for young animals. I have many head of stock doing well under cover on the very food that killed my calves. Old ewes folded on a limited piece of this Italian Rye-grass, and having cotton cake, &c., are doing well and suffer no injury. Some of my neighbours' fat shearling sheep have recently died. They were upon Red Clover, cotton cake, and water. He attributes their death to the cotton cake, because he found much of it packed

hard in the small or digesting stomach. I do not think it is the cake—I am puzzled in these matters.

May it not be that during this very dry weather the heads or seed pods of both Rye-grass and Clover, when unmixed with the due proportion of stem, are too rich or too toughly indigestible, thus irritating and inflaming the stomach. The sheep were worthless when killed, being very red all over, and my neighbour says that when he bled them it seemed as though they would never stop bleeding. Surely, the seed-heads and Cotton-cake together, were too rich and too forcing.

Some persons are apt to mistake the short cough for lung complaint. As only about 10 per cent. of the flock were affected, we may assume that some had consumed more seed-heads and less stalk than their fellows. *J. J. Mechi, July*, 1864.

P.S. My neighbour removed his sheep to another field, and stopped the supply of Cotton-cake. Still he loses some, so that the mischief, whatever may be its cause, arose in the Clover field where they were folded. It should be noted that this Red Clover field had not been mown, but had been before fed with sheep and manured. Now, we know that lambs fed upon the second growth of Clover, the first growth of which has been fed off by sheep, are almost sure to die. Has this been the case with these sheep? Generally speaking, old sheep do not suffer in this way. These were shearlings, nearly fat. I have 40 old ewes doing well, folded in Italian Rye-grass, having 1 lb. a day of Cotton-cake. Lambs would die under the same conditions.

I hope that your Correspondents will throw some light on this subject.

Cotton-cake makers are especially interested in this matter, because the losses are frequently attributed to the use of cotton cake. My own experience is favourable to the use of cotton cake, if of a bright or yellow colour, which indicates that it has been made from good unheated seed, and that there is not an undue proportion of husk. Black, hard cotton cake is very objectionable. I hope we shall soon return to the pure entirely decorticated.

July 21.—I have reason to believe that cotton cake is quite guiltless in this question of losses.

Another of my neighbours has lost about 70*l.* worth of calves, a cow, and two sheep.

Some time since a dealer lost many shearlings and two rams in my neighbourhood by being turned into a Ryegrass and Clover field during a dry July.

July 23.—I have come to definite conclusions as to the cause of death in these cases; it is neither due to cotton cake nor to the physical form of the Clover or Rye-grass, but is owing to its rankness or over-luxuriance. My neighbour's Clover was folded, the first growth, with shearling sheep eating cotton cake or corn food. The second time, when the second growth was nicely on the head, the same shearling sheep went on to it, still eating cotton cake and cut Tares. The consequence is that several of them have died of aundice and inflammation.

Yesterday we had a singular instance of the poisonous nature of the succulent rapidly grown Italian Rye-grass. Four days ago it was sewaged, having been prior to the former growth also guanoed. In four days it had grown from 4 to 5 inches, was of an intense green, and pronounced to be, by sharp practical men, just the food for lambs.

Well, we put on our lambs, taking care to do so in the evening, after they had been well fed. My bailiff accompanied them, and, within five minutes, turning accidentally round, he saw two of the lambs with their heads in the air staggering (stomach staggers it is called) and frothing at the mouth. He immediately saw the mischief, removed the lambs, and on their way back to a bare fold some of them vomited the Italian Rye-grass that they had just eaten, accompanied by frothy slime; others brought it up during the night. Some of them trembled, gaped, and showed all the same symptoms that my calves had done, such as rapid pulse, &c. Two or three of them are rather queer to-day.

I do hope that Professor Simonds, or some capable person will tell us how this is? If we mow this Grass, bring it home and cut it into chaff, all which tends to heat or dry it, it becomes wholesome food. The same remarks apply in degree to very succulent Tares. If the Italian Grass is brought home and given long and quite fresh to the calves it will kill them. It does not appear to injure old ewes as it does lambs or shearlings. The dry weather has something to do with it. In wet weather the evil is much diminished or disappears.

There is a growing and well-founded opinion among practical farmers that guano forces or flushes bulk at the cost of weight and quality. The proportion of ammonia seems too large and (chemically speaking) unnatural. There is nothing like good shed manure.

A GUANO CASE

AT THE COUNTY COURT, CARLISLE.

W. Slater *v.* Rae.—This action, adjourned from last Court for consideration of the judge, T. H. Ingham, Esq., was brought by Mr. Slater to recover 14*l.* 1*s.* 4*d.*, the amount of Patagonian guano supplied to defendant, who refused payment on the alleged ground that the guano was worthless.

His Honour said:—Undoubtedly when a person offers for sale a manure or any other article, by a certain name or title, the purchaser has a right to have delivered to him, quite independent of any warranty of guarantee, an article reasonably answering the description given and the purposes intended; but on the other hand the seller, as in this case, must not be held responsible for a misapplication of the article, or that moderate degree of uncertainty which it is admitted is incident to all these, what are called artificial manures, though that term is very improperly applied to guano. The manure now in question was sold by the plaintiff for Patagonian guano, a kind of guano, be it observed, of known inferiority. Then comes the question, did it reasonably answer the purpose which guano of this description ought to do? The defendant has produced evidence to show that it was almost worthless, that it produced in fact no visible effect upon his crop of Turnips at all; but he has never attempted to show that the same guano failed on its application by other parties. But we must now look at the evidence as given by the plaintiff, which, so far as appears, is wholly disinterested and unimpugnable. He has called several farmers who purchased of this very same cargo of guano, taken from the same vessel, at the same time and place, and they say they were perfectly satisfied with the result. How comes it then—for I believe the fact will not be denied—that the same article should have given different results in different hands? Now there is abundant evidence from a circular issued by the plaintiff, and which the defendant admits he got, wherein are testimonials from a great number of farmers, that the crop from this Patagonian guano depends very much indeed upon the nature and state of the soil to which it is applied. One tells you that he applied it to a black top porous soil, and it produced an excellent crop; and another tells you when applied to land ploughed out of old pasture, it produced no effect whatever. This proves an uncertainty for which I think the seller ought not to be held liable. Guano generally, but especially inferior guano, I know from experience will not have much or any effect upon poor stiff soil, which ought to have applied to it manure of more substance. As to the application of guano generally, we know that even with the very best Peruvian the crops will vary immensely, and the success always depends very much upon the power of absorption possessed by the soil, and the more porous and well-worked the soil is the greater the absorption, and of course as a certain consequence the greater the benefit in the application of all manures, because manure comes from the air on one side and from the earth on the other, and a proper working of the land and exposure of it to the air will often be as effective as an actual dressing of visible manure, inasmuch as the active but invisible ingredients of the air are absorbed by the soil to be made use of by the plant. It is quite absurd in any farmer to expect the same result from any manure, especially from these concentrated manures, when applied to badly worked land, as when applied to well worked, pulverised, absorbing land. But besides the various effects of the same guano on various soils, there is a most important matter in the mode of application, and which I constantly see farmers utterly disregard. Our greatest agricultural chemists emphatically say when giving advice how to apply these manures, "Always, if possible, apply it during showery weather. Always before application mix it with at least five or six times its weight of ashes or fine soil. The guano should on no account be allowed to come in direct contact with the seeds," and, it is added, (and these are the words of one of our most eminent agricultural chemists) "these rules, if attended to, will prevent the recurrence of those vexatious losses of time and capital, which many of our farmers have experienced for want of a due acquaintance with the properties of and correct modes of applying all these artificial manures." But there is another point to which I ought to advert, and it is this:—The guano brought from various countries, although beyond doubt a genuine unadulterated guano, varies considerably in the composition of its fertilising qualities. We know that the climates from which they all come are very dry, scarcely any rain falling, and the sun shining with vehement power, and, of course, the quality of the guano will be the best where the deposits happens to be the thickest, and it is not unreasonable to suppose that the quality of guano, from the enormous demand lessening the old deposits, will from year to year be found of inferior quality, coming, as it does, from newer and thinner deposits. But another reason why guano differs in composition is the fact that in some places the deposits are more exposed to the action of the spray of the sea and to the accumulation of sand brought by the prevailing winds. I mention these circumstances, because I am of opinion that if an individual, as in this case, imports a cargo of guano under a particular name, and there is nothing to show that it is not as genuine an article, as, taking these circumstances into account, it may fairly be expected to be, then he is not further responsible. The question really to be determined by the court is this:—Was the article sold by the plaintiff as Patagonian guano a natural, unadulterated article? Now it was alleged by the defendant's advocate that it was "a villanous compound." Where is the evidence of that? There is a very important piece of evidence on this point, adduced by the defendant, viz., the analysis of this very manure by an eminent chemist in Edinburgh, from a sample sent by the defendant, and which, to my mind, proves beyond a doubt that this was in no way whatever an adulterated manure; and what is more, I think, looking at the time when the analysis as issued by the plaintiff, and that obtained by the defendant are made. The slight difference, for it is but slight after all, which exists between the one and the other, is easily accounted for without in the least impugning the honesty of the analysis of the plaintiff. We all know that some of the constituents of all manures are volatile and go into the air. Ammonia, one of the most valuable constituents of all manures, is that which is most volatile, and on the other hand the least valuable constituents are always the least volatile and the most soluble. Now, the analysis, as stated in the plaintiff's circular, would be made, I presume, as early as April, at all events whilst that of the defendant's is not made until December, and the defendant tells us he had kept a small sample all that time in a paper bag, in some dry upper room. Now, I think this is an unfair way of dealing with this analytical process. What says a great agricultural chemist upon this point? He says: "if a sample of guano be wanted, half a pound should be taken from five or six bags containing the bulk, it should be mixed together until thoroughly incorporated, and to prevent evaporation and consequent deterioration, the sample should be wrapped up in a tinfoil or lead-leaf." But when we compare the respective analyses of plaintiff and defendant, they vary very little indeed, and they just vary in those very constituents which time most affects. We have less moisture, rather less ammonia, and more sand, and I think, therefore, that the defendant's analysis is not inconsistent with this guano having been, when purchased by him, a fair and reasonable sample of Patagonian guano. Looking to the very serious loss which follows, not only to the farmer but to the whole community, by the use of a worthless, adulterated manure, and which can only be discovered too late to renew the crop, I am sure our Courts of Law will always look with a very careful eye into this comparative new branch of trade. But, on the other hand, we must be careful to look at both sides, for we may discourage the interests of those who have capital and enterprise to import an article which has become almost a necessity to the agriculturist, and from which the entire public reap an advantage. I therefore give a verdict for the plaintiff, for the full amount—14*l.* 1*s.* 4*d.*—Mr. Wright; I am sure the agriculturists of the county will be deeply indebted to your Honour for your remarks.—*Carlisle Examiner.*

DAIRY FARMING.—No. II.

[The following passages on the fitness (and its causes) of the dairy districts are abridged from the second lecture on Dairy Farming given by Mr. Harrison, of Frocester Court, before the Royal Agricultural College.]

After an enumeration of those beds included in the secondary formation, which are fitted for dairy husbandry, and giving extracts from the reports of Mr. Caird, and of Mr. Dyke Acland and others to the Royal Agricultural Society, which show that the richer lands on the secondary formation are applied to grazing, and the second-rate and inferior Grass land to dairy farming, the lecture proceeds:—

From these few specimens you will see that the dairy land is considered only the second best, and this arises probably not simply from the fatting cattle requiring the most luxuriant herbage, so that they shall not require to work hard to obtain their food, but that it is better adapted to supply fat-forming food, whereas the second best soil furnishes the more leguminous herbage, which is best for cheese making. Much of the best cheese is thus made on poor farms, though the quantity per acre is moderate.

Now, how come such farms to have the character of poor? Do they really deserve it? We found the land in our union, which is situated on the lias formation, when examined by the Assessment Committee, to vary in value from under 18*s.* per acre for the wet clays with but little soil on them up to 60*s.* per acre, when there was a rich deep loamy covering. I believe that these wretched looking, starved fields, yielding 18*s.* per acre, are not so intrinsically poor, but that they afford to the disgrace of their owners, a striking specimen of the absence of that permanent improvement which the growing requirements of the country loudly demand.

Let us see what the circumstances are which give rise to this character. They will generally be found to have a thin soil lying upon the undisturbed lias formation, which had been subjected to the enormous pressure of the superincumbent oolites, &c., previous to its upheaval and denudation. Such subsoils are almost impervious to water, and consequently extremely difficult to drain. It is such lands as these whose wealth is as it were locked up, that deep cultivation by steam-power is to unlock, and I have little hesitation in saying that when so treated they will be found among the most productive soils of the country. I know the excellent effects of drainage and deep steam-digging (which as it were completes the drainage, or is at any rate on such land a necessary supplement to it), when under cultivation, and of draining alone when in Grass, but the drains require to be put very closely together.

I should add here that I have found a good dressing of manure after draining indispensable, this you will understand when you consider that the effect of the drainage of such land is to completely alter the herbage, the coarse Grasses delighting in a wet soil being replaced by finer and more nutritious ones. The former die or languish, and the effect for a time seems injurious unless by good manuring the growth of these substitutes be encouraged.

We frequently have pressed upon our attention the value of the vegetable mould, and there is no question that what is so-called is of vast agricultural importance.

What then is vegetable mould? Its name would imply that it is a mixture of vegetable remains with the few inches of the mineral matters of the earth lying on its surface, and we are told by some that it owes its value to the presence of this vegetable matter, and that by recklessly using up this supply we are impoverishing the soil as rapidly as we can. Now one thing is clear—that vegetable matter must decay or pass through the body of some creature before it can become food for plant growth. In peat we find it not subject to decay, arising from the soil on which it rests having been long soaked with water which has no outlet, and by the capillary attraction of the peat constantly drawing a supply from this source for evaporation; thus the peat is never dried, the air is excluded, tannin is formed, and the peat is preserved. In this condition it is useless as a manure or a medium for the growth of plants, but when decomposed it becomes valuable.

The less drained the land is the more must the dead roots of plants be similarly preserved, and thus the less useful for vegetation. Again, the more complete the drainage the more freely will the air circulate in the soil, and the more rapid the vegetable decomposition. But unless the soil be retentive, the more rapid also will be the dispersion of the new compounds formed from the decomposition. Arable culture by constantly exposing the soil to the sun and air facilitates decay and forces vegetation. But when we dig the mould in a rich pasture field we find it of the finest possible texture, free from stones or gravel of any kind, unless they have been put on the surface, and then, in the course of years, they are found gradually descending below it. How came the soil in this fine condition? How is it that these stones and gravels appear to sink into the earth? Could the mere vegetation bring the earth to the surface? Undoubtedly not. There is another

agency at work, to which I must now direct your attention—it is that of the earthworm.

The Operation and Use of the Earthworm.—You must frequently have observed in the arable fields in the autumn the remarkable manner in which pieces of stubble and vegetable refuse are drawn together in a star-like form round the holes of the earthworm, some pieces being partly drawn in. From this operation I think we may fairly infer that this is the worm's provision for the winter, and that such vegetable matter is its food. Again it seems evident that along with this it eats earthy matter, a provision in all probability to assist digestion. This earthy matter, mixed with the vegetable fœcal matter, is thrown up on the surface in the shape of wormcasts, beautifully fine in texture, and around which if you examine the Grass in the spring of the year, you will find the herbage looking more thriving than on the patches where there are none. Here then we have a compost of earthy and organic animal matter of the finest description thrown up for the nourishment of the Grass. If we examine further we shall find that the quantity thus thrown up varies immensely on different descriptions of soil. You are all aware that worms soon die when thrown into water, and you will find that wet undrained land does not suit their taste, and that upon such there are few worm casts Again, on sandy soils they are comparatively rare. As Mr. Thompson says, "those who in their boyhood dug for worms for ground bait are well aware that one spadeful of rich well manured loam will often do more towards supplying their wants than a whole hour's digging on poor sandy soil."

Are then the rich loams of our Grass lands the cause of their being there, or are they the manufacturers of them, delighting to increase and multiply in it with its extension? From my own observation of the influence of draining, I should say that on many of our clays if you remove the water the worms will multiply.

But you will be inclined to say—why spend so much time on such an insignificant subject?—the worm cannot appreciably ameliorate the soil or influence the growth of plants. Let us see.

Mr. Thompson tells us that on a sandy loam he found that wormcasts and decayed Grass roots unitedly accumulated a layer of soil not exceeding 1½ inches in 12 years, as tested by the descent of a well marked top dressing of mineral matter.

"But Mr. Wedgewood's experience (given in the "Penny Cyclopædia," by Mr. Darwin, article Lumbricus) was very different. In one field, which had been limed without having been ploughed 12½ years before, a layer of lumps of lime were found 3 inches below the surface. The soil below the lime was of a gravelly nature, whilst that above was of uniform firmness, excepting a line of black spots at a depth of 1 inch, the remains of cinders, which were spread over the field 3 years before." In this case we have an annual deposit of from ¼ to ⅓ of an inch of earthy compost by these little creatures.

"The second field examined was remarkable only from the cinders being now buried in a layer only an inch thick, 3 inches beneath the surface, which layer was in parts so continuous that the superficial mould was only attached to the subsoil by the longer roots of the Grass." Showing that the greater part of the herbage was deriving its nourishment from the upper part of the soil, which had been raised above the ashes by the earthworms.

"The history of the third field is more complete: previously to 15 years since it was waste land, but at that time it was drained, harrowed, ploughed, and well covered with burnt marl and cinders. It has not since been disturbed, and now supports a tolerably good pasture. The section here was turf ½ inch, mould 2½ inches, a layer 1½ inches thick composed of fragments of burnt clay, of cinders, and a few quartzy pebbles mingled with the earth; lastly about 4½ inches beneath the surface was the original black peaty soil." This gives about ¼ inch of earth raised to the surface yearly during 15 years.

Now a thickness of a third to a quarter of an inch of soil amounts to 30 or 40 cubic yards, or between 20 and 30 tons per acre—no mean result when we consider the amount of labour required to apply one-half of that quantity in the usual way on a small portion of the farm. Let us not then despise this agency.

It is stated by the Rev W. R. Bowditch in his interesting paper to the Royal Agricultural Society, "that a bowling-green at Penrith (45 yards by 32 yards) was watered with a solution of corrosive sublimate, after which 11 stones of worms were gathered, and 4 years before 20 stones." These weights correspond to 518 lbs. and 938 lbs per acre respectively. I have tested the accuracy of this and found worms at the rate of 1000 lbs. per acre in one part of a field when they appeared actively employed. Here, as Mr. Bowditch remarks, "there is cause adequate to the effect."

When we hear of an ox, whose weight when ready for the butcher would not probably exceed that of the worms, being fatted per acre, we pronounce without hesitation the land to be excellent, and the country covered with such an amount of stock would be a magnificent sight. But here we find a quiet subsoil worker carrying on from year's end to year's end his useful work, converting the decaying roots of the Grasses into manures; for he carries nothing off or out of the land as the farmer does from the surface, his manure and his body when he dies and decays becoming equally food for the plants, and silently depositing it, mixed with the finest earth, on the surface for the nourishment of the future vegetable growth.

We plough and cultivate our arable land, and expose it as much as we can to the influence of the atmosphere, that it may become disintegrated and capable of receiving the riches that the air and rainwater passing through it may impart, and is not Mr. Bowditch somewhat justified in asking the question "Is not this Nature's provision for the aeration of the soil of Grass land, which cannot be stirred by man? Are not worms his ploughman, bringing fresh soil to the surface for atmospheric disintegration, and opening channels in the earth to promote decomposition in them? May not the earth food of Grass plants depend principally upon the labours of earthworms?"

I go a step further and believe that they are the root pruners of the plants and consumers of this root growth when decaying, affording organic as well as mineral manure to the plants; and I think, as I have said, that with the aid of steam we may be able to stir the subsoil of our Grass land as well as of that under tillage, and thus both assist the drainage, aerate the land, encourage the multiplification and facilitate the working of these, as I believe, most valuable little creatures.

The Value of Bones as a Top-dressing.—Now if the view I have taken of the cause of the famous cheese dairy districts coinciding with a particular geological formation be correct, it follows as a consequence, that although the soil of some parts of this district, as Cheshire, may from the continued drain of phosphate of lime for a number of years, and its more porous nature than the lias and other soils, have become impoverished and require renovation by replacing in the shape of bone-dust that which has been taken away, still the subsoil will contain it in abundance, and that a judicious application of the subsoil to the surface would effect the same object. Now experience proves this to be correct.

Fifty years ago in Lancashire and Cheshire, which counties now derive so much benefit from the application of bones, red marl was the great source of fertilization. The enormous quantity, amounting to 200 or 300 loads per acre, sometimes put on the land, must always have remained a great barrier to its extensive use. Happily since then chemistry has come to the rescue, and concentrated manures are used instead. Mr. Paine and Professor Way, whilst examining the composition of the upper and lower strata of the green sand formation which lies immediately below the chalk, discovered large quantities of phosphate of lime and several layers of phosphatic nodules or coprolites containing 40 to 60 per cent. of bone earth.

When we consider, as Dr. Voelcker informs us, that superphosphate of lime probably constitutes fully three-fourths of all our chemically prepared fertilizers, and that the whole world is being ransacked to obtain materials for this manufacture, which is now carried on in England on a gigantic scale, and is rapidly extending on the Continent, we may judge of the importance of a careful analysis of marls in different localities, which may lead to the discovery of many now neglected, which are rich in phosphates and very valuable. As Dr. Voelcker remarks, "It is an interesting fact that in the neighbourhood of Swindon, where I am informed phosphatic manures are of no use, coprolites have been found. I have in my possession specimens of phosphatic nodules from the neighbourhood of Swindon, and highly phosphatic marls from other parts of Wiltshire. If in other localities phosphatic manures are unavailing, the intelligent observation of this apparently anomalous fact may then lead to the discovery of valuable deposits of mineral phosphates."

It may fairly be asked—may not other soils of the country besides those naturally so be made suitable for cheese making, by a judicious application of the mineral manures found wanting? I see no reason to doubt it, and we have an interesting case given by Mr. Dixon in his "Prize Essay on Manuring Grass Land," when 50 or 60 acres of land at Alvanley, near the forest of Delamere, in Cheshire, which had hardly any soil, nor had there been any attempt to cultivate it, no vegetable growing on the surface, except dwarfish Heaths, were covered with stone marl, and form now a most beautiful and luxuriant pasture.

Many fields which have been dressed with this peculiar marl are among the richest pastures of the district.

The lecturer then discusses the condition in which the dairy lands are placed in the hands of tenants; the state of non-equipment in which they are offered to tenants by their owners. This is especially true of the South-Western dairy districts. The Northern and Midland farms are better provided with buildings, which is perhaps owing to greater severity of climate. And on this point detailed information is then given.

The following recapitulation concludes the lecture:—

We have seen that the rich grazing and cheese-making district is naturally limited in extent, that from its geographical position, the geological formation on which it is situated, which is famous for phosphate of lime, it possesses a remarkable intrinsic value; which, however, is not duly appreciated generally by its possessors, as it is called the blot on English agriculture, calling loudly for improvement from its owners for their own sakes as well as their country's; and that notwithstanding the high rental it produces the accommodation is very frequently sadly deficient.

That within this district coprolitic and other phosphatic deposits are frequent, calling for the intelligent observation of those engaged in agricultural pursuits to discover fresh sources of supply, especially as phosphatic manures derived from these and other sources are being made on a gigantic scale not only for the United Kingdom but for Europe.

In the remaining lectures I shall confine myself more to the tenant's interest in the question, premising, however, that if Grass land improvement is to go a-head and overtake the proud lead that the more purely arable districts have got, the tenant's interest must be secured to him in a lease. He, like the arable farmer, may do much to permanently improve the value of his holding, and so be called upon to give up at short notice without remuneration that which has cost him much, and from which he has not had time to obtain any adequate return; besides this the value of his stock frequently bears a considerable proportion to the absolute value of the land, and it is hardly to be expected that he should go to great expense in improving his farm or his stock when he may be called upon to leave at a short notice and be obliged to sell off at possibly a great disadvantage.

Another point also I would name here (upon which, however, I shall have more to say afterwards, but I mention it here as it is a matter for the landlord's consideration), viz., that it is very decidedly to the advantage of every Grass farm that there should be a portion of arable land attached to it, both for the landlord's and tenant's sake. Some sandy or gravelly parts, or it may be clay with a thin soil, will generally be found, which may with advantage be brought under the plough.

HORSE BREEDING AND FEEDING.

[The following is the conclusion of the lecture by Mr. Barthropp on this subject, most of which appeared in a former Number of the *Agricultural Gazette*.]

HAVING made these few remarks on the feeding of cart horses, I will conclude by giving you the experience of a friend of mine who has paid great attention to the subject.

He has come to the conclusion that it is better, taking all things into consideration, to keep a small number of well fed horses than a large number of inferior fed. There is less outlay for horses, harness, &c.; fewer men are required to work them; there is no excuse for a small day's work being done if the horses are well fed and in good condition; besides which, if the horses are in good condition, the men naturally take a pride in attending to them, which they will not do if they are poor. His farm consists of 480 acres of arable, all heavy land and heavy mixed soil. He keeps 19 horses that are selected with a view to hardihood and activity, and he finds that large horses do not last so long as horses of medium size; in fact, he says, "Above all I dislike a large horse, even if he could pull a castle down at a slow pace." In the following scale the provender is charged at an average price of—Beans at 16*s.*, and Oats at 12*s.* per coomb; hay at 3*l.* 10*s.* per ton; and Beet-root or Swedes at 3*d.* per bushel. After harvest the horses are put upon full feed, for September, October, November, and half of December, and the allowance per week is—

Beans	.. 5 pecks	..	5*s.* 0*d.*		
Oats	.. 2 pecks	..	1 6		
Hay	.. 1 cwt.	..	3 6		
Root	.. 4 bush.	..	0 8		
			10 8	.. 15 weeks ..	£8 0 0

Half December, all January and February.

Beans	.. 3 pecks	..	3*s.* 0*d.*		
Hay	.. 1 cwt.	..	3 6		
Root	.. 4 bush.	..	0 8		
			7 2	.. 9 weeks ..	3 4 6

Half February, all March, April, and May.

Beans	.. 5 pecks	..	5*s.* 0*d.*		
Oats	.. 2 pecks	..	1 6		
Hay	.. 1 cwt.	..	3 6		
Root	.. 4 bush.	..	0 8		
			10 8	.. 15 weeks ..	8 0 0

June.

Beans	.. 5 pecks	..	5*s.* 0*d.*		
Oats	.. 2 pecks	..	1 6		
Grass or Tares	..	..	2 0		
			8 6	.. 4 weeks ..	1 14 0

July and August.

Beans	.. 3 pecks	..	3*s.* 0*d.*		
Clover, Grass, or Tares	..		3 0		
			6 0	.. 9 weeks ..	2 14 0

So that the cost of each horse would be £23 13 6

A discussion then ensued, during which Mr. D. SMITH, Jun., said:—Up to the present, for the cultivation of their farms, they had to depend principally upon the horse. The animal he should select for the work of the farm would be of the medium size, not too long in the leg, with a good middle, smart and active. In some situations the steepness of the hills, and the heaviness and retentive nature of the soil, might require more than ordinary strength; but upon the lands in cultivation in this neighbourhood a horse of medium size was best, for it cost much less to keep than a large one. He advocated the keeping of at least one brood mare. As Mr. Barthropp had gone so fully into the question of breeding, he merely alluded to it, and recommended that a colt should not be put to work till he had attained his third year, by which time he would have cost full 30*l.* As to keep, he recommended a good supply of nutritious food. From Michaelmas to June 1st, and from September 1st to Michaelmas, comprised about 40 weeks, during which the horse had the hardest work to perform, and during that period he should be fed almost, if not entirely, at the homestead, and during the remaining 12 he might be kept on green food. He had drawn up two tables of the feed of a horse for the year. The first was as follows:—

1½ cwt. of Hay or Clover per week for 40 weeks, at 4*l.* per ton	.. ..	£12	0 0
10 coombs Corn, at 15*s.*	.. .. ..	7	10 0
1 ton of straw and chaff	.. .. ..	2	0 0
50 bushels of roots, at 3*d.*	.. ..	0	12 6
12 weeks' Grass, at 4*s.* 6*d.* for 12 weeks		2	14 0
		£24	16 6

That would be feeding the horse at the rate per day of 24 lbs. hay, 6 straw and chaff, 7½ corn, 9 roots. Total 46½ lbs. The second scale was—

2 tons Clover	.. ..	£8	0 0
12 coombs Oats and Beans	.. ..	9	0 0
1½ tons straw	.. ..	3	10 0
50 bushels roots	.. ..	0	12 6
12 weeks' Grass	.. ..	2	14 0
		£23	16 6

He would, under this system, have 16 lbs. Clover, 9 lbs. Corn, 14 lbs. chaff, and 9 lbs. roots. Total, 48 lbs. per day. As to management, it was not right that the horse should be turned directly into the meadow. They did not take sufficient care of their horses, for as Mr. Barthropp had said of riding horses, by keeping them well they would get a much greater amount of work out of them. The stable should be at least 8 or 9 feet from ceiling to floor, well ventilated, cleaned out every day, and the wall whitened with lime-water. The rack should be as perpendicular as possible, so as to prevent the seeds getting into the horses' heads, and the manger should be rather deeper than they were in the habit of having, for the purpose of giving them rather more cut food. A friend of his had told him that he cut up his horses' food with a chaff cutter, and had a lad to feed them, the men who worked the horses having nothing to do with the feeding, and he found that a much cheaper system than the ordinary one. He had lived in several other counties besides Suffolk, and he did not know that in any it was the custom to turn the horses out into yards and pastures after the day's work as here. Economy was the great object they should study, and he should be pleased to find them acting upon a more economical plan than heretofore, if possible.

The Rev. J. H. GROOME said it occurred to him that one great cause of the defects which had arisen in the breed of horses in Ireland was that in their over anxiety to procure a certain kind of horse they had lost certain pure breeds. When he was a boy there was a

stock celebrated for trotting—the Shales stock; and he asked if it was not a pity that that stock had been lost, as it probably was very useful for crossing with pure racing stock? In the cart horses he remembered there formerly was a pure breed of bays, which had been lost, and he questioned whether they had been wise in losing the pure old stock of cart horses for the sake of such a matter of fashion as colour. The agricultural shows had been so far injurious as to set a particular fashion, and thus caused pure breeds to be lost. He also believed serious mischief resulted from the over-fatting of stallions. Great fatness was generally taken as a proof of a strong constitution; but was there no better criterion of a good constitution? The Yorkshire breeders did not use their riding stallions in such a fat state, but rather when in a hard condition; and why should not the same be the case with cart horses? He would like to know whether physiologically a given character might not be stamped on a race, and whether horses being kept excessively fat might not, in the course of many generations, produce such a change in the constitution of Suffolk cart horses that in the end the animal would be possessed of great fatting capabilities at the expense of his muscle, and degenerate from a muscular into an animal like the Short-horn bullock, with greater tendency to secrete fat?

The Chairman.—What do you think of that, Mr. Grey?

Mr. Grey (Parham).—Not anything. The fact of a horse getting fat was a proof of good constitution. If a horse would keep fat he did not want so much food. It was true riders were not made fat, but they were an entirely different race of horses. He thought the value of a travelling horse depended much on the leader; there were many leaders who were such drunken fools they did not know a horse from a donkey.

Mr. G. Goodwin said he never had a horse on his farm that he thought too fat.

Mr. George Jeaffreson said they would not injure a cart horse by allowing him to get fat, for the fat did not take the place of muscle in him whilst he had active exercise, and therein was the difference between the horse and the bullock; for the latter was shut up in a shed or yard, and never had any exercise, and the result was that fat took the place of muscle.

Mr. Barthropp, with reference to Mr. Groom's statement as to the Shales breed of trotting horses, said the decline of that breed was owing to the alteration in the method of travelling, which did away with the demand for trotting horses. Nevertheless, last year he was judge at a show in Yorkshire, where there was a class of 21 brood mares of this breed, with foals, and nearly as large a class of stallions. As to bay Suffolk horses, Mr. Catlin had some very fine teams of them, but there was always a doubt whether they were of the true Suffolk stock. With respect to the fatness of cart horses compared with riders, no one would think of showing a fat hunter or thorough-bred horse, because his body would be too big for his legs; and that sort of horse was not wanted fat and heavy; but in the cart horse weight was necessary. Mr. Jeaffreson had answered the question whether fatness would deteriorate the breed, and he might add that many entire horses travelled 20 miles a day, and still were what was called "beastly fat;" but a horse's fat would be found to be firm, whilst a bullock's was soft and pappy. He was surprised to hear any members advocate turning horses out at night into open yards. Let them only fancy a horse coming home on a foggy day in November in a very wet state. He was shut up from three to eight o'clock in a stable, and it was impossible for his coat, which would then be long, to get dry. He got into a cold sweat, and was then turned out into the open yard when, very likely, it was raining fast. When he lived at Cretingham he had a covered yard open on one side—not warmer than outside, but dry and sheltered from the rain.

Mr. Barnes, Kettleburgh, said the horse would be dry after being in the stable from three to eight.

Mr. Barthropp.—Let him be dry. What is the use of turning him out to get wet?

Mr. Barnes.—We can't do anything else.

Mr. Barthropp said the landlords ought to build covered yards.

AGRICULTURAL MEMORANDA.

Plenty of Green Food in hot dry Weather.—I am induced again to mention that so long as you have a good field of green Beans, so long have you a first-rate green food for either cows, fattening bullocks, or growing animals. They must be passed through the chaff-cutter. It is surprising how far an acre of good Beans will go in this way; and in my experience they pay much more money in meat and manure when so used than when submitted to the expensive process of harvesting, grinding, and wasting the straw. By mixing the cut Beans with a little cut Cabbage and rather dry Italian Rye-grass we can most comfortably keep our stock going, while others (having Beans too) are selling their stock at a sacrifice. My man finds them most excellent for producing rich milk. *J. J. Mechi, July* 23.

Wheat too thick from a peck an Acre.—Methinks some of my three-bushel friends will feel very angry at this heading, but it is true that my bailiff just now said to me "I have been walking into our peck an acre, and it is really too thick in some places, for I counted 48 stems from one kernel, and the kernels were placed only 4½ inches apart." This was some of Hallett's, and the other lands are our own Crabbe's Wheat. Both are excellent pieces, and look like 6 quarters an acre from less than one peck. The rest of the field is an excellent crop of rough chaff white from 1 bushel, but it would have been better thinner. My peck an acre of Barley promises to beat the 6 pecks; and a peck of Oats which were put in much later than the rest of the field come close to the 2 bushels. There is a great advantage in one respect in having some of your corn thinner than the rest; it comes in course at harverst, say a few days or a week later than the rest. *J. J. Mechi, July.*

Apparent Agricultural Discrepancies.—I am assured that Messrs. Way and other chemists have filtered liquified manure through glass tubes filled with dry earth, and that the fluid comes out as clear water. May I ask those gentlemen to be good enough to try the same experiment with earth not dry, but damp or wet, the same as we almost always find it at a foot or two below the surface. I think that they will then no longer find the fluid clear or colourless; that is, provided the original fluid was a compound of solid and liquid excreta fluidised. I am induced to ask for this trial, because when applying our fluidised sewage to our land we so frequently make the drains (at intervals of 30 to 50 feet and 5 feet deep) discharge abundantly the sewage, coloured and even smelling. I presume the difference must arise from the opposite conditions of the soil as to dryness or moisture. *J. J. Mechi, July*, 1864.

Home Correspondence.

Cereal Cultivation and Germinating.—The readers of the *Agricultural Gazette* will recollect that last autumn an elaborate and carefully-drawn up Table was printed in it to show the defective germinating powers of Wheat, to which it was my intention to have replied at the time; but a fearful accident having befallen me at the railway station at Manningtree prevented my doing so; but now, as, I am thankful to be able to say, I have been mercifully restored to nearly my former state of health, I will enable those of my friends who think my papers worth reading, to contrast my opinion and my practice and experiments with the results of the experiments and the conclusions drawn from them of the learned author of the above referred-to Table; and *in limine* I may as well say at once that I differed entirely from the opinions on the germinating powers of Wheat of the learned author of that Table. The subject is a most important one; and in agriculture none can be imagined more so, and my reputation as an amateur farmer and writer on agriculture I consider is somewhat involved in the settling of it. It is well known to very many kind friends, I hope, that I reside in one of the finest agricultural districts in this country—fields teeming and abounding with corn, and now ripening for harvest, are all around me, and so near that I cannot look out of a window but I have the inexpressible pleasure, beyond a few flowers which I take especial delight to look on also and contemplate, of beholding one of the most enrapturing spectacles in the world that thoughtful man can behold and enjoy—namely, a field of ripening corn. For example, on the south of me and just beyond my lawn, is my own most wonderful crop of Wheat—wonderful I write, because I will now challenge it not only against all England for quality and quantity, but against all the world, and yet there was only a single gram of Wheat to a square foot of ground; nor has the land been touched by any instrument whatever since the seed was put into the ground; and it is the 10th time in succession that the same land has been cropped with Wheat, and every year the crop is the same. Nay, further, there is Barley growing in the same way just by the side of it, and I will here stake my reputation upon it that there shall be not fewer than from 1200 to 1500-fold both of Wheat and Barley for every grain of seed I put into the ground; and as I have said, every year is the same, so that on one field I rented for 17 years (and I had it in Wheat 13 years out of the 17). I averaged 44 bushels an acre, and as fine Wheat as ever was grown, and yet I never exceeded 2 pecks of seed an acre, and sometimes scarcely 1 peck. But to proceed. On the west side of my house are Wheat fields in succession, for I know not how far, and on the east is a large field of Oats, and on the north one of Barley, but these are not mine, but are good according to the long established system of farming; but I mention these merely to show that I live in the midst of growing crops of corn, and that I in consequence ought to know something about them and how they are produced. But to return to myself and the learned author's germinating Table. It appears that the real object the author of the Table had was to prop up the system of thick seeding, and if he be correct I am growing these wonderful crops by magic; I by no means profess to do this, but I require a seed for every root I grow. But the author states that in some kinds of Wheat only about 50 per cent. will grow, in others only about 40 per cent., and in others not more than 30, and of one kind only 18 grains in 100 will grow. Now, as I grow all kinds of Wheat I can lay hold of, and as I sometimes do not use four quarts of seed an acre, what kind of crops should I have if only a 50, or 40, or 30, or an 18th per cent. grew? But last autumn I obtained 16 samples of different kinds of Wheat from corn dealers and farmers, and of each I put 100 grains in each of 16 rows, and not 2 per cent. failed to germinate and grow out of the whole. But from my experience, now extending to half a century, I have found but very little difference in the germinating powers of Wheat; and be it observed that I never doctor my seed Wheat, but just as I receive it from the seller or producer I put it into the ground, and yet I never have any smut, nor failing of any to germinate and grow. But my readers are sceptical, and if so, I ask them to come and see for themselves; they will see Wheat growing 6 feet high, and so strong that no storms can beat it down, and as thick on the ground as it can grow, and from about 3 quarts—quarts, I repeat—an acre of seed, and of Barley the same, though, of course, not so high; but from some grains of seeds of this cereal, I can count now 60 ears, and some of the ears have 38 and some few 40 grains in each. Then why should I sow more? I cannot tell, for if I were, I should most likely have worse crops, but I could not have better. But in conclusion, as gentlemen in my profession say, I will state that when Wheat fails to grow, in general the fault is in the sower and not in the seed; "in general" I write, but not always, but then when it does fail, one kind is as likely to fail nearly as another; but the least likely are the bearded kinds, but in none as to kinds will the difference be 5 per cent. But if my readers are still sceptical, I inform them that a neighbour of mine had a pint of Wheat which he had put into the middle of a large field drilled with Wheat at about 7 pecks an acre. The pint was sufficient for the fifth of an acre, and that fifth is now, my neighbour and his men believe, equal in quantity and quality to the rest of the field—but would this have been the case had only half the pint, or a quarter, or the fifth part of it grown? But will the author of the Table referred to be so good as to explain these cases? and if so I will give him a few more. *Geo. Wilkins, Wix Parsonage, July* 11.

Harvest Time near Rugby.—I send you a statement of the time of the corn crop coming into ear and flower on the Holbrook Grange farm for the last six years, as I find that some of your readers have been looking for its being carried on. I make it for six years instead of five as heretofore, because the season of 1859 was similar to what this season has been hitherto.

	Corn in Ear.			Wheat in Flower.
	Wheat.	Barley.	Oats.	
1859 ..	June 14	June 12	June 11	June 19
1860 ..	,, 24	,, 24	July 2	July 5
1861 ..	,, 14	,, 21	June 20	June 21
1862 ..	,, 20	July 4	July 10	,, 27
1863 ..	,, 15	June 13	None sown	,, 20
1864 ..	,, 15	,, 17	June 15	,, 21

	Begin Harvest.			Finish Harvest.
	Wheat.	Barley.	Oats.	
1859 ..	August 8	July 28	July 27	August 20
1860 ..	September 1	Sept. 11	August 28	October 3
1861 ..	August 16	August 26	,, 10	August 31
1862 ..	,, 25	September 5	September 8	Sept. 20
1863 ..	,, 8	August 3	....	,, 8

Chas. M. Caldecott, Holbrook Grange, Rugby, July 16.

Small-pox in Sheep.—I feel that it is only due to the memory of my late father to contradict some statements made by Professor Simonds in his address to the Royal Agricultural Society in Hanover Square, on Small-pox in Sheep. I have no wish to enter into any discussion upon the subject of vaccination; but I cannot allow some remarks which he has made relative to my father to pass unnoticed, they being untrue. First Mr. Simonds says "he does not believe Mr. Overman's sheep were ever vaccinated." It is to be regretted that Mr. Simonds should have assailed the statement of one who, being gone, is unable himself to refute it; but I, as Mr. Simonds justly observes, "knew all about it," and I equally maintain that my father's sheep were vaccinated. Secondly, Mr. Simonds says—"Mr. Overman sent two sheep, after being pressed to do so, to the farm of a neighbour, in whose flock the disease existed, and those two sheep were both inoculated on that farm—one of them by a farmer who, I do not hesitate to say, at that time performed the operation of inoculating far better than many so-called veterinary practitioners—I mean Mr. Cooke, of Litcham. Mr. Cooke inoculated one of the sheep of Mr. Overman to which I have just alluded; and Mr. Baldwin, a veterinary surgeon of Fakenham, inoculated the other. Both sheep took the disease, and passed through its several stages; and the result was in no way different from what was observed in hundreds of other sheep that were unprotected or even vaccinated. But Mr. Overman, in his letter to the *Norwich Mercury*, absolutely denied that these sheep did take the disease." Now the real facts are these:—My father, far from being pressed to send these sheep to his neighbour's flock, did it by his own particular wish, and as he also most correctly stated in the *Norwich Mercury*, these sheep did not take the disease. One never ailed anything, the other died from gangrene in the wound made by that farmer in inoculating the sheep, who, according to Professor Simonds, performed the operation so well. I wish to add from my own experience that this is no isolated case, for several rams were let by my father to those flockmasters who had smallpox in their flocks. Of

these he never lost one; but few of them took the disease, and those that did had it in the mildest form. I am only too glad that I am able to recollect these circumstances, and also to hold the letters which my father wrote at the time, and so refute the slur which Professor Simonds has thrown on my father, who was known and acknowledged as a man of strict truth and integrity, and one who, dealing with plain facts as they stood, was not a man to be "pressed into a corner" by the professor. I was glad to find that Government had determined to test vaccination and inoculation fairly one against the other; but I was surprised that the trial should be entrusted to a person so prejudiced in favour of inoculation as Mr. Simonds. Before a just conclusion can be arrived at, men unbiassed towards either system should be selected for the task. *Henry Overman, Weasenham, Rougham, Norfolk, July* 8.

New System of Drainage.—Mr. David Robie, Kilbarchan, Paisley, states that he has discovered a new, and, as he calls it, a novel system of drainage, upon which principle land lying below the level of rivers or canals may be drained, the mouth of the outlet pipe to pass into the river at any distance required below the surface. This idea is not at all new; it is new I will grant to call public attention to this mode of drainage, but those who have previously conceived these ideas have refrained from placing them before the public, for the very good reason that this system of drainage would never become of public utility from the difficulties with which it is surrounded, and therefore it is more novel than useful. As Mr. Robie's new system of drainage does not appear to have been very clearly explained, and probably many of your readers may not understand its principles, I will endeavour as far as I am able to make it intelligible to them. In the first place, estates lying low and bounded by canals or rivers, the waters of which are either on a level or above the surface of the ground, cannot be drained by Mr. Robie's new system, for this reason: the pressure of water at the mouth of the outlet pipe in the river would exceed the force and pressure of water in the pipes, because all the water to be conveyed was below the surface of the river, therefore the drains would always be full, and whether the river flowed quickly or sluggishly it would never draw the water out of the drains. But supposing these estates were bounded on one side by lands rising to a considerable elevation, and on the other by a river above the surface of the ground, in this case it is quite practicable to convey water through a main drain into the river several feet below its surface, but in order to accomplish this object, providing there were no strong springs rising up in these estates, the waters of which would be supplied from the high surrounding lands, and conveyed there in a natural main drain, an artificial main drain would have to be laid to convey the water from these elevated lands through the low estates, before water could be discharged from a main drain into a river running above the surface of the ground which required to be drained. The whole secret of this new system of drainage consists in having water brought from high ground, either by natural or artificial means, and this column of water must be of sufficient force to overcome the resistance the water in the river would offer at the mouth of the outlet, and this force would be exercised in proportion to the distance the outlet pipe was below the surface of the river. On this principle Artesian wells are constructed, and springs rise from the bottom of lakes and the beds of rivers. *H. Harrison, York, July* 19.

Artesian Drainage.—I have been much interested in an account given in your Paper of the 16th inst. by my ingenious friend Mr. Robie, of Kilbarchan, of experiments made in draining upon a new principle (which may be termed the Artesian system—or better the Robian system), as it strongly corroborates an article written by me some time ago, and rejected last winter by a leading London magazine, in which I pointed out that the cause usually given of the use of water in Artesian wells was erroneous and quite inadequate to the effect, and that the real cause was internal pressure upwards, and also the force of gravity downwards, forcing a lighter body (water) upwards from out of a compressible heavier body (water and earth held together by capillary attraction). This system of drainage, as described by Mr. Robie, which your readers will remember, was employed to remove the superfluous moisture from a flat piece of ground where the outfall is only about a foot lower than the surface of the field. Here it was found that by laying pipes from three to four feet deep, with an upright pipe at the exit end as high up as the surface of the open water-course or streamlet, the drain water rushed up out of the pipe drain into the water-course, and drained the field more effectually than pipes or open cuts about a foot deep, that is as deep as have a clearance of run by the natural level. Here Mr. Robie does not give the cause of the flow by the deeper drains. This my rejected theory explains. In my piece on Artesian wells, &c., I stated that the pressure of gravity of the incumbent mass (earth or rock water-logged) exceeding the weight of a column of water of the same depth, is one of the causes of the high rise of water in Artesian wells. Here it may be asked, how does the weight of the incumbent mass down as far as the bottom of the bore not send the bottom water up through the mass itself? The reason is that the attraction of cohesion between the earth and water so far resists the rise, while in the smooth bore the attraction of the sides will scarcely be known, and as the depth increases the pressure increases—that is, the difference of weight between the water column and moist earth column increases, while the attraction of cohesion may not increase. In the case of the flat field alluded to, the whole weight of the mass of moist earth down to the low pipes, minus the weight of a column of water of the same depth, must press the water out from the soil into the pipes and out at the raised mouth, while in the case of pipes only a foot deep, or open cuts, capillary attraction would almost balance the force of gravity. There may also be bottom springs from earth cracks, natural artesian wells under the lacustrine deposit of the flat field, which find a more ready vent through the deep pipes. When a boy I have often amused myself by shaking the sand with my feet at the side of a river, thus causing little streamlets of water to run down from the sand. The shaking loosens the attraction of cohesion or capillary attraction, and the greater weight of the sand particles causes them to reside and the water to rise and run down in streamlets; but it was my impression then that the shaking pumped up the water from the river. In the case of ground being well shaken by an earthquake, streams of water are often ejected from the earthquake cracks. I may recur to the different causes of the rise of water in artesian bores, the reservoirs of water in the interior and their cause, the cultivation of climate, the reclaiming of arid lands and desert. Had one-tenth of the means employed to obtain a knowledge of polar lands and seas been directed to obtain a knowledge of the interior of the earth, our knowledge might not have been so fruitless. *Patrick Matthew, Gourdie Hill, Errol, July* 25.

On Drainage where the Outfall is Defective.—In your Papers of June 25th and July 16th my name is mentioned in connection with this subject. I have not seen Mr. Robie's article in the *Ulster Journal*; but I believe that the subject would lose nothing at his hands. At present I am prevented from entering upon the topic, for the following reason. In February, 1863, I forwarded a paper thereon to the Royal Agricultural Society. The subject excited some interest among the Journal Committee, and two gentlemen were sent down to investigate the facts. They examined the instances referred to, on the rivers Tame and Oxon, and the article (with certain modifications) is now in type. At least the proof was revised by me some months since, and it will, I presume, be published in due course. Though I regret this long delay, yet if it leads to a fuller investigation (of apparently anomalous results) in the interval, I doubt not but it is all for the best. As regards Mr. Palin's drainage in Cheshire, your description shows it to be a very judiciously executed work; but, as you well know, there are many river-side meadows where it would be impracticable to carry up an outfall main. And to such cases, Mr. Dumolo's system (which my article describes, and which my practice has simply followed) is assuredly best adapted. *T. Bowick, Britannia Farm, Bedford, July* 20.

Societies.

AGRICULTURAL OF ENGLAND: *Newcastle.* — The great meeting has proved to be a great success; the attendance and receipts stand third on the list of the Society's experience. The attendance and receipts for the years 1861, 1862, 1863, and 1864 have been as follows:—

NUMBER OF PERSONS ADMITTED TO THE SHOW-YARD AT

	1st Day.	2d Day.	3d Day.	4th Day.	5th Day.
Leeds	2,027	10,283	18,823	73,824	40,824
Battersea.....	5,873	10,083	8,644	28,092	38,131
Worcester	811	7,684	9,293	38,282	19,469
Newcastle	720	10,232	15,949	56,569	30,811

AMOUNT OF MONEY TAKEN.

	Leeds.			Battersea.			Worcester.			Newcastle.		
	£	s.	d.	£	s.	d.	£	s.	d.	£.	s.	d.
1st day ..	506	15	0	1468	5	0	404	19	6	360	0	0
2d day ..	1285	17	6	1257	0	0	960	12	1	1279	0	0
3d day ..	2352	17	6	1080	10	0	1162	2	0	1993	12	6
4th day ..	3691	4	0	1404	12	0	1915	18	5	2828	19	0
5th day ..	2041	4	0	1906	11	0	973	9	0	1540	11	0

The total number of visitors during the Show at Leeds were 145,781; at Battersea, on five days, 90,828; at Worcester, 75,539; and at Newcastle, 114,281.

The total amount of money taken at Leeds was 9877*l.* 18*s.*; at Battersea, on the specified days, 7116*l.* 18*s.*; at Worcester, 5417*l.* 1*s.*; and at Newcastle, 8002*l.* 2*s.* 6*d.*

The following are the numbers of catalogues sold during the five days of the Show:—Monday, 1918; Tuesday, 4077; Wednesday, 3920; Thursday, 3379; Friday, 1844. Total, 15,138.

At the general meeting of the Society in the Show-yard on Friday thanks were cordially and unanimously voted to the civic authorities, to the railways, to the local committee, and to Lord Feversham, the retiring President. In acknowledging this last vote his lordship said:—

It has been stated by gentlemen present that they are indebted to the Society for the visit which it has paid to Newcastle upon this occasion: but I can assure them that if any compliment has been paid by the Society to Newcastle it has been most fully reciprocated by all classes of the inhabitants of this great, important, populous manufacturing and commercial town, and we feel grateful to all classes of its inhabitants for the exertions and efforts which they made in bringing our great exhibition to a successful issue. We are greatly indebted to the Mayor and Corporation for their hearty welcome and cordial reception, for their sumptuous and unbounded hospitality, and as well for the great support which we have received from all classes of the community, and for the interest which has been shown in the object of the Society by the great mass of the population of Newcastle, as evinced by the numbers who have frequented the show yard, and who have greatly contributed thereby to the success of our meeting. It may, perhaps, not be an exaggeration to say that there are circumstances in the year 1864 which will ever be memorable in the annals of the institution. I believe there have been a greater number of members elected during the present year than in any former one. At the head of them is the heir-apparent to the throne of this country, his Royal Highness the Prince of Wales, who intimated in the most gracious manner his desire to be enrolled a governor of the institution. Then, also, we have for the first time visited the same locality in which the meeting was held 18 years ago. This, perhaps, is not, however, a surprising circumstance, invited, as we were, in the most honourable and liberal manner; and as so many years have elapsed since the period of the former meeting, since those who were then hardly out of their cradles have now grown up to be men and women, it is not extraordinary that the Society should have again selected, after so long an interval, Newcastle-upon-Tyne for the purpose of holding its meeting. I can assure you, gentlemen, it is no mere set form of words when I say that I find myself at a loss for terms adequate to express my deep sense of gratitude for the kind and liberal assistance which I have received during my year of office. The day has now arrived for me to return into your hands the high and important position of President of the Royal Agricultural Society. I do so with the utmost feelings of gratitude and thankfulness. I am aware of many deficiencies, but I may say it has been my study and desire to uphold the interests of the institution to the best of my ability and power, and I have to thank you most sincerely for the able assistance and the devotion of your time, and labour, and exertions to the accomplishment of the end. I have now, therefore, only to bid you, and all the Council and members of the Society generally, a hearty farewell, hoping that at the conclusion of this meeting you will, all of you, arrive at your homes safely and prosperously, carrying with you pleasing and grateful reminiscences of the very successful meeting which we have had on this second occasion at Newcastle-upon-Tyne.

We add the remainder of the prize list in those classes for the awards in which we had not last week sufficient room.

SPECIAL PRIZES, AMOUNTING TO 410*l.*,

OFFERED BY THE LOCAL COMMITTEE OF NEWCASTLE-UPON TYNE.

CATTLE.

GALLOWAY.

CLASS 116. For the best Bull, calved previous to January 1, 1863.—1st, 20*l.*, William Roper, of Ling Side, Seberham, Cumberland; 2d, 10*l.*, W. and J. Shennan, of Bailig, Kirkcudbright. Highly Commended: Alexander Jardine, of Applegarth, Lockerbie, N.B. Commended: William Kier, of Whithaugh, Newcastleton, Roxburghshire.

CLASS 117. For the best Bull, calved after January 1, 1863.—1st, 20*l.*, Sir Frederick U. Graham, Bart., of Netherby; 2d, 10*l.*, John Cunningham, of Whitecairn, Dalbeattie, Kirkcudbright. Highly Commended: James Graham, of Meikle Culloch, Dalbeattie.

CLASS 118. For the best Cow, above 3 years old.—1st, 15*l.*, James Graham, of Meikle Culloch; 2d, 5*l.*, John Cunningham, of Whitecairn.

CLASS 119. For the best Heifer, calved previous to January 1, 1863.—1st, 10*l.*, James Graham, of Meikle Culloch, Dalbeattie.

SHEEP.

BORDER LEICESTER.

CLASS 121. For the best Shearling Ram.—1st, 15*l.*, George Simson, of Courthill, Kelso; 2d, 5*l.*, Thomas Simson, of Blainslie, Lauder. Highly Commended: George Simson.

CLASS 122. For the best Ram of any other age.—1st, 15*l.*, Thomas Simson, of Blainslie; 2d, 5*l.*, Messrs. J. Wilson and John Angus, of Whitefield, Northumberland.

CLASS 123. For the best Pen of 5 Shearling Ewes, of the same flock.—1st, 10*l.*, George Simson, of Courthill; 2d, 5*l.*, John Angus, of Whitefield.

CLASS 124. For the best Pen of 5 Ewes, of any other age, of the same flock.—1st, 10*l.*, William Purvey, of Lintow, Burnfoot, Kelso; 2d, 5*l.*, John Angus.

HERDWICK.

CLASS 125. For the best Shearling Ram.—1st, 15*l.*, George Browne, of Troutbeck, Windermere; 2d, 5*l.*, Richard Browne, Troutbeck, Windermere. Highly Commended: Edward Nelson, Gatesgarth, Buttermere.

CLASS 126. For the best Ram of any other age.—1st, 15*l.*, Edward Nelson; 2d, 5*l.*, George Browne. Highly Commended Daniel Crosthwaite, Hallgarth, Keswick.

CLASS 127. For the best Pen of 5 Shearling Ewes, of the same flock.—1st, 10*l.*, George Browne; 2d, 5*l.*, Edward Nelson. Commended: George Irving, Wythrop Hall, Cockermouth.

HORSES.

CLASS 128. For the best Hunter—Mare or Gelding, 5 or 6 years old.—1st, 20*l.*, Sir Frederick U. Graham, Bart., of Netherby; 2d, 5*l.*, John B. Booth, Killerby. Commended: Thomas Sutton, Alwent Hall, Darlington.

CLASS 129. For the best Hunter—Mare or Gelding, 4 years old.—1st, 20*l.*, William Hardisty Clark, of Hook, Howden; 2d, 5*l.*, Robert Norman & Son, of High Close. Commended: J. W. Pease, of Woodlands, Darlington.

CLASS 130. For the best Hunter—Colt or Filly, 3 years old.—1st, 10*l.*, to James B. Boyd, of Doddington, Wooler. Commended: R. W. Hodgson, of North Dene, Gateshead.

CLASS 131. For the best Roadster—Stallion.—1st, 15*l.*, Thomas Brown, of Butterwick, Barton-le-Street; 2d, Thomas Altham Jackson, Quarry Gap, Bradford.

CLASS 132. For the best Roadster—Mare or Gelding, above 4 years and not exceeding 12 years old, and also not exceeding 15 hands.—10*l.*, Richard Forster, White House, Gateshead, Durham. Commended: J. W. Pease, Woodlands, Darlington.

CLASS 133. For the best Pony—Gelding, of any age, not exceeding 14 hands.—5*l.*, Rev. John Alexander Blackett Ord, Whitfield Hall, Haydon Bridge. Commended: Christopher Don Barker, 12, Carlton Place, Newcastle-upon-Tyne.

CLASS 134. For the best Mountain Mare Pony, of any age, not exceeding 13½ hands, with foal at foot or stinted.—10*l.*, Thomas Ramsay, Sherburn Green, Gateshead.

CLASS 135. For the best Pair of Mares or Geldings, or Mare and Gelding, for Agricultural purposes.—1st, 10*l.*, Charles Mark Palmer, Whitley Park, Newcastle-upon Tyne. Highly Commended; Duke of Hamilton and Brandon; Commended: J. W. Pease.

CLASS 136. For the best Gelding or Filly, 3 years old, for Agricultural purposes.—1st, 10*l.*, Duke of Hamilton and Brandon; 2d, 5*l.*, John Muir, of Lochfergus, Kirkcudbright.

CLASS 137. For the best Gelding, 2 years old, for Agricultural purposes.—1st, 5*l.*, John Laws, Kearsley, Matfen.

CLASS 138. For the best Gelding or Filly, 1-year old, for Agricultural purposes.—1st, 10*l.*, Joseph Laycock, of Gosforth, Newcastle-upon-Tyne; 2d, 5*l.*, to Jonathan Melvin Pattinson,

of Norwood, Gateshead. Commended: Nathaniel Clarke, of Beamish Park, Fence Houses, Durham.

WOOL.

CLASS 139. For the best Five Fleeces of Leicester.—2*l.*, to John Angus, of Whitfield, Morpeth. Highly Commended: J. A. Armstrong, of Baysleap, Wylam.

CLASS 140.—For the best Five Fleeces of Cotswold. Not sufficient merit.

CLASS 141. For the best Five Fleeces of Lincoln and other Long-woolled. Not sufficient merit.

CLASS 142. For the best Five Fleeces of Oxford Down.—2*l.*, to Charles Howard, of Biddenham, Bedford.

CLASS 144. For the best Five Fleeces of Shropshire.—2*l.*, to Ambrose Robotham, of the Oak Farm, Tamworth. Highly Commended: Lord Wenlock.

CLASS 145. For the best Five Fleeces of Hampshire and other Short-woolled.—2*l.*, to William Humfrey, of Oak Ash.

CLASS 146. For the best Five Fleeces of Cheviot.—2*l.*, to Charles Rea, of Doddington, Wooler. Highly Commended: John Robson, of Birness, Rochester, Northumberland.

CLASS 147. For the best Five Fleeces of Blackfaced.—2*l.*, to Alexander Wearing Long, of Mint Cottage, Kendal.

CLASS 148. For the best Five Fleeces of Herdwick.—2*l.*, Edward Nelson, of Gatesgarth, Buttermere.

BUTTER.

CLASS 149. For the best Firkin of Butter.—5*l.*, to James Nicholson, of Blencairn Hall, Penrith. Commended: John Tweddle, of Askerton, Brampton.

CLASS 150. For the best 6 pounds of Fresh Butter, in single pounds.—1st, 5*l.*, to G. M. Allender, of Lee Grange, Winslow, Bucks. Commended: Joseph Wilson, of Manor House, Woodhorn, Morpeth.

Reviews.

The Newcastle Daily Chronicle: July 18—23, 1864. Chronicle Office, Newcastle-on-Tyne.

Never, at any previous meeting of the English Agricultural Society, have we known its proceedings more fully or more ably recorded than they have been from day to day in the columns of the *Newcastle Daily Chronicle*. The series of its publications, commencing some days before those which we have named above, contains a full account of the implement trials, of all departments of the exhibition, and of every incident and occurrence connected with them; but we confine our reference more particularly to the week of the meeting, because of the very interesting and instructive papers from the pen of Prof. Wilson, which have been published on those days descriptive of the agriculture of the northern counties. These, characterised, like all Prof. Wilson's writings, by unambitious simplicity of style, relate in clear and lucid English a very full and explicit history of the great agricultural improvements which have of late years been effected in the county of Northumberland. We understand they are soon to be collected and published as a pamphlet, when agricultural readers will have the opportunity of learning what landlords and tenants are doing in the North; and they will join us in thanking the conductors of the local daily paper for engaging Prof. Wilson's pen in such a useful performance.

Meanwhile we extract an illustration from the forthcoming pages of the scale on which the duties of the landowner in some cases fall to be discharged, and of the spirit in which they appear to be undertaken.

The Duke of Northumberland's estates include 3000 acres of woodland, 116,200 acres of hill pastures and Grass land, 38,900 acres of tillage, and 4700 acres of waste and rock and shore. This great territory is allotted in sheep farms, varying from 4000 to 8000 acres in extent, and from 1*s.* 6*d.* to 6*s.* an acre in rent; and in ordinary tillage farms, varying from 200 to 900 acres in extent, and from 10*s.* to 3*l.* an acre in rent.

As regards the game, except in the vicinity of the duke's residences, where it is strictly preserved, the rule of the estate is that on the tillage farms the tenants have the offer of the shooting at a low rate, about 3*d.* per acre. This is generally accepted; if, however, it be not so, the right of shooting is let, the game tenant making his own arrangements with the farmer, so that the landlord is seldom called upon to interfere. All permanent improvements to the estate, as farm buildings, cottages, roads, &c., are done at the sole cost of the duke; for draining an annual charge of 5 per cent. on the outlay is made, the tenant also undertaking to lead the tiles. No less than 35,203 acres have thus been thorough drained, at an average cost of about 5*l.* per acre. Liming is usually done by the tenant, except when any special arrangement is made for an allowance from the landlord in the shape of material or money.

The same understanding also exists in reference to laying down land to permanent Grass. The condition of the farm-houses and buildings on the estate is generally good, and is each year being kept up and improved. Much, too, has been done by his Grace in regard to the cottages, upwards of 1000 having been either built or put into good repair since he came into possession of the estates. Much, however remains still to be done. The cottages vary in size, however, more than in condition. Some few are to be met with still having only one room, while in others again there are four rooms. The greater number, however, have but two rooms—a living and a sleeping room—with a small scullery and the usual conveniences. To all a garden is attached, and some have, in addition, a piece of land sufficient for the keep of a cow. The estate is of such large extent, so divided, and comprises such a variety of properties—land, mines, manufactories, houses, and other sources of revenue—all differing in tenure, that it is well-nigh impossible succinctly to describe the management. The general administration of the whole is entrusted to his Grace's commissioner, Mr. Hugh Taylor, from whom all the agents employed in the different departments or districts receive their instructions. Under ordinary circumstances coming within the rules laid down for the management of the estate, the agents have no difficulty; but in all other cases the matter is submitted, through the commissioner, to the duke, who himself looks into the case and decides upon its merits.

The following abstract of the amounts expended by the duke on the estate since he came into possession in 1847 will, as a sequence to the general description already given, show how clearly his Grace has understood his responsibilities as a large land proprietor, and how fully he has discharged them. The amounts, under their respective heads, are made up to Dec. 31, 1863, and are exclusive of the large outlay upon Alnwick Castle and other residences, churches, parsonages, &c.

For roads, bridges, &c.	£39,689 0 1
,, buildings, cottages, &c.	308,336 12 9
,, draining	176,582 4 0
	£524,607 16 10

These details enable us to draw a comparison highly favourable to his Grace between the administration of this and of some other properties, which pass like his from the present proprietor to collateral heirs; for that reason is often assigned as an extenuation of, if not as an excuse for, the unimproved and neglected condition they are allowed to remain in. Most of us will, I think, feel that in this respect the Duke of Northumberland has nobly and honourably exemplified the old Norman apophthegm, "*Noblesse oblige.*"

—— We have to announce the death, on Tuesday last, of Mr. John Morton, of Nailsworth, Gloucestershire—one of the original members of the Royal Agricultural Society of England, and agent for many years over the estates of successive Earls of Ducie. English agriculture owes to him the establishment, a quarter of a century ago on Lord Ducie's property, of the Whitfield Example farm, which at one time received large numbers of visitors inquiring into the results of the land drainage and of the vigorous farm management which he there superintended and directed. We are also indebted to him for the first attempt to illustrate the connection existing in this country between Agriculture and Geology. In early manhood — already however, in the occupation of a small farm in his native county, Fife — Mr. Morton repeatedly walked over most of the counties of England, using for this purpose during many successive summers the comparatively leisure period lying on most Scottish farms between their early Turnip seed-time and a late corn harvest. His notes on the geology and farm practice of the districts thus examined were afterwards collected and published in his book—"On Soils:" and this, as the work of an original observer, was cordially introduced to the agricultural public by the late Dr. Buckland and the late Philip Pusey, M.P., and went through several editions during 1840–1848. And we must not forget among his publications about this time, the controversial pamphlet which he wrote along with his friend the late Joshua Trimmer, F.G.S., advocating the repeal of the corn laws from the agricultural point of view, on the ground that the farmer is or ought to be one of the largest consumers of grain in the right prosecution of his business—a truth which, though not generally admitted at the time, has since then been more and more realised. Early in the century Mr. Morton left Fifeshire, and took a farm near Dulverton, in Somerset; and, through the introduction of his landlord, the late Earl of Carnarvon, he was ultimately placed in charge of Lord Ducie's Gloucestershire estates. Here—on the Pusey property—and on estates in Lincolnshire, he long lived a laborious useful upright life, discharging the duties of his office with promptitude and integrity. He resigned his various charges at the age of threescore years and ten, and had latterly resided at Morningside Cottage, Nailsworth, where, as the honoured centre of a united family and of a pleasant social circle, he spent as bright and cheerful an old age as ever falls to human lot. The first heavy blow fell here nine weeks ago, when a happy married life at length was broken, whose 50th anniversary had been long since celebrated:—The Mother, pure exemplar of a simple Christian life, died May 20th, aged 76:—the Father, pattern of unobtrusive piety, of self-denial, honesty, and industry, and of public spirited and professional intelligence and ability, died July 26th, aged 83.

—— Fifty years of wedded life—
Honoured husband, happy wife!
Perfect trust, and perfect love—
Type of holier ties above!
Gently down the stream of time
Gliding to the sun-bright clime—
Thus, together, hand in hand,
Pass on to the Father-land.

Notices to Correspondents.

FLAX DODDER: *H W C.* asks "which is the most effectual method of destroying 'Dother,' otherwise called Wild Flax." We have not heard the latter term applied to the parasite here meant, but Dodder is a common pest in Flax, which is best got rid of by pulling out the Flax-plants upon which the threads of the Dodder have taken hold. But as prevention is better than cure, it is important to see that the Dodder seed is not sown with the Flax, to which end American or Riga seed should be preferred; the Odessa seed nearly always contains seeds of Flax Dodder. Upon this subject see a paper in the *Agricultural Gazette*, for Sept. 10, 1859, also the "Bath and West of England Society," vol. xii., part 1, *J. B.*

Glass for Garden Purposes.

JAMES PHILLIPS AND CO. beg to submit their prices as follows:—

REDUCED PRICES

OF PROPAGATING GLASSES.

Each.—	s.	d.		Each.—	s.	d.
3 inches in diameter ..	0	4	12 inches in diameter ..	1	6	
4 ,, ,, ..	0	5	13 ,, ,, ..	1	10	
5 ,, ,, ..	0	6	14 ,, ,, ..	2	3	
6 ,, ,, ..	0	7	15 ,, ,, ..	2	9	
7 ,, ,, ..	0	9	16 ,, ,, ..	3	0	
8 ,, ,, ..	0	10½	17 ,, ,, ..	4	0	
9 ,, ,, ..	1	1	18 ,, ,, ..	4	6	
10 ,, ,, ..	1	2	19 ,, ,, ..	5	6	
11 ,, ,, ..	1	4	20 ,, ,, ..	6	0	

BEE GLASSES.

Each.—	s.	d.		Each.—	s.	d.
4 inches in diameter ..	0	6	9 inches in diameter ..	1	8	
5 ,, ,, ..	0	8	10 ,, ,, ..	2	0	
6 ,, ,, ..	0	10	11 ,, ,, ..	2	6	
7 ,, ,, ..	1	1	12 ,, ,, ..	3	0	
8 ,, ,, ..	1	4				

Not made above 12 inches.

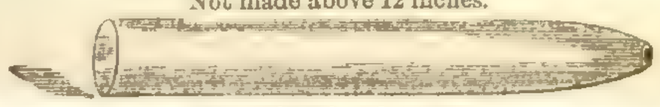

CUCUMBER GLASSES.

Each.—	s.	d.		Each.—	s.	d.
24 inches long	1	9	16 inches long	1	2	
22 ,, ,, ...	1	7	14 ,, ,, ...	1	0	
20 ,, ,, ...	1	6	12 ,, ,, ...	0	10	
18 ,, ,, ...	1	4	Made to any length.			

HAND GLASSES,

WITH OPEN TOPS.

Each.—	s.	d.		Each.—	s.	d.
12 inches	6	6	18 inches	9		
14 ,, ...	7	6	20 ,, ...	10	6	
16 ,, ...	8	6	22 ,, ...	11	6	
			24 ,, ...	12	6	

Painted and Glazed with 16 oz. Sheet Glass.

London Agents for HARTLEY'S IMPROVED PATENT ROUGH PLATE.

LINSEED OIL, Genuine WHITE LEAD, CARSON'S PAINTS, PAINTS of various colours ground ready for use.

180, Bishopsgate Street Without, London, E.C.

HAND GLASS FRAMES (LOOSE TOPS)

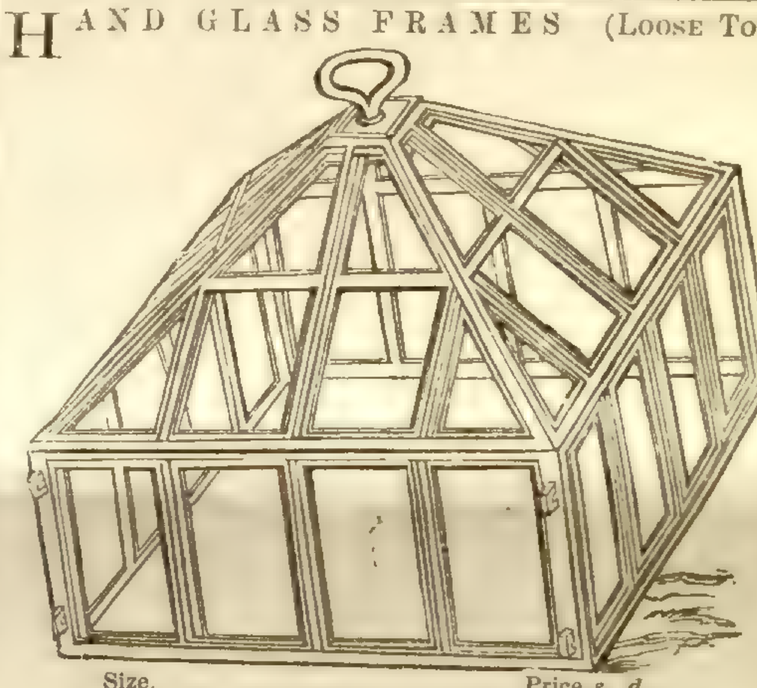

Size.	Price s.	d.	
14 by 14	4	0	Each.
18 by 18	5	9	,,
20 by 20	6	6	,,
22 by 22	7	6	,,
24 by 24	8	6	,,

Delivered Free to any Station in England if 12 or more are ordered.

J. JONES & SONS, 6, Bankside, London, S.E.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 570.

J. TYLOR & SONS' GALVANIZED IRON TUB GARDEN ENGINES, with Registered Spreader.

8 gal.	12 gal.	16 gal.
£2 13 6	£3 2 0	£3 12 6

Fig. 571

J. TYLOR & SONS' OAK TUB GARDEN ENGINES, with Registered Spreader.

24 gal.	30 gal.	15 gal.	28 gal.
£5 0 0	£5 12 0	£5 12 0	£7 0 0

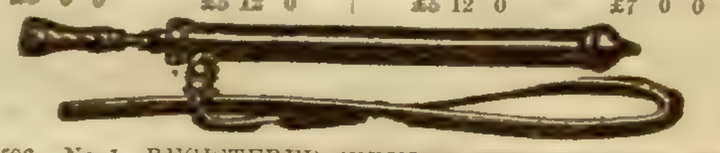

Fig. 586. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. £ 1 6 6 each.
No. 2. Ditto ditto .. 1 1 0 ,,
Telescope Branch Pipe for ditto .. .. 0 10 0 ,,

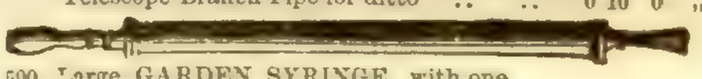

Fig. 590. Large GARDEN SYRINGE, with one rose and jet .. .. 10s. 6d. each..
,, 589. Middle Ditto ditto .. .. .. 9 6 ,,
,, 588. Small Ditto ditto .. .. .. 8 6 ,,
,, 587. LADIES' GARDEN SYRINGE, with do. .. 6 9 ,,

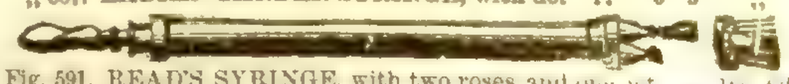

Fig. 591. READ'S SYRINGE, with two roses and one jet .. 10s 6d
READ'S SYRINGE, with one rose and jet 11 0
,, 592. Improved ditto ditto large .. 15 0

Garden Engines and Syringes of J. TYLOR & SONS' manufacture kept in stock by Ironmongers and Seedsmen in every part of the United Kingdom.

J. TYLOR & SONS, Manufacturers, Warwick Lane, Newgate Street, London, E.C.

TANNED GARDEN NETTING.—Inch Mesh, 1*d.* per yard; in pieces containing 400 to 500 yards. Small quantities, 1½*d.* per yard. TOBACCO PAPER, price to the Trade on application.
H. BROWN, Seedsman, 4, Commutation Row, Liverpool.

TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.
VARNISHED FLOWER STICKS:—1 foot, 3*d.*; 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s.* 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

NETTING for FRUIT TREES, SEED BEDS, RIPE STRAWBERRIES, &c.—TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3*d.* per yard; or 100 yards, 20*s.*; 4 yards wide, 6*d.* per yard; or 50 yards, 20*s.* NEW TANNED NETTING, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 6*d.* per yard; 4 yards wide, 1*s.* per yard; ½-inch mesh, 4 yards wide, 1*s.* 6*d.* per yard.
Can be had in any quantity of EATON & DELLER, 6 and 7, Crooked Lane, London Bridge, E.C.

W. S. UNDERHILL'S NEW PATENT IRON FENCE for GARDENS, LAWNS, &c.
Manufactory: Newport, Salop.
Warranted the strongest and most durable Fence ever offered at corresponding prices. It is easily repaired if broken from accidents; can be rolled up most compactly when not in use, is admirably adapted for exportation, and can be had of any height and mesh required, at prices from 4*d.* to 1*s.* 6*d.* per yard and upwards.
For further particulars apply at the Manufactory; or of the London Agent, Mr. R. WINDER, 18, Abingdon Street, Westminster, S.W.

Wasps.
HAYTHORN'S HEXAGON and CHISWICK NETS will protect all kinds of Fruit from Wasps, Flies, Birds, &c. Patterns free by post.
Direct, Mr. HAYTHORN, Nottingham.

EDGINGTON'S RICK CLOTHS for 59 years have maintained their celebrity as the best.
EDGINGTON'S MARQUEES and TENTS are the prettiest.
EDGINGTON'S MARQUEES for hire are the most elegant and capacious.
EDGINGTON'S GARDEN NETTING is the cheapest and most durable; 1*d.* per square yard in quantities of 250, 500, and 1000 yards.
Samples of material free on application. Be particular—FREDERICK EDGINGTON & Co., Thomas Street, Old Kent Road, London, S.E.
INTERNATIONAL EXHIBITION, 1862, Class XIX.
Honourable Mention.

BENJAMIN EDGINGTON, MARQUEE, TENT, RICK CLOTH, and FLAG MANUFACTURER by Special Appointment to her Majesty.—MARQUEES, TEMPORARY ROOMS and AWNINGS, for Dinners, Balls, Parties, &c., on HIRE, lined, boarded, lighted, and elegantly decorated. RICK CLOTHS, New and Second-hand, with Poles, &c., complete. NETTING for Fruit Trees; Scrims for Greenhouse Blinds, &c. Be particular to address,
BENJAMIN EDGINGTON (only), 2, Duke Street, London Bridge, S.E.
No other Establishment.

SHAW'S TIFFANY.
For samples and prices apply to
J. SHAW & Co., 29, Oxford Street, Manchester.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—
"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles.—Your obedient servant, "G. GLENNY."
Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.
The GUTTA PERCHA COMPANY, Patentees, 18, Wharf Road, City Road, London, E.C.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, &c.
PROTECTION from the SCORCHING RAYS of the SUN.
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1*s.* 8*d.* per yard run.
Four yards wide	3*s.* 4*d.* per yard.
An improved make, 2 yards wide ..	1*s.* 9*d.* per yard.
An improved make, 3 yards wide ..	2*s.* 8*d.* per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.
ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.
"It is much cheaper than Mats as a covering."

Hydraulic Suction Pumps, Garden Engines, Syringes, &c.
CAUTION.—The well-known reputation of
READ'S ENGINES, MACHINES, and SYRINGES, has led to the nefarious practice of Manufacturers selling Syringes as "READ'S PATENT."
R. READ begs to caution the Public against being deceived by such false representations, as these instruments, upon trial, will be found defective and useless.
READ'S SYRINGES have the Royal Arms, and address, 35, Regent Circus, London, W. Descriptions sent Post free.

HORTICULTURAL TOOLS.—Lawn Mowers, Garden Rollers, Garden Engines, Syringes, and Tools of all kinds; Wire Netting, Prize Churns, &c., delivered carriage free; Price List free.
BURGESS & KEY, 95, Newgate Street, E.C.; Works, Brentwood, Essex.

TERRA COTTAS always on Sale, viz.:—FOUNTAINS, VASES, STATUES, FLOWER POTS, TRACERY, CHIMNEY TOPS, PAVING TILES, &c., at
J. R. BLASHFIELD'S Galleries, Praed Street, Paddington, W.

Sticks and Tallies.
COMMENDED BY THE ROYAL HORTICULTURAL SOCIETY.
F. A. HAAGE'S WOOD GARDEN STICKS and TALLIES can now be had of all sizes, Wholesale, of BETHAM & BLACKITH, Cox's Quay, Lower Thames Street, London, E.C.; and Retail of all the principal Seedsmen and Florists.

SMITH, BECK, AND BECK'S GREENHOUSE and HOTBED THERMOMETERS.—These Instruments are of the very best construction, and at moderate prices.
31, Cornhill, E.C.

Universal Microscope. Price £5 5s.
SMITH, BECK, AND BECK,
31, Cornhill, E.C.; late 6, Coleman Street.
*** Catalogues sent on receipt of 6 postage stamps.

BARNARD, BISHOP, AND BARNARDS,
Norwich.
FURTHER REDUCTION in the PRICE of WIRE NETTING.

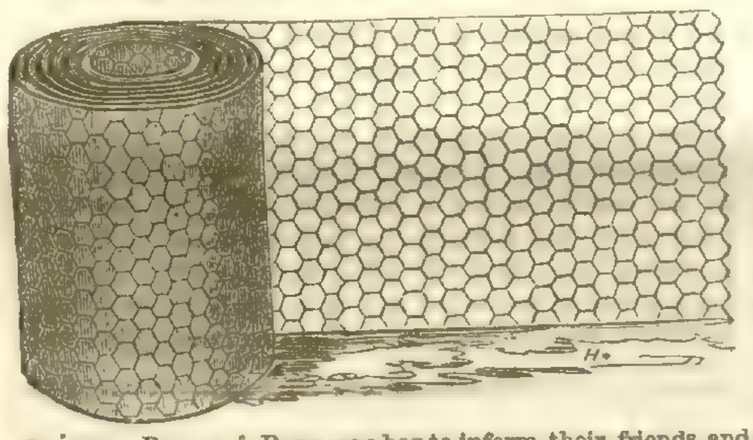

BARNARD, BISHOP, & BARNARDS beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

	Gauge.	Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide	No. 19 ..	4½*d.* per yd.	3½*d.* per yd.
2-inch " " " "	18 ..	5 "	4 "
2-inch " " " "	17 ..	6½ "	5 "
2-inch " " " "	16 ..	8 "	6½ "
1⅝-inch " " " "	19 ..	4¾ "	4 "
1⅝-inch " " " "	18 ..	6 "	4¾ "
1⅝-inch " " " "	17 ..	7 "	5½ "
1⅝-inch " " " "	16 ..	9 "	7 "

All the above kinds can be made any width (under 6 feet) at proportionate prices.
Strong GALVANISED POULTRY NETTING, 7½*d.* per yard, 3 feet wide. GALVANISED SPARROW-PROOF NETTING for Pheasantries, 11*d.* per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.
Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1*s.* per yard.
The same with Galvanised Wire Rope, 1*s.* 2*d.* per yard
Illustrated Catalogues, with prices of every variety of Wire Fencing and Wire Netting, forwarded free on application.
*** Wire Fencing and Netting delivered Carriage Free at all the principal Railway Stations.

The Furnishing of Bed Rooms.
HEAL AND SON have observed for some time that it would be advantageous to their customers to see a much larger selection of BED-ROOM FURNITURE than is usually displayed, and that to judge properly of the style and effect of the different descriptions of Furniture, it is necessary that each description should be placed in separate rooms. They have, therefore, erected large and additional Show Rooms, by which they are enabled not only to extend their show of Iron, Brass, and Wood Bedsteads and Bed Room Furniture, beyond what they believe has ever been attempted, but also to provide several small rooms for the purpose of keeping complete suites of Bed Room Furniture in the different styles.
Japanned Deal Goods may be seen in complete suites of five or six different colours, some of them light and ornamental, and others of a plainer description. Suites of Stained Deal Gothic Furniture, Polished Deal, Oak, and Walnut, are also set apart in separate rooms, so that customers are able to see the effect as it would appear in their own rooms. A Suite of very superior Gothic Oak Furniture will generally be kept in stock, and from time to time new and select Furniture in various woods will be added.
Bed Furnitures are fitted to the Bedsteads in large numbers, so that a complete assortment may be seen, and the effect of any particular pattern ascertained as it would appear on the Bedstead.
A very large stock of Bedding (HEAL & SON'S original trade) is placed on the Bedsteads.
The stock of Mahogany goods for the better Bed Rooms, and Japanned Goods for plain and Servant's use, is very greatly increased. The entire Stock is arranged in eight rooms, six galleries (each 120 feet long), and two large ground floors, the whole forming as complete an assortment of Bed Room Furniture as they think can possibly be desired.
Every attention is paid to the manufacture of the Cabinet work, and they have just erected large Workshops on the premises for this purpose, that the manufacture may be under their own immediate care.
Their Bedding trade receives their constant and personal attention, every article being made on the Premises.
They particularly call attention to their Patent Spring Mattress, the Sommier Elastique Portatif. It is portable, durable, and elastic, and lower in price than the old Spring Mattress.
HEAL & SON'S ILLUSTRATED CATALOGUE of Bedsteads, Bedding, and Bed Room Furniture sent free by Post.
196, 197, 198, Tottenham Court Road, London, W.C

The Hydropult Challenged.
WINTON'S "HYDROPNEUMATIC" FIRE and GARDEN ENGINES are acknowledged to be superior in every respect to the Engine of the above name. Sold everywhere.
HYDROPNEUMATIC, £1 15*s.* Lady's ditto, £1 10*s.*
JOHN G. WINTON, 13, Gladstone Street, St. George's Road, Southwark, London, S.E.

Landscape Gardener and Estate Improver.
JOSEPH NEWTON, 30, Eastbourne Terrace, Hyde Park, London, W., Author of "Picturesque Plans for Laying-out Grounds," is now Laying-out Fort William Park, the White Abbey, and H. Kirk's, Esq., Estates near Belfast, Ireland. Therefore other persons contemplating improvements can have advice upon the spot, or Working Plans prepared and Foremen sent to any part of the United Kingdom, to execute Works, Planting, Making Ponds, Roads, Horticultural Structures, &c.
Pinetums, Arboretums, Rare Trees, and Collections of Shrubs.—Gentlemen can have these planted, arranged, and named by Mr. G. Gordon, Author of the "Pinetum," many years Superintendent of the Horticultural Society's Garden at Chiswick, that now contains the finest collection of trees ever planted. Dr Lindley says Gordon is the best practical man living.—Address as above.

WARNER'S KOH-I-NOOR LAMPS, TO BURN THE HYDRO-CARBON OILS.
PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.
They are more easily trimmed and refilled than any other Lamp with similar burner.
There is no danger of chimneys breaking, and the chimney cannot become smoked.
For designs of the above, adapted for the DINING-ROOM, DRAWING-ROOM, HALL, or LIBRARY, see Number 2 of this Journal. A REALLY GOOD LAMP.
The above may be obtained of any Lamp Dealer.

FENDERS, STOVES, FIRE-IRONS, and CHIMNEY-PIECES.—Buyers of the above are requested, before finally deciding, to visit WILLIAM S. BURTON'S SHOW-ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, CHIMNEY-PIECES, FIRE-IRONS, and GENERAL IRONMONGERY, as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with ormolu ornaments, 3*l.* 15*s.* to 33*l.* 10*s.*; bronzed fenders, with standards, 7*s.* to 5*l.* 12*s.*; steel fenders, 3*l.* 3*s.* to 11*l.*; ditto, with rich ormolu ornaments, from 3*l.* 3*s* to 18*l.*; chimney-pieces, from 1*l.* 8*s.* to 100*l*; fire-irons, from 2*s.* 3*d* the set to 4*l.* 4*s.* The BURTON and all other PATENT STOVES, with radiating hearth-plates.

CUTLERY, WARRANTED.—The most varied assortment of TABLE CUTLERY in the world, all warranted, is on Sale at WILLIAM S. BURTON'S, at prices that are remunerative only because of the largeness of the sales.

Ivory Handles.	Table Knives per Dozen.	Dessert Knives per Dozen.	Carvers per Pair.
	s. *d.*	*s.* *d.*	*s.* *d.*
3¼-inch ivory handles	12 0	9 6	4 6
3½-inch fine ivory handles	15 0	11 6	4 6
4-inch ivory balance handles	18 0	14 0	5 0
4-inch fine ivory handles	24 0	18 0	7 3
4-inch finest African ivory handles	32 0	26 0	11 0
Ditto, with silver ferules	40 0	33 0	12 6
Ditto, carved handles, silver ferules ..	50 0	43 0	17 6
Nickel electro silver handles, any pattern .	25 0	19 0	7 6
Silver handles, of any pattern	84 0	54 0	21 0
Bone and Horn Handles—Knives and Forks per dozen.			
White bone handles	11 0	8 6	2 6
Ditto, balance handles	21 0	17 0	4 6
Black horn rimmed shoulders	17 0	14 0	4 0
Ditto, very strong riveted handles ..	12 0	9 0	3 0

The largest stock in existence of Plated Dessert Knives and Forks, in cases and otherwise, and of the New Plated Fish Carvers.

CLOCKS, CANDELABRA, BRONZES, and LAMPS.—WILLIAM S. BURTON invites inspection of his Stock of them, displayed in two large show-rooms. Each article is of guaranteed quality, and some are objects of pure vertu, the productions of the first manufacturers of Paris, from whom William S. Burton imports them direct.

Clocks, from	7*s.* 6*d.* to 25*l.*
Candelabra, from	13*s.* 6*d.* to 16*l.* 10*s.* per pair
Bronzes, from	18*s.* 0*d.* to 18*l.* 16*s.*
Lamps, moderateur, from	6*s.* 0*d.* to 9*l.* 0*s.*

WILLIAM S. BURTON, GENERAL FURNISHING IRONMONGER by appointment to H.R.H. the Prince of Wales, sends a CATALOGUE gratis and post paid. It contains upwards of 600 Illustrations of his illimited Stock of Sterling Silver and Electro-Plate, Nickel Silver and Britannia Metal Goods, Dish Covers, Hot-water Dishes, Stoves, Fenders, Marble Chimney-pieces, Kitchen Ranges, Lamps, Gaseliers, Tea-Trays, Urns and Kettles, Clocks, Table Cutlery, Baths, Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding, Bed Room Cabinet Furniture, &c., with Lists of Prices, and Plans of the 20 large Show Rooms, at 39, Oxford Street, W.; 1, 1a, 2, 3, and 4, Newman Street; 4, 5, and 6, Perry's Place; and 1, Newman Yard, London, W.

PURE PICKLES, SAUCES, JAMS, &c., and Table Delicacies of the highest quality, pure and wholesome. See *Lancet* and Dr. Hassall's Report.
CROSSE & BLACKWELL, Purveyors to the Queen, Soho Square, London. May be obtained from all Grocers and Oilmen.

DINNEFORD'S PURE FLUID MAGNESIA has been during 25 years emphatically sanctioned by the Medical Profession, and universally accepted by the public, as the best remedy for Acidity of the Stomach, Heartburn, Headache, Gout, and Indigestion, and as a mild Aperient for delicate constitutions, more especially for ladies and children. It is prepared in a state of perfect purity and of uniform strength by
DINNEFORD & Co., 172, New Bond Street, London, and sold by all respectable Chemists throughout the world.

Avoid Medicines.—They always aggravate Chronic Complaints, but DU BARRY'S delicious health-restoring
REVALENTA ARABICA FOOD invariably and effectually cures them. Extract from 60,000 cures:—Cure No. 58,216, "of the Marchioness de Bréhan, Naples, of a fearful liver complaint, wasting away, with a nervous palpitation all over, bad digestion, constant sleeplessness, low spirits, and the most intolerable nervous agitation, which prevented even her sitting down for hours together, and which for seven years had resisted the careful treatment of the best French and English medical men."—Cure No. 1771: "Lord Stuart de Decies, Lord Lieutenant of Waterford, of many years' dyspepsia."—Cure No. 49,842: "Fifty years' indescribable agony from dyspepsia, nervousness, asthma, cough, constipation, flatulency, spasms, sickness, and vomiting. Maria Jolly."—Cure No. 47,121: "Miss Elizabeth Jacobs, Nazing Vicarage, Waltham Cross, Herts, of extreme nervousness, indigestion, gatherings, low spirits, and nervous fancies."—Cure No. 54,816: "The Rev. James T. Campbell, Fakenham, Norfolk, of indigestion and torpidity of the liver, which had resisted all medical treatment."—Cure No. 54,812: "Miss Virginia Zeguers, of consumption." In Tins, 1 lb., 2*s.* 9*d.*; 2 lb. 4*s.* 6*d.*; 12 lb. 22*s.*
BARRY DU BARRY & Co., 77, Regent Street, London, W.C.; also FORTNUM & MASON, Purveyors to Her Majesty; at PHILIPS's, Tea-dealers; BATTY'S; PETTY & WOOD'S; ABBIS'S, 61, Gracechurch Street, E.C.; 4, Cheapside, E.C.; 63, 150, and 298, Oxford Street, S.W.; 64, Upper Baker Street, W.; 330, 440, and 451, Strand, W.C.; 55, Charing Cross S.W.; and all Grocers and Chemists.

CORNS and BUNIONS.—A Gentleman, many years tormented with Corns, will be happy to afford others the information by which he obtained their complete removal in a short period without pain or any inconvenience.—Forward address on a stamped envelope to W. GOODALL, Esq., Epsom, Surrey.

7th Edition, 10th Thousand, price 2*s.* 6*d.*; free by post, 32 stamps.
DISEASES of the SKIN: a Guide to their Treatment and Prevention. Illustrated by Cases: By Thos. HUNT, F.R.C.S., Surgeon to the Western Dispensary for Diseases of the Skin, 21A, Charlotte Street, Fitzroy Square.
"Mr. Hunt has transferred these diseases from the incurable class to the curable."—*Lancet.*
London: T. RICHARDS, 37, Great Queen Street, W.C.

THE PATENT IN-DOOR PLANT CASES

(TO WHICH A PRIZE WAS AWARDED AT THE ROYAL HORTICULTURAL SOCIETY'S EXHIBITION).

SOLE MANUFACTURER,

JAMES GRAY, HORTICULTURAL WORKS,

DANVERS STREET, CHELSEA, LONDON, S.W.

The PATENT IN-DOOR PLANT CASE is one of the most useful of the Gardening novelties of the day. It is a handsome ornament for the Drawing Room or Sitting Room, and at all times forms a fresh, pleasant, and interesting object to the mind and eye. It is always under command, and will preserve many of the most tender Exotic Plants through the severest winter with comparatively little of the trouble and annoyance attending the use of Lamps, Gas, and Heating appliances of any other kind.
To all who have a taste for the cultivation of In-door Plants, for raising Seedlings, striking Cuttings, &c., the Plant Cases will be found an inestimable boon.
The Cases are highly approved and recommended by Professor Lindley, and by Messrs. Veitch, of the Royal Exotic Nursery, King's Road, Chelsea.
Sizes and Prices on application.

NEW TARIFF OF GLASS AND HORTICULTURAL GOODS.

THOMAS MILLINGTON,

GLASS AND COLOUR MERCHANT,

87, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

REDUCED TARIFF FOR SHEET GLASS AND HORTICULTURAL GOODS.

THE AGRICULTURAL HALL, ISLINGTON, CONTAINING AN ACRE OF GLASS, WAS SUPPLIED BY ME.

Mr. Rivers and the leading men in the Horticultural profession, as well as the Nobility, Gentry, and Merchants, have favoured me with Orders for Home use and for Exportation

SHEET GLASS.

In Cases for Cutting up, averaging from 6 to 9 feet super.

Average Thickness, 15 to 16 oz.

4ths quality	..	..	per 300 feet case	32s.	6d.	or about 1¼d.	per foot.
3ds ,,	..	..	,,	41	0	,, 1⅝	,,
2ds ,,	..	..	,,	60	0	,, 2¼	,,
Best ,,	..	..	,,	92	0	,, 3¼	,,

Average Thickness, 21 oz.

4ths quality	..	..	per 200 feet case	33s.	6d.	or about 2d.	per foot.
3ds ,,	..	..	,,	42	0	,, 2¼	,,
2ds ,,	..	..	,,	63	0	,, 3¾	,,
Best ,,	..	..	,,	89	0	,, 5¼	,,

Average Thickness, 26 oz.

4ths quality	..	..	per 200 feet case	44s.	6d.	or about 2½d.	per foot.
3ds ,,	..	..	,,	56	0	,, 3¼	,,
2ds ,,	..	..	,,	84	0	,, 5	,,
Best ,,	..	..	,,	116	0	,, 7	,,

SHEET SQUARES, Cut to Order.

Average Thickness, 15 to 16 oz.

	Under 1 foot super.	Under 2 feet super.	Under 3 feet super.	Under 4 feet super.	Under 5 feet super.	Under 6 feet super.
4ths quality	1½d.	1¾d.	2 d.	2¼d.	2½d.	2¾d.
3ds ,,	1¾	2	2¼	2¾	3	3¼
2ds ,,	2	2½	2¾	3	3½	4
Best ,,	2¼	3	3½	4	4½	5
Average Thickness, 21 oz.						
4ths quality	2½d.	2¾d.	3 d.	3¼d.	3½d.	3¾d.
3ds ,,	2¾	3	3¼	3½	4	4¼
2ds ,,	3	3½	3¾	4¼	4½	4¾
Best ,,	4	4½	5	5½	6	7
Average Thickness, 26 oz.						
4ths quality	3d.	3½d.	3¾d.	4 d,	4¼d.	4½d.
3ds ,,	3¾	4	4¼	4¾	5	5¼
2ds ,,	4¼	5	5½	5¾	6	6½
Best ,,	5¼	6½	7	7½	8	8½

15 oz. Squares usually kept in Stock, &c.

32 oz., 36 oz., and 42 oz. are also supplied in various quantities.

EXTRA WHITE or CRYSTAL SHEET GLASS, very superior for Pictures and best Glazing.

RUBY, GREEN, BLUE, YELLOW, COLOURED, ENAMELLED, GROUND, and FLUTED GLASS.

15 oz. Squares usually kept in Stock, packed in 100 ft. and 100 ft. Boxes.

Stock Squares.								4ths.	3rds.	2nds.	Best.
6 by 4	7 by 5	8 by 6	9 by 7					9s. 6d.	10s. 9d.	12s. 6d.	14s. 8d.
6½ by 4½	7½ by 5½	8½ by 6½	9½ by 7½								
10 by 8	12 by 9	12½ by 10½	14½ by 10½								
10½ by 8½	12½ by 9½	13 by 10	15 by 10					10s. 6d.	12s. 0d.	14s. 8d.	17s. 3d.
11 by 9	13 by 9	13½ by 10½	13 by 11								
11½ by 9½	12 by 10	14 by 10	14 by 11								
15½ by 10½	16 by 10	14½ by 11½	15 by 11					11s. 6d.	13s. 6d.	16s. 0d.	18s. 0d.

Stock Squares.				Per 100 feet.			
				4ths.	3rds.	2nds.	Best.
15½ by 11½	14 by 12	17 by 13	22 by 16				
16 by 10	14½ by 12½	18 by 13	24 by 16				
14½ by 11½	15 by 12	23 by 13	20 by 17				
15 by 11	15½ by 12½	18 by 14	22 by 17	..	11s. 6d.	13s 6d.	16s.	18s.
15½ by 11½	16 by 12	22 by 14	24 by 17				
16 by 11	16½ by 12½	24 by 14	20 by 18				
21 by 11	17 by 12	22 by 15	22 by 18				
13 by 12	18 by 12	24 by 15	24 by 18				
13½ by 12½	22 by 12						

ORCHARD HOUSE SIZES,

As recommended by and supplied to Mr. Rivers, and the leading Horticulturists of the day.

Average Thickness, 15 to 16 oz.

		4ths.	3rds.	2nds.	Best.
16½ Inches by 12½ Inches.					
20 ,, 12 ,,					
20 ,, 13 ,,					
20 ,, 14 ,,	Per 100 feet ..	11s. 6d.	13s. 6d.	16s.	18s.
20 ,, 15 ,,					
20 ,, 16 ,,					
20 ,, 17 ,,					

Average Thickness, 21 oz.

		4ths.	3rds.	2nds.	Best.
20 Inches by 12 Inches.					
20 ,, 13 ,,					
20 ,, 14 ,,	.. .. ..	14s. 6d.	18s. 6d.	24s.	27s. 6d.
20 ,, 15 ,,					
20 ,, 16 ,,					
20 ,, 17 ,,					

The above prices are only for the sizes stated, but if a quantity of any other size is required, they can be supplied at about 5 per cent. additional, provided time is allowed to manufacture them.

I have also a GREEN TINTED GLASS, which I can strongly recommend. In Summer it gives a cool appearance and in Winter a warm one.

PROPAGATING GLASSES.

3 inches diam.	0s.	4d.	each.	
4 ,, ..	0	5	,,	
5 ,, ..	0	6	,,	
6 ,, ..	0	7	,,	
8 ,, ..	0	10½	,,	
10 ,, ..	1	2	,,	
12 ,, ..	1	6	,,	
14 ,, ..	2	3	,,	
16 ,, ..	3	0	,,	
18 ,, ..	4	6	,,	
20 ,, ..	6	0	,,	

HAND GLASSES.

12 inches diam.	5s.	6d.	each.	
14 ,, ..	6	6	,,	
16 ,, ..	7	6	,,	
18 ,, ..	8	6	,,	
20 ,, ..	9	6	,,	
22 ,, ..	10	6	,,	
24 ,, ..	11	6	,,	

If removable tops, 1s. extra.

Painted and Glazed with Sheet Glass.

PRESERVE JARS.

In. diam.	Without Lids.		With Lids.		
3 ..	0s. 4d.	..	0 6	each.	
4 ..	0 5½	..	0 8	,,	
5 ..	0 7	..	0 10	,,	
6 ..	0 9	..	1 1	,,	
7 ..	0 10½	..	1 2	,,	
8 ..	1 2	..	1 6	,,	
9 ..	1 6	..	2 0	,,	
10 ..	1 10	..	2 4	,,	

These will be found preferable to any other kind of Jar.

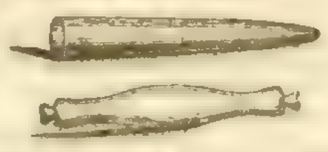

CUCUMBER TUBES.

Ins. long.		each.	
12 ..	0s.	10d.	
13 ..	0	11	
14 ..	1	0	
15 ..	1	1	
16 ..	1	2	
17 ..	1	3	
18 ..	1	4	
19 ..	1	5	
20 ..	1	6	
22 ..	1	7	
24 ..	1	9	

ROLLING PINS.

each	
1s.	3d.
1	4
1	6
1	8
1	9
1	10
2	0
2	2
2	3
2	4
2	8

MILK PANS.

6 inches diam.	0s.	5d.	each.
8 ,,	0	8	,,
10 ,,	0	10½	,,
12 ,,	1	1	,,
14 ,,	1	6	,,
16 ,,	2	0	,,
18 ,,	2	5	,,
20 ,,	2	10	,,
22 ,,	3	4	,,
24 ,,	4	0	,,

Intermediate sizes in proportion.

FISH GLOBES.

In. diam.		Qts.	each
8	¾ filled,	3	1s. 3d.
9	,,	4	2s.
10	,,	6	2s. 6d.
11	,,	8	3s.
12	,,	9	3s. 9d.
13, 14, 15, 16	At same average according to weight.		7d. per lb.

If on feet, 9d. per lb.

GLASS TILES, in SHEET and ROUGH PLATE. PLATE GLASS, PATENT PLATE, and HARTLEY'S IMPROVED ROUGH PLATE.

PAINTS, COLOURS, VARNISHES, &c.

GENUINE WHITE LEAD, 30s. per Cwt.
SECONDS ditto, 28s. per Cwt.
LINSEED OIL PUTTY, 9s. per Cwt.
PINE OAK VARNISH, 10s. to 12s. per Gallon.
,, CARRIAGE ditto, 12s to 14s. per Gallon.
,, CRYSTAL or PAPER, 10s. to 12s. per Gallon.

WHITE ZINC PAINT, 34s. per Cwt.
One hundred weight of pure Zinc Paint, with 3 gallons of Linseed Oil, will cover as much as one hundred weight and a half of White Lead and 6 gallons of Linseed Oil.
Special Dryers for this paint.

GROUND PATENT DRYERS, 3d. to 4½d. per lb.
,, OXFORD OCHRE, 3d. to 4½d. per lb.
,, RAW UMBER, 4½d. to 6d. per lb.
,, BURNT Ditto, 6d. to 9d.
GREEN PAINT, all shades, 28s. to 60s. per cwt.
BLACK PAINT, 24s. to 36s. per cwt.

STUCCO PAINT, 24s. per cwt.
This paint adheres firmly to the walls, resists the weather, and is free from the glossy appearance of oil paint, resembling a stone surface, and can be made any required shade. It is mixed with rain or pure river water.

LINSEED OIL, 3s. 9d. per gallon
BOILED OIL, 4s. 3d. per gallon.
TURPENTINE, 7s. per gallon,
MINERAL Ditto, 3s. 6d. per gallon.
PREPARED OIL for ANTICORROSION, 4s. 6d. p. gal.
BRUSHES for Ditto.

IMPROVED ANTICORROSION PAINT, 28s. to 34s. per cwt.
Anticorrosion Paint is extensively used for all kinds of work in exposed situations, in Brick, Stone, Compo, Iron, Iron Bridges, Conservatories, Greenhouses, &c., and is easily laid on by any ordinary workman.

MILLED LEAD in Sheet and Pipe of all Sizes. OLD LEAD bought or taken in exchange. LIFT PUMPS, WATER CLOSETS, & PLUMBER'S BRASS WORK of all kinds.

NETT CASH.

Landscape Gardener.

JOSEPH NEWTON, 30, Eastbourne Terrace, Hyde Park, W., Author of "Picturesque Garden Plans," offers Advice, prepares Drawings, and sends Foremen to all parts of the United Kingdom. Works now in operation can be referred to near Belfast, Newcastle, York, Portsmouth, London, &c.

PLANTING ARRANGEMENTS of Rare TREES, &c., SHRUBS, ARBORETUMS, PINETUMS, &c., carried out by George Gordon, Author of the "Pinetum," and many years Superintendent of the Horticultural Society's Gardens, Chiswick.
Address, 30, Eastbourne Terrace, Hyde Park, W.

Sticks and Tallies.

Commended by the Royal Horticultural Society.

F. A. HAAGE'S WOOD GARDEN STICKS and TALLIES can now be had of all sizes, Wholesale, of Betham & Blackith, Cox's Quay, Lower Thames Street, London, E.C.; and Retail of all the principal Seedsmen and Florists.

TERRA COTTAS always on Sale, viz.:—FOUNTAINS, VASES, STATUES, FLOWER POTS, TRACERY, CHIMNEY TOPS, PAVING TILES, &c., at
J. R. Blashfield's Galleries, Praed Street, Paddington, W.

The Hydropult Challenged.

WINTON'S "HYDROPNEUMATIC" FIRE and GARDEN ENGINES are acknowledged to be superior in every respect to the Engine of the above name. Sold everywhere.
HYDROPNEUMATIC, £1 15s. Lady's ditto, £1 10s.
John G. Winton, 13, Gladstone Street, St. George's Road, Southwark, London, S.E.

HORTICULTURAL TOOLS.—Lawn Mowers, Garden Rollers, Garden Engines, Syringes, and Tools of all kinds; Wire Netting, Prize Churns, &c., delivered carriage free; Price List free.
Burgess & Key, 95, Newgate Street, E.C.; Works, Brentwood, Essex.

SHAW'S TIFFANY.
For samples and prices apply to
J. Shaw & Co., 29, Oxford Street, Manchester.

TANNED GARDEN NETTING.—Inch Mesh, 1*d.* per yard; in pieces containing 400 to 500 yards. Small quantities, 1½*d.* per yard. TOBACCO PAPER, price to the Trade on application.
H. Brown, Seedsman, 4, Commutation Row, Liverpool.

NETTING for FRUIT TREES, SEED BEDS, RIPE STRAWBERRIES, &c.—TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3*d.* per yard; or 100 yards, 20*s.*; 4 yards wide, 6*d.* per yard; or 50 yards, 20*s.* NEW TANNED NETTING, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 6*d.* per yard; 4 yards wide, 1*s.* per yard; ½-inch mesh, 4 yards wide, 1*s.* 6*d.* per yard.
Can be had in any quantity of Eaton & Deller, 6 and 7, Crooked Lane, London Bridge, E.C.

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.
F. & G. Rosher, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.
Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.
Also TESSELATED PAVEMENTS of more enriched designs than the above.
WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.
To be obtained of F. & G. Rosher, at their Premises as above.
Orders forwarded by Railway with despatch.

SILVER SAND (Best Quality), of F. & G. Rosher, at the addresses above—14*s.* per Ton, or 1*s.* 3*d.* per Bushel. 2*s.* per ton extra for delivery within three miles, and to any London Railway or Wharf. Quantities of 4 Tons, 1*s.* per Ton less.
GARDEN FLINTS for Grotto Work, 12*s.* and 14*s.* per Ton.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, &c.
PROTECTION from the SCORCHING RAYS of the SUN.
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1*s.* 8*d.* per yard run.
Four yards wide..	3*s.* 4*d.* per yard.
An improved make, 2 yards wide ..	1*s.* 9*d.* per yard.
An improved make, 3 yards wide ..	2*s.* 8*d.* per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.
Elisha Thomas Archer, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.
"It is much cheaper than Mats as a covering."

To the Trade.

HOOPER'S ETRUSCAN HYACINTH VASES.—The New Designs for the coming season, in these SUPERB ORNAMENTS are now ready, and List of Prices may be had on application.
Notwithstanding the unprecedented beauty and novelty of the designs of last year, those of the present will be found to far eclipse them, and must be looked upon as marvels of the Potter's art. The most perfect and exquisite delineations of ancient Grecian Figures, both upon dead and brilliant surfaces, and likewise imperishable gold and other ornaments, are included amongst their embellishments. In spite of these improvements, however, the prices are not raised.
H. & Co. beg to inform those of their customers, who being supplied last season out of the first lot of Vases, complained of imperfection in the glazing, that such improvements have since been made in their manufacture as to render them in that respect, as in every other, PERFECT.
Early orders are solicited to ensure supply, as last year H. & Co. were quite unable to fulfil the whole of the orders received for them.
Hooper & Co., Covent Garden Market, London, W.C.

GUTTA PERCHA TUBING for WATERING GARDENS, &c.—The Gutta Percha Company have been favoured with the receipt of the following

Testimonial from Mr. J. Farrah, *Gardener to* Boswell Middleton Jalland, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing (in lengths of 100 feet each, with Union Joint) in use for the last twelve months for watering these Gardens, and I find it to answer better than anything I have yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the Tubing. I consider this Tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens with about one-half the labour formerly required."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Curtain Rings, Galvanic Batteries, Talbotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.
The Gutta Percha Company, Patentees, Wharf Road, City Road, London, E.C.

Oil Paint no longer necessary.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which Hill & Smith will forward on application.
Sold in casks of about 30 gallons each, at 1*s.* 6*d.* per gallon, at the Manufactory, or 1*s.* 8*d.* per gallon paid to any Station in the kingdom.
Apply to Hill & Smith, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street West, E.C., from whom only it can be obtained

Paxton Works, Sheffield, Established 1738.

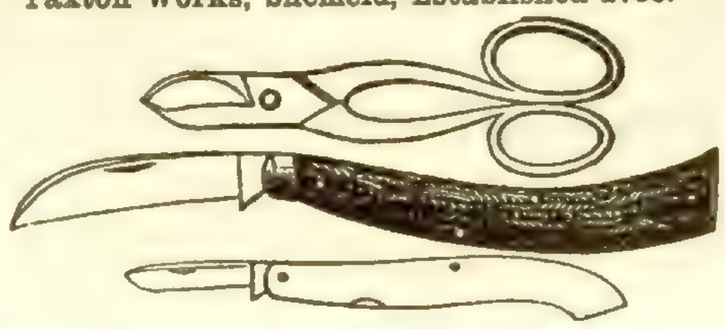

International Exhibition Prize Medal was Awarded to Saynor & Cooke for Superiority of Quality in Pruning and Budding Knives, &c.

SAYNOR AND COOKE'S celebrated English and French Exhibition PRIZE PRUNING KNIVES, &c., can be obtained of any respectable Nurseryman or Seed Merchant in the three kingdoms, all Knives warranted both by the Seller and Maker.
Caution.—None are genuine unless marked Saynor. Other marks would cause disappointment, as these Knives are tempered by an improved process known only to the Makers.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 570.
J. Tylor & Sons'
GALVANIZED IRON TUB GARDEN ENGINES,
with Registered Spreader.

8 gal.	12 gal.	16 gal.
£2 13 6	£3 2 0	£3 12 6
24 gal.	30 gal.	
£5 0 0	£5 12 0	

Fig. 571
J. Tylor & Sons'
OAK TUB GARDEN ENGINES,
with Registered Spreader.

15 gal.	28 gal.
£5 12 0	£7 0 0

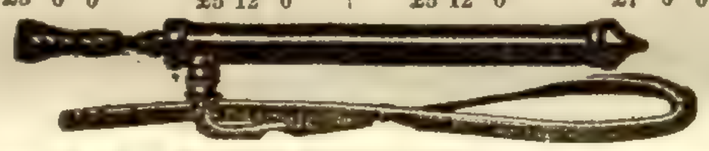

Fig. 586. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. £1 6 6 each.
No. 2. Ditto ditto .. 1 1 0 „
Telescope Branch Pipe for ditto .. .. 0 10 0 „

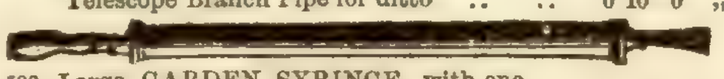

Fig. 590. Large GARDEN SYRINGE, with one rose and jet .. .. 10*s.* 6*d.* each.
„ 589. Middle Ditto ditto .. .. .. 9 6 „
„ 588. Small Ditto ditto .. .. .. 8 6 „
„ 587. LADIES' GARDEN SYRINGE, with do. .. 6 9 „

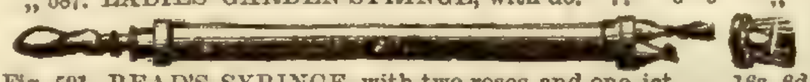

Fig. 591. READ'S SYRINGE, with two roses and one jet .. 16*s.* 6*d.*
READ'S SYRINGE, with one rose and jet 14 0
„ 592. Improved ditto ditto large .. 13 0
Garden Engines and Syringes of J. Tylor & Sons' manufacture kept in stock by Ironmongers and Seedsmen in every part of the United Kingdom.
J. Tylor & Sons, Manufacturers, Warwick Lane, Newgate Street, London, E.C.

To Florists and Gardeners.

AROMATIC FUMIGATING TOBACCO, prepared by A. Coronel, 258, High Holborn, W.C.—The only discovery yet known for the entire destruction of fly and other insects (the greatest enemies of a greenhouse), without injury to plants or to health, being void of all unpleasant smell. May also be used in hospitals and sick chambers with confidence.
Agents: Henderson & Co., Florists, Pine-apple Place, Maida Vale; Newbery & Sons, St. Paul's Churchyard: Carter & Co., Seedsmen, High Holborn, W.C.; Hurst & Son, Seedsmen, Leadenhall Street; and Messrs. Butler & McCulloch, Seedsmen, &c., Covent Garden, W.C.

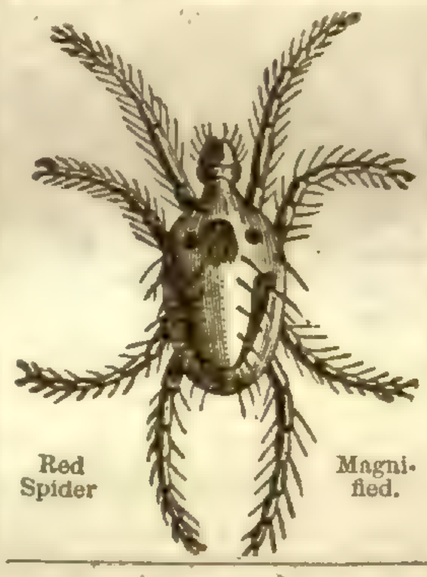

Red Spider — Magnified.

GISHURST COMPOUND, whether used against Insects and Mildew, on Growing Plants, or as Winter Dressing on Trees at rest, should be dissolved 48 hours before use. This gets rid of smell, and if the Solution be decanted, prevents any staining of foliage. A strength of from 1 to 2 oz. to the gallon of water is recommended for growing Plants; one from 4 to 16 oz. for Trees at rest.

Sold Retail by Nurserymen and Seedsmen, in boxes, 1*s.*, 3*s.*, and 10*s.* 6*d.* each.

Wholesale by
PRICE'S PATENT CANDLE COMPANY
(Limited).

COCOA-NUT REFUSE delivered within 2½ miles of Charing Cross, at 2*s.* per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the Patent Cocoa Fibre Company, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. Barsham & Co.

Barsham's BRUSHES and MATS are sold in every town.

Caution.—Every Brush is stamped, J. Barsham's Patent.

Permanent Grass Seeds
FOR ALL SOILS.

SUTTON AND SONS can supply good fresh SEEDS for immediate Sowing as under:—

PERMANENT GRASS SEEDS
For Laying down New Pastures (including CLOVERS in full quantities), 30*s.* per Acre.

PERMANENT GRASS SEEDS
For Mending New Pastures, which may have been injured by the Corn crop, 12*s.* per bush.

Royal Berkshire Seed Establishment, Reading.

The Best Turnip for Late Sowing is

SUTTON'S SHORT-TOP SIX-WEEKS.

Price 1*s.* per lb.; 45*s.* per bushel.

Carriage Free, except small parcels.

Sutton & Sons,
Royal Berkshire Seed Establishment,
Reading.

Chivas' Orange Jelly Turnip.

CHIVAS AND WEAVER (late George Chivas) acquaint agriculturists that they are supplying the above TURNIP, grown with scrupulous care, from a Stock which they have been improving for several years; the characteristics of the variety are now generally recognised, viz:—Rapidity of Growth (may be sown till the middle of August), highly Nutritious and particularly Hardy. To secure the genuine article direct application is recommended. Price 1*s.* 6*d.* per lb.; 20 lb. delivered free at any Railway Station. Chester, August, 1864.

TRADE

HALLETT'S PEDIGREE NURSERY WHEAT.
MARK.

Seed required { In September .. .. .. 4 bushels on 10 acres.
In October { 1st half / 2d half } 4 bushels { On 8 acres. / On 6 acres.
In November .. .. .. 4 bushels on 4 acres.

One Guinea a Bushel, or Seven Guineas a Quarter, including Bag delivered at the Brighton Railway Station, upon receipt of Cheque or Post-office Order, without which the Wheat will in no case be sent.
Apply to Frederic F. Hallett, Esq., F.Z.S., the Manor House, Brighton, Sussex.
Note.—This Wheat will not after the present season be again offered by Mr. Hallett to the public until 1868 at the earliest.

CARTER'S FARMER'S VADE-MECUM.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.
The Stock having been purchased by John Standish, strong Plants will be sent out in the first week of June, price 15*s.* to 31*s.* 6*d.* each.
Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.
Royal Nurseries, Ascot, Berks.

Vine Duchess of Buccleuch.

ROBERT PARKER begs to announce that he has arranged for the distribution of the stock of this very distinct and valuable EARLY WHITE GRAPE, and that the plants will be sent out early in autumn. Full particulars as to its qualities will be given in future advertisements. In the meantime, and during the whole of the season, visitors to the Gardens of Dalkeith Palace will have opportunities of seeing and judging of its merits, as a large quantity of pot and permanent Vines are now fruiting at that establishment.
Strong Planting Canes, 21*s.* each; Extra strong Fruiting Canes, 42*s.* each. Orders are now being booked, and will be executed in strict rotation.
Exotic Nursery, Tooting, Surrey, S.

ROBERT PARKER begs to offer the following, all of which are well-grown, clean, and healthy plants:—

AZALEA INDICA, Stocks for Grafting	per 100	20*s.* 0*d.*
ALOCASIA METALLICA	each	7 6
CLERODENDRON BALFOURII	„	10 6
RHODODENDRON COUNTESS of HADDINGTON..	„	21 0
„ JAVANICUM	„	2 6
„ NUTTALI	„	2 6
TRITOMA GRANDIS	„	5 0
„ UVARIA GLAUCESCENS	„	1 6

Intending purchasers are invited to inspect the general stock of Plants. DESCRIPTIVE and PRICED CATALOGUES of SEEDS and PLANTS are published, which will be forwarded to applicants.
Exotic Nursery, Tooting, Surrey, S.

New Hardy Annual for Spring Flowering.
COLLINSIA VERNA.

W. THOMPSON, Seedsman, Tavern Street, Ipswich, begs to announce that he is now prepared to supply the Trade with fine SEED of the above beautiful novelty for autumnal sowing. Its charming sky-blue and white flowers are among the first to greet the returning spring, and precede considerably those of any other species. It received a Second-class Certificate at the Regent's Park Exhibition, April 30; and was referred to in conspicuous terms in a leading article in the *Gardeners' Chronicle* of same date.
Prices and full description will be sent on prepaid application. A Coloured Plate for 6 Stamps, or gratis to purchasers of a certain quantity; retail packets, 1*s.* each.

To the Trade.

JEAN VERSCHAFFELT begs to intimate that his Stock of CAMELLIAS, well set with buds, is this year unusually large and fine, and begs to solicit early orders for the same, in order to secure a first choice.
A first-rate Stock of INDIAN AZALEAS is also to hand, and will be disposable in good plants at from 4*l.* a hundred.
CAMELLIAS with buds at from 6*l.* a hundred.
Apply to Jean Verschaffelt, Nurseryman, 43, Rue de la Caverne, Ghent, Belgium.

DILLISTONE AND CO., Sturmer and Woodlands Nurseries, near Halstead, and only one mile from the Haverhill Junction of the Great Eastern and Colne Valley Railway, beg to offer 12 distinct and most beautiful HARDY CLIMBERS, all well-established, from 18 inches to 3 feet high, for 9*s.* They consist of the finest CLIMBING ROSES, JASMINES, PASSION FLOWERS, HONEYSUCKLES (in some rare kinds), CLEMATIS and IVIES (a most beautiful collection), &c., &c. Post Office Orders must accompany the order from strangers.
A CATALOGUE for one stamp is now in the press, of New and Rare Plants of 1864, at reduced charges. We possess all the greatest novelties.
A CATALOGUE of GENERAL STOCK and a WHOLESALE CATALOGUE of STOCK, each for one stamp.

WELLINGTONIA GIGANTEA.—The Undersigned begs to offer fine healthy Seedling Plants in pots, at the following prices:—
One Year Seedlings, in single pots, 50s. per 100.
Specimen Plants, in 24-sized pots, 18 inches, 60s. per dozen.
Fine Plants, in 32 pots, 1 foot, 30s. per dozen.
in 48 pots, 9 inches, 15s. per dozen.
ARAUCARIA IMBRICATA, in 48 pots, fine, 9s. per dozen.
CUPRESSUS LAWSONIANA, 9 inches, 12s. per dozen.
T. Henchman, Edmonton, near London.

HERBACEOUS CALCEOLARIA, &c., SEED.

CHOICE CALCEOLARIA (James').—This unrivalled strain has in every instance received First Prizes wherever exhibited—can be seen in bloom here. Sealed Packets, 1s. 6d., 2s. 6d., and 5s.
CHOICE PRIMULA SINENSIS FIMBRIATA.—Hayes' superb strain. Sealed Packets, 2s. 6d., 3s. 6d., and 5s.
CHOICE CINERARIA.—Saved from best named varieties, and cannot be surpassed. Sealed Packets, 1s. 6d., 2s. 6d., and 5s.
HUNT'S SWEET WILLIAM.—Sealed Packets, 6d. and 1s.
SCARLET INTERMEDIATE STOCK.—True and fine. Sealed Packets, 1s. and 2s. 6d.
PANSY.—From best named varieties. Sealed Packets, 1s. and 2s. 6d.
And every other first-class Seeds. See CATALOGUE, post free.
Wm. Cutbush & Son, Highgate Nurseries, London, N.

Choice Seeds for Present Sowing.

ROBERT PARKER begs to offer the following, all of which are warranted new and the finest possible quality of their several kinds:

	Per packet—s.	d.
CALCEOLARIA, Herbaceous, mixed	2	6
CINERARIA, from named varieties, mixed	2	6
STOCK, Scarlet Intermediate	0	6
" White, ditto	0	6
" Giant Scarlet, ditto	1	0
" White, ditto	1	0
PRIMULA SINENSIS FIMBRIATA, mixed	2	6

A PRICED and DESCRIPTIVE CATALOGUE of SEEDS and PLANTS is published and will be forwarded to applicants.
Exotic Nursery, Tooting, Surrey, S.

UNRIVALLED CALCEOLARIA, PRIMULA, CINERARIA, CARNATION, and PICOTEE.

HERBACEOUS CALCEOLARIA, 2s. 6d. per packet.
HALF SHRUBBY CALCEOLARIA, 2s. 6d. per packet.
CINERARIA, 2s. 6d. per packet.
CARNATION, Self, Flakes, and Bizarres, 2s. 6d. per packet.
PICOTEE, White and Yellow grounds, 2s. 6d. per packet.
Barr & Sugden, Seed Merchants, 12, King Street, Covent Garden.

CHOICE AZALEA INDICA.

F. & A. SMITH,

THE DULWICH NURSERIES, SURREY,

Beg to call attention to their Stock of the above, which includes all the newest and best varieties, and of which they can now offer a large quantity, well set with bud, at moderate prices.

They can with confidence recommend their
FLAG of TRUCE, large double white, | PRINCE of ORANGE, brilliant orange scarlet,
CLAPHAM BEAUTY, bright rosy pink,
As the best formed and most distinct of their respective colours yet offered.

They have on Sale a few Plants of the original stock of the above sorts set with bud, and suitable for growing on into specimens, of which they will be happy to furnish sizes and prices.

A DESCRIPTIVE CATALOGUE of their COLLECTION Free on application.

NEW GRAPE, ROYAL VINEYARD.

TO BE SENT OUT IN SEPTEMBER NEXT.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Feels great pleasure in being able to introduce this important acquisition. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years.

B. S. W., to meet an extensive demand, has prepared a large Stock, which will be in excellent condition, and ready for distribution in September. Early orders are respectfully solicited. A List of those who have favoured him with orders will be published shortly.

PRICES:
Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

Dr. Hogg's *Report on the Royal Vineyard Grape:*

"Bunches hard and well set, sometimes long and tapering, and sometimes short ovate. Berries large and roundish ovate, skin white and somewhat transparent, showing the texture of the flesh through it, remarkably thin, and adhering closely to the flesh; so thin is it, that the whole berry may be eaten without any inconvenience being caused by the skin. Flesh firm and crackling, with a fine Sweet-water flavour. This is a fine looking Grape, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society."

For the opinions of the Horticultural Press, see *Gardeners' Chronicle*, April 9.

A correct COLOURED ILLUSTRATION by Andrews will be sent in exchange for 12 Postage Stamps.

NEW HARDY CLIMBING PLANTS.

CLEMATIS JACKMANNI, First-class Certificate.
CLEMATIS RUBRO-VIOLACEA, First-class Certificate.
Awarded by the Royal Horticultural Society, August 4, 1863.

The following is the Report of the Floral Committee:—
"CLEMATIS JACKMANNI.—This was one of a batch of Seedlings raised by Messrs. Jackman, the result of a cross between C. lanuginosa and C. Hendersoni and atro-rubens, the first being the female parent. They were lovely, hardy climbers, with large flowers; which, in the present variety, were of a deep bright violet, and consisted of a variable number of from four to six sepals. It was considered quite an acquisition. The plants flower from July onwards to the Autumn."
"CLEMATIS RUBRO-VIOLACEA.—This was from the same batch of Seedlings as the foregoing, and differed chiefly in its intense maroon-shaded, reddish-violet flowers, which were remarkable for the rich, velvety appearance of the surface."

The following is an Extract from the *Gardeners' Chronicle* Newspaper, November 21, 1863:—
"The recollection of some hardy, hybrid forms of Clematis shown at South Kensington during the past Summer, has served us as a reminder that, amongst hardy Climbers, the Clematis already occupies a very high position. Cut flowers of two of them exhibited on the occasion referred to (August 4, 1863), obtained each a unanimous award of a First-class Certificate, and well they deserved it, for certainly nothing in their way could be more beautiful.
"These seedlings were bred from lanuginosa, the female plant, crossed with the two very distinct sorts already mentioned. We have seldom seen anything more beautiful; the lustrous richness of the colours very much enhancing their beauty."

The *Gardeners' Chronicle*, January 9, 1864, on Meritorious Novelties in New Plants, mentions:—
"C. Jackmanni, an English hybrid, with flowers of the richest velvety-purple—decidedly a front-rank plant."

The *Journal of Horticulture*, August 11, 1863, remarks:—
"C. Jackmanni, a beautiful, broad-petalled, violet flower. C. rubro-violacea, a finely-formed, reddish violet-coloured flower, very distinct. Both these varieties will prove a great acquisition to our list of hardy climbers."

GEORGE JACKMAN and SON, WOKING NURSERY, SURREY,

Have much pleasure in offering to the public, for the first time, these beautiful Seedling Clematis; and they consider it is quite unnecessary for them to comment further on their sterling merits, after the above conclusive and high testimonials of their excellence and beauty. Orders will now be taken, and the plants will be sent out strictly in rotation in the month of October.

Plants, 15s. each. Plants, extra strong, 21s. each.
The usual allowance to the Trade. Two Coloured Drawings may be had post free for Twenty-four Stamps.

For Present Sowing.

SUTTON'S IMPROVED ITALIAN RYE-GRASS, 6s. per bushel, or cheaper in large quantities.
This is the best season for sowing Italian Rye-grass to ensure Sheep Feed very early in the spring.
TRIFOLIUM INCARNATUM (Early Crimson), 6d per lb., or cheaper in large quantities.
☞ A Mixture of the above will be found very useful for mending Clover and Grass Seed sown for mowing next spring.
MUSTARD SEED for Sheep Feed in October and November, or for Green Manure.
RAPE.—New Seed at reduced price.
Sutton & Sons, Royal Berkshire Seed Establishment, Reading.

WHEELER'S IMPERIAL CABBAGE (True), 6d. per packet, post free; 10d. per oz., post free; 8s. per lb. carriage free. An early and most excellent sort; we believe the best Early Sort for either Farm or Garden Cultivation. A great favourite: we receive orders for it fro all parts of the kingdom.

J. C. Wheeler & Son, Seed Growers, Gloucester, Seedsmen to the Gloucestershire Agricultural Society.

CARTER'S GARDENER'S VADE-MECUM.

ROYAL HORTICULTURAL SOCIETY.
SOUTH KENSINGTON.

Future Arrangements.

24th August, Wednesday, and following days—Show of New and Rare Plants at South Kensington.
26th August, Friday—Prince Consort's Birthday: Admission Free at South Kensington Gardens. Music all day.
28th August, Saturday—Flower and Fruit Promenade at Chiswick, admission 1s. Band at 3.
24th September, Saturday—Promenade and Grape Show at Chiswick, admission 1s. Band at 3.
Promenades in August and September, every Monday, admission 6d.; and Saturday, 1s. at 4.
19th October, Wednesday and following days—Fruit and Vegetable Shows at South Kensington.
16th November, Wednesday, and following days—Chrysanthemum Show at South Kensington.
7th December, Wednesday and following days—International Fruit and Vegetable Show.
26th December, Monday, and following days—Perfumes from Flowers and the Processes of Distillation.
The Gardens are now open daily. Admission, Mondays, 6d.; Tuesdays, Thursdays, Fridays, and Saturdays, 1s.; Wednesdays, 2s. 6d.; Sundays, by Fellows' personal admission or orders.
On the days of the Band Competition, Volunteers in Uniform are admitted at half price.

The Gardeners' Chronicle.

SATURDAY, AUGUST 6, 1864.

What then is to be done with our Flower Shows? That the visitors thereto are becoming weary of things as they have been, the forcible letter of Mrs. Ellis, which we printed last week (p. 723), is abundant evidence, if indeed any other evidence than that afforded by one's own experience and observation were needed. And that something further must be embodied in these exhibitions—some leading idea, as our correspondent puts it, to keep up the interest in them, and to make them sufficiently attractive to repay the visitor for the trouble and expense of going to see them, has become very evident.

We live in an age of progress, and flower-shows, like all other institutions, must be progressive. What would satisfy the lookers-on of some quarter of a century ago, when exhibitions were by so many years younger and less developed than they are now, does not and will not satisfy the public of the present day. The bulk of the visitors on whose support the success of such gatherings is dependent, have made acquaintance with them, so to speak, at a higher level than did the generation which preceded them, and from this higher stand-point they look for greater things than have been as yet accomplished. Not indeed, so much, let us remark parenthetically, in regard to the province of the cultivator, as in regard to that of the exhibitor: not so much in the material which furnishes the show, as in its setting up, and the general features of its arrangement. But some change must be made in these latter to secure the sympathies of the looker-on: that is to say, it must be made the main object to supply that which the looker-on wants, namely, a picture of beauty. "For the mere florist," as has been very well observed in the letter referred to, "exhibitions are perhaps well enough as they are; but certainly not for that vastly greater proportion of visitors who go for the sake of finding something to admire, and who above all things want that natural and healthy refreshment which beauty, under its most favourable aspects, is so well calculated to afford." And yet with all our change, we must be as conservative as we can. We want reform, but to attempt a revolution would only lead to disaster. Exhibition plants are not produced like Aladdin's palace, and we must even make the best of the materials that we have, working in

gradually amongst them such desirable improvements as may be practicable.

The bane of our flower shows is formality. Almost everything about them, except Ferns and Palms which refuse to do homage to the prevalent fashion, is rigidly formal. Long continuous level lines of stages, step above step, or of still less varied flat-topped tables, form the foundation on which the matter-of-course superstructure has to be reared. Then as to plants: because a fine pyramid Azalea has proved to be a telling object, and the pyramidal outline is rather the fashion of the present day, every Azalea must appear as a closely-trained pyramid of glowing colour. So also because Pelargoniums happen to have been well presented in a depressed globular form, that in which they are probably the most readily produced, each Pelargonium just reflects another, with some slight variation of the shade of brilliant colour which it may present. Then those much maligned stove and greenhouse miscellaneous collections, which it is said are so dull that after Azaleas and Pelargoniums they don't attract the sight-seers—the fault lies not in the subjects themselves, but in their trimness and sameness of outline, and still more in the enormous masses of them which are brought into juxta-position, under which circumstances indeed, as a whole, they look dull enough.

Here, then, are three series of plants which together make up the bulk of our summer shows, and amongst them how much variety do we find? What between pyramids, and globes more or less perfect or depressed, the variation in form is reduced to a minimum, and nothing remains but colour to effect the necessary contrasts which should bring out the individual and several beauties of each of the plants. And little indeed is possible in the distribution of even this element of beauty. For on stages, tier above tier, but running in level lines, and so planned as to suit the bulkier of the plants (consequently here well filled and there scantily furnished), we meet with collection after collection of the same character, group after group of "dull miscellaneous" things, or mass after mass of brilliant colour, in wearisome continuity—here too, possibly a phalanx of giants, and probably next to them a squad of squats. There is no softening of sharp angles, no setting off of bright colours by cool greens or other complementaries, but each series, each collection, is put down, doubtless with the best skill of its owner, but as if no other plant were there, and without the smallest reference to its surroundings. This is where failure manifestly sets its stamp upon our present arrangements. Our cultivators can grow anything, everything, if they but know what is wanted, but the plan of our shows is such that neither they nor our show managers have yet shown the capacity to deal efficiently with the arrangement of the materials collected together with so much cost and labour, and with so prominent a display of productive talent.

It is not in colour, as our talented correspondent points out, "so much as in form and variety that we shall find the great defect of our floral exhibitions." True "it is very difficult to give that consideration to form, which the importance of the subject demands, so long as we are necessarily confined to long straight lines for the placing of flowers for exhibition." But why confine ourselves to these lines? That is, of all others, the very question. We have on more than one occasion invited attention to a more pleasing mode of arrangement, which is moreover by no means speculative, since it has been most successfully carried out by our continental neighbours. Flowing banks of varied foliage; striking groups of brilliant colours; low expanses of flower and foliage, with choice specimens of foliage or flower in contrast set here and there above them, and sometimes arching overhead; serpentine boundaries; and the outer plants set low so that the eye may range freely over them—these are features, which would a thousandfold improve the aspect of our shows; but, as we have also shown, they cannot be carried out without more time, without breaking up the separate collections of exhibitors, and without the employment of artistic talent in the distribution of the materials. But if not without these, why not with them? The reform is one which is demanded by the very progress and position of horticulture.

What Mrs. ELLIS suggests is indeed very much like the arrangements to which we have just alluded. Suppose we deviate, she observes, from the long straight lines. "Suppose we take a circle or an oval to fill up, and imagine ourselves in possession of some little island, surrounded, instead of water, by mere space. There is perhaps no object in nature more beautiful than a little wooded island, towering up in the centre with tall spiral trees, and fringed about the edges with light feathery foliage, drooping down, and so shading off the central mass. Within the deep recesses of this embowering green, we will suppose little gems of beauty—something for the eye to rest upon with concentrated attention."

There is no doubt that this is the direction in which reform should be commenced. There is no lack of material; indeed, we have already a superabundance of the higher class of objects. Just as the operas of MOZART may be said to contain "music" enough to make up half-a-dozen of the ordinary calibre of those of modern times, so one of our present flower shows comprises first-class specimens enough to make at least two or three good shows, if supplemented with the complementary relief plants, which could be got in any quantity. They would even when thus dispersed be more effective than now, as they would not only be prevented from "killing" the effect of their own neighbours, but would in turn also escape being "killed." There might be some difficulty under present arrangements, in producing any great number of the "little islands of beauty" which are suggested in the letter to which frequent allusion has been made, but the attempt should be made.

One attempt, it is said, to carry out this or any other idea in advance of the old style "would give interest to our exhibitions for next year." We quite believe this, and have no hesitation whatever in saying that the attempt ought to be made; and further that a decided advantage will be gained by those who are first in successfully making this attempt. It does not appear to us however that such an "idea" would be so well left at first to the accidental treatment it might receive at the hands of any one or more exhibitors; but rather that the great Societies who hold the kind of shows now under discussion, should make special arrangements to have it thoroughly worked out under their own directions. The sample of this new plan of setting up might be thus made a prominent feature in next year's programme, and it would thus most effectually serve to bring home the matter to the comprehension of the exhibitors themselves, who might afterwards be left to vary or improve upon the original idea.

THE pyramidal mode of training dwarf PEAR TREES, growing upon the Quince stock, is one which finds much favour with cultivators, but we have observed in the continental gardens a variation of it which seems to have some special points of merit. In the ordinary pyramid Pear tree the

branches are allowed to proceed from the stem in all directions, so that when perfect the outline is that of a filled-up tall cone. In the variety to which we refer the branches which issue from the upright main stem are all brought into five radiating lines, and fixed one above another, so that their points indicate a pentagon, with the stem in the centre. The advantage of this mode of training appears to be that light and air are admitted directly to the centre of the tree from five different points, and consequently the fruits growing on the sides of these regularly disposed tiers of branches are more thoroughly exposed to the influences of these necessary agents; while to some extent they are also sheltered.

Something of the same mode of training has been described in a recent number of *L'Horticulteur Français*, under the name of the PENTAGONAL PYRAMID, by M. CROUX, of Sceaux, and his few remarks are accompanied by a sketch, which we here reproduce. In this the branches receive the same direction as in the cases we have referred to, but the tip of each branch is carried upwards at the circumference of the tree, and grafted into that next above it, so that the whole system of branches is held firmly by means of this series of artificial unions, and the branches are at the same time kept at regular distances. When this plan is adopted, M. CROUX points out that no other means of support is needed for any part of the tree, and consequently that the trouble and expense of providing trellis work are entirely done away.

Whatever practical benefits there may be in M. CROUX's plan of grafting together the tips of the branches of his pentagonal pyramid Pear trees, we cannot but regard the pentagonal method of training as advantageous, for the reasons which have been mentioned.

SINCE our observations on several peculiarities in GOURDS were published (p. 721), we have noticed one or two additional particulars which seem worthy of record.

It has been supposed that the roots which are so readily developed in some Gourds, especially in some varieties of Cucurbita maxima, are representatives of the second tendril, which in some Cucurbits is developed at the right or left hand of the leaf as the case may be. This however is certainly not the case. The accessory roots are not supplied like the tendrils by one of the three main bundles of vessels which enter into the stalk of the leaf where no tendrils exist. Moreover they are frequently developed at the right hand of the tendril, should that chance to be nearer to the soil than the other side of the footstalk.

We have moreover observed (in that variety of Cucurbita maxima seeds of which used formerly to be distributed by the Horticultural Society under the name of Cucurbita ovifera, and which is the very best of the tribe for purées), both the tendrils to be developed, and in this case the three bundles of vessels were most distinctly defined, one going into each of the tendrils, and the third in the centre entering the footstalk of the leaf. In this case they were so much the more distinct because the bright yellow stalk of the fruit was perfectly soldered to the stem, making a striking contrast of colour. The sepals in this variety are often very much elongated with yellow petaliform wings on either side, and the setaceous tip in some flowers is twisted almost resembling a tendril.

There seems, moreover, in this species a peculiar tendency in different parts to assume the colour of the corolla. In the fruit-stalk this is normal in several varieties, and in those now under cultivation, the leaves of healthy plants are spotted with yellow as decided as that of the flowers, and sometimes the greater portion of the lamina is similarly coloured.

We mentioned the circumstance that in Cucurbita moschata the sepals sometimes assume the form of perfect leaves; these fall off just like ordinary flowers, leaving the naked flower stem behind. We have just gathered a flower in which one large leaf is developed of a whorl below the flower and apparently below the point where the flower would fall off. As this is clearly not soldered to the flower-stalk, it must apparently be considered as a bract. We have seen no other instance.

Amongst several plants of the variety Concourzelle of C. Pepo now under cultivation, some are wide spreading, while others answer precisely to the American Bush Squash. The habit, we believe, cannot be preserved, though it is most desirable to do so, and in this respect we have not found seeds of varieties of Bush Squash received directly from America more constant than others. Amongst the plants of a Gourd whose seeds we received from M. VILMORIN, under the name of Courge blanche

non coureuse, not a single individual retained the bush-like habit. All sent out remarkably long runners. *M. J. B.*

—— The appearance which has been made by the now greatly varied race of Scarlet Pelargoniums at the shows of the present season, though not all that could have been desired or all that may be attained, has, nevertheless, been so far satisfactory as to indicate that the varieties of this branch of the great Pelargonium family may be made very efficient elements of a summer display. This is especially the case with those beautiful forms which have salmon-coloured, rose-coloured, or parti-coloured flowers.

So far as our present experience teaches, the error which exhibitors have fallen into has consisted in attempting to grow their plants too large, and the consequence has been, that in order to furnish the too ample heads of foliage with a scattering of blossoms, the expedient of tying down the trusses has been resorted to. Nothing could be done so effectually to spoil the appearance of the plants as this tying down of the flower-trusses; and this has been so evident that we should hope it will never again be attempted. We doubt, indeed, whether many of these varieties—especially those which produce very large heads of blossoms, can be made to flower so thickly as the show Pelargoniums do, and if this really proves to be the case, it will be evident that the production of large plants is a positive mistake. It would be far more satisfactory to have neat moderate-sized plants, each with say ten or a dozen or a score well-developed trusses, than larger plants proportionately more thinly furnished.

Some advantage may probably be gained another year by the judicious treatment through the autumn and winter months of such plants as those which have been exhibited this season. With age, if a fair balance of health and vigour were kept up, a greater profusion of flowers would no doubt be brought out. These matters may, however, be safely left to our cultivators, if the encouragement to persevere is but continued to be held out to them in the prize schedules. Then we may expect to see these beautiful and varied flowers, the pride of our conservatories, taking their proper place at our shows. There is evidently some trouble and difficulty in arriving at a satisfactory result, as the deficiencies of the plants which have as yet been exhibited, bear witness; and this difficulty will not be overcome by the grower for the mere sake of varying the shows or pleasing the public which may come to look on. That is not the producer's business, at least not in a primary sense. He must have his substantial reward, and in every sense he is worthy of it.

We allude to this question just now for the purpose of urging the Societies to continue at least, if not to extend their prizes for this class of Scarlet or Zonal Pelargoniums. At present the prizes are below the average, and therefore fail to excite so much interest and competition amongst growers as would otherwise be the case. The plants have always been so treated, and this is no doubt the reason why they have not yet as a rule been brought out in the perfect state to which they are capable of being grown. Because some sorts of this race of Pelargoniums are largely used for out-door gardening, the notion seems to have been entertained that they were common things—mere bedding-out stuff, and that almost any petty prizes would be sufficient encouragement for them at a flower show; but nothing can be more fallacious than this notion. There are numberless choice and delicately-coloured sorts of this horse-shoe breed which are to all intents and purposes in-door plants, whose beauties can only be fairly brought out with the aid and shelter of glass. It is these sorts which we want to see freely brought to our flower shows, but we want them brought out perfect as to cultivation, and this we shall not have done unless there is some amount of persistence in the offering of prizes; and a due recognition of the trouble incurred, in the scale at which these prizes may in future be fixed.

—— One of M. Linden's recently introduced New Grenada plants, the Isotypus rosiflorus, belongs to the curious forms of the Mutisia group of Composites, and in its flower heads bears some resemblance to Barnadesia rosea. The genus Isotypus was established by Humboldt, Bonpland, and Kunth for a South American plant, which had lyrately pinnatifid radical leaves, white beneath, and a corymbosely branched stem. M. Linden's new species is described by its discoverer, M. Triana, as a very elegant plant. It was found between Mira and the Magdalena River, near to Bogota, at an elevation of from 1600 to 3300 feet, growing in dry stony places. Its leaves too are lyrately pinnatifid, smooth, green above and downy white beneath, while the stem is more or less branched, and bears numerous heads of flowers. It is a winter-flowering plant, and according to M. Triana, a fine ornament for the hot-house, on account of its red flowers and the white underside of its leaves. From the original I. onoserioides it is known by its heads being much larger and more distinctly stalked, by its peduncles being simple or but slightly branched, by the involucral bracts being more compact, and by the large terminal lobe of the leaf being deltoid instead of five-lobed. It is easily cultivated, requiring perfect drainage and the avoidance of over dampness in the soil; and is best placed in the hothouse near the glass.

THE RHODODENDRON.

It is as little to be doubted that the Rhododendron is the prince of ornamental evergreen shrubs, as that the Rose herself is the queen of flowers. And think of the season of its commencement, and the period of its continuance—from the middle of April to the end of June—leading us through many a scene of floral beauty to the very opening of Rosetide, as that again conducts us into the glories of the autumnal flower garden. So is Flora's bright chain woven, and the year is clothed with beauty. Why should not the lovers of flowers possess and enjoy them all?

We confess that we are somewhat old-fashioned and conservative in our tastes. We have even gone so far as to deprecate excess in the bedding-out system. But after seeing the flower gardens at Dalkeith and Dirleton we surrendered our convictions on this point, and beat a retreat into the position of the wise man, viz., that "everything is beautiful in its time." It cannot be doubted that families who spend their autumn only at their country residences, and who have no particular interest in individual plants, will prefer the fashionable flower garden of the present day. We retain so much of our old faith as to have a special predilection for the mixed style of flower gardening, and think it best fitted for a garden attached to a residence permanently occupied. We are not content with bare spaces in spring, and blank panels in summer, when we can have a succession of ornamental plants from February to November. To a man of such tastes flowering shrubs are indispensable, and of these, as already said, the Rhododendron is prince. There is no plant that suspends in air such masses of conspicuous and varied colours, none that is possessed of more diversified interest to the florist; and with it at his command no one, without attaching blame to himself, can continue to speak of "the shrubbery's insipid scenes." It may be added, that if the amateur has a turn for observation and experiment, there is scarcely any province of hybridizing so full of promise and enjoyment.

But the objection may be started by some, "We are not in the vicinity of peat, and the formation of a proper Rhododendron soil would be to us both operose and expensive." Let them hear what Mr. John Waterer says on that point:—"The commonly received opinion we find is still prevalent that the most choice kinds of American plants cannot be grown without the aid of a rich peaty soil; nothing, however, is more erroneous. Still we do not deny that a good peaty soil is preferable, but the absence of it need deter none from planting on that account, as abundance of material of a highly suitable character in every locality can at any time be found. However, in absence of peat (which is more or less to be found on nearly every estate), the subjoined will be found to answer every purpose. Leaf-mould and turfy loam in equal parts, with a small admixture of white or other sand; or the top spit of any plantation, wood, or Grass land—the more it is impregnated with vegetable particles the better; the thickness of the spit will depend on the composition of the soil—the more turfy the better for the growth of plants; a small portion of sand, with well rotted stable manure—the proportions of the latter being one barrowful to six of the former ingredient. But numberless instances are recorded of their thriving in almost every kind of soil, particularly in light fertile loams."

One does not like to modify, much less contradict, the opinions of a man of such experience as Mr. Waterer. We believe that in damp localities, with abundance of shade, Rhododendrons will grow in any soil, except where it is charged with lime, but in such situations they do not flower freely. On the other hand, they become stunted in open situations, and on clayey soils. For our part, we would not venture choice sorts on common exhausted garden mould, or on any soil in which peat and sand did not predominate. Doubtless they might live in almost every kind of soil, but we would rather be without them altogether than see them scraggy and ill-grown. Any one near a railway in Scotland may easily obtain a few trucks of peat. Many have free access to abundance of leaf-mould; and common pit sand is sufficient for the other ingredient. We warn our readers against crossing soils when they are intended for Rhododendrons. A layer half-a-foot thick of moss digged into clayey or gravelly soil, or exhausted garden mould, is just so much labour and expense thrown away. This we have learned from numerous instances, both of observation and experience. If only such a thin layer is to be had, let it be kept on the surface, and not much interfered with by digging. The great secret is to keep the soil loose and free near and around the neck of the plant, and it probably matters little whether this is done by means of sand and leaf-mould, or sand and peat, only in dry weather the former will require more watering than the latter. Any soil that clots or bakes into a sort of concrete is unsuitable for the fine fibrous roots of this shrub.

Last winter we formed a compost for Rhododendrons, and apparently with complete success. From a peculiarity in the district the chief difficulty was to procure suitable sand; and for this ingredient we were obliged to content ourselves with the finer dressings of the sandstone of Binny Quarry—that from which the new buildings in Edinburgh are being erected; these dressings were passed through a wide wire sieve. The peat was carefully broken down with a coarse rake, and mixed with the sand and vegetable mould, the heap being repeatedly turned over. A layer of about 16 inches thick of this material was placed in the beds excavated for the purpose, and the surface was sharpened by a copious sprinkling of silver sand obtained from the neighbourhood of Tranent. In these beds a number of Rhododendrons, after a long journey of some hundred miles, were planted about the middle of April; they have stood all the late droughts without being watered; not one of them has lost a leaf; not a few of them have bloomed beautifully, and they are now making shoots which we trust will blossom another year. We would say to the reader—go and do likewise. At all events we never had greater satisfaction in any gardening operation we ever performed. *J. S., in Scottish Gardener.*

NOTES ON GARDENS.—No. XV.

Botanic Garden, Oxford.

(*Continued from page 723.*)

Leaving the walls with some reluctance and passing up the main walk, it was noticed that the collection of exotic trees and shrubs which margin it in wide irregular borders was planted so as to accommodate the great number of species necessary in the limited space. Thus, the large species occupied the central line, then the second-sized trees on each side, and finally the shrubs to finish off. Half-way up the walk is the circular aquarium, which is also filled with the larger hardy aquatics growing in good style, while between the four walk entrances which converge at this point are benches about 3 feet high, having in them little copper cisterns about a foot in diameter, for growing tiny marsh aquatic plants, &c., so that the student can examine most of our larger aquatics in the aquarium, and then at once turn to where such things as Actinocarpus, Littorella, and the smallest of Canadian yellow Water-Lilies, Nuphar Kalmiana, are elevated for his convenience. These cisterns were made during Dr. Sibthorp's professorship, more than 50 years ago, but are still as useful as ever.

The half of the garden to the east of the main walk is almost wholly occupied by a natural arrangement of hardy plants, that to the west by a Linnean garden of British plants, and a garden of exotic annuals. Both divisions are, however, divided by a walk parallel to the main one, and these walks are margined by circular and oblong beds tastefully filled with bedding plants, Centaurea ragusina being largely used among them. This plant has been for nearly 70 years in the Oxford garden, where it was brought from its native home in the Mediterranean by Dr. Sibthorp. Mr. Baxter was, I believe, the first to use it as a bedding plant. About 5000 plants are used in the bedding, and as the arrangements of hardy plants—the beds cut in turf—are seen beyond the margin of colour produced by these, and beyond them again the trees raising a noble wall of foliage, in no place do Nature's brilliant colours appear to exceed the proportion which they were intended to bear to her ever-varying ever-refreshing mantle of green. Cycas revoluta and a few of its allies were placed out for the summer singly in the neighbourhood of these beds, the pots being placed in pits, so that the rims were a little lower than the turf, and of course they looked very well so placed. It is hardly necessary to say that the transference of the beauty of fine specimen greenhouse plants from the obscure spot in which they are often placed for the summer, to the favourite flower garden, lawn, or pleasure ground would be a desirable change.

From the north side of the garden its trees are seen to great advantage, completely obliterating as they do its formal outline, and presenting a diversity of character and of foliage which it would be difficult to surpass even where the surface aided the planter. The absence of duplicates and judicious intermingling of distinct things account for this. The Frizzle Filbert, Corylus Colurna, was 50 feet high, and nearly as much through, and the Yellow Pavia, Cytisus Adami, Hop Hornbeam, Rhamnus alpinus, and the Maiden-hair tree were proportionately remarkable, the latter very high and almost as straight as a Lombardy Poplar. Ailantus japonica, having somewhat of the habit of a Rhus, and with gracefully bent leaves three feet or more long, made a telling contrast among the foliage of the second-sized trees. Outside the garden, on the margin of the water near Christ Church meadow, Planera Richardi occurs, a noble specimen of a distinct looking, and I believe rare tree. In the various outer walks fine trees are met with, which are not in the botanic garden from want of space. Not far from the garden is a great tree of Salix alba, with abundance of Mistleto upon it, and this, in addition to the trees it is commonly found upon, also occurs on Pavia flava, the Lime, Poplar, and Juglans regia; but the most singular specimen was suspended over one of the main walks by Cratægus prunifolia, on a branch leafless beyond the globular mass of the parasite, which contained a thrush's nest, and was 4 feet in diameter. Borne on the end of a branch, right away from the body of the tree, this interesting specimen, though quite healthy, was not expected to survive long.

The large specimen trees are named in a way that ought to be at once adopted by those who are anxious to have theirs decently labelled, but who have long ago given up patent labels, "tombstones," and all the

rest of it in disgust. A piece of tin a few inches square is used, with half an inch of the upper edge bent down to form a little coping to keep off dirt, &c., while the name is plainly written with white paint on a green ground, and a wire being passed through two holes in the angle formed by the bent portion, the label is nailed to the bole at about 5 feet from the ground. These labels remain perfectly legible and clean for many years, and nothing could be neater or more economical.

Noticing that the arrangements of hardy plants are very well filled, I passed on through a handsome entrance in the east wall, where the chief houses are found against its outer side; but these I shall do collectively, and now allude to the sweet bit of ornamental ground between them and the river Cherwell. In olden times the garden was subject to floods from the river—its now very desirable margin, the astonished curator sometimes finding it a placid lake, and the tops of the Irises veritable waterflags; but during the curatorship of Mr. Baxter, Sen., he managed to heap nearly 2 feet of soil over the surface, thus putting an end to erratic irrigation. Well, the chief charm of this little garden on the banks of Cherwell is produced by large plants of the several species of greenhouse Araucaria and other things of symmetrical habit being placed about singly, the pots being sunk in the turf. Among them the variegated American Agave was a noble specimen, with leaves 6 feet long, and evidently well primed for shooting into flower, which flowering will not compensate the garden for the loss of so fine a plant; Cordyline australis in flower, Xanthorrhœa hastilis, and Dasylirion acrotrichum were of great size. Some clumps of hardy Heaths and Rhododendrons were dotted here and there, but the largest beds were level, firm, and well drained, being for the accommodation of the medium and small-sized greenhouse plants out for the summer. Among the general greenhouse stuff in these clumps were healthy growing plants of Mr. Veitch's new Japanese introductions; stout little Caper plants, and Paronychia argentea from the walls of Nazareth. Along in front of the picturesque range of houses the low walls and corners were taken advantage of to comfortably shelter and guard such things as the Caper—which is elevated a little to keep its neck dry and warm; Bambusa Ragamanski, Viburnum macrocephalum; Indigofera decora, which gets killed to the ground during a very severe winter, but comes up again and forms a very pretty flowering plant for low walls; Arundinarias, Deutzia crenata fl. pl., and Clematis azurea grandiflora. I need scarcely say that the combination of clumps of greenhouse with hardy shrubs, the dotting about of fine specimens, the absence of monotony and gaudy colouring, the river with now and then a smart boat, the full-length view of Magdalen Bridge and through one of its arches of the original recorded locality for Arabis Turrita, and finally another splendid view of the tower of Magdalen, made this a delightful strip of garden.

Passing to the south side of the walls, the Grass garden appeared, each species being grown by itself in a little circle cut in the turf, which is perhaps the best way of avoiding the Gordian knot which the hapless Curator has to unravel who permits his Grasses to embrace each other. Hereabouts, on the outer side of the garden wall, was a very large plant of Smilax Sarsaparilla (?), which grew rapidly, was perfectly hardy, and had been for 25 years on the wall. On the border, which was here devoted chiefly to hardy medicinal plants—the Asafœtida plant was met with, and also Arundo conspicua, which is likely to prove a fine ornamental Grass in favoured localities. Xanthosoma violacea, a noble Arad, which we shall meet in its proper character in the stove aquarium, was planted out here, growing and in flower with the esculent Caladium; but I suspect Petasites vulgaris, on the rich banks of a stream, will always present a more "tropical appearance" than anything we can do with the exotic Arums in the open air in this country. A few thriving plants of Cephalotaxus drupacea remind us of the Pines, which are for the most part planted on the outer side of the west wall; but the garden is not favourable to the Pine tribe, and there is nothing of unusual interest among them.

Now for the houses, beginning at the succulent house, which is one of the four built against the herbarium, &c., at the north end of the garden, and which contains, when all the plants are housed, a very excellent collection of these curiosities—that is, if anything of the sort can be called so after the noble one at Kew. By the by, gentlemen who have given up growing everything in the way of a succulent, must feel a pang of regret when they enter that astonishing house at Kew, the perfecting of which by the late curator, Mr. Smith, would alone entitle him to the admiration of the gardeners of Britain, even did he not know a Grevillea from a Gymnogramma. But good things in the Aloe, Agave, and succulent way are "coming in again," and if any one doubts this let him look into Mr. Williams's new nursery at Highgate Hill, where he will also be surprised at the value set upon some of the specimens.

Well, the first noticeable thing met with was a regularly and beautifully striped Aloe from Natal, one of Mr. Saunders's introductions; then Echeveria pulverulenta, which would certainly be an addition to a group of dwarf "fine-foliaged" plants; and Echinocactus denudatus, with the strong spines laid down so low, and their points tucked in so comfortably, that even a non-callositied monkey could sit and meditate upon it, which character it will be admitted is a distinct one amongst Echinocacti. Of Mammillarias there was a good collection; and about 130 species of Mesembryanthemum, of which obconellum, nuciforme, and octophyllum appeared the most distinct and singular, with M. anatomicum, which is obliging enough to skeletonise its own leaves. There were also Euphorbia Scolopendria and grandidens, both very stately and distinct; Crassula obliqua, a perfect miniature tree; Aloe lineata, with good big bushy specimens of the officinal Aloes and Euphorbias.

The remaining houses here were emptied of their more important inmates, and filled with miscellaneous flowering stuff for the summer, with a large batch of Centaurea ragusina in flower to get seed from, a good collection of Cape Geraniums, Sphærogyne latifolia, and Stangeria paradoxa. *Wm. Robinson.*

(*To be continued.*)

P.S. The Dasylirion mentioned at p. 723, was 8½ not 18 feet in diameter, and Mr. Baxter's botanical library should have been stated to number 5000 vols.

BEES, HONEY AND HIVES.—No. I.

[The following very interesting and instructive letters on the important rural business of bee-culture, which bear the signature of "A Bee-master," and are dated from Tunbridge Wells, have lately appeared in the *Times*:—

"It is rare now-a-days to find even in the *Times*, where one finds everything, any information on this subject. I have ten stock-hives. I never destroy or kill my bees. I look on the system of the sulphur match as barbarous and unprofitable. I leave each family on an average not less than 25 lb. of honey for their winter stores, and the surplus only I take away. Should any hive swarm, which I can generally prevent, and the remaining stock be therefore deficient in provision for the winter, I feed them in the course of the early spring with barley-sugar. This and other little attentions endear the bee-master to his bees, as they are very susceptible of gratitude, and have long memories.

"A hive is very like a church. When, in May, it increases rapidly in numbers, and the temperature rises inside, you either increase their accommodation in area or in height, or you will have a secession. Should a secession take place, bees set an example ecclesiastics might copy. The new church never falls out with the old one. Side by side they work in perfect harmony, believing there is plenty of food for both. The only incidental mischief-maker is the wasp; whether he be prelate or presbyter I cannot say, but I know well he is a thief and intruder, and after a fight the bees, who in this matter are rigid non-intrusionists, eject, maim, or kill him—and he deserves it. Queen Victoria's Court is modelled on the apiarian Queen's. You may see the Queen bee, by means of my glass windows, going her rounds, and giving orders with her Royal ladies, who never turn their backs on Her Majesty. The exceptional instance occurred on one occasion, when it became necessary to give a rather sickly establishment rum and sugar, of which they drank to excess and got drunk. As long as the stimulus lasted the monarchy became a fierce democracy, and Queen and subjects were confounded in the *mêlée*.

"The only vice among bees is their passionate liking for rum and strong ale. But the teetotaller would fairly reply that they never care about either, unless it is pressed upon them.

"My bees at present have begun the massacre of the drones. These are a sort of Benedictine Monks, who, like Brother Ignatius, prefer enjoyment to hard work. They are round, fat, and lazy, making much noise, and eating of stores to which they do not contribute. About this time the Queen and her active subjects have awakened to the truth of the text, 'If any will not work, neither should he eat,' and the drones are being garotted. But you want to hear about the harvest

"In one square box there are 40 lb. of honey, and, a corresponding super rapidly filling up, there is likely to be for me as much more. In three Scotch or Ayrshire hexagonal hives, which I have found to answer best of any, the three supers are in two almost full, and in one there is at least 40 lb. weight in the super, and over the super is a bell glass with 7 lb. or 8 lb. additional. In one of Neighbour's very beautiful straw hives I have two bell glasses almost full, and a month ago I removed from this hive a very beautiful glass of honey. In one of Petitt's lateral hives the bees passed through the subterranean archway a month ago, and have nearly filled this compartment. On this, also, I have placed a super bell-glass, which is beautifully stored. From a common cottage straw hive I removed a bell-glass super three weeks ago, weighing 18 lb.

"This season I shall have nearly 200 lb. weight of surplus honey, and yet leave in each hive more than enough to last the producers till April, 1865. Why should not cottagers cultivate bees? There is nothing to pay for pasture; very little labour is required, and that labour amusing, in taking care of them; and for very early virgin honey there may be had 1*s.* 6*d.* a pound. The poor cottager might thus easily pay his rent. If landlords could only convince them that the old system of burning the bees in order to get the stock honey, which is at best inferior, is not only cruel, but unprofitable, they would do an essential service. The poor peasant would have an interesting amusement after his day's work, and a contribution towards his rent on the year's end." *July* 19.

"Since my letter appeared in your columns I have received various communications from rectors, vicars, curates, &c., who feel a very great interest in bee-keeping as a social and commercial question. Most of these letters invite confidential and private communications, and record a variety of questions, difficulties, and perplexities which have injured or arrested the apiarian enterprises of the writers. I prefer to answer their inquiries through your columns. The most urgent questions in the letters of my correspondents, refer to the hives I employ, and which I briefly described in my letter.

"The first I mentioned is the Scotch or Ayrshire Hexagonal Hive. It is made of thoroughly seasoned deal in the form of a hexagon, about 8 inches in height, and 16 inches diameter. On the top is a series of parallel slits extending from front to back, which I open or shut by a series of corresponding deal slides. On receiving a swarm in April or May, I introduce the slides and thereby close up the top of the box. On finding, as in fine weather I am sure to find in three or four weeks, that the box is full, I place on the top another hexagonal box in all respects the same *in size* and shape, and draw out the slides and thereby introduce the bees to the vacant upper chamber. As each box has a window, I am thus able to ascertain progress. When this upper box is filled with honey, I may place on the top of it another precisely the same, drawing out the slides on the top of the second box, and introducing the bees to a third story. But usually I prefer, for the sake of the beauty of it, a bell-glass, greater or less as the season may suggest. I have found this hive by far the most successful. It seems the bees, who construct their cells in the form of hexagons, prefer the house in which they work to be of the same shape. A cottager may very easily make these boxes in the long winter evenings.

"The second kind of hive I alluded to is made of straw, and may be purchased at Neighbour's, in Holborn. The greatest disadvantage is its expense, costing, as it does, 30*s.* But it is so well made that it will last very long. I have had one in constant use during 10 years, and it is still as good as when it was bought. Its top is flat, with three longitudinal apertures closed till full, with zinc slides. About the end of May, in a good year, I draw out the slides after placing over each a good sized bell-glass, and in July I have often had in each glass 7 or 8 lbs. of honey. The reason of the failure at this hive is the coldness of the glass, which Neighbour's additional super straw hive or cover does not mend. But if my correspondents will get a piece of thick Scotch plaid made like a nightcap and case each glass with this, they will find the bees use it as readily as a wood or straw hive, and there will be no moisture from condensation of the bees' breath inside.

"The third sort of hive is Petitt's, of Snargate, Dover. It is worked on the lateral system, and of its kind is a perfect gem. Two boxes are placed on one floor with a subterranean communication between them; on stocking the box on the right a zinc slide is introduced which shuts off the communication. As soon as the box is full the slide is withdrawn and the communication laid open. The bees take possession of the other box on the left and fill it with pure honey. When my harvest comes I shut off the communication and remove the left-hand box full of honey. You will perceive that my principle of action proceeds on the notion that the bottom box of the Ayrshire or Scotch hive, the straw box of Neighbour's, and the right-hand box of Petitt's, are each the sacred property of my bees, which I feel it larceny to lessen or disturb, and that the surplus is the tithe or portion of the beemaster. The ruinous blunder of country bee-keepers is their taking honey from the former—honey, too, mixed with brood and bee's-bread and the films of the young grubs. In this, the department I never touch, the Queen presides with her Ladies-in-Waiting, and in any one of these, if the bees have filled the additional supers or laterals, there is abundance for all her subjects during the winter.

"In some of the letters you have been good enough to send me, the expense of these hives is urged as a fatal objection as far as the cottager is concerned. Let me therefore explain my last and cheapest plan.

"Place the swarm in a common sixpenny or shilling straw hive. When you ascertain, either by its weight or the busy working of the bees, that it is full, take a square board about a foot square; cut in the centre of it a round hole 3 or 4 inches in diameter; place on it a bell-glass, or, what is cheaper, a smaller straw hive; take a sharp table-knife and go to the hive about 12 o'clock at noon, when most of the bees are out working, cut out the top of the straw hive, making a round aperture of 4 or 5 inches in diameter, and place on it the board with the bell-glass, or lesser straw super, covering the glass with its nightcap, and you have everything you can desire. If in cutting the hole on the top of the stock hive you hesitate or lose your self-possession the watcher bees will attack you. Decision invariably paralyzes them for the moment and secures your safety. These glasses, or supers, are removed by cutting through between the board and the lower edge of the super with

a zinc plate, on which you carry off the super full of surplus honey, placing over the hole at the top of the stock a flat board or an empty super. From one straw hive treated in this way I carried off 18lb. of honey at the beginning of July this year. I ought to add that I keep my hives of every sort under cover of wooden sheds, accessible from behind by means of doors that let down. During the winter I cover up the hives in the sheds, each with paper, and thereby I keep them warm. As the spring approaches I give the lightest an occasional half-pound of barley sugar. This barley sugar I get at Kilner's, in Hanway Street, Oxford Street, before it is mixed with scent or lemon acid. Common sugar is of no use. To be available to the bee, to suit a lambent insect, it must have been exposed to a heat of 300° Fahrenheit. I had better add a few useful hints.

"Get acquainted with your bees; they are naturally very affectionate. I have frequently hived swarms, filling each hand with clusters of bees, and rarely have I received a sting. I have sat in the midst of them for hours, and weary bees have rested on me and have entered their homes singing a song of thanks.

"They have several bitter enemies besides the wasp. I used to see toads frequently sitting under the landing board, and only recently discovered they were there 'seeking whom they could devour.' On one of these ugly visitors being laid open his maw was filled with bees which he had sucked into his ugly jaws. The tom-tit, also, is a dangerous little enemy. He perches on the landing-place of the bees on a wet day, taps with his bill, apparently inquiring after the health of the inmates; a watcher bee comes out to reconnoitre, and is instantly snapped up by the wicked hypocrite. The spider, also, catches weary bees in his web, but the occasional use of a brush disposes of this peril. The snail, attracted by the warmth, occasionally creeps in. The bees successively attack him, but find their stings blunted and broken by the shell, as shot is by our ironsides. Failing to injure or remove the intruder they have recourse to a plan which indicates more than instinct. They cover him up with propolis, a kind of gum which they use for stopping up crevices, and not only does he die from want of air, but he is prevented from giving forth offensive odour by the air-tight case or shroud.

"The most attentive bee-master occasionally gets stung. I have discovered a cure not found in the pharmacopœia. Press a watch-key hard on the place after removing the sting; this prevents the poison from spreading; then apply moist snuff or tobacco, rubbing it well in, and in five minutes all pain is gone. This is a never-failing remedy.

"I have entered into these details because it is evident that a great interest has been excited by my communication, and because it is of great social importance. Many a poor curate and ill-paid vicar, and many a cottager with time to spare and his rent to pay, may thus add to their income. My bees feed over an area of six miles, improving every flower they touch and robbing nobody. Tunbridge Wells is one of the best bee districts in England, and this alone is evidence of its being a healthy district. Bees never get on in unhealthy places." *July* 27.

STRAY NOTES.

1. *Disfruiting and Taking off Strawberry Runners.*—It has been said that if you destroy the runners you induce incipient fruit-buds to become runners, which otherwise would remain fruit-buds. I planted Eliza (Rivers) this spring twelvemonth, and disfruited it and kept the running strings constantly cut off; and the following are the numbers respectively of the main stems of 12 plants, viz., 58, 49, 43, 50, 37, 56, 46, 32, 47, 44, 40, and 38. The crop was enormous, and the fruit from these plants, together with Wonderful and Empress Eugénie, supplied the *déjeûner* at the Royal Gardens on the 29th of June. I had counted before me three plants of the Empress Eugénie and three of Wonderful similarly treated, and of the same age, and they averaged from 18 to 32 main fruit stems per plant. I also had counted three plants of Wonderful, two years old plants, that had never been allowed to fruit, but had been kept solely for runners. The result was similar. I speak not of branchlets of stems, but of main stems running into the heart of the plant. Eliza, in different positions, went through the whole season. The two years old Frogmore Pines and Royal Hautbois bore immense crops. The Frogmore Pines were many of them as large or larger than Myatt's Surprise. The crop of Eugénie was very fine. I have fine spring-planted plantations of the following sorts that have been treated as the above, viz:—Eliza, Frogmore Pine, Eugénie, and Wonderful.

In critical seasons, these dis-fruited and dis-runnered spring-planted plants will be sure to crop well, if supplied with sufficient water. As these have now become strong plants, I have no objection to taking runners from them.

2. *Manetti Roses on Raised Banks.*—I described these banks last year. Nothing could be finer than the growth and blooming of the plants this year. The blooming is still very fine. I measured a new stalk from the base of Duc de Cazes, and found it to be 87½ inches. There are plants of it together exhibiting fine growth and continuity of splendid blooms. I made a new bank this year, and planted it with 10 of Alfred de Rougemont, 4 Duc de Rohan, and 10 Maurice Bernardin, all first-class, beautiful, and most successful Roses. Their blooming has been wonderful. I measured some of the stalks, new shoots from the base, of these three sorts, and they measured respectively 3 feet 2½ inches, 3 feet 10 inches, and 3 feet 7 inches; these have fine buds forming on them. None of the plants on these five Rose banks have ceased blooming since June 1. They are blooming finely now, and will keep on till winter sets in. Rose growing will be a new thing, when this mode of Manetti Rose culture is adopted. Moreover, four of the banks wintered their plants far better than others here. The above plants can now be viewed by a near resident reader. I have about 100 plants taken from pots on the banks; with the exception of three, which are on a seedling Rose, they are all on the Manetti stock. The Manetti Roses on the flat are still blooming beautifully.

3. *Peaches.*—My three trees protected with sheets have beautiful wood, lovely foliage, and 560 fine healthy Peaches. Taking the average of eight years consecutively, I shall have grown over 4000 Peaches; and next year I would undertake to put a Peach wherever the reader pleased to make a chalk mark. They are beginning to redden, and soon will look like the flocks of sheep ruddled for Weyhill Fair, which come across the downs, and go up my chalky hill to skip the turnpikes! These Peaches have been kept well syringed, adequately supplied with food, and copiously watered. I have only seen four blistered leaves this year. When will people learn that the young leaves of Peaches require as much or more protection than the blossoms? Glass or sheets are the only things that will effectually do both. *W. F. Radclyffe, Rushton, August 2.*

Home Correspondence.

Seedling Clematises.—Can any of your readers tell me how long it takes to get a seedling Clematis in flower from the time of saving or sowing the seed? In my simplicity I had formed the notion that the seed would lie in the ground inert for something like twelve months, and that it would be good work to get a plant to produce a weakly flower at the end of, say, the second year. If by any chance a stray seed or two should germinate in the first year, I had a notion that at least it could not be flowered till the end of the second year. I begin to fear I have been wool-gathering, or at any rate have not kept pace with the times, my reason for entertaining this suspicion being founded on a letter I noticed a few days ago in a month old number of one of your contemporaries. A Mr. Townsend, who has it appears shown some seedling Clematises this summer, so marvellously like others shown last year by Messrs. G. Jackman & Son, of Woking, as to have suggested in the words of your reporter an idea of their "common origin," gives some explanations with the view of removing what he seems to consider the damaging aspect of this resemblance; and he says the seeds from which his large flowering plants were raised were sown by himself immediately after Christmas, 1862, and that some of the plants bloomed "last year," that is in 1863, while others have bloomed for the first time this summer. This is certainly a go-ahead age, but unless the opinions I have learned to form respecting the behaviour of Clematis seeds have been superseded by modern discoveries, I must own myself puzzled by these statements. The subject is not without importance, and I shall hope to profit by the experience of some of your readers. *A. Z.*

A few Words on Coffee and Cinchona Cultivation.—The Coffee plant thrives best in India at a medium elevation, and it has been cultivated with great success between 2000 feet and 4500 feet above the level of the sea. It seems to like the soils, exposures, and elevation of the red-barked Cinchona, although it bears a lower altitude than the latter has been attempted at in India. The two plants, botanically allied, depend on two vegetable alkaloids, somewhat different in composition from one another, for their effects on the human frame. The sustaining influence of Coffee is due to caffein, and the qualities of Peruvian bark as a febrifuge are due to quinine. The composition of the former is 16 of carbon, 10 of hydrogen, 4 of nitrogen, and 4 of oxygen. Of the latter it is 40 of carbon, 24 of hydrogen, 2 of nitrogen, and 2 of oxygen. The cultivation of both the Cinchona plant and the Coffee plant are at present attracting some attention, especially among men of capital in India. The wants of the English market for Peruvian bark, from which quinine is obtained, being but badly supplied from the wild forests of Peru, the English Government have exerted themselves considerably to introduce the plant into India; and their attempts have been crowned with success. Whether the cultivation on a large scale will pay, however, has yet to be proved. Should the Cinchona cultivation prove a profitable investment in India, there is every reason to hope that the hilly tracts of forest land which partly form the upper slopes of the Western Ghats of Southern India will soon be redeemed from waste by the Cinchona planter. In a few years we may be able to pass from one cultivation to another in ascending the Western Ghats from the plains of India, and ride through different examples of what industry can do; for immediately above the altitudes of the Coffee estates, and perhaps shading the roads of those over 3500 feet above the sea, we may find the Cinchona as a thriving plant, well repaying its cultivators. Tea estates might also be well represented on the lands above the Coffee estates; and indeed the cultivation of Tea has already commenced on the Neilgherry Hills, and the Tea sells on the spot at 2*s.* 6*d.* a pound. The hills of Travancore, Neilgherries, Wynaad, Coorg, Mungerabad, and Nuggar, where the elevation is sufficient, seem to offer fitting lands for the growth of the Cinchona. Where the elevation is excessive, 6000 to 7000 feet, as at Ootocamund, the sanatarium of the Madras Presidency, one kind of Cinchona plant can be grown. Where the elevation is not so great another species will thrive. It was feared that there might be found some difference in the alkaloids of the Cinchona plant grown in India from that grown in Peru, and that there might be in the former either a scarcity of the alkaloid quinine, or that its place might be taken by some modification, which modification, although nearly allied to quinine in actual composition, might, from perhaps an altered arrangement of its atoms, fail, or partially fail, as a powerful febrifuge. However, an analysis made of the young bark sent home from the Cinchona, grown on the Neilgherries, is very encouraging in this respect. The grand question to be answered now, is—Will the Cinchona cultivation pay? Of the profitable nature of Coffee cultivation in India we are certain; European energy and capital have in India, in the face of great difficulties, within the last few years opened out many thousands of acres of what was before dense forest, and grown Coffee to return 20 to 60 per cent. for their money. The prospect of so good a return has induced many men to risk in the backwoods of India their lives and means. The Coffee planters are now getting numerous enough in India to assert their rights at the hands of Government. They have changed forests into Coffee gardens, brought plenty to the poor of the crowded villages of Mysore and Madura by offering employment to thousands of men, women, and children, who might otherwise be compelled to apply to some Emigration Commission for work in the Mauritius and elsewhere; and done much to bring the poorer classes of the Madras Presidency face to face with English justice. But although land suitable for Coffee, and conveniently situated to roads, has been in places eagerly taken up, there are vast tracts which only require good roads made to them to bring them into requisition for Coffee; and for Cinchona also, if the latter will reward its cultivators. The cost of opening out an acre of forest, planting it with Coffee, and bringing the plants into bearing—which happens from the third to the fourth year after planting the young nursery plants, in India, may be considered from 10*l.* to 20*l.* per acre. The average yield yearly of a good Coffee estate in proper bearing is from six to eight cwt. per acre. The value of one cwt. in the English market is for a series of years, 70*s.* The following may represent the returns of a Coffee estate:—

Opening expenses per acre	£15	0	0
Cultivation yearly	13	0	0
Crop of 6 cwt. at 70*s.* per acre	21	0	0

This yields a yearly margin of 8*l.* per acre as profit on the year's expenditure; or on the outlay and cost of production a profit of about 28½ per cent. There are many Coffee estates in India that yield 50 and 60 per cent. The Coffee tree lasts with good management a long time in India, and seems to increase in vigour as it gets older. In Ceylon it is thought, that, as a rule, the Coffee trees do not improve after the sixth or seventh year. *J. Fowler.*

Blackbird v. *Cat.*—A friend of mine possesses an unusually large Tom Cat, who shows such a great antipathy to the blackbird's note of alarm, that one of these birds takes advantage of the fact to help himself from the cat's plate at dinner, all the time fluttering and crying, whilst the cat retreats to a little distance, mewing and showing his teeth, but not daring to advance. Have any of your readers ever noticed a similar instance? *C. D.*

Societies.

Botanical of Edinburgh: *July* 14.—Professor Balfour in the chair. The following communications were read:—1. *Account of the Zambesi District, in South Africa, with a Notice of its Vegetable and other Products.* By Dr. John Kirk, late of the Livingstone Expedition. Introductory to a few remarks on the chief vegetable products of East Tropical Africa (said Dr. Kirk), I may point out the leading geographical features of the regions recently explored. The Zambesi is the only river south of the equator of any great size on that coast, and in its hydrographic basin most of our time was spent. At its mouth is a vast alluvial delta extending 60 miles inland, with 90 miles of sea face. This is flat or gently undulating land covered with Grass vegetation; trees, singly or in clumps, break here and there the monotonous landscape. Such genera as Ficus, Combretum, and Acacia are frequent. Borassus among Palms, where it occurs, forms a marked feature, with its tall cylindrical stem bulged in the middle. These plains consist of horizontal beds of clay, sand, and vegetable matter. In the older clay beds are fossil bones of existing species of animals, with indications that there a race of men existed whose habits correspond with those of the negro The seaboard presents a dark

band of forest lining its creeks, Rhizophora, Barringtonia, Heritiera, Sonneratia and Pandanus, entwined with Leguminosæ and Convolvulaceæ, are here prevalent. The delta land abounds in game and larger carnivora; its rivers and creeks are the haunts of hippopotami and crocodiles, besides containing many species of fish. The Zambesi opens to the ocean by four mouths, of which two only are navigable. Above the delta the Zambesi banks are well wooded, and the finest trees are good for timber—suitable for ornamental work and shipbuilding purposes. Coal is abundant, and the veins conveniently placed; the best, however, are above the rapids, and therefore cut off from the coast. Europeans, adds Dr. Kirk, may rule the country but will never colonise it. The climate is a barrier, and the healthy lands of the interior are too far off to give much hope from them for a long time to come. Cotton is the most important of the vegetable products of Africa; it has been long in cultivation among the natives, and it is found in all parts within the tropics. Three distinct kinds are found, which, as far as this region is concerned, are distinct species, although, when studied over a wider field, it becomes difficult to divide them into definite species, the one being then found to pass into the other. The three sorts are, Gossypium herbaceum, G. barbadense, and G. peruvianum. The first yields a short staple adhering firmly to the seed; it is the worst of all, is of a woolly harsh nature, and seems to be the oldest in cultivation, being found mostly in the regions furthest from the lines of trade. The second, G. barbadense, has fine long staple, and is known by its seeds being free from each other, and the cotton separating readily from the seed. It is grown on the lower Zambesi and south end of the Nyassa Lake. Gossypium peruvianum is a large bush or small tree, yields excellent long staple cotton, and has the seeds cohering in masses. It is grown in the centre of the Continent and on the Rouma River; also on the western shores of the Nyassa Lake. In the mountains only are these plants annuals; in all the warm valleys they form perennial shrubs, yielding more than one crop every year. No better seed is required, the quality now cultivated being that most needed by our merchants. With its cultivation the natives are well acquainted. Both the soil and climate of tropical Africa are suited to the crop, for cotton is a sure plant, enduring great drought at the season of ripening its seed. The manufacture in all its stages is carried on by the same individual. Having gathered the crop, it is next picked from the seed, carded by means of a bow, and drawn into thread by hand, a spindle being used to twist it. The loom is a simple arrangement; the threads passed over two bamboos kept apart by four upright sticks, have the cross threads drawn through by a shuttle, the width of the cloth, each thread drawn up by a flat piece of hard wood. Thus, cloths weighing 5 lb. are formed 10 feet long by 5 feet in width; but the time needed for the operation is very great. Universal as is the Cotton plant, and excellent as we find its quality, more security is needed before the native will find it advantageous to cultivate it on a large scale. Shut out from civilisation by the exclusive claims of the Portuguese, this never can occur; for while they do not enter into such branches of commerce themselves, they encourage the slave trade, which is the root of all the misery now prevalent. The growth of Cotton has this advantage over all others excepting oil seeds—that it needs little supervision of Europeans; agents to purchase it if once grown in quantity, and security to the native, being all that is required. Oil seeds rank next in importance; and for Ground Nut and Sesamum—both in great demand — the soil is well adapted. Both are cultivated and thrive well. Other wild seeds yield oils of value, but only second in importance to the former. Among these are the Trichilia, a handsome tree widely distributed over the continent. Castor-oil is abundant, and small quantities of oil are extracted from the Cucumis and Sterculia. Among fibres that of the Lophostylis pallida is the chief; it furnishes what is made into fishing nets. Another, the produce of an Ectadium of the Apocynaceus group, is equal in value. These are estimated as superior to Flax, and might be had in large quantity. The Sanseviera yields another kind of fibre suitable for rope-making, and is also abundant. Of dyes the Orchella of the coast is exported in small quantity, and might be procured in much larger; and a yellow dyewood might be had. It is the produce of a species of Oudranea near to the Maclurea which yields Fustic, with which it agrees in physical as well as botanical character. India-rubber may be gathered from a climbing shrub abundant in the low countries; the plant is near to that yielding the caoutchouc of Madagascar, but nothing has yet been done to develop these branches of industry. The riches of the country are not those of the vegetable kingdom alone. Iron ore, malachite, and coal are all abundant in the Zambesi hydrographic basin, and will one day become of use to the world. I have brought a few examples illustrative of the arts among the people beyond the influence of Europeans. Their arms show what amount of development they have attained in war manufacture. The cotton illustrates the making of cloth among them in all its stages. Dr. Kirk then exhibited a large assortment of articles of native manufacture, such as weapons, Tobacco, Cotton, cloths, &c., several of which he presented to the museum. He also exhibited a native loom.——II. *Notice of Botanical Excursions in the Neighbourhood of Edinburgh.* By Prof. Balfour. Prof. B. stated that Mr. Claudio L. Serra had found abundance of Goodyera repens in fir woods at Dalmeny, within six miles of Edinburgh. Mr. Naylor exhibited specimens of the plant which he had collected in company with Mr. Serra. This discovery extends the southern limit of the plant considerably. Mr. Howie sent specimens of Arctostaphylos alpina from Ben Wyvis. Mr. M'Nab laid on the table flowering branches of Liriodendron tulipifera from the Botanic Garden; also a series of British Ferns and their varieties in a growing state. Several gentlemen were elected members.

Notices of Books.

The Flowering Plants of Great Britain. 8vo, in Numbers, with five coloured plates in each. Society for Promoting Christian Knowledge.

It may be a question how far it is wise in the Committee of General Literature and Education appointed by the Society for Promoting Christian Knowledge to undertake extensive works like the present, which certainly must interfere with similar publications in which large sums are vested by the trade, and where profit is a necessary object, whereas it is a matter of comparative indifference to a body so richly supported as the Society in question. The attempt to diffuse works containing useful information, and supplying a fund of rational amusement to replace the foolish and often mischievous trash which used formerly to be dispersed by the common hawker, was certainly worthy of the Society which contemplated not merely the diffusion of a particular set of dogmas, but the civilisation of the lower classes at the same time with the religious instruction of all; and we hail also with pleasure their efforts in an æsthetic point of view, which is by no means without its proper bearing on morality, to substitute for the daubs which used to mottle our cottage walls, prints which are tolerably irreproachable as works of art, and to place in the hands of the rising generation, whether poor or otherwise, little picture cards which combine correctness of design with sobriety of colouring, and are calculated to a certain extent to train the mind to the love of what is beautiful. If, however, as appears to be the case, more ambitious works are to be undertaken systematically by the Society, it is certainly essential that they should as far as possible tread in the same steps, and give correct information, and illustrations void of any glaring defect, and we think that this end is to a great extent attained in the work before us.

If we were disposed to be hypercritical, we might point out the too great uniformity of tint which exists in several species of the same genus represented on the same plate, and one or two cases, as in Anemone apennina, where there is a manifest failure of colouring; but in general the grouping is good and the sketches correct, though it would be possible to mark one or two, as for example Lathræa squamaria, where there is more or less of error. As regards cheapness there is scarcely anything which can compete with it, but we should think this of little consequence under the peculiar circumstances of the publication, if the work did not combine with it a proper degree of excellence. On turning to the text, which is, we believe, the work of Miss Anne Pratt, we are really surprised at the great mass of useful and curious information which it contains, insomuch that the practised botanist as well as the student may frequently consult the work with advantage, while there is scarcely a page which may not be read with interest. Where we have fixed upon certain points which are out of the range of common reading, as tests, we have very rarely found that our author has slurred them over or wholly passed them by. The antiquarian notices are of especial interest, and there are few matters physiological, medical, or æsthetical which have not met with proper attention.

As a specimen of the information which this work contains, we give an extract from one or two of the earlier numbers. Speaking of the Monkshood (Aconitum Napellus), a very doubtful native, though a common inhabitant of our gardens, our author says:—"It is very common in gardens, but should not be planted in those to which children have access, as its odour is noxious, and they are likely to select it for their play, on account of the fancied resemblance which the nectaries and side petals bear to a chariot drawn by doves. Some persons in delicate health have been injured by even smelling the flower in the open air; and others, on touching the eyelids after handling it, have experienced considerable pain and inflammation. Even the pollen of the stamens, if blown into the eyes, causes a dangerous affection. The root is most powerfully poisonous. A fatal instance occurred in the year 1853, in consequence of but a small quantity having been eaten in mistake for Horse-radish. The stems and fresh leaves have also proved fatal, or caused mental derangement. In one case, in which a man became maniacal through eating it, the surgeon who attended him declared that the malady was not caused by the plant, and insisting on eating some leaves in proof of his assertion, died in extreme agony."

Under Papaver Rhæas we have the following:—"Frantz Meyer mentions a singular usage connected with the Poppy amongst the Indian population which pours into Mexico from the Lake:—'Scarcely an afternoon passes in Lent that the observer will not find the canal covered with gay boat-loads of Indians, passing homewards from market, dancing, singing, strumming the guitar, and crowned with wreaths of Poppies.' 'I do not,' he adds, 'know the origin of the custom of wearing this forgetful flower, but it is both a healthier and more poetic oblivion than that resorted to by many people of other lands after a day of toil.'"

Again, under Papaver somniferum,* after stating the uses of its seeds in making oil, and their employment in Eastern confectionery and sprinkled over cakes, and of its milky juice in the manufacture of opium, our author says:—"In the opium shops of Constantinople it is mixed with rich syrups made of various fruits, in order to render it a sweetmeat; or it is formed into lozenges, on which are impressed the words 'Mash Allah'—the work of God. The Tartar couriers, who travel immense distances with astonishing rapidity, often take no other nourishment than a few of these small lozenges. The celebrated Maslach or Mash Allah of the Turks is believed, however, to contain other narcotic substances besides the opium, and the juice of the Hemp is probably mingled with it."

We must however give a specimen or two of the kind of antiquarian lore which is scattered up and down through the numbers. We will select the first from the account of the common Marsh Mallow (Althæa officinalis). "The Marsh Mallow is a native of every country in Europe, and we seldom look upon its large grey leaves without recalling to mind one of the uses to which the plant was applied in darker days. In times when men accused of crime had to give a supposed proof of their innocence or guilt by passing through some ordeal, persons of weak health or delicate frame, especially monks and ecclesiastics, were exempted from the usual mode of single combat, and were required to test their innocence by holding red-hot iron in the hand. As these trials were made in the church, and during the performance of mass, and as inspection was made by the clergy alone, the suspected person, if he had friends about him, was easily shielded by covering his hands with a thick coating of some substance which would enable him to resist the action of heat. A kind of paste used for this purpose was described in the 13th century by Albertus Magnus, a Dominican monk. The sap of the Marsh Mallow, the slimy seeds of a kind of Flea Bane (which were until recently used in Germany by hatmakers and silk-mercers), together with the white of an egg, were combined to make the paste adhere, and the hands were as safe as if covered with a pair of gloves. Beckman, remarking on this says, 'The use of this juggling trick is very old, and may be traced back to a Pagan origin. In the Antigone of Sophocles, the guards placed over the body of Polynices, which had been carried away contrary to the orders of Creon, offered, in order to prove their innocence, to submit to any trial. 'We will,' say they, 'take up red-hot iron in our hands or walk through fire.'"

We take, as a second, the following curious passage from the account of Dianthus Caryophyllus, which is not the less interesting from being an extract from another work.

"'The reserved rent,' says Mr. Turner in his paper on the Horticulture of the Middle Ages, 'the *unius clavi gariofili*, which is of such frequent occurrence in mediæval deeds relating to land, meant simply the render of a Gillyflower, although it has usually been understood to signify the payment of a Clove of commerce. The incorrectness of this rendering must be apparent, if we recollect that the Clove was scarcely known in Europe in the 11th and 12th centuries, when this kind of reserved rent was most common.'"

Multitudes of interesting passages might be extracted, but we have already exceeded our usual limits. We may refer especially to the observations on the Mustard tree of Scripture under Sinapis; to the curious occurrence of Sisymbrium Irio at Henfield, confirmatory of the old tale of its spreading amongst the ruins after the Great Fire of London; and to the habit of certain parasites under Thesium and Rhinanthus, as additional specimens.

The method of arrangement adopted is most judiciously the natural method, to the exclusion of the Linnean. The genera and families are well defined, though some difficult characters, as the comparative position of the cotyledons and radicle, are omitted; and considerable judgment is shown as to the admission of species. Brambles are very wisely restricted to five species, though we could wish that less latitude had been allowed in the Roses, of which there are 18 representatives. The price is so low that the book is

* Under Papaver Rhæas appears the following passage, which will surprise the cultivator who looks upon the plant in no other light than a worthless weed. Indeed, it has surprised us, and still does so, as we cannot find any confirmation of it in any book we possess. We fancy that it has accidentally slipped into P. Rhæas from P. somniferum, but if this is not the case we shall be glad to hear that the account is correct, and that we ourselves are oblivious. "This Poppy is cultivated in France and Germany, and the oil expressed from its seeds. The oil is not narcotic, but is consumed very generally on the Continent instead of Olive oil. Its use was at one time prohibited by the laws of France, much popular and unreasonable clamour having been excited against it; but it is now openly sold, and is often mixed with Olive oil. The seeds are also used in Poland and Russia as ingredients in soups and gruel." The statement that the flowers of Königa maritima are yellow is evidently a mere slip of the pen.

within the means of every gardener, and we cannot do better than cordially recommend it to his notice.

Haselden's Notes on the British Pharmacopœia (London: Hardwicke) is a small duodecimo of xxxvi. and 82 pages, designed to point out in a short and simple manner the additions, omissions, and changes of name which have been made in respect to the new British Pharmacopœia compared with the last editions of those of London, Edinburgh, and Dublin. There are brief explanatory notes on the various preparations.

Catalogues Received.—*S. Glendinning & Sons' Catalogue of Plants* contains a good selection of the usual stove and greenhouse plants, together with a considerable collection of hardy ornamental trees and shrubs and of Coniferæ.——*J. Keynes' Descriptive Catalogue of Roses* is a brief list of the best sorts, including the finest new varieties. It is almost confined to the H.P. class.

Garden Memoranda.

Messrs. Waterer & Godfrey's Nurseries, Knap Hill.—These nurseries, long celebrated for their fine collections of American plants, are situated little more than two miles from the Woking station of the South-Western railway. The road then crosses the Basingstoke Canal and a portion of the vast wastes of Woking and Horsell Commons; the former is now, however, in some measure occupied by the Necropolis Company, and also by the Government charitable institutions, as well as by private individuals for building purposes. The rural village of Horsell, too, lays in our route, its ancient church and modern schools being both objects of considerable attraction. From here we soon reach the newer portions of the nursery grounds, which are situated on either side of the road. The broad hedgerows and timber trees which formerly skirted this road have recently been removed, and the grounds broken up and cropped, preparatory to being brought into nursery cultivation in the autumn. Onwards the hedges are very beautiful, being formed of Green Holly faced with Thorn on the roadside, and the top, from some 5 feet in height, being worked with the Golden variety, produces a charming effect on this well-kept fence, which bounds the "Home Nursery" on the southern side. The entrance, through neat and appropriate gates, lays between lofty Holly hedges surmounted by huge pyramidal masses of gold and silver variegation. The "Home Nursery" is considerably more than 60 acres in extent, of varied surface and irregular outline, and the soil, too, is of different qualities and texture—admirably adapted for the nursing and cultivation of the fine plants which it contains. On the lawn in front of Mr. Godfrey's house, and in the grounds adjoining it, are some noble examples of remarkable trees and shrubs, amongst which we noticed several specimens of Douglas's Fir, some 35 feet or more in height, and the tips of the branches are now loaded with cones of a rosy-tinted pale green colour, somewhat thickly covered with lengthened trident, pale-coloured bracts, producing a charming effect. Magnolia Soulangeana is some 20 ft. in height, and the spread of its branches is 54 feet; it is a noble plant, flowering freely every season, and perfuming all around with its fragrance. Thuja aurea in beautiful specimens, 20 feet or more in circumference, and not more than from 5 to 6 feet in height, is plentiful, their golden spring livery being now changed into a delicate pale green. Cydonia japonica may be found in the shape of nicely-trained columnar specimens, some 15 feet in height and 5 feet in diameter; they flower freely every spring, and form a fine contrast with the Magnolias then in blossom. There are good examples of Araucaria, Deodars, and Cryptomeria, some 20 feet in height; the latter loaded with cones. Here also is the beautiful Abies Nordmanniana, nice specimens producing cones of a moderate size and brownish colour, from which resin exudes here and there in patches, giving them an extremely interesting appearance. Irish Junipers are abundant, as are also Upright and other Yews, many of the latter having golden heads. Of Liquidambar there is a fine specimen more than 40 feet in height; its large palmate yellowish green leaves have now a fine effect, and later in the season, when they assume their autumnal purplish red, the effect is even more striking. Of the Schubertia disticha, and its pendulous variety, there are sundry magnificent examples—the former is more than 40 feet in height. Sequoia sempervirens, of which there are several fine trees, is some 35 feet in height, dense, and beautiful. Plants of Sea Buckthorn are about 18 feet in height; their silvery tinted foliage forming a striking contrast with the various shades of green by which they are surrounded. Of Maidenhair tree there are several good specimens, some 30 feet in height; the singularity and beauty of their yellowish-green Fern-like foliage produces a fine effect. Of Pinus macrocarpa there is here a fine cone-producing specimen, and many well grown plants of Wellingtonia, Thuja gigantea, and the Golden Pine; the two former about 14 feet in height. Of Cupressus Lawsoniana there is a magnificent plant fully 10 feet high, the tips of whose lovely Fern-like branches are rendered pendent with the weight of its now nearly ripe globose cones. A standard Wistaria sinensis is a pretty object; it is 12 feet high, and the circumference of its branches is 35 feet; another, in close proximity, is intertwined and surmounted with the Bignonia radicans, and the trumpet-shaped orange-coloured flowers of the latter produce a pleasing effect in contrast with the delicate purplish-blue racemes of the former. Here are some finely-formed round-headed standards 12 or 15 feet in height of the cut and Fern-leaved Beech, cut-leaved Lime, &c. A standard Rhus cotinus, 10 feet in height and 24 feet in circumference, is a highly interesting object; it is now densely covered with large loose panicles of elongated hairy pedicels, which almost entirely hide its finely formed pale green semi-evergreen foliage. A standard Maple is ornamented with a pendent globular bunch of Mistleto rather more than 2 feet in diameter. There is also an aged almost branchless Spruce Fir, some 50 feet high, whose trunk is covered nearly to the top with deep green Ivy, of a columnar form, which looks very well amidst these admirable plants. Of Hollies there are some magnificent specimens, both of the Golden and Silver varieties, in the form of bushes, standards, and pyramids; some of these latter are 30 feet in height, and in appearance are altogether faultless. There are also many interesting examples of dwarf Pinus and Abies scattered about; one Abies pumila is nearly 14 feet in circumference, and not more than a foot in height. Standard variegated Oaks are also very interesting, the broad white-edged foliage producing a fine contrast with other trees with which they are associated. Sophora japonica pendula is 15 feet in height, and weeping to the ground; and there are some good specimens of Purple Beech; also a noble form of Lombardy Poplar, which towers up majestically over all competitors, forming a landmark for many miles around.

On the lower portion of the lawn is a nicely formed symmetrical flower garden, in the centre of which is a nice young Weeping Beech; the surrounding beds and borders are now gay with parti-coloured autumn flowers and beautiful Roses, which have this season flowered remarkablywell; Gladiolus insignis too has been very gay, and will now be succeeded by the late flowering varieties of this magnificent genus. Closely adjoining this garden is the Propagating ground, covering a considerable space, subdivided and sheltered by fine examples of Hornbeam, Holly, and Yew hedges; these latter are surmounted at intervals by large globular masses of the Golden variety, which produce at this season of the year an exquisite effect. These inclosures contain a large assemblage of pits and houses adapted for the raising and propagation of hard-wooded plants. There are also other houses and deep pits adjoining, the latter used for grafting large standard Rhododendrons with the more new and valuable kinds, and the former are filled with small plants of the more popular varieties of Camellias for forcing purposes, and also with seedlings and other plants of the more rare Coniferæ. Here is also a considerable stock of the new and beautiful silvery variety of Cupressus Lawsoniana—a lovely plant. All around are screen-protected spaces to which newly propagated plants are transferred. Sheltering in various ways by means of dried Heath is largely adopted here.

In front of a block of span-roofed and other houses already noted, and which are used for the propagation and growth of Camellias and other plants, are some very remarkable specimens of fine trees. Abies nobilis forms a beautifully compact specimen some 20 feet in height; its large handsome pale-coloured cones, now bending it down with their weight, invest it with additional interest. Kolreuteria paniculata is some 20 feet or more in height, and the spread of its branches extends to 90 feet in circumference; it is now beautifully in flower, and has a highly ornamental appearance, altogether different from that of any other hardy tree; its large brownish tinted, ragged looking compound leaves, surmounted by loose spikes of Oncid-looking flowers, produce a singular effect. Nor is it less interesting in the autumn, when it is covered with large bladdery capsules, and when the leaves have changed to a deep yellow as they fall off. A nice specimen of Weeping Bird Cherry is an object of interest; and here also is a Bignonia radicans in the form of a large bush, 9 feet in height and 27 feet in circumference, densely covered with trumpet-shaped orange-coloured flowers. There are likewise many unique forms of Yew with both green and golden heads on nicely formed broad columnar bases. From near here starts the main walk of the nursery; it is 12 feet in width, and has a border of 30 feet in width on either side, in which a vast assemblage of admirable specimens of choice trees and shrubs are grown. Cupressus macrocarpa is a noble tree 30 feet in height. There are also good specimens of Araucaria imbricata, Wellingtonia gigantea, Abies lasiocarpa, Deodars and the fine upright-growing Thuja gigantea. Distributed along the front of the borders are many unique and beautiful specimens of dwarf bushes of Abies pumila, Clanbrasiliana and other Dwarf Firs, also Pinus sylvestris pumila, P. Strobus pumila, and others. Cryptomeria japonica nana, and the different dwarf species and varieties of Juniper are also extremely interesting. Quercus palustris, a beautifully erect specimen, is 40 feet in height. There are likewise nice plants of Lucombe and other Evergreen Oaks. A Douglas Fir is 40 feet in height. Pinus Pinaster variegata, with broad creamy yellow blotches and long glaucous foliage, is a very attractive plant. A handsome pair of Red Cedars with clear stems, situated close to the walk, measure 25 feet in height. There are also many good specimens of Weeping Ash, one of which is completely covered with the tree variety of Ivy, and has a good effect. Abies Albertiana, Thujopsis borealis, Cephalotaxus Fortuni, Libocedrus chilensis, Retinospora ericoides, Variegated Tree Ivy, Juniperus oblonga pendula, Ilex latifolia, ovata and scotica, in the form of nice compact specimens, are plentiful. We also noticed beautiful examples of Pinus Hartwegii and Abies Pinsapo, and a few good specimens of Golden Yews, variegated Hollies, and Thuja aurea.

We now come to a cross walk, the planting of the borders of which has been accomplished very effectively; the plants are not particularly large, but they are of the most choice and beautiful kinds; they vary in height from 8 or 9 feet at the back to a foot near the walk. Here the lively forms of Abies Nordmanniana, nobilis, and Pinsapo contrast well with Wellingtonia gigantea, Araucaria imbricata, and Douglas Fir, the common and green variety of Deodar, and also with such upright-growing plants as Irish Junipers, Yews, Thuja gigantea, &c.; the front portion is filled with dwarf Firs, Junipers, &c., and the whole is interestingly blended with Thuja aurea, together with fine forms of Upright and bush plants of Golden and Silver Hollies, and Golden Yews, the whole producing a very fine effect.

Proceeding along the main walk we arrive at a remarkably beautiful specimen of the variegated Abies excelsa, 14 or 15 feet in height. Of Abies monstrosa there are several good plants, whose long straggling branches produce a singular effect among the beautiful plants with which they are associated. Of Purple Beech there are some good forms; they are cut closely in every season; the foliage they produce is in consequence much more robust, and it is also of a very deep colour. Juniperus recurva is 18 feet in height and 45 feet in circumference; and of Broad-leaved and Silver variegated-leaved Box there are many good specimens. Here are also standard Lilacs and Fern-leaved Beech, nice specimens; also some glorious plants of Thuja aurea, more than 6 feet in diameter, Cupressus disticha pendula, Pinus Lambertiana, Montezumæ, and monticola, some of them fine specimens more than 20 feet in height, the last producing cones, long and pendent, of a brown colour, and the resin, which is white and transparent, exuding freely from every bract, gives them a somewhat crystallised appearance. Other remarks on these interesting grounds must form the subject of another paper.

Miscellaneous.

African Fruits.—Of African edible fruits and seeds one could almost go on to infinity, for there are few indigenous that are not eaten by the natives in some form or another. The Blood Plum of Sierre Leone (Hæmatostaphis Barteri), has a pleasant sub-acid flavour when ripe; in size and form it is similar to a Grape, but somewhat larger. Another fruit of the same shape and form, but smaller and with less pulp, is considered a favourite fruit on the Niger; it is a species of Vitex. The fruit of Sarcocephalus esculentus, called in Sierre Leone Native Peach, is, when full grown, about the size of a large Apple; it is of a pulpy nature; the outside is rough and uneven, and and bears some resemblance to a Custard Apple (Auona). The pulp of the Baobab (Adansonia digitata), has a very pleasant and agreeable sub-acid flavour, and is much esteemed by the natives in making a kind of sherbet or cooling drink. Detarium senegalense, called Duttock on the Gambia, where it grows to an immense tree, produces a fruit, the pulp of which is eaten, as well as the kernel or seed. In size and shape it is like a large Chestnut; the outer skin is of a dark dull brown. The small pod of Codarium acutifolium is remarkable for its velvet appearance; hence it is sometimes called Velvet Tamarind, and is also known as Black Tamarinds. The pulp enveloping the seed has quite the flavour of East Indian Tamarinds, and is valued by the natives of Sierra Leone on that account. The Ochro (Abelmoschus esculentus) is common on the Niger, and is used on account of its mucilaginous properties in various ways in the preparation of native dishes. The seeds of a species of Triculia are also eaten in this part of Africa; the fruit is very similar to the Bread-fruit, to which it is closely allied. Its size is about that of a child's head; the seeds are small and hard; the native name is Akna. The fruits of Habzelia æthiopica are used as pepper, and are sold in the markets at Nupé as well as at Bahia. The seeds of Monodora grandiflora, M. tenuifolia, and M. brevipes are all more or less aromatic, and would seem to be well adapted, if shipped in any quantity, for a useful condiment in this country. Many of the Anonaceæ have the same decided fragrance, but none so powerful as in this genus. The fruits are very large and round; those of M. grandiflora quite the size of a large cannon ball, the other species somewhat smaller. The seeds are about the size of a common Scarlet Runner Bean, and are very thickly embedded in the pulp, which fills up the interior of the fruit. The fruits of the Wild Mango, probably a species of Spondias, are eaten on the Niger, and on the Zambesi the kernels of a species of Sclerocarya. The stones of this fruit, however, are very hard and difficult to crack; these kernels appear to contain a quantity of oil, and perhaps might be turned to account in that way. The fruit of Mal-

pighia saccharina, called in Sierra Leone the Sugar Plum, in shape and size resembles the Damson. It has a sweet and agreeable flavour, and is in perfection in the months of February and March, when it is to be seen in large quantities in the market of Freetown. The tree producing it is lofty and majestic in appearance, attaining a height of 80 feet. The large seeds of Pentaclethra macrophylla, known in the Eboe country as Opachalo, and in Gaboon as Owala, are collected at the seasons of their falling, and eaten as food; they also yield a clear limpid oil. The young germinating shoots of Borassus æthiopum are eaten by the natives both of East and West Africa; for this purpose they are taken up soon after the seed has vegetated, and are then boiled in a similar manner as we cook Cabbages or some such vegetable. The large seeds of Cycas circinalis, from which the natives of Ceylon and Western India prepare a kind of Sago, are valued as an article of food in some parts of the Zambesi. The existence of a species of Cycas was discovered in Western Africa by the botanist of the Second Niger Expedition, as well as by Gustav Mann, both of whom found that the natives applied the seeds as an article of food. Of the Dika or Udika bread, a specimen of which arrived in this country some three or four years since, and was then supposed to be procured from the seeds of Mangifera gabonensis, it will be sufficient to say that upon further researches it is proved to be from no Mango, but from the seeds of Irvingia Barteri. The fruit is similar in form and size to that of the Mango, but the seeds, which contain a large amount of oil, are separated from the fruits and beaten in a trough till they attain a partially fluid state. This is then put into baskets of Musa leaves and exposed to the sun, when a white tallow collects on the surface, which is poured off, and the dika allowed to cool in the shade. The natives esteem it very highly in the various preparations of their food, but more especially in cooking fish. It has, however, a strong, rank, and highly disagreeable taste. The fruit of a species of Parinarium, known on the Zambesi as Mobola, is valued on account of the very sweet pulp which surrounds the seeds. The Gero corn (Penicillaria spicata) is in common use for household purposes on the Niger and Gambia. The seeds of Sorghum vulgare are also extensively used for preparing as malt. *Jackson, in Technologist.*

Hazel [Corylus Avellana, L.], Ang. Sax. *hæsl* or *hæsel*, and allowing for dialect, the same word in all Germanic languages, the instrumental form of Ang. Sax. *hæs*, a behest, an order, from Ang. Sax. *hatan*, Old High Germ. *haizan*, Germ. *heissen*, give orders; a hazel stick having been used to enforce orders among slaves and cattle and been the baton of the master. But the Lat. *corylus*, Gr. κορυλος, and Germ. *hasel* are identical; for it is agreeable to analogy that the initial *c* and κ of Greek and Latin words should be replaced with *h*, the *r* with *s*, and the vowel, the short *o*, with *a*. Thus Lat. *collum* makes *hals*; Lat. *cor cordis*; Gr. καρδια makes Goth. *hairto*; and Lat. *soror* replaces the Sanskr. *svasar*. This meaning of the Gr. κορυλος seems to be implied or shadowed in κοιρανος, a commander. It is not unlikely to be at the same time connected with Lat. *casa*, Germ. *haus*, as the material of which wattled dwellings were made. That a tree so generally diffused over Europe should have the same name in so many languages, is proof of some ancient general use of it, to which this name refers. Wedgwood derives it from Dan. *hase*, a husk. Mrs. Kent, in her *Flora Domestica*, from Ang. Sax. *hæsil*, a hat, a word of very doubtful authenticity. The verb *hælsian*, foretel, seems to be derived from the use of the hazel rod for purposes of divination. *Prior's Popular Names of British Plants.*

African Fibres.—The fibrous plants, both of the eastern and western coasts, are worth more attention than has hitherto been given to them. On the east there is the Baobab (Adansonia digitata), a good tough strong fibre—so strong indeed as to be the material from which the nets used to catch antelopes are always made. Then the Sanseviera guineensis furnishes a strong and durable fibre. The abundance of fibre capable of being obtained from the Buaze, probably two species of Lophostyles (L. longifolia and L. angustifolia) would seem to give it a claim to be classed among the fibrous plants of commerce. Experiments were made with this fibre some few years back by Messrs. Pye Brothers, who reported very favourably upon it, but since then it has been quite lost sight of in the commercial world. A notice of it, as well as Messrs. Pye's report, was published in Dr. Livingstone's book. The well-known fibrous plant, Paritium tiliaceum, also grows in this part of Africa, while on the West Coast are several good fibre-yielding plants. The fibre obtained from Vigna Catjang is very strong and tough, and is procured by beating the stem. These are but a few of the many apparently useful plants of the great African continent, which if brought within the range of commercial enterprise, would undoubtedly prove valuable. *Jackson, in Technologist.*

Calendar of Operations.

(*For the ensuing week.*)

THE present drought will render it necessary to pay great attention to watering out as well as indoors. All kinds of soil for potting may now be laid in with advantage. Store them up neatly in narrow ridges, so as to be safe from wet and yet exposed as much as possible to the action of the air; and as success in plant growing very much depends upon having suitable soil for potting, no trouble or expense that may be necessary to procure this should be spared where well grown specimens are expected. Loam of moderately good quality may be obtained in most neighbourhoods, but good peat is not so easily got; this is absolutely necessary, however, for the growth of choice hard-wooded plants, and should be procured at the proper season, so as to have it in a fit state for use at the right time.

FLOWER GARDEN AND PLANT HOUSES.

In some neighbourhoods green fly is troublesome out of doors. Where such is the case, tobacco water and soap suds may be used with success. The mixture should be used sufficiently strong to kill the insects, but not so strong as to injure the leaves. It should be applied in the evening, using a fine syringe or fine-rosed watering-pot for the purpose, and giving enough to moisten the whole of the foliage. Go over the beds frequently, and remedy any defect that may be perceptible without loss of time. Keep herbaceous plants neatly tied up, and cut off the flower-stems of any that are becoming unsightly. Take advantage of leisure hours and favourable weather to put in cuttings, and use every possible despatch with this work until there is a good stock in a fair way for rooting of such things as are known to be difficult to winter, except in the shape of well-established plants. Keep gravel walks perfectly clean and smooth by weeding, sweeping, and rolling, as may be necessary. Keep climbers on walls within due limits.

AURICULAS.—These must now claim attention. To insure good growth and bloom next spring they will require to be shaken quite out of the old soil and repotted, using a moderately rich, but well sweetened compost. Do not overpot, and for some time after repotting keep the plants rather close in a frame or pit, giving air by degrees and in proportion as they get established, when they may be fully exposed to the air, but not to heavy rains, to which they should never be subjected if they can possibly be screened from them.

DAHLIAS.—Go over the plants regularly twice a week, in order to remove all superfluous shoots and small buds; but this must be done with care; only cut away a little at a time, leaving robust varieties unpruned for a time. Water freely during this remarkably dry weather, and in addition give the plants a good sprinkling over head every evening after sunset. Secure the side shoots by tying them to stakes, and relieve the centre as much as possible. Earwigs should be kept in check before the blooming season sets in.

CINERARIAS.—These will now want a cool shady situation; if mildew makes its appearance sulphur should be at once applied. The first-struck cuttings will now require repotting; also the first-sown seedlings for early bloom.

PANSIES.—Choose a showery day for transplanting these; they are not easily managed during hot weather.

FORCING GARDEN.

FIGS.—When these are ripening the house must be kept somewhat drier, but at the same time the state of the soil must be carefully watched, lest it gets too dry and causes the swelling fruit to drop off. Beware of red spider, which is particularly apt to establish itself at such a crisis, when the swelling fruits are making large demands upon the energies of the plants, and are thereby checking in some measure their vigorous growth. This is an evil which must be carefully guarded against.

PINERIES.—Those who intend cultivating Pines on the open bed system cannot begin at a more favourable season than the present. The bed should be from 18 inches to 2 feet deep, and should consist principally of good rich mellow turfy loam, well broken up, and carefully intermixed with a liberal sprinkling of clean sand, and a small proportion of leaf soil or good rich fibry peat; for when rough turfy soil is used and the bed is ever, from any cause, allowed to get thoroughly dry, it is very difficult to moisten it again, as the water passes off through the lumps without penetrating them. But if the loam is well broken up and mixed with some leaf soil, or peat and sand, it will be found to take water freely enough, and the roots will be almost as much under command as when the plants are grown in pots. Persons commencing this method of growing Pines should also endeavour to avoid planting out pot-bound plants, for these, whether young or old, seldom strike freely into the fresh soil, and are very apt to fruit prematurely; but if such plants must be turned out, then care should be used to make the soil firm about the balls, so as to prevent the water passing off without moistening the balls.

STRAWBERRIES.—Take care to secure sufficient runners for forcing. Better have too many than too few.

VINERIES.—Every possible attention must be afforded young Vines planted this spring where strong rods are expected. Let a vigorous root action be secured, and endeavour to get the wood well ripened. Give air freely and early on fine days, so as to avoid any risk of scorching the foliage, but shut up early in the afternoon, sprinkling the floors, &c., so as to cause a genial moisture in the atmosphere, which will be of great service in strengthening the Vines. If plants are grown in the house, see that they are not infested with black thrips, and on no account be induced to regulate the temperature, &c., of the house for the plants, but remove these to other quarters, or make them fall in with the treatment most suitable for the Vines. Keep a sharp look out for the appearance of red spider in houses where the fruit is ripening, and coat the pipes or flues with sulphur on the first appearance of this enemy. Indeed it is well to do this occasionally by way of a preventive, which, in this case as in most others, is vastly preferable to a cure. Vines in pots intended for early forcing will require attention to get the wood properly ripened, and this should be effected by exposing them freely to light and air.

HARDY FRUIT AND KITCHEN GARDEN.

Young wood in most cases will be well ripened this year. It may however be advisable to go over such trees as are over luxuriant, and stop about half the shoots, beginning of course with the strongest, for a general stopping at this time would probably be of little farther service than to induce the production of a mass of useless spray, whereas stopping the stronger shoots or those which incline to grossness will divert the sap into the weaker ones, which will be strengthened, while the buds on the shoots that have been stopped will become full and plump without starting into growth. The only effectual method, however, of curing a gross habit of growth when this is the case in ordinary seasons is root pruning or keeping the roots within proper limits by means of shallow well drained borders. Should it be found that the shoots, after stopping, incline to start into growth, it will be advisable as soon as the fruit is gathered to open a trench at a moderate distance from the stem of the tree, cutting the stronger roots. This will be of the greatest service in checking growth, and will probably do more towards securing ripe wood than anything else that could be adopted. Get the Strawberry plantations intended to stand for next season trimmed as soon as convenient, cutting off and clearing away the runners, so as to afford the leaves plenty of room. Attend to providing plenty of Lettuce, Endive, &c., for winter salads; also see that there is a good bed of Parsley provided in some sheltered spot where it can be readily protected in severe weather.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Aug. 3, 1864, as observed at the Horticultural Garden

July and August.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind
Thurs. 28	24	30.000	29.812	79	45	62.0	64	62½	S.W.
Friday 29	25	30.057	30.022	82	43	62.5	65	63	N.W.
Satur 30	26	30.130	30.110	80	52	66.0	65	63	S.W.
Sunday 31	27	30.122	29.948	83	49	66.0	64½	62½	S.W.
Mon. 1	28	30.043	30.010	77	40	58 5	65	63	S.W.
Tues. 2	●	30.092	30.080	80	31	55.5	65	63	N.W.
Wed. 3	1	30.112	30.028	79	45	62.0	64	63	N.
Average.		30.078	30 001	80.0	43.5	61.7	64.6	62.6	

July 28—Very fine, with streaky clouds; cloudy; fine.
— 29—Very fine; cloudless; fine throughout; air very dry.
— 30—Densely overcast; fine; very fine.
— 31—Uniformly overcast, very fine; overcast; windy at night.
Aug. 1—Fine; very fine throughout.
— 2—Clear dry air; cloudy; fine; temperature in the night 1 deg. below freezing.
— 3—Very fine; lower current of air from S.; upper, from W. exceessively dry; slight showers.
Mean temperature of the week 1¼ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending August 13, 186

August.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 7	74.4	50.8	62.6	13	0.57 in.	1	4	3	—	6	21	1	—
Mon. 8	74.5	49.7	62.1	16	0 50	2	5	2	—	3	19	3	—
Tues. 9	74.6	50.2	62.4	14	0.40	2	7	4	—	5	14	2	—
Wed. 10	75.3	52 6	64.0	17	1.06	1	6	3	2	5	15	11	—
Thurs. 11	75.8	51.3	63.6	17	0.78	1	1	3	1	5	15	11	—
Friday 12	75.2	50.8	63.0	14	0.47	2	2	2	1	6	13	5	—
Satur. 13	74.2	50.3	62.2	17	1.14	1	3	3	3	4	5	3	—

The highest temperature during the above period occurred on the 10th, 1842—therm. 92 deg.; and the lowest on the 13th, 1839—therm. 32 deg.

Notices to Correspondents.

CARNATIONS: *Z Z.* Your new scarlet Clove Carnation named Garibaldi is not in our opinion either so sweet-scented or bright in colour as Prince of Denmark. The blooms were, however, a little faded, and otherwise out of condition when they reached us.

CUPRESSUS LAWSONIANA: *K P.* You may transplant it as soon as the ground is moistened by the autumnal rains.

CYDONIA JAPONICA: *J W B.* We do not know that any use has been made of the fruit of the ordinary form of the Japan Quince, or Pyrus japonica as it is often called, but from a large-fruited variety raised in the south of France, a very good preserve may be made, as you will see on referring to p. 868 of our volume for 1859. It is probable therefore that the common sort might be used for a similar purpose.

NAMES OF PLANTS: *E K.* 1, Alopecurus pratensis; 2, A. geniculatus; 3, A. agrestis; 4, Bromus commutatus.—*K P.* Verbascum album.—*D.* Datura Stramonium.—*J B H.* 1, Hyssopus officinalis; 2, Origanum vulgare.—*C C.* Teucrium Botrys.—*W. May.* 1, Mentha piperita; 2, M. viridis.—*Mary.* Campanula rotundifolia, in an exuberant condition.—*C S F.* Cratægus prunifolia.—*W S.* Spiræa canescens.—*Jas Carter.* The Collinsia is possibly new; as to the two Godetias the specimens are insufficient for certain identification; they must be each accompanied by a ripe seed vessel and a few ripe seeds, and sent us again, when we will do our best with a difficult question.—*S C.* Athyrium Filix-fœmina rhæticum.—*T Corder.* Pimpinella Saxifraga, a plant which is most variable in the form and cutting of its leaves.—*Aphis.* Momordica Balsamina.—*M A Woodward.* Lastrea remota—*Irish Sub.* Lastrea dilatata var. collina, certainly. The indusium has fallen away in some places, but is to be found shrivelled up in the centre of many of the sori.

NURSERYMEN: *J G & Co.* A nurseryman is not entitled to any longer notice to quit than other people, unless he has expressly stipulated for it.

MANCHESTER and LIVERPOOL AGRICULTURAL SOCIETY.

Patrons.—The Earl of Derby, K.G., and Lord Egerton of Tatton.
President for the Year.—Lord de Tabley.

GRAND SHOW at KNUTSFORD (near the Entrance to Tatton Park), on SEPTEMBER 7 and 8. PRIZES amounting to nearly 1000*l.*, for Horses, Horned Cattle, Sheep, Pigs, Poultry, Dogs, Seeds, Roots, Horticultural Productions, Cheese, Butter, Implements, Machinery, &c.

ENTRIES CLOSE on AUGUST 6.

Prize Lists and Forms of Entry may be obtained from Mr. J. B. Cutter, Local Secretary, Knutsford; or from
T. B. Ryder, Secretary.
57a, Church Street, Liverpool

Land Drainage, & other Agricultural Improvements.

MR. BAILEY DENTON, C.E., maintains a large Staff for the Execution of Land Improvements by a commission of 5*s.* per acre for Under Drainage, and a fixed charge for Outfall and other works.
For particulars, apply to him, at 52, Parliament Street, Westminster.

Drainage of Land.

MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

Drainage, &c.

MR. J. BEAUMONT, Land Agent, Surveyor, and Drainage Engineer (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.

To Landowners, the Clergy, Estate Agents, Surveyors, &c., in England and Wales, and in Scotland.

The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable William Napier, Managing Director, 2, Old Palace Yard, Westminster, S.W

THE GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY,
Offices: 52, Parliament Street, S.W.

Under this Company's Act tenants for life, trustees, mortgagees, guardians, committees of incompetent persons, beneficial lessees, corporations (ecclesiastical or municipal), incumbents, charitable trustees, &c., may effect the following Land Improvements, and charge the outlay and expenses on the estate improved, by way of rentcharge, to be paid by half-yearly instalments, viz.:—

1. All works of Drainage, Irrigation, Warping, and Embankment.
2. The Erection of Farmhouses, Cottages for Agricultural Labourers, and all kinds of Farm Buildings.
3. The Construction of Roads.
4. The Grubbing and Clearing of Old Woodlands, Enclosing, Fencing, and Reclaiming Land.

The owners of estates, not entailed, who may be desirous to avoid the expense or inconvenience of a legal mortgage, may also charge their Estates with an outlay in improvements under the simple and inexpensive process of the Company's Act.
The term of years for the rentcharge is fixed by the landowner, so as to adapt the amount of annual payment to the circumstances of the tenants, the term for building works being limited to 31 years.
No investigation of title being required, and the charge not being affected by incumbrances, no legal expenses are incurred.
The arrangements for effecting improvements are threefold:—
No. 1. The works may be designed and executed entirely by the landowner's agent, and the Company employed only to supply the loan and conduct the matter through all the official forms for charging the outlay on the estate.
No. 2. The Company will supply plans, specifications, and estimates for any improvements to be executed by the landowner's agent as under No. 1. In each of these cases the landowner will be solely under the control of the Enclosure Commissioners.
No. 3. The Company will undertake the entire responsibility of the improvements, prepare the plans, execute the works, and finally charge on the estate the actual amount expended, with their commission thereon, approved by the Enclosure Commissioners.
Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.
Works of Drainage and other improvements are also executed on commission for landowners, who merely require the skill and experience of the Company's officers and a staff in constant practice.
Applications to be addressed to William Clifford, the Secretary, at the Office of the Company, 52, Parliament Street, S.W.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, and RAWTREE.
Address, 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c.
They also continue to supply GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all Fertilisers of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. Purser, Secretary.

LAWES'S MANURES.
The Manures manufactured by J. B. Lawes for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. Lawes, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
American and other Cakes at Market prices.
Address John Bennet Lawes, 1, Adelaide Place, London Bridge, E.C.; and 22 Eden Quay, Dublin.

£1000 UPON the WOOLSTON TACKLE against the NEWCASTLE "best application."
William Smith, Woolston, Bletchley Station.

REAPING MACHINE.—On SALE for 20*l.*, one of Burgess & Key's 1860 REAPING MACHINES. It originally cost 45*l.* 12*s.* 4*d.*, with extras; has never been worked more than one or two trials, and is only parted with by the owner for sinking in his light, peaty soil. On hard, clayey lands this objection would not exist.—Apply to Messrs. Ben. Reid & Co., Seedsmen, 132, Union Street, Aberdeen, N.B.

CLAYTON, SHUTTLEWORTH, and CO., Engineers, Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.
Stamp End Works, Lincoln, and 78, Lombard Street, London; also at Lowengasse, No. 44, Landstrasse, Vienna; and Gegenüber dem Bahnhof, Pesth.
Descriptive, Illustrated, and Priced Catalogues, Free per Post.
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SKIRVING'S KING of the SWEDES.
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SKIRVING'S IMPROVED SWEDE PURPLE TOP.
E. P. Dixon & Sons, 57, Queen Street Hull.

The Agricultural Gazette.

SATURDAY, AUGUST 6, 1864.

Most of our pages are this week filled with reports of the current harvest. We cannot congratulate our readers upon the character of it. It was hardly to be expected that so cold a June and so dry a summer should have produced abundant crops—but we did not think from a recent examination of many of our eastern, western, and midland counties, that the returns at least of the Wheat crop would have been so unfavourable. The following tabular statement gives the general character of the reports which our readers will find in the following pages:—

Number of Reports.

Crops.	Under Average.	Average.	Over Average.	Total.
Wheat	82	102	20	202
Barley	26	119	47	192
Oats	126	72	12	210
Beans	88	27	14	129
Peas	58	48	9	115

We have only to add that the reports thus tabulated are necessarily assumed to be of equal value. But this is far from being the case. And readers who want to know about the character of our great Wheat-growing districts, as regards the chief grain crops, had better look at the southern and eastern counties to the exclusion of all the west and Ireland.

BUTTER-MAKING NOT A MYSTERY.

There are about five or six weeks in spring and fall when I suppose every farmer's wife can make fair butter. It will almost "make itself" with good June or September feed, in a clear dry June or September atmosphere, with the mercury indicating an average of 60°. But for the dairy to yield a generous profit through the whole year, a fair article must proceed therefrom every week. Everybody cannot be supplied through the dog-days with June butter; nor can every family have their tubs for winter filled in September. Now, if you can bring the dairy under the same conditions in August or December that prevail in June and September, why should you not realise the same results? But this it seems impossible at present fully to do. Yet I think the secret of success in butter-making is to bring about these conditions as nearly as may be.

1. In the first place you must, of course, have good cows. Some cows will make a large amount of high-coloured butter, but it is too soft to handle well in any weather, especially when very warm; others yield an article too white to be attractive, though I consider colour of much less importance than solidity. As far as my observation has extended, very yellow butter is not as good as that which is lighter coloured. It is apt to be oily, caused I think first, by being naturally soft, and second, by the consequent over-working it usually receives; the butter-milk being less readily extracted from soft butter.

2. Good cows obtained, the next requisite is good feed. And what can be better than June Honeysuckle "up to the eyes," or Clover aftermath in September? Probably nothing. I prefer, however, as a matter of health, to give a feeding of dry hay every day through the season. I can thus keep them more uniformly, and not subject them to sudden changes from green to dry food. But what for feed the remainder of the year? Why, get the next best thing—which is the same, cut and cured, for feeding in the stall. During the third week of last June I cut four or five acres of Clover and Red-top, the Clover just coming into flower, the Red-top showing its flower-stalk. Sixty days after I cut the same field again. This winter the cows, to which both lots are fed, seem to know no difference between the first and second crop. It is all Rowen to them. I am fully of the opinion that very little of the hay in New England is cut as early as it should be. For dairy cows I would prefer it all cut before blossoming rather than after. A large butter-dealer and a good judge tells me that he has known his mother to make just as good and just as yellow butter in winter, while her cow was being fed solely on rowen, as she could ever make in summer from the same animal. I think he came very near the truth.

3. But supplying yourself with a stock of June atmosphere to which to set your milk and do your churning through dog-days, is not so easy a thing as to cut your hay early, and afterwards a crop of Rowen. The thermometer does not usually stand at 66° from July to September, nor do you generally have clear dry air at that season. Hence, I do not expect you can make your best butter, or that which will keep the longest, during this period, unless you can secure these two requisite conditions—viz., moderate temperature and dryness of the atmosphere. But the nearer you can contrive to approach these conditions the better your success. I keep my milk during the extreme hot weather in my house cellar—a large, light, airy room, clear of all boards and wooden utensils not used for milk; the whole room thoroughly whitewashed. The windows—a north, south, and west one—are open or shut, darkened or not, just as may be needed to keep the air of the room as pure, as dry, and at the same time as cool as it can be under the circumstances. I consider a damp atmosphere worse than a very warm one for milk. It makes the cream thin and watery requiring much more care and longer time in churning. I need not say that I do or that you should set your milk in the pans two or three inches in depth, and skim it up at 24 or 36 hours old, putting the cream in a tin pail or stone jar, stirring it occasionally; for that almost all dairymen and women do. But when I say you should never commence a churning unless your cream is known to be at a temperature not any below 60°, nor higher than three or four above that point, I cannot at the same time say everybody does that, for I do not know of any dairyman or woman, except through the books, who is exact in this respect. All butter makers think that, if cream be warm, it will come too quickly, be soft and white, and not pleasant stuff to manage; and if too cold it will swell and foam, and not come at all—some one asserting that "it did almost come, but went back to cream again." One dairyman, who usually has good luck, told me this winter that he churned all one day and then gave his cream over to the pigs, only wishing he had done it sooner. Up to last April I occasionally, and not very unfrequently, had just such "luck." Since that time I have used a common 50 cent thermometer—selecting one that would slide easily in the case, or that I could dip the bulb into the cream without the case. When I have gathered a sufficient quantity of cream I try it by the thermometer; and if the temperature be from 60° to 64°, I churn it immediately; if not within those limits, I bring it there by some means before it goes into the churn. I keep my cream in a large tin pail that can be hung in the well the night before churning—not in the water, but just far enough down to have the cream at 60°, when churning is commenced. Placing it in the water makes it too cold; and cold cream is addicted to the same freaks in summer as in winter. In spring and fall 62° does well; in winter, 64°; but in summer the temperature will rise rapidly enough if you commence at 60°. I never want butter to reach a higher temperature than 66° at the time it separates from the butter-milk. Following this method, I have not had the shadow of a failure for ten months. My summer and winter butter have come about equally well, varying from 15 to 45 minutes, according to the ripeness of the cream. I think it does no harm to run a bucket of cold water through the churn after the milk is drawn off. If the butter is too soft, as it almost will be in summer, it does much good by hardening it before salting.

4. My butter is taken from the churn to a butter worker, like the small simple one that figured in Flint's work on "Dairy Farming"—a book, by the way, that every man or woman who expects to make a hundred pounds of butter should read through twice as a preliminary step. In this worker the butter is salted, then returned to the well for 12 hours, after which it is thoroughly worked. And here I find a great advantage in the worker over the hands. If butter a little too cold is worked in summer by hand, it will grow much too warm before the buttermilk is expelled; while the worker will do it quickly, thoroughly, and without causing the oily taste so commonly found in hard-worked butter. So much for summer butter. And now, to make good, sweet, yellow butter in winter, you have only to secure the same conditions that are best for making summer butter—namely, good cows, rich feed, a dry air in which to raise the cream, and a temperature as near 60° as it is possible to preserve. The latter condition is much more easily obtained in winter than in summer; for by artificial heat the air can be kept at the proper temperature in the milk-room without being made damp, while the same result cannot as readily be obtained in summer with ice, on account of the dampness accompanying it—indeed, I believe that more butter, and that of a good quality, can be made from a given number of quarts of milk, in winter, than can be through the warmest weather.

Finally, in butter-making, as in shipbuilding, or surveying, strike the word "luck" from your vocabulary. Learn your trade. Learn the laws that govern your work, and obey them. Be not outwitted by heat or cold, by wet or dry, but press them all into your service, and be master, and not slave, of the fluid forces of Nature. *New England Farmer.*

THE PRESENT APPEARANCE OF THE CROPS.

FROM THE REPORTS (JULY 30) OF OUR OWN CORRESPONDENTS.

COUNTY.	WHEAT.	BARLEY.	OATS.	BEANS.	PEAS.	POTATOS.	HAY.	ROOT CROPS.	WHEN WILL HARVEST BE GENERAL.	NAME AND ADDRESS.
SCOTLAND.										
INVERNESS	Under average	Average	Under average	Good	Few grown	Promising	Very light crop	Turnips, fair promise	Aug. 25	Alex. Simpson, Beauly
MORAY	Not average	Very fine crop	Average	None	None	Very promising	Light	Looking very well	In about four weeks	James Hamilton, Forres
BANFF	Under average	About average	Average	None sown	None sown	Under average	Rather light	Fair promise	Beginning of September	John Barclay, Braes of Enzie, Fochabers
ELGIN	Good crop; average	Above average	Nearly average	.. ..	....	Under average but healthy	Short crop	Very promising	Sept. 1	John Grigor, Forres
ABERDEEN	None	Fair	Nearly average	Good	....	Promising	Fair crop and well got	Stiff to grow	Fortnight later than last year	James Laing, Peterhead
	Little sown; quality fair	A good average	Improving; and may be an average crop	None	None	Healthy, and promising well	Under average	Turnips much improved within last fortnight	Perhaps the middle of September	Jas. Macdonald, Huntly
	Average crop	Full average crop	Straw deficient; the ear has an average appearance	None grown	None grown	A fair crop	Below average	Now doing well	End of September	——, Whiterashes
PERTH	Nearly average	Full average	Under average	Full average	Full average	Irregular	Very short crop	Turnips, fair prospect	Last week of Aug.	David Edie, Elliothead
FORFAR	Thin; under average	Nearly average	Most miserable	....	....	Thin; very poor crop	Half a crop, but good	Backward	End of Aug.	Alex. Bell, Montrose
	Over average	Over average	Average	Over average	....	Under average	Under average	Under average	End of Aug.	Robert Colvill, East Newton-by-Chance Inn
	Average	Under average	Much under average	Very good	....	Bad	Half a crop	Good, except on clays	End of Aug.	Wm. Smith, Brechin
FIFE	Rather under average	Above average	Much under average	Above average	Above average	Under average	Very much under average	Rather under average	Aug. 22	John Pitcairn, Kinnaird
	Average	Average	Under average	Average	Average	Under average	Under average	Not very promising; finger and toe	Aug. 20 to 25	R. Russell, Pilmuir
	Under average	Full average	Under average	Above average	None	Below average and late	Not a half crop	Average crop	1st week of September	John Morton, Lambieletham, St. Andrews.
STIRLING	Average	Full average	Under average	Above average	....	Under average	Very light	Promising	In 20 days	Walter Veitch, Grange
	Good average	Average	Below average	Above average	....	Below average	Average in low lands	Promising	End of Aug.	Alex. Buchanan, Whitehouse Farm
	Full average	Above average	Under average	Promise a full average	Not cultivated	Blanky and not vigorous	Greatly under average	Promise an average	End of Aug.	W. Drummond & Sons, Stirling
	Average	Fully average	Under average	Average	None	Below average	Below average	Nearly average	Beginning of September	——, Stirling
HADDINGTON	Average	Above average	Under average	Under average	....	Under average	Under average	Average	August 19	Patrick Shirreff, Haddington
	Full average	Over average	Under average	Average	....	Under average	Half a crop	Various; part excellent	About Aug. 20	George Hope, Drem
EDINBURGH	Thin; good deal rusted; not average	About an average crop	One-third short of an average crop	Average crop	None	Fully one-third short of an average crop	Half of an average crop	Suffered from drought	About Aug. 22	——, Dalkeith
	Average	Above average	Light; under average	Average	None grown	May be average	Under average	Turnips look well, except stiff soils	With fine weather about 1st Sept.	James Hislop, Mid-Calder
	Average of past six years	Average of do.	Short strawed; under average	Good	....	Scarcely average; no disease	Below average; aftermath poor	Promising	Aug. 20	James Melvin, Bonnington, Ratho
RENFREW	Very thin and little average	Fair average	Average crop	Good; average crop	....	Fair crop	Not over one-half the usual crop	Turnips and Mangel are looking well	About six weeks	George Boyd, Renfrew
LANARK	Very thin	None grown	Average	Good	None grown	Average	Very light	Wanting rain and heat	In Sept.	J. Munro Mackenzie, Wishaw
AYR	Middling	Good	Very good	Good	....	Good	Light	Looks well	Sept. 5	Wm. Orr, Beith
	Generally thin; Under average	Little grown; average	Short of straw; good average	Over average; good	None grown	Early crops well; late crops promising	Very light; much under average	Very promising	About Aug. 24	And. W. Ralston, Lagg
	Variable; winter sown, thin; scarcely average	None	Generally good	Few grown; very good	None	Frosted; but recovering	Very light	A great crop	End of Aug.	W. M'Jannett, Irvine
SELKIRK	Average	Average	Under average	None grown	None grown	Average	Under average	Turnips good	Last week of Aug.	James Stalker, Galashiels
PEEBLES	....	Barely average	Below average	....	....	Average	Very light crop	Turnips very promising	Middle of Aug.	James Lyle, Innerleithen
ROXBURGH	Under average	Average	Under average	Look well	Look well	Under average	Very poor crop	Good	Aug. 29	Patrick Brodie, Clarilaw, Selkirk
	Average	Average	Below average	A little below average	Average	Below average	Below average	Full average	14 days	James Thomson, Whiterlee
DUMFRIES	....	Good	Very good	Good	....	Good	Very poor	Very good	Middle of Sep.	J. Little, Langholm
BERWICK	Under average	Average	Under average	Average	....	Average	Under average	Average	End of Aug.	George Logan, Humehall, by Stitchill
	Average	Above average	Decidedly under average	Good	....	Good	Light, but well got	Good on free soils; very poor on clays	About Aug. 25	John Wilson, Edington Mains, Chirnside
	None grown	Little grown	Short in the straw; but well headed, and like a full average	None grown	Few grown	Good	Under average	Not equal; all growing well	End of Aug.	John S. Bertram, Cranshaws, Duns
WIGTON	Looks well, but small breadth	Little sown	Generally under average	....	....	Fair; disease appearing	Very light crop	Mangel only middling; Turnips very greatly improved	End of Aug.	A. H. M'Clean, Auchneel, Stranraer
ENGLAND.										
NORTHUMBERLAND	Hardly average	Fair crop	Very light	Good	A full crop	Thin	Light	Want rain greatly	End of Aug.	J. Grey, Lipwood House
1.	Average	Average	Short in straw; under average	Few grown	Average	Poor crop	Poor crop	Fair; great need of rain	About three weeks hence	Thos. Dods, Hexham
2.	Thin and poor	Short	Very light	Few grown	Average	Poor	Poor	Various; generally unequal plant	Sept. 1	Ditto
	A fair crop; thinner than we expected	Good	Very short, and a light crop	Good	Good; very few sown in this district	Want rain much, and a middling crop	Fair crop	On light lands good; on strong lands bad	The first of Sept.	Geo. Laing, Coldstream
	Below average	Above average	Light	An excellent crop	Average	Below average	A light crop	Below an average	About Sept. 1	Jacob Wilson, Woodhorn Manor House
CUMBERLAND ..	Average, although light	Average	Under average	....	....	Good	Very light	Good	Last week of Aug.	——, Carlisle
	A thin light crop, but well fed	Average crop	Very light crop	....	....	Poor crop	Very light	Swedes poor; Turnips good	End of Aug.	Richard Harrison, near Penrith
WESTMORELAND	Average	Average	Average	....	....	Good	Light, but good	Under average	End of Aug.	T. Wilson, Ullswater
	Good	Good	Light	Good	....	Good at present	Generally light	Very promising	Aug. 20 to 25	William Key, Kirkby-Lonsdale
	Thin crop: nearly an average	Average	Average	None	None	Looks well	About half a crop	Average	Sept.	Jonathan Robinson, Warcop
DURHAM	Rather thin	Good	Not very good	Good	Good	Good	Under average	Generally backward	End of Aug.	Robt. B. Dixon, Darlington
YORKSHIRE.....	Thin; nearly an average	Average	Under average	....	Very good	Looking bad	Very light	Bad	End of Aug.	George Crofton, Kimblesworth
	One-third below the average; attacked with red rust	A full average crop	One-third below the average	A full crop, with fair amount of straw	....	Looking remarkably healthy	A light crop; nearly all in good condition	Very healthy indeed, but late	Middle of Aug.	John Outhwaite, Bainesse, Catterick
	Under average	Average	Average	Full average	Average	Very promising	Half a crop, but well got	Swedes failed, or very late	End of Aug.	H. J. Turner, Richmond

THE PRESENT APPEARANCE OF THE CROPS—(*Continued*).

COUNTY.	WHEAT.	BARLEY.	OATS.	BEANS.	PEAS.	POTATOS.	HAY.	ROOT CROPS.	WHEN WILL HARVEST BE GENERAL.	NAME AND ADDRESS.
ENGLAND.										
YORKSHIRE	Scarcely average; red gum and midge	Good	Bad	Good	None	Small tubers owing to drought	Light crop, but well got	Late, but promising; want rain	About second week in Aug.	Peter Stevenson, Rainton
	Below average	Good crop	Below average	Moderate	Moderate	Moderate	Light crop; well got	Good where forward	Aug. 14	Brady Nicholson, Stevcton Grange
	Average	Good	Bad	Short in straw; well podded	Bad	Poor crop	Well got, but bad crop	Very bad	Aug. 12	John Clark, Sen., Hessle, Hull
	Prematurely ripening owing to the drought	A good average crop	Poor crop owing to the drought	Fair average crop	Good	Healthy, but small	Short crop, but well got	Turnips very poor	Third week in Aug.	Henry Briggs, Wakefield
	Average	Good	Average	....	....	Look well	Light	Turnips bad	Aug. 18	Thos. Taylor, Dorrington
LANCASHIRE ..	Average, and good breadth	Looks well	Good; full average	Above average	None planted here	Look well	A light crop	All look well; Turnips late	In three weeks time	Richard Robinson, Garstang
	Scarcely an average	Decidedly good	Average; short in stem	Excellent	....	Complete success	Very light; well got	Healthy and strong	Middle of Aug.	William A. Ramsay, Parbold Hall, Wigan
	Scarcely an average	Fair average	Below an average	Few grown	Not grown here	Various; not heavy	Half a crop	A few good; more bad	Aug. 20.	G. W. Fowler, Liverpool
	Average crop	Nearly average	Rather light	Very few grown	None grown	Above average	Light	Under average	Last week in Aug.	H. W., Warrington
	Below average	Average	Average	Rather short	None grown	Looking well	Very light	Not well	In about 3 weeks.	R. Bell, Mosbro Hall, St. Helen's
	Short; but average	Short; but average	Short; but average	Very few grown	None grown	Good	Rather light; very well; sound	Very promising	About Aug. 25	Geo. Drury, Holker
LINCOLNSHIRE ..	Average	Good	Light	Good	Very good	Irregular	Very light	Various	Aug. 15	Croft Sharpley, Louth
	Average	Above average	Below average	Very few grown	Very few grown	Bad	Bad	Want rain much	Aug. 8	Francis Sowerby, Aylesby
	Full average	Average; large breadth for the district	Under average	Under average	Over average	Average; no disease; large breadth	Much under average	Mangels bad; Turnips irregular; Coleseed not up	Second week in Aug.	John Algernon Clarke, Long Sutton
	Nearly average	Average	Average	Fair crop	Average crop	Not good; and injured by frosts	Very light	Fair crops but backward; want rain	Aug. 15	William Dudding, Panton House
	Average	Over average	Below average	Average	Average	Good	Short crop	Very deficient	Aug. 10.	W. Fancourt, Aslackby
	Rather thin; but average	Good; on Barley soil	Light crop	Spring Beans light	Good; but few grown	Promising well	Very light	....	Middle of August	James G. Dixon, Caistor
	Under an average	Average	Under an average	Average	Average	Very small	Very light	Bad	Aug. 8.	Edward Darby, Folkingham
DERBY	..	..	Average	..	..	Good; no disease	Under half a crop; well got	Very promising	End of August	Benjamin Swaffield, Hartington
	Suffering from Smother fly	Good	Under average	Under average; dropped without podding	Average	Under average; damaged by frost	Very light	Suffering from the continued drought.	In about three weeks	John Parkin, Idridgehay
NOTTS	Average on good land; very light on thin soils; damaged	Good generally, but on the light soils very bad	But few grown	Not well corned	Good	Damaged by frost; now looking pretty well	Very light	Very indifferent; must be bad unless rain comes	In about 14 days	William Sanday, Holme Pierrepont
* On loam & clay	Good average*	Good average	Good average	Good average	Good average	Good	Light crop; but well got	Potatos good Swedes bad; Mangolds bad	About 1st week in Aug.	C. D., near Southwell
† On light sand	Bad; much under average†	Bad; and under average	Very bad indeed	None grown	None grown	Not grown, only for house	Not half a crop	Swedes very late and backward	About 1st week in Aug.	Ditto
	Very thin, with a deficient ear	Good crop; coarse quality	Short and light	Much under average	Average, but short in straw	Very bad	One-fourth of a crop	Failure	Aug 11	John N. Buckley, Normanton Hill
	Under average	Early sown, very light; late, average	Quite under average; very short	Not grown	....	Suffering from drought	Half a crop	Light land, pretty fair; strong land, very deficient	About Aug. 8	Henry J. Wilson, Newlands, Mansfield
	Very thin	Bad	Very light	Fair	Bad	Fair	Half a Crop	Not good as a rule	Aug. 1	William Chowler, Jun., Newark
	Below average	Average	Below average	Average	Average	....	One-third below average	Below average	Aug. 10	C. Paget, M.P., Ruddington Grange
CHESHIRE	Under an average, injured by insects	Fair average crop	Various	Injured, thinly podded	....	Healthy, early sorts fair crops	Very light, but very good	Very uneven	Aug. 12	W. Palin, Stapleford Hall
	Healthy and promising; about average	But little grown	Short, and light, under an average	Good	None grown	The late kinds promising, early sorts light	One-third short of average	Late deficient, damaged by maggots	About Aug. 18	W. B. Burnham, Spital, near Chester
SHROPSHIRE	One-third below an average, aphis and red gum	Average	Average	A total failure	Good	Good, and free from disease	Very deficient	Generally deficient, attacked by maggot	Aug. 15	Evan Davies, Patton Wenlock
	Good, but not so much as last year	Very good	Fair	....	....	Healthy	Very light	Fair promise on the light soils	Aug. 8.	Pryce W. Bowen, Shrawardine Castle
	Under average red gum very bad	Full average	Very good	Very bad	Fair; but blighted	Small crop	Very light crop; well harvested	Moderate; want more rain	Aug. 8 to 12	Richard Shirley, Bawcott Munslow
LEICESTER	Average crop; but much infested with lice; white is best	Barley on strong land average where early; but late sown bad	Oats very short, and will be very bad in the yield	Beans short of pods	Average	Potatos very hazardous at present	Hay and seeds half a crop; pastures brown and water scarce	Root crops generally bad	Early in Aug.	Francis Spencer, Lutterworth
	Good	Good	Good	Not much grown	Not much grown	Not much grown	Light	Fair	Middle of Aug.	——, Ashby-de-la-Zouch
STAFFORDSHIRE	Under average	Average	Average	Blighted	Good	Deficient	Very light	Prospect bad	Aug. 8	Thos. Byrd, Mytton Manor, Penkridge
NORFOLK	Bare average	Good average	A bad crop	Under average	Fair average	Looking well at present	Very light crop; but well got	Promising; want rain	Aug. 7 to 12	Thomas Brown, Denver, Downham
	Ears defective; slightly under average	Good	Under average	Average	Average	Want rain	Very poor indeed	Various; want rain	About middle of Aug.	Wm. Cubitt, Bacton Abbey
	Under average; thin plant, small ears, some deficient; affected by frost	Good crop; on well farmed land bulky, coarse; on other soils uneven	Not so good as last year	Rather defective; short in straw, and pods few and small	A fair crop; larger breadth than for years past	Rather diseased; early ones indifferent in yield	Hardly a three-quarter crop	Planted moderate	Aug. 8	William H. Taylor, Wymondham
	Average crop here; not above two-thirds of a crop from Peterborough to York	Very good crop here; north part of this country very much scorched, and prematurely ripe	Good; the Fens are a poor crop, much injured by the frost in June and May	None grown here; promise well on the deep land about Lynn	Good; taken up last Thursday and the land ploughed and drilled with Turnips	Good	Very short crop; well secured; seed very short, rain much wanted	Mangel very good; Swedes excellent here; complained on the strong lands of this county	About Aug. 8	John Hudson, Castle Acre Lodge
	Below average	Very good	Bad	Not good	Good	Good	Very bad	Beet good; Turnips bad	Aug. 10	——, Rougham
SUFFOLK	Good upon our best lands; very defective on other soils	Promises well upon all fine cool lands	....	Poor prospect	A large breadth; some not half a crop	Small, but no disease at present	About the lightest crop ever grown	Turnips doubtful; Mangels superb, but wanting rain	Aug. 15	Henry Edwards, Woodbridge
	Much very thin in plant, and light; below average	Upon good lands full average; elsewhere damaged by drought	Partial	Fair but below average	Pretty good upon the cool soils	Very inferior	Less than half an average crop	Mangels suffering; Turnips partial	Aug. 5	Cornelius Welton, Wickham Market
	Good	Good, but prematurely ripe	Few grown	Good, but lousy	....	....	Light crop, well secured	Turnips *nil*; Mangels suffering	Aug. 9	Geo. Edwards, Framlingham
HUNTS.....	Somewhat blighted; nearly average	Generally good	Under average	Strong straw; suffering from aphides	Good	A good plant; wanting rain	Good	Mangels good; Turnips indifferent	Aug. 4	Simon A. [illegible], Hundrayton by-pass [illegible]
	Clays, good; gravels, light	Very good	Light	Light	Good	Very small	Light	A failure	Aug. 3	Peter Purves, Brampton

THE PRESENT APPEARANCE OF THE CROPS—(*Continued*).

COUNTY.	WHEAT.	BARLEY.	OATS.	BEANS.	PEAS.	POTATOS.	HAY.	ROOT CROPS.	WHEN WILL HARVEST BE GENERAL.	NAME AND ADDRESS.
ENGLAND.										
NORTHAMPTONSHIRE	Good *	An average	Thin and light	Light	A good average	Promising	Very light	Turnips very bad; Mangels fair	Aug. 3	Peter Love
* On strong land	Quarter below average †	Half average	Half average	Failure	A good average	Promising	Very light	Swedes almost a failure; Mangels fair		Ditto
† On light land	In the Fens above average; on highland thin, but good	On thin soils deficient	Under average	Plenty of plant, not well corned	Good	Good	Short produce	Mangels good; Turnips not good; Coleseed	First week in Aug.	John Whitwell, Peterborough
	Good; full average	About average	Much under average	Very short; badly corned	Average	Healthy, but very small	Half crops; well got	Very bad; almost a failure	Middle of Aug.	T. B. Smeeton, Cromwell House, Naseby
WARWICK	Thin; under average	Full average	Light	Indifferent; blighted	Thin and poor	Small; free from disease	Very light	Turnips a failure; Mangels small	Aug. 4	John Ford, Morton Hall
	Under average	Early sown average; late under average	Under average	Bad	Average	....	Half a crop	Want rain	Aug. 8	J. H. Burbery, The Chase, Kenilworth
	Under average	Full average	....	Under aver.; blighted	Various; under average	Small in consequence of drought	Much under average	Failure; Mangels require rain	Aug. 8	Wm. Gibbs, Stratford-upon-Avon
	Average	Under average	About average	Half an average	Under average	Good, but small	Half an average	Failure; Mangels doing well	Aug. 8	Wm. Aitchison, Berkswell
	On the deep loams and well cultivated clays lands a full average crop;	A very fine crop; beyond an average	....	Much blighted	Early sown good; late sown blighted and bad	Early productive; late look well	One-third of an average crop	Mangels promising; Turnips failed	About Aug. 10	J. C. Adkins, Stratford-on-Avon
	Various	Various	Light	If early, good	If early, good	Good	Very bad	Turnips bad	Aug. 6	W. Gray, Courteen Hall
	Thin, and very much blighted	Full crop, and promising	Well corned, but short in the straw	Winter Beans fail; spring blighted	A full crop	A light crop, but very sound	A very light crop; well got	Turnips a failure: Mangels good	About Aug. 15	W. Dexter, Seckington, near Tamworth
CAMBRIDGE	Good crop: ripening well; full average	About an average; not bulky	Some good; many bad	Badly podded, and full of fly	A full average	Not generally good	On good lands good; seeds light	Mangels a good crop	Aug. 8	Alfred S. Ruston, Chatteris
	Generally thick; deficient in the ear	Good	Moderate	Winter thin, but well podded; spring moderate	Good	....	Short crop	Suffering from want of rain	About Aug. 8	——, West Wickham
WORCESTER	Under average	Very good	Very few grown; good	Short straw and blighted	Early; very good	The early good; the late small	Got well; half the quantity of Grass	Very bad	Aug. 1	Joseph Matthews, Malvern
	Under average	Over average	....	Under average	Under average	Full crops, but small	Very light	Late and thin	Aug. 1	Richard Smith, Droitwich
	Excellent on well cultivated land. Bad on poor soils	Unusually good	Large crop	Early planted, good. Late planted much injured	Late planted, much injured by the green aphis	Early Potatos small but sound; late Potatos sound, but wanting rain	On meadow land, generally good; on uplands, very light	Miserable at present	Second week in August	Henry Hudson, The Elms, near Pershore
HEREFORD	Average	Average	Under average	Under average	Under average	Promising	Under average	Very unpromising	First week in Aug.	Henry Pride, near Monmouth
	Below an average	Below an average	Under average	Under average	Under average	Under average	About half a crop	Very bad	August 1	T. Duckham, Baysham Court, Ross
	Michaelmas planted very good; spring sown light	Good average	Under average; straw short	A good deal blighted	Not good	Early planted good; rest bad	Much under average	Very patchy	August 1	P. N. Edwards, Brinsop Court
MONMOUTH	Bare average	Over average	Under average	....	....	Very promising; all good at present	One-third under average; no after Grass	Healthy, but retarded	Aug. 10	G. R. Greenhow-Relph, near Usk
	About average; aphis	Very good; aphis	Light; aphis	....	....	Promising	Very light	Various; suffering from drought	Beginning of Aug.	W. H. Little, Llanvair Grange
	Average	Good	Light	Blighted	Very light	Average	Very light	Very bad	About Aug. 7	Thomas Beckingham, Monmouth
GLOUCESTERSHIRE	Below an average; thin, but healthy	Early planted an average; late indifferent	Same as Barley	....	Fair, but a good deal blighted	....	Very short, but well made	Swedes a good plant, but suffering from grubs and drought; late planted a failure	Second week in Aug.	J. M. Read, Elkstone
	Good, but thin	Good	Good	Badly blighted	Nearly destroyed	Looking well	Very light	Very patchy	Second week in Aug.	John Cobbam, Berkeley
	Thin, and short in the straw; rather under	Under average	Short in straw; much under average	Variable	Fair; some harvested	Injured by early frost	Very light quantity, but well made	Very defective; suffering from want of	About Aug. 4	Stiles Rich, Didmarton
	Average	Early sown good; late sown bad	Average	Much blighted;	Various	Promising; no blight	One-third of average	Some good, but generally a	First week in Aug.	J. T. H., Frocester
	One-fifth below average	Above average	Various	Below average	Blighted	Very small, but sound	Small quantity, but good	Suffering much from drought	Aug. 5	John F. Peacey, Winchcomb
	Thin, and irregular in height; land below an average	Early sown good; average	Below average; straw very short	Much blighted; under average	Very generally bad; below average	Under average; suffered from dry weather	Unusually light; much below average	Irregular short breadth, much injured by grub	Aug. 4	J. Lynch Fletcher, Royal Agricultural College
	Very variable; barely average of past 12 years	Average; parts ripening prematurely	Under average; few grown here	Considerably under average; many blighted with aphis	Barely average; part blighted	Under average; checked by drought	About 2-3ds of crop on low lands; half on uplands	Most unpromising; scarcely any at present	First week of Aug.	Wm. Woodward, North way House, near Tewkesbury
	Some full crop and some under average; thin	Rather under average	Under average	Badly blighted	Much under average	Very small; under average	Well made but much under average	Bad prospect	July 29	Giles Edmonds, Eastleach, Lechlade
OXFORD	Average crop	Average crop	Partial crop	Very bad; spring pretty good	Good	Good but small	Very short crop	Bad	Aug. 9	Richard Page, North Newington
	Good on strong soils; under average on light land	Very good	Short and under average	Average	Under average	Small; healthy	Short crop; well secured	Very bad	Aug. 10	Matthew Savidge, Sarsden Lodge Farm
	Average	Under average	Bad	Bad	Bad	Under average	Much under an average	General failure, except of Mangels	Aug. 1	Saml. Druce, Eynsham
BUCKS	Average	Under average	Under average	Not over average	Not over average	Under average	Good and well got	Mangel good Turnips bad	Aug. 7	Edward Evans, Windsor
	Under average	Average	Under average	Under average	Average	Look well	Half a crop	Bad	Aug. 2	W. Smith, Woolston
	Below average	Much below average	Generally inferior	Diseased bad	....	Average	Short crop	Nearly a failure	Aug. 1	Alexander Fraser, Clayden, Winslow
	Below an average.	Fair on clay, bad on light soils	Very much below an average	Blighted; below average	About an average	Good	Very light on uplands; good in meadows	Mangel very indifferent; scarcely any Swedes	Aug. 8	W. G. Duncan, Bradwell, Stony Stratford
BEDS.	Average	Average	Not average	Not average	Average	Good	Light	Bad	Aug. 7	William Lavender, Biddlesham
	Not full plant but exceedingly good ear; many ears 5-set, ripening well, and every prospect of a good	A good crop on all soils, but the hottest gravels; quality is not likely to be good	Scarcely any grown about here; what we have, very light	Short in straw and not so promising now as a week or two ago	A very good crop	A great breadth planted, but the tubers at present very small	A good crop and well got	The Mangels and Kohl Rabi where early, good crop; Turnips very backward,	4th to 6th Aug.	T. E. Pawlett, Beeston Sandy
	Quite average on heavy land	Generally good	Indifferent in places	Gone off very much the last few days (fly)	Not average	Fair yield where sown early	A great deficiency; meadow average crop	Very bad indeed	Aug. 4	John Howell, Stevington

THE PRESENT APPEARANCE OF THE CROPS—(*Continued*).

COUNTY.	WHEAT.	BARLEY.	OATS.	BEANS.	PEAS.	POTATOS.	HAY.	ROOT CROPS.	WHEN WILL HARVEST BE GENERAL.	NAME AND ADDRESS.
ENGLAND.										
HERTS.	Over average	Over average	Over average	Much blighted	Fair crop	Very good; no disease	Clover bad; meadow average	Very backward	Aug. 8	John Bennet Lawes, Rothamsted
	A good crop	A good crop, ripening prematurely on gravels	Short straw, light cut	....	Injured by green-fly; indifferent	No complaint	Very slight crop; well got	Unpromising	Aug. 1	George Webb, Redbourn
MIDDLESEX	Red, average; White under	Average	Under	Very bad	....	Under	Average	Wurzel, good plant; Swedes, partial	Aug. 1	Thomas Hewitt, Cranford
ESSEX	Average on clay soils; one-third below on light gravelly soils	Above average; very good	Not average	Not average; infested with collier	Half a crop; damaged by aphis	Free from disease, but tubers small; not average	Well got up, but a light yield	Mangels various; Swedes, a great failure; Turnips, none	Aug. 1 to 7	Henry Dixon, Witham
	Below average	Good	About average	Under average	Light	Small, but good	Short; got well	Turnips short; Mangels good	Aug. 4	A. Barfield, Great Dunmow
	A very defective crop; at least 12 bushels per acre below last year	Scarcely an average crop, especially late sown, and ripening prematurely	Bad generally	Winter, a failure; spring, late sown much blighted	Generally light	Bad; very small	Short crop	MangelWurzel generally good; suffering dreadfully	Aug. 1	Wm. Fisher Hobbs, Boxtead Lodge, Colchester
	Much under average	Average	Under average	Under average	Average	Half crop	Short, but good	Turnips, failure; Mangels, good	Aug. 1	A. Hardy, Sen., Maldon
	Good	Excellent	Three-fourth of a crop	Half a crop	Half a crop	Half a crop	Three-fourths of a crop	Half a crop	Aug. 5	Collinson Hall, Romford
	Near average	Over average	Under average	Average	Under average	Good, but small	Failure	Mangel good; Turnips bad	Aug. 2	J. J. Mechi, Tiptree Hall
SURREY	General appearance good; but some prematurely ripe, and root-faller.	Good, over average	Crops light	Very much blighted	Early sown, fair crop; late sown, very bad	Suffering from drought, tubers very small	Very light indeed, well secured	Mangel looking well, dry, Swedes injured by grub, Turnips failure	Aug. 1.	Edward Hilder, Woking
	About 8 bushels under an average	Early sown, an average, but late sown under an average	White an average crop; Black very short	Nearly a failure, attacked by dolphin	Same as Beans	Good, but very small, about two-thirds of an average	Short crop, but well secured	Nearly a failure	Aug. 1	William Willis, West Moulsey
	Average, very blighted in many places	Good	Short, well corned	None grown	An indifferent crop	Earliest very small; late look healthy	Short crop	Mangels promising; Turnips most miserable	Aug. 4.	James Arnot, Woodcote, Carshalton
BERKS	Under average	Under average	Under average	Short crop	Very bad	Sound but small	Short crop; got up well	Unpromising	Aug. 2	John Adnams, Tbatcham, near Newbury
	Various; hardly average	Burnt up on all light lands	Same as roots	Dwarfed; blighted	Half crop	One-fourth crop	Bad	Never worse	July 27	James Williams, Abingdon
	Scarcely average	About average	Under average	Very bad; blighted	Very much blighted	Exceedingly variable; very small	Very deficient	Very variable	Aug. 1	Thos. Owen, Hungerford
	Barely average; blight appearing more or less	Early, good; late bad	Early fair; late bad	Blighted very seriously	Blighted very badly	Good, but not large crop	Short in quality; well made	Suffering for want of rain	Aug. 4	E. W. Moore, Colcshill
	Average	Average	One-third less than average	Complete failure	Under average	Half an average	Very good in quality; half a crop	Very bad	Aug. 4	Stephen M. Plummer, Peasemore
SOMERSET.....	Good	Very good	Average; straw light	....	....	Excellent	Under average; well got	Turnips very good	Middle of Aug.	John B. Collyns, Dulverton
	About average; burden light, but yield good. Crop bad on poor clays and badly farmed lands. Spring sown bad for want of rain	Early sown good; late sown bad: on the whole, average. The "stiff straw," a new sort to the neighbourhood, is very bad	A poor crop	Winter Beans are partially good; Spring Beans will be a failure	In most cases cut and made into fodder	Early planted good appearance, but the late ones very bad	A light crop; good	The root crop will be very bad; the early Mangel and Swedes have done pretty well	Aug. 3	Walter Farthing, Stowey Court, Bridgewater
WILTS	Average	Average	Early heavy; late light	A failure	....	Average	Sainfoin good; others light	Good plant, now suffering	Aug. 8	Thomas Chandler, Aldbourne
	Average	Early good; late indifferent	Average	Total failure	Blighted	Good	Short, but good quality	Backward	Aug. 9	J. Pearce Brown, Burderop
	Full average	Average	Under average	Injured: aphis and drought	Moderate	Moderate; good	Under average	In want of rain	Aug. 1	Thomas Arkell, Swindon
	Good average	Good average	Good average	Very much blighted	Very much blighted	Not half a crop	Very light; made well	Very backward	Aug. 9	G. Brown, Chippenham
	Good	Good, except late sown	Average	Much blighted	Very bad	Plenty, but small	Short crop	Very bad	Aug. 1	——, Wilton
	Average	A full average	Below average	Decided failure	Two-thirds of average	Sound and good	Deficient, but good	Mangels good; Turnips bad	Aug. 1	Joseph Stratton, Manningford Bruce
KENT	Good average	The best crop for many years	Not half a crop	Under an average	Not half an average	Not half the crop of last year	Not half a crop	Very bad	Aug. 1	R. Matson, Wingham
	An average crop	Above an average	Three-fourths of an average	Half an average	An average	Early Potatos small	Well secured, but light	Good, but suffering	Aug. 3	Wm. Mauser, Dumpton
	Average	Average	Short straw	....	Good crop	Looking well	Short crop	Looking well	Second week in August	M. Sandford, Martin, near Dover
SUSSEX	Average	Average	Under average	Much under average	Much under average	....	Half average crop	Inferior	Aug. 1	H. Scott Hayward, Folkington
	Average	Average	Early sown good; late sown light crop	Not grown	Blighted	Dried up, but free from disease	Generally light; well made	Mangel generally patchy; Turnips backward	Aug. 1	H. E. Sadler, Mid Lavant, Chichester
	Early sown average; late sown thin and under average. Some drought-ripe	Early sown average; late sown under average	Early sown average; late sown far under average. Straw 12 inches high	Early sown average; late sown under average	Bad; far under average	Healthy; average	Short, but well got	Suffering; Mangels bad; Turnips destroyed	Aug. 1	Fred. F. Hallett, The Manor House, Brighton
	Not average	Very little grown	About average	Average	Below average	No blight	Short crop	Poor crop	About Aug. 8	John Brotherston, Robertsbridge
	About average	Average	Under average	Bad	Very bad	Short crop; sound	Bad crop	Bad	First week in Aug.	James Eames, Lynch, Midhurst
HANTS..	Full average	Over average	Under average	Inferior	Under average	Small, but healthy	Deficient, but good	Very bad	Now general	John T. Twynam, Winchester
	Under average	Under average	Under average	Under average	Under average	Average	Light crop	Great failure	Aug. 1	Joseph Blundell, Bursledon, Southampton
	Good average on the best land; inferior on very light and on wet land	Above average	Early sown good: late sown very short	Much under average	Under average	A light crop	A light crop; well secured	Suffering very much for want of rain	Aug. 1	Hugh Raynbird, Basingstoke
DORSET	Full average, and quality promises to be fine	Early sown good; late thin and small	Nearly an average, but short	Bad	Many very bad	Small, but sound	Short crop	Turnips half up; Mangels poor	Aug. 3	Robert Damen, Dorchester
	Full average	Early heavy; late sown very light	Average crop	None sown	Much lighter, and not half a crop	Fair crop,	Middling cut, and made well	Mangels middling: Swedes want rain; Turnips, grub worm	Aug. 3	Thomas H. Saunders, Watercombe
	Average	Above average	Above average	Blighted	Very blighted	Good	Very good	Uneven; want rain	Aug. 3	William T. Pope, Bridport
	Over average	Full average	Average	....	Bad	Very good	Excellent, but short	Under average	Aug. 4	W. J. Voss, Corfe Castle
	Good	Good	Good	Bad	Bad	Good	Half crop; well saved	Middling	First week in August	J. Furmedge, Beaminster
DEVON.....	Above average	Above average	Average	None grown	None grown	Good	Very light	Good	Aug. 5	——, near Totnes
	Average; straw short	Average; straw short	Under average; straw short	....	....	Very good; no disease	Very light but well got	Patchy, but now improving since the rain	Aug. 8	John Benson, Tavistock
	Bare average; ripening; a good colour	Early good; late inferior	Deficient	....	....	Finer than for many years	Light; well saved	Turnips good; Mangel irregular	Aug. 8	P. Cowan, Tawstock Manor, Barnstaple

THE PRESENT APPEARANCE OF THE CROPS—(*Continued*).

COUNTY.	WHEAT.	BARLEY.	OATS.	BEANS.	PEAS.	POTATOS.	HAY.	ROOT CROPS.	WHEN WILL HARVEST BE GENERAL.	NAME AND ADDRESS.
ENGLAND.										
DEVON.....	Early sown average; spring sown much under average	Early sown average; late sown bad crop	Bad crop	Bad crop	Quite a failure	Promise fairly	About half a crop	Not very promising	Aug. 1	George Turner, Beacon Downes
	Under average	Over average	Average	None	None	Good crop; no disease	Light crop	Good	Aug. 7	George Langdon, Ashford, Barnstaple
	Above average	Above average	Deficient	....	....	Average and healthy	Very deficient	Indifferent	Aug. 8	Samuel Cornish, near Kingsbridge
	Crops excellent	Good	Average	None	Bad	Good	Slight; good	Roots good	Aug. 5	Lamoureux & Clark, Plymouth
CORNWALL	Fair average crop	Various but average crop	Below average	....	....	Good	Not half; but well got	Promising	Aug. 1	James Wills, Southpetherwyn
	Above average	Average	Average	....	....	Above average	Very deficient	Average	Aug. 1	F. Davey Simmons, Killiganoon
	Above average	Average	Average	....	....	Good	Thin and light	Good	Aug. 5	John Michell, Tregoose, Truro
WALES.										
CARMARTHEN ..	Good; average	Average; short straw	Average; short straw	....	....	Splendid	Half a crop	Good; average	Aug. 8	John Muscott, Jun., Laugharne
	About average; a few pieces already commenced cutting	Good; average	Fair	....	....	Look promising	Very light crop	Looking well	About middle of Aug	John Burnell, Llanelly
IRELAND.										
LONDONDERRY ..	Little sown; average	None	Short; under average	None	None	Good	Light; 3-4ths crop	Promising	Sept. 20	C. Pollock, Magherafelt
DOWN	A fair average with a slight speck of rust	Very short; inferior in quality	Winter good; spring very bad	Good quantity	Scarce and very bad	Good; average	About half a crop	Turnips very bad	Aug. 20	W. M'Cleery, Portaferry
ANTRIM	Good	....	Average	....	Not average	Average	Light	Average	Sept. 8	Jno. Burniston, Randalstown
ARMAGH	Very good	Good; little sown	Ears well filled; short in straw	Very good	....	Good crop	Light crop	Very good	Last week in Aug.	Wm. Boyd
	Very good	....	Very productive	None sown	None	Very good	Light crop	Good	End of Aug.	Robert Boyd Hardy, Cooley Hill
LOUTH.....	Looks well; not much extent	Very good	Very good	Little or none here	None	Very good	Over average	Looking very well	End of Aug.	William McCulloch, Dundalk
ROSCOMMON	Good	Good	Light	....	....	Very good	Short and light on uplands	Good	Sept. 10	John Kelly, C.E., Brook Lodge
WESTMEATH	Good	Average	Good	....	....	Very good	Short	Middling	Aug. 26	W. Newburn, Mullingar
TYRONE	Tare	None	Good	None	None	Good	Half a crop	Very good	Sept. 1	W. Paterson, Pubble Lodge
LEITRIM	None	None	Good appearance	None	None	Very promising	Average crop	Very good	Sept. 10	James Lindsay, Ballyglass Cottage
FERMANAGH	Very good	Good	Very good	....	....	Very good	Very bad	Good	End of Aug.	Andrew Mair, Brookeborough
CAVAN	Not grown	Not grown	Now looking well	Not grown	Not grown	Excellent; never were finer	Under an average, but well got	Not very good	End of Aug.	Thomas Chambers, Ballyborough
	....	....	Late short; early very good	None	None	Very fine	A very light crop	Swedes good	End of Aug.	J. Albert Nesbitt, Belturbet
LONGFORD	....	....	Very good	....	....	Very good	Light	Bad	Aug and Sep.	J. M. Goodriff Granard
CLARE	Average	Much under average	Much under average	....	....	Sound, but small	About half a crop	Very bad	Aug. 15	Edward Bennett, Newmarket-on-Fergus
	Good	Average	Short	None	None	Excellent	Fine	Want of rain	Aug. 10	J. Digan, Killaloe
KILKENNY	Very good	Average	Bad; short in straw	None	....	Very good	Average	Average	Aug. 10	Dawson A. Milward
	Average	Average	Light	....	....	Under average	Under half average	Very bad	Aug. 10	Patrick Grace, Freshford
CARLOW	Good	Very good	Very poor	....	....	Not so good as last year	Very bad	Fair	Aug. 20.	——, Clonegal
WEXFORD	Good	Very good	Early, good; late, short	....	....	Not so good for 20 years	Early, good; late, very bad	Early crops of Turnips good; late, very poor	Aug. 15	George Glascott, J.P. Camolin
KERRY	Very good	None	Good, but short	None	None	The best since 1846	Short	Indifferent	Aug. 20	J. O. Sullivan, P.P. and V.G., Kenmare
	Average	Good	Good	....	....	Very good	Light crop	Good	About Aug. 25	John Creagh, Tarbert
TIPPERARY	....	....	Very good	....	....	Very good	Below the average	Below the average	Aug. 15	R. D. Bolton Massy, Ballywire
	Good	None	Good	....	....	Good	Good	Good	Aug. 20	Wm. Ryall, Cashel
CORK	Very good	Good	Good; straw short	....	....	Very good; but small	Very poor crop	Very bad	Aug. 1	D. Clauchy, D.L., Charleville
	Good; injured by insects	....	Very short in straw	....	....	Under average	Under average	Very bad	Aug. 10	James Byrne, Shanballymore
	Good	Average; little grown	Under average and short	....	....	Very small but sound	Very light	Not promising to be good	Aug. 8	F. A. Twiname, Kanturk
	Good	....	Short	None	None	Small	Short	Small	September	Sam. Piddell, Kildorrery

Home Correspondence.

Crops at Ridding's Hill, Farnsfield, Southwell, Notts.—I duly received your note of inquiry about crops in this locality, and have filled in the sheet and return to you by this post; but I ought to explain that this farm is a fine deep loam, and a very productive soil. Now last year (1863) my Wheat crop nearly averaged six quarters per acre, and White Canadian Oats 14 quarters per acre, and other crops in like proportion, and all of excellent quality; but this year I feel sure will not be near so good a yielding year—but the soil to the north and east, and also to the west of this farm for many miles is various, from good sand to forest land, that is very light, and in some places "blow-away sand"—on that class of soils all the grain crops are very bad indeed; in some parts there are many acres of Wheat and Barley that are not more than four to six inches high at this time, and will not pay to cut; the hot dry summer is the cause of these bad crops; the seeds (farms on these soils have only a few acres of Grass, and on forest not any), are quite bare of herbage; the Turnips are a regular plant, but very late and backward indeed, they are just busy striking out and singling Swedes; the farms from this village (Farnsfield) to Mansfield, a distance of eight miles, were only a very few years ago a portion of the old Sherwood Forest, and grew only Gorse, Ferns, and Ling, and supported a few rabbits; nearly the whole of the forest is now enclosed, and grows good crops of Turnips, keeping thousands of sheep, and after that good crops of Barley, and seeds, and Wheat. It is managed on the 5-course, thus:—Turnips, Barley, seeds (pastured), seeds (ditto), and Wheat. Bones are used to a great extent, and Linseed cake to fatten the sheep. The occupiers on the above farms are getting money fast. Just the soils for Turnips and sheep. Now, the soil to the S., S.E. and S.W. of this farm is clay, in some parts good clay, and in others a poor, weak, wet, hungry soil. On the good clay all the Grain crops are good, but not so good as last year; the Beans are very good, much better than they have been for several years past. The Turnips are bad; fields present a very patchy appearance, and at a distance look more like summer fallows than land sown with Swedes; very few Mangels are now grown, and they are looking healthy, but small and backward. On my farm all my grain crops are very good; Hay and Clover good, quite an average crop of hay, and the Clover above average. Pastures are brown, but still plenty of food for stock. I ought to tell you that this farm is "high-farmed," and being in very good condition and clean, the dry summer has not hurt it. *C. D.*

Somersetshire Crops.—Wheat below an average; Barley, early sown on good soils, good, otherwise poor; Beans, various; Peas, bad where grown; Potatos, short but healthy; Hay, light but good; Root crops, bad; Mangels came badly; Harvest will be general in the beginning of August. *Charles Frederick Perkins, Kingston, near Taunton.*

Caution to Farmers and Riflemen.—Believing that the public should be made acquainted with the undermentioned facts I shall feel obliged by your kindly inserting this letter in an early impression of your Journal. In May last three cows, the property of Mr. Mullins, of Rugby, died, after exhibiting symptoms which could not be referred by Mr. Watson, the veterinary surgeon consulted, to any disease with which he was acquainted. On making a *post-mortem* examination of the cows, fragments of lead were found in their alimentary canals, especially in the reticuli or paunches. It was then remembered that the whole of the cows affected, although they had from November, 1863, up to the period of their death in May last, been pastured at a distance from the butts of the Rugby Rifle Volunteer Corps, had, prior to November, 1863 been kept in a field immediately adjoining those butts. This field was carefully examined by Mr. Watson, and among the herbage he discovered fragments of lead which corresponded in every way to those found in the stomachs of the cows. Now the lead here referred to is that which had been scattered from the targets consequent upon the impact of bullets, and is called "bullet spray." Some of this spray had been evidently picked up by the cows while feeding; it remained in their stomachs several months, where, during that time, it slowly, but continuously, underwent solution and subsequent absorption into the system, and so doubtless poisoned the animals in question. Since the death of the three cows, the owner has lost two more under precisely the same circumstances as those already related. The viscera of one of the cows which died last were sent to me for analysis, and I was enabled to demonstrate the presence of lead, not only in the coats of the stomach and intestines, and in their contents, but likewise in the liver and kidney, thus proving the passage of that poisonous metal into the circulation. I also had an opportunity of examining the bullet-spray, which enabled me to ascertain that most of it was encrusted with a pale drab-coloured substance, composed chiefly of carbonate of lead, a highly poisonous plumbic compound. It was this carbonate of lead which, I believe, more immediately caused the

death of the cows. Such, sir, is an epitomised statement of the facts in my possession, which appear to me of sufficient importance to occupy a nook in your Journal, as a knowledge of them may, I trust, induce owners of stock and commanders of rifle corps to take precautionary measures against the occurrence or recurrence of losses similar to those recorded in this communication. *Richard V. Tuson, Professor of Chemistry in the Royal Veterinary College, July 27.*

Steam Cultivation on Heavy Land. — One great advantage to be derived from the use of the steam cultivator to the farmer on clay soils, is the power and facility it gives him to set out a certain amount of work to be done in a given time. Many circumstances may arise which may render it desirable on his part, so to modify or alter his customary rotation of cropping (not for the pernicious and disreputable practice of cross cropping—my meaning is very far removed from that), but for the purpose of renovating and improving his land by devoting a larger acreage to the growth of Grass and roots for cattle feeding, and thereby enabling him to grow a larger amount of corn upon a reduced number of acres. To attempt this, however, with his ordinary working staff of horses, &c., would at any time be a doubtful proceeding. He knows perfectly well that he keeps no more cattle than just sufficient or hardly that to get his seasons completed in proper time and in a proper manner, and hesitates before altering a system that has worked as he thinks tolerably well, and so, whatever his ideas may be about altering his rotation, he is compelled to stand still in the old track or custom. It is then in such a case as this that the mighty aid of steam-power comes in, and awaits, like a willing giant, obedient to do his will. He may now look with delight and pleasure upon a soil that has so much troubled him with its stubborn and adhesive character, and give up all idea of pounding and battering down the same with heavy rollers and clod-crushers in vain and useless attempts to obtain a seed bed, but by one deep and thorough cultivation at the right time, and consequently in a proper manner, open up the soil to the all powerful yet ever varying agencies of nature. This fact cannot be too much impressed upon the clay land farmer, viz., that he is graciously permitted, if I may so term it, to make use of the weather by keeping his work well forward, or in advance of the season—but once caught, as many can testify to their cost, by adverse weather with work behind, it becomes a punishment of relentless severity. Half the labour that is commonly spent upon a clay soil is very often spent in vain. There they go morning after morning, three or four costly teams of cattle with their ploughmen, &c., and at such a pace! to turn over once more the shallow strip of soil that has been turned over for ages past, and lying upon a subsoil literally case-hardened. I have heard it said by practical men that this bottom, impervious alike to air and water, must not be broken up, and if no outlet existed for the rainfall, this would probably be right to some extent; but what is it that constitutes or helps to make the great fertility that we find upon some of our very shallow soils, whose subsoil is porous as chalk for instance. Is it not owing to a very considerable extent to the free action of the rainfall and of the atmosphere? It is this free action that we must endeavour to introduce in our heavy soils, and there is no doubt whatever that steam is the power for such action, and more effectually so by the cultivator than by the plough, and I may add that the best field of roots I am likely to have this year, has been cultivated only by "Smith's" No. 3 and 4 implements, and not been ploughed at all. *Wm. Simmonds.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

Monthly Council: *Wednesday, August* 3, 1864.—Present:—Thomas Raymond Barker, Esq., Vice-President, in the chair; the Hon. Major-General Hood, Sir A. K. Macdonald, Bart.; Mr. Amos, Mr. Barnett, Colonel Challoner, Mr. Druce, Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Holland, M.P.; Mr. Milward, Mr. Randell, Mr. R. Smith, Mr. Torr, Mr. Wells, Mr. Frere, Prof. Simonds, and Dr. Voelcker.

Finances.—The Hon. General Hood, Chairman of the Committee, presented the Report, from which it appeared that the Secretary's receipts during the past month had been examined by the Committee, and by Messrs. Quilter, Ball, & Co., the Society's accountants, and were found correct. The balance in the hands of the bankers on July 30 was 9781*l.* 2*s.* 6*d.* After payment of the expenses connected with the Newcastle Meeting, there will probably remain a surplus of 1000*l.*

Prize Essays for 1865.—Mr. Holland, M.P., presented the following list of subjects proposed for competition, which was agreed to:—

Subjects for Prize Essays for 1865.

1.	Agriculture of Leicestershire	£50	0
2.	Increase of sheep stock on strong as well as light land	25	0
3.	Short history of rise and progress of Short horns	20	0
4.	Comparative profit of making cheese, butter, or grazing stock on pasture land of various qualities	25	0
5.	Improvement of the water supply in rural parishes for agricultural and domestic purposes	20	0
6.	Comparative cheapness and advantages of iron and wood in the construction of roofs for farm buildings	20	0
7.	For the best account of the reclamation of waste or inferior land by marling or dry warping	20	0
8.	Any other agricultural subject	10	0

Newcastle Meeting.—On the motion of Mr. Milward a special vote of thanks was accorded to the directors and officers of the North-Eastern Company for their endeavours to promote the success of the show, which was carried unanimously.

Agricultural Education.—Mr. Holland, M.P., Chairman, reported that the Committee recommended that 50*l.* be offered by the Council for a prize essay on Middle Class Education, the essay to be delivered in with the other prize essays in March, 1865, and its adjudication to be left to the Committee. This was agreed to.

General Plymouth Committee.—Letters having been received from the Local Committee at Plymouth relative to the Show-yard, the Committee recommended that Mr. Randall and Mr. Torr, members of the late Inspection Committee, be requested to go down to Plymouth to arrange with the Local Committee the boundaries of the show-yard and levelling the fences as proposed and offered to the Society by the authorities of Plymouth.

On the motion of Mr. Fisher Hobbs a committee, consisting of the Hon. General Hood, Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Milward, Mr. Randall, and Mr. Torr, were appointed to consider the Country Meeting Queries, and to report in December.

A letter was read from the Foreign Office, inclosing an extract from a report which has been received from H.M. Consul at Dunkirk, of which the following is a copy:—"Mons. Vandercolne, the corresponding member of the Society of Agriculture, informs me that he has found means to drain effectually by the use of a simple pipe, the expense of which one season's good crop would repay. He thinks that the expensive method of tile draining will be totally abolished in a few years. The prospect for the harvest of 1864 is not cheering; in consequence of the prevalence of cold winds during spring and long continued drought, every species of grain and farm produce is unusually backward, and a late and scanty harvest is very much feared. A singular contrast is to be remarked with regard to fruit trees; no such promise of fruit is remembered; this is attributed to the absence of frost, and to the bright sunny weather which prevailed notwithstanding."

The usual leave of absence was granted to the Secretary, and the Council then adjourned over the autumn recess to Wednesday, the 2d of November.

HIGHLAND AND AGRICULTURAL.

The Stirling Show of the National Agricultural Society of Scotland during the past week has proved one of the most successful meetings it has ever held.

The Show-yard was fitted up in the King's Park to the south of the Castle and Town, one of the finest situations in the country. The placing of implements commenced on Thursday the 28th, and the placing of stock on Saturday the 30th ult. The whole of the preliminary arrangements were completed on Tuesday morning, and the judges commenced their labours shortly after that hour. The classes of Short-horns, Polled Angus, and Highland Cattle, and of Blackfaced sheep were of special excellence. The horses are believed to have been the best collection that ever was brought together in Scotland. The Classes of Mares were of especial merit. More than 200 Clydesdales were exhibited.

The following is the Prize List:—

Class I.—CATTLE.

Short-horn Breed.

The Medium Gold Medal to Bull "Forth," winner of the 1st prize at Kelso, 1863, belonging to Amos Cruickshank, Sittyton.

The Medium Gold Medal to Bull "Cherry Duke 2d," winner of the 1st prize at Edinburgh, 1850, belonging to Lord Kinnaird, K.T.

For the best Bull, calved before 1st Jan. 1862, (25 entries).—1st prem. 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. 1, T. H. Binning, Home of Argaty; 2, Viscount Strathallan; 3, David Ainslie, of Cosren.

For the best Bull calved after 1st Jan. 1862, (16 entries).—1st prem. 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. 1, James Douglas, Athelstaneford; 2, Thomas Mellis, Manor House, Bedale; 3, Lord Kinnaird

For the best Bull calved after 1st Jan. 1863, (10 entries).—1st prem. 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, The Duke of Buccleuch; 2, Arthur James Balfour of Whitenoarn, Prestonkirk; 3, Viscount Strathallan.

For the best Cow of any age, (16 entries).—1st prem. 15*l.*, 2d, 8*l.*, 3d, Bronze Medal. 1, A. & A. Mitchell, Alloa; 2, John Bowstead, Penrith; 3, George Robertson Barclay of Keavil, Dunfermline.

For the best Heifer, calved after 1st Jan. 1862, (12 entries)—1st prem. 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, William Lambert, Haydon Bridge; 2, Jaffray Barcroft, Killioggit House, Dublin; 3, Arthur James Balfour, Viscount Strathallan.

For the best Heifer, calved after 1st Jan. 1863, (16 entries).—1st prem. 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1 and 2, A. & A. Mitchell, Alloa; 3, James Douglas.

Polled (Aberdeen or Angus). 40 Entries.

The Medium Gold Medal to Bull, "Fox Maule," winner of 1st prize at Kelso, 1863, belonging to Robert Walker, Portlethen, Aberdeen.

The Medium Gold Medal to Cow, "Fair Maid of Perth," winner of the 1st prize at Edinburgh, 1859; and Medium Gold Medal at Perth, 1861, belonging to William M'Combie, Tillyfour.

The Medium Gold Medal to Cow, "Charlotte," winner of 1st prize at Inverness, 1856, belonging to William M'Combie

The Medium Gold Medal to Cow, "The Belle," winner of 1st prize at Aberdeen, 1858, belonging to William M'Combie.

The Medium Gold Medal to Cow, "Pride of Aberdeen," winner of 1st prize at Dumfries, 1860, and Battersea, 1862, belonging to William M'Combie.

The Medium Gold Medal to Cow, "Mayflower," winner of 1st prize at Perth, 1861, belonging to William M'Combie.

For the best Bull, calved before Jan. 1, 1862.—1st prem., 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. 1, Alex. Paterson, Keith; 2, Mr. James H. Burnett, of Leys, Crathescastle, Aberdeen; 3, John Hepburn, Kirkcaldy.

The Silver Medal to the breeder of the best Bull.

For the best Bull, calved after Jan. 1, 1862.—1st prem., 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. 1, Wm. Goodlet, Boishan, Arbroath; 2, Robert Walker, Portlethen; 3, Robert Walker, Montbletton, Banff.

For the best Bull, calved after Jan. 1, 1863.—1st prem., 10*l.* 2d, 5*l.*; 3d, Bronze Medal. 1 and 2, James Leslie, Blairgowrie; William M'Combie, Tillyfour.

For the best Cow of any age.—1st prem., 15*l.*; 2d, 8*l.*; 3d, Bronze Medal. 1, 2, and 3, Wm. M'Combie.

For the best Heifer, calved after Jan. 1, 1862.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, Robert Walker, Montbletton; 2 and 3, the Earl of Southesk.

For the best Heifer, calved Jan. 1, 1863.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1 and 2, William M'Combie; 3, Lord Kinnaird, K.S.

Polled (Galloway). 28 entries.

The Medium Gold Medal to Cow, "Semiramis," winner of the 1st prize at Kelso, 1863, belonging to James Graham, Meikle Culloch, Dalbeattie.

For the best Bull, calved before Jan. 1, 1862.—1st prem., 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. 1, Samuel Thomson, Blaiket, Crocketford, Dumfries; 2, William Keir, Whithall, New Castleton; 3, Alexander Jardine, Lockerbie.

The Silver Medal to the breeder of the best Bull.

For the best Bull, calved after Jan. 1, 1862.—1st prem., 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. W. & R. Callendar, Dalquhairn, Dumfries.

For the best Bull, calved after Jan. 1, 1863.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. John Cunningham, Whitecairn, Dalbeattie.

For the best Cow of any age.—1st prem., 15*l.*; 2d, 8*l.*; 3d, Bronze Medal. 1, the Duke of Buccleuch; 2, James Graham, Dalbeattie; 3, John Cunningham, Whitecairn.

For the best Heifer, calved after Jan. 1, 1862.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, Wellwood Maxwell of Glenlee, New Galloway; 2, James Graham; 3, Robert Jardine, Balgray.

For the best Heifer, calved after Jan. 1, 1863.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, James Cunningham, Dalbeattie; 2 and 3, Wellwood Maxwell of Glenlee.

Ayrshire (132 Entries).

The Medium Gold Medal to Cow, "Collyhill," winner of 1st prize at Edinburgh, 1859, and Medium Gold Medal at Kelso, 1863, belonging to the Duchess Dowager of Athole.

The Medium Gold Medal to Cow, "Premium," winner of 1st prize at Glasgow, 1857, and Medium Gold Medal at Kelso, 1863, belonging to the Duchess Dowager of Athole.

For the best Bull, calved before Jan. 1, 1862.—1st prem., 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. 1, John Stewart, Strathaven; 2, the Duchess Dowager of Athole; 3, W. A. M'Lauchlain, Auchintraig.

The Silver Medal to the breeder of the best Bull.

For the best Bull calved after Jan. 1, 1862.—1st prem., 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. 1, Arch. Ballock, Milliken, East Kilpatrick; 2, John Brown, Stewarton; 3, John Stewart, Burnside, Strathaven.

For the best Bull, calved after Jan. 1, 1863.—1st prem., 10*l.*; 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, John Parker, Broomlands, Irvine; 2, Jas. Kay, Hill Sconn, Garguunoch; 3, James Frew, Balmalloch, Kilsyth.

For the best Cow in milk, of any age.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, The Duke of Hamilton and Brandon; 2, Robert Wilson, Nether Johnstone, Kilbarchan; 3, the Duchess Dowager of Athole.

For the best Cow in calf, of any age.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1 and 3, the Duke of Hamilton; 2, the Earl of Strathmore.

For the best Heifer, calved after Jan. 1, 1862.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, Sir Graham Montgomery; 2 and 3, the Duke of Hamilton.

For the best Heifer, calved after Jan. 1, 1863.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, John Parker, Broomlands; 2 and 3, the Duke of Hamilton.

Highland. 51 entries.

The Medium Gold Medal to Bull, "Duntroon," winner of the 1st prize at Perth, 1861, and Battersea, 1862, belonging to John Malcolm, of Poltalloch, Lochgilphead.

The Medium Gold Medal to Cow, "Rosie," winner of the 1st prize at Kelso, 1863, belonging to the Duke of Athole.

The Medium Gold Medal to Cow, winner of the 1st prize at Perth, 1861, belonging to Donald M'Laren, Corrychrone, Callander.

The Medium Gold Medal to Cow, "Shuna, winner of 1st prize at Battersea, 1862, belonging to John Malcolm, Poltalloch, Lochgilphead.

For the best Bull, calved before Jan. 1, 1861.—1st prem., 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. 1, James Gordon, of Manar, Keithhall; 2d, Duncan Stewart, Monachoyle, Lochearnhead; 3, Archd. Stewart, Claigan, Dunvegan, Isle of Skye.

The Silver Medal to the breeder of the best Bull, the late Marquis of Breadalbane.

For the best Bull, calved after Jan. 1, 1860.—1st prem, 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. 1, The Duke of Athole; 2, Alex. M'Donald, Ballochallan, Callander; 3d, Geo. Campbell, Ardifuir, Lochgilphead.

For the best Bull, calved after Jan 1, 1862.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, Robert Lawrie, Fincharn, Ford, Lochawside; 2, Mrs. Ewing, Strathleven House, Dumbarton; 3, Allan Pollock, Ronachan, Clachan, Cantyre.

For the best Cow of any age.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, John Malcolm, of Poltalloch, Callton Mor, Lochgilphead; 2d, The Duke of Athole; 3, Donald M'Laren, Corrychrone, Callander.

For the best Heifer, calved after Jan. 1, 1862.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, John Malcolm, of Poltalloch; 2 and 3, The Duke of Athole.

For the best Heifer, calved after Jan. 1, 1862.—1st prem., 8*l.*; 3d, 4*l.*, 3d, Bronze Medal. 1 and 2, Allan Pollock; 3, John Malcolm.

Brittany.

J. E. Paterson, Linlothen, Broughty Ferry, Bull, age 3 years and 2 months, bred by Mr. Lindsay, Broughty Ferry.

Class II.—HORSES.

For Agricultural Purposes.

Medium Gold Medal to No 398, Stallion, "Sir Walter Scott," winner of the 1st prize at Dumfries, 1860, belonging to the Duke of Hamilton and Brandon, Hamilton Palace, Hamilton.

For the best Stallion foaled before Jan. 1, 1861 (17 entries).—1st prem., 30*l.*; 2d, 15*l.*; 3d, Bronze Medal. 1, Audrew Logan, Crossflat, Kilbarchan; 2, Peter Anderson; 3, Samuel Clark, Mansrae, Kilbarchan.

The Silver Medal to the Breeder of the best Stallion.—Andrew Logan.

For the best Entire Colt, foaled after Jan. 1, 1861 (12 entries).—1st prem., 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. 1, John Kerr, The Bloom, Mid-Calder; 2, Robert Murdoch, Hallside, Cambustan; 3, Wellwood Maxwell, of Glenlee, New Galloway.

For the best Entire Colt, foaled after Jan 1, 1862 (22 entries)—1st prem., 15*l.*; 2d, 8*l.*; 3d, Bronze Medal. 1, Peter Anderson Gillespie, Glenluce; 2, George Scott Barr, Largs; 3, Robert Morton, Dalmair Old Kilpatrick.

For the best Entire Colt, foaled after Jan. 1, 1863 (25 entries).—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, William

Kirkwood, Shankston, Patna, Ayr; 2. James Kay, Hillfarm, Gargunnock; 3, Peter Crawford, Dumgoyach.

For the best Mare (with foal at foot), foaled before Jan. 1, 1861 (14 entries).—1st prem., 20*l.*; 2d, 10*l.*; 3d, Bronze Medal. Alexander Buchanan, New Kilpatrick.

For the best Mare (in foal), foaled before Jan. 1, 1861 (30 entries).—1st prem., 15*l.*; 2d, 8*l.*; 3d, Bronze Medal. 1, William Stirling, of Keir, M.P.; 2, the Duke of Hamilton and Brandon; 3, Wellwood Maxwell, of Glenlee.

For the best Filly, foaled after Jan. 1, 1861 (15 entries).—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, the Duke of Hamilton; 2, Wm. Park, Balqubannan, Dalmuir; 3, the Duke of Hamilton.

For the best Filly, foaled after Jan. 1, 1862 (16 entries).—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, The Duke of Hamilton; 2, James Finlayson, Baker Street, Stirling; 3, Major John Findlay, of Easterhill.

For the best Filly, foaled after Jan. 1, 1863 (10 entries).—1st prem., 6*l.*; 2d, 3*l.*; 3d, Bronze Medal. 1, Wellwood Maxwell, of Glenlee; 2, Alex. Buchanan, Garscadden Mains, Glasgow; 3, David M'Gibbon, Inveravon, Polmont.

CLASS III.—SHEEP.

LEICESTER. 170 Entries.

For the best Tup, not above 4 shear.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, Thomas Simpson, Blainslie, Lauder; 2, David Ainslie, of Costerton, Blackshiels; 3, Thos. Watson, Esperton, Gorebridge.

For the best Dinmont or Shearling Tup.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, Thomas Simpson; 2 and 3, George Simpson, Cowithill, Kelso.

For the best 5 Ewes, not above 4 shear.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, Wm. Purves, Burnfoot, Kelso; 2, Thomas Ferguson, Kinnochtry, Coupar Angus.

For the best 5 Shearling Ewes or Gimmers.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, George Simpson; 2, Thomas Simpson; 3, David Ainslie.

CHEVIOT. 52 Entries.

For the best Tup, not above 4 shear.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, James Brydon, jun., Kinnelhead, Moffat; 2, Thomas Borthwick, Hopsrig, Langholm; 3, Sir Graham Montgomery, M.P.

For the best Dinmont or Shearling Tup.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, James Brydon, Moodlaw, Langholm; 2 and 3, Thos. Elliot, Hindhope, Jedburgh.

For the best 5 Ewes, not above 4 shear, with Lambs at foot. 1st prem., 8*l*; 2d, 4*l.*; 3d, Bronze Medal. 1, Thomas C. Borthwick, Hopsrig, Langholm; 2, James Brydon, Kinnelhead, Moffat; 3, Robert Shortreed, Attenburn, Kelso.

The best Pen of Lambs, the Silver Medal, James Brydon, jun., Kinnelhead.

For the best 5 Shearling Ewes or Gimmers.—1st prem. 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, Robert Shortreed, Attenburn, Kelso; 2, Thomas Elliot, Hindhope, Jedburgh; 3, James Brydon, Moodlaw, Langholm.

BLACKFACED. 79 Entries.

For the best Tup, not above 4 shear.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1 and 2, Thos. Murray, Eastside, Penicuik; 3, David Foyer, Knowhead, Campsie.

For the best Dinmont or Shearling Tup.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, Thomas Aitken, Liston Shiels, Balerno; 2, the Heirs of the late James Walker Nisbet, Biggar; 3, John Malcolm of Poltalloch, Lochgilphead.

For the best 5 Ewes, not above 4 shear, with Lambs at foot—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, John Phillips, Laighpark, Milngavie; 2, Donald M'Laren, Corrychrone; 3, Thos. Murray, Eastside.

For the best pen of Lambs, the Silver Medal.

For the best 5 Shearling Ewes or Gimmers,—1st prem. 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, John Archibald, Oversheils, Stow; 2, John Malcolm of Poltalloch; 3, John Wilson, Crosshouse, Roslin.

SOUTHDOWN. 18 Entries.

For the best Tup, not above 4 shear.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, Robert Scot Skirving, Camptown, Drem; 2, David R. Williamson, of Lawers, Crieff.

For the best Dinmont or Shearling Tup.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1 and 2, Robert Scot Skirving, Camptown, Drem; 3, James Bruce, Burnside, Fochabers.

For the best 5 Ewes, not above 4 shear.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, Robert Scot Skirving, Camptown, Drem; 2, Alex. S. Findlay, of Castle Toward, M.P., Greenock.

For the best 5 Shearling Ewes or Gimmers.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1 and 2, Robert Scot Skirving, Camptown, Drem; 3, James Bruce, Burnside, Fochabers.

LONG-WOOLLED, OTHER THAN LEICESTER.

For the best Tup, not above 4 shear.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1, Thos. Beale Brown, Salperton Park, Andoversford, Gloucestershire; 2, Thomas B. Brown; 3, John Gibson, Woolmet, Dalkeith.

For the best 5 Gimmers or Ewes, not above 4 shear.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, Thomas B. Brown, Salperton Park; 2, John Gibson, Woolmet; 3, Robert Scot Skirving, Camptown, Drem

SHORT-WOOLLED, OTHER THAN SOUTHDOWN.

For the best Tup, not above 4 shear.—1st prem., 10*l.*; 2d, 5*l.*; 3d, Bronze Medal. 1 and 2, Charles W. Hamilton, Hornwood, Dunyon, Ireland; 3, John Gibson, Woolmet.

For the best five Gimmers or Ewes, not above 4 shear.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, Charles W. Hamilton; 2, J. Gibson, Woolmet. No award

CLASS IV.—SWINE. 50 Entries.

For the best Boar, large breed.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, Mrs. Ferguson, Balthayock; 2 and 3, W. B. Wainman, Carhead, Crosshill.

For the best Boar, small breed.—1st prem., 8*l.*; 2d, 4*l.*; 3d, Bronze Medal. 1, Mrs. D. Findlay, Easterhill, Glasgow; 2, John Laing, Glendenglie, Kinross; 3d, Robert Philp, Royal Hotel, Bridge of Allan.

For the best Sow, large breed.—1st prem., 6*l.*; 2d, 3*l.*; 3d, Bronze Medal. 1, W. B. Wainman, Crosshills; 2, Richard Dichin. Stockport; 3, D. Findlay, Easterhill.

For the best Sow, small breed.—1st prem., 6*l.*; 2d, 3*l.*; 3d, Bronze Medal. 1, Thomas D. Findlay, Easterhill; 2, Thomas Sadler, Norton Mains, Ratho; 3, Robert Philp, Royal Hotel, Bridge of Allan.

For the best pen of 3 Pigs, not exceeding 8 months old, large breed.—1st prem., 4*l.*; 2d, 2*l.*; 2d, Bronze Medal. 1, W. B. Wainman, Crosshill; 2, Thos. D. Findlay; 3, James Kay, Killfarm, Gargunnock.

For the best pen of 3 Pigs not exceeding 8 months old, small breed.—1st prem., 4*l.*; 2d, 2*l.*; 3d, Bronze Medal. 1 and 2, Robert Philp, Bridge of Allan; 3, the Earl of Wemyss and March.

YORKSHIRE AGRICULTURAL SOCIETY.

HOWDEN.—The meeting of this Society here was opened on Tuesday, when a very large show of live stock—more especially of horses—was thrown open to the inspection of visitors. The following table compares the entries at the last few annual shows:—

	Cattle	Sheep	Pigs	Horses
1859 Hull	105	82	68	240
1860 Pontefract ..	81	76	70	204
1862 York	95	66	94	242
1863 Stockton	76	49	63	203
1864 Howden	78	67	65	320

It will be seen from these figures that while in several former years the shows held in other districts have to some extent surpassed that at Howden in regard to cattle, sheep, and pigs, the stock of horses at the latter, which is the centre of a district long famous for its breed of horses, and which itself is the seat of one of the most celebrated horse fairs in the country, has never even been approached at any other town visited by the Society.

At the annual dinner on Wednesday Lord Wenlock contrasted the show at Howden with that at Newcastle. "If the gentlemen who heard him had been at Newcastle and saw the show recently held there they could not have helped being struck with the immense advantage which in a great many points the Yorkshire Agricultural Society possessed over the Royal Agricultural Society while there. For instance, they had at Howden a much larger number of horses, and that point alone to the Yorkshire Society was one of paramount importance, and contributed to its great success. They had also a very much higher class of horses than were shown at Newcastle, which proved that in this comparatively small area, this one department had been developed with much greater success than over the rest of England. He really believed that the best horses in the world came out of Yorkshire.

Next year's meeting will be held at Doncaster.

We have only room for the following prize list:—

IMPLEMENTS.

Amies & Barford, Peterborough—For steam-power chaff-cutter, with self-delivering apparatus, Silver Medal; steam engine, 2*l.*; plain roller, 2*l.*; clod crusher, 2*l.*; corn grinding mill, 4*l.* Ashby & Co., Stamford—For haymaker, 2*l.* W. Busby, Newton, Bedale—For plough for a depth not exceeding 6 inches, 5*l.*; plough for a depth not exceeding 8 inches, 10*l.*; plough for a depth above 8 inches, 10*l.* C. Clay, Wakefield—For scarifier or surface parer, 5*l.*; cultivator, 5*l.*; drag for more than two horses, 3*l.* Cooke & Co., Lincoln—For plough for a depth above 8 inches, 5*l.* Coleman & Morton, Chelmsford—For drag for two horses, 3*l.*; scarifier or surface parer, Highly Commended. Cuthbert & Co., Bedale—For plough for a depth not exceeding 8 inches, 5*l.*; plough for ploughing and breaking up at same time a single furrow, 5*l.*; plough for raising Potatos, 3*l* Hornsby & Sons, Grantham—For apparatus to threshing machine for cleaning chaff, 2*l.* F. Hutchinson, Thirsk and Northallerton—For his stand, 2*l.* J Patterson, Beverley—For improved mill, 2*l.* Page & Co., Bedford—For heavy harrow for three horses, 3*l.* Puckering & Co., Beverley—For market cart, 2*l.* J. & R. Reeves, Westbury—For patent Bean dropper, 1*l.* B. Sanderson, Thorne—For double mouldboard plough for ridges, 5*l.* — Seaman—For light harrow for two horses, 3*l.* W. Sawney, Beverley—For plough for a depth not exceeding 6 inches, 10*l* J. Spencer, Doncaster—For Potato planting machine, and horse rake, 2*l.* B. Stead, Barnsley—For scuffler for working between the rows of green crop, 2*l.*; grubber for deep working between the rows of green crops, 2*l.* Taylor & Co., Salford—For churn, 1*l.* — Barker—Subsoil plough for four horses, 5*l.*

SHORT-HORNED CATTLE.

Best Bull 3 years old and upwards, 20*l.*, Richard Booth, Warlaby; 2d, 10*l.*, J. B. Booth, Killerby, Catterick.

Best Bull 2 years old, 20*l.*, Richard Eastwood, Thorney Holme, Clitheroe; 2d, 10*l.*, R. Gell, Grimston Lodge, York.

Best Yearling Bull, 20*l.*, J. H. Fawkes, Farnley Hall, Otley; 2d., 10*l.*, J. Charlesworth, Headfield, Dewsbury.

Best Bull Calf upwards of 5 months old, 10*l*, R. Booth; 2d, 5*l.*, J. D, Jefferson, Thicket Priory, York.

Best Cow of any age in Calf or Milk, and having had a live Calf, 15*l.*, J. Wood, Stanwick Park, Darlington; 2d, 5*l.*, H. Morley, Melbourne.

Best 3-year old Cow, in Calf or Milk, and having had a live Calf, 10*l.*, J. R. Middleborough, South Milford; 2d, 5*l.*, C. Watson, Seaton Ross, Pocklington.

Best 2-year old Heifer in Calf, 10*l.*, and 2d, 5*l.*, R. Eastwood.

Best Yearling Heifer, 10*l.*, R. Booth; 2d, 5*l.*, R. Eastwood.

Best Heifer Calf upwards of 5 months old, 5*l.*, R. Eastwood; 2d, 3*l*, Robert Fisher, Leconfield, Beverley.

Best fat Ox under 4 years old, 5*l.*, J. Hill, Wetherby.

Best fat Cow or Heifer, 5*l.*, R. Tennant, Scarcroft Lodge, Leeds.

CATTLE OF ANY BREED.

Best Cow for dairy purposes, 5*l.*, J. T. Robinson, Leckby Palace, Thirsk.

LEICESTER, OR LONG-WOOLLED SHEEP.
(Not Cotswold.)

Best Shearling Ram, 15*l.*, and 2d, 5*l.*, J. Borton, Barton House, Malton.

Best Ram of any age, 10*l.*, J. Borton; 2d, 5*l.*, J. Simpson, Spofforth Park, Wetherby.

Best pen of 5 ewes, 10*l.*, W. Angas, Neswick, Driffield; 2d, 5*l.*, J. Simpson.

Best pen of 5 Shearling Wethers, 5*l.*, E. Riley, Kipling Cotes Farm, Beverley.

Best pen of 5 Shearling Gimmers, 10*l.*, S. Wiley, Brandsby, York; 2d, 5*l*, F. Rickell, Warter, Pocklington.

GIVEN BY THE LOCAL COMMITTEE OF HOWDEN.

Best pen of 5 Gimmer Lambs, 5*l.*, J. Hannam, Kirk Deighton, Wetherby; 2d, 2*l.*, F. Jordan, Eastburn House, Driffield.

SHORT-WOOLLED SHEEP.

Best Shearling Ram, 10*l*, Lord Wenlock, Escrick Park; 2d, 5*l.*, T. Marris, The Chase, Ulceby.

Best pen of 5 Shearling Gimmers, 3*l.*, Lord Wenlock; 2d, 2*l.*; T. Marris.

Best pen of 5 Ewes, 3*l.*, and 2d, 2*l.*, Lord Wenlock.

PIGS.

Best Boar large breed, 5*l.*, J. Shaw. Falsgrave, Scarbro'; 2d, 2*l.*, H. Harrison, Cross Hills, Leeds.

Best Sow large breed, in pig or milk, 5*l.*, J. Hickman, Hull; 2d, 2*l.*, J. Dyson, Leeds.

Best Boar small breed, 5*l.*, Lord Wenlock; 2d, 2*l.*, H. Endeacott, Leeds.

Best Sow small breed, in pig or milk, 5*l.*, H. Keyworth, Leeds; 2d, 2*l.*, M. Walton, Halifax.

Best Boar of any breed not qualified to compete in another class, 5*l.*, J. Hickman; 2d, 2*l.*, C. W. Graham, Leeds.

Best Sow of any breed, in pig or milk, not qualified to compete in another class, 5*l.*, J. Hickman; 2d, 2*l.*, H. Keyworth.

Best three store Pigs of any breed, and of the same litter, from 4 to 9 months old, 5*l.*, Lord Wenlock; 2d, 2*l.*, J. Gledhill, Heckmondwike.

Best Boar large breed, under 12 months old, 3*l.*, J. Hickman.

Best Sow large breed, under 12 months old, 3*l.*, W. B. Wainmain, Carrhead, Cross Hills.

Best Boar small breed, under 12 months old, 3*l.* H. Endeacott.

Best Sow small breed, under 12 months old, 3*l.*, Lord Wenlock.

Farm Memoranda.

TATTENHALL HALL.—The following passages are extracted from the paper read by Mr. Jackson, the present tenant of Tattenhall Farm, before the Over Agricultural Society. He first refers to the former condition of the property:—

Formerly in spring the milking stock were usually too feeble to rise, to effect which the neighbours' aid was not unfrequently called in; but the team horses were the sorriest figures of all I ever saw, they were mere moving skeletons, six of whom have from inability left the wagon and coals in the road to be fetched at twice the following day, the farmer in disguise as wagoner vowing if he could only get home the master should drive them himself, for he was ashamed of such a team.

At harvest the corn was, for the sake of appearance, put in stacks of only a few loads in each, near the road, to disarm the fears of creditors, while the light seen through the loop-lights of both barns told the tale of hollow deception. The farm buildings originally, put in a hole, where all the liquid manure passed directly into a stream that polluted the neighbourhood. The old pastures on the left of the mill stream had once been the best in the parish, but had by long pasturage with dairy stock become deprived of its phosphates, until as in a like case mentioned by Professor Voelcker, the milk, probably, contained only one-third its proper quantum of butter.

Our now best meadows were then bogs, that defied a snipe shooter to get across them in safety, and were employed in growing Alder that served in after time to drain them.

On the other side the mill stream, the land had, while provisions were at war prices, been cultivated—"Wheat, Fallow, and Wheat;" in the meantime, capillary attraction bringing the stagnant water to the surface, so narrowed the crop on every but or stretch that the reapers had nothing to do with the rean or furrow.

War rents and peace prices, could, for Farmer Old Style, "a tale unfold," production yearly decreasing left him nothing to sigh for, but the forlorn hope of "another good war!" At this critical juncture the landlord died and the estate was sold. Mr. Jackson, late in 1823, got possession under a novel form of lease, which recites the measurement of the farm 326 acres, for fourteen years. After being put in good repair by the landlord, the rent of water mill and farm to be for the first three years 375*l.*, and for the last eleven years of this demise the rent to be fixed on by two indifferent people, one to be chosen by each party, and in case they should not agree, a third and indifferent person to be chosen as umpire, whose decision should be binding.

When the three years were expired, the estate had again been sold; and while the new landlord and tenant were disputing about rent, a new man came in and gave the landlord his price. In a few years he and his successor had disappeared, and the landlord, very properly considering that Mr. W. Jackson had been ill used, sent for him and relet him the farm at the rent he had previously offered, with (you will please to note) this remarkable condition!!!—he would not have four fields at the extreme end of the farm, having learned by former experience that they would not pay to cultivate, and in Grass not worth rates and taxes.

Two conceited gentlemen of the shuttle, ambitious to be agriculturists, went to the landlord and took the largest of these fields, 14 acres, and either for love or money they got it cultivated; and with a resolution that deserved better fortune, they decided on planting it with Potatos. They could not get farm-yard manure, and our artificial manures had not then been thought of. But they had heard of the wondrous property of soot, so they got a wagon load, and one brother made a hole and put in a handful of soot, and the other followed with a thin slice, cut from a Potato, and covered it carefully in the hole; and no doubt the following summer they paid many pilgrimages to see the progress of what they had planted, in hope, but like many farming philosophers of our day, they found that the best laid planting schemes will not ever secure the expected increase; but they were saved the expense of digging the crop—except when they were tired of the loom—they used to go and pull up a stem where they could find one, and carried home in their pockets all they gathered of the produce. You will not be surprised that the first experiment took a little wind out of their vanity sails. The second year's effort proving alike unprofitable; and the third a forlorn, hopeless, insolvency, without assets—their looms gone and their habitation pulled down over their heads, and their land left to grow Thistles to seed the neighbouring farms—was a nuisance not to be borne; and then, probably for the first time, was fulfilled the prediction of the far-famed Cheshire prophet, that "The landlord shall come with his hat in his hand, to beg of the tenant to take the land;" and just only to oblige the landlord, the tenant consented to occupy, rentless.

One other of the "four" fields was put to another farm, and remains so, choosing its own crop. The other two had to come back to us, because nobody else would have them. Six of the adjoining fields, about 100 acres, were, to Farmer Old Style and his landlord, scarcely worth owning—they served to run stirks till they were old enough to be cows and big enough to be calves.

Now in the spring of 1842, to please my uncles, I consented as a partner to try my hand at farming. I knew I had an up-hill game to play. But with other better paying vocations, I resolved to make my farming play work. One undrained sixteen-acre field we dressed with boiled bones, 10 cwt. per acre, on the seeds. The field rooted badly, and the bones made little difference. I next tried lime on fallow for Wheat, and the cost, 70*l.*, I might as well have thrown into a pit. At the end of three years, the prices of produce were low, and without anything that promised a return, I found my farm ledger 600*l.* on the debit side. I told my landlord how matters stood, and that the farm had broken all who had held it for 40 years, and would break us except for other resources, and that there was only one or two things for it—if we were to occupy the farm, either he must improve it, or give us security for the necessary outlay.

Draining.—I shalll never forget the peculiarly placid smile with which he replied—"We will drain you a field or two, and we will subsoil them for you, and then we shall see." He kept his word. We got two fields drained. The large one had 4800 yards of guttering in it, which, at 1*d.* per rood (a fair price) came to 2*l.* 10*s.*, and that for guttering every time the field was ploughed.

As luck would have it, at this juncture, accidentally, I travelled with Mr. Smith, of Deanstone, by rail from Crewe to London, and with simple, good-natured frankness, characteristic of a great man, he told me that satisfactory experiments had convinced him that the

broken stones which he had been used to place in his 30-inch or 3 feet drain were a useless waste of money, and that though we trod soft clay on horse-shoe tiles the water would find its way into them after a short time. This was good news for my horses and my landlord's pocket; and 15 years' subsequent experience has proved the soundness of Smith's philosophy.

Before leaving the subject there is for permanent pasture on clay subsoils trig-draining, which is not estimated according to its merits. The field I first drained, 20 years ago, at a cost of 2½*d.* per rood, 18 inches deep, dispersed all the Rushes and still answers well. The straight side of the trigging tool is turned to nick down the edge and reversed; the flange brings out the trig, the drain having previously been cut down 2 feet deep, and about 8 inches wide at the bottom. The trig is then scooped out, with what our drainers call a gooseneck, and the sod, about 2½ inches thick, turned upside down on the trig; the whole done at half the cost of a pipe. Everything in farming is a question of price, and as 3 acres on this plan may be done for one with pipe, and as it will probably last a lifetime, the farmer would have two-thirds of his money in his pocket; or, if done with pipe by the landlord at 6 per cent., the latter in seven years would cover the cost of trig draining.

Guano and artificial manures came into notice at the time we had drained the first field. It was a novel idea that suggested caution, to see a man sow manure with his hand, and I cautiously speculated first in a bag of Ichabo, and tried it on a few square yards of seeds, Wheat, and the remainder on about a quarter of an acre of Oats on the field we had drained, and stuck down sticks to mark the spots. Early in May, being showery at the time, the marks in a week were unnecessary, the colour and rankness showed in bold relief to the last inch of the application, and hundreds of admirers went away wondering at the results. The seeds rotted before the rest of the field had well started. The Wheat was more than could grow, and the Oats a good crop, while the other part was poverty stricken; and when the stacker came to the guano Oats he sang out, "Stop, these Oats are in bad condition, they are so heavy." The wagoner with a grin replied, "I thought so at first. These are the guano Oats."

"I had seen some other experiments that year which satisfied me that guano would for one year wonderfully increase production—its effects surpassed anything I had seen. One 20-acre field,—which the preceding year had been overstocked with eight rearing calves—after its application kept 200 Carnarvon ewes and lambs; and one butt or stretch, purposely omitted, retained its carnation Grass till the field was ploughed 12 years afterwards, whilst the rest resembled a velvet carpet (of wild Clover); and that year my farm advertised guano as an extraordinary agent for increasing production, whilst its application required but a fraction of the labour of ordinary manures. Up to this time, with about 50 cows, we had rarely got through the winter without a heavy outlay for fodder; while, with double the stock, we have ever since had some to spare for our needy neighbour—so, while draining in my case has been the foundation of increased production, guano was the start for the superstructure.

Of late years, I have taken as a substitute bones or superphosphate, as fertilising aids to farm-yard manure—having three times bought guano, and received a mixture of it with Welsh clay, which mixture can only be detected by analysis, as by application to the land we can only say, we saw little or no result.

Having started two steps forward—with our knowledge of draining and guano—let us return to the weavers' field. That, Farmer Old Style vowed he would never plough again, and we shall find a change has come over the spirit of his dream. Two fields drained, and one subsoiled by the landlord and the "guano Oats," the tenant thinking it was his turn to try next, had contracted for 40*l.* to drain the field that broke the weavers—the landlord giving the horse-shoe tiles from Wardle (Tweeddale Works), delivered by canal at Crow's Nest Bridge, Tattenhall; soon as ploughed and sown with Oats it was dressed with cheap Ichabo guano, at a cost of 40*l*, and I think I never saw such a crop; it astonished every one who knew the field, although it had been eaten close down with sheep till the middle of May. If sold at 4*s.* per bushel would have paid for the draining, guano, seed, labour, and something over.

It scarcely appeared safe to sow Wheat after Oats on so poor a field, so we put in Swedes and Purple-top Turnips, manured with farm-yard dung and a skittering of cheap guano. The Swedes were very good, but the common Turnips were so rank that they bade defiance to both the landlord and his dogs. A splendid crop of Barley followed; then seeds, which, hanging together like Tares, I had to pay the mowers double price and give them double beer, so there was no labour saved; and the Wood's mowing machine, which did its work inimitably last year, would have been useless there, the crop being so twisted. The following 11 years it grazed, carrying, I believe, as much fatting stock as our best old rest land. In 1856 it was again put in with Oats, then Wheat, roots, Barley, seeds, Oats, and now it has Wheat. On part of this field cut off by the new fence I gained the 40*s.* prize of the Malpas and Whitchurch Club for Mangels, and the Swedes were first-rate, and that, please remember, on the very field the tenant had taken to oblige the landlord.

Implements and Cultivation.—The last 20 years have trebled in number, and so greatly improved our implements by contrivance, that to do them justice would require a treatise; they leave us to wonder how Farmer Old Style cultivated his land, killed his weeds, or secured his crops without them. I have never elsewhere seen the double mould plough, with the mould-boards removed, used as a subsoil plough, after the drills are drawn up for green crops. By this means, with little labour, the subsoil on the whole of the arable land once every course gets stirred 13 in. to 15 in. deep, which being under the roots rarely fails to secure full development.

After harvest, as quickly as possible, we scarify all the stubbles with Bentall's implement; then a pair of harrows loosens what is green, and covers in all weed seeds—which will vegetate—and the next ploughing buries them. When frost or fine weather favours, I like, early in winter, to get on the land what farmyard manure we have made, which, ploughed in, helps to keep it light in the spring; and, as soon after as the weather permits, the land is ridged up and subsoiled; if there is time to split the ridges before the Swede or Mangel seed is put in all the better. By the middle of January this year we had all our Potato, Mangel, and Swede land manured and ploughed under; and by the middle of March it had been stirred across, drilled up into ridges, and every drill had been subsoiled up to the beam with two horses; and as we cannot secure suitable weather, I find it is best to take time by the forelock.

Fences.—We have over a mile of fence, planted about six years ago, which only requires the brushing hook; beside this I paid last year an old labourer 1*d.* per rood for cleaning 1055¼ roods, or 4 miles 3 qrs. 72 yards. There were also three new fences cleaned by day-work, which makes a total of about six miles of new fence.

Mode of planting new fences: First—we cut out two furrows with the Scotch plough, then run the (double mould) subsoil plough a foot deep up the furrow, scatter in a little rotten dung as for a drill of green crop, then shut up the dung with the Scotch plough for six furrows or "three rounds." The landlord gives the Quicks, a boy places them to a line, and two men soil them in, one up each side, and they will in a day plant a quarter of a mile.

The second year we cut off the Quicks 3 or 4 inches from the ground. It frets them if cut the first year, and they more frequently die, but if otherwise they shoot feebly; while if cut the second they will shoot 10 or 15 strong stems.

The hunters this spring had to pick a weak spot near a gate before taking a three-year shoot fence; and, in a few more years, I trust our new fences will defy even steeple-chasers. When two adjoining fields are ploughed, and Quicks put in as described, they will form a very good fence at the end of the five crop course, thus dispensing with railing. Beautiful fences, the great ornament of a farm, are got at a trivial cost, occupying scarcely three feet wide. We have grubbed from 10 to 12 miles of old miserable crooked fence, and must have added over 12 acres of land to the production of the farm.

There is one other source of increased production with which only I will detain you—a judicious course of cropping, and in this respect I am following the advice of Mr. Martin, of Henhull, so far as 100 acres of reserved pasture on the left of the mill stream will allow, coloured green, as you see, on the map. The fields numbered 1 to 18 are cropped—first five and then four course, and are eight years in crop and eight years pasture, viz., Oats, Wheats, roots and Beans, Barley, seeds, Wheat, Beans and roots, Barley, permanent Grasses, eight years. By this arrangement the land is in green crop, varied with Beans one year; on the next course or shift, Potatos, Swedes, and Mangels, on what was before Beans; and by again reversing the Swedes, Potatos, and Mangels, gives Beans once in 16 years, Swedes and Mangels once in 32 years, Wheat and Barley twice in 16 years, and Oats once.

The other 10 fields, No. 9 to 19, are cropped on the double shift or course, and changed as before described for 9 years, leaving the land pastured 11 years, only I purpose to put on this lighter land Peas instead of Beans.

Formerly:—I must just detain you with a last look at the Weavers' field, and follow the sorry Oats that we raked from it, until they are manufactured into horse flesh, cheese, &c. The gutters running obliquely with the ridges and reans, and the waggon crossing them has got many a shake till they had to be re-loaded before they were out of the field, and then there was no road, and the path circuitous as on the map, and rutted until the last horse of the three, steaming with efforts to keep on his legs, and two or three men with pitchforks steadying the load for fear of its rolling over, it arrives at last at home, and is put into a stack, and the two carts that follow are caught in a drenching rain, and so on the first fine day they and the waggon load have to be put on the nearest spare field to be dried, and as soon as fortune favours, all except what in moving was left for the rooks, is again stacked: but as there is no Wheat straw thrashed they have to remain unthatched through another drenching rain, and when the beginning of the year following, the stack has to be got in it is found that the roof is matted together, a serious loss, through not to compare with the loss of the Wheat stack that preceded it. It has next to be moved to the barn, and as there are no pavements, two horses in each of two carts, through various mishaps and mud, get to the barn—with ducks and poultry besetting the path, and all in Clover. You will please to note the cost in labour in getting in a stack under the most favourable circum-tances—2 carts with 1 horse each, equal to 4 men; on the stack, 2 men; on the carts, 2 men; to place or tread it in mow or bay, 3 men. Threshing with two men in each barn with two sticks each, keeping up the monotony of the winter music. From the barns to either ranks of cattle the paths were kept clean with a constant accumulation of straw that dropped as it was being carried with pitchforks. The Oat threshing was done by day work, because the waggoners conceived they had a moral license to take at night into the hay loft nearly all that had been beaten out during the day. On one occasion my waggoner, after helping himself to a sack, went to Wales for coals and forgot to restore the barn key to its place, so the threshers could not get into the barn that day. On another, and the last time we threshed with a flail, we winnowed only about 20 bushels of Oats at the end of theweek, as the united efforts of two men for 5½ days; the rest had gone into a secret auxiliary stock for the team horses. These 20 bushels, given to the cows with hay—that most expensive article of farm produce—we will take as represented in milk put into a pail at the shippon door, and carried in the arms of a powerful man, we will suppose on Sabbath day, over his shoes in dirty weather, as you see by the distance on the map nearly one-eighth of a mile, through the then kitchen up four steps, across the entrance hall, living room, house place, two more passages, down eight more steps into a cool underground room, to remain; to be brought back to the cheese tub in the kitchen at 4 o'clock on Monday morning, and because the man could not get back before the next pail was full, he was obliged to have a "help meet," and under such disadvantages were the first conscientious attempts made to avoid the Sabbath desecration practised at that time throughout the Cheshire dairies on Sunday. The other milk house was on a level with the kitchen, small, and badly ventilated. The old plan of heating the whey added considerably to the labour, and that at the time when the cheese required most attention. The then system of treating the curd gave much additional labour where two cheeses were made per diem; so that with three or four hard working, strong women in the kitchen, they had hardly time for their tea before going to night milking. On Mondays a man was, during summer, put to turn the churn, for which he got a mug of beer, and so contrived to finish by dinner time. About twice a week in summer he had to carry the cheese upstairs, and as it was a hot job he took care to make a morning's work of it, and looked glum if he did not get another swig at the tap. The cheese had, when sent to market, to be carried down stairs again, and a slip at the top of the stairs occasionally made one cheese into two—and, at the conclusion, a good swig at the barrel was termed washing out the cheese tub. If none of the waggoners were killed, and came home sober, they must expect that the next dairy will taste of the Crab tree.

To return to the whey: this had, while hot, been carried in pails in our case, because no human contrivance was considered equal to get it to the pig cistern, from which again the bulk of it was carried to the far piggeries, the other piggeries being close to the milk-house. This moving and carrying of the whey three times over every day, first from the tub to the furnace, second from that to the cistern, and again to the pigs, to do which, during the summer, left one servant no lack of employment. The vessel-boiler, then in the dairy kitchen, necessitated a mess and muddle, which only wooden shoes, shod with iron or leather, could tolerate. A brewing-pan, in addition to the one for whey, took up the whole chimney opening, and left the servants all winter only the vessel-boiler fire for warmth and light, except auxiliared by a half-skinned rush dipped in fat, but of such candle wicks the pastures then supplied no lack. This is a very hurried and imperfect sketch, and gives but a feeble impression of the disadvantages under which dairy manufacture was carried on—and it is by some said to higher perfection than with us.

Now:—Last year a part of the Weaver's field, now No. 9, had Oats, and an uncommon good crop, cut, gathered, set up, raked with the horse-rake, rakings cocked, and all in good condition. Having found that a wagon with three horses, in harvest, and carts with one or two, resemble wheels in quick motion with large teeth and small, as though they were resolved to play at cross purposes the game of vexation, the wagon therefore was sold; and we will try to do with five two-horse carts, for having made a good road to the field, one horse will, on the road, do more than the work of two; and as the land is drained and free from gutters, there will, we hope, be no reloading, as with two good pitchers and two good loaders, the carts won't be in the fields many minutes, with an extra chain-horse to help them out. Seeing all fairly started here, we will go to the homestead, where we find no barn floor between the corn and straw bay, for the threshing operation is changed from an instrument with two sticks, to one that performs the combined operations simultaneously of threshing, straw-shaking, dividing corn and sacking it, good, bad, and indifferent, putting the caving one way and the chaff another. But we find a long roof, supported by seven brick arches, erected by the present proprietor of the estate, at a less cost than the old barns, and on the true manufacturing principle of being suited to its purposes. This range is capable of housing all the corn crops that ordinarily the farm is expected to produce, and it will be seen to form one side of the capital letter H, while the milking cows are ranged in two rows, with their heads to a feeding passage, forming the opposite side of the H; and the stroke that joins the two sides of the letter, represent on the basement one extensive root store, with food house, or cooking kitchen beyond. In February and March, the roots having been consumed, the compartment divided with hurdles, and intersected by the feeding passage and cart passage, forms four calf-houses into which the calves are from each of the four shippons driven behind the cows, and closed in with a wicket: the cows have only a single rail before them, and each two cows have an iron drinking trough, at which they can always drink at pleasure from the stream that constantly flows through the pipes that supply the troughs. You will see by the elevation of the cattle range that at each end there is a shed for 20 cows, which shed ventilates with the other 40 cows, and which are provided with 21 iron windows, that open or close by slides, and with the ventilators and cupola on the roof give free atmospheric circulation; so that, favoured by Providence, we have not since their erection (two years) had a sick cow or calf. The channels behind the cows are provided with trapped drains, and flushed with water at pleasure, which convey the liquid manure from the tanks, and is again conducted into the centre of a ten-acre meadow, where the cart is filled in a quarter of a minute. Over the food-house or cooking-kitchen is a straw-room or loft, in which is the chaff cutter; the operations of carting home the crops are continued so long as there is a load left, until the long range of arched roof is filled, one compartment after another, and except the last all the carts have been covered while unloading, safe from weather and waste of thatching. The roots, when pulled, are carted home with all convenient speed, and find stowage as indicated and in a root shed against the inner wall of the cow's side of the building, and near the root cutter. Over 40 of the cows, and "calves or roots," is stowage for an immense quantity of hay, say 100 to 120 tons. There are also two other ranks, forming with those described, and flanking the farmyard in the direction of the farmhouse. One rank has a hospital for six cows, nag stable for three horses, with harness-room; drift-house for portable thrashing apparatus and engine, a loose horse-box, and cart shed; this range also has very ample stowage for hay. On the opposite side, the other range forms a cart-stable for nine horses, food house, and a cart harness-house; then follow two spacious poultry

rooms, closed in front with a wire netting, and a well secured root house for Potatos at back; and over this rank there is spacious stowage for Clover or seeds, the mill serving as granary.

(To be concluded next week.)

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. Slatter, Streatley, near Reading.

At 9 A.M., Railway Time.

Day of the Week	Day of the Month	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Reading of Dry Bulb.	Thermometer. Reading of Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.										Inches.
Friday	July 29	..	..	..	..	..	..	..	..	..	..	..
Saturday	30	..	..	..	..	..	..	..	..	..	..	..
Sunday	31	30.10	64	59	S.W.	1	10	74	53	90	43	0.00
Monday	Aug. 1	30.05	70	59	N.W.	1	6	76	54	90	45	..
Tuesday	2	30.12	66	50	N.W.	3	5	70	52	86	42	..
Wednesday	3	30.12	68	56	S.W.	1	5	68	40	87	31	..
Thursday	4	30.03	72	61	S.W.	2	5	72	50	88	40	..

Calendar of Operations.

AUGUST.

Fifeshire: *Pilmuir, Leven, July* 28.—A cold and ungenial summer has kept vegetation in check, and none of the crops have shown much luxuriance. Hay is remarkably light, and pastures have not done well. Potatos have not a great deal of vigour about them, even on the best soils, and fields on the stiff lands are blanky and the stems weak. This crop, however, has improved greatly since the temperature became higher. Turnips, on the whole, are backward: the early sown were destroyed by fly, and many fields resown. Wheat is sound in the ear, but not particularly well set, and the straw is short. It will prove a bare average, even though the weather should now be favourable. Barley is the best crop. Oats are thin, and short in straw; almost every field has more or less a stunted appearance, and a very deficient yield is looked forward to. Beans are bulky, but close enough on the ground to set well. *R. Russell.*

Wester Ross: *July* 25.—So little rain has fallen for several weeks in this district that complaining is now loud and general. The hay crop, which has just been cut, is unusually light; the pastures are bare, or so thoroughly withered that they would form no unsuitable food for fire; Oats and Barley are so thin and short that they will bulk little in the stack-yard, and Turnips, which have thriven well hitherto, cannot, in the continued absence of rain, hold out long. Repeatedly have the farmers' expectations been raised by the gathering of the clouds overhead, with every indication of immediate rain, but as repeatedly have their expectations been dashed by the disappearance of these same clouds before a scorching wind and brilliant sun. Nor have the neighbouring counties been so scantily supplied. True, Invernesshire has suffered considerably, but the Barley and Oats in the counties of Nairn and Moray are very fine, indicating a full supply of rain. As our Oats and Barley have not yet reached their full length an immediate and continued fall of rain would stretch them out considerably. Our Wheat crop, however, is good, and having now safely passed the blooming season amidst glorious sunshine, it promises an abundant return of well-matured grain, with a full average supply of straw. The Wheat has very much escaped the effects of the drought, having previously well nigh reached its full length. The Turnips came more rapidly to the hoe than usual, and the singling has for some time been completed. The Swedes are as yet advancing satisfactorily; the earlier sown ones pretty well covering the ground. Potatos on the whole do not look well, and will not be a full crop. The braird in many cases was deficient, and the stems are slim and stunted. Sheep of all kinds are a few shillings dearer per head than last year, whilst wool has reached a price perhaps unparalleled. Cattle also maintain their value, and meet a ready sale, whilst Wheat is gradually rising from its depressed and unremunerating price.

Notices to Correspondents.

Insects: *Anon.* The Wheat ears had worked their way out of your envelope. Small orange grubs infesting the grains of Wheat at this season are the larvæ of the Wheat midge Cecidomyia Tritici.

Landlord and Tenant: *Cor.* If you have received unconditional permission in writing to break up Grass, then we presume that the land so broken up is arable for the future, and affected merely by those conditions of your lease which relate to the management of the arable part of your farm; among which probably is one requiring you to lay down so much of it during the last year of your tenancy.

JAMES PHILLIPS & CO.,

HORTICULTURAL GLASS MERCHANTS,

180, BISOPSGATE STREET WITHOUT, LONDON, E.C.

REDUCED PRICES OF SHEET GLASS FOR HORTICULTURAL PURPOSES.

ENGLISH SHEET GLASS.

Packed in Crates of about 280 feet.

	16-ounce.	21-ounce.
Best	5½d.	7½d.
Seconds	3¾d.	5d.
Thirds	2½d.	3½d.
Fourths	2¼d.	3¼d.

HORTICULTURAL GLASS,

Stock Sizes, 16-ounce. In 100 feet Boxes.

These prices only apply to the sizes stated.

	4ths.	3rds.	4ths.	3rds.
11 by 9, 12 by 9, 13 by 9, 14 by 9 / 12 „ 10, 13 „ 10, 14 „ 10, 15 „ 10 / 13 „ 11, 14 „ 11	10s 9d	12s 3d	12s 6d	14s 0d
14 „ 12, 15 „ 12, 15 „ 11, 16 „ 11 / 18 „ 12, 19 „ 12, 16 „ 12, 17 „ 12 / 16 „ 13, 17 „ 13, 20 „ 12, 21 „ 14	11s 6d	13s 6d	13s 6d	16s 0d
19 „ 13, 20 „ 13, 18 „ 13 .. / 16 „ 14, 17 „ 14, 21 „ 13 .. / 19 „ 14, 20 „ 14, 18 „ 14 ..	14 to 15 ozs. to the foot.		16 to 17 ozs. to the foot.	

FOREIGN SHEET GLASS.

In Cases for cutting up, in Sizes as Manufactured.

	16 oz., 200 ft.	16 oz., 300 ft.	21 oz., 200 ft.
	£ s. d.	£ s. d.	£ s. d.
Best	3 7 0	..	5 14 0
Seconds	2 10 0	..	4 13 0
Thirds	..	2 5 0	2 10 0
Fourths	..	1 15 0	2 0 0

GLASS for ORCHARD HOUSES,

As supplied by us to Mr. Rivers, to the Royal Horticultural Society, and to most of the Nobility, Clergy, and Gentlemen of the United Kingdom.

Each Box contains 100 feet.

		14 to 15 ozs.	16 to 17 ozs.	21 ozs.
20 by 12 / 20 „ 13	Fourths	11s. 6d.	13s. 6d.	15s. 0d.
	Thirds	13s. 6d.	16s. 0d.	19s. 0d.
20 „ 14 / 20 „ 15	Seconds	..	English.	English.
	Best	..	18s. 0d.	23s. 0d.

The above prices include the Boxes.

We recommend 3rds quality at 16s., or 21-ounce at 19s. (as supplied to Mr. Rivers). Best and Seconds are intended only for pictures or dwelling-houses.

SMALL SHEET SQUARES.

In 100 feet Boxes.

6 by 4, 6½ by 4½, 7 by 5, 7½ by 5½ / 8 „ 6, 8½ „ 6⅞, 9 „ 7, 9½ „ 7½ / 10 „ 8, 10½ „ 8½	11s. 6d. / 12s. 6d.

Boxes 2s. each, returnable at full price.

All small squares from 6 by 4 to 10½ by 8½ are cut from pieces, consequently there is only one quality.

London Agents for Hartley's Patent Rough Plate.

Perforated Glass for Ventilation.

Glass Shades, Ebony and Gilt Stands, Gas and Lamp Glasses, Chimney and Globes, &c.

Glaziers' Diamonds from 10s. to 21s. each.

GLASS TILES and SLATES in SHEET and ROUGH PLATE. PLATE GLASS, PATENT PLATE, and HARTLEY'S IMPROVED ROUGH PLATE. PAINTS, COLOURS, VARNISHES, &c.

GENUINE WHITE LEAD. ANTI-CORROSION PAINT. LINSEED OIL PUTTY. | FINE OAK VARNISH. CARRIAGE. „PATENT" DRYERS. | LINSEED OIL. BOILED OIL. TURPENTINE.

Lead in Sheets or Cut to Sizes, Lead Pipe, Lift Pumps, Water Closets, and Plumbers' Brass Work of every description.

PORTABLE HOT-WATER APPARATUS,

WITH TRUSS'S PATENT JOINTS FOR HEATING CONSERVATORIES, HOTHOUSES, &c.

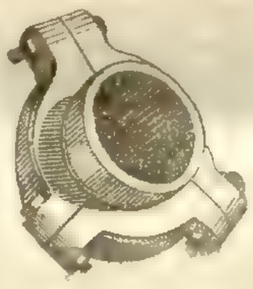

T. S. TRUSS

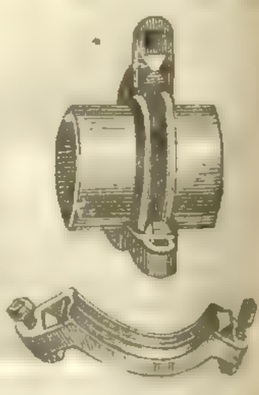

Begs to offer complete HOT-WATER APPARATUS for GREEN HOUSES (consisting of 4-inch Pipes and Joints, Saddle Boiler, Fire Doors, Bars, Soot Doors, Damper, Supply Cistern, Feed and Air Pipe-Pipe Stands, &c., of the best quality), delivered to any Railway Station in England, and to erect the same within 25 miles of London, at the following prices:—

TWO 4-INCH PIPES ALONG ONE SIDE AND ONE END OF HOUSE.

Size of House.	Apparatus complete.	Erection.	Size of House.	Apparatus complete.	Erection.
16 feet by 8 feet	£8 10 0	£2 0 0	30 feet by 12 feet	£11 15 0	£2 10 0
20 feet by 10 feet	8 17 6	2 0 0	40 feet by 15 feet	15 0 0	2 15 0
25 feet by 12 feet	10 5 0	2 5 0	50 feet by 15 feet	18 0 0	3 0 0

Erections beyond 25 miles of London, Railway Fare for one Man charged extra.

By the use of these Joints the Apparatus is easily altered or removed without injury to either Pipes or Joints.

Estimates and Plans forwarded on application to

T. S. TRUSS, C.E., 53, GRACECHURCH STREET, LONDON, E.C.

ST. PANCRAS IRON WORK COMPANY,

OLD ST. PANCRAS ROAD, LONDON, N.W.

BY ROYAL LETTERS PATENT.

SCOTT'S GLASS WALLS AND ECONOMIC GREENHOUSES.

Designed to meet the suggestions of James Scott, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES GREENHOUSES HOTHOUSES | PINE and MELON PITS VASES VERANDAHS | BALCONIES IRON SASHES IRON HURDLES | GATES TANKS HOT-WATER WORKS

PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. Lists Free.

ST. PANCRAS IRON WORK COMPANY, OLD ST. PANCRAS ROAD, LONDON, W.N.

NEW TARIFF OF GLASS AND HORTICULTURAL GOODS.

HAND GLASSES.

THOMAS MILLINGTON,

GLASS AND COLOUR MERCHANT,

87, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

PRESERVE JARS.

REDUCED TARIFF FOR SHEET GLASS AND HORTICULTURAL GOODS.

See Advertisement first week in the month, or on application.

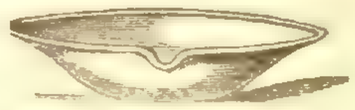
MILK PANS.

LAWN MOWING MACHINES FOR 1864.

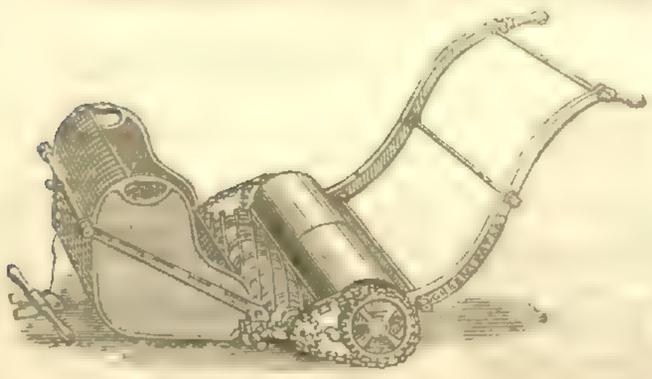
GREEN'S MACHINE.

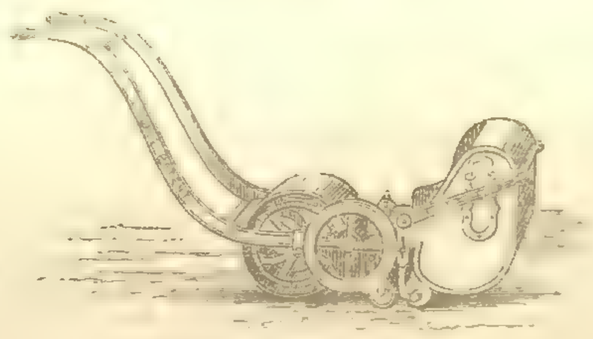
SHANKS' HAND MACHINE.

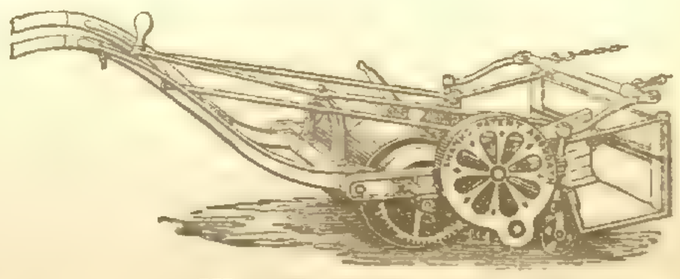
SHANKS' HORSE MACHINE.

GREEN'S HAND MACHINE.

Size.	Easily Worked.	Price.	Size.	Easily Worked.	Price.
10-inch, 12-inch, 14-inch	*By a Boy* ..	£3 10 0; 5 0 0; 5 10 0	18-inch, 20-inch, 22-inch, 24-inch	*By a Man* .. / *By two Men*	£7 10 0; 8 0 0; 8 10 0; 9 0 0
16-inch	*By a Man* ..	6 10 0			

SHANKS' HAND MACHINE.

Size.	Easily Worked.	Price.	Size.	Easily Worked.	Price.
10-inch, 12-inch	*By a Lady* ..	£3 10 0; 4 10 0	19-inch ..	*Man and Boy* ..	£7 12 6
14-inch ..	*By a Boy*	5 10 0	22-inch, 24-inch	*By Two Men* ..	8 7 6; 8 17 6
16-inch ..	*By a Man*	6 12 6			

A STOCK OF MACHINES KEPT ON HAND, FROM WHICH ORDERS CAN BE AT ONCE EXECUTED. PRICED LISTS OF HORSE, PONY, AND DONKEY MACHINES, ON APPLICATION

*** *Every Machine sent out is Warranted to give ample satisfaction, and, if not approved of, may be exchanged for any other size of Machine, or for the Machine of any other Maker, or may be at once returned unconditionally.*

J. B. BROWN AND CO., 18, CANNON STREET, CITY, LONDON, E.C.

NEARLY OPPOSITE ST. SWITHIN'S LANE and "LONDON STONE," and near LONDON BRIDGE.

GREEN'S PATENT SILENS MESSOR,

OR

NOISELESS LAWN MOWING, ROLLING, and COLLECTING MACHINES.

BY SPECIAL APPOINTMENT,
SOLE MANUFACTURER

TO HER MOST GRACIOUS MAJESTY
THE QUEEN.

THE

FIRST PRIZE MEDAL

OF THE

INTERNATIONAL

EXHIBITION,

1862,

WAS AWARDED TO

THOMAS GREEN,

FOR HIS

PATENT

LAWN MOWERS.

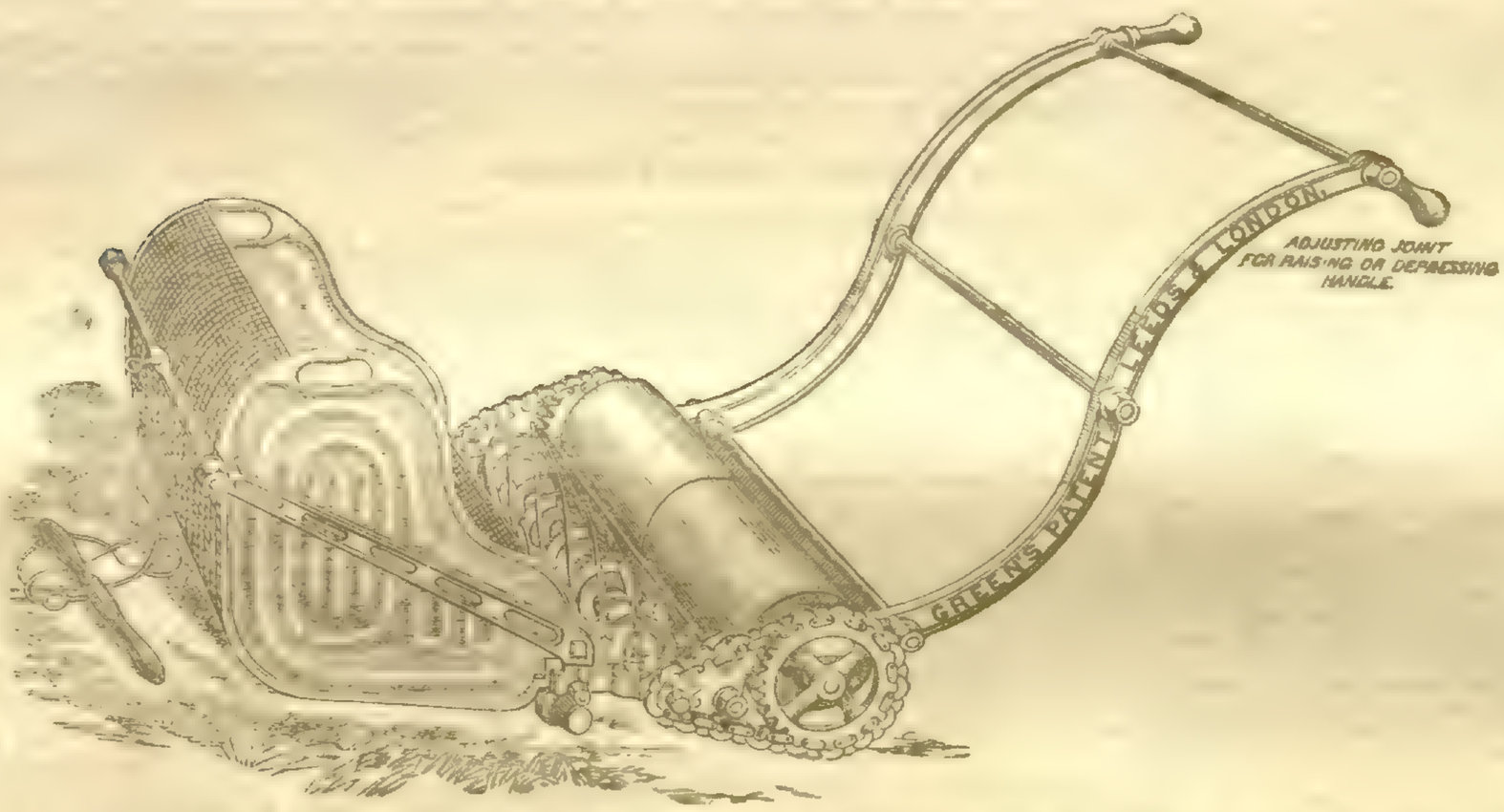

FOREIGN MEDALS

AWARDED TO

GREEN'S PATENT

LAWN MOWERS.

LIEGE, 1861.

BRUSSELS, 1861 & 1863.

NAMUR, 1862.

GAND, 1862.

LINNEENNE, 1861,

1862, & 1863.

LAEKEN, 1862.

EXTRAORDINARY AND WONDERFUL IMPROVEMENTS FOR THE PRESENT SEASON 1864.

ILLUSTRATED PRICE LISTS may be had on application to

THOMAS GREEN AND SON, SMITHFIELD IRON WORKS, LEEDS, YORKSHIRE;
or 2, FARRINGDON ROAD, HOLBORN HILL, LONDON, E.C.; or 19, EDEN QUAY, DUBLIN.

Choice Seeds for Present Sowing.

ROBERT PARKER begs to offer the following, all of which are warranted new and the finest possible quality of their several kinds:

	Per packet—s.	d.
CALCEOLARIA, Herbaceous, mixed	2	6
CINERARIA, from named varieties, mixed	2	6
STOCK, Scarlet Intermediate	0	6
,, White, ditto	1	0
,, Giant Scarlet, ditto	1	0
,, White, ditto	1	0
PRIMULA SINENSIS FIMBRIATA, mixed	2	6

A PRICED and DESCRIPTIVE CATALOGUE of SEEDS and PLANTS is published and will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

ROBERT PARKER begs to offer the following, all of which are well-grown, clean, and healthy plants:—

	per 100	20s.	0d.
AZALEA INDICA, Stocks for Grafting	each	7	6
ALOCASIA METALLICA	,,	10	6
CLERODENDRON BALFOURII	,,	21	0
RHODODENDRON COUNTESS of HADDINGTON ..	,,	2	6
,, JAVANICUM	,,	2	6
,, NUTTALI	,,	5	0
TRITOMA GRANDIS	,,	1	6
,, UVARIA GLAUCESCENS	,,		

Intending purchasers are invited to inspect the general stock of Plants. DESCRIPTIVE and PRICED CATALOGUES of SEEDS and PLANTS are published, which will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

Unequalled Seeds for Present Sowing.

DOBSON AND SONS' celebrated Strain of CALCEOLARIA. Sealed packets, with directions for sowing and growing, 1s. 6d., 2s. 6d., 5s.

CINERARIA, 1s., 2s. 6d., 5s.
PRIMULA SINENSIS FIMBRIATA, 1s., 2s. 6d., 5s.
PELARGONIUM, 2s. 6d., 5s.

Are unsurpassed for their superior quality, the saving of which is under our personal care, and are warranted to produce first-class flowers only. Woodlands Nursery, Isleworth, W.

To the Trade.

JEAN VERSCHAFFELT begs to intimate that his Stock of CAMELLIAS, well set with buds, is this year unusually large and fine, and begs to solicit early orders for the same, in order to secure a first choice.

A first-rate Stock of INDIAN AZALEAS is also to hand, and will be disposable in good plants at from 4d. a hundred.

CAMELLIAS with buds at from 6d. a hundred.

Apply to JEAN VERSCHAFFELT, Nurseryman, 43, Rue de la Caverne, Ghent, Belgium.

Major's Half-Shrubby Calceolaria Seed for 1864.

MR. HENRY MAJOR, Knosthorpe, near Leeds, is prepared to supply the above Seed, saved from his new seedlings of this year, in packets, at 2s. 6d. per packet, or 3 for 5s., post free. Postage stamps may be sent in payment.

N.B. The following is the opinion of the Editor of the *Journal of Horticulture*, June 7, 1864:—

"H. Major, we have received your very beautiful blooms: they are even better than those you sent last year, both in shape and brilliancy of colour; and we wish that some of them could be seen at our London Exhibitions. You have certainly obtained a good strain."

TO the TRADE. CROP 1864.

PRIMULA SINENSIS FIMBRIATA ALBA.
PRIMULA SINENSIS FIMBRIATA ROSEA.
PRIMULA SINENSIS FIMBRIATA RUBRA.
PRIMULA SINENSIS FIMBRIATA ATRO-CARMINEA SPLENDENS (new).
PRIMULA SINENSIS FIMBRIATA STRIATA (new).

The above Seed has been grown from the finest strains in cultivation, saved from the choicest flowers only, and is guaranteed as unsurpassed. To parties who have not yet favoured us, we can refer to some of the principal growers in England and Scotland.

PRIZE PELARGONIUM
(Emperor Napoleon's large Gold Medal of Honour, April, 1864).
PELARGONIUM, large-flowered.
PELARGONIUM DIADEMATUM.
PELARGONIUM, Odier's 5-spotted.
PELARGONIUM, fancy.
Price on application.

STUART & Co., 10, Southampton Street, Holborn, W.C.

Beautiful New Plant, Dipladenia amabilis.

JAS. BACKHOUSE AND SON beg to call the attention of all lovers of Choice Plants to this superb DIPLADENIA, of which they possessed the entire stock. It is a new hybrid of unrivalled beauty; with the deep rosy-crimson flowers of D. crassinoda, approaching the size of D. splendens. Leaves about the size of D. Van Houttei, but of the form and texture of D. splendens. A most abundant bloomer, and for house decoration or exhibition invaluable. 10s. 6d. each.

J. B. & SON also offer the following:—

TRICHOMANES ZOLLINGERI.—Fine stove Fern from Java, of vigorous habit. Good healthy established plants 10s. 6d. each. Large specimens by special contract.

CATTLEYA WARCEWICZII, var.—Several nice healthy plants, just received direct from the party who first sent C. Warcewiczii delicata and C. Wagneri rosea to them. Prices on application.

SCHIZOSTYLIS COCCINEA.—Good strong plants for autumn flowering. 6s. each. For large quantities special prices on application.

York Nurseries.

CARTER'S FARMER'S VADE-MECUM.

Early Sheep Feed.

SUTTON'S IMPROVED ITALIAN RYE-GRASS.—At the Meeting of the Royal Agricultural Society, on March 16, in a Lecture delivered by Alfred Hughes, Esq., of Thorness, Isle of Wight, as reported in the *Bell's Weekly Messenger*, and the *Mark Lane Express*, Mr. Hughes said:—"I always reserve a portion of Oat land to lay down with SUTTON'S Improved Italian Rye-grass, the most reliable plant I have come across for some years for Ewes and Lambs in the Spring. When I tell you that I put it in in the Spring, and dressed it after harvest with Guano, and that in the Autumn, when my Sheep fed it off, it was up to their knees; and that I fed it off again this Spring with Ewes and Lambs, I think you will agree that this is a crop of very great value. This Italian Rye-grass, which is sold by SUTTON, of Reading, is a most astonishing vigorous plant; indeed, I never saw anything to equal it in the course of all my experience."

Mr. W. CARDWELL, of Nunnery Farm, near Sheffield, in a letter to Messrs. SUTTON, dated April 9, 1863, says:—"The Italian Rye-grass grown from seed purchased from you, and sown in August, is now 16 inches high, and is much admired."

Messrs. SUTTON have also been favoured with the following on the same subject:—

Mr. R. STURT, *Pilming, September* 14, 1863.

"The SUTTON'S Improved Italian Rye-grass seed I had from you last year was very good; I think every seed came up. I have a beautiful plant, and have cut four good crops from it since the 30th of March last. It surprises my neighbours very much."

From JOHN BALDWIN, Esq., *Luddington, April* 11, 1859.

"It is certainly delightful to witness the Sheep up to their knees in your beautiful Italian Rye-grass."

From FREDERICK H. HALLETT, Esq., *The Manor House, Brighton.*

"I mowed some of your Italian Rye-grass at Christmas, 1856; again April 12, 1857; three times since in same year, and am mowing it again now, March 15, 1858. The cut on April 12 was 4 feet high, and a perfect mass of Grass."

J. H FOWLER, Esq., *Eastleach, May* 16, 1862.

"I seeded some Rye-grass this last year, the seed of which I had from you, and sold it for 6s. per quarter more than any other sample in the market, in consequence of its very superior quality. Your Turnip and Swede seed also produced the best roots I ever saw. They were universally admired in this neighbourhood. Your Champion Swede is, I am satisfied, the best that can be sown; mine lasted and were quite juicy to the end of March, and none were rotten."

SUTTON & SONS have a fine stock at present of their Improved Italian Rye-grass, which is a very different and superior article to much that is sold as Italian Rye-grass.

PRESENT PRICE 6s. per bushel, carriage free, in quantities of 8 bushels upwards. Quantity required per acre if sown alone 3 bushels.

Royal Berkshire Seed Establishment, Reading.

CARTER'S GARDENER'S VADE-MECUM.

Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

	Per pkt.—s.	d.		s.	d.
PRIMULA ..	2	0	and	3	6
CINERARIA ..	1	6	and	2	6
CALCEOLARIA	1	6	and	2	6

	Per pkt.—s.	d.		s.	d.
INTERMEDIATE STOCK.. ..	0	6	and	1	0
BROMPTON do.	0	6	and	1	0

The above Seeds are saved with great care, and can be warranted to give satisfaction.

Paradise and Victoria Nurseries, Holloway, London, N.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE post free on application.

Paradise and Victoria Nurseries, Holloway, London, N.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.

The Stock having been purchased by JOHN STANDISH, strong Plants will be sent out in the first week of June, price 15s. to 31s. 6d. each.

Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.

Royal Nurseries, Ascot, Berks.

Vine Duchess of Buccleuch.

ROBERT PARKER begs to announce that he has arranged for the distribution of the stock of this very distinct and valuable EARLY WHITE GRAPE, and that the plants will be sent out early in autumn. Full particulars as to its qualities will be given in future advertisements. In the meantime, and during the whole of the season, visitors to the Gardens of Dalkeith Palace will have opportunities of seeing and judging of its merits, as a large quantity of pot and permanent Vines are now fruiting at that establishment.

Strong Planting Canes, 21s. each; Extra strong Fruiting Canes, 42s. each. Orders are now being booked, and will be executed in strict rotation.

Exotic Nursery, Tooting, Surrey, S.

TRADE MARK.

HALLETT'S PEDIGREE NURSERY WHEAT.

Seed required { In September .. .. .. 4 bushels on 10 acres. / In October { 1st half / 2d half } 4 bushels { On 8 acres. / On 6 acres. / In November .. .. .. 4 bushels on 4 acres.

One Guinea a Bushel, or Seven Guineas a Quarter, including Bag, delivered at the Brighton Railway Station, upon receipt of Cheque or Post-office Order, without which the Wheat will in no case be sent.

Apply to FREDERIC F. HALLETT, Esq., F.Z.S., the Manor House, Brighton, Sussex.

NOTE.—This Wheat will not after the present season be again offered by Mr. Hallett to the public until 1868 at the earliest.

Cabbage Seed for Present Sowing.

SUTTON AND SONS can now supply the best sorts of CABBAGE SEED for early Table use next Spring and Summer.

Also the large DRUMHEAD CATTLE CABBAGE, which should be sown now for Feeding in the Autumn of next year, and smaller kinds for Sheep Feeding early next Summer.

Prices moderate, but various according to sorts.

Royal Berkshire Seed Establishment, Reading.

New Early Turnip.

SUTTON'S SHORT-TOP SIX-WEEKS, for Sowing in August and September.

This excellent Turnip if sown in the month of August will be ready for Feeding off in October and Novemuer, or will stand the Winter for Spring Feeding, being quite hardy.

Price 1s. per lb.; 42s. per bushel.

CARRIAGE FREE, except small parcels.

SUTTON & SONS,
Royal Berkshire Seed Establishment, Reading.

VINES.

JAMES CARTER & CO.

Beg to call attention to their unrivalled stock of the above, numbering over 2000, in splendid condition for Fruiting in Pots or Planting out, all true to name, being raised from Vines growing at their Nursery, and a selection of the most approved varieties cultivated, including also the new varieties offered by other growers this season. A visit to the Nursery will well repay intending purchasers, when they can make their own selections from an immense stock.

The AUTUMN SUPPLEMENT to "CARTER'S VADE MECUM," Containing full descriptions of 50 most desirable varieties, will be forwarded by Post on application.

JAMES CARTER AND CO., SEED FARMERS, MERCHANTS and NURSERYMEN, 237, 238, & 261, HIGH HOLBORN, LONDON, W.C.

NEW GRAPE, ROYAL VINEYARD.

TO BE SENT OUT IN SEPTEMBER NEXT.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Feels great pleasure in being able to introduce this important acquisition. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years.

B. S. W., to meet an extensive demand, has prepared a large Stock, which will be in excellent condition, and ready for distribution in September. Early orders are respectfully solicited. A List of those who have favoured him with orders will be published shortly.

PRICES:

Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

Dr. HOGG'S *Report on the Royal Vineyard Grape:*

"Bunches hard and well set, sometimes long and tapering, and sometimes short ovate. Berries large and roundish ovate, skin white and somewhat transparent, showing the texture of the flesh through it, remarkably thin, and adhering closely to the flesh; so thin is it, that the whole berry may be eaten without any inconvenience being caused by the skin. Flesh firm and crackling, with a fine Sweet-water flavour. This is a fine looking Grape, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society."

For the opinions of the Horticultural Press, see *Gardeners' Chronicle*, April 9.

A correct COLOURED ILLUSTRATION by ANDREWS will be sent in exchange for 12 Postage Stamps.

NEW HARDY CLIMBING PLANTS.

CLEMATIS JACKMANNI, First-class Certificate.
CLEMATIS RUBRO-VIOLACEA, First-class Certificate.
Awarded by the Royal Horticultural Society, August 4, 1863.

GEORGE JACKMAN & SON,

WOKING NURSERY, SURREY,

Have much pleasure in offering to the public, for the first time, their beautiful rich coloured, free flowering Clematises that they can recommend with confidence, being convinced when known they will occupy a very high position in climbing shrubs. Orders will now be taken, and the plants sent out strictly in rotation in October.

For further particulars of "their sterling merits," read our Large Advertisement, August 6, page 745; the Report of the Floral Committee, Royal Horticultural Society, August 4, 1863; *Gardeners' Chronicle*, November 21, 1863; *Gardeners' Chronicle*, January 9, 1864, on Meritorious Plants; *Journal of Horticulture*, August 11, 1863.

Plants, 15s. each; extra strong, 21s. each.

The usual allowance to the Trade. Two Coloured Drawings by Andrews may be had post free for Twenty-four Stamps.

BISHOP AUCKLAND FLORAL and HORTICULTURAL SOCIETY.—The next Exhibition of this Society will be held in the Park of the Lord Bishop of Durham, on FRIDAY, August 26, when the following and numerous other valuable PRIZES will be awarded:—

For 6 Stove and Greenhouse Plants, 10*l*., 7*l*., 4*l*., 2*l*., 1*l*.
For 6 Handsome Foliaged Plants, 3*l*., 2*l*., 1*l*. 10*s*., 1*l*., 10*s*.
For 24 Dahlias, 7*l*., 5*l*., 3*l*., 2*l*., 1*l*.
For 9 Hollyhock Spikes, 5*l*., 3*l*., 2*l*., 1*l*.
For 6 Exotic Ferns, 2*l*., 1*l*. 10*s*., 1*l*., 10*s*
For 12 Dahlias, 3*l*., 2*l*., 1*l*. 10*s*., 1*l*., 10*s*.
For 24 Hollyhocks, Cut Blooms, 2*l*., 1*l*. 10*s*., 1*l*., 10*s*
For 9 Gladioli, Single Spikes, 3*l*., 2*l*., 1*l*., 10*s*.
For 8 Dishes of Fruit on Basket or Tray, 4*l*., 2*l*. 10*s*., 1*l*. 10*s*., 1*l*., 10*s*.
Complete List of Prizes on application to Secretary.

N.B.—The Full Band of the First Life Guards and three other Military Bands will perform during the day.

RUGBY HORTICULTURAL and COTTAGE GARDENERS' SOCIETY.
President, The Rev. Dr. TEMPLE.

The ANNUAL SHOW of the above Society (open to all England), will be held at Rugby on TUESDAY, August 30.

Upwards of 120 Prizes in Class 5 will be offered for Plants, Fruits, Cut Flowers, Vegetables, &c., including a Silver Cup of the value of Six Guineas, with Second and Third Prizes of Three Guineas and One Guinea, for the best Collection of 8 Stove or Greenhouse Plants in Flower.

Entries to be made on or before the 23d August next. Schedules of Prizes and further particulars may be obtained on application to

JOHN S. SAVAGE, WM. MASON, } Hon. Secs.

Rugby, Aug. 13.

BANBURY HORTICULTURAL SOCIETY.
OPEN PRIZES—1864.

The EIGHTEENTH ANNUAL EXHIBITION of this Society is fixed for TUESDAY, August 30, when, in addition to the usual number of Prizes to be competed for by Members, the following are offered, open to all England, on payment of an Entrance Fee of 2*s*. 6*d*.

For the best 6 Stove or Greenhouse Plants, either in Flower or Ornamental, of at least four different Genera, but not Fuchsias or Annuals, 1st Prize, 3*l*.; 2d, 2*l*.
For the best 24 Dahlias, 24 varieties, 1st, 3*l*.; 2d, 2*l*.
For the best 18 Hollyhocks, 2 Blooms of each 1st, 2*l*.; 2d, 1*l*.
For the best 12 varieties of Verbenas (5 Trusses in a bunch), 1st, 1*l*.; 2d, 15*s*.

The Judges may withhold any prize if the production exhibited is not considered worthy.

Intending Exhibitors must give notice to the Secretary on or before Saturday, August 27.

The Society will, if requested, convey the productions from and to the Railways.

The Bands of the Coldstream Guards and the Third Oxfordshire Rifle Volunteers and the Orpheus Glee Union will perform on the Grounds.

For further particulars, apply to E. J. HARTLEY, Acting Secretary, 57, High Street, Banbury.

ROYAL HORTICULTURAL SOCIETY.
SOUTH KENSINGTON.
FUTURE ARRANGEMENTS.

24th August, Wednesday, and following days—Show of New and Rare Plants at South Kensington.
26th August, Friday—Prince Consort's Birthday: Admission Free at South Kensington Gardens. Music all day.
28th August, Saturday—Flower and Fruit Promenade at Chiswick, admission 1*s*. Band at 3.
24th September, Saturday—Promenade and Grape Show at Chiswick, admission 1*s* Band at 3.
Promenades in August and September, every Monday, admission 6*d*.; and Saturday, 1*s*. at 4.
19th October, Wednesday and following days—Fruit and Vegetable Shows at South Kensington.
16th November, Wednesday, and following days—Chrysanthemum Show at South Kensington.
7th December, Wednesday and following days—International Fruit and Vegetable Show.
26th December, Monday, and following days—Perfumes from Flowers and the Processes of Distillation.

The Gardens are now open daily. Admission, Mondays, 6*d*.; Tuesdays, Thursdays, Fridays, and Saturdays, 1*s*.; Wednesdays, 2*s*. 6*d*.; Sundays, by Fellows' personal admission or orders.

On the days of the Band Competition, Volunteers in Uniform are admitted at half price.

The Gardeners' Chronicle.

SATURDAY, AUGUST 13, 1864.

MEETING FOR THE ENSUING WEEK.

TUESDAY, Aug. 16 { Royal Horticultural (Floral and Fruit Committees) at S. Kensington .. Noon

THE theory of the ACTION OF MANURES is a subject upon which it is of the highest importance that all cultivators of the soil should be correctly informed, and yet, if we are to trust some recent remarks of Baron LIEBIG,* it is a subject upon which English cultivators are very much at fault. The Baron charges it against us that we set about making one-sided and insufficient experiments, and then draw from them false conclusions as to the value of the agents employed.

It is in this way that the charge is made out. We have learned by the aid of science, it is said, that plants require for their normal growth a number of elements, as carbon, phosphorus, silica, ammonia, potash, lime, magnesia, &c., most of which are furnished by the soil; and we have also learned that these must all exist together and work together in building up the vegetable fabric. Again, no one of these different substances can replace or discharge the functions of another, so that if one be wanting, although there may be an abundance of the rest in the soil, the plant cannot thrive, or if one of them be insufficiently represented, the crop will suffer in direct proportion to the element that is wanting. Further than this, it is contended that ammonia possesses in itself no higher nourishing or manurial value than lime, phosphoric acid no higher value than potash, and so on.

This is LIEBIG's doctrine; but English cultivators do not, he says, generally admit the doctrine, which, however, he maintains, is based on natural laws. On the contrary, they make experiments with manures, and draw conclusions as to their value, on evidence which is sufficient only to prove the deficiencies of the soil to which the manure has been applied, and not the true plant-feeding value of the letter, which they nevertheless set down as determined by one or two trials of this sort. For instance, phosphoric acid being found to have little influence on corn, but to be potent with Turnips, and salts of ammonia being found beneficial to corn, but to have no influence on Turnips, a so-called practical doctrine comes to be deduced, namely, that nitrogen (ammonia, nitric acid) is especially efficacious applied as a fertiliser for the corn crop, and that phosphoric acid has the same beneficial action on the Turnip crop. But LIEBIG goes on to urge that this mode of testing or estimating the value of manures is altogether fallacious; for if it be once proved as an empirical law, that ammonia, phosphoric acid, potash, lime, &c., are nutritious elements, and as such indispensable for all plants, there can be no further doubt of their efficacy in every single case, and no additional proof of their value can be needed. The fact of obtaining an increased bulk of a particular crop by the use of salts of ammonia or of superphosphates, is not in the least wanted to prove the efficacy of these manures; because this is already known and undisputed, nor does the fact that no such increase may follow from the use of potash or lime prove that these latter substances are not in themselves efficacious. Such facts indicate only what elements of food are abundant or wanting or available in a particular soil, and prove nothing as to the general efficacy of a manuring agent. The results of such experiments establish only the quality or nature of a particular plot of ground, and are consequently of little interest even to those who may have to deal with an adjacent plot.

It is then argued that there are certain conditions under which phosphoric acid or ammonia may not, either alone or together, exert the slightest influence on the growth of a plant. Thus: "supposing phosphoric acid, potash, lime, magnesia, silicic acid, &c., to be indispensable conditions for the efficacy of ammonia, and supposing ammonia, potash, lime, or silicic acid, to be indispensable conditions for the efficacy of phosphoric acid," it follows that if land manured with ammonia alone gives a higher return than it does without it, all that is proved is that this land "contained an excess of phosphoric acid, potash, lime, &c., inefficacious because a certain proportion of ammonia was wanting, but rendered efficacious by increasing the quantity of ammonia in the soil; while without this excess of available but not efficacious elements, the largest manuring with ammonia would have had no effect." And so of other substances.

It is really astonishing, concludes LIEBIG, that men of experience can be made to believe that because a manure has produced on certain land a high return, it should produce an equal effect, or possess an equal value, on all other lands; for if the efficacy of a manure, A, be believed to depend on the presence and quantity of the manures B, C, D, &c., it must, for such a result to follow, be assumed that all the land in a country contains the same quantity of B, C, D, &c., whereas it is indisputable that there are scarcely two fields of the same country, often not two fields on the same estate, which possess the same identical geological, chemical, or mechanical character, and consequently the quantity of the manures B, C, D, must vary in each instance. It must be plain, therefore, that a given "quantity of manure A, be it ammonia, phosphoric acid, or potash, must necessarily have quite a different operation in proportion as the land may be differently constituted. Even stable dung, which contains all the nutritive elements in conjunction, produces different effects when applied in the same quantity to different fields." Thus it follows "as a corollary, from the law of equality of nutritive value belonging to the constituents of food, that the element or elements which are either wanting in the soil, or are contained in it in insufficient quantity, are those which will prove of preponderating value in the manures applied."

* Popular Science Review, iii., 438.

THE following letter from Sir RODERICK MURCHISON appeared on the 6th of August in the *Reader*, and we reproduce it here, partly on account of the interest attached to the subject, and partly because we gave, so long ago as 1849 (at p. 612), a rather full account of these ESCULENT LICHENS, together with figures of two of the principal species, and again adverted to the subject in 1856 (p. 84), on the occasion of figuring an analogous substance from Melbury, in Dorsetshire. A letter, moreover, from Erzeroom, had previously been given in 1849 (p. 581), containing information received directly from Dr. HEINIG, the salutary physician at Byazid. A section of one of the specimens received originally by Dr. LINDLEY from Erzeroom is given in the "Introduction to Cryptogamic Botany" at p. 414, showing the very curious disposition of the gonidia.

The sudden appearance, indeed, of these and one or two other esculent Lichens has been familiar to botanists from the time of PALLAS. Indeed, one of the species had been sent a century before to DILLENIUS by AMMANN from the neighbourhood of Orenburg. Similar instances are not of unfrequent occurrence in Algeria.

"29th July, 1864.

"I have received a letter of the 14th inst. from my distinguished friend M. HAIDINGER, of Vienna, in which he thus alludes to a recent so-called fall of Manna in Asia Minor.

"'Baron PROKESCH-OSTEN, the Austrian Internuncio at Constantinople, sent me lately (6th July) a portion of this Manna, which fell with a gust of rain at Charput, north-west of Diarbekir, in Asia Minor, and I have prepared a communication thereon, which is to be read to day before our Academy of Sciences. Though not quite unknown, such falls of Manna certainly deserve more attention than has hitherto been bestowed on them. It is well known that the substance of them is a Lichen, the Parmelia esculenta of PALLAS, who found it in the steppes of the Kirghis and described it. PARROT and LEDEBOUR afterwards noticed it. A good account of this Lichen was given by Professor EDWARD EVERSMANN, of Kazan, who likewise examined it in the Kirghis Steppes. These falls are now known to extend far to the west, crossing the Caspian Sea to Van, Diarbekir, Malatia, and Jenirchehir. There was a fall at the last mentioned place in January, 1846, of which Dr. REISSEK gave an account at one of the first meetings of our "Freunde des Naturwissenschaften."

"'EVERSMANN had observed that these bodies, having much the form of Mulberries or Raspberries, are always perfectly detached, and grow larger from the moment when first observed, extending themselves on all sides. In the specimens sent to me by Baron PROKESCH-OSTEN, I found, however, that a good many of them are really attached to a strong support of pretty large greenish granite, sandstone, and a marly limestone of tertiary aspect. I have not, however, as yet sufficiently examined all the specimens.

"'This Manna is ground into flour and baked into bread; the Turkish name of it being Kudert-boghdasi, which means Wonder-corn or grain. Though used as a bread, its composition is remarkable; for it contains more than 65 per cent. of oxalate of lime, whilst on the other hand it has within 25 per cent of amylaceous matter.'

"I may observe that this amylaceous matter is allied to starch, and according to BERZELIUS, Iceland Moss contains 80.8 per cent. of it. It would appear, indeed, that several species of Lecanora are eaten by the nomades of the desert in Asia besides the Parmelia esculenta.

"On receiving the interesting letter of M. HAIDINGER, consulted the valuable 'Dictionary of the Bible,' edited by Dr. W. SMITH, and did not find under the name of Manna any allusion to the authors who have described it as a Lichen. As the appearance of the Manna in question was preceded or accompanied by a fall of rain, is it not probable that moisture, combined with a peculiar state of the soil, occasioned a sudden growth of the Lichen (just as Mushrooms spring up), rather than that the Lichen should have fallen in the rain?

"I do not here allude to the exudations from various trees and shrubs of the East described by AVICENNA, BURCHHARDT, and RAUWOLF, as noted in the 'Dictionary of the Bible;' for none of these substances, though called Manna and used in medicine, can be supposed to be the substance mentioned in Holy Writ, whilst the Manna spoken of in this letter, as analysed by M. HAIDINGER, seems to come into the same category as the Man-hu* of the Hebrews, who gave it that name, or, "what is it," from the sudden appearance of a thing previously unknown to them.

"RODERICK I. MURCHISON."

The only new fact in HERR HAIDINGER's letter is the existence of a point of attachment, which has, we believe, never been observed before either in Asiatic or African specimens. That there must have been something of the kind is almost self-evident, though in general it may have been very minute, and separation may have taken place at a very early period. In the globular free condition of Parmelia cæsia, which, like the Lichen-Manna, is carried about freely by the wind, it is believed that there was once a point of attachment, though perfect specimens show no trace of it.

As regards the sudden appearance of the Manna, it is certainly worthy of note that it always comes with rain, but it is scarcely possible, from its abounding so much in mineral constituents, that it can be formed in the course of a few hours, a circumstance, moreover, which would be entirely at variance with the nature of Lichens in general. Besides it occurs in dense masses several inches in depth, and competent authorities assert that not a trace of it existed previous to the recorded Manna falls. Any one indeed who has examined specimens, which even in the dry state sometimes weigh two scruples, could not believe that it had escaped observation, for it is not like Nostoc dried up to a mere inconspicuous film under the influence of a burning sun. There would besides be no difficulty in such bodies being drifted over the extensive steppes by boisterous gales, and the circumstance that such gales attended by rain were productive of Manna after a long drought, when the people were almost perishing with hunger, has led the natives to look on the supply, coming in their utmost need, as miraculous. The Witch Balls, consisting

* In the text Man v'hua, literally "what is," which is singularly near the Arabic Man huwa, "what is it?" and Aish howa, "what is that."

of an interwoven mass of the stems of herbaceous plants, which travel hundreds of miles over the steppes, are in fact quite as marvellous as these Lichens.

There is not the slightest reason for thinking that this production has anything to do with the Manna of the Israelites; it scarcely answers any one of its characters. Lecanora esculenta, however, more especially has often been so regarded, rather from its supposed miraculous origin than from any sound reason. Among other instances it may be mentioned that specimens which were supposed to have fallen from the clouds exist in the Museum of Natural History in the Armenian Convent of S. Lazzaro, in an island of that name near Venice. Its obvious differences from the true Manna may have induced the writer of the article in Dr. SMITH'S Dictionary to omit any mention of it, though, indeed, Cryptogamic plants, as, for instance, vegetable Rust and Mildew, do not find a place in the work, though something might have been said about them with advantage.

It may be remarked, that besides the three principal esculent Lecanoræ, a species which forms a crust on the soil is often eaten in Tartary. This, it may be observed, is constantly accompanied by Nostoc.

The great proportion of oxalate of lime must render these Lichens a very poor article of food. They are perhaps more frequently ground up with Wheat, than used simply. The sheep that feed on the Lichen exist, but do not thrive.

We have more than once in very hot weather seen pearls of Manna drop from trees, especially from the Elm, and have swept them up like sugar plums from the smooth top of a wall. It is obvious, however, that such a number of persons as the Israelites who went out of Egypt could not have been sustained by such a precarious supply. Such a circumstance would be more miraculous than the miracle itself, which we shall never account for satisfactorily by any ordinary solution. *M. J. B.*

SOME one has noted as a characteristic of the present age its tendency to diffusion, expansion, and universality. Horticulture and Landscape Gardening, quiet professions as they are, are nevertheless in full share influenced by this onward movement. Horticulture is rapidly becoming a science built on the solid and secure foundation of the physiologist's labours in the field of vegetable anatomy. Landscape Gardening, roused and excited by the progress of the sister arts and aided by the introductions of modern travellers and hybridists, has entered on a new era, and embraces a field wide as it is fertile, and one in which the most industrious and gifted may find ample scope for the exercise of his ingenuity and taste.

Time was when LANDSCAPE GARDENING had but few professors, and the materials with which they had to work were limited in the extreme. How would BROWN and REPTON, PRICE and GILPIN have rejoiced over the TREES, SHRUBS, and PLANTS which their successors have at their disposal? Readily accessible by hundreds and thousands, in a condition to produce immediate effect, and at a price which recent improvements in the art of propagation have made marvellously low, we can only imagine what would have been the effect of England's landscapes *now* had these things been accessible in their day.

But while modern landscape gardeners revel amidst the wealth and variety of these later times, they should not forget that the happier days in which they work entail upon them increased responsibilities. And while reminding them of this fact, we cannot but record here our conviction that they have not hitherto sufficiently availed themselves of the treasures recently brought within their reach. If they are acquainted with them, they have not shown the alacrity displayed in other branches of art in availing themselves of their aid. If they are not, it is surely an important part of their business to study and master them. We predict that he who shall first do this, and display in good taste the almost infinite variety in form and tint now existing among trees and shrubs, will not only obtain for his profession a higher rank, but win for himself the best position in it.

Familiar acquaintance with many of the leading gardens and estates in England compels us to say that the great want in the landscape is VARIETY. There is a monotony in form and colour that should be, and must be corrected. Why indeed should it not? There is no lack of materials. As to form, there are spreading, columnar, and weeping, large-leaved and small-leaved trees in abundance. As to colour, there are light green, dark green, silver, gold, and purple trees shrubs and plants *ad infinitum*, to say nothing of the varied tints of spring, and the changing hues of autumn. When planting an estate or garden, these objects, or the best of them, should be so chosen and arranged as to heighten the beauty of each other by harmony or contrast; and convert the present unmeaning landscape into a series of beautiful pictures, perfect in themselves, yet sufficiently connected to form a complete whole.

Are we met by the objection that there is not even yet sufficient variety to accomplish all this? We join issue with the objector. It is true that we cannot find among trees and shrubs the bright colours and strong contrasts met with in flowers. But we do not want them. We would not have the whole country a flower garden. We seek not repetition or repletion, but would rather avoid both. Quite as appropriate in their sphere are the more sober hues. The remedy we seek is to be found in breadth rather than in intensity of colour.

In further elucidation of these views we are promised a series of papers from a well-known correspondent.

IN our number for June 18, 1864, we gave a notice of the interesting paper read by M. CAHOURS before the French Academy on the changes which take place in Fruit after it has arrived at that degree of maturity which makes it necessary to the Horticulturist to secure his crop. M. CAHOURS has lately laid another paper before the Academy on the RESPIRATION OF FLOWERS, which is not without importance, even in a practical point of view. The following are the points at which he has arrived, as summed up by the author, and which we copy from the number for July 16, 1864, of that admirable scientific journal "The Reader."

1. Every flower left in a limited atmosphere of normal air consumes oxygen and produces carbonic acid in variable proportions, whether the flower has smell or not.

2. The circumstances under which the phenomena are accomplished being identical, this proportion of carbonic acid increases in proportion as the temperature rises.

3. As a general rule flowers gathered from the same shrub, provided their weight is the same, produce a little larger quantity of carbonic acid when the apparatus in which the experiment is performed is exposed to the light, than when placed in total darkness; but nevertheless in some cases this proportion is sensibly the same under both circumstances.

4. When oxygen is substituted for normal air, the differences are less marked.

5. The flower while developing emits a little more carbonic acid than when it is in full bloom—a fact which can be explained by a more powerful vital action.

6. Every flower left in an inert gas emits small quantities of carbonic acid.

7. Of the different elements which make up a flower, it is in the pistil and stamens that the greatest vital power is concentrated, as they consume the largest quantity of oxygen, and produce the greatest proportion of carbonic acid.

Now it has long been known that under the influence of light while the green parts of plants give out oxygen, fixing carbon, the flowers or other coloured parts consume it to form carbonic acid, thus establishing a sort of equilibrium, so that the air is not materially altered as regards its constituents. Several of the points however noticed above had not been previously ascertained, and on reviewing the whole we may see that the prejudicial effect of flowers at night in heated rooms is not an old wives' fable. For though the quantity of carbonic acid formed under the influence of light is in many cases somewhat larger than that which is formed in a dark room, the difference is not great, and therefore, in addition to the evil influence of flowers at night as well as in day, we have to add that of the leaves, which no longer give out oxygen to replace that absorbed by the flowers. It appears, moreover, that the odour is a matter of indifference, and that where it proves injurious, as is sometimes the case in peculiarly susceptible constitutions, which are subject to "die of a Rose in aromatic pains," or a depressed condition of vital energy, its effects must be estimated independently of any other source of mischief. Full-blown flowers, moreover, appear to be less injurious than those which are just expanding, contrary to commonly received notions, and double flowers it should seem are less injurious than those in which the stamens and pistil are perfect. *M. J. B.*

—— IN consequence of the representations of some of the Rose growers, that the month of August would prove too early for the determination of the merits of SEEDLING ENGLISH ROSES, for which our prize is offered (see p. 506), so far at least as regards the testing of their perpetual-flowering qualities, we wish it to be understood that we are quite content that the consideration of the award should stand over, as suggested, till the 27th of September, the day on which the last meeting of the Floral Committee in that month will be held.

—— At p. 460 we invited attention to a hybrid Berberry from the Handsworth nursery, for which we proposed the name of BERBERIS STENOPHYLLA. The specimens we had then seen proved it to be a very handsome shrub in regard to its flowers, which were of the fine Apricot colour of B. Darwinii, and produced in racemes of from three to five together from the leaf-axils, instead of singly, as in B. empetrifolia, of which this new shrub has something the character, only that it is more vigorous. From samples which have recently been sent to us, we are able to say that the bushes are at this season laden with purplish-black berries, which must add greatly to their beauty, as well as *prolong* indefinitely the period of their effectiveness as ornamental shrubs. The berries, like the flowers, hang in racemes of from three to five from the leaf-axils, and are about as large as Currants in the samples sent to us, but we learn that they are smaller than usual this year, owing to the excessive drought. When we add that this Handsworth hybrid is of a very hardy character, that it makes strong shoots four feet long in a season, that it is clothed with neat narrow evergreen foliage, and adorned with a profusion of gay orange-coloured blossoms in early summer, we shall have said enough to show that it is likely to prove a very decided acquisition not only for our pleasure grounds and shrubberies, but also for our plantations and game preserves.

—— We learn from the *Journal of Botany* that the Imperial German L. C. Academy has conferred on Mr. RICHARD SPRUCE the degree of Doctor of Philosophy, in appreciation of his eminent services as a botanical explorer and traveller.

—— Mr. BELL, of Bretton Hall, mentions, in the *West of Scotland Horticultural Magazine*, that a small quantity of gas tar poured into a WASPS' NEST after dark, will most effectually destroy them. It is both the safest and easiest of the many plans he has seen tried to effect their destruction. A small piece of turf should be trodden into the hole after the tar is poured in. I have just had some nests dug up that were thus served "last night," he observes, and in every one the wasps were dead. We have seen the same plan adopted by Mr. RIVERS, who bears testimony to its efficiency.

—— Some few months ago the newspapers announced that the TEA-PLANT had been found in the greatest luxuriance and abundance in Pennsylvania, and that an American Tea Company had been formed, the natural inference from the language employed being that the Tea-plant in question was the genuine Chinese Tea. These remarkable, but apocryphal statements were noticed by us at the time (see *Gardeners' Chronicle*, 1863, p. 1034). We now learn from a notice by Dr. ASA GRAY in the *American Journal of Science*, that the Tea-plant referred to is the well-known Ceanothus americanus, the New Jersey Tea, the leaves of which were made use of so long ago as the period of the American revolution. Dr. GRAY states that he has examined a specimen of this new Tea, and is thus able with certainty to indicate its origin. Some one, he remarks, has stated that the beverage must have tried the patriotism of our great-grandmothers, but others report more favourably of its qualities.

HORTICULTURAL EXHIBITIONS.

THE following letter on this subject from Sir Joseph Paxton, M.P., to the Exhibition Committee of the Royal Horticultural Society, seems to open up questions of general importance, and will doubtless be read with interest.

7, Pall Mall East, London, July 20, 1864.

SIR,—Having been requested to give my opinion as to the nature and character of Exhibitions which the Royal Horticultural Society should encourage for the true advancement of Horticulture and its accompanying sciences, I have drafted out this letter, in order to form a foundation (or data) on which this matter can be discussed, and I trust with a good result.

1. No doubt the result of the Society's Exhibitions has, in many respects, been very advantageous to the cause of Horticulture, particularly the earlier ones. They have encouraged great improvements in the culture and management of plants, particularly in such plants as can be produced in flower at what may be called the London fashionable season; but they have by no means been productive of unmixed good. They have brought into existence an unnatural and artificial condition of things, which is not only objected to in the interests of gardeners themselves,

but is also opposed to the interests of the public, by causing what may be termed a spasmodic effort and exertion, which at other seasons of the year is unemployed, and, to a great degree, unproductive. I may illustrate this by stating that a good many years ago (and the same state of things now exists to a certain extent) I called to see a first-class London garden—forgetting that it was one of the Exhibition days, and I found only about six or eight plants in the garden, the others having all been trained—like a horse for racing—and had been taken to the show to win the stakes. In the same season, some time after this, I called again, and found the plants, having been their round of racing, all flowerless, and beginning to be placed under training for the next season for the same purpose; and this training was effected by keeping some plants back and forcing others, so that they might all flower together, and such plants as would not bear this treatment were not cultivated.

2. Every one, of course, says he has a right to do what he likes with his own plants, which I do not deny; and if a gentleman does not mind being 10 months in the year without flowers in order to make this great display, I have no fault to find with him; all I contend for is, *that* should not be the main aim and scope of the Exhibitions of the Horticultural Society. In one respect the Exhibitions of the present day have produced a good result by giving prizes for collections of beautiful foliage plants, as the culture of these plants (which look beautiful all the year round) is thus stimulated, and they are a great improvement in the garden.

3. But in other respects these great show cultivators grow very few plants which do not flower at the show seasons, and therefore leave the flowers which might be cultivated with great effect for other seasons of the year without much attention.

4. The true object of Horticulture should be, in my opinion, to increase the enjoyment derivable from it, and to diffuse it as widely as possible; to enable the owners of gardens to get the greatest amount of pleasure and satisfaction from their possessions, and to enable the general public to procure the greatest number of fruit, flowers, and vegetables, in the greatest quantity, of the best kinds, and at the cheapest prices.

5. In order to carry out this, there should be something like a continuous exhibition, so that a gardener would have no interest in forcing his plants unnaturally into flower; but if he had a beautiful specimen at any time he would know he could exhibit itwhere it would be seen and appreciated, and its merits rewarded. When the Horticultural Society was in its palmy days, one of its great sources of benefit and attraction was the fortnightly shows at their great room in Regent Street. It was then the practice for any gentleman in the country, if he had a new plant or a new fruit, to send it to one of these exhibitions at any time in the year, and the nurserymen brought every new plant there from their respective establishments. Dr. Lindley explained the nature and properties of everything as it appeared in each exhibition with his lucid and agreeable manner, in which on this subject he has no rival, and these meetings were intensely fashionable, and often densely crowded.

6. When the Horticultural Gardens at Chiswick were the leading gardens in the country for new plants, many gardens were supplied thence, and so they were never without great interest. They could not trust altogether to country gentlemen and nurserymen for plants for exhibition, and when the entries were deficient the shows were made up of beautiful plants from the Horticultural Gardens. Though, then, a Certificate of Merit from the Society meant something, and was prized at a high rate; it insured the sale of any plant which received it, and often practically represented a prize of some hundreds of pounds sterling—as many nurserymen had orders before the exhibition closed for very large amounts. It therefore appears to me that these fortnightly exhibitions should be renewed at once, and every attraction given to them. And considering the increase of commercial transactions relating to Horticulture, the facility of carrying anything from a distance, and the great influx of visitors into London in the season for a temporary sojourn, for the spring and summer months, it would be well to try a weekly exhibition without the descriptions, which in point of fact, would almost amount to a continual show. And they should be held in a place suitable for plants, where many nurserymen would not mind allowing them to remain all the time they were in full flower. One or two of the great shows might be still held in the Gardens, where the fashionables could attend to show themselves and look at each other; which they do on these occasions quite as much as at the flowers.

7. It would be too much in a letter of this sort to go into details as to how many branches of horticulture have remained stagnant for many years past; though it would not be irrelevant, it would occupy more space and time than I can now afford to give to it. But there is one subject that has pressed upon me so long, and I am so convinced of its damaging effects upon the commercial part of the supply of the finer fruits in the public market, that I cannot help reverting to it in this letter, and that is—the growth of fruits for sale by private establishments, in competition with the market gardeners. Many gentlemen keep gardens, partly for their own use, and partly for the sale of the produce, which they sell to cover part of the gardening expenses; and this is done to a very large extent and by some of the highest private garden establishments in the country. The result is, that fruit, with all the facilities of cheap glass and cheap coal all over the country (compared with 40 years ago) is absolutely dearer than it was 40 years since; while the produce of real market gardens is perhaps 50 per cent. cheaper and 100 per cent. better, the forced fruits in which the private establishments compete have made very little progress in goodness. If you went to Covent Garden Market between 30 and 40 years ago and looked at the fruit, you would find the fine Grapes were grown by Mr. Andrews, the great market gardener at Vauxhall, Mr. William Wilmot, of Isleworth, or some other good market gardener of the day; whereas, if you go there now, the same kind of fruit is from some private garden; and supposing a large quantity of fruit is wanted for a big party, none of the great fruiterers will undertake to supply you until they have written or telegraphed to some private establishments to know what they can get.

8. The first question that naturally strikes you is—How is the public worse off for this change? I can answer this, I think, to everybody's conviction, in a few words: A private establishment will very often sell in the early season 1 lb. of Grapes or a dozen Peaches, regardless of cost, at a price which it would ruin a market-gardener to attempt. This price will content a private gentleman who does not know the cost of growing them, but competition at these prices would ruin any market-gardener, who is nearly deterred from growing them at all; and therefore the regulation of the supply of the market is left in the hands of these limited private establishments. If the market-gardeners were not met there, they would try to excel each other in the cheapness and goodness of the fruit, as they do in all other things, and in a short time the market would have a regular supply at half the present cost of spring fruits, which is not attempted now on a scale large enough to compete with the great number of private establishments who send the best of their things, and pocket their losses, and the public have in consequence a very limited supply. I daresay it answers the purpose of the fruiterers very well, but it is very detrimental to the public.

9. And now, Sir, before I close my letter allow me to say a word or two about what is done in the sale way by the Royal Horticultural Society. It is quite legitimate and right to propagate and distribute any new plants (which it has brought into the country) to Fellows, but I object *in toto* to buying new plants, cultivating them, and balloting for them; this is (allow me to say) an infringement of the legitimate business of the nurserymen, who can do it much better and cheaper than the Society can. I am, Sir, yours very truly,

JOSEPH PAXTON.

THE SUN AND RAIN.

THE sun is the "Fire Queen," and the quickener of the vegetative world. Where its beams are not, or where its beams are withheld for any length of time, winter sets in (even though it be summer time), and bleakness and barrenness ensue. It is not only the daily proclamation of the existence and glory of our Creator, but it is the proclamation of the goodness of Him who "maketh his sun to rise upon the evil and the good." Without it the cultivator could not succeed. By artificial heat and light, no doubt, things usually dependent on the sun may be procured; but still the colouring of fruits and flowers is dependent on solar light and heat; moreover, the sun is the flavourer of fruits, and the saccharometer of the world. Fruits may be procured by artificial heat under glass in sunless summers, but flavour and colour are dependent on sun and air.

The moon has no chemical effect upon the earth, and as its light is only borrowed and feebly reflected, it has no heating power. It is an opaque body, devoid of fire, and always presents the same side to the earth. It is not however of the moon, but of the sun and rain, that I now propose to speak.

The sun is a huge globe or liquid mass of fire, the boiling cauldron of the sky. It is 1,300 000 times greater than the earth, and is distant from us 94½ millions of miles. Were it as near to us as the moon, which is distant from us 237,000 miles, the earth and its inhabitants would be incinerated. For several summers we have had but little of its heat; but this summer "nothing has been hid from the heat thereof." Agriculturists like this heat. They are gainers on the whole, after the deduction of the sun's parching demolitions. Horticulturists cry out badly for rain, especially those who have not free access to water. This leads me to observe that in constructing gardens, we should select a place with free access to water. Deficiency of pumps is one of the causes of failure in horticulture. It is one of the most noticeable defects of most English gardens, even of our larger gardens, where there is no other defect. The sun can scarcely be too hot, provided rain or pump water is in the same ratio. If there is no rain, and yet free access to water, give the English labourer a trifle extra and some beer, and he will carry out water enough in a week to drown Deucalion, the mythological Noah. These encouragements will produce rain-makers more effective than those in heathen countries. As the sun's heat and rain, for vegetation generally, should be in the same ratio, I am led to speak of rain.

Rain, like the sun, is a heavenly gift, distributed alike to "the just and unjust," and they are mentioned in connection in Scripture. Pump-water, even where it can be commanded, is not equal in effect to rain. The quality of rain-water is better and more genial to plants than pump water, which loses its chemical properties by filtration. Moreover, when we water, the sun exhausts the water nearly as fast as we pour. Rain touches all the points of the roots; and the atmosphere is attempered and rendered more genial by it. We can water but we cannot check the sun's exhausting power, nor genialise the atmosphere. We water the roots (imperfectly), but Providence soaks and cleanses the whole plant.

The sun and rain, then, are the fertilizers of the world; and it is of no use to complain of the deficiency or excess of one or the other. The time will be better spent in adopting such measures of supply for both as the intellect which has been given us suggests, viz., artificial heat for certain things, and inordinate supplies of water to meet any deficiency, or the excessive power of the sun. It is impossible for gardeners to satisfy their employers unless their employers supply them with such agency as will meet the seasons in this climate. It is with a view of procuring more water-power, therefore, for our cultivators, that I have written this article. *W. F. Radclyffe, Rushton.*

NOTES ON GARDENS.—No. XVI.

BOTANIC GARDEN, OXFORD.

(*Concluded from page 748.*)

To find the more important plant houses we again pass into the river-side garden, and here we enter the stove Aquarium, a ridge and furrow structure. There is no Victoria to be seen, for its culture has been abandoned for the variously coloured beauties of the Nymphæaceæ, the majesty of tropical Arads, and the interest of the numerous things that dwell on the margin of the deep, and thereby derive for man an additional charm. Surely, when it is impossible to have both, it is better to have all this than one single giant, and the occasional satisfaction of astonishing somebody who had not before seen the Royal Water Lily. No flowers with which we are acquainted are finer to look upon than those of the tropical Water Lilies rising boldly out of the changeful element, and here they were in a sheet of bloom. There were red, blue, and white Nymphæas, viviparous Nymphæas, pigmy Nymphæas, and odoriferous Nymphæas, all shut up and asleep during the heat of the day, but—as everybody should—I had an early morning peep at them, when fully expanded. Nymphæa gigantea, which was in flower, and the true N. stellata were considered among the best and rarest; and others might be mentioned almost *ad lib.*; but enough, the collection of Water Lilies is probably the best in the country. And here were some strange subjects which I had not seen off *terra firma* before, but evidently much enjoying the water in which the great pots containing them were plunged. Xanthosoma violacea, a great dark-leaved, dark-stemmed Arum, was 8 feet high, with leaves 3 feet long by 2 broad, and had an array of pointed runners of very much the colour and rotundity of mahogany rulers, making away from the pot on all sides. This plant, for producing fine effect in large stoves, aquariums, &c., will be invaluable. Hibiscus palustris, with flowers like those of a good single Hollyhock, rose from the water in a very luxurious state, nearly to the roof. The Ouvirandra was here of course, but as usual in most places the necessity for providing it with a larger pan was not immediate. Colocasia edulis and C. edulis purpurea were associated with the Xanthosoma in the water, and, with Thalia dealbata and the Nelumbiums, produced a very striking effect. Scarcely a less telling plant was Acrostichum aureum, which sent fronds from the water 8 feet high, with an abundantly flowering mass of Houttuynia at its base. With the commoner inhabitants of aquariums, flourished Saccharum violaceum and aureum, which is thought highly of by Mr. Baxter, as its flowers are greater favourites with the ladies than those of any other ornamental Grass he has got; also Philydrum lanuginosum, Herpestis Monnieria, the Nardoo, Carolina and other varieties of Rice, Hydropeltis purpurea, and Pilularia globulifera.

The Nymphæas were not by any means luxuriantly grown, as if such were the case a few of the freer growing species would soon monopolise a tank 27 feet by 17; but in the comparatively dwarf, firm, and free-flowering state which Mr. Baxter prefers, and which he effects by having a continuous flow of air, passing in from a drain, up through the pipes, over the tank and out at top; both drain and top-ventilation being at work night and day during the warm season.

From the aquarium the Fernery is entered, but after York and Rockville it is almost hopeless to record anything interesting about Ferns. Callipteris prolifera and esculenta, Lonchitis pubescens, and Rhipidopteris peltata the curious, were noticeable; and the contents of this house with the larger specimens in various others, leave the garden very well off for a general collection. Here we begin to meet the ornamental plants, &c., Musa textilis, the Manilla Hemp plant being one of the first, with some young Cocoa Nut plants; and in the Conservatory which was next

entered, some Ferns working up to the arborescent state, such as Alsophila capensis and A. excelsa, Cibotium Schiedei, and a fine Dicksonia. Thrinax parviflora was about 2 feet high and as much across—a specimen brought from Cuba by Professor Daubeny in 1838, and yet so dwarf. Those who having but small houses, yet desire in them the grace of the Palms, without the uncomfortable prospect of parting with a fine specimen, or having it give free roof ventilation some fine morning, should therefore certainly employ Thrinax parviflora. Now Mr. Baxter is in a dark corner, his arm deep in a water pan, and he pulls out a body remarkably like one's grandmother's worsted ball covered with Conferva, and I begin to think he has recovered the playtoy of a little Baxter. But no; it is the Goat Ball Conferva, C. ægagropila, quite a dense round ball 2 inches in diameter, with a lot of young Goat Balls, round and dense, too, but coming down to the size of marbles. So we look at the "queer fish" under a glass, and it is safely put back again. The stove I entered last, and found it almost a wood of fine old specimens, that completely hid the roof and walls. Here Pothos acaulis was of great size, and throwing its flowers freely to the ground; with Pandanus odoratissimus, very fine; the Old Man Cactus, and Cereus heptagonus, remarkable specimens; Aloe pseudo-ferox, a fine bush of a fine old thing; Arum viviparum; a great plant of the Paraguay Tea, and some good Ferns.

With the indispensable medicinal plants, &c., and those I happened to be very familiar with, were grown Amyris toxifera, Artocarpus Locucha, Cerbera Tanghin the Ordeal tree of Madagascar, Genipa americana, and Omphalobium Lamberti, which furnishes the beautiful zebra wood of the cabinet makers. It was altogether too hot to think of asking about the heating apparatus; but of the old four-wheeled waggon spoken of in the "Gardeners' Magazine," "which in severe weather is filled with burning charcoal and drawn backwards and forwards along the front path by the gardener," or its results, I saw nothing.

For nearly the whole of its existence previous to 1848, the garden was for the most part laid out in parallel beds. In that year Mr. W. H. Baxter altered it to its present very desirable form. The whole place is worked by five men in summer and four in winter, and was in as good keeping as could be desired; each man has a certain portion of the garden allotted to him, and to this portion he attends in every particular.

The Herbarium of the Oxford Garden is a very extensive and interesting one in more respects than one. It occupies several large rooms, and has been admirably arranged by Mr. Baxter, sen. Here are the herbariums of Morrison, plants collected from 1670 to 1683; of Bobart; of Sherard, presented in 1726; of Du Bois, Dillenius, Sibthorp, and Lord Macartney; some of Wallich's and of Dr. Daubeny's; but the great riches of the garden in this way was imparted by the late Mr. Fielding, who bequeathed to it his magnificent herbarium, second to few in existence. It alone contained 80,000 specimens collected by Wallich, Bentham, Schomburgk, Cuming, Douglas, Nuttall, Hartweg, and scores of other botanists, and included Prescott's fine herbarium. With a strong wish to stop a week here, I had only time for a look at the Mosses in the herbarium of Dillenius, the specimens from which he drew the plates in his great work; into some drawers containing the larger Proteads in fine preservation; and at some of the specimens in Dr. Sibthorp's collection from which the plates in his famous work were taken. On one of the tables lay a copy of the "Flora Græca," and the library—which is an extensive one—contains also the original drawings for that work, many rare books, and the drawings of the animals of the Levant, executed for Dr. Sibthorp by his travelling companion and draughtsman the celebrated Ferdinand Bauer. The garden also possesses one of the only two copies ever struck off from the plates engraved for the Emperor from the celebrated MS. of Dioscorides, with illuminated figures, preserved in the Imperial Library at Vienna, which was presented to it by Dr. Sibthorp. "The MS. was procured by Busbequius, the Emperor's resident at Constantinople, about 1560, and is said to have been copied at the expense of Juliana Anicia, daughter of the Emperor Flavius Anicius Olyber, about the year 492." This copy "contains 410 figures of plants to which Dr. Sibthorp has attached the Greek names, and in spite of their rudeness may be useful from their antiquity in enabling us to identify with modern plants those described in that early authority on the Materia Medica, especially as they are said to agree with the figures contained in a still earlier MS. of the same author existing in the library at Naples."

There is also a botanical museum, small but useful, "illustrative of the structure, functions, and uses of vegetables." Here amongst the monuments of the botanist's, benefactors and curators of the Oxford garden, a few words concerning them, extracted from the guide book, may not be uninteresting. Dr. Morison was the first professor at the garden, and during his time the elder Bobart was curator or supervisor, whose son afterwards became professor, and published the third part of the "Oxford History of Plants," which work was begun by Morison. Of the elder Bobart there is a small whole length figure in the frontispiece to "Vertumnus," a poem on the garden, published in 1713, in which he is represented dressed in a long vest with a beard, "which it is said on feast days he used to have tagged with silver."

The second Bobart was succeeded by Sandys and Trow, and these by Dr. W. Sherard, who was a munificent patron of the garden. He collected plants in Natolia and Greece, met with, and induced Dillenius to accompany him to England, gave 500*l.* towards enlarging the conservatory; presented the garden with a library of botanical books, and an herbarium "which rendered Oxford (in the eyes of Linnæus) pre-eminent in this respect among the Universities of Europe;" and on his death bequeathed 3000*l.* to provide a salary for the Professor of Botany, on condition that the University should supply the annual sum of 150*l.* towards the maintenance of the garden, and that Dr. Dillenius should be chosen the first professor—terms which were accepted by Convocation. Here the great cryptogamic botanist completed his "Historia Muscorum," all the subjects in which were drawn and etched by his own hand. Linnæus visited the garden during the time of Dillenius, and it is said surprised him in company with his patron Dr. Sherard; and having apologised in Latin for his inability to speak English, threw Dillenius off his guard, who said carelessly to Sherard, "This is the young man who would confound the whole of botany." Linnæus gathered the meaning of this speech by tracing the verb *confound* to its Latin root, and soon took an opportunity of retaliating by slightly alluding to it while he was demonstrating in the garden some of the new genera to which Dillenius had particularly objected. He soon led the Oxford professor to form a high opinion of his abilities, but could never make a proselyte of him. Dillenius was succeeded by Dr. H. Sibthorp, the father of Dr. John Sibthorp, who will ever be memorable in the annals of botany for his zeal and munificent designs to promote its advancement. He travelled much in Greece and the Archipelago, and on his death in 1795 made over to the garden all his books, drawings, and collections. He it was, as is well known, who bequeathed a freehold estate for the purpose, first, of publishing his magnificent "Flora Græca" in 10 folio vols. with 100 plates in each, and afterwards of endowing a professorship of rural economy in his own University, which was to be enjoyed by the Professor of Botany for the time being.

Dr. Sibthorp was succeeded by Dr. Williams, who on his death in 1834, when he was succeeded by the present professor, gave 500*l.* Consols to the garden. The piece of garden between the river and east wall before described was, till the alteration of the garden by the present curator, an experimental ground, of which the establishment was deprived till Dr. Daubeny purchased a couple of acres of ground near the Iffley Road, of Magdalen College, for this purpose, and subsequently made it over to the University in trust for the Professor of Rural Economy for the time being, in order that he may have the means of carrying on any enquiries connected with scientific agriculture which might from time to time suggest themselves.

Criticism of the dear old place is quite out of the question. My chief feeling on leaving it was one of gratitude to Lord H. Danvers, and all the good men who have given their labour and fortunes for its advancement: my chief wish that it, above all gardens, should never be removed to more "commodious premises," even though the improvement of gardening should surpass the most Utopian expectations, and our country towns have their Crystal Palaces, or future British workmen smoke the calumet of peace under their own Vines; but that it might remain for ages to come a home for the useful, strange, and beautiful inhabitants of the world of vegetation. *Wm. Robinson.*

BEES, HONEY, AND HIVES.—No. II.

(*Continued from p. 749.*)

"THE letters that reach me, addressed to '*The Times* Bee-master,' are legion. I can now form some idea of the weight of the load that must press on your shoulders every day; but I confess I had no notion of the extent of the interest that these letters prove to exist in apiarian culture. I select such difficulties from the letters before me as I have not disposed of, and these I would endeavour to overcome.

"A very often repeated question is—What is the best way of hiving bees or securing a swarm? Let me at once state that the old and inveterate habit in Kent of beating a kettle, striking the tongs with the poker, and raising similar discordant sounds is utterly absurd. They do not affect the bees. In swarming the old queen abdicates and heads the swarm, and a young queen mounts the throne in the hive. The outgoing queen, followed by 5000 or 6000 bees, either *ex proprio motu*, or guided by pioneer scouts, selects a Rose bush, or a cozy opening in a laurel hedge, and all her subjects hang on, forming a cluster of bees as large as the largest bunch of Grapes. As soon as they have nearly all settled, take your empty hive or bee-box, which must be thoroughly clean, as bees hate dirt and slovenliness, turn the hive or box bottom upwards, hold it in your left hand under the cluster of bees, lay hold of the branch on which the bees hang with your right hand, and shake down the swarm into your empty hive. Place the hive bottom downward on a bee board laid on the Grass close by, raise up the edge by inserting a wedge or stone about 2 inches in size, and cover the top of the hive with a cloth or a few branches to keep off the sun heat. If the queen is inside, which is usually the case, the bees will steadily enter and remain. If by your awkwardness you have left her in the hedge with her ladies-in-waiting, the bees will return to the hedge, and you will have all to begin anew. As soon as they are comfortably housed, carry the hive to the shed under which it is to stand, and do not look at it or touch it for three days. You need not be afraid of stings unless you meddle with the queen. If you interfere with her, the watcher bees will sound the alarm, and a thousand stings, like swords, will be unsheathed; but otherwise, they are so absorbed with her majesty that they do not fly at a prudent and fearless bee-master.

"A very important inquiry, repeated in several letters, is, on removing the super, whether of glass or straw, how are the bees to be expelled, that the honey alone may thus be secured? All the plans of tapping, beating, and smoking are bad. Tobacco smoke, and smokers generally, bees have a mortal hatred to. Bees have other personal antipathies, but the horrid scent of a tobacco pipe in a visitor's pocket either induces them disdainfully to shun all acquaintance, or provokes them to make an attack.

"Your best way of removing a super full of honey, with bees, of course, in the spaces not full of comb, is to carry it about 100 yards away from the hive. Wedge up the glass on one side from the zinc plate on which you have carried it, and the bees will leave in the course of an hour, and fly home. They very soon discover their separation from their queen, and under this feeling they lose all courage and give up defending the very property they would have died fighting for when connected with the parent hive. The exceptional case is where there may be, what is very rare in a super, a portion of young brood—always in such cases drone-brood. This they refuse to desert. They do not attack, but, as if placed sentries by their queen, they insist on continuing at their post. The only course in such a case is to cut out the brood cells and put them away, as they are not likely to be wanted, and the bees will then return to the stock hive, report, I suppose, and receive future orders. In removing a super in August, when the bee ceases to accumulate in Kent, you must take care not to do so on the windward side of your hives, as the scent of honey will bring you visitors from every hive, who will rob you of all.

"If in this month you find it difficult to escape the robbers, carry your super into your cottage, near a window, and expose one side of the super to the window—the side having egress for the bees. Very soon great numbers will fly to the window-panes, and by opening it for a few minutes they will rush out, and robber bees will have no time to enter.

"I have been asked who and what is the queen, and who are those lazy abbots I referred to as drones. The queen is nearly twice the length of the common bee, of elegant proportions and shape. On seeing her you would at once pronounce her a duchess or a queen. But it is a singular fact, and well worthy the consideration of sanitary students, that she rises originally from the ranks, and that treatment makes all the difference. The egg deposited seems the same as that of the ordinary bee, but we find it always laid in a cell three times the size of common cells. As soon as the young queen comes from the egg numbers of nurse bees wait on her; she receives finer and more delicate food, more air, a warmer, larger, and nicer house, and apparently she is the creation of circumstances. She is the only female bee. The working bees are neuters; her husband is a drone. With queenly prerogative and dignity she selects her husband, and off they fly on a wedding trip, and spend the honeymoon amid sunshine and flowers. But it is asked—Why are there so many drones in a hive, if only one wife? This is a very hard problem. But one part of it seems to me very clear. When the queen's countless eggs come to be hatched the temperature of the hive must be raised to 85° or 90° Fahrenheit. The fat, round, and lazy drones are really the fuel. They accordingly give out great heat. This year I had two stock hives during breeding at 95° Fahrenheit. We thus learn that fat old gentlemen are of use, and that Mr. Banting's system is not always wise or expedient.

"There are in a good hive three or four royal cells; consequently, three or four queens will turn up. What follows? If the heat be great and additional room withheld, the old queen will abdicate and head a secession—in apiarian language, a swarm—and the next senior queen will ascend the throne. If there be still no increase of room she, too, will secede and head a second secession—in apiarian phrase, a cast—usually feeble, requiring when hived to be fed, and rarely a desirable issue. But when room is given, and a drawing-room is added to the dining-room, and *boudoirs* to the nursery, I am asked what follows. Do the queens live together in harmony? My answer, from very careful observation, reveals a sad fact—a fact I cannot suppose to have been instituted in paradise. If two queens turn up in a hive with plenty of space, but related space, they fight it out till one alone lives. So settled is this law, that the bees hound on the more timid and cowardly of the two queens, and insist on victory with supremacy or death. This is to me the only melancholy trait in a favourite study; but I suppose some higher law requires it.

"It has been urged as a commercial question that honey is not now of the same importance as it was before the sugar-cane was discovered, and that gas had

superseded wax candles. I am satisfied from many considerations that if people would eat honey at breakfast instead of rancid London butter and nasty greasy bacon, not only would their health be better, but their temper would be sweeter. I find invariably that people who like honey are persons of genial and affectionate temper. * * * The producers of honey never draw their stings unless in defence of their homesteads, and the eaters and admirers of honey rarely indulge in acrimonious language. I believe a great deal of bad feeling is not moral or mental, but physical in its origin. If you have in a congregation, or in a school, or in a convocation some one who sets everybody by the ears, treat him to a little honey at breakfast for six months, and the 'Thorn will blossom as the Rose.' People that can't eat honey—'*hunc tu caveto*'—they can't ever fit 'a land overflowing with milk and honey.'

"I have not answered half the letters I have received; but because you have been so good as to take an interest in this very interesting subject I intend to send you, as an expression of my thanks, a small glass super of honey filled from Heath during July. If you do not eat honey, which I hope and, indeed, am sure is not the fact, you can give a portion to any inmates of your great hive in Printing House Square who may be prone to use their stings too freely." *August* 2.

[This and the foregoing letters, quoted at p. 748, together with the "Bee-master's Sermon," in which he argues that bees carry from the hive to the cottage hearth lessons of industry, loyalty, attachment to home, cleanliness, Christian sympathy, peacemaking, and a love of fresh air and early rising, have called forth on this subject of Bee-culture sundry criticisms, of which we propose to give the substance hereafter.]

IRRIGATION OF FLOWER-BEDS.

The present season will long be remembered by those who are interested in the cultivation of the soil, and especially by those who have the care and responsibility of large gardens resting upon them, in consequence of its excessive dryness, and the incessant labour which has been consequently entailed in dispensing water with the necessary liberality to the flower-beds and borders, &c. The practical amateurs and all lovers of flowers, and indeed horticulturists generally, will have data of their own, based upon some difficulty, disappointment, or want of success, to bring to their recollection the dry season of 1864; and it may be that each individual will economise to the best of his ability, and will husband the resources at his command in the shape of water and of labour in applying it, in order to produce the best effect according to his means.

No doubt the thoughts of some ingenious minds may bring to recollection the perusal of certain grand schemes which have from time to time been propounded and carried into effect for "supplying large towns with water" and other works of that description, in the hope of reaping some benefit, by adopting something of which they have long since read a description, either as to a supply or to distributing the resources at command; for we cannot get rid of the fact, that under ordinary circumstances, the present dry weather renders it necessary that the supply of water to our flower-beds and borders should be "continuous." Ingenuity however, and it may be science, will be taxed to meet the difficulties and necessities of a season like the present. Mulching with cocoa-nut fibre, with leaf-mould, or light rotten manure, or with short Grass or other material, will each be held in requisition, and most probably all or any of them will be found to produce the very best results from their power of preventing evaporation from the surface of the soil, and confining the extraction of its moisture chiefly to the roots of the plants. These therefore are means especially to be recommended where water is scarce.

Instances may occur where the supply of water is sufficient to meet even the demands of a season like this; but in such cases economy of labour is of no less importance, in connection with other matters which at first sight would appear to be of but little moment. I refer especially to the sloping or unlevel surface which beds and borders are generally made to assume, being highest in the middle and sloping towards the outside, consequently water soon finds its way to the lowest point, very little, if any, remaining to penetrate the soil. Thus only a surface or very superficial moistening of the soil is the result, although the operation of watering may be repeated again and again. Under such an arrangement the plants lacking moisture receive at their roots but, to say the most, a very scanty supply. This must be regarded as an extreme case, yet not without a remedy.

Let us take another instance, much less objectionable than the last, one which appears to represent the practice in most of the large establishments known to us, at present, more or less. In the first case mulching would certainly benefit the plants, but in ordinary cases it would not remove the evil; in the following case, however, it would effect much more. I now refer to what has been the rule of practice in some of the leading establishments, both public and private, in this country, for some time past, viz. that of preserving the surface of the flower-beds quite level, a practice which has done much towards attaining to the production of those grand sheets or seas of floral development of various hues which at the present time are the glory, and reflect the utmost credit upon the management, of some of the most extensive gardens and places of public resort in the kingdom, among which may be named the Crystal Palace, the gardens of the Royal Horticultural Society at South Kensington, Kew, Hampton Court, Hyde Park, and Victoria Park.

But returning to the subject of beds with an even level surface, and to those under my own charge in Battersea Park, most of which were made level before planting, it is found that in putting in the plants, the middle of the bed almost invariably gets higher than the sides. This in a season of ordinary moisture would hardly attract any notice; but in a season like the present, when moisture is of so much importance, the case is different. At the beginning of the dry weather this was found to be an evil that required an immediate remedy, as mulching is not resorted to, from water being plentiful and convenient for use. In consequence of this evil, that of the beds being slightly higher in the middle than at the sides, an arrangement of their surface was made by which water was retained to each separate line of plants. This was done by drawing the mould from the highest side behind each line of plants with a small hand-hoe, to the front, where it was raised so as to form a small retaining ridge, and thus a concave surface was formed to each line of plants of from 6 to 9 or 12 or 15 inches broad, according to the space between the rows. By this method and with careful watering, every plant is made to receive an equal quantity, and but little water is wasted, so that there is a great saving of labour. These little water tables however require to be carefully attended to, as the front or raised edge occasionally gets washed down, and every little fault is made good during the operation of watering. The labour of forming these tables and slopes about the plants has been fully compensated by a proportionate saving of labour in a few days' watering. There is nothing to complain of in the appearance of beds so treated, except in the case of those in which the surface is not covered with foliage; and these would probably suggest the idea that some juvenile engineer had been busily engaged in testing some of his rudimentary schemes, or moulding from memory an imitation of some earthwork. *J. G., Battersea Park.*

Home Correspondence.

Seedling Clematises.—I feel great pleasure in furnishing "A. Z." (p. 749) with our experience respecting the germinating properties of Clematis seed. As it is stated (p. 654), that Clematis Jackmanni and rubro-violacea, exhibited by us at South Kensington in July last, "were so marvellously like those produced the week before from another source, as to suggest the idea of a common origin," I feel bound, for the credit of our firm, to at once commence by explaining the origin, sowing, flowering, and working of those varieties; stating and confining myself unreservedly to facts as they occurred. Batch of Seedlings, No. 1: In the summer of 1858, when Clematis lanuginosa and C. Viticella Hendersoni and atro-rubens were in flower, the idea occurred to me that if I could succeed in hybridising the latter varieties with the former, I should get something distinct in colour and shape of flower. I did so, and the seed ripened, was gathered, and sown in November, 1858, by our propagator, Thomas May; the seeds did not vegetate in the year 1859, but they came up in 1860, and the young plants were potted off in the spring of 1861. The following Michaelmas we changed our propagator, and engaged Thomas Townsend (now manager of St. Mary's Nursery, Hornsey), who had these Clematises under his management, and they flowered for the first time in the summer of 1862, when we selected from among them some of the most rare and distinct varieties; these were worked for the first time by Townsend, who left our employ to take the St. Mary's Nursery, Hornsey, the following Christmas (1862). We then exhibited, within 9 months of the last mentioned date, C. Jackmanni and rubro-violacea, and were awarded unanimously two First-class Certificates. Batch of Seedlings, No. 2: I and Thomas Townsend hybridised together, in the summer of 1862, C. lanuginosa and some of the new seedlings of batch No. 1, with C. Viticella venosa, and the seed was gathered by him the following autumn, and was sown by our present propagator Dec. 27, 1862 (which, on reference to our labour book, I see was a week after Townsend had left our employ). This seed did not vegetate in the spring, but two seedlings came up in the autumn, and made a growth of from 2 to 3 inches; and one of these seedlings produced a weakly flower last week, the colour being lavender with a light centre to each sepal; the remaining portion of the seed came up this spring, and according to our former experience I expect the young plants to bloom in the summer of 1865. This explanation will, I imagine, clearly show that those varieties which were exhibited by the firm of George Jackman & Son, were originated at the Woking Nursery, and taking into consideration that our Clematises were exhibited in August, 1863, one season before Mr. Townsend showed the world that he also possessed similar varieties, I take it that ours must be considered the originals. I have only during these last few days read Mr. Townsend's letter on the subject of his Clematises inserted in a contemporary, July 12. He there states that "he shall be happy to answer any questions that may be put to him concerning them." His own words inform us that his letter only contains "some information respecting his seedlings;" further, "I came," he says, "to St. Mary's Nursery, Hornsey, at Christmas, 1862; immediately after this the seed was sown," and in the preceding line he states that "the seed from which these Clematises were raised, was hybridised and gathered by me." I notice, however, that he gives the public no information as to where he was up to Christmas, 1862, nor where his plants were that he hybridised, or from which he gathered the seed; perhaps he will favour us with these particulars. Again, some of them are reported to have bloomed last year, that is, in the same summer or season in which the seed was sown; this, contrasted with the statistics just given respecting our Batch No. 2, rather astonishes me, rendering as it does our system of propagation quite stage-coach pace, compared with the marvellous rapidity with which it is managed to raise Clematises at Hornsey. I hope therefore that Mr. Townsend will be good enough to give some further particulars as to his plan of rearing Clematises from seed. The Horticultural public may thus derive some valuable information on an interesting subject. *George Jackman, Jun., Woking Nursery, Surrey.*

Surface Caterpillars.—The long-continued dry weather we have had this summer has been very favourable to the development or rather preservation of insect life. Insects, indeed, in general can withstand cold and frost to a great degree so long as they are dry, but wet is their great exterminator. Among the insects which have thus become prevalent to an extraordinary degree, are the surface grubs of the heart and dart moth. In the series of agricultural returns published last week it will be seen that the Turnip crop is almost universally a failure, and in many instances this is expressly attributed to the caterpillar. In my own garden near Oxford they were first noticed in consequence of a bed of young Turnips being completely eaten off just below the surface of the ground. They then attacked Potatos, Carrots, Beetroot, and Seakale. I set my gardener daily to move the earth round the roots of these vegetables, and in a short time each day he filled a pint measure with the creatures. The dryness of the soil allowed it to be easily moved around the plants, and so long as this is the case this is the best remedy which I am able to suggest for their destruction. Another is to plant the tops of Lettuces, Potatos, or Turnips in the beds, keeping them moist, and visiting them daily. They form an excellent trap. *J. O. W.*

Oak Tree Killed by Frost.—I have just cut down an Oak tree here measuring 7 feet 9 inches in girth at 5 feet from the ground, above 50 in length to the lowest branch, and containing more than 80 feet of timber, which was completely killed by the frost of 1860. I do not know that there is any other record of an Oak of such size and vigour being killed by frost in England. This is the largest that I know of here, but it is only one out of many hundreds of Oak trees which were completely killed by the frost of that winter at this place. *C. W. Strickland, Howsham, near York.*

Notices of Books.

The Alpine Guide: Part Second. By John Ball, late President of the Alpine Club. London: Longman & Co., 1864. Pp. 502.

In our last year's volume we noticed at some length (pp. 846 and 894) the first part of this most useful guide, from the pen of one of the most successful of mountain travellers. The volume before us is a further instalment of the work, with capital maps, and some panoramic sketches, and is devoted to the Central Alps, in which is included the Bernese, the North Switzerland, the Leopontine, the Rhætian, and the Lombard Alps. Forty chapters or sections of the book are devoted to as many districts into which these mountain systems are divided, and under each of these a series of routes which are open to travellers are concisely yet amply discussed; such information as to tracks, and guides, and charges, and similar matters, as would be most likely to be sought after, and useful to those who are bent on trying mountain passes, being very clearly put before the reader.

The bulk of the volume being made up of a running account of these various routes, is necessarily to a considerable extent descriptive of the mountain scenery through which they pass; and hence there are many choice bits which are full of interest even for stay-at-home readers. Here is one such passage in the portion devoted to the Bernese Alps:—

"The upper valley of Hasli is a wild and barren glen, seemingly suffering from an especially ungenial climate, as cultivation here stops short at a far lower level than in other parts of Switzerland. The village (Guttannen) has been twice burned down in this century, and suffered severely from the storm of 1834. This does not seem to have affected unfavourably the physical condition of the people. The men are usually active and muscular, and will carry weights over the rough mountain paths that would not be attempted by well-fed townsmen. Soon after leaving Guttannen the track crosses to the right bank at the picturesque bridge Tschingelmatt, and rather more than one mile further on returns to the left bank. The vegetation becomes more alpine in character, the summits of the

Gelmerhörner are seen above the right bank of the valley, and the path ascends through a forest where a distant roar, gradually growing more distinct, announces the approach to the famous waterfall of the Handeck. This is certainly one of the finest in the Alps, and has the unusual privilege of never languishing for want of water. The Aar, after flowing rapidly for some distance through a narrow channel, suddenly springs over a rocky ledge, and descends, at a single bound of 200 feet, into a dark chasm, whence clouds of spray ceaselessly rise, as if driven up by blasts from some subterranean cavern. There are two points of view which should not be missed. One of these is in front and some way below the fall, reached by a narrow path turning to the left from the bridle-track; the other is from a wooden bridge thrown across the stream immediately over the fall. The effect here is most impressive, rather too powerful for the nerves of some visitors, who cannot bear to look down on the rushing flood at the moment when it leaps wildly into the void. The effect is heightened by the circumstance that another but much more slender torrent, called the Arlenbach, happens to join the Aar just at this point. Its clear waters spring from a lateral cleft into the abyss, and before reaching the bottom are mingled with the murky flow of the Aar, here laden with the fine mud of its parent glaciers."

In the St. Gothard district of the Leopontine Alps, at the Devil's Bridge, "there is a scene sometimes witnessed by travellers who pass this way in winter, that exceeds all that the imagination can picture to itself of the fury of human warfare. A winter storm in the gorge of Schöllinen is an event never to be forgotten by one who has beheld it. The howling and shrieking of the blast only at intervals allow the hoarser roar of the torrent to reach the ear, and the surrounding crags are but dimly seen amid the drifting snow that is swept along through the cleft of the valley. At such times the country people who have need to ascend or descend through the valley take refuge in the galleries above and below the Devil's Bridge, and when it becomes necessary to risk the passage, creep over on hands and knees, in order to avoid as far as may be the incredible fury of the wind at that point." Storms like these, snow fields, crevasses, avalanches, adders, and scorpions, all which may lie in one's path, only help to bring out in stronger relief the more agreeable features of Alpine travelling.

Not only are the prominent snatches of scenery indicated as they are passed, but facts of historic interest connected with various places along the different routes are adverted to, and the scientific traveller has many of the choicer objects of natural history pointed out. The botanist is especially favoured in this way, for here the well-known botanical attainments of the editor come in as a guarantee that those who put themselves under his guidance will not be disappointed. Thus in the Bernese Alps, on the route from Bex to Sion, the Alpine pastures above the châlets of Anzeindaz, and the stony slopes at the base of the Diablerets are pointed out as "extraordinarily rich in rare plants. The botanist may find tolerable night quarters in one of the châlets, but he should take provisions, as little is to be found here. Ranunculus pyrenæus, Viola cenisia, Crepis pygmæa, Hieracium breviscapum and H. speciosum are amongst the rarities of this locality. The geologist may find many fossils of the Gault period." On the route from Thun to Sion by the Rawyl Pass, "the char-road through the Iffigenthal is carried for about three miles above An der Lenk; the way lies at some height above the torrent through very beautiful scenery. Cystopteris montana is here unusually abundant." Further on, "in the descent to Sierre, the botanist will be pleased to find Genista radiata." The rough ground at the foot of the Rhone Glacier, and the adjoining slopes "afford Achillea valesiaca, Carex bicolor, Kœleria hirsuta, and many species of Hieracium."

On the North Swiss Alps, "Epipogium Gmelini, Lathræa squamaria, and some other uncommon plants are on the slopes of the Rigi Scheidegg towards the Lake of Lucerne, and the beautiful Dianthus superbus is plentiful on the steep slopes north of Rigi Staffel;" while on the Pilatus the naturalist may well make the Klimsenhorn Inn "his halting place for several days, as the mountain, besides being considerably higher than the Rigi, offers many more objects of interest. The flora of the limestone Alps is here very well represented, and the botanist may find several rare plants, such as Papaver alpinum (in débris below the peak of the Esel), Petrocallis pyrenaica, Campanula thyrsoidea, Androsace chamæjasme, Festuca Scheuchzeri, &c."

In the same way the most interesting features of the other districts comprehended in the Central Alps are indicated; and as to the mode of travelling, both what to do and what to avoid equally come in for attention. The young and adventurous spirits of the age, who in their aspirations for manly exercise, coupled with the agreeable and exciting incidents of travel, may be determined to scale the Alps, cannot do better than take Mr. Ball's handy-book as their Mentor, and Excelsior as their motto.

The Utilization of Minute Life. By Dr. T. L. Phipson, F.C.S. London: 8vo, pp. 282. Groombridge & Sons. 1864.

Some of the lower classes of animals are as remarkable for their utility to man as they are for the peculiarity of their organisation and their habits. A very important branch of manufacture depends upon the rearing of silkworms. Fortunes are made in France by the cultivation of the leech. The skilful management of bees, cochineal, and snails, brings its reward; and the breeding of oysters and various crustaceæ might be turned to account, and indeed the whole practice of pisciculture promises to be a great success. Dr. Phipson thinks, that while few people with slender means could hope to gain their livelihood by rearing new varieties of the dog, cow, horse, ass, or pig, an immense field is open to them if they would direct their attention to the utilization of minute life; and he is never weary of reminding the reader of the want that is felt in the world of a new dye, if anybody could produce one from the animal or vegetable world.

The first chapter of the little book before us is devoted to the silk-producing insects, and it is stated that 80 lb. weight of cocoons is the average produce from an ounce of silkworms eggs. Probably the produce might be greatly increased by adopting the French method of reserving only the finest and heaviest cocoons for breeding purposes.

Of all the colour-producing insects cochineal is the most important. It is calculated that more than a million pounds weight of cochineal arrives in Europe every year, and 70,000 of the dried insects, on an average, go to a pound. When the Vines of Teneriffe were completly destroyed a few years ago, the inhabitants turned their attention to the cochineal, which a gentleman had previously introduced from Honduras. It succeeded admirably. An acre of land planted with Cactus yielded from 300 lb. to 500 lb. of cochineal, worth 75*l.* to the grower: no bad investment by way of a makeshift!

It seems that two new Australian species have been discovered, one of which feeds upon the Mimosa, the other on a species of Eucalyptus. An insect named Coccus fabæ, which feeds on Beans and Sainfoin, has been discovered in the south of France, but it is not so rich in colouring matter as the cochineal. A Chinese Coccus is the cause of the production of large quantities of wax, resembling spermaceti, but it is scarcely known whether this substance is the product of the insect or of the plants it feeds on, which appear to be Rhus succedanea and Ligustrum glabrum. For information on bees, cantharides, locusts, and other insects used as food, the breeding and peculiarities of lobsters, and crawfish, and crabs, we must refer to Dr. Phipson's interesting book. Colouring matters evidently find great favour in his eyes. He says:—"The black or dark-blue colour of lobsters and their allies is very remarkable in a chemical point of view, as it becomes red in hot water at a heat of 70° Centigrade. The colouring matter can be extracted from the lobster's shell by means of alcohol, in which it is soluble; but during the operation the colour turns red. Sulphuric and nitric acid turn the red alcoholic solution to a permanent green, which the alkalies do not again change to red. A permanent organic green is such a desideratum at this moment in the tinctorial world, that the discovery of a new dye of that description would be worth thousands of pounds."

The formation of oyster beds on the coasts of France, under the direction of M. Coste, has been attended with wonderful success. "Every oyster is supposed to produce from one to two millions of young; out of these not more than 10 or 12 attach themselves to their parents' shell; all the rest are dispersed, perish in the sand, or are devoured by fish. Now, if faggots of brushwood be let down and secured to the oyster banks by weights, the young oysters will, on issuing from the parents' valves, attach themselves to these faggots, &c.;" "after six months one fascine was found to have no less than 20,000 young oysters upon it."

Pearl fisheries, escargotoires, leech ponds, the murex dye, corals, sponges, and a variety of other things are treated of; not in the loose popular style that is so common in the present day, but in a thoroughly accurate and philosophical manner, and the names are given of those authorities from whom information is derived. This is in fact a little work of scientific merit and research, and contains much information that is sufficiently curious. Thus, speaking of the regenerative faculty of some of the lower animals, in reproducing lost or mutilated organs, Dr. Phipson says: "Spallanzani, having cut off a snail's horn, observed that it began to bud out again in about five-and-twenty days, and continued to grow until it was as long as the other. He then cut away part of the head of another snail, and in course of time the lost portion was renewed. When the head was cut completely off the experiment sometimes failed, and the animal died; but more than once a new head grew again even in this case; at the end of a few months the snail appeared with another head, in every respect similar to the lost one. The snails thus operated upon retired into their shells the moment decapitation had taken place, and covering the opening with their operculum, remained thus inclosed for weeks, and even months. When forced out for examination at the end of 30 or 40 days, some appeared without any marks of renewal; but in others, especially when the weather was warm, a fleshy globule, of a greyish colour, was observed about the middle of the trunk.

"No particular organisation was noticed in this globule, but in eight or ten days it became larger—rudiments of lips, mouth, tongue, and the smaller horns appeared, then gradually developed, and in the course of two or three months the injury was so completely repaired that the new head could only be distinguished from the old by its lighter colour. These experiments have been confirmed by Bonnet, Schæffer, Gerordi, and others."

The Handbook for Travellers in Durham and Northumberland (Murray), is just the kind of guide which persons bent on a tour in our northern counties will find acceptable to them in their wanderings. It gives a brief but interesting account of the different districts, which are set down under routes such as the traveller may conveniently follow. In Northumberland we learn that it is only along the river banks or in well protected parks that fine trees will be found, the rest being blasted and parched by the fierce winds that sweep in from the sea. "Among the largest trees of the county are the King Oak (its trunk measuring 14 feet 9 inches at the ground), and the Queen Oak (14 feet 5 inches) at Netherwitton; a Larch (13 feet) in Hartburn Dene; an Ash (20 feet) at Wallington; a Beech (13 feet 5 inches) at Newminster; one of 14 feet at Capheaton; a Spanish Chestnut (12 feet 9 inches) at Bywell. Holly trees are remarkably fine all over the county, and are a great feature on the sides of its rocky denes; some of those in the old Trench wood at Netherwitton measure 7 ft. 6 in., and 9 ft. 7 in. at 1 yard from the ground. The book contains a good map of the two counties.

With the *Handbook for Travellers in Ireland* (Murray) in possession, who would not spend the vacation season in exploring the Emerald Isle, and especially when the whole country is laid out before him to be "done" in some three dozen routes, beginning with Kingstown and ending with Bantry Bay? It is a very tempting invitation, especially in the company of so pleasant a companion, for our guide is to tell us as we go, all about the Physical Geography, the Geological and Botanical points of interest, the antiquities, and the places of interest to be met with in these wanderings. Flax, we are told, is the staple crop of Ireland, and turf is an institution of the country. "No tourist can help being struck with the vast amount of turf which he sees either being cut or stacked for drying in the inland counties, or with the universal topic of conversation with respect to the turf crop, the success or ill-success of which brings comfort or tribulation to hundreds and thousands of poor families." Of course a book on Ireland without something like a "bull" would be an anomaly, and hence we read of a fine waterfall of 300 feet at Glencar, which runs *up* hill—at least so the visitor may be told in Sligo, this being explained by the curious fact "that when the wind blows strongly from the south, the water is prevented from descending." Then who would suppose Irish rabbits capable of such mischief as causing a mansion to be overwhelmed *in* sand? Yet so it is, as the traveller may find at Rosapenna. "A line of coast and country extends from the sea deep into the land, exhibiting one wide waste of red sand; for miles, not a blade of Grass, not a particle of bloom, but hills and dales and undulating swells, smooth, solitary, desolate, reflecting the sun from the polished surface of one uniform hue. Fifty years ago this line of coast was as highly improved as the opposite shore of Ards, and contained the comfortable mansion of Lord Boyne, an old-fashioned manorial house and garden with avenues and terraces, surrounded with walled parks. But now, not a vestige of this is to be seen—one common mound of sand covers all. The cause of all this mischief appears to have been the carelessly permitting the rabbits to gnaw the roots of the 'Tent Grass' (Arundo arenaria), which when protected serves as a sufficient guard against the incursion of the sand." A little more care in regard to the names of the rare plants mentioned would have been desirable. Thus the Killarney Fern, the botanical rarity of Ireland, is in one place called Trichomanes speciosum, and another T. brevisetum. The orthography of the names of plants too, is often faulty, Melanopsis, for example, standing more than once for Meconopsis. Such errors however are not very numerous, and the abundant information on general points of interest which the book contains, must make it a most useful companion to the Irish tourist. There is a good index, and two capital maps on a large scale.

BOOKS RECEIVED.—*Holiday Papers*, by the Rev. Harry Jones, are sad trash.——*Curtis' Botanical Magazine* for August contains a capital figure of the Corylopsis spicata, the fine new hardy shrub, with the leaves of a hazel and long yellow catkins, the colour of a Cowslip, introduced by Messrs. Veitch and Mr. Fortune from Japan.—— Of the *Useful Knowledge Society's Family Atlas*, part X. (Stanford), containing Scotland (3 sheets), and Ancient Palestine, has just appeared. The work, a real Hydrographical gem, is unapproached in price and execution by any other British Atlas.

Garden Memoranda.

MESSRS. CARTER & CO.'S ANNUAL GROUNDS, DEDHAM AND ST. OSYTH, ESSEX.—These grounds, spread as they are over many acres, serve to illustrate, in an eminent degree, the effect which different kinds of garden Annuals produce when grown on a large scale in patches of distinct colours. The various masses of Tom Thumb Nasturtium, of themselves amply repay a journey of many miles to see them. The great demand

for them necessitates their being grown extensively, and the display which they make is one of the most brilliant description, equalling even that of the Scarlet Zonal Pelargonium, while for one plant of the latter as many as 50 of the former may be bought. To persons, therefore, who having no means of wintering Pelargoniums, desire to possess a showy flower bed at a cheap rate, these Nasturtiums are a real boon. They may now be had of all shades of colour, from bright golden yellow pure or spotted in every petal with red, to glowing scarlet, and some even are nearly black. Of high-coloured kinds one of the most attractive is King of Tom Thumbs, a new kind with very dark foliage and intensely bright scarlet blossoms. This has not yet, we believe, been offered to the public. Of Canariense, both climbing on sticks and trailing on the ground, there are large plantations.

Petunias raised from seed and treated as annuals, rank perhaps next to the Dwarf Nasturtiums just alluded to, in point of attractiveness. A mixed mass of different coloured kinds of these is a sight not easily to be forgotten, and among so many thousands as are grown here, novelties of sterling merit are sure occasionally to make their appearance. From these seed is carefully saved year after year, always selecting the best, and in this way an excellent race of these showy flowers has been obtained.

Of Godetias, another class of comparatively large-blossomed plants, there are also great numbers, some of them quite decumbent, with purple and white flowers charmingly spotted with red; others tall and robust. Among the latter the best is G. roseo-alba, a profuse flowering and extremely showy plant; of dwarfer sorts, G. insignis would perhaps be the greatest favourite with most people. We must not, however, forget the Bride, a beautiful medium-sized Godetia, of which we noticed a large plantation at St. Osyth. This is a light-coloured kind, and, when seen *en masse*, is wonderfully handsome. Other new kinds not yet "let out" we hope to report on hereafter.

Among Everlastings (Helichrysums) there is now great variety, some being as brilliant in colour as even the greenhouse varieties of Aphelexis themselves. For cutting and drying for winter bouquets alone these annual kinds are very valuable.

Ten-week and German Stocks of different colours are flowering most satisfactorily as far as doubleness is concerned, but owing to the dry weather they have experienced they are not so robust as we have seen them in more favourable seasons. Notwithstanding the fierce sunshine to which they have been subjected, their colours are bright and showy, and the different beds of them are well worth inspecting.

Miniature dwarf French Marigolds are so compact in habit, and altogether such little gems, as to attract everybody's attention, as well they may, for perfection in this direction has been very nearly attained. Plants of them, not more than 6 inches in height, are literally bouquets of gaily striped brown and golden yellow flowers, and in the shape of edgings or small beds they are wonderfully pretty. For larger masses the lemon and bright orange African, and large French Marigolds are more suitable.

The different sorts of Calliopsis are now becoming so numerous that a selection from them must soon be made. Here may be found a race of dwarf plants, which, in a favourable season, must be extremely pretty. Of taller sorts, Drummondii, an orange with large dark eye, is one of the best.

Among lesser Convolvuluses, tricolor monstrosus is one which cannot fail to give satisfaction. The blossoms, which are white, with a broad rich purplish blue edge and yellow eye, measure nearly two inches across, and when fully open are really beautiful. C. minor splendens is also a fine kind, Among climbing kinds are some with striped and others with rich violet blossoms, which are large and showy.

Of the Swan River Daisy (Brachycome iberidifolia) there are charming beds now in perfection, both of the blue and white sorts, and also of the two mixed together, literally masses of floral beauty such as one rarely has an opportunity of seeing. This is undoubtedly one of the best of all dwarf annuals, and one which cannot be too extensively cultivated. It requires, however, to be sown in heat, and pricked out after all danger of frost is over. The blue and the white mix well together, and thus treated the effect which they produce is admirable.

Lupins are plentiful, and embrace a great variety of colours. One of the best is Hybridus insignis.

Among annual Chrysanthemums, tricolor Burridgianum still claims the first rank; but there are double yellow and white sorts, also both useful. There is likewise a double variety of tricolor, the blossoms of which measure quite two inches across. This too will no doubt be a favourite with everybody. It is, we believe, to be called C. t. Dunnettii. For border decoration these Chrysanthemums are well worth attention.

Salpiglossis though grown here in separate colours, appear to be yet much in want of improvement. Individually the blossoms are in some instances extremely handsome, but in habit they are somewhat faulty. With care and perseverance this may, however, yet be rectified.

Saponaria calabrica, both pink and white, is grown by the acre, the former viewed from a distance looking not unlike a field of blooming Heath. For the ornamentation of rockwork these charming little plants are much sought after, and they also make suitable ornaments for small beds and other places where less compact growing plants would be objectionable.

Œnotheras seem to be favourites, if we may judge from the large numbers of them that are grown here; they vary in size from the little decumbent varieties of Œ. Drummondii, to the profuse-flowering stately-growing Œ. Lamarckiana, which is an extremely showy herbaceous border plant. One of the largest flowered and best for beds is still Œ. macrocarpa.

Among German Scabiouses are some pretty things which might be sparingly introduced into borders or large mixed beds with good effect.

Rhodanthe Manglesii and maculata form charming plantations, the size and regularity of growth of which render them most effective. Of all half-hardy annuals these are two of the prettiest, and when cut their blossoms, like those of other Everlastings, last long in perfection. There is also a pure white variety which, when better known, will form a fine contrast with the bright rosy pink kinds.

Larkspurs at St. Osyth, both dwarf Stock-flowered and dwarf Rocket, are extremely showy and beautiful, and the taller kinds are also equally interesting. All these are in separate colours and mixed, and even among the multitudes of other fine things grown there they play a most important part. They are, however, now getting past their best.

Clarkias, now over, have been exceedingly beautiful this season, especially the double variety of integripetala, blooms of which were lately shown in good condition at South Kensington, and received a First-class Certificate. Rose-coloured and pure white single-flowered kinds have likewise been most satisfactory.

Nemesia compacta is one of the prettiest of all annuals for small beds, and for pot culture it is extremely suitable, forming as it does compact tufts of clear blue white-lipped blossoms. It has also the good quality of remaining in beauty for many weeks in succession.

Of the Cuban Datura ceratocaula there is a large bed, which, when seen after sunset, is a truly glorious sight, covered as it is with multitudes of great white blossoms each 6 inches in diameter, and so sweet-scented as to fill the air in their neighbourhood with a delicious fragrance. On this account alone this Datura is well worth cultivating; but the peculiar time at which the blooms open also gives it additional interest.

Linum grandiflorum is at all times one of the most attractive of annuals, its brilliant crimson blossoms being conspicuous even at a considerable distance. No difficulty is here experienced, as with some, in getting the seeds to germinate, and the young plants raised on slight bottom-heat and transplanted grow as freely and blossom even more profusely than Phlox Drummondii. Of the last there are also good beds.

Xeranthemums of different kinds are very gay, especially a new double purple, which is a great improvement on the old kind; their blooms being hard and dry, like those of Helichrysums, render them also very suitable for cutting for winter bouquets.

Annuals of other kinds are likewise plentiful, and grown in large quantities. Nearly 10 acres are devoted to Mignonette alone, and the fragrance arising from it is delightful. Nor is there any lack of novelties this season; but these we pass by until their real merits have been more correctly determined by further trial.

Vegetables, as might be seen from our notice of these grounds last year, also receive as much if not more attention than flowers, and consequently among them are many well selected varieties. Lettuces cover large breadths of ground, especially Carter's Giant White Cos, Dunnett's Giant Brown Cos, Victoria Cabbage, and Wheeler's Tom Thumb and Imperial, all excellent in their way. Among Cabbages the large and dwarf York and Enfield Market are grown extensively, as are also Snow's Early, Imperial White, Early Malta, and Grange's Early Broccoli, to which may be added for late use Mammoth and Carter's Champion. Among Peas, Veitch's Perfection, Princess Royal, a large, fine, green variety; and Wonder of the World are good summer sorts. Carter's Earliest is stated to be the best for a first crop. Among Cucumbers, Champion is reported to be most useful, and excellent for winter forcing. Herbs of all descriptions are likewise largely cultivated, as are Dunnett's Garnishing Parsley, a wonderfully fine curled variety, St. Osyth and Pine Apple Beets, and Gloucestershire Kidney and King of Potatos, two clean-skinned, fine-looking sorts.

Miscellaneous.

Scientific Studies in Connection with Medicine.—The following passages are selected from Dr. Balfour's opening lecture of the course of Botany, in May, 1864, as reprinted in the *Edinburgh Medical Journal*:—Natural Science, in all its departments, has now become an important part of education, not merely on account of its connection with professional studies, but also from its value in mental training. It exerts a most beneficial influence on the observant faculties; it calls the perceptive powers into action; it teaches the student to note the resemblances and differences among objects; promotes the formation of orderly and systematic habits; and it enforces accuracy, both of observation and of expression. It also benefits the mind by investing the objects around us with a new interest, and it supplies healthy and cheerful occupation at all times. The value of natural history as an educational science consists mainly in its teaching the student to observe truly and to note accurately. The prosecution of it ought not to be confined to any one profession, such as that of medicine. It should, to a certain extent, constitute a part of a liberal education. The student of classics, mathematics, and philosophy, ought not to ignore the knowledge of God's works in the creation around him. Why should not a portion of the summer be devoted to this subject by those who have been prosecuting their literary studies during the winter months, and whose long vacation might thus be in part profitably employed in preparing the way for their future professional career? It is surely of importance that the student of arts should know something of the objects in the material world with which he is surrounded; that he should enlarge his views of nature, and have a sympathy with that science which teaches the structure, functions, and uses of the organised beings which people the globe, and of the unorganised matter which forms the crust? In relation to medicine, botany must be viewed not only as furnishing the medical man with valuable information in regard to the affinities and properties of medicinal plants, and enabling him to substitute one species for another with safety in circumstances where the usual remedies are not at hand; but it must be regarded as an important branch of preliminary study, which trains the mind of the student to those habits of observation and diagnosis which are so essential to the successful prosecution of his profession. The study of the physiology of plants, too, enables him to observe in a simpler form many of those phenomena which are more complicated and obscure in the higher orders of living beings. This is specially true of the functions of fertilisation and embryogeny; the examination of which by eminent botanists, both in this country and on the Continent, has tended in no small degree to promote the advancement of animal physiology. The training of the mind in correct methods of observation gives to botany and the other natural history sciences, their value as instruments of preparation for professional education. There can be no doubt that every one entering upon a learned profession, such as that of medicine, ought to have in the first place a certain amount of literary education. The study of languages, both ancient and modern, of the mathematical sciences, and of mental philosophy, should precede in all cases the professional curriculum. It is also of importance that a class of men so widely diffused, and mingling so much with society, as the members of the medical profession, should be so instructed as to be able to give a tone to conversation, and to promote among those with whom they associate the love and the pursuit of literary and scientific accomplishments. The objections urged against natural history sciences have depended chiefly on the fact that they were studied at the same time with purely professional subjects, and that thus the minds of the students were overwhelmed with the multiplicity of objects brought under their notice, and with the necessity of preparing for an examination on one set of subjects whilst they were studying another. Natural history sciences have been considered a hardship, not because the students disliked them *per se*, or thought that the subject was not a good one for their minds to work upon, but because the study of them came at a most improper time, because far too much of it was attempted to be taught in the time, and because the little that they could learn well was what they felt they ought to have learnt in their younger days. A medical degree is not only a qualification to practise, but it is also a university honour, and the public will naturally expect that our doctors of medicine should be men of higher education than those who merely hold diplomas from colleges. The only direction, it appears to me, in which this superiority can show itself, is in the department of literature and science. It is to our medical graduates that we look for the advancement of science. Many of them are now occupying important scientific positions all over the world, and are contributing in no small degree to the advancement of our knowledge. In the military and naval services, and in our colonies, eminence in science has raised graduates in several instances to places of high responsibility and emolument. Our University has sent many of her alumni to occupy such positions; and at the present moment some of the most important scientific expeditions owe much of their value to Edinburgh doctors of medicine. Among these may be noticed Dr. Balfour Baikie, who has superintended the exploration of Western Africa; Dr. Hector, who acted as geologist in Palliser's expedition to the Rocky Mountains, and who is now engaged in valuable geological researches in New Zealand; Dr. John Kirk, who acted as medical man and naturalist to the Livingstone expedition; Dr. Thomas Anderson, now filling with the highest credit the office of superintendent of the Botanic Garden of Calcutta; Dr. Birdwood, filling a similar office at Bombay; Dr. Cleghorn, conducting the forest department in the North-Western Provinces of India; Dr. Alexander Hunter, ably conducting the School of Design at Madras, and the Horticultural Garden there; Dr. Aitchison, advancing the knowledge of Indian botany by his researches; Dr. Wallich, publishing valuable

treatises on the lower forms of animal and plant life; and many others who are doing credit to their alma mater.

Statistics of the Edinburgh University Botanical Class for 1864.—Number of Pupils, 187, of these 161 were medical, and 26 general students. Number of Lectures, 63; Practical and Histological Demonstrations, 60; Monthly Competitive Examinations, 3; Weekly Examinations, 10; Saturday Excursions, 11. The following were the Excursions:—1. Arniston and Dalhousie; 2. Burntisland and Aberdour; 3. Mid-Calder and Dalmahoy; 4. Drem, Gullan, and Longniddry; 5. Alloa, Menstrie, and Ochils; 6. Hawick, Cavers, Denholm, and Hassendean; 7. Linton and Tynninghame; 8. Newburgh and Lindores; 9. Dumfries and Carlaverock; 10. Anstruther and Elie; 11. Callander and Ben Ledi. Number of Species collected during the Excursions: — Dicotyledons, 508; Monocotyledons, 147; Ferns, and their Allies, 34; Mosses, 90; Hepaticæ, 12; Lichens, 55: Algæ and Fungi, 30. Total, 878. Number of miles travelled by railway, steamboat, and walking, 920. The numbers at the excursions varied from 40 to 110. Total expense of trips, 34*s*.

The Garden in Finsbury Circus.—This fine open space, one of the few that remain in the mania for railway making, and which was at one time threatened with invasion in one way or another by various competing projects, is to be carefully preserved by express enactment. It has long been a place to which men of business and others, pent up in the city, have resorted to breathe the fresh air in occasional intervals of leisure, the circus being within a few minutes' walk of the Bank of England and the parts of the city chiefly occupied by the mercantile and professional classes, and its threatened destruction had therefore been regarded with regret. The Metropolitan Railway (Tower Hill) Extension Act, 1864, which received the Royal assent a few days before the prorogation of Parliament, will subject the circus to partial spoliation during its construction, but that only for a limited time, and the ornamental gardens in the centre will be carefully protected in the process, and restored afterwards in parts which may be unavoidably injured. The extension railway is to be carried through the circus in a covered way, and after its construction the company are bound by their Act to restore the surface of the ground, and to lay out the part of the gardens which may have been interfered with in a way equally ornamental with the present to the satisfaction of some person to be appointed by the Board of Trade. They are also under express obligation to contribute 100*l*. annually towards maintaining the ornamental character of the grounds. In constructing the line the company are likewise bound by certain other restrictions. The railway under the gardens is to be completed within four months from the commencement of the works there, and the surface of the ground above the line is to be reinstated forthwith, and without any openings. No more of the gardens is to be occupied than is absolutely necessary in the process of construction, and the part so occupied will be securely fenced by close palings, at least 6 feet high, so as to prevent trespass on the parts of the gardens not taken up by the works. The trees are also, as far as possible, to be protected from injury.

Calendar of Operations.

(*For the ensuing week.*)

The few sharp showers which we have had this week have effected wonders; bedding plants are improving in appearance. Grass lawns are already greener, fruit trees look more healthy, and the shedding of their produce, which was becoming alarming in some districts, is in some measure arrested. As regards vegetables, the benefit of the change is also apparent, and prices at present high, especially for some things, must doubtless be reduced. Potatos, however, in some places are reported to be pushing young shoots from the new tubers which must greatly deteriorate their present value as well as render them unfit for long keeping.

FLOWER GARDEN AND PLANT HOUSES.

Let shading be used less frequently now than when the weather was so hot; plants ripening their growth have need of not only all the daylight they can get, but even moderate sunshine. A rough plan must now be made of the arrangements of flower beds, which should be numbered to suit an accompanying list of the names of the plants, with which it is designed to fill them next year, and the quantity required for each bed. By compiling a summary from this list, accurate information is at once obtained of the quantity of plants which must be propagated immediately by cuttings, and both by these and seeds in spring. By this simple means, redundancy and deficiencies are avoided, disappointment is prevented on the one hand, and waste of labour on the other. Whilst the half-hardy plants are in beauty, a tasteful eye will easily discover the weak and improvable points, and, by observing the more satisfactory parts, will readily perceive the most desirable future arrangement.

Orchids.—Kinds which have already made their growth and ripened it should be removed forthwith to a cool house. Great care should be taken not to excite such plants into a new growth at this time, as it is much too late to get them properly matured, and the unseasonable draught upon the stored energies of the plants will materially interfere with their next production of flowers. Dendrobiums of the D. nobile character, which are sufficiently advanced in growth, should also be removed to a cooler house, where they should be supplied with a moderate temperature, abundance of air, and scarcely any water, till their stems are ripened and their flower buds formed. Those Orchids which are in a growing state should be placed in the most favourable positions, and encouraged by a high temperature, so long as the strength of daylight will admit of such a course.

Pinks.—Pipings in some cases may now be ready for transplanting; and in doing this not a moment should be lost, as they have need of all the rest of the season to establish themselves in such a manner as to prevent frost from injuring them. If the situations ultimately intended for them are vacant, they should be planted in them at once, as they thereby flower much finer; but if these places are occupied for the present by something else, the young Pinks should be planted 4 inches apart, on reserve beds in an open situation, the soil of which should consist principally of light loam, to which has been added some charcoal dust or charred refuse; a little dung mixed with road drift and soot should be added. The rotten manure from an old Mushroom bed answers very well for this purpose, as it encourages a mass of fibres, and produces a healthy not over-gross development of top.

Roses.—Cuttings of China and some other kinds may now be taken and planted in a close cold frame in a north aspect for three weeks or a month, until they are cicatrised at the base; they should then be taken carefully up, potted in thumb pots, and plunged in a close warm frame with a gentle bottom heat. So treated, they will make nice plants in a very short time, and if kept under slight protection during winter, will fill their pots with roots, and be ready for planting out in April or May.

FORCING GARDEN.

Cherries.—Let no exertion be spared that will contribute to keep the foliage healthy and clean as long as possible.

Melons.—Late plants swelling fruit should be kept moist, but avoid frequent waterings of the soil by giving good soakings.

Pines.—Maintain a high moist temperature, with abundance of ventilation, to plants which are swelling their fruits; and a rather drier atmosphere around those which are in flower. In all the stages except that last mentioned, use the syringe freely, in fine weather, when there is a certainty of the moisture evaporating by the heat of the sun; but, on dull days, depend almost entirely upon the evaporating troughs, and be careful to admit air, to prevent too great a condensation of moisture. If the syringe is used in excess during this month, it is liable to render the soil too wet for the healthy development of the plants. Take care that the bottom-heat does not get too strong for plants which have been recently potted or planted.

Strawberries.—If not already done, pot off layers, and place them where they will receive partial shade until they get established. After that they may have full exposure to sunlight.

Vines.—When late crops have done stoning, the borders, both inside and out, should have a good soaking of liquid manure, to assist the swelling of the fruit. Do not allow the process to go on too sluggishly, if they are of kinds adapted and intended for late keeping. Muscats ripened with the aid of the summer sun, by the end of August, are infinitely superior, both in appearance, flavour, and keeping, to those which are growing on through the next two months. The Vines in a more forward stage, on which the Grapes are just beginning to ripen, should be gradually inured to a freer admission of air; and if it be desired to keep for any length of time those which are quite ripe, they should still have the advantage of a slight shading during scorching weather.

HARDY FRUIT AND KITCHEN GARDEN.

Continue to pinch or lay in shoots of Wall trees, and to gather all kinds of fruit as it becomes ripe.

Celery.—This may still be planted. Some prefer what is called the Scotch plan, viz., beds of from 4 to 6 feet in width. These beds, which often succeed crops of Peas, are trenched two spits deep. The bottom spit receives plenty of raw manure or half-rotten leaves, and the top one old manure. The principal secret in growing very tender and crisp Celery, irrespective of size, is to grow it very quickly by means of plenty of manure and moisture. Whether in rows or beds, the young plants will not succeed without plenty of water.

Parsley.—Some strong, well-curled plants should be selected from the spring sowing, carefully lifted with large balls, and planted at the foot of a south wall. A quantity planted in boxes proves very useful during a long continuance of severe weather in winter, as they can be placed in a cool Peach-house, or similar situation.

Potatos.—Let early kinds be got up as soon as the tops are ripe enough; and let particular pains be taken to pick out all the tubers, as those left in the ground are very annoying in future years. Let the produce be sorted, and if of an approved kind, let all the small and moderate sized tubers be carefully preserved in dry sand or charcoal dust. Be at a little trouble also to test the different varieties, and do not allow your number of sorts to exceed half a dozen, selecting those only which are most liked on table, free croppers, early in coming to perfection, and least liable to be affected with disease.

Spinach.—Sow some for winter in good rich ground, deeply trenched; and, if the soil is of a heavy nature, the operations should proceed simultaneously, as the soil is thereby left in a loose uncompressed state. Avoid thick sowing in all cases; the rows should stand about 16 inches apart, to allow a free passage between the rows for forking, cleaning, and gathering the crop. At the first gathering every other plant should be drawn out entirely, thus giving additional space to those plants which are to produce the late winter and spring supply.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Aug. 10, 1864, as observed at the Horticultural Gardens

August.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 4	2	30.057	30.013	84	47	65.5	64½	62½	S.W.	.00
Friday 5	3	30.117	30.058	89	55	72.0	66	63	S.W.	.00
Satur 6	4	30.068	29.997	89	40	64.5	66	62½	S.W.	.00
Sunday 7	5	30.015	29.862	82	59	70.5	66	64	S.W	.00
Mon. 8	6	29.876	29.84	81	47	64 0	66	64	S W.	.00
Tues. 9	7	29.838	29.775	68	42	55.0	66	63½	S.W.	.56
Wed. 10	)	30.109	29.984	67	37	52.0	64	63	S.W.	.00
Average.		30.018	29.932	80.0	46.7	63.3	65.5	63.3		.06

Aug. 4—Light clouds; excessively dry air; very fine at night.
— 5—Very fine; cloudless; excessively dry, cloudless, and hot; fine; cloudy.
— 6—Overcast; hot and dry; fine at night.
— 7—Partially overcast; fine; very fine; overcast.
— 8—Overcast; very fine throughout.
— 9—Rain; densely and uniformly overcast; cloudy; rain; fine.
— 10—Very fine; clear; quite cloudless; cloudy and fine; cold at night.

Mean temperature of the week ¼ deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending August 20, 1864

August.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 14 .	72.5	50.8	61.6	15	0.79 In.	—	10	4	2	2	13	5	2
Mon. 15..	73.0	50.1	61.6	15	0 61	4	5	4	1	5	9	5	5
Tues. 16..	73.2	51.5	62.3	18	0.80	—	3	4	2	5	4	9	4
Wed. 17..	73.1	50.4	61.7	21	1.12	5	2	1	2	5	8	13	2
Thurs. 18..	73.3	51.6	62.5	14	0.38	3	6	5	3	4	8	8	1
Friday 19..	73.0	51.6	62 3	18	0.42	2	4	3	2	3	10	10	4
Satur. 20..	72.5	50 8	62 6	17	0.45	2	3	3	—	5	10	11	4

The highest temperature during the above period occurred on the 18th, 1842—therm. 92 deg.; and the lowest on the 21st, 1850—therm. 34 deg.

Notices to Correspondents.

Books: *A A.* The book you mention is of no authority.—*J. C.* You will find the Pelargoniums described according to the notions of botanists, in the first volume of "Harvey's Flora Capensis.—*Filix-fœmina.* "Moore's Handbook of British Ferns" is the most convenient and trustworthy of the many publications on the British Ferns. — *Nemo.* "Berkeley's Outlines of British Fungology."

Crested Ferns: *Mary.* The best of the crested varieties of British Ferns are Lastrea Filix-mas cristata and its subvariety angustata, Jervisii, and Clowesii; Athyrium Filix-fœmina Victoriæ, corymbiferum, Elworthii, gracillimum, and multiceps; Polystichum angulare cristatum, grandiceps, and Kitsoniæ; Asplenium Trichomanes cristatum; Blechnum Spicant ramosum; Polypodium vulgare multifido-cristatum; Scolopendrium vulgare glomeratum, ramosum, ramoso-marginatum, laceratum, and cristatum; and Osmunda regalis cristata.

Fuchsias: *N.* Your blooms did not arrive in good condition. A meeting of the Royal Horticultural Society's Floral Committee takes place at South Kensington next Tuesday, at which you might exhibit plants of them.

Hot-Water Pipes: *H J Moule.* There must either be something peculiar in the quality of the water you employ, if paint has no effect in preventing rust on the pipes, or else the paint must be imperfectly applied. Doubtless the open iron troughs are partly to blame. We should recommend that the pipes should be thoroughly dried and cleaned, and then painted, giving time for the paint to harden before the troughs are again filled. Can any of our readers help our Correspondent? Why not try the anti-corrosive paint?

Moss Roses: *Flora.* We have never heard of any real Black or Yellow Moss Roses, and cannot give our fair Correspondent any hope of finding either. Such things did exist formerly—in books, but nowhere else.

Names of Plants. *W T T.* It seems to be Stanhopea inodora, but the middle lobe of the lip is lost.—*T Davis.* Crataegus odoratissima.—*F C.* Some Cœlogyne without leaves; perhaps C. graminifolia.—*E K.* 1, Glyceria fluitans; 2, Juncus compressus; 3, Poa trivialis, in a weak state.—*R S.* Glyceria plicata.—*G M.* Onoclea sensibilis.—*R T B.* 1, Acroclinium roseum; 2, Lupinus Menziesii; 3, Salvia Sclarea.

Penstemon: *J Laing.* The Seedling which you propose to call Mrs. Moore is one of the most pleasing we have seen, and quite distinct. The large white flower-tube marked with rosy veins, and the even border of bright rose on the limb segments, give it quite a marginate character. Though the tube is not above the average length, it is broad and pure white both inside and beneath, while the limb is well spread out, and about half its surface occupied by the white of the throat, and half by the even and well defined rose-coloured border. It will be quite an acquisition.

Royal Horticultural Society. *Robinson Crusoe and many others.*—The state of our health does not allow us to interfere; but we disapprove as much as any one possibly can.

Valves for Hot-Water Pipes: *W B S.* On inquiring amongst those who are familiar with the different kinds of valves now in use, we learn that what is known as the Throttle Valve is the cheapest, and at the same time useful.

Ventilation: *Subscriber.* We know of no special work on this subject, which however forms part of all general instructions in the different departments of garden culture; but we will endeavour to meet your wishes shortly. One chief object of ventilation in forcing-houses is to keep down the temperature, which during sunshine would otherwise be excessive; a ready guide for regulating this will be found in the tables of temperature always provided in gardening books in the instructions for the management of the different structures at different seasons.

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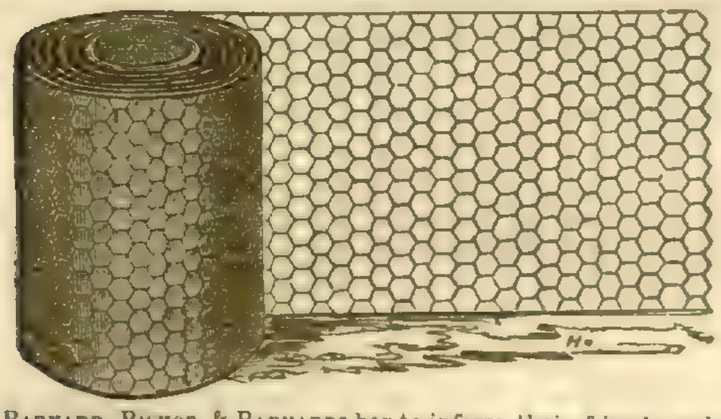

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The Agricultural Gazette.

SATURDAY, AUGUST 13, 1864.

THIRTY inches of rain or thereabouts fall annually upon this island. They wet its surface, which dries again and sends back so much into the air. They find their way by various surface channels, runnels, brooks, rivulets, and rivers to the sea. They sink through its surface to various depths, taking always the path of least resistance to that downward passage which the weight of the water urges, until at length the passage of least resistance leads to the reappearance of this portion of the rainfall in springs at various points below that where it sank into the ground.

Now of these two latter portions of the rainfall various uses are made:—They fill our rivers, which are thus along many miles of their course made available as carriers; they fill our mill-streams, and their weight is thus turned to account as power in various manufactures; they provide drink for our live stock and our population; and they feed our plants.

But the surface on which the rain-water falls is covered with plants. The cultivator of these plants is thus the first owner of this water; and he is more and more awakening to the immense value of this property, and to the greatly enhanced services which, properly directed, it can render to him as a grower of these plants.

Guided by the better knowledge of this subject which now prevails, every man either the owner or the hirer of this surface, is dealing with the water which falls upon it for his own exclusive benefit. Either each estate by itself, or it may even be each field by itself, is so drained that the rain passes through its soil and subsoil for use, instead of over its surface to waste; and after being made useful as a feeder of the plants grown in and on the soil, it is thereafter provided with as easy and as rapid an exit as is possible. The field is drained or the estate is drained, and thereafter the water, done with, is dismissed as immediately as possible.

Now, even as regards an estate, there is room for the use of water after it has done its duty as feeder of the plants. It is then available as a water supply for animals; it is even available for a use once again in irrigating, and so feeding plants upon a lower level. But if a larger view of the economy of the rainfall be wise as regards an estate, still more is an enlarged and general view important on the great scale of the nation generally. Our outfalls are every day becoming more direct and rapid in their action; rain which used to drag sluggishly downwards through meandering streams, runs straight out to the sea. Floods, rather as the result of this arterial drainage than as the result of parallel subsoil drainage, follow excessive rainfalls more immediately than they used. And, unexpected as it may be, the influence of agricultural drainage becomes apparent on our springs, our mill streams, and our rivers. It is of great importance that an inquiry be made into this subject, in order that the truth of the matter may be known before the owners of estates shall have permanently injured their own interests by a too narrow confinement of their views to the mere agricultural object of land drainage. And still more is it necessary, that the owners of land may not have permanently injured the general interests of the island and its population before Government shall have lost all opportunity of interference.

It is therefore satisfactory that one so well known as Mr. BAILEY DENTON, C.E., in connection with the subject, should have addressed the following memorial to the Home Secretary. It is to be hoped that his representation may be listened to. The following is the memorial:—

I beg permission to bring under your notice the necessity of an enquiry into the effect of under-drainage on our river systems, and generally into the larger questions of the water economy of the country.

Such an enquiry would elicit information on several objects of great national importance, and would go far to reconcile different views prevailing with individual land owners in the drainage of their estates, which at present produce derangement and general loss owing to contradictory action.

The experiences of the last 20 years lead to the following conclusions:—

1st, That the general effect of under-drainage as practised, is a gradual though slow decrease of our perennial water supply.

2d, That the prevailing mode of under-draining by its uniform application to soils equally wet but varying in character—*i. e.*, the retentive clays and the free water-bearing beds—is productive of drought at certain times and of floods at others.

3d, That under-drainage, when appropriately applied to wet soils of these various characters, is capable of becoming a means of improving the perennial supply of our rivers, by securing a more regular and increased flow instead of sudden discharges by periodical cessation, as at present.

4th, That certain districts subject to seasonal drought are capable of being supplied with water during the summer and autumn by the storage of the water discharged from drained land during winter and spring.

5th, That many villages of which the inhabitants suffer greatly for want of water in dry summers are capable of a like supply.

6th, That arterial or district drainage, as now conducted under the Land Drainage Act, 1861, is calculated to produce derangements in our river systems of the worst character, inasmuch as certain unconnected portions of our valleys are being acted upon without regard to the effect of such partial work upon the lower portions of the same valleys.

7th, That arterial or district works of drainage are carried out by local commissioners without due provision for appropriate under-drainage, according to the variety of soils.

8th, That although the Inclosure Commissioners are required to fix the limits of drainage areas formed under the Act of 1861, and to sanction the mortgaging of the rates, they really have no influence on the character of the works themselves, an anomaly productive of much evil, inasmuch as an authoritative sanction is seemingly given to works upon which no opinion whatever is exercised.

9th, That although entailed estates are charged with the cost of under-drainage, the efficiency of which is dependent on easements for outfall through adjoining properties, in but few instances does any legal right to such easements exist, owing to the great cost and difficulty of obtaining the right.

In addition to these conclusions it is observed, that as the quantity of water in the rivers during summer gradually becomes less from drainage or other causes, the influx of the refuse of towns becomes greater.

I may state too, as a coincident fact bearing upon the subject, that the subterranean supply or springs of the country were never so low within the memory of man as at this moment.

The present time would appear especially opportune for the suggested enquiry, inasmuch as the Lord Chancellor's Act "the Improvement of Land Act, 1864," following "the Land Drainage Act, 1861," will lead to a great extension of land drainage, and with 20 millions of acres in Great Britain still to drain, the accumulating effect will swell into one of great magnitude.

MR. ALDERMAN MECHI'S account of the losses amongst live stock which he has sustained, as he at first supposed owing to adulterated or bad cake, but as he afterwards concluded owing to the indigestible food which they find in his fields, has

brought out many parallel cases, or cases which appear parallel to his. Amongst others, Mr. Wallace, of Houghton, Stockbridge, Hants, describes his experience, and we give his letter at length, as taking the other view of the case; and arguing that it is not benty Grass or indigestible field food, but bad cake and indigestible bought food that has done him mischief. He says—

"I have myself been a great sufferer in my lambs and the symptoms were very similar to what Mr. Mechi describes. When my lambs were taken ill I was at a loss to understand it, never having seen anything like it before. I changed the food, the produce of the farm, without any benefit (my lambs have been eating ½lb. Linseed cake per head per day). I then came to the conclusion that the cake had something to do with it, especially after chewing it, and trying one ounce of cake with 6 ounces water, and finding it did not jelly as good cake ought to do. I stopped the cake, and within a short time I could distinctly see an alteration for the better. I then sent three lambs alive to the Veterinary College, Camden Town. When they died, on being examined *post mortem*, they were reported to have died from inflammation of the mucous membrane of the intestines, caused by something they had been eating; in the meantime I sent a part of the cake to two eminent chemists, and having read Dr. Voelcker's lecture upon the adulteration of oilcake in the last number of the *Royal Agricultural Society's Journal* for 1863—where he mentions that the analysis does not tell everything, as a clever oilcake maker can make a cake to analyse well, but still be composed of something very different from pure Linseed—I caused it to be examined thoroughly for adulteration. Both analyses make it out a fair average cake. One chemist reports it as being made from rather dirty seed, and that it is not a *genuine* or *pure* Linseed cake, but contains starchy refuse, bran or pollard, and *nut cake;* and adds, the danger of using such a mixed cake is, that it is apt to get mouldy, and sometimes acts like a rank poison. The other says it is not made from pure Linseed; it contains a quantity of earth nut, a small quantity of Rape, and some starch of a cereal, apparently Wheat, which is probably due to the addition of some bran or other refuse. It is also acid to test paper, and has apparently been made of seed which has undergone some fermentation, or has been damaged in some other way. I have a strong idea that such a mixture is sufficient to cause irritation of the intestines in a young animal, a lamb for instance, and if continued for some time to bring on inflammation. If the cake was not mouldy to appearance, might not the bran or nut cake be so before being mixed with the linseed? Dr. Voelcker makes mention in the lecture I referred to of the dangerous character of some of the nuts. (It is not long ago since I saw in the papers a case where a number of boys were poisoned by eating some peculiar sort of nut they found in bags at a railway station.) Within a district of 10 miles I know of no less than a dozen cases where parties have suffered in a similar way to myself. I have seen and corresponded with them, and find they have all been using linseed cake from the same manufacturer as I have. Some have used cake to one part of their lambs, and to the other part none. With cake they died, without it they did well. One person gave to some of his lambs cake alone, and to the rest cake and Beans; when cake alone was used then he suffered most; in all the several cases the lambs were feeding on a variety of other food. My immediate neighbours some of whom have used no cake and have not suffered, others have used cake from different manufacturers, and their lambs have done well. I have heard of one person who has lost a number of lambs from eating cotton cake, and he tells me they recover after stopping the cake. For my own part I never considered cotton cake fit for young animals. I have no doubt young animals in good condition, and hot weather, would be more likely to bring out the bad effects of cotton cake. Some of Mr. Mechi's calves were at home cool and quiet; this had something to do with the difference of their doing from the others at pasture. If his calves were suffering as he mentions, it would take some time after withholding the cake until they improved, and even then some that were affected would die; as I found to be the case with my lambs, for I believe out of 360, all eating this Linseed cake were affected more or less. You are quite at liberty to make any use you please of the above information, as it is a matter deeply concerning agriculturists."

On this point we quite agree with Mr. Wallace, and hope that the subject will not be allowed to drop, but that any other of our readers who have had anything like his experience will relate it.

Mr. Mechi adds, nevertheless, "I am decidedly of opinion that the losses have not been caused by cake feeding. My lambs and ewes are all getting cotton-cake daily, from half a pound to one pound each, and do well. They are on red Clover, the first crop having been mowed for hay. The field was then top-dressed with shed manure. Had the first crop been fed with sheep I should expect death to many lambs. Sheep must have plenty of water during this hot weather, and if possible some shelter from the sun's rays during the extreme heat of the day. Fortunately I have some abundant and never-failing springs from my deep drainage."

The Artificial Drying of Grain is one of the means that have been adopted at different times, and with varying success, for its preservation. It is well-known that most organic bodies, if kept in a state of dryness, can be preserved intact for an indefinite period. The moisture usually contained in the interstitial spaces of organic matters, being once driven off, can no longer act as a mechanical and chemical furtherer of decomposition.

Wood, fruit, grain, and similar substances, have been kept for a very lengthened period when once their natural moisture has been driven off. Many examples can be cited. We may mention as one, the discovery in 1707, at Metz, of a large quantity of Wheat, placed in 1528 in a subterranean granary. The Wheat was so well kept that the bread made from it, two centuries after its being reaped, was found to be excellent. The grain had probably been thoroughly dried in the sun before being stowed away. The application of heat has also the effect of hardening the epidermis of grain; it is thus not so easy of access to the moisture of the air, nor so liable to the attacks of insects. The *absolute* weight of grain is diminished by the application of heat, while its specific weight is increased. When dried Wheat, however, has been ground to flour and made into bread, the water it had lost is again absorbed.

According to a rather recent number of the Scientific American, "thousands, perhaps millions, of bushels of Wheat are annually injured by water and heating when transported on our lakes and canals. Such Wheat sells in New York and other places for a very few cents. per bushel." A practical plan for drying grain artificially would give us the power of seasoning it almost like seasoning wood; of getting rid of its natural humidity, which continually predisposes it to fermentation; and at the same time we should have a means of destroying the germs of its peculiar animal and vegetable parasites, the development of which follows, step by step, the progressive stages of the process of fermentation.

The great advantage of a good plan for drying grain artificially consists in its being a quick and cheap substitute for the various complicated mechanical and chemical means that have been adopted at various times for keeping corn from fermenting in the granary.

The records of the Patent Office show that several patents are built upon the phenomenon that grain always begins to decompose from the centre of a heap, while the outside is left intact. The grain at the outside is kept dry by the continual renewing of the air. The moisture is thus carried off from the outside of the heap; but if the inside be wet it will ferment.

Amongst the purely mechanical means used for preserving grain are those of shaking up and changing the position of the heaps by means of shovels. The late Mr. J. G. Bodmer, formerly of Manchester, proposes in the *Journal of the Society of Arts*, 1846, page 41, several plans for keeping grain in a dry state. He advocates mechanical apparatuses, on a large scale, by which it can be stirred up; and one of his plans consists in the use of an endless screw, or a Jacob's ladder which is traversed through the grain. Other means have been proposed, such as hollow columns, hoppers placed one above another, revolving cylinders, and similar expedients, for bringing the grains into motion at intervals, as substitutes, in fact, for hand labour. At certain ulterior stages in the state of the grain these plans would probably do more harm than good, as they would then favour the increase of insect life.

Plans were proposed in France in 1828 and 1852 for injecting cold air into stored-up grain. Thus, instead of the grain being moved through the air, as by the preceding means, the air itself is driven through the grain, and with a similar more or less efficient result.

An arrangement that has been used from immemorial times in southern climates is that of placing the grain in subterranean places, impervious to water, and hermetically closed, called *Silos* in French and Spanish. The grain is thus kept at a low and unchanging temperature. The preserving action of the *Silos* is accounted for by some upon the observation that the outer grain germinates from the moisture of the ground, and that it thus forms a hard shell several inches thick. The grain at the inside is stated to be preserved for years by the interstitial spaces between the grain getting filled up with carbonic acid gas, evolved from the decomposed outside shell.

Mr. W. Bridges Adams, in his book entitled "Roads and Rails," proposes (p. 208), to store grain in "large cast-iron canisters, built of plates—like a gasometer—through which warm air might be pumped till it was quite dry, after which it might be hermetically sealed, to the exclusion of all vermin. A small opening at top would serve to fill it, and a draw-off pipe at bottom to empty it." He thinks that grain might be preserved for an indefinite time in this way. He relates that in South America grain is stored up in the skins of oxen, taken off entire, and made into a hard dry bag, each of the shape of an ox.

Amongst the many chemical means that have been used to some extent for preserving grain, are chlorine and sulphurous acid gas, injected into the grain for destroying insects. This was patented in 1808. In 1845, carbonic acid gas was proposed both in England and France for the same purpose. The injection of chlorine was again patented in 1852 in England. Chloroform has also been employed. These chemical fumigations must evidently in some instances injure the grain, and must in most cases be very expensive and difficult to apply.

The mechanical means are all evidently founded on the principle of keeping the grain dry by renewing and changing the moistened air as much and as often as possible. In what may be called the *stationary* plans, this is obtained by filling the grain into sacks, and these sacks are placed as far as possible from one another. Or the grain is laid in thin layers, divided by occasional furrows. It will be seen at once that such plans will take up a large amoun of room.

The above may be considered as a short statement of the advantages that would be derived from a good plan for drying grain artificially. The problem is, however, involved in some difficulty. A grain of Wheat—taken singly—is by itself a bad conductor of heat, through its own molecular structure and composition; while this non-conductibility is increased in a mass by the air filling up the interstices between the individual grains. It thus becomes a very difficult matter to give to every grain heated the same temperature. Too high for some, the heat destroys many of their useful properties; too low for others, an insufficiency of heat can neither affect the egg, the larva, nor the insect; while the moisture natural to grain is also left undisturbed. Of course, if only a slight proportion of any quantity of grain intended to be used as seed gets torpid, and its life destroyed, this is sufficient to ruin the whole lot as seed. Authorities appear to differ as to the limits within which grain can be heated without injury. According to Monsieur Doyère, grain can support from 50° to 100° centigrade (122° to 212° Fahrenheit) without any greatly injurious effects. At about 70° centigrade, however, the gluten of the grain is cooked, and its germ destroyed—an effect similar to that of the same temperature on the albumen of an egg. The eggs of the parasitic insects peculiar to Wheat are destroyed by a temperature of 60° to 65° centigrade, and this heat is never found to injure the germinating properties of Wheat. These degrees of heat evidently vary on account of the heat acting on the grain being more or less absorbed by the greater or less humidity contained within it.

In any case, it is found that the germinating properties of Wheat are sooner destroyed than the qualities required from it in making up bread.

Another of the difficulties to be encountered in drying and storing Wheat consists in its hygroscopic nature, to which we have alluded above; a difficulty varying with different Wheat, being more or less as the Wheat is softer or harder.

Some time after heat is applied to the grain it begins to sweat, and after the utmost temperature that can be given by the apparatus is reached, the air surrounding the grain gets saturated with the amount of humidity proper to this degree of heat, and no further moisture is evolved. It then becomes necessary to drive off this moisture, and to cool down the grain.

The difficulties to be met with in drying grain are such that there is at present no generally successful apparatus for this purpose, whether simple or complicated.

To recapitulate; the points to be considered in the construction of an efficient apparatus are:—1st. A certain temperature must be given to the grain, high enough to kill the germs of the parasitic insects, not so high as to destroy the

life of the Wheat itself; and a certain temperature only varying within narrow limits is thus required.

2nd. Provision must be made to heat each grain equally, and to counteract the natural non-conductibility of the Wheat.

3rd. The steam evolved from the grain itself must be driven off.

It will be instructive to examine how these conditions have been fulfilled in the numerous plans, patented and otherwise, that at various times have been brought before the public; and a slight description of these plans, with the dates, will give the history of the attempts at drying grain made in the different countries.

In England, where grain is seldom stored for any great length of time, nor exported to any extent, there is no great necessity felt, save and except in wet harvest years, for any system of desiccating grain. The very great number of patents taken out within late years would seem to negative this, but none of these plans appear to be in successful operation, most of them being probably either scientifically, practically, or commercially deficient.

The French appear to have achieved most in this direction, although none even of their plans as yet seems to be quite successful. The Americans, favoured probably by their drier climate, have not attempted much in this way, as there are only about half a dozen patents taken out in Washington for grain-drying apparatūs—a relatively small number for a country so prolific in patents. For want of a complete record of German invention, it is difficult to ascertain what has been done in that country.

Of course the cheapest and best plan for drying grain and flour, when it can be carried out, is that of submitting it, in thin and furrowed layers, to the conjoined influence of the sun and air. This, however, can only be carried out in a southern climate.

The different means proposed for artificially drying grain, may be roughly classed under the following heads:—1st. The centrifugal apparatus or hydro-extractor arrangement. 2nd. The stove or kiln principle. 3rd. The employment of the desiccating action of artificial gases, steam, superheated steam, of heated air, or lastly of air dried by exhausting it through either common lime or chloride of lime. 4th. The employment of the desiccating action of a metallic surface, which is heated with hot air, steam, superheated steam, gas, or hot water in indirect contact with the grain to be dried.

Many of these patents are simply absurd, while very few show a complete appreciation of the requirements of a grain drying apparatus.

The hydro-extractor or centrifugal plan is, as a rule, only used when the grain has been washed. It can merely get rid of water which is in mechanical union with the grain.

The stove, kiln, or retort, plan, is embodied in several French and English patents.

We may mention No. 97, year 1853, and No. 497, year 1854. Different arrangements upon this idea will be found described in the official "Descriptions des Brevets," *vide* Vols. 18, 72, 74, and 76. There are several general objections to this arrangement. It is expensive, it requires much room, and the grain gets unequally heated, unless well stirred up and moved about.

Kilns are used for torrefying grain for malt, or for roasting coffee on a large scale. These are very different operations to drying grain for storing, and any roasting action on Wheat detracts from the sweetness of the bread.

What we have termed the third principle, or the use of the direct action of desiccating fluids, may be divided into three kinds:—1st. In which the grain itself is moved against the desiccating fluid agent. 2nd. In which the fluid used is itself in action, and is injected into stationary grain. 3rd. In which the above two principles are combined into one apparatus.

As instances of the first kind of apparatus we might point to patents No. 97, year 1853; No. 614, year 1856; No. 2845, year 1857; No. 2364, year 1858, &c. Bringing the grain in motion against the desiccating fluid agent must evidently involve some complication. Not merely is an apparatus required for generating the heat, and necessarily one for keeping the grain in motion, but also in some cases an arrangement has to be constructed to inject the heated air. If a stove or kiln be used, almost all the inherent defects of this apparatus also come to bear upon this case.

The following patents taken out in England come under our next subdivision:—No. 11,947, year 1847; Nos. 1288, 1489, and 1882, year 1855; No. 2632, year 1857; No. 1530, year 1858; No. 2179, year 1860; No. 1436, year 1861.

The injection of carbonic acid gas, or of any other artificial gas into corn, is more to be used for killing the vermin in grain already far gone than as a preventive measure. Such an application is scarcely a thing for everyday use, and would be likely to give an unpleasant taste to the corn. The use of steam, or of superheated steam, although specified in several patents, appears absurd. If steam be taken at such a pressure that it can force itself through the grain, it must cook the gluten; at a low pressure, the steam would be condensed within the grain, thus leaving it in a worse state than before. Using air dried by chemical substances is a very scientific way of drying grain, but its action would probably be but limited, and in many cases the drying of air by such means would be scarcely practical.

With regard to the application of heated air in direct contact with grain, it will be seen that this plan has great difficulties in its wake. As is well known, the pressure of atmospheric air is only very slightly raised by a temperature of even 212°—so that it could not be injected by its own pressure. On the other hand, if the air be heated and injected by mechanical means, on its first contact with the grain it would probably give out too much heat. It is likely that this would be the case with Stanford's patent (No. 1530, year 1858) unless the air were admitted at a low pressure by the grain being placed in thin layers, as on a floor. In Delezenne's patent, taken out in France and England in 1854, and 1855, carbonic acid gas and heated air are forced into cases. There must be some difficulty in getting the gases to permeate through the whole contents of the case.

Instances of our third subdivision of the general plan of bringing air and gases in direct contact with the grain, will be found in Patent No. 2005, year 1859; and No. 3159, year 1860. Messrs. Newton, Messent, and Doyère have taken out similar patents in France, in the years 1838, 1853, and 1854 respectively.

The patent of Monsieur Doyère has been carried out on a large scale in France. The main features of his invention consist of a cylinder formed of wirework, open at its extremities, and on an incline, like a bolting drum. One or more of these cylinders are placed in a brick chamber communicating with a second chamber, containing a cast-iron stove and pipes. The heated air enters the chamber holding the wirework cylinder; the latter is revolved, while it receives the grain by the upper end; and empties it, after a passage of 15 or 25 seconds' duration, into a wooden case. The grain quickly passes through this case, which is provided with a thermometer—the guide of the operator. This thermometer gives the amount of heat of the grain at its exit from the cylinder. This amount of heat must not transgress the fixed limits of 57° to 62° centigrade. If the temperature be higher or lower, the fire must be raised or slackened; the cylinder has to be turned quicker or slower; the men must alter the communication between the two chambers; or more or less grain must be let in during the same time. The necessity for these manœuvres will be evident from what has been said above; the difficulty of practically carrying them out will be apparent. In addition to these objections, as the screenings drop through the wirework cylinder during the passage of the grain, they get charred, giving out an unpleasant taint to the Wheat, and causing discomfort to the attendants.

We now come to the last principle—that of using a heated metallic surface. This principle has been adopted in patents Nos. 32, 471, 1040, 2373, year 1853; No. 1479, year 1854; No. 2665, year 1855; No. 2008, year 1856; and Nos. 892 and 1589, year 1861, &c. The use of a gas flame on a metallic surface would give too much heat, so that we may dismiss this, although several inventors have attempted this plan. A kiln for roasting malt could, however, be heated with great regularity by means of gas. Superheated steam is also liable to the same objections. Hot water is not so light and neat in its application as steam. Heated air is unpractical and is dangerous to the grain, its heat as it is difficult to regulate, from the tendency of heated air to absorb so much caloric without changing its pressure; the plan does not give us such a ready means of keeping fire heat within due bounds, as compared with steam. The patent described in the specification No. 892, year 1861, may be regarded as the best and latest sample of this principle. The inventors, Messrs. T. Don, T. Smith, and L. Horsfield, describe their invention as follows. The steam, superheated steam, or air, are made to pass through pipes. These are placed in a case. The grain is caused in its descent to pass in contact with the heated surfaces of the pipes, and is thus dried. The moisture is drawn off as fast as it is evolved by means of a fan. The grain is stirred and moved about through the revolution of screws.

This arrangement is doubtless very efficacious, but the fan and the Archimedian screws must consume much power, and the whole is probably a very expensive apparatus.

There is a plan for drying grain which has been adopted to some extent in France, and with success; but which does not seem to have attracted much attention in England, nor has it been patented in this country. It is that of submitting the grain in layers of barely 1 inch depth to the action of exhaust steam. The small depth of the layer allows each separate grain to undergo the same degree of heat within a given time. It has been patented by Monsieur Malleval in France during the year 1854, and is described in vol. 39 of the official "Descriptions des Brevets d'Invention." It consists of a flat casing of copper or tin, with a double covering. The grain is between these casings, and is thus heated on both sides, as the steam traverses the apparatus from top to bottom, where it is let out by a tap. The grain is let in through a hopper placed at the top of the apparatus. There is a slide or damper at the bottom of the casing, by which the outflow of the grain may be regulated. The grain, on making its exit out of the apparatus, being hot and damp, is caused to fall into contact with the blast of a fan, by which means it is cooled down, and the moisture driven off. The grain, after being shovelled into heaps, is left for a few hours, and is then stowed away. The grain is stated to be heated to 60° centigrade (140° Fahrenheit), after being two minutes in the apparatus; 70° C. (150° F.), at the end of four minutes; and 75° C. (165° F.), at the end of 10 minutes. A small independent apparatus could be made of a small boiler containing about 3 gallons of water, and a case measuring about 1 square yard. With this arrangement the exhaust steam and condensed water could be returned back into the small boiler. An apparatus like the above, holding 3 bushels, would take to fill and empty it about two minutes. The grain would remain in the apparatus barely three minutes, and about 3 bushels of Wheat could be dried every five minutes.

It is evident that this plan could be carried out on a larger scale, and in a different shape; while peculiar facilities would be afforded in this system for drying grain with portable apparatuses, which could be applied at once to the threshing machine. *P.*

DAIRY FARMING.—No. III.

[The following are extracts from the third lecture of the series on Dairy Husbandry, lately delivered at the Royal Agricultural College, by J. T. Harrison, Esq., of Frocester Court, Stonehouse, Gloucestershire.]

1. The stand point from which we have as yet viewed the subject of Dairy Farming has been that occupied chiefly by the landowner and the public at large.

We have seen that the land occupying the surface represented by the secondary formations on our geological maps is intrinsically the richest in our islands, whether it be compared with the primitive and transition or with the tertiary series; that it consequently commands in a very marked manner the highest rental, but that, along with this maximum of value, there is frequently a minimum of attention paid to its permanent improvement.

From the state in which dairy farms are let, the tenant is frequently put in a wrong position from the commencement of his taking. If there is any truth in the unfavourable comparison so frequently drawn between the arable and the dairy farm, we may trace the cause of this to the peculiar circumstances in which they are respectively placed. In the case of the latter there is frequently hardly an acre of arable land attached to his farm, and possibly not a shed for his cattle, his farm undrained, the labour per acre reduced to a minimum—milking morning and evening, hay-making, feddering in the open fields, with a little hedging, ditching and ground beating during the winter, attention to have the cows duly in calf, and a little extra care during calving, demand but little labour and little forethought. Abundance of time is left for attending every market within many miles, where drinking and smoking enervate the mind and tend to lower the man to the level of the senseless beast which is under his care. According to Mr. Acland's description of the dairy farms of Somersetshire in 1850, "The pail (that is the cheese) pays the rent; the dairyman lives on his bacon, calves, and some butter, to the great injury of the cheese, their poverty rather than their will consenting; a few acres of land out of reach of the floods growing a little corn for their own consumption." A system that should lead Mr. Acland to represent "the men's labour as confined to seeing the cows milked at an early hour in the summer," and to say "it is a sad sight to see a man standing by doing nothing while his wife and daughter are turning many times in the day a weight of above half a cwt.," has surely something radically wrong in it. This is, however, by no means universally a true picture; and taking the whole of the dairy districts, it is to be hoped that it is the exception and not the rule. But when it is true, where does the fault lie? Not with the poor farmer, who, with less education it may be than many of the artisans in our towns, has no resources within himself and no spur to quicken his intellect; but with the system, which may produce a maximum of rent with a minimum of outlay on the part of

the owner, and may maintain a small class of farmers living very little if at all better than the labourers they employ. It is a system, however, which has not a spark of the spirit of improvement in it, which with the least labour also results in the least produce for the good of the country, and only tends to demoralisation and a miserable system of semi-serfdom which maintains a degraded tenantry.

2. I shall suppose, then, that we have taken a dairy farm of 600 acres under a landlord anxious to see it improve and ourselves prosper, thoroughly drained throughout, with ample but not extravagant convenience for men and stock, on a lease for a sufficient period to justify our laying out money in improvements, 400 acres of the farm being in Grass and 200 under the plough.

First, then, as to the Time of Entry.—A spring taking for dairy farming is undoubtedly the best both for outgoing and incoming tenants. I take it to be a wise provision that the amount of money to be paid to and by the outgoing and incoming tenant respectively should be reduced to as low a point as possible, so that the incoming tenant shall have his capital free to stock the farm properly, and not have a large sum of money locked up during his tenancy, and that the landlord may not have the farm thrown on his hands with a heavy sum to pay to his outgoing tenant, sometimes with the option of retaining him against his will, or of sacrificing this large sum before he can obtain another tenant.

In the spring the large supply of hay, straw and roots, which would have to be taken to at Michælmas, will have been consumed. Provision however should be made in the agreement between landlord and tenant for such a quantity of these to be left and taken to by the new comer as shall be required by his stock till the Grass is sufficiently grown to carry them. Supposing we had to provide for stock equal to 3 acres per cow, and that we bought them in from time to time, so that we had 100 cows, or 200 cows from the 6th April to the 10th of May to keep five weeks, we may estimate the quantity thus:—

Hay.—100 Cows × 5 weeks × 1 cwt., = 25 tons of hay.
Straw for litter.—„ „ } = 125 tons of straw.
Straw for thatching }
Roots.—100 cows × 5 weeks × 8½ cwt. = 90 tons of roots.

These we should have to take at a consuming price—which leads us to consider the payments to be made to the outgoing tenant. Now, the consuming value of hay, straw, and roots, is a very interesting and important question. I have taken some pains to arrive at an accurate estimate of them. From materials I have collected, I find that on rich dairy land where no young stock is reared, it requires 3 acres to maintain one cow, the Grass on 1½ acres being mown and made into hay. This agrees with Mr. J. Morton's report on the dairy farms near Whitfield in Gloucestershire, as he found that 1011 acres (33 only of which were arable), maintained stock equal to 358 cows, or nearly 3 acres per cow.

Hay.—From observation and the opinion of good judges, it appears that 25 cwt. of hay per acre may be taken as fully the average crop. If we take the autumn Grass to be equal to 3-fifths of the Grass mown, which is probably not far from correct, we have some data for calculating the consuming value of a ton of hay.

25 cwt. on 1½ acres mown, gives 37½ cwt. for the winter use.
Grass consumed by the cow during the summer months on the other 1½ acres, = 37½ cwt.
And 3-fifths of both these together (viz. 75), = 45 cwt., consumed during the autumn—or the whole produce of the 3 acres of Grass land required for one cow's keep equals 120 cwt., or 6 tons of hay.

The value of a cow's produce in this district may be taken at 15*l.* on an average, from which deducting 3*l.* for casualties, depreciation, expenses of attendance, milking, dairy utensils, marketing, &c., we have 12*l.* as the consuming value of 6 tons of hay, or 2*l.* per ton. That is the sum the cow will return to the farmer for his ton of hay. The Dorsetshire farmers are accustomed to let out their cows to dairymen at from 8*l.* 10*s.* to 10*l.* per cow per annum. This seems a low rate, but much depends upon feeding, &c., and this system by no means conduces to a maximum production. It is rarely the case that farmers purchase hay except they are driven to it, or can get at it about 2*l.* per ton to be consumed on the premises. When it is sold to be removed the price immediately rises, and the hay merchant, not the farmer, becomes the buyer.

Roots.—It appears that 20 lbs. of hay, or 120 lbs. of roots have been found sufficient to maintain an average sized cow in store condition. This gives the value of roots one-sixth of 40*s.*, or 6*s.* 8*d.* per ton, which is not probably far from their consuming value. The Oxford Farmers' Club, after a discussion upon the subject, agreed that 7*s.* was the value of a ton of Swedes.

Straw.—I have found that 1 cwt. of good straw per week, and 3½ cwt. of Mangel will keep a cow in good store condition, equal therefore to 120 lb. of hay. Thus—

120 lb. of hay, at 2*s.* per cwt. = 2*l.* 2*s.*, equal to	3½ cwt. of Mangel, at 6*s.* 8*d.* per ton	£1 2
	1 cwt. of straw, at 1*s.* per cwt.	1 0
		£2 2

So that 1*s.* per cwt., or 1*l.* per ton, is about the consuming price of straw. We have then for future calculation—

	d. per lb.
Hay worth 2*l.* per ton, consuming price	= ·215
Good straw worth 1*l.* per ton, consuming price	= ·108
Roots worth 6*s.* 8*d.* per ton, consuming price	= ·036

Summary of Hay, Roots, and Straw to be kept for Incoming Tenant.—Carrying out the quantity of the materials, we found we should require to take to, at these prices, things amounting to—

25 tons of hay	at 2*l.*	=	£50 0
10 „	straw at 1*l.*	=	10 0
Say 90 „	roots at 6*s.* 8*d.*	=	30 0
			£90 0

Grass not Eaten off.—Besides this in the way of food, the outgoing tenant may perhaps claim for Grass left on the ground. This may amount to about 2*s.* per acre over the Grass land, or say 50*l.*; it is certainly better to pay this than to have had the land trodden down by cattle, consuming it up to the day of entry.

Hedging and Ditching.—As to hedging and ditching, I think a farmer should be bound to do what was absolutely requisite up to the time of his leaving without charging for it.

Manure Hauling.—It will be to the advantage of the incoming tenant that his predecessor hauled upon the land a large quantity of manure during the winter months, and either spread it on the Grass grounds or formed heaps ready for roots on the arable land. The labour expended on these operations should be willingly and liberally met. The amount will depend upon the position of the farm buildings, and the part of the farm to which the manure was hauled Supposing that half the manure made during the winter was hauled out, it would amount probably to 50*l.*

Tillages.—Again, all the tillage since autumn—and the seed sown should be paid for—the expense of sowing the Clover, harrowing, &c., and I think half a year's rent upon the Clover-lay, rather than have it eaten off.

Course of Cropping.—In estimating this we may take the arable land to be farmed on a double four-course system. We should then have 50 acres in preparation for roots, thus will require deep ploughing—three horses not doing more than ¾ of an acre a day, at a cost of about 12*s.* per acre—100 acres in white crops, once ploughed, at 10*s.* per acre; and 25 acres ploughed, for Beans, costing about 15*l.*; we have then to pay for hauling manure and tillage—

Preparation of 50 acres for roots	£30
„ 100 „ Wheat, &c.	50
„ 25 „ Beans	15
Sowing Beans, Wheat, &c.	25
Loading and hauling out manure	50
	£170

Wheat seed	100 acres at 1½ bushels = 150 bushels at	7*s.* ..	£50
Beans ..	25 „ 3 „ = 75 „	6*s.* ..	22
Clover seed	25 „	.. ..	10
½ year's rent on Clover, 25 acres	.. .. ..	..	28
„ Wheat land, 100 acres	.. ..	..	100
			£210

These items collectively amount to—

Hay, straw, and roots	£90
Grass keep	50
Acts of husbandry, dung hauling, &c.	170
Clover and Wheat seed, &c., and allowance of ½ year's rent on Wheat land, &c.	210
	£520

Horse Labour.

	Acres		Days Hor.	Days		£	£
For roots	50 ÷ ¾ =	say 70	× 3 =	210	for 1 horse at	⅐ =	30
Wheat	100 ÷ ¾ =	140	× 2 =	280	„	„ =	45
Beans	25 ÷ ¾ =	35	× 3 =	105	„	..	15
Sowing	125 ÷ 8 =	16	×10 =	160	„	..	24

Manure Hauling.

Say 200 cows for 10 weeks = 14,000 days × 1 = 700 tons ÷ 35 = 20 days × 10 = ...	200	„ .. 30
	955	£144

Or nearly 100 days for each horse; the outgoing tenant would have to cut chaff, haul Wheat, &c., for himself, besides what he could charge to the out-going tenant

I do not think that on a dairy farm, unexhausted manures and cake need to be taken into account. The land is generally rich in mineral manures, and the quantity of stock kept should ensure a plentiful supply of farm-yard manure, so as not to require the purchase of much artificial manure.

3. LIVE STOCK.—We should have next to provide the live stock, so as to have them in good time for the Grass.

1*st*, *Horses.*—We should require 10 good horses, which would cost about 30*l.* each. Two of them, say useful mares to breed from and keep up the stock. This may appear a large number, but during haymaking and harvest-time they would not be found too many.

2*d*, *Sheep.*—The farm should carry a flock of 100 breeding ewes through the winter, which, with their lambs, should be sold off fat every year. This is better than keeping a flock constantly, since on the rich Grass they are very subject to the foot rot. These would be bought in at about 50*s.* each.

3*d*, *Cows.*—I shall not enter here into the question of what description of cattle it would be well to buy, although that is of the utmost importance to decide upon at once, as I shall in another lecture call your attention specially to that subject, and it would not materially affect the question of cost.

It would be well however to determine here which of four systems we determine to adopt, viz.:—

1st, Not rearing any stock, but purchasing in season heifers when necessary.
2d, Not rearing, but purchasing stirks to come in at three years old the following spring.
3d, Rearing calves to come in at three years old.
4th, do. do. two do.

The *First System* requires great judgment in selecting animals likely to milk well. The heifers wanted may be picked up at private sales, but must frequently be obtained at markets, accompanied with the risk of introducing disease into the herd. On this system there is no object in purchasing good bulls. When excellent judgment in selection is brought to bear it is probably profitable on the richer land, but there must always be considerable risk.

The *Second System* is open to the same objection as the first, with the additional one that it is not so easy to form a reliable opinion of the probable milking qualities of the stirks. They can however generally be purchased at a less price than the dairy farmers can rear them.

The *Third System* is that most usually adopted, and it has many advantages over the previous ones. I have found that superiority in the milking properties of cows is hereditary.

For instance, six cows of one family in my herd gave an average of 636 gallons each per annum in 1862 and 1863:—

2 cows of another family averaged in 1862 and '63 733 gals. each
2 cows „ „ „ „ 735 „

Evidence of the contrary is not wanting, but as the inferior milkers are sold off as quickly as possible, and I avoid weaning calves from them when I know it, I am unable to adduce evidence so distinct.

It is thus evidently the interest of dairy farmers to wean calves from the best milkers, and to weed out the bad ones.

It is also very important to use bulls the produce of good milkers. I have 21 cows in my pack got by Herald, a thoroughbred bull, the son of Honeysuckle, which belonged to the late Colonel Kingscote, and was remarkable as an excellent Short-horn milker; these 21 cows gave on an average in 1862 and 1863, 642 gallons per annum each.

The rearing of his own stock enables the dairyman to improve his herd as milkers, and by care he may do this, and increase their value when turned off to be grazed, for nothing is more marked at sales by auction than the decidedly increased value put upon animals that show a little breeding.

The *Fourth System* is adopted by a few, and seems to offer great advantages. My experience is that heifers brought into the dairy at two years' old, if well grown, will return from 8*l.* to 10*l.* the first year, without materially checking their future growth. In many of the dairies of the Vale of Berkeley this system is adopted.

Mr. Edward Bowley, in an excellent paper on Breeding Cattle, remarks upon this subject.

"My early calves (those which drop from December till the end of February) I allow to suck the cow for a fortnight, when I take them off and give them as much as they will drink of skimmed milk and thick gruel, made from boiled linseed, in equal proportions twice a day. As soon as they are inclined to eat, I supply them with oilcake, carrots, and hay. When three months' old I reduce the milk and linseed to once a day, and in three weeks afterwards discontinue it altogether, continuing the other food till they are turned out to grass, when I give them 2 lb. of oilcake, which I continue, in addition to their other food, 12 months, that is till they go to Grass, in the following July or August of which year they are served with the bull, so that they calve the year following, just before going to Grass, when they will be about 2 years and 4 months old. Some are of opinion that heifers should not calve till they are 3 years old, but my experience does not warrant this view of the subject.

The extra cost of oilcake which is a chief part of Mr. Bowley's system would amount to about 2*l.* per head.

Under the last two systems there is every inducement for the farmer to improve his stock by using good bulls; under the two former there is none at all, consequently any mongrel is used, which diminishes the value of the calves dropped, so that in the dairy districts calves of 10 days old are sold for 16*s.* each or even less, a sum which does not much more than cover the value of the milk consumed. Whereas in other districts cows are kept the whole year round, simply to produce and rear their calves.

My recommendation would be to rear your own stock, to do them well, bringing into the dairy at 2-years old those only which are well grown, and the others at 3-years old.

Having then decided to rear stock and to aim at its improvement, we should have to consider how many cows we could keep along with the young ones. The following is about what might be kept if the land were good:—

120 dairy cows.
30 calves.
30 yearlings.
30 2-years old.
100 ewes and lambs.
14 horses and colts.
100 pigs.

For the first year it would be possible to keep more cows than afterwards in place of the yearlings and 2 years old. To this the objections are that it is not desirable to purchase more dairy utensils, &c., than will be required when the farm is steadily at work, and that the dairy accommodations are not sufficient. There are two courses then open, either to mow more Grass the first year than it is intended to do afterwards, or to graze some bullocks—probably the best would be to do both—say that instead of 30 yearlings and 30 2-years old, you purchase 20 bullocks to graze, and mow 50 acres of Grass more than ordinary for hay; a little extra stock of which on hand is always desirable.

The live stock to be purchased would then be—

120 cows at 18*l.*	£2160
20 barrens at 14*l.*	280
100 ewes and lambs at 50*s.* ..	250
10 horses at 30*l.*	300
100 pigs at 30*s.*	150
	£3140

The stock will have to be purchased at markets, fairs, and sales by auction; and I should very strongly recommend great care being taken with the first purchase, as it is from these cows that the stock is to be maintained, and upon which improvement is to be made.

Both the cows and the barrens should be selected in good condition, which the above prices will enable us to do, otherwise much of the summer's keep is expended in putting flesh on the animals' backs, robbing the milk pail in the one case, and delaying the period when the grazers are fat, which is undesirable, as there is a risk of not selling them again from the Grass.

The extra hay made the first year must be charged to capital, as it will probably be dormant during much of the lease, really to meet an emergency. This we may call 50 acres at 30 cwt. = 75 ton at 2*l.* = 150*l.*

Although the stock will be larger in the course of two or three years, when the young animals grow up, the value of the whole (at market prices) will probably not exceed the above estimate, for the cows must be taken as losing 1*l.* per head each year as they grow older. We may therefore I think pretty safely take the above as a fair amount of capital required for the live stock.

DEAD STOCK.—We have next the dead stock to provide for. We may presume that the landlord has erected an engine for thrashing, or that he shall hire a portable engine and machine when wanted, and that all the necessary apparatus for straining pigs' food, boilers for dairy purposes, &c., are provided.

For the Dairy we should want—

2 milk carts at 12*l.*	£24	0	0
20 milk buckets at 5*s.*	5	0	0
1 large tub	3	0	0
Carry forward	£32	0	0

Brought forward	£32 0 0		
2 small tubs	4 0 0		
60 pans or stands to hold as much ..	10 0 0		
Curd cutter and breaker, &c.	5 0 0		
120 vats	30 0 0		
6 double cheese pressers	30 0 0		
Whey vessels	20 0 0		
Cheese stands	15 0 0		
Churn and butter tubs	5 0 0		
Sundries	10 0 0		
		£161	0 0
Cart Harness—			
6 sets of thiller harness at 4*l.* 10*s.* ..	27 0 0		
5 sets of trace harness at 3*l.* 10*s.* ..	17 0 0		
5 sets of go harness at 2*l.*	10 0 0		
1 set of mowing machine harness ..	10 0 0		
Headstalls, &c.	5 0 0		
		69	0 0
Wagons and Carts—			
4 wagons at 30*l.*	120 0 0		
5 carts at 14*l.*	70 0 0		
1 small cart	8 0 0		
		198	0 0
Haymaking Machines, &c.—			
1 mowing machine	22 0 0		
2 tedding machines	22 0 0		
1 horse rake	7 0 0		
4 hand rakes	5 0 0		
1 rick cloth	15 0 0		
20 rakes	1 0 0		
Prongs, shovels, &c.	9 0 0		
		81	0 0
Ploughs &c —			
5 ploughs at 5*l.*	25 0 0		
1 bouting plough	4 0 0		
1 subsoil plough	5 0 0		
2 skim plough and cultivators	18 0 0		
1 pair heavy drags	6 0 0		
2 pair lighter harrows	8 0 0		
1 Crosskill roller	15 0 0		
2 smooth rollers	24 0 0		
1 small roller	8 0 0		
1 steerage drill	26 0 0		
1 turnip drill	8 0 0		
1 grass-seed drill	4 0 0		
3 horse-hoes	7 0 0		
2 chain barrows	7 0 0		
1 reaping machine	35 0 0		
Seedlips	1 0 0		
1 ash screen	1 0 0		
		202	0 0
Barn Implements &c.—			
1 2-horse-power	30 0 0		
1 chaff cutter	10 0 0		
1 root pulper	8 0 0		
2 turnip cutters	8 0 0		
1 winnowing machine	10 0 0		
1 weighing machine	5 0 0		
1 sack barrow	1 0 0		
1 oilcake crusher	4 0 0		
1 bushel measure	1 0 0		
200 sacks at 2*s.*	20 0 0		
Barn shovels, sieves, &c.	2 0 0		
		99	0 0
Sheep Hurdles, &c.—			
Racks, hurdles, and troughs	20 0 0		
Dipping apparatus	1 0 0		
		21	0 0
Pigs—troughs, buckets, &c.		5	0 0
Cider and Cellar Utensils—usually wanted on a dairy farm		50	0 0
Ladders—of various kinds		15	0 0
Jack, grindstone, cow chains, baskets, &c.		25	0 0
Total of Implements, &c.		£927	0 0

We should besides these have at least capital enough to pay the wages for 6 months. I find that my labour amounts, including dairymaid, bailiff, and their keep, to 25*s.* an acre. This item will therefore amount to 750*l.* a year, for the half of which we should provide from capital.

The Capital we should require would thus be—			
Payments to be made to outgoing tentant	£520	0	0
Hay to be made first year and kept against emergencies	150	0	0
Live stock	3140	0	0
Dead stock	930	0	0
Half year's wages in hand, say	360	0	0
Total Capital	£5100	0	0

This gives 8*l.* 10*s.* as the capital required per acre to stock a mixed dairy and arable farm well.

I have not allowed in this anything to meet the rent, as the sale of cheese will do this in due course. I would only add, that to have sufficient capital is of very great importance, as the person so situated is not obliged to force sales, and he can purchase at the cheapest market.

SHEEP SALES.

SHROPSHIRE SHEEP.

Mr. S. Byrd held his annual sale of rams the other day, when 30 rams of Patentee blood were offered by auction. The shearling rams were a lot of true-made, heavy-fleshed sheep, and with wool of the finest quality, whilst 13 lb. was the weight of several of their fleeces, which were exhibited on the ground. The attendance was large and biddings spirited, the four let sheep, with which the sale commenced, making 21, 26, 14, and 11 guineas respectively, the first being given by Mr. C. Stubbs for the magnificent highly-commended yearling at the Newcastle R.A.S., while the commended one went as high as 40 guineas. The 30 rams sold and let realised an average of 14*l.* 7*s.* 11*d.*

GRENDON.

Mrs. Baker.—The sale opened with a grand six-shear ram, Perfection, bred by W. O. Foster, Esq., M.P., highly commended at Leeds, in 1861, and there purchased by Mrs. Baker at 50 guineas, and which, from his excellent quality and good points, has done much service in the flock, and now goes to the Earl of Aylesford's, being purchased by his lordship's agent, Mr. Sharpe, at 20 guineas. Three promising yearlings were let at 6½, 7, and 10 guineas each. The Sparkenhoe winner of last year, a two-shear ram, price 15½ guineas; others selling afterwards at 16½, 14, down to 5½ guineas; the average being 9*l.* 6*s.*

YEW-TREE FARM, PENKRIDGE.

Mr. C. R. Keeling.—The sale included the magnificent ram Competition (bred by Mr. S. Byrd, and purchased at his sale in 1862, at 71 guineas), and many shearlings of his stock. The average obtained reached the high figure of 17*l.* 3*s.* 8*d.* per head.

PENDEFORD.

Mr. R. H. Masfen's brought the average 11*l.* 10*s.* 1*d.* for 35 rams, seven being aged sheep.

ELFORD PARK.

Mr. G. A. May.—The rams at Elford were good in colour and size, and clipped the first week in May from 10 lb. to 14 lb. of wool each. No. 1 was let for the season at 35 guineas to Mr. C. Randall, of Evesham; Nos. 3 and 6 made 14 guineas each; No. 7 23 guineas; No. 28, a very neat two shear, 20 guineas; the average being 11*l.* 18*s.* 10*d.* per head.

FREEFORD.

Colonel Dyott and Mr. Coxon.—The success achieved by Mr. Coxon at the recent Royal Agricultural Show at Newcastle, where with three sheep only entered he obtained a first and third prize and a high commendation, must be regarded a great triumph for any one flock, particularly as the exhibition of Shropshires on this occasion was pronounced to be one of more than ordinary merit, and these victories no doubt considerably increased the number of intending purchasers at Freeford on Monday last, where a most numerous and business-like company surrounded Mr. Preece in his disposal of the rams and ewes from the joint flocks of landlord and tenant. The rams generally were good in form, of fair size, excellent quality, and possessed of a money-making fleece, and, considering the large number offered, viz., 47, of which only one was, we believe, unsold, the average realised 13*l.* 13*s.* (for both selling and letting) must be considered one of the best of the season.

Mr. Yates, of Packington, hired the third-prize yearling at 24 guineas; and Mr. R. H. Masfen gave 47 guineas for the highly commended sheep in the same class, this latter sheep being preferred by many judges as a sire for ram-breeding purposes.

Mr. Horley's "Fosse" Flock.—The first sheep offered was Havelock, a five-shear ram, and winner of the Royal Agricultural Society's first prize at Battersea, and which was hired in 1862 by Mr. G. A. May, at 35 guineas, and which, after being entered by Mr. Keeling at 20 guineas, fell to Mr. John Canning at 30. Four shearlings were let at about 12 guineas each. The whole forty shearlings readily found purchasers at an average for all, both sold and let, of within a trifle of 12*l.* each.

WILTSHIRE DOWNS.

Ratfin Farm.—Mr. Edmund Olding's ram lambs and rams at Ratfin Farm, Amesbury, Wilts, were sold on the 27th ult. The highest prices for lambs let were 28, 17, 15½ guineas, &c., each; for single lambs sold, 26, 20, 18, 17, 16½, 15½, 15 guineas, &c., each; for lambs sold in pairs, 25, 22, 21, 17, 16 guineas, &c., per pair; for rams let, 20, 17 guineas each; and for rams sold, 14, 11½, 11 guineas, &c., each. The average of the lambs let and sold was 9*l.* 0*s.* 11*d.* each lamb, and of the ram lambs and rams, 9*l.* 1*s.* 7*d.* each.

COTSWOLDS.

Mr. Wigmore, Weston-under-Penyard.—Lots 1, 2, and 5 were secured by Mr. Duckham, of Baysham Court, Ross, for exportation to Australia. The whole 45 yearlings were sold at an average of 12*l.* 5*s.*

The following Cotswold sales are also reported. The most important of them has been that of Mr. W. Hewer, of Northleach, whose flock has acquired great celebrity. Fifty of these rams fetched an average price of 25*l.* 5*s.*, and one bought by Mr. W. Lane, of Broadfield, for the extraordinary sum of 230 guineas. Mr. R. Garne, of Northleach, has disposed of 50 at an average of 14*l.* 18*s.* 2*d.*; Mr. C. Barton, of Fyfield, 48 at 12*l.* 18*s.* 4*d.*; Mr. W. Garne, 34 at 12*l.* 7*s.* 8*d.*; Mr. G. Fletcher, of Shipton, 53 at 14*l.* 17*s.* 7*d.*; Mr. T. Porter, of Baunton, 50 at 10*l.* 18*s.* 10*d.*; Mr. E. Handy, Sierford, 51 at 10*l.* 10*s.* 10*d.*; Mr. W. Lane, of Broadfield, 56 at 10*l.* 6*s.* 7*d.*

PRESENT APPEARANCE OF THE CROPS.

[The following returns reached us too late for insertion in our tabulated form of last week.]

BERKSHIRE.—Wheat, average; Barley, average; Oats, third less than average; Beans, complete failure; Peas, under average; Potatos, half an average; Hay, very good in quality, half a crop; Root Crops, very bad; Harvest, August.—*Stephen W. Plummer, Peasemore.*

DURHAM.—Wheat, below average and 28 per cent. below last year; Barley, good; Oats, short and bad; Beans, average; Peas, good; Potatos, upon strong soils light crop, elsewhere pretty good; Hay, light; Root Crops, not more than half a crop; Harvest, August 27 or 30. ——., *Sham.*

ESSEX.—Wheat, near average; Barley, over average; Oats, under average; Beans, average; Peas, under average; Potatos, good but small; Hay, failure; Root crops, Mangel good, Turnips bad; Harvest, August.—*J. J. Mechi, Tiptree Hall.*

HERTS.—Wheat, 10 bushels below 1863 on an average; Barley, good, except on gravel, or late sown deficient; Oats, below average, injured by the drought; Beans, fair, injured by the fly in spots; Peas, below average, injured by the drought and fly; Potatos, small; Hay, scarcely half a crop, but well secured; Root Crops, late and inferior; Harvest, August 4.——*St. Albans.*

LANCASHIRE.—Wheat, under an average; Barley, average crop; Oats, not above two-thirds of a crop; Beans, good; Peas, good; Potatos, below an average; Hay, light crop; Root Crops, rather light crop; Harvest, August.—*Thomas Atherton, Chapel House, Speke.*

LINCOLNSHIRE.—Wheat, very good, above an average; Oats, light, very short straw, below average, far inferior to the past four years; Beans, few grown and barely average; Potatos, fair; Hay, good; Root Crops, Mangels light crop, Rape very inferior; Wheat Harvest, August 13. *Thomas Aitken, Decoy Farm, Spalding Fen.*

NORTHAMPTONSHIRE.—Wheat, good on strong lands, not good on light; Barley, the same; Oats, a light crop; Beans, early sown, good; Peas, the same; Potatos, good; Hay, very bad; Root Crops, Mangel fair, Turnips bad; Harvest, August 6.—*William Gray, Castlethorpe.*

OXFORD.—Wheat, average; Barley, under an average: Oats, bad; Beans, bad; Peas, bad; Potatos, under an average; Hay, much under an average; Root Crops, general failure except Mangels; Harvest, August 1. *Samuel Druce, Eynsham, Oxford.*

Home Correspondence.

The Harvest.—Your reports on the present appearance of the crops tells a sad tale, for by it we see that you have not an average crop of Wheat ("very defective," "blighted in many places," and "drought ripe," are prevalent words), about an average of Barley, a very bad crop of Oats, Beans, and roots. Now let us compare this with land under steam cultivation. My Wheats are excellent, ripening splendidly, much over an average; my Barley is also over an average, ripening well; my Beans are good, and free from blight; and my Swedes are good, they are growing well now. To prove that this is not an exceptional case I have examined other steam cultivated farms, and find that they also stand this dry summer. I will give a couple of instances: Mr. Whiting, of Stoke Goldington, near Newport Pagnell, who has farmed by steam power for six years, has splendid Wheat, Barley, Beans, and Oats, all over an average; his Mangels and Swedes are very good. Mr. Cranfield, of Buckden, Hunts, who has farmed by steam power for four years, has splendid crops of Wheat, Barley, and Beans, all much over an average; his Oats are a full average, and his roots are excellent; 100 acres all looking well, not a single plant missing. These are the results of deep cultivation in a dry summer, let my brother horse-farmers reflect over them a bit. *William Smith, Woolston, Bletchley Station, Aug.* 8.

New System of Drainage.—I venture to offer a few observations on a question now under discussion in your Paper, namely, the possibility of obtaining an increased outfall for inland water by its introduction to rivers below their surface. I saw an illustration of this a few days since, in the pumping of water from a coffer dam into a river. The water passed from the pumps into an open trough, made of two boards at right angles, which rested on the bottom of the river, of which the water was from 2 to 3 feet deep. As the pumped water was turbid and the river clear, it was easy to see the velocity with which the water reached the bottom of the trough; to all appearance it was little retarded in its passage downwards, falling as it did at an angle of say 45°. The displacement of the river water was shown by the disturbance and visible local elevation of the surface immediately above the point of final discharge, the end of the trough. The increase of outfall depth appeared to be considerable, due of course to weight and velocity of the running water. How far the velocity of the stream in the river, as has been said, "pulls along" the water so introduced, is another question. As to the Artesian theory, I see that a Correspondent suggests that "the pressure of gravity of the incumbent mass (earth or rock water logged), exceeding the weight of a column of water of the same depth, is one of the causes of the high rise of water in Artesian wells." Where, as in the sand beds of the plastic clay formation under London, or lower greensand under Paris, the strata are moveable, the sand blows so as to endanger the foundation of buildings above, and as appears to me rather impedes the rise of the water; other pressure it cannot exert. I have specimens so raised in Paris 1700 feet by the water. The law of the rise of water in Artesian wells is the mean, at any points between the highest source of supply and the lowest proximate outfall. The facts and figures and sections showing this in the London and Paris basins may be found in a paper of mine, read at the Institution of Civil Engineers, Jan. 22, 1850, and printed in their Transactions. Even where there is no known possible outfall, the rising of the water is kept down in its passage from higher levels, by the friction or resistance it encounters in the soil through which it passes; by no possibility can the earth cause the water to rise. *J. C. Clutterbuck, Long Wittenham, August* 8.

Will Reaping Machines displace much Harvest Labour?—This is a question of considerable importance to our agricultural labourers, and if it can be clearly shown that it will not, it may approve itself to their satisfaction. That it is advantageous to the farmer does not admit of a doubt. The harvest being expeditiously got in, cannot fail to be a great benefit to him. It sets his land at liberty for autumn culture, now so much in practice, and becoming more and more popular every ensuing year, and most deservedly so. A month's good autumn culture is almost equal to a summer fallow. It is in this laudable practice of autumn culture upon which the labourer may rely for a continuation of profitable labour. No sooner is the crop off than this culture ought to commence, but hitherto such has been the scarcity of labour at this

season that all has to be deferred till the harvest is completed, and thus the most valuable part of the season is lost. Our best modern and enterprising farmers would sacrifice much, would give any reasonable amount of wages in order that this culture may proceed simultaneously with the ingathering of the latter harvest. Now the general use of reaping machines would enable most farmers to accomplish this. The cutting for the most part may be achieved by the reapers. The labourers doing the tying, the stacking, and the raking. This of course appears to displace labour. In the first instance it does. But look at the subsequent operations in all their phases and bearings. It is unquestionably true that in every part of the country much greater attention and care is bestowed upon the culture and management of land and stock than formerly. This gives employment to a far greater amount of manual labour. Consequently there is neither the necessity, nor the disposition for labourers to migrate from the more thickly populated or the earlier harvest districts, to the later ones to aid in securing the harvest. In fact their services are required at home. It is only in a very scarce time that the price of harvest labour in the more thinly populated or probably later harvest districts is sufficiently tempting to entice workmen from any great distance, although railway facilities are so good. The labourers, then, in almost any district may, by the aid of these machines, be able to secure the harvest themselves, and retain the amount of harvest wages at home, instead of seeing it carried away to pay it may be the Irish landlord's rent, or it may be to eke out the scanty wages paid in some districts to labourers who are by this necessitated to leave their poverty-stricken homes to seek employments elsewhere. Depend upon it, if the time should come when their help is not much needed abroad, employment will be found for these migratories at home, and their employers will soon find it profitable help too. These things, as knowledge and enterprise increase, will approximate, assimilate, and rectify each other. It is altogether wrong to fancy there is a surplus of labour immediately after harvest. Where such fancies exist, there is something sadly wrong in the management. Every "hand," every appliance ought to be in requisition to effect a good autumn tillage, and to complete the various kinds of work that every autumn brings with it, and which is then so much better and effectually done than in the winter; besides, winter brings its work with it, and in great plenty too, if all is done that can profitably be done. Take for instance a market gardener. See how he disposes of his land, and what cultivation and management he bestows upon it. This in its measure ought to enter into the contrivance and calculation of every farmer. Nor must landlords continue such old-fashioned restrictions. Let it suffice that the farm is in good and fertile condition, and leave all the rest to the intelligence and good management of the farmer. Labour cannot be indefinitely increased under a restrictive lease. It is like imposing fetters upon an active agent. *O. F.*

Foreign Correspondence

RIO JANEIRO. *Estancia del Guayavo, May* 23, 1864.—My lambing season is going on beautifully. I count already 150—170; while the other flocks on the estancia have but 10 or 20 lambs in each. So much for my management. I will tell you what I have done. During last summer you may remember me telling you of the terrible seca; when the Grass in many places was quite scorched up, and little or no water in camp, besides the heat at noon being intense. Well, every day I saw that my sheep went where there was water, though it was two miles from the paesto, and got there just before the heat of the day came on; then during the heat of the day my flock had the good luck of having long Grass, about 2 to 3 feet high, and perhaps higher, to take shelter under. About 3 P.M., as soon as they got on the move, I used to turn their heads homewards, and so get home by sundown. Of course during the middle of the day I had to be in-doors, the sun being too powerful.—You ask me if dogs are used in "rounding" sheep. I do not know of any being used for that purpose. Dogs are used for cattle and minding the house. A German out here has shepherd dogs, and can work with them; but for rounding sheep with dogs a native seldom, if ever, does it. I have made inquiries respecting the number of square miles on this estancia. I believe it is something like 360 square miles.—For fencing a garden, the best fence I believe in this country is one similar to that which I have made round my garden (40 yards by 30 yards) *i.e.* stacones and rama (excuse spelling). If stone walls are used, then ants and animals make their appearance. Ditches likewise encourage ants, and indeed after a "temporal," a ditch would in all probability be washed away. I have sown Gorse seed and some Ash-keys, but most of my best seeds died in the ground last summer during the seca. Apple and Pear trees thrive amazingly. I believe Apricots, Peaches, Figs, Mr. W—— has in great numbers in his garden. The Vine is also cultivated both there and at St. George. With reference to the number of sheep in a flock, that all depends on circumstances. However, you may say from 1000 to 2000 in each. A flock generally commences with 1000 or so, and when it gets from 2000 to 3000 then it is generally parted as being too lage. Now here we have I believe 6000 capones in the one flock, so there is no rule. My flock commenced with 1500, *i.e.* I had 1500 (al corte), including 150 capones de cuenta. Old ewes, 881; ewe lambs, 255; caponitos, 214; capones de cuenta, 150; total, 1500. This J—— took over, Feb. 28, 1863. In 4th July we marked our lambs—hembras, 142; machos, 132; total, 274.

Flock counted	1473
Dead to date	27
	1500

Total in flock, 1473+274=1747

Nov. 10, 1863, marked our lambs—hembras, 127; machos, 120; total, 247. Flock counted, 1679+68, dead to date; total, 1747. Total in flock, 1679+247 =1926. My flock is only now lambing, which is two months late, but I am more than fortunate. The weather is everything one could wish. The war does not affect us so far. I hope the English at home do not interfere, or it will be "look out" for us here. There are neither rabbits nor hares in this part of the country.

Societies.

BATH AND WEST OF ENGLAND.

A monthly meeting of the Council was held at the Railway Hotel, Taunton, on the 6th inst., under the presidency of the Right Hon. Lord Taunton.

The Hereford Meeting.—The Secretary reported that the sum of 900*l.* had been paid to the Society's bankers by the Hereford Local Committee.

Dr. Gillett, Chairman of the Finance Committee, brought up various bills, amounting to upwards of 3000*l.*, which were ordered to be paid. He proposed that hereafter checks for the prizes awarded at the Society's annual meetings should be drawn at the Council meeting next ensuing; this he considered would be more gracious and becoming than to defer payment till the stated quarterly meetings of Council, at which financial questions are at present entertained.

Date of Calving.—On the motion of Mr. Duckham it was resolved, that the Stock Prize Sheet Committee be requested to consider the desirability of substituting "calved before the year" for the words "above three years old on the 1st of June," in Classes 1, 7, and 13; and calved "in the year" for the words "not exceeding three years or two years old, as the case may be, on the 1st of June," in Classes 2, 3, 5, 6, 8, 9, 11, 12, 14, 15, 17, and 18 on the Prize Sheet.

Attending Stewards at the Open Judging.—Mr. Duckham read a letter from an Exhibitor at the Bristol meeting, complaining of certain irregularities on the part of persons showing stock in one of the classes, and in order to their future prevention, moved that the number of Stewards of Stock be increased, in order that each distinct set of Judges shall have one Steward in attendance upon them during the time they are occupied in making their awards. The Council generally concurred in the spirit of Mr. Duckham's resolution, but doubted the expediency of appointing extra stewards for the entire week of the Society's meeting; and it was ultimately resolved, on the suggestion of Sir J. T. B. Duckworth, with the full concurrence of Mr. Duckham, that at the May meeting of Council a sufficient number of members be appointed to assist the Stewards during the time the Judges are occupied in making their awards.

New Members.—Rev. A. Baillie, Bath, Mr. J. Snow, merchant, Bristol.

DORCHESTER: *Lord Rivers on Labourers, Landlords, and Farmers.*—1. *Labourers.*—At the annual meeting of this Society, after the awards of prizes had been read, the labourers were ushered into the room, for the purpose of receiving their premiums.

The CHAIRMAN (Lord Rivers) then said it was his agreeable duty to have to say a few words to them before they left. He congratulated them on having won the prizes just distributed, but said they must not look upon the one or two pounds they had received as a compensation for what they had done, for it was not in that light that he viewed the question. He believed it was a satisfaction to be acknowledged by any society, and they should look upon the premiums in the same way that a soldier did his medal, as a little token that their services had been acknowledged, and that the society had spoken well of them. But with reference to this point, he wanted to say a few words to the Dorchester Society. He thought it would be a very good thing, and remarkably desirable, that the successful candidates should have some printed record that they would be able to keep, in order to show that they had won these prizes. The simplest thing in the world would do, and their secretary, in the course of a little conversation, had thrown out the suggestion that it should be an embossed card, upon which could be printed for what the party had received the prize, whether for long and faithful service, for ploughing, sheep shearing, or anything else; but he thought the labourers ought to have some such proof of the estimation in which they were held by the Society. He would just give them an illustration of the importance of this. About three years ago his bailiff left him. He had a sort of head labourer working upon his farm as foreman, and he wanted a man to take the place of the bailiff, but had nobody at hand. He went quite by accident to the cottage of this man, and he never saw any thing more neat and nice than its appearance, as well as that of the children. They were at tea, and it looked so comfortable that he should have been happy to sit down with them. But all around he saw a number of little maple frames, which at first he thought contained pictures. He said to the man, "Well, Mitchell, what have you got here?" The man replied it was either a prize from the Blandford or Sturminster Society, one or the other, for sheep shearing. He then asked, "What is this?" The man replied, "That is a prize I received for hedging." He asked what others were, and found they were records of having received prizes for something else. At last he came to a very large black frame, very much larger than the others, and he said, "What have you got here, Mitchel?" The reply was, "That is not mine, my Lord." "Whose is it?" he asked. Mitchell replied, "That is my wife's." He asked, "What is that for?" The man said, "For having been a good servant, and having earned a good character (he thought) for 13 years." [The result we understand was, that his lordship engaged the man as bailiff, which capacity he satisfactorily occupies at the present time.] His lordship continued to observe that they prized those pictures much more than the money they had received, and knowing the value which was set upon them, it occurred to him that this Society should give similar proofs to the labourers of the distinction they had gained. There was one thing to which he wished to allude, and that was that he never had understood, nor should he ever be able to understand, how poor people lived. He had tried to draw up a statement of the outgoings and incomings hundreds of times, but it had always baffled him; but what astonished him was this, that whether the labourer earned 8*s.* a week or 16*s*, taking the minimum and maximum, whether clothing was cheap or dear, whether the price of Wheat was as low as at present, or whether, as they had known it, up to 70*s.*, it seemed to be perfectly immaterial to the labourer, he clothed himself just as well, he did not get more into debt; and there was always a margin found, whatever the price of clothing, whatever the price of Wheat, whatever sickness there was, whether wages were 8*s.* or 16*s.* a week, for he scarcely ever saw a single parish in this or any other county where the labouring classes did not manage to support a beershop and make it the best business going. He did not wish them to think that he believed the poor were too well off—he wished they were better off; but their position always puzzled him more than anything else, and this puzzled him, that through thick and thin there was always a large margin for the beershop. Take his own parish, with a population of about 300, and he could undertake to swear that the beershop was the best business in the village. It was more sought after than anything else, and if anybody could get a little bit of land they would soon build another house to carry on the same trade. Where the money came from he did not know, but there was always this margin for the beershop. Well, he would advise them for goodness' sake to keep away from the beershop. So strongly did he feel upon this question that, although it might appear inconsistent in him, who should drink a bottle of wine after dinner to-day, and perhaps did so every day of his life, that he actually subscribed 5*l.* to the Sturminster Temperance Society, because he believed it was calculated to do so much good.

2. *Landlords.*—In acknowledging the reception of his health as a toast, Lord RIVERS said—He was the largest landlord in the county, and he hoped they would take in a good spirit what he was going to say. They had met as friends, and he did not desire that they should part otherwise; but there was always a risk of speaking before a large body of men, and he saw one or two of his own tenants and friends in the room. Now he confessed on his honour that he did not know, he did not understand the meaning of the term a "good landlord." He did not know what it meant. There was a definition given to it two or three years ago by a friend of his—he laughed at it to his face; therefore he was not saying behind his back what he would not say in his presence; nor did he wish to say anything disrespectful towards those who heard it, but it was received with immense applause. He gave as the definition of a good landlord, "A good landlord is a man who receives low rents, has no rabbits, and builds good farm buildings." Now, he did not believe it, and they must not think he had come here to say what was offensive. He did not understand what was the meaning of a man being a bad landlord who had high rents, a quantity of rabbits, and no buildings. Were the tenantry of Dorsetshire to be looked to as a set of poor miserable fools who could not hold their own. For what was the man who believed his landlord got too high rent? He must be a fool to give it. It should be remembered that there were two parties to the bargain; the tenant as well as the landlord at least subscribed to the conditions. If the tenant signed conditions which enabled the landlord to injure him, more fool he for doing it. He did not seek to exercise such power over his tenants; if he did he knew they would believe him that he would not come forward and say what he did. It seemed to him that they never allowed these things to be conducted on the same footing as any other business was conducted. Now they would understand his meaning of a good landlord in one respect, that was, that there was no relation in life in which they could not be liberal, kind, and indulgent, and there was an amount of liberality which a landlord

should show to his tenant. If he had a farm to let, his liberality consisted in a fair agreement and in encouraging the tenant by many ways, and by putting up farm buildings, which if he used he had to pay for. He did not understand the separation between the case of a landlord and tenant of a farm, and the landlord and tenant of a house. In either case he did not think it was a sound and good principle for either landlord or tenant to go upon. He wanted it to be a matter of bargain. He did not wish the tenant to be under an obligation to him, any more than he wished to be under an obligation to the tenant. Having agreed upon the conditions upon which it was to be farmed, then afterwards a man might become an encouraging and liberal landlord. He had certain insertions in his leases put in for protection against a bad tenant, but he should never think of putting them in force to a good one. It was merely an agreement which would serve him in the case of a bad tenant; and if he was a bad tenant it was his duty to send him away. What he wanted it to be was a thorough good matter of business between himself and his tenants. He wished them to make the best bargain they could for themselves, and he would enter into any agreement as a matter of business. He thought he knew something about farming and the tenant's position; and he had no objection to enter into it in a liberal spirit as a matter of business. But what he would not give credit for was that if he had a farm worth 1000*l.* he would let it for 900*l.* He blamed the man for criticising the conduct of a landlord for having raised the rent of a farm in a different manner than he would criticise the conduct of a landlord who raised the rent of a house. It was a fallacy and an unsound basis for the intercourse between a landlord and tenant to rest upon, that the liberality should in point of fact be giving the tenant 100*l.* a year.

3. *The Tenant Farmer.*—Mr. G. J. Wood, one of the successful exhibitors said; with regard to the cause of the farmers, he did think it deserved more consideration than had hitherto been given to it. He did not mean particularly in respect to the landlord, though there were some things which he thought required to be altered between landlord and tenant. There were two or three things that ought to be set right between landlord and tenant. He was no advocate for low rents; he did not think the tenants asked for it; but they asked for reasonable rents so that they could live. This, however, he said on behalf of the tenants, that for any landlord to let a farm to a man and then proceed to stock it himself was not quite honest. He knew there were many opinions as to the injury which game did; and he begged to express his opinion, as the result of 25 or 30 years' experience, that rabbits and hares did a great deal of damage to the land—much more damage to the land than a surveyor could estimate on looking over a farm and seeing here a quarter of an acre spoilt and there a quarter of an acre spoilt. That was not the damage done. The amount of damage was this, that if they allowed part of the farm to be stocked for several years in succession, the land was poisoned, and they had got to work 10 years before they got the land into anything like a perfect state again. Now he did not wish to overstate this question, or to state anything that would not bear the test of truth, but he did believe that to be an honest opinion. Then they would allow him to say that the cause of the farmer did not stand quite as it ought with regard to the legislation of the country. Mr. Calcraft had alluded to the rights of the ratepayers in regard to the county expenditure. He had very generously and honestly allowed that the rights, as he (Mr. Wood) had endeavoured on another occasion to express those rights, did belong to the ratepayers; and he thought it only remained for those who were in a position, whose province it was to alter the law in regard to that particular question, to proceed to do it. He did not know what proceedings it was necessary for them as farmers to take, in order to induce them to take up a question which was universally admitted. But there was another grievance, and a very great grievance, for the reduction of which they had been fighting during the last two years—he referred to the question of the Malt Tax. A great deal had been said; it had been canvassed in the country, it had been canvassed in the Houses of Parliament, and he must say that all the discussions that had taken place in regard to that question had shown to him that it was not fully understood, neither in the country nor in the House of Commons. He did not say it was not understood by some, but generally. People talked about it being a consumer's question, and said it was that and that only. Others said it was a producer's question; and others said it was a question which referred to the best grown Barleys in England, and not to any other sort. He had no hesitation in saying that it was a producer's question, that it was a consumer's question, and that it was a question which referred to all the Barleys grown in this country. And when the noble lord, in his very interesting and appropriate address to the labourers, spoke of the difficulty he had to ascertain how the money was spent, and referred to the beer-house as the only means he could account for the surplus, whether it be of 8*s.* or 16*s.* a week, this he said, "Remit the Malt Tax, and you remove the difficulty." A poor man now went to the beerhouse and paid 1*s.* per gallon for ale of the same kind he was satisfied he could have for himself, brewed by himself, if not malted by himself, in his own house, at 5*d.* or 6*d.*; and he challenged anyone to contradict that assertion.

Lord Rivers thanked Mr. Wood for what he had said; but he must have misunderstood what he (the noble Lord) stated when he said he did not like a landlord to stock a tenant's farm. He would tell them that he would not have a game farm if it were rent free. He would tell them why, because he should expect his landlord to act as fairly towards him as he should towards his landlord. Nothing would compensate him; if the game did him 500*l.* damage, he would not take 500*l.* for it, because that would not compensate him for his anxiety and wasted efforts. But this would not prevent a landlord letting his farm if he could get a tenant of a different mind. He let such a farm the other day, and he told the man to go and look carefully over it, to ask the labourers all about it; and to come back and say what he would give for it, but not to come and complain to him afterwards. Now he would candidly avow it, that he would not have it rent free. Many men took a different view of their position from what he should, therefore he let him the farm. But that did not affect the question of a good landlord or a bad landlord. He thought that at these meetings, from what he gathered from the reports, the proceedings were too much of a complimentary nature, and that they did not enter into agricultural matters quite enough. There was one thing that he should have liked to go more fully into, and that was the different mode of treatment, the different practice, and the very different amount of profit that was derived from sheep here in Dorsetshire and some other parts of England—for instance, in Nottingham and Norfolk. Some time since Messrs. Squarey & Rawlence took the trouble to get information as to the percentage of lambs weaned, in comparison with the number of ewes put to the ram, within 25 or 30 miles of Salisbury; and as they thought it would be interesting to him, they supplied him with the figures. He thought it was 90 per cent. Before he came here, not that he had come with a set speech, he referred to some returns of the percentage of lambs and ewes which he had obtained from various flock masters in Nottinghamshire in 1861. In one instance 361 ewes produced 442 lambs—that was the number of ewes put to the ram and the number of lambs weaned. Another return was from Mr. Fulger, who said that was the worst year he ever had in his life, and 200 Leicester ewes produced 208 lambs, and 191 downs produced 219 lambs. Here was another flock of Shropshire downs, and in one case 42 ewes produced 65 lambs, and in another 49 ewes produced 71 lambs. He had another return from a friend of Mr. Calcraft's, Mr. Bridgeman Simpson, of Nottingham, who from 501 Leicester ewes weaned 636 lambs. Another return was from Mr. Champion in 1860, from which it appeared that 249 ewes produced 294 lambs. He had also another return from a gentleman which ranged from 1853 to 1860. In 1853, 51 ewes produced 56 lambs; in 1854, 40 ewes produced 72 lambs; in 1855, 32 ewes produced 47 lambs; in 1856, 45 ewes produced 61 lambs; in 1857, 60 ewes produced 71 lambs; in 1858, 106 ewes produced 133 lambs; in 1859, 102 ewes produced 152 lambs; and in 1860, 106 ewes produced 135 lambs. The most extraordinary thing was that not one of these ewes or lambs, he would not say ever tasted hay, but not more than they had of turtle or venison. They were kept upon Turnips, and allowed to run on the after-Grass. It might be said that they did not keep so many per acre. Mr. Bridgeman Simpson had about 500 acres of land, which he farmed on the 5-field system. He had 100 acres in Wheat, 100 in Barley or Oats, 100 in Turnips, and 200 in Grass, or a two years' ley. Part of his land was tolerably good, and a part very light sand; and he should say it was not at all an average farm as farms went in this county. He had about 200 acres of the very roughest sort of pasturage, which could not be estimated at more than 100 acres of good. Now, upon this acreage he kept 530 ewes. He never sold his lambs, but kept the whole flock during the winter, and sold his tegs in the spring of the year, sending them out as two-teeth. In Nottingham and Norfolk they never gave any hay; they cut more wool than was done here; the animals were in good condition; and they kept more sheep.

Mr. Levi Groves, of Knighton, said he had travelled through the midland counties, and when the Bath and West of England show was here he challenged five Lincolnshire gentlemen to show that as much stock was kept on their farms as was done in this county. The fact was that they let a few sheep run over their pasturage, and they were astonished to see the large folds on such small pieces here. He believed that if they had more sheep they had not so many beasts.

The Chairman said the gentleman he alluded to kept the largest head of cattle that he knew of on such a farm.

Mr. Groves contended that they did not keep so much stock as in Dorsetshire generally.

The Chairman then entered into an estimate of what his sheep cost him in hay and labour, and said he had always a difficulty in drawing out an account what the carcase of the sheep paid in itself, but he found that he could make more money by feeding bullocks. In conclusion, he proposed "Success to the Dorchester Agricultural Society."

Reviews.

Land: its Registration and Transfer, A Letter addressed to Landowners on the benefit arising from a Parliamentary title, and the mode of obtaining it. By Howard Reed, F.S.S. Effingham Wilson, Royal Exchange.

This pamphlet explains the great advantages of an indefeasible, and at a glance, obvious title to land; it describes the mode of obtaining it, recites the various steps of the process, relates examples of the facility with which transfers may be afterwards effected, contrasts all this with the cumbrous and costly old system of conveyance, discusses the objections of solicitors, and foretells the great future now destined for the possessors and the possession of land. Mr. Howard Reed is evidently master of his subject, and capable of discussing it in still fuller detail with those who may consult him on the subject. His relations to the existing agency for the conveyance of land are described in the following passage from his Preface:—

"The writer is anxious to have it understood that he has, in the following pages, adopted the popular tone in alluding to lawyers from no desire to depreciate that body. He entertains the highest respect for them, hopes ultimately to work with them, and has already secured the co-operation of professional gentlemen possessed of advanced views respecting the use of land. He believes the difficulties surrounding the transfer of land to have arisen more from the desire of lawyers to protect their clients than to tyrannise over them. It is not, however, the less true that, as a class, the members of the legal profession have set their faces against Lord Westbury's Reform, not because they suspect its soundness in law, but because it is likely to lessen professional profits. But this attitude of antagonism is only temporary. They will soon perceive that whereas, under the old system, an estate passed once through their hands in a given time, recent legislation will tend in future to make it pass more frequently; and that in place of one large profit they will receive many small ones, which will more than compensate any immediate diminution. Like many an important innovation, it is regarded with the greatest suspicion by those who will, perhaps, derive from it the greatest benefit. While the expenses of land transfer were enormous few people used land as a security; now that its transfer is safe and cheap, it will become the favourite security—the savings bank for all classes. That the community may not lose the advantage of the amended law, pending the change of opinion on the part of the solicitors, it is necessary that the duties they seem indisposed to undertake should be performed by others who have no objections to overcome. A new Agency is, in truth, necessitated by the new Act."

Mr. Reed thereupon proceeds to enumerate every step taken under the old system and under the new before the title to land is established; the main difference being that now it may be examined and declared by a public officer, and is thereafter declared by him against all comers in the form of a simple certificate, including a reference to the national record in which it is specified:—

"The registered owner, on having passed through this very simple and inexpensive ordeal, is a man to be much congratulated. He places the little witness to his lordship in his pocket-book, and clears out his piles of musty parchments for a bonfire. Should he want money, he simply presents his certificate to his banker, who compares it with the register (which is accessible only for such purposes), and without a day's delay, makes the required advance. Both parties to this transaction are advantaged—the lender inasmuch as he receives, without trouble, the best possible security;—the borrower because he is not required to wait till his title be proved by the solicitor to the bank, and because the accommodation can be obtained with more secrecy than under the old system. The certificate on a foregoing page is the copy of a *bonâ fide* document, which is the result of the investigation of an abstract of title consisting of 100 sheets. The owner of this property will, when he wants to sell it, have nothing to do but to carry this document to the auctioneer, and the purchaser will have nothing to do but to see that the document corresponds with the entry in the register. Instead of entering into an investigation lasting for six months, or, perhaps, for two or three years, an inspection of the registry acquaints him with the facts of the case, and upon the payment of 5*s.* or 6*s.* beyond the price of the moderate stamp imposed by Government, the purchaser has his name entered upon the book, and receives a document corresponding with the one just produced, and the estate is conveyed to him for ever, with an indefeasible title. If he wants money, he has only to hand over this mortgage, with a corresponding statement, which may be done for a few shillings. If he does not wish the transaction to be know, he has simply to go to his banker's with the document, and say to him, 'Will you lend me 5000*l.* or 10,000*l.*?' He can then deposit it with the banker, who would receive it with the most perfect confidence, because, while the document is in his hands, there can be no possible dealing with the land, and the document itself proves the indefeasible title of the landowner."

Mr. Reed adds:—"Land is now destined to play a very different part in the substantial progress of this country. This liberative measure will bring a surprising amount of latent capital into operation, and will rapidly increase the value of land."

This is true, for owners heretofore have had for the most part to be satisfied with the mere enjoyment of the fruits of their land, now they will be able to *use* it. Money will be raised upon it without difficulty, either for its own improvement or for any other purpose whatever.

The special interest of this journal on the subject is

satisfied by declaring that the main difficulties in the way of all agricultural improvements are at once removed by Lord Westbury's Act. The capital required for buildings, cottages, roads, land drainage, everything which the estate requires, will be raised at once without the preliminary expenses which frighten landowners now, and without any transfer of authority over his property to the agency of any company or association outside, whenever the title, of which that Act provides so simple and accessible a declaration, shall have been obtained. Mr. Reed concludes as follows:—

"It only remains now for the writer to summarise the points he proposed to deal with in this pamphlet, namely: That the value of property is measured not so much by the supplies it may produce for our necessities, or the gratification it may yield to our feelings, as by the amount of other commodities for which it may be exchanged, that is by its market price:—that the exchangeable value of land is in some cause reduced to a minimum by the difficulty of ascertaining the title to it, and this depreciation sometimes exceeds one-half what that value would have been had the property being easily and readily negotiable: that an indefeasible title gives the quality of negotiableness at once to land, raises its exchangeable value to the maximum market standard, and, in the same ratio, increases the borrowing power of the proprietor who does not want to sell. These propositions simply embody the recognised doctrines of political economy. They have been handled briefly as the subject demanded, but it is hoped with sufficient clearness to show the value of Lord Westbury's Act for the emancipation of land from its long slavery."

Farm Memoranda.

TATTENHALL HALL.—We conclude here our report of this farm.

We have now got the crops all under cover, like a winter hive, and we have only further to describe the engine-house, boiler-shed, and steam chest, which occupy a position alongside the food-house. A small 6-inch cylinder engine, 12-inch stroke, drives Moody's root-cutter, which has the recommendaton of separating the dirt; it also drives the root elevators and chaff-cutters; the exhaust steam passes up a drain and heats the water as it comes to the force-pump, so that without waste of fuel hot water is sent into the steam boiler, into an oil-cake gruel tank, and also by a tap at the straw cutter sprinkles the chaff as it is cut, and the root elevator pours its cut Swedes and Mangels through the knives of the cutter, and the whole descends together into the steam chest, and when in three hours sufficient is cut to last the whole of the stock three days, all mixed up together, the steam is turned out of the boiler, which is 16 feet long, a sort of brewing scent is diffused over the building. On the old plan we saw it took equal to 11 men to remove the stacks or ricks to the barn. Let us now see how many men, independent of weather and waste, are required, not only to remove the stacks, but to thresh, dress, winnow, sack the corn, put the chaff and caving under cover, put the straw through the chaff-cutter, cut the roots, mix and mash the whole up together, so that when the cows smell it their teeth will water, and they won't look at well harvested hay in comparison. But we will take the men. Two on the rick, or putting the Barley to the feeder on the box; one putting the straw from the box through the pitchhole, one putting the straw to the two men feeding chaff cutter, one engineer, one taking away the sacked corn, chaff, and cavin, putting all under cover, and one boy filling the roots into the cutter, and coals to fixed boiler fire: total, nine men and the boy, who have finished their work while the men with two sticks were looking at it. Some of the manufacturing princes on both sides the Tweed have confessed that they cannot ditto it. It will also be seen that by changing the position of the threshing apparatus to the sides and end of the straw loft, one man at the shakers will be able to put the whole of the straw, as threshed, to the room where it is wanted. Our worthy agricultural alderman, with his fixed engine at Tiptree, cannot compare with it. While my portable engine has paid for itself, the threshing apparatus and repairs, with obliging my neighbours, besides being at liberty to steam cultivate my farm, and as many as will join me in the required outlay.

The food is cooked and prepared, in the words of Lord Kinnaird:—"Certainly the feeding buyers are very convenient;" and this is apparent from the fact, that one old man, through the winter, looks after the 80 dairy cows, without having to go outside the building for anything except to wheel away the dung from 40 cows to the side of the shippon, to the pig and nag horse dung-yard; and from the other 40, at the end of the other rank, to be there mixed with the cart stable manure, the mixing of which as made, it will be seen, is secured by the arrangement. The cowman early in the morning in spring, is assisted by a man helping to wheel away the dung.

It will be seen by the map that the homestead is placed in the disadvantageous position of being at the outside instead of at the centre of the farm. This is partially remedied by 24 cow-stalls and a food house erected near the junction of four fields, at the far part of the farm, to which the pressnt proprietor has kindly added a good six-roomed cottage, at a cost of abont 100*l.*, for which he gets 5 per cent.; and the man who has the charge of the young stock, feeding stock and sheep, pays 15*l.*, including keep of a cow. The yearling calves have also a shed or lodge for shelter and feeding, and by consuming a quantity of roots and fodder, the cartage home is saved, and a good portion of manure made near where it is wanted for the green crops.

Dairy Department. Having traced the crops, or raw material until manufactured into meat and milk, we have next to glance at its further transitions. It will be seen by reference to the cow houses that by dividing the stock they are sent back to their pastures, and 40 cows come in at the back or at one gable, and the other 40 at the corresponding end, and so pass direct to the stalls without coming to dirty the inner yard or pavement—the cows being numbered from 1 to 80 instead of named, facilitates the milkers counting their cows, to prevent them waiting, and being required each to milk their number, avoids their delaying in hope of passing a hard or difficult cow, the cowman follows, and secures their being properly milked. A carrier with yoke and two tins, brings the milk, say on Sabbath morning, through the milk house, down six steps, into the second milk house, which is well ventilated, and under the dining room, and which is cool even in the hottest weather; the distance is so shortened and the yoke and swing tins so superior to the pail, that a strong boy will perform the task easier than the two men 20 years ago. The Sunday evening's milk is put in the milkhouse, which is also well ventilated, and the window to the north; on Monday morning the old milk of the previous day, and the new brought direct from the shippon, is divided into three cheese tubs, which at the bottom are provided with ¾-inch copper plugs, and these plugs are placed over a cast iron painted spout let into the kitchen floor, from which is continued a trough lined with lead, passing over four large slate cisterns, and each of these again provided with an inch plug over each cistern, and the bottom of each cistern is also provided with a 2-inch plug, to which is fixed a wooden handle 2 ft. 6 in. long; from these last plugs a socketed Buckley pipe, 3 inch drain, jointed with Roman cement, is continued to the Windsor pig troughs on each side of the pig food house. When the milk in the cheese tub has been changed to curd, an American curd breaker is used, and so soon as the curd has settled at the bottom of the cheese tub, a frame, filled in with woven wire like a window blind, with hinges in the middle to admit of the two sides of the frame coming together like a closed book, which when closed is put edgeways to the bottom of the tubs, and over the copper plug, the wire frame is then opened slowly till it resembles the capital letter V, turned with its two ends to come against the sides of the cheese tub: by this contrivance the curd is pushed away from the valve or plug, which is then drawn and a strainer put over the aperture, when the whey steadily filters off in a few minutes, while the dairymaid is left at liberty to repeat the process on the other two tubs. On Monday morning the whey will fill one of the small and one of the large slate cisterns, the other small cistern having received that from the Saturday evening's cheese, and the third and remaining cistern having been 48 hours and the cream twice skimmed or removed from it. The 2-inch plug when pulled by the handle will allow one-third of the whey in about one minute to get distributed at pleasure into all the pig troughs—this is pig feeding made easy, and the arrangements, and so far as is known is new, and completely disposes of all the old process between the cheese tub and the pig trough, and makes it a pleasure for every farmer to feed his own hogs, and thereby not only save the coals and labour of heating, but gets more and better butter, and the pigs thrive and do better than on scalded whey. Can any manufacturing patent contrivance surpass this? When the whey has passed off the curd is put into one of Mr. Cornes's patent cheese drainers, the whey from which passes off as before described to the slate cisterns; the curd is next ground in the mill, instead of by the old dilatory practice of breaking with the hand, which yet prevails in many dairies—the curd when broken and salted is put into the vat, and by dinner time the work is finished, and if by chance any of the whey gets split on the kitchen floor, the dairy maid removes it with a cloth, and so keeps her kitchen and herself both clean and neat, and that with the assistance only of having the curd mill turned, makes the cheese from 80 dairy cows with apparent ease and comfort. Whereas on Monday the curd has been put into three cheese vats, they are placed round the warm vessel boiler, and a door lets down to close them in till the following morning, when they are next removed to a stone, which, except in hot weather, is warmed by the flue of the vessel boiler passing under both it and the flags of the six stone cheese presses, while in hot weather the heat by pulling out a register is allowed to go up the chimney, by which simple contrivance (which has long been practised in greenhouses), it will be seen without cost (for the heat would go up the chimney), and with the labour only of pulling or pushing a register, gives the dairy maid the advantage of a perfect command of temperature. When the cheeses are "dry under press," the dairy maid lets down from the cheese room with a winch a scale bottom, on which the cheese is placed, and she turns the winch until the cheese is even with the planks that surround the chese room: she then slips a hook into a noose, which makes all safe, and slides the cheese on to the plank in the room, from which point it makes by turning daily progress to the other side of the room, when it is put on the floor, and by the time it is ready for market it has come pretty nearly the scale bottom, which lowers it down to be sent away, dispensing with the old plan of the man's panting, and his jug of strong ale.

For several years we have had our dairy vessels, cans, and cheese tubs painted with white enamel. This is done to perfection by Mr. Cornes, Barbridge, and so far from being more difficult to keep sweet we have found them the reverse. It saves much labour in scouring, which rapidly wears them out. I am aware that Professor Voelcker disapproves of this practice; but he ought to have supported his opinion with facts. The paint becomes enamelled, and is more perfectly cleaned than wood by scouring. We use tin milk pans, which, when worn, are liable to rust, discolours the milk, cream, and probably often accounts for black spots in cheese.

I have alluded to the disadvantages under which, at Tattenhall Hall, Sunday cheese-making was abolished. I hope you will bear with me when stating that for 30 years, with various dairy maids, we have found the duty a delight. I should fear a dairy mutiny, with our present arrangements, were I to order cheese to be made on Sabbath days. I am confident the plea would be, apart from its sacred obligation, "Pray do let us have one day of rest."

LAMBTON, DURHAM.—The Lambton property comprises about 15,000 acres, besides which, Lord Durham has another property of about 3500 in the Wooler district of Northumberland. The former is nearly all of the naturally cold ungenial clay loam of the district; the latter forms part of the Turnip and Barley soils of that part of Northumberland. The farms on the Lambton Estate are considerably above the average of the county, being from 200 to 800 acres in extent. Formerly they were of about the usual small size, latterly, however, as they became vacant they have been enlarged by taking down unnecessary fences, and throwing two or more together; and a wealthier and more enterprising tenantry now occupies them. They are mostly held on lease for 15 or 20 years—the former is the more common term. Some of the older tenants, however, prefer still to hold their farms upon the original terms, than to bind themselves by the covenant of a lease. The leases are liberally drawn up—they contain the usual restrictions as to cropping, but leave is readily obtained to depart from them if good reasons for so doing be adduced. The general practice on the estate is to follow a five or seven years course of cropping—Oats or Potatos,—Beans,—Wheat or Barley,—fallows or Turnips,—Wheat or Barley—seeds—seeds. Although the game is preserved, the rabbits, the farmers greatest enemies, are rigidly kept down. Formerly they were the perquisites of the keepers, who then had a direct interest in their abundance. Now they have strict orders to exterminate them, and any complaint by a tenant is at once attended to. Draining has been largely carried out on the estate—the tenants being called upon to pay 5 per cent. on the outlay. The drains are all laid 4 feet deep; on the strongest soils they are cut 18 to 20 feet apart; on the lighter soils they are placed at wider intervals.

Liming appears to be the general weak point of the farming system in both counties. It is here used, but not so largely as it should be, the cost being here, as elsewhere, the great obstacle to its more general application. Although the magnesian limestone crops out on the estate, it appears to contain such a large per centage of magnesia, as to be unfit for agricultural purposes. The two beds, the upper and the lower of the magnesian limestone formation are well-nigh as distinct in their physical, as in their chemical characters—the one contains from 30 to 40 per cent. of magnesia, while the other is nearly a pure limestone, with merely traces of magnesia in it. These latter beds should diligently be sought after, as they are admirably suited for agricultural use.

The buildings and cottages on the estate are mostly good and in excellent condition; the tenant, his stock, and his labours, being equally well cared for. Each year much is done in this respect on the estate, and always with the same encouraging results. All appear to have benefited by the liberal and judicious improvements that have been effected since the Royal Agricultural Society's meeting was last held in the district. The tenantry is of a superior class, and the farmers show evidence of advanced cultivation, while the noble proprietor has been recompensed by an increase of fully 20 per cent. to his rental, with the certainty of a satisfactory and progressive augmentation as the present leases expire.

His lordship identifies himself with his property by farming a large portion of it himself. The "home farm" at Lambton, including the park, contains about 1600 acres, of which 900 acres are in permanent Grass, and the remainder under the plough. The farm is laid out in large rectangular enclosures, and exhibits a high state of cultivation. The same system of cropping is pursued as that on the estate generally—either a five or seven years' course, as circumstances may make most advisable. The land has all been deep-drained and well limed, and for some time past a great portion has had the advantages of steam tillage, and has been stirred far deeper than is the custom of Durham farming. I had an opportunity of seeing the "steam-plough" (Fowler's) at work with the digging breasts on in the place of ploughs. The field was a tenacious loam, varying in quality and in texture, and in rather a rough condition, having been steam-ploughed in the early part of the winter, and not touched since. The plough was working from 12 to 14 inches deep, and throwing up the soil in a manner that it never had been operated on before; and I must do the men in charge of the steam-plough the justice to say that I never anywhere have come across a steam-plough at work on a farm before which was in such a clean and creditable condition. As large quantities of stock are fattened on the farm, the root-break is always well treated, in order to secure good crops. The usual allowance is from 25 to 30 loads of good farm dung with the addition of 4 to 5 cwt. of artificial manure—Peruvian guano and bones—to the acre. About 90 tons of Peruvian guano and 400*l.* worth of bones ground on the farm, were thus used during the past year. The results of this deep tillage and liberal dressing are seen beyond the crop for which it is mainly intended; they are traceable throughout the whole rotation. Last year, for instance, the Wheat crop on the farm averaged 56 bushels of market, and 4 bushels of tail corn to the acre—a crop, in all probability, without parallel even in the best soils of the country. About 200 acres of Grass are annually mown and made into hay, and a large acreage also is cut green for the horses used in his lordship's collieries. Below ground, also, the "steam horse," which has done such good service on the surface, has been introduced by his lordship with great success.

A breeding flock of 600 ewes are kept—about half the lambs are sold off fat—now averaging 35*s.* each,—and the rest are fed and sold off at a later period. A large number of beasts are also kept and got ready for the Christmas market. They are always disposed of at a public sale on the farm, about the middle of December, which, from the known quality of the stock and the mode of feeding adopted, is attended by purchasers from distant as well as neighbouring markets. Last year the sales comprised 122 fat beasts, chiefly Galloways, West Highlands, and crosses, which realised 2885*l.* 10*s.*; and 900 sheep, Cheviot, Cheviot crosses, and South Downs, for which 2569*l.* were obtained. As on most of the other large estates in the two counties, an increased portion of stronger soils on this, are being each year laid down for permanent Grass. Mr. Morton's practice is to sow the seeds down without any grain crop, and to feed them off the first year. He has tried the practice of sowing them with a corn crop, and has found that they never succeed so well as when sown by themselves.

The buildings are well adapted for a large farm; and the cottages are commodious, clean, and comfortable. The hinds are engaged by the year, and have 14*s.* per week, with a cottage, good garden, coals,

8 bushels of Wheat, and 8 cwt. of Potatos per year. *Professor Wilson, in Newcastle Chronicle.*

Miscellaneous.

The Exact Manner in which Plants Extract their Food is not ascertained. Liebig holds that it is not directly from solution in water, but contact between the membranes of the roots and the soil itself, the juices of the plant exercising a species of attraction for particular materials, just as if we place a thin piece of skin over a vessel full of water slightly acid from sulphuric acid and place on the top some lime, the attraction between the acid and the lime will be so great that gradually the whole of the lime will pass through the membrane. He does not say that water has no part in this process; on the contrary, he believes that the moisture held up in the soil by capillary attraction assists the process; but his argument tends to show that the water which circulates through the soil, has not power to convey food from one portion of the soil to another. To quote from his late work: "A plant is not like an animal, endowed with special organs to dissolve the food, and make it ready for absorption; this preparation of the nutriment is assigned by another law to the fruitful earth itself, which, in this respect, discharges the functions performed by the stomach and intestines of animals. The arable soil decomposes salts of potash, ammonia, the soluble phosphates, and the potash; phosphoric acid and ammonia always take the same form in the soil, no matter from what soil they are derived. In performing this function, the plant-bearing earth constitutes for the use of man and beast an immense purifying apparatus, whereby it removes from the water all matters hurtful to the health of animals, and all products resulting from the decay and putrefaction of deceased generations of plants and animals." The views of Liebig on this point are very ingenious, and, in the absence of definite knowledge, afford a more rational explanation of the influence of different crops in a rotation, than can be found in the mere differences of mineral food they require, viz.:—That it is due to the different habits of root-growth, that whilst one crop finds its food in the surface, another is supplied from the deeper layers of the soil. This view is by no means original, having been advocated years ago by Dr. Voelcker. Thus root crops, such as Mangels and Swedes, feed rather deeply, as well as near the surface. Beans feed entirely in the deeper parts, whilst Barley and Potatos spread out roots immediately below the surface. The Clovers feed whilst young near the surface, and in the second year become deep-rooted plants. That Clover-sickness often becomes visible at that period of growth, when the roots are descending into the subsoil, leads Liebig to a somewhat hasty conclusion, that the explanation of this hitherto inexplicable phenomenon is extremely simple, viz., the presence or absence of suitable food in the subsoil. Abundant evidence could be obtained to upset this pretty theory, and to show that Clover-sickness must be due to other causes, to which we have not the clue—that it occurs in soils both poor and rich—that a field shall fail at one time, and in the next course, without the addition of any food, the plant shall be perfectly good. *Professor J. Coleman, at Wigton.*

Calendar of Operations.

AUGUST.

Berwickshire: *Merse Farm, August* 1.—It is just two years and a week since that terrible gale, which did as much as the cold dark season to blight the Wheat crop of 1862; and just such another has blown all night; yet until the broken stalks die it might be rash to estimate the amount of damage. Hitherto the season has justified Mr. Du Boulay's predictions, for, though often bright, it has been cold and backward, with the exception of a few fine days about the middle of May, June, and July; and, with a rainfall of 5½ inches, the ground has never been wetted, owing to the immediate and intense drought. On exceptional deep loams crops look well, but on the vast majority of soils they are quite the reverse. Of all the cereals, Barley is the best; much of it is a good standing crop, though on hard clays the braird was late and irregular. It is, however, beginning to change colour too soon and very unequally. Wheat at one time threatened to be too thick, but the cold spring cured that fault; straw and ear are both rather short; many of the stalks being broken down, it will be bad to reap; and there is much red gum in the earliest fields. Oats have suffered most from the drought. On poor clays and gravels they are exceedingly short, some look as if they would never be worth harvesting, and many a field of good land will disappoint reasonable expectations. In a cold season we generally find a great growth of yellow weeds among Oats, but this year there is no such thing to be seen. We must attribute this to the thorough fallowing those fields got in the dry summers of 1858 and 1859. Beans were late of being sown, but grew vigorously; and here and there may be seen a very good crop of Peas on clean land. The old crop of Potatos being quite unsaleable, the breadth planted is much less than for some years past; and those planted late look but middling. In low situations the shaws were nipped in June. Seldom have we had a better fallowing season; operations proceeded regularly with scarce a day's stoppage; and some who were rash enough to sow their seed on dirty land, have got a good time to work it with scuffler and paring plough. Part of the Swedes sown in the beginning of May were taken by frost and flea, and we see no reason to alter our practice of waiting till near the middle of the month. With the exception of a few late sown fields of Turnips, which will never come to anything for want of sap, the crop in general, though not luxuriant, has progressed fairly and steadily. By the middle of July, when the lambs are weaned, seeds were totally burnt up; but such fields as got relief then, by transfer of stock to faggage or old Grass, are filling up nicely with White Clover. Old pastures have done well, being mostly grouped in well sheltered policies; but it must have been difficult to stock them with lean cattle, for the prices were monstrous. The Clover hay crop is very light, and well saved. Old land is just come to the scythe. To consume the old Potatos, a great number of cattle was kept on till June, and the price did not rise as usual. Mutton, too, has been moderate in price, and lean sheep very dear. Wool recovered from its depression about a month ago, and the rise in price has only been limited by the exhaustion of supplies. Prices have ranged from 5*d.* to 8*d* per lb. above last year. Lambs are a middling crop, and 4*s.* to 5*s.* up; 30*s.* being a current price for good average lambs. In lambs, as in wool, prices have been irregular, owing to the great and unexpected rise. It is more than ever evident, that sheep are the farmer's mainstay; for the corn crop has not proved nearly so abundant as it seems to have done in England. Harvest may commence within the month, and will be general in September. *J. T.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. Slatter, Streatley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	Aug.	Inches.	°	°				°	°	°	°	Inches.
Friday	5	30.14	76	66	N.E.	1	0	78	55	94	45	0.00
Saturday	6	.09	71	65	S.W.	1	10	82	58	96	50	0.07
Sunday	7	30.03	71	61	S.W.	1	5	78	47	92	38	0.36
Monday	8	29.87	67	63	W.	1	10	76	62	91	54	:
Tuesday	9	29.81	61	59	S.W.	1	10	76	55	94	46	:
Wednesday	10	30.05	63	54	N.W.	4	7	65	48	96	38	:
Thursday	11	30.30	61	54	N.W.	0	5	64	43	78	33	:

Notices to Correspondents.

Diseases in Pigs: *A Worcestershire Lad.* The disease that has been so fatal to pigs differs from the pleuro-pneumonia of cattle, and is rather to be regarded as fever of a typhoid character, caused by some animal poison engendered probably from keeping a large number of animals together. Not much can be done by way of remedy, but much in the way of prevention. With a view of the latter the situation should be changed and the styes thoroughly lime washed and cleansed. If possible the pigs should be turned into a Grass field daily, for the sake of the room, the air, and the natural diet. The food should be in some measure changed, and rather less nutritious. Skim, or butter milk will be useful, also green vegetables. By way of medicine, 1 ounce of nitrate of potash and 2 ounces. of super-tartrate of potash; 2 ounces of carbonate of soda may be dissolved and mixed with the food of eight middle-sized pigs, and given daily two or three times *W C S.*

Flint on Dairy Farming: *T O'G.* You can get it through any publisher, who will apply for it to the American publishers here. List of works hereafter.

Leather: *S R A.* We can find no information on the composition of leather clippings. But it is doubtless rich in nitrogenous matter. In the conversion of skin into leather there is, however, such an insolubility and fixity of character conferred upon it that it is rendered useless as manure, except after such a tedious process of rotting and disintegration as will practically render it valueless.

Outgoing Tenant: *Clitheroe.* It is probable that the outgoing tenant having supplied all the labour of the Wheat crop (now standing), all the manure, all the seed, and half the rent, has spent 25*s.* to 30*s.*, 30*s.* to 40*s.*, and 15*s.* to 20*s.*, or in all 3*l.* 10*s.* to 4*l.* 10*s.*, say 4*l.* per acre. On the other hand the incoming tenant, paying half the rent, has paid 15*s.* to 20*s.*, say 1*l.* per acre. If the division is to be made in this proportion, then the incoming tenant should have one-fifth only of the proceeds after all the expense of harvesting and marketing has been discharged. But in general no such division is made. The outgoing tenant does and is done by, as his predecessor did and was done by at the last change of tenancy. Your question did not arrive till after we had gone to press.

Plants: *H W C.* The plant sent is Spergula arvensis, common Spurrey; it is a common denizen of sandy soils, and occurs in any crop; it is quite different from the Dodder, though it is, as we have this year experienced, a sad pest in Flax. It is harmless, and may be eaten by sheep; indeed it has been recommended for cultivation as sheep food. *B—M & Co.* The Grass is Bromus secalinus, Rye Brome Grass. *B.*

Tilework: *X Y Z.* There is information on the subject in the "Cyclopedia of Agriculture" (Blackie).

HAND GLASS FRAMES (Loose Tops).

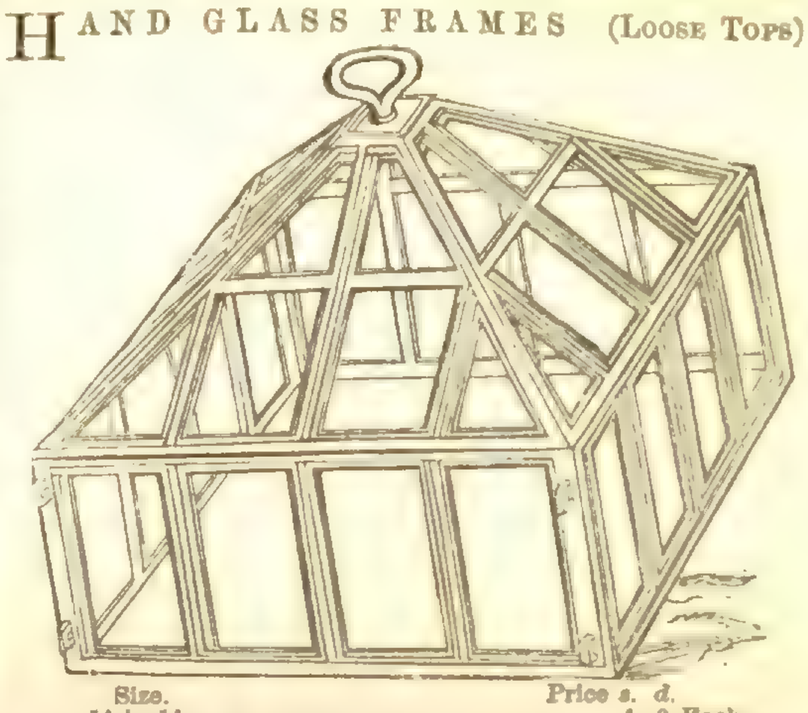

Size.	Price s.	d.
14 by 14	4	0 Each.
18 by 18	5	0 "
20 by 20	6	6 "
22 by 22	7	6 "
24 by 24	8	6 "

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J. Jones & Sons, 6, Bankside, London, S.E.

Glass for Garden Purposes.

JAMES PHILLIPS AND CO.
beg to submit their prices as follows:—

REDUCED PRICES OF PROPAGATING GLASSES.

	Each.—s.	d.		Each.—s.	d.
3 inches in diameter	0	4	12 inches in diameter	1	6
4 " "	0	5	13 " "	1	10
5 " "	0	6	14 " "	2	3
6 " "	0	7	15 " "	2	9
7 " "	0	9	16 " "	3	4
8 " "	0	10½	17 " "	4	0
9 " "	1	1	18 " "	4	6
10 " "	1	2	19 " "	5	6
11 " "	1	4	20 " "	6	0

BEE GLASSES.

	Each.—s.	d.		Each.—s.	d.
4 inches in diameter	0	6	9 inches in diameter	1	8
5 " "	0	8	10 " "	2	0
6 " "	0	10	11 " "	2	6
7 " "	1	1	12 " "	3	0
8 " "	1	4			

Not made above 12 inches.

CUCUMBER GLASSES.

	Each.—s.	d.		Each.—s.	d.
21 inches long	1	9	16 inches long	1	2
20 " "	1	7	14 " "	1	0
18 " "	1	6	12 " "	0	10
	1	4	Made to any length.		

HAND GLASSES, WITH OPEN TOPS.

	Each.—s.	d.		Each.—s.	d.
12 inches	6	6	18 inches	9	6
14 "	7	6	20 "	10	6
16 "	8	6	22 "	11	6
			24 "	12	6

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Illustrated Price Lists free by post. The Trade supplied.

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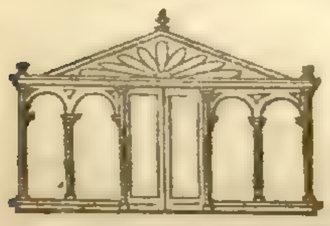

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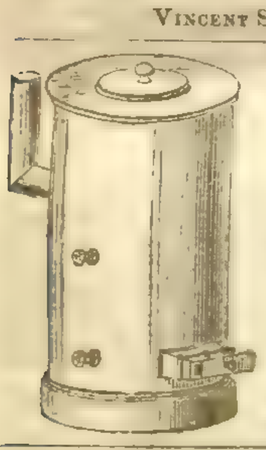

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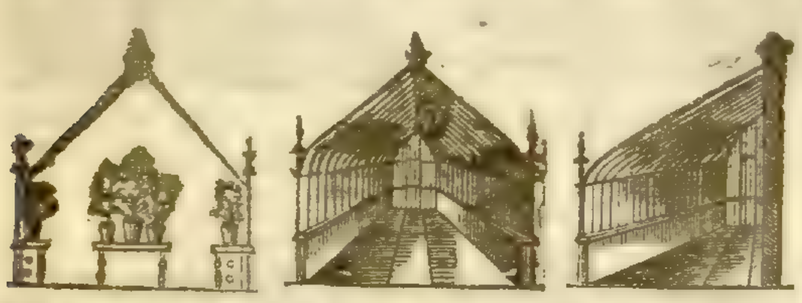

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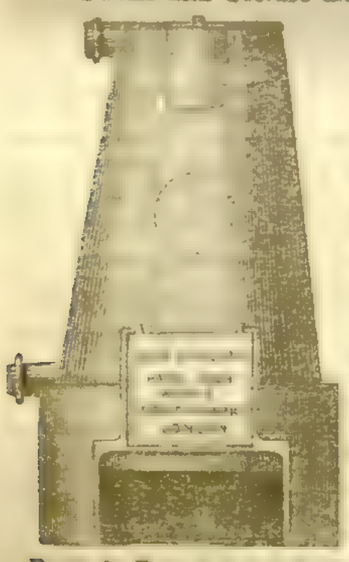

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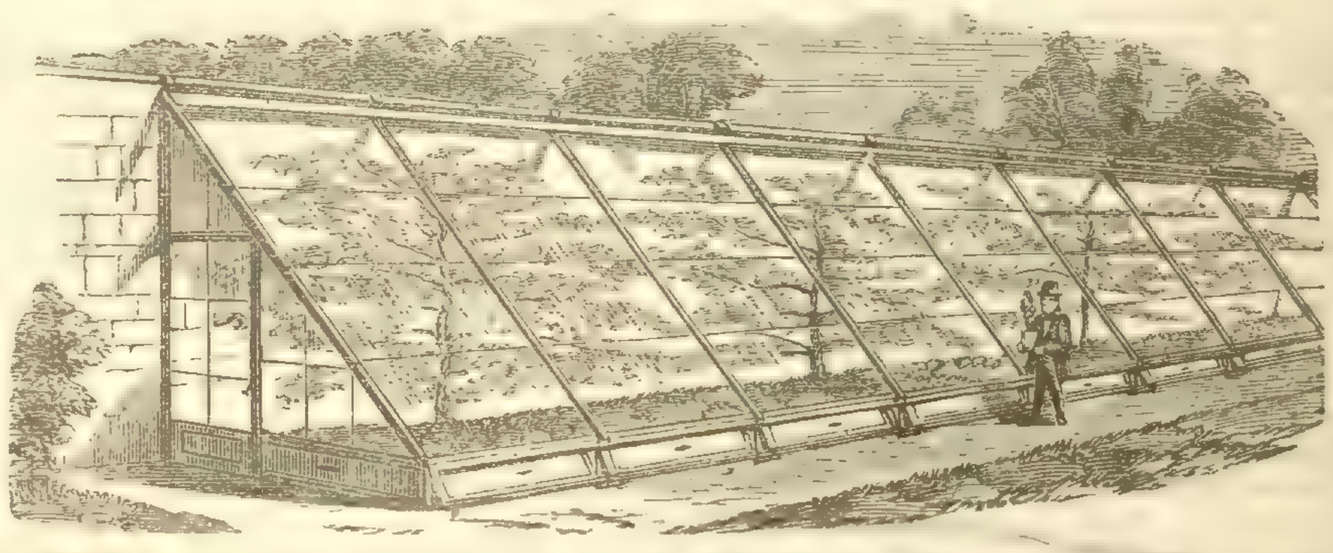

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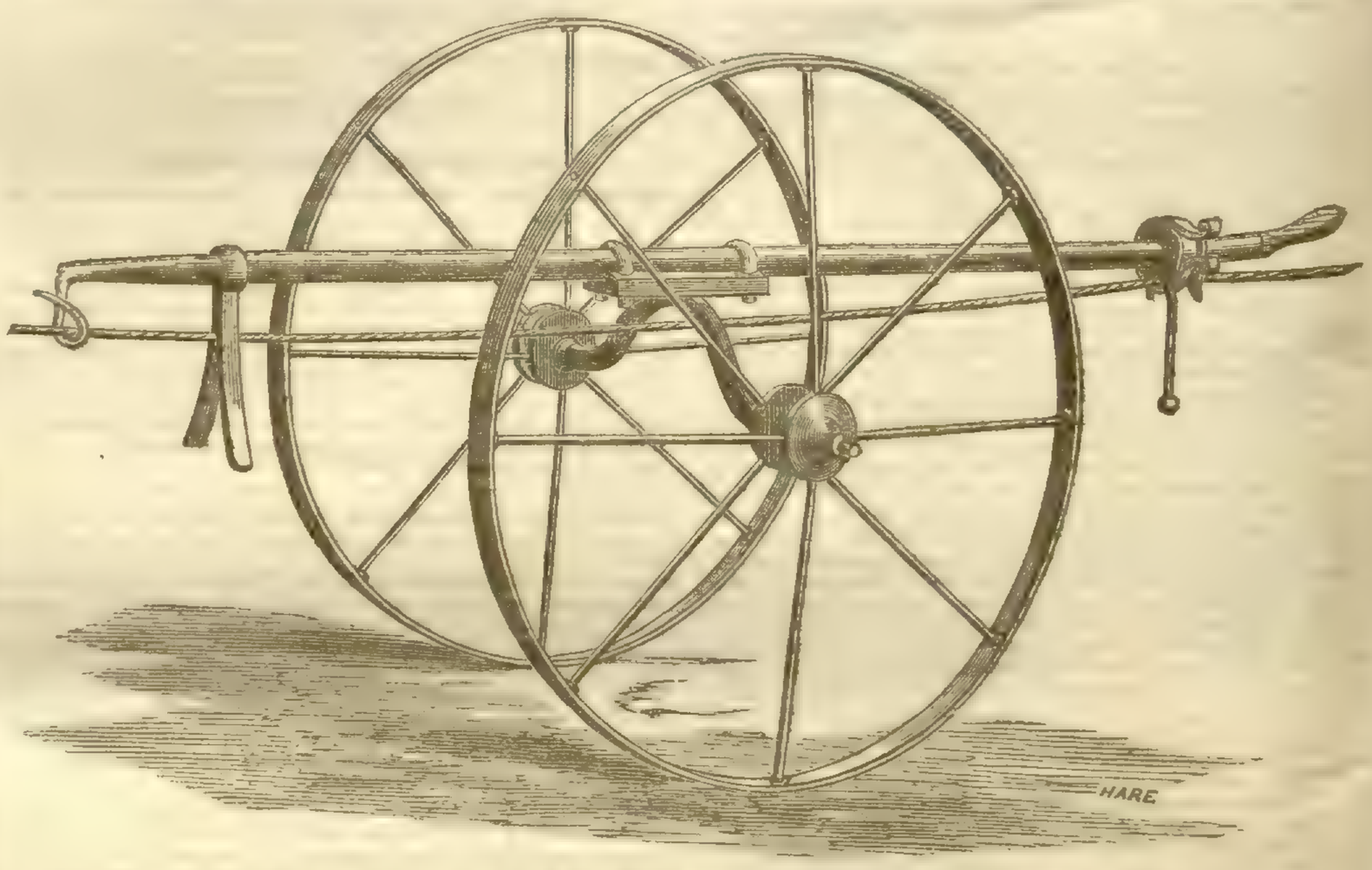

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AWARDED THE FIRST PRIZE AT THE NEWCASTLE MEETING OF THE ROYAL AGRICULTURAL SOCIETY, JULY, 1864.

THESE ROPE PORTERS are fastened to the Rope at intervals behind the Cultivator or Plough as it leaves either headland, they travel across the field with the Rope and are taken off as they return. They can be released from the Rope instantaneously. They are much less trouble than any hitherto in use, and they save the boys the fatigue of running with the Implement across the field.

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FOR ALL SOILS.

SUTTON AND SONS can supply good fresh SEEDS for immediate Sowing as under:—

PERMANENT GRASS SEEDS
For Laying down New Pastures (including CLOVERS in full quantities), 30s. per Acre.

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For Mending New Pastures, which may have been injured by the Corn crop, 12s. per bush.

Royal Berkshire Seed Establishment, Reading.

Choice Seeds for Present Sowing.
ROBERT PARKER begs to offer the following, all of which are warranted new and the finest possible quality of their several kinds:

	Per packet—s.	d.
CALCEOLARIA, Herbaceous, mixed	2	6
CINERARIA, from named varieties, mixed	2	6
STOCK, Scarlet Intermediate	0	6
,, White, ditto	0	6
,, Giant Scarlet, ditto	1	0
,, White, ditto	1	0
PRIMULA SINENSIS FIMBRIATA, mixed	2	6

A PRICED and DESCRIPTIVE CATALOGUE of SEEDS and PLANTS is published and will be forwarded to applicants.
Exotic Nursery, Tooting, Surrey, S.

ROBERT PARKER begs to offer the following, all of which are well-grown, clean, and healthy plants:—

	per 100	20s.	0d.
AZALEA INDICA, Stocks for Grafting			
ALOCASIA METALLICA	each	7	6
CLERODENDRON BALFOURII	,,	10	6
RHODODENDRON COUNTESS of HADDINGTON	,,	21	0
,, JAVANICUM	,,	2	6
,, NUTTALI	,,	2	6
TRITOMA GRANDIS	,,	5	0
,, UVARIA GLAUCESCENS	,,	1	6

Intending purchasers are invited to inspect the general stock of Plants. DESCRIPTIVE and PRICED CATALOGUES of SEEDS and PLANTS are published, which will be forwarded to applicants.
Exotic Nursery, Tooting, Surrey, S.

WELLINGTONIA GIGANTEA.—The Undersigned begs to offer fine healthy Seedling Plants in pots, at the following prices:—
One Year Seedlings, in single pots, 50s. per 100.
Specimen Plants, in 24-sized pots, 18 inches, 60s per dozen.
Fine Plants, in 32 pots, 1 foot, 30s. per dozen.
,, in 48 pots, 9 inches, 15s. per dozen.
ARAUCARIA IMBRICATA, in 48 pots, fine, 9s. per dozen.
CUPRESSUS LAWSONIANA, 9 inches, 12s. per dozen.
T. HENCHMAN, Edmonton, near London.

Beautiful New Plant, Dipladenia amabilis.
JAS. BACKHOUSE AND SON beg to call the attention of all lovers of Choice Plants to this superb DIPLADENIA, of which they possessed the entire stock. It is a new hybrid of unrivalled beauty; with the deep rosy-crimson flowers of D. crassinoda, approaching the size of D. splendens. Leaves about the size of D. Van Houttei, but of the form and texture of D. splendens. A most abundant bloomer, and for house decoration or exhibition invaluable. 10s. 6d. each.

J. B. & Son also offer the following:—
TRICHOMANES ZOLLINGERI.—Fine stove Fern from Java, of vigorous habit. Good healthy established plants 10s. 6d. each. Large specimens by special contract.
CATTLEYA WARCEWICZII, var.—Several nice healthy plants, just received direct from the party who first sent C. Warcewiczii delicata and C. Wagneri rosea to them. Prices on application.
SCHIZOSTYLIS COCCINEA.—Good strong plants for autumn flowering 3s. each. For large quantities special prices on application.
York Nurseries.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.
The Stock having been purchased by JOHN STANDISH, strong Plants will be sent out in the first week of June, price 15s. to 31s. 6d. each.
Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.
Royal Nurseries, Ascot, Berks.

Vine Duchess of Buccleuch.
ROBERT PARKER begs to announce that he has arranged for the distribution of the stock of this very distinct and valuable EARLY WHITE GRAPE, and that the plants will be sent out early in autumn. Full particulars as to its qualities will be given in future advertisements. In the meantime, and during the whole of the season, visitors to the Gardens of Dalkeith Palace will have opportunities of seeing and judging of its merits, as a large quantity of pot and permanent Vines are now fruiting at that establishment.
Strong Planting Canes, 21s. each; Extra strong Fruiting Canes, 42s. each. Orders are now being booked, and will be executed in strict rotation.
Exotic Nursery, Tooting, Surrey, S.

CARTER'S GARDENER'S VADE-MECUM.

Choice Seeds for Present Sowing.
B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

	Per pkt.—s.	d.	s.	d.		Per pkt.—s.	d.	s.	d.
PRIMULA	2	0	and 3	6	INTERMEDIATE STOCK	0	6	and 1	0
CINERARIA	1	6	and 2	6	BROMPTON do.	0	6	and 1	0
CALCEOLARIA	1	6	and 2	6					

The above Seeds are saved with great care, and can be warranted to give satisfaction.
Paradise and Victoria Nurseries, Holloway, London, N.

New and Choice Plants.
B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens.
A DESCRIPTIVE and PRICED CATALOGUE post free on application.
Paradise and Victoria Nurseries, Holloway, London, N.

BANBURY HORTICULTURAL SOCIETY.
OPEN PRIZES—1864.

The EIGHTEENTH ANNUAL EXHIBITION of this Society is fixed for TUESDAY, August 30, when, in addition to the usual number of Prizes to be competed for by Members, the following are offered, open to all England, on payment of an Entrance Fee of 2s. 6d.
For the best 6 Stove or Greenhouse Plants, either in Flower or Ornamental, of at least four different Genera, but not Fuchsias or Annuals, 1st Prize, 3l.; 2d, 2l.
For the best 24 Dahlias, 24 varieties, 1st, 3l.; 2d, 2l.
For the best 18 Hollyhocks, 2 Blooms of each 1st, 2l.; 2d, 1l.
For the best 12 varieties of Verbenas (5 Trusses in a bunch), 1st, 1l.; 2d, 15s.
The Judges may withhold any prize if the production exhibited is not considered worthy.
Intending Exhibitors must give notice to the Secretary on or before Saturday, August 27.
The Society will, if requested, convey the productions from and to the Railways.
The Bands of the Coldstream Guards and the Third Oxfordshire Rifle Volunteers and the Orpheus Glee Union will perform on the Grounds.
For further particulars, apply to E. J. HARTLEY, Acting Secretary, 57, High Street, Banbury.

ROYAL HORTICULTURAL SOCIETY.
FLORAL COMMITTEE.

LIST of AWARDS, August 16, 1864.

FIRST-CLASS CERTIFICATES.
ANTHURIUM sp. (WEIR), from the Society's Garden.
DAHLIA EDWARD SPARY, from Mr. Keynes, Salisbury.
DAHLIA LADY MAUDE HERBERT, from Mr. Keynes.
HOLLYHOCK CHAIRMAN, from Mr. W. Chater, Saffron Walden.
HOLLYHOCK CYGNET, from Mr. W. Chater.
HOLLYHOCK DECISION, from Mr. W. Chater.
HOLLYHOCK FANNY CHATER, from Mr. W. Chater.
HOLLYHOCK GLADIATOR, from the Rev. E. Hawke, Gainsborough.
HOLLYHOCK HERCULES, from Mr. W. Chater.
HOLLYHOCK JAMES ALLEN, from Mr. W. Chater.
HOLLYHOCK REV. E. HAWKE, from Mr. W. Chater.
HOLLYHOCK REV. JOSHUA DIX, from Mr. W. Chater.
HOLLYHOCK WILLINGHAM DEFIANCE, from the Rev. E. Hawke.
PEPEROMIA ARIFOLIA, from the Society's Garden.
PEPEROMIA sp. (WEIR), from the Society's Garden.
VERBENA CHARLES TURNER, from Mr. C. J. Perry, Castle Bromwich.
WAITZIA GRANDIFLORA, from Mr. W. Thompson, Ipswich.

SECOND-CLASS CERTIFICATES.
DAHLIA AMBASSADOR, from Mr. Wheeler, Warminster.
DAHLIA GEORGE RAWLINGS, from Mr. Keynes.
DAHLIA HAMLET, from Mr. Keynes.
DAHLIA JOHN SALTER, from Mr. Keynes.
DAHLIA STRIPED PERFECTION, from Mr. Keynes.
HOLLYHOCK ALBION, from the Rev. E. Hawke.
HOLLYHOCK CAVALIER, from the Rev. E. Hawke.
HOLLYHOCK COMPETITOR, from Mr. W. Chater.
HOLLYHOCK FAIREST OF THE FAIR, from Mr. W. Chater.
HOLLYHOCK OTHELLO, from Mr. W. Chater.
HOLLYHOCK VOLUNTEER IMPROVED, from Mr. Bird Porter, Epping.
VERBENA ANNIE, from Mr. Cooling, Bath.

COMMENDATION.
VERBENA LILAC KING, from Mr. C. J. Perry.

SPECIAL CERTIFICATES.
To a Collection of HOLLYHOCKS, from Mr. W. Chater.
To a Collection of HOLLYHOCKS, from Messrs. Downie, Laird, & Laing, Forest Hill.
To a Collection of VERBENAS, from Mr. C. J. Perry.

The NEXT MEETING of the COMMITTEE will take place on TUESDAY, September 13.

THOMAS MOORE, Secretary to the Committee.

ROYAL HORTICULTURAL SOCIETY.
SOUTH KENSINGTON.

FUTURE ARRANGEMENTS.
24th August, Wednesday, and following days—Show of New and Rare Plants at South Kensington.
26th August, Friday—Prince Consort's Birthday: Admission Free at South Kensington Gardens. Music all day.
27th August, Saturday—Flower and Fruit Promenade at Chiswick, admission 1s. Band at 3.
24th September, Saturday—Promenade and Grape Show at Chiswick, admission 1s. Band at 3.
Promenades with Bands in August and September, every Monday, admission 6d.; and Saturday, 1s. at 4.
6th September—Tuesday, Flowers at South Kensington.
19th October, Wednesday and following days—Fruit and Vegetable Shows at South Kensington.
16th November, Wednesday, and following days—Chrysanthemum Show at South Kensington.
7th December, Wednesday and following days—International Fruit and Vegetable Show.
26th December, Monday, and following days—Perfumes from Flowers and the Processes of Distillation.
The Gardens are now open daily. Admission, Mondays, 6d.; Tuesdays, Thursdays, Fridays, and Saturdays, 1s.; Wednesdays, 2s. 6d.; Sundays, by Fellows' personal admission or orders.

ROYAL HORTICULTURAL SOCIETY'S GARDENS, SOUTH KENSINGTON.

ANNIVERSARY of the BIRTHDAY of the PRINCE CONSORT, AUGUST 26, 1864.

By command of Her Most Gracious Majesty the Council have directed that these Gardens shall be opened freely to the Public on August 26, 1864, the Anniversary of the Birthday of His Royal Highness the Prince Consort, the Founder of the Gardens.
1. There will be entrances to the Gardens at the East in Exhibition Road; West in Prince Albert's Road, and South in the Exhibition Road. The entrances will be opened at 10 and closed at 6 o'Clock.
2. The Conservatory, Orchard Houses, Arcades, and Maze will all be opened. The Cascades and Minton's Fountain will play.
3. The Old Hundredth Psalm, a Hymn composed by the Prince Consort, and "God Save the Queen," will be sung by the visitors. "God Save the Queen" will be sung at 6 o'clock. Bands will be stationed in several parts of the Gardens, and will perform at intervals during the day.
4. Omnibuses pass the Gardens.
5. Clubs, Schools, &c., may be accompanied by their banners and bands.
6. Refreshments will be sold at moderate rates, or the visitors may bring their own. The South Arcades at the lower end of the Garden, as in the Exhibition of 1862, and either of the Annexes, may be used for the refreshments; but visitors are requested not to use the Flower Garden as a place for that purpose.

The Gardeners' Chronicle.
SATURDAY, AUGUST 20, 1864.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY, Aug. 24 and following days } Royal Horticultural (Show of New and Rare Plants), at South Kensington.
SATURDAY, Aug. 27 { Royal Horticultural (Flower and Fruit Promenade), at Chiswick.

EVERY day shows us more clearly the truth of HAMLET's saying that "there are more things in heaven and earth," the immaterial and material world, "than are dreamt of in our philosophy." Who would have expected to see a Fungus producing perfect fruit at the bottom of the sea, as Sphæria Posidoniæ does on the hard stems of Posidonia, while another which abounds everywhere in dead herbaceous plants, attains an equal growth on seaweeds cast upon the sea shore? Who again would have suspected that dry rot, which is the pest of all timber constructions, should be able to penetrate and destroy brick walls? Or, to give another instance, reported by Dr. J. E. GRAY, who could believe that a Fungus, and that belonging to the very highest division, could be developed in water to such an extent as to block up leaden pipes as effectually as the multitudinous roots of many Phænogams?

Now, however, that the curious tribe of Saprolegniæ, notwithstanding some anomalies, vindicates its place incontestably amongst FUNGI, we must enlarge our notions as to the possibility of their development when immersed in water; and unwilling as we may be to depart from our preconceived opinions as to the main distinction between Fungi and Algæ consisting in the aquatic growth of the latter, we must be content to open our eyes once more and acknowledge that we have another proof before us of the impossibility of accurately defining the essential characters of the several great groups of which the cellular Cryptogams consist. It ought not, however, to surprise us more to find aquatic Fungi, than it does to recognise as certain Lichens essentially aquatic species, while far the greater number are more capable perhaps of enduring a lengthened drought than any other members of the vegetable world.

No mention is made in Dr. GRAY's communication of any wood entering into the construction of the tank, the leaden pipes of which are blocked up by the spongy substance of which we have a specimen before us. This substance is clearly the hypertrophied hymenium of some Polyporus, and there is no doubt that at some period of its growth it was attached to wood, as fragments of it, probably of Elm wood, still adhere to it. An examination on the spot might possibly enable us to ascertain to what especial species it belongs. That it is in an abnormal state is beyond doubt. Unfortunately we can suggest no remedy that would not be equally destructive to the fish and other inhabitants of the tank. There would be no difficulty in finding chemicals which would prevent the growth of the Fungus, but we fear that the lowest proportion which would destroy the vegetable would make the water unfit for admission to the gills of fishes, and possibly destroy the myriads of little animals and vegetables of which their nutriment consists.

This is not indeed the only instance in which Fungi have been injurious by stopping up pipes and taps. A very curious plant was sent to us lately from the cisterns supplied by the Severn water at Worcester, which had this unwelcome property, in addition to which it made the water totally unfit for artificial fish breeding, as the threads surrounded the eggs and rendered them abortive. This Fungus however was evidently one belonging to a far lower type than that to which we before alluded. It forms a gelatinous mass, consisting of an infinity of threads of different diameters, which whether articulated or free from divisions, present in their cavity a series of globose bodies or nuclei. Here and there we perceive a sudden inflation, but we see nothing like fruit; though there is an occasional conjugation of the threads; and notwithstanding the aquatic habit and resemblance to certain Algæ, we feel convinced that it is the spawn of some mould, but of what species we are altogether ignorant, as the threads possess a character of their own different from anything we have seen before in Fungi. We tried in vain to get it to grow on rice paste. The threads showed no change, but seemed to act as a putrefactive ferment, separating with extreme rapidity the watery from the solid constituents of the paste, and emitting a most loathsome effluvium; an effect which was not surprising, as it proved fatal to fish, and was characterised when fresh by a smell resembling that of sulphuretted hydrogen. When placed in sugar and water it seems, as far as observed, quite inactive.

We regret extremely that we had no further opportunity of examining this substance, and the more so, as we strongly believe that hospital gangrene and malignant ulcers arise from vegetable contagion. It has lately been remarked that malignant ulcers almost always take place on an exposed part. One instance occurred where there was a slight exposure of the skin from the shirt not being closely buttoned, another from a puncture on the thigh when bathing, and we ourselves know of a fatal case which arose from the abrasion of a small pimple in shaving. Numerous instances indeed of a like kind might easily be collected from current medical journals. *M. J. B.*

THE success which attended the cultivation of CANNAS in Battersea Park last year, of which an account appeared in our pages (see *Gardeners' Chronicle*, 1863, pp. 963, 986), has led, we are informed, to some experiments in reference to the preservation of their roots during the past winter, one of which we think is deserving of notice as being especially interesting to the cultivators of these plants, and of general interest to horticulturists. The same experiment may indeed have been tried in other places, and with equal success, but the result has not—as far as we are aware—been hitherto published.

The experiment referred to applies to a bed of Canna limbata, a circular bed about 9 feet in diameter. The plants made a very vigorous growth last year, producing stems above 6 feet high, and numerous flower spikes, the underground roots or tubers being proportionately

strong. It was determined to leave these tubers in the bed all the winter, and to protect them from frost, in order to ascertain if they would survive under such treatment. The leaves and stems remained uninjured until the beginning of November, when they were destroyed by frost, and removed. The bed was then covered with dry litter a foot thick, which was changed once during the winter after it had become thoroughly wet; and during the severe frost another coating a foot thick of dry litter was added, and secured with stakes to prevent its being blown about by the wind.

About the end of March the young shoots began to make their appearance; the litter was then removed, and a thinner dry coating of similar material was placed lightly over the surface, and allowed to remain until the shoots had grown a foot high; this was about the end of May. As the shoots and leaves were blanched by the covering, it was necessary to shade them from the sun; the plants were also protected from the late spring frosts, and from the cutting easterly winds.

This bed of Canna limbata is now in luxuriant health, with stems above 5 feet high, forming a dense mass, there being no blank spaces, which is a proof that the roots were in no way injured by the very low temperature to which the surrounding earth must have been reduced. The bed was prepared for the reception of these plants last year only in the ordinary way, as for bedding plants, and not as described in our account of the arrangement of the beds prepared for the growth of such plants in the sub-tropical garden. We are indeed of opinion that in beds similar to those last referred to, the roots of Cannas would survive uninjured through a much more severe winter than that of 1863-64 with a sufficient covering to exclude frost, as from their being so well drained the roots would be less likely to suffer from excessive moisture in the ground.

We are ready to admit that various objections may be urged against the plan above described, as regards its appearance during winter in a well-kept garden; but such objections do not lessen the value of the experience gained by this simple experiment, which has proved that the roots of Cannas may be preserved in the open ground in this country uninjured; and we record the fact in the interest of horticulture, leaving the question of appearance to be arranged by those concerned in that part of the subject.

AFTER all that has been said about PUBLIC SCHOOLS in partial or total ignorance on the one hand, and more or less wilful indisposition for improvement on the other, with a certain admixture at the same time amongst those who are better informed and less prejudiced, of a sincere desire to meet the requirements of the present age, which is in so many respects different from that of our forefathers, it is quite refreshing to be able to turn to something which in itself is calculated to give unmixed pleasure, and which shows that in one quarter at least there is just that degree of encouragement for something beyond mere classical attainments which is consistent with the grand end of public education. No system could be worse than one which induced a mere smattering knowledge of every science under the sun. A sound foundation upon which to build hereafter is the main object, and without it there is sure to be, to use a builder's phrase, a more or less dangerous settling hereafter. But supposing this foundation should be firmly established, the wise master builder will not object to many an ornament, which will add grace at least if not solidity to the building. Nature will often point out the direction in which taste and talent may be most profitably exerted, and it is a great point gained if useful or desirable propensities receive a helping hand,—propensities which may lay up an almost incredible store of happiness hereafter, especially for those whose lot has been cast among the rich; and may at the same time check a course of extravagance and licentiousness which is often taken up from the mere want of something rational to occupy the mind.

With these sentiments deeply impressed on our mind, it was with no slight pleasure that we received a day or two since a little work on the Flora and a portion of the Fauna of Harrow, entirely got up by Harrow boys, of whom four are still members of the school and one has recently left it.* The Flora is due mainly to the exertions of Mr. J. C. MELVILL, while the notices of the birds of the neighbourhood have been prepared by the Hon. F. C. BRIDGEMAN and the HON. G. O. M. BRIDGEMAN, and those of the butterflies and moths by Mr. C. C. PARR and Mr. E. HEATHFIELD.

We ourselves remember with great pleasure our rambles some 40 years ago in the environs of a public school, after plants, fossils, and antiquities; and it has always appeared to us a great privilege that our pursuits even in those remote days were not discouraged; while we still have a lively recollection of the pleasure we experienced in reading XENOPHON's history of the retreat of the Ten Thousand, with an illustrated copy of "Tournefort's Voyage to the Levant," with its beautiful figures of plants, kindly lent by one of the masters. Harrow however is not, we believe, the only school in which Natural History is encouraged. Rugby at least treads in the same steps, and even before Dr. ARNOLD's days, we remember well an excellent course of lectures on Comparative Anatomy, which must have left a strong impression on more minds than one.

It is indeed greatly to be wished that in every public school, some sound general principles should be taught, though it would be impossible to enter into the details of every individual branch of science. We should not then witness such complete ignorance of the commonest facts of science as assail us in every quarter amongst public men, an ignorance which is almost peculiar to this country; and the claims of science would not then be so thoroughly ignored as they are at present, while we should avoid many a serious mistake and imposition, which now arise from ignorance and a consequent inability to detect fraud.

To return, however, for a moment to the work itself, we may remark that the neighbourhood of Harrow is not one which is encouraging to the naturalist. The plants and insects, it might be expected, are, with few exceptions, those which are most widely distributed through the more highly cultivated districts. The birds present more interest, the list of these containing several which are far from general. The volume is accompanied by a little map, and is nicely got up, and we hope will lay the foundation for a still farther love of science amongst the rising generation.

There is of course little that can be extracted from a work which professes rather to give correct names and localities than details. We may remark, however, that some judgment is displayed in regard to doubtful species, like those of Brambles and aquatic Ranunculi. A few accidental notes occur, of which the following is a specimen relative to the red-backed Shrike or Butcher-bird:—

"This is by no means uncommon at Harrow, though a rare visitor in the midland counties, and scarcely ever seen in the north of England. It first arrives in this neighbourhood towards the end of April or beginning of May, and leaves it again in September. The food of this bird consists of cockchafers, beetles, grasshoppers, and such like insects; it also occasionally makes a meal of a small bird; its food is impaled on Thorns previously to being eaten. I have found an unfledged bird impaled in this manner half devoured, which shows that even nests are not safe from the depredations of these well-named Butcher-birds." *M. J. B.*

SINCE our remarks respecting MANNA were written, two letters have appeared in the *Reader* on this subject by Mr. HOGG and Dr. SEEMANN. We learn from the former, that GEORGIUS SYNCELLUS of Byzantium, some 11 centuries ago, speaks in his "Chronographia" of what is clearly this substance, as having been brought from Parthia, and tasted by himself. Dr. SEEMANN reminds us of showers of *Sclerotium Semen* and *S. varium* in 1852, in Rhenish Prussia. Both the letters are well worth reading, and indicate several sources of information.

We may also take this opportunity of remarking that we knew an instance, similar to one lately mentioned, of Raspberry seeds being passed from the bladder, and supposed to be little calculi. *M. J. B.*

—— THE present hot dry season has been one of those which unmistakeably show the superiority of the PELARGONIUM in a general way over all other flowers for bedding-out purposes. The Verbena, which is almost the only one which competes with it in respect to breadth and variety of colour, has often been unable to make head against the excessive heat and drought we have experienced; while these influences have had much less effect on the Pelargonium, and indeed within certain limits have proved rather favourable to it than otherwise. The Verbena, however, it must be admitted, still holds the advantage in respect to variety of colour.

Under these circumstances it will be evident that the acquisition of new colours amongst Bedding Pelargoniums would be an immense boon to those who, either from choice or necessity, follow up the parterre system of flower-gardening; and though much yet remains to be accomplished in this way, we may safely congratulate those who are interested in the subject on the considerable advance which has been already made. It is well known amongst those who have kept themselves well informed respecting what has been going on in this way of late years in the neighbourhood of London, that the late Mr. DONALD BEATON, with much zeal and a good proportion of success, occupied himself with the cross-breeding of Pelargoniums with the express object of increasing the materials available by the flower-gardener. Such now well-known varieties as Stella Cybister and Lord Palmerston, all of the nosegay race, and all having this origin, bear evidence at least of success in his earlier labours in this direction. From the vantage ground thus gained, with increased knowledge and experience, Mr. BEATON was following up the subject, and had raised a large quantity of seedlings, the whole of which passed shortly after his death into the hands of Mr. W. PAUL, of Waltham Cross, by whom a few of them have been exhibited during the present summer, though the majority are as yet unbloomed. A recent visit to Waltham, which gave us the opportunity to inspect those which are now blooming—some of them already proved before Mr. BEATON'S death, and intended for present distribution—enables us to state that amongst scarlets passing off in one direction towards orange and yellow, and in the other towards purple-rose or magenta, the bedder-out will have acquired amongst Pelargoniums a variety of tints which must be invaluable to him, especially in seasons like the present, the flowers, moreover, having in many cases a play or glow of colouring which gives them extraordinary richness and brilliancy. Besides, however, the advantages of colour, the seedlings to which we allude, all having more or less evident the nosegay blood, add that of increased breadth of petal, taking on thus an improved form, many of them in fact being what might be called semi-nosegays. The immense trusses borne by varieties of the nosegay race, and the profusion of blossom which they yield, have always kept them in high favour amongst flower-gardeners, but the shape of their flowers has been against them in the estimation of others. Now, we have combined with a profuse-flowering habit, and ample trusses, either larger and better-shaped flowers of the old type, or such as we have called semi-nosegays, in which there is so much increase of breadth in the petals as to make them intermediate between the nosegay race and those with circular flowers, a predominance of the nosegay character being, however, still apparent.

One of the most remarkable of these novelties is a variety called *Beaton's Indian Yellow*, which is one of this semi-nosegay race, dwarf habited and free, with zonate leaves, and producing trusses of 50 or more flowers, forming masses measuring some 4 inches across. The colour of these flowers is an orange-scarlet, with a strong glow or suffusion of yellow, which becomes very remarkable when the flower is placed in close contrast with some other decided and distinct shade of colour. It is a most unexpected and valuable addition to the materials for parterre gardens.

Another remarkable flower is *Glowworm*, a green leaved semi-nosegay variety, of good habit, and produci well furnished trusses of flowers, which are especia remarkable for the glow of colour they present, t upper part of each flower being a fiery scarlet, and t lower magenta with a dash of scarlet towards the c of the petals, presenting also, as do most of the va ties in which the magenta tint is evident, a grac change of hue during the opening stages of the flow which doubtless explains the particular appearance of a glow of colour to which we have alluded.

A third variety, of very great beauty, and likely to be a most useful one for the bedder, almost if not quite belonging to this semi-nosegay series, is one called *Amy Hogg*. It is a strong free-growing variety, of spreading habit, and has slightly zonate leaves and very large flower-trusses abundantly produced and standing up boldly above the leaves, the colour of the flowers being a bright purple rose, very distinct and attractive, so that the variety altogether stands in the front rank.

A fourth deserving of prominent mention for its dwarf dense free habit, and its bold full trusses, is named *Rebecca*. This, too, is one of the semi-nosegay race, and has the upper part of the flower orange-scarlet, and the lower magenta crimson with an extra flush of magenta towards the centre. The abundant ample trusses, and the peculiar play of colour observable here as in others, the blossoms having the property of changing in tint without fading, will render this a very desirable variety for the flower-garden.

Another very effective and well-marked variety, named after the raiser, *Donald Beaton*, has fine broad-petaled flowers of a clear orange scarlet, in large trusses, and is a thoroughly good variety, having moreover leaves which appear faintly zoned from the green being contrasted with a slightly tinted grayish centre. There is however, though much quality, less of novelty of character in this variety.

Turning to varieties which are more distinctly of the nosegay race, there is one called *Orange Nosegay*,

* The Flora of Harrow, by J. C. MELVILL. With Notices of the Birds of the Neighbourhood, by the Hon. F. C. BRIDGEMAN and the Hon G. O. M. BRIDGEMAN; and of the Butterflies and Moths, by C. C. PARR and E. HEATHFIELD. Small 8vo. London, 1864, pp. vi. and 127

which on account of its colour, will certainly be a great acquisition. It is green-leaved, free in habit, and bears the enormous trusses characteristic of this section; but the flowers differ from all others we have seen in their decided bright orange tint, a tint which brought into contiguity with any other shade of red, assumes a strongly marked yellow cast almost as decided as in the Indian Yellow already mentioned. Another of the true nosegays, called *Black Dwarf*, will be extremely useful for small beds or the margins of ribbon borders on account of its close dwarf habit; this has darkly zonate leaves, and the flowers, freely developed, are of a crimson scarlet.

Though not from the same source, we may here mention another variety of Pelargonium, which we saw in the same collection, and which in respect to size and form is far in advance of all the rose-pink varieties we have yet seen. This is named *Mrs. William Paul*. It is very dense, dwarf, and sturdy in habit, with wavy lobed moderately dark-zoned leaves, the flowers larger than a crown piece, of excellent form, being quite circular, the colour a pale soft blush pink, with the upper petals white towards the base, exceedingly delicate and beautiful.

We shall look forward with much interest to the chances of meeting with something very *recherché* amongst the hundreds of recent seedlings from Beaton's stock, which are now here and there coming into flower in Mr. Paul's nursery.

—— In the number of the *Proceedings of the Royal Horticultural Society* just issued, we find the Society proposes to hold several Minor Shows during the autumn months. There is to be a show of New and Rare plants on the 24th inst. at South Kensington. Then, on "Saturday the 28th,"—the 27th is meant, we since learn—there is to be a Promenade Show at Chiswick for the inspection of the subjects sent in for trial by the Floral Committee. From the peculiarities of the season, and the small size and late planting of many novelties, we believe this meeting has been fixed too early. On the 7th of September a show of Dahlias and other flowers was announced at South Kensington, but as this date had long been fixed for the Crystal Palace meeting, an alteration was necessary; and the natural thing to have done would have been to have held the Kensington Show on the same day as the meeting of the Floral Committee, which takes place on the 13th, but we see it is now fixed for the 6th. The 17th or 24th of September—both dates being announced—is set apart for another Promenade Show at Chiswick, the specialties being the Vines and the Trial flowers, which latter may then be expected to be in better condition than on the 27th inst. A Fruit and Vegetable Show is to be held at Kensington on the 19th of October. The 9th or 16th of November is set down as the opening of a Chrysanthemum show. On the 7th of December, an International Show of Fruit, Vegetables, Roots, Preserves, and Pickles! is to commence; and on the 26th of December, a show of "perfumes from flowers and the processes of distillation," but we are not told how these are respectively to be made tangible and apparent to the visitors. We observe, that at the principal of these shows the exhibitors are to be paid by sharing among them half the receipts, one-fourth being divided according to the Honorary Certificates which may be won, and another fourth according to the space which may be occupied. [With all this there will no doubt be exhibited choice specimens of that wonderful species of muddle now taken under the patronage and management of the Royal Horticultural Society.]

GOOSEBERRIES.

The varieties of the Gooseberry are exceedingly numerous, some being small, others very large. With some persons flavour is the chief consideration, with others size; hence many of the sorts called show Gooseberries are met with in cultivation, although they are so coarse as not to be eatable by those who know the quality of good old sorts like the Red Champagne, Red Warrington, &c. We shall therefore notice, in the first place, some of those sorts that can be well recommended for flavour; and as some of the large kinds are in this respect much better than others, we shall then notice some of the best of them.

Gooseberries are generally classed in four divisions, red, yellow, green, white, according to the colour of the fruit. Strictly speaking there are no white Gooseberries, but a considerable number of the palest green sorts are so called. When the fruit is of a uniform pale green, with veins of nearly the same colour, it is included amongst the greens; as are likewise those in which the veins are large and rather pale, but the rest of the skin deep green. When, on the other hand, the veins are large and very pale, and the rest of the skin moderately so, the variety in that case is ranked among the whites, the colour of the veins predominating so as to give the fruit on the whole a whitish appearance.

FRUIT RED.

Rough Red.—Early, small, roundish; skin very hairy, dark red, rather thick. Esteemed for preserving and making into jam.

Barton's Hairy Red.—Small, round, slightly hairy, and thick; flavour sharp and good.

Small Dark Rough Red.—Early, small, round, very hairy, dark red, nearly black when fully ripe. Like the Rough Red it answers well for preserving. Upper surface of the leaves downy; this distinguishes it from the Rough Red, the leaves of which are smooth above.

Scotch Best Jam.—Approaching to middle-sized, roundish, slightly hairy, dark red, thick; flavour brisk and rich. Good for the purpose which its name implies.

Red Champagne.—Syn. Red Turkey (of some), Ironmonger (of many); middling early, somewhat oblong, hairy, light red; flavour excellent, rich and vinous. This for dessert is perhaps the best of all Gooseberries. It has a clear pulp; the bush is distinguished by its very upright growth.

Keens' Seedling Warrington.—Resembles the Red Warrington; but is early instead of late, and has a thinner skin than the sort just mentioned. Pulp clear and rich.

Red Warrington.—Syn. Aston, and Aston Seedling; late, rather large, roundish oblong, hairy, light red; pulp clear, vinous, and rich, resembling that of the Red Champagne. One of the best late dessert sorts, and should therefore be in every garden; it has the property of hanging late.

Red Turkey.—Small, roundish oblong, smooth, dark red, thin, rich and sweet. Sometimes confused with the Red Champagne, but the surface of the one being smooth, that of the other hairy, is sufficient distinction.

FRUIT YELLOW.

Yellow Champagne.—Syn. Hairy Amber; rather late, small roundish oblong, hairy, yellow, thin; flavour rich and excellent.

Early Sulphur. — Syn. Golden Ball; very early, middle-sized, roundish oblong, very hairy, bright yellow, and thin; flavour tolerably good. An abundant bearer, and esteemed on account of its earliness.

Rumbullion.—Small, middling early, skin very downy, pale yellow, rather thick. The unripe berries are excellent for bottling; nevertheless it is less extensively grown for that purpose than it formerly was. It is worthy of remark that the skins of Gooseberries for preserving or for bottling should either be hairy or downy, but by no means thin and smooth, for in the latter case the smooth skins become tough films, whereas the hairy and downy skins become tender; but whether this important difference is duly attended to we cannot say.

Amber.—Syn. Smooth Amber; approaching middle size, roundish, smooth, bright greenish yellow, with conspicuous veins, thick, hangs well, and becomes rich.

Yellow Ball.—Roundish, skin smooth, yellow, thick; a good late sort.

FRUIT GREEN.

Early Green Hairy.—Very early, small, round; skin hairy, deep green, and thin; flavour very sweet; esteemed for its earliness.

Hebburn Green Prolific. — Early, middle-sized, roundish; skin hairy, dull green, rather thick; flavour sweet and rich.

Glenton Green.—Syn. York Seedling; early, middle-sized, obovate; skin very hairy, green, with whitish veins, rather thick; flavour sweet and rich.

Pitmaston Green Gage.—Late, rather small, obovate; skin smooth, green, thickish, often acquiring a powdery bloom; flavour rich, sugary, excellent. Will hang on the bush and shrivel, becoming sugary, somewhat like a Raisin, instead of turning sour or insipid, as most Gooseberries do after being fully ripe.

Green Walnut.—Early, middle-sized, roundish oblong; skin smooth, dark green, very thin; flavour sweet.

FRUIT WHITE.

Hedgehog.—Early, medium size; skin hispid, white, rather thin; flavour rich and excellent; but notwithstanding its general merit, an objection to it is likely to arise on account of the bristliness of its skin.

White Champagne. — Middling early, small and roundish oblong; skin hairy and slightly downy, white, rather thick; flavour rich and sweet.

Early White.—Early, middle-sized; roundish-oblong; skin slightly downy, transparent, yellowish white, thin; flavour rich and sugary. Highly deserving of cultivation.

Crystal.—Late, small, roundish; skin smooth, or but very slightly downy, white, thick, tolerably rich. Worthy of recommendation on account of its coming in late, for a prolonged supply.

White Damson.—Very early, small roundish; skin smooth, greenish white, very thin; flavour excellent.

White Honey.—Small, slightly obovate; skin generally smooth, white, rather thick; flavour rich and very sweet.

White Fig.—Very small, but exceedingly rich, obovate, white, smooth. Received its name because it will hang on the bush and dry like a Fig. It may be eaten by those who cannot relish the large sorts of Gooseberries; and, as it hangs well, a few plants of it may be grown for matting up.

The above 25 sorts will form a small but well-flavoured collection, of various colours, red, yellow, green, and white; some early and others late. Planted for trial, they will not occupy much space; and when on trial a selection from them can again be made, as some sorts may be more approved than others. They are all, however, of good quality, so that they may be eaten freely, and without danger. ||

THE INDUSTRY OF MANURES.

[We gratefully borrow the following extracts from our very able contemporary the Pharmaceutical Journal.]

Early History of Manures.—Manures, in the form of cattle-dung and ordinary farm-yard composts, have been known and employed from time immemorial for the fertilisation of the soil; but the manures termed "artificial," which have their origin elsewhere than in the farm itself, and are for the most part of concentrated and portable character, have but of late years come largely into use. Nevertheless, the manufacture of these manures, and the trade to which they have given rise, already rank amongst the most extensive of modern industries.

The first manure-patent of the present century was granted, in 1802, to one Estienne, for a method of converting human excrement into manure, by gathering it in tanks, decanting its liquid part, drying the solid sediment in the sun (with or without addition of lime), letting this ferment in heaps, and finally crushing it to powder. This was a step in the right direction; though we now know that the treatment suggested, by removing from the compost all its soluble and volatile ingredients, must have destroyed nineteen-twentieths of its value

In 1806 pounded oyster-shells and gypsum were patented, as a fertilising mixture, by John Fletcher. This was also a fair proposition. Oyster-shells are slightly phosphatic, and gypsum is known to benefit many soils.

After these slight efforts, invention in this department seems to have slept during more than a quarter of a century; for the next manure patent on record bears date 1835.

In that year, one Pottevin patented a compost of nightsoil with calcined river or pond mud, or other carbonaceous earth. This was a great improvement on Estienne's proposal; seeing that the mud, charred by calcination, and brought to a porous, absorbent condition, would tend to retain and partially disinfect the fertilising matters, which Estienne's mode operated to volatilise or wash away.

Course of Early Scientific Research.—In the meantime, however, a vast store of scientific information, tending more or less directly to the elucidation of this important subject, had been in slow and silent course of accumulation, by the successive labours of many eminent experimentalists.

Not to go back further than the last century, nor even than its latter half, we shall find, concentrated in this brief period, a series of brilliant discoveries, bearing more or less directly upon the manurial and agricultural questions, but far too numerous even for the most cursory narration here. Space would fail us even to enumerate the names of European celebrity that adorned this memorable epoch; but if we had to select half-a-dozen of the most illustrious to represent the philosophical activity, British and continental, of the period, we would venture to single out on the one hand, Black, Priestley, and Cavendish; and on the other, Lavoisier, De Saussure, and Berthollet.

During the 50 years in question the nature and composition of air and water, of carbonic acid and ammonia (the four main forms of volatile plant-food) were discovered, their gaseous elements isolated, and their properties determined.

The sciences of geology and meteorology at this period also began to take shape and form; enabling an insight to be gained into the origin and nature of cultivable soils, and into the climatic conditions of plant-growth.

At the same time the laws of the physical forces, particularly those of light and heat, began to be better understood, as well in their general relations as in their special influence on plants.

The introduction of more accurate chemical methods permitted, meanwhile, a closer investigation than had before been possible of the tissues and products of plants, and of the various transformations which those products undergo during the several stages of vegetable development.

Among the many illustrious men who assisted in working out these great results, Lavoisier probably deserves the highest place; not, perhaps as the largest contributor of new truths to the accumulating store—though his contributions of this kind were many and brilliant—but because his vivid imagination, and the eminent generalizing powers with which he was endowed, enabled him to co-ordinate all the scattered researches of his time, and to display innumerable isolated facts in their true subserviency to general laws; so as (among other things) largely to extend our knowledge of the cosmic equilibrium on which sound husbandry can alone be based. Everything, indeed, that Lavoisier did, bore the impress of his master-mind. He it was who first applied the balance to the study of the phenomena of life. He it was who first showed that, while plants evolve oxygen, animals, on the contrary, consume it; carbon being oxidized or burned in their bodies as oil is burned in a lamp. His lofty tone of thought, and eloquent language, powerfully impressed his contemporaries; and chiefly to his influence and example the admirable researches of his age owe their high scope and scrupulous precision. Science never endured a severer loss than when Lavoisier met his untimely fate. But his great spirit lived after him; and researches bearing upon the noble themes he had loved to treat were carried on, if possible, with increased activity after his death. The scientific records of Europe were soon crowded with fresh masses of undigested discovery; and in a few years such another mind as his was wanted, to grapple with

the growing mass of detail, and once more to create order out of the scientific chaos.

Early in the present century England, in her turn, produced a master-mind—that of the illustrious Sir Humphry Davy—vast in scope and luminous in conception, as any, the greatest, of foregone times. Davy was well fitted to wear the fallen mantle of Lavoisier, and to continue his great work. It is, accordingly, to Davy's genius we owe that memorable treatise—truly described by Liebig as "immortal"—the "Elements of Agricultural Chemistry."

But as the true value of the quarried stones is only made apparent by their judicious collocation in the edifice, according to the plan of the architect; so also do experimental data, separately accumulated by the toil of many, only appear in their true value and significance when comprehensively embraced, co-ordinated, and, as it were, fused into a harmonious whole, by the fiery genius of one master-mind. Such a mind was Lavoisier's in the last century; such a service was rendered by Davy to our fathers; and such, to ourselves, are the mind and the service of Justus Liebig.

It was in the year 1837 that the British Association for the Advancement of Science, perceiving the immense accumulation of facts, for the most part unsystematised, which had already taken place in organic chemistry, and was annually increasing therein, invited Justus Liebig, who had already attained to eminence by his extensive researches in this branch of science, to write a report upon its then condition; which honourable duty the illustrious philosopher undertook.

In the year 1840, Liebig, in fulfilment of this engagement, produced his memorable work on "Organic Chemistry in its Applications to Agriculture and Physiology."

Profiting by the controversial criticism which his book, on its appearance, did not fail to provoke, Liebig made it more perfect in successive editions; and extended it by additional volumes, some modestly entitled "Familiar Letters," some promulgated as codes of Natural Law, but all forming parts of a connected series, in which, as in a mirror, is displayed the progressive development of Liebig's views, in the light of his own and of contemporary researches. By these labours, pursued with unwearied industry during upwards of 20 years, Justus Liebig has unquestionably shed upon his all-important theme a flood of light, as copious and brilliant to the full as that which it successively received, in former days, from the luminous minds of Lavoisier and Davy.

Modern History of Manures.—The impulse given by Liebig's first book to manurial industry is very distinctly traceable in the registry of British patents.

During the 10 years which followed its publication, *i.e.*, between 1840 and 1850, no less than 36 patents for manurial processes and products were enrolled; being six times as many, in 10 years, as had been obtained in all preceding time since patents were first granted.

During the next five years this manurial movement went on in an accelerating ratio; no less than 96 more patents having been registered between 1850 and 1855. The lowering of the charge for patents, which occurred during this interval, no doubt had its share of influence on this result.

The patent statistics since 1855 are not before the Reporter; but he is enabled to state, in general terms, that the activity of research and invention in this department has by no means declined during the last seven years, and that the manurial inventions brought forward in England since 1840 may be approximatively estimated as numbering at least 200.

This long series of inventions comprises plans and processes for turning to account, as manure, almost all the known forms of animal waste and ejecta; such as, for example, the night-soil and sewage of towns; the rags of woollen, silken, and leathern clothing; the *débris* of manuactures in which horn, bone, hides, bristles, gut, and other organic and nitrogenous materials are used; the spent animal or bone charcoal of the sugar refineries, and other phosphatic residua; the ammoniacal liquors of gas-works; the alkaline wash-waters of soap, dye, bleach, and many other factories: in a word, several hundred forms of residua—nitrogenous, phosphatic, and alkaline—formerly cast away as worthless rubbish.

These the respective patentees propose to subject to various processes, mechanical, physical, and chemical; such as, for example, in the case of liquors, to concentration by boiling down, or precipitation by chemical agency; in the case of solid residua, to crushing, grinding, or other process of comminution; or to chemical disintegration by powerful solvents, acid or alkaline, according to the circumstances in each case; or to maceration in water; or to torrefaction by fire; or to digestion, at low or high pressure, sometimes in moist, sometimes in dry or superheated steam.

Several of the patents include recipes for mixing the products thus obtained with each other, or with products of a different origin, to adapt them (as the inventors allege) for special crops, or for peculiar soils.

Many of these proposals possess merit; though a still larger number exhibit ignorance on the projector's part; while a certain percentage almost seem to have been concocted with a view to profit by the ignorance of others.

Superphosphate of Lime Manufacture.—First in importance, and nearly first also in chronological order, among the manure patents enrolled since the publication of Liebig's book in 1840, stands the celebrated patent granted in 1842 to Mr. J. B. Lawes, for converting tricalcic into monocalcic phosphates by sulphuric acid. The invention of this process, so far as it applies to the treatment of recent bones, is not claimed by Mr. Lawes, but belongs to Justus Liebig, who suggested it in his great work already quoted. As this suggestion has become the foundation of the modern industry of manures, and its authorship has been the subject of controversy, the Reporter feels bound to record, in the foot-note below, Liebig's own words on the subject.*

The great merit of Mr. Lawes consists, first, in his having extended the application of sulphuric acid to phosphates of mineral origin, such as apatite, and to the fossil bone phosphates known as coprolite; and, secondly, in his having devised means and appliances for carrying out the manufacture on an industrial scale. Those upon whom it has devolved to organise a new industry, and to overcome the difficulties that spring up, unforseen, at every stage of such a work, will know how to appreciate at their just value Mr. Lawes's services in this respect. Indeed, in his double capacity, as a manufacturer of manures, and as an indefatigable experimentalist on their effects, Mr. Lawes merits recognition as one of the most active promoters of agriculture now living. Nor would it be just, in such a mention, to overlook the large share of service rendered by Dr. Gilbert, the able coadjutor of Mr. Lawes in the experimental and analytic department of his labours.

Mr. Lawes appears to have made his first essays in the manufacture of superphosphate in 1841-2; and, on the success of these experiments to have begun his great manufactory at Deptford in 1843. Many similar works have since sprung up, and the manufacture has grown to enormous magnitude. Mr. Lawes himself produces 18,000 to 20,000 tons of superphosphate annually; and the total yearly production of superphosphate in Great Britain is estimated by him as ranging from 150,000 to 200,000 tons.

Mr. Lawes has favoured the reporter with the following interesting particulars as to the most recent and improved mode of manufacturing superphosphate, its average composition, and its present market price:—

"The phosphatic materials are first ground to a very fine powder by mill-stones; the powder is then carried up by means of elevators, and discharged continuously into a long iron cylinder, having agitators revolving within it with great velocity. A constant stream of sulphuric acid, of sp. gr. 1·66, enters the cylinder at the same end as the dry powder, and the mixture flows out at the other end in the form of a thick mud, having taken three to five minutes in passing through the machine. The quantity turned out by such a mixing-machine is about 100 tons daily. The semi-fluid mass runs into covered pits 10 to 12 feet deep, each of sufficient size to hold the produce of the day's work. It becomes tolerably solid in a few hours, but retains a high temperature for weeks, and even months, if left undisturbed.

"The composition of a superphosphate of good quality, made partly from mineral phosphate and partly from ordinary bones, may be stated as follows:—

Soluble phosphate	22 to 25 per cent.
Insoluble phosphate	8 „ 10 „
Water	10 „ 12 „
Sulphate of lime	35 „ 45 „
Organic matter	12 „ 15 „

Nitrogen 0.75 to 1.5 per cent.

"If sufficient sulphuric acid were used to decompose the whole of the phosphate of lime, the product would be too wet to be packed in bags, and would require either to be mixed with extraneous substances of a dry and porous nature, or to be artificially dried.

"The price of the best descriptions of superphosphate ranges from 5*l.* 15*s.* to 6*l.* 10*s.* per ton, and of that made from purely mineral phosphate from 4*l.* to 5*l.* 5*s.* per ton."

Of the raw materials annually worked up into superphosphate in Great Britain, Mr. Lawes estimates that about half is derived from the deposits of fossil bone-earth, or coprolite, discovered of late years in several parts of England. Bone-ash, chiefly imported from South America, animal charcoal from Germany, and bones from all parts of the world, together supply about 40 per cent. more of the raw material; while the remaining 10 per cent. of the total supply is made up by guano (chiefly of the less nitrogenous and more phosphatic kinds) with a little apatite (say 200 to 500 tons per annum) obtained from Spain, Norway, and America.

Importation of Manures into Great Britain.—These data alone might serve to indicate that the industry of manures, since the impulse it received in 1840, has afforded occupation not only to the inventive and manufacturing, but also to the commercial activity of the English nation. But of this the origin and development of the guano trade affords direct evidence.

The British guano trade can scarcely be said to have existed, as a regular branch of commerce, before Liebig drew attention to the subject. Its principal importers, Messrs. Gibbs & Sons, only began their trade in 1842, two years subsequently to the appearance of Liebig's work, which dwelt strongly on the value of this deposit. In 1841 guano had already been tried on 60 English farms, as appears from a report published in that year by the Council of the Royal Agricultural Society. A few such trials had, in all probability, been made in the two or three preceding years; seeing that several cargoes of guano were imported and sold (at upwards of 20*l.* per ton) by a Mr. Myers, before Messrs. Gibbs engaged in the business. The statistics of the entire guano trade are not before the Reporter; but of its development during the last 20 years some idea may be formed from the experience of Messrs. Gibbs & Sons. That eminent firm in the first year of their trade (1842) only imported 182 tons of guano; in 1843 their importations had already reached 4667 tons; and in 1862, the 20th year after their commencement, their total supplies (as well for foreign as for British consumption) had attained to the enormous rate of 435,000 tons per annum. Of that vast total, from a fourth to a third was retained for use in the United Kingdom. It may interest agricultural readers to know that at the outset of the regular guano trade the price ranged between 10*l.* and 15*l.* per ton; that during the two years, 1846-48, it remained at 9*l.*, its lowest point; that during the next four years 1849-53, it advanced but slightly, to 9*l.* 5*s.*; reaching 10*l.* in 1854; 11*l.* in 1855; 12*l.* in 1856; and 13*l.* its highest recent point, in 1857. Since that time it has slightly declined; and now rules at about 12*l.*

Good and Evil of the Trade in Manures.—The manure trade presents itself, therefore, in two aspects; the one advantageous, the other detrimental to mankind. Nothing can be more advantageous than the collection and utilisation of fertilising residua formerly cast away as worthless. The fossil phosphates quarried out of the bosom of the earth, and the guano extracted (by the successive intervention of seaweeds, fishes, and penguins) from the depths of the ocean, are evidently so much treasure fairly won from nature for the legitimate enrichment of mankind. Even the withdrawal of recent bones and bone-ash, from plains untenanted as yet save by wild cattle, to fertilise the corn-fields of the populous old world, must be accounted a legitimate commerce. But the boundary line is overpassed, and the manure trade becomes abnormal, when bones are withdrawn from one populous country to enrich the exhausted fields of another.

Nor is the detriment thus occasioned confined to the country whose soil is impoverished. In the closely-knit relations of modern commerce, the impoverishment of any one commercial country reacts on the prosperity of all the others, by diminishing the stock of exchangeable wealth in the world. If Germany, for instance, grows less corn, her purchasing power for foreign goods, say French or British, is proportionately diminished, and commerce suffers *pro tanto*. The gain to France or England is, therefore, but illusory, if either robs a neighbour's soil to fertilise her own.

In a work just published, Baron Liebig sternly rebukes England for her over-eagerness to buy up, in the form of bones, the phosphatic wealth of countries less advanced than herself in financial and industrial power, and for the apparent recklessness with which she squanders forth these treasures (ill-gotten and ill-spent) down her innumerable sewers to the sea. The great agricultural teacher manifests alarm at the superabundant zeal with which the most diligent of his pupils obeys his lessons; and to other nations he earnestly points out the ruinous consequences that must ensue to them, from the exportation of phosphates, drawn from their soil, to stay the exhaustion of the English fields. His cry of warning is couched in terms of almost passionate invective:—

England (he exclaims) is robbing all other countries of the conditions of their fertility. Already, in her eagerness for bones, she has turned up the battle-fields of Leipzic, of Waterloo, and of the Crimea; already from the catacombs of Sicily she has carried away the skeletons of many successive generations. Annually she removes from the shores of other countries to her own, the manurial equivalent of three millions and a half of men; whom she takes from us the means of supporting, and squanders down her sewers to the sea. Like a vampire she hangs on the neck of Europe, nay, of the entire world, and sucks the heartblood from nations, without a thought of justice towards them, without a shadow of lasting advantage to herself.

It is impossible (he proceeds to say) that such iniquitous interference with the Divine order of the world should escape its rightful punishment; and this may perhaps overtake England even sooner than the countries she robs. Most assuredly a time awaits her, when all her riches of gold, iron, and coal will be

* The form in which they [bones] are restored to a soil does not appear to be a matter of indifference. For the more finely the bones are reduced to powder, and the more intimately that they are mixed with the soil, the more easily are they assimilated. The most easy and practical mode of effecting their division is to pour over the bones, in a state of fine powder, half of their weight of sulphuric acid diluted with three or four parts of water, and after they have been digested for some time to add 100 parts of water, and sprinkle this mixture over the field before the plough. In a few seconds, the free acids unite with the bases contained in the earth, and a neutral salt is formed in a very fine state of division. Experiments instituted on a soil formed from grauwacke, for the purpose of ascertaining the action of manure thus prepared, have distinctly shown that neither corn nor kitchen-garden plants suffer injurious effects in consequence, but that, on the contrary, they thrive with much more vigour.—"Organic Chemistry in its Application to Agriculture and Physiology," pp. 184-5.

inadequate to buy back a thousandth part of the conditions of life, which for centuries she has wantonly squandered away.

Home Correspondence.

The Unpropitious Season of 1864.—The remarks made by your Battersea Park correspondent induce me to say a little more on this subject. Here the season has been very unfavourable as far as the flower-garden and vegetation generally are concerned. The frost on the 29th of May was an occurrence that may be regarded as a floral calamity, coming as it did just as the bedding plants had been placed in their summer quarters, making great havoc amongst them. Many had to be taken up and replaced by others. Dahlias in the lower part of our grounds, though protected with branches, had to be taken up and started again. Several shrubs of different kinds suffered greatly, and the effect may be seen on some even now. Following this we had cold, or at least what was far from being growing weather, and things could hardly be said to have made a start until the beginning of July. Since then we have had seven weeks of dry weather, with the exception of a few showers one day which were not sufficient to moisten the soil an inch deep; hence irrigation has been a daily labour, but the performance of most of that arduous task can be effected here with a hose attached to the water pipes. This, wherever it can be carried out, is the best way of watering flower gardens. Sometimes beds are so large that to water them properly in the ordinary way some part must be trampled on; a pipe with a little force of water therefore remedies that evil and keeps the Grass and walks clean. A flexible pipe may be attached to a pump, one man being at the latter, and another directing the hose. Some, after reading "J. G.'s" remarks on Flower-beds, might perhaps be delighted with the idea of mulching, and would hasten with all speed to apply it, wondering how they could be so stupid as not to think of it before. Let me, however, advise all such to take heed. If they are troubled with blackbirds and thrushes, they will never forget mulching; for before 24 hours will have elapsed their covering, whatever it may be, will be far enough from the spot where they put it. Flattened beds again appear to be a very natural suggestion, and no doubt they not only are, but will be adopted wherever it is convenient to do so. My opinion, however, is that raised beds produce a decidedly better effect than flat ones, giving us as they do miniatnre hills of floral display as well as "seas." Here some are perfectly flat, others partially raised, and some very much so, especially the beds in the herbaceous grounds. And the only means of getting water at the roots of the plants is by forming a cavity all round them, or making what is termed a basin for each plant. This may appear tedious, but it amply repays the operator for his trouble. The same plan has been followed in the case of some of the small trees on the lawn, where the turf has been cut 2 feet in diameter round the plant, affording an opportunity of giving it a thorough soaking for two or three days in succession; the turf is then replaced. After this any amount of water will penetrate the soil; taking up the turf may not have to be practised on level grounds, but with us, under such a long drought as we have experienced, with sloping lawns and chalky land, the effects on trees and shrubs may be better imagined than described. Our mowing machines have been dispensed with for the last six weeks, and their service is not likely to be required for some time yet to come. The Grass fields in the vicinity are quite brown, in short presenting the appearance of a highway. On the 10th and 11th inst. the air felt rather cooler, especially at night; and on the morning of the 12th the ground was covered with a white frost, and at 5 o'clock in the morning thin cakes might be scraped off the Grass. Nothing, however, appears to have received any injury from it except a few beds of Coleus, the rich hue peculiar to which has been changed into a brown. One might be puzzled, however, to attribute it to the effects of frost. The edges of the leaves of the Amaranthus melancholicus are also browned a little. The damage to this would have been greater had it been watered in the same manner as the Coleus was on the previous night. The present season may therefore, I think, well be set down as one of incessant trouble to horticulturists. *W. P. R., Shrubland Park Gardens, Ipswich.*

Lilium auratum.—For these last three weeks I have had a fine imported bulb of this Lily in flower at my nurseries at Draycott, where it has borne 15 full-sized blossoms; the stem is upwards of 6 feet high, measuring from the top of the pot. The flowers occupied a space of about 18 inches round the top of the stem; 11 was the greatest number out at once, and at that time the plant presented a truly magnificent appearance. *William Barron, Elvaston Nurseries.*——My plant of this Lily has at the present time a single stem 7 feet 2 inches high, with 115 perfect leaves, each from 7 to 9 inches in length; the flowers were 11 in number, eight of which are in full beauty, and three buds unexpanded; the flowers were 12 inches in diameter, a sight more easily imagined than described. As an illustration of its attraction, I may mention that visitors pass by a fine plant of Disa grandiflora unnoticed to inspect it; individual flowers on the latter plant have been in full beauty upwards of four weeks. The Lily is one of the most beautiful and useful plants in cultivation, and when better known will become a general favourite. *Robert Bullen, Gardener to A. Turner, Esq., Leicester.*

Oak Trees Killed by Frost.—In our annual fall of timber in 1862 there were some 80 Oak trees so much injured by the frost of 1860 that it was found expedient to cut them down. They stood singly in hedge-rows and in fields. Some adjacent to the River Ryton. In one lot there were four Oaks, which contained over 100 cubic feet in each tree. One alone contained 140 feet cube. The boles of those 80 Oaks were all striped or peeled in the barking season, with the exception of one, the bark of which could not be got to stir, not even by beating, a process the tanners dislike. The majority of the large limbs and branches of the other trees were so affected that it was impossible to strip them of their bark. There were other Oaks affected, but it was considered that they might rally. Some of them are at this time very sickly; in fact one has given way within these last two months. We have several large Beech trees hereabouts which are sickly and dying, apparently from the continued dry weather and heat. *J. L., Worksop.*

Stoppage in Lead Pipes.—I shall feel obliged if you can suggest to me a remedy under the following circumstances. I have a large reservoir or open tank, basin-shaped, bricked all round, which receives a great deal of land drainage, having no spring in it that I know of. It contains a very large body of water, has shrubberies and timber round two-thirds of it, has gold fish in it, and sometimes leeches and frogs. This reservoir has for 70 years supplied the whole of my premises with soft water—house, stables, farmyard, garden, &c.; but for the last two or three years I have occasionally found a stoppage in the lead pipe which conveys the water from the pond to the buildings; the pipe is now quite choked with the spongy material of which I enclose a sample. Can you suggest anything which will prevent rapid formation of this substance, without prejudicing the water or the fish? It is a 1½ inch pipe, which runs from the pond to a filter—say 25 feet, and lies about 6 feet deep. *J. E. Gray.* [See a leading article in another page.]

Scarlet Runners and Humble Bees.—While sitting on the shady side of a row of strong healthy Scarlet Runners, and admiring their deep green leaves and brilliant flowers, I began to cogitate on the fact, that in a hot, bright summer like this, the flowers wither and fall, leaving us minus the dish of Beans so welcome in the "days of auld lang syne." I knew it was not for want of water, because mine are watered nearly every evening; and it is not through over watering, because some of my neighbours do not water at all, and they are not any better off. I wondered if there was any malformation in the flowers themselves preventing them from being properly impregnated, and then I remembered saying to my little boy a few days before that—"bees were not only intended by the Creator to make honey, but their most important work was to impregnate every flower, so that each herb and tree might bear the fruit and seed after its kind." Whether you will agree with my philosophy or not I cannot say, but I began to notice the bees humming round my head, as they flew from flower to flower, until my attention was arrested by one of the larger humble bees, who instead of going into the flowers settled upon them. At first I thought he was resting, but seeing him go to another and settle in the same way I examined the one just left and found that there was a hole through the calyx. I looked round for my acquaintance, and found him just settling, and after a little scrambling he fixed himself firmly on the upper petal of a stiff fresh flower with his head to the stalk, then opening his mandibles he took a wide grip, and by an upward jerk literally tore away the upper part of the calyx at the base of the petal, and just over the nectary, then thrusting his proboscis into the hole, he extracted the honey without the trouble of clambering into the flower, which is certainly rather fragile for a heavy bee to rifle. After seeing him repeat the process several times, I killed him. I then found on examination that the majority of withered blooms had been bitten in this way, and only in one case did I find a young Bean formed where the calyx had been perforated. Is it usual for this kind of bee to do this, and if so is it not injurious to the crop? If not usual, perhaps some of your readers will look over their bloom and see if it is similarly affected. *Croydon.*

Horticultural Exhibitions.—I quite agree with the remarks of your Correspondent Mrs. Ellis, p. 723. No doubt a change is wanted to increase the attractions of these displays. The same collections, the same old plants, and the same style of arrangement year after year present themselves. With this state of things people are getting dissatisfied, and to improve matters the Councils of our societies will do well to give it attention, and as far as is consistent carry out the views of Mrs. Ellis, and consider your comments on the subject at p. 730. The great shows of the season must be upheld if even on a smaller scale than that hitherto practised, or their number must be reduced in what is termed the London season, so as to allow other smaller shows to be held at different times of the year. Collections of stove and greenhouse flowering plants, Orchids, Azaleas, Geraniums, and Roses must maintain their position at the general summer displays, but the quantities, and consequently the prizes in many of the classes, might be reduced, so as to allow a few groups of good plants to be arranged for effect, in or out of flower. Let these collections be placed at certain intervals apart amongst the general mass of other plants, according to the taste and judgment of a competent superintendent. This would give room for the introduction of many plants not usually seen at even London exhibitions, except in a small state in the shape of new or rare subjects. Such collections should be limited to from 30 to 40—plenty, and with this number, there would be ample room for taste in arrangement. This notion of beauty of arrangement seems to have been prevalent in the midland counties, for some time past; for according to the Schedules of the great Agricultural and Horticultural meetings, I find that Silver Cups are offered for collections of this description. And as an eye witness I can bear testimony to the beautiful and natural character of such collections. There still remain two other shows this year, where 10-guinea Silver Cups are offered for such collections; viz., at Leicester on August 31, and at Ashby-de-la-Zouch, on September 7. If a list of the plants comprising the winning groups, will be any guide for future exhibitions of this kind, I shall be pleased to furnish it. *An Old Exhibitor.* [Pray do.]

The Present Drought.—What can be done in our flower and kitchen gardens with a drought of now nearly four months' duration—no rain having penetrated the ground an inch below the surface during the whole of this period? With some pumps on the premises I hoped to have kept my shrubs and plants alive, but the springs are well-nigh exhausted, and we can scarcely obtain a sufficiency for our few animals. I have been a gardener for nigh 50 years, and such a drought and so dry a state of the atmosphere I can never remember. The trees are shedding their leaves as in the autumn—my orchard, made two years since, is becoming a burial ground—my Apples and Pears, of the best sort—my Filberts, and all else, are dying away, and my stock for winter in the kitchen garden is shrivelling up, and I fear now worthless. Dig as deeply as I will the earth has no moisture in it, and what can be done is a question I am unable to solve. I am now buying water at a dear rate, but to little purpose. This place is peculiar in its character in regard to storms; these seldom visit us, and the rain clouds that have appeared around have seldom given us a shower, though within very short distances several smart showers have fallen. An island not more than 3 miles from us seems to divert the clouds, and they pass over to a second island not far distant, leaving us at the bottom of an inlet dry, whilst they are being deluged with rain, of late often disappointing to us. Should this state of things continue much longer, I fear matters will become most serious. I hear of families—not far from hence—who have been obliged to quit their homes for lack of water, having none even to wash their hands, their wells being dry! My wells, which have never failed to supply water in superabundance, will now yield but very few buckets full in four-and-twenty hours, which, in the memory of the oldest inhabitant, never occurred before. There have been predictions at the beginning of the year, I think by some learned Frenchman, of certain peculiarities for the coming two or three seasons, but of what kind and from what causes I do not recollect. Can any one tell me? *X. Y. Z.*——The sensible remarks at p. 771, about our gardens being so frequently without water, lead me to suggest that fountains should in every case be a necessity of a flower-garden; it is quite sufficient for one that it should only play the quantity wanted every day in a garden or a greenhouse, which water—as every one knows—is much benefited by being aërated and exposed to the sun. A stoneware tazza with simple jet is not very expensive. *Somerset.*

Societies.

Royal Horticultural: *Aug.* 16 (*Floral Committee*).—Several very fine spikes of Hollyhocks were furnished on this occasion by Mr. Chater, of Saffron Walden. To Cygnet, white; James Allen, puce-shaded purple; Rev. E. Hawke, cerise; Decision, flesh colour; Chairman, rosy crimson; Hercules, yellow flushed with fawn; Fanny Chater, rosy carmine; and Rev. Joshua Dix, bright crimson, First-class Certificates were awarded; and to Othello, a very dark mulberry-coloured kind, Competitor, and Fairest of the Fair, from the same grower, Second-class Certificates were given. Mr. Chater also received a Special Certificate for his collection of Hollyhocks, in which was a very fine spike of Acme, a delicate pink variety, Certificated last year. To Messrs. Downie, Laird, & Laing, was given a Special Certificate for a collection of cut blooms of Hollyhocks, among which were some promising kinds, especially Lady Des Veaux, delicate pink; and Orange Perfection, buff shaded with fawn. To the Rev. E. Hawke were awarded First-class Certificates for Willingham Defiance, rose; and Gladiator, deep crimson; both excellent Hollyhocks. The same raiser had also Albion, primrose; and Cavalier, cherry; to which Second-class Certificates were given. Messrs. Carter & Co. furnished blooms of Datura fastuosa atroviolacea, a semi-double or rather hose in hose flowered sort, white inside and violet out; also some pretty Nosegay and Zonal Pelargoniums and other interesting plants. Mr. Bull exhibited blooms of Vallota eximia and examples of new striped Italian and other Verbenas. From the Society came a handsome leaved Anthurium, sent home by its collector, Mr. Weir,

to which a First-class Certificate was given; and similar marks of distinction were also conferred on two kinds of Peperomia, from the same source, with silvery striped foliage, both of which looked as if they might be good additions to variegated plants. Waitzia grandiflora, a useful yellow everlasting, from Mr. Thompson, of Ipswich, received a First-class Certificate. A golden-leaved Zonal Pelargonium and a variegated-leaved variety of the Nosegay kind came from Mr. Payer, of Folkestone. Mr. Perry, The Cedars, West Bromwich, furnished cut blooms of Dahlias and Verbenas; among the last, for which he received a special Certificate, Lilac King received a Label of Commendation; and Charles Turner, a delicate pink kind with a large crimson centre, a First-class Certificate. From Mr. Keynes, of Salisbury, came a collection of cut blooms of Dahlias, among which First-class Certificates to the following were awarded, viz., Edward Spary and Lady Maude Herbert; and Second-class Certificates to George Rawlings, Hamlet, John Salter, and Striped Perfection, all promising varieties. Mr. Wheeler received a Second-class Certificate for Dahlia Ambassador. Verbena Annie, the best of the white and carmine-striped varieties we have seen, from Mr. Cooling, of Bath, had a Second-class Certificate; and Hollyhock Volunteer Improved, from Mr. Bird Porter, Epping, a similar award.

Aug. 16 (*Fruit Committee*).—A promising violet-coloured Plum was shown at this meeting by Mr. Ingram, of the Royal Gardens, Frogmore; and from Mr. Cooling of Bath came some seedling Apples and a blue variety of Potato. Examples of a white Grape from Mr. Keynes were also shown, but this we hope to see in better condition on another occasion.

ENTOMOLOGICAL: *August* 1.—The Rev. Hamlet Clark, M.A., in the Chair. Mr. F. Bond exhibited a small species of moth, Gelechia pinguinella, new to this country, taken on the trunks of Poplar trees near London; also a specimen of Nyctigretes achatinella, a very rare moth belonging to the group of Phycides, taken near Yarmouth. Mr. M'Lachlan exhibited a specimen of a dragon-fly, Libellula striolata, taken in the south of France, which has the veins of the basal portion of the wings infested with a great number of a small red species of Acarus. Mr. Smith stated that he had taken Acari on the bodies of bees and Scotrupes, which from the hardness of the integument seemed little likely to afford sustenance to these parasites. Mr. Baly read a memoir containing descriptions of new genera and species of plant-feeding beetles, with remarks on their geographical distribution. Descriptions of six new exotic species of butterflies by Mr. Hewitson were also read, and the Chairman communicated some Notes on the genus Hydaticus of Leach, belonging to the family of the water-beetles, with descriptions of eight new species from Australia, China, and the Gold Coast of West Africa.

Notices of Books.

A Dictionary of the Bible, by various Writers. Edited by William Smith, LL.D. John Murray, Albemarle Street: 1864.

The valuable work before us was published in 25 parts, and we have once or twice attempted to give our readers a specimen of the way in which the natural history subjects connected with the Bible are treated; but the work as a whole demands a more formal notice. Nobody who takes the book in hand will be surprised that it has received, and nobody who carefully examines it can doubt that it deserves, the highest commendation. The task that lay before Dr. Smith was one of no small difficulty at any period, and there are circumstances that have rendered his task one of great delicacy, and one requiring much careful discrimination.

Dr. Smith is admitted on all hands to possess, in an eminent degree, those peculiar qualifications which must be combined to constitute the successful editor of an Encyclopædia: for undertakings of this kind require the harmonious co-operation of many minds. To Dr. Smith belongs the merit of seeing how much a good Dictionary of the Bible was needed, and of judging what such a work ought to contain; next, who were the persons best qualified to assist him, and what portion should be assigned to each; and his previous intercourse with scholars and gentlemen enabled him to secure the aid of a most efficient body of contributors. That list includes the names of 68 writers of the highest reputation, and eight of these are either Bishops or Deans. The result of their united labours is an excellent book of reference for the student, in three volumes, containing the most valuable information that the present state of knowledge can supply, written in a concise, but clear and lucid style. At some future time we may possibly make an extract or two from the "Dictionary of the Bible." For the present we can only repeat the general opinion, that the thanks of the Biblical student are due to Dr. Smith, and that nobody who wishes to be *au courant* in such matters, ought to be without his capital book.

Leechdoms, Wortcunning, and Starcraft of Early England. Edited by the Rev. Oswald Cockayne, M.A. Cantab. Vol. I. Pp. 405, 8vo. Longman & Co., London.

For this strange production the British world is indebted to a suggestion of the Master of the Rolls in 1857, sanctioned by the Treasury, "for the publication of materials for the history of this country from the invasion of the Romans to the reign of Henry VIII." Preference was to be given in the first instance to such materials as were most scarce and valuable. Documents were to be edited after the manner of an Editio Princeps, without mutilation or abridgment, care being especially directed to the correctness of the text. A preface was to be allowed, giving a brief account of the life and times of the author, &c.

The result is the extraordinary book before us, with a learned preface of 100 pages by Mr. Cockayne, telling us much of Hellenic skill in surgery, and mighty little about Apuleius, whose name is supposed to give weight to the various remedies which follow, occupying 250 pages of this precious Herbarium. In the opening sentence of the preface, Mr. Cockayne acknowledges, "It will be difficult for the kindliest temper to give a friendly welcome to the medical philosophy of Saxon days." He nevertheless asserts that "the Gothic nations had a knowledge of their own in the kinds and powers of worts, that is, they had the more useful practical part of botany. Their medicine must have consisted, partly, in the application of the qualities of these worts to healing purposes, for otherwise the study was of no real utility:" and he defends the use of charms and amulets by the reflection that "these play-things tended to quiet and reassure the patient, to calm his temper, and soothe his nerves; objects which, if we are not misinformed, the best practitioners of our day willingly obtain by such means as are left them." The power of charms upon the ignorant and superstitious is well illustrated by a story of Hearne the traveller, who, when "urged by an Indian to give him a charm against some enemy (being convinced of the harmless folly of such sorceries), complied, and drew on a sheet of paper some circles, signs, and words. The Indian took care that the doomed man should know this; he immediately sickened and died. Hearne resolved to make no more magic papers." After showing the prevalency of such magic arts in all ages, Mr. Cockayne concludes that "the leechbook must adapt itself to its day."

We gladly pass over all that the learned editor says about "love charms," and "knots," which is, indeed, not fit to be quoted, even in a dead language. It is only at page 75 of the preface, that we get a glimmering of information respecting the MS. which has been thought so precious, and of which a fac-simile page is given. "Opinions, gathered from those most experienced, agree that it dates as a copy from about 1050 A.D." Mr. C. believes that it was written out not earlier than A.D. 1000, nor later than the Conquest. It suffered from the fire at Ashburnham House in 1731, and was taken out of the ashes a shrivelled blackened lump of leaves, and only after the greatest pains was got into its present state, held together by ligaments of gold-beater's skin.

As to its value to the botanist: "The drawings may once have been likenesses of the plants; in some cases we see that the pencils employed were capable of the work. But it often happened that when a pattern to be faithfully repeated was placed in the hands of the limner, he regarded it with too artistic an eye, and considered how he could improve it." This is notably the case with the fac-simile page which gives the drawing intended for Saxifraga granulata. "This plant throws out, adhering to its roots, many small bulbs of the form and colour of Onions, but not bigger than the heads of large pins. The artist seeing no leaves, rounded and made green the granules, so as to do the duty of leaves." We are told that in many cases no one could at first sight recognise the commonest plants, as for example, the Buttercup, Horsetail, Marsh Mallow, Cress, Strawberry, Hop, Celandine, Clover, Hemp, and so on.

To assist in determining the names of plants a Latin illustrated MS. was used. The editor says, "The interpretation of the English names of plants rests on the same bases generally, as the rendering of any other obsolete words;" and presently we learn that it was found impossible blindly to follow some author, who had managed to confuse the poisonous Bryony, which has clusters of berries, with the "humble," a plant which has Hop catkins and wholesome juices.

The book or rather MS. upon which so much labour has been expended is headed by a painting supposed to represent Esculapius, Plato, and a Centaur, and has this title, "The Herbarium of Apuleius, which he received from Esculapius and Charon the Centaur, the instructor of Achilles." It begins with a table of contents, in which there are the names of 185 plants, with the supposed botanical name in the margin, and after each plant, a list of the complaints for which it is used. Thus, Betonica officinalis, which stands first, is recommended "for monstrous nocturnal visitors and frightful sights and dreams," but is equally good for "a broken head" and a "sore belly," "the bite of a snake," and constipation, and the gout; it is used either internally or externally, and is a general heal-all for 29 varieties of ailments. The usual plan is to knock (pound) it with old lard, and lay it on the stead (place); then will he be very soon hole (whole), or then it goodeth (benefits) the sore of the loins, and of the thighs very rathely (quickly).

Of Mugwort, (Artemisia vulgaris) we read that besides being good on a journey "it also puts to flight devil sickness (demoniac possession); and in the house in which he, the master of the house, hath it within, it forbiddeth evil leechcraft, and also it turneth away the evil eyes of evil men." The same is good for sore feet.

Sore of milt (spleen) seems to have been a very common complaint, which we seldom hear of now except from old East Indians; bites of snakes and stings of scorpions appear to have been common.

The Mandrake (132), Atropa Mandragora, has always enjoyed a mighty reputation. "It shineth at night altogether like a lamp. When first thou seest its head, then inscribe thou it instantly with iron, lest it fly from thee; its virtue is so mickle and so famous that it will immediately flee from an unclean man, when he cometh to it; hence, as we before said, do thou inscribe it with iron, and so shalt thou delve about it, as that thou touch it not with iron, but thou shalt earnestly with an ivory staff delve the earth, and when thou seest its hands and its feet, then tie thou it up. Then take the other end and tie it to a dog's neck, so that the hound be hungry; next cast meat before him, so that he may not reach it, except he jerk up the wort with him."

Speaking of the merits of the Mandrake remedies, there is added with much *naïveté*, "thou wondrest how quickly the patient is healed."

Of Apuleius, who has the credit of these leechdoms, nothing whatever is known for certain. About 70 pages of the book before us, profess to be taken from Dioscorides, and about 50 more from Sextus Placitus. This gentleman is shrewdly suspected to be "a nominis umbra, a phantom name, a mediæval bit of fun; and that Idpartus, king of Egypt, a contemporary of Augustus, must be a creature of imagination." Certain it is, however, that the *Medicina de Quadrupedibus* is even more absurd than the Herbarium, though it does prescribe lion's flesh to those who suffer from any apparition.

But our readers have had enough of this. We have endeavoured to tell them in a few words what they may expect to find in this volume of "Chronicles and Memorials of Great Britain and Ireland during the Middle Ages,"—and we hope they like it.

THE following are the portraits of plants given in the *Botanical Magazine* for August:—*Corylopsis spicata*, mentioned last week, a fine hardy flowering shrub, of which blooming specimens were shown last spring by Mr. Standish, at South Kensington. It is deciduous, and the flowers appear very early before the leaves, like our own Nut bushes, which this plant resembles in its leaves, whence the generic name.—*Dendrobium eburneum*, a fine Moulmein epiphyte, with short erect stems, obliquely or unequal-pointed leaves, and lateral racemes of from two to five handsome flowers, having "exactly the appearance of polished ivory, which is relieved by lines of dark Roman red, which occupy the lower portion of the disk of the lip, and the base of the column."—*Kalanchoë grandiflora*, a stout Indian Crassulaceous plant, native of Mysore, stated to have flowered at Kew in a greenhouse devoted to succulent plants. It has sub-arborescent stems, largish succulent obovate or sub-rhomboidal leaves, and a large terminal cyme of greenish yellow flowers.—*Delphinium Brunonianum*, the Musk Larkspur, which we shall take another opportunity of noticing.—*Cœlogyne odoratissima*, a pretty and graceful Ceylon and Neilgherry species, growing on the trunks and branches of trees, and producing flowers which have a powerful smell of honey. It is quite dwarf, with ovate wrinkled pseudobulbs, about two linear-lanceolate leaves, the three-flowered peduncles rising with them from the apex of the pseudo-bulbs; the flowers are white with a yellow disk to the lip. Mr. Bateman observes respecting it:—"C. odoratissima grows freely if not kept too warm; indeed I believe that it will be found to succeed perfectly in a cool orchid house, into which I was led to place it after hearing the account of its habitat from Gen. Cotton, who at once recognised the species when looking through my collection. According to him this and other Cœlogynes are found in large masses on the summits of the highest Neilgherry hills, but always on the *north side*, and frequently growing among stones and wet moss."—*Aphelandra Liboniana*, one of the showy stove Acanthads, with white-ribbed ovate-lanceolate leaves, and a tall four-ranked spike of imbricated orange-scarlet bracts, and yellow flowers.

The *Florist and Pomologist* has a figure of *Lord Macaulay Rose*, one of Mr. W. Paul's new introductions, and one which, from its strong habit, bold and ample foliage, and firm smooth-petaled cupped rich crimson flowers, may be safely calculated on as meeting the requirements of English cultivators. The flowers are said to vary in colour, being sometimes shaded with rich deep almost maroon crimson, sometimes of an uniform deep crimson, and sometimes having the margins of the petals of a glowing crimson scarlet, in any of which conditions it is a beautiful Rose of high merit. Among some notes on novelties by a writer, who styles himself "a Country Bumpkin," we read:—"I have also had an opportunity of tasting some of Mr. Standish's new Seedling Grapes, not yet sent out, and for one of these named the Royal Black, I venture to predict a brilliant career, as a keeper. I think none will equal it; there are other fine points of character about it to recommend it, but of course we shall see and hear more about it in a year or two. I have also tasted Charlotte Rothschild Pine, and say of this that it i

the Pine Apple, *par excellence.* The flavour is most delicious, and the flesh as melting as a Peach, leaving nothing in the mouth but the most delicious aroma."

In the *Floral Magazine* are figures of *Fancy Pelargoniums Anne Page* and *Edgar Turner*, from Mr. Turner's collection, the first light, the second dark-coloured, and both of them desirable novelties; Mr. Veitch's *Rhododendron Princess Alice*, now pretty well known as a fine white hybrid between ciliatum and Edgworthii, with large and sweet-scented flowers and dwarf habit, is a capital thing for greenhouse decoration; *Iris Mademoiselle Patti*, a yellow and red variety of germanica from Mr. Salter's collection; and *Sarracenia Drummondii*, to which latter the following cultural notes by Mr. Williams are appended:—The genus Sarracenia comprises perhaps some of the most curious and interesting plants that we have, and one which is much more rare than it need be, owing to the mistakes that have been made with regard to its culture; for notwithstanding that they are mostly North American plants, and consequently are subject to great variations of temperature, they have been generally treated as stove plants. But it has been found with them as with many of our Orchids that the high temperature to which they have been subjected is not only not necessary, but does not suit them so well as a lower one. The method of procedure is to put them in a soil composed of good fibrous peat, Sphagnum Moss, and leaf mould in about equal proportions, well mixed but not sifted. Plenty of broken pots and charcoal should be used for drainage, for on attention to this point depends a good deal of the success of their cultivation. Being bog plants they require a great deal of water; and if there be not good drainage the soil is apt to become soured, and the plants to be injured, if not destroyed. I generally repot them about every six months, and find that the place most suitable for them is a cool greenhouse, avoiding a current of air passing directly on them. In this situation they will flourish well; and their curious appearance will amply repay any trouble taken in their cultivation.

Seemann's *Journal of Botany* for the present month has a figure of *Hildenbrandtia fluviatilis*, an Alga, "found growing over flints in a little well about 3 feet in diameter and 1 foot deep, which encloses the spring or source of a fresh water rivulet at a place called Tidwell, about a mile from Budleigh-Salterton, on the south coast of Devon." Among the papers is an account by Dr. Moore, of the discovery of Neotinea intacta in Galway last May, as already mentioned in our columns (p. 627.) Mr. G. W. Smith has some curious remarks on Dioecious plants. The Editor commences a Revision of the order Hederaceæ, with an account of the polyandrous genera, of which characters, with woodcut figures of the floral structure, are given. These genera are Tupidanthus, Tetraplasandra, Plerandra, Brassaia, Reynoldsia, Gastonia, Grotefendia, Bakeria, and Nesopanax, the three last being new genera. We subjoin a few passages from Mr. Smith's paper:—I think, he observes, an exaggerated importance is attached to the functions of various organs. For instance, although anthers generally bear the pollen, under certain conditions other organs will produce pollen. Instances of this are upon record. I have near me a drawing copied by myself from Nature, showing the pistil bearing an anther as well as a stigma (in Crocus vernus); on the end of this anther again is another small stigmatic surface. It is also well known that petals occasionally bear anthers, generally situated in their thickest part, as in Nymphæa alba, and in the double forms of the garden Poppy. I have frequently seen the middle of the petal of a double Poppy open and discharge pollen. In my mind it is an open question whether a female flower cannot be fertilised without the direct influence of true pollen. If anything will do this I am inclined to think it is the nectar found at the base of the petal. In some Ranunculaceæ I have observed the nectary-bearing pollen in place of nectar. At the base of the petals of the female flower of Bryonia dioica may be seen a sort of globular gland. I have gathered several times branches of the female plant with the flowers in bud and kept them in water under a propagating glass till they opened, and when examined one or two grains of pollen were found in nearly every flower, probably produced by these gland-like bodies to which they were attached. From my own experiments I well know individual specimens of Lychnis diurna to be sometimes *entirely male*, then monœcious, and eventually *entirely female*. I have a plant in my garden the rootstock of which has produced all three since the early spring of this year.

Garden Memoranda.

Mr. Rivers's Nursery, Sawbridgeworth, Herts.—Few nurseries afford so much information on matters relating to general gardening as that of Mr. Rivers. An ardent lover of improvement in every branch of the business, he is continually trying experiments, the results of which are always extremely interesting and instructive.

Early in the month of January of the present year, a house for the culture of Oranges was finished; this is warmed by two 4-inch hot-water pipes in a chamber for bottom heat, and two for heating the air of the house Mr. Rivers knowing well the advantage of root-heat, felt loth to lose the opportunity which the upper pipe seemed to give, of employing its heat. He first thought of having an iron plate fixed on it to use as a shelf on which to place some Vines in pots, but to save the trouble and expense, he had 40 Vines brought into the house, intending to place them on the pipe somehow. It was amusing to see his man when told to place the pots on the round pipe: he looked "how?" Mr. Rivers at once comforted him by placing a pot and supporting it under the rim by a piece of copper wire, which he twisted round a nail driven into the plate at the side of the house; he was thus enabled to place 40 pots on the upper pipe.

Mr. Rivers however confessed that he thought their position rather ticklish, for he quite expected their roots would be scorched by contact with iron heated to 160° and upwards. He therefore had but little trouble taken with the Vines, not even shifting them from the small pots (9-inch) they had been growing in the preceding season, but merely top-dressing them with his favourite compost—horse droppings, saturated with liquid manure, and malt dust. He had however some hopes of procuring a bunch or two from each Vine, and as they were mostly new varieties of Frontignans, he felt that he should be satisfied with a very small crop. He was induced, he stated, to place Vines in small pots in such a hot place from hearing a travelled friend describe the excellence of the Grapes grown in some of the rocky islands of the Levant on Vines having but a small quantity of earth to grow in, and under the most intense heat, apparently scorching, as the hand placed on the rocks was quickly withdrawn. Forcing was commenced in the house just named in January, and all the Vines broke with great vigour, every bud showing from one to two bunches; these were reduced to about six on each Vine.

The Vines in question continued to show great vigour, and it was found on examination that their young roots had eaten up all the top-dressing—in other words, that they had come to the surface and penetrated it in all directions. More food was wanted; pieces of slate were stuck in round the sides of the pots, so as to give a space some 6 inches deep. This was filled in with the same compost—no liquid manure was given, but abundance of water. The result has been the ripening a crop of the most delicious Grapes ever tasted. Mr. Rivers states that he has been more particularly struck with their fine flavour, because he heard one of our great gardening authorities say, not long since, that "no Grapes of fine flavour could be grown on Vines in pots." Notwithstanding his success, he is however inclined to think that this dictum is correct as a general rule, for fruiting Vines in pots as generally grown, plunged in some material to convey bottom heat, often ends in failure as far as flavour is concerned. Those at Sawbridgeworth, on the contrary, were fully exposed to the heat of the sun, as well as standing on a dry, almost burning surface; and to this alone must be imputed their exquisite flavour. The fruit has been long since gathered, but the Vines are still growing healthily and vigorously. Mr. Rivers recently examined the roots of some of them, expecting to find them scorched, but all were healthy and firmly matted round the bottom of the pot. Those even in the centre of the pot and in direct contact with the heated iron, were full of vitality. Nothing could more forcibly show the great heat the roots of the Vine will bear.

The sorts so successfully cultivated under this treatment are mostly Frontignans, some of them new and likely to be valuable on account of their earliness. To test the relative periods of their ripening Mr. R. placed among them a Vine of the Royal Muscadine and one of Black Hamburgh. The earliest of all the Frontignans is the Early Smyrna, called in the Levant "Isaker Daiziko;" this ripens with the Royal Muscadine, and like that well known sort will succeed on walls in the south of England. Its berries are round, of medium size, of a bright amber when fully ripe, and, very rich and delicious. Salomon's Frontignan (or as it may with justice be called) the Golden Frontignan, has large round berries of a bright amber, very long unshouldered bunches, and when fully, but not over ripe, is a firm-fleshed, rich, and beautiful Grape. This ripens about a fortnight after the Early Smyrna, and about three weeks before the Hamburgh, so that it will succeed in a cold Vinery. The Smyrna Frontignan, like the first of the above, is a Levant Grape, but not much earlier than our old White Frontignan; its berries are round and large, and its flavour not so rich as that of some other kinds. The Trovéren Frontignan Mr. R. imported several years ago, under the name of "Muscat Trovéren Blanc," but he has recently received it from Lyons under the name of "Muscat Eugénien," which is a different variety. He has never known its excellent qualities so fully developed as in this warm sunny season under his dry and hot root culture. Its berries are round, very large, greenish, inclining to brownish amber when fully ripe, and while ripening covered with a delicate bloom; this has the flesh crispy and breaking, full of the most delicious and refreshing juice—no Muscat or Frontignan Grape surpasses this fine variety, or perhaps equals it. It is a most vigorous grower and abundant bearer, but requires the temperature of a heated Vinery. Grapes of this kind were fully ripe here by the end of July, forcing, as has been stated, being commenced in January.

The Primarvis Frontignan is evidently a seedling from the Chasselas Musqué, producing large round berries of a beautiful bright amber when fully ripe, the flesh crisp, and of the same high exquisite flavour as its parent; its habit is most vigorous, and it bears abundantly; it is not liable to crack to the same extent as C. Musqué, but Mr. R. has observed a few of its berries with that tendency. This and Trovéren are the most beautiful Vines, owing to their vigorous and fruitful habit, almost ever seen. The Tokay Frontignan is another relation of Chasselas Musqué, bearing most abundantly, and furnishing berries slightly crisp, of medium size, of a bright amber when ripe, and of the most delicious flavour. The Eugénien Frontignan of the same parentage differs slightly from the preceding, but is a trifle earlier, and like that is likely to prove a good Grape for cold Vineries. Chasselas Musqué de Sillery differs widely from Chasselas Musqué; it is of the true Frontignan race, ripening two or three weeks earlier than Black Hamburgh; its berries are round, of a light amber, and of the true Frontignan flavour. Early Auvergne Frontignan (Muscat de Puy de Dome) is a very early Frontignan, with round berries of medium size, of a rich golden amber when ripe, and with a rich Frontignan flavour. This, like the preceding, will prove valuable for cool Vineries.

Thus far we have described a few of the varieties of Grapes that have succeeded so well here under, perhaps, a novel species of culture. Many gardeners may have placed vines in pots on hot-water pipes, but they have not made their experiment known to the gardening world. Mr. Rivers claims no credit for the result; the experiment was dictated by an active imagination, or as some would call it an idle fancy; still if it leads lovers of Grape culture to occupy every eligible space on their hot-water pipes with Vines in pots, a considerable number of Grapes will be added to our desserts. It may be added that the vines are in *statu quo*, and open to the view of Grape growers.

Three new Orchard houses have been lately erected, each of them measuring 100 feet in length and 24 feet in width. These have fixed roofs, the only ventilation they possess being at the sides, where there are apertures running the whole length of each house on both sides, 18 inches deep. These are opened and closed by means of wooden shutters, hinged at bottom so as to be easily let down or put up when required. In nearly 40,000 feet of glass, Mr. Rivers has not a sliding light, but at the end close to the roof, is left an open pane to let out the warm air. By means of this lateral ventilation, a continual circulation of air is kept up, which comes freely in contact with the under surface of the foliage, and to this fact, and to his top dressing, mentioned in reference to the Vines, Mr. Rivers attributes much of his success in regard to Orchard house culture. Be that as it may, all must admit that his trees are wonderfully fine, that they bear heavy crops annually, and that they are perfectly free from insects. In houses like these one can walk under the shade of his own Peach, Apricot, or Plum trees, and the delicious fruit grown in them is not only pleasant to the eye, but unusually interesting, owing to the personal superintendence under which they may be produced. Of Seedling Apricots Mr. Rivers has some highly promising varieties, which when better known will be general favourites; and with respect to Seedling Plums, as well as other kinds of fruits, his collection is equally rich, some of them the descendants of two or three generations, the pedigree of which has been carefully noted.

Of Pear trees trained in the cordon fashion, most interesting illustrations may be seen here; many of them not more than 3 feet in height, and only as many years from the bud, all furnished with from five to seven fruit, which they will ripen. They are planted in rows about 3 feet apart, and their side shoots are constantly pinched in during the growing season to three leaves. In this way an immense number of varieties can be grown on a comparatively small plot of ground; to amateurs, therefore, or to the possessors of small suburban or other gardens, this cordon mode of training is most valuable. Trees thus pinched in and kept close may also be used as edgings; for this purpose they are trained horizontally on stout wires run along about a foot above the ground. When they have acquired sufficient age not to need support the wires may be removed.

With Apples the plan is even perhaps more practically useful than with Pears. A plantation of Apples on the English Paradise stock, which Mr. Rivers calls his "bush orchard," is now an extremely interesting sight. The trees are at present scarcely 3 feet in height; they are planted as many feet apart each way, and all of them are bearing fruit. About 4000 of these miniature trees will stand on an acre, and when older Mr. Rivers calculates that each tree may bear about a bushel of fruit. For market gardeners, this plan, therefore, well deserves attention in a commercial point of view; but for private cultivators, who have little room to spare, it is invaluable. For the idea alone Mr. Rivers deserves our best thanks; but if it be true that "that is gold which is worth gold," then indeed is he a national benefactor.

The great secret with respect to the management of these small trees is grafting on the Quince in the case of Pears, and on the Paradise stock in that of Apples; and pinching in continually to three leaves. Cherries and Plums treated in a similar way also succeed remarkably

well, and the fruit of the former is easily netted up, so as to keep it from birds. Young fruit trees in pots, grown for table decoration, are kept about 20 inches high by the plan just recorded, and when placed on the table furnished with ripe fruit they are truly ornamental.

Of Vines, Mr. Rivers has a most extensive assortment in all stages of growth; some 3 feet high, pinched in, are bearing from 12 to 15 bunches of Grapes per plant. In the "Curate's Vinery," a low ridge of glass covering a Vine rod laid horizontally upon slates, the Vines are also bearing most satisfactorily, and are clean and healthy. That Vines will succeed in this way may therefore now be set down as an established fact

Oranges, consisting of the Maltese, Tangierine, and St. Michael's, grow admirably under the shade of Vines, the only requisite being root heat while growing. Of the success which Mr. Rivers has attained in Orange culture some account was given at p. 1179 (1863), and if it were for an inspection of these alone his establishment is well worth visiting. Trees in all stages of growth may be found here, from 18 inches to 3 feet in height, the latter loaded with fruit.

Among other things is a house devoted to the growth of American Apples, that do not succeed well in our climate out of doors. Under glass, however, the Newtown Pippin, Fall Pippin, and others, grow as large and acquire as fine a colour as they do in their native country.

Out of doors, stock spread as it is here over from 80 to 100 acres, has suffered a little from drought, but not so much as in some places. Fruit trees are most extensively cultivated; Roses, now being budded, form no inconsiderable item, and of select ornamental trees there are some fine specimens.

As regards Plums, some years ago Mr. Rivers raised a seedling or two from the Précoce de Tours, and among them was one which was afterwards named Early Prolific. This has proved to be a most valuable sort, being very early, covered with a beautiful bloom, and fetching more in market than any other variety. From 500 trees Mr. Rivers has gathered bushels upon bushels this year. He has also seedlings from it even superior in point of colour to the parent.

Of Vegetables we have only room to mention the Royal Ashleaf Kidney Potato, a handsome clean-skinned sort, earlier than the ordinary Ashleaf, and a good cropper. When better known it cannot fail to be a favourite.

Miscellaneous.

Calabar Beans.—A few days ago the town of Liverpool was thrown into a state of excitement, in consequence of a rumour, which proved to be too well founded, that a number of children had been poisoned by eating some obnoxious Beans. One little girl was taken in great suffering to the Southern Hospital, and the surgeons were informed that she had been eating some Beans, gathered from a heap of rubbish. Before there had been sufficient time to administer the necessary remedies about 20 other persons arrived with children affected in a similar way. They seemed to suffer acutely from pain, and many of them retched violently. Within an hour or two about 40 other children were taken to the hospital. One boy, six years of age, died about 10 minutes after he was admitted, notwithstanding all the efforts to save him. The remedies applied were the stomach pump, emetics, stimulants, &c. The symptoms exhibited were peculiar; the children were pale, sick, and exhausted, and when they attempted to walk they staggered about as if drunk, although they had the use of all their senses, the poison which they had taken evidently not producing that stupefying effect which results from taking opium. Their pulsation was at first very low; some of them became feverish and drowsy, and their eyes were bright and protruding from the sockets, and in some of the worst cases the pupil of the eye was contracted. The quantity of the Beans taken produced somewhat different effects. In one case, where a girl had eaten 12, her recovery was easily accomplished; whereas in the case of another child, who stated that she had only eaten two Beans, it was for some time feared that fatal results would follow. The boy who died ate, it is stated, only six Beans. It appears that the Beans formed part of a cart-load of rubbish, deposited on some vacant ground adjoining the schools connected with Great George Street Chapel. Some of the children began to scrape among the rubbish, and finding a quantity of large, oily-looking Beans, the little things, in their ignorance, ate some of them, finding they had no unpleasant taste. The Bean is the seed of Physostigma venenatum, known as the Calabar or Ordeal Bean, a deadly poison, which is said to be used for dyeing and tanning purposes. Considerable alarm was created on the following day by a rumour that a number of the poisonous Beans had been found in another part of the town; and it appears that three girls, five to six years of age, who had eaten some of the Beans picked up in Parliament Street, were taken to the hospital, exhibiting the same symptoms as those admitted on the previous day. The remedies fortunately had the desired effect, and they speedily recovered. A woman 32 years of age was also admitted, exhibiting symptoms of having been poisoned. She stated that she had eaten part of a Bean the previous day, and that she had been seized with pain some time after; she received every attention, but was in a precarious condition. The rubbish containing the Beans has been ascertained to be the clearings of the barque Commodore, just arrived from the West coast of Africa, consigned to the African Merchants' Company, and at present lying in the Queen's Dock. *Liverpool Paper.*

Calendar of Operations.

(*For the ensuing week.*)

The weather, though still dry, is colder, especially at nights; out-door vegetation, therefore, begins to assume an improved appearance. In order to maintain a certain amount of gaiety in the conservatory, a stock of succession plants must necessarily be kept up. Any plants, therefore, in pots, which it is desirable should be grown quickly, may now have a shift; it will not, however, be advisable to give them large pots at this season, as whatever wood the plant now makes must be ripened, with perhaps the exception of such free-flowering plants as bloom on the current growing wood. As this shift will be all that will be required during the winter months, the drainage of the pots should be ample. When established, a free open situation should be selected for the newly-potted plants, in order that any new growth made may be ripened.

FLOWER GARDEN AND PLANT HOUSES.

Where great care has been exercised Flower-gardens will be now in considerable beauty, and every means must be taken to keep turf, gravel, and edgings of all kinds in the neatest possible order, that no drawback to the complete keeping of the whole may occur; dead flowers should be picked off daily, and stray growths reduced within proper limits. Trailing and climbing plants should be frequently gone over, to keep them neatly trained and secured against rough winds; for the same purpose examine Hollyhocks, and other tall-growing plants.

DAHLIAS.—Water these plentifully every evening while the weather is dry; take care that the laterals are well staked out, and use every means to entrap earwigs and other vermin which injure the flowers.

PANSIES.—Rooted cuttings for making up autumnal beds should now be ready. It will, therefore, be necessary to make beds for their reception. In doing this it is absolutely necessary that wireworms should be caught, therefore the compost should have repeated turnings; for these pests are as destructive to young Pansies as they are to Carnation layers.

PINKS.—Look over faded blooms, extracting the petals from the pods. Should wet set in, these decayed petals will act prejudicially, by retaining moisture round the lower part, which will cause rottenness and consequent destruction.

ROSES.—Remove dead flowers, and encourage the production of autumn blooms in the Perpetuals, by watering with liquid manure, and mulching the surface of the ground where practicable.

TULIPS.—Throw out the soil from the bed on to the paths, so that it may sweeten previously to being returned.

VERBENAS.—Go over beds frequently and remedy any defects that may be perceptible without loss of time. Where the stock is still growing, pegging and training will involve considerable attention, and it will be necessary to inspect the plants frequently, removing decayed flowers, and cutting back such of the shoots as may incline to encroach upon the edging of the beds.

FORCING GARDEN.

PEACHES.—This warm dry season will have been very favourable to wood ripening; but where any is still immature means must be taken to forward it, as next year's success will very much depend upon ripening being properly effected. Keep the foliage clean and free from insects, and endeavour to preserve it in health as long as possible. Give air freely both day and night. Any gross shoots that may still incline to grow should be stopped, as if left they encourage the action of the roots, and cause a greater tendency to growth than would otherwise be the case. Loosen the surface of the border where this is at all close, in order to admit air and warmth.

PINES.—Plants growing in dung pits must be freely supplied with air to prevent their getting drawn, and they should also be kept near the glass and not allowed to stand too closely together, for strong robust plants need hardly be expected unless this is attended to, and weakly drawn ones seldom or never yield fine fruit. Give careful attention to such as are swelling; afford them plenty of warmth and moisture, and as much manure-water at the root as the soil will bear. Remove useless suckers and gills as soon as they are perceived, which, if left, only rob the fruit and weaken the suckers which it may be necessary to leave on the plant for keeping up the stock. Do not allow young stock in free growth in the succession pits to stand too closely together, nor to sustain any check through neglect in watering, or the want of pot room. Plants growing in beds of soil must also be carefully attended to with water, keeping the soil in a nice moist state. Where rapid growth is required keep as warm and moist as can be done without drawing the foliage, and give plenty of strong clear manure water at the root, and the plants will make rapid progress for the next two months.

VINES.—See that Vines from which the fruit has just been cut are free from insects, giving the foliage an occasional washing with the engine if red spider is at all troublesome; and use every precaution to keep the leaves in health as long as possible. Prevent the growth of laterals, which only shade and injure the principal foliage. Late Grapes colouring should be assisted with slight fires at night, especially Muscats. Thrips are frequently very troublesome in late Vineries where plants have been grown under the Vines, and where there is any reason to expect these, the foliage should be frequently examined closely; giving the house a heavy smoking as soon as they are perceived, and repeating this for two or three times at intervals of about a week; shading the house the day after smoking where it can be done so as to be able to keep it rather close, will render the cure more effectual; and if the pest is taken before it gets quite established, it will be easily got rid of by two or three smokings, but unless taken in time it is very difficult to eradicate.

HARDY FRUIT AND KITCHEN GARDEN.

Summer pruning and nailing in of the current year's wood will require following up. Pear trees may now, if not already done, have the breastwood cut back to five or six eyes, beginning with the least vigorous first, as they will be the least liable to start. Where time will permit, Currants, Gooseberries, and Raspberries will be benefited by the remaining wood of the present year's growth being thinned, leaving only sufficient to furnish next season's crop. Clear away the haulm, stumps and refuse of crops directly they are over, burn them, and if the ground is not wanted dig the ashes in, and let the land remain till required. At this season, however, there is seldom ground to spare; for it should be remembered that the supply for several months of the next winter and spring will depend on the diligence now made use of, in planting out as large a supply of those kinds of vegetables most likely to be in demand as can possibly be found room for. Potatoes and other crops soon coming off may therefore be interlined with any of the different kinds of Broccoli or winter Greens; and where the above are not sufficient a quantity may be planted at one foot apart, to wait for ground as it comes in by the removal of other crops.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Aug. 17, 1864, as observed at the Horticultural Gardens

August.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth. 1 foot deep.	Of the Earth. 2 feet deep.	Wind	Rain.
Thurs. 11	9	30.320	30.254	71	33	52.0	63	63	S.W.	.00
Friday 12	10	30.288	30.264	79	36	57.5	62	62½	W.	.00
Satur 13	11	30.343	30.293	80	40	60.0	62½	62½	N.E.	.00
Sunday 14	12	30.404	30.369	76	45	60.5	63½	62	N.E.	.00
Mon. 15	13	30.409	30.326	79	43	61.0	64	61½	N.E	.00
Tues. 16	14	30.286	30.053	76	45	60.5	64	61½	N.E.	.00
Wed. 17	○	30.104	30.035	71	37	54.0	64	62½	N.E.	.00
Average.		30.307	30.227	76.0	39.8	57.9	63.2	62.2		.00

Aug. 11—Clear, quite cloudless; very fine throughout; cold at night.
— 12—Fine; very fine; very dry air.
— 13—Very fine throughout; excessively dry.
— 14—Very fine throughout.
— 15—Fine; cloudless, hot and dry; fine at night.
— 16—Uniformly overcast; slight fine drizzle and haze; very fine.
— 17—Fine, with brisk N. E. wind; cold at night.
Mean temperature of the week 4½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending August 27, 1864.

August.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 21	72.4	49.7	61.0	14	0.62 in.	3	2	1	1	4	8	13	3
Mon. 22	71.5	49.9	60.2	14	0.67	2	2	3	—	4	11	11	2
Tues. 23	72.0	48.9	60.4	16	0.95	2	3	3	1	3	10	12	4
Wed. 24	71.6	47.9	59.8	16	0.24	—	7	4	—	6	10	9	3
Thurs. 25	71.5	50.3	60.4	16	0.62	2	2	2	1	5	14	7	5
Friday 26	72.6	48.7	60.1	12	0.54	2	3	3	—	7	9	3	4
Satur. 27	73.3	49.3	61.3	12	1.32	2	2	4	—	2	10	9	9

The highest temperature during the above period occurred on the 25th, 1859—therm. 89 deg.; and the lowest on the 21st, 1850—therm. 32 deg.

Notices to Correspondents.

AUBRIETIAS: *J J.* The best of the Aubrietias by far is that called Hendersoni, which is remarkable for its compactness of growth, and its depth of colour.

BELGIAN AZALEAS: *J H S.* The very large-flowered varieties you refer to as having been exhibited at Brussels this year, were Triomphe de l'Exposition Universelle, a white striped with rose and carmine, and with blotches of greenish spots; and Octave Van der Cruyssen, a cerise rose, with dense violet rose spotting. They were very showy certainly; but we gave the preference to Madame Van der Cruyssen, in which the flowers were above the average size, of excellent form, and richly coloured, the colour being a deep violet-rose, finely spotted. You should not miss Stella when it is to be got, nor Fascination.

GRAFTING ROSES: *J M.* Your question is too indefinite. The spring months are preferred, with the aid of heat and close propagating pits, if resorted to for increasing stock; but sometimes out-doors, if merely for the purpose of substituting one variety for another in any particular situation where a stock is already established.

HOLLYHOCKS: *Mrs. B.* The specimens you allude to are not made up of cut flowers tied to a stick, as some oracle has informed you, but they are portions of the stem with the flowers as they grow naturally, cut to a length convenient for exhibition. Whoever gave you this piece of information must have been a thorough cockney. Did you never see a Hollyhock growing?

NAMES OF PLANTS: *G D Pollock.* Rhus typhina.—*W G.* 1, Leycesteria formosa; 2, Rhus Cotinus.—*E P T.* 1, Eleocharis palustris; 2, Marica semiaperta; 3, Fimbristylis puberula.—*G G.* 1, Euphorbia glareosa; 2, Potentilla pimpinelloides—*Bodorgan.* A very fine thing well known to us. We will tell you all about it next week.—*V C C.* Some Cassia too much withered to be named.

THRIPS: *J Milton.* Give them a thorough fumigation with tobacco or tobacco paper, three or four times, at intervals of three or four days. That will clear them if efficiently done. Or if more convenient dip into a solution of Gishurst, 2 oz. to the gallon, repeating the dipping three or four times at similar intervals; but you must wash this off each time with pure water, before it dries on to the leaves.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.
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Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c.
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Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

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The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
American and other Cakes at Market prices.
Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22 Eden Quay, Dublin.

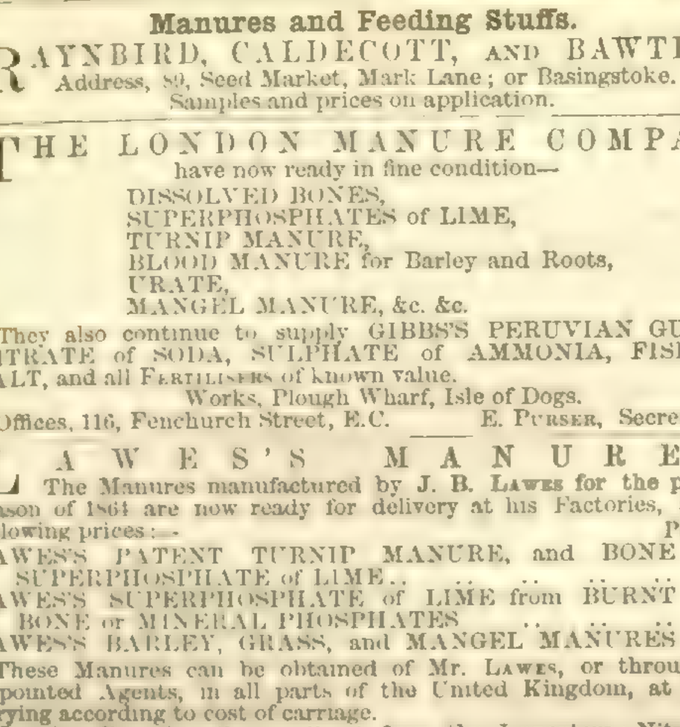

1864.
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(Will not rust nor corrode.)
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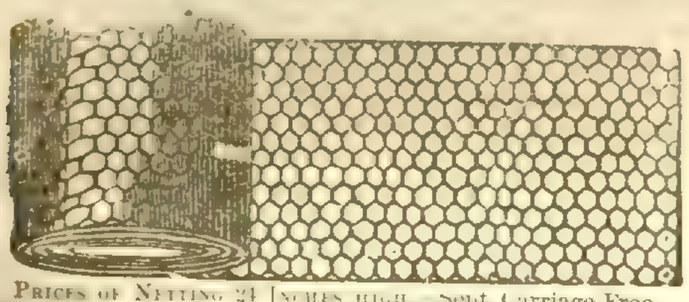

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2 in. ..	All kinds of Game.	4½d.	5d.	6½d.	8d.
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HURDLES, GATES, and IRON and WIRE FENCING of all kinds.
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Incorporated by Special Act of Parliament in 1853.
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The Agricultural Gazette.

SATURDAY, AUGUST 20, 1864.

THE notice of the 50*l.* offered by the Royal Agricultural Society for a prize essay on Middle Class Education was received for insertion in our Journal without the addition of the words, "having reference to the improvement of the education of those who depend upon the cultivation of the soil for their support." In the notices sent to our agricultural contemporaries these words were added (being the words used in the Charter). We are glad now to be able on authority to correct the omission of them here, since it is requisite that they should have full weight with any competition for the prize essay in question. The chief object in offering the prize is to elicit opinions as to the best method of conducting the education of that large section of the middle-class (connected with the cultivation of land), which has *above* it, the wealthy occupiers who can afford to give their children a first-rate education, and which has *below* it in the scale of society, the labouring class, whose education is provided for at the cost of the nation.

MR. BOMFORD, of Pitchill, near Evesham, occupying 800 acres of land, 600 of which are arable, heretofore worked by 34 or 35 horses, has been enabled to put down 10 or 12 of them by the adoption of steam cultivation, and will hereafter be able to put down more. His land lies on the junction of the lias and the new red sandstone, the latter presenting either a marly or a gravelly soil, and the former a stiff clay. The four-course rotation of crops is adopted on the lighter soils; the six-course, with Wheat every other year, on the heavy land. Nothing can look better than the grain crops of the current harvest, and Mr. BOMFORD is satisfied that his management—under which small and numerous fields have been thrown into large rectangular enclosures, divided by the cleverest fences we have any where seen, and drained, cultivated, seeded, and fed or harvested, all in an exceedingly husbandlike, practical, and successful manner—is being wonderfully facilitated, improved, intensified, and cheapened by steam tillage.

This was our report of early summer last year. We have lately walked over the land again, and seen 5 and 6 quarters of Wheat per acre standing upon it where the Bean stubble of last year had been only smashed up in early autumn by steam—the seed being harrowed in some weeks later, after the soil had mouldered, mellowed, and fallen firmly together again under alternate drought and rain. There are also heavy crops of the brightest Barley on this land—and, what is this year much rarer, a thickly podded Bean crop—the result in great measure of the perfect tillage which steam power has enabled. The produce of the land in 1864 quite bears out the anticipations of increased fertility to which the system gave rise in 1863.

The other anticipations have also been to some extent realised. If Mr. BOMFORD has not put down more horses, as he expected to do, he has taken more land without any increase of his stud. Another farm—360 acres of clay land—eight miles off, has been added to his occupation, and he fully expects to master the whole by the steam force in his employ.

It is not however by its cost, to which, as the first idea connected with it, attention has hitherto been for the most part directed, that steam tillage will stand or fall. It is the resultant produce of the land that will determine its adoption or rejection. The competition of rival manufacturers has hitherto been a constant struggle to prove one or the other plan to be the cheaper of the two; and the money column is that by which the award of prizes at the Society's annual meeting has for the most part been decided; but manufacturers have really a harder fight with the *vis inertiæ* and indifference of the agricultural public in general than they have with one another; and we wonder that among the efforts they have made to convince agriculturists of the value of the new agency which is offered them, none has been directed to the thorough investigation of what is really the principal point connected with it—the question of increased fertility which is consequent upon its adoption. It is only by examples here and there that our own contribution to a publication of the truth upon this point can be made; and such an example we have here.

Certain portions of the Pitchill farms have, we presume, been always noteworthy for fertility. The general range indeed of that country is, during the present harvest time at any rate, a fine specimen of fertile corn land. But there are, upon the lias portion of the land, fields of extraordinary intractability of soil, the excessive cost of whose cultivation has been hardly hitherto repaid by a scanty or extremely fickle crop.

The foul and poor clay land which last summer we saw lying "smashed up" by a triple steam cultivation, was afterwards burned at the rate of about 150 cubic yards per acre, and has this year borne probably five quarters of Wheat per acre. The plan originally had been to take a crop of Rape and feed it off in early autumn with cake fed sheep; but the drought was too much for this, and so the subsequent Wheat crop, which has just been harvested, has depended wholly on the tillage which had been given to the land; and this has been sufficient to make a poor stiff clay produce abundantly. Of course neither Mr. BOMFORD, nor any other sensible man, with the existing high prices for meat and wool before him, depends wholly on tillage. His energetic management is shown in the sheep-fold and feeding-stall as much as in the fallow field. Some 1200 sheep are annually kept upon these farms, and large quantities of cake and corn are also consumed by fatting beasts. A considerable extent of land, moreover, is adapted for Turnip culture; and Mangel Wurzel, the only succulent root which is this year going to yield a fair produce, is adapted for a still larger proportion of the land; and one-fourth of the lighter soil and one-sixth of the heavier land is thus annually set apart for green crops—Turnips, Rape, Vetches, Cabbages and Wurzel. And from the consumption of these, with large quantities of grain both grown and purchased, the dung heap is a large one. This goes with guano, bones, and superphosphate to the reproduction of the green crop. It also goes on the stubbles broken up in autumn for the coming Bean crop. But for the Wheat upon the clays, the dependence is on tillage—fortunately on tillage by steam power—for what a difference there is between this and tillage done by horses!

In the first place, the tillage for Wheat by horse power cannot be begun until the Clover land now

hardened by a season's drought has been moistened by the autumn's rainfall; and in the next place the period fit for tillage on such soils is soon cut short by the continuance of this autumn rainfall. There is but a little time, during which on our stiffest soils autumn tillage by horse power is possible; and this is one reason for the need of a bare fallow on such land during all the previous summer. Steam power, however, enables the work to be commenced whenever it may be desired; it does the work more rapidly, and accomplishes it more perfectly.

We saw last week 25 acres which had been thoroughly broken up in 19 hours by Fowler's plough out of hard and burned-up land. The apparatus had been a month away at Newcastle, and to and fro; and the loss to Mr. BOMFORD of the best month in the year he can hardly overestimate. Since its return, however, it has not been suffered to be idle; and the continuance of the drought, however injurious on the fallow crops and pasture fields, has been no doubt beneficial to the corn crops now in process of harvesting, as well as to those yet unsown, which will be harvested next year.

A steep Clover field was being ploughed, Fowler's balance plough being used, on the day of our visit; the hard land was perfectly broken up and turned over, and Mr. BOMFORD is confident that tillage thus performed on land so dry will be seen in at least 12 bushels an acre of extra produce next harvest time. The cost of a benefit so great ought not to be of much account within a few shillings per acre; but this cost is nevertheless really much below that of the horse ploughing, which would be now impossible, and at any time inferior. Three men and a boy, and a man with a water cart, represented the expense of labour; some 18 to 20 cwt. of coal laid in heaps along the headlands of the field represented the day's expense of power. The men receive 11*s.* a week throughout the year, with the harvest 5*l.* note, and their cottage and garden rent free; this last item being the only one in which their wages differ from the ordinary run of agricultural labourers. And the quantity of work accomplished varies from 5 or 6 acres daily under difficult circumstances, such as when we saw it being done, to twice as much in an easy and ordinary field.

It is in the cost and facility of the work, more perhaps than in the quality of it, that the different systems of steam cultivation differ. The plan which Mr. BOMFORD has adopted is that of double engines, which Mr. SAVORY, of Gloucester, introduced two years ago, and which Messrs. GARRETT now manufacture. Two engines, one at each end of the furrow, carry revolving drums around their boilers and working apparatus; and these, as they revolve, coil or uncoil the rope wrapped around them, pulling it in or letting it out, as the tool is being drawn to or fro. The first cost of the apparatus is considerable, but many of the items of expenditure under which the cost of steam cultivation is set down, are undoubtedly a minimum under the system. The careful winding of the rope one ply thick around a large cylinder involves a minimum of tear and wear under this particular head, the risk of injury and accident is very small, and the loss of time in sitting down to work and leaving it (in many cases a considerable item) is also here a minimum. And where, as in Mr. BOMFORD's case, farms are miles apart, or where work is done on hire, apparatus is required which can be moved from place to place with facility and quickness. In these particulars, and in the extreme unevenness of the surface of the land—some of the fields being level for one-half their length, and rising one in six the rest—Mr. BOMFORD's farms are undoubtedly especially adapted to GARRETT's apparatus.

On the field where it was at work last week one engine had climbed a steep hill side, and was travelling along the upper headland, and the other moved along the foot; the headlands were anything but parallel, the furrow doubling in length in a very short space, and they were on very different levels, the upper end of the furrow being probably 600 feet above the other.

The advantages of the carried windlass and of the single rope are in such a case obvious and unquestionable. However different the length of the next furrow, no fitting of the apparatus to the altered circumstances is required. In every case the one engine pulls the tool up to itself, while the other lets off the longer rope in its wake, by which its return journey is to be effected. And the rope stretching taut between the two engines, in this case lifted 20 or 30 feet above the intervening hollow, falls bodily on the ground at any accidental check to motion, without risk of injury to any one. A double rope coiling around either two engines or engine and anchor, though provided with great surplus store on the slack gear pullies of the plough, would have dealt neither so perfectly with the rapid variations in the length of furrow, nor so safely with the difficulty of variations in the level of the work.

Mr. BOMFORD's farms are a capital illustration not only of the advantages of steam cultivation generally, but also of the special merits of the double engine system manufactured by Messrs. GARRETT.

There are illustrations also here of other points in energetic agriculture—good fences, roads, farm buildings and cottages—capital and well managed Plum and perry orchards in various stages of bearing and completness—cordiality between master and servant—and the final test and issue of the whole, a first-rate harvest.

IN the *Agricultural Gazette* for September 12th and 26th, 1863, will be found notices with the following engraving of the ravages of a caterpillar, which last year caused a great amount of mischief to the Turnip crop. We now direct attention not only to an aggravation of this pest in as far as the Turnip, both Swedish and common, is concerned, but also to a wide spread of the same creature amongst Mangel Wurzel and other plants.

In a field of Mangel and Swedes, in alternate ridges of eight rows of each, drilled on the 17th and 18th May, we noticed that after the plants had been hoed and singled there was a daily diminution of their numbers, and the plants in the row became even more irregular in their intervals than was altogether due to the drought of the present season. As the crop progressed, quite large Swedes and Mangels might be seen either dying in position or with their heads fallen; and on clearing away the soil from round the roots, we found that they had been eaten in all stages, from a commencement of the attack to its completion by severing the head from the root, which latter made the soil quite moist from its exuding juices. Of course we were not long in noticing the author of the mischief, which indeed is the very same caterpillar noticed last year, and then determined to be the larva of a species of moth belonging to the genus *Noctua*, but of what species we are as much in the dark as ever, though we hope to be able to breed some before another season. Now these grubs were found infesting the roots by from one or two to a dozen at each, and they varied in size from grubs of 2 lines to 2 inches in length. In the day they live wholly round the roots, just under the surface of the soil, but at night they come out, and are then rather prone to eat any leaves that may be laying on the ground. There is a good figure of this caterpillar in "Curtis's Farm Insects," plate E, fig. 12, and it is not a little curious that this acute entomologist should have to confess that he "could not ascertain the species of moth it would change to, never having been able to rear one." This it would appear, was from want of time and opportunity, which it seems most desirable that some entomologist living in the country should bestow, as without a thorough acquaintance with its natural history it will be next to impossible to know how to battle with so great an enemy.

There is, however, much reason to believe that it is nearly allied to the species *Noctua exclamationis* (Heart and Dart Moth), and *N. segetum* (the common Dart Moth), the caterpillars of which are themselves not uncommon in the field and the garden; still the larva in question is distinguished from these by its smooth skin, while they are thinly clothed with short bristly hairs.

There can be no doubt but that the long continued dry weather has favoured the maturation of more than one brood in the season, and of these probably most of the caterpillars have escaped the evils which wet entails upon a family of grubs, amongst which the foremost is probably that of diarrhœa, which carries off thousands when their food is very succulent.

Some notion may be formed of the quantities of these creatures in a single field, from an examination instituted on the farm of Professor BUCKMAN at Bradford Abbas, Dorset. A boy was employed to remove the soil from around the collars of three rows of Swedes and collect the caterpillars.

Each row was in length	...	324 yards
Each row contained ...	...	541 Swedes
The three rows yielded	...	824 caterpillars.

Though this would seem to be an enormous quantity when we talk of a field of 20 even acres, yet there is reason to think that fully one-half escaped detection.

Of course in this position of affairs, as plants not over thick were daily being thinned out, it was deemed advisable to have them hand-picked; but then there came the difficulty just upon harvest of getting enough people willing to do such work: and this indeed could not be overcome, as Dorsetshire folk consider grubs to be "nasty things which they don't like to handle." It is right, however, to state that help came in this crisis from a rather unexpected quarter. First the peewits were observed to be busy in the field, then came rooks by the dozen, and lastly, the ducks from the farmyard took to this field work, and of these worthy labourers it is not too much to say that they performed their work with such address and perseverance, as upon examination into the mode of their operations ensured them the most perfect protection and respect.

Day by day the rooks more especially increased in numbers, and it was interesting to observe the adroit method in which they had cleared the surface soil from around the roots, and how free the roots they had visited were from the pest they had sought after. At first it was thought that this almost daily increase of black friends was caused by the information of cheap food conveyed from tribe to tribe; but besides this, as so many farmers in the surrounding district had made complaint that the rooks were eating off their roots, it is highly probable that they congregated where they were more welcome.

But seriously, this misapprehension as regards the rook is an important matter. We have previously pointed out that these birds do not eat off the heads from the root as asserted; but we know that the caterpillars do, and we also know that the rooks most perseveringly seek out and eat these creatures; so that whatever mischief may or may not be attributable to our sable friend at other times we can only welcome him as the saviour of that portion of the Turnip and Mangel crop which the present season has allowed to grow. While pointing out the ravages of the caterpillars on Swedes and Mangels it may be as well to remark that few plants of a succulent nature have wholly escaped from their attacks this season; flowers, weeds, and farm crops being alike welcome to them; and we now learn that the pits and depressions we have so often met with on the sides of roots have been caused by the attacks of these grubs upon the young plants. In ordinary seasons new roots are sent out, and the sores have become healed, but this year their attacks have been extremely fatal for the want of rain. We have mentioned that garden plants suffer: the tuber of the Potato is eaten in holes by them, and the haulm nibbled all around; but one of the most interesting cases of injury caused by this surface grub may be described as follows.

We were invited by Mr. SAVORY, of New Bond Street, to cultivate some of the *Datura Tatula* for medical use. Upon which we drilled about the eighth of an acre with the seed over lines of manure; here the grubs have played sad havoc, killing numbers of plants somewhat difficult to grow, and plants too of a highly poisonous kind.* But speaking of manures reminds us to point out that in a field half Swedes and half Mangels, in part of which PROCTOR's manure was drilled with the seeds, another part sown on the surface and worked in before drilling, another farmyard manure employed, and in a fourth portion simply ashes from burning drilled in—in all we can trace no difference either in the number or behaviour of the grub. Here then we have an enemy increasing from year to year, and one too of which we know little as to its parental identity or habits; and this seems to be on the increase all over England, mainly because farmers

* Though so powerful, the *Datura Tatula* is now much used in the shape of cigars and "tobacco" for asthma, for which it is highly extolled.

in general will continue to believe that the rook is constantly employed in nipping off young Turnips. If however he came to us to do this, the immense numbers we have welcomed to our field during the past few days were enough to have destroyed the whole crop. We conclude then that this surface grub is a great pest, and that its best cure is to encourage the rook. *B.*

FLAX MANAGEMENT: IMPROVEMENT OF, IN IRELAND.

The importance of Flax management in Ireland is now admittedly so great to all her Majesty's subjects at home and abroad, as to supersede the necessity of my offering any apology to your readers for again and so often seeking to force it on their attention. My object in doing so now is of a two-fold character; first to let you know how far we have advanced in combining "science with practice;" and secondly to ask your scientific and practical contributors to help us on with the work by advice and otherwise. When a boy I have heard it sung that an Irishman is "better to practise than to plan." Lately I have read what, if a fact, I have never known before, that "Irishmen had good heads and bad hands." * Whatever our heads and hands are, whether good, bad, or indifferent, or all combined as a whole, the most conceited amongst us must now admit that the very best of us have much yet to learn as regards both head and hands. To prove this to such of us as did not before know it, we had a German philosopher lecturing us on the growth and management of Flax a few days ago at the Royal Dublin Society's Exhibition. Fastidious and hypocritical men have censured this important lecture, for important it was, although containing too much that was commonplace, too little believed to be truly practicable, mixed up with a strong smell of the "shop." The lecturer is Mr. Friedlander, whose flax breaking and scutching machinery with others, I have already noticed in your pages. The better to understand the object of the lecturer, I will give you the words of the advertisement announcing his intention to lecture.

"Cultivation of Flax,

and on the most improved processes by which it is prepared for the manufacture according to the methods practised in Belgium and in Ireland, with special reference to Flax machinery in the Exhibition, and an improved plan of cold water steeping, by which, with any quality of water the operation of flax-rotting may be completed in four or five days." The better to explain how this can be effected, the lecturer showed a diagram of given but of ordinary dimensions. Sunk in the ground, or on the side of rising land, a steep pond having a perforated false bottom with an underground flow-pipe placed immediately over the false bottom, to let off the water when having done its work with the Flax; the residual matter remaining under the false bottom, and held in solution by the remaining water to act as a medium of increased or renewed fermentation in the flax, as hereafter described. The sides and ends of the pond to be built up with bricks or stones, laid in mortar, to secure the sides and ends, and retain whilst necessary the steep-water in the pond. These are not the exact words of the lecturer, who pleaded ignorance of the English language, but they are the literal meaning in as far as I was enabled to catch it on hearing the lecture read by him, or on reading the lecture since in print—corrected, I presume.

The lecture, I have said, is of great importance, but to render it more so it would be necessary that the lecturer should have known more of the soils and waters of Ireland and their constituents compared with those of Belgium, before recommending in an unqualified manner the practices adopted in the latter as applicable to the varied circumstances of the former.

As a proof of this I can now give your readers a fact too little known to Flax growers in general. Two fine samples of Flax supposed by the most acute ordinary observers to be of equal market value, one Irish, the other Belgian, were selected and carefully analysed by Doctor Sullivan, Professor of Chemistry to the Museum of Irish Industry, and the Catholic University in Ireland. The Irish Flax contained 15 per cent. of oxide of iron, the Belgian none. The Irish Flax when manufactured into linen, had to undergo an expensive chemical operation to rid it of this oxide, with the view of improving and retaining when improved its colour; whether and to what degree its lasting powers as a "wearable" were improved by such process, I am not scientific enough to say. This much I believe, I am justified in saying, that the Irish Flax must have derived this oxide from the soil in which it was grown; or imbibed from the water in which it was steeped, or perhaps from both. The lecturer not being aware, I suppose, of this, and judging perhaps by what he had learned in Belgium, made no preparation for this whether regarding the soil the Flax is to be grown on, or the water in which it is to be steeped. Every man in Ireland practically acquainted with the reclamation and cultivation of the many soils on which Flax can be grown to the greatest perfection, knows well how to counteract the evil effects of this ferruginous matter in the soil. But the full counteraction of it in the water for Flax steeping is a much more difficult matter, which after all, is but of £ *s. d.* I have said the learned German did not know enough of Irish soils, and Irish water, when announcing his intended lecture. Much less did he know what had passed through both the heads and hands of some of his audience. His plan of a steep-pond might do very well in Belgium, where there might be no external pressure from water on the sides and ends, or both. In Ireland it would never do, where there would be such pressure, and requiring a facile means of the external water's escape to prevent its tumbling the sides or ends into the pond when empty, or unsupported by a corresponding pressure from within.

More than three years ago I submitted to Sir Robert Kane, the director of the Museum of Irish Industry, a plan that would meet all the objections that I now presume to raise against the pond designed by Mr. Friedlander. This design I know from experience to have been so far successful in practice, not alone as suitable for Flax steeping, but for economising the Flax water, as it is called, for the purposes of irrigation and by gravitation, but also to enable the Flax steeper to save himself from the meshes of the fishery laws, for the Flax water contains elements that will poison fish, but highly enriching to land, on which when applied will render it perfectly innoxious in every sense. At the period alluded to, in my correspondence with Sir Robert Kane, I also suggested that water which might be impregnated with iron should be exposed as much as possible to the action of the air before being let in on the Flax; thus, to have a supply taken from its source and conveyed slowly, and over as wide-spread a passage and as thinly as possible, into a reservoir of wide-spread surface, to "soften it," as it is termed, or in other words, to leave its ferruginous ingredients as much as possible behind it before entering on the Flax in the steep. I further asked him, as a chemist, if it were not possible; and, if so, how far practicable consistent with economy, could other chemical ingredients be introduced into such water with the view of counteracting the evil effects of such minerals as are held in solution in such water, and deleterious to Flax? Not being yet fully satisfied on that head, I will still prosecute the inquiry in Ireland, and the cause of my noticing it now at such length is with the view of stimulating such inquiry also at your side of the Channel by your practical and scientific friends; and here let me beg in a more especial manner the co-operation of the worthy Alderman Mechi; for the successful culture of Flax, and the economising of its seed and steep-water will do much to assist in furthering many of his important expansive views.

Let me now return to Mr. Friedlander's lecture. In proving how far he could succeed in preparing Flax "in four or five days for the manufacturer," he was not sufficiently explicit to satisfy all or even many of his hearers. He said (after describing how the Flax should be placed in the pond) that the water should be let in and remain in it for 24 hours, to superinduce fermentation. The water then to be let off, and the Flax covered with straw to exclude the light. How long it should remain in this state of fermentation he did not say, though I presume he meant that period should depend upon the state of the atmosphere, which is, I believe, far more variable in Ireland than in Belgium; but he said a second watering of 24 hours more should take place to wash the Flax straw from impurities might rest on, or be given off by it during the process of fermentation.

On the foregoing theories there were a good many sceptics present, but not one on this important part of the lecture, when he said that Ireland has grown or is growing this year 300,000 acres of Flax, and for the seed alone every acre is on an average worth 8*l.*, or the whole value for 2,400,000*l.* Another speaker who followed the lecturer said each acre was valued in seed alone for 10*l.*, or making a total of 3,000,000*l.*

I quite agree with the latter taking into account the indirect as well as the direct advantages of Flax seed saving in Ireland.

To meet the objections of some who say that the Flax fibre is deteriorated by the rippling or other removal of the seed before being steeped, I asked the lecturer if such was the case? To which he replied, "No." I further asked him if it were necessary to insure a good fibre, and to aid by any chemical means the fermentative powers of the water, the Flax seed should be let rot in the pond? To this he also replied "No," adding, "there will remain under the false bottom, when the water over it is drawn off, all the elements required to hasten and continue the necessary fermentation."

The chief fault, if I am justified in saying I have found fault with this, with all its real or supposed faults, valuable lecture, was in the lecturer having, in my opinion, with bad taste and worse judgment, endeavoured to prove the superiority of his own Flax-breaker and scutcher over all else at the Exhibition. This is not yet fairly proved. A better attempt will be soon made to repeat such test by the conductors of the Exhibition of the Royal Dublin; and should they from want of proper appliances fail to do so, another, and I hope a more successful attempt will be made by the conductors of the International of 1865, for they will or can have such appliances if they take but proper steps to put them into requisition, as it is to be hoped they will. *Edward Carroll, College Hotel, College Street, Dublin, Aug. 9.*

* Mr. Senior's evidence on Irish Taxation before a Committee of the House of Commons.

RAM SALES.

Shropshires: *Mr. J. H. Bradburne*, Pipe Place, near Lichfield.—The rams numbered 41, averaging 10*l.* 5*l.* 8*d.* per head. The ewes included two or three veterans, purchased by Mr. Bradburne several years ago from Messrs. Adney and Crane, at prices as high as 8*l.* 8*s.* each, and which here were secured by Mr. Lycett at 72*s.* 6*d.*, the 70 averaging 50*s.* 3*d.*; but they were all very low in condition.—*Midland Counties Herald.*

Mr. Preece's Sales at Shrewsbury.—Of 180 rams, selected from the choicest flocks in the county, about 150 were disposed of under the hammer. The following particulars are from the Shrewsbury papers:—The first lots were those of Messrs. Crane. The prices varied from 25 guineas down to an average of 11 guineas. The Rev. C. P. Peter's lot of six made the good average of 12½ guineas, the highest price being 20 guineas. Mr. Henry Smith's, of Sutton Maddock, 13 sheep averaged over 12 guineas. Mr. Evans, of Uffington, brought 13 first-class rams, in store condition only, averaged only 10*l.*

Mr. Maddox, of Harley, sent three sheep, averaging 10 guineas.

Mr. Meire, of Berrington, had a lot of 12 sold, averaged nearly 9*l.* a-piece.

Mr. Sheldon, of Brailes House, Warwickshire, sold 11 capital rams at an average of 11 guineas.

Mr. Thornton produced a dozen of the most perfect sheep we have ever seen. The Newcastle winner was, however, not among them, as he was sold on the ground for 84*l.* His sire, however, a magnificent three-shear sheep bred by Mr. Claridge, was let for the season to Messrs. Crane for 65 guineas. Lot 2 was sold to Mr. T. Mansell for 41 guineas; and lot 3, a grand yearling, was let to Mr. May, of Elford Park, for 36 guineas. The highly commended Newcastle sheep was purchased by Mr. James Hand, of Ludlow, for 27 guineas, and the next lot for Lord Chesham for 30 guineas. The 12 sheep realised 291½ guineas, being the extraordinary average of 25*l.* 10*s.*

Mr. Horton, of Harnage Grange, exhibited 12 splendid sheep, all either descended from, or themselves Royal prize winners, the lot averaging over 17*l.* sold and let.

Mr. Minor's 10 ranged from 10 guineas downwards.

Mr. Pryce Bowen also produced 10 grand sheep, which averaged nearly 18*l.*

Mr. T. Mansell had 12 brought up, and averaged about 12*l.* 10*s.*

The sale of ewes took place on Wednesday, when upwards of 700 representatives from the most noted flocks in the county were disposed of. The following are the prices realised:—Messrs. Crane, 110 ewes, from 3*l.* to 8*l.* 8*s.*; Mr. Evans, 60 ewes, 3*l.* to 4*l.*; Mr. Meire, 85 ewes, 2*l.* 17*s.* 6*d.*; Lord Wenlock, 70 ewes, 2*l.* 10*s.* to 5*l.* 5*s.*; Mr. P. W. Bowen, 60 ewes, 3*l.* to 7*l.* 17*s.* 6*d.*; Mr. Mansell, 60 ewes, 3*l.*; Mr. R. Lee, 50 ewes, 3*l.* 2*s.* 6*d.*; Mr. Plimley, 40 ewes, 3*l.* to 3*l.* 10*s.*; Mr. Payne, 20 ewes, 3*l.* to 4*l.* 12*s.* 6*d.*; Messrs. Bowen & Jones, 20 ewes, 3*l.* to 4*l.*; A. H. Minor, Esq., 20 ewes, 3*l.* 15*s.*; Mr. George Horton, 50 ewes, 3*l.* 2*s.* 6*d.*; Mr. R. Jones, 20 ewes, 3*l.* 2*s.* 6*d.*; Mr. Brewster, 50 ewes, 2*l.* 12*s.* 6*d.*; Mr. Meredith, 30 ewes, 2*l.* 10*s.*; Mr. George Juckes, 40 ewes, from 2*l.* 17*s.* 6*d.* to 4*l.*; Mr. W. H. Bickerton, 30 ewes, 3*l.* 5*s.*; Mr. H. H. Wright, 40 ewes, 2*l.* 12*s.* 6*d.* Nearly the whole of the lots were secured by purchasers from great distances, extending from Scotland and the extreme north to the south of England. Amongst the purchasers were Lord Chesham, of Latimer Park, Bucks, whose purchases amounted to nearly 600*l.*; and D. R. Davies, Esq., of Mere Old Hall, Knutsford, Cheshire, who secured the Messrs. Crane's beautiful R.A.S.E. Show ewes, at the sums each of 9*l.* 9*s.* and 8*l.* 8*s.* respectively.

Leicesters: *The Foscote Flock.*—On the 3d inst., a portion of this celebrated flock was sold by auction, in consequence of the death of the late proprietor, Mr. Valentine Barford. For more than 70 years the late proprietor and his father never introduced into the flock any ram or ewe from another flock, and whatever may be the merits or demerits of this in-and-in breeding the Foscote sheep possessed several good characteristics; among others, a natural aptitude to fatten on vegetable food only, and hardy constitutions. The sheep sold bore this out, for although they had nothing but what they could get on the farm, they looked and handled well. For many years Mr. Barford had an annual letting of his rams, at which he made good prices for them, varying from 8 to 20 guineas for the season, and many of his customers came long distances year after year for them. The flock was originally established from sheep from the Dishley flock of Bakewell and Honeybourne, in 1783, and up to the present date a pedigree of every sheep bred on the farm was kept by the late owner and his father, and we believe this is the only flock of Leicesters that could boast a direct descent from Bakewell. The prices for rams ranged from 5½ to 11 guineas. The theaves and ewes averaged about 63*s.* per head, the highest price being 80.

Park House.—Mr. G. W. Langdale's rams were sold and let by auction on the 3rd inst., at Leconfield, East Yorkshire. The attendance of gentlemen from that and other counties was very numerous. Sixty-

seven rams were brought into the ring, 62 of which were quickly disposed of, at an average of 11*l.* each for those that were let, and upwards of 8*l.* each for those that were sold.

Mr. J. Allen, Markshall.—The first sheep was hired by Mr. W. Burroughes for 13*l.* 10*s.*, No. 2 was let for 10*l.*, No., 18 for 11*l.* 5*s.*, two others, for 9*l.* 15*s.* each, one for 8*l.*, three for upwards of 7*l.* each, and the remainder at prices ranging each from 6*l.* 15*s.* to 4*l.* *Norwich Mercury.*

Yorkshire.—During the past week the most noted of the ram shows have been held. At Park House Leconfield, Mr. G. W. Langdale's show of Leicester Rams brought together a very large company from Yorkshire and neighbouring counties. In all 67 rams were brought into the ring, of which 62 were quickly disposed of at an average of 11*l.* each for those let for the season, while those sold out averaged 8*l.* per per head. At Highfield House, Nunnington, Malton, Mr. Stamper had an unusually large attendance. Sixty-five sheep were offered, of which upwards of 40 were let. Some six or seven of the rams had the pure Sandy's blood, and these averaged over 12*l.* Mr. Borton's (Barton) flock numbered 73, most of which are let privately, but the average is understood to be high.

OXFORDSHIRE DOWNS.—Mr. Franklin, Ascott, sold 34 ram lambs and a few shearling rams, and realised from 3*l.* 5*s.* to 10*l.*, the average being about 4*l.* 5*s.*

Mr. Pratt, Haseley, offered 10 ram lambs, 10 shearlings, and a few older sheep, the average about 6*l.* 12*s.* The lambs realised from 3*l.* 5*s.* to 5*l.* 15*s.*, and averaged a little over 4*l.*

Mr. T. M. Kerr, of Burford realised from 6½ to 10½ guineas, and averaged about 7*l.*

Messrs. Lyne also offered 6 Oxfordshire Down rams, the property of Mr. Wm., Hemming, Coldicote, from a flock established nearly 30 years, and which took three prizes at the German exhibition last year, besides 46 at the principal English shows. They fetched from 3½ to 5½ guineas, being bought by Messrs. Chambers, Nott, and Halford.

Thirty Oxfordshire Down ram lambs, the property of Mr. Joseph Gillett, of Highway Farm, Maidenhead, realised on an average on an average, 3*l.* 5*s.* 3*d.*

Forty Oxfordshire Down Shearlings, bred by C. Gillett, of Cote House, Bampton. They averaged 9*l.* 19*s.*, the highest figure being 22½ guineas.

Mr. Button disposed of about 30 superior Oxfordshire Down ram lambs. The highest price was 18 guineas, and the average about 8*l.*

The Winchendon Flock.—The flock consisted of 149 ewes and theaves, 38 shearling rams, 25 ram lambs, and 102 ewe and wether lambs, the majority of which combined all the characteristics of highly improved Oxfordshire sheep, possessing width of back and chest, perfection of form, and heavy fleeces, the sale commenced with the ewes and theaves, the highest price being 6*l.* 11*s.* each for a pen of theaves, which had won the first prize at Northampton and highly commended at Newcastle, and were secured by Mr. Workman (Evesham). The average was 4*l.* The ewe and wether lambs came next, the average for the former being nearly 4*l.*, and for the latter 37*s.* each. The shearling rams followed, the average 9*l.* 4*s.* The ram lambs readily found purchasers at an average of 5*l.* 11*s.* each.

Mr. Roberts, of Caswell, disposed of 43 Oxfordshire Down rams, which ranged from 5½ to 14½ guineas, the average being 9.

COTSWOLDS.—Twenty superior Cotswold rams, the property of Mr. Christopher Lord, fetched from 6½ to 14½ guineas, averaging 8*l.* 11*s.*

Eighty first-class Cotswold ram lambs from the flock of Messrs. T. & G. West, of Greenhill Farm, Bletchington, realised from 16 guineas downwards, the average being 5*l.* 11*s.*

Twenty-five Cotswold ram lambs, bred by Mr. J. F. Mills, of Upton Farm, sold at an average of 3*l.* 0*s.* 5*d.*

		£	*s.*	*d.*
July 30,	Mr. W. Smith, Bibury	average 9	19	6
Aug. 4,	Mr. Radford, Hull Farm, 20.. .	,, 10	1	0½
,,	Mr. Hobbs, Kencott, 6	,, 8	3	0
Aug. 5,	Mr. J. Barton, Coln St. Aldwyns, 46	,, 9	5	9
Aug. 1,	Messrs. J. and B. Porter, Coln St. Aldwyns, 20	,, 7	0	0
,,	Mr. T. Clarke, Frampton Mansell, 14	,, 7	12	3
,,	Mr. J. Barton, Kemble, 20	,, 8	16	0
,,	Mr. C. Barton, South Cerney, 10 lambs	,, 3	6	6
,,	Mr. R. Barton, Somerford Keynes, 9	,, 2	1	2

At Bicester 35 Cotswold shearlings from the flock of Mr. John Godwin, of Troy Farm, Somerton, were a fine lot of animals, the highest making 18*l.* 18*s.*, and the average being 9*l.* 8*s.* 8*d.* Thirteen cross-bred rams, bred by Mr. Painter, of Ludwell Farm, near Wootton, were sold at an average of 5*l.* 6*s.* 7*d.* Five fine cross-bred sheep, the property of Capt. Dewar, of Middleton Stoney, averaged 7*l.* 2*s.* 9*d.* each.

Wherstead.—The following high averages will best show the success with which Mr. Sexton maintains the character of his flock:—20 two-shear rams sold at an average of 6*l.* 16*s.* 9*d*, and the same number of shearlings at 7*l.* 6*s.* 9*d.* 30 ram lambs were let at an average of 5*l.* 10*s.*; 25 shearlings at 7*l.* 12*s.*; and five two-shear rams at 6*l.* 10*s.*

HAMPSHIRE DOWNS: *Mr. James Rawlence, of Bulbridge*, had lately the most extraordinary sale of Hampshire Down rams that has ever taken place in Wiltshire, the whole of 140 ram lambs and rams let and sold averaging over ten pounds each. The company numbered upwards of 500, and included the principal flockmasters, not only from that and the adjoining counties, but numbers from a distance. Mr. Ewer observed that the animals for sale were in common stock order, and only five weeks ago Mr. Rawlence sold 300 wether lambs at 35*s.* per head. The biddings commenced with the letting of 20 lots of ram lambs for the season. The highest price was No. 3, which realised 42 gs., being hired by Alfred Morrison, Esq., of Fonthill. Other lambs brought 31 gs., 26 gs., 25 gs., 22 gs., and so on. The lambs sold well, the highest being purchased by Mr. R. Brine, of Dorsetshire, for 30 gs. Other lambs realised 26 gs. and 23 gs., and several lots brought 20 gs. A four-tooth was let for six weeks to Mr. Edmund Olding, of Ratfin, Amesbury, for 26 gs.; and three two-tooth rams were let averaging over 20 gs. each.

DAIRY FARMING.—No. IV.

[The following are extracts from the fourth Lecture of the series, lately delivered by J. T. Harrison, Esq., of Frocester Court, before the Royal Agricutural College, Cirencester.]

1. *On the Distribution of Stock throughout the country.*—A general survey points out that some parts of our island not being generally adapted for cheese-making and grazing, are employed in simply rearing stock most fitted for the grazing; in this category we may place much of Scotland and the north of England, Herefordshire, and other adjoining counties, and the greater part of Wales, Devon, and Cornwall—that these districts have cattle peculiar to them and naturalised, and that calves bred upon richer districts would in all probability not thrive so well there as the native breeds. Again, that the cause of the cattle from these parts not being good milkers arises from the breeders aiming chiefly at early maturity and a disposition to fatten. That in some parts of Wales and Ireland the stock is kept to produce butter, which, though probably of small quantity, is of excellent quality, and that breeds of Kerry and Welsh are reared best suited to this purpose, but inferior for grazing. That a large portion of England lying on the secondary formation is applied to summer grazing, for which purpose Highlanders, Welsh Runts, Herefords, and Devons are much used, whilst another large portion of it is used for dairy purposes where the Shorthorns or crosses with them predominate. And we seem to be taught distinctly that the quality of the pasture should in all cases be closely studied so as to accommodate the size of the animals to it—the richer the pasture and more genial the climate the larger the animals that may be used with success.

Confining then our attention to the best stock for producing milk for the use of man, we find that the shape in which this milk is used determines in a great measure the description of animal kept to supply it.

The modes in which milk is used are—

1st, Simply as milk for our large towns.
2d, For butter and fatting pigs.
3d, Chiefly for cheese and pig feeding.

1st. When milk for direct consumption is the chief object.

The milk for London and our large towns used to be almost entirely supplied by milkmen who kept large dairies in the suburbs, or under the archways near the Strand, feeding largely on brewer's grains, &c. This is now however to some extent superseded by milk being carried by railway for many miles to meet this demand.

The London milkmen prefer the large Yorkshire or Holderness breed, quantity not quality being the great object.

2d. For butter. Here quality or richness in cream is of much more importance than quantity, the cow giving a small quantity of milk sometimes returning a larger quantity of butter, than another cow giving a large yield of milk.

Professor Trail made an experiment as to the best breed of cows for producing butter, and found the Kerry cows to rank first, the Galloways second, and the Ayrshires third; with the Kerrys should probably be classed the Channel Island cows, but this again must depend upon the quality of the pasture, for certainly on some pastures the Short-horns are found excellent as butter producers, and even the Devons and Herefords in some cases are found extremely useful. Thus Mr. Ruegg, in his paper to the Royal Agricultural Society, says:—"I have found our dairyman speaking of Herefords as the best milkers within his experience, his neighbour favoured the beautifully symmetrical North Devons, whilst a third declared that the best milk producer was a cross. On our farm a breed of Alderneys were found excellent for butter making, but when tried as cheese producers they proved very inferior to the Ayrshires."

3d. Where cheese is the chief object we want quantity rich in casein.

Upon the poorer land and in less genial climate the Ayrshires hold their ground, but generally throughout the cheese-producing districts of England the Short-horns are displacing every other breed.

We are probably not far wrong in placing the breeds of the country in the following classes, the degree of merit corresponding to the order of classification.

1st. As meat producers—Herefords, Short-horns, Devons, Highlanders, Irish Runts.

2d. As milk producers for our large towns—the large Yorkshire or Holderness.

3d. As butter producers—Channel Islands, Kerrys, Galloways, Ayrshires, Suffolks, Devons, Herefords, Short-horns.

4th. As cheese producers—Short-horns, Ayrshires, Long-horns, Gloucesters.

A good deal depends, however, upon the individuality of the cow—the richness of the pasture and the climate in a great measure determining the description of cow from which selection is made. As we are supposed to be stocking a cheese-making farm, I should select the stock from among fairly bred Short-horns, three years old.

2. *Selection.*—The following appear to be some of the principal points which should guide us in our selection, as recommended by Major Rudd and others.

For the Cow.—A small fine tapering head, eye full and placid, neck straight, fine, slightly placed on shoulders, a deep capacious chest, the shoulders lying back in the body, showing strength of constitution and aptitude to fatten, the ribs round and barrel-like, the back straight from the neck to the top of the tail, the loins wide, the hind-quarters long and straight, the bones small and offal light; long soft silky hair, skin thin and moveable, but not too loose. Quietness and docility are of capital importance. A full sized udder well up behind, with the teats large, squarely placed, and wide apart, taking care if the cow has had a calf that she has not lost any of her quarters. The milk veins prominent. There appears to be some truth in M. Guénon's (of Bordeaux) recommendations respecting the milking qualities of a cow. His notion is that cows are good milkers in proportion to the extent of surface on the thigh and hinder part generally covered by reversed hair; the further upwards and the wider then that this surface of upward growing hair extends the better the cow as a milker.

I have examined a good many cows and found this a useful indication, and Mr. Haxton, in his book entitled "How to choose a good Milk Cow," declares that his own examination of many dairies expressly for the purpose, led him to the conclusion that M. Guénon's marks of a good milk cow are really trustworthy.

We should have to purchase two or three bulls; these I should choose from thorough-bred Short-horns with good pedigrees, taking care that their dams are famous as milkers. The bulls should be well grown and masculine, but with small heads rather than otherwise, as the cows experience much less difficulty in calving to small headed bulls. Great attention should also be paid to their temper, as this is undoubtedly hereditary.

After the first purchase the stock should be reared on the farm, those kept being carefully selected from the very best milkers. The purchase of bulls being continued until the stock will supply animals entitled to a place in the herd book, when thorough-bred animals can be selected from families of well known excellence as milkers.

The summer management of the cattle is then described.

3. *Haymaking.*—We should then set apart at least 100 acres for mowing from the beginning of April, this will give us about 150 tons of hay for the winter; but before we commence the old land haymaking we shall find the first crop of Clover ready to mow. This being 25 acres will give us from 30 to 40 cwt. the first time and about 20 the second—say 50 cwt. per acre in the two mowings, or 62½ tons of Clover hay.

Clover loses much weight in drying; I once tried an experiment on a perch of a very fine crop, and found the weight when cut at the rate of 15½ tons per acre, and when dry 2½ tons per acre. Fine drying weather is of great importance during the whole of the haymaking season, especially for the Clover. As it is not desirable to throw it about as we do other hay, since much of the leaf is thereby separated from the stem. Frequent turning over of the swaithe and cocking shortly before hauling is all the making that is usually practised. I have used the tedding machine, but I do not recommend it for Clover. Care should be taken that before hauling no juice can be forced out of the stems when they are tightly twisted. Clover hay very readily imbibes moisture, it should therefore be hauled if possible in the sunshine, and not be taken up after the dew begins to fall, otherwise it turns out fusty when cut.

It is of great consequence to the dairy farmer to make his hay well, and the haymaking season is always an anxious time, as so much depends upon the weather. No maxim is more worth recollecting than to make hay while the sun shines, and for this purpose his eye should be constantly directed to the weather, a careful study of which will be well repaid. The combined instruments now made by Negretti & Zambra, which cost 50*s.* each, and by other makers costing 30*s* to 35*s* each, specially for farmers, should form an indispensable piece of furniture in every farmhouse. They consist of a barometer and wet and dry bulb thermometer, by a careful study of, and attention to which, many a load of good hay may be secured. They will very generally forewarn him of a change of weather, and urge the farmer to get his hay as closely as possible together, as a captain would furl his sails and make all secure for the coming storm. They also foretell when a favourable change is likely to ensue, that he may resume work with his mowers or mowing machine, and be prepared to take advantage of the sunshine when it comes. For it is important to remember that no hay is so cheaply made or so good as that made by the sun, and that there is nothing more dispiriting than haymaking in bad weather, when so much labour is thrown away, and all the labour in the world would not make the hay good. When the *Times* can be obtained the day it is published, I believe it would well repay the farmer to take it in during the haymaking season; simply on account of Admiral Fitzroy's prognostications of the weather.

I consider Wood's mowing machine an immense boon to the farmer, not so much from enabling him to cut his Grass more cheaply, though that is a recommendation, as from the command it gives him of the work. My own experience used to be, that mowers were sometimes difficult to obtain, that when really fine haymaking weather came it was very difficult to get the mowers to cut down the Grass, which is not to be wondered at, for the employment is very severe and trying, becoming in too many cases the chief cause of premature old age; when, again, unfavourable weather followed, there was no preventing them cutting down a larger breadth than was desirable.

Now with the mowing machine we cut the Grass as we want it, stopping when unfavourable weather sets in, and having the ability to cut down a large quantity when the weather suits in a very short time.

The plan we adopt is to follow the mowing machine closely with the tedding machine, or when the crop is very heavy to have it tedded by women; if the weather is fine, we allow the Grass so tedded to lie spread over the ground during the night. The next day the machines go through it twice, the first time throwing the Grass into the air, the second time with the reverse movement, and in the evening it is raked into small rows, called in the Vale of Gloucester single hatches. The second day after mowing these hatches are turned over by the women with rakes, on the third day the hatches are broken

up by the tedding machines crossing them, and in fine weather the hay is frequently raked together in the morning and hauled to the rick in the afternoon. Should another day intervene, especially if the weather is catching, the hay is raked together by the women and cocked by the men; the size of the cocks depending upon the dryness of the hay. As to the cost of haymaking, my experience is that it varies from 6s. to 9s. per acre, according to the crops and the weather. On my farm, however, the thatching is less than in most cases, as I put a large quantity into the barn.

4. *Management of Young Stock.*—Our practice is to let the calves suck the cows for about 10 days, then take them away and give them 3 quarts of new milk morning and evening for six weeks, and 8 quarts of skim milk daily for five or six weeks longer, giving them hay and Mangel as soon as they will eat it. When there is a good bite of Grass they are turned out, and we have found it a good plan to give them about 1 lb. of oilcake each daily during the summer and autumn, and to bring them into the yards at night when the cold weather sets in. I have already given Mr. Bowley's system, which is somewhat cheaper than this.

The summer work on the arable land is also described.

5. *On Weaning Calves.*—In September we find it an excellent plan to give each of the calves a dose, consisting of 1 oz. of saltpetre, and 2 oz. of flower of brimstone, well mixed in a pint of thin gruel, keeping them on a small allowance of hay the following night. In the spring we give a similar dose to the yearlings before turning them out to Grass. This treatment was recommended to me by Mr. Henry Hayward, of Folkington, Sussex, as a precaution against greater evil. Whereas I lost many young animals before I adopted it, I have hardly lost one since, after administering the dose.

6. *Management of Cows.*—The cows are generally turned out to Grass about the end of the first week in May, sometimes I have turned out the latter end of April, but tempting as it is sometimes to do so, I would generally advise patience till the later period, as cold easterly winds sometimes prevail in May and even in June, seriously checking the growth of the Grass. The advantage of having a little extra store of hay is here felt very decidedly, for turning out too soon, or meeting the Grass as it is called, is like killing the goose that laid the golden eggs.

It is desirable to have shelter for the cows in the hot weather, especially when the flies are troublesome; in such cases it is well to leave the gates open, and allow them to come home into the courts if there is not shelter in the fields. Trees afford great comfort to the stock at such periods; they are best when planted in the middle of the fields, so that wherever the sun is they cast a shadow under which the cattle can lie. When they are in hedges they prevent the quicks thriving below them, and the cattle in their endeavours to reach the shade break down the hedge.

Having gone through the serious ordeal of the distemper among the cattle, I can recommend the plan I adopted on a late occasion, viz:—1st. To give the whole herd as soon as it appeared a dose consisting of 4 oz. of Glauber salts dissolved in half-a-pint of warm water; to which was added 4 oz. of sulphur; 1 oz. of saltpetre; and one wine-glass full of linseed oil, well mixed in about 1 quart of thin gruel. To the feet of those that were lame we applied an astringent composed of 2 oz. of blue vitriol; 2 oz. of verdigris; 1 oz. of nutgalls; 1 oz. of butter of antimony—all finely pounded and mixed in 1½ pints of vinegar. A little alum or chloride of lime and water is recommended to wash the tongue, but we did not use it.

2d. To separate those affected from the rest as soon as they caught the disease, keeping the worst cases in yards, and giving them as nourishing food as possible, oilcake or oatmeal gruel, &c., and not allowing any to walk further than was absolutely necessary, giving them hay, &c. near home.

By taking these precautions we did not lose one beast, and but few were seriously affected. When the cows were physicked, and when they had the distemper, the milk was thrown away. When they recovered the milk for some time was kept by itself and made into cheese, and such was the care taken by the milkers and the dairymaid, that none of the cheese was rejected by the factor, although it was carefully kept by itself. The loss was of course considerable, and makes one fully alive to the importance of the Bill lately before Parliament, to prevent the introduction and spread of diseases of the kind.

Much importance is rightly attached to careful milking; the more nearly the milking can be done at equal intervals of time the better, and it would be well to have one person specially charged to see that every cow is thoroughly stripped. It was the remark of an old farmer, who died worth 30,000*l.*, that he had made his fortune by attending to this little detail. Gentleness on the part of the milkers is by all means to be encouraged, and the contrary condemned, as many a good cow is spoiled by harsh treatment.

The cows are subject sometimes to sore teats, which is very catching, causing inflammation and boils on the hands of the milkers, and spreading thus to the whole pack if great care is not taken. It is advisable at once to separate any that are affected, and let one person attend to them. Here the milking machine, if brought out successfully, would be eminently useful.

The cow-pox, which led to Dr. Jenner's famous discovery of vaccination, is rarely met with, though the above complaint, which is common, resembles it very much.

The udders of the cows occasionally become inflamed, and if great care is not taken at once to reduce the inflammation the loss of one or more quarters ensues, seriously injuring the usefulness of the cow. We find bathing with warm water and rubbing in a little of Day's Driffield oil the best remedy.

When the cows calve before their time, or show symptoms of fever after calving, one of Day's red drench or a Gloucestershire drench made by Mr. White, of Dursley, with some warm gruel, generally soon puts them right, if it does not the best plan is to send for the veterinary surgeon; but, as a general maxim, prevention is better than cure, and with steady feeding and ordinary care, I find I am able to keep down my veterinary bill at a very low sum.

A Cattle Insurance Company was formed a few years ago, which from want of encouragement, or some other cause, fell to the ground. At the time I studied the question and found that the sum I should have to pay exceeded considerably the amount of my losses, and this, I take it, will generally prove the case where a large stock is kept and there is tolerable winter accommodation for them, especially as the company would not ensure deaths from epidemic diseases. If the insurance met such an emergency it would be very valuable to the farmer, whose all is sometimes in danger, but where it only extends to ordinary diseases, which in a greater or less degree the owner by good management might have prevented, I do not see the benefit of it, and it is pretty evident that the careful managers would have to pay for the mismanagement of others.

In my next lecture I propose to consider the uses to which milk is applied, the manufacture of butter, cheese, &c.

SAVORY'S STEAM CULTIVATING ENGINES AT NEWCASTLE.

[The following correspondence has taken place between Messrs. Garrett, of Saxmundham, the exhibitors and manufacturers of Savory's engines, and the Secretary of the Royal Agricultural Society.]

I.

To the Council of the Royal Agricultural Society of England.

"Newcastle-on-Tyne, July 19, 1864.

"We herewith protest against the award made in the steam cultivation classes to Mr. John Fowler's windlass and application of power thereto. We maintain that the "clip drum" is not a "windlass" any more than a pair of pully blocks, which it resembles, inasmuch as it cannot be used independently of its fellow drum, and is therefore not applicable to the winding off and on of the rope, &c.—Yours respectfully,

(Signed) R. Garrett & Son."

II.

To the Council of the Royal Agricultural Society of England.

"Newcastle-on-Tyne, July 19, 1864.

"We herewith protest against the award made in the steam ploughing class of the second prize for the large occupations to John Fowler's tackle. In making this award, we believe that no notice has been taken of the main points in which our engines and tackle are manifestly superior, viz, simplicity of design; durability in working, ease with which it is worked even by men totally inexperienced and unused to each other; promptitude with which the apparatus is got to work and removed when finished; and quantity of work performed per day. In place of making the slightest comparison on these—as you must admit—most important points, we presume that figures representing the quantity of coal consumed, of earth moved, and of capital at stake in our competing case, which every one interested in the subject of steam-ploughing will pronounce to be but second to the points on which we challenge, have been employed solely in arriving at this unjust decision.

"We return respectfully the slight marks of approval with which you honour us, assuring you of your having done effectually all that was required to show the inconsistency of the prize system as conducted in this society. We shall leave it, convinced that, should it be necessary to exhibit to the public the advantages or disadvantages of any particular machinery, the Royal Agricultural Society of England is the last place in which to do so fairly and well; and unless the important points we have named as, in our belief, belonging to our system of steam cultivation, receive their due weight in your scales of justice, we retire once again, and for ever this time, from your trial yards.—Yours respectfully,

(Signed) R. Garrett & Son."

III.

To Messrs. R. Garrett & Son.

"August 4, 1864.

"Gentlemen,—In reply to the protest dated July 19, and addressed by you to the director of the Show, I am directed by the Council to inform you that they see no reason to interfere with the award of the judges. The judges' report will, when completed, no doubt record the results which guided them in their decisions.—I am, gentlemen, yours faithfully,

"H. Hall Dare, Secretary."

IV.

To H. Hall Dare, Esq, 12, Hanover Square, London.

"Dear Sir,—We have to acknowledge the receipt of your favour of the 4th inst. We take note that you direct us for an explanation of the awards at Newcastle, to the judges' report; but at the same time we beg to remark that we consider our protest demands more prompt reply than we shall obtain by waiting for the publication of the Society's Journal, the date of which is at present indefinite.—We are, dear sir, yours faithfully. (Signed) R. Garrett & Son."

EXPERIMENTS IN THE FIELD.

LECTURE BY PROFESSOR ANDERSON.

A lecture was delivered in the Golden Lion Hotel, Stirling, by Professor Anderson, during the meeting of the Highland and Agricultural Society. The following are extracts from this lecture:—

What I have to say regarding the conducting agricultural experiments may be divided into two parts, 1st, The precautions necessary to secure accuracy; and 2d, The mode in which experimental agriculture may be best promoted.

In commencing any set of experiments it is of primary importance that a definite plan should be laid down. The experimenter should put before himself some question or questions for solution, and should then set himself to consider carefully how his experiments may be so shaped as to give a definite answer with accuracy and precision. To secure this, no precaution should be omitted, and he must avoid undertaking too much. He will find no difficulty at seed time in beginning a large number of experiments, but it is not so easy to make all the necessary weighings at harvest, when he has so many other matters to attend to. It is very desirable also that the experiments should be so arranged that they may be repeated during several successive years on an exactly similar plan, by which their value will be enormously increased. Having fixed upon the particular subject to be examined, the next point is to ascertain exactly the existing state of information on it, the current opinions regarding it, and any previous experiments bearing on it should be minutely examined, by which means much labour and unnecessary repetition may be avoided. The previous experiments should be very carefully studied, and their weak points traced, so that the same defects may not occur in those about to be begun.

The plan being arranged, the next matter for consideration is the field in which the experiment is to be made, and to this very great attention should be paid. It is of primary importance that the soil shall be as uniform in quality and texture as possible. Preference should always be given to a field which is perfectly flat. Undulations on the surface are generally connected with differences in the soil or subsoil, and are often due to the existence of rocks beneath the heights which, of course, modify to a great extent the nature and quality of the superincumbent soil. On a considerable slope the soil can never be uniform, as any one may easily convince himself when the state of a ploughed field, on even a very moderate inclination, is examined after a heavy fall of rain. The importance of uniformity of soil is so obvious that it would be infinitely preferable if some more precise method of ascertaining it were adopted. This could be readily done by deciding on the nature of the experiments and the position of the plots a year beforehand. The plots should then be at once staked out, and the crop being raised in the usual way, the produce of each should be harvested and weighed separately, and if it proved equal in all cases the soil would be perfectly uniform. I am not acquainted with any experiments in which this precaution has been taken; but there can be no doubt that the year's delay, and greatly increased labour, would be amply repaid by the additional value and precision of the results. The condition of the soil is also a matter of great importance. In general a soil which has been well worked, but not highly manured, is best, because on it the differences between the manures employed will be most marked.

Not less important is the size of the plots on which the experiments should be made—a subject of some difficulty, and in regard to which very great difference of opinion exists. The general impression is, that the larger they are the better; and it has been held by some that no experiment should be made on less than an acre, while others have made half an acre their standard; and still smaller quantities, down in some instances to a very small fraction of an acre, have been used. Supposing it be resolved to make only five experiments on an acre each, this requires five acres in all; and I do not hesitate to say that there is nothing more difficult than to find that quantity of soil of the necessary uniformity, and that in the great majority of cases plots of 1-8th or 1-16th of this size would give much more accurate results. It is urged also that the crop can be more accurately weighed when the spaces are larger, but this is only because experimenters generally are content with the rude weighings which suffice for the ordinary farm purposes, while if they used a somewhat more refined apparatus, equal if not greater accuracy might be secured in the small scale. The size of the plots must, in fact, be greatly influenced by the nature of the experiments to be undertaken. Where the object is merely to make what I have called special experiments, a considerable breadth of land is best, but it need never exceed a quarter, or at most half an acre—a quantity amply sufficient to give a fair average of the whole field. Where, however, the intention of the experimenter is to contribute to our knowledge of the general principles of agricultural science, much smaller quantities of land will suffice, and a 1-20th or even 1-100th of an acre will often be sufficient. In these cases it must be remembered that it is comparative results that are wanted, and it does not matter whether the produce from the plots be above or below the average over the whole field, provided only they be made under precisely similar circumstances, and are fairly comparable among themselves. The main objection which may be made to small experiments is, that when the crop is one of a kind which throws out long roots, it is likely that the mutual interpenetration of the roots of adjoining plots may occur to such an extent as to interfere to some extent with the accuracy of the results. If, for example, a plot to which nothing has been applied adjoin one which has been heavily manured, some of the roots from the outer part of the former will penetrate into the latter, so that its produce will be somewhat increased; while, the same way, the outer plants of the manured soil will stretch into the unmanured, and the difference between the produce will consequently be less marked than it ought to be. This difficulty can, however, be easily overcome by a slight separation of the plots by a sort of outer rim. If, for example, it be resolved to make the experiments, say in a 50th of an acre, the space should be measured off by 40ths for manuring, while the portions actually weighed should be in each only 1-50th of an acre in the centre of each 40th. So that the field would be arranged somewhat as in this diagram, where the inner squares represent the quantities to be weighed. Another objection is the difficulty which is experienced in gathering the crop without overstepping the boundaries of the plots, which, when they are small, may lead to great inaccuracies. I was myself led to direct my attention to this point some years since when engaged in examining the progress of vegetation in the Wheat crop, when, from the very nature of the inquiry, it was indispensable to work on a very small scale. The plan I then adopted was to measure out the spaces with great care, and to drive firm pins, projecting about 6 or 8 inches above the surface, into the corners, between which slender wires were stretched, so that when the produce was required it could be cut with the greatest certainty, the plants taken being always those included within the wires of each plot.

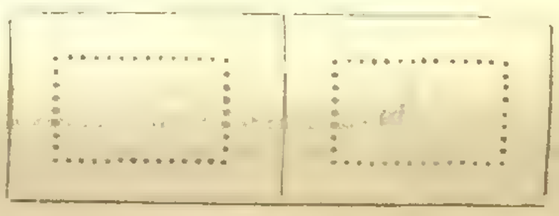

Whether we choose to operate in a large or a small scale, it must never be forgotten that single experiments have comparatively little value, and that every result to be trustworthy should be made in duplicate, and it is better still if it is repeated three, or even four times on the same soil. The disturbing causes which are not eliminated in this way are the

effects due to the kind of soil, and to the meteorological conditions. These can only be ascertained by extending the experiments, so as to include different descriptions of soil (which may be selected in the immediate neighbourhood of one another), and localities differing in their temperature and rainfall, which must almost of necessity be at some distance apart. Such a plan could only be accomplished by several persons in different parts of the country associating themselves together for the purpose of repeating the same experiments. I would particularly refer to the importance of leaving plots entirely without manure.

The application of the manures involves some attention. Those which are to be employed should be procured from dealers of reputation, so that their quality may be good. Before each is applied it should be turned out of the bags on a clean wooden or stone floor, and carefully mixed with the spade, any lumps contained in it being broken down. It should then be passed through a sieve and again mixed, and a sample taken for analysis from six or eight handfuls of the stuff. The quantity required should then be weighed and mixed with once or twice its bulk of damp sand, and the whole being again passed through a sieve, it should be put into a bag ready for use. The object of mixing with sand is to admit of its uniform application, and to prevent the more dry and dusty manures being blown about by the wind during application. It is very necessary when precise results are required that the actual manures used should be analysed in order to see that they come up to the proper standard, and this precaution should never be omitted.

For still greater completeness the soil should also be examined, or at all events a sample should be taken just before the experiment is begun, which may be afterwards analysed should it be deemed necessary. For this purpose a hole should be dug to the depth of the soil, say 10 inches, and from its perpendicular side a slice two or three inches in thickness should be taken. This should be repeated at five or six different parts of the field, and the whole of the soil thus taken should be carefully mixed with the spade, passed through a coarse sieve, and spread out in a thin layer on large sheets of paper for some days to dry in the air, and 5 or 6 lbs. fairly selected from this should be preserved in a tin box. It is scarcely necessary to observe, that during the growth of the crop attention should be paid to everything bearing on its progress. The time at which it brairds in each plot, when it comes into ear, if a cereal, and all similar events should be carefully noted. A knowledge of the rainfall and temperature during the time of the experiments is also of much importance, and the necessary information on these points, obtained from any meteorological observer in the neighbourhood, will generally suffice. The most perfect plan would be to have a rain gauge on the field itself, and if the strength of the solar rays were also observed, the results would doubtless be most interesting; but these are refinements which we can scarcely expect to see adopted in the present state of agriculture. When the crop approaches maturity, the proper time for harvesting becomes a matter demanding much careful consideration. The general system is to collect the produce from all the plots on the same day, and so far as root crops are concerned this is probably right, because there is no definite point at which they can be said to be ripe. But it is quite otherwise with the cereals. In them the period of exact maturity should be carefully attended to, and as the effect of some manures is to accelerate this point, it would be wrong to reap all the produce on the same day. If this be done it is necessary either to wait till the latest plot is ripe, in which case some of the grains of the earlier ones are liable to be shed, particularly if the weather is windy, or to begin when the first is ripe, in which case the others are placed at a disadvantage. The experimenter must, therefore, examine the crop day by day and gather each when in the same condition as to ripeness. The crop has then to be weighed, the bulbs and tops of roots being taken separately, and the gross weight of the cereals being noted in the meantime, while the separate weights of grain and straw are left until it is convenient to thresh them. Here the experiments terminate for the year, unless it be thought necessary to ascertain the nutritive value of the produce by analysis.

It was my intention to have entered here into some details regarding the exact kind of experiments which it is desirable should be undertaken.

Among subjects particularly requiring examination, I may mention the effect of phosphates in different states In bones the phosphates exist in an insoluble form, but they nevertheless operate very powerfully as a manure. If, however, the bones be burnt, the phosphates left appear, so far as the few experiments made with them have gone, to possess but little manurial effect, unless they are treated with acid, and so rendered soluble. Repeated and varied experiments are necessary to ascertain the cause of this peculiarity. A comparison between the action of nitrogen in the state of ammonia and as gelatine, in which form it exists in the bones, would also be of interest. A series of experiments on the manurial effects of the salts of potash is likewise much required. Some years since, when discussing the alleged exhaustion of the soil of the British Islands by the modern system of agriculture, I expressed the opinion that, so long as the present supplies existed, there was no probability of the ammonia or phosphates being exhausted, but that a diminution in the available supplies of potash was a possibility, though a distant one. Up to the present time we have very little information regarding the effects of potash, and what there is is conflicting. A few years ago experiments were made at my instigation with muriate of potash, on the Potato, a crop requiring a large amount of that alkali, and the results were very favourable, and in one case so remarkable, that the gentleman who made the experiments procured a supply and used it on a considerable scale in the subsequent year, but the results were then entirely negative. The cause of this remarkable difference, and indeed everything relating to the manurial action of potash, is still to learn. The same applies to the salts of magnesia, which are sometimes used as manures for the cereals, under the impression that they must be useful, because the ash of these plants contains a large quantity of magnesia. As regards experiments on cattle, I would just observe, that we are still greatly in want of a complete and exhaustive inquiry into the relative nutritive value of Swedes and common Turnips. The effect of water in promoting the fattening of stock also merits inquiry. It has been recently observed by a French experimenter, that when a horse was liberally supplied with water it gained weight rapidly, even when its daily rations of solid food were materially diminished. Should this be confirmed by further experiment, and found to be applicable to cattle and sheep, it would obviously be a matter of great importance to the farmer.

Any one inclined to engage in experiments will find, that as in everything else, the hand gets into it, and that what at first occasions a good deal of trouble soon becomes much simpler, and after some experience has been acquired, can be accomplished without the effort it requires at the outset. Neither should he be deterred from the good work by being in a position in which he cannot carry out all the details, for he may rest assured that experiments in which some of the precautions are omitted, may still be useful although necessarily not so valuable as those in which they are observed. This much, however, may be said, that wherever the choice lies between many experiments with few precautions, and few experiments with many precautions, the latter alternative should unhesitatingly be adopted.

The true plan is to undertake no more than can be well and effectually accomplished, and where a variety of results is required, it is best that several individuals should associate themselves together for the purpose. Where this is done the results are sure to be most valuable, particularly where the same experiments are repeated on different soils and districts for several successive years, so as to eliminate the effect of disturbing causes. But when several persons unite for this purpose, it should be made a strict regulation that the experiments should be made exactly in the same manner, and that no one should be allowed to modify any of the details. I have seen instances in which the value of experiments were materially diminished by trifling differences, which rendered it difficult to compare the results. The principle of association to which I have just adverted, is one of great importance to the future of experimental agriculture, and is one of the methods by which it may be most successfully promoted As our knowledge advances experiments must of necessity become more and more complex and elaborate, and at length require an expenditure of both time and money, which, at no distant date will put it beyond the power of individuals to make them. The elaborate researches of Messrs. Lawes and Gilbert, which are unsurpassed for minuteness and precision, may be referred to as an example of what agricultural experiments ought to be, and of the difficulty of increasing their number, for I need scarcely say that the case is quite exceptional in which an individual has both the will and the power to expend upwards of 2000*l* a year for many successive years in inquiries of this kind. It might be accomplished, however, if the means requisite for the purpose were raised by subscription, and this plan has been adopted by the German agriculturists, whose exertions well merit attention. There have been established for some years back in that country what are called Agricultural Experiment Stations, of which the number is considerable, I believe not less than eight or ten being in existence, supported chiefly by subscriptions, to which the Government in some instances contributes, their entire object being to carry out inquiries in various departments of agriculture. They differ considerably in extent and the particular departments of experiment they prosecute, but as an example I may instance that at Salzmunde, in Saxony, which is under the direction of Dr. Grouven, an able chemist, and author of a course of lectures on Agricultural Chemistry. It includes a laboratory, small cattle house for feeding experiments, and other necessary appliances. The cost of starting the station was between 400*l*. and 500*l*., and the annual expenditure about 450*l*, but this does not include any charge for land, manure, labour, or cattle food consumed in the experiments, all of which were supplied by a neighbouring proprietor free of all expense. The other Experimental Stations throughout the country were conducted on a similar plan, though in some instances the means are smaller, in which case of course the experiments are more limited. Dr. Grouven, who appears to have given much attention to the subject, is of opinion that the minimum outlay should not be less than it is at Salzmunde. The cost of a similar institution in this country, taking into account the much greater expense of living, and the wages, would not be less than double what it is in Germany, or say 1000*l*. a-year, and to this must be added the cost of land, labour, &c., which I have no means of estimating, but it could not be well under 200*l*. or 300*l*. a year, so that the expense of an experimental station in this country would not be less than 1200*l*. a-year. As there are eight or 10 stations in Germany, the agriculturists of that country are at the present moment expending a sum equivalent to 7000*l*. or 8000*l*. a year of our money for the encouragement of scientific agriculture. The experimental stations are doing a great deal of good work, and support a periodical, in which the results of their labours are given to the public. We have here an example which might be advantageously followed in this country, and though it may be vain to expect, at least at present, an outlay at all equivalent to that which is made in Germany, something might surely be done. If an institution of this kind could be established in Scotland, I should myself be glad to contribute towards it both money and labour, and I am satisfied that if it were properly started, its results would in the course of time be in the highest degree beneficial to agriculture.

Home Correspondence.

Potato Crops and Weeds.—As we in Ireland chiefly depend on your markets for the sales of our agricultural and farm stock productions, so are you so far dependant upon us for your supplies; and as a deficiency in the quantity or quality of such supply, must in a corresponding or relative degree affect the interest of both, a few words on our Potato crops and their colleagues, the Weeds, may not be out of place at this particular, and let me add critical period of the year, locally and in too many places justly called "the starving month of July." As many of our peculiarities sound strangely anomalous to such of your readers as are not familiarised to them, the strangest of all may be the fact that where starvation of mere farm stock and farm crops most frequently occurs, there you will be sure to find the robbing Weeds revelling in luxury; fed to plethora. This is visible even in the scantily supplied, as well as in many of the rich and abundantly supplied pastures. It is visible in most of the too few leguminous crops we grow, as well as in the too many cereal crops, in our meadows as well as in our green crops, but worse than all still, in our Potato crops, in a more especial degree ever since the fatal disease of this crop in 1845. As soon as this fatal disease makes its appearance, the terror-stricken and despairing cultivator frequently abandons the crop to its fate, and then it is the Weeds thrive, when, having got full possession of the manured land, and the result is that by such full, complete, and uncontrolled occupancy, even for three months of any one year, the next seven years will present in all the other crops adverted to, all the evils arising from the penny wise and pound foolish policy in neglecting to clear off the weeds from such Potato-planted lands during the latter part of July and all August and September,—in fact, scarcely ever spending a thought in removing those Weeds till the Potato-digging time comes round in the month of November, when the Weed seeds of all kinds are all shed, and roots of those perennial ones fully matured. Even in November, in too many cases, there will be removed but the withered stems, those having done their worst in having established in embryo and otherwise full crops in perpetuity; nor is it any wonder then to find all future crops inferior in quality and deficient in quantity, even during the most favourable harvests, but doubly or trebly so in unfavourable ones. If instead of this course being permitted to run, all such Weeds were removed by all and every means, the Potato crops themselves could be much more readily preserved on being earthed up so as to render the drills, as we call them, or the ridges as you call them, capable of casting off the rain into the spaces as it falls, and by a greater exposure of surface render the land more pervious to the drying action of the atmosphere; whilst the tubers are permitted to remain in the land "to harden," or better still, to have the tubers removed and drily stored as soon as ever the stalks cease to perform their functions, in a salutary point of view, and before they begin to poison the tubers by the descent of the contaminated sap. The advantages would be (1) a good chance of having a considerable quantity of sound Potatos, (2) the land rid of the Weeds and the seeds which perpetuate them, and (3) an easy means afforded of cropping the ground again at an early and a comparatively idle period of the autumn, whether the next crop should be a cereal or an autumn sown green crop, but perhaps best of all, under the altered circumstances of the country, Italian Rye-grass without a corn crop, the best crops of Italian Rye-grass I ever grew and I was, I believe, the very first in Ireland at least that ever grew heavy crops of such Grass on a large scale, and to report the results for the encouragement of others. Since then almost every good farmer in Ireland has to a greater or less degree adopted the system, or a modification of it, to suit *his* own peculiar circumstances. In fact, since corn growing has become less profitable than an increased production of animal food, many of the very best farmers in Ireland have laid down their lands to permanent pasture (or for meadowing) in autumn without a corn crop. Of this I could adduce many important examples, but none more so to farmers generally, but to small farmers in a more especial degree, than that so successfully practised on the small farm at the Albert Institution, Glasnevin, by Mr. Baldwin, agricultural lecturer there, and who is also one of the lecturers at your own Royal College at Cirencester. Corn growing in Ireland for exportation is utterly ruinous to the Irish farmer, nor is it ever again likely to be profitable when grown on a scale greater than will be required for stock feeding on or contiguous to the premises on which grown. Barley, it is true, when grown on suitable soils, will always be profitable when fit for malting purposes at home or abroad; but when grown on unsuitable soils, especially when badly harvested—as it latterly has been in consequence of wet harvest weather and being so very foul from Weeds—is utterly ruinous. It is true that some few who are in point of industrial intelligence in advance of their neighbours, have of late years converted their Barley into stock feeding, and by such means helped to keep their ground, whilst those who grew it for exportation had to slip off the ground and seek their fortune for better or worse beyond the Atlantic or at the Antipodes. I know not if I could feel justified in the eyes of your intelligent English and Scotch readers by pursuing these subjects further than to say our harvest prospects, so far, as a whole, seem very favourable as regards all crops within the range of my acquaintance, which indeed is not very limited. Wheat where regularly sown and under favourable circumstances bids fair to be at least an average crop. Barley in many cases ditto. Oats autumn sown never better, but the spring sown, except on rich and moist grounds, a crop short in straw, and should the harvest prove at all favourable, likely to yield well in quality, though the quantity may be light. Beans wherever grown, and such places are too few, never promised better. The same may be said of Peas, which are suited to a greater range of soils and situations. Potatoes have been trembling in the balance, though looking remarkably well whilst growing, and though the quality at market is generally good, the acreable produce is by many considered light. Still, if the blight remains in abeyance for another fortnight or three weeks, by judicious harvesting there will be an abundance for home consumption and considerable quantities to spare for exportation. Cabbages, notwithstanding the mildness of the winter and their adaptability for our fine Irish soils—and finer in this case because milder climate—are still exceedingly dear in the Dublin markets. This can be accounted for only because of the immense quantities exported to Glasgow, Liverpool, and, I believe, Bristol, where your people are so well and so profitably employed in manufactures, of which Dublin with all its advantages cannot be said to contain any, if we except porter and whisky. *Edward Carroll, Dublin.*

The Number of Cattle, &c., landed in the Port of London last year was as follows:—Beasts, 76,9 8; calves, 31,414; sheep, 341,408; pigs, 23.555. Of these it was found necessary to detain and slaughter, on account of their being diseased, 992 beasts, 126 calves, 4398 sheep, 550 pigs; out of which there were condemned and destroyed as unfit for human food, 299 beasts, 51 calves, 607 sheep, 220 pigs. The remainder, in which the flesh did not appear to be impaired, being delivered to the consignees. It appears from this account that of the total number of animals

imported into London only 1·1 in every 100 is affected with disease at all, and only ·26 per cent. or 2 in 1000 are so seriously affected as to render heir flesh after death unfit for human food. The sheep affected with the "scab" or "variola ovina" are rather more than 1 per cent., and the diseased pigs 2 per cent. of the numbers imported, while the cattle, suffering mostly from "eczema," or the foot and mouth disease, number only nine in a 1000. Great vigilance has been exercised by the cattle inspectors to prevent the introduction of diseased animals of any kind into London, where, as we are informed, about one-quarter of the meat consumed is the flesh of foreign cattle. We have also as far as practicable extended the operation of the London regulations to the outports where cattle are imported, and authorised the employment of veterinary surgeons to examine every cargo. We have no reason to believe hat the watchfulness of these officers has been evaded in any case. A deliberate attempt was made in the rly part of the year to land a large cargo of diseased imals from Hamburg at the port of Lowestoft, but aving received information of this intention, we nt down one of our London inspectors to await the arrival of the ship and to prevent the delivery of the animals, if found to be unsound. The cattle being all diseased were accordingly reshipped, and allowed to proceed to this port, where hey were all slaughtered at Blackwall, under the care our inspectors. We feel confident that the present stem is sufficient to exclude diseased animals from the untry. But it has been long the opinion of our principal inspectors that legislative interference is necessary to establish a proper inspection and control over cattle of home production at markets and fairs throughout the country, where at present little or no precautions are taken to prevent the spread of diseases which are sometimes erroneously supposed to be peculiar to foreign cattle, but which in reality had existed in the United Kingdom years before the cattle importation began. *Report of Commissioners of Customs.*

Turnip Fly.—At page 730 of a recent issue, I observe allusion is made to a nostrum for the purpose of preserving Turnips from the fly, which brings to my memory a paper signed "Rusticus," and published in the *Horticultural Register*, August 1, 1833, page 376, in which the writer details a number of experiments he very ingeniously made to ascertain the cause and remove that pest of the farmer the Turnip fly or beetle. He states that he baked the earth and boiled the water used upon it, covering it with a glass, yet the young plants so grown were eaten with the fly, he then examined some of the seed with a microscope, and found on a number of them, adhering closely to the seed, white flattened substances, from two to five on most of them; these he concluded were eggs. So he states that he made some pretty strong brine, in which he steeped the seed for 24 hours, then dried and sowed it, and that he did not discover a single fly, nor were any of the young plants injured. This matter of fact relation appeared to me to possess so much of common sense, that I thought it worth reviving; knowing that brine is extensively used for steeping grain previous to sowing to prevent smut. *A Constant Reader.*

Cereal Cultivation and Germinating.—Mr. Wilkins, Wix Parsonage, supplied an interesting article in your paper of the 30th ult. on this subject, in which he made some most extraordinary statements on the cultivation of Wheat. I do not for one moment question the correctness of Mr. Wilkins' statement, as I feel sure that no gentleman would give publicity to anything of public importance which he felt sure would not bear the strictest investigation. My object in troubling you with this is to solicit Mr. Wilkins for the favour of further information upon this important matter, as I feel sure many of your readers would feel interested equal to myself to know how such extraordinary large crops of Wheat can be produced so many years consecutively. Mr. Wilkins states that one field he has had rented for 17 years, during which period he has had 13 crops of Wheat, and on other lands 10 crops of Wheat consecutively, the average of which was 5½ quarters, and the seed did not exceed two pecks, and in some instances scarcely one peck. The writer would esteem it a favour if Mr. Wilkins would supply the following information. In what state, and how was the land cultivated previous to Mr. Wilkins occupying it? What is the nature of the surface and subsoil, if drained, and upon what principle? What mode of cultivation does Mr. Wilkins adopt, and what management or manures are supplied to the land? Whether is the Wheat drilled or dibbled, and at what period of the year is it sown? *H. Harrison, York, Aug.* 8.

Traction Engines on Roads.—As steam cultivation is now becoming so general, and the opinion of the country and judges, as shown by the awards at the two last great meetings of the Royal Agricultural Society, are all in favour of the use of traction engines, on account of the ease with which the tackle is moved from place to place, it becomes an important question whether these engines are to be allowed to travel upon the public roads without hindrance or not. In Wiltshire, I am sorry to say, it has been decided that they shall not, unless they like to grope about on the roads and lanes at night, which any who are acquainted with the working of such engines must know is practically a prohibition against their use altogether. In Dorsetshire, a notice has been extensively published that persons working any steam engine passing within 50 yards of a public road, will be liable to the full penalty of 50*l.* In Somersetshire, where there are several sets of steam cultivating tackle, they have not hitherto been quite so tightly restricted. I have for the last 12 months, had four of Fowler's large traction engines working constantly in the neighbourhood, and during that time they have travelled through 30 different tollgates without paying, but within the last few weeks it has got into the heads of some of the local magistrates' clerks that the tackle is subject to a toll of 2*s.* 6*d.* for each carriage—this would amount to about 30*s.* each time they passed through a tollgate, rope porters, &c., including engines. I have represented to these gentlemen that as they are agricultural implements the general Act of Parliament exempts them from all toll, but they do not seem to see it; and my object in writing you this letter is to elicit the opinion and experience of yourself and your numerous readers and correspondents, who own, or have any interest or experience in steam cultivating tackle. What I most particularly want to know is, if any other of the numerous owners of agricultural steam engines have ever been called upon to pay toll; or if any judges' or magistrates' decision has ever been given as to their liability or otherwise. I must apologise to you for intruding so much on your valuable space, but knowing the trouble and interest you have taken in advertising the course of steam cultivation, leads me to believe you will, by inserting this letter, oblige your obedient servant. *Joseph Nicholls, Queen Camel, Somerset, August* 8.

Societies.

Royal Dublin.—*Flax Culture.*—Mr. Friedlander lately read a paper on this subject before a special meeting of this Society. We extract the following passages from the report of it in the Irish *Weekly Agricultural Review*:—

1. *Soil.*—In no case, excepting one which I will presently refer to, should Flax be sown on land freshly manured. If this is done, the plant is sure to grow strong and thick in wood, and will yield but little and poor fibre. The best land is sound, dry, deep loam, with a clay subsoil.

2. *Preparation.*—Plough in autumn; cross-plough a week or so afterwards, so as to leave the soil exposed to rain, wind, sun, and frost. Remove stones. In spring, a few days before sowing, plough lengthwise (shallow, say about 3 inches), and harrow pretty heavily. Sow either by hand or by a Clover-sowing machine, at the rate of a Riga barrel per acre of, on light land, Dutch seed, and, on heavy lands, Riga, or home-saved seed (care must be taken that the Flax-seed is well cleaned, and that nothing but pure Flax-seed goes into the ground). The seed must be harrowed in with a light, narrow harrow, and, if necessary, rolled. The farmer must attend carefully to weeding when the Flax is from 3 to 4 inches long. I supply my weeders with a knife with which they cut all such as Thistle and other long roots under the surface, so as to prevent the disturbance of the neighbouring stalks of Flax by pulling so large a root.

3. *Pulling and Seed Saving.*—The Flax should not be left in the ground after it shows indications of being really "ready," which indications are not an entire gray or yellow colouration, indicating absolute death of the plant, but a change in the colour of the bolls to a yellow hue—of the tips of the seeds to brownish tinge—a graduated yellowing of the stem or stalk from the top, one-third or so more downwards. When these appearances present themselves, the sooner the Flax is pulled the better. The plant has absorbed from the soil all the elements it is capable of receiving.

Removed from the ground at this proper period it should be "stooked" in A form—in long rows in the field—so that the air may have free access to every stalk. In three or four days the Flax plant and its seed will be found to be really ripe and matured—ready, in fact, for rippling.

4. *Rippling* (*part of Seed Saving*).—The seed of Flax is of great value for not only cropping purposes, but for feeding cattle, &c. The acreage of Flax in Ireland this year is about 300,000 acres—the estimated average value of seed saved for any purpose here is about 8*l.* per acre; and thus may be seen the enormous sum of 2,400,000*l.* dependant on the care exercised in pulling and rippling.

My practice is to ripple after "stooking;" convey the bolls into an airy room; turn them with a wooden shovel (as malt is treated) every few days for a month or so. In January or February, when the seed is thoroughly dry, it must be threshed. The seed when freed from the hush is put through a fanner, which in the same operation separates the lighter seeds, which are suitable for feeding or crushing, from the heavier, which it is desirable to preserve for sowing. Thus the seed is saved, and the Flax straw in the best condition for "steeping" or "rotting."

5. *Steeping or Rotting.*—The stalk of the Flax plant consists essentially of a woody core, surrounded by a cylindrical sheath of filaments, the whole being cemented together by a strong gum or vegetable glue. To obtain the fibrous portion it is clear that we must destroy or weaken the binding power of the gum. Were it soluble in water there would be no difficulty; but it is not so, and the only way by which the object can be effected is by changing the condition of the gum, and this is done by exposing the plant to the joint influence of air and water, as by leaving it on the field or by letting it remain submersed in water; in neither case does the water act as a diluent; but it is a serviceable agent in assisting to produce a decay—rotting or retting of the gum which we wish to get rid of. The process of putrefying by exposure to the atmosphere is commonly termed "dew retting;" that by immersion in water is called "water retting."

Of late years many different plans for the steeping of Flax have been proposed and tried; none, however, have met with success. Schenck's, Leadbetter's, with others equally ingenious, failed, because they were proved to be unsuitable to general adoption. What is wanted is a method of steeping, applicable in any case, which will enable the cultivator of Flax in a district where there is little or no soft water to "ret" his crop, so that he can compete with his neighbour who has a better water supply.

I construct tanks, pits, or vats, lining them with tiles, or timber if requisite, 35 feet long, 15 feet broad, about 4 feet deep. At 10 inches from the bottom I place a grating or false bottom made of laths. At the level of this grating I fit a pipe and tap, or plug, so that when advisable the vessel can be drained or run off to the level of the grating. On this grating the Flax, neatly tied in bundles, is placed vertically, root downwards. The vat or pool is filled with as many of these bundles or beets of Flax as can be placed therein by careful close packing, neatness and care that the bundles are vertically placed and support each other being necessary (on these terms the pools will hold about 3 tons of the Flax straw). I then place laths or boards on the top of the Flax, on these a sufficient weight of stones, and run up with water of any kind. I allow this water to remain 24 hours, after which I run it off to the level of the grating—remove the boards and weights, and, instead, cover the whole of the top of the Flax lightly with straw. Very soon fermentation ensues (this is rotting or "retting"), caused and kept up by the evolution of gases from the water below the false bottom, which may be described as the "barm" or "yeast;" this must be allowed to continue until tried by the well-known test, the Flax is apparently ready. I now refill the vat with water, and so let it stand for a day or so. I have found that by taking this course I am enabled to dispense with two-thirds of the time usually occupied in "Grassing," and also that objectionable hardening of the remaining gums is avoided. The Flax is now taken out of the pool, placed so as to allow the gum-water to drip off, and then spread upon the ground for "Grassing." It will be seen that in this method the quality of water is a secondary matter; the first filling being for the purpose merely of "soaking" the Flax, and the second for washing.

6. *Breaking and Scutching of Flax.*—As the name specifies, "breaking" is the process of breaking or fracturing the woody straw of the Flax, and precedes the operation of scutching. The more completely the straw is broken, the less difficulty is experienced in removing it from the fibre, to which it adheres with great tenacity. The process of freeing the fibre from this woody part is called "scutching."

In Belgium the process is conducted in a similar way, with implements of the same kind, but improved. In that country the beetled Flax is held over the stock by the workman, who strikes a vertical blow downwards, in the direction and along the length of the fibre, the effect of this blow being to detach such bits of straw as the knife comes in contact with. The scutcher then, holding the streak in one hand, dexterously passes his fingers through the Flax, and opens it, thus preparing it so that the "heart," or interior portion, shall next be presented to the knife. He then passes a steel scraper along the fibre. These three operations are continued in their order until the Flax is completely "scutched." This method is very costly and tedious (a good workman not being able to clean more than 7 to 8 lbs. per day), and is now giving place to my patent machinery, which produces as fine quality as is desired, at great economy of time and cost.

In this country the "mill" or "Irish scutch handle" has long been in use. This is a simple implement, consisting of a series of wooden knives or blades, attached radially and at right angles to an axis. These blades, when in motion, work with a circular cutting sweep against the streak of Flax held over the stock. These machines have done the work well in their day, but are so far inferior to the recently "much improved" ones that it would be as imprudent for any one to erect them, having to compete with others possessing better, as for a young or increasing nation to arm with old flint muskets to match Whitworth rifles.

I am the inventor of a machine, which I have patented, for scutching Flax, which I exhibit, and can be seen at work in the machinery department. In my machine the Flax is brought into contact six times in every revolution (the machine working at the rate of 200 per minute) with a series of three factors—the first representing the Belgian wooden knife; the second, the intersecting and opening fingers of the workman; and the third the steel scraper or comb. It will be observed that the blow is tangential, and strikes the Flax in the direction of the fibre as it lies. This, with the alternate "finger" opening and scraping action, complete the resemblance between the operation

of my patent machine and model Belgian hand-scutching.

A report of experiments with the various methods of scutching related the following results. One cwt. of straw was served to each:—

"The handles gave 23 lb. 3 oz. fibre, in time equal to 6 st. 2 lb. per day of 10½ hours.

"Rowans' patent gave 24 lb. fibre, in time equal to 7 st. 11 lb. per day of 10½ hours.

"Friedlander's gave 25 lb. 15 oz. fibre, in time equal to 7 st. 10 lb. per day of 10½ hours.

"The quality of Flax on your machine being 9*d.* per stone better than either of the others.

"For the second trial we put the machines on 1 day's work (10½ hours), with our own people working the two patents, each under the superintendence of the men above named.

"The handles gave 6 st. 8 lb. fibre, yield equal to 20 lb. 12 oz. per cwt. of straw.

Rowans' patent gave 7 st. 7 lb. fibre, yield equal to 20 lb. per cwt of straw.

"Friedlaender's gave 7 st. 3½ lb. fibre, yield equal to 21 lb. 14 oz. per cwt. of straw.

"With again the same superiority of quality in favour of Friedlander's. "J. N. RUSSELL & SONS."

Mr. Purdon, T.C., proposed a vote of thanks to Mr. Friedlander, which was carried by acclamation.

Reviews.

The Art of Valuing Rents and Tillages, &c. Eighth Edition. Revised by J. C. Morton. Longmans.

This work contains the calculations of produce and cost, drawn up by Mr. Bayldon, the original author of the work, to illustrate his ideas of the division of farm produce amongst landlord, labourer, and tenant farmer. Such calculations are no doubt serviceable to learners, but they do not in practice guide the judgment of the valuer. He knows by inspection and experience the value of the article which he is called on to appraise; and, whether for hire or for sale, he can, without of necessity being able to justify his conclusions, put the price upon the land which he examines which will be given for its use by the farmer, or for its ownership by a buyer. A full examination of the details of valuation, including their influence on farm management, and on the interest of landowner and occupier, is however of service to those who have only entered on the work of valuing between the two; and all this we have in the book before us. We quote a passage from the preface to the last edition by Mr. Baker of Writtle, and we add the preface by the editor of the present edition.

Mr. Baker says:—"The increasing population of the kingdom demands that the utmost efforts should be made to increase its agricultural produce; and, as the area is limited, this can only be obtained by increasing the yearly acreable quantity. But this can be effected only by liberal management, and a judicious application of capital and skill; and it therefore becomes daily more and more imperative upon landed proprietors to give due encouragement to their tenants by affording them the utmost security for the investment of their capital, not only by removing such absurd restrictions in leases as have hitherto existed, but by giving security, by valuation, for unexhausted improvements. This can readily be attained whenever leases are entered into, but in cases of yearly tenancy dependent on the custom of the country alone, no such security can be insured to the tenant; and it therefore becomes necessary to point out a mode which can be readily applied in furtherance of that object, and which the late reduction in stamp duties tends also equally to facilitate. We refer to the abolition of the yearly tenancy altogether, and the substitution of a lease for a term of one year instead, in which lease the mode of cropping, as well as other stipulations may be clearly set forth, and the mode of quitting also specfied in every particular, as in a lease for a longer term. In such lease the landlord should undertake for the payment, at quitting, for all permanent improvements, such as draining and manuring, and for manures, in the proportion in which at the determination of the lease they may be unexpended; nothing in such valuation, however, to extend over a given period, to be therein named. The covenants of such a lease as this—although made for a single year—would continue binding upon both parties as long afterwards as the tenant might continue to occupy, and considerable advantages would be derived by both landlord and tenant beyond those which are obtained under ordinary yearly tenancies, subject alone to the custom of the district. This is generally so indefinite, that if no other object was attained beyond that of substituting a well-defined agreement for an undefined custom, this of itself would be sufficient to recommend it. As regards buildings erected by the tenant to enable him the better to carry on his occupation, justice and common sense point out the necessity of such an agreement as will allow him to remove them at the expiration of his occupation, should the landlord refuse to take them by valuation. The application of capital, beyond the ordinary amount to the cultivation of land, demands a further security than that afforded by the common law of the realm; and in all cases where landlords met their tenants with liberality, an immediate improvement of their estates as certainly follows. 'The liberal man deviseth liberal things, and by liberal things shall he stand.'"

To this Mr. Morton adds:—

"The present editor cordially acquiesces in the concluding sentences of the late Mr. Baker's preface. He believes that landowners will generally better attain the increased fertility of their estates by thus enlisting the self-interest of their tenants in its maintenance and improvement, than by insisting on rules and restrictions framed for the hindrance of bad management. The alterations of this work and additions to it which he has made in the present edition of it, have been for the purpose of pursuing this judgment to its natural and practical conclusion. And if in anything this has been done by him with greater confidence or dogmatism than his predecessor Mr. Baker had exhibited, he believes that nowhere has he exceeded the urgency with which Mr. Baker would himself have written on the subject, had the rapid increase in the amount of farming capital to be protected, which every year's improvements in agriculture have of late occasioned, occurred previous to the last edition of this work. He has only to add, that while such rules and particulars of valuation as altered practice suggests and requires, have been treated in the following pages at some length, he has yet not felt himself at liberty, in dealing with a work of such long and standard authority on agricultural valuations, to alter or remodel the enumeration of details with which valuations of the year's cultivation have hitherto dealt. These accordingly remain in these pages as they still do in actual practice over large districts of arable land in this country."

We add, that all references to the laws affecting valuations have in the present edition been revised by Messrs. Ball & Purchas, Solicitors, Stroud, Gloucestershire.

Farm Memoranda.

WESTERSEAT AND BILBSTER, NEAR WICK.—Mr. Henderson's farm here contains about 470 acres, of which 100 acres are of a fair, second-rate quality. The remainder is composed of hills and hollows of a stiff, clayey nature, resting on a very retentive subsoil, and unless from its proximity to Wick, and the industry, enterprise, and capital brought to bear upon it by Mr. Henderson, would not be worth more than, perhaps, 10*s.* an acre of rent.

The farm has been cultivated on the four years' rotation—viz., 1, Oats; 2, Turnips; 3, Oats, Bere, or Barley, and 4, Grass. This system of cropping has enabled Mr. Henderson to maintain 140 head of cattle summer and winter, and from 350 to 500 sheep, which are fed off during the winter. The latter are crosses of the Leicester ram with the Cheviot ewe, and are bred on Mr. Henderson's other farms at Bilbster and Dunn, being brought to Westerseat about the beginning of October, where they have a run over the Grass break until the Turnips are ready for use. That portion of the crop of Turnips which is intended for the cattle is then cleared off, and the sheep netted on the remainder with an allowance of hay. During the spring months they are sold off in lots as they become ready for the butcher. To enable sheep to be folded on Turnips, where the soil is of the nature it is at Westerseat the land must be thoroughly drained—a needful operation which has been extensively carried out in Caithness, and which, as we have already said, is indispensable in that part of the world.

There are between 40 and 50 milch cows constantly kept at Westerseat; about the half of the number being specially set apart for dairy purposes, the produce finding a ready and convenient market in Wick. The rest are retained for suckling the calves, two calves being put to each cow. Ten or twelve of the best heifers are picked out and put to the bull when 15 months old, and these are allowed to suckle their own calves for the first season, after which they are either used as dairy cows or as nurses for calves. The cows are all descendants of the native breed of Caithness, which was akin to but not so good as the West Highland, unless where pure Highland blood had been introduced; but the bulls used at Westerseat for the last 15 or 20 years have been well-bred Short-horns.

The calves are generally dropped in March and April, and are suckled until they are four months old. After being weaned the calves are turned out on a piece of old Grass, which is kept for the purpose, but they are always housed at night, and Vetches, or the second cutting of Clover, given to them, with half a pound each of artificial food, consisting of a mixture of bruised Oats and oil-cake. This quantity of cake and corn is continued until January, Turnips and straw having meanwhile taken the place of the green food, when the allowance of mixed oil-cake and Oats is increased to 1 lb. per head. In April it is again increased to 2 lb. each, with hay or Oat straw, until Grass become ready for cutting. It must be observed that the young stock do not get, during winter, as many Turnips as they would eat. The first fed in the morning is their allowance of oil-cake and Oats. At 9 o'clock A.M., Turnips are given, and again at 3 P.M.; but there is no restriction put on the quantity of straw, and what they do not consume between the feeding times is used for litter.

In addition to keeping the young stock in a constantly improving state, which is a most important consideration in any system of rearing, the Westerseat mode of feeding has proved to be a complete antidote against quarter-ill or blackleg, which at one time prevailed on the farm. Calves which have been kept in the manner described never lose condition, but are always getter better, and the result is that they fetch from 12*l.* to 15*l.* each when a year or 14 months old. A lot of 24, of that age, were sold last April off the farm at 13*l.* a head, and were considered cheap at the money. If kept on till they are 18 months old they will weigh 5 to 6 cwt.; and such have been sold by Mr. Henderson in October at 18*l.* a head.

Where such a number of cattle are kept, and kept in such a manner, there is, as a natural consequence, a large quantity of rich manure. This, however, does not satisfy Mr. Henderson, who is fully alive to the fact that while "muck" is the mainstay of good farming, a liberal supply of it is required to make the naturally inferior soils of his farm productive. For this reason he is indefatigable in bringing together all he possibly can procure from Wick, the refuse of the fisheries helping to enrich the fertilising collection. The farm-yard manure and town dung are mixed together, and applied for Turnips at the rate of 25 cubic yards per Scotch acre, together with 5 cwt. of artificial manure. As an early growth of the sown Grasses is most desirable, a top-dressing of sulphate of ammonia, nitrate of soda, or soot, or a mixture of these, is applied early in spring to that division of the farm, and evidently with good effect.

Bilbster, another of Mr. Henderson's farms in the neighbourhood of Wick, consists for the most part of inferior land, a considerable proportion of it having been reclaimed from a state of actual waste. All the old land on the farm is subdivided and well fenced. There is a large quantity of bone-dust and dissolved bones prepared on the farm, to effect which there is a powerful bone-mill, driven by water, and other requisites for the preparation of dissolved bones, attached to the farm buildings. In order to provide material for the bone-mill and manure factory, bones are brought from people who gather them through the country, and old horses are also purchased for the purpose. The latter are buried in earth, and when the flesh has become decomposed in this manner, forming, of course, a compost, the bones are taken out and ground.

Between 200 and 300 acres of peat Moss, or bog, varying from 12 to 18 feet in depth, have been reclaimed at Bilbster by Mr. Henderson, and brought into cultivation. This tract of formerly unproductive land has been thoroughly drained, and divided into fields of 10 acres, and we now find corn, Turnips, and sown Grasses growing instead of Heather and aquatic plants.

The cattle are crosses of the Short-horn bull with Highland or black polled cows. Sometimes a stock may be crossed several times with Short-horn bulls; but in general it is considered advisable now and then to try back to the original Highland or polled breeds, in order to renew the constitution. The utmost attention is paid to the purity of the bulls, cross-bred bulls, or bulls of doubtful descent, being utterly inadmissible into a herd, and most properly so, for such bulls are sure to spoil the stock and disappoint the breeder. In order to show the extreme attention which is paid to this point, we may state that Sir John Sinclair has been using Malachite at Barrock for the last three years, for the purpose of crossing black polled Galloway cows, or crosses of that breed with other high bred bulls. Now, it must be understood that Malachite was the winning bull of his age in 1859 at the Canterbury meeting of the Royal Agricultural Society of England. He was also a winner at the Royal North Lancashire Show, and at the Shows of the Manchester and Liverpool, and Craven and Wetherby Societies; quite sufficient evidence to prove that he has all along been a first class bull. He is of great substance and good quality, and he evidently transmits these properties, along with much sweetness of style, to his cross-bred progeny. This, combined with fair treatment, results in good prices for the young cattle when they are sold, as they are always sold, at 15 or 16 months old. With reference to this, we quote a paragraph from a Wick journal—the *Northern Ensign*—of the 7th ult.:—

"On Friday last one of the most extensive shipments of cattle from one farm was made here by 'Vanguard' steamer. It consisted of 43 head of stirks from Sir John Sinclair's farm at Barrock—a lot which attracted general attention, from the fine appearance which they presented, as well in symmetry as in general characteristics. They were sold on the previous day by Sir John to Messrs. Paterson & Morison, Banffshire, at 4*l.* 10*s.* a head—15*l.* being realised for six of them.

"On a recent occasion the Marquis of Clanricarde, when examining a witness before a committee of the House of Lords on the subject of conveying cattle by steamers, made a remark that he thought Caithness stock was so inferior in value that they were scarcely worth the expense of a long sea voyage. The witness hinted in rejoinder that as high as 12*l.* was at times obtained for year-olds, and that at a recent Edinburgh market 25*l.* had been realised by Sir George Dunbar for cattle, while Mr. Henderson, of Bilbster, had got 16*l.* for one-year-olds; and had the noble Marquis been at the South Pier here on Friday during stock shipments he would have gone away with a different impression from what he entertains."

Other breeders who pay attention to the matter get somewhat similar prices, being a wonderful difference from those which cattle once brought in Caithness; for it is not many years ago since two-year-olds were bought in that county at 50*s.* a head, and off some of the very farms which are now sending out those valuable year-olds.

Crossing the Cheviot ewe with the Leicester ram is

LAWN MOWING MACHINES FOR 1864.

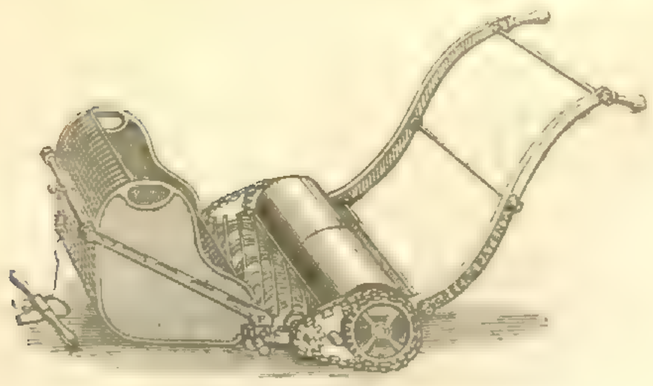

GREEN'S MACHINE.

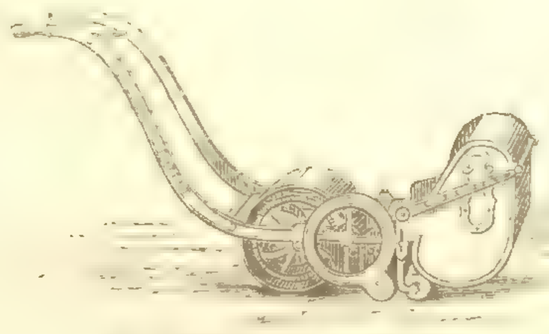

SHANKS' HAND MACHINE.

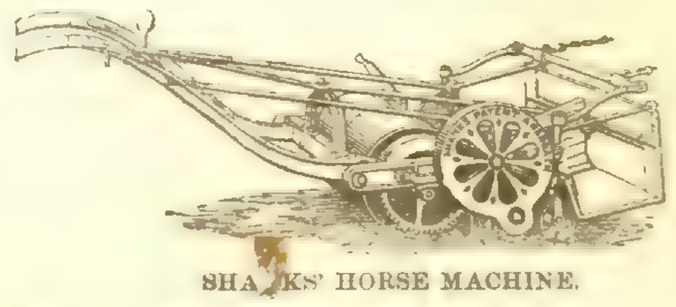

SHANKS' HORSE MACHINE.

GREEN'S HAND MACHINE.

Size.	Easily Worked.	Price.	Size.	Easily Worked.	Price.
10-inch, 12-inch, 14-inch	*By a Boy* ..	£3 10 0, 5 0 0, 5 10 0	18-inch, 20-inch, 22-inch, 24-inch	*By a Man* ..	£7 10 0
16-inch ..	*By a Man* ..	6 10 0		*By two Men*	8 0 0, 8 10 0, 9 0 0

SHANKS' HAND MACHINE.

Size.	Easily Worked.	Price.	Size.	Easily Worked.	Price.
10-inch, 12-inch	*By a Lady* ..	£3 10 0, 4 10 0	19-inch ..	*Man and Boy* ..	£7 12 6
14-inch ..	*By a Boy*	5 10 0	22-inch, 24-inch	*By Two Men* ..	8 7 6, 8 17 6
16-inch ..	*By a Man*	6 12 6			

A STOCK OF MACHINES KEPT ON HAND, FROM WHICH ORDERS CAN BE AT ONCE EXECUTED. PRICED LISTS OF HORSE, PONY, AND DONKEY MACHINES, ON APPLICATION.

*** *Every Machine sent out is Warranted to give ample satisfaction, and, if not approved of, may be exchanged for any other size of Machine, or for the Machine of any other Maker, or may be at once returned unconditionally.*

J. B. BROWN AND CO., 18, CANNON STREET, CITY, LONDON, E.C.

NEARLY OPPOSITE ST. SWITHIN'S LANE and "LONDON STONE," and near LONDON BRIDGE.

NEW TARIFF OF GLASS AND HORTICULTURAL GOODS.

THOMAS MILLINGTON,

GLASS AND COLOUR MERCHANT,

87, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

HAND GLASSES.

PRESERVE JARS.

REDUCED TARIFF FOR SHEET GLASS AND HORTICULTURAL GOODS.

MILK PANS.

See Advertisement first week in the month, or on application.

GREEN'S PATENT SILENS MESSOR,

OR

NOISELESS LAWN MOWING, ROLLING, and COLLECTING MACHINES.

BY SPECIAL APPOINTMENT,
SOLE MANUFACTURER

TO HER MOST GRACIOUS MAJESTY
THE QUEEN.

THE
FIRST PRIZE MEDAL
OF THE
INTERNATIONAL
EXHIBITION,
1862,
WAS AWARDED TO
THOMAS GREEN,
FOR HIS
PATENT
LAWN MOWERS.

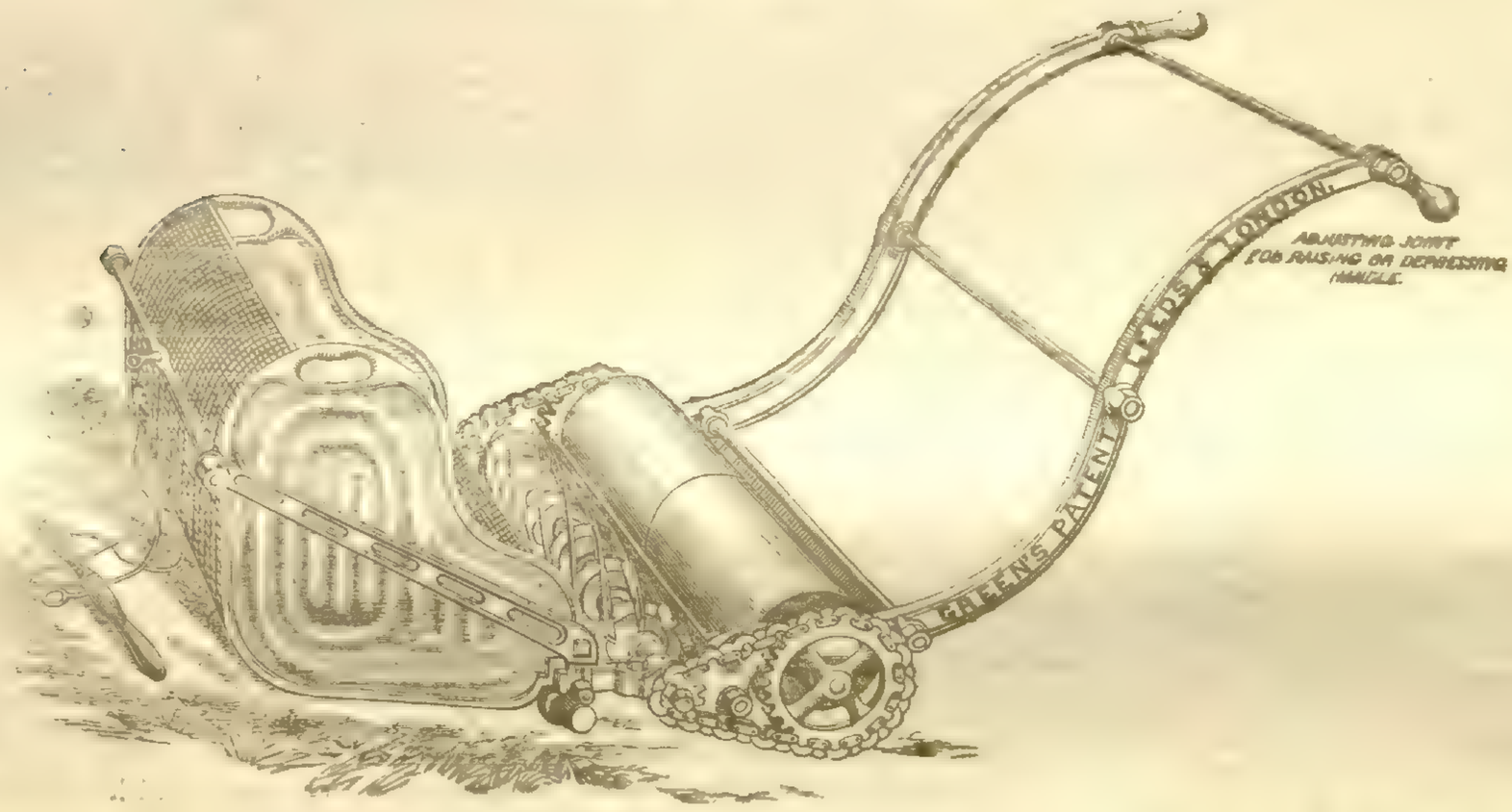

FOREIGN MEDALS
AWARDED TO
GREEN'S PATENT
LAWN MOWERS.
LIEGE, 1861.
BRUSSELS, 1861 & 1863.
NAMUR, 1862.
GAND, 1862.
LINNEENNE, 1861,
1862, & 1863.
LAEKEN, 1862.

EXTRAORDINARY AND WONDERFUL IMPROVEMENTS FOR THE PRESENT SEASON 1864.

ILLUSTRATED PRICE LISTS may be had on application to

THOMAS GREEN AND SON, SMITHFIELD IRON WORKS, LEEDS, YORKSHIRE;
or 2, FARRINGDON ROAD, HOLBORN HILL, LONDON, E.C.; or 19, EDEN QUAY, DUBLIN.

FIR TREES.—WANTED, 100 or more WEYMOUTH or other quick-growing FIRS, suited for a sandy soil, 8 feet or upwards in height, to be delivered free at Walton Station (London and South Western Railway) and guaranteed to live for 12 months after planting.

Address, with full particulars and price, to JOHN STABT, Gardener, The Hollies, Weybridge, Surrey.

COCOA-NUT REFUSE delivered within 2¼ miles of Charing Cross, at 2s. per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. BARSHAM & Co.

BARSHAM'S BRUSHES and MATS are sold in every town.

CAUTION.—Every Brush is stamped, J. BARSHAM'S Patent.

20,000 Dwarf Roses in Pots on own Roots.

FRANCIS AND ARTHUR DICKSON AND SONS, The "Upton" Nurseries, Chester, beg to offer 20,000 DWARF HYBRID PERPETUAL BOURBON and TEA-SCENTED ROSES, ON THEIR OWN ROOTS, in pots, including all the novelties and every variety of merit yet introduced. The plants are very STRONG and WELL ESTABLISHED, and if planted out now will bloom this Autumn.

F. & A. D. & SONS have also a large number of EXTRA STRONG plants of the BEST HYBRID PERPETUAL and TEA-SCENTED varieties, specially grown for Autumn and Winter forcing. Purchasers will be liberally dealt with.

Prices and all particulars on application as above.

WELLINGTONIA GIGANTEA.—The Undersigned begs to offer fine healthy Seedling Plants in pots, at the following prices:—

One Year Seedlings, in single pots, 50*s.* per 100.
Specimen Plants, in 24-sized pots, 18 inches, 60*s.* per dozen.
Fine Plants, in 32-pots, 1 foot, 30*s.* per dozen.
" in 48-pots, 9 inches, 15*s.* per dozen.
ARAUCARIA IMBRICATA, in 48 pots, fine, 9*s.* per dozen.
CUPRESSUS LAWSONIANA 9 inches, 12*s.* per dozen.

T. HENCHMAN, Edmonton, near London.

FERNS: a rare opportunity to noblemen, gentlemen, Proprietors of Public Gardens, Nurserymen, &c.—About a Dozen fine SPECIMEN FERNS, varying from 2 to 20 feet through. Also a few other Specimen Plants, consisting of Orange Trees, &c. The whole to be Sold a Bargain, solely because the room is much needed for other purposes.

T. HAWKINS, Manor Nursery, Harrow Road, Paddington, W.

CARTER'S FARMER'S VADE-MECUM.

TRADE MARK.

HALLETT'S | PEDIGREE | NURSERY WHEAT.

Seed required—
In September .. .. .. 4 bushels on 10 acres.
In October { 1st half / 2d half } 4 bushels { On 8 acres. / On 6 acres.
In November .. .. .. 4 bushels on 4 acres.

One Guinea a Bushel, or Seven Guineas a Quarter, including Bag, delivered at the Brighton Railway Station, upon receipt of Cheque or Post-office Order, without which the Wheat will in no case be sent.

Apply to FREDERIC F. HALLETT, Esq., F.Z.S., the Manor House, Brighton, Sussex.

NOTE.—This Wheat will not after the present season be again offered by Mr. Hallett to the public until 1868 at the earliest.

New Seed Business.

DRUMMOND BROTHERS (Sons of Mr. PETER DRUMMOND, of Stirling, N.B.) beg to announce that, being about to Commence Business in Edinburgh as RETAIL SEEDSMEN, they have secured, at 52, George Street, immediately adjoining the Music Hall, commodious Premises, which they intend opening in September, with the FLOWER ROOT TRADE.

Their constant aim will be to obtain the purest and most carefully selected Stocks of TURNIP and other AGRICULTURAL SEEDS; and their various MIXTURES of GRASS SEEDS and CLOVERS will consist only of the most suitable kinds, in proportions adopted by the leading agriculturists.

To the GARDEN SEEDS DEPARTMENT they shall devote special attention, using every endeavour to secure for their Customers VEGETABLE and FLOWER SEEDS of the finest quality and true to name.

Nursery Orders they shall be prepared to receive and have executed with carefulness and despatch.

Edinburgh being most favourably situated for Railway and Steamer communication to every part of the United Kingdom, DRUMMOND BROTHERS feel confidence in respectfully soliciting a share of the trade of the Country, and they hope, by studied attention to the wishes of those who may favour them with their patronage during the ensuing season, to merit a continuance of support.

CATALOGUES will be forwarded, when issued, upon application.

Viewforth, Stirling, August 27.

Early Sheep Feed.

SUTTON'S IMPROVED ITALIAN RYE-GRASS.—At the Meeting of the Royal Agricultural Society, on March 16, in a Lecture delivered by Alfred Hughes, Esq., of Thorness, Isle of Wight, as reported in the *Bell's Weekly Messenger*, and the *Mark Lane Express*, Mr. Hughes said:—"I always reserve a portion of Oat land to lay down with SUTTON'S Improved Italian Rye-grass, the most reliable plant I have come across for some years for Ewes and Lambs in the Spring. When I tell you that I put it in in the Spring, and dressed it after harvest with Guano, and that in the Autumn, when my Sheep fed it off, it was up to their knees; and that I fed it off again this Spring with Ewes and Lambs, I think you will agree that this is a crop of very great value. This Italian Rye-grass, which is sold by SUTTON, of Reading, is a most astonishing vigorous plant; indeed, I never saw anything to equal it in the course of all my experience."

Mr. W. CARDWELL, of Nunnery Farm, near Sheffield, in a letter to Messrs. SUTTON, dated April 9, 1863, says:—"The Italian Rye-grass grown from seed purchased from you, and sown in August, is now 16 inches high, and is much admired."

Messrs. SUTTON have also been favoured with the following on the same subject:—

Mr. R. STURT, *Pilming, September* 14, 1863.

"The SUTTON'S Improved Italian Rye-grass seed I had from you last year was very good; I think every seed came up. I have a beautiful plant, and have cut four good crops from it since the 30th of March last. It surprises my neighbours very much."

From JOHN BALDWIN, Esq., *Luddington, April* 11, 1859.

"It is certainly delightful to witness the Sheep up to their knees in your beautiful Italian Rye-grass."

From FREDERICK H. HALLETT, Esq., *The Manor House, Brighton.*

"I mowed some of your Italian Rye-grass at Christmas, 1856; again April 12, 1857; three times since in same year, and am mowing it again now, March 15, 1858. The cut on April 12 was 4 feet high, and a perfect mass of Grass."

J. H. FOWLER, Esq., *Eastleach, May* 16, 1862.

"I seeded some Rye-grass this last year, the seed of which I had from you, and sold it for 6*s.* per quarter more than any other sample in the market, in consequence of its very superior quality. Your Turnip and Swede seed also produced the best roots I ever saw. They were universally admired in this neighbourhood. Your Champion Swede is, I am satisfied, the best that can be sown; mine lasted and were quite juicy to the end of March, and none were rotten."

SUTTON & SONS have a fine stock at present of their Improved Italian Rye-grass, which is a very different and superior article to much that is sold as Italian Rye-grass.

PRESENT PRICE 6*s.* per bushel, carriage free, in quantities of 8 bushels upwards. Quantity required per acre if sown alone, 3 bushels.

Royal Berkshire Seed Establishment, Reading.

DUTCH FLOWER ROOTS.

JAMES VEITCH,

ROYAL EXOTIC NURSERY, CHELSEA, S.W.,

BEGS TO ANNOUNCE THAT HE HAS RECEIVED HIS

ANNUAL SUPPLY OF BULBOUS ROOTS FROM HOLLAND,

and is pleased to say that they are in excellent condition.

CATALOGUES are now ready, and will be forwarded post free on application.

J. V. desires to impress upon those who patronise him the great advantage of giving him their orders early, as the successful Cultivation of Bulbs depends in a great measure upon their being planted early in the season.—August 27.

BARR & SUGDEN

12 KING ST. COVENT GARDEN

FOR PRESENT PLANTING (Sent Carriage Paid),

DUTCH, CAPE, FRENCH, and ITALIAN FLOWERING BULBS,

FOR THE

ORNAMENTATION of the SITTING-ROOM, CONSERVATORY, GREENHOUSE, and FLOWER GARDEN.

THE COVENT GARDEN COLLECTIONS of BULBS for In and Out-doors, 10*s.* 6*d.*, 15*s.* 6*d.*, 21*s.*, 42*s.*, and 63*s.*
THE PAXTONIAN COLLECTIONS of BULBS for Out-doors, 10*s.* 6*d.*, 15*s.* 6*d.*, 21*s.*, 42*s.*, and 63*s.*
THE KENSINGTON GARDEN and CRYSTAL PALACE COLLECTIONS for Indoor Winter Gardens, 10*s.* 6*d.*, 21*s.*, 30*s.*, 42*s.*, and 63*s.*
HYACINTHS, 2*s.* 6*d.* to 15*s.* per dozen. CROCUS, 1*s.* 6*d.* to 4*s.* per 100. TULIPS, 3*s.* 6*d.* to 20*s.* per 100.

A Detailed List of the above Collections, and a General Priced List of Bulbs, sent Free and Post Paid on application.

BARR AND SUGDEN, SEED MERCHANTS and FLORISTS, 12, KING STREET, COVENT GARDEN, W.C.

CATTLEYA WARSCEWICZII, VARS.

Several nice healthy Plants, just received direct from the party who first sent C. Warscewiczii delicata and C. Wagneri rosea to us. Prices on application.

DIPLADENIA AMABILIS.

We beg to call the attention of all lovers of Choice Plants to this superb DIPLADENIA, of which we purchased the entire stock. It is a new hybrid of unrivalled beauty, with the *deep rosy-crimson* flowers of D. crassinoda, approaching the *size* of D. splendens. Leaves about the size of D. Van Houttei, but of the form and texture of D. splendens. A most abundant bloomer, and for House decoration or Exhibition invaluable.

10s. 6d. each.

JAMES BACKHOUSE AND SON, YORK NURSERIES.

NEW HARDY CLIMBING PLANTS.

CLEMATIS JACKMANNI, First-class Certificate.
CLEMATIS RUBRO-VIOLACEA, First-class Certificate.
Awarded by the Royal Horticultural Society, August 4, 1863.

GEORGE JACKMAN & SON,

WOKING NURSERY, SURREY,

Have much pleasure in offering to the public, for the first time, their beautiful rich coloured, free flowering Clematises that they can recommend with confidence, being convinced when known they will occupy a very high position in climbing shrubs. Orders will now be taken, and the plants sent out strictly in rotation in October.

For further particulars of "their sterling merits," read our Large Advertisement, August 6, page 745; the Report of the Floral Committee, Royal Horticultural Society, August 4, 1863; *Gardeners' Chronicle*, November 21, 1863; *Gardeners' Chronicle*, January 9, 1864, on Meritorious Plants; *Journal of Horticulture*, August 11, 1863.

Plants advertised at 15*s.* each: G. J. & SON cannot take further orders, for having had but a limited quantity of that size, for the future the price will be

Strong Plants, 21s. each.

The usual allowance to the Trade. Two Coloured Drawings by Andrews may be had post free for Twenty-four Stamps.

NEW GRAPE, ROYAL VINEYARD.

TO BE SENT OUT IN SEPTEMBER NEXT.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Feels great pleasure in being able to introduce this important acquisition. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years.

B. S. W., to meet an extensive demand, has prepared a large Stock, which will be in excellent condition, and ready for distribution in September. Early orders are respectfully solicited.

PRICES:

Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

Dr. HOGG'S *Report on the Royal Vineyard Grape:*

"Bunches hard and well set, sometimes long and tapering, and sometimes short ovate. Berries large and roundish ovate, skin white and somewhat transparent, showing the texture of the flesh through it, remarkably thin, and adhering closely to the flesh; so thin is it, that the whole berry may be eaten without any inconvenience being caused by the skin. Flesh firm and crackling, with a fine Sweet-water flavour. This is a fine looking Grape, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society."

For the opinions of the Horticultural Press, see *Gardeners' Chronicle*, April 9.

A correct COLOURED ILLUSTRATION by ANDREWS will be sent in exchange for 12 Postage Stamps.

Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

	Per pkt.—s.	d.		s.	d.		Per pkt.—s.	d.		s.	d.
PRIMULA ..	2	0	and	3	6	INTERMEDIATE STOCK.. ..	0	6	and	1	0
CINERARIA ..	1	6	and	2	6	BROMPTON do.	0	6	and	1	0
CALCEOLARIA	1	6	and	2	6						

The above Seeds are saved with great care, and can be warranted to give satisfaction.

Paradise and Victoria Nurseries, Holloway, London, N.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c ; amongst which are some very fine specimens.

A DESCRIPTIVE and PRICED CATALOGUE post free on application.

Paradise and Victoria Nurseries, Holloway, London, N.

UNRIVALLED CALCEOLARIA, PRIMULA, CINERARIA, CARNATION, and PICOTEE.

HERBACEOUS CALCEOLARIA, 2s. 6d. per packet.
HALF SHRUBBY CALCEOLARIA, 2s. 6d. per packet.
CINERARIA, 2s. 6d. per packet.
CARNATION, Self, Flakes, and Bizarres, 2s. 6d. per packet.
PICOTEE, White and Yellow grounds, 2s. 6d. per packet.

Barr & Sugden, Seed Merchants, 12, King Street, Covent Garden.

PRIZE PLANT CASES, elegantly fitted up, 10s. 6d. to 200s.

RUSTIC WINDOW GARDENS, 15s. to 30s.
RUSTIC MIGNONETTE BOXES, 10s. 6d. to 21s.
RUSTIC STANDS and TABLES, 15s. to 105s.
PAXTON HANGING BASKETS, 10s. 6d to 21s.
CONSERVATORY HANGING BASKETS, 3s. 6d. to 21s.

Barr & Sugden, Seed Merchants, 12, King Street, Covent Garden, W.C.

New Spotted and Blotched Prize Hybrid Mimulus,

1s. per packet ; Trade packets, 2s. 6d., 3s. 6d., 5s., and 10s. 6d.

BARR AND SUGDEN offer with confidence the above superb strain of MIMULUS ; the stock of which they have just purchased from Mr. Bull. The Seed has been saved from the beautiful varieties which Mr. Bull has this season been exhibiting at the great London Flower Shows

Barr & Sugden, Seed Merchants, 12, King Street, Covent Garden, W.C.

TWO NEW FIMBRIATED PRIMULAS.

Seed Packets, 2s. 6d. and 5s. each.

PRIMULA CARMINATA SPLENDENS, a beautiful new coloured one.

P. FILICIFOLIA (Fern-leaved).

See other Advertisements of the older kinds of fimbriated Primulas.

E. G. Henderson & Son, Wellington Nursery, St. John's Wood, London, N.W.

New Hardy Bedding Plant—Sedum glaucum.

JOHN SALTER invites the Growers of BEDDING PLANTS to visit his Nursery and inspect this beautiful novelty, which he will send out early in 1865. It is very dwarf, and of exceedingly close habit, forming a compact mass of silvery gray foliage, which it retains both in summer and winter ; for edgings, ribbon borders, or pots it will be found one of the most useful dwarf plants ever offered. Orders are now being taken for the Spring at 9s. per dozen. Price per 100 upon application.

Versailles Nursery, William Street, Hammersmith Turnpike, W.

The Greatest Novelty of the Season.

BEATON'S HYBRID BEDDING GERANIUMS.

WM. PAUL (Son and Successor to the late A. Paul) begs to announce that he has purchased from the Executors of the late Mr. Donald Beaton, the whole of his SEEDLING BEDDING GERANIUMS, which includes the latest efforts of this successful hybridist. Some are of a yellowish tinge, some rose, some purple, some magenta ; the individual flowers of others are larger than a five shilling piece. For Bedding purposes they will prove invaluable, being new in colour and remarkably free and hardy.

They will be offered by PRICED DESCRIPTIVE LIST in October.

NOW in BLOOM, inspection invited. Entrance from the Platform, Waltham Station, Great Eastern Railway.

Paul's Nurseries, Waltham Cross, N.

New Hardy Annual for Spring Flowering.

COLLINSIA VERNA.

W. THOMPSON, Seedsman, Tavern Street, Ipswich, begs to announce that he is now prepared to supply the Trade with fine SEED of the above beautiful novelty for autumnal sowing. Its charming sky-blue and white flowers are among the first to greet the returning spring, and precede considerably those of any other species. It received a Second-class Certificate at the Regent's Park Exhibition, April 30 ; and was referred to in conspicuous terms in a leading article in the *Gardeners' Chronicle* of same date.

Prices and full description will be sent on prepaid application. A Coloured Plate for 6 Stamps, or gratis to purchasers of a certain quantity ; retail packets, 1s. each.

CARTER'S GARDENER'S VADE-MECUM.

GRAHAM'S MUSCAT MUSCADINE, a hardy Orchard-house Grape with a Frontignan flavour.—This hardy and prolific Grape was raised by F. J. Graham, Esq., of Cranford, and received a First-class Certificate from the Fruit Committee of the Royal Horticultural Society. It has a fine Frontignan flavour, is equal in every respect to the Chasselas Musqué, but more hardy, and not so liable to crack as that variety is. It is a very abundant bearer, the bunches being equal in size to those of Royal Muscadine, and the berries as large as those of Dutch Sweetwater.

The Stock having been purchased by John Standish, strong Plants will be sent out in the first week of June, price 15s. to 31s. 6d. each.

Strong Plants of all the leading kinds of Grapes. LISTS and Prices to be had on application.

Royal Nurseries, Ascot, Berks.

Vine Duchess of Buccleuch.

ROBERT PARKER has much pleasure in offering this distinct and valuable Early Grape, which will supply the long-felt desideratum of a White Grape with Muscat flavour, that may be grown and ripened with the same treatment as the Black Hamburgh.

The following Certificates and Prizes have been awarded at various London and other Exhibitions :—

2 Certificates of Merit.
3 First-class Certificates.
2 First Prizes in open competition for the finest flavoured Grape of any colour.

A DESCRIPTIVE CIRCULAR will be forwarded to applicants. and visitors to Dalkeith Palace Gardens during the season will have opportunities of seeing and judging of its merits, as a number of Pot and permanent Vines are now fruiting at that establishment. Orders are now being booked, and will be executed in autumn in strict rotation, the stock being limited.

Strong Planting Canes, 21s. each; extra strong Fruiting Canes, 42s. each.

Exotic Nursery, Tooting, Surrey, S.

Gladioli.

EUGÈNE VERDIER, Fils Aîné, Nurseryman, 3 Rue Dunois (late Rue des Trois Ormes), Paris, begs to inform Nurserymen, Seedsmen, Florists, and the Trade generally, that he will shortly publish his CATALOGUE of his unrivalled collection of GLADIOLI for this autumn, which may be had of him direct, or of his London Agents, Messrs. Betham & Blackith, Cox's Quay, Lower Thames Street, E.C., upon prepaid application.

Stove Plants.

TO BE DISPOSED OF, a large and most choice Collection of STOVE PLANTS, including many very fine specimens suitable for Exhibition ; also a nice Collection of healthy ORCHIDS. To any one forming a collection this offers a rare opportunity, as they will be sold on very moderate terms where a quantity or the entire is taken. Railway communication to all parts of Ireland.

For particulars apply to Mr. Wm. Dowse, Cloon Rectory, Mohill.

ROYAL HORTICULTURAL SOCIETY,

SOUTH KENSINGTON.

SHOW of NEW and RARE PLANTS, AUGUST 24, 1864.

LIST of AWARDS.

Class 1.—STOVE PLANTS in FLOWER.

Mr. J. Linden, Brussels, for Rogiera gratissima, First-class Certificate
Mr. Thos. Ingram, Gr. to her Majesty the Queen, Frogmore, for Bougainvillea glabra, Second-class Certificate

Class 2.—STOVE PLANTS OUT of FLOWER, remarkable for their Foliage.

Mr. Thos. Ingram, for Dracæna ferrea variegata, First-class Certificate
Messrs. A. Henderson & Co., for Gardenia florida variegata, First-class Certificate
Messrs. A. Henderson & Co., for Oreopanax dactyliferum, First-class Certificate.
Mr. Wm. Bull, for Sphærogyne latifolia, First-class Certificate
Mr. Wm. Bull, for Dracæna ferrea variegata, First-class Certificate
Mr. J. Linden, for Maranta orbifolia, Second-class Certificate
Mr. J. Linden, for Mappa fastuosa, Second-class Certificate
Mr. J. Linden, for Cyanophyllum cinnamomeum, Second-class Certificate
Mr. J. Linden, for Maranta picturata, Second-class Certificate
Mr. Wm. Bull, for Dracæna terminalis latifolia pendula, Second-class Certificate
Mr. Wm. Bull, for Pandanus elegantissimus, Second-class Certificate
Mr. Wm Bull, for Gymnostachyum Verschaffeltii, Second-class Certificate
Mr. Wm. Bull, for Gesnera Radiancy, Third-class Certificate

Class 3.—GREENHOUSE PLANTS in FLOWER.

Mr. Thos. Ingram, for Lilium auratum, First-class Certificate
Mr. Wm. Bull, for Vallota eximia, First-class Certificate
Mr. Thos. Ingram, for Pelargonium Roi d'Italie, Second-class Certificate
Messrs. Herbst & Stenger, for Lobelia longiflora, Third-class Certificate

Class 4.—GREENHOUSE PLANTS OUT of FLOWER, remarkable for their Foliage.

Mr. P. McArthur, for Bonapartea juncea filamentosa, First-class Certificate
Mr. Wm. Bull, for Eurya latifolia variegata, First-class Certificate
Mr. Wm. Bull, for Rhodea japonica macrophylla fol. aureo-marginatis, Second-class Certificate
Mr. Wm. Bull, for Saxifraga japonica tricolor, Second-class Certificate
Mr. Thos. Ingram, for Euonymus japonicus aureus variegatus, Second-class Certificate
Messrs. Herbst & Stenger, for Iresine Herbstii, Third-class Certificate

Class 5.—ORCHIDS in FLOWER.

Mr. Wm. Bull, for Saccolabium Dayi, First-class Certificate
Mr. Wm. Bull, for Cypripedium Hookeræ, Second-class Certificate

Class 6.—HARDY PLANTS in FLOWER.

Mr. Wm. Bull, for Mimulus Conquest, Second-class Certificate

Class 7.—HARDY PLANTS OUT of FLOWER.

Messrs. Herbst & Stenger, for Euonymus radicans fol. variegatis, First-class Certificate
Messrs. Herbst & Stenger, for Aucuba japonica vera, First-class Certificate
Messrs. Herbst & Stenger, for Eurya japonica latifolia, First-class Certificate
Messrs. Herbst & Stenger, for Aralia Sieboldii, First-class Certificate
Messrs. Herbst & Stenger, for Sedum Sieboldii medio-pictum, First-class Certificate
Messrs. Herbst & Stenger, for Osmanthus ilicifolius variegatus, First-class Certificate
Messrs. Herbst & Stenger, for Bambusa Fortuni variegata, First-class Certificate
Mr. Wm Bull, for Aucuba japonica fol. marginatis, First-class Certificate
Mr. Wm. Bull, for Aucuba japonica vera, First-class Certificate
Mr. Wm. Bull, for Euonymus radicans variegatus, First-class Certificate
Messrs. Geo. Jackman & Son, for Clematis rubro-violacea, First-class Certificate
Messrs. Geo. Jackman & Son, for Clematis Jackmanni, First-class Certificate
Messrs. Herbst & Stenger, for Saxifraga Fortuni tricolor, Second-class Certificate
Messrs. Herbst & Stenger, for Raphiolepis ovata, Second-class Certificate
Messrs. Herbst & Stenger, for Osmanthus ilicifolius, Second-class Certificate

Class 8.—HARDY CONIFERS

Mr. Wm. Bull, for Thujopsis dolabrata, First-class Certificate
Mr. Wm. Bull, for Retinospora obtusa, First-class Certificate
Messrs. Herbst & Stenger, for Retinospora pisifera, First-class Certificate
Messrs. Herbst & Stenger, for Retinospora pisifera aurea, First-class Certificate
Messrs. Herbst & Stenger, for Retinospora obtusa, First-class Certificate
Messrs. Herbst & Stenger, for Retinospora leptoclada, Second-class Certificate

Class 9.—STOVE FERNS.

Mr. J. Linden, for Dorvopteris Alcyonis, First-class Certificate
Mr. Wm. Bull, for Gleichenia hecistophylla, First-class Certificate
Mr. Wm. Bull, for Adiantum Féei, First-class Certificate
Mr. Wm. Bull, for Asplenium flabellulatum, First-class Certificate
Mr. Wm. Bull, for Cibotium princeps, First-class Certificate
Mr. Wm. Bull, for Gymnogramma Wetenhalliana, First-class Certificate
Mr. Wm. Bull, for Adiantum cardiochlæna, Second-class Certificate

Class 10.—GREENHOUSE FERNS.

Mr. Wm. Bull, for Cyathea Smithii, First-class Certificate

Class 11.—HARDY FERNS.

Mr. Wm. Bull, for Lastrea varia, First-class Certificate
Mr. Wm. Bull, for Lastrea opaca, First-class Certificate
Mr. Wm. Bull, for Lastrea Standishii, First-class Certificate
Messrs. Herbst & Stenger, for Lastrea Standishii, First-class Certificate
Messrs. Herbst & Stenger, for Lastrea opaca, First-class Certificate

Class 12.—MISCELLANEOUS.

Mr. Wm. Bull, for Astrocaryum mexicanum, First-class Certificate
Mr Wm. Bull, for Ceroxylon niveum, First-class Certificate
Mr. Wm. Bull, for Geonoma Ghiesbreghtii, First-class Certificate
Mr. Wm. Bull, for Centaurea argentea vera, First-class Certificate
Mr. Wm. Bull, for Pelargonium Mrs. Pollock, First-class Certificate
Mr. Wm. Bull, for Euterpe edulis, Second-class Certificate
Mr. Wm. Bull, for Attalea excelsa, Second-class Certificate

The Gardeners' Chronicle.

SATURDAY, AUGUST 27, 1864.

Many of our readers were no doubt aware, even before the excellent account Mr. Robinson has given of the gardens at Rockville, appeared in our columns, that one prominent feature of that now famous establishment, is the Double Glazing of the Plant Houses. This plan of construction, which if adopted elsewhere does not appear to have attracted much attention, is, we believe, destined to play a very important part in the future of plant culture, and we therefore gladly take an opportunity to bring it more directly into notice.

The beneficial influence of double-glazing upon the atmosphere of a plant-house, and in the same degree upon the progress of vegetation which is being developed therein, is threefold. It acts firstly, as a safeguard against any excess of heat by day ; secondly, it serves as a protection against cold by night ; and thirdly, it becomes a preventive of the aridity consequent upon radiation and condensation, which is so apt to take place, even when little suspected, in houses constructed with single roofs, in bright cold weather, whether by day or night. The double-glazing itself may be brought about by means either of a double roof, or of double sides and roof combined, but the principle legitimately carried out involves, that the space between the two surfaces of glass should be shut in on all sides, so as to completely enclose a body of air, which then acts as a non-conductor.

It is a common but homely saying, that what will keep out cold will keep out heat, and this familiar phrase is sometimes used to justify the mounting of a top coat in the dog days. That a double roof ought to have some appreciable influence in resisting cold, would no doubt be agreed to by any dullard, but the chances are that its influence in keeping down the temperature of a hothouse during sunshine, would not be admitted without question. Nevertheless, the action is as positive and decided in the one case as in the other, as we can testify from our own experience in this matter, in so far as regards the difference between a single-glazed and a double-glazed Wardian case, the one being constructed in the usual way, and the other with an outer shell of glass and wood 4 inches apart from the case containing the plants.

It is well known that in summer the great defect of a Wardian case is the excessive heat which accumulates in the interior, during periods of sunshine, and this renders it difficult to cultivate in them many plants for which they would otherwise be suitable. Now we find that in sunny weather there is a difference of some 10° or 12° in favour of the double-glazed case, that is to say, the double-glazed case is to that extent cooler than another similarly placed and similarly constructed in all respects, except that the sides and roof are single. We have not, as yet, had the benefit of a winter's experience, but we have no doubt that frost will be almost if not altogether excluded, and if so, many plants reputedly tender may be grown in such cases without risk. Of course in a larger structure, such as a plant house, the effect, at least in excluding frost, would be still more marked than in the confined area of a Ward's case.

That results of this kind will follow from the application of double glazing is now no speculation ; they have been observed and commented on any time during the last year or two, and Mr. Bewley himself laid before the British Association about this period last year, both a description of his principal Fern house, which is constructed on this plan, and an account of his experience up to that date. This account is so complete and satisfactory that no apology is needed for introducing it here at length :—

"My Fern house is a triple-span roof standing north and south, 60 feet wide, *i.e.*, three spans of 20 feet each ; the length is 48 feet ; the height of the sides to the spring of the roof is 13 feet 6 inches—of this, 7 feet is a wall. In the lower part are ventilators near the ground, which are opened and shut from the outside. The rest of the sides is glazed with fine ribbed glass. I think it is called Hartley's rough plate. The centre span is supported by three pillars, 12 feet apart from centre to centre. These pillars are rough brown slate, square, about 3 feet each way. The stones are laid horizontally, with ample spaces between, from the mortar being picked out for plants. From pillar to pillar are Gothic arches of the same material, covered with Ferns, Lycopods, &c. Thus there are two rows of four arches each. Each side has in addition a row of eight arches of 6 feet each, planted in the same manner. Each roof rises about 7 feet, so that the highest part of the house is 21 feet. The north end is a wall, against which is a mass of irregular rockwork about 10 feet high, with concealed steps to the top, and from these a path from side to side to enable a view to be had of the plants below, there being a number of Tree Ferns standing on the floor. This path is depressed so as to allow a person to pass under the lowest part of the roof. On the north side of the path, the rockwork is carried up to the top of the house, so that when viewed from below, the rockwork is seen to extend from the ground to the glass. An irregular rockwork is also carried round the south end, and along the east and west sides, up to the glass (7 feet) : but it is separated from the outer walls by a space of 6 inches to allow ventilation from the outside, and also for the circulation of heat, from a pair of 4-inch water-pipes which run round the house. This is the only heating power. In order to promote a circulation of air, there are openings, in fact small concealed arches in the rockwork on the ground level, passing through it to the narrow space next to the outer wall. Thus the hot-water pipes being next to the outer wall, and there being ventilators in these, and openings on the ground level inside through the rockwork, there is a perfect circulation of

air maintained—a matter all-important to the health of plants. The roof is one of ordinary construction; wooden rafters 4 feet apart, with three light iron sash-bars between. I may here remark, I prefer the combination of wood and iron to either exclusively. All iron has too uniform an appearance to please me. Wooden rafters 4, 5, or 6 feet apart break the dull uniformity into spaces, and are of great practical convenience by enabling a nail, screw, or hook to be put in whenever wanted. The inner glass is common 21 oz.; it is put in about 1 inch on the under side of the rafter, so that the rafter being about 6 inches in depth, 5 inches of it are outside. Now, on these rafters the outer roof rests—simple framed sashes 4 feet wide—and for the convenience of moving, in two lengths. They are glazed with the same glass as the sides, and are fixed in their places by a screw bolt, so as to be removed when required. Thus the inner and outer glass are from 5 to 6 inches apart. I do not think the distance is important; anything from 4 to 6 inches will do; but what is all important is, that the outer sashes should fit close, so as to admit of no circulation of air between. I do not like moveable sashes for top ventilation in any house, and therefore in mine I carry up the glass only to within 1 foot from the top of the ridge; above this are wooden shutters or panels for ventilation, and by a very simple contrivance they can be opened or shut.

"Now, as to temperature. My Fern-house being 60 feet by 48, with a mean height of about 16 feet, contains 46,000 cubic feet of space; and there being a pair of 4-inch hot-water pipes running round it, the heating power is 430 feet of pipe, or about 1 foot of pipe to 100 of cubic contents. In a single-roofed house, I do not think this heating power would do more than exclude frost in severe winter weather, but with the double roof, the thermometer rarely goes below 48°. I think I once saw it at 46°. My estimate is that I gain 14° or 15° of heat from the double roof. The loss of heat is very slow in cold weather; I think it would take three or four nights of severe frost to bring the heat of the house down from 52° to 48°, and probably 36 hours to cause the same reduction were the fire to be left out altogether. With a single roof this would be expected in, I think, about six hours. It is a great comfort to know that if, in any house I have, the fire were let out or neglected in the depth of winter for a whole night, its contents would suffer no damage. The reverse effects are equally interesting—the very slow increase of heat in warm weather. This has been a hot summer, yet the heat of the Fern house has never that I am aware of gone up to 70°; with a single roof and the same amount of ventilation, the house would run up to 80° or 85° in a single hot morning.

"There is another interesting fact, and one of great importance in plant-growing: there is a steady uniform increase of temperature in the house according as we ascend from the floor, day and night. This arises from the non-transmission of heat through the roof. Thus, while I have native Ferns and other temperate plants growing below, I have tropical plants, Ferns, Palms, &c., growing on the higher portions of the rockwork. And while in ordinary houses we remove tender plants from near the glass in severe weather, the nearer I place them to it, the warmer they are. This is curiously indicated by the little creeping Ficus and other plants clinging to the under side of the inner glass, and spreading over it, apparently in great enjoyment.

"Another important result takes place from the non-radiation of heat through the roof. In ordinary houses, where moisture forms a requisite of good plant-growing, no matter how freely we use the syringe in the evening, we find the house dry in the morning, arising from the great condensation of moisture on the roof, and running off when thus condensed. The cooled air having parted with its moisture in the morning when the temperature rises a little, it becomes absolutely dry, to the great detriment of the plants. With the double roof, there is very little condensation on the roof, the blanket of non-conducting air between the two roofs of glass preventing it; and consequently, as the air cools down a little at night, the condensation takes place on the plants themselves, exactly according to nature. I have gone into my Orchid-house, which has a double roof and sides, of a morning, and have seen the plants as beautifully covered with dew as a plot of Cabbages on a May morning. Is not this nearly the perfection of plant-growing?

"We generally commence fire-heat in the Fern-house when the cold weather sets in, in the latter end of October, and leave it off in March, when the house gets about 54°. Thus, we have fire for about five months only in the year, and during these five months, the consumption of fuel is not more than one-half of what it would be if the house had but a single roof. Now, using only half fuel for five months, and none during the other seven, causes a very large saving, and to this must be added the saving from no fire attendance during the same seven months—no small item. These together I calculate to amount to about 20 per cent. per annum on the extra cost expended on the double roof. But this is trifling compared with the enhanced value of the plants grown in a double-roofed house. The effect is astonishing. Plants which with difficulty held their own, or but slowly improved in an ordinary house, have grown and improved with me in a way that would surprise plant-growers in general. I should add, there is one point on which great caution is requisite by any one who adopts double-roofed houses. From the uniformity of temperature, and the consequent non-condensation of moisture, very moderate waterings and syringes are sufficient to keep the plants in health. A beginner will be very apt to overdo it. My Fern-house has nothing done to it for weeks together beyond a very light syringing each morning in summer, two or three times a week in spring and autumn, and once every week or 10 days in winter.

"My large plant-house is about 130 feet long, 19 wide, and 11 high. It had shelves at either side 3 feet wide, then paths of equal width, and a central stand 7 feet wide; beneath each of the side shelves there were two 4-inch flow pipes and two returns, 12 pipes in all. When I double-roofed it, the heat was too much, so I built a low brick wall on either side, and also enclosed in the same way the central 7 feet, and filled up the spaces with gravel, &c., to about 3 inches over the pipes; the gravel is kept damp, and on it the plants stand—on a hotbed, in fact, and they delight in it. I think any one who will cover up all his heating power in this way will soon find that it is superior to exposure—the heat is so gradually diffused and the moisture also, the gravel beds being frequently watered.

"The peculiarity and advantage of double-roofed houses may be summed up thus:—Great economy of heating power, and great uniformity of temperature and moisture; and consequently remarkable facility in growing plants in perfect health and beauty. So far as my experience has gone—and I have now been trying it for some years—I can have no hesitation in recommending the system to every person for the cultivation of any description of plants."

What benefit, then, to the general cultivator, it may be asked, is to be gained by this system of double glazing? Much, we reply, every way. There is unquestionably, first of all, a great saving of fuel, for the heat within not being rapidly dissipated as it is from an ordinary glass roof, does not need incessant renewal to the same extent as usual. Mr. Bewley's experience is clear upon this point. Then the draining of the juices of plants which takes place in ordinary cases by the condensation which is going on, on cold bright nights especially, and which too often reduces the atmosphere to such a parched condition as to have a scorching effect upon vegetation, is unknown. The mere decrease of the amount of fire-heat which, under the circumstances, it is necessary to apply, has the same kind of beneficial influence upon the atmosphere; and the necessity for throwing open the sashes during hot days to let off the accumulating heat—which of course flies away charged with vapour—being done away, neither the plants nor the atmosphere are robbed of moisture by this means. Then shading becomes unnecessary, so that the plants get continuous and abundant light, yet without excess. There is, it seems also, absolute immunity against the irruption of frost consequent upon any sudden or accidental failure of a heating apparatus. Above all, there is the gratification of seeing the plants happy and healthy, and revelling in an atmosphere which is thoroughly congenial to them.

We recommend every one who can do so, to try a double-glazed house, and we have a strong persuasion that the experiment will be repeated by the erection of another and another till perhaps single roofs have altogether disappeared. We should particularly like to know something of the effect of this system of roofing in regard to fruit culture. In the mean time Mr. Bewley would do a service to horticulture if he would record his further experience, along with such statistical data as may be at his command.

It is a very common notion that Fungi will grow only in damp or wet weather. True as this is of the larger, and indeed, many of the smaller and more insignificant species, the case is quite the reverse with others. Every gardener knows that his Peas are more subject to mildew in dry than in wet seasons, and the case is the same with Hop mildew, and with many other species of Erysiphe which affect both wild and cultivated plants. In our driest corn fields, where not half an inch of rain has fallen since the 1st of May, several of the weeds, as for example, the common Knot-grass, are conspicuous at a distance from the extraordinary development of Erysiphe.

A striking instance of the peculiar prevalence of a Fungus during a time of drought which is perhaps without an equal since 1826, has lately been brought to our notice in the condition of the crop of Apricots in many gardens in our immediate neighbourhood, though it is not every tree which suffers, and the Moor Park variety seems more subject to attack than others. On the little Roman Apricot, which is almost banished from our gardens, though it is so sure a bearer, and is equal for culinary purposes to the finest varieties, we have not observed a diseased fruit, and the Breda has shown only a single spot, and that has dried up without running through its usual course.

The disease, which is caused by a little grayish mould, Oidium fructigenum, appears at various stages of growth. Apricots which are quite green are in some cases spotted, while in other cases the attack does not seem to take place till they are nearly ripe. The intermediate or half-ripe condition is apparently that in which the attack is most prevalent. The first indication of the disease is a little discoloured brownish spot, very slightly sprinkled with whitish minute tufts of threads, on some of which a solitary egg-shaped spore may be found. In this stage, if the subjacent tissue be examined, it will be found to be traversed by multitudes of thick succulent branched threads, evidently in a condition to bear a copious crop of fruit. The progress of the disease is very rapid. The brown spot increases in diameter; the centre is occupied by a dense mass of mould, consisting of closely-set roundish tufts; the threads bear necklaces of spores, the central ones of which are lemon-shaped, and as the disease spreads the little tufts often assume a concentric disposition, which indeed is in general far more apparent when some other kinds of fruit, as Pears or Apples, are the object of attack. At length the whole fruit gives way, and either drops off, if the flesh was very succulent at the first appearance of the Fungus, or remains attached to the tree withered and wrinkled like a large mouldy French Plum, but with a tinge of orange rather than of purple. In this condition the greater part of the sugar has vanished, the mould having in great measure lived at its expense.

Whether this mould is merely a condition of some more perfect Fungus is entirely unknown: but however this may be, as the disease does not show itself till the spawn is well established within the fruit, any remedy is perfectly hopeless; and the only advice we can give is at once to pick off every diseased fruit, and to guard against future attacks by burning them before the Fungus has had time to disperse its spores. It may be remarked that the Fungus penetrates as surely in a centripetal as a centrifugal direction. The fruit-bearing heads break out in the cavity of the flesh where it does not cling to the stone, exactly as the Potato-mould does in the berries of the Tomato.

Apricots are not the only fruit which is at present suffering from Fungus. We have lately received, through the kindness of Mr. M. C. Cooke, a specimen of diseased Figs from Sussex, where the whole crop in certain of the Fig orchards is affected and dropping off before it is ripe. This however is caused by a very different Fungus, apparently Gloeosporium fructigenum; but our specimen was not in a sufficiently good condition to enable us to determine this satisfactorily. A figure of that species will be found in the *Gardeners' Chronicle* for 1856, to which we must refer for particulars. We can only state at present, that the Fungus appears as a circular patch of little pustules, which apparently are destitute of any common sac or perithecium, and contain a mass of minute hyaline elliptic spores, with a nucleus or oil-globule at either extremity. The spores, moreover, as the walls which produce them contract, ooze out in the form of little colourless tendrils.

When the specimen reached us the circumference was fringed with beautiful specimens of Macrosporium, the spores of which with their numerous cells arranged in two distinct bundles form an exquisite object under the microscope. We conceive that this latter Fungus had nothing to do with the disease, but was an after growth. The Messrs. Tulasne have determined that it is a condition of one of the commonest of Fungi—Sphæria herbarum—a Fungus which not only affects indifferently almost every kind of herbaceous plant, but grows even on heaps of Seaweed rejected by the tides. *M. J. B.*

— Gladiolus brenchleyensis has long held a prominent place amongst the varieties adapted for producing effect in the flower-garden, on account of its bright orange-scarlet colour, and its hardy constitution; and this character it still holds, as we have abundant evidence in an arm-full of its glorious flower spikes just sent us from the nursery of Messrs. Youell & Co., of Great Yarmouth. Notwithstanding the improvement which has latterly been going on in the Gladiolus in respect to size and form, none of the finer varieties of

high colour are as yet sufficiently attainable to replace it; and when attainable it will remain to be ascertained whether they will prove to be equally useful. In the meantime G. brenchleyensis may be set down as a thoroughly attractive decorative sort.

We may mention that a quantity of Gladioli have been growing this season with remarkable vigour in the deep calcareous loam of Mr. Rivers's nursery at Sawbridgeworth, notwithstanding that they have not, it is said, done so well in other places as might have been wished, probably owing to their not having perfectly recovered from the disease which so seriously affected them last year. It would therefore appear that a calcareous soil is peculiarly suited to this flower, though perhaps in the case of Mr. Rivers's plants the healthy development may be partly attributable to deep moving of the soil, the plot on which they are growing being the site of an old hedge, which had just been grubbed and the soil thoroughly stirred. It is to be hoped that so fine a subject as the Gladiolus may not, from accidents of the seasons, lose the popularity which seemed to be setting in so decidedly in its favour.

—— We learn from Dr. Seemann that the true N. American Woodsia glabella has been found in the Tyrol and Carinthia, as well as in Norway, as recorded by Mr. Backhouse. The former gentleman has himself carefully compared the alpine specimens with typical examples of W. glabella from Arctic America, and finds them absolutely identical. In a former mention of this discovery (p. 175) we observed, that it was desirable to know if those who identified the Swiss plant with the North American species distinguish Woodsia alpina, and this we are assured they do. The occurrence of the plant in such widely separated European localities, renders it not improbable that it may yet reward the researches of a diligent explorer of some of our own northern mountains. It is a botanical prize worth finding.

—— Mr. D. Thomson, of Archerfield, speaks highly of Calceolaria canabiensis—an unfortunate garden name intended to mean canary-coloured—as a bedding variety. He regards it as one of the finest bedding plants that has been introduced for some years; and being dwarf and bushy it is available for artistic designs in beds and borders to a degree which does not occur in any other Calceolaria he has seen. The severe drought too has but little affected it. Set as panels on a ground-work of blue Lobelia, with belting or bordering lines of Little David Pelargonium, he observes, it would be in company with primaries supplied by two plants not more useful than it is itself likely to become. As a pot or vase plant it is also first-rate.

ORNAMENTAL PLANTING.—No. I.

SPRING.

I have somewhere met with the remark that the poet revels most in the beauties of spring, the painter in those of autumn. The Landscape Gardener when selecting Trees should perhaps be conversant with and consider the effect they produce at all seasons. Spring is the time of promise in gardening, and I purpose in the present instance to confine my remarks to that season. The dominant features of Tree-scenery in spring are:—

1. The outline of the trees.
2. The colours of the flowers.
3. The colours of the leaves.

1. *The Outline of Trees.*—From among the various forms which trees assume, I may perhaps be permitted to instance the following as clearly defined points of departure—spreading, round-headed, pyramidal, and weeping. Not that it is intended to say that all trees are well defined examples of one or the other of these forms; for it is admitted that in many there is an absence of strongly marked character, and that a tree may be neither perfectly spreading, round-headed, pyramidal, nor weeping, but in the intermediate forms will generally be found a dominant habit which renders them easily referrible to one or other of these divisions.

Spreading.—This is the form most prevalent in nature, and such must be the staple of ornamental planting. The Ash, the Beech, the Oak, and its Spanish Chestnut are of this character. Look abroad on the uncultivated landscape, and the probability is that nothing else will meet the view, unless it be a few Lombardy Poplars, whose spire-like tops everywhere break into the blue vault above.

Round-headed.—Of these the Robinia inermis is perhaps the most strongly marked. This beautiful tree is not planted in England half so much as it deserves to be. In France it is met with at every step, and the dense masses of leaves of a fresh bright beautiful light green never fail to attract the attention of the traveller. Most of the round-headed trees are, however, of moderate or small growth, and therefore better fitted to fill various positions in the flower-garden than to adorn the distant landscape.

Pyramidal.—Pyramidal trees of large size are more numerous than round-headed ones. The Lombardy Poplar, Turkey Oak, and White Beam tree (Pyrus Aria) are well-known examples of these. There are also pyramidal forms of the Acacia, the common Oak, the Elm, the Elder, and a beautiful new Alder known in trade as Alnus asplenifolia. Then among evergreen trees we have the common Cypress, the Red Cedar, and the Irish Yew.

Weeping.—The Weeping Birch and Weeping Willow are both familiar trees, and form good illustrations of this group. They are less common round London than many other kinds, but they are distinct and attractive, and not likely to be passed unnoticed.

2. *The Colours of the Flowers.*—Trees and shrubs which flower in spring are especially valuable, and, fortunately there is no dearth of such. A group composed of Scarlet Thorns, Laburnums, and Lilacs will furnish an example of what may be effected by the introduction of spring-flowering trees.

3. *The Colours of the Leaves.*—Some deciduous trees put forth their leaves early, others late; but at whatever time they appear, being constantly moistened with the showers of spring, they present the eye with an agreeable freshness which we in vain look for at a later date. The varied tints of the bursting leaves form a most agreeable feature in the landscape in spring—the blood red of the Purple Beech, the yellow of the Caragana, offer contrasts in themselves pleasing, but which lessen in intensity as the summer advances. With evergreens the difference in colour between the new growth and the old, especially in the Pine tribe, is too strongly marked to escape notice, and produces a very pleasing variety. The darkest and the lightest shades of green are often thus brought in immediate contact.

Within view of the spot where these lines were written, is a stream, whose margin, at the time they were penned, was overhung with the pale tender green spray of a Weeping Willow; behind were dark masses of the common Yew, and still further beyond groups of blossoming Hawthorn. The effect of this combination was admirable. Onward still, and in the distant upland, were trees innumerable; but so far as could be distinguished, each seemed but a counterpart of the other.

Although not in a severely critical mood, I have been indulging the fancy by obliterating certain objects within range of sight—some of the comparatively meaningless trees which in many instances have been planted by the hand of man, but more commonly by Nature. In their places I have conjured up examples of the rarer and more modern trees, and the landscape thus improved lies before me in increased loveliness. I have gazed and am satisfied. The youth and freshness of spring are still there, but the monotony has disappeared; the whole landscape is inspirited.

In endeavouring to give utterance to these views I do not seek to ignore the fact that the prevailing colour in tree scenery is green, varying in shades, but still green. This is as it should be, for no other colour in nature is so agreeable to the eye. Let us then take this colour as the ground-work of our operations, and retain its ascendancy, but let us vary and increase the pictorial effect of the landscape by a more liberal introduction of other colours. Every domain should be in itself a picture, or rather a series of skilfully united pictures. *William Paul, Waltham Cross, N.*

ORCHARD MANAGEMENT.—No. VII.

It was observed in the last paper on this subject (p. 627) that the time occupied in the work of preparing the trees would afford ample opportunity for getting together a good supply of compost in readiness for planting them permanently. I must now bring this point more prominently before the mind of the planter, because a very considerable quantity will be required at planting time, and unless there is a large supply to fall back upon, it is absolutely necessary that every opportunity should be taken advantage of when work is slack or materials are plentiful, to get together as much as possible. This should be laid up in good sized heaps, either upon the intended site of the orchard or contiguous thereto. As these heaps will consist for the most part of an incongruous mass of materials, composed probably of the scrapings of roads, as well as the parings of the road sides, together with tree leaves, decaying vegetable matter, the clearings out of ditches and open drains, and indeed of anything which is likely to rot down into a friable and strong compost, it will be necessary to have them occasionally turned over, and well mixed up together to hasten the decaying process. I have urged this matter at some length, because it is desirable that the work of collecting should be commenced early enough to have all the materials thoroughly decomposed, well mixed up, and ready for use by the time the trees are ready for planting.

We must now return to that point where it was recommended that the intended site of the orchard should be trenched up, and planted with Potatos the summer previous to planting the prepared trees. By the beginning of October, the ground should be thoroughly cleared and levelled, and the stations for the trees marked out with stakes.

And now arises a question about which in my opinion the planters of orchards have committed some of the most serious mistakes that it is possible to conceive, and that is, the distance at which the trees should stand from each other. Our experience as practical cultivators teaches us that for perfect development there must be ample room; and this is true not of one department only, but of every department in the art of gardening. Take any one subject, either amongst fruits, flowers, or vegetables, and we shall find that the ruling principles of superior cultivation would not be considered as fully carried out unless the plants had sufficient room to develope themselves, so as not to touch each other when fully grown.

I purpose on a future occasion to draw more attention to this particular subject, but for the present I must confine myself to the application of it as regards the planting of orchards, for it appears to me to have been entirely lost sight of, or else repudiated, by many of our predecessors, who, following each other like sheep in a track, have planted their trees so near together that if they took to growing with any vigour at all, a very few years would elapse before the branches would meet. This could only happen indeed in cases where the ground had been well and properly prepared; for when the plan of digging a hole in the solid ground and sticking in the tree, was adopted, we may well suppose that many years would elapse before the branches would meet. Indeed, in such cases, unless under very favourable natural conditions, many of them would canker, and probably die off, and require to be replaced before those more liberally treated had arrived at maturity. Supposing, however, the ground to be well prepared, and thick planting adopted, the trees would soon meet, and then would commence the general thinning, pruning, and cutting, which is so entirely destructive to them, and indeed is in most cases the beginning of a downward course in the life of the trees. I conclude therefore that the practice is not at all in accordance with the recognised principles of good culture. Again, I have observed many instances in which, under such circumstances, thinning and pruning has been neglected, and the branches have become so thickly interlaced as to shut out the light of the sun, and it has been even difficult to get a ladder through to reach the fruit on the tops of the trees. Now this, although a condition on which many are apt to congratulate themselves, because, as they say, there is no waste ground, but all is covered, yet it is the very reverse of profitable, in comparison with trees which have plenty of room. This will become more evident if we remember that the greater the surface which can be exposed to the sun's rays, either direct or indirect, the greater in proportion will be the improvement in the size and quality of the fruit produced. An unbroken surface of branches covering a given area, does not by any means expose so much surface to the beneficial influence of the sun, as would a less number of trees with largely developed heads, not touching each other. The difference will be about equal to that between the length of a straight line from one point to another, and that of a very tortuous one between the same points.

Neither do I consider it desirable or profitable to plant thickly, with the understanding that every other tree shall be removed at a given time; for although it is possible that they may pay for a few years when they come into bearing, they will ultimately so injure each other as to prevent a perfect development on the part of those which are intended to remain permanently—more particularly on the lower branches, which is a very important matter, because it is only by a proper encouragement of these lower branches that a perfectly formed and well balanced head can be produced. And although, as I said before, the system may pay for a time, it will prove to be very bad economy in the end; for I am well convinced, reasoning from analogous cases in my own experience, that those trees which have the greatest amount of room to spread out and enlarge, other conditions being equal, will yield the largest returns for outlay, and that too in less time than the advocates of thick planting would suppose possible.

The physiology of this matter will become more evident when we reflect that every tree, which may be considered favourably placed, should have nothing to interfere with it, either above or below, within the circumference of a circle which it is probable by good management the branches would eventually cover. Therefore if an extra tree is planted between two, under the idea that it might be removed before harm is done, it is a fallacy, because it will not only have inflicted the injury of its shade upon its neighbours, but also will have exhausted the soil of those elements most favourable to the growth of the permanent trees. Thus it will be far better to trust, as I before recommended, for an intermediate remunerative produce to vegetable productions which require annual top-dressings, and which therefore help to keep the soil in good heart. The spaces however so cultivated should be contracted as the branches extend, so that eventually the whole may be laid down in Grass.

Now in reference to the distance at which it is advisable to plant the trees from each other, I would observe that a well grown Apple tree with sufficient room may be reasonably calculated to extend its branches to a maximum distance of 12 yards from the stem of the tree. But then again sorts vary very much in this respect. Some valuable sorts are more upright in their growth than others. Take for example two Apples popular in the market, the Yorkshire Greening and the Northern Greening; the former is of a very spreading habit of growth, the latter much more inclined to develope itself upwards, and yet it makes a noble tree with plenty of room and good treatment, and as it is a very free bearer, the weight of the fruit makes the branches more or less dependent as the trees advance in age. Yet it would obviously be very bad policy to

plant trees of this habit at the same distance apart as those whose habit of growth was more spreading.

These facts should teach the planter, that he should not only study the quality of his sorts, but the habit of his trees in regard to their growth, so as to give each its proper position in the orchard, for the difficulty as regards distance is easily got over by planting the upright and spreading growers alternately, and lessening the distance between them. Thus, supposing one to be a sort which may be calculated upon to radiate 12 yards from the centre, and the other only 8 yards, then taking the mean radius of the two, which will be 10 yards, and planting the sorts alternately, the spaces will be well filled. Thus we arrive at the average distance of 60 feet from tree to tree, and the same distance should separate the rows.

It is immaterial whether the trees are planted quincunx fashion or opposite each other, with such very wide intervals. I am inclined to recommend their being planted in squares rather than triangles, because as long as the intervening spaces are cultivated they will be worked with more facility in the square, than in the diagonal direction. The square method of planting is also more favourable to the equal distribution of the trees, under the system I have recommended, and therefore is to be preferred on the score of utility. *John Cox.*

BEES, HONEY, AND HIVES.—No. III.

(*Continued from p. 773.*)

[The letters of "A Bee-master," already quoted from the *Times* at pp. 748 and 772, have called forth from a well-known authority on the subject, Mr. T. W. Woodbury, Mount Radford, Exeter, the reply of which we here subjoin the principal passages.]

"As an English bee-keeper of many years' experience, I have been grieved at perusing the letters on this subject which have recently appeared, and which I cannot but think are likely to give our Continental neighbours and Transatlantic brethren a very mean idea of the skill and knowledge of British apiarians.

"First, with regard to bee communities remaining at peace with each other. This they will do so long as both are strong and tolerably prosperous, and honey continues plentiful out of doors; but as soon as honey-gathering is over, innumerable spies from strong colonies try the mettle of their neighbours, and should any one or more betray signs of weakness, the invaders take all, and utterly destroy the vanquished; unless indeed, the latter, as sometimes happens, join the confederation, and assist in the plunder of their own stores. Whatever virtues bees possess, therefore, honesty, or even the slightest respect for *meum et tuum*, is certainly not among them. But, while pleading guilty to the sin of dishonesty among my little favourites, I must absolutely acquit them of the charge of drunkenness, or a 'passionate liking for rum and strong ale.' Neither the one nor the other will bees meddle with, unless their natural repugnance to such abominations be overcome by their liberal admixture with either honey or sugar in some form; nor will they even in this case accept the proffered libation so readily as if pure water were used to dilute it.

"Mr. Harbison considers the queen a simple machine for laying eggs absolutely under the workers' control, who stimulate or repress her fecundity according to circumstances. I do not go these lengths, but I know Mr. Harbison to be far nearer the truth than your correspondent who talks about the queen's 'giving orders,' and says that 'if you interfere with her, the watcher bees will sound the alarm, and a thousand stings like swords will be unsheathed.' I am in the constant habit during the season of handling queen bees, and I can assure him that nothing of the kind ever takes place. The note of distress from a captive queen passes totally unheeded by her subjects, and though a few stray workers may alight on the bare hand that holds her prisoner and even lick her as she is held between the fingers, the sight of her captivity has no effect in moving them either to anger or resentment. When she is indeed gone for ever they generally fall into confusion for a time, and appear to seek her, but even this is not invariable. I have, moreover, another fact to communicate which will probably startle many of your readers. Regicide in its worst form is not unfrequently perpetrated by bees. Hurled in one instant from the height of popularity to the depths of misery, the poor deposed sovereign finds herself pinioned and unable to move a limb, among a dense mass of her unnatural children; and there she remains, without the possibility of escape, until death, very many hours afterwards, puts an end to her misery. Often have I seen the poor dried and shrivelled carcase, betraying in the distorted rigidity of every limb the severity of its last agony; and all this, so far as we can discover, without a cause! The youngest and most fertile queens are sometimes victims, and that even at a time when their loss entails extinction on the community.

"Stewarton (Ayrshire) hives are octagonal, not hexagonal in form, nor is there the slightest reason for imagining that the bee which builds a hexagonal cell would prefer a hive of the same shape. So far from a cottager being able easily to make the four compartments comprised in a Stewarton hive, it would puzzle many a skilled carpenter to dovetail even a single octagonal box accurately together.

"Common sugar (lump sugar is best) does not require to be exposed to a heat of 300° to be available by bees. Three lbs. of lump sugar mixed with 2 lbs. of pure soft water, and boiled a minute or two, forms excellent bee food.

"Pressure by a watch-key and tobacco as remedies for a bee sting are no new discoveries. I advise any one stung by a bee to take the sting out as soon and as carefully as possible, leaving no part of it behind, and then let the wound alone. All the so-called remedies which I have tried (and their name is legion) only irritate and increase the swelling, which otherwise would soon disappear.

"If any one has a swarm consisting only of 5000 or 6000 bees, let him not take the trouble of hiving it. A good swarm will weigh 4 lb., and I have known one weigh 8 lb. Now, 5000 bees are computed to go to a pound, and this is not too many, for a friend of mine counted and weighed 5020 freshly-killed bees this spring, and they only weighed 12½ oz. Let any one, therefore, do a simple sum in mental arithmetic, and say if 15,000 to 30,000 are not within the mark, even allowing for the weight of the honey carried off by the swarm.

"Brood in supers is not always drone brood, nor is the heat of drones necessary for the maturation of brood. If it were, they would not be absent in spring, when the weather is coldest, and a great quantity of brood is hatched, nor would they be destroyed in autumn, when the temperature is falling. There is, of course, a well-known and sufficient reason for the multitude of male bees in summer, and that is that queens may run no unnecessary risk by unavailing matrimonial excursions, as their loss at that time would entail destruction on the entire community. Neither does the queen exercise 'queenly prerogative and dignity' by selecting her husband. She launches into the air unattended, and there mates, sometimes with a drone from a hive a mile or two distant from her own.

"Bees are never nursed by other bees. They are strict utilitarians, and totally devoid of sympathy. 'Those who cannot work shall not eat' is a law applied with stern impartiality alike to the disabled worker and the useless drone. He therefore, who would teach or learn a lesson in charity must look elsewhere.

"Hives on the 'nadir,' or 'nether,' principle have often been tried, and as often found wanting, and for this reason,—they are opposed to the instinct of the animal itself, an instinct which prompts it to place its honey above and its brood below. It may, therefore, be safely asserted that any stock of bees which is compelled to place honey in a 'nadir' would collect double or quadruple the quantity in a 'super.'

"In commenting thus freely I am very desirous of making it known to our continental and American friends that these letters do not convey an adequate idea of the amount of knowledge of the subject possessed by British bee-masters. Not only have we frame hives second to none ever made for ingenuity and convenience, as well as the necessary skill to avail ourselves of the advantages they afford; but we are no strangers to the superiority of the Italian race of honey bee (Apis Ligustica), and are even now ransacking the world in the search after other species; while we have repeated and verified the experiments and investigations of Von Siebold, which establish beyond question the truth of Dzierzon's great discovery of parthenogenesis in the honey bee."

Home Correspondence.

Belgian Azaleas.—I see amongst your Notices to Correspondents a remark about the Belgian Azaleas exhibited at Brussels in the spring. Lest your Correspondent should be misled, the Azalea you refer to should be distinguished as Triomphe de l'Exposition 1864; there is a Triomphe de l'Exposition of a former year, I think 1863. You should not, I think, omit Guillaume III. and Madame de Cannart d'Hamale, exhibited in the same collection—both very fine flowers, and marked in my notes as equal with Triomphe de l'Exposition 1864, and superior to the two others quoted, although, if I remember rightly, the size and not the colour was the chief attraction. *Wm. E. Dixon, Hull.* [Size was the principal recommendation in the case of all these Belgian varieties, except that of Madame Van der Cruyssen, in which, in addition, there was good form.]

Radiant Heat.—Professor Tyndall's closing lecture for the season at the Royal Institution upon this subject must necessarily be of interest to gardeners. Some experiments made by him for the purpose of deciding whether any difference exists between liquids and their vapours as regards the passage of heat through them, showed that their powers of absorbing radiant heat were equal. He places water at the head of all liquids as a radiator and absorber, and adds that, weight for weight, its vapour transcends all others in its power of absorbing and emitting radiant heat. The best radiators, we all know, are the worst conductors, and *vice versâ*. The experiments being made by Professor Tyndall in connection with this subject, cannot fail to throw new light upon some of Nature's secrets. Water in one shape or other is most useful to us, and as the Professor intends to follow up his researches upon this subject, I trust that some one able to condense and simplify whatever may be in them relative to horticulture will favour us with his digest of the matter. *J. Thomson, Wortley.*

The Victoria Regia, &c., at Kew.—I paid a visit to the Royal Botanic Gardens at Kew last week, and saw, of course, much to please and interest me, but I was particularly delighted with the condition in which I found the two tropical aquariums. In both houses the Victoria is in luxuriant health and flowering freely; it is rather a curious coincidence that both plants came into flower on the same day. I did not count the leaves upon the plant in the smaller house, but it possesses quite as many as the surface of the tank can well accommodate. On the shelves at the ends of the house I found a collection of Pitcher-plants, some of them seedlings, in the most robust health, and producing their pitchers of a size much larger than I ever before saw them. The plants are evidently quite at home there. Along the sides of the house a collection of well-grown Caladiums and other "foliage plants" are arranged. In the aquarium near the Palm stove the Victoria has more room to display its wondrous beauty. I was told that it was planted out upon the 20th of May, having then six leaves upon it, the largest of which was 11½ inches in diameter. It grew rapidly, and it has been from time to time necessary to remove about a score of its leaves. It now possesses 14 full-grown ones, all perfectly healthy. It came into flower upon July 30, produced a second blossom on Aug. 1, a third upon the 4th inst., and it has since continued to throw up its delicate and lovely flowers at regular intervals. This regal Water Lily is surrounded by a circle of courtiers scarcely less lovely than itself. Of these, Nymphæa gigantea, the large blue Australian species, is remarkably fine; the crimson N. rubra, the white N. dentata, the fragrant N. cœrulea, with N. Lotus and other kinds, are all in flower; as is also a hybrid variety raised in Berlin, and named Inspector Bouché. The yellow flowers of Lymnocharis Humboldtii are peeping up between the Water Lilies. The Nelumbiums have evidently been very fine, but their flowers are nearly all over; this plant is, however, quite worth growing for its remarkable peltate foliage. Associated with these is a fine plant of Colocasia distillatoria (or, as I believe it is now called, C. antiquorum) half plunged in the tank. There are also some nice specimens of the variegated form of Cyperus alternifolius in one of the corner tanks, and I was informed that the only way of preventing them from running back into the green state is by growing them in pure sand. This is a practical hint worth making a note of, as it may prevent much disappointment. There are also some tropical Sedges which, apart from their botanical interest, may probably prove very ornamental plants, and useful for decorative purposes. One of the most remarkable and little-known plants which I saw in this house is Remusatium viviparum, which is certainly worthy of more extended cultivation. It may be increased with the greatest facility by the viviparous buds with which some shoots from the root are covered. The plant seems to revel in the moist heat of this house, and has produced leaves 2½ feet in length. The foliage is very dissimilar to that of any other plant, and it would make a fine contrast with some of the brightly coloured Caladiums, which it somewhat resembles in general habit and growth. The leaves are ovate, sagittate, with splashes of a purplish crimson colour, shaded off, between the principal ribs on the lower side; this colour shows through to a certain extent upon the upper surface. This house is full of interesting plants, as indeed the whole garden is, but one other as a botanical curiosity is specially worthy of mention. It is a dwarf form of the Papaw tree (Carica Papaya). This is a male plant, and is in flower, with a stem only 3 feet in height. There are several other plants from the same packet of seed, and it is to be hoped that some of these may prove to be females. The condition of the plants in both these houses, and in fact of the whole garden, is in the highest degree creditable to those by whose skill the result has been obtained. Every year sees some improvement made in these gardens—indeed, there have been constant successions of improvements ever since I first visited the place, now many years ago. *C. W. C.*

Effects of Ringing.—At the suggestion of Dr. Hooker I write to acquaint you of a fact which has puzzled me much. I have a good sized Pear tree (Jargonelle) in my stable-yard; about the middle of May, 1863, my pigs got loose from the sty, and before they were secured had ringed or barked the trunk of this tree for a space varying from 18 inches to 2 feet. The leaves, &c., turned black and were shed, and I concluded the tree was dead; but this year it has seemed more vigorous than ever, having been one mass of bloom, and producing a larger and finer crop of fruit than I have known it to do during the seven years I have resided here. I sent specimens of the fruit to Dr. Hooker. *Francis H. Boott, Dudley.*

Peristeria elata.—As several notices of this have appeared of late, I trouble you with a description of a specimen now in bloom in my small collection of Orchids, believing it to be a very vigorous one. I received the original pseudo-bulb about five years ago, in a very dry state, but under the treatment my gardener gave it it produced a fresh bulb, and in the following year the second fresh bulb threw up a flowering spike, six or seven feet in height, with some 30 or 40 blossoms; this was in the autumn of 1862. The new bulb of that year produced an equally strong spike last autumn, followed by two strong pseudo-bulbs, which at the present time have each two strong blooming spikes,

with 25 to 30 blooms on each spike. The soil it has been grown in has been rotted turf. *A. M., Eltham.*

Wasps.—The following plan will effectually destroy these pests. Soak a piece of rag (woollen is best) in spirits of turpentine, push it well into the nest with a stick, and then cover up with clay. The spirits of turpentine stupifies the wasps, and the air being excluded by the clay they soon die. *Mary.*——I find tar a most effectual thing for the destruction of wasps. A small quantity poured into their hole at night, and a sod placed on it afterwards to keep in the fumes, generally finishes them; it is much quicker than the old squib. *John Edlington, Wrotham Park, Barnet.* ——Gas tar will destroy wasps in the manner described at p. 770, and that effectually; but it is not the easiest method. All wasps do not build their nests in a hole in the ground; on the contrary, many attach them to the branches of trees. How, therefore, can tar be applied to these? Again, no person, however cautious they may be, can use a quantity of tar without having their hands and often their clothes besmeared with it; and, that this is both unpleasant and disagreeable, few will be disposed to question. I have tried this method among many others which have been declared infallible, but I have found spirits of turpentine immeasurably superior to anything I have yet used. *J. M., Bothwell.*

Societies.

Royal Horticultural: *August* 24 (*Exhibition of New Plants*).—This was not so well supported as could have been wished, three or four of our greatest metropolitan firms being unrepresented.

Mr. McArthur, Maida Hill, sent examples of a variety of Bonapartea juncea called filamentosa, which differed from the common kind in having the foliage ornamented with white thread-like appendages.

Messrs. Herbst & Stenger, Kew Nursery, near Richmond, sent a considerable number of interesting plants, among which the most remarkable were Retinospora pisifera, its charming gold-tinged variety called aurea, R. leptoclada and obtusa, all extremely beautiful hardy Conifers; also Lastrea Standishii and opaca, the latter of a deeper shade of green than the former, and more robust; Aralia Sieboldii, well furnished with healthy deep green palmate-shaped leaves; the variegated-leaved variety of Eurya japonica latifolia, the green Japanese Aucuba, Osmanthus ilicifolius, the shining deep-green-leaved Raphiolepis ovata, Saxifraga japonica tricolor, with foliage charmingly variegated with pink; Sedum Sieboldii medio-pictum, the centres of the leaves of which are striped with yellow; the silver-edged variety of Euonymus radicans; a large batch of a purplish red-coloured plant, called Iresine Herbstii, which it is thought may be found useful in beds out-of-doors in summer; and Lobelia longiflora, a plant with long pale-green toothed leaves, and conspicuous star-shaped white blossoms. The same exhibitors also furnished a collection of tropical fruits, among which were various Brazilian Eugenias, the Vanilla, and the Custard Apple.

From the garden of the Society at Chiswick came Mr. Weir's Peperomias, mentioned at p. 797; also the handsome pale-green-veined dark-leaved Anthurium, likewise formerly noticed; Lilium auratum, the fine-foliaged Lomaria gibba, various Ferns, Selaginellas, and other interesting plants.

From Messrs. Jackman, of Woking, came plants and coloured drawings of their fine new Clematises, alluded to in another column.

Messrs. A. Henderson & Co. contributed various Caladiums; the variegated variety of Aralia Sieboldii; Gardenia florida variegata, with foliage conspicuously mottled and overlaid with white; Oreopanax dactyliferum, with deeply divided palmate-shaped coriaceous rusty leaves, and other plants.

Bougainvillæa glabra in a small pot, and furnished with a considerable amount of its handsome, pale mauve-coloured floral leaves, was shown by Mr. Ingram, of the Royal Gardens, Frogmore. The same exhibitor also sent a showy orange-scarlet zonal Pelargonium, named Roi d'Italie; examples of the rich, deep red-spotted varieties of Lilium lancifolium, also L. auratum, the golden variegated-leaved variety of Euonymus japonicus, a handsome red-leaved Dracæna called stricta, and various fine Caladiums and other plants.

Mr. Bull, King's Road, Chelsea, showed a large collection of plants, among which were a semi-double variety of Achimenes grandiflora; the pretty red-veined Gymnostachyum Verschaffeltii; Dracæna ferrea variegata; and a broad pendulous-leaved variety of D. terminalis; a Gesnera called Radiancy, with deep rich reddish-brown mottled leaves; Pandanus elegantissimus, with gracefully-drooping long narrow leaves, thickly furnished at the sides with small brown spines; Sphærogyne latifolia, with leaves as handsome as those of Cyanophyllum itself; Vallota eximia, finely in flower; the pink variegated-leaved Saxifrage mentioned above; the creamy-edged-leaved variety of Rhodea japonica macrophylla, Eurya latifolia variegata; Araucaria Rulei; and Pogonia discolor, with a deep brown leaf covered with conspicuous orange-coloured hairs; this last was carefully guarded with a bell-glass. The same exhibitor likewise furnished Pelargonium Mrs. Pollock, a beautiful variety now well known; Centaurea argentea; Saccolabium Dayi, with a handsome spike of flowers on it; the singular Cypripedium Hookeræ; a pretty orange-red minutely spotted Mimulus named Conquest; a variegated variety of Euonymus radicans; the new Japanese Aucuba, covered with green and ripe fruit, which is produced in great abundance even on small plants; also a golden blotch-leaved Aucuba; the handsome Thujopsis dolabrata, Retinospora obtusa, and various Ferns and Palms. Conspicuous among the former were Gymnogramma Wetenhalliana, a whitish-coloured tasselled sort; Adiantum cardiochlæna, a stately plant with ebony-coloured stems; A. Féei, the Guatemala Maiden-hair Fern; Asplenium flabellulatum; Cibotium princeps; Gleichenia hecistophylla, a beautiful kind in the way of G. dicarpa; Lastrea Standishii, varia, and opaca, and the Tree Fern Cyathea Smithii. Among the Palms we remarked examples of Euterpe edulis, the Silver Palm from New Grenada, and others of which descriptions have been given in former reports. From Mr. Short came examples of the Tom Tit or Golden Drop Gourd, the Fingered Orange, and fruit of Bryonopsis erythrocarpa; the last when ripe is red prettily streaked with white.

Mr. Linden, of Brussels, contributed among other things specimens of Doryopteris Alcyonis, a robust deeply divided leaved Fern; Trichocentrum albo-coccineum, an Orchid now little seen, with yellowish brown sepals and petals and white lip, stained on both sides next the base with purple; Cyanophyllum cinnamomeum, with ferruginous stems and ample leaves; Maranta picturata, with shining deep-green leaves ornamented with a pretty silver variegation above and purple underneath; Mappa fastuosa, a green-leaved Philippine Island Euphorbiaceous plant; Maranta orbifolia; and last, but not least, Rogiera gratissima, a truly handsome Mexican plant, which when better known will doubtless become a favourite, its numerous heads of delicate rosy-pink blossoms giving it an attractive and beautiful appearance.

To nearly all the plants named in this report either First, Second, or Third-class Certificates were awarded. The list of awards will be found in our advertising columns.

Notices of Books.

The Abbeville Jaw. A paper read at Hull by J. L. Rowe, F.G.S. Longmans. 1864.

The finding of the Abbeville jaw took the world scientific and theological by surprise, and mighty results were supposed to hinge upon the question of its authenticity. There were reasons for this. The discovery followed hard upon the heels of Professor Huxley's and Sir Charles Lyell's works, and these had been published while the world was in a state of excitement, scarcely knowing what to think about the Darwinian theories, and the Essays and Reviews. Happily the world has sobered down, and can calmly discuss the opportune finding of the jaw.

Mr. Rowe, who is a person perfectly qualified to judge of these matters, assures us that though there may be an apparent lightness of style in a popular lecture like his, "the exactitude of fact has in no case been sacrificed." If any of our readers wish to know the real state of the case, we recommend them to procure this little pamphlet.

Mr. Rowe assures us that, *mutatis mutandis*, we have the story of the "Antiquary" beautifully repeated, for the workmen at Abbeville knew what the gentlemen desired to find, and acted accordingly. He refers to p. 306 of the second Number of the Anthropological Journal, for a charmingly French view of the great discovery. "This time the demonstration was complete, but to render it more palpable, more striking, and safe from the last objection of sceptics, a crowning proof was required; it was requisite to discover in the fossiliferous diluvium, not merely the remains of man's industry, but the remains of his body. Who was to be the happy explorer? M. B. de Perthes has the glory of having finished the edifice of which he had laid the first stone. What must have been the joy of this venerable man when he was called upon to extract from the diluvial beds the celebrated jaw which our learned President has some days since shown you."

Mr. Rowe says, there are two distinct questions:—1. The genuineness of the jaw; 2. A far more important question, as to the nature, age, and genuine fossil contents of the beds in which it was alleged to have been found. As to the first, there can be no doubt now, that the *savans* were thoroughly humbugged. He says, "I believe I am only stating a simple fact, when I say, that not the slightest confidence is now placed in the genuineness of the jaw, as a fossil of the Moulin Quignon beds, by English geologists, whatever their opinion may be on the antiquity question." In fact, the workmen having been told what was wanted, "on the 28th of March a workman came to inform M. B. de Perthes that something was sighted. He found, projecting from the face of the excavation, about eight-tenths of an inch of what seemed to be bone;" but, how the dickens any workmen could recognise so small a body, when the matrix was of the same colour, does not seem quite clear. This was the famous jaw. Some were struck with "its almost black colour, its solidity, and its weight; all these peculiarities being obviously due to one and the same cause, namely, metallic infiltration." There were, however, suspicious circumstances, for washing subsequently deprived it of its dark colour which was reduced to "a light buff colour, mottled with brown stains." Some hatchets, found in the same deposit, presented no signs of being genuine antiques, and a loose molar, when sawn across was found to be "quite recent;" "the section was white, glistening, full of gelatine, and fresh-looking" But the Frenchmen were not satisfied; an international congress of *savans* was summoned. "On the 3d day the jaw was examined, the black matrix was removed, and the saw called into requisition, with the following results. There was found to be no real metallic staining of the bone, no infiltration of mineral properties from the supposed original matrix, no dendritic markings, little or no superficial erosion, such as is common in old bones, even when not buried in a stormy bed, like that of Moulin-Quignon; the dental canal was lined with a fine grey sand, quite different from the black matrix, which blocked up its orifice, the enamel of its single molar was white and brilliant, and its dentine, where exposed by the section, was also white, and the jaw itself was firm under the saw, and had the distinct odour of sawn bone."

The case looked ugly for the champions of the jaw, and the French President adjourned the commission to Abbeville. Here, the craftiness of the workmen again threw doubts upon the question, which were never satisfactorily cleared up, till Mr. H. Keeping, a gentleman who had had much experience in geological explanations, and whose integrity and intelligence could be vouched for by Dr. Falconer and Mr. Pengelly, took pickaxe in hand, in the summer of 1863, and here is an extract from his journal:—"June 5, No. 5. This I found in about an hour after I commenced work on Friday morning. I found the specimen 9 feet 4 inches in depth, and 3 feet 6 inches from the outside of the cliff. This, perhaps, would have been the most likely specimen to have deceived any one, on account of the distance from the outside of the cliff; and had I not been working there the day before, which enabled me to discover a crack in a line where we were working, I should probably have come to the conclusion that this must be a genuine one. The crack I have just referred to was not to be seen the next morning, all being made good, so as to have the appearance of undisturbed gravel. I therefore followed my work in this direction to the distance of about 3 feet 6 inches, when I discovered the flint hatchet, and then the crack was again to be seen, corresponding with the one of yesterday, showing plainly to me that the crack had been made good from the place where I had left off working yesterday, so far as the spot where I found the flint."

This surely is evidence enough for anybody; and Mr. Rowe concludes his first chapter with this summing up:—

"The result of the whole is, I cannot doubt, that the jaw must follow the flints and the molar to the limbo of scientific hoaxes, where we must charitably hope (repeating Mr. Evans's benediction) it may rest in peace."

Physical Geography for Schools and General Readers. By M. F. Maury, LL.D., Commander in the Navy of the Confederate States of America. Pp. 141. Longman & Co., 1864.

The name of Captain Maury is so favourably known in this country, in connexion with the "Physical Geography of the Sea," that we opened his modest-looking book with great expectations. We were not disappointed, for the unpretending little volume contains a mass of information, which is the result of scientific labours and original researches, extending over many years. Capt. Maury's explanation of the trade winds, and the important duties they perform; the Gulf Stream, and the oceanic currents in general (for the construction of a plate to represent these a million and a quarter of observations were registered and used); the influence of the lay of a coast upon its flora and fauna; the effects of mountain ranges on climate, as for example, of the Andes, in collecting an abundance of rain, on one side, for the district of the Amazons, while Peru, on the other side, is left rainless;—these and a variety of other matters are brought before the reader in a manner so clear and interesting that one is never tired of having them so well explained. But the important part that the invisible vapour of the atmosphere performs, is a subject not so generally known. It has been found to possess the marvellous power, first of protecting the earth from the fierce intensity of the sun's rays, and then, when the earth has imbibed a portion of solar heat, this vapour in the atmosphere serves as a thick blanket to retain the warmth, and prevent its too rapid escape. In the absence of such moisture the city of Yakutsk, in Asiatic Russia, though only lying in latitude 61° 40′, is insupportably cold. Erman observed the thermometer there at 104° below the freezing point. Capt. Maury tells us: "The cool nights, the scorching sun, the severe winters, the hot summers of the great steppes of Central Asia, were formerly a puzzle to travellers who ventured there. But now these new revelations of science, concerning the power of vapour over the radiation of heat, seem to make it all plain. The air of the steppes lacks vapour enough to intercept the heat of the sun by day, and to prevent its radiation from the valleys by night. Also travellers in crossing the great desert of Sahara in Africa, which is under the calm belt of Cancer (vide Plate I), and partly intertropical, have reported that by day the sand there is as fire, and the wind like flame; yet in this land of

fire and flame by day, they find it cold enough at night to freeze the water in their canteens." The discovery alluded to, is stated to be due to Professor Tyndall.

Another wonderful subject is the great capacity which water has for heat, being 3080 times that which air possesses, volume for volume. Now, in the condensation of vapour enough to form one gallon of rain water, it is found that heat enough is set free, in the clouds, to raise 5⅔ gallons of water from the freezing to the boiling point, and a still further quantity of heat is given out during the condensation of water into hail or show. Hence it is shown, by a simple calculation, which it is not necessary to inflict upon the reader, "that in the process of condensing the vapour for this one gallon of water, and freezing it into hailstones, heat enough is liberated in the cloud region to raise 67,690 gallons of air from the temperature of melting ice to summer heat"—a result which, it must be confessed, is positively astounding.

The dynamical force which the sea derives from its salts, *i.e.*, the way in which these assist in the circulation of its waters; the difference of the thermal laws of dilatation, for fresh water and for salt water; the phenomena attending the congelation of salt water; the scouring of the Straits of Gibraltar; the level and peculiarities of the Dead Sea, and of inland seas in general, are all beautifully described. Also one sees at once how it is that South America must have a gigantic river like the Amazons, while the continent of Australia is almost riverless. And then, again, why that great river, running from west to east through the most fertile country in the world, has scarcely any trade from one part to another. While the Mississippi, the great river of North America, running from north to south, "changes its latitude with every bend in its course, and consequently the inhabitants of each city on its banks have need of exactly those articles of traffic which every other city, either above or below, has to spare. The trade and traffic on that river before the American war commenced, was more valuable than the entire commerce of the whole country with all the nations of the earth besides."

This allusion to the war, and some other remarks on the unhappy state of his magnificent country, which he says will attract emigration until its "institutions become intolerable, as they are likely to do," remind us of the able defence of Secession principles which Captain Maury published about three years ago. How long is this desolating contest to continue? and how long is this ornament of his profession to be regarded as a rebel?

The third part of the second volume of *Harvey's Thesaurus Capensis* has just been issued. It contains as usual 25 well-drawn plates, illustrating as many rare Cape plants, with brief descriptions. Many of the subjects are of botanical interest only, but among them occur *Schrebera Saundersiæ*, a beautiful shrub, first found four or five years ago by Mrs. Saunders, of Natal, who describes the white flowers as fragrant, each blossom embellished by a dark velvety ring round the throat of the corolla, and as they are borne plentifully at the ends of the branches, the general aspect must be very ornamental. The flowers and foliage are those of a Jasmine. Of *Strychnos Atherstonei* we read that it furnishes the celebrated Kajaten wood of the eastern colonists. Dr. Pappe regarded it as a new genus, and named it Atherstonea, but Dr. Harvey cannot find any tangible character either in floral structure or in habit to distinguish it from Strychnos. It had been received under the name of the King's tree of the Zulu Kaffirs, whose chiefs' sticks of ceremony are made of its twigs. Three species of the curious Orchid genus Mystacidium are figured; the original M. filicorne, and two smaller species, all remarkable for the long slender cornucopiæ-like spur of the lip of the flowers.

We have before us the July and August Numbers of the *Scottish Gardener*, containing good practical papers on Rhododendrons, Lettuces, Salsafy, and Scorzonera. "Is the Rhododendron," asks one writer, "like the Rose, to become chiefly an amateur's flower?" and he replies: "We rather suppose so. We know of only one nobleman's garden in Scotland where there is anything like an adequate collection of this fine shrub. Various influences are adverse to Rhododendrons, and almost in the same proportion as the same influences are favourable to what is called the bedding-out system. Rhododendrons bloom in spring or in early summer, when the great world is in London. Spring flowers are neglected, and we have known an instance in which they were actually forbidden! Those, too, who are familiar with the economics of garden expenditure will readily understand that when the keeping of a place, *i.e.*, the price of labour necessary to the keeping of it, ranges from 500*l.* to 1000*l.* per annum, very little margin is left for defraying the expense of the formation of proper soils for Rhododendrons or the purchase of the plants. Gardeners cannot propagate Rhododendrons as they do Verbenas. Give a clever gardener in autumn three guineas worth of new bedding-out stuff, and in spring he will probably have some 10,000 plants to put out. Little do the admirers of the glowing riband borders, panels, &c., know how much of them is due to the gardener's brains and hands, and even private influence in procuring the means of floral decoration." The causes at which we have now hinted, continues the writer, "and perhaps others not difficult to surmise, tend to place Rhododendrons chiefly in the possession of amateurs, even as they throw Verbenas, Lobelias, and Scarlet Geraniums, &c., into the hands of noblemen's and gentlemen's gardeners." In another article on Moutan Pæonies, it is remarked that the account we gave of the cultivation of these plants in an orchard house at Knypersley, was read "with unfeigned astonishment." The writer admits that it is difficult to account for peculiarities of climate, and that of North Staffordshire may be of an abnormal description. "We beg however to say," he goes on, "that we have cultivated some of the old varieties of the Moutan with no inconsiderable success in the latitude of Edinburgh, in a somewhat humid district, and at an elevation of 350 feet above the level of the sea. We have six plants in our little garden—if we had room we should have more—three of which last spring were slightly protected, and three not at all, and one of the latter bloomed quite as well as the more favoured. We never apply any protection till about the beginning of February, when the thick pink annual shoots begin to protrude, and then a hood or table-like covering of Spruce-fir branches, leaving full access to the air below, and chiefly to preserve the flower buds from being nipped by spring frosts, is found sufficient. We will guarantee that this method will be successful as far north as Inverness. In the pleasure ground at East Binny, 400 feet above the sea level, the Moutans have stood for several winters without any protection, in the open shrubbery, and at a distance from walls. The plants flower beautifully every summer, and form irregular bushes of graceful waving outlines, such as are seen in Chinese drawings." We suspect however that the climate of Edinburgh is more favourable than that of Staffordshire, or perhaps for Moutans even than that of London, by not exciting growth at so early a period. There is some good advice to the Royal Horticultural Society—alas! that it should be necessary—to leave in future, fireworks and nigger-singing out of its programme, and to devote itself to the promotion of horticulture, the introduction of new plants, and the giving prizes for the exhibition of superior skill in any and every department of gardening—in a word to strive to fulfil its proper mission; then no more murmurings of discontent would be heard. "They have work enough before them, if they will only do it."

The *West of Scotland Horticultural Magazine* for the same month has a good article on the cool treatment of Orchids, which we shall endeavour to find room for shortly. There is also an interesting account of a method of Nature-printing practised by Mr. Connon, of Buchanan, who describes it as follows:—"I find the following paints or colours most useful for printing Ferns and other leaves: chrome yellow, Prussian blue, yellow ochre, burnt sienna, raw sienna, terra verte, Naples yellow, raw umber, and light red. Chrome yellow and Prussian blue, used in various proportions, make the most useful shades of bright green. Prussian blue and yellow ochre, or Prussian blue and raw sienna, make olive greens. Terra verte, with a little of chrome yellow, makes a useful green. Prussian blue and Naples yellow make a sickly green. Burnt sienna and raw sienna, used separately or together, do for withered leaves, or those brown spots which are found on Ferns in autumn, and which are very effective in making groups. In printing withered leaves, such as Brambles, which assume very bright tints in autumn, while the texture of the leaf remains fresh, light red will be found very useful, and raw umber is used for the small black stalks of some Ferns. Have three or four brushes, so that different colours may be used at the same time. Three of these should be about the circumference of a good-sized goose-quill, and one small and fine, for any little stalk that may have to be touched up afterwards. These are all that are necessary. The colours must be mixed up with a little boiled linseed oil, and practice must teach the quantities required. It must not be so thin as to have the least inclination to run on the palette. In general the face of the frond is the best to put the paint on. In Ferns, I may say, without exception, lay the frond or leaf (quite dry and clean) on its back on a clean palette; having your different shades all ready mixed on a palette for the purpose, take not too much colour in your brush, and beginning at the extremity of the frond, dab it on carefully and uniformly. Too little paint is less a fault than too much, but practice, as I said before, will show this. Withered spots, &c. can be put on at the same time, and remember to dab on the paint, not to lay it on as in painting. Having coloured the frond with paint, take it up and lay it carefully on the paper, the painted side, of course, downwards. Lay several folds of blotting paper above, hold the leaf firmly down by placing one hand on the stalk end above the blotting paper, and then with a cloth rolled up in the other hand, press and rub over the whole leaf. Take care, in Ferns especially, to apply a good deal of pressure up the middle of the frond, otherwise the thick midrib will prevent the part next it from giving a sufficiently distinct impression on the paper. The principal requisite in the paper is to have it smooth, and at the same time soft and porous." We quote also from these well-filled pages the following letter on the subject of Horticultural distinctions from the Editor of the "Florist's Guide:"—"I am glad to see you taking up the subject of 'Horticultural Distinctions,' first mooted in the *Midland Florists' Guide*. To me it seems that the proposition ought to have the consideration of every real horticulturist, who should make a stand against the unmeaning use of F.R.H.S. by any mushroom. Twenty-five years since the F.H.S. carried with it an honourable distinction, but in these days F.R.H.S. means nothing. Anybody who chooses to pay the annual subscription and entrance fee can use these letters. In fact they are used chiefly by puffing advertisers. I wish to see the Horticultural Society of London take this matter up, and institute a scientific department, fellowship with which shall be conferred on all distinguished in horticulture. The proper way to go to work in starting would be to appoint, say, Dr. Lindley, Mr. Thomas Moore, Dr. Hogg, Mr. Rivers, Mr. William Paul, and Sir Joseph Paxton, to prepare a list of 100 distinguished men in the gardening world to be at once elected Fellows. Then all future elections, which should take place quarterly, would be decided by the [selected] Fellows themselves, by means of polling papers and lists of names proposed being sent to them. No person to be elected who did not receive two-thirds of the votes. Any person to have the power of nominating candidates; but of course an unknown name in the gardening world would stand no chance of being elected. The plan of having examinations would not answer, as there are too many difficulties in the way. I think also that instead of having separate distinctions for England and Scotland, all should unite in pressing this subject on the Horticultural Society of London. There is a large number of first-class practical gardeners in Scotland, who are eminently entitled to such an honourable distinction, and on this side of the Border we have more to back them up. With, as I stated in the April No. of the *Florists' Guide*, 'the strong hand of distinguished gardeners, practical, clear-headed horticulturists, and collectors, who have braved the dangers of the tropics in search of new things for us, ought we not to have a fellowship amongst such men to distinguish them from the ruck?' It is my intention to keep this subject before horticulturists. I am much pleased to find that men eminent in the gardening world are determined to take up the subject; and I venture to hope that before next summer has passed, we shall find that my suggestions have not been made in vain."

The Midland *Florist's Guide* continues to occupy its ground usefully. The subject of conferring Horticultural Distinctions by some more satisfactory means than the assumption of the initials F.R.H.S. is again urged on the notice of members of the Society and of the horticultural public. Respecting the summer treatment of Gladioli the Editor observes that "it will be advisable to keep the plants syringed or watered with a rose pot night and morning, and weak liquid manure may be safely applied frequently. We believe liquid manure may be safely applied in a tolerably strong state. Occasional stirrings of the soil, combined with liquid manure, and frequent rose-pot waterings will do much towards ensuring a good bloom. We this year stripped the skin from every bulb when planting, and have scarcely a miss." A commentator on the London Exhibitions, speaking of Azaleas, observes—"Greek met Greek, and the tug of war was furious, but Chelsea prevailed over Slough. Messrs. Veitch & Son had immense plants, models of symmetry, and bathed in bloom; you could scarcely discern a green leaf on any of the Chelsea plants. In a few of Mr. Turner's plants they had struggled out from among the thick covering of flowers, as if they would assert their right to be considered part of the plant, and an important element in its cultivation. I felt a sense of something like disappointment as I looked upon so much skill and so much labour thus misapplied. It was too artificial. There was symmetry without elegance, glare and show without attractiveness, size and proportion without ease or freedom. There was too much mechanism, and too little of nature." The same writer describes the Duke of Buccleuch's prize at Kensington, and that of the Proprietors of the *Gardeners' Chronicle* as the "most easy wins" he ever witnessed. "Two exhibitors, in one case, and only one in the other, contended. I thought the Adiantum a very ordinary looking subject, and in common with many others, I greatly wondered that the prize was not withheld." The August number is almost entirely filled with reports of exhibitions.

CATALOGUES RECEIVED. — *William Paul's Select List of Hyacinths, &c.*, is a carefully prepared descriptive list of the best sorts of bulbs for autumn planting. Amongst the Hyacinths we notice such novelties as King of the Blues, Lord Palmerston, Robert Fortune, Thorwaldsen, &c. The Catalogue is accompanied by a reprint of Mr. Paul's lecture on the Hyacinth, delivered at South Kensington on the 5th April, and at the time reported at length in our columns.——*William Cutbush & Son's Bulb Catalogue* for 1864, is also a carefully compiled select and descriptive list, including among novelties in the way of Hyacinths, Josephine, Robert Fortune, Henrietta Elizabeth, Lord Palmerston, Thorwaldsen, and the fine yellow San Francisco. Messrs. Cutbush also offer a new Raspberry—Princess Alice, and a new Black Currant—Varney's Princess of Wales.——*Benjamin S. Williams's Catalogue of Bulbs* is another select list, though with less of rarity; and it is supplemented by a brief fruit catalogue.

Garden Memoranda.

Messrs. Jackman & Son's Nursery, Woking.—This establishment, long favourably known for its fine collection of hardy plants, is now likely to attain a world-wide fame for the magnificent new race of hybrid Clematises of which it has been fortunate enough to be the birthplace; and of the origin of which a full account was given at p. 773. A plantation of these charming plants, supported on stakes some 6 feet in height, has produced thousands of blossoms during this summer and autumn, varying in colour from deep rich violet blue to dark velvety maroon; and when we state that multitudes of such blooms have been quite as large in size as that represented by our woodcut of C. Jackmanni, some idea of the beauty of such a mass of graceful floral drapery gathered together in one place may easily be conceived. To flowers the size of those of C. lanuginosa has been added the rich bright violet-red colour of the small-blossomed C. Hendersoni and atrorubens, which were the male parents employed in producing these valuable mules, for the origination of which Mr. Jackman certainly deserves our best thanks. Beautiful they are admitted to be on all hands, but Mr. J. states that he will not be content until he has added to their splendid blossoms a delicious fragrance. Be that as it may, however, they will make glorious ornaments either for walls, verandahs, or rustic poles or pillars; and they are as hardy as the commonest Virgin's Bower which adorns our cottage porticos. The demand for them must therefore necessarily be great, and to meet it Mr. Jackman has wisely prepared a large and fine stock.

Another plant likely to become extensively cultivated when better known is Lonicera aureo-reticulata, the beautifully veined leaves of which have acquired a richness of colour here this hot dry season which is quite delightful.

Of Coniferous plants Mr. Jackman has an extensive and excellent collection, and his specimen ground on the lawn in front of his residence, furnishes ample illustrations of the beauty presented by some of the finer kinds in a large state. Of Thuja aurea and compacta, Golden Yews, Abies Pinsapo, Chinese Junipers, Deodars, Pinus insignis, Taxodium distichum pendulum, a beautiful variety; Cupressus macrocarpa, and Cryptomeria Lobbii, there are numbers of beautiful examples; Pinus macrocarpa has produced cones from which hundreds of seedlings have been raised. Of Cedrus atlantica there are also some fine trees, which are said to bear moving much better than Cedars of Lebanon of the same size and age. A plant of Thuja gigantea, 9 feet in height, has borne cones and ripened seeds from which plants have been raised; we have also Pinus excelsa and Cryptomeria japonica, both of which have attained the size of stately trees. Of Abies Nordmanniana we noticed a beautiful conical specimen, the deep glossy green of which during this hot season, when Grass and other things have been burned up, has been quite refreshing to look upon. This too has produced cones, as also has A. nobilis.

Among Hollies, one of the best is Watereriana, a spineless gold-edged variety, which, either in the shape of standards, pyramids, or bushes, has a compact and beautiful appearance. One example of this on Mr. Jackman's specimen ground is well worthy of mention; it measures about 10 feet in height, and quite 40 feet in circumference, close to the Grass, which it covers with a dense roll or mass of foliage, and the branches are sufficiently thick to conceal the stem all the way to the top, forming a singularly beautiful object. The broad-leaved Evergreen Oak is likewise a handsome tree; as are also Ulmus viminalis variegata, and the Purple and Fern-leaved Beeches. Of Weeping Elms, Ashes, Poplars, Hollies, and Limes we observed many fine specimens, and also one of the comparatively little known, but really beautiful old Chinese tree, called Koelreuteria paniculata.

Mr. Jackman's dwelling house, a new and commodious building, stands on a terrace, on the summit of a hill overlooking an extensive range of well-wooded and beautiful country; behind it is the nursery properly so called, and through this runs a broad walk bordered with select Coniferous and other trees, edged next the roadway with dwarf Firs. The quarters contain a thriving nursery stock of every description; of Abies Nordmanniana alone 30,000 plants are stated to have been raised from seed this year, and many others of it vary in height from 2 to 3 feet. These, and even Deodars 12 and 15 feet in height, move well, all having undergone a previous course of treatment calculated to facilitate that important operation. The beautiful Cupressus Lawsoniana bears cones in great abundance, and thousands of young plants are

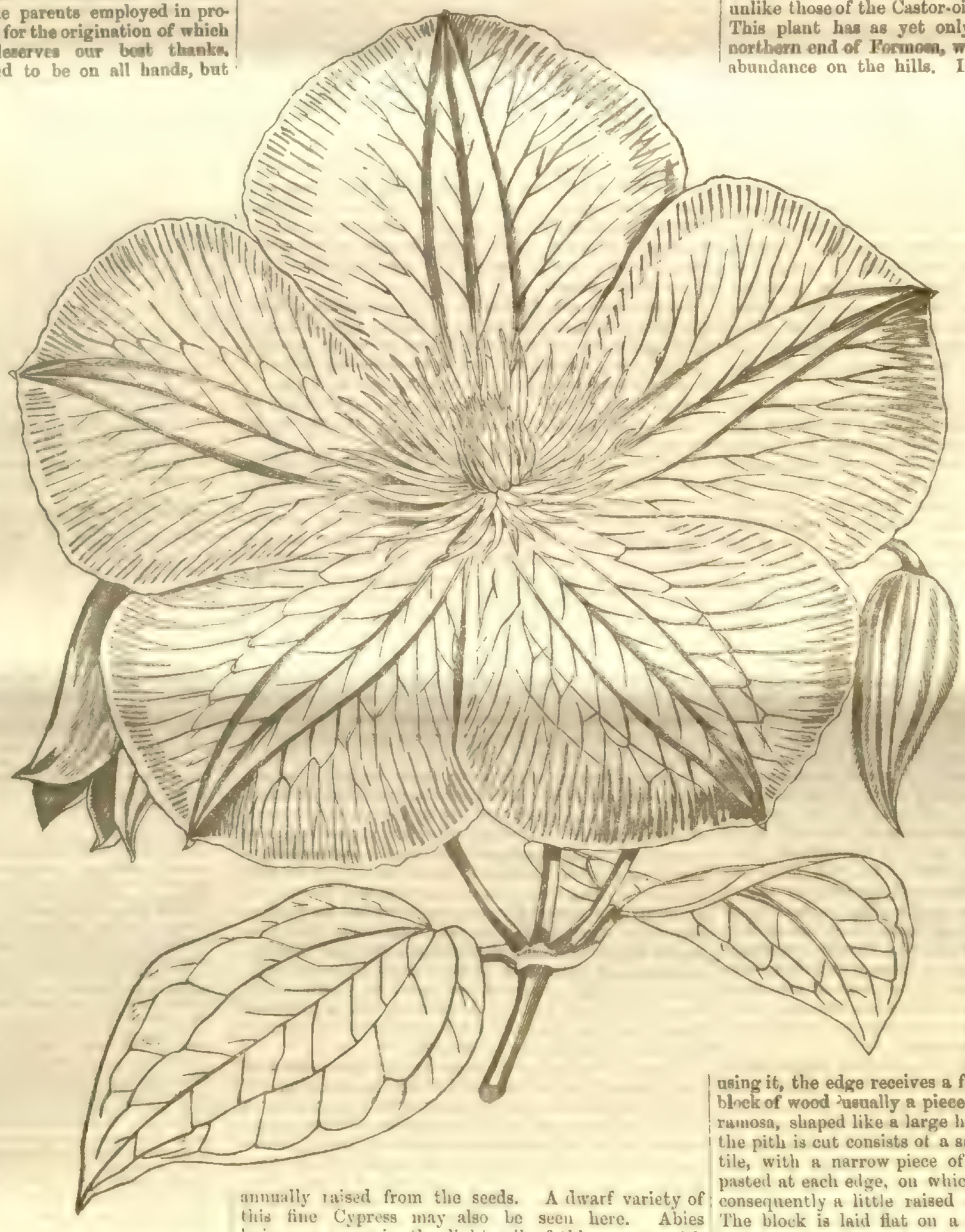

annually raised from the seeds. A dwarf variety of this fine Cypress may also be seen here. Abies lasiocarpa grows in the light soil of this nursery with great vigour; even this dry season it has thrown up a leading shoot 2 feet in length. From cones of Thujopsis borealis many seedling plants have been raised. Plantations of Wellingtonia from 5 to 7 feet in height seem to withstand the drought of the season well, as do also young plants of the Douglas Fir, for which there is now a brisk demand. Forest trees, fruit trees, Rhododendrons, Deciduous trees and shrubs, and Roses also form important items of the general stock, which covers an area of some 60 acres in extent.

Portugal Laurel hedges are much employed here, and good close fences they make. Pinus Pinaster and austriaca are also used as screens.

In one of the quarters a batch of Irish Yews, 4 or 5 feet in height, topped with the Golden variety, had an imposing appearance, even a long distance off, the bright yellow of the one forming a striking contrast with the deep green of the other.

The main road from Chobham to Woking and Guildford runs through Messrs. Jackman's grounds, and preparations are being made for planting ornamental trees and shrubs on both sides of it. This, therefore, when completed, viewed in connection with the little country church close by, surrounded as it is with Cedars of Lebanon, Deodars, Cypresses, Ilex scotica, Pinus austriaca, Cembra, and other Conifers, together with the Rose-clad parsonage, and substantially-built schools, will all doubtless add an interesting feature to this truly rural district.

It may perhaps be worthy of remark that this nursery is about a mile and a half distant from Woking stacion, and that it is approached through shady lanes, the banks of which are in many places covered with Ferns, wild Heath, and other native plants. Even in bright, warm weather, therefore, this part of the journey is far from being unpleasant; but to see such Clematises as those grown here, the old proverb, "Love knows not labour," holds good.

Miscellaneous.

Rice-Paper of Formosa.—The plant that produces the so-called rice-paper is the Aralia papyrifera of botanists (see p. 724), a low shrub with large leaves, in form not unlike those of the Castor-oil plant (Ricinus communis). This plant has as yet only been procured from the northern end of Formosa, where it grows wild in great abundance on the hills. It is of very quick growth, and the trunk and branches, which are lopped for use, are not unlike those of an old Elder in appearance. The cellular tissue or pith attains its full size the first year. The trunks and branches are mostly procured from the aborigines of the inner mountains, in barter for Chinese produce. They are rarely straight throughout their length, and are usually cut into pieces of about 9 inches long; and with a straight stick inserted at one end and hammered on the ground, the pith is forced out with a jump at the other end. The pith is then inserted into straight hollow Bamboos, where it swells and dries straight. If too short to form the required breadth of paper, several bits are inserted into a hollow Bamboo, and, by rods inserted at both open ends of the Bamboo, pressed together until dry. By this process the short bits are forced to adhere together and form one long straight piece of the required length. Thus paper of almost any size can be procured. The knife used in paring the pith into paper is in shape not unlike a butcher's chopper. It is well sharpened on a stone, and when not used kept with the edge in a wooden groove, held firm to it by two strings round the wood and the knife. Before using it, the edge receives a fresh touch up on a small block of wood usually a piece of the timber of Machilus ramosa, shaped like a large hone. The block on which the pith is cut consists of a smooth brick or burnt clay tile, with a narrow piece of brass on a rim of paper pasted at each edge, on which the knife is laid, and is consequently a little raised above the bare tile itself. The block is laid flat on a table, and the dried pith rolled on it with the fingers of the left hand, and then the knife laid on the brass rims with its edge towards the pith, its handle being held by the right hand. As the knife is advanced leftwards by the right hand, the pith is rolled in the same direction, but more slowly, by the fingers of the left. The paring thus goes on continuously, until the inner pith, about a quarter of an inch in diameter, is left, resembling somewhat the vertebral column of a very small shark, and breaking into similar concave-sided joints. This is used by the Chinese as an aperient medicine. The paring produces a smooth continuous scroll about 4 feet long, the first 6 inches of which are transversely grooved and cut off as useless. The rest shows a fine white sheet. The sheets, as they are cut, are placed one upon another and pressed for some time, and then cut into squares of the required size. The small squares made here are usually dyed different colours, and manufactured into artificial flowers for the adornment of the hair of the native ladies; and very excellent imitations of flowers they make. The sheets most usually offered for sale, plain and undyed, are about 3¼ inches square, and are sold in packets of 100 each, at rather less than 1*d.* the packet, or a bundle of five packets for 4*d.* The largest sized paper is made t order, and is usually exported to

Canton, where the grotesque but richly tinted rice-paper paintings have long attracted the curiosty of Europeans. Some of us tried our hands at paring, but made most abortive attempts, producing only chips, though the operation looked so easy in the hands of the apprentice. The term of apprenticeship to the trade is three years, during which time the man receives no pay, but only board and lodging from his master, and has to give his services as general attendant besides to his employer. When the three years are completed, the apprentice is required to work other four months, in place of paying premium. He then receives a certificate of capability, and can either set up on his own account or demand wages for hire. *Swinhoe, in Pharmaceutical Journal.*

Carving on Trees.—This much-condemned habit of our race, especially as practised on the Beech, is intimately interwoven with the most important element of civilisation. The smooth bark of the Beech recommended itself above all other trees of our latitude for carving—that of the Elm, Ash, and Oak was too rough for the purpose, that of the Pine and Birch apt to fall off in regular flakes. Now it is not simply a matter of coincidence that originally book and beech were synonymous; in the word Buckinghamshire, the shire of the Beeches, the more primitive root is still upheld. The old Runic tablets (some of which are still preserved) were made of Beech wood, and hence in all Teutonic languages the tree gave the name to the book. The origin of the word, and its identity with the Sanscrit "boko" letter, "bokos" writings, furnishes clear evidence that the Brahmins had the art of writing before they detached themselves from the common stock of the Indo-European race in Upper Asia; that we, together with other Teutonic nations, received alphabetical signs from the East by a northern route, and not from the Mediterranean; and that the belief that Ulphilas constructed the Gothic alphabet in the fourth century, on the basis of the Greek, is probably unfounded. *Athenæum.*

Garden Edgings.—We lately called on a friend and found him cutting numerous pieces of Rosemary into lengths of about 6 inches, for the purpose, he said, of planting them round the edge of a flower bed, and he was going to do this with a dibble. Now this is not the proper way to plant Rosemary hedges, although our friend said he saw a man putting it in in a similar way in a fine garden the other day. The edge of the bed or border should be properly made up and beaten firm and level all round or along, as the case may be, with the back of a bright spade. The line should then be put along it, and a small trench about four inches deep, cut in a similar way to surveyors' trenches, should be cut out—the cut edge of the trench being the edge of the border, so that the roots of the plants to be put in may incline to the walk, not under the border as we frequently see. Slips of Rosemary, about 8 inches long, should then be taken from the old plants (if the old plants have been planted deep for a time, so that the young shoots have struck all round, so much the better), and laid in this trench at distances apart of about 2 to 3 inches. The left knee of the operator should be placed in the trench to press the earth in on the young shoots, as it is brought up against them with the right hand. The back of the left hand will hold the slips in their places till the soil is placed against them. When the whole edge is put in, it should be gone over and any loose places made firm with the foot. The tops of the slips should now be cut off with the shears (not before), leaving the slips about two inches above the ground. The whole of the earth should then be put back into the trench, and the gravel put over all, and thus a nice neat edge will be secured. *Victorian Horticultural Gazette.*

Alleged Poisoning by Hemlock.—The papers state that recently a lady and her two children residing at Litherland were taken seriously ill soon after dinner. Two medical men who were promptly called in, at once ascribed the illness to the action of poison, and on the remains of some food taken at dinner being shown to them, they detected the presence of Hemlock leaves amongst the herbs used to flavour the soup. Remedial agents being promptly applied, the sufferers were relieved from all dangerous symptoms in the course of a few hours, though two or three days elapsed before they quite recovered from the effects of the poison. Further inquiries showed that the Hemlock had been gathered in the family's own garden, growing with Parsley, and it is suggested that probably the two kinds of seeds were accidentally mingled when supplied by the seedsman. [It is more probable that the poisoning was caused by the Fool's Parsley, Æthusa Cynapium, a common garden weed in some places, than by Hemlock, a plant much less likely to find its way into a Parsley bed.]

Calendar of Operations.

(*For the ensuing week.*)

A SHORT time ago we recommended all who are anxious to make a fine display of flowers next summer, to take notes of the most effective plants for that purpose, and of the habits and peculiarities of each. Such a review might now be carefully repeated, and the present state of the plants noted, marking particularly those which at that time made a creditable display, but which are now becoming shabby. In making arrangements for another year's planting, it is not necessary to include great variety, as the symmetrical relationship between the parts not only admits of repetition, but demands that the corresponding parts should be similarly furnished. The object should be to make the *tout ensemble* perfect; and in almost every case this may be done best by a small selection. For example, if the cultivator has of each distinct colour, and of the most useful intermediate shades, a few suitable plants of different heights, he may with proper taste make the arrangement of his masses as perfectly beautiful as a thing of the kind can be. The best way to proceed then is to make a list of desiderata, filling up for the present with things which approach most nearly to his standard, and substituting others as soon as they come under his notice. One important point to be attended to in the selection of plants for bedding purposes is the proper balance between flower and foliage, and especially amongst the bright warm colours. The principle of methodical arrangement might indeed be carried beyond the parterre, every clump of shrubs might be made to give evidence of good taste, in the disposition of shades and colours. Many of the finest and most showy herbaceous plants are now in beauty, and by studying the effect they produce in different situations, it is more easy to decide where they may be introduced with the greatest advantage.

FLOWER GARDEN AND PLANT HOUSES.

The great drought which has been experienced for many weeks past is now succeeded by cold winds and even frosty nights; flowers out of doors cannot therefore be satisfactory this season. The notes recommended to be made above should consequently include observations on such plants as have withstood the effects of the weather best.

CARNATIONS AND PICOTEES.—Pot off rooted plants, and place them on ashes in a shaded and sheltered place, covering with frame-lights, so as to prevent excessive rain, should it occur, from soddening the soil; regular attention as to watering, &c. must be given.

DAHLIAS.—These will yet require abundance of water while the weather is dry, if fine blooms are to be expected.

TULIPS.—A bed or beds should be made for offsets, and seedlings should be got in as soon as possible; every precaution should be taken, as far as preparation of the compost goes, to insure their healthy growth. The most beautiful blooms are often from maiden bulbs, or the first flowers which the offset produces. Here, too, is the amateur's reserve, from which he drafts to reinforce his main bed. Let this advice be attended to in good time, as it sometimes happens that weak offsets of very valuable sorts shrivel and perish by being kept out of the ground too long.

FORCING GARDEN.

CUCUMBERS. — If the weather is bright, dew the plants overhead once or twice a week, observing always to use a fine rose, as a heavy stream breaks down the leaves.

PINES.—Plants which have been recently potted, or shifted into new soil, will now be growing vigorously. This should be encouraged by a liberal temperature, but accompanied at all times by sufficient ventilation to prevent undue elongation of the leaves, and to mature their tissue while sunlight is powerful enough for that purpose. A less humid atmosphere should be supplied generally, and especially to those intended for fruiting early next spring, as it is very important that they should acquire a strong sturdy habit, and that the accumulation and elaboration of sap should be encouraged, rather than the increase of the size of the plant. Assist the swelling fruit with liquid manure, but admit abundance of air, for the sake of the flavour, and to prevent the crowns growing too luxuriantly.

VINES.—Pay every attention to the preservation of ripe Grapes from the effects of damp, by avoiding the spilling of water about the houses, and by admitting a free current of air in all favourable weather, accompanied by a little fire during rain or fogs. These houses should now, if possible, be freed entirely from plants in pots, or if any are allowed to remain they should be of kinds requiring little or no water, such as bulbs and other stove plants, which like a dry cool treatment to induce them to rest. From this time the points of all growing shoots should be stopped, as the leaves produced after this time take from the stored-up energy, without ripening sufficiently early to benefit the Vines in return. Care, however, must be taken not to stop too closely the lateral shoots of Vines which are still growing vigorously, as they are liable in such cases to burst the buds too near the base of the shoots. As wasps are now troublesome, their ingress should be prevented, by fixing some thin bunting over the moveable sashes. Haythorn's hexagon or gauze net is a good material for this purpose.

HARDY FRUIT AND KITCHEN GARDEN.

Let young plantations of Strawberries be well attended to by stirring the soil between the plants, and supplying them with plenty of liquid manure, that they may continue to progress at the root, and fully employ their leaves in the elaboration of sap. Promote by every means vigorous growth now, and fine fruit next year will be the reward. Alpine Strawberries should be looked to, to see that they are sufficiently moist, as they will soon be found useful in supplying a desirable addition to the dessert. If they are in a state to receive water, supply it in the shape of liquid manure. Plant a few beds of young runners on a north wall for another year; soil a sandy loam, moderately enriched. Look to the buds of fruit trees inserted in July and the early part of August, and loosen the ties. Proceed with forking dung in amongst fruit bushes and Strawberries, and thereby encourage the production of roots near the surface of the ground: these will materially assist in perfecting the growth of the plant, and preparing it for the healthy and abundant development of fruit. Attend to the gathering of fruit as it ripens, and if any of the trees are without names, take advantage of the opportunity of ascertaining them, marking the fruit as well as the trees that produced it. Take advantage of dry days to earth up Celery, sprinkling a good dusting of quicklime or soot about the plants in the lines, and over the surface of the ground for some distance on each side, to destroy slugs, which generally do considerable damage to Celery, especially in wet seasons. The soot or lime should be applied two or three times before soiling up the plants, at intervals of a few days, and early in the morning, before the pests have retired to their hiding-places. Take up and dry Onions that have completed their growth.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Aug. 24, 1864, as observed at the Horticultural Gardens

August.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 18	16	30.018	29.831	74	32	53.0	63	62	N.	.00
Friday 19	17	29.743	29.629	74	38	56.0	63	62	E.	.00
Satur 20	18	29.821	29.687	74	36	55.0	62½	62	N.	.02
Sunday 21	19	29.905	29.785	68	35	51.5	61	61	N.E.	.43
Mon. 22	20	29.952	29.813	68	44	56.0	60	61	E.	.32
Tues. 23	21	29.788	29.694	68	37	52.5	59	60½	N.E.	.16
Wed. 24	22	30.098	29.995	62	30	46.0	58½	60¼	N.W.	.00
Average.		29.903	29.776	69.7	36.0	52.8	61 0	61.4		.68

Aug. 18—Slight uniform haze; very fine; cold at night.
— 19—Fine; very fine; fine, but cold at night
— 20—Cloudy; very fine; cool at night; slight rain.
— 21—Partially overcast; thunder-storm, with heavy rain, showery.
— 22—Uniform slight haze; partially overcast; rain.
— 23—Rain; fine, but cold at night.
— 24—Clear and cold; fine, with low white clouds; frosty, 2 deg. below freezing at night.

Mean temperature of the week 8½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Sept. 3, 1864

August and September.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 28	73.1	49.5	61.3	17	0.22 in.	2	6	3	—	5	11	7	4
Mon. 29	71.6	46.0	59.8	14	0 58	4	5	4	1	2	2	7	3
Tues. 30	72.0	48.3	60.1	9	0.92	2	6	3	—	5	9	10	3
Wed. 31	71.1	47.2	59.1	16	1.31	2	7	3	2	2	8	9	5
Thurs. 1	70.5	47.5	59.0	19	1.50	3	5	3	4	3	12	4	4
Friday 2	70.6	47.6	59.1	16	0.44	7	5	2	1	3	8	9	3
Satur. 3	70.3	47.6	58.9	16	0.49	3	7	3	1	6	9	6	3

The highest temperature during the above period occurred on the 1st, 1843—therm. 85 deg.; and the lowest on the 29th, 1850—therm. 32 deg.

Notices to Correspondents.

BOOKS: *W G.* The only treatise on Ferns in general, which we know as likely to assist you in obtaining a knowledge of these plants, and not very expensive, is the introductory or generic portion of Moore's Index Filicum, of which a portion has been issued with the several numbers published.

COLLECTIONS AT COUNTRY SHOWS: *T G.* If the terms of the prize schedule are as you quote them: "Stove or greenhouse plants (not Fuchsias or Balsams), six plants of dissimilar varieties," six Gloxinias of distinct varieties will certainly be eligible to compete for the prize, but of course they will not stand so high as an equally well grown collection, in which there was more variety.

CONIFERS: *J J R.* Without a cone, or a scale taken from the middle of a cone, it is impossible to name this class of Conifers with certainty.

JUDGING FRUIT: *A Grower.* Certainly all fruits exhibited for prizes, except such as winter Apples and Pears, (which cannot be if invited out of season, and which cannot well be dispensed with at an autumn show), should be ripe and fit for table; and wherever this is made a rule it should be strictly enforced. However unfortunate, therefore, that your better grown Muscats should have failed to carry off the prize, the award is strictly just if those which took the prize were ripe, while yours were not.

NAMES OF PLANTS: *M A.* Spiranthes autumnalis.—*H B.* Momordica Elaterium.—*T W.* Selaginella pubescens, miscalled Willdenovii in gardens.—*F E.* 1, Onychium auratum; 2. Woodwardia, *alias* Doodia media; 3, Platyloma flexuosum. —*W Abraham.* Blitum capitatum, a common old-fashioned garden annual.—*A T.* The plant found in the Usk is Potamogeton crispum.—*W Heale* Origanum Sipyleum.—*Bodorgan.* Not well enough to answer before next week.—*Henry Min.*— Wistaria, certainly.

POMEGRANATES: *A B.* Pomegranates prefer a rather heavy loamy soil, moderately enriched, and should be firmly potted or tubbed, good drainage being provided. Over-potting or over-tubbing is not good for them, for they seldom flower well unless the roots feel their confinement. They like warmth when growing, and to be kept dryish and not too cold when at rest.

SEEDS FOR INDIA: *A B.* You cannot do better than follow as far as you can the advice of your friends in India, namely, to take seeds of all kinds of fruit, flowers, and vegetables, especially the latter, which are probably the most important. That is to say, you should take two or three, or more of the best varieties of each of the leading kinds of vegetables; these would no doubt be most valuable and most acceptable. The seeds of fruits would be of more doubtful utility; and as to flowers, whose name is legion, the most welcome would be some of those which are well known and popular here, and such as would awaken recollections of home. You cannot do better than place yourself in the hands of one of the leading London seed houses. As to packing, the best mode is to put the seeds in ordinary brown paper covers, and these packages into canvas bags, not too large nor too tightly packed; and the more these are exposed to air the better.

SOIL OF NEW GARDEN: *R O.* If the soil is very stiff, we should advise the smother-burning of some of it, and then to mix this burnt portion with the rest. The admixture of sand or vegetable mould of any kind, or of charred vegetable refuse, would also be advantageous. This may be done at any time when the ground is dry, that is, in a state fit for working. The subject shall receive further attention.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.
Address, 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c.

They also continue to supply GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

LAWES'S MANURES.
The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
American and other Cakes at Market prices.
Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22 Eden Quay, Dublin.

DIXON AND CARDUS'S LINSEED CAKE,

Analysed and Reported upon by Dr. VOELCKER.

As considerable mortality amongst the Lambs has occurred in two or three districts in Hampshire, and in some cases our Linseed Cake, on which they were feeding, has been blamed as the cause of it, we requested Dr. Voelcker to investigate the subject and report upon it; which report we subjoin.

It will be seen that the Cake was of excellent quality, and free from any matter that could be injurious to the health of animals feeding upon it.

Diseases in Lambs in isolated districts are by no means uncommon; and no doubt excellent Cake is often branded as the cause of sudden outbreaks of disorders in Lambs, whereas these disorders are enveloped in such mystery that the best Veterinary Surgeons and the most experienced Flock-masters are at a loss to advance a rational theory in accounting for the sudden death which often affects the flocks in one district and not in another.

The four Samples of Cake sent for Analysis were marked:—
J. W. No. 1 and No. 2, from Mr. John Wallace, Houghton.
T. E. From Mr. Thomas Edwards, of Compton House, Stockbridge.
S. A. From Mr. Stephen Ayles, of Braishfield, Romsey.

DIXON & CARDUS.

Report of Dr. VOELCKER.

101, Leadenhall Street, London, July 8, 1864.

To Messrs. DIXON & CARDUS, Southampton.

DEAR SIRS,—I have now the pleasure of handing you the results of careful Analyses of four samples of your Cake. You will observe at once that these four samples show a close agreement in composition, which distinctly proves that the manufacture of your Cake is carried on uniformly in your mill.

The per centage of Oil (the most valuable constituent of Oil-cake) in all four samples is quite as high as in the best kinds of Linseed Cake; and that of flesh-forming matters a fair average proportion.

The small amount of sand, and the absence of obnoxious weed seeds, shows that Clean Linseed is used in the preparation of these four samples of Cake.

I have carefully examined your Cake for injurious foreign matters, and am decidedly of opinion that it contains nothing that can be regarded as at all likely to be injurious to the health of animals fed upon it. Its condition is fresh, it is free from mould, and is palatable; and in my opinion is a wholesome and nutritious Cake of good average quality.—Yours truly, AUGUSTUS VOELCKER.

COMPOSITION OF FOUR SAMPLES OF LINSEED CAKE, MANUFACTURED BY DIXON & CARDUS, NORTHAM, SOUTHAMPTON.

	SAMPLES MARKED.				
	J.W. No. 1	J.W. No. 2.	T.E.	S.A.	Barrel American
Moisture	10.91	11.39	10.58	10.48	11.64
Oil	11.55	11.26	10.92	10.94	10.43
*Albuminous compounds (flesh forming matters)	26.62	25.25	27.43	26.43	24.01
Mucilage, Starch, Sugar, and digestible fibre	31.09	31.28	30.34	30.96	34.44
Woody Fibre (Cellulose) ..	14.04	13.46	14.46	15.09	14.26
**Mineral Matters (Ash) ..	6.79	7.36	6.27	6.10	5.22
	100.00	100.00	100.00	100.00	100.00
*Containing Nitrogen	4.10	4.04	4.30	4.23	3.84
**Containing Sand	2.12	2.34	1.64	1.13	1.42

AUGUSTUS VOELCKER.

London, 101, Leadenhall Street.—July 8, 1864.

N.B. We have in the above Table added an analysis of Barrel American Cake, made by Dr. Voelcker some time ago for us, which shows our cake to be even superior to Barrel American, which is considered by many as the standard of first-rate quality. D. & C.

GIRDWOOD'S MELOSSOON or SHEEP PROTECTING DIP.—This preparation, poisonous alone to Parasites, forms an artificial yolk of great value for the sheep and wool. It is the Best, Cheapest, and Safest of all Dipping Compounds.
Price 6d. per lb. Above a cwt. free to stations.
To be had of Mr. ROBERT GIRDWOOD, Tanfield, Edinburgh, or his Agents.

Royal Agricultural Society of England.

RANSOMES AND SIMS, Ipswich,
WERE AWARDED
FOUR FIRST PRIZES
FOR
SWING and WHEEL PLOUGHS
AT THE
NEWCASTLE-ON-TYNE MEETING, JULY, 1864.
DETAILS OF THE AWARD:—
The FIRST and ONLY PRIZE of £15 0 0
For the Best Swing Plough for General Purposes.
The FIRST and ONLY PRIZE of £7 10 0
For the Best Swing Plough for Light Land.
The FIRST and ONLY PRIZE of £7 10 0
For the best Wheel Plough for Light Land.
The FIRST and ONLY PRIZE of £7 10 0
For the Best Wheel Plough for Heavy Land.
No other Firm was awarded more than One Prize.
No Prize was given of more than £15.

BARROWS AND CARMICHAEL, Banbury,
Manufacture STEAM CULTIVATING APPARATUS, the cheapest, most simple, and successful Tackle out.
PORTABLE STEAM ENGINES, more simple in construction, efficient at work, and consuming less coal than the old-fashioned Engines usually made.
THRESHING MACHINES, which will astonish those who work the ponderous and complicated Machines now so generally used.

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

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Offices: 52, Parliament Street, S.W.

Under this Company's Act tenants for life, trustees, mortgagees, guardians, committees of incompetent persons, beneficial lessees, corporations (ecclesiastical or municipal), incumbents, charitable trustees, &c., may effect the following Land Improvements, and charge the outlay and expenses on the estate improved, by way of rentcharge, to be paid by half-yearly instalments, viz.:—

1. All works of Drainage, Irrigation, Warping, and Embankment.
2. The Erection of Farmhouses, Cottages for Agricultural Labourers, and all kinds of Farm Buildings.
3. The Construction of Roads.
4. The Grubbing and Clearing of Old Woodlands, Enclosing, Fencing, and Reclaiming Land.

The owners of estates, not entailed, who may be desirous to avoid the expense or inconvenience of a legal mortgage, may also charge their Estates with an outlay in improvements under the simple and inexpensive process of the Company's Act.
The term of years for the rentcharge is fixed by the landowner, so as to adapt the amount of annual payment to the circumstances of the tenants, the term for building works being limited to 31 years.
No investigation of title being required, and the charge not being affected by incumbrances, no legal expenses are incurred.
The arrangements for effecting improvements are threefold:—
No. 1. The works may be designed and executed entirely by the landowner's agent, and the Company employed only to supply the loan and conduct the matter through all the official forms for charging the outlay on the estate.
No. 2. The Company will supply plans, specifications, and estimates for any improvements to be executed by the landowner's agent as under No. 1. In each of these cases the landowner will be solely under the control of the Enclosure Commissioners.
No. 3. The Company will undertake the entire responsibility of the improvements, prepare the plans, execute the works, and finally charge on the estate the actual amount expended, with their commission thereon, approved by the Enclosure Commissioners.
Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.
Works of Drainage and other improvements are also executed on commission for landowners, who merely require the skill and experience of the Company's officers and a staff in constant practice.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Office of the Company, 52, Parliament Street, S.W.

MANCHESTER and LIVERPOOL AGRICULTURAL SOCIETY.

GRAND SHOW at KNUTSFORD, SEPTEMBER 7 and 8, for SPECIAL and other PRIZES, amounting to nearly 1000*l.*

The Exhibition will this year comprise HORNED CATTLE of various kinds; HORSES, including thorough-bred and other Stallions, and a large entry of Hunters, Cobs, Ponies, &c.; SHEEP, PIGS, POULTRY, DOGS, CHEESE, BUTTER, SEEDS, ROOTS, HORTICULTURAL PRODUCTIONS, IMPLEMENTS, MACHINERY, and Miscellaneous articles.

[ENTRIES for the Show finally closed on the 13th inst.]

Excellent Show Ground of about 12 Acres in extent has been provided by the Local Committee near the entrance to Tatton Park and Gardens, which, by the kind permission of Lord Egerton, of Tatton, will be open to the inspection of Visitors to the Show.

Admission to the Show:—On WEDNESDAY, September 7, from 10 o'Clock to 6 o'Clock, Admission (by Tickets sold on the spot) 2*s.* 6*d.* each; and on THURSDAY, September 8, from 8 o'Clock to 4 o'Clock, when the Show will finally close, Admission 1*s.* each Person.

On WEDNESDAY, the 7th, there will be a GRAND MUSICAL BAND CONTEST, which has been provided for out of Funds raised for Special Prizes, &c., by the Local Committee.

The PUBLIC DINNER will also take place on that day, at Half-past 3 o'Clock P.M., the Right Hon. Lord de Tabley in the Chair.

Tickets, 3*s.* 6*d.* each, may be obtained from Messrs. JENNISON, the Contractors, at Bell-Vue, Manchester, or in the Show Yard.

T. B. RYDER, Secretary and Treasurer.

57A, Church Street, Liverpool, August 27.

The Agricultural Gazette.

SATURDAY, AUGUST 27, 1864.

WE last year commented as severely as we could on the very remarkable speech addressed to a Cheshire Agricultural Society by the chairman of its annual meeting—Sir HARRY MAINWARING, Bart. Characterised by its confident utterances in direct opposition to the general experience of farmers, it was then described perhaps with undue heat as outrageous, arrogant, and ignorant. We give in another column an agricultural discourse by the same speaker at a former county agricultural show. It resembles last year's speech in the clever paradox and outspoken frankness which it displays. And we do not doubt that the speaker, known by his past performances, is welcomed at the county agricultural meetings by all who love something better after dinner than soft words and compliments and empty phrases. He is to preside again at the county show at Great Budworth on the 28th of September, and the address given on a similar occasion at that place, which appears elsewhere, will enable us to estimate the result of seven years additional experience of local agriculture on a clever and observant man, whose opinion ought to be of service to his neighbour.

The point which seems especially to weigh with Sir HARRY MAINWARING is that local experience and knowledge are necessary before a judgment of any value can be pronounced on the propriety of local practice. And in this we should have unreservedly agreed with him had our opinion not been staggered by the conclusions to which this local knowledge and experience had in his own case led.

The three points to which his experience of Cheshire farming leads him, are that bones and drains, and broad-breasted bulls, have spoiled cheese farms. We have lately been over a number of Cheshire farms, and everywhere we have learned upon the contrary, that drains and bones, and Short-horn bulls, have been the salvation of the Cheshire dairy farms. Meeting one sunny afternoon the other day with a hearty portly tenant farmer on his horse, slowly marshalling his herd of 50 milch kine to the milking, and remarking on the quality of his cattle—"Yes," he exclaimed, "we are nothing here without the cow." But on inquiry it appeared that his farm and all the neighbouring farms had greatly increased their stock by the aid of bones and drains, and greatly improved their stock by a Short-horn cross. If the statistics of a dairy farm for 40 or 50 years, since the first use of bones, could be obtained, it would clearly prove that the quantity and quality of milk produced had been immediately increased by boning and by draining. We hope hereafter to prove this point by an actual history; meanwhile we state it merely as the confident utterance of the many tenant farmers in that county with whom we have lately come in contact.

Cheshire is the county of all others that can be quoted for the improvement of its pastures. Dairy land in Gloucestershire and elsewhere has been generally stationary in fertility and produce or many years. "The condition of the Grass lands of England generally," recently exclaimed a first-rate agricultural authority at the London Farmers' Club, "is disgraceful." No doubt there are rushes and thistles in abundance on many of the pasture fields of Cheshire; but formerly there were more. The improvement of the county, ascertained bit by bit over a number of its farms, is unquestionable; and it is due to boning and to draining.

The history of Tattenhall farm, given in a recent number, is perfectly a case in point; and there is many another history which could be quoted also. The stock, too, is improving as well as the pastures for their maintenance. And this is everywhere attributed to a Short-horn cross upon the former cattle of the county—either of the Welsh or Long-horned breeds. It is quite a mistake to suppose that the Short-horn is the most delicate of breeds, and still more to imagine that it stands low on the list of breeds as cheese-producers. Mr. HARRISON, of Frocester Court, Gloucestershire, who milks close upon 100, and whose experience upon dairy matters we have been giving lately in our columns, puts them indeed lowest on the scale as butter cows, but the very highest of the whole for cheese.

It thus appears that not only is Sir HARRY'S dictum contradicted by general experience, but also by the very local practice and experience on which it declared itself to stand. Let us hope that we may next month have a speech from him as full as ever of spirit, point, and confidence, but teaching sounder doctrine than even local experience and practice have hitherto inspired.

JOTTINGS BY THE WAY.

STARTING from the south of England, and passing through the midland counties, every traveller must be struck by the present appearance of the country. On the sloping banks of the railways not a vestige of anything green can be discovered; most probably a spark from the engine has fallen, and every stalk, stem, or leaf is destroyed—in many places even large portions of standing corn have been thus consumed. The pastures are brown, the hill-sides slippery as glass, sheep run to water, cattle appear to be wandering continually in quest of food, and on many farms are even supplied with hay. The "root crops" are but an apology for what they should have been. Wheat is below an average crop, and late-sown Oats are short. But on the other hand, Barley is heavy and good; Potatos sound and promising, and Flax very satisfactory. Such was my idea of the state of things between the extreme south and Chester. From thence to Holyhead the prospect was more pleasing; the crops there appear heavy, and are likely to be better harvested than in 1863; several really good and regular fields of roots are seen, and the country generally does not appear to have suffered so much from a long protracted drought. Crossing to "the Emerald Isle," where it has been asserted that "rain falls every day" (but which assertion experience enables me to contradict) I find a different scene, for here the unusually dry season appears to have had a beneficial effect. Crops of all kinds are good; roots, regular and luxuriant; Potatos, though the tubers may not be perhaps as large as usual, are very healthy and promising; the hay crop, not yet secured, is heavy; and Flax, I should say, uncommonly good, and likely to prove very remunerative; in fact, every Englishman visiting Ireland for the first time must be astonished at the large number of acres of Flax growing. He would also be astonished perhaps to learn that the seed is entirely neglected and wasted, and certainly he must be astonished, and I may venture to

add not gratified by the sickening stench which proceeds from the numerous pits in which the Flax is steeped. Why the seed cannot be preserved—why it is so necessary to steep the Flax in these pits—or why the management of this crop differs so much in England and Ireland, I cannot explain — I ask for information; for surely, after making allowance for the dissimilarity of climate, it must be allowed that either we or they have much to learn, and by comparing notes, mutual assistance may be derived; any how the importance of growing Flax appears to be now discussed and known in Ireland, and in several large towns lectures on its cultivation and management were given during the past month. I apprehend that all crops are good throughout Ireland, and that an improvement in agriculture is steadily progressing. At Lough Gall, in county Armagh, a rich fertile district, by some called "the garden of the North," I remained several days, and had an opportunity to observe carefully the farming. I found well managed farms, several good implements lately introduced, a respectable class of peasantry, and I should imagine liberal and considerate landowners.

In the South again are many well-farmed parts, and crops that can gladden the eyes of either an Englishman or a Scotchman; but then I noticed a more ragged and "shoeless" crowd, a more plentiful supply of importunate beggars. Docks and weeds, I fear it must be allowed, flourish and abound in Ireland, and in many parts are seldom disturbed. On one occasion I did inquire, "why they allowed so many Docks to be propagated?" The answer I received was this — "Shure, yer honour, what would we do widout them when the horses had the distemper?" (conclusive).

I saw many good and large herds of Short-horn cattle, and some choice specimens of the pretty little Kerry cow, but the kind of animal which we know as "Irish," seems to be disappearing.

Sheep, generally speaking, I fancy do not thrive, probably the soil and atmosphere is too moist. In the little island of Innisfallen, in one of the lakes of Killarney, they are said to "get fat in three weeks," at all events those I saw, though I know not how long they had been located there, appeared to be almost fit for the butcher. Either the Southdown, or a cross between that and the Leicester, are the varieties generally preferred.

Large farm horses I rarely saw; on the farm of one energetic amateur near Dublin were several huge animals, but they seemed quite out of character. As a matter of course, the "well bred" Irish horse is justly appreciated and often seen, in spite of the active agents of English dealers.

Pigs certainly are much valued, and realise high prices. I found a less coarse breed of swine than I anticipated; even now I fear the pig is regarded as a member of the family, frequently enjoying the same privileges as the children; and though perhaps not actually permitted to occupy the same bed, may often be found under it! Poor Toby is found useful in many ways! *e.g.*, a friend of mine, requiring some clean linen, on going to the laundress to inquire about it, asserts that he found his shirt placed on the pig's back "to dry!" In the parts frequented by tourists a great profit is derived from poultry, but in some places in the south I was told that *after* the season "a good cock chicken may be bought for twopence!" During the winter months buttermilk and Potatos constitute the food of the poor, and in some places it seems that they do nothing in the winter, but are supposed to follow the example of the bees or ants, and save during the summer. Whiskey is supposed to be only indulged in on extraordinary occasions, such as a "wake" or a fair. To tourists I would say, "beware of the mountain dew!" Altogether I think that though an Englishman on his return to his own country may be wonderfully disposed to whistle the tune of "Home, sweet Home," still in Ireland he will have been agreeably deceived; there is much to be admired in her, though there may be much to be improved.

Barring the riots now commencing, 1864 must be a "golden" year for Ireland. *W. J. P., August* 16.

CHESHIRE FARMING SEVEN YEARS AGO.

[Addressed to the occupiers of farms in Over Peover and Goostrey-cum-Barnshaw, Cheshire. The following was the speech of Mr. (now Sir Henry) Maiswaring at the Agricultural Show at Great Budworth, Sept. 22, 1857.]

I am rather surprised that no allusion has been made to the meeting of the Royal Agricultural Society at Chester in July next at any of the agricultural meetings which have lately been held in the county, excepting at Macclesfield, where Mr. Humberston had made some very suitable observations, and said that upwards of 5000*l.* had been subscribed towards the expenses of the meeting, the prizes, &c., being a larger sum than had ever been subscribed by any county on any similar occasion. This is very satisfactory for us to hear; but may we not ask, "What return shall we get for our money?" On several occasions some leading agriculturists from the corn counties had been present at the cattle shows in this county, and it was rather curious to notice the various specimens of advice, and the recommendations which had been made by these gentlemen. One of them had said that the milking cows were too thin, and that if they were fatter they would give more and better milk; now, we all well know the reverse to be the fact, for it was found that as a cow put on fat her milk became less rich, though it might not decrease in quantity. A cow cannot feed well and milk well at the same time. Another recommended the feeding system. In Warwickshire and Northamptonshire, where one statute acre will feed a large ox fat for the London market, that system would pay; but Cheshire land will not do this: Cheshire farmers are well aware that cheese-making pays better than cattle-feeding. Horses and sheep had also been recommended as good paying stock, but our land cannot compete with the pastures of Shropshire and Lincolnshire, or the lime-stone leys of Derbyshire, and horses do not grow well in this county; they grow large in the belly, long in the leg, small in muscle. Sheep also fail; our land does not suit them, and we can only keep a flock for 12 months. Such advice can do us no good. I have read with great attention the speeches which have been made at the meetings of the Royal Agricultural Society for the last 10 years, and I have observed that, with some slight change of words, they have been one and all the same. The same subjects have been discussed year after year. Corn growing, steam engines, reaping machines, ploughs (all of little use in Cheshire), have been talked about over and over again. Now, if I had the honour of being a member of this Royal Society, and if I had the still greater honour of being deputed by the Society to attend their Annual Meeting, at Salisbury for instance, or at some town in a corn county,—suppose, when I made a speech at the dinner-table, I told the farmers present that they did not know how to farm their land, and that I recommended them to grow Grass instead of corn, and to keep milking cows instead of feeding cattle,—would it not be likely that they would say to me—"go back to your own county, and milk your cows and feed your sows."

Now this is just the advice which has been given to us Cheshire farmers, viz.:—to grow corn, to feed cattle, to keep sheep, and to breed horses: if such advice is to be given to us at Chester next year, surely such advisers had better keep away, for then so surely will our subscription of 5000*l.* be thrown away. If I were appointed by the Society to attend the Meeting in a corn-growing county, I would go into that county, and live there for three or more months, in order to study the climate, the soil, the mode of farming, the population, and the markets, and then at the dinner table I might be able to say something worth hearing, and probably to give some good advice to my audience. I wish that a plan of this kind might be carried out at Chester next year; and I would venture to suggest that some of the leading landowners in the county should consult with the Committee of the Royal Agricultural Society on the subject. Whether the suggestion be carried out or not, I would express a hope that something of the kind might be done, and I would take this opportunity of congratulating the Royal Agricultural Society on coming into this county—a county new to them; new ground; virgin soil as it were; a new system of farming, on which they would have to make new speeches, and to offer new advice. I trust that some members of that Royal Society, and that the judges appointed for the show, will come into Cheshire next spring to learn the peculiar mode of farming in this very peculiar county; and I feel certain that the houses of all now present in this room, and of every farmer in the county, would be open to them, and a hearty welcome given. I have said that the farming of Cheshire is very peculiar; it is at the same time very simple. I consider that he would be a bad friend to Cheshire farmers who advised them to depart from the old plan; and I think that a farmer departing from the old system, and pursuing another system—say the corn and feeding system—would pursue it to a loss. I say again that the system of farming generally pursued in the county is not only a peculiar system, but that it is the right system, for it is based upon four great points:—

1st, Upon the voice of Nature;
2d, Upon the direct finger of Providence;
3d, Upon the great force of custom; and
4th, Upon the mighty power of profit.

Let us look at the 1st point. Cheshire is one large meadow, of a strong deep alluvial soil, and nearly flat, except here and there some ridges of sand, bounded on three sides by hills, and on the fourth by the sea. Hence the soil and the atmosphere are damp, caused by fine fertilising rains, making the land green and full of Grass, at a time when other counties are burnt up; and causing it to produce the finest Grasses for cows and for milk, as well as every green herb for the use of man, in abundant quantities. Thus does Nature lead the Cheshire farmers to keep the green side uppermost.

As to the 2d point, the direct finger of Providence. On the south side of the county are the Staffordshire Potteries with upwards of 200,000 inhabitants; then come the towns of Congleton and Macclesfield; further on the east, Stockport with 80,000 people, and all that large mining and manufacturing district, Dukinfield, Hyde, Staleybridge, and Ashton; then Manchester with half a million of inhabitants; the towns of Oldham, Rochdale, Bury; then Warrington, and then Birkenhead and Liverpool with its 500,000 people. All these large towns are well supplied with corn, and beef, and mutton, from Ireland and Scotland and Yorkshire; but they look to Cheshire for cheese, and milk, and Potatos, and roots of all kinds; and Providence had been pleased to make the position of Cheshire one peculiarly adapted for supplying these wants. Farmers therefore should pause ere they set aside the old system of farming, considering the position in which Providence had placed them.

With respect to the 3d point, the force of custom; our ancestors have learned from Nature what the soil and climate were best suited for, and I think that we had better not set aside the good old custom of our ancestors. And now upon the 4th point, the mighty power of profit. Take, for instance, a farm of 150 statute acres; an active farmer, blessed with an active wife—a good cheese maker—would be able to keep 50 cows, each of which, if bred rightly, and fed rightly, would make 6 or 7 cwt. of cheese. (Hear, hear. No, no, 3½ cwt.) I know that in a dairy near Nantwich each cow produced 6 cwt. of cheese in a year. Then the out-goings on a dairy farm are very small. The farmer, and his son, and a boy would look after the cows; another son, or a labourer, would take care of the horses; his wife, and daughter, and a servant girl would manage the cheese; so that he would only require a labourer or two occasionally, and a few extra hands at harvest time. These expenses are small when compared with the costs and wages on a tillage farm. Cheese at 60*s.* per cwt. would pay far better than a corn crop in this county. A Cheshire farmer should not grow a grain of corn for sale; nor a Turnip except for sale. Having thus, I hope, shown that Cheshire farming is based on Providence, and directed by profit, I consider that the man, a stranger to the county, who should tell us farmers that we were all in the wrong, and should advise us to pursue another system of cultivating our land, must indeed be a very bold man. I have endeavoured to lay before you, gentlemen, some few points with respect to farming in Cheshire; and in proposing to you, as a toast, "Success to the Royal Agricultural Society of England," I would now, with many apologies, venture to tell you what (as appears to me) we do not want to hear from the Society next year; and 2dly, what do we want to hear from them. 1st. We want to hear nothing about fat Short-horn bulls. I once knew a man who, upon setting up a dairy farm, bought a splendid bull out of Durham for 200*l.*; and had he thrown him into the river Dane on the first night of his arrival, he would have been a richer man by 500*l.* at the end of a year or two. He bred very few calves, and those few were not milkers. But I know that farmers say, "Oh, if these high-bred heifers do not milk well, they will feed well." I do not admit the word if: it is a word not to be permitted. When a man takes a dairy farm he should say, "I will make a good dairy of cheese, and I will breed good milking stock only." We do not want to hear a word about Devon or Hereford cattle: we want to hear very little about horses. A Cheshire farmer, holding 150 acres, requires only two cart horses, and one good active nag to draw his shandry cart, and to serve in the "Earl of Chester's Yeomanry Cavalry." Still less do we want to hear about sheep. We do not want to hear anything about irrigation, except when we can throw a river of clear limestone water over our meadows; hay grown from land watered with dirty farm-yard water is not good for cows, nor will they eat it unless compelled to do so. We do not want to hear anything about implements—some very beautiful implements have been shown in the yard this day, but they are of very little use in Cheshire,—a dairy farmer only requires two ploughs, a heavy pair of harrows, a light pair of harrows, three or four carts, some cheese presses, and a roller. We do not wish to hear one word about ploughs:—I consider a plough to be a much more pernicious weed than a rush. We do not want to hear anything about steam engines. A steam engine is ruin to a farmer, unless he has 300 acres of corn land, beside Grass land. So much for what we do not want to hear: now for what we do want to hear:—1st. We want to hear a good deal on the best breed of cows for cheese-making. I will say nothing on this point to-day, as the subject was discussed in this room last year. I believe, however, that it is generally acknowledged that the cows are very inferior to what they were a few years ago. I was much pleased at seeing a placard on a cow's head, placed there by the judges this morning, on which it was stated that they considered the cow to be the best animal in the yard; but as she only gave a small quantity of very inferior milk, they did not consider her worthy of the prize: accordingly they had given the prize to a cow of a very inferior appearance in the eyes of the butcher, but of superior appearance to the eyes of the dairy farmer. 2d. We want to hear what is the best mode of wintering cows. I will give you an anecdote. I was travelling up to London in a very fast coach some years ago. I had observed that many of the horses had looked bad in their coats (it was late on in the autumn), and they appeared to be weak, and not up to their work; at last, a team came out in tip top condition, sleek in their coats as race horses and looking all over fit to run for the Chester Cup. They did their work easily—12 miles in the hour. I asked the coachman how he accounted for these horses looking so much better than all the other teams, and doing their ground so much more easily. He replied, "Oh, our governor alway gives his horses plenty of Beans when Blackberries are ripe." What wisdom—what good sense! At the time that horses are weak, when their

coats are thin, and their skin and constitution is undergoing a change, then the proprietor gave them good food to fit them for their work. Just so should farmers act; they should give their cows Oats and Beans, when they do give them 'fash,' or, as I call it, 'trash.' I will draw a picture, though I fear that too many of you gentlemen now present will appear as portraits in it. Imagine a cold autumn night—there has been a sharp white frost—the cows have been driven up to be milked, and are turned out again! they stand bellowing out for food; the cold mist begins to fall, when wheels are heard, and a cart is seen creeping along, laden with a high green top load, driven by a wet cold boy. It comes into the field; the cows bellow still louder; and the cold boy gets on the top of the load, and throws about, right and left, that dreadful fash—Turnip tops! And the wretched cows swallow them up greedily, and are driven up again in the evening to be milked, and turned out again for another cold night, and for fash again the next morning—and farmers are surprised that cows do not do well! Whenever I see a farmer giving his cows fash, I know what sort of man he is. An essay on the subject of winter feeding, which gained the prize at the Nantwich show last year, has been published,—an excellent essay, equal to any of Lord Macaulay's, got up with great labour, and full of statistics, but unfortunately, like the play of Hamlet with the part of Hamlet omitted, it fails to tell us exactly what we most wanted to know, viz, the best mode of wintering milking cows. I will therefore supply this omission, and tell you the best mode, viz.:—Tie up your cows on the 1st of November. After milking in the morning give them a good feed of crushed Oats with a little Bean flour, then turn them out for the day, and at night give them some good hay. This is for cows before calving. After they have calved pursue the same system, but double the quantity of Oats and Beans and hay, and add about 20 lb. of Mangels, to each cow per day; keep a field of Eddish, and turn them out in the daytime on the 14th of April, and on the 1st of May turn them out altogether. By this plan you may begin to make large cheese on the 1st of May, instead of the 15th of June, as is the case with the great majority of farmers, who lose the first six weeks of cheese-making, simply because their cows are out of condition. I would here remind farmers that by leaving their cows out so late in the year, suffering them to be exposed to the weather, and feeding them on fash and Oat straw at the time that they require good strengthening food, they induce disease. I believe it to be generally admitted that during the month of November the pleuro-pneumonia is engendered, that the seeds of that fatal disease are then sown, to break out among the herd in one or two, or it may be three or more years. The cows' lungs are then affected, and they never recover. We also want to hear something about leases. Last year two forms of leases were published, one by Mr. Humberston, the other by Mr. Tollemache, both excellent leases, and well adapted for a large tillage farm of 500 acres, the occupier of which has, and must have, 10*l.* per acre in his banker's hands before he can take the farm; but, like steam engines and reaping machines, of no use for the dairy farms of Cheshire. We also want to be told what is the best mode of making cheese. Mr. Cadbury, who is probably the largest cheesemonger in London, was one of the judges of cheese at the show at Macclesfield last week, and he told the meeting that Cheshire cheese was badly made, and that it was very inferior to what it was some years ago; he urged upon them to make a better article, and said that dealers would give a large price for good cheese. I had the honour of saying a few warning words on this subject in this room last year, therefore I shall say nothing more on the subject on this occasion. We wish to hear something on highways, which are kept in bad repair at a large cost in the country; and upon weights and measures, which vary so much. We want to hear a good discussion upon the neglect of meadows in Cheshire, upon the improvement of the same, and upon the best mode of making hay, and upon the autumn clearing of land after straw crops. I have seen lately some very dirty farming in the neighbourhood of Knutsford,* so I hope that some gentlemen from the neighbourhood of Bridgnorth, where the land is very clean, and very well farmed, may attend at Chester next year, and give a lecture to our farmers on the Knutsford side of the county. And lastly—for I will not mention any more subjects, though I could mention many—we want to have a good system of education laid down for the children of agricultural labourers from the age of four to ten years. I have now laid before you what we do not want to hear, and also what we do want to hear, from the Royal Agricultural Society at Chester next year. Many may not agree with me, but some, perhaps, may be of my opinion. I have also ventured to suggest that some members of the Society, or the judges, should come into the county before the show to learn the system of Cheshire farming. I hope some gentlemen may be induced to follow my suggestion; and I hope that, when they have made themselves acquainted with the soil and climate and markets of the county, when they understand the system of Grass farming, and when they fully comprehend the mysteries of cheese-making, then they will, to use the words of Southey, give us 'Not the Mushrooms of fancy, but the fruits of understanding.'"

(*) Tillage land in Cheshire is certainly very dirty when compared with other counties, and farmers are rightly blamed; but perhaps too much blame is attached to them, for two reasons: 1st, because the land in Cheshire is given to grow Grass and weeds in great profusion, and it is very difficult to keep it clean. 2d, because farmers do not know how to manage tillage land: they have given, very properly, their sole attention to Grass land and cheese making. A farmer from Cambridgeshire, or Holderness, would make a very bad dairy of cheese. A very good lecture on "the best method of cleaning arable land" has lately (March 24th, 1858,) been given by Mr. Dutton, at Over, in this county, which merits the attention of all farmers. [*Note by the Author.*]

FLAX CULTIVATION IN IRELAND, 1864.

Return, showing, in Statute Acres, the Extent under Flax in each County in 1863 and 1864, compiled from Returns obtained by the Constabulary and Metropolitan Police, who act as Enumerators.

Counties and Provinces.	Extent of Land under Flax. 1863.	1864.	Difference between 1863 and 1864. Increase.	Decrease.
Ulster.	acres.	acres.	acres.	acres.
Antrim	21,576	34,847	13,271	..
Armagh	24,001	31,673	7,672	..
Cavan	10,260	15,924	5,664	..
Donegal	24,132	29,645	5,513	..
Down	44,963	59,137	14,174	..
Fermanagh ..	4,482	7,494	3,012	..
Londonderry ..	25,872	32,734	6,862	..
Monaghan	20,054	25,486	5,432	..
Tyrone	32,007	41,314	9,307	..
Total of Ulster	207,347	278,254	70,907 acres Increase in 1864.	
Munster.				
Clare	586	1,412	826	..
Cork	663	2,939	2,276	..
Kerry	378	1,236	858	..
Limerick	190	773	583	..
Tipperary	327	1,003	676	..
Waterford	38	257	219	..
Total of Munster	2,182	7,620	5,438 acres Increase in 1864.	
Leinster.				
Carlow	12	81	69	..
Dublin	1	31	30	..
Kildare	7	19	12	..
Kilkenny	50	270	220	..
King's	335	786	451	..
Longford	406	1,704	1,298	..
Louth	702	2,641	1,939	..
Meath	325	882	557	..
Queen's	63	268	205	..
Westmeath ..	159	595	436	..
Wexford	34	200	166	..
Wicklow	4	6	2	..
Total of Leinster	2,098	7,383	5,285 acres Increase in 1864.	
Connaught.				
Galway	300	1,537	1,237	..
Leitrim	887	2,226	1,339	..
Mayo	606	2,036	1,430	..
Roscommon ..	330	1,590	1,260	..
Sligo	259	1,246	987	..
Total of Connaught	2,472	8,685	6,213 acres Increase in 1864.	

Total Acreage under Flax in Ireland in 1863 and 1864	1863. acres. 214,099	1864. acres. 301,942

Total Increase in 1864, 87,843 acres.

Extent of Flax grown in Ireland in each of the following years:—

1851	140,536 acres.	1858	91,646 acres.
1852	137,908 ,,	1859	136,282 ,,
1853	174,579 ,,	1860	128,595 ,,
1854	151,403 ,,	1861	147,957 ,,
1855	97,075 ,,	1862	150,070 ,,
1856	106,311 ,,	1863	214,099 ,,
1857	97,721 ,,	1864	301,942 ,,

The foregoing return—which exhibits an increase of the area under Flax in every county—is published, as in previous years, in anticipation of the general abstracts, which will show the acreage under the various crops, and the number of live stock, by counties and provinces,—they will, I trust, be ready for publication in the course of the ensuing month.

I do not apprehend that any difference of importance will be found between the acreage under Flax here given, and that which will appear in the detailed tables of the general abstracts now in course of compilation. *William Donnelly, Registrar-General, Agricultural and Emigration Statistics Office, 5, Henrietta Street, Dublin, August 8.*

MILK.

The composition of this important fluid varies not only in different classes of animals, but also in different individuals of the same class. Further, the composition of milk is modified by the influence of food, climate, degree of activity, and health. Notwithstanding these variations an average can be arrived at by numerous analyses, and the following table will give a general idea of milk:—

	Woman's.	Cows'.	Asses'.	Goats'.	Ewes'.
Dried Caseine ..	15.2	44.8	18.2	40.2	45.8
Butter	26.5	31.8	1.1	33.2	12.0
Sugar of Milk ..	65.0	47.7	60.8	52.3	50.0
Salts	4.5	6.0	3.4	5.3	6.8
Water	881.8	870.2	916.5	868.0	885.4
	1000.0	1000.0	1000.0	1000.0	1000.0

The various substances comprised in milk may be classified under three heads—cream, curd or caseine, and whey.

Cream, according to Dr. Voelcker's* analysis, is composed of—

Water	61.67	.. ..	64.80
Butter	33.43	.. ..	25.40
Caseine	2.62	.. ..	7.61
Sugar of Milk	1.56		
Mineral matters ..	0.72	.. ..	2.19
	100.00		100.00

And may be considered as consisting of small, round, egg-shaped globules, composed of fatty matters, enclosed in a thin cell of caseine, which, being lighter than the fluid containing them, rise to the surface and constitute cream, and in proportion to the quantity of this removed from the milk, the latter becomes less opaque, and assumes a blue tinge. When exposed to the air for a short time in a dry place it loses water, becomes more compact, and constitutes what is called cream cheese. When churned, cream undergoes a complete change; the caseine cells are broken, and the fatty globules gradually adhere one to the other and form a solid fatty mass, called butter, and it is found, on an average, that 28 lb. of milk will yield 1 lb. of butter. Fresh butter is composed of—

Fatty matters	Margarine, Oleine, Caproine, Caprine, Butyrine, Caproleine,	.. .. ..	77.5
Caseine			1.6
Whey			20.9
			100.0

But as butter rapidly becomes rancid, it is necessary to adopt means to prevent this as much as possible, and the following are the usual methods, viz., working the butter well with water, and then adding 3 or 4 per cent. of common salt, or, melting the butter at a temperature below 212°; but the following method, employed by M. Bréon, appears to give general satisfaction. It consists in adding to the butter, water containing 0.003 of acetic or tartaric acid, and carefully closing the vessels containing it. The rancidity of butter is due to a fermentation generated by the caseine existing in it, which unfolds the fatty matters into their respective acids and glycerine, and as the volatile acids, butyric, caproic, &c., have a most disagreeable taste and odour, it is these which impart to butter the rank taste. Allow me to add, *en passant*, that whilst butyric acid possesses a repulsive smell, its ether has a most fragrant odour, viz., that of Pine Apple, for which it is sold in commerce.

Curd of Milk or Caseine has, according to Dr. Voelcker, the following composition:—

Carbon	53.57
Hydrogen	7.14
Nitrogen	15.41
Oxygen	22.03
Sulphur	1.11
Phosphorus	0.74
Total	100.00

And is easily recognisable by its white flocculent appearance. It is insipid and inodorous, like albumen, from which it differs in its insolubility in water, though it is dissolved by a weak solution of alkali or acid. But what chiefly distinguishes caseine is that it is not coagulated on boiling, and that rennet precipitates it from its solutions. Dr. Voelcker has proved, however, in his researches on cheese, that the commonly-received opinion, that rennet coagulates milk by decomposing the lactine into lactic acid, is incorrect, for he has coagulated milk while in an alkaline condition, and it is owing to the difference in the action of rennet on albumen and caseine, that chemists have been able to detect the presence of $\frac{1}{2}$ to $\frac{3}{4}$ per cent. of albumen in milk. This important organic substance not only exists in milk, but is also found in small quantities in the blood of some animals, such as the ox, and in a large class of plants, but more especially in the leguminous tribe, such as Peas, Beans, &c. Caseine is the basis of all cheeses, and when these are made with milk from which the cream has been previously taken, the cheese is dry, but when part of the cream has been left the cheese is rich in fatty matters as well as in caseine; and I may add that the peculiar flavours characterising different cheeses are caused by modifying the conditions of the fermentations which the organic matters undergo. The following researches made by M. Blondeau illustrate this point, as well as the modifications which cryptogamic life under peculiar circumstances may effect in the composition of organic substances, and his interesting results were obtained in studying the conversion of curd into the well-known cheese of Roquefort. He placed in a cellar some curd of the following composition:—

Caseine	85.42
Fatty matters	1.85
Lactic acid	0.88
Water	11.84
	100.00

to which he added a small quantity of salt. After a month, and again after two months, he analysed portions of the same, with the following results:—

* For further particulars on this subject the reader is referred to Dr. Voelcker's paper, published in the "Journal of the Royal Agricultural Society of England," vol. 24.

	After 1 month.	After 2 months.
Caseine	61.33	43.28
Fatty matters	16.12	32.31
Chloride of Sodium	4.40	4.45
Water	18.15	19.16
Butyric acid	—	0.67
	100.00	99.87

The above figures show a most extraordinary change in the caseine or curd, for we observe that the proportion of caseine gradually decreases, and is replaced by fatty matters. Considering the circumstances under which this phenomenon has occurred, there can be no doubt that this curious conversion of an animal matter into a fatty one is due to a cryptogamic vegetation or ferment; and if the Roquefort cheese be exposed to the air under a bell jar for 12 months, the decomposition becomes still more complete; for it is no longer the caseine which undergoes a transformation, but the oleine of the fatty matters. The following analyses clearly illustrate this curious action. Composition of the cheese after two and 12 months:—

	After 2 months.	After 12 months.
Caseine	43.28	40.23
Margarine	18.30	16 85
Oleine	14.00	1.48
Butyric acid	0.67	..
Common salt	4.45	4.45
Water	19.30	15.16
Butyrate of ammonia	..	5.62
Caproate of ammonia	..	7.31
Caprylate of ammonia	..	4.18
Caprate of ammonia	..	4.21
	100.00	99.49

The substances to which cheeses owe their peculiar flavour are ammoniacal salts, chiefly composed of various organic acids, such as acetic, butyric, capric, caproic, and caproleic. I cannot better conclude my remarks on cheese than by extracting from Dr. Voelcker's interesting papers a few of his numerous analyses of different kinds of cheese:—

	Cheshire.	Stilton.	Old Cheddar.	Double Gloster.	Single Gloster.	American.
Water	32.59	20.27	30.32	32 44	28.10	27.29
Butter	32.51	43.98	35.53	30.17	33.68	35.41
†Caseine	26.06	33.55	28.18	31.75	30.31	25.87
Sugar of milk, Lactic acid	4.53		1.66	1.22	3.72	6.21
†Mineral matter	4.31	2.20	4.31	4.42	4.19	5.22
	100.00	100.00	100.00	100.00	100.00	100.00
†Nitrogen	4.17	3.89	4.51	5.12	4.85	4.14
†Common salt	1.59	0.29	1.55	1.41	1.12	1.97

The principal application of caseine in arts and manufactures is that first introduced by Mr. R. T. Pattison, who used it under the name of lactarine for fixing pigments in calico printing. His process consists in drying the washed curds of milk, which he sells to the calico printer, who mixes it with a solution of ammonia or weak alkali, which swells it out and renders it soluble in water. To a solution of this substance, of proper consistency, he adds one of the tar colours, prints it, submits the goods to the action of steam, which drives off the ammonia, leaving fixed on the fabric the caseine and colour. In consequence of the insoluble compound which caseine forms with lime it has often been used as a substitute for glue or linseed oil in house painting, and it may be useful to some of my audience to know that when caseine is dissolved in a concentrated solution of borax, an adhesive fluid is formed, which is capable in many cases of serving the purposes of glue or starch. Mr. Wagner has made another useful application of caseine, mixing it with six parts of calcined magnesia and one part of oxide of zinc, and a sufficient quantity of water to make a pasty mass, which he leaves to solidify, and when dry it is extremely hard, susceptible of receiving a high polish, and is sold as a substitute for meerschaum.

Whey.—According to Dr. Voelcker, the composition of whey is as follows:—

Water	89.65
Butter	0.79
Caseine	3.01
Sugar of milk	5.72
Mineral matters	0·83
	100.00

When whey is concentrated to the state of syrup, and kept in a cold place, it gradually deposits fine well-defined crystals, which, on further purification and re-crystallisation, yield white quadrangular prisms of a substance called lactine, or sugar of milk, which is highly interesting. It is remarkable that while sugar of milk has only been known in Europe for a comparatively short period, where homœopathists are its principal employers, in India lactine has been known for a great number of years. Let us now study some of the chemical facts connected with sugar of milk. Thus cane sugar, when acted upon by nitric acid, gives oxalic acid, whilst lactine gives mucic acid; cane sugar, when unfolded under the influence of a ferment, gives alcohol and carbonic acid; lactine yields lactic acid. As the latter transformation is most important, in a physiological and chemical point of view, allow me to dwell upon it for a few minutes. The substance which possesses the property of most readily converting lactine into lactic acid, is caseine after it has undergone some peculiar modification, which renders it a ferment. Thus when milk leaves the cow it is alkaline, but when exposed to the air it rapidly becomes acid, and this is due to the conversion of lactine into lactic acid, a change most interesting as a chemical fact, since both lactine and lactic acid have the same composition, the only difference being that two equivalents of oxygen and two of hydrogen cease to exist as such in the acid, but may be considered as combined in the form of water with the remaining elements:—

Lactine	...	C_{12}	H_{12}	O_{12}	
2 Lactic acid	...	$(C_6$	H_5	O_5	HO)

M. Pasteur has shown that this lactic fermentation is not merely confined to milk, but that it is a peculiar fermentation, differing from the previous one, which frequently occurs during the decomposition of organic matters, and is due to a distinct ferment of its own; and his researches on lactic fermentation have explained the fact, observed by M. Pelouze, some years since, that when a vegetable substance, such as sugar or starch, was put in contact with chalk or other alkali and an animal substance, lactic fermentation ensued, but until the researches of M. Pasteur, we did not know why sugar and starch, in these circumstances, should give lactic acid instead of alcohol and carbonic acid, which would be the result of a fermentation produced by yeast. Lactic acid is a most interesting substance to the physiologist, for it is found in large quantities, free or combined with lime, in gastric juice, in the muscular part of animals, or with soda, in blood, and its production is easily accounted for when we remember that it can be produced from the starch and sugar existing in our food. When lactic acid is purified by various chemical means and separated from the fluid in which it is combined, it presents itself as a syrupy fluid, of an intensely acid reaction, which, when submitted to the action of heat, first loses its one equivalent of water, and becomes anhydrous lactic acid, and on a further application of heat loses still one equivalent of water, and is transformed into a neutral substance called lactide. This acid, in a free state, has not yet received any important application in arts and manufactures, but I have little doubt that it will some day be largely employed, for we have noticed in a former lecture its advantageous use when produced from Rye and other amylaceous substances in removing the lime from various skins intended to be tanned or prepared as there described, and Mr. E. Hunt has used it in the form of sour milk for the conversion of starch into dextrine (see Journal of the Society of Arts, December 23, 1859). I wish now to say a few words on the mineral substances existing in whey, and which play a most important part in milk as a nutritious substance. We are all of us too apt to overlook the importance of the mineral elements in food, and to consider as essential the organic matters only. In milk, however, its alkaline salts, and especially the phosphate of lime, are as essential (as food) as caseine or fatty matters, for if an infant requires the lactine to maintain respiration and the heat of the body, the caseine to contribute to the formation of blood, the phosphate of lime is equally essential to the production of bone; permit me here to state that the practice adopted by some mothers of feeding infants upon amylaceous substances, such as arrowroot, sago, tapioca, &c., in place of milk, is most pernicious, for these contain neither flesh nor bone-forming element, and milk is the only proper food for infants.

Having now examined the general properties of some of the most important constituents of milk, let us say a few words on that fluid in its integrity. We all know how rapidly milk becomes sour, especially at a temperature of 70° to 90°, and as this is owing, as already explained, to the formation of lactic acid, the best way to preserve milk sweet for domestic purposes is to add to it every day a few grains per pint of carbonate of soda, to keep the milk alkaline. The possibility of preserving milk for a lengthened period has repeatedly occupied the attention of scientific men, as a most important problem to solve for the benefit of persons undergoing long sea-voyages, but up to a recent date with very imperfect success. One of the best plans proposed is to add to milk 7 or 8 per cent. of sugar, and evaporate the whole, agitating all the milk to prevent the formation of the skin, and when reduced to one-fifth of its bulk to introduce it into tin cans, which, after being subjected for half-an-hour to a temperature of 220°, are hermetically sealed. In 1855, l'Abbé Moigno drew the attention of the members of the British Association at Glasgow to milk which he stated contained nothing injurious, and which would keep for a long period. This statement has proved correct, for I have here some milk which has been in the hands of the Secretary of this Society since that period, and which, on being opened to-day, was found perfectly sweet. But if l'Abbé Moigno's process has remained a secret, M. Pasteur has succeeded in effecting the same end, and probably by the same method. Thus he has found that if milk be heated to 212°, it will only remain sweet for a few days; if heated to 220° it will remain sweet for several weeks; but if to 250° (under pressure, of course) the milk will keep for any length of time. This, according to M. Pasteur, is owing to the spores or eggs which generate lactic fermentation being destroyed by the high temperature, and thus the possibility of fermentation is put an end to.

The adulteration of milk by various substances stated to have been discovered therein, has, I think, been greatly over-estimated, as I have never found any of them in the samples of milk which I have analysed—in fact the most easy and cheapest of all is the addition of water. It is comparatively easy to ascertain if milk has been tampered with; but, without entering into details of the methods necessary to estimate the exact extent of adulteration, I may mention the following plan:—If a glass tube, divided into 100 equal parts, is filled with milk and left standing for 24 hours, the cream will rise to the upper part of the tube, and, if the milk is genuine, will occupy from 11 to 13 divisions. Another practical method is to add to the milk a little caustic soda, and agitate the whole with a little ether and alcohol, which dissolves the fatty matters; this ethereal solution is removed from the milk and evaporated, when the fatty matters remain, and experience has shown that 1000 parts of good milk will yield 37 parts of fatty matters. Any milk leaving no more than 27 must have been tampered with. Dr. Voelcker suggests the employment of a hydrometer as a means of ascertaining the quality of milk, as the specific gravity of that fluid is an excellent test. From a great number of experiments he has ascertained that good new milk has a sp. gr. of 1.030, whilst if good milk is adulterated with 20 per cent. of water, its sp. gr. will fall to 1·025. *Dr. Crace Calvert before the Society of Arts.*

TRIALS OF REAPING MACHINES.

THE trial of the Reaping Machines in connection with the North Lincolnshire Agricultural Show, took place at Gate Burton on Friday last, August 12, in a field belonging to Mr. Harpham. From the number of machines exhibited at the show yard, and the fact that the present year is considered very favourable for their operation, an exciting and severe contest was expected. The number of machines actually put in competition was nine, embracing some from the most noted and approved makers, including R. Cuthbert & Co.'s one and two-horse reapers, Picksley & Sims', Bamlett's, Woods', Burgess & Key's "self raker," Hornsby's self-delivery and one-horse manual delivery ditto.

The trial field embraced about 16 acres of Wheat, very strong but nearly all standing, except in some few places; about one acre and a half was allotted to each machine, and after a few rounds by each, the pieces was measured off, and the cutting commenced against time. Considerable difference was manifested both as to time and the quality of the work done. R. Cuthbert and Co.'s 2-horse machine cut nine-tenths of an acre in 33 minutes; Bamlett's 1 acre in 45 minutes; Picksley and Sims', and Woods' in about the same time. The self-delivery machines were much longer and made very indifferent work. After a somewhat long and severe contest, the 1st prize of 10*l.* given by the Right Hon. the Earl of Yarborough, President of the Society, was awarded to Mr. H. Smith, of Winterton, R. Cuthbert and Co.'s agent for Lincolnshire; and the 2d prize of 5*l.* to Messrs. Hornsby's 1-horse reaper. This is the fifth time the North Lincolnshire prize has been awarded to Cuthbert & Co.'s reaper.

On Saturday an extensive trial of reaping machine took place under the auspices of the United Agricultural Society of East Lothian. The competition took place on the farm of Athelstaneford, near Drem, where Mr. Douglas, the famed breeder of farm stock, had provided a field of 65 acres of Barley, divided off into lots of about 1¼ acre, and a field of Oats of 40 acres, divided into lots of nearly an acre each. The weather was extremely favourable for the competition, and the crop cut was in capital condition. The Barley was on a nearly level field, and was a full average crop; the Oats, which were in a field with a gentle slope, were light in the straw, but fully up to the average Oat crop of the season. Upwards of 30 machines were entered for the competition, but several were withdrawn. Several more were not brought forward, some of them owing to the machines having been missent or delayed by the railway company. There were very general complaints on the ground as to the conduct of the railway in the matter, and the competition was delayed fully an hour later than the time announced for its beginning. 18 machines in all took part in the competition, displaying fully the different principles of construction and working of those now in the market. Four were on the self-delivering principle—namely, Samuelson & Co.'s two-horse machine, Brigham & Bickerton's two-horse and one-horse reapers, and M'Cormick's sheaf-delivering machine, the latter exhibited by Mr. Todd, of Castlemain. The manual delivery reapers were—two by Mr. Halliday, of Haddington; two by Mr. Wallace, Alexandria, Dumbartonshire; two by Picksley, Sims, & Co.; one Pixley machine exhibited by Mr. Hume, Coldstream; a two-horse band-delivery reaper by Mr. Gray, of Brownrigg; a two-horse reaper by Brigham & Bickerton; a "Buckeye" combined reaper and mower by the same firm; a Gardner & Ainslie machine, shown by Mr. Reid; and a new two-horse reaper by Messrs. G. & W. Porteous, of Haddington. There were also one of the "Eclipse" one-horse machines of Samuelson, and a one-horse "Excelsior" of Brigham & Bickerton. The extent of the competition brought together a large number of the leading agriculturists of Scotland to witness the interesting sight. The judges were the

Marquis of Tweeddale, Mr. Henderson, Byres; Mr. Smith, Steventon Mains; Mr. Wyllie, Bolton; and Mr. Russell, Coalstonemains. The reaping began on the firing of a gun shortly after 11, and concluded about 5 in the afternoon, an interval taking place between the cutting of the Barley and the Oats, during which time a large party of gentlemen dined in the tent, the Marquis of Tweeddale presiding. After the allotted spaces in the two fields had been cut, the judges went minutely over the work, and also inspected the mechanism of most of the machines. They then selected a few for a further trial under their own immediate view, and after consideration gave the following awards:—For manual delivery machines—1st prize, Halliday, Haddington; 2d ditto. Brigham & Bickerton's "Buckeye;" 3d ditto, Halliday, Haddington; 4th ditto, Wallace, Dumbartonshire; 5th ditto, Humes, Pixley; 6th ditto, Wallace, Dumbartonshire. For self-delivering machines—1st prize, Samuelson & Co.; 2d ditto, Brigham & Bickerston's two horse. For the best reaper in the field, Mr. Halliday, Haddington. The machine placed first is the same as that with which Mr. Halliday took the first prize at the competition at Yester, in the same district in 1861, but with considerable improvement. It differs from the machine placed third in having a compound acting guiding wheel, by which the machine is easily turned, and which has the merit—of considerable importance on a Grass bottom—of not cutting up the soil, however sharply it may be turned. Both Halliday's machines are provided with a very simple arrangement, by which one lever throws the machine out of gear and at the same time lifts the knives out of the ground. This is by many deemed an advantage, though it has been objected that, as the knives cannot be lifted without stopping the cutting, there is not the same facility for clearing obstructions, such as stones, as is given in reapers where the actions are not conjoined. The balance arrangement for lifting the knives in Samuelson & Co.'s one-horse machine was much admired. There were, however, no prizes given for one-horse reapers. Brigham & Bickerton's machines, of which there were five on the ground, took both the 2d prizes. The "Buckeye" is a strong and rapid working machine, and gave great satisfaction. Mr. Wallace's reapers, which stood fourth and sixth, differed from each other in the arrangement of the wheels—one of them having two large wheels, while the other was constructed with one only. The Pixley machine, shown by Mr. Hume, started very late, owing to its detention on the railway, but succeeded in taking its place in the prize-list. The easy draught and excellent working of Samuelson's self-delivery machine won it the first place in that class. Its light draught is materially assisted by the action of the teeth, which pass through two fingers at each revolution, thus lessening the number of revolutions necessary to give speed to the cutters. The same arrangement is used in the "Eclipse" machine. The band-delivery machine of Mr. Gray excited considerable attention by its novelty. In it a girl follows the machine, placing a "whippie," or binding straw, on the tilt-board after each sheaf is delivered. The band is thus found lying beneath each sheaf on the ground. In every respect the competition went off well, and the work done was throughout good. So much was this the case that the opinion was freely expressed that with any of the machines on the ground a farmer would be well served.

IMPORTS AND EXPORTS.

The Commissioners of Customs have issued their report on the year 1863. The following are extracts:—

"Beginning with the return of the declared values of British and Irish exports, and comparing those of the six last years, we find the figures to be as follows:—In 1858, 116,608,756*l.*; in 1859, 130,411.529*l.*; in 1860, 135,891,227*l.*; in 1861, 125,102,814*l.*; in 1862, 124,992,264*l.*; and in 1863, 146,489,768*l.* So great has been the stimulus given to our manufactures during the year just past by the general prosperity of the country, that even the values of 1860, the highest previous year on record, have now been surpassed by nearly 11,000,000*l.*, an increase of 7 per cent., and those of 1862 by more than 22,000,000*l.*, an increase of 18 per cent. There is a rise in the value of haberdashery exported of more than 750,000*l.*; in hardware and cutlery, of 500,000*l.*; in linen yarn and linen manufactures, of 2,000,000*l.*; in machinery, of 250,000*l.*; in iron and iron manufactures, of 1,750,000*l.*; in other metals, of 1,500.000*l.*; in woollen yarn and manufactures, of nearly 3,500,000*l.*; and of cotton yarn and of cotton manufactures, of nearly 2,000,000*l.* and nearly 9,000,000*l.* respectively. The general result of the exports of British and Irish produce to all foreign countries is an increase of nearly 13½ millions, or 16 per cent., the figures being for 1862, 82,096,915*l*, and for 1863, 95,570,114*l.* The remainder of the 22,000,000*l.* increase on exports generally has been absorbed by our colonial dependencies. India, as usual, has taken the lion's share, nearly 20 millions' worth of goods. The total values of the British and Irish exports to the British possessions are 50,919,654*l.* as against 41,895,349*l.* in 1862, an increase of nine millions, or 21 per cent.

"In the same manner the real values of the foreign and colonial exports have risen from 42,175,870*l.* in 1862 to 49,485,005*l.* in 1863, an increase of upwards of 7,000,000*l.*, or 17 per cent. as compared with one of 25 per cent. last year.

"The real values of the imports continue steadily to advance in an increasing ratio every year. Last year we recorded a rise of 4 per cent. in 1862 over 1861, as compared with one of 3 per cent. in 1861 over 1860. We have now to record one of 10 per cent. in 1863 over 1862. The figures are as follows:—In 1861, 217,485,024*l.*; in 1862, 225,717,976*l.*; in 1863, 248,980,942*l.*, showing an increase of 23 millions. This is the more wonderful when we consider that our imports from America, which fell in 1862 from 49 to 27 millions, have in 1863 experienced a still further decline of more than eight millions, or 29 per cent.—viz., from 27,715,118*l.* to 19,570,815*l.*

"We come now to our usual comparison of the quantities of the principal articles imported, and find an increase in 11 out of 14. 1st. Cotton.—The quantity of this article has advanced from 4,678,333 cwt. to 5,978,422 cwt. 2. Coffee this year shows the very large increase of 117,354,329 lb., as against 94,041,883 lb. in 1862. 3. Hemp and jute, 2,290,946 cwt., against 1,951,708 cwt. 4. Provisions (excluding eggs, the number of which has also largely increased) show 4,602,934 cwt., against 4,031,174 cwt. 5. Spirits, 10,521,131 gallons, against 10,281,586 gallons, rum having fallen off, and brandy and geneva increased. 6. Sugar (unrefined), 10,724,647 cwt., against 9,884,191 cwt. 7. Tea, the importation of which rose from 96,577,383 lb. in 1861 to 114,787,361 lb. in 1862, has again advanced in a still more remarkable way, viz., to 136,806,319 in 1863, partly owing to the transit to America and Russia from China being now performed through this country, and partly, no doubt, from the reduction of the duty having encouraged extended importations. 8. Timber and wood goods show 3,379,736 loads against 2,886.028 loads. 9. Tobacco shows 55,122,048 lb. as against 42,306,034 lb. in 1862. 10. Wine shows 14,186,189 gallons, as against 11,960,676 gallons. The quantities are as follows:—Spain, in 1862, 5,365,647 gallons, and in 1863, 6,716,560; Portugal, in 1862, 3,048.491, and in 1863, 3,594,885; France, in 1862, 2,244,727, and in 1863, 2,186,701. The produce of the Madeira Vines has still further fallen off from 47,102 gallons to 39,460 gallons, while the Cape growers appear to have determined on a fresh struggle on equal terms against foreign competition by sending us 105,165 gallons against 49,455 in 1862. The importation from Italy has also considerably advanced after the decline of 1862, and now exceeds that of 1861 by 40,000 gallons. 11. Wool shows 174,094,062 lb., as against 168,836,713 lb., the largest importation yet known.

"To turn to the three articles of which the quantities imported have decreased:—

"1. Corn and flour show 13,857,399 qrs. and 5,233,789 cwt., as against 16,375,192 quarters and 7,225,048 cwt. in 1862. This falling off is, of course, owing to the abundant harvest in this country, and is therefore in every respect a matter only for congratulation.

"2. Flax (dressed and undressed) shows 1,458,962 cwt. as against 1,798,351 cwt. in 1862, and 1,333,679 cwt. in 1861. The decrease is evidently only owing to the importation of 1862 having been unusually large, and is, moreover, a sign that Cotton has been more plentiful last year than it was in 1862.

"3. Silk (raw) gives 9,221,145lb. against 10,372,123lb. in 1862.

"Before proceeding to our record of the quantities of the principal articles entered for home consumption, we think it may be interesting, for the purpose of showing the magnitude of our commercial transactions with America and France, to give a comprehensive view of the state of our trade, inwards and outwards, with those countries, for the year 1863:—General imports from America, 19,570,815*l.*; import of bullion from America, 8,147,524*l.*; total inwards, 27,718 339*l.* Exports (British and Irish) to America, 15,351,626*l.*; export of bullion to America, 54,195*l.*; foreign and colonial exports, 4,235,557*l.*; total outwards, 19,641,378*l.*

"From France our general imports have been 24,024,619*l.*; import of bullion, 1,444,270*l.*; total inwards, 24,468.889*l.* Exports (British and Irish) to France, 8,667,138*l.*; export of bullion, 4,760,984*l.*; foreign and colonial exports, 14,271,152*l.*; total outwards, 27,699,274*l.* Thus, while it would appear that we are indebted to America on the direct transactions of the year in more than 8,000,000*l.*, which we have taken from her in goods or in bullion over and above what she has received from us, we seem to stand, on the other hand, in the position of creditors towards France, on the balance of the accounts of our direct trade for the year with that country, to the extent of upwards of 2,000,000*l.*

"We shall now proceed to show that the large importation of articles necessary for the use and comfort of mankind which we have just detailed has not been made upon a false estimate of the consuming powers of the country.

"The returns of the quantities entered for home consumption in the year 1863 show us that out of 11 principal articles 8 have experienced a rise. The consumption of cocoa has risen 4 per cent; of currants 9 per cent.; of raisins 11 per cent.; of tea 8 per cent. This is the largest increase in the consumption of tea that has occurred since 1857, and it is to be accounted for in the same way as in that year—viz., by the reduction of the duty. In 1857 the duty on tea was reduced from 1*s.* 9*d.* to 1*s.* 5*d.* per lb., and the quantity consumed rose from 63,200,000 lb. to 69,100,000 lb. in round numbers. The same result has followed the reduction made last year from 1*s.* 5*d.* to 1*s.*, though the increase has not been quite so large in proportion—viz., from 78,800,000 lb. to 85,200,000 lb. in round numbers. The former reduction, however, took effect on the 6th, and the latter not till the 25th of April. The consumption of sugar (unrefined) has risen 2 per cent., that of refined having slightly fallen off; of spirits 6 per cent., the increase being all in the imports of brandy and geneva; of tobacco 5 per cent. Wine (our last article) shows a rise of 7 per cent.—viz., from 9,803,028 gallons to 10,478,401, though the consumption still falls short of that we recorded for 1861. The wines of Spain have been more in demand during the last year than those of either of her rivals, Portugal or France. For while the consumption of French wines has risen from 1,901,200 gallons to 1,937,555 gallons, or 2 per cent., and that of port from 2,350,457 gallons to 2,618,680, or 11 per cent., that of Spanish wines gives an increase from 3,955,424 to 4,531,424 gallons, or 14 per cent. This return is also in excess of that for 1861 by nearly 500,000 gallons, while those for France and Portugal still fall short of the quantity consumed in that year. The quantities of each class of wine consumed in the year have been—of red, 4,529,053 gallons, and 5,949,348 gallons of white; the stronger wines still continuing to command four-fifths of the whole consumption of the country. There are only three articles which show a decrease of consumption. Corn and flour have fallen off from 16,354,397 qrs. and 7,191,384 cwt. to 13,794,834 qrs. and 5,182,184 cwt., or 15 per cent. and 28 per cent. respectively. This, as we said above, has arisen of course solely from the abundant harvest, and the increased quantities of home-grown grain consumed in 1863. The fall in coffee, viz., from 34,664,135 lb. to 32,986,116 lb., a decrease of 4 per cent., we can hardly account for altogether, as in previous years, by its wholesale adulteration with chicory, inasmuch as since April 1863, the duties have been nearly equalised, although we believe the dealer still finds it his interest to adulterate, the price of chicory being so much lower than that of coffee. We may, however, attribute a portion of the loss to the fact of the increased demand for tea, now that the duty on that article has been reduced, having somewhat affected the market for coffee. In the face of so very large a reduction of duties as has been made by the Government in the year 1863, amounting in all to a sum estimated at 1,708,785*l.* a year, it cannot, of course, be expected that the Customs' revenue should show anything but a very considerable decrease. The total gross receipt has fallen from 23,993,546*l.* in 1862 to 23,588,932*l.* in 1863, and the net receipt, after deduction of repayments and drawbacks, from 23,709,505*l.* to 23,217,637*l.*, a decrease of 491,868*l.*, or nearly half a million.

"The comparative returns of shipping show, first, that the increase in the tonnage entered inwards and cleared outwards in 1863, as compared with 1862—viz., from 26,535,439 tons to 26,738,733, or an increase of 203,294 tons, is entirely in the British shipping, and tonnage of foreign vessels inwards and outwards having fallen off from 10,588,579 tons to 9,719,341 tons, while that of the British has risen in the year from 15,946,860 tons to 17,019,392 tons or more than one million of tons. 2dly. That the number of new vessels built and registered in the British empire in 1863 is 2090 of 507,606 tons burthen, as against 1933 of 451,534 tons, an increase of 157 vessels and 56,072 tons. 3dly. That though the aggregate number of vessels existing on the registry has fallen in the past year from 39,427 vessels to 38,282, yet the tonnage at the same time has risen from 6,041,358 tons to 6,427,273 tons, and the number of men employed as crews from 304,171 to 312,722, so that the carrying power of British shipping has increased instead of diminishing."

RESTRICTIVE CLAUSES IN LEASES.

Like all human laws made for the purpose of keeping the vicious from perpetrating mischief upon their neighbours, these covenants introduced are expressly for the purpose of preventing an ignorant, selfish, or evil-disposed tenant from injuring the farm he occupies; and it is therefore usual for landlords not to interfere unnecessarily whenever they feel that they have a tenant equal to the management of the farm, and who is evidently improving it yearly as he goes on. And it behoves the landlord to sanction the proceedings of the tenant by entering into a new contract a few years before the expiration of the current lease, thereby ensuring the improvements to him, or the money spent in these improvements should be repaid by valuation, in proportion as they may be unexpended at the expiration of the term.

The injury that a tenant has the power of inflicting upon a farm, by a scourging process of cropping and reduced cultivation, in the last years of the term, can hardly be over-estimated, and it behoves every landlord to guard against it as far as possible. This can only be effected by stipulations introduced into the lease at the time of the tenant entering upon the occupation. And in case no new agreement should again have been entered into at the commencement of the fourth year

next preceding the expiration of the lease, these stipulations should be to the effect that the landlord agrees to pay for all draining, for all extra manuring by manure purchased and brought on, or by oil-cake consumed, and for all other permanent improvements made by the tenant from that time, in such proportion as they may be unexpended at the expiration of the lease; a deduction for any dilapidations to the farm by neglect or improper management being made by the valuers, whose decision, by themselves or umpire, should be binding, and conclusive as regards both parties.

Let us add, that as the wealth and intelligence of the farmer increase, it becomes more and more the interest of the landlord to leave the management of the land which he has leased for a term of years to the unshackled enterprise of the tenant. Except during the last few years of the lease, to which the above paragraph refers, it must be the interest of the farmer to maintain the fertility of the land at as high a pitch as possible; and the purpose both of the owner and occupier of the land is best served by leaving the latter to do all he knows for his own interest, which is that also of his landlord, unshackled by restrictions whether as to cropping or as to sale of produce. Towards the end of the lease, when the interests of the owner and occupier may diverge, the former should endeavour to renew the engagement of the latter at such a rent for another period as the land may then be worth; and failing that, he should insert in the lease that during the last four years of the term no straw or hay be sold without an equivalent purchase of manure, no two white-straw corn crops should succeed each other; all root crops should be consumed on the land, and one-fourth the land should lie in Clover every year.

There can be no doubt that it is not merely the personal interest of the landowner that is served by the adoption of the lease for a term of years, with any other expedient which increases the quantity of capital invested in the cultivation of the land, but every other interest is also served. The general adoption of thus tilling land is a matter of public policy; and we make no excuse for adding here the following statement of the argument on this subject:—

"Everybody is benefited as the quantity of invested farm capital increases—the landlord, for rent in the long-run is in proportion to the fertility of the soil, whether it be natural or artificial—the farmer, for, notwithstanding what economists tell us about the greater costliness of every fresh addition to an artificial fertility, practical men know well that from the latest outlay on the soil there is not only its own return but an increased benefit derived from what has been done before; for instance, that besides the advantages conferred directly by the steam plough, there is an increased efficiency given by it to the land drainage which had preceded it; that besides the direct advantage of the application of lime, there is the increased force given by it to previous manurings; and many other illustrations could be quoted. That the labourer and the consumer are benefited by the increased outlay and effort of the farmer is too plain to require a proof.

"The converse of the proposition is equally true—everybody is injured by that which either occasionally or constantly checks the investment of farm capital. The value of the land, the profits of agriculture, the money paid as wages, the produce sent to market, all diminish with the slackened effort of the farmer. There is thus no question of greater agricultural importance than—how to encourage the investment of capital in the land.

"There are two principal plans which landlords have adopted in order to a satisfactory solution of this question. They have offered their land to wealthy tenants for a term of years at a fixed annual rent, letting it, with as few restrictions as possible, be dealt with as the tenant chooses, in order to the creation of fertility, and the conversion of that fertility to his profit. And this, it cannot be doubted, is the only true way to encourage agricultural enterprise. It has the two great advantages of giving to regular professional agriculturists the certainty of a home for a term of years, and to the more energetic among them an undisturbed and certain field for their enterprise. The lease alone, however, is not a security for the permanence of the fertility which it creates.

"When tenants have made the outlay which the circumstances of the farm require, and the fertility thus conferred is rewarding their exertions, the end of the term draws near, and knowing that then their opportunity is about to cease, it no longer becomes their interest to make any other outlay than is repaid within the year or by the current crop. They draw upon the artificial fertility which they had created until it ceases with the end of their occupation as it began with its commencement.

"When 'the lease' alone exists, there is thus a tendency to an intermittent fertility. And some modification of the relation between the landlord and the tenant is needed to make the latter maintain good and energetic management throughout his occupation of the farm. This modification is either in the nature of a series of restrictions as to cropping and sales of farm produce during the last few years, to which we have referred above; or it is in the nature of a provision, by which any extraordinary expenditure by the tenant in farm management and improvement is repaid to him so far as the benefit of it may remain unexhausted when his lease expires."

The provisions which are to have this effect, by which it becomes the interest of the farmer to keep the land at its utmost fertility to the very end of the lease, constitute the code of what the Vale of Evesham Agricultural Society call "landlord and tenant right." It is plain that they are not antagonistic but supplementary to the lease for a term of years—that the latter more especially is the incentive to agricultural enterprise, and that the former ensures the maintenance of the fertility thus created.

This system of tenant-right valuation, by which along with the security, not of a lease but of the personal character of the owner of the land, the fertility of very large districts in this country is maintained at a very high pitch, has long been known and praised by agricultural writers as characteristic of the best parts of Lincolnshire and some other counties. Thus the usual allowances in the north of Lincolnshire to outgoing tenants are as follows:—

Bone dust is considered to last three years—a tenant receives two-thirds the cost of what he applied the previous year, and one-third of what he applied the year before that. For marl or chalk, an allowance is made until seven years have expired. For lime, the allowance lasts five years. For draining with tiles, it last seven years. "It is plain that there is nothing in the two systems of lease and tenant-right to make them antagonistic; they should be combined in order to the best result." And this, accordingly, is the plan recommended by a committee of the Vale of Evesham Agricultural Society, which, under the presidency of Mr. E. Holland, M.P., has lately issued a scheme for the preservation of both landlord and tenant right, of which the following are the principal provisions.

After the usual arrangements for the appointment of valuers and arbitrators between the landlord, or incoming tenant, and the outgoing tenant, it is declared:—

"At the expiration of the tenancy, one-half part of the arable land shall be clean, and fit for planting with white straw crops. One moiety of such half part shall have been fallowed with green crops during the previous summer, the other moiety thereof shall have been wholly under Clover or mixed Grass seeds, or parts in Clover, and the rest Beans after being manured. None of the Clover or other Grasses shall have been allowed to stand for seed.

"One-fourth of the arable land shall have been sown in the spring preceding the termination of the tenancy with Clover or other proper mixed Grass seeds, upon land fallowed the previous year, and clean (or upon clay land farms this fourth may be not less than half Clover, the remainder fit to plant with Beans). The Clover seeds shall be supplied by the landlord or incoming tenant, not later than the 1st of March. If not so supplied, they shall be purchased (not less than 14 lb. to the acre) by the outgoing tenant, who shall be paid on production of vouchers for the same. He shall also be paid for sowing and harrowing, but shall not stock the seeds after harvest.

"Not more than one-fourth of the arable land shall require to be fallowed in the year after the termination of the tenancy, nor require an outlay of more than 50*s*. per acre to clean it; if it require less than that sum, the incoming tenant shall pay the difference.

"The incoming tenant shall pay 50*s*. per acre for all land in excess of one-half which, under the above conditions, is fit to plant with white straw crops, and shall be paid at the same rate for every acre short of one-half of the arable land.

"The incoming tenant shall pay 40*s*. rer acre for all the land whereon Clover or other Grasses have been grazed the whole summer by sheep, provided that it be clean, and that only one crop of corn has been taken since the previous fallow. The outgoing tenant shall be entitled to the sum of 50*s*. per acre for all clean fallows; if not clean, the cost of making them so must be deducted.

"The out-going tenant shall be paid one-half the cost of all purchased manures applied to green crops in the last year of the tenancy, and one-fourth of that in the last year but one, such cost not having exceeded 40*s*. per acre. All unprepared bones and lime used upon any part of the farm within the last four years shall be paid for, and burnt soil, where the application has not been less than 80 cubic yards per acre—one-fourth of the cost in each case being deducted for each year's use—and for every other fertiliser of a permanent character, such allowance as the arbitrators may determine. He shall also be paid one-half the cost for all oilcake or linseed consumed during the last year, and one-fourth of that consumed in the last year but one provided that it has been given to cattle and sheep, but not to horses, and does not in either case exceed the average of the three previous years.

"The outgoing tenant shall be entitled to the value of all growing green crops, and of all hay and straw remaining on the premises. The arbitrators shall fix the times for threshing and for delivering such straw to the incoming tenant.

"It is desirable that all draining should be done by the landlord, charging interest for the cost thereof; but where it has been done with pipes at the tenant's expense within the last eight years, and provided the extent and system have been approved by the landlord in writing, the cost not including carriage of materials, shall be repaid, subject to a deduction of one-eighth for every year's use; but in case the landlord has paid for materials, the cost of labour shall be considered as repaid in four years.

"All other permanent improvements made by the tenant with the landlord's previous sanction in writing, shall be paid for as the arbitrators may determine.

"Not less than 12 months' notice shall be given to terminate a tenancy."

We are glad to give currency in the pages of a standard work on valuations such as Bayldon's has become, to suggestions issued on such good authority as that of the Evesham Committee, and so well calculated as these appear to be to provide for the interests of both the landlord and the tenant, and to hinder that intermittent condition as to fertility of the land which prevails when leases without valuations of unexhausted improvements at the termination are the rule.

We conclude this chapter with one word of warning as to the possibility of an over-regard in this way to the interests of the outgoing tenant. He certainly has no right to a full valuation of all the improved conditions which his landlord's property has acquired while in his hands. The valuations recommended are merely for the purpose of securing him from any loss to which liberal farming to the end of his lease might subject him. "A great apparent increase in the intrinsic value of an estate may often arise from a comparatively inexpensive act on the part of the cultivator. Draining, liming, or subsoiling may sometimes increase the value of land far beyond the cost of the operation; but notwithstanding this, no claim can be justly made for more than this cost. Its effect has been so great, not because it has added to the soil anything for which the tenant paid, but because it developed and brought into action that which, though dormant then, had a pre-existence in the property of the landowner."

It is plain, then, that the sole object of the valuation of what has been called tenant right, is to induce a tenant to continue his usual practice hitherto of applying bone-dust and other manure, and of purchasing cake and other food for cattle, by letting him have his year, or two years, or three years' enjoyment, as the case may be, of the result, with a repayment of such a portion of the mere cost of the operation as would, at the termination of the lease, correspond to the years yet to run of the period during which the operation would still be fruitful.

It is well to bear in mind that excessive valuations of this kind at the commencement of a new tenancy are prejudicial to the value of land, by restricting competition for it to a less numerous class of farmers. When valuations on entry are not heavy, a larger number of applicants come forward in competition for any vacant farm. *Bayldon's Art of Valuing Rent and Tillage. 8th Edition. By J. C. Morton.*

Home Correspondence.

Rye-grass and Cattle Disease.—Since noticing the letters of Mr. Mechi, Mr. Wallace, and others in your *Agricultural Gazette*, respecting disease which appeared in cattle after depasturing on fields of Italian Rye-grass, I have examined the Rye-grass growing on the edges of green paths and headlands in our fields, and I find a considerable quantity of Rye-grass which has been, and some which still is, affected by the disease called "Ergot." The Ergot or "Spurred Rye" is known to possess deleterious and poisonous qualities on the human frame, though it is employed for special medical purposes. The question arises whether "Spurred Rye-grass" eaten by cattle, can, or may, produce disease in their system. The noxious qualities of the Ergot of "Rye" are mentioned in many works upon poisons, or medicines; but I do not recollect meeting with any observations respecting the existence of a similar disease in Rye-grass. *Nath. C. Barnardiston, The Ryes, Sudbury, Suffolk, Aug.* 17. [Rye-grass is not uncommonly ergotted; and much mischief, especially to cows in calf, has often been attributed to it.]

Crops in Norfolk.—What a serious drought we have had, and I may say still have! It has been the most trying season for the farmer and his live stock that I have any remembrance of, and I fear that we hardly yet know the worst of it, as there is no prospect of winter food for stock. As regards the Wheat and Barley crops in this district, I think they are both nearly of average quantity and quality. I have cut all my Wheat, and carted all except 8 acres; and I shall have carted a third-part of my Barley before this day is over. I am rather overstocked with bullocks, but they do not seem to suffer for want of feed; the water from the stream which I headed up three years ago with a sluice seeming to supply the place of Grass. *T.*

Wheat-carrying by Grant's Portable Railway.—It may interest many of your readers to know that this railway was yesterday employed on the estate of H. Bannerman, Esq., in this parish, in carrying Wheat to the stack, being, it is believed, the first work of the kind ever attempted by rail. A good crop was cleared off a 6-acre field in the course of the day, and stacked in the field in a decidedly expeditious and creditable manner; the frequent shifting of the branch line and turntable being effected with remarkable ease and despatch by one man. The tackle employed consisted of 60 rods of rails, two trucks with ladders, and two turn-tables. Although corn-carrying is not the kind of work for which the railway would be most useful in this district, where so little is grown, yet I feel it to be due to Mr. Grant, who has bestowed a very great amount of thought upon the subject, to state my conviction that the adaptability of the railway for carrying corn, as well as roots and manure, must be a most important consideration in the great corn and root-growing districts of the kingdom, especially on large holdings, where steam is used in the cultivation of the soil, and the horse-power of the farm is reduced to a minimum. Although the field in question inclined upwards to the stack, one horse only was employed to draw the two trucks coupled together. But it would very frequently happen in level districts that horses might be entirely dispensed with. As I have said, however, these considerations rather concern your corn-growing readers than the Hop-growers of this neighbourhood, who are chiefly attracted to the rails by the power which their great bearing surface affords, of getting out manure, hop-poles, &c. at any season without having to wait for a frost, and of avoiding that injurious kneading of the soil which carting off the root crops so often inflicts. *William L. Hubble, Steward to Henry Bannerman, Esq., Barn Hill, Hunton, Kent, August* 20. [How many men and boys were used; and what quantity of corn was got together?]

Societies.

Ormskirk.—Lord Stanley presided at the annual meeting of this Society last week, and thus referred to its uses and proceedings:—We are not a very ancient society—all the better for us, I say, because we are clear of antiquated rules and unsuitable customs. We are not an old society, but these are days when men live fast, and when the year does the work of half-a-dozen. We have seen within one generation on this very spot a village grow up into a town of 20,000 people; and we need not, therefore, be ashamed of owning that our society is a little younger than Southport—being only eight years old. Nor can we claim to be at present a very numerous body. We have upon our list as paying 10*s*. and upwards, 220 members, but

there have been fluctuations. Two or three years ago the number was rather larger than it is now, but I lay no stress upon that, because I consider we are still growing, and that we have not at all reached what may be considered as our permanent position. But in a society of this kind the number of enrolled members is no test whatever of the amount of the work which you have done, or which you are doing. There are very many persons who don't care to subscribe, but who, nevertheless, come as regularly as any subscribers to our yearly meetings, and who pay their shilling upon the ground, and who go away, having carried off whatever they could learn there in the way of agricultural experience. Now, those attendants, though they might not show on our lists, yet not only do some good to themselves, but very materially assist in the aggregate of our finances. I don't mean by that that I should not be very glad, for one, to see the subscriptions to this Society increased. I think they ought to be increased, and I think they will be increased; at the same time, I can make large allowances for men who are not very willing to part with money that has been hardly earned by their own labour, or by labour which they have honestly paid for. It is one thing to be free with your cash when you have made, God knows how much by speculation, at the risk of total ruin, and it is another thing to part with that which has been honestly and hardly earned. But what I do say is this, that the influence and usefulness of a society of this kind is not in any degree to be measured by the number of its annual subscriptions. I think we have a much better test in the attendance at the show-yard, and in that respect it shows a very marked improvement. The amount taken at the doors last year, I am told, was 117*l*. To be sure, it was wet, but that is not a very unusual thing in Lancashire. The amount this year I believe has not been accurately made up, but it this day considerably exceeds 200*l*., and that, I hope, is a fair measure of the progress we are making. On the whole, if we look back at the past, although we may not be able to point to any very brilliant or extraordinary achievements, still we may fairly say that we have done, and are doing, our work in a steady and unostentatious way. There is such a thing as making the pace too good to last, and spending all one's energies at the outset. Well, I hope we have not done that. Plants which are the fastest of growth are the most rapid also to decay. That has not been our case and I think we have taken root in the soil; and, although we expect to be blown about and buffeted, our association will grow up into a stately tree. Having discussed these financial details, let me say one word as to the value of local associations of this kind. There are some people who think it would be better if there were only one or two great agricultural associations in a county, and if all these smaller gatherings were done away with. I believe they are entirely mistaken. I don't look upon it that we take away one subscription or one visitor from the Liverpool and Manchester or from the North Lancashire agricultural societies. There are many gentlemen who attend here in their own neighbourhood, among their own friends, where they can recognise every other face they see, who would never think of taking the trouble of going to one of the inland towns among strangers halfway from here to Yorkshire. No, there are some people who say, "I can't afford to subscribe to both the county and the local society, and I prefer the local." That is true; but then the larger association may set this against it—there are many persons who acquire a taste for these meetings, and an inclination to compete at them, who would never have acquired that taste had not the opportunity been brought to their doors. There is another point. We are a little out of the way here. The greater societies very properly and naturally look to their balance-sheet, and, as that depends very much upon the number of admissions to the show-yard, they are always anxious to hold their meetings in the most central towns, where a large number of persons can be brought together. That is quite right for them to do; but I am afraid if we had to rely upon them exclusively, we in Southport and in Ormskirk might find ourselves, to use an American phrase, "left out in the cold." Well, I say, therefore, let us live and let live. There is ample room for our society; ample room for other associations of the same kind, and I hope that we may continue to flourish by the side, and, if they so please it, under the shade of our bigger neighbours. They won't hurt us, and I don't believe we shall hurt them. And now will you let me say a few words upon a question deeply interesting to us all, and which on these occasions we can't entirely avoid—namely, what are the prospects of agriculturists in these districts, what has been done, and what is doing here? I have always said, as I say now, recognising as I do the immense improvement in the past 25 years, that Lancashire farming is still not, upon an average, what it ought to be, and not what it will be. Partly this is due, I think, to the enormous increase of trades and manufactures in these districts, drawing off capital and energy in other directions; partly it is due, not to poverty, but to the overwealth of landlords, who draw many of them from coal and building land so large a portion of their rents, that to them agricultural operations are a secondary matter; and again, partly it is due to the unfavourable opinion—a prejudice, I think—as to the climate and soil of this country, which possibly prevents farmers from coming here from other districts. No doubt we have a damper soil and a colder climate than in the south; no doubt the sea wind does us no good; no doubt, most of our land requires a deeper and costlier drainage for making it really valuable; but on the other side we have great advantages to set against this. We have an almost entire freedom from such droughts as at this moment are causing the great anxiety and alarm over the south of England. We have more capital at our doors than is possessed by any county excepting the metropolitan county of Middlesex; we have a greater quantity of machinery; we can get better machinery, and we can get skilled men to manage it; and we can too, get what is as important—cheap coal to work with. The flat expanses of this county are singularly favourable for the operations of the steam plough; and what is perhaps more important than all, we have in Liverpool and the adjacent district a market absolutely insatiable, especially for dairy produce. There is one thing more. Whenever our wise men, who are now a good deal at sea on the subject, shall settle among themselves some plan for making the sewage of towns really useful—and I do think that will come before long—we shall then be in a position to take back from the towns as much as we send to them. Well, then, what is it that we want here, and that we can supply? In the first place, I think we want a more thorough conviction, especially among landlords and tenants, that farming, in order to be carried on efficiently, requires both capital and training. I do not look forward, as some people do, to see all small holdings extinguished, and to see the whole country divided into enormous farms and many hundred acres. I shall be sorry to see that day upon social grounds, and I do not believe it will be economically necessary. Now, as a general rule, the holdings in this country are smaller than they ought to be; but I believe—and I am speaking upon the judgment of high agricultural authority—I say, I believe that farms of moderate size, farms of from 100 to 200 acres, may be worked with all the appliances of modern skill and science, given only two conditions—that there shall be the requisite training in the farmer, and that he shall be able to combine with his neighbours to obtain those costly improvements which are necessary for modern farming, and which on his own private account he could not purchase. But we want something more. I have said it before, and I say it again, although I am afraid it is an old story,—I think that every good tenant, who is expected to stay permanently on the farm he holds, is entitled to ask for a lease, or for the offer of a lease. One feels, of course, that there is something rather pleasing in the idea of that relation which exists between tenants-at-will and a landlord, in which the parties are bound, not exactly by law, but by a sort of honourable understanding that exists between them. I have nothing to say against that, and where perfect reliance can be placed upon that understanding I don't doubt it is sufficient. But I do say this,—and in what I am speaking I am rather in my own mind addressing landlords than tenants,—I say that if a tenant is to be expected to lay out capital on his farm, it implies no distrust of the landlord, it is simply an ordinary and a proper business precaution, that he should insist upon having a lease. I may say that upon the estate of which I know most—upon the estate of Lord Derby—no good tenant has been, or will be, refused a lease except under some peculiar circumstances where the arrangements made are only temporary, and where some change in those arrangements is contemplated. Now, there is another matter which I, if I am not tiring your patience, should like to mention. It is quite right that the landlord, whose interest in the soil is permanent, should secure himself against ill-usage or exhaustion of the land by one whose interest may be only temporary. There can be nothing said against that; but that may in general be done by a few simple provisions, and I don't hesitate to say that leases, as they are framed over the greater part of the country, are in many—perhaps in most—cases coupled with conditions which are unnecessarily complicated and unnecessarily restricted. But then the answer is plain. If you don't want to enforce them, what is the use of having them? I believe that these two things—the one making the giving of leases the general rule, the other having leases drawn more simply than, as a rule, they are at present—I believe that those two matters would go very far to settle that question of land ownership of which we have heard something of late. And perhaps you will allow me to say a word about that matter. We have heard great alarm expressed of late lest the soil of England should be swallowed up by a certain number of great proprietors. We have been told that large estates are everywhere increasing, that small properties are everywhere dying out, and that therefore the bulk of the population is being separated from the soil. Now, I cannot speak for other parts of the country, but in these districts I will venture to say that, although there has been a very great amount of transfer, it will probably be found that the transfers have been, in by far the majority of cases, no transfer of the old possessors of the neighbouring property, but rather in favour of a new class of proprietors, who have made their money in towns. No doubt there are cases where estates have grown by economy and good management, as there are other cases where estates have been diminished by waste; but, take it upon the whole, the real change that is taking place is this—that the old small freeholder, burdened with debt and mortgage up to the ears, is being bought off, and his place is being taken by those who have acquired wealth in commerce or in manufactures. Now, I can't say that, as to that process, I see anything which ought to be objected to. In England the possession (I mean the ownership) of land is a luxury; and those, therefore, who are making their 10 per cent. securely in business will be glad to pay from 40 to 50 years' purchase for landed property—receiving, that is, from 2 to 2½ per cent. on their capital, and thus be sacrificing, so far as that amount goes, from three-fourths to four-fifths of what they are making. That is no uncommon case, that is, I conceive, the result of our national character.

The noble lord proceeded to observe that when a Frenchman had made a fortune his desire was to take a fine house in a fashionable street in Paris, while an Englishman, in similar circumstances, would buy an estate, and try to bring up his son as a country gentleman, and that he thought the latter the better taste of the two; but that it followed from the very existence of that taste that land could not be remunerative as an investment. Consequently land was a bad bargain to buy, but it was a good one to sell. A poor man would thus sell a small estate, which was heavily mortgaged, probably thinking, and thinking rightly, that he would do better by becoming a tenant on the land, and by investing the money he thus obtained in the purchase of stock, and in making other improvements, than by retaining a nominal ownership of the land without having the capital or the credit to make that really available in a financial point of view. And thus it was in this country that the number of small freeholds was gradually diminishing—but diminishing not, so far as his observation went, in favour of a few colossal properties, but rather of moderate-sized estates, purchased by capitalists who had acquired wealth elsewhere. He believed that if this state of things in England were investigated, county by county, and parish by parish, that would be found to be a true description. That was not a state of things that they need regret. Let them try to give the farmers a more independent possession, and let them encourage such excellent societies as that. He advocated the plan of giving to labouring men at a moderate rent freehold cottages (and railroads added to the facility for so doing), and remarked that the soil of England was not split up into estates of which it would take 100 to make a good-sized field. His lordship concluded by observing that, whether they agreed with him in what he had stated or not, he thought they would be of his opinion that it was better for him to discuss such matters as those to which he had alluded than paying them mere compliments. As to the show of that day, so far as his observation went, it had far outdone any of its predecessors; and though there were not so many implements displayed as might be desired, the show of horses was excellent, and of cattle generally very poor, while the display of fruit was entitled to high praise.

Reviews.

The History of Windsor Great Park and Windsor Forest. By William Menzies, Resident Deputy-Surveyor. Illustrated with Photographs by the Earl of Caithness and Mr. Bembridge, of Windsor. Longmans.

This superb volume, which has been for some years promised, has at length appeared. It is the result of careful and persistent antiquarian research, well directed professional labour, and remarkable literary ability. Describing the Park and Forest in successive chapters during the reigns of Elizabeth, of James I., and until the death of Charles II., from James II. to the death of George I., and during the rangership of William and Henry, Dukes of Cumberland—it relates the age of the existing plantations, the methods employed to determine it, the history of individual specimens of old trees, details of the utilitarian management during the Commonwealth, and the vigorous management as Ranger, of Sarah, Duchess of Marlborough.

The whole is interspersed with much interesting personal anecdote, and with historical and professional memoranda. We thus read as an extract from a document of the year 1625, that in the 22d year of the reign of Elizabeth, 13 acres of Cranbourne Walk in Windsor Forest had been fenced into the Great Park pales, and sown with acorns, "which is now become a wood of some thousands of tall young Oaks, bearing acorns, and giving shelter to cattle, and likely to prove as goodly timber as any in the kingdom." This plantation Mr. Menzies believes to be that large group of Oaks stretching from the back of the Park Bailiff's house and premises in the direction of Cranbourne, which is accordingly in all probability the oldest plantation in this country of which any definite history exists. Again, with reference to another plantation, the following is a note of professional value:—"An important lesson may be learnt from this plantation (one of 1718), and from the fine one of 1693, viz, that in all progressive thinnings of a plantation from the age of 20 years to one of 150 years, light and air *generally* must be sought for, not *special* individual regularity among the trees, and that the finest headed and straightest grown trees should always be left, to the exclusion of double-headed, forked, or bushy ones, though set out at exact distances. It would be a mistake because two or three fine Oaks are growing within 20 feet of one another at 40 years of age to separate them with the idea of thinning them. Give them light and air all round, and they will do well. In these plantations, which in my opinion are perfect both as regards their present state and the system of management which has been followed with them for one hundred years, we find two of the largest and finest trees growing at a distance of but 8 feet apart; we find four other remarkably fine trees also growing in a group at the respective distances of 15, 18, and 21 feet from each other. Indeed, the irregularity is such, that

were all the trees 21 feet apart, we should have nearly 100 to the acre, whereas there are only 30 to the acre, so that some of the Oaks are 50 feet or more apart."

In one of the chapters the date is given—1623—of the first mention of draining; in that year and the following various sums were ordered for the draining and the "trenching" of portions of the Park.

With George the Third's reign commence the notices of the Norfolk and the Flemish Farms, and of their management by Mr. Kent, a land-agent, from the year 1790. Although their cultivation was not profitable, nor even, in some particulars, pointed out by Mr. Menzies, well advised, yet "a most important object [one which has been regarded by his successors] was effected.

"His Majesty's example gave a great impulse to the improvement of farming land in the raising of green crops, draining, liming, and keeping clean; points which were then scarcely beginning to be understood, although we now treat them as the first elements of success in farming."—"The King continued to farm until 1813, when the Norfolk Farm was let to a Mr. Hatch, and the Flemish Farm to Mr. Joseph Perkins. They then passed through various hands, until in 1830 King William IV. resumed possession of them. After his death arrangements were already made to throw them again into the Park when his Royal Highness the Prince Consort took them under his own care."

The latter chapters of the volume relate more particularly to the history of the Forest—its enclosure, the various conflicting claims relating to it, the manners and customs of the district, conflicts with the authority of the "Constables," and particulars regarding remarkable individual trees. The whole is full of very interesting and amusing detail.

Take the following as an anecdote on "title"—a first-class agricultural subject. The owner of the cottage gave the following account of it:—"You see, sir, my wife's father as was, so I've been told, lived in another house near this 60 or 70 years agone; and there was a piece of waste land as were part o' the Common that was handy, and so he first planted 'taturs in it, and then he got some bricks and some sods and he put up a bit of a place to take shelter in, and at last he got to live in it, and there was a good deal o' bother made about it one way and the other; but he was servant to a gentleman as was a magistrate in the neighbourhood, and he was friendly to the poor people, and said as the land was no use to nobody, and so he kept it, and when I married his daughter I came to live in it. When the old man got frail I kep him for a good many years, and when he died, me and my wife's brother we gave him a comfortable funeral; and as my wife's brother paid a good part of the expense of it, he took the one half of the house and lived in it, and I took the other. There never was no will as I heer'd on, and I believes as he never was married to my wife's mother, and so you see, sir, I don't think there is any kind of deeds or titles as I can give you, that I knows on, except it be the key o' the door."

Mr. Menzies justly closes his account of recent history and improvement with the remark—"It is no easy matter to keep pace with the improvements at present going on in England; but what I have mentioned will show that not a little has been done to bring Windsor up to its legitimate position, as it is certainly in an historical light the most interesting landed property in the kingdom."

The magnificent folio volume in which the results of his inquiries into this subject are recorded, is illustrated with a series of admirable photographs of particular trees and occasional groups—Oaks, Beech, Fir, and Cedar. The old Pollard Oak at Forest Gate, probably 800 years old, 27 feet round, is one noble specimen. Some of these sun pictures, in which the inner light of the treeless wood is seen through boughs of Cedar, which cast a broken shadow upon the stems in the foreground, are especially admirable; and, in particular, the picture of Cedars at maturity in Belvidere Wood is very fine. "Queen Anne's Oak," age about 400 years, is another good photograph. The whole series are a worthy garnishing of a very admirable volume,—"Fit gift for a Queen"—as the *Times* reviewer pronounces it, "and dedicated to Her Majesty."

Farm Memoranda.

WATEREND FARM.—Few if any of the Gloucester cheese are what we would call full-milk cheese. It is a common practice in the vale of Berkeley to take the cream from a considerable proportion of the milk. In the dairy at Waterend very little cream is taken off: and this, together with the general carefulness of the management, accounts for the superiority of Mr. Leonard's cheese. He has 36 cows this summer; and previous to our visit 8 lb. to 9 lb. of milk butter, in addition to the cheese, were weekly made. As cheese is made twice a day, the hours for milking are early. In the morning it is commenced a little before 5 o'clock, and in the afternoon at 3. As the milk is brought in it is put into the cheese tub, and great care is taken to free it from impurities. A cloth is thrown over the tub, and above it is placed the ladder with the hair sieve through which the milk is poured. A table-spoonful of nitre is put over the cloth, and is left to mix with the milk as it flows through into the tub. The colouring matter—composed of a solution of annatto—and the rennet are then added, and stirred carefully through the milk.

The thermometer is not used in Mr. Leonard's dairy, and on that account we cannot speak precisely as to temperature. During the time of milking there is, of course, a considerable loss of heat; and as the small quantity of skimmed milk is added in summer without being heated, the temperature of the whole, we would suppose, may be from 85 to 90 degrees when the rennet is added.

About an hour is allowed for coagulation. The time for breaking is judged by the touch of the finger. By allowing the curd to become pretty firm the whey comes off purer than it would do if the curd were earlier broken. Breaking the curd is an operation that must be carefully performed. The dairy superintendent, or in her absence a trustworthy person, must do this part of the work. The hands are put gradually down to the bottom of the tub, and are brought slowly to the surface with the palm upwards, and the fingers extended. This is done repeatedly; and care is taken to avoid pressing or squeezing the curd, as a very slight pressure would cause the whey to come off white. After the hands have been passed through the whole mass in this manner, a circular wooden breaker, formed like a net, is used to complete the operation of breaking. It is moved slowly and steadily until the whole of the curd is made very fine. The breaking usually occupies from 20 to 30 minutes. The curd is then left about 20 minutes, to allow it to settle to the bottom of the tub. It is next drawn gently by the hands to one side of the tub to admit of the whey being taken from the other side. The whey is lifted in a wooden bowl, and poured through a hair sieve into the leaden vessels, which are placed at the side of the dairy. The sieve retains any small portions of the curd that have been lifted in the bowl. When the greater part of the whey has been taken off, the curd is heaped on one side of the tub; it is cut in different directions, to allow the remaining whey to run out, and is gently pressed by the hands to accelerate the separation. The whey, as it flows from the curd, is lifted from time to time and put through the sieve into the whey leads. The curd is then put into vats with thin cheese-cloths, locally called whey-cloths, over them; and the vats are placed in the press, one above the other, for about 20 minutes.

When taken from the press, the curd is cut into squares, and broken by the hand somewhat finely into the tub. A little heated whey is poured over it; the whey and the curd are well stirred together; the curd is drawn slowly to one side of the tub, and the whey is taken out as before. After the whey has been taken off, the curd is again broken down by the hands into the vats. It is easily broken, as it has not attained a firm state of cohesion. As the vats are filled, the curd is pressed into them with the hand, and they are piled one above the other in the cheese tub. At this stage the curd is in a pasty state, and the fragments combine very easily; the pressure from the weight of the vats brings the contents of each vat into a mass. When the vats are all filled, they are reversed, and the bottom ones placed uppermost. The top cheese is taken and a triangular paring, about an inch broad at the base, is cut off round the edge. It is then turned into a whey cloth, the vat is rinsed with a little whey, and the cheese is put into it with the cloth under. The edge that is now uppermost is pared round as the other had been, and a portion of curd, in the form of an inverted cone, is cut out of the centre of the cheese. This is called "cutting out the witch," and we have been informed that the practice is seldom omitted by a Berkeley dairymaid. Along with an old horse-shoe over the door it forms a perfectly sufficient safeguard against witchcraft. The "witch" is broken down by the hand, the paring from the edge is placed round the opening made by "cutting out the witch;" as much more curd is put in as suffices to make the vat full enough; the cheese is covered over with the cloth, and is put into the press. The other vats are treated in the same manner, and are then put into the press.

After being pressed an hour or an hour and a half, the cheeses are put into dry whey-cloths, and returned to the press till the evening. They are then rubbed over with refined salt, and put into thicker cloths, called "salting cloths." In the morning the cheese is again rubbed with salt, and returned to the press in the same cloth. Next morning it is rubbed a third time with salt, and the salting-cloth is put over it another day. On the fourth morning the cheese is put into the vat without a cloth, for the purpose of being made smooth. It is reversed in the vat on the fifth morning, and again on the sixth, and on the seventh morning it is laid on the shelf. The frequent rubbing of so many cheese with salt has a very severe effect upon the hands of the dairymaid.

It may be stated as a fair average of the amount of whey butter in Mr. Leonard's dairy, that one pound is made weekly from the produce of each cow during summer. The cheeses are turned daily in the cheese room until they become firm, and afterwards they are turned about twice a week. Before being sold they are painted with colouring matter composed of Venetian red and water. There is no particular age of the cheese at which the painting should take place. They are painted just long enough before being sold to allow the peculiar bluish colour, which indicates a true Gloucester cheese, to show itself. This may be at the age of three or four or six months. In painting the dairymaid sits on a low stool, takes the cheese in her lap, and scrapes it carefully. She then stains it over with a woollen cloth dipped in the paint. In some cheese-rooms, after the cheese is painted a Cabbage leaf is placed upon it, to assist in imparting the desired colour. The leaf is kept on a week, first on the one side and then on the other. A longer time of it would injure the colour.

The single Gloucester cheese, which is generally made in Berkeley, is 15½ inches in diameter, and from 2½ to 2½ inches in depth. This gives about eight cheeses to the cwt. The quality of the double Gloucester is originally the same, but it is made of double thickness, and is usually kept to a greater age, which accounts for the higher price at which it is sold. The large leaden vessels and some of the other utensils in the Berkeley dairies are excellent. The cheese-tubs, like most of our own, are of wood; but the vats or chessels are much superior to ours. They are made of Elm, and are turned out of a single piece of wood. Their surface is remarkably smooth; and as they are hooped with wood there is nothing about them to corrode. With ordinary care, therefore, they last a long time. The wooden presses, though they have a clumsy and old-fashioned appearance, seemed to work well. We counted 15 cheeses piled upon each other in one of them. They have no advantage over good lever presses, and in some respects are not so convenient.

This appears to be a very accurate account of the Gloucestershire cheese-making. There are a few points upon which I have some remarks to make. The writer says few if any of the Gloucester cheese are what we would call full milk cheese.

This depends entirely upon the richness of the milk. Some milk may have a great deal of butter made from it, and still make full milk cheese. I may instance the testimony of Dr. Voelcker to the richness of some skim milk cheese made under his own eye in my dairy. The doctor says of it: "Though made from skim milk it is as rich in butter as good Cheshire cheese; at six months old it was pronounced by several good judges to be excellent, superior indeed to most of the Gloucester cheese which I have ever tasted." Again, as to the quantity of butter made, although only 8 or 9 lbs. of milk butter were made weekly, there appears to have been about 36 lb. of whey butter—this is a very large quantity—and it would be much better to make more of the former, which is most valuable, and less of the latter, as it cannot affect the cheese when taken off at first, or as whey butter. I find our total make of butter is at the highest very little over 1 lb. per cow per week, upwards of 80 per cent. of which is best or milk butter.

The addition of a little nitre prevents the cheese from heaving. As to colouring the cheese I never colour mine, and I find no difficulty about selling it in consequence. The colour does no good at all, it makes the cheese look a little richer perhaps, and so long as the public in London and other parts prefer to eat annatto with their cheese it will be used, but I agree with Dr. Voelcker that it would be well if it were banished altogether from the dairy. The thermometer should be used in every dairy, and the cheese run at about 84°. Dairymaids generally judge by their own sensation, but there is no question that milk of the same temperature will feel to the hand cool one day and warm another. On this point Dr. Voelcker made some very useful experiments. He found a temperature of 60° too cold; the curd took three hours to form, and was tender. At 65° it took two hours, curd still tender. At 70° to 72° it takes from three quarters of an hour to one hour; the curd neither too tender nor too hard. At 80° to 84° the curd was firm and well adapted for making thick cheese, but not thin. At 90° the milk curdled in 20 minutes, and at 100° in about a quarter of an hour, curd hard. At 120° to 130° curd soft, running like toasted cheese, but on cooling became hard. *Mr. Harrison, at Cirencester Agricultural College.*

Miscellaneous.

Duty on Corn.—On and after the 1st of September next, the duty upon corn and grain will, under the provisions of the Act 27 Vic., cap. 18, become chargeable by weight, and in lieu of the present rate of 1s. per quarter, that of 3*d.* per cwt. will be levied. The Commissioners of Customs have accordingly promulgated the necessary instructions to their officers throughout the kingdom, and apprised them that, at ports where the municipal or other authorities have hitherto meted corn and grain, the duty may be assessed on their certificates of weight, as it has hitherto been on their certificates of measurement. At ports where the practice of measuring grain may be continued, the weight for duty may be calculated according to an average obtained by weighing a fair proportion of bushels or of sacks of uniform measurement; or if the sacks are made up on board the importing vessel to any particular weight, the account for duty may be calculated from the tally on the completion of the discharge of the cargo. As, however, the alteration in the mode of charging the duty was adopted by desire of the trade, and not for any benefit to the Crown, it is to be understood that, in any case not falling under the conditions before specified, the Crown is not to be put to

an increased expense in ascertaining the weight of corn and grain for duty.

Produce of Cows.—In Mr. J. Morton's paper in the *Agricultural Gazette* of October, 1854, he gives the following return of the produce per cow over a large extent:—

Cheese .. .. .. 4 cwt. per cow per annum.
Butter .. .. .. 40 lbs. ,,

Mr. Caird's observations on the dairy districts in 1851 corresponded very nearly with this. The average produce of eight good farms in this neighbourhood on which no young stock is kept is—

3½ cwt. of cheese per cow per annum.
31 lbs. of butter ,,

It appears that in seven years, from 1857 to 1863 inclusive, there were 459 cows milked for one year on Frocester Court farm, which gave an aggregate of 245,458 gallons of milk, or on an average 535 gallons per cow per annum. The money-value of this produce was 677*l.* or 6.63 pence per gallon of milk. The average return in money per cow, not including the calf, was 15*l.* in the nine years from 1855 to 1863.

The average weight of cheese per cow .. .. 8.8 cwt.
,, butter ,, ... 44.5 lbs.

The following are the details which have been carefully recorded, from 1855 to 1863 inclusive:—

Date	Number of Cows.	Milk. Total.	Milk. Per Cow	Butter. Total.	Butter. Per Cow	Cheese. Total.	Cheese. Per Cow	Return. Total.	Return. Per Cow
1855	90	..	..	lbs. 1803	lbs. 62	lbs. 10,864	lbs. 362	£ 444	£ s. 15 0
1856	46	..	..	2919	65	19,040	423	711	16 0
1857	56	23,258	605	3466	63	25,424	462	906	16 0
1858	62	24,780	477	2031	39	20,160	388	637	12 5
1859	60	32,490	583	2425	40	22,738	378	795	13 3
1860	71	34,470	582	2486	35	29,344	444	1070	16 4
1861	63	30,140	550	2461	44	32,312	455	1068	15 0
1862	75	39,558	524	2752	37	30,876	423	1034	14 3
1863	82	43,572	531	3340	40½	36,690	447	1268	15 9
534	534	213,418	Average =535	23,733	Average =44½	227,438	Average =426	7093	Average =15 nearly
	6.4	469		534		534		534	

During the former of these years there were more sheep and more animals grazed. For the last two years an accurate account has been kept of the quantity of milk given by each cow. The milk is measured once a fortnight, and recorded by means of diagrams. This method is found of great service for ascertaining accurately the relative value of the cows for their milking properties (except as to the richness of the milk): by its aid the least valuable are culled out of the herd, and calves weaned only from the more excellent. The experience of the years 1862 and 1863 shows that—

Cows brought in.	Years old.	Average	Gallons.	£	s.	d.
8	2	1st year ..	317 at 6¾	8	18	0
15	3	1st ,, ..	472 ,,	13	15	6
14	3	2d ,, ..	535 ,,	15	0	0
15	3	3d ,, ..	616 ,,	17	6	6
20	3	4th ,, ..	665 ,,	18	14	0
18	3	5th ,, ..	635 ,,	17	17	2
9	3	6th ,, ..	703 ,,	19	18	3
15	3	old ..	651 ,,	18	6	2

These figures give only an approximation to the truth; for the bad milkers which would keep down the average of the first, second, and third years, would probably be culled out in the fourth and fifth years, and only the very best milkers would be found in the sixth year, and among the old cows. Were the facts recorded for a number of years, by taking the produce of the same cows yearly throughout the period, a much more accurate result would be obtained. To test the richness of the heifers' milk three cheeses were made last summer from 30 gallons of new milk given by the heifers, and three were made from 30 gallons given by the largest milkers. The following were the weights of the cheeses on the 4th December last:—

Heifers .. .. 3 cheeses weighed 26 lbs.
Old cows .. .. ,, 25¼ ,,

showing but little superiority in the heifers' milk. A subject of interest upon which light is thrown by a careful record of the milk given by each cow is, as to the time at which it is most desirable for the cows to calve. One point is very clear, that as winter draws on all the cows seriously lessen their yield of milk, whether they calved early or late. This, no doubt, is a question of food and temperature combined; and if the cattle were housed and liberally fed this would not occur; and thus arises the question of high feeding dairy-cows in-milk during the winter months. Doubtless we keep our cows doing very little indeed for several months during the winter, in which time they consume a great deal of valuable food. This the grazier turns to good account along with some artificial food. Cannot the dairyman do the same with advantage? Mr. Horsfall answers decidedly, "Yes;" and, seeing that butter throughout the winter always brings a good price, this is well worthy of attention. The following examples are the first that come to hand of cows that calved early in 1863, and of some that calved about the time of going out to Grass:—

	Weeks.	Average Quarts per day.	Dropped from	Maximum in Summer.
Handsome, Feb. 20 to May 1	10	10	11½ to 8	10½
Old Spark, Jan. 9 to ,,	16	12	13 ,, 11	14
Prettymaid, Mar. 2 to ,,	say 9	11½	12½ ,, 10½	14½
Orange, Jan. 17 to ,,	15	12½	15 ,, 11	14½
Gooseberry, Feb. 10 to ,,	10	10½	12 ,, 9	13
Magpie, Jan. 6 to ,,	16	11	12½ ,, 9½	11
Violet, Jan. 5, to ,,	16	10½	12 ,, 9	12
Lemon, Jan. 10, to ,,	16	10½	11½ ,, 9½	14½
Blossom, Jan. 26, to ,,	14	10	10½ ,, 8½	13
Peachy, Feb. 5, to ,,	12	10½	12 ,, 10	12
Famous, Jan. 10, to ,,	16	10½	12½ ,, 8½	13
Brindy, Feb. 16, to ,,	10	11½	12½ ,, 10½	14½
	12)131			
Average ..	11 quarts nearly			

Compare these with some that calved about the end of April or beginning of May:—

	Weeks.	Average Quarts per day.	Rose from Gallons.
Primrose, from April 27..	10	14	12 to 16
Dewberry, from April 19	,,	12½	11½ ,, 14
Alice, from May 3 ..	,,	15	12½ ,, 18 fell to 12
Coaley, from April 14 ..	,,	13½	12 ,, 15½
March, from April 16 ..	,,	14	9 ,, 17 fell to 14
Dowke, from May 25 ..	,,	12½	12 ,, 13½ fell to 11
Clara, from April 22 ..	,,	11½	10½ ,, 13
	7)93		
	13⅐ quarts per day.		

The comparison is not so favourable to the latter as it would generally be, as the weather was very cold after the cows were turned out in May last. It shows that the early calvers by no means lost their time before being turned out to Grass, and when turned out were not far behind the later ones in the quantity of milk they gave. When the advantage of having early calves to wean or to sell is taken into account, it seems that the earlier the cows come in in the spring the better; but they must be liberally treated, and no doubt a more liberal diet would have paid well in the cases given above. The weekly food given to the cows that calved early was—

3½ cwt. of Mangel, at 6*s.* 8*d.* per ton	1*s.*	1*d.*
1 ,, hay, at 2*s.* per cwt.	2	0
Attendance	0	5
	3	6 per week.

It does not, however, seem desirable to feed so highly as Mr. Horsfall. His object was to fatten his cows and milk them at the same time. This is not the aim of the dairy-farmer, but rather to maintain them in good condition while they are giving a good yield of milk. Two or three pounds of Rape-cake and meal daily in addition to the above allowance would probably effect this object. *Mr. Harrison, of Frocester Court, in the Bath and West of England Agricultural Society's Journal.*

The Poetry of the Racer's Life.—Let us leave the high-mettled where we first found him, in such good companionship, with the little lambs, mocking his long stride as they run matches against each other to the tinkling of the starting bell with which the wandering ewe will clear the way. How different in its sober, monotonous echo, to that quick thrilling alarum which proclaims "They're off!" When, in the noise and turmoil of the crowded course, we are challenged on every side by the hoarse, husky Ishmaelite, who will "lay agen" everything and everybody—when, amidst the din of discord and the wild revelry of such a holiday, we catch a glimpse of the yellow jacket of Aristophanes, as he sweeps by in his canter, or struggles home to a chorus of shouts and yells, of cracking of whips and working of arms—hero, then, though he may be, high though that number nine be exalted, we see little of the beauty and poetry of the thoroughbred horse's life. We must seek this rather in the sweet solitude of the downs and byways, where the shepherd's hut is the ending post, and the farmer, thrice happy in his ignorance, will lean carelessly on his stick as they march by, to ask "What's the name of that 'un?"—*Corbet's Tales and Traits of Sporting Life.*

Notices to Correspondents.

Daintree's Seedling Potato: *C H.* must look at our Advertisement columns.—Mr. Alderman Mechi, Tiptree Hall, Kelvedon, Essex.

Fern: *Anon.* It makes good litter, and rotting with the waste of cowhouse or of stable it makes good manure, nearly as good as straw.

Errata.—For "600," at p. 802, col. *a*, 12th line from bottom, read "60."—For "greater" evil, at p. 805, col. *a*, line 34, read "quarter" evil.

REIGATE SILVER SAND, 12*s.* per ton, at Swan Place, delivered five miles, or to any London Wharf or Railway, 16*s.* per ton, or 1*s.* 6*d.* per bushel (sacks at cost price, or on hire).

Kentish and Hampshire Peats, Yellow Loam, Leaf Mould, Sphagnum Moss, and Cocoa Fibre Refuse.

J. Kennard, Swan Place, Old Kent Road, London, S.E.

£1000 UPON the WOOLSTON TACKLE against the NEWCASTLE "best application."

William Smith, Woolston, Bletchley Station.

CLAYTON, SHUTTLEWORTH, and CO., Engineers, Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.

Stamp End Works, Lincoln, and 78, Lombard Street, London; also at Lowengasse, No. 44, Landstrasse, Vienna; and Gegenuber dem Bahnhof, Pesth.

Descriptive, Illustrated, and Priced Catalogues, Free per Post.
Special Drawings when required.
[*The best Steam Threshing Machinery made.*]

TO MARKET GARDENERS, Florists, Nurserymen, Iron Founders, Cabinet Makers, Manure Manufacturers, &c.—The newly imported Cargo of RUSSIA, DUNNAGE, and PACKING MATS of every description at the lowest quotations. Buyers are respectfully invited to order samples, which will immediately be forwarded to any part of the Kingdom.

Address Russia Mat Stores, 133, Minories, E.C.

HYDRAULIC SUCTION PUMPS, GARDEN WATERING ENGINES, PAIL MACHINES, CONSERVATORY PUMPS, and GREENHOUSE SYRINGES, with all the latest improvements, manufactured only by the Patentee,

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Descriptions, with Drawings, post free.

BENJAMIN EDGINGTON,
Marquee, Tent, Flag, and Rick Cloth Manufacturer,
By Special Appointment to Her Majesty.
An Illustrated Catalogue sent free by post.
Be particular to address Benjamin Edgington (only),
2, Duke Street, foot of London Bridge, S.E.
No other Establishment

GUTTA PERCHA TUBING for WATERING GARDENS, &c.—The Gutta Percha Company have been favoured with the receipt of the following

Testimonial from Mr. J. Farrah, *Gardener to* Boswell Middleton Jalland, Esq., *of Holderness House, near Hull.*

"I have had 400 feet of your Gutta Percha Tubing (in lengths of 100 feet each, with Union Joint) in use for the last twelve months for watering these Gardens, and I find it to answer better than anything I have yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the Tubing. I consider this Tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens with about one-half the labour formerly required."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Curtain Rings, Galvanic Batteries, Talbotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.

The Gutta Percha Company, Patentees, Wharf Road, City Road, London, E.C.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, &c.

PROTECTION from the SCORCHING RAYS of the SUN.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide .. .. 1*s.* 8*d.* per yard run.
Four yards wide.. .. .. .. 3*s.* 4*d.* per yard.
An improved make, 2 yards wide .. 1*s.* 9*d.* per yard.
An improved make, 3 yards wide .. 2*s.* 8*d.* per yard run.
Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.

Elisha Thomas Archer, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.

"It is much cheaper than Mats as a covering."

BARNARD, BISHOP, and BARNARDS, Norwich.

FURTHER REDUCTION in the PRICE of WIRE NETTING.

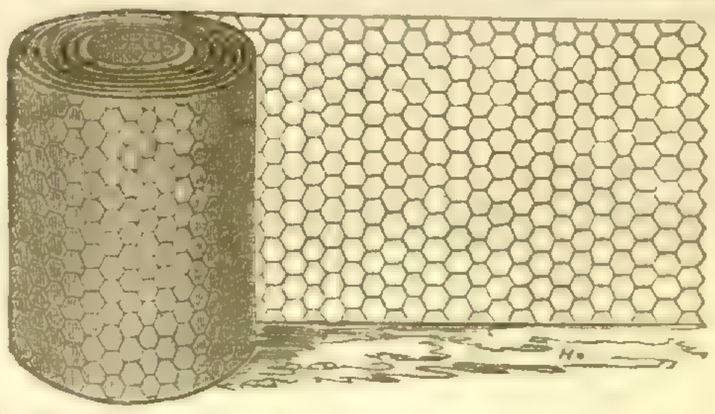

Barnard, Bishop, & Barnards beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

2-inch mesh, 24 inches wide	Gauge. No. 19 ..	Galvanised. 4¼*d.* per yd.	Japanned Iron. 3½*d.* per yd.
2-inch ,, ,, ,, .. ,,	18 ..	5 ,,	4 ,,
2-inch ,, ,, ,, .. ,,	17 ..	6½ ,,	5 ,,
2-inch ,, ,, ,, .. ,,	16 ..	8 ,,	6½ ,,
1½-inch ,, ,, ,, .. ,,	19 ..	4½ ,,	4 ,,
1½-inch ,, ,, ,, .. ,,	18 ..	6 ,,	4½ ,,
1½-inch ,, ,, ,, .. ,,	17 ..	7 ,,	5½ ,,
1½-inch ,, ,, ,, .. ,,	16 ..	9 ,,	7 ,,

All the above kinds can be made any width (under 6 feet) at proportionate prices.

Strong GALVANISED POULTRY NETTING, 7½*d.* per yard, 3 feet wide. GALVANISED SPARROW-PROOF NETTING for Pheasantries, 11*d.* per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1*s.* per yard.

The same with Galvanised Wire Rope, 1*s.* 2*d.* per yard

Illustrated Catalogues, with prices of every variety of Wire Fencing and Wire Netting, forwarded free on application.

*** Wire Fencing and Netting delivered Carriage Free at all the principal Railway Stations.

Glass for Garden Purposes.

JAMES PHILLIPS AND CO.
beg to submit their prices as follows:—

REDUCED PRICES OF PROPAGATING GLASSES.

	Each.—s.	d.		Each.—s.	d.
3 inches in diameter ..	0	4	12 inches in diameter ..	1	6
4 " " ..	0	5	13 " " ..	1	10
5 " " ..	0	6	14 " " ..	2	3
6 " " ..	0	7	15 " " ..	2	9
7 " " ..	0	9	16 " " ..	3	0
8 " " ..	0	10½	17 " " ..	4	0
9 " " ..	1	1	18 " " ..	4	6
10 " " ..	1	2	19 " " ..	5	6
11 " " ..	1	4	20 " " ..	6	0

BEE GLASSES.

	Each.—s.	d.		Each.—s.	d.
4 inches in diameter ..	0	6	9 inches in diameter ..	1	8
5 " " ..	0	8	10 " " ..	2	0
6 " " ..	0	10	11 " " ..	2	6
7 " " ..	1	1	12 " " ..	3	0
8 " " ..	1	4			

Not made above 12 inches.

CUCUMBER GLASSES.

	Each.—s.	d.		Each.—s.	d.
24 inches long	1	9	16 inches long	1	2
22 " "	1	7	14 " "	1	0
20 " "	1	6	12 " "	0	10
18 " "	1	4	Made to any length.		

HAND GLASSES, WITH OPEN TOPS.

	Each.—s.	d.		Each.—s.	d.
12 inches	6	6	18 inches	9	
14 "	7	6	20 "	10	6
16 "	8	6	22 "	11	6
			24 "	12	6

Painted and Glazed with 16 oz. Sheet Glass.
London Agents for HARTLEY'S IMPROVED PATENT ROUGH PLATE.
LINSEED OIL, Genuine WHITE LEAD, CARSON'S PAINTS, PAINTS of various colours ground ready for use.
180, Bishopsgate Street Without, London, E.C.

HAND GLASS FRAMES (LOOSE TOPS).

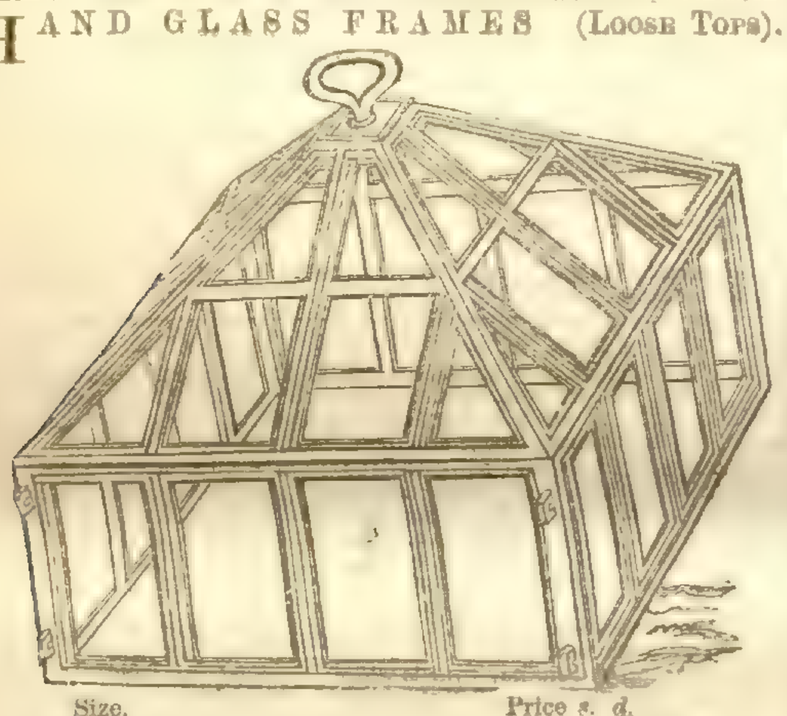

Size.	Price s.	d.	
14 by 14	4	0	Each.
18 by 18	5	9	"
20 by 20	6	6	"
22 by 22	7	6	"
24 by 24	8	6	"

Delivered Free to any Station in England if 12 or more are ordered.
J. JONES & SONS, 6, Bankside, London, S.E.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 570.
J. TYLOR & SONS'
GALVANIZED IRON TUB GARDEN ENGINES,
with Registered Spreader.
8 gal. £3 13 6 — 12 gal. £3 2 0 — 16 gal. £3 12 6
24 gal. £5 0 0 — 30 gal. £5 12 0

Fig. 571
J. TYLOR & SONS'
OAK TUB GARDEN ENGINES,
with Registered Spreader.
15 gal. £5 12 0 — 26 gal. £7 0 0

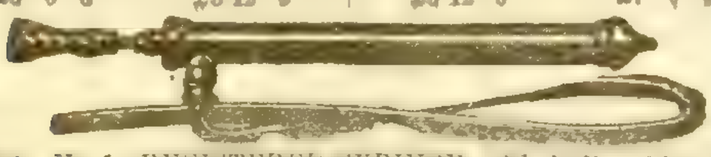

Fig. 586. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. £1 6 6 each.
No. 2. Ditto ditto .. 1 1 0 "
Telescope Branch Pipe for ditto .. .. 0 10 0 "

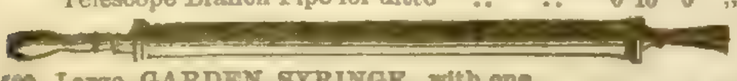

Fig. 590. Large GARDEN SYRINGE, with one rose and jet .. .. 10s. 6d. each.
" 589. Middle Ditto ditto .. .. .. 9 6 "
" 588. Small Ditto ditto .. .. .. 8 0 "
" 587. LADIES' GARDEN SYRINGE, with do. .. 6 9 "

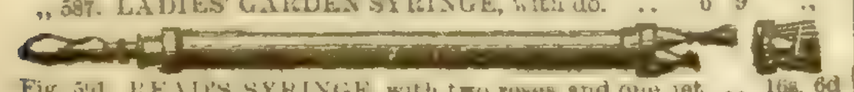

Fig. 591. READ'S SYRINGE, with two roses and one jet .. 16s. 6d
READ'S SYRINGE, with one rose and jet 14 0
" 592. Improved ditto ditto large .. 13 0

Garden Engines and Syringes of J. TYLOR & SONS' manufacture kept in stock by Ironmongers and Seedsmen in every part of the United Kingdom.
J. TYLOR & SONS, Manufacturers, Warwick Lane, Newgate Street, London, E.C.

NEW IMPROVED PREMIUM WIRE NETTING.

GREAT IMPROVEMENT,

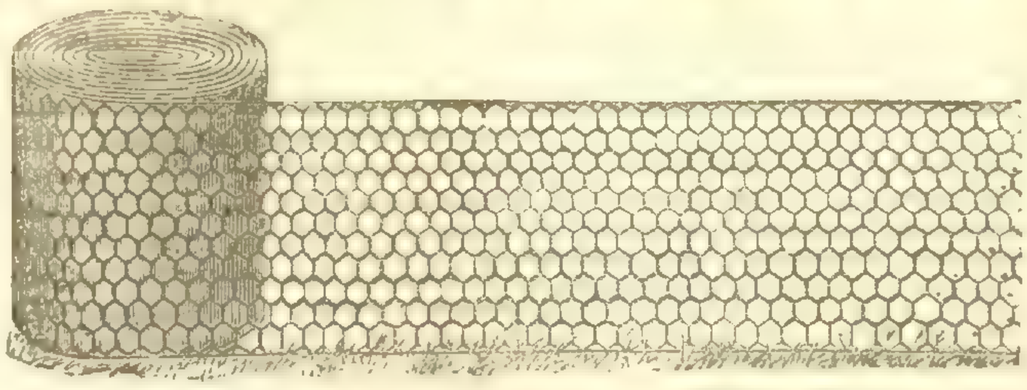

WITH REDUCED PRICE.

PRICES PER LINEAL YARD, 24 INCHES HIGH.

Size of Mesh.	Mostly used for	Light. Japanned.	Light. Galvanized.	Medium. Japanned.	Medium. Galvanized.	Strong. Japanned.	Strong. Galvanized.	Extra Strong. Japanned.	Extra Strong. Galvanized.
2½ inch	Hares, Dogs, Poultry ..	3d.	4d.	3½d.	5d.	4½d.	6d.	5½d.	7d.
2 inch	Game or Poultry Netting	3½d.	4½d.	4d.	5d.	5d.	6½d.	6½d.	8d.
1⅝ inch	Small Rabbits, Hares, &c.	4d.	4¾d.	4¾d.	6d.	5½d.	7d.	7d.	9d.
1½ inch	Smallest Rabbits	5d.	6d.	5¾d.	7d.	7d.	9d.	9d.	11d.

Quantities of 100 yards or upwards delivered free at nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland and Ireland.

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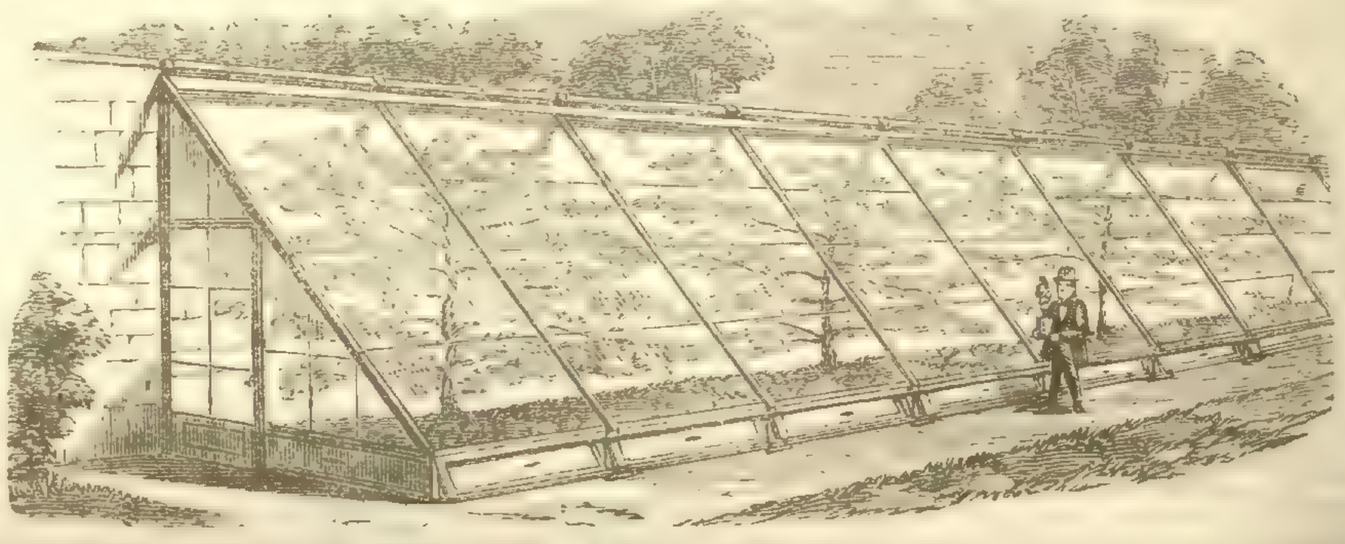

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Designed to meet the suggestions of JAMES SCOTT, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES	PINE and MELON PITS	BALCONIES	GATES
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PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. Lists Free.

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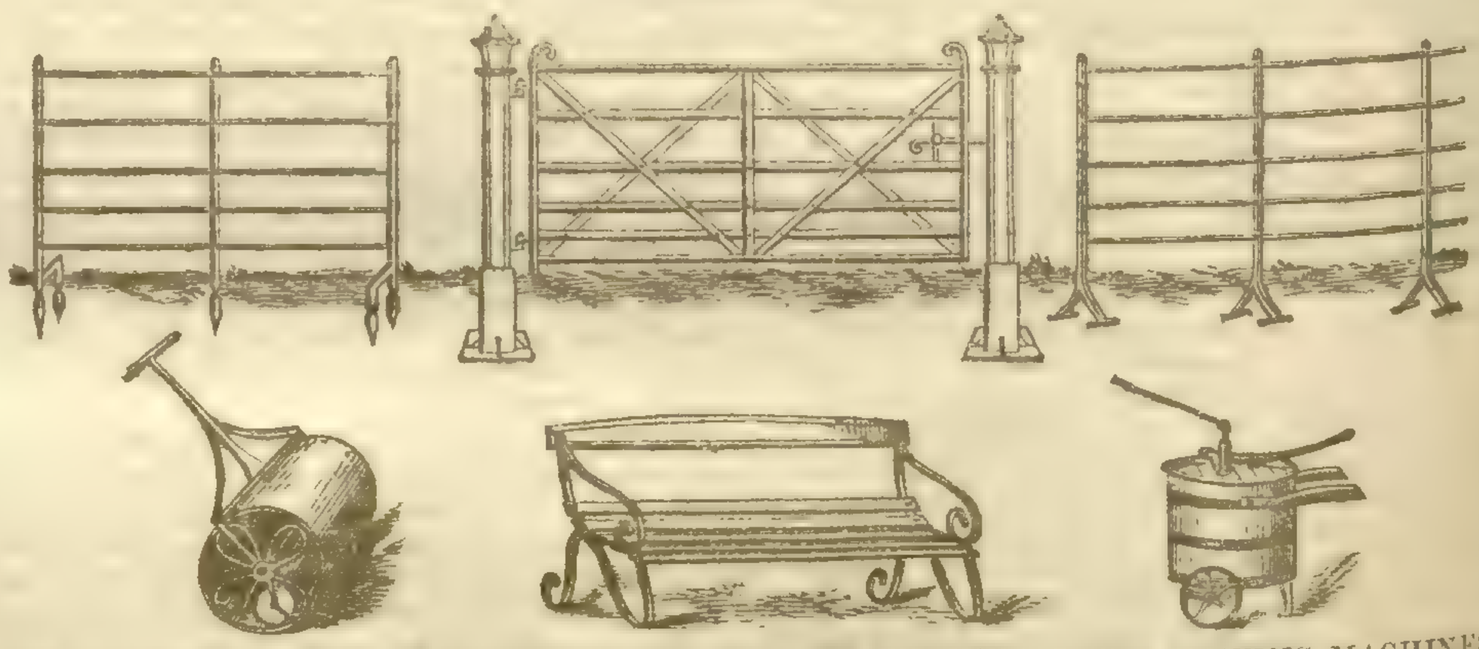

IRON GARDEN ROLLERS, GARDEN CHAIRS, GARDEN ENGINES, LAWN MOWING MACHINES, WIRE WORK, PUMPS, and every description of Implements for Horticultural and Gardening purposes.
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NEW GRAPE, ROYAL VINEYARD.

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Feels great pleasure in being able to introduce this important acquisition. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years.

B. S. W., to meet an extensive demand, has prepared a large Stock, which is in excellent condition, and is now ready for distribution. Early orders are respectfully solicited.

PRICES:

Strong Planting Canes, 21s. each. | **Strong Fruiting Canes, 42s. each.**

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PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

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Choice Hyacinths for Glasses or Pots, 6s., 8s., 10s., and 12s. per doz.
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BARR & SUGDEN 12 KING ST. COVENT GARDEN

FOR PRESENT PLANTING (Sent Carriage Paid),

DUTCH, CAPE, FRENCH, and ITALIAN FLOWERING BULBS,

FOR THE

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THE COVENT GARDEN COLLECTIONS of BULBS for In and Out-doors, 10s. 6d., 15s. 6d., 21s., 42s., and 63s.
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HYACINTHS, 2s. 6d. to 15s. per dozen. CROCUS, 1s. 6d. to 4s. per 100. TULIPS, 3s. 6d. to 20s. per 100.

A Detailed List of the above Collections, and a General Priced List of Bulbs, sent Free and Post Paid on application.

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NEW ORNAMENTAL FOLIAGE PLANT, IRESINE HERBSTII (Hook.)

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Have great pleasure in offering for the first time this distinct and handsome Plant, introduced by them direct from the River Plate, and to which a Certificate was awarded by the Royal Horticultural Society on August 24.

Colour of leaves dark maroon, ribs and stem bright carmine. A worthy rival of Coleus Verschaffelti, both as regards colour and hardiness.

Plants ready for delivery now at 10s. 6d. each.

The usual Discount to the Trade. Prices per 12, 25, 50, *and* 100 *Plants on application.*

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ESTABLISHMENT for the INTRODUCTION of NEW PLANTS.

TO BE SENT OUT IN SEPTEMBER 1864.

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AZALEA PONTICA BOUQUET DE FLORE.—Splendid variety, large bouquet, rose, delicate, with stripes. A figure will be published shortly in the "Illustration Horticole." Good plants, 4s. each.

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All Letters containing Orders must be sent direct to

AMBROISE VERSCHAFFELT, GHENT, BELGIUM.

DOBSON'S CELEBRATED SEEDS,
for PRESENT SOWING.
PRIZE CALCEOLARIA. 1s. 6d., 2s. 6d., 3s. 6d., 7s.
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PRIZE PELARGONIUM, 2s. 6d., 5s.
Sealed Packets, post free.
J. DOBSON & SONS, Woodlands Nursery, Isleworth, W.

Choice Seeds for Present Sowing.

B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

Per pkt.—	s. d.	s. d.	Per pkt.—	s. d.	s. d.
PRIMULA ..	2 0	and 3 6	INTERMEDIATE STOCK.. ..	0 6	and 1 0
CINERARIA ..	1 6	and 2 6	BROMPTON do.	0 6	and 1 0
CALCEOLARIA	1 6	and 2 6			

The above Seeds are saved with great care, and can be warranted to give satisfaction.
Paradise and Victoria Nurseries, Holloway, London, N.

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B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens. A DESCRIPTIVE and PRICED CATALOGUE post free on application.
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BAMBUSA VARIEGATA (JAPAN).—The most beautiful variegated foliage plant ever offered either for the greenhouse or out of doors, quite new, from Japan. Price from 5s. each.
EUONYMUS JAPONICUS AUREUS VARIEGATUS.—A most beautiful plant, variegated dark green and brilliant gold, quite new and distinct from anything in its class. Plants from 5s. each.
T. AYRES.

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CARTER'S GARDENER'S VADE-MECUM.

The Gardeners' Chronicle.

SATURDAY, SEPTEMBER 3, 1864.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY,	Sept.	6	Royal Horticultural (Show of Autumn Flowers) at South Kensington.
WEDNESDAY,	—	7	Crystal Palace Autumn Flower and Fruit Show.
THURSDAY,	—	8	

Is there any difference between the varieties of WHITE MUSCAT GRAPES allied to the Muscat of Alexandria?—if so, how much? and in what does it consist? These have been some of the vexed questions amongst fruit growers for some time past, and there has seemed to be little prospect of obtaining unanimous replies. The very causes which, as we suppose, have operated in giving origin to some at least of the reputed varieties, have been more or less actively at work in perpetuating a diversity of opinions on these points. It cannot be doubted that some of the so-called varieties may be traced back to the exhibition of —or at least the production of, remarkably fine samples of fruit, whose very excellence has seemed to set them apart from the rest, but which excellence has been produced, perhaps, by a combination of favourable circumstances of a more or less permanent character, and have disappeared under other conditions; while others, there seems as little doubt, have been seedlings whose apparent divergence from the original has been rather dependent on the advantages they have derived from experimental cultivation, than in any permanent distinctive character.

Such being the unsatisfactory condition of this Muscat question, it was resolved some two or three years since that one of the houses at Chiswick should be devoted to the clearing up of the mystery; and with this object in view as many varieties as possible were got together—young healthy Vines of the following reputed sorts, procured as far as possible from authentic sources, being planted, namely:—Muscat of Alexandria, Charlesworth Tokay, Muscat Escholata, Denbies Muscat, Barnes' Muscat, Canon Hall Muscat, Passe Muscat, Tynningham Muscat, Bowood Muscat, Tottenham Park Muscat, and the Zibibo of Sicily. It was thought that the best way to test their distinctness was to bring all the varieties together, and to grow them as nearly as possible under the same conditions. This was done; Vines of the same age were planted in the same border, and last year these Vines yielded their first fruits, with very little promise of diversity amongst them. This year they have borne a fair crop, and the suspicion of sameness which was

excited last year has been more than confirmed. Excepting only the Canon Hall variety, which stands out prominently from the others, there is no perceptible difference to be found in the whole series, now that the fruit is matured and fit for table. There are diversities observable, it is true, such as the presence of rounder or more oblong berries, with more or less of looseness or compactness, more or less of shouldering, more or less of tapering elongation in the clusters; but the differences in the berries are here seen to occur indifferently on the clusters of the same Vine, and the differences in the clusters occur indifferently through the whole series of Vines. The only observable difference of flavour is readily traceable to the more or less ripened condition of the particular berry or bunch, and cannot in any case be traced as characteristic of the variety. Thus, for all useful purposes, the so-called varieties are identical; nor are there any distinctions to be observed, independent of the fruit, in the wood or in the foliage.

It appears, however, from observations made during the earlier stages of growth, that although it may have vanished by the time the fruit has matured, there is a difference perceptible in certain cases while development is going on. Some of the kinds are found to set their fruit better—that is to say more abundantly, more uniformly, and more certainly—than other kinds, and this, in one sense at least, is to be regarded as an advantage. The better setting kinds are the Bowood Muscat, Tynningham Muscat, and Passe Muscat, which all agree in this peculiarity, and which do not otherwise present any differences among themselves. Perhaps it should also be mentioned that the Charlesworth Tokay was just a shade less ripened than the others, indicating lateness, but the difference was hardly perceptible.

To sum up, therefore, the result of this experiment, is to show, that leaving out the Canon Hall Muscat, which is diverse, all the other varieties mentioned are either identical or so closely similar as to present no appreciable difference at the period of maturity, but that the three varieties just above specified have the advantage of being what in garden parlance is called better setters. We understand that a resolution somewhat to this effect has been unanimously agreed to by a pretty full meeting of the Fruit Committee, which has just made this a special subject of examination. For ourselves, we do not hesitate to affirm, that neither the foliage nor fruit of these young Vines, grown under identical conditions, and really excellent in quality, could by any possibility be correctly distinguished by any outward character, or inherent quality, if once they were intermixed.

But if there are no actual differences between them, what is the explanation of all the supposed distinctions which have gone to swell up our lists of Muscat Grapes? That differences have been presented, chiefly of course in the size and form of the berries and bunches, is apparent enough; and that they have been differences sufficient to mislead good judges is equally apparent, for no doubt, at this very moment, some at least of the varieties which have been mentioned, are believed in as distinct by good gardeners. We suppose the explanation, on the one hand, to be, as already indicated, that the samples which have mystified growers have been the result of peculiar, and it may be unappreciated advantages of soil or situation, of something eminently favourable to the crop in the very material or construction of the border, or of healthy vigour, whether it be that of young Vines just come to their prime, or of old Vines well established in a position where their roots are fed independently of all borders, there being combined with some one or other of these advantages that kind of judicious treatment which has turned them to their full account, and resulted in well-swelled and thoroughly-matured Grapes. The differences amongst Muscat Grapes attributable to mere position and treatment we know to be by no means inconsiderable, from the evidence which any great fruit show will furnish; and we can hardly refuse to go a step further, and admit that the diversity may sometimes give the impression of a distinct variety; and if such an impression becomes once established, it is not without difficulty overcome. It is fair to mention, that in one or two of the above cases the new names are not to be set down to the account of the original growers. This applies especially to the forms distinguished as Barnes's and the Deubies Muscats, which were included in the trial merely from a certain reputation they had acquired, the names being added to distinguish them.

On the other hand, no doubt some of the supposed distinct Muscats have been seedlings. Now we know that in the case of flowers a seedling plant, in its first flush of vigour, will often indicate qualities which it does not maintain when it falls into the ordinary routine of cultivation; and it is only reasonable to infer that something of the same kind may occur in respect to fruits. And then, if a choice seedling fruit, like a Grape, does really seem to indicate any distinct and desirable qualities, it is petted and coaxed on in a way which may keep up the delusion for a time, until it is brought to the test of a rigid comparison, such as has been made in the case to which we refer; and all this in perfect good faith on the part of the grower. Thus we think, in one or other of these ways, may the occurrence of so many supposed varieties of White Muscat Grape be accounted for.

Now for the practical result, so far as it may be considered settled at this stage of the Chiswick experiment. It is that there are only two of these White Muscats, where we have hitherto counted at least ten; and the Canon Hall being one, it matters little which of the remaining names is taken to represent the other. On the whole the preference might be given to the Bowood or Tynningham or Passe Muscat, from their setting better. It ought not however to be overlooked, that if these varieties do set more freely than the rest, they give more trouble in thinning.

Those who have no difficulty in "setting" the old Muscat of Alexandria—and that many growers have not our fruit shows well testify—need give themselves no trouble about the rest. We do not go so far as to say that they are all identical, but we do say the differences between them, if any, are so slight as to be of no practical importance, and are not like those between certain forms of Black Hamburgh, distinctly appreciable.

EVERY gardener who has any pretensions to an acquaintance with the common ATMOSPHERIC CONDITIONS which affect cultivation, is well aware of the baneful effect of nocturnal radiation on vegetation, and adopts, therefore, some contrivance to prevent it by interposing a screen of wood, canvas, or some other material, as the especial case may require. In nature a great deal is effected in the same direction by overclouding, and it has been supposed that the clouds act not only by preventing radiation, but partly by reflecting the heat radiating from the earth, and partly by the emission of heat from their own substance.

As regards the prevention of radiation, the clouds and the artificial screen act apparently in the same way, but as the heat increases much more rapidly than it was abstracted before the screen was interposed, and as the heat is greatest at the earth's surface, and diminishes gradually upwards, and inasmuch as in either case of the screen or cloud the effect is the same, as appears from actual experiment, some other explanation must be sought than that which has obtained currency. Two Italian philosophers, Dr. FUSINEIRI and Signor ZANTEDESCHI, have accordingly undertaken the examination of this phenomenon, and an account of their investigations is given in the "Reader" of August 20, 1864, from Secchi's *Bullettino Meteorologico*.

As the result of their investigations they affirm "that the nocturnal vapours arising from the earth, a source warmer than the air through which they pass, condense progressively the higher they ascend; but a fluid rendered specifically lighter than air by its excessive temperature does not lose the heat employed in its ascension, whereas the temperature of a fluid must equalise itself with that of the surrounding atmosphere directly its ascension is obstructed. Hence it is seen that nocturnal vapour ascending from the earth, and arrested by means of an extended surface, must of necessity heat the air and all immediate bodies more than if its ascension had not been impeded. And in the same manner, when this obstruction is withdrawn and the vapour is allowed to ascend, the surrounding cold air will rush into the space that had been heated and effect the rapid decrease of the temperature observed."

When a cloud at a great distance is interposed instead of an awning at a short distance, Signor ZANTEDESCHI observes that the clouds arrest the vapour in its upward course, and the highest stratum which first comes in contact with the cloud will hinder the progress of that immediately below, and so on to the surface of the earth, and as the heat thus arrested in its progress will be imparted to the surrounding atmosphere, the temperature will rapidly increase, while the nocturnal evaporation will be checked.

Whether this interesting explanation be of any practical importance or not, it is of very great consequence that the attention of cultivators should be called again and again to the subject, and especially as connected with forcing houses. The absolute necessity of some covering to the exposed glass, especially where considerable heat is kept up at night, is a point to which we have often alluded, as the dryness of the air where this is not attended to, becomes a fertile though frequently an unexpected cause of mischief.

We have lately seen what we believe to be an instructive case, though we had not an opportunity of talking the matter over with the gardener under whose inspection the case took place. The Vines in a particular house were extremely unhealthy, the leaves pale and partially withered, the bunches irregular, and the berries, which in many cases were very small, shanking and spotting, were for the most part of little value. Some of the Vines were sending out long roots from the branches, a circumstance which seemed to indicate a desire to get as much moisture from the dry air as possible. It was moreover apparent that the condition of the Vine roots was not the cause of evil, as in the same house a large plant of Psidium Cattleyanum, whose roots were differently circumstanced, showed an equal degree of unhealthiness. The greater part of its fruit was densely rusty, and cracked both longitudinally and across just as it was beginning to swell and ripen. The whole seemed to us clearly to indicate mischief arising from an atmosphere occasionally very dry, with sudden accession of moisture from the roots. On no other theory could we account for the condition of the house, and we believe the case is one which may convey a very useful lesson. In other houses we observed an excellent crop, and their condition seemed quite confirmatory of our theory. *M. J. B.*

—— On the 26th ult., the anniversary of the birthday of the PRINCE CONSORT, the GARDENS of the ROYAL HORTICULTURAL SOCIETY were, according to announcement, thrown open to the public, free of charge, in compliance with the expressed wish of her Majesty the QUEEN. The grounds were opened at 10 o'clock, and continued open till 7 o'clock in the evening. The day was delightfully fine, and during the course of it, as nearly as can be ascertained, about 153,000 persons were admitted. It is very gratifying to be able to state that no material damage beyond the unavoidable trampling of the turf slopes, was sustained, notwithstanding the densely crowded condition of the garden throughout the day. The conservatory, orchard-houses, arcades, and maze were all open, and the cascades and MINTON'S fountain played. Bands were stationed at various parts, and played at intervals. Towards evening the Old Hundredth Psalm, with a hymn composed by the PRINCE CONSORT, and the National Anthem were sung by the assembled visitors on the upper terrace, the singing being led by trumpeters.

—— The meeting of the BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, which is to be held this year at Bath, will commence on Wednesday the 14th inst., under the Presidency of Sir CHARLES LYELL. The geological features of the immediate neighbourhood of Bath, the celebrity and beauty of the city and its environs, and its historical associations will, no doubt, conduce much to the scientific interest and success of the meeting. All the principal railways have consented to convey members and associates travelling on their respective lines at a single fare for the double journey, but in order to secure this privilege it is announced that early application must be made to the local secretaries for pass tickets.

—— The *Revue Horticole* states that a large TRADE IN APRICOTS is carried on in Burgundy. The principal centres of Apricot culture are at Marsannay-la-Côte, where the trade has during the last few years reached to the value of 10,000 francs; and also near Morey, where the sale has been not less considerable. Of the next importance, in a commercial point of view, Gevray, Chambol, Beaune, Brochamp, Couchey, Fissin and Chenove may be cited. The varieties which are mostly grown bear the names of Abricot rougeot, Abricot vert, Abricot petit-jaune, Abricot de Morey hâtif, and Abricot Goulard in these localities, beyond which they are not known; but they are preferred for commercial purposes on account of the great quantity of fruit they yield from trees grown fully exposed. They are either grafted on the Peach, or raised from the stones. Three other kinds of Apricot are well known in the same districts, and their fruits also enter largely into commerce. These are the Abricot-Pêche, Abricot de Pontà-Mousson, and the Abricot gros Angoumois; these last find their way in the catalogues of Horticulturists, but the former do not.

—— The Rev. J. G. C. FUSSELL, of The Chantry, Frome, has sent us specimens of two forms of GYMNO-

GRAMMA CHRYSOPHYLLA of remarkable beauty, on account of their size and the vigorous character of their growth. Some of the visitors to the London shows of 1863 will doubtless remember an enormous specimen shown by Mr. FUSSELL at one of the flower shows held at Kensington in the old Exhibition building; this specimen, which was in the most perfect health, formed a spreading mass some 5 feet through or more, and was we suppose the finest plant of Gold Fern ever exhibited. It was evidently one of the larger seedling forms of this variable species; and the specimens now before us, retaining completely the giant character of those formerly exhibited, suggest the application to it for garden purposes of the distinctive appellation of G. CHRYSOPHYLLA MAJOR. The fronds are at least 3 feet long, with the lower pinnæ nearly a foot long, and the pinnules pyramidal and acute, exceeding an inch in length. Another form, scarcely so large, but even more elegant, suggests the name of G. CHRYSOPHYLLA CAUDATA, on account of its elongated taper-pointed pinnæ. In this the fronds are about 2½ feet long, the larger pinnæ 6 inches, and the larger pinnules about an inch, and of an oblong ovate blunt form, so that the pinnæ stand apart. Both sorts are clothed beneath with the richest yellow powder, and are fine examples of what are called Gold Ferns.

—— Among the NEW PEAS of the Wrinkled Marrow class which have fallen into the hands of Mr. TURNER for distribution, one which is called the PREMIER stands high in point of excellence as a summer variety. It has the character of being very productive, and of growing 3½ to 4 feet high, producing long well-filled pods, and it certainly is, when cooked, a large deep-green and exquisitely-flavoured Pea, quite fit for an epicure's table.

—— According to M. BILLIARD FILS there is an art in PRUNING SPIRÆAS. These beautiful shrubs are divisible, he tells us, into two distinct classes, according to the pruning they require. Generally, he observes, all Spiræas without distinction are pruned—or rather sheared, for few take the trouble to prune them—during the winter; but this practice involves the loss of the flowers of certain species which blossom in spring. For this very sufficient reason, he argues that there should be two periods for pruning: one at the beginning of spring for those species which flower upon the buds of the same year, and the other immediately after the flowering season, for those which form their flowers upon branches of the preceding year. The following species, with their varieties, should, according to this view, be pruned at the beginning of spring, namely:—S. salicifolia, Billiardii, canadensis, Douglasii, callosa or Fortunii (of which M. BILLIARD mentions the varieties paniculata, alba, and foliis variegatis), eximia, californica, tomentosa, rosea grandiflora, floribunda, corymbosa, Regeliana, semperflorens, pachystachys, Nobleana, and Gonthierii. On the other hand, the following sorts should be pruned immediately after flowering:—S. thalictrioides, sorbifolia, pikowiensis, ariæfolia, Nicoudertii, aquilegiæfolia, sinensis pendula, expansa nivea, Lindleyana, opulifolia, lævigata, bella rosea, prunifolia, with its double-flowered variety; lanceolata or Reevesii, with its double-flowered variety; ulmifolia, pubescens, crenulata, cana, adiantifolia, chamædrifolia, Blumei, Kamoun, rupestris, alpina, oblongifolia, amœna, hypericifolia, procumbens, grandiflora, speciosa, confusa, Thunbergii, and Hookeri.

EARLY FLOWERING BULBS.

THE return of August brings with it the usual announcements of the importations of bulbs, and that catalogues of them are on the eve of publication; and many a well-compiled little tract invites attention and assails the pocket. In fact, the "Postman's Knock" is already introducing to notice some of these lists, and I always peruse them with pleasure, even though but few additions are made to last year's subjects.

Of all the divers varieties of bulbs that can be pressed into the service of winter decoration, two of them can be had in bloom remarkably early, viz., the Roman Hyacinths, perhaps more generally known as the white Hyacinths of Paris, and the Paper-white Narciss, perhaps more popularly known as the single Italian Narciss. These two are pushed on into bloom to a large extent to supply the exigencies of the market in the shape of cut flowers; and also to render good service in the Conservatory, mixed with Chrysanthemums and similar plants.

For window or conservatory decoration during winter, Paper-white Narcissi are invaluable. They are easily and early obtainable, and they are easily cultivated; they flower freely, and remain in bloom for a considerable time. I find that two importations of this flower are made into the London market. The largest quantity, and which is also the earliest flowering, comes from Paris; the other, and in the case of which the bulbs flower some two months later, comes from Holland or the Channel Islands. How there is such a difference in the time of flowering I do not know, but the fact exists. By employing both the Parisian and the Dutch bulbs, a succession of flower can be obtained from the beginning of November till the end of April. The first are already in the market, so forcing can be commenced at once. Then as a companion there is the Parisian Double Roman Narciss, not nearly so beautiful but yet very early in blooming. It is true that you can get but three or four flowers on one of its muscular looking stalks; but then, at such a season of the year, who is disposed to be fastidious? Why, in the midst of the short, dark, fog-stricken days, or those of intense, biting frost, or of snow-clad houses and streets, the dullest looking flowers are treasured up with tender care—the uncoloured blossoms of a Christmas Rose even—and are welcome there as a bunch of spring Violets.

The little azure-blue Scilla sibirica also comes in with the preceding, and so do the old single Duc van Thol Tulips. By the assistance of a little warmth, a constant supply of this charming yet tiny Tulip can be maintained, till the larger members of its family, together with Hyacinths and Crocus, come in abundantly. And so you can draw around you a family circle of little floral pets, whose pleasant influence can fill the heart with deep thankfulness, and cause the outward gloom to become a ministrant to the cheerfulness within. *Quo.*

THE LONDON PARKS.—No. I.

BATTERSEA PARK.

No brave New Englander was more "severely wounded" in the gorge of death at Petersburg than the bugbears of our flower gardens—monotony and dumpiness—have been by the splendidly successful arrangements adopted by Mr. Gibson in Battersea Park. It may be long before death ensues; long before remote country gardens, now overspread with "bedding" in its vulgarest aspect, are adorned with the grace and beauty which might characterise them; and still longer ere real plant-beauty envelopes the cottage now in too many cases surrounded by a spread of bad blue, gamboge, and scarlet, without a particle of grace—the colour being afforded by plants which, during May and June, the sweetest months of the year, look starved and contemptible, and during the dog days, or by the time one has feasted upon flowers, yield forth a blaze of "colour" which could be almost equally well spread out by the cotton printer, and which render our gardens generally the most uninviting places in the world for a Turner to look into for repose, or a subject.

All real lovers of plants have long ago been surfeited and disgusted with the sameness of our flower gardens, but their tastes and suggestions have been ignored for what was supposed to be the popular love of a "blaze;" but now the people, even those from the most cheerless streets of London, are enabled to see the difference between geometrical colouring of the ground, and such a scene of beauty as Mr. Gibson has provided for them. Moreover, in the "sub-tropical" garden at Battersea Park, the rollers in carriages that are "set down" at the South Gate may be seen, not strolling along with a listless stare, such as we see exemplified in our great bedding places, where the only pleasure derivable is from the general effect and colouring of the scene, but standing astonished, interested, charmed—wondering at the grace of one plant, and determined not to go without the name of its dignified neighbour. Along with these, equally wrapt in admiration, is the propeller of the perambulator, that formerly may have done duty as a soap box, and now teems with humanity of all conditions, evidently drinking to the full of the loveliness displayed by a mixed vegetation.

It must not be inferred from what I have said, that bedding-out proper is not to be seen at Battersea; on the contrary it is there, pure and simple, to an enormous extent. The individual whose soul is charmed by long lines of colour this, succeeded by long lines of colour that, and who gloats over the absence of verdure or leaf beauty, may go there and be twice blessed, for Mr. Gibson has catered for his taste most extensively. Should the misanthropic stroller wish to call up such associations as could be derived from the sight of some great undertaker's black plumes, placed out in lines for an airing, he, too, need not despair, for behold, in vast lines, Perilla is there!

In some places too the advanced colour-culturist may see displays which will give him pleasure, and perhaps instruction. But I did not go to Battersea to inquire about and descant upon the effects and daubings of the "bedder out," which, Heaven knows, has been sufficiently done over and over again. So having explained this to Mr. Gibson, and apologised for youth and ignorance, I had a look over the main features of the park before entering the well shut-in shades of the subtropical garden; admired the excellent drives and promising luxuriance of the young trees and shrubs; met with a large spread of Œnothera macrocarpa, and regretted the absence of Œnothera taraxacifolia, which by the by would add an exquisite charm to the subtropical garden in the evening—the time when it and every other garden are most enjoyable during such hot weather as we have had; came upon Tritomas in fine condition; and eventually stopped short at a beautiful bed of Solanum marginatum.

This is, perhaps, the best of the Solanums employed at Battersea, and has erect fierce spines on the leaves, which have margins of downy silveriness, while the young unfolding leaves in the centre are covered with close down of a pinkish tint. It is an invaluable plant for filling a summer vacancy in the mixed border, or indeed for any flower garden work. Mr. Gibson plants this and other Solanums a good distance apart, as if the plants touch each other the strong spines come into play and lacerate the leaves. In any case the stateliness and the symmetry of plant are better seen when they stand singly.

Near these Solanums, on the west drive, may be seen the bed of Canna limbata, which has stood out all last winter, the roots being deeply protected; and also in the same neighbourhood a very perfect and brilliant piece of colouring produced by seven elevated radiating beds, each about 36 feet long, widening, and gradually rising to fully present the colours to the eye, as the long beds recede from a central circular one. There is also a very effective display of bedding near the "Rosary" Lodge, in which Rosary the Moss Rose does wonderfully well, covering the ground closely pegged down, presenting good evidence of having been covered with bloom. A circular bed here, about 14 feet in diameter, filled with Coleus Verschaffeltii, crossed and surrounded by Centaurea ragusina, both splendidly done, was without doubt remarkably telling—but then what about the dumpiness which characterises it, and almost every other bedding composition? It was unmitigated of course. Now I confess to have been often charmed by such a little rotundity as Monanthes polyphylla or Sedum brevifolium, but when squat succeeds squat, to be in its turn surrounded by other squats, and a large space is quite given up to squattiness, then I say of it as Byron said of another species of dumpiness, "Oh my soul I hate it." Around the refreshment room on the banks of the Thames (from which I had better say a straight walk leads to the sub-tropical garden, which is so easily hidden in by banks and trees that one who did not know of its existence might miss it, and conclude that there was little more in Battersea Park than in any other great "bedding" establishment), there is a superb band of colouring, which should be seen by all colour-culturists.

Now for the subtropical garden, of which I shall give my impressions exactly as they were stamped, and for the few of them that may not appear laudatory I must apologise, as I feel it is presumptuous in me to criticise the yet growing though successful and vast experiment of a veteran distinguished in more fields than one. For the future, however, I shall say what I think candidly of the work of any don or dignitary of any public garden that I may be privileged to write upon.

A bank of shrubs and trees faces the visitor who enters from the north side, and the walk diverges to the right and left of it; but to the right I went, attracted by a fine plant of Alsophila australis, looking quite at home plunged in the Grass under a large Willow, with Marattia cicutaria beside it, and behind in the secluded shade, Anthuriums—which will not bear the sun, a young Dicksonia, and Carludovica, a genus which Mr. Gibson hopes yet to do more with in the subtropical garden. The sight of the Ferns made me mentally predict that ere long the frequenters of the subtropical would be treated by Mr. Gibson to tree species in full character. Philodendron podophyllum was quite healthy near the Alsophila, and the same may be said of two plants of Grisinia macrophylla near the entrance; but they did not appear to me to present any advantages of leaf or habit more than could be obtained from many hardy trees and shrubs. Going a little way beyond the Alsophila, a partial view of the scene opens up, and one of the most beautiful of sights it is that has ever been enjoyed in a garden. A lawn of irregular outline and full of diversity occupies the greater portion of the space enclosed, and this is planted with fine-leaved plants in all sorts of arrangements, with clumps of shrubs and rising young trees, and with bedding plants, too, here and there, looking much the better for being associated with so much leaf beauty and verdure. But it is against the well-planted winding ridge which surrounds the enclosure that the chief display of leaf and tropical beauty is to be seen, as it is in and on its quiet recesses, hollows, little terraces, and banks that Mr. Gibson comfortably accommodates hundreds of his noblest tropical friends. The view of this bank from numerous points is astonishingly beautiful. It has in itself the elements of rarity, and in no one spot fails to present the visitor with something interesting, from the original little bedding compositions, up through the fine-leaved Ferdinandas, Wigandias, and their numerous helpmates, to the Ferns, shrubs, and trees in the background, which shut out every brick, and confine the scene to plants, their admirers, and the canopy of heaven.

Every one interested in gardening or plants should see this garden some time between this and the end of September, during which month Mr. Gibson says many of the plants will be much finer than they were at the date of my visit. Though the surrounding division is much the more attractive, I will begin again at the Alsophila, and going round the lawn endeavour to say which is best and which is worst of the host of things from both the "indoor and outdoor department" that are used to produce the novel display. I must however first observe, that it was only last spring 12 months, that Mr. Gibson fairly began the experiment, and one of the greatest wonders is how he has got together such an immense number of valuable plants in such a short time. I must add that hardy herbaceous plants may and will yet be drawn on very extensively by Mr. Gibson for producing effects quite equal, and in many cases far superior to that of many of the "tropicals" he employs at present. I need only instance some very near relations of Cynara Scolymus, grand plants, as may be seen at Kew, not omitting the

Artichoke itself, for a well grown plant of it in flower, is one of the noblest objects in cultivation. *Wm. Robinson.*

(*To be continued.*)

HOOIBRENK'S SYSTEM OF VINE CULTURE.

THE system of Vine culture propounded by M. D. Hooibrenk, of Heitzing, near Vienna, a brief notice of which will be found at p. 986 of our volume for 1863. has attracted so much attention and discussion on the continent, and is still regarded there with so much interest by those holding favourable or unfavourable views respecting it, that some further explanatory particulars will no doubt be acceptable to many of our readers.

We commence with a remarkable report which has been presented to the *Société Centrale et Impériale d'Horticulture de Paris* by a commission charged to examine this method of cultivating the Vine, as practised in the garden of Madame Furtado, at Rocquencourt, and in that of General Jacqueminot, at Meudon. The following is a *résumé* of the more important passages of this report:—

At Rocquencourt M. Fournier first conducted the Commission towards a pit or glass-case (*bâche*) which had been set up against a wall 8 feet high, and of considerable length; and explained that the results obtained proceeded from old Vines, which had not yielded any produce for several years, as much by reason of age, as by the evil influence of masses of shrubs growing in front of them. These shrubs had been removed, and large trenches opened at the foot of the wall, the trenches being filled with good soil and manure, and the old Vine stems laid down therein, the terminal branches being either fixed against the wall, or trained as espaliers. The Vines throughout the whole extent of the wall had become furnished with vigorous shoots, rising vertically to various heights, and then turned off to one side and lowered a little below the horizontal line, in order to form long fruit-branches. The inclination of the fruit-branches was from 12—15°. All these long inclined branches had the most of their buds developed, almost all of the buds bearing one or oftener two moderately fine bunches, not, however, attaining the condition of perfection. In all those cases where the stem had only one long branch, the first eye had produced a shoot, which being trained vertically and not stopped, became fit to replace the fruit-branch in the following year. But wherever on the same stem there were two, three, or four fruit-branches, only one or two of them yielded shoots fit for the replacement. The inclination of 12—15 degrees below the horizontal line being regarded as a distinctive and essential character of the Hooibrenk method, the equal bursting and fertility of all the buds of the fruit-branch, whatever might be its length, being attributed to it, the Commission was induced to examine closely all the eyes along the whole length of the fruit-branches, and though here and there the equality was nearly realized, yet, in many cases it was not manifested, either in the breaking or vigour of the buds, or in the number and quality of the bunches. The greatest vigour showed itself at the extremities, while the centre was generally inferior, and sometimes altogether naked.

The inclination of the fruit-branch, indicated by M. Hooibrenk, was held by M. Guyot to be no new thing, since it had been practised from time immemorial in France, as at Jurançon, at Madiran, and in other places. M. Guyot maintained that the depression of the branches was neither necessary nor advantageous, and that the horizontal line was better adapted than any other to secure the equal development of the buds, and of the fruit crop. This equality, so well obtained in the French vineyards, would disappear, he argued, if the cordons, instead of being horizontal, were inclined downwards. M. Forest expressed the opinion, shared by MM. Malot and Guyot, that equal growth and fructification throughout the length of a fruit branch depended much more upon the pinching or stopping being done at an opportune time, than upon the mere inclination of the branch some few inches more or less below the horizontal line.

These having been examined and discussed, M. Fournier conducted the Commission to another pit or glass-case (*bâche*) containing some old Vines in horizontal cordons, furnished with their Grapes, and other Vines laid down distant from the wall, bearing one, two, three, or sometimes four long branches, the greater part inclined downwards, but some horizontal. All these long branches were furnished with Grapes. The stems, which had three or four long branches, produced only one or two shoots for replacement, so that the same mode of pruning could not be repeated the next year. These Vines bore abundantly, but the Grapes were of third or fourth-rate quality, and inferior in flavour to the fruit of Vines trained in horizontal cordons, which latter, moreover, were found to yield with perfect uniformity both shoots and fructification, each branch bearing as many clusters as shoots.

It was therefore concluded that the abundance of fruit and the vigorous growth observed were the natural consequence of successfully laying down (*recouchée*) the stems of the old Vines; and that the appearance, consistency, and flavour of the fruit were the result of a temporary fertility induced by the superabundant vigour thus thrown into the plants, and not durable qualities as in the case of the cordon and courson Vines.

It was also found that when the Vines had but one long fruit-branch, they produced at the angle a bud of sufficient strength to yield a shoot for replacement; but that when they were furnished with two, three, or four such branches, they did not produce the new shoots necessary in the following year. While therefore acknowledging the ability and practical success with which M. Fournier had established and conducted his experiments, the Commission found in their results nothing to constitute a new invention or a new system.

Count Lelieur, in his *Pomone française* (1842), remarks that in certain countries they leave on one of the short branches (coursons), one shoot without pruning it. This shoot is called pique, ployon, or marcotte, according as it is kept straight, or bent, or is thrust into the ground to make it take root. The Vine yields sometimes much on this alone, as on all the rest of the short branches; but it is necessary in order to load a Vine with these long branches that it should

FIG. 1.

be vigorous, planted in good soil, and of at least four years growth. The Vine-dressers of the environs of Paris multiply them too much, thus exhausting the plant and lowering the quality of the produce. The

FIG. 2.

fruit of the short branches always ripens before that of the long ones; there is also a marked difference in the latter between the ripening of the clusters at the top

FIG. 3.

and those at the base of the branch. The celebrated French pomologist therefore only accords exceptional praise to this mode of pruning. But even from this point of view, the system may deserve to be known, although with us as a general rule it can only be applied to Vines cultivated under glass.

M. Hooibrenk's description of his system was translated from the German and published by M. Ladrey in *La Bourgogne* for March 15, 1860, and is there accompanied by figures. Fig. 1 shows how the Vine ought to be pruned and worked in the spring. Fig. 2 represents the development of that Vine during the summer. In the following spring the Vine is again pruned and disposed as represented in Fig. 1. The two best branches must be chosen, pruned back to 10 or 12 eyes, and sharply bent close above the head of the old stem, which last operation is very important. In the following spring again the bent branches are pruned to one eye, and replaced by the new shoots which have had during summer a vertical direction, and have been prepared for bearing fruit. The same treatment is to be indefinitely repeated.

Subsequently M. Guyot stated in the *Journal d'Agriculture pratique* (April 5) that the system of M. Hooibrenk was only a plagiarism of the French system of Vine culture, of which a summary with engravings had been published in 1857 in the same Journal. M. Hooibrenk, it is said, has since abandoned the curvature of the branch above the old stem, as well as the bilateral system, in order to employ the unilateral system, and the simple lowering of the fruit-branch. He however still proposes, as in Fig. 3, some dispositions which are held to be impracticable. The fruit-branches (*a*) are from 5 to 6 feet in length; from the base of each of these is to be trained a young shoot (*b*) of from 7 to 10 feet long for renewal. All experience in tree culture establishes the axioms that an abundance of fruit prevents the production of wood, and reciprocally that a superabundance of wood is opposed to a large production of fruit. It is therefore argued that if there are eight, six, or four branches of 7 feet long laden with fruit, this will not permit of eight, six, or four young shoots of similar length being produced on the same stock at the same time—an opinion corroborated by the Vines seen at Rocquencourt, where they bore several of the long branches. It is observed that M. Hooibrenk in his figures everywhere shows the branches as being opposite instead of alternate, a circumstance likely to embarrass those who allow themselves to be guided by his figures.

M. Pynaert, to whose account we are indebted for the foregoing extracts, suggests that the system might perhaps be applied to Vines treated as espaliers, particularly under glass, with good results. In forcing, especially where it is sometimes necessary to allow the trees to rest for a season, he thinks one might, by the aid of these long branches, load the Vines at pleasure.

On the same subject M. Rivière has recently stated at one of the meetings of the *Société Impériale d'Horticulture*, that Philippar, in his course of culture, published in 1840, gives precise indications as to the inclination of the cordons of Vines and branches of fruit trees. One of the plates of this work represents the trees with bent branches, after the method practised by Cadet, of Vaux, and others, in which they have the inclination recommended by M. Hooibrenk. He also finds in the translation, published in 1763 by Duppy d'Emportes, of the Vegetable Staticks of Hales, a figure representing Vines, with branches inclined according to the same system.

The method of M. Hooibrenk has thus, it will be seen, both its advocates and its depreciators. No doubt the present season will produce further evidence of its results in France and Germany. In the meantime our own cultivators may do well to take note of it, as some modification of it may after all be found useful if we should ever come to grow Grapes on the orchard-house plan.

ORNAMENTAL PLANTING.—No. II.

SUMMER.

WHATEVER may be the beauty of trees in spring, there is an incompleteness attending it—the incompleteness of progress; it is not until the arrival of summer, when the leaves have attained their full size, that trees appear in full dress, and produce that depth of light and shade in which the lover of Nature finds so much pleasure.

If we seek to produce variety through the diversity in form of the leaves, we shall find no difficulty in doing so. There are the needle-shaped, of which the Pines, Firs, and Junipers, are examples. The small-leaved, which include such trees as the Oak, the Elm, the Beech; the large-leaved, to which belong the Catalpa and Paulownia; and the compound-leaved, grand examples of which are met with in the Ailantus, Kolreuteria, &c.

But the colour of the leaves in summer is the most fertile source of variety. There are light green, for example, Taxodium distichum, and Gleditschia; dark green: Fraxinus crispa, and Castanea vesca; purple: Beech, Elm, and Sycamore; yellow: variegated Turkey Oak, Ash, and Sycamore; white: Acer Negundo variegatum, and Silver Poplar. I know of no trees so beautiful in the landscape in summer as the two latter, on account of the idea of coolness they suggest by the glitter of their white leaves. The Aspen, too, is desirable at the same season, the ceaseless play of its foliage disclosing a breeze so faint as to be scarcely distinguishable by any other test.

Then as to shade—we want shade in summer. Trees which produce the densest masses of foliage should be selected for this purpose and planted in appropriate spots. Although "deciduous" trees are in their greatest

beauty at this season, we cannot altogether dispense with "evergreens." The latter are invaluable on account of the variety they produce, and also for the coolness and almost impenetrable shade which they afford.

"Before me rose an avenue
Of tall and sombrous Pines,
Abroad their fan-like branches grew,
And when the sunshine darted through,
Spread a vapour soft and blue
In long and sloping lines."

The Abies Douglasii, A. Deodara, and Pinus austriaca stand in the very foremost rank, both as summer and winter trees, for avenues, groups, or single specimens.

The examples above given are mostly trees attaining to considerable size and familiar samples of such. There are, however, others of medium and lowly growth similar in form, colour, and general character.

Among novelties I have not forgotten the remarkably beautiful trees introduced from Japan, by Mr. Fortune and Mr. Veitch. Some of these, the Acers especially, are wondrously beautiful, but are they hardy? Time is necessary to prove this. It is reported that some are difficult of propagation, and if so it will require time before they become sufficiently reasonable in price to be generally available. *William Paul, Waltham Cross, N.*

Home Correspondence.

American Aloe.—In the conservatory at Walcot, Shropshire, one of the seats of the Earl of Powis, there is now an American Aloe in bloom. Mr. Bond, the gardener, attributes its flowering to the great warmth of the season. The plant is not more than 60 years old, and it is not what would be called an extraordinarily large specimen. The flower stem is 21 feet high, with 26 panicles of bloom on it; on one of the lower ones there are 240 flowers and buds. The panicles project at unequal distances all round the upper part of the stem, with a most graceful curve; the summit is crowned by clusters of bloom buds, and as a whole it is a most wonderful floral production. *G. Jones, Aug.* 29.

Winds.—Good foliage is the health of plants; if it is injured by winds to any great amount the effect is the same as that occasioned by blights, which stop the respiration and perspiration of the plant, and also prevent the inhalation of those gases from the atmosphere which conduce to health. The effect of injured foliage in the case of Roses is the staining of the rind, and a general imperfection of the wood. Most years we suffer from fungus and blights of one kind or another. Last year my plants suffered from a crushing hailstorm, and also from winds, as well as from black blight in the early part of the year, and from white fungus in the latter part of the season. This year the winds have been quiet, and I never have had, since I have been a Rose cultivator, a finer season, nor finer nor more abundant Roses. They commenced flowering out of doors on the Manetti stock on the 7th of May, and are now blooming well; and they will continue to do so (having been manured and copiously watered) till winter sets in. My present object, however, is to speak of winds. What are the causes of those agitations in the atmosphere which are called by the generic term of winds? They are occasioned by the annual and daily motion of the earth, and also from the more or less influence exerted by the sun upon the earth, which influence varies in different seasons, and also varies at different times in any one season. If our globe were fixed, it is plain that the sun's rays would be always directed upon the same surface. The air above the surface would then be greatly heated, as is the case in the equatorial region, and would rise, whilst currents of air or winds would rush in to fill the vacated space, or rather the more rarified space; for though Nature is said to hate a vacuum, there is in reality no such thing as a "vacuum" in Nature. If there is in Nature a vacuum, it is in the human head! The most violent winds are the trade winds, which are occasioned by the rushing in upon a heated surface of cold or moist currents of air, to supply the place of the highly heated column of air that has ascended; and so regular are cause and effect, that mariners can tell the exact time of the occurrence of these trade winds. The same theory will explain the cause of winds generally beyond the tropics, where the sun's influence is much weaker than at the equator, where the sun has shed its beams in a direct manner since the world began. The winds which affect us are called variable, in distinction from the trade winds, which are invariable. There are two winds, or rather breezes, which affect us, and which may be attributed to much the same causes as the trade winds. They are also nearly as invariable, viz., the land-breeze and the sea-breeze. After sunset the land and water lose their day-heat; but loss of heat by the land is quicker and greater than that sustained by the water. The air over both these surfaces must therefore be cooled unequally; and soon the air, which rests on the earth, being colder and denser than the air over the sea, rushes into the more rarified space of the latter. This takes place at the end of the night, and produces the land-breeze. But when the sun rises, it heats the earth quicker than the sea, and the colder air resting over the sea rushes in its turn into the more rarified air resting over the land. This takes place at or towards the evening, and constitutes the sea-breeze. As regards Rosaries (as I have stated in my Lecturette before the Royal Horticultural Society at South Kensington), they cannot have too much air, and, during foliage time, too little wind. My home garden is as much exposed to the W. or S.W. wind as Portland and the Eddystone. My other garden at Rawston (close here), is shielded S. and W. by a high Thorn hedge, but is open, or nearly so, to the N. and E., so that I manage in the course of the year to grow a daily treat (this season a daily exhibition) of Roses on the Manetti stock in unfit land (highly cultivated), *i.e.*, in chalky and thin gravelly soil. In selecting a Rosarium, choose an airy but protected situation with free access to water, and beware both of variable and invariable winds! *W. F. Radclyffe, Rushton.*

Cyperus alternifolius variegatus.—It is stated (p. 820) that the only way of preventing this from running back into the green state is to grow it in pure sand. This I know from experience is incorrect, as I have a large plant without one blade of green upon it. Its leaves are beautifully white, with a few very fine veins of green in them, which adds greatly to their beauty. I grow it in very poor peat, with a little sand; if not kept pot-bound it comes nearly all green. *T. C., Lymington.*

Thladiantha dubia, Bunge.—You noticed this Cucurbit in 1861 (p. 848) as having been then recently introduced by the French "Acclimatation Society." I wonder if your notice attracted the attention of English floriculturists to it. Few things which I saw in a recent visit to the Botanic Gardens of Paris, Lyons, and Grenoble, pleased me more than this plant. In the experimental gardens of the Jardin des Plantes it grows like a weed, covering everything in its way with a pretty foliage of velvety, heart-shaped leaves and a profuse abundance of beautiful, bell-shaped, yellow flowers. Only the male plant, I believe, is in cultivation, but it is a most free grower, and may be multiplied to any extent by its tubers. There can be no doubt that in the South of England, at any rate, it would grow well enough out of doors. In the north, if too cold, it would be a valuable acquisition as a greenhouse climber. *D. O.*

Wasps.—A deadly mode of destroying these pests is by means of cyanide of potassium and dilute sulphuric acid (as sold by druggists). It can be applied with but little trouble by day or night, though of course the most certain plan is at night, when all are at home; those, however, who would wish to see its deadly effect may do it in the day time. The mode is simply this: Put half a drachm of cyanide of potassium in a vial, and three drachms of dilute sulphuric acid in another; pour in the acid, thrust the bottle into the hole, the more upright the better; every wasp that enters drops at once, and none come out, so that the operator may look on without risk; at night act in the same manner, but dig the nest out in 10 minutes and destroy it. I believe the same plan would be effectual with red spider and thrips, but I have none to try it on; on green fly it acted at once. *T. W. Taylor, Bocking, Aug.* 30.

New Hybrid Clematises.—Allow me to reply to Mr. George Jackman's questions published in your Paper of Aug. 13, and also to those of A. Z., inserted in a previous number. The facts of the case as concerns myself and these Clematises are as follows. Previous to my entering Mr. Jackman's service, I resided at Sunningdale, and was in Mr. Charles Noble's service; on the cottage in my garden I had growing Clematis lanuginosa, which was hybridised by myself. The seed was gathered in the September previous to my entering Mr. Jackman's service, and was preserved in sand till I came to Hornsey, when it was regularly sown in warmth, being 15 months from the time of gathering it. In three weeks several plants appeared and were potted and encouraged; the seedlings exhibited by me were some of them. Such is the history of my Clematises.. Mr. Jackman's observations insinuate that I could not obtain flowering plants of seedling Clematises from the time I left his service till mine were exhibited; if, however, A. Z or Mr. Jackman will visit Hornsey they will find that I have now flowering seedling Clematises sown at Christmas, 1863—not puny flowers, but from 4 to 5 inches in diameter. This is only nine months. I would therefore recommend A. Z. and Mr. Jackman to leave off wool-gathering, and pursue a system of propagation, by which they might have flowering plants of seedling Clematises in one year instead of three. I have pursued my avocation for upwards of 30 years, and I have no cause to be ashamed of my transactions during that period. *Thomas Townsend, St. Mary's Nursery, Hornsey.*——Your Correspondents may well question the statement of Mr. Townsend when he asserts that he bloomed in 1863 some plants of seedling Clematises from seeds sown soon "after Christmas, 1862." I have had some experience in sowing seeds of the Ranunculaceæ, and I have generally found them not only the most stubborn to vegetate, but the most tedious to bring into flower of almost anything I know. I may instance the case of my seedling Clematis Reginæ, now in the hands of Messrs. Veitch, and with which they this summer took a First-class Certificate. I find, on looking back into my Note Book, that the seeds, which were from a cross between C. azurea grandiflora (the seed bearer) and C. lanuginosa, were sown in "September, 1855," with this memorandum added:—"1856: October 28, observed three seeds vegetated," and as I closely watch my seedling pots, I feel certain that they could not have been many days up before I observed them. Only three plants came altogether, and one soon died. The first bloom was in April, 1862. Now, if Mr. Townsend wrought with hybridised seeds, and sowed them on, or "immediately after Christmas, 1862," and bloomed some plants in 1863, and others in 1864, carrying first-class prizes too, he has accomplished a feat I would never undertake to do, and one certainly greatly in advance of any experience of mine. *I. Anderson Henry, Hay Lodge, Trinity, Edinburgh.* [We quite agree.]

An Acre of Glass.—Mr. Ormson, I see, advertises glass structures by the acre! How such an announcement would have amazed our forefathers! In bygone times a couple of vineries, a conservatory or Orange-house, a greenhouse, a couple of odd houses, and a few pits were considered ample. The duties of a gardener have increased since then at least tenfold, and the rage for bedding-plants has been the means of banishing from our gardens many beautiful herbaceous plants and annuals, and has still made more laborious the duties of a gardener. Times, however, are progressing, and we are now living in an age of wonders. People's tastes go with the times, and gardeners are compelled to do the same; but above all, seasons have changed. The uncertain and variable nature of our climate tends to baffle the skill of the gardener, and he is compelled to use glass structures to guard against the uncertainty of the seasons. As a proof of this, in looking over my register I find that from October 1, 1863 to June 6, 1864 we had no fewer than 164 frosty nights, and independent of these, on 46 nights the register was under 40°. Thus, for a period of 8 months and 6 days we have not had the register above 39° more than as many nights. The frost of June 1 was very destructive. On August 11 and 12 we had frosts, and the last named day the register was 29°; and French Beans, Amaranthus, Ageratums, &c., were slightly injured, but not sufficiently so to disfigure them. Never therefore could such an announcement as that of Mr. Ormson in your advertising pages come at a more appropriate time, for the great heat by day and the exceedingly cold nights, render glass structures on a large scale almost indispensable. The cheapness of glass and the powerful aid of machinery have brought such structures within the reach of many gentlemen whose delight is in their gardens. It is not however my intention now to enter upon the advantages or disadvantages of such structures, but merely to state that they appear to me to be a step in the right direction. The following is the temperature of some of the hottest days and coldest nights of each month, from Oct. 1 to June 1, as indicated by a thermometer in the shade.

Months.	Night.	Day.	No. of Frosty Nights.
	Deg.	Deg.	
October	24	64	12
November	21	55	15
December	19	50	24
January	3	47	28
February	9	52	26
March	14	53	28
April	21	68	16
May	25	82	9

In addition to the above I may state that the first six nights of June were accompanied by frosts. Since the above was written we have had more severe frosts, damaging the French Beans, &c. On August 19 the thermometer indicated 27°; on the 20th, 35°; 21st, 31°; 22d, 26°; and on the 23d, 33°. *Edward Bennett, Gr. to G. S. Foljambe, Esq, Osberton Hall, Worksop.* [From Lincolnshire we learn that on the Fen land the haulm of hundreds of acres of Potatos has been cut down by frost within the last two or three weeks.

Societies.

ROYAL HORTICULTURAL: *August* 27 (*Promenade at Chiswick*).—Between 200 and 300 Fellows and their friends assembled here on this occasion to listen to excellent music from an efficient band, and to inspect the different matters of interest now to be seen in the garden. Prominent among the latter is the great Conservatory, full, as usual, of magnificent examples of Grapes, now ripe and ripening; a house in which are growing the so-called different varieties of Muscats alluded to in another column; various illustrations of hardy fruits and of fruit tree pruning and training; and last, but not least, the fine collection of half-hardy plants placed under the auspices of the Floral Committee in a new trial ground at the East end of the Conservatory. Among these, though affected like other things by the late drought, are many subjects of sufficient importance, as far as out-door decoration is concerned, to demand a separate notice, which will be given as soon as their respective merits shall have been fairly tested by the Committee appointed to determine them.

Notices of Books.

Wayside Weeds. By Spencer Thomson, M.D. Edinburgh. Pp. 212. 8vo. Groombridge & Sons. London, 1864.

This is the title of a small book written for young people, with the good natured idea, that instead of carrying the juvenile student through a terra incognita of hard names, much might be gained by selecting some of the commonest and most familiar plants, which many

persons would call mere weeds. These Dr. Thomson arranges by the handful (not that the flowers are always in bloom together), contriving to choose plants of the same family, or conveniently related to one another. By this means, and with the aid of about 120 clearly drawn wood-engravings, he leads the little student onward to the conclusion of a chapter on Ferns, when the reader is informed that he has been following the "natural" system, and finds five pages on classification. The book is written in a pleasant, and what might be called patronising style, occasionally stilted—as *e.g.*, when he calls something "our first initiament into botanical terms," meaning, we presume, initiation. Initiamenta, the elements of a subject, is a word only used in the plural.

Passages of a Working Life. By Charles Knight. Vol. 2, Pp. 336. Bradbury & Evans, 11, Bouverie Street.

The favourable impression which Mr. Knight's first volume produced, naturally led us to welcome the second, the greater part of which we read with undiminished interest. If there is a slight falling off towards the end of the second epoch, that result must be attributed rather to the circumstances of the times than to the writer; to the complete success of the object which he had in view, not to its failure. As a person of intelligence, with keen powers of observation, and a patriotic desire to do good in his generation, Mr. Knight noticed the abuses which abounded in his day, and saw some of the perils which threatened his country. He traced much of the rampant evil to brutal ignorance, and made the instruction of the masses the object and the mission of his life. This at least forms the warp of the history he has written, and the woof is made up of the various events that were taking place around him during a period of great political excitement, together with sketches of a number of the remarkable characters with whom he became acquainted in the way of business; and that business was, as we have said, providing cheap and useful literature for the million. 1824, which saw Mr. Knight settled in Pall Mall East, was the age of caricatures, when H. B. so marvellously hit off the portraits of Lords Eldon, Lyndhurst, and Brougham, and other celebrities of the day; and the first personage in the realm came in for a large amount of free handling. Such caricatures tell us much of the history of these times, and a prominent place was occupied by "the march of intellect."

The funeral of Lord Byron gives Mr. Knight an opportunity of recounting the history of an injunction restraining him from publishing the correspondence of that erratic nobleman, a great disappointment to the young publisher.

By Christmas time Mr. Knight was shocked at the general drunkenness that prevailed in London, and lamented that there was nothing for the people to amuse themselves with, and that the British Museum was rigidly closed at such holiday seasons. There was no National Gallery, no South Kensington Museum, no cheap train to Kew Gardens or Hampton Court, no musical performances for the multitude, no rational amusement whatever, except perhaps a visit to the elephant at Exeter Change or the lions at the Tower.

A visit to Paris brings out a description of the French travelling and capital as it was in 1825, and how everybody did a little bit of smuggling, as a matter of course, on his return to England; but Mr. Knight turns away from French translations and devises the scheme of a "National Library;" and before the end of 1826 he is introduced to Mr. Brougham, who was organising the "Society for the Diffusion of Useful Knowledge." "That first interview," he says, "was an event which had a marked influence upon many subsequent passages of my life."

The spring of 1827 saw Mr. Knight in financial difficulties, but in the summer his services were accepted to superintend the Diffusion of Useful Knowledge Society's publications, which had started with Mr. Brougham's celebrated "Discourse on the Objects, Advantages, and Pleasures of Science," of which it may with truth be said, "No reader, to whom the subjects treated of were in any degree new, could read the little book without feeling an ardent desire to know more,—to know all. Such were my own feelings, &c." This treatise and a few sixpenny numbers were all that the Society had published hitherto.

At this date the Stationers' Company had a virtual monopoly of the almanacs, being rich and unscrupulous enough to buy off all competitors as they arose. These almanacs were filled with disgraceful trash, and paid a duty of 1*s.* 3*d.* to Government. Knight consulted Mr. Brougham, and by his influence scientific assistance was obtained, and the "British Almanac" was published under the Society's auspices, and was soon followed by "A Companion to the Almanac."

In 1828, Brougham made that celebrated speech in which he said "the schoolmaster is abroad." Soon after this Mr. Knight was engaged upon another of the Society's works, the "Library of Entertaining Knowledge," and he travels by the coach to Liverpool, Manchester, Leeds, and other large towns on the business of the Society, giving his experiences, and noticing the state of things wherever he goes.

The monthly meetings of the Society's sub-committees, and their plain dinner at 5 o'clock, brought Mr. Knight acquainted with all the distinguished men who took a part in the work of the Society, and he says a few words about the assistance which each of them rendered to the cause of education. Their names are familiar to us all, but alas! how many of them have closed their labours upon earth. Mr. Knight says:—"After the Reform era I have sat at the monthly dinner with five Cabinet Ministers, to whom it appeared that their duty was to carry forward that advancing intelligence of the people which had conducted them to power, and which would afford the best security that liberal opinions, &c." To Brougham he assigns the merit of giving to a certain book the well-known title—"The Pursuit of Knowledge under Difficulties." In 1830 came the death of George IV., and in a few weeks after that, the French Revolution, and Mr. Knight in company with two friends visited Paris, and gives some account of what he saw and heard in France at that epoch. Before the year is out Brougham becomes Lord Chancellor, and ere he strides into the House of Lords desires Mr. Knight to "advertise Paley to-morrow morning," which work accordingly came out, "with Notes and an Introductory Discourse by Henry Lord Brougham."

The Reform Bill and the Cholera were the chief topics of conversation, when on March 31, 1832 appeared the first number of the "Penny Magazine." It met with such success that by the end of the year a sale of 200,000 in weekly numbers and monthly parts was reached. "It may be fairly calculated that the number of readers of that single work amounts to a million. If this incontestable evidence of the spread of the ability to read be most satisfactory, it is still more satisfactory to consider the species of reading which has had such an extensive and increasing popularity. In this work there has never been a single sentence that could influence a vicious appetite; and not a paragraph that could minister to prejudices and superstitions, which a few years since were common. There has been no excitement for the lovers of the marvellous, no tattle and abuse for the gratification of a diseased taste for personality, and, above all, no party politics."

It appears that Dr. Arnold had a strong desire to be able to co-operate with a body, which he "believed might, with God's blessing, do more good of all kinds, political, intellectual, and spiritual, than any other society in existence." He was anxious, he wrote, to furnish them regularly with "articles of the kind that I desire." Mr. Knight, however, distinctly states that no expression of such a desire ever reached him, and much regrets it.

The first number of the "Penny Cyclopædia" appeared January 2, 1833. It had a sale of 75,000 so long as a single number was issued every week, but when two and afterwards four numbers appeared per week, the public felt that it was larger and more expensive than they had been led to suppose, and the sale fell off, and when the work was completed in 1844, the balance of outlay above the receipts was 30,78*l.*, a loss which fell entirely upon Mr. Knight. To Prof. De Morgan was confided the mathematical department; and the Astronomer-Royal undertook the article on Gravitation, "a masterpiece of lucid exposition without the employment of mathematical formulæ." Dr. Arnott wrote the general articles on Physics. There were other contributors of the highest mark. But the general application of the Electric Telegraph, Photography, Chloroform, and a variety of new inventions came in just late enough to render the work an imperfect one. And Mr. Knight attributes its pecuniary failure to the duty on paper, and proves his position in a note at the end of the book.

Another work of importance which Mr. Knight published was "The Pictorial Bible," under the editorial care of Dr. Kitto, a very remarkable person. We have, however, perhaps already exceeded the limits of the reader's patience, and must close our notice of these very interesting "Passages of a Working Life."

BOOKS RECEIVED.—The *Geological Magazine*, edited by T. Rupert Jones, F.G.S., assisted by H. Woodward, F.G.S., F.Z.S. The first number of this new Geological Magazine came out in July. The first paper is "On the Past and Present Aspects of Geology," and gives a brief account of the ideas that have prevailed on that science. The present epoch is supposed to be a period of wholesome scepticism as to the exact truth of various received principles, as *e. g.*, "the contemporaneity of strata which contain the same or similar fossils, and which are geographically far apart." The Editor desires so to conduct the Geological Magazine that it may "be regarded as an impartial tribunal, whose verdict will command respect by reason of its justice." The original articles comprise among other papers a notice of the pebble-bed at Budleigh Salterton, in which "some 30 species of fossils have been already detected, all without exception new to British Geology;" a paper on species of Thecidium, with two plates; and a translation by Mr. Ramsay, F.R.S., of a very interesting work on the "Sahara and its different Types of Deserts and Oases," by Professor Desor, of Neufchatel. This is an article that will well repay perusal.——*An Abridgment of the Practical English Grammar*, by Roscoe Mongan, A.B., a very shabby unattractive little school book, very badly printed on very inferior paper.——*Orthographic Projection and Isometrical Drawing*, by W. S. Binns. This is one of Mr. Gleig's (Chaplain-General of the Forces) school series. It is intended to help mechanics and handicraftsmen in the simplest kinds of drawing. Workmen should be handy with their pencil and compasses, able to draw to a scale, and represent simple forms in plan, elevation, and section. This shilling book will help them, but in our humble opinion it is far too difficult.

Garden Memoranda.

MESSRS. IVERY & SON'S NURSERY, DORKING.—The taste—we might almost say the passion for Ferns, which is a characteristic of the present day, has not been without its influence on commercial gardening, for it is no less true in horticultural than in economical matters, that for whatever there is a demand there will arise a supply. The little world of pteridophilists has long been familiar with the pteridean stores to be found at Foot's Cray and Todmorden, and the names of Sim and Stansfield have become as household words amongst this Fern-loving class of garden amateurs. Now Mr. Ivery is following in their wake, and treading closely upon their heels, his collection of varieties ranking in the trade probably next to that of the growers we have mentioned in fulness, and his stock of most of the best sorts being at the same time very extensive, from the happy facility with which the rearing of plants from the spores is carried out. We were indeed most agreeably astonished, considering the short period which Mr. Ivery has been before the public in the character of a Fern grower, to find on the occasion of a recent visit that his stock had become so rich and rare, and withal so abundant, and had assumed so vigorous, orderly, and healthy an appearance.

But passing from the general to the particular, we may describe Mr. Ivery's British Ferns as divisible into three groups. There are the specimen plants, examples of which one has latterly become familiarised with at our great shows—avoided it would seem by other Fern traders; these are sufficiently numerous to fill a long range of deep pits, in which they grow to perfection. Then there are what may be called "half specimens," examples of the better class of varieties, shifted on into larger pots than those afforded to the general stock, with the object of giving "a helping hand" to those who are desirous of setting up a Fernery without waiting too long for results. And then follows the ordinary trade stock, which, as we have just said, is not only extensive and in vigorous health, but includes many of the best and most thoroughly marked varieties in cultivation. These latter are all grown in pits, many of them rudely constructed of turf sods, but none the less congenial to Ferns on that account.

In a collection so varied it would be hopeless—for want of space rather than of matter—to *attempt to* notice all the varieties which possess sufficient interest to render them worth mentioning, but we may name a few of the more rare and striking among them, and some of these prove to be seedlings raised by Mr. Ivery's very intelligent foreman, Mr. Appleby, to whose enthusiastic love of Ferns no doubt the excellent condition of the collection is in great measure to be attributed. The most remarkable, perhaps, are a series of entirely different forms selected out of large batches of the varieties of Lady Fern, called Frizelliæ and Fieldiæ, because they indicate strongly the sportive character found to exist in many species of Ferns, and not less so the permanence of such sports, for in almost all cases the seedlings from these sports reproduce their own particular parent forms in a greater or less ratio—sometimes the whole of the progeny, sometimes the greater part, and much more rarely a few only presenting the true character of the sport, the rest consisting partly of new sports diverging again from the first, and partly of plants which run back to some normal condition of the species. The latter, however, are probably often derived from vagrant spores, sown with the true ones; and hence it may be assumed, as an almost absolute condition, that Fern sports either reproduce themselves or yield further deviations, and seldom revert to a normal condition. Of sports of the Lady Fern then, derived from the varieties already mentioned, Mr. Ivery has several, and amongst them the following:—A. F.-f. lanci-folium, a tall form, 2 feet high, with the lower portion about 3 inches broad, made up of tapered pinnate pinnæ, forked at the base and divergent, and with the upper part scarcely averaging an inch in breadth, having the pinnæ always forked or ramose, and the apex tapering away into a sharp slender point, which has suggested the name; this has evidently come from Fieldiæ. Another, larger still, and but slightly removed from the normal condition, albeit showing a peculiar distinctness in the mass, is A. F.-f. compositum, which has fronds two or three feet long, the lower part 6 or 8 inches broad, and like the normal variety incisum, the apex also quite normal, but between these parts the upper portion of the frond is changed so as to assume the peculiar narrowed and forked character of Fieldiæ. Another resembling the last, except that the apex of the frond and of the portion of pinnæ otherwise normal are multifid, is called A. F.-f. compositum multifidum. Then A. F.-f. strictum is of quite another character, the whole frond being linear and pointed, and made up of the short forked or ramose pinnæ, such as are found in the contracted portion of the fronds of Fieldiæ. A. F.-f. Fieldiæ obtusum is another well-marked sport, having the lower pinnæ from an inch and a-half to two inches long and simple, and the upper ones an inch or less and

forked or ramose, but all of them, as well as the frond itself, blunt and rounded at the apex, and the pinnules set close. Another, called A. F.-f. Fieldiæ diffissum, with the broad base and contracted apex of Fieldiæ, has the peculiar deep open cutting which characterises the variety diffissum, and is thus altogether unlike the preceding, in which the parts are rather full and crowded: both of them being moderately vigorous in habit. A. F.-f. Frizelliæ nanum has stiff sturdy fronds a foot long, but otherwise, except in its blunt apex, does not differ from the gracefully arching parent Frizelliæ; while A. F.-f. Applebyanum retains this arching habit, but becomes ramose at the apex, forking into a broad flat head of some 10 to 15 divisions; and A. F.-f. Iveryanum unites the forking pinnæ of Fieldiæ with the stiff blunt-ended habit of Frizelliæ nanum. All these and perhaps others we have overlooked, have sprung up in Mr. Ivery's nursery from a sowing of Frizelliæ and Fieldiæ.

Among the specimen plants, which it may be noted are not cumbrously large, being mostly in about 10-inch pots, we may further mention of Lady Ferns, A. F.-f. Grantiæ, a dwarf dense broad-fronded close variety, with undulated pinnules and pinnæ; A. F.-f. grandiceps, with a contracted base and great round bunchy head, forming a fine cristate mass; A. F.-f. fissidens, a curious ragged-looking sort with long-toothed unequal irregular pinnæ; A. F.-f coronatum, another variety with small lower pinnæ, and a large massive head, but quite unlike grandiceps, for the head does not form a rounded mass, but spreads out more like a coronet; A. F.-f. glomeratum, a fine novelty, such as might come from the fusion of a very much improved multiceps with grandiceps, the frond terminating in a large dense globular head of finely-cut crispy segments, and the pinnæ being also crested in a similarly dense manner. Passing to other species, Polystichum aculeatum acrocladon may be instanced as a fine novelty, with dark green persistent fronds crested at the apex of both fronds and pinnæ; and P. aculeatum proliferum as another elegant variety of a species not prone to vary, and having the proliferous character so well marked in the analogous variety of angulare. We must be content with further specifying Lastrea montana Nowelliana; Blechnum Spicant imbricatum, ramosum, and projectum; Osmunda regalis cristata; Lastrea Filix-mas cristata and cristata angustata, L. F.-m. Bollandiæ, and crispa, the latter very odd-looking from its density and dwarfness; Athyrium F.-f. plumosum and corymbiferum; Polypodium vulgare omnilacerum, one of the best of the bipinnatifid Polypodies; and P. vulgare pulcherrimum, another fine and elegant variety more in the way of semilacerum; both the Woodsias; with Asplenium fontanum and germanicum; and some of the best Scolopendriums. We also noticed young plants of the very distinct Polystichum angulare rotundatum, with the pinnules of roundish outline; and the most remarkable A. F.-f. Victoriæ, the Queen of Lady Ferns, which has the pinnæ forked at the base, and is everywhere crowned with crests.

Among the store plants we were most struck with the stock of Asplenium septentrionale—a whole frame full, the plants as even as if manufactured, as vigorous as if revelling on Snowdon, and altogether presenting a picture of—but we fail to find a simile, suffice it therefore to say, a picture such as would delight the heart of a Fern lover. These plants had in fact, from their vigour and their symmetry, an appearance so unlike what this little Spleenwort generally bears under cultivation that for a moment we were nonplussed. We were told they had all been raised from spores on the establishment, and were in this way found to grow more readily and freely than plants collected from their native rocks. This, we observe in passing, is legitimate cultivation, and should put to the blush those dealers or others who are ready to receive, even though it be with an open pocket, the strippings of any wild habitat. Asplenium fontanum and Polystichum Lonchitis, reared in the same way, were equally flourishing; and seedlings of Woodsia alpina in strong force, also showed themselves quite at home among the Surrey hills. As all these plants, and other varieties too, beyond a doubt, may thus be obtained in plenty from spores, and with better prospect of success in respect to their cultivation than if gathered wild, it is to be hoped that Fern growers, who are increasing in numbers, will be warned in time to do all they can to encourage such a legitimate mode of culture, and to discourage to the uttermost the destruction of our rarer species in the few places in which most of them occur in a state of nature. To be indoctrinated with this idea, if for nothing else, is worth a journey to Dorking, even though it were from the Land's End.

Besides those already mentioned, there were in the store pits fine healthy batches of the following Athyriums—conioides, Vernoniæ, Parsonsiæ, Elworthii, mucronatum, Applebyanum, fissidento-excurrens, Barnesii, and glomeratum; of Polystichum aculeatum acrocladon; of Lastrea lepidota; of Lastrea dilatata dumetorum; and of Blechnum Spicant ramosum, imbricatum, and projectum, all well-marked varieties; while in the several pits and houses were legions of seedlings of all kinds to follow in succession.

PLASNEWYDD, ANGLESEA.—Every one who passes down the Menai Straits from the wonderful tubular bridge, one of the greatest triumphs of modern engineering, towards Caernarvon, must have observed on the right hand, just after leaving the pretty little church of Llanvair, a line of charming wood about two miles in length, occupying the banks which fall more or less precipitately towards the water, consisting of magnificent trees principally of Oak, Beech, and Sycamore, the remains, doubtless, of the ancient forest from which Anglesea took its name of Ynys Dywyll, from its impenetrable darkness. This wood, which extends nearly to the Church of Llanedwen, is broken in the midst by a green slope on which stands the noble mansion of Plasnewydd, the property of the Marquis of Anglesea, but for many years the residence of the Dowager Lady Willoughby de Broke, to whose taste alone the beautiful garden to which we are going to call the attention of our readers, owes its attraction.

This property formerly bore the name of Llwyn y Moel, derived probably from the curious Druidical tumulus which is one of its leading points of interest. This mount, which bears the name of Bryn yr Hên Bobl, or Hill of the Ancient People, is laid bare on the south side, exposing a most curious chamber, the object of which has exercised the ingenuity of Welsh antiquaries to little purpose from the time of Pennant. It is probable that further excavations may lead to fresh discoveries, as there seems to be one, if not two passages leading from the cist. This mount is shaded by one or two fine Oaks, which are recorded as having most appropriately in former days produced the Mistleto, but if this report is correct, there is no trace of the parasite now.

The mound is not the only Druidical remain which demands notice, for near the house is a most perfect and magnificent double cromlech, the larger of which consists of an enormous mass of stone more than 12 feet long and broad, and 4 feet thick, supported originally by five stones, of which two have fallen, and close to it a smaller one of near 6 feet square, supported by three uprights, and originally as it should seem by four.

The wood itself moreover is of considerable botanical interest, containing at least one rare Fern, while the trees afford in profusion rare Mosses, such as Pterogonium Smithii and Neckera pumila, while the soil is in places adorned with the lovely Hookeria lucens.

The lawn, which descends abruptly from the house to the sea wall, and which even in the present dry season is beautifully green, has most judiciously been left unornamented, the splendid mountain view extending from the Rivels to those beyond Aber, needing nothing whatever to draw off the attention. A seat which commands a full view of Snowdon with the Glyder looking up the Pass of Llanberris, is placed accordingly at the entrance of the garden, and is a favourite resort for those who have a passion for pondering on the outline of these distant hills, which present with every change of atmosphere a fresh object of interest. The ever changing waters of the Straits, and the beautiful scattered woods on the opposite coast, which unlike most woods are without a particle of formality, form the most admirable foreground to the extensive panorama.

It is time, however, to turn to the gardens themselves, which from their beauty strike every passer by. The lawn, of which we have just spoken, and which in front of the house is perfectly clear of trees, extends in the direction of the tubular bridge, which, with the adjacent column, forms an interesting object, and is continued deeply into the wood so as to leave the boles of the magnificent trees perfectly exposed, and to form a beautiful contrast to the dense mass of foliage beyond. This part of the lawn is studded with various beds which in point of colour are more brilliant than anything we have seen elsewhere, and where tall plants like Gladioli or Kniphofia are used, the soil is concealed with great effect by a dense covering of some charming little plant like Saponaria calabrica. These brilliant gems are here and there contrasted with groups of tall Grasses, which have an excellent effect. From the house a hedge of Fuchsias, of extreme luxuriance, extends towards a small but very pretty conservatory, the base of which is covered with Clematis montana, except in the centre, where the flight of steps leading into the interior is covered by a curved parapet, surmounted by snow-white urns, containing beautiful masses of flowers.

In front of this the ground is laid out in terraces, leading down to the sloping lawn just mentioned, with a charming riband border of great length, consisting of Gazania, blue Lobelia, Flower of the Day Pelargonium, and Calceolaria amplexicaulis, in the whole of which not a single failing plant can be discovered. The beds on the terraces consist of groups of flowers inlaid in ornamental Box, which flourishes in great perfection, and which in the upper terrace is disposed in scroll-work, with an elaborate monogram in the centre which is quite marvellous, from the perfection with which the Box is trimmed, and the peculiar brightness of its colour. The Box, moreover, is set off by the pure tint of the quartzose gravel, which is judiciously though sparingly mixed with fragments of other tints. The groups of flowers look peculiarly bright embosomed in the Box, which perhaps could scarcely be produced in such perfection under a less favoured climate.

We think that scroll-work has been too much neglected from a notion of its being too artificial. It is not, however, more artificial than riband borders, or, indeed, than the bedding system in general, and it has the great merit of being beautiful in winter as well as in summer. Everything, however, depends upon purity of design, neatness of execution, and perfect cultivation, without which it can only be a failure; and if flower are intermixed, it is certainly a great point to have such perfect masses as are general in this charming garden, or to have flowers like those of the splendid varieties of Chinese Pinks, at least double the size which they attain under ordinary cultivation.

Miscellaneous.

Windsor Forest.—The date at which it was first fenced in is unknown. It was inclosed long before the time of Elizabeth. On December 9, 1564, that Queen sent strong orders to the Lord Chief Justice and Solicitor General, to direct and advise the Earl of Sussex, Chief Justice in Eyre, to hold a court for redressing disorders within the Forest. This Chief Justice in Eyre was an important personage, generally some nobleman appointed by the Crown, to hear and determine all complaints of trespass within the Forest, and all claims of purchases, liberties, and privileges. The office became gradually obsolete, and was abolished in George the Third's reign; the last person who held it being Mr. Granville, who had not performed any duty, except granting licences for shooting, for 40 years previously. Until the year 1817, the Forest was simply an open common over which the Crown had rights of timber and pasturage for deer. The timber was only such as grew naturally, in a wild uncultivated state, lopped for the deer and destroyed by the commoners. Accordingly, little of the old Forest timber is sound or valuable; although we are indebted to this system for the numerous picturesque trees. Even over that part in which the deer were kept there were complicated rights. The Crown claimed the right of pasturage for the deer, the right of cutting browse-wood for them, the right of timber growing naturally on the land, and the right of property in the soil itself. Then there were many manors in the Forest, the lords of which claimed the right of granting shooting licences, the right of under-wood, the right of pasturage, and other similar rights. The Constable of Windsor Castle claimed the right of protecting the Crown "vert," or "browse," and "venison;" the Lord Chief Justice in Eyre, the power of prosecuting all offenders against forest laws, accused of wood-stealing or land-inclosing, together with the power of granting licences for shooting. The commoners claimed to cut turf for fuel; pasturage in summer for as many animals as they could keep in winter on their lands; grazing for geese; and, further, helped themselves to everything which they could possibly appropriate. If they had small pieces of freehold adjoining any part of the open common, they had a simple but ingenious method of extending them at the public expense by always "scouring out" their ditch on the side opposite to their own land, until by this "rolling brook and ditch" they carried out their boundary as far as they dared. They could see no moral or legal wrong in this process. An old commoner related, with glee, that one Christmas eve, 60 years ago, when the Forest officers were tapping their Elder wine—a custom come down from time immemorial and still kept up—he worked all night long in the bright moonlight, and had a quarter of an acre added to his land before the morning. Moonlight nights were the season for such and similar operations. If a commoner could only build himself a hut of turf, and have a fire lighted and a *pot boiled* in the rudest chimney, the hut became established as a house, was in fact his "castle," and was then wholly unassailable except by regular process of law, which the Forest officers frequently declined to institute. If, however, the pot had not boiled, the forest officers might proceed without ceremony to pull the house down. With the enclosure of the Forest all such customs have passed away. The commoners were never much given to deer-stealing, preferring the more substantial accumulation of "landed property," which when found out was not so severely punished. They had vast numbers of swine, which were turned out into the Forest. One of these men could spin amusing yarns about the good old times. He had been so much among pigs that he regarded them with particular affection, and seemed to understand every one of their movements. "The pigs," he said, on one occasion, "are like us, for they will ate amost anything; and yet they are different too, for if you put a lot o' things afore a pig he'll always take the best of them first; but when I gets my dinner o' Sundays, I likes my beef and taturs first, and my pudding afterwards. Them as was bred in the Forest it was no manner o' use tryin' to keep them in when the acorns began to rattle off the trees; out they would be. There aint a move but they're up to; and when you want them home, and they won't come, they *are* aggrawatin'! They'll circumwent the artfullest man as ever lived. There aint a bit o' pig as isn't good to ate, as I knows on; but the sweetest morsel is the wery pint o' his nose, which you scrapes and salts and hangs a fortnight, and then you byles it with greens and taturs. There's ne'er a pictur ever hangs in a man's cottages as aiquals a gammon of bacon hung up agin the chimney." This oid man and two others are the sole survivors of a class which in a few years will be extinct in this part of England. *Athenæum*

Wasps.—There is no sweet without a bitter. Every Beemaster feels the plague of wasps this autumn of 1864; for 15 years, the range of my experience as a

Beemaster, I have not seen so fierce and multitudinous bands of wasps descending on my bees on predatory incursions. I do not mean to insinuate that the wasp has no mission. I believe he has his use. He is the scavenger of our gardens, and clears off decay, putrescence, and filth of every sort. For this I give him credit, but I cannot extend to him either the affection or respect I feel for my bees. Were you to see the wasps this autumn rushing into my hives, sometimes by a sudden dash, at other times by stealth, you would instantly acknowledge in them the type of the thief and burglar. But my bees are better prepared for the wasp's reception than London householders for thieves. He runs the gauntlet every time he enters. Through my glass observatory windows I watch the conflict. One bee half his size, seizes him by the throat, another gives him a taste of his sting, and two or three watchers seize him by the legs and drag him out. I have hit on an admirable plan of keeping him off, well worth disclosing to every Beemaster. I place at the entrance of the hive a stick of barley-sugar a couple of inches long. This brings to the entrance a dozen of bees, who thankfully feed on it. There is thus secured an additional guard at the gates. The moment the wasp alights the whole *posse* fly at him and drive him away. Another plan is to fill half full a wine bottle with beer and sugar. Incidentally a bee may look in, but the wasps, whose scent is perfect, rush in and are drowned. It is a sacred duty devolving on every Beemaster to exterminate these Arabs, Bedouins, and corsairs. They lay up no stores for themselves, they do nothing for the support or enjoyment of man. They use their stings, not like bees, in self-defence, but in sheer wickedness. They are professional thieves. Like the bees of a Correspondent of yours, they have no respect for *tuum*, and having no *meum* they care nothing for it. Living at the expense of others, without consulting the convenience or goodwill of anybody, they richly deserve what their extermination will pay for—sulphur, gunpowder, and boiling water. The death penalty is due to every wasp that enters a bee garden. The razing of his house and the dislodgment and destruction of the whole clan have become a sacred duty. Let me beg all that value their lives to examine well every Apple, Pear, and Peach they eat, for these venomous insects may be seen this year ensconced under the skin, and if admitted within the mouth they will sting the throat, and, as in several recent cases, the sufferers will die. Do not conclude I am uncharitable. It is no charity to connive at theft and murder. I am satisfied that killing wasps is no murder. Had Peter the Hermit or Walter the Penniless lived in my garden, and witnessed these wicked vagabonds trying every hive, worrying my bees and stealing my honey, they would have preached a crusade against wasps. *A Beemaster, in the Times.*

Calendar of Operations.

(For the ensuing week.)

FEW plants are more attractive than Japan Lilies. They come into bloom at a time when the beauty of New Holland plants is over, and when an actual paucity of flowering plants exists, wherewith to decorate our conservatories and greenhouses. They produce a gorgeous display either in-doors or out; and as they are quite hardy they may be liberally planted in the open border, and thus constitute one of our best autumnal flower-garden plants. The cultivation of them in pots is by no means difficult. Immediately when the bulbs go to rest in autumn is the proper time to repot them. By no means destroy the old roots, but carefully place them amongst the fresh soil. If large examples for particular display are required, large pots may be employed, and half a dozen large flowering bulbs placed in each pot. Rough peat, intermixed with a little loam and silver sand, is the best kind of soil for them. The pots should be well drained, and the crown of the bulb should be just covered with the soil; when potted they should be placed in a cold pit or frame, in order to prevent the soil from freezing, although frost will not injure the bulbs. Where room under glass is an object in winter, they may be plunged in the open air in coal ashes, in a manner similar to potted Hyacinths. There is scarcely any plant which is so much benefited by liquid manure as this Lily, more especially before expanding its flowers. If used in a clear state, and considerably diluted, this water alone may be applied for at least a month before the plants come into flower. If the object should be out-door cultivation entirely, they should be planted in beds, in which in favourable seasons their effect is exceedingly grand. Excavate the soil 18 inches deep, and fill in the bottom a foot deep with very coarse peat, intermixed with one-fifth of decayed manure or leaf-mould. The remaining 6 inches may be entirely peat. If the bulbs are large enough to bloom, plant them 12 inches apart every way, and if beds of the different sorts are well contrasted one with another, the effect will be magnificent. Lilium lancifolium speciosum or rubrum is one of the handsomest of these Lilies; and those who can afford it cannot do better than add to their collections the glorious L. auratum, of which so many fine specimens have been exhibited this season. The old japonicum is also worth growing.

FLOWER GARDEN AND PLANT HOUSES.

Stove plants which flower upon young wood may with propriety be shifted now, as they will thereby be much invigorated; and the size of the blossoms also will be improved. Those, on the contrary, which flower upon the ripened wood, must be gradually encouraged to go to rest, as the days decrease in light. We would not pot any plants when they are very near their flowering season. Poinsettias, which do not flower until January, may be repotted now, and freely supplied with liquid manure; under this kind of management the floral leaves will be double the size that they would be if less liberally treated. As Amaryllids in pots show signs of ripening, they should be gradually dried off. Before the season is further advanced, every gardener should calculate, as nearly as may be, whether the extent of his framing conveniences will be sufficient to afford shelter during winter to his stock of established half-hardy plants, as well as to those he is now propagating. If his room is deficient, he must either restrict autumnal propagation within certain limits, or prepare additional pits without further loss of time. Brick pits are of course the most durable, and although expensive in the first outlay, are cheapest in the end. A very common make-shift pit is built of turves, which lasts several seasons and is very warm, but in appearance rather untidy.

BALSAMS.—These will now be in full flower, and must be treated so as to keep them in beauty as long as possible. Do not let them suffer from want of water, remove all dead blooms, and keep the foliage clean and healthy.

DAHLIAS.—Exhibitions of these will now be held plentifully all over the country, and to procure fine blooms for them will test the skill and patience of many an amateur. Early flowers, from which it may be desirable to save seed, should have attention, and as they wither, the decaying florets should be extracted. Seedlings, especially weak late blooming ones, that give any evidence of merit, though they may not be quite up to the mark in every respect, should be taken care of, to be tried again, as high cultivation another season may cause a more favourable development of their good qualities.

HOLLYHOCKS.—Great improvement has been effected in these showy border plants of late; even this season some excellent new kinds have been exhibited. Save seed from the best. Some adopt the plan of removing the upper part of the spike, leaving six or eight of the early blooms. When the plant throws up four or five stems, and propagation of the variety is an object, one or more of the spikes of flowers may be sacrificed; the stem may be split, cut in lengths, with a bud in each, and placed under a hand-glass, taking care that the small portion of shoot retained is covered with soil, leaving the point of the bud exposed. Strong young plants may often be raised in this way.

FORCING GARDEN.

CUCUMBERS.—Where a supply is required during winter, vigorous young plants should be secured at once from seed, as plants that have been bearing through the autumn, however promising they may look, seldom answer well for winter fruiting.

MELONS.—Where fruit is ripening, give air as freely as the state of the weather will permit, and keep the atmosphere as dry as possible. If late plants are infested with spider, syringe morning and afternoon as freely as can be done without injuring the leaves; in short use every means to get the plants perfectly clean, while water can be employed without danger of creating too much damp.

PINES.—Let the soil about the roots and also the atmosphere be somewhat dry about fruit that is ripening; therefore be careful not to over-water. Endeavour to afford growing stock a steady bottom-heat of about 70°, and keep it well supplied with manure-water at the root, but avoid getting the soil too wet. As fire-heat will soon be necessary to a considerably larger extent than has been the case during summer, care must be exercised to secure a properly moist state of the atmosphere, keeping the evaporating pans or troughs regularly supplied with water, and moistening the floors, &c., frequently, as any sudden change from a moist to a dry state of the atmosphere would be most injurious to growing stock, and also to plants swelling their fruit. Be as sparing of fire-heat, however, as circumstances will permit, and shut up early on the afternoons of bright days. Where young stock is grown in dung pits care must be exercised after this season not to get the plants weakly through keeping them too close and warm; air should be admitted freely on every favourable opportunity, and sufficient command of warmth should be secured from the linings, to allow an opportunity of giving a little air at night and on warm cloudy days.

VINES.—Remove all decayed or unhealthy berries from ripe Grapes, and keep the house well aired and free from moisture. Where the crop is cleared, the wood ripe, and the leaves beginning to decay, the sashes, if not already removed, may be taken away altogether.

HARDY FRUIT AND KITCHEN GARDEN.

Where planting of Broccoli and other Winter Greens has been delayed by the late drought, that operation should now be completed as soon as possible; also make failures good in plantations already made. Make the principal sowing of Cabbage for spring use; and plant out those sown last month for Coleworts. Sow Brown Cos and hardy Cabbage Lettuce towards the end of the month for spring use; plant out those sown last month in a warm situation; these will probably be useful in November. Earth up Celery in a forward state. Sow Turnips and make a sowing of Early Dutch at the end of the month, for use in spring; also Early Horn Carrot—these should remain in the ground for winter use. Sow Tripoli Onion; also Prickly Spinach for winter and spring supply.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Aug. 31, 1864, as observed at the Horticultural Gardens

August.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain
Thurs. 25	23	30.157	30.152	77	34	55.5	58¼	59½	S.W.	.00
Friday 26	24	30.300	30.240	69	31	50.0	59	59½	N.	.00
Satur 27	25	30.326	30.215	71	47	59.0	59	59½	S.W.	.00
Sunday 28	26	30.134	30.056	70	52	61.0	60	59	S.W.	.00
Mon. 29	27	30.038	30.001	75	38	56.5	60¼	60	S.W.	.00
Tues. 30	28	29.846	29.825	79	57	68.0	60½	60½	S.	.01
Wed. 31	29	29.930	29.760	71	42	56.5	63	61	S.W.	.14
Average.		30.104	30.035	73.1	43.0	58.0	59.8	60.1		.15

Aug. 25—Clear; dusky white clouds; fine; cold at night.
— 26—Clear; quite cloudless; fine; one deg. below freezing at night.
— 27—Slight haze; very fine; fine throughout.
— 28—Partially overcast; very slight drizzle; overcast at night.
— 29—Fine; very fine; cold at night.
— 30—Very fine; hot and sultry; slight rain.
— 31—Densely clouded; rain; fine at night.
Mean temperature of the week 2¼ deg below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Sept. 10, 1864.

September.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 4 .	70.4	46.2	58.3	16	0.58 in.	5	7	4	4	2	7	3	6
Mon. 5..	69.8	47.3	58.6	16	0.30	3	9	7	—	4	5	6	2
Tues. 6..	69.5	46.0	57 7	17	0.70	1	10	4	—	1	14	7	1
Wed. 7..	69.6	47.1	58.4	17	0.55	1	6	6	1	6	11	5	2
Thurs. 8..	68.9	47.3	58.1	17	0.65	3	7	2	2	3	15	3	3
Friday 9..	68.8	48.0	58.4	17	1.09	—	6	2	3	5	6	8	2
Satur. 10..	69.4	45.5	57.5	19	1.27	2	4	4	1	7	8	10	2

The highest temperature during the above period occurred on the 5th, 1848—therm. 83 deg.; and the lowest on the 6th, 1850—therm. 30 deg.

Notices to Correspondents.

ALOCASIA ZEBRINA: *E A H.* This plant would of course be admissible in a class for the best "Ornamental Foliage Plants," although as you say, the stem is more beautiful than the leaves. The meaning of such a class is clearly plants not in flower.

BEDDING PELARGONIUMS: *H W C.* For general bedding purposes, where the colour of the flower is what is wanted, there is no advantage, but rather the contrary, in the presence of a horse-shoe band or zone on the foliage, for its tendency is to create dulness. A plain green, the shade of colour rather lively than dull, sets off the flowers to better advantage. Of course there may be cases when *the zoning* of the leaf may be introduced with good effect *as an element* of the composition, just as in those instances where the colour of the foliage is varied by white or yellow; but such cases do not occur so frequently with the former as with the latter. It is different with the tricolor zonate sorts, such as Mrs. Pollock, because in these it is the bright picture presented by the leaf colours which is really desired. So, too, in our opinion, the white eye we see in some varieties is not desirable in bedding sorts, unless exceptionally; a better picture results from the use of whole colours.

EXHIBITIONS: *A Showman.* It is sheer nonsense for any one to urge that we in England should shut our eyes or harden our hearts against those features of arrangement in which we are excelled by our neighbours over the water. It will be much wiser if we try to introduce them to our own exhibitions, as far as may be consistent with such habits and customs as cannot readily be changed. We say, as we have said before, that the bane of our shows, even the best of them, is formality and stiffness, and these cannot be got rid of without a radical change as to arrangement. In the foreign shows which have been mentioned in connection with this subject, we have a clear indication "how to do it;" and if we are deterred by bad counsellors from profiting thereby, it can only be to our own loss. If you take our advice you won't listen to the bah! of wolves in sheep's clothing.

MARIGOLDS: *W Melville.* The pot Marigolds are showy and varied in colour, and of very good quality, but not better, if so good, as some we have seen from the South of England. We quite concur that they are fine things for the back of a ribbon border, wherever such plants are admissible.

NAMES OF PLANTS: *J B.* 1, Polypodium vulgare cambricum; 2, P. v. omnilacerum.—*G E.* Myosotis sylvatica, not arvensis.—*G Y.* 5, Tournefortia heliotropioides.—*S H P.* Such plants can rarely be named from a solitary leaf and *nothing more.* It is probably Salvia Æthiopis, or something of the sort.—*G. Young.* 1, Pteris hastata macrophylla; 2, Pteris hastata; 3, Calycanthus lævigatus; 4, Pavia macrostachya.—*Constant Reader.* 1, Panicum miliaceum; 2, Polypogon monspeliensis; 3, Lagurus ovatus; 4, Lamarckia aurea.—*Constant Reader.* Phytolacca icosandra.—*A D.* The specimen sent is a starveling of Matricaria Chamomilla, the Wild (not the officinal) Chamomile, whose slight properties are aromatic, and could not, we should think, have caused any injury to cows; indeed, some animals are said to eat it; but another plant, equally common, the Anthemis Cotula or Mayweed, so like this Matricaria as to be distinguished only by purely technical marks not at all apparent to an ordinary observer, may grow intermixed with it, as it often does, and as this is reputed to be acrid, even blistering the skin if much handled, it may be injurious if eaten in sufficient quantity.

STOPPAGE OF HOT-WATER PIPES: *Agricola* has a hot-water apparatus connected with his kitchen range; but the pipes are partially stopped, caused, as he fears, from the hard water forming a deposit within them. He would be thankful to any Correspondent who would inform him what is the best means of preventing this deposit, and believes the information would be beneficial to many persons besides himself. Can any one help him to a better remedy than sal-ammoniac?

TROPÆOLUMS: *W Melville.* The samples of the dwarf bedding Tropæolums were too far gone before they reached us to enable us to say much about their colour. They are dwarf and compact in habit, as in the Tom Thumb section, one having the flowers maroon-crimson, the other scarlet. So far as we could judge from the condition of the flowers, these seemed to be much better shaped than those of the ordinary Tom Thumb varieties. The scarlet one appeared particularly good. The others were past examination.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.
Address, 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
CRATE,
MANGEL MANURE, &c. &c.

They also continue to supply GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

LAWES'S MANURES.
The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
American and other Cakes at Market prices.
Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22 Eden Quay, Dublin.

DIXON AND CARDUS'S LINSEED CAKE,
Analysed and Reported upon by Dr. VOELCKER.

As considerable mortality amongst the Lambs has occurred in two or three districts in Hampshire, and in some cases our Linseed Cake, on which they were feeding, has been blamed as the cause of it, we requested Dr. Voelcker to investigate the subject and report upon it; which report we subjoin.
It will be seen that the Cake was of excellent quality, and free from any matter that could be injurious to the health of animals feeding upon it.
Diseases in Lambs in isolated districts are by no means uncommon; and no doubt excellent Cake is often branded as the cause of sudden outbreaks of disorders in Lambs, whereas these disorders are enveloped in such mystery that the best Veterinary Surgeons and the most experienced Flock-masters are at a loss to advance a rational theory in accounting for the sudden death which often affects the flocks in one district and not in another.
The four Samples of Cake sent for Analysis were marked:—
J. W. No. 1 and No. 2, from Mr. John Wallace, Houghton.
T. E. From Mr. Thomas Edwards, of Compton House, Stockbridge.
S. A. From Mr. Stephen Ayles, of Braishfield, Romsey.
DIXON & CARDUS.

Report of Dr. VOELCKER.
101, Leadenhall Street, London, July 8, 1864.
To Messrs. DIXON & CARDUS, Southampton.
DEAR SIRS,—I have now the pleasure of handing you the results of careful Analyses of four samples of your Cake. You will observe at once that these four samples show a close agreement in composition, which distinctly proves that the manufacture of your Cake is carried on uniformly in your mill.
The per centage of Oil (the most valuable constituent of Oil-cake) in all four samples is quite as high as in the best kinds of Linseed Cake; and that of flesh-forming matters a fair average proportion.
The small amount of sand, and the absence of obnoxious weed seeds, shows that Clean Linseed is used in the preparation of these four samples of Cake.
I have carefully examined your Cake for injurious foreign matters, and am decidedly of opinion that it contains nothing that can be regarded as at all likely to be injurious to the health of animals fed upon it. Its condition is fresh, it is free from mould, and is palatable; and in my opinion is a wholesome and nutritious Cake of good average quality.—Yours truly, AUGUSTUS VOELCKER.

COMPOSITION OF FOUR SAMPLES OF LINSEED CAKE, MANUFACTURED BY DIXON & CARDUS, NORTHAM, SOUTHAMPTON.

	SAMPLES MARKED.				
	J.W. No. 1.	J.W. No. 2.	T.E.	S.A.	Barrel American
Moisture	10.91	11.39	10.58	10.48	11.64
Oil	11.55	11.26	10.92	10.94	10.43
*Albuminous compounds (flesh forming matters)	25.62	25.25	27.43	26.43	24.01
Mucilage, Starch, Sugar, and digestible fibre	31.09	31.28	30.34	30.96	34.44
Woody Fibre (Cellulose) ..	14.04	13.46	14.46	15.09	14.26
**Mineral Matters (Ash) ..	6.79	7.36	6.27	6.10	5.22
	100.00	100.00	100.00	100.00	100.00
*Containing Nitrogen	4.10	4.04	4.39	4.23	3.84
**Containing Sand	2.12	2.34	1.64	1.13	1.42

AUGUSTUS VOELCKER.
London, 101, Leadenhall Street.—July 8, 1864.
N.B. We have to the above Table added an analysis of Barrel American Cake, made by Dr. Voelcker some time ago for us, which shows our cake to be even superior to Barrel American, which is considered by many as the standard of first-rate quality. D. & C.

THE GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY.
THE RIGHT HON. LORD RIVERS, *Chairman*.
J. BAILEY DENTON, ESQ., *Principal Engineer*.
Offices: 52, Parliament Street, S.W.

Under this Company's Act tenants for life, trustees, mortgagees, guardians, committees of incompetent persons, beneficial lessees, corporations (ecclesiastical or municipal), incumbents, charitable trustees, &c., may effect the following Land Improvements, and charge the outlay and expenses on the estate improved, by way of rentcharge, to be paid by half-yearly instalments, viz.:—
1. All works of Drainage, Irrigation, Warping, and Embankment.
2. The Erection of Farmhouses, Cottages for Agricultural Labourers, and all kinds of Farm Buildings.
3. The Construction of Roads.
4. The Grubbing and Clearing of Old Woodlands, Enclosing, Fencing, and Reclaiming Land.

The owners of estates, not entailed, who may be desirous to avoid the expense or inconvenience of a legal mortgage, may also charge their Estates with an outlay in improvements under the simple and inexpensive process of the Company's Act.
The term of years for the rentcharge is fixed by the landowner, so as to adapt the amount of annual payment to the circumstances of the tenants, and it may be so adjusted that principal, interest, and all expenses will be included in an annual charge of 6*l.* per cent.
No investigation of title being required, and the charge not being affected by incumbrances, no legal expenses are incurred.
The arrangements for effecting improvements are threefold:—
No. 1. The works may be designed and executed entirely by the landowner's agent, and the Company employed only to supply the loan and conduct the matter through all the official forms for charging the outlay on the estate.
No. 2. The Company will supply plans, specifications, and estimates for any improvements to be executed by the landowner's agent as under No. 1. In each of these cases the landowner will be solely under the control of the Enclosure Commissioners.
No. 3. The Company will undertake the entire responsibility of the improvements, prepare the plans, execute the works, and finally charge on the estate the actual amount expended, with their commission thereon, approved by the Enclosure Commissioners.
Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.
Works of Drainage and other improvements are also executed on commission for landowners, who merely require the skill and experience of the Company's officers and a staff in constant practice.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Office of the Company, 52, Parliament Street, S.W.

HALLETT'S PEDIGREE NURSERY WHEAT.
TRADE MARK.

Seed required		
In September	.. ..	4 bushels on 10 acres.
In October	.. ..	4 bushels { On 8 acres. / On 6 acres.
In November	.. ..	4 bushels on 4 acres.

Seven Guineas a Quarter, including Bag, delivered at the Brighton Railway Station, upon receipt of Cheque or Post Office Order, without which the Wheat will in no case be sent.
One Guinea a Bushel, or Seven Guineas a Quarter, including Bag, delivered at the Brighton Railway Station, upon receipt of Cheque or Post Office Order, without which the Wheat will in no case be sent.
APPLY TO FREDERIC F. HALLETT, ESQ., F.Z.S., THE MANOR HOUSE, BRIGHTON, SUSSEX.

Land Drainage, & other Agricultural Improvements
MR. BAILEY DENTON, C.E., maintains a large Staff for the Execution of Land Improvements by a commission of 5*s.* per acre for Under Drainage, and a fixed charge for Outfall and other works.
For particulars, apply to him, at 52, Parliament Street, Westminster.

Drainage of Land.
MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

Drainage, &c.
MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

MANCHESTER and LIVERPOOL AGRICULTURAL SOCIETY.
GRAND SHOW at KNUTSFORD, SEPTEMBER 7 and 8, for SPECIAL and other PRIZES, amounting to nearly 1000*l.*
The Exhibition will this year comprise HORNED CATTLE of various kinds; HORSES, including thorough-bred and other Stallions, and a large entry of Hunters, Cobs, Ponies, &c.; SHEEP, PIGS, POULTRY, DOGS, CHEESE, BUTTER, SEEDS, ROOTS, HORTICULTURAL PRODUCTIONS, IMPLEMENTS, MACHINERY, and Miscellaneous articles.
[ENTRIES for the Show finally closed on the 13th inst.]
Excellent Show Ground of about 12 Acres in extent has been provided by the Local Committee near the entrance to Tatton Park and Gardens, which, by the kind permission of Lord Egerton, of Tatton, will be open to the inspection of Visitors to the Show.
Admission to the Show:—On WEDNESDAY, September 7, from 10 o'Clock to 6 o'Clock, Admission (by Tickets sold on the spot) 2*s.* 6*d.* each; and on THURSDAY, September 8, from 8 o'Clock to 4 o'Clock, when the Show will finally close, Admission 1*s.* each Person.
On WEDNESDAY, the 7th, there will be a GRAND MUSICAL BAND CONTEST, which has been provided for out of Funds raised for Special Prizes, &c., by the Local Committee.
The PUBLIC DINNER will also take place on that day, at Half-past 3 o'Clock P.M., the Right Hon. Lord de Tabley in the Chair.
Tickets, 3*s.* 6*d.* each, may be obtained from Messrs. JENNISON, the Contractors, at Bell-Vue, Manchester, or in the Show Yard.
T. B. RYDER, Secretary and Treasurer.
57A, Church Street, Liverpool, Sept 3.

SMITHFIELD CLUB FAT CATTLE SHOW, 1864.—
The ANNUAL SHOW of FAT CATTLE, SHEEP, and PIGS, will be held at the AGRICULTURAL HALL, ISLINGTON, on MONDAY afternoon, December 5, and four following days.
The Prizes now offered consist of 1955*l.* in money, two Silver Cups for Cattle value 40*l.* each, three Silver Cups for Sheep value 20*l.* each, and a Gold Medal for Pigs, also 60 Silver Medals to the Breeders, and a Butcher's Silver Cup, value 10*l.*
There are now Eleven Divisions for different breeds of Cattle, Eleven Divisions for Sheep, and Four Classes for Pigs of different ages.
The Entries for LIVE STOCK CLOSE NOVEMBER 1.
Prize Lists and printed Forms of Certificates with full particulars can be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, Corner of Half-Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words "Smithfield Club."

SMITHFIELD CLUB SHOW, 1864.
IMPLEMENT DEPARTMENT.
The LAST DAY for receiving ENTRIES for IMPLEMENTS and MACHINERY is SATURDAY, October 1.
Printed forms of Certificates and all necessary information can be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, corner of Half Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words—"Smithfield Club."

The Agricultural Gazette.

SATURDAY, SEPTEMBER 3, 1864.

—— A GOOD deal has during the past week appeared in print on the subject of reaping machine competitions.

The *Mark Lane Express* attributes the marked success which at length attends the use of mowers and reapers very much to the prize system, which localises, intensifies, and defines that rivalry amongst manufacturers, the results of which have been so beneficial. It calls attention to the trials (reported in our columns last Saturday) before the East Lothian and the North Lincolnshire Agricultural Societies, as examples of the advantages of the prize system as administered by official judges.

On the other hand Mr. BERNHARD SAMUELSON, to whom the first prize was awarded for a self-acting or sheafing reaper at one of these competitions, without condemning the prize system in itself, asserts the comparative uselessness of these provincial competitions, and attributes it to the impossibility of having prizes fairly and impartially awarded at such trials.

The *Times* had declared in reference to the proceedings of the North Lancashire Agricultural Society, that reaping and mowing machinery would come more rapidly into use among farmers if really useful examples of these labour-saving tools were more frequently exhibited in efficient working order at the provincial cattle shows.

Mr. SAMUELSON states accordingly the reason why the principal manufacturers of these and other machines hesitate to send their productions to local shows. He sums it up in two words—mismanagement, and partiality of the local directors.

In illustration of this assertion, he puts the

case of this very North Lancashire Society. His firm exhibited in 1862. They were set to work in "fields of grain which had not been underdrained nor rolled, but were intersected with surface drains, some of them nearly 2 feet in depth, and concealed by the crops. In the first field no precaution was taken to keep out the crowd, which trampled down everything before it. Of course, no judgment was possible." They were then ordered into an enclosure, from which not only spectators but the exhibitors themselves were excluded, until the open watercourses brought some of their machines to grief, when they broke bounds. A favoured exhibitor, however, had not only been admitted from the beginning, but had been allowed to reconnoitre and practise in the field before the trial.

This year another northern society offered prizes for steam ploughs and reapers. One of our leading makers was tempted to compete for the former; "of course," says Mr. SAMUELSON, "he was only second—a local maker being placed before him. As for the reaping competition, that was adjourned for a fortnight, although the crops were waiting, because another local man was not ready.

"Last week," he says, "the East Lothian Society had a competition of reaping machines. My firm took the first prize for a self-acting or sheafing reaper, but the prize for 'the best reaper in the field' was given to a manual delivery reaper made on the spot, which also stood first on the last similar occasion in 1861, but had not become famous out of East Lothian during the interval. All the most celebrated Scotch makers competed in both years, but the East Lothian implement was owned on each occasion by the same East Lothian nobleman, who was also one of the judges, all the other judges being East Lothian men like himself."

Then follow remarks of less general interest on the number of new reapers which the Banbury firm have this year started, and so forth. But the allegations, however, which we have quoted above, as to the favouritism shown to local makers, and in particular the reference to the "East Lothian nobleman," ought to be immediately replied to by the proper authorities.

The most interesting account, however, we have seen of machine competition in the harvest field is that of the one at Midville, near Boston, Lincolnshire, superintended by the Bennington Labourers' Friend Society. Think of a *Labourers'* Friend Society getting up a competition among reaping machines! What would those gentlemen say to this who some years ago deprecated the extended use of agricultural machinery on the ground that employment for the labourer would thereby be diminished? The Bennington Labourers' Friend Society know well that the working man is interested above all things in the establishment and prosecution of vigorous and successful agriculture. The steam engine and the steam plough—the reaper and the mower and the thresher—are parts of vigorous management, and it is where vigorous management prevails that wages are highest, and working people are best off. It seems too that this very successful meeting at Midville came off without the incentive of any prizes to be awarded. The following is the account of it:—

Six reapers made their appearance upon the ground, four of which were double-horse and two of them single-horse machines. Each had an acre and a-half of Wheat allotted to it to cut, and the time consumed in the accomplishment of the task was noted with every one of them except the two single-horse machines. The following particulars will show the difference between the respective implements:—HORNSBY & SONS' (side delivery), 3 horses and 1 man, 75 minutes; BURGESS & KEY'S (side delivery), 3 horses, 2 men and 1 boy, 55 minutes; SAMUELSON'S (sheaf delivery), 2 horses and 1 man, 48 minutes; BURGESS & KEY'S (sheaf delivery), 3 horses, 1 man and 1 boy, 57 minutes; HORNSBY'S (back delivery), 1 horse and 2 men, not timed; CUTHBERT & Co's (back delivery), 2 horses and 3 men, not timed. The judges were Messrs. JAMES MARTIN, of Wainfleet, and CARTWRIGHT MAYFIELD, of Hagnaby. Their decision, which appeared to give universal satisfaction, awarded the first place to SAMUELSON'S machine in the double-horse department, and to HORNSBY'S in the one-horse. The general opinion, however, on the ground was in favour of the side deliveries in preference to the sheaf delivery.

—— Mr. STRAFFORD'S September list of Shorthorn sales includes a dozen animals of all ages belonging to Capt. SPENCER, on the 8th, at Lancaster; 23 belonging to his Grace the Duke of DEVONSHIRE, at Holker Hall, North Lancashire, on the 9th; 52, the entire herd, belonging to J. WORSEY, Esq., at Lower Clopton, near Stratford-on-Avon, on the 20th; 33, the entire herd, belonging to G. F. HENEAGE, Esq., at Hainton Hall, near Wragby, Lincolnshire, on the 21st; 33, the property of D. R. DAVIES, Esq., at Mere Old Hall, Knutsford, Cheshire, on the 23d; 68, the entire herd, belonging to Mr. JOHN LAXTON, at the Manor House, Morborne, near Yaxley, Peterborough, on the 27th; and 34, the herd of the late Mr. THOMAS CHAPMAN, at Whitwell, between Oakham and Stamford, on the 29th. Here are about 250 pure-bred cattle, whose average price will fairly represent the existing market value of good Short-horn stock. We see that in reference to the sale at Holker Hall, Mr. STRAFFORD announces that the tribes from which they are descended contain some of the oldest, the purest, and the best blood in the country, and have for many years been famous for producing animals of great excellence and real merit: the specimens here offered will be found to have fully sustained the reputation of these tribes, as not only their pedigrees but the animals themselves will bear the strictest scrutiny, and with the exception of two heifer calves, from "Countess of Barrington," and Cleopatra 2d," the Catalogue includes all the females of these families now at Holker Hall. Mr. STRAFFORD'S instructions are that no reserve whatever shall be placed upon them.

We add that at Mr. WORSEY'S sale, two bulls, SAFEGUARD and STANDARD, the property of J. C. ADKINS, Esq., of Milcote, of the celebrated *Charmer* family, will be sold.

—— In another column will be found an account, taken from the *Oxford Journal*, of a recent visit to the Beddington sewage meadows, near Croydon, which were described in our columns last June. It appears that a hot dry summer is not favourable to succulent vegetable growth, even where the soil is soaked with sewage water. The tendency of the Italian Rye-grass to throw up its seed-stem is irresistible under such circumstances; and the great first cutting of 13 or 14 tons per acre, grown under the cool moist air of March, April, and May, has this year been followed by cuttings of not more than 5 or 6 tons per acre grown in June, July, and August. Those who speculate on the possibility of turning London sewage to account on the low-lying lands of such a dry hot district as the counties of Kent and Essex generally are in midsummer, must consider this diminished efficiency of their manure at that season.

It is to some extent a counter balance to this deficiency of power of sewage water, however, to find that it has this year proved remarkably efficient at Beddington in growing Mangel Wurzel. An attempt had been made there on the 17th or 18th of May to plough up some Grass land, but the land was found too hard; and on the 20th, when we walked over it, the land was lying under sewage water, which had been thrown over it simply to soften it. Immediately thereafter the Grass land was ribbed up by the plough, two furrow-slices being laid together over an inner slice unmoved. Mangel Wurzel seeds were dibbled on these upturned sods, and when the ground was dry, sewage has at intervals been let in upon the land, standing and soaking in the furrows. The consequence is that there was, when we were over the land the other day, an extremely promising young crop of Mangels, full of growth and without a blank. We have never seen anything like so good a plant after so late a sowing.

—— It is well to call attention to the various expedients which have been and no doubt will be immediately adopted for shortening the period during which our live stock will, during this coming winter, be dependent upon the existing store, or the existing promise, of food for them in the country.

The Early Stone Turnip has no doubt been sown largely upon early moved stubbles, and the rains of the past week have started the seed. The Trifolium incarnatum has probably been more largely sown than usual, and may yet be sown—simply harrowed in, 20 lb. of seed per acre, upon the moistened unmoved stubble—and it will yield large crops of green food pretty early next spring. The Winter Oat and the Rye are other means of shortening the period of winter feeding by providing early spring keep. Cabbages have been more generally planted than hitherto — and Mustard may be sown yet with the probability of a crop worth having before the frost shall cut it down.

AGRICULTURAL EDUCATION.

[The following letter was last week addressed to the Editor of the *Times*.]

YOU have powerfully enforced and illustrated the argument on this subject, which Lord Stanley recently addressed to the Ormskirk Agricultural Society. Good professional training on the one hand, and sound business relations between landowners and land cultivators on the other, are undoubtedly, as you point out, the best agency for the furtherance of agricultural progress. "Judgment, Pluck, and Capital," which qualify for agriculture, as for every other occupation, will be forthcoming, just in proportion as a man is properly educated for his profession, and is enabled to invest his means in it with safety. And, accordingly, it seems plain that our agricultural societies cannot employ themselves more usefully than in endeavouring to promote a sound public opinion on agricultural education on the one hand, and on the relations of landlord and tenant on the other.

Are you aware, however, that we have a National Agricultural Society incorporated by Royal Charter for the very purpose (among others) of promoting agricultural education; and that this Society was startled the other day by the intelligence that never since the grant of its Charter, now more than 20 years ago, had it done anything whatever in discharge of the duty in this particular which it then assumed. A committee of its governing body has been since appointed "to consider the measures which ought to be taken for 'the improvement of the education of those who depend on the cultivation of the land for their support,'—that being declared by the Charter to be the 7th National object to be prosecuted by the Society"—and the result of its deliberations has lately been announced by the offer of a prize of 50*l.* for an "Essay," to be sent in next spring. The upshot hitherto accordingly of the whole discussion, it appears, is this:—The Society is directed by its Charter to "take measures;" it has taken no measures—has never even thought of taking measures. It doesn't know what measures to take, and has therefore appointed a committee to advise it, but this committee finds itself in the very same predicament; it, too, fails to indicate what measures are advisable; and, handing in its turn its duties over to the general public, it recommends that 50*l.* be offered as a fee to Counsel for an opinion on the subject. Will any gentleman accept the 50*l.* of this Society and tell its office bearers what to do?

The measures to be taken seem so plain and the need of them so urgent that more good will be done, as I believe, by a discussion of them here and now than by waiting half a year for the professional judgment on them which is offered them. The measures which are wanted have been made obvious enough by the general educational experience of the past few years. "Middle-class schools" and other educational institutions have been both urged and guided, as everybody knows, by annual University examinations and by those of the Society of Arts. These examinations have applied both rein and spur, with the best effort on both the direction and the rate of progress. And like the corresponding official examinations of our professional schools—legal, medical, military, naval—they are, I understand, becoming year by year more careful and severe, and therefore more efficient. Surely there is every indication here of what might similarly be done for agricultural education by so powerful an association as the Royal Agricultural Society of England. There has been no attempt on the part of the examining bodies to establish new colleges or schools. These have multiplied as personal enterprise or public spirit has been aroused by the demand for them. The object has been only to improve the existing institutions. Education has been guided by the programme of the examinations which are to test it, and both teachers and students have been stimulated by the distinctions, prizes, and professional position which are the result of their success before the examiner.

Something like this is needed for promoting the education of the Agricultural profession. So far as professional education is concerned, the majority of young farmers are at present taught simply by experience on the farm at home; probably the bulk of the remainder acquire what professional ability they possess by residence for a year or two upon a farm elsewhere. There are indeed a few professed schools of agriculture in this country, and these are much more capable of imparting the science and the skill on which professional ability depends; but they are suffering from the lack of that stimulus and that guidance which national agricultural Societies and their official examiners, with the prizes and distinctions given them to award, ought to have supplied. The number of these professional schools would probably increase were they thus made the care of great agricultural associations, but the first effect of such a thing would, doubtless, be to increase the efficiency and success of the few already established.

There is a Royal Agricultural College at Cirencester for example, incorporated like the National Agricultural Society by a Royal Charter. One would think

that here was an agency ready to its hand, by whose aid the Society might long since have taken measures for the improvement of agricultural education. It has sent out during the past 16 or 18 years 20, 30, and 40 men per annum, many of them well qualified as agriculturists, who have since achieved professional success. Furnished with a large farm, with a staff of teachers and professors, some of them of European reputation, with accommodation for 200 students, with lecture rooms and laboratories—a completer apparatus for agricultural education than anywhere else exists—it has nevertheless often needed help and guidance, almost failed indeed at times for want of them. And these the Agricultural Society might have given it; and, just as the Universities are helping general schools, ought to give it now. Carried on at great personal labour and expense by public spirited men—Mr. Holland, Mr. Sotheron Estcourt, the Earl of Ducie, and Lord Bathurst—with only a public object to subserve—it has never yet, as I believe, been even recognised by the Royal Agricultural Society of England. And not one half, I dare to say, of the members of that Society, nor one in ten, in all probability, of those who are seeking agricultural education in this country for their sons, know of its existence. Could this have been if the duty, connected with "the seventh National object," imposed by the charter of the Society had been properly discharged, or even been attended to at all?

It seems to me that the offer of a prize for an essay on the subject of middle-class schools for those who are dependent on the cultivation of the soil, while a duty so obvious and direct remains undischarged, is giving the go-by to the whole affair—is in effect a shirking of the plain responsibility which has been laid on the Society by its Charter. And as the subject is certainly of great public interest, I venture to ask that publicity for this statement of it, which your columns alone can give.

It is certain that the next generation of agriculturists will need all the ability which a good professional education can confer. The new order of proprietors to whom it seems, from the address at Ormskirk, and from your subsequent remarks on it, the country must look forward—the men who have bought their land at 40 and 45 years purchase of the existing rental, will unquestionably do their utmost to raise their rents in some proportion to their outlay. They will claim every penny which their tenants can afford to give. And the help which these will need, is that better education which will first enable them to negotiate with landlords on fair and equal terms, and thus qualify them for the best possible use and prosecution of the bargain to which they may consent. The Royal Agricultural Society of England is bound by its Charter to take measures for the promotion of this better agricultural education, and no better use of its large powers can be imagined than in aiding, stimulating, and directing the existing means of it. *J. Chalmers Morton, Examiner in Agriculture to the Society of Arts, Streatley, near Reading, August* 25.

A DAY AT BIRKENHEAD.

1. THE PHOSPHO-GUANO WORKS at Seacombe, opposite Liverpool, cover upwards of 3 acres of ground. The materials used in the manufacture are—*first*, the so-called Maracaybo guano, which is found as a stone-like incrustation either on the rock or on the organic beds with which the surface of certain West Indian Islands is covered; *second*, sulphuric acid of the density 1·74; and *third*, sulphate of ammonia. The first is imported by the Phospho-guano Company, who have acquired exclusive right to the guano at Maracaybo and neighbouring islands—the second and third, manufactured at soda-ash and gas works in the neighbourhood, are purchased and delivered at the Company's Works. The ship loads of guano are piled under shelter as they arrive: the vitriol is delivered at intervals in carboys as it is needed; the sulphate of ammonia is lying in a small hill or large heap under the same roof.

The process is as follows:—The guano, in the form of hand-shaped fragments of the incrustation, is fed into mills and ground. A horizontal circular trough, with iron bed, revolves rapidly around its centre under a pair of upright "stones," which, standing in this trough, revolve more slowly with it. These "stones" have iron rims hollowed out, so that any pebbles in the guano can always escape their action, and a certain portion only of the stuff fed in is with each revolution crushed to powder. The trough is, however, being continually emptied at a constant rate by revolving cups, which lift whatever they lay hold of to a screen, and from this the powder is received into bags, while the unground residue returns to the trough.

Two such pairs of stones keep two men continually shovelling the shell-like fragments of guano into the mill, and three or four men are continually carrying the ground guano away in bags to the great heaps, which are operated on during the busier manufacturing season, and which in the meantime accumulate to a quantity of many thousand tons.

The manufacture is conducted in iron pans, each capable of holding 20 cwt. of the manufactured material. Over each is a cistern of sulphuric acid; so much of the sulphate of ammonia is put into each of these pans, of which there are two double rows, about 30 in all.

The proper quantity of sulphuric acid is then mixed with it and dissolves it, and the proper weight of guano is then added, and the whole is thoroughly intermixed. The pans are emptied from 16 to 18 times a day, so that the materials of each change remain together for more than half an hour, before they are thrown into a common heap.

This in the course of weeks is quarried out and put through the breaking and mixing machine. A rapidly revolving double circular framework, the parts of which turn different ways, receives the shovelsful of the hardened mould, in which state it is quarried out, and this is delivered by centrifugal action, well powdered by the rapid strokes it has received on its passage from the centre to the circumference. It is then weighed in cwts. into bags and casks, and is ready for sale. And a very large sale it meets with, though owing to the cost of the materials and the process it is inevitably a costly article.

The question of value is one of course quite apart from that of cost; but with ample certificates of value from the highest authorities in chemistry, derived from their knowledge of its composition, and, what is still better, with ample testimony from agriculturists of the effects it has produced—with, moreover, our knowledge of its origin as a natural guano to which sulphate of ammonia has been added—we need not wonder at the large sale which it commands, notwithstanding its high price.

2. LISCARD HALL.—Mr. Harold Littledale, of Liverpool, owns a large extent of land near Seacombe, on the western side of Birkenhead; and some hundreds of acres of this property near his house he farms. His farm includes 300 acres of arable land, and 150 acres of poor Grass land.

The five-course rotation is adopted, viz.:—1st and 2d years, Italian Rye-grass; 3d, Oats; 4th, Green crops, as Turnips, Potatos, Mangel Wurzel; and 5th, Wheat. The green crops, together with large purchases of grain and cattle food, go to the maintenance of a large herd of dairy cows.

Ninety of the finest Yorkshire large-framed productive cows were standing in the stalls at the time of our visit, and about 1000 quarts of milk were daily taken from them. From 800 to 1000 quarts a day are the usual produce, 200 gallons being sold daily in the neighbourhood, and the remainder being churned.

The buildings—a remarkably well-arranged, commodious, and neatly kept homestead—have been erected with a view mainly to the accommodation of a large dairy stock. Four parallel ranges of buildings—three of them byres—abut on a cross range of higher buildings, at the back of which are threshing barn and machinery for grinding corn, cutting chaff, churning, &c. There is ample accommodation, both for housing the live stock and dealing with the produce of the farm—and the apparatus includes millstones, threshing machine with conical drum, chaff-cutters, corn and cake crushers, churns.

The cows, milked at 4 A.M., and 3.30 P.M., are fed at 7 A.M., 1 P.M., 3 P.M., and 5 P.M. on hay, grains, Turnips, Mangels, and hay chaff. A good bull is kept, and the best cows are kept on and calved on the premises. Many, however, are every year sold off, and others bought in their places to keep up the supply of milk. They are generally bought in at their prime, four or five years old, and kept two or three years before being disposed of. The pleuro-pneumonia has made frightful havoc in the herd on four several occasions during the past 20 years, more than 100 having been lost in this way at different times. When the supply of milk exceeds the sale a considerable remainder exists, which is set in earthen vessels for butter. The churning takes place when the milk is two or three days old, in an upright cylindrical churn with two sets of beaters, one projecting from the upright central axis, and the other from the inner surface of the cylinder. A number of experiments were made at the time of the erection of this churn by Mr. Clyburn, of Lord Ducie's Implement Works, at Uley, Gloucestershire. He compared the Cheshire D or box churn, Rowan's churn, Brown's vertical double-action churn, and his own, and the following table gives the results of his experiments:—

NAME OF CHURN.	No. of gallons of Milk and Cream.	No. of quarts of Water.	Temperature.	Revolutions per minute.	Total of revolutions.	No. of minutes.	Temperature when finished.	Weight of Butter.	Experiment.
								lb. st.	
Cheshire Churn	18	6	56	60	7200	120	60	17 10	No. 1 by hand power.
Rowan's Churn	18	6	56	60	14400	240	60	15 6	
Vertical Churn	9	3	56	100	6100	61	60	6 0	No. 2 by horse power.
Cheshire Churn	18	4	56	100	11000	110	60	12 0	
Rowan's Churn	18	4	56	100	no result	..	..	..	
Cheshire Churn	18	4	56	100	7200	72	..	14 8	No. 3 by horse power.
Cheshire Churn	18	6	56	70	8680	124	..	16 2	
Cheshire Churn	23	9	56	100	14700	147	..	19 12	No. 4 by horse power.
New Churn	23	9	56	100	4000	25	..	19 12	

The usual practice now is to drive the revolving beater 140 revolutions per minute, the milk being thus broke between 40 moving spokes or arms, and as many fixed ones. The butter comes in 12 to 15 minutes—and the rapid churning yields 5 to 7 per cent. more butter than the ordinary slow action of the box-churn.

The management of the herd is in the hands of four men and four women, who see to the feeding, cleaning, and milking.

The whole waste of the cow-house goes into two large tanks, 60 feet by 13 feet, and 10 feet deep, and is thence pumped over the Italian Rye-grass. A 4-horse power engine drives this through a 3-inch pipe and hose over the Italian Rye-grass at 200 to 1000 yards distance. It lowers the tank about 8 inches in an hour, and gets over 4 or 5 acres in a day of 10 hours. This is equal to about 60 tons of liquid applied per acre, which is a pretty fair dressing. Sixty acres of first year, and as much of 2-year old Italian Rye-grass thus treated, are cut generally four times a year, and provide capital summer feeding for the cows. The Rye-grass is sown in autumn after a thorough tillage and good manuring of the Wheat stubble; it remains down two years, and is ploughed up for Oats. Very heavy crops of grain are obtained,—the Mangel Wurzels were the finest we have this year seen. The Italian Rye-grass in early July was promising well for the second cutting, and the Wheat and Oat crops were looking like more than 5 and 10 quarters per acre. Rent, wages, and taxes, are all extremely high, as the neighbourhood of a large town would make them. We have nowhere seen cleaner, neater management, either in the field or in the farmery. Liscard is a capital specimen of vigorous suburban agriculture, under the direction of Mr. Littledale's farm manager.

THE BEDDINGTON MEADOWS, NEAR CROYDON.

WE described some weeks ago the attempt which is being made at Aldershot to utilise the waste of the camp—to turn the refuse of a large population, which bid fair to become a pestilential nuisance, into a source of food and profit. Mr. Blackburn, who is conducting that experiment, would be a very courageous man if he had only analogy to guide his proceedings, for it is a singular fact that analogy is very far as yet from being a safe guide in these matters. Manure is indeed food, minus growth; and the waste of a great feeding establishment like Aldershot, or any other town, ought to be as valuable as the waste of a great feeding establishment such as we see on every well-managed farm. But hitherto this has failed of being realised. The Rev. Henry Moule, of Dorchester, does indeed find that, in the case of a single household, a proper conservation of house waste suffices for the fertility of a garden; but even this falls far short of the agricultural parallel. An arable farm is certainly well stocked, and that means well manured, if it carries two or three sheep per acre. Comparatively few plough-land farms do so much. But when we come to apply a unit of this kind to calculations of the value of town sewage, we are altogether at fault.

In Mr. Morton's evidence before the select committee of the House of Commons on Sewage, in 1862, he says that the water which drains and washes out one-half of the ground on which the city of Edinburgh stands, is all turned upon about 230 or 240 acres between Edinburgh and Leith, so that 300 persons must, as it were, have been "folded" here per acre.

At Carlisle again, where Mr. M'Dougal hires the sewage of the town, the produce of 20,000 people flows over 110 acres, being after the rate of nearly 200 persons per acre. And it is one of the greatest puzzles that exists in agriculture that the general truth, apparently so obvious when sheep and cattle are the live stock which fertilises the farm, fails of being realised in those few cases where the waste of a resident population has been turned upon the land. It needs no longer two or three per acre, but a whole population, to bring about the fertility which is desired.

Mr. Blackburn has examples in Watford, Croydon, and other growing and considerable places, of the kind of success which was likely to follow his attempt at Croydon. In the former of these places the Earl of Essex hires the sewage, and pumps it over his Italian Rye-grass grounds; but although he has a considerable population to fertilise the grounds, he confessed before the Committee that his mistake lay in setting apart too many acres for the purpose. If he had had a population of 200 per acre, instead of 40 or 50 only, the experiment would have been more profitable.

Probably, however, the most instructive experiment in the utilisation of town sewage is near Croydon, where the Board of Health, having drained the town, and been prosecuted by neighbouring landowners for the nuisance which the delivery of the drainage water at one point had occasioned, took some hundreds of acres on a very slight but uniform slope about two miles below the town, and relet this land to a tenant at an advance of 1*l.* per acre for the use of the sewage water on it; and this is now being poured over it. Mr. Marriage, of Chelmsford, the tenant of the farm at Beddington, has thus about 240 acres under sewage, which pours on to the farm at its upper end, and is conducted along ditches with hatches at one field and another, by putting down which the contents of the ditch are made to overflow at that field. The water is thus led along parallel narrow furrows about 16 yards apart, and from them it flows over the intervening

lands. The land is particularly well adapted for the purpose, being of a very gradual slope, and down this slope it trickles to the lower end of the field, is gathered into a drain there, and thence conducted to a field on a still lower level. After being conducted a second time over the land, the filthy turbid stream which was delivered on to the farm from the town, leaves it clear and limpid, with hardly a smell to offend the nose; and the stream into which it falls is now as full of fish as ever it used to be.

It is on the use by the land of those contents of the filthy sewage water which it leaves behind it on the Beddington Meadows that Mr. Blackburn and other experimentalists on the subject build their hopes.

What, then, is the use to which this filth is turned? Mr. Marriage sows this land with Italian Ryegrass. After the plant has grown, it receives during the first winter and the following spring several dressings of two days' water at a time, and the consequence is an enormous growth of green. When we saw these meadows in the month of May, there was over these fields of Grass in their second year a crop of 10 to 13 tons per acre. It stood, of a dark green colour, as high as a walking stick, and succulent from end to end—a mass of food of the very best quality for cows. Five hundred square yards cut the day before had yielded 29 cwt., and 1200 square yards cut the previous day to that had yielded 3½ tons, The whole was sold as fast as it was ready to men who came with carts morning and evening from long distances, and took away their quantities at about 9*d.* a cwt., or 1*s.* a square rod. Several cuttings are obtained each year, varying, perhaps from 10 or 12 tons per acre at first to not more than 4 or 5 in a hot midsummer, and again 7 or 8 tons per acre in the autumn.

A walk over these meadows the other day showed that the cool spring weather is the best for grassy growth. The contrast, however, between these meadows and surrounding Grass fields, baked in this summer's drought, is very great. But the formation of the seed spike is in hot weather almost immediate, and there is less succulence in the stem and leaf, notwithstanding that the land is soaked with the filthy water. It needs a cool damp air, as well as a well-fed cool moist soil, to produce the most abundant growth of Grass. Mr. Marriage's experiment is, however, sufficiently successful. 8000 tons of Grass, or thereabout, are annually produced from 240 acres thus watered; and this, either fed at home, or sold at a price varying from 8*d.* a cwt. at home to 1*s.* and 1*s.* 3*d.* a cwt. in London, pays sufficiently well. The Italian Rye-grass sown this autumn is retained over two and sometimes three summers—but it gradually dies, and thins, and dwindles—other less productive Grasses gradually taking its place, until at length it is ploughed up. The best plan probably is to allow only two summer crops from it, breaking it up in the third spring for Turnips or Potatos—this crop being removed in time for re-sowing the land in the following autumn, when it will be ready to bear another repetition of two-year cropping with Italian Rye-grass.

The land at Beddington is especially adapted for the water delivered from the Croydon drainage, especially because of the gradual and even slope of its surface; but it is by no means the better qualified for this use of it by the natural fertility which it possesses. It is a very fair quality of porous gravelly soil, worth probably 2*l.* per acre, or rather more, in the neighbourhood. The Local Board of Health, driven to obtain such land at any cost, give, we understand, 4*l.* per acre for its use, and the tenant is charged 1*l.* extra for the sewage over it. But the land is not the better for its being of good quality naturally. We believe that a sheer sand would, in a year or two, be as productive as a good loam under the treatment which these lands receive, a statement of considerable importance to owners of unproductive estates.

In order to the best and most economical use of town sewage, it only needs that a porous sloping surface of soil, however poor, be provided. It is a machine by which the fertilising filthy flood will be converted into pasture. It is only a machine that is required—and the poorer soil will be a cheaper machine than one of natural fertility. We believe accordingly that, notwithstanding the extreme poverty of the soil with which Mr. Blackburn has to deal at Aldershot, he will realise from the waste of the camp of 18,000 men as great a return as is obtained by Mr. Marriage on the fertile soils at Beddington from the waste of 20,000 people living in the town and neighbourhood of Croydon.

COTSWOLD RAM SALES.

(From the *Wilts and Gloucestershire Standard.*)

We give below our usual Tabular Statement of the principal Sales of the past eight years:—

Name.	1857. Sheep Sold.	1857. Average. £ s. d.	1858. Sheep Sold.	1858. Average. £ s. d.	1859. Sheep Sold.	1859. Average. £ s. d.	1860. Sheep Sold.	1860. Average. £ s. d.	1861. Sheep Sold.	1861. Average. £ s. d.	1862. Sheep Sold.	1862. Average. £ s. d.	1863. Sheep Sold.	1863. Average. £ s. d.	1864. Sheep Sold.	1864. Average. £ s. d.
Mr. H. Howell, Coates	40	12 10 0	40	9 0 0	40	8 19 3	40	14 10 2	41	8 11 7	40	11 1 0	40	11 6 8	39	10 17 3
Mr. J. Lane, Barton Mill	50	9 14 9	50	10 8 0	45	8 18 0	48	10 10 4	47	11 2 3	48	10 0 4½	50	11 18 9	47	9 14 9
Mr. Beale Brown, Hampen	65	12 17 9	70	10 2 4	60	10 0 3	—	.. ..	—	.. ..	—	.. ..	30	6 0 0	—	.. ..
Mr. J. King Tombs, Hatherop	50	8 15 0	53	8 0 0	43	8 9 3	40	8 8 6	39	9 6 2	50	7 13 3	40	8 12 6	40	7 10 2
Mr. C. Barton, Coln Rogers	52	13 5 8½	52	12 2 1	53	11 1 2	52	12 7 4	50	10 5 0	50	11 13 0	52	11 19 2	49	9 11 7
Mr. W. Cother, Middle Aston	70	9 16 2	70	11 1 3	68	9 1 1	60	8 14 2	60	9 18 0	86	10 13 6	65	8 9 11	44	9 10 3
Mr. W. Garne, Kilkenny	56	8 3 0	49	8 5 0	45	8 7 2	**46**	**19 8 0**	54	12 4 0	47	10 4 5	48	11 6 9	34	12 7 8
Mr. W. Lane, Broadfield	**65**	**22 4 2½**	58	16 14 6	50	11 16 6	54	17 8 0	50	17 11 3	50	13 13 9	56	14 14 11	56	10 6 7
Mr. J. Gillett, Minster Lovell	64	14 2 0	64	12 14 1	60	14 4 2	60	11 17 2	66	12 2 7	58	9 17 4	50	10 0 3	56	9 16 4
Mr. R. Garne, Aldsworth	59	16 17 3	60	12 7 2	50	12 1 6	52	18 13 2	56	15 15 7	50	11 14 1	54	15 16 9	50	14 8 2
Mr. W. Smith, Bibury	57	18 16 2	59	13 6 7	51	11 4 9	50	11 7 4	50	9 10 0	54	8 0 4	44	11 4 6	54	9 19 11
Mr. T. Porter, Baunton	52	10 15 8	50	9 15 8	44	9 0 0	49	11 11 8	50	10 18 6	50	7 17 6	30	8 16 9	50	10 18 10
Mr. E. Ruck, Castle Hill	70	9 6 6	70	8 7 8	60	8 11 6	60	8 2 6	—	.. ..	—	.. ..	—	.. ..	—	.. ..
Mr. Fletcher, Shipton	54	12 9 3	54	12 3 7	50	13 5 6	51	11 8 6	50	12 16 6	51	11 17 9	52	13 10 6	53	14 17 7
Mr. W. Hewer, Northleach	54	15 18 6	**55**	**20 12 11**	53	14 17 6	50	16 8 0	50	16 5 3	56	17 17 0	**50**	**17 5 0**	**50**	**25 5 2**
Mr. Walker, Yanworth	46	12 0 7	46	9 0 3¾	40	10 14 7	19	13 1 0	—	.. ..	—	.. ..	—	.. ..	—	.. ..
Mr. R. Lane, Cottage Farm	30	16 5 0	46	12 2 6	**32**	**16 0 7**	32	17 6 6	**36**	**34 10 8**	**43**	**23 2 3**	—	.. ..	—	.. ..
Mr. Howell, Ewen	42	12 0 6	40	12 9 4½	40	11 1 3	40	12 8 4	40	11 0 6	40	13 3 3	36	12 1 6	39	12 19 0
Mr. J. Barton, Coln St. Aldwyns	50	9 1 6	50	9 4 0	50	8 17 0	45	11 8 0	50	10 7 0	46	8 19 7	44	11 5 0	46	9 5 9
Mr. Barton, Fyfield	50	13 9 9	50	9 10 0	50	9 2 10	50	15 3 6	44	15 10 0	46	16 13 4	44	14 14 11	48	12 18 4
Mr. Handy, Sierford		....		....		....	—	.. 9 18 0	40	.. 9 16 3	42	.. 10 10 8	48	.. 9 15 0	51	.. 10 10 10
Mr. H. Cole, Ashbrook		....		....		....		....		....	—	.. 0 0 0	20	.. 10 10 6	24	.. 8 12 4
Mr. James Walker, Northleach		....		....		....		....		....	—	.. 13 5 0	36	.. 11 9 2	40	.. 10 0 0
Messrs. J. Wells & Co., Hampnett		....		....		....		....		....		....		....	51	.. 11 19 5

In 1854 Mr. Garne, of Aldsworth, realized **£21 7s. 3d.** each for 55 sheep.—In 1855 Mr. W. Lane's average for 65 sheep was **£20 2s. 6½d.**—In 1856 Mr. R. Lane obtained an average of **£20 14s. 1d.** for 30 sheep.—Mr. R. Lane has now discontinued his sale of shearhogs, and last year sold his ram lambs at an average of nearly **£7** each.

*** The highest average obtained in each year is distinguished by being printed in black type.

Home Correspondence.

The Death of Live Stock and Oilcake Considered.—In your Number of the 13th August is a letter from Mr. Wallace on the above subject, and some remarks by you upon it and on Mr. Mechi's letter relative to the losses amongst his calves. As it is a matter of great importance to farmers, we are sure you will be glad to publish any details which may throw light on the subject, as to whether the disease amongst Mr. Wallace's lambs could be caused by feeding them on good Linseed-cake, or whether the lambs suffered from some epidemic independent of the cake. We say "good" Linseed-cake, because Mr. Wallace says "the Linseed in the cake may have undergone some fermentation, and if the cake was not mouldy to appearance, might not the bran or nut cake be so before being mixed with the Linseed?" If materials (or even the purest Linseed) in a state of decomposition are used, the cake will of course be injurious and unfit for food; in the same way beef or mutton if in a similar state would be unfit for the food of man. Now, we can speak positively as to the perfectly sound condition of the cake Mr. Wallace complains of, as we made it and supplied him with it. In order to satisfy others we sent a piece of cake from Mr. Wallace's farm and some from his neighbours to Doctor Voelcker, for his analysis and microscopical examination, and we enclose his report for your perusal. The following facts strongly corroborate our opinion that the cake had nothing to do with causing the complaint among the lambs. 1st, the disease was confined to a limited locality, and farmers in the same district lost lambs who were not feeding with our cake at all. 2dly, many hundreds of farmers residing in other parts of Hampshire and the neighbouring counties of Dorset, Wilts, Somerset, Devon, Sussex, &c., were using our Linseed-cake, and their flocks were not only free from disease, but did well and gave every satisfaction to their owners, as numbers of gentlemen have voluntarily written to inform us after hearing of the case and reading Dr. Voelcker's report in the county papers. 3dly, Mr. Wallace sold such lambs as he considered deteriorated by eating our cake. in lots of 50 each, by auction, at Salisbury. We purchased one lot and sent them to a neighbouring farm (Mr. Benjamin Gulliver, of Wimpson, near Redbridge) where they were folded on a piece of Clover and fed with precisely the same sort of cake that was said to have poisoned them at Houghton. These lambs improved so rapidly that in the course of three weeks we sold them at a profit of 12*l.* 10s. on the lot, and the butcher who slaughtered them says that he never had a healthier lot of lambs. Trusting that you will kindly insert this letter in your next paper, and allow the foregoing facts to speak for themselves. *Dixon & Cardus.*——The following is the report of Dr. Voelcker, introduced by a preliminary statement from Messrs. Dixon & Cardus. "As considerable mortality amongst the lambs has occurred in two or three districts in Hampshire, and in some cases our Linseed cake, on which they were feeding, has been blamed as the cause of it, we requested Dr. Voelcker to investigate the subject and report upon it; which report we subjoin. It will be seen that the cake was of excellent quality, and free from any matter that could be injurious to the health of animals feeding upon it. Diseases in lambs in isolated districts are by no means uncommon; and no doubt excellent cake is often branded as the cause of sudden outbreaks of disorders in lambs, whereas these disorders are enveloped in such mystery that the best veterinary surgeons and the most experienced flock-masters are at a loss to advance a rational theory in accounting for the sudden death which often affects the flocks in one district and not in another. The four samples of cake sent for analysis were marked:—J. W. No. 1 and No. 2, from Mr. John Wallace, Houghton. T. E. From Mr. Thomas Edwards, of Compton House, Stockbridge. S. A. From Mr. Stephen Ayles, of Braishfield, Romsey."

REPORT OF DR. VOELCKER.

101, Leadenhall Street, London,
July 8, 1864.

To Messrs. Dickson & Cardus, Southampton.

Dear Sirs,—I have now the pleasure of handing you the results of careful analyses of four samples of your cake. You will observe at once that these four samples show a close agreement in composition, which distinctly proves that the manufacture of your cake is carried on uniformly in your mill. The per centage of oil (the most valuable constituent of oilcake) in all four samples is quite as high as in the best kinds of Linseed cake; and that of flesh-forming matters a fair average proportion. The small amount of sand, and the absence of obnoxious weed seeds, shows that clean Linseed is used in the preparation of these four samples of cake. I have carefully examined your cake for injurious foreign matters, and am decidedly of opinion that it contains nothing that can be regarded as at all likely to be injurious to the health of animals fed upon it. Its condition is fresh, it is free from mould, and is palatable; and in my opinion is a wholesome and nutritious cake of good average quality.—Yours truly,

AUGUSTUS VOELCKER.

COMPOSITION OF FOUR SAMPLES OF LINSEED CAKE, MANUFACTURED BY DIXON & CARDUS, NORTHAM, SOUTHAMPTON.

	Samples Marked. J.W. No. 1	J.W. No. 2	T.E.	S.A.	Barrel American.
Moisture	10.91	11.39	10.58	10.48	11.64
Oil	11.55	11.26	10.92	10.94	10.43
*Albuminous compounds (flesh-forming matters)	25.62	25.25	27.43	26.43	24.01
Mucilage, Starch, Sugar, and digestible fibre	31.09	31.28	30.34	30.96	34.44
Woody fibre (Cellulose)	14.04	13 46	14.46	15.09	14 26
**Mineral Matters (Ash)	6.79	7.36	6.27	6.10	5.22
	100.00	100.00	100.00	100.00	100.00
*Containing Nitrogen	4.10	4.04	4.39	4.23	3.84
**Containing Sand	2 12	2.34	1.64	1.13	1.42

AUGUSTUS VOELCKER.

101, *Leadenhall Street, London, July* 8, 1864.

N.B. We have in the above Table added an analysis of Barrel American cake, made by Dr. Voelcker some time ago for us, which shows our cake to be even superior to Barrel American, which is considered by many as the standard of first-rate quality. *D. & C.*

Stubble Turnips.—The unprecedented long drought and pestilential plague of insects, is at last, thanks to a kind Providence, repaired and set at nought by this day's soaking north rain—I presume and trust universally, judging from the quarter whence it comes. I have in a former article hinted and recommended, that the only alternative and proceeding I can conceive of to relieve the supposed losses farmers and gardeners must

have sustained by repeatedly losing their plants of most kinds, and to supply the wants of general consumers in the present emergency, is to secure a fresh supply of stubble Turnip seed or some other variety of a dwarf habit, and to sow it thinly immediately. As it is a matter of serious and urgent importance and public interest, and so much vacant ground is at liberty and at rest in all localities far and near, allow me through your far spreading columns, and for the guidance of all, to state that within the limits of this month or beginning of September, is not too late to sow it with a view of fearless success; if not to grow Turnips full sized, yet quite large enough for the pot (they will be needed, as Potatos must be dear), if the plants are well hoed and singled out in due time. Also for sheep feed in the fields, where they will be wanted assuredly, and will come off in ample time for Wheat. *A. Hardy, Sen., Maldon.*

Reviews.

Outlines of Modern Farming. By Robert Scott Burn. Vol. III. Cattle, Sheep, and Horses. Virtue Brothers, 1, Amen Corner, Paternoster Row.

Illustrated with numerous woodcuts, and full as usual of well packed information extracted from every trustworthy source, this third volume maintains the character of the series. We look in the index for information on cattle food, which will this season be scarce enough; and on the economy and provision of which, therefore, information is anxiously desired by many a stock master, soon to be in difficulties, if indeed he be not suffering already, and we are directed to page 71, &c., from which we extract the following passages:—

"A few remarks on the varieties of food used for the feeding of cattle, and the modes in use of preparing them, will appropriately and usefully conclude this chapter.

"*Wheat* is rarely used in bulk as a feeding material, its price being usually such as to preclude any chance of using it economically. When, however, it can be obtained at, or a little over, 1*d.* per lb., it may be used economically in conjunction with other food. The cereals generally are very fattening, producing more fat than flesh. Indian Corn is pre-eminently valuable in this way. Beans and Peas are more remarkable for having the contrary effect, adding to the muscle and the flesh of the animal. In conjunction with other food, Bean-meal is often given to cattle with good results. On the straws of the cereals as a feeding material, much has been said and written of late at Agricultural meetings and in Agricultural Journals. The practical result of the discussion may be stated to be this: that straw, where roots are scarce, may be used to a much greater extent than has been usually the practice, provided it be used with judgment and in conjunction with other food; and that mixed with this in the form of chaff, or rather cut straw, better results will be obtained than if a large bulk of uncut straw is given to the animal, the roots being also cut or pulped. With this food—pulped or cut roots, and cut straw, or chaff as it is most generally termed—and with 3 or 4 lbs. of Bean-meal or crushed oil-cake per day, animals may be fattened, or at all events prepared for fattening, with economical results.

"The *Roots* generally employed as food for cattle are Turnips, Mangel Wurzel, Kohl Rabi, Carrots, and Potatos; the three latter, however, not so frequently, Turnips and Mangels being what may be called the staple food of cattle in this country.

"Turnips owe much of their feeding value to the soil in which they are grown, and the way in which they are cultivated. It has for many years been an established rule with farmers in this country, that the more bulky the roots, the higher their feeding value. Many, however, are of opinion that the opposite of this is the case. Of all the varieties of Turnips grown, Swedes are considered the most nutritious; they keep longer in good condition than other kinds, of which the yellow is the next in value to the Swede; the white the least valuable.

"Mangels are a most valuable food; but it is necessary that they should be kept for some time—till Christmas, at least, of the autumn they are taken up in—as they possess an acrimonious substance or peculiarity when freshly gathered which has a bad influence upon the health of the animals partaking of them. If Mangels, however, are given early in the season, they should be given sparingly at first, until the animals get accustomed to them.

"*Natural Grasses.*—As food the Grasses vary much in feeding value, and much depends also upon the way in which they are grown. Grasses grown under irrigation are generally of greater nutritious value than those grown in the ordinary way.

"Of the *Artificial Grasses*, Clover, as a feeding material, is greatly influenced by the time at which it is cut down, full flower being the best time.

"Of *Hay*, Clover-hay is not so valuable as fresh-cut Clover. Of ordinary hay, it is generally understood that the second crop, or after-math, is not so nutritious as the first crop.

"Of leaf-crops, *Cabbages* are by far the most valuable food: for milch-cows they are specially good.

"*Oil-cakes and artificial foods.*—These form most important adjuncts to the feed stock of the cattle feeder. The following remarks from a lecture by Dr. Stevenson Macadam are so full of practical information bearing upon this subject, that we do our readers a service by quoting them here:—

"'*The Feeding qualities of Oil-cakes.*—The ordinary food of stock, consisting of Grass, hay, and Turnips, is very bulky in its nature, and contains a small per centage of flesh-forming ingredients, accompanied by a large proportion of heat-producing constituents and refuse matter. The digestive systems of the sheep and the ox are specially designed for making the best use of such food, but the fattening process proceeds slowly unless an admixture of richer food is given. The oil-cakes, which are now so extensively consumed by stock, supply in small bulk, and with comparatively little trouble to the animal, a large amount of fat and flesh-forming ingredients. The feeding qualities of oil-cakes are mainly dependent on the presence of albuminous compounds to the extent of 20 to 40 per cent., accompanied by an average of 12 per cent. of oil. But besides these, there is a large amount of starch and woody fibre, along with a little sugar, and gum, and saline matter containing phosphates—the principal element in bones. In short, we have present in an oil-cake the important feeding properties of the ordinary food of animals in a concentrated form, and readily capable, when partaken of by the animal, of becoming flesh and fat.

"'One of the great advantages of a feeding stuff with the composition of an oil-cake, is the presence of so much ready-formed oil, as this is readily assimilated by the animal system, and is readily stored up as fat. At the same time the digestive powers act on the starch, gum, sugar, and part of the woody fibre, resolving these into compounds which, as they circulate through the blood, become elaborated into fat capable of being also deposited in the tissues. The albuminous constituents also become transformed before and after entering the blood, and ultimately are woven into flesh in the living structure, whilst the phosphates are taken up into the blood, and supply the wants of the bones.

"'*Linseed-cake* is regarded as the first-class oil-cake, and it is obtained from Linseed by bruising, steaming, and subjecting it to pressure in hair-cloth bags, when about 25 per cent. of oil is extracted, and Linseed-cake is left. The better kinds contain 24 to 30 per cent. of albuminous compounds, and about 12 per cent. of oil. Linseed oil-cake is liable to be mixed with inferior oil-seeds, bran, and other cheap materials, which detract from its nourishing properties, and occasionally impart to it noxious properties. A simple way of examining Linseed-cake is to grate down about half an ounce, and put it in about half a tumbler of water, and stir for a short time. Good cake gives a light-coloured jelly, with an agreeable taste and smell. If other seeds be present as impurities, they communicate a disagreeable taste and an unpleasant odour, like refuse Canary-seed.

"'*Cotton-seed cake* is made from the seed of the Cotton plant in two ways. 1. By crushing the whole seed—husk and kernel—yielding a cake with little more than 20 per cent. of albuminous compounds and 6 per cent. of oil, and which is very objectionable as an article of food, owing to the presence of the fragments of husk and much Cotton fibre. 2. The cake is prepared by first shelling the seed so as to remove the husk, and the kernel so obtained is compressed so as to extract some of the oil, and a very superior feeding cake is left, which contains from 30 to 40 per cent. of albuminous compounds, and 15 to 18 per cent. of oil. In the shelled or decorticated cake no fragments of the husk should be observed. The newly-prepared or fresh cake is yellow in colour, somewhat resembling Mustard, but becomes brown on the surface when exposed to the air—especially when damp—and the brown tint passes gradually to the centre as the cake gets aged.

"'*Rape-cake* is the cheapest kind of oil cake, but many varieties are equal to Linseed in composition, and in some cases have been found equally useful in the feeding of stock. It is prepared by bruising and compressing Rape-seed, which yields Rape-oil, largely used as lighting oil, and leaves in the bags the Rape-cake. This description of cake has naturally a pungent taste, which cattle and sheep rather dislike at the first, and very often it is found necessary to mix the bruised cake with Locust Beans, or merely to sprinkle the cake with treacle, which to a great extent mask or cloak the pungency of the cake, and besides add to the feeding properties. Rape-cake is often mixed with other seeds, especially Mustard-seeds, which necessarily impart blistering properties to the cake, and thus give rise to rather serious effects in the alimentary canal of the animal partaking of such a mixed cake. The presence of the Mustard-seed may be easily determined by reducing the cake to powder, and mixing it into a thin paste with cold water in a pickle-bottle, which can be corked up. If the quantity of Mustard is great, the characteristic smell of made-up Mustard will be decidedly apparent in a quarter of an hour, but failing its appearance, then the experiment may be allowed to go on for 24 hours, when should no pungent odour be recognised, and the taste is not extra strong and pungent, then Mustard is not present in quantity to be at least productive of harm; but if the Mustard odour is obtained, and especially if a very strong pungent taste accompany it, Mustard is present in quantity to be injurious to the health of animals partaking of the cake.

"'The judicious employment of the various kinds of cake in the feeding of animals is productive of the best results, but cakes of all descriptions are too rich to be given alone to feeding stock, and the daily quantity should be limited. In the feeding of sheep with cake, it would be safer if some plan could be adapted whereby each hog would only take its allotted share. During recent seasons, several fatal cases happened, not only where a too liberal dose of the Rape-cake had been thoughtlessly given, but even where the proper quantity was weighed out for a given number of sheep; but as one sheep could appropriate its own and its neighbours' shares, evil consequences resulted.

"'In concluding the subject of oil-cakes, special reference must be made to the very rich nature of the dropping or manure obtained from stock fed on cake. The improvement in the nature of the manure through the instrumentality of the oil-cake is mainly due to a part of the albuminous or nitrogenous compounds passing through the animal without having been taken up by the system. The proportion of the nitrogenous ingredients of the oil-cake which thus passes direct through the alimentary canal, and appears in the manure, is variously estimated at 7-8ths down to 9-20ths of the whole, and therefore we may safely consider that the manure represents one-half of the total value of the oil-cake.'

"The way in which food is prepared for the animal is a point of considerable importance in connection with the best modes of economically feeding cattle, and has received of late a most extended discussion. For a long time, and until indeed very recently, the only mode ever thought of by cattle feeders of administering food, was simply giving it them in its natural condition. Straw, hay, and roots in bulk were thrown down to them, and they were allowed to make the most and best of them as they could. In process of time it was suggested by some advanced thinker that by dividing the materials (cutting the straw or hay into short lengths, and slicing the roots into pieces), the process of assimilation by the animals would be materially hastened. The next step in the process of assisting assimilation was the cooking of food; and so far as the preparation of the roots was concerned, a further division of their bulk was introduced, and in place of contenting themselves with slicing or separating them into comparatively large pieces, a thorough comminution was carried out by some feeders, and pulping roots became then a largely developed practice. On these points then—the cooking of food and the pulping of roots—many experiments have been made, and the results of these, and of a less precise but a most extended practice, have been made known; and the result is greatly in favour of both of these plans of preparing food. The advantages of cooking food may be summed up briefly by stating that it enables it to be more quickly digested by the animal, saving much mastication. Against this, however, it should be remembered that there may be a disadvantage arising by avoiding too much the process of mastication, which we know is a natural process, having certain important ends in view, as mixing the food with the saliva, &c., and absorbing the oxygen from the air. The second advantage obtained by the cooking of food is the getting rid of, in many cases, musty odours and bad flavours, which are present in cattle food very frequently; and, thirdly, by adding to the warmth of the animal, or perhaps more correctly stated, by not subtracting from it that which it already has, by giving it large bulks of cold uncooked food. The advantages obtained by pulping roots may also be briefly stated here:—reducing the quantity of food consumed, as no waste is allowed; ordinary straw can be used with the roots; and all danger of the cattle choking is avoided.

"Much has been said lately of the advantages afforded by allowing mixed food, as cut straw or hay, and pulped roots, to ferment and become soured. There is no doubt whatever that many animals are greedily fond of fermented or soured food. We have not, however, much direct evidence to fall back upon as to the real merits of fermented food. Mr. Duckham, of Baysham Court, Herefordshire, speaks very favourably of it. The most mouldy hay, cut into short lengths and mixed with pulped roots, becomes, after fermentation sets in, most sweet and palatable. When pulped roots are mixed with straw they soften it and render it more easily assimilated."

Farm Memoranda.

EAST BARNS, HADDINGTON.—Probably there is no tract of alluvial soil in Scotland more valuable than that stripe of land which stretches along the south-east coast, between Phantassie on the one side and Dunglass on the other. The length of this stripe is about 10 or 11 miles as the crow flies, while its breadth varies from two to four miles. The general character of the soil is a rich loam, interspersed and mingled here and there in varying proportions with sand or clay. It is friable in its quality, and upon the whole pretty easily worked. Stiff places are occasionally encountered, which try the mettle of the horses and the skill of the ploughmen, but in the majority of cases there is nothing to complain of in this respect. In climate, too, the district alluded to is particularly well favoured. The rainfall is rather limited at times, and the land occasionally suffers from protracted droughts: but this is more than compensated for by the comparative immunity of the tract from those severe and unseasonable frosts that often work

such dire havoc on the upper and midland districts of the county. The humid exhalations from the adjoining ocean have a certain effect in counteracting the effects of the long droughts on vegetation, and thus it happens as an almost invariable rule that the seaside farmers get through with their harvest at an earlier period than their less fortunate neighbours. With a soil and climate thus adapted to the successful prosecution of the labours of the husbandman, we believe it will be admitted that in general there is no portion of the country better cultivated than the district to which our remarks are at present limited. Two hundred years ago, when the legions of Cromwell passed along the low country, they were amazed at its fertility, and the same character it still retains. No better criterion to the value of land can be obtained than the amount of rent which it yields to the proprietor. In these competitive days land is occasionally pushed a little beyond its fair value; but exceptional cases do not invalidate the truth of the general remark. Assuming it, accordingly, as a fact, we are pretty safe in asserting that there is no more valuable soil in the whole of Scotland than that which lines its south-eastern coast, right and left of Dunbar. At a distance of two or three miles from any railway station, and at least three from the nearest market town, farms have been let within the last 10 or 12 months at a rental of not less than 5*l*. per imperial acre, and this is by no means an out-of-the-way case.

It is in this locality that Mr. Murray, of East Barns, has been engaged for the last 19 years in developing his farming conceptions on a scale that places him among the chief agriculturists of the day. The phrase, "merchant princes," has now crept into colloquial use; and, with the example of Mr. Murray and others before our eyes, the time seems to have come when the collateral title of "farming princes" might not be unworthily bestowed on men who, in their own way, are much more benefactors to their race than many of those potentates that figure so prominently in the world's history. The scale on which Mr. Murray farms is of itself something princely. There are many farms in the county more extensive than his. It comprises no more than 500 imperial acres; but his yearly rental, which we believe is a fixed money one, is not less than 2400*l*. a year—a larger sum than the total annual revenue of more than one German dukedom. To work this extent of land 20 horses are constantly employed, and half as many ploughmen, besides female labourers and others. The population of the farm is, not only in name but in reality, a little "town," and embraces an aggregate, great and small, of from 140 to 150 human beings, distributed among 27 cottages, and all under the immediate supervision of the farmer himself, whose will is law to the whole community. There may be farms as well managed in the county as that of East Barns, but we are safe in asserting that there are none in which the whole of the agricultural machinery—composed, as that is, of thews and sinews, horse and steam power, mechanical implements, and brains to work them—is kept in better condition, or produces more satisfactory result. In going over the farm, the visitor cannot help being struck with the extreme neatness and tidyness that is everywhere visible. Hedge-rows are neatly pared down, so as not to leave a single superfluous projecting branch; deadly warfare, too, is waged with the weeds, which are never permitted to shoot up their unwelcome heads above the level of the soil. The feathered creation is also as rigidly interdicted from the fields; and the sole employment of one of the men on the farm has been for the last two months to watch, gun in hand, the approach of any stray wood pigeon or other winged marauder, and make it pay the price of its temerity. Though the land lets at so high a value, yet, under the system pursued by Mr. Murray, it cannot be said to be rack-rented; and perhaps the best proof of this lies in the fact that he has got his lease renewed on his own terms, and without the intervention of either middle-man or valuator. The farm, when Mr. Murray entered on it 19 years ago, was very much out of order. The property had been for some time under trustees before A. Mitchell Innes, Esq., of Ayton Castle, the present proprietor, succeeded to it, and had greatly deteriorated in value. Since that time, however, a change has taken place on it, the full extent of which can only be understood by those who remember the condition of the land at the commencement of the lease, and what it now is. The fields have been re-arranged in many places, new dykes built, hedge-rows planted, a splendid row of first-class cottages erected, and, in addition to all, a range of farm buildings have been put up which, though not the newest in the district, are among the completest, most convenient and largest in the whole county. The genius of order reigns supreme in East Barns. Go where we will—through any part of the farm, from the closes in the interior of the steading to the extremest verge of the fields—and nowhere will anything be found out of place. The steading itself is quite a model in this respect. Its arrangement is as nearly as possible that of an oblong square, in which all the farm buildings are concentrated. Stable, granary, straw barn, cart, implement, and Turnip sheds are all enclosed within and enter from the interior of the square. A large gateway which faces the south gives access to the enclosure, and is regularly locked up at night, keeping snug and secure all the bestial of the place. The closes are numerous and well-arranged, and furnish the necessary accommodation for feeding 80 head of cattle. Though the litter from such a quantity of stock must be excessive, the daintiest lady in the land might at any period of the year venture through the enclosure and find everything as cleanly swept and carefully looked after as if the court-yard had been the entrance to a nobleman's mansion. A liberal allowance of paint and the free use of the brush keep the wood-work about the steading always as fresh-looking as if the buildings had been erected but yesterday. In the work of the harvest field the same neatness is observable. Mr. Murray has not yet experimented in reaping-machine cutting, though in possession of one; but we will in vain look for machine work equal to what he makes with his band of well-trained harvest hands. The grain is cut down almost to its roots, and so closely that the severed stalk is but barely discernible among the Clover plants. No stray heads are allowed to straggle from the sheaves, which it is the pride of the bandsmen to set up as symmetrically as possible. A visit to the harvest field at East Barns is indeed a sight worth seeing. The girls—smart, active, and tidily dressed—go through their work with a will, stimulated now and again by a kindly and encouraging word from the master, when he passes along to see how matters are progressing. There appears to be a uniform mode of handling the hook, and we believe that Mr. Murray is so particular in this respect that he rarely engages stray hands. His plan for many years has been to write to Ireland for his labourers, fixing for them the time to come to East Barns, when, sure to the day, Pat makes his appearance, and goes to his work as methodically as if he had never left the farm. So much is this a part of the system followed out that reapers are at the present moment at East Barns who have never missed a season with Mr. Murray for the last 36 years. Though so conservative and averse to change—a feeling which also manifests itself among his workpeople, who seldom seek another employer—the tenant of East Barns is in many other respects not inimical to progress. He has a great desire to improve the social and intellectual position of his work-people, and, as one practical proof of it, has established for their use a library which numbers some four or five hundred volumes of general literature. In another respect, also, his example might well be imitated by his brother farmers. Many years ago he resolutely set his face against the indulgence by his men in the habit of profane swearing and loose talk—a practice, we regret to say, that is but too prevalent in the county. At a recent meeting, the unpleasant circumstance was even made the subject of comment. It is to the credit of Mr. Murray that he has succeeded in entirely banishing it from East Barns. Of course, it took a little time to effect such a gratifying change. The means adapted for the purpose were simple enough, but that they have been effectual is evident from the fact that from one year's end to the other anything in the shape of an oath is rarely, if ever, heard. In other respects, too, Mr. Murray evinces his interest in the work people—an interest that, on their part, is warmly reciprocated; for we believe that on no farm in the county is there an employer more respected or beloved. In his own sphere, and without the intervention of either Royal Commissioners or agricultural associations, he has been doing much to improve the condition of the farm labourer, and of those who are dependent on him. This has not been done without some outlay on his part, but it has been greatly compensated by the alacrity and steadiness with which his people carry on the work of the farm.

We hear much now-a-days of such model farms in England as Tiptree Hall, of which Alderman Mechi seeks to make a world's wonder. We question, however, if there is a place in the country where agriculture is carried on under better defined principles and with more profit than at East Barns. No expense is spared in the cultivation of the land, and nowhere is it more efficiently brought under what is termed "high farming." It may be also stated that there is not a farm in the county where there will be found more attention paid to the comfort of the industrious tillers of the soil. If it is added that there is not another farmhouse in Scotland where a more generous hospitality is exercised—where all the amenities of social life are more abundantly distributed, or where more tastefully kept pleasure grounds, including vinery and conservatory, are at hand to enliven the leisure hours of its occupant—we have said enough to justify us in claiming for East Barns and its tenant the character of being notable examples of a first-class farm and a first-class agriculturist, even in the far-advanced county of East Lothian. *Haddington Courier.*

Farmers' Clubs.

DORCHESTER: *Cattle, Sheep, or Pigs.*—The choice of live stock for light land farms was lately the subject of a very instructive paper by Mr. Saunders, before this Club. He said:—The general advantage or benefit to be derived from fattening stock on light lands is to be found in the value of the good manure which is left on the soil, especially where much corn or cake has been consumed, to be obtained at a future day in the realisation of an increased quantity of corn grown therefrom; the system must also tend to improve the land, if it be only for a certain time, and thus the owner of the soil may derive some little benefit also. I do not feel confident in asserting that the land receives a permanent benefit, as I am inclined to think that where land (especially of light nature) has been what is termed high-farmed, it requires marked attention afterwards to keep it up. The actual clear profit from fattening, or it may be loss, must of course depend on a variety of circumstances, amongst which I may briefly notice the cost and supply of food of the various kinds, seasons, and I may also here add the situation viewed with regard to shelter; then, again, the age, quality, and general description of animal selected or otherwise, the degree of fatness attained, and the state of the market when sold. Hence I prefer making my remarks of a general nature as much as possible, instead of endeavouring to explain too much by figures, and, it may be, misunderstood. I have also thought the better way would be to direct those remarks principally to winter grazing—that is, with roots, hay, and other food, in the shape of oilcake or corn, or mixed kinds; besides, the quantity of stock grazed on light lands in other ways is limited. Thus we shall be enabled more easily to compare them, as it is not the system itself taken alone that we are met to consider, but its application and bearing on sheep, cattle, and pigs respectively on light lands, taking general interfering circumstances into consideration as we find them. To make any animal pay for feeding, the process should be conducted in moderation, by what is termed slow feeding—that is, allowing the animal food sufficient to keep it in a thriving condition, but not of a too expensive kind, being enabled by those means to allow it more time to make flesh at the same amount of cost. Thus, for instance, if we take two lots of lean sheep, equal in numbers, and nearly alike in quality and live weight, giving one lot ½ lb. of cake per day, with roots and hay in fair allowance, to the other 1 lb. of oilcake, with the same roots and hay as the first receive, we shall no doubt find what is very reasonable—that with 1 lb. of cake the increase of weight would be greater than with ½ lb.; but then, again, allowing them to be thus fed, say for 16 weeks each lot, I would ask, shall we find the extra increase of weight by the highest fed lot over the other pay us for the extra money expended in the shape of extra food?

1. *Choice of Sheep for Grazing.*—Connected with the increase in the weight of sheep for a given amount of food, I would refer you to various experiments, reports of which are published in the Royal Agricultural Society's Journal. The experiments I allude to were carried on by Mr. Lawes, a gentleman who, as most of you are aware, has from time to time conducted many experiments beneficial to agriculture, relating to manures for different farm crops, fattening qualities of different breeds of sheep, also the relation of bullocks to sheep, and various other stock. From the excellent and very fair way in which these were conducted, the manner in which the results are given, coupled with the large numbers experimented on, they are deserving of considerable attention; but as a rule, taking all published experiments simply as they are given, we find them to be unsatisfactory rather than otherwise, in a great measure so from the circumstances connected with their being very indefinite as laid before us.

In No. 28 of the Journal referred to, we have a report of experiments on the comparative fattening qualities of different breeds of sheep; many similar ones have appeared since. The breeds here alluded to are the Hampshire and Sussex Downs, which, being so near those kept in our own district, has induced me to name this particular report rather than any subsequent one. A friend of Mr. Lawes bought 50 Hampshire Down lambs at Overton fair in July, 1850, which arrived at Rothamsted early in August. And in October he bought 50 Sussex lambs, which were selected from the flock of a Mr. Sadler; these were taken home and placed with the Hampshires, which from the time of their arrival had been fed on Grass only. At this latter date both lots were provided with some White Turnips, thrown down to them in the pasture, and were thus fed until November 7, when 40 of the more uniform of each lot, believed fairly to represent the respective breeds, were placed side by side upon rafters in a long shed. This was done from the land being of a heavy kind, and not adapted to carry stock in winter. The experiment now commenced by giving to each lot a weight of dry food proportionately to the respective live weights previously ascertained. The Hampshires, found to be 113 lb. live weight, received 1 lb. oilcake per day, and 1 lb. Clover chaff each sheep; the Sussex, whose average weight was 88 lb., received food in similar proportion, about four-fifths of a pound of oilcake, and the same of Clover chaff. Swedes were given to each lot, as many as they chose to eat, but from quantities which had been previously ascertained by weighing them. Both lots of sheep were weighed every four weeks, as nearly as possible at the same hour of the day, with a view to rendering all the circumstances equal at each weighing during the time the experiment was being carried on, which was 26 weeks. I do not purpose troubling you with many of the details of this experiment with sheep further than what have reference to the system of feeding, showing how they increased in weight according to the food which they received in a given time, rather than to consider which breed was most remunerative. Taking the Hampshires first, we find that during the first 20 weeks they received 1 lb. of oilcake and 1 lb. of chaff daily, eating about 100 lb. of Swedes each week per head for the 20 weeks together, and taking the average of them all. At this date (March 27) they were shorn, and their oilcake increased to 1½ lb. per day each; but the chaff remained as before. Of roots they consumed rather more; the quantity stated is 135 lb. weekly as the average of the following month. The two weeks which remained to complete the 26 weeks they ate rather less, viz., 11 lb. of Swedes weekly, with 1½ lb. of cake and 1 lb. of chaff daily. The increase in live weight per head was 2 lb. 11 oz. weekly during the first month (November), 2 lb. 6½ oz. weekly during the second month (December), 2 lb. 6 oz. the third (January), 2 lb. 1½ oz. the fourth, and 2 lb. 14 oz. weekly during the fifth month; the sixth month,

although with an extra quantity of cake, they only increased 2 lb. 6½ oz. weekly; the fortnight remaining they increased 3 lb. 10½ oz. weekly. Thus it seems they decreased in proportionate gain during the first few weeks after their cake was increased, at the same time eating more Swedes; but this might have arisen perhaps somewhat from their being shorn just at that time, as afterwards they showed a considerably increased gain. Now let us take the Sussex. These were fed, and their food increased in the same manner proportionately as the Hampshires, with this difference only, that at the end of 20 weeks the Sussex, by a mistake of the man attending them, received the precise weight of hay as the Hampshires, while before they had given them only in proportion to their relative live weight. Their increase in live weight weekly during the first month was 2 lb 8¾ oz.; the second month, 1 lb, 1¼ oz. weekly; third month, 1 lb. 5 oz.; fourth month, 2 lb. 0¾ oz.; fifth month, 1 lb. 3½ oz. This brings us to the time when they were shorn, and their food increased. The sixth month they increased weekly 2 lb. 12 oz., and the last two weeks, which concluded the experimental period, they increased live weight weekly 6 lb. 3½ oz. I could have wished to draw some more satisfactory conclusion from a comparison of the two lots of sheep, taking them together, than it appears I am able to do, as we find that at one time (the month after shearing) the Hampshires lost in weight compared to previous weighing, whilst the Sussex increased very considerably; then during the last fortnight the Hampshires gained more than the Sussex in proportion. One thing will be observed in which both agree—that is, the increased live weight weekly was less during December and January than the periods before or after. The experiments were interesting, as they commenced early in the winter, and were carried on through it into the spring; the misfortune was their being shorn before the experiment so far had terminated. If we take both lots together for the whole period, and average them, we find they consumed weekly for the whole period per head 7 lb 1½ oz. oilcake, 6½ lb. chaff (nearly), 92 lb. Swedes—increase in live weight, 2 lb. 5½ oz. weekly. Their live weight (the average of both lots) when put up was about 100 lb. each, from which it does not appear they were very heavy sheep. No doubt the more correct way to deal with these figures would be by putting those calculations at so much per 100 lb. live weight rather than so much per head, but it would not appear quite so clear at first sight. I may however state that the mean average gain in weight per 100 lb. live weight over the whole time was 1 lb. 11½ oz. weekly, whilst at the commencement of the experiment it was found for 100 lb live weight there was an increase of 7 lb weekly. Mr. Lawes observes, in reference to one point, the tables showing that as the experiment proceeded a large amount of food was required to yield a given amount of increase in live weight—"that the experiments led to the belief that in this seeming diminished effect of the food the difference was more apparent than real, for as the animal ripens the increase is found to be much less aqueous than during the earlier periods of growth." So it becomes necessary, in drawing our conclusions from any experiment whatever, to comprehend all the various conditions by which it is surrounded. I should not have occupied so much of your time with these experiments, conducted with reference to sheep alone, but for the reason that on some points what is applicable to sheep has also some connection with beasts and pigs.

2. *Choice of Sheep or Bullocks.*—I will now proceed to consider the fattening of oxen and sheep relatively. It would be somewhat difficult to include pigs, the food consumed by them being of a different description; hence there is greater difficulty in drawing a correct comparison, so that it will be perhaps better to speak of them separately afterwards. Taking one view of the matter, in speaking of the "relative" advantages of sheep and beasts, I would first inquire how many sheep are equal in consuming powers to one bullock?—a question which is certainly one not to be answered satisfactorily in a moment.

Various opinions exist, differing considerably one from another—some believe four, others six, some eight to one. A subject somewhat similar to the one we are now met to discuss was a short time since brought forward at a meeting of the Botley Farmers' Club, in an able paper by Mr. Blundell, a very practical agriculturist, and one well acquainted with stock, especially the grazing of it. His opinion appears to be that four sheep would consume the same amount of food as one ox, bringing forward an estimated cost of feeding the ox on the one hand, and the four sheep on the other. The ox, however, has the advantage of a loose box under cover, whilst the four sheep are in the open fold. He concludes that, allowing the ox to consume 4 lb. of oilcake and 60 lb. of roots, with straw as fodder instead of hay daily, it would gain 16 lb in meat per week, and after paying for the food consumed, haulage of roots, cartage of manure back to the field, attendance, &c., show a profit of 1*s.* 8*d.* per week, placing the value of the beef at 7½*d.* per lb, together with the value of the manure. On the side of the four sheep consuming the same quantity of cake, and the same quantity of roots, but with an allowance of 1 lb. of hay per day each instead of straw, in open fold on the land, he concludes the increased weight of mutton would be about 6 lb., or 1½ lb. each sheep weekly. Placing the mutton at 8*d.* per lb., and taking into consideration all the circumstances, including the expenses of food and attendance, he shows a loss of 3*d.* weekly for the four together. This statement would have been more useful had it dealt with both sides under equally favourable conditions. On the one hand, we have the ox under the best conditions favourable to fattening; on the other, the sheep under almost the worst. I also think he has placed 4 lb. of cake against the four sheep, when 3 lb. would have given nearly as favourable a result; the ox I consider to have been underfed rather than otherwise. My own opinion is that, taking beasts of four or five years old, and sheep of two years old, feeding them under equal conditions of food, warmth, and shelter, six sheep are more in proportion to one bullock than any less number, but then the profit or loss may vary considerably, according to the system of management pursued. I would place them in this way—the beasts under cover, the sheep in a sheltered yard, but not of an expensive kind, both being provided with a fair amount of good food:—

6 sheep to consume			1 bullock to consume		
4½ lb. cake per day = 31½ lb. weekly, at 11*l.* per ton ..	*s.* 3	*d.* 1	4½ lb. cake per day = 31½ lb. weekly, at 11*l.* per ton ..	*s.* 3	*d.* 1
90 lb. Swedes per day = 630 lb. weekly, at 7*s.* per ton	2	1	90 lb Swedes per day = 630 lb. per week, at 7*s.* per ton ..	2	1
6 lb. hay per day = 42 lb. per week, at 3*l.* per ton	1	1½	8 lb. hay per day = 56 lb. per week, at 3*l.* per ton	1	6
Attendance	0	4½	Attendance	0	8
	6	8		7	4
Increasing in weight 11 lb meat, at 8*d*	7	4	Increasing in weight 12 lb. at 7½*d.* p. lb.	7	6

These calculations are based on my own experience on our own farms; the quantities of food named are what I believe to be moderately good keep for sheep or beasts—that is, supposing we feed both on the same kinds of food for comparison's sake only. Although I have given hay in the statement for beasts, I believe that straw as fodder pays better than hay. Beasts thrive better when fed on mixed kinds of food; instead of giving the full value of cake, give them, say one-half in cake, the other half in meal, with due consideration to the relative market value of the two. Then, again, with roots—Swedes in the early part of the winter are as good, and perhaps better (weight for weight), than Mangels, but in the spring I prefer Mangels instead of Swedes for bullocks. Sheep also pay better with a mixture of cake and corn together than with cake alone. The proportion of increased weight to food consumed, which I have stated in the case of sheep, is about what I have found from the average of many weighings over several lots of sheep from time to time, whilst fatting up to 16 or 20 weeks. Mr. Lawes found with the Hampshire sheep, for the 26 weeks, that with 8 lb of oilcake, 7 lb of chaff, and 106 lb. of Swedes weekly, the average weekly increase in live weight was 2¾ lb. In some other experiments he states (No. 47, Royal Agricultural Society's Journal, page 215), referring to oxen and sheep, as the general results over large numbers of animals to which he arrived, that an ox consumed 12 lb. to 13 lb. dry substance of food to produce 1 lb. live weight increase; whilst sheep, consuming 15 lb. to 16 lb. dry substance of food, should yield 1¼ lb. increase, showing that beasts give the least proportion of increase for a given amount of food; he also stated they expended in respiration more than sheep. His experiments show what may be done with good management, and therefore it is desirable that we should become somewhat acquainted with them. That management has much to do with fattening, nearly all experience confirms. We may give animals too much expensive food, so that they will not pay; so also shelter from cold and rain is very necessary during winter, both for sheep and bullocks, to may them pay. Although I have said much in reference to sheep under cover, I wish to be understood that on light lands during autumn and the spring, if the weather is favourable for them to remain out in the field, they make nearly, perhaps quite as much flesh as if they were under cover, leaving their manure evenly over the field, giving solidity to the land, and saving the expense of drawing the roots home and the manure back, which are considerable advantages on the side of sheep over beasts, which require their food in house. It is when fattening sheep on the land during the autumn that we have an opportunity of carting away a portion of roots to the homestead, the loss to the land being made up in the cake or corn there consumed, the roots removed being consumed by bullocks, or kept in store for the same sheep when the weather becomes unfavourable for them to remain longer in the field. I do not consider on the whole, taking light land farms, that much bullock fatting is of advantage, as the quantity of roots which I have just mentioned are almost the only ones which ought to be removed from the land, if intended for Wheat, believing that, except in a very few instances, the whole of the other roots would be more advantageously fed by the store sheep entirely, without any taken away. Where the root land is intended for Barley, then more roots may be taken away without loss to the following crop, with a view to converting the surplus straw of the farm into good manure, rather than to derive any large profit from grazing. The haulage and storing of roots to the homestead is somewhat expensive, and cannot be performed at less than 10*d.* to 1*s.* per ton for a mile distance, even under very favourable conditions. In such a case I would prefer putting up a cheap sheltered yard in the field for sheep to lie in during bad weather, thus making manure where it would be wanted at a future day.

3. *Choice of Pigs for Feeding.*—These latter remarks in relation to roots and straw apply to pigs almost in the same degree as to sheep or bullocks. The value of pig manure to light land is considerable; but the profit in other ways depends very much on the nature and quantity of the food the pig receives.

Pigs can be made to pay if fed on Barleymeal, given them in small quantities at the commencement, with roots besides, and also a few grains if they can be procured. Taking a pig eight months old, I consider 1 peck of Barleymeal per week and about 3 bushels of roots per week sufficient to begin with, to be gradually increased until the pig is fat. In this manner pigs can be made to pay for the food they consume; but if a pig is fattened on meal, and that only, I do not think 10*s.* per score will fairly show a balance in its favour. There is one advantage in having some pigs to consume any refuse food, and the litter which may be supplied them is not necessarily so good as that required by other stock.

4. *Conclusion.*—Taking a general view of the whole subject throughout, the conclusions to which I have arrived are these—that the fattening of stock, as a whole, on light land farms, is a benefit to the land, in supplying the means of converting the surplus straw into good manure, more than the profit derived directly in money value. Thus, mixed kinds of stock possess their respective advantages at different times. To sheep I give the preference, as I believe it can be shown their profit over beasts is greater under the same conditions. The advantage to the land, at those periods of the year when sheep can be kept to consume their food there, added, gives it in their favour. Our experience tells us the simple return of manure, of which light land may have been deprived, will not of itself supply all that it requires. The extent to which the fattening of pigs can be carried on with advantage rests, in a great measure, on the quantity of surplus straw on the farm, and the facility with which a quantity of roots may be brought to the homestead, the loss to the land from their removal being weighed, and the manner in which it may be replaced.

Mr. GENGE certainly thought that the grazing of a mixed class of animals—sheep, cattle, and pigs—was the most advantageous, though relatively, perhaps, sheep were the most profitable. He took particulars of the feeding of some oxen last year, and the profit was so small that it would not be advisable for him to adopt box-feeding. At Michaelmas he put up three oxen in fair condition, two valued at 18*l* each, and one at 12*l*. The food they consumed in 24 weeks cost 20*l*. 13*s*. 6*d*., cake, at that time, being so dear that he considered meal more economical. They "proved" as well as any animals could; and, at the end of the period named, he sold them for 50*l*., which, adding together their original value and the cost of keep, only left him a profit on the three of 5*l*. 6*s*. 6*d*. The average cost of their keep was 7*s*. 4*d*. per head per week, and the profit only 1*s*. 5½*d*. They, of course, left a great quantity of very good manure; but, if he had been fatting on a large scale, and had lost a bullock or two, it would have swallowed up the profit. In feeding out sheep liberally, however, they paid him very well, independent of the manure they left.

Mr. CRANE was glad to say he had only one pig to his name. As to the old ewes, instead of selling them at a low figure, when poor, he grew some Rape to feed them on, and took advantage of the fortnightly sales to send them in as he thought fit, which answered well; and he had no doubt the land was also benefited.

Mr. DAMEN said he had had some experience in fatting stock, and the conclusion he came to was, that on light land sheep paid infinitely better than oxen. He alluded to the important item derived from wool; but even if he could have shorn the oxen, he believed the sheep paid better.

Mr. J. G. HOMER referred to the advantages of grazing in making good manure for the corn crops, by the extra food which was given to the animals. His experience was that sheep paid more than beasts, but still they could not do one without the other. He believed that our hill farms would allow of a portion of roots being taken from the field into the yard. In certain seasons of the year, he believed sheep would do as much harm as good on certain descriptions of land. Much depended on the season. In the first part of the autumn sheep might be grazed on the land with advantages, but after November till February he always found they did best in the yard, where they would make double as much mutton. He also agreed with gradual feeding rather than giving the animal so much that it could not take up all the nutriment contained in the food. In home feeding he considered a great thing was the conversion of all the straw into manure. With respect to another point, the nearest calculation he could make was that six sheep would consume about the same as one bullock.

Mr. T. H. SAUNDERS said he had for some years been in the habit of weighing sheep alive to see how they "proved." He had given a pint of corn a-day, and found they paid for it; but when he doubled that allowance, although in the same field of Turnips, they did not pay for the extra quantity. He had made similar experiments with pigs as well as sheep, and found slow feeding paid best. As to feeding sheep out of doors, when the weather was bad, as Mr. Homer said, it was almost impossible to make them pay. His practice had been, instead of carting the Swedes home, to put up a temporary yard, at the expense of about 20*s*., which would hold about a couple of hundred sheep, so that they could walk out to eat their food, and go in for shelter at night. Where the land was light, the solidity given to the soil by the treading of the sheep was almost as useful as the manure they left behind. He also liked to put a rick where the yard would do for two years instead of one. As long as the weather was favourable in autumn he should not put sheep in a yard, for he found that during fine weather they gained most out of doors; but when it got wet they did better in the yard. If they had a yard in the corner of a field they could take some Turnips and place them in a row close by the yard, so that they would be there to feed when the weather got bad just where they grew, and where the manure was required. He alluded to the necessity of sheep being also well looked after and regularly fed, which was of no less importance than their having plenty of food. Mr. Homer had observed that on heavy land sheep sometimes did much harm, and he (Mr. Saunders) therefore took care on wet days even to keep them off moderately light lands, as they were better in the yard on those days. With regard to oxen, he generally bred and fed his own, and, though he had not been able to weigh them, from valuation he believed there was not very much difference between their profit and that of sheep; but then he always considered that he gained by the latter giving solidity to the land, and instead of carting the roots home they were consumed on the spot. Were he proprietor of a large estate, he would feed as much as possible, for it would make the farm pay much better; but then it gave a false face to a poor farm by making it better than it really was. If they had a good holding also, it would answer to feed as much as possible; but if a landlord could step in and raise their rent, they had better not feed too high; for if they were not able to repeat such liberal doses as formerly, the land would soon go back to its original condition.

Mr. G. GALPIN said one question which presented itself very forcibly was, Did the fattening of sheep pay in itself? He did not believe, as a rule, that it did. It was only from the manure which agriculturists got for the succeeding crops of corn that they got any return for the money laid out. Perhaps his views were different from those of gentlemen who had spoken before; and he was glad to hear that they did make it pay. He had once put up some old oxen, by which he lost 20*l*.; and, from this experience, he should not put up any more. Mr. Blundell, however, who was a very practical man, found that the fattening of cattle paid better than sheep, and said it all depended upon the animals they bought. Mr. Galpin also spoke in favour of fatting broken-mouth ewes, when they would sell well, whereas before they would fetch next to nothing.

The CHAIRMAN said his experience went with the meeting as to slow feeding. He had seven beasts in the Repository sale that day, which were grazed on roots and hay, without a morsel of cake or corn. He thought they averaged about 22*l*. per head; and it would not be unfair to say the animals were worth about 12*l*. or 13*l*. each at the end of November. He was not fond of oilcake bills, though he did not say they should not feed on oilcake or a good substitute for it; but he thought they ought as much as possible to grow their fattening food on their own farms. He also argued that they should always keep all their stock, even breeding stock, in good condition, not only as affecting the animals themselves, but also the manure which they left behind. It was also of the utmost importance to keep the young stock well the first year, both sheep and calves; and, in pursuance of this principle, he had, for some years past, cut the Turnips for all his lambs through the winter: and, though there was a little more expense, he was amply repaid for it. He considered that the evidence of good or bad farming was, whether there was any unused or surplus straw lying about. As to Mr. Galpin's remark about fattening poor oxen, he had for years given up attempting any such thing; but, at the same time, he had not given up half-fattening them, so as to be fit for the contractor.

Miscellaneous.

Agricultural Education in Ireland.—The Head Inspectorship.—The retirement of Dr. Kirkpatrick from the position of Head Inspector of the Agricultural Department of the National Board of Education, recently alluded to by Sir Robert Peel in the House of Commons as being a probable event, is now, we understand, a settled fact. Considering the important nature of the office, as well as the effect which the steps taken by the Commissioners with relation to it may have, not only on the mere question of agricultural education, but on the future progress of Irish agriculture, it is natural that considerable anxiety is manifested as to the choice which the Commissioners may make of a successor to Dr. Kirkpatrick. There never was, perhaps, in the history of this department of the Board's operations, a period when the Commissioners had a more responsible duty to fulfil than that which devolves upon them in consequence of Dr. Kirkpatrick's retirement from office.

This is evident from the altered state of matters in Ireland, the conflicting opinions which are presented to the public regarding the management of land, and even the total abandonment of cultivation, which has been of late so persistently advocated, and even practised. Everything combines, therefore, to render the duty which the Commissioners have to perform more than usually onerous; and a mistake made at the present time would be fraught with irreparable injury to the country. In the literary department of the Board's arrangements, each of the head inspectors enjoys the very great advantage derivable from the advice and suggestions of his colleagues, and hence it may be assumed that in all decisions affecting literary subjects the collective wisdom of responsible and highly experienced officers has been brought into exercise; but in the agricultural branch, by which is affected, not the education of the community merely, but the material wealth, comfort, and prosperity of the nation, one officer alone adjudicates upon arrangements, plans, and principles which should be accepted by the country at large as safe, practicable, and profitable, and be adopted and acted upon without any cause for doubt or hesitancy. It is manifest, therefore, that the agricultural head inspector should be an officer possessing practical experience, should be gifted with a clear understanding of the trust committed to his charge, as well as solidity of judgment of no ordinary character, and should possess administrative abilities of a nature adapted to the varied duties of his office, and be also qualified to represent the Commissioners in a manner calculated to secure the respect and confidence of the public. We can testify to Dr. Kirkpatrick's gentlemanly and conciliatory bearing under many difficulties which have arisen connected with his department; and in the name of the interests which we represent, we desire to express a hope that no one may be appointed as his successor who shall not be capable of adding to the friends of the agricultural department of the Board, instead of lessening and narrowing the interest with which it may at present be regarded. We do not hope for more than we have idealized in the future agricultural head inspector; and we say it advisedly, that it will be an ill omen for the permanency of the agricultural department if the choice about being made would realise less. A golden opportunity offers for putting that department on a better footing in public estimation than it has ever occupied, and we are full of hope that the expectations entertained on the subject will not be disappointed. Agricultural education is at present occupying a large share of attention in other parts of the United Kingdom; and as Ireland has hitherto taken a lead in the matter, it would be a fatal mistake did anything occur to injure its efficiency, or lessen public confidence in it. *Dublin Farmers' Gazette.*

The Nitre Beds of Tacunga, Ecuador.—Last week, M. Boussingault communicated to the Academy of Sciences a paper on the nitre beds of Tacunga, in the State of Ecuador. Nitre, or saltpetre, is a substance formed by nature in astonishing abundance; it is to be met with in rain, snow, hail, and fogs; in the water of rivers, and consequently also in the ocean. It is produced in the air and in various soils; but, though found everywhere, it is seldom found in large quantities; the only spot on the globe where it is met with in this shape is Zarapaca, in Peru. Elsewhere this salt makes its appearance spontaneously, producing efflorescences on the surface not unlike vegetation. One day the soil is black and damp, the next is white and crumbles into dust. The saltpetre is collected by sweeping the surface, and if the weather continues fine a new crop soon appears. It is thus obtained on the banks of the Ganges after an inundation; in Spain they obtain it by lixiviating vegetable mould, which may therefore serve the double purpose of a profitable nitre bed or a rich corn field. Tacunga is a town situated 59′ S. lat. and 80° 10′ W. long. from Paris; it was built in 1524, on the site of an Indian city; its altitude is 2860 metres, its mean temperature 15° centigrade. It lies between two rivers, the Alaque and the Cutushee, and at the base of the Cotopaxi. Its soil rests on a bed of trachyte and volcanic tufa, and consists of fine sand containing particles of trachyte and pumice-stone. The saltpetre effloresces on its surface, and is collected as above described. A kilogramme of dry earth produces 18 per cent. of nitre, independently of nearly 2½ per cent. of nitrogen combined with organic substances. Efflorescence of saltpetre denotes an extremely fertile soil; indeed, M. Boussingault considers fertility and nitrification to be intimately connected; the latter, however, depends in a great measure upon certain atmospherical conditions; thus, dry weather favours it; but damp, and especially rain, will dissolve and wash away the nitre already formed. *Journal of Society of Arts.*

Mr. Rigden's Sale of Southdown Sheep.—The annual sale of Southdown ewes and letting of rams, established many years ago by Mr. Rigden, of Hove, took place on Friday at the Hove Farm, near Brighton. The flock comprised 100 ewes and 40 rams for letting and hire, the auctioneer being Mr. Bushby, of Lewes. The ewes were put up in pens of five, seven of which were purchased at 2 gs., two at 2½ gs., three at 3 gs., three at 3½ gs., two at 4 gs., two at 5 gs., and one at 6½ gs. The principal purchasers were Lord Sudeley, who bought eight pens, and Lord Norbury, who purchased seven pens. With the rams for letting there was some spirited competition. Three were let at 10 gs. each. Two of these were taken by the Baron Nathusius, of Magdeburg, Prussia, who reserved the right of purchase at double the price. The others were let at prices varying from 11, 15, 18, 22 (for Duke of Richmond), 22½, 30, and 36 gs. (this last to Lord Sudeley). Two of the rams were not let. There were 19 rams for sale, but only seven found purchasers, and the competition was far from active. Five were knocked down at 10 gs., one at 12 gs., and one—a two-year-old—at 15 gs.

Shropshire Rams.—At Ludlow, Mr. B. Giles's annual sale of pure Shropshire rams took place, 20 of which, bred by Mr. James Hand, sold at prices varying from 10*l.* to 12*l.*; 15 ditto, bred by Sir C. R. Boughton, Bart., from 10*l.* to 15*l.* each; 8, bred by Mr. C. Boulton, Cainham, 8*l.* to 10*l.* ditto; and 10 bred by Mr. Nightingale, Burway, 6*l.* to 10*l.* Mr. R. G. Price, M.P., Lord Bateman, and others were among the purchasers.

Lincolnshire Rams, belonging to Mr. Stephenson, were sold by auction at Newbold, Yorkshire. The number offered was 56, all of which, save three, were quickly disposed of at an average of nearly 9*l.* each.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	Aug.	Inches.	°	°				°	°	°	°	Inches.
Friday	26	30.14	59	56	S.W.	2	10	66	49	77	41	0.07
Saturday	27	30.06	67	62	S.W.	1	5	65	48	74	38	0.01
Sunday	28	29.87	70	62	S.E.	3	0	74	48	87	60	0.06
Monday	29	29.73	65	63	S.	2	10	78	63	87	60	0.07
Tuesday	30	30.06	64	59	N.W.	2	3	66	49	77	41	0.07
Wednesday	31											
Thursday	Sept. 1											

Reading of Self-Registering Thermometers.

Notices to Correspondents.

CATTLE MELONS: *M S.* Mr. Blundell says:—The "Cattle Melons" alluded to as being of various colours and shapes, are intended to be so, and are strictly of two kinds, designated "Cattle Melons" and "Cattle Marrows," the former being various in colour but of a globular shape, and growing to a large size, the latter being rather elongated in form; are early in fruiting and abundant producers; both, however, are alike nutritious for cattle feeding at any period of their growth.

CLOVER DODDER: *R C.* Your sample is a handful of the Clover Dodder, a mischievous parasite which springs from a seed capable of separation from Clover by screening. It springs from the soil; soon lays hold of a plant; and its connection with the soil then dies. Thereafter it grows from plant to plant, entangling a whole circle in its embraces, sucking their juices and destroying the whole. If the Clover is for seed, the circles thus destroyed should be pared and burned before the crop is harvested.

GRUBS: *Henry.* The grubs sent, which have eaten the Swedes, and are beginning with the Mangel, were referred to at page 802.

MANURES: *T D Hill.* A crop requires certain substances as the building material of a certain produce, and it is the substances (not so much *present* as) available *in minimo* which rules the crop. Nitrogen and phosphorus are very often the substances *in minimo*, and hence the value as manure of those substances guano and superphosphate, which yield them in abundance. Lime is sometimes *in minimo* in relation to the requirements of some crops, and then a liming is useful. But lime is also valuable for its power of dealing with other good things present, which may not be in a condition to be used, by its power of bringing them into such a condition. Its office as a manure is thus an extremely composite one.

WORKS ON DAIRY MANAGEMENT: *R.* We take the following list from Mr. Allnutt's catalogue of his Agricultural Library at 200, Fleet Street. All systematic works on agriculture refer to dairy management, and in particular Mrs. A. Scott's Dairy Management, 1*s.*; How to Choose a Good Milk Cow, by J. Haxton, 3*s.*: Cows and Dairy Husbandry, by M. M. Milburn, 1*s.*; Handbook of Dairy Husbandry, by J. C. Morton, 1*s.* 6*d.*; Milch Cows and Dairy Farming, by C. L. Flint

RICHARD GARRETT AND SONS,
LEISTON WORKS, SUFFOLK.
Illustrated Catalogues.

"THE HYDROPULT,"
142 & 143, Cheapside, London, E.C.
Illustrated Prospectus with Testimonials sent free on application.

£1000 UPON the WOOLSTON TACKLE against the NEWCASTLE "best application."
WILLIAM SMITH, Woolston, Bletchley Station.

FOWLER'S PATENT STEAM PLOUGH and CULTIVATOR may be seen at Work in every Agricultural County in England. For particulars apply to
JOHN FOWLER & Co., 28, Cornhill, London, E.C.; and Steam Plough Works, Leeds.

BARROWS AND CARMICHAEL, Banbury,
Manufacture STEAM CULTIVATING APPARATUS, the cheapest, most simple, and successful Tackle out.
PORTABLE STEAM ENGINES, more simple in construction, efficient at work, and consuming less coal than the old-fashioned Engines usually made.
THRESHING MACHINES, which will astonish those who work the ponderous and complicated Machines now so generally used.

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS,
Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.
Stamp End Works, Lincoln, and 78, Lombard Street, London; also at LOWENGASSE, No. 44, Landstrasse, Vienna; and Gegenüber dem Bahnhof, Pesth.
Descriptive, Illustrated, and Priced Catalogues, Free per Post.
Special Drawings when required.
[*The best Steam Threshing Machinery made.*]

SHANKS' NEW IMPROVED PATENT LAWN MOWERS.

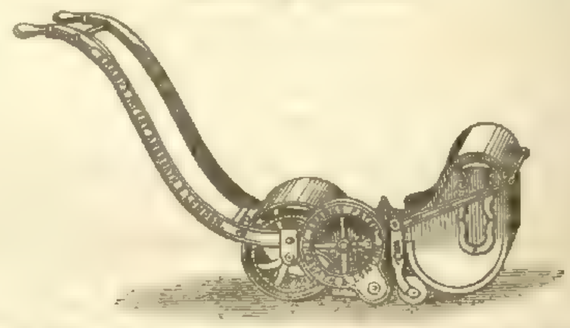

Patronized on five separate occasions this season by HER MAJESTY the QUEEN, also by HIS MAJESTY the KING of SAXONY. Every Machine warranted to give satisfaction, and if not approved of can be at once returned.
Illustrated Price Lists free on application.
A. SHANKS & SON, Dens Iron Works, Arbroath; London Warehouse, 27, Leadenhall Street, E.C.
A stock of Machines always kept at the London Depôt.

Royal Agricultural Society of England.

RANSOMES AND SIMS, Ipswich,
WERE AWARDED
FOUR FIRST PRIZES
FOR
SWING and WHEEL PLOUGHS
AT THE
NEWCASTLE-ON-TYNE MEETING, JULY, 1864.
DETAILS OF THE AWARD:—
The FIRST and ONLY PRIZE of £15 0 0
For the Best Swing Plough for General Purposes.
The FIRST and ONLY PRIZE of £7 10 0
For the Best Swing Plough for Light Land.
The FIRST and ONLY PRIZE of £7 10 0
For the best Wheel Plough for Light Land.
The FIRST and ONLY PRIZE of £7 10 0
For the Best Wheel Plough for Heavy Land
No other Firm was awarded more than One Prize.
No Prize was given of more than £15.

Silver Medal and Cup, 1863, awarded for

JAMES'S FIRST PRIZE MANURE CART, which has been awarded 20 PRIZES. Is now fitted up to answer for LIQUID MANURE, for supplying the STEAM PLOUGH, for WATERING STREETS, or for a FIRE ENGINE. Nearly 300 already sold.

Washing.

The last great improvement in Washing Machines is in JAMES'S new Patent PRIZE WASHING, WRINGING, and MANGLING MACHINES, awarded several FIRST PRIZES. Will Wash 20 Shirts in 20 Minutes, with much less injury than with the hand. More than 300 Sold.
Address, I. JAMES, Tivoli Works, Cheltenham.

Paxton Works, Sheffield, Established 1738.

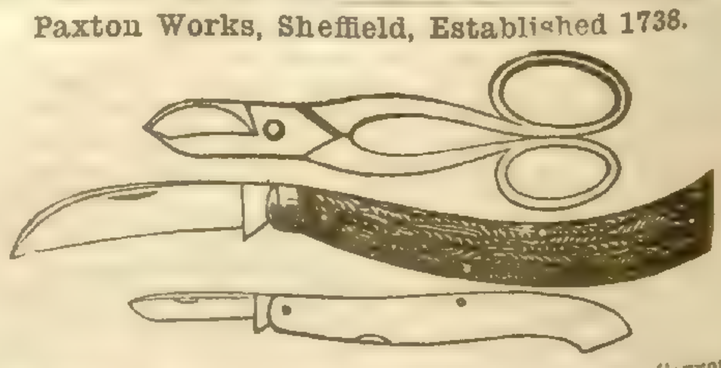

INTERNATIONAL EXHIBITION PRIZE MEDAL WAS AWARDED TO SAYNOR & COOKE FOR SUPERIORITY OF QUALITY IN PRUNING AND BUDDING KNIVES, &c.

SAYNOR AND COOKE'S celebrated English and French Exhibition PRIZE PRUNING KNIVES, &c., can be obtained of any respectable Nurseryman or Seed Merchant in the three kingdoms, all Knives warranted both by the Seller and Maker.
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HYACINTHS for EXHIBITION.
FRESH IMPORTED BULBS.
SUTTON'S SELECTION.

	Per 100.	Dozen.
Finest sorts by name ..	£4 4s.	12s.
Very fine ditto ..	3 10	9
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Good Hyacinths for Beds, Ribands, &c. in separate colours (fresh imported), 21s. per 100.

Anemones, Crocuses, Tulips, Gladioli, &c., also very low in prices, as per CATALOGUE, which may be had gratis and post free.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading

HYACINTHS, TULIPS, and other DUTCH BULBS, imported by WM. CUTBUSH & SON.
TWENTY-FOUR PRIZES awarded to their Collections last Spring, TWENTY-TWO being FIRST PRIZES.
The DESCRIPTIVE PRICED CATALOGUE, with numerous Cultural remarks, post free on application.
Early orders earnestly solicited, as the supply cannot possibly meet the increasing demand.
Highgate Nurseries, London, N.

New Catalogue of Plants, Dutch Bulbs, &c.
ROBERT PARKER begs to announce that his NEW GENERAL CATALOGUE, containing Select, Descriptive, and Priced Lists of New, Rare, and Beautiful-foliaged Plants, Azalea Indica, Conifers, Exotic and Hardy Ferns, Fruit Trees, Grapes, Exotic Orchids, Greenhouse and Stove Plants, Miscellaneous Hardy Trees and Shrubs, Rhododendrons, Roses, &c, Hyacinths, Tulips, Gladioli, and other Bulbs, is now published and will be forwarded to applicants.
Exotic Nursery, Tooting, Surrey, S.

CHAS. SOUTHBY, NURSERYMAN, Clapham, London, S., offers a few Packets of the following SEEDS saved this season from Plants that obtained Prizes at the London Shows:—

CYCLAMEN PERSICUM, from 8 vars. ...	per pkt.	2s. 6d.
CINERARIA, very dwarf vars.	,,	1 6
CALCEOLARIA, the finest possible strain ..	,,	2 6
PANSY, from 24 best vars. out	,,	1 0

VINES from Eyes, strong Canes of all the leading kinds, 5s., 7s. 6d., and 10s. 6d. each.

New Hardy Bedding Plant—Sedum glaucum.
JOHN SALTER invites the Growers of BEDDING PLANTS to visit his Nursery and inspect this beautiful novelty, which he will send out early in 1865. It is very dwarf, and of exceedingly close habit, forming a compact mass of silvery gray foliage, which it retains both in summer and winter; for edgings, ribbon borders, or pots it will be found one of the most useful dwarf plants ever offered. Orders are now being taken for the Spring at 9s. per dozen. Price per 100 upon application.
Versailles Nursery, William Street, Hammersmith Turnpike, W.

TWO NEW FIMBRIATED PRIMULAS.
Seed Packets, 2s. 6d. and 5s. each.
PRIMULA CARMINATA SPLENDENS, a beautiful new coloured one.
P. FILICIFOLIA (Fern-leaved).
See other Advertisements of the older kinds of fimbriated Primulas.
E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

New and Choice Plants.
B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens A DESCRIPTIVE and PRICED CATALOGUE post free on application.
Paradise and Victoria Nurseries, Holloway, London N.

Choice Seeds for Present Sowing.
B. S. WILLIAMS can now supply Genuine SEEDS of his well-known strain of

Per pkt.—s. d.	s. d.	Per pkt.—s. d.	s. d.
PRIMULA .. 2 0	and 3 6	INTERMEDIATE STOCK.. .. 0 6	and 1 0
CINERARIA .. 1 6	and 2 6	BROMPTON do. 0 6	and 1 0
CALCEOLARIA 1 6	and 2 6		

The above Seeds are saved with great care, and can be warranted to give satisfaction.
Paradise and Victoria Nurseries, Holloway, London, N.

New Hardy British Ferns.
J. IVERY AND SON have the pleasure to offer the three undermentioned distinct and beautiful varieties, in good plants, showing their true characteristic forms, 10s. 6d. and 21s. each.
POLYSTICHUM ACULEATUM ACROCLADON,
ATHYRIUM FILIX-FŒMINA MUCRONATUM,
" " " GLOMERATUM.
(They have each received First-class Certificates from the Royal Horticultural Society, and Royal Botanic Society.)
Likewise ATHYRIUM FILIX-FŒMINA PARSONSIÆ, VERNONIÆ, and FISSIDENTO-EXCURRENS at 5s. each.
Dorking, Sept. 3.

The Greatest Novelty of the Season.
BEATON'S HYBRID BEDDING GERANIUMS.
WM. PAUL (Son and Successor to the late A. PAUL) begs to announce that he has purchased from the Executors of the late Mr. Donald Beaton, the whole of his SEEDLING BEDDING GERANIUMS, which includes the latest efforts of this successful hybridist. Some are of a yellowish tinge, some rose, some purple, some magenta; the individual flowers of others are larger than a five shilling piece. For Bedding purposes they will prove invaluable, being new in colour and remarkably free and hardy.
They will be offered by PRICED DESCRIPTIVE LIST in October.
NOW in BLOOM, inspection invited. Entrance from the Platform, Waltham Station, Great Eastern Railway.
Paul's Nurseries, Waltham Cross, N.

New Hardy Rhododendrons.
JOHN WATERER begs to offer the following SIX RHODODENDRONS, which will be sent out in the month of October next. Price 21s. each, with the usual discount to the Trade. They will be found to be perfectly distinct from any other varieties in cultivation, and are such kinds as he can confidently recommend.
MRS. FITZGERALD, a very bright rosy scarlet, close compact truss, and good foliage.
SIDNEY HERBERT, brightest carmine, with dark eye, fine shape and free bloomer.
JOSEPH WHITWORTH, dark lake with dark spots, and immense truss with very fine foliage.
SIR ROBERT PEEL, dark rosy crimson, well and strongly marked with black spots, good foliage and habit.
THE WARRIOR, clear rosy scarlet, very large truss, and fine foliage.
SURPRISE, a light lilac, with immense dark marking, which renders it very remarkable.
American Nursery, Bagshot, Surrey.

WELLINGTONIA GIGANTEA.—The Undersigned begs to offer fine healthy Seedling Plants in pots, at the following prices:—
One Year Seedlings, in single pots, 50s. per 100.
Specimen Plants, in 24-sized pots, 18 inches, 60s. per dozen.
Fine Plants, in 32-pots, 1 foot, 30s. per dozen.
" in 48-pots, 9 inches, 15s. per dozen.
ARAUCARIA IMBRICATA, in 48 pots, fine, 9s. per dozen.
CUPRESSUS LAWSONIANA 9 inches, 12s. per dozen.
T. HENCHMAN, Edmonton, near London.

To Gentlemen and Nurserymen.
MR. CLAPHAM, Proprietor of the Royal Park, Leeds, wants several hundred LIMES, CHESTNUTS, ITALIAN and SILVER POPLARS, several CEDRUS DEODARA, and other ornamental Trees; Rhododendrons, Azaleas, Common and Portugal Laurels, and Evergreen Shrubs, Roses, &c. They are required as large as possible to transplant safely, and for immediate effect. As a quantity is required and ready cash will be paid they must be cheap.

DOBSON'S CELEBRATED SEEDS,
for PRESENT SOWING.
PRIZE CALCEOLARIA. 1s. 6d., 2s. 6d., 3s. 6d., 7s.
PRIZE CINERARIA, 1s., 2s. 6d., 5s.
PRIZE PRIMULA, 1s., 2s. 6d., 5s.
PRIZE PELARGONIUM, 2s. 6d., 5s.
Sealed Packets, post free.
J. DOBSON & SONS, Woodlands Nursery, Isleworth, W.

Established Upwards of a Century.
BUTLER AND McCULLOCH,
SEED MERCHANTS,
Covent Garden Market, W.C.

COLLECTIONS of BULBS for GREENHOUSE and CONSERVATORY.

No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.
5l.	2l. 10s.	1l. 5s.	1l. 1s.	15s.	10s. 6d.

FOR FLOWER GARDEN ONLY.

No. 7.	No. 8.	No. 9.	No. 10.	No. 11.	No. 12.
5l.	3l.	2l.	1l. 5s.	1l. 1s.	10s. 6d.

FOR GREENHOUSE and FLOWER GARDEN.

No. 13.	No. 14.	No. 15.	No. 16.	No. 17.	No. 18.
5l. 5s.	2l. 12s. 6d.	2l. 2s.	1l 1s.	15s.	10s. 6d

These Collections include only Bulbs of first-class quality.
For full particulars see CATALOGUE, which may be obtained post free on application.
Orders amounting to 21s. and upwards sent Carriage-free.

CARTER'S GARDENER'S VADE-MECUM.

ROYAL HORTICULTURAL SOCIETY.

SHOW of AUTUMN FLOWERS. TUESDAY, September 6.

AWARDS of the JUDGES.

CLASS 1—24 ROSES, cut blooms, distinct varieties, single trusses.
Messrs. Paul & Son, Old Nurseries, Cheshunt, N., First-class Certificate
The Rev. W. F. Radclyffe, Rushton Rectory, Blandford, Dorset, Second-class Certificate

CLASS 2—18 ROSES, cut blooms, distinct varieties, single trusses.
Messrs. Paul & Son, Old Nurseries, Cheshunt, N., First-class Certificate
Mr. W. H. Treen, Victoria Nursery, Rugby, Second-class Certificate

CLASS 3—12 ROSES, cut blooms, distinct varieties, single trusses.
Mr. W. H. Treen, Victoria Nursery, Rugby, First-class Certificate

CLASS 4.—12 TEA ROSES, distinct varieties, single trusses.

CLASS 5—24 HOLLYHOCKS, single flowers, distinct.
Messrs. W. Minchin & Son, The Nurseries, Hook Norton, Oxon, First-class Certificate

CLASS 6—12 HOLLYHOCKS, single flowers, distinct.
Messrs. W. Minchin & Son, The Nurseries, Hook Norton, First-class Certificate

CLASS 7—24 GLADIOLUS, cut spikes, distinct kinds.
Messrs. Paul & Son, Old Nurseries, Cheshunt, Herts, First-class Certificate

CLASS 8—12 GLADIOLUS, cut spikes, distinct kinds.
Mr. W. H. Treen, Victoria Nursery, Rugby. Disqualified, not being named

CLASS 9—24 PHLOXES, cut spikes, distinct kinds.

CLASS 10—24 VERBENAS, 5 trusses of each, distinct kinds.
Messrs. W. Minchin & Son, The Nurseries, Hook Norton, Oxon, First-class Certificate

CLASS 11—36 DAHLIAS, distinct kinds (Nurserymen).
Mr. J. Keynes, Salisbury, First-class Certificate

CLASS 12—24 DAHLIAS, distinct kinds (Nurserymen).
Mr. J. Keynes, Salisbury, First-class Certificate

CLASS 13—18 DAHLIAS, Fancies (Nurserymen).
Mr. John Keynes, Salisbury, First-class Certificate

CLASS 14—12 DAHLIAS, Fancies (Nurserymen).
Mr. J. Keynes, Salisbury, First-class Certificate

CLASS 15—24 DAHLIAS, distinct kinds (Amateurs).

CLASS 16—18 DAHLIAS, distinct kinds (Amateurs).

CLASS 17—12 DAHLIAS, distinct kinds (Amateurs).

CLASS 18—MISCELLANEOUS.
Messrs. A. Henderson & Co., for Group of New and Rare Plants, First-class Certificate
Messrs. F. & A. Smith, Dulwich, for Collection of 24 Balsams, Second-class Certificate
Messrs. Paul & Son, Cheshunt, Stand of 20 French Asters, Third-class Certificate

ARTIFICIAL FLOWERS.
Mrs. Stodart, Victoria Station, Pimlico, for a Stand of 12 Dahlias in Rice Paper, First-class Certificate

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.
LIST of AWARDS, September 6, 1864.

FIRST-CLASS CERTIFICATES.
PELARGONIUM BEAUTÉ DE SURENNES, from Mr. Salter
DENDROBIUM FORMOSUM GIGANTEUM, from Mr. Bull
ALLAMANDA HENDERSONII, from Messrs. Henderson & Co.
PENTSTEMON MRS. MOORE, from Messrs. Downie & Co.
DAHLIA GEORGE WHEELER, from Mr. Keynes
DAHLIA CHAMPION, from Mr. Keynes

SECOND-CLASS CERTIFICATES.
PENTSTEMON MRS. E. CLARK, from Messrs. Downie & Co.
VERBENA MINERVA, from Mr. Stalker, Sydenham
DAHLIA QUEEN OF PRIMROSES, from Mr. Keynes
DAHLIA QUEEN OF SPORTS, from Mr. Keynes

COMMENDATION.
BEDDING VERBENA PURPLE PRINCE, from Mr. Norford, Brompton.

The Gardeners' Chronicle.

SATURDAY, SEPTEMBER 10, 1864.

MEETING FOR THE ENSUING WEEK.

TUESDAY, Sept. 13 { Royal Horticultural (Floral Committee) at South Kensington .. .. Noon

IF, besides the fact that ORCHIDS, many of them at least, do not need excessive heat, it were a generally recognised truth that they associate admirably WITH VINES, we should probably see the collections of these beautiful flowers rapidly increase in number and probably also in extent; for if to the saving resulting from the adoption of a lower temperature were added the profit of a crop of good Grapes, the actual cost of Orchid growing would be reduced to a very small item, if it did not prove to be absolutely *nil*.

But though the fact be not so extensively recognised as it should be, it is nevertheless perfectly authenticated, that good Grapes may be grown in association with beautiful Orchids; even as it is also true that most Orchids may be grown better in a moderated temperature, than in a reeking vapour bath. Here, then, in respect to Orchid culture is a double advantage gained over the practice of bygone years: (1) a reduced expenditure for fuel; and (2) a crop of first-rate dessert fruit to boot.

We have been led to make these observations, in consequence of the receipt of some admirable Grapes grown at Broomfield by Mr. ROBERT WARNER, in association with his Orchids—and these it is pretty well known do not suffer in consequence, as we have repeatedly had occasion to mention in our columns. As to the Grapes, we can report them to be a good average sample of serviceable Black Hamburghs, the bunches from 1 lb. to 1¾ lb. in weight, the berries of average size, well-coloured, rich, juicy, and full-flavoured; and all this, though they have not full advantages in respect to their cultivation.

Nothing would be so likely to keep up and even to extend the ranks of Orchid-growers as the distinct and full appreciation by the thousands of amateurs who do not indulge in extensive garden establishments, of the fact that Orchids and Vines go well together. Mr. WARNER informs us that he can now speak from the results of nine years' experience of this association, and his utterance is most decided in favour of the practice. He has during all this period been engaged in growing many species of this Orchideous race in Vineries, and what are termed greenhouses with Vines trained under the roof, the two kinds of structure differing somewhat in respect to the treatment they receive—as regards temperature especially, and thus yielding fruit in succession. In this way, then, every one who possesses a glass house of even the simplest character may not only grow Vines, but also indulge in plant-culture. Mr. WARNER writes:—

"It is well known that in a general way plants do not thrive under the shade of Vines. This prevents many persons fond of flowers from indulging in the luxury of growing their own Grapes, but such would not be the case if it were generally known that there is a class of flowers which do even better under Vines than when grown without their friendly shade. The fact I have often taken occasion to mention, but it is one that requires to be repeated over and over again, 'line upon line, precept upon precept,' before it will make a due impression on the minds of cultivators generally. If I had but a few houses at Chiswick, or even at the gardens at South Kensington, I would soon show the public what could be done with Orchids and Vines.

"There are but few Orchids worth growing that might not be cultivated under Vines. Even many of the East Indians do well under this *régime*. It is only some few species of Vanda, Aërides and Phalænopsis, that cannot be so cultivated. One of my cool houses, which is devoted to Lycaste, Odontoglossum, &c., is not allowed to fall below 40° in winter, and in summer the temperature is permitted to run up as high as the sun will raise it. The other cool house where I grow Cattleya Skinneri, Vanda cœrulea, Dendrobium nobile, and many Brazilian Orchids, is not allowed to become cooler than 50° in winter; and this also in summer gets as hot as the sun may make it. The roots of the Vines are confined within brick pits, and altogether, from the nature of the soil and the little preparation made, they are not so suitably placed as they would be in a good raised open border. Still, under all these disadvantages, I get a good crop of useful Grapes every year; and the colour, as you will see, shows that much air is given, so that the treatment is really on the cool system."

Mr. WARNER goes on to point out that one of the great drawbacks to the general cultivation of Orchids, namely, the supposed necessity for a large expenditure under the item of fuel, is thus got over. He states that he does not on an average use more throughout the year for all his nine small houses than a ton per week of the cheapest coal, and if his houses were closely glazed and in a less exposed position, the consumption would be still smaller. No doubt the fact of having an abundance of piping is an advantage, and in the construction of his boiler, made according to his own directions, Mr. WARNER may have another advantage; but putting all these things together, the cost of fuel for each house is not, he states, at the utmost more than 2s. per week.

Who, then, would not grow Orchids when, over and above the gratification to be derived from their often gorgeous, often grotesque, and always

charming blossoms, there is at so small a cost also to be secured so luscious and precious an adjunct as a well-favoured and well-flavoured crop of Grapes?

AMONGST the seeds of CUCURBITS which were kindly sent to us last spring by Monsieur NAUDIN, were those of a Melon (under the name of White-fleshed Cantaloup), we believe of Algerian origin, which had been pronounced by Monsieur DURIEU DE MAISONNEUVE, who explored the Botanical riches of Algeria with such success, to be the most delicious of all the Melons.* Our seeds were as widely distributed as their number would allow, and three which were given to Mr. EWART, Gardener to the Earl of WESTMORELAND, produced three plants, which have yielded perfect fruit. There was nothing particular about the foliage or flowers. They belonged to the same type as that of most of our large Melons; the leaves being of rather a large size, obscurely five-lobed, but very acutely and strongly cup-shaped.

The three plants presented fruit of three distinct forms, though all evidently belonging to the same variety, the seed of which seemed to be pure. In the first, the fruit was elliptic, very deeply nine-ribbed, with the interstices still showing short distinct hairs, slightly warty, and very sparingly if at all cracked or netted, with the perfectly smooth apex projecting like a broad nipple with a central scar beyond a corky lobed ring, exactly as in the varieties of Cucurbita maxima, known as Turbans or Turks' Caps. In the second the characters were the same, with the exception that the form was globose instead of elliptic; while in the third there was no projecting nipple, but in its place a broad strongly warted circular area, as in the variety known as the large Germek. In all, the stem flowed gradually into the fruit, and the colour was a delicate buff, while the flesh in the one we have figured, which was the only one we had an opportunity of examining, was of a washy white slightly tinted with green, of a tolerably firm consistence and high flavour, while the scent was most delicious, resembling that of a pure Green Cabul. We could, however, hardly go the length of saying that the flavour was superior to that of any we ever tasted; but it was nevertheless excellent, and the flesh not the worse in our opinion for being rather firm, like that of most of the Cantaloups. The variety at any rate is very handsome; it grows to a large size, and where more than one sort is cultivated is a desirable change. The present season has not we think been favourable to the perfect development of the qualities of delicate fruit. The cold nights have scarcely been compensated by the hot dry days, and all the fruit we have seen has ripened rather prematurely without giving time for the most perfect growth, with a decided tendency to rapid decay. The dry atmosphere has moreover favoured the red spider, and the most diligent syringing has not availed in every case to drive the enemy away.

There is a figure of a red-fleshed Cantaloup in a work on Melons by a cultivator named JACQUIN, which, though rough, represents tolerably our second more globose form.† Our author observes that the word ought properly to be spelt Cantaluppen, as it is derived from a town in the Papal dominions called Cantaluppi. In this country it has been very generally supposed that the name has something to do with the old family of Cantaloupe, but this is a mistake, for which no authority can be found. The town is a short distance from Rome (some 15 miles), and Melons were first introduced there, according to JACQUIN, by some Armenian Missionaries. From thence they passed to France in 1495, and from thence to Spain, England, the Netherlands and Germany. They sometimes in consequence bear the name of Italian Melons. It has indeed been asserted that Melons were introduced at the end of the Mithridatic war by LUCULLUS, but the notices of authors are so obscure and doubtful, that ALPHONSE DE CANDOLLE, who is one of our best authorities on such subjects, for many reasons which are detailed in his work on Geographic Botany, is inclined to think that they are of comparatively modern introduction.

The variety alluded to above, which comes very near to our white-fleshed Cantaloup, is called the Prescott Cantaloup. It is of a roundish form, depressed at either pole, with a prominent umbilicus, and attains a larger diameter of 5¼ inches, and is yellowish when ripe and ornamented with dark green spots; the umbilicus prominent, surrounded by a coronet of network and marked in the centre with a similar spot. It is considered as a casual variety of

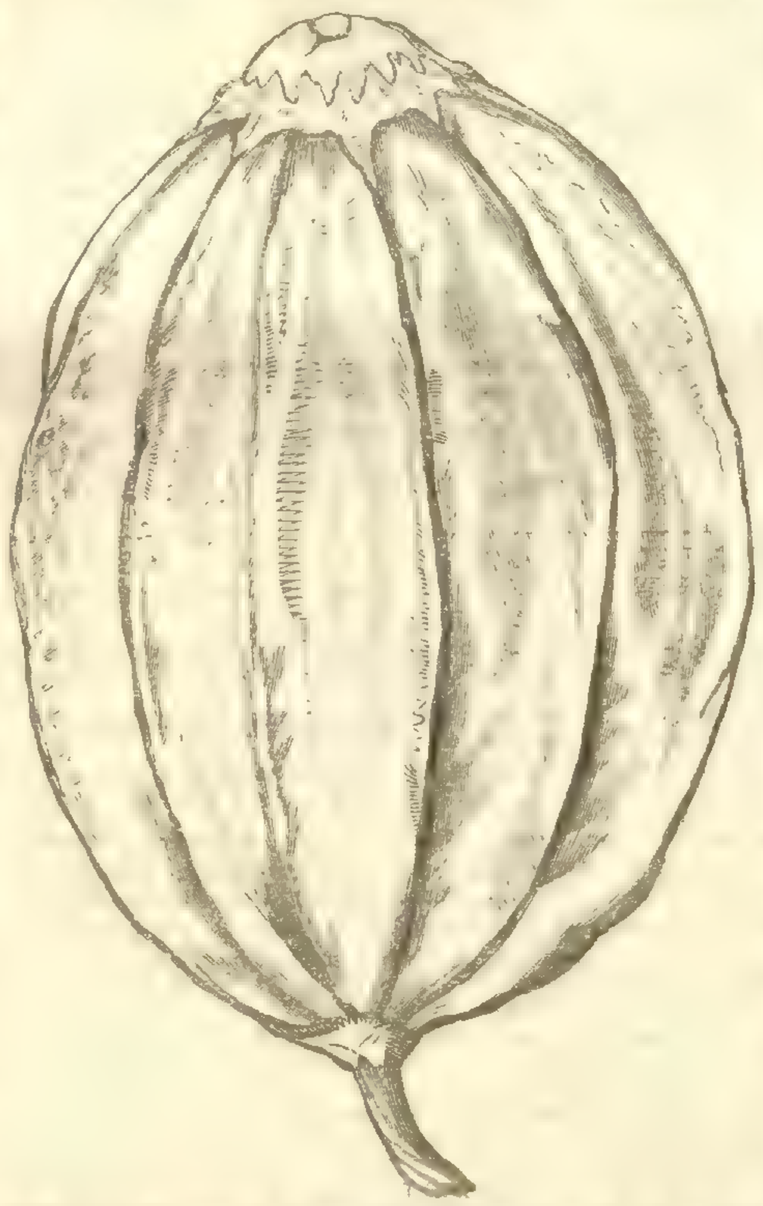

the White Prescott Cantaloup, the colour of which is whitish, with a few green spots, but when ripe, yellowish, spotted with chestnut-brown dots, and the umbilicus large and corky, as in our third variety. The rind is smooth when ripe, but at first hairy. Our author has but one variety of Cantaloup with white or greenish flesh, and this, which appears to be originally an English Seedling, is very different from that before us. Our figure represents the fruit of half the natural size. *M. J. B.*

—— NOTWITHSTANDING all that has been said about the destruction of the AMERICAN BLIGHT or Woolly Aphis, either by means of the use of oils or of the essences of turpentine and lavender, writes M. DELAVILLE, the pest continues to infest our fruit trees, and principally those of the greatest vigour, a result, it is concluded, to be attributed to the inefficiency of the means adopted, which are both expensive and difficult of application. I have, he observes, like many other cultivators, destroyed a goodly number of infested trees in the hope that the neighbouring trees would not become affected, and by this simple means I had thought to get rid of them, when lo! in the height of summer, some four years ago, I found a large number of my espalier White Calvilles, full of large woolly flakes which sheltered thousands of the insects. If it is true, moralises the writer, that sometimes misfortune is good, then this new invasion must be so regarded, for I have through it discovered a more simple means of getting rid of the formidable enemy. Waiting impatiently till the following December, M. DELAVILLE armed himself with a hard brush provided with a handle, and with this and boiling water he set to work to scrub and wash the poor besieged trees; then with a sharp pruning knife, having cut away the woody tumours caused by the puncture of the insects, many others which had taken refuge about them were brought to light, and these were speedily removed by a second washing similar to the first, with water kept boiling for the purpose by a lighted stove. This completely destroyed them; for since then no more have appeared, while the trees have continued to shoot and produce as before, unaffected in health by so powerful a remedy. Last summer M. DELAVILLE found in another part of his garden, some of his finest horizontal cordon Pear trees to be covered with these insects. But on the occasion of one of his lessons in tree-culture in the month of December, he had the satisfaction of showing his auditory the simplicity and immediate efficacy of this hot-water cure. All, writes M. DELAVILLE, who have tried this simple remedy, have had their trees quite cleared from these formidable enemies, without any other cost than that of a little charcoal or a few faggots; and he concludes that after such repeated success he may venture to recommend the plan he has adopted, without any fear of being contradicted by the results: so that henceforth it may be said of the woolly aphis of the Pear and Apple, as of the oïdium of the Vine, those only will have it who are willing to have it. A similar remedy it will be remembered, effectually destroys mealy bug, but it should be applied when the wood has become hardened.

—— We have already briefly alluded to a curious physiological fact relating to the DEVELOPMENT OF BUDS, vouched for by M. E. RODIGAS, one of the Professors of the School of Horticulture at Ghent. The fact is one of so much interest, that we subjoin a more complete version, gleaned from the account given in the *Flore des Serres*.

It is well known that many pomaceous trees may be intergrafted, and the practice is in constant operation in nurseries. Cratægus, Mespilus, Sorbus, Pyrus, and Cydonia are familiar examples. Cratægus, which furnishes the subject of the fact above referred to, succeeds best on Sorbus or Pyrus Aucuparia, and indeed may be successfully worked on it at any height to obtain vigorous and handsome stems. And this is what appears to have been done in the case in question.

Dr. F. RODIGAS, the director of the cultural establishment attached to the normal school of the State, at Lierre, had grafted in a thicket contiguous to his garden, a dormant bud of the scarlet Cratægus Oxyacantha on the stem of a Sorbus Aucuparia. The bud was placed on the eastern side, at about a yard from the ground, in the usual way. This was done in July. In the following spring the bud was developed and attained nearly 2 inches in length, when the leaves were dried up. But at the same time on the opposite side, and about 6 inches below the point of insertion of the bud, the stock produced another bud of Cratægus, the leaves of which were developed in a healthy and characteristic manner, and acquired half their normal size. This bud however also eventually dried up. The stem at this point had a circumference of about 3 inches; it was perfectly smooth, and there was no vestige to be seen of the insertion of a bud, though it is well known that a very evident scar is always found where a bud has been inserted. The young shoot was absolutely adventitious. Of this fact, which, M. RODIGAS observes, is perhaps without precedent in the annals of the physiology of plants, the perfect authenticity is guaranteed. It is only to be regretted, he adds, "that this portion of the tree was not submitted to microscopical examination. We leave it to those who search into the mysteries of nature to explain this strange phenomenon. Is it possible that a cell containing in itself the vital germ of the Cratægus can have been borne along from the point where the eye was inserted to that where the new bud has been formed? Can the affinity which exists in the sap and in the whole organization between Sorbus and Cratægus, be held to favour this view of the fact? We dare not say. Nevertheless it may be remarked that if an analogous fact has ever occurred, it may very well have passed unperceived."

—— We mentioned at p. 631 that a subscription had been set on foot for the purpose of REPLACING MR. BAKER'S LIBRARY, which had been unfortunately destroyed, together with his Herbarium, by fire. We now learn that the Metropolitan Committee who undertook to receive subscriptions are able to report a considerable list of contributions; and they suggestively mention that several botanical authors have besides presented copies of their own works to Mr. BAKER, while others in possession of spare copies of useful botanical works have sent them to him. The subscriptions acknowledged amount to 88*l* 12*s*.

—— Those who are inclined to use COLLINSIA VERNA for the decoration of their spring flower-beds, may be reminded that this is the season for sowing the seeds, not only because it is necessary to sow in autumn in order to get the plants sufficiently early into blossom, but for a more potent reason, namely that, beyond a very small percentage, the seeds refuse to grow if kept till spring. The secret of its cultivation consists in attention to this idiosyncrasy of the plant. The details of treatment recommended to be adopted by Mr. THOMPSON, are these:—The seeds must be sown between the end of August and the middle of September, in pans of light vegetable soil, which should be kept *thoroughly damp*. In a fortnight the seedlings will show themselves, and when these have made their first pair of leaves (besides the seed-lobes) are to be pricked out singly in pans, boxes, or pots, the latter if intended for blooming under glass. From this moment it is important that the seedlings should be kept cool and damp, and close to the glass, that their growth may not be forced. If intended to bloom in the open ground, they may be planted out in light, rich soil, in partially shaded situations, or in a north or north-west aspect, and will require no other attention but slight protection during severe weather. Thus treated, they will, in ordinary seasons, commence blooming early in April, and continue in flower six or eight weeks. When potted for growth under glass, they will often commence flowering in March, or even earlier, according to the temperature of the house; but as rapid growth is unfavourable to the formation of compact, well-branched specimens, it is desirable to keep them in a temperature which just excludes frost, until they are well advanced in their growth. The white and bright blue of the blossoms no doubt renders

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* The ticket which came with the seeds was precisely as follows. Cucumis Melo Cantalupensis carne albâ! White-fleshed Cantaloup. The most delicious of all the Melons according to M. DURIEU. Not yet cultivated in the Museum.

† Vollständiges Handbuch der Melonenzucht, von Jacquin d. Ält. Translated from the French. With 33 plates. Quedlinburg und Leipzig. 8vo, 1853. Pp. viii & 150. The work is not one of much authority, but it contains a great quantity of figures and an account of several varieties, including those of the Water Melon. The original edition appeared in Paris in 1832.

this Collinsia effective when well bloomed in masses; and those who use annuals to supply early flowers, will find it, at least, worth a trial, the more so as its near ally, C. bicolor, from which it differs obviously in colour, proves so well suited to the purpose.

THE LONDON PARKS.—No. II.

BATTERSEA PARK (*Continued from page* 844.)

I WILL recommence my notes on the Sub-tropical garden at a mixed bed on the left, the best looking plants in which are:—Solanum pyracanthum, which does very well in the open air, and would, I think, be best grown from plants young and single-stemmed to begin with, and to be kept so. I have seen it doing very nicely, managed in this way, in the Wellington Nursery. Verbesina verbascifolia. Amicia zygomeris, useful from its distinctness, but it will be seen in much greater perfection in other parts of the Sub-tropical garden. Deeringia Amherstiana variegata, very healthy, but not producing a more remarkable effect than some hardy variegated shrubs would afford. Russellia juncea in flower and growing nicely. Ficus elastica, all the plants plunged in pots, as numbers of the things are, and looking quite at home of course. The plant is finely grown by the hundred in the garden, and has in many cases made a clean growth of 1 foot since planting out, the young leaves and bracts affording a singular and useful effect from their colour. Asclepias curassavica, nicely in flower. Montagnæa mollissima, doing very well; it is a great favourite with Mr. Gibson, which is saying a good deal for it. Sonchus laciniatus, which will do well for such work as it is used for at Battersea, being a most elegant-leaved plant, but the wretched flowers must not see the light. Some species of Hibiscus and Vinca were also here, and though they were expected to do better during the coming month, yet they looked the "picthur o' misery," as some Hibernians would say.

I next came upon a bed edged with Convolvulus mauritanicus, which when well done, is the sweetest and most graceful of small edging plants we have, as all will say who notice it round the bed I allude to at Battersea. A group of American Aloes next turned up, plunged in the Grass; and near them Lithospermum fruticosum, the little blue beauty growing very well, but not flowering satisfactorily. Here I may remark that all the beds are made upon elevations of brick rubbish, which keeps the roots dry and warm, while the surface of the beds is level, and their sides nicely sloped down with turf. Still going round on the left, one is attracted by a very imposing bed, with grand Caster-oil plants in the centre, a fine line of Uhdea bipinnatifida around them, Funkia subcordata flowering modestly under the shade of the Castor-oils, the whole edged with a rich row of the purple Plantain. It seemed to me a very striking bed, and all the plants in it fit for their work. Dracæna australis was plunged here and there, and grew freely in the open air; as did Nicotiana wigandioides, a grand thing, and quite a Gog amongst Tobaccos, but it did not seem to me to be ever likely to rival the magnificent Wigandia. In some places I thought the large beds, planted with a single species, were a little too unbroken and vast, and presented too level lines of foliage, but from this I must exempt a splendid bed of Wigandia, which, whether planted individually or collectively, subdued all feeling but that of respectful admiration, and made me exclaim to Mr. Gibson when approaching its head-quarters—"This is the noblest Roman of them all!" To see the Wigandia alone at Battersea is well worth a visit. Canna macrophylla was very fine, but all the Cannas and most other things are surpassed by, though they contrast beautifully with, His Eminence Ferdinanda, who, with a rare mixture of grace and dignity, spreads forth his ample leaves, nearly 2 feet in breadth.

In another mixed border we meet with:—Senecio planifolia, a plant which will, I think, be found useful for such purposes. Hibiscus Cooperi, very doleful-looking indeed. Polymnia grandis, a grand thing, apparently of free habit, with leaves somewhat like those of the Bread-fruit tree, and the stem beautifully fluted. The Coral tree, healthy. Saccharum Maddeni. Aralia papyrifera, which occurs in many places, and is a capital plant. Aralia macrophylla, very fine; but of course, as it is not to be raised freely like the Solanums, &c., it will probably remain long among the choice single specimens plunged about so freely. Canna discolor or floribunda, with very dark leaves and free habit, was highly spoken of by Mr. Gibson, and seemed to deserve it; but I did not think so much of Magnolia fuscata, which is about in various places, looking healthy enough, and probably calculated, with some other sweet-scented things, to add ere long another tropical charm besides that of aspect to the Sub-tropical. Cupania Pindaiba was one of the choice specimens. Begonia fuchsioides was rather freely used, and was flowering nicely, but it did not assume the free and graceful habit which it does in a higher temperature. Dracæna ferrea was plentiful as well as useful, and "bears any amount of sun and exposure."

Many fine-leaved plants were plunged here and there singly, such as Rhopala Jonghii and others; Tupidanthus calyptratus, which is thought highly of for open air use; Aralia farinosa and others; Strelitzia augusta, Grevillea Hillii, Dracænas, Latanias, Astrapæa Wallichii, and the Bambusas, of which there are many promising plants about. A few young Tree Ferns next appear, with Stadmannia australis fine, and Ficus imperialis with leathery leaves 18 inches long by a foot broad; but the Ferns made me think that a lot of such rings and single specimens of the North American Struthiopteris and numerous other large and hardy Ferns as I had seen in the Edinburgh Garden last autumn would be a telling improvement, and by no means an expensive one.

Among the starvelings here—one would expect to have found many more in such an immense collection of stove plants as is planted out—I may mention the Ginger, the Lemon Grass, and the Hand plant; but Coleus nigricans, which filled some beds, was the reverse of stunted and very ugly, being of a sea-sick black. None of these, I should say, would be again much used. The bold Aralia papyrifera filled the centre of a bed nobly; Mr. Gibson recommends it to be planted at about 9 inches high; it ought to be abundantly supplied with water, and may be propagated to any extent from the roots. In the hollow of the lawn is a bog in which grew Papyrus antiquorum Cyperus alternifolius, Scirpuses, Andropogon squarrosum, and Gunnera. When the plants of Gunnera get up like the one at Kew, they will take "the shine" out of many things that look better at present. Talking of big-leaved hardy things, I concluded that Rheum Emodi would be well worth introducing to the Sub-tropical. In one long winding bed there is a forest of Ficus elastica—fine equal-sized plants growing rapidly; the bed edged with Centaurea, Amaranthus, and other plants; and it is certainly one of the most astonishing beds ever seen. However, I thought it and some of the great Canna beds, a little too flat-topped.

The lover of monotony—if there is such an individual—had better expect very little gratification in this department, for go where we will, choice plants, many of them rarities in the stoves and greenhouses of good places, crop up abundantly. Here, again, we meet Dracæna arborea; young plants of Fortune's Palm, which ought to do beautifully in the well-sheltered nooks; Acacia schænifolia; a very likely looking plant of Mr. Veitch's on trial; Charlwoodia congesta; numerous good plants of Yucca aloifolia variegata; and plenty of others which I have not space to mention by name. I have, however, missed few if any of those which seemed most at home. There were many fine species of Solanum about, and plenty of Solanum violaceum, with a singularly spiny one, armed with fine purple spines on every surface, and named atropurpureum, but S. marginatum may, I think, be pronounced the very best. I am as yet forgetting the bedding plants, but there is a tasteful sprinkling of them about amongst the tropicals, so that provision is made for every taste, and one may say "look on this picture, and on that" without any doubt as to the decision.

The walk which leads from the south drive to the Sub-tropical has match pairs of some things already mentioned, edged with herbaceous plants; and Bambusa gracilis, surrounded by the variegated Coltsfoot—one of the very best of variegated plants, but it has a fashion of coming up anywhere but where you want it, unless planted in pots, as it was in this case. Here I noticed that the old plants of Nicotiana wigandioides did not look so well as those which were young and dwarf, and the same may be said of some other subjects. The simple-stemmed and young almost invariably looked best. Chamæpence diacantha was on trial, but there is no doubt of its giving satisfaction.

Lonicera aureo-reticulata formed a most effective and chaste edging; and divided from it by Amaranthus I met an old friend in a strange place, Plumbago capensis, as an edging plant, pegged down close and flowering very freely. Geranium anemonæfolium, a rare Geranium, was very useful; and some of the Grasses came in well, such as Panicum plicatum and Pennisetum longistylum, but there are many annual, and some hardy perennial Grasses which would add much to such arrangements as these, and without doubt they will soon be seen at Battersea. Are there more elegant plants than Panicum capillare, Milium multiflorum, or even the common Millet, P. miliaceum, not to mention others? I think not, and also that to fully beautify our flower gardens the more graceful species of Grasses must be extensively used. I thought the Solanums had been done with, but here I met another fine one, S. robustum, with a velvety orange tint, decurrent leaves, and a good habit.

There were quantities of Caladium esculentum doing tolerably well, and expected to grow twice as large, but I don't think the plant will ever assume its real dignity with us in the open air. Centaurea gymnocarpa made an excellent edging round a bed of Coleus; it ought to be much more used in flower gardening than it is, being a far more graceful plant than C. ragusina, as all will say who see it depending round the edge of the raised bed I allude to. The grand bed of Wigandia was the last of those on the lawn, and I found the leaves to be more than 2 feet long by 15 inches wide. It was edged with Farfugium grand.

Going round again to the northern entrance, and beginning on the right, we first notice Dracæna terminalis in lines and in capital condition, with Musa Cavendishii, rosacea, glauca, and zebrina—the last looking very much at home, and the others much better than one could expect; also a selection of fine Cannas, C. zebrina elegantissima being remarkable. Those who want to make a feature of Cannas should immediatel go to Battersea and study the vast collection there. The Japanese Privet is a shrub much used by Mr. Gibson; he considers it second to no other plant for withstanding the smoke. Bushes of Brugmansia Knightii in flower appeared to "astonish the natives" very much, and no wonder, from its contrast to the rigid little dumps they generally see so much of; and Tradescantia discolor looked very well in pots. We now come upon a little panel which is distinct in its way, the diamonds being marked by lines of Sedum denticulatum, and the front edged neatly by Sempervivum hirtum. This reminds me of what neat edgings might be made from the encrusted Saxifrages and some of the hardy Crassulaceæ. Veronica incana filled little half diamonds in this panel very neatly.

Passing a shady recess with Blechnum corcovadense, Musa, and Marattia, we approach what may be well termed the region of Castor-oils, Cannas, and Ferdinandas, for the groves of these plants, in the most luxuriant health, could not be surpassed in their native countries. The last mentioned grows on an average about 10 inches per week, and like some other of the best things, will be in much better condition a week or two hence if the weather is favourable. Of Ricinus, the varieties gigantea, spectabilis, and sanguinea, appeared the best. The old Canna indica was to be seen in some places, but is utterly useless compared to any of those previously mentioned. A group of Monstera deliciosa looked quite at home under a Willow, and, though dwarf, they were unfolding young leaves healthfully. Lastrea opaca I noticed in quantity among other Ferns, and the Cardamom plant, rather pleatiful, with Alpinia nutans, and numerous allied plants. Thus Mr. Gibson treats his visitors to some medicinal and economical plants, not often to spare even in good botanic gardens. One round bed near the walk was very charmingly filled by a single plant of Dracæna Ghiesbreghtii in the centre, surrounded by two superb rings of Dracæna terminalis, and finished by a ring of Salvia patula, the ground-work being composed of Lonicera aureo-reticulata, which was also trained up the stem of the fine central Dracæna. Looking up from the neighbourhood of this bed, for some distance on either side to the rising boundary, various beds may be seen in nicely sheltered bays, beautifully filled with a mixture of our very choicest stove and greenhouse plants, each bed different in composition and arrangement from its neighbour, the whole series offering a treat to the plant-lover, the like of which was never to be had out of doors in this country before, and very rarely indoors. In some of them, young and graceful Palms, such as Seaforthia elegans, did the chief work, but they were contrasted by and intermingled with the best Dracænas, Alsophila australis, Philodendrons, Berberis trifurca, Caladium violaceum, and Arundo Donax and conspicua, Musas, Strelitzia juncea, Crotons, Rhopala magnifica, and scores of other choice plants. The two Arundos should be in all arrangements of the sort, especially the first, which does so grandly in the flower garden at Syon.

It may be a question whether it is judicious to employ the vast number of Exotics that are used at Battersea for the decoration of our flower gardens generally, but there can be no doubt as to the propriety and necessity of introducing many of the most effective and free growing of them into all monotonous flower gardens at once. Neither will anyone with the slightest general knowledge of the capabilities of the hardy herbaceous plants and Alpines, of the Ferns, and of the Grasses, obtainable and easily cultivated in this country, doubt, that with a selection of these, with every really good and distinct bedding plant, with a large assortment from Mr. Gibson's splendid lot, and above all, by the help of a man of taste and a little more knowledge of plants and their habitats than is required to turn out the "stuff" in the end of May, a garden—a real garden—could be formed, which would as far surpass the old mixed garden and the "modern flower garden," in interest and delight-giving, as the Pyramid of Cheops surpasses in size the gum-bottle before me!

Somebody has talked of gardening having arrived at its climax, but so long as the more important parts of our garden landscapes are planted with the most ungraceful plants in existence, and the placard and wall-paper printers' notions of colour are floating about in the brains of our gardeners, causing them to present us with scenes remarkably like those taken care of by "Archibald Nagle, general advertiser," in lieu of the exquisite colouring of Nature, the expression of such an opinion is little less than idiotic.

I was full of these ideas after witnessing Mr. Gibson's raid into the enemy's country over the water; but not having time to think of them all now, I must wind up by telling how much I thanked Mr. Gibson for presenting the public with a scene infinitely more beautiful and interesting than anything ever seen in a gaudily decorated garden; and I felt, too, that when a future Loudon comes to write the "History of English Gardening in the Nineteenth Century," and therein of our emergence from a period of debased taste, that his name must figure as a leading pioneer. *Wm. Robinson.*

SHOW GOOSEBERRIES.

GOOSEBERRY shows have long been held annually in many parts of the kingdom, but more especially in Lancashire, Cheshire, and Yorkshire, and at these

shows, prizes have been awarded for the heaviest berries, flavour being very rarely taken into consideration. The consequence of this has been, that numerous varieties have been raised of enormous size, but coarse in substance, and bad in quality as regards flavour. So long, however, as prizes are offered solely for weight, that point alone will of course be the main consideration with the raisers and growers for competition; but that no doubt has been brought to a high standard, varieties having been raised so large that 12 fruits have weighed upwards of 1 lb. Such has been the result of long and extensive competition, bearing on a single point, that of weight.

Presuming that a Gooseberry bush can only bear to perfection a certain weight of fruit, it will be admitted, that when the use of the fruit for dessert is the object, it is better that that weight should consist of moderate-sized berries of good quality, than of very large ones of bad or inferior quality. This being admitted, it must be concluded that the prizes offered for size only have been misapplied, so far as ripe fruit is concerned. But taken in another point of view, such prizes may, on the whole, have proved of importance to the community, more especially in the populous manufacturing districts, where also these shows most abound.* Although not considered good to eat ripe, at all events by those who have the opportunity of obtaining such smaller well-flavoured kinds as we have described in a former article, yet some of these large kinds are good for tarts, and they have the advantage of soon acquiring size enough for that purpose. And it may be borne in mind that by the class of persons confined in shops and manufactories, some such acid as is afforded by various fruits is required much more than by those who are employed in the open air; and these large Gooseberries are the earliest fruits of the season to cheaply afford this desirable supply.

Again, among the many hundreds of varieties that have been raised, there are some which, though large, are nevertheless well flavoured; and such are those which form the subject of the following notes:—

FRUIT RED.

Leigh's Rifleman.—Rather late, large, roundish oblong; skin hairy, red, thick; flavour sharp and rich. An abundant bearer, and has been long much grown for the London market.

Bratherton's Lord of the Manor.—Late; very large, roundish; skin hairy, red, rather thick; flavour very good.

Lomax's Victory.—Syn. Lomax's Victory; middling early, tolerably large, roundish oblong; skin hairy, light red, thin. The unripe berries are much esteemed for tarts.

Milling's Crown Bob.—Late, very large, oblong; skin hairy, red with a greenish mixture near the base, bright red at the blossom end; flavour good. One of those sorts which is a good deal cultivated for the market.

Denny's Shakespeare.—Late, very large, roundish; skin hairy, red, thick; flavour very good.

Hopley's Companion.—Middling early, very large, roundish oblong; skin hairy, bright red, with reddish orange veins; flavour rich.

Dublin.—Very large, roundish; skin hairy, red, with orange red veins; flavour sweet and rich. This is perhaps the best of the very large Gooseberries, and is likely to obtain an extensive cultivation for the market.

Speedwell.—Large, roundish oblong; skin hairy, light red, thin; flavour rich and vinous.

Berry's Farmer's Glory.—Leaves pubescent above; fruit very large, obovate, downy, red, thick; flavour rich.

Hampson's Tantararara.—Above middle size, obovate; skin downy, red; flavour rich.

FRUIT YELLOW.

Beaumont's Smiling Beauty.—Early, large, oblong obovate; skin smooth, yellowish white, thin; flavour very good.

Broom Girl.—Early, large, roundish oblong; skin hairy, thin; flavour rich.

Fanny.—Large, roundish oblong; skin hairy, yellow; flavour rich.

Goldfinder.—Large, oblong; skin hairy, yellow; flavour excellent.

Leader.—Very large, roundish oval; skin smooth, yellow; flavour rich.

Moreton Hero.—Very large; skin smooth, yellow, and thin; flavour rich.

Candidate.—Large, oblong; skin smooth, thin; pulp tender and rich.

FRUIT GREEN.

Parkinson's Laurel.—Rather late, large, obovate; skin green, very downy, and thin; flavour very sweet.

Collier's Jolly Angler.—Late, large, obovate; skin downy, light green, and thin; flavour rich.

Massey's Heart of Oak.—Middling early, large, oblong, tapering to the stalk, which is thick at its insertion; skin smooth and thin; flavour rich and excellent.

Edward's Jolly Tar.—Resembles the preceding, but is less oblong; ripens later, the skin being thicker; flavour rich and sweet.

Beeston Castle.—Large, roundish obovate; skin smooth, green, thin; pulp tender, with rich flavour.

Random Green.—Very large, oblong; skin green and thin; flavour good.

Green Overall.—Very large, obovate; skin downy, green, and thin; flavour rich and excellent.

Lofty.—Very large, obovate; skin hairy, green, very thin; flavour very rich.

Lord Eldon.—Large, roundish obovate; skin smooth, green, and thin; flavour sweet and rich.

Keepsake.—Large, roundish oblong; skin hairy, green, thin; flavour very sweet, rich, and excellent.

FRUIT WHITE.

Woodward's Whitesmith.—Syn. Whitesmith, Sir Sidney Smith, Hall's Seedling, Lancashire Lass, Grundy's Lady Lilford; middling early, and of good size, but has not been much grown for competition where size alone is the object; roundish oblong, sometimes inclining to ovate; skin downy, white, and thin; flavour excellent. When prizes were offered for new sorts, flavour being taken into consideration, and when the number of them was inconveniently numerous, the task of decision was found to be greatly abridged and simplified by the expedient of offering prizes for sorts better than Woodward's Whitesmith. Few were brought forward to compete with this standard of excellence.

Wellington's Glory and *Crompton's Sheba Queen* are scarcely different from the preceding.

Saunders's Cheshire Lass.—Very early, large, oblong; skin downy, white, and very thin; flavour rich and sweet. Deserves recommendation for its earliness in ripening, and also for tarts, its green fruit soon acquiring a size fit for that purpose.

Cleworth's White Lion.—Late, tolerably large, roundish oblong; skin slightly hairy, white, transparent, very thin; flavour rich.

King of Trumps.—Large, roundish oval; skin smooth, white; flavour rich and excellent.

Cook's White Eagle.—Late, large, obovate; skin thick, smooth, white; flavour good. Affords a late succession.

Taylor's Bright Venus.—Middling early, of medium size, obovate; skin very slightly hairy, white; flavour sugary, rich, and excellent. After being ripe it has the property of hanging till it begins to shrivel; and it then acquires a slight bloom, resembling that of the Pitmaston Greengage Gooseberry. ||

* These shows are of a very primitive character. The club-room of a country inn is usually the exhibition place. The exhibitors gather round a table; the chairman sits with scales and weights before him, and calls for the "heaviest red," it may be. A berry is produced by some exhibitor, weighed, and the weight recorded. This is repeated so long as berries are forthcoming, the heaviest for the time being remaining in the scale as the standard, until it is beaten by a heavier fruit. These large berries appear to be produced rather by means of thin skin and high cultivation than by special feeding.

ELIZABETHAN GARDENING.

[From Fraser's Magazine for August.]

THAT style of domestic architecture which, after an interval of about half a century, succeeded the Gothic, and which is called Elizabethan—though some of its finest examples belong rather to the reign of James I.—has of late years suffered a revival; and, as the only really domestic style of English architecture, certainly deserves a considerable share of popular favour. We trust the taste for it may increase, and supersede the bastard attempts at domestic Gothic which modern architects perpetrate, under the disguises of Venetian, Victorian, or some other phrase for their original ideas of what Gothic ought to be.

In its broad characteristics, the Elizabethan is, without doubt, a style peculiarly well adapted to our English climate and scenery. The warm tint of brick—its favourite material—harmonises far better with the cool green of foliage, than the cold lines of the grey or white stone or stucco of an Italian building; while the quaint clumps of decorated chimneys, the variously-formed gables, the obvious roof, the large unsymmetrical windows, and ornamental portals, all meet the requirements of a residence in a country which necessitates huge fires, ample light, and protection from heavy rains and occasional deep snows, and which practises a large and free-handed hospitality. It is, moreover, a style suited for the prince and for the peasant; it can meet the requirements of the most wealthy,—as in Holland House, Hardwicke, and other stately examples; while it is suited to shelter the lowliest cottager. The details of its ornamentation—hybrids between the Classical and the Gothic,—are doubtless susceptible of improvement; but they are not necessary to it: on the contrary, it is capable of receiving the most varied ornamental details, from any source which the fancy or taste of the modern architect can adapt or devise. In fact, it has the unspeakable advantage of not being a true 'style,' and, therefore, has no pedantic rules to fetter it.

It is strange, however, that while so much attention has been paid to the study of this style for country residences, but comparatively little has been done for promoting a knowledge of the style of gardening which prevailed at the same period, and always accompanied it as a very essential part of the design. It is customary to see a not despicable imitation of an Elizabethan house, surrounded by a garden in what is called the 'Natural' style—which means a small lawn with a few small flower beds cut out upon it in an irregular manner, after the fashion of the confectioner's ornaments on a tart; or, if a more ambitious style is attempted, it is either an Italian or French garden, totally at variance with the style of the mansion. Even if an attempt is made to reproduce an Elizabethan garden, and the architect is consulted on its laying out, we shall probably find the 'forthrights,' *i. e.*, the principal walks, accurately set out; but there the architect's knowledge will seem to have failed him. He could plan a flat surface, intersected at right angles by broad straight walks, but how to fill up the spaces between the intersections was beyond his powers. It was as if he had undertaken to erect a building, and having laid down the ground plan, and drawn the general outlines, he was unable to design a capital, carve a window tracery, or execute a moulding. It would be obvious that such a man had not half learned his profession, and had undertaken more than he was able to perform; yet few gentlemen detect that the designer who leaves their gardens only half planned, with all the details of ornamentation shirked and omitted, is equally ignorant of his profession, and has no business to undertake the laying out of grounds. The architect feels conscious that he ought to be able to complete his work, and prepare a design for the surrounding of the house which he has built; and therefore, if appealed to, he undertakes it, though he rather despises the task; but, being seldom appealed to, he neglects this part of his education, and is incompetent to the work. It was formerly—as it still should be—the work of the architect to plan out the garden attached to the villa; and, in the early works on domestic architecture, there is scarcely a ground-plot not laid out as a parterre or labyrinth. That it is otherwise now is really the fault of employers. When a gentleman has built a house, he thinks he has done with the architect, and sends for the landscape-gardener. The landscape-gardener, who, for the most part, is more ignorant of architecture than the architect is of landscape-gardening, has not the remotest suspicion that the garden should harmonise with the house. He has certain rules, according to the fashion of the time; and, whether appropriate or not, he lays out the garden according to those rules, in the prevailing taste of the day. He has no more idea of appropriateness than the milliner, to whom the prevailing fashion of the minute is the only guide, and with whom one pattern serves for all alike. Of course, neither the milliner nor the gardener is to blame: while ignorance prevails among their employers, and fashion reigns sole arbiter, they must comply with their employers' demands; for ruin would await the presumptuous heretic who dared to dispute fashion's decrees.

'Ancient' gardening, as Loudon calls all English gardening prior to the Revolution, still labours under the ban which tabooed Gothic architecture in the last century. It is regarded as simple barbarism, without rules, laws, or ordinances of any kind; the mere outbreak of 'a diseased imagination.' The popular belief is, that there was really no style of gardening worthy of study, much less of imitation, prior to the Revolution. It is generally believed that William III. introduced gardening into England, in the form which is, from him, called the 'Dutch' style; that is, quaint figures of temples, vases, statues, animals, &c, in 'topiary work,' with formal canals, and broad straight walks, bordered by walls of cut foliage; that the excess to which this taste was carried led, in the first quarter of the 18th century, to a directly opposite style—the 'Natural' or 'English' style, in which the grounds were to be reduced to a wilderness, and a vain attempt made to imitate the wild luxuriance and easy grace of Nature; and that this has yielded partially to the modern style—a modification of the French and Italian styles.

But the truth is, that all these styles had been long previously practised in this country. In the reign of Henry VIII., the gardens of Nonsuch House were laid out in the Italian style, with columns and pyramids of marble, statues, vases, fountains, &c. In the same reign, Leland, in his Itinerary (p. 60), describes the gardens at 'Wrexhill Castille, in Yorkshire,' as containing 'mountes, *opere topiaris*, writhen aboute with degrees like cokill-shells to com to the top without payn,'—in what is now called the 'Dutch' style. Examples of this style, much older than the time of the stern Dutchman, still remain attached to old mansions. At Packwood, near Knowle, in Warwickshire, there is a 'mount writhen with degrees like cokill-shells,' and planted with Yews, which is probably quite as old as that so quaintly described by Leland. Three-quarters of a century before the alleged introduction of the 'Dutch' style, Lord Bacon, in his 'Essay on Gardening,' had advocated the Natural style in preference to 'images cut in Juniper or other garden stuff, knots or figures, with divers-coloured earths—they are but toys—they are for children.' And, before the end of the 16th century, Spenser had described the 'English' or 'Natural' style, with much beauty, in passages in the Faerie Queene, adapted from Tasso:—

> There the most dainty paradise on ground
> Itself doth offer to his sober eye,
> In which all pleasures plenteously abound,
> And none does others' happiness envy;
> The painted flowers; the trees upshooting high;
> The dales for shade; the hills for breathing space;
> The trembling groves; the crystal running by;
> And, that which all fair works doth most aggrace,
> The Art, which all that wrought, appeared in no place.

It has been frequently said that Milton's description of Paradise was instrumental in introducing the Natural style; but if so, it could only be by a mis-

apprehension of what he says. In his description of what may be called 'the open country' of Paradise, 'hill, and dale, and plain,' he lauds it as not planted by 'nice art, in beds and curious knots:' but it by no means follows that he was opposed to visible art in the garden, any more than Spenser, because he describes the art as concealed in the seductive Bower of Bliss, which was spread as a trap for the Knight of Temperance. On the contrary, Milton describes the 'blissful bower' of our first parents as fashioned by Divine art; and his words are carefully selected to convey an idea of the art which perfects man's abode. The *roof* is *inwoven* shade, *fenced* up by a verdant *wall*; flowers *wrought Mosaic* and with *rich inlay broider'd* the ground. How elaborately the passage is phrased to exhibit art; and how carefully the poet distinguishes between the home of man, where art should be visible, and the wild range of nature, where art has no place.

In fact, the English have always loved gardens; and it is impossible to fix a date when gardening was not practised as an art. The Romans had their gardens in Britain, and introduced many useful and ornamental plants. Every Saxon gentleman had his 'garth' for pleasure, and his ort-garth (orchard) for vegetables; and, under the Norman Kings (temp. Henry II.), the citizens of London had gardens to their villas, 'large, beautiful, and planted with various kinds of trees.'

It would be possible to trace some of the alleged modern styles of gardening to a much earlier date; for it is quite certain that the 'Dutch style, with cut trees, straight avenues, and canal-like ponds, prevailed in Egypt; that the 'Natural' or 'English' style was preferred at Babylon: for the celebrated hanging gardens made by Nebuchadnezzar for his queen Anytis, were laid out to imitate the mountains and natural scenery of her native country, Media; and the sculptures represent similar gardens at a still earlier date in Assyria. But we have no intention of entering into so pedantic an inquiry, or we might literally travel to China and Peru for further illustrations.

(*To be continued.*)

Home Correspondence.

Prize Groups of Plants.—According to promise I beg to send you a list of plants comprising the group to which the Silver Cup was awarded at the Leicester Horticultural Show held the other day. This collection occupied a space of 40 feet in length and 7 feet in width, and was exhibited by A. Turner, Esq., of Leicester. In the centre was a noble specimen of the Norfolk Island Pine, upwards of 13 feet high; on either side of this stood fine examples of Seaforthia elegans and Dicksonia antarctica, under the shade of which were fine specimens of the following Orchids, viz.: Vanda suavis and tricolor, Oncidium flexuosum, Cattleya bicolor, Lælia elegans, and Dendrobium chrysanthum. In other available space stood the following plants, carefully arranged, so as to produce the best possible effect:—Plumbago capensis, trained on a large globular trellis; Cissus discolor, Echites nutans, Sphærostema marmoratum, Pandanus elegantissimus, Pandanus javanicus variegatus, Croton longifolium variegatum, Alocasia metallica and macrorhiza variegata, Pothos argyræa, Caladium Chantini, Houlletti, picturatum, Wightii, hæmatostigmum, Belleymei, Troubetskoi, and Lowii; Lilium lancifolium rubrum and album; Disa grandiflora; Eranthemum rubronervium, Eriocnema marmorea (both the latter under large bell-glasses); the Japanese Lonicera, Pteris argyræa, Lomaria attenuata, Blechnum glandulosum, Anemia fraxinifolia, Asplenium lucidum, Nephrodium molle var. corymbiferum, Platycerium alcicorne, and Pteris rubro-nervia. These plants formed in themselves a forest of the most beautiful vegetation. *An Old Exhibitor.*

Double Glazing.—In your Paper of the 27th ult. you have done me the honour of alluding to my experiments on this subject, and of quoting a statement of mine written for the information of my friend Mr. Ward, and by him laid before the British Association last year. At the close you invite me to give my further experience, and I have now much pleasure in doing so. Another year's trial has confirmed me still more of the value of double glazing, and of its perfect adaptation to all kinds of plant growing. With me, under this system, plants continue to flourish and increase in beauty to a degree far beyond what I expected when I first adopted it. One unexpected result has followed—an almost total cessation of annoyance from insects. Formerly, as with others, these pests, of various kinds, abounded with me; now they but rarely appear, and when they do they are few in number and are easily got rid of. From this I infer that when plants are grown in a condition of atmosphere suited to maintain them in perfect health, they are but little liable to such attacks, which so often impair their beauty. But the most remarkable feature arising from double glazing is the extraordinary length of time heat is retained in a house so treated. I give you an interesting instance. In the first week of January last we had here four days and nights of continued severe frost, the thermometer not rising during these days to 32°, and each night falling to about 18°. Just at the commencement of this frost an accident happened to the apparatus which heats my stove house, 130 feet long, and a range of about 60 feet for Orchids. On entering the latter one morning I was alarmed to find that the fire had been drawn, the water in the pipes run off, and some of the latter disconnected to enable a new fitting to be put in. I was assured, however, that all would be completed by evening, so as to enable the fires to be relit. On my arriving home about sunset I was informed that the new fitting did not fit, and that another casting should be made and be ready for use the next day. It did not come home until two days after. So there was a valuable collection of tropical plants in two large houses without any heat, with 12° to 14° of frost. I much regret I did not make a note at the time of the actual temperature of the houses, and of the divisions of each, and can therefore now only write from recollection. I think it was about 56° on the morning the fire was discontinued. I am sure that 24 hours after the reduction was only 3°, and the following morning, 48 hours after, only 3° more! The houses remained in the same condition the third night, and 2° more were lost—a reduction of 8°, from 56° to 48°, in 72 hours, with a mean temperature outside of about 25°. Nothing was injured. Is not this a striking proof of the value of double glazing? It saved me more than I ever spent in this way, for I must have lost my plants without it, because long before the above time expired the temperature of an ordinary house must have gone below freezing point. With such a system a gardener and his employer may sleep without anxiety all night during the hardest frosts. I send these few facts in the hope that they may prove interesting to some of your readers, and induce them to turn their attention to double glazing. I entertain no doubt that those who try this system will never regret it. To those who doubt it, I have only to say, "Come and see the results, and judge for yourselves." *Thos. Bewley, Rockville, Black Rock, near Dublin, Sept.* 7.

Flower Shows.—In looking back through the vista of past years, I find that almost invariably prizes are taken in certain classes by the same individuals. The competition is left to two or three, who claim 1st, 2d, and 3d prizes. How does this happen? Is it because they are the only growers of the subjects exhibited? No. Is it because they are the most skilful cultivators of them? No. It is simply this. A. commenced growing plants some 20 years back, B. 15, and C. 10, but D., E., and F. only commenced four or five years ago—unfortunately for them therefore they can have no hopes of being successful just yet, as A., B., and C.'s plants are older and consequently much larger, though more skill may have been bestowed on those in the possession of D., E., and F. The only way of remedying this evil, (for it is considered by many to be an evil), is to name the size of the pots required, and to fix the standard smaller than some of the sizes in which many of the plants are exhibited at present. Or let the prizes given at present to plants in any sized pots be given to those in a size fixed upon, and a smaller prize given to those in any sized pots, as it would perhaps be unfair to exclude the latter altogether, although they have been exhibited so often, that most of them are well known to the public. In short, it has been said of some collections, that if only set properly on the road, they would find their way without difficulty to any of the London shows. It is to be hoped that the drift of these remarks will not be misunderstood. Provided the hints just given are attended to, there would I think be more competition, greater skill displayed, and more recent introductions would doubtless thus be brought before the public in the shape of specimens than have hitherto been submitted to public inspection. *W. P. R., The Gardens, Shrubland Park, Ipswich.*

Glazing.—I shall feel obliged for a reply from any experienced gardener to the following question. Will a Vinery answer in which the house is composed of lights that have the glass put in without laps? The lights in my Vinery were originally of the old-fashioned form; the glass being in small squares, each overlapping the other, leaving a small aperture between. While in that state the Vines prospered, and excellent Grapes were usually obtained. But the then owner, considering that harm was done by the rain driving in occasionally with a south wind, thought to obviate the evil by inserting thicker glass in strips of 18 inches long, the edges of which, instead of overlapping, were put end to end with white lead between, so as to render it perfectly water-tight, and so it was; but at the same time of course it became air-tight, and ever since the Vines have evidently done badly. The foliage is weak, and subject to red spider and other pests, and the fruit small, while the whole plants appear parched and dwindled. Is this owing to the alteration? Can it be avoided by proper ventilation by means of the front lights which swing, and the upper lights, the topmost of which slide? or would it be advisable to reglaze the lights, and allow the glass to overlap so as to admit of freer ventilation? I should observe that I always start my Vines early in the year, so as to have the Grapes ripe by August and September. An opinion on this point will greatly oblige. *B.*

Wasps.—Can any of your Correspondents tell me what is the reason that there are so many wasps this year? A gentleman, speaking to me one day on the subject, declared it was owing to the destruction of the blackbird, but I doubted his word, for I have closely watched the habits of birds at all seasons of the year, and I have never seen a blackbird or any other bird attempt to destroy a wasp; and the blackbird is the very last I should look to for such an action, for blackbirds I think live entirely upon fruit. From May till October they live on the products of the garden and orchard, and the remaining months their food is furnished by the wood and hedgerow. Every gardener knows what a plague the blackbird is in the fruit garden; it destroys more fruit than all other birds put together. So I do not think the cause of our having so many wasps lies in the destruction of blackbirds; I attribute it to the hot and dry summer, which I think has been particularly favourable to wasps. Since the latter first made their appearance I have destroyed upwards of 100,000, and the means I have used are very simple, and not expensive. I have a quantity of large-mouthed bottles, and I half fill them with a mixture of beer and water sweetened with sugar; then I hang them on the walls and fruit trees where the wasps are most numerous. They are very fond of this mixture, and to make it more attractive, I place over the mouth of the bottles a Plum or Pear that has been partly eaten by them; care must, however, be taken to leave sufficient room for them to get into the bottles. The plan of placing the fruit over the bottles assists in the destruction of wasps in two ways. In the first place it renders it more difficult for a wasp to get out of a bottle when it is once in, and it flutters about in the bottles until it falls into the liquid. In the second place, many wasps will be found to prefer the fruit to the mixture, and as they are great gluttons, they eat of the fruit until they become helpless, and then fall into the bottles and are drowned. In this way I destroy from 150 to 200 in every bottle I hang out in the course of a day and night, and as I have more than 30 bottles I destroy about 5000 wasps every day. And now there appears to be just as many as there were before a wasp was taken, although every nest has been destroyed as soon as it was found. *G. G., Coventry.*

Frogs.—Can any of your readers tell me whether they ever heard a frog squeak? A large and much distended one was in our garden yesterday, and every time it was touched it uttered a most distinct squeak. It was very sluggish, but finally took three or four leaps, squeaking with every jump. As I never heard such a thing before, I should be glad to know whether it has ever been noticed. *F. H. H., Kew.*

Societies.

ROYAL HORTICULTURAL: *Sept.* 6.—*Exhibition of Autumn Flowers.*—Cut Roses were shown on this occasion by Messrs. Paul & Son, the Rev. Mr. Radclyffe, and Mr. Treen of Rugby. Hollyhocks and Verbenas came from Messrs. Minchin & Sons, and Messrs. Paul & Son furnished cut spikes of Gladioli. Of Dahlias, Mr. Keynes contributed the only collection exhibited. Messrs. Paul & Son showed a stand of French Asters; Messrs. Smith, Balsams; and Messrs. A. Henderson & Co. a group of Miscellaneous Stove and Greenhouse Plants, among which we noticed the variegated variety of Rhynchospermum jasminoides, various sorts of Ferns, Campylobotrys regalis, Marantas and other interesting plants. The same firm also contributed Allamanda Hendersoni, a continuous flowering variety in the way of Schottii, as far as the blossoms are concerned, but with foliage more like that of cathartica. This received, as it well deserved, a First-class Certificate; as did also the large orange-stained white blossomed Dendrobium formosum giganteum from Mr. Bull, King's Road. To Pelargonium Beauté de Surennes, a fine rose, from Mr. Salter was awarded a First class Certificate, and Verbena Purple Prince from Mr. Norford, of Brompton, received a label of Commendation. Another Verbena called Minerva, pink with a crimson eye, from Mr. Stalker, of Sydenham, was awarded a Second-class Certificate. Pentstemon Mrs. Moore, a beautiful variety formerly alluded to by us, received a First-class Certificate, and Mrs. E. Clarke, a Second-class Certificate. These came from Messrs. Downie, Laird & Laing, as did also other fine varieties of the same useful flower. Dahlia Queen of Primroses received a Second-class Certificate; and George Wheeler, purplish crimson shaded lilac, a First-class Certificate, as did also Champion, a variety in the way of Lord Derby; while Queen of Sports, a carnation-striped sort, had a Second-class Certificate. These were all shown by Mr. Keynes, of Salisbury. Two groups of Pelargoniums from the Society's Garden, placed at each end of the different collections, served to set them off to good advantage, but altogether the display was miserable compared with what might have been expected at this season of the year under proper management. To most of the collections just named Certificates were awarded, as will be seen by an advertisement in another column.

CRYSTAL PALACE HORTICULTURAL EXHIBITION, *Sept.* 7 *and* 8.—The autumnal Fruit and Dahlia show, which was held on Wednesday and Thursday last, was well attended. The display of fruit was unusually large, and in many instances excellent, especially in the case of Black Grapes, which were all that could be desired.

Collections of 8 *dishes of Fruit.*—These were not numerous; but among them were some excellent examples of skilful cultivation. In the different exhibitions were very fine Black Hamburgh, Muscat, and Trebbiano Grapes, good Barrington Peaches, Moor

Park Apricots, Enville and Queen Pine Apples, Trentham Hybrid Green-fleshed Melon, Morello Cherries, Pitmaston Orange and Elruge Nectarines, Red Magdalen and other Peaches; Washington, Coe's Golden Drop, and other Plums; and Williams's Bon Chrétien Pears.

Awards.—1, Mr. A. Henderson, Trentham; 2, Mr. Dawson, Panshanger Herts; 3, Mr. Jones, Nottesford Abbey, Hants.

Pine Apples.—These were neither plentiful nor good, a statement confirmed by the fact that both the first and second prizes for Queens were withheld. Among other sorts was a singular variety from Mr. Drewitt, gr. at The Denbies, in which from the base and crown, proceeded little nobs surmounted by crowns—in short a kind of hen-and-chicken Pine Apple. This came from Penang, and from its peculiarity of appearance elicited considerable attention. We also noticed a Providence, weighing 10 lb.

Awards.—Queens: 1 & 2 withheld; 3, Mr. Stafford, Wormley Bury, Hants. Other varieties: 1, Mr. Page, gr. to W. Leaf, Esq., Streatham; 2 and 3, Mr. Smith, gr. to A. Anderson, Esq., Norwood.

Grapes. — These were wonderfully fine, especially Black Hamburghs, three bunches of which, weighing together 11 lb. 4 oz., were contributed by Mr. Meredith, of Garston, near Liverpool. The basket of 12 lb. from the same excellent grower was also equally good; and beautiful fruit of Lady Downes' Seedling also came from Mr. Wills, gr. to Sir P. G. Egerton, Bart., and Mr. Henderson, of Trentham. Of White Grapes the best three bunches were furnished by Mr. Dwerrihouse, gr. to Viscount Eversley, at Heckfield. The same exhibitor had also a bunch, beautifully formed and well ripened, of the same sort, a seedling, which weighed 5 lb. This was shown as the largest single bunch of any kind. It was however beaten by Child of Hale, a new variety, from Mr. Meredith. This latter weighed no less than 8½ lb. Marchioness of Hastings, from Mr. Henderson, weighed 4 lb. 14 oz.; and Muscat Hamburgh, from Messrs. Lane, upwards of 2 lb.

Awards.—12 lb.: 1, Mr. Meredith; equal 2, Mr. Wills and Mr. Henderson; 3, Mr. M'Kay; extra, Mr. Monk. Three Black Bunches: 1, Mr. Meredith; 2, Mr. Ford, gr., Frogmore Hall, Walton, Herts; 3, Mr. Omant, gr., Hookfield Grove Epsom. Three White Bunches: 1, Mr. Dwerrihouse; 2, Mr. Budd, gr. Cobham Hall, Gravesend; 3, Mr. Wills. Heaviest Bunch: 1, Mr. Meredith; 2, Mr. Dwerrihouse; 3, Messrs Lane & Son.

Peaches.—These were for the most part small; those, however, to which 1st prizes were awarded were all that could be desired, both as regards size and colour. The sorts were chiefly Barrington, Violette Hâtive, Grosse Mignonne, Têton de Venus, Royal George, and Vanguard.

Awards.—1 and 2, Mr. Cross, The Grange, Alresford, Hants; 3, Mr. Spivey, Bishop's Stortford.

Nectarines.—Among these were numerous examples of Pitmaston Orange, Elruge, Violette Hâtive, Red Roman, and Murrey. With one or two exceptions they were, however, small in size.

Awards.—1, Mr. John Fraser, Lea Bridge; 2, Mr. Henderson; 3, Mr. Woodward, Ewell, Surrey.

Melons.—These were plentiful. Among green-fleshed kinds, the best were Bailey's Golden Perfection, Beechwood, and Bromham Hall, and among red-fleshed sorts Gem stood in the foremost rank.

Awards.—Green-fleshed: 1, Mr. Bailey, Shardeloes; 2, Mr. Rust, Broome House, Fulham; 3, Mr. Beech, Ringswarren, Epsom. Scarlet fleshed: 1, Mr. Young, Lee Park, Havant; 2, Mr. Blair, Shrubland Park, Ipswich; 3, Mr. Godfrey, Ware Park Mill, Herts.

Figs.—One or two dishes of these were good; the rest were somewhat small in size.

Awards.—1, Mr. Eustone, Ware House, Exeter; 2, Mr. Dungey, Ockham Park, Ripley.

Cherries.—These were chiefly Morellos, of which there were some large and excellent fruit.

Awards.—1, Mr. Dawson; 2, Mr. Holder, Reading; 3, Mr. Bailey.

Plums.—These were shown in great variety, and in good condition. Among the varieties were Greengage, Prince of Wales, Goliath, Washington, Jefferson, Coe's Golden Drop, Denyer's Victoria, and other well-known sorts.

Awards.—1, Mr. Bailey; 2, Mr. Woodward; 3, Mr. Kaile, East Horsley Towers, Ripley; extra, Mr. Drewitt, The Denbies, near Dorking.

Apples.—These were numerous; for the most part large and free from speck or blemish, the bright warm colour of the Red Astrachan and Quarrenden lighting up and setting off to good advantage the different green-skinned kinds with which they were associated. Among dessert varieties were very fine examples of Kerry, Downton, Ribston, Fearn's, Golden, and Cox's Orange Pippins; Summer Pearmain; Cox's Pomona, a free-bearing excellent kind; Old Nonpareil, Bull's Golden Reinette, and Blenheim Orange. Kitchen sorts comprised Reinette du Canada, Wellington, Hollandbury, Keswick Codlin, Alexander, Lord Suffield, Hawthornden, Cellini, Golden Noble, Kentish Fillbasket, Lord Nelson, and Manx Codlin.

Awards.—Dessert sorts: 1, Messrs. Lane, St. Mary's Cray; 2, Dr. Cooper, Slough; 3, Mr. Webb, Reading; extra, Mr. Betteridge, Milton Hill, near Steventon, Berks. Kitchen kinds: 1, Messrs. Lane, St. Mary's Cray; 2, Mr. Mortimore, Wallington; 3, Mr. Wren, Carshalton; extra, Mr. Webb, Reading.

Pears.—These were plentiful and for the most part in fine condition. The sorts were chiefly confined to Duchesse d'Angoulême, Beurré Bosc, Marie Louise, Crassane, Chaumontel, Napoléon, Glou Morceau, Beurré Diel, Beurré Rance, Comte de Lamy, Gansel's Bergamot, and Beurré d'Amaulis. As regards flavour, the best were Louise Bonne of Jersey, and Williams's Bon Chrétien, of both of which some fine fruits were exhibited. Among sorts shown for weight there was nothing remarkable.

Awards.—Three Dishes: 1, Mr. Wilson, Craven Cottage, Fulham; 2, Mr. John Fraser; 3, Mr. Nicholls, New Road, Hammersmith. Single Dish for flavour: 1, G. Wilson, Esq., Gishurst Cottage, Weybridge; 2, Mr. Heather, Ember Grove, Thames Ditton; 3, Mr. Sheath, Langley, Bucks. Single Dish for weight: 1, Mr. Dwerrihouse; 2 & 3, Mr. Goldsmith, Polesden, Dorking; extra, Mr. Harrison, Oatlands.

Miscellaneous Subjects.—Among these were some well fruited Vines and Peaches in pots from Mr. Giers, Norwood, and Messrs. Fraser and Lane. Mr. Wm. Paul had also some Vines in pots, showing the period of ripening of different kinds. Capsicums of unusually large size came from Mr. Scorer, Woodlands, Havant; very fine nuts from Mr. Webb of Reading; large and beautiful fruit of the Granadilla from Mr. Blair, Shrubland Park; and last but not least, the highly coloured and extremely fine looking Apple from Mr. Taylor of Southampton, mentioned in our notices to correspondents, the fine appearance of which alone would recommend it to a prominent place on the dessert table. We also noticed some very fine Oranges from Mr. D. Hutcheson, Margate.

Dahlias.—The display of these was large, and the blooms in the winning stands in good condition. Those from Mr. Turner and Mr. Keynes especially were very fine. Good stands were also contributed in the amateur class. In the different collections we noticed beautiful examples of Lord Palmerston, Lady Franklin, Lady Popham, Goldfinder, Earl of Shaftesbury, Heroine, Commander, Hon. Mrs. Trotter, Madge Wildfire, Criterion, Hon. Sidney Herbert, Model, Captain Harvey, Cygnet, Chieftain, Lord and Lady Elcho, Lord Cardigan, Joy, Hope, Volunteer, Pioneer, Hugh Miller, Miss Henshaw, Pluto, Lord Derby, Duchess of Wellington, Perfection, George Douglas, Lord Eversley, Miss Pressley, Mr. Stocken, Mrs. Pigott, Mr. Boshell, Marquis of Bowmont, Chairman, Jenny Austin, Norfolk Hero, Mrs. H. Vyse, Cherub, Warrior, Juno, Lord Dundreary, Gold Drop, Umpire, Bob Ridley, Delicata, General Jackson, Mauve Queen, Dinorah, Count Cavour, Charlotte Dorling, Beauty of Hilperton, Donald Beaton, Mrs. Henshaw, Midnight, Peri, Willie Austin, Disraeli, Lord Canning, and George Brown. Among Fancies we noticed fine blooms of Harlequin, Lady Paxton, Countess of Bective, Pauline, Starlight, Elegans, Queen Mab, Confidence, Sam Bartlett, Miss Jones, Mrs. Crisp, Norah Creina, Madame Sherrington, Summertide, Fairy Queen, Mrs. C. Kean, Countess of Shelburne, Pluto, Zebra, Garibaldi, Rev. J. Dix, Triomphe de Roubaix, Mrs. Wickham, Duchess of Kent, Leopold, Oliver Twist, Flirt, and Gem.

Awards.—48 blooms: 1, Mr. Turner; 2, Mr. Keynes; 3, Mr. Walker; 4, Mr. Legge. 24 blooms: 1, Mr. Keynes; 2, Mr. Turner; 3, Mr. Walker; 4, Messrs. Kelway & Sons; 5, Mr. Morse; 6, Messrs. Saltmarsh & Son. Amateurs, 24 blooms: 1, Mr. C. J. Perry; 2, Mr. Sladden; 3, Mr. Hobbs; 4, Mr. Hopkins; 5, Mr. Watt; 6, Mr. Pannett. 12 blooms: 1, Mr. Sladden; 2, Mr. Charlton; 3, Mr. Hopkins; 4, Mr. Hobbs; 5, Mr. Sladden; 6, Mr. Wakeman. Fancies, 12 blooms: 1, Mr. Keynes; 2, Mr. Turner; 3, Mr. Walker. Amateurs: 1 and 2, Mr. Sladden; 3, Mr. C. J. Perry.

Asters.—Exhibitions of these were numerous, and seemed to excite much interest. Both the French and German sorts were very much admired, and both were very handsome.

Awards.—German: 1, Mr. Sandford; 2, Mr. Bettridge; 3, Mr. Jennings. French sorts: 1, Mr. C. Sandford; 2, Mr. Ward; 3, Mr. W. Sandford. Extra: Mr. Wyatt.

Roses.—Several boxfuls were shown, all of them more or less indicating the ill effects of the dry hot weather which we have lately experienced. Among them there were, however, fair examples of most of the leading varieties, foremost among which stood Senateur Vaisse, Gloire de Santenay, M. Eugène Verdier, Gloire de Dijon, and Celine Forestier.

Awards.—36: 1, Mr. Turner; 2, Messrs. Paul & Son; 3, Mr. Keynes. 24; 1, Messrs. Paul & Son; 2, Mr. Turner; 3, Mr. Keynes. 18 (Amateurs): 1, Mr. Exell; 2, Mr. Wright; equal, 3, Mr. Plester and Dr. Cooper; 4, Mr. Marlow.

Hollyhocks.—Various stands of cut blooms were shown, in which were excellent examples from Mr. May, of Bedale, the Rev. E. Hawke, and Mr. Smail, of Norwood, of most of the best kinds, among which we noticed the Rev. J. Dix, Stanstead Rival, J. Ullett, Mrs. Cochrane, Purple Prince, Premier, Prince Charlie, Lord Loughborough, Queen Victoria, and J. Clarke. Messrs. Downie, Laird & Laing, showed handsome spikes of this favourite flower.

Awards.—24: 1, Mr. May; 2, Rev. E. Hawke; 3, Messrs. Minchin & Son. 12 (Amateurs): 1, Mr. Smail; 2, Rev. E. Hawke; 3, Mr. Pannett; extra, Mr. Porter and Mr. Plester.

Verbenas.—One or two good exhibitions of these were furnished by Mr. C. J. Perry, Mr. Turner, and Messrs. Minchin & Son.

Gladioli.—From Messrs. Kelway, Standish, and Paul & Son came collections in which the following were good and striking, viz.: Brenchleyensis, scarlet; Eleanor Norman, delicate pink and white; Clemence, pink striped with crimson; Comte de Morny, cerise with white throat; Egerie, rose striped salmon; Erato, bright rose; Isoline, delicate pink; John Bull, saffron veined white; Le Poussin, red with white throat; Linné, cerise blotched with yellowish white; Madame Binder, carmine striped white; Ophir, purple spotted yellow; Penelope, creamy white; Vesta, carmine spotted white; Imperatrice Eugénie, a charmingly marked kind; Scottish Chief, Reine Victoria, Madame Standish, Ensign, Rev. Joshua Dix, Basil, large and showy; Rosenberg, Edith Dombrain, and Miss Howell, the last a good pink. In one of the collections the spikes were backed up by the stiff deep-green leaves of Yucca gloriosa.

Seedlings.—These were chiefly confined to Dahlias, of which some promising sorts were exhibited. First-class Certificates were awarded to Leah (Turner), golden yellow, an effective looking flower; Princess Alexandra (Collier), small compact rich orange, striped with bright crimson; George Wheeler (Keynes), purple shaded lilac; and Spitfire (Rawlings), orange scarlet. Second-class Certificates were given to Brunette, flame colour with very heavy lacing of purple crimson, and Black Hero (Hopkins), a promising dark mulberry flower, and to E. Spary (Keynes), compact light maroon. Queen of Sports, Champion, and Queen of Primroses, were also exhibited, and much admired. To Seedling Verbenas, Charles Turner, large delicate pink with bold crimson eye, and Snowball, white, with a fine outline, First-class Certificates were awarded. These came from Mr. Perry.

Miscellaneous Plants.—Of these a collection came from Mr. James Veitch, in which were Lilium auratum, the singular Anthurium Scherzerianum, Dracænas, and other interesting plants; Messrs. Smith contributed Balsams; and from Mr. Linden came the pretty Rogiera gratissima, and one or two other plants, all of which were mentioned by us in a former report. From Messrs. Fraser came a strong-growing useful-looking Heliotrope, of continental origin; and from Mr. Wm. Paul examples of Beaton's Pelargoniums alluded to at p. 794.

Notices of Books.

Lessons in Elementary Botany, the part on Systematic Botany based upon material left in MS. by the late Professor Henslow; with numerous Illustrations. By Daniel Oliver, F.R.S., F.L.S., &c. London and Cambridge: McMillan & Co. 16mo, pp. 317.

It is not for want of Botanical Text-books of every conceivable size and character, that we are not a nation of botanists. They abound, from the thin 16mo to the bulky 8vo; but yet somehow or other one does not meet in society with many persons who have even a smattering of the science; while of those who necessarily become students of it, at least professedly, very few advance to a respectable knowledge of its secrets. A reviewer has lately attributed this want of result in great measure to the character of our instruction books and lectures, in which commonly, under the notion of beginning at the beginning, the reader or hearer is bewildered by long unintelligible discussions about cells and tissues and such abstruse matters, and thus loses heart at the very outset. There is probably much of truth in this view of the matter.

Such a charge at least does not rest against Professor Oliver, whose first chapter is devoted to an examination of the common Buttercup, and becomes a lesson in respect to the root, the stem, the leaves, the flowers, and the fruits of plants in general; and whose second and third chapters by means of the very same specimens illustrate the principal functions of plants; while a fourth and fifth are devoted to a comparison of the Buttercup with various other common familiar flowers, by which some notion of the differences of structure which occur amongst plants is plainly brought out. The sixth chapter explains the use of certain "flower schedules" largely employed in teaching by the late Professor Henslow—employed also by Professor Oliver, as he tells us, with much advantage in his own class, and strongly recommended by him both for private colleges and schools.

These schedules form a distinguishing feature of the book, their object being to compel attention to those points which are of the first importance in the structure of flowers. Here is one of the schedules, filled up for the Buttercup, by way of example:—

Organ.	*No.*	*Cohesion.*	*Adhesion.*
CALYX .. .. *sepals*	.. 5	Polysepalous. ..	Inferior. ..
COROLLA .. *petals*	.. 5	Polypetalous (regular).	Inferior. ..
STAMENS .. *filaments* .. *anthers*	∞	Polyandrous.	Hypogynous. .. ..
PISTIL .. .. *carpels* .. .. *ovary*	.. 8 ..	Apocarpous.	.. .. Superior.
PERIANTH † * .. *leaves*	.. ..	.. ..	.. ..

Class.	*Division.*	*Name.*
Dicotyledon.	Thalamifloræ.	Buttercup.

N.B. The sign ∞ denotes many. No entry is made opposite to perianth (†) because it is described as calyx and corolla in the case of the Buttercup.

The use of these schedules is explained thus:—The column headed "No." is to be filled with the real number of parts, whether free or coherent, in each of the four series of organs which compose the flower; a "0" opposite an organ necessarily indicating suppression. The column headed "Cohesion" is to be filled in with terms which express or involve cohesion of parts or the absence of cohesion; and the last column headed "Adhesion" is in like manner for terms which express or involve adhesion of parts or the absence of adhesion. The terms used are—Of the calyx (cohesion or it

absence), gamosepalous, polysepalous; (adhesion or its absence), inferior, superior. Of the corolla (cohesion or its absence), gamopetalous, polypetalous (regular, irregular). Of the stamens (cohesion or its absence), if cohering by their filaments, mon- di- or poly-adelphous; if by their anthers, syngenesious; if free, mon- di-, &c., up to 10, dec-androus; or if more than 10, poly-androus. Of the pistil (cohesion or its absence), syncarpous, apocarpous; (adhesion or its absence), inferior, superior. To denote the number of carpels constituting the pistil, whether they be free or coherent (if the latter, the number being inferred from the divisions of the style or stigma) the Greek numerals are prefixed to the termination -gynous, as mono- di- poly-gynous, &c. The advantage of encouraging close and correct observation of structure in this way is obvious; and the student is recommended to keep a supply of the schedules in blank, and always to make use of them after collecting a plant not previously analysed.

As an example of the easy style of the elementary portion of the book, we quote a passage which familiarly indicates the nature of transpiration and absorption:—"By this time the specimen of Buttercup has probably faded; the leaves now become soft and flaccid, are drooping, and the stem has lost much of its stiffness. How is this? If the specimen be not quite withered, plant it again in the soil, and cover it with a flower-pot, or better and more easily done, put the root in water, and place the whole in a cool, shaded place for a few hours. We shall anticipate matters, and suppose that this has been already done, and that you tried the experiment in this way upon three distinct specimens of Buttercup. No. 1 you left lying upon the table; No. 2 was placed with its root in water; No 3 was hung upside down, with a flower or leaf in water, the roots in the air. The general result of your experiment will be as follows:—After the lapse of, say 24 hours or so, No. 1 will be, as we have already found, faded; No. 2 will be nearly unaltered; No. 3. will be partially faded, the parts out of water especially. Hence we may gather, that water supplied to the specimens prevents them from fading, especially if it be supplied to the root. On the other hand, if water be withheld, they fade.

"If we take now the faded specimen first described, and put its root in water, and leave it for a few hours in a cool, shaded room, we shall probably find, unless it be irretrievably withered, that it freshens more or less, the leaves and stem becoming firmer and more nearly like their original state. This experiment shows us, further, that water supplied to a fading Buttercup enables it to recover. Reflecting upon these experiments we shall be led to the following conclusions:—

"i. That water evaporates from the exposed surface of plants.

"ii. That fresh supplies are taken into the plant by the root.

"iii. That the stem serves to convey this water-supply from the root to the leaves.

"We may now try another simple experiment, devised by Professor Henslow, which shows that exposure to direct sunlight, as well as dryness of the air, has to do with this evaporation of water from the leaves. Take six or eight of the largest, healthy, radical leaves of the Buttercup you can find; two tumblers filled to within an inch of the top with water, two empty dry tumblers, and two pieces of card, each large enough to cover the mouth of a tumbler. In the middle of each card bore three or four small holes, just wide enough to allow the petiole of a leaf to pass through. Let the petioles hang sufficiently deep to dip into the water when the cards are put upon the tumblers containing it. Having arranged matters thus, turn the empty tumblers upside down, one over each card, so as to cover the blades of the leaves. Place one pair of tumblers in the sunshine, the other pair in a shady place. In five or 10 minutes examine the inverted tumblers. That exposed to the sun you will find already lined with dew on its cool side, while that kept out of the sun is still nearly or quite clear. It is manifest, therefore, that evaporation from the leaves must be not only rapid, but considerable in amount when plants are exposed to the sun or a dry atmosphere. This exhalation of vapour from the surface of plants is termed *transpiration*. A correct understanding of the process explains how it is that plants growing in parlours are apt to become faded even when watered, because the taking up of water (termed *absorption*) by the roots, cannot always keep pace with the transpiration from the leaves, owing to the rapid evaporation excited by dryness of the air."

The seventh chapter describes in further detail the various organs and their modifications; and the eighth, closing the first part, explains the minute structure and vital processes of plants.

The second part of the book is devoted to the classification or systematic arrangement of plants, and in this portion much use is made of the schedules, one of them being devoted to a selected type of each natural order of our British flora. The learner is told not to be content with the examination of the plants used as types, but to try and refer every flowering plant which is met with to its type. If this is done, he is promised that in a short time the natural orders to which most British plants belong will be easily recognised. The various orders are treated upon the following plan:—

"46. *Natural Order*—Solanaceæ. The Solanum family.

"Herbs or shrubs. Stamens same number as corolla-lobes. Ovary 2-celled, ovules indefinite.

"Type—Bittersweet Solanum (Solanum Dulcamara).

"A straggling deciduous shrub, with alternate petiolate often auricled leaves, and loose extra-axillary cymes of purple flowers.

Organs.	*No.*	*Cohesion.*	*Adhesion.*
Calyx .. .. *sepals*	.. 5	Gamosepalous. ..	Inferior. ..
Corolla .. .. *petals*	.. 5	Gamopetalous. ..	Hypogynous. ..
Stamens ..	5	Pentandrous.	Epipetalous.
Pistil .. .. *carpels*	.. 2	Syncarpous. ..	Superior. ..
Seeds	Several, albuminous, in red berries.		

"Observe the frequently geminate leaves and extra-axillary inflorescence of the order: the persistent accrescent calyx of Winter Cherry (Physalis Alkekengi), grown in cottage gardens; the anthers of Solanum opening by pores at the apex; the albuminous seeds with, usually, a curved embryo; the fruit of Thorn Apple (Datura), four-celled, owing to the infolded dorsal sutures of the carpels, which reach and adhere to the placentas.

"Although some species under cultivation are amongst our most valuable food-producing plants, the order is dangerous, including the Deadly Nightshade (Atropa Belladonna), the berry of which, about the size and colour of a black Cherry, has often proved fatal to children; Henbane (Hyoscyamus niger), a viscid weed of waste places about villages, with dingy, purple-veined, yellow flowers; and Tobacco (Nicotiana), the oil distilled from which is a virulent poison. The narcotic principle of Tobacco is developed in the leaf by a fermentative process, after it has been collected. In 1862, upwards of 35 millions of lbs. of Tobacco were entered for home composition. It is extensively grown in hot countries, especially in the Southern States of America, Cuba, South America, and the East Indian Islands. The Potato-plant (Solanum tuberosum) is by far the most important member of the order, affording our most valuable esculent. It was originally introduced from the south-western coast of South America. Potatos are the tubers of swollen portions of underground branches, and not roots, as the 'eyes' (leaf-buds) of the tubers show. They contain about 15 per cent. of starch, which may be roughly separated from the tissue of the Potato by grating and washing. From this starch are prepared dextrine, used in calico printing, and British gum, used to attach postage labels. The Potato disease is caused by a minute fungus (Botrytis infestans), which usually attacks the leaf in the first place, rapidly descending to the tubers. The starch of diseased tubers, while it remains, is perfectly wholesome. Cayenne Pepper is the ground seeds of species of Capsicum. The fruits of the Aubergine (Solanum Melongena) and Tomato (Lycopersicum esculentum) are used in cookery. The berry of Winter Cherry may be safely eaten; it is cooked in Spain and Germany."

The little volume closes with instructions for drying plants, an appendix showing how to describe them, and a combined Index and Glossary. In laying it down we feel we may unhesitatingly congratulate Professor Oliver on having taken up an honourable place amongst the many authors of books of botanical instruction to which we alluded at the outset of this notice. The text is freely illustrated by good woodcuts, most of which, as we learn from the preface, were "drawn by Professor Henslow's daughter Mrs. Barnard, of Cheltenham, from the admirable sheet diagrams designed by Professor Henslow, and executed by Mr. Fitch for the Committee of Council on Education."

The Application of Cast and Wrought Iron to Building Purposes. By Wm. Fairbairn, C.E., F.R.S., F.G.S., &c. Third Edition. Pp. 303. Longman & Co. 1864.

This is a first-rate work, by a civil engineer in the foremost rank of his profession. Being written for the guidance of professional men, of course a great part of it can only be duly appreciated by those who are conversant with mathematical science. The use of iron for all purposes of construction is year by year becoming more general. We see not only cast-iron beams spanning our streets in all directions, and tubular bridges of gigantic proportions crossing rivers and arms of the sea, but there appears to be no limit to the applicability of this material to the building of all kinds of warehouses and mills, which will possess the important advantage of being fire-proof.

The first part of Mr. Fairbairn's work is on cast-iron beams for supporting the floors of buildings. Such beams appear to have been used by Smeaton so far back as a hundred years ago, when iron was of very inferior quality; and to have been first employed in the construction of a cotton-mill by Boulton and Watt in 1801. Mr. Hodgkinson, who is well known in the scientific world, and is "the very first authority" in such matters, has made a number of carefully conducted experiments on the strength of beams; some of these experiments seem to have been made on Mr. Fairbairn's premises, and are given at length; the results of others are tabulated, and a mass of information is stored up for the use of the practical man. It is a singular circumstance, that the combination of cast-iron beams with wrought-iron tension-rods or trusses, for the purpose of giving additional strength, is found to be a mistake, and in some cases absolutely injurious. The one metal possesses great powers of resisting compression, the other great powers of resisting extension; and the consequence of their combined use is that the extensile property of the wrought iron does not come into play till the cast iron beam is on the point of breaking, which is obviously too late.

The application of wrought iron beams for supporting the floors of buildings and fireproof warehouses is very interesting, but it involves a good deal of mathematical and technical knowledge. We must, therefore, pass on to the description of a palatial building, of which Mr. Fairbairn is justly proud. It was erected for Titus Salt, Esq., and is called "the Saltaire Mills," situated on the river Aire, near Bradford. The floor-area of this establishment covers about 12 acres. It is probably the most magnificent and the most complete building of the kind in the world.

The fourth part of Mr. Fairbairn's valuable work treats of "the adaptation of malleable iron beams or girders for the construction of bridges," ending with a description of the author's projected bridge over the Rhine at Cologne, a proposal which the Prussian Government, for reasons of their own, were unwilling to adopt.

CATALOGUES RECEIVED: *Sutton's Autumn Catalogue for* 1864; *James Carter & Co.'s Gardener's and Farmer's Vade-Mecum:* Part IV.; *Barr & Sugden's Illustrated Autumnal Floral Guide for* 1864. These all contain good lists of Bulbs, accompanied by cultural hints. Amongst them we are glad to see such things as Ixia and Sparaxis re-appearing.——*Robert Parker's Catalogue of Plants, &c., for* 1864-5, is a full list of Orchids, Stove and Greenhouse plants, Ferns, &c., with a bulb supplement.

Miscellaneous.

African Dyes.—Some of the products here enumerated are only known to be used amongst the natives, but their economic value is very apparent. They produce some of their brightest and best colours for dying their mats, &c., from woods, barks, seeds, roots, &c., and these colours are mostly fixed without the aid of mordants, the knowledge of the use of which is quite unknown to them. One of the best dye woods found on the Zambesi is a species of Cudrania, a plant closely allied to the Fustic of Commerce. This is a common climbing shrub. The colouring principle seems to be as fully developed as in the wood of Maclura. It is the heart wood from which the dye is obtained, though the bark is of a very bright yellow, and of a considerable thickness, running in deep ridges in a slightly spiral direction. The external covering is of a dusky brown colour, very thin, and, upon peeling off, exposes the very bright yellow bark, and this appears to be composed of thin layers of a papery nature similar to Birch bark. These are of the brightest yellow, but no colour can be extracted from them; that which is contained in the wood itself would seem to be in the form of a resinous secretion. By the use of alum as a mordant, a good durable colour can be obtained. What is a most singular fact is, that having this dyewood so easily accessible, they get the bulk of their yellow dye from other sources. The pretty baskets, mats, and ornamental articles, in the manufacture of which they are so clever, and which are plaited with the leaves of the native Date Palm (Phœnix spinosa), are always composed of three colours—black, red, and yellow—very harmoniously interwoven. These colours are extracted from the barks of three distinct trees, and are very apparent, even in the outer bark; indeed, the colours of the barks are almost as distinct as when extracted. The colours are obtained, probably in the most simple manner, that of boiling the bark. Specimens of these woods with the bark upon them, together with articles dyed with them, are in the valuable collection at Kew, and were brought home by Dr. Kirk, the indefatigable collector and medical officer to the Zambesi Expedition. It is to be regretted that he was unable to obtain specimens of the leaves and flowers of each, whereby to determine their scientific nomenclature, but the difficulties to be encountered in collecting in uncivilised Africa are not few. Many things obtainable through the instrumentality of the natives are extremely difficult to trace to their right source. In Soudan the roots of Cochlospermum Planchoni are much used as a dyeing agent, a good yellow colour being easily extracted from them. This is probably the source from whence is obtained the yellow colouring matter of the mats and baskets of the people of this coast. They employ the leaves of Phœnix spinosa in a similar manner to those of the East Coast. By the ingenuity of these people many other plants are made to yield dyes for their own domestic uses. A species of Sorghum (S. vulgare), which would appear common to both the East and West, gives a crimson colour, from the sheathing base of the leaves; and the mode of extracting it seems equally well-known to the natives of both sides of Africa. On the Niger it

is much used for dyeing mats, nets, cotton fabrics, &c. In Sierra Leone a yellow dye is obtained from the bark of a shrub Cœlocline polycarpa, and is called "yellow Gbéyido bark." All sorts of things are used as dyes in various parts of Africa, in fact, anything from which a colour can be extracted. The wood of a species of Afzelia is used on the Rovuma for dyeing black. Pods of species of Acacia are made in that part of Africa to give a brown colour to their black cloths. Orchella weed is one of the largest articles of commerce in dye-stuffs imported from Africa, and it would seem to grow almost universally in any favourable situation as far in the interior as has yet been explored. Barwood and camwood are also exported from the West Coast into Liverpool, and are used in this country for dyeing red. The bright red of the English bandana handkerchiefs is procured from the latter wood. Both woods are the produce of one tree, and the commercial difference would seem to be selected varieties according to the amount of colour contained in them; camwood fetching in the markets nearly four times the price of barwood. The wood is occasionally used for turning small articles, and also for the smaller kinds of furniture work. Turmeric is likewise used by the natives of South-Western Africa as a dye, while Henna, the powdered leaves of Lawsonia inermis, is known by them as well as by the natives of the more ancient and historical Egypt. *Jackson, in Technologist.*

The Summer of 1864.—Droughts in this climate have been of rather frequent occurrence. Within the last quarter of a century five years have been thus characterised—namely, 1840, 1844, 1852, 1863, and 1864. It is, however, in the spring when droughts have usually happened, and in that season of the year they prevailed in the first four of the above. We have not had so dry a summer as that just closed since 1800. Dry summers are therefore very rare. Our rainfall in the three driest summers of the present century is as follows:—

	June.	July.	August.	Total.
1800 ..	0.43 in. ..	0 22 in. ..	0 64 in. ..	1.29 in.
1826 ..	0.19 in. ..	1.67 in. ..	1 81 in. ..	3.67 in.
1864 ..	1.80 in. ..	0.70 in. ..	0.69 in. ..	3.19 in.

Our average for the three months is about eight inches, so that the deficiency this summer is nearly 5 inches. Last year closed with 4 inches deficiency of rain. February and March this year were in excess, and all the other six months were in deficit. It rarely happens that we get two very dry years in succession. The deficiency of rain from January 1, 1863, to the present time is almost 10 inches, or equal to four months of our average fall. The shade thermometer attained the highest point on the 20th of July—83°, and the lowest was touched on the morning of the 1st of June—31°, or 1° below freezing point, 4 feet above ground, and 23°, or 9° below freezing point, on Grass. This is, I believe, the lowest on record in this country for the month of June. The mean of June was 58°, or 1° in deficit; July, 61.5°, being 0.5° in excess; and August, 59°, which is about the average. The mean summer temperature was therefore below the average. We have not had a hot summer since 1859, when the shade thermometer exceeded 90° on several occasions. The means of June, July, and August, 1859, were 1°, 5°, and 3° above the average respectively. It is worthy of remark that the *maximum* of May this year—84°—was not reached during the three subsequent months. The barometrical ranges were less than in any previous summer of my observations, thus precisely corresponding with the dry character of the weather. The drought accounts for the comparatively low night temperature, the earth being too dry to retain the heat of the sun beyond a few hours in the daytime; hence radiation often brought down the temperature very low during night. To this also must be attributed the seldom occurrence of thunderstorms since May. So far, then, as Birmingham (about the centre of England) is concerned, the summer was the driest for 64 years. The total fall of rain in two months ending the 27th of August was under an inch. August was the driest ever known here up to the 28th. Only 0.21 in. of rain had fallen in the first 27 days. The severity of the frosts in June and August was extraordinary. On many mornings ice of considerable thickness was formed, which in the month of June was not on former record, and also very remarkable for August. Notwithstanding the many days of cloudless skies and brilliant sunshine, the greatest heat in any day did not come up to that of last spring. With this result, and the mean temperature of the three months ending August 31 being below the average, I come to the conclusion that the summer, though so dry and bright, was not a hot one. *T. L. Plant, in the Times.*

Calendar of Operations.

(For the ensuing week.)

THE late rains and comparatively cool weather have worked wonders in the appearance of ornamental grounds generally, and since their occurrence the culinary department in particular has become greatly improved. If frost therefore keeps off for some time, a troublesome season may yet furnish tolerably satisfactory results. Dahlia blooms, hitherto small in most places, are now increasing in size, and bedding plants on the whole are beginning to produce a fair amount of gaiety. Indeed, where proper attention has been bestowed, sub-tropical plants, like those now to be seen in Battersea Park, have been unusually fine, and have elicited universal admiration.

FLOWER GARDEN AND PLANT HOUSES.

Keep Begonias for winter display thin, that their foliage may be as much as possible uninjured. Plumbago capensis being almost indispensable for supplying cut flowers for autumn use, must not be overlooked. Attend also to Chrysanthemums; water them freely with liquid manure. The earliest winter-flowering Heaths and Epacrises should now or soon be placed under cover, as it will forward their blooming; give air, however, freely.

AURICULAS.—Finish repotting and keep the plants dry. Do not remove decaying leaves until they are quite dead. Keep the plants free from green-fly.

BEDDING PLANTS.—Propagation of all the more important bedding-out plants must now be finished as quickly as possible; late struck cuttings, as we have often remarked, are bad to keep through the winter through having an insufficient amount of roots and ill-matured wood. Let Scarlet and other Pelargoniums struck in the open ground be taken up and potted immediately they have made roots; they will require a close frame for a week or two, when they should be placed on a dry bottom in a southern exposure to harden them for the winter. For the same purpose Verbenas, Petunias, &c., struck in pans and intended to be kept in them through the winter, should be placed in a similar situation, at the same time stopping the points of the shoots. It should in fact be a point to keep them as hardy as possible by fully exposing them, until they are placed in their winter quarters.

CARNATIONS AND PICOTEES.—If not already done, get soil ready for potting off. Shelter the plants from heavy rains, should they occur.

CINERARIAS.—If sufficient stock is not yet secured, propagate young plants from suckers, and keep them in a close shady frame until they have became established.

HOLLYHOCKS.—Propagate these from eyes, and cuttings placed on gentle bottom heat.

HYACINTHS.—The potting of these for forcing must soon occupy attention; in doing this do not forget to put in a few miniature ones, which are stated to bloom beautifully in proportion to their size; they form good outside rows to vasefuls of large-flowered varieties, which should, of course, occupy the centre. About equal portions of good fibrous loam and decayed leaf-mould with silver sand will be the best soil for them if for forcing, but well-decomposed cow-dung must be substituted for the leaf-mould when the bulbs are intended for late flowering. After potting place them on a dry bottom and cover the pots 2 to 3 inches deep with old tan, ashes, or better than either, Cocoa-nut refuse, preserving them at the same time as much as possible from heavy rains; under this treatment they will fill their pots with roots, and will be in readiness when wanted.

IXORAS.—Plants which have bloomed, and which it may be desirable to increase in size as fast as possible, should be cut back, repotted if necessary, thoroughly cleaned, tied out, and placed in the warmest end of the house. These, if properly attended to, will make a fine growth before winter.

PANSIES.—Keep plants of the finer kinds supplied with good soil, in order that young shoots may strike root freely in it. They may also be propagated by means of cuttings.

PELARGONIUMS.—Re-pot plants that are sufficiently advanced after having been cut back, keeping them rather close and moist until they strike into the new soil. Plants, however, that are fairly established after re-potting can hardly be too freely exposed to air or kept too cool.

FORCING DEPARTMENT.

CUCUMBERS.—As we stated last week, where a supply is required during winter, see that vigorous young plants are secured at once, either from seed or cuttings. The last usually make the most fruitful plants.

MELONS.—Where fruit is ripening give air freely. If late plants are infested with spider, syringe morning and afternoon as freely as can be done without injuring the leaves; in short, use every means to get the plants perfectly clean.

PINES.—Endeavour to afford growing stock a steady bottom-heat of about 70°, and keep it well supplied with manure-water at the root, but avoid getting the soil too wet. As fire-heat will soon be necessary to a considerably larger extent than has been the case during summer, care must be exercised to secure a properly moist state of the atmosphere. Be as sparing of artificial heat, however, as circumstances will permit, and shut up early on the afternoons of bright days. Where young stock is grown in dung pits care must be exercised after this season not to get the plants weakly through keeping them too close and warm.

VINES.—Continue to remove all decayed or unhealthy berries from ripe Grapes, and to keep the house well aired and free from moisture.

HARDY FRUIT AND KITCHEN GARDEN.

Upon a careful attention to the growing crops this month the abundance or scarcity of the winter supply will very much depend; everything must be done to keep them in a growing state, and if the weather should continue dry, many crops in light land will require a good supply of water, but such as are in heavy land, and deeply trenched, will be better without it; in every case, however, the operation of surface stirring must be constantly attended to, it opens the ground to atmospherical influences, and does much good. The main crop of Onions should now be in a fit state for harvesting, and storing away when in a thoroughly dry state; when the beds are cleared they should be well manured, trenched up, and otherwise prepared for planting with Cabbages to stand through the winter. Draw the largest of the Cauliflowers from the beds sown last month, and prick them out in nursery beds under glass, to prepare them for planting under handlights. Celery will now require constant attention to earthing up, and be sure to see that the plants are thoroughly well watered a day previous to the operation of earthing, which must always be done in dry weather. The earliest Endive should be tied for blanching when quite dry, also Lettuces; and new plantations of both Lettuces and Endive may be made twice this month; see that the Lettuces intended to be transplanted into frames for the winter supply are properly attended to by surface stirring and watering. Thin out Prickly Spinach sown last month to 6 or 8 inches apart, and hoe the surface over to keep down weeds. Sow a good breadth of Turnip Radishes for autumn use, also small salad under handlights. Let young plantations of Strawberries be well attended to by stirring the soil between the plants, and supplying them with plenty of liquid manure, that they may continue to progress at the root, and fully employ their leaves in the elaboration of sap. Promote by every means vigorous growth now, and fine fruit next year will be the reward. Alpine Strawberries should be looked to, to see that they are sufficiently moist, as they will soon be found useful in supplying a desirable addition to the dessert. If they are in a state to receive water, supply it in the shape of liquid manure.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Sept. 7, 1864, as observed at the Horticultural Gardens

Sept.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs. 1	●	30.043	29.955	70	49	59.5	62	60½		
Friday 2	1	29.856	29.763	72	45	58.5	62	51		
Satur 3	2	29.683	29.652	73	49	61.0	61	61		
Sunday 4	3	29.881	29.784	73	51	62.0	61	61		
Mon. 5	4	30.032	29.916	68	42	55.0	62	61		
Tues. 6	5	30.038	29.918	72	60	66.0	60½	61		
Wed. 7	6	29.957	29.927	75	61	68.0	62	61		
Average.		29.927	29.844	71.8	51.0	61.4	61.5	60.9		

Sept. 1—Very fine throughout; dry air.
— 2—Cloudy; fine, rather windy, cloudy; mild at night, rain.
— 3—Very fine, hot; rain at night.
— 4—Very fine; overcast; rain.
— 5—Fine, with clouds; very fine throughout.
— 6—Very fine; overcast, heavy rain; cloudy; warm at night.
— 7—Overcast; densely clouded and mild; windy with warm rain.
Mean temperature of the week 2 4-5ths deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Sept. 17, 1864.

September.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 11 .	68.4	46.8	57.6	10	0.68 in.	2	8	1	2	5	6	10	4
Mon. 12..	68.8	44.8	56.8	15	0 49	4	6	1	4	2	8	12	1
Tues. 13..	67.8	45.6	56 7	17	0.42	2	3	6	2	4	7	9	5
Wed. 14..	66.7	46 3	56.5	19	0.84	1	4	7	4	3	9	7	3
Thurs. 15..	67.1	46.2	56.8	19	0.63	1	3	6	2	7	5	6	5
Friday 16..	68.3	47.5	57.9	15	0.50	3	7	3	1	9	4	7	2
Satur. 17..	69.1	45.7	57.4	14	0.90	1	6	6	2	2	13	4	4

The highest temperature during the above period occurred on the 12th, 1808—therm. 86 deg.; and the lowest on the 17th. 1840—therm. 29 deg.

Notices to Correspondents.

BORAGE: *A Y.* This is good for bees, and is one of the ingredients of the old fashioned cool tankard. We are not aware that it is grown for cattle or horses, but an allied plant, the Comfrey, sometimes is. There is at least no harm in it.

COMPOST FOR VINE BORDERS: *Old Sub.* You had better try a young growing and useless Vine in a pot in the heavily salted compost, before making up your border of it; if the plant carries healthy foliage you will be safe, but we confess we should hesitate to make a border with such materials before it had been several times turned over, and exposed for at least a whole season. Lime, either fresh or old, would probably have been a preferable addition; and as to using salt thus freely for killing weeds, they would no doubt have perished had the material been simply thrown up in a heap, and once or twice turned, picking out any perennial roots that might threaten to become troublesome. Has any of our correspondents had experience with salted Vine borders?

NAMES OF FRUITS: *J Black.* 1, Easter Pippin; 2, Hughes's Golden Pippin; 4, London Pippin; 5, Herefordshire Pearmain; 6, Hawthornden.—*M J C.* 1, Red Quarrenden; 2, Old Golden Pippin.—*W B C.* Red Astrachan.—*W Taylor.* Your Seedling Apple is very handsome, regularly formed, oblate, glossy, uniform bright red next the sun, pale green where shaded; flesh soft and tender, with a pleasant sub acid but not rich flavour. It is exceedingly beautiful.

NAMES OF PLANTS: *A Y.* The Conifer appears to be Cupressus torulosa, a plant which is more or less tender in England, so that its success would depend very much upon position and local circumstances.—*E T.* We are making inquiries about the Oak specimen.—*J S.* 1, Polystichum angulare proliferum; 2, P. aculeatum lobatum; 3, Polypodium vulgare.—*G, Bath.* Origanum Dictamnus, one of the plants grown in cottage windows as the Hop plant.—*M J C.* 1, Polystichum aculeatum; 2, Lastrea Filix-mas; 3, Polystichum angulare; 4, Lastrea dilatata.

ROYAL HORTICULTURAL SOCIETY OF DUBLIN. The recent show held on September 1st, was, we are happy to state, a very successful one. We have not room for the report this week, but it will appear in our next number.

SCARLET RUNNERS: *J C J.* It is quite possible yours do not bear in consequence of getting dry at the root in so hot a position as they must be in under a south wall. Have they been well watered in dry weather? The failure of a crop, as some of our correspondents have recently shown, may, however, arise from injury to the flowers caused by humble bees. You had better advise with some neighbouring gardener, who may be able to see what is the nature and condition of your soil. The Peas under a north wall would not be favourably placed. Probably both want a better circulation of air about them.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.
Address, 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c.

They also continue to supply GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

LAWES'S MANURES.
The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
American and other Cakes at Market prices.
Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22 Eden Quay, Dublin.

Autumn Wheat Sowing.

PHOSPHO-GUANO, Carriage Free at any Railway Station or Shipping Port in the Kingdom, 11*l.* 10*s.* per ton, net cash, for 10 tons and upwards. Smaller quantities, 11*l.* 15*s.* per ton.
*** This Guano is admitted to be the best manure for Wheat, containing, as it does, 35 to 40 per cent. of Soluble Guano Phosphates, and 3½ per cent. of actual Ammonia, in addition to Potash. The advantage of applying it in autumn is, that the farmer is enabled to harrow the Guano well into the soil before sowing, which produces a better result than top-dressing in the Spring. The Phospho-Guano promotes a strong braird, vigorous growth, and a full and plump grain. Apply at the rate of 2 to 2½ cwt. per acre.
PETER LAWSON & SON, Contractors, Edinburgh; and 28, King Street, Cheapside, London, E.C.

DIXON AND CARDUS'S LINSEED CAKE,
Analysed and Reported upon by Dr. VOELCKER.
As considerable mortality amongst the Lambs has occurred in two or three districts in Hampshire, and in some cases our Linseed Cake, on which they were feeding, has been blamed as the cause of it, we requested Dr. Voelcker to investigate the subject and report upon it; which report we subjoin.
It will be seen that the Cake was of excellent quality, and free from any matter that could be injurious to the health of animals feeding upon it.
Diseases in Lambs in isolated districts are by no means uncommon; and no doubt excellent Cake is often branded as the cause of sudden outbreaks of disorders in Lambs, whereas these disorders are enveloped in such mystery that the best Veterinary Surgeons and the most experienced Flock-masters are at a loss to advance a rational theory in accounting for the sudden death which often affects the flocks in one district and not in another.
The four Samples of Cake sent for Analysis were marked:—
J. W. No. 1 and No. 2, from Mr. John Wallace, Houghton.
T. E. From Mr. Thomas Edwards, of Compton House, Stockbridge.
S. A. From Mr. Stephen Ayles, of Braishfield, Romsey.
DIXON & CARDUS.

Report of Dr. VOELCKER.
101, Leadenhall Street, London, July 8, 1864.
To Messrs. DIXON & CARDUS, Southampton.
DEAR SIRS,—I have now the pleasure of handing you the results of careful Analyses of four samples of your Cake. You will observe at once that these four samples show a close agreement in composition, which distinctly proves that the manufacture of your Cake is carried on uniformly in your mill.
The per centage of Oil (the most valuable constituent of Oil-cake) in all four samples is quite as high as in the best kinds of Linseed Cake; and that of flesh-forming matters a fair average proportion.
The small amount of sand, and the absence of obnoxious weed seeds, shows that Clean Linseed is used in the preparation of these four samples of Cake.
I have carefully examined your Cake for injurious foreign matters, and am decidedly of opinion that it contains nothing that can be regarded as at all likely to be injurious to the health of animals fed upon it. Its condition is fresh, it is free from mould, and is palatable; and in my opinion is a wholesome and nutritious Cake of good average quality.—Yours truly, AUGUSTUS VOELCKER.

COMPOSITION OF FOUR SAMPLES OF LINSEED CAKE, MANUFACTURED BY DIXON & CARDUS, NORTHAM, SOUTHAMPTON.

	Samples Marked.				
	J.W. No. 1.	J.W. No. 2.	T.E.	S.A.	Barrel American
Moisture	10.91	11.39	10.58	10.48	11.64
Oil	11.55	11.26	10.92	10.94	10.43
*Albuminous compounds (flesh forming matters)	25.62	25.25	27.43	26.43	24.01
Mucilage, Starch, Sugar, and digestible fibre	31.09	31.28	30.34	30.96	34.44
Woody Fibre (Cellulose) ..	14.04	13.46	14.46	15.09	14.26
**Mineral Matters (Ash) ..	6.79	7.36	6.27	6.10	5.22
	100.00	100.00	100.00	100.00	100.00
*Containing Nitrogen	4.10	4.04	4.39	4.23	3.84
**Containing Sand	2.12	2.34	1.64	1.13	1.42

AUGUSTUS VOELCKER.
London, 101, Leadenhall Street.—July 8, 1864.
N.B. We have in the above Table added an analysis of Barrel American Cake, made by Dr. Voelcker some time ago for us, which shows our cake to be even superior to Barrel American, which is considered by many as the standard of first-rate quality. D. & C.

BARROWS AND CARMICHAEL, Banbury, Manufacture STEAM CULTIVATING APPARATUS, the cheapest, most simple, and successful Tackle out.
PORTABLE STEAM ENGINES, more simple in construction, efficient at work, and consuming less coal than the old-fashioned Engines usually made.
THRESHING MACHINES, which will astonish those who work the ponderous and complicated Machines now so generally used.

HIGHLAND and AGRICULTURAL SOCIETY.
EDINBURGH VETERINARY COLLEGE.
The COMMITTEE of the Highland and Agricultural Society of Scotland, appointed to Superintend the Veterinary College, hereby intimate that SESSION 1864-65 will COMMENCE on WEDNESDAY, November 2, at 1 P.M.

The COURSE of STUDY embraces the following CLASSES:—

1. Zoiatrics, Veterinary Medicine, and Surgery	Professor DICK.
2. Zootomy—comprising Veterinary Descriptive Anatomy and Physiology	Mr. STRANGEWAYS, V.S.
3. Practical Anatomy, and Anatomical Demonstrations	Mr. STRANGEWAYS, V.S.
4. Chemistry, Theoretical and Descriptive, from commencement of Session till end of January	Dr. A. DALZELL.
5. Veterinary Materia Medica and Pharmacy, from beginning of February till end of Session	Dr. A. DALZELL.
6. Physiology and Histology, Physiological and Pathological	Dr. P. YOUNG.
7. Practical Pharmacy and Clinical Instruction	Prof. DICK, assisted by Mr. WORTHINGTON, V.S.

Perpetual Fee for attendance on all the Classes, £16 16*s.*
JN. HALL MAXWELL, Secretary.

HIGHLAND and AGRICULTURAL SOCIETY.
AGRICULTURAL EDUCATION.
The SOCIETY'S AGRICULTURAL DIPLOMA will be conferred on Candidates who shall have passed the Examination, and fulfilled the other conditions required by the Royal Charter and relative Bye-Laws.
Examinations are held annually towards the close of the Winter Session of the Edinburgh University. Detailed information may be had by applying to Mr. HALL MAXWELL, 6, Albyn Place, Edinburgh.

THE NATIONAL EXHIBITION of SPORTING and OTHER DOGS.
President—His Grace The DUKE of BEAUFORT.
Vice-President—The MAYOR of BIRMINGHAM.
The FIFTH GREAT ANNUAL EXHIBITION of SPORTING and other DOGS will be held at BIRMINGHAM, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, and 30, and December 1.
Copies of the Prize Lists and Regulations, with the statement of Receipts and Expenditure for 1863, may be obtained from the Secretary. The ENTRIES CLOSE on NOVEMBER 1.
GEORGE BEECH, Secretary.
Offices: Rectory Chambers, Temple Row, Birmingham.

THE BIRMINGHAM CATTLE and POULTRY SHOW, 1864.
The SIXTEENTH GREAT ANNUAL EXHIBITION of FAT CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, CORN, ROOTS, and IMPLEMENTS, will be held in BINGLEY HALL, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, 30, and December 1, when Prizes to the amount of £1995 will be awarded in the following Divisions, viz.:—

FAT CATTLE ..	£794 10	BREEDING PIGS ..	£78 10
FAT SHEEP.. ..	299 5	CORN and ROOTS ..	71 5
FAT PIGS	60 5	POULTRY and PIGEONS	693 0

Prize Lists, Certificates of Entry, and every information may be obtained from the Secretary.
The ENTRIES CLOSE on TUESDAY, November 1.
JOHN B. LYTHALL, Secretary.
Offices: 13, Temple Street, Birmingham.

SMITHFIELD CLUB FAT CATTLE SHOW, 1864.—The ANNUAL SHOW of FAT CATTLE, SHEEP, and PIGS, will be held at the AGRICULTURAL HALL, ISLINGTON, on MONDAY afternoon, December 5, and four following days.
The Prizes now offered consist of 1955*l.* in money, two Silver Cups for Cattle value 40*l.* each, three Silver Cups for Sheep value 20*l.* each, and a Gold Medal for Pigs, also 60 Silver Medals to the Breeders, and a Butcher's Silver Cup, value 10*l.*
There are now Eleven Divisions for different breeds of Cattle, Eleven Divisions for Sheep, and Four Classes for Pigs of different ages.
The Entries for LIVE STOCK CLOSE NOVEMBER 1.
Prize Lists and printed Forms of Certificates with full particulars can be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, Corner of Half-Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words "Smithfield Club."

SMITHFIELD CLUB SHOW, 1864.
IMPLEMENT DEPARTMENT.
The LAST DAY for receiving ENTRIES for IMPLEMENTS and MACHINERY is SATURDAY, October 1.
Printed forms of Certificates and all necessary information can be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, corner of Half Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words—"Smithfield Club."

The Agricultural Gazette.

SATURDAY, SEPTEMBER 10, 1864.

ALTHOUGH showers have fallen of late over most of the southern and midland English counties, yet the soil has nowhere yet been soaked. The rain has generally been licked up again by the dry air and sun almost immediately, and excepting where the land had been deeply tilled and loosened so as to permit the water to sink some depth at once, it has hardly benefited. It is, indeed, a wonder to any one at all observant, how in the midst of such unusual drought, the Grass plant has continually been fed. No doubt its growth has been greatly checked and hindered; but on a dairy farm we know, where 90 cows are milked, they have been making as many as nine cheeses all through the summer, where they used to make 12. The cattle turned out on the close cropped ground yet manage daily to satisfy their hunger, and of course this is by the continual growth of their provender, which is sufficient for its purpose, though one sees little else but a half withered stubble on the surface. There is, however, some verdure to be seen almost everywhere—the Elm trees in the hedge rows show as dark a green and luxuriant a growth as ever—the deep rooted Clover is green, while the Grass around them is burned up—and the Thistle stands up as strong and green as ever, drawing its nourishment from a deeper layer still. In their ability to withstand the drought we have a good practical lesson for the farmer. He may depend upon it that deep tillage has a double power of vegetable sustenance among its advantages. It facilitates the deeper rooting of our plants, and by its multiplication of that inner superficies of the soil and subsoil on which their capacity as a warehouse of food for plants depends, it doubles and quadruples their ability to store up and retain the moisture which will penetrate them against the time when it will be wanted.

And this is now no mere theory. Thanks to Professor CHURCH, of the Royal Agricultural College, we are able in a particular example to state accurately the quantity of moisture existing in the subsoil after a summer's drought under differing treatment and different conditions of the soil above it.

The layer examined was the 13th of an inch in thickness, downwards from the surface of the ground. One foot of soil was removed, and the next inch taken for examination, and the quantity of water which that inch of soil contained was ascertained in the usual way. It will be seen from Professor CHURCH's account that nearly 29 per cent. in weight of the layer in question was water where the soil had been deeply cultivated; while a similar layer taken in another case on lower ground from beneath 12 inches of soil which had not been moved at all, contained only 19 per cent. of water. Even this seems a very large quantity, but it must be remembered that the last portions of mechanically combined water are given off with extreme reluctance, and that the difference between 28.8 and 19.2 per cent., less than 10 per cent. as stated in figures, may be all the difference between a very difficult and scanty provision, and practically none at all for the growing plant. These experiments of Professor CHURCH, which furnish an instructive lesson on the value of tillage operations at any time, appear to us especially interesting at the present, when we are suffering from a summer's drought so unusual. The following is the report of them with which we have been favoured:—

"The following experiments were made in order to determine the comparative amount of mechanically combined water in uncultivated and cultivated soils, after the long-continued and severe drought of this summer.

"The samples were taken August 20th. In each case a foot in depth of soil was removed, and the next inch taken as a sample for experiment. The foot was measured from the level of the neighbouring turf.

"No. 1. A bed in the Botanic Garden. It had been deeply cultivated (16 inches) in autumn. At the time of taking the sample nothing was on the ground. Per-centage of moisture = 28.6.

"No. 2. Uncultivated ground in the Botanic Garden. It has never been disturbed within memory; it was covered with rough turf, but the sample was taken from a spot nearly bare, the turf having shortly before been removed to the depth of an inch or two. This ground was about 1 foot lower in level than that from which No. 1 was taken. Per-centage of moisture = 19.2.

"No. 3. Ground in kitchen garden, trenched in autumn (16 inches): Carrots had been grown on part, not on the portion from which the sample was taken. Per-centage of moisture = 26.2.

"No. 4. Ground in kitchen garden. It had been dug once in autumn (8 inches) to about half the depth of No. 3; a crop of Chalots since; at time of taking sample nothing on the ground. Per-centage of moisture=20.5.

"I should add, that with the exception of a heavy shower of rain in the middle of July, we have had scarcely any wet since the spring; it will be seen that the samples were taken before the commencement of the late rains. The soil experimented on is a light calcareous clay loam, resting on the forest marble. *A. H. Church, R. A. College, Cirencester, Aug.* 30."

MR. SANDERSON, of Manchester Buildings, Westminster, reports to the *Times* the impressions regarding the current harvest, which four weeks of travel in various parts of the country have left upon him.

"Crops have all cut up better than farmers anticipated, and as the various harvest operations advanced the brighter became the farmers' prospects. Corn in stock gave higher promise than corn growing; the yield on the barn floor exceeded that which the stock led farmers to expect, while the returns—especially of Wheat—to the miller are equal to those of last year."

The earlier sown of the spring crops are generally better than the later. Plants which have fully developed their feeding apparatus in the soil before the drought comes on them are the better able to withstand it. The following illustration of this is given by Mr. SANDERSON:—

"One half of a field containing 18 acres, which forms part of a highly cultivated farm in West Kent, was seeded with Black Tartarian Oats in the third week of March; the other half of the field, which consisted of similar soil, was treated in every manner alike, excepting that it was seeded on the 20th of April. The result is that the yield of the former will exceed 80 bushels per acre, while that of the latter will not reach 34 bushels. Many similar cases have come under my observation, and, as a rule, an improved system of farming from drainage, deep cultivation, and liberal manuring justifies early seeding."

The following, somewhat abridged, is the general report given of the harvest:—

"On all soils adapted to its growth, Wheat is a full

verage crop, and the quality and condition are very uperior. Bright coloured straw, ears sound and fully developed, and grain plump and clear, characterise the larger area under Wheat. On undrained clays and imperfectly pulverised soils, the effects of the drought, by creating deep fissures in the land and thereby forming the surface soil into large masses as hard as indurated cement, have been most severe; consequently on such soils the Wheat has been thin in the ground and short in both straw and yield.

"The Barley crop, especially in the south, is unequal. In the Barley counties of Norfolk, Berkshire, Bedfordshire, Suffolk—barring the sandy soils of the latter, and in all the Barley districts of Scotland, this cereal is unquestionably above average. The samples brought to market in Northumberland and the Lothians run from 56 lb. to 58lb. per bushel. On light, shallow soils Barley is deficient in bulk and yield, and the grain small and steely.

"With the exception of the Lincoln, Cambridge and York fens, which have produced bulky crops, the Oat crop in England is sadly deficient. In Scotland, too, the Oat crop is thin in the ground, short in straw, and altogether deficient.

"The Bean crop is very irregular; on deep loams it is an average, but on the whole this crop is deficient.

"Potatos generally are of fine quality; tubers small, but plentiful, and the produce light.

"The Turnip crop in the southern, eastern, and in most of the midland counties of England is a failure. In the fine root-producing counties of Norfolk, Hants, and Berkshire a few fields of average quality may be witnessed, but these are exceptional, and the greater portion of the area allotted to Turnips and Mangold is a blank. Fortunately, in the north the root crops are more promising. In the north parts of Staffordshire and Shropshire, and part of Yorkshire, the Turnip crop, though inferior, will afford a considerable amount of 'feed.' In the west part of Cheshire, and in all Westmoreland and Cumberland, Turnips were never more promising, while in Scotland generally they are a full average crop. All the counties south of the Forth and Clyde, and in the north Aberdeen—whose roots constitute the chief food of the Smithfield favourites—may be specially named as promising a large weight of Turnips.

"Pastures in the south have suffered severely from the drought, and up to the middle of August presented the most arid appearance. Stock not supported with extraneous food subsisted chiefly on hedgerow leaves and the branches of trees, and it is surprising how they maintained their condition. In the north-western counties of England, and in the border and western counties of Scotland, pastures, though not equal to the average of years, have nevertheless been unusually green and fresh, and have afforded good keep for stock.

"Taking the crops as a whole, Wheat is average, Barley fully average, Oats one-third deficient, Beans under average, Potatos short, roots in the south not one fourth of a crop, in the north a full average.

"In the absence of statistics the exact relative acreage under cereals in 1863 and 1864 cannot be ascertained. There is no doubt, however, that the area under cereals, especially Oats, this year is far short of that of last year.

"With a light crop of hay, roots a failure, a short yield of straw, and barren pastures, it is a matter for serious apprehension on the part of farmers in the south respecting their short supply of food for a full supply of store and fattening stock. Doubtless the major part of the Oat crop will be consumed for that purpose, and cakes of every description will be largely used, but these can only be profitably used as auxiliaries, not as substitutes for natural food. It is essential for every farmer strictly to economise his food resources, and chop up all hay and straw for cattle food, too frequently only wasted as cattle litter. For the latter purpose sand, burnt clay, spent bark, and indeed every available appliance must be resorted to."

THE second Committee of the House of Commons which has of late inquired into the utilization of town-sewage, has just made its report. It has come to the conclusion that it is not only possible to utilise the sewage of towns, by conveying it in a liquid state through mains and pipes to the country, but that such an undertaking may be made to result in pecuniary benefit to the ratepayers of the towns whose sewage is thus utilised.

This is one conclusion of great importance to which its inquiries have directed it. Let us hope, however, that an authoritative dictum of this kind may not indefinitely postpone its own realisation. Nothing seems plainer than that the first attempt to realise the agricultural value of town sewage must be without any burden on the speculation of the kind thus suggested. The ratepayers may come in fairly enough for a share in the ultimate profits, if any, of the undertaking; but those who risk their funds in it should receive all the proceeds until a dividend of at least 10 per cent. upon the outlay has been declared. Indeed, it is not likely that funds will be forthcoming for the purpose on any other terms; for it is no ordinary risk, which the first speculators incur.

Another important conclusion to which the Committee has arrived, is that whereas no efficient artificial method has been discovered to purify, for drinking and culinary purposes, water which has been once infected by town sewage, yet soils and the roots of growing plants have a great and rapid power of abstracting impurities from sewage water, and rendering it again innocuous and free from contamination. Here then is the obvious remedy against both waste and injury. That which at present is a nuisance can on the agricultural plan, and on no other known to art or science, be deprived of its injuriousness, and at the same time be turned to account by conversion into wholesome food.

THE committee of the United East Lothian Agricultural Society has, as we anticipated, lost no time in replying to Mr. SAMUELSON'S allegations of unfairness at the late reaping machine competition. And their Secretary, Mr. RICHARDSON, has been directed to request a publication in the *Times* of the following extract from their minutes, in answer to Mr. SAMUELSON'S letter:—

EXTRACT FROM MINUTES OF THE COMMITTEE OF DIRECTORS OF THE UNITED EAST LOTHIAN AGRICULTURAL SOCIETY, HELD ON THE 2D OF SEPTEMBER, 1864.

"The attention of the committee was called to, and they took into consideration a letter from Mr. Samuelson, Banbury, to *The Times* newspaper, dated August 27, as to competitions of reapers at local shows, from which the following is a quotation:—'Last week the East Lothian Society had a competition of reaping machines. My firm took the first prize for a self-acting or sheafing reaper, but the prize for 'the best reaper in the field' was given to a manual delivery reaper made on the spot, which also stood first on the last similar occasion in 1861, but had not become famous out of East Lothian during the interval. All the most celebrated Scotch makers competed in both years, but the East Lothian implement was owned on each occasion by the same East Lothian nobleman, who was also one of the judges, all the other judges being East Lothian men like himself.'

"The committee considered it necessary to contradict that statement, as they know that neither at this nor the previous competition did Mr. HALLIDAY'S machine, which stood first at both competitions, belong to the nobleman alluded to. The machine at the late competition was engaged to be delivered to Mr. HARVEY, Whittingham Mains, on the afternoon of the trial, and he in consequence refused to act as a judge, in case any partiality might be alleged.

'How such a statement should have been furnished to Mr. SAMUELSON, who was not present, the committee are at a loss to conjecture.

"As to the complaint of partiality on the part of the judges, the committee have reason to know that their awards gave almost universal satisfaction to the large assemblage of agriculturists on the ground, and the committee are of opinion that Mr. SAMUELSON has unfairly reflected upon the decision of the judges.

"Extracted from the minutes by

"ROBERT RICHARDSON, Secretary."

THE BERKSHIRE DEW PONDS.

SOME weeks since an article appeared in this Journal drawing attention to the ponds on the Berkshire Downs which in that county go by the name of dew ponds. The description there given (p. 729) leaves nothing to be said, and the cause attributed by the shepherd to the failure of the Moulsford Pond is in accordance with the general belief of all who live in the vicinity of such ponds—not merely ignorant rustics—but men of some education and considerable powers of observation.

Such a mass of concurrent testimony, based though it may be in error, ought not to be set aside lightly without investigation or proof of its erroneousness, if so it be. The interest created by the present lengthened season of drought led me to make some observations and calculations respecting the supply of water in one of these ponds—at Westridge in this parish. The observations unfortunately were made on a night unfavourable to the formation of dew, but the calculations countenance the popular notion. Nevertheless, as they are affected with uncertainty in the determination of the height of the water at the commencement of the drought, I refrain from stating them at present, hoping at some future opportunity to set before your readers the result of an exact and lengthened examination.

Before dismissing the subject for the present, let me briefly point out the condition which governs the whole question. The formation of dew no doubt is mysterious to the uninitiated; but it is well known to science that it is produced whenever substances are presented to the air so cold that they condense a portion of the invisible aqueous vapour which is always suspended in it.

Under a clear sky, when the heat of the sun is withdrawn, vegetation parts with its heat so quickly as soon to be so much colder than the surrounding air that the air in contact with it yields up a portion of its vapour, which is condensed into water, and so it continues to act, gradually accumulating moisture on the surface of the leaves until the return of the sun, or it may be a warm dry wind, raises the temperature, and makes a further deposition impossible. The same thing occurs for the same reason when on a hot summer day a glass vessel of cold spring water is brought into a warm room—its sides continue to stream with moisture until the body of water in the vessel is raised in temperature so as no longer to compel the air to part with its vapour. Now apply this reasoning to the case of our ponds. Different substances have, as we know, very different qualities in causing the formation of dew on their surfaces, simply because they part with their heat at very different rates. Now, water is much more tenacious of its heat than many solid substances; and I have satisfied myself by experiments with an exquisitely sensitive thermometer, that there is no cold film formed on its surface by radiation, as suggested in the article in this Journal referred to above; nor is it absolutely certain that evaporation is ever suspended even when that portion of the atmosphere which is in contact with the water is saturated with moisture; but, however that may be, in order to fulfil the theory by which they could be truly called dew ponds, the process of evaporation must be reversed, and during the few hours out of the 24 upon the few days that occur during the year on which it may be possible for the deposition to take place, it would seem that the deposit of dew on the water must be enormous, not only to make up for the loss by evaporation, but also to yield an available supply for the flock.

We must be prepared then to find that these ponds are simply reservoirs for rain-water—a kind of savings bank on which the flocks may draw for a considerable time during seasons of necessity, without fear of total exhaustion, unless the period of drought is prolonged as at present. The pond at Westridge made 10 years ago and filled with snow, still holds water, and has never been in danger of exhaustion until the present year, and during this dry summer it has up till the present time afforded water to 480 sheep daily, and to above 700 for part of the time, besides serving for various other domestic uses at the two farms and the neighbouring cottages. The value of these ponds, simply in this light, stripped of all their mysterious attributes, is convincingly felt at the present date by many who are either raising all their water from a depth of 400 feet in the bowels of the earth, or employing their teams with vast labour to draw from the river. *J. S., Streatley Vicarage, Sept.* 6.

SHORT-HORN CORRESPONDENCE.

[Mr. Bowly, of Siddington, has been so good as to place in our hands the letters on this subject of the late Henry Cottrell, Esq., of Rhodgate Lodge, Congresbury; and from them we extract the following correspondence in 1826 and 1827 between himself, Major Rudd, and the Rev. H. Berry.]

ON THE PEDIGREE OF HUBBACK.

1. *Mr. Cottrell to Major Rudd, 27th Nov.*, 1826.—

"As you stated in a letter in the *Farmers' Journal*, dated 16th July 1821, that "You were in possession of evidence which established the fact that the dam of Hubback owed her propensity to fatten to an admixture of Kyloe blood, &c., and that the sire of Hubback had an admixture of Alderney, &c., and that Hubback, therefore, was the main root of the improved Shorthorns uniting three crosses, the Dutch or old Short-horned breed, the Kyloe, and the Norman or Alderney, &c.,' I shall be greatly obliged by your information, for upon reference to all the documents I have, which are numerous, I do not find it shown where the dam of Hubback is Kyloe. You all appear to have agreed upon the certainty of Hubback's sire, but we still are in the dark as to the Kyloe blood. Vide Herd Book, Hubback.—My motive for this inquiry is not under the impression that the breed is at all deteriorated by the Kyloe, *vide* Lady; but because I am a researcher into the very trifles of this breed, on account of my admiration and conviction of its superiority."

2. *Major Rudd to Mr. Cottrell, Nov.* 30, 1826.—

"Many years ago I felt a great interest in tracing the origin of the improved Shorthorns, having derived much amusement in breeding them. I have for a long series of years been intimately acquainted and on terms of great friendship with Mr. Charles Colling, and his brother the late Mr. Robert Colling, of Bampton. From them I have always understood that the great improvement of this breed was derived through the bull Hubback; hence I became anxious to trace as far as possible the pedigree of this bull. All the information which I could derive from the Messrs. Colling on the subject was that Hubback was got by a bull belonging to a Mr. George Snowdon, who had been a tenant of the late Sir James Pennyman, and whose bull was from the stock of the late Sir James Pennyman. It so happened that my principal tenant at this place was for many years hind (farm steward) to Sir James, and from him I learnt that Sir James Pennyman had his stock of cattle from Sir W. St. Quintin, of Scampston, near Malton, and that he had often heard Sir James say they were a cross between the Alderney and Shorthorns. Some years after I received this information, I happened to purchase the 'New Farmers' Calendar,' 4th edition, published in 1802, in which at p. 493 you will find a full account of Sir William Quintin's experiments and of the improvement he made in the Shorthorns by a cross with the Norman and Alderney Cattle. These experiments, and the result, are also given in Middleton's "Agricultural Report of Middlesex," p. 415. From this great weight of evidence I have therefore no doubt that the improved Shorthorns have Norman or Alderney blood. The greatest pains have been taken to trace the pedigree of the dam of Hubback, and I believe that Mr. George Coates, the author of the 'Herd Book,' did everything in his power to procure proof that she was a pure and real Shorthorn, but his efforts were fruitless and in vain. I knew several farmers who remembered the dam of Hubback. She belonged to a bricklayer at Harworth, near Doncaster, and was generally depastured in the highways. Their concurrent testimony to me was that she was a small cow, and that they had no doubt whatever from her appearance that she was a half-bred Kyloe. It was from their testimony, which they offered to verify on oath, that I have always believed Hubback to have Kyloe blood through his dam. There is also external evidence in the Kyloe coat of hair which peculiarly distinguishes the real and genuine descendants of Hubback. The old un-improved Shorthorns are remarkable for the reverse; that is for having very bad coats. To this testimony I can add the fact which I know of my own personal knowledge [ ] of the bulls which were the nearest related to Hubback actually got stock which had the appearance of being half-bred Kyloes. This I have seen with my own eyes. I must conclude this subject with my assurances that an experience (in breeding the highest improved Shorthorns) of more than 20 years standing has left no doubt in my mind as to the real cause of the improvement. I have instituted experiments which would

convince the most sceptical, and which at some future day I shall, perhaps, communicate to the public."

3. *Mr. Cottrell to Major Rudd, Jan.* 1, 1827.—

"I beg to observe I was fully apprised of your opinion as to the origin of Hubback and his dam. But, as you have been so kind as to say you felt pleasure in any of my letters on the subject, may I, without inflicting a punishment, intreat a second in elucidation, if you can, of the statement of G. Coates, and Hutchinson, and Waistell, relative to the date of Hubback—G. C. saying 1777, and Hutchinson for Waistell, 1785, 4 yrs. old. In a conversation with old George, some length of time ago, the old man stated to me he knew Hubback in Fawcett's possession and that he considered his statement of age as correct as any counter-statement, and that he would collect and send me every particular in his power."

4. *Major Rudd to Mr. Cottrell, Jan.* 5, 1827.—

"I have often heard from Mr. Charles Colling that he commenced his endeavours to improve the breed about the year 1785, and therefore I believe that Mr. Hutchinson was correct in naming that year as the period when the bull Hubback was first used by Charles Colling. What age Hubback then was I do not know. Having given you all the information in my power respecting the origin of Hubback, I have nothing to add on that subject, except to repeat my entire conviction that Hubback united Kyloe, Alderney, and Short-horned blood, and that from this union arose the improvement of the Short-horns. Your information to me respecting the remarks made on your bull Touchstone are very interesting to me, for I recollect hearing the late Mr. Robert Colling make a similar remark respecting the Short horns, when he was entirely ignorant of the real pedigree of Hubback. He observed that the colour often resembled the Alderney, as the hair did the Kyloe. I believe that the discovery of the real origin of Hubback was first made by me from the active inquiries I made into the subject. I have given you the evidence, which can leave no doubt in the mind of any liberal and unprejudiced person. It is singular that a prejudice should exist against the Kyloe when it is known in all the cattle markets that no breed shows more symmetry of form or inclination to fatten. I entirely coincide with you in the opinion that too close breeding occasions a degeneracy. It causes a diminution of size and weakens the constitution. I have had the evidence resulting from more than 20 years' experience. An occasional change of bulls is indispensably necessary, to keep up the size and constitution. I entertain an opinion that an occasional infusion of Kyloe blood is necessary. I have tried the experiment with great success, and regret much that my great distance from the Smithfield Show prevents me from showing the result to the amateurs who assemble there. You may believe me, when I declare to you upon my honour, that for the last five years, during which the experiment has been fairly tried, I have found my oxen of this fresh cross much superior to those of the real Colling Shorthorn. They are much fatter at the same age when they are kept exactly in the same manner. I consider that an experiment of this kind is decisive, for if the oxen had been kept by different persons much might have been attributed to difference of keeping. I have found them invariably the best every year for the five years in succession, and I can add that they have produced the most money when sold at the public markets. I can give you no stronger testimony."

5. *Mr. Cottrell to Major Rudd, Feb.* 1, 1827.—

"It appears pretty plain the exact year of Hubback's birth cannot be got at, but from the evidence of the Herd Book, Mr. Hutchinson's assertions are incorrect, the Messrs. Colling not thinking it worth while to keep one of his (Hubback's) begetting. Vide R. Colling's lame bull, Hearn, this bull did mischief; R. Collings' horn bull, Charles 126, Garland 271, Grandison 279, from a son of Hubback, and a very long list of cows by sons and grandsons of Hubback. As you have informed me of your experiments, I intrude on you with a statement of pursuits here. I live in the midst of large cheese-making dairies; the land is highly rented, and as the farmers find cheese the most remunerative, scarce any young stock is reared. If their cows get out of season they are sold and replaced by purchases, generally at Gloucester market, 3 years old heifers and calves; I may say averaging 12*l.* each. Select or particular breed they are quite careless about. Their search in the cow is quantity of milk; the bull to get a fat and white fleshed calf. Where 60 or 80 cows are kept, seldom more than four or six calves are weaned, and those perhaps once in three or four years. Having myself noticed the uncertainty of these looked-for qualifications, I have made various experiments. I have possessed Alderneys, Devons, Glamorgans, mixed breeds, Long horns, Herefords, Yorks, or unimproved Shorthorns, and Isle of Skye, but not any other Scotch. I have also crossed some of these breeds. In the year 1813 I procured improved Shorthorns, said to be descended from Cecil, to which as a main stock I have remained steady, and since to certain pedigreed improved Shorthorn cattle; because from them I have found the greatest certainty of the above qualifications. But I have played experiments with these, by crossing with Devons and Alderneys. The three breeds joined produced the prettiest and neatest animals I ever obtained, but I had neither milk nor weight. I now exert every kind of persuasion to get the farmers to procure the improved Shorthorns (and I despair not of ultimately succeeding), though I am sorry to pourtray their characters—as adhering to their fathers' and grandfathers' old ways. I did not mean in my last letter, describing my bull Touchstone to convey that I considered the improved Shorthorns (save Lady blood) to be a mixed breed, but what my neighbours say of him. In this point I must dissent from you and others, upon this ground: although they bear resemblances in colour and shape to other breeds, yet in all the several herds of this breed that have come under my notice there is the same invariable general character. I have not seen that flying off as in other breeds, viz., true bred Alderneys frequently are as dissimilar to their congeners as possible; Devons and Herefords, whose colour has been of such long standing, equally fly off, but, indeed, I believe I may say it of all our native cattle, for perhaps there is not now one true, distinct, native breed, and it may ultimately happen with the improved Shorthorns. This you will say is recantation. To attribute to them the Kyloe coat I cannot. It is true I am not acquainted with the varieties of Scotch cattle, but I never felt such coats on those I have known as on the improved Shorthorns; theirs being universally mossy, whilst the Scotch are long only. The greatest similarity to the Scotch are the Longhorns (they are here numerous), approximating in colour, form, and length of hair.

(To be Continued).

SHEEP SALES.

LINCOLN SHEEP: *Biscathorpe, Sep.* 1.—Mr. Kirkham's flock has for years surpassed all the other flocks of the county. The number of rams offered by Mr. Briggs was 150, 74 of which were shearlings. The prices realised must have surpassed Mr. Kirkham's most sanguine expectations, as they went far beyond anything recorded of sheep letting in this county. No. 8, a shearling, almost perfect in form, and possessed, in a superlative degree, of all the high qualities of a first-class ram, was let to Captain Catlin, Needham House, Wisbeach, for 160*l.*, a price never before reached in Lincolnshire. No. 9 was let to Caleb Going, Esq., Nenagh, Ireland, for 60*l.* No. 10 realised 65*l.* No. 13 was secured by Mr. Smith, Morton, near Burlington, for 110*l.* No. 20, 90*l.*, Mr. R. Howard, Temple Bruer. No. 39, 70*l.*; in short, the 74 shearlings averaged 23*l.* 5*s.* a head. Of the two-shear and aged sheep three were let for 100*l.* each and upwards, viz., No. 79, a two-shear of rare character, let to Mr. Daintree, of St. Ive's, for 110*l.*; No. 120, a fully developed and almost perfect three-shear, to J. Kirkham, Esq., for 120*l.*; and No. 123, a three-shear, for 100*l.*, to Mr. Caswell, Laughton; a fourth realised 85*l.*, a fifth 60*l.*, a sixth 56*l.*, &c. The 150 rams realised the sum of 3392*l.* 10*s.*, giving an average per ram of 22*l.* 12*s.* 4*d.*

Halton: Aug. 29.—Mr. Vessey's sheep included 180, chiefly shearlings. A further supply of about 14, which had been kept in reserve for contingencies, quickly shared the fate of their fellows. As several gentlemen were still unsupplied, a further and last reserve was produced, which were disposed of as readily as the first; so that altogether more than 200 were let, being a larger number than Mr. Vessey had ever before let in one day. Still they were insufficient to meet the demand.

At the dinner, Mr. WELSH, after observations on the dryness of the season, which had forced them to have recourse to artificial food for the preservation of their stock, said in the use of Cotton-cake they were labouring under very great disadvantages, for if they were going to quit their occupations, whatever Cotton-cake might have cost them, they would be allowed nothing for it. Cotton-cake was a valuable auxiliary in a season like this for keeping the stock alive, and he thought an allowance ought to be made for that as well as for Linseed-cake. As to the reaping machine, he had now employed one for six or seven years, and he would back that which he used the other day at New Leake against all the other machines in the country. With it he had cut an acre and a half in 48 minutes. He believed reapers would come, and must come into very general use, and for this reason, that owing to improved cultivation and improved manures, they had now, instead of three weeks or a month as formerly, only about 14 days in which all their corn must be cut.

Mr. HEANLEY, referring to Mr. Welsh's observations respecting Cotton-cake, said he had asked his steward about it, and he replied that he would allow the same for Cotton-cake as for Linseed-cake. He had been subpœnaed in a case at Lincoln, and he said there that he expected to be allowed for Cotton as well as for Linseed-cake.

Mr. MASON was quite aware that the use of Cotton-cake in this country was only recent, and he could not consider its use so established as for it to be allowed for as a custom of the country. It was a matter to which himself and other valuers had turned their attention. To some persons the use of Cotton-cake was an advantage, and to some it was of no use whatever. But whether it should be allowed for or not was a question which they (the agriculturists) should decide, and not the valuers. He would advise them to have a provision for allowance for its use to be inserted in their agreements.

Mr. MARTIN said he had for many years come to Halton for sheep, and it was his opinion that persons coming here had generally fared well. The long-wool sheep had been the wealth of Lincolnshire. It was the wool it had always grown, and it was now more in request by manufacturers than any other kind of wool. Many flocks of sheep in this county had last year clipped 14 lb. of wool each, and he considered them the sheep to pay.

Tathwell.—In consequence of the death of its late proprietor, F. Chaplin, Esq., the whole of this celebrated flock was sold by auction, by Mr. Briggs, on Tuesday last. The 70 shearlings made 1165*l.* 10*s.*, averaging over 16*l.* 10*s.* each. Amongst the two-shear and aged sheep some made very high prices, No. 115 reaching the extraordinary figure of 130*l.* This was bought by W. Chaplin, Esq., who also gave 70 guineas for No. 128, two splendid rams. No. 116 was bought by Mr. Dudding for 80*l.*, No. 114 by Mr. Greetham for 50 guineas. No. 120 by Mr. Wingate for 40*l.*, and No. 80 by Mr. Topham for 40*l.* The 150 rams made the gross sum of 2592*l.*, or an average of about 17*l.* 5*s.* *Lincolnshire Chronicle.*

SHROPSHIRE: *Dumbleton, Aug.* 31.—Lot 1, very justly described in the catalogue as a "grand" six-shear ram, Patentee 2d, winner of the 1st prize at the Royal Agricultural Society's show at Leeds, by Patentee —Farmer, to be let for the next eight weeks, was started at 10 guineas, but the price reached 20 guineas, the bidder being Mr. Bradburn, of Pipe Place, near Lichfield. The sire of this ram was the winner of the Royal Society's prizes at Salisbury and Chester. Almost immediately after this lot was knocked down, a telegram was received from an eminent breeder, offering any reasonable sum for this ram, but the offer was too late. Lot 2, another grand two-shear ram, Patentee 4th, by Patentee 3d—dam by Cullabine, highly commended at the late show of the Royal Society at Newcastle; a true type of the Shropshire sheep, of wonderful constitution, large size, excellent colour, abundance of wool, and an aptitude to feed, was next offered, and, after some spirited bidding, was let to Mr. Spurgeon (bailiff to Mr. Allsopp, of Hindlip), for the same period, at 37 guineas. The next lot was a three-shear ram, for sale, known as Lord Dartmouth, sire Cullabine 7th, Old Cullabine, by ram of Foster's; dam Lord Salisbury, the winner of three Royal prizes. This is one of the best animals of the year, and it was bought by Mr. Bate for 15 guineas. Others went at lower prices. There were 30 lots of shearling ewes, five in a lot, and these were mostly sold. The first lot, which was an average sample, was bought by Mr. Curtis Hayward, at 2*l.* 19*s.* per head.

BORDER LEICESTER RAMS: *Mungoswalls, Dunse.*—Mr. J. Thomson's shearling rams, were sold by auction in Dunse fair, August 26th—44 shearlings, at an average price of 7 guineas.

WORDS OF ADVICE TO IRISH TENANTRY.

[The following sensible advice was published at the beginning of the year by Mr. C. W. Hamilton, of Hamwood, among the tenantry on the estates under his charge.]

AFTER three years of constant rain, and one in which an unusually wet autumn injured a promising harvest, and almost precluded the possibility of good autumn tillage, there is not much to cheer the farmer; but much to make him anxious for the future. He hears on every side proofs that the live stock, as well as the population of this country, are diminishing in numbers; and unless each individual farmer sets about considering how he may on his own farm prevent the diminution of stock and population, the country must grow poorer and poorer, and he himself end in ruin.

Government and law makers can do but little to help you; but if every one would help himself, the prospect of the country would soon improve. You must change your mode of farming, if you wish to save yourselves; and I think that some few observations upon the change that you must make may be of use to you.

When the price of corn was high, you took too much out of the ground; and now that the price has fallen, and is not likely to rise, you get a smaller return and price, and complain that tillage does not pay as well as grazing; and many are laying down as pasture land tracts which were formerly under tillage. But although this may do in good ground, and where one man holds a very large extent of Grass land, and thus, making a small profit on each one of many hundred acres, may realise a good income, yet the profit on each one of from 20 to 30 acres makes too small a sum for a small farmer and his family to live comfortably upon. Indeed, from the way I see poor and exhausted land let out, I feel sure that for many years the Grass does not pay the rent, much less enrich the farmer.

What I wish to urge you to aim at is, to breed stock which you will always be sure of getting a good price for, and not to depend upon selling corn. You may feel sure that if you set about it properly you will make more by consuming your corn as food for stock than by selling it. I doubt if it is wise in the largest farmers to abandon tillage entirely, because if they abandon tillage they abandon also the rearing and wintering of stock; but I am quite sure that the small farmer cannot do so without going to ruin; and if he does not abandon it, but carries it on in the old way, he will be also a loser. Whether you hold many or few acres, you should lay out your cropping so as to keep the greatest number of sheep or cattle you can, both in winter and summer; and to keep through the winter as much, or nearly as much, as you can feed through the summer, and also lay out that whatever labourers you require at one time of the year should have employment on every day of the year. If you put under Oats every acre that you think will give you any sort of a crop, and sow your crop late in the spring, you will always be subject to what I have seen so much of among you this last autumn, fields of corn coming in ripe at the same time, and shedding the best part of the grain from want of hands to reap it. You may depend upon it that this want of hands will increase every year in future. The remedy that I suggest is, that you should sow only that land that is fit to give a good crop, and that you should sow different kinds of Oats, and at short intervals, so as not to have the crop coming in at once. Where the land is clean, a portion sown in autumn would come in early, and thus few hands would be sufficient at harvest time. It takes nearly as many hands to harvest a bad crop as a good one; and you would find it to your advantage in every way to manure and till 5 acres properly, and get from 15 to 20 barrels of Oats per acre, rather than get from nine to 10 barrels from double the number of acres. You cannot grow any good crop without manure, and you cannot have manure unless you keep your cattle in houses, and unless you have Turnips and Mangels to give them in the winter; but you had much better leave it alone than not carry it out properly. I have seen many giving their roots and hay at first recklessly, and then having either to sell or turn out in cold March weather the cattle whose food has run out. It is very easy for a prudent person to calculate beforehand. If you have no means of weighing your crop of roots, you may load your carts evenly and count them, and remember that roots shrink so from evaporation that for every 100 stones or cartloads or tons that you put in, you can only calculate upon measuring or weighing out 60. Another simple plan is, to pack the

roots in an even ridge, and measure that in length, and then only use such a length in the week as will enable you to carry on to the end. Many people waste much by giving more than necessary. I find that where cows are kept dry and warm, three stones of Mangels is an ample daily allowance for large dairy cows; five cwt. of straw to each gives them clean bedding for six months, where the floor is high and even; but as most of you have Heath, Fern, Sedge, or even Furze, bedding is easily economised. About 6 cwt. of hay and one ton of straw is what each consumes as food in the six months, and two or three pounds of oatmeal given in mash to each in addition to the straw, will keep a large cow in full milking condition. Now, no one should house stock on the 1st November, unless he sees that he has food for carrying on until May 1. What I give is the rate of feeding for animals which, when fat, would weigh from 6 to 8 cwt.; smaller cows will take proportionably less. If you have the means of cutting the straw, and boil in a pot 2 lb. of Oatmeal and a ¼ lb. of Linseed until the Linseed turns into jelly, and then mix it with the straw, you might dispense with the hay altogether. Under this treatment each cow ought to rear her calf, and make at least six pounds of butter per week; and if you get into the habit of skimming the milk only once, and churning the cream, you will have that amount of butter, and all the skim milk to use in the house; and if you sell what you do not use to your labourers, at a very low price, say 1*d.* or 1½*d.* per gallon, you would make them much more comfortable, and help to make the dairy pay. You should inquire and satisfy yourselves that the labourers you employ do get milk and meal at a fair rate. If you fatten sheep, you will find much profit in feeding them under shelter, and make quite as much manure as by stall-feeding cattle with the same amount of food and bedding.

Now, with respect to rearing the young, whether of cattle or sheep, I think that one of the most fatal errors that you make is in thinking that any land and any food is good enough to bring them round, and that good feeding is thrown away upon them. You may depend upon it that the animal that is fed and sheltered well from the day of its birth will pay best. If a starved calf is put upon good feeding suddenly, it will probably die of blackleg or some other disease of the blood. If young sheep are kept on poor food, they have not strength of constitution to stand the change from the dry summer's Grass to the unhealthy herbage of a wet autumn, or even to Turnips or Rape given in spring; but if you get them into condition before Christmas, you will find them able to stand the roughest winter. Well, my advice to you is, to sow in May a sufficient quantity of white or Aberdeen Turnips to be able to give your hoggets each about half stone a day during October and November; and if you see any tendency to scour, stop it at once with half pint of Oats to each a day for a week or fortnight, and you will have but few losses in the spring; and I need not tell you how heavy those losses have been of late years, nor how much Oats and Turnips the sheep that annually die would pay for. Shedding need not be a very expensive matter—common poles from the thinning of plantations are in most places cheap enough. Nothing makes a nicer wall for a sheep shed than Furze wattled in, and any coarse thatching, such as Heath, Rushes, or Furze, makes a sufficient roof. I have no doubt whatever, now that mutton is scarce and dear and corn cheap, that Oats may be turned into mutton to profit. I would recommend any breeder of sheep to sow a good breadth of Rape in May, with artificial manure, drilled in and hoed afterwards just as the Turnips are; you will find it invaluable for the ewes in September, and for fattening of wethers, which it will generally do to the number of 20 to the Irish acre, and leave the land in fine condition for Oats. You may be quite sure that you will not be able to hold on unless you determine to have 1 acre of green crops, so tilled and manured as to give you from 30 to 40 tons of Turnips or Mangels to the acre for every 2 acres of corn that you sow; and that it will be better for you to till only a quarter of your farm well and leave the rest in Grass than to have a greater extent under the plough than you can clean and treat properly. The expense of labour in producing 30 or 40 tons of Turnips or 20 barrels of Oats from an acre is not much greater than it takes to produce a crop of half the amount.

If you tilled well in autumn and winter, and always did every act of farming on the first day that the weather suited for the operation, you would seldom be beaten by even a wet season. I have so strongly urged you to make your farms breeding farms that I need say no more on that subject, but end as I began, by urging you earnestly to consider how impossible it is that our country should prosper as long as the labourers, whom you cry out for during the summer, are left unemployed during the winter. You are ready to give them exorbitant wages at harvest time; but you seem to expect that they should appear then for your advantage, and disappear afterwards, going and living you care not where or how. You will find that if you continue this system, they will continue to go, but not to return, as heretofore. You and I have gone through that sad period of the famine, and well know what degradation relief rates bring with them; and you cannot doubt but that emigration is better than unprofitable labour. But it would not be necessary, if every farmer so laid out his system of cropping as to have the same number of workmen, whether members of his own family on small holdings, or hired labourers on large farms, equally employed on every working day in the year. I have no doubt that this is practicable and profitable; and that there is no other way in which we may ever hope to see the country flourishing and the people happy. *Charles Wm. Hamilton.*

DAIRY FARMING.—No. V.

[The following are extracts from the Fifth Lecture on this subject lately delivered to the Royal Agricultural College, Cirencester, by J. T. Harrison, Esq., of Frocester Court, Stonehouse, Gloucestershire.]

1. *Disposal of Milk.*—The most simple and remunerative method of disposing of milk is to sell it simply as milk to the consumer—1*d.* a pint, or 8*d.* per gallon, is the common wholesale price. For milk thus disposed of, we may safely say that the return per gallon is a maximum, and the expense attending it is a minimum. Thus, with much expense attending the manufacture, I find 6¾*d.* per gallon is the most I can make by converting the milk into butter and single Gloucester cheese. But, as before remarked, quantity not quality being the object, cows giving a considerable quantity of milk are selected, and house feeding is generally followed. Hence great reliance is placed on grains as food, of which 1½ bushels, with 10 or 12 lbs. of hay, and 1¼ cwt. of roots, chiefly Mangel Wurzel, are given daily, or in place of the hay and roots, abundance of cut green food, Clover, Vetches, &c., during the summer. This, with an ample supply of water, forms the daily food of the large Yorkshire cows in the London dairies.

These cows yield from 600 to 1000 gallons of milk per annum, which at 8*d.* per gallon, returns from 20*l.* to 33*l.* each. This does not, however, by any means give an exact notion of the average yield of these cows, as it is the custom to replace those that give less than 8 quarts of milk per day, by others at a loss of 6*l.* or 7*l.* each.

2. *Butter Dairying.*—I shall next make a few remarks on butter dairying, which forms a complete contrast to the milk dairy system—quality or richness in cream being the chief object instead of quantity. The contrast is well shown by a comparison with Mr. Horsfall's management, as his cows are to a great extent similarly house fed. In his case, instead of feeding to encourage a large supply of poor milk, and drawing upon the condition of the cow to supply some quality, he feeds highly or rather richly to obtain butter, and fatten the animal at the same time. Instead of purchasing animals in good condition as the milkman that he may make them lean, Mr. Horsfall buys them from three to five years old, and lean that he make them fat. Of course he buys cheaply, whereas in the other case a good price must be given. In some cases he buys strippers, which correspond nearly with the cast off of the milkman. These cows when bought frequently give but little milk; after a week or two it increases 2 quarts a day, and that too of much richer quality.

Mr. Horsfall aims to give his cows in the shape of purchased food, the nitrogenous and oleaginous matters, and the phosphates which are carried off in the milk and the improved condition of the animal, and in this way he finds his pastures are not tending to impoverishment, but to increased fertility.

Mr. Horsfall's winter feeding per week consists of—

	s.	d.
63 lb. of hay, valued at	2	3½
Straw and shells of Oats	1	3
Mangel Wurzel	1	0
35 lb. Rape cake, 10½ lb. Bran, 10½ lb. malt combs, 10½ lb. Bean meal	4	0½
Cost of food per cow per week	8	7

And his return he reckons at—

14 quarts of milk daily at 2*d.*	16	4
Gain of flesh, 6¼ lb., at 6*d.*	3	5½
	19	9½

Leaving a profit on each cow of 10*s.* 10*d.* per week.

Mr. Horsfall cooks his food to a great extent, but for further particulars I must refer you to his most instructive papers in the Journal of the Royal Agricultural Society.

The butter obtained from a certain quantity of milk varies immensely. Mr. Morton, in his "Handbook of Dairy Husbandry," gives a large amount of useful information on this and other subjects. He ascertained that the quantity of milk required to give 1 lb. of butter varies from 16 up to 29 pints, depending apparently upon the food given and the breed of the animals. But the method employed to extract the butter has also much to do with this result, the butter being more or less pure, and the impurity being casein, the principal ingredient of cheese. The purer the butter the finer the taste, and the better it will keep. There seems to be a difference of opinion as to the advantage of the Devonshire system of scalding the cream before making it into butter. Mr. Acland, in his report on Somersetshire, says it is a common opinion that the object of the scalding is to extract from the milk a larger quantity of cream and butter. Having obtained most contradictory answers to his inquiries upon the subject, he had an experiment made on 12 quarts of milk. The butter obtained from the 12 quarts of milk scalded was 1 lb. 4½ oz.; from the 12 quarts not scalded, 1 lb. 6 oz.; the difference amounting to 7½ lbs. on every 100 lbs. in favour of the non-scalded milk.

Professor Way's analysis of the butter produced shows a larger quantity of pure butter from the raw than from the scalded milk butter.

The results of Dr. Traill's experiments were:—

1. That the addition of some cold water during churning facilitates the process, or the separation of the butter, especially when the cream is thick and the weather hot.

2d. That cream alone is more easily churned than a mixture of cream and milk.

3rd. That butter produced from sweet cream has the finest flavour when fresh, and appears to remain the longest period without turning rancid.

4th. That scalded cream, or the Devonshire method, yields the largest quantity of butter; but if intended to be salted, is most liable to acquire a rancid flavour by keeping.

5th. That churning the milk and cream together, after they have become slightly acid, is the most economical process for districts where butter-milk is sold; whilst at the same time it yields a large amount of excellent butter.

In April last, before the cows were turned out to Grass, I had butter made from 8 gallons of milk in three different ways, when the results both as to quantity and quality varied immensely.

1st. The cream raised in the ordinary manner from 8 gallons of milk, yielded 28½ oz. of butter, the quality of which was very good.

2d. The cream raised from 8 gallons of milk by the Devonshire plan, yielded 38½ oz. of butter, which had a creamy taste.

3rd. The milk was allowed to stand till it turned sour, when it gave 50½ oz. of very inferior quality. On repeating the experiment last week (May), we obtained from the same quantity—by the first method, 48 oz. instead of 28½ oz. of butter; by the second method, 48 oz. instead of 38½ oz. of butter; by the third method, 24½ oz., instead of 50½ oz. of butter, all good in quality. I do not attempt to explain this, but it points out the importance of a little experimenting. The richness of the milk and the temperature have no doubt a good deal to do with the results.

The temperature of the cream before churning should be about 60°; during the process of churning the temperature rises considerably. In some experiments made by Mr. Ballantine of Edinburgh, he obtained the largest quantity of butter when the temperature of the cream was 56°, and the butter 60°, the best quality cream at starting 52°, butter 55°. When the heat exceeded 65°, no washing could detach the milk from the butter without the aid of salt.

Ruegg says, "the production of butter by churning is both a chemical and mechanical process. By the mechanical operation of the churn the envelopes of the globules of fat are broken, and the globules brought into cohesion. By the chemical process the sugar of milk is converted into lactic acid, and the bulk of the fluid, which was put sweet into the churn, is instantly soured. The following is Mr. Ruegg's description of the process of butter making in Dorsetshire, whose butter holds the highest rank in the London market.

"The cows are milked twice a day in summer in the fields, in winter generally in the straw barton. The milk is purified by being passed through a sieve, and then set to cool in milk leads. In some counties glass ware or stone coolers are used; but the Dorsetshire farmer will use nothing but leads, which he finds the cleanest, sweetest, and in every respect the best of milk coolers. In these the milk is allowed to stand for a period varying from 12 to 36 hours according to the season, the quantity of milk at command, &c. Usually after standing 24 hours, it is skimmed, and the cream is collected in tin vessels until sufficient to form a churning has accumulated. In very large dairies and in the summer season, butter is made every day; and it may be laid down as a general rule that the quicker cream is converted into butter, the sweeter and better the butter. It should not be allowed to remain longer than three days under any circumstances." . . . "The butter having come, (to use the language of the dairymaid), the whey is drawn off for the pigs, and the butter is taken out and well washed. It is then thoroughly worked with the hand until the buttermilk is thoroughly expressed, and the air bubbles are broken. A portion of salt is mixed with about each half dozen pounds; the manipulation is resumed; the lump undergoes a second washing, which carries off the surplus salt; and it is finally made up into rolls or printed pats for the home market, or, with an additional salting, is packed in clean tubs for the London factor."

The system adopted depends in some measure on the district; thus in the thinly peopled Dorsetshire the whey or buttermilk is given to the pigs, but in densely populated districts, such as the northern manufacturing counties, the buttermilk is consumed by the people, and the quality of this made from the milk and cream together, leads Mr. Rowlandson to prefer the Lancashire method, which combines, he says, the best principles connected with the other methods.

"The practice alluded to consists in dividing the milk into two portions, viz, the greater part of the first milk is set in the ordinary way to stand for cream, the latter being usually taken off quite sweet, and the skimmed milk sold, used for the family or given to the pigs; the latter part of the milking, which is rich in cream, is at once placed in a vessel containing the cream of prior milkings; the last drawn are locally called 'afterings;' in cold weather the mixed cream and afterings are set near the fire, in order to induce acescency, provincially termed 'soiling.' The churn should be set at 58° or 60°, and if smartly churned the butter will 'come' sometimes within the hour, and rarely, if set at the above temperature, will it exceed one hour and a half."

Mr. Rowlandson's views of the advantages of this system are that, "By setting aside the milk first drawn to stand for cream, the most aqueous and serous portion of the milk is got rid of, whilst by preserving the last drawn portion and mixing it with cream it obtains the requisite fluidity, and the acescent form in which the whole is placed in the cheese is favourable to the speedy formation of the butter. The quality of the buttermilk thus made is far superior to that made from cream alone, and so more soluble.

I may add that when the whole milk is churned, the churn is

a fixture; it is an upright somewhat conical vessel, made so, however, only in order to secure the tightness of its hooping; of various dimensions, from three feet and upwards in height, and from 15 inches in diameter, according to the quantity of milk to be treated This milk is churned when about three days old, varying according to the weather, being first allowed to cool and then placed in large wooden vats to become sour. Steam or water power is frequently used, as in the case of the larger churns it is too laborious for manual labour.

The Devonshire method of making butter differs materially from the above, and is peculiar to that county. The milk is placed in tins or brass pans holding about 11 or 12 quarts each. Twelve hours in summer, or 24 hours in winter after milking, these pans are placed on trivets over holes in a broad iron plate heated by a clear fire of charcoal or wood-ashes. The milk is gradually warmed to near the boiling point, but on no account allowed to boil, or the whole is spoilt. When the bottom of the pan (as locally expressed) rises to the surface, forming a ring a short distance from the rim of the pan, the milk is removed from the fire and allowed to cool. Each morning the cream thus formed the preceding day, which is called clouted cream, is removed from the pan and turned round in a wooden bowl by the hand, or in hot weather with a bottle filled with cold water renewed from time to time, by which simple process the butter is generally quickly separated, after which it is treated as in other cases.

There is great variety of opinion as to the best vessels for separating the cream from the milk. Zinc should be avoided. Mr. Horsfall uses milk bowls of glazed brown earthenware; they stand on a base of 6 or 8 inches ditto, and expand at the surface to nearly twice that width. Four or five quarts are contained in each bowl, the depth being 4 or 5 inches at the centre. These he places in leaded cisterns, gently inclining, along which he can pass cold or hot water at pleasure. Glass, tin, and white glazed pans are also found very useful, but the Dorsetshire farmer, as before mentioned, prefers leads to them all. Slate is sometimes used, and has a nice clean appearance; when the vessels are of earthenware the glazing should be entire, otherwise the porous earthenware imbibes the milk and becomes offensive.

The necessity of cleanliness on the part of the dairymaid cannot be too strongly insisted upon. The dairy vessels must be scrupulously clean; they and the dairy itself should be removed from everything that taints the air; this applies to all dairies, whether for butter or cheesemaking, and much too little attention is paid to the subject. The pigstyes, stables, cowyards, &c., should all be well removed from the dairy, whereas, in most cases, they are close by. With a little management the whey, &c., can be made to run away in pipes conveniently to the pigs, and where the fall of the ground will not permit it, it is better to pump it up out of a sunken well than to have the sties close to the dairy.

We have now to consider the conversion of milk into cheese.

3. *Cheese Making.*

The art of cheesemaking consists in separating the casein, combined with a certain proportion of butter, so as to preserve it in a concentrated and portable form for the food of man.

It appears that the most complete coagulation is effected by the agency of the prepared stomach of the calf or of the lamb, as used by the Stilton cheesemakers. The calf's stomach when prepared is called a vell, and is sold by most chemists in the dairy districts.

From these vells is made rennet.

In Cheshire the rennet used is made fresh from the vells every day. These, procured fresh from the butcher the previous year, are cleaned and salted and laid one over the other, with a layer of salt between each, in a deep earthenware vessel. They are taken out a month previous to use, the brine is drained from them, and they are spread out, covered with salt, and dried. Two bits of 2 or 3 square inches are cut off these and put into half-a-pint of warm water the day before use, along with a teaspoonful of salt. This is sufficient for 50 or 60 gallons of milk.

In other parts rennet is prepared in the following manner. A brine is made strong enough to bear an egg, this is then boiled half-an-hour, and when quite cold put into a jar—the large Olive oil jars holding about 30 gallons are very useful for this purpose; to every two gallons of brine are added six vells and one lemon sliced, which does away with any disagreeable smell. Spices, such as Cloves, also are added by some, as they keep the rennet in good condition, and give it an agreeable flavour. One ounce of saltpetre to every two gallons should also be added.

This should be prepared in February, and is a most essential part of cheese-making, and the greatest care should be taken that the vells are sweet. The rennet thus made exerts so powerful an influence as to coagulate the casein of 1800 times its weight of milk. The advantage of using the rennet in this form is that when once its strength is ascertained it can be used with confidence.

[A detailed examination is then made of the action of rennet on milk, and it appears that nearly one-fourth of the casein of milk escapes its coagulating influence, and escapes in the whey.]

The manufacture of Parmesan cheese is described to illustrate the effect of heat in the process.

Parmesan cheese is made entirely of skimmed milk—two meals, the evening's after it has stood 16 hours, and the morning's, about six, were put together. At 10 o'clock, this milk, consisting of about 66 gallons, was suspended in a large copper by a crane over a slow wood fire. When an hour had nearly elapsed, the milk, having been frequently stirred, was about 82° of Fahrenheit, and the heat of the atmosphere at the time was 70°. The cazaro or dairyman took a ball of rennet, like a large Walnut, and squeezed it through a cloth into the milk, which was all the while stirred. He then removed the copper from off the fire by means of the crane, and a few minutes past 12 the rennet had operated. The coagulated milk was freely stirred up, and allowed to stand for a little till the whey should in some degree separate—at 1 o'clock the cazaro ordered his sotto-cazaro to work the curd, which he did with a stick properly armed with cross wires. The curd being reduced to a small grain and left to subside till the whey was nearly clear on the surface, part of this was taken out, and the copper again turned over the fire. It was now brought to a heat somewhat below boiling, and a quarter of an ounce of saffron added, to impart a slight degree of colour. All the while the curd was stirred with a wooden instrument, to prevent singeing or burning, and the cazaro from time to time examined it betwixt his finger and his thumb, to mark the exact moment when it should have attained sufficient firmness and solidity. The heat was 124½ Fahrenheit. It is, however, often raised considerably higher.

When the small grains of curd felt as firm as the cazaro wished (which was in about an hour and a half) the copper was taken from the fire and the curd allowed to subside. The cazaro then drew off about three fourths of the whey; poured round the bottom of the copper three or four gallons of cold water, to cool it so far as that he might be able to handle the curd, and slid below this a cloth, by which he brought it up and placed it in a tub to clear. When drained it was put into a hoop, and about half a hundred weight laid upon it for an hour. The cloth was then removed, and the cheese placed again in the hoop and put upon a shelf.

The practice is to allow it to remain there for two days, at the end of which period it is sprinkled all over with salt; and this is repeated every two days for 30 days successively, if it be summer, and 40 if it be winter; after which no further attention is requisite. During the process of salting they place two cheeses on one another, in which situation they are supposed to take the salt better than when single. They are afterwards scraped clean, turned in the magazine once every day, and rubbed with linseed oil to preserve them from insects. They are never sold till they have been kept six months.

A point of great interest respecting cheese making is the quantity of butter retained in its manufacture. Dr. Anderson, an intelligent writer on the subject, says:—"It is generally supposed that richness or the proportion of oily matter contained in cheese is the cause of its agreeable flavour; but (he adds), I cannot admit this to be the fact; for Parmesan and the small round Dutch cheeses are both deemed by most persons to be of the best flavour, and yet they are made of skimmed milk." From experience I know that the richest cheeses are most liable to become acrid if not properly made, and the skim cheeses will keep longest.

The fine rich cheeses, however, contain a large quantity of butter, and skim cheese is generally distinguished by its absence. And the justly prized Stilton cheese is made from new milk with the addition of some cream. It can, however, only be eaten as a condiment, and its equilibrium is so unstable that without great care it soon totters to decay.

As butter is ordinarily about double the price of cheese, you will see how the question of separating the butter or leaving it in the cheese gives rise to an endless variety of practice.

In 1857 I made some experiments upon the subject, and when the cheese was ready for use I had them priced by an intelligent cheese factor. Thus, pricing the

Butter at 1*s.* per lb.
Skim cheese at 4½*d.*, or 42*s.* per cwt.
Two-meal cheeses at 6½*d.*, or 58*s.* 4*d.* per cwt.
New milk cheese at 6¾*d.*, or 65*s.* per cwt.
Stilton cheese at 10*d.*, or 93*s.* 4*d.* per cwt.

I found that making

Skim cheese and butter returned 5¾*d.* per gallon.
Two-meal cheese and butter, 6½*d.* per gallon.
New milk cheese, 6½*d.* per gallon.
Stilton cheese and skim cheese, 8¾*d.* per gallon.

Dr. Voelcker has since made some similar experiments, and found that 1000 gallons of milk gave:—

8 cwt. of whole milk cheese at 70*s.*, equal 28*l.*
6 cwt. 2 qr. 16 lb. at 80*s.*, and 1¼ cwt. butter at 1*s.*, equal 26*l.* 18*s.* 4*d.*
6 cwt. 0 qr. 24 lb. at 50*s.*, and 2½ cwt. butter at 1*s.*, equal 29*l.* 10*s.* 8*d.*
Or extra rich: 4 cwt. 3 qr. 0 lb. at 70*s.*, skim 3 cwt. 0 qr. 12 lb. at 50*s.*, equal 24*l.* 7*s.* 10*d.*

Had he put the extra rich at 90*s.*, instead of 70*s.*, this last would have been 29*l.* 2*s.* 10*d.*, which accords more nearly with my experiment; the great difference in the result in either case, however, points out how with varying prices it may be sometimes more profitable to make a large quantity of butter, and at other times but little. The great, and a very important objection to acting upon this is, that it is most desirable to have a steady market for your cheese, and this you can only secure by making constantly a similar article. For good cheese there is always a ready sale, but inferior frequently becomes a drug. It is remarked that near large towns, where where is generally a good demand for fresh butter at a high price, the cheese made is inferior. On rich farms again, much butter may be made, and excellent cheese at the same time; in fact it is sometimes necessary, on account of the richness of the milk. A comparison of the following analysis of milk, by Dr. Voelcker, on my farm in August and October, and on the College farm in September, 1860, will explain this.

	Frocester Court Milk.			College Milk.
	August	October	Nov.	Sept.
Water..	87.40	83.90	85.20	90.32
Butter	3.43	7.62	4.96	1.89
Casein	3.12	3.31	3.66	2.87
Milk Sugar	5.12	4.46	5.05	4.28
Mineral Matter—Ash ..	.93	.71	1.13	.65

The cheese made at Frocester in August weighed when sold, .89 lb. per gallon of milk.
Ditto in October .99 lb.
Ditto in November 1.17 lb.

You can thus judge how much skill and careful observation are required to ensure success. A skilful dairymaid is thus of the greatest value to the success of the dairy farmer, for he may enrich his land and increase both the quantity and quality of his milk, and when it is brought into the dairy have it all spoilt.

The more gently the curd is broken up after it is set by the rennet, the less is the covering of insoluble matter enclosing the oleaginous portion of the fluid broken—when unbroken it becomes enveloped with curd and fixed, as it were; but when broken the cream escapes among the whey, making it opaque, and this cream is only regained by setting up the whey, when it collects on the surface, is removed, and made into an inferior butter, called whey butter. Thus we know the careless dairymaid by the large quantity of whey butter she makes. From the same cause, and sometimes from not having the curd sufficiently firm, a good deal of curd is suspended in the whey, and settles afterwards in the bottom of the leads. Much cream on the whey, and much curd below it, after it has been standing some time, are certain indices of the slovenly cheese maker.

There is one other subject to which I will call your attention before giving an account of some other processes of cheesemaking—that is, the quantity of water contained in cheese. After a very careful examination of forty analyses of different kinds of cheese, I find that poor skim cheese contains in a striking degree a large percentage of water, and that on the other hand extra rich cheese has, as might be expected, an excessive percentage of butter. Excluding these extremes, a diminution in the percentage of butter is in a great degree made up by an increase in that of water, so that the two combined range generally between 61 and 67 per cent. of the whole cheese. This is very striking when we find also that the quantity of water in these same cases varies from 27 to 44 per cent.

It seems as if water to a great extent takes the place of butter when it is absent, so as to fill up the interstices between the particles of casein, and that thus by making a poorer cheese we shall not lose so much weight and obtain more butter into the bargain; but we must remember that in taking off the butter on the other hand, a great deal of casein is removed along with it, which lessens the quantity of cheese made from the remainder of the milk. The makers of Parmesan cheese appear alive to this, as they make cheese of the buttermilk as I mentioned before.

[A description is then given in detail of the process of Gloucester cheesemaking, as carried out on the farm of Mr. Leonard of Waterend farm, for which see page 832 of this Journal. The details of Wilts and Cheshire cheesemaking are also given.

Before proceeding further, I would recall your attention to the points I have endeavoured to explain to you:—

1. That what is called casein in milk, although apparently of the same composition, has this peculiarity, that 3-13ths of it is not coagulated by rennet.

2. That the remaining 10-15ths when coagulated, envelope the creamy particles which are contained in small insoluble bags.

3. That when the curd is tender the utmost gentleness is called for, so as not to disengage or break these bags or to separate the firm particles of the curd.

4. That the careful application of heat after the curd is firm with constant stirring, as in the manufacture of the Parmesan cheese especially, and to some extent in the Cheddar system, or the ordinary method of what is called slip scalding (that is, taking out some of the whey, heating it, and pouring it over the curd) appears to have the effect of coagulating some portion of the remainder of the casein or albumen, thus forming a coating round the particles of curd, defending them from contact with the whey, and preserving them from decay and subsequent excessive loss by evaporation.

5 That the question of the extraction of the remaining portion of casein or albumen seems well worthy of further investigation.

Home Correspondence.

Caterpillars.—The continued dry and fine weather of this summer so much reminds me of the summer climate of Australia, that it is natural to find from your columns that the troubles from the insect world have been reproduced here also. The ravages of the caterpillar on the Turnip, Cabbage, and Mangel crops, as described by your correspondents, are almost an annual thing in Australia. It is a gratification to find that rooks have, in attacking this pest, proved themselves the farmer's friend. We may hope to establish and colonise them with as much success as the salmon promoters appear to have had. I observe your correspondent states it was after the plants had been hoed and singled that the caterpillars began their depredations. This is my experience also in Tasmania; the hoe removes the food of the insect, and he resorts of necessity to all that is left—your own crops; in this way I have seen row after row of plants fall in successive progress after the steps of the hoer. I set myself to detect what was the favourite food of this caterpillar, and came to the conclusion it was the common Hog-grass (Polygonum vulgare). I was told by a labourer he knew an instance of a small plot being left unhoed to answer the needs of the caterpillar, and that it remained free from attack. Perhaps some of your Correspondents may have time this season to verify or disprove this statement. I am disposed to suggest for protecting any small collection of plants the placing a row of soot along the roots, with slight watering to dissolve the soot, the bitterness of which will I think deter the caterpillar. *Tasmanian, Ryde, Aug.* 26.

Capillary Attraction an Obstacle to the Descent of Water?—Mr. Donald states in his pamphlet on Land Drainage:—"A certain quantity of water is retained in suspension, and no more; and when dry weather

occurs the water suspended is slowly drawn upward from a considerable depth by capillary attraction, bringing with it such organic or inorganic matter as it may have dissolved." We are told in Morton's Cyclopædia of Agriculture that 100 lb. of dry sand in a bag will take up and hold 25 lb. of water before it begins to drip; that 100 lb. of loam will in like manner take up about 40 lb. of water, and that 100 lb. of pure dry clay will take up about 70 lb. of water." With all due deference to your knowledge of land drainage, here is a sentence of yours which expresses a common but erroneous idea about capillary attraction being an obstacle to the descent of water in soils not waterlogged by leakage from underground veins supplied from higher levels:—"It is plain that drains will not remove any water which may be in the subsoil below them; but what we contend for is this, that neither will they affect water lying in some of the subsoil above their level, for the capillary attraction of that portion of the subsoil lying immediately above them, will in spite of those drains lift that water above their level."* Capillary attraction does that at present in soil which is too dry for growing Grass luxuriantly; but capillary attraction could not, with heavy rainfalls, keep land at the dripping point. It is impossible that land which is sufficiently porous to allow the rapid filtration to lower levels can be kept at the dripping point in wet weather by capillary attraction. The following quotation from Mr. Girdwood's memorandum will explain the meaning of the Rev. Mr. Clutterbuck's statement, that "Drainers seem to confuse the two forces of capillary attraction, and that which is sometimes called friction. It is by this that water is held in soils in an inclined line, to which in 1841 I gave the name of 'water level' to the late Sir T. Sebright, on the Watford Water Scheme, a term very much found fault with, but still in use." Mr. Girdwood states:—"In some of the gypseous clays in Derbyshire and Staffordshire I have gone to great depths. In one case at Sudbury, the seat of Lord Vernon, I have drained about 40 acres at a depth of from 8 to 11 feet. The drains are 66 yards apart, and have been perfectly successful. This land had been twice drained, I believe, and was as wet as ever. I dug down in a dry time, finding no great rush of water till I got to about 8 feet. It then began to flow, and at 10 it rushed in with such force that the workmen had to be hauled up. This determined my proceedings." *Agricultural Gazette*, 1858, page 94. A good many will consider that this shows the power of capillary attraction, but it does not; it was the escape of water by leakage, from veins supplied by a reservoir at a higher level. Land saturated by leakage is in a condition similar to what it would be in were a perforated iron-pipe laid 6 or 8 feet below the surface and supplied by a reservoir 100 feet above the perforated pipes. The bursting of a water pipe in a street in Fulham, near London, showed me and others the force of friction caused by leakage. The water is pumped out of the Thames and forced into a reservoir on Putney Heath for supplying the Pimlico district. The bursting of the pipe made a hole in the street apparently 12 feet square. Capillary attraction had nothing to do with that; neither has it anything to do with the floating of water on the surface within a few feet of drains. Mr. Bailey Denton stated in his remarks at the London Farmers' Club:—"What was the object of draining? The perfect aëration of the soil. When the soil had been aërated from one drain to another, the water descended, for this reason, that it was just 817 times heavier than the air which was displaced by it. That was one of the principal points in drainage, and it disposed at once of the illusion that a well was any criterion of a water level." *Agricultural Gazette*, 1858, p. 11. Mr. Bailey Denton's paper, which I have referred to, and Mr. Girdwood's memorandum, ought to be read together to enable a comprehensive view of the aëration of dense clays and open soils by artificial drains. For example, Mr. Denton refers to the fact that "Soils of different formation, for the most part, are equally susceptible of percolation if channels of discharge were provided below." Here is a practical proof of it. Mr. Girdwood states:—"Where gravel beds occur in the clay, or under it, they often permit of wide intervals being used with perfect success. I have drained nearly 200 acres of this kind of subsoil at Sudbury, at 6 feet deep, and at intervals of 44 yards, with the greatest success. Sometimes we meet with very porous beds, where the land, though full of water, may be laid dry with drains of moderate depths at very wide intervals. I lately met with a remarkable instance of this in Oxfordshire, on the Earl of Shrewsbury's estate at Bampton. On one side of the town the immediate subsoil is the Oxford clay, well known for its stubborn retentive qualities; on the other side, however, there is an extensive superficial deposit of gravel full of water, so full indeed, that when I first examined it, it was not possible to cut trial holes at all, as the trench filled with water to within 12 inches of the surface as fast as it was dug. Owing to the flatness of the country, it was not possible to get an outfall of greater depth than 5 feet; but when the first field was drained, all the shallow wells within a quarter of a mile in one direction were laid dry, and several adjoining fields were also drained by means of it. The drain was a large one, but it had to be taken up and one twice its size substituted." This jumble of quotations ought to convince the readers of the *Agricultural Gazette* that a knowledge of capillary attraction is not of any practical utility to those superintending draining operations in dense homogeneous clays. As for the "New system of drainage," I treat it as the discovery of a "mare's nest." *A Roxburghshire Rustic.*

The Condition of the Labourer in Scotland.—In a report of a meeting of the Morayshire Farmers' Club, I observe Mr. Cushing, Speymouth, stated in his appropriate remarks:—"But another and worse error is, that certain people (and I regret to say some of my own cloth) in discussing the condition of farm servants, have made it a kind of political question; and while lamenting, or professing to lament, the condition of the farm servant, their true object was to strike at the master, or still better, at the landlord. I speak advisedly when I say this. They have represented the farm servant as a down-trodden serf, as degraded in morality as the cattle he tends, and worse looked after and cared for. Having drawn this dark picture, these gentlemen proceed to tell us that the landlord and the farmer are alone to blame for this state of matters, more than half the evils of which are the creation of their own prolific fancies. Their remedies are to do away with the law of entail, to break down large properties and large farms into small ones, to upset all things, and establish a universal suffrage, or something of that nature." Mr. Collie, Ardgay, stated in his remarks:—"The general assumption is that farm labourers are a more degraded and immoral class than any other portion of the community. I take exception to that I believe they will stand comparison with, and are just as moral, as any other class. If you look at the large number that are kept, and compare them with the number kept of any other class of labourers, you will find, when the criminal calendar is called, they will bear a very small comparison, and we very seldom see them in the panel box. I believe what Mr. Cushing says is quite correct—that these men are getting up a cry against the rural labourer for a purpose different from what they state it to be." The Chairman drew up the following as the finding of the Club:—"1. That the condition of farm servants has been steadily improving for many years past, and that a very marked improvement has taken place since this subject was discussed by this Club seven years ago. 2. That the cottage and bothy system appears best adapted to meet the views of both masters and servants, as possessing in many respects advantages over the practice of boarding servants in the kitchen." "This was approved of." Were farmers as a body to express their sentiments as freely as the Morayshire farmers have done, Mr. Dunlop, who has attempted by legislation to alter the relation between master and servant in Scotland, would pause before he ventured to be guided by the positively erroneous assumptions of reformers that as Parliament has interfered in regard to mines, manufactories, emigrant ships, and lodging houses, there seems no reason why it should not interfere to protect our agricultural labourers—the sons of toil—a race which forms the very backbone and sinew of the community." Landowners are not responsible for the dwindling and entire sweeping away of villages; it is the power-loom that has starved the hand-loom weavers out of the rural villages. Contrast this with Dr. Begg's erroneous statement at Liverpool, where he stated that "the villages have been swept away, and the respectable families of people expatriated to make way for such large farms worked by these bachelor colonies, the leading object being to raise the greatest amount of rent at the smallest possible outlay." A "Friend to the Labourer" in Morayshire has stated that "servants are neither so industrious, so temperate, so respectful, nor so trustworthy now as of old; and the low state of morality among this class has in this quarter become proverbial." This is in direct opposition to the opinion of the Morayshire Farmers' Club. Modern farming employs nearly double the number of women and boys that it does men. This is a stumbling-block to Mr. Scot Skirving, Dr. Begg, and others, when speaking and writing on the requisite number of cottages for arable farms beyond the reach of male and female labourers in villages and towns. Fancy these men advocating the necessity of building family cottages as residences for the single men and women, who require to be imported, to make up the complement of labourers at 10*d.* and 1*s.* a day! It is positively preposterous describing all the social evils as the results of hiring markets and bothies. I read lately in a book by the Rev. Dr. Blakie (Better Days for Working Men), that Messrs. Pickford of London have erected a large lodging-house for the single men in their employment. There is a lodging-house attached to some of the London police stations, at least for the single men. No one finds fault with lodging-houses being provided for noblemen's male and female servants, for Pickford's men and for policemen, but single ploughmen and female farm labourers are regarded as unfit for enjoying similar privileges! Dr. Strachan's Address to Young Women should be read on the subject. Any one can procure it from Andrew Elliot, 15, Princes Street, Edinburgh, for one penny. *W.*

Ergotted Grasses and other Plants.—When Mr. Alderman Mechi's letter on Stock Diseases arising from the use of Italian Rye-grass, appeared, it struck me that in addition to the inconvenience experienced by stock, in digesting the comparatively dry woody fibre of such Grass, they had also to digest some of the ergot alluded to by Mr. Barnardistone in your last impression. I have in a former letter told your readers I was the first to grow Italian Rye-grass to any appreciable extent in Ireland. That was close on 30 years ago. I have studiously watched its growth in various parts of Ireland ever since, and have never failed to discover it ergotted more or less when allowed to stand for seed; the extent of such ergotism, if I may use the word, being in proportion to wet or dry state of the summer months during its maturation; rarely when wet did it appear to any great extent, but frequently when dry, as is the case with many other Grasses. But whether it is, that our climate is on the whole more moist, and our Grasses as a consequence more succulent, I have never witnessed in cattle inconvenience from its use except in very dry seasons, and then such as I have found, or fancied I have found, to arise from the use of some other Grasses also causing constipation in both sheep and cattle, and this frequently on some farms more than on others lying quite contiguous to them, and to an ordinary observer, in all respects of a nature, both in soils, subsoils, and produce, natural and artificial, similarly characterised. When such Grasses were cut in a comparatively green and rather succulent state for soiling, I have rarely witnessed any such inconvenience—never at all when the Grass was obtained from land irrigated with water suitable for such purposes; for we have in Ireland, as I suppose you have also, waters which, when run over pastures or meadows, would not only greatly diminish the quantity but sadly deteriorate the qualities of the herbage. A strange case of slow poisoning by ergotism some time ago went the rounds of some agricultural papers. I do not remember having seen it noticed in yours. There are, as authentically reported, in one of the finest Grass-producing districts of that most luxuriant Grass-producing county in Ireland, the rich county of Meath, some fields on or contiguous to the demesne of Lord Dunsany, whose Grasses, Clovers, Vetches, Oats, Potatos, and I believe even Turnips, Mangels, and Carrots, when eaten by cattle and horses, exclusive of other pods produced elsewhere, will cause such a disease in both varieties of stock, as will cause the hoofs and horns to fall off the one, and loosen if not cause to fall off the hoofs of the other, and leave all as bare of hair on tails and manes as if they had been affected with the most virulent mange. The old people and children who eat the Potatos or bread or stirabout made from the corn, are said to lose their hair and nails and become otherwise physically debilitated [?!] When speaking with Lord Dunsany's steward on the subject some time ago, I questioned him on the character of the soil, subsoil, on drainage, subsoiling, general manuring and management, top-dressing, irrigation, &c.; and all he could satisfy me was, that all these things, he, as an excellent practical farmer, had duly attended to, and as far as he knew, met the most strict attention. Now, sir, we have in Ireland—and as an Irishman I am proud to say it, without I hope any vain boasting—as good practical and scientific men, comparatively speaking, as any other part of Europe can boast of; and as our papers have failed to excite their attention, permit me without apology to call on Mr. Baldwin, the excellent practical and scientific lecturer on agriculture to the Board of Education in Ireland, and one of your excellent professors at Cirencester. I call on Sir Robert Kane, the director of the Museum of Irish Industry; and on Dr. Sullivan, one of the lecturers there as well as Professor of Chemistry to the Catholic University, to which I will add, if I can so far presume on the attention of a gentleman to whom I am personally an utter stranger, Professor Jukes, of the Geological Department of the Museum of Irish Industry, to have this mysterious affair duly investigated. Each of these owes it to the cause of science, to our common humanity, to discover this cause if possible, and design a remedy against such evil effects. *Edward Carroll, Dublin, August* 27. P.S. Since the above was written I have read "the Jottings," by W. J. P., for whose remarks on Ireland, I, as an Irishman, beg to thank him—even for his burlesque description of the use of Irish "Docks," and our laundresses mode of drying the tourist's clothes. I could, and if spared, may hereafter give your readers, if they wish to have them, some notes purely Irish, and even more grotesque than those good-natured remarks of your intelligent, and I am sure, well meaning correspondent "W. J. P." *E. C.*

Societies.

ROYAL AGRICULTURAL OF IRELAND: *The Sligo Show.*—The following report is abridged from the *Dublin Farmers' Gazette*:—We must impress on the Society and its well-wishers the importance of having some Special Prize of more than usual value, to be competed for at the annual shows. The Purcell Cup is much missed, and, if a donor cannot be found willing to have his name honourably connected with the Society and with Irish agriculture in this manner, surely there would not be the slightest difficulty in making up sufficient funds by subscription to procure a cup. The Cork cups, in connection with the sheep classes, have done much good to the Society's shows, and to the

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country, let us, therefore, have, if not a Purcell Cup, an "Hibernian Plate" to be competed for in the cattle sections.

The Short-horned class, which is always the leading feature in all our gatherings, from the Royal itself down to the humblest "local," presented but little to interest one, as the various sections were brought out for the inspection of Messrs. Wiley, Thurnell, and Wetherall, jun., on Wednesday morning. In fact, we have often seen a better turn out at a local show than that which appeared at Sligo, if not in point of numbers, certainly in that of style and quality. The bull selected as the 1st in the aged section—Young Craven Hero, belonging to Mr. Joshua Kell—is a short-legged, thick bull, but very light behind; and the 2nd bull, Mr. Cox's Nero, with no pedigree, is slack at the girth, has a drooping, bad rump, and is all through but a coarse animal. The 2-year old bulls were better; the first on the list being Mr. Conolly's Royal Ranger, which had been the 2d prize yearling at the Royal Dublin Spring show last year, when shown by his breeder, the late Captain Ball. The yearling section contained some very inferior animals, which do not promise much for future generations, if their career as bulls is not speedily terminated; but the 1st bull in the section would not be easily passed over anywhere, and in fact, he had been a commended bull at the last Spring Show of the Royal Dublin Society. The bull we refer to is Star of the West, belonging to Mr. Low, Kilshane, Co. Tipperary.

Turning now to the female sections of the Short-horned class, those sections which have been graced by so many first-rate and really grand animals at former shows of the Society, we found first of all the cows, presenting a useful lot for ordinary purposes, without anything remarkable. In the 3-year old heifers Mr. Barcroft won easily with his Mysie the 19th, the second 2-year old heifer at the Kilkenny Royal, and the first 3-year old at the last Spring Show; Mysie being also the "reserve" in the award of the gold medal. She is a heifer of great substance, with a good rib and quarters. The 2nd in the section was Mr. Wood's Bessy, a strong, useful, good-backed heifer. Mr. Barcroft had another very easy victory in the 2-year old section, the first of that lot, as well as the winner of the gold medal as the best of all the prize cows or heifers exhibited at the show, being the Maid of Rocklands, whose winning at the Stirling Show of the Highland and Agricultural Society of Scotland we recently recorded. She was also the gold medal heifer of the last Spring show, as well as the 2nd in her section at the Kilkenny Royal, so that, young as she is, for she is just two years old, she has done her part well in supporting Mr Barcroft's name as a successful exhibitor. The 2nd prize was given to Mr. Kell's Rose, a somewhat plain heifer. The yearling section was headed by Mr. Adamson's Mab, a nice, level heifer, come of a winning line of blood, being descended from Matadore, Pro-bono-Publico, and Pat. In the heifer calves Kilbogget was again at the top of the tree, Mr. Barcroft winning with his Muslin, a promising calf by Chief of the Harem, a son of Mr. Langston's Lord of the Harem, the 2nd aged bull at Battersea.

The Herefords as a class were good, better so, taking them all through, than the Short-horns; and we must say that the Society should do more towards the encouragement of those gentlemen who have been at so much expense of late years in introducing the best Hereford blood into Ireland than it does at present, only one premium in each section being considered sufficient for a class of stock second only to the Short-horns, and not even second in the estimation of many as graziers' stock.

Passing on to the other breeds, Mr. Owen, of Blesinton, clears all the prizes in the Polled sections, with his bull Sir John, bred by Sir John Sinclair; his 6-year old cow from the Malahide Castle herd, and his 2-year old heifer, bred at Blesinton, and come of the best blood in Angus. Mr. John Borthwick got a prize for his well-bred Ayrshire bull Royal Charlie, and 1st prize in the young heifer section with his Bonnie Bell, the same heifer which took the 2nd prize at the last show of the North-East Society. In the Kerry sections, Mr. James Brady, so long a successful exhibitor, when acting for the late Lord Charlemont, made his *début* at Sligo on his own account, and with as much success as any man could possibly wish to have, for he carried off everything. His bull Young Knight is an extraordinarily good animal, thick and deep, with a great shoulder and good back, and is at the same time a very nice handler. So good is he that the judges were all taken with his appearance, and put him down as the "reserve" bull for the gold medal as the best of all the prize bulls of any age or breed.

Horses come next in the catalogue, beginning with those adapted for agricultural purposes, and the aged stallions were again headed by Mr. Mill's Colonel, which, as some of our readers may remember, was the winning horse both at the Kilkenny Royal and the Royal Dublin show. Colonel also got the special medal as the best stallion of any age exhibited. Mr. Mooney's two-year-old stallion, Sir Patrick, by Sir William Wallace, apparently out of the same dam as that of Welshman, got the 1st prize in his section, no 2d award being made. Mr. Mill's Clydesdale mare Bell, with a foal at foot by Lord Clyde, and in foal to the Colonel, got the 1st prize in her section, and the 50*l.* challenge cup awarded to the best of all the stallions, mares, fillies, or geldings exhibited, being the second time she has gained it, having been the cup mare last year at Kilkenny.

There was a very fair entry for the "Croker Challenge Cup," specially set apart for the best weight-carrying thorough-bred stallion; and after a good deal of consideration, the judges picked out Sir Percy Nugent's Hospodar as the best of the lot. Hospodar got the gold medal at the National Horse Show last April, as having the "most quality" of any of the stallions exhibited on that occasion, although another horse, which did not appear at Sligo, was put first at that time.

The entry of Colts or Fillies for Hunting purposes, and up to at least 12 stone, foaled on or after 1st January, 1860, was large, but some of them were rather light.

The show of sheep was short of what we have seen it at other times, but, on the whole, what were there were good. Mr. Marris got the 1st prize in the section of shearling Leicester rams, and also the challenge cup, with a sheep which had been the 2d shearling at the Newcastle Royal. This shearling is a good backed sheep, and particularly good in the girth, with a full bosom, and superior rumps. The 2d shearling, which belonged to Mr. George Turner, is a very large sheep of his age, and [well] put together. There is a deal of good about Mr. Marris's 3d prize shearling, though he is not so thick, nor yet so sweet a sheep as his owner's cup ram. Mr. Turner had another of his shearlings highly commended. In the rams of any other age, Mr. Turner led the way, and also got the 3d prize in the section, the intermediate position as 2d being filled by one of Mr. Marris's rams, two highly commendeds falling to Mr. Owen's lot. In shearling ewes Mr. Marris took both 1st and 2d prizes, his 1st pen being a level lot of handsome sheep, while the sheep in the 2d pen had scarcely as much quality. Mr. Owen's commended shearlings were nice sheep, both in mutton and wool. Mr. Seymour Mowbray, who took the prize with his ewe lambs last year at Kilkenny, was similarly placed at Sligo, with a pen of neat lambs.

Mr. Beale Browne, the champion of the Cotswolds, had it again all his own way in the sections in which he exhibited, taking everything on the prize list, his three-shear ram being one of the largest sheep which has ever come under our notice. His shearling ewes were particularly good. A Sligo exhibitor, Mr. W. C. Chambers, was the winner in the ewe lamb section.

In Southdowns Mr. Marris was the only exhibitor, every one he showed being good sheep of their kind, with plenty of size to please anybody. The Shropshires were well represented, and Mr. C. W. Hamilton took the 1st and 2d prizes in the shearling ram section, together with the Cork Cup, being the second time in succession that it has been awarded to that gentlemen.

In the next section, that of rams of any other age, Mr. Hamilton was again the winner of the 1st and 2d prizes, the 1st prize ram being the same grand sheep which took the cup as a shearling at Kilkenny, and the 1st prize at the Stirling Show of the Highland and Agricultural Society.

The show of Swine was neither so large nor yet so good as the Irish Royal should have, nor yet as good as it has had; and, without going into particulars, we shall merely mention the following as being the principal lots, namely, the aged Berkshire boar from the Glasnevin Albert Farm, the young sows of that breed exhibited by the Right Hon. John Wynne and the Commissioners of National Education, and the two lots of Berkshire breeding pigs, four months old, exhibited by Mr. William Joyce.

Implements.—The implement yard was by no means so well filled as usual, several firms who used to be prominent exhibitors being unrepresented, except through the medium of agents. Still, it was not the least attractive part of the show in many respects, and considerable excitement was produced by the competition which took place for a special prize of 30*l.* for the best machine for scutching and dressing Flax, the conditions being "that it be simple in construction, moderate in price, capable of being attached to the horse gear of an ordinary threshing machine; that an intelligent farm labourer, with a little instruction, can easily work; and if not portable, that can be easily set up."

The machines entered for competition were Friedlander's patent double scutching machine; John Gray & Co.'s (Uddingston) improved Flax breaking and scutching mill attached to a threshing mill; William Graham's (Dublin) patent Flax breaker, and his improved Flax scutching machine; and David Nevin's (Kilmoyle, Coleraine) patent scutching machine. After a lengthened trial, the judges awarded the prize to Messrs. John Gray & Co., who are engaged in putting up a considerable number of their machines in the north of Ireland.

Farmers' Clubs.

Hexham.—This Society was founded by Mr. John Grey, late of Dilston, and from its records we extract somewhat condensed the following paper on "Leases," read nearly 9 years ago by Mr. Grey—as a capital example of wise advice founded upon a long experience.

The subject which I have undertaken to introduce to-day is, "The relative duties of Landlords and Tenants." It would be a very trite definition of the terms landlord and tenant, if I were merely to tell to a Farmers' Club, that one is the owner, and the other the occupier of the soil—names which are continually in your mouths, and facts as familiar to you as household words. But, when I come to speak of the duties of each, I can fancy that some may say, "We know well what is expected of the tenant—obligations are laid on him by the landlord which he is required to fulfil—but who can impose any on the landlord—'can he not do as he will with his own?'" Be assured, gentlemen, there is much fallacy in that aphorism. Obligations, as strong as laws, arise on all sides, to fetter his will, if it be capricious, and to control his conduct—obligations connected with his family interests, with his social position, and with his character in public estimation—all tending to that result, which experience in a free community teaches, that he consults his own interest most surely and permanently who gives due consideration to that of others. Before entering particularly into the duties of each, as the connection exists between them in our times, it may be allowable to look back, and shortly to trace the origin of their respective positions.

In early times, or in the settlement of unoccupied countries, men became owners of land by royal grant, by conquest from their weaker neighbours, or by clearance. In modern times, it is obtained by inheritance or by purchase. In the early periods of our country's history, as in less civilized countries still, the chieftain held his lands by strong hand against innovators, and the inferior inhabitants were maintained as serfs to serve for defence or aggression in war, and for hunting and field labour in times of peace. Countries so circumstanced were necessarily thinly peopled. As civilisation advanced, and society became settled, the owners of large domains could not occupy and cultivate them under their own eyes and management, but resorted to the mode of letting them off in parcels to their retainers. The serf who had hitherto yielded his labour in peace, and his life in war, for the precarious support and protection which he derived from his chief, altered his condition, and took a portion of land to occupy: first, paying for it in the shape of produce in kind, and in personal service: then, as money came into use, rent resolved itself into a stipulated money payment, and the relations between landlord and tenant became recognised and defined. Thus, out of that feudal state, by degrees, rose the system of letting lands on lease to tenants, and bringing to bear on the productive powers of the soil, the industry, skill, and capital, of a large body, most influential and important, as on their exertions mainly depend the support and prosperity of the nation at large. A twofold application of capital is thus brought to bear on the all important operations of agriculture. The original value of the soil is vested in the landlord, who also supplies, or ought to supply, the capital fixed on the land in buildings, fences, embankments, and all substantial and permanent improvements, which do not alter with, or depend upon the changes of tenancy; while the tenant, again, employs what may be called the floating capital, working upon the other, and making it productive. Thus a system of reciprocal aid and obligation is created and acted upon, so familiar to us now, that we are apt to lose sight of the fact, that it is both artificial and conventional. The landlord looks to have his property maintained in value, and restored to him without deterioration, though out of his own management; and the tenant requires security of possession for the outlay of his capital, and for the perfecting of his plans of improvement. Other kinds of property there are, which may be let on lease, and worked by speculators, but they differ entirely in character from land. For instance, a bed of coal or a vein of lead ore is let to a company on certain conditions. When that bed or that vein is exhausted, the property is extinct. It has been purchased and paid for by one party, the benefit has been received by the other, and the income from that source is at an end. Not so with land; its value is perpetual. We return to it from year to year to claim its produce; it is grateful to us, if we are kind to it, and remunerative, in proportion as we treat it with skill and liberality. It is this unceasing value and perennial productiveness of land, which call for restrictions and regulations as to its management, sufficient to secure its owner against any unreasonable drain of its fertility while out of his power; and, on the other hand, require for the tenants such security of tenure and such liberal conditions, as shall afford him all reasonable prospect of a suitable return for his capital, skill, and industry, as well as an inducement to use his best efforts to keep its productive powers in active and constant operation.

The arrangements between landlords and tenants are still, in many parts of England, left to be settled by customs and rights, or to what is called "a good understanding" between them. Nothing can be more creditable to the character of both parties than the very common existence of this "good understanding" and long-continued connection between the owners and occupiers of land; but when we consider that land is, in most hands, a saleable commodity, and that the uncertainty of human life, in all cases, makes it doubtful how long the parties who now go on harmoniously may live to act together, there can be no doubt of the prudence on the part of the tenant, and the justice on that of the landlord, in having the rights and obligations of both defined and secured by a plain legal document, termed a lease.

In districts which have long been enclosed and cultivated, and where no expensive improvements are required, annual occupation is attended with less risk and inconvenience than in others, and it is unquestionable that where such custom prevails, agriculture is found to be in the most languid condition, and intelligence among farmers at the lowest ebb. It was remarked by that distinguished writer on agriculture—Arthur Young—many years ago, "Give a man a permanent interest in a bog, and he will make it fertile; but give him a lease of a garden for a year and he will leave it a wilderness." He is the best tenant who treats his farm as if it were his own property, and he is likely to do the most for his land, who has the longest prospect of enjoying it. There are estates and those of great extent, so bound up by mortgages, entails or settlements that the owners have it not within their power to act the part of liberal and improving landlords, because the money they ought to expend on their property would but increase the fortune of the heir to the privation of other members of the family. To remedy this evil and help forward the good work of national improvement, the legislature has wisely come forward to make advances of money for the execution of certain beneficial works, or to give a guarantee to public bodies who do so, or legalised terms of repayment, as preferable claims, resting on the property for a given number of years; thus helping owners who cannot do so themselves to contribute to their own and the public benefit. For this act of the legislature the country may be grateful—and indeed some

compensation was justly due from legislatures, for the evil which their acts at former periods entailed upon it, by attempts to regulate the price of produce, and to set at defiance that unerring law of demand and supply which, when left to its natural operations, is as sure and steady in action as the law of gravitation, or any other law in the phenomena of nature which science has proved or developed. Unfavourable seasons will produce scarcity, and circumstances over which legislation can exercise no control will create high or low prices, but if all attempts to regulate production and price were futile in former ages, much more vain and nugatory would they be now, since the facilities of intercourse throughout the world and the spirit of enterprise which animates its merchants give such ready means of conveying the surplus of one country to supply the wants of another. A better light has arisen on our political horizon, and a sounder system prevails in our day. Landlords and tenants meet on more equal, because on more natural grounds. The artificial system has been pronounced untenable. We no longer trust to legislative enactments, or await with anxiety the result of Parliamentary divisions, but each party sets himself with determination to act his part in the work of progressive improvement, the great end of which is to increase produce and lessen its cost. The landlord takes upon himself to supply buildings, drainage, and other things essential to that object, and the tenant to apply the floating capital, skill, and industry, necessary to derive the greatest benefit from his occupation.

One result which it is reasonable to expect from this state of things is, the encouragement of spirited tenants on long leases, and the gradual abandonment of the custom which still prevails in many, though those the worst cultivated districts in England, and not at all in Scotland, of holding land on annual tenancy.

That the tendency is now to engage in long leases, I have practical proof in the recent letting of farms, and that it is reasonable, I shall try to demonstrate hereafter. I have been accustomed to think, where no unusual outlay was required for improving a farm, that 15 years was a sufficient length of term for an owner to relinquish the power over his property, and for a tenant to have a fair course of crops, and in holdings of small size. I see no need to alter that opinion. But in offering two large farms to let last autumn, believing that tenants of large means are not willing to remove and establish themselves in concerns demanding great capital without the prospect of lengthened occupation, I offered them on leases of 15 or 21 years, as parties might propose. The result was, that of 10 proposals for one farm, which was let eventually at a rent of 2000*l.*—only three offered for both terms, and mark the difference of the offers. One for 15 years was 1630*l*, but for 21 years 1760*l*, viz. 130*l.* more for the longer time during the whole lease. Another for 15 years was 1620*l*, but for 21 years 1730*l.*, being a difference of 110*l.* per annum. Another for 15 years was 1400*l.*, and for 21 years 1626*l.*, making the great difference of 226*l.* The other seven competitors offered only for a term of 21 years. Then for another farm offered on the same conditions, and let for 1305*l.*, of six parties, not one proposed for the shorter term. Having stated that the tendency of the times is for long leases, I shall now venture on another assertion, and say that the tendency is equally for large holdings. It used to be the argument against the policy of large farms, that there was less competition for them, in letting. I must again appeal to facts and practical demonstration. Of six farms which I have recently let—for one of 2000*l.* rent I had ten offers; for one of 1305*l.*, six; for one of 1050*l.*, seven; for one of 258*l*, six; and for one of 180*l*, two. Hence, then, for a large farm of 2000*l* a-year, were ten offers from highly respectable and eligible tenants, and for a small farm of 180*l.*, with good buildings and in good condition, only two.

I must now show some reasons for the present preference for large farms and long leases.

A great portion of the land in this country is in the hands of the aristocracy, and other wealthy proprietors, who can occupy only a small part of it themselves. The prevalence of these large estates in few hands curtails the number of the middle class of landowners which is found in many countries, whose place, however, is well substituted in this, by the large occupiers to whom I am now adverting. The capital, which would go but a short way in the purchase of land, is sufficient to place an active man in a highly respectable and most useful position as the tenant of a large farm, and the taste or ambition which elsewhere lead to the purchase of a small estate tend here to the possession of an extensive occupation. It is reasonable to think that a man planting himself and family down upon land on which he is to invest a large capital, and for which, by daily attention and habit, he is likely to conceive a strong local attachment, should like to cherish the idea of settling there for a long period of his life. But, besides those feelings of local interest and attachment which grow spontaneously in the human breast, the current of events and free state of society tend strongly to the concentration of large operations, on the ground of rural and political economy. We have a continual increase of population, which all the efforts of agriculture hitherto have failed to feed; the rational desire of the statesman and the interests of the agriculturist are to do their utmost to supply its demand by an increase of produce, and by obtaining that produce at a diminished cost. The obvious means of attaining these desirable objects are to apply more skill and science to the cultivation of the land, and to effect greater economy in tillage, by a perfect division of labour and the employment of improved implements and machinery; these are only to be effected in large establishments. I am friendly to a few small farms in a district, not because I deem them profitable in a national point of view, but because they serve as steps in the ladder, for men of small means and industrious habits to mount by. Such men, at times, succeed wonderfully, but it is by dint of hard labour, poor living, and rigid economy. They can work only with the plainest and least expensive implements—various operations must be done by the same hands—horses are at times laid idle for the sake of some manual operation—corn is threshed by a machine of small power, or by the slow and monotonous evolutions of the flail, leaving a good deal in the straw, producing it in small quantities at different periods, and at last rendering it to the market in a deteriorated condition. Compare this languid and imperfect mode of proceeding with that of a farm of large dimensions and complete arrangements, where each department of labour is provided with adequate strength and under judicious management, watching the fitting season and effecting the work with expedition, by the economy of well-selected implements in the hands of skilful workmen, with able horses. Here a large quantity of corn can be threshed out at once by water or steam power, and a machine so constructed as to raise the grain, when separated from the straw, to a winnowing machine, and so fit it for market at once, all hands being kept actively at work during the time; and then the premises are locked up, and other work is resorted to. In the same building with the threshing machine corn is ground, and vegetables and roots steamed or boiled for the feeding of stock. These sources of economy in labour and in the preparation of food are out of the reach of the small occupier. Another source of profit is also in great measure out of his power. You hardly find 1000 sheep in a whole county of small tenements, which one large farm will supply; but then they require attendance, and that the small farmer cannot give, while on a large scale it is the sole occupation of a shepherd, who in most parts of this county, so well adapted for sheep, is the most essential and profitable of the farm servants. A full complement of sheep on suitable land and well managed is the safest stock that a farmer can possess; producing a return of wool as well as mutton, one of which may not be depressed in price if the other is; besides which, sheep are the most effectual fertilisers of the land which they occupy. These are some of the grounds on which I found my opinion, that the tendency of circumstances now is in favour of long leases and large holdings; of which I have given you a practical illustration, as well as a proof that, notwithstanding the difficulties and depression which agriculture has of late years experienced, capital is not wanting in the hands of farmers, any more than the spirit to invest it on suitable opportunities.

A very important subject which comes to be settled between landlord and tenant is the due regulation of the rent which the latter ought to pay for the privilege of occupying the land of the former.

In ancient times, as has been already stated, the rent, or render, was given in kind and in personal service—the tenant yielding so much produce to the lord and doing his work in conveying fuel from the wood or bluhog, in reaping his corn, making his hay, and rearing animals and poultry for his use. These in time were converted into cash payments, and the letting of land and paying for its occupation assumed the character of a commercial transaction. In consequence of the great fluctuations in the price of grain and of the consequent value of land, of late years a partial return has been made to the old system—not of actually paying rent in kind, but of converting it into the money value of a certain amount of produce, according to the average price of the time, which is called "a corn rent." This has not proved generally satisfactory to the tenant, for when prices are low little remains for his profit; and when high, as now, enabling tenants on money rents to receive a good surplus, he finds himself giving a high rent to his landlord and making much less to himself than his neighbours are realising. There can be no doubt that money is the most convenient medium of intercourse, and the best representative of value, and that those tenants act the most prudently who are careful of their profits in good times to be prepared to meet others less favourable, or who, having security of tenancy, lay them out in improving and enriching their land, so as by an increase of produce to be able to meet a fall of prices.

MANCHESTER AND LIVERPOOL.—The Society's 17th annual Show was held on Sept. 7 and 8 at Knutsford. Some of the departments, including those for cheese and horses, are unprecedentedly large. Knutsford had raised 500*l.* towards the expense of the meeting, of which 300*l.* augment the show premiums of the Society. Altogether the Society offers 365 premiums to be competed for, the total amount given being this year 911*l.* The entries comprise 108 horned cattle, 269 horses, 141 sheep, 96 pigs, 164 poultry, 110 dogs, 92 cheese and butter, 95 seeds, grain, and roots, 2 saddlery, 1216 implements, and 206 flowers, &c. The show of horses is good, in addition to being the largest remembered at the meetings of this association. Being held in the heart of Cheshire, the show of cheese and butter, as might be expected, is particularly worthy of attention. The total number of entries is this year 2391; last year, at Birkenhead, they were 3150; in 1862, at Warrington, 1740; in 1861, at Ashton-under-Lyne, 2150; in 1860, at Bolton, 1623; in 1859, at Edge Hill, Liverpool, 1597. There were nearly 14,000 visitors upon the ground during the first day, and the receipts at the gates were 700*l.* The annual dinner was held on the showground, about 200 persons being present. Lord De Tabley, the president of the Society, occupied the chair. The Chairman proposed "Success to the Society." He said that at the establishment of the Society by the union of the old societies in 1848, there were only 310 entries; this year there were 2391 entries—a number unprecedented, with the exception of the show held at Birkenhead. There was an increase in the number of implements and of that machinery which was devoted towards the improvement of agriculture. The cost of labour was increasing, and there was a natural tendency to absorb labour in large towns. Agriculturists must therefore economise labour, by getting machinery to do their work and by taking advantage of the improvements, not only in chemistry, but in any mechanical invention which the spirit of the times might bring under their notice. But the great question of the day was the use of the sewage of large towns for irrigating land. He hoped the time would soon come when that sewage would be used more than it was now for fertilising their fields.

Reviews.

Agriculture, Ancient and Modern, Nos. 3 and 4. J. Virtue, Ivy Lane.

This work continues to promise on its completion to be a most complete picture of the art of cultivation as practised by all nations. The present numbers are occupied with a continuation of the history of European agriculture, and with an account of the present state of the science relating to farm practice. The following is an account of agriculture in the Campine, the large sandy plain of the provinces of Antwerp and Limburg, in Belgium.

"The soil is one continuous covering of driving sand, twisted up by the eddies of wind into large mounds, or driven in clouds before it. In some parts it is thinly covered with heath or marshy plants intermixed with pools of water, stunted Firs, or Brushwood. Yet in this desolate and barren region the industry and perseverance of the Belgians have succeeded in reducing the apparently incorrigible waste to fertility; and here and there you meet with their little farms, fenced in by sand heaps from the surrounding desert, and smiling within its boundaries with verdure and brightness. These farms are multiplying continually, and bid fair, at no distant period, to convert the sterile desert into a garden, the howling wilderness into an abode of happiness and plenty. The chief means of effecting this important change is irrigation, which is greatly promoted by the numerous canals that have been constructed at a large expense. Extensive tracts of meadows have been formed, and roads are driven in every direction through the plain, from town to town, for the accommodation of the inhabitants, the canals being the common medium for conveying away the produce to, and bringing home the manure from, the different towns. Nothing, in fact, could be effected without these two auxiliaries, as the Belgian farmers are well aware, whose motto is, 'With the water, the Grass; with the Grass, cattle; with the cattle, manure; with the manure, everything nearly which one desires on a farm!" Since the formation of the Campine Canal nearly 5000 acres have been brought under cultivation in the commune of Arendonck alone, where large farms have been established, and hundreds of head of cattle are fed, and dairies are formed. The value of the land in the Campine, where these improvements or creations have been effected, has risen from almost nothing to respectable prices. The best heath land, that sold previous to 1830 at 20 francs per hectare,* will now bring from 150 to 250 francs. Many of the richest gardens and most fertile farms in the neighbourhood of the towns of the Campine were, 10, 20, and 30 years since, tracts of barren heath and the dreariest sand. Wherever manure has been easily obtained, there it has been the most carefully preserved, and most prudently applied; and in the history of the facilities of obtaining abundant supplies of manure you read the history of the culture of the deserts of the Campine.

"The soil of the Campine varies from a light white sand, through which the water filters as through a sieve, to a sandy loam. The former is planted in the first instance with Fir trees and Broom, the *débris* of which, annually deposited, forms in time a vegetable mould, and consolidates the surface. Loam or clay is brought in aid, then manure, and thereby a crop of Potatos, or Buckwheat, or Rye is obtained. From this stage the process gains strength continually, until the defects of nature give way, and victory and success crown the efforts of the indomitable invader.

"In some parts the yellow sand lies upon a hard crust called 'tut,' and in England iron or moor-band pan, under which is a good loam. This is a more promising soil, but it involves the labour of deep trenching with the spade, to bring the loam and pan to the surface, when the frost is allowed to ameliorate them, after which they mingle intimately with the surface soil, and at once, with the addition of manure, form an excellent staple for cultivation. Potatos are first taken, then Rye with Clover. The land is trenched upwards of 27 inches (70 centimetres) in depth with the spade, the turf being buried with the Grass uppermost, to form in its decay a fertiliser for the future crop. The Campinoise farmers are said to excel even the Flemish in the collection and preparation of manures. All the cattle are stall-fed, and every description of vegetable capable of being reduced to manure is employed as litter, with which mould is also mixed to increase the bulk. The whole is kept under cover until it is wanted to be spread upon the land. An excellent compost for top-dressing the meadows is made by placing layers of vegetable earth on the stable floors to absorb the urine, to be afterwards mixed with other manure. The best rotation of crops recently introduced is as follows:—1st year, Beetroot; 2d, Colza; 3d, winter Barley; 4th, Rye with Clover, or Oats with do.; 5th, Clover; 6th, Wheat. This, however, is exceptional, as in general the cereal crops are too numerous, to the exclusion of root crops that require hoeing, so that the land is apt to become foul, which in some seasons materially affects and reduces the produce.

"Rye is the principal cereal cultivated in the Campine. The seed is usually brought from a distance, and is sown at the rate of about 2¼ bushels per acre. The average crop is about 24 bushels, but instances are related in which, by the application of an abundance of manure, as much as 74 bushels per acre have been obtained. Wheat has hitherto been an exceptional crop, but is now beginning to be generally cultivated, being rather more largely manured for than Rye. The produce ranges from 20 to 28 bushels per acre. Barley is very little cultivated, but Oats and Buckwheat both form important articles of produce. The former yields from 33 to 66 bushels per acre; the latter from 28 to 33 bushels."

In the 4th part of the work we have a review of animal and vegetable physiology, of the food and diseases of plants, and of agricultural chemistry and geology and meteorology. And then commences a description of our domestic animals. The work continues to be ornamented with well-executed engravings, interesting, however, rather as artistic garnishing of a well got-up volume than as instructive illustrations of the various subjects treated in it.

* About 6*s.* 9*d.* per acre.

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Anemones, Crocuses, Tulips, Gladioli, &c., also very low in prices, as per CATALOGUE, which may be had gratis and post free.

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Early orders earnestly solicited, as the supply cannot possibly meet the increasing demand.
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ROBERT PARKER begs to announce that his NEW GENERAL CATALOGUE, containing Select, Descriptive, and Priced Lists of New, Rare, and Beautiful-foliaged Plants, Azalea Indica, Conifers, Exotic and Hardy Ferns, Fruit Trees, Grapes, Exotic Orchids, Greenhouse and Stove Plants, Miscellaneous Hardy Trees and Shrubs, Rhododendrons, Roses, &c., Hyacinths, Tulips, Gladioli, and other Bulbs, is now published and will be forwarded to applicants.
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DUTCH HYACINTHS and EARLY TULIPS for FORCING.
12 Early Showy HYACINTHS .. .. 6s.
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These Collections include only Bulbs of first-class quality.
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Seed Packets, 2s. 6d. and 5s. each.
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See other Advertisements of the older kinds of fimbriated Primulas.
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B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens. A DESCRIPTIVE and PRICED CATALOGUE post free on application.
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New Hardy British Ferns.
J. IVERY AND SON have the pleasure to offer the three undermentioned distinct and beautiful varieties, in good plants, showing their true characteristic forms, 10s. 6d. and 21s. each.
POLYSTICHUM ACULEATUM ACROCLADON,
ATHYRIUM FILIX-FŒMINA MUCRONATUM,
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(They have each received First-class Certificates from the Royal Horticultural Society, and Royal Botanic Society.)
Likewise ATHYRIUM FILIX-FŒMINA PARSONSIÆ, VERNONIÆ, and FISSIDENTO-EXCURRENS at 5s. each.
Dorking, Sept. 17.

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JOHN SALTER invites the Growers of BEDDING PLANTS to visit his Nursery and inspect this beautiful novelty, which he will send out early in 1865. It is very dwarf, and of exceedingly close habit, forming a compact mass of silvery gray foliage, which it retains both in summer and winter; for edgings, ribbon borders, or pots it will be found one of the most useful dwarf plants ever offered. Orders are now being taken for the Spring at 9s. per dozen. Price per 100 upon application.
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WM. PAUL (Son and Successor to the late A. PAUL) respectfully invites an early inspection of the following leading Plants, &c., cultivated in his Establishment. The soil of these Nurseries being cool and strong, the trees &c., have suffered nothing from the recent dry weather; having been frequently removed, they are in the finest possible condition for transplanting.
HARDY FLOWERING TREES, SHRUBS and EVERGREENS.—One thousand species and varieties selected for the beauty or fragrance of their flowers and foliage, and for the effect they produce in the landscape, many handsome specimens of large size.
FRUIT TREES, for the Orchard, Garden and Orchard House, both in and out of pots.—Many thousands of fruit-bearing and other trees (including Grape Vines), healthy, handsome, and warranted true to name.
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BULBS.—Hyacinths, Early Tulips, Crocuses, &c., the choicest of the stock from the most celebrated Bulb farms in Holland.
His collections of these, exhibited before the Royal Horticultural and Royal Botanic Societies in March last, furnish the best evidence of their quality.
PRICED CATALOGUES free by post.
Orders by post promptly attended to. Entrance from the Platform, Waltham Station, Great Northern Railway, half an hour's ride from London.

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FRANCIS AND ARTHUR DICKSON AND SONS have now ready for sending out, some 1500 extra fine well ripened VINES of all the new and leading kinds, TRUE TO NAME. Many are as thick as the "little finger," and if planted immediately a season will be gained. A better lot of Vines they believe were never grown. Inspection invited. Price from 3s. 6d. to 15s. each, according to kinds and strength. List of kinds on application.
"Upton" Nurseries, Chester.

Vine Duchess of Buccleuch.
ROBERT PARKER has much pleasure in offering this distinct and valuable Early Grape, which will supply the long-felt desideratum of a White Grape with Muscat flavour, that may be grown and ripened with the same treatment as the Black Hamburgh.
The following Certificates and Prizes have been awarded at various London and other Exhibitions:—
2 Certificates of Merit.
3 First-class Certificates.
2 First Prizes in open competition for the finest flavoured Grape of any colour.
A DESCRIPTIVE CIRCULAR will be forwarded to applicants, and visitors to Dalkeith Palace Gardens during the season will have opportunities of seeing and judging of its merits, as a number of Pot and permanent Vines are now fruiting at that establishment. Orders are now being booked, and will be executed in autumn in strict rotation, the stock being limited
Strong Planting Canes, 21s. each: extra strong Fruiting Canes 42s. each. Exotic Nursery, Tooting, Surrey, S.

Fruit Trees.
B. WHITHAM begs to call attention to his very superior stock of APPLE TREES, including about 2000 of LORD SUFFIELD, RINGER GRENADIER, POTT'S SEEDLING, LORD DERBY, and GOLDEN SPIRE, which are allowed to be the very best sorts out. No grower should be without them, also many other good varieties, all at 9s. per dozen, or 60s. per hundred. A further reduction in price per thousand.
Also the justly celebrated Apple LORD CLYDE, new, of 1863, which is allowed to have no equal in flavour and keeping qualities, at 2s. each or 20s. per dozen.
Trained and Standard PEARS, CHERRIES, PEACHES, NECTARINES, &c. in great variety, at equally reasonable prices.
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WILLIAM BARRON begs respectfully to inform his friends and the public, that in consequence of his intended Removal from Elvaston to his new Nurseries at Borrowash, his large and magnificent stock of Specimen CONIFERS and other rare and hardy Plants will be offered for Sale upon very favourable terms.
His DESCRIPTIVE CATALOGUE for the AUTUMN of 1864 and SPRING 1865 will shortly be ready, when it may be had free upon application. Elvaston Nurseries, Derby.

ROYAL HORTICULTURAL SOCIETY.
FLORAL COMMITTEE.
LIST of AWARDS, September 13, 1864.

FIRST-CLASS CERTIFICATES.
ACHIMENES AURORA, from Mr. A. Parsons, Danesbury, Welwyn
ACHIMENES ROSE QUEEN, from Mr. A. Parsons
DAHLIA LEAH, from Mr. C. Turner, Slough
PELARGONIUM (VARIEGATED) METEOR, from Messrs. Saltmarsh & Son, Chelmsford
PELARGONIUM (ZONAL) LITTLE TREASURE, from Messrs. Saltmarsh & Son
VERBENA ANNIE, from Mr. Cooling, Bath

SECOND-CLASS CERTIFICATES.
DAHLIA SPITFIRE, from Mr. G. Rawlings, Romford
DAHLIA MISS ROBERTS, from Mr. C. Turner
GESNERA CHROMATELLA, from Mr. W. Bull, Chelsea

COMMENDATION.
ANTIRRHINUM (DOUBLE) GIUSEPPE GARIBALDI, from Mr. Bull.

The NEXT ORDINARY MEETING of the COMMITTEE will take place on TUESDAY, September 27, when Dr. Lindley's Prize for the best English Seedling Rose exhibited during the season, will be awarded.
THOMAS MOORE, Secretary to the Committee.

The Gardeners' Chronicle.

SATURDAY, SEPTEMBER 17, 1864.

IF anything could reconcile us to the loss of shade and shelter in the AVENUES OF THE REGENT'S PARK, concerning which some remarks will be found at p. 771 of our volume for 1863, it is the clever and beautiful CLASSICAL GARDEN which has been laid out by Mr. MARKHAM NESFIELD in the space once occupied by the innermost of the lines of trees of which they were composed. We must, however, confess at the outset that we cannot adopt the views enunciated by the *Times* as to the pernicious effects of these trees—that of rendering the park damp and dismal, a prey to ague and rheumatism, for a pretty close acquaintance with the spot, extending over many years, has certainly left no such reminiscence, but instead thereof the recollection of an umbrageous canopy which was most enjoyable, at least during those times when enjoyment could be fairly expected from it. Of course no one would think of seeking pleasure or gratification, hardly of taking a constitutional, under these trees, when they were dripping with rain-drops or while a bitter north-easter was raking their ranks, without intending to invite some such companion as rheumatism; and in this case there could be no ground of complaint if such a companion were sometimes found. All this, however, does not in the least detract from the merit of Mr. NESFIELD's classical design, or the beauty of the garden which has been laid out and planted under his direction, and which occupies a length of some 350 yards and a breadth of about 75 feet between the outer lines of trees on either side of the main walk in the southern or first division of the park, immediately adjoining Park Square.

We pass over now, a question on which there may be two opinions, namely, as to how far the elaborate flower gardens which have become the fashion of the day, are in place in the parks at all, since in the instance which is more immediately before us, the very formality of the situation invites some such formal treatment, and the gardens being bounded by the existing lines of trees, are in some sense cut off from the park proper, and at least do not interfere with its character and general features.

The western division of this Avenue Garden is the more furnished of the two, having been laid out last year, while the eastern division has been but a few months completed. The trees on the western side are consequently more established, and the arrangements altogether show more completely the intention of the designer. It is of course after all but a narrow strip on which to work, but it has been treated with much judgment and taste, as we think all who examine it will agree. It is divided into three principal parts, consisting of a central garden and two ante-gardens, the principal feature in the former being a large tazza supported by griffins and standing in the centre of a curbed bed: this being flanked north and south by a long sunk flower panel on Grass, also with a stone curb. Two features of these panel gardens struck us as being particularly happy. The first was the use of a broad line of Holly along the centre of the principal flower beds, kept even at top and just higher than the flowers, which were thus finely relieved by contrast with its dark green foliage. The second was the free use on the Grass level, of the graceful yet formal Yucca recurva, and other formal plants, such as round-headed standard Holly green and variegated, pyramidal Box, and spheroidal Thuja aurea. The flower beds in these two gardens have been this season cleverly planted, with a keen appreciation of colouring effect, and an abhorrence of gaudy glare. In one the Holly centre has been flanked on each side by Scarlet Pelargonium, purple Verbena, and orange Tropæolum, edged by grey Gnaphalium lanatum; in the other the materials have been Trentham Rose and Flower of the Day Pelargoniums, then purple Verbena, with the edge of grey Cerastium. The bright yellow of the Calceolaria, instead of being mixed up with the other colours, has been massed in circles at the end of the beds, with the effect of imparting liveliness and brilliancy without vulgarity to the whole composition. When at the best, these little parterres, round which the walk is carried, must have been very beautiful. Various other tazzas and vases are judiciously introduced so as to connect and harmonise the various parts of the design.

In the ante-gardens north and south of this the arrangements are altogether different. There is a broad central path, planted on both sides with a line of Lombardy Poplars, which are to be kept cut to a close form and moderate height; and which by the silvery flicker of their leaves break up the monotony of the too confined space, and at the same time, by carrying the eye onwards, and affording a marked contrast with the taller and more bulky trees, gives the impression of great length rather than of narrowness, and consequently of increased space. The side borders are planted with trees and dwarf shrubs arranged in lines and masses, so as to work out a picture from their different colours, forms, and habits, the principal things used at present being yellow-spotted Aucubas and Euonymus japonicus, edged with lines of green Hollies, and behind these Persian Lilacs in masses, to yield abundance of flower in spring. Here and there are groups of Berberis Aquifolium; and at other points groups of standard Thorns, Laburnums, and Almonds, are introduced so as to connect the prominent parts of the design. Outside of all is a dwarf Hornbeam hedge, planted so that the stems intersect each other diagonally in the form of trellis work.

The eastern division is so far similar to the western that there are two terminal ante-gardens leading to the central compartment, but the centre itself is differently treated, owing to the necessity of introducing angular walks to facilitate the dispersion of the crowds which occasionally congregate. This part, however, has not yet received the finishing touches, some rearrangement of the architectural ornaments and other modifications being contemplated. The eastern ante-gardens, like the western, have their lines of Lombardy Poplars, and their flanking beds of formally arranged shrubs and standard trees, among which Dwarf Box, clipped Privet, and Rhododendrons occur—of the latter the ponticums are preferred, for this reason, that their foliage does not look drooping and failing, as does that of many hybrids partaking of the catawbiense blood. On the outside, again, occurs the trellis hedge of Hornbeam.

On the western side of the garden and exterior to the avenue, a raised bank, chiefly for shelter from south-west winds, is planted with the common Lilac, this being selected as a showy shrub flowering in masses in spring. This belt might with

advantage be more broken up and extended in a westerly direction. Groups of Hollyhocks, which occur here and there within the garden, form admirable features, these flowers being particularly well suited for the purpose. It is of course impossible without a plan to explain the minute details of the arrangements in this highly artistic garden, in which there has been a very successful attempt to realise in landscape gardening something of the effect of landscape painting; but the points to which we have alluded will give some general notion of its grouping and composition, which we repeat reflect the highest credit on Mr. NESFIELD's taste, and augur well for his future career in this walk of landscape gardening.

We ought not to omit mention of a very commodious red-brick gardener's cottage designed by the architect, Mr. W. EDEN NESFIELD, and now in course of erection near the south entrance, for with its handsome gables and verandahs nestling among the trees, it will form an elegant finish to the vista in the western garden looking southwards.

While we still hope that the insatiable genius of Change, may not lay ruthless hands on the as yet shady avenues of the further park, we may observe that the small portion of ground on the eastern side of the avenue in the first park fronting the Colosseum, might with advantage be laid out as an adjunct to the garden already formed, since it is completely cut off from the more open portions of the park lying to the north and west. At present it certainly bears rather a meaningless character.

One further improvement, which would seem from its obvious fitness to have been contemplated in the original laying out of the ground, is moreover wanting, and this it is to be hoped the authorities may find ere long the means of accomplishing. We refer to the continuation of the broad walk through the gardens of Park Square and Park Crescent onwards to Portland Place, with which it lies in a direct line. Were this line opened up, London might boast of one of the finest possible continuous thoroughfares, extending from St. James's Park to Primrose Hill; and the area of the gardens of the square and crescent placed at Mr. NESFIELD'S disposal might be made to form a grand continuation townwards of his refined and classical formal garden. Here might also be found a capital site on which to erect what London is so lamentably deficient in, a pair of fountains worthy of England's metropolis.

And now, having given Mr. NESFIELD the praise which we believe to be his due for the manner in which these Avenue Gardens have been planned and planted, we may offer a remark or two as to what appears to be desirable to ensure their permanent success. First of all, he should, we think, eschew the too free use of flowering plants, the attempt, that is, to rest content with a mere blaze of flowers. With the limited breadth of 75 feet, and a row of old-established Elms and Horse Chestnuts on either side, no gardener need be told that it will be uphill work to keep flowering plants fed in such a way as to secure that vigour and brilliancy which are essential in a garden of this kind if it is to rise above mediocrity. The trees will be perpetual robbers, and no manuring, no watering, no root-cutting will compensate for this original defect of situation. This being so, we think that bedding plants, instead of being dispersed over the whole garden, should be rather confined to small compact groups here and there, such as the central parterres which we have described, in which, if necessary, the soil might be wholly renewed every year; while all other weedy flowers, such as some which have been necessarily used for mere filling up this season, should be banished altogether. Groups of Hollyhocks, and groups or lines of Gladioli, and such like formal subjects might be introduced with good effect, and if not too numerous could be specially provided for; and such of the subtropical plants as Cannas, Ferdinandas, Aralias, Dracænas or Ricinus, either planted out or plunged — singly we think, certainly not in mixed groups as now—might be induced to grow satisfactorily. For everything which has to be planted out, however, trenching and manuring will have to be resorted to, as well as watering, and that to a far greater extent than is probably calculated on. Even with the more permanent shrubs the secret of ultimate success, if success be accomplished, will lie in annual top-dressing, and mulching, and in copious watering; while for the beds of choice flowers a renewal of the soil, of frequent if not annual recurrence, will be necessary.

What we would mainly suggest, then—since this garden cannot hope to vie in the way of flowers with others more happily situated—is that a distinctive and characteristic feature should be given to it by the more abundant introduction of evergreen shrubs of varied colour and character, so as to maintain a permanent and perpetual interest. We have no London garden fit to look on in winter as well as in summer. Here is an opening for Mr. NESFIELD to win new laurels. The contiguous trees, which are his chief difficulty with respect to flowers, would by their shelter rather help him than otherwise in the case of shrubs. We are not going to inflict on our readers a catalogue of names, but as an indication that materials are not wanting to the accomplishment of this idea, we may just point to such things as the varieties of Holly with variegated leaves; the Aucubas green and blotched; the forms of Euonymus japonicus, of which one with gold variegation is most brilliant and full-toned; Euonymus radicans variegatus, one of the brightest of white-edged leaves, and thoroughly hardy; the several forms of Osmanthus green and variegated, also thoroughly hardy; the neat Ilex crenata; the yellow-veined Lonicera aureo-reticulata; Helianthemums green and variegated; Yews green and golden; and Ivies in endless variety of form and colour. Such an Evergreen Garden, for which the design is in every way fitted, might give to the Regent's Park a prominent position amongst the metropolitan park gardens, such as has been already nobly won by Battersea through Mr. GIBSON's most successful development of the idea of a subtropical garden.

— THE SOCIETY OF AMATEUR BOTANISTS, the existence of which was mentioned at p. 100 of our volume for 1863, is making progress. The Association, which was formed in 1862, was at first only designed as a bond of union between the students in different elementary classes established in the metropolis; and as a stimulus to them to carry on the work they had commenced to a practical issue. Though thus established for a special purpose, the Society is, we find, open to other amateur botanists than those for whose especial benefit it was formed. The prospectus at first circulated, and still adhered to, defines the objects aimed at, to be mutual assistance in the study of British plants by the establishment of a herbarium, museum, and library, the interchange of specimens, the communication of papers, and such other means as from time to time may present themselves. These objects are carried out by excursions during the summer on alternate Saturday afternoons, and by meetings on the evenings of the first and third Wednesdays in every month at 8 o'clock (at 192, Piccadilly), when papers are read, often of an interesting character. A herbarium (Phanerogamic and Cryptogamic) has been commenced; the nucleus of a library of practical works (chiefly local floras) has been collected; and the museum—if so grand a name can be applied to the collection of fruits, and seeds of British plants—is in embryo. In the interchange of specimens but little has as yet been done, although scarcely a meeting passes without a few desiderata being supplied to members. The conditions of membership exclude no one, of either sex, taking interest in botanical pursuits. An admission fee of half-a-crown, and an annual subscription to the same amount, have yielded sufficient funds for the working of the Society. Residents in the country are admitted as corresponding members on payment of the admission fee. In its quiet and unassuming manner this association continues to increase in numbers and usefulness. At present it contains about 50 members, and its meetings and excursions are well attended. Such a Society only needs to be better known to insure increase. It is in contemplation to commence a register of all plants, whether cryptogamic or phanerogamic, found by the members within a reasonable distance of London; and it is intended that efforts should be made, not only to record the occurrence of cryptogamic plants, but also to obtain as good a collection of them in the herbarium as circumstances will permit. In furtherance of this object, the President, Mr. M. C. COOKE, will be enabled to render valuable assistance. The Society has, we think, acted wisely in combining a field club with a chamber association.

— Though we may not perhaps meet in the VARIETIES OF BRITISH FERNS with more striking deviations from the normal form than are to be found amongst the sports of the Lady Fern—Frizelliæ, Victoriæ, and acrocladon to wit, we do not appear as yet to have exhausted the store. The cry is "still they come." Within the last few days we have received specimens of Lastrea Filix-mas, gathered at the foot of the Bird Rock, near Dolgelly in North Wales, which it is possible some may find it hard to believe to belong to the Male Fern at all, so utterly diverse are they from any form of it yet seen, even as persons may be found not thoroughly intimate with such sports, ready to question that those we have mentioned above have anything in common with the Lady Fern. Facts, however, are stubborn things, and we must claim as a fact, that the remarkable Fern now alluded to, is a veritable Filix-mas. We propose to distinguish it by the descriptive epithet RAMOSISSIMA, and in doing so we must congratulate the discoverer, Mr. R. WRIGHT, on having added one of the most distinct and interesting forms yet met with to the already numerous varieties of our British species of Ferns.

The sample before us presents these peculiar features:—Its length is about 10 inches. At an inch from the base the stipes becomes forked into two equal branches, which are bare of pinnæ for a length of about 4 inches, while the remaining portion of the length is furnished with pinnæ. This upper leafy portion consists entirely of a series of furcations, the forking being repeated at every inch or so, till the head of the frond, when moderately spread out, becomes equal to its height in breadth. On one of the two branches may be counted as many as six progressive series of furcations, and some three dozen distinctly developed points, several of which are, indeed, a good deal dilated, as if a little extra vigour would have produced another furcation. The whole head has necessarily something of a bunchy character, and the extreme points are somewhat crisped. Of course, after branching to this extent, the whole of the pinnæ on the fronds become reduced very much to the character of pinnules, varying, however, in size and form, but with a general tendency to an oblong figure, and blunt or even dilated at the top. The few larger pinnæ at the base are nearly an inch long, oblong and dilated at the apex, resembling very much the pinnæ of similar size to be found on young plants of L. Filix-mas cristata. There is no trace of fructification on the specimen which has reached us. This may be considered as the analogue amongst Male Ferns of the varieties crispum and acrocladon amongst Lady Ferns. *M.*

New Plants.

278. URCEOLINA AUREA (*ante*, p. 627).

To the particulars respecting this beautiful bulbous plant given at the page just referred to, we now add a figure, which will give a better idea of the appearance

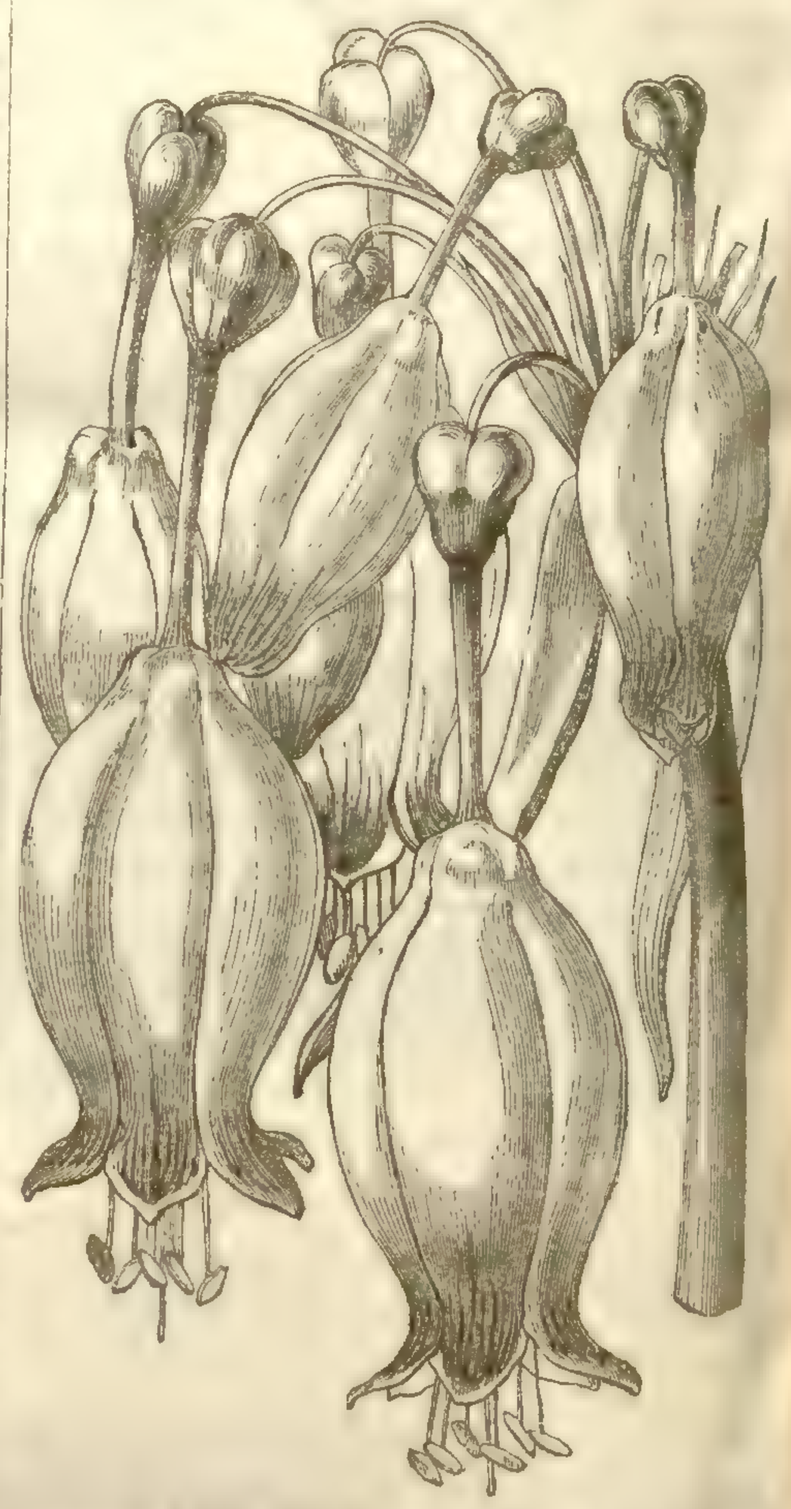

of the flowers, than can be formed from mere description. The flowers, it will be remembered, are elevated on a scape about a foot in height, and the leaves are rather broad and fleshy. Sir W. Hooker thinks it the same as the Urceolina pendula of Herbert.

BRITISH ASSOCIATION.

AT the opening meeting, which took place on the 14th inst., the new President, Sir C. Lyell, in his inaugural address, made some remarks on the subject of Thermal Springs, which, as bearing on the question of earth temperature, are not without interest to cultivators. The following are passages from the address:—

What renders Bath a peculiar point of attraction to the student of natural phenomena is its thermal and mineral waters, to the sanatory powers of which the city has owed its origin and celebrity. The great volume and high temperature of these waters render them not only unique in our island, but perhaps without a parallel in the rest of Europe, when we duly take into account their distance from the nearest region of violent earth-

quakes or of active or extinct volcanoes. The spot where they issue, as we learn from the researches of the historian and antiquary, was lonely and desert when the Romans first landed in this island, but in a few years it was converted into one of the chief cities of the newly-conquered province. On the site of the hot springs was a large morass, from which clouds of white vapour rose into the air. There first was the spacious bath-room built. On the slopes and summits of the picturesque hills in the neighbourhood rose many a Roman villa. Dr. Daubeny has remarked, that nearly all the most celebrated hot springs of Europe, such as those of Aix-la-Chapelle, Baden-Baden, Naples, Auvergne, and the Pyrenees, have not declined in temperature since the days of the Romans; for many of them still retain as great a heat as is tolerable to the human body, and yet when employed by the ancients they do not seem to have required to be first cooled down by artificial means. This uniformity of temperature, maintained in some places for more than 2000 years, together with the constancy in the volume of the water, which never varies with the seasons, as in ordinary springs, the identity also of the mineral ingredients which, century after century, are held by each spring in solution, are striking facts, and they tempt us irresistibly to speculate on the deep subterranean sources both of the heat and mineral matter. How long has this uniformity prevailed? Are the springs really ancient in reference to the earth's history; or, like the course of the present rivers and the actual shape of our hills and valleys, are they only of high antiquity when contrasted with the brief space of human annals?

It has been ascertained that the hot springs of the Pyrenees, the Alps, and many other regions are situated in lines along which the rocks have been rent, and usually where they have been displaced or "faulted." Similar dislocations in the solid crust of the earth are generally supposed to have determined the spots where active and extinct volcanoes have burst forth. Another connecting link between the volcano and the hot spring is recognisable in the great abundance of hot springs in regions where volcanic eruptions still occur from time to time. It is also in the same districts that the waters occasionally attain the boiling temperature.

The quantity of solid as well as gaseous matter transferred by springs from the interior of the earth to its surface is far more considerable than is commonly imagined. The thermal waters of Bath are far from being conspicuous among European hot springs for the quantity of mineral matter contained in them in proportion to the water which acts as a solvent; yet Professor Ramsay has calculated that if the sulphates of lime and of soda, and the chlorides of sodium and magnesium, and the other mineral ingredients which they contain, were solidified, they would form in one year a square column 9 feet in diameter, and no less than 140 feet in height. All this matter is now quietly conveyed by a stream of limpid water, in an invisible form, to the Avon, and by the Avon to the sea.

The temperature of the Bath water varies n the different springs from 117° to 120° F. This is exceptionally high, when we duly allow for the great distance of Bath from the nearest region of active or recently extinct volcanoes, and of violent earthquakes. The hot springs of Aix-la-Chapelle have a much higher temperature—viz., 135° F., but they are situated within 40 miles of those cones and lava streams of the Eifel which, though they may have spent their force ages before the earliest records of history, belong, nevertheless, to the most modern geological period. Bath is about 400 miles distant from the same part of Germany, and 440 from Auvergne—another volcanic region, the latest eruptions of which were geologically coeval with those of the Eifel. The geological map of the environs of this city, shows numerous lines of fault or displacement of the rocks, and one of these has shifted the strata vertically as much as 200 feet. I have therefore little doubt that the Bath springs, like most other thermal waters, mark the site of some great convulsion and fracture which took place in the crust of the earth at some former period—perhaps not a very remote one, geologically speaking.

Hot springs are, for the most part, charged with alkaline and other highly soluble substances, and, as a rule, are barren of the precious metals, gold, silver, and copper, as well as of tin, platinum, lead, and many others, a slight trace of copper in the Bath waters being exceptional. Nevertheless, there is a strong presumption that there exists some relationship between the action of thermal waters and the filling of rents with metallic ores. Thermal springs, charged with carbonic acid and with hydro-fluoric acid (which last is often present in small quantities) are powerful causes of decomposition and chemical reaction in rocks through which they percolate. If, therefore, large bodies of hot water permeate mountain masses at great depths, they may in the course of ages superinduce in them a crystalline structure; and in some cases strata in a lower position and of older date may be comparatively unaltered, retaining their fossil remains undefaced, while newer rocks are rendered metamorphic. This may happen where the waters, after passing upwards for thousands of feet, meet with some obstruction, as in the case of the Wheal Clifford spring; causing the same to be laterally diverted so as to percolate the surrounding rocks. The efficacy of such hydro-thermal action has been admirably illustrated of late years by the experiments and observations of Sénarmont, Daubrée, Delesse, Scheerer, Sorby, Sterry Hunt, and others. The changes which Daubrée has shown to have been produced by the alkaline waters of Plombières, in the Vosges, are more especially instructive. These thermal waters have a temperature of 160° Fahrenheit, and were conveyed by the Romans to baths through long conduits or aqueducts. The foundations of some of their works consisted of a bed of concrete made of lime, fragments of brick, and sandstone. Through this and other masonry the hot water has been percolating for centuries, and has given rise to various zeolites, spar, and siliceous minerals, all found in the interspaces of the bricks and mortar. The quantity of heat brought into action in this instance in the course of 2000 years has, no doubt, been enormous, although the intensity of it developed at any one moment has been always inconsiderable. The study of late years of the constituent parts of granite has, in like manner, led to the conclusion that their consolidation has taken place at temperatures far below those formerly supposed to be indispensable. But some geologists, when made aware of the intervention, on a large scale, of water in the formation of the component minerals of the granitic and volcanic rocks, appear of late years to have been too much disposed to dispense with intense heat when accounting for the formation of the crystalline and unstratified rocks. As water in a state of solid combination enters largely into the aluminous and some other minerals, and therefore plays no small part in the composition of the earth's crust, it follows that when rocks are melted, water must be present, independently of the supplies of rain-water and sea-water which find their way into the regions of subterranean heat. But the existence of water under great pressure affords no argument against our attributing an excessively high temperature to the mass with which it is mixed up. Still less does the point to which the melted matter must be cooled down before it consolidates or crystallises into lava or granite afford any test of the degree of heat which the same matter must have acquired when it was melted and made to form lakes and seas in the interior of the earth's crust. We learn from Bunsen's experiments on the Great Geyser in Iceland, that at the depth of only 74ft. at the bottom of the tube, a column of water may be in a state of rest, and yet possess a heat of 120° Centigrade, or 248° Fahrenheit. What, then, may not the temperature of such water be at the depth of a few thousand feet? It might soon attain a white heat under pressure.

Passing from thermal springs to a consideration of the glacial period, which it was observed was a mere episode in one of the great epochs of the earth's history, the inhabitants of the lands and seas—man so far as is known non-existent—before and after the grand development of snow and ice being nearly the same, Sir Charles briefly alluded in conclusion to two points on which a gradual change of opinion has been taking place among geologists of late years. First, as to whether there has been a continuous succession of events in the organic and inorganic worlds, uninterrupted by violent and general catastrophes; and, secondly, whether clear evidence can be obtained of a period antecedent to the creation of organic beings on the earth. On the first point, he observed although, a belief in sudden and general convulsions has been losing ground, as also the doctrine of abrupt transitions from one set of species of animals and plants to another of a very different type, yet the whole series of the records which have been handed down to us are now more than ever regarded as fragmentary. I agree with Mr. Darwin in considering them as a mere fraction of those which have once existed, while no approach to a perfect series was ever formed originally, it having never been part of the plan of nature to leave a complete record of all her works and operations for the enlightenment of rational beings who might study them in after ages. In reference to the other great question, the earliest date of vital phenomena on this planet, the late discoveries in Canada have at least demonstrated that certain theories founded in Europe on mere negative evidence were altogether delusive. In the course of a geological survey, carried on under the able direction of Sir William E. Logan, it has been shown that northward of the river St. Lawrence, there is a vast series of stratified and crystalline rocks more ancient than the oldest fossiliferous strata of Europe, or those to which the term primordial had been rashly assigned. The newest part of this great crystalline series is unconformable to the ancient fossiliferous or so-called primordial rocks which overlie it, so that it must have undergone disturbing movements before the latter were formed; and again, the older half is unconformable to the newer portion of the same. In this lowest and most ancient system of crystalline strata, a limestone, about a thousand feet thick, has been observed, containing organic remains. These fossils have been examined by Dr. Dawson, of Montreal, and he has detected in them, by aid of the microscope, the distinct structure of a large species of Rhizopod, called Eozoon canadense, specimens of which have been brought to Bath by Sir Wm. Logan. We have every reason to suppose that the rocks in which these animal remains are included are of as old a date as any of the formations named azoic in Europe, if not older.

Sir RODERICK MURCHISON, in seconding a vote of thanks to Sir C. Lyell, observed that after many years of labour among his own Silurian rocks and those which lie beneath them in Britain and the continent of Europe, he had come to the conclusion that during vastly long periods in the formation of the crust of the earth, *i. e.*, in the Lower Silurian formations, all animals (and their fossil forms are in countless profusion) belonged to invertebrate life, and that in all these long periods no fishes with back bones swam in the then seas. Descending into older rocks, and beneath the Silurian types of life, the closest researches have only revealed to us two or three species of a coralline body, and probably a few seaweeds. The discovery at present announced from still older rocks pertained, he observed, to the same low order of animals, and the very name of Eozoon canadense, or dawn of Canadian life, really seemed to point to the earliest origin of animal life that we are ever likely to obtain.

The sectional meetings commenced on Thursday.

ORCHARD HOUSES.

THIS is the 14th year of my orchard-house culture, and I can truly say the 14th of unvarying success—of pleasurable cultivation. During that period much has been said for and against this most simple mode of growing fruit in an artificial climate; prejudice has as usual with all new cultural modes, been very active, and even now sways some really good gardeners, for it is but a few days since that I heard of a very skilful Grape-grower having said, on being shown a house full of healthy trees, "It is of no use,"—meaning orchard-house culture; and R. T., one of my old friends, prunes his wall trees in cold weather in February, protects their blossoms in March, and when he happens to have a good crop he also says, "no other mode of culture can equal wall-tree culture."

Such men have always existed in England, and their ranks will never lack recruits as long as some men move on in one limited routine of thought and action. They are to be excused, for what can be more perfect than a well-appointed nobleman's garden, with fine walls well furnished with trees, Peacheries, Pineries, and Vineries? All is done well, and success is perfect. A good gardener educated under such circumstances feels that nothing more is wanted, and accordingly looks down with a degree of contempt on all other modes of culture. I sometimes endeavour to place myself ideally in the same position, and am more than half inclined to think that I should do likewise; so when I hear of an experienced gardener saying of orchard-house culture, "It is of no use," I freely forgive him, and only regret that he has not been able to acquire freedom of thought.

I find I have rambled from my intention, which was merely to give you in a few lines some account of the progress I have made in this mode of culture, flattering myself that at least some of your readers will feel interested in my ways and words. And first, with regard to the form of those structures called orchard houses: there are two, the lean-to and the span-roofed. For a few years I was quite successful in growing good Peaches and Nectarines in low lean-to houses, and I perfectly remember having seen some fine trees full of fruit in 1854 in the garden of Mr. T. Bewley, at Rockville, near Dublin, grown in low lean-to houses built with boards and asphalte felt; he has long repudiated such structures, and now calls them by the undignified name of "shanties," thus scorning his first love. Well, I soon found that much care was required to keep trees in health in such houses, and so turned to the span-roofed form, which, as a rule, I believe to be the most perfect of all for fruit-tree culture, owing to the facility with which low lateral ventilation—the great essential of orchard-house culture—can be carried out. As all my numerous houses are thus ventilated, and all are without roof ventilation, I am able to lay down some rules with the confidence gained by experience, for more healthy or more luxuriant trees were never seen than those cultivated here—no red spider ever making its appearance, even during the hot and dry weather of the past summer.

The amount of ventilation required for houses of different widths is as follows:—A span-roofed house 14 feet wide (no house should be of less width) should have a continuous shutter 1 foot wide on each side opening downwards, the lower part of the aperture 18 inches from the ground. A house of this width should be from 5 to 6 feet high at the sides, and from 10 to 12 feet high to the ridge. A span-roofed house from 18 to 20 feet wide should have a continuous shutter on each side 15 inches wide. A house of the same form 24 feet wide should have a shutter 18 inches wide. A house 30 feet wide should have a shutter 2 feet wide. A house 40 feet wide should have one 3½ feet wide. In all these cases the shutters should be continuous, to be made to open downwards, and the bottom of the aperture should be not more than 20 inches from the surface of the ground outside and inside. I have not yet seen a single span-roofed house 40 feet wide, and I am not aware of any advantage to be derived from so wide a structure, but with sides from 8 to 9 feet in width, and low ventilating shutters 3 or 3½ feet wide, I have but little doubt of their success. The great object is to have the two low lateral currents of cool air to come in with sufficient force by their own gravity, so as to meet in the centre of the house, the large body of air to become rarefied, and ascend to the roof through the leaves of the trees, and then to make its escape through the small

triangular apertures under the gable at each end. So apparent is this ingress of cool air in a sultry sunny day, that the centre of the house is always agreeable, although the temperature may be from 80° to 95°.

My favourite width for houses—favourite because of the perfect success attending the culture of the trees in them—is 24 feet; these houses are 5 feet high at the sides and 12 feet to the ridge, but from closely observing the fine robust and healthy growth of my trees, although in pots, I am quite inclined to recommend a greater height, say 8 feet at the side, and 15 feet to the ridge. The truth is, my ideas of the extent to which orchard-house culture may be carried have, like my trees, grown slowly but healthily, and I can now see no reason why a Peach tree cannot be grown in an orchard house, so as to bear a bushel of fine fruit.

With respect to the culture of trees in pots, or planted in the borders of orchard houses, a few words, the result of several years' experience, may not be out of place. Trees in pots require a considerable deal of manual labour in watering, unless, as should be the case, the water is laid on so that a hose can be used; but they are so convenient for forcing or retarding, that their use will never be discontinued. The great fault of most cultivators is the not feeding them sufficiently; scarce any surface dressing can be too powerful, but the best ever yet discovered is the compost so often recommended—horse droppings and malt or kiln dust, equal quantities well mixed—spread out and then saturated with strong liquid manure; it should not be made into a ridge or heap, for then fermentation is so violent that the smell is perfectly intolerable. This compost, used as a summer surface dressing, commencing in May, and renewing it three or four times till the end of July, has a most remarkable effect. The trees seem to be gifted with reason, they do not attempt to root through the pots at bottom, but seem instinctively to come upwards and feed upon the compost till every portion of it is full of fibres, forming a circular ridge round the pot on the surface. To every fruit tree in cultivation I have found this summer surface dressing acceptable; but mark! this strong compost brought into immediate contact with the roots would doubtless injure them to a great extent; it should be employed solely as a surface-dressing, while trees are in full growth. Fruit trees in pots are too often seen in a state of semi-starvation, owing to a lack of food—their fruit small, their leaves and shoots weakly; rich surface food will remedy all these defects, and make potted trees a great source of pleasure to the cultivator.

With some amateurs there is still an open question whether to plant all the trees required for an orchard house in the borders, or to plant, *i. e.*, cultivate them in pots. For some few years I have closely watched both modes of culture, and at last feel that I can give a more decided opinion than I have ever yet done. In large span-roofed houses, *i. e.*, in houses 18 feet wide or upwards, with a central walk and a broad border on each side, trees may be planted in the borders with advantage; the only condition required is solidity of soil—a Peach tree would grow and bear better in the centre of a turnpike-road, than in the deepest richest and most fertile border of a kitchen garden, if light and dry. It will, perhaps, be better that I describe what has been done here rather than give directions as to how a Peach border in an orchard house should be prepared. The soil on which my houses are built is a stiff calcareous loamy clay; this has been under nursery culture for upwards of a century, and not made rich by frequent manuring. Well, after the houses were built, the surface of the soil looked very solid from the trampling of the workmen; it was not stirred or dug in any way, but some holes 2 feet in diameter and 18 inches deep, were dug. In these some standard and half-standard Peaches were planted, some rotten manure being mixed with the soil in filling it in; some five or six gallons of water were given to each tree, when the roots were covered with soil, and then the remainder filled and left for a day till the water had soaked in; the earth round each tree was then firmly trodden down, and the work considered as finished. They now stand in a firm, unbroken floor, and the only culture they have had is to stir the soil 1 inch deep round each tree in June, when the fruit is swelling, and spread over the circle a shovelful of rotten dung, merely to absorb and prevent the water running off as it otherwise would do.

They have no water from the end of September till early in March, when the blossom buds are swelling, and then water is given once a fortnight, till hot weather in June, when a good sound watering, say three gallons to a tree once a week, enables them to ripen their fruit in perfection.

The best description of tree to plant in span-roofed houses is the half-standard, with a stem about 4 feet in height. They have this advantage, their heads can be looked over, and the young shoots pinched in, and directed. The pinching need not be so close as for potted trees; six or eight leaves may be left instead of three, as in potted trees. In lofty houses, if the amateur wishes to form an avenue, and to walk under the shade of his Peach trees, tall standards may be planted, but they are not so agreeably pruned or tended to as half-standards; the latter soon form fruitful umbrageous heads, and as I have proved are most satisfactory. These trees may be planted from 10 to 12 feet apart, and till their heads become large, pyramids in pots may be placed among them.

Pyramids are not eligible for planting out; the sap will go to the head, so that the lower branches become unfruitful and weakly; but cultivated in pots and their young shoots pinched in, they form the most beautiful of all trees; in fact I know of no fruit tree more attractive than a well managed pyramidal Peach tree, full of fine fruit. If the soil be poor and hungry, the surface dressing recommended for potted trees may be given to those planted out, two or three times during the summer. Here, all our variations of soil, from loam to sand, are full of comminuted chalk, and to this I impute the great luxuriance of all my stone-fruited trees. The three great requisites for the successful culture of orchard-house trees are solidity of soil, a calcareous soil, and a rich summer surface-dressing; the latter seems like nutritious food to animal life, and a common expression here in June is: "the trees require some fresh dressing, they have eaten up all they had in May."

The best description of trees for lean-to houses are bush trees in pots for the front border, and pyramids in pots for the border at the back of the house. The objection to lean-to houses is the difficulty of having a continuous ventilating shutter in the back wall at a low level, and the same height from the ground (18 inches) as the front. Sliding shutters to a certain extent may do, but I believe failures have often taken place from the lack of two continuous currents of air entering the house simultaneously. Lean-to houses should never be narrow—never less than 12 feet wide. I have seen a good and careful gardener fail in orchard-house culture in lean-to houses only 6 or 8 feet wide, in spite of his utmost care; it would seem that the draught of cool air is too sharp, the changes of temperature too sudden. I have a strong idea that the failure in Apricot culture in orchard houses is generally owing to the nature of the soil; here, they prosper and bear annually large crops of fine fruit, and trees, now some 12 or 14 years old, are more fruitful than ever; this is doubtless owing to our calcareous and rather stiff loam. Would it not, therefore, be advisable for cultivators who have loams non-calcareous, to mix powdered chalk with them? I think so. *Thos. Rivers, Nurseries, Sawbridgeworth.*

ELIZABETHAN GARDENING.

(*Continued from p.* 869.)

VARIOUS circumstances contributed to give an impetus to a taste for flowers and ornamental gardening during the reign of Elizabeth. Among these may be enumerated the extended intercourse with other countries; the improved condition of the middle classes; the security and internal peace of the kingdom; and the immigration from the Low Countries of the persecuted Huguenots, who brought with them the cultivated flowers for which Holland was already celebrated. Many of the great London merchants—as Master James Cole, John Tradescant, and Mr. Nicholas Lete, 'a worthy merchant and lover of all fair flowers,'—interested themselves to procure new plants from their correspondents in distant countries; and some of them even sent out, at their own expense, persons especially commissioned to seek out and bring home rare and curious plants both from the far East, and from America. These efforts were attended with so much success, that at the beginning of the 17th century the English flower garden was stocked with a much greater variety of flowers for all seasons than is usually found in the best gardens cultivated in the fashion of the present day.

The botanical works of the period were chiefly Herbals, which, from their number, seem to have been very popular; but this was probably rather on account of their medical information than for their botanical or horticultural uses; for mankind seems to have a natural love for amateur dosing and domestic quackery. Several works, however, on gardening, as an art, were published during the reign of Elizabeth; among others 'The Gardener's Labyrinth; containing a Discourse of the Gardener's Life, in the yearly travails to be bestowed on the plot of earth, for the use of a garden; wherein are set forth divers herbes, knottes, and mazes, cunningly handled for the beautifying of gardens, &c.' Soon afterwards the same author published a second part on the kitchen garden. Similar guides to the art of gardening were published by Sir Hugh Platt, Thomas Hyll, William Lawson, and others. The most copious work, however, and one which contains as much useful information as most books on gardening of the present day, was the 'Paradisi in Sole, Paradisus Terrestris,' by John Parkinson. It was not published till 1629; but Parkinson—who was born in 1567, three years later than Shakspeare—may be fairly classed among Elizabethan authors. These works indicate that gardening was at this period a popular amusement, and that the amateur was seeking information and instruction in his favourite pursuit.

The favourite style for the 'Garden of Flowers' attached to the house of the proprietor, which prevailed in the time of Elizabeth, was that which Shakspeare succinctly but fully describes in three words, the 'curious knotted garden' ('Love's Labour's Lost,' Act I. scene 1), composed of 'forthrights'—straight walks—with knots, 'meanders and mazes'—geometric beds—filling the intersections. The knots and mazes consisted of flower beds divided by gravel walks edged with Box, Thrift, Thyme, and other low-growing plants; or with stone, slate, tiles, &c. The pattern was strictly geometric, stiff, and formal, like the patterns of Arabic tracery; but withal very well adapted for filling in with harmonious colouring. The gardening books of the period generally give elaborate patterns for laying out gardens in this style; though, as Parkinson says, 'it would be almost endless to express so many as might be conceived and set down, for that every man may invent others far differing from these, or any other that can be set forth.' Topiary-work was added to the parterre; and being executed in evergreen shrubs, helped to give interest to the garden even in the winter. Sometimes, perhaps, more quaint and less formal patterns were adopted; and probably Giles Fletcher's description of a garden cut like a lady fair was copied from actual observation:—

> The garden like a lady fair was cut,
> That lay as if she slumber'd in delight,
> And to the open skies her eyes did shut.
> * * * * *
> Upon a hilly bank her head she cast,
> On which the bower of vain-delight was built;
> White and red Roses for her face were placed,
> And for her tresses Marigolds were spilt.

In order to bring the garden into harmony with the building, and make it, as it were, part thereof, a long broad terrace—in more stately mansions—ran along the private front of the house, and commanded a view of the whole design. Broad flights of steps connected the garden with the terrace, and thence the principal walks diverged in straight lines, which were intersected by similar walks parallel to the terrace. These walks—broad, and gravelled or turfed—formed the main lines of the design; the intermediate parallelograms were filled up with 'the meanders or mazes,' the 'beds and curious knots,' or with labyrinths, shrubberies, and orchards, or Grass plots. Thus a uniform plan, harmonising and answering to every feature of the house, was presented. The forthrights of the garden corresponded to the ground plan of the building, and the mazes or knots to its ornamental details, its pillars, friezes, mullions, and carved capitals. The peculiar geometric tracery which surmounts so many Elizabethan buildings, very closely corresponds to the geometric beds of our Elizabethan gardens.

The gardener of the period was not inattentive to the importance of producing a rich effect of colour in his garden. His practice was to mix and blend the colours of the flowers in one rich mass of various hues, 'as Nature does herself' in her wild banks, moors, and woodlands. This necessarily ensued from the beds being planted with various flowers to succeed each other at different seasons—

> As in a rainbow's many-coloured hue,
> Here see we watchet deepen'd with a blue;
> There a dark tawny, with a purple mix'd;
> Yellow and flame, with streaks of green betwixt;
> A bloody stream into a blushing run,
> And ends still with the colour which begun;
> Drawing the deeper to a lighter stain,
> Bringing the lightest to the deep'st again;
> With such rare art each mingleth with his fellow,
> The blue with watchet, green and red with yellow;
> Like to the changes which we daily see
> Around the dove's neck with variety;
> Where none can say (though he it strict attends),
> Here one begins and there the other ends.
> Using such cunning as they did dispose
> The ruddy Piony with the lighter Rose,
> The Monkshood with the Bugles, and entwine
> The white, the blue, the flesh-like Columbine
> With Pinks, Sweet Williams; that far off the eye
> Could not the manner of their mixture spy.
> *W. Browne.*

In the mingling of colours here indicated lies the secret of all purely ornamental, as distinguished from pictorial, colouring:—

> Where none can say (though he it strict attends),
> Here one begins, and there the other ends.

This is true colouring: a harmonious blending of tints softening and subduing each other; not violent contrasts, rendering each other more violent, harsh, and glaring. Here we have light blue (watchet) deepened by dark blue; a dull tawny brightened with a purple; yellow and flame cooled by streaks of green. This mode of intimately mixing colours so as to make them blend is quite different from the modern fashion of separating them to make them contrast, by planting separate beds of distinct flowers—great patches of one colour here and another colour there—like the patches on a harlequin's jacket, and on the whole about as picturesque and interesting; and certainly directed to the same end, viz., to please the vulgar taste for coarse colours. Beds of flowers planted in this manner can never be made to produce a harmonious effect, unless you go to an eminence half a mile off to survey your garden. What we ought to imitate—if we adopt an artificial standard—is the rich colouring and intermixture of warm and cool tints in a Persian carpet, and not the violent hues and vulgar blaze of the French carpet weaver. Of course more was left to Nature than the modern gardener trusts to her care. As the primary object was to have a succession of flowers during the year, it was impossible to arrange them for mutual effect as to colour. The contrast and harmonies of one month would be deranged in the next, and any attempt to produce determinate effects would be rendered futile as one flower succeeded another. The chief attention in planting was given to bringing all the flowers well into view by placing them

with regard to their respective heights and sizes, and the colours were left to blend themselves as

Tapettes (tapestry) that Nature
Had made herself.—*Chaucer.*

The Elizabethan gardener had no fear but that if the flowers were varied and plentiful enough their colours would blend with quite as much beauty as in any artificial arrangement which he could devise. He had seen how Nature blends her colours on the river bank or the woodside, in the open meadow, or the upland path, and he was quite satisfied to let her dispose his colours in like manner. And this he might safely do; for the colours which he had to use being natural to a temperate climate, and not tropical exotics dragged from their blazing home, were soft and harmonious; and whatever their arrangement, were sure to produce a satisfactory result. The best artificial guide to colour arrangement which the gardener can have is the varied play of light which passes through the glass of an ancient painted window, seen from a distance; where the pattern cannot be deciphered, but only a rich mass of colouring perceived. Probably the nearest approach which European art has made towards pure taste in the use of bright colours is in the old glass which adorns some of our cathedrals and parish churches. The reason for this success is that subject was made subordinate to colour; and the painter rather sought to produce a rich assemblage of colours than to execute a picture better suited to an opaque surface. He felt that he had to deal with the richest colours which human art could produce, and it was his aim to do justice to the means at his disposal, and not to display his skill as a draughtsman.

In dealing with flowers, however, we have this superior facility: that while artificial colours require artificial treatment, and demand attention to certain rules as to their juxtaposition, Nature's colours always harmonise, if placed near enough together, and we need never be afraid to give them almost any arrangement we please, or in fact—which is better—leave them to take any arrangement which they may happen to fall into. It is a rule, for instance, not to oppose blue and red, and not to ally blue and green; but in a garden we may constantly see these colours blend together in perfect harmony, and with the richest effect, in spite of all our artificial rules. What, for instance, can be more exquisite, in the spring, than a bed of Anemones of every possible colour? or, in the autumn, than a mixed mass of German Asters in all their varied hues? What a rich mosaic is a bed of Hyacinths, Tulips, or Pansies: and how exquisitely their various tints weave what Shakspeare calls 'a rich scarf for the proud earth.' It is in this blending of colours that the painting of Nature so far transcends all that man can do; and this is a secret which the modern præ-Raphaelite has yet to learn, viz., that Nature does not pick out her colours, or forms, in separate bits—here a bit of scarlet, there a bit of blue, and there a bit of green; here a leaf, and there a pebble; but she blends them all in one rich whole, so that with the strictest attention 'we cannot the manner of their mixture spy.'

Spenser, Shakspeare, Jonson, Drayton, Browne, and all the poets of the time seem to have delighted in this commingling of flowers of various colours; and perhaps it is not too bold an assertion to make, that the taste of the age which produced our best poets, and a distinctive style of architecture, was at least equal to the taste of the age which has not half a dozen poets to boast of, and which has no architecture at all, but what is servilely imitated from a bygone age; and perhaps it is not too heretical to believe that the careless blending of colours in Nature is as good a guide for combinations of the colours of Nature as the most learned theories which science can elaborate in a dark closet for the colours of art.

(To be continued.)

ORNAMENTAL PLANTING.—No. III.

AUTUMN.

The prominent feature of tree scenery in autumn is the changing and varied colours of the leaves. As green is the dominant colour of the mature leaf in summer, so is a russet brown that of the falling leaf in autumn. But there are some trees whose leaves grow brighter as they advance to maturity, and in the red, purple and yellow hues which they assume in autumn, we find materials to vary and increase the beauty of the landscape. The leaves of the scarlet Maple and the scarlet Oak change to a fine red; those of the Norway Maple, the Birch, the Ash, the Kœlreuteria and the Tulip tree to yellow; the Liquidambar dies a variegated mass of green, red, purple and yellow; and there are various intermediate tints, which, if less marked, are nevertheless of infinite value. These, in our opinion, are seldom sufficiently used in the composition of tree-scenery.

The Sumach (Rhus typhina) is valuable, not only for the brilliant tints of its dying leaves, but also for the feathery tufts of flowers which it produces, and which become dry and remain on the tree during autumn and winter.

Trees which bear fruits or berries are also worthy of notice at this season. The red and the yellow-berried Mountain Ash are beautiful. Then there are numerous varieties of the Thorn (Cratægus) producing yellow, red, and black berries, some of them of large size; and the Siberian Crab and the Transparent Crab, when laden with their respective fruits, are objects of matchless beauty.

As the greater number of English landed proprietors spend the autumn at their country seats, it becomes of first importance that every feature of beauty at that season should be fairly and fully developed. But what is the fact? We know of many first-class English residences where the monotony previously condemned in spring exists alike in autumn. From universal green to universal brown, and back again as the seasons revolve, is all the change that takes place. The flower garden, planted and arranged with exquisite skill and taste, forms a series of glowing pictures; but everything beyond is dull, tame, heavy and monotonous. Now we would not that the garden should be a whit less beautiful, but the proprietor of a demesne is not expected to spend all his time there. The pursuit of country sports, if nothing else, will take him into the outlying parts of his estate, and as he traverses the dewy meads amid fogs and falling leaves, the intervals of sport may be enchantingly filled up by the contemplation of a varied, vigorous, and well-composed landscape. Whatever, therefore, is left undone, at least the park and the outlines of woods and plantations should be varied and adorned by all the forms and colours that can be drawn from the rich repertory of the vegetable kingdom.

At this season, as at others, there requires a due admixture of the deciduous and the evergreen to attain all that is desirable. The airiness, the grace, the glow of the former, is rendered far more beautiful when associated with the more solid-looking and durable forms of the latter. As the deciduous forms are stripped bare, and their leaves scattered by the autumnal whirlwind, it is pleasant to contemplate the permanency and repose of the evergreens, fitly represented by the Pine and Yew. *William Paul, Waltham Cross, N.*

Home Correspondence.

Sharp Frosts in Durham.—From the beginning of August up to the 27th, this county has been visited with sharp frosts at sunrise, the thermometer frequently indicating from 2° to 2½°; both plants and glass have frequently been covered with rime, and on Saturday morning, the 27th ult., the frost was still more severe, the thermometer indicating 6°. Where the ground was wet it was frozen hard; water-taps could not be moved; and Dahlias, Heliotropes, and various other plants were killed; Sycamores, Chestnuts, and other forest trees dropped their foliage as soon as the sun came upon them. So severe a frost has never, I apprehend, been known to occur so early in this country. *John Harrison. Darlington.*

Lily of the Valley.—Is it common for this to seed? Several old gardeners have told me that they never knew it to do so. *G. W.* [Occasionally.]

American Blight.—I see noticed in your pages several modes of getting rid of this pest. I have found, both on old and young Apple trees, that a brush rubbed after wetting on a box of Gishurst and worked about over the blight is a complete cure, and it is certainly a simple and inexpensive one. *G. Wilson, Gishurst Cottage, Weybridge*

Voices of Frogs and Toads.—Professor Bell, in his "British Reptiles," does not allude in his account of the frog, to any other voice than croaking; but in his account of the ringed snake, in describing the mode in which this reptile preys upon frogs, he mentions the latter as uttering under a sense of danger a "peculiar weak cry with more than usual shrillness;" and again says that he has heard a swallowed frog utter "its peculiar cry" from the stomach of the snake (Op. cit. pp. 49, 51. 1st ed.) Is not this shrill cry what your correspondent (see p. 869) has heard? When I resided in Alabama, my curiosity was excited one day, by hearing, from a marshy spot, a continued succession of deafening shrieks, excessively shrill and loud. I had reason to believe they were produced by a small dusky species of frog (probably Rana clamata); for on approaching the spot whence the sound proceeded, it instantly ceased, at least there; and two or three of these frogs would dash into the water, and dive. Wishing much to witness the act of uttering the sound, I crept cautiously to the edge of one of the pools, in which I saw two or three frogs. They were very shy, and kept under water; but I waited patiently, quiet and motionless, a very long time, taking care not to stir hand or foot. At length one of them, taking courage, raised his head and half of his body out of water, sitting up, as it were, and resting on the toes of his fore feet; and thus uttered the piercing shriek, which had a kind of cracked or ringing sound, somewhat like that of a penny trumpet, but vastly louder and shriller. When about to cry, the frog first fluttered the skin of the throat a few times, and then suddenly inflated it, till it was like a blown bladder, perfectly round, as big as his head, and this condition continued all the time of the shriek, about four or five seconds. I saw the reptile do this many times close to my feet; and a very curious sight it was. The skin of the throat, when thus inflated, was so stretched, that it looked like a thin transparent membrane. I heard a pretty little note a day or two ago from the common toad (Bufo vulgaris). I domesticate these reptiles in my plant-houses, to keep down the wood-lice, and am often able to surprise visitors by showing them the most singular way in which a toad catches the fleeing victim. Sitting quietly among my plants the other day I heard a little feeble piping note two or three times repeated, and after a few minutes the same again, and presently again. I guessed the musician and cautiously peered among the Orchids towards the spot whence the notes proceeded. I had not looked long before I caught sight of a little toad about one-third grown, and as black as a sweep, sitting imbedded in the Cocoa-fibre from which a Renanthera coccinea is growing, his head and shoulders only protruding from his cosy nest. I brought my face as close as I could, avoiding any sudden movement, and presently heard, and saw, my musical friend tune up, moving his head with a sort of jerk at each note. His back was towards me; so that I regret that I could not see his throat. Yesterday I heard him at his musical practice again. Each utterance consists of about three distinct sounds, in the same tone, somewhat like the feeble chirps of a young chicken, but more mellow and flute-like. The voices of even our native animals constitute a subject on which I am persuaded we have yet much to learn. A year or two ago, as I was passing at night along a lane overshadowed by tall meeting Elms near this town, it being pitch dark, I heard from the opposite side of a field bounding the road, a loud shrill cry of the most startling character. Again and again, at intervals, that unearthly wail rose up on the night, retiring, however, farther and farther from me. I continued to hear it till I was got far beyond the place; but no clue to its mysterious origin could I then obtain, nor have I obtained since. I am pretty sure it was not the voice of the screech-owl; and I am inclined to attribute it to some one of our wild mammals. Does the badger ever utter a cry of this kind? *P. H. Gosse, Torquay.*—Permit me to direct your Correspondent's attention to a pond near "Bruxelles les Ixelles," in which frogs are reared and nurtured (as I heard) for table use. I frequently walked by this pond; it is filled with almost every variety of Algæ, and the croaking of the millions of frogs diverting in it, can only be realised by hearing the noise—no pen could describe it. *E. A. M., Dublin.*—If "F. H. H.' means by her frog's "squeaking" in her hand that it croaked, I have once met with a similar instance. It was some years ago that it occurred. It is extremely rarely that a frog or toad croaks in the hand; but a fortnight since I captured a common toad and a natterjack, both of which croak whenever handled. The toad's croak is just like a mouse's squeak. Both are now in the Zoological Gardens, and if "F. H. H." would deposit the frog there with them, any naturalist would have an opportunity of hearing the croak of all three of our native anourous Batrachians successively. *W. R. Tate, 4, Grove Place, Denmark Hill, Camberwell, S.*

Orchard-house Fruit.—Some little time back I wrote to you on the subject of the flavour of fruit grown in pots in orchard-houses. At the fruit show the other day at the Crystal Palace, my Pears, Louise Bonne, grown in a pot and kept till all fear of frost was over, in an orchard house, won the 1st prize for "Single dishes of Pears containing 12 fruit," there being 40 exhibitors in this class. *G. Wilson, Gishurst Cottage, Weybridge.*

Societies.

Royal Horticultural: *Sept.* 13 (*Floral Committee*).—From Mr. Parsons, of Danesbury, Welwyn, came various Seedling Achimenes, to two of which, Rose Queen and Aurora, First-class Certificates were awarded. The former is purplish-rose in colour; the latter, a bright carmine-rose shaded with violet, a most effective variety; with beautiful medium-sized flowers. From Mr. Bull came various rare plants, and to a pale lemon-flowered Gesnera among them, named Chromatella, a Second-class Certificate was given; while a double-blossomed Antirrhinum, named Giuseppe Garibaldi, from the same exhibitor, was Commended. Associated with these were also Saccolabium Dayi and Lilium auratum. Among Dahlias Mr. Turner's Leah received a First-class Certificate, as it well deserved, for it is universally admitted to be one of the finest varieties that has been produced for years. Miss Roberts, rose lilac (Turner), was also a promising flower, to which a Second-class Certificate was awarded. From among several seedling Dahlias shown by Mr. Rawlings, of Romford, Spitfire was selected for a similar award. It is of medium size, and in colour a light reddish salmon. Little Treasure, a very dwarf zonal Pelargonium in the way of Baron Hugel, received a First-class Certificate; as did also Meteor, a variegated sort, stated to be an improvement in colour—more yellow, and more fiery—on Mrs. Pollock. Both these came from Messrs. Saltmarsh & Son, of Chelmsford. A charming bright carmine and white-striped Verbena, named Annie, from Mr. Geo. Cooling, of Bath, received a similar distinction. This is the best striped Verbena yet obtained, and both for pot and out-door culture is certainly a very valuable addition to the section to which it belongs. Verbena Shakespere, shown by Messrs. Perkins & Son, was said by them to be larger than either Lord Leigh or Foxhunter, both of which it resembled. Rose Dr. Lindley, fully noticed by us in former reports, came from Mr. Wm. Paul; various Dahlias from Mr. Legge; and Cineraria maritima compacta, and a Pelargonium or

two from Mr. Salter, of Hammersmith. Mr. Wm. Paul showed a very good Grape, stated to be the result of a cross between the Black Hamburgh and Grizzly Frontignan; and a promising white variety of Grape was furnished by Mr. Bousie of Stoke Park, near Slough. The last was, however, unripe. Messrs. Lee, of Hammersmith, sent a dish of the Gordon Castle Plum, a yellow sort, something like Golden Drop, and reported to be useful in the north of Scotland.

ROYAL HORTICULTURAL OF DUBLIN: *September* 1.—The annual autumn exhibition of this Society took place at Salthill. There was a sharp competition for the silver cup offered by the Dublin and Wicklow Railway Company for 15 ornamental and flowering plants; but it was well won by Mr. McNeill, gr. to the Chief Secretary, with a lot of very fine plants, amongst which we particularly noticed admirable examples of Alocasia metallica and Croton pictum. The 2d prize, given by the Society, was awarded to Robert Gray, Esq., in whose collection were grand plants of Latania borbonica, and Pandanus utilis. A 3d prize was awarded to Mr. Smith, gr. to his Excellency the Lord Lieutenant, who had an extraordinarily good Cycas revoluta, and a superb Croton angustifolium. These three collections were very fine indeed.

Mr. Smith had six fine Heaths, which took a 1st prize; and Mr. Byers, gr. to the Lord Chanceller, took a 1st prize with six fine plants of the following Orchids:—Saccolabium guttatum, Blumei, and Blumei majus, Odontoglossum grande, Vanda tricolor, and Aërides quinquevulnera. Mr. McNeill also took a 1st prize for six stove and greenhouse plants. Little that was really new and rare was to be seen; and we would suggest to the Council the advisability of offering special prizes for the best or the two best new and rare plants, in which quality and not size should be the standard of excellence.

There was a capital display of fruit. Mr. Davis, gr. to Sir Charles Coote, Bart., took the 1st prize for Pine Apples with a first-rate Smooth-leaved Cayenne. Mr. James, gr. to the Duke of Leinster, took first prizes in Peaches with Barrington, and for a brace of Melons with Scarlet Perfection. A special feature of the exhibition, however, was afforded by two handsome fruit trophies, in competition for Alderman Mackey's silver cup, for the best collection of fruit arranged for dinner table decoration. The 1st prize was awarded to Mr. Smith, gr. to his Excellency the Lord Lieutenant, for an elaborate ornamental design, consisting of an upright stem with drooping wire supports for Grapes, alternating with saucer-shaped leaves for Peaches and other fruits, the whole surmounted by a Pine. Much taste was displayed in the arrangement of this group, and a large collection of fruit was introduced. The 2d prize was awarded to Mr. J. Roberts, gr. to the Honourable Alfred Bury, whose design was made up of a pot Vine, grown on the umbrella pattern, from which hung several bunches of Grapes, the pot being covered with a four-sided stage with circular corners, each of which contained a Pine Apple, and a base supported the whole, on which various fruits were arranged. It contained a fine lot of fruit, but there was a stiffness about the design which told against it.

Mr. Roberts showed very fine Muscat Hamburgh Grapes staged in the London style; and Mr. Mason, gr. to Colonel Taylor, M.P., had some superb bunches of Buckland Sweetwater of an amber colour. Reine Claude de Bavay and white Magnum Bonum plums were very fine indeed; also another plum shown as White Mogul, which appeared identical with the White Magnum Bonum. Some of the dessert Apples were wonderfully fine, especially examples of the Irish Peach Apple; and amongst kitchen Apples, the Echlinville, Glory of the West, Alexandra, and Warner's King were very fine indeed.

There was a good display of cut flowers, especially of Dahlias and Gladioli. For 36 Dahlias the 1st prize was awarded to Messrs. Campbell & Son, Glasnevin, for Lord Palmerston, Criterion, Sparkler, John Dory, Miss Henshaw, A. Dodds, Peri, Sidney Herbert, Earl of Shaftesbury, Mirfield Beauty, Bob Ridley, Alexandra, Maid of Bath, Pre-eminent, Earl Russell, Donald Beaton, Warrior, Anna Keynes, fine; Lord Clyde, fine; Chairman, Golden Drop, Queen Mab, Beauty of Slough, Mrs. Wheeler, Baron Taunton, Princess, British Triumph, Hon. Miss Herbert, Harlequin, Mr. Stocken, Hugh Miller, Lilac Queen, Lord Derby, Lady Elcho, and Lord Dundreary. J. B. Houston, Esq., Belfast, took the 2d prize for a good stand of flowers, the best of which were Lord Palmerston, Criterion, Chieftain, Golden Drop, Duke of Wellington, Pauline, Madame Lemmens Sherrington, Turner's Delicata, Handforth Hero, Sir George Brown, Count Cavour, John Spencer, Beauty of Hilperton, Jenny Austin, Volunteer, Magnificent, and Lord Derby. Messrs. Dickson & Sons, Newtonards, were 3d, and had good blooms of John Dory, Beauty of Hilperton, Harlequin, Hugh Miller, Madame Lemmens Sherrington, Hon. Mrs. Trotter, Stafford's Gem, Volunteer, Bob Ridley, Miss Pressly, Mrs. Wickham, Cygnet, and Donald Beaton. In 24 Dahlias there was a good competition, Messrs. Campbell & Sons standing 1st; Messrs. M. Saunders & Son, Cork, 2d; and Messrs. Fergus Farrell & Co., 3d. Some good Hollyhocks were shown, the best coming from Messrs. Dickson & Sons, Newtonards, who took the 1st prize, but they were not equal in size to what Mr. May in the north of England, and Mr. Chater and others in the south of England, are in the habit of showing.

There was a glorious display of Gladioli, and many first-class new kinds were shown. In the class for 24 dissimilar spikes, we think a finer lot has never been seen. The spikes were long, the blooms fine and in first-class condition. Amongst them were Prince of Orange, Madame Vatry, Calendulaceus, Ceres, Marie Dumortier, Comte de Morny, Victor Verdier, and La Quintinie, all very fine indeed. Messrs. Dickson & Sons carried off the challenge cup; while J. F. Lombard, Esq., was placed 2d, and 1st each for 12 spikes and six spikes. In his collections were some first-class new things, some of them seedlings of his own. We noticed as very fine—Paddy from Cork, Lady Morgan, Guido, Princess Clotilde, The Colonel, Flore, Edulia, Mrs. Lombard, a very beautiful light seedling; Stuart Low, Princess of Wales, Samuel Waymouth, Madame Periere, Alice Kirwan, Mrs. Siddons, and Cuvier, all very first-class for exhibiting. J. W. Lane, Esq., Dublin, was placed 3rd for 24 spikes, and amongst his were The Colonel, Miss Howell, Carminata, one of Standish's very best seedlings; Reine Victoria, Madame Vilmorin, Imperatrice Eugenie, Prince Imperial, and Napoleon III., all very fine. In other collections we noticed John Leech, Lucifer, Prince of Wales, very fine indeed; Bertha Rabourdin, Dr. Lindley, Cuvier, John Waterer, and Lady Hill, all fine varieties.

A general opinion prevailed that the exhibition was one of great excellence. At the same time, we think a little more liberality in the form of extra prizes for very deserving objects, and an enlargement of prizes for the large collections, would tend to still further improve the exhibitions. The annual dinner took place in the evening, at the Salthill Hotel, and was presided over by his Grace the Duke of Leinster, who observed in the course of the proceedings that when he first joined the Society it was a very small one, and it was most gratifying to find that it had prospered so well. Societies of this kind were most useful; and he believed that the improvement of Horticulture in Ireland was in no small degree attributable to the operations of this Society. Sir Robert Shaw, in acknowledging the toast "The Royal Horticultural Society of Ireland," said, it was owing to the Society that Horticulture had advanced so much in Ireland. Every annual show had been an improvement on the preceding. It was now established, and had improved materially in its finances, having a good large sum of money in the funds, and a good deal of what was called "plant," the best tests of success. In responding to the toast of "The Judges," Mr. Dean spoke in terms of high eulogy of the quality of the fruits, plants, and flowers exhibited.

[We are glad to learn that there is such a thing as a successful R.H.S.]

Notices of Books.

Notes upon Crystal, or Obsolete Words of the Authorised Version of the Holy Bible critically and Chronologically considered, with Occasional Biographical Notices. To be completed in Six Parts. Part I. Small 8vo. Pp. vi. and 136. London, 1864.

We do not precisely understand the title of this work, however ingenious or taking at the first glance. Did it treat of false translations it might be well enough, but words, however obsolete now, had once their own proper meaning, and can scarcely be considered as motes, merely because the process of time has altered or obscured their meaning; some of them, moreover, are even better and more expressive than any that could be put in their place.

It is curious that in the very word which led the author to the studies of which this work is the result, while he applied to a Welsh friend for the sense in which he understood the word "bolled," as translated in the Welsh version, he did not apply to Wedgwood's Dictionary of English Etymology, which would have taught him, as would Richards' Welsh Dictionary, that Bùl is the Welsh word for the husk or hull of Flax seed, as in the proverbial expression "Fal y bul ar y llin," as the boll on the Flax. The truth, however, is, that the Welsh translation, as far as our very limited experience goes, seldom solves any etymological difficulties.

In the opening word again, "Bible," our author is very unfortunate as regards his explanation that the ancients were accustomed to write on the peel and leaves of the Papyrus, since it is contrary to the character of the plant, which may be seen in very many hothouses, and a correct account of which is accessible to every inquirer. Its leaves, if it has any proper leaves, are extremely narrow, and utterly unfit for the purpose. It is the stem alone which is available. We do not see why authors should be so careless as they are with regard to the plainest facts of Natural History. It would be easy to adduce, even amongst modern authorities, the most glaring errors in this respect, errors which detract very much from our faith in their diligence and truthfulness in other respects. This same neglect of matters lying within the province of natural science, may account for the omission of such a word as Blast, on which something might have been written, but it does not account for the omission of the word "by," used in the sense of against, as in "I know nothing by myself," an omission which is all the more to be regretted as the passage is so often misunderstood, though a single glance at the Greek will set all right. The word "by" is seldom or never used in this sense now, and at any rate it has much greater claims to be considered obsolete than "by and by," which is of very frequent occurrence in conversation if not in literature, not to mention such words as addict, afterwards, allegory, allow, alms, &c., which are either not obsolete at all, or not so in the sense in which they are supposed to be obsolete. It might have been mentioned under the heading "at one," that the word atonement has popularly lost its real sense, a consequence we believe of the low tone of religious doctrine prevalent during the last century, insomuch that the very instead of retaining its true sense of reconciling conveyed a notion of making up for past transgressions by present good, in direct contradiction to Scripture.

We have no hesitation in making the above criticisms, because we consider the work itself to be one of great value, and as there will be ample opportunity of profiting by them, if correct, in the future parts. The Biographical notes are far from being void of interest, and the quotations are well selected and frequently instructive. We may add that the Introduction contains a good deal of information on the origin of our language, and its relation to the several translations of the Bible, which will be read with profit and interest, and which will perhaps convey some information even to those who are pretty well informed on the subject.

The September *Botanical Magazine* contains figured the following plants:—*Urceolina pendula*, a fine Peruvian bulb, of which some account has been given, with a figure (at pp. 627, 890), under the name of Urceolina aurea.—*Macleania pulchra*, a handsome glabrous evergreen shrub, said to be a native of New Grenada, and cultivated under the name of Thibaudia floribunda, with which it does not agree. It has elongated pendent branches, and glossy elliptical or oblong leaves, from whose axils proceed the aggregated pendent flowers, which are large and very handsome, tubular, bright scarlet tipped with yellow.—*Cypripedium caricinum*, the pretty Peruvian Lady's Slipper which has been exhibited during the summer by Mr. Veitch, under the provisional name of Pearcii, applied to it by Mr. Bateman. It however proves to be a plant previously described from Bolivian specimens under the name of caricinum. "Dr. Lindley's specific name happily designates the grassy or Sedge-like appearance of the plant, which in this respect, as well as in its long creeping rhizome, is entirely unlike any other Cypripedium with which we are at present acquainted. It would be a Selenipedium if Prof. Reichenbach's genus of that name were accepted, but I quite agree with Dr. Lindley that no sufficient case has yet been made for any such separation of the South American species from the rest of the Cypripedia." It seems probable that the plant will prefer cool treatment, and on account of its running rhizomes it should have plenty of space. The leaves are narrow, leathery, and acute; the flowers, several on a scape, are pale yellowish green, the petals narrow, twisted, and deflexed, the orifice of the lip bordered by dark brown spots, and the sterile stamen fringed with dark hairs like a pair of moustaches.—*Eranthemum Cooperi*, a New Caledonian shrub, introduced to Mr. Veitch's nursery by Sir D. Cooper, and having narrow lanceolate sinuately toothed leaves, and rather large white two-lipped flowers, the middle segment of the lower lip marked thickly with small purple spots. It is also found in the New Hebrides.—*Genetyllis fimbriata*, a very elegant greenhouse shrub, with small obtusely elliptic decussate leaves, and terminal drooping flower-heads surrounded by a large bell-shaped involucre, which is of a lively rose-colour, and fringed with short hairs. It is a South-west Australian plant introduced by Mr. Veitch. "It will be observed that it is not the flowers which constitute the beauty of this plant, for they are small and insignificant, but the coloured involucral scales resembling a large drooping bell-shaped flower."

Seemann's Journal of Botany contains a figure of a new species of *Villaresia* (*V. dichotoma*), with some remarks on the structure and affinities of the genus by Mr. Miers. Mr. Miers objects altogether to placing Villaresia among the Olacaceæ, and contends that it is correctly referred to Aquifoliaceæ. M. Dèsèglise describes a new British Rose under the name of R. Bakeri. This is the R. tomentella of Mr. Baker's North Yorkshire Flora, and has been found near Thirsk. The position of this Rose is, according to M. Dèsèglise, in the section Rubiginosæ by the side of R. fœtida of Bastard. Mr. W. G. Smith explains the view he has arrived at respecting the normal structure of Cruciferous flowers in this way:—"If we take a flower of Cheiranthus, carefully note the arrangement of the stamens and gland, &c., and assume that various organs are suppressed, the difficulty presents itself of ascertaining whether the gland-like bodies represent the elementary conditions of pod-cells, stamens, or petals. The question then naturally arises as to whether there may be any other genus of Cruciferæ where these arrangements are reversed—where organs suppressed in one are developed in another, and *vice versâ*. The unusual petal-form of Iberis prompted me to examine I. amara, and I was fully repaid for my pains. It was

manifest that whilst the two pod-cells were in the same line as the four long stamens in Cheiranthus, they were in the direction of the two short ones in Iberis. If we then assume the longitudinal cells suppressed in Cheiranthus, and the transverse ones developed, and the longitudinal cells of Iberis developed and the transverse suppressed, by supplying the missing cells of Cheiranthus from Iberis we get a four-celled pod—without doubt the normal condition of the fruit of Cruciferæ. Somewhat in proof of this, the two missing cells of Cheiranthus are indicated by two small gland-like bodies at the base of the pod, and between the two fully developed cells." Mr. Smith also argues from the structure of the same two genera, that the normal number of stamens in 16, disposed in two whorls of eight each. Dr. Alexander Braun contributes to this number a revision of the genus Naias, in which he describes eight species and several varieties. "The most important characters for the definition of species reside in the sheathing base of the leaves. The teeth of the blade of the leaves, in regard to their greater or lesser prominence, also furnish good though less important characters." Prof. Babington records the discovery of Hypericum undulatum near Helston, in Cornwall, by Mr. J. Cunnach, of that place, who has known it for several years, but being told it was H. perforatum, lost the chance of being the first to record it as a native of Britain.

The *Florist and Pomologist* has a figure of *Clematis Jackmanni*, the beautiful hardy hybrid Clematis raised by Messrs. G. Jackman & Son, of Woking, of which we have recently made special mention. Among the papers are good articles on Ornament in the kitchen garden, and on gathering and keeping fruit.

The *Floral Magazine* gives figures of the following plants:—*Pelargonium Italia Unita*, the best of the tricolor-leaved zonate varieties with silver margins. The popularity of the Pelargonium, it is remarked, has induced the promoters of our great flower shows to offer prizes for collections of both the plain-leaved and variegated kinds, but with very few exceptions the plants exhibited were unworthy of the class. That terrible love of formality which has so hindered the natural and consequently beautiful growth of many of our exhibition plants completely spoilt the effect. They were trained and tortured in a most piteous manner. We shall hope to see them better another year, for they are worthy subjects of exhibition, and grand specimens of those with highly coloured zonate leaves such as Mrs. Pollock, Lucy Grieve, Sunset, Italia Unita, and some others of similar character, would equal anything which our shows have produced.—*Tea Rose Alba Rosea*, a sort which is said to bear a great similarity to the fine old Rose Madame Bravy.—*Fancy Pansies: John M'Nab, Mrs. Dombrain, Mrs. R. Dean*, and *Mrs. Scott*, some of the novelties to be sent out by Messrs. Downie, Laird & Laing. The first and last are remarkable for their sulphur ground and purple lacing in addition to the central blotches, the others are pale grounds with large central blotches only. These fancy Pansies are rapidly improving.—*Pyrethrums: Annie Holborn*, white with lilac centre; *fulgens plenissima*, dark crimson; and *Nemesis*, rosy red. The choice varieties of this flower, after close propagation, require to be well established before they assume their proper character, and hence they do not, at first, in all cases yield the effect to be obtained from a vigorous batch of seedlings. It is, however, manifestly improving in quality.

The number of the *Journal of the Proceedings of the Linnean Society*, just issued, brings up the account of the proceedings to the close of the last session, and contains the anniversary address of the President, some passages of which we shall take an early opportunity of printing. The botanical portion of the number is principally taken up by Mr. J. Scott's observations on the functions and structure of the reproductive organs in the Primulaceæ; and on the zoological side will be found, among other subjects, a notice of the Dinornis skeleton recently found in New Zealand, an account of a new American swan, and a paper entitled Corynodinorum Recensio. Mr. Scott's observations, noticed by us briefly at the time the paper was read, are given in full detail, with tables showing the results of the different experiments.

CATALOGUES RECEIVED.—*E. G. Henderson & Son's List of Bulbs for* 1864 is one of the more elaborate lists, with a good deal of cultural information interspersed. Among other things we observe some 60 sorts of Lily, from the guinea auratum down to the threepenny candidum. There is also a long list of the beautiful families of Ixia, Sparaxis, &c.; and of Oxalis some 40 names or more are recorded.——*Catalogue des Ognons de Fleurs qui se trouvent chez Vilmorin-Andrieux & Cie., Paris*, is a pretty full list of Hyacinths, of Gladioli, and of a rather extensive series of miscellaneous bulbs.

Garden Memoranda.

MR. BARNES'S NURSERY, CAMBERWELL.—The principal subjects grown here indoors are Azaleas, among which are many fine specimens fit for exhibition, as well as multitudes of seedlings. Of the latter one batch was sown in February, 1863, the seed having been saved in the autumn of the previous year. The plants from this are now some 6 or 8 inches in height. They were raised from seed of Etoile du Gand, Gem, Variegata superba, Model, Madame A. Verschaffelt, and Madame Miellez, all these kinds being crossed one with the other.

In the shade of a friendly gable of one of the Azalea houses was a group of silver-foliaged Centaureas, among which were C. candidissima or ragusina, C. argentea, C. gymnocarpa and C. Marksii. The first however is by far the best of the lot. The propagation of C. candidissima has been pushed on with vigour whenever cuttings fit for the purpose presented themselves. Mr. Barnes strikes them in a moderate heat, generally furnished by a half-spent tan-bed.

In one house were some plants of Epiphyllum truncatum, worked on the usual stock, the old Cactus Pereskia. They were little standards with capital heads, and in this form are invaluable for dinner-table and conservatory decoration. A very few specimens were on their "own roots," as the Rosarians say; but these were not so vigorous or healthy as the worked plants; indeed so uniformly indifferent are they when grown thus, that Mr. Barnes now grafts all his plants on the stock just named.

Cyperus alternifolius variegatus may be seen here in beautiful condition, and it may be added that "T. C., of Lymington" (p. 845) follows exactly the mode of cultivation adopted here, viz., that of growing the plants in hungry peat and sand; thus treated, the variegation is all that can be desired.

Two stoves are full of tender ornamental plants, packed closely together. Among them is a good plant of Mr. Veitch's new Dracæna Cooperi, the handsome drooping habit of which, combined with the bright colour of the foliage, renders it a valuable addition to fine-foliaged plants. D. stricta has upright growing leaves, the colour of which is also very bright and striking. D. latifolia pendula has drooping foliage, as its name implies, but its colour is somewhat dull. Sphærogyne latifolia is a very handsome ornamental foliaged plant, but some care is required in its cultivation, to keep the singular marking of the leaves intact. Clerodendron Balfourdi is very much in the way of C. Thomsonæ, but has larger flowers. Caladium Lowii and C. Veitchii are, as is well known, both very fine plants of which Mr. Barnes is getting up a fine stock. The last does not increase so freely as C. Lowii, and therefore will remain scarce for some time to come. The old Echmea discolor is now blooming here freely, and its heads of bright scarlet bracts with violet tips are very showy. Sonerila margaritacea looked as healthy as could be wished. Here it is wintered on a high dry shelf, and watered very sparingly indeed. It is a very pretty plant when in good condition, but with some it is difficult to manage. Aristolochia leuconeura is a handsome variegated foliaged stove creeper; and by its side was Sphærostema marmoratum, a conspicuous failure, for here, as elsewhere, when it grows vigorously the well-defined marking on the young plants becomes almost wholly lost.

A batch of the new Zonate and other bedding Pelargoniums are being grown here for trial. Carter's Snowball is a flower whose name is a misnomer; it is not white but pale flesh-colour. Bel Demonio is a salmon-coloured flower, really "good for nothing." Cybister, of the Nosegay section, is a very fine variety with fiery scarlet flowers. Helen Lindsay is of a very pleasing shade of rosy pink, of good habit, and very fine quality. The variety known as White Tom Thumb sent out by Messrs. E. G. Henderson & Son, is, like Snowball, a pale flesh-coloured flower and not white. Merrimac, an ochre and scarlet-coloured flower, is large and very fine. Merrimac (Smith's) is in colour a bright crimson, but not so good as the preceding. Another variety from the same raiser, named Excellent, has very fine fiery scarlet flowers. Spread Eagle is in the way of Cybister, but not so good. St. Fiacre is a very fine zonale variety, its colour being salmon tinged with pink. Lord of the Isles, sent out by Mr. G. Smith of Islington, in colour a bright cerise, is a very fine flower, one of the very best of this shade.

As an experiment, Mr. Barnes is grafting some of the best of the variegated Pelargoniums, such as Mrs. Pollock, Italia Unita, Countess, Mrs. Benyon and Sunset, on stocks of the old lemon-scented Geranium. His aim is to get some dwarf standard plants for dinner table or conservatory decoration. The grafts are looking very healthy, and promise to take. Three of these variegated Pelargoniums, viz., Mrs. Pollock, Mrs. Benyon and Sunset, had a very distinct edging of gold to the leaves; they appeared, together with Italia Unita, to be the very cream of this extremely handsome and interesting class of plants.

Miscellaneous.

Algum or Almug Trees (Heb. *algummim or almuggim*).—Mention of these is made in 1 Kings x. 11, 12, 2 Chr., ix., 10, 11, as having been brought in great plenty from Ophir, together with gold and precious stones, by the fleet of Hiram for Solomon's temple and house, and for the construction of musical instruments. "The king made of the Almug-trees pillars for the house of the Lord, and for the king's house, harps also and psalteries for singers; there came no such Almug-trees, nor were seen unto this day." In Chr. ii. 8, Solomon is represented as desiring Hiram to send him "Cedar-trees, Fir-trees, and Algum trees, (marg. Almuggim), out of Lebanon." From the passage in Kings, it seems clear Algum-trees came from Ophir; and as it is improbable that Lebanon should also have been a locality for them, the passage which appears to ascribe the growth of the Almug-tree to the mountains of Lebanon, must be considered either an interpolation of some transcriber, or else it must bear a different interpretation. Rosenmüller suggests (Bibl. Bot. 245 Norren's translation), that the wood had been brought from Ophir to Tyre, and that Solomon's instructions to Hiram were to send on to Jerusalem (*vid* Joppa perhaps) the timber imported from Ophir that was lying at the port of Tyre, with the Cedars that had been cut in Mount Lebanon." The attempts at identification made by modern writers are these:—1. That the Thyine wood (Thuja articulata) is signified by Almug; but unfortunately this Thuja is not found in Asia. 2. Dr. Kitto supposes that it is the Deodar, on which Dr. Hooker remarks, "the Deodar is out of the question. It is no better than Cedar, and never could have been exported from Himalaya." 3. The late Dr. Royle, with more reason, is inclined to decide on the white Sandal-wood (Santalum album, see Cycl. Bib. Lit. art. Algum). 4. The Rabbins understand a wood commonly called brasil, of a deep red colour, used in dyeing. 5. Dr. Hooker says, "I have often heard the subject of the Almug-tree discussed, but never to any purpose. The Pterocarpus santalinus has occurred to me; but it is not found in large pieces, nor is it, I believe, now used for musical purposes." This tree, which belongs to the natural order Leguminosæ, and sub-order Papilionaceæ, is a native of India and Ceylon. The wood is very heavy, hard, and fine-grained, and of a beautiful garnet colour, as any one may see who has observed the medicinal preparation, the compound tincture of lavender, which is coloured by the wood of the sandal-tree. *Dr. Smith's Dictionary of the Bible: the latter part abridged.*

Tokay Wine.—The village of Tokay which gives its name to the wine is situated in Hungary on the top of a hill near the meeting of the Rodrog with the Theiss. The vineyards are to the west of the Rodrog and they occupy a space of 10 square miles. The earth is of yellow chalk mixed with large pebbles. The wine is white, and the vintage is commenced as late in the year as possible, but generally at the end of October. There are four different kinds of Tokay. The first is made by placing the Grapes when cleared of all rotten fruit in a wooden vat, with a double bottom, of which the one on which the Grapes rest is pierced with small holes. The vat is filled with Grapes and covered with boards. After a few hours the Grapes become heated to 80° Fahrenheit, and fermentation sets in. The fermentation destroys the tartaric acid, and the weight of the Grapes forces the juice through the holes in the bottom. The Grapes are then trodden under foot, and the wine is poured into small casks, where it remains exposed to the air for a month after having fermented for two days. This is the wine which is generally exported. When of good quality it has a silvery, oily colour, the taste sweet and mellow, with a peculiar earthy flavour, slightly astringent and aromatic, with good body. This wine may be preserved for an almost indefinite period, but it is not drinkable until it is three years old. Some Vine growers in the Arriège cultivate vineyards on the tops of the highest mountains in calcareous earth covered with stones similar to those found in the Vineyards near Tokay, but they have not as yet succeeded in producing anything as good as the Hungarian wine. *Moniteur Vinicole.*

Double Flowers.—In endeavouring to obtain double flowers, the following general propositions may be looked upon as guides. To obtain double flowers from seed, dependence must not be placed upon the influence of a stray stamen, but means must be taken to superinduce a highly elaborated plethoric habit in the seeds. The plant must be stimulated by high cultivation when the flower buds appear, and then by removing after flowering a great portion of the seeds. If the stimulus be applied too early it will be wasted in increasing the luxuriance of the plant, but if applied as the flowers make their appearance, a greater degree of strength is conveyed to them. By thinning the flowers or seed vessels as soon as they flower, so as only to have a very few seeds to ripen, these acquire a full habit, and it is well known that this state is opposed to fruitful productiveness, while the less luxuriant habit produces great fruitfulness. We do not expect much seed from a double flower. Such plants as Hollyhocks for instance, though often said to be double, are really not so, and the rendering them more double must be obtained by high cultivation and the seed thinning process. For the production of double flowers, a full exposure to light is as essential as an abundant supply of nourishment. Here the pruner may gain some information about keeping his trees thin for the production of fruit. I have proved that a due supply of moisture, a superabundant supply of decomposing organic matter to the roots and exposure to light, are the means of promoting excessive development of petals which compose double flowers. *Middlemiss, in Victorian Horticultural Gazette.* [This is very doubtful.]

Hyssop (êzôb; ὕσσωπος).—Perhaps no plant mentioned in the Scriptures has given rise to greater differences of opinion than this. The question of the identification of the êzôb of the Hebrews with any plant known to modern botanists was thought by Casaubon "adeo difficilis ut, &c." The chief difficulty arises from the fact that in the LXX the Greek word given above is the uniform rendering of the Hebrew

êzôb, and that this rendering is endorsed by the Apostle in the Epistle to the Hebrews (ix. 19, 21) when speaking of the ceremonial observances of the Levitical law. Whether the LXX made use of the Greek word as most nearly resembling the Hebrew in sound, as Stanley suggests (S. & P. 21, note), or as the true representative of the plant indicated by the latter, is a point which in all probability will never be decided. Botanists differ widely even with regard to the identification of the ὕσσωπος of Dioscorides. . . . . An elaborate and interesting paper by the late Dr. J. Forbes Royle on the Hyssop of Scripture in the Journal of the Royal Asiatic Society, viii. 193, goes far to throw light upon this difficult question. Dr. Royle, after a careful investigation of the subject, arrived at the conclusion that the Hyssop is no other than the Caper plant, or Capparis spinosa of Linnæus. The Arabic name of this plant, asuf, by which it is sometimes, though not commonly, described, bears considerable resemblance to the Hebrew. It is found in Lower Egypt . . . in the desert of Sinai, at Gaza, and at Jerusalem. It is thus met with in all the localities where the êzôb is mentioned in the Bible. With regard to its habitat, it grows in dry and rocky places and on walls. Finally, the Caper-plant is capable of producing a stick 3 or 4 feet in length. He thus concludes:—"A combination of circumstances, and some of them apparently too improbable to be united in one plant, I cannot believe to be accidental, and have, therefore, considered myself entitled to infer, what I hope I have succeeded in proving to the satisfaction of others, that the Caper-plant is the Hyssop of Scripture." Whether his conclusion is sound or not, his investigations are well worthy of attention; but it must be acknowledged that, setting aside the passage in John xix., which may possible admit of another solution, there seems no reason for supposing, that the properties of the êzôb of the Hebrews may not be found in some one of the plants with which the tradition of centuries has identified it. *Dr. Smith's Dictionary of the Bible.*

Calendar of Operations.

(*For the ensuing week.*)

FALLS of rain have been frequent during the past week in different parts of the country, and some of these have unfortunately been so sudden and heavy as to greatly impair the beauty of the more delicate kinds of bedding plants. Where, therefore, these or valuable specimens of any description are in danger of sustaining serious injury either from wet or frost, they had better be moved under some kind of shelter. A few late cuttings of choice bedding plants may still be put in, and among these do not overlook the Nosegay Pelargoniums Stella and Cybister, which are not only effective in beds and vases, but also make valuable pot plants.

FLOWER GARDEN AND PLANT HOUSES.

Hyacinths and other Dutch bulbs, if not already got, should now be procured and potted without delay. Orange trees meant for forcing in winter for the decoration of the conservatory or greenhouse should also be attended to. These and Daphnes are invaluable for winter blooming, and should be largely grown for that purpose. Look carefully after red spider on Bossiæas, Chorozemas, and anything else found to be liable to that pest, and see that it is eradicated before the plants get disfigured. Red spider is easily got rid of by laying the affected plant on its side, and well washing the under sides of the leaves with the engine, applying the water with as much force as the foliage will bear.

AZALEAS.—Get these tied into form as soon as can be done, in order to give them a neat appearance. In doing this, however, avoid too much formality, with which so much fault has justly been found during the past season. Also attend to the staking and training of specimen plants of other hard-wooded kinds as leisure time can be found for that purpose.

HEATHS.—Look carefully after the watering of large specimens of these in pots, which are soon injured by being either over or under-watered. Examine them often and carefully, and where they are found to be dry, water thoroughly, so as to moisten the whole of the ball; also look sharply after mildew on comparatively soft-wooded varieties, and dust with sulphur directly the enemy is perceived.

HOLLYHOCKS.—Great improvement has been effected in these showy border plants of late; even this season some excellent new kinds have been exhibited. Save seed from the best. Some adopt the plan of removing the upper part of the spike, leaving six or eight of the early blooms. When the plant throws up four or five stems, and propagation of the variety is an object, one or more of the spikes of flowers may be sacrificed; the stem may be split, cut in lengths, with a bud in each, and placed under a hand-glass, taking care that the small portion of shoot retained is covered with soil, leaving the point of the bud exposed. Strong young plants may often be raised in this way.

SALVIAS.—See to having plenty of the showy scarlet kind called splendens, which is extremely useful for mixing among Chrysanthemums. It is a good practice to place the largest specimens of this in a shady situation out of doors for a few weeks in autumn; plants so treated will be found to bloom more strongly, and last longer in beauty than others drawn up in a warm house.

TREE VIOLETS.—Keep these clear of their great enemy, red spider, by a liberal use of the syringe, and giving them plenty of manure water, which will assist in keeping them in vigorous health.

VAN THOL TULIPS.—Bulbs of these for forcing may be potted. Place them on coal ashes, cover them as recommended last week for Hyacinths, and early in November they may be placed in heat.

FORCING GARDEN.

CUCUMBERS.—Where a supply is required during winter, vigorous young plants should be secured at once from seed, as plants that have been bearing through the autumn, however promising they may look, seldom answer well for winter fruiting.

FIGS.—Where any are ripening, keep the atmosphere as dry as can conveniently be done, and also let the trees be on the side of dryness at the root, but avoid such a degree of drought as would be likely to injure the foliage or the bearing wood for next crop. Keep the shoots thin and neatly tied in, so as to expose them fairly to light and air, but avoid stopping at this season. Keep the atmosphere moist when the fruit is swelling, giving the foliage a good washing with the syringe frequently to prevent red spider, and give plants in pots or tubs a liberal supply of manure water.

PINES.—Any plants which may appear to require repotting should be examined and shifted at once, if this is found necessary, in order that the roots may get hold of the fresh soil before dull weather sets in, when it will not be safe to encourage free growth. And any necessary re-arrangement of plants growing in the open bed should also be effected as soon as possible. Encourage plants expected to show fruit next January to make vigorous growth, for these should be sufficiently advanced by the beginning of November to allow of keeping them rather cool and dry, so as to check and thoroughly ripen their growth, for unless this is attended to there will be considerable risk about getting them to show fruit at that season. Plants which have been prepared for fruiting, and which it is desired to get up at once, should be encouraged with a moist warm atmosphere, keeping the soil about their roots in a healthy state as to moisture. Some have a dread of applying water at the root in the case of plants that have been kept dry for a time to check growth, and withhold it until the fruit is perceptible; but this is a mistake, causing loss of time as well as injuring the plants, for unless root action is encouraged plants cannot be expected to start freely. If artificial treatment must be resorted to in order to get the plants to fruit at the desired time, there is no method so certain or so little injurious as keeping them cool and dry for a month, and then affording them a moist warm temperature and a brisk bottom-heat, giving sufficient water at the root to properly moisten the soil. Take off and pot, or plant out suckers at short intervals as they can be obtained of sufficient strength for that purpose.

VINES.—Give air freely whenever the weather is dry in houses where the ripening of the wood is an object, and if a little fire-heat is used with the air, this will be much more efficacious now than later. But except in the case of young Vines with a very gross habit it will hardly be necessary to use fire-heat if the weather is dry. Now that heavy rains have set in, as soon as the soil of outdoor borders has been sufficiently watered, we would advise covering that of the early house with dry stable litter, fern, or whatever can be obtained most conveniently that will answer the purpose of keeping the border comparatively dry. Nothing answers better for this purpose than clean straw, provided the border has a proper slope from the front of the house; in that case it is easily thatched so as to throw off the wet entirely. But straw is too valuable in most parts of the country to be used for this purpose, and wooden shutters or tarpauling would be found cheaper in the end. It will also be advisable to cover the borders of houses in which it is intended to keep ripe Grapes for any length of time, so as to prevent the soil getting saturated about the roots. Look over ripe Grapes frequently, particularly in damp weather, cutting out any tainted berries immediately they are perceived, and keep the atmosphere as dry as possible, using gentle fires when necessary, with a free circulation of air; but a warm temperature is nearly as injurious as damp, therefore use no more fire-heat than may be absolutely necessary.

HARDY FRUIT AND KITCHEN GARDEN.

Pay every attention to getting the wood of Peaches and Apricots well ripened, by exposure, shortening, &c. Prepare for planting all kinds of fruit trees, by getting the ground in good order for the different kinds. On cold stiff soils it is advisable to plant on hillocks, 1 foot or 18 inches higher than the surrounding surface. The trees will not grow so fast in consequence, and will require more attention in summer in the way of mulching, but they will form short-jointed, well ripened, fruitful wood, which is the best preventive of canker, gum, &c., and will save the labour of resorting much to root-pruning.

APPLES AND PEARS.—Most kinds of Apples may be gathered during this and next month. Late Pears should, however, be left on the trees while the weather continues favourable for their ripening.

CAULIFLOWERS.—Use these before they get too large, and prepare a shed or pit to plant a quantity on the first approach of frost.

FRENCH BEANS.—These may require a slight protection at night.

POTATOS.—No opportunity should now be lost for getting Potatos that are ripe out of the ground, and stored in a dry condition. They may either be kept in narrow pits, with a little dry earth sprinkled among them, or in airy dark sheds. Before storing, however, take care to separate the bad ones, fortunately very scarce this season, from those that are sound.

SALADING.—Plant out Lettuces and Endive for spring use. If planted on the sloping sides of wide ridges they will stand better, damp being quite as destructive to them as frost.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Sept. 14, 1864, as observed at the Horticultural Garden s

Sept.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 8	7	29.971	29.940	74	62	68.0	64	61½	S.W.	.00
Friday 9	☽	29.956	29.894	69	48	58.5	64	62	S.W.	.00
Satur. 10	9	30.012	29.882	64	45	54.5	62½	62	S.W.	.00
Sunday 11	10	29.890	29.774	66	32	49.0	61	61½	S.W.	.00
Mon. 12	11	29.981	29.958	68	34	51.0	59½	61	W.	.00
Tues. 13	12	29.952	29.822	66	48	57.0	60	60	S.W.	.02
Wed. 14	13	29.696	29.533	68	42	55.0	60	60	S.W.	.50
Average.		29.922	29 829	67.8	44.4	56.1	61.5	61.0		.52

Sept. 8—Densely overcast and windy; cloudy; overcast.
— 9—Cloudy and boisterous.
— 10—Lightly overcast; fine; overcast.
— 11—Low masses of white clouds, and windy; fine; slight frost.
— 12—Fine; low white clouds; fine; cold at night.
— 13—Lightly overcast; rain; fine; overcast.
— 14—Cloudy; boisterous; heavy rain.
Mean temperature of the week 1½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK

During the last 38 years, for the ensuing Week, ending Sept. 24, 1864.

September.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 18 .	66.8	46.8	56.8	17	0.84 in.	3	8	3	1	2	10	6	5
Mon. 19..	67.0	45.4	56.2	19	0 64	4	10	3	1	5	8	4	3
Tues. 20..	66.9	43.9	55.4	16	0.45	3	5	5	4	3	8	6	4
Wed. 21..	66.3	45.0	55.7	20	0.50	2	5	6	2	6	8	7	2
Thurs. 22..	66.6	45.4	56.0	19	0.80	—	4	9	1	6	10	6	2
Friday 23..	66.3	46.0	56.1	18	1.21	—	6	8	2	6	9	5	2
Satur. 24..	65.7	44.7	55.2	18	0.75	2	8	3	1	6	11	8	1

The highest temperature during the above period occurred on the 20th, 1843; and the 24th, 1832—therm. 81 deg.; and the lowest on the 20th, 1840—therm. 32 deg.

Notices to Correspondents.

DISEASED CAULIFLOWERS: *Flowerdale* From your description of the roots, as being formed of "a succession of tubers," we presume the reason of their dying away suddenly, is, that they are affected by the disease called Clubbing. *If so*, you can only adopt preventive measures in the case of young plants, paring away the knob-like parts, and dropping a small portion of wood-ashes into the hole when they are planted.

FUMIGATING WITH TOBACCO: *A M.* The rule certainly is to fumigate when the plants are dry, and hence it is customary to ventilate a house or pit freely before commencing. The opposite practice is liable to injure the foliage of some plants.

GALLS: *E T.* Your gall is one of those to which Reaumur assigns the name of "Artichaut." Yours, however, is apparently derived from a female flower, and not from a bud; or if from a bud, from one just above the female inflorescence, and not on a barren summer shoot. You will find a good account of the production in "Annales des Sciences Naturelles," Series 3, Vol. 19, p. 349. *M. J. B.*

GRAPES: *Constant Reader.* The probable cause of your Vines producing long loose bunches, instead of compact and well set ones, is doubtless that you keep them too close and moist while growing. Try the effect of more air—judiciously administered of course.

INSECTS: *J G.* The caterpillars on your Pear leaves are the slimy larvæ of a small black-winged species of Saw-Fly, Selandria Æthiops. They may be destroyed by dusting the leaves with lime, or syringing them with lime water. If not destroyed they will injure the trees by stopping the action of the leaves.—*T S P.* Larva No. 1, with the sickle-shaped jaws, is that of one of the lace-winged flies, Chrysopa Perla—it feeds on aphides. The other is the caterpillar of some kind of moth. We are not acquainted with it, judging from the figure of the large size of the third pair of legs.—*R W K.* The insects on the Turnip leaves from North Shropshire are a species of Plant Louse, Aphis Brassicæ or Rapæ. The Ladybird, Coccinella 7-punctata, feeds on them, and consequently should not be destroyed.—*Old Sub.* We found no beetle with your query, and are not aware of any species which attacks the Box. The small chaffers reared in the ground adjacent to the rows of Box might probably take shelter in it by day. *W.*

MONSTERA: *G. Wheeler.* We shall shortly have something to say about this as a fruit-bearing plant.

MUSCAT HAMBURGH GRAPE: We learn from Messrs. Lane, of Great Berkhampsted, that their bunch of this variety exhibited the other day at the Crystal Palace weighed 4 lb. 13 oz.

NECTARINES CRACKING: *G W.* This results from excess of moisture at the root, more or less assisted probably by the dry atmosphere in which the fruit itself is kept, preventing the expansion of the skin. Some sorts are more subject to it than others—the Stanwick for example, and in such cases it is still more necessary than in others to secure dryness of the soil as the fruit approaches maturity.

NAMES OF PLANTS: *W J.* Spiranthes autumnalis, the Lady's Tresses.—*L T Davis.* Such plants cannot be satisfactorily named without flowers; 1, appears to be the bedding plant grown as Gnaphalium lanatum; 2. is a Sedum, perhaps carneum.—*T H.* Athyrium Filix-fœmina odontomanes.—*J B.* Oncidium cornigerum.—*A B C.* The paler coloured Heath is Erica retorta major, the other E. jasminiflora rubra.—*Old Sub., Paris.* The Cornelian Cherry, Cornus mas.—*W D.* We should refer the specimens to Quercus pedunculata, though the characters are somewhat intermediate.

SEEDLING PEACH: *J B.* Your seedling Peach has a good deal of the Noblesse character and flavour, and so far as its present condition enables us to judge, has nothing distinctive about it.

SOIL FOR PINES: *J. Grove.* The best soil for re-potting large Pines in, is good friable loam, well enriched, with the further addition of a small proportion of peat or leaf-mould. If your plants have lost their roots through too much bottom-heat, you must not blame the soil.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.
Address, 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c.
They also continue to supply GIBBS' PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

Autumn Wheat Sowing.

PHOSPHO-GUANO, Carriage Free at any Railway Station or Shipping Port in the Kingdom, 11*l.* 10*s.* per ton, net cash, for 10 tons and upwards. Smaller quantities, 11*l.* 15*s.* per ton.

*** This Guano is admitted to be the best manure for Wheat, containing, as it does, 35 to 40 per cent. of Soluble Guano Phosphates, and 3½ per cent. of actual Ammonia, in addition to Potash. The advantage of applying it in autumn is, that the farmer is enabled to harrow the Guano well into the soil before sowing, which produces a better result than top-dressing in the Spring. The Phospho-Guano promotes a strong braird, vigorous growth, and a full and plump grain. Apply at the rate of 2 to 2½ cwt. per acre.

PETER LAWSON & SON, Contractors, Edinburgh; and 28, King Street, Cheapside, London, E.C.

LAWES'S WHEAT MANURE for AUTUMN SOWING.—A supply of the above Manure is now ready for delivery, at J. B. LAWES' Factories, Deptford, and Barking Creeks. Price 8*l.* per ton.

2 to 3 cwt. per acre to be harrowed into the land before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents; also

SUPERPHOSPHATE of LIME	£6 6
MINERAL SUPERPHOSPHATE	5 5

Genuine Peruvian Guano direct from the Importers, and all Chemical Manures of value.

American and other Cakes at Market prices.

Address JOHN BENNET LAWES. Offices; 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

PHOSPHATE of LIME COMPANY (LIMITED).—Capital, 150,000*l.*, in 10,000 shares of 15*l.* each, of which only 6000 will now be offered to the public. 1*l.* per share on application, 2*l.* on allotment. No calls for three months after allotment. Future calls not to exceed 3*l.* per share, and at intervals of not less than three months.

Chairman—SIR WILLIAM GORE OUSELEY, K.C.B.
Vice-Chairman—Professor WAY, late Consulting Chemist to the Royal Agricultural Society.
Bankers—European Bank (Limited), King William Street.

ABRIDGED PROSPECTUS.

This Company is formed for the purpose of purchasing and working the valuable and extensive deposits of Phosphate of Lime situated in Estremadura, Spain.

These deposits, long useless from the absence of a cheap mode of transport, have now been rendered practically available by the opening of the Railway from Lisbon to Merida, which is within a comparatively short distance of the quarries. This favourable alteration so far reduces the cost of transport that, upon a very low average of value, a dividend of 20 per cent. is confidently anticipated. The present proprietor guarantees a minimum dividend of 10 per cent. on the paid-up capital for three years; whilst the supply of Estremadura Phosphate is virtually inexhaustible, and the demand for Artificial Manures, of which it is a chief requisite, is yearly increasing.

Detailed Prospectuses and Forms of Application, by post, from the Offices, 199, Gresham House, Old Broad Street, E.C.

DIXON AND CARDUS'S LINSEED CAKE,
Analysed and Reported upon by Dr. VOELCKER.

As considerable mortality amongst the Lambs has occurred in two or three districts in Hampshire, and in some cases our Linseed Cake, on which they were feeding, has been blamed as the cause of it, we requested Dr. Voelcker to investigate the subject and report upon it; which report we subjoin.

It will be seen that the Cake was of excellent quality, and free from any matter that could be injurious to the health of animals feeding upon it.

Diseases in Lambs in isolated districts are by no means uncommon; and no doubt excellent Cake is often branded as the cause of sudden outbreaks of disorders in Lambs, whereas these disorders are enveloped in such mystery that the best Veterinary Surgeons and the most experienced Flock-masters are at a loss to advance a rational theory in accounting for the sudden death which often affects the flocks in one district and not in another.

The four Samples of Cake sent for Analysis were marked:—
J. W. No. 1 and No. 2, from Mr. John Wallace, Houghton.
T. E. From Mr. Thomas Edwards, of Compton House, Stockbridge.
S. A. From Mr. Stephen Ayles, of Braishfield, Romsey.

DIXON & CARDUS.

Report of Dr. VOELCKER.
101, Leadenhall Street, London, July 8, 1864.

To Messrs. DIXON & CARDUS, Southampton.

DEAR SIRS,—I have now the pleasure of handing you the results of careful Analyses of four samples of your Cake. You will observe at once that these four samples show a close agreement in composition, which distinctly proves that the manufacture of your Cake is carried on uniformly in your mill.

The per centage of Oil (the most valuable constituent of Oil-cake) in all four samples is quite as high as in the best kinds of Linseed Cake; and that of flesh-forming matters a fair average proportion.

The small amount of sand, and the absence of obnoxious weed seeds, shows that Clean Linseed is used in the preparation of these four samples of Cake.

I have carefully examined your Cake for injurious foreign matters, and am decidedly of opinion that it contains nothing that can be regarded as at all likely to be injurious to the health of animals fed upon it. Its condition is fresh, it is free from mould, and is palatable; and in my opinion is a wholesome and nutritious Cake of good average quality.—Yours truly, AUGUSTUS VOELCKER.

COMPOSITION OF FOUR SAMPLES OF LINSEED CAKE, MANUFACTURED BY DIXON & CARDUS, NORTHAM, SOUTHAMPTON.

	SAMPLES MARKED.				
	J.W. No. 1.	J.W. No. 2.	T.E.	S.A.	Barrel American
Moisture	10.91	11.39	10.58	10.48	11.64
Oil	11.55	11.26	10.92	10.94	10.43
*Albuminous compounds (flesh forming matters)	25.62	25.25	27.43	26.43	24.01
Mucilage, Starch, Sugar, and digestible fibre	31.09	31.28	30.34	30.96	34.44
Woody Fibre (Cellulose)	14.04	13.46	14.46	15.09	14.26
**Mineral Matters (Ash)	6.79	7.36	6.27	6.10	5.22
	100.00	100.00	100.00	100.00	100.00
*Containing Nitrogen	4.10	4.04	4.39	4.23	3.84
**Containing Sand	2.12	2.34	1.64	1.13	1.42

AUGUSTUS VOELCKER.

London, 101, Leadenhall Street.—July 8, 1864.

N.B. We have in the above Table added an analysis of Barrel American Cake, made by Dr. Voelcker some time ago for us, which shows our cake to be even superior to Barrel American, which is considered by many as the standard of first-rate quality. D. & C.

GIRDWOOD'S MELOSSOON or SHEEP PROTECTING DIP.—This preparation, poisonous alone to Parasites, forms an artificial yolk of great value for the sheep and wool. It is the Best, Cheapest, and Safest of all Dipping Compounds. Price 6*d.* per lb. Above a cwt. free to stations.

To be had of Mr. ROBERT GIRDWOOD, Tanfield, Edinburgh, or his Agents.

Early Feed.

FOR SALE, a quantity of EARLY BROAD-LEAVED SEED RYE, at 50*s.* per quarter. Sacks 2*s.* each.

The above can be recommended as a selection after several years observation from near 40 samples of the earliest Rye procurable, and may be relied upon as a very early and most productive variety.

Apply to Mr. W. W. GILLINGHAM, Seed Merchant, Rochford, Essex.

HALLETT'S TRADE PEDIGREE MARK. NURSERY WHEAT.

In September	..	4 bushels on 10 acres.
In October	..	4 bushels { On 8 acres. On 6 acres.
In November	..	4 bushels on 4 acres.
Seed required	..	1st half ..
		2d half ..

One Guinea a Bushel, or Seven Guineas a Quarter, including Bag, delivered at the Brighton Railway Station, upon receipt of Cheque or Post Office Order, without which the Wheat will in no case be sent.

APPLY TO FREDERIC F. HALLETT, Esq., F.Z.S., THE MANOR HOUSE, BRIGHTON, SUSSEX.

Agriculture and Rural Economy.

PROFESSOR BUCKMAN, F.L.S., F.G.S., &c., late Lecturer on Botany, Geology, and Rural Economy at the Royal Agricultural College, will have a VACANCY for only ONE PUPIL at Michaelmas.—For particulars apply at Manor Farm, Bradford Abbas, Sherborne, Dorset.

THE NATIONAL EXHIBITION of SPORTING and OTHER DOGS.

President—His Grace The DUKE of BEAUFORT.
Vice-President—The MAYOR of BIRMINGHAM.

The FIFTH GREAT ANNUAL EXHIBITION of SPORTING and other DOGS will be held at BIRMINGHAM, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, and 30, and December 1.

Copies of the Prize Lists and Regulations, with the statement of Receipts and Expenditure for 1863, may be obtained from the Secretary. The ENTRIES CLOSE on NOVEMBER 1.

GEORGE BEECH, Secretary.
Offices: Rectory Chambers, Temple Row, Birmingham.

THE BIRMINGHAM CATTLE and POULTRY SHOW, 1864.

The SIXTEENTH GREAT ANNUAL EXHIBITION of FAT CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, CORN, ROOTS, and IMPLEMENTS, will be held in BINGLEY HALL, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, 30, and December 1, when Prizes to the amount of £1995 will be awarded in the following Divisions, viz.:—

FAT CATTLE ..	£794 10	BREEDING PIGS ..	£76 10
FAT SHEEP ..	299 5	CORN and ROOTS ..	71 8
FAT PIGS	60 5	POULTRY and PIGEONS	693 0

Prize Lists, Certificates of Entry, and every information may be obtained from the Secretary.

The ENTRIES CLOSE on TUESDAY, November 1.

JOHN B. LYTHALL, Secretary.
Offices: 13, Temple Street, Birmingham.

SMITHFIELD CLUB FAT CATTLE SHOW.—The ANNUAL SHOW of FAT CATTLE, SHEEP, and PIGS, will be held at the AGRICULTURAL HALL, ISLINGTON, on MONDAY afternoon, December 5, and four following days.

Intending Exhibitors are requested to apply for Certificate forms by the reference letters as under:—

CATTLE.	Form A.	For an Ox or Steer (in any Class).
	„ B.	For a Cow or Heifer (in any Class).
	„ C.	For a Beast in Extra Stock.
SHEEP.	„ D.	For a Pen of three Wethers (in any Class).
	„ E.	For a single sheep in Extra Stock.
PIGS.	„ F.	For a Pen of three Pigs (in any Class).
	„ G.	For a single Pig in Extra Stock.

ENTRIES for LIVE STOCK CLOSE NOVEMBER 1.

Prize Lists, Forms of Certificates, and all information may be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, Corner of Half-Moon Street, Piccadilly, London, W.

N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words "Smithfield Club."

SMITHFIELD CLUB SHOW.
IMPLEMENT DEPARTMENT.

The LAST DAY for receiving ENTRIES for IMPLEMENTS and MACHINERY is October 1.

Printed forms of Certificates, with rules and regulations, may be obtained of Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, corner of Half Moon Street, Piccadilly, W.

The Agricultural Gazette.

SATURDAY, SEPTEMBER 17, 1864.

—— Many of our readers will be gratified to learn that Mons. F. R. DE LA TREHONNAIS, well known in English as well as French Agricultural circles, has been lately raised by the EMPEROR to the rank of Knight of the Legion of Honour, in recognition of the distinguished services which he has rendered to the cause of Agricultural progress. It is but a short time since we had to record a similar honour paid to M. DE LA TREHONNAIS on agricultural grounds by the QUEEN OF SPAIN, who had conferred on him the rank of Knight of the Order of CHARLES III.

"THE climate of this country indicates its especial fitness for the succulent growth of plants. It is not so well adapted to the ripening of seeds. Our rainfall, mists, and dews, our soils, our breeds of sheep and cattle, even our insular position, all point out the fitness of the country rather for the growth of green crops as food for our live stock than of bread corn for our population, which is so much more easily obtained by importation, and so much less easily produced at home."

This has been the outcry of the last few years. What do those who have helped to urge this popular opinion make of the past four or five months? It is well that tenant farmers, in the southern and midland counties at any rate, have not been wholly dependent like their live stock on succulent growth during the past summer. The pastures which we have been desired to extend have been burnt up. The extension of Clover and of green crop culture would this year at any rate have been but the extension of disaster.

In the northern counties and in Wales no doubt there are Turnips and Wurzels to be had; but all over the arable lands of Gloucestershire and Berkshire, and Oxfordshire, which also fairly represent the counties immediately around them, there are next to none.

The corn harvest has been tolerably satisfactory, or 1864 would have been a very disastrous year indeed; and as it is we shall be dependent to a very great extent this winter on imported grain for cattle food to make up for the lack of that provender and green food which our climate was so well adapted to ensure for us!

Apart, however, altogether from what may be

the rule of cultivation indicated by our ordinary seasons, it is plain that there is a question of very great importance and immediate urgency which this autumn in particular demands attention. How are our cattle to be kept during the next seven months? How is the meat manufacture to be carried on? And, what is of at least as much importance in its ultimate effect, how are our breeding stock and growing stock to be kept in good condition? for there cannot be a doubt that the quality of next summer's lambs and calves and also of our breeding stock next year, as well as of our existing growing stock all through their future career, depends on their condition during the next few months.

In order to enable the full discussion of these questions, we have applied widely for information on the probable food supply for the fold and farm-yard of the coming winter—and on the plans by which the deficiency of the ordinary supplies is intended to be met. And during the next few weeks we hope that our readers will contribute to the general fund of information on this subject. The following are one or two communications already received:—

One correspondent writes that he is seeking for information more immediately bearing on what is the most difficult position the farmers in the greater part of England have for many years had to encounter—the great scarcity of fodder occasioned by the unprecedented drought. "When I left Somersetshire a month ago," he says, "a green blade of Grass was hardly to be seen, and the Turnip crop had almost every where failed.

"All persons who have any practical knowledge of breeding and feeding stock must be aware of the great loss attending their being so stinted of food, as to become reduced in condition; and how difficult it is to recover their lost condition.

"This is one of the points to which I consider it desirable to direct attention, and to enforce the necessity of preventing it at almost any cost. I would beg to suggest as one of the most obvious measures the cutting up all the straw that can be spared, and using it for fodder in conjunction with meal of any sort, or of cake, according to the respective prices of each.

"The foregoing has reference to sheep as well as to cattle. In the case of the former, not only will the produce of wool be much lessened by hard keep, but its quality for combing purposes will be materially depreciated."

Mr. BURNISTON, of Henley, thus relates his experience in the use of Linseed-oil as an addition to straw chaff as provender for stock in store condition. He says:—"About 15 years ago, when under a very clever and practical farmer in Dorsetshire, I remember we fed 32 working oxen and other young stock very advantageously on chopped straw, a small proportion of hay chaff, and a sprinkling of Linseed-oil, and the animals thrived very well on the compound.

"Hay is dear and the Turnips are a failure this season, and I would suggest the following mixture to those who are short of feeding materials for their store cattle and sheep:—

lbs.		s.	d.
77	Chopped Oat-straw	nil	
28	Pollard	1	6
7	Pure Linseed-oil	2	3
112		3	9

"The above would cost 3*l.* 15*s.* per ton, containing about 10 per cent. of oil. The best Linseed-cake contains about 12 per cent. of oil, and is now selling freely at 12*l.* 5*s.* per ton.

"The Linseed-oil should be sprinkled over layers of chaff by a can and rose, and afterwards subjected to pressure to make the oil blend with the chaff and pollard. Animals are particularly fond of the Linseed-oil, and if it proves too laxative a greater proportion of straw chaff would correct its influence."

To this we have to add our own experience in the use of Linseed-meal. A lot of two-year old steers and heifers were kept all winter on a very few Turnips indeed, with straw chaff on which not more than a lb. of Linseed apiece, boiled into a thin and hot and saltish soup, had been poured. There is not only thus the direct addition of food, but this manner of applying it adds to the savouriness of the mess, and brings out the aroma of the provender, making it smell almost as sweet as hay. There cannot be a doubt that our live-stock during the coming winter, in the districts which have been so much injured by the drought, must do without litter. Sand and burnt clay, Fern and other leaf, expedients of that and other kinds, must suffice to provide them with bedding—the straw will have all to be turned to account as food. And it will be a timely and a useful thing to reproduce here the information which Dr. CAMERON of Dublin collected on this subject, and presented last year to the Royal Agricultural Society of Ireland.

It appears, according to him, that the following is the order in which our straws stand as regards nutritiveness:—

1, Pea haulm.
2, Oat straw.
3, Bean straw with pods.
4, Barley straw.
5, Wheat straw.
6, Bean straw without the pods.

The truth of this order of course hinges altogether on the condition in which the straw was harvested. Thus, no doubt, the Bean straw with pods was harvested before it became dead ripe, while that without pods was already brittle and hard, and lost its pods in threshing. Unfortunately for its serviceableness as food, there is no doubt that straw in general in the dry counties, has this year been harvested in a very hard and bright and dry condition. This fault in its condition as food must be corrected by some such cooking process as throwing hot Linseed soup over chaff, and beating it firm together in a heap for some hours before use, may amount to.

The following are some of the points to which Dr. CAMERON directed attention, and to which indeed we have already once before (1863) directed the attention of our readers.

He tells us that even in comparison with hay—taking into consideration the prices of both articles—Oat straw stands high, as will be seen by comparing the following analyses of common meadow hay, and properly harvested straw:—

	MEADOW HAY. (25 analyses.)	OAT STRAW (4 analyses.)
Water	14.61	14.0
Flesh-forming constituents	8 44	5.0
Respiratory and fatty matters	43.63	13.3
Woody fibre	27.16	63.1
Mineral matter (ash)	6.16	4.6
	100.00	100.00

As to the woody fibre of hay and straw, it appears to have been proved that it is a mistake to suppose it incapable of contributing to the nutrition of animals.

"In the summer of 1859 two German chemists, STOCKHARDT and SUSSDORF, made a series of experiments with the view of ascertaining whether or not the cellulose * of the food of the sheep is assimilated by that animal. The results of this inquiry are of importance, seeing that they clearly prove that even the hardest kinds of cellulose—lignine, in fact—are capable of being assimilated by the Ruminants. The animals selected were two wethers, aged respectively five and six years. They were fed—1st, upon hay alone; 2d, upon hay and Rye-straw; 3d, upon hay and the sawdust of Poplar wood, which had been exhausted with lye. (To induce the sheep to eat the sawdust, it was found necessary to mix through it some Rye-bran and a little salt); 4th, hay and Pine-wood sawdust, to which was added bran and salt; 5th, Spruce sawdust, bran, and salt; 6th, hay, pulp of linen rags (from the paper maker), and bran. The experiments were carried on from July till November, excepting a short time, during which the animals were turned out on pasture land, to recover from the injurious effects of the fifth series of experiments—produced probably by the resin of the Spruce. The animals, together with their food, drink, and ejecta, were weighed daily. The amount of cellulose in the food was determined, and the proportion of that substance in the ejecta was also ascertained; and as there was a considerable discrepancy between the two amounts, it was evident that the difference represented the weight of the cellulose assimilated by the animals. In this way it was ascertained that from 60 to 70 per cent. of the cellulose of hay, 40 to 60 per cent. of the cellulose of straw, 45 to 50 per cent. of the cellulose of the Poplar wood, 30 to 40 per cent. of the cellulose of the Pine, and 80 per cent. of the cellulose of the paper pulp. was digested."

In order to render a larger portion of this cellulose and lignine digestible, Dr. CAMERON recommends that straw should be cooked; and this recommendation is quite in accordance with the experience of farmers. "When straw in an unprepared state is consumed, a large proportion of its cellulose remains unappropriated, and it is certain that the hard woody fibre protects, by enveloping them, the soluble and easily digestible constituents of the straw, from the action of the gastric juice. He therefore recommends that straw should be either cooked or fermented before being used. An excellent mode of treating straw is to reduce it to chaff, subject it to the action of steam,* and mix it with roots and oil-cake or corn. A cheaper plan is to mix the straw with sliced roots, moisten the mass with water, and allow it to remain until a slight fermentation has set in. This process effectually softens and disintegrates, so to speak, woody fibre, and sets free the stores of nutritious matters which it envelopes.

Dr. CAMERON proceeded to quote Mr. BLUNDELL of Southampton, and other experienced men on the actual results of the use of straw in cattle feeding. Mr. BLUNDELL found that dairy cows, in the winter months, if fed on large quantities of roots, particularly Mangels and Carrots, will refuse to eat straw almost entirely and become very lean; but that they will always eat a full portion of sweet well harvested straw, when they get a small and moderate allowance of roots, say, for an ordinary sized cow, 15 lbs. of Mangel three times per day, the roots being given whole, just in the state they come from the store heap. Mr. BLUNDELL gives us the tabulated results of one of his experiments, proving that, by the use of straw, there is to be obtained something more than manure by the feeding of stock:—

COST OF FEEDING AN OX PER WEEK WITH STRAW, &c., ACCORDING TO MR. BLUNDELL.

	s.	d.
4 lbs. of oil-cake per day, or 38 lbs. per week, at 10*l.* per ton	2	6
64 lbs. of roots ditto, or 4 cwt. ditto, at 13*s.* 4*d.* ditto	2	8
20 lbs. of straw feeding, or 1¼ cwt. ditto, at 30*s.* ditto	1	10½
20 lbs. of straw litter, or 1¼ cwt. ditto, at 15*s.* ditto	0	11
Attendance, &c., per week	0	1
	8	0½
Deduct value of manure, per week	1	3½
	6	9
	s.	d.
Increased value of ox per week	10	0
Deduct cost of feeding	6	9
Profit	3	3

This is the ration of his fatting beasts—they will have to do with a less supply of litter this winter than has hitherto been allowed to them.

It is, however, chiefly from the chemical point of view that Dr. CAMERON regarded his subject. And assuming that 100 parts of Oat straw contain on an average—1 part of oil, 4 parts of flesh-formers, 10 parts of sugar, gum, and other fat-formers, and 30 parts of digestible fibre, he finds that the farmer buys in a ton of it for 30*s.* the following quantities of feeding material:—22½ lbs. of oil, 90 lbs. of flesh-forming material, 2 cwt. of starch and fat, and 6 cwt. of digestible fibre. Compare, now, this with what the farmer buys for 11*l.* in a ton of oilcake. He there purchases 582 lbs. of flesh-forming substances, 268 lbs. of oil, and 761 lbs. of gum, sugar, &c., and 74 lbs. of fibre. He pays 11*l.* for 2000 lbs. of nutriment in the cake, and 30*s.* for 1000 lbs. of nutriment in the straw. Straw is relatively deficient in the flesh-forming principles, and abounds in the fat-forming elements—of which, however, the most valuable, oil, is the least abundant. If, therefore, we add to it a due proportion of some substance very rich in flesh-formers and oil, the compound will possess, in nicely adjusted proportions, all the elements of nutrition. Perhaps the best kind of food which we could employ for this purpose is Linseed-meal. It contains about 24 per cent. of flesh-formers, 35 per cent. of a very bland oil, and 24 per cent. of gum, sugar, and mucilage. As Linseed possesses laxative properties, it cannot be largely employed; the addition, however, of Bean-meal—the binding tendency of which is well

* Cellulose is the term applied to the chemical substance which forms woody fibre. The latter is made up of very minute spindle-shaped tubes. In young and succulent plants these tubes are often lined with layers of soft cellulose. In many plants—such as trees—in a certain stage of development, the substance lining the cells is very hard, and is termed lignine. This substance is merely a modification of cellulose; and both resemble in composition sugar and starch so closely, that, by heating them with sulphuric acid, they may be converted into sugar.

* Mr. LAWRENCE, of Cirencester, describes his plan of using chaff as follows:—"We find that, taking a score of bullocks together fattening, they consume, per head per diem, 3 bushels of chaff mixed with just half a hundred weight of pulped roots, exclusive of cake or corn; that is to say, rather more than 2 bushels of chaff are mixed with the roots, and given at two feeds, morning and evening, and the remainder is given with the cake, &c., at the middle day feed, thus:—We use the steaming apparatus of STANLEY, of Peterborough, consisting of a boiler in the centre, in which the steam is generated, and which is connected by a pipe on the left hand with a large galvanised iron receptacle for steaming food for pigs, and on the right with a large wooden tub lined with copper, in which the cake mixed with water is made into a thick soup. Adjoining this is a slate tank of sufficient size to contain one feed for the entire lot of bullocks feeding. Into this tank is laid chaff, about 1 foot deep, upon which a few ladles of soup are thrown in a boiling state; this is thoroughly mixed with the chaff with a three-grained fork, and pressed down firm; and this process is repeated until the slate tank is full, when it is covered down for an hour or two before feeding time. The soup is then found entirely absorbed by the chaff, which has become softened and prepared for ready digestion."

known—to a diet partly composed of Linseed, will neutralise the relaxing influence of the oily seed.

If oil-cakes be used as an adjunct to straw, Rape-cake will be found more economical than Linseed-cake. If it be free from Mustard, well steamed, and flavoured with a little treacle, or a small quantity of Locust Beans, it will be readily consumed, and even relished, by dairy and fattening stock.

This, then, is the practical conclusion to which all these theoretical considerations lead:—Along with a small proportion of green food in Swedes or Mangel Wurzel give cooked straw chaff, with which boiled Rape-cake or Linseed-meal, to the extent of from 2 lb. to 8 lb. according to the advanced state of the fatting beast, is added daily per head of the herd. We hope during the next few weeks to collect and publish information not only on the deficient supply of home-grown foods but on the actual and relative prices and values of the various foods for cattle to be purchased in the market.

SHORT-HORN CORRESPONDENCE.

(*Continued from* p. 875.)

[Mr. Bowly, of Siddington, has been so good as to place in our hands the letters on this subject of the late Henry Cottrell, Esq., of Rhodyate Lodge, Congresbury; and from them we extract the following correspondence in 1826 and 1827 between himself, Major Rudd, and the Rev. H. Berry.]

ON THE PEDIGREE OF HUBBACK.

6. *Major Rudd to Mr. Cottrell, Feb.* 8, 1827.—

"I have been at a loss to conceive the reason why a prejudice against Kyloe blood should exist in the minds of the breeders in the southern part of England, for here none exists, but, on the contrary, I find it is a recommendation to the Short-horns to have a certain portion of it. Your letter has resolved the reason. You tell me that you have never seen Kyloes with a mossy coat of hair. If a person of your great research and experience has never seen the real and genuine West Highland Kyloe, I am no longer surprised at the error which prevails amongst the agriculturists in general of the South of England. It is the very ground of distinction by which we know the real and true West Highland Kyloe. It may be called the touch-stone by which they are known. It is their peculiar distinction to possess the real mossy coat of hair in a remarkable manner, and the Short-horns were never known to possess it in any instance until the cross with Hubback. The mossy coat is the true mark by which the descendants of Hubback are known, and this mark I have no doubt Hubback derived from the Kyloe. In truth it was from this very circumstance that the Short-horns descended from Hubback were long since suspected to be in part of Kyloe blood. I have heard repeatedly from both the Messrs. Colling that Hubback was the great cause of the improvement of that stock, and any report to the contrary originates wholly from the prejudice that exists against the Kyloe. I do not know any person more likely to spread these reports than Mr. George Coates, the author of the Herd Book, who I know has more than insinuated amongst the southern breeders that his own stock of Short-horns was superior to that of the Messrs. Colling. I saw Mr. George Coates' stock when he was a farmer, and lived near Driffield. I assure you I never saw any Short-horns with a worse coat of hair. I saw his boasted bull Patriot at Mr. Richardson's, at Horstow, in Lincolnshire, who was one of the purchasers of that bull. I never saw a worse coated bull nor a worse handler. You know that I purchased at Mr. Charles Colling's sale in 1810 his cow Peeress, the dam of Cecil. She was then in calf to Comet, and produced me a heifer called Princess. From Peeress and her daughter Princess I am now possessed of many cows and bulls which I kept quite distinct from any Kyloe cross, but I see their inferiority to those with a certain portion of Kyloe, say one-seventh or one-eighth. Peeress, you know, was direct from Hubback. I have now given you my genuine sentiments respecting the merit of the Kyloes and the cross between them and the Short-horns."

LETTERS FROM THE REV. H. BERRY.

7. *To Mr. Cottrell, Oct.* 17, 1826.—

"A long while ago I wrote to George Coates to be on the look out for something particular; something calculated to improve us in our girths, twists, and crops, and I really thought I had given the old fellow a job which would puzzle him. He reported, however, that he had made a point, and promised that the game should wait my pleasure. That I may tell my story in proper style, I must begin: 'Once upon a time' there grazed in the pastures about Ferrybridge, a very honest bull called Badsworth, who did a great deal of good in his way. Though moving about upon very short, little legs, and incumbered with a heavy carcase, he travelled far and near whenever his services were required by the distressed, particularly of the fairer sex, and good attended him whithersoever he went. Did sickness prevail in a family, Badsworth presented them with a healthy offspring. Was leanness the evil laboured under, he larded their carcases most disinterestedly from his own; in short, he was the sovereign remedy to which application was made in all the ins and outs which Short-horns can and do labour under. Comet was a fool to him; because whatever he might wish Comet could not perform like Badsworth; he appears, indeed, to have known no rivals but Major and Western Comet, and they emulated him at humble distance. But, alas! this apparently excellent beast was, like all sublunary goodness, tainted with a fault. He was, as Miss Cottrell can tell you, in part descended from Coates's blood, and therefore fashion condemned him. Fashion sent him to toil for vulgar beauties, while the less gifted of his compeers had at their command whole seraglios of the high bred. Among those, however, and there were a few, who estimated him properly was Sir J. Ramsden, and in his park (which has been held sacred from intruders, and therefore the public knew not what a treasure it contained), Coates had made his point, and to this sacred spot he introduced your humble servant, who speedily began transporting (in imagination at least) certain parts of Sir John's property to the more genial air of Worcestershire. To be brief, or I shall never finish, I was allowed to pick, and did select four toppers. First, a red cow, six years old, much in appearance like Millicent, quite as fat, and on the whole a great deal better, much more true in carcase, and with such a twist and girth as I never saw a cow possess in milk. I only think her neck a little too thin. Second, a roan, five years old, also in milk; Coates will have her called Magnum Bonum, and says she will be the flower of the flock. Her girth is wonderful, her twist good, and there exists no gap behind the shoulders to lay a finger in; not quite so fat as the other. Third, a three-year-old heifer, fatter and better than either, has had a calf, and is beyond all comparison the best I ever saw, taking her circumstances into consideration. She is a brilliant red and white. Her looks are most beautiful, and her depth of fore-quarters, neat shoulders, amazing girth round the chine and heart, prominent sides, handsome hind-quarters, and full twist render her a very picture. I took Mrs. Berry to see her, and thought she never would leave the ground. The fourth, two-years-old, and to calve in January, is half sister to the last, being out of the same cow, and is very capital, but her age prevents her showing so gaudily beside her elders. I believe the man who sold them is not in his senses; but what I think capital is that I bought them dog cheap. Alderson saw No. 3 for the first time when I did, and was struck speechless, and I wish you could have caught a peep at his long phiz when I met him the next day, and said I had bought the four, and had done my business at the sale. The fact is, a very illiberal prejudice has existed against Coates' blood and their black noses. Like Colling's they were good and bad, and they condemned the good ones because some people got hold of the bad and crossed them injudiciously. I would defy the world to produce more sweet heads and looks than these possess; in fact they are unusually fine. Now these animals have five or six good crosses, and then they owe their origin to Sir George Strickland's originals, which were derived from the same source as Colling's. Are they not then invaluable to me? So complete a cross with Wharfdale, in blood, and possessing the points which we so much want, they have put me in excellent humour. Coates says four such never travelled the southern road, and I believe him. At least I would not change with Whitaker for any four of his. In the spring (I hope early), when they have recovered from their fatigues, I shall summon you to pass judgment on them, and I hope neither you nor I will be disappointed. I have had several days with Coates, and you may be sure we have not been silent long. The old fellow fears he shall be trimmed for taking me from the sale, but I think he is in his heart pleased that somebody will have to do with his blood. I think you will now be of opinion I have given you enough in conscience. But mind, I will have no calling for your boots and setting out to see these wonders of wonders till the showman is on the spot, and I bargain that when at last you do, if Miss Cottrell comes, to say how I paint, whether flatteringly or truly."

8. *To Mr. Cottrell, Jan.* 2, 1827.—

"On my return from Acton this day I find your letter, and though I have not the necessary documents, I proceed to give my sentiments on the question proposed to me. Respecting the bull Hubback, it appears just to assume that there exists no certain evidence that he was either pure or cross bred. On this often agitated subject there is no proof, but strong presumption. Let us then inquire which is most striking and convincing. Until certain parties started the question he was always concluded to be a Short-horn; his colour and characteristics denoted that blood; his size and disposition to fatten only evincing a similitude to the Kyloe. But because he was small, and some of his stock small, does it follow he was of foreign extraction? Is my Minerva of Kyloe extraction because she is small? Or is any Kyloe which happens to attain great size necessarily therefore bred from a Short-horn? The size proves nothing unless accompanied by corroborative circumstances, which it is not. Where a fair presumption existed that this bull was purely bred, evidence ought to be brought rather than conjecture to affect strong probability. Such evidence has never been adduced. When Hubback flourished pedigree was little regarded, and a simple statement was made that he was so and so bred. No motive for fraud existed. Charles Colling could lose nothing by the disclosure of the truth had there been anything to conceal, and his successful crossing with the Galloway had rendered him independent of public opinion. He says he is convinced there was no Kyloe blood in him, and I have it under his hand that no produce, nor produce of produce of his were ever of Kyloe colour. All the improved Short-horns are not descended from him, indeed very few. Where then did they get their mellow touch and hair? With regard to contradictory dates, the consideration that at that time pedigree was disregarded and no accounts kept is sufficient to reconcile them; but if not, they alone are no evidence. It appears C. Colling had no motive for concealment. How stands the case with the parties attacking the pedigree? First there is Hutchinson annoyed at the celebrity of Colling, and sore for his pet Sockburns, he attacks Hubback because it had been said he did most service. He was anxious to give the Teeswater breed the credit of the improvement, and no other course lay open. But even he did not say much on the subject so long as he believed some of his stock were so descended. But when he found it was to Dalton Duke that he was to trace their descent, then the other bull was bastardised. Major Rudd has long bred Kyloes, and prefers them to the Short-horns. Can you not easily trace the grounds of his opinion? If he is possessed of evidence let the public decide [upon] it; so often reiterated at length [bring] it forth; but let us have evidence, not fiction or fancy. As to the men whose oaths could be had about it, what would they swear? To the fact that they thought such a thing. I can believe a man who records his opinion without the sanction of an oath; but if he is pleased to assert a thing at variance with circumstantial evidence, then something stronger than opinion is needed. In fact, in the same way in which this bull's breeding has been questioned, doubt might be thrown upon all the wonders C. Colling ever possessed, if it is concluded that they were pure bred because they possessed the recommendations which have consigned poor Hubback to disgrace, viz., good hair, good flesh, and (of greater size) the appearance in form of the Kyloe to which the most perfect animals naturally assimilate. To conclude, there is no proof how Hubback was descended, but there is strong probability he was a Short-horn. On the other hand, there exists no probability he was bred as they who desired to promote a particular interest asserted, and I do defy the whole agricultural world to state anything in support of such a charge, which I can show to be improbable, absurd, contradictory, and untrue."

9. *To Mr. Cottrell, March* 7, 1827.—

"An unfinished letter addressed to you on the subject of your last had long lain by me when I received your remembrancer, and before I proceed to do as you require, I shall only plead on my own behalf a most overpowering multiplicity of engagements, and submit to you that the inquiry respecting Hubback can really be productive of no good, unless evidence and probability could be produced to contradict and weaken the strong ground which the advocates for his purity of blood have taken. You will excuse my further observing that so much do I become more and more convinced that it is an unprofitable inquiry, I shall rest satisfied with a very brief redemption of my promise. In the first place we have a straightforward account of a bull bred at a distant period, on whose pedigree certain interested persons cast a slur, and when called on to produce evidence (for with them the *onus probandi* lies) they point to a discrepancy of dates. Such discrepancy may have occurred in many ways, and yet not easily be pointed out as to its source in the present day; but let it have arisen how or in whatsoever manner it may, it signifies just nothing. It has not been, and is not disputed that Hubback is the bull meant by both parties, though mentioned with different dates as to his being calved, and therefore this subject at best but affords room for a quibble, and I say, let they who can build upon it, speedily present to us their edifice. I observed in the outset that the question was raised by interested persons. I will now allude to them. Hutchinson, jealous of Colling's success, boasted that his were a pure breed, and when Wetherel, a Comet man, stigmatised Hutchinson's bull, shown in London, as descended from the Galloway, it became necessary to throw dirt at Hubback, just as a child, vexed to see its house of cards totter to the foundation, endeavours to throw down that of a play-fellow's. Yet this same Mr. Hutchinson could boast of the possession of Hubback's blood till the Herd Book set him right! He also proceeded to the length of charging the Collings with an indiscriminate use of Kyloe blood, though when called on for proof he could not produce one tittle, and I have in my possession Charles Colling's letter stating him to be egregiously wrong. Mr. Rooke, who has bred from Lady, vexed at finding the alloy so much talked of, also thought it necessary to blacken the Short-horns, called pure, but after a long controversy, the late editor of the *Farmers' Journal* declared I had satisfactorily proved him to be wrong. Major Rudd was also in a similar predicament, and had, moreover, bought Kyloes at fancy prices upon speculation; he also failed to produce proof or even probability, and no jury of wise men would allow his opinion, I cannot say evidence, an atom's weight. In Charles Colling's sale in 1810 there were some very fair lots bred with a Kyloe cross, and he publicly declared such to be the fact. Why then should he have feared to risk a similar declaration as to Hubback? The bull's qualities were unquestioned. The animals bred from him had succeeded, and Colling's successful experiment with Lady had rendered him and his measures independent of public opinion. What had he then to fear? And why did he not state as explicitly that Hubback was Kyloe bred, as he did that the above-mentioned lots were, and that Lady was descended from the Galloway? He stated it not because he knew it not, whatever he might believe. My good sir, it is too hard upon old Coates to hang a number of queries on a rope of sand, too fragile even to hold while he could answer them. Indeed you do require him to argue without grounds, and I don't see the old fellow can do more than remain silent. He has printed the date, and if he has discovered his error, does not like to contradict himself, particularly as it is a matter of no importance now."

DAIRY FARMING.—No. VI.

[The following are passages from the Sixth and concluding Lecture of the series lately given by Mr. Harrison, of Frocester Court, before the Royal Agricultural College, Cirencester.

1. ***The Winter Management of Stock,*** to which I have first to call your attention, is a matter of great importance to the dairy farmer. The first point I would impress upon you is, that before winter comes on it is desirable to cull out from the herd all the animals that are not intended to be kept during the following summer, so as to reduce the winter expenditure of food to a minimum, especially of hay, which it should ever be borne in mind is attended with great expense in making, and is not so remunerative to the farmer as it would have been if consumed green by his stock. The grazier has in this respect a great advantage where, with some arable land in occupation, he can purchase his full-grown cattle in the early spring, feed them on straw and roots with a little oilcake, and consume during the summer almost the whole of the Grass in its green state—his bullocks carrying off chiefly the fat-forming part of the food, and leaving the nitrogenous and phosphates as future most valuable manure—the system in this manner being an improving instead of an impoverishing one.

Some dairymen pursue a similar plan as mentioned by Mr. Harding, "feeding nearly all their land and selling the cows in the autumn, looking forward to replacing them in the spring." This, he remarks, seems to be an expensive mode of increasing dairy produce; but when the land produces a large quantity of milk, the Grass is of far more value than the hay. This is no doubt true, but it is not so unobjectionable as in the case of the grazier, for in the milk the dairy farmer carries off yearly a large quantity of nitrogen and phosphate of lime, and the result must be deteriorating instead of improving. We see in this the reason for the restriction in the agreements made by the Somersetshire owners of the rich marsh lands, that they shall not be stocked with dairy cattle. When the system is adopted, very excellent judgment must be exercised in the selection of stock, and there will probably be a drawback of about 6*l.* per head between the value of the cow in the spring and autumn. On the other hand there is the saving of the winter's keep and attendance, which cannot be put at less than 3*l.*, and the extra value of the crop consumed green in the summer; but there is more risk of introducing disease among the stock, and there is no improvement of stock, which should be the aim of the farmer. The winter food also is not consumed without some return in the shape of butter, sold generally at a high price, and milk for weaning calves, besides cheese, which we sometimes make throughout the year.

During winter we find the importance of knowing the time when the cows are likely to calve. We can then continue to milk them to within about 10 weeks of calving, feeding them accordingly, taking advantage of eight weeks to feed them on straw and roots and save the hay. For a fortnight before calving we feed them better.

The importance of housing for his stock presses itself on the farmer during winter. When he is obliged to keep them in the fields, much food is wasted, and the cattle so tread the land in wet weather that the Grass is kept back seriously in the spring, especially if the land is undrained, from the effect of which the plants frequently do not recover all the summer following.

Proper buildings then for winter housing are most important, and this for the landlord's interests as well as the tenant. The landlord's, that a quantity of manure may be made and an increasing fertility of the land encouraged; the tenant's, no less so for the same reason, and that he may economise his food, and lessen his risk from death among his cattle. There will always

be a difference of opinion as to whether the cattle should be tied up in stalls or kept free in open yards and sheds. I have both, but prefer the latter for dairy stock. The yards attached to sheds should be amply large, and the buildings properly spouted, and there should be good water in every yard.

The liquid manure from the yard should be carried to a tank from which, if possible, it may be conducted by gravitation over the land; pumping and carting is a very expensive process, which I have not found to repay the cost. The best plan when the manure cannot be taken by gravity over the land is to pump it upon a heap of ashes, &c.

During winter we find the advantage of some arable land, the straw and roots assisting materially; so much are they appreciated in some parts that the growth of corn becomes a secondary consideration. It is in many cases possible to apply the streams of water running through the farm as a power for pulping and chaff-cutting — when this can be done it is very important not to neglect it. I have used for many years a small supply of water in this manner with advantage; no power is so economically applied, and the saving from chaff-cutting and pulping is undoubted.

We find that our yearlings thrive well upon the following weekly allowance:—

35 lb. of hay, at 2*l.* per ton or .215*d.* per lb. ..	7½*d.*
300 lb. of roots, at 6*s.* 8*d.* per ton or .036*d.* per lb. ..	10¾*d.*
8 lb. of oilcake, at .75*d.* per lb.	6*d.*

Or, with attendance, about 2*s.* 3*d.* per week.

The two-year-olds out in the ground on hay only take 1 cwt. of hay per week, at 2*s.*, or much the same as the yearlings. They do not however thrive so well or show such improvement in the spring.

The in-calvers, 3 year olds, also in the fields, consume 1¼ cwt. of hay per week at 2*s.* to 2*s.* 6*d.*, or with attendance about 2*s.* 9*d.* per week.

The cows in open courts and sheds eat per week for 8 weeks when dry:—

	s.	*d.*
1 cwt. of straw at 1*s.*	1	0
3½ cwt. roots at 4*d.*	1	2
	2	2

Or, with attendance, about 2*s.* 6*d.* per week.

When in milk:—

	s.	*d.*
1 cwt. of hay at 2*s.*	2	0
3½ cwt. in roots, at 4*d.*	1	2
	3	2

Or, with attendance, about 3*s.* 6*d.* per week.

From these data it is easy to estimate the absolute requirements of the stock for the winter, and the probable consumption of farm produce may be estimated.

2. *Profit and Loss.*—We have next to consider the question of profit and loss on dairy farming. The outgoings will consist first of rent.

The rent of a farm, such as we have supposed suitable for dairying and rearing young stock, we may take at 45*s.* an acre, or on 600 acres 1350*l.*

The rates, taxes, and insurance, at about 150*l.* This varies with locality, but should influence the rent accordingly.

The labour on a dairy farm will vary immensely according as there is or is not arable land; also whether the stock is kept through the winter or not. On a farm such as we are considering the labour would be about 25*s.* per acre, or 750*l.* per annum. On pasture farms, without any arable land, the labour per acre is probably not half of this.

For the deterioration on the dead stock we must allow 10 per cent. on 930*l.*, or 93*l.* per annum; from which we may fairly deduct the payments made for repairs and renewals. This at first would not probably exceed, if they amounted to 30*l.* per annum, and would increase as the implements grew older to 60*l.* a year. We must, therefore, the first year charge as an outgoing 60*l.*, and strike that sum off the amount of capital the following year. Thus the dead stock would in a few years appear reduced one-half in value, at which it would stand, as the annual repairs and additions would nearly maintain it constant.

We must charge interest at 5 per cent. on the capital, which we reckoned at 5100*l.*, or 255*l.*

Artificial manure would probably amount to 50*l.* a year.

Artificial food for calves and yearlings 50*l.* a-year; meal for pigs, 200*l.*; Oats for horses, 60*l.*

I have not allowed any extra food for the cows, as we should obtain probably a *quid pro quo*, and there is not generally much used for the purpose by dairy farmers.

We should also have to pay for seed Wheat, Beans, Clover, and Vetches.

These items together amount to:—

Rent of 600 acres, at 45*s.* per acre	£1350
Rates, taxes, and insurance	150
Labour	750
Deterioration of dead stock (reduction on capital)	60
Interest on 5100*l.*, at 5 per cent.	255
Artificial manures	50
Artificial food, oilcake £50	
Pig-meal 200	
Horses' Oats 60	
.. —	310
Seed: Wheat .. .. 50 / Beans .. .. 25 / Clover .. .. 10 / Vetches .. .. 10 —	95
30 Calves weaned, at 30*s.*	45
Veterinary surgeons' bill and losses from death, which depends very much on management ..	100
Bulls, say one each year	30
Milk for 30 calves, at 50*s.*	75
Total Payments ..	£3270

Our receipts would be first from the cows. I milked in 1861, 71 cows altogether. These gave:—

39,140 gallons of milk, or an average of 550 gallons per cow.
2,451 lbs. of butter, or an average of 34½ lbs. per cow.
32,312 lbs. of cheese, or an average of 455 lbs. per cow.
and in money 1068*l.*, or on an average of 15*l.* per cow.

The 1068*l.* was thus obtained:—

Butter sold and used	£130	0	8
Cheese sold and used	767	9	0
Milk sold and used	8	11	4
Milk given to calves	76	3	6
Whey and milk to pigs	86	2	0
	£1068	6	6

Thirty-three calves were weaned, thus costing about 50*s.* each for milk; this is charged for in the outgoings, and appears in the valuation of the stock for the following year. I have selected this case, because I find that the average return per cow in my dairy for several years (including the whey and milk as above given to the calves and pigs), has been 15*l.*, or exclusive of the whey to the pigs which I reckon at 1*l.* per head, 14*l.* This on 120 cows gives 1680*l.* This does not include the calf; we may allow therefore 100 calves at 25*s.* = 125*l.*, which allows for mishaps, &c.

We should have to sell off 30 cows yearly in the autumn at 12*l.*, or 360*l.*, also one bull, say 20*l.*, 120 pigs (say purchased at 2*l.*, and sold 10 score at 10*s.* per score at 5*l.*,) at 3*l.*, 360*l.* Thus returning the manure, and 40*l.* after paying for the meal and whey from the cows.

The return from sheep would depend upon the description kept, but with the stock we are supposing Downs would be the best, and as they are good mothers and we wish to fatten both sheep and lambs, they are well suited for this purpose; they would give us say 400 lbs. of wool at 1*s.* 6*d.* = 30*l.* We may reckon on 110 lambs at about 25*s.*, say 140*l.* And we might make 15*s.* per head upon the sheep the difference between the price, buying in in the autumn, and selling fat the following year, or 75*l.*

From the arable land we may expect on an average from 100 acres of Wheat at least 32 bushels per acre = 32,000 at 35*s.*, 800*l.* 25 acres of Beans, at 32 bushels = 800 bushels, at 4*s.* 6*d.*, 180*l.*

Potatos may on some land be grown with advantage in place of part of the Beans, and Oats or Barley substituted for the Wheat.

The sum of these items is:—

From dairy cows, 120, at 14*l.*	£1680
,, ,, 100 calves, at 25*s.*	125
Barren cows, 30, at 12*l.*	360
Bull, 1, at	20
Difference on purchase and sale of 120 pigs, at 3*l.* ..	360
Sheep: Wool .. 30 / Lambs 140 / Ewes .. 75 difference on purchase and sale	245
Arable land: Wheat, 800*l.* / Beans, 180*l.*	980
Total of receipts	£3770
Total of payments	3270
Leaving	£500

as the tenant's profit and to meet expenses of housekeeping, after paying 5 per cent. on the capital. The rent of such dairy land, however, is frequently as high as 50*s.* an acre, which would reduce the tenant's profit to 350*l.* a year.

The first item of receipts, viz., that from dairy cows, will vary much under different systems of manufacture or selling it simply as milk. To these I will draw your attention for a few minutes.

In considering the disposal of the milk given by the cows and the return from it, I will assume the average quantity to be 540 gallons. This is probably not far from accurate when the feeding is not extraordinary. This we may dispose of—

1st. *Simply as Milk.*—For which, as I have before mentioned, the wholesale price would be 8*d.* per gallon, or 18*l.* per cow; this from 120 cows would return 2190*l.* The expenses attending this system would depend upon circumstances. If sent up to London by train, as the milk is from distances of 70 or 80 miles, they would probably exceed those attending cheese-making. When again the milk is produced from land near London or other large towns, the rent of the land is always much greater. There, however, brewers' grains, as we have seen, are largely used as food, increasing the quantity but injuring the quality of the milk.

2d. *For Fatting Calves.*—From experiments made by Dr. Müller, of Stockholm, it seems that 7 gallons of new milk produced 6 lb. of veal; thus from 540 gallons of milk we should have 463 lb. of veal. The money returns will depend upon the price of veal; at 8*d.* per lb. (not an uncommon price), the return would be 15*l.* 8*s.* 8*d.* per cow. Morton tells us 160 gallons of milk will give 1 cwt. of veal, or more than 8½ gallons of milk to 6 lb. of veal, and he reckons that each cow will fatten 4 cwt. of veal or more per annum, which is not very far from the above. On this system we may reckon the 120 cows to return 1852*l.* per annum.

3d. *Butter, the chief article, and Skim Cheese.*—Morton gives 1 lb. of butter for every 2¾ gallons of milk, and 1 skim cheese for every 1½ gallons of milk.

Thus 540 gallons would give 207 lb. of butter at 1*s.*	£10	7*s.*
496 gallons of skim milk would give 330 lb. of skim cheese at 3*d.*	4	3
To which we must add whey for pigs	1	0
	£15	10

Here again the result depends upon the price in a very great measure. Dr. Voelcker's experiments give more per cow than this, but he reckons the cheese at 50*s.* a cwt., or more than 5¼*d.* per lb., which is generally above the usual price. He remarks upon it, "Where a ready sale of butter can be found, I am inclined to think it is more profitable to make skim-milk cheese and butter, than to look only to the production of cheese of a better quality." He should have added, "and a ready sale for the cheese as well." My own experience is that skim cheese is not nearly so saleable as rich cheese. 120 cows at 15*l.* 10*s.* would return 1860*l.*

4th. *Single Gloucester cheese; butter about* 1 *lb. per cow per week, and pigs.*—This is the system I adopt. As I have given you the details before, I need not repeat them; the result is 15*l.* per cow, or for 120 cows 1800*l.*

5th. *Whole milk cheese and pig feeding.*—According to Dr. Voelcker's experiments, 540 gallons of milk would yield—

4½ cwt. of cheese at 70*s.*	£15	3*s.*	0*d.*
Whey for pigs	1	0	0
Or for 120 cows at 16*l.* 3*s.*, £1930.	£16	3	0

From all the data I have to form an opinion on this subject, I am inclined to think that circumstances must entirely decide the question of which system is the best. So very much depends upon the locality that it is impossible to lay down a rule; the best plan will generally be to follow the system of the neighbourhood as the rule, and other modes on a small scale as the exception, until you prove the decided superiority of one of them.

ON CONDITION IN LAND.—No. VI.

BEFORE proceeding to consider Condition with reference to Grass land, I venture to request room for a few lines in farther elucidation of the most useful points brought out by our previous inquiry, and also to correct some errors in figures, for which either I or the printer owe an apology. In the No. for July 25, p. 614, the net allowance for a ton of hay should be N. 22 lb. or 11*s.*, and for oilcake 25*s.* In the No. for July 16, p. 684, the second column is the amount of nitrogen in cwts. contained in the food consumed in the first column, and should be so added up at the foot of the second column. Also in the No. for July 30, p. 732, I have carried out too large a value for the dung, making the total theoretical value of the goods rather too large. These corrections will be evident to any one carefully following out the argument which the figures were designed to verify, but I fear that is an amount of attention that no writer has any business to expect. With these corrections I believe the views advocated in those papers are true, and if acted upon would tend very materially to the improvement of our farming. If the conclusions at p. 685 are true, that the unexhausted value of manure can be ascertained with sufficient correctness to reimburse an outgoing tenant for any outlay he has incurred, and were generally acted on, there would no longer be any temptation to get all that could be got out of land during the last years of a tenancy. And if it were generally received that a well-tilled and clean fallow was worth the price of 2 quarters of Wheat per acre, and that a want of cleanliness was a proportionate diminution of the rights of an incoming tenant, an equitable system of tenant-right would establish itself in a very short time as the custom of the country. Again, if the reasoning at p. 732 is correct, and manure can be made in almost any quantity at the cost of the straw only; and if the example of No. 4 in the farms tabulated at p. 684 can be successfully copied, and 9 or 10 quarters of corn can be sold off every acre in three years, what an enormous addition would this be to the corn-producing power of the country generally, and what an incitement to high farming. There is no want of capital in the country. There is no want of the necessary skill and judgment in many of our farmers. The only reason why more capital is not invested in the business is the general opinion of the uncertainty of the return, that the investment will not pay, but how do the results of the four farms just referred to bear out this idea?

No. 1 is an average specimen of clean farming with small capital. No. 3 is a high farmer on the usual 4-course system. No. 4 exceptionally high. Now I have no access to the balance sheets of these gentlemen, nor if I had should I have any reasonable expectation that they would find acceptance. I am quite conscious that a balance sheet will always be open to cavil. But I think we may gather from the returns of these four sums in p. 684, a tolerable idea of their relative net returns.

No. 1 on a farm of 100 acres, grows annually 50 in corn. His produce sold is 4 quarters per acre, at say 50*s.*, or 500*l.*:—

Deducting his rent, tithes and taxes, 30*s.* an acre ..	£150
Deducting his labour, seed and trade bills, 3*l.*, ...	300
Leaves him a profit of about 10*s.* an acre, ...	50
Total	£500

No. 3 on 150 acres grows 75 in corn. His produce is 4½ qrs. Wheat, and 6 qrs. of Barley, say 12*l.* per acre, = 900*l.*

Deduct as before rent, &c., 30*s.*	£525
Labour, seed, and bills, 3*l.*	450
Leaves him a profit = 30*s.* per acre	225
	£900

No. 4 on 63 acres has 42 in corn. His produce is—

21 acres of Wheat, 5 qrs. at 50*s.* } 21 acres of Barley, 5 qrs. at 40*s.* }	say total	£450
Deducting 30*s.* for rent × 63 acres		£94 10
3*l.* 10*s.* for labour, &c.		220 10
Leaves a profit of 2*l.* 2*s.* 6*d.* per acre		135 0
Total ..		£450 0

The labour in all three cases is supposed to include the fallow; I have assumed the expenses of the fallow crop, as well as all the food and attendance on the stock, to be repaid and not more than repaid by them (see p. 732). I have allowed 10*s.* an acre more for the extra threshing, hoeing, carting, chaff-cutting, &c., attending the 4th system: he still makes a very good profit. The only impediment I know to his system being generally followed, besides the before-mentioned want of capital, is the want of sufficient accommodation for the necessary quantity of stock required; but this, like draining and other permanent improvements, would at once be met if the necessity of it were generally acknowledged. Near the metropolis, I fancy the straw and all other produce may be sold off and manure purchased. It matters not for my argument how this is procured, the only requisite being that for every bushel of corn grown by the land beyond what I have termed the annual productive capacity of the soil, 5 lb. of nitrogen must be introduced. We have seen that No. 4 does this on his farm; I think we may gather that he reaps an ample profit.

In the above considerations on the Condition of arable land, I have purposely omitted all mention of liming, boning, &c. I am aware there are many parts of England in which these mineral manures are requisite; but as regards them I have no experience and nothing new to suggest, and with reference to them the covenants usually introduced into the leases of those counties are sufficient to protect the interests of the different parties. When we come to consider Condition as applicable to Grass land, these mineral manures will require a more prominent place in our discussion. *J. B. M.*

Home Correspondence.

Uneven Germination of Swedes and Mangels.—In Swede and Mangel hoeing and regulating during the unusually dry season of this summer, I have been most anxious in directing that the soil in the vacant spaces in the rows should be as little disturbed as possible, and this because I felt sure that germination would take place on the occasion of sufficient moisture. It is then not a little interesting as showing how dry the soil has been here for some months on the one hand, and what the seed is capable of bearing on the other, to state that now the rain has come, in a crop of Swedes and Mangels in alternate bands of eight rows, each sown on the 17th and 18th May, and in a crop of Swedes sown as late as June 10th, plants of both kinds are making their appearance every day. Of course in both cases their germinating now is of little or no advantage, but had the rain come a month earlier it might have been different; still, it is curious to observe ranks being filled up by newly sprung seed intermixed with bulbs of more than a foot in circumference. As regards the growth of my roots this year—and I am better off than most of my neighbours—I may remark that the best results have been marked in those fields where winter cultivation was practicable; this I take to be due to the fact of a better admixture of manures and soils and the production of a finer and more even "tilth"—thus affording facilities for capillarity upwards, and the more ready absorption of atmospheric moisture—conditions, the reasoning upon which, if followed out to all their consequences, will lead to the conclusion that deep ploughing, winter cultivation, and an intimate admixture of materials, whether of common farmyard dung or artificials, are three of the chiefest points in root-growing—points upon which I shall hope soon to report the result of a series of experiments. *J. Buckman, Bradford Abbas.*

Turnips.—These are very severely attacked and destroyed at the roots by the caterpillar. It is only necessary to remove the earth around any Swede Turnip which is seriously checked in its growth, and two, three, or more caterpillars will be found, from ½ to 1¼ inch in length. I took three on the 17th of August from a root; one about half an inch, a second about three-quarters, and a third about an inch long; placed them in a small box, fed them with portions of the leaf-stalks of the Turnip they had fed upon for three or four days, and then, as I wished to force them into the chrysalis state, desisted giving them food. Their voracity was considerable, for the half-withered leaf-stalk was completely consumed by them in a few hours, and as the perfect insect or moth which breeds them is not known, it is interesting and important to endeavour to force Nature to expedite her work of development. Therefore the two best I suffered to be without food for nearly three weeks without their life seeming to be at all endangered, although their plumpness was abated. Thinking the starving had been applied too early in their age and growth, I took some more caterpillars from the Swede Turnips in the field—fine plump 1¼ inch long fellows, and placed them in the box with the former ones, and some Swede Turnip leaf-stalk. The first lot soon commenced to feed. It is clear that these caterpillars, like most caterpillars, can undergo very long abstinence from food without their lives being endangered. Those most valuable farmers' friends, the peewit and starling, for some time fed constantly in the surrounding Turnip fields, and where they congregate the most there was the greatest abundance of sickly Turnips, and numbers of these caterpillars. The crows also came in large flocks, and intermixed in the good work with the plover and starling; but of late, with the exception of a few peewits, I have not observed any, although the caterpillars are now fine large fat fellows. Perhaps the birds are satiated and tired of feeding so long upon one dish, or this insect may be so abundant that these birds are in less flocks, and employed in other districts. My own Turnips were, I think, the earliest around, and so would come in for the first benefit these most valuable farmers' friends bestow. *W. Wooler, Sadberge, Darlington, Sept.* 9.

Caterpillars.—I have been very much interested by the remarks of "Tasmanian" upon these creatures in Australia, from which I conclude that roots and other crops are attacked in that distant region by a grub somewhat similar to our own. I am, however, curious to know whether our pest has been derived from Australia, or whether it has been so-called acclimatised from thence; anyhow, I hope the attempt to introduce the rook into that colony will be successful, and if such caterpillar food is as abundant as described, I should look upon success as almost certain. The surface grub or caterpillar in this district has attacked every plant with sufficient succulence, young Stramonium plants, Potato haulm, and roots of all kinds, and this at the part just below the surface; he is now penetrating a little deeper, perhaps preparatory to entering the pupa state; but in this descent he does not quit his vegetable food, but may be found quietly ensconced in deep holes which have been eaten in the tubers of Potatos and in the bottoms of the larger bulboid Turnips and Mangels. "Tasmanian" concludes that a favourite food of the caterpillar is the common Hog-grass (Polygonum vulgare). Now we have in England a plant sometimes called the Hog-weed, which in the midland counties is known by the name of Fat-hen, and in the west by that of Bacon-weed (Chenopodium album) which is possibly identical with the Australian weed; if so, it is curious to note that in a plot of Swedes on my own farm this plant was very abundant, and the appetite of our caterpillar for this Chenopodium album was as great, if not more so, than for my roots. It is still a question as to the exact specific identification of our caterpillar. Cannot Mr. Westwood kindly enlighten us upon this matter? I have just turned out 32! of these creatures, averaging about 2 inches in length, from a single Belgian Carrot root. Potatos here are bored with the grub, and spoiled to the same extent as they formerly were with the disease. These ravages are worse near the village and places where the larger grub-eating birds would certainly be scared. *J. Buckman, Bradford Abbas.*

The Prize System.—In your leading article of the 3d you noticed my letter to the *Times* on the subject of local trials of implements, and remark that although my firm, on the occasion which brought up the question, took the first prize for a sheafing reaper, and although I do not condemn the prize system in itself, I assert the comparative uselessness of these local competitions. Nothing can be more correct as regards such "competitions," if they are to be taken as deciding upon the merits of the respective implements, but I could wish to see them multiplied to any extent, if, like local ploughing matches, they are held simply as trials of skill amongst the persons owning and using them. It is a grave matter for a few persons, however honest and experienced, to affix the stamp of superior excellence to any mechanism after a trial of a few minutes or some hours, under conditions, perhaps, where an equal chance to all competitors is impossible, and without the assistance of appliances, like the dynamometer, for forming a correct judgment. The case is quite different when the whole trial is regarded as a friendly contest amongst neighbours, which cannot fail to render the use of machinery popular not only with farmers but amongst the labourers using them. To show how much has still to be done in order to remove the prejudice against reaping machines, I will mention the case of one of my own neighbours—a man by no means without intelligence, who recently wished to borrow one of our reapers for cutting his stubbles, "the only purpose for which he could use it on his farm, his crops were always so heavy and so much laid," and who was very much surprised when told that a score of men within a few miles of him had cut every acre of their Grass and grain crops, standing and laid, by machinery this season. Contrast this with America, where the labourer, before engaging himself to a farmer, looks carefully round the implement shed and refuses to be hired if any of the usual labour-saving tools are not forthcoming. I will not in this letter enter into the merits of the prize system when administered under the most favourable conditions, as by the Royal Agricultural Society of England; my opinion on the subject, whether correct or not, is well known. Like several of the firms engaged in the manufacture of agricultural implements, I have fought hard against it, and I submit to it, because personally I find that the prizes which we gain are an excellent advertisement, and because the incontestable advantages of such large assemblages as those of the Royal, the Yorkshire, and other similar Societies, far outweigh any evils that may arise out of their more questionable accompaniments. *Bernhard Samuelson, Sept.* 10.

Reviews.

The Present Position and Future Prospects of English Agriculture. A paper read by R. C. Chawner, Esq., President of the Midland Farmers' Club, at their first meeting on June 23. H. Wright, New Street, Birmingham.

The general subject here treated of has been several times of late discussed by sufficiently competent men. Mr. Thompson's review of it in the Journal of the Royal Agricultural Society, and Mr. Morton's review of it in his paper before the Society of Arts, are both of them comprehensive. The influence of railways, markets, free trade, societies, relation of landlord and tenant, have thus all been discussed. In the present pamphlet Mr. Chawner discusses the influence of the landowner and the need of his co-operation—the education of the farmer—the propriety of extending green crop culture, the subject of agricultural statistics, and the position of the agricultural labourer. The following are extracts on all these points:—

1. *The Power of the Landlord for good.*—"If it be true that what man has done man can do, let us turn for a brief moment to consider the power of a landowner in leading the way to any agricultural improvement. My example shall be taken from Mr. Sidney's article in the 'Quarterly Review,' before referred to. He is there speaking of the late Lord Leicester, better known as 'Coke of Norfolk.' Mr. Coke used to describe the condition of his property by this remark, 'that he found two rabbits quarrelling for one blade of Grass.' Mr. Coke's estate required barns, and yards, and houses fit for first-class tenants: he accordingly laid out above 100,000*l.* in twenty years in dwellings and offices. In dealing with those who farmed under him, he showed the same wisdom as in his own tillage. He raised his rental to more thousands a year than it was hundreds when he inherited the estate, and had enriched a numerous tenantry into the bargain. He showed that no profession in the world was so lucrative as that of a landlord who devoted his life to the improvement of his property: the wealth, nevertheless, which accrued to himself was the smallest part of the gain. He was 'a national benefactor on a mighty scale, and was the cause, directly and indirectly, of adding a countless mass of corn and cattle, of beef and mutton, bread and beer, to the resources of the country.'

"I have already referred to the important question of tenure, and I may here remind you that a step in the right direction has been recently taken by the Lord Lieutenant of Staffordshire, a nobleman whose conscientious discharge of his public duties makes him an example to every man in his county. We are promised, as the result of his labours, a model agreement between owner and occupier, and I have little doubt that such agreement will be a great improvement upon the general run of agreements now in use. At the same time we must remember that such agreement will be an annual one, with, perhaps, a covenant giving a longer period than six months' notice to quit; I cannot, therefore, omit this opportunity of declaring my conviction that the best annual agreement which the combined wit and experience of man shall devise must of necessity be an insufficient substitute—a poor apology—for a long lease. 'If the case be argued on commercial principles alone,' says Mr. Thompson in his able paper, 'the advocates of leases have the best of the argument, and doubtless in the long run this view of the matter will prevail.' I rejoice to be able at this moment to add the opinion of such a nobleman and statesman as the present Lord Stanley. When presiding, the other day, over the Royal Agricultural Benevolent Institution, he is reported to have used these words—'and I, for my own part, do not hesitate to say that I wish every tenant farmer in this country had a lease.'"

2. *The Education of the Farmer.*—"His occupation is an ancient and a noble one; but in these days the individual must be, to a certain extent, an educated man, if he aspires to that position in society to which he is in all other respects eminently entitled. And here let us briefly contrast the Scotch with the English farmer. In Scotland, happily, for years past, has prevailed a national system of education, of which advantage the occupier of the land and the labourer have availed themselves; and in the superior position of the Scotch farmer, as regards tenure, we may recognise the truth of the maxim 'that knowledge is power.' We are not called upon, however, now to enter into details, or to examine the various plans proposed for the education of the middle classes in this country. Supposing a young man to have received the advantages of a sound commercial education, there remains for the cultivator of the soil a special training, to which he must pay a daily increasing attention. Within the last few years a great amount of attention has been paid by scientific men to what I may here call 'The Natural Laws of Husbandry,' that being the title of Baron Liebig's last work. Now, without expecting an accurate knowledge of chemistry or other sciences requiring the undivided attention of a whole life, we do expect that the results of other men's labours and research will be studied, and will be understood and applied to the practical cultivation of the land. Permit me to illustrate my meaning from the work just alluded to. 'From the soil plants receive the food necessary for their development; hence an acquaintance with its chemical and physical properties is important in helping

us to understand the nutritive processes of plants and the operations of agriculture.' This, I repeat, is the direction to which the daily education of the farmer should be pointed:—to study the qualities, the constitution of the soil he cultivates, the food elements of plants, their proportions. and the most efficient and at the same time economical means of restoring to the soil those fertilising qualities of which, by cropping, the land is annually deprived. For thus writes the great German chemist:—'The cultivation of plants exhausts the fertile soil, and renders it unfruitful. In selling the produce of his field, which serves as food for man and beast, the farmer removes a portion of his soil.' Thence arises the necessity of restoration, or as Liebig terms it, compensation, and he asks the question 'What is manure? whence comes it? All manure comes from the farmer's fields; it consists of straw, which has served as litter, of remains of plants, of the liquid and solid excrements of men and animals.' The law of compensation, the replacement of nutritive substances which the crops have carried away from the soil, is the foundation of rational husbandry; and this, of course, involves the great sewage question, which I hope will be discussed in this Club at some of our future meetings. Indeed, the further consideration of this question has recently become imperative by the seizure of the Chincha Islands by the Government of Spain. In addition to our own farm-yard manure, guano is largely used in this country, and the possibility of an interruption to that trade will compel the serious and immediate attention of all who are interested in the future of agriculture. I conclude this part of my subject by a quotation from a book which I earnestly recommend to the attention of our members, viz.: 'The Natural Laws of Husbandry,' by Justus von, Liebig. 'A rational pursuit of agriculture which with the greatest economy of capital and labour, can obtain from a field continuously without exhaustion the highest crops it is capable of yielding, requires a large compass of knowledge, observa on, and experience, more, perhaps, than in any other business. The rational agriculturist must be able to interpret what his field tells him in the phenomena which he observes in practice: in a word, he must be a thorough man, and not a half-and-half creature, who knows no more about his actions than a tom-cat with just skill enough to catch a gold fish in a basin of water.'"

3. *Extension of Green Crop Culture.*—"The continuous moisture, or drip, which we experience at uncertain intervals throughout the year, whilst it too frequently disappoints our hopes in harvest time, always promotes the growth of Grass and other green crops, and enables us to produce in abundance root crops upon which animals may be reared and fattened during the winter. Surely, then, this is the direction which necessity and sound policy points out for our future enterprise. In other words, stock-farming must henceforth be the foundation, the leading feature, of English agriculture. The recommendation so frequently made in reference to this subject, of laying down arable land to permanent pasture, I consider as coming from no sufficient authority, but rather from speculators and amateurs who are contented to take a bird's-eye view of agriculture. The great variety of green crops which may be produced upon arable farms, in great luxuriance, far exceeds the capacity of mere Grass land in the rearing and feeding of stock. When stock-farming shall be taken up through the length and breadth of the land, in a manner and to the extent which present necessity demands, then will the subject of green crops—in their several varieties, their powers of continuous succession, their comparative flesh and fat-forming proportions—be thoroughly studied and cultivated as the foundation of all future operations in husbandry. Again: if the system of free importation acts prejudicially as regards the price of Wheat in home markets, we derive an advantage from that system in the moderate prices of grain and other feeding materials, and this without reference to what are called 'feeding stuffs,' not excepting the patent food recently manufactured by the Legislature under the able directions and receipt of the Chancellor of the Exchequer. But here, gentlemen, arises the difficulty. We ask the farmers of England to multiply their flocks and herds, in order to supply butchers' meat to our population at reasonable prices; in other words, we ask them to double their present risks. Experience has painfully shown to what a fearful extent the ravages of disease and pestilence will reach amongst our herds and flocks. Small-pox amongst sheep, pleuro-pneumonia, diarrhœa, and other diseases amongst cattle at all ages, too frequently absorb the profits of former years, and imperil the future position of the agriculturist; and therefore it is that I maintain that we have here a difficulty which must be considered and dealt with, ere we can expect to see a sufficient capital embarked in carrying out satisfactorily the object we have in view. In reflecting upon this point I have frequently asked myself the question, Why cannot the farmer avail himself, in an equal degree, of that protection by which the merchant and ship-owner cover their risks and adventures? I allude, of course, to the principle of insurance."

4. *Agricultural Statistics.*—"It is the general belief that the occupiers of land are opposed to the collection of information desired by the public. I believe myself that the objections hitherto made refer to the proposed methods of collecting the desired information. The inquiries proposed to be made and the questions to be answered have appeared to farmers to be rather in the nature of an official prying into the business and proceedings of private individuals, than an honest desire to obtain information of undoubted public importance. The knowledge of the results of our own harvests must of necessity be useful to the manufacturers of food, for such knowledge would teach them when to sell and when to hold their produce, would regulate their future operations, and would afford them the safest insight into the probable action of the money market. Agricultural statistics of a reliable character can only be furnished by the voluntary action of the producers themselves, and as a beginning I would venture to offer the following suggestion for the consideration of the Club. The country is now pretty well divided into Unions for Poor Law purposes, and the relieving officers are, to a considerable extent, chosen by the occupiers of land. I would begin with ascertaining the result of the harvest as to bread corn. A return, giving the acreage and the estimated yield per acre, might be collected by the relieving officer from each occupier. These returns would be delivered to the clerks of Unions, and they would make to the Poor Law Office in London an aggregate return of the Wheat grown in each Union without any division or names of occupiers making the returns. This, if a partial, would still be a most useful return, and I cannot believe that any serious obstacles would be thrown in the way, because if the occupiers of the land claim as a protection for themselves the exercise of the *commercial principle*, they cannot object to the operation of the same principle when other interests are concerned as well as their own."

5. *The Condition of the Labourer.*—"Contrast the position of the farm labourer with that of all other labourers. Other labourers are generally working together under the same roof, and here the task of overlooking—the watching of labour—is easily and readily performed, and the comparative skill—the efficiency of each man's labour—is tested by a scale supplied by the labourers themselves. The farm labourers are of necessity scattered over a wide expanse of ground, where the watching of labour is rendered difficult, if possible, by the distant scenes of their labour. It is true that a certain proportion of farm labour may be, and is performed by contract; but still much remains to be performed in the routine of daily labour alone, and therefore the disposition of his mind towards his employer, and his task, is a point of the utmost importance. Permit me to illustrate my meaning by adding two familiar instances. In the one case, where the labourer is looked upon by his employer rather in the light of a partner, in a certain degree, with the owner and occupier of the land. His position may be thus described:—he has a dwelling where he can bring up his family with decency and comfort; his money wages enable him to sustain and recruit his own strength, to share with his family a sufficient supply of plain and wholesome food, as also to afford some education to his children, looking with hope to their future—it may be one more advanced than his own; for I know no reason why the motto of the present day, "Excelsior," may not be applied to the labourer as to other classes. This man goes forth to his daily task with a cheerful mind, willing to labour in that state of life to which it has pleased God to call him. Let us take the other instance, the man hired on the principle of supply and demand. Competition cuts down his money wages to an amount which makes his continued existence a problem. With insufficient food to restore the wear and tear of his daily work, he becomes careless of himself and his family, and then all the bitter consequences of a parent's neglect become in his children patent to the world. With a sense of ill-treatment ever present to his mind, he shirks his daily task, feeling under no obligation to his employer. Contrast the two cases and say, when measured by the strict rule of economy, in which case is the labour the cheapest and the best? And so it will continue, gentlemen, to the end of the chapter; until the agricultural labourer shall be looked upon in the light of a partner, to a certain degree, with the owner and the occupier of the land, and shall feel within himself that he is receiving his fair share of the fruits of the earth which his labour in so great a degree helps to produce."

The paper here published inaugurated the establishment of a midland agricultural institution, not for the exhibition of stock but for the discussion of agricultural topics. Birmingham, with its Midland Counties Agricultural Association, and this its Midland Counties Farmers' Club, takes a rank in agriculture as high as that which it holds in manufactures.

Farm Memoranda.

REPORT OF A SMALL FARM.—Having long been connected with farmers in supplying them with manures, seeds, and food for cattle, though I never had any land under my own cultivation, I thought I could combine practice with theory, and begin to try what I had previously recommended.

I this spring took a small farm of 53 acres of what may be called strong-bodied sand lying upon a good marl. Though this land had been professedly drained before, it required redraining; this cost about 70*s.* per acre, and I have drained upwards of 30 acres just before my occupation began. I may say I have taken the farm on a short lease, the proprietor being upwards of 80 years old, and not likely to expend much money, I have the draining to do myself, and as the gates are mostly worn out I have renewed them at my own expense. I got an allowance in rent, which for the whole term will pay nearly half the cost of draining.

Though the Wheat crop of 1863 was about 5 quarters to the acre, I consider the farm was in a low condition, as I believe the money expended in manure and cake during the last five years did not exceed 25*l.* per year, or say 10*s.* per acre. But it seems to me to be desirable to get it as early as possible into good condition at the commencement of a short lease. I have been willing to expend in manure as much as I think will be beneficial to the crop without endangering laying the corn, and I began by applying certain mixtures to the 11 acres of Grass at the rate of 40*s.* per acre, 3 acres of it being for hay, and the rest in pasture. I applied six different mixtures to the meadow field at the same rate, all of which did well; and though these were applied after the 6th of April (it being eaten bare up to this time), I got full three times the weight of hay that was got off the same field last year—that is, I got 6 tons of hay out of cock, and I understand the quantity obtained last year was about 1½ tons, most likely taken after the stack had heated. This field, though the highest in the farm, seemed the wettest when we were draining, and in it and the pasture there were a few Rushes growing in the furrows, and in the pasture there was a good deal of Moss. The Cow Grass and other good herbage are now plentiful in both the meadow and pasture, and I doubt not but the hard heads which still linger in the furrows will soon decrease, as just where the drains are the Grass is very sweet, and is eaten very bare. I attribute this to the roots of all the coarse Grasses and plants being cut and destroyed, and only the sweeter and shorter rooted plants being left.

I gave the Barley and seeds each 20*s.* per acre in mixed manures, which I think will pay in the additional crop. I also think that the Wheat crop to follow will benefit more from manure applied in this way than if given directly to itself. My Mangels did not come up well, as the farm-yard manure put in with them in spring has tended to make the seed-bed too dry, the more so in a summer like this. I have a good plant of Turnips in a field where I was told I could not get Turnips at all. I applied 45*s.* worth of mixed hand tillage, besides some fold-yard manure to part, and lime to the other part. I have planted about a dozen sorts of Potatos, and some of Paterson's Seedlings, which I got from him from Dundee; they look very strong in the stalk, and are much more vigorous than the old sorts that I got in the neighbourhood. When taken up I intend to report as to quantity and quality. My Wheat, which was sown by my predecessor, looks pretty well; it has been, however, attacked by the brown aphis, and will not exceed 26 bushels. My Oats, which I sowed on a field just drained, and gave 30*s.* per acre, are short, deficient, not over 4 qrs., which is the case with most of my neighbours. My land is troubled with a good many weeds, of which Coltsfoot seems the worst. Goose Grass is also difficult to keep under, and Sow Thistle is abundant. I have not much Twitch, Charlock, or Poppies. My seeds were also troubled a good deal this spring with three weeds—Chickweed, a small Bed-straw, and another weed—all of which spread over the ground, and were only attached to the ground by one small root, and I think if I had run a hand or horse-rake over it in spring it would have pulled a good deal of it up, and would not have injured the Clovers. It appears to me that Clover seed before sowing should be either very carefully dressed of weeds or the field carefully weeded early in the spring following the Barley crop, and I am not sure that the better plan would not be to sow Clover by itself and not amongst corn.

I sowed a small plot with the blue Lupines that are used on the continent for cattle food, but I cannot get any of my animals to eat them, and I suppose they will have to be put into the fold-yard for manure. I suppose cattle would eat them. I think Tares are an earlier and quite as heavy a crop as the Lupines.

Carrots not being sown early make nothing out, and a few Parsnips do not seem to get on. I think both these require sowing earlier, and the land should be cultivated earlier, say the autumn before.

From the darker colour and more vigorous appearance of the Oats and Barley where the drains are just cut, it seems a clear indication to me that we want to cultivate deeper, and if I cannot get the use of the steam plough, one of which I understand is coming into the neighbourhood, I intend to use one of the digging ploughs which are made by Cuthbert, and the same principle is used by Fowler with his steam tackle. The land has been so hard one could not break up seeds till rain came. Farmers seem to me not to be sufficiently particular in procuring the best seed corn—I intend to try some of Shirreff's and most likely Hallett's. I also think if we were to be at the pains of selecting some of the finest ears of Wheat and Barley, these would be more likely to produce a fine crop than taking them promiscuously; this of course following Hallett's plan of selection, but I do not mean carried so far as he does. It is well known that it is easy to lay a crop by too heavily manuring with a stimulating manure, but I believe if we are on poor land, constantly applying a manure containing not only some of the stimulating but also of the mineral principles, there will not be much

danger on land that is not rich in manure or vegetable matter to begin with; but the combination of judicious manuring, and deeper cultivation, is no doubt the most rational and lasting plan of cultivation. *H. R., Flaxlow, York.*

Tiptree Farm.—A walk of a few miles brought me in sight of Tiptree Hall; and its first aspect relieved my mind of an impression which, in common with thousands better informed, I had entertained in reference to the establishment. An idea has generally prevailed among English farmers, and agriculturists of other countries who have heard of Alderman Mechi's experiments, that they were impracticable and almost valueless, because they would not pay; that the balance sheet of his operations did and must ever show such ruinous discrepancy between income and expenditure as must deter any man of less capital and reckless enthusiasm from following his lead into such unconsidered ventures. In short, he has been widely regarded at home and abroad as a bold and dashing novice in agricultural experience, ready to lavish upon his own hasty inventions a fortune acquired in his London warehouse; and all this to make himself famous as a great light in the agricultural world, which light, after all, was a mere will-o'-the-wisp sort of affair, leading its dupes into the veriest bog of bankruptcy.

From what I had read and heard of the Tiptree Hall estate, I expected to see a grand old baronial mansion, surrounded with elegant and costly buildings for housing horses, cattle, sheep, and other live stock, all erected on a scale which no *bonâ fide* farmer could adopt or approximately imitate. In a word, I fancied his barns and stables would even surpass in this respect the establishments of some of those New York or Boston merchants, who think they are stimulating country farmers to healthy emulation by lavishing from thirty to forty thousand dollars on a barn and its appurtenant outhouses. With these preconceived ideas, it was an unexpected satisfaction to see quite a simple-looking unassuming establishment, which any well-to-do farmer might make and own. The house is rather a large and solid-looking building, erected by Mr. Mechi himself, but not at all ostentatious of wealth or architectural taste. The barns and "steadings," or what we call cow-houses in America, are of a very ordinary cast, or such as any country-bred farmer would call economical and simple. The homestead occupies no picturesque site, and commands no interesting scenery. The farm consists of about 170 acres, which, in England, is regarded as a rather small holding. The land is naturally sterile and hard of cultivation, most of it apparently being heavily mixed with ferruginous matter. When ploughed deeply, the clods turned up look frequently like compact masses of iron ore. Every experienced farmer knows the natural poverty of such a soil, and the hard labour to man and beast it costs to till it.

To my great regret, Mr. Mechi was not at home, though he passes most of his time in summer at Tiptree. But his foreman, who enters into all the experiments and operations which have made the establishment so famous with almost equal interest and enthusiasm, took me through the farm-buildings and all the fields, and showed me the whole process and machinery employed. Any English or American agriculturist who has read of Alderman Mechi's operations would be inclined to ask, on looking for the first time at his buildings and the fields surrounding them, what is the great distinguishing specialty of his enterprise? His land is poor; his housings are simple; there is no outside show of uncommon taste or genius. Every acre is tile-drained, to be sure, but that is nothing new nor uncommon. Drainage is the order of the day. Any tenant-farmer in England can have his land drained by the Government by paying 6 per cent. annually on the cost of the job. His expenditure for artificial manures does not exceed that of hundreds of good farmers. He carries out the deep-tillage system most liberally. So do other scientific agriculturists in Europe and America. Of course, a few hours' observation would not suffice for a full and correct conclusion on this point, but it gave me the impression that the great operation which has won for the Tiptree farm its special distinction is its irrigation with liquid manure. In this respect it stands unrivalled, and perhaps unimitated. And this, probably, is the head and front of his offending to those who criticise his economy and decry his experiments.

This irrigation is performed through the medium of a small steam engine and 16 hydrants, so posted and supplied with hose as to reach every square foot of the 170 acres. The water used for this purpose is mostly, if not entirely, supplied from the draining pipes, even in the driest season. The manure thus liquified is made by a comparatively small number of animals. Calves to the value of 50*l.* are bought, and fat stock to that of 500*l.* are sold annually. They are all stabled throughout the year, except in harvest time, when they are turned out for a few weeks to rowen feed. The calves are housed until a year old in a large steading by themselves. They are then transferred to another building, and put upon the "boards"—that is, in a long stable or cow-house, with a flooring of slats, through which the manure drops into a cellar below, made water-tight. Here the busiest little engine in the world is brought to bear upon it, with all its faculties of suction and propulsion. Through one pipe it forces fresh water in upon this mass of manure, which, when liquified, runs down into a subterranean cistern or reservoir capable of holding over 100,000 gallons. From this it is propelled into any field to be irrigated. To prevent any sediment in the great reservoir, or to make an even mixture of the liquified manure, a hose is attached to the engine, and the other end dropped into the mass. Through this a constant volume of air is propelled with such force as to set the whole boiling and foaming like a little cataract. One man at the engine and two at the hose in the distant field perform the whole operation. The chapped and "baky" surface of the farm is thus softened and enriched at will, and rendered productive.

Now, this operation seems to constitute the present distinctive specialty of Alderman Mechi's Tiptree farm. Will it pay? ask a thousand voices. In how many years will he get his money back? Give us the balance sheet of the experiment. A New Englander, favourably impressed with the process, would be likely to answer these questions by another, and ask, will drainage pay? Not in one year assuredly, nor in five; not in ten perhaps. The British Government assumes that all the expenditure upon under-drainage will be paid back in 15 or 20 years at the farthest. It lends money to the landowner on this basis; and the landowner stipulates with his tenant that he shall reimburse him by annual instalments of six or seven per cent. until the whole cost of the operation is liquidated. Thus the tenant-farmer is willing to pay six, sometimes seven, per cent. annually for 20 years, for the increased capacity of production which drainage gives to the farm he cultivates. At the end of that period the Government is paid by the landlord, and the landlord by the tenant, and the tenant by his augmented crops for the whole original outlay upon the land. For aught either of the three parties to the operation knows to the contrary, it must all be done over again at the end of 20 years. The system is too young yet, even in England, for any one to say how long a course of tubing will last, or how often it must be re-laid.

One point, therefore, has been gained. No intelligent English farmer who has tried the system now asks if under-drainage will pay; nor does he expect that it will pay back the whole expenditure in less than 12 or 15 years. Here is a generous faith in the operation on the side of all the parties concerned. Then, why should not Alderman Mechi's irrigation system be put on the same footing in the matter of public confidence? It is nothing very uncommon even for a 200 hundred acre farmer in England to have a small locomotive or stationary steam-engine, and to find plenty of work for it, too, in threshing his grain, grinding his fodder, pulping his roots, cutting his hay and straw, and for other purposes. Mr. Mechi would doubtless have one for these objects alone. So its cost must not be charged to the account of irrigation. A single course of iron tubing, a third of a mile long, reaching to the centre of his farthest field, cannot cost more, with all the hose employed, than the drainage of that field, while it would be fair to assume that the iron pipes will last twice as long as those of burned clay. They might fairly be expected to hold good for 40 years. If, then, for this period, or less, the process yields ten per cent. of increased production annually over and above the effect of all other means employed, it is quite evident that it will pay as well as drainage.

But does it augment the yearly production of the farm by this amount? To say that it is the only process by which the baky and chappy soil of Tiptree can be thoroughly fertilised would not suffice to prove its necessity or value to other soils of different composition. One fact, however, may be sufficient to determine its virtue. The fields of Clover and Italian Rye-grass, &c., are mown three and even four times in one season, and afterwards fed with sheep. Certainly, no other system could produce all this cropping. The distinctive difference it makes in other crops cannot, perhaps, be made so palpable. The Wheat looked strong and heavy, with a fair promise of 45 bushels to an acre. The Oats, Beans, and roots showed equally well.

The irrigation and deep-tillage systems were going on simultaneously in the same field, affording me a good opportunity of seeing the operation of both. Two men were applying the hose upon a portion of the field which had already been mowed three times. Two teams were at work turning up the other, which had already been cropped once or twice. One of two horses went first, and with a common English plough, turned an ordinary furrow. Then the other followed, of twice the force of the first, in the same furrow with a subsoil plough held to the work beam deep. The iron-stones and ferruginous clods turned up by this "deep tillage" would make a prairie farmer of Illinois wonder, if not shudder, at the plucky and ingenious industry which competes with his easy toil and cheap land in providing bread for the landless millions of Great Britain.

The only exceptional feature or arrangement besides the irrigating machinery and process that I noticed was an iron hurdling for folding sheep. This at first sight might look to a practical farmer a little extravagant, indicating a city origin, or the notion of an amateur agriculturist more ambitious of the new than of the necessary. Each length of this iron fencing is apparently about a rod, and cost 1*l.*, or nearly five dollars. It is fitted to low wheels or rollers on an axle two or three feet in length, so that it can be moved easily and quickly in any direction. It would cost over 50*l.*, or 250 dollars to enclose an acre entirely with this kind of hurdling. Still Mr. Mechi would doubtless be able to show that this large expenditure is a good investment, and pays well in the long run. The folding of sheep for 24 or 48 hours on small patches of Clover, Trefoil, or Turnips, is a very important department of English farming, both for fattening them for the market and for putting the land in better heart than any other fertilising process could effect. Now, a man with this iron fencing on wheels must be able to make in two hours an enclosure that would cost him a day or more of busy labour with the old wooden hurdles.

On the whole, a practical farmer who has no other source of income than the single occupation of agriculture would be likely to ask, what is the realised value of Alderman Mechi's operations to the common grain and stock growers of the world? They have excited more attention or curiosity than any other experiments of the present day; but what is the real *résumé* of their results? What new principle has he laid down? What new economy has he reduced to a science that may be profitably utilised by the millions who get their living by farming? What has he actually done that anybody else has adopted or imitated to any tangible advantage? These are important questions; and this is the way he undertakes to answer them, beginning with the last.

About 20 years ago he inaugurated the system of under-draining the heavy tile-clay lands in Essex. Up to his experiment the process was deemed impracticable and worthless by the most intelligent farmers in the county. It was more confidently decried than his present irrigation system. The water would never find its way down into the drain-pipes through such clay. It stood to reason that it would do no such thing. Did not water stand in the track of the horse's hoof in such clay until evaporated by the sun? It might as well leak through an earthenware basin. It was all nonsense to bury a man's money in that style. He never would see a shilling of it back again. In the face of these opinions Mr. Mechi went on, training his pipes through field after field deep below the surface. And the water percolated through the clay into them, until all these long veins formed a continuous and rushing stream into the main artery that now furnishes an ample supply for his stable cattle, for his steam-engine, and for all the barn-yard wants. His tile-draining of clay lands was a capital success; and those who derided and opposed it have now adopted it to their great advantage, and to the vast augmentation of the value and production of the county. Here, then, is one thing which he has led, and others have followed, to a great practical result.

His next leading was in the way of agricultural machinery. He first introduced a steam-engine for farming purposes in a district containing a million of acres. That, too, at the outset, was a fantastic vagary in the opinion of thousands of solid and respectable farmers. They insisted the iron horse would be as dangerous in the barn-yard or rick-yard as the very dragon in Scripture; that he would set everything on fire; kill the men who had care of him; burst and blow up himself and all the buildings into the air; that all the horses, cows, and sheep would be frightened to death at the very sight of the monster, and never could be brought to lie down in peace and safety by his side, even when his blood was cold, and when he was fast asleep. To think of it! to have a tall chimney towering up over a barn-gable or barn-yard, and puffing out black coal smoke, cotton-factory-wise! Pretty talk! pretty terms to train an honest and virtuous farmer to mouth! Wouldn't it be edifying to hear him string the yarn of these new words! to hear him tell of his engineer and ploughman; of his pokers and pitchforks; six-horse power, valves, revolutions, stopcocks, 20 lb. of steam, &c.: mixing up all this ridiculous stuff with yearling calves, Turnips, horse-carts, oilcake, wool, bullocks, Beans, and sheep, and other vital things and interests, which 40 centuries have looked upon with reverence! To plough, thresh, cut Turnips, grind corn, and pump water for cattle by steam! What next?

Why, next, the farmers of the region round about

"First pitied, then embraced"

this new and powerful auxiliary to agricultural industry, after having watched its working and its worth. And now, thanks to such bold and spirited novices as Mr. Mechi—men who had the pluck to work steadily on under the pattering rain of derisive epithets—there are already nearly as many steam engines working at farm labour between Land's End and John o'Groat's as there are employed in the manufacture of cotton in Great Britain.

His irrigation system will doubtless be followed in the same order and interval by those who have poohpoohed it with the same derision and incredulity as the other innovations they have already adopted. The utilising of the sewage of large towns, especially of London, has now become a prominent idea and movement. Mr. Mechi's machinery and process are admirably adapted to the work of distributing a river of this fertilising material over any farm to which it may be conducted. Thus, there is good reason to believe that the very process he originated for softening and enriching the hard and sterile acres of his small farm in Essex will be adopted for saturating millions of acres in Great Britain with the millions of tons of manurial matter that have hitherto blackened and poisoned the rivers of the country on their wasteful way to the sea. This will be only an additional work for the farm engines now in operation, accomplished with but little increased

expense. A single fact may illustrate the irrigating capacity of Mr. Mechi's machinery. It throws upon a field a quantity of the fertilising fluid equal to one inch of rainfall at a time, or 100 tons per imperial acre; and as a proof of how deep it penetrates, the drains run freely with it, thus showing conclusively that the subsoil has been well saturated—a point of vital importance to the crop.

Deep tillage is another specialty that distinguished the Tiptree farm *régime* at the beginning, in which Mr. Mechi led, and in which he has been followed by the farmers of the country, although few have come up abreast of him as yet in the system.

Here, then, are four specific departments of improvement in agricultural industry which the Alderman has introduced. Every one of them has been ridiculed as an impracticable and useless innovation in its turn. Three of them have already been adopted, and virtually incorporated with agricultural science and economy; and the fourth, or irrigation by steam power, bids fair to find as much favour, and as many adherents in the end, as the others have done.

He has not only originated these improvements, or been the first to give them practical experiment, but he has laid down certain principles which will doubtless exercise much influence in shaping the industrial economy of agriculture hereafter in different countries. One of the best of these principles he puts in the form of a mathematical proposition. Thus: As the meat is to the manure, so is the crop to the land. Tell me, he says, how much meat you make, and I will tell you how much corn you make, to the acre. Meat, then, is the starting point with him; the basis of his annual production, to which he looks for a satisfactory decision of his balance-sheet. To show the value he attaches to this element, the fact will suffice that he usually keeps 65 bullocks, cows, and calves, 100 sheep, and a number of pigs, besides his horses, making one head to every acre on his farm. With this amount of live stock, he makes from 4*l.* to 5*l.* worth of meat per acre annually. Perhaps it would be safe to say that no other 170 acres of land in the world make more meat, manure, and grain in the year than the Tiptree farm. *Elihu Burritt's Walk from London to John o'Groat's.*

Miscellaneous.

Preserving Eggs.—M. Burnouf recommends in *Le Bélier*, a French journal of agriculture, the following method of preserving eggs:—Dissolve in two-thirds of warm olive oil one-third of bee's-wax, and cover each egg completely with a thin layer of this pomade with the end of the finger. The egg shell by degrees absorbs the oil, and each of its pores becomes filled with the wax, which hermetically seals them. M. Burnouf affirms that he has eaten eggs kept two years in this manner, in a place not exposed to too great extremes of temperature. He thinks also that the germ may in this manner be preserved for a considerable time. *The Reader.*

Barnet Great Cattle Fair.—This great autumn cattle fair, held annually at Barnet, chiefly for the sale of store beasts, was held last week, and brought together a very large gathering of agriculturists and others interested in cattle from nearly all counties. The supply of stock was in the aggregate far below the usual average. Welsh cattle did not comprise one-third the usual show, and were of inferior character. The Devon beasts were moderately represented by cattle in good condition. The Hereford stock were a miserable show, and consisted of culls and plain steers, most of the best cattle having been made off as beef. Shorthorn steers were short in supply and in lean condition, and notwithstanding the very limited exhibition of store bullocks, the demand was exceedingly dull, which is attributable to the general failure in the growth of Swede Turnip crops this year, which forms the staple commodity in the fatting shed. This irretrievable loss of the root crop is to farmers "a calamity," and is suggestive of insurmountable impediments, as the necessity of fatting beasts for the purpose of obtaining manure is an essential element of high-class farming, which must this season be partially relinquished. The fair was divided into sections, each being denominated by the class of stock to which they were assigned. The following were the prices obtained: Welsh cattle, small, two-year old steers, 8*l.* to 9*l.*; ditto, heifers, 6*l.* to 7*l.*; full grown runts, in good condition, 13*l.* to 15*l.*; North Wales beasts (Anglesea and Carnarvon breed) realised 16*l.* to 18*l.* Many were not sold. Hereford Beasts.—Large beasts, 14*l.* to 16*l.*, and small inferior bred steers, 10*l.* to 11*l.* Business very limited. Devons.—In this division the demand was more active. Well bred steers (good bloods and well up in condition) made 14*l.* to 15*l.*; inferior ditto, 11*l.* to 12*l.*; and steers, one year off, 7*l.* to 8*l.* Shorthorn beasts.—Large, well-grown steers, 13*l.* to 16*l.*; and second quality, 10*l.* to 12*l.*, and Shorthorn stock heifers, 9*l.* to 10*l.* The Scotch fair.—This section of the stock mart was a mere phantom as compared with previous fairs. The show consisted of Scotch runts, which sold at from 4 to 5 guineas. Some herds of Highland steers in high condition, brought 16*l.* to 17*l.*; Polled Scots, store steers, 12*l.* to 14*l.*; ditto heifers, 11*l.* to 13*l.* Much of the best descriptions sold off. Dairying cattle.—The fields apportioned for this class were well supplied. Large framed Yorkshire bred full milch cows sold readily to London cow-keepers at from 21*l.* to 25*l.*; small Short-horn dairying cows, 15*l.* to 18*l.*; Alderney cows in full milk, 13*l.* to 16*l.*; Dutch cows, 11*l.* to 12*l.*; well-bred Yorkshire bulls, 13*l.* to 18*l.*; and Short-horn in-calf heifers, 11*l.* to 14*l.* Irish heifers and steers, 4*l.* to 8*l.*; Dutch ditto, 5*l.* to 8*l.* There was a large herd of miscellaneous stock scattered over the town and roadside, and which did not command attention. In the horse fair there is a glut of horseflesh of every description.

Memorandum.—In a conversation with Mr. C, Collings, at Monkend Croft, he told me that milk was not his sole object, but he got it if he could. He considered FOLJAMBE and PHŒNIX his best cattle, but the *Cherry*, *Daisy*, and *Duchess* tribes his best milkers. *Mr. Cottrell, of Rhodyate Lodge, Congresbury. May* 29, 1830.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Reading of Dry Bulb.	Thermometer. Reading of Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	Sept.	Inches.	°	°				°	°	°	°	Inches.
Friday	9	29.93	65	63	S.	3	10	71	62	80	56	..
Saturday	10	30.02	58	52	S.W.	0	10	70	51	81	46	0.00
Sunday	11	29.83	50	55	N.W.	3	5	64	48	81	38	..
Monday	12	30.02	62	57	N.W.	2	2	63	47	77	38	0.10
Tuesday	13	29.94	59	55	S.W.	2	10	63	45	80	39	..
Wednesday	..	..	..	..	..	..	..	..	..	..	..	..
Thursday	..	..	..	..	..	..	..	..	..	..	..	..

Calendar of Operations.

SEPTEMBER.

BERWICKSHIRE MERSE FARM, *Sept.* 10.—The fine harvest weather that prevailed throughout summer has failed us when most wanted. A beginning was made three weeks ago, and those who then cut their corn green, after the new fashion, have got decidedly the best of it. For, with the first day of this month, there came a tract of boisterous weather with showers, and it has rained heavily since mid-afternoon. Monday was a terrible day of wind; in exposed places full one-half of the grain was shed on the ground, and the general loss, perhaps 10 bushels, over a third of the acreage. Yesterday's gale was still worse, making a clean sweep of anything then standing; and in Lammermuir, we understand, little is left but the bare straw. Of course stocks have been flat all the week, and are in bad trim for wet weather, and much less is secured than would have been with moderate weather. Wheat, perhaps, has suffered less than other grains, being fully greener. Our opinion of the crop is in no way altered since August 1, except that deductions must be made for loss by wind. Barley, Wheat, Oats, was the order of merit, and Barley has suffered most. We should expect our farm horses to consume the most of the Oats at home. Clovers are pretty well planted, but not strong yet. Pastures are very bare, and much artificial food is required. Lambs have fallen in price, and no demand. Swedes on free land have all along looked well, but later sown Turnips have not made much root, though that may be looked for now. At Kelso sales yesterday there were sold 2200 shearling Leicester tups, mostly of the "Border" breed. The Mertoun lot averaged 26*l.* 10*s.* and two sheep brought 70*l.* and 61*l.* *J. T.*

Notices to Correspondents.

BISCUIT MEAL: *H E.* A sample of biscuit meal has been placed in our hands; it appears to be a clean, nutritious, and sweet food. The price, 11*l.* a ton. We have no information as to its composition. That is to be ascertained only by a costly analysis.

DODDER SEED. Thanks for a sample.

GRASS SEEDS: *B H.* It is not very satisfactory to determine a Grass merely from the seed; yours may possibly be that of some form of Agrostis alba, which is oftener red than any other colour.

PLANTS: *James James.* 1, Eyebright (Euphrasia officinalis); 2, Carnation Grass (Carex recurva); 3, Purging Flax (Linum catharticum). All these plants speak of a poor, hungry, and we should think, wet soil. Still, if it be drained, top-dressings of any kind of rubbish will do good, but drainage is the first requisite. As regards the question of the tendency to scour in purging Flax, it may be sufficient to say that we do not consider this to exert so active an agency in affecting sheep and cattle as the general poverty of the pasture as indicated by the three plants sent. *J B.*

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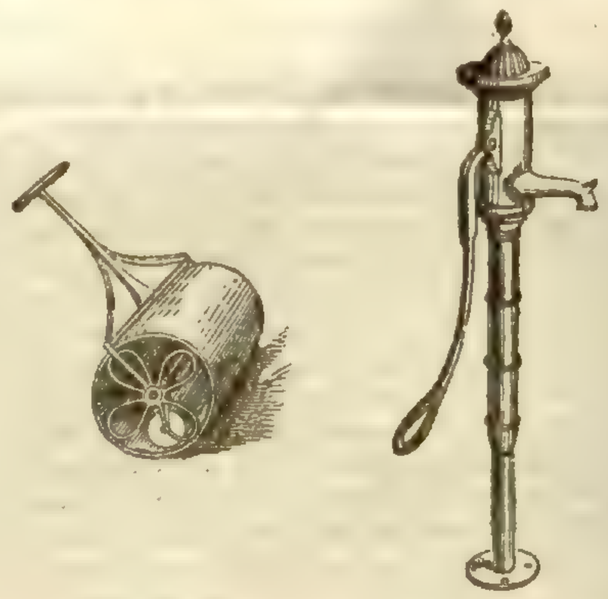

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SIR ROBERT PEEL, dark rosy crimson, well and strongly marked with black spots, good foliage and habit.
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The Gardeners' Chronicle.

SATURDAY, SEPTEMBER 24, 1864.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY, Sept. 27 { Royal Horticultural (Floral and Fruit Committees) at S. Kensington.. Noon

A CORRESPONDENT has sent us a sample of perfectly sound and good POTATOS, in which the whole surface has little particles of dirt and vegetable matter attached to it by very short delicate threads. Whether he went so far as to examine the surface minutely with a lens we cannot say, but had he done so he would have seen that the whole is occupied by a close-pressed extremely fine network with wide meshes, the threads of which are of a deep copper purple. Here and there he might have seen these threads communicating with minute patches of the same colour, consisting of fine intermatted flocci.

The Fungus is in fact in a very early stage of development, and it required some acuteness on the part of our correspondent to notice its presence at all. In the course of a few weeks probably the whole would be invested with a coloured film, which if it did not impair the quality of the tubers, would at least render the crop unsaleable.

The Fungus is the common Copper Web (Rhizoctonia), which is so destructive in some districts to Lucerne and Asparagus, whose roots are killed by it. It is not, at least in its early stage, destructive to Potatos, and if the tubers are lifted at once it is possible that the spawn may not obtain any further development in the pit. The safer plan however would be to use them immediately.

We observe that the soil is full of fibrous matter derived apparently from a former crop, but whether this has had anything to do with the production of the Copper Web we are unable to say. *M. J. B.*

WE are reminded of the revolution wrought in our FRUIT GARDENS by the introduction of Pyramidal and Bush trees, and of the share which Mr. RIVERS has had in bringing it about, by the appearance of a twelfth edition of a capital little book* of his, which is devoted to this subject. The readers of the previous eleven editions must of necessity comprise a goodly company of cultivators, and of these it is a fair presumption that many have become converts to the practice.

If it be true, as doubtless it is, that for the bulk of our hardy fruit produce we must rely on our old-fashioned orchards, judiciously managed after the principles which Mr. COX is so well explaining in our columns, it is unquestionable, on the other hand, that many of our choicer fruits may be satisfactorily grown in the miniature fruit garden, as Mr. RIVERS calls it, with such aid as is to be derived from Quince and other dwarfing stocks, and from the practice of root-pruning, biennial removal, and the summer pinching system of pruning applied to the formation of cordon, of pyramid, and of bush-formed trees.

This method of culture is eminently adapted for amateur gardeners who take a personal interest in the management of their own trees. Root-pruning and biennial removal are most essential features of it, and from the moderate size of the trees cannot be regarded as obstacles in the way of carrying it out. Their purport is to make and keep the trees healthy and fruitful by ensuring that their roots shall be kept near the surface within the influence of the sun and air. The ground over the roots of garden trees is too commonly dug once or twice a year and cropped, so that every surface fibre is destroyed, and the larger roots are driven downwards, with the certain result of imbibing crude watery sap, and developing a too surely fatal luxuriance—fatal because the wood scarcely ever ripens as it should do.

Perhaps of all hardy fruits the Pear is that which can be most profitably submitted to this discipline. Indeed, worked on the Quince and prepared by one or two removals, pyramidal Pears become a perfect mass of fibres, and the stems and branches literally clothed with blossom buds. Summer pinching, however, it is to be always remembered, is a most important element in the management of such trees; and so are winter transplanting and root-pruning, which, if not done annually, should at least be practised every two years, early in November.

The French gardeners, Mr. RIVERS tells us, have a curious yet interesting way of training Pear trees on the Quince stock, which they call training *en fuseau*, or distaff training, the most simple of all modes. A young tree, one year old from the bud, is planted; and every side shoot, as soon as it has made four leaves, has its top pinched off, leaving three. This is the first pinching, early in June. These pinched shoots all put forth young shoots which must be pinched to one leaf, and so on with all the young shoots during the summer. The leading shoot is topped when it has reached 12 inches in length, and as soon as two or three shoots break out from it, all but the leaders are pinched in in the way already described. This process is repeated every season, and a very complete distaff-like tree is the result. This, which is the cordon system applied to single-stemmed trees, is much to be recommended for small gardens, where it is desired to accommodate a considerable collection.

What the Quince stock is to the Pear, the Paradise stock is to the Apple, and the Mahaleb stock to the Cherry. On the Paradise stock Apples form pyramids of great beauty and utility. This stock, like the Quince, has a strong tendency to emit roots near the surface, and is therefore just suited for the practice of frequent transplantation. The sorts of Apples should be discriminated, those of close compact habit being suitable for pyramids, while those of horizontal or crooked growth must be treated as bush trees. The pinching in, which is the same in either case, may be practised with Apples as with Pears, and the results are equally successful. The Apple, too, may be profitably grown in the form of single horizontal cordons, as an edging to kitchen garden borders. The *modus operandi* is this:—Take a tree worked on the Paradise or Doucin stock, and having a single shoot; plant it in a sloping position, and train the shoot, at about 10 or 12 inches from the ground, along a wire supported by oak posts, standing one foot above the surface and 30 or 40 yards apart, the wire being passed through an eye at the top of iron pins placed at intervals of six feet. Plant the trees six feet apart, train them along the wire, and when they meet graft them into each other so as to form a continuous cordon. Every side shoot of these cordons is to be pinched in to three leaves all the summer; and the fruit, from being near the earth, and thus profiting largely by radiation, will be of very superior quality. Vertical cordon training may also be successfully adopted both with Apple and Pear trees. It is, however, found with respect to all cordon trained trees, that root-

* The Miniature Fruit Garden; or the Culture of Pyramidal and Bush Fruit Trees; with instructions for Root Pruning, &c., &c. By THOMAS RIVERS. Twelfth Edition. London. Longmans. 1864. Pp. 125.

pruning or removal is seldom required, the vital force of the plant being in most cases sufficiently reduced by the continuous pinching of the young shoots. All vertical cordon trees, too, should be supported by slight iron rods standing 6 feet above ground, and inserted 10 or 12 inches into the soil.

In respect to Plums, no stock has been found quite analogous in its effect on these trees to that of the Quince and Paradise stocks on the Pear and Apple respectively; but it has been found that trees worked on the Plum stock are readily dwarfed by the system of annual or biennial transplantation.

The most charming of all pyramid fruit trees, however, are found in the varieties of Duke and Morello Cherry worked on the Mahaleb stock. These, by following out the summer pinching and winter transplanting as with Pears and Plums, become, to use Mr. RIVERS's words, "in two or three years the most delightful fruit trees ever seen, for in spring they are perfect nosegays of flowers, and in summer clusters of fruit—if spared by spring frosts." As vertical cordons, too, nothing can be more charming than these kinds of Cherries.

As to frequency of removal, Mr. RIVERS lays down the following data. If the soil be very rich, so as to induce the trees to make shoots of 18 inches long in one season, they may be transplanted annually till this rate of growth is checked. If they only make a growth of 6 or 8 inches, they may be transplanted biennially. If the soil is such that the trees grow but very slowly, root-pruning is more advantageous than removal, as they sustain less check than by the latter operation.

Double grafting is another secret of success with respect to Pears; and this is the history which Mr. RIVERS gives of it. "I observed," he remarks, "when budding and grafting Pears on the Quince, that some varieties did not grow freely on it, especially Gansel's Bergamot, Knight's Monarch, and others. I found that the Beurré d'Amanlis formed a most perfect union with the stock, and seemed most enduring, for I had seen trees in France at least 50 years old. I therefore fixed on this sort for experiment, and had thrifty trees two-years old from the bud, grafted with Gansel's Bergamot. These grafts flourished, and became so prolific that when three or four years old they bore from three to four dozens of fruit. There are many Pears of the finest quality but of a delicate and unfertile habit, that may be much improved by double grafting. With Apples the plan is of less importance, the Paradise stock securing perfect health and fertility in most soils."

THE PLANTERS OF TREES AND SHRUBS in Scotland, with a few exceptions, have been rather behind those who live in the southern part of the United Kingdom in appreciating the value of new introductions from foreign countries. While ornamental or useful hardy plants are eagerly sought for and planted in the parks and gardens of England, but small encouragement has hitherto been given to such things in Scotland. We do not suppose that this state of apathy is owing to any unwillingness on the part of our northern brethren to incur a little extra expense in the purchase of novelties, but it probably has arisen either from a want of consideration, or from an indifference to the matter altogether.

In these days of rapid communication by telegraph and railroad, the indifference to which we allude could scarcely have proved lasting. And we are glad to be able to state that a marked change has taken place already, the effects of which are visible in several parts of the country. Within the last few years we have heard a good deal of some gardens in the vicinity of Falkirk, which were becoming remarkable for their beauty and interest, owing to the number and size of the exotic trees and shrubs which were growing in them. During a recent tour in Scotland we took occasion to pay a visit to Falkirk, and we must say that what we saw there far exceeded the expectations we had formed from the reports that had reached us. The gardens visited by us belonged to Mr. RUSSELL, Mr. GAIR, Mr. NIELSON, and to a sister of the gentleman first named, and there are probably others of the same kind in the neighbourhood. These gardens contained goodly-sized specimens of most of the new Pines and other trees and shrubs which have been introduced within the last 30 or 40 years. The plants are already extremely ornamental and interesting objects in the gardens where they grow, and they are producing a marked and beautiful effect upon the scenery about the town.

Our object at present is not so much to give a list of the names of the trees and shrubs we met with in these gardens, as to draw attention to the circumstance of their successful cultivation in that part of the country, and to the effect they are already producing upon the scenery. But we may mention that we observed large and handsome specimens of the Indian Deodar and its silver-leaved variety, of Wellingtonia gigantea, of Cryptomeria japonica, and of Abies Douglasii, Nordmanniana, nobilis, cephalonica, Pinsapo, Menziesii, orientalis, &c. All the new sorts of Thuja, Thujopsis, Cupressus, and Retinospora, were flourishing in an admirable manner. The little Japanese variegated-leaved Honeysuckle was used as an edging round beds, and had a pretty appearance when applied in this way. And we may remark farther, that the nurseries of Knaphill and Bagshot would seem to have been ransacked for the finest kinds of the Rhododendron, all of which were thriving luxuriantly in the Falkirk gardens. As a large proportion of these new trees and shrubs to which we have alluded are Evergreens, the effect they produce upon the landscape during the winter months must be even more striking than they were at the time of our visit.

We may hope that the example now set by the gentlemen of Falkirk will be speedily followed in other parts of Scotland. We are aware that much has been done in this way in Perthshire, and at some future time we may have the pleasure of visiting those places in that part of the country to which we alluded when drawing the attention of our readers to the beautiful set of photographs which were employed to illustrate Mr. MURRAY's lecture on Conifers delivered to the Royal Horticultural Society at South Kensington.

The Scotch are naturally and justly proud of their country. That

> "Land of brown heath and shaggy wood,
> Land of the mountain and the flood,"

of which Sir WALTER SCOTT so charmingly sings in his "Lay of the Last Minstrel," has many charms. The thousands of tourists who, at this season of the year, are wandering about amongst its hills and valleys, will return to their homes much pleased with the scenery through which they have passed. But taking all this as granted, there is no country in the world which is more capable of being enriched and improved by the productions of other lands than Scotland. Its scenery may be made more interesting and more beautiful than it is now by the cultivation of those foreign hardy trees and shrubs which we have just been describing, and therefore we hail with a lively satisfaction any movement which has a tendency to this end.

There is another matter which came under our notice during our visit to these Falkirk gardens. The Falkirk people are also most successful in transplanting trees of almost any size, and in transporting them from one part of the country to another. Mr. SORLEY, a gardener in the town, is quite famous owing to his success in this department of his profession. Some account of his process will be found in our Volume for 1863, at p. 147. He has succeeded in moving an immense number of trees and shrubs, many of great size, and in bringing them safely home to Falkirk, oftentimes from a considerable distance. Jealous people even say that he is so enthusiastic in this matter that he is accustomed to look with an envious eye upon every fine specimen he meets with away from home, and that he does not rest until he has added it to the collections of his native town. We believe the secret of Mr. SORLEY's success is simply this: he knows the best season for transplanting each particular tree, and he attaches the greatest importance to the preservation of the young roots, more especially in cases where the specimens happen to be large ones.

Before closing these remarks upon the introduction of foreign hardy trees and shrubs to Scotland, may we ask what progress the last expedition to North-west America is making? It was stated for some time to be full of promise, but we have not heard anything of it lately. There is, surely, still a fertile field in that quarter of the world, which will yield an abundant harvest of fine things for our woods and gardens.

—— WE understand that Mr. ROBERT WARNER has at the present time in flower at Broomfield, a magnificent plant of VANDA LOWII, a very fine species, presenting some curious points of structure. One of the most remarkable of these is the occurrence—on every spike apparently—of two flowers totally unlike all the rest. This was observed in the example originally flowered by Messrs. VEITCH, by whom the plant was introduced alive from Borneo about 1858, and was then supposed to be an accidental freak; but it is also recorded by Prof. REICHENBACH (who calls the plant Renanthera Lowii), as having occurred in the case of a plant flowered in 1861 by M. REICHENHEIM, of Berlin; and it occurs again, as we now learn, on all the seven flower spikes which are borne by Mr. WARNER's plant—some idea of the character of which may be formed from the following particulars:—The plant is about 6 feet 6 inches high, and the leaves, which are rather less than 3 feet long, are slightly curved downwards, so that the breadth of the plant is about 4 feet 6 inches. There are three subordinate shoots of about a foot in height. All the flower spikes, seven in number, are, however, produced from the one main stem, a circumstance which our informant regards as unprecedented in the garden history of this Vanda, no cultivated plant having as yet produced so many spikes from one stem. The flower spikes are some of them 6 feet, some 8 feet long, and they are very pliant, and hang about in an extremely graceful manner. The number of flowers on each spike varies from 30 to 35, the lowermost ones placed about 4 inches apart, the others about 2 inches apart on the spike. The prevailing colour is a light buff marked with reddish brown bars and spots, but as already observed, the two lower flowers, that is to say the two nearest the stem, on each spike, are of a golden yellow with dark spots, and the sepals and petals in these are broader and blunter than in the others. The flowers on this plant are stated to have been already expanded for six weeks, and every one of them to be as fresh as ever! Now that it is found that this handsome and curious species, under proper treatment, can be made to yield its blossoms so freely, it will doubtless be much sought after by Orchid growers. We understand the specimen we have referred to is be figured in the new series of Mr. WARNER'S Orchidaceous Plants. The singular dimorphism which occurs in this plant does not appear to affect the essential organs of the flower, for, in the specimens examined by Prof. REICHENBACH, the pollen masses and the placentas are stated to be equally developed in both forms.

—— At the last meeting of the R.H.S. Flora Committee, Mr. TILLERY, of Welbeck, invited attention to a property in the HOLLYHOCK, which, if known to the initiated, does not appear to be commonly known or practised amongst cultivators generally. It is, that seedlings may be had to bloom satisfactorily the same year in which they are sown. Mr. TILLERY's communication was accompanied by some remarkably fine-grown flowers, admirable subjects for garden decoration, in illustration of the treatment which he recommends to those who have not convenience for wintering a supply of plants. These flowers were in fact sent to show that the seeds of Hollyhocks sown in February will yield vigorous flowering plants the following September—a great desideratum in filling up shrubberies with masses of these gorgeous autumnal flowers, for which purpose, of course, seedlings of a "good strain," as the florists say, are exceedingly well adapted. It was explained that in the case in question, the seeds were sown in a Peach-house in the beginning of February. The seedlings were planted singly in small pots, and kept growing in heat till the beginning of April, when they were planted out, some in well-prepared garden soil, others in masses in the shrubberies. All have flowered, or are coming into flower. It is well-known, Mr. TILLERY observes, that severe or wet winters cause the Hollyhocks to rot, when not protected by frames; but by raising them from seeds every year, a supply can be kept with little trouble. It is also well-known that certain kinds of Hollyhocks may be reproduced almost true to colour and properties when raised from seeds, and such are of course very desirable parents to adopt when this method of treatment is carried out.

—— We have not yet got to the end of the NEW GRAPES, for which, in the form of seedlings or foundlings, the last few years have been remarkable. Only the other day, at South Kensington, Mr. WILLIAM PAUL exhibited one which, so far as can be judged from cut fruit, promises to take the highest rank of merit. It has the Hamburgh character of bunch and of berry, and something of the Hamburgh flavour, but with this is combined most distinctly that of the Frontignans. It is described as a cross between the Hamburgh and Frontignan, and this its peculiar flavour seems to confirm. The only drawback to this new Grape is its colour, which is of a rather reddish grizzly hue; but we suppose that after all the test of a Grape lies in its flavour. Its large rich succulent berries will place it on a par with the Muscat Champion, or, as it was formerly called, the Champion Hamburgh Muscat, which indeed it somewhat resembles in its outward aspect. We believe this, like the variety just mentioned, originates in the north.

INFLUENCE OF HEAT-FORCE ON VEGETABLE LIFE.

I CANNOT conclude my remarks upon the recent progress of biological science without alluding to the modern discovery of the dynamical theory of heat, or equivalence of heat and force—a wonderful theory, which the lectures of Tyndall have rendered practically clear even to the unscientific mind, but which, nevertheless, it is difficult to follow in all its details without feeling a certain bewilderment of the brain. I may refer to Dr. Carpenter's article "On the Application of

the Principle of Conservative Force to Physiology," in the "Quarterly Journal of Science" for January and April of the present year, for a general review of the influence of this force on vegetable and animal life; and for a more popular summary, to the graphic sketch of the relation of the sun to life, contained in the closing portion of Prof. Tyndall's twelfth lecture. But in this summary occur the following passages, which, however correct in regard to the great principle they are intended to illustrate, might yet, I think, without explanation, lead the ordinary reader into considerable error with regard to some great biological facts; and upon which therefore, on account of the high standing of the distinguished author, and the general circulation which the work must command, I think it necessary to offer a few observations.

"The earth's atmosphere contains carbonic acid, and the earth's surface bears living plants; the former is the nutriment of the latter. The plant apparently seizes the combined carbon and oxygen, tears them asunder, storing up the carbon, and letting the oxygen go free. By no special force, different in quality from other forces, do plants exercise this power: the real magician is here the sun." (P. 430.)

"But we cannot stop at vegetable life; for this is the source, mediate or immediate, of all animal life. In the animal body, vegetable substances are brought again into contact with their beloved oxygen, and they burn within us, as a fire burns in a grate. This is the source of all animal power, and the forces in play are the same in kind as those which operate in inorganic nature. In the plant the clock is wound up, in the animal it runs down. In the plant the atoms are separated, in the animal they recombine." (P. 431.)

The sun "rears, as I have said, the whole vegetable world, and through it the animal. The Lilies of the field are his workmanship, the verdure of the meadows, and the cattle upon a thousand hills. He forms the muscle; he urges the blood; he builds the brain. His fleetness is in the lion's foot; he springs in the panther; he soars in the eagle; he glides in the snake. He builds the forest, and hews it down—the power which raised the tree, and which wields the axe being one and the same. The Clover sprouts and blossoms, and the scythe of the mower swings, by the operation of the same force." (P. 432.)

Notwithstanding the assertion to the contrary, it must be admitted that there is here a little of poetry mixed with rigid mechanical truth; and we, as special investigators of the complex phenomena of animal and vegetable life and living beings, ought not to allow this quiet and summary dismissal of what is ordinarily, though perhaps erroneously, called "vital force," without remark. Life may not be a force in the sense which natural philosophers give to the term, but it is a power which so materially modifies the action of heat-force, that it comes within the general and more popular meaning of the word. Life cannot indeed be set in action without the operation of heat-force; but, on the other hand, the sun cannot build a tree without the assistance of life. What life really is we do not know: its origin is probably beyond our investigation; but its existence and continuity cannot be denied. Notwithstanding the objections of heterogeneists, I cannot but remind you that in the present state of science we have as yet no prospect of proofs that any new life is created, that any new living being is built, by the sun or any other force, out of matter organic or inorganic. Life is continuous, and has been so from a period beyond human cognizance. We witness its cessation, but it has never been known to commence. Every new being grows out of, and is a portion detached from, a pre-existing one. We cannot even fix precisely the moment when its independent life commences. It is not when the detached bud first shoots out its own roots, not when the seed bursts, or the egg-shell is broken, or the young animal is born; for the bud, the embryo or fœtus, had a previous existence, more or less independent of, or connected with, the parent, according to species. It is not at the moment of fertilisation; for the bud, and even the ovum in cases of parthenogenesis, may grow into independent beings without ever being impregnated. Nor can our most powerful instruments perceive the moment when the first embryo-cell receives that impress which has irrevocably determined the form which the perfect being is to assume, within those narrow limits which neither impregnation nor any other influences set in action by the sun can ever make it exceed. And if life is once stopped, if interrupted, be it for a moment, no force can set it in action again. It may lie dormant for a long (but not perhaps indefinite) succession of years; its action may be absolutely imperceptible or limited to the resistance of disorganisation, until recalled into more active operation by the action of the sun on surrounding influences; but if during the dormant period (of the seed, egg, &c.) life has once ceased, nothing will restore it: the action of the same sun upon the same surrounding influences will produce decomposition, not growth. The word "force" may indeed be properly limited to mechanical force, and it may be incorrect to say that life is a force different in quality from other forces; but as we must have some term equivalent to the popular sense, we may call life a power different in quality from force. Dr. Carpenter (p. 80) proposes to term it a germinal capacity; but it is surely much more than a capacity, to be paraphrased as the "power of utilising, after its own particular fashion, the heat which it receives, and of applying it as a constructive power to the building up of its fabric after its characteristic type" (p. 87). There is here this difference between the term and its paraphrase, that the one expresses a passive, the other an active idea.

"Vegetable substances, brought into contact with their beloved oxygen in the animal body, will burn within it as a fire burns in the grate." True; but that burning will be fermentation and corruption, unless brought under the influence of the living parts of the body to be converted into growth. I say growth, not building; for building the brain and the forest is a metaphor which must lead the unscientific mind far astray from all that science has as yet taught us. Nothing in life is built, in the ordinary "sense" of the term; no portion, no single cell, has been externally added to a living being; everything has grown out of it, every new cell is gradually compounded within a living cell.

"The plant apparently seizes the combined carbon and oxygen, tears them asunder, storing up the carbon, and letting the oxygen free." True; but it does much more. Every living being, animal or vegetable, absorbs compound substances, decomposes them, liberates at once a portion (chiefly oxygen in the case of most plants), and stores up a portion. Of this portion some may be deposited unchanged in visible particles in various parts of the animal or plant, but some also undergoes a further decomposition and dilution into a state hitherto concealed from our observation, from which it emerges recombined, having already received a peculiar impress, definitely differing in every species, or even in every individual—differences then inappreciable, it is true, to our senses, but evidenced by the forms the animal or plant is compelled to assume as it grows. And the process is substantially the same in animals and plants; both absorb, decompose, select, reject, and recombine. An animal may select what a tree rejects; but so also may one plant select what another rejects. None feed upon carbon or oxygen alone. Some are not satisfied without drawing their nutriment direct from the living plant or animal; many feed upon organic substances, in which the decomposition after death has scarcely commenced; and most, if not all, appear to require for their support some small portion, at least, of matter in which life is or has been. In both animals and vegetables the clock is wound up, and it runs down; in both, the atoms are separated and recombined, and in both, these operations take place in a totally different way from what they do in the same bodies under the same influences, the moment life is extinct, the moment the vital power ceases to act. It is this vital power, its continuity and infinite divisibility, its unity and infinite diversity, the concordances, discrepancies, and reciprocal action and influences of the infinity of forms it produces, that our Society is specially called upon to investigate. As systematists, we have so to discriminate, describe, and class these forms as to enable us readily to identify them, both individually and collectively, to comprehend one and another and ourselves in treating of them, and to retain and store in our minds and books what is known of their resemblances, differences, and peculiarities, of their influences and relations to each other and to the lifeless world, as a starting point for future observation. As biologists, we have to study life itself in all its phases, and the multifarious influences by which it is continued, preserved, multiplied, checked, injured, destroyed, or extinguished. But, in addition, we must not neglect to learn from natural philosophers what are those general forces which act on organic as well as on inorganic bodies, and whilst carefully watching every modification these forces undergo, when applied in combination with vital power, gratefully accept any proved identity of action in the living and inanimate world. *From the President's Address at Anniversary of Linnean Society.*

NOTES ON GARDENS.—No. XVII.

MANCHESTER BOTANIC GARDEN.

REJOICE, ye lovers of trees that dwell in the mighty Babylon, and cease your persistent grumblings, ye Horticulturists around it, for your trees are as the trees of the oasis, your dews as those of Hermon, compared with the blighted Oaks and inky vapours which it was my fortune to sail through in the neighbourhood of Stockport. I had previously thought London the worst place in the world for plants, but it was a mistake. Only a few days before I had seen the Planes in various places in the heart of London delightfully healthy and verdant; and now gaunt skeletons were flitting by whose last leaves of life were shed. Dead trees were, however, much more abundant on the road to Todmorden. "Oh!" said I, "if this is improved upon, there will be little need for the charming Perilia in the Manchester Botanic Garden."

However, Manchester is not the blackest of cities; and the Botanic Garden is situated pleasantly enough at a considerable distance from its busy and smoky parts. The air is free enough from gases and smoke to permit many plants to prosper in the garden, though the Rose is almost absent from the Rosary, and the Pine in a good state from the grounds through their influences. The garden was commenced many years ago, when the city was poor compared to its present condition; and was begun very spiritedly by its originators, to judge from the dignified and respectable entrance-gates, curator's house, and other works completed by them. I am very particular about curators' houses and the entrance gates of botanic gardens: they are rarely up to the mark of mediocrity. The curator's house in the Manchester Garden is one of the best I have seen, and is situated immediately within the gates, a corresponding building on the other side containing a council room, porter's room, a small museum, and other necessary offices. The entrance gates at Kew, though good, are not worthy of the praise they receive in the Guide Book. At Glasnevin the entrance is respectable and nearly worthy of the noble garden, but I cannot say so much for the external aspect of the director's house, though it may be commodious and comfortable in other respects. At Liverpool both entrance and house are satisfactory. At Oxford the entrance is massive, ancient, and interesting, the curator's house snug. At Edinburgh the entrance is backdoorish; of the curator's house I can say nothing, as during my visit it was undergoing extensive alterations. At Belfast the entrance is paltry, but the curator's house is neat, and beautifully, though rather too conspicuously situated. At the College Gardens, Dublin, there are entrance gates in the noble iron railing which separates the garden from the main road, but there is no curator's house.

If there is one spot where a building should be more truthful, chaste, and dignified than another, it is in a great garden, especially in a national one, and why? Because it is or ought to be surrounded by the most dignified and beautiful objects on the face of the earth, "builders with the shield" and "builders with the sword," as a great writer calls the noble Oaks and noble Pines;" and the work of man that stands in their midst should be reverent and unpretending, but worthy of its surroundings, and elegant enough to save us from being disgusted at the touch of art while admiring that of Nature. I have lately met with several barbarously hideous garden buildings, and hope to do justice to them by and by. The designer of one important structure in particular ought to be drummed out of the regiment of architects! But I am digressing.

The Manchester Garden is 16 acres in extent: and is the property of the Manchester Botanical and Horticultural Society—a number of shareholders who pay an annual subscription of two guineas, which entitles to admission on all occasions. The annual income, mainly derivable from subscriptions, is about 2000*l*., but 450*l*. of this are annually required for interest of debt. So rich a city as Manchester should be able to support a fine botanic garden, and I have no doubt that if the incubus of debt were removed, the garden would speedily improve in many respects, and be a credit to the city—a city I should say, which from its position, and the occupations of the mass of its people, requires a good botanic garden as much or more than any other.

During the past seven years the garden has been gradually brought from a state of poverty of interest and of funds, to one of great excellence as an indoor plant-growing establishment, and to a comparatively and progressively satisfactory financial state, by the present curator, Mr. Bruce Findlay, as is well known in the neighbourhood. However, his efforts cannot liquidate a heavy debt, though a sum is paid off annually; and, in consequence, striking improvements are for the present apparently very distant. The chief range of glass is about 360 feet long, and was built about 1828; it is an imposing range, and contains, without over-crowding, a very excellent collection of stove, greenhouse, fine-leaved, and miscellaneous plants, in a perfect state of health and cleanliness. I had better not furnish a catalogue of names, but I may say that most of our new plants were in those houses, with tree Ferns, fine Proteads, specimen Camellias, &c., in such a state as we rarely find them, except in private places of plant-growing notoriety.

Apart from the main range there is a very long one for growing young greenhouse things, and a supply of bedding plants, which are freely used in the garden. The Victoria was in a fine state, grown in a lean-to and apparently under difficulties; but I must say that it is by far better in the Regent's Park at present than I have seen it elsewhere this year. By-the-by it would have been almost lost to the country this season, had it not been that the curator at Sheffield happened to possess a lot of young plants, and supplied nearly all our great gardens. There is a Palm house in the centre of the main range, 30 feet high, small of course compared to recent erections in that way; but it is well even to be able to grow and display the habit of a few Palms in a botanic garden. In it was a plant of Cereus hexagonus, about 28 feet high, and flowering freely near the top, a grand old plant. There was a good and exceedingly well grown collection of Ferns in a house adjoining that in which the Victoria was grown; and amongst the Ferns any Orchids that happened to be in flower were placed, a good arrangement, as above all other plants they require some verdant and graceful surroundings. The Ouvirandra was grown here in a very free and cleanly state, planted in a large inverted bell-glass; soil, three parts of sand and the rest of leaf-mould and loam, town water being used. I understood that it was freely and abundantly grown at Lord Egerton's, in the neighbourhood, by Mr. Cliff, and without any attention whatever. When one considers the trouble that has been taken

with it in the immediate neighbourhood of London, and to little purpose, it is not too much to say that if the water is not the cause of the difficulty, this is a plant "that no fellar can understand." I believe that it is to Mr. Bain we are chiefly indebted for its remaining amongst us, for though many grow it now, and in some cases far larger than in the College Gardens, yet when it was very scarce he had it in abundance, and his method is more certain of keeping the plant alive than any other. I hope to explain it by-and-by.

Most of the best Orchids are well grown in the Manchester Garden, the newer species and varieties included, as Mr. Findlay, in addition to exchanging, finds means to give an occasional order to our great Orchid and new plant purveyors, which it is rarely in the power of botanic gardeners to do. I noticed all the obtainable species of Aërides, and the best species of several allied genera, in fine condition, but shall again abstain from a catalogue. They are grown, as the best of them always should be in a botanic garden, in a suitable house away from the main range.

Out of doors the chief features are a fine open lawn for promenading; a walk along the front of the main range of glass, 1000 feet long by 27 wide; a flower garden of the modern type in front of the pavilion—a building erected for flower shows; an irregular piece of water, and several small gardens for specialties. A collection of herbaceous plants has been but recently formed, and is not yet extensive. From causes previously alluded to the garden is far from the best for hardy plants, trees, and Coniferæ. The flower garden was very tastefully bedded out, but not having space to mention individually the fine house plants, I need hardly say that it is not my intention to describe the topographical and geometrical relations of Ageratum and Calceolaria as exhibited in it. To me the garden seemed too flat and monotonous, but a magnificent semicircle of Gladiolus brenchleyensis encompassed it, and to some extent relieved the picture. This Gladiolus also filled some immense beds beyond the margin of the flower garden, but adjacent to it, the ground from which the Gladioli sprang being covered with Saponaria. The display of Gladiolus was the finest I have seen in a public garden. Mr. Findlay stated his intention of breaking up and diversifying the surface of this flower garden with such things as the Pampas Grass, Yuccas, shrubs, &c.

Many are the flower gardens that require similar manipulation. My pen has lately been "frightened from her propriety" by the sight of several "flower gardens" in Ireland. In one famous place, situated amidst some of the grandest scenery in that country, where the aspects of Nature ought to have driven a little true taste into the brain of the veriest human donkey, I have been prevented saying a word in consequence of the only out-door "ornamental gardening" attempted being a hideous blotch of ugliness!—"a bad patchwork quilt," as I remarked to a gentleman of great horticultural taste and ability in the neighbourhood, who heartily acquiesced in the comparison. A large space was covered with flower beds, closely packed together, and filled with one kind of plant in each, while not a trace of verdure or grace could be detected over a space larger than that in which Mr. Wilkie makes the most fascinating of gardens and of pictures at his place in the Phœnix Park. Yes, over a large surface there was nothing more verdant than Lord Raglan, nothing more elegant than Perilla! Doubtless the modern genius who produced this scene considers himself a triumphant representative of the new school; but I have a far greater respect for the plant love and gardening taste of the Londoner who purchases and grows a penny pot of Musk, or the celebrated old woman who grew a Strawberry in a teapot, than for such an one.

The exhibition building or Pavilion is about 230 feet long by 68 feet wide. It is a building of some dignity and character, very strongly made, though apparently with a view of using as much timber as possible in its construction. It is not heated, and in consequence is only used for accommodating nearly hardy plants, standard evergreens in tubs, &c. If funds could be spared to heat it, Mr. Findlay would very soon convert it into a comfortable winter garden, for which it is very well adapted. Three exhibitions are annually held in it by the Society, and the plants look as well in the Pavilion as they generally do in similar structures. The autumn show, which was held on the day of my visit, was a minor one, though it was an interesting exhibition and collected a very good company. The stove and greenhouse plants were fairly grown, and Orchids, though few in consequence of the absence of the chief exhibitor, were yet very creditable for the season. Dahlias were very poor; Asters and florists' flowers generally worse—probably from the parching season. Fuchsias were ridiculously badly grown, and Balsams far below mediocrity, but Ferns were exceedingly well done, not a few arborescent species being shown; while the collections of plants from nurserymen, contributed by Mr. Shaw and Mr. Stafford, were remarkably good, and contained scores of rare plants, and all the new ones obtainable. Fruit was very fairly shown, some displays of it, and of table decorations from the fruiterers, being particularly good, while vegetables were much better looking than they have been about London this season. Of vegetables, however, I have seen none like those shown at Kells from the rich lands of Meath. They would astonish the Cockney who has been labouring to drill through the woody tissue so well developed of late. At Dublin, too, fruits and vegetables were remarkably good; but I hope to speak a little of the Dublin Horticultural Society, its shows, rules, and tendencies, by and by.

The Manchester exhibitions are managed by the curator, with a very good result I believe; and I have no doubt, considering the excellent keeping of the garden and the vital improvement effected during his stewardship, that when the funds at all admit of it, the Pavilion—as a winter garden—and the herbaceous department will rapidly display the interest, health, and variety that are now so conspicuous in the plant houses. *Wm. Robinson.*

THE SÉCATEUR VAUTHIER.

In the *Revue Horticole*, M. Lachaume describes a new kind of Sécateur, or pruning nippers, invented by M. Vauthier, a cutler of Paris. It is said to be a very simple, solid, light, and convenient instrument. Its sloping semi-cylindrical handles have their outer side rough, which gives a firm hold; the springs, though strong, resist the action of the hand gently; the curvature of the blade and the adjustment are perfect; and lastly, the principal thing, the action is so easy as never to hurt the hand.

During the many years of my experience, observes M. Lachaume, I have, alas! a right to more than one *chevron* in the noble legion of arboriculturists; I have used tools of all kinds, and the tools have also used me

a little; but I have never met with anything which gave me so much satisfaction as the Sécateur Vauthier. Every desirable quality is combined in it, and I recommend it with perfect confidence. The strongest branch will not resist its cutting, nor a single branch, however well concealed, be inaccessible to it. Moreover, the double notch on the back of the blade, and hook (in which a wire is shown in the figure) will enable the operator when trimming his trees to cut every wire without using the pincers.

The price of this Sécateur is stated to be 8 francs. It will be seen that it differs somewhat in form from a similar instrument figured at p. 501 of our volume for 1862, and still more in the provision at the back for nipping wires.

SELECTION OF ROSES.

The Catalogues begin to arrive. It may greatly help those commencing a Rosary, and also those who wish to increase their number of varieties, if I give a list of kinds that can be safely recommended. I will name none but good growers and constitutional and beautiful Roses, fit for exhibition and also for ornamental purposes. Such as do well here cannot do badly anywhere, if properly attended to.

Of Summer Roses the following are the cream:—

Moss Roses.—The common Moss on its own roots, the Crested Moss, Gloire des Mousseusses, Lanei.

Damask.—La Ville de Bruxelles, Madame Zoetmans.

Rosa Gallica.—Boula de Nanteuil, Kean, Ohl, Napoleon, Schismaker, Tricolore de Flandre, William Tell, La Volupté, Triomphe de Jaussens, Transon Goubault, Cynthie, Adèle Prevost.

Hybrid China.—General Jacqueminot, Madeline, called also Emmeline, and the double-margined Hip, a very curious, beautiful, and distinct Rose. Mr. Tiley told me some years ago that the young ladies of Bath would not esteem a summer bouquet without Madeline.

Hybrid Bourbons.—Charles Lawson, Coupe d'Hébé, Paul Ricaut.

These are the best of the summer Roses, some of which are perfectly distinct, and are valuable for varying the monotony of the colours of rose and crimson autumnals. If your situation is very severe, leaving out the common Moss and Transon Goubault, select from the others; and if you cannot grow them, the sooner you give up Rose-growing and take to Hollyhocks the better. The season of summer Roses is short (about five weeks), but it is a glorious one. They do equally well upon Manetti and the Briar. If pole Roses are required, the following are good for the purpose, viz.: Madame Plantier, Triomphe de Bayeaux, Chénédolé, Brennus, Frederick the 2d, and Blairii No. 2. Most of the others are suitable for pole purposes, especially Lanei, La Ville de Bruxelles, M. Zoetmans, and the three Hybrid Bourbons.

Of Autumnal Roses the following are well worth cultivation:—

Moss Roses.—Madame Ory, the best; Salet, the hardiest and latest bloomer.

Damask.—Mogador, a distinct Rose, and fine bedder on Manetti.

Hybrid Perpetuals.—To save space, "M." before a name in the following list means Madame, "Mr." Monsieur. Alexandrine Bachmeteff, Alfred de Rougemont, Alphonse Damaizin, Anna Alexieff, Anna de Diesbach, Auguste Mie, Baronne Prevost, Beauty of Waltham, Cardinal Patrizzi, a perfect bedder on the Manetti stock; Caroline de Sansal, Charles Lefebvre, Comte de Nanteuil, Comtesse de Chabrillant, Deuil de P. Albert, Duc d'Anjou, Duc de Bassano, Duc de Cazes, Duc de Rohan, Duchess of Norfolk, Duchesse d'Orleans, Empereur de Maroc, best here on a Briar; Eugène Appert, François Arago, François Lacharme, General Washington, Gloire de Vitry, on own roots; Gloire de Santenay, grows well on a Briar here, but not on Manetti: it requires to be cut very hard every spring; Géant des Batailles, General Jacqueminot, Jean Bart, Jean Goujon, John Hopper, Jules Margottin, La Fontaine, L'Elegante, La Ville de St. Denis, Lord Macaulay, Lord Raglan, M. Alfred de Rougemont, M. Boll, M. Boutin, M. C. Crapelet, Mr. W. Paul, a first-rate bedder; Mrs. W. Paul, M. Knorr, M. C. Wood, M. Freeman, M. Julie Daran, Maréchal Vaillant, Maurice Bernardin, Mathurin Regnier, Mr. de Montigny, Pauline Lansezeur, Pius the 9th, Prairie de Terre Noire, President Lincoln, Prince Camille de Rohan, Princess Alice, Princess Mathilde, Professor Koch, Senateur Vaisse, Sœur des Anges, Souvenir de la Reine d'Angleterre, Triomphe d'Alençon, a red Baronne Prevost; Triomphe de l'Exposition, Triomphe de Paris, Vainqueur de Goliath, Vicomte Vigier, Turenne, honeycombed in the centre; W. Griffiths; Richard Smith, sometimes not full, but a splendid maroon corymb bouquet Rose. As a corymb Rose, François Lacharme is unequalled.

Almost all of these, here, are on the Manetti stock. Some are also on the Briar. Some are on both stocks, and on own roots. They are the very cream of *proven* Roses here. If the situation is very severe, perhaps Patrizzi and Maroc had better be left out. Probably, beginners had better not have Duchesse d'Orleans and Sœur des Anges. The best blushes for them are Malmaison and C. de Sansal. Let beginners test their capacity by M. L. Carique, Anna Alexieff, Acidalia, and Sir J. Paxton, the four best autumnal pole Roses; and if they fail here, there is not a ray of hope left.

Bourbons.—Acidalia, Souvenir de Malmaison, Mrs. Bosanquet, Emotion, lovely; and Sir J. Paxton. Baron Gonella (not here) is fine.

Tea Noisettes.—Solfaterre, Gloire de Dijon, Triomphe de Rennes, Celiine Forestier, Mdlle. Aristide. The three first are never out of bloom here, and rarely give a blind end. The Tea Noisettes require but little pruning; the two last less so than any. The last is the hardiest and most vigorous of all yellow Roses. With the exception of Dijon, they all require a south wall.

Tea Roses.—Devoniensis, Sombreuil, Souvenir d'un Ami, Adam, Souvenir d'Elise. If you cannot grow the second out of doors, you need not try any more. Under glass I specially recommend Elise Sauvage, Vicomtesse Decazes, and Smithii, three most beautiful, yellow Roses. The proper place for Tea Roses is a conservatory. They are in that situation continuous bloomers, and most beautiful Roses.

As regards the Roses of 1864 I have not purchased any, and cannot tell you anything of my own knowledge. Mr. Rivers speaks highly of Guillot's Maréchal Suchet. A Yorkshire Rosarian says Maréchal de Serrurier is a "trump." Mr. Keynes says the very best Rose of the season is La Duchesse de Morny. Monsieur Eugène Verdier kindly sent me the picture of it. It is in paint a distinct and most lovely Rose. *W. F. Radclyffe, Rushton.*

Home Correspondence.

Notes on the Flora of Kildare.—Having spent some leisure hours during the past summer in exploring parts of this district, I will give you a brief sketch of our local Flora, and in doing so will begin with the Bog of Allan. Any of your English readers who have not seen an Irish bog, and especially the Bog of Allan, can have little idea of what a bog ought to be. The eye wanders over an immense tract of desolate country, relieved only by an occasional Furze bush. I speak at present c.

that part of the bog stretching away past the villages of Prosperous and Robertstown. Where it has not been subjected to the ameliorating influence of cultivation—and that can be said of thousands of acres—the bog is covered with a parched and stunted vegetation, consisting chiefly of common Ling, cross-leaved Heath, Reindeer Moss, and numerous patches of Scirpus setaceus. But on the edges of the bog, where for ages the spade of the turf cutter has been at work, the vegetation is much more varied and interesting. Here we find the two Sundews, Drosera rotundifolia and longifolia, displaying their pearly beauties in abundance. In the month of August this part of the bog is quite gay with Narthecium ossifragum, and here and there patches of Comarum palustre. In spots which have been excavated for turf, and which are standing full of bog water, tangled masses of the rather curious Utricularia minor are to be found. Here also are growing, more or less frequent, Tormentilla officinalis, Lycopodium Selago and selaginoides, and, in abundance, Sphagnum acutifolium and cymbifolium, and Polytrichum juniperinum. Creeping along the banks of marshy spots is the White-rot, Hydrocotyle vulgaris, and occasionally, but not common, Andromeda polifolia. The Grasses here, unlike the fertile parts of the country, are neither numerous, nor, as might be expected, of a good description. Besides the sweet Vernal Grass, what I found were chiefly the Bent Grasses, Agrostis canina and stolonifera, and Sesleria cœrulea. Turning our steps away from the bog, and tracing the fertile banks of the Liffey, we find the Glumales in numbers and luxuriance sufficient to convince us that the appellation of the "Emerald Isle" is appropriate. I picked about 40 species, representing 20 genera, within the bounds of one parish, Straffan. These included all the best of our pasture and meadow Grasses, as well as others that may be said to be ornamental when growing on the bank of a river, such as Phragmites communis and Digraphis arundinacea. Much of the soil along the banks of the Liffey is an alluvial deposit, and is clothed with a vegetation rich and varied. The greater number of the composite and umbelliferous plants are to be found here, with the representatives of many other natural orders. On the flat ground between Straffan and Maynooth, the following Orchids are growing in profusion, viz., Orchis Morio, mascula, pyramidalis, latifolia, maculata, and conopsea; viride is confined to one little spot. In the same fields there are spots carpeted over with the really pretty Bog Pimpernel, and the Grass of Parnassus. Here, also, on one spot are found growing side by side, the Mother of Thyme and the everlasting Gnaphalium dioicum, with Plantago media. On the Hill of Lyons is growing Viola lutea, and on the side of the hill Veronica montana. On the hill of Castle Warden Teucrium Scorodonia and the beautiful Bryum crudum. In Lyons demesne Myriophyllum verticillatum. In Carton demesne, the noble Typha latifolia, and Ranunculus Lingua. In a wood at Leixlip, Lysimachia nemorum and Melampyrum pratense. On the G. S. and W. Railway, Hyoscyamus niger; at Castleton, Veronica spicata; and at Straffan, Polygonum Raii, and Linaria minor. I have mentioned only a very few of the plants that are indigenous to the county, nor is it, indeed, probable that I have yet found the whole of them. Should any of your Botanical readers wish to exchange specimens, I will be glad to communicate with them. *J. Douglas, Straffan, Kildare.*

Ripe Fruit on Standard Peaches and Nectarines.—Surely there must have been unusually favouring circumstances about the time of the blossoming of Peach and Nectarine trees this spring; for not only have they set well on walls, but occasionally in the open ground without protection. In my exotic nursery, within the walls of this ancient city, I can now show a standard Nectarine with a 5-feet stem, and a head 6 or 8 feet through, that has between 40 and 50 full-sized fruit upon it, and which in a few days will ripen. At the fruit and forest tree nursery, which is about a mile from that where the Nectarines are growing, several Peaches are growing on plants in the quarters, as Almonds not unfrequently do. In a long life devoted to horticulture I have never seen a similar occurrence, and therefore I opine that the flowering time must have been unusually favourable. *William Masters, Exotic Nursery, Canterbury.*

Double Glazing.—I was glad to see Mr. Bewly's account (p. 869) of his double-glazed orchard houses, yet he did not answer the question asked in your Paper of the previous week, viz., whether fruits would ripen well under double glass? I much wish an answer to this, and also to another question, viz., will leaves scorch under double glass? I have a span-roofed pit 28 feet long, divided by glass in the middle, running north to south. The north division is heated with hot-water pipes; every plant therein is burnt with the sun—not a leaf is scorched in the southern division. Now, during most of the day the sun shines through two glasses to reach the northern division; while, in the east or west, it shines through but one glass, and then it is I fancy the mischief is done. *Ignoramus.*

Lælia versus *Cattleya.*—I noticed some ago that one of your reviewers, in remarking on a portion of Mr. Warner's Orchid book, took exception to some of the plants therein called Lælias, and maintained that they were Cattleyas. Now, I have seen Lælia elegans finely in flower and in great variety, and have been afforded the opportunity of dissection, and I maintain that it is a true Lælia. I have also been able to examine Lælia gigantea, and that too is a true Lælia; so is L. Turneri. If those who think otherwise would provide themselves with a magnifying glass, they might be able to see what I have found no difficulty in making out with the naked eye. If the whole series is to be Cattleya, as some suggest, well and good; but if the two families are to be kept apart, let us go by the evidence of our senses. *Observer.*

Orchard-house Fruit.—Would Mr. Wilson, who at page 893 says he won the prize for the best flavoured Pears at the Crystal Palace Show, be kind enough to say if they were grown entirely under glass, or whether the trees were moved out of doors after the bloom was set; might I also ask if the pots were plunged or whether they stood on the surface, and if there was much rooting through the bottom of the pots. I am about to commence orchard-house culture, and will feel greatly obliged by answers to these questions. *An Old Subscriber.*

Frogs.—In your Paper of the 3d inst. inquiry is made if it is a common thing for the frog to squeak. I can inform your Correspondent that I have often heard it do so, and I have no doubt that it arises from fear, as any one may prove for himself by causing one to jump until it does squeak; this it soon will do, as I accidentally discovered when a boy some 50 years ago. On seeing one jump vigorously to get out of my way I followed it, when to my astonishment, I heard a squeak, to me more like the plaintive cry of a cat than anything else with which I can compare it. This I caused it to repeat many times, until it became exhausted by fatigue, when I left it to recover, being instructed not to take the life of frogs, as they were harmless and useful. Not thus considered by me, however, was the unfortunate toad; for woe be to him at that time if he came in my way. I have, however, learned better now; I may also mention that since I have become more advanced in life, I have tried the same experiment mentioned above with regard to my jumping friend the frog, and always with the same result. *J. Budd, 20 Kidd Street, Woolwich.*——Frogs generally squeak if pursued for a few seconds in an open place. A rather singular thing happened to one here about 12 months ago; a mouse had got into a hole about a yard square, and attacked a frog which was there. The mouse every now and then nibbled the hind legs of the frog, which made him squeak so loud that he might have been heard more than a hundred yards off. The mouse continued his game for about an hour, when he retired, without doing much injury to the frog. *J. Bryan, Heydon House, Royston.*

A Young Date Palm found Growing in the Open Air at Weymouth.—On inspecting a spot in my kitchen garden that had not been disturbed for some time, I observed a shoot about three inches long. At first sight I took it to be some kind of Grass or Iris, but on looking closer I recognised what I had so often seen in India, the young shoot of a Date Palm. How did it come there? was the next question. Upon inquiry I found that in December last my children had planted some Date stones, which at once accounted for its presence. It has been carefully dug up, and may now be seen at Mr. Hawkins' nursery and flower garden, Gloucester Street, Weymouth. *E. Johnson, Alma Villa, Weymouth, Sept.* 13.

Societies.

ACCLIMATIZATION OF GREAT BRITAIN.—From the Fourth Annual Report of the Council it appears that the number of members has nearly doubled during the past year; and the financial report shows a banker's balance of 438*l*. The Duke of Newcastle has accepted the office of President, A meeting of the members (one of the contemplated objects of the Society being to hold periodical meetings for the purpose of reading papers and interchanging information and experience) was held in April, when Viscount Powerscourt, V.P., presided, and the following papers were read:—1. *On the Reports from Hong Kong, Labuan, Tasmania, and Western Australia, relating to Fauna and Flora suitable for Acclimatisation in Great Britain.* By Mr. Frank Buckland. 2. *On Oyster Culture* By Mr. James Lowe. 3. *On the Game Birds and Animals of Canada.* By Mr. A, W. Crichton.

Among the most important events of the last year has been the issuing from the Colonial Office of a series of questions addressed to her Majesty's Ministers, Governors, and Consuls in various parts of the world, requesting information as to such animals, birds, fishes, insects, and vegetables as are likely to be of use or ornament, whether for domestication or for varying the common food of the people, or for manufacturing, or for any other useful purpose, and whose constitution and habits offer a reasonable prospect of successful cultivation. The Society continues to preserve an intercourse of the most friendly character with the various Acclimatization Societies throughout the world, and especially with the Société Impériale d'Acclimatation of France and the Acclimatization Societies of Victoria and Queensland. A Silver Medal having been awarded by the Council of the French Society to Mr. William Bennett, of Brockham Lodge, near Reigate, for his success in acclimatizing and domesticating the Emeu (Dromaius novæ hollandiæ), the medal was transmitted through the hands of the Secretaries of this Society to Mr. Bennett. Attention has been for some time past directed to the important subject of Pisciculture, it being thought highly desirable that the Society should institute operations for the purpose of distributing among its members the vivified ova and young fry of the more valuable kind of river fish, and especially of the Salmonidæ, and of such fish as could be introduced from abroad. These Piscicultural operations have been confided to Mr. Francis, under whose supervision a building and apparatus have been erected and constructed on his premises (The Firs, Twickenham), with a store pond and other conveniences attached. The results are considered satisfactory.

Among the introduced animals favourably reported on may be mentioned a herd of very fine red deer (Cervus Elephas) from Austria, and the Wapiti (Cervus canadensis) both located at Powerscourt. The Wombat (Phascolomys ursinus), three of which alive and well, are running wild about Mr. Bush's premises at Clapham; they are very tame, and their habits most interesting; and experience has shown that when in a state of domestication and where a habitation is provided for them, they do not burrow, but accommodate themselves to their altered circumstances. Among birds, Honduras Turkeys, Curassows, Indian jungle fowl, cross-bred pheasants, Wonga Wonga pigeons (Leucosarcia picata), bronze-wing pigeons, Australian speckled doves, and green-wing pigeons, are some of those mentioned as doing well. The Society has also one Emeu from Queensland in excellent condition and very tame. These Emeus are highly amusing and ornamental creatures for a gentleman's park or lawn. In reference to insects it is reported that Lady Dorothy Nevill continues to have great success with her Ailantus silkworms. This spring they have laid well. Her ladyship hopes to have a large number of eggs this year, which she is willing to part with at a small price to cover the expenses. Mr. Bush and other members have also had considerable success in the cultivation of this interesting and valuable insect. Ailante-culture, which was first introduced into this country by Lady Dorothy Nevill, is thus gradually becoming developed. It is mentioned that several acres of what would be almost waste land, near Bagshot, have been enclosed for the purpose of hatching the Ailantus silkworm on a large scale. A new kind of silkworm is also under course of experiment by Lady Dorothy Nevill, viz., the Bombyx Yama Inai. Of vegetables the report is rather meagre. The Guernsey branch of the Society has been experimenting with the Chinese Yam (Dioscorea Batatas), Hook-podded Pea (Dolichos unguiculatus), and Lima Bean (Phaseolus limensis), all of which are proceeding satisfactorily. Favourable reports as to these vegetables have been received from other members of the Society, and also as to the Brazilian Arrowroot. The Council hope that the partial success in cultivating the Hook-podded Pea which has been achieved in Guernsey will stimulate the members to still further endeavours to accomplish the acclimatization of that highly desirable vegetable.

Notices of Books.

The Preparation and Mounting of Microscopic Objects. By Thomas Davies. London: Hardwicke. Pp. 156.

Those who are entering on, or who engage occasionally in microscopic pursuits, will be sure to meet with objects which they wish to preserve, and this little book will serve as a welcome guide to those who are so circumstanced, albeit that much of the success which may be realised in the mounting of subjects for microscopical examination must depend upon dexterity of manipulation, such as may be acquired only by practice. Here, however, at least, will be found hints and instructions to put the operator on the right track. The author promises that his pages will be found to yield information on all the most approved methods of mounting, whether practised by others, or the results of his own experience; and as they are intended to aid the beginner as well as the more advanced student, the very rudiments of the art have been explained. Where there is a diversity of opinion as to the best mode of proceeding, the different modes in practice have been pointed out. Thus the information given cannot fail to be of utility, especially to those who are just entering on the field of microscopy.

The book is divided into chapters, of which the first treats of the apparatus required; the second of mounting objects dry; the third of mounting in Canada balsam; the fourth of preservative liquids; the fifth of sections and how to cut them; the sixth of injection; and the seventh of various miscellaneous matters not coming under these heads. We quote the following passage as an example:—

"There is one class of objects for the polariscope which differs in preparation from any we have yet considered, and affords very beautiful specimens. Some plants, including many of the Grasses and the Equisetaceæ, (*i.e.*, horse tails), contain so large a quantity of silica, that when the vegetable and other perishable parts are removed, a skeleton of wonderful perfection remains. This skeleton must be mounted in balsam, the method of performing which will now be considered.

"Sometimes the cuticle of the Equisetum is removed from the plant, others dry the stem under pressure, whilst the Grasses of course require no preparation. The vegetable should be immersed in strong nitric acid, and boiled for a short time; an effervescence will go on as the alkalies are being removed, and when this has ceased more acid should be added. At this point the modes of treatment differ. Some remove the object from the acids and wash, and having dried burn it upon thin glass until all appears white, when it must be carefully mounted in balsam. I think, however, it is better to leave it in strong acid until all the substance, except the required portion, is removed; but this will take a length of time, varying according to the mass, &c., of the plant. Of course, when this latter method is used, the skeleton must be washed from the acid, &c., before being mounted in balsam.

"These siliceous cuticles are readily found. The straws of most of the cereals, Wheat, Oats, &c.; the husks also of some of these; many canes; the Equisetum as before described; and some of the Grasses. Many of these are everywhere procurable, so that the student can never want material for a splendid object for the polariscope."

The last number of *Van Houtte's Flore des Serres*, which has come to hand, contains a handsome set of *Herbaceous Calceolarias*; a group of the *Spotted Mimuli* bred by Mr. Bull and others; and another of double-flowered varieties of *Portulaca grandiflora*. There are also figures of *Hibiscus Cooperi*, *Goodyera pubescens*, and *Ourisia coccinea*; but the most beautiful of the plants represented in the present number is *Phalænopsis Schilleriana*, which well deserves the double plate here devoted to it.

CATALOGUES RECEIVED.—*Catalogue de l'Établissement Horticole d'Ambroise Verschaffelt, Gand:* No. 75,

Automne 1864 *et Printemps et Été* 1865. A very full list of stove, greenhouse, and hardy plants, comprising many novelties. Among the specialties are ample lists of Azaleas and Camellias; and of Tree Pæonies some 90 varieties are offered.——*Eugène Verdier fils aîné: Prix pour Marchands des Pivoines en arbres et Pivoines Herbacées* is a list of about 140 varieties of Tree Pæonies, varying in price from 100 fr. per 100 to 7 fr. each, and of a still larger number of herbaceous varieties, the prices of which range from 50 fr. per 100 to 3 fr. each. The same grower issues an extensive Trade List of Gladioli.

Garden Memoranda.

MR. MACINTOSH'S NURSERY, HAMMERSMITH.—China Asters, raised from Prussian seed, are now in fine bloom here, and they serve to set off the show house to excellent advantage. Whether in pots or out-of-doors few plants make a better display than these at this season of the year, and by means of successional sowings they may be had in beauty from the end of June to that of September. For early flowering, *i.e.*, in July and August, the seeds may be put in about the middle of March; and to have the best effect in September, they should be sown in the end of April or beginning of May. Let the young plants be raised in gentle heat in light soil, and when large enough to handle pricked off fouror five together into 3-inch pots; after potting place them in a cold frame, and keep them close for a few days. They may be kept thus until June or July, when they may be planted out into beds, if not done in the end of May, and those selected for pot culture should now receive a shift into 48-sized pots, in which they may be had beautifully in bloom for a period of from six weeks to two months at a time.

Another way practised by some is to prick them out at once into the open ground from the seed pans or frame in which they have been grown, and then when required for indoor decoration to take them up and pot them. Their beauty is, however, of less duration than when treated in the way just described. Weak liquid manure may be given to both these and the others, once or twice a week after the pots have become full of roots.

As regards dwarf kinds, one of the very best is the new white Chrysanthemum Aster, which does not grow more than half a foot in height, and flowers most abundantly. In pots it is very effective. Tall Chrysanthemum sorts, measuring about 18 inches in height, are also very showy; and their blooms measure from 3 to 4 inches in diameter, and are of various shades of colour from pure white to bright rose and deep violet; some of the varieties in this section are also charmingly striped with white.

Boltze's New Bouquet is a neat dwarf kind very suitable for pots, and an abundant bloomer. Its height varies from 9 inches to 1 foot; the flowers are of various colours, and, though small, very showy.

Ranunculus-flowered kinds are also pretty and well-suited for pots, as are likewise the New Imbricated Pompons, a small, neat-flowered section consisting of at least six colours.

Among other large-flowering Asters one of the most striking is Rose Emperor, a branching variety, with large blossoms bright in colour, and produced in great abundance. It grows from 12 to 18 inches in height. There are also other varieties in this class, but without the branching habit of the one just mentioned, and therefore they are not so suitable for pot-culture. All of them, however, have very large and handsome blossoms.

Truffaut's Pæony-flowered sorts are likewise very effective. The best among them belong to the Perfection class.

The globe-flowered German quilled kinds are very suitable for purposes of exhibition in the shape of cut blooms; but for pot culture they do not make so good a display as many of the other kinds.

With most people the improved Cockade or Crown Asters are especial favourites, owing to the fine contrast of colour which the blossoms present, the centre being white surrounded by a broad belt of bright rose or rich violet. Many fine varieties have lately been added to this section, the flowers of which are very suitable for bouquets. The plants themselves vary from 12 to 15 inches in height.

A variety called Victoria forms a vigorous branching bush about 1½ foot in height, and not unfrequently ornamented with from 20 to 30 showy blossoms, all in perfection at one time. These being of a bright carmine rose colour are very attractive, rendering this one of the most striking of all Asters as far as general display is concerned.

Among other plants we noticed a hybrid Solanum, the result of a cross between S. pseudo-capsicum and S. Capsicastrum. It forms a handsome bush, covered with bright orange-scarlet fruit for many weeks in succession, and in habit it is an improvement on both parents, being more dwarf and bushy than pseudo-capsicum, and on the other hand robust enough not to require the support of sticks. It will prove a valuable hardy greenhouse plant with ornamental fruit, and when it becomes better known cannot fail to be a favourite. The double variety of Datura violacea is now in bloom here, and quite scents the air in its neighbourhood with its fragrance. The Bean-leaved Sedum, mixed with Asters and other plants, as it is here, is a useful plant at this season of the year, as is also the gracefully-drooping Sedum Sieboldi. Of double white Feverfew Mr. Macintosh has an improved variety called compactum, the flowers of which are white as snow, a character which they maintain if the plants are raised from cuttings and not from seed; and among Campanulas the different varieties of fragilis, with drooping wreaths of large star-shaped pale blue blossoms, are very ornamental. Browallia elata, an old-fashioned annual with deep blue Forget-me-Not like blooms, is likewise not unworthy of notice for indoor autumnal decoration, contrasting as it does well with the pale blue flowers of Plumbago capensis, which although now consigned to outdoor work in summer, is nevertheless indispensable in greenhouses in winter.

Of Scarlet Zonate Pelargoniums we observed many promising seedlings, all furnished with conspicuous white eyes; and of Nosegay and Scented-leaved varieties of Pelargonium there is also here an excellent collection, especially of the latter, a class of plants not so much grown as they deserve to be. Here we noticed at least a dozen different kinds.

MESSRS. WATERER & GODFREY'S NURSERY, KNAP HILL, NEAR WOKING.—At p. 751 the upper division of this nursery was the subject of remark; let us now approach the lower portion of these interesting grounds. This department has all been thoroughly drained, the water is constantly running in a considerable stream, and the main drains being all open can be readily examined at any time; they have neat turf sides, and are admirably kept, and can be flooded back at any period if required, an advantage, more especially in a dry season like the present. The main walk from the packing grounds to this spot is 726 feet, and the walk is carried onwards from here to the extreme end of the ground, a distance of 1584 feet, making the whole 2310 feet—an area which will soon be extended through another field, which is now being broken up at the extreme end. The borders on either side of the walk just alluded to, are raised something like a foot above it, and are edged with turf. They are 40 feet in width, and are filled throughout the whole extent with remarkable specimens of American plants, both in the form of bushes, standards, and dwarf plants, illustrations of which might have been seen in the grand exhibition of American plants held in the immense suspension tent at South Kensington this season.

There is a row of the variegated Acer Negundo on either side, whose silvery foliage contrasts finely with the dark aspect of the Rhododendrons. The whole of the ground on either side of the lower portion of this walk is devoted exclusively to the cultivation of American plants; the walks are kept lower than the beds, and after the removal of each crop fresh peat and sand is added. The latter is procured on the ground, but the former is brought from a distance of several miles, and there are literally mountains of it stored up in every available space in the nursery until it is required for use. Shelter is obtained by beautifully kept hedges, and they are of great extent; some are formed of Box, Holly, and Thorn, but the greater portion is of Arborvitæ, somewhat lofty, not more than a foot at bottom, and 9 or 10 inches in width at top. They are most beautifully managed, being altogether faultless to the keenest eyes. Standard Rhododendrons are planted somewhat sparingly yet regularly over the open portion of the ground, in order that they may grow not only perfect in form but afford shelter and protection to the smaller nursery plants beneath, and this they do most effectually. There are also many other forms of fine plants scattered about this portion of the grounds. Magnolias are most attractive, and comprise many good specimens; auriculata is more than 40 feet in height, a fine object in the landscape. There are also several Tulip trees and a large Cedar of Lebanon, the latter contrasting well with the more upright-headed trees. In the more sheltered places are some noble specimens of Kalmias, Azaleas, &c. Andromeda floribunda is 12 feet high and 40 feet in circumference, and when in flower it is one of the most beautiful plants that can well be imagined. Here also is a remarkable plant, a standard Scotch Fir, with a clear stem some 5 feet in height, and a closely grown compact head. Lilium superbum is here finely in flower. Stuartia virginiana is also now in flower. Andromeda arborea is some 15 feet in height, its branches being crowned with loose panicles of white waxy flowers. Amongst these are vast numbers of stools for propagating purposes, both of Azaleas, Rhododendrons, Andromedas, Heaths, and other plants, and every available space is filled with young plants growing onwards into specimens.

This portion of the grounds is intersected by a broad walk extending the whole width of the nursery—proceeding from the western side, it is flanked on either hand with broad borders of American plants in the shape of large specimens, and is continued through a new piece of ground which was added in this direction last winter. This portion of the walk is 594 feet in length, and has been planted with long rows of choice shrubs in the following order:—

Deodars.
Upright Yews and Junipers—many of the former with golden heads; sparingly intermixed with Acer Negundo variegatum.
Pinus Cembra.
Chinese Juniper.
Thuja Lobbii, sparingly intermixed with Acer Negundo var.
Araucaria imbricata.
Cupressus Lawsoniana, sparingly intermixed with Acer Negundo variegatum.
Abies pygmæa and pumila.
Edging of dwarf Yew.

WALK.

Edging of dwarf Yew.
Picea pectinata pumila, and Pinus Strobus compacta, sparingly intermixed with Acer Negundo variegatum.
Picea nobilis.
Abies orientalis alba, &c. sparingly intermixed with Acer Negundo variegatum.
Wellingtonia gigantea.
Irish Junipers.
Abies Douglasii, sparingly intermixed with Acer Negundo variegatum.
Dovaston and other Yews.
Cedar of Lebanon.

Here these beautiful plants are shown to excellent advantage, and being intermixed with nice plants of the finely variegated Acer Negundo and Golden-headed Yews, the monotony of green colour is at once broken up and brightened by this pleasing contrast. On either sides of these borders are large breadths of Larch, Birch, Ash, Alder, and other forest trees, thriving admirably in this newly broken ground, which had been previously well prepared by trenching and subsoiling. The extreme lengths of this cross walk and borders are 1386 feet, and they extend the whole width of the nursery.

Another straight walk proceeding from Mr. Godfrey's house traverses the whole length of these grounds, and although of less width than the central main walk, to which it seems parallel, is nevertheless most interesting, as the borders on either side of it contain not only many remarkable specimens of fine trees, but also a multitude of other choice plants, among which we noticed the following, viz., Taxus Dovastonii horizontalis with an upright leader, a pretty plant; Pinus macrocarpa, some 40 feet or more in height, and 8 feet in girth at some distance from the ground; Abies cephalonica, 30 feet in height, and loaded with cones; A. alba, very interesting, its small pale green pendent cones producing a very nice effect; Cupressus Lawsoniana glauca, and the golden-blotched Arbor-vitæ Thuja occidentalis, both very beautiful. Amongst the vast numbers of dwarf Abies, Pinus, Picea, &c., with which the fronts of the borders are planted, are nice specimens of the Umbrella and Golden Pine; Juniperus Hudsonii, virginiana humilis, squamata, sibirica compacta, &c.; Elæagnus japonicus variegatus, Abies Hookeriana, Taxus monstrosa ericoides, Andromeda *formosa, Retinospora*, &c.; Fagus betuloides and Cunninghamii, both evergreen, some 5 or 6 feet in height; Ilex opaca, scotica, latifolia, &c., and Chinese and fragrant Junipers in nice specimens; there were also Picea grandis, Pinus palustris, Bungeana, and Sabiniana; Berberis empetrifolia, Darwinii and intermedia, &c., in compact forms. B. fascicularis is some 8 or 9 feet in height and 12 feet in diameter, an admirable specimen; Pinus Strobus compressa is 30 feet in height. A remarkable form of Weeping Beech intervenes; it is some 30 feet in height, and more than 100 feet in circumference; its pensile branches, loaded with ovate prickly fruit, weep to the ground. Onwards there are some noble round-headed specimens of Virgilia lutea, more than 20 feet in height. Large handsome forms of Pinus insignis, Silver-striped Beech, and the Golden Chesnut, the latter a beautiful tree, its bright colour contrasting well with all around. Pavia californica is also a most desirable plant; its numerous spikes of white flowers are in fine contrast with shining palmate leaves. Juniperus oblonga pendula, in a fine weeping form, is a beautiful plant. Cedrus Deodara monstrosa, Yuccas, Pampas Grass, and nice compact forms of variegated Hollies and Golden Yews are here scattered about. As the walk nears the American portion of the grounds, it passes between several large plants of Weeping Beech. From this spot there is an excellent view over the lower portion of the grounds, and when the Rhododendrons and other kindred plants are in flower, the scene is a most attractive one; and there are some noble forms of remarkable trees scattered about which add beauty to what would otherwise be a flat monotony of gaudy colours. There is a noble specimen of a silver-barked weeping form of Birch, more than 40 feet in height, which has an excellent effect. There are also fine examples of Tulip trees, Magnolias, American Weeping Willows, Ailantus, Purple Beech, deciduous Cypress in both its common and weeping varieties, Sorbus terminalis, Maiden-hair tree, &c.

On either side of these borders are large br adths of nursery plants, amongst which are numerous specimens of consideraole size, and they comprise the more valuable kinds of Coniferæ, amongst which Picea nobilis in large plants are very conspicuous; there are also great numbers of admirable plants of Cupressus Lawsoniana, and of the lovely White Cedar, nearly 14 feet in height. There are also to be seen in great quantities both Silver-striped and Golden Hollies, and many upright forms of Irish Juniper, Irish and other Yews, many of the latter supporting large golden heads of many forms. Such are some of the plants with which these interesting borders are flanked.

Beyond the Weeping Beeches the walk is intersected by a cross path, and in the centre is a large circular

bed, in which some of the more choice Rhododendrons are growing; onward at the corners of the walks is a pair of handsome Swedish Junipers, nearly upright in shape, and attractive both on account of form and colour. On either side the walk is now bordered with fine specimens of Rhododendrons and other American plants.

Soon after passing the main cross walk of the nursery another large circle intervenes, which, with its flanking borders, is screened and protected by a lofty Arborvitæ hedge; these borders have just been drained, the subsoil removed, and new soil substituted. They will, therefore, now be planted with the more choice kinds of Rhododendrons; beyond these are some noble standards of striped Hollies amongst the Rhododendrons. On one of the last mornings of the May month, the American plants in these grounds as elsewhere were greatly injured by having their new made growth killed by frost; these damaged parts were cut off, and the plants have since made fresh growths, which the dryness of the season seems to be ripening satisfactorily. The small plants too are now much more bushy and perfect specimens than they otherwise would have been.

There is also a Fernery in this part of the ground, which it is proposed to extend and otherwise embellish in the autumn; here Osmunda, Scolopendrium, and many other species grow freely, and undisturbed. All the upper portion of the ground is a dark sandy loam, in which trees thrive admirably; the portion on the western side is divided by a broad drive, and the ground on either side is so arranged that rows of large specimen plants shelter the smaller ones; here there are large breadths of choice plants in every stage of growth, amongst which we particularly noticed Picea lasiocarpa, Nordmanniana, Pinsapo, and grandis, Cupressus Lawsoniana, and Thuja aurea, the two latter originally raised in these grounds. Associated with these were also African and Lebanon Cedars, Abies Albertiana, Wellingtonia, &c. There are likewise two long borders completely filled with Hollies of the most perfect form, both green and variegated kinds. Picea nobilis is some 30 feet in height, laden with cones. There is also a beautiful form of Picea Pinsapo, likewise producing cones. The double-flowering Horse Chesnut is in the month of May one of the most beautiful of trees; its flowers are equal to the most perfect Hyacinth, both in colour and formation. Here too are grown collections of Pentstemons, Hepaticas, Pæonias, Iris, &c.

In this portion of the ground is a series of turf pits for the raising of young plants of various kinds, but more particularly those sorts which naturally grow in peat. The pits are a yard in width and of indefinite length, and they are readily protected both from the ill effects of sun and frost. On the southern side of this ground, which abuts on the road, is a wide border filled with choice specimen plants admirably arranged; amongst these we noted neat standard specimens of Ligustrum japonicum, now nicely in flower; the variegated Weeping Mountain Ash, a very effective tree, its pendent coral-red berries contrasting well with its golden variegation; a beautiful specimen of the variegated Balm of Gilead Fir, also attractive; standard variegated Oaks, the broad silvery-margined foliage of which was very telling; Abies pygmæa, a standard, not more than 15 inches in height, with a clear stem, and densely formed compact head; there were also the Kilmarnock Weeping Willow, Pinus Llaveana, Sabiniana, and many other plants of equal interest. About this portion of the ground we also observed some nice bushes of the Golden Symphoria, Silver-foliaged Shepherdia, as well as many other plants.

Blue Gates Nursery, as it is called, is divided from the Home Nursery by the public road. It consists of a deep loamy soil, slopes in a north-western direction, and is some 16 acres in extent, divided by broad roads. It is well stocked with large breadths of standard and dwarf Roses of the most approved kinds, Deodars, Araucaria, Ivy, Cydonia japonica, Golden and other Yews, Aucuba japonica, Berberis, Cupressus, Juniperus, Thuja, &c. Here, too, are many admirable specimens of the singular-looking Acer Negundo, with finely variegated foliage. Large breadths of plants for forcing are also grown here, such as Asparagus, Sea-kale, Deutzia gracilis, Dielytra spectabilis, Lilies of the Valley in nice patches ready for potting, and a host of other plants of similar character. Here, too, are seed beds, in which are raised large quantities of hardy plants.

Dover's Nursery is another compartment divided from the Home Nursery by the public road, and from the Blue Gates ground by another road on the western side. The surface, which is nearly flat, comprises something more than 30 acres. The soil is a deep sandy loam, and has all been cleared of hedgerows and hedgerow timber, thoroughly drained and deeply cultivated, and gradually brought under nursery crop within the last three years. It is divided in the centre by means of a broad walk, ornamented on either side with specimen plants of the same character as those by which the principal walks in the Home Nursery are decorated. Amongst these we observed many beautiful specimens of Picea nobilis not more than 5 feet in height, producing cones very freely. This ground is also intersected by other walks and roads, and the whole is well stocked with plants which are making admirable growth. Here are large breadths of Roses, Fruit-tree stocks, Laurels, Picea nobilis, lasiocarpa, Abies Albertiana, Cupressus Lawsoniana, and other popular kinds of Conifers, Yews, &c. Fruit trees are in fine condition, especially Peaches, Nectarines, Pears, Apples, Plums, Cherries, and Apricots. Here also is a considerable space of ground appropriated to the cultivation of forest and other deciduous trees. The frontage of these nurseries bounds the public roads on either side for considerably more than a mile, and it is determined that next planting season the portion which has only recently been brought into cultivation shall be permanently fenced with a green Holly hedge, to be kept dwarf, and to be eventually surmounted by a worked crest of the fine Golden variety; inside of this will be a walk, and then a broad border, which will be filled with choice specimens from the vast treasures of these grounds.

The Farm Nursery closely adjoins the Home Nursery on the north-western side, being only separated from it by two fields, across which it is proposed to extend the unrivalled central walk, and onwards to the Chobham Road, and this portion of the grounds has the advantage not only of a large frontage on this road, but on the Guildford Road also. The surface is considerably varied, and the soil is of a deep sandy loamy character. Fifty acres of this ground have gradually been brought into cultivation within these last five or six years. A large portion is devoted to the cultivation of fruit trees, which are now in the course of training, and are nice specimens of their respective kinds. There are also vast breadths of Araucaria plants, Deodars, Green and Golden Hollies, Laurels, Elms; Scotch, Spruce, and Larch Firs, as well as fruit tree stocks, Roses, &c., all in the most robust character in this deeply cultivated newly broken soil.

The Well Field Nursery and field closely adjoining amount to something between 5 and 6 acres; the former is close to the Blue Gates Nursery, and occupies an eastern slope near the summit of Knap Hill. The soil is rather heavier than is the usual character of the district; it nevertheless suits Conifers, Oaks, Seakale, &c., exceedingly well. Here there is an overflowing spring, the water from which it is proposed to convey in iron pipes to the propagating ground in the Home Nursery. From here an excellent view is obtained of the immense Government buildings on the summit of the eastern peak of Knap Hill, and also delightful peeps of the beautiful scenery of the adjoining country, and for which the great county of Surrey is so remarkable. On the opposite side of the road is Woking Common, and near here, on the slope of the hill, the soil is wet and retentive, and Rushes, Equisetums, and such like plants form a scanty covering to the surface; a few scattered Oaks, too, are but of stunted character. Notwithstanding there is growing on the embankment which incloses a garden orchard from the waste a Cedar of Lebanon of the following formidable dimensions: it is considerably over 50 feet in height, and has a clean trunk of 20 feet, which at 4 feet from the ground is 13 feet in girth. There is also in this garden orchard an immense tree of Cob Nut, larger than any other of which we have any knowledge. It has a clear stem, and is 24 feet in height; its clean stem girths 3 feet 8 inches at some distance from the ground, and its round-headed spreading branches cover a space of 100 feet in circumference.

The Pirbright Nursery is some four miles distant, the road to which runs across Woking Common, passing on the left the immense new buildings of the Government, which are now rising up through a forest of scaffold poles, crossing the Basingstoke canal, and after passing beneath a bridge of the South-Western Railway, the Woking Necropolis is before us—a vast inclosure of more than ordinary interest. The ground about its beautiful chapels, lodges, and stations, appears to be judiciously laid out, and the monuments too clustered about are beginning to assume a somewhat dressed and clothed appearance by the introduction of Cypress and other trees of a mournful character. The road leads onward through the common, and rural village of Pirbright, when we soon reach the nursery. It is 8 acres in extent, on a flat surface of boggy well drained land, which is managed on the same system as the American grounds of the Home nursery. The whole of this nursery is devoted to the cultivation of American plants, with which it is well stocked.

Miscellaneous.

African Oil Seeds.—Of fruits, seeds, &c., having oleaginous properties, there are many. Cocoa-nut, Sesamum, and Ground Nuts are all articles of export from Zanzibar, chiefly to Marseilles. The Cocoa-nut grows in immense forests. The oil is not expressed for exportation, but the dry copperah is sent in large quantities for expression by European machinery; a large trade is also done in the seed of the Sesamum (Sesamum indicum), and Ground Nuts (Arachis hypogæa). Both these oils are well-known in this country, as much in the manufacture of soap as for burning in lamps. Sesamum oil is also much employed for adulterating olive oil. The principal African oil seed however is that now so well-known and so extensively used in the manufacture of candles, the Elais guineensis. This is a native of Western Africa, and is imported into Liverpool in immense quantities. The introduction of this oil by Price's Patent Candle Company has been the means of giving employment to thousands in this country as well as of establishing a profitable speculation in Western Africa, and in some measure supplanting the slave traffic. Of seeds which are at present quite unknown in commerce, but which would appear to have great claims upon the attention of the soap and candle maker, may be mentioned, firstly, those of Trichilia capitata, known on the Zambesi as "Motsakiri" seeds; these are small black seeds about half an inch long, and contain a large quantity of solid fat, which would no doubt prove a valuable addition to our oil seeds were they exported. These seeds are the produce of a large handsome tree, growing abundantly in the vicinity of rivers. The natives apply the wood to the manufacture of small canoes. The Castor Oil is also found growing wild in this part of Africa, and attains a height of from 12 to 14 feet. On the west side of Lake Nyassa, Dr. Kirk discovered a small oil Palm in habit quite unlike that of the West Coast, but more resembling the Date Palm. The albumen was found to contain an abundance of oil, very similar to Palm oil. It is not known to be in use in any way whatever amongst the natives. The tree, which grows to about 40 feet high, was not seen in great abundance anywhere. A nut much resembling an almond, both in shape and size, and called by the natives "Boma nut," yields an abundance of a sweet fluid oil, much used by the natives in their cooking. The fruit itself with the fleshy covering is about the size of a Walnut. The natives cultivate the trees abundantly near the Victoria Falls. It is also found in the Shire Valley, but does not extend further south than Lake Naomi; it is probably a species of Vitex. Moringa pterygosperma is another good oil seed, but it is found only in the neighbourhood of villages, and has probably been introduced. In Western Africa the seeds of Carapa guineensis furnish an oil much in use amongst the natives for burning in lamps, and also for anointing their bodies. In Sierra Leone it is given as a purgative medicine, one teaspoonful being considered a dose. It is imported into the South of France for soap-making. The seeds of Carapa Touloucouna also contain a large quantity of oil, the residual nut, after expression, making a good oil-cake for cattle. This plant is a native of Senegambia. The seeds of the Bassia Parkii are well known as furnishing the Shea butter of Western Africa. Mungo Park, in writing of this vegetable fat, says that the natives were then "employed everywhere in collecting the fruit of the Shea trees." The butter or fat, which is contained in large quantities in the seeds, is extracted by boiling in water, and is afterwards bleached. This butter is in great request by the natives for many domestic uses, and it forms one of the principal articles of inland commerce. The above-mentioned writer, speaking in high praise of the delicious flavour of this butter, says, "It is whiter, firmer, and, to my palate, a better flavour than the best butter I ever tasted made of cow's milk." I cannot, however, bear out this testimony, except as to its firmness and whiteness, for the specimens which I have had the opportunity of tasting have been of the most rank and disgusting flavour, though it is said it will keep perfectly sweet for several months. But if this butter or fat is not suited to a refined palate, it seems to have many advantages as an article of commerce, and would no doubt prove a valuable import for the purposes of soap and candle making. *Jackson in Technologist.*

Storing Fruits.—To gather fruit at the right time, to preserve it in good order, and to ripen it properly, is an art in itself, and one for which considerable accommodation and convenience are indispensably necessary; and yet, strange to say, but no more strange than true, a structure properly adapted for the keeping of fruit is only occasionally to be met with. In many places we find the most wretched make-shift for keeping fruit—a shed, cellar, or loft—the very opposite of those principles upon which a fruit-room should be built. In building a fruit-room, the principal points to be secured are a low uniform temperature, dryness, darkness, and means for thorough ventilation when required. The interior fittings should consist of boarded shelves and drawers. The boards for the shelves should be planed smoothly, and should be fitted close together. In most places it is usual to have the shelves made of narrow laths, with openings of an inch or more between, than which nothing can be worse, as all the finer or tender-skinned Pears get marked by the sharp edges of the laths, and in consequence never look well when dished up. All fruit intended for keeping should be most carefully hand-picked. This is one of the most important points to be attended to, as the slightest bruise or injury is fatal to their keeping; and yet it is too common a practice, even when hand-picked, to throw the fruit roughly into a basket, thereby seriously damaging a great portion of it. This is not perceived at the time, but after the fruit has been a short time in the fruit room, the spawn of Fungi soon establishes itself on those parts of the fruit which were injured; decay takes place long before people are aware of it, and when discovered they are astonished and say fruit keeps badly, not thinking that they themselves are to blame. Fruit should always be handled with the greatest care and gentleness, and not thrown roughly from one basket into another, and then on to the fruit room shelves. Some people make it a rule to gather the fruit at a stated time every year. This is a great mistake, as it is ready two or three weeks sooner some seasons than others. All fruit intended for immediate use, or that is fit soon after gathering, should remain on

the trees until nearly ripe; but all fruit intended for late keeping should be gathered before ripening proceeds too far, as when fruit once arrives at the proper state of ripening it begins to lose its quality, and ere long it will begin to decay naturally. Every sort should be gathered separately, and all the small, spotted, or shrivelled ones should be put aside; then the finer ones should be laid carefully on the shelves in single layers, if there be sufficient space for all the fruit; but, if not, the common sorts may at first be laid two or three or more layers deep, and as the earlier sorts are used they can then be laid thinner. After the fruit is got into the fruit room no light should be admitted, as it would cause the fruit to lose weight, and would accelerate maturity. Air should be admitted night and day until about the 1st of November; by that time the sweating of the fruit will to a great extent be over, and the house can be closed. The choicer kinds of Pears and Apples, after sweating, should be put, when quite dry, very carefully into the drawers. All the sorts should be properly labelled with the date when gathered, and the time they generally ripen at. The whole of the fruit should be carefully looked over every other day, and every fruit the moment the slightest spot or sign of decay is perceived should be removed as, if allowed to remain to decay, the spawn of the fungus will spread in all directions and settle on every fruit that has the smallest speck of injury. During the whole of the winter months ventilation should only be had recourse to when absolutely necessary to carry off any exhalations or impurities that may be in the atmosphere. A uniform, steady, low temperature, with a dry atmosphere, should at all times be maintained, and the fruit should be handled or touched as little as possible. By attending carefully to these matters I have never experienced the least difficulty in keeping Pears and Apples a long time in the best possible condition. Gathering the fruit carefully at the proper time; handling it as little as possible and with gentleness; keeping the atmosphere dry, and maintaining a low, steady, uniform temperatere of about from 40° to 45°; looking over the fruit frequently and picking out any that show the slightest symptoms of decay the moment it is perceived;—these are the great points to be attended to and when properly attended to they never fail to give the most satisfactory results. *M. Saul, in Florist and Pomologist.*

Mushrooms.—It is stated that enormous and almost unprecedented quantities of Mushrooms have been gathered in Devonshire this season, which is to be accounted for by the long drought and the rains following upon it. The *Times*, quoting from a local paper, gives some interesting particulars relative to Mushrooms, written for the unlearned in these matters by a scientific gentleman of Exeter. People, it is said, generally look upon Mushrooms as a sort of luxury, and not as an actual article of food. The inhabitants of Italy, France, Germany, and Russia, however, use large quantities of various species rejected by us as articles of food. Indeed, Fungi not only constitute for weeks together the sole diet of thousands, but the residue, either fresh or dried, is variously preserved in oil, vinegar, or brine, and sold to the poor. In the Italian market, which is perhaps more largely supplied than many others with Fungi, there is a regular inspector, whose business it is to look over the various lots brought into the market, and if any species or specimens of a poisonous nature are detected, those are at once thrown into the Tiber. Now, curious enough, the one we so highly prize, Agaricus campestris, is by the Italians considered unwholesome, and is consequently rejected by them. Dr. Badham, who has written a treatise on the edible species indigenous to this country, has enumerated upwards of 30 species that might be used as articles of food, but great caution must be used by those who gather them not to pick the doubtful ones. Although, generally speaking, there is but one species brought to our markets, another is frequently gathered with it. This, which generally grows to a much larger size, is not so tender, and has always a yellowish tinge on the top of the pileus or cap; it is the Agaricus exquisitus or Georgii, and notwithstanding its name, denoting exquisite flavour, is by far inferior to campestris and its varieties. This Agaricus exquisitus is largely used for making catsup; it grows in the salt marshes in the eastern counties in enormous quantities, and has been observed in the salt marshes, near Exeter, very fine. As a nutritious article of food, the Mushroom, perhaps, yields to none of the higher forms of the vegetable kingdom, being next in importance to butcher's meat. And curious enough, and which is indeed almost an anomaly, Mushrooms breathe or give off carbonic-acid gas the same as animals, and absorb oxygen. It is a very remarkable fact that these plants come nearer to the animal kingdom than the higher forms of the vegetable world. All Fungi do not absorb oxygen and give off carbonic acid, but so far as has been ascertained all the edible species do. Of all vegetable productions these are the most highly azotised—that is, they come nearer in their chemical composition to the flesh of animals than any other of the vegetable kingdom. Many of them, in addition to sugar, gum, and resin, have a peculiar acid, called frugic acid, and a variety of salts. They also furnish considerable quantities of albumen, adipocere, and osmazome; this last is the principle that gives its peculiar flavour to meat gravy. Besides the solid in Mushroom diet we have what is well known to almost everybody, the expressed juice called catsup, catchup, or ketchup. This word, which is spelt in various ways, is quite a puzzle to philologists; some suppose it to be derived from Kuck-hup, a Hindostanee word for turtle. In the "Cuisinier Royal, par Viart" it is mentioned among the "petites sauces" as ket-chop. If more attention were paid to these lowly forms of the vegetable kingdom, many a good meal might be obtained by those who now feel the pinch, or want a dinner.

Calendar of Operations.

(For the ensuing week.)

SINCE showery weather has set in, the growth of weeds as well as that of more useful plants has made rapid progress, and where no attempt has been made to keep them in check, the ground is literally carpeted with them. Where such a state of things exists, therefore, the work of extirpation must be commenced on the first favourable opportunity. The principal operations in regard to ornamental grounds for the present will be mowing and clearing up, and if anything like neatness is to be maintained, sweeping up of leaves will soon require daily attention. Gravel walks must also be thoroughly freed from weeds and Moss; roll them frequently so as to keep the surface hard and smooth.

FLOWER GARDEN AND PLANT HOUSES.

Summer-flowering twiners in greenhouses and conservatories, which usually become unsightly about this season, should be cut back rather freely, as also any others that will bear this treatment. Shade can now well be dispensed with; therefore not a spray that can be spared should be left to obstruct light. Acacias and other winter-flowering plants having been subjected to a period of comparatively dry treatment, to ensure their blooming profusely, should now be pretty liberally supplied with water at the root, in order to get them into flower during the dull season, when they will be much more esteemed than in spring, when flowers are plentiful.

ANNUALS.—Where these have sown themselves on borders, let them if possible be retained; they will bloom early and strongly in spring, especially the Californian kinds, and may then be transplanted if desired to other situations.

BEDDING PLANTS.—Cuttings of Calceolarias, zonate Pelargoniums, &c., may still be put in where the stock is deficient. The latter, with perhaps the exception of Mrs. Pollock, will root almost anywhere, but Calceolarias are not quite so accommodating, as cuttings taken from plants in the open ground are very liable to damp off in heat; these will be found to do very well, however, in a close pit or frame where there is the means of applying a little warmth when necessary to dispel damp. See to securing as many cuttings as possible of any scarce plants which it may be desirable to increase while there is a fair chance of rooting them, and also be prepared to protect choice Pelargoniums and other things which it may be intended to take up and winter, for we may expect frost any time after this period, and if such things can be protected so as to prevent the foliage and young wood from being injured they are much more easily wintered.

CHRYSANTHEMUMS.—These will soon be beginning to occupy attention; let them be tied out so as to display their blossoms to the best advantage, and where too thick, thin out the buds.

HOLLYHOCKS.—If the weather should become very wet, choice sorts of these may be taken up, potted, and wintered in a cool house; they will be exceedingly useful for furnishing cuttings, and these if got in early in spring will make excellent plants for next season.

FORCING GARDEN.

PINES.—As has been frequently mentioned, plants swelling their fruit should be assisted with a brisk temperature, say from 65° to 75° at night, regulating this according to the state of the external temperature, keeping the house rather close on sunny days, and allowing the thermometer to rise to 80° or 85° before giving air freely. Also endeavour to proportion the moisture to the temperature, for a high dry temperature is not favourable to the swelling of the fruit, and there is no chance of getting well swelled heavy fruit without plenty of warmth and moisture. Maintain a steady bottom-heat of about 85°, and use every care to keep the soil in a healthy state as to moisture. When watering is necessary, use clear manure-water; give sufficient to moisten the whole of the soil, and avoid frequent dribblings, for when this system of watering is practised it is nearly impossible to keep the under soil in a healthy state. Use the syringe sparingly, and only to dew the plants, as heavy syringings after this season are apt to keep the surface soil so moist as to render it difficult to judge as to when water should be given. Any young plants growing in pots which may require re-potting should be seen to at once, so as to allow an opportunity of getting them established in fresh pots, while they can be kept moderately warm. See that the balls are in a proper state as to moisture before repotting, as neglect of this is a frequent cause of young stock fruiting prematurely. Keep moist and rather warm for a time after shifting, so as to encourage the formation of fresh roots.

VINES.—Before wet comparatively sunless weather sets in, we would again advise covering the borders of houses in which it is intended to keep ripe Grapes for any length of time, so as to prevent the soil getting saturated about the roots. Look over ripe Grapes frequently, particularly in damp weather, cutting out any tainted berries immediately they are perceived, and keep the atmosphere as dry as possible, using gentle fires when necessary with a free circulation of air; but a warm temperature is nearly as injurious as damp, therefore use no more fire-heat than may be absolutely necessary.

HARDY FRUIT AND KITCHEN GARDEN.

Get all spare ground deeply trenched and ridged up so as to expose it as much as possible to the weather, putting in plenty of good rotten manure, especially where crops of an exhausting character are to be planted.

APPLES AND PEARS.—As formerly recommended, look over kinds still remaining out of doors frequently, and gather them as they become fit for storing. Also examine those in the fruit room, as there will occasionally be found a few decaying for a few weeks after housing, and these should be removed as soon as perceived. Keep the fruit room cool and airy, in order to allow of the escape of moisture given off by the fruit, which is considerable for a few weeks at first. Where it is intended to make fresh plantations of trees this season, the ground should be prepared at the earliest convenience, and any fresh soil to be used for planting should be thoroughly exposed to the action of the weather, so as to have it in a mellow state when wanted for use.

CELERY.—The principal crop should now be kept rather closely earthed up, using quick lime and soot freely to destroy slugs.

LETTUCES.—Brown and Bath Cos, as well as Hammersmith Cabbage, for early spring work, should now be pricked out; more especially if getting what is technically termed proud.

STRAWBERRIES.—If not already done, clean and dress plantations of these, clearing away all useless runners, giving a good dressing of manure when necessary, but be careful to select that which is thoroughly decayed, and which can be covered without the necessity of digging deep or injuring the roots.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Sept. 21, 1864, as observed at the Horticultural Gardens

Sept.	Moon's Age.	Barometer.		Temperature. Of the Air.			Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain
		Max.	Min.	Max.	Min.	Mean				
Thurs. 15	○	29.611	29.480	66	37	51.5	60	60	S.	.16
Friday 16	14	29.320	29.302	65	40	52.5	60	59½	S.	.61
Satur. 17	15	29.521	29.421	64	41	52.5	60	59½	S.	.24
Sunday 18	16	29.635	29.607	64	37	50.5	59½	59	S.	.02
Mon. 19	17	29.781	29.694	66	32	49.0	59	59	S.W.	.00
Tues. 20	18	29.879	29.779	67	50	58.5	58½	59½	S.W.	.04
Wed. 21	19	29.762	29.721	67	48	57.5	59¼	59	S.W.	.18
Average.		29.643	29 572	65.5	40.7	53.1	59.5	59.3		1.25

Sept. 15—Cloudy; sultry at intervals; showery.
— 16—Heavy rain; partially overcast; fine; very heavy rain at night.
— 17—Clear and cool; boisterous and showery; heavy rain.
— 18—Clear; quite cloudless, fine; slight rain.
— 19—Fine; very fine; at freezing at night.
— 20—Heavy dew; very fine; warm at night; rain.
— 21—Fine; very fine; rain at night.

Mean temperature of the week 3½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK

During the last 38 years, for the ensuing Week, ending Oct. 1, 1864.

September and October.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 25 ..	65.7	43.6	54.6	18	0.30 in.	2	4	3	3	6	13	6	1
Mon. 26..	65.2	44.2	54.7	19	1.88	—	5	6	2	9	1	3	3
Tues. 27..	65.1	45.3	55.2	22	0.57	—	2	4	3	7	11	9	2
Wed. 28..	64.6	44.3	54.4	21	1.44	1	4	4	1	10	10	5	3
Thurs. 29..	65.2	44.4	54.8	24	0.46	2	3	3	4	8	13	3	2
Friday 30..	65.0	43.6	54.3	23	0.58	3	2	3	4	7	9	9	1
Satur. 1..	63.5	45.2	54.3	20	0.53	2	2	2	2	7	17	4	1

The highest temperature during the above period occurred on the 25th, 1832—therm. 82 deg.; and the lowest on the 26th, 1855—therm. 26 deg.

Notices to Correspondents.

CUBA BAST: *Pont-y-pool.* This is not the bark of the Lime tree, but of a West Indian tree called Paritium elatum.

INSECTS: *H J.* The wasps are attracted in vast numbers to the crevices of diseased Elm trees in hot summers to feast on the extravasated sap, which has undergone a change and become palatable to them and other insects. The pieces of Elm bark sent were attacked by the larvæ of Scolytus destructor—the Elm beetle. We should be glad to know the conditions of soil, drainage, and age of these Elms—whether, in fact, they have been brought into a state of disease by any of these circumstances so as to become palatable to the Scolyti, or whether the attacks of the latter have not brought the trees into their present state. *W.*

GARDEN REFUSE: *M M.* You cannot possibly do better than have it smother-burned along with any earthy matter at hand, such as ditch-scourings, turf parings, &c.; or if your soil is heavy, burn a quantity of that with it, and it will make excellent compost. This is much better than the more tedious process of rotting it, and the material is of more value when charred in this way.

HOLLY HEDGE: *C D.* Have the ground well prepared by trenching, if necessary, and plant at once, selecting the best transplanted Hollies you can find in the most convenient nursery. Be careful, however, to get plants that have been frequently as well as recently transplanted, so as to secure plenty of fibrous roots. Then, with ordinary care, you need have no fear of their growing away freely as soon as they get hold of the soil. The Holly prefers a loamy soil, rather sandy than otherwise, and not too moist.

NAMES OF PLANTS: *J E C.* Tropæolum speciosum.—*J Hodges.* The Dendrobium, which is one of the Pedilonum section, is probably new, but the specimen sent was not sufficient for determination.—*R A.* Physianthus albens.—*Ossian.* 1, Chrysanthemum acaule; 2, Tagetes signata nana.—*H H.* Senecio mikanoides.

VINEGAR PLANT: *Mary.* This is the spawn of a Fungus named Penicillium glaucum, in a peculiar condition. A portion placed in a weak sugary solution soon converts it into vinegar. It may be cut up into pieces of moderate size, every one of which will grow.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.
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Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c.
They also continue to supply GIBBS' PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

LAWES'S WHEAT MANURE for AUTUMN SOWING.—A supply of the above Manure is now ready for delivery, at J. B. LAWES' Factories, Deptford, and Barking Creeks. Price 8*l.* per ton.
2 to 3 cwt. per acre to be harrowed into the land before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents; also
SUPERPHOSPHATE of LIME £6 6
MINERAL SUPERPHOSPHATE 5 5
Genuine Peruvian Guano direct from the Importers, and all Chemical Manures of value.
American and other Cakes at Market prices.
Address JOHN BENNET LAWES. Offices; 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

Autumn Wheat Sowing.

PHOSPHO-GUANO, Carriage Free at any Railway Station or Shipping Port in the Kingdom, 11*l.* 10*s.* per ton, net cash, for 10 tons and upwards. Smaller quantities, 11*l.* 15*s.* per ton.
*** This Guano is admitted to be the best manure for Wheat, containing, as it does, 35 to 40 per cent. of Soluble Guano Phosphates, and 3½ per cent. of actual Ammonia, in addition to Potash. The advantage of applying it in autumn is, that the farmer is enabled to harrow the Guano well into the soil before sowing, which produces a better result than top-dressing in the Spring. The Phospho-Guano promotes a strong braird, vigorous growth, and a full and plump grain. Apply at the rate of 2 to 2½ cwt. per acre.
PETER LAWSON & SON, Contractors, Edinburgh; and 28, King Street, Cheapside, London, E.C.

Autumn Sowing.

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Offices—109, Fenchurch Street, London, E.C.
Manufactory—Plaistow Marshes, Essex.
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This Manure, specially prepared for AUTUMN SOWING, has been in use for upwards of 12 years, and has given great satisfaction to consumers.
Orders may be sent to the Company's Agents throughout the country, or direct to C. T. MACADAM, Secretary.
Offices, 109, Fenchurch Street, London, E.C.
Price 7*l.* 10*s.* per ton, delivered at any Railway or Wharf in London.

BARNARD, BISHOP, AND BARNARDS, Norwich.
FURTHER REDUCTION in the PRICE of WIRE NETTING.

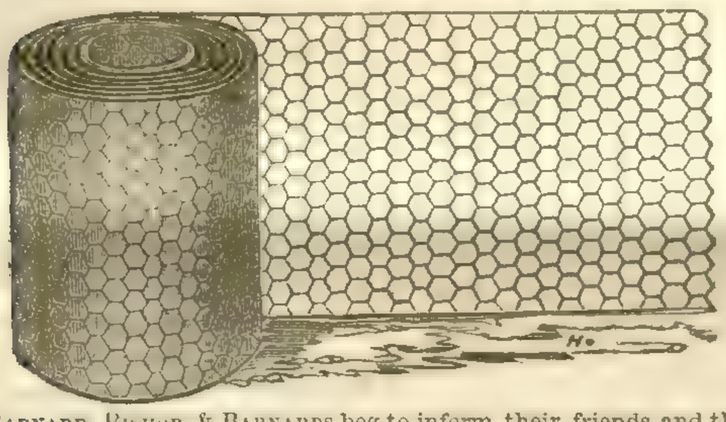

BARNARD, BISHOP, & BARNARDS beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

		Gauge.		Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide		No. 19	..	4½*d.* per yd.	3½*d.* per yd.
2-inch	,, ,, ,,	18	..	5 ,,	4 ,,
2-inch	,, ,, ,,	17	..	6½ ,,	5 ,,
2-inch	,, ,, ,,	16	..	8 ,,	6½ ,,
1⅜-inch	,, ,, ,,	19	..	4¾ ,,	4 ,,
1⅜-inch	,, ,, ,,	18	..	6 ,,	4¾ ,,
1⅜-inch	,, ,, ,,	17	..	7 ,,	5½ ,,
1⅜-inch	,, ,, ,,	16	..	9 ,,	7 ,,

All the above kinds can be made any width (under 6 feet) at proportionate prices.
Strong GALVANISED POULTRY NETTING, 7½*d.* per yard, 3 feet wide. GALVANISED SPARROW-PROOF NETTING for Pheasantries, 11*d.* per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.
Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1*s.* per yard.
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To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.
The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
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4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

Agriculture and Rural Economy.

PROFESSOR BUCKMAN, F.L.S., F.G.S., &c., late Lecturer on Botany, Geology, and Rural Economy at the Royal Agricultural College, will have a VACANCY for only ONE PUPIL at Michaelmas.—For particulars apply at Manor Farm, Bradford Abbas, Sherborne, Dorset.

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

SMITHFIELD CLUB FAT CATTLE SHOW.—The ANNUAL SHOW of FAT CATTLE, SHEEP, and PIGS, will be held at the AGRICULTURAL HALL, ISLINGTON, on MONDAY afternoon, December 5, and four following days.
Intending Exhibitors are requested to apply for Certificate forms by the reference letters as under:—

CATTLE.	Form A.	For an Ox or Steer (in any Class).
	,, B.	For a Cow or Heifer (in any Class).
	,, C.	For a Beast in Extra Stock.
SHEEP.	,, D.	For a Pen of three Wethers (in any Class).
	,, E.	For a single sheep in Extra Stock.
PIGS.	,, F.	For a Pen of three Pigs (in any Class).
	,, G.	For a single Pig in Extra Stock.

ENTRIES for LIVE STOCK CLOSE NOVEMBER 1.
Prize Lists, Forms of Certificates, and all information may be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, Corner of Half-Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words "Smithfield Club."

SMITHFIELD CLUB SHOW.
IMPLEMENT DEPARTMENT.
The LAST DAY for receiving ENTRIES for IMPLEMENTS and MACHINERY is October 1.
Printed forms of Certificates, with rules and regulations, may be obtained of Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, corner of Half Moon Street, Piccadilly, W.

The Agricultural Gazette.

SATURDAY, SEPTEMBER 24, 1864.

THE reports from our correspondents in other columns declare what so good a harvest time as we have had, has already led us to expect—that the produce of our corn fields is certainly better than was anticipated in July. The Wheat crop of the country is probably an average one, and Barley is probably better than an average crop. Oats, however, are much below an average, and Beans and Peas are generally bad.

The certainty of at least an ordinary crop of Wheat and Barley is perhaps sufficient to justify Mr. DISRAELI'S account at Aylesbury last Wednesday of the corn harvest generally; but whatever may be thought of his opinion of our Wheat and Barley crops, there cannot be a doubt of the mistake he made in reference to the almost equally important subject of cattle food. The root crops, which, according to him, are "not so bad after all," are simply the greatest failure that the existing generation of farmers has known. All over Southern and Midland England the Turnip crop is a failure, and the Wurzels, everywhere extremely patchy, are, like the produce of our Grass fields, only half a crop.

The maintenance of our breeding and our young stock in healthy condition, and the maintenance of progress in our fattening stock, is the great agricultural difficulty of the coming winter; and the supply is so short that whether or not we have an autumn and a winter so mild as that of the year 1818, which is described by Mr. BOWLY in his interesting letter as having experienced a similar failure of food for stock, there cannot be a doubt that our flockmasters and cattle feeders will be put to very great straits indeed.

In these circumstances we are glad to give in the following pages the recommendations of a number of practical and experienced men as to what it is best to do. And we may direct the attention of our readers especially to the letter of Mr. LAWRENCE, of Cirencester, on the economical use of roots and straw. It is the principal alleviation of the difficulty which during the coming winter we have to bear that the crop of straw is generally both abundant and well harvested. And the use of the chaff-cutter, with subsequent additions of meal and water—linseed and other soups, in fact—to the chaff, will be our great resource. It is worth while to remember what one of our Correspondents points out—that at existing prices Wheat is one of the cheapest grains for cattle food.

IT will be one of the many great agricultural services rendered by the Royal Agricultural College if we shall receive from the teachers and professors there engaged manuals of the different branches of science and practice which they are severally engaged in teaching. The Manual of Instruction for the Laboratory, noticed in another page, is one book of the kind, and there is ample room for many others.

Our readers have, we are sure, appreciated the extracts we have already given here from time to time from the course of lectures on Dairy Farming delivered at the College by Mr. HARRISON, of Frocester Court. Were these collected, and, where necessary, extended and elaborated, we are sure that their publication would be welcomed as at once a most suggestive and most instructive guide to this particular section of the field which the instructions of the College traverse. We know of no treatise on the whole subject of dairy management, including both its theory and its practice, which is so well calculated to inform all classes—the landlord, the tenant, and even the dairyman—on their respective duties. And the references made throughout it to the geology and chemistry of the subject are well calculated to excite the attention and the thought of agriculturists in the dairy districts, where it is generally believed that less of movement and of novelty exists than in almost any other part of the country.

THERE is given in the following page an epitome of the Journals of the Manchester and Liverpool Agricultural Society for the past 14 years—in so far as these are occupied with reports of the farms which have successfully competed during those years for the prizes which this Society offers for good cultivation. We have to thank Mr. RYDER, the Secretary of the Society, for copies of the Journals, from which we have extracted the information thus condensed.

It appears to us, on a general review of this table, that there are reasons on the face of it which might well lead the Council of this Society to reconsider the whole scheme on which their elaborate and almost exhaustive prize list is founded. The prizes of Silver Medal and of 8*l.* and 10*l.* respectively offered to owners and occupiers for the best cultivated farms arranged in a dozen or more classes, according to their extent and character, do not appear to us to have been hitherto successful in inducing the general competition of the class of tenant-farmers who are really characteristic of Cheshire agriculture.

Cheshire is, as Sir H. MAINWARING properly declares it to be, essentially a dairy county; but one cannot look down the figures in many of these columns without perceiving that these, the prize farms of the county, are not exclusively nor even chiefly dairy farms. Look at the enormous purchases of stable manure and of night soil, at the great extent of Potato culture, and again at the comparatively small extent of Turnips and Mangel Wurzels in the green crop columns. Look also at the comparatively small number of cows, in all not more than 2000, over more than 14,000 acres; and it is obvious that on the average, and considering the totals of the past 14 years, these the prize farms of the Agricultural Society, are not strictly speaking characteristic Cheshire farms. Of course one can easily see that many of them are really Cheshire dairy farms. These are recognisable in some cases by the well known names of the tenants, and in others by the number of cows profitably kept on them per 100 acres, which after all is the true key to rank upon the scale of dairy merit. But whenever farms of this kind appear on the list, the columns for purchased manures are confined to records of bones and guano bought. Stable manure and night soil, of which such enormous purchases are here recorded, are the mainstay of the market gardener, or of the mere milkman and suburban farmer; and our conclusion from these lists is that the prizes of the Manchester and Liverpool Agricultural Society, do not, except in certain well known instances, touch upon the characteristic agriculture of the county to which its operations are directed.

—— THE National Association for the Promotion of Social Science, which is now holding its eighth annual meeting at York, this year for the first time comprises in its proceedings a section on subjects specially connected with agriculture. This section commences its business on Monday the 26th inst., and will be presided over by Mr. EDWARD HOLLAND, M.P., who will, we understand, open the proceedings with an address on the social effects of steam cultivation. Professor WILSON, of Edinburgh, will act as Honorary Secretary. There is no doubt that the establishment of this section occupies a field left vacant by our agricultural societies, and that its discussions may lead to valuable results in more than one direction.

THE PRIZE FARMS OF THE MANCHESTER AND LIVERPOOL AGRICULTURAL SOCIETY.

No.	Name and Address.	Total Extent.	Pasture.	Meadow.	Clover.	Corn Crops.	Green Crops.	Potatos.	Horses.	Colts.	Mares in Foal.	Bulls.	Cows.	Heifers.	Calves.	Fatting Beasts.	Sheep.	Pigs.	Manure. Made.	Manure. Bought.	Night Soil.	Guano.	Bones.	Superphosphate.	Character of Soil.
		acres.	acres.	acres.	acres.	acres.	acres.	acres.	No.	No.	No.	No.	No.	No	No.	No.	No.	No.	tons	tons	tons	tons	tons	cwt.	
	1850.																								
1.	R. C. Lowndes, Rice House, Liverpool	90½	20¾	26½		27½	17½	3½	6	..	1	5	12	13	12	..	63	31	..	300	..	1½	..	..	Light sand
3.	R. Birch, Netherton, Liverpool	250	12	55	54	60	10	27	12	..	..	1	12	16	8	..	..	12	400	900	300	..	..	..	Light black
3.	W. Boyes, Speke, Liverpool	200	18½	97		65	10½	7	8	2	..	2	11	3	2	..	..	8	220	300	640	2½	..	..	Various
4.	J. Birch, Orrell, Liverpool	121	12½	..	38	34½	12	22	7	2	..	1	11	8	7	..	..	7	350	150	600	5	..	..	Light loam
5.	R. Dobell, Leftwich, Northwich	102	50	10	16½	9½	8½	4	2	2	..	1	26	16	5	..	164	10	200	..	..	1	6	..	Strong loam
5.	E. Whitehead, Blackley, Manchester ..	70	27	41	..	..	..	..	4	..	..	1	38	..	..	..	..	15	400	..	..	..	..	..	Deep loam
8.	W. Taylor, Roby, Prescot	75	4	27		23	6½	11½	3	1	..	..	2	*	1	..	..	11	50	150	..	..	..	..	Good loam
	1851.																								
1.	Mrs. Davenport, Capesthorne Hall	392	171	43		128	42	8	10	15*	..	5	12	79*	51	72	259	45	1500	..	..	4	..	40	....
3.	W. Boyes, Speke	200	11¼	100½		60½	5	13½	8	2	..	1	11	3	2	..	..	10	250	300	700	4	..	..	....
4.	A. Fairclough, Winstanley	111	5¾	..	33	48	6	16	7	..	..	..	5	3	1	8	..	20	200	300	400	5	..	..	Black light
5.	R. Mawdsley, Orrell, Liverpool	94½	10¾	41		25	4	14	4	2	..	..	7	4	4	..	..	9	180	177	300	¾	32	..	....
5.	J. Edwards, Aintree, Liverpool	81½	7	30½		25	7	10	4	2	..	1	4	4	4	..	..	8	150	200	400	..	..	..	Light black
8.	J. Crowther, Blackley, Manchester ..	67	33	33	..	..	..	..	4	..	..	3	30	..	1	..	..	6	340	150	..	..	79	..	Heavy
9.	J. Warburton, Sandway, Northwich ..	152½	63¾	63		35	15	9	4	..	..	1	30	10	6	..	175	30	350	..	..	2	12	..	Various
9.	W. Palin, Stapleford, Tarvin	250	116	49		45	24	9	7	5	2	2	52	23	12	..	100	45	560	..	..	..	..	..	....
10.	R. Dobell, Leftwich, Northwich	102	51¼	18	..	16	8	5	3	2	..	2	32	9	8	..	184	9	200	20	..	..	9½	..	....
	1852.																								
1.	J. J. Blackburn, Hale, Warrington ..	242	80	52	..	71	18	13	10	3	..	..	15	3	4	10	450	30	450	..	..	10	1	20	Light sand
2.	Colonel Clowes, Broughton Hall	14	52	26	..	42	18	..	6	5	..	1	13	20	..	..	60	32	700	..	..	..	..	..	Various
3.	W. Atherton, Speke, Liverpool	163	21	2	65	53	8	12	7	4	..	1	16	8	4	..	..	21	300	200	800	2	..	..	Various
4.	H. Clayton, Aintree, Liverpool	127	16	52		35	7	16	5	14	..	2	20	6	7	..	..	10	500	300	640	..	..	..	Light
5.	J. Edwards, Aintree, Liverpool	81½	5½	20		28	5	11	4	2	..	1	4	4	5	..	..	4	150	200	400	1½	..	..	Light
7.	E. J. Pemberton, Sankey, Warrington	128	14	64		19	9	19	4	1	..	..	8	2	1	..	..	23	200	..	200	1	..	..	Deep loam
9.	W. Palin, Stapleford, Tarvin	250	117	53		55	18	9	7	4	..	2	56	16	18	..	77	50	560	..	..	£20		..	Various
	1853.																								
3.	J. Cartwright, Speke	163	10½	88		89½	8½	14	4	2	..	1	12	2	5	..	..	17	300	200	600	4½	..	..	Light sand
4.	J. Dickenson, Upholland, Wigan	104	26	..	21	39	4½	12½	4	1	..	2	16	7	5	..	..	7	200	300	300	..	4½	..	Clay
5.	W. Ashton, Speke, Liverpool	94½	3¾	40½	..	34	2	10	5	1	..	..	8	5	3	..	..	7	155	80	480	1½	..	..	Light sand
9.	Mrs. Cliff, Crewe	263		194		39	20	3	4	4	..	..	73	12	17	..	190	52	750			£55			Strong
10.	H. B. Briscoe, Littleton, Chester ..	140	63	S	24	31	5	5	4	1	1	1	38	12	7	..	60	30	600	303		..	..	..	Rich loam
	1854.																								
3.	Mrs. Edwards, Speke, Liverpool	158¾	3	77¾		52	5	19	6	..	..	..	6	2	2	..	..		180	180	600	4	..	..	Sandy
4.	J. Langshaw, Speke, Liverpool	110	5	42		43	6	12	6	6	..	..	8	5	5	..	..		200	150	320	4	..	..	Rich loam
5.	J. Swinton, Ashley, Altrincham	90½	13	48	..	20	1	6½	3	2	..	1	28	..	..	..	..		400	..	..	..	..	..	Light
5.	J. Langshaw, Speke, Liverpool	99	9½	39		34	2½	12	4	2	..	..	8	3	3	..	..		165	90	460	2¾	..	..	Light
7.	G. Halsall, Halewood, Prescot	134	6	80		30½	10½	6	5	1	..	..	4	4	5	..	..		350		..	8	..	..	Strong loam
10.	J. Glassford, Lostock, Knutsford ..	108	35	..	17½	35	5½	12	4	2	..	1	13	11	9	..	55	?	400	..	..	..	5	..	Peaty loam
	1855.																								
2.	R. Watt, Speke, Liverpool	121	12	60½*		29	4	14	5	1	..	..	6	3	..	..	..	2	150	..	..	8	..	..	Light
3.	Mrs. Jenkinson, Speke, Liverpool	189	20½	85½		56	6½	18	8	..	..	..	8	4	5	..	..	16	200	300	..	10	..	..	Good loam
5.	T. Langshaw, Speke, Liverpool	99	7½	44½		30	2½	13½	4	1	..	..	8	4	2	..	..	7	165	90	320	6	½	..	Light sand
6.	J. Rose, Hale, Warrington	249	26	134		63½	9	10½	8	1	..	1	8	..	..	..	72	54	650		1200	3	..	..	Strong loam
7.	R. Richardson, Halewood, Prescot ..	128	13½	40		45½	7½	19½	6	3	..	..	3	3	1	9	230	27	250	544	..	6	5¼	..	Stiff clay
7.	J. Ellis, Halewood	137	20½	56½		48½†	16½	4½	6	40*	..	..	2	..	1	..	..	20	?	400	..	4	..	..	Strong loam
9.	Mrs. Robinson, Lea Green, Minshull ..	257	115	69		45	8	5½	6	..	..	..	69	5	12	..	26	40	400	..	..	1	10	..	Strong loam
10.	T. W. Swinton, Marston, Northwich ..	121½	40	30		39	1½	10	3	1	..	1	18	4	7	..	..	19	300	..	..	1	1	..	Strong loam
	1856.																								
1.	R. Bevan, Norley, Pemberton	206	60	48	29	49	9	5	4	..	..	..	16	6	1	..	..	2	360	100	..	4	3	..	Stiff clay
3.	J. Birch, Sefton, Liverpool	206	16	93		52	13	30	8	2	..	..	20	14	10	..	..	8	220	400	300	15	..	..	Good loam
4.	W. Atherton, Speke, Liverpool	104	6	51		30	4	10	5	..	..	..	6	3	4	..	..	6	200	150	..	5½	..	..	Various
5.	E. Whitehead, Blackley, Manchester ..	70	27	34	..	6	1	1	4	1	..	..	87	..	2	..	3	..	300	..	60	..	..	31	Various
6.	C. Garfitt, Tably, Knutsford	161	70	8½	9	50	6	4	8	2	..	..	5	35	..	..	170	20	400	..	..	2	8	5	....
7.	J. Ellis, Halebank, Liverpool	134	28¾	25		49½	19	7½	7	3	40*	..	3	1	..	..	..	80	880	450	..	5	6	..	Strong loam
8.	T. Wright, Minshull, Nantwich	60	33	6	..	16	..	4	2	3	..	..	4	1	..	20	69	25	150	..	..	£20		..	Deep loam
9.	P. Wright, Minshull, Middlewich	150	80	18	10	24	..	7	4	2	..	2	42	7	12	..	..	50	300	..	..	1	9	..	Loam
10.	P. Percival, Daresbury, Warrington ..	124	48	6	24	20	5	20	2	1	..	2	31	8	10	..	..	16	300	..	..	3½	7	10	Strong loam
	1857.																								
3.	T. Atherton, Speke, Liverpool	153	22	59		45	5	20	6	1	..	..	15	11	6	..	..	8	300	15	..	15	3	..	Sandy loam
4.	E. Holme, Speke, Liverpool	160	10	47		37	5	8	6	..	..	..	12	4	4	..	..	10	200	150	..	2	5½	..	Stiff loam
5.	R. Edwards, Speke, Liverpool	88	4	41		25	2	14	5	2	..	..	5	2	3	..	..	10	100	200	..	3	2	..	Strong loam
5.	S. Cook, Linacre, Liverpool	70	5½	28		15½	6	14	4	3	..	..	4	3	1	..	..	3	120	250	400	2	.	..	Light loam
7.	E. W. Wilmot, Hulme, Congleton	120	13	18		34	33	3	4	2	..	..	26	..	..	2	100	10	?	2	100	5	..	..	Various
8.	J. Hamnill, Denton, St. Helen's	70	9	25		20	5	8	3	..	..	1	13	6	4	..	..	5	250	?	..	4½	..	..	Various
9.	H. Williamson, Orrell, Liverpool	48	..	4	17	18	1	7	3	..	..	..	..	..	..	..	..	2	20	260	250	1	..	..	Sandy loam
11.	T. W. Swinton, Marston, Tabley	130	49	7	21	35	3	12	3	2	..	..	27	..	7	..	..	26	200	40	..	..	5	30	Clay loam
	1858.																								
2.	J. P. Heywood, Norris, Liverpool	135	30	38		41	19	7	10	4	..	1	11	10	8	..	..	15	500	..	350	10	..	..	Light land
5.	H. Gibbons, Toxteth, Liverpool	70	4	..	11½	33	2	11	3	..	..	..	4	4	..	..	..	4	150	150	500	..	..	..	Light loam
6.	J. Lathbury, Toxteth, Liverpool	157	2	63		52	2	30	5	..	..	..	3	1	..	..	..	15	150	300	..	2	..	..	Good loam
7.	N. Twigge, Halewood, Liverpool	110	4½	28		50½	12	12	6	2	..	..	2	4	..	..	6	99	300	200	..	3½	..	..	Stiff loam
8.	R. Ledger, Grove House, Liverpool ..	66½	5½	25		18½	5	8½	2	..	2	..	3	3	2	..	..	3	100	£62	..	..	..	..	Sandy loam
9.	Mrs. Caldwell, Kirkby, Prescot	59½	8	11		31½	..	12¾	4	..	..	..	2	2	12	..	..	5	100	260	..	..	..	..	Sandy loam
10.	T. Wild, Weavenham, Northwich	177	76	27	9	37	7	13	4	3	1	..	38	17	8	..	90	15	250	..	..	..	£60	..	Various
	1859.																								
3.	R. Birch, Netherton, Aintree	240	12	40	48	86	12	38	10	4	..	1	8	14	18	..	..	10	380	800	500	..	.	..	Light sand
4.	T. Williamson, Linacre, Liverpool ..	102	12	10	22	30	4	12	6	2	..	..	12	1	2	..	.	4	220	280	300	3	..	..	Rich light loam
5.	S. Cook, Linacre, Liverpool	70	3	32		19	3	12	4	2	..	..	3	5	3	..	..	10	120	300	300	2	..	..	Rich light loam
8.	J. Gorst, Garston, Liverpool	64	8½	12½		26	5½	7½	3	2	1	..	7	2	3	..	..	3	200	100	200	..	..	..	Good deep loam
9.	C. Musker, Booth, Liverpool	49½	..	10	10	14½	1	11	3	..	..	..	3	..	1	..	..	3	50	500	28	..	..	..	....
10.	S. Davies, Eardswick, Minshull	207	100	44		44	12	5	3	1	2	2	55	10	7	..	..	57	400	..	.	£100		..	Very stiff soil
12.	J. Birch, Sefton, Liverpool	205	35	70		52	15	26	8	..	..	..	27	20	9	..	..	10	250	500	400	6	3	..	Good light loam
13.	G. Halsall, Haleback, Warrington ..	135	12	60		42	18	6	6	6	..	..	5	10	5	..	..	11	150	140	80	7	.	..	Strong loam
	1860.																								
3.	W. Atherton, Speke, Liverpool	198	6	97		62	11	20	8	3	..	..	8	22	5	..	..	7	400	500	..	10	9	..	....
4.	W. G. Ashton, Roby, Prescot	116	5	43		39	10	18	5	3	..	..	3	..	2	..	..	4	200	250	600	2	..	..	Various
4.	J. Edwards, Aintree, Liverpool	105	6	24	17	38	5	14	5	2	..	..	3	7	..	..	5	4	100	360	500	..	1	..	Light loam
5.	J. Pilkington, Bearscough, Ormskirk ..	57	5	*	10	26	..	13	3	..	..	..	6	..	4	..	..	4	110	250	50	..	..	..	Light
8.	S. Lees, Newton, Preston	162	70	27		40	2	20*	6	3	..	..	45	4	5	..	..	48	600		£317			..	....
9.	J. Bowker, Aston by Budworth	64	18	13		22	3	7	2	2	..	..	16	2	3	..	..	14	130	..	..	..	5	..	Good loam
9.	T. Rigby, Fennywood, Over	91	56	13		18	2½	1	3	..	..	1	23	4	..	..	44	10	100	..	..	£12	£30	..	Strong loam
11.	S. Dorning, Swinton, Manchester	115	27	52		16	5	5	6	5	..	..	24	5	6*	..	..	..	500	59	200	..	..	..	Light loam
	1861.																								
3.	T. Booth, Moss Hall, Bolton	218	47	62	69	65	10	13½	6	5	..	..	16	11	2	..	75	7	100	500	500	..	..	..	Various
4.	J. Dickinson, Upholland, Wigan	112	22	30½		38	4	14½	4	2	1	3	14	7	10	..	..	6	300	200	..	7	3	..	Clay
5.	R. Webster, Old Stair, Litherland ..	83	9½	22½		31	8	9	6	2	..	..	12	4	3	..	..	5	250	250	350	1½	1	..	....
6.	Mrs. C. Wood, Litherland	45	6	11		14	1½	11	3	1	..	..	3	2	2	..	..	2	50	170	100	3	..	..	Light
7.	T. Moreton, Marton, Northwich	213	113	22	14	41	10	9	4	7	..	2	50	14	10	6	87	40	400	..	..	..	£100	£20	Half sand & clay
8.	W. T. Pownall, Yarwood, Altrincham ..	140	93	6	..	26	11	1	4	2	..	1	..	9	..	40	149	14	200	..	..	..	8	10	Loam and clay
9.	T. Rigby, Fennywood, Winsford	91	59	10		11	3	1	3	..	..	1	18	4	..	..	72	7	100	..	..	£10	£30	..	Loam and clay
10.	H. Higson, New Hall, Pendleton	182	55	56		42	6	24	6	3	..	..	35	5	3	..	100	24	600	600	..	..	..	..	Good loam
12.	E. Whitehead, Blackley	71	27	36		1½	1½	..	5	3	..	..	20*	..	..	..	..	17	..	..	..	..	..	..	Strong clay
	1862.																								
3.	J. Kay, Warburton, Warrington	305	82	55	28	83	12	54	12	7	..	1	54	..	..	35	124	10	?	500	1400	..	..	..	Various
4.	T. Hurst, Tabley, Knutsford	117	47½	..	18	34	12	4	4	5	1	..	12	6	4	..	100	5	300	..	..	10	10	..	Light
5.	R. Mawdsley, Orrell, Liverpool	98	9	30		33	3	16	4	2	..	..	6	6	3	..	..	8	180	..	280	4	..	..	....
7.	W. Palin, Stapleford, Tarvin	250	114	38	15	46	17	7	8	6	..	..	50	14	17	..	220	40	400	..	..	..	..	..	Various
8.	T. Bebbington, Oulton, Tarporley ..	152	82	80		37	..	..	8	1	..	2	41	12	12	..	25	30	?	..	..	..	..	..	Pure soil
9.	J. Garner, Tattenhall	81	46	21		10	1	2	3	1	..	1	26	6	3	..	18	14	150	..	..	..	£38	..	Stiff clay
12.	J. Aspinall, Kenyon, Manchester ..	77	10	67		..	..	..	2	2	..	..	12	4	4	..	..	4	190	..	..	..	£86	£45	Strong
	1863.																								
1.	J. J. Blackburn, Hale Hall, Warrington ..	242	48	86		75	5	15	10	4	..	..	15	7	4	..	300	30	250	200	70	11	1	..	Good loam
3.	J. Fairhurst, Woodlands, Ormskirk ..	152	33	24		46	8	35	9	3	..	2	14	6	7	..	..	74	?	..	?	..	20	..	Sandy loam
4.	H. Clayton, Aintree, Liverpool	125	18	40		42	6	16	5	4	..	..	22	16	6	..	..	25	?	500	400	5	..	..	Various
5.	J. Ashton, Speke, Liverpool	90	3	44		29	..	14	6	..	..	..	7	..	4	..	..	8	..	180	..	5	2½	..	Good loam
7.	W. Whitlow, Crouchley, Lynn	239	128	40		46	3	19*	5	4	..	2	60	5	12	..	120	40	..	..	..	..	£100	..	Good loam
7.	G. Jackson, Tattenhall	322	194	28		51	6	2	7	6	..	3	80	21	11	18	168§	54	..	..	..	..	£100	..	Various
8.	C. Davenport, Stanthorne, Middlewich ..	120	54	15		37	1	10	4	1	..	..	23	5	9	..	50	20	..	..	..	..	£40	..	Strong loam
9.	J. Rigby, Lower Whitby, Northwich ..	60	30	10		10	1	8	3	1	..	..	17	7	11	..	..	25	..	..	..	..	£55	..	....
10.	H. Neild, Worsley, Manchester	400	160	90	14	75	23	35	10	5	4*	2	..	..	10	28	128	15	?		£200			..	Light boggy

* A veterinary establishment.

SHORT-HORN CORRESPONDENCE.

(*Continued from* p. 899.)

Among the letters and papers left by Mr. Cottrell, of Congresbury, and kindly placed at our disposal by Mr. Bowly, of Siddington, are copies of a voluminous correspondence, much of which appeared in the columns of Agricultural Journals upwards of 40 years ago. We make the following extracts :—]

1. *From Mr. Hutchinson, on the Origin of the Short-horn Breed.*

"Stockton-on-Tees, July 5, 1820.

"Sir—It is now clearly understood and allowed that it was in the year 1787 that the Sockburn bull carried off the premium of the Durham Society, the late Mr. Robert Colling receiving one guinea as second, but what bull it was of Mr. Colling's thus posted we have yet to learn.

"When Major Rudd's reply to my former letter was announced, I hoped to have seen this question answered, but, alas! he has left it still a mystery, upon which I trust, however, I am able to throw some light; not, let me assure you, with the intention of underrating the merits and properties of the improved Short-horned Ketton breed, or giving offence to their sole author (as Mr. Charles Colling is called), or to Major Rudd himself, my particular friend, but merely to apprise the public that there formerly was in this county, between the years 1760 and 1800 (and probably long before), a race of most excellent Short-horned cattle (unmixed with the Kyloe), as a breeder of which my late relation Mr. Thomas Hutchinson, who died at Sockburn in 1788, stood pre-eminent; that this breed still exists in full perfection; that it was not extinguished all at once by magic or an earthquake in the year 1785, when Mr. Charles Colling first began to breed, nor yet been washed away by the streams of pure blood that have since flowed through the land.

"Now Mr. Bailey, in his 'General View of the County of Durham,' printed in 1810, says: 'In the spring of the year, Mr. Basnett, of Darlington, purchased a cow with a bull calf at her foot, and putting her into a good pasture she got so fat it induced him to dispose of her to a butcher in the August following, and the calf was sold to a farmer in the neighbourhood.* At four years old he was purchased by Mr. Robert Colling and Mr. Waistell, of Ailhill, who at that time did not keep a bull for any other purpose than serving their feeding cows; but Mr. Colling, finding him to have a great propensity to get fat, sold him to his brother, Mr. Charles Colling, who was then beginning to breed, and anxious to select those with the best dispositions to fatten. For the same reasons, and with the same view, he soon after purchased of Mr. Maynard, of Ayreholm, a cow and a heifer, her daughter. This bull and cow, selected with so much judgment, are the original stock from which the celebrated Durham ox, &c., are descended.' And Major Rudd in his account of some of the celebrated stock of Short-horned cattle, &c., late belonging to Mr. Charles Colling (himself having purchased most spiritedly at the Ketton sale), confirms this statement by saying that 'the bull Hubback' (above alluded to) 'when four years old, was purchased by Mr. Robert Colling, of Barmpton, and Mr. Waistell, of Ailihill, for the purpose of serving their feeding cows. He had such an uncommon inclination to fatten as to excite the particular attention of Mr. Charles Colling, who purchased him of Mr. Robert Colling and Mr. Waistell in the year 1785. Now if Mr. Robert Colling and Mr. Waistell kept no bull in 1785, except just one for the purpose above stated, it cannot be supposed that they were breeders of note. And if Mr. Charles Colling was then really only just beginning to breed, and for this purpose did buy the only bull that his brother and Mr. Waistell possessed, may we not fairly conclude that they had not a choice of bulls amongst them to enable them to contend two years afterwards in 1787 for the premium at Durham? And, therefore, as none remember what beaten bull this was, I do venture to presume that it could be no other than the said bull, since called Hubback, the renowned patriarch of the improved Short-horned tribe. And further, that he must have been shown in Mr. Robert Colling's name (for Mr. Waistell was allowed to have nothing to do with him afterwards under five guineas a cow), and that some other bull which Mr. Waistell has bought in the meantime for the purpose of serving the feeding cows of himself and Mr. Robert Colling (perhaps) had been entered in Mr. Waistell's name, for it is a recorded fact that both these gentlemen were competitors for the premium. This bull Hubback, thus picked up in the first instance as it were at random, was no doubt in the estimation of the Messrs. Colling a superior animal (though I am credibly informed that Mr. Waistell parted with his interest in him for a very trifling sum, and very inadequate, as he soon afterwards found on being told that his serving price was fixed at five guineas a cow), or they could not have anticipated victory over the Sockburn bull, for which 50 guineas were that day offered, the property of a breeder of the first experience, eminent alike for his horned cattle† and his sheep, &c. I am, Sir, your humble servant,

"JOHN HUTCHINSON."

2. *From Mr. John Rooke, on Improving the Breed of Horned Cattle.*

"Akehead, June 2, 1821.

"Sir—The means by which Mr. Charles Colling improved the Ketton Short-horns, and the admixture of the blood of that stock with others, afford a body of facts illustrated by experience, which perhaps throw considerable light upon the art of breeding horned cattle in general. The methods by which he proceeded demand peculiar attention. Use and profit was his constant aim, but the procurement of it was directed to obtaining the greatest value of carcase alone, in return for the food consumed. Had milk and carcase combined formed the basis of his selections, it may not be too much to say he would never have obtained that early maturity, excellent quality of flesh, aptitude to fatten, and perfect symmetry, by which his bull Comet was so pre-eminently distinguished. In his selections Mr. Colling wished to bring such animals together as in his judgment were most likely to attain the great end of his exertions. Whenever he found one suited to his purpose he endeavoured to become possessed of it, though the price were very considerable. Thus, for his cow Favourite, and her calf Strawberry, he paid Mr. Maynard 30 guineas at a time fully equal to 60 at present. He was, however, but little guided by long pedigrees and distinguished ancestors, though they may be well worth attending to at present in a breed selected with success.

"It is agreed on all hands, and the price paid for Mr. Maynard's cows corroborates it, that the Teeswater Short-horns were a valuable breed of cattle prior to their improvement by Mr. Colling. Indeed, some will have it, though ill-supported by subsequent facts, he made them no better than he found them. But how did he find them? Will anyone undertake to prove they were anything more than large useful animals that possessed about as much point (excellence in all points) as the polled breed of Galloway have at present, which when examined in particulars, nearly dwindles into no point at all, though the breed may be justly esteemed for its general properties.

"If the Short-horns possessed little or no point, how did Mr. Colling obtain it? We may readily suppose by using his bull Hubback. Much excellence, when examined in particulars, has been attributed to this bull. If this were not so, how does it happen all the valuable Short-horns are descended from him? Then what was Hubback? The breed of his sire has been satisfactorily ascertained, but of his dam little more is known than that she had that remarkable propensity to fatten, for which the improved Short-horns are distinguished. It is worthy of remark that the descendants of this bull, partaking of the excellent qualities of his dam, should have characters quite distinct from the general breed to which he belonged, namely, a capacious chest and prominent bosom, a thick mossy coat and mellow skin, a great deal of fine flesh spread equally over the whole carcase, particularly along the back and on the ribs, deep flanks drawn in a line with the sides, a broad level back, fine shoulders, a clean broad straight thigh, fine-boned short legs, and a great aptitude to fatten. Will any one tell us where Short-horns are to be found at the present time possessing these peculiarities and unmixed with that blood of Hubback? Or will anyone tell us of a breed of Short-horns, even mixed with that blood, which have them in so preeminent a degree as his real relatives? And is not what is called high blood uniformly estimated by their near kindred to his immediate descendants? Thus in producing a pedigree it is thought quite sufficient to show how nearly they are related to Foljambe, Lord Bolingbroke, Favourite, and Comet bulls, bred by Mr. Colling, and descended in a direct line from Hubback. What places Mr. Colling in a high point of view is the fact that he was the breeder of the whole line of these eminent bulls from Hubback without being indebted to any other person for a sire.

"Characters which are not to be met with in the common breed of Short-horns form the leading peculiarities of the Kyloe; besides there is a striking resemblance between the eye of the improved Short-horns and that breed. We may therefore reasonably conclude the dam of Hubback had some of that blood in her veins, and which communicated to the improved Short-horns those valuable properties for which the Highlander is noted.

"This opinion is not singular. Mr. Hutchinson (see July 5, 1820) observes: there formerly was in this county between the years 1760 and 1800 (and probably long after), a race of most excellent Short-horned cattle, unmixed with the Kyloe, which implies the improved Short-horns have a mixture of Kyloe in them. This is precisely the view I entertain, that the dam of Hubback owed her astonishing propensity to fatten to an admixture of Kyloe blood; that the acute and observing habits of Mr. Colling noticed the valuable qualities of her son and assimilated them with the best Short-horns he could procure.

"All the most valuable Short-horns have been produced in this way. The Chilton, Sockburn, and many other stocks had acquired considerable eminence before their admixture with Ketton bulls. What has placed the Chilton stock on a level with the Ketton and Barmpton Short-horns but this circumstance? Mr. Mason commenced upon a pure breed of Teeswater cattle which were crossed with Lord Bolingbroke, Favourite, Comet, and other bulls of great eminence. Perhaps no one had the use of these famous bulls to the same extent except the Messrs. Colling themselves; and since the Ketton and Barmpton stocks have been sold off, it is by many considered the best stock in the hands of any single individual.

"It may be worth while to inquire what have been the peculiar advantages derived from the intermixture of the Kyloe and Teeswater Short-horns. The latter acquire a great size at an early age, and are tolerably well shaped, but naturally too thin of flesh, too strong boned, and deficient in those general requisites which denote a truly valuable breed. When crossed with Hubback, supposed to have been a mixture of Kyloe and Short-horn, the essentials wanted were acquired, though somewhat reduced in size; but as they had more flesh, less bone, and much neatness, they lost none of their weight; when fatted were considerably more valuable by the stone, and consumed less food, for large, raw-boned animals such as the common breed of Short-horns is at the present day consume more food in proportion to their value than such as are light of offal and have much rich roasting beef. Thus, when Mr. Hutchinson crossed his Sockburn cow with Petrarch, one of the highest bred bulls of the day, he tells us he obtained what Major Rudd never had—a Herod. Certainly then he was indebted to the new principles of breeding resorted to in rearing the Ketton stock for Herod. But what breeder would go to Herod for a pedigree in preference to Petrarch, his sire."

* William Fawcett, near Haughton.

† Between the years 1786 and 1800 the Sockburn stock won three premiums of the Society, two for cows, and one for the bull. A three years old white ox calved in March, and killed in March, at Sunderland, weighed 4 qrs. 9½ stone, 14 lb. to the stone. A cow, full of milk at Martinmas, was also sold in March or April following to the same butcher at Sunderland, and weighed alive at Sunderland Bridge, where they weigh waggons, 156 stone. A four years old heifer, in 1800, was slaughtered by Mr. Otterburn, of Scarborough, weighing 4 qrs., near 80 stone, and several other instances of excellence I could recount.

THE CORN CROPS OF 1864.

Wheat.—There is considerable difficulty in conveying a correct idea about this crop, owing to that of last year proving an unusually great one, and of the natural tendency of the mind to compare this year's crop with that of what I fear we must regard as the crop of an exceptional year.

After careful examination, I am satisfied that we have this year, in bulk, a full average crop of Wheat; but I do not think, according to all the samples I have seen, and from all the other evidence I have obtained, that Wheat this year will weigh so much by 2 lb. per bushel as it did last year. A casual observer might say that is a trifling difference, but when it is remembered that the 2 lb. per bushel constitutes one thirty-second part of the whole crop, its serious importance will at once be admitted.

Wheat, however, in all the southern counties, and, indeed, as far north as York, has all been secured in excellent condition. I do not mean in condition to keep, but it is sufficiently dry to be at once brought into use, and most of it has been got in without a damaged grain. The samples I have procured, where the weight is really known, are mostly 63 lb. per bushel; the highest weight of all my samples is 66 lb. per bushel; this last is an uncommonly bold sample of Red Wheat from Norfolk.

A good deal of Wheat in the northern counties has been carried during the last few days, and, owing to the frequent showers we have had lately, its condition is much inferior to that of the southern counties. There is no fear of it keeping well, but much of it will not be fit to grind until it has had the benefit of October's winds.

Barley.—This crop varies a great deal, but over the whole kingdom I think it is unquestionably above an average crop. Owing to excessive drought and other circumstances, a greater proportion than usual will, I believe, be found unfit for malting purposes. For reasons I shall afterwards give, I do not think this will prove any loss to the farmer.

Oats are an irregular crop; on the whole under an average in bulk, but their condition is unusually good. I have before me some fine samples. I have one, grown in Yorkshire, plump, thin in the skin, and as white as rice; and in all districts where heavy crops of Oats are grown the sample will be found unusually free from inferior grains.

Beans.—This crop is a very unequal one; in some places it was good and well podded, in others not half a crop; in not a few fields they have been ploughed down. I have before me a beautiful sample I got in Cheshire, but the crop was a miserable one. On the whole the Bean crop is clearly under an average one.

Peas I think an average crop, and they have been got into the stackyard in unusually good condition.

Turnips.—I am deeply grieved to have to report very unfavourably on the crop of this important root; but there can, I think, be no doubt that over the kingdom the crop is not half so heavy as might reasonably have been expected. In many counties they have not a quarter of a crop; and it is lamentable to see acres upon acres of bare fallow where fine Swedes ought to have been growing. The Swedes of the northern counties, though much inferior in weight to what was hoped for, are far superior to those grown in the south; in a very regular crop which I examined yesterday I measured one which was fully 18 inches in circumference, and in another good field I walked over to-day I found one measuring fully 21 inches round it.

Grass.—With few exceptions, chiefly in Westmoreland and Cumberland, with some dales in Yorkshire, Grass land has been completely burnt up. Pastures have long ago lost their ordinary green colour, and have resembled a close-cut Oat stubble. Most farmers have found it absolutely necessary to give their stock cake or corn, and with such addition it is wonderful to see how well animals have kept their condition.

After-grass, or Fog, as it is called in Yorkshire, is absolutely worthless.

Hay was a moderate crop, and in consequence of the scarcity of Grass, is held at extravagant prices.

It will thus be seen that, owing to the total want of after-grass and of Grass in our pastures, our present means of making fat are much curtailed, and when the great failure in the Turnip crop is taken into consideration it seems clear that our ordinary mode of fattening stock during next winter will have to be considerably modified. A liberal supply of cake, or bruised Barley, or Oats, or inferior Wheat must be given to stock, along with a very limited quantity of roots. The rough Barley will come in well for this purpose, and reduce the outlay for cake; and, with beef and mutton at the high prices they are sure to bring, Barley used in this manner will probably make as much money as that sent to the maltster.

It will be observed that there is this year much variety in our crops, and several of them not so productive as one could have wished; still, there is very much to be thankful for; there is a fair crop of Wheat, which may now be said to have all been secured sound and good. Hence a great portion of the staff of life for the people is again secured for another year, and the late showers of rain, though too late to do much good to pastures, will put the land intended for autumn Wheat into good condition to receive seed for the crop of another year. *H. J. Turner, Land Agent, Richmond, Yorkshire, September 13, in the "Times."*

THE PAST HARVEST AND THE COMING WINTER.

CARMARTHENSHIRE: *Llanelly.*—I am sorry not to give you a good account of the harvest in this part. The past fortnight having been very wet and stormy, quite put a stop to all harvest operations; and there is in the late districts a great quantity still in the fields, and some of it in a very bad state, and will be only fit for pigs unless the weather clears up, of which there are no signs at present. I drove 20 miles through the country yesterday, and in many farms that I passed there was not a bit of corn in the yards; all in field mows, and I hope secure from the weather. The little Wheat I see at market is a very good sample, but the yield is not so good as was anticipated. The Barley and Oats are a good crop, with plenty of straw, which, if it can be well saved, will be valuable as fodder. The hay crop I consider all through the country is not more than half crop, but I think we are better off in this part for fodder than many places. Most farmers grow a small quantity of Gorse, which is very useful for cattle and horses, and a great saving of hay, and if carefully prepared they are very fond of it. Sheep are not kept to such an extent as in some places, and scarcely it ever see a bit of hay. There are no Beans or Peas grown here, and not a great quantity of Swedes or Mangels; there are some very fair crops of the former, the latter very indifferent. The Potatos I am glad to say will be a good crop, though smaller than usual, owing to such a length of dry weather. I have not seen a single diseased Potato this year, nor heard of any one that has, but what the consequence may be after so much rain as we have had of late I really am at a loss to know, but

I trust they are too far on to be injured much—the haulms are nearly ripe; the only danger I fear is their growing again, which I hear they are doing in some places. I should have been pleased to have given you a better account. *J. Burnell, Farm Agent, Pennyfair.*

GLOUCESTERSHIRE: (1) *Stapleton, near Bristol.*—Wheat and Barley are here about an average. Beans almost a lost crop; Peas, say half a crop; Mangels tolerable; Swedes, with few exceptions very bad indeed. You ask how stock is to be carried through the coming winter? I confess I have no great fears on this head, as, although hay is less than half the usual quantity, and is already high in price, yet, in a season like this, straw of every kind is excellent, and I have proved that with 4 lbs. daily of bruised Oats, Beans, or Peas, store cattle do well. The difficulty will be with cows in milk, and making meat; here the lack of Turnips and hay will be felt, and the flockmasters of Wiltshire will be sadly puzzled to carry on during the spring months. We always kept the ewes until lambing on Pea straw and a little corn. This year they must have a double portion of the latter in place of Swedes. This season proves how much better I should have fared with a greater proportion of arable land. My Mangels are good; Oats and Barley ditto; the straw of which alone is worth more per acre than the produce of as many acres of hay. I should have said that in Wiltshire we have a full crop of Wheat and Barley; hardly an average of Oats; Beans a failure, but Peas not amiss. *R. Stratton.*

GLOUCESTERSHIRE: (2) *Kingscote.*—On this portion of the Cotswolds the harvest has been finished about three weeks, except a few pieces of late-sown spring Wheat and Barley on farms far apart. I believe Wheat, Barley, and Oats are nearly, if not quite, an average crop and good quality of corn and straw. Beans and Peas are not much cultivated in this neighbourhood, and the few pieces I have seen have been very bad. The prospects of stock-keep for the coming winter are not bright. Hay, meadow and Clover, not more than one-fourth the usual crop. Roots about one-half (they are much improved within the last 10 days), and where there are plants of Swedes they will be large; with the exception of 3 acres that were eaten off with grub, I never saw them looking better on this farm. Cattle must be kept on straw cut into chaff with ground corn or cake, mixed up in a heap, and a few bucketsful of water thrown over it; but there are few cattle kept in this neighbourhood in comparison to sheep, and without they are folded over the land we may expect a very light crop of corn; therefore they must walk over the fields, stopping a night in each fold, and eat the small quantity of Clover hay there is cut in chaff and mixed with corn and Linseed-cake; the difference of price will decide which to use most of. The early harvest and fine weather have enabled the farmer to make great preparations for spring feed, a large portion of the Wheat stubbles have been cleaned, and are now green with Rape, Rye, Mustard, &c. *Francis Burnett.*

GLOUCESTERSHIRE: (3) *Cirencester.*—Although the Wheat on the light land was thin, the crops on the stronger land were good, and although not equal to last year, I think the crop will prove an average one. Barley is over an average; with the exception of a few late planted pieces, the crop is good everywhere. Oats are not much planted in this neighbourhood; the early-sown are good, the later deficient. The same may be said of Peas. Beans are a general failure; numbers of acres have been fed off with sheep, and those harvested not half a crop. The hay crop was very deficient, particularly the seeds; many not worth mowing, and the best of those harvested not half a crop, and certainly not equal to one-third of the produce of some years. Carrots and Mangels have stood the drought of the season pretty well, and some of the very early planted Swedes; and these, since the late rain, look fresh and growing. The root crop generally is very bad, some farms having scarcely any of any description upon them. There has been great complaint of the grub, but this is a pest we have every year, and I have known them much more abundant than this season, but from the plants not growing out of their way as they usually do, their ravages have been more apparent; indeed in many cases they destroyed the whole crop, and all are injured more or less with them. I have one piece of Swedes which have grown in spite of them; this was on land we ploughed long dung in before winter, and have not ploughed since, and I believe where land is sufficiently clean, this is the best cultivation for roots of all kinds. With this deficient crop of roots and hay the difficulty of getting through the winter will be great. The year most similar to the present was 1818, which is well remembered by many. The spring was very wet; the Barley was put in badly, and there being no rain on it till harvest time, it was so short it could not be mown, and rakes were made in order to rake it together, and the price began at 80*s.* a quarter, but gradually got down to 40*s.* In that year there was no rain the whole summer, and foddering the cattle became general in August; but abundance of rain came on the 23d of September, Reading Fair Day, well remembered by many, from cheese sinking in price 20*l.* a ton in a few days, to the loss of all and ruin of some cheese factors. After this rain, with a continuance of warm fogs, the growth of all vegetation was most extraordinary, and farmers have told me they did not fodder their cattle again till February. Should we again have such a season it will help us wonderfully. We have one great advantage now over 1818 in having an abundance of sweet and wholesome straw. The pulper and chaff cutter must be brought into extensive use so as to make the few roots go as far as possible. Oats are a very moderate price, but perhaps not cheaper than Wheat for feeding purposes, and the variety of all kinds of feeding stuff is so great that it is difficult to say which is the best—people must use their own discretion; no farmer in his senses will buy hay. Steaming straw makes it more palatable, otherwise I think it has no advantage, and where there is no steaming apparatus, watering the chaff and allowing it to stand a few hours will answer the same purpose. Being very short of keep I have been giving my lambs a pint of crushed Oats daily through the summer, and being careful to have them well supplied with wholesome water they have done remarkable well. I am making inquiries as to the price of low qualities of sugar, thinking it may be of advantage to mix with straw chaff. I think it probable there will be more nutriment in the roots this year than in wetter seasons; if so, a smaller quantity will be sufficient. There is a large quantity of stubble Turnips planted, and if we should have such a season as 1818, they will help wonderfully, but at present the nights are too cold for them to make great progress. Brewers' grains, malt dust, bran, and pollards, I shall have to mix with straw chaff, as the price may be. *Ed. Bowly, Siddington House.*

GLOUCESTERSHIRE: (4) *Cirencester.*—As to the late harvest in this neighbourhood, my own observation and the reports of several large farmers whose opinions I have collected amount to this, that on the deep and heavy lands the Wheat crop would equal that of average years, but on the Cotswold Hills, the Wheat with few exceptions is under average in quantity, but of good quality, and 2 lbs. per bushel under the weight of last year. Barley sown in good time, generally over average; Beans a general failure; and Peas about half a crop. The upper half of the straw of each entirely destroyed by vermin. My own crops of Beans and Peas were very promising up to Midsummer, the former quite free from their usual enemy the black blight; but ultimately smothered, as well as the Peas, by a white insect, apparently a species of aphis. The Swede and Turnip crops, with very rare exceptions, a complete failure. The Mangel has succeeded better; but the plant is generally very deficient. This has succeeded well in my own case, with the exception of one field which had been turned up deep with the steam plough last autumn, in which the Mangel failed entirely, and successive sowings of Swedes also. In other fields there is a good plant of Mangel. From some cause or other I have observed in travelling about, that fields of Mangel are always patchy, and deficient in plant. I attribute this to the want of attention at the usual time of setting them out. I secure a regular plant by sending women round with semicircular trowels just before cutting out the superfluous plants, to fill up all vacancies. One goes forward and scoops out a roomy hole, and another follows with a similar tool, and placing it well under the root of a young plant, lifts it bodily, with the soil attached, into the hole previously made. The removal thus made is little felt. This is quickly done over a field, as the parallel lines supply each other, without walking about and collecting plants for subsequent setting. I have found Kohl Rabi by much the most satisfactory plant this season. It has stood the drought better than anything, and has not been attacked by any enemy, while all other green crops have suffered terribly from the hard-coated grub which has been so destructive to every other crop. We have over 200 lambs doing well with a fresh piece of this daily, and a feed of straw and hay chaff, and a little bran sprinkled over it at night, and early in the morning.

Your inquiry for information on plans for eking out the supply of food for sheep and cattle which prevails in the southern counties is not so easily answered; and I fear comes somewhat too late. I observed, at the commencement of the spring corn harvest, the entire destruction of the Clovers on my farm by the long drought, and I found this very general, not only in the southern but in the midland counties, involving much anxiety on farms mainly under tillage, for a supply of food in early spring and summer. We sowed the dwarf Essex Rape over failures on the root quarter, and on some portion of land intended for Wheat, to be fed off late in the autumn; a very poor result, in consequence of the absence of rain long after sowing. On the failing Clovers we sowed a portion of Rye to come in first—to succeed that, another portion in Italian Rye-grass; all this is coming on favourably; then a portion of winter Oats, and lastly, Vetches to succeed the Oats early in June. A second sowing of Vetches will take place the first week of November, and a third early in May. The Rye and winter Oats may yet be successfully sown, but it is full late for the Italian Grass. For the economic feeding of stock during the coming winter, the first consideration would be shelter from wet and cold. Secondly, attention, in the preparation of food, to certain relative proportions of the nutritive and respiratory elements of food is material. It has I believe been found in practice, that food which contains one part of nutritive elements containing nitrogen, to from four to five of fattening, or carbonaceous elements, is in economical proportion. It must be borne in mind, it is the quantity of food which an animal can assimilate by thorough digestion, and not the quantity which an animal will eat, that is the economic consideration; for all the rest is waste, excepting as manure. Linseed-cake of prime quality at the present price, about 12*l.* per ton, is an extravagant food. Bran, at 5 guineas a ton, is far more economical. Lentils and Indian Corn, both at present to be bought at from 32*s.* to 34*s.* per quarter, are cheap foods. Wheat again is a cheap article to mix with Indian Corn. The former contains, in 100 parts, 20.82 of nutritive, and 50.38 of fattening matter; the latter 10.70 of the former, and 72.08 of the latter. Fattening bullocks and sheep naturally require a much less quantity of Swedes, &c., than is usually given them. Forty pounds per diem for bullocks, and 12 for sheep, thoroughly mixed with chaff, will be found a sufficient allowance. As you have extracted from my "Handy Book for Young Farmers," my mode of preparing food for fattening bullocks, I may add that we use only the best green Rape-cake, at little more than half the cost of equally good quality of Linseed-cake. I insist on the necessity of subjecting the Rape-cake to solution at a temperature not less than 212° boiling heat. It is not so palatable to cattle as the Linseed-cake, but they soon get accustomed to it; according to Professor Anderson, Linseed-cake contains of oil 12.79 parts in 100, and of albumen, 29.53; Rape-cake oil, 11.10; albumen, 29.53. These are the essential elements of each. Space will not admit of much detail of quantities. I have therefore only offered a few hints for such of your readers as may not have directed their attention to the economies of feeding stock. *Charles Lawrence, Cirencester, Sept.* 20.

HAMPSHIRE: *Southampton.*—I beg to hand you an estimate of the corn and cattle food crops in the district of South Hants. I don't at all know what I could do with my cattle under cover were it not for the supply I have now in use of the "Cattle Melons" which I cut daily for them and which is abundant, although I am obliged to reserve as many as possible for seed. Wheat, average; Barley, average: Oats, under average; Beans, very deficient; Peas, ditto; Potatos, short crop, but sound; Roots, the greatest failure within the past 20 years; Hay, short crop, and gone into consumption unusually early. *Joseph Blundell, Bursledon, Southampton.*

MID-LOTHIAN: *Bonnington, Ratho.*—Harvest is not yet completed in this neighbourhood, there being still a portion of Oats and Barley in the fields. The wind on the 5th and 9th shed out more grain from the uncut corn than in any year during the last 20. Luckily the breadth to cut was not great on each farm, though on individual farms from 30 to 100 acres were exposed to its fury, and there the loss must be estimated at several hundred pounds. Except in the very early district few farms entirely escaped. Now that the appearance of the stackyards can be judged of, there can be but one opinion as to their bulk, and that is that there is a deficiency of about one-sixth from that of an average year. The quality of the grain is above average, and the short-coming will be chiefly in Oats. However, Barley cannot be pronounced more than an average, and Wheat barely that. Turnips will be fully an average crop. They are now very much improved since the rains of the 2d and 6th, and the pastures are greener, while the foggage after hay is improving. Save from the shortcoming of straw and the rather light hay crop, the prospects of winter's food for our stock are much as usual. With plenty of fodder, now that grain is so low in price, the want of green food such as Turnips is less felt. On several farms last year where the Turnip crop failed from drought, nearly as many cattle were fed as usual, although these were of a lighter weight, and that almost entirely on corn and cake and uncut straw, with a very few Turnips. *James Melvin.*

SOMERSETSHIRE: *The Manor House, Brent Knoll, Weston-super-Mare.*—My immediate neighbourhood is mainly a Grass district, the crop of hay is at least one-half short, and the farmers will have nothing else to supply the want of it, if the winter is either a wet or a severe one. If the winter should be mild and dry, they will manage pretty well for their dairy cows, but little or no beef will be made. It is not, however, a county in which much beef is made in winter. On the other side of Bridgewater the Turnips are almost a universal failure, the Mangels not half a crop. The farmers have put in late stubble Turnips as a partial substitute, and some are buying Oats and cake, but they will, as a general rule, winter fewer sheep and cattle, and make little or no beef. I am at present staying in Shropshire, a great Turnip-growing county. Here, too, the failure of the Turnip crop is universal, and the remedy proposed is to feed no beasts in the stalls this winter. This portends high prices for meat next spring and summer, and unless the price of Oats and Indian Corn remains moderate, which can hardly be expected, there will be hard times for the young stock also. *G. J. Poole.*

SURREY: *Wanborough, near Guildford.*—So far as I am able to form an opinion as to the corn harvest, &c., in this district, the Wheat crop on all the deep well-cultivated land, commonly termed good holding land, is a fair average crop, and by average I mean to say ranging from six to nine sacks per acre. That has been the average for the past 14 years on this farm, and I put the present crop at, say, seven sacks per acre. On all the shallow soils, as sand or gravel, the Wheat has suffered much from the effects of the drought; it

has cut up short in the straw, thin and blighty, and has been stacked in a small compass. Of Barley many fine samples may be seen where early sown, and of this description the crop is probably good; all the backward sown crops are short in straw, and the corn thin and hard, only fit for grinding quality. Beans, Peas, and Oats are generally bad, with some exceptions where early sown. Upon looking round, the rick-yards do not present that well-filled appearance so characteristic of a good corn year, and point more than ever to the necessity for a deeper cultivation and earlier sowing, to enable the corn plants the better to withstand the extremes of the seasons. Although the present summer has been most delightful weather for field operations—no stoppage or hindrance of any kind—it may form perhaps in this respect an exception, viz., that it has been too dry for the growth of cereals; so remarkably free from all storms which generally prevail, and serve to counteract the effects of a season of drought. The failure in the root crop far surpasses anything I have ever witnessed. There seems to be literally nothing in the shape of Swedes or Turnips in prospect for the coming winter. Since the recent rains, the few roots that remain are putting on a growing appearance, and look like spots in a desert—the gaps are so numerous and extensive all around. I attribute my loss chiefly to the ravages of the grub, the usual accompaniment of a dry summer, for I had secured a good plant as I thought. Our friends the rooks helped to destroy the pest, but in vain, the crop seemed doomed to destruction. Mangels are a better crop, and are now growing nicely; there is, however, some loss of plant, which will be felt. I am thinking at present of collecting the scattered Swedes and Turnips for yard feeding, and all that I possibly can in the shape of chaff, sweet straw, &c., to form a basis for a feeding material of a more expensive kind, and fully expect to pay dearly for fatting this winter. The usual winter stock of sheep I keep, with the same feeding, would eat everything clean up by the end of November—such is the extent of the failure. Let us hope that a mild winter may mitigate the apparent scarcity of food for live stock; and, whatever it may cost to fatten, the flockmasters may not suffer in their breeding flocks. They will not require telling the condition must be kept up at any cost, for poverty is the first step towards disease. *W. Simmonds.*

SUFFOLK: *Framlingham.*—My former representations to you of the Wheat and Barley crops are fully borne out. The summer has been such as to suit our cold land—the quantity of Barley straw is beyond any year within my experience as a farmer of 34 years duration. The grain will very much of it be thin, harsh, and unkindly for malting; the Wheats not so extra as to straw, but still more than usual—5½ acres make a good 6-yard bottom round stack—mown straw, which system has become universal. The yield of both grains is well spoken of. Beans and Peas not so good as expected; the attack of louse shortened the crop. All the corn secured in good order. The Pea straw is abundant, and will help the store of fodder; the second math of Clover not enough to mow. The change to showery weather has come too late to be of much use to either Mangels, Turnips, or Grass, yet the meadows are improved and give some late feed. The old school of farmers here keep their horses at pasture feed till the middle of November, and many who as a system always keep the horses in the yard will be obliged to go to the old system, as one means of sparing stover, and when taken in they will make shift with straw—happily that is all dry and sweet. The beasts, too, must be content with it, and have more cake and corn, whether for fatting or keeping them growing to resell as stores in the spring. This must apply also to cow stock. Just here, except on the larger farms, there is but little fatting; such as practise it will resort to pulping the small crop of roots. *G. Edwards.*

SUSSEX: *Lynch, Midhurst.*—The Wheat crop of this neighbourhood is, from all I can learn, an average crop; Barley above an average quality, not so good as was expected; Oats very light, above a third under average, Peas from 5 sacks to none per acre—a great many of the latter; Beans very bad—a great many never cut, some for litter, and some have enough to pay for harvesting; Potatos sound, but short crop. As respects the prospect for cattle and sheep it looks gloomy; Turnips are almost a failure; Swedes a few pieces, but very patchy, and the bulbs very much out of shape from the constant eating of the grub; Mangels bad; although much Turnips, Rape, and Mustard have been sown, a great quantity have again disappeared, the grubs or other insects carrying them off. The only really cheap thing the farmer has is Wheat, and that at under 9*l.* per ton must be used for cattle and sheep feed; and it is quite as safe as any other corn properly used. I have used a considerable quantity these last three years, mixed with Peas and Beans or either, and Barley or Oats, all ground together with a very little Linseed-cake; of course other things might be mixed in, such as Cotton-cake (which I have done), or Rape-cake, or Locust Beans; the thing is not to give too much of one thing. I believe a small portion of Linseed-cake, or better, Linseed meal, an excellent thing for cattle; it softens the skin, and assists the breathing, and so keeps the lungs in a healthy state; the whole should be mixed with a small portion of pulped roots, and hay and straw chaff; if no roots, moisten well the chaff, adding a little salt. The Grass does not grow kindly, although we have had some really good showers, which have well soaked the roots. Hay is very good, and very scarce and dear; straw is very good, but hard and stubborn this year. *James Eames.*

WIGTON: *Auchneal, Stranraer.*—The crops in this neighbourhood will be, I think, a full average if safely secured, though in some farms there has been a good deal of loss by the storm of the 9th inst. There is not a third of the grain of this district as yet secured, the weather being very wet. On some farms there is a part secured, on others it is all out standing, with very unsettled weather. The green crops generally will be a full average, the late rains having very greatly improved them. There is no apparent scarcity of keep for live stock in this quarter, if the crop be safely secured. *A. H. M'Clean.*

YORKSHIRE: *Bainesse, Catterick.*—The harvest is almost all over in the immediate neighbourhood; Barley, Oats, and Beans have taken off as good a crop as was expected, and good in sample. Wheat has taken off good in bulk but inferior in sample. The prospects of winter are more prosperous than they were three weeks ago, on account of having beautiful showers this last fortnight, which have made Turnips grow amazingly, and I think they will get to be very nice sheep fodder. I think the only substitute for the deficiency of Turnips will be grain, as the high price of oilcake and the scarcity of hay will not allow farmers to feed stock to a profit, and I think it will be much cheaper than any other substitute I can name according to the present prices. *John Outhwaite.*

THE WHEAT PLANT.

A SUMMARY of the history of civilisation, ancient and modern, is symbolised in this same field of Wheat. The history of nations, ancient and modern—the political and the military history of races, the course of emigrations and of immigrations—the tracks of trade, the rise and decay of the arts of life—the suffusion of races by colonisation—as to these things, and many such like things, of which you read in books, you may gather them up, in the way of meditation, while you follow a path through these corn fields. This one undulating sea of ears of Wheat carries me back without an effort to those boundless expanses of the ancient Mesopotamia that are spoken of by Herodotus; or to the corn fields of the ancient Egypt, or to the Wheat levels of Poland and southern Russia; or to the vaster levels of the Western world. If I pursue these suggested thoughts in their course of three or four thousand years, I find that in following them out to where they naturally lead, these meditations bring into view what may warrant the affirmation, that the history of the world, or rather the history of every people that has deserved a place in history, is identical with that of the Wheat culture. What have been the doings of this chief of all fruit-bearing plants? It was this that built Nineveh and Babylon; it was this that carried conquests to the far east, and to the far west, and to the south of the Mesopotamian centre; it was this, or its equivalent, that built the Pyramids, and the other architectural wonders of the valley of the Nile; it was this that sustained the Pharaohs, and afterwards the Ptolemies in their widespread despotisms; and this that governed Rome, when Rome governed the world; it was this that either sustained, or was the reason of, the invasions of the empire by Vandals, Goths, Huns, and others. It is the Wheat harvest that, in modern history, has favoured or thwarted the ambition of military despots: it is this—even the Wheat culture, that now holds the fate and fortunes of infant states in doubt, until it shall be known who it is that is destined to command the Ohio and the Mississippi. For good or for evil, for the better or the worse of nations—Wheat is the power that sways the world; and there might be meaning in the epigrammatic utterance that the sceptre of worldly dominion is—a straw!

This plant of power unites in itself qualities which, in combination, attach to no other vegetable kind. These properties are summarily the five following. (1.) The grain of Wheat-corn contains the three main ingredients of the nourishment that is required for the support of human life—viz., the starch, and the gluten, and the mucilage. (2.) Then the plant of Wheat is one of the hardiest—perhaps it is the hardiest of all plants (annuals) which are properly designated as esculents. (3.) Wheat culture, as dependent upon soil and climate, extends over a larger area than that of any other esculent. (4.) The grain of Wheat far excels all other vegetable esculents in its preservable property; for the produce of a harvest may be stored, not only from one harvest to the next, but through many years, even centuries: so it is that granaries have kept nations in existence through famines, from year to year. (5). Lastly, Wheat—although in a less degree than most other vegetable species liable to variations of kind by artificial means—is, in a very high degree, open to those methods of culture, the intention of which is to increase the quantity of the yield per acre.

A brief statement of some facts, in the way of an annual biography of the plant of Wheat, may properly claim a few minutes' attention; at least from those who, in taking their breakfast, seldom or perhaps never put the question—whence did the the baker obtain his material? The baker from the miller; this is true, no doubt, and the miller from the farmer, and he from the land: but how, and under what conditions? Some of these conditions might properly be spoken of—as I have already ventured to speak of them—as stipulations: for they are the terms of an unwritten, yet real and solid, covenant—as ancient as the human family, and which is still, as the lawyers say, *in viride observantiâ.* The due succession of crops would forbid that some one of the cereals should follow immediately some other one of the cereals. We infer therefore that last year there must have been, whether we remember it or not, Mangel Wurzel, or Tares, or Turnips, Turnips [Clover or Beans], inasmuch as now there is Wheat on these acres. This is a change of method in farming which, as the modern farmer has learned it, gives him more than an equivalent for the fallows of the bygone practice of husbandry. Fallows are still resorted to in a cycle of years; but not, as once they were, every year upon every field of corn-growing land.

Harvest well finished and housed, even to the remainders of the Beans, then the plough comes on to make preparation for the harvest of the next year. A goodly spectacle it is at the earliest daylight of a chill November morning, when a dozen well-fed horses—ridden by the men and the boys, sitting lady-fashion—are coming down the lane to accomplish their journée (not journey, as it has come to be pronounced). Two ploughings, and a cross-ploughing perhaps, are the commencement of these careful preparations, and if manure has not already been carried on to the land, it is because the drill must be brought forward to insert, in careful measured lines—not the grain, but the stimulus of vegetative life—the guano. Then comes the drill, with its charge of the precious grain; which itself, perhaps, has had a preparative steeping. Close at the heels of the drill follows the harrow; and alongside of both comes hopping the rook, accused of pilfering the Wheat, when in fact it is the grub that he covets.

A little time before Christmas, or it may be a little while after that merry season, the husbandman will come a-field to do all that he has to do for the Wheat crop (the principal Wheat). As for the hoeing, at a later time, it is an incidental operation:—it is only a keeping in check the rival weed that might otherwise choke and impoverish the plant by drawing the soil. So far as the labour or the watchfulness of man may avail, the husbandman will be at liberty to ride his horses home, and there await the issue:—it will be a hopeful, and yet an anxious waiting time of five months. But how severe is the trial which this plant of Wheat—these slender spikes—must pass through, even while they are still nothing more than green filaments—a very symbol of frailness. Little or no snow may have fallen in January: there has been perhaps no fleecy mantle to whelm itself over this tender growth; yet a frost of unpitying severity sets in before the winter has passed. The cold may be of such intensity that in the shrubbery all but the hardiest shrubs have been killed. Magnolias, Myrtles, Laurels, Laurustinus, have been smitten, never to recover. Nevertheless the Wheat has lived through all this arctic rigour. It must not be affirmed in absolute terms, that the Wheat crops sustain no injury in the course of an unusually severe winter: but of this prime support of human life it may be affirmed, as above, that it is the hardiest, or almost the hardiest, of all annual plants. Too much wet in spring is more perilous to Wheat than any ordinary intensity of frost. It is to be noted—and I take leave to remind my city readers of the fact, that it is only the principal Wheat that has to endure the trial of extreme cold. As to the spring-sown crops—the Barley, the Oats, they do not appear until winter has fairly blown over.

I have said that when the roller—or let us include the hoe also, have done their work; and while the plant of Wheat is, as you might think, a thing of very small pretensions—then it is that, as the farmer retires—his part of the covenant duly completed—then it is that the other party in this covenant advances to do His part, and He so comes as if He were minded to do it alone. In act, the creative force is always, even from the earliest moment of the germination of the grain; and at work, while so slender and frail a spike, as is the spike of Wheat, has worked itself—at the rate of an infinite slowness—through the rugged clods; and so until daylight has been reached, and the heavens have smiled upon it. But now the Almighty takes the work in hand alone: it is an instance that has no exact parallel. Everywhere and always, upon the solid surface, and in the air, and in the ocean does the Creator go on—silently—unfailingly—erring never—asking no advice—minding no criticism—desiring no spectators—waiting for no plaudits—the Creator is at work, giving to all creatures life and breath and all things. All this is true; and more than we can imagine is true; but the Wheat harvest claims regard by special privilege; and the principal Wheat comes into a foremost place in the marshalling of the vegetable orders. When we use the customary phrase, the vegetable kingdom, and speak of Wheat as standing foremost therein, we are emboldened (in no irreverent mood) to borrow from their place in the Gospels the words—"So is the kingdom of God as if a man should cast seed into the ground; and (when he has done his part) should sleep and rise night and day, and the seed should spring and grow up he knoweth not how: for the earth bringeth forth fruit of herself: first the blade, then the ear, after that the full corn in the ear: but when the fruit

is brought forth, immediately he putteth in the sickle because the harvest is come." *Good Words for Sept.* 1864. [This is doubtless the true lesson of the history, but it is taught by a very inaccurate historian.]

SEWAGE MANURE.

[The following are notes of two papers read on Wednesday before the British Association at Bath.]

(1). MR. W. GEE gave an account of the mode adopted at the Bradford Union (Wiltshire) for the utilisation of sewage:—"As chairman of a Wilts Poor Law Union, where the boys' and girls' schools' sewage has been for two years simply, clearly, and effectually deodorised and wholly saved by the Rev. H. Moule's earth method, I would most strongly advocate the 'dry way,' and not the 'wet way,' as the true method for half the population of this kingdom. All houses and cottages that are not in towns, all workhouses, hospitals, and prisons will find this plan easily available. I beg attention to what follows:—For 15 months ending Midsummer last there had been no removal of the product from the schools' shed, so that the heap of excreta and earth then apparent resulted from, say 45 children during that long period. It must be understood that whenever the soil became sufficiently dry, under cover, it was used over and over again, and it will be then credible that the whole quantity did not weigh 3 tons. Two tons were sold to neighbouring farmers, and I purchased about 1 cwt. of the remainder, of which I am able to send you a small box. It is quite inoffensive, and might be handled by a lady in potting flowers. Without disparaging Dr. H. C. Bird's plan for towns, pray contrast the one simple process I have mentioned —the mere mixing of exuviæ and dry earth—with the 13 heads of his (no doubt able) treatment of liquid sewage, where it cannot be taken to the fields direct, or coarsely filtered, and I venture to think you will advocate the adoption of the 'dry way' by every man who does not live in a street. Supposing even in any street persons were bold enough to try it (and pray let me repeat that I acknowledge all the difficulties of its adoption in a town—I only imply that it is possible), I will advance that, according to the above result, six families might, by one visit among them of one dust-cart in five months, be supplied with dry earth and relieved of a valuable product.

Dr. DAUBENY said the Mayor of Coventry had informed him that in that town the nightsoil was removed about two miles from the town, and was deodorised by street sweepings, and the expense and the proceeds about balanced each other.

In the course of the discussion the opinion was expressed that precipitation destroyed the value of sewage as manure, and that the only plan of making the ordinary sewage of towns available for agricultural purposes was to distribute it on the land in a liquid form.

(2.) Dr. J. HUGHES BENNETT, of Edinburgh, commenced by stating that this country annually lost about 10,000,000*l.* by the non-utilisation of sewage, and if account were taken of the cost of the works required to carry off the sewage, the extent of national loss might be doubled. The difficulties in the way of the application of sewage to agriculture arose from three sources —1. From the large admixture of sewage with water. 2. From certain ideas of its prejudicial influence on health. 3. Owing to the nuisance which it was thought by some would thereby be occasioned. All plans for the utilisation of this important material were more or less interfered with in consequence of the assumption that there was something pestiferous or unhealthy in the fermentation, exposure, and smell of sewage. He agreed with Mr. Rawlinson, who was examined before the Committee of the House of Commons, that the health of the people was the first consideration, but he could not agree with him that the risk to public health from the utilisation of sewage was such that it was better at any cost to remove it from towns and throw it into the sea. To prove the fallacy of that opinion, and remove some of the difficulties surrounding the question, he laid down the following propositions—1. That atmospheric air strongly impregnated with odours of various kinds was not necessarily injurious to health. 2. That atmospheric air without smell was often most deadly. From these two propositions he inferred—3. That there was no necessary connection between smell and deleterious gases. Smells by themselves might be considered as non-injurious. They were not even a nuisance to those who lived among them. The sense of odour was very easily paralysed. 4. That deleterious gases arising from excreta were injurious, being inhaled from pent-up drains. 5. That emanations from drains and sewage entering running streams were in no way dangerous. 6. That typhoid fever could not be proved to originate from excretal fermentation. 7. That the improvement of drainage by costly works did not necessarily diminish the amount of disease. Typhoid fever in Edinburgh appeared to follow improvement in drainage. Improper food and drink had much to do with fevers. The worst effects were produced by bad water. Decomposed animal matter, by means of cesspools, found its way into our wells. The general conclusion at which he arrived was this—that, so far from sewage being poisonous and injurious to man, it was a source of growth to the vegetable, and through that to the animal, world.

Dr. LIVINGSTONE begged leave to enter a protest against being thought an advocate for stinks; but it was most important to know that stinks had not been the cause of fever in Africa. This was the conclusion to which his experience led him, and Dr. Kirk, his companion, who was present, could testify the same thing. He would give one instance in which they had particularly noticed that a very bad smell had no effect whatever on health. When coming down the Shire last February they found, the river being in flood, that a large portion of water ran out of the river into a marsh about 10 miles broad, and the same water passing through the marsh fell into the river again at a point lower down. When the water came out of the marsh it was literally as black as ink, and had a most abominable smell. Part of the Mission was obliged to remain all night in the midst of this abominable smell, which was so strong they could not for a moment forget its presence. On the following morning they found that the white paint of both the vessels Pioneer and Nyanza was quite black. He thought they must reckon on a smart touch of fever, and inquired among the natives whether fever had followed it. They said no disease followed it, and such was actually the fact. They had no fever in consequence of spending the night in that atmosphere. From all his other experience he came to the conclusion that whatever the fever might be it did not come from bad smells. He thought bad smells ought to be got rid of as soon as possible; but it would be a great mistake if medical men or others supposed from the presence of a bad smell there must be fever.

RELATIVE VALUES OF FOODS.

[The following notes or extracts from Dr. Voelcker's Paper on the Chemistry of Food read before the London Farmers' Club are appropriate now.]

WE require constituents (1) which supply the muscle of animals; (2) which produce fat and feed respiration; and thirdly, constituents containing bone materials and mineral and saline matters. But as regards the proper admixture in which we should have these constituents no general rule can be laid down; because the wants of different kinds of animals, like the wants of animals of different ages, are so various. Fattening animals require food which is less nitrogenous and more abundant in fat-producing constituents. For the successful production of milk, we require food richer in nitrogenous matter. The most concentrated food that farmers are in the habit of using is oilcake. No doubt we can fatten animals on Linseed, if we use it judiciously, giving not more than 2 lb. per day per head in the case of bullocks—if we give it with food that is rather binding, with Bean-meal, straw, and hay. But Linseed-oil is too expensive. It only produces fat, and we can obtain fat from cheaper sources. Linseed-cake will be found more economical than Linseed itself. But Linseed-cake is often adulterated with bran, which is of inferior value, and is, moreover, liable to get mouldy.

In Cotton-seed cake, if made of the whole seed, the excess of the nitrogenous matter in the kernel is diluted with a substance like sawdust. Hence, undecorticated cake has frequently been found to produce a better practical result than decorticated; nevertheless the latter cake is the more valuable of the two. We ought to give decorticated cotton-cake with a good deal of straw, inferior hay, and roots; in other words, with some bulky material. It is of great importance, especially in the case of ruminating animals, to feed them with bulky materials, in order to fill out the stomach; and in this way we may make good use of straw and inferior hay. Cotton-cake by itself is too binding in its qualities; but mixed with Linseed-cake in equal proportions, it will, I believe, be found as useful as Linseed-cake given alone. Ground-nut cake decorticated is well fitted for young stock; but it is not so well adapted for fattening stock, on account of the great excess of nitrogenous matter which it contains. Leguminous seeds, Peas, Beans, and Lentils possess an analogous composition; but there is a good deal of difference in their relative digestibility. Lentils are more easily digested than Beans and Peas.

Barley-meal is justly valued as a fattening food for pigs, and as a finishing food for every description of stock. It is rich in starch, which is changed into fat. Wheat, when cheap, is perhaps still more valuable than Barley-meal. It contains about the same quantity of nitrogenous or flesh-forming, and a larger proportion of fattening material. Indian Corn is not so rich in flesh-forming constituents as Barley-meal or Wheat, and for this reason it is an exceedingly good mixture for such food as cake or Peas, or Beans or Lentils, which are rich in flesh-forming materials. Animals fed on Indian Corn exclusively get fat very quickly; but the substance of which the cellular tissues in which the fat is deposited consists, not being supplied by Indian Corn in sufficient quantity, is insufficiently formed, and the result is that the fat which is deposited in pigs or other stock is too soft. Bacon fries out, runs to waste, and becomes flabby. Rice dust is but a poor kind of food—inferior to Barley-meal. It is deficient in flesh-forming materials. Hay and Grass from irrigated meadows is inferior in point of nutrition to Grass from old pasture or herbage which is grown more slowly. A larger proportion of nitrogenous matter is found in the produce of irrigated meadows; but it is very questionable whether the nitrogen that occurs in the produce of irrigated meadows really exists in the form of albumen. Straw is not so universally used as food as it deserves to be. It is especially useful when it is not allowed to get over ripe. Oat straw is in this respect a most valuable description of food. It is wonderful how much further concentrated food, and a limited supply of roots, may be made to go, by giving along with the pulped and sliced roots and Linseed-cake, broken up into small bits, or made into a jelly, a due proportion of well-harvested straw cut sufficiently fine into chaff. Oat straw is the most valuable description of straw among the cereals, but it is surpassed in nutritive power by Pea straw, and perhaps also by Bean straw, which, however, may be exceedingly good or exceedingly bad; it is entirely a question of harvesting. Pea straw is the most valuable, next to that Bean straw under ripe, then Oat straw, Wheat straw, Barley straw, and lastly, perhaps, Bean straw over ripe. With respect to green crops, the nutritive property depends upon the condition in which roots are harvested, very much on the amount of sugar, and not on the amount of nitrogenous matter which they contain. The old-fashioned way of testing the flesh-producing properties of roots, namely, by taking a bite at them to see whether they are sweet or not, is the best way of ascertaining whether a Mangel or a Swede is the better food. In conclusion, I would observe that quite independently of the composition of food, its nutritive qualities are affected by the condition in which it is presented to animals. A mouldy condition is injurious; an imperfect mechanical condition is often detrimental. In this respect the cooking of food deserves attention. It will frequently enable us to make inferior with more nutritious food, and the blending of food which separately would never be given very largely will enable us to make the best of our feeding materials. In this point of view malt well deserves our attention. I do not think malt will ever displace Barley-meal; I do not think it will ever be as much used as Barley-meal in feeding. But as an addition to inferior kinds of food, very good use may be made of malt. In the same light, perhaps, are some of the condiments to be regarded. I am not an advocate for the use of condiments, at all events not the use of purchased condiments. If farmers want condiments, let them make them for themselves. There are some condiments which may be used with advantage, but I have no hesitation in saying that every intelligent farmer can make his own condiments much better, and, by judicious blending of food, obtain a better practical result, than by purchasing prepared food.

Home Correspondence.

On the Cultivation of Wheat.—In your Paper some weeks ago there appeared an article written by Mr. Wilkins, Wix Parsonage, on "Cereals and Germination." In the course of his remarks he had occasion to make some wonderful statements on the cultivation of Wheat on the same land 10 years consecutively, and from other lands he has rented for 17 years, during which period he had reaped 13 Wheat crops, the average of which was 44 bushels or 5½ quarters an acre. Mr. Wilkins further stated that there did not appear the least diminution in quantity, the straw not less than 6 feet high, and so strong that there was no fear of it being blown down by a storm, and the quantity of seed used did not exceed 2 pecks an acre. According to general experience in the cultivation of Wheat, farmers do not attempt two crops consecutively. I have known a second crop tried, but the last always proved a bad one. I feel certain it cannot be the natural quality of the land which can supply food for 10 Wheat crops consecutively, according to the present mode of cultivation, without showing a falling off in quantity. Mr. Wilkins must, therefore, by the application of some kind of manure not generally known, restore to the soil that which the previous Wheat crop had consumed. If this could be done at a reasonable expense of manure, there would be no necessity for that regular formula in the rotation of crops, so as to keep the land in a constant healthy condition. This desirable object Mr. Wilkins has evidently accomplished, and left his neighbours lagging behind, pursuing the old system of regular course of cropping before they can restore the land to a proper condition to produce another crop of the same kind. Take for instance Red Clover, a most valuable crop to a farmer if a good one, but before he can get another crop from the same ground it takes four, eight, ten years, and sometimes a longer period. What, therefore, is the nature of the food upon which each crop feeds and extracts from the soil? Ability to produce any quantity of Wheat crops consecutively may prove a key to that food upon which other crops feed, and thus farmers may be enabled, and allowed without any restriction, to grow such crops as are the most profitable without any fear of impoverishing the land. *H. Harrison, York.*

Capillary Attraction and Land Drainage.—I see that this question is again raised in your Paper of Sept. 10. It is overstating the case to say that a knowledge of capillary attraction "is not of any practical utility to those superintending draining operations in dense homogeneous clays," simply because such knowledge will make us understand with what water the clay will part, and that which it will retain. If what I have said is of any value on this point, it may be found at some length in the *Agricultural Gazette* of July 25, 1853, p. 473. I merely wish now to record an expe-

ment which appears to me a good illustration of the quotation from Mr. Donald's pamphlet on land drainage, with which "A Roxburghshire Rustic" begins his letter. I placed 18 pieces of quite dry chalk, of various shapes and sizes, in a glass tube 1 inch in diameter and 2 feet 6 inches long, immersing one end in a solution of salt and water; though the point of contact between the pieces was very limited, they all became saturated in due time with the liquid, the salt appearing in the form of efflorescence, especially on the top piece, due of course to evaporation after it had been raised through the pieces of chalk below. *J. C. Clutterbuck, Sept.* 14.

Wheat-carrying by Grant's Portable Railway.—In your comparison of the cost of carts *versus* Grant's portable railway for carting corn you are quite correct as far as the experiment went, but the trial was not against time or cost, but to ascertain to a certainty if the rails could be applied advantageously for the purpose of carrying corn to the stack. I knew that the very same hands would be required to pitch, load, and stack as in the ordinary mode of carting and stacking, but there were other things to be proved, viz., whether the trucks with the wheels so near together would travel with a load of Wheat-sheaves without turning over; also whether the rails could be shifted so often as required without hindering the men pitching, &c.; and to be satisfied upon the above points I selected for the experiment a very uneven, irregular-shaped, and narrow field, in order to put the rails thoroughly to the test, and the way in which the work was accomplished quite surpassed my expectations, and I am now quite convinced that the railway is not only highly valuable in getting off roots, carting on manure, and for many other purposes on a large and tolerably level farm in wet seasons; but that it may be applied to carting corn in many places to great advantage. Now as to cost: you say "Men are dear and horses are cheap," but where horses are reduced through steam cultivation, and upon large farms, the rails must prove advantageous in filling up the deficiency in horses, as the practice is now generally adopted of stacking the corn near where it grows. The plan you name of carting corn by the acre is the proper one with the rails, and as the question resolves itself into the cost of the additional horses required for carting in the ordinary way against the cost of a man or man and boy to shift the rails, my firm opinion is the result will be found in favour of the latter; give the men 2*s.* 6*d.* extra in lieu of every horse saved by the use of the rails, and I have no doubt they will prefer them to the ordinary mode. Again, in many seasons, from the effect of wet, the corn is nearly all cut on a farm before carting commences, and then, when fine weather sets in, the rails would be found a great assistance, as hands would then be more plentiful than in the midst of cutting. Feeling that I had not properly explained the nature of the experiment, I trust you will take that as a sufficient excuse for troubling you with this long letter. *William L. Hubble, Barn Hill, Hunton via Staplehurst, Kent, Sept.* 13.

The Destruction of Grubs.—In all my searchings for them during the last week, when in two days I found a quart mugful (about 4000 in number), off 40 rods of land, or about 100 on each square rod from various plants, I have not found one feasting by daylight. By the use of a lighted lantern during the night-time, I have discovered them on the tenderest and youngest plants of Turnips, Cabbages, Broccoli, &c., gnawing them right off, or boring a hole through the plants just below the eye or heart, leaving only a short stump; then, when gorged, burying themselves just under the plant, about half an inch, which it last devoured, till the next night, when I have easily and as surely found and taken them in their haunts, which were indexed by a gnawed-off leaf, or the entire plant appearing withered. The grub does not burrow from plant to plant by day, as I believe most people have hitherto imagined; but from fear of some deadly enemy by day, lies dormant and hidden till night comes. I find the grubs feed upon various weeds, which accounts for the formidable havoc they are now making more than usual to all cultivated plants in the present season planted on barren ground, since unfortunately, if I may be allowed to use the expression, from the late severe drought there are but few weeds (their natural food) for them to live upon. On a patch of early Wheat planted this autumn at my favourite time, September 1, exactly three grains in each hole, to admit of various casualties it might be subjected to before and after the plants were up, which was in six days, not one missing; two days after, to my dismay and disappointment, I observed considerably more than half had been clipped off by those creatures during the night, and in nineteen cases out of twenty where I found the tender blade prostrated, there, as sure as fate, I found the grubs, sometimes diminutive, and others big and fat, hidden in the ground very close by. *A. H., Maldon.*

Societies.

AYLESBURY: *Mr. Disraeli on Agricultural Topics.*—At the annual meeting of the Bucks Agricultural Association, Mr. DISRAELI delivered an agricultural address, from which we make the following extracts:—

(1) I can upon this occasion congratulate you upon an event which, upon the whole, is the most important that can occur in a country—that is, the harvest. I congratulate you that you not only have a good harvest, but a very good harvest. My opinion is, from all I can learn, and from something which I have observed, that it is a capital harvest, and that the general result of the harvest has never been done justice to by the press, and, for some reason or other, there was an apparent attempt to persuade the people that Nature and Providence had not been so bountiful to them as they ought to have been. It is true that the root crops have not been so successful; but even the root crops are not so bad as many supposed them to be, after all. I want to impress upon you what an important event a good harvest really is. It is very expedient that the country should contemplate what is the effect upon its fortunes of the difference between a good and a bad harvest. A bad harvest is, in fact, a subtraction from the national wealth, which perhaps may be equal to the whole amount of those gold mines of which we have of late heard so much.

(2) There is another point on which, from what I have seen to-day, I cannot help touching, and that is a production which of late has very much interested farmers, and that is wool. That now is one of the most important features in our agricultural life, and is a source of very great profit to those who cultivate the soil. I cannot help being surprised that in this county, especially in South Bucks, with which I am more intimately acquainted, our flockmasters continue only to breed flocks which produce short wool. The great prizes are given for long wool, and I cannot understand why we continue to produce merely short wool in the county of Buckingham. I should have supposed it would have been very easy to cross with some of the Gloucestershire and Leicestershire breeds, and to produce a very choice long wool, with some of the advantageous characteristics of all this short wool, and when I look to the relative prices of long and short wool, I am surprised that we still go on adhering to the system of merely breeding Downs and producing short wool. I mentioned this fact to a friend of mine, a neighbour, who has a considerable flock. He perfectly agreed with me, and thought we ought to cross the Downs with the Cotswold. But, he said, "the great price of wool has been occasioned entirely by the American civil war, and I have just read in the newspapers that there is going to be peace in America." I could not help saying that I did not entirely agree with him that the high price of wool was mainly occasioned by the civil war in America. The tendency of late has been that all articles of raw material, particularly wool, have been rising in price, and when I look at the fact that mixed fabrics, that make the industry of Yorkshire, are becoming more popular in the market, it is clear that wool is an article of raw produce for which there is a greater demand, and if there had been no civil war you would have had a high price for wool, and it would have been the best wool; and therefore, to bring the point to a practical issue, the result of my speculation is that I shall cross my Downs with Cotswolds, and I do think that it is a deficiency on the part of the faamers of Bucks in adhering so closely to the old system of merely breeding Downs.

(3) There is another class of agriculture on which I should like to say a few words, and I will tell you my views on the subject, and that is with respect to the condition of the labourer. I think the condition of the agricultural labourer is one which requires and deserves great public consideration. I am not entering at all into the question of the remuneration which he receives. The wages of the agricultural labourer, like every other class of labourers, are totally independent of legislation. I consider it of the utmost importance that agricultural labourers should be well housed. In my opinion it is more important than a question of food or raiment. I believe we all eat quite enough, and many of us drink a great deal too much, but this I will venture to say, that no man can be too well housed. A perfect sanitary condition as regards habitations is one which, while it preserves and defends the inhabitant from the inclemency of the seasons, allows him to breathe pure and unvitiated air. For these reasons it is the truest source of health and wealth. It is, therefore, a matter of great importance to the farmers that the agricultural labourers should be well housed. There are great difficulties in the way, and the first difficulty is that it is an investment of capital which does not bring in directly an adequate return. This is an objection which I consider fallacious. The point is, what do you consider an adequate return? Ask the farmer whether he would like to have on his farm his labourers in healthy habitations or living two or three miles from the acres which they cultivate, in miserable hovels which engender sickness and weaken their energy and strength. The farmer will say directly, "Give me labourers who reside on my acres and reside in houses which allow them to come to their labour full of energy and vigour, energy and vigour given by sound sleep and pure air." The farm will then be more valuable to the tenant, and if so, it must be in the long run more valuable to the proprietor, and it does tell upon the rent. In this way the latter will find an adequate return for his investment. I do not say that this is an easy difficulty to combat. It is a great one, but it must be met. The question, however, is usually argued as if the proprietor was called upon suddenly to sweep away all the miserable tenements that he has inherited, and to cover his estate with model cottages. That is impossible, for you cannot, in an instant, effect this great change. You cannot unhouse the whole peasantry from an estate at once. It can only be done gradually. Every man cannot do what the Duke of Northumberland has done, but every man can do something. He may build a few cottages, or repair others. You ought to keep before your eye, clearly and closely, the object you have to attain, and avail yourselves of every opportunity of accomplishing the result. The question is becoming both in town and country one of paramount interest. The greatness of the country depends on the race that fills it, and, whatever our ancestors may have done to make the country great or famous, whatever liberty they may have acquired, whatever wealth they may have accumulated, if the race becomes inferior, you lose all those results and all those blessings. It is a question to which we must give our minds. I do not touch on the scenes of life in our great cities. They are familiar to all. They prove that wretchedness and crime are co-ordinate; but, while we deplore the condition of our working classes in our great cities, it is impossible any longer to shut our eyes to the condition of our agricultural labourers, and it is our duty to set an example on this subject. I was reading lately in an old book written more than 200 years ago, and I was surprised to find that this question, which is supposed to be one of modern origin discovered by the philosophers of the 19th century, had attracted the attention of society nearly 300 years ago. Nearly 300 years ago, to the honour and glory of the Church, intramural sepulture was forbidden. I may, then, say that there is nothing new under the sun, and what we look upon as the result of enlightenment and progress was practically considered a considerable time ago. A very great scholar observes that in his opinion the declaration of the wisest of mankind, "Vanity of vanities, all is vanity," was not a misprint, but a mistake of the copyist, and that he believed the words really were not "*Vanitas vanitatum, omnia vanitas,*" but "*Sanitas sanitatum, omnia sanitas.*" Now, I quite agree that it must have been a misquotation of the words of the wise King of Israel, and, if so, that this would have constituted one of his best claims to be considered the wisest of mankind. I am willing to admit that there has been some improvement in the condition of the labouring class. I am sensible that as much fault lies with the labouring class themselves; and it is for this reason that I intend, with the permission of the committee, to offer a prize of 5*l.* for the cottage that is kept in the best condition. I think it has been said before, to show the uselessness of such prizes, that what we want is new cottages, and not rewards for keeping old ones in good order. I think that criticism is quite superfluous. What we want is to bring the attention of the people themselves to the subject. If you offer a prize you awake the attention of the community to the subject. They try to obtain a prize, and although only one man obtains a prize, in the research and pursuit of the prize they discover such sources of delight and such new causes of happiness and content that you educate them to that cleanliness and order which you want to instil into their minds. Therefore, I am of opinion that a prize of that kind, if I am permitted to offer it, will not be fruitless.

TIPPERARY.—At the Annual Meeting and Show of this Society during the past week, Lord STANLEY presided, and spoke thus of Irish Agriculture:—

"He might be too sanguine, but he could not bring himself to take a despondent view of the future of Ireland, and especially of that part of it. Recent bad seasons had operated against the farmer, and from all parts of Ireland, but especially from the South and West, there has been of late years a continuous outflow of emigration. They had no security against the recurrence of bad seasons, and the best course they could adopt was to guard against, in popular phrase, having too many eggs in their basket, or, in other words, placing too much dependence on any particular crop. The present year, happily, was the most prosperous since 1860, and the drought that prevailed had not been half so severely felt in Ireland as in England. If he thought that the drain of the population were to continue for any considerable time, that the country was to become a mere grazing-field, and cattle were to take the place of men, he would not be able to express himself hopefully, and, as an Englishman, he should deeply lament that the empire was derived of so many stout hearts and strong arms, so much capacity for labour and the heroic courage which had been tested long ago, and might be required again. But his reading and observations led him to doubt that the tide of emigration would continue to flow at the same rate, and, although he knew that a country so vast as America must always attract numbers to its shores, the facts of the war raging in the United States, where there was a Government expenditure of about half a million a-day, and the indications which he believed to exist of the approaching termination of that tremendous conflict, induced him to believe that when the war ceased, the release from the military service of about a million of men would reduce the demand for European labour. Moreover, he saw with pleasure the gradual increase of wages in Ireland, which, as it progressed, must remove many of the temptations to emigrate. As men became abundant in America, wages would diminish; as they decreased in Ireland, wages would increase, and thus, before long, the disparity which existed would be in a large measure removed. This led him to the reflection that the low-paid labourer, which had been the rule in Ireland, was not always cheap, and that the well-fed and well-paid labourer was likely to do more work than three men dieted and remunerated on the old scale. Ireland undoubtedly was a prolific country. Within the past few days he had seen many cabins where, alas, the occupants had few of the necessities and none of the comforts of life, but in every cabin some children were sprawling upon the floor. He might be asked, why, then, if the population of Ireland had fallen, that of England had increased? The reason was that England was a manufacturing country. In the English agricultural districts the population had also decreased, and thousands had been attracted to the large manufacturing towns. It was a significant fact that there were about 100,000 Irish living in and around Liverpool,

and the calculation was that there were over 800,000 Irish in the manufacturing districts of England and Scotland. People ought in fairness to recollect that these figures did not represent a movement from this country as a whole, but only a movement from one part of the empire to another. He, for one, hoped that the day would be very far distant when an Irishman would not be received with welcome in England and an Englishman in Ireland. His Lordship referred to the increasing cultivation of Flax in the south of Ireland as an experiment which might prove successful, which, at least for some years to come, should not be treated as any other than an experiment. They should not put their hands further than they could draw them back. He wished to end as he began. With respect to the value of land, he thought it ought to rise here, as in England and Scotland. The Irish climate, if damper, was milder, the soil was more fertile, the beauties of the scenery more frequent and remarkable. When the days of violence and outrage were over, when life and property were as safe in Tipperary as in Middlesex,—and that time, notwithstanding some parting indications of angry feeling, he rejoiced to believe was not far distant—the natural resources of the district would begin to be fairly developed. He knew Tipperary as long as he knew anywhere; he had seen great changes and expected to see many more. He believed that Ireland was deserving to be prosperous and happy, and it was in the belief that such agencies as that would contribute to so great a result that he asked them to drink "Success to the Tipperary Farming Society."

Reviews.

How we Managed the Night School. 1863. By a Clergyman's Wife. W. MacIntosh, 24, Paternoster Row.

We have here 15 small pages, describing a success which appears to have been attained without the use of any unusual means, and by the aid, so far as appears, solely of the female members of the clergyman's own family.

Why did none of the parishioners co-operate? Was it because those who should have co-operated were unwilling? Or was it because their co-operation, accompanied as that would necessarily be, by divided, or rather a shared authority and responsibility, was not desired?

Notes on Northern Farms and Farming. By John Wilson, Esq., F.R.S.E., Professor of Agriculture in the University of Edinburgh.

These notes, which were written by Professor Wilson for the *Newcastle Daily Chronicle* during the meeting of the English Agricultural Society last July, have here been collected; and will be valued by many readers out of the district referred to, for the picture of energetic agriculture and vigorous management on the part of both landlord and tenant which they describe.

The Laboratory Guide for Students of Agricultural Chemistry. Arranged by A. H. Church, M.A., Professor of Chemistry in the Royal Agricultural College.

A useful and explicit Manual of Instructions, which is thus sufficiently described in the Preface:—

"In the Qualitative part, not only all the rare elements, but also all those that are not necessary constituents of any agricultural material or produce, are omitted: in this way the processes of analysis have been simplified.

"In giving Quantitative methods, examples have been selected from the most important substances likely to engage the attention of the agricultural analyst. By a reference to the Table of Contents, it will be seen that the examination, not only of various kinds of cattle-food and manures, but also of waters and soils, is included.

"The 'Manual of Qualitative Analysis,' by Mr. Northcote and myself, has furnished some suggestions for the arrangement of the present work, while the processes adopted are, for the most part, those in common use in chemical laboratories. The plan of analysing superphosphates is due, I believe, to my predecessor in the Chair of Chemistry at Cirencester, while my assistant, Mr. Robert Warington, jun., has made considerable improvements in the process for determining phosphoric acid, &c. in coprolites; his aid has also been most important in testing other processes, and in collecting and arranging the materials for the book.

"The 'Guide' was intended primarily for the Royal Agricultural College, as a help in carrying out the system of practical instruction in chemistry, as applied to agriculture, there pursued. As no other complete and special organisation of the kind exists in this country, I thought the publication of part of its system might not only prove of interest, but also render a wider service."

Miscellaneous.

Health in the Country.—Family health, in a rural home—whether it be a mansion or a cottage—is—first, an inheritance: then it is the product of out-of-door occupation, and of sufficient revenues, and especially of an unrestricted command of the plainest food. As at the lodge, so at the Hall, prodigious breakfasts are consumed; no breakfast, no man: this is a hygienic canon. As to the dinner at the lodge, you might not fancy the bailiff's bill of fare; but neither he nor his family know anything about indigestion; and what is far better than this, neither he nor they know or think anything about digestion: they have no gastric consciousness any way. Family health in the mansion, or at the lodge, or in the cottage, is the normal condition of those (exceptions not forgotten) whose lot it is, and has always been, to imbibe life from sunshine, to breathe life in uncontaminated air, and to convert an abundance of aliment into chyle. No manual of health, no directory for reaching the ninetieth year, is needed by any, whatever their rank may be, whose lot includes the conditions above-named. If it were asked which of the three conditions may claim the foremost place, there might be a difficulty in deciding between Food and Light; none in rejecting the claim of pure air to the first place. I heartily wish that we might, to any good purpose, or to our own satisfaction, extend our walk from the bailiff's lodge to the cottage of the farm labourer, such as too often it is. Family health there might be in the cottage; but we find there, alas! the indications of a state of things which it is indeed pain to take notice of. Leaving the labourer's cottage, for the present, we go on to Long Acre field, where the plough is agoing. What sublime cattle are there! The horses at plough are genuine "Suffolks." I know them at a glance: they would do no discredit to one of Barclay & Perkins' drays: they stand 17 hands:—round in the barrel, clean in the shank, neat at the fetlock, powerful over the withers; and as to the hind quarters of these horses, such they are that you might cut a hippopotamus out of them and to spare. But now what shall we say of the poor fellow that is grasping the plough stilts? he staggers and hobbles along the stitch as he goes: manifestly he does not possess either the bodily weight—the mass, or the bulk of fibre in the arms, which his difficult task demands. There must be a fault of system here:—a great and very damaging misunderstanding of the farmer's own interests makes itself conspicuous in this instance. The farmer, if he could but understand what so much concerns him to know, would see to it that the cattle and the man shall be co-efficients; which they are not. If in explanation of this pitiable anomaly it is averred that the thoughtless fellow drinks his week's wages:—if it be so, then there is no help for this misery; or none concerning which this should be the place to discourse. If we return to the cottage, and if the man, in fact, is sober, and the wife is careful, we discover, in our talk with her, that, though they do just get on, most part of the year, there are weeks and weeks during which all that can be said of the family is, that they do not perish. At such times the man loses substance: the wife and the children become skeletons, the children show sandy heads of hair, and hollows over the collar bones. Then when work in the fields is procurable, the mother and the girls undertake it, immensely to their damage in every sense. If you talk to the farmer about his horses, and you say—well, it is certain that these splendid beasts of yours live well all the year round—I see you allow them Oats enough, whether they work or not, he shrewdly replies, "I never stint my cattle in Oats, for if I was once to let them fall out of condition, by grudging them a sack of corn, then, for every sack I grudged them, it would cost me three sacks extra to get them up again." It is just so as to these splendid greys:—but oh the dull brains, not only of farmers but of squires also. Do let somebody go round the country on a mission from Oxford to teach them logic. It is true that the farmer does get his land well ploughed for the principal Wheat, in October, because at that time the men are just out of harvest, and they have been in plenty for some weeks; but when the year opens, and the land is to be prepared for the Lent corn, and when the manure is to be carried, the men that should do it have just survived the winter; and in this time they have fallen out of condition, they have lost fibre, lost bulk in the limbs, lost the power to render a full day's work for their wages. A mistake! a mistake! through and through, there is here in our rural economy. The instance of the farm-labourer might seem to contradict what I affirm to be the law of health, but it does, in fact, confirm it. It is still true that 12, 14, 16 hours of the 24, spent out of doors, goes far in securing health; and the efficacy of this simple method is shown when conditions, the most unfavourable, are by this means passed through so well as they are. But alas! not merely is the diet of the labourer and his family often insufficient in quantity, but the bread that is distributed over a rural district from the village or centre-town is often very bad; the groceries dealt out by the rural shops are of inferior quality, and would be dear at half their price. Then the roof of the labourer's cottage has long been out of repair. If only a two or a three days' work were afforded, this time would also suffice for draining off from the back door a bog of filth. The man and his family do live, it is true, notwithstanding all these drawbacks—so great is the efficacy of out-of-door life. *Isaac Taylor, in Good Words.*

On Manuring.—Climate and present prices render it desirable that some modification should be made in our cropping; less corn and more stock food. The question occurs, Is it not practicable to lay down some of the poorer soils that yield a poor return as arable land? I am told that in many cases Grass will not last more than three years, and I am not here to doubt the statement; but I would ask whether a fair trial has been given? if the land has been properly prepared, and the soil in thorough cultivation and good heart? secondly, if a careful selection of the most suitable seeds has been obtained regardless of expense; not merely a lot of bad Clover and Rye-grass, but some 10 or 12 different kinds of Grasses, with four or five of the leguminous plants? Such a mixture will probably cost from 25*s.* to 30*s.* an acre. The character of the herbage will be influenced by the nature of the soil and the manures we apply; some particular Grasses will be developed at the expense of others; but, by starting with a considerable selection, we increase the chances of obtaining a thick sward. As to sowing the above with or without a crop, is a question that must be decided by experience in a district. I am inclined to believe you will succeed best by sowing alone, and perhaps adding 3 or 4 lb. of Rape; this will be especially the case if the soil is at all light or spongy, as the feeding the Rape in autumn will tend to give firmness to the soil and prevent injury from frost. Having prepared the soil by liberal manuring and thorough cultivation, extending to both soil and subsoil; and having secured a fine and firm surface, the seeds may be sown and brushed in, and the land kept firm by occasional rolling. We have got a good start: how is it to be maintained? At first we may expect a luxuriant growth; the second year will be equally good; about the third year a decided falling off is visible; many of the Grasses appear to die; much of the Clover disappears. This deterioration will vary much, according to the natural qualities of the soil, but in all cases it occurs; and, in almost all cases, if liberal and judicious treatment is employed, the sward will recover, although it may alter its character. We may have a more luxuriant growth than can be maintained, and the permanent sward will not be so good. What would be the state of our crops if no manure was applied? And, if therefore, under the most favourable circumstances, when you can cultivate, mix, and expose the soil to the atmosphere, you could not long succeed without manure, how, in the name of common sense, can you expect that Grass land should, year after year, produce good herbage without assistance? Before proceeding to apply manure the soil should be examined for lime, nitrogen, and mineral matters, as the phosphates and alkalies; the herbage in a natural state would often determine this. If we find a fair proportion of leguminous plants, Clover, Trefoil, &c., we may conclude that both lime and phosphates are present; if, on the other hand, these are absent, and the Rye-grass, Cock's-foot, &c., are strong, we may safely say that nitrogen is present in excess of the mineral matters; and lastly, if the Grasses proper are weak, and the leguminous plant deficient, we may be sure that the soil is wanting in most of the elements of fertility. Farm-yard manure must be applied, and, if possible, repeated every four to five years. Bones, either fresh or partially dissolved, with from one-third to one-fifth their weight of sulphuric acid, and a small quantity of either guano, nitrate of soda, or sulphate of ammonia, mixed up in a compost, with plenty of soil, to which lime may be added, or withheld, according to circumstances, would afford a capital dressing, and the more bulky our application the better. Five to 6 tons of rather fresh manure; 4 cwt. of partially dissolved bones, or an equivalent of fresh bone dust; 1 to 1½ cwt. of Peruvian guano, or nitrate of soda; 1 to 2 cwt. of salt. Such a compost applied during the winter, well spread and brushed in, would, I am convinced, have a most beneficial effect on young Grass; and whether we mow or feed, a dressing of some sort, the best we can give, should be put on every third year. The winter feeding of roots by sheep eating corn is an excellent method of improving Grass; indeed, the means are easy; the results are not so easily proved as with a crop on arable land, and consequently farmers are too often unwilling to incur the outlay. I am certain that nothing would pay them better. In conclusion, allow me very briefly to sum up some of the chief points that have been touched upon. 1. It was shown that in all cases where permanent fertility was the object, farm-yard manure must form the basis of our applications. 2. That the conversion of fresh into rotten manure, when properly managed, was not attended with the loss of any valuable constituents; but, on the contrary, the manure being rendered more concentrated and soluble was for many purposes much more valuable. 3. That the use of fresh or rotten manure was principally a question of soil; strong soils requiring the former, whilst on light porous soils small dressings of rotten dung immediately to the crop were desirable. 4. Artificial manures were to be looked upon more or less as stimulants, highly valuable to supplement farm-yard manure; and, by calling out the energies of the plant, enabling it to obtain an increased amount of food from the soil. 5. The importance of knowing the value of the different ingredients of manure and buying upon a guarantee or analysis was insisted upon, and instances of fraud pointed out. 6, and lastly. The advantages of a more liberal management of Grass land was recommended. *Professor J. Coleman, at Wigton.*

Cochineal.—Our cochineal was found to be already in use in its native Mexico when, early in the 16th century, the Spaniards arrived there; but for 100 years men were not sure whether it was an insect or a seed. The Cactus on which it is usually bred is called the Nopal, whence the plantations are known as nopaleries, and the chief part of the cochineal of commerce is produced from small nopaleries belonging to Indians who are very poor. These people establish their Nopal plantations on cleared ground, on the mountain slopes, two or three leagues from their

THE GARDENERS' CHRONICLE
AND
AGRICULTURAL GAZETTE.

A Newspaper of Rural Economy and General News.—The Horticultural Part Edited by Professor Lindley.

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MADAME FURTARDO (SOUCHET).—Very large and open flowers, disposed in long and beautiful spikes; very fine rose, diminishing to a light carnation, very strongly flamed with deep rose carmine. Extra fine varieties, 7 francs each.

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MEYERBEER (SOUCHET).—Large well formed flowers, disposed in very long spikes; brilliant Nasturtium red, flamed vermilion, spotted amaranth red; perfection. Vigorous and splendid plants, 7 francs each.

EUGÈNE VERDIER, FILS AINÉ, NURSERYMAN, 3, Rue Dunois (late Rue des Trois Ormes), Boulevard de la Gare d'Ivry, Paris.

NET PRICES to the TRADE (without any discount).

NEW ROSES for the AUTUMN 1864.

Awarded a Silver Medal of the 1st Class in July last. Raised in the Establishment from Seed chosen from a considerable number.

Price, each variety, 25 fcs. Five plants of one variety, 100 fcs.

HYBRID PEPETUALS.

AUGUSTE RIVIÈRE.—Vigorous plant, flowers full, 9 to 10 cent. in diameter, globe-shaped, very regular, of a fine bright carmine red, reverse of petals paler, bordered whitish on the edges; very distinct, remarkable variety.

COMTESSE DE PARIS.—Vigorous plant, full flowered, 10 to 12 cent. in diameter, fine bright rose, whitish edges; very fine variety.

DOCTOR ANDRY.—Very vigorous plant, flowers full, 12 cent. diameter, perfectly imbricated, deep carmine red, very bright; variety of the first merit.

GÉNÉRAL D'HAUTPOULT.—Vigorous plant, flowers full, of 9 to 10 cent. in diameter, globe-shaped, 5 to 10 blooms in a head, very bright scarlet red, some of the centre petals marked with a white line; superb variety.

MADAME VERSCHAFFELT.—Strong plant, almost without thorns, flowers full, 10 to 12 cent. in diameter, well formed, beautiful delicate rose, petals strongly bordered; very fine variety.

RUSHTON RADCLIFFE.—Strong plant, full flowers, 10 to 12 cent. in diameter, perfectly imbricated, of a beautiful cherry red, clear and bright; very remarkable variety.

SOUVENIR DE WILLIAM WOOD.—Vigorous plant, flowers full, 9 to 10 cent. diameter, very deep black purple, shaded, in many respects like Prince Camille de Rohan, but deeper coloured; very effective variety.

PERPETUAL MOSS.

JAMES VEITCH.—Very strong plant, very full flowering, large flowers, 9 cent. in diameter, 3 to 8 in a head, deep slate violet, shaded; remarkable variety.

NEW TEA ROSE.

Obtained from Seed some years since by a Florist of Central France, never before sent out, and remaining until now little known, notwithstanding that several Gold Medals were awarded to it.

MARÉCHAL NIEL.—Very strong plant, long reddish healthy branches, the leaves composed of 3 to 5 leaflets, extra large and shining, full flowers, 12 to 14 cent. diameter, globe-shaped, of a beautiful deep yellow, exceedingly odoriferous.

This magnificent variety (the most beautiful of this class of Roses, to which belong Chromatella, Isabella Gray, Jean Hardy, Solfaterre, &c., which it surpasses in its habit and being a more abundant flowerer) will not be sold alone, but will be presented gratis to each buyer of the foregoing entire eight varieties.

An engraving of this superb variety will be sent to every buyer.

EUGÈNE VERDIER, FILS AINÉ, NURSERYMAN, 3, Rue Dunois (late Rue des Trois Ormes), Boulevard de la Gare d'Ivry, Paris,

NET PRICES to the TRADE (without any discount).

NEW ROSES for the AUTUMN 1864.
Obtained from Seed by well-known Collectors.

HYBRID PERPETUALS.

ACHILLE GONOD (GONOD.)—Healthy plant, full-flowered, 9 to 10 cent. in diameter, well-formed, bright carmine red. Each 25 fcs.; the five plants, 110 fcs.

ABBÉ BERLÈSE (GUILLOT FILS).—Strong plant, flowers full, 10 cent. diameter, finely formed, colour varying from a bright cherry red to a carmine red. Each 20 fcs.; the five plants, 90 fcs.

BELLE ROSE (TOUVAIS).—Very vigorous plant, full flowered, 10 to 12 cent. in diameter, globe-shaped, perfectly open, of an irreproachable form and habit, very fresh clear red. Each 25 fcs.; the five plants, 100 fcs.

CHARLES WOOD (PORTEMER FILS).—Strong plant, flowers full, 9 to 10 cent. in diameter, very finely formed, very deep red, shaded blackish. Each 25 fcs.; the five plants, 100 fcs.

DENIS HÉLYE (GAUTEREAU).—Strong plant, flowers full, 12 to 14 cent. in diameter, firm and upright, a very pretty bright and fresh carmine rose colour, a grand and effective variety. Each 20 fcs.; the five plants, 75 fcs.

JEAN ROSENKRANTZ (PORTEMER FILS).—Very strong plant, full flowers, 9 to 10 cent. in diameter, well formed, very bright coral red. Each 25 fcs.; the five plants, 100 fcs.

MADAME HERMANN STENGER (GONOD).—Very vigorous plant, full flowers, 9 to 10 cent. diameter, of a fine form and bearing, beautiful bright rose, shaded sulphur in the centre. Each 25 fcs.; the five plants, 110 fcs.

MADAME MOREAU (GONOD).—Very strong plant, flowers full, 12 to 14 cent. in diameter. Peony formed, large petals, dazzling bright red, shaded violet. Each 25 fcs.; the five plants, 110 fcs.

MADAME ROUSSET (GUILLOT FILS).—Vigorous plant, flowers full, 8 to 10 cent. in diameter, fine rose shot with silver. Each 20 fcs.; the five plants, 90 fcs.

SEMIRAMIS (TOUVAIS).—Strong plant, full flowers, 10 cent in diameter, globe-shaped, fine form and habit, a tender carnation rose colour. Each 25 fcs.; the five plants, 100 fcs.

SOUVENIR DE BERNARDIN DE SAINT PIERRE (GUILLOT FILS).—Strong plant, full flowers, 10 to 12 cent. diameter, well formed, imbricated, colour varying from a velvety crimson red to a slate violet red, the centre shaded fiery velvet red. Each 25 fcs.; the five plants, 110 fcs.

SOUVENIR D'UNE MÈRE (TOUVAIS).—Vigorous plant, full flowers, 10 to 12 cent. diameter, flat, large petals, exterior of a tender rose, the centre bright cherry, very fragrant. Each 25 fcs.; the five plants, 100 fcs.

All the other Novelties of Paris and elsewhere, as well as the past varieties, are always furnished by this establishment at the same prices as are charged by the growers themselves. Their names and descriptions are not yet published, so for the present I am unable to make them known.

NOTICE is HEREBY GIVEN, that the PARTNERSHIP heretofore subsisting between the Undersigned JOHN HOLLAND and JOHN BAYLEY, as FLORISTS, &c., at Bradshaw Gardens, Chadderton, in the County of Lancaster, under the Firm of "HOLLAND & BAYLEY," has been this day DISSOLVED, and will in future be carried on by JOHN HOLLAND.

All Debts Due and Owing to and by the said late Partnership will be received and paid by the said JOHN HOLLAND.

Dated this 10th day of September, 1864. JOHN HOLLAND. JOHN BAYLEY.

JOHN HOLLAND begs respectfully to inform his numerous Friends that he has again taken the above GARDENS, and that they will in future be conducted by him; and in tendering his grateful acknowledgments for past favours, solicits a continuance of public patronage.

A. VAN GEERT, NURSERYMAN, Ghent, Belgium, begs to inform Amateurs and the Trade in general that his NEW CATALOGUE is just published, containing many interesting novelties, and may be had on application to his Agents, Messrs. R. SILBERRAD, 5, Harp Lane, Great Tower Street, London, E.C.

CAMELLIAS, with flower buds, 6*l.* per 100.

INDIAN AZALEAS, best varieties, with flower buds, from 3*l.* 10*s.* and upwards.

ACER PSEUDO-PLATANUS, var. LEOPOLDII.—This splendid new hardy variety (of which A. VAN GEERT possesses the entire stock), with a brilliant carmine striped foliage, will be sent out in strict rotation from the 1st October. Fine grafted Trees, on stems, at 10 and 20 francs each. A Drawing may be had on application, and one plant over for every three taken.

A. VAN GEERT also offers fine plants of his new hardy RHODODENDRON AUGUSTE VAN GEERT, 5*s.* to 10*s.* 6*d.* each.

A. VAN GEERT, Nurseryman, Ghent, Belgium.

Pæonies.

CHARLES VERDIER, FILS (successor to the late firm of VICTOR VERDIER PÈRE & CHARLES VERDIER, FILS), NURSERYMAN, 32, Rue du Marché aux Chevaux, Paris, has just published a Special and Descriptive CATALOGUE of the TREE and HERBACEOUS PÆONIES now disposable at his Nursery, which may be obtained, post free, either direct from him, or of his Agents, Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, London, E.C.

The CATALOGUE of NEW ROSES and GLADIOLI will be published shortly, and will also be sent post free on application to the above.

New hardy Hybrid Rhododendrons, and Azalea indica Souvenir du Prince Albert (J. V.)

JEAN VERSCHAFFELT, NURSERYMAN, Ghent, Belgium, begs to offer the following two new and beautiful hardy RHODODENDRONS, which he is now ready to send out for the first time, in strong plants at the undermentioned low prices, viz:—

RHODODENDRON PROFESSEUR LEMAIRE, strong plants, 12*s.* each.

RHODODENDRON VICOMTE DE BLOIS, 12*s.* each.

AZALEA INDICA SOUVENIR DU PRINCE ALBERT (J. V.) (the most distinct Azalea ever sent out). Dwarf grafted plants with nice heads, 8*s.* each. Per dozen, 4*l.*

All orders to be directed to JEAN VERSCHAFFELT, 43, Rue de la Caverne, Ghent, Belgium.

JEAN VERSCHAFFELT begs to offer the following PLANTS at the undermentioned low prices, viz.:—

CAMELLIAS, best sorts, 1 to 1½ feet high, set with buds, at 6*l.* per 100.
" larger plants, 10*l.* per 100.
" 5*s.*, 8*s.*, and 12*s.* each, and upwards.
AZALEA INDICA (first-rate sorts), fine healthy plants, 4*l.* per 100.
" on stems 1½ to 2 feet high, 10*l.* per 100.
ARUNDO DONAX VERSICOLOR, fine strong plants, 24*s.* per doz.
LILIUM LANCIFOLIUM RUBRUM, extra large bulbs, 3*l.* per 100.
" " ALBUM, 2*l.* 8*s.* per 100.
" " PUNCTATUM (very scarce), extraordinary large sized bulbs, 4*s.* each.
CAMELLIA STOCKS, fit for immediate working, 28*s.* per 100.
AZALEA INDICA, fit for immediate working, 20*s.* per 100.

CAMELLIAS with buds being rather scarce this year, J. V. begs to solicit early orders, so as to ensure a good choice. All orders to be directed to

JEAN VERSCHAFFELT, 43, Rue de la Caverne, Ghent, Belgium.

Vine Duchess of Buccleuch.

ROBERT PARKER has much pleasure in offering this distinct and valuable Early Grape, which will supply the long-felt desideratum of a White Grape with Muscat flavour, that may be grown and ripened with the same treatment as the Black Hamburgh.

The following Certificates and Prizes have been awarded at various London and other Exhibitions:—

2 Certificates of Merit.
2 First-class Certificates.
2 First Prizes in open competition for the finest flavoured Grape of any colour.

A DESCRIPTIVE CIRCULAR will be forwarded to applicants, and visitors to Dalkeith Palace Gardens during the season will have opportunities of seeing and judging of its merits, as a number of Pot and permanent Vines are now fruiting at that establishment. Orders are now being booked, and will be executed in autumn in strict rotation, the stock being limited

Strong Planting Canes, 21*s.* each; extra strong Fruiting Canes 42*s.* each. Exotic Nursery, Tooting, Surrey, S.

Special Notice.

J. MEIKLE, The Nurseries, Folkestone, Kent, begs to inform his customers (especially those whose orders he was unable to execute last season) that his Stock of ROSES are this season unusually fine, and includes most of the very best sorts in cultivation. Orders executed in strict rotation.

A DESCRIPTIVE and PRICED LIST free on application.

J. M. begs to offer a few fine Specimen Seedling THUJA JAPONICA and AUREA, fine varieties. Safe removal warranted. Price 5*s.* to 10*s.* each.

New English Hybrid Perpetual Rose, King's Acre.

JOHN CRANSTON has the pleasure to announce that his New English Seedling HYBRID PERPETUAL ROSE, KING'S ACRE, will be sent out this autumn.

The colour of this truly beautiful variety is bright vermilion rose, reverse of petals satiny; the flowers are extra large, globular, of remarkable depth and exquisitely formed, having large, smooth, shell-shaped petals of fine substance; the foliage is ample and of a fine rich dark green colour, while the habit of growth is all that can be desired, being vigorous and robust.

Assured that the above is worthy of a prominent place in the most select collection, either on the Exhibition tables or in the Rosery, J. C. respectfully solicits early orders, and observes that such will be executed in rotation. Price 7*s.* 6*d.* each. The usual discount to the Trade when 3 or more are taken.

"SEEDLING ROSE (*J. Cranston*).—We regret that we did not see your Rose King's Acre in the season, for when such beautiful flowers are produced now, after such a drought, we may well ask, what must it have been then? Those you sent were very fine, globular, and of a colour much wanted—purplish rose, with the reverse of petals light. It is a really fine flower, and if, as you say, vigorous, having withstood the season of 1860 as a seedling, it will be a valuable acquisition to our English raised Roses."—*Vide* Journal of Horticulture, Aug. 30, 1864.

A faithfully coloured Drawing, by ANDREWS, will be sent in exchange for 12 postage stamps.

Nurseries, King's Acre, near Hereford.

Two Splendid Seedling Azaleas.

WILLIAM BARNES has great pleasure in announcing to his friends and the public that he will be prepared to send out on and after the 15th of October next, his two magnificent Seedling Azaleas, BRIDE of ABYDOS and PURITY.

BRIDE of ABYDOS is a splendid white, striped and splashed with pink; of fine vigorous growth, and an abundant bloomer. It was exhibited before the Floral Committee on May 6, 1862, when it met with their unanimous approval. The following description is given of it in the *Gardeners' Chronicle* upon the 10th of that month:—

"Mr. BARNES, of Southampton Street, Camberwell, contributed a beautiful Azalea named Bride of Abydos, the flowers of which are large, white, flaked with pink, and possess great substance; of this variety three plants were exhibited, all excellent in habit and evidently free in growth."

In the *Gardeners' Chronicle* of December 27, 1862, page 1217, in describing the new and most prominent Azaleas of the above year, are the following remarks:—

"As a free-flowering sort of vigorous habit adapted for decoration and exhibition, the Bride of Abydos is the most useful which has appeared amongst the whites, with occasional streaks of red."

Fine strong Grafted plants will be ready on the above date at 21*s.* and 31*s.* 6*d.* each.

PURITY is a beautiful clear white, fine large flower, with unusual substance and of the most perfect shape; it is of a fine robust habit. A variety of this description has long been required, viz.:—

A pure white, with fine shape, large flowers, and good vigorous habit. Plants will be ready on the above date at 21*s.* and 31*s.* 6*d.* each.

A few plants of each variety to offer in extra large plants, prices of which can be obtained on application to

WILLIAM BARNES, Camden Nursery, Camberwell, S.

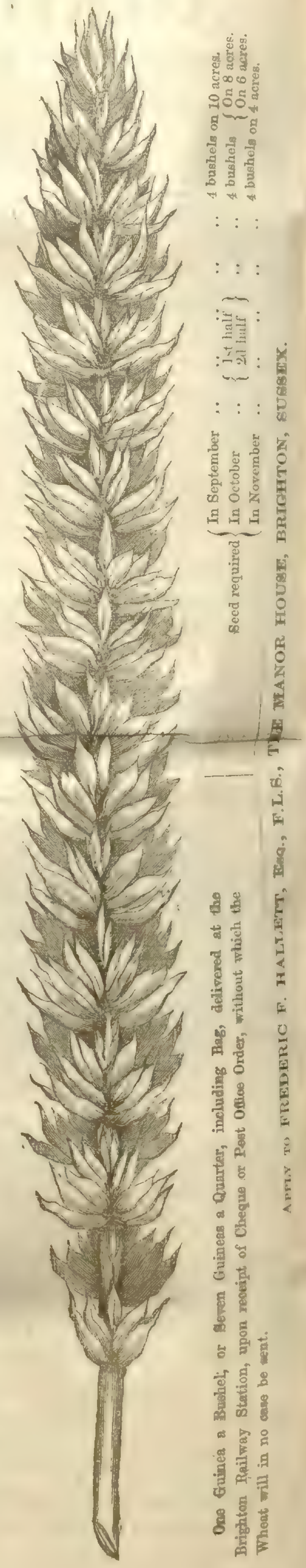

BROWICK WHEAT.—Carefully screened samples for Seed, grown on stiff clay soil. Price 48s. per quarter (in hired sacks) at the Bedford Stations of the Midland, London and North-Western, or Bedford and Cambridge Railways.

Apply to Mr. Thomas Bowick, Manager of Messrs. Howard's Steam Cultivated Farms, Bedford.

Seed Wheat.

MAMMOTH WHEAT, Selected by Mr. Teverson.—The most productive and valuable variety of Wheat ever grown by the Advertiser. It is hardy and vigorous in habit, not liable to blight, and adapted both to strong Wheat land and to light land. Price 7s. 6d. per bushel, or 48s. per quarter, delivered at Braintree Station.

Apply to Henry Evershed, Park Hall, Gosfield, Halsted, Essex.

HALLETT'S PEDIGREE WHEAT, off the Clay.—Grown with great care from Seed obtained of Mr. Hallett. Threshed by hand. Price 10s. 6d. per bushel, including bags. Also the following sorts, being grown on the Lois Weedon system, which allows each plant to become fully developed, are peculiarly adapted for Seed:—SHIRREFF'S BEARDED WHITE and HOARY WHITE, 52s. per qr., Sacks extra. SHIRREFF'S BEARDED RED, GOLDEN DROP, and WHITE STRAWED BROWN, at 48s. per qr.

Apply, with remittance, to Thomas Grant, Shirley House, Maidstone.

SEED WHEAT from the CHILTERN HILLS.

The CHILTERN WHITE, a new variety, offered to the public for first time; ear compact and handsome; grain of excellent quality; straw stiff and medium length. Price 56s. per qr

The BURGHFIELD WHITE, noted for early maturity, superior quality, and productiveness in straw and grain. Price 48s. per qr.

The above were raised by the Advertiser from single corns. New sacks charged 2s. each. Delivery to Henley Station. Cash with Order.

Address, Mr. R. C. Young, Hambleden, Henley-on-Thames.

EARLY SPRING FEED,

For Present Sowing.

NEW ENGLISH ITALIAN RYE-GRASS,
Best Imported Ditto,
TRIFOLIUM INCARNATUM,

For Sowing on Stubbles and mending deficient plants of Grasses or Clovers.

WINTER BARLEY | WINTER OATS | COMMON RYE
GIANT RYE | WINTER TARES

For Early Spring Feed.

MUSTARD and RAPE, for sheep keep and ploughing in for manure.

Samples and prices on application to Raynbird, Caldecott, & Bawtree, 89, Seed Market, Mark Lane; and Basingstoke.

WINTER BARLEY.—Hardy Two-rowed Barley for Autumn sowing. Crop last year, 10 quarters per acre; sold at 38s. per quarter for malting. It is of vigorous growth, and succeeds well sown on a Wheat stubble, with 2½ cwt. of guano per acre. Price 45s. per quarter, delivered at Braintree Station.

Apply to Henry Evershed, Park Hall, Gosfield, Halsted, Essex.

HERTFORDSHIRE HERO BARLEY.—Six-rowed, very productive, and stiff strawed; rather coarse but suitable for Winter or Spring Sowing, for Early Spring Feed, or an Early Crop for Harvest.

Price 50s. per quarter, delivered on Rail at Basingstoke.

Address, Raynbird, Caldecott, & Bawtree, 89, Seed Market, Mark Lane; or Basingstoke.

THE EARLIEST PEA known is CARPENTER'S EXPRESS, gathered May 7. See Testimonials, among which is the following from Mr. John Cox, Gardener to W. Wells, Esq., Red Leaf, Penshurst, Kent:—

"Dear Sir,—I beg to say I have tried your Express Pea this season, and am glad to be able to speak very favourably of it as the earliest Pea I have ever grown. I gathered in quantity this season nine days in advance of any other early variety, and earlier also than have ever been gathered in these gardens in the open air."

Price 3s. 6d. per quart. Trade price on application. Remittance requested from unknown correspondents.

Edward Carpenter, Seed Merchant and Grower, Brighton and Sussex Seed Warehouse, 96, St. James Street, Brighton.

Genuine Italian Rye-grass.

Produced from Second Crop Foreign Seed.

MR. S. A. DAINTREE, of Fen Drayton, St. Ives, Hunts, has a good supply of the above, which has been thoroughly cleaned, and which will be offered to the Trade reasonable terms, and samples will be forwarded on application.

CARTER'S FARMER'S VADE-MECUM.

ZONALE PELARGONIUM SEED, for present sowing, 2s. 6d. per pkt.—The above includes the newest and choicest varieties, and embraces the most distinct and diversified colours of this popular favourite. Amongst it are Mr. Bull's new kinds, so highly commended and universally admired at the great Flower Shows. This is a rare chance to amateurs of raising first-class sorts.

Mr. Bull's new SPOTTED HYBRID MIMULUS, 1s. per packet.

Barr & Sugden, Seed Merchants and Florists, 12, King Street, Covent Garden, W.C.

New Catalogue of Plants, Dutch Bulbs, &c.

ROBERT PARKER begs to announce that his NEW GENERAL CATALOGUE, containing Select, Descriptive, and Priced Lists of New, Rare, and Beautiful-foliaged Plants, Azalea Indica, Conifers, Exotic and Hardy Ferns, Fruit Trees, Grapes, Exotic Orchids, Greenhouse and Stove Plants, Miscellaneous Hardy Trees and Shrubs, Rhododendrons, Roses, &c., Hyacinths, Tulips, Gladioli, and other Bulbs, is now published and will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

DUTCH HYACINTHS and EARLY TULIPS for FORCING.

12 Early Showy HYACINTHS .. .. 6s.
12 Early Choice HYACINTHS .. .. 8s.

The two dozen carriage free.

Single VAN THOL TULIPS, 8d. per dozen; 4s. 6d. per 100.
Double VAN THOL TULIPS, 6d. per dozen; 3s. 6d. per 100.
Double TOURNESOL TULIPS, 1s. per dozen; 7s. per 100.

All Dutch Roots are very fine and lower in price this season.

A PRICE LIST free by post.

Chas. Southby, Seedsman, Clapham, S.

A GUINEA COLLECTION of FLOWER ROOTS.—12 choice named Hyacinths, 12 Border Hyacinths, 12 Crocuses, 4 Tritonias, 4 Sparaxis, 4 Babianas, 100 choice Crocus, 20 named varieties; choice Polyanthus Narcissus, 12 Anemones, 50 Double Snowdrops, 24 Winter Aconites, 24 Early Due Van Thol Tulips, 12 Early Double Tournesol Tulips, 12 named Parrot Tulips, 12 Iris, 6 Scillas, package included, forwarded on receipt of a Post-office order for 21s. E. P. Dixon & Sons, 57, Queen Street, Hull.

To Gentlemen and Nurserymen.

MR. CLAPHAM, Proprietor of the Royal Park, Leeds, wants several hundred LIMES, CHESTNUTS, ITALIAN and SILVER POPLARS, several CEDRUS DEODARA, and other ornamental Trees; Rhododendrons, Azaleas, Common and Portugal Laurels, and Evergreen Shrubs, Roses, &c. They are required as large as possible to transplant safely, and for immediate effect. As a quantity is required and ready cash will be paid, they must be cheap

REIGATE SILVER SAND (best quality for Plants, &c.), 7s. 6d. per ton; packed 16s. per ton, delivered to Reigate Station. Various kinds of excellent Peat and Loam, Sand, Stone, &c. Circulars, containing List of Prices, with other information, post free on application

W. Short, Sand and Peat Depôt, Reigate, Surrey.

COCOA-NUT REFUSE delivered within 2½ miles of Charing Cross, at 2s. per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the Patent Cocoa Fibre Company, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. Barsham & Co.

Barsham's BRUSHES and MATS are sold in every town.

Caution.—Every Brush is stamped, J. Barsham's Patent.

TOBACCO PAPER, good, 8d. per lb.

Price to the Trade on application.

H. Brown, 4, Commutation Row, Liverpool

To Florists and Gardeners.

AROMATIC FUMIGATING TOBACCO, prepared by A. Coronel, 256, High Holborn, W.C.—The only discovery yet known for the entire destruction of fly and other insects (the greatest enemies of a greenhouse), without injury to plants or to health, being void of all unpleasant smell. May also be used in hospitals and sick chambers with confidence. In Canisters, 3s. 6d. and 2s., to be forwarded to all parts on receipt of order or stamps.

Agents: Henderson & Co., Florists, Pine-apple Place, Maida Vale; Newbery & Sons, St. Paul's Churchyard: Carter & Co., Seedsmen, High Holborn, W.C.: Hurst & Son, Seedsmen, Leadenhall Street; Messrs. Butler & McCulloch, Seedsmen, &c., Covent Garden, W.C.; and Messrs. Barr & Sugden, Seedsmen, King Street, Covent Garden.

DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water-tight Roof insured.

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

For Prospectus, &c., address T. H. P. Dennis, Horticultural Builder, Hot-Water Engineer, &c., High Street, Chelmsford, Essex.

TO GROWERS OF WHEAT.

NATURAL SIZE.

FARMERS WHO WISH TO GROW WHEAT TO ADVANTAGE SHOULD TRY

DAVEY'S PERFECTION PURE STOCK OF RED WHEAT,

SELECTED EVERY YEAR.

It supersedes all other Red Wheat that has been grown. It is free from blight, nor is it given to mildew, and is remarkable for its strength and size of straw just under the ear. Where it was sown last year it gave such universal satisfaction, that the gentlemen who used it intend sowing it largely this season. It may be had, at 26s. per coomb, by applying early to

MR. THOMAS DAVEY, GARBOLDISHAM LING, NORFOLK.

PORTABLE HOT-WATER APPARATUS,

WITH TRUSS'S PATENT JOINTS FOR HEATING CONSERVATORIES, HOTHOUSES, &c.

T. S. TRUSS

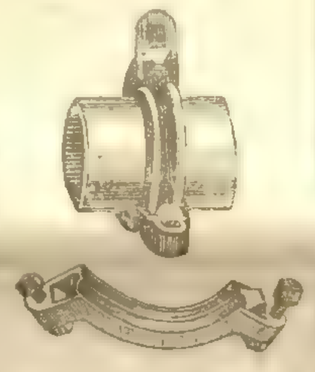

Begs to offer complete HOT-WATER APPARATUS for GREENHOUSES (consisting of 4 inch Pipes and Joints, Saddle Boiler, Fire Doors, Bars, Soot Doors, Damper, Supply Cistern, Feed and Air Pipes, Pipe Stands, &c., of the best quality), delivered to any Railway Station in England, and to erect the same within 25 miles of London, at the following prices:—

TWO 4-INCH PIPES ALONG ONE SIDE AND ONE END OF HOUSE.

Size of House.	Apparatus complete.	Erection.	Size of House.	Apparatus complete.	Erection.
16 feet by 8 feet	£8 10 0	£2 0 0	30 feet by 12 feet	£11 15 0	£2 10 0
20 feet by 10 feet	8 17 6	2 0 0	40 feet by 15 feet	15 0 0	2 15 0
25 feet by 12 feet	10 5 0	2 5 0	50 feet by 15 feet	18 0 0	3 0 0

Erections beyond 25 miles of London, Railway Fare for one Man charged extra.

By the use of these Joints the Apparatus is easily altered or removed without injury to either Pipes or Joints.

Estimates and Plans forwarded on application to

T. S. TRUSS, C.E., 53, GRACECHURCH STREET, LONDON, E.C.

ST. PANCRAS IRON WORK COMPANY,

OLD ST. PANCRAS ROAD, LONDON, N.W.

BY ROYAL LETTERS PATENT.

SCOTT'S GLASS WALLS AND ECONOMIC GREENHOUSES.

Designed to meet the suggestions of James Scott, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES	PINE and MELON PITS	BALCONIES	GATES
GREENHOUSES	VASES	IRON SASHES	TANKS
HOTHOUSES	VERANDAHS	IRON HURDLES	HOT-WATER WORKS

PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. Lists Free.

ST. PANCRAS IRON WORK COMPANY, OLD ST. PANCRAS ROAD, LONDON, N.W.

To the Trade.

MESSRS. DOBSON AND SONS will be happy to make arrangements with New Customers in the Trade to supply them with the choicest CALCEOLARIA, CINERARIA, PRIMULA and HOLLYHOCK SEED, ready made up in Sealed Packets, and which has given such great satisfaction to most of the leading firms in the United Kingdom. A liberal allowance made.
Woodlands Nursery, Isleworth, W.

Pelargoniums and Cinerarias.

J. DOBSON AND SONS have a large and unusually healthy stock of plants, which they will be happy to supply at very moderate prices; their collection contains all the leading Show and prize kinds, and intending purchasers will find it to their advantage to communicate with them previous to ordering.
Their new CATALOGUE is just published, and may be had on application.
Their New BULB LIST is now ready, post free.
Woodlands Nursery, Isleworth, W.

New Hardy British Ferns.

J. IVERY AND SON have the pleasure to offer the three undermentioned distinct and beautiful varieties, in good plants, showing their true characteristic forms, 10*s.* 6*d.* and 21*s.* each.
POLYSTICHUM ACULEATUM ACROCLADON,
ATHYRIUM FILIX-FŒMINA MUCRONATUM,
" " " GLOMERATUM.
(They have each received First-class Certificates from the Royal Horticultural Society, and Royal Botanic Society.)
Likewise ATHYRIUM FILIX-FŒMINA PARSONSIÆ, VERNONIÆ, and FISSIDENTO-EXCURRENS at 5*s.* each.
Dorking, Oct. 1.

WEST RIDING NURSERY and SEED COMPANY have received their immense Collections of BULBOUS ROOTS from Holland and France, fine sound Bulbs, and at prices lower than ever offered.
GREENHOUSE COLLECTIONS for FORCING, at 20*s.*, 40*s.*, 60*s.*, 80*s.*, 100*s.*
COLLECTIONS for BEDS and BORDERS, consisting of Hyacinths, Narcissus, Crocus, Jonquils, Snowdrops, Anemones, Ranunculus, Iris, Double and Single Tulips, &c.
500 roots in the above sorts, 20*s.* | 2000 roots, correctly named, 80*s.*
1000 ditto correctly named, 40*s.* | 2500 ditto, 100*s.*
1500 ditto, 60*s.* | No charge for Package.
*** CATALOGUES now ready.
WILLIAM BARRATT, St. John's, Wakefield.

Rhododendrons.

JOHN WATERER begs to announce that his New CATALOGUE of Hardy, Scarlet, and other Choice RHODODENDRONS, as exhibited by him at the Royal Botanic Gardens, Regent's Park, is now published, and can be had on application. It gives faithful descriptions of all the esteemed varieties, as well as a Select List of Hardy CONIFERS, with heights and prices; also the leading kinds of EVERGREENS, ROSES, FOREST TREES, &c.
The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

New Hardy Rhododendrons.

JOHN WATERER begs to offer the following SIX RHODODENDRONS, which will be sent out in the month of October next. Price 21*s.* each, with the usual discount to the Trade. They will be found to be perfectly distinct from any other varieties in cultivation, and are such kinds as he can confidently recommend.
MRS. FITZGERALD, a very bright rosy scarlet, close compact truss, and good foliage.
SIDNEY HERBERT, brightest carmine, with dark eye, fine shape and free bloomer.
JOSEPH WHITWORTH, dark lake with dark spots, and immense truss with very fine foliage.
SIR ROBERT PEEL, dark rosy crimson, well and strongly marked with black spots, good foliage and habit.
THE WARRIOR, clear rosy scarlet, very large truss, and fine foliage.
SURPRISE, a light lilac, with immense dark marking, which renders it very remarkable.
American Nursery, Bagshot, Surrey.

INTERNATIONAL EXHIBITION 1862.
THE ONLY PRIZE MEDAL AWARDED FOR SEEDS.

VINES.

JAMES CARTER & CO.

Beg to call attention to their unrivalled stock of the above, numbering over 2000, in splendid condition for Fruiting in Pots or Planting out, all true to name, raised from Vines growing at their Nursery, selected from the most approved varieties in cultivation. The new varieties offered by others this season may also be had. A visit to the Nursery will well repay intending purchasers, when they can make their own selections from an immense stock.

The AUTUMN SUPPLEMENT to "CARTER'S VADE MECUM,"
Containing full descriptions of 50 most desirable varieties of Vines, and complete Lists of imported Dutch Bulbs, and Plants of every description for Autumn use, will be forwarded by Post on application.

JAMES CARTER AND CO., SEED FARMERS, MERCHANTS and NURSERYMEN,
237, 238, & 261, HIGH HOLBORN, LONDON, W.C.

NOW READY, NEW HARDY CLIMBING PLANTS,
WELL ADAPTED FOR COVERING VERANDAHS, TRELLIS WORK, WALLS, PORTICOS, PILLARS, FESTOONS, &c.

CLEMATIS JACKMANNI, First-class Certificate.
CLEMATIS RUBRO-VIOLACEA, First-class Certificate.
Awarded by the Royal Horticultural Society, August 4, 1863.

Patronised by Her Majesty THE QUEEN, the Nobility and Gentry.

GEORGE JACKMAN & SON,
WOKING NURSERY, SURREY,

Have much pleasure in offering to the Public, for the first time, their beautiful rich coloured, free flowering, and vigorous-growing Clematises, that they can with confidence recommend, being convinced, when known, they will occupy a very high position in climbing shrubs. Orders will now be taken, and the plants will be sent out strictly in rotation.

For further particulars of "their sterling merits," read our Large Advertisement, August 6, page 745; the Report of the Floral Committee, Royal Horticultural Society, August 4, 1863; *Gardeners' Chronicle*, November 21, 1863; *Journal of Horticulture*, August 11, 1863; *Gardeners' Chronicle*, January 9, 1864; the *Florist and Pomologist Magazine*, September, 1864, with a Coloured Illustration; and *Gardeners' Chronicle*, August 27, 1864.

Strong Plants, 21s. each.

The usual allowance to the Trade. Two Coloured Drawings by Andrews may be had post free for Twenty-

A CATALOGUE of GENERAL NURSERY STOCK free on application.

HUGH LOW & CO.

HAVE ON SALE A VERY LARGE QUANTITY OF FINE ONE-YEAR SEEDLING

ARAUCARIA IMBRICATA,

At a very moderate price. Purchasers of Five or Ten Thousand will be very liberally treated.

CLAPTON NURSERY, LONDON, N.E.

NEW PLANTS.

FISHER, HOLMES, & CO.,

Beg to announce that they are now prepared to send out their

NEW BERBERIS AND ABIES.

THE FOLLOWING ARE THE DESCRIPTIONS GIVEN OF THEM IN THE *GARDENERS' CHRONICLE*:—

BERBERIS STENOPHYLLA.

See page 460, May 14, 1864.

"A very hardy hybrid Berberis, between Darwinii and empetrifolia, which promises to be one of the best evergreen shrubs in cultivation. We call it B. stenophylla. The branches are hairy; the spines 3-parted; the leaves very dark green, about half an inch long, pale beneath, tipped with a short spine, and rolled backward at the edge, so as not to appear flat but to look almost cylindrical. The flowers are of the same charming apricot colour as that which renders Darwinii so ornamental, but they are smaller,' &c.

August 13, page 770.

"At p. 460, we invited attention to a hybrid Berberry, from the Handsworth Nursery. The specimens we had then seen proved it to be a very handsome shrub in regard to its flowers, which were of a fine apricot colour, and produced in racemes of from 3 to 5 together from the leaf axils, instead of singly as in B. empetrifolia, of which this new shrub has something the character, but it is more vigorous. From samples which have recently been sent us, we are able to say that the bushes are at this season laden with purplish black berries, which must add greatly to their beauty, as well as prolong indefinitely the period of their effectiveness as ornamental shrubs. The berries, like the flowers, hang in racemes of from 3 to 5 from the leaf axils, and are about as large as Currants in the samples sent to us, but we learn that they are smaller than usual this year, owing to the excessive drought. When we add that this Handsworth hybrid is of a very hardy character, that it makes strong shoots 4 feet long in a season, that it is clothed with neat narrow evergreen foliage, and adorned with a profusion of gay orange-coloured blossoms in early summer, we shall have said enough to show that it is likely to prove a very decided acquisition, not only for our pleasure grounds and shrubberies, but also for our plantations and game preserves."

First size, strong plants in pots, 21s. each.
Second size, in pots, 15s. each. | Third size, in pots, 10s. 6d. each.

ABIES CANADENSIS MICROPHYLLA.

A beautiful Conifer of slender pyramidal habit, remarkable for the dumpy plump-looking blunt-end leaves which clothe its smaller twigs and branches, and which from their brevity and plumpness give it some peculiarity of aspect.

See p. 580 last year.

"The same exhibitors had an elegant North American Fir, very near the Hemlock Spruce, remarkable for its dumpy, plump, blunt-ended leaves."

Also in *Gardeners' Chronicle* for this year, p. 460, it states:—

"This Abies is of such singularly dwarf habit that it might almost be compared with a Heath. Leaves very dark green with a white streak beneath, rough at the edge, and no bigger than those of Menziesia polifolia. It may possibly be included in some catalogues under the name of Abies canadensis nana, but the leaves are much smaller than in the plants which we have seen bearing that name. Messrs. Fisher, Holmes & Co. have found it much more hardy than canadensis is itself, it not having suffered in the severe winter two years ago, when so many Conifers were injured."

Plants in pots, 42s. each.
A few extra sized Plants in pots, 63s. each.

Prices to the Trade on application.

N.B. CATALOGUES of FRUITS; FOREST, ORNAMENTAL, and EVERGREEN SHRUBS; ROSES; KITCHEN GARDEN, FLOWER, and AGRICULTURAL SEEDS; STOVE and GREENHOUSE PLANTS; DUTCH FLOWER ROOTS, &c., may be had Free in their respective seasons.

FISHER, HOLMES, AND CO., HANDSWORTH NURSERY, SHEFFIELD.

PAUL'S NURSERIES, WALTHAM CROSS, N.

WM. PAUL (Son and Successor to the late A. Paul)

Respectfully invites an early inspection of the following leading PLANTS, &c., cultivated in his Establishment. The soil of these Nurseries being cool and strong, the trees &c., have suffered nothing from the recent dry weather; having been frequently removed, they are in the finest possible condition for transplanting.

HARDY FLOWERING TREES, SHRUBS and EVERGREENS.—One thousand species and varieties selected for the beauty or fragrance of their flowers and foliage, and for the effect they produce in the landscape, many handsome specimens of large size.

FRUIT TREES, for the Orchard, Garden and Orchard House, both in and out of pots.—Many thousands of fruit-bearing and other trees (including Grape Vines), healthy, handsome, and warranted true to name.

ROSES.—100,000 plants, Standards, Dwarf Standards, and Dwarfs on the Dog Rose, Manetti, and own roots, including his own seedlings "Beauty of Waltham," "Princess of Wales," and others about to be announced.

BEATON'S NEW HYBRID BEDDING GERANIUMS.—The greatest novelty of the season, containing the latest efforts of this successful hybridist, and at present exclusively in W. Paul's possession. Some have flowers and trusses of enormous size, and colours entirely distinct. A new era in flower gardening will date from their introduction.

BULBS.—Hyacinths, Early Tulips, Crocuses, &c., the choicest of the stock from the most celebrated Bulb farms in Holland.

His Collections of these, exhibited before the Royal Horticultural and Royal Botanic Societies in March last, furnish the best evidence of their quality.

PRICED CATALOGUES free by post.

Orders by post promptly attended to. *Entrance from the Platform, Waltham Station, Great Eastern Railway, half an hour's ride from London.*

NEW GRAPE, ROYAL VINEYARD.

NOW READY FOR DELIVERY.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Begs to announce that he is now distributing this valuable GRAPE. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years. The stock is in excellent condition. Early orders are respectfully solicited.

PRICES:

Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

DUTCH ROOTS.

MESSRS. JOHN & CHARLES LEE

HAVE JUST RECEIVED THEIR

ANNUAL SUPPLY OF DUTCH ROOTS

IN GOOD CONDITION.

CATALOGUES free by post on application.

ROYAL VINEYARD NURSERY, HAMMERSMITH, LONDON, W.

DUTCH FLOWER ROOTS.

JAMES VEITCH,

ROYAL EXOTIC NURSERY, CHELSEA, S.W.,

BEGS TO ANNOUNCE THAT HE HAS RECEIVED HIS

ANNUAL SUPPLY OF BULBOUS ROOTS FROM HOLLAND,

and is pleased to say that they are in excellent condition.

CATALOGUES are now ready, and will be forwarded post free on application.

J. V. desires to impress upon those who patronise him the great advantage of giving him their orders early, as the successful Cultivation of Bulbs depends in a great measure upon their being planted early in the season.—Oct. 1.

BARR & SUGDEN

12 KING ST. COVENT GARDEN

FOR PRESENT PLANTING (Sent Carriage Paid).

DUTCH, CAPE, FRENCH, and ITALIAN FLOWERING BULBS,

FOR THE

ORNAMENTATION of the SITTING-ROOM, CONSERVATORY, GREENHOUSE, and FLOWER GARDEN.

THE COVENT GARDEN COLLECTIONS of BULBS for In and Out-doors, 10*s.* 6*d.*, 15*s.* 6*d.*, 21*s.*, 42*s.*, and 63*s.*
THE PAXTONIAN COLLECTIONS of BULBS for Out-doors, 10*s.* 6*d.*, 15*s.* 6*d.*, 21*s.*, 42*s.*, and 63*s.*
THE KENSINGTON GARDEN and CRYSTAL PALACE COLLECTIONS for Indoor Winter Gardens, 10*s.* 6*d.*, 21*s.*, 30*s.*, 42*s.*, and 63*s.*
HYACINTHS, 2*s.* 6*d.* to 15*s.* per dozen. CROCUS, 1*s.* 6*d.* to 4*s.* per 100. TULIPS, 3*s.* 6*d.* to 20*s.* per 100.

A Detailed List of the above Collections, and a General Priced List of Bulbs, sent Free and Post Paid on application.

BARR and SUGDEN, SEED MERCHANTS and FLORISTS, 12, KING STREET, COVENT GARDEN, W.C.

Hyacinths and other Choice Bulbs.

B. S. WILLIAMS can now supply Roots of the finest quality of all the varieties of DUTCH and CAPE BULBS. For prices and description of the appearance and colours of the various kinds, see CATALOGUE, which will be forwarded Post free on application.

Choice HYACINTHS for Glasses or Pots, 6*s.*, 8*s.*, 10*s.*, and 12*s.* per dozen.

Paradise and Victoria Nurseries, Holloway, London, N.

HYACINTHS, TULIPS, and other DUTCH BULBS, Imported by Wm. Cutbush & Son.

Twenty-four Prizes awarded to their Collections last Spring, Twenty-two being First Prizes.

The DESCRIPTIVE PRICED CATALOGUE, with numerous Cultural remarks, post free on application.

Early orders earnestly solicited, as the supply cannot possibly meet the increasing demand.

Highgate Nurseries, London, N.

SEEDSMEN BY APPOINTMENT. Sutton AND Sons

HYACINTHS for EXHIBITION.

Fresh Imported Bulbs

SUTTON'S SELECTION.

	Per 100.	Dozen.
Finest sorts by name	.. £4 4*s.*	12*s.*
Very fine ditto	.. 3 10	9
Good ditto	.. 2 10	6

Good Hyacinths for Beds, Ribands, &c in separate colours (fresh imported), 21*s.* per 100.

Anemones, Crocuses, Tulips, Gladioli, &c., also very low in prices, as per CATALOGUE, which may be had gratis and post free.

Sutton & Sons, Royal Berkshire Seed Establishment, Reading.

Established Upwards of a Century.

BUTLER AND McCULLOCH,

Seed Merchants, Covent Garden Market, W.C.

COLLECTIONS of BULBS for GREENHOUSE and CONSERVATORY.

No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.
5*l.*	2*l.* 10*s.*	1*l.* 5*s.*	1*l.* 1*s.*	15*s.*	10*s.* 6*d.*

FOR FLOWER GARDEN ONLY.

No. 7.	No. 8.	No. 9.	No. 10.	No. 11.	No. 12.
5*l.*	3*l.*	2*l.*	1*l.* 5*s.*	1*l.* 1*s.*	10*s.* 6*d.*

FOR GREENHOUSE and FLOWER GARDEN.

No. 13.	No. 14.	No. 15.	No. 16.	No. 17.	No. 18.
5*l.* 5*s.*	2*l.* 12*s.* 6*d.*	2*l.* 2*s.*	1*l.* 1*s.*	15*s.*	10*s.* 6*d.*

These Collections include only Bulbs of first-class quality.

For full particulars see CATALOGUE, which may be obtained post free on application.

Orders amounting to 21*s.* and upwards sent Carriage-free.

CARTER'S GARDENER'S VADE-MECUM.

ROYAL HORTICULTURAL SOCIETY

FLORAL COMMITTEE.

LIST of AWARDS, SEPTEMBER 27, 1864.

FIRST-CLASS CERTIFICATES.

Asplenium resectum, from Mr. Barker, Godalming.
Cattleya exoniensis, from Mr. Veitch, Exeter.
Gladiolus Our Little Lucy, from Mr. Standish, Ascot.
Gladiolus Miss Mowbray Morris, from Mr. Standish.
Nerine corruscans major, from Mr. Watson, Gr. to C. Leach, Esq., Clapham.
Skimmia (oblata), from Mr. Standish.

SECOND-CLASS CERTIFICATES.

Achimenes Stella, from Mr. Parsons, Danesbury.
Dahlia Ne Plus Ultra, from Mr. C. J. Perry, Castle Bromwich.
Dahlia Purple King, from Mr. Rawlings Romford.
Petunia Fame, from Mr. G. Smith, Hornsey Road.

COMMENDATION.

Callirhoe involucrata, from Mr. W. Thompson, Ipswich.

SPECIAL CERTIFICATES.

To Mr. Turner, for a large Collection of Roses.
To Mr. Turner, for a large Collection of Dahlias, "sent out" by himself.
To Mr. Veitch, for a fine group of Odontoglossum grande.

The next Ordinary Meeting of the Committee will take place on Tuesday, October 11, at noon.

Thomas Moore, Secretary to the Committee.

The Gardeners' Chronicle.

SATURDAY, OCTOBER 1, 1864.

THE garden at Elvaston Castle, near Derby, has been long celebrated as one of the most remarkable in England. There are few places in this country where one can see such noble avenues and drives of all our best and rarest Pines, Cypresses, Junipers, and Yews as those which have been produced there under the management of Mr. Barron. While most of our landed proprietors have been contented with planting a few specimens only of those Evergreen trees and shrubs which have been introduced to England of late years, we meet with such things at Elvaston in hundreds or thousands. Long avenues of the Indian Deodar, of Araucaria imbricata, of the Douglas Fir, of Abies canadensis, A. nobilis, and of Junipers and Yews, have been planted in many parts of the Park, and now form most remarkable and beautiful objects to look upon. Then in all parts of the grounds we meet with large specimens of Abies grandis, A. amabilis, A. Nordmanniana, A. Menziesii, A. cephalonica, and A. Pinsapo, together with Pinus Cembra, Cryptomeria japonica, and all the finest and rarest species of the most interesting family to which these trees belong. The common Yew has also been extensively planted. Remarkable specimens of this tree which have been found growing in various parts of the country have been taken up with Mr. Barron's transplanting machines and transported to Elvaston, where they are now growing as luxuriantly as if they had never been moved from the spots on which they

had been first planted. Some of the trees to which we have alluded were of great age at the time of their removal, a circumstance which renders the success which attended the operation still more remarkable. Several large Cedars of Lebanon, from 30 to 50 feet in height, have been transplanted, and in order to show what amount of success has attended the operation, we give the dimensions of four trees, showing the progress they have made since they were removed in 1831:—

Height of Trees in 1831.	Circumference of Trunks in 1831.	Height of Trees in 1864.	Circumference of Stem in 1864.
feet	feet	feet	ft. in.
28	1	50	7 2
32	3	59	7 10
35	3	62	7 7
33	6	18	9 6

Some extraordinary removals have been effected in summer. We may instance an Oak, 46 feet in height, which had been taken from the centre of a plantation in the month of July, when in full leaf, and the success of this operation may be judged of by the fact, that in the third year after the tree had been transplanted it made shoots fully 2 feet long. These results are very striking, and show the excellence of Mr. Barron's method of transplanting large trees.

In walking over the grounds at Elvaston we were particularly struck with the effect produced by variegated foliage. At one spot we came upon a variegated Pine (P. Pinaster) of a goodly size. The white or golden-coloured leaves, which it produced in tufts amongst its highest branches, had a remarkable appearance when viewed from a little distance. But the Golden Yew, which is largely grown at Elvaston, is the most effective plant for garden decoration which has come under our observation for many years. It quite lights up the landscape, and looks like a bed of flowers amongst evergreens. In the winter months its appearance must be even more remarkable and attractive than it was when we saw it a few days ago. We strongly recommend this shrub to all who wish to have an attractive object in their parks and pleasure grounds.

The scenery in the Park at Elvaston is ever-changing as one walks over it. Now it is a long avenue of rare Pines that we are looking upon, and now a little garden of Yews and Junipers meets the eye—some clipped into artificial forms, while others, although in a natural state, look almost as if they were artificial too. From many a spot in our progress we look upon some remarkable tree in the distance which is evidently a stranger in this country, and which, on a closer examination, proves to be, perhaps, a Douglas Fir, an Araucaria imbricata, or some other remarkable foreign introduction.

But passing onwards and leaving the avenues and artificial gardens behind us, we come to what must be regarded by every one as a complete triumph in landscape gardening. This is a lake, which, although entirely artificial, is yet the most natural-looking thing of the kind we ever remember to have seen. It is on a large scale, and is none of your petty little things of which the Chinese are said to be so fond, and in the construction of which, with the surrounding rock-work, they are supposed to be such adepts. At no one point can its extent or boundary be seen; it is studded with little islands clothed with trees and brushwood, and, as far as the stranger who looks upon it knows, it may be many miles in extent. Its sides are winding and irregular in form, so that different pictures are presented at every step of our progress round it, and very pretty these pictures are. The rockwork, which has been raised here and there on its edges and on the islands, is the most tasteful, natural, and effective thing of the kind we have ever met with, and the strange and beautiful forms of exotic and indigenous trees and shrubs have been most skilfully employed. Araucaria imbricata, the Chinese Juniper, the Irish Yew, Pinus Cembra, and Abies Menziesii, give a kind of boldness to the picture, which is filled up with such things as the Weeping Willow and other pendent trees. The variegated Elm, the purple Beech, and the golden-leaved Holly light up the scene with their bright tints, and the whole combined make one almost fancy himself in some enchanted fairy land. While looking upon it we thought there was only one thing wanting to make it perfect; we wished we had been able to throw in here and there a few of those glorious Maples which produce such wonderful effects in the land-scapes of Japan. The late Duke of Wellington, when visiting Elvaston Castle, was highly pleased with this lake, and his remark upon it is still well remembered by Mr. Barron. "It is," said the Duke, "the only natural piece of artificial water I have ever seen."

We cannot close these remarks upon the gardens of Elvaston Castle, without a word or two upon Mr. Barron's nursery, which he is now removing from Elvaston to a good situation about a mile distant, and near the Railway Station of Burrowash. Here we noticed a fine stock of the Golden Yew we have already alluded to, the effect of which in brightening up the landscape cannot be overrated. We also observed beautiful examples of Abies Kæmpferi, 7 feet in height, of A. lasiocarpa, Parsonsi, Hookeri, Pinus Bungeana, and of all the new and rare kinds of Conifers. There are noble trees of Abies nobilis bearing cones, a sight of which is worth a journey from London to Derby. There are also many thousands of the seedlings of this fine species, which had been raised from the cones of former years, and all are in the highest state of health and vigour. Along with these we observed large quantities of seedlings of the Douglas Fir (a tree which produces its cones yearly at Elvaston), together with those of Abies Menziesii, Pinus Lambertiana, P. monticola, &c.

The seedling plants of our favourite Conifers will prove of great importance to all the planters of ornamental hardy trees. When we consider the great beauty of all the species we have named, and the value of the timber of some of them—as that of the Douglas Fir for example—the success which has attended the efforts of Mr. Barron in producing them would seem to be really of national importance.

We gave a few weeks since a short account of a disease which has attacked some specimens of Figs and Peaches during this autumn. Since that was published we have met in the garden of Sir Hugh Williams, at Bodelwyddan, in Flintshire (a garden which is known to many on account of the wonderful specimen of Brownea grandiceps, which flowers magnificently in the stove every year, and which this year ripened its seeds), with a disease confined to a single variety of Peach, the Barrington, produced by a mould which we have never seen before.

Shallow pits about half an inch in diameter appear on the surface of the fruit, the centre of which is occupied by a dark mould bearing a profusion of spores, so as to blacken the finger when touched. The mycelium penetrates deeply into the fruit, which if not gathered in good time becomes useless. The mycelium consists of more or less waved articulated threads, which give off here and there stouter erect flocci with shorter joints, branched slightly above, and producing at the tip of each joint a large spore. The spores are at first oblong and pale, showing one or two transverse septa. These rapidly acquire a dark tint, elongate, become more or less linear, and consist of from seven to eleven swollen divisions, of which the terminal one is mostly apiculate. Each division contains a few minute oil globules. The length varies from $\frac{1}{700}$ to $\frac{1}{750}$ of an inch. After the spores have fallen they frequently split in the centre and give out a globular body, which is in all probability reproductive. The mould apparently belongs to the genus Macrosporium, and may be named M. rhabdiferum.* It is, however, probable that like many similar parasites it is a condition of some common Sphæria, though we are not able to say to what particular species it probably belongs.

The present season, in consequence apparently of the small supply of water, has been peculiarly productive of such maladies. In an extensive collection of Gourds, to which the cold nights have been peculiarly unfavourable, we find a disposition to wither prematurely at the tips, and to produce a dark coloured mould, closely allied to that before us.

We have figured the general appearance of the mould as it appears in a dried specimen, together with a group of peculiarly large young spores, a tuft of mycelium with spores in different stages of growth, and the rupture of the fallen spores in consequence of which a globular body is formed. *M. J. B.*

* M. rhabdiferum sporis rectis multiseptatis, articulis tomulosis.

A Grand International and Universal Horticultural and Industrial Exhibition is fixed to be held next year at Nice, under the auspices of the *Société Centrale d'Agriculture, d'Horticulture, et d'Acclimatation de Nice et des Alpes-Maritimes*, which holds its *Concours Régional* in the month of April next. It is announced that the project has met with the warmest encouragement from the Government, and will be carried out under the patronage of their Majesties the Emperor and Empress. The Exhibition is to be open from the 26th of April till the 1st of May; and the programme and regulations, together with the form of declaration to be used by exhibitors, may be had on application.

We may briefly indicate that those who intend to exhibit are required to apply for the necessary space to the Director of the organising Commission, at the Offices of the above Society, Rue Victor 45, before the 1st of March, 1865, and also to send in an exact list of the objects intended to be exhibited. The subjects will be grouped according to the degree of temperature they require, a part of the building being heated for the reception of hothouse plants. Artistic and industrial products and all large plants will be received up to the 20th of April; hothouse plants and all flowering plants up to the 25th of April; and bouquets and cut flowers up to the morning of the 26th of April, the day on which the exhibition is to be opened. The awards are to be made by a jury nominated from amongst the leading horticulturists of Europe; and the managers of the Regional Congress undertake to pay the cost of transport, both going and returning, of all objects sent by the French railways, and by the steam-boats which go to Nice. It is to be hoped, in the name of good faith, that it may not (happen as was the case last May with the jurors and members of Congress in Belgium, under a similar engagement), that the latter half of this bargain—the return—will be repudiated.

Among the prizes which are announced are two Medals of Honour given by the Emperor to be awarded to the foreign exhibitor and exhibitor of the department respectively, who shall contribute most to the splendour of the exhibition. Another Medal of Honour is offered by the Empress, for the finest collection of flowering plants; and the ladies of Nice offer a Gold Medal to the exhibitor who shall produce the best group of three baskets of cut flowers. The general prize list contains about 80 classes.

—— We learn with much satisfaction that Mr. Meredith, of Garston, near Liverpool, whose remarkable examples of Grape growing have for the last three or four years won for him so much honour and for themselves so prominent a position at our metropolitan exhibitions of Fruits, has lately, with similar materials, been winning new laurels at some of the great continental fruit shows. At Antwerp, the first prize for a large collection of Grapes has been awarded to him; and in Paris a similar large collection has obtained for him the "Medal of Honour" for extraordinary cultivation, the highest award, as we are given to understand, which it was in the power of the jury to bestow. Those who have had the opportunity of seeing Mr. Meredith's achievements in the culture of the Vine, either at Garston, or as illustrated at our public exhibitions, will not, we are sure, be surprised at these results.

At the Paris exhibition, to which reference has just been made, we understand that the show of Pears and Apples was exceedingly fine. Pine Apples were not numerous, but those which were shown were very good indeed. And the Grapes were also good, a very fine collection from the open air of the South of France, containing bunches, which judging from their size, weighed from 4 lb. to 7 lb. each. At the same show the Gladioli were very beautiful, the improvement manifested in these charming flowers within the last two or three years being something remarkable.

—— We have good news for the admirers of t glorious new Japanese Lily, Lilium auratum, whi

is, doubtless, the grandest of all the flowering plants which Japan has sent us in recent times. Mr. Stevens announces, as will be seen in more detail in our advertising columns, a sale of nearly 700 plants of this Lily, many of the plants in full bloom, so that on this occasion, at least, the auction rooms in Covent Garden will be quite a flower show. The sale is to take place next Wednesday. No doubt amongst the different importations of bulbs we shall get considerable variety. Already some variations have been noticed, and we have to mention another — RUBRO-VITTATA — which has just been flowered by Mr. W. Bull, in which the yellow bandsare replaced by bands of deep red, tolerably well defined.

—— Mr. Stevens also announces another important Sale of Plants from Japan, the last portion of Mr. Fortune's valuable introductions from that country. Many of the original imported specimens will be offered. Among other things, we observe that this sale includes the stock of the male Aucuba, which has attracted so much interest at our exhibitions, and enabled us to see for the first time in English gardens, the real beauty of the Aucuba bush when laden with its coral-coloured berries. Forsythia Fortuni, Lychnis Senno, the Cowslip-scented Corylopsis spicata, the Jedo Vine, a hardy variety with a Frontignan flavour in the fruit, and much esteemed in Japan, together with many other valuable hardy things, will be offered. The whole are to be sold without reservation. This sale is fixed to take place on the 11th and 12th inst.

—— It is always an agreeable task to do honour to those who have long and well occupied a responsible position; and all the more so to horticulturists if that position has been a prominent one in the world of horticulture. Such a labour of love it has been proposed should now be undertaken by the gardening community, the object being to present a testimonial to Mr. Thomas Ingram, her Majesty's Gardener at Frogmore, on the occasion of his completing his 50 years' charge of the Royal Gardens. We do not flatter Mr. Ingram when we say that he is in every way worthy of this mark of esteem from his associates in the ranks of horticulture of whatever class; and we shall be surprised if the testimonial which is contemplated does not assume a most substantial character. A committee of the leading horticulturists around the metropolis has been formed, with Mr. Brown, of Slough, as its Secretary, and no doubt public announcement will soon be made of the course which it is proposed to adopt for the purpose of realising this most appropriate proposition.

SPRING FLOWERING BULBS.

The Crocus.

This "sweet harbinger of spring" imparts a gay appearance to our gardens when all else is winter like. It shoots up through the earth immediately after stern winter has relaxed it from its icy grip. The Crocus, the Snowdrop, the Hepatica, the Primrose, the Aconite, and the Violet, all come forth to proclaim that

"The reign of violence is o'er,"

for a brief time at least.

Of this pleasing little flower there is great variety if the names in lists are to be trusted. My object is to direct attention to some of the best that have come under my own notice.

Among the blue or purple varieties, of which as many as 20 can be enumerated, there is a strong family likeness. The richest and darkest shade of colour is presented in the infantile flower, and as it increases in size and age it changes to violet, and from violet to lilac, becoming paler in colour hour by hour till dissolution ensues. To prove the identity of two or more varieties they must be grown side by side, for if the isolated blooms only are compared, in different stages of development, the chances are that the judgment will be misled, and an erroneous conclusion arrived at. In a collection that I looked over last spring I saw Grande Vidette, Prince Albert, and Prince of Wales, the last of which was announced to be new; if, however, there ever did exist a perceptible difference among them it had entirely disappeared. I find also that a variety known as Vulcan is identical with the foregoing. There is more of blue proper in these varieties than in any others classed as blues with which I am acquainted.

The following may be denominated purple, viz., David Rizzio, Brunel, Sir Joseph Paxton, and Sir John Franklin, the three last being in fact the "otherselves" of the former; unless it sometimes happens that a flower of a brighter shade of purple or purplish blue, called by some Lamplighter — with which is also identical a variety known as Lord Byron—is sent to England for Sir John Franklin. I do hold that a manifest difference exists between David Rizzio, Prince Albert, and Lamplighter, regarding these as types of the three shades of colour, the former being the darkest, and the last named the lightest shade.

Our importers are, however, at the mercy of the Dutchmen, and may not always get the same variety under the same name. There is yet another stage of the blue class represented by Lilacens Superbus, Argus, and two new varieties called Perfection and Gloriosa. The colour is a bright lilac blue, flashed with pale lilac or white. It is a very beautiful shade of colour, and very striking. The light-edged varieties are as yet scarce. Ne plus ultra is the best if not the sole representative of this class, and with this I associate Martinet, which so much resembles it as to be pronounced by some identical with it.

The striped kinds are as numerous as the blues, but like the latter they offer but few real points of difference among themselves. Foremost is the old Versicolor or Cloth of Silver, I believe the parent of the finest striped kinds. This is a most profuse flowering variety, but like the Yellows has a tendency to produce a great deal of Grass when in the flowering state. There was once, and there may be still a difference between Versicolor and Cloth of Silver; the former is not so much striped as the latter, but the stripes are of greater width. Invariably, however, the largest bulbs are sent as Cloth of Silver, the smaller as Versicolor. Two new varieties of Versicolor have recently appeared, viz. Laureatus, like the original Cloth of Silver, and Formosus, very similar to the original Versicolor. I think, however, that these new varieties have a purer ground colour than those from which they are supposed to be derived. The large light-striped flowers form another division by themselves. They are Sir Walter Scott, Bride of Lammermoor, and Gallio. There is scarcely a perceptible difference between these three flowers. La Majestueuse is as large as the preceding, but the stripes are darker. The smaller-sized light-striped varieties are Argus, Sappho, Ida Pfeiffer, and Beauty of Albion. The flowers of darker stripes, but of intermediate size, are Albion, Spectabilis, Van Speyk, and Albertine, but the former will admirably represent the quartette.

Amongst the white varieties—and their names are almost legion—I find there are two distinct shades of colour—the pure white and the cream-coloured. Of the former, I have seen Lina, Hebe, Elfrida, Madame Hodson, Venus, Jeanne d'Arc, Maria Stuart, Victoria Regina, Albion, Mammoth, and Pomona; and excepting in a few cases the presence of a little pencilling of purple at the base of the flower, they might be credited with a common origin. Caroline Chisholm, or Mrs. Beecher Stowe, is a small dwarf pure white variety, that throws its yellow stamens well up above the flower. The cream-coloured division is represented by Calypso, Marie d'Ecosse, Bride of Abydos (sometimes I have seen this a pure white), Malvina, and sometimes by Jeanne d'Arc. This shade of colour is always most apparent when the flowers are young; as they become aged they change to a pure white.

We are sadly deficient in really good varieties of yellow Crocus. The best in colour is the old Cloth of Gold, and it is also the freest bloomer. It flowers early, and has sometimes shed its bloom ere the other varieties have put on theirs. The common yellow, on the other hand, is apt to be the latest of all in blooming; it also grows taller, and yields a large quantity of grass. I have seen a variety known as the Golden Yellow, that occupies a kind of intermediate stage of blooming, something between the other two yellows, and therefore in companionship with the blue, striped, and white varieties. The bulbs, however, were generally small, and this brought it into some disfavour. I have not seen it for the past three or four years, though I still observe it advertised in the leading retail catalogues. *Quo.*

NOTES ON GARDENS.—No. XVIII.

Sundry Manchester Gardens.

The neighbourhood of Manchester is well known to be a famous one for the Orchid fancier, and a fertile field for the nurseryman's traveller with Orchideous tendencies; in fact, there is none equal to it in this respect, except the vicinity of London, and even there it is doubtful if the private growers are more numerous. Time only permitted me a look at Mr. Baker's Cattleyas, and a short stay amongst Mr. Turner's famous collection at Pendlebury House. The Orchids are grown there in six neat and suitable houses. They include many of the best specimens in the country, and are in first-rate condition under the management of Mr. G. Toll.

In the East India house, the plants of Phalænopsis were very remarkable, especially P. Schilleriana, which, though not so numerous as at Mr. Day's, was in most vigorous health, some of the plants bearing six immense leaves. There was a very desirable variety amongst them, with the leaves, save a few spots, silvery throughout. Of Angræcum caudatum there was an immense plant, probably the largest in the country; and there was one of the most superb collections of Aërides which I have seen, some of the plants flowering for the second time during the season. Aërides suavissimum delicatum, a variety almost peculiar to the place, was of nearly as pure a white as A. quinquevulnera album, of which there were fine plants in flower, together with gigantic plants of Aërides nobile, and many fine specimens and varieties, some of them recently originated in the gardens, which I have no space to particularise. Mr. Toll finds the Phalænopsis do best suspended over water.

After one has seen Mr. Day's Saccolabiums it will not be an easy matter to be astonished with that genus, but there were here some unrivalled specimens, and amongst them the first plant of S. ampullaceum introduced to the country, having six strong shoots; and S. curvifolium nearly equally fine. Cattleya superba was on blocks in quantity; it requires more heat than any of its congeners.

The cool-house is kept at about from 70° to 75° in summer with sun-heat—at night 60°. In winter at about 60° during the day, and 50° to 55° at night. Odontoglossum crinitum, Phalænopsis, nævium, Pescatorei, and most of the rare ones were grown finely in it. Barkerias are extremely well grown and flowered by Mr. Toll. Being all shy bloomers except Skinneri, he takes them from the cool house when their young shoots are half-grown, and puts them in a temperate stove near the glass, which is of Hartley's rough plate, and never shaded. Treated thus they flower very freely. Barkeria melanocaulon and spectabilis had furnished sheets of bloom through receiving this treatment—no shade during growth. Pescatoria cerina and the Huntleyas were doing finely in the cool house. Luisia Psyche, a very curious looking leathery-lipped little thing, was in flower. The Burlingtonias were finely grown in baskets, thoroughly saturated with water. Of Pleiones there were large pansfull of lagenaria, Wallichiana, maculata, and others, in beautiful condition, being watered very freely during the growing season.

Some Orchids were in fine fruit. A plant of Dominy's hybrid Cattleya bore a pod fertilised by Cattleya crispa superba; C. Dominiana had also ripened fruit well. The old Cypripedium javanicum was bearing large pods. Lælia Lindleyi bore a large pod fertilised by L. superbiens. Zygopetalum maxillare was finely in flower, and was one of the most charming things to be seen at the time, which was the worst season for seeing Orchids in flower—and they are dry subjects when out of bloom. Two houses were filled almost solely with Cattleyas, one house being kept considerably cooler than the other. There were larger plants than I had before seen of many of the species, such as C. Wageneri, lobata, Warneri, Regnellii, quadricolor true, Warscewiczii, exoniensis one of Mr. Dominy's finest hybrids, and Turneri a fine one-leaved slender-bulbed kind with flowers the size of those of C. Mossiæ; and besides these, there were scores of fine specimens worthy of special notice.

The largest Vandas were accommodated with a house to themselves, and were ranged in single file along each side of the central path. A perfect line of grenadiers they were, with Veitch's var. of Vanda suavis 6 feet high with as many breaks, and bearing fine fruit, fertilised by Vanda cristata and Vanda teres. A specimen of Vanda teres was 6 feet high and 4 feet in diameter; and there was the first plant of Vanda Hookeriana introduced to the country, with other Vandas of extraordinary size. A plant of Aërides suavissimum 8 feet high, with six shoots, had borne 18 spikes of flowers, each of them branched, and must have been grand.

Without space to specially mention the interesting and in many cases unrivalled specimens of Dendrobiums and Cypripediums, I must not forget to state that Cypripedium Schlimmii was finely grown in heat with plenty of moisture—as many say it should be grown cool. Oncidium phymatochilum was found to do best in Cocoa-nut fibre and Sphagnum Moss well mixed together, with plenty of drainage. Calanthes were remarkably well grown in baskets filled with peat, loam, cow-dung, and sand, and placed near the glass—rather a novel, but a very successful way of growing them. My few rapid notes, however, after all furnish but a very inadequate notion of the extensive and interesting Orchid treasures of Pendlebury House, which should be seen by all Orchid growers who have the opportunity.

—— The Sarracenias shown at Kensington during the past season by Mr. Baines, gardener to H. Micholls, Esq., at Bowdon, attracted me there to see how and where the plants were grown that won—almost by a walk over—Lady D. Nevill's prize, and astonished the best plantsmen at the show. That my visit was not without reward will be inferred from the following measurements:—Sarracenia Drummondii bore pitchers from 18 inches to 2 feet 10 inches long, the largest plant 2 feet in diameter. S. flava had pitchers 2 feet 6 inches long, the plant 2 feet in diameter. S. variolaris bore pitchers 18 inches long; S. purpurea had pitchers 10 inches long, the plant 2 feet 6 inches through. Many who have not seen the plants might suppose them to be "drawn" &c., but the reverse was the case, as they looked much firmer in texture, and bore better developed pitchers than I had previously seen, except on those grown at the College Gardens, Dublin—they looked, in fact, as firm as if cast in bronze.

The cultivation of these highly interesting plants has hitherto been as difficult as their conformation is singular, and I am sure plant growers will be pleased to hear that Mr. Baines has been good enough to fully explain to me his mode of growing them to a size and degree of perfection which few if any thought they were capable of attaining. Mr. Baines has found that in the cultivation of Sarracenias the great mistake made was that of keeping them too hot. "Under such treatment they appear to grow vigorously for a time, but soon become exhausted, and ultimately die. S. Drummondii will stand the most heat of any of the genus; at the same time it is much the most shy at forming its singular trumpet-shaped leaves. In strong heat with me it altogether refuses to make them, all the leaves coming plain. I have tried it in the stove amongst Ixoras, &c., the plants elevated to within 6 inches of the glass, but not a single leaf came in proper character." Mr. Baines

grows all his Sarracenias together in the lightest corner of a span-roofed Fernery, the plants elevated to within a foot of the glass, and the temperature not more than 45° to 50° in winter, by night, with a rise of 5° or so during the day. About the beginning of March they show signs of growth, and require potting. He then removes as much of the old soil as possible, and uses care not to injure the roots, which are very brittle; repotting them in good fibry peat in lumps as large as hens' eggs, with as much as possible of the earthy matter shaken out, and with a fourth part of crocks, broken as small as Peas, added to it. "The pots are afterwards surfaced with green Sphagnum. The house is then kept about 5° warmer, and by the end of April the temperature is increased to 60° or 70° by day, with moderate air night and day. At that time, if all is well, they will be making vigorous growth, and should receive copious waterings every two or three days. As the season advances the temperature is prevented from getting too high, by shading the house, and admitting plenty of air. By the end of June they should have made their growth, but for two months afterwards they should be watered copiously. Some growers stand the pots during the growing season in pans of water; this I do not like, as it has a tendency to cause the soil to become sour, which is fatal to the plants. The method of propagating all the Sarracenias is by dividing the crowns, which must be separated with a sharp knife in spring just before they begin to grow, potting the pieces in 4 or 5-inch pots and giving them the same treatment as that recommended for the specimen plants. It is necessary to guard against thrips and scale, as if these are not watched they do the plants much injury. Until the young plants get strong I always pinch out the flowers as soon as they appear. As the plants get older I do not see that it does any harm to allow them to flower; and I find that the flower-stem always divides the crown from which it issues, thus giving the opportunity, if desired, of increasing the plants."

Dionæa muscipula is fully as well grown by Mr. Baines as are the Sarracenias, and in the same house with them. Here again, he says, "too much heat does the mischief, with insufficient light and air. I have seen it growing strongly for a time in heat, but it invariably goes off suddenly when so treated. I grow it with the Sarracenias, and in similar materials, broken much smaller. Each plant is grown in a thumb pot, well drained, the pots plunged in Sphagnum as thick as they can stand in a pan 20 inches in diameter, so as to cover as much as possible the whole surface of the pan with the curious traps, at the ends of the leaves, which in spring are frequently as much as 6 or 7 inches long. The plants are syringed overhead every day during the growing season, and never at any time must they be allowed to get dry. The plants are never covered with a bell-glass, except during the time of an exhibition; for keeping them constantly covered, as is often done, even if the glass is tilted, makes them much too tender and liable to damp off. The Dionæa is propagated by dividing the crowns in spring." It is but justice to Mr. Baines to state that all his pot-plants were remarkably well managed. It is, however, hardly necessary to say this of one who was A 1 with his Ferns and fine-leaved plants at the Regent's Park, and elsewhere, during the past exhibiting season.

—— One of the best laid-out, best-cropped, and most beautifully-situated nurseries which it has been my fortune to see, is that of Mr. J. Shaw, landscape gardener, and manufacturer of the famous tiffany, situated about half a mile from Bowdon. The owner's house, surrounded by a lawn dotted with the choicest shrubs and Conifers, is charmingly situated, and overlooks the nursery, and a considerable portion of the country around. Good taste and keeping seemed to prevail everywhere, even to the foreman's cottage, which is a very pretty thatched rustic one.

The houses were rich with the best Orchids and fine-leaved plants; and among them were several specimens of Shaw's patent Vinery, the peculiarity of which consists in its being well and freely aired by continuous glass-panelled ventilators placed in the front of the house and in the back wall, thus admitting of a fixed, and consequently very considerably cheaper roof, and doing away with the clumsy mode of sliding sashes, wooden shutters, brick perforations, &c. Another advantage of these houses is their adaptability to existing garden walls without increasing the height of brickwork, which is rarely desirable, and not at all times practicable. There can be no doubt that efficient ventilation in the back walls of most houses that possess such, is the true and by far the cheaper mode, as is now pretty generally admitted; though I have recently seen in several otherwise first-class lean-to houses in Ireland erected by a London firm, a little apparatus for regulating each sliding light, while in the same neighbourhood the whole back or front ventilation of houses for like uses was worked with less trouble than was required for the single sliding sash. My call was a very late one, but I could see that the "ribbon system" was very extensively displayed by Mr. Shaw, the lines composed however of Wellingtonias and the choicest of the Coniferæ—plants on which the eye could rest with pleasure; and there was enough to lead me to conclude that, should "the Honourable Governors and Company of the Guild of Nurserymen" ever appoint a landscape gardening official, Mr. Shaw would be a very likely candidate. *Wm. Robinson.*

GRAPE CULTURE.

On reading your article (p. 799) respecting the culture of Grapes in pots on hot-water pipes, as seen with Mr. Rivers, I was induced to examine the mode of culture which seemed to me so novel. First, as regards the house: it is span-roofed, 10 feet wide, 5 feet high at the sides, and 10 feet high to the ridge. The roof is fixed, and the ventilation is on each side by shutters 15 in. wide, in 10-feet lengths, on hinges opening downwards; the lower part of the aperture near the surface of the ground is not more than 15 in. from it; at each end is an opening under the gable, closed at night. On each side of the house is a hot-air chamber about 3 feet 6 inches wide, in which are two 4-inch hot-water pipes, placed horizontally; over them is a pavement of slates supported by bricks fixed in mortar. On the floor of this heated chamber are Orange trees, cultivated so as to ripen their fruit in one season, and in early spring, Peach trees, in pots for forcing, are placed among them. On each side, close to the outer walls, are two 4-inch pipes, one over the other, so that eight pipes are employed to heat a house 10 feet wide and 10 feet high; the consequence is a great heating power, so necessary in early forcing. On the upper pipe of these last mentioned, at the sides of the house, are placed the Vines, the pots supported as you describe. Their growth, and the fruit they have given, are among those extraordinary things that one sometimes sees in matters appertaining to horticulture—less than a cubic foot of earth, and a rich compost, supporting a Vine that has made in the aggregate shoots 40 feet in length, after being repeatedly stopped while the fruit was growing, and having borne a fine crop of Grapes.

It is a fact well known to cultivators that the White Frontignan and Muscat Grapes rarely attain in England that rich bright amber colour, indicative of thorough ripeness, so peculiar to them in the south of France and in Spain. At our exhibitions in September, Grapes approaching to it are occasionally seen, and always admired; but the rich golden tint I allude to is, I think I may say, never seen. Now this is the striking peculiarity which I witnessed in Mr. Rivers's house as early as July, in several kinds of White Frontignan Grapes, on Vines in pots placed on a hot-water pipe. They were then thoroughly ripe, and their flavour rich and grateful in the extreme.

With regard to the facility of growing Grapes after Mr. R.'s method there is no question. With regard to the economy there is something to be said. Vines planted out in heated borders, and forced so as to have ripe Grapes in May, require much skill, attention, and expense. Vines in pots placed on a 4-inch hot-water pipe, and in a house heated as I have described, require less care and ripen much more rapidly. In the former but one crop in the season can be brought to maturity; in the latter two or even three crops may be ripened. In this way, supposing forcing to commence in November or December, the Grapes will be ripe in April and May; the second series of Vines may then be introduced, which will ripen their fruit in July and August; and then, if Vines in pots from a cool Vinery are introduced, they will ripen their fruit in September, and be kept till forcing has again commenced; so that in one house, with a cool Vinery at hand as a nursery, three abundant crops may be produced. Mr. R. calculates that each Vine with short stopping, *i. e.*, to stop the young shoot down to the bunch, requires 2 feet of space, so that a Vinery like his, 50 feet long, will allow of 25 Vines on each side, or 50 in the whole. If, however, the hot-air chamber is used for forcing Peaches in pots, each Vine should be allowed 3 feet, otherwise sufficient light would not be admitted. Forced Oranges seem to like the shade, and grow and bear well; and Figs would doubtless do the same.

I have been tempted to describe this, to me, new mode of culture, seeing in it a great future to Grape growers, whether for market or for the supply of families. Cheap span-roofed houses 10 feet wide with fixed roofs are now built by every village carpenter, and heating by hot water cheaply applied. *Vitis.*

[We received from Mr. Rivers in July several varieties of Frontignan Grapes from Vines in pots placed in the novel situation above described. They were all of a bright amber colour, and one, we believe called the Golden Frontignan, was particularly bright. The Tokay, Primavis, Trovéren, Early Smyrna, and Auvergne Frontignans were also remarkable for the bright colour and rich flavour of their berries.]

ELIZABETHAN GARDENING.

(*Continued from p.* 893.)

Another primary object of the Elizabethan horticulturist was to render the garden a pleasant adjunct to the family residence at all seasons, by producing a flush of flowers or a display of attractive herbage all the year round. They did not, as in the modern fashion, plant a garden intended for every-day use with a few exotics which require expensive care ten months in the year, just to produce a showy blaze of hot colours for a month or two in the hottest part of the year. They endeavoured to supply a source of pleasure and delight all the year round, and to tempt the household to enjoy healthy exercise in the garden in every month of the year. To larger mansions were attached pleasaunces, specially devoted to winter exercises, 'that when the wind blows sharp you may walk as in a gallery' (Bacon). Protected by thick Yew tree hedges, the 'alleys ever finely gravelled,' and the borders planted with Evergreens of various tints—some dark green, others light, some variegated gold, some silver, with a few light deciduous trees for contrast—the winter garden afforded, even in the dreariest season, a sheltered walk, full of interest and beauty to the lover of Nature. Such gardens are attached to many of the old Elizabethan mansions which still remain to attest how grandly and with what magnificent taste men could once build their domiciles.

Lord Bacon, whose ideas were always magnificent, says, 'I do hold it, in the royal ordering of gardens, there ought to be gardens for all the months of the year, in which, severally, things of beauty may be then in season. For December and January, and the latter part of November, you must take such things as are green all winter—Holly, Ivy, Bays, Juniper, Cypress trees, Yew, Pines, Fir trees, Rosemary, Lavender, Periwinkle—the white, the purple, and the blue; Germander, and Sweet Marjoram, warm set. There followeth, for the latter part of January and February, the Mezereon tree, which then bloometh; Crocus vernus, both the yellow and grey; Primroses, Anemones, the early Tulip, Hyacinthus, Chamæiris, Fritillaria, &c.' And then he gives lists for each month in the year, adding 'but my meaning is perceived, that you may have *ver perpetuum*, as the place affords.'

But not only in royal gardens was this principle carried out. It was the fundamental principle of the gardeners of the period, that the garden was to be made as attractive as possible at all seasons.

Parkinson lays down the same principle for the guidance of persons having gardens; and gives directions how to select flowers 'which do show forth their beauty and colour early in the year, that they seeme to make a garden of delight even in the winter time; and others which do give their flowers one after the other, so that whoever would have of every sort of these flowers, may have for every month several colours and varieties, even from Christmas until Midsummer, or after, and then until Christmas again; and that in some plenty, and that with great content, and without forcing; so that every man may have them in every place, at all times, if they will take any care of them.'

This is the true secret of ordinary domestic gardening for the private individual of every class, according to his means and the opportunities at his command, viz., so to order his garden that he may have delight in it at all seasons.

The modern horticulturist's idea of planting a garden is in such fashion that, for nine or ten months in the year, it shall be a desert without a flower or shrub of any interest. Your professed gardener has a limited catalogue of about a dozen plants, which he calls 'bedding-out plants,' consisting of Verbenas, Calceolarias, Tom Thumbs, Petunias, and a few others. On these he expends all your money and all his time and energies. He has but one idea; and that is, to force a few coarsely-contrasted plants, without scent, without variety, stiff and formless, to make a show of glaring colours during August and September. Hence it happens that we may visit a score of gardens in a year, and be unable to detect much difference between them. As to the form of the beds—at one time a sort of plaid prevails, at another the French carpet, at another the ribbon style. As to colour, there is no variety: the changes are rung on the same flowers—now it is Verbena, Lobelia, Geranium; then Geranium, Verbena, Lobelia; now yellow, white, blue, and scarlet; then scarlet, blue, yellow, and white. We just perceive distinctions without differences, until we become weary of the continued monotony, and fatigued with an oppressive blaze of vulgar colours.

This style may be all very well for the gentleman who visits his country seat for the shooting season, and spends the summer in London. It is sufficient for him to find his flower-beds as gay and glittering as the ladies who condescend to lighten the tedium of a country-house out of the season; but nothing can be more tasteless and absurd than for those who live at their houses during the greater part of the year, and want a garden all the year round, to adopt this expensive fashion. It is not to be denied that there is a certain kind of brilliancy in this fashionable garden. It is gay, glittering, and exciting; but it is safe to deny that a tawdry blaze of scarlets and yellows is consistent with good taste, or has one-tenth the play of harmonious beauty and richness which a border of mixed colours possesses. Besides, there is the weariness and monotony of it. Your beds once planted for the season, must remain the same. The pattern, so elaborately designed, seen and admired, must remain before your wearied eyes all the months of its blossoming. There is no change; no variety. The flower you see one morning you must see the next, and the next, in wearisome succession. It is incapable of enjoyment except during a few months in the autumn. Now, it unfortunately happens that this is the season when, to the perennial dweller in the country, the garden is least required for enjoyment. It is the season when he is most tempted to take the air in the open fields or wild paths of Nature, or to visit the Continent or the sea-side. It is the season when, during the day, the garden is hot and wearying—and rendered still more hot and

wearying by the blaze of the same colours day after day; and when the evenings are getting damp and chilly. The domestic garden is most wanted at seasons when Nature is least attractive; when the lanes are muddy, and the forest trees are bare of leaves; or else when the evenings are long, and the warm night air balmy and charged with perfume; when the blackbird is trilling his last good night, and the linnet is making its nest; and the black-cap and the nightingale,

> In some melodious plot
> Of beechen green and shadows numberless,
> Sing of summer in full-throated ease. *Keats.*

'Bedding-out' plants, too, are necessarily stiff and graceless, monotonous and uniform. They must not 'wander at their own sweet will,' but must conform to the requirements of the pattern elaborately designed on paper by the gardener. They are also generally deficient in one of the chief attractions of flowers—perfume. Moreover, they have no associations, no poetry, no sentiment; their names excite no pleasing fancies, no poetical associations, no historical connections. What possible idea can a Scarlet Verbena conjure up, except that of a flat patch of bright colour? but who can look even upon a Daisy without calling to mind that it was Chaucer's favourite flower; to do homage to which, at its first opening, he rose early in the morning—

> For to be at the resurrection
> Of this flower * * *
> Her cheer is plainly spread in the brightness
> Of the sun, for there it will unclose:
> Alas! that I ne had English rhyme or prose
> Suffisaunt this floure to praise aright;

or that Burns has immortalised it as the 'wee crimson-tippet flower;' or the numerous verses in which Wordsworth has eulogised it? What a fund of poetry, moreover, is there in the very names of the old flowers! Monkshood or Venus's car, Love in a Mist, our Lady's Slipper, our Lady's Smock, Maiden-hair, Venus's Looking-glass, Pansies, or Love in Idleness, Kiss at the Garden-gate, and the host of other pretty names for the Heartsease; Sweet William, Love lies Bleeding, and hundreds of other pretty fancies, almost forgotten, because your gentleman gardener won't let you have what he calls nasty common things—that is, plants which will grow and flourish without his skilful and well-paid manipulations.

We are quite aware of the difficulty which overrides all attempts to introduce a more wholesome taste in gardening. The owner knows little about it, and he is dependent on his gardener: the gardener is dependent on his trade for a livelihood; and his idea is, that his trade consists in producing, with as much labour and care as he can get paid for, several thousands of a dozen varieties of plants for 'bedding-out.' Having produced them with much care and at great expense, he is of course desirous to show them off to the best advantage; so everything else is rooted out of the garden under the name of 'common rubbish;' formal beds are cut in whatever form happens to be the fashion of the day; and each sort and colour of plant is planted in a separate bed, in contrast to some other plant in some other bed, that it may be as conspicuous and glaring as possible. Your gentleman gardener, who pretends to 'have a taste,' and who regards his master merely as 'the slave who pays'—which indeed for the most part he is,—does not condescend to know a common English flower. A Primrose or a Daisy is to him a mere weed, common and unclean; and if his master were to dare to ask him to introduce plants of this description into the garden in preference to his 'bedding-out plants,' he would attribute his wish to meanness, and plainly tell him 'he was no gentleman,' and quit his service. He does not know that God loves the commonest of His creatures as much as the rarest, and perhaps we might say more so; for that He has made them common seems to show that He loves them best and has more to teach us from them. At all events, it is not for man to call anything that God has made 'common or unclean;' and no right-minded man will despise or reject any of His works.

(To be continued.)

Home Correspondence.

Orchard Houses.—I have thrice reported the results of my experience of an orchard house, and other amateurs may be again interested to receive the results of my fourth year. I must repeat that the house in question is span-roof, 12 feet high and 20 feet in width, with flaps round the sides, which are left open all the year except during severe spring frosts. There is no roof ventilation. There is a centre bed and two borders at the sides. The trees are planted in the bed; on the borders they are placed in pots. The trees in the bed are taken up, root-pruned, and replanted every autumn. There is a good supply of water by pressure delivered from a hose pipe. The results of this fourth year are as follows:—Peaches a good crop, fair size, but again sadly wanting in sweetness and flavour, and this equally when in pots and in the bed. As the summer has given us more sunshine than usual, I fear this defect will not be overcome. But, strange to say, it does not affect the Nectarines. The crop was large, size small, but flavour perfect, and this alike at both ends of the house, in the shade as well as in the sun. The Stanwick has again ripened well, with high flavour, abundant crop, and partial splitting. Let me add that one of Mr. Rivers's new Nectarines, the Victoria, was placed by accident in the cold end of the house; nevertheless the fruit ripened well, and it deserves all its reputation; a more delicious Nectarine I never tasted. It appears to be a cross with the Stanwick; is it so? Pears are magnificent. In size and cleanness and flavour they are equal to anything produced in Jersey. This crop has never failed. Undoubtedly the orchard house is the paradise of the Pear tree; but I would recommend any reader about to stock a house to be very careful in his selection of sorts. I have about 20 sorts, but only a few of them are first-rate. It is bad economy to waste valuable space on inferior fruit. Many of the French Pears are coarse in texture, though sweet and rich in flavour. The best are the Van Mons Leon le Clerc, the Seckle, the Beurré Superfin, and the Autumn Bergamot. Do not fail to have two or three of each of these, instead of a larger variety, of which one-half are almost worthless. Plums a good crop, ripened well, but only three or four sorts worth planting—the Jefferson and Coe's Golden Drop are the best. Apricots again a fine crop, not large in size, but of luscious quality, studded with their golden fruit, averaging perhaps four or five dozen upon a tree; they were a beautiful picture. The orchard house appears to be admirably adapted for this valuable fruit. Figs have ripened well, and the crop enormous. Some choice Apples have attained a large size and handsome colours—but inasmuch as they can be produced out of doors, it is questionable whether they should occupy ground within that might yield fruit unattainable in the open garden. Some bushes of the Eugenia Ugni are loaded with their luscious berries, as plentiful as the leaves. I have utilised the upright posts that support the sides by planting Currant bushes against them. The fruit thus protected from birds is still hanging in great clusters, and will be acceptable a month hence. I purpose trying some Gooseberries in like manner Let me add that no heat is applied at any time. It is necessary to place galvanised netting over the open sides in the summer to exclude the birds. The operation of pinching is regularly performed through the summer. I agree with Mr. Rivers that the secret of the success of the orchard house is the perfect ventilation at the bottom of it, by which the under parts of the leaves are thoroughly aërated, and insects driven from a place that is too cold to keep them. Might not the same process of ventilation be found equally beneficial in greenhouses, conservatories, &c.? *E. W. Cox, Highwood, Hendon, Sept.* 26.

Further Notes on the Flora of Kildare.—If the county is rich in Grasses, it is poor in Ferns. It, however, can boast of the Royal Fern, which is found occasionally in the bogs. Old ruins, of which there are many, are often to be found covered with the scaly Hart's-tongue, accompanied by the common Polypody. Equally common on walls is the Wall Rue Spleenwort. A. Trichomanes and A. Adiantum-nigrum are also common, but local in their habitats. I may mention in passing, that another denizen of old buildings is sometimes found luxuriating on the crumbling masonry of a bygone age—I mean Cotyledon Umbilicus, Pennywort. I found it side by side on a very ancient ruin with Sedum acre. But to return to our Ferns. In a wood at Leixlip, magnificent plants of Lastrea dilatata and Polystichum angulare are scattered profusely under the shade of equally magnificent Beech trees; the latter Fern, indeed, is growing everywhere throughout the county, as is also the common Hart's-tongue. But I should like to ask a question as to Scolopendrium vulgare. Is it common for simple fronds and cut fronds to be growing on the same plant? I found this to be the case in one or two instances. Has it been noticed elsewhere? [Sometimes.] The only other Ferns that I have yet found are the male Fern, Lastrea Filix-mas; the northern hard Fern, Blechnum Spicant, and the common Brake. Kildare is not a mountainous county, and hence the absence of many Ferns elsewhere common. There are no natural lakes, but nevertheless plenty of water. The county is pierced by one main natural channel, the Liffey, and by two artificial ones, the Grand Canal and Royal Canal, and each of these has to some extent a vegetation of its own. The waters of the Liffey are not encumbered with many aquatic plants. This is no doubt partly owing to the high and very rapid floods that frequently pour down from its feeders in the mountains of Wicklow, causing the river often to overflow its banks far and wide. The stones in the bed of the river are often completely covered with the Moss called Fontinalis antipyretica, and here and there are patches of the floating Pondweed, Potamogeton fluitans. Masses also occur of the spiked Water Milfoil, Myriophyllum spicatum. Excepting these I know of nothing of any importance in the water. The overhanging banks are in some places completely covered with Marchantia polymorpha; and such plants as the Hemp-agrimony, Water Ragwort, purple Loosestrife, are common on the immediate banks. Forget-me-not is also present everywhere. The sluggish water of the Grand Canal is, as might be expected, much more favourable for the development of an aquatic vegetation. Our American cousin Anacharis Alsinastrum seems to have established its head-quarters here. So plentiful is it in this canal that I should think it sometimes impedes the operations of the bargeman. The Potamogeton densum, P. perfoliatum, and P. pusillum are also abundant. The beautiful Arrow-head, Sagittaria sagittifolia, with its white and violet flowers, is here, but not so plentiful as the others. So also is the fine-leaved Water Dropwort, Œnanthe Phellandrium. The Royal Canal I have not fully explored, and can only at present mention one plant spread extensively over it, viz., the Buck Bean, Menyanthes trifoliata. Deep and wide ditches occur everywhere, and often serve the two-fold purpose of affording water to the cattle and draining the land, as well as being fences. The plants most commonly found in these ditches are the two Water Plantains, Alisma Plantago and A. ranunculoides; the broad-leaved Water Parsnep, Sium latifolium, the great common Carex, Carex riparia; the two Speedwells, Veronica Beccabunga, and V. Anagallis; and the floating Ranunculus, which, by the way, I ought to have mentioned, is growing under at least two forms in the Liffey. There is a pretty fair sprinkling of Carices in the woods and on the banks of the ditches. In the wood at Leixlip, before mentioned, the great pendulous Carex, C. pendula, grows freely, and has a picturesque appearance. This would be worth planting on the margins of lakes and in moist woods. Some of the others commonly to be met with are C. remota, C. vulpina, C. sylvatica, C. flava, C. recurva, C. stricta, and C. vesicaria. While enumerating the Ferns I should have mentioned that the Adder's-tongue, Ophioglossum vulgatum, is found in abundance growing in some of the pastures about Straffan, near the Liffey. *J. Douglas, Straffan, Co. Kildare.*

Peaches and Nectarines on Standards.—Mr. Masters's statement concerning the existence of ripe Peaches and Nectarines on trees in the open ground without protection induces me to inform you that I have now at the present time a bush Peach tree 8 feet through and 10 feet high, with 500 ripe fruit upon it, after 700 have been taken off in thinning on the 9th of July. I have also a second tree with 400 ripe fruit upon it, from which I took 600 in thinning. A third tree has got 350 very fine fruit on it, nearly ripe, and 450 were taken from it at thinning time. For four successive years these trees have produced abundant crops of richly flavoured fruit; they were all planted in my nursery, which is in a very exposed situation, in February, 1859. I have nine sorts of Peaches now fruiting besides those just mentioned; they are very fine trees and yield good crops. I have also some very fine bush Nectarines which have even surpassed the Peaches. None of the above have had any protection whatever. My own experience leads me to believe that Peaches and Nectarines may be very profitably grown in this manner for market. *Josiah Illman, Wellington Nursery, Strood.*

Orchard-house Pears.—In answer to "An Old Subscriber's" questions, I beg to say that my Pear trees were moved out of doors about the end of June, that the pots were plunged to economise water, and that there was very little rooting through the bottom of the pots. If your Correspondent is ever in this neighbourhood, and would like to examine our trees, he is most welcome to do so. They are within five minutes' walk of the railway station. *George Wilson, Gishurst Cottage, Weybridge.*

Wistaria in Fruit.—Has the Wistaria sinensis ever fruited in this country? I have just discovered a seed pod on a plant growing in my nursery. *Charles Noble, Sunningdale Nursery, Bagshot.* [We have not met with this plant in fruit].

Societies.

Royal Horticultural: *Sept.* 27 (*Floral Committee*). — Several highly interesting subjects were exhibited on this occasion. Mr. Parsons, of Welwyn, received a Second-class Certificate for an Achimenes called Stella, a beautiful variety, with very rich deep purplish magenta flowers. Mr. Smith, of Hornsey, received a similar award for a Petunia named Fame, with well-formed white blossoms, broadly striped with rosy purple. Callirrhöe involucrata, with large purplish crimson Anemone-like flowers, white at the base inside, from Mr. Thompson, of Ipswich, was Commended. From Mr. Barker, of Godalming, came various charming Tropæolum blooms, and some rare and interesting Ferns from the Island of Ascension, to one of which, Asplenium resectum, a slender, shining, deep green-leaved kind, a First-class Certificate was awarded. Mr. Veitch furnished a basket full of charmingly-bloomed plants of Odontoglossum grande, the flowers of which were unusually large and highly coloured. For these a Special Certificate was given, which they well deserved. The same exhibitor also contributed a very fine hybrid Cattleya, named exoniensis, the result of a cross effected by Mr. Dominy between C. Mossiæ and C. crispa superba; it had delicate lilac sepals and petals, and a bold showy lip, deep purplish crimson at the top, and stained in the throat with bright orange. This received a First-class Certificate. A specimen of Odontoglossum Uro-Skinneri also came from the same establishment. A Brunsvigia, Hæmanthus, and other showy flowering Cape bulbs came from Mr. Watson, gr. to C. Leach, Esq., of Clapham, who received a First-class Certificate for Nerine coruscans major, a very fine robust variety, with brilliant scarlet blossoms. Mr. Bull sent an example of Alocasia longiloba, a species with slender marbled stems in the way of zebrina, but with leaves by no means as handsome as those of C. Lowii. Among Dahlias, of which considerable numbers were exhibited, was one from Mr.

Rawlings, called Purple King, a large compact lilac-shaded purple, to which a Second-class Certificate was awarded. Black Doctor, a variety exhibited on former occasions, was shown by Mr. Legge, and Brunette, previously reported on by us, by Mr. Hopkins. Ne Plus Ultra, a streaked bronzy rose, from Mr. C. J. Perry, received a Second-class Certificate. Mr. Turner contributed Leah, which must certainly be characterised as the flower of the season; also a collection of most of choice varieties sent out by himself, for which he was awarded a Special Certificate. No English Seedling Roses were shown on this occasion for Dr. Lindley's prize; but from Messrs. Paul & Son and Mr. Turner came beautiful collections of established varieties, among which was a boxful of charming blooms of Gloire de Dijon; also fine blooms of Souvenir de Malmaison, Madame Bravy, President, François Lacharme, John Hopper, Prince Leon, General Washington, Lamarque, Madame de Stella, Maréchal Vaillant, Senateur Vaisse, Lord Clyde, Beauty of Waltham, Maurice Bernardin, Madame C. Crapelet, Narcisse, Madame Falcot, Triomphe de Rennes, the white Hybrid Perpetual Madame Soupert, and other interesting sorts. To Mr. Turner was awarded a Special Certificate for his collection, in which were the fine blooms of Gloire de Dijon just mentioned. The last named exhibitor also showed a well-bloomed plant of Lilium auratum. From Mr. Standish came two kinds of Gladiolus, to which First-class Certificates were awarded. One named Our Little Lucy was a light-striped magenta rose, feathered with crimson; the other, Miss Mowbray Morris, was striped salmon streaked with purple. The same exhibitor also received a First-class Certificate for a Japanese Skimmia, a fine evergreen shrub with stiff fleshy leaves and upright terminal clusters of little crimson oblate fruit, rendering it when in this condition a highly ornamental plant.

Sept. 27 (*Fruit Committee*).—Some Grapes allied to Chasselas Musqué were shown from the Society's Garden; Foster's Seedling, a kind larger than the Sweetwater, and Golden Hamburgh Grapes were furnished by Mr. Richardson, gr., Southend, near Darlington. Various Apples came from Mr. Toogood of Westergate, near Arundel; and we also noticed some very good Pears and late Peaches. From. Mr Murdock, of Hendlip Hall, near Worcester, came an excellent Scarlet-fleshed Melon, to which a First-class Certificate was awarded.

MARKET GARDENERS', NURSERYMEN'S, AND FARMERS' ASSOCIATION.—On the occasion of the 36th Anniversary dinner of this Society, which took place on Tuesday last, it was thought desirable that some information should be given as to the usefulness of such an Association to market gardeners generally, in order to induce those who are not members to become so, especially when the great numbers who are cultivators of the soil and partakers, directly or indirectly, without membership, of the benefits secured by the Society in the many important cases taken up by the Committee, are considered. The rent and tolls of Covent Garden Market may be referred to in illustration. When, in the year 1828, the Market Bill was passing through Parliament, it was so attentively watched, that clauses were introduced, by the exertion of some gardeners uniting for the benefit of all the trade, securing the rent and tolls at the present moderate charge. This Society was then formed, and held its first meeting on the 26th of March, 1828. The objects proposed were to obtain funds to assist unfortunate members, and to protect the general interests of market gardeners; and since that time the most convincing proofs of usefulness have been shown. Among the benefits which the trade generally have received may be mentioned the horticultural horse duty taken off through the Society representing its injustice; the Weights and Measures Bill; the Sewers Rate upon Land reduced three-fourths; the Tenant's-rights Bill; the charges for tonnage by railway transit on vegetables sent from the markets greatly reduced; and the additional gaslights to Covent Garden Market without any cost to the holders of stands in the market—a boon obtained by the Society. The covering over of the market with glass has been petitioned for, and is now only a question of time, as it has become a necessity. Moreover it is promised by the Bedford authorities that the question will be fully entertained next year, when some leases fall in of adjoining house property, and great alterations will be made in the market. The existence of such a Society, open to all who are engaged in horticultural and agricultural pursuits, should be generally known. One striking fact should be noticed, namely, that one of the market gardeners who first suggested the formation of this Society, has through misfortune in business been the first applicant, and the first recipient of relief from the funds. It is hoped that when the Society is more generally known to market gardeners and others, the number of members will be increased, and therewith the success and prosperity of the Association. *Wm. J. Lobjoit, Henry Myers. Wm. Thomas Atwood, Secretary, Mortlake.*

ENTOMOLOGICAL: *Sept.* 5.—F. P. Pascoe, Esq., F.L.S., President, in the Chair. Mr. Dunning exhibited a number of living specimens of the caterpillar of a species of Agrotis (A. segetum?) which had proved extremely destructive in Yorkshire, the person from whom he had received them having had at least 150*l.* worth of Turnips entirely destroyed by them. Prof. Westwood gave an account of the ravages of the same insects in his own garden in Oxfordshire, where they had attacked Turnips, Beetroots, Carrots, various kinds of Greens and Cabbages, Celery, and Seakale. Their numbers were quite formidable; as many as 29, many of them 1½ inch long, having been found at the root of a single Broccoli plant. Hand-picking and setting of traps had proved the only means of stopping their ravages. Mr. Janson exhibited four small species of Staphylinidæ new to the British list of beetles. The Rev. Hamlet Clark exhibited a specimen of Buprestis ocellata, a beautiful beetle taken on board ship from India, when about 50 miles from Madagascar, it having been probably bred in wood in the ship; several instances were, however, mentioned by Mr. Lowne in which insects had been taken as far as 150 miles from land off the coast of Africa, carried by the N.E. trade winds. Mr. Lowne exhibited various Coleoptera and Diurnal Lepidoptera which he had collected in the Holy Land. Mr. Tegetmeier called the attention of the Society to the numerous incorrect and ridiculous statements relative to the economy of the hive-bee, which had appeared in a series of letters recently published in the *Times*. Professor Westwood and the Rev. Hamlet Clark also regretted the diffusion of so much error in a leading journal, and the unfair treatment to which Mr. Woodbury had been subjected. A paper by Mr. Hewitson, containing descriptions of some new species of butterflies, was read. Professor Westwood read descriptions of a number of new species of Sagrides and Megalopides, natives of Africa, Asia, and Australia. Lieutenant Beavan communicated "A few Remarks on the Tusseh Silkworm of Bengal." The Rev. H. Clark read a paper containing descriptions of new species of plant beetles of the genus Schematoza, remarkable for their great resemblance to species of Lycidæ.

Notices of Books.

Advanced Text Book of Physical Geography. By David Page, F.R.S.E., F.G.S., Pp. 296. Blackwood & Sons, Edinburgh and London, 1864.

Mr. Page's text books of Geology are deservedly popular with the student, because they contain just the very information which he requires, arranged too in the clearest manner. This is to a certain extent the character of the work before us on "Physical Geography," a charming subject, which has been beautifully treated by Captain Maury. In the book before us, a man of any taste will be frequently shocked by the pedantic introduction of high sounding words, and then again by an equally pedantic explanation of terms which require no explanation at all, as for instance Solar system (Lat. *sol*, the sun), Equator (Lat. *æquus*, equal), Negro (Lat. *niger*, black). Some people seem to think the adoption of an easy style and the use of simple words must be derogatory to the dignity of a *pædagogus*. We are of a different opinion. We hold it to be high treason to the cause of education, when people thus make pleasing subjects "hideous." What can be more barbarous than the concluding sentence of the book before us. "To observe and arrange the phenomena of the terraqueous surface, to discover their producing causes, and to give intelligible expression to the law that regulates, is the great object of our science, and it only partially performs its function when, in dealing with the human species, it fails to be guided by the same methods of research. Directed by these methods, and applying them to the whole field of Nature, the ordainings of our planet, amid all their myriad ramifications, assume a unity and completeness which it is the great object of science to discover, and the highest effort of philosophy to establish." Can anybody tell us what are "the ordainings of our planet?"

We don't mean to say that Mr. Page's book is not full of information, nor that it is ill arranged. Quite the contrary. There are also several choice extracts from the best authors, such as Baron Humboldt, Sir John Herschel, Captain Maury, Dr. Hooker, and the lamented Captain Speke, and the student who desires further information is told where he may find it. There is also a glossary and an index, and the book might have been a very good one.

The second and third numbers of the *Geological Magazine*, the commencement of which was noted at p. 846, keep up the character of this new serial. Among the original matter in the numbers before us are articles on the Bridlington Crag, with a list of fossils; on the skeleton of the Archæopteryx; on Acrodus, a genus of fishes of the secondary rocks; on the copper-bearing rocks of Alderley Edge, Cheshire; on the Miocene beds of the West Indian Islands; on the relationship of certain West Indian and Maltese strata; and descriptions of some new fossils. There is besides a variety of miscellaneous geological information. In reply to Col. Greenwood, who expresses a wholesome scepticism, as he calls it, as to the phrase "rainless district" used by geographers, regarding such a thing as a rainless district an impossibility, Mr. D. T. Ansted, after admitting that the north of Africa and the whole of Asia Minor are subject to occasional rains, in a certain sense seasonal, though for the most part, and sometimes for more than a year at a time, without rain, at least periodical rain (thus indicating the sense in which districts so circumstanced are called "rainless"), adds "there are other tracts, especially that on the west side of the Andes, where rain is so excessively rare that the inhabitants would regard it almost as a miracle. I remember being told some years ago, by a resident at Alicante, on the east coast of Spain, that there had been no rain in that district for 20 years."

Since our last notice of *L'Illustration Horticole*, the following are the most important of the subjects which have received illustration in its pages:—*Jacaranda digitaliflora*, the J. gloxiniæflora of gardens, a Brazilian shrub, with compoundly pinnated leaves, and compound panicles of large handsome lilac Foxglove-like flowers; it is compared with J. semiserrata. *Schizostylis coccinea*, Messrs. Backhouse's showy Kaffrarian Irid. *Camellia Petazzi*, an imbricated cerise-rose, having some of the central petals banded with white. Mr. Fortune's beautifully *Variegated Japanese Saxifrage*, under the name of S. Fortunei tricolor. *Aucuba japonica*, the normal plant, represented as shown by Mr. Standish last spring, laden with its coral berries. *Iriartea ventricosa*, a curious Palm, with slender stems, gouty in the centre, stilted on its adventitious roots, and crowned with a head of pinnately-parted leaves, having the segments truncate and deeply toothed at the apex. *Aquilegia spectabilis*, a very handsome plant from the Amoor river, producing dark purple flowers, of which the large spreading sepals are slightly tipped with green, and the petals, which converge in a bell-shaped form, much more decidedly tipped with lively yellow, while the spurs are very remarkably incurved. *Camellia alba ornatissima*, an Italian variety of great beauty, the flowers being pure white, and represented as perfect in regard to symmetry of form. *Cycas Riuminiana*, a remarkably fine species of Cycas, found in the Philippine Islands by M. Porte, with a trunk of 6 or 8 feet high, and a dense crown of pinnatisected leaves, having thorny petioles, and very long and numerous linear-lanceolate leaflets, of which the lower are shortly stalked, and the upper sessile and decurrent on the posterior side; they are particularly handsome on account of their Fern-like character, and their lively shining green colour. *Lapageria rosea albiflora*, one of the finest of greenhouse climbers. *Hippeastrum procerum*, a Brazilian Amaryllid, called Impératrice du Brésil, by its introducer M. Binot; this produces an umbel of purplish-lilac flowers; according to the figure the bulb is so much narrowed and elongated as to become like a stem or caudex, from the top of which the leaves depend, and out of the centre of which the scape issues. It is a remarkably distinct-looking plant amongst Hippeasters. *Achyranthes* (?) *Verschaffeltii*, a red-leaved plant with purplish veins, which has been exhibited in London under the name of Iresine Herbstii, given to it by Sir W. Hooker; the leaves are roundish in outline, and often so deeply emarginate as to appear bilobed, and they have the margins so much incurved that they become cupped; the plant has been recommended for bedding purposes on account of its deep blood-red leaves; and being a native of Brazil it may possibly prove more hardy than some of those already employed. *Camellia Giardino Schmitz*, a pretty pale rosy blush flower, very delicate in tint, and of good form, but scarcely, if we may judge from the figure, attaining to the middle size. The Echmea distichantha of the "Botanical Magazine" M. Lemaire names Æ. Hookeri, on the ground that it is not the original Æ. distichantha published by himself. There is a figure of a good-looking Pear called *Beurré Spae*, a new Belgian variety.

BOOKS RECEIVED.—*Parts XVIII. and XIX. of Dictionary of Chemistry.* By Henry Watts, B.A., F.C.S. In the first of these Parts the article on Iron is concluded, and our eye has been attracted to a few pages on the curious subject of Isomerism. "This term is derived from ἴσος equal, and μέρος part, and its employment by chemists is an expression of the fact that very different chemical compounds have sometimes identically the same ultimate composition. Two or more different bodies which are composed of the same elements, and of the same proportions of those elements (*i. e.* which have the same per-centage composition) are said to be Isomeric. The following organic substances may be cited by way of illustrating the employment of this term. Butyric acid, acetic ether, aldehyde, oxide of ethyline, four bodies which are quite different, and have the same percentage composition of carbon, hydrogen, and oxygen, and are represented, the two former by the chemical formula $C^4 H^8 O^2$, the two latter by $C^2 H^4 O$." Of inorganic bodies the elementary substances themselves offer many examples of isomerism. Thus, oxygen appears to be capable of existing in two allotropic states; in one condition it is known as ordinary oxygen, in the other as ozone. Hence the dictum—"It is of consequence how the atoms of a compound are arranged as well as what kind of atoms." And hence there may be very many totally different substances composed of the same ultimate atoms. This is in fact the whole philosophy of isomerism. Part XIX. contains a long article on Lead and the different modes of dealing with its ores, from the

backwoodsman's simple process of kindling a fire in an old stump of a tree, where he places some galena on the charred wood, and melts it down; and when it cools, finds the metal at the bottom of the hollow—to the elaborate methods which are adopted in this and foreign countries. The imports of lead into the United Kingdom for 1862 amounted in value to 460,536*l.*, and the exports for the same year to 770,590*l.*, upwards of a quarter of a million pounds worth having gone to the United States. There can be no doubt that this Dictionary of Chemistry is an admirable work.

Garden Memoranda.

Dr. Falls', Bournemouth.—Bournemouth, it need scarcely be remarked, now ranks among the most fashionable of English watering places, and is justly valued for its delightful quiet and comparative retirement. Its situation is near the western extremity of the south coast of Hampshire, and about two miles from Dorsetshire. It nestles snugly in the bosom of extensive woods of Scotch Fir and Pinaster, and the various detached villa residences of which it consists, standing as they do among the trees at irregular distances apart and at different elevations, have a very pretty appearance, especially when viewed from a distance, half concealed by their perpetual mantle of living green. The cliff, too, which is rugged and time-worn into innumerable crevices, fissures, ravines, and "chines," is not without its attractions; it rises high above the sea, and is crowned to within a few yards of its edge with Fir woods, through which are innumerable walks and drives, cool and shady, even in the brightest and hottest weather. Rhododendrons, Laurels, and other evergreens, clothe the sides and basin of the bay through which flows the little rivulet called the Bourne, and form an ornamental shrubbery traversed by walks of a most pleasant character. In addition, too, to these favourite places of public resort, nearly every house has its private garden of greater or less extent.

Among the latter, one of the most charming is that of Dr. Falls, situated in what is called Richmond Terrace, and which may be readily recognised by the neat conservatory entrance or circular-topped glass-covered way which connects that gentleman's residence with the public road. This is neatly floored with different coloured tiles, and is tastefully ornamented at the sides with hanging baskets and flowering plants in pots on stages, which it is hoped will be eventually over-canopied with Fuchsias, and such luxuriant-growing climbers as will cover the roof. Around the residence is a well-kept lawn cut off from a little kitchen garden by a Laurustinus hedge, which grows luxuriantly and blooms every year most satisfactorily, as do also Rhododendrons, the soil being suitable for these and similar sandy peat-loving plants. One side of this pretty little garden is screened from public observation by an avenue of Pinaster, the stems of which in several instances are overrun with Ivy; on another side is a shrubbery planted on root-supported terraces, and decorated in front with Ferns and other interesting plants. Arbours, rustic flower vases ornamented with split Fir cones, and beds of Pelargoniums, Verbenas, and Mesembryanthemums, all form prominent features of this delightful semi-rural retreat.

The glory of the place is, however, a tree of the Emperor Alexander Apple, the fruit of which, in point of colour, is as superior to that of ordinary Apples of that kind as the brilliant Coleus Verschaffeltii, as it is called, is to its near relation the old Nettle Geranium. How so much colour came to be infused into the red streaked greenish-yellow skin of the Emperor Alexander, it is not easy to say; but as "one stroke does not fell an Oak," so a combination of circumstances has doubtless contributed to bring about so favourable a result. The summer here as elsewhere has been unusually dry and bright, and that, in conjunction with the salt air from the sea and an open south-west aspect, may reasonably be expected to have had much to do with the matter. Be that as it may, the tree, which stands on the open lawn, has borne a heavy crop, the fine appearance of which has elicited universal admiration. The beauty of the fruit alone is, however, not all; for in flavour Dr. Falls' Emperors are very superior to ordinary fruit of that kind. They are in short as good as they look, which is saying a great deal, for finer fruit of this variety than those now under notice have perhaps never before been seen. Larger we acknowledge have been imported from Nova Scotia and elsewhere; but none so brilliant in colour. Other Apples and Pears are also excellent, especially Louise Bonne of Jersey and Baron de Mello, both valuable dessert Pears. Strawberries are likewise stated to succeed uncommonly well here; they come in early and are highly flavoured. In this warm climate Cuthill's Black Prince is indeed a right regal sort, and other varieties are equally good.

In a sheltered corner of this well cared for little garden is a tree of Paulovnia imperialis in robust health, its ample pale green leaves forming a fine contrast with the more sombre hue of some of its associates. Judas trees blossom here in great profusion, and Fuchsias grow with a vigour unknown to them in less favoured localities.

Dr. Falls is a keen meteorologist, and from accurate sets of instruments placed in his garden are compiled weather tables, which are periodically sent to Greenwich. From these it appears that in 1863 the thermometer fell below freezing on only five nights in January, eight in February, seven in March, four in May, and again two nights in November and five in December, while during the day time in that year it was found always to be above the freezing point; and in 1862 frost occurred only on one day. Need it be wondered at therefore that half-hardy plants winter here safely in turf pits, covered with straw mats, over which is spread a tarpauling to throw off wet. The chief enemy to be guarded against is damp, from which Cinerarias especially are apt to suffer when closely confined. The mean annual fall of rain in the last three years has been nearly 26 inches, being about 2 inches more than the mean at Chiswick, and we may add that it "seldom rains but it pours." Owing to the extreme porosity of the soil, however, rain dries up directly it falls; any quantity is immediately absorbed, and no sooner has the most copious fall poured down from a thunder storm ceased, than the ground becomes almost as dry as ever.

Coarse Grasses, Heath and Furze, both the summer and autumn-blooming varieties, cover the country for miles round this immediate neighbourhood, and also along the greater part of the line of railway from Southampton to Christchurch. The horticulture of the place is therefore limited; we may mention, however, that under proper management most of the finer kinds of hardy fruits acquire great perfection here, especially Figs, beautiful specimens of which have ripened this season on a standard in the Priory Garden at Christchurch.

Miscellaneous.

Duchess of Buccleuch Grape.—In the course of a short visit to Edinburgh, in the middle of September, we paid a hurried visit to Dalkeith, desirous of seeing those magnificent gardens again, and especially to see the new Grape, the Duchess of Buccleuch, under Mr. Thomson's management. In June last we saw three bunches of this Grape at the York Show, and were disappointed with it. It looked like a good Sweetwater Grape, and although a Frontignan flavour was perceptible, it made no impression on those who saw it. The fact is, the Grapes were not ripe or in proper character. Feeling confident Mr. Thomson was about the last man in the world to gull the public by sending out a worthless or second-rate fruit, we went to Dalkeith, anxious to see what the "Duchess" was doing there, and although only a bunch or two was left, we saw enough to convince us that the Duchess of Buccleuch will take its place amongst our best Grapes, and be a decided acquisition. It must do so, because it is a hardy Grape, a free setter, very prolific, makes a handsome tapering bunch, and ripens into a pleasing amber colour, with a most delicious Frontignan flavour. The flavour, hardiness, and free cropping qualities will carry this Grape through. But the best test of what the Grape is doing, and of the estimation in which it is held at home is to be found in the good orders the Scotch nurserymen are giving Mr. Parker, who is to send it out—one of them, Mr. Methven, having ordered 50 plants. There is another fine seedling Grape there, not named we think, although Mr. Thomson calls it the Golden Lady Downes', a name which very justly describes it. We shall be mistaken if this new Grape does not turn out a good one, and as it will be sent out in due course, it will soon get known. Talking of Lady Downes', Mr. Thomson has this fine kind in glorious trim just now—most superb bunches and berries. We cannot attempt to describe this magnificent place. Everything is A 1; the houses, the plants, Vines, Pines, everything! In walking through the whole place you neither see a bad plant nor a thing out of its place. It is a drawing-room garden in neatness and beauty, and yet there is enough glass to astonish even those accustomed to large places, and the bedding-out is grand! Seventy-eight thousand plants were put out this year, and these exclusive of Cerastium tomentosum, of which there must be several thousands. It is one of the finest gardens in the world, and we question if there is one superior to it. We have not seen one equal. *Midland Florists' Guide.*

Relative Strength of Deodar and Cedar of Lebanon.—Sometime since Mr. Tillery, gardener to the Duke of Portland, sent to the Royal Horticultural Society a polished slab of timber, being a longitudinal section of a tree, the lower half of which is a Cedar and the upper a Deodar. A Deodar had been inarched upon a Cedar when young, and after growing until the tree had reached about a foot in diameter, it had been cut down, and Mr. Tillery had sent it to illustrate the junction of the two kinds of timber, which can, with a little pains, be distinctly traced. Little difference, however, can be seen in the wood itself. Under the microscope the spiral tubes of the Deodar seem a little more open and more frequent than in the Cedar, but the difference is slight. It occurred to me that this was a good opportunity for testing by actual experiment the strength of the two different kinds of timber, and indirectly of throwing some light upon the much-disputed question of the identity of the two trees; for, of course, if the strength of the timber is different under exactly the same conditions, it would be an argument against this identity. Adequate comparative trials of the strength of these trees, and of the Atlantic Cedar, have never previously been made, for unless made on trees of the same age, and which have grown under exactly the same conditions, the conclusions to be drawn from them are of no value. We know that the timber of a tree varies to a great extent according to its age, soil, exposure, and a multitude of other circumstances, as is well exemplified in the difference between old native Scotch Firs grown in Scotland or Norway, and young plants grown in plantations in England. In the present sample we have an identity of condition which can very rarely be secured—age, soil, exposure, climate, treatment, drainage, everything is the same down to the very roots. I caused a piece of wood one foot in length and one inch square to be cut from each end of Mr. Tillery's slab. Each piece was free from knots, and as similar to the other as possible. They were then each placed between supports 11 inches distant, and weights were suspended from the centre, the suspender bearing on the specimens being about a quarter of an inch broad, and placed exactly in the centre. The breakage was as follows:—the Cedar of Lebanon broke under a weight of 378 lbs.; the Deodar under a weight of 448 lbs., or about one-sixth more than the Cedar. But the deflection and mode of fracture were even more instructive. The Cedar showed scarcely any deflection at all; when weighed with 224 lbs. it deflected only 3-16ths of an inch; with 336 lbs. it deflected only 3-8ths of an inch, and at 378 lbs. it broke in two, with a short and sudden fracture like that of a carrot, and the slight deflection already indicated went back. The Deodar, on the other hand, did not begin to deflect until a weight had been put on it which broke the Cedar; but at 364 lbs. it deflected a whole inch; at 420 lbs. an inch and a half; and at 448 lbs. an inch and three quarters—nearly 2 inches. It then broke in three, with a sudden fracture and loud report, short on the under side, and half through it split in half from the centre to one end, the top side remained tough, and broke at about 2 inches from the centre, which remained permanently deflected. The inference to be drawn from this experiment, so far as comparison with the Cedar is concerned, is very favourable to the Deodar. It has considerably greater preliminary toughness, although when it does give way it shows a good deal of the same brittle qualities—wholly wanting the tough commixture of fibres which in some trees are so intimately blended that they will scarcely break, but are drawn and torn out, and will bend or twist in every way rather than break. Comparative trials with the Oak would indicate that it is five times as strong as the Deodar; but as the trials from which that result can be drawn can give no information as to the conditions of growth of the different trees, they are defective in one of the chief excellencies of this interesting experiment. *A. Murray, in Proceedings of Royal Horticultural Society.*

A Shower of Toads.—The local papers state that on Friday week, after a heavy shower of rain, the ground in and near Eton College swarmed with myriads of small toads, the main road, the Long Walk, and other places being literally alive with them. Many of the creatures had bodies an inch long, and with legs distended were in length 2 inches, although most of them were smaller. As they had not been observed before the down-pour, the general belief was that they had descended with the rain. Mr. Charles Knight's "Museum of Animated Nature," which combats the idea of a shower of these reptiles, says that it is generally in August, and after a season of drought, that these hordes of toads have made their appearance, and just such a time we have lately experienced. On the contrary, sailors have said that they have actually seen quantities of small frogs and toads on the deck of a vessel after a heavy shower, and if this statement could be trusted there might be reason to believe that the thousands of Ranidæ, seen at Eton College were really precipitated from the clouds with the heavy rain that had fallen in the early morning.

Origin of Animalcules.—In a paper addressed to the Academy of Sciences, M. Lemaire, one of the most determined opponents of M. Pouchet's theory of spontaneous generation, examines the question of the origin of all the microphytes and microzoaria which, he says, people the air at all altitudes—an assertion, by the way, in which he is not borne out by his leader, M. Pasteur, whose experiments tend to show that in the higher regions of the atmosphere there are no spores, germs, or animalcules of any sort. However that may be, M. Lemaire endeavours to prove that microphytes and microzoaria are carried up in the air by the gases generated by the fermentation caused by those minute organisms, and that a constant exchange of them takes place between the fermenting substances and the atmosphere. With this view M. Lemaire employs a bottle with two 'tubulatures,' connected by means of a tube with a retort containing a solution of pure glucose (the sweet principle of fruit, honey, &c.) in distilled water; the bottle, containing matter in a state of fermentation, emits gas which must pass through the glucose before it escapes into the atmosphere, and leave all the microphytes and microzoaria with which it may be charged behind in the solution. The first series of experiments was made with yeast; a quantity of cells of the Cryptococcus Cerevisiæ (a microphyte) and various semi-transparent ellipsoidal and cylindrical bodies were thus carried into the glucose. The smallest quantity of these was obtained in an experiment in which atmospheric air was excluded; the largest in

another in which a current of air was admitted by means of the gasometer. In the latter the quantity was so great as to give a milky appearance to the glucose. Twenty-four hours after the experiment the microscope showed that many of the cells were budding, but their development went no farther, the glucose not being a proper nutriment for those small plants. In another series of experiments a maceration of meat was used. This did not produce microphytes but microzoaria, which remained in the solution. These experiments, therefore, lead to the conclusion that the gases of fermentation do carry away animalcules and microphytes. M. Lemaire concludes by observing that when it is considered that a single drop (globule?) of steam emitted from putrified matter contains myriads of these small beings, and that fermentation exists everywhere, there is no reason for invoking their spontaneous generation in order to explain their prodigious number. *Daily Paper.*

The Ailantus Silkworm.—Mr. Lowe, by permission of the Council, presented us with about 50 caterpillars of the Bombyx Cynthia, a variety of silkworm introduced into Piedmont from China in the year 1856—a much more hardy creature than that which feeds exclusively on the leaf of the Mulberry. The rearing of this newly-introduced variety has already been attended with great commercial success in France; and, at her residence in Hampshire, Lady Dorothy Nevill has also succeeded in propagating it. Its cultivation promises to be a great source of wealth to any country in which it becomes acclimatized; and there can be little doubt of its thriving well in Guernsey, where the Ailantus glandulosa [(the tree which affords its natural nutriment) is perfectly naturalised, and capable of being easily propagated to any extent. It happened, fortunately, on Mr. Lowe's arrival, that several young plants perfectly adapted to the purpose required were found growing almost spontaneously in Mr. Willis's Nursery grounds. On these, surrounded by light netting to prevent the depredations of birds and insects, the worms were deposited on the 13th of August last. The largest and most vigorous (about 15 in number) attached themselves readily to the under surfaces of the leaves. They retained that position in spite of thunder, lightning, rain, and wind; eagerly consuming the food within their reach, which necessitated their removal to fresh plants—a process easily accomplished. As early as the 24th of August some of them had attained their fourth stage of growth, indicated by their measuring nearly an inch in length, and becoming gradually greener, with tubercles of the same colour on their bodies. Stormy weather, with heavy rain, succeeded; nevertheless, on the 17th of September one of the worms began to spin, others followed, and early in October 10 cocoons were collected. Up to a certain point, therefore, the first experiment in rearing the Bombyx Cynthia, thanks to the care and attention of Mr. Willis, has succeeded so as to afford a rational hope that it may be carried a step further in the course of the ensuing spring. The amount of practical experience already gained light though it be, affords proof that the propagation, of the Ailantus silkworm is not liable to the various causes of failure which attended attempts at rearing the Mulberry variety in this island. We have ascertained beyond doubt that the former is vigorous and tolerant of stormy weather; that it does not require to be fed; that it feeds itself on the plants which it prefers to all others, and that it requires very little attention, after being placed on the Ailantus, beyond that of protection, by means of netting. This precaution, however, we are told, is only required when the scale of cultivation is limited. Thus, according to the great experience of Messrs. Hebart and Lamotte-Barracé, "If, in a large plantation, wasps, ants, or birds do carry off some of the worms, the quantity is not missed; the same reasoning applies to this as to fields where cereals are grown, and in which the ravages of birds and insects are insignificant in comparison with the quantity of the crop." The quality of this new textile fabric has been examined by persons capable of judging as to its commercial merits. They have pronounced that "the strength of the silk is immense," and to this they attribute "the great durability of the Indian foulards, which are composed exclusively of this silk." L'Abbé Incarville states that "it lasts double the time of the Mulberry silk, does not spot so easily, and washes like linen. Monsieur de Jongh finds that "the gloss of the Ailantus silk far surpasses any of the other known kinds of Bourre de Soie." The weavers of Alsace report that "the cocoons are very easy to card and spin, that they are easily cleaned, and take a good dye. This culture, made on a large scale, will furnish in abundance a stronger and finer floss than the Mulberry silkworm, and will prove of immense utility in France and England. As to the supply of food in this island, there can be no difficulty. The plants destined for the reception of the worms should be planted about a yard apart, in order that their branches should approximate, so as to enable the worms to go from one plant to the other. The chief stem should be cut down every year, so that young shoots should spring up and produce tender leaves, which are essential, as the worms cannot easily devour old leaves produced by large trees, and without a constant supply of tender leaves most of them perish. *Report of Guernsey Branch of Acclimatization Society.*

Calendar of Operations.

(For the ensuing week.)

Owing to the fine weather with which we are now favoured, bedding plants are still in considerable beauty; Roses especially in many places are in fine bloom, the late rains have had a beneficial effect upon them, and Dahlias are also very satisfactory. Endeavour therefore to keep all neat and clean, in order that not only flowers but the garden generally may appear attractive for as lengthened a period as possible.

FLOWER GARDEN AND PLANT HOUSES.

Now is a good time for executing out-door alterations, and where these are in hand they should be prosecuted with the greatest possible despatch. Planting, or the removal of large evergreens, cannot be finished too soon; for it is of the utmost importance that the plants should be afforded some chance of making fresh roots before bad weather sets in. See to even small plants being secured against wind; for these are often greatly injured by being blown about after planting, which a small stake and a few minutes' work would prevent.

Bedding Plants.—Cuttings of these should be carefully looked over to see that nothing has been omitted, and that a sufficient quantity of everything is in a promising state for making nice plants before winter; it should be borne in mind that things which are at all difficult to winter rooted after this season may be considerably thinned before spring, and also that they will not be sufficiently strong to furnish many cuttings for spring propagation; consequently a larger quantity than would have been necessary had the cuttings been put in earlier should be provided. But if there is a reserve stock of strong plants in pots, which is a safe practice where there is a large quantity of bedding things required, and proper convenience for growing them and propagating them in spring, these will furnish a large quantity of cuttings next March, which, as has been formerly stated, will form equally good plants by turning-out time as cuttings put in now. In the case of such things as Ageratums, Heliotropes, and dwarf Lobelias, it is useless wintering young stock, as these grow so freely in heat, and are so easily propagated from soft cuttings that a few good-sized old plants which require but little room or attention in winter will furnish a very large quantity of plants by bedding-out time. Attend to the potting of cuttings sufficiently rooted, and give every after attention to these in order to get them well established.

Carnations and Picotees.—If the stock of these is not already procured, defer increasing it till next spring. Late potted plants require much more care, and are more apt to get spotted and injured than those which are better established.

Dahlias.—These must now be carefully attended to. Having been much checked by drought during the summer, should the weather continue propitious, we may yet have a prolonged bloom. Draw a little earth round the crown of the roots, which will prevent damage by sudden frosts.

Pansies.—These may be struck from cuttings, choosing side shoots for the purpose; they will make good plants, either to send off, or to plant for next spring's blooming. Plant out seedlings, that they may get well established.

FORCING GARDEN.

Mushrooms.—Beds made early last month will now be bearing; it is a good plan to sprinkle or syringe the surface of the bed a week or so before the Mushrooms make their appearance; more especially in Mushroom houses where a fire may have been used occasionally; this is far better than watering after the Mushrooms are through. The water, however, must not be allowed to penetrate the manure—merely to soften the soil.

Pines.—Plants in bloom will require very careful management to prevent their being injured by damp, and the atmosphere must be kept dry, with a rather brisk temperature, admitting a little fresh air on every favourable opportunity; and if there is, as there should be, a proper ventilating apparatus, or the means of admitting air over the pipes, so that it may get warmed before coming in contact with the plants, a little should be admitted constantly. Plants in bloom should also be near the glass, and where they will catch every ray of sunshine. It is nearly impossible to get fruit to swell anything like properly at this season, therefore unless a succession of ripe fruit is indispensable, and cannot be secured except by driving plants that bloomed late, these had better be kept rather quiet until spring. Where an attempt must be made at present to get fruit to swell, a moist warm temperature of about 70° at night and 75° by day must be maintained, allowing it to rise to 80° with the assistance of sunshine, and the bottom-heat must be kept regular at about 85°, taking care to keep the soil in a healthy state as to moisture.

Vines.—As soon as the early house is closed for forcing, be careful to secure a thoroughly moist state of the atmosphere by frequently sprinkling the floors and every available surface, but as observed previously, a regular moist state of the atmosphere is most effectually secured by means of a slight bed of fermenting materials in the house, which will also afford a little warmth, and the moisture from this is much more congenial to vegetation than anything that can be effected by the most careful use of the syringe or evaporating pans.

HARDY FRUIT AND KITCHEN GARDEN.

If any transplanting or root pruning of fruit trees has to be done, let this be attended to as soon as the leaves are off, and see that those exposed to wind are securely staked before leaving them. Also get the ground prepared for fresh plantations.

Cauliflowers.—Give plants of these under glass as much air as possible; indeed the sashes should only be used to throw off wet; the plants will do all the better for being kept hardy.

Celery.—Let all earthing up required by this crop be done on a dry day.

Lettuces.—Let any under glass be kept as open as circumstances will admit.

Potatos.—At this time of the year it becomes an important consideration how to preserve Potatos for another season, especially those for seed. To this end three principles would seem to be of paramount importance, viz., low temperature, dryness, and a freedom from fermentation; the latter being perhaps of greater import than all other considerations together. Where fruit-room shelves are likely to remain unoccupied by fruit, they might be given up to the prime seed Potatos for garden planting. The latter may be placed several layers thick, provided some tolerably dry material is sprinkled in alternate layers between them. No two Potatos should be in contact, if possible.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Sept. 28, 1864, as observed at the Horticultural Gardens.

Sept.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain
Thurs. 22	(	29.785	29.740	69	44	56.5	60	59½	S.W.	.00
Friday 23	22	30.041	29.958	68	50	59.0	60	59½	S.W.	.06
Satur. 24	23	30.224	30.051	70	36	53.0	60	60	N.W.	.01
Sunday 25	24	30 308	30.283	70	40	55.0	60	59½	S.W.	.00
Mon. 26	25	30.332	30.229	72	38	55 0	60	59½	S.W.	.00
Tues. 27	26	30.263	30.217	68	32	50.0	59	59½	E.	.00
Wed. 28	27	30.239	30.162	70	33	51.5	58½	59	N.E.	.00
Average.		30.170	30 091	69.5	39.0	54.3	59.6	59.5		.07

Sept. 22—Clear; very fine; overcast.
— 23—Very fine; partially overcast; fine; mild at night; rain.
— 24—Drizzly; very fine throughout.
— 25—Foggy; very fine; heavy dew.
— 26—Foggy; hazy; fine at night.
— 27—Very foggy; very fine; at freezing at night.
— 28—Slight fog; fine; dry haze; cold at night.
Mean temperature of the week 1 deg. below the average.

STATE OF THE WEATHER AT CHISWICK

During the last 38 years, for the ensuing Week, ending Oct. 8, 1864.

October.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 2..	64.5	44.2	54.3	19	0.49 in.	1	3	1	—	9	12	7	4
Mon. 3..	63.6	44.6	54.2	16	1.01	2	3	1	1	11	13	6	3
Tues. 4..	64.7	43.4	53.8	19	1.06	—	6	—	3	7	17	3	2
Wed. 5..	63.2	41.1	52.2	19	0.82	4	4	2	1	6	13	7	1
Thurs. 6..	62.0	44.0	53.0	21	0.78	1	4	6	3	5	11	6	2
Friday 7..	62.6	44 6	53.6	19	0.58	2	6	4	2	4	14	5	1
Satur. 8..	61.5	42.3	51.9	20	0.63	1	6	4	4	6	7	9	1

The highest temperature during the above period occurred on the 4th, 1859—therm. 80 deg.; and the lowest on the 2d, 1853—therm. 17 deg.

Notices to Correspondents.

Books; *R. G. Nash.* You may perhaps find what you want in Kemp's How to Lay Out a Garden, which is a most trustworthy guide, but we are unable to recommend you a modern work treating of mazes. You will find a plan of a very good one in our Volume for 1849, p. 85.—*J G.* Bentham's Handbook of the British Flora, illustrated edition.—*H H B.* There is no very recent general garden Catalogue. Don's is the latest.—*S S S.* The Ladies' Assistant in the formation of their Flower Gardens, by Joshua Major, Knowsthorpe, Leeds; or Designs from Flower Beds and Gardens, by J. Marshall, Derby Road, Nottingham, both of which you will find advertised in our columns, will probably suit your purpose.—*Rainscombe.* Brown's Forester will give you the information required.

Diseased Leaves: *E K.* As far as we can judge from the appearance of your Primula leaves, it is probable that they have been attacked by Thrips. We ascertained last autumn that the spots in different species of Gloxinia and Achimenes which were so prevalent, were due to this cause, and those on your Primula leaves have exactly the same appearance. *M J B.*

Laurel Leaves: *A M.* The proper Laurel leaves to use for flavouring purposes are those of the true Laurel or Bay tree. Those of the Cherry Laurel, or as it is often called, the Common Laurel, as containing prussic acid, cannot be employed without hazard.

Mountain Meal: *D T.* What is called mountain meal, consists of Diatomaceous remains, occurring in the shape of a white powder, and forming vast beds. It is stated to be mixed with flour in some parts of Sweden.

Names of Fruits: *A W.* 1, Gloria Mundi; 2, Keswick Codlin. Pear marked J. P., Bezi de Montigny.—*E. Franklin.* 2, Nonsuch; 3, Gloria Mundi; 4, Stone Pippin (Norfolk).—*E. Maller.* 1, Hacon's Incomparable; 3, Paradise d'Automne.

Names of Plants: *B A.* 1, Nephrolepis tuberosa; 2, Pteris cretica.—*L T Davis.* 3, apparently Ostrya virginica.—*J B B.* Plants bundled up like a wisp of hay, are not fit specimens to examine. As far as we can make out after extricating some of the fragments, yours are—1, Atriplex hortensis; 2, Festuca Myurus; 3, useless; 4, Polystichum aculeatum. We do not name more than four at one time.—*T S.* All forms of Lastrea Filix-mas: 1, var. deorso-lobata; 2, var. palescea; 3, var. cristata.—*E Franklin.* Celtis occidentalis.—*B C D.* The seeds are those of Abrus precatorius.

Potato: *Anon.* Next week.

Pyracantha Berries: *F A P.* We are not aware that the berries of the Cratægus Pyracantha, or the Cotoneaster, are harmful, but they are not pleasant to eat; and this, perhaps, is the reason your children, who put them into their mouths, did not swallow them. Those of the Pyracantha are bitter.

Underwood for Larch Plantation: *H S M*, who is about to thin a small Larch plantation, wants to grow some thick underwood in the place of the Larches removed, principally as cover for rabbits. The soil is gravel and sand. Can any correspondent who has had experience in the matter advise him?

Misc.: *S. M. E.* is requested to send to the Office for a number of letters received in answer to his Advert sement.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.
Address, 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
CRATE,
MANGEL MANURE, &c. &c.
They also continue to supply GIBBS' PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

LAWES'S WHEAT MANURE for AUTUMN SOWING.—A supply of the above Manure is now ready for delivery, at J. B. LAWES' Factories, Deptford, and Barking Creeks. Price 8*l.* per ton.
2 to 3 cwt. per acre to be harrowed into the land before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents; also
SUPERPHOSPHATE of LIME £6 6
MINERAL SUPERPHOSPHATE 5 5
Genuine Peruvian Guano direct from the Importers, and all Chemical Manures of value.
American and other Cakes at Market prices.
Address JOHN BENNET LAWES. Offices; 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

Autumn Wheat Sowing.

PHOSPHO-GUANO, Carriage Free at any Railway Station or Shipping Port in the Kingdom, 11*l.* 10*s.* per ton, net cash, for 10 tons and upwards. Smaller quantities, 11*l.* 15*s.* per ton.
*** This Guano is admitted to be the best manure for Wheat, containing, as it does, 35 to 40 per cent. of Soluble Guano Phosphates, and 3¼ per cent. of actual Ammonia, in addition to Potash. The advantage of applying it in autumn is, that the farmer is enabled to harrow the Guano well into the soil before sowing, which produces a better result than top-dressing in the Spring. The Phospho-Guano promotes a strong braird, vigorous growth, and a full and plump grain. Apply at the rate of 2 to 2½ cwt. per acre.
PETER LAWSON & SON, Contractors, Edinburgh; and 28, King Street, Cheapside, London, E.C.

Autumn Sowing.

THE PATENT NITRO-PHOSPHATE or BLOOD MANURE COMPANY (LIMITED),
Consisting of Tenant Farmers occupying upwards of 30,000 Acres of Land.
Chairman—JOHN CLAYDEN, Littlebury, Essex.
Managing Director.—JAMES ODAMS.
Offices—109, Fenchurch Street, London, E.C.
Manufactory—Plaistow Marshes, Essex.
ODAMS'S BLOOD MANURE for WHEAT.
This Manure, specially prepared for AUTUMN SOWING, has been in use for upwards of 12 years, and has given great satisfaction to consumers.
Orders may be sent to the Company's Agents throughout the country, or direct to C. T. MACADAM, Secretary.
Offices, 109, Fenchurch Street, London, E.C.
Price 7*l.* 10*s.* per ton, delivered at any Railway or Wharf in London.

WHEAT SOWING.

DOWN'S FARMERS' FRIEND, for preventing the Smut in Wheat, and the ravages of the Slug, Grub, and Wireworm.
A 9*d.* packet is sufficient for 6 bushels of Seed Wheat, which can be dressed and fit to sow in a quarter of an hour.
Testimonials from the largest Wheat-growers in the Kingdom, bearing testimony to its great power and efficacy, may be had of Agents, who are appointed for every district.
Full directions for use are given with each packet.
Prepared at the Manufactory, Woburn, Beds.
CAUTION.—To guard against fraudulent imitation and consequent disappointment, see that the signature of HENRY DOWN is on the label.
Agents in every Town throughout England, Scotland, and Ireland.

GIRDWOOD'S MELOSSOON or SHEEP PROTECTING DIP.—This preparation, poisonous alone to Parasites, forms an artificial yolk of great value for the sheep and wool. It is the Best, Cheapest, and Safest of all Dipping Compounds.
Price 6*d.* per lb. Above a cwt. free to stations.
To be had of Mr. ROBERT GIRDWOOD, Tanfield, Edinburgh, or his Agents.

RICHARD GARRETT AND SONS,
LEISTON WORKS, SUFFOLK.
Illustrated Catalogues.

GUTTA PERCHA TUBING for WATERING GARDENS, &c.—The Gutta Percha Company have been favoured with the receipt of the following
Testimonial from MR. J. FARRAH, *Gardener to* BOSWELL MIDDLETON JALLAND, ESQ., *of Holderness House, near Hull.*
"I have had 400 feet of your Gutta Percha Tubing (in lengths of 100 feet each, with Union Joint) in use for the last twelve months for watering these Gardens, and I find it to answer better than anything I have yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the Tubing. I consider this Tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens with about one-half the labour formerly required."
Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Curtain Rings, Galvanic Batteries, Talbotype Trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.
The GUTTA PERCHA COMPANY, Patentees, Wharf Road, City Road, London, E.C.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society &c.
PROTECTION from COLD WINDS and MORNING FROSTS.
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.
Two yards wide .. .. 1*s.* 9*d.* per yard run.
Four yards wide .. .. 3*s.* 6*d.* per yard.
An improved make, 2 yards wide .. 1*s.* 9*d.* per yard.
An improved make, 3 yards wide .. 2*s.* 8*d.* per yard run.
Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.
ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.
"It is much cheaper than Mats as a covering."

Oil Paint no longer necessary.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.
Sold in casks of about 30 gallons each, at 1*s.* 6*d.* per gallon, at the Manufactory, or 1*s.* 8*d.* per gallon paid to any Station in the kingdom.
Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street West, E.C., from whom only it can be obtained.

£1000 UPON the WOOLSTON TACKLE against the NEWCASTLE "best application."
WILLIAM SMITH, Woolston, Bletchley Station.

FOWLER'S PATENT STEAM PLOUGH and CULTIVATOR may be seen at Work in every Agricultural County in England. For particulars apply to
JOHN FOWLER & Co., 28, Cornhill, London, E.C.; and Steam Plough Works, Leeds.

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS, Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.
Stamp End Works, Lincoln, and 78, Lombard Street, London; also at LOWENGASSE, No. 44, Landstrasse, Vienna; and Gegenüber dem Bahnhof, Pesth.
Descriptive, Illustrated, and Priced Catalogues, Free per Post.
Special Drawings when required.
[*The best Steam Threshing Machinery made.*]

Land Drainage, & other Agricultural Improvements

MR. BAILEY DENTON, C.E., maintains a large Staff for the Execution of Land Improvements by a commission of 5*s.* per acre for Under Drainage, and a fixed charge for Outfall and other works.
For particulars, apply to him, at 52, Parliament Street, Westminster.

Drainage of Land.

MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

THE WEST of ENGLAND LAND DRAINAGE and INCLOSURE COMPANY.
ESTABLISHED IN THE YEAR 1844, AND INCORPORATED BY SPECIAL ACT OF PARLIAMENT, 11 & 12 VICT., C. CXLII.
Chairman—The Right Hon. the Earl of DEVON, Powderham Castle.
Deputy-Chairman—WILLIAM PORTER, Esq., Hembury Fort, Honiton.
TERMS MUTUALLY ADVANTAGEOUS TO LANDLORDS AND TENANTS.
Lands Drained and improved without any expense whatever to the Owners, a small increased Rent paid by the Tenants being sufficient to meet the only payment which Landlords are required to make, viz., merely the interest of from four to five per cent. on the loan, this Company's Act not requiring them to pay off the principal; all expenses may be a permanent charge on the property, or made redeemable at any time, or liquidated over any term of years.
Tenants for Life and Mortgagors can likewise Drain and Improve their Estates without any expense to themselves.
The Works are undertaken by the Company, who keep in constant employ a very extensive and experienced staff of Engineers, Surveyors, and Workmen; or Proprietors may avail themselves of the powers of the Act only, and get the Works executed under their own superintendence, or by Agents appointed by themselves.
Outfalls through adjoining lands are obtainable under the Company's Act.
Works are also executed by the Company for parties advancing their own Capital or not wishing to borrow the money.
FREDERICK BRODIE, Secretary, Castle Street, Exeter.
Offices: Castle Street, Exeter; 30, Parliament Street, London.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.
The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.
Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

THE GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY.
THE RIGHT HON. LORD RIVERS, *Chairman.*
J. BAILEY DENTON, Esq., *Principal Engineer.*
Offices: 52, Parliament Street, S.W.
Under this Company's Act tenants for life, trustees, mortgagees, guardians, committees of incompetent persons, beneficial lessees, corporations (ecclesiastical or municipal), incumbents, charitable trustees, &c., may effect the following Land Improvements, and charge the outlay and expenses on the estate improved, by way of rentcharge, to be paid by half-yearly instalments, viz.:—
1. All works of Drainage, Irrigation, Warping, and Embankment.
2. The Erection of Farmhouses, Cottages for Agricultural Labourers, and all kinds of Farm Buildings.
3. The Construction of Roads.
4. The Grubbing and Clearing of Old Woodlands, Enclosing, Fencing, and Reclaiming Land.
The owners of estates, not entailed, who may be desirous to avoid the expense or inconvenience of a legal mortgage, may also charge their Estates with an outlay in improvements under the simple and inexpensive process of the Company's Act.
The term of years for the rentcharge is fixed by the landowner, so as to adapt the amount of annual payment to the circumstances of the tenants, and it may be so adjusted that principal, interest, and all expenses will be included in an annual charge of 6*l.* per cent.
No investigation of title being required, and the charge not being affected by incumbrances, no legal expenses are incurred.
The arrangements for effecting improvements are threefold:—
No. 1. The works may be designed and executed entirely by the landowner's agent, and the Company employed only to supply the loan and conduct the matter through all the official forms for charging the outlay on the estate.
No. 2. The Company will supply plans, specifications, and estimates for any improvements to be executed by the landowner's agent as under No. 1. In each of these cases the landowner will be solely under the control of the Enclosure Commissioners.
No. 3. The Company will undertake the entire responsibility of the improvements, prepare the plans, execute the works, and finally charge on the estate the actual amount expended, with their commission thereon, approved by the Enclosure Commissioners.
Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.
Works of Drainage and other improvements are also executed on commission for landowners, who merely require the skill and experience of the Company's officers and a staff in constant practice.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Office of the Company, 52, Parliament Street, S.W.

AGRICULTURAL PUPIL.—Mr. HENRY EVERSHED has a VACANCY for a Pupil.
Park Hall, Gosfield, Halsted, Essex.

THE NATIONAL EXHIBITION of SPORTING and OTHER DOGS.
President—His Grace The DUKE of BEAUFORT.
Vice-President—The MAYOR of BIRMINGHAM.
The FIFTH GREAT ANNUAL EXHIBITION of SPORTING and other DOGS will be held at BIRMINGHAM, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, and 30, and December 1.
Copies of the Prize Lists and Regulations, with the statement o Receipts and Expenditure for 1863, may be obtained from the Secretary. The ENTRIES CLOSE on NOVEMBER 1.
GEORGE BEECH, Secretary.
Offices: Rectory Chambers, Temple Row, Birmingham.

THE BIRMINGHAM CATTLE and POULTRY SHOW, 1864.
The SIXTEENTH GREAT ANNUAL EXHIBITION of FAT CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, CORN, ROOTS, and IMPLEMENTS, will be held in BINGLEY HALL, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, 30, and December 1, when Prizes to the amount of £1995 will be awarded in the following Divisions, viz.:—

FAT CATTLE ..	£794 10	BREEDING PIGS ..	£76 10
FAT SHEEP	299 5	CORN and ROOTS ..	71 8
FAT PIGS	60 5	POULTRY and PIGEONS	693 0

Prize Lists, Certificates of Entry, and every information may be obtained from the Secretary.
The ENTRIES CLOSE on TUESDAY, November 1.
JOHN B. LYTHALL, Secretary.
Offices: 13, Temple Street, Birmingham.

SMITHFIELD CLUB FAT CATTLE SHOW.—The ANNUAL SHOW of FAT CATTLE, SHEEP, and PIGS, will be held at the AGRICULTURAL HALL, ISLINGTON, on MONDAY afternoon, December 5, and four following days.
Intending Exhibitors are requested to apply for Certificate form by the reference letters as under:—

CATTLE.	Form A.	For an Ox or Steer (in any Class).
	" B.	For a Cow or Heifer (in any Class).
	" C.	For a Beast in Extra Stock.
SHEEP.	" D.	For a Pen of three Wethers (in any Class).
	" E.	For a single sheep in Extra Stock.
PIGS.	" F.	For a Pen of three Pigs (in any Class).
	" G.	For a single Pig in Extra Stock.

ENTRIES for LIVE STOCK CLOSE NOVEMBER 1.
Prize Lists, Forms of Certificates, and all information may be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, Corner of Half-Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words "Smithfield Club."

SMITHFIELD CLUB SHOW.
IMPLEMENT DEPARTMENT.
The LAST DAY for receiving ENTRIES for IMPLEMENTS and MACHINERY is October 1.
Printed forms of Certificates, with rules and regulations, may be obtained of Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, corner of Half Moon Street, Piccadilly, W.

The Agricultural Gazette.

SATURDAY, OCTOBER 1, 1864.

ECONOMY in preparing food for stock is one of the great questions that a season like the present renders all important. There are many farms where it is proposed to winter feed entirely on dry matter—straw of different kinds, prepared by cutting, and steaming and mixing with artificial materials. In other cases a very moderate supply of roots will be used as seasoning to a large quantity of straw. The chaff cutter and the pulper, the corn mill and the cake bruiser, are the means by which this division and mixture are to be effected. Any saving in the cost of working these invaluable machines will be most important, and we believe that in many instances the substitution of wind for water and coal, or to speak more correctly, the use of wind as an accessory to steam, will be found both practicable and valuable. There are many situations—we would especially instance the down country of England—where more or less wind is almost constantly felt; breezes, often coming directly from the sea, blow over such districts, bearing moisture to the grateful earth, and playing an important part in the economy of Nature. Why should we allow the wind to sweep by us without contributing to our welfare—why not arrest its course if but for a moment, and appropriate the mighty power, to economise our fuel, which is often a very heavy item in these particular districts. But we should be unjust to the wind engine if we confined its utility to the down country. Wherever the buildings are on open table land, so that wind reaches them from all quarters, then this power may be economically used; we may go further and state that as an occasional substitute for steam there is no situation so sheltered but that a wind engine might work. We lately inspected the wind engine made by BURY & POLLARD of Southwark, on Mr. WORTLEY'S farm at Ridlington, Rutland, where it has been erected upwards of four years, and where it has worked with great success. The farm for which it is the manufacturing power is about 500 acres in extent, 300 of which are arable. Threshing is, we think, very wisely not attempted. Messrs. BURY & POLLARD have some testimonials on this head; but we cannot believe that a power liable to such

fluctuations as wind, would answer for an operation that requires a very steady motion. No, the use of the wind-engine is for pumping and preparing food. The engine part varies according to the horse power; for farm purposes nothing less than a 4-horse, which costs 130*l.*, is advisable—we should prefer the 6-horse, costing 180*l.* It can be erected above any ordinary barn, or root and chaff house, and the only space consumed is the area occupied by the framework carrying the engine, which generally consists of three strong uprights fixed firmly in the ground and braced together. Motion is first conveyed to a vertical shaft, and passes on by means of cog-wheels to the ordinary barn shaft, and from this the different machines are driven by straps. It is of course desirable to have the power as nearly as possible in the centre of the shafting. The whole arrangements are so simple, that there is no difficulty and little expense in erection. The cost of the engine is very similar to a fixed engine and boiler of the same power. The economy is in the work and in saving of coal and labour. A strong lad was managing everything at Ridlington, and two men can cut chaff at the rate of 5 or 6 tons a day with an ordinary breeze. On very large farms, where steam would be required every day to provide a supply of food, the wind-engine could not be solely depended upon, but the shafting may be driven by a strap from a portable engine, which for threshing or steam cultivation is likely to be wanted. With good management, however, steam will not be required very often. Such operations as grinding corn can go on at night, and on one farm we were informed that they constantly went on work until the man went to bed—a good supply of corn being placed in the hopper, and the mill left for hours. Simplicity is a most important feature in all farm machinery, and we certainly have it in BURY & POLLARD'S wind engine.

That at Ridlington was nominally 4-horse power, working up to 8 in strong wind. The engine consists of eight sails, 14 feet long, capable of self-adjustment to a certain extent, so that in the event of a hurricane the surface exposed to wind is reduced. Of course this acts only to a limited extent, and irregularities of speed are unavoidable. The sails are adjusted by a lever, which instantly alters their angle; when required to stop the sails are placed edge to wind, and come to a standstill almost immediately. *The sails are placed at varying angles, according to the force of wind and the work to be accomplished.*

On Mr. WORTLEY'S farm about 700 sheep and 50 head of horned stock are wintered. Not an acre of hay is mown, and everything is cut up and pulped. The wind engine has enabled him to do away with the haystack, and he is so well satisfied with the result in a pecuniary point of view, that he would not be without it on any account. We saw at work a capital chaff-cutter by HAYWARD of Derby, capable of cutting three lengths, and very simple in construction, noticeable for the absence of cogwheels and the use of straps, by a slight alteration of which the speed of flywheel is adjusted.

Mr. WORTLEY has one of the American grist mills, manufactured by RICHARD WATTS, and which received a silver medal at Newcastle. It works admirably, the lad regulating the set of the mill so as to grind flour or merely kibble corn by turning a screw, which lowers or raises the concave box in which the cone revolves. If this machine stands its work it is certainly the best metal mill yet invented. With a very moderate breeze there was power enough to make good work. The feed is capable of alteration, and this is regulated by the attendant according to the power of wind.

BENTALL'S cake crusher and pulper are used and much liked—indeed the former implement is the best we have seen, as all sizes can be produced. All these machines, save the last, are on a raised floor, beneath which are compartments for the prepared material. At one end of the building, and adjoining it, at right angles, is a straw store, which proves very useful.

Our object at Ridlington was to inspect a wind engine in ordinary work. We have endeavoured to give our honest opinion as resulting from our visit. In conclusion perhaps we may be allowed to say a few words as to the farm, the stock, and the general management, for all are instructive. The farm is partly a good loam—very new soil—and partly strong nasty clay, which, if it could be made to grow Grass, would be better laid down, but unfortunately it is too poor to grow Grass, and so it is principally under the plough, and consumes a great deal of labour. The Grass is principally on the loam, and is good store land. We saw 6 acres of Mangels and 25 acres of Swedes; the best we have seen this season. The cultivation for the former consisted in shaving the stubbles, throwing up the land into high ridges, subsoiling the intervals during winter, in spring the ridges are harrowed down, land manured and ploughed, and the seed planted with 6 cwt. of Mangel manure. Mr. WORTLEY has abandoned the plan of drilling manure under the seed; he likes to have both the farm-yard manure and the artificial thoroughly incorporated through the soil, believing that in this way the roots are encouraged to spread more rapidly and completely through the soil, and thus obtain more moisture and food. This is rather an important point for consideration now that land is so thoroughly pulverised. The stubbles are all moved as soon after harvest as is practicable, either with WOOLFF'S parer or HILL & SMITH'S cultivator; and this year a peck of mustard was thrown on, and promises to make some useful keep in November. The Swedes are on comparatively light loam. Mr. WORTLEY attributes his success to keeping the land firm; every day the roller was put on the ground ploughed, and after drilling the land was again heavily rolled; the moisture in the soil was thus secured, and any shower that fell held up by the soil and prevented from rapidly passing away. They were sown the middle of June, 15 loads of muck and 6 cwt. of dissolved bones being applied; there was very little mildew, and the crops looked most growing. The rotation principally adopted is a seven years course, consisting of one root, four corn, and two years Swedes.

1. Roots manured with farm-yard and artificial dung—then two corn crops.

2. Spring Wheat, as Barley is not successful, followed by autumn Wheat, in which seeds are sown.

4 and 5. Seeds—White Clover Alsike and Italian Rye-grass, kept down two years and entirely fed—are broken up in the spring for Oats generally, sometimes Beans or Peas are substituted. Oats are followed by Wheat. There are many advantages in this system, and with land in high condition and naturally rather strong, it will answer well.

Mr. WORTLEY has a growing herd of useful Short-horns, originally derived a good deal from the blood of Mr. BAKER, of Cottesmore, and lately crossed with bulls from Lady PIGOTT.

[It is to be understood that the wind engine is here recommended only for those operations of chaff-cutting, grinding for farm consumption, &c., in which case a sufficiency of work can be accomplished at once to last for several weeks if necessary. No power can be called economical which is liable to fail us when most wanted; and the wind-power, which has long since been abandoned for that of steam in the Lothians, is not recommended except when it can be used for the manufacture of a store of finished work in advance.]

A LARGE portion of our Paper is this week occupied with reports of the past harvest, and with speculations as to the coming winter. In the multitude of counsellors there is wisdom, and our readers will therefore not object to the advice of our many correspondents, notwithstanding that it is somewhat monotonous. The unanimity of their recommendations proves them to be all the more trustworthy. The abundance of excellent straw for provender, and the power of making it palatable, and of adding to its feeding power by the addition of meal, Linseed, Carob pods, salt, and even sugar—this is what every one declares to be our great resource in the difficulty of an almost lost crop of Turnips and of a half crop of hay. The last named addition, which Mr. BURNISTON and Mr. BOWLY have both suggested, is, perhaps, the most fattening of any. Mr. BANTING tells us that "5 ounces of loaf sugar spread over seven days consumption will increase his weight above 1 lb. at the end of that week." This he has proved on many occasions, and he infers from it that sugar and saccharine matters are the main means of undue corpulence. If this be so, then, provided prices will allow of it, we cannot do better than attempt to render straw fodder palatable by sweetening it. What guide we have in the existing prices of meals and condiments must be the subject of future discussion, meanwhile we add here the following letter on the subject from the tenant of one of our largest City mills:—

"As to the cheapest and best meals and other produce of the same class available for cattle food, I would suggest that as we have had a very good harvest time, the straw will of course be quite sweet, and if cut into chaff and mixed with bran or pollard, it will, I think, do well for store cattle. For feeding purposes I think Indian Corn and Barley-meal will be as cheap and good as any article the farmer can command. Maize is now selling at 26*s.* per qr., or about 6*l.* per ton; we have large arrivals, and a great number of cargoes are known to be either loading or afloat. We may expect in all about 330,000 qrs., so that prices are not likely to go higher. The meal would require to be mixed with a large proportion of sharps or pollard, when it would make good feeding. Barley both in England and France is this year I believe very irregular in quality, and a large portion is unfit for malting, consequently it will be forced on the market for grinding purposes. It can now be bought at a price to make meal at 6*l.* 10*s.* per ton. I may also state that I think meal made from inferior Wheat could be used with advantage; it would mix well with Indian-meal, and tend to make it mellow; it would also make flesh fast. The average price, as you know, is only 40*s.* per qr., or not quite 9*l.* per ton; using Wheat for this purpose might also have a tendency to advance the price—if so, it would benefit the farmer in two ways."

OUR readers are aware that agricultural education has been the subject of Government encouragement and superintendence in Ireland for some years past, and attention has been just directed to this by the announcement that Dr. KIRKPATRICK, who has been the head inspector of the National Agricultural schools and farms in that country for the last 16 years, has been obliged, by failure of health, to retire from the inspectorship.

The system of agricultural instruction which the Commissioners of National Education have engrafted upon the ordinary branches of school education, was for some time confined to the central establishment at Glasnevin, in the neighbourhood of Dublin, and a few other National schools throughout the country, but the famine of 1846-47 induced the Board of National Education to extend the system of combined literary and agricultural instruction, and thus bring within the reach of a large mass of the small tenant farmers and labouring poor in Ireland, a knowledge of improved husbandry and general farm management. The Commissioners, in their Annual Report for the year 1837, remarked that, "considering the very backward state of agriculture in Ireland, and that it forms the only source of employment for a vast portion of the labouring poor, we think it particularly desirable that a better knowledge of it should be promoted, and that the schools under us should tend, as far as practicable, to bring forward an intelligent class of farmers and labourers." The extension of the system to which we have alluded was called for by the public, and strongly recommended by the "Devon Commission." In 1849 the Glasnevin Model Farm and Agricultural Training Institution, which, since the visit with which they were honoured by his Royal Highness the late Prince Consort in 1853, have been called the Albert Agricultural Institution and Model Farm, were enlarged. The Model Farm and Gardens now contain 180 statute acres, and the buildings for accommodating resident pupils, officers, and farm offices, are of considerable extent. The National Schools, having Agricultural departments annexed to them, were also extended by grants from the Board towards building purposes, salaries of teachers, and boarding, &c. of resident pupils. A number of the largest sized schools and farms are under the entire management of the Board, the farms being cultivated and managed on their account. Of this class the following are the principal:—

Munster	Agricultural	School and	Farm, near Cork.
Ulster	ditto	ditto	Belfast.
Limerick	ditto	ditto	Limerick.
Kilkenny	ditto	ditto	Kilkenny.
Athy	ditto	ditto	Athy, co. Kildare.

In several other cases the farms are let to, and cultivated on their own account by the agriculturists. There is a numerous and increasing class of minor establishments, which have but a very limited area of land annexed to ordinary national schools, and in those cases the literary and agricultural departments are conducted by the literary teacher, who receives from the Board 5*l.* yearly, in addition to his class literary salary, for giving a daily lesson in agriculture to a class of the advanced boys; the theoretical or in-door instruction being exemplified by systematic cropping, &c., on the plot of ground connected with the national school.

In the organising and working of this system of Agricultural Education, Dr. KIRKPATRICK has had laborious and responsible duties to discharge, and we sincerely regret to learn that his health has been so impaired as to necessitate his retiring from

a situation which he has filled for the last 16 years with credit to himself and benefit to the public.

SHORT-HORN CORRESPONDENCE.

(*Continued from* p. 923.)

[Among the letters and papers left by Mr. Cottrell, of Congresbury, and kindly placed at our disposal by Mr. Bowly, of Siddington, are copies of a voluminous correspondence, much of which appeared in the columns of Agricultural Journals upwards of 40 years ago. We make the following extracts:—]

3. *Major Rudd on the Advantages of Crossing.*

"Marton Lodge, June 28, 1821.

"I am in possession of evidence which establishes the fact that the dam of Hubback owed her propensity to fatten to an admixture of Kyloe blood; and perhaps this letter will for the first time communicate publicly that the sire of Hubback had an admixture of Alderney or Norman blood. Hubback, therefore, who was the main root of the improved Short-horns, united three crosses, viz., the Dutch or old Short-horned breed, the Kyloe, and the Norman or Alderney.

"The sire of Hubback was descended from the stock of Sir James Pennyman, who obtained the breed from Sir William St. Quintin. I was intimately acquainted with Sir James Pennyman's steward, who has repeatedly assured me that Sir James told him that this breed was a cross between the old Short-horns and the Alderney. Some time ago I happened accidentally to read the 'New Farmers' Calendar,' 4th edition, 8vo, published in the year 1802, in which, at page 493, is the following passage: 'Yorkshire is famous for the Holderness or Short-horned cows. This large breed came originally from Holstein and the Low Countries, and were until of late years too coarse and Dutch built; they have been much improved in symmetry and fineness of bone and flesh by a judicious cross with the Norman cattle; for this improvement I understand the country is indebted to the exertions of the late Sir William St. Quintin. They are now very excellent and beautiful stock, and many of them are made fat at three years old.'

"Such then being the pedigree of Hubback, it follows that all the improved Short-horns are a mixed breed, the result of judicious crossing. Hubback was the sire of Fuljambe's dam; Fuljambe was the sire of Old Phœnix and of Lord Bolingbroke; Lord Bolingbroke was the sire and Old Phœnix the dam of Favourite; Favourite was the sire of Comet, and Comet's dam was by Favourite out of Old Phœnix. Hence Comet was full of Hubback's blood, and was of course of a mixed breed. This fact furnishes an experimental proof of the expediency of judicious crossing much stronger than any theoretical argument. It is unnecessary to mention that Comet was sold by public auction for 1000 guineas.

"Having thus given one practical illustration of the effects of crossing, I will add another equally strong and remarkable. The late Mr. Bakewell it is well known was the founder of the breed of sheep called the Dishley or New Leicesters. From the secrecy of his proceedings their origin was for a long time unknown to the public, and I do not remember ever yet reading in any publication any account of their origin. It is now, however, known to the most eminent breeders of the Dishley sheep, that they were a cross between the Lincolnshire and Peak of Derbyshire breeds of sheep. Mr. Robert Colling, who was one of the earliest disciples and a most intimate friend of the late Mr. Bakewell, told me that Mr. Bakewell once communicated to him their origin. One of the most eminent and most respectable of the present Leicestershire breeders has confirmed to me the above account of their origin. Mr. Bakewell, I believe, has let a ram of this breed for 1000 guineas the season."

4. *Mr. Hutchinson on the Origin of Short-horns.*

"Stockton-on-Tees, August, 1821.

"Your distinguished correspondent Mr. John Rooke in his luminous letter on this subject declares his object to be the promotion of open and liberal discussion, and desires to be corrected if in error. I take the liberty, therefore, before he returns to it, with all due submission to set him right in a very material point relating to the origin of the improved Kettons. What will be his surprise when I tell him, without the fear of contradiction, that the bull Hubback (as my friend Major Rudd and he have both erroneously asserted) was not the main root of the improved Short-horns or (as I say for metaphor's sake) the mainspring or source of this mighty stream of pure blood, but only a humble tributary, which instead of purifying, must, I fear, have rather contaminated it (if all be true that has lately been said of his Kyloe descent). Instead of Hubback, I pronounce the Blackwell premium bull of 1784, bred by Christopher Hill, Esq. (the sire of the Sockburn premium bull of 1787), to be the main root of this famous breed. Thus the Blackwell bull begot Mr. Richard Barker's bull of Oxneyfield; Mr. Barker's bull begot Fuljambe; Fuljambe begot Lord Bolingbroke, who begot Favourite, who begot Comet, who begot Petrarch, who begot (though last not least) Herod—a race of worthies in a direct line from the Blackwell bull, and not from Hubback, who was merely the sire of Fuljambe's dam. For what delusive purpose the pedigree of Mr. Barker's bull, the sire of Fuljambe (which Major Rudd has recorded to have been 'one of the best bulls of his day'), has been kept so long *incog.* I will not venture to guess, but that he was got by Mr. Hill's bull, and out of a cow from the white breed of Mr. Aisleby, of Studley Park, is as certain, as that I can prove it by a letter lately received from a nephew of Mr. Richard Barker, one not likely to deny his handwriting. I am now confirmed in my opinion that the obscure doubtful origin of Hubback (whose dam has been pronounced Kyloe breed, and as I have been told reared on the highways and hedges) is still *in statu quo*, though Major Rudd has in his letter to you of the 28th June so distinctly and positively made out his pedigree, forgetting perhaps that on a former occasion he ended a like statement with this more credible sentence: 'It is probable that Hubback may have been descended from this breed (Sir James Pennyman's), but the fact cannot be ascertained.' Mr. Editor and Gentlemen of the Jury, judge for yourselves, I will not touch upon Mr. Maynard's cow, for the account I have had of her from the facetious gentleman himself always creates a smile; nor Ralphy Alcock's surly bull, which I know myself as well as any man, having frequently seen him hounded out of Sockburn Holms across the Tees into his own pastures; a bull of taste I must say in his amours, for he well knew where to find a handsome heifer, and no bugle horn ever surpassed in melody his voice sounded in Beverley Wood."

5. *Mr. J. Rooke on Improving the Breeds of Horned Cattle.*

"Akehead, August 31, 1821.

"By my essay of the 2d June I intended to suggest that the judicious crossing of horned cattle is calculated to render them more profitable; and I therein attempted to prove the correctness of this proposal by showing that the improved Short-horns have been obtained in this way, nor am I aware that the worthy founder of the Ketton stock would raise any objection to cross breeding if the produce were more useful than their progenitors. But it was by no means my intention to point out any bull by which the Ketton breed of Short-horns may be still further improved.

"Perhaps, however, the great value of the Ketton breed of cows may be regarded in the same light as the improvement of the sluggish breed of cart-horses by putting heavy mares to blood horses, and thus obtaining more action and spirit. When the large 'Dutch built' breed of cows are put to Ketton bulls, the produce often turns out more profitable than the thorough blood on either side. But according to this rule the breeder must again go back to blood, if I may be allowed this term of the turf for future sires, else he may lose his symmetry, fine flesh, and aptitude to fatten. I never heard anything of the high blood of the celebrated ox called Capsall by the dam's side, but it is well known he was by one of Mr. Mason's bulls. It would then appear that the breeding of Short-horn stock for immediate use and that of rearing sires ought to be, and I believe is, conducted upon distinct principles, never losing sight of the usual rule that blood ought to be on the bull's side, except when bulls themselves are intended to be bred. I quarrel not then with improved Short-horns, they have my highest admiration, but I would limit them to their proper use—that of producing a race of sires, looking to their cross with large cows for profit.

"The very large ox bred at Rickerby, near Carlisle, and lately sold by Mr. Gibbs, near Dumfries, for a show animal, has horns of the Long-horned breed, rather flat in colour, a Short-horn with improved shoulders and Dutch thighs and rumps, and I think him a very great curiosity as a cross-bred animal, but to have preserved such an animal for a sire is out of the question.

"Probably the advocates of a direct cross between the West Highlander and the Short-horns have not followed the best course. Instead of going from the Short-horned sire to the Highland dam, ought they not to have gone from large fine-shaped and well-fleshed Highland bulls to large and useful Short-horned cows?

"Some attempts have been made of late years to improve the Galloway Polls by crossing them with the West Highlander. But it has been given up again in consequence of several of these crosses proving horned. Had they, however, persevered and bred back again wholly to the Galloway side, keeping as closely as possible to the Galloway character, there can be but little doubt they would have succeeded.

"In the same way I am strongly inclined to think a portion of improved Short-horns might be introduced into the Galloway Polls to great advantage.* However, in the commencement of the process much would depend upon breeding from a cross that have taken well, and looking steadily to the pure Galloway character ever afterwards.

"A very judicious and considerable farmer near Penrith, in this county, who possessed an excellent and entire stock of Long-horned cows, has for the last seven years been regularly crossing them with a Short-horned bull he had from the Earl of Lonsdale's stock, formerly kept at Lowther Castle.

"On trial he has found them more profitable than his original Long-horns, and some of his neighbours have been so convinced of their superiority that in a few instances the very best Long-horns have been put to the above Short-horned bull. I shall not, however, pretend to decide the question whether this be judicious crossing or not. It was commenced upon principle in the case to which I have alluded, and profit had led to its continuance.†

"The delicate manner in which Major Rudd reminds me of the passage in which I have said: 'Since the Ketton and Barmpton stocks have been sold off, it is (the Chilton stock) by many considered the best stock in the hands of any single individual,' requires an explicit answer on my part. This passage, intended for no other purpose but that of proving collaterally the advantages of judicious crossing, through inadvertence, appears to overlook the fact that the purchasers of the pick of the Ketton and Barmpton stocks ought to have produce equal to the originals.

"Taking then the comparative excellence of the stocks of the present time as they stand in blood, Major Rudd's ought not to be placed as second to any one, since Countess, Lily, and Peeress have been considered the best cows in each of three of the most famous tribes disposed of at the Ketton sale, and Petrarch has usually been placed as the next best bull to Comet, then sold.

"I feel much obliged to Mr. Hutchinson for the correction he has made in my statement that Hubback was the sire of Fuljambe instead of Fuljambe's dam. But I trust he will not think me perverse in still believing that a portion of Kyloe blood might run into the veins of Fuljambe with just as much certainty through those of his dam as if Hubback had been his sire. And the question still comes to this—Are the improved Short-horns, possessing as they do fine symmetry and much rich roasting beef, the pure descendants of the Dutch built Short-horns of former days? My opinion is to the contrary, and that in some way or other Kyloe beef has been spread over large Dutch carcases—I am willing to think greatly to their advantage.

"I shall by no means quarrel with Mr. Hutchinson because he has made it appear that Herod is a bull of very great merit. But in support of crossing he will allow me to add that Western Comet, a son of old Major, the well known son of Lady, has got the best stock of any Short-horned bull ever brought into Cumberland. This is a fact which prejudice has been unable to gainsay."

6. *Major Rudd on Hubback.*

"Marton Lodge, September 15, 1821.

"The sire of Hubback belonged to Mr. George Snowden, who had been a tenant of Sir James Pennyman, and by that means derived his bull. Mr. George Snowdon I understand is still alive, and able to prove his descent from Sir James Pennyman's stock. It is certain that the late Mr. Robert Colling believed the descent of that bull to be from the stock of Sir James Pennyman and Sir William St. Quintin, for in his printed sale catalogue of his stock in 1818 he deduces the pedigrees from their stocks. Of these proofs I was not apprised when the notes were published, and surely, Mr. Editor, every person has a right to correct a statement when superior information is acquired.

"With respect to the Kyloe descent I can assure your correspondent from Worcestershire, who writes under the signature 'B.' that I have not given my account from mere conjecture, as he supposes. My information was derived from a most worthy and respectable person, who assured me he had it from Mr. John Hunter, of Hurworth, bricklayer, to whom the dam of Hubback belonged, and who bred Hubback, by sending this cow to Mr. George Snowden's bull. Mr. John Hunter is now dead, and therefore this evidence is the best that can be had, unless some living person knows the pedigree of Hubback's dam and can attest it. This I have never been able to obtain, and therefore I trust to the evidence I have stated, and I have no doubt of the fact. It is my conviction of the truth of my information which induced me to state the circumstance more positively. If any of your correspondents can give a well attested pedigree of Hubback's dam, I shall suppose my information to be incorrect, but not until such proof is given. I am an enemy to all mystery and concealment, and therefore I have given to the public the best information in my power, but I am a friend to the elucidation of truth, and shall be happy if any of your correspondents can give you more accurate information.

"My friend Mr. Hutchinson animadverts on my expression that Hubback was the main root of the improved Short-horns. I used this expression because the late Mr. Robert Colling and the present Mr. Charles Colling have assured me that Hubback was the grand cause of the improvement. I believe that to Hubback the Short-horns owe that mossy coat and silky hair for which the best of them are now distinguished, and which is the surest index of inclination to fatten. I honestly confess that I know of no other breed except the Kyloe which could give this great improvement to the old Dutch Short-horns. The old unimproved Short-horns are remarkable for the reverse of this index. I have no wish to disparage any man's stock, and least of all that of my worthy friend Mr. Hutchinson; but he must excuse me if I give the decided preference to the Ketton and Barmpton stock after a long experience of their comparative merits. It is my sincere and conscientious opinion formed after a trial of many years."

* Improved Short-horns and the common breed are here considered as two distinct sorts of cattle.

* This we are told has been done, but the advantage is doubtful; we have seen many of these snail-horned and coloured crosses in Smithfield. Edit. F. J.

† This may very well be, but does it make a better race than the Short-horns? Edit. F. J.

THE PAST HARVEST AND THE COMING WINTER.

Ayrshire: *Lagg, by Ayr.*—Wheat: being thin of roots, owing principally to the severe frosts in spring, will not be an average crop, but quality generally very good. Much damage was done to standing crops on the 9th and 11th and 12th of the present month by the high winds. In some instances the loss could not have been less than a quarter per acre, but fortunately the greater part of the Wheat crop was at that time cut down. Oats: generally short of straw, but thick of roots. Will probably yield quite an average, except on very dry light soils, where drought affected them. In the inland parts of this county, where reaping is now not more than half over, I believe Oat crops will be considerably better than for the last three years. As very little Barley, Bere, or Rye is grown in this part of the county, I cannot speak with certainty as to these crops. Beans: generally a good crop and well filled out. Fully an average, and likely to be a remunerative crop to sowers. Although we do not suffer to anything like the extent (from the effects of drought) as the southern counties of England, still the shortness of straw and probable scarcity of fodder in spring must force us all to economise as much as possible. Turnips being likely to be at least a fair crop, we can best do this by chopping our straw and steaming it along with them, as it is well known that by giving straw or hay in its natural state to cattle for fodder, much of it is wasted. At the present price of Oats, nothing, I fancy, more economical could be used for feeding sheep, along with a few Turnips, which might be more advantageously used if pulped. The Oats should also be bruised and mixed with the Turnips, and perhaps a little chopped hay. *Andrew Ralston.*

Bedfordshire: *Beeston, Sandy.*—The agricultural prospects in this neighbourhood for the coming winter, are I think on the whole rather gloomy. It is true we have above an average crop of Wheat, an abundant yield of Barley of excellent quality, but the prices for these are likely to be very low so that the profit per acre may not be above an average. Our green crops are very bad. Not half the Turnip land is planted, and those who were forward in sowing their Swedes early, and have some appearance of a crop, will find them go off very fast when the sheep get to them. Mangels, I should say, will not be above one-third of a good crop. Kohl Rabi and Cabbage have done well. I have some very good, which appears to be equal to what I generally grow. I think it will be the worst winter for sheep farmers that they ever experienced. The supply of mutton, now sheep have arrived at such early maturity, is derived during the spring months from lamb hogs, but how these for the most part can be made fat without a plentiful supply of roots I know not; older sheep may by giving them cake and corn on Grass. I have been giving my lambs a small quantity of Cabbage and early-sown white Turnips daily on Grass and old seeds, and shall continue to do so for some time to come, with as much Cotton-cake as I think their constitutions will bear, in order to make them grow and keep them healthy until such time as I think I shall have roots enough to carry them through the winter by letting them have then as much of them as they can eat. Although we have a short crop of hay the Barley straw is excellent; and as Barley and Wheat will be very cheap, there is not much fear but that plenty of beef will be made. I fear that there will not be much work for our labourers, and consequently discontent will prevail, although bread will be cheap. *T. E. Pawlett.*

Berkshire: *Coleshill.*—With reference to the corn harvest generally, I should say the Wheat has rather exceeded our former expectation—a fair average, also Barley; Oats variable, but better than was expected. Peas and Beans generally a failure. There is some hope that we may get through the winter better than we anticipated, if the weather continues warm; after the rain we have had, late Swedes and Turnips are growing rapidly, and if we have a fine autumn a considerable quantity of keep will come forward—a large breadth of Rape and stubble Turnip has been sown. The hay crop, though short, is all of excellent quality, and will help much in mixing with less nutritious matter. I am not sanguine, but with present appearances hopeful that we shall get through our difficulties as to stock better than we could have expected a few weeks back. A variety of compensating circumstances seem always to be provided by a superintending Providence; with the bulk of the corn housed in

splendid condition we may "rest and be thankful," not of course slacking any effort in the use of means within our reach to meet our difficulties as to feeding of stock, but not "anxiously careful." *E. W. M.*

BUCKINGHAMSHIRE: *Woolston.* — The harvest in this neighbourhood finished as follows. Wheat various on heavy land, a little cut up a full crop, a good deal middling, and some very thin; all ripened pretty well on light land, a good deal very thin, and a little about an average crop—all ripened prematurely. Altogether we have not an average crop. Barley cut up generally good, yet ripened prematurely, therefore will not be much over an average. It is doubtful as to whether it will work well into malt. Oats cut up light and are much under an average. Beans were very much blighted, and are not more than half a crop. Peas are an average crop. Potatos are good though small, and will not yield much per acre. Roots are generally bad, especially the Swedes; in many cases a total failure. There will be a great loss in lamb hoggs this winter. Dry food must be given at once; where that is not done they will certainly die. Beans in the straw are good for foddering on Grass; the lambs will pick up every Bean leaf and pod. These, with the young Grasses (now we have had rain) will strengthen, and in some cases fatten the lambs. Cake and straw must be our great substitutes for our short crop of hay. *William Smith.*

CAMBRIDGESHIRE: *Chrishall Grange, Saffron Walden.* —In regard to our crops, I consider the Wheat rather under an average on our light lands; the Barley a full fair average, and very heavy; Oats, a large crop; Winter Beans, destroyed by the frost, and Peas put in instead, which are under an average. Of seeds we have none, and have had the most trying season for feed for our flocks I ever knew; and, bad as it has been, the worst is now coming. I have between 3000 and 4000 sheep, and little feed, having had no rain for 12 weeks until about 14 days back. The bad planted seed-land, after feeding it off in the spring, was all dunged, and sown with Rape, with 3 cwt. of blood manure per acre, but the Rape has not yet made its appearance until the last day or two, which is too late to be of much use. Our Turnips are small and stunted in growth, and large patches destroyed by the grub of the brown moth. A man with seven children to day in six hours dug up from the roots of Turnips quite three pecks: this was by taking the outer edge of the patches of Turnips. How we are to get through the winter I know not, but it must be done by using large quantities of chaff, with bran, malt combs, cake, and corn. I use straw-chaff largely. I have seven barns which used to be filled with corn, which I now use entirely for straw chaff; they now contain at least the straw produce of 200 acres of Wheat and Oats, cut into chaff last spring. I mix with the chaff when cut some green Tares or Rye cut into chaff, and salt also, and have a gang of six boys treading the chaff into the barn as it is carried in, so as to fill it as solid as possible; this causes a fermentation, and the chaff so expands from the heat that we are obliged to strengthen the outer walls by bars and iron rods across the buildings, and the chaff is as sweet as hay. I cut my chaff at the same time I thresh the corn, which enables me to do it for the same amount of labour I require to stack the straw. I have to use about 5 cwt. of coals extra for my engine, a 12-horse power one, so that I cut my straw into chaff at a cost of 1*s.* 6*d.* per acre, and it is astonishing the value of old chaff so made as compared with new fresh cut. *Samuel Jonas.*

CHESHIRE: (1) *Spital near Chester.*—From inquiries and personal inspection in this district, I find (though accounts are conflicting) that the Wheat crop will equal and in some cases exceed in yield the expectations of the growers, and may be put down as a fair average. The condition of it varies much, some samples are very damp. The quality of the Red Wheat is very fine, the White is not so good upon the whole. Oats will not prove a good crop generally; straw short, and samples lean, and the yield will be under the average. Barley is a good crop and quality fine, but there is but little grown here. Beans are short in the straw, and are not yet harvested; they are fairly podded, but will be under the average. With regard to the Turnip crop the late rains have just saved them from being almost a failure, and though the bulbs will be small they may yet reach three-fourths of an average, but of course greatly inferior to last year. Mangels have again been much blighted, and will be very small. Oat straw, which will form a large portion of the food for stock this winter, is scarce and dear, fetching in the market 3*l.* per ton. It will no doubt be nearly all cut up for use, and the Turnips pulped to mix with it. I do not feel myself qualified to recommend any particular articles to supply the deficiency of hay and roots. I am using, and intend to continue the use of good Rape cake and Locust Beans mixed with cut straw, and pulped Turnips and Mangels for my cow stock and sheep, and I expect that as both these articles are reasonable in price they will be largely used. *W. B. Burnham.*

CHESHIRE: (2) *Stapleford Hall, Chester.*—My impression is that Wheat will not be very productive; that there will be a deficiency as regards last year's crop of from 15 to 20 per cent. I have threshed out a little, and the yield is not very good, but the quality is tolerably fine. I think the same remark may be applied to Oats, which in many instances ripened prematurely. Barley is decidedly the best crop, and will, I think, prove an average, and it is generally of fine quality. The green crops are much improved by the rains, and some fields begin to have a very luxuriant appearance, but many crops of Mangels and Swedes, the latter more particularly, have been greatly injured by the "grub," and consequently are very irregular. Potatos too in some localities have suffered to a great extent from the same pest. Hay was a very light crop generally, in many instances not more than half the usual quantity, and a second crop of Clover is a thing rarely to be seen; it is now too late for the pastures to get ahead of the cattle, which are quite ready to receive the Grass as it springs; with these prospects it is to be feared that live stock of all kinds will suffer during the winter and spring months from being scantily fed, and the demand for all kinds of feeding stuffs will enhance their value and place them beyond the means of many farmers; of course much will depend upon the severity or mildness of the winter. Second crops, after early Potatos, such as planted Mangels, common Turnips, &c., are generally a failure; and purchased food, such as Indian Corn, Linseed-cake, Cotton-cake, Linseed-bran, &c., must be resorted to. It is however not too late to sow Rye, or Rye and Vetches, and they will be found very useful in the spring, and may be cleared off the land in time for a crop of Swedes; the first sowing should take place immediately upon very well manured land, and another about the middle of October. Molasses has been strongly recommended to me for cattle in scarce seasons, but I have never tried it, and the cost I have not yet considered. *William Palin.*

DEVONSHIRE: *Stancombe, Kingsbridge.*—Our Wheat crop proves to be far beyond an average, and samples as fine as I ever saw. Barley is about average in quantity, the samples varying much. Turnips and Mangels will probably prove a half crop, for such is the mildness of our climate, that the Turnips, which did not come up till after the rain of August 20, will generally be good. We have about half a crop of hay, and by the use of a good deal of grain hope to get through the winter; some of our farmers are giving Wheat to their cattle. *Samuel Cornish.*

GLOUCESTERSHIRE: (1) *Cullabine Farm, Dumbleton, Evesham.*—I consider the Wheat crop hardly an average, but Barley I should say is quite an average and of excellent quality—both have been harvested in first-rate condition. We had scarcely a storm during our harvest. Beans are almost a failure, unless on strong Bean land; Peas were attacked by the fly at much too early a period to come to a full crop; the early white Peas to some extent escaped, the later sorts were seriously affected. Potatos are very inferior in quantity, quality and size; they have been grown very sparingly with us this season, in consequence of the over supply last year. The root crop is almost a total failure; there is a tolerably good piece here and there, but they are few and far between, and the loss of so valuable a crop will be severely felt during the winter. How the loss is to be supplied will be a very serious consideration with many, myself among the number. I have hardly half my usual crop of hay, consequently it will have to be carefully used. For a considerable period I have cut up all my hay and straw into chaff, and pulped my roots this winter. My ordinary management of the live stock on Mr. Holland's farms will differ only in this: we have no roots to speak of, and the want raised by the loss of that important crop I purpose in a measure supplying by using meal and cake. I intend trying the Palm-nut cake, and if it answer, as I am assured it will, it will economise the cost of keep considerably. I can say nothing of it as yet, I must further test its feeding properties, but I remember Professor Coleman spoke highly of it when at the Cirencester College. The cattle eat at all times half hay and half straw steamed. To those of your readers who have not steam accommodation, I would recommend them to adopt the plan of mixing up their chaff with cold water, and let it lie 24 hours before using, it will then be in a state of fermentation, and will keep good two or three days, according to the state of the weather; should it heat too much spread it a little. I mean to mix with all my cattle food a little salt, as all animals are fond of it; it may induce them to eat coarser food with more appetite—at least, I mean to try it. The feeding beasts formerly had as much chaff as they would eat, and for a few weeks after they were stalled and daily had half a peck of flour, with about 14 lbs. of pulped Mangels, afterwards a peck of flour, until they were fit for the butcher; this season flour and cake must make up for the loss of roots. The dairy cows will have hay and straw chaff, with perhaps not a third of their former allowance of Cabbage, than which nothing is better for making good butter during winter, provided that no dead or withered leaves are used, these give a very objectionable taste to it; the dry season has also caused a considerable failure in this plant. The in-calf heifers will have one-third hay and two-thirds straw, with 4 lbs. of meal and cake; the two-year old animals will be put on Wheat, Pea and Barley straw chaff, with about 2 lbs. of meal. If I have much tail Wheat, I shall probably use that for feeding purposes, as I expect it will be as inexpensive as any meal the miller will supply me with; year-olds and calves will get one-third hay and two of straw in chaff, with 2 lbs. of meal or cake. In this neighbourhood Oats, Rye, Vetches, and Trifolium are being largely planted, in the hope of having some early spring keep; I am also drilling some Cabbage seed, risking the probability of the plants standing the winter, but of that I have not much fear, unless we have very severe weather. For several seasons I have planted Asparagus Kale, and have found it answer remarkably well; several gentlemen on my recommendation are going to try it. I have drilled 2 lbs. to the acre in drills 16 in. apart, on Wheat stubble, intending Swedes or Mangels to follow; I shall put my sheep on in the spring and eat it off as I would a Turnip crop. We shall have a few months' anxiety as to what food may be best and most inexpensive to supply the partial failures of this harvest, but "time and the hour runs through the roughest day," or season. *Charles G. Clarke.*

GLOUCESTERSHIRE: (2) *Didmarton, Chippenham.*—Nearly the whole of the cereal crops in this neighbourhood have been very early and well harvested; as regards the probable yield and quality, scarcely sufficient has been yet threshed to judge from; but a portion of Wheat and Barley from different fields yielded well to the straw, the Wheat very fine in quality, but the Barley rather thin and too white in colour. Both the above kinds will, I expect, yield rather better to the acre than was at one time expected. The Oat crop must be deficient in quantity and quality; Beans generally bad, and Peas variable. The hay crop being very short, all the straw of the last corn, and some of the Wheat straw must be husbanded for the cattle and sheep, and as the root crop is very bad, but few can be spared for the store stock; much artificial food and corn must consequently be used during the winter. From my own experience I would recommend the cutting of Oat or Pea straw with a little hay into fine chaff for the stock ewes, and chilver tegs, supposing they can have but a very few roots, or, if none, a moderate allowance of Linseed or some other kind of cake or artificial food, or inferior corn, as each person's judgment might dictate, and of course the sheep must have water if roots cannot be given. Cattle, including in-calf cows, will do very well part of the winter on straw, running out on the pasture; but as there is little old Grass, a little Linseed, or other cake given will help to keep them at straw much longer, to save hay; unless pulped roots can be mixed with it, it is not good practice to cut the straw into coarse chaff, but bad coarse hay will pay for cutting. When homesteads have the requisite conveniences, no doubt steamed or cooked food can be used with advantage, rendering hard, crude matter more palatable and digestible. It will be obvious that every stockowner, the coming winter, must use his best abilities in the economy of all food for stock, and certainly it will be unwise to let *animals deteriorate*, but each person, without any particular rule, must be influenced by local circumstances, the relative prices of artificial food, corn, markets, &c. On referring to farm memoranda of 1818, a season very similar to the present, it is stated that in August and September nearly all the sheep and cattle were obliged to be foddered from want of Grass food, the water also being very short, but on December 13, after fine rains, and a mild time till then, there was abundance of Grass, enabling the cows to be milked longer than usual, and all the cattle much benefited. I can only hope the next winter will be of like character. *Stiles Rich.*

GLOUCESTERSHIRE: (3) *Whitfield, Berkeley.*—The harvest in this neighbourhood has been secured in the best possible condition a month ago, but I hear of small pieces of Wheat and Barley being still in the fields on the hills above Wotton. We have not threshed any of the new crop yet, but judging from appearances at harvest time, I am of opinion that the yield of Wheat will not be so good as last year. Oats and Barley promise a fair average yield. Peas and Beans are all but a failure, and the bulk of straw in all the crops below that of last year. The root crops are more or less a failure for miles round this neighbourhood. Our own crops of Swedes and Turnips, with the exception of a few patches of Swedes, is completely cleared off by grubs, so that we have no root crops to look to for winter food but Mangels, and they are a rather ragged crop; and the hay crop being a very light one, about one-third an average, I hardly know how we are to get our stock through the winter. I have been thinking of cutting a mixture of straw and hay with chaff, damping it well with boiled Linseed, and mixing the whole with a portion of meal composed of Indian Corn, Peas, Barley, or Oats, or any tail corn, for the store sheep and cattle, adding a liberal allowance of good Linseed cake for the fatting stock. In this way I think a good deal of straw may be used as food for the stock, and still keep them healthy and in good condition. I am quite aware this plan will entail a heavy expense for corn and cake, which with the present price of Wheat can ill be borne, but in the absence of hay and roots I can think of no better or cheaper plan of wintering the stock. Our Mangels we shall keep for spring use, when it will be wanted for the ewes. We have been sowing a good breadth of Rye, Wheat and Vetches to come in for early spring feed, to be followed by Swedes or Turnips next summer. *John Cobban.*

HUNTINGDON: *Brampton.*—Our harvest in this district, both on the high lands and in the Fens, is now completed. I never knew the accounts in regard to the Wheat crop so conflicting; some farmers stating that they are not dissatisfied with their yield,

and others that they are much disappointed. The Wheat crop, in point of bulk, was certainly above an average, but I know crops which before harvest looked like five quarters an acre, are only turning out three. Generally the later Wheats are the best yielding, and those in the Fens are reported better than those in the higher districts. Yellow maggot and blight have lessened our prospects, and upon the whole I would say that Wheat nearly approaches, but is not quite, an average. Barley is a very fine crop—as fine, I think, as I ever saw it, and considerably beyond an average. A large breadth was sown, and our supplies will no doubt be very plentiful. As a crop it has been paying better than any other for the last few years, and this of course has given a fillip to its increased cultivation. Oats are a light crop, and thin in quality, as they generally are in a dry summer, and they are certainly under an average. Beans are very bad, the extreme dry and hot weather having brought a locust of flies upon them, which completely shrivelled up and prevented the pods from filling. The root crops are generally complete failures; occasionally you may see a field of Mangel Wurzel or Kohl Rabi with the prospect of a good half crop, but generally speaking the crops are past recovery. The disaster upon flock-masters will be the greater, inasmuch as the tendency of late has been to increase the flocks of sheep. The question is therefore a very important one—How are our herds of beasts and flocks of sheep to be kept over the coming winter? It is clear that both roots and hay must be economised in every given shape, and that the former must be cut up and pulped for the sheep and beasts, and all hay cut into chaff and used largely with straw. Of course artificial food must be largely drawn upon; but if good management be exercised in regard to every handful of food which is given to the stock, our present apparent difficulties may be got over better than we now anticipate. It generally happens that those ills which overtake us are attended sooner or later with good results; and it is the true philosophy of life to extract the greatest possible good from them whenever they come upon us. I believe that such will be the result in regard to the disaster which has happened to the root crops of this season. It will show more clearly to many, who have gone into the cultivation of these crops upon our clay soils with rather a niggardly and sneering spirit, their inestimable benefits, now that they are deprived of them, and at the same time the indispensable necessity for their extended cultivation. Indeed, if rents are to be paid upon our clay soils, it must not be from depending upon Wheat, now ranging under 5*s*. a bushel, but upon a large increase to our flocks of sheep, which are paying better than any other produce of the farm, and the supply of which at present does not seem to keep pace with the requirements and consumption of the country. But to carry out this system root crops are indispensable, Mangel Wurzel especially; and with proper cultivation this root may be grown successfully on our poorest clays. *Peter Purves.*

Kent: (1) *Marten, Dover.*—I think the result of the harvest will prove to be, on the whole, an average crop. Wheat not so good as last year, and some of it carried in rather poor condition, especially on the late soils. The quality of the Barley is, generally speaking, very good, though the later pieces were much washed. Oats various, in some cases good, in others very indifferent. With regard to the root crops they are worse than I ever knew them, and even now are failing. One of my neighbours counted no less than 213 slugs round one Turnip. The Rape, where there is any, does not seem to grow; I fear my sheep must almost live on corn and Pea straw a great part of the winter. The Pea straw I cut down with one of Richmond and Chandler's chaffcutters, and if I find my Pea straw likely to run short I must mix Oat straw with it. Surely the slug that now infests our fields is something fresh; no one seems to remember having their roots so much injured in this way until the last two years, and they seem to attack the crops as much where they are manured with artificial manure as where dung has been used. I am sorry I can give you no more information on the subject, as it must be a matter of vital importance to farmers. *Mark Sandford.*

Kent: (2) *Dumpton, Ramsgate.*—The corn in this neighbourhood was never harvested in finer condition, and there can be no doubt but the yield will be quite equal to or more than was expected at the commencement of harvest. The present price of Wheat is no inducement for farmers to thresh, but those who have threshed find the produce greater than they expected. The weight, colour, and condition is so good that in some cases seven bushels of Wheat will produce as much flour as eight bushels will in bad seasons. Barley will also prove a great crop; it varies much in quality, some being harsh (or steely, as our maltsters term it), but most of it is very heavy, and if not fit for malting will give a large amount of food for pigs and cattle. Oats were much shorter in the straw than usual, but they yield well in proportion to straw. Peas are quite as good as were expected. Beans are no better than I reported before—about half our usual crop. Our prospect of food for sheep and cattle is not so gloomy as it was six weeks since. The fine rains we have had, followed by warm growing weather, have much improved the appearance of things generally. Hay of all sorts is scarce and dear, but our Grass land, Clover, Sainfoin, &c., is now giving a good quantity of sheep keep. Mangel Wurzel generally planted well, and the growth of it has been such the last few weeks that it bids fair to be nearly if not quite an average crop. Swedes also planted well, but they have been, and still are, much punished by grub; nevertheless they will produce a greater weight per acre than was thought possible a short time since. But very few of the common Turnips ever vegetated; the few that were sown very early were a good plant, but they have suffered so much from the long drought that since the rain they have shown more tendency to rot than to grow. The plans adopted for eking out the scanty supply of food, &c., are so numerous that it is difficult if not impossible to define, as nearly all are doing something to lengthen out the food they have, or to supply the deficiency; and, should the winter prove mild, there is great reason to hope that no serious evil will result. Chaff-cutters and root-pulpers will be more generally used than they ever have been in this district, and we are not deficient in straw, and, from being so well harvested, it is nearly as sweet and nutritious as inferior hay. Cotton-cake and Maize have already been largely purchased by several of us, and the quantity of Rape and Mustard sown is of far greater breadth than was ever known. These crops are growing very fast, and, should frost keep off, will keep our sheep with a little corn and cake and a good supply of good straw for a long time; but with all this there cannot be anything like the usual number of sheep and bullocks fatted. The most we can expect is to keep our store stock in good growing condition, experience having taught us that all animals that get poor in the autumn are difficult and troublesome to winter, therefore we are trying to keep them well at present. Our lambs since they were weaned have had an unlimited supply of Oats; they have not up to the present time consumed more than ½ lb. each per day. Our dairy cows and young stock have Linseed and Cotton-cake mixed, proportioned according to age and size; both sheep and cattle are doing well at present. Our Potatos are a good crop, no disease at present; it will entirely depend on price how they are disposed of; there were a great many tons last year consumed by pigs, sheep, and cattle, and I think the probability is they will be applied this year to the same purpose. Taking all things into consideration, and looking back to what they were in the middle of August, we have much more cause to be grateful than to complain. There is one thing in this neighbourhood that will be a serious loss to us. As I have not seen it noticed in any of our agricultural publications, I hope it is not general—it is the almost complete failure of our young Clovers and seeds of all kinds, sown in the spring; very many acres are already scarified or ploughed up. Some have been endeavouring to make good the deficiency by drilling Trifolium and Tares, but this at the best is only patchwork, a makeshift that is a little better than a perfect loss. *Wm. Manser.*

Lincolnshire: (1) *Panton House, Wragby.*—From the present threshings it is fully ascertained that all corn crops are not yielding so much by about 1 quarter or more per acre, as last year, although it is thought that they will weigh heavier per bushel. The bulk of straw is also less. The quality of the corn is good. With regard to the green crops, they are on the strong clay lands nearly a total failure, with the exception of the Mangels, which are good. On the lighter lands they are not more than half a crop, but they are now growing very fast. The plan to be adopted for carrying the stock through the winter will be to keep the sheep off the Turnip crop as long as possible, and hold them on the old seed and Grass lands, giving them cut Oats and Clover fodder, with artificial food. Also lead out Cabbage when so fortunate as to possess them. The present fine season is now flushing the Grass and seed land very much, and I think by economy and care we shall be able to carry over the stock in a healthy state up to next spring. The cattle will require a greater consumption of cakes and meals, &c. *William Dudding.*

Lincolnshire: (2) *Long Sutton.*—I shall venture to give my "opinion of the corn harvest," &c., comprising the country situate between the towns of Boston, Bourn, Peterborough, Ely, Downham, Lynn, *i.e.*, including a large tract of marsh land, high land, and fen land. The crops of Wheat and Peas are above a general average. Barley is a full average, Oats below an average, Beans a bad crop caused by aphis, Potatos a fair crop, but tubers small, Mangels very defective, Swedes the worst crop we remember, Turnips scarcely any to be found, Coleseed the worst crop ever known. Every stockowner is at his wits' end to know what to do. For cattle and horses, hay and straw provender may readily be made to suffice, with the customary additions of cake and corn. It is the winter management of the flock and young cattle wherein lies the difficulty. Old sheep will do very well upon horse and cattle food, but young sheep, (lambs) and young beasts, must have a ration of succulent food daily, however small it may be. In the district named above, sheep troughs are to be seen everywhere, thus giving evidence of preparation to supply the sheep with artificial food throughout the winter. Most farms have a small stock of green food. This must be eked out very sparingly and given along with cut straw, cut hay, cut Oat-sheaf chaff, Barley-sheaf chaff, cut Pea straw and well broken Bean straw, together with cake or meal, Oats, Barley, Bean and Pea meal, bran and offal sprinkled over the chaff. Young cattle, beasts, builings, yearlings, (I wish we had one general term for all), may do very well upon hay, or even good straw with cake, corn, bran, malt-comb, Linseed-meal. *J. C.*

Norfolk: (1) *Denver.*—Wheat will reach nearly a fair average, and of good quality, though not quite so fine as last year; it has been well harvested, and I believe is now completed in the fens adjoining this district, and I hear no cause of complaint, but that it will be an average crop in that district. Barley is a very fine crop, with a great variety of quality, and most of it harvested well where they were not in too great a hurry. The young Clover plant among the Barley is very weak, and in many instances I fear has perished on the hot gravelly soils, but on good soils I hope they will recover and be a middling plant: the late showers have improved them very much. Oats are only a middling crop. Beans are bad, and Peas, what few are grown, are very good. Our Mangels will be a fair crop on good soils, but the Turnips are wretched; where we had a good plant, what with the lice and grubs, they will be hardly half a crop, and as to the common Turnips there are hardly any, and what is to be done with the sheep I don't know. One thing, corn is cheap, and to that we must resort, hoping we may be favoured with a fine open winter. We are sowing lots of Rye and Italian Rye-grass, and Stone Turnip, &c., for spring feed. Stock are in a healthy state, though many of them are in low condition. *Thomas Brown.*

Norfolk: (2) *Norwich.*—I write from Tenby, where much corn is yet abroad (though of course all cut and placed in hand mows), and the Grass is ankle deep, and Swedes a capital crop. This exceptional appearance of Grass and roots does not reach beyond Swansea; eastward of that you know what a prospect and what a present dearth there is. My district in Norfolk, between Norwich and Yarmouth, is mostly a deep soil, resting on a cool brick earth; the summer has therefore suited our corn, and our Wheat is a good average crop; Barleys bulky, and will yield well, and the grain though white and steely is of fair body. Oats are short, and Beans and Peas an average. All straw light, well harvested, and free from vermin. Hay half a crop, but well saved. Mangel a fair plant, and on holding ground will be a three-quarter crop. Swedes patchy and very small, and were full of lice and terribly cut up with grub. White Turnips generally a failure for want of plant. I shall shred all my roots, and mix them with an equal bulk of cut straw or corn chaff; all the hay will be cut into chaff, save a little for the riding stable. Sheep will be daily driven to a well littered yard, and there remain some time; and where the land will not bear folding, will lodge in the yard all night. Of course oil-cake, Cotton-cake, and corn meal will be given to all stock in proportion to their size and state of fatness. I never exceed 4 lb. of Linseed-cake, 4 lb. of Cotton do., and half a peck of meal to a large ox; that, with 4 bushels of finely shredded roots and corn chaff (half and half), and a handful of hay chaff, I fancy is enough for the largest beast. I have also bought some treacle at 17*l*. per ton, fine and sugary; this I shall mix with warm water and sprinkle over chopped straw, and give at the rate of 2 lb. a day to small store cattle; a few roots will be added if there are any to spare. I am buying some spring Beans off marsh land that are 7 or 8 feet high, quite free from lice. They are yet green, and I am chopping them up with Oat straw for my cart-horses; and with 1 bushel of ground Oats each per week they are doing remarkably well. *Clare Sewell Read, of Plumstead.*

Roxburghshire: *Clarilaw.*—I think that the crop of corn in this neighbourhood is nearly an average, except Oats, which are a very poor crop, not two-thirds of an average; we have a great deal of the crop still standing out. I have not a fourth of it carried home yet. The Turnip crop looks well, but we shall have to keep fewer cattle. I do not know the best way to eke out the scarcity of the supply of food for sheep and cattle, but I think oilcake a very good help. *Patrick Brodie.*

Salop: *Baucott Munslow, Church Stretton.*—Harvest is all completed, and never was secured in finer condition. The Wheat is likely to yield less than people expected before harvest, and the quality not so good as last year. The Barley will be quite an average, and the grain a fine colour, but not so large as last year. Oats very good. The straw of every description is good, and will be eaten well by the stock. The Swedes in this district have made considerable progress since the rain, but common Turnips are a failure. I consider we are much better off than we were four years ago. Our Turnip crop was much worse, our hay spoiled, grain got badly, and straw worth less except as manure. There are considerable quantities of cake being used now, and will be as long as the cattle remain in the pastures. I have no doubt after cattle are taken to the yards there will be more grain used with cut chaff, pulped roots, &c., cake being the most economical food to use during the time the cattle are upon the pastures, and grain with a mixture in the yards. *Richard Shirley.*

Sussex: *Brighton.*—The harvest is rather better than it was expected to be. Cattle food for winter is scarce; Turnips a complete failure; Cabbage and

Carrots nearly as bad; Mangel, where there is a crop, good. Hay, oilcake, bran, brewer's grains, &c., very dear and scarce. Grass much improved by late rains, and store cattle will probably be out until Christmas. To shorten the winter early Rye and spring Rape will be had recourse to, but Italian Rye-grass freely irrigated now will grow during the next two months, and be ready before either. In my own case I sowed in August 20 lb. of Cabbage seed, which is now ready to plant out. The "Eastham" variety is ready in March, which will next year be a very critical period. Until nearly the middle of December, the under leaves of the Mangels, carefully stripped off, will furnish the bulk of our succulent farm food, and from that time to the middle of March, the roots themselves, with a few Cabbages, will be the main support. My roots are all put into pies, 8 feet wide and 4 feet high, and covered with earth. At every two cartloads carried in a bunch of straw is placed, and when the pie is ultimately covered a stake marks each 10 loads. The daily consumption can thus be accurately arranged, and half a cartload a day economised through 150 days leaves a most valuable reserve at the last. There is but very little autumn Rape for the sheep. *Fred. F. Hallett.*

WARWICKSHIRE: (1) *Stratford-on-Avon.*—The harvest having been concluded a sufficient time in this district to allow the threshing machines to be used to a considerable extent, it is found that the Wheat crop yields badly; although upon some of the best clays and deep soils fair crops are found, it is under an average, and considerably so on the lighter soils, as the plant was generally deficient. The Barley crop does not yield so well to the straw as at one time expected, the grain being generally thin in consequence of the continued dry weather throughout July, yet it must be a full average, although none of those large crops spoken of at one time from the great bulk of straw, and there seems a greater quantity than usual shed upon the ground. The Peas where sown early are a fair crop, and the straw being free from blight will be extremely valuable for fodder. The Beans are very various; upon some of the deepest and best-conditioned soils a fair crop, on others middling, down to very bad. The failure of Swedes and Turnips is very general, and as many parties grow none and others only a small quantity of Mangel Wurzel, they will be sadly put about to carry their stock through the winter without being meat producers. Some parties in this district are large growers of that excellent root, (and no doubt next season their number will be much increased) and as the crop is probably more than two-thirds of an average they will be in a position to take the benefit of the meat market in the spring, but will have to resort to unusual means to keep the store stock in fair condition through the winter and spring months; the failure of the young seeds is very disastrous; they are now being resown generally, some fields being left to be planted with Beans. A great effort is being made for spring feed in sowing Trifolium, Rape, Rye, winter Oats and Vetches, Italian Rye-grass, &c. The cutting up of different kinds of straw with a little hay and mixed with the flour of the cheapest kind of corn, malt-combs, &c., will be very extensively resorted to, and when used for cattle, the chaff being steamed, will make a good feed, but the best and cheapest we think is, where roots can be had to pulp and mix with it. If Wheat continues near its present price a considerable quantity no doubt will be used for feed in the room of cake, &c., and may perhaps have some effect on its price in the ensuing spring. Although the Grass fields are looking green they throw up but little keep, and the different brush Turnips sown grow but badly, being much eaten by the slug and fly, the weather apparently not being sufficiently warm for their growth. *G. A.*

WARWICKSHIRE: (2) *Milcote, Stratford-on-Avon.*—The harvest of this neighbourhood is entirely gathered, and I know no reason to alter the opinion I have previously given you of its probable results. On land suited to the growth of Wheat and well cultivated, that grain will prove a full average crop, but not as productive a one as that of 1863. Barley is beyond an average quantity, but much of it will be hard and thin, and fall far short of the fastidious desires of the maltsters, whose requirements become yearly more and more difficult for the English farmer to supply. Beans are a bad crop. The Mangels bore the extreme and continued dryness wonderfully; since the rain came, they have grown and are still growing rapidly, and promise to be a good crop. As this root is much cultivated, where a few years since Swedes would have been sown, many farms in this locality have about their usual quantity of winter sheep food upon them—but where Turnips have been the dependence, a different state of things is present, and numerous farmers will be greatly puzzled to keep their usual number of sheep during the coming winter. I have not heard of (nor can I suggest) any means to meet their exigencies. All fodder will doubtless be cut and afterwards mixed with flour or bruised grain, as a means of inducing the sheep to eat a larger quantity of such food than it would be deemed advantageous for them to eat, supposing roots were plentiful. *J. C. Adkins.*

WILTSHIRE: *Avebury, Chippenham.*—The harvest, I believe, is nearly all completed, with the exception of a few Beans, which, I am sorry to say, are a complete failure; Winter Beans I believe a fair crop. The harvest, I believe, never could have been better secured. Wheat, per acre, is beyond what was expected in quantity and quality also; weight of Wheat superior to that we are accustomed to, being unusually heavy; Barley very good, and well secured, a good crop, and likely to malt well, as it grows so well in the field; Oats on the whole a fair average crop; Tares come to market more plentiful than was expected, and still command a high price. I am pleased to observe since the rain where there are Swedes they have made wonderful progress. Everything that could be thought of has been sown as early spring food for sheep, which, with the improvement of the pasture land since the rain, will help to pass away time; the great abundance of old hay which is in many parts of our county, and which, I hope and think, will not be dearer than at present, with cut straw of every description, a few Oats or a little cake, and, in some instances, Beans, will enable us to rub through the winter; many people will cut up their Oats as they are and give to sheep. I have heard of Wheat straw cut into chaff, with a little hay and a pint of Oats given to ewes at the present time, do well; all kinds of straw are so particularly sweet this year, equal to bad hay, that I am of opinion, and trust if we have a mild winter things may not be so bad as may appear at the present time. Warmth is a great thing when food is short. I find there is a difference of opinion as to the Oat crop being an average. *Geo. Brown.*

YORKSHIRE: *Sturton Grange, Garforth, Leeds.*—With respect to the "corn harvest in this neighbourhood," the Wheat crop is under an average, having much small corn in the sample. Barley a good crop, I think the best that has been grown for years; Oats moderate. The harvest has been well secured, plenty of corn ready to thresh, selling at a bad price. White Turnips a failure; Swedes now growing well, and should the frosts keep off until the end of November there will be some good fields in this part of Yorkshire. Upon the strong lands Turnips are a lost crop. For the winter keep of sheep there will have to be a great outlay in either Barley, Malt-combs, Cotton-cake, and Locust Beans. I give my lambs which have been on Turnips three weeks, Cotton-cake at 5*l.* per ton, Locust-meal at 6*l.* 10*s.*, malt-combs at 4*l.* per ton, and shall also give Barley if under 1*s.* per stone. I think farmers ought to use as much corn as they require, which will raise the price and reduce oil-cake. My ewe flock will be wintered upon Grass, with an outlay of 6*d.* per head per week in artificial food. *B. Nicholson.*

Home Correspondence.

Linseed and Straw.—In the too probable scarcity of food for stock-masters during the coming winter and spring, it may be of great public utility that I make known a recipe once given me by a grazier, and which, when I kept two or three cows in a stable, I put to full and satisfactory proof. By the help either of this or of the waste from the kitchen, mixed with a small quantity of bran and Wheat straw, I was saved the necessity during twelve years of cow-keeping of buying a single truss of hay. And during one winter, when hay was selling at 6*l.* a ton, and when it cost the farmers and milkmen 12*s.* a week for each cow, my two cows together, with straw at 30*s.*, cost me only 9*s.* a week; and they were in better condition than any in the place, and gave as much milk as any. Let a peck of whole Linseed be steeped for 48 hours in 54 gallons of cold water, and let this be occasionally stirred, and at the end of that time the water will be thickened, my informant said, to the consistency of arrowroot. I must say, however, that his arrowroot must have been rather thin. Still, so much of the oily and glutinous matter escapes into the water, that, if you wish to warm it, boiling, because of the froth raised, is out of the question. I cannot, however, see any need of boiling or even simmering it. My opinion is that if those 54 gallons thus saturated be mixed with a quarter of a ton of straw, or even half a ton, it will make it equal to the best hay. My informant stated that he and the man who taught him had sometimes fatted a bullock, when put up in pretty good condition, with no other food than this. Can it be that the nutritious and fattening particles are extracted in so fine a form that the system of the animal immediately takes them up, and thus derives from them full and immediate benefit; whereas a vast portion of the oilcake and coarse Barley-meal commonly given passes through the animal in an undigested form? *Henry Moule, Dorchester.*

Gorse.—The corn crops have been pretty safely housed about here, in spite of the broken weather. The Wheat crop, of which there is but a limited sowing, yields very well; but a good deal is of inferior quality. Oats, although in some instances luxuriant, are disappointing in the yield, the grain being light, and consequently the produce very short. On an average, it is said not to exceed a half crop as compared with last year. The straw also is very short on light lands, and where it remained out in stooks, was very much blackened with rain. Barley is better in appearance, and has turned out more productive. Of Peas and Beans, the quantity cultivated hereabout is so small as to be hardly worth mentioning; it is a good crop. Potatos are a fine crop, both as to quantity and quality, and hitherto completely free from disease. Turnips and other roots will be very deficient. The earlier sown ones will give from one half to two thirds of a full crop. The later sown crop will not produce anything; they were past recovery when the rains came. They are merely now putting out leaves, and make no show of bulbing. On the whole I should say that there will not be more than a half supply. The hay crop deficient by a third at least. The Grass was all dried up in the pastures, and the autumn growth which our graziers rely upon for the winter will come to nothing, for it is consumed as fast as it grows. There will be no stock of it to carry on, and stockmasters will have to draw on their fodder sooner than usual. Of aftermath there is none. A very large number of beasts must be kept over the winter, which under ordinary circumstances should have been sold out by this time. To meet these wants we shall have recourse to the use of Indian Corn, or at the present low prices, of inferior Wheat, Oats, Peas, and Beans, all of which are now cheaper than the various descriptions of cake. The practice of cooking the food is increasing very much, and is found economical. The use of Gorse is not yet sufficiently understood; otherwise, where practicable, it is the most economical of all fodder. From my experience of it I should say, "so much Gorse given so much hay saved.' This is only true when it is properly prepared, so that there is no waste of the material itself or of muscular power in the animals endeavouring to reduce it to a proper state by prolonged mastication. I send you a pamphlet by this post, illustrative of the machine I have invented, and of its usefulness. In it I have not mentioned the cost of the Furze when prepared, because that must vary according to circumstances. In no case can it exceed 20*s.* a ton. In my own case I never found it exceed 10*s.*, although I had to get the Gorse cut by hand off hedge-rows. Others have had it done much cheaper, especially when it is mowed in what are termed Furze meadows. The workers must be provided with proper appliances, such as gloves, hooks, &c. I have never found any difficulty in getting any animal to eat it excepting sheep, which are very whimsical about it. When snow is on the ground they eat it eagerly. Cows will eat it anywhere, in the house or on the Grass. Last winter there was a good deal of correspondence in the *Times* about this subject. I wrote twice to the Editor in answer to queries, but he did not condescend to insert my letters, although he published several very little to the purpose. *John Walsh, Stedatt, Balbriggan, Ireland, September* 26.

Farmers' Clubs.

BOTLEY: *Use of Superphosphate in Turnip Culture.*—Mr. SPOONER lately read a paper on this subject. The discovery of the use of superphosphate was due to a suggestion of Liebig. He himself was one of the early experimenters, for it was nearly 20 years ago since he won the R. A. S. prize for the best essay on the subject. Since then many papers have been written, and full directions given, of the different modes of dissolving bones by acid, amongst the worst of which was using a heap of ashes as a bed for the bones, as the ashes were sure to absorb and neutralise some of the acid. In order to supply this article in sufficient quantity to agriculturists, the world had been ransacked for the requisite materials, and he produced a specimen of fossilised bone earth imported from the island of Sombrero, and various phosphatic materials from this and other countries. The importance of chemical manures and the wants of agriculture, demanded that every encouragement should be given to the opening and development of new sources of supply, in order that the article might be supplied at as cheap a price as possible, and nothing can be more injurious to agriculturists than the attempt to induce them to rely on or employ one form of phosphate of lime alone, such as half-inch bones. If it be a desirable object to raise this useful manure some 50 per cent. in price, then by all means use it, and use it alone; but if otherwise, then give every encouragement to those who ransack the world for the supply of materials which, by the aid of chemical science, can be converted into food for mankind.

In applying sulphuric acid to bone phosphate, or tribasic phosphate of lime, as it was now termed, from its containing three equivalents of lime to one of phosphoric acid, the sulphuric acid abstracted two of these equivalents of lime and formed sulphate of lime or gypsum, whilst the remaining equivalent of lime formed with the phosphoric acid soluble phosphate, the principal and most valuable ingredient in commercial superphosphate. To show that it was really so, the lecturer dissolved some superphosphate in water, filtered it into a test tube, where it was quite colourless. To show its presence he poured in an alkali, which, uniting with some of the phosphoric acid, caused the remaining phosphate of lime again to become insoluble, and therefore visible in the form of a milky cloud. This latter was called precipitated phosphate, and was the form in which it was taken up by plants, whilst its previous soluble state was that in which it became distributed through the soil. The precipitated phosphate was in a much finer state of division than any mechanical means could reduce it to; so they must not delude themselves by the idea that by fermenting their bones, or by mixing them up with ashes, they can render the phosphate soluble. He had found on submitting both the soluble phosphate as well as the precipitated phosphate to a

microscopic examination, that the former was present in the form of exceedingly minute bodies, somewhat like the globules of the blood, whilst when precipitated the crystals were long and slender, like those of Epsom salts, thrown together, as it were, in all positions, and thus accounting for the bulky state of the precipitate. Mr. Spooner then alluded to an article in the Journal of the Royal Agricultural Society of England, by Dr. Voelcker, in which were detailed a number of experiments, which proved that the soils which derived most benefit from phosphate of lime were those in which it did not greatly abound, but which had the power of absorbing the soluble phosphate, and fixing it by means of their alkaline properties. Thus most strong soils possessed this capability, and chalky soils still more so, whilst many sandy soils were deficient in this power. This led the Doctor unwittingly into an erroneous statement, for he said that light soils had not the power of thus fixing the soluble phosphate, which was therefore not a desirable manure for them. Now we know that by far the great majority of light soils in this country were on the chalk, and there superphosphate succeeded best. Dr. Voelcker evidently applied, or rather confined, the term light to sandy soils alone. It was satisfactory to know that most soils retained superphosphate to a far greater extent than was ever applied, and the fear of its being washed out, which some imagined, was therefore altogether groundless. It was only when too small a quantity was used that it was likely to do harm. He considered that it was desirable to use bones with superphosphate, not because the latter alone would do any harm, but because more phosphate (although insoluble) could be thus applied for the money, with ammonia in addition, which was very useful in the latter stages of growth; and thus for the same reason bone dust was used with much advantage in making superphosphate, with other materials, still richer in phosphate of lime.

Mr. Blundell said his experience showed that whilst superphosphate answered very well for starting a crop of roots, it was not likely to be productive of successful results on loamy soils such as theirs, which were not chalky, unless they used some other manure in addition to it. He used bones fermented by mixing them with sand or ashes, and also guano. He could grow Mangels and Carrots much better than Swedes.

Mr. Scott contended that the result of numerous experiments was highly favourable to soluble phosphates, as now supplied by manufacturers, and quoted the following passage from a lecture by Mr. Sibson, F.G.S.:—"Is it advisable for the farmer to make the superphosphate he requires for his own use? I should say, except under peculiar circumstances, certainly not, and for the following amongst other reasons: because it is impossible that it can be made so well on the small scale, by persons unaccustomed to the work, as on a large one by skilled hands; or with the simple apparatus the farmer is able to provide, or to extemporise on the spot, as with the machinery and appliances found by experience to economise labour and improve the result. Again, in places where bones are to be had cheap, acid will generally be dear; indeed, the carriage of vitriol in small quantities is so expensive, in consequence of the almost prohibitory rates charged by most of the railway companies for this article, that it can seldom be procured by farmers with advantage."

Mr. Spooner said those who were in favour of bone manure could not consistently condemn superphosphate, which possessed the same properties as bone earth, but supplied it in a more soluble and therefore more effective state. [In reply to the Chairman.]—Taking an equal weight of bone and Sombrero guano, if the former would supply the skeletons of 200 sheep, the latter would be equivalent to 300. He should not have alluded to the commercial aspect of the question at all had he not been told by a gentleman that, in a communication he had lately received, it was stated that a sack of bones weighing less than 1¼ cwt., dissolved by 60 lbs. of vitriol, was equal to 4 cwt. of the very best superphosphate, a statement which was as incorrect as it was unfair and unjust. The former would make about 2¼ cwt. of superphosphate, and would contain somewhat more ammonia, but only one-half the phosphate of lime, and not one-third the soluble phosphate as the 4 cwt. of superphosphate. There was only one fair way of trying such experiments, and that was by applying each manure at the same expense per acre.

Blandford: *Stable Ventilation.*—Mr. Wills, V.S., read a paper on this subject, from which we make the following extracts:—

A few years ago, when a commission was appointed by Parliament to inquire into the subject of ventilating dwellings, in their report they state:—

"We began the work by endeavouring to ascertain, approximately, the amount of fresh air required to keep a sleeping-room healthy. Various attempts have been made at different times to settle this amount scientifically, but nearly every experimenter has arrived at a different estimate of the quantity. These differences in opinion have arisen from not sufficiently considering the various offices which fresh air has to perform in the ventilation of dwellings, and from not looking at the practical rather than the scientific view of the question. One set of experimenters have based their calculations on the quantity of air required to dilute the carbonic acid down to the proportion in which that gas exists in the external atmosphere. The estimates hence are various, and differ to the extent of one, two, or even four times, as to the amount of air required for health—a difference which proves how little is yet known, scientifically, on the subject." They go on to say, "The practical argument as to the amount of fresh air required to ventilate a room is, in our opinion, of far more weight than the mere scientific one. We find, for example, that Nature has provided in the atmosphere unlimited extent and constant means of purification and of movement. The building of dwellings interferes with those natural conditions, by enclosing the air in confined spaces, saturating that air with impurities, and rendering it stagnant. It may be fairly argued, as, indeed, has been proved by experience, that those dwellings are the most healthy in which the natural conditions of the atmosphere are most perfectly preserved."

This being our object, then the first point to be considered is the quantity of air vitiated by a single horse, and how much he will require in a given time to keep him in a healthy condition. To make this clear I must enter a little into estimates, but I will promise to make them as short as possible. An ordinary healthy atmosphere consists of the following constituents: Oxygen, 20.61 per cent.; nitrogen, 77.95 per cent.; carbonic acid, 04 per cent.; watery vapour, 1.40 per cent. Now, the oxygen is the important ingredient which supports life, the nitrogen being only a diluter of the oxygen. The carbonic acid gas is in scarcely appreciable quantity, and that is produced by the process of respiration and combustion on the surface of the earth, by which immense quantities are continually being formed; nevertheless the proportionate quantity scarcely varies; for this very gas, which is exceedingly destructive to animal life, is, as you know, the principal food upon which all the vegetable world live, absorbing this carbonic acid from the air, and decomposing it, retaining its carbon and giving off the oxygen, which is just what animals require. The destructive agency of this gas, viz., carbonic acid, on animal life, is well exemplified in certain places, where large quantities are evolved from the earth, the most striking instance being the celebrated valley of Java, which if any animal enters, it never leaves. If you are not familiar with it, I will read you a short but interesting account of this valley given by an eye-witness:—

"We took with us two dogs and some fowls to try experiments in this poisonous hollow. On arriving at the foot of the mountain we dismounted and scrambled up the side, about a quarter of a mile, holding on by the branches of trees. When within a few yards of the valley we experienced a strong nauseous suffocating smell, but on coming close to its edge, this disagreeable odour left us. The valley appeared to be about half-a-mile in circumference, oval, and the depth from 30 to 35 feet; the bottom quite flat; no vegetation; strewed with some very large (apparently) river stones, and the whole covered with the skeletons of human beings, tigers, pigs, deer, peacocks, and all sorts of birds. We could not perceive any vapour or any opening in the ground, which last appeared to us to be of a hard sandy substance. It was now proposed by one of the party to enter the valley, but at the spot where we were this was difficult, at least for me, as one false step would have brought us to eternity, seeing no assistance could be given. We lighted our cigars, and with the assistance of a bamboo, we went down within 18 feet of the bottom. Here we did not experience any difficulty in breathing, but an offensive nauseous smell annoyed us. We now fastened a dog to the end of a bamboo 18 feet long, and sent him in. We had our watches in our hands, and in 14 seconds he fell on his back, did not move his limbs or look round, but continued to breathe 18 minutes. We then sent in another, or rather he got loose, and walked in to where the other dog was lying. He then stood quite still, and in ten minutes fell on his face, and never afterwards moved his limbs; he continued to breathe seven minutes. We now tried a fowl, which died in a minute and a half. We threw in another, which died before touching the ground. During these experiments we experienced a heavy shower of rain; but we were so interested in the awful sight before us that we did not care for getting wet. On the opposite side, near a large stone, was the skeleton of a human being, who must have perished on his back, with his right hand under his head. From being exposed to the weather the bones were bleached as white as ivory. I was anxious to procure this skeleton, but an attempt to get it would have been madness." Any animal shut up in a close stable affects the purity of the air in those very matters which are injurious to his health, viz.,—He withdraws oxygen by the process of respiration, and thus diminishes its proportionate quantity. He replaces the oxygen by an equivalent of carbonic acid, increasing its proportionate quantity. By the process of exhalation from the lungs and skin he increases the proportion of water in the air. In the moisture exhaled from the body is a quantity of excreted animal matter, disengaged from the system, which, were it retained, would be fatal to health and life. The respired air, therefore, is found to differ very much in composition; it has lost from 4 to 5 per cent. of its oxygen, and has acquired 4 or 5 per cent. of carbonic acid and a quantity of watery vapour. It has been calculated that the horse takes into his lungs at each inspiration 100 cubic inches of air; at the rate of eight respirations per minute he inspires 48,000 cubic inches of air per hour. Now I will not go into details of this kind further than I can help, but at the very least the quantity of carbonic acid evolved in 24 hours may be calculated at 24 cubic feet, containing 45 oz. of solid carbon. It must, however, be remembered that the carbonic acid is not the only injurious product. The exhalations from the skin and excretions, defective drainage, &c., all combine to produce a vitiated atmosphere. The amount of the cutaneous perspiration and the pulmonary transpiration is on an average 15 lb. weight daily, holding in solution a quantity of animal matter which very readily putrifies, and hence the moisture becomes the vehicle for a subtle aërial poison, which, when breathed for some time, poisons the blood and predisposes to disease. Now, having arrived at these data, that a horse passes through his lungs 800 cubic inches of air per minute, that in 24 hours he makes 24 cubic feet of carbonic acid, and that from his lungs and skin he adds about 15 lbs. weight of watery excretions, we will endeavour to adapt them practically. Keeping to my promise not to bore you with uninteresting scientific details, I will merely say that chemistry tells us that at least 1000 cubic feet of air per hour are required by a horse for the mere purposes of diluting the carbonic acid and water given off from the body to the same standard as they exist in the atmosphere itself. But chemistry takes no cognisance of those aërial poisons eliminated from the skin and lungs, and which, in stagnant air, are perfectly cognisable to the senses, even after the air has been diluted to the extent stated. Indeed the object to be served by ventilation is primarily the dilution and removal of those poisonous exhalations; and, if this be secured, the carbonic acid and water will be removed at the same time. Calculating on the experiments in reference to human beings, made by the commissioners, 6000 cubic feet of air should be supplied to each horse per hour. Now, in a stable of that capacity, viz., 6000 feet, or about 53 by 15 by 12 feet, you would place five horses; therefore the ventilation should be so contrived as to change the air five times every hour. I am making my calculations on readily practical grounds. It would be a different thing if you were about to build; I should then recommend twice as much space for each horse as that I have mentioned. Now, having settled that a horse having 1200 cubic feet of stable room requires that the air should be changed five times every hour, the first question that arises is, how can this be done? It is a well-known fact that air, like water, is governed by certain laws, and that its ingress and egress into and from rooms can be regulated by the observance of certain conditions. Respired air, warmed by being taken into the lungs, is specifically lighter, or takes up more space than pure, cold atmospheric air; it therefore ascends towards the ceiling, where it becomes condensed, and subsequently descends and mixes with the air of the whole room, in obedience to the remarkable law of the diffusion of gases, a portion escapes by any opening it can find at the top of doors, windows, &c., but if there is a fire most of it escapes by the chimney. This, by itself, is sufficient ventilation for a large room. Again, fresh air enters by doors, windows, &c. It has been calculated that eight cubic feet of air per minute will pass between each window frame and the sash, but free entrance and exit must be provided for the air; our ventilation must be self-acting in fact. Stables should have plenty of ventilators in the ridge of the roof, and a number of openings in the walls above the horses' heads; the heated air would then escape by the highest openings, and cold air enter by the lower ones, and immediately take the place of that escaping above, thus not blowing down on the horses at all. If this plan were thoroughly carried out I think it would be sufficient; but where, from a loft being over, this plan cannot be adopted, and you could not conveniently carry ventilators through the loft, try two rows of holes in the walls, both above the horses' heads; and if this is not sufficient, holes must be made along the bottom of the walls furthest from the horses. Do not be afraid of the draught; it has been proved that animals in a state of nature require very little more than food and shelter to preserve them in a healthy condition; but go into almost any stable you please, and what do you think of it? I suspect you will find more than shelter there: it probably is so warm and stifling that you can hardly breathe. You look at the ventilators, if there are any, and you will find them stuffed with straw, and every crack or hole in the wall or window effectually closed, for fear the horses should take cold. Well, gentlemen, continue this, and you will continue to have influenza, coughs, ophthalmia, and a variety of other diseases in your stables, and perhaps employ me to cure them; but if you wish never to have a case of the kind, take my advice, and thoroughly ventilate: far better have too much air than too little. As I said before, you must have plenty of pure air at any sacrifice: however inconveniently the ventilators may be placed they are better than none. I would rather have a stable full of cracks and holes, what you call tumbling down, to preserve the health of a horse, than the majority of stables throughout the country. There are times when, from the heat and stillness of the external atmosphere, the ventilation becomes stagnant: in such cases of course you must have adventitious aids, opening all your doors, windows, &c. I hope I have said enough to satisfy you that a horse confined in a stable destroys so rapidly a large proportion of atmospheric air, as to render it necessary that he should have a much larger space than has hitherto been allotted to him: that the system of ventilation must be self-acting, and of sufficient capacity to ensure the necessary supply of pure air; and that windows and doors should only be looked upon as adjuncts to the self-acting system during times of extreme heat and stagnation of the outer atmosphere, and not as the main provisions for ventilation. The evils attendant on the want of sufficient ventilation are only too well known to those whose duty it is to inquire into the causes of disease, but which are little suspected and rarely admitted by stock owners; but I assure you that a large number of the diseases affecting animals can principally be attributed to, or are promoted by, an accumulation and stagnation of the exhalations of the body. It is of little use running over a list of these. Take away the cause, and the effects will cease.

Mr. W. Spooner said that it was extremely necessary that ventilation should be more attended to than it had been. Horses gave off very large quantities of carbonic acid in the process of respiration, which gas, when present in excessive quantity in the air, was very fatal to animal life. Some time ago a striking instance of this occurred on his own premises. He had a tank under-ground, in which the gas liquor of some of the Southampton gas works was collected, and used for the purpose of obtaining ammonia. His men had a quantity of weak sulphuric acid, which they wanted to get rid of; so they emptied it into this tank, and closed it. Shortly after a man went to dip some water from a well about a dozen yards off, and he fell forward on his face. Another went to see what was the matter, and he fell down over him. A third then came up, and feeling a suffocating sensation, ran back, and, seeing some person coming by, pointed to the well, for he could not speak. The men were quickly rescued, otherwise in a few minutes their lives would have been sacrificed. The carbonic acid had been produced by the action of the sulphuric acid on the gas liquor, and, making its way through the earth, filled the well and overflowed it; for, being a very heavy gas, it rolled along the surface of the ground to some distance. He recommended that stables should be ventilated by both low and high openings, and that earth should be placed to the depth of a foot below the horses, instead of paving. It having the property of absorbing immense quantities of ammonia, it was the best natural deodoriser, and would be afterwards very valuable as a manure—nearly as good as his superphosphate, in fact, and would not require to be changed more than once in six months. A great number of diseases, as glanders, farcy, diseases of the eyes, &c., were frequently produced by defective ventilation. During the Peninsular war, some horses in a transport, in consequence of bad weather, were closely confined for some time, the hatches being battened down: when they were landed, all were found to be either glandered or farcied. He was satisfied that many diseases would be entirely prevented by effective ventilation.

Reviews.

Agriculture, Ancient and Modern; a Historical Account of its Principles and Practice. No. 5. By "The Old Norfolk Farmer." J. Virtue.

The present Number continues the history and description of the livestock of the country. The chapters on the breeds of Cattle are concluded, and those on the Sheep are begun.

The following are two extracts:—

1. *On the Selection of Cattle.*—"The purchase and selection of cattle, of whatever breed, and for whatever purpose, has been reduced of late years to what may be called a science. We have already observed that in the early and rude state of agriculture, the eye alone in the purchaser, and size chiefly in the animal, were the means of determining the merits of the subject under consideration; and such is still the case in those countries where agricultural improvement has made little or no progress. A large ox is preferred, however unpromising in other respects, to a small one whose symmetry and well defined excellencies of form indicate a better, quicker, and more profitable result. There is no doubt but that practice, and a keen faculty of discrimination, will enable a purchaser to make a good selection on a *prima facie* view; but no practical man of the modern school will trust to sight alone in the choice of cattle or sheep; he will exercise the sense of feeling as well, and this is far more demonstrative, but at the same time difficult, a requirement than choosing at sight. Most men possess some idea of the 'line of beauty,' whether in their own species, or in the inferior

animals; but the art of ascertaining by a few slighta touches upon certain parts of a bullock or sheep, whether it will lay on fat on the most valuable points, and in the most expeditious manner, can only be acquired by long practice and observation, and cannot be explained or communicated by words from one person to another. 'I have often,' says Culley, 'wished to convey in language that idea or sensation we acquire by touch or feeling of our fingers, which enables us to form a judgment, when we are handling an animal intended to be fattened; but I have as often found myself unequal to fulfil that wish. It is very easy to know where an animal is fattest that is already made fat, because we can evidently feel a substance or quantity of fat upon all those parts that are denominated 'the fattening points;' but the difficulty is to explain how we know or distinguish animals in a lean state, which will make fat, and which will not; or rather which will make fat on such and such parts or points, and not on others; which a person of judgment (in practice) can tell as it were instantaneously. I say in practice because I believe that the best judges out of practice are not able to judge with precision; at least, I am not. We say 'this beast touches nicely upon its hips, ribs,' &c., &c., because we find a mellow pleasant feeling upon those parts; but we do not say soft, because there are some of this same sort of animals which have a soft, loose handle, of which we do not approve, because, though soft and loose, they have not that mellow feel above mentioned. The one will make fat, the other will not.'

"It was observed by the same writer that the breeders of his day made a great mistake in breeding neat cattle, by endeavouring to unite great milkers with quick feeders (or fatteners). 'I am inclined to think,' he says, 'that this cannot be done; for wherever we attempt both we are sure to get neither to perfection. In proportion as we gain one, in the same proportion we lose the other. The more milk the less beef, and the more we pursue beef the less milk we get.' This is perfectly consistent with reason and analogy, and should never be lost sight of by the breeder or grazier. The Short-horned breed may be thought to disprove this, as they are said to excel any other breed in producing a greater quantity of beef, tallow, and milk from a given quantity of food. This, however, may be an error; for it is well known that the Short-horns are large feeders, and that their milk, though much in quantity, is poor in quality. Where they improve in this latter respect they lose their fattening propensity; and if they attain a large size and fatten readily, it is by consuming large quantities of food. In either case, however, they answer respectively the purposes of both the grazier and the dairyman, the object of the first being a quick return for his outlay, and of the second a large meal of milk irrespective of its quality. We close our account of neat cattle with a principle laid down by Culley, with which he also concludes his book:—

"'It would seem as though the same principle which we have all along endeavoured to establish held good through all the different classes of domestic animals which supply us with food, viz., that of all animals, of whatever kind, those which have the smallest, cleanest, finest bones, are in general the best proportioned, and covered with the best and finest grained meat. I believe they are also the hardiest, healthiest, and most inclined to feed, able to bear the most fatigue while living, and worth more per pound when dead.'"

2. *List of Original Breeds of Sheep.*—"The list of 'original' breeds of sheep is almost as numerous as that of counties. The old writers afford very little information on the subject, and we must, therefore, accept the statements of comparatively recent ones for the names of those which have been most prominent amongst graziers and breeders. The following is a list of those which were recognised at the commencement of the present century, and most of which are still admitted at the cattle shows:—

Name or Breed.	Kind of Wool.	Colour.	Horned or not.	Weight of Fleece.	Weight of Quarter.	Killed at Age.
				lbs.	lbs.	Years.
1. Teeswater	Long wool	White face	Horned	9	30	2
2. Lincoln	"	"	"	11	25	2
3. New Leicester	" fine	"	"	8	22	2
4. Cotswold	" "	"	"	9	24	2
5. Romney Marsh	" "	"	"	8	22	2
6. Dartmoor	" "	"	"	9	25	2
7. Exmoor	" coarse	"	"	6	16	2¼
8. Heath	" "	Black face and legs	"	3	15	3½
9. Hereford, Ryeland	Short wool	White face and legs	Not horned	2½	14	3½
10. Dorset	"	White and speckled	Horned	3½	18	2
11. Wilts	"	" "	"	3	20	3
12. Southdown	"	" "	Not horned	2½	18	2
13. Norfolk	"	Black and white	Horned	2	18	3½
14. Herdwick	"	White and speckled	"	2	10	4½
15. Cheviot	"	White face and legs	Not horned	3	16	4½
16. Dun faced	"	Dun face and legs	"	1½	7	4½
17. Shetland	" cottony	Various	"	1¾	8	4½
18. Spanish	" super.	White	Horned	3¼	14	2½
19. Merino Cross	" "	"	"	2¾	16	2

We have to repeat that the numerous illustrations of the work are mere garnishing and ornament—they are not generally instructive.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. Slatter, Streatley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Reading of: Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	Sept.	Inches.	°	°				°	°	°	°	Inches.
Friday	23	30.02	65	60	S.W.	1	1	66	49	78	41	..
Saturday	24	30.13	61	58	W.	..	10	65	56	80	49	..
Sunday	25	30.33	53	51	E.	..	10	65	41	79	33	..
Monday	2	30.38	57	56	S.E.	1	7	67	43	81	36	..
Tuesday	27	30.26	61	53	S.E.	..	..	64	43	74	34	..
Wednesday	28	30.28	49	49	N.E.	1	..	68	41	76	33	..
Thursday	29	30.20	59	55	N.W.	..	..	68	48	82	36	..

Notices to Correspondents.

Grass: *W D, Grantham*, says, "Will the writer who signs himself 'H. R. Flaxlow, York,' in last number of the *Gardeners' Chronicle and Agricultural Gazette*, kindly state the nature of the mixtures applied to his 11 acres of Grass at the rate of 40*s.* per acre? [We do not believe in renovating Grass seeds. Apply 3 cwt. of Peruvian guano now or with the first shower if the land is drained and not liable to flood. That will be the best help to next year's hay crop. Or a good dressing of farm-yard manure.]

Rabbits: *Cor.* If there is anything specially adapted to meet the difficulty you name, a Correspondent to whom we have sent your letter will inform us for you.—*A Subscriber.* If your rabbits are kept in hutches, the troughs should be broad at top, narrow at the bottom, and fastened to the front. They should not be filled; but only sufficient bran or corn put in for the one meal. If the rabbits be at liberty in a pen, the trough should be too heavy for them to overturn, and should have bars over the top to prevent them from getting into it.

Weather in Cambridgeshire, &c. All the corn has been harvested in splendid condition. I do not know of enough corn having been threshed to give much information about the yield, but what Barley has been threshed has generally yielded well; but the quality of it is various, and I think not quite so good as was anticipated. Wheat has not proved so deficient as was expected from the many mis-set ears. The green crops are generally very bad; the Mangels and a few Turnips appear to be improved since the rain, and the late Coleseed and Turnips are now growing, but are not likely to be of much use for feed. Many of the Turnips have so suffered from being eaten by the grub and the dry weather as to appear past recovery. This beautiful weather has caused more feed on the pastures, which if it continue will prevent the roots being eaten quite so early; but I expect sheep and cattle will have to depend very much on artificial food this winter, and be kept at a considerable expense. Large quantities of chaff (principally straw, as there is a short crop of hay) with corn and cake will have to be used; good straw now cut in large quantities, salted, and made to heat, and well trodden (to make it solid), will be found very valuable in the winter. *H. Webb*——Essex: The late heavy rains falling on the very dry and heated ground, have produced a close, steamy temperature, and a wonderfully rapid vegetation—so that Rape, Mangel, Turnips, and Grasses, all promise to be much better than was expected. Still Turnips can hardly be more than half a crop, they have been so infested with lice above, and brown grubs below, the latter cutting in two the main roots, and thus destroying the plants. *J Mechi.*

GREEN'S PATENT LAWN MOWERS have proved to be the best in all cases of Competition.
Leeds, London, and Dublin.

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142 & 143, Cheapside, London, E.C.
Illustrated Prospectus with Testimonials sent free on application.

HORTICULTURAL TOOLS.—Lawn Mowers, Garden Rollers, Garden Engines, Syringes, and Tools of all kinds; Wire Netting, Prize Churns, &c., delivered carriage free.
Price List free.
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Caution to Gardeners.—When you ask for SAYNOR AND COOKE'S WARRANTED PRIZE PRUNING and BUDDING KNIVES, see that you get them. Observe the mark Saynor, also the corporate mark, Ostrich Warranted, without which none are genuine.
S. & C. regret having to caution Gardeners and others, but are compelled to do so, in consequence of an imitation, of common quality, having been sold for the genuine one, and which has caused many complaints to be made to them of Knives which were not of their make, all of which are warranted both by sellers and makers.
S. & C.'s Pruning and Budding Knives are the best and the cheapest in the market.
Paxton Works, Sheffield. Established upwards of 125 years.

Silver Medal and Cup, 1863, awarded for

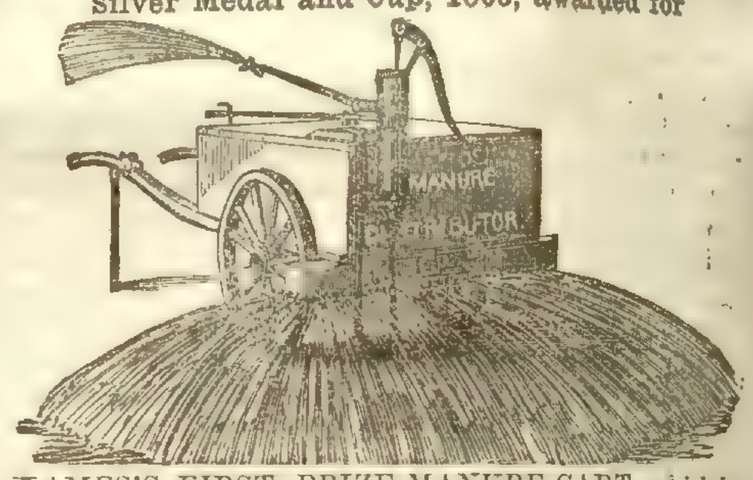

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The last great improvement in Washing Machines is in James's new Patent PRIZE WASHING, WRINGING, and MANGLING MACHINES, awarded several FIRST PRIZES. Will Wash 20 Shirts in 20 Minutes, with much less injury than with the hand. More than 300 Sold.
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Just published, royal 8vo, 66 pp. and Wrapper, Illustrated with 78 Engravings,
COMPLETE ILLUSTRATED CATALOGUE of IRON and WIRE FENCES for PARKS, FARMS, GARDENS, SHEEP-FOLDS, POULTRY COURTS, GAME PRESERVES, &c., post free on receipt of 4 stamps addressed to
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COTTAM'S PRIZE STABLE FITTINGS and HARNESS BRACKETS.

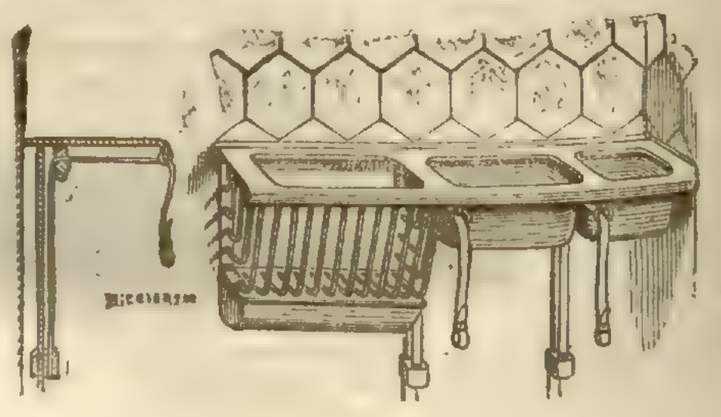

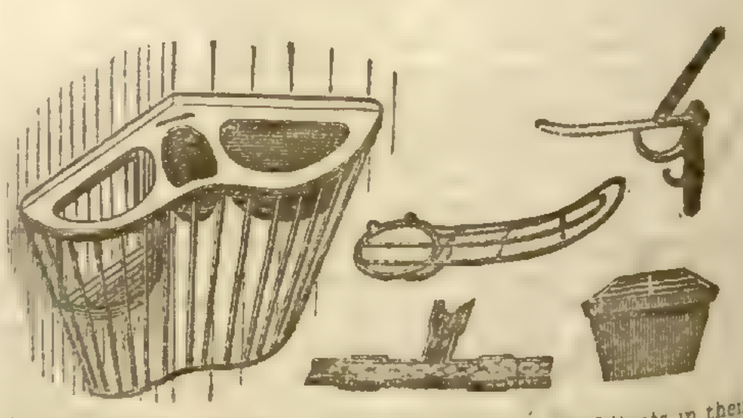

These Fittings, now so generally specified by Architects in their specifications, may be seen at the Manufactory, 2, Winsley Street, Oxford Street, W., where a large supply is always on hand and regular sizes kept in stock, and where full-size Stalls and loose Boxes (variously arranged, with a view to the economy of space) can be examined.
Cottam & Company, Manufacturers and Patentees, hold the Prizes of 1851, 1855 (Paris) and 1862, for these Fittings.
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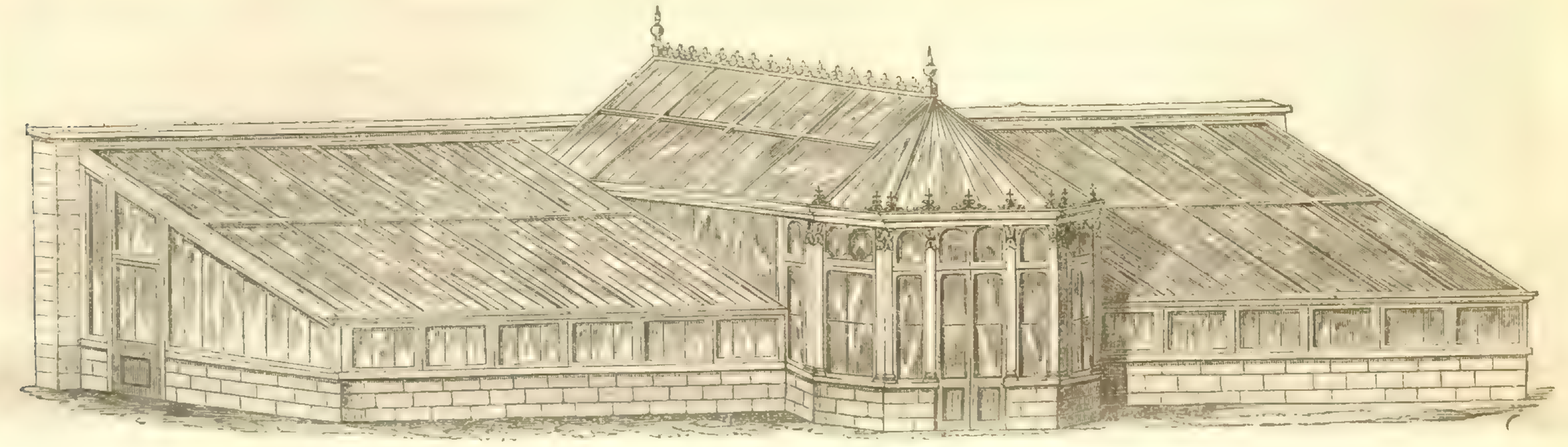

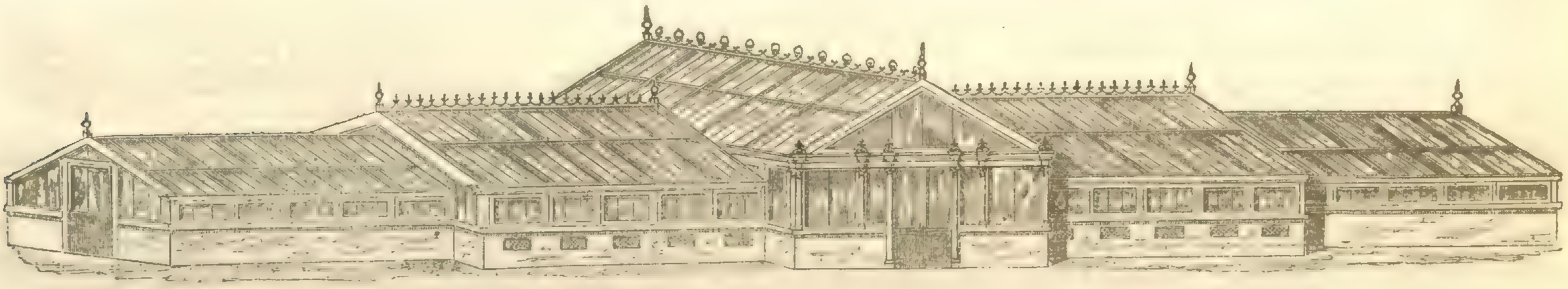

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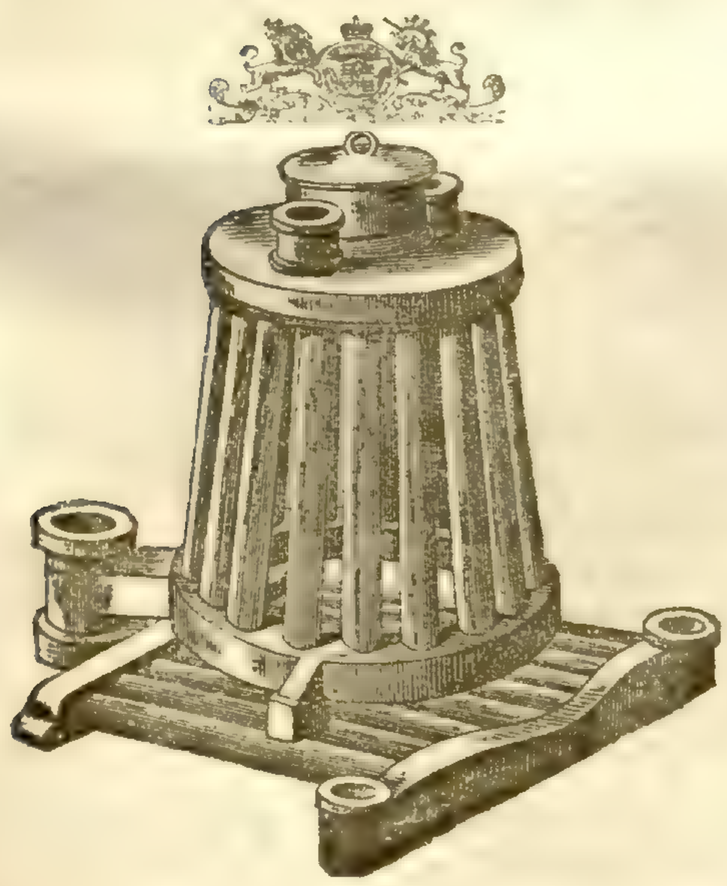

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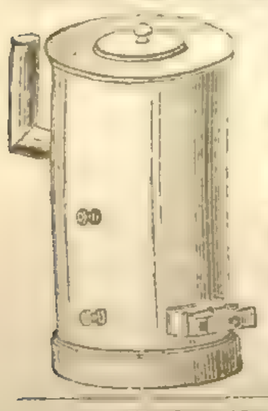

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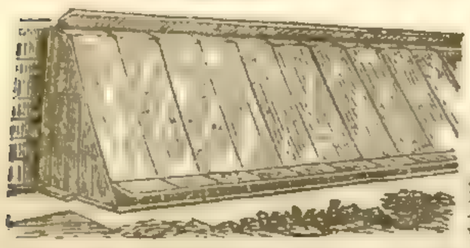

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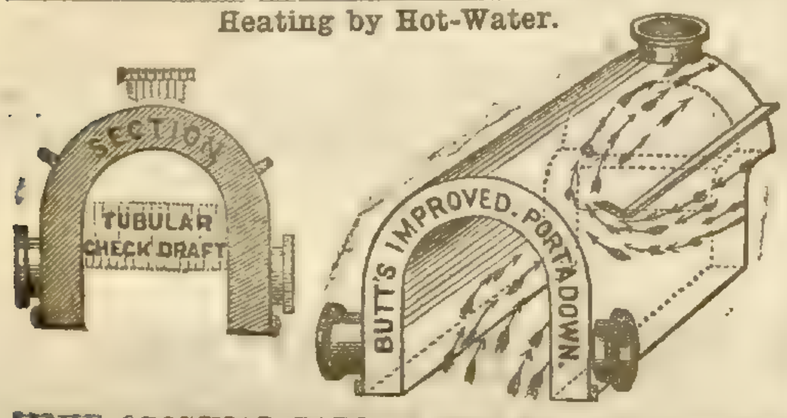

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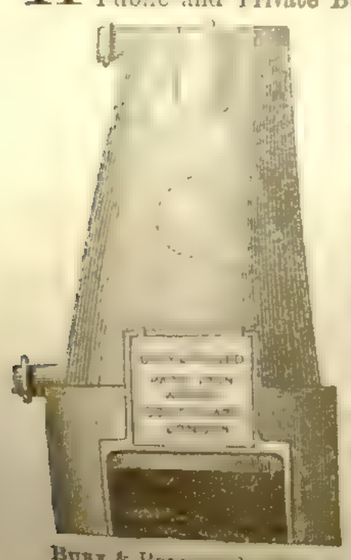

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	16-ounce.	21-ounce.
Best	5½*d.* ..	7¼*d.*
Seconds	3⅜*d.* ..	5*d.*
Thirds	2½*d.* ..	3½*d.*
Fourths	2¼*d.* ..	3¼*d.*

HORTICULTURAL GLASS,

Stock Sizes, 16-ounce. In 100 feet Boxes.

These prices only apply to the sizes stated.

11 by 9	12 by 9	13 by 9	14 by 9	4ths.	3rds.	4ths.	3rds.
12 „ 10	13 „ 10	14 „ 10	15 „ 10	10*s* 9*d*	12*s* 3*d*	12*s* 6*d*	14*s* 0*d*
13 „ 11	14 „ 11	..	..				
14 „ 12	15 „ 12	15 „ 11	16 „ 11				
18 „ 12	19 „ 12	16 „ 12	17 „ 12				
16 „ 13	17 „ 13	20 „ 12	21 „ 14	11*s* 6*d*	13*s* 6*d*	13*s* 6*d*	16*s* 0*d*
19 „ 13	20 „ 13	18 „ 13	..				
16 „ 14	17 „ 14	21 „ 13	..	14 to 15 ozs. to the foot.		16 to 17 ozs.	
19 „ 14	20 „ 14	18 „ 14	..				

FOREIGN SHEET GLASS.

In Cases for cutting up, in Sizes as Manufactured.

	16 oz., 200 ft.	16 oz., 300 ft.	21 oz., 200 ft.
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Best	3 7 0	.. ..	5 14 0
Seconds	2 10 0	.. ..	4 18 0
Thirds	.. ..	2 5 0	2 10 0
Fourths	.. ..	1 15 0	2 0 0

GLASS for ORCHARD HOUSES,

As supplied by us to Mr. Rivers, to the Royal Horticultural Society, and to most of the Nobility, Clergy, and Gentlemen of the United Kingdom.

Each Box contains 100 feet.

		14 to 15 ozs.	16 to 17 ozs.	21 ozs.
20 by 12	Fourths	11*s.* 6*d.*	13*s.* 6*d.*	15*s.* 0*d.*
20 „ 13	Thirds	13*s.* 6*d.*	16*s.* 0*d.*	19*s.* 0*d.*
20 „ 14	Seconds	.. ..	English.	English.
20 „ 15	Best	.. ..	18*s.* 0*d.*	23*s.* 0*d.*

The above prices include the Boxes.

We recommend 3rds quality at 16*s.*, or 21-ounce at 19*s.* (as supplied to Mr. Rivers). Best and Seconds are intended only for pictures or dwelling-houses.

SMALL SHEET SQUARES.

In 100 feet Boxes.

6 by 4 ..	6½ by 4½ ..	7 by 5 .. 7½ by 5½ .. } 11*s.* 6*d.*
8 „ 6 ..	8½ „ 6⅜ ..	9 „ 7 .. 9½ „ 7½ .. }
		10 „ 8 .. 10½ „ 8½ .. 12*s.* 6*d.*

Boxes 2*s.* each, returnable at full price.

All small squares from 6 by 4 to 10½ by 8½ are cut from pieces, consequently there is only one quality.

London Agents for Hartley's Patent Rough Plate.

Perforated Glass for Ventilation.

Glass Shades, Ebony and Gilt Stands, *Gas and Lamp* Glasses, Chimney and Globes, &c.

Glaziers' Diamonds from 10*s.* to 21*s.* each.

GLASS TILES and SLATES in SHEET and ROUGH PLATE. PLATE GLASS, PATENT PLATE, and HARTLEY'S IMPROVED ROUGH PLATE. PAINTS, COLOURS, VARNISHES, &c.

GENUINE WHITE LEAD.	FINE OAK VARNISH.	LINSEED OIL.
ANTI-CORROSION PAINT.	CARRIAGE.	BOILED OIL.
LINSEED OIL PUTTY.	"PATENT" DRYERS.	TURPENTINE.

Lead in Sheets or Cut to Sizes, Lead Pipe, Lift Pumps, Water Closets, and Plumbers' Brass Work of every description.

GRANT'S PORTABLE RAILWAY.

MANURING A FIELD BY GRANT'S PORTABLE RAILWAY.

Which is also adapted for clearing Root Crops off Wet Land, carrying Corn, and all kinds of Field Carting, and will be found to afford an immense saving over all kinds of Barrow work where the runs are long.

MANUFACTURED by the PATENTEE, J. GRANT, LINTON, KENT,
of whom full particulars may be obtained.

N.B. For particulars of the Wheat carrying on the 19th of August, 1864, see Correspondence in the *Gardeners' Chronicle*, &c., between Mr. W. L. Hubble, Steward to H. Bannerman, Esq., and the Editor, August 27, p. 830, September 10, p. 881*a*; and September 24, p. 927*a*.

Cheap Greenhouse Stoves.

DEANE AND CO.'S Patent VENTILATING and SUSPENSION STOVES are simple, cheap, and efficient: have been largely adopted and approved; will burn many hours without attention, and at a small cost for fuel. Prices of Suspension Stoves, 20s., 30s, 38s., and upwards. Ventilating Stoves, 50s., 60s., 70s., 90s.

HOT-WATER APPARATUS for Conservatories, Greenhouses, Hothouses, Forcing Pits, &c., erected and fitted up complete.

DEANE & Co., 46, King William Street, London Bridge, E.C.
Established A.D. 1700.

FOR SALE, a Great Bargain, a Portable, Good, and all but New ROOM, complete, 34 feet by 13 feet high and wide, Iron Roof, the sides Ground Glass with Blue margins. Can be seen at Chelsea. Also a very handsome CONSERVATORY, Circular Roof, which are all E. D. has left, and for which no reasonable offer will be refused.

Address E. DENCH, Pomfret Villa, Penge, S.E.

SMITH, BECK, AND BECK'S GREENHOUSE and HOTBED THERMOMETERS.—**These Instruments are of the very best construction, and at moderate prices.**

31, Cornhill, E.C.

Universal Microscope. Price £5 5s.

SMITH, BECK, AND BECK,
31, Cornhill, E.C.; late 6, Coleman Street.

*** Catalogues sent on receipt of 6 postage stamps.

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the planer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.

F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.

Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, **in blue, red, and buff colours, and capable of forming a variety of designs.**

Also TESSELATED PAVEMENTS of more enriched designs than **the above.**

WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.

To be obtained of F. & G. ROSHER, at their Premises as above.
Orders forwarded by Railway with despatch.

SILVER SAND (Best Quality), of F. & G. ROSHER, at **the addresses above—14s. per Ton, or 1s. 3d. per Bushel. 2s. per ton extra for delivery within three miles, and to any London Railway or Wharf. Quantities of 4 Tons, 1s. per Ton less.**

GARDEN FLINTS for Grotto Work, 12s. and 14s. per Ton.

SHAW'S TIFFANY.
For samples and prices apply to
J. SHAW & Co., 29, Oxford Street, Manchester.

BENJAMIN EDGINGTON,
MARQUEE, TENT, FLAG, and RICK CLOTH MANUFACTURER,
By Special Appointment to Her Majesty.
An Illustrated Catalogue sent free by post.

Be particular to address BENJAMIN EDGINGTON (only),
2, Duke Street, foot of London Bridge, S.E.
No other Establishment.

To Users of Portable Steam Engines.

At the suggestion of the Principal Agricultural Engineers.

TURNER'S PATENT STRAP COMPANY are producing their PATENT STRAPS or BELTS, specially adapted for use with Portable Engines, when Driving Threshing or other Machinery unsheltered. **These Engine Straps are made from** the stout parts of the backs only of the primest hides, and they are **offered with confidence as the best and most economical that can be employed. Price 60 feet long by 5 inches wide, 6l.; 5½ inches wide, 6l. 15s. Other lengths and widths in proportion. Turner's Patent** Leather Driving Straps or Belts are made from hides prepared by a process which preserves and strengthens the natural fibre, instead of destroying it, as is the case with tanning. They have been tested for several years, and have been proved to drive higher velocities and transmit more power than any other kind of driving belt. When once properly adjusted to the pulleys they scarcely ever require taking up. They are cheaper than any other belts, not only in the first cost, but by reason of their greater durability, and they are suitable for all ordinary and out-door purposes, and wet and dry places The Patent Straps can be relied upon in all climates, and are, therefore, particularly deserving of the attention of exporters.

List of Prices:—Widths, 1 in., 2½*d.*; 1½ in., 3½*d.*; 2 in., 5*d.*; 2½ in., 6½*d.*; 3 in., 8*d.*; 3½ in., 10½*d*; 4 in., 1*s.*; 4½ in., 1*s.* 2*d.*; 5 in., 1*s.* 4*d.*; 5½ in., 1*s.* 6*d.*; 6 in., 1*s.* 8*d.*; 7 in., 2*s*; 8 in., 2*s.* 4*d.*; 9 in., 2*s* 8*d.*; 10 in., 3*s*; 11 in., 3*s.* 6*d.*; 12 in., 4*s.* per foot lineal.

Double Straps, double price, and 7½ per cent. extra. Extra Strong Laces, 6*s.* per gross. Block Ropes, much stronger than hemp, 1*s.* 3*d.* per pound.

TURNER'S PATENT STRAP COMPANY.—Manufactory: Armit Works, Greenfield, near Manchester. Warehouse: 13, Hanover Street, Long Acre, London, W.C., where a Stock of the above is kept; and also of Whitehead's Patent Woollen Belts.

Agent: **Mr. H. FERRABEE, 113, Leadenhall Street, London, E.C.**

WARNER'S KOH-I-NOOR LAMPS,
TO BURN THE HYDRO-CARBON OILS.
PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.

They are more easily trimmed and refilled than any other Lamp with similar burner.

There is no danger of chimneys breaking, and the chimney cannot become smoked.

For designs of the above, adapted for the DINING-ROOM, DRAWING-ROOM, HALL, or LIBRARY, see Number 2 of this Journal. A REALLY GOOD LAMP.

The above may be obtained of any Lamp Dealer.

JOHN T. WILLMER,
HORTICULTURAL AGENT, AUCTIONEER, and VALUER,
Springfield Nursery, Sunbury, Middlesex, S.W.

Estate Improver and Landscape Gardener.

JOSEPH NEWTON, 30, Eastbourne Terrace, London, W., Author of "Picturesque Garden Plans," now Laying-out Grounds and Plantations near York, Newcastle, Dublin, and Belfast, offers Advice upon Alterations without charging travelling expense from London.

To Nurserymen and Gentlemen's Gardeners.

TO BE LET, with Immediate Possession, a SMALL NURSERY containing from 7000 to 8000 feet of Glass, within three miles of Covent Garden.

For further particulars apply to Mr. SHERMAN, Seedsman, Newington Butts, near the Elephant and Castle, S.

To Nurserymen.

TO BE LET on LEASE, for any term that may be agreed on, about 50 ACRES of LAND, well adapted for Growing Conifers and American Plants, part of which is at present under Nursery and remainder under Agriculture, upon which is two neat Cottage Residences, six Labourers' Cottages, and all necessary Buildings; a new Span-roof Forcing House for Propagating, and 43 Brick Pits, and all the other necessary Plant for Nursery purposes. The present stock to be taken off at valuation. The property is well situated for Road and Railway, being less than a mile to the new Salisbury Line and South-Western Railway, joining the Turnpike Road, being 6 miles from Christchurch, six from the fashionable watering place Bournemouth, 7 from Poole, and 4 from Ringwood.

For further particulars apply to the owner, Mr. JOHN BAILLIE, Ringwood, Hants.

Epsom.

To NURSERYMEN AND GENTLEMEN'S GARDENERS.

TO BE SOLD, with immediate possession, the LEASE, STOCK, and GLASS of the old-established EPSOM NURSERY, in consequence of the decease of Mr. GEORGE S. DODS, the late Proprietor. The Grounds contain Five Acres of Land, have a large quantity of Glass, which is completely and economically Heated with Hot Water; also a valuable general NURSERY STOCK.

For further particulars apply at the Nursery.

Quick and Forest Trees.

THE ANNUAL SALE of QUICK and FOREST TREES upon the Lands of Mr. S. Robinson, Shaw House, Melbourne, near Derby, will take place about OCTOBER 20.

Further particulars in future Papers.

NEWBOLD & OLIVER, Auctioneers, Derby.

Glasshouses for Sale.

MR. J. C. STEVENS begs to announce that he has now on Sale by Private Contract, a VINERY and PEACH-HOUSE, 100 feet by 22 feet, well heated with 4-inch Hot-water Pipes, and planted with choice Vines and Peach trees, 3 years old. Also 4 SPAN-ROOFED HOUSES, 50 feet by 10½ feet.

38, King Street, Covent Garden, W.C.

Sales by Auction.

Dutch Bulbs and Ghent Camellias.

MR. J. C. STEVENS will SELL by AUCTION at his Great Rooms, 38, King Street, Covent Garden, W.C., on SATURDAY, October 1, at half-past 12 o'Clock precisely, 500 fine Specimen CAMELLIAS, 4 feet high, from a celebrated Ghent grower. **Also a capital Assortment of DUTCH BULBS, comprising** some of the best varieties in cultivation.

On view the Morning of Sale, and Catalogues had.

Important Sale of Japanese Plants.

MR. J. C. STEVENS begs to announce that he has been favoured with instructions to SELL by AUCTION, at his Great Rooms, 38, King Street, Covent Garden, W.C., on TUESDAY and WEDNESDAY, October 11 and 12, at half-past 12 o'Clock **precisely each day WITHOUT RESERVE, in consequence of the agreement between Messrs. Standish and Fortune having terminated, the** last portion of CHOICE and RARE PLANTS from JAPAN, many of them being the imported specimens and the largest in England, including the MALE AUCUBA JAPONICA.

Aucuba japonica vera	Sciadopitys verticillata
,, ,, longifolia	Thea variegata
Thujopsis Standishii	Retinospora pisifera aurea
Asplenium elegantulum	Yedo Vine
A new Oak	Skimmia japonica vera
Forsythia Fortuni	

And many other fine and rare species.

On view the Morning of Sale, and Catalogues had of Mr. J. C. STEVENS, Auctioneer and Valuer, 38, King Street, Covent Garden, London, W.C.

Important Sale of Wellingtonia gigantea at Edmonton.

MR. J. C. STEVENS is instructed to SELL by AUCTION, on the Premises, opposite the Golden Fleece, Edmonton, on THURSDAY and FRIDAY, Oct. 13 and 14, a splendid Stock of Specimen plants of WELLINGTONIA GIGANTEA, warranted from seed, and ranging **from 1 to 3 feet in height**; the plants are all in pots of various **sizes, from 48's to 24's, and are in the** highest state of health; also a large assortment of other choice **hardy CONIFERS. comprising Pinus insignis, Picea Nordmanniana, Araucaria imbricata, Cupressus Lambertiana, Thuja gigantea, &c.,** all in pots and in vigorous health; also about 300 choice named CAMELLIAS, well-grown plants, and full of flower buds, from 3 to 5 feet in height; and a choice selection of INDIAN AZALEAS, of the best varieties, and well set for flower.

On view the Morning of Sale, and Catalogues had of Mr. J. C. STEVENS, Horticultural Auctioneer and Valuer, 38, King Street, Covent Garden London, W.C.

Bagshot, Surrey.—Final Clearance Sale.

To NOBLEMEN, GENTLEMEN, NURSERYMEN, AND OTHERS ENGAGED IN PLANTING.

MR. J. C. STEVENS (HORTICULTURAL AUCTIONEER and VALUER), 38, King Street, Covent Garden, W.C., begs to announce that he has been favoured with instructions from Mr. STANDISH, in consequence of removal to Ascot, to SELL by AUCTION on the Premises, Bagshot, Surrey, 25 miles from the Surrey dale Station on the London and South Western Railway on TUESDAY, October 25, and two following days, at half-past 11 o'clock precisely, each day, without the least reserve, a VALUABLE COLLECTION of HARDY CONIFEROUS PLANTS, Specimens and others, American Plants in variety, Fruit Trees Trained and Standard; choice Collection of Shrubs and Trees. Roses in Pots, &c., all of which are in the finest possible health, and for Sale without the least reserve.

On view the day prior and Mornings of Sale. Catalogues had at Mr. STANDISH's Nurseries, Bagshot and Ascot, and of Mr. J. C. STEVENS, at the Auction Rooms, 38, King Street, Covent Garden, W.C.

Tulips.

MR. J. WILLMER will SELL by AUCTION, at the City Auction Rooms, Gracechurch Street, on WEDNESDAY, October 12, at 12 o'Clock, a choice collection of TULIPS, the property of Henry Goldham, Esq., of Mitcham.

On view the morning of Sale, and Catalogues had at the Rooms, or by forwarding a postage stamp to the Auctioneer, Springfield Nursery, Sunbury, S.W.

To Gentlemen, Nurserymen, Florists, and Others.

MESSRS. PROTHEROE AND MORRIS will SELL by AUCTION at the City Auction Rooms, 38 and 39, Gracechurch Street, City, E.C., on THURSDAY, October 13, at 12 o'Clock, a first-class collection of DUTCH BULBS, consisting of the finest Double and Single Hyacinths, Narcissus, Tulips, Crocus, Snowdrops, &c.; also a fine assortment of 300 handsome STANDARD, HALF-STANDARD, and DWARF ROSES, comprising the choicest Hybrids, Perpetuals, Bourbons, Chinas, Noisettes, &c.: selected AMERICAN PLANTS, including Ghent and other Azaleas, Hybrid Rhododendrons, Kalmias, Andromedas, beautifully furnished with bloom buds, &c.

On view the Morning of Sale. Catalogues may be had at the Auction Rooms as above: and of the Auctioneers and Valuers, American Nurseries, Leytonstone, N.E.

Snaresbrook.

SALE OF VERY HANDSOME SPECIMEN PLANTS, FRUIT TREES IN POTS, &c.

MESSRS. PROTHEROE AND MORRIS are instructed by a Gentleman who is leaving the neighbourhood, to SELL by AUCTION on the Premises, Woodford Road, near the Eagle, and within five minutes walk of the Snaresbrook Railway Station, on SATURDAY, October 15 (unless previously disposed of privately, of which notice will be given), the whole of the Valuable Collection of GREENHOUSE and STOVE PLANTS, including some handsomely-trained specimens of Azalea indica and fine double Camellias, abundantly furnished with bloom buds; Orange Trees, Ericas, Epacris, Cytisus, Myrtles, Acacias, Veronicas, Cactus, Pimelia, Ardisia crenulata, Eriostemon Difwilli, Pieroma elegans, Epiphyllum, Chorozema, Pelargoniums, Scarlet and other Geraniums, Roses, Lapageria rosea (fine specimen), Asclepias, Passiflora Bonapartea (fine plant), Swainsonia, Francisca, Begonias, Coleus, Euphorbia, Cissus, Ferns, Stephanotis floribunda (fine specimen), Cypripedium venustum, Gloxinias, Vines and Figs in Pots, &c.; also a quantity of healthy and handsome specimens of Fruit Trees, well established in Tubs; choice Rhododendrons, Azaleas, Garden Implements, and other effects.

May be viewed three days prior to the Sale. Catalogues may be had at the Eagle, Snaresbrook; at the Swan, Stratford; the Castle, Woodford; at the principal Seed Shops in London; and of the Auctioneers and Valuers, American Nurseries, Leytonstone, Essex.

Strawberry Hill Nursery, Tunbridge Wells.

HIGHLY IMPORTANT SALE OF ORNAMENTAL TREES AND SHRUBS.

MESSRS. PROTHEROE AND MORRIS have been favoured with instructions from Mr. Edwin Hollamby, to SELL by AUCTION, at the Strawberry Hill Nursery, Tunbridge Wells, the **middle of THIS MONTH, (of which due Notice will be given)** in consequence of the Lease of the above Nursery being nearly expired, and the Land required for building purposes, the valuable NURSERY STOCK, comprising fine specimen Cedrus Deodara, Cedars of Lebanon, Red Cedars, Arbor-vitæs, Araucaria imbricata, Pinus insignis, Abies Pinsapo, Wellingtonia gigantea, Thuja aurea, **Thujopsis borealis, Cupressus Lawsoniana, Thuja gigantea, Abies canadensis, Pinus excelsa, from 4 to 15 feet in height; having been** constantly transplanted, they are in a fine state for removal. Also some thousands of Rhododendrons, bushy and well set with flower-buds, Laurustinus, Arbutus, Green Hollies, Ligustrum ovalifolium, Specimen Portugal Laurels. Also many handsome Evergreens and Deciduous Shrubs of various sizes.

On view the week prior and Morning of Sale. Catalogues to be **had by enclosing two postage stamps to Mr. E. HOLLAMBY, Parade,** Tunbridge Wells; the Nursery, Groombridge, Kent; or of the Auctioneers and Valuers, American Nurseries, Leytonstone, Essex.

Romford.

To GENTLEMEN, NURSERYMEN, AND OTHERS ENGAGED IN PLANTING.

MESSRS. PROTHEROE AND MORRIS are directed **by Mr. Thompson to SELL by AUCTION on the Premises,** Mercury Gardens, Romford, Essex, on **FRIDAY, October 21, at** 12 for 1 o'Clock precisely, without reserve, the Lease having expired, the whole of the valuable NURSERY STOCK, including a large quantity of Common and Portugal Laurels, Aucubas, Arborvitæs, Box, Yews, Firs, Red Cedars, Euonymus, Laurustinus, Hollies, Bays, Privet, Arbutus, Phillyreas, &c.; about 2000 Gooseberries and Currants, Standard Apples, Plums and Walnuts, Raspberries, &c.; Weeping and Mountain Ash, Willows, Thorns, Limes, Chesnuts, Standard and Dwarf Roses, a quantity of Ivies, Clematis, Pyracantha and other Climbers in Pots, about 3000 Sea Kale and Asparagus Plants, 500 yards of Box Edging, &c.; also the Greenhouse Plants, comprising fine Double Camellias, Geraniums, Pelargoniums, Genistas, Lilium lancifolium, &c.; together with two neat of Seed **Drawers, a Weighing Machine, two Scales and Weights, set of Measures, 20 loads of capital old rotten Dung, Garden Tools, Ladders** and Sundry Effects.

May be viewed one week prior to the Sale. Catalogues may be had on the Premises; of the principal Seedsmen in London; and of the **Auctioneers and Valuers, American Nurseries, Leytonstone, Essex.**

Woking.

PRELIMINARY NOTICE OF AN UNUSUAL EXTENSIVE SALE OF NURSERY STOCK AND OTHER EFFECTS, WITH THE VALUABLE LEASES.

To NOBLEMEN, GENTLEMEN, NURSERYMEN, PUBLIC COMPANIES, AND OTHERS ENGAGED IN PLANTING.

MESSRS. PROTHEROE AND MORRIS have received instructions from the Trustees of Mr. Robert Donald, to offer for unreserved SALE by AUCTION, on the Premises, Goldworth Nursery, Woking, Surrey, about one mile from the Woking Railway Station, on the South-Western line, on MONDAY, October 24, and following days, at 11 o'Clock each day, if not previously disposed of privately, the LEASES and the whole of the valuable NURSERY STOCK extending over 153 Acres, and including millions of Plants, consisting of Evergreens, Coniferæ, and Deciduous Shrubs, Ornamental Forest and Fruit Trees, Fruit Stocks and Seedlings, viz., 40,000 Hollies (Green), 15,000 Variegated Hollies, 150,000 Common Laurels, 10,000 Portugal Laurels, 5000 choice worked Rhododendrons **of the leading kinds, 3000 Rhododendron Ponticum,** 1000 Aucuba japonica, 50,000 Spruce Firs, 2000 Arbutus, 1000 Irish Yews, 5000 choice Taxus, 5000 Common Yews, 2000 Cupressus Lawsoniana, 1½ to 3 feet; 20,000 Retinospora ericoides, 3 to 18 inches; and Retinospora variegata, 1000 Thuja americana, 5000 do. Wareana, 4000 Wellingtonia gigantea, 1000 Juniperus sorts, 5000 Plants australian, 1 to 3 feet; 2000 Silver Firs, 500 Thuja gigantea, 500 Picea Nordmanniana, 100 do. nobilis, 700 Abies Pinsapo, 500 do. Menziesii, 50 do. lasiocarpa, **fine from seed; 200 Abies Douglasii, 5 to 6 feet; 800 Thujopsis borealis, 2 feet; 300 Cedrus Libani, 2 to 6 feet; 500 Cedrus Deodara,** 150 Pinus Lambertiana, 3 feet; 300 Cephalotaxus sorts, Pinus excelsa, Araucaria imbricata, 800 Tree Box, 1000 hardy Azaleas, 1000 Lilacs, 1000 Spiræas, 500 Weigelas, 500 Guelder Roses, 500 Syringas, 500 Red Dogwood, 500 Pyrus japonica, 500 Cytisus, 500 Forsythia, 500 Deutzia, 500 Ribes, 10,000 fine Standard and Dwarf Roses, 6000 Roses in bud worked on Manetti; many thousands of Climbers, viz., 5000 Ivies, 600 Lonicera aurea reticulata, Clematis, Bignonias, Passiflora, Honeysuckles, Jasmines, Virginian Creepers, &c.; 4000 Hardy Heaths, 60 Lights of Coniferæ and other cuttings (struck), some Japanese Plants, 30,000 Spanish Chestnuts, 20,000 Hornbeam, 3 to 5 feet; 10,000 Willows, 3000 Poplars, 2000 Limes, Planes, Crataegus, Weeping Ash, Birch, and 1½ acre of 1-year Seedling Quick, &c. There is a splendid collection of Specimen Shrubs and Trees in borders adapted for effective purposes: 1,000 full headed clean grown Standard Cherries, 20,000 Standard Apples, 10,000 Maiden Pears, 5000 Maiden Apples, 6000 Maiden and Trained Peaches, Nectarines, and Apricots: about 5000 Dwarf and Standard Plums, 10,000 Gooseberries and Currants, 1000 Filberts, 100,000 **Crab Stocks,** 100,000 Mussel, 100,000 Brussel, Brompton, Quince, &c., with 20,000 Pear **Stocks,** 500 vigorous Grape Vines from eyes, Figs, Medlars, Box Edgings, &c., together with Glass Erections, &c

Five strong Cart Horses, useful Bay Cob, ditto Pony, 2 Heifers, **2 Waggons, 4 Carts, Ploughs, Harrows, Rollers, Drags,** sets of Cart and Gig Harness, Saddles, 50 Sacks Barley, 2 Stacks Prime Meadow Hay, 2 do. Straw, 1 do. Oats, Wheelbarrows, Hay Ladders, Garden Tools, 500 Cast Garden Pots, and numerous other effects.

May be viewed one week prior to the Sale. Catalogues may be had (1s. each) returnable to purchasers, when [illegible] **when ready on the Premises;** Percy's Albion Hotel, Woking; of the **principal Seedsmen in London;** and of the Auctioneers and Valuers, **American Nurseries, Leytonstone, Essex.**

IMPORTANT SALE of LILIUM AURATUM.

MANY OF THE PLANTS IN FULL BLOOM, AND ALL WILL BLOOM MAGNIFICENTLY NEXT SUMMER.

MR. J. C. STEVENS

Has the pleasure to announce that he has been favoured with instructions from Mr. Wm. Catleugh, Florist, Chelsea, to SELL by AUCTION, at his Great Rooms, 38, King Street, Covent Garden, W.C., on WEDNESDAY, October 5, at half past 12 o'Clock precisely,

A LARGE QUANTITY OF LILIUM AURATUM.

Many of the Plants are in FULL BLOOM, and he has the authority of Mr. Fortune, who has examined them, to state that every Plant in the Sale is the true L. auratum. The Public will now have an opportunity of acquiring this magnificent Lily at a moderate price.

On view the Morning of Sale, and Catalogues had.

NEW TARIFF OF GLASS AND HORTICULTURAL GOODS.

THOMAS MILLINGTON,

GLASS AND COLOUR MERCHANT,

87, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

REDUCED TARIFF FOR SHEET GLASS AND HORTICULTURAL GOODS.

THE AGRICULTURAL HALL, ISLINGTON, CONTAINING AN ACRE OF GLASS, WAS SUPPLIED BY ME.

Mr. RIVERS and the leading men in the Horticultural profession, as well as the Nobility, Gentry, and Merchants, have favoured me with Orders for Home use and for Exportation

SHEET GLASS.

In Cases for Cutting up, averaging from 6 to 9 feet super.

AVERAGE THICKNESS, 15 TO 16 oz.

4ths quality	..	..	per 300 feet case	32s.	6d.	or about	1½d.	per foot.
3ds ,,	..	..	,,	41	0	,,	1¾	,,
2ds ,,	..	..	,,	60	0	,,	2½	,,
Best ,,	..	..	,,	92	0	,,	3¾	,,

AVERAGE THICKNESS, 21 oz.

4ths quality	..	..	per 200 feet case	33s.	6d.	or about	2d.	per foot.
3ds ,,	..	..	,,	42	0	,,	2¼	,,
2ds ,,	..	..	,,	63	0	,,	3¾	,,
Best ,,	..	..	,,	89	0	,,	5½	,,

AVERAGE THICKNESS, 26 oz.

4ths quality	..	..	per 200 feet case	44s.	6d.	or about	2¾d.	per foot.
3ds ,,	..	..	,,	56	0	,,	3½	,,
2ds ,,	..	..	,,	84	0	,,	5	,,
Best ,,	..	..	,,	116	0	,,	7	,,

EXTRA WHITE or CRYSTAL SHEET GLASS, very superior for Pictures and best Glazing.

SHEET SQUARES, Cut to Order.

AVERAGE THICKNESS, 15 to 16 oz.

	Under 1 foot super.	Under 2 feet super.	Under 3 feet super.	Under 4 feet super.	Under 5 feet super.	Under 6 feet super.
4ths quality	1½d.	1¾d.	2 d.	2¼d.	2½d.	2¾d.
3ds ,,	1¾	2	2¼	2¾	3	3¼
2ds ,,	2	2½	2¾	3	3½	4
Best ,,	2½	3	3½	4	4½	5

AVERAGE THICKNESS, 21 oz.

4ths quality	2¼d.	2¾d.	3 d.	3¼d.	3½d.	3¾d.
3ds ,,	2½	3	3¼	3¾	4	4¼
2ds ,,	3	3½	3¾	4¼	4½	4¾
Best ,,	4	4½	5	5½	6	7

AVERAGE THICKNESS, 26 oz.

4ths quality	3d.	3½d.	3¾d.	4 d.	4¼d.	4¾d.
3ds ,,	3¾	4	4¼	4¾	5	5¼
2ds ,,	4¼	5	5½	5¾	6	6½
Best ,,	5¼	6½	7	7½	8	8½

15 oz. Squares usually kept in Stock, &c.

32 oz., 36 oz., and 42 oz. are also supplied in various quantities.

RUBY, GREEN, BLUE, YELLOW, COLOURED, ENAMELLED, GROUND, and FLUTED GLASS.

15 oz. Squares usually kept in Stock, packed in 100 ft. and 100 ft. Boxes.

Stock Squares.				Per 100 feet.			
				4ths.	3rds.	2nds.	Best.
6 by 4 / 6½ by 4½	7 by 5 / 7½ by 5½	8 by 6 / 8½ by 6½	9 by 7 / 9½ by 7½	9s. 6d.	10s. 9d.	12s. 6d.	14s. 8d.
10 by 8 / 10½ by 8½ / 11 by 9 / 11½ by 9½	12 by 9 / 12½ by 9½	12½ by 10½ / 13 by 10 / 13½ by 10½ / 14 by 10	14½ by 10½ / 15 by 10 / 13 by 11 / 14 by 11	10s. 6d.	12s. 0d.	14s. 8d.	17s. 3d.
15½ by 10½	16 by 10	14½ by 11½	15 by 11	11s. 6d.	13s. 6d.	16s. 0d.	18s. 0d.

Stock Squares.				Per 100 feet.			
				4ths.	3rds.	2nds.	Best.
15½ by 11½ / 16 by 10 / 14½ by 11½ / 15 by 11	14 by 12 / 14½ by 12½ / 15 by 12 / 15½ by 12½ / 16 by 12 / 16½ by 12½ / 17 by 12	17 by 13 / 18 by 13 / 23 by 13 / 18 by 14 / 22 by 14 / 24 by 14 / 22 by 15	22 by 16 / 24 by 16 / 20 by 17 / 22 by 17 / 24 by 17 / 20 by 18 / 22 by 18 / 24 by 18	11s. 6d.	13s. 6d.	16s.	18s.
16 by 11 / 21 by 11 / 13 by 12 / 13½ by 12½	18 by 12 / 22 by 12	24 by 15					

ORCHARD HOUSE SIZES,

As recommended by and supplied to Mr. Rivers, and the leading Horticulturists of the day.

AVERAGE THICKNESS, 15 TO 16 oz.

		4ths.	3rds.	2nds.	Best.
16½ Inches by 12½ Inches. / 20 ,, 12 ,, / 20 ,, 13 ,, / 20 ,, 14 ,, / 20 ,, 15 ,, / 20 ,, 16 ,, / 20 ,, 17 ,,	Per 100 feet ..	11s. 6d.	13s. 6d.	16s.	18s.

AVERAGE THICKNESS, 21 oz.

		4ths.	3rds.	2nds.	Best.
20 Inches by 12 Inches. / 20 ,, 13 ,, / 20 ,, 14 ,, / 20 ,, 15 ,, / 20 ,, 16 ,, / 20 ,, 17 ,,	.. .. ..	11s. 6d.	18s. 6d.	24s.	27s. 6d.

The above prices are only for the sizes stated, but if a quantity of any other size is required, they can be supplied at about 5 per cent. additional, provided time is allowed to manufacture them.

I have also a GREEN TINTED GLASS, which I can strongly recommend. In Summer it gives a cool appearance and in Winter a warm one.

PROPAGATING GLASSES.

3 inches diam.	0s.	4d.	each.	
4 ,, ..	0	5	,,	
5 ,, ..	0	6	,,	
6 ,, ..	0	7	,,	
8 ,, ..	0	10½	,,	
10 ,, ..	1	2	,,	
12 ,, ..	1	6	,,	
14 ,, ..	2	3	,,	
16 ,, ..	3	0	,,	
18 ,, ..	4	6	,,	
20 ,, ..	6	0	,,	

HAND GLASSES.

12 inches diam.	5s.	6d.	each.	
14 ,, ..	6	6	,,	
16 ,, ..	7	6	,,	
18 ,, ..	8	6	,,	
20 ,, ..	9	6	,,	
22 ,, ..	10	6	,,	
24 ,, ..	11	6	,,	

If removable tops, 1s. extra.

Painted and Glazed with Sheet Glass.

PRESERVE JARS.

In. diam.	Without Lids.		With Lids.		
3 ..	0s.	4d.	0	6	each.
4 ..	0	5½	0	8	,,
5 ..	0	7	0	10	,,
6 ..	0	9	1	1	,,
7 ..	0	10½	1	2	,,
8 ..	1	2	1	6	,,
9 ..	1	6	2	0	,,
10 ..	1	10	2	4	,,

These will be found preferable to any other kind of Jar.

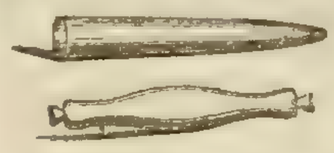

CUCUMBER TUBES.

Ins. long.			each.
12 ..	0s.	10d.	
13 ..	0	11	
14 ..	1	0	
15 ..	1	1	
16 ..	1	2	
17 ..	1	3	
18 ..	1	4	
19 ..	1	5	
20 ..	1	6	
22 ..	1	7	
24 ..	1	9	

ROLLING PINS.

each	
1s.	3d.
1	4
1	6
1	8
1	9
1	10
2	0
2	2
2	3
2	4
2	8

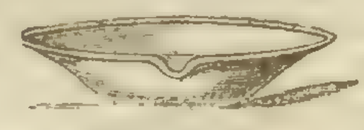

MILK PANS.

6 inches diam.	0s.	5d.	each.
8 ,,	0	8	,,
10 ,,	0	10½	,,
12 ,,	1	1	,,
14 ,,	1	6	,,
16 ,,	2	0	,,
18 ,,	2	5	,,
20 ,,	2	10	,,
22 ,,	3	4	,,
24 ,,	4	0	,,

Intermediate sizes in proportion.

FISH GLOBES.

In. diam.		Qts.	each
8	¾ filled,	3..	1s. 3d.
9	,,	4..	2s.
10	,,	6..	2s. 6d
11	,,	8..	3s.
12	,,	9..	3s. 9d
13, 14, 15, 16	At same average according to weight.		7d. per lb.

If on feet, 9d. per lb.

GLASS TILES, in SHEET and ROUGH PLATE. PLATE GLASS, PATENT PLATE, and HARTLEY'S IMPROVED ROUGH PLATE.

PAINTS, COLOURS, VARNISHES, &c.

GENUINE WHITE LEAD, 30s. per Cwt.
SECONDS ditto, 28s. per Cwt.
LINSEED OIL PUTTY, 9s. per Cwt.
PINE OAK VARNISH, 10s. to 12s. per Gallon.
,, CARRIAGE ditto, 12s to 14s. per Gallon.
,, CRYSTAL or PAPER, 10s. to 12s. per Gallon.

WHITE ZINC PAINT, 34s. per Cwt.
One hundred weight of pure Zinc Paint, with 3 gallons of Linseed Oil, will cover as much as one hundred weight and a half of White Lead and 6 gallons of Linseed Oil.
Special Dryers for this paint.

GROUND PATENT DRYERS, 3d. to 4½d. per lb.
,, OXFORD OCHRE, 3d. to 4½d. per lb.
,, RAW UMBER, 4½d. to 6d. per lb.
,, BURNT Ditto, 6d. to 9d.
GREEN PAINT, all shades, 28s. to 60s. per cwt.
BLACK PAINT, 24s. to 36s. per cwt.

STUCCO PAINT, 24s. per cwt.
This paint adheres firmly to the walls, resists the weather, and is free from the glossy appearance of oil paint, resembling a stone surface, and can be made any required shade. It is mixed with rain or pure river water.

LINSEED OIL, 3s. 9d. per gallon
BOILED OIL, 4s. 3d. per gallon.
TURPENTINE, 7s. per gallon.
MINERAL Ditto, 3s. 6d. per gallon.
PREPARED OIL for ANTICORROSION, 4s. 6d. p. gal.
BRUSHES for Ditto.

IMPROVED ANTICORROSION PAINT. 28s. to 34s. p. cwt.
Anticorrosion Paint is extensively used for all kinds of work in exposed situations, in Brick, Stone, Compo, Iron, Iron Bridges, Conservatories, Greenhouses, &c., and is easily laid on by any ordinary workman.

MILLED LEAD in Sheet and Pipe of all Sizes. OLD LEAD bought or taken in exchange. LIFT PUMPS, WATER CLOSETS, & PLUMBER'S BRASS WORK of all kinds.

NETT CASH.

Editorial Communications should be addressed to "The Editor;" Advertisements and Business Letters to "The Publisher," at the Office, 41, Wellington Street, Covent Garden, London, W.C.
Printed by WILLIAM BRADBURY, of 13, Upper Woburn Place, in the Parish of St. Pancras, in the Co. of Middlesex, and FREDERICK MULLETT EVANS, of No. 11, Bouverie Street, in the Precinct of Whitefriars, City of London, Printers, at their Office, Lombard St., Precinct of Whitefriars, City of London, and Published by them at the Office, No. 41, Wellington Street, Parish of St. Paul's, Covent Garden, in the said Co.—SATURDAY, October 1, 1864.

THE GARDENERS' CHRONICLE
AND
AGRICULTURAL GAZETTE.

A Newspaper of Rural Economy and General News.—The Horticultural Part Edited by Professor Lindley.

No. 41.—1864.] SATURDAY, OCTOBER 8. {Price Fivepence. Stamped Edition, 6d.

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ROYAL HORTICULTURAL SOCIETY.
FLORAL COMMITTEE.
A Meeting of this Committee will take place on TUESDAY, October 11, at 12 o'Clock, at South Kensington.
Thomas Moore, Secretary to the Committee.

Vines, extra strong, from Eyes.
WM. CUTBUSH and SON have a large stock of the above for fruiting in pots or planting out. An inspection is solicited. Prices on application.
Highgate Nurseries, London, N.

VINES, VINES.—A fine stock of Healthy Vines now offered for Sale by
James Crawford, High Beech, Essex, N.E.

Grape Vines.
MRS. G. S. DODS begs to announce that she has a large and fine stock of VINES ready for Planting Out or Fruiting in Pots. BULB LIST is now ready on application.
Epsom Nursery, Epsom, Surrey.

Vines.
B. S. WILLIAMS begs to announce that he has a large and fine stock of VINES of various sizes for planting out or fruiting in pots.
Paradise and Victoria Nurseries, Holloway, London, N.

Pines.
B. S. WILLIAMS has a fine and healthy stock, including CHARLOTTE ROTHSCHILD, HURST HOUSE SEEDLING, SMOOTH CAYENNE, BLACK JAMAICA, &c. Prices on application.
Paradise and Victoria Nurseries, Holloway, London, N.

Choice Succession Pines.
TO BE DISPOSED OF, several Dozen vigorous PLANTS, comprising QUEEN, &c.; also some PINE APPLES. For full particulars apply, on Oct. 13, to Mr. Rorr, North End, Hampstead, N.W.

THE TRUE BLACK ALICANTE, a magnificent Late GRAPE.—The above variety may be had genuine from J. Meredith, Vineyard, Garston, near Liverpool, who devotes nearly the whole of his Establishment to Vine Growing.

NEW STRAWBERRY, SIR JOSEPH PAXTON.—The above approved variety obtained three First-class Certificates this season. Strong Plants, now ready, 21s. per 100.
Charles Turner, The Royal Nurseries, Slough.

The Kimberley Strawberry.
CHARLES KIMBERLEY can supply the above fine Strawberry, in strong plants that will fruit well next season, at 10s. per 100.
London Agents: Messrs. Hurst & Son, 6, Leadenhall Street.
Stoke Nursery, near Coventry.

STRAWBERRIES.—British Queen, Black Prince, Eleanor, Elton Pine, Carolina Superba, Oscar, Prince of Wales, Sir C. Napier, Surprise, Victoria, Wizard of the North, Sir Harry, and Wonderful. Trade price 2s. per 100.
Geo. Cornwell & Co., Seedsmen, &c., Barnet, Herts, &c.

W. H. CARTER, Union Nursery, St. John's Hill, New Wandsworth, Surrey, S.W., begs to offer strong well-rooted STRAWBERRY PLANTS, Sir Charles Napier, at 2s. 6d. per 100, or £1 per thousand.
Also good strong SEAKALE, from 7s. 6d. to 10s. 6d. per hundred.
ROSE DE MEUX and PROVENCE ROSE, 4s. p. doz., or 30s. p. 100.
Strong 3-year old RED CURRANT, clean stem, 4s. per dozen, or 30s. per hundred.

ORCHARD-HOUSE TREES, Fruiting in Pots—PEACHES, NECTARINES, APRICOTS, CHERRIES, PLUMS, PEARS, APPLES, VINES, and FIGS.
Richard Smith, Nurseryman and Seed Merchant, Worcester.

Orchard Houses.
MESSRS. RIVERS and SON invite all those interested in ORCHARD HOUSE CULTURE to Inspect their numerous houses, now full of bearing Trees.
Nurseries, Sawbridgeworth, near the Harlow Station, Great Eastern Railway.

NEW PLANTS of 1864.—CATALOGUE of above at greatly reduced prices for one Stamp.
Wm. Dillistone, Munro Nursery, Sible Hedingham, Essex.

West Riding Nursery and Seed Company.
LILIUM AURATUM.—Several Plants of this fine importation have Bloomed in this Nursery, and fully sustain its high character. Price per bulb or dozen on application to
Wm. Barratt, St. John's, Wakefield.

J. IVERY and SON beg to announce that their DESCRIPTIVE PRICED CATALOGUES of AZALEA INDICA, HARDY BRITISH FERNS, ROSES, CONIFERÆ, GRAPE VINES, and SEEDS, may be had on application at their Dorking Nursery.

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ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.
*** Part II. (Exotic Ferns) will be issued as early as possible.
Foot's Cray Nursery, S.E.

Hyacinths, Tulips, Crocus, Narcissus, &c.
BARR and SUGDEN,
12, King Street, Covent Garden, W.C.

Imported Dutch Bulbs.—Now Ready, Part IV. of
CARTER'S GARDENER'S VADE-MECUM, comprising LISTS of all Descriptions of BULBS and PLANTS for Autumn planting, with Cultural Directions. Forwarded gratis and post paid on application to
James Carter & Co., 237, 238, High Holborn, London, W.C.

To Hyacinth Growers.
SUTTON'S DESCRIPTIVE LIST is NOW READY.
Post Free.
Sutton & Sons, Reading, Berks.

The Best Twelve Hyacinths Imported by
SUTTON and SONS,
for Twelve Shillings.
Sutton & Sons, Royal Berks Seed Establishment, Reading.

S. PONSFORD and SON beg to announce that their DUTCH BULB CATALOGUE (with Cultural notes) may be had on application to
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Dutch Bulbs, Late Tulips, &c.
CHARLES TURNER'S CATALOGUE of the above is now ready. The roots have also arrived in fine condition. Orders will meet with prompt attention.
A fine stock of LILIUM AURATUM.
The Royal Nurseries, Slough.

DUTCH BULBS.—Best named HYACINTHS, 6s. to 8s. per dozen.
Best DUTCH CROCUS, 1s. 6d. to 4s. per 100.
Send for J. H. Cottrell's CATALOGUE.
15, Bull Ring, Birmingham.

Large Importation of Flower Roots from the best Houses in Haarlem.
Woodlands Nursery, Maresfield, near Uckfield, Sussex.
WM. WOOD and SON beg to solicit early commands for BULBS, just arrived in most excellent order.
Prices as reasonable as any respectable house in the Trade.
DESCRIPTIVE CATALOGUES may be had on application.

Hyacinths and Dutch Bulbs.
Fine and at moderate prices.
PAUL and SON'S PRICED DESCRIPTIVE LIST of the most desirable varieties is now ready, post free.
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Fresh Imported Dutch Bulbs.
SUTTON and SONS have just received from Haarlem one of the most extensive and rare Collections of BULBOUS FLOWER ROOTS ever imported into this country.
Prices very moderate, as see LIST, which may be had post free.
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Sutton's Unrivalled Collections of Bulbs.
SUTTON'S GUINEA COLLECTION of BULBS for BLOOMING in POTS and GLASSES.
Sutton's GUINEA COLLECTION for BEDS and BORDERS.
For particulars see Sutton's AUTUMN CATALOGUE, which may be had Gratis and Post free.
Sutton & Sons, Royal Berks Seed Establishment, Reading.

DUTCH BULBS.—HYACINTHS, best named, 6s. per dozen; ditto Mixed, 3s. and 4s. per dozen, 20s. per 100; DUTCH YELLOW CROCUS, 1s. per 100, 8s. per 1000, &c. FERN CASES filled complete, from 4s. 6d. each.
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Bulbs Carriage free.
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Hooper & Co.'s AUTUMN CATALOGUE, forwarded free by post.
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New Rose Catalogue and New Bulb Catalogue for 1864 and 1865.
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Rose Catalogue for 1864.
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"Old" Cheshunt Nurseries, N.

Roses.
PAUL and SON have still a fine show of the Autumnal varieties at the
"Old" Cheshunt Nurseries, Cheshunt, N.

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1864 and 1865 Rose Catalogue.
JOHN CRANSTON will be happy to forward on application his DESCRIPTIVE CATALOGUE of ROSES, for the present season.
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Entrance from the Platform, Waltham Station, Great Eastern Railway. PRICED CATALOGUES free by post.

S. PONSFORD and SON beg to announce that their GENERAL NURSERY CATALOGUE is now ready, and may be had on application to
Loughboro' Park Nurseries, Brixton, Surrey, S.

Carnations, Picotees, Auriculas, Pinks, Pansies, &c.
JOHN HOLLAND'S DESCRIPTIVE CATALOGUES are now ready, post free, on application.
Bradshaw Gardens, Chadderton, near Manchester.

Bedding Pelargonium Mrs. Pollock.
ALFRED FRYER offers strong out-door struck Plants, well established, in 60-pots, at 3s. 6d. each or 36s. per dozen.
Alfred Fryer, Nurseryman, Chatteris, Cambridgeshire.

CALCEOLARIA, CINERARIA, PRIMULA, HOLLYHOCK, and PELARGONIUM SEED.
The choicest strain in cultivation, may be had of
J. Dobson & Sons, Seedsmen, Isleworth, W.

Clianthus Dampieri splendens.
C. KIMBERLEY has just received a supply of the above fine Greenhouse Climber, direct from Australia, which he begs to offer in packets of six seeds for 1s. 6d.
Stoke Nursery, near Coventry.

Good Seeds, Carriage Free, at Market Prices.
SUTTON and SONS,
Seed Growers and Merchants,
Royal Berkshire Seed Establishment, Reading.

H. and F. SHARPE,
Seed Growers and Merchants, Wisbech.
SPECIAL PRICED LIST of NEW SEEDS on application.

RAYNBIRD, CALDECOTT, and BAWTREE,
Seed Farmers and Merchants,
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Prize Medals, 1851, for Wheat; 1862, for "Excellent Seed Corn and Seeds."

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Special prices and advantageous offers on application to
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Genuine Garden and Agricultural Seeds.
JAMES CARTER and CO.,
Seed Farmers, Merchants, and Nurserymen,
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Zonale Geranium Seed.
F. and A. SMITH beg to offer the above, saved this Season with the greatest care from their own Collection, which includes every variety of merit. This Seed is of most superior excellence and quality. Packets 1s. and 2s. 6d. each.
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ALOCASIA MACRORHIZA VARIEGATA, well variegated Plants, 7s. 6d. each; 60s. per dozen.
Thomas Jackson & Son, Nurseries, Kingston, S.W.

ALPINE AURICULA SEED, Crop 1864.—Saved from a very Choice Collection.
In packets, 1s. and 2s. 6d. each, post free.
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WELLINGTONIA GIGANTEA.—Fine specimens of this noble Tree, 3, 4, and 5 feet, repeatedly transplanted, and being full of roots, will remove with perfect safety. Low in price.
James Dickson & Sons, The "Newton" Nurseries, Chester.

EVERGREENS.—All sorts and sizes, suitable for present Planting in large quantity, of very superior quality and on low terms, especially where a considerable order is given. All have undergone periodical transplanting, and will remove to any distance with safety. Special prices on application.
James Dickson & Sons, The "Newton" Nurseries, Chester.

SPECIMEN PORTUGAL LAURELS.—Fine Plants, 8 to 10 feet round, 24s. to 30s. per dozen. Extra fine specimens of perfect form, 14 or more feet in circumference, 84s. to 105s. per dozen, or 7s. 6d. to 15s. each.
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COMMON LAURELS, very fine, in great quantities.—Shrubs in general very good, and in excellent condition for removal. Prices reasonable.
D. S. Thomson, The Nursery, Wimbledon, Surrey, S.W.

LAURELS, Splendid Stuff, being stiff, bushy, and well rooted, 1½ to 2½ feet, 7l. per 1000, or 60l. for 10,000.
G. Frost, Nurseryman, Bampton, Devon.

50,000,000 WHITE THORN QUICK. Samples and Prices to be had of
Wm. Dillistone, Munro Nursery, Sible Hedingham, Essex.

ACORNS.
For the above, apply to
W. Dillistone, Munro Nursery, Sible Hedingham, Essex.

WANTED, ACORNS, &c.—Parties who will be able to supply good sound ACORNS, SPANISH CHESNUTS, or BEECH MAST, will oblige by forwarding lowest prices per bushel, delivered at the nearest Railway Station, and for Cash on delivery, to
James Smith, Darley Dale Nurseries, near Matlock.

Larch Firs, 3 to 4 feet.
WANTED, a Large Quantity of the above.—Parties having such to offer would oblige by sending a sample, and stating quantity and price to
Z., care of R. Baxendine, Seedsman, High Street, Guildford.

WANTED in the Trade, a few Thousand 2-year Seedling PEARS, BEECH, SWEET CHESNUTS, MAPLE, HORNBEAM, MULBERRY, TULIP TREES. Terms cash.
Apply, stating price, E. Hale, Lansdowne Nursery, Lansdowne Road, South Lambeth, Surrey, S.

WANTED, HAZEL NUTS, &c.—Parties who will be able to supply good sound HAZEL NUTS and BLACK THORN, SLOES, will oblige by forwarding lowest price per bushel, for cash on delivery, delivered at the nearest Station, to
James Smith, Darley Dale Nurseries, near Matlock.

Autumn Crocus, or Saffron.
WANTED IMMEDIATELY, several Thousand strong BULBS. Nurserymen, Farmers and others are invited to state a Price Delivered. Address as below at per 100. Some Plants of the OSMUNDA REGALIS FERN also wanted.
Address, Mr. Taplin, 6, Dean Street, SohoSquare, London, W.

Double White Camellia.
FOR SALE, 8 feet high, 5 feet in width, covered with bloom buds in robust health.
Apply to G. Christmas, 2, Surrey Place, Grove Lane, Camberwell, S.

Cinerarias.
TO BE SOLD CHEAP, 5000 CINERARIAS, fine Young Plants, suitable for early purposes.
Apply to Mr. G. Wells, Grove Nursery, Coleman Street, Camberwell.

WHEELER'S LITTLE BOOK on GRASSES.
Gratis and Post Free.
J. C. Wheeler & Son, Seed Growers, Gloucester.

NATURAL GRASSES: their Names and Derivations; Quality, Produce, Elevation, Situation, Soil, Use, Peculiarity, Season, Growth, Increase, Time of Flowering, Price, &c. Free for One Postage Stamp.
Richard Smith, Seed Merchant, Worcester.

Genuine Italian Rye-grass.
Produced from Second Crop Foreign Seed.
MR. S. A. DAINTREE, of Fen Drayton, St. Ives, Hunts, has a good supply of the above, which has been thoroughly cleaned, and which will be offered to the Trade on reasonable terms, and samples will be forwarded on application.

CARTER'S GARDENER'S VADE-MECUM.

Choice Pelargoniums.

GEO. SMITH begs to offer in good plants the following new and choice PELARGONIUMS, at 30s. per dozen, viz :—Achilles, Alexandra, Aristides, Amy, Belle of the Ball, Cynosure, Diadem, Display, Lord Eversley, Maggie, Philo, Princess Helena, Princess of Wales, Paris, Queen Bertha, Spotted Nonpareil, Scarlet Nonpareil, The Charmer, and The Prince.

Also the undermentioned ZONALES, including the newest and best in cultivation, at 15s. per dozen, viz :—Admiral Protet, Amelina Gresseau, Beauté des Hesperides, Beauté de Parterre, Conqueror of Europe, Cedo Nulli, Eugénie Mezard, Etoile des Massifs, Francis Desbois, Henriette Renard, L'Eclair, Pinaraldia, Rataze, Roi d'Italie, Resplendens, Senator, St. Fiacre, Velcen, Villefranca, and Woodwardiana.

Lord of the Isles and Orange Globe, 2s 6d. each.

G. S. has also a first-class collection of all the leading kinds of French, Spotted, Fancy, and Variegated, with other varieties too numerous here to mention.—See CATALOGUE.

Tollington Nursery, Hornsey Road, Islington, London, N.

20,000 Dwarf Roses in Pots on own Roots.

FRANCIS AND ARTHUR DICKSON AND SONS, The "Upton" Nurseries, Chester, beg to offer 20,000 DWARF HYBRID PERPETUAL BOURBON and TEA-SCENTED ROSES, ON THEIR OWN ROOTS, in pots, including all the novelties and every variety of merit yet introduced. The plants are very STRONG and WELL ESTABLISHED, and if planted out now will bloom this Autumn.

F. & A. D. & Sons have also a large number of EXTRA STRONG plants of the BEST HYBRID PERPETUAL and TEA-SCENTED varieties, specially grown for Autumn and Winter forcing. Purchasers will be liberally dealt with.

Prices and all particulars on application as above.

Special Notice.

J. MEIKLE, The Nurseries, Folkestone, Kent, begs to inform his customers (especially those whose orders he was unable to execute last season) that his Stock of ROSES is this season unusually fine, and includes most of the very best sorts in cultivation. Orders executed in strict rotation.

A DESCRIPTIVE and PRICED LIST free on application.

J. M. begs to offer a few fine Specimen Seedling THUJA JAPONICA and AUREA, fine varieties. Safe removal warranted. Price 5s. to 10s. each.

Roses.—Notice to the Trade.

CHARLES VERDIER, FILS (ex-Partner in, and Successor to, the late firm of VICTOR VERDIER PÈRE & CHARLES VERDIER, FILS), NURSERYMAN, 32, Rue du Marché aux Chevaux, Paris, has the honour to inform Nurserymen, Seedsmen, and the Trade generally, that he has just published his WHOLESALE PRICED CATALOGUE of ROSES, which may be obtained, post free, either from him or of his Agents, Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, London, E.C.

His CATALOGUE of GLADIOLI (also at wholesale prices for the Trade only) may also be obtained as above.

New Roses.

CHARLES VERDIER, FILS (ex-Partner in, and Successor to, the late firm of VICTOR VERDIER PÈRE & CHARLES VERDIER, FILS), NURSERYMAN, 32, Rue du Marché aux Chevaux, Paris, begs to call attention to Two of the Handsomest and Best NEW ROSES of the Season, which he will be ready to send out next autumn.

HYBRID PERPETUALS.

DUCHESSE DE CAYLUS (CHARLES VERDIER).—Flowers clear, brilliant carmine, of most perfect form, large and full; growth vigorous. One plant, 1*l.*; five plants, 4*l.*

This Rose was exhibited at the Flower Show of the "Société Impériale et Centrale d'Horticulture de Paris" last July, and received the FIRST PRIZE (silver gilt medal) for New Roses.

DUC DE WELLINGTON (GRANGER).—Flowers velvety bright red, shaded with black, fiery red centre, large and full; growth very vigorous. One plant, 1*l.*; five plants, 4*l.*

C. VERDIER, FILS has also just published a List of 66 other New French Roses, which are to appear next season. This List can be obtained either direct from him or of his Agents, Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, London, E.C.

Pæonies.

CHARLES VERDIER, FILS (Successor to the late firm of VICTOR VERDIER PÈRE & CHARLES VERDIER, FILS), NURSERYMAN, 32, Rue du Marché aux Chevaux, Paris, has just published a Special and Descriptive CATALOGUE of the TREE and HERBACEOUS PÆONIES now disposable at his Nursery, which may be obtained, post free, either direct from him, or of his Agents, Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, London, E.C.

The CATALOGUE of NEW ROSES and GLADIOLI will be published shortly, and will also be sent post free on application to the above.

EUGÈNE VERDIER, FILS AINÉ, NURSERYMAN, 3, Rue Dunois (late Rue des Trois Ormes), Boulevard de la Gare d'Ivry, Paris.

NET PRICES to the TRADE (without any discount).

NEW GLADIOLI for 1864, deliverable on the 1st Nov. next.

FULTON (SOUCHET).—Large flowers, finely formed; red vermilion, velvety, extra bright, magnificently coloured. Effective plants, 6 francs each.

MADAME FURTADO (SOUCHET).—Very large and open flowers, disposed in long and beautiful spikes; very fine rose, diminishing to a light carnation, very strongly flamed with deep rose carmine. Extra fine varieties, 7 francs each.

MADAME DE SEVIGNÉ (SOUCHET).—Large flowers of a clear cherry rose, largely blotted and lined with pure white; a fine fresh colour, beautifully shaded. Very pretty varieties, 6 francs each.

MEYERBEER (SOUCHET).—Large well formed flowers, disposed in very long spikes; brilliant Nasturtium red, flamed vermilion, spotted amaranth red; perfection. Vigorous and splendid plants, 7 francs each.

EUGENE VERDIER, FILS AINÉ, NURSERYMAN, 3, Rue Dunois (late Rue des Trois Ormes), Boulevard de la Gare d'Ivry, Paris.

NET TRADE PRICES (without any abatement).

NEW ROSES for the AUTUMN 1864.

Obtained from Seed by different Collectors, and of which this Establishment has become the purchaser of the whole or part of them. Price, each variety, 15 fcs. Five plants of the same variety, 60 fcs. Each buyer of the whole Collection will receive Gratis one root of that magnificent Rose "Maréchal Niel."

HYBRID PERPETUALS.

ARIOSTE DU CHALET.—Strong plant, full flowers, from 7 to 8 centimètres diameter, in bunches of from 5 to 15 together, of a perfect habit, slate-coloured purple, shaded deep red to violet.

CHARLOTTE CORDAY.—Very vigorous plant, flowers full, of about 10 cent. diameter, purple red, reverse of the petals whitish.

DUNOIS.—Vigorous plant, flowers full, 8 to 10 cent. diameter, carmine red, shaded bright red and violet, analogous to Vicomte Vigier.

FORSTER.—Very strong plant, full flowers, 8 to 9 cent. diameter, imbricated, fine bright poppy red, strongly shaded violet.

JOHN KEYNES.—Very vigorous plant, flowers full, 10 to 12 cent. diameter, bright scarlet, shaded chesnut.

L'ABONDANT.—Very vigorous, free, and full flowering plant, blooms 9 to 10 cent. diameter, globe shaped, in bouquets of from 3 to 10 together, fine bright red, shaded fiery red, very distinctly bordered whitish, reverse of petals silvered.

LA COQUETTE.—Strong abundant flowering plant, flowers full, 7 to 8 cent. diameter, finely formed and globular, in bunches of 3 to 15 together, very bright red, shaded deep red and violet, three or four of the exterior rows of petals of a dazzling red.

LEONIE.—Strong plants, full flowers, 7 to 8 cent. diameter; well formed, in clusters of 5 to 10; red, reverse of petals lilac.

WILLIAM BULL.—Very vigorous plant, full flowers, 12 cent. diameter, globular, finely formed: pretty bright cherry red, superb.

MOSS ROSE.

DENIS HELYE.—Very strong, free flowering plant, flowers full, 8 to 9 cent. diameter; 6 to 12 in a bunch: purple violet, reverse of petals red.

NEW GRAPE, ROYAL VINEYARD.

NOW READY FOR DELIVERY.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Begs to announce that he is now distributing this valuable GRAPE. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years. The stock is in excellent condition. Early orders are respectfully solicited.

PRICES:

Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

INTERNATIONAL EXHIBITION 1862.

THE ONLY PRIZE MEDAL AWARDED FOR SEEDS.

VINES.

JAMES CARTER & CO.

Beg to call attention to their unrivalled stock of the above, numbering over 2000, in splendid condition for Fruiting in Pots or Planting out, all true to name, raised from Vines growing at their Nursery, selected from the most approved varieties in cultivation. The new varieties offered by others this season may also be had. A visit to the Nursery will well repay intending purchasers, when they can make their own selections from an immense stock.

The AUTUMN SUPPLEMENT to "CARTER'S VADE MECUM,"

Containing full descriptions of 50 most desirable varieties of VINES, and complete Lists of imported DUTCH BULBS, and Plants of every description for Autumn use, will be forwarded by Post on application.

JAMES CARTER AND CO., SEED FARMERS, MERCHANTS and NURSERYMEN,
237, 238, & 261, HIGH HOLBORN, LONDON, W.C.

PAUL'S NURSERIES, WALTHAM CROSS, N.

WM. PAUL (SON AND SUCCESSOR TO THE LATE A. PAUL)

Respectfully invites an early inspection of the following leading PLANTS, &c., cultivated in his Establishment. The soil of these Nurseries being cool and strong, the trees &c., have suffered nothing from the recent dry weather; having been frequently removed, they are in the finest possible condition for transplanting.

HARDY FLOWERING TREES, SHRUBS and EVERGREENS.—One thousand species and varieties selected for the beauty or fragrance of their flowers and foliage, and for the effect they produce in the landscape, many handsome specimens of large size.

FRUIT TREES, for the Orchard, Garden and Orchard House, both in and out of pots.—Many thousands of fruit-bearing and other trees (including Grape Vines), healthy, handsome, and warranted true to name.

ROSES.—100,000 plants, Standards, Dwarf Standards, and Dwarfs on the Dog Rose, Manetti, and own roots, including his own seedlings "Beauty of Waltham," "Princess of Wales," and others about to be announced.

BEATON'S NEW HYBRID BEDDING GERANIUMS.—The greatest novelty of the season, containing the latest efforts of this successful hybridist, and at present exclusively in W. PAUL'S possession. Some have flowers and trusses of enormous size, and colours entirely distinct. A new era in flower gardening will date from their introduction.

BULBS.—Hyacinths, Early Tulips, Crocuses, &c., the choicest of the stock from the most celebrated Bulb farms in Holland.

His Collections of these, exhibited before the Royal Horticultural and Royal Botanic Societies in March last, furnish the best evidence of their quality.

PRICED CATALOGUES free by post.

Orders by post promptly attended to. *Entrance from the Platform, Waltham Station, Great Eastern Railway, half an hour's ride from London.*

NEW FUCHSIAS, ETC.

ON AND AFTER OCTOBER 10, THE FOLLOWING NEW FUCHSIAS WILL BE SENT OUT
at 10s. 6d. each, or 31s. 6d. the set.

In offering these beautiful varieties, we need make no further remarks beyond calling the special attention of cultivators to the fact, that the kinds raised by Edward Banks, Esq., are always, where known, found in winning collections throughout the kingdom, and also upon the Continent, from year to year, whilst the generality of other collections brought into the market are discarded as soon as bloomed.

The re-appearance of the kinds in question (as the highest evidence of public favour) is the only test of sterling merit, and the best expression of unbiassed judgment as confirmed in the numerous awards given to Banks's premium Fuchsias for many years past.

LA TRAVIATA.—Flower good size, tube short, sepals broad, of a bright carmine scarlet tint, well recurved; corolla of good outline, evenly cup-shaped, proportionate, and firm in substance, rich lavender blue in colour. Habit of Rifleman (Banks'), well branched, and a profuse blooming variety, making an excellent front-rank exhibition plant.

ANNE BULLEYN.—Sepals broad and of firm substance, erectly recurved, of a rich carmine scarlet tint; corolla of good outline, evenly cup-shaped, in colour rich rosy lavender. A profuse bloomer; by its erect, well branched, and short-jointed growth, well adapted for pyramid exhibition specimens.

MARVELLOUS.—One of the finest varieties yet offered; flowers remarkably large, sepals of great width and substance, bright carmine scarlet, horizontally curved; corolla two inches in diameter, of a violet tinted plum colour, of firm texture, and smooth close margins. Adapted for conservatory, standard, or pyramid growth.

TROUBADOUR.—Sepals very broad, of firm smooth texture and elegantly curved; corolla cup-shaped, even, and proportionate; colour a rich olive black, nearer to the latter than any hitherto offered, not fading to a lower or different tint, but retaining its rich hue through sun and rain. Habit adapted for a cone or pyramid, requiring a free unchecked growth during its first pottings.

Among the foregoing are one or two of Mr. Banks' Seedlings, which were so highly noticed when exhibited as **cut flowers at the Royal Horticultural Society, and pronounced a decided advance.**

PYCNOSTACHYS URTICIFOLIA.—Strong plants for Winter Conservatory decoration, producing dense terminal racemes of beautiful bloom, equal in brilliancy of colour to Salvia patens. 3s. 6d.

CLEMATIS HYBRIDA SPLENDENS. 5s. each.

CLEMATIS JACKMANNI and C. RUBRO-VIOLACEA, splendid hybrid varieties of C. lanuginosa. 21s. each.

WINTER-FLOWERED MULE or HYBRID PINK, in white carmine, and striped flowered varieties, 1s. 6d. each. Also, new rose-coloured ditto, 3s. 6d.

ACHYRANTHES VERSCHAFFELTI (syn. IRESINE HERBSTII). A highly ornamental new crimson-red leaved Amaranth-like plant, for bedding and decorative garden purposes. Plants 2s. 6d. each, or post free 3s. 6d. each; 6 plants post free 17s. 6d.; coloured plate of the plant post free, 6d. each.

BOUVARDIA LONGIFLORA, full of flower buds, 18s. per dozen.

" (best scarlet) HOGARTH, 18s. per dozen.

" GRANDIFLORA, new white-flowered species, 3s. 6d.

BANKS'S NEW FUCHSIAS, sent out in the Spring of 1864, can be had in strong plants.

E. G. HENDERSON AND SON, WELLINGTON NURSERY, ST. JOHN'S WOOD, LONDON.

TWO NEW FIMBRIATED PRIMULAS.
Seed Packets, 2s. 6d. and 5s. each.
PRIMULA CARMINATA SPLENDENS, a beautiful new coloured one.
P. FILICIFOLIA (Fern-leaved).
See other Advertisements of the older kinds of fimbriated Primulas.
E. G. Henderson & Son, Wellington Nursery, St. John's Wood, London, N.W.

New hardy Hybrid Rhododendrons, and Azalea indica Souvenir du Prince Albert (J. V.)

JEAN VERSCHAFFELT, Nurseryman, Ghent, Belgium, begs to offer the following two new and beautiful hardy RHODODENDRONS, which he is now ready to send out for the first time, in strong plants at the undermentioned low prices, viz :—
RHODODENDRON PROFESSEUR LEMAIRE, strong plants, 12s. each.
RHODODENDRON VICOMTE DE BLOIS, 12s. each.
AZALEA INDICA SOUVENIR DU PRINCE ALBERT (J. V.) (the most distinct Azalea ever sent out). Dwarf grafted plants with nice heads, 8s. each. Per dozen, 4l.

All orders to be directed to Jean Verschaffelt, 43, Rue de la Caverne, Ghent, Belgium.

JEAN VERSCHAFFELT begs to offer the following PLANTS at the undermentioned low prices, viz. :—
CAMELLIAS, best sorts, 1 to 1½ feet high, set with buds, at 6l. per 100.
" larger plants, 10l. per 100.
" 5s., 8s., and 12s. each, and upwards.
AZALEA INDICA (first-rate sorts), fine healthy plants, 4l. per 100.
" on stems 1½ to 2 feet high, 10l. per 100.
ARUNDO DONAX VERSICOLOR, fine strong plants, 24s. per doz.
LILIUM LANCIFOLIUM RUBRUM, extra large bulbs, 3l. per 100.
" " ALBUM, 2l. 8s. per 100.
" " PUNCTATUM (very scarce), extraordinary large sized bulbs, 4s. each.
CAMELLIA STOCKS, fit for immediate working, 28s. per 100.
AZALEA INDICA, fit for immediate working, 20s. per 100.
CAMELLIAS with buds being rather scarce this year, J. V. begs to solicit early orders, so as to ensure a good choice. All orders to be directed to
Jean Verschaffelt, 43, Rue de la Caverne, Ghent, Belgium.

MR. ALEXIS DALLIERE, Nurseryman, Ghent, Belgium, begs to inform Amateurs and the Trade that he is now ready to supply the following Plants (delivered freight free to London, but landing charges to be paid by the purchaser), viz. :—
CORREA CARDINALIS, well set with buds, 1s. each.
PIMELEA HENDERSONII, very fine, 1s. 3d. each.
MIMOSA PARADOXA, handsome pyramids, 3 feet high, well set with buds, 1s. 8d. each.
SAXIFRAGA FORTUNEI, fol. var., 2s. 6d. each.
GYMNOSTACHYUM VERSCHAFFELTI, 1s. 8d. each.
PAROCHETUS CŒRULEUS, new plant, with blue flowers, 1s. 0d. each.
EUONYMUS JAPONICUS LATIFOLIUS, ALBO-VAR., 1s. 8d. each.
" " RADICANS, ROSEUS, 10d. each.
" " ALBUS, 10d. each.
BORONIA POLYGALÆFOLIA, strong plants, well set with buds, 1s. each.
PULTENÆA STRICTA, well set with buds, 10d. each.
DIOSMA AMBIGUA, blooms all the winter, 10d. each, or 8s. per doz.
JASMIN DESPAGNE, fl. albo pleno, 10d. each, or 8s. per dozen.
PHYLICA CAPENSIS, strong plants, bloom all the winter, 1s. 3d. each, or 12s. per dozen.
LEUCOPHITON BROWNII, handsome new plant from the Cape, 1s. each.
SERISSA FŒTIDA, strong plants, to bloom this winter, 7s. per doz.
TROPÆOLUM TRICOLORUM GRANDIFLORUM, 8s. per dozen.
LILIUM LANCIFOLIUM RUBRUM, strong Bulbs, 2l. per 100.
" TIGRINUM, very handsome, 12s. per 100.
THUJA AUREA, 10d. each.
" very strong plants, 2s. 6d. each.
" RECURVA NANA, strong plants, 1s. 3d. each.
JUNIPERUS ELEGANS, fol. var., very handsome new plant, 2s. 6d. each.
" SABINA, fol. var., strong tufts, 10d. each.
AZALEA INDICA, fine plants, well set with buds, 4l. per 100.
CAMELLIAS, fine plants, well set with buds, 6l. per 100.
" LAVINIA MAGGI, with buds, 3s. 6d. each.
" BONOMIANA, with buds, 3s. 6d. each.
These two last are the handsomest Camellias known.
Other plants (far too numerous to name) will be found in Alexis Dalliere's CATALOGUE, which may be had post free on application to his Agents, Messrs. R. Silberrad & Son, 5, Harp Lane, Great Tower Street, London, E.C.
All letters containing orders should be sent direct to M. Dalliere, addressed as above. Payment at 4 months from the date the plants are sent off.

NOTICE is HEREBY GIVEN, that the PARTNERSHIP heretofore subsisting between the Undersigned JOHN HOLLAND and JOHN BAYLEY, as Florists, &c., at Bradshaw Gardens, Chadderton, in the County of Lancaster, under the Firm of "Holland & Bayley," has been this day DISSOLVED, and will in future be carried on by JOHN HOLLAND.
All Debts Due and Owing to and by the said late Partnership will be received and paid by the said John Holland.
John Holland.
Dated this 10th day of September, 1864. John Bayley.

JOHN HOLLAND begs respectfully to inform his numerous Friends that he has again taken the above GARDENS, and that they will in future be conducted by him; and in tendering his grateful acknowledgments for past favours, solicits a continuance of public patronage.

SEED WHEAT from the CHALK.—BROWICK RED, SPALDING, CLOVER'S RED, NURSERY, MORTON'S RED STRAW, and all the most approved varieties of Wheat. Also HALLETT'S PEDIGREE, SHIRREFF'S WHEATS, &c, supplied by Raynbird, Caldecott, & Bawtree. Samples and prices post free on application.
Address, Basingstoke; or 89, Seed Market, Mark Lane, E.C.
R., C., & B. can also supply from a clay soil improved stocks of RED BROWICK WHEAT and THICK-SET ESSEX RED, both carefully selected and hand picked, and recommended for productiveness and stiffness of straw.

SEED WHEAT from the CHILTERN HILLS.
The CHILTERN WHITE, a new variety, offered to the public for first time; ear compact and handsome; grain of excellent quality; straw stiff and medium length. Price 56s. per qr.
The BURGHFIELD WHITE, noted for early maturity, superior quality, and productiveness in straw and grain. Price 48s. per qr.
The above were raised by the Advertiser from single corns. New sacks charged 2s. each. Delivery to Henley Station. Cash with Order.
Address, Mr. R. C. Young, Hambleden, Henley-on-Thames.

HALLETT'S PEDIGREE WHEAT, off the Clay.—Grown with great care from Seed obtained of Mr. Hallett. Threshed by hand. Price 10s. 6d. per bushel, including bags. Also the following sorts, being grown on the Lois-Weedon system, which allows each plant to become fully developed, are peculiarly adapted for Seed:—SHIRREFF'S BEARDED WHITE and HOARY WHITE, 52s. per qr., Sacks extra. SHIRREFF'S BEARDED RED, GOLDEN DROP, and WHITE STRAWED BROWN, at 48s. per qr.
Apply, with remittance, to Thomas Grant, Shirley House, Maidstone.

BROWICK WHEAT.—Carefully screened samples for Seed, grown on stiff clay soil. Price 48s. per quarter (in hired sacks) at the Bedford Stations of the Midland, London and North-Western, or Bedford and Cambridge Railways.
Apply to Mr. Thomas Bowick, Manager of Messrs. Howard's Steam Cultivated Farms, Bedford.

Seed Wheat.
MAMMOTH WHEAT, Selected by Mr. Teverson.—The most productive and valuable variety of Wheat ever grown by the Advertiser. It is hardy and vigorous in habit, not liable to blight, and adapted both to strong Wheat land and to light land. Price 7s. 6d. per bushel, or 48s. per quarter, delivered at Braintree Station.
Apply to Henry Eversher, Park Hall, Gosfield, Halsted, Essex.

WINTER BARLEY.—Hardy Two-rowed Barley for Autumn sowing. Crop last year, 10 quarters per acre; sold at 38s. per quarter for malting. It is of vigorous growth, and succeeds well sown on a Wheat stubble, with 2½ cwt. of guano per acre. Price 45s. per quarter, delivered at Braintree Station.
Apply to Henry Eversher, Park Hall, Gosfield, Halsted, Essex.

HERTFORDSHIRE HERO BARLEY.—Six-rowed, very productive, and stiff strawed; rather coarse but suitable for Winter or Spring Sowing, for Early Spring Feed, or an Early Crop for Harvest.
Price 50s. per quarter, delivered on Rail at Basingstoke.
Address, Raynbird, Caldecott, & Bawtree, 89, Seed Market, Mark Lane; or Basingstoke.

CUTHILL'S EARLY PRINCE ALBERT WINTER CUCUMBER, 1s. per packet, or by the oz.; MUSHROOM SPAWN, 5s. per bushel. Pamphlet on ditto, 1s. 1d.; on the Strawberry, 1s. 1d.; on the Melon and Cucumber Forcing, 1s. 1d.; on Market Gardening, 1s. 6d.; on the Potato, with other Superior Vegetables, 1s. 6d.
James Cuthill, Camberwell, London, S.

SEED POTATOS.—MYATT'S EARLY PROLIFIC KIDNEY, EARLY DALMAHOY ROUND, and all the earliest and best varieties, of the finest quality, free from disease, and at very moderate prices.
Apply to H. & F. Sharpe, Seed Growers and Nurserymen, Wisbeach, Cambridgeshire.

THE EARLIEST PEA known is CARPENTER'S EXPRESS, gathered May 7. See Testimonials, among which is the following from Mr. John Cox, Gardener to W. Wells, Esq., Red Leaf, Penshurst, Kent:—
"Dear Sir,—I beg to say I have tried your Express Pea this season, and am glad to be able to speak very favourably of it as the earliest Pea I have ever grown. I gathered in quantity this season nine days in advance of any other early variety, and earlier also than have ever been gathered in these gardens in the open air."
Price 3s. 6d. per quart. Trade price on application. Remittance requested from unknown correspondents.
Edward Carpenter, Seed Merchant and Grower, Brighton and Sussex Seed Warehouse, 96, St. James Street, Brighton.

EARLY SPRING FEED,
For Present Sowing.
NEW ENGLISH ITALIAN RYE-GRASS,
Best Imported Ditto,
TRIFOLIUM INCARNATUM,
For Sowing on Stubbles and mending deficient plants of Grasses or Clovers.
WINTER BARLEY | WINTER OATS | COMMON RYE
GIANT RYE | WINTER TARES
For Early Spring Feed.
MUSTARD and RAPE, for sheep keep and ploughing in for manure.
Samples and prices on application to Raynbird, Caldecott, & Bawtree, 89, Seed Market, Mark Lane; and Basingstoke.

CARTER'S FARMER'S VADE-MECUM.

To Gentlemen and Nurserymen.
MR. CLAPHAM, Proprietor of the Royal Park, Leeds, wants several hundred LIMES, CHESTNUTS, ITALIAN and SILVER POPLARS, several CEDRUS DEODARA, and other ornamental Trees; Rhododendrons, Azaleas, Common and Portugal Laurels, and Evergreen Shrubs, Roses, &c. They are required as large as possible to transplant safely, and for immediate effect. As a quantity is required and ready cash will be paid, they must be cheap

To the Trade.
ANDREW G. DALY, Newry, Ireland, offers
2,000,000 1-year Seedling THORN QUICKS.
500,000 2-years' TRANSPLANTED Ditto.
500,000 BEDDED LAURELS, strong, well-rooted.
100,000 SEEDLING BERBERIS DARWINII.
10,000 TRANSPLANTED do, Bushy.
Prices moderate on application.
Delivered in Liverpool, Glasgow, or Dublin.

PLANTING SEASON.—100 sorts FOREST TREES, in all sizes; 300 do. EVERGREENS; 300 do. CONIFERÆ; 400 do. FLOWERING SHRUBS; 400 do. ROSES; 50 do. CLIMBERS; 1000 do. FRUIT TREES; 3000 do. Winter and Summer BEDDING PLANTS; 2000 do. general GREENHOUSE and STOVE PLANTS, FERNS, &c.
Apply to J. Scott, Merriott Nurseries, Somerset, for CATALOGUES. Fruit Tree, 7d.; Bedding Plant, 6d. General Nursery, Bulb, and Seed do., one stamp each. These Catalogues are allowed to be the best published, and when bound together, form a Vade Mecum, unsurpassed for Horticultural and Planting improvement.

WELLINGTONIA GIGANTEA.
Fine Plants from seed, 1½ to 2 feet, 30s. per dozen
Do. Do. 2 to 3 feet, 42s.
Do. Do. 4 to 6 feet, 10s. 6d. to 60s. each
Do. Do. 6 to 7 feet, 42s. to 84s. "
Do. Do. 7 to 9 feet, 63s. to 105s. "
CEDRUS DEODARA, 3 to 4 feet, 42s. per dozen
Do. 4 to 5 feet, 50s. to 60s. per dozen
Do. 5 to 6 feet, 60s. to 120s "
PINUS DON PEDRI, transplanted specimens, 2 to 3½ feet, 21s. ea.
This noble species appears to be quite hardy; it bears monster cones, like Pine Apples, 16 to 18 inches long!
Jas. Backhouse & Son, York Nurseries.

REIGATE SILVER SAND (best quality for Plants, &c.), 7s. 6d. per ton; packed 16s. per ton, delivered to Reigate Station. Various kinds of excellent Peat and Loam, Sand, Stone, &c. Circulars, containing List of Prices, with other information, post free on application
W. Short, Sand and Peat Depôt, Reigate, Surrey.

COCOA-NUT REFUSE delivered within 2½ miles of Charing Cross, at 2s. per bag.
For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the Patent Cocoa Fibre Company Kingston-upon-Thames.
Postage Stamps or Post-office Orders payable to J. Barsham & Co.
Barsham's BRUSHES and MATS are sold in every town.
Caution.—Every Brush is stamped, J. Barsham's Patent.

TOBACCO PAPER, good, 8d. per lb.
Price to the Trade on application.
H. Brown, 4, Commutation Row, Liverpool

To Florists and Gardeners.
AROMATIC FUMIGATING TOBACCO, prepared by A. Coronel, 256, High Holborn, W.C.—The only discovery yet known for the entire destruction of fly and other insects (the greatest enemies of a greenhouse), without injury to plants or to health, being void of all unpleasant smell. May also be used in hospitals and sick chambers with confidence. In Canisters, 3s 6d. and 2s., to be forwarded to all parts on receipt of order or stamps.
Agents: Henderson & Co., Florists, Pine-apple Place, Maida Vale; Newbery & Sons, St. Paul's Churchyard: Carter & Co., Seedsmen, High Holborn, W.C.: Hurst & Son, Seedsmen, Leadenhall Street; Messrs. Butler & McCulloch, Seedsmen, &c., Covent Garden, W.C.; and Messrs. Barr & Sugden, Seedsmen, King Street, Covent Garden

Cheap Greenhouse Stoves.
DEANE AND CO.'S Patent VENTILATING and SUSPENSION STOVES are simple, cheap, and efficient; have been largely adopted and approved; will burn many hours without attention, and at a small cost for fuel. Prices of Suspension Stoves, 20s., 30s., 38s., and upwards. Ventilating Stoves, 50s., 60s., 70s., 90s.
HOT-WATER APPARATUS for Conservatories, Greenhouses, Hothouses, Forcing Pits, &c., erected and fitted up complete.
Deane & Co., 46, King William Street, London Bridge, E.C.
Established A.D. 1700

Card.
SAMUEL N. McGERROW,
General Horticultural Builder,
Knotty Ash, near Liverpool.
Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

Heating by Hot Water.
HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, Tubular, and Elliptic, from 24s. each. Improved Boilers and Iron Stands to use without brickwork, 56s. each. Valves from 10s. 6d. each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at
Mr. Lynch White's Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S. Price List on application.

W. J. HOLLANDS, Iron Merchant,
31, Bankside, London, S.E.
HOT WATER PIPES, from Stock, per yard:—2-inch, 1s. 4d.; 3-inch, 2s.; and 4-inch, 2s. 7d. BENDS, from Stock, 1s. 7d., 2s. 6d., and 3s. 3d. each. THROTTLE VALVES, 10s. 6d., 13s. 6d., and 15s. each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day. A discount to the Trade.

HEATING by HOT WATER.—Public and Private Buildings, Manufactories, Conservatories, &c., heated on the most improved system, combined with perfect Ventilation. Baths fitted upon economical principles connected with Kitchen Ranges, ready for use night or day without extra fire. Success in all cases guaranteed. Estimates free. References to hundreds of the Nobility's Seats, Botanical Societies, Public Buildings, Banks, Manufactories, &c.

BURY AND POLLARD
(Successors to John R. Peill),
Sole Manufacturers of the Improved CONICAL BOILERS which require NO BRICKWORK, and which Boilers have for their durability and economy attained a celebrity far surpassing any other Boilers ever invented.
Park Iron Works, 17, New Park Street, Southwark, London, S.E.
N.B. Patent WINDMILLS for Pumping and Driving Farm Machinery, from half-Horse Power upwards. To be seen daily at work as above
Bury & Pollard having completed the order for the India Board are now making another large Windmill and Pumps for the Government Gardens at Agra.
WIND ENGINES FOR ASCENSION.—The Admiralty Department officially report the two large Wind Engines supplied by Bury & Pollard two years ago for Ascension as working most satisfactorily.

BARR & SUGDEN
12 KING ST. COVENT GARDEN

Orders 21s. and upwards sent carriage paid.

LILIUM AURATUM, the most magnificent variety of this family, 10s. 6d. and 15s.; roots which have this autumn flowered, 21s.

DUTCH, CAPE, FRENCH, JAPAN, and ITALIAN FLOWERING BULBS,
For the SITTING-ROOM, CONSERVATORY, GREENHOUSE, and FLOWER GARDEN.
A Descriptive and Priced List with Cultural Hints free and post paid on application.
THE COVENT GARDEN COLLECTIONS of BULBS for In and Out-doors, 10s. 6d., 15s. 6d., 21s., 42s., and 63s.
THE PAXTONIAN COLLECTIONS of BULBS for Out-doors, 10s. 6d., 15s. 6d., 21s., 42s., and 63s.
THE KENSINGTON GARDEN and CRYSTAL PALACE COLLECTIONS for Indoor Winter Gardens, 10s. 6d., 21s., 30s., 42s., and 63s.
HYACINTHS, 2s. 6d. to 15s. per dozen. CROCUS, 1s. 6d. to 4s. per 100. TULIPS, 3s. 6d. to 20s. per 100.

ZONALE PELARGONIUM, seed saved from the superb new varieties exhibited this last summer by Mr. Bull; colours scarlet, white, pink, cerise, rose, carmine, blush, salmon, rose-pink, orange-scarlet, &c., many of them with very distinct eyes, 2s. 6d. per packet. Mr. Bull's magnificent strain of MIMULUS, 1s. per packet. Mr. Holland's Prize CYCLAMEN PERSICUM, 1s. per packet. Now is a good time to sow these seeds.

BARR AND SUGDEN, SEED MERCHANTS and FLORISTS, 12, KING STREET, COVENT GARDEN, W.C.

New English Hybrid Perpetual Rose, King's Acre.

JOHN CRANSTON has the pleasure to announce that his New English Seedling HYBRID PERPETUAL ROSE, KING'S ACRE, will be sent out this autumn.

The colour of this truly beautiful variety is bright vermilion rose, reverse of petals satiny; the flowers are extra large, globular, of remarkable depth and exquisitely formed, having large, smooth, shell-shaped petals of fine substance; the foliage is ample and of a fine rich dark green colour, while the habit of growth is all that can be desired, being vigorous and robust.

Assured that the above is worthy of a prominent place in the most select collection, either on the Exhibition tables or in the Rosery, J. C. respectfully solicits early orders, and observes that such will be executed in rotation. Price 7*s.* 6*d.* each. The usual discount to the Trade when 3 or more are taken.

"SEEDLING ROSE (*J. Cranston*).—We regret that we did not see your Rose King's Acre in the season, for when such beautiful flowers are produced now, after such a drought, we may well ask, what must it have been then? Those you sent were very fine, globular, and of a colour much wanted—purplish rose, with the reverse of petals light. It is a really fine flower, and if, as you say, vigorous, having withstood the season of 1860 as a seedling, it will be a valuable acquisition to our English raised Roses."—*Vide* Journal of Horticulture, Aug. 30, 1864.

A faithfully coloured Drawing, by ANDREWS, will be sent in exchange for 12 postage stamps.

Nurseries, King's Acre, near Hereford.

Two Splendid Seedling Azaleas.

WILLIAM BARNES has great pleasure in announcing to his friends and the public that he will be prepared to send out on and after the 15th of October next, his two magnificent Seedling Azaleas, BRIDE of ABYDOS and PURITY.

BRIDE of ABYDOS is a splendid white, striped and splashed with pink; of fine vigorous growth, and an abundant bloomer. It was exhibited before the Floral Committee on May 6, 1862, when it met with their unanimous approval. The following description is given of it in the *Gardeners' Chronicle* upon the 10th of that month:—

"Mr. BARNES, of Southampton Street, Camberwell, contributed a beautiful Azalea named Bride of Abydos, the flowers of which are large, white, flaked with pink, and possess great substance; of this variety three plants were exhibited, all excellent in habit and evidently free in growth."

In the *Gardeners' Chronicle* of December 27, 1862, page 1217, in describing the new and most prominent Azaleas of the above year, are the following remarks:—

"As a free-flowering sort of vigorous habit adapted for decoration and exhibition, the Bride of Abydos is the most useful which has appeared amongst the whites, with occasional streaks of red."

Fine strong Grafted plants will be ready on the above date at 21*s.* and 31*s.* 6*d.* each.

PURITY is a beautiful clear white, fine large flower, with unusual substance and of the most perfect shape; it is of a fine robust habit. A variety of this description has long been required, viz.:—

A pure white, with fine shape, large flowers, and good vigorous habit. Plants will be ready on the above date at 21*s.* and 31*s.* 6*d.* each.

A few plants of each variety to offer in extra large plants, prices of which can be obtained on application to

WILLIAM BARNES, Camden Nursery, Camberwell, S.

SUTTON'S

UNRIVALLED COLLECTIONS OF

BULBOUS FLOWER ROOTS,

FOR BLOOMING DURING THE WINTER AND SPRING.

These are every year becoming more popularly cultivated, and the HYACINTHS, ANEMONES, TULIPS, &c., which we imported last season from the celebrated Dutch Florists, Messrs. de Boom, Veen, Byvoet, and others, having been so generally admired, we have imported from the same parties, and still more extensively. *As many of these sorts are at present unknown to English cultivators, we have considered it advisable to make up Collections* of the sorts which, after careful observation, we have found to be the best worthy of cultivation, being THE MOST SHOWY AND MOST CERTAIN TO THRIVE WELL under any ordinary treatment, and for which any good Garden soil (not particularly heavy) will be suitable.

SUTTON'S COLLECTION of HARDY FLOWER ROOTS for OPEN GROUND.

		£	*s.*	*d.*
No. 1.	A large and Choice Collection of ANEMONES, HYACINTHS, CROCUSES, TULIPS, RANUNCULI, NARCISSI, SNOWDROPS, IRISES, GLADIOLI, &c.	2	2	0
No. 2.	Ditto ditto, consisting of all the same kinds, in Reduced Quantities	1	1	0
No. 3.	A Small and Choice ditto	0	10	6

SORTS for FLOWER POTS and GLASSES.

		£	*s.*	*d.*
No. 4.	A splendid Collection of HYACINTHS, JONQUILS, NARCISSI, EARLY TULIPS, New large CROCUSES, &c.	2	2	0
No. 5.	The same in Reduced Quantities	1	1	0
No. 6.	A Small and Choice Assortment	0	10	6

N.B. A complete LIST of the above may be had post free, and any article specified, if not required, will be omitted, and additional quantities of others included.

The very low charges now made for the above Choice Collections of Flower Roots will, it is believed, insure a continually increasing demand.

Early Orders are requested before the more scarce kinds are all sold.

SUTTON'S AUTUMN CATALOGUE,

Containing Descriptive Lists of the best varieties of HYACINTHS, GLADIOLI, ANEMONES, CROCUSES, and other Bulbous Roots, and Choice STOVE and GREENHOUSE PLANTS, FERNS, AMERICAN PLANTS, ROSES, CARNATIONS, and other Florists' Flowers, FRUIT TREES, New GARDEN SEEDS, &c., may be had gratis and post free on application.

All Goods sent Carriage Free except small parcels, and 5 per cent. allowed for cash payments.

SUTTON AND SONS, ROYAL BERKS SEED ESTABLISHMENT, READING.

GREENHOUSE ORCHIDS.

NO FIRE HEAT, EXCEPT TO KEEP OFF FROST!

JAMES BACKHOUSE & SON

Offer good PLANTS of the following beautiful species, which may be easily grown in an ordinary Greenhouse or Vinery, for Cash Remittance:—

12 for Three Guineas.

LÆLIA SUPERBIENS.
" AUTUMNALIS.
CATTLEYA MOSSIÆ.
" CRISPA.
" SKINNERI.
CYPRIPEDIUM INSIGNE.
" VENUSTUM.
TRICHOPILIA TORTILIS.
LYCASTE SKINNERI.
" (MAXILLARIA) HARRISONIÆ.
BLETIA VERECUNDA.
ONCIDIUM FLEXUOSUM.

12 for Five Guineas.

ODONTOGLOSSUM GRANDE.
BROUGHTONIA SANGUINEA.
SCHOMBURGKIA UNDULATA.
LÆLIA SUPERBIENS.
" AUTUMNALIS.
ONCIDIUM AMPLIATUM MAJOR.
LYCASTE SKINNERI.
CATTLEYA GUTTATA.
" MOSSIÆ.
" CRISPA.
" SKINNERI.
MAXILLARIA HARRISONIÆ.

12 for Eight Guineas.

LÆLIA PURPURATA.
" SUPERBIENS.
" AUTUMNALIS.
DENDROBIUM MONILIFORME.
BARKERIA SKINNERI.
LYCASTE SKINNERI.
EPIDENDRUM VITELLINUM.
" ATRO-PURPUREUM.
ODONTOGLOSSUM GRANDE.
CATTLEYA ACLANDIÆ.
" SKINNERI.
" CRISPA.

For 12 Guineas: the fine CATTLEYA WARSCEWICZII, C. PINELLI, ONCIDIUM AMPLIATUM MAJOR, and SOPHRONITIS GRANDIFLORA, would be added to the Third Collection.

YORK NURSERIES.—October 8, 1864.

NEW PLANTS.

FISHER, HOLMES, & CO.,

Beg to announce that they are now prepared to send out their

NEW BERBERIS AND ABIES.

THE FOLLOWING ARE THE DESCRIPTIONS GIVEN OF THEM IN THE *GARDENERS' CHRONICLE*:—

BERBERIS STENOPHYLLA.

See page 460, May 14, 1864.

"A very hardy hybrid Berberis, between Darwinii and empetrifolia, which promises to be one of the best evergreen shrubs in cultivation. We call it B. stenophylla. The branches are hairy; the spines 3-parted; the leaves very dark green, about half an inch long, pale beneath, tipped with a short spine, and rolled backward at the edge, so as not to appear flat but to look almost cylindrical. The flowers are of the same charming apricot colour as that which renders Darwinii so ornamental, but they are smaller,' &c.

August 13, page 770.

"At p. 460, we invited attention to a hybrid Berberry, from the Handsworth Nursery. The specimens we had then seen proved it to be a very handsome shrub in regard to its flowers, which were of a fine apricot colour, and produced in racemes of from 3 to 5 together from the leaf axils, instead of singly as in B. empetrifolia, of which this new shrub has something the character, but it is more vigorous. From samples which have recently been sent us, we are able to say that the bushes are at this season laden with purplish black berries, which must add greatly to their beauty, as well as prolong indefinitely the period of their effectiveness as ornamental shrubs. The berries, like the flowers, hang in racemes of from 3 to 5 from the leaf axils, and are about as large as Currants in the samples sent to us, but we learn that they are smaller than usual this year, owing to the excessive drought. When we add that this Handsworth hybrid is of a very hardy character, that it makes strong shoots 4 feet long in a season, that it is clothed with neat narrow evergreen foliage, and adorned with a profusion of gay orange-coloured blossoms in early summer, we shall have said enough to show that it is likely to prove a very decided acquisition, not only for our pleasure grounds and shrubberies, but also for our plantations and game preserves."

First size, strong plants in pots, 21s. each.
Second size, in pots, 15s. each. | Third size, in pots, 10s. 6d. each.

ABIES CANADENSIS MICROPHYLLA.

A beautiful Conifer of slender pyramidal habit, remarkable for the dumpy plump-looking blunt-end leaves which clothe its smaller twigs and branches, and which from their brevity and plumpness give it some peculiarity of aspect.

See p. 580 last year.

"The same exhibitors had an elegant North American Fir, very near the Hemlock Spruce, remarkable for its dumpy, plump, blunt-ended leaves."

Also in *Gardeners' Chronicle* for this year, p. 460, it states:—

"This Abies is of such singularly dwarf habit that it might almost be compared with a Heath. Leaves very dark green with a white streak beneath, rough at the edge, and no bigger than those o Menziesia polifolia. It may possibly be included in some catalogues under the name of Abies canadensis nana, but the leaves are much smaller than in the plants which we have seen bearing that name. Messrs. Fisher, Holmes & Co. have found it much more hardy than canadensis is itself, it not having suffered in the severe winter two years ago, when so many Conifers were injured."

Plants in pots, 42s. each.
A few extra sized Plants in pots, 63s. each.

Prices to the Trade on application.

N.B. CATALOGUES of FRUITS; FOREST, ORNAMENTAL, and EVERGREEN SHRUBS; ROSES; KITCHEN GARDEN, FLOWER, and AGRICULTURAL SEEDS; STOVE and GREENHOUSE PLANTS; DUTCH FLOWER ROOTS, &c., may be had Free in their respective seasons.

FISHER, HOLMES, AND CO., HANDSWORTH NURSERY, SHEFFIELD.

SEEDSMEN BY APPOINTMENT Sutton AND Sons

HYACINTHS for EXHIBITION.
FRESH IMPORTED BULBS.
SUTTON'S SELECTION.

	Per 100.	Dozen.
Finest sorts by name	.. £4 4s.	12s.
Very fine ditto	.. 3 10	9
Good ditto	.. 2 10	6

Good Hyacinths for Beds, Ribands, &c. in separate colours (fresh imported), 21s. per 100.

Anemones, Crocuses, Tulips, Gladioli, &c., also very low in prices, as per CATALOGUE, which may be had gratis and post free.

SUTTON & SONS, Royal Berkshire Seed Establishment, Reading.

Dutch Bulbs and other Flower Roots.
CONSISTING OF HYACINTHS, CROCUS, TULIPS, NARCISSUS, ANEMONES, LILIES, SNOWDROPS, &c.

JAMES FAIRHEAD AND SON beg to state that their BULBS and ROOTS have arrived this season in prime condition and very large size.
CATALOGUES free on application.
7, Borough Market, London, S.E.

New Catalogue of Plants, Dutch Bulbs, &c.
ROBERT PARKER begs to announce that his NEW GENERAL CATALOGUE, containing Select, Descriptive, and Priced Lists of New, Rare, and Beautiful-foliaged Plants, Azalea Indica, Conifers, Exotic and Hardy Ferns, Fruit Trees, Grapes, Exotic Orchids, Greenhouse and Stove Plants, Miscellaneous Hardy Trees and Shrubs, Rhododendrons, Roses, &c., Hyacinths, Tulips, Gladioli, and other Bulbs, is now published and will be forwarded to applicants.
Exotic Nursery, Tooting, Surrey, S.

Hyacinths and other Choice Bulbs.
B. S. WILLIAMS can now supply Roots of the finest quality of all the varieties of DUTCH and CAPE BULBS.
For prices and description of the appearance and colours of the various kinds, see CATALOGUE, which will be forwarded Post free on application.
Choice HYACINTHS for Glasses or Pots, 6s., 8s., 10s., and 12s. per dozen.
Paradise and Victoria Nurseries, Holloway, London, N.

HYACINTHS, TULIPS, and other DUTCH BULBS, Imported by WM. CUTBUSH & SON.
TWENTY-FOUR PRIZES awarded to their Collections last Spring, TWENTY-TWO being FIRST PRIZES.
The DESCRIPTIVE PRICED CATALOGUE, with numerous Cultural remarks, post free on application.
Early orders earnestly solicited, as the supply cannot possibly meet the increasing demand.
Highgate Nurseries, London, N.

WEST RIDING NURSERY and SEED COMPANY have received their immense Collections of BULBOUS ROOTS from Holland and France, fine sound Bulbs, and at prices lower than ever offered.
GREENHOUSE COLLECTIONS for FORCING, at 20s., 40s., 60s., 80s., 100s.
COLLECTIONS for BEDS and BORDERS, consisting of Hyacinths, Narcissus, Crocus, Jonquils, Snowdrops, Anemones, Ranunculus, Iris, Double and Single Tulips, &c.

500 roots in the above sorts, 20s.	2000 roots, correctly named, 80s.
1000 ditto correctly named, 40s.	2500 ditto, 100s.
1500 ditto, 60s.	No charge for Package.

*** CATALOGUES now ready.
WILLIAM BARRATT, St. John's, Wakefield.

New Hardy British Ferns.
J. IVERY AND SON have the pleasure to offer the three undermentioned distinct and beautiful varieties, in good plants, showing their true characteristic forms, 10s. 6d. and 21s. each.
POLYSTICHUM ACULEATUM ACROCLADON,
ATHYRIUM FILIX-FŒMINA MUCRONATUM,
" " " GLOMERATUM.
(They have each received First-class Certificates from the Royal Horticultural Society, and Royal Botanic Society.)
Likewise ATHYRIUM FILIX-FŒMINA PARSONSIÆ, VERNONIÆ, and FISSIDENTO-EXCURRENS at 5s. each.
Dorking, Oct. 8.

New and Choice Plants.
B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens. A DESCRIPTIVE and PRICED CATALOGUE post free on application.
Paradise and Victoria Nurseries, Holloway, London N.

Ranunculuses, Anemones, &c.
C. TYSO, FLORIST and SEEDSMAN, Wallingford, Berks, begs to offer choice-named assortments:—

50 Splendid RANUNCULUS, one each	14s. to £1 0s. 0d.
50 ditto, TYSO'S SEEDLINGS, one each	30s. to 3 0 0
50 Mixed ditto, fine quality	4s., 8s., and 0 10 0
50 DOUBLE ANEMONES, one each ..	10s. 6d. to 0 13 0
50 Ditto Single Mixed	2s. 6d. to 0 3 6

IMPORTED DUTCH and other BULBS for spring flowering.
C. TYSO'S SOVEREIGN COLLECTION of RANUNCULUS and ANEMONES, sent post free for 21s.
CATALOGUES by post for one stamp.

Winter Flowering Plants.
F. AND A. SMITH, The Nurseries, Dulwich, S., beg to offer the following Plants at moderate prices, well budded, and in excellent condition:—ACACIAS, of sorts, APHELEXIS, AZALEAS, CAMELLIAS, CINERARIA, CYTISUS, DILLWYNIAS, DIOSMAS, ERICAS, EPACRIS, LESCHENAULTIAS, PELARGONIUMS, PHÆNOCOMA PROLIFERA, BARNESI, fine, PRIMULA SINENSIS, and many other fine things.
Lists and Prices on application.
Forced DUTCH BULBS throughout the Season.

Splendid New Pelargoniums raised by
DOBSON AND SONS, Isleworth.
The following superb set is now offered for the first time, and are unequalled. For fuller description see CATALOGUE, gratis and post free.

THE RIVAL.—Rich orange salmon, 31s. 6d.
Received First-class Certificate.
SENSATION.—Vivid crimson, 21s.
Received First-class Certificate.
DUKE of CAMBRIDGE.—Crimson, 21s.
Received First-class Certificate.
METEOR.—Purplish rose, striped, 21s.
Received Second-class Certificate.
PASHA.—Fine large purple, 21s.
CONSTANCE.—Pale lilac, large, 21s.
SCARLET KING.—Vivid scarlet, 21s.
KING of LILACS.—Lilac, extra fine, 21s.
CLOTH of GOLD.—Orange scarlet, 21s.
MAJESTIC.—Purplish rose, extra large, 21s.
MISS KATE.—White, superb, 21s.
CALYPSO.—Salmon rose, 21s.
JESSIE.—White, distinct, 21s.
LORENZO.—Rich bright purple, 15s.

During upwards of 20 years' experience in raising Seedling Pelargoniums, so fine a set, the result of one season, by one raiser, has never before come under our notice.

DOBSON'S NEW CINERARIAS.
ACHILLES.—Bright crimson, white ring, 5s.
DUKE of CORNWALL.—White, rosy purple edge, 5s.
DARLING.—Rosy purple, pure white ring, 5s.
FAVORITE.—Mauve edge, white centre, 5s.
PRINCE ARTHUR.—Magenta self, 5s.
ROYAL PURPLE.—Shaded purple, 5s.
VANDYKE.—Rich deep crimson, 5s.

Ready the last week in October. Orders executed in rotation.
A general Collection of best sorts cheap.
J. DOBSON & SONS, Woodlands Nursery, Isleworth.

Rhododendrons.
JOHN WATERER begs to announce that his New CATALOGUE of Hardy, Scarlet, and other Choice RHODODENDRONS, as exhibited by him at the Royal Botanic Gardens, Regent's Park, is now published, and can be had on application. It gives faithful descriptions of all the esteemed varieties, as well as a Select List of Hardy CONIFERS, with heights and prices; also the leading kinds of EVERGREENS, ROSES, FOREST TREES, &c.
The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

New Hardy Rhododendrons.
JOHN WATERER begs to offer the following SIX RHODODENDRONS, which will be sent out in the month of October next. Price 21s. each, with the usual discount to the Trade. They will be found to be perfectly distinct from any other varieties in cultivation, and are such kinds as he can confidently recommend.
MRS. FITZGERALD, a very bright rosy scarlet, close compact truss, and good foliage.
SIDNEY HERBERT, brightest carmine, with dark eye, fine shape and free bloomer.
JOSEPH WHITWORTH, dark lake with dark spots, and immense truss with very fine foliage.
SIR ROBERT PEEL, dark rosy crimson, well and strongly marked with black spots, good foliage and habit.
THE WARRIOR, clear rosy scarlet, very large truss, and fine foliage.
SURPRISE, a light lilac, with immense dark marking, which renders it very remarkable.
American Nursery, Bagshot, Surrey.

JEAN VERSCHAFFELT, NURSERYMAN, Ghent, Belgium, begs to announce that his NEW SUPPLEMENTARY CATALOGUE (No. 8), very rich in Novelties and good Plants, is now ready, and can be obtained on application either to himself or to his Agents, Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street London, E.C

Vine Duchess of Buccleuch.
ROBERT PARKER has much pleasure in offering this distinct and valuable Early Grape, which will supply the long-felt desideratum of a White Grape with Muscat flavour, that may be grown and ripened with the same treatment as the Black Hamburgh.
The following Certificates and Prizes have been awarded at various London and other Exhibitions:—
2 Certificates of Merit.
3 First-class Certificates.
2 First Prizes in open competition for the finest flavoured Grape of any colour.
A DESCRIPTIVE CIRCULAR will be forwarded to applicants, and visitors to Dalkeith Palace Gardens during the season will have opportunities of seeing and judging of its merits, as a number of Pot and permanent Vines are now fruiting at that establishment. Orders are now being booked, and will be executed in autumn in strict rotation, the stock being limited
Strong Planting Canes, 21s. each; extra strong Fruiting Canes 42s. each. Exotic Nursery, Tooting, Surrey, S.

Vines, Vines—extra strong.
J. MEREDITH, The Vineyard, Garston, near Liverpool, begs to inform the public that he has a very fine stock of VINES of various sizes, both for planting out and fruiting in pots. The wood is thoroughly ripened, so that they may be forced early if necessary. The stock has been propagated from the Vines that produced the fine Grapes which have been so successful for the last four years at the London and Liverpool Exhibitions.

Vines—Extra Extra Strong.
FRANCIS AND ARTHUR DICKSON AND SONS have now ready for sending out some 1500 extra-fine well-ripened VINES of all the new and leading kinds, TRUE TO NAME. Many are as thick as the "little finger," and if planted immediately a season will be gained. A better lot of Vines they believe were never grown. Inspection invited. Price from 3s. 6d. to 15s. each, according to kinds and strength. List of kinds on application.
"Upton" Nurseries, Chester.

The Gardeners' Chronicle.

SATURDAY, OCTOBER 8, 1864.

MEETING FOR THE ENSUING WEEK.

TUESDAY, Oct. 11 { Royal Horticultural (Floral Committee), at South Kensington .. .. Noon

IN the years 1862 and 1863, a Pomological Congress for the EXAMINATION of CIDER and PERRY FRUITS, was held at Rouen. Before separating last year the members of the Congress decided that, as the study of these fruits in the session then terminated, had been productive of results that would unquestionably prove useful, a similar assembly should be held annually. Although the members of the Agricultural and Horticultural Societies of the departments where cider and perry fruits are cultivated, might be engaged in studying specially the productions of their respective departments, it was determined that there should be held annually a general meeting in some one of the localities most interested in the examination of the fruits in question, such general Congress to be held at the different places in rotation. It was further decided that the meeting for the present year should take place at Caen, from the 8th to the 13th of November.

The programme states that this Congress is for the special consideration of the Cider and Perry fruits of the north-west of France, consisting of the following departments:—Nord, Pas-de-Calais, Aisne, Oise, Somme, Seine-Inférieure, Eure, Calvados, Orne, Manche, Mayenne, Sarthe, Loire-Inférieure, Morbihan, Finistère, Côtes-du-Nord, and Ille-et-Vilaine. The exhibition will be opened on the 8th, and closed on the 13th of November, and on the latter day the prizes will be distributed. Horticulturists, landowners, and farmers are requested to send in collections of fruits, or even single fruits, remarkable for quality, beauty, or rarity. Exhibitions will be admitted collectively—that of the sorts of a district, parish, or country, for example; and the jury in making awards will make proper distinction between producers and collectors. Every exhibitor is requested to send three or four specimens of each variety of fruit, so as to show the different appearances which it may present, and to write legibly on a card attached to each variety the name which it bears in the part of the country where it has been produced. The subjects to be exhibited are to be sent to the Exhibition Hall, Hotel-de-Ville, Caen, on Monday, November 7, between the hours of 7 A.M. and 6 P.M.; and exhibitors are to inform the Secretary de Bureau de la Société d'Horticulture (Rue de Chanoine, 24, à Caen) a week beforehand, of the number of kinds which they propose to exhibit.

The Central Society of Horticulture of Caen and Calvados has decided that it will add, as accessory to this Congress, an Exhibition of TABLE FRUITS, consisting of Pears, Apples, and fruits of all kinds. Forms are sent out to be filled up by the exhibitors, containing columns for the number of the fruit; the name under which it is known; form of the tree, and nature of the soil if possible; growth and fertility; period of ripening; quality of the fruit; observations; and in the case of the table fruits there is a column to indicate whether from a wall or standard.

From the above it will be seen that our neighbours beyond the Channel are paying great attention to Cider and Perry fruits, of which there is a great variety, and some vastly superior to others. By the exhibition and examination of these as proposed, the good sorts will be brought into notice and substituted for the bad, and hence a general improvement may be expected to result. Such might also be the case in England, if similar means were adopted.‖

GRAPES really seem to be the offscouring of the earth as regards disease. Every week brings us something new, and unfortunately something for which we can suggest no remedy. We have now before us a portion of a fine bunch of Lady Downes' Grape, the only variety affected in a large house, which shows a form of disease which we have never met with before. The first indication is the appearance of a few white specks, which increase slowly, but surely, till the berries shrivel and dry up. Those before us, which are in rather an advanced stage of the disease, are pitted all over with little roundish shallow pits, not very different in colour from the rest of the surface. Most of these, when examined under a good lens, show one or two minute cracks, some of which, but not all, produce a little obscure white mould belonging to the genus Fusisporium, a genus which plays so constant a part in the wet form of the Potato murrain. Whether this little mould, however, is the cause or consequence of the disease we are unable from the materials before us to form any opinion. Sulphur has been tried in vain, and unless it could be accurately ascertained that the Fungus is really the cause of the disease, we are not inclined to recommend the application of any other chemicals.

These Grape diseases are so capricious in their attacks, that it is very difficult to come to any conclusion about them. They appear one year, and nothing more is known of them for many seasons, and it is frequently a single Vine only or a single variety which is affected. Spotting and shanking can in some measure be prevented by securing a healthy condition of the roots and free ventilation, but we have seen this year a fine healthy crop, probably in consequence of the dry sunny weather, in two houses, which have for years been notorious for the bad condition of the produce. Where a disease like that before us is partial in its attack, one must submit with a good grace, for there is many a form of vegetable disease for which in all probability no remedy will ever be found, and in which the only philosophy is to grin and bear it. *M. J. B.*

THE curious plants called MONSTERAS have occasionally fruited in our gardens, and one of them, M. deliciosa, at least, has been recognised as yielding a fruit which is pleasant to the taste, but little, if anything, has yet been effected in the way of bringing them into cultivation, with the object of thereby supplying an occasional variety of a very acceptable character in our not very varied English desserts. And yet they seem deserving of more attention from this point of view than they have yet received.

In our Volume for 1858 (p. 883) will be found a brief account of the fruiting of a plant of M. deliciosa in the Royal Gardens at Kew, accompanied by a woodcut, which we reproduce on our next page. The quality of the fruit in this instance was remarkably good.

A few weeks since we were favoured by Mr. EWING, gr. to O. F. MEREICK, Esq., of Bonham, with a sample of ripe Monstera fruit, accompanied by leaves and flowering specimens; and those-

quently another sample has been received from Mr. WHEELER, gr. to H. WESTCAR, Esq., of Hersham, whose flowering of the plant is recorded at p. 554 of our last year's volume. The fruit in these instances appeared to be identical with each other, and with that which we have figured. This renewed testing of its quality enables us to report without hesitation, that the fruit of the Monstera is, when ripe, most delicious, so much so, indeed, that we think it might well be introduced to our desserts as one of the choicest of luxuries.

In all the cases alluded to, the species appears to be that called M. deliciosa, a plant which Mr. EWING well describes as having a good deal the habit of a Pothos or Philodendron, that is to say, it has a scrambling mode of growth, especially adapting it for creeping over and about massive rockwork or rustic work or the back wall of a tropical house. The stout stem, as thick as a man's wrist, produces numerous pendent aërial roots, often as thick as one's finger, and from 30 to 40 feet in length. The plant at Bodorgan, the origin of which is not known, is believed to be about a dozen years old, and it is singular that an allied, if not identical species found in Amboyna, is said to come into fruit at about the same age, and to continue for an indefinite period. The plant is grown in a pot, is about 10 feet high, and is now fruiting for the first time. The leaf itself is highly interesting, the lamina, which is decurved at the top of the leaf-stalk, being upwards of 2 feet across, of a blunt ovate heart-shaped figure, and furnished between the principal veins with several series of oblong perforations, while the margin is deeply slashed half way to the mid-rib in a pinnatifid manner. "The young leaf is at first beautifully rolled up like a roll of paper, and as it keeps unfolding the points are held up by threads until they are able to bear their own weight. Without these filaments the tender portions of the leaf would not be able to support themselves."

The plant, as we further learn from Mr. EWING, "produces from six to eight flower-spikes at a time, these becoming changed in twelve months into an equal number of succulent fruits, of most agreeable flavour, and having a Pine Apple-like scent." The flower spikes are produced from the main stem on stalks about a foot in length, and are each about 8 inches long, and 5 inches in circumference. The sessile flowers which form a close cylindrical scarcely tapered spike or spadix, are arranged in a spiral manner, and consist of hexagonal closely-pressed fleshy bodies marked on the face with an oblong umbilicate scar representing the stigma, and with the short stamens protruding from between them. The spadix is wrapped round by a broad boat-shaped fleshy-coriaceous pale-coloured spathe very little longer than itself, and having its margin slightly revolute and its apex acute.

The spadix, when in the fruiting state, becomes sensibly thicker than when in flower, but without otherwise materially altering in its appearance. Each "fruit," that is to say, each succulent compound spike, attains about a pound in weight; it is of an oblong cylindrical form, about 9 inches long, and nearly 8 inches in circumference. It is found to be composed like the Pine Apple of numerous "pips," which are arranged in spiral manner around a central column, from which however and from each other, unlike the Pine Apple, they separate readily when ripe. When whole the surface of the fruit is marked out into as many separate hexagonal meshes as there are pips, each being from a quarter to three-eighths of an inch across, of a sage-green, somewhat depressed around the centre, which is elevated in the form of a small oblong scar. This green portion separates from the edible portion, when ripe, in the form of a rind or scale, nearly the eighth of an inch in thickness. Each pip has its upper end hexagonal as just mentioned, but below it assumes the form of a blunt square-ended wedge, so that it has a linear-oblong attachment of about one-fourth of an inch long, whence a spiral series of linear-oblong depressions, surrounded by short dark-coloured scales, becomes marked on the central column. The wedge-shaped pips are of a fine fibry texture, and full of a rich fragrant juice, the flavour and aroma of which is something like that of a Pine Apple and Melon combined, very luscious and pleasant to the taste, but soon satisfying. These pips separate readily, lifting easily out from among the dark-coloured scales by which they are invested at the base. The stalks both of the leaves and spadices are thickly covered with harsh papillæ.

Mr. EWING's Monstera luxuriates, he tells us, in the moist atmosphere of an Orchid house, and be a most curious and interesting plant, whether irrespective of its fruit-bearing quality, proves to

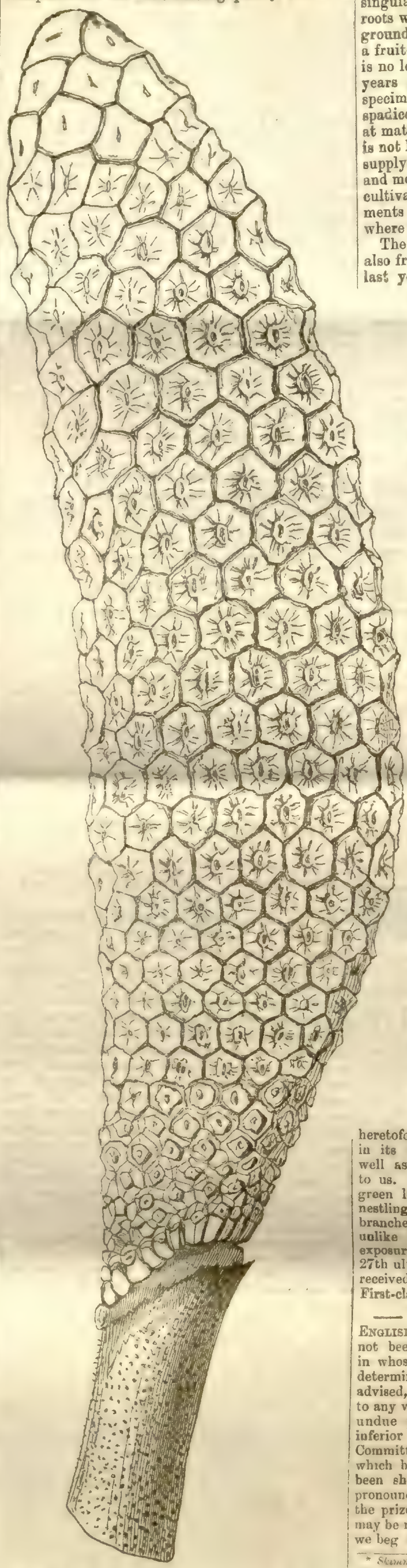

regarded from the point of view presented by its singular perforated and gashed leaves, the long roots which it sends out into the air and along the ground, or the peculiar inflorescence. Viewed as a fruit-bearing plant the interest of the Monstera is no less marked; for although the plant is some years growing up to a flowering age, and large specimens produce but a limited number of spadices, and even these are 12 months in arriving at maturity, and although consequently the fruit is not likely to be produced in any quantity, yet as supplying a novel article of dessert of the richest and most *recherché* character, it might be usefully cultivated for its produce in those garden establishments where a variety of fruits is prized, and where space is not too much restricted.

The sample forwarded by Mr. WHEELER was also from a plant which flowered for the first time last year. This bore two spadices, which had been a twelvemonth in ripening. The fruits in this case were of the following dimensions:—Length, 7¼ inches; circumference at an inch and a half from the base, 7¾ inches, and at an inch from the apex 6¼ inches. All who had tasted them pronounced them delicious.

We venture to hope, therefore, that by thus inviting special attention to the subject, this Monstera may become more generally grown for the sake of its fruits.

WE have just received some of this year's shoots of the diseased BLACK CURRANT trees, which we noticed in this Journal, April 16, 1864. The disease seems still more prevalent than ever, and, as we stated before, is clearly not dependent on any sudden change from drought to moisture. As in the former instance, every bud seems to have a tendency to start, and to produce a short unhealthy twig instead of being contented to remain and bear fruit the following year. Another peculiarity consists in a great portion of the leaves, especially those above, being wedge-shaped at the base, while many of them are so small as to give the plant a very peculiar appearance. The cause remains as obscure as ever. We have in vain attempted to get the cuttings to strike in the hope of being able to study the malady more effectually. *M. J. B.*

— OUR readers doubtless will remember that in the early part of the year we recorded the success which had attended the efforts of Mr. STANDISH to present our stay-at-home gardeners with a view of the berried Aucuba as seen by travellers in the far East. We have now to chronicle his exhibition of another most beautiful Japanese evergreen, with berries of the brightest vermilion red, and one which must become a valuable acquisition for our gardens and shrubberies. This also, like the Aucuba in question, was one of Mr. FORTUNE's discoveries, and is a species of Skimmia,* which proves to be most remarkably distinct from all other Skimmias as yet known, in the remarkably oblate figure of its bright red berries, so obviously different from the dull red oblong fruits of the Skimmias we have heretofore possessed. It is also remarkably distinct in its foliage, which is of a different texture, as well as in its habit, from the other species known to us. It is a free-growing shrub, with dense clear green leaves, the panicles of bright-coloured berries nestling amongst the foliage at the ends of the branches; and we are assured by Mr. STANDISH that unlike the other species we cultivate, this bears exposure to the sun. The parent plant was shown on the 27th ult. at the meeting of the Floral Committee, and received the unanimous and unhesitating award of a First-class Certificate.

— The prize offered by us for a SEEDLING, ENGLISH ROSE (see p. 699 of our volume for 1863) has not been awarded this year. The Floral Committee, in whose hands the prize was placed, has come to the determination, in which we have no doubt they are well advised, that a prize of this kind ought not to be given to any variety which was not of first-class character, lest undue prominence should be given to something of inferior quality. In this view we concur. The Committee has also decided, that none of the seedlings which have been submitted to it during the year, have been shown in a condition which will warrant it in pronouncing them first-rate. It is on this ground that the prize has been held back. We trust the growers may be more fortunate in their subsequent efforts; and we beg them distinctly to understand that the prize is

* *Skimmia oblata*: leaves rigid coriaceous obovate elliptic acuminate; flowers * * * *, in panicles; berries oblate, of a bright glossy deep vermilion red. *M.*

not lost to them by the accident of its not being now awarded. It is our wish to give the five annual prizes of 5*l.* each, as originally announced, provided that flowers of sufficient merit to satisfy the Floral Committee are forthcoming.

—— In the text which accompanies the beautiful figure of Phalænopsis Schilleriana, given in Van Houtte's *Flore*, occurs a correction of the statement with respect to the habitat of this fine plant, which is made in Warner's *Orchidaceous Plants*, which, as bearing somewhat on the treatment of the plant, it may be useful to record. In that work Phalænopsis Schilleriana is reported to grow in "moist shady places," but, observes M. Van Houtte, this contradicts the evidence of M. Porte himself, the discoverer of the plant, to whom even Mr. Warner must be indebted for his examples. M. Porte expresses himself thus:—The Phalænopsis amabilis in the Philippine Islands inhabits small and large forests in localities where the season of dryness is more or less regular, but one never meets with it in the forests which are sombre and constantly moist. The Phalænopsis Schilleriana is met with under nearly the same conditions, except that ordinarily it is found on the declivities of the mountains, at a height of 300-400 metres (about 375—500 yards.) Thus, according to M. Porte, P. Schilleriana affects a higher position than P. amabilis, which he says is never found in the sombre and constantly moist forests, and consequently is even less exposed than that to stagnant moisture.

DR. DAUBENY ON THE DECAY OF SPECIES,

AND ON THE NATURAL PROVISIONS FOR EXTENDING THEIR DURATION.

[A Paper read at the Natural History Section of the British Association in Bath, September 1864.]

It is usual amongst naturalists to distinguish between animals and plants, by saying that the former have a definite limit to their existence assigned to them by Nature, whilst the latter have not.

But in reality both are equally subject to that decree which has gone forth from the beginning of Time, and which renders death the inevitable termination of all created existences.

Animals, even if assumed to be protected from all external causes of injury, and from derangements of function incident upon errors of diet, or excesses of every kind, would perish eventually through the mere decay of their essential organs.

Nor would plants, regarded as individuals, be exempt from the same fate, although their existence may appear capable of indefinite extension, owing to the production of new individuals springing from previously formed organisms.

But it seems to be also a law of Nature that no organism can repeat itself indefinitely without becoming in the end worn out.

Thus cuttings from a plant are so apt to degenerate when grafted upon a foreign stock, that Andrew Knight actually imagined that all trees belonging to the same parent partook of one common individuality, so that when the original stock from which the cuttings were taken is worn out, the grafts also perish.

The hypothesis alluded to, although emanating from so high an authority, will probably meet with no supporters at the present day. Indeed M. Decaisne, the learned Professor at the Jardin des Plantes, has lately stated, that many varieties of Pear trees retain their characteristic properties after a century or two unchanged. He instances the Crassan, the Chaumontel, and others.

Dr. Lindley, also, in his "Theory and Practice of Horticulture," Ch. 17, has given the weight of his authority to the same side, and has adduced abundance of instances, in which plants propagated by cuttings have continued for a long time unchanged.

But, on the other hand, many practical cultivators adhere to the position, that certain plants, at least, wear out after long cultivation, of which, perhaps, the most trustworthy statement is that given by Mr. Masters, of Canterbury, in the *Gardeners' Chronicle* for 1853.

His long experience leads him to the conclusion, that many of our varieties of Apples, such as the Golden Pippin, Lemon Pippin, &c., have dwindled away, and even when they have maintained themselves in a state of pristine vigour, this has been brought about, according to Dr. Lindley, by transplanting them into a foreign soil, as into France and America, and then bringing them back again after a time to their native air. Granting, then, the decay of plants propagated by cuttings within a limited time to hold good with respect to any varieties at all, analogy would lead us to extend the same inference to the rest, and to suppose, that they differed only in a longer period of duration being assigned to their existence, and thus being regarded as permanent. At any rate the recent failure of Potatos and of other plants which are propagated by cuttings, seems to point to such a law of Nature as that which I began by announcing; and, if this be the case, any cause which brings about a certain degree of variation from the primæval type ought to be favourable to the duration of the species.

I am therefore inclined to think that one subsidiary end aimed at in the reproduction of plants through the instrumentality of parts analogous to the sexual organs of animals may have been to aid in producing these salutary though minute variations from the original type.

That the organs in question are in some cases essential to the perpetuation of the species cannot indeed be disputed.

Plants, such as Annuals, of which the roots, as well as the stem and branches, die at the expiration of a certain period, might be speedily exterminated if they did not produce seed. And even Perennials could hardly spread far, if limited to the range within which they are capable of extending themselves by suckers or offshoots; whereas through the agency of the winds, of insects, and the like, their seeds are carried to an unlimited distance, so as to bring about the dispersion of the species to any conceivable extent, unless checked by external obstacles, or by the interference of other plants possessing superior vigour of constitution, or greater fitness for the soil and climate.

But it is plain, that even amongst phanerogamous plants there are many, such as that American pest, the Anacharis, which in spite of all our efforts invade whole continents by the mere division of their parts; whilst others, like the Weeping Willow, do the same through man's assistance, although only one of the sexes may have been brought over from its original birth-place.

And amongst cryptogamous species there exist in the lowest grades no other means of propagation, except that of a simple division and development of the primary cell; whilst in the higher ones, it is found that the two processes go on, as it were, hand in hand, and seem to be equally intended for bringing about the production of new and distinct individuals.

Hence we may be permitted to seek out other uses for the sexual organs of plants besides that of the mere reproduction of the species, and it was with a view of pointing out what these might be, that I communicated to the Natural History Section of this body, at their last meeting in Oxford, a paper entitled, "On the Final Causes of the Sexuality of Plants," which was afterwards published as a separate pamphlet.

In the original paper I had stated rather too broadly, that no deviation from the primæval type could occur in a plant, except by sexual reproduction—a proposition which I modified in printing the communication afterwards, by admitting the existence of a few exceptions to the rule, in allusion to the cases of sporting, which occur occasionally in flowers produced from branches, as well as in the case of seeds.

The well-known example of the occurrence of isolated blue bunches of Grapes on stocks of white varieties, of isolated bunches of red Currants mingled with the white ones of the same stock, of isolated pure sulphur-yellow Roses amongst variegated flowers of the red Austrian Briar Rose, afford proofs of a tendency to variation, which can hardly be referred to the influence of pollen from a foreign source, and may therefore be regarded as illustrative of this point.

There is, however, one difference between the two cases, namely, that whilst in a bud the deviation from the primæval type is exceptional, arising probably from some morbid condition of growth, or from some modification in the external circumstances under which the plant had been placed, in a seed it is of constant occurrence, although existing in various degrees of intensity.

It may be stated as a general law, that no one individual, animal or vegetable, produced from an egg or from a seed, was in every respect like either of its parents; in all cases some divergence from the primitive type being brought about by the influence of the male organ upon the embryo of the female. Hence the existence of floral organs in plants, no less than the distinction of sexes in those animals of lower grade, which nevertheless propagate their kind without any sexual union having occurred, may be regarded as a provision against too great an uniformity in the aspect of Nature, and may be recognised, even by those who are unwilling to bind themselves to the acceptance, in its totality, of Darwin's hypothesis respecting the origin of species, as an expedient for increasing the number of originally created forms by means of the varieties in this manner introduced.

And amongst the ends aimed at by this arrangement, may be that of a provision for a longer continuation of the species than would otherwise be possible.

One obvious effect of this introduction of varieties more or less diverging from the primæval type, is one which the disciples of Darwin will be the first to appreciate, namely, that such slight differences in structure and constitution may contribute towards preventing the species from dying out, by giving rise to a progeny, some members of which are better adapted than their parents to live under any new conditions of climate, &c., to which they may be subjected.

For as the external circumstances are undergoing frequent alterations, so it may be necessary, that the organic beings themselves placed under their influence, should undergo a like modification.

Many years before Mr. Darwin brought forward his theory of natural selection, with which these facts, it must be confessed, harmonise well, Dean Herbert, in his Paper on Hybridisation,* had expressed himself as follows:—

"We cannot say, that the order to multiply after their kind meant that the produce should be precisely similar to the original type; and if the type was allowed to reproduce itself, who can pretend to say how much variation the Almighty allowed?

"Who can say, that His glorious scheme for peopling and clothing the earth was not the creation of a certain number of original animals and vegetables, predestined by Him in their reproduction to exhibit certain variations, which should hereafter become fixed characters, as well as those variations which even now frequently arise, and are nearly fixed characters, but not absolutely so, and those which are more variable, and very subject to relapse in reproduction."

But I am tempted to believe that these and other provisions for varying the type of a species may have a further object in view. For even when we have reason to believe the external conditions to remain unchanged, a gradual deterioration of the race would seem to occur from causes arising out of its own organisation, which deterioration would appear to be more or less rapid, according to the degree of variation incident to the species, taking place soonest in plants propagated by cuttings, and more slowly in those multiplied by seeds.

Dr. Lindley indeed lays it down as an axiom, that whilst individuals are mortal, species are eternal; but of course he cannot mean to use the latter term in its strict sense, or as implying more than that they will endure so long as the external conditions remain unaltered; and even this last position seems hardly reconcileable with the facts which he records as to the failure of Apple trees and other vegetables from some internal principle of decay.

With all deference therefore to this and other great authorities, I cannot but think the question still open to discussion, and for my own part am tempted to believe, that the blights which have affected the Potato and the Vine were primarily the consequences, rather than the causes, of the decay or unhealthiness of the plants which they infested, and would suggest, that their occurrence might arise from the circumstance, that both the plants alluded to are propagated mainly by cuttings; regarding the diseases which have proved so fatal in these two cases, no less than the fact already alluded to of the dying out of certain fruit-trees, as indicative of a law of Nature, which forbids the long continuance of a race, except its vitality be renewed by frequent variations from the primæval type.

(*To be Continued*).

* Journal of the Horticultural Society, vol. ii., 1847.

ORNAMENTAL PLANTING.—No. IV.

Winter.

It may probably startle some of my readers when I essay to speak of the "Beauties of Winter." But the real lover of nature who possesses the *mens sana in corpore sano* will find in the changes of the seasons pleasure rather than discomfort. To an individual thus soundly constituted, the balmy breezes of spring, the noontide heat of summer, the whirlwind of autumn, and the snows of winter, with their varying preliminaries, accompaniments, and sequences, are only so many fresh sources of knowledge, gratification, and delight.

To draw on one's own experience, I remember riding over a bleak plain one December day many years ago, in face of a biting north-east wind, with the thermometer 20° below the freezing point. Shortly afterwards I entered a wood of Scotch Pines, and was struck with the change of climate—a change of which the thermometer gave no adequate indication, and which deeply impressed me not only with the sense of increased personal comfort, but also with the value of shelter to the young and delicate objects of vegetable life. I thought then, and have thought since, that the horticulturist who measures the probable influences of the weather by the thermometer alone, does not rise to a correct estimate of the powers he has to contend with.

Thus, while I regard with no antipathy the biting frost and the searching wind, knowing that these things are of vast importance in the order of Nature's laws, it is my purpose to advocate the use of those objects and agencies which art and science have placed at our disposal to modify and subdue those influences uncongenial to the comforts of an English home.

The real value of SHELTER can scarcely be too highly estimated in many of the delicate operations of modern gardening, and the idea of it when associated with warmth is no less pleasing to the mind in winter. On both grounds the free use of evergreens when forming new gardens or plantations is strongly advocated; they are invaluable for the shelter they afford, and the idea of warmth which they convey. But a garden or pleasure-ground, planted wholly with evergreens, few would be bold enough to advocate; such would be heavy in summer, and monotonous in winter. Evergreens may abound, but they must not superabound. To abound even, they require to be judiciously varied. The free and spreading forms should be mingled with the formal; the large-leaved and small-leaved kinds must be properly arranged and adjusted; the light green, the dark green, the glaucous and the variegated, must be represented in varying proportions to suit the character of the mansion and the surrounding scenery. A group of the Golden Holly forms a glowing picture in winter; the Silver Holly with its clusters of bright red berries is no less pleasing; the yellow green of the

Laurel, and the black green of the Yew, produce a beautiful contrast both in form and tint, and they may at times be brought in contact for the sake of contrast, and at times be separated and softened down by the intermediate tints of light and glaucous green.

But the beauty of our gardens out of doors in winter need not be wholly dependent on the forms of trees and the tints of their foliage. There are some few plants which bear berries, and these should be introduced without stint. Besides the common form of Holly so familiar to us through its bright red berries, there are also the yellow-berried and the orange-berried varieties, both noble trees, well worthy of general cultivation. Then there are the Thorns, alluded to in a former paper, which retain their fruit through a part of winter; the Pyracantha, the Arbutus, the Skimmia, the Cotoneaster, the Pernettya, the Privet (both black and yellow-berried), the Ivy, and others.

The beauty of the bark of certain deciduous trees in winter is also a feature which should not be lost sight of. The true Silver Birch, glittering in the sunshine and bright even in the gloom, is one of the most prominent of these; the golden-barked Ash, the yellow, purple and white-barked Willows, the red-barked Dogwood and the snake-barked Maple belong also to the same category. To those who are professionally interested in, or may have the leisure to study the subject, the spray of the leafless trees in winter opens up a boundless source of pleasure and instruction. Infinite is the variety of Nature; every kind of tree differs in the form, character, and direction of the spray, and it is at least a harmless pleasure to engage mentally in the disentanglement of the sinuous masses or to track their labyrinthine paths.

Again, there are trees whose leaves, though they change, remain on the branches during winter; the Beech, the Hornbeam, and the Turkey Oak are familiar examples of these, and their dress of rich russet brown provides both shelter and warmth.

Lastly, there are some few shrubs and trees which blossom even amidst the storms of winter; the Andromeda floribunda, with flowers chaste and pure as driven snow; the Chimonanthus, possessing at once a rare and delicate beauty, and an unapproachable fragrance; the Cornus, the Forsythia, and the Jasminum nudiflorum, belong to this class.

These are the beauties of Winter, and by a wise use of them the gardens of England, now often so bare and cheerless at that drear season, may be made bright, pleasant, and joyous. Comparative warmth and comfort may be secured within the charmed circle of the *sheltered* English home, while in the distance we hear "the stormy wind howling among the trees and raving over the plain." My next essay will form a classified *list of materials for ornamental planting. William Paul, Waltham Cross, N.*

HYPOCAUST HOTHOUSES.

I WRITE a few lines to accompany the more complete plans of my new hothouse, in order to report a few matters that have occurred since it was erected which may be useful to those who wish to erect similar buildings.

First, I have devised (and it has been tried by a neighbour) a better mode of constructing the floor than that which I at first adopted, viz., supporting the whole floor till the cement had set, by a wooden stage. It is much better to make the floor beforehand in large blocks, sufficient to reach from one of the intended supports to another; and, after leaving these blocks, or rather slabs, to harden for two or three days, to lay them in their places like paving-stones. The edges must be left as shown in Fig. 2 annexed, and the spaces filled in afterwards. If only one-third of sand is used, the cement will set in two days—if half it will require longer.

It is not easy to ascertain the cost of what one's own workmen build, as different jobs get mixed together, and the result is always more or less conjectural. My neighbour's new house having been built in the ordinary way by a tradesman, I am able to say that his floor, 20 feet by 10 feet, cost 6*l.* 2*s.* 6*d.*, or 3*l.* a square. But this included 17*s.* for a coating of cement all over to imitate stone pavement, leaving about 2*l.* 12*s.* 6*d.* a square for the tiles themselves, as used for a Vine border, when they are covered with earth and require no decoration.

The cost of the furnace may be much diminished when it is only of moderate size. The heat not being excessive, very little fire brick need be used. The horizontal flue is not required when the chimney can be placed opposite to the fire, and I am not sure that it is necessary in any case. When the fire and the chimney are at one and the same end of the house, a low partition of 4-inch work, continued to within 3 feet of the farther end, and then left open, may be used with advantage as a support to the floor, instead of the piers used in my own case, provided the house is not more than 12 feet wide. My neighbour's house is built in this way, and answers perfectly—the fire-place being merely one which once warmed a copper. It is not intended for Grapes, and has no Vine border, but I doubt not that a Vine border would work well, if the heat were admitted under it by means of openings in a second wall of support parallel to the other. Tile floors of this description are very commonly used by architects for other purposes, and it is ascertained that they will bear a considerable weight if supported by a rigid support every 6 feet. It is quite unnecessary to have a

Fig. 1.

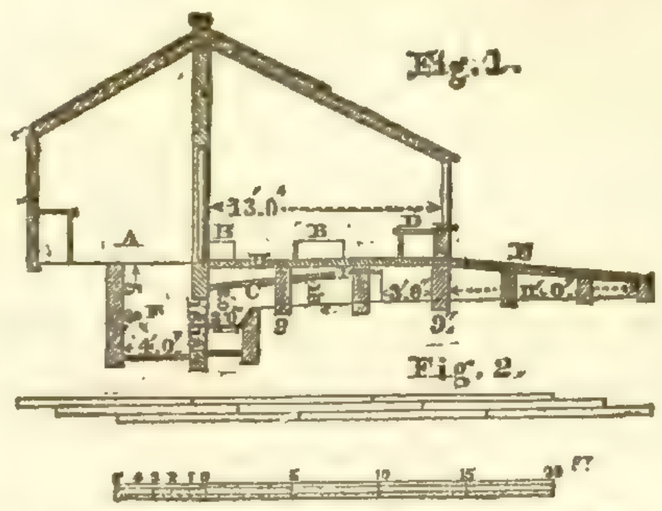

Fig. 2.

FIGURE 1.—A, Potting-shed; B B, Borders for Pines, Figs, &c.; C, Roof or top of Horizontal Flue; D, Stage for Plants; E, Paving of Tiles under Vine borders; F, Stokery of Furnace; H, Floor of Greenhouse [see an enlarged plan of this at Fig. 2.]; I, a piece of Cast Iron, 2 ft. 6 in. square, placed over the mouth of horizontal flue to disperse the heat (this is not required where the house is not so large as to render a very large fire desirable).

FIGURE 2 shows how the tiles are arranged in three courses with a view to strength.

continual fire. The air chamber underneath retains its heat for several hours if the furnace door and the damper of the chimney are closed when the fire goes

Fig. 3.

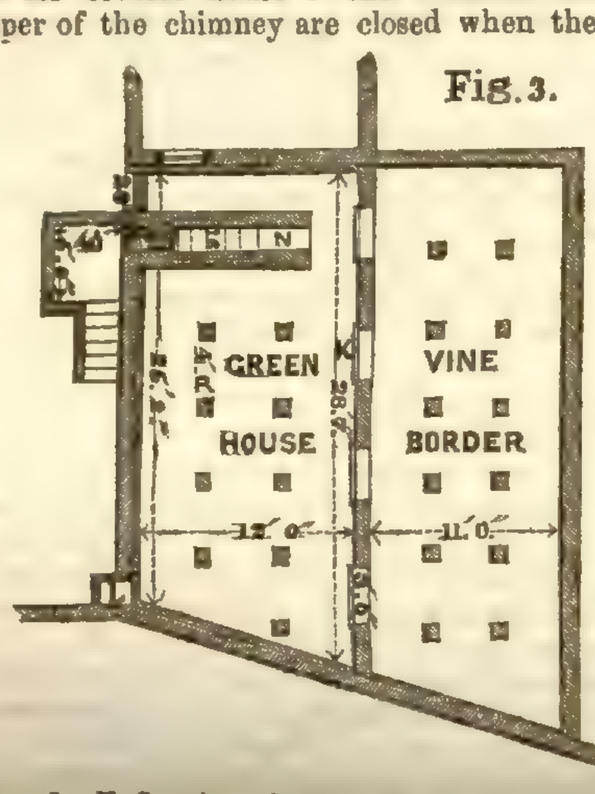

FIGURE 3.—K, Openings furnished with Shutters to prevent the heat passing under Vine border when not required; L, Chimney, furnished with a damper to regulate the draught; N, horizontal flue.—N.B. It is found when the sun becomes powerful that a sufficient supply of heat is produced by lighting the fire for a very short time in the evening, and then closing the door of the furnace and the damper of the chimney. The heated tiles, aided by the warm air in the chamber, which is 2 ft. 6 in. high, and extends under the whole house and Vine border, retain their heat for many hours.

out. I hope these fresh particulars may prove useful. *Charles Wykeham Martin, Leeds Castle.*

[We have no doubt that Mr. Wykeham Martin's plan is a most important step towards the construction of cheap and at the same time effective hothouses, and that it will ultimately be adopted in some shape or other. Something of the same kind has, indeed, already been tried successfully in other quarters, and one of our most eminent nurserymen and fruit growers has examined it thoroughly and highly approves of the system. The whole difficulty of construction is obviated by building the floor on a firm stage, which may be removed in a few days, leaving an extremely strong pavement, which does not readily part with its heat when it is once thoroughly warmed, added to which the temperature may be very easily regulated.]

BEES, HONEY, AND HIVES.—No. IV.

(*Continued from p.* 820.)

[The following passages are from the *Times* "Beemaster's" rejoinders to the comments of Mr. Woodbury, printed at p. 820.]

"IT is well that bees have not learnt to read all that your correspondent, Mr. Woodbury, says about them, or they would send a battalion to Mount Radford, Exeter, and ere they returned would make their calumniator exhaust all his remedies for bee stings. I am immensely jealous for the honour and good name of my bees. Mr. Woodbury says that 'whatever virtues bees possess, honesty or even the slightest respect for *meum et tuum* is not among them.' A grosser libel on the apiarian race was never perpetrated. Their respect for *meum* is so intense that they will defend their queen and home to the death. Their respect for *tuum* is so entire that they never touch the property of another unless in circumstances which would justify men as well as bees in seizing the property of another. If Mr. Woodbury robs one of his stocks of its stores, or takes away for the market or his table too much of their accumulated wealth, can it be expected that 6000 or 10,000 bees will lie down and die martyr deaths in order to illustrate his theory of *meum et tuum?* He starves his bees, and when they forage denounces them as thieves. If a bee-master does his duty by protecting his hives, feeding the unfortunate and weak, no such freebooters will be found.

"Mr. Woodbury says, 'Mr. Harbeson, a sturdy citizen of the American Republic, considers the queen a simple machine for laying eggs.' He has only to extend this free philosophy, to see in Rose bushes machines for growing Roses, in birds machines for building nests, in Tennyson a machine for spinning poetry, and in Lord Palmerston a machine for turning out speeches. His exaggerated talk about bees being regicides is not true. That the queen, who has precedence of birth, destroys the princess next to her that might be her rival, I admitted and deplored as sad. But that bees are regicides is not true. They never kill their queen; they love and are loyal to her, and obey her commands. I said they hate republicanism and so they do, and so do I. Mr. Woodbury says cottagers cannot make Ayrshire hives. They do cleverer things. At all events, they can try. The Ayrshire hive is octagonal, I admit; but all I said was that my success as a bee-master led me to suspect they prefer a box similar to their combs, and therefore I intend this winter to have several hexagonal beehives.

"Your correspondent says, 'Common sugar (lump sugar is best) does not require to be exposed to a heat of 300° to be available to bees.' No wonder his weak stocks plunder his strong ones, for bees cannot and do not eat lump sugar or brown sugar. Their lambent organisation renders it impossible. I spoke of feeding with pure sugar, and stated that it is available in the shape of barley sugar only. That it can be presented as boiled up in beer or water I taught when I alluded to its being dissolved in ale. But whether in water or ale it smears their wings, clogs their feet, and is vastly inferior in all respects to barley-sugar. Mr. Woodbury adds, 'if any one has a swarm consisting of only 5000 or 6000 bees, let him not take the trouble of hiving it.' I mentioned 5000 or 6000 bees as a swarm. It is the lowest, I freely allow. But I will add to your correspondent's knowledge. I had a cast thrown off last year, at the end of June. I despaired of its weathering the winter, but I resolved to feed it richly with barley-sugar till March. The *maximum* number of bees was 5000. It filled the lower box with at least 40 lb. of honey by the middle of June this year. The bees had increased immensely. I opened the communication with a large super. This super has in it now not less than 36 lb. of the whitest cells and honey I ever saw. I have shown it to many whose mouths watered for a slice of it. I never join stocks. We feed cattle on oil-cake; why not feed weakly stocks with barley-sugar?

"Your correspondent says, again, 'Bees are never nursed by other bees; they are totally devoid of sympathy.' My reply to this is, *I have seen the disabled* bees tended with exquisite and unwearied attention, rolled in the sunshine on the bee board, and carried or helped into their homes. His testimony is negative, mine is positive.

"Reaumur, the eminent naturalist, observes that after the queen regnant has become a mother, 'the bees are constantly on the watch to make themselves useful to her, and to render her every kind office; they are for ever offering her honey; they lick her with the proboscis, and wherever she goes they form a court to attend her.' Huber writes—'I have seen the workers lavish the most tender care on such a queen.' These are facts noticed and recorded by the two most eminent and careful apiarian naturalists. They are, in the judgment of every one able to appreciate weight of evidence, conclusive disproofs of Mr. Woodbury's material and mechanical theory.

"Allow me now to select one or two of the most important practical inquiries which I have received. One asks, 'How am I to begin an apiary?' Let me tell him. Buy a stock in August or September for 20*s.*, taking good care that it is not old and weighs (inclusive of straw hive) not less than 30 lb. Erect a shed with sloping roof projecting sufficiently to carry the rain beyond the alighting board of the bees. The length may be 12 feet, the height about 5 feet, and width 2½ feet. Divide it into four equal sections or chambers. Make an exit in each 3 inches long by 2 inches high. Place your hive in the centre of one of them, with its opening directly opposite the opening in the chamber. Fix below each opening in the shed a bees' landing-board, sloping at an angle of 25°. If you can afford it, buy four stock hives. Next May cut out the top of each as I directed in a previous letter. Place on it a board with circular hole or a bell-glass rather narrower at the lower part than at the centre; cover each with its plaid nightcap, and you will have plenty of delicious honey in 1865. If, however, you do not mind loss of time, build your shed this autumn; make it smooth inside to discourage spiders, and next April send round the country to cottagers keeping bees and engage four good swarms, which ought not to cost more than 10*s.* each. In carrying them home pin over the entrance hole a piece of gauze, tie a towel or napkin underneath, fastening the four corners at the top, and do not jolt the young family unnecessarily. If the swarms can be had in May, and if it prove a fine summer, you may place a glass on each about the end of June. Do not forget the old adage—

> "A swarm in May is worth a load of hay;
> A swarm in June is worth a silver spoon;
> A swarm in July is worth a fly."

If your swarm is an early July one, you may save it by pushing three or four sticks of barley sugar into the hive by the exit aperture once a fortnight till March

Any little expense in feeding introduces you to your bees and helps them wonderfully, and is never a loss. If you want to tempt the bees to feed in your own garden, sow Mignonette, Salvia, and Sainfoin; plant plenty of Raspberry, Gooseberry, and Currant bushes. They like Lime, Poplars, Apple blossoms, Thyme, and above all, Borage. Bees never touch double flowers. Should the early summer prove very dry, place near your bee-shed two or three soup plates half full of water, taking care to put in as many pebbles as each will hold. The bees require stepping-stones for their tiny feet, and otherwise they are necessary to save them from drowning.

"I am giving directions to those who desire to work economically. But if you can lay out a little as an investment, and wish to combine interest and pleasure with profit, you cannot do better than call on Neighbour, either in Regent Street or Holborn, where I have seen many varieties of hives, of different prices and all of good workmanship. The lateral system is the most elegant, but least productive. I do not like the nadir system. Bees naturally ascend or traverse the same plain, but mostly prefer ascent. 'Excelsior' is their favourite aspiration.

"In answer to another inquiry—do I approve using stupifying fumes as of Puff-ball, in order to expel the bees from supers full of honey?—I say certainly not. It may not injure the bees if judiciously administered. But it is not necessary. The bees will leave the super on its being detached from the hive and carried to a little distance, and will return immediately to their home and their queen. The only case in which I have recourse to it is when any portion of the comb through accidental admission of wet, has become mouldy. A few whiffs of Puff-ball may be injected by means of an instrument sold for this purpose, during five minutes. As soon as the humming noise ceases, lift the hive and cut out the mouldy portion of the comb, replace it, and in 20 minutes the bees will again be at work. This is the only case in which I would employ either this or tobacco smoke, which answers as well.

"Your apiary or bee-shed should be placed as near your dwelling as possible, sheltered from the north and north-east winds, and at the greatest possible distance from poultry. Frequently, but quietly and unobtrusively, visit them, watch them at work in your bee-glasses, or by windows in your bee-boxes. Let your children play beside them. They are fond of children, and unless violently irritated they will not injure them. I can state this from very ample experience. At the same time it is proper to state that some few persons are so offensive to bees that they must not approach them. Plenty of soap and water and fastidious cleanliness are essential to a bee-master's continued popularity with his apiarian family."

Home Correspondence.

Land-fall in Norfolk.—On Thursday, Sept. 29, a singular phenomenon took place in a field on the farm of Mr. Hastings, of Longham, in Norfolk, on the estate of the Earl of Leicester. Suddenly, and without visible warning, for Mr. Hastings had driven over the spot 20 minutes before, the ground gave way, and there appeared a chasm of 30 feet in diameter, and of more than 17 in depth. Mr. Hastings may be said to have had a narrow escape; for if the surface had sunk, as it might well have done, beneath the concussion of his gig, he must have been buried alive. At first there was no sign of danger to the adjoining surface, but as crowds of country people have flocked to the spot, thinking that they were visiting the scene of an earthquake, the land under this unusual pressure seems likely to give way in other places. Cracks are plainly seen for a radius of 50 yards in every direction. From the immediate appearance of water it is supposed that the ground has been undermined by a subterraneous stream; but the science at command in a country place can do no more than guess at the cause of the phenomenon. One side of the chasm now looks as if it were the opening of a cave, the earth above which is a mere crust. There is a sensible depression of a foot or two over quite an acre of ground. Perhaps the cause is to be sought in the extraordinary dryness of the land, the like of which Mr. Hastings cannot remember during his occupation of half a century. Can any of your numerous readers assign any more probable cause for this singular and very unpleasant occurrence? *A. H., Oct. 4.*

Anacharis Alsinastum.—Your Paper contained a notice of the flowering of this plant in stagnant water near London during the hot weather in May. I had never seen it in blossom in the Thames until last year, when it bloomed abundantly, throwing up its white threads, terminated with their singular blossoms, from a considerable depth. They were all pistilliferous, but I noticed certain processes alternating with the pistils, which appeared like abortive stamens, as if the plant had some inclination to hermaphroditism. I recur to the subject because this year's observation enables me in rather an interesting way to fix pretty accurately the temperature needed to force this plant into bloom. Last year the time was the middle of August. The mean temperature of the river during July had been 66°, and during the week previous to the blossoming it had risen to 68°. This year the mean temperature of the river during July was only 64°; it rose to 67½° on the 6th of August, and numerous white threads began to show themselves; on the 8th, the temperature began rapidly to decline, and the threads disappeared without producing a single blossom. *J. S., Streatley Vicarage, Oct. 5.*

Relative Strength of Deodar and Cedar of Lebanon.—In your Paper of October 1st (p. 943), I observe an interesting article on this subject—interesting in so far as it shows how the timber of the two kinds of trees named may be assimilated, but I think it by no means shows their relative strength. It is well-known that the Cedar of Lebanon, grown in this country, is often as soft as the most degenerate variety of Scotch Fir, while small branches of Deodar have the appearance of yielding firm, resinous timber of great strength, like that which the tree has a reputation for in the Himalayas. In testing the strength of the Deodar and Cedar wood yielded by the slab from the engrafted tree, I think the Deodar gets scant justice, notwithstanding the statement of the writer that "in the present sample we have an identity of condition which can very rarely be secured. Age, soil, exposure, climate, treatment, drainage, everything is the same, down to the very roots." It is surely a very artificial mode of arriving at the conclusion to deprive the Deodar of its own roots, and place it on the stock of its soft-wooded relative; thus the timber which was produced by the Deodar was nourished, and sustained, through roots and channels not its own, and may well be supposed to have been deprived of that copious flow of turpentine and rigidity of fibre, so important in the test of strength. Besides all this, I expect some will agree with me in thinking, that the sap which ascended from the root and was elaborated in the leaves of the Deodar, and thence descended, forming the timber of the Cedar portion of the trunk, may have formed it of better quality than had it been prepared by the ordeal of its own leaves, thus showing, as stated in the article referred to, only a difference of about one-sixth in favour of the Deodar. I further think there is hardly room in this test, to point to the identity of age, for the stock must have been considerably older than the scion; and even supposing the timber of both sorts had been formed since the operation of grafting, is it not likely that a difference would arise to some extent from the medullary rays emerging from centres of various ages? Within the last few years the Deodar has not been in such favour as formerly, and is not planted to the extent it deserves; this has arisen from unfavourable seasons, sudden changes of the weather, and the attacks of Fungus, similar to the casualties which overtake the Larch. Still it is one of the most valuable timber trees lately introduced, well adapted for growing as a succeeding crop in thin plantations, where it has shelter and ordinary good soil, excellent for a cover to game, and thriving when partially shaded better than any other of the tribe, except the Silver Fir; and although I have not been able to test its durability as a post or railway sleeper, I expect it is far greater than that of the Oak, or any other tree we have of the same age. It was introduced with this character respecting its incorruptible power, a quality far more valuable than its strength in resisting weight, the last of which I believe to be very great, when the timber is thoroughly matured. *J. G.*

Underwood for Larch Plantation.—In answer to "H. S. M." I may say that if the soil, gravel, and sand is rich enough to grow Larch freely, Deodars will make an excellent underwood when the Larches are thinned. If the soil is too poor for Larch, common and American Juniper, Snowberry, Berberis Aquifolium, and Holly may be planted, but the latter should be established before the rabbits are introduced. *J. G.*

Standard Peaches and Nectarines.—It appears that the late long hot and dry summer has had a great deal or all to do with the ripening of out-door Standard and Bush Peaches and Nectarines. I have this day (October 5), tasted Peaches raised here from the kernel marked from Noblesse, and Royal Kensington, also Nectarines of the Violette Hâtive and Downton kinds, as finely flavoured as from orchard-house or wall; but of course not so large as from the latter. These are bush trees raised four years back in an orchard-house, and when one year old planted out into a calcareous soil, or such as Mr. Rivers calls full of comminuted chalk, loam, and but little or no sand, but on a sunny slope, and where Roses on the Manetti luxuriate, growing 6 to 8 feet, and making fine pillars in one season only from the bud. *S. Dillistone, Nurseries, Sturmer, Halstead, Essex.*

Wistaria sinensis.—In answer to Mr. Noble's inquiry as to whether the Wistaria has ever fruited in this country, I may remark that there is at present in the gardens here a plant of W. sinensis alba with four pods or legumes on it which will apparently ripen seeds, and although this is the first time I have personally seen it fruiting, I believe it has done so before on more occasions than one. Whether it did so formerly in dry hot seasons or not, I am unable to learn, although I think it most probable that the hot weather is the cause of its fruiting, and that on each occasion it was the same white variety. I have never seen the common W. sinensis set a single fruit. *G. L., Kew Gardens.*

Ancient Gardening.—I should be very much obliged if any one who possesses a treatise on gardening or even an Almanac one or two centuries old would have the kindness to look what date is given as the proper period for sowing Scarlet Runners or dwarf French Beans. I am anxious to ascertain, as far as is possible, whether these plants can now be sown at all earlier than was formerly the case. The title, date, and place of publication of any old treatise should be given. *Charles Darwin, Down, Bromley, Kent.*

Concluding Notes on the Flora of Kildare.—The geographical distribution of the flora of a country indicates in some measure the character of its soil. From the plants that I have already mentioned it will therefore be seen that that of Kildare varies greatly. Taking the Liffey as a starting point, and following a north-westerly direction, we gradually come into a poorer description of soil, with here and there fertile spots. On the Liffey many of the Umbellates grow most luxuriantly, especially Anthriscus vulgaris, Angelica sylvestris, Pastinaca sativa, and Pimpinella Saxifraga. A little to the northward we meet with Gentiana Amarella, and still farther on the pretty little Euphorbia exigua. Westward from this point, Chlora perfoliata finds a suitable habitat, and still further west is a region of Cotton Grasses. Nothing more in this direction particularly attracts attention until we find ourselves in the bog. Starting from the right bank of the Liffey in a south-easterly direction, we traverse an undulating country until we reach the foot of the Dublin mountains. On one spot, where the limestone rock crops up near the surface, I found Melilotus officinalis, and not far from that Malva moschata on a gravelly bank. Cnicus pratensis is found sparely scattered in a humid meadow in the same locality. Of the plants more generally distributed throughout the county, the two elegant white-flowered Stellarias, Holostea and glauca, are common in many localities. S. graminea and S. uliginosa also occur. In every quarry and gravel pit Reseda Luteola abounds. Hypericum quadrangulum is on every ditch, H. calycinum more sparingly scattered in some woods, and H. Androsæmum rare, an odd plant of which is only seldom seen on the road-sides. Both of these last St. John's Worts are well worthy planting about gentlemens' demesnes; calycinum in particular has very large and elegant flowers, and looks well near the sides of shady walks, planted among Laurels, &c. There is an extremely beautiful Alpine plant growing on some old walls in Carton demesne, viz. Erinus alpinus, than which nothing could be better for covering ruins and old walls; it spreads itself rapidly. On the lofty and picturesque rocks at Carton, Geranium lucidum and Poterium Sanguisorba are growing, but not very plentifully. Geranium molle and G. pyrenaicum are common; G. dissectum is rather scarce. Another graceful wall plant is sometimes found on old buildings, viz., Linaria Cymbalaria. The kind of plants most generally found in certain localities surely indicate the wet nature of the soil and consequent necessity of drainage. But as the county is almost exclusively devoted to grazing, draining is not so essential as in a tillage country. The reclaiming of bog land has been successfully attempted in some instances, and where that operation has been properly conducted, fine crops of Grass have been obtained. The turf cutters generally have a small bit of reclaimed bog under crops of Potatos or corn; but I should say that the want of manure baffles their efforts to a great extent. It was only the other day that I saw such a bit of ground as I am describing producing the poorest Potatos and finest plants of Senecio lividus and Chrysanthemum segetum that I ever saw. On the few farms where tillage is practised extensively, it is generally done in a very superior style, and fine crops both of cereals and green crops is the result; in fact, better Turnips than are growing in some parts of Kildare it would be difficult to find. I walked over the Curragh in the merry month of May, but it is useless to look for plants in flower there. The sheep leave it too bare for that. I saw nothing on it but the most closely cropped herbage, with Furze bushes dotted up and down over the immense plain, as neatly cropped in with the sheep as if a gardener had been at them with a pair of shears. At the lower end of the Curragh is situated the ancient town of Kildare. There I found the wild Wallflower blooming on one of the finest old round towers in the country. *J. Douglas, Straffan, Kildare.*

Societies.

British Association: *Sept. 15.*—We select from the reports of the various Sections a few passages which will interest our readers:—

In Section B (Chemical Science) Dr. Daubeny, in a paper 'On the Thermal Waters of Bath,' after alluding very briefly to the mineral constitution of the Bath waters, as affording no adequate explanation of the medicinal virtues ascribed to them, proceeded to one point of scientific interest connected with their appearance, namely, the large volume of gas which they have gone on continually disengaging, apparently from time immemorial. Judging from the circumstance that the majority of these springs are associated with volcanoes, and likewise that the same gas is freely evolved from the latter, both in an active and in a dormant condition, it was, he observed, fairly to be inferred that the evolution of nitrogen is in some way or other connected with the same widely-spread and deep-seated cause. And if this really be the case, the phenomenon in question acquires

an additional interest, as affording a possible clue to the true nature of the processes which give rise to volcanoes as well as to thermal springs. Now this evolution of nitrogen seems best to admit of explanation by supposing a process of combustion to be going on in the interior of the globe, by which oxygen may be abstracted from the common air which penetrates to these depths, whilst the residuary nitrogen is evolved. What may be the nature of the bodies by which this process of combustion is maintained must of course, from the depth at which the latter is carried on, be shrouded in mystery; but it is at least certain that whilst they cannot belong to the category of those which supply the fuel for the ordinary processes of combustion of which we are eye-witnesses, there is nothing in the nature of the products resulting from volcanic action inconsistent with the idea that metals possessing a strong affinity for oxygen, but not already combined with it, might, if they existed in the interior of the earth, be instrumental in producing the supposed combustion. And if we indulge in speculation, we might maintain with some show of probability that the bases of the earths and alkalies which constitute the present crust of the globe, would have existed originally uncombined with oxygen, and therefore they must at one time have been subjected to that very process of oxidation and combustion which we imagine to be at the present time continued. The author therefore suggested that volcanic action may be owing to certain chemical reactions proceeding in the interior of the earth, between the constituents of air and water on the one hand, and the metallic bases of the earths and alkalies on the other. After developing this theory, the paper concluded with pointing out a practical use to which the waste waters of the thermal springs of this city might be applied, suggesting that if, instead of being discharged at once into the river, they were first conveyed through underground pipes a few feet beneath the surface, within a given area, the warmth imparted to the soil would prove highly favourable to the culture of tender exotics, and, moreover, if the ground were further protected from the cold by a glass roof, a winter garden might be obtained with scarcely any expense beyond that of the original outlay.

In Section C (Geology), the President, Professor Phillips, in the course of his opening address, offered the following remarks on variations of climate:—"As in existing nature the amount of effect produced by known causes varies with the conditions of each case—as the sun's effect varies from hour to hour, from day to night, from summer to winter, and from year to year—as the force of moving water is greater or less according to the slope of the ground, and the sea's movement is modified by the age of the moon and the position of land—so, in earlier nature, the combinations of phenomena varied, and the measures of effect were modified accordingly. In another point of view, the aspect of nature is found to be variable, and subject to cycles of change, periods of greater and less effect of particular forces which, in their own nature, are constant. The distance of the earth from the sun is not constant; the form of its orbit is not constant; it was not always, nor will it always be, nearer to the sun in winter than in summer. From these varied conditions, which are measured by long astronomical periods, cycles of greater and less heating effect on the earth in general, and on parts of it in particular, arise; so that speculations as to the causes of the differences of climate during geological periods are entirely incomplete if we leave out of view these real and definite sources of terrestrial vicissitude. Whether they are sufficient, and justly applicable to the facts established in geology, is a proper subject of deliberate inquiry. Among the facts put in evidence by geology regarding the former condition of the land and sea, none are so convincing of great change and systematic diversity as the remains of plants and animals. By appeals to these innumerable witnesses, conclusions of much importance are maintained, touching the greater warmth of the carboniferous land, and the colder climate of the later Cainozoic seas. By the same testimony, it appears that over every part of the earth's surface, in every class of organic life, the whole series of created forms has been changed many times. Have we measured these changes of climate, and assigned their true physical causes? Have we determined the law of the successive variations of life, and declared the physiological principles on which the differences depend? No; the variations of climate must be further investigated, the limits of specific diversity more surely defined, before we can give clear answers to these critical questions. Late researches, partly archæological and partly geological, both in England and France, have been held to prove the contemporaneity of man and the mammoth in the northern zones of the world. Have we, then, been too confident in our belief that the human period was long posterior to, and strongly marked off from, that of the cavern bear and the woolly rhinoceros? Did the races of hyæna and hippopotamus remain inhabitants of Europe till a comparatively modern epoch, or was man in possession of the earth in times far earlier than history and tradition allow? The prevalent opinion seems to be that as variations of the forms of life are extremely slow in existing nature, for every case of considerable change in the predominant types of ancient plants and animals, very long intervals of time must be allowed to have elapsed. If in some thousands of years of human experience no very material change has happened in our wild plants or wild animals, or in cultivated grains, or domestic birds and quadrupeds, it is evident that no considerable changes of this kind can arise from such causes as are now in action without the aid of periods of time not contemplated in our chronology. Estimated in this way, the antiquity of the earth grows to be inconceivable—not to be counted by centuries, or myriads of years—not to be really compassed by the understanding of men, whose individual age is less than a century, and whose histories and traditions, however freely rendered, fall short of a hundred centuries. The whole human period as we have been accustomed to view it, is but a unit in the vast sum of elapsed time: yet in all those innumerable ages the same forces were seated in the same particles of matter; the same laws of combination prevailed in organic and in living bodies; the same general influences resided on the surfaces or governed the masses of the planets, in their ever-changing paths round the sun."

In Section D (Zoology and Botany), the President, Dr. J. E. Gray, delivered an address, in the course of which he made some observations on the subject of Public Museums. It may be well imagined, he observed, that, having during the whole of my life been intimately connected with the management of what I believe to be, at the present day, the most important zoological museum in the world, it is a subject that has long and deeply occupied my thoughts; and it will also be readily believed that it is only after serious and prolonged consideration that I have come to the conclusion, that the plan hitherto pursued in their arranagement has rendered them less useful to science and less interesting to the public at large than they might have been made under a different system. The purposes for which such a museum is established are twofold: first, for the diffusion of instruction and rational amusement among the mass of the people; and, secondly, for giving to the scientific student every possible means of examining and studying the specimens of which they consist. Now, it appears to me that, in the desire to combine these two objects, which are essentially distinct, the first object—namely, the general instruction of the people—has been to a great extent lost sight of, and sacrificed to the second, without any corresponding advantage to the latter, because the system itself has been thoroughly erroneous. What the largest class of visitors, the general public, want is a collection of the more interesting objects, so arranged as to afford the greatest possible amount of information in a moderate space, and to be obtained, as it were, at a glance. The students, on the other hand (and though these are undoubtedly the most important, they form but an infinitesimal proportion of the mass)—the scientific students require to have under their eyes, and in their hands, the most complete collection of specimens that can be brought together, and in such a condition as to admit of the most minute examination of their differences, whether of age, or sex, or state, or of whatever kind that can throw light upon all the innumerable questions that are continually arising in the progress of thought and opinion. In the futile attempt to combine these two purposes in one consecutive arrangement, the modern Museum entirely fails in both particulars. Dr. Gray is very much disposed to recur to something like the old plan of arranging each species or series of species in a special case, every case distinctly labelled with an account of the purpose for which it is prepared and exhibited, each specimen also having a label indicating why it is there placed. Such cases may advantageously be prepared to show—The classes of the animal kingdom by means of one or more typical examples of each class; the orders of each class; the families of each order; the genera of each family; the sections of each genus; a selection of a specimen of each of the more important or striking species of each genus or section; the changes of state, sex, habit and manner of well-known or otherwise interesting species; the economic uses to which they are applied, and such other particulars as the judgment and talent of the curator would select as best adapted for popular instruction. The time is approaching, he remarked, when a great change will be made in museums of natural history, and these observations were thrown out as suggestions, by which it appeared that their usefulness might be greatly extended.

Notices of Books.

The Knapsack Guide for Travellers in Switzerland. With Clue Maps, Plans, and Mountain Outlines. London: Murray. Pp. 555.

The Knapsack Guide for Travellers in Italy. Illustrated with Maps and Plans of Towns, Galleries, &c. London: Murray. Pp. 591.

These "Guides" are prepared to supply the want of some handbook, cheaper and more portable than the ordinary "Guides" to the Continent. The first is "not merely an abridgment of the Swiss Handbook, but a condensed and corrected revision, containing much new matter regarding places and passes in the Alps." The second is in a great measure an abridgment of the Handbooks of Northern, Central and Southern Italy, condensed, corrected, and revised to the latest moment," Rome being omitted for considerations of space. Their distinctive features are brevity, utility, and portability. The first of these features, indeed, rather neutralises the second, but for those who want fuller information than the "Knapsack Guides" afford, there remain the more bulky Handbooks just alluded to; while for those who can only take a rapid run over the ground, their small bulk and portability will be a great recommendation. There are several pages of very useful information on general matters, forming an introduction.

A Handbook for Visitors to Paris, &c., with Maps and Plans. London: Murray.

This portable little volume contains a description of the most remarkable objects in Paris, "with general advice and information for English travellers in that metropolis, and on the way to it." The subjects are arranged on an alphabetical plan as the most useful and convenient in practice; and by means of a clear and carefully prepared map, marked out in squares, with references corresponding to those inserted in the text, any place of which the name was known, might be found readily. The names of the most important buildings are engraved on this map. The information given is clear and concise, and from being alphabetically arranged is much more easily got at than when an index has also to be turned up. In the Introductory portion will be found general information as to money, hotels, restaurants, cafés, and reading-rooms, with a scheme for seeing Paris in 12 days, a classified list of objects of interest, and a stranger's diary of the principal objects to be visited. Altogether this Handbook will be found a very convenient one for visitors to the French capital.

Le Jardin Fruitier du Muséum. By Professor Decaisne.

We have received Parts 61 to 72, inclusive, of this valuable work. The plates continue to be beautifully executed, and it is almost needless to say that the descriptions are excellent, and impartial as regards the quality of the respective subjects, whether good or indifferent. Hitherto Pears have been the principal kind of fruit figured and described; but in the 12 Parts before us there are as many varieties of Peaches and Nectarines as there are of Pears.

The following extracts, combined with some remarks of our own, may probably be acceptable to those of our readers who have not the opportunity of seeing the work itself.

Pêcher de Chine à Fleur Blanche Double.—The white double-blossomed Chinese Peach. Leaves with reniform glands. Flowers very large, of a pure white, and double or semi-double. Fruit oval, rarely subglobose; skin greenish, or yellowish green; flesh adhering strongly to the stone, yellowish white, juicy, but rather astringent. This variety was introduced into England (by Mr. Fortune) in 1842; and from this country to France in 1854, where it is highly esteemed as an ornamental plant on account of its profusion of snow-white flowers. Professor Decaisne says there is ground to hope that it will constantly reproduce itself.

Pêcher Unique.—Syn. Emperor of Russia, Serrated leaf, New cut-leaved. According to Mr. Floy, this was found wild in the woods of New Jersey. It takes a high colour in France, where it is very good in warm seasons, but not in those that are cold and wet; whilst in England we know that at best it proves to be only of second-rate quality.

Poire Charbonnière.—Middle-sized, pyriform with a long stalk; skin greenish yellow, sprinkled with large fawn-coloured specks; flesh very white, melting, with a rich, acidulated, sugary juice. A summer Pear.

Poire Boutoc.—Syn. Poire de Notre Dame. Middle-sized, obovate or oblong, obtuse at the stalk; skin smooth, citron yellow on the shaded side, tinged with red next the sun; flesh white, fine, melting and juicy, slightly perfumed. Excellent, but soon decays. Season, end of August. Originated at the village of Boutoc, between Sauterne and Barsac, and is much cultivated in the department of Gironde under the name of Poire de Notre Dame. It is much esteemed by confectioners on account of the fineness and whiteness of its flesh.

Pêcher Chang-Hai.—Syn. Shanghae Peach. This is represented smaller than it grows in England, and we must conclude that the tree which produced the specimen figured and described, had not been in perfect health. The section of the fruit, exhibiting the bright rose-coloured rays of the flesh near the stone, is most beautiful. Its quality is described as being but very middling; but it keeps long in the fruit-room.

Avant-Pêche Rouge.—This is our Red Nutmeg.

Poire d'Angoisse.—Fruit middle-sized or small, obovate, brownish yellow, tinged with red next the sun; flesh breaking, sugary but astringent; a stewing Pear. A very very old variety, having been found at Angoisse, a village in Limousin, in 1094; and there are many trees of it in the department of Cher with a stem upwards of seven feet in circumference. It is a sure and most abundant bearer, and the fruit makes excellent perry.

Poire Safran.—Rather small, obovate; skin yellow, speckled and marbled with brown; flesh breaking and coarse—therefore its cultivation should be discontinued.

Pêcher Reine des Vergers.—Syn. Monstrueuse de Doué, Monstrueuse de Douai. Leaves with reniform glands; flowers small. Fruit very large, roundish inclining to oval, highly coloured with

vermilion next the sun; flesh parting from the stone, where it is deep red, elsewhere greenish white, tolerably sweet, and perfumed. Should be gathered several days before it is used; it bears carriage well; ripens in the middle of September, and will afford a supply till the 1st of October. Keeps longer after being ripe than the Bellegarde, and in that respect better deserves this name than the excellent variety so called.

In *James's History and Antiquities of Northamptonshire* (Murray) we have a very interesting volume of Railway Reading of convenient size, and printed in good bold type. The author is impressed with the idea that local objects and scenes, and other far less romantic things and places teeming with the annals of history, and lying unheeded about every one's home, are the best starting points in all historical study. "History and Geography," writes Mr. James, "should begin at home. If we want a boy to know some day the families of the Herods and the Cæsars, let him start by learning who was his own grandfather. The Church Catechism rightly commences by making the child tell his own name; it would be in many cases a most puzzling, but in all cases and senses a most proper question to ask him further the names of his godfathers and godmothers; and so carrying him gradually onward, he would know, what seldom happens, the Kings of England, before he attempted those of Israel and Judah. The principle holds as true of place as of persons. The things that touch us nearest interest us most. Geography should begin from the school-walls. 'Which side of this room does the sun rise on?'—'Does Church Lane run west or north?' In this way the young scholar would in time be brought to comprehend the round world, and his own position on it; and probably with some clearer perception of the truth and relation of things than if he had begun by rote, 'The earth is a terraqueous globe, depressed at the poles, consisting of &c.' But we are all taught on the contrary plan. We began at the wrong end, for in the ladder of learning, Ego, not Adam, is the true No. 1." And so we are inclined to think. As regards the Northamptonshire gardens, Mr. James tells us they are not what they once were. "The fine Tulips of Mr. Mansel of Cosgrove, and Mr. Bateman of Sibbertoft, mentioned by Morton, exist no longer; and Lord Dysart's terraces at Harrington, and those of the Boughtons, must be added to the others we have deplored. Mr. Annesley's garden at Eydon (by a favouring pronunciation Eden) has become a proverb. Capability Brown has left the mark of his thumb at Burghley and Castle Ashby. Finedon has its arboricultural varieties, and Lamport a most choice rockwork of Alpine plants. Lilford and Bulwich rejoice in their formal borders. The flowers that gladden the village of Whittlebury may be traced to my lady's parterres close at hand; just as the rare plants found in the gardens near King's Cliffe are to be referred to the botanical proficiency of the rector."

Winter's Mathematical Exercises form a collection of questions selected from the examination papers of the College of Preceptors, the Civil Service, Sandhurst, Woolwich, and the Line, and offers good practice to those who are working up for these several examinations.

Garden Memoranda.

The Royal Horticultural Society's Garden, Chiswick.—Notwithstanding that the year has entered its last quarter, and that deciduous trees have put on "the sere and yellow leaf," a few notes on Pelargoniums and other plants placed out of doors here for trial under the supervision of the Floral Committee may not be without interest.

Among Variegated Pelargoniums, one of the whitest, as far as silvery-edged leaves are concerned, is still Mrs. Lenox; and Queen of Queens is also a most useful looking variety, with a compact and excellent habit. Silver Chain looks as if it might be suitable for edgings, provided the blossoms were removed; with them on, it promises to make an effective small rosy-salmon bed.

Among other kinds of Pelargonium, Flower of Spring is one of the finest of those with rosy salmon blossoms; Baron Ricasoli, with scarlet flowers, has an extremely neat horseshoe leaf; Garibaldi is a compact dwarf sort with scarlet flowers, and very strongly-marked small zonate leaves; Monitor, a Nosegay, has dull orange-scarlet blossoms, faint brown horseshoe-marked leaves, and a spreading habit; King of Italy (Roi d'Italie), has well-formed deep salmon-rose flowers, and good horseshoe leaves; Cheshire Hero, without zonate leaves, is a good soft scarlet; as is also Volcano, the foliage of which has likewise no horseshoe marking; Adonis, a brilliant scarlet with white eye, has zonate leaves, and being dwarf and very compact in growth, is a variety suitable alike for edgings or small masses; Attraction, scarlet, is also a fine variety, and like the last, being of dwarf habit, will likewise be found useful for small beds; Clipper, with strongly marked zonate foliage, is a good dwarf kind, the blossoms of which are brilliant scarlet; Faust is also dazzling in colour, but its leaves are without horseshoe marking; Agatha, with strongly marked zonate foliage, is a most profuse bloomer, and is also very brilliant; as is likewise Rev. Joshua Dix, a good scarlet; Vivid, as its name implies, is a bright scarlet, and without horseshoe marking; it is said to be the same as Hercules; Lucien Tisserand is brilliant scarlet, with a white eye, and has horseshoe marked leaves, altogether a very showy sort; Nora and Umpire are both rosy scarlet sorts, bearing fine trusses, and highly effective: the latter has faintly zonate leaves; in the former the horseshoe mark is more distinct; Lord of the Isles is a dwarf rosy scarlet with zonate foliage. The best of the stronger-habited scarlets, however, has been the old Punch.

Of varieties with other shades of colour, Eve, a paler sort, in the way of Christine, is promising, with faintly marked horseshoe leaves. St. Fiacre, a free-flowering kind, has zonate foliage and salmon blossoms, the colour becoming deeper as it approaches the centre. Roseum nanum, dwarf and pretty, has strongly marked horseshoe leaves and rosy-pink flowers. Lady Cullum is a dwarf lilac-pink variety, with faintly marked horseshoe foliage. Eugénie Mezard is salmon pink with a pale eye. Pink Pearl, a light magenta rose, is a good addition to the Nosegay class, of which Stella and Cybister, both scarlets bearing fine trusses of blossoms, stand in the first rank. Bridesmaid, cerise with pale edge, has good horseshoe leaves; as has also Hector, a kind with flowers of nearly the same shade of colour. Helen Lindsay is the best deep rosy pink, but of an intermediate shade none is better than Rose Queen, which is a free flowering variety, of good habit. Magenta has also a good habit, and fine horseshoe-marked leaves.

Among white or blush sorts with crimson or salmon centres, the best is Princess Mary, a vigorous variety, raised at Chiswick, and having strongly marked horseshoe leaves. Beauty is also a fine kind; as is likewise Léonie Nivelet, a sort with large trusses and boldly marked zonate leaves; and Amelina Grisseau, a dwarf kind.

Golden Baron Hugel will apparently be useful for bedding purposes; but of all Pelargoniums with yellow foliage the best here is Golden Fleece, a very dwarf sort with small scarlet blossoms, and comparatively small leaves bright yellow in colour.

Among Pelargoniums in pots indoors Cybister and Stella, both crimson scarlets, belonging to the Nosegay class, are certainly the most effective. Lord Palmerston, rosy crimson, is also a valuable addition to this class; François Chardine has large compact trusses, and slightly marked zonate leaves; Red Dragon, Garibaldi, and Victor Emmanuel, scarlets, and Minnie, rose-pink, are also all good sorts. Among whites the best is Perfection, a variety with good habit. Léonie Nivelet, salmon with pale edge, is likewise very effective in pots; as is also Souvenir du 8 Juin.

Among Verbenas, Lady Benning, scarlet with white eye, possesses that desirable quality, a good habit; as does also Velvet Cushion, a bright purplish crimson. Rival King differs from Purple King in being of a more decided shade of blue, and in having a pale eye. Among white sorts the best is Sylph, which has not only a good habit, but a hardy and excellent constitution. St. Clair, purplish plum colour, is also good.

Dahlias, like other things, have suffered from the effects of the late dry autumn. Of the Pompon sorts, Kleiner Preusse, a white-tipped free blooming purple, not much over a foot high, though not the smallest-flowered, is the dwarfest habited we have seen. Captain Ingram, purplish crimson, is a most abundant bloomer, and though not new is worth alluding to on that account; Crimson Gem, dark maroon, is dwarf, and like the variety just named, is also a most profuse flowerer. Gem of the Dwarfs, crimson scarlet tipped with white, is likewise a very free bloomer, and one which cannot fail to be a favourite.

Associated with the different varieties of plants in beds mentioned above, were various kinds of Castor-oil plants (Ricinus), Wigandias, Ferdinandas, Solanums, and the red-leaved Amaranthus melancholicus. To these however, as well as to other descriptions of plants grown for the beauty of their leaves, ample attention has been directed in our notice of Battersea Park.

Among other matters the Grapes in the large conservatory deserve a word of commendation; they have been equally fine this year as in former seasons, and although now half cut, many beautiful specimens yet remain to be seen. Conspicuous among them are bunches of Barbarossa, some of which weigh as much as 6 lb., and measure 18 inches across the shoulders, and as much in length. This variety, grafted on the Black Hamburgh, produces more compact and better coloured bunches than on its own roots, as well as ripening earlier Indeed, so compact and handsome are they, treated in this way, that they might easily be mistaken for Hamburghs. The Muscat Hamburgh, grafted on the Syrian, although larger in the berry, is, however, inferior in flavour to fruit of the same kind on its own roots. Burchardt's Prince, as yet comparatively little known, is well worth attention. It is a valuable late Black Grape, with a fine vinous flavour and is a good cropper. Golden Hamburgh has done well here this year, some of its bunches weighing as much as 2½ lbs. each, and they are very perfect both in shape and colour. Among Hamburghs, decidedly the best is the Frankenthal, large finely coloured bunches of which, nestling in the most natural way possible among the still bright green leaves, may yet be seen against the upright east end of this in all respects magnificent Grapery. The so called varieties of Muscat, to which particular attention was directed at p. 841 are nearly all cut.

Out-door fruit is here as elsewhere most abundant and good, and the fruit room is now becoming well filled with the contents of the orchard. Among Pears now fit for table are the Marie Louise, Louise Bonne of Jersey, Fondante d'Automne, Thompson's, Gansel's Bergamot, and sweetest of all, perhaps, the Seckel, whose only fault is its small size. Among Apples now in season are Ribston Pippin, King of the Pippins, Gravenstein, and many others, of all of which may be found here some very fine specimens.

Miscellaneous.

The Ivies of Europe, Africa, and Asia.—Whether there is only one species or several mixed up with the plants which now go in gardens and herbaria under the name of Hedera Helix, and make up the genus Hedera, as now circumscribed, and whether one or two species are indigenous to the British Islands, are still open questions. No botanist has, as yet, been successful in finding good characters for what have been considered as species; and though all other Hederaceæ have a limited geographical range, Helix is supposed to be an exception to this rule, and to be spread over three continents, Europe, Asia, and Africa, from the Canary Islands to Japan, and that this circumstance alone sufficiently accounts for the numerous existing varieties. After carefully investigating the subject, and examining every specimen I could lay my hands on, aided by contributions from botanical friends, I have arrived at a different conclusion. I can clearly distinguish three distinct species, which, though having each many varieties do not run into each other, and have each a distinct geographical range. If these different species had to be named anew, I would propose to call them respectively the European, the African, and the Asiatic. The European Ivy is Hedera Helix, Linn. It is not found out of Europe, and may at once be known by its uppermost leaves being ovate or elliptical, its umbels arranged in simple racemes, and its pedicels and calyx being covered with white stellate hairs, the hairs having from 6-8, but never more, rays. From time immemorial a variety with white and yellow variegated leaves has been cultivated in gardens; even Pliny mentions it; indeed it is one of the oldest, if not the oldest, variegated garden plant of which we have any record. The fruit of H. Helix in northern Europe is generally black; in Germany it occurs occasionally with white; and in European Turkey, Greece, and Italy with yellow berries. The black-fruited kind has always been considered as the true H. Helix, and the white as a variety of it, which indeed it is; but the yellow has been made, I think unjustly, into a distinct species, and named H. poetarum by Bertoloni, and some time previously H. chrysocarpa by Walsh. It is the latter plant which played so important a part in ancient Greece and Rome, its leaves supplying the materials for the wreaths with which poets were crowned, and at the festivals in honour of Dionysos all casks, vessels, amphoras, &c., were decorated; it was customary even to lie and sit upon Ivy branches on those occasions. It is believed traditionally that the yellow-fruited Ivy came from India with the worship of Bacchus; and the fact that the Nepal Ivy described by Wallich has yellow fruit, is regarded as a proof of the correctness of this tradition. But a close examination of the European yellow-fruited plant shows that it is specifically identical with H. Helix, and specifically different from the Nepal, and all other Asiatic specimens. If the worship of Dionysos gradually crept from India to Greece and Rome, and a yellow-fruited Ivy was deemed essential to its proper performance, there was no need of carrying the Asiatic plant into Europe, as an indigenous variety (chrysocarpa = poetarum) occurred at the very threshold; whilst the Asiatic Ivy, as we shall presently see, is spread from the central highlands to the most western confines of Asia—to ancient Colchis. The African Ivy is Hedera canariensis, Willd. It is found in the Canary Islands, Madeira, and the north of Africa, and may at once be known by its uppermost leaves being cordate, its umbels arranged in panicles, rarely and only in young plants in simple racemes, and its pedicels and calyx being covered with white stellate hairs, the hairs having from 13 to 15 rays. To this must probably be referred what is called in gardens Scotch or Irish Ivy. It is a much quicker-growing plant than H. Helix, and on that account more frequently planted in gardens, but is much more susceptible to cold, and in Germany often killed by frost. At some time or other this species is said to have been introduced into Ireland, and has hence received the name of H. hibernica in our gardens: but I have not been able to learn anything authentic about this introduction, or whether it has been introduced at all. At present, Dr. Moore, of Glasnevin, informs me it is found, to all intents and purposes wild in various parts of Ireland, growing together with H. Helix, and far away from cultivation. Mackay also mentions it as having been found in Ireland. I have not been able to examine any specimens of wild Irish Ivy, and our British Floras do not afford any information respecting it. The Asiatic Ivy is Hedera colchica, C. Koch. It is not found out of Asia, and may be known by its uppermost leaves being elliptical or lanceolate, its umbels arranged in simple racemes, and its pedicels and calyx being covered with yellowish two-lobed scales, the lobes being opposite each other, and divided into seven to ten segments. Our

first knowledge of this plant is derived from Kæmpfer, who two centuries ago found it in Japan, where it is called "Fotogi Ista (*i.e.*, simulacri seu idoli Hedera)." It was afterwards gathered by Wallich and other collectors in the Himalaya Mountains, by Fortune in Northern China, by Wright in the Loochoo Islands, and by C. Koch in the Trans-Caucasian countries. Wallich was the first to describe the plant, though he did not venture to separate it from H. Helix; in fact, the important character furnished by the scales escaped him. It was not until 1859 that C. Koch, who had seen it wild, named it colchica, and gave a correct diagnosis of it. It is owing to an authentic specimen kindly transmitted by him that I am able to identify this new species with the Asiatic Ivy—as I am indebted to the Rev. R. T. Lowe for a sight of the Madeira Ivy. Hedera colchica is now an inmate of our gardens, it having been found on the Caucasian coast of the Black Sea, by Mr. Rœgner, formerly curator of the Botanic Gardens of Odessa. Thus it found its way into our gardens, occurring here and there under the (I believe unpublished) name of Rœgneriana. The only two popular accounts of this plant are given by Wallich and C. Koch. In Nepal it is called Sagooke or Gooke, (*i.e.* the climber), and is, says Wallich, "one of the most common, as well as the most noble productions of Nepal, where it grows to a majestic size, and extends over trees and rocks." In Trans-Caucasia on the contrary, it is more stunted than the European Ivy, having reached its western geographical limit; and, says C. Koch, "I have never seen it ascend the tops of the numerous Beeches of that country, whilst the common Ivy climbed to the highest branches." Though there are several important peculiarities to distinguish the three species, the most ready way to make sure of them is to look at the character furnished by the hairs and scales. They are largest in H. Helix, where they may be seen distinctly with a common pocket lens; but in the other two species it requires a greater magnifying power to make their nature quite intelligible. *Dr. Seemann, in Journal of Botany.*

Chinese Yam.—In the year 1862 my plantation of Yams consisted of two rows, about 3 feet apart, occupying a space of 42 feet in length by nearly 6 feet in breadth. The ground had been trenched to a depth of about 2 feet 6 inches, and manured as for a crop of Potatos. Soon after the middle of March the sets were planted 12 inches apart, and about 3 inches below the surface of the ground, on the top of ridges 1 foot high. When the plants began to grow they were roughly staked with ends of Oak branches, that could not have been used for staking Peas. The crop was taken up about the end of November, and after having been kept in a dry place till the beginning of January, it was well cleaned, and its weight ascertained to be 70 lb. and a fraction, English weight. I calculate the produce to have been at the rate of 1 lb. for every 3½ square feet of ground. This year (1863) I planted three rows in a space exactly 48 feet long by 8 wide. The culture was the same as last year, and the crop, well dried and cleaned, weighed about 113 lb. This gives a weight of 1 lb. to 3.4 square feet—a result very similar to that of the preceding year. We, in our household, value the Chinese Yam so highly for the table, where it is especially useful at the season when the best-keeping Potatos begin to deteriorate in quality, that I intend to extend my culture of it considerably. If I have not done so more rapidly in the course of the last two years it was because, instead of subdividing my sets, so as to increase their numbers, I have generally planted them of full length (from 9 to 12 inches long—longer perhaps than is necessary), with the view to obtain tubers of a good size, and well suited for the table. *H. O. Carré, of Guernsey, in Report of Acclimatisation Society.*

Calendar of Operations.

(For the ensuing week.)

IF not already done, lose no time in getting tender plants under protection, a kind of work the omission of which may peril the welfare of valuable stock that cannot be readily replaced. Where pits or frames are at liberty, or can be made so, by rooting up the remains of exhausted Cucumbers, Melons, &c., there is no absolute necessity for stationing every plant precisely where it is to remain through the winter. Protection of this sort, for a short period indeed will contribute more than housing to the production of sturdy and well-ripened wood, possessing a greater tendency to blossom, and more capable of enduring a severe winter. In such places they must be secured from the depredations of the earth-worm. This is easily accomplished, especially where the frames are raised above the common ground level, by a good soaking of lime-water, followed by a coating of cinder-ashes, three inches in thickness.

FLOWER GARDEN AND PLANT HOUSES.

As was stated last week, alterations of grounds and planting of Evergreens should now be carried on with dispatch, while the soil is in good condition for operations of this kind; the drier mould is when placed round the roots of newly planted shrubs (provided they are judiciously watered in) the sooner they will emit fresh roots. Mulching is, however, requisite to keep out frost, and earlier in the season to prevent evaporation. In greenhouses and conservatories climbers, at least some of the most rambling, will now want a smart dressing where they obstruct light in any material degree. Such as flower on the young wood, and which are now in a ripening condition, or approaching a state of rest, may be pruned in close. Others, such as the late-blooming Passifloras, Combretums, Echites, Ipomœas, Stephanotis, Thunbergias, Mandevillas, &c., which are still thriving, must be regulated with a more gentle hand, cutting away merely barren shoots, and drawing the remainder into somewhat closer festoons, in order to throw sunlight into the interior of the house.

AZALEAS.—Keep these in an even condition with regard to water at the root. Stake or tie out if necessary, and do all that can be done to keep the plants clean, and to maintain them in good health.

CAMELLIAS.—Thin the blossom-buds if too thick, and give the plants plenty of air while the weather is favourable.

CINERARIAS.—Those intended for late blooming will do very well in a cold pit if the weather should not prove unfavourable. Cuttings may still be put in, or young plants may be raised from seeds. The last will prove useful late in the season. Plants struck early may now require a shift.

CHRYSANTHEMUMS.—These, though apparently late this season, will soon be the chief feature of attraction in-doors, and where largely grown, will require attention. They are very impatient of a close rather warm atmosphere, and if under glass and the house contains plants requiring this treatment, the Chrysanthemums should as far as practicable be placed in the coolest part, where air can be given freely on every favourable opportunity; for except they can be pretty fully exposed to air their foliage soon gets attacked and disfigured by mildew, especially if the plants are bushy and well grown. See also that they are kept well watered at the root.

HEATHS.—If such things as Pelargoniums, Cinerarias, and Calceolarias must be wintered in the same house with these and other hard-wooded plants, they should be kept as much as possible by themselves, as they will require a somewhat closer temperature than hard-wooded plants, but where circumstances admit of it, Heaths especially should occupy a house or pit by themselves. They seldom succeed well if associated with soft-wooded plants.

PELARGONIUMS.—Of these there should now be a fine stock of healthy plants. Pinch out the centre of young stock in order to induce dwarf and bushy growth. Give any that require larger pots a shift, and water carefully when required. Keep down green-fly by repeated fumigations. Fancy varieties require to be kept a trifle warmer than ordinary kinds.

FORCING GARDEN.

CUCUMBERS.—Plants in bearing will now require fire-heat, at least at night. They will also enjoy a moist growing atmosphere.

PINES.—Plants expected to show early next year will be benefited by being kept in a comparatively dry state for a few weeks previous to subjecting them to a warm moist temperature. The atmosphere should be kept dry; also allow the soil about the roots to become as dry as can be done with safety. Do not, however, subject the plants to a very low temperature, but keep this at from 60° to 65° by means of fire-heat, for although they will bear a considerably low temperature without any apparent injury, those not subjected to any unnecessary extremes will produce the finest fruit; and a short period of comparatively dry treatment will ripen the growth and just as effectually induce a tendency to show fruit as checking the energies of the plant by an unnaturally low temperature, and without any of the ill effects of the latter method. Little dependence can be placed on the weather after this season, therefore see to plants in pits with insufficient means of heating being well protected by means of covering at night; and maintain the command of a rather high temperature by frequently renewing the linings, &c. so as to be prepared for any sudden decrease of heat. Avoid anything approaching excess of atmospheric moisture among young stock, whether in pits heated by linings, or in better arranged structures; it only tends to promote a too free growth for the amount of light.

VINES.—Where early forcing is to be carried out, attend to previous directions as to keeping the atmosphere moist, as there will be some difficulty in getting Vines to break freely except this is attended to. If circumstances allow of having a bed of fermenting manure inside the house, this will be found the best means of keeping the atmosphere regularly moist, but if this cannot be used the house must be sprinkled with the syringe frequently, and the evaporating troughs kept full. Also see that the roots are afforded a steady gentle warmth, until the buds are fairly swelled; keep the temperature about 50° by fire-heat at night, and 60° by day, letting it rise to 70° on sunny days.

HARDY FRUIT AND KITCHEN GARDEN.

Look over fruit stores frequently to see that all is keeping well, and remove any fruit that may show symptoms of decay, so as to prevent the mischief from spreading; attend to gathering fruit as formerly directed.

CAULIFLOWERS.—Plants heading must be frequently examined; those not wanted for immediate use should be taken up and stored till wanted.

LETTUCES.—A good stock of these fit for use should be put into cold frames or turf pits, where they can be protected during frost by means of straw mats or some other efficient covering; also take care to secure a good supply of Endive for winter use.

POTATOS.—Get these out of the ground as soon as they are fit for lifting; frequently inspecting them after they are stored, in order to separate any that may be bad, from the good.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Oct. 5, 1864, as observed at the Horticultural Gardens.

Sept. and October.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs. 29	8	30.166	30.063	70	38	54.0	58	59	W.	.02
Friday 30	●	30.111	30.081	64	37	50.5	58½	58½	W.	.00
Satur. 1	1	30.083	30.067	64	47	55.5	58	58	E.	.00
Sunday 2	2	30.240	30.140	61	40	50.5	57	58	E.	.00
Mon. 3	3	30.283	30.197	56	39	47.5	57	58	E.	.00
Tues. 4	4	30.154	30.063	59	36	47.5	55½	57	E.	.00
Wed. 5	5	30.020	29.985	59	25	42.0	54	56	E.	.00
Average.		30.151	30.085	61.8	37.4	49.6	56.8	57.8		.00

Sept. 29—Fine; slight fog; very fine; overcast at night.
— 30—Very fine; overcast; cold at night.
Oct. 1—Hazy clouds; very fine throughout; slight rain.
— 2—Overcast; fine; boisterous at night.
— 3—Fine, with brisk wind; hazy clouds; fine.
— 4—Clear, cold and windy; dry, strong whirling wind; cold at night.
— 5—Dry cold haze; clear; fine; frosty at night.
Mean temperature of the week 4½ deg below the average.

STATE OF THE WEATHER AT CHISWICK

During the last 38 years, for the ensuing Week, ending Oct. 15, 1864.

October.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E	S.	S.W.	W.	N.W.
Sunday 9.	60.6	42.5	51.6	21	0.52 in.	—	7	2	2	5	14	6	2
Mon. 10..	61.6	44.0	52.8	23	0.68	3	3	4	—	8	10	6	4
Tues. 11..	62.0	42.8	52.4	20	0.34	2	5	2	2	4	13	5	5
Wed. 12..	60.6	42.4	51.5	22	1.00	2	2	3	1	10	6	10	4
Thurs. 13..	60.6	42.6	51.6	20	0.23	2	4	4	1	7	9	8	3
Friday 14..	60.2	41.3	50.8	18	0.50	2	5	4	1	9	8	5	4
Satur. 15..	61.5	41.1	51.3	19	1.04	2	2	4	1	11	6	4	8

The highest temperature during the above period occurred on the 15th, 1842—therm. 74 deg.; and the lowest on the 15th, 1860—therm. 24 deg.

Notices to Correspondents.

AROMATIC ORCHIDS: *Anon.* Vanilla is not the only Orchid which yields aromatic fruit capable of being used for flavouring. There is Leptotes, the fruit of which, as long ago stated in the Botanical Register, is fragrant like the Tonquin Bean, and which when infused in cream gives it a mild agreeable flavour, sweeter than Vanilla, but less penetrating.

DOUBLE SENECIO: *W Dillistone.* The three varieties, one of which is magenta-coloured, and the others shades of deep crimson purple, are evidently of a fine double strain, and being as you say dwarf and compact growers, not over 4 or 5 inches in height, and blooming profusely, they are no doubt well adapted for bedding out and for ribbon borders.

FUCHSIA: *F Wattez.* The flower of the variety sent has the petals reduced in size and pedicellate. It is a curiosity, and will probably be constant, but though it may form an ornamental plant it has no special recommendation for general cultivation, and would be little valued by growers.

FUNGI: *W B.* Your Fungus is as you suppose Rœstelia cancellata. You will find a figure in Sowerby's Fungi, towards the end of the third volume, with some account of it.—*J B.* Your fungus is Rœstelia cancellata. You can get rid of it only by burning the leaves as fast as they are infected. *M. J. B.*

HEATING ORCHARD HOUSE: *Old Subscriber.* We should advise you to adopt, according to the means at your command, either a small Stephenson's conical boiler with pipes, or a furnace with some simple vessel as a boiler, and a cemented covered trough for the flow of hot water. The boiler setting might be inside, but the furnace would be better kept out. Such heating, however adapted to preserve bedding plants, will make yours a greenhouse rather than an orchard house.

INSECTS: *J L.* The minute scales on the leaf sent are the young states of the Aleyrodes Chelidonii, or Vaparorium, allied to the Aphides. We know no other means of destruction than syringing and fumigation.—*Subscriber.* The red and black insect sent is one of the bug tribe—Pyrrhocoris aptera. It is often found in great numbers crawling about footpaths in gardens and public promenades. *W.*

LAURIER DES ALPES: *W C.* There are two plants bearing this name: the Laurier-Rose des Alpes which is Rhododendron ferrugineum, and the Laurier Alexandrin des Alpes which is Streptopus amplexifolius.

MONSTERA DELICIOSA: *G Wheeler.* This plant is a native of Mexico.

NAMES OF FRUITS: *J. Kelly.* 2, Beauty of Kent; 4, Hughes's Golden Pippin; 5, Beurré Bosc; 6, Beurré Diel.—*H B.* 1, Adams's Pearmain; 2, Northern Greening; 3, Braddick's Nonpareil; 1, Duchesse d'Angoulême; 2, Vicar of Winkfield.

NAMES OF PLANTS: *W B G. No.* 2—there is no No. 1—No. 2 seems to be a miserable specimen of Stanhopea inodora; but it is too much crushed for certain identification.—*F S.* 1, Blechnum occidentale; 2, Asplenium cicutarium; 3, Adiantum pubescens; 4, Cheilanthes or Adiantopsis radiata.—*R R.* The so-called German Ivy is Senecio mikanoides.—*J B B.* 5, Athyrium Filix-fœmina; 6, Lastrea dilatata; 7, Lastrea spinulosa.—*R Pr.* Martynia fragrans.—*F D.* 1, Campyloneurum Phyllitidis; 2, Polystichum vestitum proliferum; 3, another form of P. vestitum; 4, Asplenium reclinatum, or as it is sometimes called, A. erectum proliferum. The price of the book you inquire about is 5*s*.

POPLAR ROOTS: *J W P.* We know of no better mode of destroying them than by tracing the largest and most troublesome and grubbing them out; or if this cannot readily be done, cut off the suckers just below the surface, and fill up the hole with salt.

THRIPS ON AZALEAS: *Learner.* The best mode of dealing with Azaleas nearly dead with thrips and red spider, would be to burn them; and replace them by clean healthy young plants. If you cannot do this, wash them repeatedly at intervals of three days with a strong solution of Gishurst Compound; this should be done by dipping them in the solution for a few minutes, and then syringing with clean water. You have kept them in too dry an atmosphere while the leaves were growing. If you persevere, and get rid of the insects in this way, start the plants into fresh growth by and by in a nice moist heat, and be more careful of them when the new leaves have formed.

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They also continue to supply GIBBS' PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
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2 to 3 cwt. per acre to be harrowed into the land before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents; also
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Genuine Peruvian Guano direct from the Importers, and all Chemical Manures of value.
American and other Cakes at Market prices.
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An improved make, 2 yards wide .. 1*s.* 9*d.* per yard.
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"I have had 400 feet of your Gutta Percha Tubing (in lengths of 100 feet each, with Union Joint) in use for the last twelve months for watering these Gardens, and I find it to answer better than anything I have yet tried. The pressure of the water is very considerable, but this has not the slightest effect on the Tubing. I consider this Tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens with about one-half the labour formerly required."
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In September	..	4 bushels on 10 acres.
In October	..	4 bushels { On 8 acres. On 6 acres.
In November	..	4 bushels on 4 acres.
Seed required	..	1st half .. 2d half ..

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INTRODUCTORY LECTURE on WEDNESDAY, Nov. 2, 1864.
For Prospectus apply to Professor JOHN GAMGEE, New Veterinary College, Edinburgh.

THE BIRMINGHAM CATTLE and POULTRY SHOW, 1864.
The SIXTEENTH GREAT ANNUAL EXHIBITION of FAT CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, CORN, ROOTS, and IMPLEMENTS, will be held in BINGLEY HALL, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, 30, and December 1, when Prizes to the amount of £1993 will be awarded in the following Divisions, viz.:—

FAT CATTLE ..	£794 10	BREEDING PIGS ..	£76 10
FAT SHEEP.. ..	299 5	CORN and ROOTS ..	71 8
FAT PIGS	60 5	POULTRY and PIGEONS	693 0

Prize Lists, Certificates of Entry, and every information may be obtained from the Secretary.
The ENTRIES CLOSE on TUESDAY, November 1.
JOHN B. LYTHALL, Secretary.
Offices: 13, Temple Street, Birmingham.

SMITHFIELD CLUB FAT CATTLE SHOW.—The ANNUAL SHOW of FAT CATTLE, SHEEP, and PIGS, will be held at the AGRICULTURAL HALL, ISLINGTON, on MONDAY afternoon, December 5, and four following days.
Intending Exhibitors are requested to apply for Certificate forms by the reference letters as under:—

CATTLE.	Form A.	For an Ox or Steer (in any Class).
	" B.	For a Cow or Heifer (in any Class).
	" C.	For a Beast in Extra Stock.
SHEEP.	" D.	For a Pen of three Wethers (in any Class).
	" E.	For a single sheep in Extra Stock.
PIGS.	" F.	For a Pen of three Pigs (in any Class).
	" G.	For a single Pig in Extra Stock.

ENTRIES for LIVE STOCK CLOSE NOVEMBER 1.
Prize Lists, Forms of Certificates, and all information may be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, Corner of Half-Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words "Smithfield Club."

The Agricultural Gazette.

SATURDAY, OCTOBER 8, 1864.

—— A CORRESPONDENT reminds us of the risks run by purchasers of manufactured foods and manures. And as cakes and meals and manufactured foods will this autumn no doubt be more largely bought than ever previously, we give all possible publicity to the warning which the following memorandum conveys:—

SUGGESTIONS TO PURCHASERS OF COMPOUNDED MANURES AND CATTLE FOOD ON ANALYSES.

Some of our Correspondents having received printed circulars from vendors of these articles, containing analyses by well-known chemists, accompanied by certificates purporting to have been signed by them, such analyses and certificates may be accepted, on such authority, with perfect faith, in reference to the specific sample of such compounds as were submitted for analysis. As the seller however invites the purchase by setting forth its *specific merits*, on such authority, it is but common honesty that he should deliver, in bulk, up to the same standard of quality and value as that indicated by the printed analysis. We would recommend farmers, thus induced to make purchases, to preserve the analysis, and require a guarantee from the seller to that extent.

IF the weekly quantity of milk yielded by a cow—recorded week by week—were represented by vertical lines of correspondent lengths stationed at equal intervals along a base line of sufficient length to receive 52 such lines upon it for the successive weeks of the year—they would in any ordinary case, where the cow had been kept in health and produce by a uniform method of feeding, commence at a maximum height and gradually dwindle. The curved line joining their extremities, whose distance from the base line, from point to point of the vertical lines thus joined, would show the varying yield of milk from week to week throughout the year, would commence at once, perhaps some time in March, at a maximum height, representing

possibly a produce of 20 or two dozen gallons weekly; it would maintain a nearly level course till after midsummer, and gradually dwindling through the autumn it would touch the base line, indicating an entire cessation of produce towards the end of the year. After 9 or 10 weeks of rest the cow coming to the pail again would jump to its full produce, and again maintain that produce for a month or two, and again dwindle for two or three months to nothing at the end of 40 weeks or more from the time of its commencement.

But there are many things upon a farm which interfere with this uniformity of the curve of individual weekly milk produce. And chief among them is the fact that cows are not uniformly fed. They begin on hay and roots, and by and by get on to Grass: this, with the circumstances under which it is consumed, improves for a few weeks: then, as the pastures get bare before haymaking time, it shrinks in quantity and perhaps in quality. After haymaking a large extent of aftermath is added to the resources of the farm, and the quantity of

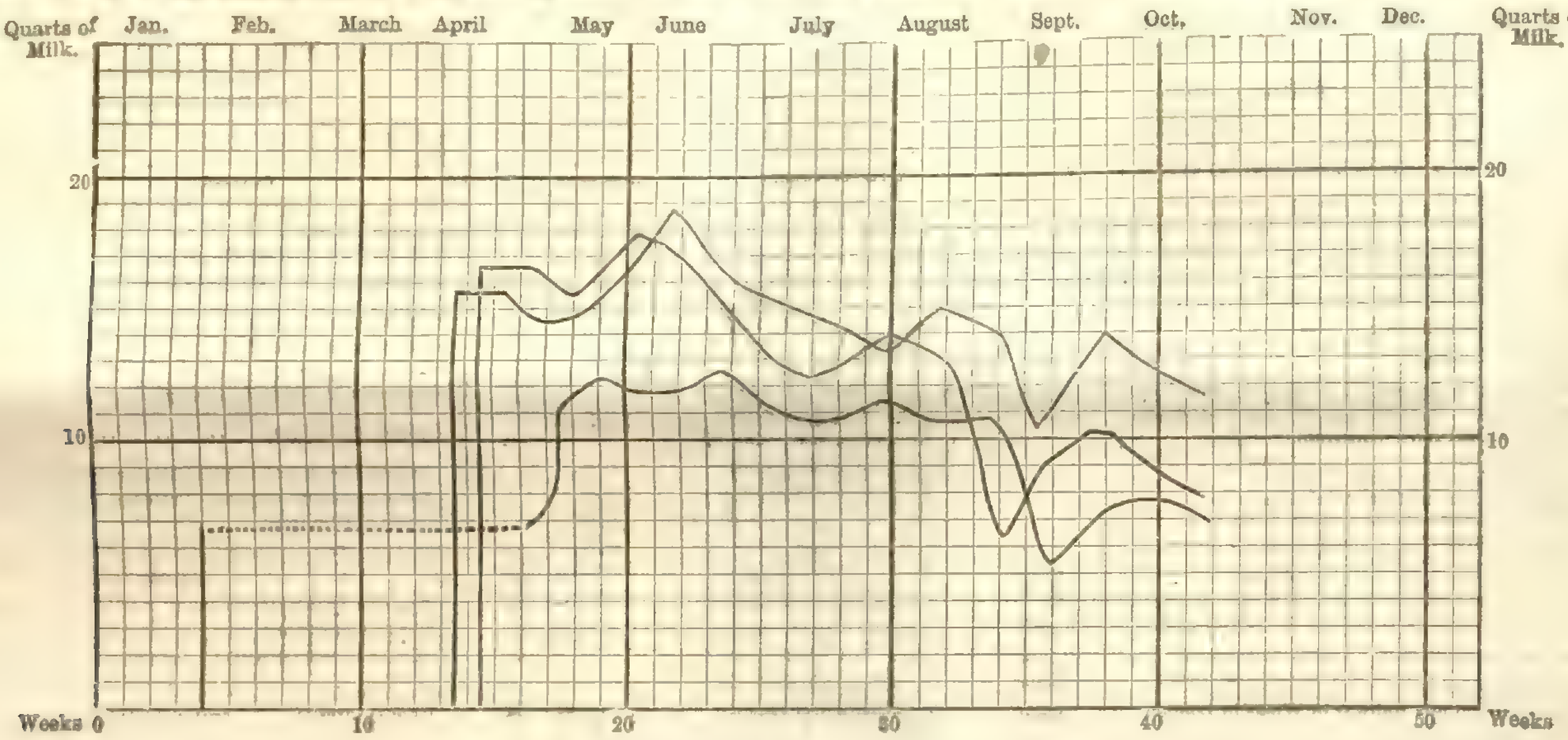

DIAGRAM SHOWING DAILY YIELD OF MILK FROM INDIVIDUAL COWS.

available food increases, but this dwindles with the autumn and ceases with the winter—and so the quality of the food fails along with the constitutional productiveness of the animal, and the curve drops and ceases sooner than it would.

Instead therefore of a milk curve of such uniformity as the first theory supposes, the actual line is irregular. Commencing with a distance from the base line correspondent to the produce when on hay and roots, it rises when the cow is turned out to Grass, drops again before hay harvest is completed, rises with the access of the herd to aftermath, and drops more rapidly than it might owing to the feeding on dry food when winter comes. Still the curve of the individual cow

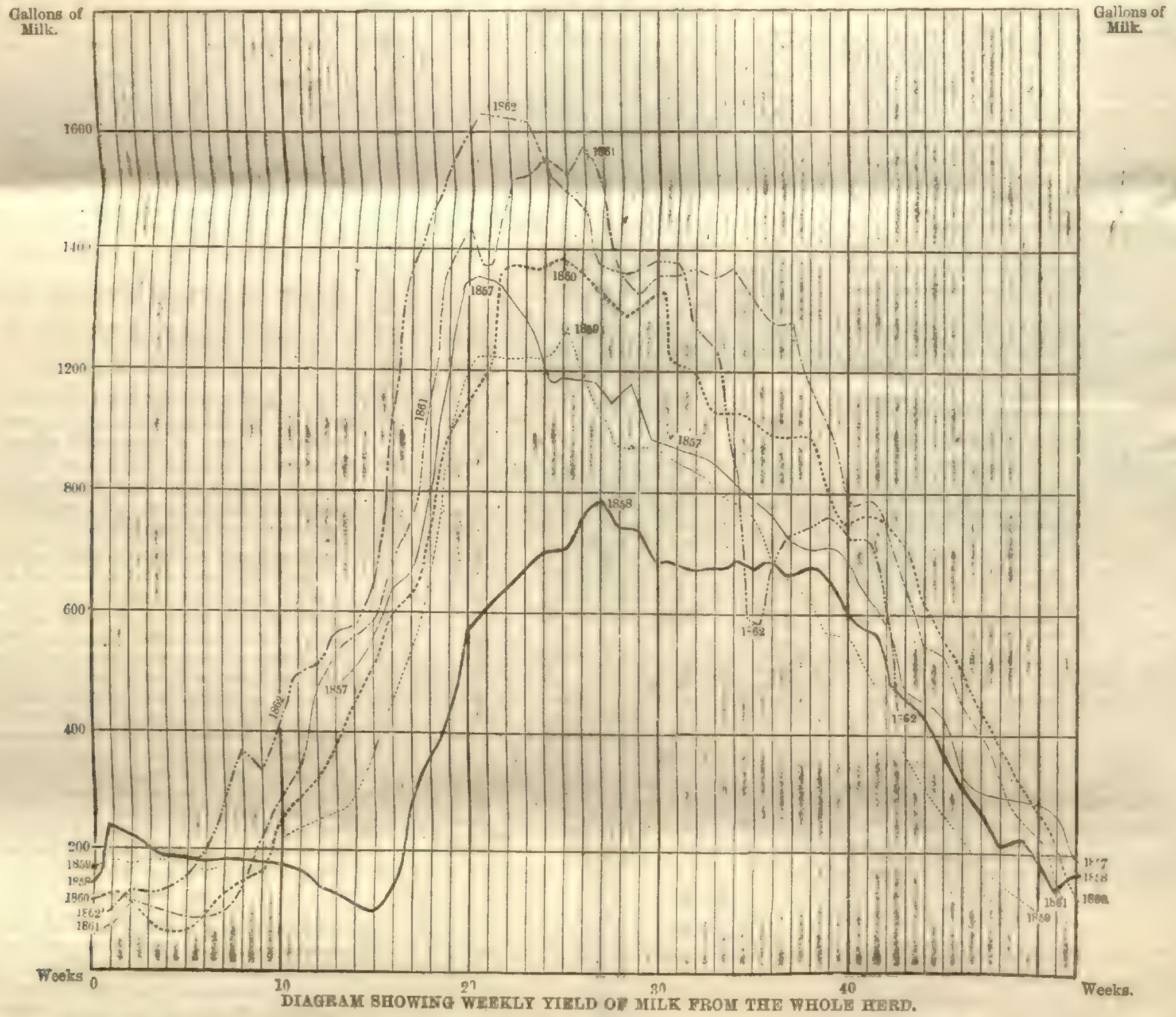

DIAGRAM SHOWING WEEKLY YIELD OF MILK FROM THE WHOLE HERD.

always commences at a considerable height, and ultimately ceases altogether. This appears in the upper diagram, where the lines for three cows are drawn indicating the average daily produce in successive weeks from the time of calving up to the first week in October, when they had just recovered from an attack of the foot and mouth disease, which had, as will be seen in every instance, greatly reduced their produce for several weeks. If the curves had been continued, they would have rapidly declined through October and November, and ceased in December.

If, however, we draw a curve indicating the weekly produce of the whole herd, a line of a very different form appears. The cows do not all come to the pail together; if they did, then the curve would resemble in its general features those in the diagram above. They come to their calving at different times during the first months of the year, and there is thus no week without some milk in the pail. The curve of weekly milk produce on the whole farm thus never touches the base line at all. It is lowest in December and January, and rises rapidly in the months of April and May. It reaches its maximum at the end of May or beginning of June, shrinks during June, and rises again a little after hay harvest, and if not affected by any general failure of health in the stock, falls gradually and uniformly throughout the autumn.

The lower diagram shows the curves of this kind of several successive years on the Frocester Court farm, near Stonehouse, Gloucestershire. It was published in these columns by Mr. Harrison's kind permission two years ago, and we reproduce it here at present in order that our readers may the better understand the statistics of the same farm during the past summer which have lately been supplied to us by Mr. Harrison, and which illustrate the effect of the drought of 1864 upon a dairy farm.

In the diagram to which the attention of our readers is now directed, it will be seen that all the curves exhibit the principal facts just named. In all there is some height above the base line even in the very ebb of the wave, indicating that the produce of milk never altogether ceased—in all there is the hollow in the wave's crest indicating the diminished supply of food between the end of May and the finishing of the hay harvest, and in the year 1862 there is the great depression about the 35th week of the year, indicating a general attack of foot-and-mouth disease, and its effect on the produce, which, it will be seen, was not entirely recovered on the departure of the illness. The principal point of difference in these curves is not so much in the general form which they all more or less exhibit, as in the height which in successive years they severally attained. But this was owing simply to the different number of cows which the herd in successive years contained. There were 55 cows milked in 1857, 52 in 1858, 60 in 1859, 66 in 1860, and 71 in 1862.

Suppose, now, that in place of representing the total amount of milk produced in successive weeks, the lines had represented only the average amount per cow per week. Suppose, for example, the total of 1620 gallons, which is seen to have been attained in the 21st week of 1862, had been divided by 71 (the number of cows milked that year,) so that the distance of the line from the base should have represented 22.8 gallons as the average weekly produce per cow at that time, and that the correspondent figures for the other lines had been similarly obtained—so that the 1270 gallons for example in the same week of 1857 had been divided by 55 cows, and 22,2 had thus been obtained for that week's produce per cow in that year. It is plain that, barring the effects of management and health, the curves would have been nearly identical one year with another; or, rather, they would have been influenced only by those differences in the food supply of the year, which, as the result of the climate of the season, are almost beyond the power of the farmer to affect. This is what has been done by Mr. Harrison in the comparison of 1863 and 1864, which our readers will now be able fully to understand.

The following figures represent the weekly produce *per cow* in the two years. Let any reader interested in the subject draw three columns on a sheet of paper, and on 52 lines across these columns write respectively the date of the 52 successive weeks of the year and the average produce per cow in each week in 1863 and 1864 respectively, and then from the outer line of the right-hand column draw horizontal lines of a length correspondent, at the rate of 4 gallons to an inch, to the produce of 1863 and 1864 respectively for every week of the year. The curves joining the extremities of the lines for 1863 and those for 1864 respectively will at once represent to the eye, what the reader will only laboriously extract by a study of the figures given below, the disastrous effect of the drought of 1861. It will be seen that all through May and June the curve for 1863 is outside that of 1864; and that, excepting only the first week—and that is more owing to the earlier hay harvest of the present year than to any other cause—the curve of 1864 drops far within that of 1863 all through July and August and September. But there were 90 cows milked in 1863 and only 80 in 1864, and the figures in the next column, which give the weekly produce per cow, great as is the loss which they represent —8, 9, 10, and 11 gallons per head per week in 1864 through the last two months in place of 11, 12, 13, and 14 gallons in 1863—therefore, do not show the whole loss which has been sustained. And in addition to this there has been an even greater extent of pasture taken up this year in feeding 80 cows with the reduced return per head, than kept 90 last year and made them yield nearly one-third more individually. It is plain, therefore, that the weather of the past summer, which has brought a good harvest to excellent maturity in our corn fields, has been unusually severe on all those farmers who depend on succulent growth for their returns, and nowhere more severe than in the dairy districts of the country. The following are Mr. Harrison's figures:—

Average Weekly Yield of Milk per Cow, on Frocester Court Farm, near Stonehouse.

Week Ending	1863.	1864.	Week Ending	1863.	1864.
	gallons.	gallons.		gallons.	gallons.
January 3	0.33	1.22	July 4	15.44	15.85
,, 10	0.94	2.85	,, 11	14.90	14.52
,, 17	0.98	3.42	,, 18	15.60	13 45
,, 24	1.77	3 20	,, 25	15.62	12.82
,, 31	2.42	3.42	August 1	14.60	12.17
February 7	2.53	3.50	,, 8	14.18	11.57
,, 14	2.70	3.27	,, 15	13.09	10.87
,, 21	2.90	3.16	,, 22	12.78	9.69
,, 28	4.28	3.64	,, 29	12.62	9 06
March 7	5 54	4.59	September 5	11.92	8.21
,, 14	7.53	4.44	,, 12	11.81	8.19
,, 21	7.44	5.45	,, 19	10.99	7.67
,, 28	8.70	6.87	,, 26	9.64	7.17
April 4	8.21	7.17	October 3	8.64	6.66
,, 11	8.21	6.72	,, 10	8.16	..
,, 18	8.94	7.57	,, 17	8.40	..
,, 25	9.11	9.01	,, 24	7.90	..
May 2	13.83	14.01	,, 31	7.35	..
,, 9	15.53	14.76	November 7	6.82	..
,, 16	16.94	15.61	,, 14	6.04	..
,, 23	18.41	16.95	,, 21	4.53	..
,, 30	18.43	18.18	,, 28	4.11	..
June 6	18.22	17.05	December 5	3.54	..
,, 13	17.83	16.64	,, 12	3.24	..
,, 20	17.89	16.10	,, 19	2.57	..
,, 27	16.60	15.41	,, 26	2.11	..
			,, 31	1 29	..

The present Part of the English Agricultural Society's Journal contains the prize report of Hertfordshire, supplemented by agricultural notes on the same county, by the Rev. J. C. Clutterbuck; a discussion of the agricultural aspects of the late Census returns, by J. D. Dent, M.P.; a short prize essay on the management of a suburban farm, by J. Bligh Monck; a very instructive paper, by Dr. Voelcker, on the absorption of potash by soils of known composition; Mr. Paget's paper on accidents through farm machinery; Mr. G. Jonas's prize essay on storing root crops, which we shall immediately transfer to our columns; a paper by the Editor on the improved construction of stables; Mr. Grantham's account of the disafforesting of Delamere; Mr. Herbert's periodical statistics on meat consumption in the metropolis; an account of experiments with salt on Mangels, by Dr. Voelcker; the general report on the Newcastle meeting by Mr. Coleman, including a very elaborate account of the steam cultivation trials, we presume by the same pen; the report, by Mr. Dent, M.P., on the live stock show at Newcastle; and a continuation of their elaborate account of experience in Wheat growing, by Messrs. Lawes & Gilbert. The addenda are a controversial paper by Baron Liebig; a paragraph by Mr. Mechi on green Beans as sheep food; a letter on sheep inoculation by Mr. Deacon; and reports of the occasional agricultural discussions before the Council during the session of last spring. In addition to these there are the prize lists of the Newcastle meeting, and a complete enumeration of the membership of the Society, with a list of all the privileges attaching to it.

There is thus a large volume full of good reading for farmers. Will they read it? Perhaps it would afford a clue to the best editorship of such a performance if we could ascertain which of the papers thus collected will be most read and earliest read by those to whom the volume is addressed. We have no doubt that the report of the implement judges will be read, and especially that of the steam plough judges. The paper, too, on storing roots, coming into the hands of the farmer just as he is about to direct the storage of his own scanty crop, will be at once referred to for information. Baron Liebig's last shot at Mr. Lawes will be listened to and looked at; the current notes on meteorology, prices, and supplies will be consulted, and very likely the reader may refresh his memory of some of the more interesting of the weekly discussions which were reported in the agricultural papers at the time of their occurrence. There may be a few who will turn to Mr. Monck's account of his experience as a suburban farmer, and no doubt a good many will look to see what the Professor of Chemistry has to say as the result of his most recent researches into the relations of soil, manure, and plant. The way to prepare a book which shall be read is to throw the chief weight of the performance upon subjects of immediate or of personal interest.

The point of all others on which information is now desired, is the most economical substitute for a deficient crop of hay and roots, but of information such as this—conspicuous by its absence—there is none in the present volume. An inquiry addressed to 40 or 50 of the leading practical men or the list of members would have obtained the information needed, and this would, through the pages of the Journal, have seasonably reached the 4000 or 5000 members of the Society, most of them just at this time surely needing guidance on just this point. If instances of this prompt attention to the immediate wants of readers were the rule instead of the exception in the successive volumes as they appear —if it thus appeared that the Editor is wide awake to the current needs of English agriculture, he would ultimately obtain that general usage and perusal of his pages which they certainly do not now receive. It is confidently declared that not one-half of the copies of this work that are issued ever have their pages opened. Surely this is not a condition of things under which the Journal Committee are content to lie. What is to be the remedy for it? How shall the 1500*l.* per annum now spent upon this Journal by the Society be made to serve the intended purpose of so large an outlay? The subject certainly calls for serious and earnest inquiry and discussion.

SHORT-HORN CORRESPONDENCE.

(*Continued from* p. 947.)

[Among the letters and papers left by Mr. Cottrell, of Congresbury, and kindly placed at our disposal by Mr. Bowly, of Siddington, are copies of a voluminous correspondence, much of which appeared in the columns of Agricultural Journals upwards of 40 years ago. We make the following extracts:—]

7. *Mr. Hutchinson on Hubback.*

"Stockton, October 10, 1821.

"The bull Hubback being now pronounced the grand cause of the improvement instead of the main root of the Ketton and Barmptons, so celebrated above all other Short-horns, it behoves every breeder in the kingdom to prove his own stock related to this wonderful animal (if he can), which I conceive it by no means difficult for almost every breeder in this district to do, as no bull (as I will show) has been more easy of access. He served three years at W. Facett's, near Haughton-on-Skern, at 1*s.* a cow, before the late Mr. Robert Colling and Mr. Waistell purchased him (as we have it) for the sole purpose of serving feeding heifers, but I am now in possession of evidence to show that Mr. Waistell during the nine or ten months he remained a partnership bull, had his twelve breeding Short-horned cows served by him, and that he was open and free to the whole neighbourhood during that period. Mr. Charles Colling became possessed of him in October, 1785, he was then rising five years old, his price not more than 8*l.* 8*s.* (the late Mr. Robert Colling having declared his opinion to Mr. Waistell that he was not a good one), and in 1786* he purchased Mr. Maynard's cow and heifer for 3*l.* 10*s.* (bidding about the same time 50 guineas for Mr. Scott's Sockburn cow). Mr. Charles Colling was then an established breeder. In the spring of 1790 he exhibited in Darlington market his first two yearling bulls for sale, and succeeded in selling them both. Mr. Coates, of Smeaton, was the purchaser of one for 26*l.*, and Mr. Robert Thomas of the other for 28*l.* These bulls surely may be called Improved Short horns, and immediately descended from Hubback (whether Mr. C. Colling and Major Rudd allow it or not) and as the latter of these bulls, which won the premium at Durham in 1793 in Mr. Ralph Grimstone's name,† was the sire of the great grandam of my cow Stranger, it will appear that my breed has perhaps as much of Hubback blood in it as any other breed in the kingdom (not even excepting that of the Messrs. Colling), as the Sockburn cows in my brother's time had access to both these bulls, and Chapman's Son of Punch surely had his proportion.

"But I am by no means reconciled to the idea that Mr. C. Colling himself ever thought so highly of this bull (for he only kept him two years), as is now so confidently held out, otherwise would he have parted with him at seven years old a nameless bull?—for it is well known that he was not called Hubback till many years after he had been sold to a gentleman of that name at North Seaton, in Northumberland. We hear indeed of sons of Hubback, and if ever Mr. Colling had any such, the two yearlings above alluded to must have been of them. Not one of Messrs. Colling's own bulls (their best bulls, as Major Rudd has it) could call him sire,‡ and it is surely most wonderful that they should have never thought it worth while to keep one of his begetting. The long lines of bulls from Fuljambe (the son of Mr. Barker's bull) to Cecil, and from Punch to Pilot, have sprung from the loins of Mr. Hill's Blackwell bull, and that no virtue is allowed to have been found in any blood, but in this drop of the Kyloe in the veins of Hubback, is most wonderful. Mr. Hill's bull, besides being the sire of Mr. Barker's bull and the Sockburn bull, was also the sire of George Coates' old bull, which won the premium in 1791."

8. *Mr. G. Baker on Hubback.*

"Elemore Hall, November 19, 1821.

"Attempts having been made through the channel of your paper, by hearsay evidence and otherwise, to question the blood of Hubback, I send you his pedigree. I have the authority of Mr. Charles Colling to say he always considered him a thoroughbred Short-horned bull. Mr. John Hunter, of Hurworth, who sold his dam with Hubback at her foot to Mr. Bassnet, of Darlington, says his father bought her of Mr. Stephenson, of Ketton, and that she was a pure bred Short-horn. Mr. Alexander Hall, of Sherraton Hill Top, who lived in that neighbourhood, and remembers her and her calf perfectly well, says she was a beautiful colour and handler, and when she got on to good land near Darlington, she got so fat she would not breed again. Hubback, he says, was got by Mr. Snowden's bull, a son of Mr. Robson's bull, of Dinsdale, who was bred by old Mr. Waistell, of Burton, a very noted breeder, and got by Mr. James Masterman's bull, of Coatham, near Darlington, and was a true bred Short-horn. The above gentlemen will attest the same if necessary.

"I consider the name of Improved Short-horn to come from the breed of Hubback and Mr. Maynard's cows, which, from time and judicious crossing have brought them to their superior excellence. No cow or bull can ever be called a Short-horn with a cross of Scotch blood, for I would just as soon put the Duke of Grafton's Penelope to a Scotch pony to breed a racer as a cow to the grandson of Bolingbroke out of a Galloway cow to breed a Short-horn."

* No, not in 1786, for he had Phœnix from Mr. Maynard's Favourite in 1783.

† Mr. Hutchinson, you err! R. Grimstone's bull was got by Charger, son of Favourite.

‡ Yes! Broken Horned Bull and his dam, also the Lame Bull, and several cows, were got by this bull, with several young bulls not named, only called sons of Hubback.

9. "B" (*Rev. H. Berry*) *on Mr. Colling's stock.*

"Worcestershire, December 3, 1821.

"Your correspondent, Mr. Baker, has made a statement in his letter on the pedigree of Hubback, which seems calculated (though probably not so intended) to cast a slur upon certain of the stock purchased at Mr. Colling's sale. I beg, therefore, to make some observations on that statement. Mr. B. states thus:—No cow or bull can ever be called a Shorthorn with a cross of Scotch blood, for I would just as soon put the Duke of Grafton's Penelope to a Scotch pony to breed a racer as a cow to the grandson of Bolingbroke out of a Galloway cow to breed a Short-horn,

"Now, upon investigation it becomes immediately apparent that Mr. Colling (certainly not ignorant on this point) did think the stock got by the grandson of Bolingbroke properly called a Short-horned stock, and from the preference he gave to the tribe thus descended and from his unequivocal assertion to that effect, no doubt can be entertained that he thought them entitled to be considered the best of improved Short-horns. It is not for any person at the present day to dictate to Mr. Colling how his cattle ought to be derived in order to entitle them to a peculiar distinctive appellation.

"The merit of judicious selection, and, I will add, of crossing, were fairly and signally his own, and his breed will and must ever be distinguished by the designation with which he sent them forth to the world—Improved Shorthorns.

"Perhaps, were the inquiry to be made, it would be a difficult matter for Mr. Baker to satisfy persons possessed of any knowledge of Short-horns that Mr. Maynard's cows deserved to be so called, but as I consider what I have previously advanced is fully adequate to my purpose, that of preventing the influence of the ill founded opinions, I shall conclude my letter by stating that public estimation has confirmed Mr. Colling's opinion, in proof of which take the following facts:—Lady, by the grandson of Bolingbroke, sold for 206 guineas; Countess, her daughter, for 400 guineas; Laura, another daughter, for 210, and Celina, out of Countess, for 200 guineas. These facts, Mr. Editor, will I doubt not, as they ought, have more weight than new opinions offered upon a subject which has long been settled by the highest authorities. I am, your obedient servant, "B."

10. *Mr. J. Rooke on Improving the Breeds of Horned Cattle.*

"Akehead, March 7, 1822.

"Since I last addressed you on this subject it has been stated by Mr. Hutchinson, in his very interesting and valuable little book, entitled 'Origin and Pedigrees of the Sockburn Short-horns,' that he believes the Kyloe cross was more frequent in Mr. Robert Colling's stock than in that of Mr. Charles Colling; that a Kyloe bull has been seen ranging in his pastures for the whole summer amongst his Short-horn cows, and that any person of discernment may easily believe this who ever made a comparison between the last of the Barmpton bulls and any of Mr. Charles Colling's. He adds: 'Wellington and Barmpton were surely the neatest and the softest and shortest legged of his bulls, as was Moss Rose of his cows, and had more Highland hair, like all their descendants, than any I have ever seen of the Kettons.

"It has been asked by 'A Breeder,' 'what was Punch's pedigree by the mother's side?" On comparing this mysterious and pointed question with what has been stated by Mr. Hutchinson, and also with Major Rudd's pedigrees of some of Mr. Robert Colling's stock, it would seem as if Punch's dam was by a Kyloe bull. Punch was the sire of Ben, the sire of the dam of Redrose, and of the granddam of Wildhair. Punch was also the sire of the dam of North Star, the sire of Golden Pippin, and also the great granddam of Venus.

"On the subject of crosses, Mr. Bailey in his 'General View of the Agriculture of Durham,' observes: Mr. R. Colling has *frequently crossed with the improved Short-horned bulls and the best Kyloe cows he could procure*, the produce made very fat, and much earlier than the pure Kyloe, but he has given it up, finding that pure improved Short-horns are more profitable.

"Unquestionably 'pure improved Short horns' in the sense used by Mr. Colling had a very different meaning from 'pure Short-horns.' It would now seem that Mr. Colling meant to say a cross between a Kyloe bull and a Short-horned cow are more profitable than a cross between a Short-horned bull and a Kyloe cow, owing to their getting more size, and by way of distinction he called them 'Improved Short-horns,' which he was fully warranted in doing, as they had the exterior appearance of Short-horns 'improved.'

"In 1815 Mr. Robert Colling said in the presence of the writer of this article, 'Whatever I know of the art of breeding cattle I owe to the late Mr. George Cully,' and he also said 'Ben is the best blood.' In speaking of the Fifeshire breed of cattle Mr. Cully observes: 'You would at first imagine them a distinct breed, from their upright white horns and being exceedingly light eyed and thin thighed, but I am pretty clear it is only from their being more nearly allied to the Kyloes, and consequently less of the coarse kind of Short-horns in them.' Probably this was a portion of the valuable information which Mr. Colling owed to Mr. Cully, and hence I suspect the former of these eminent breeders considered the 'blood' of Ben the best, owing to their combining the size and appearance of the Short-horn with the valuable qualities of the Kyloe. What else was there in the pedigree of Ben to induce Mr. Colling to call his the best blood. For we are more ill-informed about his and his sire's pedigree than even Hubback himself, and yet they are the very foundation of the Barmpton stock, and immediately connected with that of the Ketton stock also.

"The public have stamped a value upon the 'judicious crosses' or 'improved Short-horns,' not 'pure Short-horns,' presented to their notice at the Ketton and Barmpton sales, which have no parallel in the history of breeding horned cattle; and it marks out the course to be followed by other improvers of any of the varieties of horned cattle with the greatest clearness, namely, to cross with the best Highland bulls, and so breed back again wholly to the dam's side. Perhaps the time may not be far distant when this mode of crossing will receive a fair trial even among the Long-horns.

"Where size and Kyloe qualities are the main objects of preservation, I think no female Kyloe ought to intervene, because it necessarily removes the process more remotely, and endangers a diminution of the properties sought after.

"As it has ever been your wish to guard the columns of your valuable journal against misrepresentation, either direct or indirect, I take the liberty of adding an important estimate of the prices of the different tribes of cows disposed of at the Ketton sale in 1810. This estimate, as you will find, is highly favourable to Lady and her progeny, and completely refutes the insinuation of 'A Breeder.'

No.		Tribes.			Amount in Guineas.		Average of each in Guineas.
15	..	Lady	..	..	2368	..	157
4	..	Venus	..	..	640	..	160
2	..	Daisy	..	..	550	..	275
5	..	Cherry	..	..	618	..	125
1	..	Comet	..	..	1000		
21	..	Not classed		..	1602	..	75
48			Total amount		6778 guineas.		

"If we make due allowance for the age of the Lady tribe, which contained one very old cow (Lady herself, 14 years of age, sold for 206 guineas), two up in years, four calves, and only six animals in the prime of life; their prices were not only the highest at the Ketton sale, but fully equal to those brought by the Red Rose at the Barmpton sale, as the latter were mostly in the heyday of life. But as Venus was by Ben, and Daisy's granddam by Punch, so far as relates to Mr. Charles Colling's stock, the superiority of the 'pure improved Short-horn' is fully established, and what is ignorantly I believe called 'pure Short-horns' is evidently thrown into the shade.

"Nor have the public estimated the value of the Barmpton stock in favour of the 'pure Short-horns,' as appears by the following prices obtained at that sale:—

No.		Tribes.			Amount in Guineas.		Average of each in Guineas.
9	..	Red Rose	..	..	2355	..	261
9	..	Wildhair	..	..	1345	..	149
3	..	Venus	..	..	487	..	162
2	..	Golden Pippin		..	297	..	148
48	..	Not classed	..	..	2985	..	62
71			Total amount		7479 guineas.		

Thus establishing the advantages of 'judicious crossing' upon the clearest and most unquestionable evidence—the decision of the public, who were totally unacquainted with the grand secret, and also of the Messrs. Colling themselves, who, it is evident, have been decidedly partial to Lady and Venus, Red Rose and Wildhair.

"It would seem as if these distinguished breeders of cattle had gone to work systematically, and they were eminently successful. To use the words of Mr. Hutchinson, 'every man's stock in the county of Durham has been benefited more or less by the Kyloe mixture.'

"Perhaps the closeness with which the Messrs. Colling have hitherto kept the grand secret has been highly advantageous to the public, as it has allowed the hand of time to stamp its sanction upon an experiment successfully carried on through 36 years, whereas, had the secret been prematurely divulged it would probably have given rise to that diversity of experiment and opinion which too frequently have a tendency to bury truth beneath a load of rubbish."

SOCIAL SCIENCE CONGRESS AT YORK.

[In the Agricultural Section, presided over by Mr. Holland, M.P., papers were read last week by the President, Mr. Strickland Mr. Gordon, and others, of which the following are abstracts.]

STEAM CULTIVATION.—Mr. HOLLAND, M.P., read a paper on the social effects arising from the introduction of machinery—more especially the application of steam power—in the culture of the soil. He said: In the limited area of this country there was a continual increase of population, and a large portion of land every year was taken from the producing area to increase civilisation. It was calculated that in our limited area the increase of population required an increase of houses equal to something like two Birminghams and a-half in area; railways and other wants of civilisation also took much land; so that, while more was required from the land, the space from which the produce was to be obtained grew less. This required the application of machinery and steam-power on land in the same way that the power-loom was called for to replace the common hand-loom in manufactories. The farmer hitherto had been more or less at the mercy of the season, and that was one cause for the slow movements in agriculture compared with the progress that had taken place in the sister sciences. There were causes—including the isolated life of the farmer before railways, the uneducated state in which he lived, the feudal rights by which he was still encompassed—trammelling his efforts to advance, and preventing his being a free agent in many ways. The rural districts at the commencement of the century were most depressed. The new Poor Law was the salvation of the country, and most beneficial to agricultural labourers. That law extended its protection to the really necessitous, increased the comfort of the aged and infirm, and raised the independent labourer; while the foundations of boards of guardians raised the character of the yeomen, accustomed them to the transaction of business in public, and under circumstances in which the conduct was scrutinised and the character formed. Without its previous existence and operation at the passing of the Bill in 1844, opening the ports and establishing free-trade, we should not have been able to compete with other countries in the production of food. From this period the introduction of machinery in agriculture became necessary. As a result of free-trade we had introduced the steam-plough. Steam tillage was the prominent triumph of British agriculture, and by it land previously drained was smashed up in a third of the time before necessary to cultivate it for inferior crops, while the saving in horse labour had been very satisfactory, and met almost the expenditure of working steam-power, and the capital required in establishing it, while the treading of horses, which did much harm, was obviated, and the evil consequences of bad seasons were overcome. Great economy of labour was obtained, as well as an increase of produce; but all this could not be accomplished without a great outlay of capital, and there was a corresponding requisite for security of property. The farmer of the present day was much better educated than farmers of former days. He made greater requirements from his landlords, consequent upon steam cultivation—desiring that fields might be made of proper shape and size; that hedges and timber be cut down so that the farmer might have full play for his machinery; he also required that the buildings should be adequate for his wants; moreover, he required from his landlord a greater security of tenure and freedom from feudal rights and customs. The farmer now selected his men, not because they happened to be parishioners, but because they were suitable to his requirements. The class of labourers was changed through the introduction of steam-ploughs. They were no longer sluggish and unwilling as in former days, and required to be well-housed and cared for. His experience told him that those connected with steam-ploughing and machinery required and obtained good cottages, and the most powerful thing in elevating the character of working men was the providing for them superior habitations and promoting respectability in dress. By the management of steam machinery labourers had become so altered that he had been able to shut up a public-house, the men enjoying the evening to a far greater extent in a large room provided with fire and light, where there were social enjoyments, whilst the evils of the public-house and drunkenness were far reduced among them—example, no doubt, having much to do with this. Example had had, and was having, also much effect on labourers' employers. In course of time it might be found that they might select their men in return for the purposes of steam management. In his own case he had a large steam-plough and two other steam-engines at work, and had not, in any case, been obliged to call in an engineer; the whole of the steam work in his occupation being done by labourers. The population of this country employed in agriculture was on the decline. In 1841 the rural population under the head of agriculture was — males, 1,082,165, and females, 56,398, making altogether employed in agriculture out of doors, 1,138,563. In 1861 the males were 914,301, females 43,964, making altogether 958,265, being a decrease of 180,298, from which many were in the habit of arguing that the country was in a state of decay, whereas it was just the reverse. It showed how well timed was the introduction of steam-culture, coming at the moment when the population employed in agriculture is becoming less, owing to the advanced state of the manufactures of the country, whilst the area was diminished in which food was to be produced, and whilst the wants of the increased population required them to make every exertion to meet the demands made upon them. The influence of steam culture had been to give the men better wages, superior home accommodation, so that they demanded as necessaries of life articles which were denied to them as luxuries a few years ago. The influence of the introduction of the steam culture of land was that labour was rapid as well as extraordinary. As the area of cultivation became less, as it obviously must, the cultivators of land would rank as manufacturers of food, and labourers would be described as skilled and intelligent artisans. The freedom from variableness of climate and deep cultivation producing a great increase of food would go far to make steam culture a lasting benefit to the country.

AGRICULTURAL COTTAGES.—Mr. C. W. STRICKLAND, Howsham, York, read a paper "On the Obtaining of Good Plans for Agricultural Cottages, and the Political and Social Bearings of the Subject." He referred in the outset to what had already been done towards arriving at a knowledge of the principles of construction upon which the best and more economical cottages can be built; and he proceeded to point out what in his opinion is chiefly needed at the present time to carry that knowledge further; and, in the next place, he made a few remarks upon some collateral matters, especially respecting the question of cottages paying interest to those who build them. He said there was one form of cottages which had not yet been considered nearly so much as it deserved to be, but which ought to be generally useful if good plans of it were well known. This is a pair of cottages with two living rooms downstairs and two bed-rooms upstairs in the one, and with one living room downstairs and three upstairs bed-rooms in the other. This ought, he believed, to make a better pair of cottages, and for less money in proportion to the accommodation obtained, than any other, and throughout the agricultural districts would, he believed, be found to be the most useful of all forms of cottage. Speaking on the question of how cottage building is to pay, Mr. Strickland said he was abundantly convinced that the building of decent cottages never could be made to pay as a commercial speculation to a professional builder, except possibly—but by no means certainly—by some kind of legislative protection, as unjust as it would be impolitic—such as exemption of cottages from rates and taxes, or favouring them with a more rational mode of conveyance than that which other kinds of property are burdened with. But there could be little doubt that it would well repay landlords and employers of labour to provide fitting homes for their workpeople. After referring to the feelings of independence and self-respect which the possession of a cottage and garden are calculated to engender in the mind of a person employed in agricultural pursuits, he concluded with a few slight remarks upon the law of settlement and the manner in which it bears upon the subject. He concurred in the opinion that Government could do nothing but mischief by interfering in the matter, unless it be, perhaps, by increasing the facilities for borrowing money on advantageous terms for this purpose.

(*To be continued.*)

AGRICULTURAL STATISTICS, IRELAND, 1864.

[The following are the chief items in the report just presented by the Registrar-General.]

	acres.
The total area under crops this year is	5,672,980
In 1863 the area was	5,662,487
Showing an increase under crops in 1864 of	10,493

Of the Cereal Crops, the total extent under Wheat was greater in 1864 than in 1863 by 19,552 acres;

whilst the total area under Oats has diminished by 143,965 acres. Barley, Bere, and Rye increased by 1103, and Beans and Peas by 873 acres,—exhibiting on the whole a decrease in Cereals of 122,437 acres, as given in the following summary :—

Abstract of Cereal Crops.

	1863.	1864.	Increase in 1864.	Decrease in 1864.
	acres.	acres.	acres.	acres.
Wheat	260,311	279,863	19,552	..
Oats	1,953,883	1,809,918	..	143,965
Barley	171,892	172,662	770	..
Bere and Rye ..	8,659	8,992	333	.
Beans and Peas ..	15,153	16,026	873	..
Total ..	2,409,898	2,287,461	21,528	143,965

Decrease in Cereal Crops in 1864, 122,437 acres.

In Green Crops there is a slight decrease this year compared with last. Turnips show a diminution of 14,153 acres; Mangel Wurzel and Beet Root of 2328; Cabbage of 2369; and Vetches and Rape of 20 acres. Potatos, however, have increased by 15,868 acres, and Carrots and other green crops by 685 acres,—so that, on the whole, the green crops in 1864 have only diminished by 2317 acres, on a total amounting to nearly 1,500,000 acres.

The acreage under green crops in 1863 and 1864, and the increase or decrease in each crop, in the latter year, were as under :—

Abstract of Green Crops.

	1863.	1864.	Increase.	Decrease.
	acres.	acres.	acres.	acres.
Potatos	1,023,414	1,039,282	15,868	..
Turnips	351,436	337,283	..	14,153
Mangel Wurzel and Beet Root ..	16,434	14,106	..	2,328
Cabbage	34,125	31,756	..	2,369
Carrots, Parsnips, and other Green Crops	22,505	23,190	685	..
Vetches and Rape	29,938	29,918	..	20
Total ..	1,477,852	1,475,535	16,553	18,870

Decrease in Green Crops in 1864, 2317 acres.

The following Table gives the total area under the several crops in each of the years 1860 to 1864 inclusive :—

Crops.	1860.	1861.	1862	1863.	1864.
	acres.	acres.	acres.	acres.	acres.
Wheat	466,415	401,243	356,321	260,311	279,863
Oats	1,966,364	1,999,160	1,977,528	1,953,883	1,809,918
Barley	181,060	198,955	192,302	171,892	172,662
Bere and Rye ..	12,734	11,582	12,128	8,659	8,992
Beans and Peas ..	12,832	14,017	15,202	15,153	16,026
Potatos	1,172,079	1,133,504	1,018,112	1,023,414	1,039,282
Turnips	318,540	334,104	876,715	351,436	337,283
Mangel and Beet Root	32,124	22,940	23,222	16,431	14,106
Cabbage	22,765	30,020	30,548	34,125	31,755
Carrots, Parsnips, and other Green Crops	21,033	19,559	17,713	22,505	23,190
Vetches and Rape	40,481	31,280	30,630	29,938	29,918
Flax	158,595	147,957	150,070	214,099	301,660
Meadow and Clover ..	1,594,518	1,546,206	1,552,924	1,560,638	1,608,124

The number of horses, cattle, sheep, and pigs, at the time of taking the agricultural statistics, in each year from 1855 to 1864, both inclusive, is given in the following Table :—

Total Number of Live Stock in Ireland, in each Year from 1855 to 1864, inclusive.

Years.	Number of Horses.	Number of Cattle.	Number of Sheep.	Number of Pigs.
1855	556,287	3,564,400	3,602,342	1,177,605
1856	573,408	3,587,858	3,694,294	918,525
1857	599,782	3,620,954	3,452,252	1,255,186
1858	611,321	3,667,304	3,494,993	1,409,883
1859	629,075	3,815,598	3,592,804	1,465,751
1860	619,811	3,606,374	3,542,080	1,271,072
1861	614,232	3,471,688	3,556,050	1,102,042
1862	602,894	3,254,890	3,456,132	1,154,324
1863	579,978	3,144,231	3,308,204	1,067,458
1864	561,361	3,257,309	3,363,068	1,056,249
Difference in No. between 1863 and 1864 ..	Decrease. 18,617	Increase. 113,078	Increase. 54,864	Decrease. 11,209

Notwithstanding the decrease in the number of horses and pigs, there is an increase in the estimated total value of stock this year compared with last, amounting to 632,411*l.*

This increase, combined with the larger extent of Flax—87,761 acres—and the consequent greater yield and value of that crop in 1864 compared with 1863, also the expected increase in the "average yield" of other crops this year, may be considered as affording fair hope of a return to more propitious seasons for the farmer, than Ireland has enjoyed for some years past.

Emigration.—According to the returns received, 84,586 persons left Ireland this year up to the 31st of July, who stated it was their intention not to return,—being an increase of 4080 on the number for last year. The entire number of emigrants since the date when their enumeration at the several ports of Ireland commenced,—1st May, 1851,—to the 31st of July last, amounted to 1,499,642 persons. *William Donnelly, Registrar-General, General Register Office, Dublin, 26th September*, 1864.

THE PAST HARVEST AND THE COMING WINTER.

Essex : *Tiptree Hall.*—Our harvest was completed before the 1st of September. As to finding food for my stock during the approaching winter I see no difficulty ; I have, therefore, my full and usual number of live stock. My Mangels are good and my hay abundant—thanks to irrigation. Of Swedes I only grow a small acreage, and they will probably be two-thirds of a crop. These fine rains have now reached the subsoil, and the temperature being so high greatly favours the more complete growth of our root and green crops. On cold clay soils in our southern counties we should always make a Mangel crop our main dependence, for reasons which I will some day give in a separate paper. The Mangels can endure a higher and drier temperature than Turnips. My usual mode of winter feeding stock with pulped roots and pulped green crops mixed with chopped straw of every kind, and a considerable proportion of cake and meal with (for growing animals) malt combs and bran, will, I think, be largely adopted this winter. At most I never exceed 1 bushel of roots per day for each bullock. This season half a bushel will be about the quantity. Let those who are deprived of roots consult Mr. Horsfall's able papers (Royal Agricultural Society's Journal, vols. 17 and 18), and they will see how easily roots may be dispensed with by the use of a little Linseed-oil or Linseed. I find half a lb. to 1 lb. of Linseed meal always very useful when fattening bullocks. Let us always bear in mind that selling **corn off the farm impoverishes it, whereas by selling it to our cattle, the bulk of it remains with us as manure.** Again, if we are to fertilise our farms, let us feed with something that was not grown on our own farm. When will farmers learn the value of Bean-straw, chaffed and moistened by hot water, as a feeding stuff? This winter ought to teach every one the value of straw for feeding purposes. My old friends of the London Farmers' Club will no longer laugh at me for suggesting the use of straw in feeding, for straw chaff is now becoming the order of the day. For our ewes malt combs, bran, a little cake and Pea straw, will carry them well through the winter, especially with a pint or half a pint of Indian Corn. When corn is cheap and meat is dear we ought to make plenty of the latter. By-the-bye have any of your correspondents found that cotton-cake is apt to make the wool come off the sheep in the spring? I have heard of such cases, and fancy that mine were slightly affected. With regard to the crops hereabout, we consider Wheat an average in quantity and good in quality ; better than average on the cold clays, and rather under on the warmer or mixed soils. Barley almost everywhere over average. Beans and Peas a very poor crop. (Mine are good.) Oats considerably under average. Clovers and Grass hay a very small crop. Mangel half a crop, generally much improved by the rains. Turnips quite a failure, past redemption ; Rape only just coming up. Every one hoping and preparing to have a crop of some sort for spring food. I have a good crop of Mangel, plenty of Clover hay, and some good growing Cabbages, thanks to irrigation. Owing to the low price of Barley and Revett Wheat, much of it will be used for cattle and stock feeding, especially as roots are so short a crop. *J. J. Mechi.*

Cambridgeshire : *Chatteris.*—In this immediate neighbourhood we have reason to be satisfied with the harvest. Wheat, where threshed, has yielded well, and is heavy in weight and of good quality. Perhaps this district will equal last year. The spring crops can only be guessed at, as very little has been threshed ; we must therefore defer our opinion upon these, and give it in a future report. We shall be short of winter keeping. Coleseeds are generally inferior, and where moderately good are realising almost fabulous prices. An effort will be made to keep sheep on Grass, which is now growing as long as possible, giving them cake or corn. As this is not a breeding country, flock-masters will not suffer so much, as they will buy according to their prospect for food. The present comparatively low price of lambs is a strong inducement to purchase as many as can possibly be kept during the winter. We purpose using cake on Grass from the middle of October till some time towards the end of November, and then put our lambs on Coleseed till the end of the year, and then into yards to eat Mangels. We have some fair crops of Mangels, and hope to be able to keep from 400 to 500 lambs in this way up to April, when they go on the pastures. Mangels on cool lands are a pretty good crop, but on other soils are poor. No Turnips are grown. *A. S. R.*

Cornwall : *South Petherwyn, Launceston.*—The harvest in this neighbourhood being completed for some time, many a farmer has put his threshing-machine to work under an idea that as a whole the prices are just after harvest as high as at any time for many months after. Our markets are therefore liberally supplied, which offers an opportunity of judging the real state of the different descriptions of grain. The Wheat is heavy and exceedingly good in quality, and a full average crop. The Barley varies greatly, some lands giving far above an average of excellent malting quality, others again not one-fourth, and that of such poor light sample as to be fit for nothing else but for feeding purposes. The Oats on thin dry soils are light, and almost worthless, but on land better suited to the growth of this grain some fields are very good indeed. The hay crop is light in the extreme, but very well made. Potatos good in quality, but small. Mangels and Swedes have suffered so much from the drought, that notwithstanding the great improvement that has taken place since the rain came, they cannot be more than two-thirds of an average crop. The white and others of the late sowings of Turnips are most promising. The Grass has been so very scarce, and the pastures so dry and brown, that on all farms fully stocked all sorts of shifts have been resorted to to keep the cattle alive. This is, as regards the produce of the land, the result of the dry, but still, as Mr. Du Boulay says, the beautiful summer of 1864. The last was the 36th harvest in succession we have gathered on this farm, and by way of showing how seasons affect the production of the land, time of harvest, and so forth, we give the following brief statement. In 1857 the spring was exceedingly wet and unfavourable for the Barley tillage, consequently it was very late. We sowed a field of thin dry land on the 7th of May ; the summer proved favourable, the crop was very good indeed, both in quantity and quality, and put to stack in excellent condition the 31st of August. This year the same field was in Barley again, was sown the 15th of April, and a beautiful tillage made ; and entirely from the want of rain the crop is not one-third of the year 1857 ; the quality very low, and harvested Aug. 18. The unusually dry summer of 1864 has not only given us a very short quantity of cattle food, but the supply **of water also has been very short indeed. Pumps and wells that were never recollected to be dry before have** been so, putting the people in too many cases in a most unhealthy and deplorable state. It has also placed the stock master in no enviable position, witnessing, as he has, his starving flocks and herds, and having no means of satisfying the cravings of the hungry animals that beset him in his usual vocation. Nor indeed is his anxiety over. On looking at his winter's provender he feels how inadequate it is to fill the stomachs and satisfy the animals that he most truly wishes to keep in a thriving condition. He is therefore put to his wits' end. Rape, Trifolium incarnatum, Italian Rye-grass, winter Oats, Vetches, &c., are sown as spring feed, and the best means to economise roots, hay, and straw, is occupying the mind of one and all. As might naturally be expected, various opinions are formed as to how this desirable work can best be accomplished. It is said, "Necessity is the mother of invention." Some good, no doubt, will result from the great scarcity. One thing we think is quite certain, that bullocks will not, as heretofore in too many cases, be over crammed with roots, but will have less roots, and more chaff, corn, or cake. Then again the farm horses will have some substitute for the amazing quantity of hay given them. We remember many, very many years ago (and we always think of it with delight) visiting Earl Ducie's Whitefield Example Farm, and seeing, amongst other rare and interesting sights, the fattest and best lot of farm horses we ever saw, as a whole, on any farm, and these splendid creatures never were allowed hay. We say to our brother farmers, as far as practicable, go and do likewise. *Jno. Wills.*

Dorsetshire : *Bridport.*—I may say that I consider the past harvest to have proved the opinion we formed of its "prospects" to have been correct. Wheat probably may be a better crop than was anticipated. Barley is a very heavy crop ; I now look at a field which has yielded 17 sacks to the acre. Oats are good. Beans and Peas are a very indifferent crop. Potatos continue sound and good. Since the rain came roots have made surprising growth, and during my September rambles over many farms in this part of the country, I have noticed some very fair pieces of Swedes and common Turnips, though the general remark of sportsmen, "there is no cover for birds," proves the great deficiency in the Turnip crop. It was quite astonishing to see, after the first rain, the quantity of young plants springing up from seed, which had been lying in the ground for a period of two months or more. Mangels without doubt are small. The pastures have once more assumed a lively appearance, but too late

to enable us to get rid of the feeling that the farmers will require all his wits to "cut and contrive" to carry him through the coming winter. "What is to be done?" is the all-important and oft-mooted question. Hay certainly is well harvested, but still it cannot make up for the deficiency of roots, and moreover the very fact that it is so good will tend much to cause it to go the faster, if extra care be not exercised, but straw fortunately is unusually well saved, and consequently for feeding purposes will be of the greatest value. The Flax crop too was a satisfactory one, and yielded an abundance of seed, so the general opinion appears to be that to meet their difficulty, farmers must depend upon a judicious use of straw, oilcake, and Oats. The idea of grazing must be almost abandoned; we cannot expect to see many stalls of well-fed cattle. The ewes and lambs must have the best run of the pastures and Turnips, and be followed by the "dry" sheep, and they will be assisted with a little hay, oilcake, or corn. The usual waste in the straw-yards must be entirely prevented, and an unusual quantity of straw will be cut into chaff. *W. I. P., West Dorset.*

FORFARSHIRE: *Ferryden Farm, by Montrose.*—With regard to the harvest in this neighbourhood, I am sorry I cannot report so favourably as I should have done three weeks ago; then there was the appearance of an average crop of Wheat and Barley, but the high winds we experienced in the beginning of the month, but more especially on the 9th, shed two-thirds of the Wheat and Barley crop that was uncut, of which on most farms there was a considerable breadth. Oats being a very light crop, suffered little. Potatos are improving in size, but will be a deficient crop. Turnips have grown considerably since we had rains, but small to what they should have been at this season. *Alex. Bell.*

GLOUCESTERSHIRE: *Salperton Park, Andoversford.*—I think our Wheat was quite an average on the Cotswold Hills, and the Barley also, being very fine in quality. Some very good Oat crops and some very bad; altogether I should not place them as an average. Peas good in quality, but do not yield well. Vetches promised well with a fine blossom, but are sadly blighted and not a tenth of a crop. The Swedes and Turnips have taught us a lesson this year if we would but learn it; the early sown are good, but in this cold country we get later and later in planting every year. I think we have more Swedes and forward Turnips than any district this side of Normanton. I never had my Swedes much better, or my Mangels, but have no Turnips. The question of stock is most alarming, especially in the great grazing counties; the cut of hay being short they must buy hay or straw, both of which will be very dear; but with *hay and straw-chaff wetted, and some corn-flour, they will do very well with cattle.* We are rather fearful of keeping sheep on straw-chaff with corn, as sheep greatly dislike wet food; when cake or corn becomes wet in their troughs they will not touch it, but we must try what can be done. Cake is so dear we shall not be able to buy it, but the great secret will be to mix many sorts of corn together; I shall use Wheat, Barley, Oats, and a little Linseed meal. I think now cake is so fearfully adulterated that Linseed will be more used, and surely it must be more nutritious with the oil, as strong beer is better than small beer. If I can get my sheep to eat straw-chaff with a mixture of corn-flour, and sprinkled with a little Linseed tea, I shall do very well. I shall also use Thorley's condiment. *T. Beale Browne.*

HEREFORDSHIRE.—I have great pleasure in complying with your wishes respecting our agricultural position and prospects, together with the course I have adopted to meet the deficiencies of this most trying year, which is one of an unparalleled nature; for although the year 1844 was extremely dry, and the prolonged drought of 1826 was greater than that of the present season, yet we had not the severe frosts by night, and chillingly cold north-east winds we have this year experienced, neither were there so many mouths to feed upon our broad acres as now. The growth of Turnips from artificial manures has so rapidly increased since those periods, that anything which interferes with that most valuable portion of our agricultural productions is a most serious matter, and in this peculiar year presents a difficulty with which the wisest of us know not how to grapple. An extremely light crop of hay, failing crops of seeds, and a light crop of straw (although each were well secured), tends greatly to increase that difficulty, and our prospect of seeds for another year is at present not a whit better, if so good as it was last autumn. I never knew as many acres of them ploughed up and put to green crop for spring feed, whilst scarcely a field not ploughed up has been allowed to remain without other seeds being harrowed in. This I thought wrong, and my ideas upon the matter have proved to be right, for since a merciful Providence has blessed us with a fine fall of rain, those not disturbed have greatly improved, and individually I do not despair of having a good stock; but in order to make sure of a substitute, should my expectations not prove correct, I well scarified a clean stubble, and sowed Trifolium incarnatum and Italian Rye-grass. I have also sown in a similar manner a large breadth of Mustard, another large breadth of Rape and stubble Turnips, the former for autumn and the latter for spring keep for breeding sheep, an increased breadth of Rye, drilled at length and across to insure an early cut; a larger quantity than usual of mixed winter Vetches and Rye, together with a few acres of Cabbages, constitute my provision for the spring, and I am happy to say the whole are bidding well to supply a portion of the deficiency caused by the very general failures of Swedes, Turnips, and Mangel Wurzel; for although each of those crops have greatly improved in appearance since the genial rains, and are growing rapidly under the influence of the brilliant weather with which we are now blessed, yet, taking the county through, they cannot be more than one-third of a crop. Upon thousands of acres the seeds remained in the ground seven or eight weeks without vegetating, and those that came up early, and at one time bid fair for a crop, were so generally attacked by grub (the ravages of which the extreme dryness of the season appeared greatly to favour) that they are scarcely worth remaining, and much of the early Turnips not previously destroyed are now going rapidly off with mildew; all this has had a depreciating effect upon the price of store animals, whilst fat stock has risen, and I consider must still further rise in value. I have for months past kept my feeding sheep and lambs running upon the pastures, but principally dependent upon cut hay and straw chaff, mixed with ground oil-cake and meal, equal portions of Wheat and Oats, with which they do well. The cattle which were intended to be fed on Grass have been months in the fold-yard and feeding boxes upon similar food, the chaff being scalded the day before used with boiling Linseed—thus the straw is rendered palatable and of easy digestion by fermentation, and my limited stores of winter fodder are not so much trenched upon as they otherwise would be, whilst the pastures are freed for the other portion of my stock, the whole of which come to the fold-yards by night to eat Barley straw, and thus eke out the limited amount of herbage to as lengthened a period as possible, as there will be no roots for them during the coming winter. The crops of corn were all secured in splendid condition, but as far as I am able to judge, and from all I hear, there will be a great deficiency, I have no doubt equal to from 25 to 30 per cent. below an average, taking the bulk of all kinds together. The effect of the aphis or Wheat louse, with which all our cereals were blackened for many days, together with the premature ripeness, the effect of extreme heat by day and frosty nights, have caused the corn to be small and irregular. The Apple and Pear crops are a great abundance, and I anticipate there will be some very first-class cider and perry made in the county this year. A short time since I saw you mentioned my success with pulping roots and cut straw, remaining mixed until it became sour. This is an error: I never allow it to be sour, but if too much fermentation takes place I have it turned to cool it. *T. Duckham, Baysham Court.*

HUNTINGDON: *St. Ives.*—After due observation and inquiry, my report of the appearance of the crops in this district before harvest has been generally borne out by the machine test. Wheat was then valued at barely an average, and on the high lands this would still be the estimate. The fen land will be a full average (if not more), but on weak and dry soils the yield must be under an average, both in quality and quantity. White varieties of Wheat yield best this season, and this being more generally grown in the fens, may to some extent account for the more favourable return there, although the constant claying, the deeper cultivation, and the liberal manuring this sort of soil has received of late years, is perhaps mainly the reason of its retaining sufficient moisture in a year like this to mature the kernel. Barley will be an average crop (at least), but of very uneven quality, and very little will make first qualities of malt; faith, however, in Mr. Gladstone, and his measure, may help us to get rid of some of the remainder, if it does not increase its value. Oats vary both in yield and quality more than any other crop, and will not yield above three-quarters of an average, although some plots were very fine, and yielding. Beans prove badly, and can hardly be quoted at more than half a crop. Peas will prove about an average, with a superior quality. Potatos—the earlier are generally a short crop, with small tubers; but late varieties, where they have been liberally treated, will make a fair average return—the size and quality will be very much determined by the extent of such liberality. Hay crops were fairly good on the low land, and nearly an average on the high land, but owing to the feeding pasture "burning up," the extent of crop was unusually small, and this, with a failure of seeds, hardly any stubble feed, wretched specimens of Turnip, and only a moderate crop of Mangel and Kohl Rabi, makes the keeping of stock (sheep especially), through next winter look sufficiently problematical to tax all our energies. On the whole this has been a year when high farming has "told its tale" as regards yield, although generally corn growers will not have much cause to complain on that score; but stock and flock-masters, and graziers, must have had a terrible season. Cake and corn has been the rule on the pastures and seeds, the water-cart constantly going. Stock, half-mad with thirst and flies, pounding away, "tails up," breaking hedges, &c., and requiring the owner's unwearied attention to keep both himself and them from "coming to grief." Wheat at 1*s.* per stone is certainly not a lively price, nor very suggestive of full pockets; nevertheless, we may congratulate ourselves upon having a good autumn seed-bed for the next crop, and until prices mend, we must endeavour to convert our present one into meat, which at current rates should be more remunerative. To do this the most economically, so as to keep our usual quantity of stock, and to preserve that stock in a healthy and feeding condition with our corn, and the small supply of roots at our disposal only, and without purchasing cake and other feeding stuffs, relatively much dearer than our own produce, is the little problem to be solved during the coming winter. *Fendrayton.*

NORTHUMBERLAND: *Anick Grange, Hexham.*—The harvest is scarcely completed here, but nearly so. The crops have all cut up much better than I anticipated when I sent you a report previous to harvest. Barley is decidedly over an average, and Wheat fully an average, if not over it. Oats are certainly under an average, and on poor thin soils a very deficient crop, but still better than I reported formerly. On the later farms there has been a very great loss by wind, especially on Friday the 9th inst. Turnips, both Swedes and White, will be a very deficient crop, and Yellow not half a crop. Acres have been eaten off by the larvæ of a midge; even large vigorous plants are attacked and destroyed. Keep must be scarce during winter in this district, but in the west I believe the Turnip crop is good. Even here, where they have escaped the vermin, they have greatly improved since the rains. I know of no expedients likely to be tried to eke out the supply, except stinting the quantity of roots and increasing the supply of cake, meal, &c. I don't think cooking is likely to be much practised, nor when I have tried it have I seen much profit result. My cattle are all eating 4 lbs. of Rape-cake per day, and are greedy of it. I enclose specimens from common White Turnip and Swede of the aphis, midge, or whatever they are, which are eating our Turnips by acres. *Thos. P. Dods.*

SURREY: *Hoe Bridge, Woking.*—I think the crop of Wheat in this district is about (as expected) an average, both in quantity and quality (but the price ruinously low); the Barley over an average in quantity, but not so good as expected in quality. Oats, Peas, and Beans, an exceedingly short crop. The late beautiful rains have improved the pasture feed wonderfully, and also brought up (very quickly) an abundant plant of Wheat. Barley (self-sown), Rye, Rape, Mustard, Trifolium, and Stubble Turnips, and almost every available acre has been sown with one or other of the above; these, with a fine open season till the close of the year, will be a good help for the flocks, but yet a very poor substitute for the Turnip and Swede crop, which is as near as possible a failure in this locality. Mangels are much improved, but still a very light crop. I think our ingenuity will be taxed to the utmost to provide for our cattle and sheep till next spring; and should the winter be severe and the spring late, whatever may be the price of beef and mutton it will cost more than they will make to produce them. *Edw. Hilder.*

WARWICKSHIRE: *The Chase, Kenilworth.*—I see no reason to alter the opinion I gave you two months ago. Wheat will, I still think, prove under average, Barley average, Oats nearly average, Peas average, and Beans about half a crop. The prospect of the coming winter for live stock is very serious; our crops of hay and Clover are not half an average, and I speak within bounds when I say Turnips are not one-fourth of an average. We have had fine rains, and our pastures are looking greener, but there is no amount of keep in them; most of my cattle are and have been for some time receiving fodder in some shape, nor do I see any probability of their doing without it. Fearing to cut the hay ricks, and in the total absence of any green food, my horses have been living almost entirely on unthreshed Barley, making but little waste. Seeds sown in the spring are almost a total failure with us. Under these circumstances I intend sowing my Barley and Oat stubbles with Wheat, using a liberal quantity of Wheat manure, and letting my seeds and second seeds remain for my sheep to run upon through the winter, hoping with a regular supply of corn and chaff to keep my young sheep in health; making them fat will be out of the question with me. This season is an exception to all other dry seasons within the last 46 years, inasmuch as with pastures utterly dried up we have a full average quantity of capital Barley and Oat straw, when in the dry seasons of 1826 and '44 the quantity of straw was very short, as well as of Grass and hay. We must take courage, hope for a mild winter, and adapt the various means on our respective farms in the best manner we can to the maintenance of our live stock. *J. H. Burbery.*

WILTSHIRE: *Chippenham.*—First, as to the harvest. It was all got up quick and in good condition; but of the yield it is impossible to form an opinion at present. The Wheat will I think be deficient; Oats promise well, and Barley I fancy is better than any one had a right to expect. Beans are very bad indeed. Mangel Wurzel and Turnips a decided failure, and this being a great cheese-making district, and hay crops very short, little of the latter can be spared for sheep or oxen. I cannot conceive what is to make up for the deficiency in the green crops; and as to the sheep, especially the large flocks on our down lands, a great deal of ingenuity will be required to keep them properly. That

which ought to be a good aftermath is not yet much more than green, little growth being visible, especially on the lands that were mown. If I now had a large farm and numerous stock, I should try cutting up one-third straw and two-thirds hay, and well mix, steaming it all well; dress my corn very high, and kibble it, and put it in amongst the above. Keep it closed and feed with it warm, the reason being that it goes further, owing to its being sweet and luscious, and makes the animals drink more. Beasts that are prepared for the butcher must be got up at a great loss; and now they are in a backward state to begin upon. When we know that hitherto beasts have been given as much as 60 lbs. of roots per day, what is to make up for the 420 lb. weight per week, which we have not got? *Avon.*

Worcestershire: *Pitchill, Evesham.*—Wheat is rather under an average. Barley is over average, quality good, but rather flinty; I should say the best crop ever grown. Beans is a very bad crop. Peas: on good Pea land rather under average, on strong soils a very bad crop. Oats were scarcely grown in our district. Potatos were a very short crop—not half the quantity of last year, but no appearance of disease. Young seeds are very bad, scarcely a good field of seeds can be found. A great deal of Trifolium and Rye-grass has been sown this autumn. Hay a very short crop; it is now worth about 6*l.* per ton. Mangels: a moderate crop, have grown very much lately. Swedes and Turnips a complete failure; not a good field within our district. As regards the keeping of our cow stock, having plenty of straw we can make up with corn and cake. I scarcely know how we shall manage with our sheep; we must put aside our cutters and use the pulper with our Mangels, and eke out our roots with cake and corn as best we can; nothing but the best management and strict economy will meet the deficiency. We must have meat very dear.—*R. Bomford.*

Home Correspondence.

Produce of a Cow.—I send you the year's produce of an old cow which dropped her 6th or 7th calf in last December, and is just now dry before calving again.

	No. of Weeks.	Butter lbs.	Butter value.	Milk sold.
1863.			£ s. d.	£ s. d.
December	2	18½	1 6 2	0 3 4
1864.				
January	4	31½	2 2 0	0 9 1
February	4	23¾	1 11 0	0 9 6
March	5	28	1 16 10	0 13 1
April	4	26?	1 12 2	0 9 0
May	4	3[illegible]	2 1 9	0 6 8
June	4	24½	1 6 6	0 6 2
July	5	24½	1 10 3	0 7 5
August	4	23	1 10 8	....
September	4	17¾	1 5 3	0 2 1
	40	251	16 2 6	3 6 7

The milk sold was skim-milk. Of the butter made some 2] or 3 lb. are weekly consumed in the house, and the price charged is what the remainder was sold at. But besides this a good deal of whole milk and cream was also consumed—so much so, that when we have been forced to buy it we have been charged upwards of 6*d.* daily. I except five weeks when we were from home in August and September, and give the cow credit for 3*s.* 6*d.* a week during 35 weeks for so much of its milk as was consumed at home. Its produce for the year thus stands:—

Butter consumed and sold, 251 lb.	£16 2 6
Skim-milk sold	3 6 7
Milk and cream consumed, 35 weeks at 3*s.* 6*d.* ..	6 2 6
Total produce	£25 11 7
Add the calf sold for	1 1 0
	£26 12 7

Streatley.

Liquid Manure.—Many farmers, from experience, have now become fully convinced of the fertilising qualities of liquid manure, and the advantages derived from its application where properly applied to the land. On the other hand, it is lamentable to see the disregard shown by others, allowing it to flow away from their farmsteads, and manifesting no more concern for its preservation than if it was only the rain from the clouds. I have conversed with many farmers on this subject, and pointed out to them the importance of preserving it, giving them instances of the great quantity of extra produce from its application, and I have found very few who would not readily admit its fertilising properties, but still they would not take one step towards making arrangements for its preservation, when it might be done with a small expense and a little extra trouble. How difficult it is to induce some people to leave the old beaten track in which they have moved for years. Those farmers who will not keep pace with the progress of agricultural improvements, but still disregard those helps and assistances which lay within their reach, will certainly have to succumb and give place to their more enterprising and more spirited neighbours, who will be enabled by adopting these new modes of management to pay higher rents and still live on those farms from which their predecessors had to retire. The preservation and application of liquid manure is so easy that every farmer might readily adopt the practice. The expense is only small, and the additional trouble is not great. There are two ways by which it may be beneficially applied to the land, the one in the liquid state and the other in combination with compost. If applied in the liquid state the spring is the best time, when vegetation shows signs of activity; and during summer, when it is desired to stimulate crops to a rapid growth. In this condition it readily passes to the roots, and is at once taken up by the plants to which it is applied. To use liquid manure in combination with refuse vegetable matter, soil, road-scrapings, ditch-cleanings, &c., is a method which has met with great favour by many, but to apply it with compost it should be put on the land when vegetation is in a state of inactivity. To collect this liquid manure every one is quite aware that a tank in a convenient place is required, into which the liquid should be conveyed, and it would be well in making it to avoid a common error of making it too small, for when once made it is difficult to alter it. After it has been received into the tank, care should be observed to preserve all the fertilising ingredients which liquid manure contains, and the most important is the ammonia. There are different opinions as to the best and cheapest means of fixing the ammonia, but the majority are in favour of gypsum, being the cheapest and easiest of application. Sulphuric or muriatic acids will fix it more effectually, but these acids should be used with care, which is inconvenient to farmers in general practice. To use gypsum nothing more is required than to bruise it small and put it into the tank, occasionally stirring it up and renewing it every nine or 12 months, first removing what is in the tank before putting in fresh. It is wonderful what may be accomplished by the proper application of liquid manure; it contains all the fertilising qualities contained in guano, in the quest of which ships are sent to all parts of the world, and for which farmers will readily pay a high price when it is brought to our shores. *H. Harrison, York, Sept.* 25.

Societies.

Bath and West of England.—At the usual monthly meeting of Council the Stock Prize Sheet Committee brought up the list of prizes proposed to be offered at the Hereford Meeting. The committee appeared to be divided as to the best time for commencing the breeding year for cattle; one party thinking with Mr. Duckham, editor of the Hereford Herd Book, that the date of calving should be computed from the 1st of January in each year, whilst the others inclined to the view of Mr. J. T. Davy, editor of the Devon Herd Book, that such an arrangement would have the effect of cutting the breeding year in two, and so prove, in the highest degree, inconvenient to breeders in Devon and Somerset. After a long and interesting discussion, the committee withdrew to re-consider the point, and on returning to the room announced that after mature deliberation they had thought it best to adhere to the same date as hitherto—viz., the 1st of June. After some further discussion the prize lists were ordered to be printed and circulated among the Members of Council, prior to the next meeting of Council, when certain points, not yet ripe for decision, will, doubtless, create very lively interest. At the meeting to-day, Mr. Duckham forcibly urged the importance of changing the date of shearing sheep so as to assimilate the rule to that of the Royal Society of England, and an important memorial in favour of this, received from upwards of 30 of the leading breeders of Cotswold and Shropshire sheep, was read, followed by several letters to the same effect, from Mr. Holland, M.P., Mr. Preece, and other distinguished agriculturists in various parts of England.

As the Committee had purposely left a blank for the date of shearing, Mr. Knollys gave notice that at the next meeting of Council he would specially call attention to the foregoing letters and memorial, and would move that the 1st of April be substituted for the 1st of May. This view was supported by Mr. John Gray and others, and in the mean time the memorial was directed by the President to be courteously acknowledged on behalf of the Society.

Reviews.

National Health and Wealth, instead of Disease, Nuisance, Expense, and Waste. By the Rev. H. Moule, M.A., Vicar of Fordington, Dorset. Third Edition, pp. 17. Bradbury & Evans.

This pamphlet describes the dry method of dealing with house sewage, which was the subject of an excellent paper by Mr. Moule in the "Journal of the English Agricultural Society." We last week shortly reported a testimony by Mr. Gee, of Bradford, to its value. Nothing can be more satisfactorily illustrated and indeed proved than the immense agricultural value of what is now wasted, and the facility with which, on Mr. Moule's plan, it might all be saved. Farmers ought to read and study this pamphlet carefully. The following passage is especially deserving their attention:—

"The introduction of earth for this purpose into houses, whether in town or country, even with the large allowance of 1 ton to every five individuals, for 12 months, would be as cheap and easy as the present large supply of water.

"The arrangement for the removal of the stable manure of the Cavalry Barracks at Dorchester (and I suppose that similar arrangements exist in other barracks) will serve to illustrate the readiness with which companies might be expected to supply earth for closets in towns, and the comparative facility of its removal. The farmer commonly supplies the straw required in the barracks free of all charge, and on the sole condition of receiving in return the manure made by it. For every load of straw, he in general receives back three loads of manure. Now that load of straw would sell for at least 30*s.* Add to this value, then, the wages of a man and boy, the use of horses, and the wear and tear of waggons, and each load of manure must cost at the least 12*s.* And I once convinced a farmer, who was rejoicing in having obtained the privilege of thus supplying straw to one wing of these barracks, that in the carriage of the straw to the stables, and of the manure from thence to his fields, and in manuring with it 100 acres at the rate of 10 loads to an acre, he would expend more than 500*l.*, and that three horses would have to travel, in performing this task, 2000 miles. Now, one load of the manure made in the way proposed in this pamphlet, would be equal to 15 or 20 of stable manure, and the earth or subsoil might in general be supplied for it at no other cost than that of labour and carriage."

Here again is a testimony to the value of the soil thus treated and prepared:—

"It has been doubted by some, but without any assigned reason for their doubts, whether the earth, absorbing and deodorising the soil at once, and before fermentation sets in, receives and retains the value of the manure. I think the following experiment will prove a satisfactory settlement of any such doubts. A farmer in my parish put in some Swede Turnips late in the spring, with some of the earth mentioned above as having been used five times in removing the soil of a family for seven months, averaging, during that time, 15 persons. It had lain in the shed full seven months after being used. The quantity applied to the ground was 1 cwt. to a quarter of an acre. Equal quantities of superphosphate were applied to 15 equal spaces of ground. The crop, though injured by the vast growth of weeds during a rainy summer, was one of the best in the neighbourhood. And though all that I had looked for was, that the piece manured with the mixed earth should be as good as those which had received the superphosphate, yet through the whole of their growth there could be no doubt as to the superior healthiness and strength of the plants grown in the former; and on pulling them, their roots weighed full one-third heavier than the others. The following year another farmer substituted earth which had passed seven times through an earth-closet for crushed bones, at the rate of 1 cwt. an acre. The ground was poor, the crop white Turnips, and several good judges expressed the opinion that a finer crop could scarcely have been grown. Mr. Dickinson, of New Park Farm, Hampshire, has asserted that such a mixture is equal to crushed bones in power, more immediate in its action, and that the benefit lasts three years in the ground."

The Quarterly Journal of Science. No. IV. J. Churchill & Son.

In the present Number the directly agricultural section of it calls attention to those agricultural uses of water which an unusually dry summer has brought into prominence. It refers to the advantage of drainage and deep tillage in a time of drought—to the subject of summer irrigation, and the experience of sewage meadows—to Mr. Bailey Denton's memorial on the treatment of the rainfall in the interests of the country generally rather than in those of each individual field or property by itself—and to the question of evaporation and dew deposit illustrated by the Berkshire dew ponds. It describes the most recent plans of steam cultivation as illustrated at the Newcastle meeting—alludes to Mr. Harrison's dairy lectures, to Sir H. Mainwaring's speeches, and to the question of agricultural education.

The volume generally is a most interesting picture of scientific progress and achievement. While it is real and thorough in the information which it conveys, our readers must not suppose it to be so profound and abstruse as to require special education or peculiar tastes for the appreciation of its merits. These will generally commend themselves to the popular reader as well as to the strictly scientific man. Mr. Stewart Balfour's paper on Radiant Light and Heat is a most delightful example of this—commending itself to the general reader by clever explanations and illustrations of its most interesting subject, as much as it does to the man of science by its exhaustion of all the facts.

Farm Memoranda.

Baysham Court in Ross.—The following report of Mr. Duckham's farm is abridged from the columns of the *Dorset County Chronicle*:—The farm lies well together, and contains a good deal of orchard ground, several pieces of which have lately been added to the occupation. In this great cider district, the trees are young and really pretty, and loaded with gorgeous crops of rosy-cheeked Apples. We found some forage still left in the meadow bottoms; but Swedes and Turnips have large blanks, or are entire failures; and autumn crops, and attempts at rearing Mustard, Rape, Rye, or other kinds of keep as substitutes, are everywhere made, in the hope of aid from a mild, moist fall.

Mr. Duckham's is a farm of medium size, carrying, in proportion to its extent, a larger head of live stock than any other in the vicinity, or perhaps in Herefordshire; for, as our readers already know, Mr. Duckham is an enterprising farmer. He knows the capabilities of the Hereford soil, and although he may, like others, be baffled and beaten by the difficulties of the season, we everywhere found him, as we passed along, fertile in resources. Here he had raised a grand supply of Cabbage, there he was bringing on patches of winter Greens in addition to the usual crops. But in fact it would puzzle the wits of the most astute to know what to do with the season's misfortunes. On various farms, as we passed along, the smell from the Turnip fields loudly declared that what few Mangels or other roots of any promise had been obtained by the growers at no end of superphosphate were unhappily "going." And, on inquiry, we discovered that the cause of this was the existence of five or six large grubs eating into the roots of every plant. Certainly the farmer will have long cause to remember the season of 1864. One thing more unfortunate than another seems successively to have fallen upon him all throughout the year, and the worst may be yet to come. Mr. Duckham undauntedly says, "Well; if I haven't the keep for my animals, I must put my hand in my pocket to purchase artificials;" and he does so, whilst at the same time using every legitimate endeavour after green crops to ameliorate the pressure. He is trying a good many experiments; one of which, consisting of some savoury cattle cookery, in which the ingredients are a peck of Linseed boiled in 60 gallons of water and mixed boiling hot with cut Wheat-straw, ordinary hay, and meal formed of equal parts of Wheat and Oats—a mess which the cattle relish hugely and devour greedily—smells, for all the world, like the genial aromatic gust of a good wholesome beer-brewing. His store cattle, of which the fold-yard contains not a few, are well supplied with uncut Barley straw, Several heifers and steers already tied up for Christmas will be magnificent specimens of the art of laying on flesh and fat upon the great square frames of the Herefords. The cattle in the yard make a manure which is, we really think, the perfection of farmyard, although or rather because of there being no tank and no drainings. This is avoided by the straw being given out to the beasts *ad libitum*; and whereas many farmers think it necessary to lay down 5 or 6 inches deep of fresh straw through which the liquid manure or droppings can never penetrate to the bottom—and we have consequently an illustration of what Mr. Wren Hoskyns means by "Farmer Drychaff's dung cart"—Mr. Duckham distributes the litter as often and as regularly as the food; and thus his well-made manure is got up in *thin layers of perfectly mixed and saturated straw, much more effectually trodden down than it could ever be when piled up to any great depth.*

[Then follows an examination and description of Mr. Duckham's well known Hereford herd, with a particular account of several individual animals intended for exportation, and of others—COMMODORE, FRANKY, CASTOR, &c., who have won honours at our annual shows.]

The eddish in the low meadow has wonderfully preserved its luxuriance throughout the drought; but the owner will soon be put to his mettle for the due supply of nourishment to his stock throughout the winter. We believe that Mr. Duckham's proposed experiments, however, will be interesting and valuable, and this winter must inevitably be productive of many such, dear bought as the experience may be. Besides the Herefords Mr. Duckham's lands carry a large head of sheep. The sheep and lambs are an excellent flock—the peculiar sheep stock of the district—Rylands originally crossed with the Leicester many years ago, and subsequently by the Cotswolds, but having always a tendency to come back to the Ryland, both in wool and general character. In fact, it is observed that the Cotswolds when brought into the Hereford district gradually undergo a modification of this kind in the wool.

Miscellaneous.

Co-operative Farming.—I shall be very glad if the enclosed appear in the October "Co-operator," with a request that whoever can give information about co-operative farming, will kindly write to me before November:—

A PLAN BY WHICH A FARMER MAY SHARE THE PROFITS OF HIS FARM WITH THE LABOURERS ON HIS FARM.

Let him say to them—I wish to share the profits of my farm with you, because I think such an arrangement would be profitable to me; at the same time, I think such an arrangement would be profitable to you. I propose to pay wages as heretofore; to take stock and draw up a proper balance-sheet once a year; and when that balance-sheet shows a profit, to share that profit with you in proportion to our wages. The word wages is used here to mean suitable interest for capital, equally with suitable interest for labour. Let every labourer who has been in my employment, either by piece or by time, during the whole or any part of a year, be entitled to his or her share of that year's profit, if any; and let the right to sell his or her chance of a dividend be acknowledged and arranged for in any way that may be found most convenient. For example—suppose the wages of the year to have amounted to 500*l*., and the balance-sheet shows an increase of wealth of 1100*l*. Of this sum I take 1000*l*. as interest due to the capital I have invested. 100*l*. remains as profit to be divided among us. Of this sum 66*l*. 13*s*. 4*d*. is the share due to me on account of my capital, and 33*l*. 6*s*. 8*d*. is due to the labourers, and is divided among them in proportion to the wages they have received. Thus every labourer who has received wages during the year to the amount of 15*d*., receives a profit of 1*d*.

Thanks for your note. I am most anxious to get information, but especially sound advice, about co-operative farming. I have visited Mr. Gurdon's farms. They are joint-stock farms. Please order 10*s*. worth of the October "Co-operator" to be sent to me. I am a son of Sir Wilfrid Lawson, farming my own land. I think we are interesting the people hereabout in Co-operation; but there is not even a store yet, and I am in doubt as to whether we should aim at having a farm and a store separately, or a farm in combination with a store. Any useful suggestions on the subject before November will be most thankfully received. *William Lawson—in the Co-operator.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

Day of the Month	Day of the Week	At 9 A.M., Railway Time. Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Sept. 30	Thursday	30.13	53	50	E.	0	0	58	33	69	25	
Oct. 1	Wednesday	30.11	56	53	E.	3	1	53	41	62	27	
2	Tuesday	30.18	57	54	N.E.	2	0	60	43	66	32	
3	Monday	30.31	53	49	E.	3	5	59	39	69	:	
4	Sunday	30.17	50	47	E.	4	0	55	43	76	32	
5	Saturday	30.06	52	46	E.	3	1	53	41	78	31	
6	Friday	30.22	53	50	E.	0	0	58	33	76	37	

Calendar of Operations.

OCTOBER.

MERSE OF BERWICKSHIRE: *Oct.* 1.—Three weeks ago we reported the destructive gales which scattered so much corn, and the attendant rains which threatened to sprout the bulk of the crop then a-field. A shake is by far the most vexing kind of loss, and our estimate of it was below the mark. The rains, amounting for the month to 3 inches, continued until the 21st, and carting was done by snatches. Yet Barley and Wheat being previously well won, were stacked in good order. Oats had now been in stook three or four weeks, but having been cut green and small of straw, it was generally found that they were quite unfit for the stack. But just when we were at a loss what to do, five breezy days put all right, and a few selected sheaves of sprouted corn will embrace all the damage. Some of our more active farmers, however, have been engaged these few days in turning over their Oat-stacks; for the 27th was exceedingly warm and still, and there has been little air since. The young seeds are a fair plant but very weak, and will not stand the lambs long. The root crop, except where late sown on strong land, was always well planted, and improved much during the rainy weather, but the return of dry days and cold nights is again checking growth. The bulbs are of very moderate size, especially Swedes, and have an unpromisingly set appearance. Draft ewes are difficult to sell for the south, and the demand for lean cattle is perhaps scarcely so brisk as we have been accustomed to for some years. The rearing of calves is coming in again, for it is believed the plunder goes to the breeder. Ewes are rather poor from want of Grass, but will be freshened up with Oat stubbles and Turnips. Some tup breeders have put the tups to already, by way of adding to the size of their lambs; but ordinary flocks will not do anything for a fortnight. When lambs come before Grass in spring, they are difficult to keep; and unless trouble be taken with them, they were better a month later. Potatos are a small crop, free from disease, but much thinned out by grubs in summer. The haulm was pretty well killed down on the morning of 27th of August, but of late they have sprung again, and are forming small tubers, at the expense of the large—if large they can be called. The frost was pretty sharp this morning, and promises to be so to-night; and we hope it will check useless and unseasonable growth, and admit of the crop being stored while the weather is so very suitable for it.

Notices to Correspondents.

BEECH MAST: *G L Essays*: If any of your readers have experience with regard to feeding pigs on Beech mast, I should feel obliged to them for some information as to whether I shall succeed in fattening a pig on Beech mast (free from the husk or shields) and if so how many gallons a day I ought to give the pig, besides skim milk and butter-milk. The Beech being in inclosed ground I cannot turn the pig out.

RICHARD GARRETT AND SONS,
LEISTON WORKS, SUFFOLK.
Illustrated Catalogues.

HORTICULTURAL TOOLS.—Lawn Mowers, Garden Rollers, Garden Engines, Syringes, and Tools of all kinds; Wire Netting, Prize Churns, &c., delivered carriage free.
Price List free.
BURGESS & KEY, 95, Newgate Street, E.C.; Works, Brentwood, Essex

NEW IMPROVED PREMIUM WIRE NETTING
Great Improvement with Reduced Price.

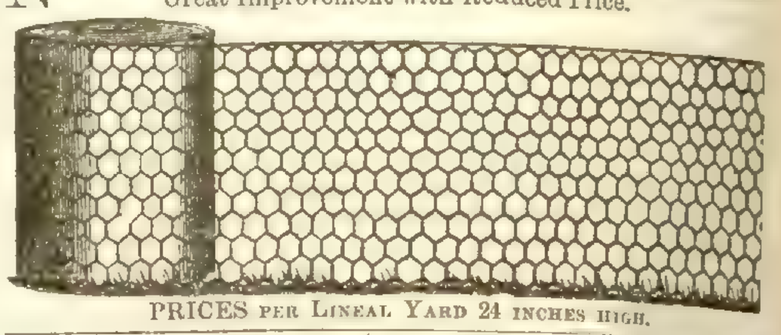

PRICES PER LINEAL YARD 24 INCHES HIGH.

Size of Mesh.	Mostly used for	Light. Jap	Light. Gal	Medium Jap	Medium Gal	Strong. Jap	Strong. Gal	Extra Strong Jap	Extra Strong Gal
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
2½ in.	Hares, Dogs, Poultry	0 3	0 4	0 3½	0 5	0 4½	0 6	0 5½	0 7
2 in.	Game or Poultry Netting	0 3½	0 4½	0 4	0 5	0 5	0 6½	0 6½	0 8
1½ in.	Small Rabbits, Hares, &c.	0 4	0 4½	0 4½	0 6	0 5½	0 7	0 7	0 9
1½ in.	Smallest Rabbits ..	0 5	0 6	0 5½	0 7	0 7	0 9	0 9	0 11
1 in.	Pheasantries, &c. ..	0 9	0 11	10½	1 1½	1 3	1 6	1 9	2 0
¾ in.	Aviaries, &c.	1 0	1 3	1 3	1 6	1 6	1 9	..	..

Quantities of 100 yards or upwards delivered free to nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland and Ireland.

*** Every description of Netting warranted to give satisfaction and if not approved will be exchanged, or may be returned unconditionally

IRON HURDLES, CONTINUOUS BAR FENCING, IRON and WIRE FENCING, FENCING WIRE, FIELD and ENTRANCE GATES, GARDEN ENGINES, GARDEN ROLLERS, GARDEN SEATS and CHAIRS, CAST IRON VASES, and every description of HORTICULTURAL and AGRICULTURAL MACHINES, TOOLS and appliances.

Lists Free on application. Every article guaranteed to be satisfactory.

J. B. BROWN & Co., 18, Cannon Street, City, London, E.C.

BARNARD, BISHOP, AND BARNARDS,
Norwich.

FURTHER REDUCTION in the PRICE of WIRE NETTING.

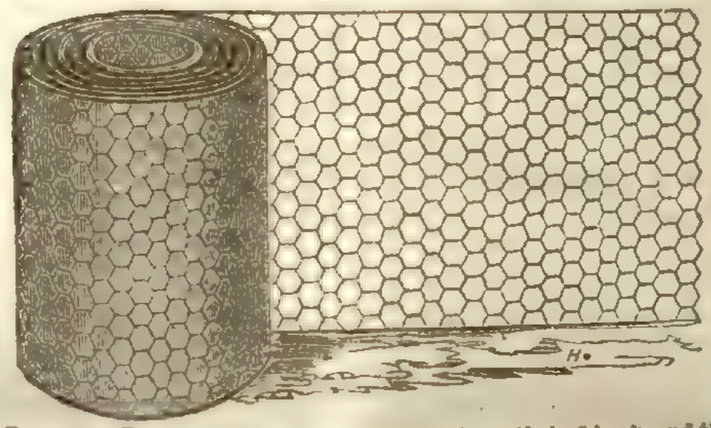

BARNARD, BISHOP, & BARNARDS beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

	Gauge.	Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide	No. 19 ..	4½d. per yd.	3½d. per yd.
2-inch " " " .. "	18 ..	5 "	4 "
2-inch " " " .. "	17 ..	6½ "	5 "
2-inch " " " .. "	16 ..	8 "	6½ "
1½-inch " " " .. "	19 ..	4½ "	4 "
1½-inch " " " .. "	18 ..	6 "	4½ "
1½-inch " " " .. "	17 ..	7 "	5½ "
1½-inch " " " .. "	16 ..	9 "	7 "

All the above kinds can be made any width (under 6 feet) at proportionate prices.

Strong GALVANISED POULTRY NETTING, 7½d. per yard, 3 feet wide. GALVANISED SPARROW-PROOF NETTING for Pheasantries, 11d. per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1*s*. per yard.

The same with Galvanised Wire Rope, 1*s*. 2*d*. per yard

Illustrated Catalogues, with prices of every variety of Wire Fencing and Wire Netting, forwarded free on application.

*** Wire Fencing and Netting delivered Carriage Free at all the principal Railway Stations.

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.

F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.

Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

Also TESSELATED PAVEMENTS of more enriched designs than the above.

WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.

To be obtained of F. & G. ROSHER, at their Premises as above.
Orders forwarded by Railway with despatch.

SILVER SAND (Best Quality), of F. & G. ROSHER, at the addresses above—14*s*. per Ton, or 1*s*. 3*d*. per Bushel. 2*s*. per ton extra for delivery within three miles, and to any London Railway or Wharf. Quantities of 4 Tons, 1*s*. per Ton less.

GARDEN FLINTS for Grotto Work, 12*s*. and 14*s*. per Ton.

THE PATENT IN-DOOR PLANT CASES

(TO WHICH A PRIZE WAS AWARDED AT THE ROYAL HORTICULTURAL SOCIETY'S EXHIBITION).

SOLE MANUFACTURER,

JAMES GRAY, Horticultural Works,

DANVERS STREET, CHELSEA, LONDON, S.W.

The PATENT IN-DOOR PLANT CASE is one of the most useful of the Gardening novelties of the day. It is a handsome ornament for the Drawing Room or Sitting Room, and at all times forms a fresh, pleasant, and interesting object to the mind and eye. It is always under command, and will preserve many of the most tender Exotic Plants through the severest winter with comparatively little of the trouble and annoyance attending the use of Lamps, Gas, and Heating appliances of any other kind.

To all who have a taste for the cultivation of In-door Plants, for raising Seedlings, striking Cuttings, &c., the Plant Cases will be found an inestimable boon.

The Cases are highly approved and recommended by Professor Lindley, and by Messrs. Veitch, of the Royal Exotic Nursery, King's Road, Chelsea.

Sizes and Prices on application.

HOT-WATER APPARATUS,

WITH TRUSS'S PATENT PIPE JOINTS.

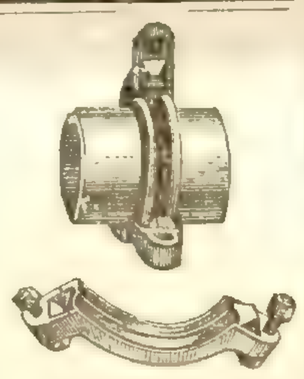

T. S. TRUSS, C.E.,

53, GRACECHURCH STREET, LONDON, E.C.

By means of these Joints the work is executed in less than half the time required for Socket Joints, and alterations can at any time be made, or the entire Apparatus removed and erected elsewhere with the greatest facility. A considerable saving in cost is also effected.

These Joints have been used for several years, giving entire satisfaction, and may be seen in use at the Royal Horticultural Society's Gardens, Chiswick, and many other places in Horticultural and Public Buildings. They are also exhibited at the Society's Gardens, South Kensington.

For a few prices, see last week's advertisement.

ESTIMATES, PLANS, AND PRICE LISTS FORWARDED ON APPLICATION.

GRANT'S PORTABLE RAILWAY.

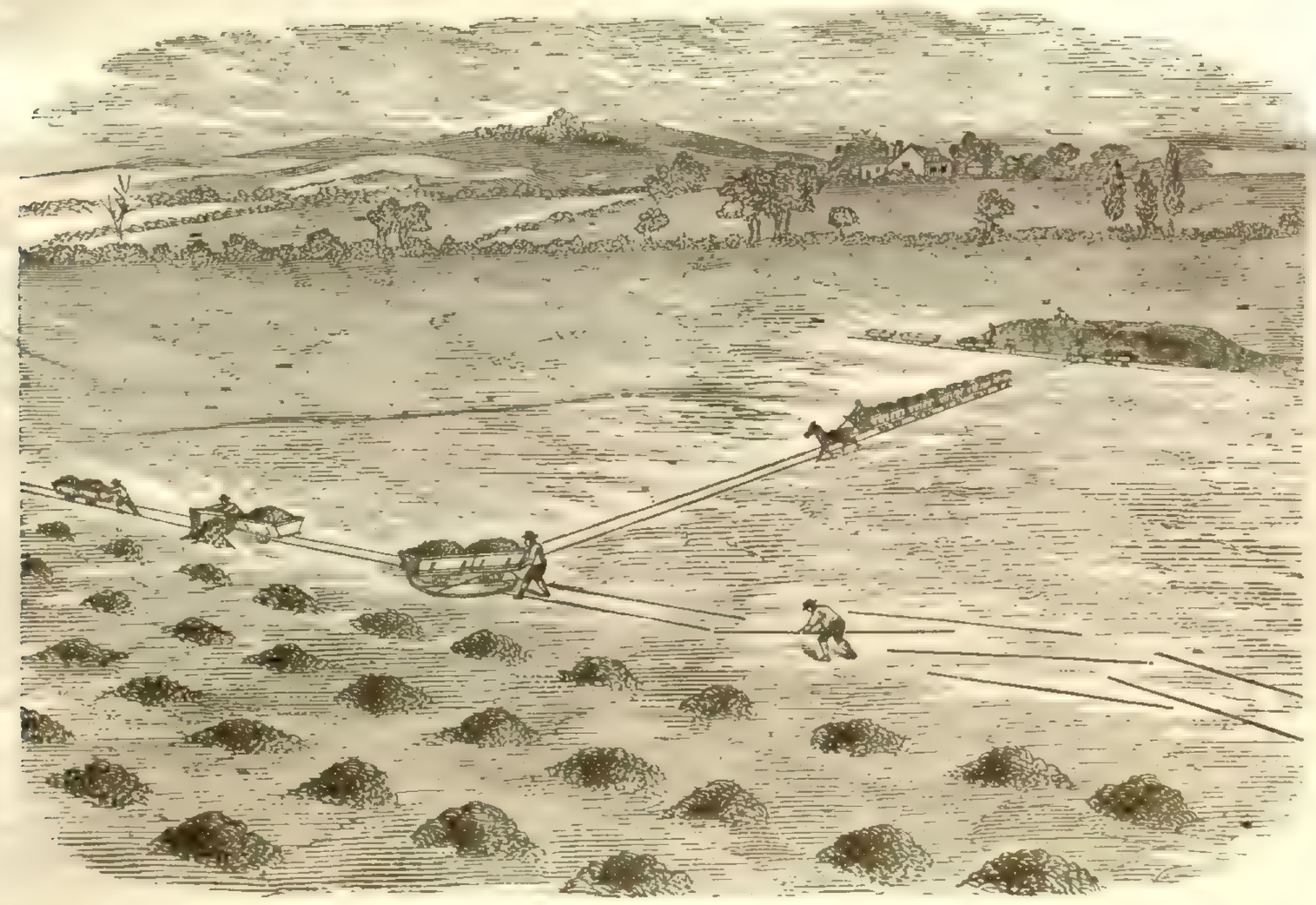

Manuring a Field by Grant's Portable Railway,

Which is also adapted for clearing Root Crops off Wet Land, carrying Corn, and all kinds of Field Carting, and will be found to afford an immense saving over all kinds of Barrow work where the runs are long.

MANUFACTURED by the PATENTEE, J. GRANT, LINTON, KENT,

of whom full particulars may be obtained.

N.B. For particulars of the Wheat carrying on the 19th of August, 1864, see Correspondence in the *Gardeners' Chronicle*, &c., between Mr. W. L. Hubble, Steward to H. Bannerman, Esq., and the Editor, August 27, p. 830, September 10, p. 881*a*; and September 24, p. 927*a*.

JOHN T. WILLMER,
Horticultural Agent, Auctioneer, and Valuer,
Springfield Nursery, Sunbury, Middlesex, S.W.

GREEN'S PATENT LAWN MOWERS have proved to be the best in all cases of Competition.
Leeds, London, and Dublin.

"THE HYDROPULT,"
142 & 143, Cheapside, London, E.C.
Illustrated Prospectus with Testimonials sent free on application.

SHAW'S TIFFANY.
For samples and prices apply to
J. Shaw & Co., 29, Oxford Street, Manchester.

SMITH, BECK, AND BECK'S GREENHOUSE and HOTBED THERMOMETERS.—These Instruments are of the very best construction, and at moderate prices.
31, Cornhill, E.C.

Universal Microscope. Price £5 5s.

SMITH, BECK, AND BECK,
31, Cornhill, E.C.; late 6, Coleman Street.
*** Catalogues sent on receipt of 6 postage stamps.

Caution to Gardeners.—When you ask for

SAYNOR AND COOKE'S WARRANTED PRIZE PRUNING and BUDDING KNIVES, see that you get them. Observe the mark Saynor, also the corporate mark, Obtain Warranted, without which none are genuine.

S. & C. regret having to caution Gardeners and others, but are compelled to do so, in consequence of an imitation, of common quality, having been sold for the genuine one, and which has caused many complaints to be made to them of Knives which were not of their make, all of which are warranted both by sellers and makers.

S. & C.'s Pruning and Budding Knives are the best and the cheapest in the market.

Paxton Works, Sheffield. Established upwards of 125 years.

VERANDAHS, COVERED WAYS, AWNINGS, CONSERVATORIES, and every description of Roofing and Sashes in Wrought and Cast Iron, made to order.

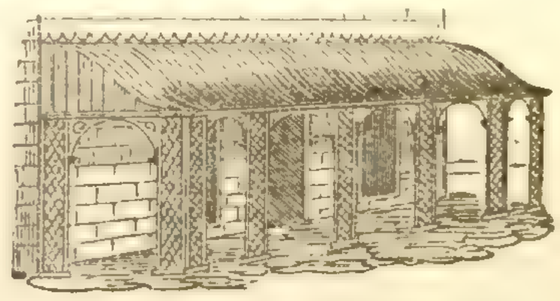

Apply to Cottam & Co., Manufacturers, Iron Works, 2, Winsley Street (opposite the Pantheon), Oxford Street, London, W.

JAMES PHILLIPS AND CO.,
180, Bishopsgate Street Without, beg to subjoin their prices of GLASS SLATES.

With Drilled Holes.	Rough Plate.			Sheet.			
	¼ inch thick.	3-16 inch thick.	⅛ inch thick.	16 oz.	21 oz.	26 oz.	32 oz.
Size.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Duchess .. .. .. 24 by 12	1 3	1 6	1 9	0 9	1 0	1 4	1 8
Small Imperials .. .. 20 „ 14	1 2	1 5	1 8	0 8	1 0	1 3	1 7
Small Duchess .. .. 22 „ 12	1 2	1 5	1 8	0 8	1 1	1 3	1 6
Countess .. .. .. 20 „ 10	0 11	1 1	1 3	0 7	0 10	1 0	1 3
Viscountess .. .. 18 „ 10	0 10	1 0	1 1	0 6	0 9	0 11	1 1
Large Ladies .. .. 16 „ 10	0 9	0 11	1 0	0 6	0 8	0 10	1 0
Ladies .. .. .. 16 „ 8	0 8	0 9	0 10	0 5	0 7	0 8	0 10
Doubles .. .. .. 13 „ 7	0 6	0 7	0 8	0 5	0 6	0 7	0 8

GLASS TILES.

Rough Plate.	Each—s. d.	Sheet.	Each—s. d.
¼ inch thick	0 10	16 ounce	0 6
3-16 inch thick	0 11	21 ounce	0 8
⅛ inch thick	1 0	26 ounce	0 10
⅜ inch thick	1 6	32 ounce	1 0
½ inch thick	2 0		

GLASS TILES, quarter of an inch thick,
Packed in Cases containing 50. 1*l.* 18*s.* 6*d.* per Case nett.
3-16 inch Case of 60 .. £2 2 3 | ¼-inch Case of 60 .. £1 17 6
Cases, 2*s.* each extra, returnable at full price.
Glass Tiles and Slates will be found invaluable for Out-houses, Farm Buildings, Stables, and Factories.
Perforated Glass for Ventilation.

HAND GLASS FRAMES (Loose Tops).

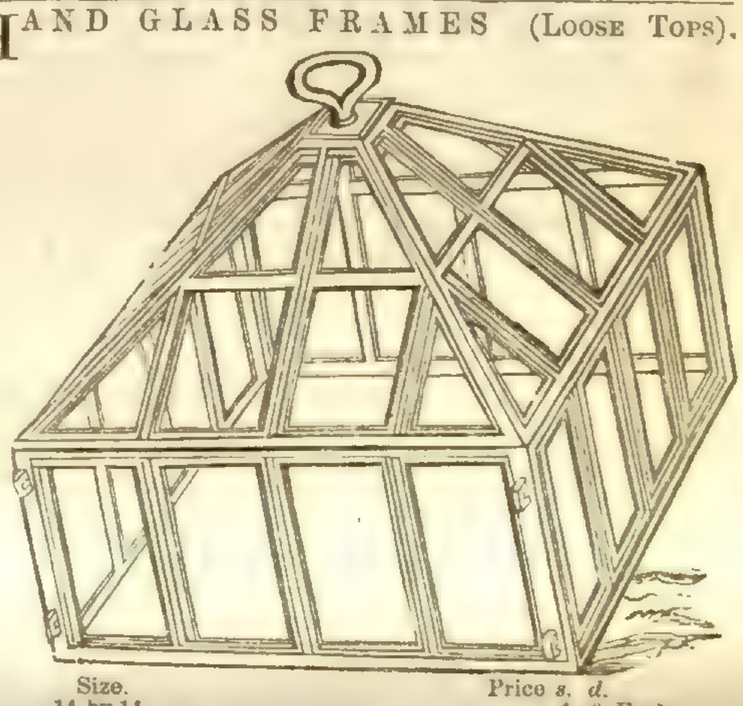

Size.	Price s.	d.
14 by 14	4	0 Each.
18 by 18	5	9 „
20 by 20	6	6 „
22 by 22	7	6 „
24 by 24	8	6 „

Delivered Free to any Station in England if 12 or more are ordered.
J. Jones & Sons, 6, Bankside, London, S.E.

NEW TARIFF OF GLASS AND HORTICULTURAL GOODS.

THOMAS MILLINGTON,

GLASS AND COLOUR MERCHANT,

87, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

HAND GLASSES.

PRESERVE JARS.

REDUCED TARIFF FOR SHEET GLASS AND HORTICULTURAL GOODS.

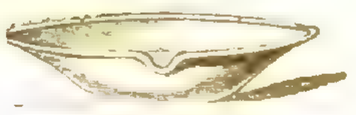

MILK PANS.

See Advertisement the first week in the month, or on application.

Exhibition Prize Medal, 1862.

HOTHOUSES for the MILLION.—On the principle invented and patented by Sir Joseph Paxton, M.P., combining simplicity, cheapness, excellence, and durability. SPAN-ROOF HOUSES, painted three coats, and glazed with English Sheet Glass, ready for fixing, 21 ft. by 13 ft., 24*l.*; 43 ft. by 19 ft., 73*l.* 5*s.*; 64 ft. by 25 ft., 161*l.*

Illustrated Circulars, with Prices, can be had on application to SAMUEL HEREMAN, 7, Pall Mall East, London, S.W.

Also, A HANDBOOK on VINE and FRUIT TREE CULTIVATION, 2d Edition, price 1*s.*; post free, 1*s.* 1*d.*

Midland Steam Power Horticultural and Hot-water Works, Loughborough.

T. G. MESSENGER, the Proprietor of the above Works, finding it necessary (through the great demand for his Horticultural Buildings and Heating Apparatus) to make large additions to his Premises, and to Fit the same with an entire set of STEAM-POWER MACHINERY, is now enabled to execute any Orders entrusted to him with the greatest dispatch, and at the lowest possible price consistent with good and substantial work.

Illustrated Catalogues, Working Model, Plans and Estimates, free on application.

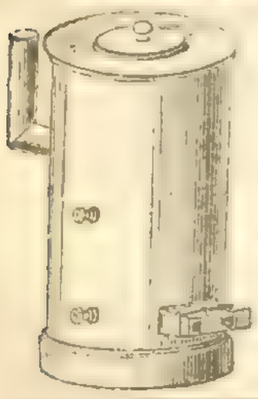

RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the Patentee's Warehouse, 155, Cheapside, London, E.C.

Price complete from 3*l.* 10*s.*

Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

The only Stove without a Flue.

JOYCE'S PATENT, for Warming Chapels, Halls, Shops, Conservatories, and all other Places. Price from 12*s.* 6*d.* each.

JOYCE'S STOVES are Portable and Economical, and burn 12 hours with one supply of fuel, requiring no attention.

STOVES for GREENHOUSES are made to burn all the Winter. Temperature always the same. Patent Fuel, 2*s.* 3*d.* per bushel.

SWAN NASH, Patentee, Ironmonger,
253, Oxford Street, W.; and
119, Newgate Street, London, E.C.
Illustrated Catalogues post free.

T. M. LOBJOIT'S PATENT HOT-WATER BOILERS are acknowledged by all who have them in use to be the most powerful Boilers now known, and are the most economical, requiring less fuel and attention than any other. They are made of various sizes, suitable for heating the smallest Greenhouse to the largest Conservatory, Churches, and Buildings of all descriptions.

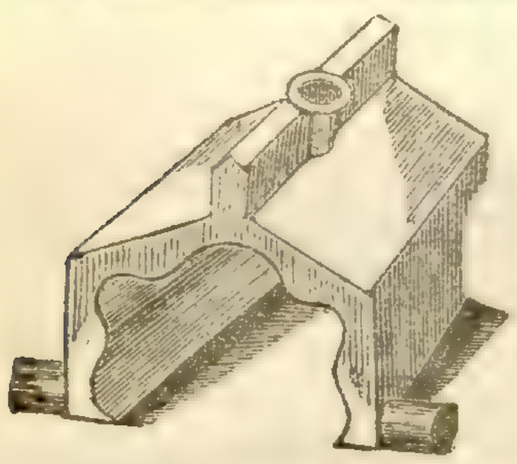

Testimonials forwarded on application to THOS. M. LOBJOIT, Horticultural Builder and Hot-Water Apparatus Manufacturer, Turnham Green, and High Street, Acton.

West of England, Ireland, and Wales.

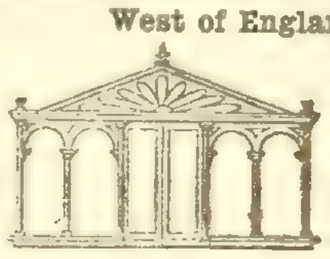

VINCENT SKINNER (*late Partner with J. WEEKS & Co.*), HORTICULTURAL BUILDER and HOT-WATER APPARATUS MANUFACTURER, HEATING on the ONE-BOILER SYSTEM. Plans and Estimates on application.

VINCENT SKINNER, Bridewell Street, Bristol.

DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility o fracture is prevented, and a permanently Water-tight Roof insured.

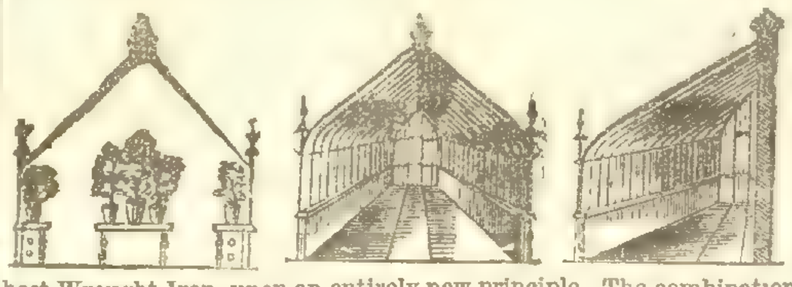

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

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2 Sauce Ladles	0	6	0	0	8	0	0	8	0	0	9	0
1 Gravy Spoon	0	6	6	0	9	0	0	10	0	0	11	0
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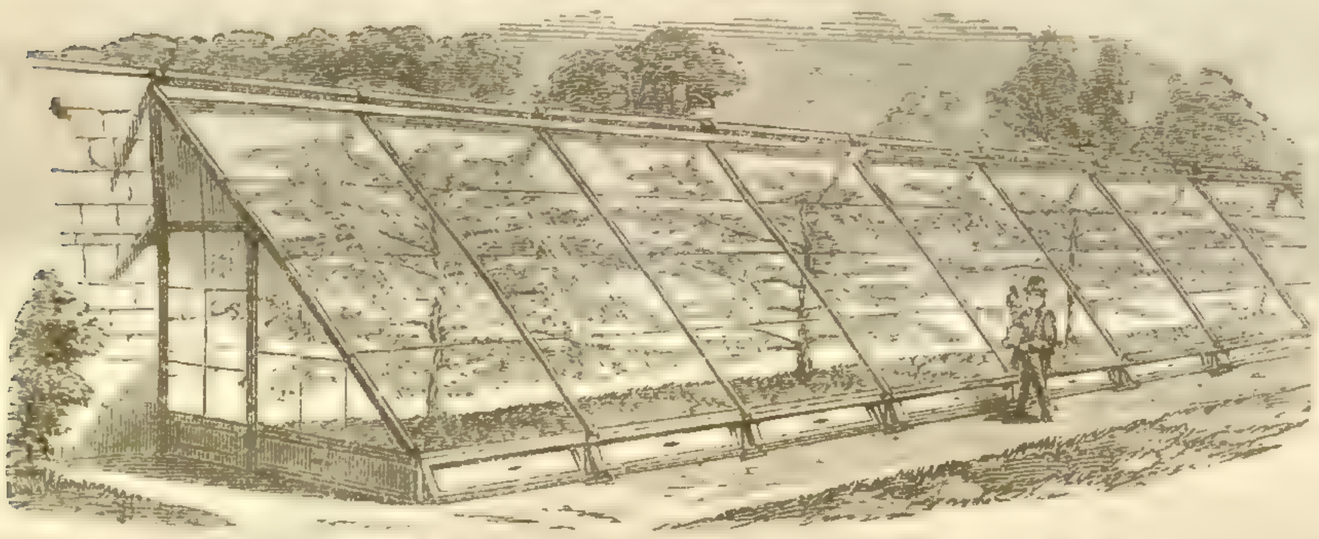

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Important Sale of Japanese Plants.

MR. J. C. STEVENS begs to announce that he has been favoured with instructions to SELL by AUCTION, at his Great Rooms, 38, King Street, Covent Garden, W.C., on TUESDAY and WEDNESDAY, October 11 and 12, at half-past 12 o'Clock precisely each day without reserve, in consequence of the agreement between Messrs. Standish and Fortune having terminated, the last portion of CHOICE and RARE PLANTS from JAPAN, many of them being the imported specimens and the largest in England, including the MALE AUCUBA JAPONICA.

Aucuba japonica vera	Sciadopitys verticillata
" " longifolia	Thea variegata
Thujopsis Standishii	Retinospora pisifera aurea
Asplenium elegantulum	Yedo Vine
A new Oak	Skimmia japonica vera
Forsythia Fortuni	

And many other fine and rare species.

On view the Morning of Sale, and Catalogues had of Mr. J. C. Stevens, Auctioneer and Valuer, 38, King Street, Covent Garden, London, W.C.

Important Sale of Wellingtonia gigantea at Edmonton.

MR. J. C. STEVENS is instructed to SELL by AUCTION, on the Premises, opposite the Golden Fleece, Edmonton, on THURSDAY and FRIDAY, Oct. 13 and 14, a splendid Stock of Specimen plants of WELLINGTONIA GIGANTEA, warranted from seed, and ranging from 1 to 3 feet in height; the plants are all in pots of various sizes, from 48's to 24's, and are in the highest state of health; also a large assortment of other choice hardy CONIFERS, comprising Pinus insignis, Picea Nordmanniana, Araucaria imbricata, Cupressus Lambertiana, Thuja gigantea, &c., all in pots and in vigorous health; also about 300 choice named CAMELLIAS, well-grown plants, and full of flower buds, from 3 to 5 feet in height; and a choice selection of INDIAN AZALEAS, of the best varieties, and well set for flower.

On view the Morning of Sale, and Catalogues had of Mr. J. C. Stevens, Horticultural Auctioneer and Valuer, 38, King Street, Covent Garden London, W.C.

Consignment of Plants from Ghent.

MR. J. C. STEVENS will SELL by AUCTION, at his Great Rooms, 38, King Street, Covent Garden, on FRIDAY, October 14, at half-past 12 o'Clock precisely:—

300 CAMELLIAS, with buds, all of the most approved imbricated sorts.
100 CAMELLIAS, strong bushy plants, from 2 to 3 feet.
300 AZALEA INDICA, chiefly consisting of both English and Continental novelties sent out these last two years.
50 AZALEA INDICA, strong plants, on stems.
20 ARUNDO DONAX, fol. variegated.
100 LILIUM LANCIFOLIUM RUBRUM, extra large.
100 " ALBUM, extra large.
20 AMARYLLIS JOSEPHINÆ.
50 Seedlings from best hybrids.
60 CANNA INDICA. Fine Miscellaneous Ornamental Plants, such as DRACÆNAS, AGAVES, YUCCAS, &c.
50 RABY HYBRID RHODODENDRONS, best sorts, &c.

On view the Morning of Sale, and Catalogues had.

Bagshot, Surrey.—Final Clearance Sale.

To Noblemen, Gentlemen, Nurserymen, and Others engaged in Planting.

MR. J. C. STEVENS (Horticultural Auctioneer and Valuer), 38, King Street, Covent Garden, W.C., begs to announce that he has been favoured with instructions from Mr. Standish, in consequence of removal to Ascot, to SELL by AUCTION on the Premises, Bagshot, Surrey, 2½ miles from the Sunningdale Station on the London and South Western Railway, on TUESDAY, October 25, and two following days, at half-past 12 o'clock precisely, each day, without the least reserve, a VALUABLE COLLECTION of HARDY CONIFEROUS PLANTS, consisting of—

50 ARAUCARIA IMBRICATA, 1½ to 2½ feet
50 ABIES ALBERTI, 2½ to 3½ feet
150 " DOUGLASII TAXIFOLIA, 3 to 5 feet
40 " LOWII, 1½ to 2 feet
20 " ORIENTALIS, 2 to 3 feet
250 BERBERIS CONCINNA, 2 to 3 feet
250 " DARWINII, 1½ foot
250 " FASCICULARIS HYBRIDA, 1½ to 2 feet
150 CEDRUS DEODARA, 3 to 8 feet
200 CEPHALOTAXUS FORTUNEI, 2 to 4 feet
200 CHAMÆCYPARIS SPHÆROIDES, 2 to 3 feet
50 CUPRESSUS LAWSONIANA, 2 to 3 feet
1000 HOLLIES (Green), 2 to 3 feet
100 " (named sorts), 2 to 3 feet
100 " (variegated), 1½ to 3 feet
2000 LAURELS (common), 2 to 3 feet
500 PINUS AUSTRIACA, 2 to 5 feet
50 " BENTHAMIANA, 5 to 8 feet
100 " CEMBRA, 3 to 5 feet
100 " EXCELSA, 3 to 5 feet
20 " LAMBERTIANA, 3 to 3½ feet
700 PINUS STROBUS (WEYMOUTH PINE), 3 to 7 feet.
20 PICEA CEPHALONICA, 2 feet.
20 " NOBILIS, 2 to 3 feet.
20 " NORDMANNIANA, 1 to 1½ feet.
50 " PINSAPO, 1½ to 2 feet.
100 RED CEDAR, 4 to 5 feet.
250 RHODODENDRONS (named sorts), 2 to 4 feet.
250 " Hybrid Seedlings, 1½ to 2 feet.
200 ROSES, STANDARD.
500 " DWARF, on their own roots.
50 SALISBURIA ADIANTIFOLIA, 4 to 5 feet.
200 SILVER FIR, 2 to 3 feet.
200 TAXODIUM SEMPERVIRENS, 6 to 8 feet.
50 THUJA WAREANA, 5 to 6 feet.
1000 " Seedlings, 2 feet.
150 " LOBBI, 3 to 4 feet.
100 WELLINGTONIA GIGANTEA, 1½ to 3 feet.
150 TRAINED APRICOTS, PEACHES, and NECTARINES.
300 PYRAMIDAL PEARS, 3 to 8 feet.
500 APPLES, 4 to 7 feet, &c., &c.

All of which are in the finest possible health.

On View the week prior and Morning of Sale; and Catalogues had at Mr. Standish's Nurseries, Bagshot and Ascot, and of Mr. J. C. Stevens, Auction Rooms, 38, King Street, Covent Garden, W.C.

To Gentlemen, Nurserymen, and Others.

Dunford Nursery, Chertsey, Surrey, about 3 miles from Addlestone, and 1½ from Woking Stations.

MESSRS. WATERER and SONS will SELL by AUCTION, on TUESDAY, October 11, and following day, at 10 o'clock, by order of Messrs. Chitty & Chapman, declining business, all the young and valuable NURSERY STOCK, the produce of about 9 Acres, comprising 16,000 Standard and Dwarf Roses, 18,000 Common Laurels, 60,000 Green Hollies, 2,000 variegated Hollies, 1500 Rhododendrons, 1500 Aucuba japonica, 2000 Cotoneaster microphylla, 90,000 Fruit Stocks, 1500 Dwarf-trained and Standard Fruit Trees, 70,000 Bedding and Seedling Quick, 70,000 Spanish Chesnuts, 37,000 Birch, and other valuable stock.

May be viewed one week previous to the Sale, and Catalogues had upon the Premises; and of Messrs. Waterer & Sons, Auctioneers and Valuers, Chertsey, Surrey, who will forward them on application by post.

HEATING BY HOT WATER.

J. JONES & SONS,

IRON MERCHANTS AND HORTICULTURAL ENGINEERS,

6, BANKSIDE, SOUTHWARK, LONDON, S.E.

It is now generally admitted that BUILDINGS of any kind can be more effectually warmed by HOT WATER than by any other means; but as so much depends on the way in which the APPARATUS is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES and SONS are prepared to estimate for WARMING, to any extent—

GREENHOUSES.	FORCING PITS.	CHURCHES.	LECTURE HALLS.	FACTORIES.	DRYING ROOMS.
CONSERVATORIES.	PEACH HOUSES.	CHAPELS.	BILLIARD ROOMS.	OFFICES.	CELLARS.
VINERIES.	PINE STOVES.	SCHOOLS.	HALLS and PASSAGES.	WORKSHOPS.	COACH HOUSES.
HOT HOUSES.	ORCHARD HOUSES.	READING ROOMS.	BATHS.	WAREHOUSES.	HARNESS ROOMS.

J. JONES & SONS' APPARATUS is simple in construction, moderate in cost, and economical in working.

It is equally available for the AMATEUR'S GREENHOUSE, or the longest range of FORCING HOUSES; for the smallest CHAPEL or the largest CHURCH for PRIVATE OFFICES, or those of PUBLIC COMPANIES.

It is admirably adapted for DWELLING HOUSES, as coils of pipes can be placed in any part, for warming the various rooms. One or more BATHS may be heated from the same boiler, and a constant supply of Hot Water obtained in any part of the House.

For WAREHOUSES and WORKSHOPS this system of Heating is unsurpassed, as it is not only the means of keeping goods dry, but it also adds to the comfort of the workpeople, and thereby effects a saving in labour.

J. JONES & SONS recommend Boilers of all kinds being set in Brickwork, if possible; but Portable Boilers can be supplied, if required.

MATERIALS.—All Materials supplied will be of the best quality.

DELIVERY.—Boilers of various kinds, and Pipes and Connections, being always in stock, can, at a very short notice, be sent to any part.

FIXING.—The Fixing will be done by experienced men, fully capable of finishing properly any work they may undertake; and J. JONES & SONS are prepared to guarantee the effectual working of any Apparatus fixed by their own men.

ESTIMATES.—Plans and Estimates will be sent, on application.

LIST OF IRON WORK KEPT IN STOCK.

PIPES for GAS, WATER, or STEAM.	MANGERS and STABLE GUTTERS.	HYDROPULTS.
RAIN-WATER PIPES.	CAST and WROUGHT HAY RACKS.	GARDEN SEATS and CHAIRS.
MOULDED GUTTERS, of DIFFERENT PATTERNS.	PIG and CATTLE TROUGHS.	ORNAMENTAL and PLAIN GRATING.
HALF ROUND GUTTERS for FARM BUILDINGS.	WIRE NETTING.	WROUGHT IRON TUBING.
PUMPS.	HAND GLASS FRAMES.	MOWING MACHINES and GARDEN ROLLERS.
FLANGE PIPES for Ditto.	CAST IRON VASES.	LAMP POSTS.
PATENT KITCHEN SINKS.	FLOWER STANDS.	

J. JONES and SONS can also supply the following at a short notice, at Manufacturers' Prices:—

BAR, ROD, and HOOP IRON.	GIRDERS and COLUMNS, WROUGHT or CAST.	VERANDAHS.
IRON HURDLES.	PLAIN and GALVANIZED ROOFING.	IRON STAIRCASES.
STRAINED WIRE FENCING.	STABLE FITTINGS.	GARDEN ENGINES.
CAST IRON RAILING, ORNAMENTAL or PLAIN.	STOVES and RANGES of any size and shape.	GARDEN SYRINGES.
WROUGHT and CAST IRON GATES.	BATHS, with or without Fittings.	GARDEN ARCHES.
BOUNDARY POSTS.	IRON CONSERVATORIES.	AGRICULTURAL MACHINES.
TANKS and CISTERNS, PLAIN and GALVANIZED.	BALCONIES.	AGRICULTURAL IMPLEMENTS.
PAILS and BUCKETS, PLAIN and GALVANIZED.		

IRON WORK OF ANY KIND. PRICES AND ESTIMATES ON APPLICATION.

J. JONES AND SONS, 6, BANKSIDE, LONDON, S.E.

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INTERNATIONAL EXHIBITION 1862.

THE ONLY PRIZE MEDAL AWARDED FOR SEEDS.

VINES.

JAMES CARTER & CO.

Beg to call attention to their unrivalled stock of the above, numbering over 2000, in splendid condition for Fruiting in Pots or Planting out, all true to name, raised from Vines growing at their Nursery, selected from the most approved varieties in cultivation. The new varieties offered by others this season may also be had. A visit to the Nursery will well repay intending purchasers, when they can make their own selections from an immense stock.

The AUTUMN SUPPLEMENT to "CARTER'S VADE MECUM,"

Containing full descriptions of 50 most desirable varieties of VINES, and complete Lists of imported DUTCH BULBS, and Plants of every description for Autumn use, will be forwarded by Post on application.

JAMES CARTER AND CO., SEED FARMERS, MERCHANTS and NURSERYMEN,
237, 238, & 261, HIGH HOLBORN, LONDON, W.C.

NEW GRAPE, ROYAL VINEYARD.

NOW READY FOR DELIVERY.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Begs to announce that he is now distributing this valuable GRAPE. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years. The stock is in excellent condition. Early orders are respectfully solicited.

PRICES:

Strong Planting Canes, 21s. each. | Strong Fruiting Canes, 42s. each.

BARR & SUGDEN 12 KING ST COVENT GARDEN

Orders 21s. and upwards sent carriage paid.

LILIUM AURATUM, the most magnificent variety of this family, 10s. 6d. and 15s.; roots which have this autumn flowered, 21s.

DUTCH, CAPE, FRENCH, JAPAN, and ITALIAN FLOWERING BULBS,
For the SITTING-ROOM, CONSERVATORY, GREENHOUSE, and FLOWER GARDEN.

A Descriptive and Priced List with Cultural Hints free and post paid on application.

THE COVENT GARDEN COLLECTIONS of BULBS for In and Out-doors, 10s. 6d., 15s. 6d., 21s., 42s., and 63s.
THE PAXTONIAN COLLECTIONS of BULBS for Out-doors, 10s. 6d., 15s. 6d., 21s., 42s, and 63s.
THE KENSINGTON GARDEN and CRYSTAL PALACE COLLECTIONS for Indoor Winter Gardens, 10s. 6d., 21s., 30s., 42s., and 63s.
HYACINTHS, 2s. 6d. to 15s. per dozen. CROCUS, 1s. 6d. to 4s. per 100. TULIPS, 3s. 6d. to 20s. per 100.

ZONALE PELARGONIUM, seed saved from the superb new varieties exhibited this last summer by Mr. Bull; colours scarlet, white, pink, cerise, rose, carmine, blush, salmon, rose-pink, orange-scarlet, &c., many of them with very distinct eyes, 2s. 6d. per packet. Mr. Bull's magnificent strain of MIMULUS, 1s. per packet. Mr. Holland's Prize CYCLAMEN PERSICUM, 1s. per packet. Now is a good time to sow these seeds.

BARR AND SUGDEN, SEED MERCHANTS and FLORISTS, 12, KING STREET,
COVENT GARDEN, W.C.

NOW READY, NEW HARDY CLIMBING PLANTS,

WELL ADAPTED FOR COVERING VERANDAHS, TRELLIS WORK, WALLS, PORTICOS, PILLARS, FESTOONS, &c.

CLEMATIS JACKMANNI, First-class Certificate.
CLEMATIS RUBRO-VIOLACEA, First-class Certificate.
Awarded by the Royal Horticultural Society, August 4, 1863.

Patronised by Her Majesty THE QUEEN, the Nobility and Gentry.

GEORGE JACKMAN & SON,

WOKING NURSERY, SURREY,

Have much pleasure in offering to the Public, for the first time, their beautiful rich coloured, free flowering, and vigorous-growing Clematises, that they can with confidence recommend, being convinced, when known, they will occupy a very high position in climbing shrubs. Orders will now be taken, and the plants will be sent out strictly in rotation.

For further particulars of "their sterling merits," read our Large Advertisement, August 6, page 745; the Report of the Floral Committee, Royal Horticultural Society, August 4, 1863; *Gardeners' Chronicle*, November 21, 1863; *Journal of Horticulture*, August 11, 1863; *Gardeners' Chronicle*, January 9, 1864; the *Florist and Pomologist Magazine*, September, 1864, with a Coloured Illustration; and *Gardeners' Chronicle*, August 27, 1864.

Strong Plants, 21s. each.

The usual allowance to the Trade. Two Coloured Drawings by Andrews may be had post free for Twenty-four Stamps

A CATALOGUE of GENERAL NURSERY STOCK free on application.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens. A DESCRIPTIVE and PRICED CATALOGUE post free on application.
Paradise and Victoria Nurseries, Holloway, London N.

TWO NEW FIMBRIATED PRIMULAS.
Seed Packets, 2s. 6d. and 5s. each.
PRIMULA CARMINATA SPLENDENS, a beautiful new coloured one.
P. FILICIFOLIA (Fern-leaved).
See other Advertisements of the older kinds of fimbriated Primulas.
E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

New Hardy British Ferns.

J. IVERY AND SON have the pleasure to offer the three undermentioned distinct and beautiful varieties, in good plants, showing their true characteristic forms, 10s. 6d. and 21s. each.
POLYSTICHUM ACULEATUM ACROCLADON,
ATHYRIUM FILIX-FŒMINA MUCRONATUM,
" " " GLOMERATUM.
(They have each received First-class Certificates from the Roya Horticultural Society, and Royal Botanic Society.)
Likewise ATHYRIUM FILIX-FŒMINA PARSONSIÆ, VERNONIÆ, and FISSIDENTO-EXCURRENS at 5s. each.
Dorking, Oct. 15.

Woodlands Nursery and Seed Warehouse,
MAYFIELD, NEAR UCKFIELD, SUSSEX.

WILLIAM WOOD AND SON are now offering the following Collections of BULB

FOR CONSERVATORY and GREENHOUSE.

A.	B.	C.	C. C.
£4	£2	£1	10s.

FOR FLOWER GARDEN.

D.	E.	F.	F. F.
£4	£2	£1	10s.

FOR CONSERVATORY and FLOWER GARDEN.

G.	H.	I.	I. I.
£4	£2	£1	10s.

Full particulars of the above Collections are contained in the DESCRIPTIVE CATALOGUE of BULBS, which may be had free on application.

CARTER'S GARDENER'S VADE-MECUM.

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

LIST of AWARDS, OCTOBER 11, 1864.

FIRST-CLASS CERTIFICATES.

AUCUBA JAPONICA PICTA (Bull), from Mr. Bull, Chelsea.
CATTLEYA DEVONIENSIS, from Mr. Veitch, Chelsea.
CATTLEYA DOMINIANA ALBA, from Mr. Veitch.
VARIEGATED PELARGONIUM LADY CULLUM, from Messrs. E. G. Henderson & Son, St. John's Wood.

SECOND-CLASS CERTIFICATES.

DAHLIA LIGHTNING, from Mr. Legge, Edmonton.
SOLANUM CAPSICASTRUM HYBRIDUM, from Mr. McIntosh, Hammersmith

The NEXT MEETING will take place on November 8.
THOMAS MOORE, Secretary to the Committee.

The Gardeners' Chronicle.

SATURDAY, OCTOBER 15, 1864.

MEETING FOR THE ENSUING WEEK.
WEDNESDAY, Oct. 19 { Royal Horticultural (Fruit and Vegetable Show), at S. Kensington .. 1 P.M.

MANY of the readers of this Journal are old enough to remember a time when the people of this country were all but excluded from our PUBLIC GARDENS, and had little to do with them except to assist in paying for their maintenance. These were the good old times, when most of the plants in such places had not their names placed in front of them as they usually have now, and if marked at all, had only a number painted on a label referring to some list which was carefully kept in the hands of the curator or superintendent. If the visitor happened to be particularly struck with the beauty of any plant which he met with in his walks, he had the satisfaction of knowing that it was number so and so, and that was probably all the information he could acquire. This state of things is changing as the world grows older, and as men get more liberal in their ideas. Our great public gardens, like Kew for example, are now thrown open to the people, and the collections in them are legibly named, so that "all who run may read." The same thing may be said of our public parks. As PATERFAMILIAS takes his family out for a walk in such places he can, without much knowledge of Botany, point out to them numberless objects of great interest which he must necessarily have passed by unnoticed in former days, when such things were without names. He can show them the Sugar and Tea plants, the proceeds of which had formed such an important item at the breakfast table from which they had just risen, or the Cotton which clothes them; or plants which yield dyes and medicines, together with a hundred other things of interest; and all this he can do, simply because the plants in our public gardens have their names placed in front of them. Our gardens, in this way, have an interest to the general public, and are daily turned to good account in the education of the people.

The greatest results oftentimes spring from the most simple causes. Who can imagine the difference which is produced upon the mind by one label which tells the visitor that the plant he stands in front of, is the Tea plant of China for example, and

another which gives him the information that it is No. say 680! And yet there is very little more trouble or expense in writing the name than there is in painting the number.

We fancy we hear some critical reader exclaim —"This may be all very true, but there is nothing of this kind now-a-days; we have changed all that." Well, we think not quite, although we allow that we have gone a long way in the right direction towards so desirable an object. There are more things in gardening than the naming of plants in public gardens to which our remarks apply. A short time ago, when noticing a most interesting exhibition of plants got up amongst the poor of London by the worthy and excellent rector of Bloomsbury and his assistants, we endeavoured to show how much more interest would have been added to the exhibition, if, instead of the large placards which were suspended over the collections merely showing the number of each class, the same placards had informed the visitor that the plants under his inspection had been grown in a certain poor and densely populated part of the parish, or by domestic servants, or by school children.

Our object to-day is to bring forward some other examples of a somewhat similar kind for a little friendly criticism, and we do so with the very best motives, and certainly with no spirit of fault finding. Our readers will have observed the articles published in our columns, describing the very meritorious and successful efforts which have been made in forming a sub-tropical garden at Battersea Park. There is no park round London which does more credit to its Superintendent than that at Battersea, and the efforts which have been made, and successfully made, to grow many strange and beautiful forms of tropical plants in the open air during the summer months, deserve the highest praise. We took an opportunity of paying a visit to the sub-tropical garden a short time ago, and were delighted with the effect which many of the plants produced. Crowds of people were inspecting the garden, and were evidently surprised and delighted with the treat which had been provided for them. But strange to say, but few, if any, of these curious and interesting objects were named. Now, in a park like that at Battersea, we do not attach very great importance to a long Latin name being placed in front of a plant, especially when it has no English one, and when it is of no known use, although such names would prove interesting to many, and would do no harm. But many of these plants are of great interest and produce articles of commercial value, which are well known to the poorest visitor. We observed, for example, specimens of the India-rubber tree, the Rice-paper plant of China, the Castor-oil plant, Indian Shot, and many other things of a similar stamp. What an amount of additional pleasure and instruction would not the names of these plants have given to the thousands of visitors who went to Battersea, and how easily could these names have been supplied! We hope this omission will be put right another year. We are sure the visitors will be grateful for the boon.

Another example of a similar kind was to be seen in the garden of the Royal Horticultural Society at Chiswick. A collection of half-hardy plants had been planted on the sides of the broad walk at the east end of the iron conservatory, under the auspices of the Floral Committee, with the view of testing their relative value. It would appear that these plants, or at least a portion of them, had been examined by the committee, who had awarded First, Second, and Third-class Certificates to the plants considered worthy of these distinctions. In examining this collection, then, we observed certain little marks in the form of crosses which had been made on some of the labels (the varieties are all named), the meaning of which we did not understand. And we should have left the ground in the same state of ignorance had we not happened to meet with a small placard at the end of one of the beds, which informed us what the said little crosses meant. The plants with three crosses on their label had received a First-class Certificate, those which had two crosses had received a Second-class Certificate, and those with one only had been awarded a Certificate of the Third class. Now how easy, and how much better it would have been to have given this information in a conspicuous way in front of each plant or group of plants, and how much interest this would have added to the collection. If it be worth while to get a collection of this kind together, to examine the different varieties critically, and to award prizes to the most deserving, surely the last and very important step of making plain the decision of the Committee should not be omitted. We are aware that the awards of the Committee will eventually be published in the "Proceedings" of the Society; but in the meantime—the Fellows of the Society and others having been invited to examine the plants at the gardens—we think it would have been more satisfactory to the visitors, as well as to the owners of the plants themselves, had the awards been shown in the manner we have suggested, instead of being written on a placard which at first sight looks like a notice requesting visitors "not to pluck the flowers or the fruits." We trust it is simply an omission, which needs only to be pointed out to be put right.

A GOOD deal has been written about FISH-MOULDS, and few vegetables are more curious in point of structure, or more instructive as regards natural affinity, than the white floccose bodies which so frequently infest dead animal substances of various kinds immersed in water, and which sometimes attack the animals themselves when in a low state of vitality, and possibly on occasion induce a diseased condition in individuals which were previously healthy. Our attention has, however, been called lately to something very different, which is destructive to gold fish. Perfectly healthy individuals when transferred to certain waters gradually acquire a dark tinge, which rapidly increases in intensity, and in the course of a few weeks they perish. Specimens of the scales of a diseased fish from the banks of the Conway show that the affection is undoubtedly due to some vegetable production. When examined under a common lens the exposed part of each scale, and sometimes a portion of the colourless part, is found to be studded with little bright black spots, which exhibit a fibrous structure, and which are not altogether unlike that of the Asterinæ, which are so common on leaves from tropical or subtropical districts, though much smaller. This likeness however ceases when a higher power is employed. The spots then exhibit two forms, one which is more compact and which resembles an imbricated Lichen in miniature, and the other looser, which consists of very irregular threads swollen here and there, and producing obovate bodies which might at first sight be taken for fructification. The threads do not resemble very closely those of any Fungus with which we are acquainted, though they have the colour of those of many species of Helminthosporium, and we are inclined to refer the spots rather to some incipient aquatic Verrucaria, and possibly the same with one which we have noticed in the Dulas, a stream which runs down from the hills which border the lower part of the Conway, though in a different direction. For the present this is a mere conjecture, for we have not materials at this moment for more accurate investigation. Our notice will however call attention to a curious matter, on which better information will be acceptable. *M. J. B.*

—— IN his remarks on the Decay of Species published in our last Number (p. 963), Dr. DAUBENY refers to "the well-known examples of the occurrence of isolated blue bunches of Grapes on stocks of white varieties, of isolated bunches of Red Currants mingled with white ones of the same stock, and of isolated pure sulphur-yellow Roses amongst variegated flowers of the red Austrian Briar Rose," as affording proofs of a TENDENCY TO VARIATION amongst plants other than that which is referrible to the influence of pollen,—a tendency to which indeed we are indebted for many of our cultivated varieties, and for most, if not originally all, of our variegated plants. We have just received from Messrs. LEE, of Hammersmith, a most curious illustration of this sportive tendency in the case of fruits. It consists of a cluster of Frontignan Grapes, cut from a vine of the Black Frontignan variety, in which more than half the berries are white, exactly as in the White Frontignan, and the rest are in the normal black condition. The uppermost shoulder of the bunch is entirely black, and so is one of the lesser branches towards the apex; two or three others contain white and black berries intermixed, and the rest are entirely white, or occasionally white with a narrow streak or two of purple, the white berries in the whole cluster being more numerous than the black ones. Both white and black berries have the full Frontignan flavour. This curious bunch of Grapes had been grown at Clumber. A somewhat similar example, it will perhaps be remembered, occurred in the Italian collection of Grapes shown in 1862 at the International Fruit Show at South Kensington. One of the varieties in this collection, called the Switte, bore on the same bunch both black and amber-coloured berries, each of them perfectly matured, the difference being as clearly and as sharply defined as in the case of the Frontignan Grapes from Clumber, now lying before us.

—— SCIENTIFIC HONOURS emanating from the Sovereign sometimes assume remarkable forms. Thus, as the *Athenæum* has lately told us, the KING OF BAVARIA has bestowed on Dr. HERMANN VON SCHLAGINTWEIT, chief of the scientific expedition to India and High Asia, the surname "Sakünlünski," the "ascender of the Künlün," he being the first European who had succeeded in crossing the Künlün mountains, in the year 1856, and advancing from India to Turkistan by the Asiatic mountain regions. It seems that the idea of conferring such an honour on a man of science has been suggested by the Government of Russia. If this fashion becomes general, remarks our contemporary, as it has been for some time in the Russian army (as, for instance, MOURAVIEFF-AMURSKI, General SABALKANSKI, &c.), our men of science will enjoy a nice appendage of unpronounceable names. Mr. *Punch*, in the mean time, might get a list of them ready.

—— We have just become acquainted with a remarkable fact bearing on the WEARING OUT OF RACES of fruit trees—a doctrine which has from time to time found many strenuous advocates. In the nursery of Mr. RIVERS occurs a tree of the Golden Pippin Apple, which is some century old at least. This tree bears small scrubby fruit, of good quality nevertheless, but scarcely bigger than a large Walnut, and may be taken to represent the "degenerate" condition of this variety under ordinary, and not very favourable conditions. This tree is on the Crab stock. Grafts taken from this very tree, and worked on the Paradise stock, were submitted to pot culture in an orchard house, when lo! the fruit became at least trebled in size, acquiring the richest golden colour, and the choicest flavour. Verily, there was no trace of degeneracy in these.

There can be no doubt that this result was caused in great measure by the healthy root action set up under the improved climatal conditions to which these potted trees have been subjected. The trees were well fed by the generous top-dressing which is part of Mr. RIVERS'S system, and the roots were at the same time influenced by the warm air of the house acting on them through the sides of the pot, and were thus able to do their work thoroughly. Hence the well-swelled fruit, which under such circumstances was carried forward to perfect maturity, and altogether surpassed the choicest specimens of the olden time.

—— CARNATIONS and PICOTEES seem to be making more way in the north than the south, for while we hear and see little of them about the metropolis (partly no doubt owing to their not being invited to our great summer shows—that again being mainly, as we may hope, owing to their not exactly synchronising with them, rather than from intentional neglect), one of the Numbers of the *Midland Florists' Guide*, now before us, contains an account of two very successful exhibitions of the past summer, namely, that of the National Society, whose exhibition was held at Manchester, and that the West Riding Florists' Society, which was held at Leeds. At the latter, as we learn from our contemporary, the following Seedlings obtained First-class Certificates:—Dr. Foster, a decided acquisition, being a fine purple flake Carnation, with fine petal, very pure, decided in marking, and bright in colour; shown by Dr. FOSTER. Clara, a medium purple Picotee, very pure, with well-formed petal and fine guard, altogether a very fine flower; and Miss Sarah Dobson, a very refined light purple Picotee; both exhibited by Mr. JACKSON. Juliet, a very chaste light purple Picotee, with beautiful petal, the marking lively, well laid on, and perfectly regular; shown by Mr. SIMMONITE. The following all received Second-class Certificates:—Benjamin Simmonite, a fine useful scarlet bizarre Carnation, boldly marked, and a fine petaled flower, but rather deficient in white; shown by Mr. WOOD. Frank, a good useful scarlet flake Carnation, not very bright; Jonathan Jackson, a bright well-marked useful rose flake Carnation; and Desdemona, a light purple-edged Picotee, with good petal, pure, clean, and useful; all shown by Mr. SIMMONITE. Finally, Earl of Harewood, a purple flake Carnation, rather thin, but bright and well-marked; produced by Mr. CHADWICK. Raisers of these interesting flowers, therefore, are still to be found. We should like to see these, and such like things, meet with better encouragement about London. Alas! that late hours should render any of our great Societies so constantly somnolent.

—— OF NEW HOLLYHOCKS which have turned up this season in the north, we find MAY'S Purple Emperor, and DOWNIE & Co.'s Countess of Craven spoken of with especial praise. Purple Emperor won a First-class Certificate at Bishop Auckland, and is of a distinct shade of purple, one of the finest flowers yet produced; and Countess of Craven is also spoken of as a first-class acquisition.

New Plants.

279. DELPHINIUM BRUNONIANUM, *Royle, Illustrations of Botany of the Himalaya*, p. 56; *Botanical Magazine*, t. 5461.

This very pretty Indian Larkspur, first made known by Dr. Royle, has lately been flowered at Kew, where it had been raised from seeds sent to

England by Dr. Cleghorn. It is remarkable, as Sir W. Hooker observes, for its very powerful odour of musk, which is not, however, peculiar to this, but exists also in other high alpine species, "which form a peculiar group with half-closed membranaceous flowers, whence the mountaineers erroneously suppose that the musk-deer feed upon them, and thereby communicate the peculiar odour to their glandular secretions. In consequence of this musky odour the plant has also obtained the name of Delphinium moschatum.

It is a dwarf herb, with simple or branched stems, everywhere viscoso-puberulous and musky. The stems grow from six inches to a foot or more in height, the lower long-stalked leaves being of kidney-shaped outline, deeply lobed and inciso-dentate, whilst the uppermost are three-parted. The flowers form a corymbose raceme, and are of large size, the five large roundish oval sepals pale blue, becoming bright purple towards the edge, the small central petals black, with a yellow spot on the face of the two lower ones, and both sepals

and petals hairy. The flowers have a short thick blunt spur. Their large size and varied colours—azure purple black and yellow—render the plant a very ornamental one in its class.

The species is a native of the lofty Alps of Western Thibet, at altitudes of from 14,000 to 18,000 feet. It is stated to have blossomed at Kew in the open border in the month of June, and to have quite died down to the ground early in July; and is supposed to be quite hardy.

DR. DAUBENY ON THE DECAY OF SPECIES,

AND ON THE NATURAL PROVISIONS FOR EXTENDING THEIR DURATION.

(*Concluded from p.* 963.)

It seems provided, that those vegetables, such as the Cerealia, which are most necessary for the subsistence of man and other animals, should be multiplied by seeds and not by buds, in order to obviate the occurrence of famines from the failure or dying out of the species.

Yet even here, in addition to that minute change of structure which may be effected each time by the process of sexual reproduction, a certain modification in the external circumstances under which they are placed seems favourable to their health and development, and hence perhaps may in some degree arise the success attending their introduction into a strange locality; and the renewal of vitality which we are told has been induced, in the case of Apples, by transplanting them into a foreign soil; whilst the failure of certain crops, such as the Clover, after a period of years, even with the most liberal supply of manure, and under the advantages of careful tillage, may perhaps be explained upon the same principle.

And thus we may account for the remarkable vigour, which plants introduced into a new locality, and especially into a far distant region, so frequently exhibit. Witness the spread of the American weed in our ponds and ditches; the equal luxuriance of our Water-cress in those of New Zealand; the Cardoons of Europe, so rampant in the Pampas of South America, &c. And this perhaps may be the object of those provisions against self-fertilisation, which Mr. Darwin has lately called attention to, and has illustrated in so ingenious a manner in several of his publications.

These contrivances may be classed under three heads:—

The first consists in the maturation of the stamens and pistils of a flower at different times, so that the latter are unsuited for receiving the influence of the pollen at the time when it is in a state of greatest efficiency.

This circumstance was pointed out long ago by Conrad Sprengel, who designated it by the name of *dichogamie*, distinguishing as *androgynous* that in which the stamens ripened first, and *gynandrous* that in which the pistils were first developed.

This want of synchronism occurs in some flowers abnormally, in others normally. Thus in the Campanulaceæ the anthers open and discharge their pollen before the corolla expands. In the Fig, the flowers first produced contain few male organs, and these generally are developed after the stigmas are dried up. The late Figs also have no male flowers.

M. Hooibrenk, in his Report on the artificial Fecundation of Wheat, which strikingly illustrates the advantage of impregnating the ovaries with strange pollen, states it as a general law, that the pistil is ready to be impregnated before its own pollen is matured. Hence in the ordinary course of Nature Cereals are only made to fructify by foreign pollen, and in order to produce this effect more completely, M. Hooibrenk adopts an artificial method for distributing the fertilising dust over a field of corn, by passing a rope along the surface of the crop at the time when the stamens are developed, thus accomplishing in a more certain way, what is done casually through the influence of the wind and by insects. By this simple contrivance he boasts that he has added 50 per cent. to the yield of the crop, and his method, after having been investigated by a special committee, has been honoured by a favourable notice in the Ministerial report on the present state of the French Empire.

The second mode resorted to by Nature for preventing self-fertilisation consists in establishing such a relation between the male and female organs, as will render it impossible for the former to operate upon the latter. To this head belong those beautiful contrivances, which Mr. Darwin has pointed out in his work on the Fertilisation of Orchids, and in his remarks on Dimorphous flowers.

In the Orchid tribe, where self-fertilisation is in most cases prevented by the very structure of the floral organs, and where, therefore, the reproduction of the species seems in a manner dependent upon the casual visits of insects, Nature would appear to have provided for the preservation of the species, by means of tuberous roots in the terrestrial species, and of pseudo-bulbs in the epiphytal ones.

Thus several of our British Orchises, by pushing out a tuber each year in advance of the one from which the stem and flowers proceed, travel in the course of time along the entire length of a field in search of fresh nutriment, and renew themselves by protruding a fresh flower-stalk every summer from the new root.

In the case of dimorphous flowers, self-fertilisation seems provided against, not only by the want of correspondence between the lengths of the stamens and pistils, but also by the greater efficiency of pollen taken from a neighbouring flower, as has been inferred by Mr. Darwin from an elaborate series of investigations.

The third mode of preventing self-fertilisation is dependent on the entire separation of the sexes, either by placing the male flowers on different stalks from the female ones, as in monœcious plants; or on distinct plants, as in dicœcious species.

Physiologically however the same result is obtained, where, as in the case of that curious plant Welwitschia, though the flowers are hermaphrodite, the female blossoms attached to the stamens are barren. And where, as stated by Braun in his Rejuvenescence of Species, the male and female catkins arise, not as co-ordinate sprouts from the same axes, but the male blossoms from the second generation on the male catkins, the female ones from the third generation on the female inflorescences, as happens in the Hornbeam and Oak, a still further provision for intermingling the races seems to be aimed at.

Thus the analogy between the two organic kingdoms of nature is maintained in its completeness throughout, extending to the individual no less than to the species.

In both the period of duration has certain definite limits prescribed to it, for although, it may be said, we are unable to pronounce in the case of a tree, that its life has a fixed duration, like that of an animal, yet the same uncertainty exists in the case of a polype, and for the same reason; whilst it is equally true of the individual shoots, as of the distinct polypidoms, that their separate existence as living beings has a certain fixed period assigned to it.

In both instances, the dying out of species, at the present time, as well as during those epochs of creation that have preceded the one now in progress, announces to us intelligibly enough, that the very same law, only one operating at an infinitely more distant period, applies to the race, as well as to the individual.

Indeed, that tendency to decay, which exists throughout Nature, and brings about the gradual extinction of species both amongst vegetables and animals, is illustrated in man and the higher mammalia by the impossibility of keeping up a breed to the same standard of excellence for any long period, and by the rare occurrence of any remarkable quality of mind or body in its full development, perpetuated in a race beyond the third or fourth generation.

In this instance we seem to trace the workings of two antagonistic principles; the first, that which aims at handing down to the offspring the leading characteristics of the parents; the second one, that which causes the vigour of the race gradually to decline, or its peculiar excellences to be effaced, owing to the balance, upon which the harmonous working of the system depends, being destroyed, through the undue preponderance of one element, or the diminution and loss of another.

In both instances, moreover, Nature seems to have provided means for postponing this inevitable termination for a longer or shorter interval of time; namely, by those variations from the primitive type, which are to a certain extent brought about by the mere process of sexual reproduction, and which are still further secured by those contrivances which have been pointed out in the present communication.

In animals the frequent union of individuals too nearly identical is checked by the power of locomotion which they possess, and a still further tendency to variation is brought about by the changes in climate, food, &c., which they have to encounter.

But in plants special contrivances against self-fertilisation appear to have been required for preventing the too rapid deterioration of the race, and hence, even in cases where the male and female organs grow together, it has been provided that the pollen of one flower should be conveyed in various ways to the stigmas of another: and it seems a significant fact, that in so much the greater majority of instances, trees and other plants of long duration, and of vigorous growth, should possess either monœcious or dicœcious flowers, as if it was intended by this arrangement to renovate more effectually the vitality of the plant, and thus to secure to the species a longer period of existence.

Yet with all these provisions for prolonging the life of a species, its days, like those of the individuals composing it, are numbered, and the only question that remains for us to consider, is, whether its dying out is to be regarded simply as the result of the altered conditions of climate, soil, &c., to which it has been subjected, or arises from some inherent tendency to decay in its own organisation. The former explanation is the most obvious one, and may prove satisfactory to many minds, for the gradual sinking of temperature which has taken place in the crust of the globe down to the glacial period, and its subsequent elevation during that in which we live, suggest causes for the disappearance of certain species, and for the substitution of others, which may be deemed sufficient to afford an adequate explanation. Nevertheless, if these effects are exclusively due to climate, certain other conditions, besides that of temperature, must be concerned in producing them.

Take for instance the case of the Wellingtonia. This tree, or one very nearly allied to it, existed generally throughout Europe during the Miocene period. The Lignite of Bovey Tracy in Devonshire is supposed to be principally made up of its remains, and an allied species is widely distributed over the miocene formations of Europe and America, from Italy to Greenland. At present its only native *habitat* is California, where it is confined to two valleys, yet it does not seem to have been limited to this one region by the gradually diminishing temperature, or it would not have survived the glacial period, or proved capable of resisting the present winters of Great Britain.

Mr. Bateman, who has introduced this tree largely into his plantations in Cheshire, considers it hardier than the Deodar; yet from some mysterious cause unconnected with temperature all his specimens were blighted last spring, whilst the Deodars did not suffer. Does not this fact suggest some unexplained condition of climate, which, operating upon the species during a long lapse of years, has at length reduced it to the narrow limits in which it is found native—unless indeed we fall back upon that higher law, which prescribes to each species a limited period of duration, and supposes that this period is arriving in the case of this remarkable vegetable production.

It may be said indeed that such an inference is contradicted by the vigorous growth and gigantic proportions which this tree assumes in the spots where it still exists. Yet the same remark applies to several other trees of great size and vigour, as the Dracæna Draco, the Callitris quadrivalvis, and the Glyptostrobus heterophyllus, now confined to one country, though formerly of much more extensive distribution.*

In these cases, also, it is difficult to point out what changes of climate could have led to their becoming thus restricted within their present range. In a late number of the "Annales des Sciences Naturelles" (tom. 16, ser. 4) Count de Saporta had pointed out facts which tend to show, that during the tertiary period several plants had died out, owing, as he thinks, not to a change of climate, but to some other unexplained circumstance.

The tertiary flora, indeed, of Provence, which was the subject of his researches, is made up of plants related, partly to those of the northern regions of Europe, partly to those of the southern hemisphere, and partly to those of sub-tropical regions; but the predominant character of its vegetation corresponded more nearly with that of the Cape of Good Hope and Australia at the present time, than with that of any other part of the globe. The mean temperature which

* Callitris, Con., found now in Algeria, in the miocene of Aix in Provence.—*Saporta.* Glyptostrobus, found now in China and Japan, formerly in tertiary rocks of Switzerland.—*Heer.* Dracæna Draco, confined to Teneriffe.

must have existed at one time to allow of the development of many of these plants would seem to have been not less than from 69° to 77° Fahr., but their disappearance in the upper strata cannot, the Count thinks, be attributed to the lowering of the temperature, as certain species seem to have died out before the cold could have affected them, and as, during a certain period, sub-tropical, boreal, and arctic plants appear to have lived side by side.

In fact, says the author I quote, vegetable types seem endowed with a vitality of their own, proper to each kind. Individuals die of age or of accident: a species, which is nothing more than a repetition of the individual, or in other words an aggregate of similar beings, runs in like manner through the course of its existence, persisting so long as the external conditions allow of its doing so.

Yet, he adds, it seems impossible, even by reference to these conditions, to account altogether for the disappearing of species, and we are therefore driven to admit a sort of exhaustion of the type itself, which causes it to be reduced to the limits of an existence, which becomes gradually more and more precarious in proportion as its age increases.

RENANTHERA COCCINEA.

HAVING been successful in flowering this truly beautiful Orchid, I have thought that perhaps a few hints on its cultivation may be of interest to those who are also anxious to do so. Some few years since I had a long plant, which early in spring I cut into pieces, each about a foot in length, fastening each piece on a stick, and potting them round the inside of as many pots as were required, so as not to overcrowd them. Sphagnum and broken potsherds were used as the best materials for potting. When potted they were placed at the coldest end of the East India House, and plenty of moisture was given to them during the summer months, by syringing the stems once or twice a day. A few years afterwards I had a fine lot of young plants, varying in height; and I selected eight of the strongest stems, and fastened each to a stick about 1 inch in diameter. These I potted close to the side of a pot large enough to take them without over crowding, using the same kind of material as before, the pot being also well drained.

At the time when Camellias were started into growth, which would be in March or the beginning of April, this group of plants was suspended in the centre of the house, the top being only a few inches from the glass. As the stems grew, short hooks were added so as to lower them as often as required. Great attention was given to watering for two or three months, by syringing once or twice a day, or more if very hot. A rose syringe should be used so as to moisten the plant just above the pot, avoiding say at least a foot of the top of the plant, which should on no account ever be wetted. To prevent the sun from burning the leaves make some paste, allowing it to boil until it is rather thick, then adding a little whitening dissolved in hotwater, and stirring both together, so as to be about the thickness of paint; then take a paint brush, and lay the paste thinly over the glass on the outside, care being taken not to touch the rafters or the putty, as when the paste gets dry, it will cause the paint to peel off. This will be sufficient to prevent the plants from burning. The pasting ought to be done in dry weather, as it requires two or three days to get sufficiently set to stand heavy rain.

About June the plant should be examined, as the flower buds will probably begin to appear opposite the leaves and a little above them. The young roots always proceed from the side of the stem, therefore are easily known from the flower buds. When the buds appear, the plant should be removed into the coldest end of the East India house. The spikes will grow very rapidly. I had ten flower spikes on eight stems, but when the spikes were about two inches long, I cut two of them off, leaving one on each stem, in order to give the others more strength. I exhibited this plant a few years since at Cheltenham, on the 30th of August, but I have not the least doubt it could be brought into flower earlier in the season if its growth were commenced earlier. The principal points in its culture are thorough ripening, with vigorous growth. It was really surprising to see how fast these plants grew, and yet were strong and short-jointed.

I should like to see this beautiful Orchid brought out at our London exhibitions. The colour is very desirable amongst other Orchids, and the flowers will last fresh for two months or more. I may also mention that I have set it with flower buds for three successive years. The first year there were two stems, and two fine spikes, not more than two feet in height; the next year four stems and four spikes; the third year eight stems and ten spikes. This plant stood from four to five feet in height, the greater part of its surface covered with its long spreading panicles of scarlet flowers. It is evident that under such treatment it is by no means a shy-flowering orchid. *Thomas Brown, Exotic Nursery, Tooting.*

NOTES ON GARDENS.—No. XIX.

ROYAL BOTANIC GARDEN, GLASNEVIN.

TEN to fifteen thousand visitors and upwards on a single Sunday! Where do they come from, and what attracts so many from a city not numbering more than a tenth part of the population of London? They come from the odoriferous purlieus of the Coombe; from the stews of Church Street; from the many fair streets and suburbs of Dublin, and the many foul alleys on the banks of Liffey—for to do Dublin justice, there is no air so savoury in the neighbourhood of Petticoat Lane, E., as that which may be inhaled within a hundred yards of its grandest squares; from

. . . "rows called Paradise
Which Eve might quit without much sacrifice,"

—from all these they come to feast on the beauties of tree, and shrub, and herb, and enjoy the fragrance, the verdure, and the fascinating variety of surface, form, and colour presented by a noble garden, bounded on one side by what is perhaps the most desirable margin for a great establishment of the kind—a pleasant river—the Tolka. Yes, there on Sunday afternoons, the "intelligent workman"—a type of great rarity in many places, but not by any means so in Dublin—may admire the elegant arborescent Ferns, fellow-subjects of those that spring away from his antipodes, and garnish its ravines with groves of majestic grace; may wonder at the quaint and beautiful forms of the Cactuses and their many singular allies in succulence and conformation, looking almost as well under the cloudy skies of Hibernia and in Mr. Turner's elegant curvilinear hothouses, as if storing up the precious moisture on the hills and plains of South America and the Cape under their native sun; may walk under the shade of a forest of rising Palms and pleasantly study their uses as well as admire their exceeding grace, for those yielding wine and toddy, and fibre, and wax, and sugar, and food, and oil, and ivory are all there; may find food for astonishment in the many fine Proteads and beauties of the Australian flora, some of which will generally be found in flower, for the collection of plants at Glasnevin from that interesting region, is a very extensive one; may revel amongst the Ferns gathered for his convenience from a thousand shades; may see the sumptuous water-weeds of the great fresh waters of old earth, the Sacred Beans, the Euryale, the noble Water-lilies and the Victoria, as well as they may be seen anywhere away from their native waters; may see too, the always interesting beverage, food, and medicine-yielding plants, and the Orchids—from the exquisitely coloured species that charm even the South American Indian and the native of the hot and moist East, feasted as these must be on beautiful colour, to the more northern and southern quaint and singular embroiderings produced by that wondrous family on Nature's verdant mantle; and may ramble through more than 30 acres of out-door interest—interest made up to a very great extent of the Cypresses, Junipers, Arbor-vitæs and other choice Conifers of California and other regions of the northern hemisphere, plants which, as they are grown at Glasnevin, combine verdure, grace, and dignity as no other plants combine them, together with groves of the forest giants of Europe and America, and onwards down to the tiniest Heaths; of the Grasses that directly or indirectly sustain us so well; of the herbs that yield us other foods; the herbs that yield us medicine; the herbs of the old woman's pharmacopœia; the herbs of Britain; the herbs of the verdant North, and the Lilies of the gayer South; the exquisite evergreen herbs of the Swiss and other Alps; and the interesting though familiar plants of our British river-sides—Typha, Bulrush, Hottonia, Willow, Butterbur, Villarsia, and Bogbean—that richly grow along the banks of Tolka;

"While, chance, some scatter'd Water Lily sails
Down where the shallower wave still tells its bubbling tales."

Truly, these are charms sufficient to attract thousands from any city; but they are necessary in the Kew of Hibernia, for the natural beauties of the neighbourhood of Dublin are so fascinating and so easily visited by the citizens, that a garden to attract so many must be a noble one. Not rich in mere acres of unmeaning colour and monotony, but one which affords a home to every interesting and beautiful subject of the vegetable kingdom that can be gathered, from the sea shores to the Alpine fastnesses of this wonderful earth. When the Dubliner prepares for his "day out," numerous are the natural beauties that present themselves for his patronage. He may for a trifle steam from the Liffey to Kingstown through the beauteous bay—often compared to that of Naples—with the "big hill of Howth" on the left—often it is true spotted with cloud-shadows, but those he must forgive, for doubtless they lend much of its verdure to the country which from the shore on the right, wooded to its margin, rises away beautifully to the west and south till it reaches the hills of Killiney and Dalkey, and loses itself amongst the purple-topped mountains of Dublin; whilst from the shore of the bay he may take a "header" from the ramparts into the sparkling brine, free from the chalk mud and *debris* through which the unfortunate Cockney has to wallow in many a "fashionable watering-place." And then there is the park—the park of parks, with its wild glens where an anchoret might ramble without interruption; its herds of deer, its mountain views, its zoological garden, where the wild "baysts" may be seen on Sundays for a penny, its forests of old Hawthorn trees, and its views of the Liffey, working away seawards through the beautiful valley. The far-famed beauties of Wicklow, too, are for the most part within easy reach of the Dubliner; but easier still can he enjoy the mountain air and beautiful scenery from the top of "Three Rocks," and other mountains that look down on the city, the park, the valley of the Liffey, the bay and its islands, with the fashionable town, harbour, and yacht station of Kingstown; while the mountains around, earth's, ocean's plain below, "mixed in one mighty scene, with varied beauty glow." Truly these are charms, which, if planted in the neighbourhood of the Thames, would half empty London for a year of Sundays.

But it is quite time to commence describing the garden, which in diversity of surface is worthy of its neighbourhood; while the plants, coming as they do from "Greenland's icy mountains, from Afric's burning plain," and embracing as they do many thousands of the most distinct and beautiful things that garnish so wondrously this otherwise remorseless earth, from the tiny and most interesting Andromedas that in a wild state dwell near the everlasting ocean of ice, within view of the polar twilight, to the beautiful pellucid Ferns that display their beauties in the shadowy caves of New Zealand, offer a charming study alike to philosopher or costermonger.

For promoting the love of plants and a knowledge of the various branches of husbandry and gardening, the members of the Royal Dublin Society conceived the design of forming a Botanic Garden about the year 1790, and soon afterwards their suggestions were carried into effect, and the institution founded and endowed by the Irish Parliament. In March 1795 the Bishop of Kilmore reported to the Society, that after examining various situations none had been found so suitable as the ground at Glasnevin, and it is much to be regretted that later selections of garden sites have generally been the reverse of improvements on that of the good Bishop. Apart from beauty of surface and situation, the garden possesses interesting associations from its having once been the demesne of Tickell, the poet, "who is known to have planted many of the trees." The house in the garden, now occupied by Dr. Moore, was that in which Tickell enjoyed the society of Addison during the time the latter acted as private secretary to the Marquis of Wharton, in 1714. In Dr. Moore's parlour, Swift, Parnell, Addison, Dean Delany, Stella, and Tickell have all sat, so that if eloquence, wit, beauty, and botany are capable of making a house sacred or classical, the curator's residence at Glasnevin ought to be so. Indeed, there would be a touch of Vandalism in pulling it down, yet down it must come, for it is one of the three things in the garden that are not worthy of it; the others being the new Palm-house, and the museum. The Palm-house is externally 100 degrees too ugly, the museum paltry and insufficient in a like ratio, and the house nearly a century too old.

At one time the garden contained "a Linnean arrangement" for those who study plants "systematically," a "cattle garden," hay garden, esculent garden, dyer's garden, and Irish garden—arrangements which have been modified long ago; but a good old rule that the Professor should give lectures on botany, to which the public should be admitted gratis, is still continued. Dr. Wade was the first Professor, and Mr. J. Underwood was recommended by Mr. Curtis, author of the "Botanical Magazine," &c., to the practical department. Mr. Niven, now of the "Garden Farm," followed Mr. Underwood, and was succeeded in 1838 by Mr., now Dr. Moore, in whose hands both the practical and scientific work of the garden have remained since that date.

Through the houses I shall first go, though believing the hardy department of a garden in this country, in which so many fine plants can be grown, to be much more important and interesting than any collection of potted plants in existence; but I was driven in by a shower, and so shall take things as they came.

One of the first objects which strikes the visitor to Glasnevin is the octagon house long ago built to accommodate what was once considered the finest Norfolk Island Pine in the United Kingdom, a plant which was unfortunately broken and destroyed while being conveyed to its new home. This old house, which I had expected would have become useless and comparatively ugly before the march of progress in hothouse building, I was surprised to find looking almost classical compared to the astoundingly ugly new Palm house, and nobly filled for the most part with Tree Ferns in grand condition. A great philosopher has written of the "eternal verities," and I have lately arrived at the profound conclusion that good plants are the eternal verities of respectable gardening, as those who have thrown away or disposed of their succulents and other plants not remarkable for glaring colours, to ape the monotony and fashion of the hour, will find to their cost, when by-and-by their gardens are seen to be devoid of interest, compared to places where plants—not colour and vulgarity "well brought out"—are admired and cultivated. Verily a good Tree Fern is one of the most eternal of the verities of a good gardening establishment—especially a botanical one. Nothing like a Dicksonia or Cyathea, with well elevated crest, for a silent lecture on vegetation. A Dicksonia antarctica in this house, with trifid crest, looked rather novel, and then beside it were such fine plants of Balantium Culcita in great health, imported specimens, with the true Alsophila australis, more difficult to get than excelsa, and noble plants of Cyathea medullaris, raised from spores in the garden. One fine specimen was planted out in a Lycopod-covered mound of earth, a very sensible

way of growing Tree Ferns, for those who don't pant after the beauty of tubs. Alsophila Youngii, a slender little Tree Fern, looked very distinct among huge Dicksonias and Alsophilas recently imported, some of which were likely to prove new to gardens. The old Disandra prostrata flaunted over and around a tub here very gracefully. Where such oceanic tubs are used as are now to be seen in the Edinburgh and Dublin gardens, some graceful trailer might be advantageously used to hide the surface of earth and board. Pitching one's tent in such a tub, with the right side up, would by no means give an extreme idea of Spartan hardihood, or disregard of good housing. If the old Greeks possessed tubs of equal size, the famous philosopher may not have been so awkwardly lodged as is generally supposed; and if he came now-a-days to take a house, and was referred to Glasnevin or Edinburgh, doubtless he would in preference select a wheelbarrow. In the octagon house, too, with some tender Pines and Banksias, was a specimen of the Hand-plant, nearly 40 feet high, and very healthy, yet it has never flowered.

The Victoria house at Glasnevin is a very respectable ridge-and-furrow roofed structure, with a large central and four corner tanks, in all of which aquatics of the warmer temperate and tropical countries are luxuriantly grown. A miscellaneous collection of medicinal and other plants was also stood about in it; among these the Cassava plant was in great vigour: it is flowered and fruited in the garden during some seasons. The true Cow-tree, Brosimum Galactodendron, raised from seeds gathered from the famous American trees by Mr. Linden himself, was a very interesting plant, quite distinct looking from the one usually grown as the Milk tree.

Gower Street is not remarkable for picturesque or varied beauty, nor its houses for exciting the æsthetic susceptibilities of passing city clerks. Truth to tell, there are hundreds of horticultural Gower Streets—places in which one might as well look for an interesting plant, old or new, or for interest of any kind, as for a pretty Gothic cottage, or house of original design in the famous gutter-like street. Our gardeners ought to be ashamed of this! Let us hope they will be some day, and then the remedy will soon appear. But though here and there a botanic garden exhibits a good deal of this horticultural Gower-street-ism, there is none of it in Glasnevin, which is the very antithesis of such bedder-out-aping botanic gardens. Otacanthus cæruleus, a neat-growing Acanthad, was pointed out as a valuable new winter-flowering plant, and Jacquemontia violacea indicated its own elegant presence by exhibiting its lovely flowers, reminding one of the choicest Gentian, which make it so exquisite a climber. Yams were abundant, one unnamed species bearing bulbils (if such a term will do for bodies as big in some cases as large Potatos) in the axils of the leaves; and there was also the solid-stemmed Bamboo; a plant very like Gloriosa superba, introduced from Natal by Mr. Cooper; a fine leaved new Erythrina, said by Dr. Harvey to be a very curious one; the Durio; Amherstia nobilis the difficult-to-grow, doing very healthfully; with Cordia Sebestena, Barringtonia speciosa, and Sciadophyllum pulchrum, noble-looking plants, which ought to be oftener seen. Here, too, with Euterpe edulis, was Desmodium gyroides having apparently all the functions of the Moving plant, and the aspect too—only it was much larger; and Oxalis sensitiva was wild about on some of the larger pots and tubs. Vellozia candida looked somewhat like a little branched arborescent Yucca. I had not before seen it in cultivation, and no doubt when grown up and in flower it will prove a fine and interesting plant. Though exceedingly hot I very much enjoyed the water plants in the Victoria house, and no wonder, for the Victoria was grandly developed, and the ferocious Euryale had leaves in one or two cases 5 feet in diameter—a noble plant in that state.

I am very fond of water plants, and think a botanic garden without a good tropical and hardy aquarium deficient of one-fourth the interest which it ought to possess. There are only a few respectable tropical aquariums in the country; and it is as difficult, or more so, to see hardy water plants in a good state. Rarely does one see the Water-Chesnut in cultivation. I had not, previously, except in the Oxford Garden, but here it actually covered the tank in some places, and Mr. Orr told me that brogues were the most delicate things they could traverse the bottom of the tank with, from its being covered with the well-horned fruit of the Trapa. Mr. Orr, it is quite time to say, most efficiently superintends the indoor department at Glasnevin; but it must not be supposed that he is completely absorbed in the tubbing of gigantic Ferns or the growth of Victorias, for he has discovered on the trees of the garden, and in some of its hoary and slimy spots, several Mosses, Lichens, and other small fry, new to the Irish cryptogamist. Nymphæas were largely represented, and finely grown, and when they are well done half a dozen "regulation" greenhouses are not so well worth seeing. A rampant Pitcher Plant suspended its valuable mite of interest from the roof over the water, while the purple Sugar-cane grew much better in the aquarium than it does out of it; and underneath, for the curious in water plants, grew Aponogeton monostachyon, with all its leaves low under the water, unlike its graceful congener. There were also scores of things in and out of the water which I have no space to mention. However, I must say the Sacred Beans were nobly done, Nelumbium luteum blossoming rich and fragrant, a beautiful thing not often seen in flower. Unfathomable as any problem of science, inexplicable as the origin of species, the gullibility of the human species, is perhaps, after all, one of the greatest wonders. According to circumstances, birth, or teaching, we often find man believing everything of anything or something of nothing. But if the creature, even in his superstitions, exercises good taste, we should give him the benefit of it, and so we should vastly prefer the theology of the glowing and strict old Gheber—especially since the sun has been so vividly proved the propellor of all life—to that of those who bend the knee to a mahogany "dummy." So I say, all honour to those who made sacred the beautiful Nelumbium. *Wm. Robinson.*

(To be Continued.)

Home Correspondence.

Fruit in Gardens, and Birds.—How many thousands are there, who admitting the benefit done by birds, yet when fruit and Peas are ripening, *bless* their former friends. Now, is it not possible by simple contrivances to protect ourselves when we wish it, whilst allowing them to protect us by destroying insects when we have nothing to lose? I think it is. I beg, therefore, to suggest that some of the wholesale watch-makers should turn their attention to the manufacturing of a self-acting machine which should fire off a very noisy cap (which could be easily made) as often as required. It would only be necessary to cast a narrow iron drum with any given number of nipples, then on another drum let an ordinary gun-spring hammer be placed, and with simple clock-work machinery they might be made to turn round, lifting up and dropping the hammer as often as wished. A cast-iron circle of 2 ft. diameter would hold 144 nipples, allowing half an inch to each. By using one or more of them you might be virtually firing off a gun as often as you thought necessary, and in the very spot most beneficial—under your Gooseberries, or in your Pea-rows, and the trouble would be confined to putting on caps once or twice a day, according to the number of charges or discharges. *Alpha.*

Phalænopsis Schilleriana.—I observe at p. 963 a criticism of a statement in my work "Select Orchidaceous Plants." I suppose the writer believes he has discovered a vital error in my statement "moist shady places," because of the words Van Houtte extracts from M. Porte's notes, viz., that "P. amabilis is never found in the forests, which are sombre and constantly moist." The words "moist shady places" do not, I submit, convey the same idea as dark or sombre, and constantly moist. Allow me to say that M. Porte brought his first plants to Broomfield. They were placed in the situation he pointed out as suitable; they have been there ever since; and I should much like to see finer plants of either amabilis, rosea, or Schilleriana. It is then argued by Van Houtte that because amabilis is stated by Porte "to inhabit localities where the dry season is more or less regular," (are not all dry seasons more or less regular?) and that P. Schilleriana grows 500 yards up the sides of hills (an altitude only half that of Snowdon), therefore they are less exposed to stagnant moisture. But who recommends growing Phalænopsis in stagnant moisture? Assuredly I do not. No correction then has been made of my statement; but I will correct the statement in the paragraph referred to, that M. Porte discovered P. Schilleriana. I can bring evidence to prove that he was not the discoverer. *Robert Warner, Broomfield, Oct.* 11.

Ancient Gardening.—The following answer to Mr. Darwin (see p. 965) is taken from the 8th edition of Miller's Gardeners' Dictionary, published in 1768. In that work the author says: "All sorts of Kidney Beans are too tender to be sown in the open air before the middle of April. The first crop intended for the full ground should be put in about the middle of April; but this should have a warm situation and dry soil, otherwise the seeds will rot in the ground; or if the weather should prove so favourable as to bring up the plants, yet there will be danger of their being killed by morning frosts, which frequently happen the beginning of May." *J. Bryan, Heydon House, Royston.*——Mr. Darwin may find the information he requires, together with a good deal of curious matter relating to other plants in cultivation at that time, in the "Gardeners' Labyrinth," by Mountain (1594), the first English work published on gardening. It may sometimes be picked up from old book stalls in London at a mere nominal price. Though I cannot state positively (not having seen the book for some years), I believe it will be found, as regards French Beans, that with the exception of sowing a little earlier, there is no material difference in the time or method employed, from that now practised. *J. M., Bothwell.*——The "Herball," or "Generall Historie of Plantes, gathered by John Gerarde, of London. Imprinted at London by John Norton, 1597," says that French Beans should be "sowen in the spring, especially in the midst of Aprill." *A. G., Glenam, Clonmel.*

Large Pears.—I send you a specimen of Duchesse d'Angoulême, grown in a pot; its weight is 25½ oz. Two other fruit, weighing over a pound each, were gathered from the same tree (a small one, two years old from the graft), which was lifted from the open ground and potted last spring, just as the bloom-buds were swelling. It was grown in a cool Vinery until July; it was then turned out of doors into a warm situation, and left to take its chance. I had also fruit of Louise Bonne of Jersey and Williams's Bon Chrétien, treated in the same way, superior in size and flavour to those grown out of doors. *G. Blake, Ombersley Court, Droitwich.* [The Duchesse d'Angoulême received was equal in size to, and had all the appearance of, fruit of the same variety imported from the South of France. It measured 14½ inches one way and 13½ inches the other. The skin was bright yellow, and the flesh melting, juicy, and sweet.]

Large Apples.—An Apple tree of some 10 years' growth has fruited here this season for the first time, and has borne such large fruit that an account of its weight and size may be interesting. The tree was bought for Northern Wonder, and stands in deep loam on a south slope, sheltered. It produced five Apples only, the two largest of which weigh together 2 lb. 5 oz. avoirdupois; one measures 14½ inches in girth, and the other 14 inches. We have suffered generally from drought, as other districts have done, but these Apples have had no artificial aid. *John J. Rogers, Helston.*

Autumn blooming Orchids.—Would some of your Orchid-growing Correspondents kindly inform me the names of about a dozen Orchids that can be obtained at not extravagant prices, and be depended on to furnish six in flower at the end of August and beginning of September? *J. M., Dursley.*

Fruiting of Wistaria sinensis (see p. 965).—In the spring of 1859 I had this growing in a small pot. The roots had got pot-bound, and the plant was fast getting into bad health. As it was not wanted, I intended having it thrown away; but by some oversight it was put aside, receiving neither water nor other attention, until somewhere about September, when I noticed a miserable, stunted-looking seed-pod upon it. This is the only instance of the Wistaria fruiting with which I am acquainted. *J. M., Bothwell.*

Wasps and Sulphur.—On paying a visit to a gardener a short time ago, I was surprised to see a fine crop of Grapes and foliage partly destroyed. On asking the cause of the mishap, the gardener told me that his employer (a lady) had been using a hand-glass wasp trap in the house, and that after destroying the wasps in the trap with burning sulphur in a dust-pan, she had then held the burning sulphur in several parts of the house up to the bunches to destroy such wasps as were eating the berries. This, alas, destroyed not only the wasps, but also the foliage and Grapes. *Wry.* [Of course.]

Zizania aquatica.—I have found the seeds of this plant to vegetate best when dropped of their own accord into the water as soon as ripe. *C. G.* [The dry imported seeds are useless.]

Underwood for Larch Plantations (see pp. 944 & 965).—In reply to "H. S. M." respecting underwood beneath Larches, I venture to say that nothing will grow but Grass; at least this is the opinion of *An Old Experienced Planter of Larches.*

Societies.

Royal Horticultural: *October* 11 (*Floral Committee*).—Messrs. Veitch showed on this occasion some fine hybrid Cattleyas, to two of which, viz. C. Dominiana alba, a kind with delicate lilac sepals and petals, and pale sulphur-stained crimson veined lip, and C. devoniensis, First-class Certificates were awarded. The latter is a robust-growing kind with crimson lip, and greenish-white sepals and petals. C. exoniensis, shown at a former meeting, was also reproduced on this occasion by the same firm. Various cut specimens of Antirrhinums and Pentstemons were contributed by Messrs. Stuart & Mein. Mr. Macintosh received a Second-class Certificate for his Solanum Capsicastrum hybridum mentioned by us at p. 918; and a similiar mark of distinction was bestowed upon Dahlia Lightning, yellow striped with maroon, shown by Mr. Legge of Edmonton. To a zonate Pelargonium in the way of Mrs. Pollock, but with more red in the leaves, named Lady Cullum, from Messrs. E. G. Henderson, a First-class Certificate was awarded, and an equally handsome-leaved kind, called Lucy Grieve, was also shown by the same firm. Aucuba japonica picta, a yellow-leaved variety edged with green, a male plant in flower, from Mr. Bull, received a First-class Certificate, and the same exhibitor also showed A. japonica vera in fruit, as well as some interesting varieties of Ferns.

British Association: *Sept.* 16.—In Section B (Chemical Science), after a paper on the Utilisation of Sewage by Dr. Bird had been read, Mr. Tite remarked that the whole matter of the disposition of the London sewage had been before him for a considerable time. The London sewage was something enormous in quantity. It was collected in immense reservoirs, and then poured into the river at times when it would be swept out to sea. Thus, the whole of the sewage of London, containing important chemical constituents, was utterly wasted. He had no doubt that they should relieve the basin of the Thames completely of the sewage which fell into it from Chelsea to below London; but with regard to the utilisation of the sewage, they did not see their way clearly. They were too, in difficulty as to what was to become of the drainage of the large towns above their district, because it was

impossible to join them with London, and it was idle to seek to drain Oxford by any lateral drainage that could reach the sea. At the present time Kingston had made arrangements to pour its sewage into the Thames, but was stopped by an injunction obtained by the Conservators of the river, by which they had been taught that such nuisances could not be continued. The question then remained, what was to be done with it? Two facts had been proved. At Leicester, where the experiment had been carried on regardless of expense, it was proved that the deodorising of sewage by lime would purify water and prevent it becoming a nuisance to the stream. Since then it had been found that fish flourished, and the herbage and fruit, which before were poisoned, had now returned to their normal condition. This fact was also apparent, that the products which it had been thought would be sufficient to pay for these works, had proved an entire failure; and except for the lime, which was very useful for the fertilisation of land, it had proved utterly useless. The other fact was the experiment at Croydon, which certainly did appear successful. There the river formerly was polluted by the sewage. A farm of 40 acres was then taken; ordinary drains were cut, the sewage was turned into the land before it passed into the river, thus purifying it of its offensive ingredients, and proving of great advantage to the land. Croydon had thus solved the problem extremely well; but how such a system could be applied to London was a problem still unanswered. He described various propositions which had been submitted to the Metropolitan Board of Health, and stated that they had acted on the opinion of Mr. Rawlinson, the Government engineer and the adviser of the Government, who was of opinion with regard to London that it could never be made a commercial success, and must end in bankruptcy.

In Section E (Geography), in the course of a paper on the "Increasing Desiccation of Inner Southern Africa," Mr. J. F. Wilson remarked that the Calabari Desert is gaining in extent, gradually swallowing up large portions of habitable country on its borders. Springs of water have diminished in their flow, and pools are now either dry or rapidly becoming so. The great change had commenced long before the advent of Europeans, if we may trust native traditions, which are corroborated by the existence of an immense number of stumps and roots of Acacias in tracts where now not a single living tree is to be seen. The causes of this change lie in the physical characteristics of the country and in the customs of the inhabitants. The region drained by the Orange river is naturally arid, from the interposition of the Quathlamba mountains between it and the Indian Ocean, whence the chief rain-clouds are derived. The prevailing winds are from the north east. The clouds, heavily laden with vapour from the Indian Ocean, are driven over Caffraria, watering those lands luxuriantly; but when the moisture-bearing nimbi arrive at the summits of the mountain range which divides Caffraria from the interior country, they are not only deprived already of part of their moisture, but they meet with the rarefied air of the central plains, and consequently rise higher and evaporate into thinner vapour. There are few spots, however, which are wholly destitute of vegetation, and large trees are frequent. There is no district which does not maintain its flocks of wild animals; but the diminution of even one or two inches of rain in the year is most severely felt. The author came to the conclusion, after a careful inquiry into the geological formations of the region and the sources of springs, that much water must lie, throughout wide tracts, deep below the surface of the soil, and that the boring of artesian wells would yield a permanent supply for irrigation. But as a remedy for the growing evil, he laid particular stress on legislative enactments to check the reckless felling of timber and burning of pastures, which has been long practised both by the natives and the European colonists.

In Section F (Economic Science) a report was presented by a Committee appointed to inquire into the best means of providing for a Uniformity of Weights and Measures. The Committee recommend, among other things, that it is desirable, in the interests of science, to adopt a decimal system of weights and measures; that in furtherance of this proposal it is desirable, from its scientific capabilities, to adopt the metric system; and that as the weights and measures of this country are gradually undergoing a process of decimalisation, it would be more advantageous, instead of drifting by degrees into a heterogeneous variety of systems, to change at once to a really convenient one. The Committee also suggest that in statistical documents issued by the Government relating to questions of international interest, and in communications respecting weights and measures, presented to foreign countries which have adopted the metric system, equivalents in the metric system should be given for the ordinary English expressions for length, capacity, bulk, and weight; and they recommend the authors of scientific communications, in all cases where the expense or labour involved would not be too great, to give the metric equivalents of the weights and measures mentioned. They consider that the influence of the British Association would be beneficially exerted in obtaining from Paris an authorised set of metric weights and measures to be placed in some public and frequented building in London; and that treatises explaining the metric system, with diagrams, should be forthwith laid before the public; that works on arithmetic should contain metric tables of weights and measures, with suitable exercises on those tables; and that inspectors of schools should examine candidates for pupil teachers in the metric system. On the subject of temperature, it is recommended that the authors of Reports to be presented to the British Association, relative to temperature, be requested to give the degrees of heat or cold according to both the Centigrade and Fahrenheit's thermometers; and it is proposed that the scales of thermometers constructed for scientific purposes should be divided both according to the Centigrade and Fahrenheit scales; and that barometric scales be divided into fractions of the mètre, as well as into those of the foot and inch.

The following table, by Mr. Samuel Brown, condenses the system of all the metric measures and weights into a small compass:—

SYSTEM OF METRIC MEASURES AND WEIGHTS.

		Length.	Surface.	Capacity.	Weight.
MULTIPLES.	Myria	10,000	..	..	10,000
	Kilo	1,000	..	1,000	1,000
	Hecto ..	100	100	100	100
	Deka	10	..	10	10
	UNITS ..	Mètre.	Are.	Litre.	Gramme.
DIVISIONS.	Deci .. .	.1	..	.1	.1
	Centi	.01	.01	.01	.01
	Milli	.001	..	..	.001

The multiples of the unit, in each case, are designated, in the metric system, by Greek prefixes:—*Myria*, 10,000; *Kilo*, or *Chilio*, 1,000; *Hecto*, or *Hecato*, 100; *Deka*, 10: whilst the divisions of the unit are expressed by Latin prefixes:—*Deci*, $\frac{1}{10}$th; *Centi*, $\frac{1}{100}$th; *Milli*, $\frac{1}{1000}$th. The English equivalents to the measures of length and capacity, and to the weights, according to the metric system, stand thus:—

METRIC MEASURES OF LENGTH, WITH ENGLISH EQUIVALENTS.

METRIC NAMES.	English Equivalents.			
	inches.			
Millimètre (1-1000th) ..	0.039			
Centimètre (1-100th) ..	0.394			
Décimètre (1-10th) ..	3.937	feet.	inches.	yards.
1 MÈTRE	39.371	3	3.371	1.094
Dékamètre (10 mètres) ..	..	32	9.708	10.936
Hectomètre (100 mètres) ..	..	..	..	109.363
Kilomètre (1000 mètres) ..	..	..	..	1093.633

METRIC MEASURES OF CAPACITY, WITH ENGLISH EQUIVALENTS.

METRIC NAMES.	English Equivalents.			
	gill.			
Centilitre	0.070			
Décilitre	0.704	quart.		
LITRE	..	0.880	gallons.	quart.
Dékalitre (10 litres) ..	..	..	2	0.804
Hectolitre (100 litres) ..	..	..	22	0.039

METRIC WEIGHTS, WITH ENGLISH EQUIVALENTS.

METRIC NAMES.	Avoirdupois.				Troy.
	cwt.	qrs.	lb.	oz. drms.	grains
1 décigramme (1-10th) ..	..	..	..	.. ..	1.543
1 GRAMME	..	..	..	.. ..	15.432
1 dékagramme (10 grammes)	..	..	..	5.644	
1 hectogramme (100 grammes)	..	..	..	3.527	
1 kilogramme, or kilo (1000 grammes) ..	..	..	2.205		
1 myriagramme (10 kilos)	..	..	22.046		
1 metric quintal (or 100 kilos)	1	3.674			
1 metric tonne (1 00 kilos)	19	2.736			

September 17.—In Section A (Physical Science), in a paper on the Rainfall of the British Isles in 1862—3, Mr. J. G. Symons remarked:—The broad outlines characterising the distribution of rain during 1862 and 1863 may be thus briefly sketched. Taking, first, the whole of the stations in England, Scotland, and Ireland, the average fall in each of the years 1860, 61, 62, and 63 is about 10 per cent. above the average of the last half-century; and the fall in the three years 1860, 61, 62 nearly equal, the difference being less than 2 per cent. of the total quantity; while 1863, which was rather drier than the others, only differed by 5 per cent. These very uniform results are surprising, considering that, in some districts, the fluctuation has been nearly 100 per cent. For instance, Holkham, 1860 was 35 inches, 1863 only 18 inches; Torosay Castle in 1860, was 70 inches, and in 1863 was 111 inches, differences the reverse of each other—in one case of 17 inches excess in 1860, in the other 41 inches in excess in 1863. Yet the general average throughout the country remains nearly constant; it is, in fact, a similar compensation in yearly totals to that which has prevailed during the drought now so much felt in the south of England at the very time that the north-west of Scotland has been suffering from want of dry weather. It is further evident, from the table of average fall, that there has been a series of three dry years in the midland counties of England, just as there has been a series of three wet ones in Ireland and along the west coast of Scotland. The drought at stations in the north midland counties has been more felt even than is warranted by the small fall in 1863, because the ground has had no chance of resuming its normal condition since the partial drought in 1861. The minimum recorded fall is 14·46 in 1863, at Southwell, Nottinghamshire, in which district seven stations return less than 17 inches. On the other hand, the maximum of 1863, namely, 173.84 at Seathwaite, is supported by 173 inches at Drishaig, by Dalmally, and by six other stations, with an annual fall between 100 and 150 inches.

September 19.—In Section D (Zoology and Botany), Dr. Daubeny read a paper on the "Decay of Species, and the Natural Provisions for extending their Duration," printed at length in pp. 963 and 987.

On the same day in Section E (Geography), Mr. R. Spruce read a paper on the "Physical Geography of the Peruvian Coast Valleys of Chira and Piura, and the adjacent Deserts." He gave an elaborate description of the soil and climate of those districts of northern Peru in which the different Peruvian varieties of the species of Cotton-tree named Gossypium barbadense, are so successfully cultivated. The memoir will be published by the Indian Government for distribution amongst the planters in India, where these varieties of the Cotton-plant were introduced by Mr. Clements Markham. The districts described are remarkable for the absence of rain, the only humid and fertile districts being the valleys of the numerous short streams which flow from the Andes to the Pacific. Seasons of heavy rain, nevertheless, occurred at long intervals, in some cases of 17 years.—Commodore Maury, in explaining the probable cause of the remarkable dryness and exceptional rains of northern Peru, described the equatorial cloud-belt of the earth, and said that it was a proof of the sharp limitation of this belt that at Guayaquil (which was covered by it) there was a humid climate, whilst at Piura, only 120 miles further south, but outside the belt, not a drop of rain fell for 17 years. The cloud-belt was suspended over that narrow zone which lay between the termini of the northern and southern trade winds, and he attributed the occasional rainy seasons at Piura to exceptional variations in these termini which caused the ordinary annual oscillation of the cloud-belt to extend a little further to the south than was usually the case.

Notices of Books.

Ootheca Wolleyana: an Illustrated Catalogue of a Collection of Birds' Eggs formed by the late John Wolley, F.Z.S. Edited by A. Newton, M.A., F.L.S. Pp. 160, 4to, 1864. London: Van Voorst.

The late Mr. Wolley was an enthusiast in the pursuit of Natural History. He died at the early age of 36, having left his egg-cabinet, with a note-book of its contents, to his friend and fellow-traveller Mr. Newton. These notes Mr. N. is now publishing, with descriptions and chromo-lithograph plates of the eggs; to which, in accordance with the supposed wishes of his friend, he has added the description of some others not originally in Mr. W.'s collection.

The notes give a history of each egg in the collection, whence it was obtained, and when. These little accounts are written in a pleasant lively style, and are well worth perusing for the daring feats of climbing by which alone, oftentimes, the precious eggs could be reached, and as this birds-nesting was not confined to the British Isles, a certain amount of foreign travel comes in.

In harrying the nests of the golden eagle (Aquila Chrysaëtus) in Sutherlandshire, Mr. Wolley gives a graphic description of the dangers which he encountered. There was a very high cliff overhanging a large loch. The nest was some little way down, and the adventurous gentleman was lowered by ropes over the edge of the precipice. The edge was very sharp, being a kind of mica-schist, which greatly increased the danger. But the exultation he felt at seeing the eggs and bagging them, is something charming to read of. For ourselves we had rather read his account than follow his example.

In taking some eggs of the osprey (Pandion Haliætus), the rock in which the nest was placed could only be reached by swimming, but, numbed with cold as he was, the enthusiast ventured. He writes: "I reached the peak. It was nearly perpendicular both above and below water, and no landing-place appeared. However, a bit of rock, twice as big as a walnut, projected; and higher up I stuck my claws into some roots of Polypodium, as in getting to an eagle's nest on a former occasion. My arms had hardly strength to hoist me up; but at last I reached the top and caught the cutting wind. At once I saw an egg, and in half a second two more, a little removed from the first—all beautiful. I tried to descend with my back to the rock, but it was no go, and I fell into the water. The peak might be 12 or 14 feet high. In tumbling off I did not strike against any sunken rock, so that my fall was easy. As soon as the men saw me fall into the water, they hauled hard upon the string; and I, coming across a sunken rock, disappeared beneath the surface. This frightened them, and they hauled the harder. As soon as I came to the top, I had just breath enough to shout 'Gently,' but on they dragged." He reached the shore quite exhausted, scratched, and bloody from the rocks, and almost perished with the cold. Such was the character of the egg-collector. He was not to be deterred by

trifles, and succeeded in forming a fine collection of birds' eggs.

Part I. of this work contains the *Accipitres;* another volume, containing the *Clamatores*, is promised in December. The part before us contains 9 fine chromo-lithographed plates of birds' eggs, and about as many more plates of the scenes of some of these adventures in the cause.

The Reptiles of British India. By Albert C. L. G. Günther, M.D., Ph.D., &c. Published for the Ray Society. Pp. 444. Imp. 4to. 1864. Robert Hardwicke, 192, Piccadilly.

This very beautiful work contains the descriptions of above 500 species of reptiles, not however altogether confined to the limits of British India, for it includes what is known of the reptiles of Affghanistan, Tibet, and Northern China. First Dr. Günther describes about 45 of the Chelonia; next the Saurians, which are far more numerous, extending to nearly 150. Then come the Ophidians, a still larger order; and finally about 52 Batrachians. The letter-press is clearly arranged and beautifully printed, and there are six-and-twenty superb lithographic plates of Mr. C. H. Ford's, executed to perfection by West. Altogether this volume is worthy of the learned and very useful Society by whose means it has been brought out.

Lord Oakburn's Daughters. By Mrs. Henry Wood, Author of "East Lynne," &c. London: Bradbury & Evans.

To all who are not satiated with what are called sensation novels, this book will be quite a treat. The story is charmingly told, and the three volumes are devoured and digested before you are aware that you are half way through them. The great secret of their intense interest is the skilful manner in which several of the personages are wrapped up in the most profound mystery. The hero, for example, never suspects his second wife to be sister to his first, until many years after marriage. The culprit who makes away with the first wife, is never found out or suspected till quite the end of the story. The ghost has every appearance of being an apparition, and keeps up the character well. Events happen so suddenly that you are quite breathless with surprise, and by the time you have recovered your equanimity, you are as much puzzled as ever to know what is coming next. To unromantic readers it seems strange that people should be so obtuse or so blind as never to put two and two together for themselves; but as stranger things are said to happen in real life than ever are dreamt of in fiction, we feel bound to believe that the persons in the novel were as unsuspecting as they are represented to have been.

Catalogues Received.—*Van Houtte's Catalogue des Plantes de Serres: Prix-courant* 104, is a very extensive and carefully compiled list of stove and greenhouse plants, Ferns, Gesnerworts, Orchids, Palms, Azaleas, Camellias, &c. M. Van Houtte, whose list of Camellias bears evidence of care in its compilation, gives Valle Vareda as the correct name of the fine variety grown generally as Valtevareda.—*Prix-courant pour* 1864-5 *des Plantes de Serre, et de Plein Air, d'Auguste Van Geert*, à Gand, is another ample general list, comprising amongst many other matters choice collections of Cacti, Camellias, Conifers, and Rhododendrons. Handsome stems of Alsophila excelsa, from four to ten feet high, are offered.—*Catalogue Général des Arbres à Fruits, &c., disponible dans l'établissement horticole d'Auguste-Napoléon Baumann*, à Bollwiller, is a descriptive catalogue of an extensive collection of fruit trees, accompanied by lists of hardy trees, shrubs, and herbaceous plants, and briefer ones of stove and greenhouse plants and Ferns.—*Paul & Son's Rose Catalogue for* 1864-5 comprises a select list of the more approved varieties, arranged under their respective groups. We notice a division of the class of Hybrid Perpetuals, which has some advantages, namely, the placing in distinct sections of varieties suitable for exhibition, and varieties suitable for garden decoration, but it has the defect of not indicating the best garden Roses amongst the former, while a third section, consisting wholly of the newest sorts, though perhaps necessary for want of information respecting them, will render the search for any particular Rose all the more tedious. We incline to think one continuous alphabetical arrangement would, however, be the most convenient of all, not only in the case of Roses, but perhaps of other things, the information now given by means of classification generally admitting of being readily supplied in other forms.——*Rose Catalogue for* 1864-5; *also Descriptive Catalogue of Hardy Ornamental Trees and Shrubs, by William Paul*, Waltham Cross. The first is a very full descriptive list of Roses; and the second an annotated list of a large collection of ornamental trees and shrubs, arranged under the divisions of Evergreens, Conifers and Taxads, Deciduous trees and shrubs, American plants, and Climbing and Twining plants. Both are very carefully prepared, and should be consulted by those who are about to carry out any planting operations.

Garden Memoranda.

"Coombe Abbey (Cwim or Combe, a low or hollow place), near Coventry, Earl Craven, a noble mansion, in part by Inigo Jones, in a park of 500 acres, well varied by wood and water." Such is the graphic description given by Loudon of this place in the Encyclopædia of Gardening, p. 1239, and from what we may judge of the state of it a few years ago, it was better to leave it thus than to describe it more minutely. Thanks however to the refined taste of its noble proprietor, the gardens of Coombe Abbey are fast rising into notoriety, and will fitly take their place amongst first-class establishments of the kind in this country. The old and dilapidated garden walls and houses are swept away, and new walls and handsome and substantial houses have taken their place. A new residence has been built for the gardener, and new fruit-rooms, Mushroom-house, and young gardeners' rooms, potting sheds, &c., have been erected in a substantial manner at the north end of the kitchen garden; in fact, every part of this destined to be fine place, is undergoing thorough revision.

The kitchen garden is almost close to the Abbey; hence the necessity of making it ornamental as well as useful. A walk 12 ft. wide leads from the Abbey through its centre, having the gardener's house for its termination. On either side of this walk are borders about 8 ft. wide, filled with flowering plants, and edged with the wild small-leaved Ivy from the woods. This Ivy is also employed for edging nearly all the walks in the kitchen garden; it is planted 6 inches wide, and is now, after two years' planting, so well established that it makes a very neat and ornamental bordering either for vegetables or flowers.

About half-way up this centre walk is a circular basin, 18 or 20 feet in diameter, furnished with five jets. The flower border is also carried around the basin, forming a happy combination when the water is playing, and at the same time affording a reservoir for the supply of the garden. There are two cross walks in the garden, and by the introduction of iron gates in the wall beautiful vistas are formed, running away a great distance into the park.

Midway between the fountain and the end of the garden a cross wall is introduced, leaving an opening in the centre 26 feet wide. Against this wall are placed two Peach houses, or Peach cases as they are denominated here, 75 ft. by 7 ft. The front glass is carried to the height of the wall, and the space covered with a flat span roof. An upright wire trellis, about 6 or 7 feet high, is placed against the front glass, and to this the trees are trained. The back wall is also planted with trees, and by this arrangement the front trees do not at all intercept the light from those planted at the back. Young trees were taken from the garden walls two years ago and planted in these houses where they have grown vigorously, and now almost cover the walls and trellises. These Peach houses form an excellent screen to the pits, Pine houses, &c., placed behind them, and keep up the ornamental appearance of the garden as seen from the end next the Abbey. At the back of this wall is placed a greenhouse 75 ft. by 18, also a stove and Fernery together, 75 ft. by 18; 35 feet being occupied by the Ferns, and the remainder by stove plants.

In the greenhouse are some nice specimens of Azaleas, and in the stove we noticed many good plants of Allamandas, Crotons, Begonias, Cyperus alternifolius, Dracænas, and a beautiful specimen of Hexacentris mysorensis, trained to an upright trellis about 5 feet high. In the Fernery an arrangement is made against the back wall upon a series of double arches for supporting two ornamental borders, into which Ferns are planted out of their pots, and are growing luxuriantly. Polypodium aureum, Pteris argyræa, and several others are in robust health; in front of these is a tank of heated water and a stage over it for setting Ferns on, an arrangement which amply supplies the peculiar wants of this interesting tribe of plants. The wall of the tank is finished with a hollow coping 9 inches diameter, which is filled with Lycopodium helveticum, a plan, judging from its effect, worthy of imitation.

Behind this are arranged on one side two houses 80 feet by 15, one for growing Cucumbers and Melons, the other for pot Vines, &c. The former is furnished with hot-water tank, and is well heated and ventilated.

On the S.E. side are two others, one 80 feet by 15, for growing succession Pines, the other 80 feet by 18, for a fruiting house; each of these four houses have a division in them. Queen, Providence, and Smooth Cayenne Pines are the principal kinds grown; they are all clean and in good health.

A noble range of glass 386 feet in length occupies a large portion of the wall facing S.S.E. This range has eight divisions, and is devoted entirely to the cultivation of Grapes and Peaches. The two centre houses are the widest, and are used as late Vineries—they are 50 feet by 18; two houses on either side of the centre are used as early Vineries, and are 45 feet by 15; two others for succession Vineries, 40 feet by 15; and the two outside houses are planted with Peach and Nectarine trees—these are each 50 feet by 12. The Vine and Peach trees were planted in June, 1862. The Peach trees were for the most part taken from the walls, and are now bearing good crops of fruit. The Vines are doing remarkably well, furnishing the rafters with bearing wood quite two-thirds of their length, and although they have been allowed to bear six or seven bunches of Grapes each this year, they are in good condition, and furnished with good fruiting wood for next season.

They are planted inside the house, the front of which being on arches permits the roots to pass partly outside. It is intended to make the outside border by instalments, only about 3 feet being at present made; this portion, being close to the house, is about 2 feet deep, and consists of good maiden loam, resting on about 9 in. of broken stones, which cannot fail to secure a good healthy root-action. All the most approved kinds of Grapes are planted here; the late houses contained such varieties as Lady Downes, Barbarossa, West's St. Peter's, Tokay, Muscats, &c. One Vine of the Barbarossa had six large bunches of Grapes, averaging pretty nearly 5 lbs. each, and tolerably well coloured. Between the late and early Vineries there is a break in the range on either side of about 8 feet, the houses being connected by a corridor. In these spaces two tanks are constructed, having a 4 in. pipe flow and return passing through them, thus keeping up a constant supply of hot water for the use of the houses; this is quite a novel arrangement, the value of which can scarcely be overrated. The tanks hold about 4000 gallons each.

Bordering the walks in the kitchen garden is a fine collection of Pear trees, trained for the most part in three flat tiers, resembling a round table with three tops—these tiers are about 1 foot 6 inches apart, the lower one being the largest in diameter and the top the smallest; they look well when bearing a good crop of fruit, as every fruit can be seen to advantage. Some Apple trees are trained in the same way. Several other methods of training are also adopted.

The garden slopes considerably to the south, and in order to keep the portion level where the houses are built, the lower part has been raised about 3 feet; steps are introduced in the central walk, the outside walks are carried up on an incline, and a Grass slope being made on their sides 3 feet deep at the top and running out to nothing at the bottom, a wide margin of Grass is carried all round the vegetable quarters in this division; this has a good effect in keeping up the ornamental character of the garden.

There is a large open space of ground on the south side of the garden outside the water, which is in course of formation; this is arranged so far in geometrical figures, and is intended to form a Rose garden, and probably a Rhododendron garden; and a large space is to be devoted to a miniature fruit garden. At the bottom nearest the Abbey is a croquet ground 300 feet by 90; beyond this a bank is raised and planted with shrubs to shut out the stables, &c. An outside walk 12 feet wide is carried round three sides of the garden, on two of which it is raised from 2 to 3 feet high, and forms a handsome terrace walk, with a wide margin of Grass on each side; a Grass walk 2 feet wide and 3 feet from the wall is also introduced here, and is a great improvement upon the principle generally adopted. Between this and the walk is a border about 10 feet wide, at the back of which is a row of standard Roses; the remainder is occupied with Geraniums, Verbenas, &c., as a ribbon border, and from its great length it is very effective. A part of the wall at the end of the garden, and facing the Abbey, is planted with choice hardy creepers, the centre being occupied by an ornamental screen designed by Mr. Nesfield. In front of this wall are arranged square beds of flowers. The whole of these arrangements, with the exception of the gardener's house, fruit rooms, &c., have been designed and carried out by Mr. William Miller, his lordship's gardener, and we think they cannot fail to be satisfactory both to the employer and employed.

The Abbey is undergoing thorough revision, and considerable additions are being made to it. A large serpentine lake in the park is being brought under the walls of the Abbey in the form of a moat on the north side, and extending some distance beyond the building. A handsome boat-house in connection with the Abbey is also in course of formation, and we understand that it is intended to form a beautiful terrace garden, extending up to the end of the moat, from plans to be furnished by Mr. Nesfield. Mr. Nesfield's son is the architect for the alterations and additions to the Abbey.

The park is extensive but flat; it contains much fine timber, and about 80 acres of water. Extensive drives are made through the woods, and others are in contemptation. In short, over the whole of the estate improvements are being made of such a character as cannot fail, and that at no distant date, to be attended with most beneficial results.

As some of the Scotch Firs here are beyond the ordinary size, it may be interesting to give the dimensions of a few. The measurements are taken at 3 feet from the ground:—No. 1, 12½ feet cir., height of bole 40 feet; 2, 12 feet cir., bole 40 feet; 3, 10 feet cir., bole 30 feet; 4, 10 feet cir., bole 30 feet; the heights of the trees are from 70 to 80 feet. These dimensions are superior to those quoted by Brown in his "Forester," (page 238), inasmuch as the measurements there stated were taken at only a foot from the ground, whereas the measurements just given are taken at 3 feet from the ground. These fine trees are growing partly in the park, and partly in the pleasure ground, and are not more than 60 yards distant from each other. *E.*

Miscellaneous.

Araucaria Bidwilli.—A cone of this Araucaria, measuring 26 inches in circumference, may now be seen in the window of Mr. Kennedy's new premises, Piazza, Covent Garden; also great slabs of rough bark of the Cork tree, which being light and durable will doubtless be found useful for indoor rock or other rustic work. Associated with Ferns and other ornamental plants may likewise be seen here green Australian Tree Frogs, Chameleons, and other interesting objects of Natural History.

Calendar of Operations.

(For the ensuing week.)

THE general impression amongst practical men is that autumn planting is superior to that of the spring. We are decidedly of this opinion; and we would advise those who intend making new orchards, removing large fruit trees, or replacing decayed young ones, to commence operations of a preparatory character immediately. Such preparations should consist, in the first place, of a necessary provision of fresh and sound loam; and if this can be obtained with some rough turf in it so much the better; if not, it will be well to mix rough stable litter, straw, or any other coarse material with the loam when filling into the holes. The loam being provided and thrown into a high and sharp ridge, in order to throw off rain, the next thing is to thoroughly drain, if not already done, the site intended for planting; without this all subsequent operations will end in disappointment. Perfect drainage being secured, stations may be formed by making a hard bottom of broken stone rubble, broken bricks, or other hard material, and the practice of some is to throw a coating of cinders on this hard surface, to prevent the soil from entering the porous material beneath. As to depth great moderation must be observed if the kinds are in any way tender, and designed for the dwarfing system. For such, 18 inches in depth of soil will be amply sufficient, and if the ground be of a moist character one-third of the amount of soil should rise above the ordinary ground level; indeed, in most cases, it is well to raise it considerably. We will say something about selection of kinds when the period of removal arrives; in the meantime, we would advise a trench to be thrown out without delay around very large trees intended for removal. This will check late growth, and induce a disposition in the roots to throw out new fibres or small rootlets.

FLOWER GARDEN AND PLANT HOUSES.

Dutch Bulbs should be largely cultivated where a fine display is required; and where hardy shrubs are forced for the decoration of the conservatory, they should now be got ready for the purpose.

AURICULAS.—See that frames in which these are to be wintered have a proper pitch, and that all the glass is sound, so that the plants may not be subjected to drip, which will infallibly ruin them. Free circulation of air should at all times be promoted. When properly managed few petted flowers are more hardy than the Auricula.

CARNATIONS AND PICOTEES.—In obtaining new varieties the best plan is to have them immediately; better plants can generally be got now than in spring, and they will have time to establish themselves before winter, which is highly necessary, if they are to be kept in a state of health till next spring.

HYACINTHS.—These should now be procured, potted, and placed in a cool dark place free from frost to make root. Out of doors will do, provided they are well covered over with cinder ashes or Cocoa-nut refuse. When well rooted they may be started into growth in heat as required.

PINKS AND PANSIES.—These, we presume, are already planted; some of the plants of both are occasionally "long in the leg," and such should be supported with small sticks, or they are apt to be broken over by wind.

TULIPS.—The time has now arrived when all Tulip beds ought to be properly arranged for planting, so that the bulbs may be got into the ground forthwith. Some means also should be adopted to shelter the bed or beds from heavy rain, as it is extremely prejudicial to the bulbs before they have begun to appear above ground; and in fact excess of moisture ought at all times to be avoided.

FORCING GARDEN.

CUCUMBERS.—Do not permit young plants to overbear themselves. It is much better to insure a constant moderate supply by judicious management, than to obtain overabundance at one time and nothing at another. Maintain a temperature of about 70°, and keep the atmosphere moist and agreeable for the growth of the plants.

PEACHES.—Let the house which it is proposed to force early be got ready at the first convenient opportunity. The surface of the borders, if exhausted by repeated waterings, should be carefully taken off with a fork, and replaced with fresh soil. Worn-out trees if any, may also now be replaced by bearing trees from open walls.

PINES.—If circumstances should render it necessary to subject a portion of the stock intended for fruiting to a brisk temperature at once to induce it to start, the most promising plants should be very carefully selected, and placed in a small house or pit by themselves; and, where anything like a regular supply of ripe fruit is required, several houses, or separately heated compartments, should be at command. Indeed without this convenience no gardener can reasonably be blamed for having too many ripe at one time and none at others. It is not by any means desirable to start more plants into fruit at this early season than may be absolutely necessary, for they will produce finer fruit later in the season than can possibly be obtained from them now; and where a separate house cannot be commanded for those which must be subjected to a high temperature, we would advise that the plants selected for fruiting should be placed in the warmest part of the house at command, filling the rest of the compartment with young stock.

VINES.—Where early forcing is contemplated, the points of the shoots should be kept nearly on a level with the lowest part of the Vine, until the buds are fairly broken; and if this should not be found sufficient to induce the buds to start equally throughout the length of the Vine, the rods should be bent so as to bring the most forward buds to the lowest level, elevating those that are backward. Maintain a thoroughly moist atmosphere by frequently sprinkling the floor and passages, &c.; and syringe the Vines lightly at least twice a day until the leaves begin to appear, when the amount of moisture must be moderated.

HARDY FRUIT AND KITCHEN GARDEN.

Look over fruit and other stores frequently in order to see that all is safe and sound. Standard trees which have been root-pruned must be firmly secured against injury from winds; also get any root-pruning to be done this season executed as soon as possible.

ASPARAGUS.—Young plantations will probably still retain their freshness, in which case the tops ought not yet to be cut off. It is a common custom after the beds are cleaned to spread manure on the surface, and then to dig the alleys and cover the dung on the beds with part of the soil. This top-dressing of manure can only benefit the plant by the rain washing its nutritive particles down to the roots; it might therefore lie exposed all winter, and be forked in when the beds are dressed in spring. If the alleys are filled with roots they ought not to be dug out; a dressing of manure should be lightly turned in instead.

PARSLEY.—Endeavour as far as circumstances will permit to have a good supply of Parsley under safe protection; for there is generally a large demand for this, and in the event of a severe winter it is difficult to save it by the ordinary protection of hoops and mats.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Oct. 12, 1864, as observed at the Horticultural Gardens

October.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 6	5	30.180	30.101	61	30	45.5	54	56	N.E.	.00
Friday 7	6	30.2 6	30.177	63	27	45.0	54	55½	S.W.	.00
Satur. 8	)	30.188	30.142	61	44	52.5	54	55½	N.E.	.00
Sunday 9	8	30.142	30.130	57	42	49.5	54	55	N.E.	.03
Mon. 10	9	30.288	30.173	58	42	50.0	54	55	E.	.00
Tues. 11	10	30.308	30.147	60	45	52.5	55	55½	E.	.00
Wed. 12	11	30.239	30.068	62	41	51.5	55	55	N.W.	.00
Average.		30.218	30.134	60.3	38.7	49.5	54.3	55.3		.00

Oct. 6—Slight fog; cloudless; slight dry haze, frost at night.
— 7—Clear; fine throughout; sharp frost at night.
— 8—Fine, with slight haze; overcast; mild.
— 9—Overcast throughout; rain at night.
— 10—Fine; overcast, fine throughout.
— 11—Fine; very fine; overcast at night.
— 12—Overcast; fine with dry air; fine at night.
Mean temperature of the week 3 deg. below the average.

STATE OF THE WEATHER AT CHISWICK

During the last 38 years, for the ensuing Week, ending Oct. 22, 1864.

October.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E	S.	S.W.	W.	N.W.
Sunday 16 .	58 8	40.2	49.5	17	0.56 in.	—	6	5	1	5	9	8	4
Mon. 17..	58.4	41.0	49.7	16	0.31	—	5	5	—	2	11	10	5
Tues. 18..	58.1	41.3	49.7	18	0.85	3	3	4	1	3	7	14	3
Wed. 19..	59.7	40 2	49.9	19	0.61	2	3	6	3	2	9	9	4
Thurs. 20..	59.2	40.2	49.7	16	0.34	—	6	1	3	6	9	10	3
Friday 21..	58.4	39.8	49.1	16	0.64	2	7	3	4	5	9	5	2
Satur. 22..	59.0	42 9	50.4	21	0.93	2	1	4	1	10	11	5	4

The highest temperature during the above period occurred on the 21st, 1831—therm. 73 deg.; and the lowest on the 21st, 1842—therm. 20 deg.

Notices to Correspondents.

BEET ROOT: *J W.* We do not know any variety of Beet root called Spanish, but the White or Sicilian Beet grows on the coasts of Spain. Do you mean the Spanish Radish?

BOOKS: *J Chaffin.* Thomson on the Vine.—*Lady S.* The Octavo Nature-printed British Ferns, if you want figures and a book for home reference; but if a more portable manual, then Moore's Handbook will suit you.—*W B R.* The Elements of Botany can be ordered through any bookseller.—*J R.* Hogg's Fruit Manual, latest edition. The other book you mention we cannot recommend.

CENSORS AT EXHIBITIONS: *Nestroque.* Very much depends upon the rules of the Society. The best rule undoubtedly is that the decision of the Judges should be final; and we may add, that no Judge is fit for the office, who at the bidding of President or Committee, or any other official or officious person or persons, would consent to bend his own honest and carefully formed opinion to theirs. We cannot appreciate all the circumstances of your case from the few brief sentences in which you describe them, and therefore we cannot give an opinion which you would be justified in acting upon. But we think that in common fairness, if a mistake is discovered, (and you use this word mistake), it is competent for the managers to request the judges to reexamine any particular exhibitions, and competent for the judges to amend an erroneous award, before the exhibition closes. Something of the kind indeed occasionally happens at the great London shows; for there are generally disappointed exhibitors who think mistakes have been made, and who urge reconsideration; but it is always the wiser course for all concerned to acquiesce quietly in the decision of the judges, unless it is obvious that some important point has been overlooked. Even then the aggrieved person should prefer a respectful request that the matter may be reconsidered, to the officials, not to the judges, instead of indulging in the indecorous bluster with which losing exhibitors sometimes set forth their grievances. As to the 'power' of bringing back the judges, and the 'right' of reconsidering an award, we must declare them to exist by custom; but the less frequently they are called into exercise either by officials or exhibitors the better. There is very seldom any real ground for disturbing the first award.

FUNGI: *W M.* Your Fungus on Reed is not the one which gives the reed cutters the headache. It is a very dusty Fungus, belonging to the genus Ustilago.—*W W.* Your Fungus is Puccinia Pruni. We shall probably advert to the case shortly. *M. J. B.*

GLAZING: *Reader.* A quarter of an inch lap will be quite sufficient.

HAWTHORN: *H. Saxby.* Haws are buried in heaps for 12 months as a saving of ground, because they do not vegetate till the second year, or at least only a few of them, and not a general crop. To macerate them in water for three months and afterwards to bury them for two months would not therefore, so far as our experience goes, answer the same purpose.

HOT-WATER BOILER: *W W.* For a tank of the size you describe, the coil of Perkins' steam pipe which you have on hand will be quite sufficient to keep the water up to 70°.

INSECTS: *G E F.* Ratzeburg Forstinsecten, 2, p. 88, says little about the destruction of the Goat Moth. Kollar suggests thrusting a piece of wire up the holes in the trees to kill the larvæ; tobacco smoke blown into their holes is very offensive to them, and compels them to creep out, and the trunks of the trees should be searched in June and July for the perfect moths, which should be carefully destroyed.—*A B.* The Larch twigs are attacked by Chermes (Adelges) Laricis, which the past dry summer has allowed to propagate to a great extent. Its habits are like those of Aphis, and we can scarcely suggest any remedy to be applied in an extensive way. —*H T.* There seems no predisposing cause in the circumstances you mention why the particular Elm trees should have become diseased previous to the attacks of the Scolytus, which we therefore regard as the originators of the mischief. We would recommend, 1st, that pieces of the injured bark where most infected by the larvæ should be peeled off and burnt; and 2d, that a careful watch should be kept in the ensuing summer when the Scolytus is developed as a beetle, and the trunks of the adjacent sound trees might then be smeared with some sticky substance which would catch and retain such of the newly hatched Scolyti as might fly to the sound trees. —*T S P.* The moth of which you have sent drawings of the different states is Euplexia lucipara. The drawing of the larva hardly represents the extremity of the body sufficiently angulated. *W.*

IVY: *R S.* The Silver-variegated Ivy, of which you sent leaves, agrees most nearly with that which is met with in trade collections under the name of Hedera Helix marginata elegantissima.

MANURING VEGETABLE GARDEN: *Inquirer.* For your shallow soil on a subsoil of gravel, on which you fail to get crops of Cauliflower and Onions, notwithstanding the free use of stable manure, you will find a good dressing of heavy compost of a marly or loamy texture better than manure. This should be well worked into the soil by forking, a little of the subsoil, if possible, being gradually brought up. Continue adding material of this sort till you get a suitable depth of good earth, and you will then find your stable manure tell upon the crops. Of course with a gravelly subsoil you may have to water freely in certain summers, especially in such as we have just experienced. In the meantime you may find benefit from the use of some guano, applied as a top dressing to the crops while growing.

NAMES OF FRUITS: *Anon.* Marked with figures, double lined. 1, Duchesse d'Angoulême; 2, Urbaniste; 3, Doyenne Blanc; 4, Beurré Diel; 5, Nouveau Poiteau; 6, Passe Colmar.—*Cheshire.* 1, Blenheim Pippin; 3, Court Pendu Plat; 1, 4, Blenheim Pippin; 5, Dumelow's Seedling.—*Hatfield.* Pears: 1, Thompson's; 2, Winter Nelis; Apple: 1, Downton.—*A V.* 1, Gooseberry Pippin, fruit of crop 1863, and ditto of 1864; the striped Apple is the Gravenstein, the other appears to be the Bedfordshire Foundling, highly coloured.—*A B.* 1, Alfriston; 2, Sam Young; 3, Northern Greening; 4, 5, Blenheim Pippin; 7, Wormsley Pippin; 8, Ribston Pippin.—*C Smith.* 1, Dutch Mignonne; 2, Bedfordshire Foundling; 3, Leadington. The rest appear to be worthless local Apples, not known.—*T Crepps.* 1, Kirke's Golden Pippin; 2, Yellow Ingestrie, as is also that marked Downton; and that marked Kirke's Golden Pippin is the Old Golden Pippin. —*M M.* 1, Duchesse d'Angoulême; 2, 12, Beurré Diel; 3, Beurré de Capiaumont; 4 (decayed); 5, Beurré d'Aremberg; 7, Marie Louise; 10, Easter Beurré; 13, Ne plus Meuris.—*R C.* 2, Lincolnshire Holland Pippin; 3, Fearn's Pippin; 4, Sturmer Pippin; 6, Reinette du Canada.—*J F.* (Quite decayed.)‖

NAMES OF PLANTS: *E G W.* 1, Athyrium Filix-fœmina; 2, Apargia autumnalis; 3, Eriophorum angustifolium; 4, Cnicus pratensis.—*H S.* 1 and 3, Lastrea spinulosa; 4, L. dilatata; 2, is too imperfect, but is probably dilatata.—*C B.* Clethra alnifolia.—*W D P.* Cupressus Lawsoniana, and Cratægus Aronia.—*Old Subscriber.* The specimens are insufficient. One of them may be Pyrus torminalis; the other is quite unexaminable.—*J H M.* Rhodanthe Manglesii.

PAMPAS GRASS: *W F.* We have not seen or heard of a Pampas Grass bearing plumes of red or mauve-coloured flowers, but the male plant, which has a more drooping panicle than the female, is of a pale dull purplish tint, and it is quite possible, as so many have been raised from seed, that some variation in colour may occur. Certainly no one with his eyes open could have mistaken for Pampas Grass the Tritoma Uvaria, with all deference to your opinion that when finely grown the latter does somewhat resemble it in foliage, and at a distance might have been taken for it.

ROSE CUTTINGS: *J F G.* Rose cuttings put down about 12 months since, and which are fairly rooted and have grown pretty well, may be transplanted now if they belong to the hardy races, and if the position is a favourable one, but if in a cold damp situation, they had better be left till spring. If they are tender Roses, they must be left till spring. Either way they would be the better for a little mulching.

SNAILS: *D.* Next week.

WINTERING CLIMBERS: *Inquirer.* You may perhaps keep Eccremocarpus which has been growing out during summer, alive, by covering the root well up with coal ashes or Cocoa refuse, especially if it is against a wall; but Cobœa will be hardly likely to survive. Both should be wintered in a greenhouse. They may, however, be readily reared from seed, in heat, early in the year; and will make good flowering plants if pushed on vigorously.

WIRE-WORM: *Reader.* The best remedies we know of are hand-picking and spirits of tar; the former being assiduously practised when the ground is turned over, and the latter applied to the surface in the proportion of a gallon to every 60 square yards before the ground is dug or trenched. A top-dressing in spring either of salt or soot will both benefit the crops and destroy the slugs. Or you may give the ground a dressing of gas-lime, or of soda-ash at the rate of 2 cwt. to the acre before trenching.

Manures and Feeding Stuffs.

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Address, 89, Seed Market, Mark Lane; or Basingstoke.
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THE LONDON MANURE COMPANY have now ready in fine condition—
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LAWES'S WHEAT MANURE for AUTUMN SOWING.—A supply of the above Manure is now ready for delivery, at J. B. LAWES' Factories, Deptford, and Barking Creeks. Price 8*l.* per ton.
2 to 3 cwt. per acre to be harrowed into the land before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents; also
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Genuine Peruvian Guano direct from the Importers, and all Chemical Manures of value.
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This Manure, specially prepared for AUTUMN SOWING, has been in use for upwards of 12 years, and has given great satisfaction to consumers. Orders may be sent to the Company's Agents throughout the country, or direct to C. T. MACADAM, Secretary.
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COCOA-NUT REFUSE delivered within 2½ miles of Charing Cross, at 2*s.* per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.

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TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.
The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
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Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

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MR. BAILEY DENTON, C.E., maintains a large Staff for the Execution of Land Improvements by a commission of 5*s.* per acre for Under Drainage, and a fixed charge for Outfall and other works.
For particulars, apply to him, at 52, Parliament Street, Westminster.

Relief to Landowners.

MR. HOWARD REED, Author of the Pamphlet "Land: its Registration and Transfer," price 1*s.* (E. WILSON, 11, Royal Exchange, E.C.), is prepared to give ADVICE to LANDOWNERS wishing to avail themselves of the Land Registration Acts, and to conduct all proceedings necessary for obtaining an indefeasible title. Preliminary opinions given on abstract of Title, and terms stated beforehand. Communications personally or by letter.
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Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
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TERMS MUTUALLY ADVANTAGEOUS TO LANDLORDS AND TENANTS.
Lands Drained and improved without any expense whatever to the Owners, a small increased Rent paid by the Tenants being sufficient to meet the only payment which Landlords are required to make, viz., merely the interest of from four to five per cent. on the loan, this Company's Act not requiring them to pay off the principal; all expenses may be a permanent charge on the property, or made redeemable at any time, or liquidated over any term of years.
Tenants for Life and Mortgagors can likewise Drain and Improve their Estates without any expense to themselves.
The Works are undertaken by the Company, who keep in constant employ a very extensive and experienced staff of Engineers, Surveyors, and Workmen; or Proprietors may avail themselves of the powers of the Act only, and get the Works executed under their own superintendence, or by Agents appointed by themselves.
Outfalls through adjoining lands are obtainable under the Company's Act.
Works are also executed by the Company for parties advancing their own Capital or not wishing to borrow the money.
FREDERICK BRODIE, Secretary, Castle Street, Exeter.
Offices: Castle Street, Exeter; 30, Parliament Street, London.

THE NATIONAL EXHIBITION of SPORTING and OTHER DOGS.
President—His Grace The DUKE of BEAUFORT.
Vice-President—The MAYOR of BIRMINGHAM.
The FIFTH GREAT ANNUAL EXHIBITION of SPORTING and other DOGS will be held at BIRMINGHAM, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, and 30, and December 1.
Copies of the Prize Lists and Regulations, with the statement of Receipts and Expenditure for 1863, may be obtained from the Secretary. The ENTRIES CLOSE on NOVEMBER 1.
GEORGE BEECH, Secretary.
Offices: Rectory Chambers, Temple Row, Birmingham.

THE BIRMINGHAM CATTLE and POULTRY SHOW, 1864.
The SIXTEENTH GREAT ANNUAL EXHIBITION of FAT CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, CORN, ROOTS, and IMPLEMENTS, will be held in BINGLEY HALL, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, 30, and December 1, when Prizes to the amount of £1995 will be awarded in the following Divisions, viz.:—

FAT CATTLE ..	£794 10	BREEDING PIGS ..	£76 10
FAT SHEEP.. ..	299 5	CORN and ROOTS ..	71 8
FAT PIGS	60 5	POULTRY and PIGEONS	693 0

Prize Lists, Certificates of Entry, and every information may be obtained from the Secretary.
The ENTRIES CLOSE on TUESDAY, November 1.
JOHN B. LYTHALL, Secretary.
Offices: 13, Temple Street, Birmingham.

SMITHFIELD CLUB FAT CATTLE SHOW.—The ANNUAL SHOW of FAT CATTLE, SHEEP, and PIGS, will be held at the AGRICULTURAL HALL, ISLINGTON, on MONDAY afternoon, December 5, and four following days.
Intending Exhibitors are requested to apply for Certificate forms by the reference letters as under:—

CATTLE.	Form A.	For an Ox or Steer (in any Class).
	" B.	For a Cow or Heifer (in any Class).
	" C.	For a Beast in Extra Stock.
SHEEP.	" D.	For a Pen of three Wethers (in any Class).
	" E.	For a single sheep in Extra Stock.
PIGS.	" F.	For a Pen of three Pigs (in any Class).
	" G.	For a single Pig in Extra Stock.

ENTRIES for LIVE STOCK CLOSE NOVEMBER 1.
Prize Lists, Forms of Certificates, and all information may be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, Corner of Half-Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words "Smithfield Club."

The Agricultural Gazette.
SATURDAY, OCTOBER 15, 1864.

—— A CORRESPONDENT has 16 acres of coarse neglected ground near his house, which he is desirous of reclaiming to good pasture. About one quarter of it is covered with Briars, Thorns, and Gorse, and this of course he will grub up. Of the remainder a specimen turf has been sent to us; it is full of Moss, the Grass is coarse, and many weeds abound. This he would pare and burn, but that there is not sufficient "staple." It appears to be a light and poor sandy soil, and his idea is that it should be limed and thereafter ploughed in before winter, manured in early spring, and sown with Grass seeds—possibly with the addition of Rape, "which would afford good keep for sheep during summer, while it protected and nourished the Grass seeds." The subsoil is a gravelly loam, varying in quality; and on some portions, where the ground has been used as Grass drives, there is a good and healthy sward; and it is believed that the condition of the remainder arises chiefly from long neglect, it having been allowed to run into a wild state in order to form a covert for game.

It seems to us that this last piece of intelligence gives a very trustworthy clue to the most economical method of improving this land.

The immediate result of neglect must of course be at once removed; the Gorse and Briars must be grubbed up and burned; but for the rest we would rely rather upon the treatment than upon the destruction of the existing surface. Nothing is more amenable to treatment than our pastures; the very neglect which they suffer shows it. The invariable contrast of the home paddock around the farmyard with the Grass fields at a distance from the dung-heap, is a proof of it. And our Correspondent's Grass drives amidst the wilderness of coarse and mossy pasture should be conclusive against his plan of breaking up the land and resowing it. Again, in its present poverty-stricken condition, we would not recommend liming as a first expedient, and when lime is added at all it should be in the form of compost with some vegetable material.

The proper treatment we believe to be to drain the land if necessary; to use the grubbing axe and hoe for the removal of Gorse and Thorn and coarse tussacks of Grass; to apply some 10 or 12 bushels of fine and rotten bone-dust per acre, if in previous compost with earth or ashes so much the better; to harrow the whole surface thoroughly and remove all Moss and rubbish—and to do all this before winter.

In early spring some ammoniacal manure should be applied, either gas-water in abundance, or sulphate of ammonia about 1½ cwt. per acre; or probably nitrate of soda, 1 cwt. per acre, might be usefully applied. If a dressing of good rich farmyard dung can be had, this would no doubt be better still. And in March a suitable mixture of Grass seeds should be sown, especially over the broken parts of the surface, and bush-harrowed and well rolled in. The land should be fed closely all the summer. And before next winter, or perhaps in the following year, a lime compost containing 50 or 60 bushels of lime per acre should be spread over the ground and harrowed in. A dressing of lime before some degree of enrichment of so poor a soil has been effected would not be desirable. Every opportunity should be taken by heavily stocking if necessary, feeding and foddering stock upon it, and by rolling to firm the surface of the ground. And if the lime could be applied in the form of a clay marl it would tend to the improvement of the land, by giving that firmer texture to the soil which pressure alone cannot confer.

—— Mr. SMITH, of Woolstone, has appeared in the *Times* with a very effective reply to Colonel FANE's criticisms on steam cultivation The latter imagines it to be excessively laborious and expensive, necessarily resulting in great costs for breakages and tear and wear. Mr. SMITH knows that in his own case it is both cheap and effective. And he ought to know. He has cultivated his farm now for 10 successive years by steam power. His cultivating tools have not been broken, and the wear is confined to the share points which have needed renewing. His original iron wire rope has indeed disappeared, but the steel rope costing 45*l.*, bought three years ago, is still in use. The four-wheeled windlass too bought in 1858, is still available. The coals consumed are five tons annually, the wages paid are not more now than they used to be when horses were employed, and of these his present number, for which he has little more than half work, is three fewer than it was. His apparatus is employed only 13 days in the year. His land was never better cultivated and never more productive. Although Mr. SMITH's farm is but a little one, it is in effect two or three of ordinary cultivation, one over the other.

"Colonel FANE," says Mr. SMITH, "would do well to practise before he condemns, and he would do well to reflect over the four-inch-deep work that is generally practised over the country. and compare it with the foot in depth that I get by steam-power."

Mr. SMITH is, both by practice and by precept, one of our most efficient leaders in connection with this subject; and his present letter is a capital shot into that *vis inertiæ* by which it is still so generally opposed.

WE again give prominence to Mr. BLUNDELL'S account of his CATTLE MELON, of which we shall also be glad to receive reports from other correspondents. In a season when roots have been destroyed by grub, it is satisfactory to find a plant capable of yielding such useful produce, which seems to be safe from such attacks. And in a season when all late-sown green crops have prove l

in the Southern Counties an utter failure, it is extremely satisfactory to hear of one which has maintained its usual productiveness.

Mr. BLUNDELL, writing from Bursledon, near Southampton, states the result of this year's cultivation of the Cattle Melon as follows:—

"Another year's experience in the cultivation of this valuable green crop has given me more confidence in recommending it to the notice of the agricultural community, not only as a crop capable of yielding a large amount of food for cattle, but as coming in use at the time of year when the old store of Mangel is usually exhausted, and before the new crop is fit for feeding, and also previous to the period of the different sorts of Swedes and Turnips being ripe for use, at the same time being available at the usual period of the greatest scarcity of Grass, viz., August, September, and October. The present season is an instance in which the Cattle Melon has proved invaluable. In my own case, having a good number of fatting and store cattle of different ages under cover, had it not been for the supply of this fruit, I must have sold the animals at a great sacrifice, or entered into enormous expenses to have kept them in condition entirely upon artificial and dry food; my store of old Mangel was finished on the 1st of September, since which time I have cut daily such of the Melons and Marrows as were not likely to ripen their seed, and cut them with GARDNER'S cutter, mixing with cake in the same manner as for feeding with Mangel, and I certainly never saw cattle do better with so limited a supply of succulent food.

"The stage at which the fruit are best for feeding I think is about the time the seed begins to form, say about two-thirds of the size attained when ripe. In order to ascertain the best varieties for cattle feeding, and for yielding the largest acreable production, I have been induced during the past season to get all the sorts I possibly could of Melons and Marrows, and the result of the growth of so many kinds has been not only very interesting, but has gone far to satisfy me that the Melons and Marrows have each a separate value for agricultural purposes; some sorts of Marrows have grown like a shrub, and produced from eight to 10 fruit, weighing 2 lbs. each and upwards, and this within a space of 2 ft. each way, certainly not more space than is required for a forward Turnip plant. Some others of the same habit of growth give fruit of an elongated shape, and grow to considerable size, producing from three to five fruits each, weighing on the average about 6 lb., within the before-named space of two feet; other kinds of Marrows require much room for the bine, similar to the Melons.

"The whole of the Marrows, however, are very valuable for feeding purposes, and come quicker to maturity, and are fit for use a month earlier than the Melons. I particularly noticed a variety of the Marrow producing good sized fruits, say 8 to 10 lb. each, and having no sign of seed forming, as solid as a Swede or Mangel, and as heavy, bulk for bulk, being also very sweet to the taste. I have seen no new feature in the growth of the Melons different from my last year's description of them. As, however, they take a good deal of room, I this year planted three rows of Mangel between each row of Melons, and this plan, without injuring the growth of the Mangel, gives room for the bine to spread, so necessary to their successful growth; in another field I planted two rows of Potatos between the Melons and Marrows. In both fields the seed came up unevenly owing to the dry weather, some making their appearance eight weeks after planting. I am therefore of opinion that they should be planted at the end of the month of April, in order to secure moisture sufficient to insure the vegetation of the seed. It is worthy of notice that the plants which did come passed through the ordeal of the dry summer admirably. Whilst the Mangel and Potatos between the rows of Melons and Marrows were almost destroyed by the grub, this insect however never attacked the Melon plants at all; but when the plants had nearly attained their full foliage, the leaves were attacked by the black aphis, which seemed to check them considerably, but after the rains of the 23rd of August they recovered greatly, threw out more foliage and produced fruit abundantly, although too late for seeding, yet well adapted for present feeding. On clearing some of my Marrows to-day I weighed a portion, forty fruits weighing 560 lbs. to the pole, being 40 tons to the acre, and being exactly the same weight per rod as thirty-seven fruits of the Melons of last year's growth."

Mr. BLUNDELL adds, that although the drought during the past season has diminished the crop, and also made the produce available at a later period, yet it has not suffered at all in proportion with the other root crops. It has, however, delayed the ripening of the fruit, and he will in consequence have much less seed to spare, and is much disappointed in this matter, as he had hoped to supply a large demand, so many last year having been unable to obtain seed, and having expressed a wish to be supplied by his growth of the following season.

SHORT-HORN CORRESPONDENCE.

(*Continued from* p. 972.)

[Among the letters and papers left by Mr. Cottrell, of Congresbury, and kindly placed at our disposal by Mr. Bowly, of Siddington, are copies of a voluminous correspondence, much of which appeared in the columns of Agricultural Journals upwards of 40 years ago. We make the following extracts:—]

11. *Rev. H. Berry on the Kyloe Cross.*

"Worcestershire, April 13, 1822.

"The ability with which Mr. Rooke writes, entitles him to the thanks of the public, who may benefit by his researches, and I doubt not that with equal liberality he will regard my dissent from some of his opinions.

"If, as he assumes, the Kyloe cross was ever introduced into the Ketton and Barmpton stocks, I think a moment's consideration must convince any person acquainted with them that such cross could not be frequent.

"If it had been so, we should have heard of calves bearing the Kyloe colour, and should have observed, as indicative of each additional cross, an increase of horn. But the contrary has been and is still the case. I believe it remains yet to be known that either a black or dun calf has ever been produced from any individuals of those celebrated stocks, and there is a remarkable smallness of horn observable in them all when compared with Mr. Colling's originals, and indeed with the generality of their congeners. Add to these considerations the fact that the improved Short-horns have not lost weight, a consequence, on Mr. Rooke's own showing, inevitable if the Kyloe cross were persevered in, and I think we are justified in pronouncing his opinion erroneous.

"How then has the beautiful and uniform colour of this breed been preserved, and from what cause arises rather a diminution of horn? Surely if by a cross, not by that with the diminutive black or dun Kyloe, but by some other of which we are yet uninformed.

"It has been stated that the mossy coat and soft touch of the Short-horns are derived from the Kyloe, and if I recollect Major Rudd's opinion on the subject, he thinks they could be obtained by no other means. It is unfortunate that these gentlemen should so invariably place their criterion of excellence near home. Had the worthy Major extended his research, he would have found other breeds boasting these qualifications in an equal degree. I will, however, only instance the improved Herefords, inferior in quality of flesh and coat to no cattle in the kingdom.

"Thus then it is not absolutely necessary to trace all perfections to the Kyloes in the first instance, and the more general the knowledge of our different breeds becomes, the more apparent will be this truth, added also to a conviction that in the worst breeds good individuals exist, requiring only judicious selection soon to constitute a valuable and pure breed.—I am, sir, your obedient servant, "B."

12. *Mr. Rooke on the Kyloe Cross.*

"Akehead, April 25, 1822.

"Hubback's colour was a red inclined to yellow, and North Star's dam (a daughter of the bull called Punch) was called the Yellow Cow. These are not common colours among the pure bred Short-horns. Now, there are Kyloes of this very colour, with as fine muzzles and horns as any Short-horns, and equal in size to the Galloway cattle to which Lady was related. Indeed, my creed on the art of breeding horned cattle is very short—'Aim at size and Kyloe qualities; these can be obtained only by an intermixture of Kyloe blood, either directly or indirectly.' This creed is established upon ascertained facts. As an instance, not more than 100 years ago it is known that the breed of cattle in Galloway were horned and similar to the West Highlanders, and that the polled character was obtained by crossing them with hornless bulls from a breed of cattle still prevalent in Cumberland and chiefly purchased at Rosley Hill fair, a well-known resort of the Galloway farmers. This hornless breed have all the characters of the Long-horns, except being polled. But from the unskilful manner in which this cross was managed defects have been entailed upon the Galloway breed, which I think can only be remedied by a further cross.

"From the known course which has been followed it would be no way difficult to produce cattle with all the leading characters of the Galloway, without having a single animal of that sort to breed from, and free from their peculiar defects. Thus, were a few of the best West Highland bulls introduced into Cumberland, and crossed with the largest and best shaped of our polled cows, some of which have been crossed with the improved Short-horns and turned out very large and excellent, there cannot be a single doubt about the result, as many of these cows have remained polled, though crossed with Long-horned bulls for several generations back. No bulls of this polled sort are now kept, but only a few years ago I knew of a stock of 19 or 20 milk cows and a bull wholly of this description.

"Had your correspondent 'B.' ever seen Mr. Bates' Kyloe cross by improved Short-horn bulls, formerly kept at Halton Castle, in Northumberland, he might have felt convinced that by breeding wholly back again to one side, the original characters of that side may be preserved, and I think a body of facts is laid before the public sufficient to warrant a conclusion that our improvements of the larger sorts of cattle have been chiefly effected by the introduction of a very limited portion of Kyloe blood, and that we have no other pure breed of cattle possessing the same excellent quality of flesh, early maturity, and aptitude to fatten as they do. What they want is size and docility, and hence crossing, and so breeding back again to the congeners of some large sized family is requisite, and in that way we may impart to cattle what characters we choose; they may be made to have either long horns, short horns, or no horns at all, or black, white, spotted, or mixed in colour.

"However desirable it may be to know the origin of Punch, it can hardly be expected that Mr. Charles Colling will give us any information, but at the request of the purchasers of cattle bought at his and his brother's sale and related to that bull. Let these purchasers say to him, 'we are fully satisfied with the purchases we have made of your's and your brother's cattle, but we wish the public to be informed of their origin, and I have no doubt but what Mr. Colling knows would be fully and freely communicated. Unquestionably Major Rudd would not shrink from such an inquiry, though he paid 410 guineas for Lily.

"In Mr. Hutchinson's book 'On the Pedigrees of the Sockburn Short-horns,' it is stated on the authority of John Hunter, the son of the proprietor of Hubback's dam, that 'she was a beautiful little Short-horn cow.' Mr. Baker says, on the authority of Mr. A. Hall, 'she was a beautiful colour and handler, and when she got on to the good land near Darlington she got so fat she would not breed again.' Therefore she was a little well-thriven and beautiful-coloured Short-horned cow, similar to many hundreds of the Kyloe and Short-horned crosses of the present day, and from Mr. Hutchinson's and Mr. Baker's own showing she was quite unlike a pure bred Short-horn, if we may be allowed to judge from the description they have given of her.

"In my last letter I have inadvertently said that two Daisies sold for 550 guineas, or 275 guineas each; it ought to have been four Daisies, 716 guineas, at 179 guineas each.—I am, sir, your obedien servant, "JOHN ROOKE."

13. *Rev. H. Berry on the Kyloe Cross.*

"Worcestershire, October 29, 1822.

"I am now able to offer you such proof as can at this remote period be obtained, and the first object to which I am desirous of calling the attention of your readers is the pedigree of the bull Hubback, by whose means it has been asserted this alien blood was introduced.

"'Hubback (1777) was got by Mr. Snowden's bull, which was descended on the dam's side from Sir James Pennyman's stock, and got by William Robson's bull. Robson's bull bred by Mr. Waistell, and got by Mr. James Masterman's bull, out of Mr. Waistell's roan cow Barforth; Masterman's bull bred by Mr. Walker, near Leyburn, and got by the Studley bull, bred by Mr. Sharter, of Chilton.

"'Hubback's dam was got by a bull of Mr. Bank's, of Harworth, and his granddam was purchased from Mr. Stephenson, of Ketton.'

"To this pedigree the certificate of Mr. Hunter's son, now about 80 years of age, will be annexed in the Short-horned Herd Book, about to be published.

"In confirmation of the evidence thus afforded, I have authority to state that Mr. C. Colling, Mr. Charge, and Mr. Coates, now the oldest persons living, intimately acquainted with the subject, have ever deemed Hubback to be a pure Short-horn. From him, nor from his descendants, whilst continued with the pure blood it has never been known that a calf black, blue-grey, dun, or black and white, sprung, nor has any mark been exhibited in their features which denoted a cross; on the contrary, the calves got by Hubback were all either red and white, yellow, roans, or white, in that, and in every other respect, bespeaking the true Short-horn; and in conclusion, Mr. Coates, the great depository, as I may call him, of information connected with Short-horns, who had daily access to Mr. Colling's stock, when pressed for his opinion, declares unequivocally that he never observed anything in that stock which could induce him for a moment to entertain a suspicion that the animals which have been designated pure Short-horns were either nearly or remotely allied to the Kyloe.

"Now is it not, I would ask, reasonable to yield to these statements, one confirming the other, as they do, and supported by facts, the credit which I give them, rather than to embrace Mr. Rooke's speculative opinions, unsupported by applicable reasoning, and destitute of fact in confirmation And why should we remain more sceptical on this subject than we are on others to which we every day yield credence, without possessing evidence half so satisfactory.

"Having observed that no Kyloe feature exhibited itself in Hubback's descendants, I have recollected that it has been said the remarkably short legs and mossy coats of some of his descendants showed their Kyloe origin. Now by the same rule of argument, similar features in any breed of cattle must be ascribed to the same source, for I think it will be granted me that unimproved breeds are generally long in the legs, possessing hair of indifferent quality, judicious selection being necessary to counteract both. But if the qualities of short and small bone with good hair were obtained by a cross, the inevitable consequence must be that whilst they predominated in any useful degree, the black, dun, or blue-grey colours must occasionally show themselves.

"Upon the whole then, I trust I have brought this investigation to a satisfactory issue, and am, sir, your obedient servant, "B."

14. *Mr. J. Rooke on the Kyloe Cross.*

"Akehead, November 7, 1822.

"With every deference to the opinions of Mr. C. Colling, Mr. Charge, and Mr. Coates, I submit to them whether the thick mossy coat attributed to Hubback, and the quantity and quality of the flesh upon his carcase, were not more coincident with Kyloe characters than those of the pure Short-horns. But there is another question which may be very aptly put. Do these respectable breeders contend that the bull Punch was a pure Short-horn? We have had two bulls in this country his descendants—Layton, bred at Layton, and Young Barmpton, bred by the late Mr. R Colling, both of which have been considered pure improved Short-horns, and yet they have produced stock in which the Kyloe characters are distinctly perceivable in the eye, the countenance, the coat, the leg, and the flesh. 'B.' of Worcestershire, may call these characters degeneracy if he chooses, most people, however, consider them as great perfections, and I still entertain an opinion that the surest method of improving our large breeds of horned cattle is by crossing them judiciously with Highland bulls.

Now, if Punch's dam was by a Kyloe Bull (and who has told us that she was not so bred?), there are but few improved Short-horns that can be called pure Short-horns. And are not those the most esteemed which have been bred from Punch through Favourite, Red Rose and Wildhair for instance.—I am, sir, your obedient servant, "JOHN ROOKE."

15. *Rev. H. Berry on the Kyloe Cross.*

"Worcestershire, December 6, 1822.

"The objections of Mr. Rooke to my inference in favour of pure Short-horns increase like Hydra's heads, but I entertain sanguine hopes of being able to crush them all. I state not this so much in reliance on my own sufficiency as impressed with the weakness of his arguments.

"I think it unnecessary further to notice his argument, drawn from the quick prominent eye, mossy coat, short bone, &c., than merely by inviting him to view all the improved breeds in the kingdom, and to inquire from their possessors where they obtained the same features. Without probably thinking ill of the Kyloe, they must scout the idea of a cross which common sense assures us never was made.

"But we are asked in a very imposing manner, 'Who has told us that the dam of Punch was not by a Kyloe bull?' Now inauspiciously as this may sound for our purity in the ears of the uninitiated, it only in fact betrays Mr. Rooke's ignorance of the subject. No person was ever likely to tell him a thing so self evident, but to show to the public how far his doubts are entitled to attention, I will inform him, on Mr. C. Colling's own authority, how Punch's dam was bred, and then possibly will appear the reason for any preference of that bull's blood.

"Punch by broken-horned bull by Hubback dam by Broken Horn, granddam bred by George Best, of Mansfield.

"Broken Horn calved 1787, red roan, got by Hubback, dam by Hubback, grandam bred by Mr. Watson, of Mansfield.

"This is Mr. Colling's testimony, and he adds that he does not believe there was a drop of Kyloe blood in Hubback's or Punch's veins, and that the qualities of good hair, &c.—in other words, what are termed the Kyloe qualities were eminently possessed by Comet's dam. Will any person assert she was Kyloe bred? "B."

NOTES ON FEEDING STOCK.

THE failure of the root crops in many of the counties of England will doubtless be very seriously felt by farmers, and the question:—How to eke out the scanty supply of sheep food during the coming winter? is a difficult one to answer.

It appears, from what can be gathered from reports, that in the southern, western, and midland counties, the root crop cannot be more than one-third the usual

average, and that the hay crop is a very light one indeed. To place against these, the straw crop is an average one in bulk, and has been harvested, in most cases, in very excellent condition, and the latter must, to a great extent, take the place of hay. The deficiency of roots will have to be supplied from the farmers' pocket, in the shape of corn, meal, &c. Cake, I fear, will be too dear.

It is difficult, no doubt, to change the usual routine of feeding on a large arable farm, but this difficulty must be boldly met—it may even result in good, by teaching us greater economy in feeding our sheep flocks.

I think many will bear me out, when I say there is a vast amount of hay wasted on arable farms every year, by giving it to sheep in cribs. In many cases full half is pulled out by them and trodden under foot. The remedy for this is the chaff cutter, and the feeding trough, in place of the wasteful crib.

On many arable farms it is the practice to give the breeding ewes as many roots and as much hay as they can possibly cram in. I believe a better result would be obtained if only one-fourth the usual quantity of roots were given to ewes before lambing, giving instead a larger portion of dry food. More live lambs and fewer dead ewes would, I feel sure, be the result.

As a large portion of straw will be required for sheep, the usual number of fatting beasts will, in many cases, have to be dispensed with. The breeding flock in any case must be kept. Their food may consist of one-third the usual quantity of roots, with straw and hay and meal. The straw and hay, in equal portions, cut into chaff, and sprinkled with water, adding to them meal of any kind found most convenient, at the rate of say one pound to two pounds of the chaff; a small quantity of salt would be an advantage, and the whole should be well mixed on a floor before carrying it to the sheep. The damping not only causes the meal, bran, or sharps to adhere to the chaff, but it prevents it being blown out of the troughs by the wind. In cases where the roots can be pulped and mixed with the chaff, the latter need not be damped.

Fed thus, they might be folded over the Turnip fields in the usual way, but where the fold is not absolutely necessary for the succeeding corn crop it might be preferable to feed the sheep in a sheltered yard near the homestead, and cart from the fields what few Turnips they contained.

No time should be lost in purchasing or providing corn or cake for feeding, as the price is sure to go up. Indian Corn can be purchased at 30*s.* to 32*s.* per quarter, and I am told even less than this, which is considerably under a penny per pound.

As to the weight of chaff and meal to be given to each sheep per day, along with the roots, this would soon be ascertained, but it would not be large. It may not be out of place to quote an experiment on feeding sheep by Mr. Lawes, published in the 23d volume of the Royal Agricultural Society, 1861. The sheep had no roots, nor any kind of green food, but had what water they liked. They were three-year old Hampshire Downs, and the experiment extended over a period of 32 weeks, viz., from January to September, 1861.

The following is the kind of food, the weight consumed, and the increased weight of each sheep per week:—

Lot 1. Fed entirely on meadow hay chaff and water. Each sheep consumed weekly 22 lb. 14 oz. of hay chaff and 40 lb. 4 oz. of water, and they gained in weight 8½ oz. each per week.

Lot 2. Fed on ground Beans, meadow hay chaff, and water. Each sheep consumed weekly 6 lb. 11¼ oz. of Beans, 18 lb. 9 oz. of hay chaff, and 43 lb. 3 oz. of water, and gained in weight 1 lb. each per week.

Lot 3. Fed on ground Barley, meadow hay chaff, and water. Each sheep consumed weekly 7 lb. Barley, 18 lb. 2 oz. hay chaff, and 40 lb. 10 oz. of water, and gained in weight 1 lb. and ¼ oz. each per week over the whole period.

It would appear from the above statement, that when they lived entirely on hay chaff they consumed little more than 3 lb. each per day, and yet gained half a pound each per week, so that those who are totally destitute of roots need not despair. It is right to say the sheep were kept in sheds during the experiment, but any of the above plans may be advantageously adopted in the open fold, either wholly or partially, according to circumstances. *G. C.*

As you did me the honour to insert in the *Chronicle* my letter to the *Times* on the crops of 1864, I beg to hand you some notes on feeding stock, which seem, from inquiries I have had, to be a necessary pendent to that letter, and I shall be glad if you can find room for them. Swede Turnips have greatly improved in the north during the last three weeks, while Yellows seem at a stand-still; their leaves are falling and turning a bad colour, and altogether these common Turnips promise to be a bad crop and of most inferior quality. *H. J. Turner, Richmond, Yorkshire.*

In olden times Turnips were given by many farmers without limit to feeding cattle; in fact they had as many as they could be induced to eat, and with them frequently nothing else save Oat straw—a more wasteful mode of using Turnips could hardly be conceived. Farmers however have lately learnt that it was more profitable to reduce the quantity of Turnips given to cattle, and allow some Linseed cake with that reduced quantity. Sheep have still been folded on Turnips in most places, but an allowance of Linseed cake was also given to them. This season's scanty supply of Turnips seems to call for a different arrangement, and I will suggest a course which I think will be found to answer. It will however be necessary in the first place to ascertain the money value of the different sorts of food which may be used. I shall take their prices at the present market value. English Linseed cake 12*l.* per ton—1*s.* 6*d.* per stone; Wheat at 4*s.* 6*d.* per bushel of 63 lb.—1*s.* per stone; Barley at 3*s.* 9*d.* per bushel of 56 lb.—11½*d.* per stone; Oats at 2*s.* 10*d.* per bushel of 42 lb.—11½*d.* per stone. It will thus be seen that there is very little difference in the price per stone of Wheat, Barley, or Oats; while Linseed cake, weight for weight, is half as much more. From long and careful observation I am convinced that it is most profitable to mix the kinds of food as much as possible, and for cattle I recommend E. Linseed cake, 1½ stone per week, 2*s.*3*d.*; bruised Barley, 1½ stone per week, 1*s.*5*d.*: per week, 3*s.* 8*d.* With this I would allow a good feed of Turnips morning and evening, and as much unthreshed Oats, chopped, as the animals would eat clean up. Half the foregoing quantity of cake might be given for the first fortnight, and some time (say a month) before the animals go to the butcher the quantity of Barley might be doubled, I have selected Barley to be given with the cake, but Oats or Wheat can be substituted when either of those can be had at a cheaper rate. I deem it essential to successful feeding that the greatest regularity should be observed in the times of giving food, and that the greatest possible cleanliness should be observed in both food and troughs; it is also most desirable that the greatest quietness should prevail. The cattle after being fed should not be disturbed even by the feeder, but should be left to lie down, as they will soon do if they are thus regularly treated. For sheep I would recommend 3½ lb. each Linseed cake per week, 4½*d.*; 3½ lb. Barley per week, 2½*d.*; per week, 7¼*d.* With this I should give a good feed of sliced Turnips morning and evening, with cut hay or unthreshed Oat-sheaf as much as they would eat clean up; but this cut meat should be given in small quantities at a time, and none that has got soiled by the sheep's breath, or spoiled by rain, should be allowed to remain in the troughs. The quantity of Barley may be increased after first month. Some persons will no doubt still fold their sheep on the Turnips (part of them probably being pulled and taken off the land); where this practice is followed I strongly advise a feed of chopped hay or Oat-sheaf to be given first thing in the morning. I scarcely know any pursuit where more vigilance or greater quickness of observation is required than in feeding stock; some men go stupidly about among animals as if their eyes were closed, while other men quickly note a dull eye, a staring coat, or abstinence from food, and immediately seek out the cause. If the complaint is not of a trivial character, and obviously capable of direct and speedy remedy, I always turn the animal over at once to the butcher, and in most cases this will be found the most profitable course. *H. J. Turner, Land Agent, Richmond, Yorkshire.*

ON STORING ROOTS.

[The following Prize Essay on this subject, by Mr. George Jonas, appears in the recently published Number of the Journal of the Royal Agricultural Society of England.]

This Essay is intended to embody the results of practical experience, derived from the management of about 700 acres of roots, grown annually under my superintendence. The chief points to be observed for ensuring success in storing are, first, to select dry and fine weather for the operation, and never, under any circumstances, to cart or store any which are the least frost-bitten; to cover up and keep them dry when carted, but never so closely covered as to prevent the escape of any slight heat arising from the heaps and clamps when first stored; to be exceedingly watchful in the spring, as soon as vegetation commences, to uncover the top or ridges of the stored roots, so as to allow the escape of any heat arising from their sprouting.

The general time for beginning this work is the middle or latter part of October, and it is not generally completed till the latter part of November, or in some mild seasons until the beginning of December. Fine weather not only ensures the safety of the crop, but allows of the roots being laid in larger heaps, and in a great measure protects the land from the injury caused by carting.

On heavy lands, ill suited for sheep, the whole of the Turnip crop is drawn for stall-feeding; but on light sheep farms, the general and best plan is to remove about one-fourth or one-fifth, according to the crop, taking five rows and leaving 15 or 20, or doubling these numbers. By this means the whole of the land is folded regularly, and Turnips enough for the cattle are procured without exhausting the land.

The Turnips required for immediate consumption in the yards should be drawn off, well cleaned and topped, then carted and stored in houses or sheds about the latter part of October. If the sheds be open, they should be covered with straw to protect them from the frost. All the Turnips that are to be consumed in the yards should be carried home and secured before the frost sets in; therefore, where there is not sufficient shed-room, they may be kept very well in large heaps, on the south side of walls or buildings, care being taken in the latter case that there is troughing to protect the heap from the dripping eaves. The base wall is formed by two rows of hurdles, set about 3 feet apart, the space between them being well stuffed with Barley-straw or some short Pulse to keep out the frost. The Turnips are laid up to the top of the hurdles and piled up against the wall, the heap being covered with a thick coat of straw from the hurdles to the top of the slope.

This winter about 100 loads, carted in fine weather, and laid up against a barn in this way, kept in capital condition, and there was not a bushel of decayed Turnips in the whole heap. It is a good plan to put a little straw at the bottom of the heap to keep the roots from the ground. Another plan is to lay them up in long heaps of a triangular shape about 8 feet wide at the base and 6 feet high, covering them over first with straw, and then with a slight layer of earth, but leaving the ridge without any earth on.

When stored in either of the above ways, the Turnips should be cleaned, and the crown or neck cut off close to the Turnip, so as to prevent their sprouting; if not thus treated they will begin to vegetate, which causes them to heat and decay very quickly. They will keep good till the end of February when properly stored. If it is required to keep them till March or April, they should be laid up in heaps from 15 to 20 yards long, about 3 feet high and 3½ feet wide at the base, tapering to the top, and covered with earth as a protection from the frost: the tops in this case are cut off, but the roots and earth hanging to them left on.

The cleaning the Turnips for carting home is done by women, at a cost of 4*s.* or 5*s.* per acre, or by a gang of children having a man to superintend them. For this purpose they use a knife or chopper, with which they remove all the earth from the Turnip and cut off the tops, throwing the roots in heaps ready for carting, as they are cleaned. All that are left in heaps in the field at night should be covered up with the leaves, to protect them from the weather.

The cost of filling into carts for carrying home would be about 2*s.* per acre.

Turnips are stored in a variety of ways for consumption in the field. When they are to be cut for sheep, they should be laid in heaps of about 30 bushels, with a little haulm or straw put on, and over this a covering of earth; a little piece of straw being left uncovered at the top to let any heat escape. All that are intended for use before the end of January should be cleaned and the leaves cut off before they are heaped up; but those for later feeding should be laid in heaps of about 10 or 12 bushels without being cleaned, as the earth thus left on tends to keep them fresher and in better condition. No straw is then used, a covering of 4 or 5 inches of earth alone being required.

The work of cleaning and throwing into heaps of about 30 bushels ready for covering up is done by women and children at a cost of from 4*s.* to 5*s.* per acre. The covering up with straw or haulm and earthing over will cost about 1*s.* 6*d.* per acre. Those that are heaped without being cleaned will cost about 1*s.* 6*d.* per acre to pull up and throw in heaps, and about 2*s.* per acre to cover over with earth.

Another plan of storing Turnips is to lay them in a furrow and plough them in. This is done by ploughing out two deep furrows up the centre of eight rows, the two centre rows being first pulled and laid aside; the Turnips are then pulled up by two children and handed to a man (who stands between them) to be placed in the furrow tops upwards; another furrow is then turned on to them on each side of the row, covering them up to the necks: 2*s.* 6*d.* an acre will be a fair price for pulling and placing in the furrows. Turnips will stand almost any amount of frost when stored in this way, and are much better than those left in the ground, even if they have escaped the frost; besides, they do not draw the land.

Another plan is to pack the Turnips in round patches, putting three or four loads in each patch. This is done by beginning in the centre to set them up with the tops uppermost, packing them close to each other till the patch is the required size, the leaves and all the soil hanging to the roots being left on; the outside row should be covered up to the neck with earth, and in very severe weather a little straw should be thrown over the top. This plan is best adapted for storing roots on the stubble-lands for spring consumption, so that the Turnip-land can be got ready for the Barley crop.

Mangel.—The general time for storing this crop is the latter part of October or the beginning of November, according to the season. If left later they are liable to be injured by the frost.

In taking up the crop the roots should be pulled up—care being taken not to bruise them by kicking them up—the leaves cut or twisted off, and the roots either thrown in heaps or loaded at once into carts. Twisting the leaves off is much better than cutting them off, as the Mangel are liable to get injured by the careless use of the knife; if the crown is cut, they very often decay.

Mangel left in the ground will stand a frost, if not very severe, as their leaves protect them; but when they are pulled a very little frost will injure them, therefore all the heaps left in the field at night should be covered up with the leaves.

They are best stored in long heaps of a triangular shape, about 6 feet wide at the base and 4 feet high. These heaps should receive an even coat of haulm or straw, about 12 inches thick, and about three or four days afterwards they should have a covering of earth of about 8 or 10 inches thick, taken from a trench made on either side: bunches of straw should be left, about 4 feet apart, sticking out at the top of the ridge to let out the heat. If this precaution is not taken, the roots will often decay from heating.

These heaps, or clamps as they are sometimes called, should be placed in some convenient spot close to the yards, and those that are to be consumed in the field by sheep should be placed on the headland of the field where Rye-grass, Rye, and Tares, or some other spring feed is sown. This will save much labour in carting them a second time.

The wringing the tops off and throwing the roots in heaps ready for carting is sometimes done by day-work with children, having a man to superintend them, at a cost of *4s. 6d.* per acre; the filling into carts and clamping will cost from *2s.* to *2s. 6d.* per acre. When the work is done entirely by men, it may be taken as piece-work at *6s.* or *6s. 6d.* per acre, according to the crop; this includes pulling and wringing the tops off and filling into carts. The horse is, in this case, led up the centre of each six rows, so that the wheels will span the two centre rows; three men follow each cart, taking two rows each; one man will clamp (or stack) them as fast as six men can top and fill. The cost of horse-labour will depend upon the distance the roots are carried; one-horse carts should always be used, if possible, as there is no loss of time in changing the trace-horse; boys are generally employed to drive away. The covering with earth, if done by piece-work, costs *10d.* to *1s.* per rod in length—that is, for digging the earth and covering up; but the cheaper plan is to plough about eight furrows on each side the clamp as deep as possible, turning them to the heap; the furrows are then laid on with a fork or spade, and the loose moulds put on with a shovel to fill up the spaces left by the clods; this will cover each side of the heap within about two feet of the top; they should be left in this state for a few days to let out the heat, then a few more furrows should be ploughed in the bottom of the trenches, and thrown on to complete the covering to the top—bunches of straw or haulm being still left at intervals, as before mentioned, for ventilation.

The heaps should be partially uncovered in March, about two feet of earth being taken off the top, and at intervals of 4 or 5 yards a space 4 feet wide should be uncovered down to the bottom; this is done to let out the heat caused about this time by the sprouting of the roots: if this heat cannot escape, they will soon decay. Mangel so stored will keep till July.

Potatos.—The middle or end of October is the time for harvesting this crop, except the early sorts, which are begun in the latter part of September, and are taken up as required to supply the demand. As soon as the haulm has withered and begun to decay, the roots may be taken up and placed in houses, being laid in heaps, with straw or boards between them to separate the different sorts.

The first part of the process is, to pull up by hand the whole of the haulm or stalks, and lay them in bundles on the ground ready for burning, or carting into the yards; any Potatos that come up on the stems may be shaken off and left upon the ground; by this means the land is cleared ready for the diggers to follow. Each digger with his fork takes one ridge, women and children act as pickers.

Potatos are also ploughed out with a double mould-board plough, every other row being done alternately, so as to prevent covering up with the plough. After all the ridges have been ploughed, and the Potatos picked up, a light harrow is passed over the field, to bring any that may be left to the surface, so that they may be found by the pickers.

The work, if done entirely by hand—that is, the mere raising the Potatos with forks, and the women and children picking them up and putting them into sacks or carts—will cost from *21s.* to *24s.* per acre; but with the double plough the work is much facilitated, and its cost reduced. The ploughing will come to from *4s.* or *5s.*, and the picking to *6s.* or *7s.* per acre; so that the entire cost is reduced by more than half.

The two evils to guard against in storing Potatos (as in other root-crops) are fermentation and premature germination. If the former takes place, the tubers very soon decay; and if the latter, they not only lose much of their goodness as food, but are weakened for use as sets, since all the shoots have to be broken off before planting. To prevent this, it is of the utmost importance to have the tubers perfectly dry before they are stored for the winter.

Therefore, in the first place, fine weather should be selected for the work; when taken up, they should be put into sheds or houses, and left for two or three days, then turned over and sorted, small or unsound roots being picked out for the cattle stock. Those selected and reserved for sale should, when properly dry, be taken to the pits, where they are to be kept for the winter.

These pits or "pies," as they are sometimes called, are made by removing all the top soil to the depth of about a spit and a-half: some good dry Wheat straw is then laid in the bottom, and at the side, and the Potatos are then put in and are heaped up above the surface as high as they will lie, so as to make the sides as nearly upright as possible, the pressure of the earth being thus diminished; a thick coat of well-drawn dry Wheat-straw is then laid over them, and on this is placed a complete covering of earth about 6 inches thick. From two to three tons will be sufficient to put into each pit. On clay-lands the heaps are generally placed on the surface for the sake of dryness.

Some persons prefer storing the Potatos in houses made entirely for the purpose. Doubtless this is the best plan where it can be done, as the store can be looked over at any time during the winter, when the shoots that have begun to sprout may be rubbed off, and decayed tubers may be removed.

Carrots.—Carrots are usually harvested in the beginning of November; dry weather being selected for the work. They are usually lifted by men or women with a fork or spoon-shaped spade light enough to be used with one hand, so that the other hand may be applied to the tops of the Carrots. Great care should be taken to prevent the roots breaking off in the ground: when raised, they are laid in rows far enough apart to allow a cart to pass between them, and the tops are cut or twisted off by children. They should be left in the field a few hours to dry before being carted home, where they should be laid in long heaps about 3½ feet wide at the base, and 2½ feet high, which like the Mangel store should taper to the top, and receive a covering of straw and earth.

In spring the heaps of unconsumed Carrots should be looked over, the decayed roots picked out, and the shoots rubbed from the sound ones; if they are required for late use, the crown should be cut off completely. After being looked over, the roots are heaped as before, but only covered with straw. Carrots are also stored in sheds, and covered over with straw. The cost of taking up carrots varies very much, according to the mode in which they are grown; the old plan was to sow them broadcast, but they are now commonly drilled, and the carrots are readily forked up when in rows.

For a crop sown broadcast the cost of taking up, topping, and laying in rows, would be from *18s.* to *20s.* but when drilled about *13s.* per acre; the filling into carts is generally done by day-work at a cost of *3s.* per acre, the unloading and stacking in heaps at about *1s.* per acre. When stored in sheds the cost of stacking would not be so much; covering the heaps with straw and earth will cost about *5d.* per rod if the heaps be ploughed round the same as for Mangel.

THE PAST HARVEST AND THE COMING WINTER.

BERWICKSHIRE: *Dunse.*—Harvest operations commenced with us on the 1st of the month, and cutting was finished on the 20th. The fields being prepared for the reaper the work was trimly done—an occasional breakage the only drawback. We should not like, however, to be left entirely to the mercy of the machine; on the contrary, still find the Irish contingent a most useful force. The prevalence of machine reaping has already reduced their numbers to a great extent, and with a harvest of heavy and lodged crops and a limit of extra hands, we can easily suppose a rather serious delay. The district has suffered severely from the high winds of Monday the 5th and Friday the 9th, the gale increasing to a hurricane for several hours on the Friday afternoon. It is difficult to estimate the damage. A portion of corn being green, escaped with the loss of a few bushels per acre; but a large breadth was ripe, and where exposed to the west wind the loss must be from one-third up to one-half, and in some places the whole crop has gone; several fields of Barley in this neighbourhood being nearly as clean threshed as the mill could do it. Throughout the county the loss is immense, only the earliest farms escaping; while on those stretches of arable land lying towards the hills the loss is estimated on many farms at from a half to a whole year's rent. Surely in the mad competition for land these casualties are not valued, as more money may be lost in one year by such a desolating wind than can be made in a year or two of propitious times; and those adverse breezes are not of such unfrequent occurrence, visiting good and bad crops, ill and well managed farms alike. But for the shake, the crop might have proved a fair one in point of yield; and the weather, although we have rain each night, keeps dry and breezy during the day, so that the ingathering is progressing wonderfully. To pass from corn to Turnip crops, we are glad to be able to speak favourably, at all events hopefully; and should the present fine growing weather continue we think the crop must be a good one. Of course there are large tracts of clay land where the Turnips look miserable, but these are not very trustworthy even in ordinary seasons. Prices of let Turnips are opening high, either from the expectation of a short supply or from the likelihood of very dear mutton in spring from the failure in the English crop. So far however as we can judge, there is no reason for alarm in the meantime, as this is the time that Turnips root best. Last season in wintering calves, we used corn and cake in place of Turnips, from the conviction that the Turnips were better bestowed on the sheep. We are satisfied, however, that cattle (at all events young cattle) should have a portion of Turnips allowed along with their cake. Both together do best, and should the price of grain continue low we have no doubt that it will be more extensively given to both store cattle and sheep. *John S. Bertram.*

FIFE: *Pilmuir.*—Stackyards are all much smaller this year than usual. Very little has yet been threshed, and it is doubtful how the crops may yield. A good deal of the Wheat was straw-broken when cut up, which will cause an irregularity in the sample as well as more light. The straw however coloured well, and the grain is quite as fair as it was last season. Barley is the best crop, and taking quality and quantity, will prove a full average. Oats are almost universally light. On individual farms a great deal of grain has been shed by the winds. Wheat and Barley were most destroyed. The late rains will bring the Turnips nearly up to an average. If there is a market for the Potato crop, fewer sheep and cattle must be fattened this season. Grain of all kinds being relatively lower than cakes, will be used in larger proportions till the prices rise. Turnips have been so abundant for the last few years, that pulping or other means of economising the quantity, has not been much adopted. Nor is the deficiency of roots so much to complain of as to lead to any great change in the usual modes of feeding stock. *R. Russell.*

LINCOLNSHIRE: *Aylesby.*—I adhere to my former statement in thinking the Wheat crop not an average of the last 10 years, and short of last year by nearly one-fourth. Barley full average. Oats short of an average. As to how we shall get through the coming winter with our cattle and sheep is a matter of serious consideration. The Turnip crop in this part of Lincolnshire upon clay soils is to a great extent a failure; upon the Wolds they are somewhat better, but nothing near a full crop. Cattle for the most part must go without any roots, consequently there will be very few fatted. I intend to cut up the whole of my cattle Oat and Barley straw into chaff, mixed with about one-fourth Clover hay, well got (of which I am happy to say I have got a fair crop); that, with 4 to 5 lb. of best Linseed cake, I hope will bring my cattle up to their usual condition. Breeding ewes must be content with very few roots, but must be fed in the winter months with the cheapest food we can get at the time. I intend to eke out my Turnips to my other sheep by giving them a good liberal supply of artificial food, such as Linseed cake, Barley, and Locust Beans, from the beginning of winter. Those who are sellers of lambs are feeling the sad effects of shortness of keep; thousands are selling where they ought to have been kept; many of the best are going to the butcher. *Fra. Sowerby.*

LINCOLNSHIRE: *Decoy Farm, Spalding.*—The opinion I gave respecting the harvest when we commenced cutting has been confirmed by the threshing. We have fully an average crop of Wheat, both in corn and straw. Oats very deficient in both. Beans a very poor crop. All corn well harvested, and the Oat straw better fodder than we usually have, which will help out the very small crop of hay grown on the Fen lands. Our principal green crop in this locality, and indeed on all Fen soils, is Rape, which is very generally a failure, and cannot be a fourth of the usual crop; it is mostly all consumed by sheep during the next three months; it is of very feeding quality, and in ordinary years produces a great weight of mutton. I suppose that even with giving a very liberal allowance of cake or corn we shall not produce half the usual number of fat sheep. The Mangels will be a fair crop—not an average in weight—but good in quality. They are usually grown to be consumed in the yards, but this season will be cut or pulped and mixed with chaff and corn for sheep feeding; last winter I had some shearlings kept in that manner, and they throve very well. But with all these appliances I don't think we can winter nearly our usual quantity of sheep. By using a fair allowance of cake we shall be able to keep as many cattle as are requisite to consume the straw. *Thomas Aitken.*

NORFOLK: *Bacton Abbey, North Walsham.*—The result of our corn harvest is satisfactory. Barley a heavy crop, quality various; Wheat better than was expected, above average, but not equal to last years crop. The root crop deficient, not so badly planted in this county, but the bulbs very small and of inferior quality. You ask my opinion as to the best plan of eking out the root crops. We shall in this county cut down a large portion of both Wheat and Barley for feeding purposes. There can be no policy in giving the English or foreign cake merchant from *10l.* to *12l.* per ton for adulterated Linseed-cake when the produce of our own farms is only now realising from *6l. 10s.* to *8l. 10s.* per ton. In the face of the worst hay crop and the worst root crop ever grown in England, it is highly politic to cut down a large portion of our corn for cattle feeding. That we are approaching a meat famine few can doubt. I see no means to avert it, save by the use of an almost unlimited amount of corn meal, with a limited quantity of roots. With meat at *1s.* per lb., (which in all probability it will reach), cattle will pay for high feeding, nor will that be the only advantage. A large home consumption of corn will lessen the quantity for market, and, let us hope, give us some advance upon the present low and unremunerative prices. *W. Cubitt.*

OXFORDSHIRE: *Sarsden.*—The harvest being all gathered in and some few pieces threshed, we can now

form some idea of the yield. Wheat on strong soils is equal to last year both in quantity and quality, but I fear the light sands and thin soils will fall sadly short. Barley full average crop, and a deal of very fine quality, although some pieces on the gravel and sand turned off too soon, and the red streak is still visible. Oats, Peas, and Beans under average and very small, the Beans suffered much with blight and lice. The great question—How are your Turnips, and what's to be done for keep? seems to puzzle all in this part. Never in any previous season has there been so much seed planted, and yet the Turnip fields are bare, although every fresh plan has been resorted to both in replanting, broad sharing, and stemming, but they won't grow; those who only harrowed down their land last spring and planted on the stale furrow, have decidedly the best roots, and the best are but bad. Every flock master has done much by planting Mustard, Rape, &c., for this autumn, but I fear the season is too far advanced for a crop; the dry weather and frosty nights have stunted its growth, and with our climate we cannot expect much feed. For the spring Trifolium, Italian Grass, Rye, winter Oats and Vetches, have all been planted, and more Vetches must yet be sown for spring seeds. Stock of all kinds will depend upon the chaff cutters and grinding mills for their winter food. I have found from experience when much straw is used—and a deal must be this winter, for hay is a short crop it is best to cut the chaff very fine; a few pulped roots will flavour a large heap, besides the flour and cake, or whatever is used, mix so much better in fine chaff; a little Linseed water will also assist the animal's stomach. *Matthew Savidge.*

Home Correspondence.

Harvest Rejoicings at the Royal Agricultural College.—The proceedings which took place at this Institution on the completion of our harvest some three weeks since may probably interest some of your readers. I therefore venture (at this late date) to send you a brief report of our doings at the "harvest home." After a season of uninterrupted fine weather, it was unfortunate that on the day appointed for our festivities unfavourable changes should have occurred. The day however having been selected and due provision made for those who were to assemble, and everything arranged for a holiday upon the farm, the state of the weather was not to prevent the celebration of a ceremony which had been looked forward to with such pleasure by many amongst us. By 11 o'clock in the morning our labourers were wending their way homeward, and busy preparations commenced in the College, kitchen, and also upon the farm, whilst the labourers, their wives and children, were exchanging the working garb for their "Sunday best," and when they returned to the scene of rejoicing, a more respectable, well attired, happy party, you could not wish to see than the 40 men, women, and children assembled in the decorated cart-shed at the farm buildings. At length the chapel bell summoned us to more sober duties, and ere the last toll was heard, the seats of this most beautiful little building were crowded with numbers of both sexes, including the Principal's family, members of the staff, a fair proportion of students, and lastly the labourers themselves. The demeanour of the congregation showed that all alike felt the importance of the occasion, and were sensible of the sacredness of the service they were about to join in, composed as follows:—A selection from the Psalms, appropriate Lessons from the Old and New Testament, Prayers and Hymns specially chosen for the occasion, and finally an address from the Principal. The unpropitious state of the weather, and the probable discomfort to our out-door feast by exposing the provisions, did not escape the thoughts of our Principal; he kindly offered the use of the College Dining Hall. Soon accordingly we found ourselves seated around heavily laden, solid tables, in this spacious room, and one and all agreed it was a most comfortable and excellent proposal on the part of Mr. Constable. After the usual toasts, and rounds of cheers from the worthies (some of the latter having been on the farm since the first stone of the College was laid, now 18 years back), the merry party again mustered on the ground near the College, where no lack of amusements existed. Thanks to the students, ample exertions were speedily made to secure a diversity of fun; foot races, jumping in sacks, leaping, quoits, liberal rewards falling to the winners out of the handsome purse raised by the ladies and students present. Lastly, it was proposed to form sides for foot-ball, and professors, collegians, and farm labourers contested for victory, and fought the battle out on even terms. As the shades of night gathered round, we took warning and adjourned to our comfortable shed, now hung around with evergreens and flags, and properly lighted. The wants of the women and children were provided for at once, a good supply of tea, &c., being sent from the College. The men gathered round their tables, on which were placed jugs of ale, with here and there a supply of tobacco, and then commenced the round of provincial songs; cheers and laughter burst forth as some favourite words and airs fell upon their delighted ears, and not a little flattered did the company feel when a student favoured them with a song. At 9 o'clock the merry party rose to depart, having previously proposed and drunk the health of the farm manager, the compliment being acknowledged by Mr. Fletcher, in terms which proved that a right feeling prevailed on all sides. Not a regret was heard on that day, nor did one act of forgetfulness occur on the part of an individual, and we hope the rejoicings and festivities at the Royal Agricultural College harvest home may be annually chronicled hereafter. *J. L. F. Oct.* 4.

On Crossing the Breed of Animals.—I have been led to give this subject the greater consideration from what has passed at various agricultural meetings lately, and particularly that of Salthill, in which Mr. Disraeli took a prominent part. I shall confine my remarks principally to the theory, which appears a favourite one with the right hon. gentleman, of crossing Southdown ewes with a Cotswold ram. I cannot but think, with many others, that this is an erroneous, if not an absolutely retrograde movement; and I think I can prove it. First, from the "Observations on the Breeding and Form of Domestic Animals, by the late Henry Cline," a work but too little known by practical breeders, and next from my own unfortunate experience. What says Cline on the subject of putting large males to smaller females? "When the male is much larger than the female the offspring is generally of an imperfect form. If the female be proportionally larger than the male, the offspring is of an improved form. For instance, if a well-formed large ram be put to ewes proportionally smaller, the lambs will not be so well-shaped as their parents; but if a small ram be put to larger ewes, the lambs will be of an improved form. The proper method of improving the form of animals consists in selecting a well-formed female, proportionally larger than the male. The improvement depends on this principle—that the power of the female to supply her offspring with nourishment is in proportion to her size, and to the power of nourishing herself from the excellence of her constitution." Again, "The size of the fœtus is generally in proportion to that of the male parent; and therefore when the female parent is disproportionately small, the quantity of nutriment is deficient, and her offspring has all the disproportions of a starveling. But when the female, from her size and good constitution, is more than adequate to the nourishment of a fœtus of a smaller male than herself, the growth must be proportionately greater. The large female has also a greater quantity of milk, and her offspring is more abundantly supplied with nourishment after birth." He next proceeds to give "examples of the good effects of crossing the breed." "The great improvement of the breed of horses in England arose from crossing with those diminutive stallions, Barbs and Arabians; and the introduction of Flanders mares into this country was the source of improvement in the breed of cart-horses. The form of the swine has also been greatly improved by crossing with the small Chinese boar. Examples of the bad effects of crossing the breed.—"When it became the fashion in London to drive large bay horses, the farmers in Yorkshire put their mares to much larger stallions than usual, and thus" (mark the result!) "did infinite mischief to their breed, by producing a race of small-chested, long-legged, large-boned, worthless animals. A similar project was adopted in Normandy, to enlarge the breed of horses there, by the use of stallions from Holstein; and in consequence, the best breed of horses in France would have been spoiled, had not the farmers discovered their mistake in time, by observing the offspring much inferior in form to that of the native stallions. Some graziers in the Isle of Sheppy conceived that they could improve their sheep by large Lincolnshire rams, the produce of which, however, was much inferior in the shape of the carcase, and the quality of the wool; and their flocks were greatly injured by this attempt to improve them." With the following passage I conclude my extracts from Cline:—"The general mistake in crossing has arisen from an attempt to increase the size of a native race of animals; being a fruitless effort to counteract the laws of Nature." My own lamentable experience fully bears out the correctness of the above remarks. Once upon a time (I was younger then than I am now) I was persuaded to put a Leicester tup to a lot of Scotch ewes. In consequence of the larger size of the former, as compared with that of the latter, I lost about a fourth of the ewes in yeaning, or trying to yean. To say nothing of the actual money loss, I never was so ashamed of anything of the kind in my life. I had not then read Cline, or such a misadventure would never have happened. Mr. Disraeli calls upon us for facts; I have given them; and in all due courtesy would ask him in return upon what facts he relies for his statement that his cross would produce an improvement of 5*s.* per fleece? *S. Taylor, Gloucester, October* 10.

Societies.

Social Science Association, Leeds: *Sept.* 23.—In the Health Department an interesting paper was read by Mr. Godwin, F.R.S., "On the Over-crowding of Dwellings and Workshops."

Mr. Godwin said,—In a paper already before the Association I gave numerous special cases of overcrowding to show its prevalence, especially on that occasion, in London—cases of overcrowding in dwelling houses, workshops, barracks, and schools. I have re-visited within the last month many of the places described, and found them precisely in the same evil condition as before. Thus, in Lincoln Court, Drury Lane, to which attention was directed, the first house examined on this last occasion contained 37 persons in its eight rooms, and the second 45. In some, I was told, the number of the inhabitants was greater. Every room housed a family; some, surreptitiously, three. To get at the truth, as in all these cases, was difficult, but quite enough was admitted to prove that the conditions were not such as admit of healthful existence or decency. Of Charlotte's Place, Gray's Inn, the same may be said. The medical officer of that district speaks, in his last report, of small three-roomed houses, each containing seven families huddled together as closely and almost as promiscuously as sheep in a fold. In unhappy Bethnal Green, in Mile End New Town—in fact, in every direction—the same fearful state of things may be witnessed. The extent to which the evil is increased when illness prevails or death occurs can scarcely be imagined. In one room, near the Caledonian Road, Islington, were found amid a family a child dead from scarlet fever, and another ill with the same complaint. No washing had been done for a fortnight, and the clothes which had been worn by the sick child, and those which had been taken off the dead one, were stowed in the bottom of a cupboard, where the food of the family was kept; there were dirty slops in the room and on the staircase; the window had never been opened since the sickness began. The woman who lived here had buried three children, and the one lying dead was the fourth lost. The remaining rooms of the house were densely crowded; the drainage was not good; and two other children had died in the same place not long before. Concerning most of our provincial towns, and I have examined many of them, similar statements have to be made, and must be extended to Ireland and Scotland. Having described the disastrous influences, moral and physical, of overcrowding, Mr. Godwin proceeded to consider the second question—How could it be prevented? In reply, he said, I must reiterate my conviction that the first step should be the application of the Act for regulating common lodging-houses to all houses let in tenements to, say more than two families—that each house so let should be registered, inspected, and regulated, and moreover that this step should be taken immediately. The *Times*, in commenting on my previous paper, said—"The Legislature has a right to interfere at least on behalf of the innocent victims of their landlords' or neighbours' negligence, and by fixing a statutable minimum of breathing room in cases where such protection shall be proved to be most needed, may gradually enlighten public opinion on this subject." Other influential journals went even further in support of the proposition, and at the conference on the dwellings of the labouring classes, held at the instance of the Council of the Society of Arts in May last, the meeting came to the resolution that the Legislature might procure better dwelling-places for the poorer classes by, among other steps, "the improvement of the Lodging-house Act, as regards provision for sanitary purposes, and giving greater power to inspecting officers." Very large numbers of houses in the business centres of London, tenanted by the poor and the industrious classes, have been destroyed, not only for railways, but to give place to warehouses, printing establishments, offices, and such like; and although, knowing the miserable nature of many of these places—their total unfitness for occupation—I cannot, as some do, deplore this removal in an unqualified manner, it must be urged as a cogent reason why efforts should be made to supply fresh homes of a better character. Several large structures to be let in lodgings are in progress at this time in the metropolis, at the cost of the Corporation of London, the Peabody trustees, and other bodies, and will do some little towards supplying the want, but very little as compared with the magnitude of the population to be dealt with. In the meanwhile the old houses remain unimproved, and capitalists and speculators find it pays better to erect houses for another class. Among the causes that contribute more or less to this evil is the unequal manner in which parish rates are levied in different parts of the metropolis and elsewhere. Moreover, in places where a high levy is made, capitalists and speculators are even less disposed than elsewhere to erect such buildings as are needed, although it is in such localities they are more particularly required. Mr. Godwin then referred to the overcrowding that prevails in workshops, schools, barracks, and ships; and urged that the protecting supervision sought for ought not to be confined to dwelling-houses.

Great Budworth.—The late annual meeting of this Society was presided over by Sir H. Mainwaring, Bart., who congratulated the Society on the show, for he was informed that the dairy stock had been remarkably good. The milking cows were more to his mind than the animals he saw at the Knutsford show. With regard to the prize bulls he had seen, he congratulated the owners upon winning the prizes, but he should have congratulated them more on the prospect of getting rid of such animals. Short-horns were not suited to Cheshire dairy farms. He would like to say a word or two in reference to what was said at the dinner at Crewe last year, and at which several gentlemen had taken offence. It was not his intention to have offended any person; but Mr. France, of Bostock, in a speech he made at Middlewich last autumn, found

fault with what he had said about farmers' accounts, remarking that he had no business to pry into farmers' accounts, and he advised farmers not to let him see them. Now he was the last person in the world who would wish to pry into farmers' accounts; what he complained of was, not of the manner in which they kept accounts, but that they did not keep accounts at all. He asked one farmer what he paid for labour? what his horses cost him? how much for insurance? and such matters; and the man confessed that he did not know. His grievance was, that farmers kept no accounts at all. He had also offended Mr. Rigby, and Mr. Dutton was so savage as to say that he ought to speak on subjects that he understood; and he had grieved Mr. Cliff because he had stated that farmers were 25 years behind manufacturers. He never said anything of the sort—what he stated was that farmers were 35, not 25 years behind manufacturers. And so they are. At one time the landed interests—the owners and occupiers of land—had all the railways under their own thumbs. But they neglected the opportunities they then had. They sold shares at 100*l.* that are now worth 500*l.* Had they, as they might have done, kept the railways in their own hands, the farmers of Cheshire might have supplied all Warwickshire with Turnips, and might have taken them from Hartford to Rugby for 3*s.* per ton, instead of paying 23*s.* per ton. Then Mr. Stelfox, of Comberbach, had said that he had done his best, but for the life of him he could not grow Rushes! All he (Sir Harry) could say was that he liked a cheese got upon rushy land rather than on Clover land. He had also offended the *Agricultural Gazette*, which had declared that he was against sewerage, ploughing, and all matters of that sort. And so he was. Colonel Wilson Patten, too, had taken him up for saying, at Knutsford, that sheep farming in Cheshire was all nonsense; but he would allude to that subject presently. It was said in the *Saturday Review* some time ago, that the farmers of England did not make the percentage on their capital and industry, equal to other traders, and such as they deserved, from the very great risks they run, from the climate, vermin, and other causes. This he attributed to three of the great curses of Cheshire, draining, boning, and broad-breasted bulls. They must bear in mind that he was speaking of Cheshire farmers as they are; not as they will be. There will be a wide difference 50 years hence. Take the subject of draining. A man takes a farm of 100 acres, and tells his landlord he must have it drained. The landlord drains it, and then charges the tenant an additional rent of 6*s.* per acre for his drainage; whereas he ought to have done it for 2*s.* per acre. He (Sir Harry) considered that tenant farmers were badly used. He knew an instance of this near Sandbach, where the tenant now wishes all the draining tiles back in the kiln whence they came. Cheshire naturally is the best drained county in England. There is a natural fall in every field. He saw a drain in Cambridge the other day with only 4 inches of fall in a mile. All that the Cheshire farmer has to do is to put a few tiles down here and there, and the land will drain itself. Any one travelling from Brereton Green to Knutsford, crosses no less than eight streams in 10 miles. The land is naturally drained. He granted that it might be impossible to drain tillage land too much, but Grass land in Cheshire was not only drained too much, but at double the expense to the tenant it ought to cost. He was with a gentleman the other day who had drained "comprehensively," as he termed it, and he asked him whether he was aware which way the fall ran? He replied that "It ran into a brook down there," (pointing to the place); but when asked whether he knew which way the brook ran, whether towards the Weaver or the Bollin, he confessed that he did not know. Now, if that man had been living in a flat country, he would very soon have known which way the brook ran. Then having drained his land, he must bone it, according to the fashion, at 8*l.* per acre, whilst lime and soil, which are far superior to bones for pasture land—not for tillage land—would cost him not more than 30*s.* per acre. Bones are all very well for tillage land, but lime and soil are far superior for pastures, and far better for the cheese tub. Bones destroy the natural Grasses of the county—the rich, luscious Grasses; and the evil effect is that a crop of inferior Grasses follows, which are not to be compared with the old Grass either in quality or quantity, and the stock fall off in their yield. The farmer then wants more stock. Perhaps he purchases Short-horns at 18*l.* apiece, and then he goes to his landlord and wants his farm buildings enlarged, for which he has to pay an additional rent of say 7½ per cent. Thus he is burdened with drainage at 6*s.* per acre; boning at 8*l.* per acre, and 7½ per cent. on extravagant buildings; and then he becomes possessed of a "white elephant," which like its oriental prototype eats up its owner. Those charges coming upon the tenant in the shape of rent, draw down upon him the income-tax commissioner, who says, "You pay so much rent, never mind what it comes from;" 7*d.* in the £ is put upon him, and in the end come those gentlemen who seem to have been specially selected for their incapacity—the Parochial Assessment Committee. When in possession of his "white elephant" he plunges into tillage. He has already failed in making either Cheshire, Stilton, or Cheddar cheese, so he tries his hand at tillage farming. He grows corn, and gets machines, and sells Wheat worth not more than 4*s.* a bushel. Such was the farming they had in Cheshire. He was not referring to strong-backed farmers, such as there are in Aston, Budworth, and High Leigh; he alluded to the bulk of Cheshire farmers, and contended that their farming did not allow them to purchase implements. How therefore could they compete with men who can afford to purchase implements? There is a cry that a great change has come over Cheshire farming; and so there ought to be if the best milking cows are those that have never had calves; that the land tenure required great alteration; that all the farms in the county would fall into the hands of a few holders; and that steam power would do much to accomplish this. With regard to sheep farming, he would read an extract from the letter he addressed to Colonel Wilson-Patten in reply to one from him on sheep farming. He said:—

"Dairy farming and sheep farming, however well the land be drained, will not do together. A farmer, such as he is in Cheshire, knows nothing of sheep—nothing as to their age or diseases, or that dreadful scourge the foot-rot, which prevails in Cheshire in spite of draining tiles. He cannot have money at both ends. If he has a good crop of lambs in the spring, he cannot have a good crop of cheese in the autumn. He knows not how to buy sheep, and he must change his flock every October. Cheap sheep are ruinous. The sliding scale must prevail in sheep-farming: as is the rent of land, so must be the price of sheep—land at 40*s.* per acre, sheep at 40*s.* each. I knew a farmer in Yorkshire who some years ago gave 40*s.* each for 100 ewes in October. He hired two tups at 10*l.* each for the season. At lambing time, the ewes were put on seeds with chaff, Mangels, and cake. At weaning time the lambs, 125 in number, were put on Rape, seeds, and Turnips, with hay and cake; and I saw them sold in York market, when they were about 13 or 14 months old, at 76*s.* each. Their fleeces were on, of course; but wool at that time was only 13*d.* per pound. Sheep farming in South Lancashire and Cheshire might if so managed, pay: but then the climate is against us, and if the winter was open and wet the loss of lambs would be great. And I ask you, Do you think that our Lancashire and Cheshire farmers, such as they are, are competent to farm in this manner; are they not better suited for dairy farming? Of course there are exceptions. There are strong-backed men living on the dry lands in our counties who may play with sheep-farming if they like it; but I do not think that you will, with all the characteristic shrewdness which the *Times* attributes to you and praises so highly, persuade, and I hope you will not succeed in persuading, our farmers to adopt sheep farming, even though the land be highly drained, and wool 2*s.* 6*d.* per lb."

He (Sir Harry) regarded draining, boning, and broad-breasted bulls, as the three great curses of Cheshire. The other three are tillage, sheep farming, and breeding hunters. When a Cheshire farmer takes to breeding hunters he must be very low indeed. He never desired Cheshire farmers to give up draining and boning altogether; what he would say was,—Drain mildly, put bones on tillage land, and lime and soil on pasture; and then he would promise them a long-horned bull if there was one to be found in the county of Lancashire. In conclusion he would ask,—How is a farmer to meet these large annual out-goings, viz.—6*s.* per acre for draining; 8*s.* per acre interest on bones; and 7½ per cent. for additional buildings. It is certain that his Short-horn cows, though giving plenty of milk, produce at the utmost only 2½ cwt. of cheese in the year, which will neither meet the large outlay, nor give him such per centage as he ought to have and as he deserves to have. It is equally certain that neither corn farming nor sheep farming will help him. He (Sir Harry) should be glad if any gentleman would give them an idea or plan by which these costs may be met.

Mr. WARBURTON (the Patron of the Society) proposed in complimentary terms the health of the President, to which Sir HARRY MAINWARING briefly replied.

The CHAIRMAN said their proceedings were about to be agreeably diversified by the singing of a song by Mr. Tomkinson, who would give them some verses that had special reference to what he (Sir Harry) had been talking about.

Mr. Tomkinson then sang, amid much merriment, the following verses from the humorous pen of the Patron of the Association:—

SONG OF THE RUSH.

At Peover one day, as tradition discloses,
An infant was found in the water, like Moses;
In Rushes wrapp'd up, as you wrap a cream cheese,
Afloat in his cradle, he slumber'd at ease.
Fine old Rushes, fine old Rushes;
Stick to green Rushes wherever they grow.

To the Hall he was taken, and nurtur'd with care;
"Green grow the Rushes," his lullaby there;
When the nurse would the cry of this baby boy hush,
She had only to tickle his face with a Rush.

At Peover they fed him on cheese old and prime,
So a mighty man there he became in due time;
To prove that the tale which I tell is no myth,
When he speaks you will find him a man of much *pith*.

Says he, "My good friend, the advice that I give,
Is to stick to green Rushes as long as you live;
You may follow my counsel or not, as you please;
But if not, you will ne'er make a good Cheshire cheese!"

Much mistaken are they who consider him slow;
His crotchets as fast as a river stream flow;
Wrong ways to condemn, and false notions to crush,
When he comes down upon us, he comes with a *rush*!

There is nothing so cheap as to farm in his style;
'Tis a culture that needs neither bone-dust nor tile;
A green crop that grows without labour, and tends
To produce the lean kine he so much recommends.

A bird in the hand is worth two in the bush—
Worth two is one acre well covered with Rush—
And a bull fed on Rushes, depend upon that,
Is worth more for the dairy than three that are fat.

We all have our tastes, and we know that friend Dutton
Prefers a rook pie to a roast leg of mutton;
So at Peover's old pasture each cow, it is said,
Would rather on Rushes than Clover be fed.

Some think themselves mighty fine fellows indeed
When they win the first prize for an overgrown Swede;
But we need not to Sweden for Turnip seed go,
So long as green Rushes in England will grow.

Testimonials are now quite the fashion we know;
I will tell you the one we intend to bestow;
That he still may continue to guide us aright,
We have brought him a lantern to hold his *rush-light*!

Long life to Sir Harry, the farmer's best friend;
May our riches increase as our Rushes extend;
And whenever he dines at Big Budworth, take care
That the landlady gives him a *rush-bottom'd* chair.

The laughter with which the above lines were received having subsided, a short discussion ensued on "The Tenure of Land in Cheshire." On a call from the chair,

Mr. DUTTON said he had neither given notice of his intention to take part in any discussion on the Tenure of Land in Cheshire, nor was he prepared to enter into a debate upon it, but since he had been requested to introduce the subject, he would just observe that his notion was that the tenure of land should be regulated in such a manner as was calculated to lead the farmers to a better state of things; and one of the principal stepping stones to that was a good understanding between landlord and tenant. Such meetings as the present one had an admirable tendency to secure that result. Another question connected with the tenure of land was, whether leases, annual agreements, or short terms are best? And also the nature of the covenants.

These matters ought to be looked at from both sides. Tenants are apt to look at them from one point of view, and landlords from another; and having supposed antagonistic interests, it was not easy to reconcile them; but in approaching the question they should not look through the tenant's glasses, nor through the landlord's spectacles, if they would form a correct and unbiassed opinion. In the first place the landlord let his lands in the belief that the tenant is capable of improving it; then came the question, how to protect the tenant in the embarkation of his skill and his capital. The question of rent ought to be settled by mutual agreement—giving equal protection to the landlord and the tenant, for justice never can be done without some scheme that shall combine these two points. Then arises the question, Can this be accomplished best by lease or equitable annual agreements? As a rule—he would not say universally—leases are undesirable. The landlord's interest could not be fairly protected under a long lease. It was impossible to tell what changes might take place in reference to the property. It might be desirable to throw it into the market; and what was the position of property sold under a long lease?—invariably, it never fetched within 25 per cent. of its actual value. But the chief objection to long leases was that, as a rule, the tenant spends the first half of his term in laying as much out on the farm as possible; and during the latter half he applies himself to getting as much out of the land as he can. In all annual agreements, there ought to be a clause giving the tenant compensation for unexhausted improvements. He disliked all catchpenny clauses; nothing ought to be introduced that was not absolutely necessary for the protection of both interests. He would strike out all such clauses, and let the tenant have his fling—not as Sir Harry said, namely, applying all his bones to tillage land; but putting bones on Grass land and manure on the tillage. He, Mr. Dutton, agreed with the hon. baronet that there was a good deal of land in Cheshire that it would be undesirable to plough. With Wheat at 6*s.* per bushel, the farmer holding stiff clay land cannot make much profit by bringing it under the plough. On such land they had better keep the Grass uppermost. But chief of all, each side should observe a strict and honourable fulfilment of the covenant agreed upon between them, and whatever the terms are, they should be in black upon white. He did not like word-of-mouth agreements. If the tenant violates his covenant, he deserves to be punished; and the landlord equally deserves to suffer if he does not honestly and faithfully act his part. One of the best things which the Manchester and Liverpool Agricultural Society—which had more funds in hand than it could spend—could do, would be to offer a liberal premium to the tenant farmer who, on quitting his farm, leaves it in the best condition.

Mr. C. GARFIT, on a call from the chair, said he agreed with most of what Mr. Dutton had said; the great point was to create a feeling of confidence between the two sides. He agreed with the introduction of clauses giving the tenant compensation for unexhausted improvements. Annual tenancies were, to his mind, better than long leases, both for the landlord and the tenant. A farmer, for instance, takes a farm on a 14 years lease. The time soon passes away, and at the end of the term, the landlord naturally expects that the agreement is at an end, and that he has a right to send a disinterested farmer on the land to make a new valuation for the purposes of a fresh rental. It may be that owing to the energy and enterprise of the tenant, the farm has much improved during that time; whilst over the hedge may be another farm held on lease for the same period, but being in the hands of an indolent holder, has just as much deteriorated as the other has improved. The same valuer goes over both farms—one is rented at the same sum it was let at before; whilst the well-managed farm next door has an increased rental of one-third put upon it, which of course is a benefit to the landlord, but it is a tax upon the tenant's industry. Annual tenancies are much more satisfactory than leases, particularly when there no confidence between landlord and tenant. The tenant ought to be allowed for both boning and draining, when the claims for those matters come in the shape of unexhausted improvements; if this was faithfully observed as an universal rule, tenants would never be backward in laying out capital on their farms.

The CHAIRMAN said, in reference to the power which landlords and tenants had over each other, he knew instances in which that power had been abused. In the case of a tenant having notice given him on the 2d of August, he has full power over his landlord till the 2d of February, and he can plough up every inch of ground if he likes. [Mr. FAIR: No, no; the custom of the country would be against him.] He (Sir Harry) did not believe that any jury would give the landlord damages against his tenant in such a case. He knew an instance where a tenure of land was held from year to year, and without notice being given to the tenant to quit (although he paid his rent at Christmas) on the 27th of September he got a letter demanding payment of his rent on that day. Not being prepared, he omitted the rent; and the following day he got a letter from an attorney, and the day after the bailiffs were put in his house. Nothing could hinder any farmer who takes his land from year to year, from receiving on the 29th of this month notice to pay his rent on that day,—unless special proviso to the contrary was made in the covenant or agreement. He believed the whole tenure of land to be based on a wrong principle; and one of the results was that Cheshire was one of the worst farmed counties in England. The best farms were in Yorkshire and Nottinghamshire. In those counties, when a farm is taken everything is valued to the tenant, even to the gates; when he quits, the whole is valued again, and the tenant either receives or pays as the case may be; the result is that the best farming is the consequence. In Yorkshire, in the case of a farm changing hands, the tenant in possession

performs the ploughing at 8*s.* an acre, or he allows the incoming tenant to bring his horses and plough it; but he knew hundreds of instances in this county of farms being taken on 2d February, and when the incoming tenant brings horses to plough it, he cannot get stabling till 2d May. As to leases, he never saw a good lease yet; whether it was best to make them for 21 years or not, he really did not know.

This ended the discussion on the tenure of land, and the toast list was then continued.

Mr. Tomkinson sang "Taking it Easy."

Drainage in Cheshire.—The Vice-President, the Hon. A. Lascelles, in reply to the toast of his health, said it was difficult for a non-practical farmer to go over the same ground that had been travelled over year after year by men of science and experience. He would venture upon a new topic, and advert briefly to the principle upon which these associations act. He was inclined to think that they had had their day, and that another principle must either be added or supersede the one already followed. Hitherto the principle had been one of competition—it had made known their wants, and had supplied, in a great degree, an amount of scientific knowledge which they were all the better for. But in addition to this, or else in lieu of it, what was now wanted was co-operative associations, especially in the matter of draining in this county. Draining, he contended, ought to be carried on on a much larger scale. They executed their draining field by field, farm by farm, and estate by estate; whereas it should be carried out with the eye of an engineer, taking advantage of the natural falls of water and outlets, and combine in one system of drainage the most extended area they could practically get together, irrespective of fences, or farm boundaries, or estates; and by one co-operative plan, effect the drainage of the whole. Let the landlords and tenants of three or four townships adjoining each other, co-operate in draining the entire district upon some scientific principle. If one part of the country competed with another in the carrying out of a comprehensive scheme of that description, the spirit of competition might result in greater benefit than at present. A natural outflow ought to be made subsidiary to the drainage of a farm three miles off. At present natural out-falls are thrown away in making them merely sufficient for the drainage of a single farm, whereas by turning them to some engineering account, they might be made capable of draining a whole parish. One reason why, in spite of agricultural improvements, they had small crops in Cheshire was, because the draining was carried on on so small a scale. They drained their fields into a ditch at the end of their farms, and there the ditch remained a permanent necessity and a permanent nuisance. He was glad to see that Sir Philip Egerton was setting the example of draining on a new principle, with the ultimate idea of taking in a large area of land. Under the present system a farmer is liable to be swamped by his neighbour. The drainage of farm land should be carried out on a similar principle to what is followed in towns. In boroughs and towns they do not allow one man to drain his house on one plan, and another man in the same street to drain his house on another plan; but the drainage of every house and every street is effected upon one broad system, and so it ought to be with regard to farms. Economy and effectual drainage would be the ultimate result. So far from being an impediment to other improvements, such a system would be suggestive of them. The farmer going round his farm would find his ditches dry, and the first question that would occur to him would be, Of what use are they to me? He would also ask the same question respecting the great embankments growing nothing but Briar and Blackthorn, that disfigure some of the farms in this country; and he would not be long in discovering the advantage he would derive from filling up the ditches with the soil from the embankments, and turning to profitable account the land reclaimed in both instances. He (Mr. Lascelles) felt convinced that some such plan as the one he had suggested would be acted upon. The land had been handed down to them scored and mutilated by their remote predecessors, with deep irregular ditches filled with water, which runs round the four sides of one field and then empties itself into the next, and does the same there. He ventured to think that the only way of effectually remedying this, and placing the drainage of the country on a sound principle, was by the adoption of such measures as those he had brought before their notice. *Abridged from the Macclesfield Courier.*

Reviews.

Walsh's Patent Furze Machine. Pp. 8. "Reporter" Office, Drogheda.

Mr. Walsh has repeatedly called attention in our columns to the use of Gorse as food for cattle. He here describes the machine by which the Furze shoots are reduced to an edible pulp. It acts by a number of saw-tooth discs revolving in to one another. When made with two rollers it is called a single machine, when with four rollers it is termed the double machine, and is then worked by power. A number of testimonials to the efficiency of the implement are published from well-known and trustworthy correspondents—Mr. Dawson A. Milward of Tullogher, and the Rev. W. D. Fox among them are known to us—and their favourable testimony may be accepted as perfectly conclusive.

The following is Mr. Walsh's statement on the subject:—

"The operation of it is to tear up, and at the same time to crush and soften the stuff, so that the prickles are rendered inert, and the woody parts made more easy of mastication. Of the numerous contrivances which have from time to time been applied to the purpose, none has been found to act so effectually, and at so little cost, or with so little labour, as this one. All those hitherto in use have failed to give complete satisfaction from various causes. Some, because their inventors, fancying it necessary that the material should be reduced to a perfect pulp, have, to that end, constructed, very complicated and expensive machines. These, requiring a vast deal of power, wasted much time and superfluous labour to produce a result which was not called for, and in quantities not at all adequate to the expense. On the other hand, machines are much in use which are supposed to cut the Furze into ¼ or ½ inch lengths. These are inefficient, inasmuch as they do not soften the stuff, so that a subsequent operation by pounding or rolling becomes necessary, without which horned cattle cannot take it freely. In that rough state horses may eat it, but cows will not, unless starved into doing so. The machine now described meets all these objections, neither doing too much nor too little, besides possessing this great adantage—that it offers the facility of preparing the stuff to different degrees of fineness, according to the class of animals it is required for, by passing it through once, twice, or three times. For horses, whose mouths are harder, it is sufficient to pass it once. For cows and stores, it is found best to pass it twice, which process does not involve as much labour as would appear at first sight, as the second run takes only half the time the first one does. A third run only requires half the time that the second one does; this is recommended only for calves and sheep, and for fattening cattle in the stalls. The application of Furze to the fattening of cattle is rather a new feature in the cultivation of this plant, probably unknown to many; but the practice of the last few years has proved it to be a most important auxiliary for that purpose, not only as taking the place of more expensive food, but as contributing to increase the digestive powers of the animals, and to improve the quality of the meat. With 4 stones of Turnips, 2 to 3 stones of Furze, and the usual allowance of meal daily, beasts have been fattened to 7 cwt. in a much shorter time than under the usual treatment. Without a suitable instrument for its preparation, these results would never have been arrived at; nor could the valuable nutritive properties of the plant, as shown by the annexed analyses, and confirmed by practice, have been brought out. It is true that many people have long been using Furze for horses and cattle by means of the old appliances; but, by referring to the accompanying letters, it will be seen that some of the writers had been using the ordinary chaff-cutters, but now make use of this machine in preference. It is simple in its construction and operation. It can be attached to any horse gear, one-horse power being sufficient for the double one; but a two-horse one will give more than a proportional increase in the amount of work done. The single one can be worked by power as well. In the cultivation of Furze, great stress has been laid upon the importance of having the Furze grown close and thick, so as to cause the shoots to be drawn up and tender, and more easily masticated when cut by the chaff-cutter. With the new machine, this precaution is unnecessary, as it will reduce the coarsest and most stubborn shoots that may be brought to it. Where it was first made use of, nothing was to be had but strong shoots, cut by hand off hedge-rows and bushes, sometimes with stalks more than half an inch thick. Of these, the machine would easily prepare 4 cwt. in the hour, passing it twice. This is given as the average quantity done in regular work, for a much larger quantity has been done when special trials were made."

Analyses are given by Dr. Voelcker, Dr. Cameron, and Mr. Masters, of Belfast. Dr. Cameron's analysis in April, puts the water present at 78 per cent.; the woody fibre, 10; the nitrogenous portions at 2.18; and the starch, &c., at 8 2. Mr. Masters, analysing a sample in September, of no doubt drier and riper stuff, found only 57 of water, 22½ of woody fibre, 8 of nitrogenous matter, and 10 of starch. While Dr. Voelcker, who examined a very much drier specimen, found only 33⅓ per cent. of water, and as much as 17⅓ per cent. of nitrogenous matter.

Farm Memoranda.

Lawrence End, Hertfordshire.—We give the following detailed account of the farming of Richard Oakley, Esq., of Lawrence End, as an example of what may be done on heavy land by summer feeding and early folding.

The corn crops on this farm are very heavy: 10 quarters of Oats per acre after Wheat are often grown in a locality where half that quantity is the general average. We believe Mr. Oakley finds, under his system of high-feeding, that the Barley crop is getting too strong for quality. He will probably have to crop a little faster with corn.

Mr. Oakley writes—

"I have in my own occupation about 1200 acres, about 1000 acres of which are arable, chiefly a heavy loam; the rest, Grass of a poor, weak kind; but with liberal supplies of cake or corn I manage to fatten some well-bred, moderate sized Herefords, which greatly improves the Grass.

"My principal crops are Wheat and Barley; but I sow some 30 or 40 acres of black Tartarian Oats, top-dressed, after Clover-lea Wheat. I do not sow red Clover oftener than once in 8 or 10 years, substituting Trefoil to be fed off with sheep on cake or corn; the land ploughed up early in summer and sown with Rape (dressed with superphosphate), which is fed off by sheep with cake or corn in September or October, and sown with Wheat. I sow 20 or 30 acres of winter Tares on some of the strongest land for the horses, pigs, &c.; and, when they are off, the land is cultivated and laid up in ridges for Mangel in the following spring. This enables us to get the Mangel in early, whatever the weather may be. In April I begin to put in some early Turnips, with 3 cwt. of Lawes's manure, on some of the Wheat stubbles on the strongest land, sowing about 3 acres every fortnight. I do not risk sowing many acres together so early; for, although mildew seldom affects them, they become pithy if they are not eaten at the proper time. We generally begin them early in August. Some few acres are sown with spring Tares, for fear that keep for the lambs may run short before the Turnips are quite ready; these are eaten off with cake or Corn, and the land made a tilth for Barley.

"I put 300 Hampshire Down ewes to a Cotswold ram. They are now lambing, and the lambs born in February are weaned early in May and put on Trefoil, having the first run. Some store-sheep are put behind them to clean up what they leave. The ewes are fattened off every year. The lambs have cake or corn all the summer, and, until they go to market at 11 to 13 months old, shorn. I have already sent 130 to market, which sold from 48*s.* to 53*s.* each; these cut 8 lbs. of wool each. As soon as the ewes have lost their milk they are put on good keep and fattened off, and a fresh lot bought at Overton Fair on the 18th of July.

"Getting rid of my home-bred tegs so early, I am often enabled to buy in others advantageously in the early spring for summer-feeding; 50 of the best of the Down lambs so bought and kept to the age of 21 months, averaged last Christmas 5*l.* 3*s.* 6*d.* each. Mr. Slater, of Kensington, had 24 of them at 5*s.* 8*d.* per stone, which averaged 18 stone 2 lb. each.

"As to oxen, I put off two lots in the year, one from the Grass and the other from the yards. Forty or fifty well-bred polled Scots are bought at Barnet Fair in September, which run on the Grass till about 1st of November, when they are put into small, well-sheltered yards, 8 or 10 in each. They begin with 3 or 4 lb. of cake, and go up to 10 lbs. each. They have Clover-hay and Wheat-straw chaff cut together; 1 bushel of cut Swedes or Mangel and half a peck of ground Beans are mixed with the chaff. They are sold fat from April to June (according to the beef-trade) to some London butchers. Last year they weighed 115 to 130 stones, and made 5*s.* 4*d.* per stone.

"We put about as many store-pigs in the yard as there are oxen, which live chiefly on what the oxen drop. A polled Scot requires to be in yards 5 or 6 months to make him good, and will then have made manure enough to dress an acre of ground, and this I value at 4*l.* I generally have about 20 young Short-horns sent me from Durham in May: they are about 2 years old, very poor, and cost from 10*l.* 10*s* to 11*l.* 10*s.* They go behind the Herefords, eat up what they leave, and remain grazing about till Christmas if the weather continues open. They are then shut in yards, have a couple of bushels of cut Swedes or Mangels a day and ¼ peck of ground Beans mixed with Wheat-straw chaff until they are turned out for summer grazing, when they have either cake or corn with the Grass, and they generally go off about August. Last year they averaged a little more than 108 stones, at 5*s.* per stone.

"I paid last year (in addition to home grown corn)—

For cake and corn	£1130	6	0
For manures	269	18	0
	£1400	4	0

This was rather less than usual.

"I always endeavour to be beforehand with the work of the farm."

Mr. Oakley also grows early Rape in preparation for Wheat: 5 lb. or 6 lb. of seed are drilled, 14 inches apart, with 3 cwt. of superphosphate per acre. The crop is folded at 8 or 10 weeks old, when about 18 inches high, and while young and luxuriant. At this age the sheep eat it to the ground without waste. Lambs on Rape are supplied with Clover-hay chaff, even in the hottest weather, and soon eat it freely.

The land is frequently ploughed up after folding, and again sown broadcast and without dressing, and a second crop obtained in time for Wheat to follow.

Twenty or 30 acres of Beans are grown on this farm by way of change.

Another excellent manager of stock has adopted the following system with profit. He buys cows to calve in January or February; the calves remain with their mothers until both are fat in the following May twelvemonth. They are summered on Grass, and the cows get about 5 lbs. of cake daily, or rather less while the Grass is at its best. As soon as the calf robs its mother's trough more cake is given, and by November the calves get 3 lbs. of cake each daily, and this is soon increased to 4 lbs. or 5 lbs.; they are wintered on cut roots, cake and meal, and straw-chaff. By May the calves which have remained by their mother's side will weigh about 60 stones, and sometimes more, selling occasionally for 19*l.* at 15 months old.

On farms with good pasture the calves should fall in May; in summer they should be taken into yards with their mothers during the heat of the day, and kept in yards or boxes through the winter and sold to the butcher in June or July. Mangel and Lucerne are provided for late spring-feeding. This young beef is not of the best quality, but it is quickly and profitably made. Of course the calf must be highly fed from birth, and must receive no check. It may be said of this, as of most systems of feeding, "the grazier's eye is worth 4 lb. of cake a day."

The following mixture of food for fattening oxen has been used on a large scale with success.

2 cwt. of meal	½ sack malt coombs
1 ,, oilcake	8 sacks chaff
1 ,, pollard	3 lbs. salt

The composition of the meal varies with prices; at present it consists of

1 sack of Lentils	1 sack of Indian Corn
1 ,, Beans	1 ,, Oats

The chaff is one part of good hay, and two parts of the best straw.

The times of feeding, and the quantities for a large ox are—

7 o'clock, 7 lbs. of mixture.
10 ,, 1 bushel of roots.
3 ,, 7 lbs. of mixture.
5 ,, 7 ,, of hay for the night.
Two pails of water.

Journal of the Royal Agricultural Society of England.

Calendar of Operations.

OCTOBER.

Wester Ross: *Oct.* 4.—The harvest is all but complete over the whole north of Scotland, and finer harvest weather and the crop in-gathered in better condition we have never had. Fears were entertained that as the weather had been so long dry a change might speedily come, and an untoward season set in; but all such fears were disappointed, and the harvest has been completed amidst much rejoicing. The crop, however, is of less bulk than it has been for several years, although the shortcoming in grain will not by any means be equal to the deficiency in straw. Wheat generally was somewhat thin, but is well eared, and will thresh satisfactorily. The principal

short-coming both in corn and straw will be in Oats, but the grain is in good condition and the straw of fine quality. The crop was admirably adapted for being cut by the reaping machine, as there was scarcely a laid patch to be met with, and the large number of new machines introduced this year gave great satisfaction. This farm is so steep and hilly that it is unsuitable for the reaper, and consequently it was cut once again in the old way. The crop being light and the weather fine, the time spent in harvest work was short and the expense unusually small. On Monday August 29, eight scythemen began to cut 100 acres of Wheat, Barley, and Oats, and in 11½ working days the whole was in stook, being about 1¾ acres cut by each scytheman per day, and in 5½ days additional the whole crop was safely stacked; the harvest thus occupying 17 days. The harvest season, however, extended over four weeks, seven days of which were not occupied with purely harvest work. The wages given to the people employed were the same as last year, viz, 3*s.* per day to scythemen, 2*s.* 6*d.* to binders, 1*s.* 9*d.* to gatherers, and 1*s.* 2*d.* to rakers. The whole cost of cutting, binding, gathering, raking, stacking, and thatching was 26*l.*, or 3*s.* 3*d.* per acre. The wages of half-year servants are not included. So far as harvesting expense is concerned it would be vain to change this mode for any other, but we are satisfied that where the crops and the ground are suitable the reaper makes incomparably the better work, and ultimately the more economical. Although our stackyards are more scantily filled than usual, our prospects of winter keep are considerably brighter than those of our English brethren. Our Turnips have greatly improved of late, and promise to be an average crop. We are yet so scant of rain, that the green crop lot is turning up dry as ashes, and the leas presently cannot be broken up for Wheat.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Barometer corrected to Freezing Point at Mean Sea Level.	Reading of Thermometer. Dry Bulb.	Wet Bulb.	Wind. Direction.	Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	Oct.	Inches.	°	°				°	°	°	°	Inches.
Friday	7	30.25	53	51	E.	1	7	60	42	67	30	..
Saturday	8	30.23	57	53	E.	3	1	62	35	76	25	..
Sunday	9	30.19	56	51	N.E.	2	9	59	49	69	44	..
Monday	10	30.26	54	51	N.	2	8	56	46	66	42	..
Tuesday	11	30.38	49	45	N.	1	1	55	46	62	38	..
Wednesday ..	12	30.30	52	50	N.	0	10	56	46	67	42	0.00
Thursday	13	30.12	53	50	N.W.	2	10	58	50	67	48	..

Notices to Correspondents.

BOOKS: *B C D.* Young's "Farmers' Calendar" (Routledge) 10*s.* "Handbook of Farm Labour and Handbook of Dairy Husbandry" (Longmans) 1*s.* 6*d.*

CATTLE MELON.—Will "M. S." who wrote about Blundell's Cattle Melon in page 809 of the *Gardeners' Chronicle* of August 20, be good enough to give us his address.

GAS WATER: *Derwent* asks what solid matter is best to receive gas-water, in order that it may be applied as compost to the land. Any vegetable matter, loam or rotting vegetable fibre of any kind, which on putrefaction will yield food for plants, will answer the purpose. But as he has in the Grass land itself to which he applies it, just the vegetable mould to which it is thus proposed to apply it, the best plan will be to apply the gas-water sufficiently diluted directly as a liquid manuring to his pasture.

OATS: *Dublin Steward.* 10 to 15 lbs. of bruised Oats daily; an ample allowance with hay for a powerful carriage horse in constant work.

SCAB IN SHEEP: *W. Lewis.* It is analogous to the mange, and is essentially owing to the presence of minute insects called *acari*, which burrow under the skin and produce excessive irritation.

SOUTH AMERICAN MANURE: *Old Subscriber.* We should look with extreme distrust on any offer of a recipe for the manufacture of a manure. Read Mr. Lawes' writings, and those of your own countryman, Mr. Moule, of Dorchester, and you have then all the information on the wants of plants and the manufacture of manure that any advertiser can give you.

SOWS FARROWING: *J R B, Leyton.* The most probable cause of the abortion of the sows is from their eating the old stems of the Rye grass, which they find in the large pasture of which they had the range. This Rye-grass is often affected with ergot, which powerfully excites the uterus or womb. It should be mown. *W. C. S.*

PORTABLE HOT-WATER APPARATUS,

WITH TRUSS'S PATENT JOINTS FOR HEATING CONSERVATORIES, HOTHOUSES, &c.

T. S. TRUSS

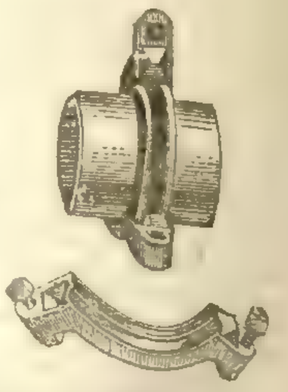

Begs to offer complete HOT-WATER APPARATUS for GREENHOUSES (consisting of 4-inch Pipes and Joints, Saddle Boiler, Fire Doors, Bars, Soot Doors, Damper, Supply Cistern, Feed and Air Pipes, Pipe Stands, &c., of the best quality), delivered to any Railway Station in England, and to erect the same within 25 miles of London, at the following prices:—

TWO 4-INCH PIPES ALONG ONE SIDE AND ONE END OF HOUSE.

Size of House.	Apparatus complete.	Erection.	Size of House.	Apparatus complete.	Erection.
16 feet by 8 feet	£8 10 0	£2 0 0	30 feet by 12 feet	£11 15 0	£2 10 0
20 feet by 10 feet	8 17 6	2 0 0	40 feet by 15 feet	15 0 0	2 15 0
25 feet by 12 feet	10 5 0	2 5 0	50 feet by 15 feet	18 0 0	3 0 0

Erections beyond 25 miles of London, Railway Free for one Man charged extra.

By the use of these Joints the Apparatus is easily altered or removed without injury to either Pipes or Joints.

Estimates and Plans forwarded on application to

T. S. TRUSS, C.E., 53, GRACECHURCH STREET, LONDON, E.C.

ST. PANCRAS IRON WORK COMPANY,

OLD ST. PANCRAS ROAD, LONDON, N.W.

BY ROYAL LETTERS PATENT.

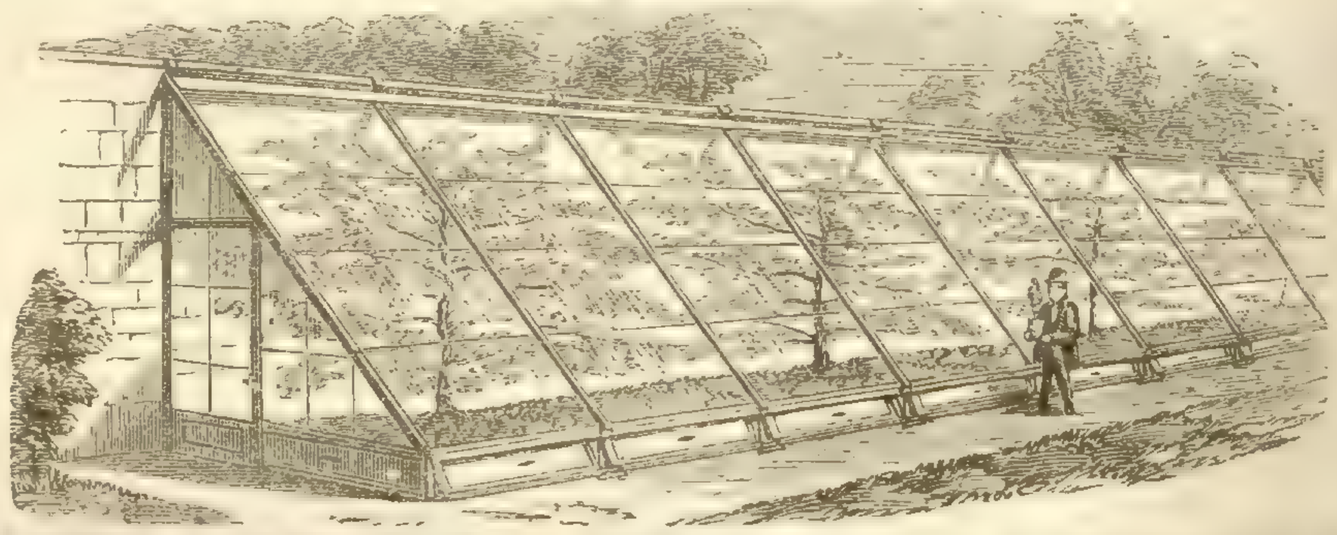

SCOTT'S GLASS WALLS AND ECONOMIC GREENHOUSES.

Designed to meet the suggestions of JAMES SCOTT, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES GREENHOUSES HOTHOUSES	PINE and MELON PITS VASES VERANDAHS	BALCONIES IRON SASHES IRON HURDLES	GATES TANKS HOT-WATER WORKS

PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. Lists Free.

ST. PANCRAS IRON WORK COMPANY, OLD ST. PANCRAS ROAD, LONDON, N.W.

GRANT'S PORTABLE RAILWAY.

MANURING A FIELD BY GRANT'S PORTABLE RAILWAY,

Which is also adapted for clearing Root Crops off Wet Land, carrying Corn, and all kinds of Field Carting, and will be found to afford an immense saving over all kinds of Barrow work where the runs are long.

MANUFACTURED by the PATENTEE, J. GRANT, LINTON, KENT,

of whom full particulars may be obtained.

N.B. For particulars of the Wheat carrying on the 19th of August, 1864, see Correspondence in the *Gardeners' Chronicle*, &c., between Mr. W. L. Hubble, Steward to H. Bannerman, Esq., and the Editor, August 27, p. 830, September 10, p. 881*a*; and September 24, p. 927*a*.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens. A DESCRIPTIVE and PRICED CATALOGUE post free on application.

Paradise and Victoria Nurseries, Holloway, London N.

TWO NEW FIMBRIATED PRIMULAS.

Seed Packets, 2s. 6d. and 5s. each.

PRIMULA CARMINATA SPLENDENS, a beautiful new coloured one.

P. FILICIFOLIA (Fern-leaved).

See other Advertisements of the older kinds of fimbriated Primulas.

E. G. Henderson & Son, Wellington Nursery, St. John's Wood, London, N.W.

New Hardy British Ferns.

J. IVERY AND SON have the pleasure to offer the three undermentioned distinct and beautiful varieties, in good plants, showing their true characteristic forms, 10s. 6d. and 21s. each.

POLYSTICHUM ACULEATUM ACROCLADON,
ATHYRIUM FILIX-FŒMINA MUCRONATUM,
" " " GLOMERATUM.

(They have each received First-class Certificates from the Roya Horticultural Society, and Royal Botanic Society.)

Likewise ATHYRIUM FILIX-FŒMINA PARSONSIÆ, VERNONIÆ, and FISSIDENTO-EXCURRENS at 5s. each.

Dorking, Oct. 22.

Vines—Extra Extra Strong.

FRANCIS AND ARTHUR DICKSON AND SONS have now ready for sending out some 1500 extra-fine well-ripened VINES of all the new and leading kinds, True to Name. Many are as thick as the "little finger." A better lot of Vines they believe were never grown. Inspection invited. Price from 3s. 6d. to 15s. each, according to kinds and strength. List of kinds on application.

"Upton" Nurseries, Chester.

Vines, Vines—extra strong.

J. MEREDITH, The Vineyard, Garston, near Liverpool, begs to inform the public that he has a very fine stock of VINES of various sizes, both for planting out and fruiting in pots. The wood is thoroughly ripened, so that they may be forced early if necessary. The stock has been propagated from the Vines that produced the fine Grapes which have been so successful for the last four years at the London and Liverpool Exhibitions.

FOR SALE, of the finest quality.—
APPLE PIPS, clean, from choicest Devon fruit, produces finest Cider and hardy culinary fruit, and is the most lasting stock.
HOLLY BERRIES, sound and clean.
DAMASCENE PLUMS, fine young bushes for planting out; or for grafting at once.
SLOES or BLACKTHORN, clean.
ASPARAGUS ROOTS, fine, 2-years old.

Prices &c., on application to Robert H. Poynter, The County Seed Establishment (A.D. 1800), Taunton, Somerset.

CARTER'S GARDENER'S VADE-MECUM.

New Pelargoniums for 1864.

B. S. WILLIAMS has much pleasure in announcing that he has been again entrusted with the distribution of Beck's NEW and CHOICE VARIETIES for this season, and that he will be prepared to supply strong plants the end of this month.

A DESCRIPTIVE CATALOGUE of which, with Select Lists of other choice Show, French and English Spotted and Fancy Pelargoniums, will be published in a few days and forwarded to all previous customers and applicants.

Paradise and Victoria Nurseries, Holloway, London, N.

American Plants.

As Exhibited in the Royal Horticultural Gardens, Kensington.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE of RHODODENDRONS and other AMERICAN PLANTS will be forwarded on application. The Catalogue also gives a General Summary of their Stock, which contains probably the most extensive choice of all the Hardy and finest Evergreens and Conifers.

Knap Hill Nursery, Woking, Surrey.

RICHARD SMITH'S FRUIT LIST contains a sketch of the various forms of Trees, with Directions for Cultivation, Soil, Drainage, Manure, Distance, Pruning, Lifting, Cropping, Treatment under Glass; also their synonymes, quality, size, form, skin, colour, flesh, flavour, use, growth, duration, season, price, &c. Free by Post for one stamp.

Richard Smith, Nurseries, Worcester.

STRAWBERRIES: British Queen, Admiral Dundas Eleanor, Oscar, Wizard, 15s. per 1000; Black Prince, Elton Pine Carolina Superba, Prince of Wales, Sir Charles Napier, Victoria, Sir Harry, and Wonderful, 2s.

GOOSEBERRIES: Crown Bob, Warrington, Whitesmith, strong bearing plants, 16s. per 100. SEAKALE. &c.

Geo. Cornwell & Co., Seedsmen, &c, Barnet, Herts, N

STRAWBERRIES for present planting that will produce a fine crop. Established in small pots, or suitable for potting on for Orchard-house culture:—

BRITISH QUEEN	OSCAR
EMPRESS EUGENIE	PREMIER
FROGMORE LATE PINE	PRESIDENT
KEEN'S SEEDLING	PRINCE ARTHUR
LA CONSTANTE	SIR CHARLES NAPIER
MARGUERITE	SIR HARRY

Price 10s. 6d. per 100; turned out of the pots, 9s.

Francis R. Kinghorn, Sheen Nursery, Richmond, S.W.

ROYAL HORTICULTURAL SOCIETY.

FRUIT AND VEGETABLE SHOW,

WEDNESDAY, OCTOBER 19, 1864, and TWO FOLLOWING DAYS.

AWARDS OF THE JUDGES.

FRUIT.

Class I.—PINE APPLE, QUEEN.

Mr. B. Mobbs, Gr. to W. B. Tyringham, Esq., Newport Pagnell, Second-class Certificate

Class II.—PINE APPLE, any variety except Queen.

Mr. T Ingram, Gr. to Her Majesty the Queen, Frogmore, Windsor, First-class Certificate

Mr. J. Jefferson, Gr to W. J. Gurside, Esq., Carlton House, Worksop, Second-class Certificate

Mr. S. Ford, Gr. to W. E. Hubbard, Esq., near Horsham, Sussex, Third-class Certificate

Class III.—GRAPES, WHITE, any variety, 3 bunches.

Mr. H. Meads, Gr. to R. Currie, Esq., Farnborough, Hants, First-class Certificate

Mr. A. Ingram, Gr. to J. J. Blandy, Esq., Reading, Second-class Certificate

Mr. J. Pottle, Gr. to B. D. Colvin, Esq., Little Bealings, Woodbridge, Suffolk, Third-class Certificate

Class IV.—GRAPES, BLACK, any variety, 3 bunches.

Messrs. H. Lane & Son, Nurserymen, Great Berkhampstead, Herts, First-class Certificate

Mr. J. W. Potts, Gr. to M. Philips, Esq., Stratford-upon-Avon, Equal Second-class Certificate

Mr. W. Meads, Gr. to R Currie, Esq., Farnborough, Hants, Equal Second-class Certificate

Class V.—APPLES, Dessert, 6 dishes, distinct kinds.

Mr. S Ford, Gr. to W. E. Hubbard, Esq., near Horsham, Sussex, First-class Certificate

Mr. T. Ingram, Gr. to Her Majesty the Queen, Frogmore, Equal Second-class Certificate

Messrs. G. & J. Lane, Nurserymen, St. Mary's Cray, Kent, Equal Second-class Certificate

Mr. G. Buster, Goring, near Worthing, Sussex, Third-class Certificate

Class VI.—APPLES, Dessert, 3 dishes, distinct kinds.

Mr. S. Ford, Gr to W. E. Hubbard, Esq., near Horsham, Sussex, First-class Certificate

Mr. Wm. Hall, Gr. to Captain Tyrrell, R.N., Fordhook, Ealing, Second-class Certificate

Messrs. G. & J. Lane, Nurserymen, St. Mary's Cray, Kent, Third-class Certificate

Class VII.—APPLES, Kitchen, 3 dishes, distinct kinds.

Mr. Geo. Scrymger, Gr. to R. Palmer, Esq., Holme Park, Reading, First-cla s Certificate

Messrs. G. & J. Lane, Nurserymen, St. Mary's Cray, Kent, Equal Second-class Certificate

Mr. W. Lee, Gr. to F.-M. Viscount Combermere, Whitchurch, Salop, Equal Second-class Certificate

Mr. J. Sayers, Gr, to E. Ellis, Esq., Clay Hill House, Epsom, Equal Third-class Certificate

Mr A. Moffat, Gr. to Viscount Maynard, Dunmow, Essex, Equal Third-class Certificate

Class VIII.—PEARS, Dessert, 6 dishes, distinct kinds.

Mr T. Ingram, Gr. to Her Majesty the Queen, Frogmore, Windsor, First-class Certificate

Mr. G. Scrymger, Gr to R. Palmer, Esq., Holme Park, Reading, Second-class Certificate

Mr. A. Ingram, Gr. to J. J. Blandy, Esq., Highgrove, Reading, Third-class Certificate

Class IX.—PEARS, Dessert, 3 dishes, distinct kinds.

Mr. Geo. Sage, Gr. to Earl Brownlow, Ashridge, near Great Berkhampstead, First-class Certificate

Mr. S Ford, Gr. to W. E. Hubbard, Esq., near Horsham, Sussex, Second-class Certificate

Mr. Wm. Lee, Gr. to F. M. Viscount Combermere, Whitchurch, Salop, Equal Third-class Certificate

Mr. Wm. Willcocks, Gr. to S. M. Aynsley, Esq., Underdown, Ledbury, Herefordshire, Equal Third-class Certificate

Class X.—PEARS, Kitchen, 3 dishes, distinct kinds.

Mr. H. Bentley, Gr to Lord St. Leonard's, Thames Ditton, Surrey, First-class Certificate

Mr. C. Hadden, Esq, Rossway, near Great Berkhampstead, Second-class Certificate

Mr. J. Masters, West Hill, Highgate, Third-class Certificate

Class XI.—PEACHES, single dish.

Mr. T. Ingram, Gr. to Her Majesty the Queen, Frogmore, Windsor, First-class Certificate

Mr. W. J. Ward, Headington Hill, Oxford, Second-class Certificate

Class XII.—PLUMS, single dish.

Mr. B. Mobbs, Gr. to W. B. Tyringham, Esq., Newport Pagnell, First class Certificate

Mr. J. Sayers, Gr. to E. Ellis, Esq., Clay Hill House, Epsom, Second-class Certificate

Mr H. Beasley, Gr. to T. Wood, Esq., Twyford Abbey, W., Equal Third-class Certificate

Messrs. H. Lane & Son, Nurserymen, Great Berkhampstead, Herts, Equal Third-class Certificate

Class XIII CURRANTS, single dish.

Mr George Tivey, Gr. to Lionel Ames, Esq., The Hyde, St. Alban's, First-class Certificate

Mr. S. Ford, Gr. to W. E. Hubbard, Esq., near Horsham, Sussex, Second-class Certificate

Mr. T. Ingram, Gr. to Her Majesty the Queen, Frogmore, Windsor, Third-class Certificate

Class XIV.—FIGS, single dish.

Mr. J. Sayers, Gr. to E. Ellis, Esq., Clay Hill House, Epsom, First-class Certificate

Mr. W. Rogerson, Gr. to E. B. Browne, Esq, Hanger Lane, Acton, Second-class Certificate

Class XV.—RASPBERRIES, single dish.

Class XVI.—MISCELLANEOUS.

Messrs H. Lane & Son, Nurserymen, Great Berkhampstead, Herts, Collection of Cut Grapes, First-class Certificate

Mr. J W. Potts, Gr. to M. Philips, Esq., Stratford-upon-Avon, for 1 Dish of Oranges, First-class Certificate

Mr J. Williams, Gr to the Hon Mrs Ives, Bentworth Hall, Alton, for a Basket of Citrons, First-class Certificate

A. Ingram, Gr. to J. J. Blandy, Esq, Highgrove, Reading, for Fruit of Eugenia Ugni, Second-class Certificate

FRUIT.

Class XVI.—MISCELLANEOUS.

Mr. J. B. Whiting, Gr. to Mrs. Hope, The Deepdene, Dorking, for a Melon, scarlet-fleshed, Mere lith's Hybrid, Second-class Certificate

Mr. J. Williams, Gr. to the Hon. Mrs Ives, Alton, Hants, for a Dish of Morello Cherries, Second-class Certificate

Mr. S. Ford, Gr. to W. E. Hubbard, Esq., near Horsham, Sussex, for a Dish of Quinces, Second-class Certificate

Mr. B. Mobbs, Gr. to W. B. Tyringham, Esq., Newport Pagnell, for a Punnet of Strawberries, Second-class Certificate

Mr. Geo. Thompson, Gr. to Mrs. Dixon, Stansted Park, near Emsworth, for Grapes Grown in an Orchard House without heat, Second-class Certificate

Mr. J. W. Potts, Gr. to M. Philips, Esq., Stratford-upon-Avon, for a Dish of Cherries, Third-class Certificate

Miss Mary Plincke, Kensington, for 3 Bunches of Grapes grown out of doors, Third-class Certificate

VEGETABLES and ROOTS.

Class I.—POTATOS, collection of.

Class II.—POTATOS, 6 kinds of KIDNEYS, 12 tubers of each.

Mr. A. Moffat, Gr. to Viscount Maynard, Dunmow, Essex, First-class Certificate

Class III.—POTATOS, 6 kinds, Rounds, 12 tubers of each.

Mr. A. Moffat, Gr. to Viscount Maynard, Dunmow, Essex, First-class Certificate

Mr. S Ford, Gr. to W. E Hubbard, Esq., St. Leonard's Lodge, near Horsham, Sussex, Second-class Certificate

Class IV.—ONIONS, 12.

Mr. J. B. Whiting, Gr. to Mrs. Hope, The Deepdene, Dorking, First-class Certificate

Mr. Geo. Scrymger, Gr. to R. Palmer, Esq., Holme Park, Reading, Second-class Certificate

Mr. J. Masters, West Hill, Highgate, Third-class Certificate

Class V.—CARROTS, 12.

Mr. J. B. Whiting, Gr. to Mrs. Hope, The Deepdene, Dorking, First-class Certificate

Mr. J. Veitch, Royal Exotic Nursery, King's Road, Chelsea, Second-class Certificate

Class VI.—BEET, 6 roots.

Mr. J. B. Whiting, Gr. to Mrs. Hope, The Deepdene, Dorking, First-class Certificate

Mr. J. Drewett, Gr. to Mrs. Cubitt, The Denbies, Dorking, Surrey, Second-class Certificate

Mr. Wm. Young, Gr. to R. Barclay, Esq., West Hill, Highgate, Third-class Certificate

Class VII.—TURNIPS, 6.

Mr. S. Ford, Gr. to W. E. Hubbard, Esq., near Horsham, Sussex, First-class Certificate

Mr. J. Drewett, Gr. to Mrs. Cubitt, The Denbies, Dorking, Surrey, Second-class Certificate

Mr. J. Sayers, Gr. to E. Ellis, Esq., Clay Hill House, Epsom, Third-class Certificate

Class VIII.—SALSIFY, 12 roots.

Mr. J. Drewett, Gr. to Mrs. Cubitt, Dorking, Surrey, First-class Certificate

Mr. E. Morris, Gr. to R. Bright, Esq., The Stocks, Aldbury, Herts, Second-class Certificate

Class IX.—SCORZONERA, 12 roots.

Mr. J. B. Whiting, Gr. to Mrs. Hope, The Deepdene, Dorking, First-class Certificate

Mr. J. Drewett, Gr. to Mrs. Cubitt, The Denbies, Dorking, Surrey, Second-class Certificate

Class X.—PEAS, 1 dish.

Mr Geo. Tivey, Gr. to Lionel Ames, Esq., The Hyde, St. Alban's, Third-class Certificate

Class XI.—BRUSSELS SPROUTS, 3 plants.

Mr. Geo. Scrymger, Gr. to R Palmer, Esq, Holme Park, Reading, First-class Certificate

Class XII.—BROCCOLI, 6 heads.

Mr. J. B. Whiting, Gr. to Mrs. Hope, The Deepdene, Dorking, First-class Certificate

Mr. S. Ford, Gr. to W. E. Hubbard, Esq., near Horsham, Sussex, Second-class Certificate

Class XIII.—CABBAGE, SAVOYS, 6 heads.

Mr. W. Young, Gr. to R. Barclay, Esq., West Hill, Highgate, First-class Certificate

Class XIV.—CABBAGE, any variety except Savoy, 6 heads.

Mr. S. Ford, Gr. to W. E. Hubbard, Esq., near Horsham, Sussex, First-class Certificate

Class XV ENDIVE, 6 heads.

Mr J Masters, West Hill, Highgate, First-class Certificate

Mr. W. Young, Gr. to R. Barclay, Esq, West Hill, Highgate, Second-class Certificate

Mr. J. Veitch, Royal Exotic Nursery, Chelsea, Third-class Certificate

Class XVI.—MUSHROOMS, dish of

Mr. W. Young, Gr. to R. Barclay, Esq., West Hill, Highgate, First-class Certificate

Mr. W. Rogerson, Gr. to E. B. Browne, Esq., Hanger Lane, Acton, Second-class Certificate

Class XVII.—MISCELLANEOUS.

Mr. W. Young, Gr. to R Barclay, Esq., Highgate, for a large Gourd, weight 123 lb., First-class Certificate

Mr. H Bentley, Gr. to Lord St Leonard's, Thames Ditton, Surrey, for a dish of Potatos, First-class Certificate

Mr. J Veitch, Nurseryman, Chelsea, for Potato Chardon, for cattle feeding, First-class Certificate

Mr. J. W. Potts, Gr. to M Philips, Esq., Stratford-upon-Avon, for a dish of Aubergines, Second-class Certificate

Mr. J. Salter, Nurseryman, Hammersmith, for a dish of Cherry Tomatos (Lycopersicum cerasiforme), Second-class Certificate

Mr. E. Morris, Gr. to R Bright, Esq, Aldbury, Herts, for a dish of Tomatos, Second-class Certificate

Mr. J. B Whiting, Gr. to Mrs Hope, Dorking, for Celery Incomparable, Third-class Certificate

The Gardeners' Chronicle.

SATURDAY, OCTOBER 22, 1864.

Few seasons pass by in which we have not one or more applications respecting a disease which is common in Pear trees, and which is caused by a parasitic Fungus—Roestelia cancellata. The only remedy we have been able to suggest is to pick the diseased leaves in good time, before the Fungus is mature, and to burn them at once. If this is neglected every fallen leaf only acts as a storehouse of evil for the following season.

A suggestion has, however, been made by more than one writer in the *Revue Horticole* during the last year or two, that the Roestelia is merely a stage of another Fungus which grows on the Savin (Juniperus Sabina), and that if this poisonous plant is carefully rooted out, the disease will entirely disappear.

The case, indeed, is exactly parallel with that of the supposed influence of the Berberry on Wheat, though here the more highly organised Fungus is supposed to produce the Roestelia, while in the case of Wheat mildew, it is the closely allied Æcidium which is accused of producing the Puccinia. The same line of argument, however, will apply in the one case as in the other, for if there is really anything in the supposition, we must have recourse to the same principles.

Modern revelations respecting the different forms which it is possible for the same Fungus to assume, and the various modes of fructification or of propagation which it may present, are so wonderful, that our philosophy cannot easily be alarmed by the most startling assertions. Good authorities do not hesitate to affirm that the same parasitic leaf-Fungus may assume three distinct forms, that namely of an Uredo, such as rust; a Puccinia, such as Wheat mildew; or an Æcidium, like the allied Pear parasite of which we are speaking, or the well-known rust of Berberries. As regards the connection of the two first genera there is little hesitation, while their intimate connection with the third is more or less problematical.

Strong however as the assertions have been of the influence of the Berberry on Wheat, it can scarcely have escaped the notice of those who have paid the least serious attention to the subject, that Wheat mildew is universal, while the Berberry is comparatively rare. But this is not all; those districts in which mildew is most prevalent, as for example the Fens, are precisely those where not a single wild Berberry can be found, and where the cultivated plants are few and far between. Allowing as much weight as possible to the assertion that the Wheat mildew is simply a form of the Berberry Rust, we must rather imagine the Wheat injurious to the Berberry, than the reverse.

The case of the Pear and Juniper is just the

same. The Savin is comparatively rare in gardens. In many villages not a single plant can be found, as from the evil use which is too frequently made of it, it is for the most part carefully excluded; and the gelatinous Fungus (Podisoma fuscum) which attacks the Juniper, and which is so conspicuous after rain, though it may easily escape notice in dry weather, is still more rare; while the Roestelia may be found in almost every garden where there is a Pear tree, and often in such abundance as to be very injurious. It is scarcely conceivable, therefore, that the most careful extirpation of the Savin would prove a remedy. Even supposing the two Fungi to be mere forms of one species, as in the case of the Wheat mildew, it is far more probable under the circumstances that the Pear Fungus should be the enemy of the Savin than the contrary. Be this, however, as it may, the case is interesting, and we recommend its consideration to some of our more experimental readers. The matter indeed does not rest here, for it is asserted that the extirpation of the Savin is equally beneficial to the Whitethorn, which is attacked by a parasite which has generally been regarded as specifically if not generically distinct from that of the Pear; and if this is the case, we must again alter our received notions as to their difference.

Unfortunately we are not able to refer to any very detailed account of the Roestelia in any English book, but those who have access to the *Revue Horticole* will find a description of its structure by that excellent observer M. NAUDIN, in the volume for 1850, p. 463. A shorter account and figure, will, however, be found in this Journal, 1856, p. 693*, and in the same volume, at p. 804, is a notice of the gelatinous parasite of the Juniper. *M. J. B.*

THE last portion of the large and valuable collection of JAPANESE PLANTS introduced to this country by Mr. FORTUNE, was sold by Mr. STEVENS a few days ago, and is now dispersed over the kingdom. Many of these late importations have been noticed from time to time in our columns, such, for example, as the male plant of the common Aucuba, the green-leaved species of that genus, the different kinds of Osmanthus, the Retinosporas, Clematises, Lonicera aureo-reticulata, the Umbrella Pine, Skimmia oblata, Lilium auratum, and a host of other things, which are now well-known to our readers. The last sale however included some plants of considerable interest, which had not been previously offered to the public, and, as these have been scattered over Europe, it may be useful to draw attention to a few of them, which are, at present, all but unknown to gardeners and planters in this country.

Among the plants to which we have alluded, a few are of the deciduous class. One of these, Corylopsis spicata, is a small tree belonging to the Witch Hazel tribe, and although its flowers are not very large or showy, it is yet a plant worthy of cultivation. Its frill-like leaves are very pretty, and the little catkins of yellow blossoms which it produces are as sweet-scented as the Cowslip. Moreover, like many of these oriental plants, it blossoms very early in spring, when flowers are scarce with us, a circumstance which gives it an additional value. A species of Hamamelis—a plant which belongs to the same natural order as the Corylopsis—is also worthy of a place in our gardens. Then, there were some Glycines, from which much is expected, although no one in this country has yet seen them in blossom. One of them in particular is reported to be a very remarkable novelty, and if this proves to be the case, we shall doubtless hear more of it by and by.

In the class of Evergreens there were some fine things. One named in the catalogue a "Retinospora, with flat leaves," is a very beautiful plant, and probably will yet take the first rank amongst the introductions in this class. Its leaves are of a beautiful fresh green colour, and from the appearance it presents it will without doubt prove to be perfectly hardy in this country. There were also other Retinosporas, such as one with light and feathery foliage, and another dwarf variety, both of which are beautiful objects in Japanese gardens, and when better known will assuredly be highly prized in this country. Another shrub in this class worthy of some attention was described in the catalogue as a species of Osmanthus with green leaves. This also is a most promising plant.

Amongst variegated plants we observed a good many specimens of Podocarpus and Nageia, in a condition, however, which gave a very faint idea of their real beauty when carefully cultivated. These plants are not hardy in the central and northern parts of the Japanese Empire, and are probably natives of Loochoo, or some of the more southern islands. But when cultivated as pot plants by the Japanese gardeners they are charming things, and well repay a little protection and extra care in winter. Whole gardens are sometimes met with which are full of them, and they are evidently especial favourites. Some of the narrow-leaved varieties of the Podocarpus have silvery-coloured foliage of a light and feathery kind, while others have their leaves of a golden hue. The Nageias have their broad green leaves striped with white lines, as if they had been painted by the hand of an artist, but far more beautiful than any artist could have drawn. These plants will make very effective objects in our greenhouses and conservatories in Europe if they are properly cultivated, and we shall not be surprised to learn that our continental friends will be the first to find out their true value. We commend the matter to our good English gardeners, who would not fail if they will only try; and we can assure them they would produce objects worth bringing out to our horticultural exhibitions. We also noticed among the variegated plants an Umbrella Pine, with tufts of golden-coloured leaves, a variegated Tea plant, a variegated Orchid, and a variegated Palm! Verily everything in the vegetable kingdom has a variegated representative in Japan.

There was only one kind of herbaceous plant in the sale to which we are alluding. This was Lychnis Senno, a charming species which has already been exhibited at our flower shows. This plant is a great favourite with all the farmers and cottagers in Japan, and is met with in almost every garden. A variety of it which produces striped blossoms is said to be a very beautiful kind. When this variety was first seen by Mr. FORTUNE its leaves were quite green, and its crimson flowers were beautifully marked with pure white stripes. Strange to say when introduced to this country the leaves became variegated, and the flowers which were produced were less beautifully striped than when the leaves were quite green. The white colouring had apparently become spent by passing into the leaves. We may hope however that the old habit of the variety will return, and we advise those who possess it to endeavour to bring it back to the condition in which it exists in Japanese gardens, namely, with green leaves and crimson flowers striped with pure white.

We never remember seeing so many new ornamental hardy plants in this country at one time, and we are not likely to witness such a circumstance again. It is not every day that a country like Japan is opened up to foreign commerce after being all but closed for several hundred years. But numerous as the new plants are which have been introduced from that country, and which are now dispersed, there can be little doubt that many more are still left in those districts which were unexplored. At some future time these, doubtless, will find their way to the gardens of Europe.

AT the EXHIBITION OF FRUITS held this week at South Kensington, a collection of Grapes from the Garden of the Society at Chiswick formed an interesting feature, inasmuch as it afforded the means of comparing the different varieties as regards size, form, and colour, and consequently of forming an opinion as to the desirability of their cultivation. On looking them over with this view we were struck with the very great difference between two bunches of Black Barbarossa, one of which weighed 6 lbs. 13 oz., and the other 3 lb. 13 oz.; the latter however was by far the best, notwithstanding its lighter weight. It was more compact and more regularly formed than the other; the berries matched each other well in size, and were much larger and better coloured than those of the larger bunch; they were also covered with a fine bloom, and were without even the most obscure tinge of red, from which this variety is seldom entirely free. All this superiority is attributable to the Vine having been grafted on a stock of the Black Hamburgh; whilst the larger, but in other respects inferior bunch was borne by a Vine growing on its own roots.

The effect produced by the stock in this instance was so evident that no one who had an opportunity of seeing the two specimens could hesitate to use the Black Hamburgh, or even preferably the Frankenthal variety of it, for the Barbarossa. The inference derivable from this case, therefore, is that considerable advantage as regards other varieties of Grapes may result from employing this, or some other suitable stock for them. The larger bunch just referred to measured 18 inches in length, and 19 inches across the shoulders; the smaller was 13 inches long and 11 or 12 across.

The other varieties of Grapes in the collection from Chiswick were also remarkably fine, and did equal credit to Mr. BARRON's management and Mr. EYLES' superintendence. Further remarks on the Barbarossa, as well as on some of the other kinds shown on this occasion, must be deferred till next week.

—— The vacancy in the CURATORSHIP OF THE CAMBRIDGE BOTANIC GARDEN has been filled by the election of Mr. W. MUDD. For many years he has had the charge of the extensive gardens and grounds of Great Ayton Hall, in Yorkshire, and taken an active part as exhibitor or judge at the horticultural shows in that neighbourhood. He is also well known to such botanists, both in this country and on the continent, as apply themselves to the study of the Lichens, by his valuable work, entitled "A Manual of British Lichens." It is the only extensive work that we possess upon our native Lichens which treats of them in accordance with the views held by modern cryptogamic botanists. The characters both of the genera and species are largely derived from the microscopic structure of the plants, and Mr. MUDD has appended to the book 130 highly magnified figures of the spores, drawn from nature, and engraved by himself. He deserves much credit for having succeeded, with small pecuniary means, in obtaining the requisite books and microscopes for the performance of this scientific work, and at the same time creditably supported a wife and family.

—— We are also glad to be able to state that the charge of the GARDENS AT TRENTHAM has been confided to Mr. Z. STEVENS, whose ability as a first-class cultivator has been abundantly demonstrated during the past year or two by his successful management of the monster Azaleas with which Mr. VEITCH has carried off some of the leading prizes which have been offered for these plants. With such productions vividly in recollection, one can feel no doubt that high-class cultivation will continue to be one of the characteristic features of the ducal gardens, and that they will maintain the high position they have acquired under the successive management of Mr. FLEMING and of Mr. HENDERSON.

—— There is at Castle Kennedy a beautiful tree of ARAUCARIA IMBRICATA VARIEGATA. The parent plant as we learn from a northern contemporary, has attained considerable size, and forms a most interesting and attractive object. From it Mr. FOWLER has obtained by process of grafting some hundred or more of young plants. The leaves are for the most part distinctly margined with yellow. We remember to have seen it shown at South Kensington in the early part of last year, when it was accompanied by a memorandum to the following effect, which explains its origin and history:—"The accompanying specimens have been taken from a seedling Araucaria imbricata raised here, and planted in the pleasure-grounds of the Earl of STAIR some 10 years ago. The plant is now upwards of 8 feet high, and about the same in diameter, very robust and healthy. The variegation was first observed when the plant was small, and it has since increased till five out of six of the last tier of branches show variegation. The marking is not confined to one branch or portion of the tree, but extends over fully one half of the entire foliage, occasionally alternating with the green. The effect is striking and unusual." We believe that, although regarded as a handsome sport, it was passed by on the occasion in question, on the ground of some doubt as to the extent to which it might admit of increase; but now, since it appears that it can be increased with tolerable facility, the distinct and decided markings of the leaves must cause it to be regarded as a decided acquisition amongst hardy Coniferous trees.

—— The necessity which exists for the more general dissemination of a knowledge of the properties of plants, has received a striking illustration in the case of POISONING BY YEW BERRIES which occurred last week at Finchley—a case in which, according to the evidence adduced, the gardener is stated to have seen his own child eating the Yew berries, without heeding the circumstance. The statement which has appeared in the daily papers is to this effect:—An inquiry was held a few days ago relative to the death of a little girl, three years of age, the daughter of the gardener at Finchley Cemetery. The child, it appears, had accompanied her mother to the ground, and had been observed by her father to eat one or two of the berries of an Irish Yew tree, but the circumstance was passed over unheeded. Shortly after the mother and child returned home to tea, the latter was taken with a kind of faintness. Brandy and other restoratives were administered in small quantities, and the child seemed to recover, and was put to bed, a dose of castor oil being also administered. In a short time, however, a relapse occurred, and medical assistance was obtained, not however before death had ensued. At the inquest, the

* We would also call attention to SOWERBY's figures, t. 409 and 410, and to the notes which accompany them, in which some modern notions are anticipated.

surgeon (Mr. WHITE) deposed to being sent for about half-past seven o'clock in the evening, when he found the child dead. The post-mortem examination proved that death was the result of poison. In the stomach were found some partly digested Yew-tree berries—from 20 to 50 in number, the husks and seeds of which are poisonous, though the fleshy part of the berry is not. The stomach and intestines were inflamed, showing the irritant action of the poison. The Coroner (Dr. LANKESTER) remarked that this was a very important case, for Yew-trees were thickly planted in all the cemeteries. He hoped that through the fact becoming known that the berries were poisonous, greater watch would be kept upon children by those who had them under their care while visiting such gardens, so that similar disasters might in future be prevented. A verdict of Accidental Poisoning was returned. As too much caution cannot be exercised in cases of this kind, we think it would be well if the managers of cemeteries would cause a notice to be conspicuously placed near the entrance to their burial grounds, warning visitors of the danger of allowing children to pluck and eat berries of any kind whatever found growing in such situations.

NOTES ON GARDENS.—No. XX.

ROYAL BOTANIC GARDEN, GLASNEVIN.

(*Continued from p. 989.*)

ORNAMENTAL, light, useful, and I may almost say everlasting, are Mr. Turner's Palm-houses and conservatories everywhere we see them. None of his works display these characteristics better than the curvilinear range, with Palm-house in the centre, adjacent to the Victoria house at Glasnevin. Much has been said for wooden houses, and undoubtedly they are worth much for forcing, ordinary plant growing, and small erections; but large buildings for plant accommodation, prominently placed in a botanic garden, should, I think, be of iron. At Kew, Belfast, Killakee, and the Regent's Park, the great conservatories and ranges erected by Mr. Turner are elegant enough to associate well with the best aspects of those gardens, while they—even the lightest of them, that in the Botanic Gardens, Regent's Park—are as sound and useful as when first built. Wooden houses built as long as some of these, would probably be half rotten by this time, and the cause of endless expense. This I remark in consequence of several very large and important garden buildings having been recently built of wood, and looking too ugly and angular to be in keeping with fine garden scenery. Any one however, who compares the two styles at Glasnevin, is not likely to become enamoured of the wood. The north wing, 150 feet long, of the beautiful range I allude to, is chiefly occupied by natives of the Cape, and of New Holland, especially of the latter country, whose vegetation is strongly represented at Glasnevin. The majority of the Australians were out of doors, but some were nicely in flower here, and among them Blandfordia flammea, a beautiful plant, which ought to be commonly grown. Of course it would be impossible for me to mention the hundreds of good and curious plants met with in these houses, nor would it be desirable, as my business is rather to record peculiar and striking excellencies, both of plants and cultivation; to help to bring from comparative obscurity neglected plants of first-class merit; and to inform the public of the leading merits and blemishes of horticulture in "ould Ireland." Hakea Victoriæ and others, with Banksias and their allies, formed however a predominant and highly interesting feature in this wing, while overhead Bignonia Cherere flaunted and flowered freely—a grand thing when allowed room in a dry conservatory; and there were also Dammara Moorei, the Weeping-Willow of Australia, with Restios, Babingtonia Camphorosmæ, Fuchsia corymbiflora—grand, when allowed to make a large shrub, and a lot of Mr. Saunders's curious succulents from the Cape. The old Rhodochiton volubile was producing a charming effect, as were the Swainsonas, S. Osbornii being particularly good, producing with grand plants of Lilium lancifolium, and such of the Heaths as were in flower, a very respectable display of bloom. Before taking leave of this wing and entering the old Palm house, I must state how well and densely Mutisia ilicifolia covered a portion of the back wall; and how much I was struck with an unnamed species of Callistemon, very showy and beautiful; and apologise to those I have not honoured by naming. Lapageria rosea was done well, but what's the use in mentioning that which is possessed by "everybody who has anything." No, it is the good old and comparatively unknown things we want to hunt from their privacy.

I am now—in spirit at all events—in the old Palm-house, but it must not be supposed to be either old or rickety, being an elegant curvilinear iron house, with every desirable quality but that of expansion, which it wanted very much when the Palms grew up; but lacking that, these ever-rising subjects were provided with the new wooden Palm-house, which may be seen a little to the west, while the older house for the past couple of years has done very useful duty as a cool Palm-house, conservatory, &c. Now, if a second, "very much enlarged" edition of this original Palm-house had been erected instead of the present new one, then, indeed, the conservatories of Glasnevin would—every one of them—be worthy of its plants and glades; would have crowned the garden with beauty in fact, for the new Palm-house occupies the highest, or one of the highest spots in the garden, but now—ah, well, I have to come to that yet. It is not too soon, however, to say what I thought when gazing through the curvilinear at the 'barnlinear' structure—that as Dove to Dodo, as white-winged Yankee clipper to swinish Monitor, as Gibson's Venus to a hideous gutta-percha faced Amazon of Dahomey, so is the old Palm-house at Glasnevin to the new. But our old Palm-house is yet one to some extent, for it accommodates Seaforthia elegans, Chamærops, and other Palms from cool countries, and a host of Cycads, Agaves, Dasylirions, Yuccas, &c., with the true Grass tree—a comparatively young though beautiful plant, only not yet showing the stem, and consequently not so striking as the fine specimens recently imported by the Messrs. Low. These latter ancient aborigines will not, I fear, adapt themselves to our northern clime and imprisonment after centuries of freedom in the scrub. When obtained young, however, they grow freely, and then far surpass in beauty your Dasylirions, Bonaparteas, and such like. Arundo Donax variegata was 14 feet high in this house, and the fine Mutisia decurrens, introduced by the Messrs. Veitch, was adorning a pillar and exhibiting its beautiful flowers; while here and there such things as Beaucarnea stricta—one of the chief verities; Macrozamia Dennisonii, Dasylirions unnamed, and Grevilleas of promise from Mr. C. Moore, of the Sydney Botanic Garden, attracted attention. Amongst Agaves, glaucescens and univittata were remarkable; and I may further mention Zamia mexicana, and the curious Coccoloba platyclada, with Phormium Cookeanum and Jacaranda mimosæfolia, exhibiting such an exquisitely graceful head of foliage as Jacarandas only can.

A fine stove and succulent house form the west wing of the curvilinear range, the latter being a very interesting house, containing a good collection of succulents, and also some curiosities, widely separated from them, such as the very singular Ceropegias, Boucheri and sororia, the latter even more remarkable than Boucheri; and, more remarkable than any of them, the snake-like Ceropegia stapeliæformis. Fine plants of the erect rigid and fleshy Euphorbias, such as E. tetragona, looked very stately indeed, and would, I am confident, produce a very pleasing effect if sparingly placed amongst the Ferns and graceful leaved plants which are so much grown in some gardens. Curious, too, was "the Gout-plant," Jatropha podagrica, which with Wagneria tomentosa and Begonia macrophylla, was associated with the succulents, the last mentioned bearing leaves 2 feet across. If Begonias are to be grown for the beauty of their leaves, this species should lead off the selection. Cereus MacDonaldiæ was thought very highly of as a flowering plant of the first order, and so were many of its neighbours. But I might almost as well talk of the plants of Saturn as of these things to most of our advanced horticulturists, who as a rule have nothing more succulent in their neighbourhood than a bit of Ice plant; and though I should be the last to recommend a gardener to make a collection of these things, yet I cannot but regret the absence of at least a couple of dozen of the best and most distinct species from every good plant place. For what could be more telling or interesting in a select conservatory than some of the Echeverias, Echinocacti, Gasterias, &c., not to select from their numerous allies, nor even to mention Yuccas and Agaves, which are fast forcing their way into public favour, as may be seen at our shows. Solandra grandiflora, one of those things that must get room to give any satisfaction, was very strong round a pillar, where it flowers finely every year. In the great stove I had the satisfaction of seeing the Cascarilla plant Croton Cascarilla, with Croton Eleuteria and linearis, the Balsam of Tolu plant Myrospermum Pereira, Melaleuca Cajeputi, Mammea americana, the true Cinnamon plant from Sir Emerson Tennent, the Alligator Pear, Calophyllum Calaba, and a host of the more commonly grown medicinal and economical plants; besides a small tree of Brownea grandiceps, which Dr. Moore told me flowered very freely—a conspicuous object, which must be worth some trouble to see when in bloom; Aristolochia caudata; and a host of other interesting plants, which I must leave. I will therefore merely say how well this curvilinear range was filled with fine and suitable plants, apologising at the same time for want of space to mention the many plants, especially Australian ones, that were first introduced to the country by way of Glasnevin.

The next great range has one of its wings devoted to Orchids and Ferns, the other to Azaleas, Camellias, and the more popular greenhouse plants; while from the centre rises very conspicuously the new Palm-house, the external aspect of which, as I before indicated, is anything but elegant. Getting into chat with a son of the soil on my way to Glasnevin, we talked of the beauty of the gardens, in which he had evidently recently spent a few Sundays, for he was highly eulogistic of the "beauteeful plants and quare flowers" he had seen there, but added "they have built a big new greenhouse, but a very ugly one; it's like an ould gable end!" This transcends my power of description, leaving me little to add but that the "gable end" is 60 feet high, 60 deep, and 90 long, the gable end aspect being the front, and by very much the best one, as the back or north side, which is seen from the curvilinear range and from most important parts of the garden, is a rough stone wall against which a vast shed is raised, and in this shed is the breakneck wooden stairs by which adventurers who attempt the gallery climb up. There is an intensity of ugliness about this building, seen from the north side, which quite appals one. It is as if the demon of bad taste had been let loose, fully accredited, to attack the enemy in his strongest camp, and accordingly set to work and built his temple in the central scene of a beautiful garden, in the midst of the elegant leaf-builders, and over a host of graceful Palms! Inside the house is all that could be desired; it has a double roof, and was, I believe, designed and erected by the Board of Works. *William Robinson.*

(*To be Continued.*)

THE BEST SIZE FOR POTATO SETS.

DURING the last season I have carried out a series of experiments with the object of ascertaining what sized Potato-sets gave the most profitable crop, and the results have been so striking, and present such decided contrast to general practice, that they appear to me to be of sufficient importance to publish in your columns.

My experience during the past year convinces me that from one-fourth to one-third of the natural produce of the Potato crop is lost solely from insufficiently large Potatos being planted; and that by a proper selection of sets an increased crop, representing a clear profit of several tons per acre, can be obtained.

On the 16th of February I planted in rows 2 feet apart, and 1 foot from set to set in the rows, sixty uncut sets of Early Prolific Potatos, viz:—

20 sets weighing 2 oz. each.
20 sets weighing 4 oz. each.
20 sets weighing 8 oz. each.

The 20 sets of 2 oz. each (2½ lb.) produced 21 lb. 5½ oz.
The 20 sets of 4 oz. each (5 lb.) produced 29 lb. 0½ oz.
The 20 sets of 8 oz. each (10 lb.) produced 35 lb. 3½ oz.

In the case of the twenty 4-oz sets, the extra 2½ lb. over and above the weight of the twenty 2-oz. sets produced a gross gain of 7 lb. 10½ oz.; and a net gain, after deducting the difference in the weight of the sets, of 5 lb. 2¾ oz. of Potatos on 40 square feet of ground, or at the rate of 2 tons 5 cwt. 1 qr. 1 lb. per acre net profit.

In the case of the twenty 8 oz. sets, the extra 7½ lb. over and above the weight of the twenty 2-oz. sets produced a gross gain of 13 lb. 14 oz., and a net gain, after deducting the extra weight of the sets, of 6 lb. 6 oz. of Potatos on 40 square feet of ground; or at the rate of 3 tons 1 cwt. 3 qrs. 26 lb. net gain per acre over and above the extra weight of the seed.

It will be observed that there was a large profit on each advance in the weight of the sets, viz., on the 8-oz. sets over those of 4 oz., as well as on the 4-oz. over the 2-oz. sets.

Another experiment was made with Second Kidneys, planted at intervals of a foot, in rows 2 feet apart, on the 31st of March, viz.:—

20 sets of 1 oz. (1¼ lb.) producing 15 lb. 9 oz.
20 sets of 2 oz. (2½ lb.) producing 16 lb 15 oz.
20 sets of 4 oz. (5 lb.) producing 19 lb. 15 oz.

Although the result in this case is not so striking as that of the Early Prolifics, each advance in the weight of the set produced more than an equivalent increase in the crop, leaving a clear profit on the extra seed.

On the 31st March I also planted four lots of Fluke Potatos, in rows 2 feet apart, each lot occupying 40 square feet of ground, viz;—

20 sets, 1 foot apart, of 1 oz. each (1¼ lb.), producing 15 lb. 2 oz.
20 sets, 1 foot apart, of 2 oz. each (2½ lb.), producing 15 lb. 0 oz.
20 sets, 1 foot apart, of 4 oz. each (5 lb.), producing 18 lb 12 oz.
16 sets, 1 ft 3 apart, of 8 oz each (8 lb.), producing 30 lb. 12¾ oz.

In the experiment with the Second Kidneys and the Flukes, it will be observed that there was little or no difference in the produce of the 1-oz. and 2 oz. sets, a small profit in favour of the 2-oz. Early Prolific sets, and a trifling loss in the Flukes; but in the advance from 2 oz to 4 oz., and from 4 oz. to 8 oz., the result is quite consistent with the other experiments, and exhibits even a greater profit in the planting of large Potatos of 8 oz. each.

The twenty 4 oz. Flukes (5 lb.) produced 3 lb. 12 oz. of Potatos more than the twenty 2-oz. sets (2½ lb.,) leaving a net gain of 1¼ lb. of Potatos on 40 square feet of ground, or at the rate of 11 cwt. 3 qrs. 14 lb. per acre clear gain, after deducting the extra weight of seed.

The sixteen 8-oz. Flukes planted at intervals of 15 inches in rows 2 feet apart, produced 30 lb. 12¾ oz., so that the 5½ lb. extra weight of sets over those 2 oz. in weight increased the crop in the 40 square feet of ground by 15 lb. 12¾ oz., and after deducting the extra weight of the seed, left a clear profit of 10 lb. 4¾ oz., or at the rate of a trifle over 5 tons per acre clear gain

The 3 lb. extra weight of sets in the sixteen 8 oz. sets over the twenty 4-oz. sets increased the crop on 40 square feet of ground by 12 lb. ¾ oz., and left a clear profit of 9 lb. ¾ oz., or at the rate of 4 tons 8 cwt. 0 qr. 27 lb. per acre clear gain, after deducting the extra weight of seed.

I also experimented with Lapstones and two varieties of Red Potato, but the former were inadvertently dug up and consumed without being weighed, and the Red Potatos prematurely withered in the tops, from [illegible] getting into part of the row, so that the results can not be given; but in the other three experiments above

recorded, every care was taken to insure uniformity of condition in each set of trials. The details of the results vary slightly, but the general bearings are strikingly consistent as exhibiting a certain and large profit in the advance in weight from a 2-oz. up to an 8-oz. set, and it will be observed that in every step of advance in the weight of the set there was a clear profit over the extra weight of the Potato planted.

To generalise from these results it would seem that small sets cannot produce such a vigour of growth as to fully develop the Potato-bearing capabilities of the soil. I believe that Potato sets are seldom planted of much more than 2 oz. in weight; 4-oz. sets are certainly the exception; so that as a rule the Potato crop is starved from an insufficient vigour in the set.

This question is in no way related to that of thin seeding. The distance at which the sets should be placed is another matter, upon which I will not now enter, excepting to observe that I think when small sets are planted they are not put nearly thick enough in the rows. My experiments prove that the ground is capable of bearing a much greater weight of tubers than can be generated from 2-oz. or even 4 oz. sets, planted a foot apart, and I believe that such small sets, if placed at 6 inch or 8-inch intervals, would produce nearly as much to a root as if at the wider distance, and of course a much greater weight per acre; but upon this point I hope to experiment during another season.

What I now wish to establish is, that the produce of the crop depends, much more than ordinary practice would seem to admit, on the size and vigour of the individual sets. Small Potatos are diminutive in all their parts; the eyes are proportionately small, and cannot produce such strong shoots as full-sized tubers. All the 8 oz. sets I planted appeared above ground with remarkably strong and vigorous shoots, which maintained their superiority over those from the smaller sets throughout the whole period of growth, and no one who saw their splendid tops—nearly double the height of the others—could for a moment doubt what the result would be at the harvest.

I believe the mere question of inherited character has much to do with the extremely various weights produced from the different sized sets. Mr. Darwin has shown how almost any quality can be established by the selection of individuals tending in a particular direction, and Mr. Hallett has actually produced a race of long-eared Wheat by the simple process of selecting the longest ears and largest grains for three or four generations.

In almost any field or garden crop we all know how much under precisely identical circumstances the plants vary, but are apt to forget that this must be solely attributable to differences in the constitutional vigour of the individuals.

If it were possible—as in the case of *Hallett's* Wheat—to select the finest individual seeds for every sowing, a certain and permanent improvement in our crops must be the result, but with small seeds sown over large areas this is practically impossible at every generation, so that the weak and the strong must to a certain extent be perpetuated together.

With Potatos however nothing is easier than to select the largest tubers for planting. If the generation is to be conveyed through the smallest individuals of the crop, the gradual diminution of the produce is a matter of certainty, but if the Potato were treated like live stock, and the finest individuals only allowed to generate, its gradual but permanent improvement on the theory of inheritance would be as certain, and the immediate increase of the crop could not but leave a rich profit over the extra weight of Potatos planted.

This is a very simple matter of experience, which any one who has a garden can prove at little or no expense by planting a number of Potatos of various weights, and noticing whether the larger Potatos do not produce an excess of crop over the small sets vastly greater than the extra weight of the set planted. *George Maw, Benthall Hall, Broseley.*

THE COOL TREATMENT OF ORCHIDS.

[The following remarks, which we believe represent the course of cultivation carried out in a famous Orchid collection near Glasgow, are borrowed from the *West of Scotland Horticultural Magazine.*]

Now that the cultivation of Orchids is becoming more general, it may be well to introduce a few practical hints bearing on the temperature best suited to their wants, and the peculiar kind of nutriment, both in the atmosphere and at the root, necessary to ensure a vigorous plant and a proper development of flower. Errors in practice often occur, even in what are called the best collections in the country, not from any want of attention on the part of the cultivators, but mainly from a want of knowledge of the exact geographical position, temperature, and climate, whether wet or dry, that the imported plants were accustomed to. The fault did not, in days past at all events, lie so much with the practical gardener. Orchid cultivation was a branch of the business with which very few were familiar, and the few who had an opportunity and availed themselves of it, had an uphill battle with such an out-of-the-way order of plants. The greater number of those introduced for the first 10 years were grown in houses of a high temperature; some of them succeeded, and many died. The particular localities where they were distributed, and the nature of the climate, received little if any consideration. Information from collectors on the spot was not so greedily sought after then as now; and hence the many unsuccessful attempts, which have never been accurately recorded, of growing to perfection, or even growing at all, this beautiful section, which is found all over the Andes of New Grenada, Guatemala, and Mexico. When growers of large experience and sound general practice are baffled, there need be little wonder expressed at the failures of new beginners; and consequently, correctly speaking, there is less room for disappointment on the part of gentlemen than at first sight might appear. It is not a very agreeable sight for either gardener or employer to see valuable plants vanishing away; and although there are methods in practice, better adapted than others for prolonging existence, and for encouraging health, there will be always one or two that will pine away under the most skilful treatment. Temperature has a great deal to do with successful cultivation; so has material for the roots to run in; so has moisture; and so has cleanliness. A proper and intelligent observance of these conditions commands success.

Why, it may be asked, is it that the most choice Odontoglots are all but lost to the country? And how is it that those which are capable of standing most fatigue are only growing, judging from what we have seen, on half diet? The simple answer is that they have been roasted in too high and too dry a temperature. But what is too high a temperature for such plants? An East Indian house, or a temperature averaging from a winter minimum of 60° to a summer maximum of 95°, is not the temperature suited to the well-being of a single known example of Odontoglossum or Lycaste. A Cattleya house, ranging from a minimum of 55° to a maximum of 85°, is not exactly suited to either of the plants named, although such varieties as grande, citrosmum, hastilabium, bictoniense, crinitum, Phalænopsis, Reichenheimii, Insleayi, Uro-Skinneri and nebulosum will live, and remain tolerably healthy under such a temperature, if accompanied with a proper degree of moisture. In fact, for such a collection, and for the following rare and valuable plants—Epidendrum vitellinum and nemorale, Lycastes of sorts, Lælia cinnabarina, anceps, and flava, Cattleya Skinneri and citrina, Trichopilias of sorts, Anguloas of sorts, Dendrobium heterocarpum and Uropedium Lindenii—we would say that a minimum of 43° and a maximum of 75° during the heat of summer are, of all temperatures, best suited for the plants. Lower than 40° it had better never be, even in very cold weather, and some care must be shown to keep the plants during that time in a medium state of moisture. Higher than 50° at night during the dead of winter is not good practice, although the house may be allowed to rise to such a height during daytime before giving ventilation. Plenty of fresh air is of great importance during summer and autumn, to consolidate the pseudo-bulbs, and encourage free-flowering.

Again, there are a few Odontoglossums that thrive better subjected to even a lower temperature than what is named above. It is a very curious fact that in the choice collection of Odontoglossums grown at Meadowbank, Odontoglossum Pescatorei and cordatum, both plants considered to be the best of their kind in the country, stood uninjured in a house where the temperature fell to 32°, while O. Phalænopsis was all but killed, and O. nævium slightly injured, growing by their side. O. membranaceum, O. Ehrenbergii, O. Cervantesii (small plants), also stood uninjured. Doubtless, this is the lowest range that any Guatemalan Orchid has been subjected to. By a globule of air getting into the mercury, the thermometer indicated at 1 o'clock at night 45°, and at 7 in the morning 40°, while the real temperature, gauged by an accurate thermometer by way of comparison, proved that the house had been at the freezing point. The plants, of course, were closely shaded for a week, else the consequences might have been serious. There cannot be the slightest hesitation in affirming, after several years' trial, that a minimum of 35° is a good one for Odontoglossum Pescatorei, cordatum, membranaceum, Ehrenbergii, and Cervantesii, else the Meadowbank plants of the two former could not produce, as in the one case, something near 100 flowers from one pseudo-bulb; and 22 spikes, averaging from 12 to 15 flowers on each spike, on the other. The above are the extreme ranges of temperature that such plants can be subjected to. It must be borne in mind and carried out in practice, that in order to promote health the temperature in-doors must rise and fall with the temperature out of doors. A good proportion is from 5° to 8° during night, and from 8° to 12° during the day.

The whole of these plants delight to grow in good, rich, fibry matter, such as is to be had in mosses and plantations where vegetable fibre largely predominates. As many of the particles of earthy matter as can be conveniently got rid of should be separated from these turves. If there is the least inclination to soddenness, or a disposition of any kind to obstruct thorough aëration, a good quantity of Sphagnum should be introduced, which counteracts any bad effects in this way. It is sheer nonsense to impoverish these semi-terrestrial plants. Sheep, cow, or horse droppings, dried up into a proper state, can be added with the most beneficial results. There is a tendency occasionally to the propagation of Fungus, which in some instances is detrimental to the growing plants, but lengthened practice and judicious combination of material suggest the remedy, and prevent, in the first instance, its propagation.

No Odontoglot, or Lycaste, or Trichopilia, or Lælia we have named ought to be allowed to get dry at the roots. Nothing will cripple their powers of action so much as drought, and it requires months and sometimes years to get plants so subjected to become vigorous. It is necessary, occasionally, to induce floral development, to check the luxuriance of some particular kinds, which show little disposition to flower annually unless thus wrought upon by the hands of the cultivator; but there is a particular time when such treatment is requisite, and its duration must not be extended for too long a period. During the growing season no cessation of vigour must be encouraged; ample supplies of water, both at the root and in the atmosphere, are what the system of the plants demands. If the material be of the proper description—so porous as to allow air to pass freely, and so fibrous as not to become sodden—watering once a day may, without injury, be resorted to.

To keep all plants free from the ravages of insects is of high importance—more especially is it so in Orchid collections. Their money value entitles them to be under the management of a skilful and attentive grower. Scale propagates itself among this tribe of plants at an alarming ratio; and if not at once kept under, gets upon the young shoots, and much deteriorates their health and appearance. Washing with pure water is the best and safest remedy, although for such things as Cattleyas, upon whose leaves they play much havoc, a little soft soap may be introduced. Thrip also attacks the more tender leaves of the various species. Fumigation is the most certain remedy for this, but great care and judgment are required to fumigate a miscellaneous collection, owing to so many of them being easily injured, among which might be named Odontoglossum citrosmum and Uro-Skinneri, as well as Lycaste Skinneri, and numerous others.

Home Correspondence.

Bananas.—I have under my charge several fine plants of Bananas, which showed fruit about the beginning of June. They have now a fine crop of nicely swelled fruit on them, but as yet do not show any appearance of ripening. Would some one be kind enough to inform me what treatment I should give them to assist them in ripening their fruit soon. *A Gardener.* [Give them plenty of heat, and they will attain maturity in their own time.]

Potatos from Seed.—My employer tells me that he last week saw a splendid crop of Potatos, grown from the Potato-apple, gathered last autumn; and he wishes me to make a trial next season in our garden. I have gathered a peck basketful of the berries from the farm, but I am quite at a loss how to manage them. If any correspondent has grown Potatos in this way, I should be much obliged for some information on the best mode of treatment. *J. C. N.*

Underwood for Larch.—If "H. S. M." wants stuff for protection of birds, then I think that in most situations Gorse will thrive, certainly if planted when Larch is young. *D.*

Frogs and the Viper Question again.—I have twice stood by frogs, and clearly saw them whilst they sent forth their cry. The first time it was in my garden, and I think caused by an adder, though I did not see it, for one was caught at the spot a few days afterwards; but the other time I heard the cry, and which I could compare to nothing so much as to that of a feeble infant's cry when in pain, it was caused by a hen pecking the frog. Both of these I clearly saw and watched for some time, whilst the frog was uttering its cry. As there is a little history about this adder I will give it, as it may be interesting to at least some. A literary contest had existed, and was rather warmly carried on between a learned gentleman of Colchester and myself respecting young vipers, when in danger, entering their parents' mouths to be conveyed away into places of safety until the danger should be over. My opponent maintained that it was impossible they should do so, for, if they did enter the parent viper's mouths, they must descend into their stomachs, and there, to use his own words, be killed by the gastric juices as quickly and effectually as they would if thrown into sulphuric acid. This was my opponent's reasoning, and, as he adds M.D. and F.L.S. to his name, my reasoning had but a poor chance against him. But the question with me was whether the young viper broods did enter their parents' mouths or not, for if they did, I was sure Nature would find for them a safe and innocious retreat whence they might return into the open air, and sport themselves or not, when the danger was over, if the parents escaped with their lives. To support my side of the question I said I could produce fully a dozen gentlemen of high respectability and veracity, and also two ladies, who had absolutely seen the young enter the vipers' mouths; and that two of the gentlemen afterwards killed the old ones, and found the young within them. I myself had witnessed an example, but I did not urge that. I said, moreover that I had dissected vipers and found a provision, such as I had referred to, prepared by Nature for the reception of the young, and altogether independent of and unconnected with the stomach. But all this

would not do. My opponent stuck to his gastric juice and the stomach, from which no reasoning could stir him; and so I advertised for a viper, that I might in the same Literary Institution dissect it, and show the pouch, the provision I have referred to for the reception of the young. Singularly enough the only one brought to me was caught in my garden by a policeman, and at the very spot on some rubbish where I had seen and heard the first frog send forth its painful and piercing cry, —at least so I felt it to be. But I was spared the trouble of dissecting the adder, for Dr. Crisp, a well known and excellent naturalist, informed me that he had dissected fully 30 of the viper genus; that the pouch for the reception of the young to take protection in was natural to them, and of this he gave me an excellent drawing, which, together with his description, showed clearly that the young brood from the open air did not, and could not, enter the stomach at all, but descended into the pouch by another way, as I myself had discovered. This was further confirmed in a contemporary journal by the very excellent comparative anatomist, Dr. Cobbold; and Mr. Buckland showed further that the gastric juices even had no injurious effect whatever upon young living vipers. I do not know whether my learned and scientific opponent was convinced by these proofs that young vipers do, in times of danger, enter their parents' mouths or not; but if he was not, I add that I myself was, and that I am sure my readers will be so also. *G. Wilkins, Parsonage, Wix.*

Large Citrons.—Three specimens of Citrus medica, grown in the garden of G. Dunbar, Esq., Woburn House, Down, when weighed were found to have attained, though not arrived at maturity, the rather unusual weight of 6 lbs. all but an ounce. Forty-seven had been previously gathered off the same plant—a young one, scarcely 5 feet by 4, worked on the Shaddock stock. During the spring, just when the plant was coming into flower, circumstances over which there was no control caused the temperature of the house in which the plant was growing to sink on several nights to within 1° or 2° of the freezing point. *Hibernicus.*

Cupressus Lawsoniana.—This year Lawson's Cypress has seeded abundantly here on trees from 6 to 12 feet in height. The cones are very small, not larger than good-sized Peas, and are full of good sound seed. Plants were raised here last year from seeds sown from the same trees, but the quantity saved was small compared with this season. In a few years there is no reason to doubt that seedling plants raised from trees in this country will be as plentiful as Larch. All intending planters ought therefore to secure plenty of this fine tree, to plant either in pleasure grounds or on a large scale for timber and shelter. The timber is described as good, clean, and easily worked, with a strong odour. This year, although the season was so dry, some of the trees here have made shoots more than 2 feet in height. The tree is perfectly hardy, and stands the wind well in bleak situations. Its habit is very graceful when it gets to the height of 10 and 12 feet, its branches bending gracefully, and forming a compact tree. It requires a little training when young, to keep the tree to one stem, as side branches often take a strong lead, which prevents the main stem from growing so fast, and spoils the outline of the tree. Cupressus nutkaënsis (syn. Thujopsis borealis) is another beautiful tree, if well pinched in when young, and kept to one stem. It does not however grow so fast as Lawsoniana, and its habit is stiffer and not so graceful. *William Tillery.*

Birds and Fruit Trees.—Wouldn't "Alpha's" contrivance, such as he indicates, be a little too expensive to be generally adopted? I think so; 114 nipples twice discharged would require 228 percussion caps, and in caps alone would cost 6*d.* per day for one machine. In a large garden five or six such machines would be required to be of much service. Instead of nipples and caps, I would suggest that he should substitute a loud discordant-toned bell for the hammer to strike upon, which would be equally effective in scaring the birds, and less expensive. But I think that a human machine would be more effectual than any mere mechanical contrivance. The more active the better, but one three parts worn out would do, plenty of which may be had in most parts of the country for 1*s.* per day, and might not only move about from one part of the garden to another without assistance, but might pull up a few weeds here and there, and do other little odd jobs—in fact earn his shilling, the bird scaring being done gratis. *T. Gell, St. Lawrence, Isle of Wight.*

Dahlias.—As the destruction of our Dahlias by frost is now imminent, perhaps the following record of dates at which these plants have been cut down during the last nine years in this part of North Lancashire, may prove interesting. The height of this place above sea level is 450 feet. In 1855, they were cut down on October 28; in 1856, on November 7; in 1857, they were quite fresh on October 27, but no further record was made; in 1858, they were cut down on October 29; in 1859, they were cut down (thick ice) on October 21; in 1860, they were cut down completely on October 12; in 1861, on November 4; in 1862, about October 25; in 1863, about October 31; and in 1864, quite fresh up to October 17. *W. Robinson, Vale House, near Garstang.*

Deodar Timber.—I have noticed the discussion in your columns regarding the relative strength and durability of Deodar wood and that of Cedar of Lebanon with much interest, for I believe that I was the first to introduce the seeds of the Deodar into England in 1826, or rather into Scotland, for they were sent to Garloch Castle, Ross-shire. Some years ago, when shooting in the Himalayas, I had a Deodar cut down to make boxes for my specimens of natural history, and on measuring the planks of some of the old chests which I still have by me, I find that the dimensions of the largest are 4 feet 2 inches in length, and 2 feet 2 inches in width. Should the Curator of the Kew Museum, or any scientific society, wish to have a piece of wood of the above dimensions to make experiments upon, I shall be happy to send one, provided the carriage and all expenses are paid. I could also send a small phial of oil extracted from the Deodar tree, and much used by the natives of the Himalayas as a cure for itch and other cutaneous affections. *A. C., Braddan, Isle of Man.*

Ancient Gardening.—Mr. Darwin asks (Oct. 8) the date given in old Calendars for sowing French Beans. Evelyn's "Terra," first published 1675, in third edition 1706, Kalendarium Hortense, at p. 226, under "February," gives the following brief direction:—"Sow Beans, Pease," &c., naming other garden seeds. *J. J. R., Helston.*——If Mr. Darwin will refer to "The Whole Art of Husbandry," by J. Mortimer, Esq., F.R.S.; second edition, corrected, published 1708, he will find the following (at p. 456):—"French or Kidney Beans are a sort of Codware that are very pleasant wholesome food, being but lately brought in use amongst us, and are not yet sufficiently known; there are four sorts thereof. 1st. The Scarlet Bean, which has a red husk, and is not the best to eat in the shell, as Kidney Beans are usually eaten, but is reputed the best to be eaten in winter when dry and boiled. 2ndly. The Painted or Streaked Bean, which is the hardiest, though meanest of all. 3dly. The large White Bean, which yields a fair delicate pod. 4thly. The small White Bean, which saving in size is like the latter, but esteemed the sweeter. They delight in a warm fertile ground, which being about the beginning of May or very soon after, planted with them at a foot distance and two fingers deep, will yield an extraordinary crop; you may either set up tall sticks near for them to twine about, or let them lie on the ground: but if you are straitened in room, those on sticks will yield the greatest increase." On turning to p. 469 of the same volume I find the following, which will, I think, prove interesting:—"Potatos are planted in several parts of our country to a very good advantage, being easily increased by cutting the roots (tubers) into several pieces, each piece growing as well as the whole root. A good fat, rich mould is best for them: but they will grow indifferently in any, provided it is well dunged; the root is very near the nature of the Jerusalem Artichoke, but not so good or wholesome. These are planted either of the roots or seeds, and may probably be propagated in great quantities and prove good food for swine." *T. Gell, St. Lawrence, Isle of Wight.*

Foreign Correspondence.

Poisonous Gastrolobes.—"Having just returned from the Flinders River, I am in a position to give you some account of the road. The floods in January presented many difficulties to our reaching that country; but this was not all—a Poison Plant, which seems to confine itself to the range dividing the waters of the Thompson from the Burdekin, destroyed nearly one-third per cent. of the sheep which passed through it. The cattle were not so much affected, but still a very heavy loss was incurred. I think I am within the mark when I state that 250 head of cattle, and 10,000 sheep, besides a few horses and working bullocks, were destroyed by this plant. In fact, it seems fatal to all; and my description of it to old colonists is: compare it with a bush which the aborigines of South Australia use for poisoning fish. The growth of the plant varies, but it seems to reach perfection when 6 feet high. It is found upon the most barren ridges and rises, in soil of a light brown colour, and of a slaty description. The bush may be easily discerned in the distance by its very green, fresh-looking appearance. Care should be taken not to camp within easy access of it. The blossom is of a dark red colour, and similar in shape to the Pea or Indigo flower."

It may interest you to learn that the preceding paragraph, written by a correspondent of the *Northern Argus*, refers to Gastrolobium grandiflorum (Fragm. iii., 17), the only species as yet known out of S.W. Australia, and as poisonous as G. bilobum, G. calycinum, G. Drummondii, and G. oxylobioides. Since Mr. T. M. Stuart, the famous explorer, found the plant near the Roper River, in Arnhem's Land (Widrington Range) it is to be feared that this poisonous species extends a long way through the interior of tropical Australia, although I did not meet with it on any of the lines of my investigation. *Ferd. Mueller, Melbourne, July 25.*

Societies.

Royal Horticultural: *Oct.* 19 (*Fruit and Vegetable Show.*—The fruit shown on this occasion, though not remarkable as regards quantity, was all that could possibly be wished with respect to quality. Grapes, both black and white, were wonderfully fine. Pears, especially an exhibition of six dishes from her Majesty's Garden at Frogmore, were in excellent condition. Among Apples were magnificent specimens of Emperor Alexander, possessing a colour equal to that of a Géant des Batailles Rose, and measuring 13 inches in circumference; Mère de Ménage, six fruits of which weighed no less than 6lb. 10 oz., measured 14 inches in circumference, and had a skin like that of a purple Aubergine; Blenheim Orange and King of the Pippins, also large and fine in colour, as was indeed most of the fruit shown at this meeting, a circumstance doubtless attributable to the continental summer with which we have been favoured. Pine Apples were scarce; the best by far was an example of Smooth-leaved Cayenne from her Majesty's Garden at Frogmore. We also noticed one or two goo specimens of Black Jamaica and Enville.

Grapes, as has just been stated, were magnificent. Next to the glorious examples of Barbarossa shown from the Society's Garden at Chiswick, of which separate notice will be found in another column, must be placed an exhibition of three bunches of Muscat of Alexandria, from Mr. Meads, gr. to Raikes Currie, Esq., Minley Manor, near Farnborough. These were large, both in bunch and berry, and possessed that beautiful golden tinge which is the distinguishing characteristic of first-class fruit of this variety. The three bunches weighed together 11 lb. 13 oz. From Mr. Pottle, gr. to B. D. Colvin, Esq., and from Mr. Ingram, gr. to J. J. Blandy, Esq., also came large and fine fruit of this kind of Grape. Vines in pots, laden with fruit, were furnished by Messrs. Lane & Son, of Great Berkhampstead, who had also very fine examples of Grapes in a cut state. Among the latter were beautiful bunches of different kinds of Black Hamburgh, Golden Hamburgh, Buckland Sweetwater, admirable examples of Muscat Hamburgh, Esperione, Black Prince, Lady Downes', and others well ripened and altogether quite a credit to all concerned in their management. From Mr. Potts, gr. to M. Philips, Esq., came beautiful bunches of Barbarossa, three of which weighed together 12¾ lbs. From Mr. Meads also came very fine bunches of Black and Muscat Hamburgh, three bunches of both of which weighed nearly 9 lbs. Finally, from Mr. Ingram came beautiful examples of Grapes from the great Vine at Cumberland Lodge, which fills a house 138 feet in length and 19 feet in width. Its produce this year is excellent, ind ed even superior to that of former seasons.

Of Apples, six fine dishes were furnished by Mr. Ford, gr. to W. E. Hubbard, Esq., Horsham, Sussex. The sorts consisted of Adams', Scarlet, and Red Pearmain; Ribston Pippin, very fine Cornish Gilliflower, one of the best of all Apples as regards flavour; and beautiful examples of Blenheim Orange. From Mr. Ingram, gr. to her Majesty at Frogmore, came Fearn's Pippin, Scarlet and Frogmore Nonpareil, the latter a good Apple, which will keep from this time till March; Court Pendu Plat; and Gipsy King, a valuable yellow-fleshed variety, good from November till June. From Mr. Lane, St. Mary's Cray, came Ribston Pippin, Bull's Golden Reinette, Summer Nonpareil, Cornish Gilliflower, Blenheim Orange, and King of the Pippins. Mr. Buster, Goring, near Worthing, furnished Golden Reinette, Carl's Seedling, King of the Pippins, Blenheim Orange, Court Pendu Plat, and Celini. In collections from other growers we noticed Hughes' Golden Pippin, Besspool, and Sturmer Pippin, all excellent of their kind. In groups of three dishes the best came from Mr. Ford, who contributed what was labelled Golden Reinette, Blenheim Orange, and King of the Pippins; Mr. Hall, gr. to Captain Tyrrell, showed Blenheim Orange, Cox's Orange Pippin, and Ribston Pippin. From Mr. Lane came Fearn's Pippin, Winter Queening, and Scarlet Pearmain. Among Kitchen Apples the best were communicated by Mr. Scrymger, gr. to R. Palmer, Esq., Holme Park, near Reading. The sorts were the finely-coloured Emperor Alexander mentioned above, Yorkshire Greening, and Blenheim Orange. Mr. Lee, gr. to Viscount Combermere, furnished the large specimens of Mère de Ménage, Flower of Kent, and Blenheim Orange. From Mr. Sayers, gr. to E. Ellis, Esq., Epsom, came Gravenstein, Mère de Ménage, and Alfriston. Mr. Lane, St. Mary's Cray, furnished Waltham Abbey Seedling, Blenheim Orange, and Gloria Mundi. Mr. Moffat, gr. to Viscount Maynard, sent Dumelow's Seedling, Blenheim, and New Hawthornden. Among other sorts of Kitchen Apples we noticed Hollandbury, Fall Pippin, Hoary Morning, Golden Noble, and Rymer. A collection, consisting of 120 varieties of Apples, was contributed from the Society's Garden at Chiswick.

Among Dessert Pears the best came from Mr. Ingram, gr. to her Majesty at Frogmore, who furnished large handsome fruit of Van Mons Leon le Clerc, Beurré Diel, Beurré Clairgeau, Queen Victoria, a variety of which we have spoken favourably in former years; Glou Morceau, and Chaumontel. Mr. Scrymger sent Marie Louise, Beurré Rance, Vicar of Winkfield, Beurré Diel, Glou Morceau, and Beurré Bosc. Mr. Ingram, gr. to J. J. Blandy, Esq., contributed Beurré Bosc, Van Mons Leon le Clerc, Beurré Diel, Duchesse d'Angoulême, Marie Louise, and Glou Morceau. In the class of three dishes, the best came from Mr. Sage, gr. to Earl Brownlow, Ashridge, who sent Beurré Rance, Glou Morceau, and Duchesse d'Angoulême. From Mr. Ford came Thompson's, Marie Louise, and Glou Morceau. Mr. Lee furnished Styrian, Beurré Diel, and Marie Louise. From Mr. Wilcocks, gr. to S. M. Aynsley, Esq., came Beurré Diel, Marie Louise, and

Duchesse d'Angoulême. In groups from other growers were fine specimens of Seckel, Beurré de Capiaumont, Beurré Hardy, Brown Beurré, Gansel's Bergamot, Urbaniste, and Knight's Monarch. Of Kitchen varieties the best came from Mr. Bentley, gr. to Lord St. Leonard's, Thames Ditton, who furnished Beurré Langelier, Catillac, and Beurré Rance. From C. Hadden, Esq., Berkhampstead, came Black Pear of Worcester, Uvedale's St. Germain, and Catillac. Mr. Masters, West Hill, Highgate, sent Uvedale's St. Germain, Easter Beurré, and Catillac. From the Garden of the Society at Chiswick came a collection of 80 varieties of Pears, chiefly from Standards.

Of Figs excellent Brown Turkey came from Mr. Sayers, gr. to E. Ellis, Esq., Epsom, and good Lee's Perpetual from Mr. Rogerson, gr. to E. B. Brown, Esq., Acton.

Of Currants, both Red and White, there were some very fine examples of well retarded fruit. The best came from Mr. Tivey, gr. to L. Ames, Esq., The Hyde, near St. Alban's; Mr. Ford and Mr. Ingram, of Frogmore, also both contributed good dishes of Currants.

Plums from Messrs. Mobbs, Sayers, Beasley, and Lane, were good for the season. The sorts were chiefly Coe's Golden Drop, and Ickworth Imperatrice.

Peaches were confined to the Salway, a yellow variety, fine-looking fruit of which came from the Royal Gardens, Frogmore, and from Mr. Ward, of Oxford.

Melons were scarce. The best was Meredith's Hybrid, a scarlet-fleshed kind, excellent in flavour.

Cherries consisted wholly of Morello, good dishes of which were furnished by Mr. Williams and Mr. Potts.

Among Miscellaneous Fruit we noticed Oranges and Citrons, Quinces, Dutch Medlars; Wax Apple, a small orange-yellow sort; Cuthill's Black Prince Strawberry, gathered from plants in the open ground in Buckinghamshire; Eugenia Ugni, and Cydonia japonica. Some of the last were nearly as large as a middling-sized Apple, but by no means handsome, either in shape or colour. From Sir Wentworth Dilke, Bart., came a dish of good Blenheim Orange Apples; Mr. Fleming sent from Cliveden handsome fruit of the Gravenstein; and from Mr. Kaile came very highly coloured examples of Fearn's Pippin.

Vegetables were not very plentiful. The best Kidney Potatos came from Mr. Moffat, gr. to Viscount Maynard. They consisted of Flesh-skinned Kidney, Royal Ashleaf, Imperial Kidney, Prince of Wales, and Lemon Kidney. The same exhibitor also contributed the best six round Potatos, consisting of Daintree's Seedling, Ten Week, Transell's Seedling, Pheasant's Eye, Devonshire Red, and Painted Lady. Among other kinds we noticed the Fortyfold, both late and early, York Regents, Red Robin, and Red Regent. Of one dish of Kidney (Lemon) the best came from Mr. Bentley, gr. to Lord St. Leonard's; and Messrs. Veitch received a First-class Certificate for a great white Cattle Potato of Continental origin called Chardon. The Garden of the Society at Chiswick also furnished an interesting collection of Potatos.

Onions came from Mr. Whiting, Mr. Scrymger, and Mr. Masters. The sorts were apparently the Reading and Strasburg.

Of Carrots, medium-sized clean skinned specimens came from Mr. Whiting and Mr. Drewitt, and of White Belgian samples were furnished by Messrs. Veitch.

Of Salsify and Scorzonera, fine roots were contributed by Messrs. Drewitt, Morris, and Whiting.

Turnips of the White Stone kind came from Messrs. Ford, Drewitt, Sayers and Whiting.

Beet, apparently the Pine Apple variety, came from Messrs. Whiting, Drewitt, Young, and others.

Of Broccoli, were some very white heads of Walcheren, from Mr. Whiting and Mr. Ford.

Among other vegetables we noticed very good Parsnips; very fine curled Parsley from Mr. Drewitt; Peas from Mr. Tivey; Incomparable White Celery from Mr. Whiting; Purple Aubergines from Mr. Potts; a Mammoth Gourd—weighing 123 lb.—from Mr. Young; finely-curled Endive from Messrs. Veitch; Dwarf green curled Savoy from Mr. Young; Early Dwarf York Cabbage from Mr. Ford; Giant Brussels Sprouts from Mr. Scrymger; ordinary Tomatos from Mr. Morris, and a small Pear-shaped Tomato from Mr. Salter. We also noticed dishes of Mushrooms from Mr. Young and Mr. Rogerson.

For a list of the awards on this occasion see p. 1000.

ENTOMOLOGICAL: *Oct.* 3.—F. Pascoe, Esq., F.L.S., President, in the chair. A collection of insects collected by Lieut. Beavan, including many rare species of different orders, was presented to the Society by that gentleman. Three species of Coleoptera of small size, belonging to the family Staphylinidæ, captured in Scotland by Mr. Sharp, were exhibited as new to the British Fauna. A box of insects collected on the coast of Brazil, from Rio to Monte Video, by Mr. Pullinger, R.N., was exhibited by Mr. Janson. Mr. Pascoe exhibited two curious Coleoptera belonging to the genera Atractocerus and Cyphagogus which he had received from Australia. Mr. Doran exhibited Botys annalis, a rare moth, captured at Lyme Regis in August last. Major Parry exhibited a case of Coleoptera collected at Gibraltar by his son; also a large weevil from Brazil, from which some long vegetable filaments of the genus Sphæria had grown. A memoir by Mr. Baly was read, containing descriptions of new species of exotic Phytophagous Beetles; and Mr. F. Bond stated that he had found the crops of partridges which he had shot filled with the larvæ of Agrotis segetum, which have this year proved so destructive to root crops all over the country.

Notices of Books.

British and Garden Botany; consisting of Descriptions of the Flowering Plants Ferns and Trees indigenous to Great Britain, with Notices of all Plants commonly cultivated in this country for use and ornament: preceded by an introduction to Structural and Physiological Botany. By Leo H. Grindon, Lecturer on Botany at the Royal School of Medicine, Manchester, &c. With numerous illustrations. London: Routledge Warne & Routledge. Small 8vo., pp. 869.

We look upon the plan of this book as a mistake. The volume is in truth neither more nor less than a British Flora, burdened with a very useless, because imperfect, account of a certain number of garden plants. Take in illustration of this last remark the following passage from the information on "garden plants" of the "Pea family:"—"Next to the Acacias come a multitude of pretty shrubs belonging to the genera Chorozema, Pultenæa, Eutaxia, Kennedya, &c., mostly with simple and often holly-edged leaves; and abundantly representing the papilionaceous part of the flora of Australia and southernmost Africa. Many of them are climbers or twiners, some are rush-like and nearly leafless; very odd and unexpected mixtures of colour frequently occur in their flowers, especially in the Chorozemas, and in many there is a dash of copper-brown, a colour elsewhere almost unknown." There is no further clue that we can find to Chorozema, for example, beyond that which points to the whole of the vast Leguminous order. Now, of what possible use can be such generalised gossip as this, in a book of reference professing to afford the means of ascertaining the names of the plants of which it treats. The book is really, as they say, neither fish, flesh, nor fowl, but a needlessly inconvenient and cumbrous volume. Besides, with Babington's and Bentham's works before him, no one can say that we have here the best account to be found of our British plants; indeed the arrangement, which occupies considerable space in working out the name of a plant by means of what are called analytical charts, a sharp critic would call mere muddle.

While we cannot then approve the plan of this book of British and Garden Botany, we are compelled to take a much more modest estimate of the merit of its execution than the author himself seems to hold, for he tells us in his preface, "that no work has ever been published in which the natural orders have been described in a way equally intelligible, or in which the idea and compass of the Natural System have been exhibited so fully for practical purposes." Surely with such an announcement we might look for correctness in the details of information given, but what do we find? We open the volume casually at p. 359, and there we read among other matters in illustration of the natural order Plumbaginaceæ—"Valoradia plumbaginoides, by some called Plumbago Larpentæ, is an annual from Shanghae"—a statement which any garden apprentice ought to be able to correct. Turning over to p. 395 we are told that "the gay autumnal flower called the 'Verbena' is the V. Melindres or chamædrifolia, a native of the neighbourhood of Buenos Ayres; the various colours it assumes render it a general favourite, as there is scarcely any contrast, except yellow, that it will not supply"—the fact being that V. Melindres has only a moderate share in the origin of our garden varieties, which have as much, if not more, of the blood of V. Tweedieana, incisa, and teucrioides, to the latter of which Mr. Grindon erroneously attributes purple instead of pinkish white flowers. Opening again at p. 467, we find the author writing of what is evidently the plant called German Ivy, Senecio mikanioides, thus:—"Perhaps the best of this class [climbing composites] in cultivation is the Mikania scandens, not indeed in respect of its flowers, but as a foliage plant; the leaves are lobed Ivy-like, and of a most delicate and glistening light green," &c.,—the truth being that Mikania scandens is altogether a different thing. These are only a few random instances, but they do not convey a very favourable impression as to the authority of the statements made respecting garden plants.

Mr. Grindon, if we may judge from his Preface, prides himself on the practical simplicity of what he calls his analytical keys and charts. Some few cases wherein we have put them to the test work out very well; but it is hardly consistent in the author to condemn the analytical keys of his predecessors, because characters are employed derived from ripe fruits, and then, as in Geraniaceæ to wit, to make the ripe fruits furnish his own leading distinctions; nor can we at all agree with him that the character of "ovary two or more celled" is enigmatical in the case of such a plant as Solanum Dulcamara, though only seen in flower. Certainly, if found to be so, it is an enigma which a young botanist should lose no time in learning how to solve. The charts are not always clear if they are 'simple'; for instance, in the order Umbelliferæ, which almost above all others needs perspicuity, the primary sections are:—1. Abnormal species (*i. e.* in no respect resembling Conium (fig. 167). 2. Umbelliferæ of normal character, but with very striking individuality of feature or figure. 3. Normal Umbelliferæ with the leaves quasi-pinnate or simply pinnatifid, longer than broad. 4. Normal Umbelliferæ, with the leaves divided into 3—5—7 branches, &c. We can well imagine a student bewildered over this choice of alternatives. Surely too, Alexanders, Angelica, and Coriander, all put in Section 4, might reasonably have been looked for in Section 2—as much so at least as Fennel, Hemlock, or Celery which are placed there. In another of these 'simple practical' keys Centaurea nigra and C. Scabiosa are distinguished in part from C. Isnardi, by attributing to the two former crimson (!) and the latter purple flowers—rather a puzzling distinction we should think to those who can distinguish colours, and useless to those who cannot. And finally, passing on to the Ferns, among which we find such queer names as Rusty-back for Ceterach, and Centipede Spleenwort for Asplenium Trichomanes, we should be surprised indeed if any one skilled in the study of Ferns, much less a novice, were to find out the Holly Fern, Lady Fern, Beech Fern, Woodsia, and others by the leading character of "fronds simply pinnatifid or quasi-pinnate," under which they all appear.

To have been consistent with its title, this book should have included all popular garden plants in its tabular keys and charts, so that by its aid one might have worked out their names. Even then if kept of a portable size it must have been necessarily very incomplete. As it is, it is next to useless as a key to the names of garden flowers, and we cannot find a word to say in its favour.

In the *West of Scotland Horticultural Magazine* for last month, the question of exhibiting Azaleas is discussed. Gardeners who have toiled hard to get plants into form, and to have them looking their best on the day of exhibition, are quite indignant, it is said, at meddlesome critics interfering with their pet subjects, and are not slow in censuring what they call "unwarrantable attacks on first-class cultivation." As regards formality of training, it is urged that some tying is absolutely necessary, that a perfectly flowered plant must of necessity be formal, and that though uneven masses of flower may be less artificial looking, yet only the prominent parts of such plants will bear inspection in respect to the quality of the bloom. Then as to the necessity for more foliage to soften the glare of colour, it is shown that this necessity is admitted and acted on in every gentleman's establishment in the country. No gardener places all his flowering plants *en masse* in the conservatory, but introduces neutrals to soften the colours. There is something very grand, it is observed, at an exhibition, in a scarlet Azalea, 6 feet by 3, between two whites of equal dimensions; but the sight is too dazzling, and there is room for cavilling at want of arrangement, and justice in the outery for green leaves. No one, however, can lay the blame of this at the exhibitor's door. He has done his duty; the work of several years is there to testify to his skill, and the only thing that is wanted to make the plants look more pleasing is the introduction of some of the graceful New Zealand Tree Ferns, which are now so much grown, or light green foliage, such as is to be found in some of the Palms, Cycads, and other ornamental plants to be seen at every show, but often placed anywhere but in the right position. The writer concludes that it is in the arrangement of the plants at our exhibitions that the fault lies, not in their cultivation or even in their training; and in this opinion we agree. There is in this same number a good account of the gardens at Castle Kennedy.

An article on Potato Culture in the *Scottish Gardener* contains the following passage, corroborative of the experiments of Mr. MAW, recorded at p. 1011:—In the selection of sets, there is no greater mistake than that of selecting small sets or of cutting large ones. I have proved this over and over again, and any one can do so, by planting a quarter of Potatos, beginning at one side, and planting a row of very small sets, then a row a size larger, and so on till the largest size is planted. It will be found at harvest time, that the small sets give the greatest proportion of small fry, and the largest will give the finest yield; in fact, the sample will be found according to the size of the sets, the largest having by far the heaviest crop of fine Potatos. Mr. D. Thomson considers Mrs. Pollock and Queen of Queens Pelargoniums, two of the finest bedding-plants of recent introduction.

The *Florists' Guide* for the months of September and October, contains amongst other articles a notice of the floricultural career of Richard Headly, Esq., intended to accompany his portrait, which however has been accidentally delayed. A well-merited tribute of praise is paid to the achievements of this gentleman amongst Auriculas, Pinks, Carnations, Picotees, Dahlias, and especially Tulips, of all which and many others he has been a most enthusiastic and successful grower and raiser, so much so as to have earned the distinction of being regarded as our leading amateur florist.

In the *Geological Magazine* for October is an interesting paper by Mr. S. P. Woodward, on the nature and origin of Banded Flints. The origin of these flints has been a puzzle to stone-breakers for the last 50 years. Those with the furrowed surface were

considered by Parkinson to be the wrinkled and petrified remains of the peduncle of the Duck-barnacle. Dr. Bowerbank considered them fossilized sponges—an opinion which few have shared with him. When slit and polished, the banded portions show no microscopic peculiarity to distinguish them from the adjacent unbanded flint, and no organic structure, save where they invade the texture of a sponge, or envelope Foraminifera, so-called Xanthidia, and other minute organisms with their hazy shroud. Mr. Woodward believes he has conclusive evidence that the coloured bands in flints are produced by infiltration, as taught by the late Professor Henslow. The paper is illustrated by two lithographic plates.

The *Botanists' Chronicle*, in reference to two rare Essex plants, remarks that Bupleurum falcatum grows plentifully on both sides the road from Chelmsford to Ongar, on the banks and in the hedges of several fields adjoining Norton Mandeville, and is extending its boundary in the direction of Chelmsford. It certainly increases by seed, and probably by its roots. Lathyrus tuberosus has a greater area than the Bupleurum. It grows in at least 10 or 12 fields in the parish of Fyfield, sometimes at the borders, sometimes at the centre, sometimes in contiguous fields, and sometimes in fields a mile apart. This year being both dry and hot, this Lathyrus, which has never before been known to produce pods, has been met with in fruit. A white-flowered variety of Epilobium hirsutum is recorded as plentiful at Southend, the corolla being pure white both inside and outside.

Garden Memoranda.

Gardens and Pleasure Grounds of Blythswood.—Blythswood, the seat of R. Campbell, Esq., is situated on the banks of the Clyde, immediately contiguous to the burgh of Renfrew, and about seven miles from Glasgow. The mansion, which is of comparatively recent erection, is in the modern English style of architecture, and presents a pleasing outline, although the lower suites of rooms are somewhat buried, owing to the low position selected for its site. The dress and pleasure grounds, which cover an extent of 30 acres, are in an admirable state of keeping, and are made up of a combination of those features which are generally aimed at in all landscape gardening. There are not the quantities of venerable trees which one sometimes stumbles upon in fine old baronial pleasure-grounds; but there is a sufficient number standing out in prominent places to give a furnished appearance to the landscape. Elm, Lime, Ash, and Sycamore predominate. Considerable attention seems to have been paid to the introduction and cultivation of Coniferæ, for not only are they to be seen standing out boldly as lawn plants in pairs to match, but here and there, in well chosen spots, irregular clumps and beltings of trees have been planted with the view of affording protection and shelter to the most decorative of those which have been proved to withstand the rigours of a northern climate. The importance of such belts cannot be overestimated, for we are all aware that some sort of shelter is absolutely necessary, even in more favoured localities than the one in question, to produce symmetrical specimens. Among the many sorts grown, the following are remarkable for luxuriance, viz., Wellingtonia gigantea, Abies Nordmanniana, Pinsapo, and nobilis, Araucaria imbricata, Cupressus Lawsoniana, and Thuja gigantea, and borealis. Of Rhododendrons, which are in robust health, there is a splendid assortment. The approach drives and walks are in the opinion of some persons too narrow, giving a contracted appearance to a park and pleasure grounds of rather extensive dimensions.

The flower, kitchen, and fruit gardens lie together, forming as a whole an irregular outline, surrounded by beltings of trees, flanked with underwood of Rhododendrons and other choice shrubs, of which may be mentioned the fine showy fruited Cratægus Pyracantha, and the sweetly [pretty flowered Cydonia japonica. The flower garden proper is of crescent form, and during our visit was very gay with bedding plants. It is not one of those formal gardens which are so designed as to present a blaze of colour without a relief point for the eye to rest upon. Choice shrubs and Conifers are introduced upon a Grass groundwork, and present an individuality which is pleasing after inspecting the arrangement of masses of colour in the respective figures. There was the usual amount of scarlet, yellow, white, purple, &c., which is to be seen in all modern flower gardens, produced by such things as Pelargoniums, Calceolarias, Gazanias, Cerastium, Alyssum, Lobelias, and Verbenas. Gazania and Lobelia mixed, as here grown, makes an admirable combination. Simplicity of design in the first instance, with a few colours well arranged, and planted correctly with material suitable as to size, is in most instances far more effective in the end than numerous geometrical figures of a complicated character, however well planted. Were this more studied, and suitable Coniferæ and other handsome plants made proper use of, less complaint would be made against the modern system of flower gardening.

The kitchen garden is large and commodious, and is surrounded with a lofty substantial brick wall. Upon the north wall is built a range of fruit houses of about 330 feet in length. In the centre of this range are three Vineries, each about 34 by 16; while on the one side are three Peach-houses, each about 34 by 10; and on the other, one Peach house, two Apricot houses, and one Fig house. The Vineries, especially those houses that are planted afresh and the borders renewed, are in very good order, showing good strong short-jointed canes. The Peaches are fully above the average, bearing large crops. The Apricots are of recent introduction, but, judging from the state of growth, they are likely to produce plenty of fruit buds. Figs are in extra fine order, the fruit gathered being both large and good. The wall trees, especially Plums and Pears, are in excellent order. Peaches and Apricots have never done so well in the more exposed localities of Scotland since the severe winter of 1861-2. In many places the old trees were all but killed. Young trees planted since have done moderately well; but there is a general disposition among fruit growers here to have walls covered with glass to insure a first-rate crop of good quality. Young Peach trees at Blythswood are in fine order. One thing is particularly well managed, viz., the standard Pears and Apples. Mr. Ross, the gardener, has certainly made the most of the trees he planted some eight or nine years ago. With careful attention to root pruning and lifting, these trees now present a fruit-bearing tendency of no ordinary kind. Unlike numbers of those we have seen at even places of note, they have been allowed to get up to a very convenient size, and this season, which of course has been a favourable one, they are loaded with fruit. They are planted in rows round the borders of the principal walks, and are quite a treat to look upon. Foremost among those doing so well in our West of Scotland climate may be named among Pears—Beurré d'Amanlis, Beurré de Capiaumont, Beurré Diel, Beurré Langelier, Beurré Superfin, Beurré Rance, Bon Chrétien, Fondante, Citron des Carmes, Doyenné d'Été, Duchesse d'Angoulême, Forelle, Glou Morceau, Gratioli, Leon le Clerc, Louise Bonne of Jersey, Marie Louise, and Monarch (Knight's). Among Apples, the following were in fine bearing order, viz:—Golden Pippin, Yellow Ingestre, Cornish Aromatic, Yorkshire Greening, Early Red Margaret, Irish Pitcher, Tam Montgomery, Paradise Pippin, Stone Pippin, Scarlet Nonpareil, Stirling Castle, Beauty of Kent, Cambusnethan Pippin, Lemon Pippin, and Keswick Codlin.

Leaving this garden, we enter a square block, upon which the various plant-houses have been built. To enumerate all the leading plants grown here would occupy too much space. In the two stoves, one measuring 35 feet by 18 feet, and the other 30 feet by 12 feet, there are numerous fine flowering and foliage plants, all in excellent health, many of which have been exhibited in Glasgow time after time. There is also a damp stove, 31 feet by 21 feet, well filled with decorative plants and Orchids together; as well as a dry house for Cacti, 26 feet by 10 feet. Fronting these are ranges of Pine pits, to the extent of 90 feet by about 9 feet wide, filled with vigorous plants, some of them bearing large well formed fruit. Of Melon and Cucumber pits there is a range at least 120 feet long and 10 feet wide, besides numerous cold pits for vegetables, bedding plants, &c.

The Conservatory in the flower garden is a well proportioned useful house for plant culture and plant showing, measuring 50 feet long by 27 feet wide. It was well filled with flowering plants. The greater part of the front stage contained Heaths, of which there is a good assortment, consisting of good plants of perspicua nana, Archeriana, Aitoniana, Turnbullii, Macnabiana, and others. There is also a good variety of other hard-wooded plants. The wood and glass work appeared to be substantially put up, and the general design, although plain, very neat. The heating is particularly well done, there being hot-water pipes, and sufficient of them to keep up a steady and lasting heat without having to resort in very cold weather to extreme firing, which is not at all desirable, either as a matter of economy or convenience. Much credit is due to Mr. Ross for his general good management, and to the critical taste and generous disposition of his worthy employer, Mr. Campbell. *M.*

Miscellaneous.

Fuchsias.—I wonder what old Leonard Fuchs would say if he were to rise from his grave in this year of grace 1864, and see the improvement made in the Fuchsia he brought from Chili, of which he said:—"The handsome form of the pendent flowers, their vivid colours, and the numbers which successively adorn the branches, will render this flower a beautiful ornament to the conservatory or parlour window." Looking back a very few years, I remember when the old longiflora, globosa, and then gracilis, were considered the gems of their tribe; but now one scarcely ever meets with either; the march of improvement has trampled them down in the estimation of the florist, and raised up almost numberless varieties, of nearly every conceivable shade of colour. I happened the other day to be in the neighbourhood of one of our large Fuchsia growers of the south, with a few minutes to spare, and I made up my mind to see the latest out. An obliging foreman very quickly introduced me to the hall where the representatives of old Fuchs held their court. As the eye encountered the "blaze of beauty," it was at once fixed upon a well-grown specimen of the new variegated Pillar of Gold, a rich golden variegation, with olive-green ground, the midrib and lateral veins being of a deep crimson colour, strongly marked, and heightened by its contrast with the golden colour of the leaf. The flower is of a medium size, violet purple corolla, scarlet crimson tube and sepals, the latter being well reflexed, and of good form and substance, the fine dark colours of the flowers appearing to great advantage against the brilliant auriferous foliage; it has obtained the certificate of the Horticultural Society. Gem of the North is a remarkably fine flower, with shaded crimson tube, and sepals of great width and substance, deep purple corolla, well reflexed, of good form, and destined, I think, to be a leading exhibition variety. Queen of Beauties, a first class light Fuchsia, tube and sepals pure white, very broad, and of great substance, well recurved, exposing a bright rose-shaded crimson corolla. Minotaur, with glossy carmine sepals and monstrous double corolla, so formed as to show three corollas in one, of a lavender blue colour, really very pretty. Neptune, a large handsome double kind, with a bluish violet corolla, bright crimson tube and sepals, a well-proportioned flower, of good branching habit. Sunshine, rosy lavender, or mauve-coloured corolla; sepals pure carmine rose, finely reflexed, quite an acquisition. Amongst a large stock of varieties sent out in 1863, Empereur des Fuchsias, Hercules, and Madame Legrelle d'Hanis showed very prominent and striking. *Florists' Guide.*

A Word on Behalf of our Sea-Fish.—Sea-fish have innumerable enemies, and whilst the destruction, by millions, of herrings and mackerel in full roe is permitted and even encouraged by law, it is unreasonable to expect the stock of sea-fish to increase. For every female herring or mackerel destroyed whilst in roe, 500,000 ova perish, and whilst the salmon, trout, perch, and all freshwater fish are protected by Act of Parliament, there is no protection whatever for our sea-fisheries. The remedy is very simple. Let it be made illegal to destroy sea-fish whilst breeding, that is, give them a couple of months' immunity, and the supply of a good wholesome article of food for the poor man will be increased a hundred fold, and fish will be procurable in the London market at a tenth part of the present price. The subject is well worth the attention of the Legislature, and he will deserve well of the nation who shall first call the attention of Parliament to so important a matter, and one in which there is room for such a vast improvement. *Once a Week.*

Coloured Vision produced by Santonine.—"Semen contra vermes," or simply "Semen contra," is the name given to the mixed flowers and seeds of Artemisia judaica, a plant of Arabia and North Africa. In commerce there are various kinds of Semen contra. The French and Belgians call it sometimes Sementine or Barbotine. Artemisia Contra is another plant which furnishes it. These plants are met with also in Tartary and Persia, and are cultivated in our gardens. The semina santonici, or santonicum of pharmacy, is a powdery substance, with a strong aromatic odour and very bitter taste, resulting from the breaking up or coarse pulverisation of the flower heads and stalks adjoining; the flowers being partly gone to seed, the whole is a mixture of seed, flower-stalk and leaflets. This product is taken internally to kill intestinal worms, at a dose of about 1 drachm in powder alone, with honey or otherwise, repeated two or three times a day; and when it has been continued for some days, a strong purgative is administered, which completes the cure. Artemisia Absinthium, another plant of the same family, and in general, all the Wormwood tribe, possess more or less the same medical properties. In England we have a number of Artemisias, known as Wormwood, Southernwood, and Mugworts. All these plants contain the peculiar principle called santonine. The most curious property of santonine is certainly its physiological effect upon the vision. Experiments were made upon this peculiar action, almost at the same time, by myself and by M. de Martini, of Naples. At a quarter past 2 o'clock, on the 5th of February, 1859, I took five grains of santonine, and waited anxiously for the desired effect, namely, the production of coloured vision. For a considerable time I experienced nothing extraordinary, and began to think the experiment a failure. About 5 o'clock, however, I fancied that the white curtains of my room had a very pale greenish tint. I attributed the effect to imagination, and went out. At 6 o'clock I returned, the gas was lighted, and the fire burning brilliantly on the hearth; a singular phenomenon now presented itself. The fire and the glass globes which surrounded the gas jets appeared of the most gorgeous yellow it is impossible to imagine. It was a greenish-yellow, exceedingly rich and brilliant, resembling some kinds of burnished gold. It was the colour of chlorine gas, but much more intense. I communicated these effects to the persons near me, who, seeing the objects as usual in their natural colours, could not realise what I experienced. Everything in the room that was white and strongly lighted (as the table cloth for instance) appeared to me of the most brilliant greenish-yellow, the flames of the gas jets and the fire were most remarkable in this respect. The other objects of different colours, red, blue, yellow, appeared still red, blue, or yellow; it was only white objects and flames that appeared of that peculiar greenish yellow tint alluded to; but, doubtless, all tints must have been more or less affected by the state of my vision. It is, perhaps, needless to add that I experienced no disagreeable effects, at least not at the

time I experienced coloured vision, though some time before I felt slightly bilious. These effects continued without intermittance during the rest of the evening; they began to diminish about half-past 10, but were very distinct, though weak, at 12 o'clock, and even until two o'clock at night, when I retired to rest. The next day all effect had disappeared. The santonine employed in these experiments was extracted from Artemisia santonica or judaica, and was absolutely pure. M. de Martini made several experiments upon his patients and his pupils, in order to ascertain whether the coloration of vision by santonine was the same for every person, and whether the dose had any influence upon the colour seen. The results obtained are certainly remarkable. An invalid, who was taking santonine as a vermifuge, invariably noticed about 20 minutes after the prescribed dose had been administered, all external objects of an intense green colour; whilst a student, M. Cassano, constantly saw objects of a blue colour. But in the great majority of cases it was observed that persons who had taken santonine saw external objects of a straw-yellow or greenish-yellow tint. The dose appears to have a very decided influence upon the results. A young man who took five grains of santonine in the solid form saw external objects of a yellow colour; the dose was then doubled, and 36 minutes afterwards, objects no longer appeared green or yellow, but perfectly red; half an hour later they appeared bright orange, and later still, yellow as before. With M. Cassano, whether he took five grains or 10 grains, external objects always appeared to him of a bright blue colour, while his fellow student M. Pedretti saw objects always straw-yellow. Another curious fact was observed, which I have looked for in vain when experimenting upon myself, namely, an intermittence in the effects of coloured vision. As to the cause of this peculiar action of santonine, M. de Martini believes that it exercises a molecular action upon the retina or optic nerve; others, among whom are M. Miable, of Paris, think that, on being introduced into the system, it induces a momentary bilious condition, which passes off in the course of the day. But it is far more probable that santonine is transformed into a new substance of an intensely greenish-yellow colour, to which I gave the name santoneine (obtained by boiling santonine with nitric acid). Admitting that it gets into the blood as the greenish-yellow substance santoneine, it is no longer so difficult to account for the production of coloured vision. The retina, or expansion of the optic nerve, is a translucid membrane which receives numerous branches of the ophthalmic artery, and sends a branch to the transparent vitreous humour of the eye, so that the ingestion of santonine colouring the serum of the blood, the latter is capable of colouring the transparent media of the eye sufficiently to produce the effects described. In the present state of our knowledge of the chemistry and physiology of santonine, this appears to me the only manner in which we can at all account for the production of coloured vision, for santonine does not appear to have any action whatever upon the nerves. *Dr. Phipson, in Intellectual Observer.*

Calendar of Operations.

(*For the ensuing week.*)

OWING to the wonderfully fine weather with which we are favoured, flower gardens are still comparatively gay. The beauty of the Pelargoniums, especially Cybister and Stella (Nosegays), is as yet in some places but little impaired; a small-flowered single yellow French Marigold is still in charming condition, as are likewise Dahlias, most of the Verbenas, and Gazania splendens. Keep all in connection with these outdoor floral decorations therefore neat and clean, so as to set them off to as much advantage as possible. Let weeds, still troublesome, be removed both from borders and walks, and keep the latter well rolled. All preparations for bulb planting should now be forwarded as much as possible, in order that active operations in reference to these matters may be commenced as soon as frost has put an end to the beauty of the bedding plants.

FLOWER GARDEN AND PLANT HOUSES.

In cool conservatories and greenhouses damp or insects soon do irreparable injury to soft-wooded plants at this season, and these must be attended to if the plants are to be wintered in first-rate condition.

CALCEOLARIAS.—These are subject to the attacks of thrips, unless afforded a moist atmosphere; they must therefore be narrowly watched, and fumigated lightly two or three evenings successively if this pest makes its appearance, keeping the atmosphere moist and giving air on every favourable opportunity to prevent the foliage from flagging.

CINERARIAS.—Plants for late blooming must now be kept cool and airy, and should not be allowed to suffer from want of pot-room. These must not be trusted in cold pits after this season, for they cannot endure frost without injury. Plants intended to flower early should be encouraged with a gentle heat, keeping them near the glass and admitting air whenever it can be done safely.

CROCUSES.—These may be planted whenever the weather is favourable, provided beds are ready for their reception; they like a deep, light, rich sandy soil, but will thrive in an ordinary soil or situation. In planting, the bulbs should be covered from 2 to 3 inches with fine mould; and if an effective display during the first season is desired, plant thickly—not more than 2 inches apart. For edging borders and beds the Crocus is exceedingly useful; and, where planted in lines along the margin of walks, or in clumps of 3, 6, 12, or more bulbs each, and allowed to remain in the ground for several years, the effect of the masses of flower which they produce is all that can be desired. We have seen a very effective display in a flower garden in March, produced by each bed having a broad edging of Crocus, the colours being nicely arranged and contrasted. This may be secured without interfering with either the spring or summer occupants; for the bulbs may be planted close to the outside of the bed, where they will scarcely be in the way, either in digging or in planting. Unless the bulbs become too numerous, and the leaves spread over more space than it may be desirable to have covered with them, they should not be disturbed, as they bloom more profusely when well established. Care must be exercised, however, to protect them from mice, which are exceedingly partial to Crocuses, especially in winter.

HYACINTHS.—For blooming in-doors, either in pots or in any of the various contrivances that are used instead of pots, strong bulbs should be selected and planted in succession; place them in any dark cool situation for three or four weeks, to allow of their making roots, before exciting them into growth. If pots are used—and these are doubtless the best, if not the most ornamental—use good rich, sandy soil, and secure perfect drainage; for a liberal supply of water is required during the blooming period, and if the drainage is defective, the soil is very apt to become soddened.

PELARGONIUMS.—These should be kept rather cool and dry, giving whatever water may be necessary on the mornings of fine days, so that all superfluous moisture may be dried up before the evening, avoiding the use of fire heat except when necessary to prevent the temperature falling below 40°, or to dispel damp when this cannot safely be done by giving air.

ROSES.—Examine those on pillars and trellis, and if the weather continues favourable see if the soil wants renewing or the kinds changing. For choice sorts roomy holes should be made capable of containing three or four barrow-loads of well prepared soil. Turfy loam of good quality is the chief thing; to this add a portion of rich rotten manure, and, if at hand, a little sandy peat or leaf-mould.

FORCING GARDEN.

CUCUMBERS.—Look sharply after woodlice, which sometimes do much mischief in little time to young plants. A cooked Potato put into a flower pot and covered with dry hay or Moss is a good trap. The best of all remedies, however, is Mr. Cuthill's plan of pouring boiling water round the insides of the pit or house close to the walls, care being taken not to injure the roots. Bearing plants in pots or boxes will now be benefited by being top-dressed with rich soil.

MUSHROOMS.—The Mushroom beds, made as directed in September, will now be bearing; it is a good plan to sprinkle or syringe the surface of the bed, a week or so before the Mushrooms make their appearance; more especially in Mushroom houses where a fire may have been used occasionally: this is far better than watering after the Mushrooms are through.

PEACHES.—Take advantage of rainy weather, should it occur, to prune, wash, and tie such trees as have not already undergone these operations.

PINES.—Water plants in pots as little as possible at this season. Where the general stock is grown in this manner it is a good plan to cover the pots over 2 or 3 inches with the plunging material; where the bottom-heat will permit that to be done it obviates the necessity of watering so frequently.

VINES.—Where forcing is commenced be careful to maintain a properly moist state of the atmosphere, and this must be especially attended to in the event of severe weather, particularly when the buds are bursting. The evaporating troughs must be kept constantly supplied with water, and the path, bed, &c., should be frequently syringed. If fermenting material is used for warming the border, this must be well covered with dry litter, and turned occasionally, adding some fresh material as may be necessary to keep the heat in the border regular.

HARDY FRUIT AND KITCHEN GARDEN.

Trench, dig, and ridge every spare inch of ground while the weather will permit these operations to be advantageously performed. This is particularly to be observed in gardens the soil of which is of a clayey character. Proceed with pruning fruit trees as soon as the leaves are fallen; let nothing of this sort remain till spring, which will bring its own labours. Get all superfluous nails and shreds drawn soon, in order to furnish in-doors work in bad weather.

ROOT CROPS.—Let all Carrots be taken up and stored away, likewise Beet; a few Parsnips for present use may be taken up; they will, however, keep well in the ground, and thus circumstanced they may have a coat of manure spread over them for the next crop and trenched out as wanted. Some recommend to cut the head of the Carrots completely off below the neck, thus checking their tendency to grow. They may then be put in pits like Potatos, raising a sharp ridge over them to keep out wet.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Oct. 19, 1864, as observed at the Horticultural Gardens

October.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs. 13	12	30.082	30.047	63	32	47.5	55	55½	N.W.	.00
Friday 14	13	30.007	29.999	60	28	44.0	54½	55¼	W.	.00
Satur. 15	14	30.094	30.022	61	36	48.5	54	55¼	W.	.00
Sunday 16	○	29.873	29.670	59	44	51.5	54	55	S.W.	.06
Mon. 17	16	29.652	29.612	61	45	53.0	54	55	S.W.	.02
Tues. 18	17	29.657	29.614	63	36	49.5	55	55	S.W.	.05
Wed. 19	18	29.351	29.028	65	40	52.5	55	55	S.W.	.09
Average.		29.815	29.713	61.7	37.3	49.5	54.5	55.2		.17

Oct. 13—Overcast; cloudy; cold at night.
— 14—Hazy; very fine; slight frost at night.
— 15—Clear; quite cloudless; very fine; rain.
— 16—Fine; very fine; fine at night; slight rain.
— 17—Cloudy; showery; mild at night.
— 18—Fine, exceedingly fine; overcast at night.
— 19—Very fine, fine, overcast; slight rain.
Mean temperature of the week ½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK

During the last 38 years, for the ensuing Week, ending Oct. 29, 1864.

October.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 23	55.5	40.1	47.8	20	0.56 in.	3	2	1	3	4	14	6	3
Mon. 24	56.1	37.4	47.8	17	0.88	1	4	4	—	19	11	6	2
Tues. 25	55.7	38.6	47.2	18	0.80	4	6	6	3	4	7	5	3
Wed. 26	55.5	36.5	46.0	15	0.52	5	6	3	2	7	7	5	3
Thurs. 27	54.7	39.1	47.0	23	0.92	2	7	3	1	7	6	7	3
Friday 28	54.5	36.6	45.5	23	1.06	2	6	3	—	7	13	3	4
Satur. 29	53.5	31.3	44.2	18	0.63	4	7	4	1	5	14	1	2

The highest temperature during the above period occurred on the 28th, 1860, and 29th, 1833—therm. 67 deg.; and the lowest on the 23d, 1859—therm. 17 deg.

Notices to Correspondents.

APPLES: The following early sorts, and some that will succeed them, and tolerably early, will answer your purpose:—Early Harvest, Red Quarenden, Red Astrachan, Wormsley Pippin, Golden Reinette, Kerry Pippin, King of the Pippins, Ribston Pippin, Blenheim Pippin. The Wormsley, Ribston, and Blenheim Pippins will answer both for dessert and kitchen purposes. Better train as dwarfs.‖

BOOKS: *T W Clarke.* Glendinning or Hamilton on the Pine-apple—whichever may be procurable.

CUCUMBERS: *J W.* Your Cucumber roots appear to be perfectly healthy, and like yourself we cannot imagine what has made the two plants fail. It seems quite clear that you cannot account for their condition by anything wrong about the roots, and we have no data on which to found any decided opinion. *M. J. B.*

FUNGI: *J J R.* Your Fungus is the young state of a rare species, Thelephora biennis, which generally grows at the root of Oak trees, but appears first on the ground before it runs up the trunk. We do not think it likely to be injurious. It is figured by Bulliard precisely as you describe it. *M. J. B.*

INSECTS: *W. W. & Son.* Your Pear leaves are infested with the slimy larvæ of one of the Saw-flies, Tenthredo Æthiops, a small species with black wings, of which the history, with figures, is given in a former volume of the *Gardeners' Chronicle.* Lime-water is an excellent remedy against the larvæ.—*B C.* We could not find a single thrip on your Cucumber leaves, the blotches on which are most probably caused by improper treatment. *W.*

NAMES OF FRUITS: *J W.* 1, Court of Wick; 3, Wyken Pippin; 8, King of the Pippins; 9, Loan's Pearmain; 10, Dutch Mignonne; 11, Kerry Pippin; 13, Cockle Pippin; 14, Golden Russet.‖

NAMES OF PLANTS: *J F.* 1, Rhipsalis Cassytha; 2, Arthrolobium paniculatum; 3, Ficus repens; 4, Gymnogramma tartarea.—*C L Paxtonia.* Physianthus albens.—*William.* The berries appear to be those of the common Berberry, a native of this country, as nearly as we can tell without accompanying leaves.—*H W B.* Helianthus decapetalus.—*Tripolium.* The specimen is insufficient, but it appears to be near A. lævis. It has no doubt escaped from some garden.—*M J B.* We are somewhat at a loss in replying to your question about the Yucca grown in Battersea Park, several species and varieties being cultivated there in tolerable quantity, and the locality in the Park where that you noticed was growing, not being stated. Of hardy kinds Y. filamentosa, recurva, and gloriosa are grown; and of tender ones Y. aloifolia and aloifolia variegata; the two last were placed this season as single specimens on the Grass in the Sub-tropical garnen. The Œnothera is that known in gardens under the name of riparia.

PEAR SCALE: *Rusticus.* Scrape the branches with some blunt instrument that will not injure the bark, and then give them a good scrubbing with Gishurst Compound, mixed at the rate of one pound to a gallon of water, and put on with a stiff brush.

PELARGONIUM SPORT: *C D.* The flowers of your sported plant of Tom Thumb seemed to be blotched and shaded with rose-pink, which, if constant, must give them a very curious appearance, but they were a good deal crushed. The leaf, which, as you say, is very beautiful, has a well-marked golden blotched variegation. If permanent, this will form a very nice addition to the variegated Pelargoniums already known, from which it is quite distinct; but its constancy can only be tested by time. Many of our choice garden varieties have, however, originated in sports, in just the same manner as yours has appeared. We should advise you to raise some young plants from cuttings of the best-marked shoots, keeping the old plant also, of course.

SNAILS: *D.* The edible snail is that called Helix Pomatia. It is said to be peculiar to chalky and gravelly soils, and while some maintain that it has been introduced to this country, others regard it as indigenous. It is still regarded on the continent as a valuable article of food when boiled in the shell and eaten with rice; and in Switzerland and some parts of France, it is said to form a considerable article of commerce. The snails are kept in an *escargotoire*, or snaillery, which is generally a large boarded space with the floor covered half a foot deep with herbs, upon which the animals fatten. The ancient Romans are said to have fed them up to an enormous size. Our Correspondent is anxious to know in what localities this snail is found; by what exterior signs it is to be recognised; and whether there is any danger incurred in eating any other kind of snail. Will some one who is skilled in Helicology give him the information he desires? It is stated generally that the larger species of Helicidæ are all good food, but we have no experience.

STEWING PEARS. *W L Y.* Three excellent stewing Pears, and of fine colour, are the Chaumontel, Franc Réal d'Hiver, and Verulam; the latter stews of a splendid colour, without any artificial colouring matter, which should never be employed. If you send her this, in vain the cook may "vow that you have sent her the wrong sort."

TREE PICOTEE: *W Grove.* As sent to us the flower is too small; but the colours are pure, and the marking bright; so that if, as you say, it is a full-sized flower, it may be worth cultivating.

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MR. HOWARD REED, Author of the Pamphlet "Land: its Registration and Transfer," price 1*s.* (E. WILSON, 11, Royal Exchange, E.C.), is prepared to give ADVICE to LANDOWNERS wishing to avail themselves of the Land Registration Acts, and to conduct all proceedings necessary for obtaining an indefeasible title. Preliminary opinions given on abstract of Title, and terms stated beforehand. Communications personally or by letter.
17, Surrey Street, Strand, W.C.

AGRICULTURAL PUPIL.—Mr. HENRY EVERSHED has a VACANCY for a PUPIL.
Park Hall, Gosfield, Halsted, Essex.

THE NATIONAL EXHIBITION of SPORTING and OTHER DOGS.
President—His Grace The DUKE of BEAUFORT.
Vice-President—The MAYOR of BIRMINGHAM.
The FIFTH GREAT ANNUAL EXHIBITION of SPORTING and other DOGS will be held at BIRMINGHAM, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, and 30, and December 1.
Copies of the Prize Lists and Regulations, with the statement of Receipts and Expenditure for 1863, may be obtained from the Secretary. The ENTRIES CLOSE on NOVEMBER 1.
GEORGE BEECH, Secretary.
Offices: Rectory Chambers, Temple Row, Birmingham.

THE BIRMINGHAM CATTLE and POULTRY SHOW, 1864.
The SIXTEENTH GREAT ANNUAL EXHIBITION of FAT CATTLE, SHEEP, PIGS, DOMESTIC FOULTRY, CORN, ROOTS, and IMPLEMENTS, will be held in BINGLEY HALL, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, 30, and December 1, when Prizes to the amount of £1905 will be awarded in the following Divisions, viz.:—

FAT CATTLE ..	£794 10	BREEDING PIGS ..	£76 10
FAT SHEEP	299 5	CORN and ROOTS ..	71 8
FAT PIGS	60 5	POULTRY and PIGEONS	693 0

Prize Lists, Certificates of Entry, and every information may be obtained from the Secretary.
The ENTRIES CLOSE on TUESDAY, November 1.
JOHN B. LYTHALL, Secretary.
Offices: 13, Temple Street, Birmingham.

SMITHFIELD CLUB FAT CATTLE SHOW.—The ANNUAL SHOW of FAT CATTLE, SHEEP, and PIGS, will be held at the AGRICULTURAL HALL, ISLINGTON, on MONDAY afternoon, December 5, and four following days.
Intending Exhibitors are requested to apply for Certificate forms by the reference letters as under:—

CATTLE.	Form A.	For an Ox or Steer (in any Class).
	" B.	For a Cow or Heifer (in any Class).
	" C.	For a Beast in Extra Stock.
SHEEP.	" D.	For a Pen of three Wethers (in any Class).
	" E.	For a single sheep in Extra Stock.
PIGS.	" F.	For a Pen of three Pigs (in any Class).
	" G.	For a single Pig in Extra Stock.

ENTRIES for LIVE STOCK CLOSE NOVEMBER 1.
Prize Lists, Forms of Certificates, and all information may be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, Corner of Half-Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words "Smithfield Club."

The Agricultural Gazette.

SATURDAY, OCTOBER 22, 1864.

IT is a curious illustration of the diversity of farm practice and of agricultural opinion which prevails, that Societies should in one part of the country be offering prizes expressly for live stock fed on grain in addition to green food, and elsewhere for live stock fed on hay to the exclusion of either grain or green food. In Ireland we learn from the daily papers that the Royal Dublin Society have found a class of cattle to which justice has not been done, which has not received sufficient encouragement to grow fat,—namely, "out-fed cattle"—that is, cattle fed on Grass in the field, without the aid of artificial food of any kind. Hitherto they have stimulated competition only among the owners of stall-fed cattle—generally men of wealth, with whom the owners of Grass-fed cattle could not compete, though they supplied the market with the greatest number of animals for slaughter. Now, beef and mutton are very dear, and it is desirable to have them produced in greater abundance and of better quality. Besides, there is little demand for agricultural labour in the country, and it can only be increased by increasing tillage, and the question therefore is, how to render tillage more profitable. The grain which Ireland can produce best is Oats, but Oats are now only one halfpenny a pound, or 7*d.* a stone, which does not pay for cultivation, and thus tillage is going more and more out of use.

But if farmers with second-rate land, who are unwilling to compete with the wealthy owners of prime land in stall-feeding, can be induced to supplement their Grass feeding with Oats, and other kinds of artificial food, they will produce a greater quantity of beef and mutton of better quality, they will employ more labour, encourage tillage, improve their own circumstances, and increase the prosperity of the country.

Such is the gist of the considerations pressed upon the attention of a meeting held the other day at the house of the Royal Dublin Society, and ultimately it was resolved to add to the prizes already proposed to be awarded at the next winter show of the Royal Dublin Society the following prizes for out-fed cattle and sheep—10*l.* for the best three oxen, 10*l.* for the best three cows, 10*l.* for the best three heifers, 5*l.* for the best 10 wethers, and 5*l.* for the best 10 hogget wethers.

The effect of these prizes will be first to induce a riper condition in the cattle before they are brought to the shambles, and thus both economise food for beast and increase the store of it for man; and secondly, to add one more to the many considerations which ought to press upon the farmer before he lays his arable land down to permanent Grass, and on the landowner before he refuses the petition which tenant farmers in dairy and other districts are continually presenting for permission to break up an additional piece of pasture. We recommend those in Ireland and elsewhere who are for laying down all tillage lands and depending on live stock, dairying, and grazing, to read Mr. MILWARD'S excellent account before the Gowran Agricultural Society, given in another column, of his experience as a farmer of arable land in Ireland. His activity and energy in seizing upon every plan of diminishing expense and obtaining an increased return, together with the Dublin Society's proposal to the stock farmers of Grass-lands to use arable produce in the "finishing" of their beasts, ought to have a wholesome influence corrective of what is now certainly an excessive outcry against the plough.

But there is other produce of our plough lands still more important than the Oat crop to the breeder on our pastures. The great cost which the Grass-land tenant farmer incurs is in haymaking, which devotes one half the produce of the land to consumption in the most wasteful season of the year, and which at the same time involves what is generally a most unsatisfactory expenditure on labour. What, then, shall be thought of a prize list which we may contrast with that of the Royal Dublin Society, in which it is a condition that the cattle shall have been fed on hay and Grass only. If any one thing is clearer than another, it is that we must all depend upon an unusual consumption of straw this winter, sweetened and rendered palatable by cooking or by mixture with pulped roots and with meal and grain. But all these things are expressly excluded in the prize list of a Gloucestershire Agricultural Society. And a district which, more than any other that we know, would be benefited by the partial extension of arable culture—which, more than any other that we know, would benefit by an adoption of straw and roots for winter cow-food in place of the hay, which ought to be eaten green in summer air, and so converted economically and directly into cheese—is directed, if it would compete for the prize in question, to adopt the most wasteful style of management known to English Agriculture!

BARON LIEBIG'S letter on Town Sewage, given in another column, will be read with great interest and with some degree of disappointment. He declares in it that special instruction is needed by our farmers in the use of this manure, or "the labours of men like Lord ROBERT MONTAGU, Dr. BRADY, and others, will be lost." It is not a complete manure, and if it alone be depended on, then, as in the corresponding use of guano, "the same men who at first overrate its value will eventually curse its application." The fact is that sewage is deficient in phosphoric acid, and therefore though "on a soil rich (in its natural state) in phosphoric acid, it will have an excellent effect, producing for instance large crops of Grass, Turnips, and corn, if the soil supplies the quantity of phosphoric acid wanting in sewage, yet, as in each successive crop a certain quantity of phosphoric acid is abstracted, the total quantity in the soil is by the continual application of sewage gradually diminishing every year, and a time must come when the phosphoric acid is insufficient for further crops, and when sewage ceases to produce its former effects." Accordingly "for each crop the composition of the sewage ought to be corrected, according to the nature of the soil, by adding those ingredients which are wanting in sewage, and which the plants to be grown require in the largest proportion."

These words were not written by an agriculturist, but by a chemist; and by a chemist who is firmly convinced that "the natural laws which govern the permanent fertility of soils and the increase of produce are very little understood by the British farmer." British farmers can sit very contentedly under the criticism of their German friend. With all their ignorance they know how to grow more beef and bread per acre than any other body of agriculturists in the world; and we are inclined to think with them that it is not necessary for a man to understand the laws of percussion before he can successfully hit a nail on the head. But, indeed, this "ignorant" success seems to be an insular peculiarity of other occupations and engagements as well as agriculture.

Our engineers do not require a preliminary discussion of the whole theory involved in any operation before they undertake to do it. It is not necessary that every act directed by them should be consciously in accord with the whole range of physical truth as ascertained by the observation of ages, and arranged and classed by men of science. So long as the nail is driven home and holds they are satisfied. And our farmers, too, are more likely to follow the example of men who have done the thing, than take the advice of those who merely know how it ought to be done.

What then has experience hitherto taught us on the sewage question? In the first place it has taught us the immense advantage of getting rid of all this *fœcal refuse*; and so, contrary to all the relations of chemistry to agriculture, we are *gladly sending every year from North London* only, 100,000,000 tons of fertilising matter utterly to waste. In the next place it has taught us that the most successful growth of plants is achieved not by a particular examination and supply of the wants of each crop in succession, but by a liberal cultivation of the soil. Special manures are exaggerations of the time when Liebig first appeared as a teacher of agriculturists, and when it was supposed that an account current of the food supply could be accurately kept between the soil and the plant. We now aim at the maintenance of fertility by thorough tillage and by liberal manuring and by liberal stock-feeding; and we grow large crops of everything. And a great quantity of sewage, which must, if manure be food *minus* growth, contain most of what the soil has once already yielded, will undoubtedly help it to produce as much or more again. It does not contain all the elements of the food which comes into London. A portion of the phosphates consumed in bread and meat by every generation gets ultimately hoarded in the grave — but that is all that is abstracted from a lifetime's food: and so small a loss can hardly with propriety be made the subject of a solemn scientific warning.

Be this, however, as it may, and, lopsided as Liebig tells us that this manure must be, yet applied as experience tells us that it should be used in agriculture, its weakest side has superabundant strength. The Craigentinny meadows have yielded an increasing growth for a century or more, receiving nothing but the Edinburgh sewage, and yet being annually robbed of 40 or 50 tons of Grass per acre. And on the lower part of them, more recently reclaimed from the shore, where the Grass is literally battling with the sea-weed and the spray, and where nothing but sewage has been hitherto applied to the mere sea sand, the produce is bought yearly by the Edinburgh cowkeepers for 20*l.* and more per acre.

It is plain that Baron Liebig's letter has been written only in the interests of the scheme which proposes to utilise the sewage of London over many hundred thousand acres, whose small doses of the town waste must thus be supplemented according to recipes which can be "made out and put into the hands of every farmer using it." But we already have examples of successful sewage operations. At Craigentinny and at Rugby, at Croydon and at Watford, sewage is being converted into Grass and into milk with profit; and these, and not the theoretical considerations urged by chemists, will undoubtedly guide any future outlay of capital in the same direction. When the results already realised elsewhere shall have been thus achieved, it may then be time to try and realise the conceptions of the theorist, and by the refinements of scientific recipes endeavour to extend the fertilising influence of the now wasted manure.

Meanwhile agricultural experience has taught us thoroughly enough not only that the use of sewage should be at first confined to the abundant irrigation of Grass land, but also that Baron Liebig's recipes for the concoction of a perfect fertiliser cannot be accepted with the same degree of confidence which is willingly accorded to him while he keeps within the proper province of the scientific man.

THE WHEAT CROP OF 1864.

In October last you favoured me with space for a few remarks on the character of the Wheat crop of 1863. Founding my conclusions upon the produce obtained in a field of 14 acres, in which Wheat had been grown for 20 years in succession, on some portions without manure, and on others with different descriptions of manure, and also upon a careful comparison for many years past of the results obtained in that field with those of ordinary farming over a large area of the country, I gave it as my opinion that the crop of last year (1863) would turn out a remarkably abundant one; and such subsequent experience has proved it to have been. I now propose to direct the attention of your readers to a few of the results obtained in the same field during the season just past, which is the 21st of Wheat year after year on the same land.

Below are given, for the harvest of 1864, the number of bushels per acre, and the weight per bushel, of the dressed corn obtained—on a portion left entirely unmanured during the whole 21 years, on another manured with 14 tons of farm yard dung every year, and on others manured with certain artificial mixtures in each of the 21 years. And, for the sake of comparison with the results of the present season, there are given, in parallel columns, those of 1863, as well as the average over the last 12 years, during which period the description of artificial manure applied was the same year after year on the same plot as for the crop of 1864. It may be added that the different artificial mixtures contained the same mineral manure in each case, but in combination either with different quantities of ammonia-salts, or with nitrate of soda.

Bushels of Dressed Corn per Acre:—

Plots.		Harvests. 1863.	Harvests. 1864.	Average of 12 years. 1852-63.
3	Unmanured	17¼	16	15¼
2	Farm-yard manure ..	44	40	35⅜
7	Artificial manure	53¼	45⅜	36⅜
8	" "	55⅝	49⅜	38
9	" "	55¼	51¼	24½
16	" "	55⅞	51	38½

Weight per Bushel of Dressed Corn—lb.

Plots.		Harvests. 1863.	Harvests. 1864.	Average of 12 years. 1852-63.
3	Unmanured	62.7	62.0	56.5
2	Farm-yard manure ..	63 1	62.5	59.3
7	Artificial manure	62.6	63.1	58 4
8	" "	62.3	63.5	57.8
9	" "	62.1	62 6	57.1
16	" "	62.4	63.2	57.6

It is seen that the produce of 1864 was in every case less than that of the extraordinary season of 1863, but that it was, on the other hand, in every case considerably higher than the average of the preceding 12 years. Indeed, on two of the plots the produce of the present season exceeded the average of the preceding 12 years. Indeed on two of the plots the produce of the present season exceeded the average of the preceding 12 years by about 12, and on one by more than 16 bushels per acre. The quality of the grain is also very high, as indicated by the weight per bushel, which is fully equal to that of 1863, and very much higher than that of the average of the preceding 12 years. It is remarkable, too, that in three of the experiments the produce of the last two years taken together has exceeded 100 bushels per acre. In no other instance during the 21 years has the produce of two consecutive seasons given such a result. The nearest approaches to it were in 1857 and 1858, when one plot gave 92 bushels, and in 1862 and 1863, when several plots gave over 90 bushels per acre in the two years.

Upon the whole I think it may be concluded that, on the heavier soils, if in good condition, the Wheat crop of 1864 will prove to be much above the average. On light and badly-farmed soils, on the other hand, I think the produce will generally be below an average. The quality is doubtless pretty universally good, and above the average. With such a crop following one of such unusual abundance as that of last year, it is not surprising that the price of Wheat should be so low. *J. B. Lawes, Rothamsted, Herts, Oct.* 17. [This letter appeared in Wednesday's *Times*.]

LIEBIG ON LONDON SEWAGE.

[Lord Robert Montagu has received a letter on this subject from Baron Liebig, which he thus introduces to the readers of the *Morning Star*:—]

Sir,—I beg leave to enclose a letter which I have just received from Baron Liebig. As the subject now engrosses public attention, the letter of so eminent an authority will doubtless be read with much interest.—I remain, sir, your obedient servant, Robt. Montagu.

72, Inverness Terrace, Oct. 13.

Munich, Oct. 6.

My Lord,—The blue-book which Dr. Brady was so kind to send has reached me, and I have read it with great satisfaction; it contains an abundance of most valuable information. The perusal of your report and the resolution of the committee lead me to think that this important question, which has occupied my thoughts since 1840, and to which I tried incessantly to direct the attention of the people in my work on "Agricultural Chemistry" and my "Letters on Chemistry," is now progressing towards a solution. But while I rejoice at the prospect of seeing my views carried out, an anxiety, which is greater than I can describe, oppresses me. The natural laws which govern the permanent fertility of soils, and the increase of the produce are, from circumstances which I cannot detail here, very little understood by the British farmers, and hence arises a fear that the use of sewage, which ought to be a lasting benefit to agriculture, may be regarded after a few years as a veritable detriment by the same farmer, who in the first years of its application would assuredly give it his full approbation. In what may be termed its natural state sewage is not a universal manure like stable dung, which is efficacious at all times and on all localities, but a special manure, the continual application of which exclusively tends to impoverish the land.

Stable dung contains all, a special manure only some, of the elements which ought to be restored to the soil in order to render it permanently fertile. Peruvian guano, for instance, belongs to the class of special manures, and experience has shown that in certain countries of Germany and Scotland the application of guano on meadow land, which produced in the first years enormous crops of Grass or hay, had later no effect at all; and that the same man who at first overrated the value of guano eventually cursed its application. (See my "Natural Laws of Husbandry," pp. 261—263.) Sewage contains ammonia, potash, and phosphoric acid, like guano, but phosphoric acid in a much smaller proportion. On a soil rich (in its natural state) in phosphoric acid, sewage will have an excellent effect; it will produce, for instance, large crops of grass, Turnips, and corn, if the soil supplies the quantity of phosphoric acid wanting in sewage, but as in each successive crop a certain quantity of phosphoric acid is abstracted, the total quantity in the soil is, by continual application of sewage, gradually diminishing every year, and a time must arrive when the phosphoric acid is insufficient for further crops, and when sewage ceases to produce its former effects.

By having the Turnips eaten on the field, the soil (by the solid and liquid excrements) is exactly manured as if irrigated with a number of tons of sewage (containing the elements of voidings of the sheep), and the farmer knows that at the beginning of a new rotation he must manure his field with phosphates in order to get the former crop of Turnips, corn, &c., in succession. The same field could not be rendered equally fit to furnish the same quantity of produce in a new rotation if it was manured year after year by the voidings of sheep only—or its equivalent of sewage, which would be the same thing.

By the increase of his crops in the first years by sewage irrigation only, the farmer, ignorant of the natural law, would be led to believe that the same effect would continue, and that he could dispense with other manures altogether, except, perhaps, with the stable dung which his farm produces. But he would be mistaken; and on discovering his error, as he would soon do, the revulsion of feeling caused by it would be most baleful. The agriculturist must be made aware that by the introduction of sewage his whole system of farming undergoes a change, and that he has to make an apprenticeship to learn to apply it rightly and economically, and in order to benefit and not to injure his fields.

If the agriculturist is left without proper instruction on this head, the labours of years of men like yourself, Dr. Brady, and others, would be lost. It would take a long time to recover the lost ground. When I think of the possibility, indeed I may say the probability, of this occurring, that the millions necessary to realise the proposed scheme should be expended in vain, that the great and important example of England should thus be lost to Europe, I confess that my anxiety on the matter is very great. It would be one of the greatest misfortunes that could happen should this contingency really occur. Every means, therefore, must be employed to prevent any misunderstanding; to clear up any false view regarding the efficacy of sewage; and to guard against all error in the application of it. To you, therefore, my lord, I write on the subject, being sure you will give it your most serious consideration, and be willing to devise means for averting the threatened evil.

If clearly understood and properly managed, the employment of sewage will prove a blessing to agriculture, and those who by unwearied perseverance have at last seen the consummation of their labours may justly be looked upon as the benefactors of their fellow-men. But loud would be the outcry should the agriculturist, either by his own ignorance or the want of forethought in others, find himself misled. Our name would then become a by-word, and instead of gratitude be recollected with a curse. There are two things which must be done:—First, it must be made intelligible to all that sewage in its natural state does not replace stable dung in its entire efficacy, and that, if used exclusively, it will produce abundant crops only for a time; secondly, that for each crop the composition of sewage ought to be corrected according to the nature of the soil by adding those ingredients which are wanting in sewage, and which the plants to be grown require in the largest proportion.

The composition of sewage being once perfectly known, a recipe for what is to be added could be made out and put in the hands of every farmer who uses it, and it remains a question whether it is not possible for the Company itself to add those ingredients wanting in the sewage, according to the demand of the crop to be grown.

The interest with which I follow this highly important question is so great, that were I a younger man and not half lame, I, instead of my letter, should be now with your lordship, in order that in personal communication the matter might be talked over in all its bearings; but as Parliament has not yet decided upon the question, the matter is perhaps not yet ripe to bring my apprehensions and

scruples before the public, and therefore it may be better to wait.—I have the honour to be, my lord, your obedient servant, JUSTUS LIEBIG.

To the Lord Robert Montagu, M.P.

THE PAST HARVEST AND THE COMING WINTER.

GLOUCESTERSHIRE: *Cirencester.*—The report we sent you in July last of the appearance of the crops in this neighbourhood was made after a rather careful inspection of the district, and consultation with some of the best agriculturists around here. The opinions we then expressed, it is interesting to observe, are generally speaking verified by the reports lately published in your Paper from Correspondents in this locality, so that we may feel contented with our attempt to anticipate the yield of corn and condition of agriculture in a season like the past. Our prognostications of the Wheat crop stated that on heavy and good medium soils it would be quite up to or over an average, but that on the light brashy land the yield would fall short. The result upon threshing our first rick of new Wheat fully corroborates the opinion we had formed. On 12 acres of Old Kent Red, after Peas, we have a return of 60 quarters. The quality of the grain is certainly superior to any we have before seen upon this farm, and it weighs 64 lbs. per bushel. The early-sown Barley proved, as we expected, the best in every respect. Still this crop has suffered generally from the drought; the quantity must be deficient, and the quality, although the grain was gathered in splendid weather, is far from good, being steely and colourless. Oats are light in corn and straw, and, being a good deal blighted in places, the foddering properties of the straw will be in a measure destroyed. Peas are barely half a crop, having been smitten shortly after the blossoming stage with the green aphis. The haulm of this otherwise valuable fodder crop is injured, and therefore of less value. Beans, excepting where winter sown and had escaped the frost, are an unusual failure, and in many cases will hardly pay the cost of harvesting. The harvesting of all our corn barely occupied a month; having commenced Wheat-cutting when the straw was in an apparently raw state, this crop was picked up with ease and regularity, and without any perceptible loss from shedding. The Barley gave us less anxiety and trouble, for this was carried immediately behind the reaper. The removal of this crop disclosed the melancholy fact of our young seeds being a failure; in fields where only the White and Hop Clovers had been sown with Perennial Rye-grass there appeared a promise of a small crop. The Red Clover, Alsike, and Cow-grass sown in other fields scarcely could be traced; perhaps the latter variety gives a little hope of coming to something. The greatest difficulty has been the scarcity of Grass. Off 45 acres we probably collected some 28 tons of material, and this is all the hay we possess; so that our 400 sheep, 30 head of horned cattle, and 10 cart horses will tax the energies of our commissariat during the ensuing winter, if all these animals remain to be provided for. Fortunately we have fared better than most of our neighbours for green forage crops. Commencing fully early enough with our Cow Cabbage on the 14th of August, our lambs did very fairly, with the range of 20 acres of Oat stubble, and an addition to their diet of a quarter of a pound of Linseed-cake, a small quantity of bran, with a limited allowance of hay chaff per day. Towards the end of September they were removed to a very fair piece of Rape, on which material they have thriven and done well, notwithstanding the crop is injured by mildew. Our Swedes are likewise stricken with this complaint, but being very growing and promising, we felt the prudence of feeding a most irregular patch of Mangels with our lambs, whilst the more hardy root is increasing in size and bulk. Our Mangels, although few in number, are very large for the season; and I believe we are economising our roots by eating the few we have upon the ground at this season in preference to pulling and threshing the crop in the usual manner. Not a particle of leaf is wasted. The lambs consume every scrap of the now juicy root without any cost for cutting, and the labour and expense of a Mangel harvest is saved. Of course we shall carefully watch the weather, and should threatenings of frost appear the roots must be sheltered with a little short straw. Our fear is that the material will be consumed before Jack Frost pays his accustomed visit. We have lost no opportunity to supply the place of those crops which the past trying season has denied us. Twenty acres of stubble Turnips sown after the first thorough rainfall since harvest, have fallen a victim to the insect life which appears to swarm in our soil. Our Oat stubble sown down with Clovers and Rye-grass in the spring, has been resown this autumn with a mixture of Trifolium incarnatum, White Dutch and Italian Rye-grass, and at this time the large Clover and Grass promise well. With such great uncertainty as to our position next spring, we have not ventured to break up 1 acre of old seeds, all our Wheat is therefore coming after our Pulse crop on land where Turnips have failed after winter Vetches, or after roots. I have no anxiety about our breeding flock; with plenty of good sweet Pea and Oat straw, we shall do very well until lambing begins, and then I hope 20 acres of Swedes, with a little hay chaff and bran, and a few Oats will do justice to the ewes and lambs. Our wether and ewe lambs with the theaves will go on to 30 acres of Swedes as necessity regulates. The chaff-cutter, bruiser, pulper, mill stones, and steaming apparatus will all do extra work this season. We hope to have a few Swedes for housed cattle; in such case this valuable food will be doled out with the utmost care, and mixed, as is our custom, with straw chaff, perhaps a few brewers' grains, the heap being allowed to ferment, when meal from our drop Wheat, and Barley, in proportions varying from 2 lb. to 6 lb. per head per day to our stock, according to their age and other circumstances, will be given, with a fair quantity of the fermented preparation. Our cart horses never get any hay, their daily rations consist of bruised Oats and a few crushed Beans, brewers' grains, and straw chaff, *ad lib.* With a rack full of cavings at night, no horses need look better, and the weekly cost of their keep could not well be less. The dietary for our stock during the ensuing winter, furnished by your numerous correspondents, as you justly observe, are somewhat monotonous, yet we should do wrong to act in opposition to the opinions of the experienced men who have suggested regimes for our animals. With an abundance of good clean straw surely every man of energy and sufficient capital will adopt measures for reducing this material to a convenient size, and will then cook it, or mix with his straw ingredients which shall render this substance not only palatable, but a nutritious food. Millers' offal, all descriptions of corn ground into meal, or a very small quantity of roots may be advantageously mixed with straw chaff which shall have been steamed or softened by fermentation, or those who prefer liquids may make decoctions of Linseed, Bean pods, or any oleaginous substance, or a syrup may be made from molasses, coarse sugar (perhaps malt), which mixtures might surely be profitably used in regular proportions with straw chaff. Anything to prevent a great reduction of the proper number of stock upon our farms, and so lessen the supply of manure. *J. Lynch Fletcher, R. A. College, Cirencester.*

HEREFORDSHIRE: *Aconbury Court, near Hereford.*—The season for sowing winter Wheat in 1863 was unfavourable, and the braird proved imperfect; the plants did not tiller well in spring; the frosts in May and early June and the prevailing drought have had an unfavourable effect on the crop; the yield is below an average. Barley and Oats are also below an average, and there is an undue proportion of tail corn in all these crops. Beans and Peas are below half an average crop, owing to the swarms of green plant-flies which attacked them in July. Mangels are a very poor crop, and not much grown of late years. Swedes and Turnips are a deplorable failure, varying from a total loss to a mere fraction of the land sown. The welcome rain which fell last month has not exerted such a good effect on these crops as might have been anticipated. *A. Hepburn.*

NORTHUMBERLAND: *Manor House, Woodhorn, Morpeth.*—Harvest operations are now rapidly drawing to a close, and though there may still remain a few straggling fields of Oats to carry in late districts, all our east-coast farmers have completed their "white Corn" harvest, Beans alone remaining out; and, with another week's favourable weather, most of these will be under cover also. And now that the crop has been secured, much anxiety is felt as to the yield; for, what with the peculiarity of the season, and the terrific shake-winds on the 5th and 9th ult., which in exposed situations played such havoc among the standing corn, in many instances carrying away entire ears—the most hopeful anticipations have been sadly staggered. Without an exception, shaken or unshaken, wherever any Wheat has been threshed, it is reported sadly deficient and below an average, whilst present prices are not such as are likely to moderate this unfortunate state of affairs. Barley, a very bulky crop, has been secured in splendid condition, and where unshaken will thresh out an unusually good yield and sample. Oats are our worst crop, and weigh about 2 lbs. per bushel lighter than usual, whilst there cannot be much left for market on ordinary farms after the horses, &c., have been supplied; the straw, however, being well secured and short, will be excellent fodder. Beans are a very variable crop in this county, in some instances the aphis having rendered them almost valueless, though in our own case we never had them so bulky or so good a sample. Swedes are as good as need be on light and loamy soils, and although the welcome showers in August and September led us to believe that we should still get a few Yellows and Whites on the stronger soils wherever we had a braird, these hopes are fast vanishing, as we daily see acres of these formerly healthy plants assuming a yellowish tinge, and subsequently disappearing altogether. On examination the under side of the leaf is found covered with myriads of eggs and lice, due no doubt to the presence of an aphis The winter's prospect is indeed a sad one for the farmer; for, although his bulk of straw may be equal to former years, he will be obliged to resort to artificial means to supply some accompaniment as a substitute for roots. Pulping of roots will doubtless be resorted to by many in the north of England who up to this time have entertained a very strong antipathy to the system, so as to eke out as far as possible the present very limited supplies. Artificial foods, including oil-cakes of every description, will be greatly in demand, and I anticipate a very extended use of Palm nut cake, which deserves to be more generally known, for it is well worthy the attention of cake consumers, possessing as it does considerable feeding properties at a moderate price. The late showers, however, have put "a new face" on to our Grass land, so that with a moderately genial autumn our sheep stock may continue to do well enough on Grass alone till Christmas, with the addition of a bit of cut hay, and a portion of Oats or cake in case of a storm. *Jacob Wilson.*

SOMERSETSHIRE: *Torneston.*—The blight by green fly or aphis the beginning of June, no doubt caused by the hot dry month of May, did great damage to many fields of Wheat in this neighbourhood; in some places where the aphis was very thick the Wheat was very seriously injured, and the grain so small that it is almost unfit for the millers; nevertheless, taking it as a whole, the Wheat crop of 1864 will be nearly, if not quite an average in this district. Barley, except a few pieces of late sown that were injured by the long drought, is very good, and of prime quality, and must be put much over an average crop. Beans, the early winter, where sown on good managed land, is a fair crop, but that on inferior, and late or spring sown, is very deficient, and was much damaged by fly; this must be barely half a crop. Peas were never known so bad; partly by the dry weather, and more considerably from the green fly, were almost a total failure. Grass has been very scarce through the months of June, July, and August; yet where stock have had a good supply of water they have done well, and are in good condition; and lambs, which have suffered so much for several years past from disease, are healthy. Mangel Wurzel, where sown in good season, with the exception of some failing plants, are a good crop, and have stood the dry weather much better than could have been expected; but late sown, and that planted on clay or heavy soils, are a deficient crop. Swedes an inferior crop; some fields on sandy and other soils adapted for Turnips, where sown early, are a fair crop, but far the greater part is very inferior. Turnips almost a complete failure throughout the vale, down from Taunton Dean to Dunster; a field here and there to be seen, mostly facing the north aspect, but a field of Turnips about here is a rarity. The rain which set in early in September has brought up the Turnips, and Rape seed, where sown, is now growing tolerably well, but must be too late to be anything like a crop. Scarcely ever was known such a failure of Turnips as this year in all the low lands, while on high colder districts, and on hill sides, the crops both of Mangels and Turnips are good. Hay also was a very light crop, consequently farmers have been driven to their wits' end in doing their best to prepare for the stock during the winter months. A very large quantity of Trifolium, Italian Rye and other seeds have been sown in all the fields where Grass seeds have gone off from the drought, and also on Wheat stubbles for spring food, besides also a large quantity of land drilled to Rape, Turnips, Mustard and Vetches, which the stormy fine weather of September is causing to grow nicely. The greatest difficulties to contend with are likely to be in the months of November, December, and January; after that the Swedes, with other feed in preparation for the spring, will be likely to meet the requirements needed, and I doubt not if we have a mild winter, food in the spring will be quite sufficient, if not in abundance. Owing to the scarcity of Grass many of the oxen and steers intended for the Christmas markets have been already sold, while many more that have been kept have been fed on hay and corn in a very expensive way, and both beef and mutton are likely to be very high for many months to come. Hay, oilcake, Beans and Peas being very high, will cause the sale of feeding corn to be very great, such as Indian Corn, Barley, Oats, and I doubt not but a large quantity of Wheat, which are all to be bought at a low price, and will be extensively and profitably used this winter as food both for fat and lean stock. *Richd. Corner.*

YORKSHIRE: *Kirkleatham, Redcar.*—The harvest in this district, a few Beans excepted, is now completed. In bulk the Wheat crop is quite an average, but the yield, from what I have seen and can learn, is scarcely so. Some of the forward Wheats that have been threshed are proving very bad indeed. I have seen some extremely poor shrivelled samples from crops which uncut promised to the casual observer quite 40 bushels per acre, but when tested by bushel and scale have realised little more than half that quantity. These were some of the earliest ripe Wheats in this district, and the cause assigned for their failure is the frosty nights we had during the time they were in bloom. Later Wheats are threshing out more satisfactorily, but they yield nothing out of the ordinary, and on the whole we believe an average crop has barely been obtained. Oats generally proved thin on the ground and short in straw; and the sample, though fine, is small, and both in bulk of straw and yield of grain we think this crop falls short of an average. Beans at one time gave promise to be *the* crop of the season, a more regular braird and vigorous healthy plant had scarcely been seen; but by the end of July a "change had come o'er the spirit of the dream," and, deep penetrators as the roots of Beans are, they fairly succumbed to the all-powerful drought. In straw I think we have about an average, but the pods are thinly set, many of the flowers, owing no doubt to want of moisture, proving barren, and many of the Beans in the pods we find are very small. Meadows

turned off a fair swathe, and the hay was secured in prime condition, but of aftermath we have none. Root crops are a great failure, nor can any amount of rain improve them, for we have no plants. The ensuing winter is looked forward to with considerable anxiety, and various plans will be resorted to to fill the void occasioned by the loss of this invaluable crop. In preference to cakes, which are now, and likely to remain, at high rates, home-grown corn will we think be largely used as a substitute. Wheat in common with other grain will be used. It is now selling at 38*s.* per quarter, and at that price will pay as well to consume as to sell. The result of this failure of the Turnip crop in this district will perhaps be less felt, or its effects less seen, as far as regards store cattle or sheep, as the few roots we have, supplemented with corn, will no doubt be supplied to keep them in condition; but the great want will be for roots to grow the winter-fed beef and mutton. These will not be forthcoming, and the consequence will be that the beef will not be made, to the serious loss of the farmer, and also to the community at large, for before we arrive at grass-fed beef prices will in all probability range fabulously high. On one farm in this immediate neighbourhood, where the usual stud of bullocks fattened on roots in winter ranged from 60 to 80 head, weighing from 50 to 70 imperial stones, in this winter it is contemplated to attempt fattening none, but to tide them over with straw and corn and fatten out on Grass, thus losing all the labour and six months of time. This course more or less will be adopted on many farms. *W. J. Moscrop.*

THE STEAM PLOUGHING TRIALS AT NEWCASTLE.

You did us the favour voluntarily to insert in your columns our protest against the awards of the Judges in the Steam Cultivating classes at the meeting of the Royal Agricultural Society of England in July last; may we now beg you kindly to insert this letter in review of the report of the Judges of Steam Cultivators, which has just appeared in the second part of the 25th volume of the Journal of the Society, more than two months after the trials took place.

We competed with a pair of Savory's Patent Steam Cultivating Engines, and feeling very dissatisfied with the awards of the judges we entered the protest referred to, and we therefore introduce the subject to the public notice in the present letter, as an explanation of the course we feel ourselves bound to follow after those trials. We entered for competition a pair of engines on Savory's principle, of our own manufacture, but these engines not being completed in time for trial, we exhibited a pair of engines which were manufactured last year by Messrs. Savory for Mr. Bomford, of Pitchill, near Evesham; on the 8th of July we informed the Secretary to the Royal Agricultural Society of England, by letter, that the engines we had sent were not of our manufacture, stating at the same time that if this circumstance would disqualify the engines should they be found worthy of a prize, we were desirous of withdrawing from the competitive trials; we received no reply to our communication before leaving for Newcastle, and on our arrival there, we at once represented the case to the Society's officials, by whom we were requested to proceed to trial. We mention this because we have been accused by one of the leading agricultural journals of "sailing under false colours."

We protested against the awards of the judges at Newcastle as soon as they were published, because we considered that in making those awards, they "took no notice of the main points in which our engines and tackle are manifestly superior;" a careful consideration of their report has confirmed us in this opinion. We were well aware that competing as we did with engines manufactured in the ordinary course of trade, and which had been through some six months' severe work in Mr. Bomford's hands, we should not stand in a good position with reference to the consumption of fuel, when compared with the performance of racing engines, manufactured expressly for competition.

Our experience in steam cultivation had, however, shown us that "consumption of fuel" is by no means the most important point to be considered by employers of steam-cultivating machinery, and we were rash enough to anticipate that some other elements would be taken into consideration by the judges in arriving at their final decision.

We believe the question of "wear and tear," with reference to the means employed for hauling the implement, stands uppermost in the minds of those men who have had any lengthened practical experience with steam-cultivating machinery, and we are convinced that the capability of performing a large amount of work in a given time, will be considered a very important point before steam will be generally adopted in preference to horse-labour in the cultivation of the soil.

A careful perusal of the judges' reports will show that in making their awards at Newcastle they were mainly guided by the consumption of fuel, thus reducing the whole trial to a simple test of the engines and boilers; no attempt was made to arrive at the comparative merits of the various systems brought under their notice, in other more important points.

With regard to "wear and tear," a paragraph attached to the tabular statement in page 397 of the Society's Catalogue, speaks for itself; "the same figures are adopted for wear and tear and interest, as in the Worcester report, viz., 12½ per cent. for wear and tear, and 5 per cent. for interest, divided over 200 days." With the following competitors before them, viz., 1st., Fowler's well known system with 14 horse-power engine and self-moving anchor; 2d, Fowler's double-engine system, "the chief novelty of the show;" 3d, Savory's engine with two winding drums and self-moving anchor, the first engine manufactured on this principle; and 4th, our double engines on Savory's principle, introduced at the Worcester Show, the judges surely cannot wish it to be understood that no one had the advantage in this important point.

Did the simple rule of three adopted at Worcester, apply to all equitably and justly? if so, the matter might have been settled by simply taking the selling price at which each apparatus was entered in the Society's catalogue, without going through the farce of a trial!

Do the consulting engineers of the Society endorse this? We are under the impression that the judges did not feel themselves competent with the opportunities afforded them of forming an opinion on the subject, and they get out of the difficulty by applying to "novelties" they had never before seen "the same figures as in the Worcester report;" can anything be imagined more unjust to the competitors, or more likely to mislead the public?

With reference to the capability of getting over a large amount of work, we are aware that to make "good looking" work with the plough, it must not travel beyond a certain speed. With the cultivator the case is different, and we see no reason why 20 to 30 acres of land may not be cultivated in a day with Savory's engines.

On reference to page 401 of the Society's Journal, it will be seen that we were working at the rate of 17.77 acres per 10 hours with two 12 horse-power engines, the price of which was 1028*l.* 10*s.* 0*d.*; Fowler's two nominal 7-horse power engines, costing 1034*l.*, worked at the rate of 13.58 acres in the same time; while Fowler's ordinary 14-horse power engines with travelling anchor, worked at the rate of 8.37 acres per day. Should this count for nothing? The judges think it ought, and instead of giving us credit for this performance, they say in a paragraph on page 402 of their Journal, "Notwithstanding the excessive pace the fuel consumed was enormous" (not so much, however, as with Fowler's single engine system!) from which we gather that with the excessive pace they expected a reduced consumption! This is scarcely to be credited in these days of "blockade runners" and "limited mail trains."

We still adhere to our protest, and maintain that the Judges at the Newcastle trials did not ascertain the relative merits of the competing systems of Steam Cultivation as regards "wear and tear;" that they did not give due consideration to the capability of performing a large amount of work in a given time, nor to the facility for moving the tackle from place to place and setting down for work, on which point we also contend that Savory's engines, as manufactured by us, "are manifestly superior to any others."

The Judges' awards, as the reports clearly show, were based on the consumption of fuel alone; thus, and on this point as we have explained, we were at a manifest disadvantage, but have no fear as to what the result would have been, if we had been working under the same conditions as our competitors.

The Judges awarded us a "high commendation" for "improvements in double engines," which under the circumstances, well known to the Society's officials, we were clearly not entitled to, the engines being Messrs. Savory's own manufacture; this "high commendation card" we returned to the Society with the best grace our feelings would allow, and notified our intention of finally withdrawing from the competitive trials of the Royal Agricultural Society of England, under the conviction that the system as at present carried out, is productive of no benefit to the manufacturers or employers of agricultural machinery.

We tender you our best thanks for the opportunity thus afforded us of bringing our case before the public, and with this explanation we are quite satisfied to abide by their verdict in the matter at issue between us and the Royal Agricultural Society of England. *R. Garrett & Son, Leiston Works, Suffolk, October* 10.

ON THE GERMINATION OF WHEAT.

I THANK "Mr. Harrison, of York," for again drawing my attention to this subject, and I lament he has had occasion to remind me of it a second time, but I wished before I wrote again to have threshed out my Wheat, although at present I have not been able to do so. I can, however, say that the crop was good, and the quality good; but this year in this neighbourhood the Wheat crops have been generally good, I may say excellent; and I have heard of weights of it heavier than I ever heard of before. But with reference to the germinating of Wheat, of which I have very much to say, and to which I shall chiefly confine myself in this letter, I can state, and with perfect confidence in this respect, that there is between one kind of Wheat and another, very little difference. I have grown most of the kinds cultivated in this neighbourhood, and some from other neighbourhoods; and from my system of thin seeding, if any of them had failed to grow, I must to my cost have found them out, since, as I put in my Wheat grain by grain with a drill I invented for the purpose, there would be gaps wherever a seed failed to grow; but I never found more gaps, or but to a slight extent, in the rows of one kind of Wheat than in those of others. All the bearded kinds being the most perfect, germinate rather better than the polled kinds, but the difference among them is very little. It is quite true that Wheat sometimes is deficient, and to a considerable extent, in the germinating principle, but one kind is as liable to this deficiency as another, since one kind is as much exposed to the causes of the deficiency as another. Thus, overthick seeding is one cause, as in that case the crop cannot freely blossom, as is very visible in over thick Bean crops, when the blossoms fall off, or are not formed; and rough and unpropitious weather just at the delicate time when a field of Wheat is in blossom, may blow away the fertilising pollen or destroy the blossoms altogether; in such cases the grain of course would be deficient in the vital and germinating principle. But one kind, I repeat, is nearly as liable to this misfortune as another, and whenever it does take place the Wheat, except by very thick seeders, should not be used for seed; but by them perhaps it might be used to some advantage. In common cases, when the whole or the greater portion of the seed germinates, if the spring and summer be propitious, with genial and fertilising showers, thick-seeded Wheat crops become so weak from over growth, that just before harvest any moderately brisk wind with rain lays them flat on the ground, and if this be done before the grains be well formed, the crops in such a condition are always nearly worthless, and sometimes completely so, as was the case in 1862 with almost the whole of the Talavera crops. These having been sown very early, and very thickly the autumn before, became so luxuriant in the spring that the weight of the superincumbent herbage on the drawn up and tender stalks caused thousands of acres of it to fall on the ground, and to become valueless, or not worth the expense of cutting, carting, and stacking. In those cases had one-half only or one-third of the seed germinated, the crop, instead of being valueless, would have been as good probably as could be grown, with good cultivation also. On the present system of farming, fortunate would it be for farmers if the germinating power of Wheat were as defective as by some it is said to be. But the last two years the cereal crops have been unusually good, so much so that in the memory of man for two consecutive years they never were better, if so good; and yet the seeding has been the same as when the crops were bad. How is this? I reply that in very dry seasons the growing crops do not tiller, or but to a small extent, if the plants be thick together, and hence, in such rare cases, the crops do not become very injuriously thick; and another thing, there were neither winds nor rain these two years to beat the crops down; but all stood gloriously up until they were fully ready for the sickle or the reaping-machine. But even this last year I saw a few Wheat crops rendered worthless, as the owners of them acknowledged to me, from over seeding; but still, fortunately, the weather was brilliantly fine and calm, and scarcely a zephyr breathing, and hence the glorious standing up crops which generally prevailed.

But even this last year, when the Wheat branched less from the causes I have stated than I ever knew it to do before, I myself had Wheat as thick as it could grow on the ground from one seed only to each square foot of ground, which, it will be remembered, I publicly invited all doubters to come and see, and challenged them to exhibit anything of theirs equal to it. And a neighbour of mine, who farms largely, had in the middle of a large field of Wheat sown with the usual quantity, a portion dibbled with 5 pints of seed an acre only, and, as he expressed to me, he was in doubt, before harvest, whether that or the part seeded with 7 pecks an acre would yield the best. A friend of mine, who is probably better known in the agricultural world than any other man, and is as justly esteemed as he is well known, had many acres of Wheat drilled with 1 peck an acre only; and I have no doubt whatever but the yields from those one pecks will be as great as from any quantity of seed per acre he ever before put in, and the Wheat will be as good if not much better, heavier, and of a finer quality.

But I give these examples chiefly to show that in general there can be but little deficiency in the germinating power of Wheat.

But can it be shown how long a farinaceous cereal seed—Wheat, for example—will retain vitality in it, supposing it was placed in the most favourable circumstances, and was known from proofs to have been quite perfect in the vital principle when reaped and threshed? As far as my inquiries have gone, and experiments made in conjunction with men of acknowledged science and acquirements, I should unhesitatingly state that by no art of man, and by no power of man, unless divinely bestowed for the purpose, can vitality in Wheat be kept for 30, and I think not for 20 years; the exact time, of course, cannot be known, but most certainly not longer than the time I here state.

But a learned and scientific M.D. in Colchester professes to possess the power of retaining life in Wheat for "thousands of years;" nay, to bestow immortality

upon it; or, to use his own language, so to act upon it, that "for it to die would be impossible." Not only to be endowed with this miraculous life preserving power himself; but, also, as it was reported in his lecture, to have such a superabundance of it, as to have been able to bestow a measure of it on his hearers, when they, in the exuberance of their grateful feelings, bestowed upon him in return their cordial vote of thanks; and some time afterwards some members of the institution, at a meeting called together on purpose, favoured me with their unanimous vote of censure, and adding also their deep regret, that their sapient townsman's powers should have been called in question by the Parson of Wix, and put to so much annoyance.

It is true, as my readers probably know, that this vegetable life-preserving power has been said to have been possessed in ancient times by the Egyptian mummy-makers, whose art was so much like the salting and drying of bacon, that were the poor and half-starved Egyptians who practised it imported into this country, they would be at home in their business, and make the fortunes of the importers of them. Is it possible that Egyptian mummy-makers, who were among the lowest and most ignorant of the community, possessed the art of preserving life beyond the time limited to it by the Creator? And is there any proof that they ever professed to possess this art? They knew how to salt and dry the bodies of fellow beings, but knew nothing of the principle by which their flesh, muscles, and bones were preserved, more than does the clown who salts and dries bacon, or, in other words, hogs. And when all the scientific and learned men, and as many of them are endowed also with what appears to unreflecting and common minds superhuman abilities, have been unable to preserve vitality in farinaceous cereal seeds for a quarter of a century only, can any rational man believe that those ancient embalmers, who knew nothing of chemical science—even for argument's sake admitting that they were not of the low and common race—accomplish what all men of science know is impossible to be done? But there is no reliable evidence that Wheat was ever found within the folds of a mummy at all, but if any ever was in, it is quite certain that it was put in by some impostor by design, or got in by accident.

But is there not a kind of Wheat called Mummy Wheat, and is there not a belief that it was obtained from a mummy? There is, and Mummy Peas also, and I have lately heard of Mummy Onions; yes, a gentleman assured me that Onions had actually been found in mummies! and that they were a most delicious kind, so mild and pleasant to the taste that he could almost live upon them: he ate them, he said, at every meal, so much did he like them, and so well did they agree with him more than any common Onions! Thus, one imposture and quackery begets another; from the Mummy Wheat imposture arose the Mummy Peas, and then the Onions, and the next, I presume, will be Mummy Potatos, Turnips, and Beet, &c., and the foundation of one imposture is the same of the others, the ignorance and credulity of the multitude always gaping after something they do not understand, and always ready to be deceived by any quack impostor, who with a bold plausibility appears before them. The Wheat called Mummy Wheat is, as the learned Calmet has shown, the oldest kind known, and analysis shows it to be the best, fullest of gluten and most nutritious, of course; and as Calmet also shows, it was grown in Egypt at the time of Joseph, and continued to be grown there till Calmet's time; and upwards of 200 years since it was also grown in England, and perhaps longer; and Tull grew it, and others of his time; and I have grown it for nearly 30 years, and hence it has been handed down from the earliest period to our time, not by preservation in mummies, but by successive cultivations of it.

In conclusion, I will inform my readers that in conjunction with some very scientific and learned friends, I have made many experiments for preserving vitality in cereal farinaceous seeds, and by methods recommended by men who appreciated the importance of the subject, but I never could get Wheat to germinate after being preserved for a dozen years only, and I feel confident that it never has been kept much beyond that time, and most certainly not for 20 years; I repeat, therefore, that if my Essex friend can, as he boasts, keep life in Wheat for thousands of years, he is more than mortal, and for this great achievement has been miraculously and superhumanly endowed by a higher Power. And here I stop for to-day. *Geo. Wilkins, Parsonage, Wix, September* 30.

WHEAT AS FOOD FOR STOCK.

The partial failure of our root crops gives unusual interest to the question, How shall we keep our stock this winter? The course I am adopting is the following:—

I boil daily a large copper full of Wheat, mix it with cut Barley straw; let the mixture stand a few hours, then add nearly an equal quantity of Wheat or Barley as meal, and serve it out to my sheep, young and old, to my cows, and cattle of all ages. The stock receive a very few pounds of Turnips or Cabbage in addition, and a little Cotton-cake. I have now no Linseed-cake on the farm.

About 10 gallons of water are required to each bushel of Wheat. The mixture, which must be stirred, takes about one hour before it boils, and is left boiling slowly for about half an hour more, till all the grains are burst. The gravy, *i. e.*, the water not absorbed by the Wheat, is poured over the chaff heap, and gives it in some measure the warmth and fragrance of steamed food. The meal added afterwards adheres to the wet chaff and takes up the superfluous moisture.

I will specify the food given to the hoggets, because practical men may have a special misgiving as to its fitness for young sheep. This lot, 246 head, has daily 1 bushel of boiled Wheat and 64 lb. of meal, half Wheat, half Barley. With this, even in the warmest days of September, they ate 6 sacks, or about 1½ cwt. of cut straw. They have also 56 lbs. of Cotton-cake, and 15 bushels of hard early-sown white Turnips, besides running for one or two hours over a bare Clover lea. When they lose this run they will have a few more roots—say 5 to 10 bushels. They have been on this food nearly a month, and the shepherd considers they are doing better than when they had Linseed-cake, and therefore asked to have boiled Wheat instead of cake for his ewes. The cost is less than for Linseed-cake.

The Wheat (or its equivalent in Barley) at 4*s.* 6*d.* per bushel costs per week	£3	3	0
The Cotton-cake	1	1	0
	£4	4	0

Or about 4*d.* per head per week.

As to the Barley chaff, I cut with Maynard's chaff-cutter at least 8 tons per day; allowing 28*s.* for the steam engine, cutter, and two men, (the letting price), 14*s.* for labour, and 6*s.* for coals and water, the cutting costs 6*s.* per ton, or about 3½*d.* per cwt. For my own part, I much doubt whether the manurial value of the straw is much affected by being passed through the animal. The few roots given each farmer may price for himself. When the ewes and wether hoggets are parted, the latter will probably have an increase of corn. These (Downs) are expected to be ripe for the butcher, and to weigh 10 stone, as soon as they are shorn.

These hoggets were all in good condition, and had without any drawback picked up all the Barley on the stubbles before they were put on to this diet. There is of course a right and a wrong way of bringing them to it, which, if the farmer cannot discern for himself, he can hardly be taught.

The ewes (300) have boiled Wheat and straw chaff, without the addition of meal. The bullocks get 2 stone of boiled Wheat, 2 stones of Wheat or Barley meal, and 2 stone of Cotton cake per head per week, costing together 5*s.* 6*d.* The milch cows in full profit have 5 stones of boiled Wheat and meal, and 1½ stone of Cotton-cake. The young stock have a similar mixture of food. The pigs also have boiled Wheat and meal.

In conclusion I will remark: 1st, After a month's trial all parties concerned are well pleased with the results so far obtained. I shall be glad to show them to any occupier of land, who will send notice of day and hour to Mr. Bennett, Dun Gate, near Cambridge, and will make his way to the Six-mile Bottom Station.

2d. There are many devices which may occur to an active-minded farmer which would be marred by their too general adoption; but this is not one of them. If this lead be generally followed, Wheat may possibly be raised 1*s.* a bushel, and Linseed-cake proportionately lowered in price; but our stock of Barley straw or our water supply is more likely to run short than the Wheat market to be seriously affected by the course which I suggest.

An American grist mill, costing 25*l.*, would be a useful adjunct to the other machinery required. *P. H. Frere, Dun Gate, Cambridge.*

SOCIAL SCIENCE CONGRESS AT YORK.

[In the Agricultural Section, presided over by Mr. Holland, M.P., papers were read by the President, Mr. Strickland, Mr. Gordon, and others, of which the following are abstracts.]

(*Continued from p.* 972.)

Co-operative Farms at Assington, Suffolk.—A communication was read from Mr. John Gurdon, in which he said:—About 34 years ago I formed a plan to raise the labourer in his class without taking him out of it, by giving him a stake in the country, and thus rendering him a serviceable man not only to his God but to his neighbours. All connected with agriculture must acknowledge that no labourer can exist upon 9*s.* or 10*s.* a-week with a wife and family. The consequence is that poaching and petty thefts are the crying evils of the age. I was induced in 1829 to offer an off-hand farm of 100 acres, more or less, to 20 labourers of my parish, offering to lend them capital without interest to cultivate the same, subject to rules and regulations—namely, that each member should advance 2*l.* as guarantee; that a manager, accountant, and stock-keeper should be selected for conducting the farm; that the capital be paid back as the profits arose; that quarterly meetings be held for transacting business, &c.; that all necessary articles be provided by the committee for the use of the members; that if any member be convicted of fraud or any other crime he should forfeit his share, which should be sold, and the monies arising therefrom should form a reserve fund for contingencies. Other salutary rules were added as to advancing to members, in case of unforeseen misfortunes, loans upon their shares, the disposal at death of such shares, filling up vacancies, &c. Upon the members subscribing their rules, I agreed to let the farm for the rent of land letting at that time, to be altered every 12 years during my life. As these members were now deprived of all parochial allowance, I called upon each member to insure in the Stocke and Welford Benefit Club for 10*s.* a week during sickness, 5*s.* a week after 65, and 5*l* funeral expenses. The aforesaid club was established by me in 1828 upon Government principles, and owing to the energy and unwearied attention of the local clergy, who act as directors, we have at this time upwards of 25,000*l.* in hand. After a few years this society paid me off all the capital I had lent them, which induced me to let another isolated farm to 34 other members. This society has also paid off the monies I lent them; so that there are now on the two farms 54 labourers, farming about 350 acres, free of debt, and possessing as their own property all the stock and crops on the said land; and as each share has been valued at 50*l.* I have bestowed upon these 54 labourers the sum of 2700*l.* at only the loss of the interest of some 1000*l.* for a few years. Farmers at first were startled at my project; but when they found I was not taking their labourers out of their former position; that they had the use of these men as before, only a certain number being required for the cultivation of these two farms; and that they, moreover, had men they could depend upon, because conviction of any theft would deprive them of their share in the farms, and, also, that these labourers were exempt from any parish allowance, they altered their tone, and were willing to confess that the plan had every advantage without one drawback. I should here mention that these two societies have established a store shop with a brewery, which I am now building for them, after the Rochdale principle; and I hear they expect to pay their rents from their savings by paying ready money and getting every article at cost price. I know the plan will at first meet with much opposition from stewards, and country gentlemen would not like the trouble of first setting the society at work; still, from the numberless letters I have received from practical economists, not only in England, but in many parts of the Continent, I feel assured that the plan will be adopted, and the underpaid labourer will be remunerated for his toil. At present he has no stimulus to moral or just feeling. If a farmer's stacks are fired, his stock injured or stolen, he gets no sympathy from the labourer; but give him (the labourer) stacks and stock of his own, and then his neighbour's losses will be appreciated, and he will be able to sympathise. I have frequently attended their annual meetings, and been much struck with their business habits and shrewd remarks; while their better mode of living gives them power to fulfil their work with spirit and energy. Professor Fawcett expressed to me in a letter that he considered it the best plan that had yet been introduced for the agricultural labourer. Of this I feel assured after thirty-five years' experience. I should add that no land is better farmed or rents more punctually paid than by these labourers.

(*To be Continued*).

Home Correspondence.

The Metropolitan Farina Company.—As the suggestions in your leading article of last week might be considered to apply to this Company, which has lately been bringing more prominently before the principal agriculturists the analysis of their biscuit meal by Dr. Voelcker, and which shows the very high per centage of its feeding properties, I have been directed to state to you that the whole of the biscuit meal delivered from the factory of the Metropolitan Farina Company is precisely similar to the sample analysed by Dr. Voelcker, varying slightly only in colour, some batches being a little more brown than others. It is not a compound, but is entirely the produce of Wheat flour. *G. Cowley, for Metropolitan Farina Company.* [We gather from this that the Metropolitan Farina Company will guarantee the goods they sell to be of the quality indicated by the analysis: and thus do all that our Correspondent to whom Mr. Cowley refers, desires.]

Steam Cultivation.—The correspondence going on respecting the remarks of Colonel Fane on the subject of steam cultivation has interested me as well as other cultivators by steam, and in common with them I regret that that gentleman should have given such decided opinions upon a subject with which he has no practical acquaintance. It is quite possible that he may have a friend who has had a bad set of tackle, or it has been injudiciously or unfairly used, or from some cause or another he may have been unsuccessful, but we all know that not only as regards steam ploughs but in many other things different men work with very different results. At all events it has answered my purpose, and that being the case I think it only fair to the system, when cold water is thrown upon the invention by one who has no practical knowledge of it, that those who have experienced its advantages should record their opinions. During the seven years I have worked a steam cultivator, each year has brought an increase of produce. The working expenses of each year have been less, as the men know better how to use it, and breakages are fewer. My practice is to use steam only for the heavy work of breaking up, leaving all the minor operations and lighter labour to be done with horses.

It will never answer to keep an idle team to play with a steam plough. Each has its proper province, and it is the judicious use of each which makes the difference between success and the want of it. My farm is chiefly cultivated with tined implements, either by horses or steam, a plough being rarely used; and when it is wanted for an odd job it has to be hunted for and is probably found cast into some ditch. Increased produce, a cleaner farm, and a diminished labour bill, are pretty good proofs of success. In my opinion (on heavy land), a plough with four horses, plodding along the bottom of the furrow, is the worst implement that could be devised, and that opinion is confirmed by my neighbours, one after another, falling into the newer and better system. In conclusion I express my thorough conviction that the steam cultivator on all clay or heavy lands, under proper circumstances and in good hands, is the most splendid invention of the age, and I wish most heartily that all who have been instrumental in its introduction, may reap the reward they richly merit. *F. W. Bignell, Loughton.*

Societies.

Gowran.—The annual show was obviously much better, alike in quantity and quality of stock exhibited, than any which has yet taken place under the auspices of the Gowran Farming Society. There were 49 entries of horses, of which 4 were stallions; there were 14 brood mares, 17 draught colts, and a number of carriage colts and other horses. Last year there had been about 30 entries for horses, and it was then considered a very large show in that department. There were now no fewer than 25 bulls, 21 milch cows, 15 three-year-old heifers, 32 two-year-old heifers, 19 yearlings, 32 heifer calves, &c. In the sheep department there were 12 shearling rams, 8 two-shear rams, and several others of various ages; there were 59 breeding ewes, 56 hoggets, and 90 ewe lambs. The pigs numbered 68, comprising 4 sires, 2 fat beasts, 7 sows and litters, 7 sows in young, and various young animals. On the whole, the show was comprised of 49 horses, 146 head of horned cattle, 255 sheep, and 68 pigs, some of the classes showing nearly double the number that appeared last year.

The chair was taken by Sir John Power, Bart.

Mr. Milward, in proposing "The Royal Agricultural Society of Ireland," remarked that pretty hard tasks had been allotted to him that day, but he found the hardest of all was reserved till the evening—to make a speech. They knew what that Society had done in Gowran, and Kilkenny too, as they had a very good trial last year of the results likely to proceed from such institutions. The Royal Agricultural Society had been instituted for the purpose of encouraging agriculture in Ireland, and the way in which it did that was by helping on its children. The Royal Agricultural Society called itself the parent society, and they were its children; but they were pretty good sized children, as they showed from their exhibition that day; however, without the parent's help they could not get on. Some of them that day had received their prizes from the hands of Lady Desart, apparently consisting only of a piece of paper, but they would afterwards be exchanged for a medal from the Royal Agricultural Society, which encouraged them to compete with each other. It was for them to show what they were able to do, and he thought the show of the Gowran Society that day gave ample proof of how they were able to keep the ball going, as well as the advantages to be reaped from such societies. If they were willing to bear with him, while on his legs, he would refer to a subject of very great importance to the farmers, namely, the tillage and Grass system of farm management. They had been often told to give up tillage and sow Grass. They ought to do so, no doubt, but then they could not all do it; some of them should put their ground under tillage, as it would not give Grass. He had paid a good deal of attention to that subject, and notwithstanding all that had been said against it, had been farming on the principle of tillage, and tillage only. His method of farming was to increase the amount of crops as much as possible, and decrease the expense of growing them, if possible; and he could say without boasting or egotism that he had increased the crops and reduced the expenses at Tullogher; but in doing so there was one point which struck him enormously this year. This year he had to deal with two farms, one at Tullogher, and the other at Gowran, and had also to cut two harvests, and the thing which struck him so much was how the farmers could save in their expenses. He would not tell them how they could increase the crops, as they all knew how to do that very well, but there was one point he had taken the trouble of working, and that was the cost of cutting the harvest. It had cost to cut and save 53 acres of corn at Gowran, 14*s.* 3*d.* per acre exactly, and at Tullogher he got 105 Irish acres cut and saved at a cost of 4*s.* 8*d.* an acre. That struck him at the time as being a very serious difference, and he therefore wished to put it to them as it presented itself to him. They were all aware he had to deal with a great many tenants. Now, tenants will come to their agents occasionally and say their farms are too dear, and that they wish for a reduction of the rent; but when there was such a large sum as 10*s.* an acre to be saved in the mere cutting of the harvests, he did not know what the tenant had to say if he paid proper attention to the management of his farm. The way that difference arose was, that at Gowran he was obliged to cut the harvest by hand, at the increased wages of the day, whereas at Tullogher he was able to get it done by machine, and the consequence was the saving of 10*s.* an acre. Farm accounts he admitted were a very great help, but it was all "bosh" to say every farmer should or could keep accounts, as from experience he found it absolutely necessary to have a book-keeper for the exclusive purpose of keeping farm accounts. But he would ask them all to carefully consider the matter, and think among themselves about the expediency of introducing machinery on their farms when they could save so much in reaping, mowing, &c., and by which means they would be enabled to make a much larger profit than they do at present. The mere rent of the ground, of course, was a heavy item in the account of expenses, but all, as tenant farmers, should expect to make equally as much out of it as the landlord, and if they did not, it was all their own fault. They knew that a saving was practicable, and if they did not avail themselves of the means by which a profit was to be derived and put to the advantage of the tenant, why they had no one to blame but themselves. All these circumstances having made an indelible impression upon his mind as to the practicableness of a large saving by judicious management, he thought it but right to bring them before them in proposing the toast. There were other matters in the way of tillage which he had also given some little consideration to. It struck him as a very singular thing the enormous use the farmers made of lime in manuring their lands. It was a useful manure, to be sure, but, above all others in use, there was none so destructive as lime if abused by a too profuse application. Lime was intended for two purposes, chemical and mechanical. Mechanically it was used to open the ground, and chemically to start vegetable matter and make it good for plants. There were large numbers of people who destroyed their land and took all vegetable matter out of it by using lime in very large quantities for mechanical purposes, without considering its chemical or productive qualities at all. The results proceeding from the use of that manure were that in many places the vegetable matter in the land was so destroyed that it could not be expected crops would grow without the land being first rescued from its impoverished state by competent hands.

Farmers' Clubs.

Docking Union: *Oct.* 7.—The Earl of Leicester, in responding to the toast of his health as Lord Lieutenant, said:—As I have been the possessor of steam cultivators for five years, having worked them both on strong and on light land, and as the attention of agriculturists will annually be more and more drawn to this subject, my experience and views on this matter may be of some service to you. I purchased my steam cultivators for the purpose of working the land I have reclaimed from the sea. This land for the most part consists of a strong alluvial soil; not exactly what would be called very stiff land, because it possesses a considerable quantity of fibrous matter, and there is a comparative absence of clay within reach of the plough; yet still, from its entire freedom from stones and other matter that would keep the land open it requires the same treatment as strong land would, and can only be worked effectually when it is thoroughly dry. By the aid of steam I am enabled to break up from 300 to 400 acres, from 10 to 18 inches deep, during the months of August, September, and October; and I find that if this land is broken up when it is thoroughly dry, and gets baked before the winter rains, it never runs together, and requires no further cultivation but the drag or harrow before the drill. By this means I obtain, also, what I may call a summer and a winter fallow, exposing this strong land to the air and the summer sun, which is as beneficial to it as I believe it to be injurious to light land. To plough with horses this same extent of land, at the same depth, and at the same time, would be almost impossible. Even if sufficient force could be obtained, the cost per acre would be very considerable, and the work would not be so effectually done. To my mind, too great stress has been placed upon the comparative cost of steam and horse power. Even if steam cost the most—which I deny—the difference between the produce under the one system and under the other has not been sufficiently considered. Strong land, thoroughly drained, and worked under the conditions that I have before stated, makes the occupier, to a great extent, independent of the seasons. Deep cultivation not only equalises the temperature of the soil, but also prevents injury from excess of moisture or excess of drought. And I would here state that the drains will work far more quickly and effectually on land that has been worked by steam than on land that has for a constant period of years been under the pressure of horses, forming thereby a smooth and hardened furrow. By the application of steam, horses would be reduced to a minimum. Effectually to work strong land with horses, a large force must be kept, in order to force on the work when the weather will permit; and for many weeks the horses must remain idle, as I find that on such land, or on strong land, the pressure of the hoof of either man or beast in wet weather is more or less injurious to it. Now as to the application of steam on light land. When I have completed my work on the strong land in the autumn, I have removed my machinery to my light-land farm in the park, in order to subsoil the Wheat stubbles for the root crop; I have subsoiled both on the chalk and on the gravel; I have carefully staked out those portions of the field that have been submitted to this treatment, the other parts of the field having been worked by the horse plough. On those portions of the field which have been subsoiled I have invariably found that the root crop is very much better than on those portions which have been ploughed with horses. I will admit that during the last dry summers the contrast between deep cultivation and shallow would probably be far greater than in wetter seasons; yet the obtaining a better root crop in such a season as the last is of very considerable advantage. Last November I ploughed with steam a field after Mangel; I ploughed about 9 inches deep, and I turned up a considerable amount of dead soil to the top—for which I was very considerably laughed at; but this was done early in the autumn, and the dead soil was exposed to the winter. On that field I grew the heaviest crop of Barley I ever saw grown in Holkham Park; and at this time I have got the very best layer of Red Clover, excepting Cinquefoin, that I have had in the park. I am so satisfied with the results of deep cultivation on every description of land that I have got in the park, that I intend to subsoil all that I can with steam, and where trees or other incumbrances exist, to do so with horse-power. Now the conclusion I have come to is this, that on a strong land arable farm of 400 acres or upwards steam cultivation might be profitably employed; the great saving in horseflesh, the more effectual working of the soil, the being to a certain extent independent of the seasons, the being able to do everything at the right time, and the certain results of obtaining a larger produce, would, in my opinion, make the purchase of steam machinery on such a farm a most desirable investment. On light land, on the contrary, if deep cultivation is considered desirable, this can be effected by horses. The pressure of horses on light land is not injurious to it. There are few days in the year on which our horses cannot be profitably employed on light land. We keep no more horses than are necessary for the in-gathering of the crop; consequently, the sole interest to be derived by the purchase of steam machinery must be from the increase of produce, and I am of opinion that even on a light-land farm of 1000 acres the increase in produce would not be sufficient to justify the purchase of steam machinery. Satisfied as I am of the advantage of possessing steam power for the 400 acres of strong arable land that I farm, I am still equally satisfied that if I did not farm that strong land, I should not purchase steam machinery to farm my 1000 acres of light-land. Should traction engines or tramways come into use, by which the number of horses kept on a light land farm might be considerably reduced, or should this most expensive machinery be considerably lessened in price, the case might be altered altogether.

Reviews.

The Ox and his Diseases. By J. R. Dobson, V.S. Longmans.

A very explicit and well illustrated book of veterinary treatment—particularly explicit and well illustrated in its discussion of the ordinary and extraordinary difficulties of parturition, but trustworthy and elaborate everywhere.

The following are extracts relating to some of the commoner attacks.

"*The Hoose in Calves.*—The cause of hoose is the presence of a vast number of parasitic worms* in the windpipe, of a fine thread-like form, and about half an inch long. The treatment of hoose consists simply in getting rid of the parasites. This, from their peculiar situation and tenacity of life, is no easy matter to effect. Some medicine must be given which will act immediately upon the parasite, and yet not endanger the life of the animal itself. One of the best—indeed, the only internal medicine to be depended upon—is the oil of turpentine, a medicine peculiarly destructive to worms of all kinds, when it can be brought into direct contact with them. Turpentine, when given internally, is absorbed from the stomach into the circulation, and thence, by the exhalents of the lungs, eliminated into the air passages, bringing its vapour into direct contact with the worms.

Linseed oil	12 ounces
Oil of turpentine	4 "

Give a wine-glassful, twice a day, in a little warm gruel."

"*On Pleuro-pneumonia.*—In summing up the researches made by modern science upon the treatment and prevention of this most distressing malady, we are compelled to confess how very futile all measures, both of prevention and cure, have hitherto proved in arresting the progress of the disease. In fact, practically speaking, it may be regarded as completely incurable, and the farmer will best consult his own interest who consigns his affected stock to the butcher upon the very first appearance of the complaint, taking proper precaution to isolate all stock which have been in contact with the diseased animals. To give the full benefit of isolation, however, it must be complete;

* The filariæ bronchiales.

there must be entire separation of healthy and diseased beasts—not only in removing them to distant and isolated places, but in providing separate attendants for those affected."

"*On the Foot and Mouth Disease.*—Eczema epizootica* is more commonly known as the 'mouth and foot complaint,' the 'murrain,' and the 'malignant epidemic murrain.' It consists of an inflammatory affection of the mucous membranes and skin, evidenced by the appearance of vesicles or small bladders, containing a colourless fluid, on the inside of the mouth, and those parts uncovered by hair.

"The history of the affection, like most epizootics, is involved in considerable obscurity, and it is by no means clear whether it was imported from abroad or whether it broke out spontaneously. It is said to have occurred in England as early as 1712; but although the symptoms of the epizootic in that year tally with those of eczema, it is not certain that it was the same affection, as it seems soon after to have entirely disappeared.

"The disease under notice first appeared in England in the spring of 1839, and spread rapidly over the whole of England, and subsequently Scotland and Ireland. When the disease first appeared fatal cases were of frequent occurrence, and in those which recovered the symptoms were of such severity as to often leave permanent traces of its effects. Of late years, however, not only have cases been of rarer occurrence, but of a much milder character. The disease remained in England for about two years, when it seemed gradually to wear itself out; the cases not only becoming more scarce, but the severity of the symptoms abating. Since that time we have had repeated returns of the malady, of more or less general prevalence."

"Of the causes of this most prevailing disease no good account can be given. Soil, situation, and food seem to have little or no influence on it; and like its congener, pleuro-pneumonia, it prevails alike in the badly ventilated and badly drained cow-shed, as in the clean, dry, and carefully tended establishment. Although the spontaneous appearance of eczema cannot be explained by any of those laws which govern epidemics in general, such as impure air, &c., yet it is an established fact that contagion is a great and widely-spread cause of the disease. This fact was made patent by a series of experiments conducted at the Royal Veterinary College, in which it was produced by saturating hay with the saliva of infected animals, and giving it to healthy ones. The effects were developed in 36 hours. Hence the necessity for legislative interference in preventing the introduction of diseased animals in fairs and markets, where by mixing with healthy stock disease is disseminated in districts till then free. Railway trucks are another source of contagion. It is also highly probable that the clothes of herdsmen attending on diseased stock is one means of spreading the infection. There is a loss of susceptibility in an animal once affected, although they may, and indeed often are, attacked more than once.

"In closing these brief remarks on the causes of eczema, it must not be supposed that it is a matter of indifference whether animals are kept in an ill or well condition, for although cattle carefully tended, and well fed and kept, are equally liable to an attack, yet cleanliness, good ventilation, and plentiful food enable them both to bear the attack better, and also to throw it off much sooner than animals in low condition."

"The treatment of eczema must be of the very simplest character, and in mild cases it is very much better to trust entirely to Nature, and do nothing at all. Occasionally, however, medical treatment may be required, as agriculturists have become so accustomed to regard the disease as beyond the power of medicine, that those measures are neglected which are absolutely required, and which, had they been pursued, might have saved a valuable animal from much suffering, and consequent depreciation in value.

"If the bowels are at all torpid (which they will often be at the commencement of a severe attack), a mild purgative may be given.

Epsom salts	12 ounces
Powdered ginger	1 ounce

"Cleanliness as to the feet is of course indispensable, and the animals should be at once removed from any situation where wet can obtain access to them. Clean dry straw as litter, and a careful removal of the manure, and daily cleansing the shed, will best fulfil these conditions. If, however, the beasts are out at Grass, they are—except in specially bad cases—best left to themselves. The mouth should be well looked to, and if the vesicles have broken, and ulcers formed, a little alum lotion may be useful.

Alum	1 ounce
Water	1 quart

Well sponge the mouth with this two or three times a day.

"To those on the udder an ointment may be used, as the alum ointment, or the ointment of acetate of copper.

"The feet will require special attention, and should be looked to daily, and any raw and ulcerated places, after being well washed, may be dressed with the alum ointment above mentioned, and diseased and exfoliated [illegible] removed with a sharp knife. Should the ulcerations be deep seated, and have a tendency to spread, a stronger application will be required: a very good one is the common *Ægyptiacum* or Liniment of sulphate of copper."

The following is an extract from the preface, declaring the intention of the author:—

"The author has endeavoured, as far as possible, to avoid the use of technical terms, so as to render the work comprehensible to those for whom it is chiefly written—the farmer and stock-keeper.

"He has, at the same time, no wish to make 'every man his own cattle-doctor,' feeling convinced that those best consult their own interests who, in all cases of difficulty or danger, at once call in the aid of the properly qualified professional man."

* The word Epizootic has been shortened into the flash term of 'Tizzy,' and by this name it is very commonly known by dealers and others.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. Slatter, Stratley, near Reading.

At 9 A.M., Railway Time. Reading of Self-Registering Thermometers.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6.	In Shade. Amount of Cloud, 0—10.	In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Thursday ..	Oct. 13	30.06	54	52	N.W.	1	10	58	50	71	40	0.11
Wednesday ..	14	30.14	51	48	N.	0	4	58	37	72	43	..
Tuesday ..	15	29.89	55	51	S.W.	1	7	56	46	66	43	0.02
Monday ..	16	29.69	55	53	S.W.	0	10	58	49	68	40	0.03
Sunday ..	17	29.67	59	56	S.W.	0	6	59	49	67	42	..
Saturday ..	18	29.28	60	57	S.W.	3	6	59	48	63	50	..
Friday ..	19	29.25	56	53	S.W.	2	9	66	47	58	47	..

Miscellaneous.

Strength and Brittleness of Iron.—As soon as a bar of iron is strained in excess of the elastic limit, a certain amount of elasticity (or the power of temporary elongation) and of ductility (or the power of permanently elongating) is taken out of it. The amount of latent work it contained at the beginning is therefore diminished. If the experiment be carried still further, and the bar be broken three or four times, the bar at the last time of breakage will be found not to elongate at all, but its powers of resistance to a statically applied load are wonderfully increased. Taking longitudinal tension merely into consideration—as it may be called the representative strain of the major portion of most other strains—we see that the bar is elongated in a longitudinal direction, and that this elongation is accompanied by a contraction of its cross-sectional area, which actually brings the particles nearer together, probably causing them to very closely interlace each other. The hardness, therefore, of one bar, and, consequently, its powers of resistance to a static load, are immensely increased, but all its elasticity and ductility have been taken out of it. We will now cite a number of experiments in support of our explanation—experiments, however, which, from a more or less forgetfulness of mechanical principles, have, one and all, been actually cited in support of the supposition that a breaking load increases the "strength" of the iron. In one sense the "strength" was increased; but it was a hard or brittle strength; the tough strength, or the elasticity and ductility was, on the other hand, annihilated. [Then follows a list of examples.] *Inquirer.*

Notices to Correspondents.

Cattle Food: C. Thanks for Dr. Voelcker's analysis. It is the business of tradesmen to advertise their wares. If any one has any agricultural experience to relate of its use, we shall be most happy to publish it.

TRADE

HALLETT'S | PEDIGREE | NURSERY WHEAT.

MARK.

FROM THE TOP OF THE CHALK DOWNS.

Seed required { In October, 2d half, 4 bushels on 6 acres / In November, 4 bushels on 4 acres

One Guinea a Bushel, or Seven Guineas a Quarter, including Bag, delivered at the Brighton Railway Station, upon receipt of Cheque or Post-office Order, without which the Wheat will in no case be sent.

Apply to Fredric F Hallett, Esq., F.L.S., the Manor House, Brighton, Sussex.

See full advertisement with engraving of Ear in Numbers of *Agricultural Gazette* and *Mark Lane Express* for September and October, and in those of *Bell's Weekly Messenger* for October and November 1864.

SHIRREFF'S BEARDED WHITE WHEAT, of select growth and warranted genuine, is now being delivered. Price 52*s.* per quarter; Bags 2*s.* each. Other growths purchased on commission. Terms cash on reference to a person in Edinburgh.

Patrick Shirreff, Haddington.

Seed Wheat.

MAMMOTH WHEAT, Selected by Mr. Teverson.—The most productive and valuable variety of Wheat ever grown by the Advertiser. It is hardy and vigorous in habit, not liable to blight, and adapted both to strong Wheat land and to light land. Price 7*s.* 6*d.* per bushel, or 48*s.* per quarter, delivered at Braintree Station.

Apply to Henry Eversher, Park Hall, Gosfield, Halsted, Essex.

SEED WHEAT.—Superior Essex Rough-chaffed or Woolly-eared Early and Club-headed Prolific Whites, warranted true to Stocks, 47*s.* 6*d.* per quarter, free on rail; or f. o. board in London, 49*s.* 6*d.*; less than a quarter, 6*s.* or 6*s.* 3*d.* per bushel. New Sack, 1*s.* 5*d.* Other varieties about 65 lbs. per bushel, but not guaranteed for Stock.

Apply to Abraham Hardy, Sen., General Land Agent (late the celebrated Seed Grower), Maldon, Essex, for samples and price. Remittances must accompany orders.

Reference for respectability and trustworthiness (if required), J. J. Mechi, Esq. Agent for "Hallett's Pedigree."

SEED WHEAT from the CHALK.—BROWICK RED, SPALDING, CLOVER'S RED, NURSERY, MORTON'S RED STRAW, and all the most approved varieties of Wheat. Also HALLETT'S PEDIGREE, SHIRREFF'S WHEATS, &c., supplied by Raynbird, Caldecott, & Bawtree. Samples and prices post free on application.

Address, Basingstoke; or 89, Seed Market, Mark Lane, E.C.

R., C., & B can also supply from a clay soil improved stocks of RED BROWICK WHEAT and THICK-SET ESSEX RED, both carefully selected and hand picked, and recommended for productiveness and stiffness of straw.

WINTER BARLEY.—Hardy Two-rowed Barley for Autumn sowing. Crop last year, 10 quarters per acre; sold at 38*s.* per quarter for malting. It is of vigorous growth, and succeeds well sown on a Wheat stubble, with 2½ cwt. of guano per acre. Price 45*s.* per quarter, delivered at Braintree Station.

Apply to Henry Eversher, Park Hall, Gosfield, Halsted, Essex.

THE EARLIEST PEA known is CARPENTER'S EXPRESS, gathered May 7. See Testimonials, among which is the following from Mr. John Cox, Gardener to W. Weks, Esq., Red Leaf, Penshurst, Kent:—

"Dear Sir,—I beg to say I have tried your Express Pea this season, and am glad to be able to speak very favourably of it as the earliest Pea I have ever grown. I gathered in quantity this season nine days in advance of any other early variety, and longer also than have ever been gathered in these gardens in the open air."

Price 3*s.* 6*d.* per quart. Trade price on application. Remittance requested from unknown correspondents.

Edward Carpenter, Seed Merchant and Grower, Brighton and Sussex Seed Warehouse, 5, St. James Street, Brighton.

NEW ZONALE PELARGONIUMS.—The following will be sent out early in November by John Hally, Nurseryman and Florist, Blackheath.

1. VENUS.—A perfectly round flower, of good size, brilliant clear orange scarlet, with pure white eye, in good trusses, and very abundant. Leaf having a gold blotch in the centre. Zone very dark, breaking into light orange buff blotches, very effective when bedded out; habit very dwarf, with flower stems standing well above the foliage. Received First-class Certificate from the Royal Horticultural Society. 7*s.* 6*d.* each.
2. RED RIDING HOOD.—Brilliant deep scarlet variety, with white eye and perfect shape, a most profuse bloomer, of very close dwarf habit and deep horseshoe leaf. Received Certificate from Royal Horticultural Society, and marked * * * as 1st class in bedding department. 5*s.*
3. ENAMEL.—Flower a very clear bright rose, with large round petals of unusual substance; foliage a deep emerald green, with very dark zone. Habit very compact, and a free bloomer. 5*s.*
4. QUEEN MAB.—A very dwarf zonal variety, with large bright orange scarlet flowers, very distinct and free. 3*s.* 6*d.*
5. PYGMIE.—A remarkably dwarf close compact-growing plant, having large trusses of deep scarlet flowers, with large white eye, and very distinct yellow marbled foliage. 3*s.* 6*d.*
6. ROSE OF LEE.—Flowers large, of a scarlet rose colour, foliage light green with yellow blotch in centre, very distinct in colour. 3*s.* 6*d.*

The above set for 21*s.*, with the usual discount to the Trade.

Two Splendid Seedling Azaleas.

WILLIAM BARNES has great pleasure in announcing to his friends and the public that his two magnificent Seedling Azaleas, BRIDE of ABYDOS and PURITY, are now ready to send out.

BRIDE of ABYDOS is a splendid white, striped and splashed with pink; of fine vigorous growth, and an abundant bloomer. It was exhibited before the Floral Committee on May 6, 1862, when it met with their unanimous approval. The following description is given of it in the *Gardeners' Chronicle* upon the 10th of that month:—

"Mr. Barnes, of Southampton Street, Camberwell, contributed a beautiful Azalea named Bride of Abydos, the flowers of which are large, white, flaked with pink, and possess great substance; of this variety three plants were exhibited, all excellent in habit and evidently free in growth."

In the *Gardeners' Chronicle* of December 27, 1862, page 1217, in describing the new and most prominent Azaleas of the above year, are the following remarks:—

"As a free-flowering sort of vigorous habit adapted for decoration and exhibition, the Bride of Abydos is the most useful which has appeared amongst the whites, with occasional streaks of red."

Fine strong Grafted plants will be ready on the above date at 21*s.* and 31*s.* 6*d.* each.

PURITY is a beautiful clear white, fine large flower, with unusual substance and of the most perfect shape; it is of a fine robust habit. A variety of this description has long been required, viz.:—

A pure white, with fine shape, large flowers, and good vigorous habit. Plants will be ready on the above date at 21*s.* and 31*s.* 6*d.* each.

A few plants of each variety to offer in extra large plants, prices of which can be obtained on application to

William Barnes, Camden Nursery, Camberwell, S.

To Gentlemen Engaged in Planting.

TO BE DISPOSED OF, a Large Quantity of ORNAMENTAL TREES, DECIDUOUS FLOWERING SHRUBS, &c.

The Standard Ornamental Trees comprise Horse Chestnuts, 8 to 12 feet high; Walnuts, 10 to 15 feet high; Limes, 8 to 12 feet; Ash Leaf, Scarlet, and other Maples, 8 to 12 feet; New Single and Double Scarlet and other Thorns, Laburnums, Caraganas, Elms of sorts, Birch, Beech, Sycamore, Tulip-trees, Pyrus spectabilis, Siberian Crabs, Pinus excelsa, Atlantics, Almonds, Double-flowering Cherry, &c.

The Flowering Deciduous Shrubs consist of Ribes, Lilacs of sorts, Syringas, Spiræas, Guelder Rose, Staphyleas, &c. Most of these are from 5 to 6 feet high, and as wide in proportion.

Among the Evergreens will be found very handsome Specimen Firs, Box, Arbor vitæs, Evergreen Oaks, Hollies, Junipers, Cedrus, &c., varying in height from 5 to 7 feet.

All these Plants may be seen [illegible] at Ashwicke, Marshfield, near Bath. All expenses [illegible] the removal of the Plants to be paid by the Purchaser.

Prices and particulars may be obtained [illegible] and the Plants seen on application to the Gardener.

RICHARD SMITH'S LIST of all the EVERGREEN FIR TRIBE suitable for Britain, giving size, price, popular and botanical names, derivations, description, form, colour, foliage, growth, timber, use in arts, native country and size there, situation, soil, and other information, with copious Index of all their synonymes. Free by Post for 12 postage stamps.

RICHARD SMITH, Nurseryman, Worcester.

Railway Nurseries, Watford.

E. R. GREENUS begs to offer for Sale this Season fine Trained Trees of PEACHES, NECTARINES, APRICOTS, PEARS, PLUMS, CHERRIES, and APPLES, of most approved sorts.

Also Extra Large IRISH IVIES, in pots, from 4 to 8 feet high; and a General Stock of FOREST and ORNAMENTAL TREES, FLOWERING SHRUBS, EVERGREENS, ROSES, CONIFERÆ, &c., all in a most healthy state, and will remove with safety, and from his proximity to the Watford Station, London and North-Western Railway, E. R. G. can execute orders to any part of the country with promptitude and despatch.

N.B. A large Stock of extra strong CLIMBING ROSES in pots.

To Gentlemen and Nurserymen.

MR. CLAPHAM, Proprietor of the Royal Park, Leeds, wants several hundred LIMES, CHESTNUTS, ITALIAN and SILVER POPLARS, several CEDRUS DEODARA, and other ornamental Trees; Rhododendrons, Azaleas, Common and Portugal Laurels, and Evergreen Shrubs, Roses, &c. They are required as large as possible to transplant safely, and for immediate effect. As a quantity is required and ready cash will be paid, they must be cheap.

PLANTING SEASON.—100 sorts FOREST TREES, in all sizes; 300 do. EVERGREENS; 300 do. CONIFERÆ; 400 do. FLOWERING SHRUBS; 400 do. ROSES; 50 do. CLIMBERS; 1000 do. FRUIT TREES; 3000 do. Winter and Summer BEDDING PLANTS; 2000 do. general GREENHOUSE and STOVE PLANTS, FERNS, &c.

Apply to J. SCOTT, Merriott Nurseries, Somerset, for CATALOGUES. Fruit Tree, 7*d.*; Bedding Plant, 6*d.* General Nursery, Bulb, and Seed do., one stamp each. These Catalogues are allowed to be the best published, and when bound together, form a Vade Mecum, unsurpassed for Horticultural and Planting improvement.

Cæsarean Nurseries, Jersey.

10,000 EVERGREEN OAKS, reared in pots, 2 to 6 feet high.

10,000 DURMAST OAKS, from rows, 2 to 4 feet high.
5,000 TURKEY OAKS, transplanted, 2 to 6 feet high.
5,000 GUERNSEY or UPRIGHT ELMS, grafted, 4 to 10 feet high.
1,000 LARGE SPRUCE FIRS, bushy and well-formed, 3 to 6 feet.
1,000 LARGE SILVER FIRS, bushy and well-formed, 2 to 3 feet.
1,000 LARGE CHINESE ARBOR VITÆS, 4 to 5 feet high.

The above are fine grown, well-rooted stuff, but are overstock, and to be sold cheap. For prices apply to

C. B. SAUNDERS, Nurseryman, &c., Jersey.

CARTER'S FARMER'S VADE-MECUM.

REIGATE SILVER SAND (best quality for Plants, &c.), 7*s.* 6*d.* per ton; packed 16*s.* per ton, delivered to Reigate Station. Various kinds of excellent Peat and Loam, Sand, Stone, &c. Circulars, containing List of Prices, with other information, post free on application

W. SHORT, Sand and Peat Depôt, Reigate, Surrey.

COCOA-NUT REFUSE delivered within 2¼ miles of Charing Cross, at 2*s.* per bag.

For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.

Postage Stamps or Post-office Orders payable to J. BARSHAM & Co.

BARSHAM'S BRUSHES and MATS are sold in every town.

CAUTION.—Every Brush is stamped, J. BARSHAM'S Patent.

To Nurserymen and Seedsmen.

TOBACCO PAPER, first-rate quality. Price on application to CHAS. BROWN, Greenheys, Manchester.

To Florists and Gardeners.

AROMATIC FUMIGATING TOBACCO, prepared by A. CORONEL, 256, High Holborn, W.C.—The only discovery yet known for the entire destruction of fly and other insects (the greatest enemies of a greenhouse), without injury to plants or to health, being void of all unpleasant smell. May also be used in hospitals and sick chambers with confidence. In Canisters, 3*s.* 6*d.* and 2*s.*, to be forwarded to all parts on receipt of order or stamps.

Agents: HENDERSON & Co, Florists, Pine-apple Place, Maida Vale; NEWBERY & SONS, St. Paul's Churchyard: CARTER & Co., Seedsmen, High Holborn, W.C.; HURST & SON, Seedsmen, Leadenhall Street; Messrs. BUTLER & MCCULLOCH, Seedsmen, &c., Covent Garden, W.C.; and Messrs. BARR & SUGDEN, Seedsmen, King Street, Covent Garden

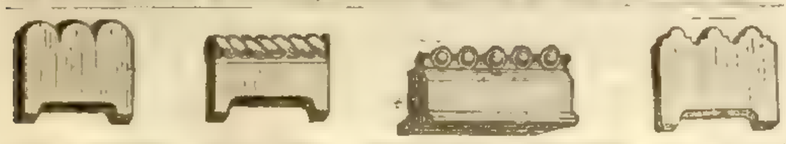

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.

F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.

Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

Also TESSELATED PAVEMENTS of more enriched designs than the above.

WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.

To be obtained of F. & G. ROSHER, at their Premises as above.

Orders forwarded by Railway with despatch.

SILVER SAND (Best Quality), of F. & G. ROSHER, at the addresses above—14*s.* per Ton, or 1*s.* 3*d.* per Bushel. 2*s.* per ton extra for delivery within three miles, and to any London Railway or Wharf. Quantities of 4 Tons, 1*s.* per Ton less.

GARDEN FLINTS for Grotto Work, 12*s.* and 14*s.* per Ton.

Oil Paint no longer necessary.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.

Sold in casks of about 30 gallons each, at 1*s.* 6*d.* per gallon, at the Manufactory, or 1*s.* 8*d.* per gallon paid to any Station in the kingdom. Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street West, E.C., from whom only it can be obtained.

ST. PANCRAS IRON WORK COMPANY,

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BY ROYAL LETTERS PATENT.

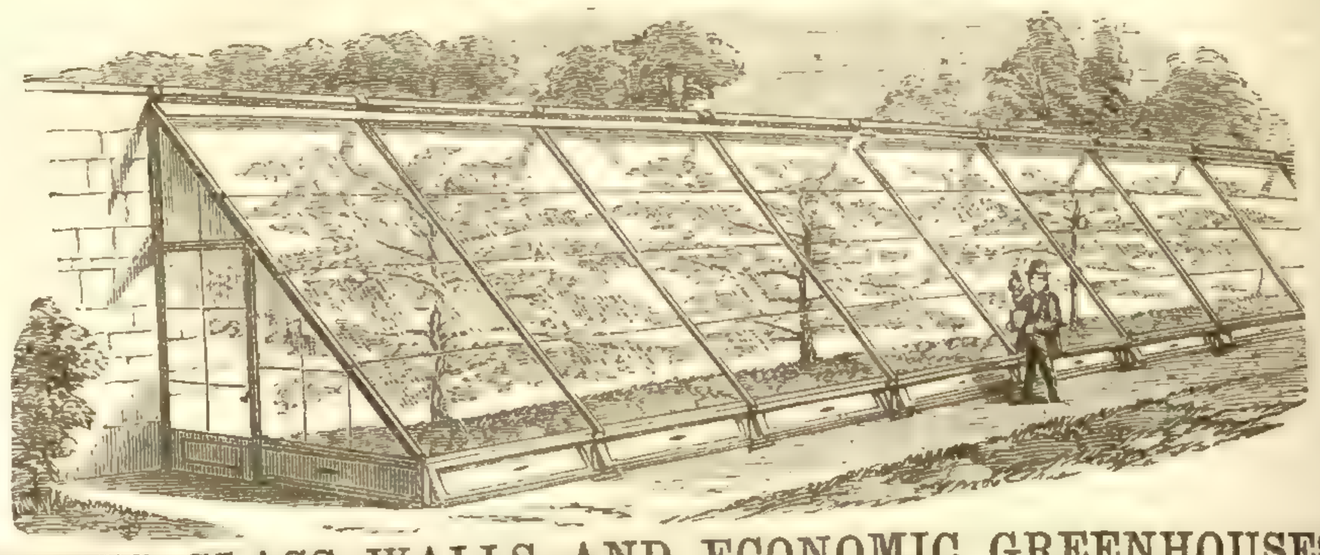

SCOTT'S GLASS WALLS AND ECONOMIC GREENHOUSES.

Designed to meet the suggestions of JAMES SCOTT, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES GREENHOUSES HOTHOUSES	PINE and MELON PITS VASES VERANDAHS	BALCONIES IRON SASHES IRON HURDLES	GATES TANKS HOT-WATER WORKS

PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. Lists Free.

ST. PANCRAS IRON WORK COMPANY, OLD ST. PANCRAS ROAD, LONDON, N.W.

THE CALIFORNIA LIFT and FORCE PUMP.

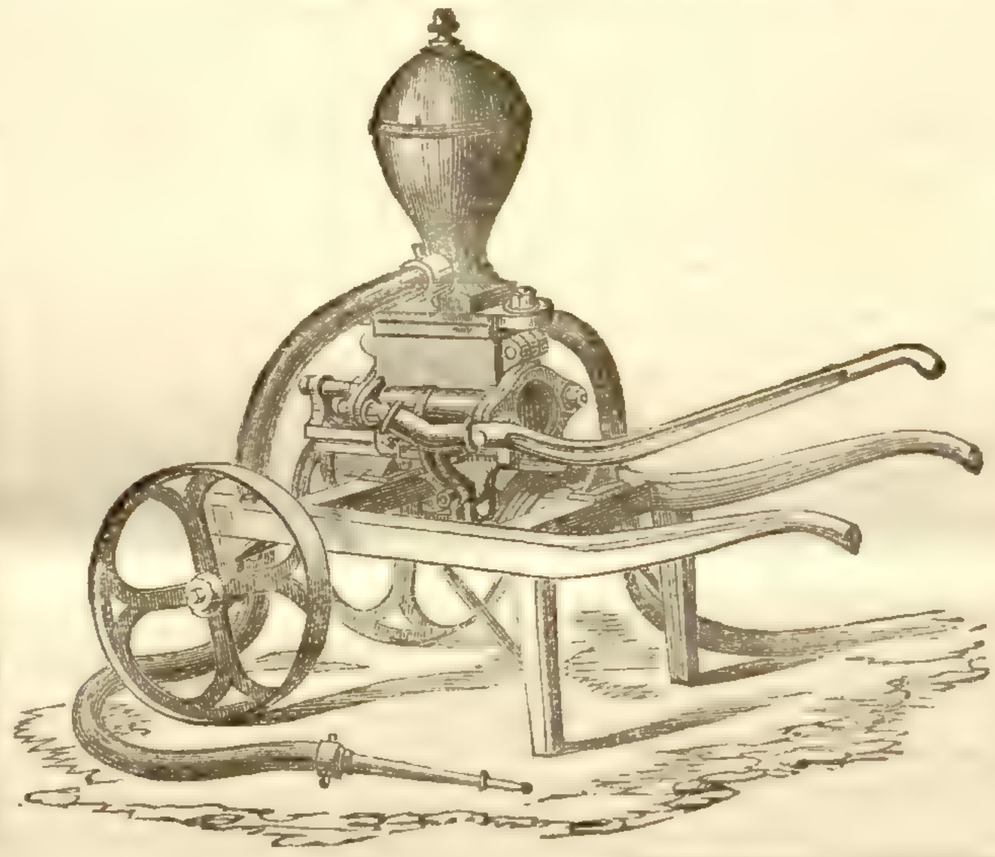

PRIZE MEDALS.

LONDON, 1862. | HAMBURG, 1863.

IN VARIOUS SIZES

AS A

GARDEN ENGINE,

LIQUID MANURE PUMP,

AND

FARM FIRE ENGINE.

It is double acting, and can be taken to pieces and cleaned or repaired without trouble or delay.

SOLE MAKERS IN LONDON:

HAYWARD, TYLER, AND CO., 84 & 85, UPPER WHITECROSS STREET, E.C.

MAKERS OF PUMPS, GARDEN ENGINES, SYRINGES, &c.

COTTAM'S

CONTINUOUS IRON FENCE, HURDLES, and FIELD GATES,

MADE OF SUPERIOR IRON (NO CINDER IRON USED) IN THE BEST MANNER.

PARK ENTRANCE GATES, and RAILING of CAST and WROUGHT IRON COMBINED,

IN VARIOUS STYLES.

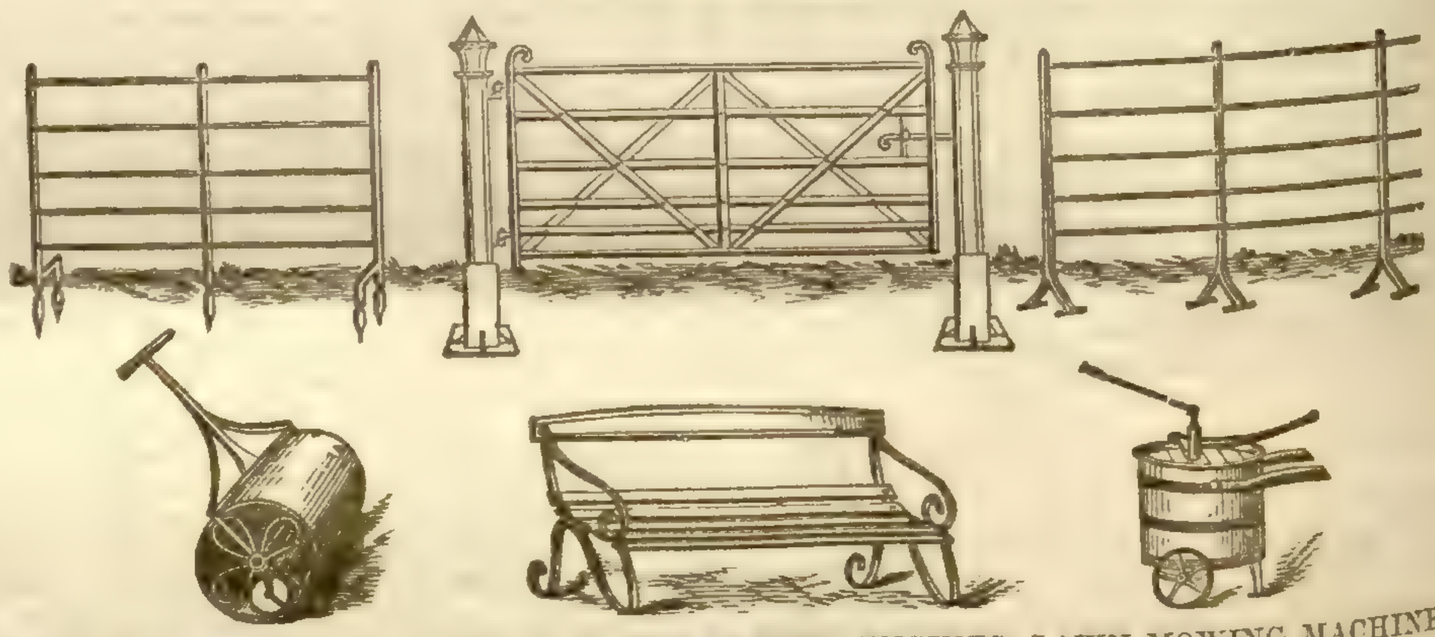

IRON GARDEN ROLLERS, GARDEN CHAIRS, GARDEN ENGINES, LAWN MOWING MACHINES, WIRE WORK, PUMPS, and every description of Implements for Horticultural and Gardening purposes. VERANDAHS, GREENHOUSES, CONSERVATORIES, HOT-WATER APPARATUS, &c. The Improved IRON MANGERS and RACKS for Stables, HARNESS BRACKETS, &c.

Illustrated CATALOGUES and DRAWINGS free on application to

COTTAM AND CO., ENGINEERS and IRON FOUNDERS,

2, WINSLEY STREET (OPPOSITE the PANTHEON), OXFORD STREET, LONDON, W.C.

NEW GRAPE, ROYAL VINEYARD.

NOW READY FOR DELIVERY.

B. S. WILLIAMS,

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.,

Begs to announce that he is now distributing this valuable GRAPE. It was raised several years since, and was fruited last and the previous season; therefore ample time has been allowed to fully test its qualities. It has been seen and reported most favourably upon by many of the best judges of the day, each describing it as the best late White Grape extant, and the best Grape that has been raised of late years. The stock is in excellent condition. Early orders are respectfully solicited.

PRICES:

Strong Planting Canes, 21s. each. | **Strong Fruiting Canes, 42s. each.**

JAMES VEITCH,

ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, S.W.; and
COOMBE WOOD, KINGSTON HILL, S.W.,

Begs to announce that the following CATALOGUES are now ready, and will be forwarded free on application.

A DESCRIPTIVE CATALOGUE of FRUIT TREES,

Comprising all the best kinds, including the latest Novelties.

A DESCRIPTIVE CATALOGUE of HARDY PLANTS,

Including the most recent introductions from Japan, Conifers, American Plants, Evergreen and Deciduous Ornamental Trees, Shrubs, &c.

A DESCRIPTIVE CATALOGUE of ROSES,

Containing a selection of all the finest and most popular sorts, together with the New Varieties for 1864.

ALSO MAY BE HAD

A GENERAL CATALOGUE of PLANTS,

Containing a choice selection of Ornamental Foliage and Flowering Stove and Greenhouse Plants, Camellias, Azalea indica, Orchids, Ferns, &c.

A CATALOGUE of NEW and RARE PLANTS for the Present Season.

JAMES VEITCH

HAS MUCH PLEASURE IN CALLING ATTENTION TO THE FOLLOWING

NEW VARIETIES of FRUITS,

Feeling confident that, from their sterling merit, they cannot fail to give general satisfaction:—

APRICOT SUKER PARA, or GREEN GAGE

This splendid variety was received from Syria, together with the now well-known Kaisha and other fine kinds, and is perhaps in many respects the best of the "sweet kernel" section.

The literal translation of the words Suker Para is a "bit of sugar," and was given it from the fact of the fruit being often left upon the trees until they become shrivelled and then eaten as a sweetmeat.

The fruit is of medium size, and in appearance very like a Green Gage Plum, from the smooth surface of the skin, small stone, and entire absence of down, while its flavour not merely equals but surpasses that of the Green Gage Plum.

It is admirably adapted for preserving, requiring no additions in the form of sugar, &c., and from its many desirable qualities, I have great confidence in recommending it, from a conviction that it will give general satisfaction.

Full-sized Dwarf Trained Trees, 21s. each.
One Year Dwarf Trained Trees, 15s. each.

PEAR PRINCESS of WALES.

This is a very fine variety, raised by the Rev. John Huyshe of Clysthydon, Devon, who has been so successful in making valuable additions to our collections of this splendid fruit

It was obtained from the Marie Louise, hybridised with Gansel's Bergamot, and is sister to the well known Huyshe's Victoria and Huyshe's Princess of Wales (formerly known as Huyshe's Bergamot.)

Dr. Hogg, in the "Gardeners' Year Book" for 1864, says:—"This is one of the most delicious and richly-flavoured Pears I know. The flesh is of quite a yellow tint, as much so as the skin of some Pears is; melting and very juicy, sugary, and with a fine delicate bouquet"

The whole of the Stock has been placed in my hands by Mr. Huyshe for distribution.

Dwarf Maiden Trees, 10s. 6d. each.

A few Dwarf Trained, Pyramid and Standard Trees, **15s. each.**

ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, LONDON, S.W.

SPLENDID NEW VARIETIES of AZALEA INDICA.

JAMES VEITCH

Has much pleasure in calling attention to the following NEW AZALEAS, which being of such sterling merit, and far surpassing all other known varieties in their class, will, he feels confident, find a place in every collection, however select.

Azalea (indica) Stella.

A vigorous growing variety, of a bright orange-scarlet colour, with a deep violet stain on the upper segments of the corolla, where it is also profusely spotted with lake.

The flowers are large, of fine substance and perfect form, and it is universally allowed to be one of the finest Azaleas ever raised.

It has been awarded First-class Certificates by both the Royal Botanic and Royal Horticultural Societies, and is described in the "Proceedings of the Royal Horticultural Society" as "A beautiful variety, of first-rate quality, quite the gem of the season."

The following, extracted from the *Gardeners' Chronicle* of June 25, 1864, p. 602, speaks for itself:—

"First and foremost amongst new Azaleas of the season we must place Mr. Veitch's Stella, a large and well formed flower, remarkable for its substance, and of a most telling colour, being one of the richest and brightest orange-scarlets to be found in the family, and marked with a Cactus-like glow of rich violet over the upper segments. It will thus be seen that the colouring is something like that of Duchesse Adelaide de Nassau, but the form is vastly superior."

Price 31s. 6d. each.

Azalea (indica) Vesuvius.

An exceedingly brilliant orange-scarlet flower, slightly tinted with purple on the upper petals. It is of moderate size, fine form and substance, and undoubtedly quite unequalled in the brilliancy of its colour. Its foliage is small, with a close compact habit.

This variety is considered by some critics to equal the foregoing, and is allowed by all to be a first-class novelty of sterling merit.

It was awarded a First-class Certificate at the June Exhibition of the Royal Horticultural Society.

"Another variety of the same style of colour, and from the same source, called Vesuvius, has been equally successful with the former (Stella) in gaining a First-class Certificate. We believe this also will prove a variety of superior character; and have very little hesitation in recommending both of these."—*Gardeners' Chronicle*, July 25, 1864, p. 602.

Price 21s. each.

Azalea (indica) Comet.

A bright salmon scarlet variety, with violet tinted upper petals, many of the flowers being half salmon and half bright violet.

Its habit is vigorous and good. This will doubtless prove a very novel and effective variety.

Price 21s. each.

The above Three Azaleas will be sold at the prices mentioned, if taken singly; or the Set of Three for 3*l.* 3*s.*

The usual discount to the Trade.

ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, LONDON, S.W.

CHARLES TURNER begs to recommend his extensive COLLECTIONS of the following, now ready:—

PELARGONIUMS, large and spotted, 18s. to 42s. per dozen.
FANCY PELARGONIUMS, 12s. to 30s. per dozen.
FRENCH PELARGONIUMS, 12s. to 24s. per dozen.
CINERARIAS, 12s. to 24s. per dozen.
AURICULAS, 18s. to 63s. per dozen.
CARNATIONS, 18s. to 30s. per dozen pairs.
PICOTEES, 18s. to 30s. per dozen pairs.
PINKS, 9s. to 20s. per dozen pairs.

The Royal Nurseries, Slough.

FLOWER SEEDS. Post-free.

LAPAGERIA ROSEA	2s. 6d. and 5s. per pkt.
CLIANTHUS DAMPIERI	2s. 6d. ,,
MIMULUS, Extra fine	1s. and 2s. 6d. ,,
ZONALE PELARGONIUM, Extra fine	1s. and 2s. 6d. ,,
ALPINE AURICULA	1s. and 2s. 6d. ,,

The above are all New Seeds of this year's growth, and guaranteed of the most genuine quality.

BUTLER & McCULLOCH, Seed Merchants, Covent Garden Market, London, W.C.

Woodlands Nursery and Seed Warehouse,
MAREsFIELD, NEAR UCKFIELD, SUSSEX.

WILLIAM WOOD AND SON are now offering the following Collections of BULBS

FOR CONSERVATORY and GREENHOUSE.

A.	B.	C.	C. C.
£1	£2	£1	10s.

FOR FLOWER GARDEN.

D	E	F	F. F.
£4	£2	£1	10s.

FOR CONSERVATORY and FLOWER GARDEN.

G.	H.	I.	I. I.
£4	£2	£1	10s.

Full particulars of the above Collections are contained in the DESCRIPTIVE CATALOGUE of BULBS, which may be had free on application

Polyanthus Seed.

MESSRS. WAITE, BURNELL, AND CO. beg to offer the above, saved by one of the most eminent Florists in England, selected from the finest laced flowers. Very superior. In packets 2s. 6d. and 5s. each.

Seed Warehouse, 181, High Holborn, London, W.C.

New and Choice Plants.

B. S. WILLIAMS invites inspection of his large and well assorted Collections of EXOTIC ORCHIDS, FERNS, and LYCOPODS, MISCELLANEOUS STOVE and GREENHOUSE PLANTS, VARIEGATED and ORNAMENTAL FOLIAGED PLANTS, TREE FERNS, &c.; amongst which are some very fine specimens. A DESCRIPTIVE and PRICED CATALOGUE post free on application.

Paradise and Victoria Nurseries, Holloway, London N.

CARTER'S GARDENER'S VADE-MECUM.

American Plants.

AS EXHIBITED IN THE ROYAL HORTICULTURAL GARDENS, KENSINGTON.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE of RHODODENDRONS and other AMERICAN PLANTS will be forwarded on application. The Catalogue also gives a General Summary of their Stock, which contains probably the most extensive choice of all the Hardy and finest Evergreens and Conifers.

Knap Hill Nursery, Woking, Surrey.

The Gardeners' Chronicle.

SATURDAY, OCTOBER 29, 1864.

MEETING FOR THE ENSUING WEEK.

THURSDAY, Nov. 3—Linnean .. .. 8 P.M.

IN an article on the influence of the EXCLUSION OF LIGHT ON VEGETATION by Monsieur H. EMERY, Professor of Natural History in the Lyceum of Versailles, which appeared in "Adansonia," vol. 3, 1863, p. 267, the author, after adverting to the numerous proofs which meet us everywhere, that the production of adventitious roots is facilitated by the exclusion of light, while that of adventitious buds depends rather on its presence, takes occasion to allude to an experiment of the Marquis DE GOUFFIER, published in the Abbé ROZIER'S Journal de Physique, May, 1778, of placing the bulb of a Hyacinth with its head downwards in water, while the base was exposed to the free air. Monsieur EMERY gives the following account of his repetition of the experiment, which may be easily made by any of our readers, and will be at least as interesting as the growth of an acorn in water, which was a few years ago so popular, and may be varied by observing the difference of growth in a transparent glass, and in a vessel which entirely excludes the light.

He chose for the experiment a vessel of stone ware with a wide neck, and having filled it with water he placed a Hyacinth bulb with the head downwards, so that the terminal point of the bulb was in the water, while the body of the bulb, on the contrary, was exposed to the free air. In doing so he altered the normal course of vegetation—1, in obliging the plant to change the direction of the poles of its major axis; 2, in immersing the part from which the stem must ultimately proceed, and depriving, on the contrary, the organ from which the roots proceed, of moisture; and 3, in keeping the stem and its appendages in darkness, and leaving the part destined to produce the roots and their dependences exposed to the action of light.

At first he felt strongly inclined to believe that the plant would not be developed under these conditions, or, supposing vegetation to take place at all, he expected at least to see roots spring

round the terminal bud, and others round the root-disc. At any rate, notwithstanding the Marqui- GOUFFIER'S record, he did not believe in the appearance of leaves in the water, being persuaded that these organs, if by any possibility they should begin to shoot, would be speedily decomposed by the liquid. All his persuasions, however, were completely contradicted by experience, a circumstance which so often happens in physiology, for after a few weeks the plant flourished in the water.

The state of the Hyacinth at the moment our author was writing was as follows:—The root disc was entirely free from roots, nor were any developed in any other part of the plant. This circumstance was not, however, new, for it was already indicated in the memoir of the Marquis DE GOUFFIER. Besides, it is well known, says our author, to all who make Hyacinths vegetate with neither earth nor water, by placing them simply upon a mantelpiece or any other article of furniture. The leaves, though they had their ordinary consistence and dimensions, were blanched, possessing only the slightest tinge of yellow. The truss, before flowering, had curved its free extremity into the form of a hook, and the point had thus reassumed its ordinary direction; six buds were expanded, but the others were beginning to become decomposed without opening. The flowers had a reddish solferino tinge, and the usual perfume.

Another Hyacinth which was treated in the same way appears to have vegetated more vigorously. Its truss was laden with buds, which were beginning to expand, and showed a corolla of a bright blue.

The first Hyacinth put forth a second spike of flowers, which were still in bud. This, like the other, was beginning to curve back and direct its apex to the zenith. It is often said, though many facts could be brought forward against the notion, that it is the green organs only which have the faculty of directing themselves towards the light, but this was not the case here, as the two flower stems were of a yellowish white.

The leaves in the first plant had stomates presenting all the characters which are found in Hyacinth leaves developed under the ordinary conditions. On the contrary, the roots of another plant of the same variety, which vegetated with the base of the bulb immersed in a common transparent Hyacinth glass, and consequently exposed to the light, did not offer a trace of these organs. The sepals, moreover, of the blanched plant equally exhibited stomates. Finally, in examining one of the flowers after being expanded about 10 days, our author was struck at finding the pollen perfectly formed and intact (at least in appearance) in anthers whose walls were decomposed and reduced to pulp. The ovary contained a great quantity of ovules, but no pollen tubes were found, a circumstance which could scarcely be expected, as the abnormal duration of the flowers seemed to indicate that impregnation had not taken place.

It is certainly very remarkable that no adventitious roots appeared, as they occur so readily in many cases where the axis is inverted, as in the case of Gooseberry trees accidentally buried while their roots are free, or in common cuttings. The stems in such cases readily produce roots, while the roots give out buds. The same thing has been observed in Myrtles. M. EMERY cites also the case of roots developed from the three-quarters grown fruit of Cactus Opuntia and other species, as observed by THUIN at the commencement of this century, and confirmed by NEVAN at Liverpool, and more lately by TRÉCUL. It seemed the more remarkable, because in Beans placed in water and shut up in a bureau, a multitude of roots were developed on the stem from the neck upwards for the space of from four to six inches, being confined to the first drawn out internode, and not proceeding from the vital knot, as is so commonly the case in Potatos.

M. EMERY derives a conclusion from a consideration of adventitious roots and buds in general, and the indifference with which the same part may produce them if placed under altered circumstances, that the germs of them are scattered in profusion through the plant. But the more correct and philosophical view is not that these organs are simply latent, and waiting for an opportunity of development, but that the tissues of the plant are capable of originating either buds or roots, according to the conditions in which they may be placed, though roots and buds are by no means to be considered as identical, because either under given circumstances may originate from the division of the same cell. *M. J. B.*

THE statement in VAN HOUTTE'S "Flore" regarding the habitat of the beautiful Phalænopsis Schilleriana and P. amabilis, to which we alluded at page 963, leads us to make a few remarks on the subject, which may have a bearing on the cultivation of these and other plants in this country. We can remember a time when the impression was pretty general amongst us that all TROPICAL ORCHIDS grew in dense shady places in their natural habitats. The reasoning which led to this opinion being formed, was somewhat like the following:—"These things are air-plants; they grow upon the stems of trees in dense tropical forests, and consequently under the shade of trees, where the sun's rays can rarely penetrate." The opinion formed in this way was brought to bear upon the construction of our Orchid houses. It was considered necessary that such buildings should face the north, and some of our readers may still remember the old Orchid house in the garden of the Horticultural Society of London at Chiswick, in which the collection was cultivated for a number of years. In this case such an aspect was eventually considered unsuitable, and the Orchids were removed into a house which faced the south.

In so far as Phalænopsis amabilis is concerned, we are in a position to bear testimony to the truth of M. PORTE'S observation, that "one never meets with it in the forests, which are sombre and constantly moist." Some 20 years ago we had an opportunity of paying a short visit to the Philippine Islands, and were successful in procuring a large quantity of this plant, which at that time was very rare in England. Only one or two specimens had been introduced alive by Mr. CUMING, and the species was so rare and highly prized, that the late Duke of DEVONSHIRE had given the large sum of 100 guineas for one of them. During our travels in the interior of Luzon, we were careful to mark the conditions under which the plant grew in its native woods, and on referring to a journal kept at the time we find the following observations:—"The air-plants are not found so frequently in the dense shaded parts of the forests as on the edges of the woods, on trees by the road-sides, and in exposed situations. The genus Aërides is sometimes met with in the most dense parts of the forest, but Phalænopsis amabilis was not once observed in such a situation. The latter is commonly found growing on the branches of the Mango, in the cleared parts of the woods near the cottages of the natives, and sometimes on the tops of very tall trees, where it is fully exposed to the sun."

These observations, which were made on the spot to which the plant in question is indigenous, fully confirm what M. PORTE has stated on this subject. We still recollect that to us the circumstance was somewhat unexpected, for we too had been led away with the common idea that Orchids flourished only when under the shade of trees. A personal inspection of their habits in the Philippine Islands, Java, the Eastern Archipelago, and India has however, corrected our earlier impressions, and has shown us that there are many species of this singular and beautiful family which luxuriate when under the direct rays of the sun. Some of the species would almost appear to be domestic in their habits, and are usually met with in most abundance on fruit trees which surround the dwellings of the natives. As a proof of this we have mentioned the preference which Phalænopsis amabilis has for the Mango trees which grow about the Indian villages.

Orchids are, in their habits, like many other plants in the vegetable kingdom. Some are found growing in shady situations only, while others would seem to delight in partial shade, or to succeed best in the full blaze of the sun. Every one knows that many of our evergreen shrubs grow in perfection under the shade of trees, while others will become sickly and eventually die in such situations.

In the Fern tribe we find that many of the species will live and thrive only in the shade, while others, as the common Brake for example, grow on our moorlands and other exposed places. It would be easy to bring forward many other examples of a similar kind.

The knowledge of the natural habitats of plants is oftentimes a matter of great importance to cultivators. Many valuable species have been lost to this country, owing to their natural requirements as to temperature, moisture, or shade having been imperfectly understood. We all remember the popular account of the introduction of the first Larches to Scotland; how, happening to be imported along with some Orange-trees and other exotics—natives of Italy, they were treated as tender plants and placed in a hothouse; how they withered under this treatment, and being supposed to be dead were thrown to the rubbish heap outside the garden; but that "being there covered with dead leaves and other rubbish, and aided by a wet season, they revived, and, sending forth shoots, soon became vigorous-growing trees."*

We know from observation and experience that plants, as well as animals, are formed for those situations on the earth's surface which they inhabit. The reason why some things flourish in the shade and others in the sun, although sometimes apparent on an examination of their structure, is not unfrequently hidden from us. We only know that an All-wise Providence, which "doeth all things well," has formed them in this wey to clothe the earth's surface, and to be "good for food and pleasant to the eye."

AT a Meeting of the Fruit Committee of the Royal Horticultural Society held in the autumn of 1860, a very noble bunch of Grapes was shown of the Black Barbarossa Vine, said to have been grafted upon the Black Hamburgh. These Grapes were very much finer than those of the Barbarossa generally are. This circumstance led in the spring of 1861 to a good strong rod of the Black Hamburgh being chosen, in the large Conservatory at Chiswick, as a stock for a graft of the Barbarossa, which was worked upon it about the latter end of April or the beginning of May, when the Vines had shot sufficiently to prevent bleeding. The graft grew rapidly, and by the end of the summer had grown to the top of the Conservatory. The following season it was cut down to about six eyes, and allowed to bear a bunch of Grapes; this proved to be an improvement upon the Barbarossa on its own roots, but not so marked as in the following season, when the berries were much larger and blacker than on the parent stock. In the present season, the Vine being strong, the bunches are larger, though not of the size of the Barbarossa itself, but the berries are infinitely superior, being nearly twice as large, and the colour is a jet black, covered with a magnificent bloom. This Vine bore about six bunches, some of which are superior in size to that which was shown last week at South Kensington. Some are still growing in the Conservatory at Chiswick, and are well worth a visit to see them. Many other Vines have also been grafted in the large Conservatory, all of which have produced satisfactory results, although not in so marked a manner as the one under notice.

This intermingling of blood, so to speak, in the Vine, has long been looked to with a strong belief in its power to improve the quality of the fruit; and these Barbarossas may be regarded as a strong example of what is likely to be effected. At all events it is certain, that with the aid of its Great Conservatory, which is only different from an ordinary Vinery in being far better suited to the constitution of the Grape, assisted by the admirable collection of Vines at Chiswick, and guided by Mr. EYLES, whose skill as a Vine grower is unsurpassable, the Royal Horticultural Society has here an opportunity to achieve a great success—an opportunity which has, so far, been turned to good account.

—— Mr. PERRY has in a recent number of the *Florist* called attention to a method of turning Rose prunings to account, by treating them as ROSE CUTTINGS. He observes that most growers of this flower adopt the very desirable practice of shortening the long shoots of standard Roses in October or November, lest the heads should be broken during winter by winds or snowstorms, and it is these prunings, which generally go to the rubbish heap, which he points out how to utilize, by converting them into plants "on their own roots." His recommendation is to cut the shoots into lengths of four eyes, to take off all leaves but the top one, to plant them in a sheltered out of the way spot in freshly dug ground, and so that one eye only with its leaf is to be left peeping out of the ground, and to tread them in quite firmly. No covering or care are required in winter, unless worms loosen the ground, when it is to be trodden down firmly again. The cuttings should be inserted thickly, as a large per centage will die off. Those that survive should be left till the next autumn before they are removed. From about a thousand cuttings of last season he has this year a hundred fine plants fit for removal to proper quarters. As to the advantages of this method, Mr. PERRY points out, that with very little trouble or expenditure of time thousands of cuttings can be planted in a few square yards of ground; that the materials

* Loudon's "Arboretum Britannicum," p. 2350.

cost nothing, but would otherwise be thrown away as refase; and that in this way stronger plants on their own roots are obtained than in any other. Some sorts, he adds, are almost certain to root, while others as certainly fail. Among the former are mentioned Jules Margottin, Duchesse d'Orleans, La Reine, Auguste Mie, and Général Jacqueminot, all particularly desirable kinds for garden decoration.

—— Bearing on the question of the best STOCKS FOR VINES, alluded to in a previous page, we observe in a paper on the gardens at Castle Kennedy in the *West of Scotland Horticultural Magazine*, that the Trebbiano is strongly recommended for this purpose. "The stock of this Vine is found to be the best on which to graft the Muscat of Alexandria, which being a shy rooter, does much better when grafted on a strong grower like the Trebbiano. Such is Mr. FOWLER'S opinion." We believe in other quarters the Black Hamburgh is considered the best of all stocks, and we have both seen and heard of excellent results attending its use, as for example, in the case of the Muscat Hamburgh at Dalkeith, and the Barbarossa at Chiswick. The question is not without importance to Grape growers, and we should be very glad to elicit the opinions of such of our readers as may have given it their attention.

—— The APPLE CROP IN FRANCE seems, like our own, to have been very abundant. We gather from the statements in the papers that these fruits are so plentiful in the department of the Meurthe, and particularly in the district of Sarrebourg, that growers are willing to give two sacks of Apples for one of Potatos; and that while a bushel of Potatos is worth 15 sous, a bushel of Apples is worth only 8. In fact, the fruiters in the Meurthe would be much embarrassed to dispose of their superabundant crop were it not for the Alsacians, who buy them up to be converted into cider and brandy.

—— SCOLOPENDRIUM VULGARE COUZENSII is one of the most curious and interesting forms of its family. It was found by Mr. J. SCHOLT COUZENS in a hedge-bank in Devonshire, and may be briefly set down as one of the dwarfest and most branched and crispy of the many branched crispy forms of the wondrously multiform Hart's-tongue Fern, which in its normal state is one of the simplest of all known Ferns, in regard to its form. The extreme height of this novel variety is from 4 to 5 inches, and the plant forms a close curly tuft, all frill so far as can be seen from a superficial examination, while its little crenato-lobate margins are abundantly proliferous. A better notion of this curious monstrosity will be formed from a description of a frond now before us (not one of the largest which the plant has produced), which scarcely exceeds 3 inches in height, whose stipes branches near the base into six parts of unequal strength, and in which the normal strap-shaped character is utterly obliterated. These branches are made up thus:—

1st branch: forks at an inch from its base, each division having three stipitate portions, the first small irregularly roundish; the second larger, having three divisions; the third with five divisions; the fourth with ten divisions; the fifth with six divisions; and the sixth with four divisions—29 divisions in all, each having a more or less decided flabellate outline, with, as everywhere, a wavy or frilled and crenato-lobate edge.

2nd branch: smaller and simple below, with a stipe-branch an inch long, the lamina also an inch long, dividing at top into six flabellate divisions.

3rd branch: small and slender, the stipe-branch and the lamina each an inch long, the latter spreading out into eight roundish fan shaped divisions.

4th branch: stouter, with a stipe-branch an inch long, and above this dividing into two stipitate portions, the first shortly stalked and terminating in eight divisions, the second with a half-inch stalk, in two parts, one half with fifteen, the other with eighteen divisions—forty-one in all.

5th branch: slender, with an inch stipe-branch, the lamina forming two divaricate portions, one of which has nine and the other eight divisions—seventeen in all.

6th branch: a sort of offshoot of the next, with a short stipe-branch, and fourteen divisions.

7th branch: stout, with a stipe-branch an inch long, and an irregular crispy head of twenty two divisions in one lobe, fourteen in another, and fifteen in a third—fifty-one in all.

It will thus appear that in this one frond, some three inches high, there are developed 166 of the little flabellate terminal lobes, and when it is remembered that each of these is itself frilled in a small way with numerous crenato-lobate marginal incisions, some notion may be formed of the complicated mass which a well grown tuft of this very interesting variety will present. *M.*

ORNAMENTAL PLANTING.

No. 5.—PICTORIAL TREES AND SHRUBS.

IT is not my intention here to offer a general list of trees that can be used intact in ornamental planting. Information of that kind, to be of any value must be founded on a knowledge of the particular soil, situation, and objects in view. My purpose is merely to single out a few of the most prominent trees—representative trees, may I call them?—which it would seem desirable to introduce everywhere for the sake of their strongly marked characters, beauty, or distinctness. Around these, others of similar character may be gathered, should it be found necessary to extend the number of any particular group. From this point of view I shall arrange the materials which I propose to to select, under the two leading heads of Form and Colour.

Under the primary division of FORM the following subdivisions appear warranted:—

1. Pyramidal trees and shrubs
2. Round-headed trees and shrubs
3. Spreading trees and shrubs.
4. Weeping trees and shrubs
5. Trees and shrubs with large compound leaves
6. Trees and shrubs with large simple leaves
7. Trees and shrubs with small simple leaves
8. Pillar climbing or wall plants
9. Trailing plants for low banks, rock-work, Fernories, &c.

1. PYRAMIDAL TREES AND SHRUBS.

EVERGREEN:—
- Abies excelsa pyramidalis
- Cupressus sempervirens
- " " torulosa
- Ilex Aquifolium argentea stricta
- " Aquifolium ovata
- " balearica
- Juniperus excelsa
- " fragrans
- " hibernica
- " stricta
- " virginiana
- Pinus Laricio
- Quercus Ilex Fordii
- Taxus baccata fastigiata
- " " pyramidalis
- Thuja gigantea
- " pyramidalis

DECIDUOUS:—
- Alnus glutinosa laciniata
- " asplenifolia
- Crataegus Oxyacantha stricta
- Fraxinus monophylla
- Larix europæa
- Populus fastigiata
- Pyrus Aria
- Quercus Cerris
- " pedunculata fastigiata
- Robinia Pseud-Acacia pyramidalis
- Sambucus pyramidalis
- Ulmus campestris stricta
- " montana fastigiata

2. ROUND-HEADED TREES AND SHRUBS.

These require to be grown as standards, and kept in this form by occasional pruning.

EVERGREEN:—
- Buxus, of sorts
- Cerasus Laurocerasus
- " " colchica
- " lusitanica
- Ilex Aquifolium [vars.
- Juniperus virginiana, in
- Laurus nobilis
- Viburnum Tinus
- Taxus baccata, in varieties

DECIDUOUS:—
- Æsculus Hippocastanum
- " rubicunda
- Caragana Chamlagu
- Cerasus Chamæcerasus
- " vulgaris, fl. pl.
- Crataegus, of sorts
- Cytisus, of sorts
- Ornus europæa
- Prunus myrobalana
- " spinosa fl. pl.
- " prunifolia
- Pyrus arbutifolia
- Robinia Pseud-Acacia umbraculifera
- Syringa persica
- Viburnum Opulus sterilis

3. SPREADING TREES AND SHRUBS.

This, the commonest form in the Vegetable Kingdom, will be sufficiently represented by the selections made under other heads.

4. WEEPING TREES AND SHRUBS.

EVERGREEN:—
- Cotoneaster buxifolia
- " microphylla
- Ilex Aquifolium pendula
- " " albo-marginata pendula
- Abies excelsa pendula
- " " monstrosa
- Glyptostrobus pendulus
- Juniperus communis pendula
- " " oblonga pendula
- " virginiana pendula
- " " viridis
- Taxus baccata Dovastoni
- " " Jacksoni

DECIDUOUS:—
- Amygdalus communis pendula
- Betula, three sorts
- Crataegus Oxyacantha pendula
- Cytisus, of sorts
- Fagus, two sorts
- Fraxinus, three sorts
- Gleditschia Bujoti
- Juglans regia pendula
- Ligustrum, two sorts
- Populus, two sorts
- Pyrus, two sorts
- Quercus, two sorts
- Robinia Pseud-Acacia pendula
- Salix, four sorts
- Sophora japonica pendula
- Tilia alba pendula
- Ulmus, four sorts

5. TREES AND SHRUBS WITH LARGE COMPOUND LEAVES.

EVERGREEN:—
- Mahonia Aquifolium

DECIDUOUS:—
- Amorpha fruticosa
- Ailantus glandulosa
- Aralia japonica
- Fraxinus, of sorts
- Gleditschia, of sorts
- Juglans, of sorts
- Rhus typhina

6. TREES AND SHRUBS WITH LARGE SIMPLE LEAVES.

EVERGREEN:—
- Aucuba, of sorts
- Cerasus Laurocerasus
- " " colchica
- " lusitanica
- Photinia serrulata
- Yucca, of sorts

DECIDUOUS:—
- Acer, of sorts
- Castanea, of sorts
- Catalpa syringæfolia
- Liriodendron tulipifera
- Magnolia, of sorts
- Paulownia imperialis
- Platanus, of sorts
- Populus candicans
- Rhamnus latifolius

7. TREES AND SHRUBS WITH SMALL SIMPLE LEAVES.

EVERGREEN:—
- Artemisia Abrotanum
- Berberis, of sorts
- Buxus, of sorts
- Cotoneaster, of sorts
- Fontanesia phillyræoides
- Phillyræa, of sorts
- Quercus Ilex
- Abies, of sorts
- Cedrus, of sorts
- Picea, of sorts
- Pinus, of sorts
- Wellingtonia gigantea
- Cupressus, of sorts
- Juniperus, of sorts
- Thuja, of sorts
- Taxus, of sorts

DECIDUOUS:—
- Berberis, of sorts
- Betula, of sorts
- Coriaria myrtifolia
- Crataegus, of sorts
- Hippophaë, of sorts
- Hypericum, of sorts
- Populus, of sorts
- Prunus, of sorts
- Pyrus, of sorts
- Salix, of sorts
- Spiræa, of sorts
- Ulmus, of sorts

8. PILLAR CLIMBING OR WALL PLANTS.

P. Pillar or Climbing.—W. Wall Plants.

EVERGREEN:—
- Berberis Darwinii, W
- Ceanothus, of sorts, W
- Cotoneaster, of sorts, W
- Crataegus Pyracantha, W
- Escallonia, of sorts, W
- Evergreens, of sorts, W
- Eurya latifolia variegata, W
- Garrya elliptica, W
- Magnolia, of sorts, W
- Osmanthus, of sorts, W
- Photinia serrulata, W
- Rhamnus Alaternus, of sorts, W
- Hedera, of sorts, W.P.
- Jasminum revolutum, W
- Lonicera, of sorts, W.P.

DECIDUOUS:—
- Cercis Siliquastrum, W
- Chimonanthus fragrans, W
- Cydonia, of sorts, W
- Forsythia viridissima, W
- Magnolia, of sorts, W
- Rosa, of sorts, W.P
- Rubus, of sorts, W.P
- Ampelopsis hederacea, W.P
- Aristolochia Sipho, W.P
- Atragene, of sorts, W.P
- Bignonia, of sorts, W
- Clematis, of sorts, W.P
- Jasminum, of sorts, W.P
- Lonicera, of sorts, W.P
- Tecoma, of sorts, W.P.
- Vitis, of sorts, W.P
- Wistaria, of sorts, W.P

9. TRAILING AND DWARF FLOWERING PLANTS FOR LOW BANKS, ROCK-WORK, FERNERIES, &c.

EVERGREEN:—
- Cistus, of sorts
- Cotoneaster, of sorts
- Crataegus Pyracantha
- Daphne Cneorum, of sorts
- Helianthemum calycinum
- Ruscus Hypoglossum
- Skimmia japonica
- Cryptomeria nana
- Abies, dwarf sorts
- Juniperus, trailing sorts
- Arctostaphylos Uva ursi
- Pernettia, of sorts
- Polygonum vaccinifolium
- Vaccinium Vitis idæa
- Hedera, of sorts

DECIDUOUS:—
- Amygdalus, dwarf sorts
- Cydonia, of sorts
- Cytisus, of sorts
- Genista, of sorts
- Philadelphus coronarius nanus
- Ribes alpinum pumilum
- Rubus fruticosus fol. varie-
- Salix, dwarf sorts [gatis
- Ampelopsis hederacea
- Aristolochia Sipho
- Menispermum canadense
- Periploca græca
- Vinca, of sorts

In addition to the foregoing, sundry spring-flowering bulbs, as Snowdrops, Winter Aconites, Scillas, Lily of the Valley, Narcissus Bulbocodium and minor, Fritillarias, Erythronium, dwarf Iris, Leucojum vernum, may be added to the Fernery. They will flower early and disappear before the Ferns are in condition. *William Paul, Waltham Cross, N.*

NOTES ON GARDENS.—No. XXI.

ROYAL BOTANIC GARDEN, GLASNEVIN.

(*Continued from* p. 1011.)

THERE is a very good and extensive collection of Orchids for a botanic garden at Glasnevin, but of course, when Orchids are made such an extensive and expensive specialty of by some amateurs and nurserymen, public gardens rarely furnish those who have seen such collections as those of Mr. Warner, Mr. Day, and Mr. Turner, with astonishing interest. Where your great grower starts with as many of the best plants of a new thing as he likes to buy, the botanic garden begins with a small plant (if indeed one can be got), and so is always behind in the Orchid race—for money is the chief ingredient used in getting up a fine collection of Orchids, and this is rarely to spare in a botanic garden! Over the Orchids the largest Pitcher plant I have seen was hanging, running along the roof, while each pillar had a different species of Hoya wreathed around it. These, with a beautiful pyramidal Nutmeg bush, 10 feet high, and such fine-leaved plants as Cossignia borbonica and Theophrasta nobilis, threw a very desirable interest and variety amongst the Orchids, which comprise many new and rare kinds. Ferns of all sorts are very largely grown at Glasnevin—a spacious house devoted to the smaller exotic species containing an enormous number, many of which made their first appearance in this country at Glasnevin. But small Ferns have now become so abundant, that in private, and I think public places too, the old pruning-knife of selection will have to be applied to some of the genera. The pillars of the house were made verdant and interesting by binding Moss, &c., around them, and planting thereupon Lycopods and small Ferns. One beautiful, and I believe, rare Fern, Mohria achilleæfolia, I must mention, and regretfully leave all the others, new, curious, and rare—except by the by Lycopodium Phlegmaria, a great favourite of mine—in the obscurity of pencil-mark, and proceed to say something of the Palm-house, which is entered from the Fernery. One other inmate of the Fernery, however, I must not forget, and that is the common Ling, which had grown from seed in many of the baskets containing Ferns, and being allowed to grow away fell down very gracefully from being drawn and weakened of course, but was full of flower, which, strange to say, it yields exactly at the same time as the plants out of doors. Grown thus it forms an excellent basket plant.

However agitated the visitor's bile may be from the external aspect of the new Palm house, it is immediately allayed when he enters it, as a better filled, arranged or managed structure of the kind it would be difficult to find. Arborescent Ferns again were abundantly represented amongst the Palms, especially near the side of the house, the lead being taken by a magnificant Cyathea serra 20 feet across the crest and nearly as much high, followed by Cyathea elegans, Alsophila aculeata, Marattia ascensionis, Alsophila infesta and ferox, Marattia elegans and alata, both very distinct and noble Ferns, Alsophila glabra, and several recently imported varieties or species of the same genus unnamed: with Amphicosmia Beyrichiana, a rapid growing fine and distinct Tree Fern, and numerous others of good size and in the best possible condition. In fact it is mere justice to say, that never in any botanic garden have I seen these wonderful Tree Ferns in such great variety, and in such luxuriant health. With the Palms too were associated, and very appropriately, such plants as Musa Ensete, the Anchovy Pear, the Water-tree, Zamia Skinneri—the most remarkable leaved species we have; Urtica Gigas, the giant Nettle of Australia, which stings most horribly, and grows in its native clime 30 feet high; and Coccoloba pubescens, with leaves 3½ feet in diameter, trained to one vigorous single stem, and looking not only extraordinary but very effective. Is it too scarce to permit of us seeing the plant in a good state at our shows? Mr. Bain is successful in its propagation. In the Cambridge Garden I have recently seen a large old plant of it broken into a very bushy head, but in that state it is not at all so singular as when its full vigour is devoted to the leaves on a simple stem. The Cocoa nut Palm was in excellent

health, and so was the Ivory-nut, but the same may be said of the whole collection—a very extensive one—the names of the best and rarest of which, with many other plants of interest, I must omit, or run in danger of writing of the place for weeks. A new Calamus from Moreton Bay was flowering on the ends of spiny peduncles as thin as wire, weeping very gracefully, and in many cases 6 feet long.

In the remaining wing of the Palm-house range Tree Ferns, such as Dicksonia Youngii and Alsophila Loddigesii, again turned up, with the Warratah in good health, and the Disa in flower; but this wing is chiefly devoted to Camellias, Azaleas, and popular greenhouse plants; interspersed, however, as every house at Glasnevin is, with plants of the greatest interest to the botanist.

The most precious of the filmy Ferns at Glasnevin are cultivated in a secret-looking old lean-to, built against the north wall of the curvilinear range, and redolent of river-bed and dripping cave. At one end of it a small compartment was partitioned off, into which a little stream from the roof was trickled over a healthy mass of the Irish Fern, while the end of the compartment built up with turf was covered with the British Hymenophyllums in the most luxuriant health and full of fruit. Standing amidst the Killarney Fern was a remarkably healthy and well-developed Trichomanes reniforme, evidently rejoicing in the conditions so suitable to our own filmy Ferns. Here, too, with Leptopteris (or rather Todea) Fraseri and superba, and a quantity of freshly imported Schizæa elegans, were two very diminutive subjects, probably new to cultivation—new to me at all events, —Symphyogyne subsimplex and hymenophylla—plants to some extent intermediate between Hymenophyllums and Jungermannias, one from New Zealand and the other from New South Wales. Among the Trichomanes a large batch of T. anceps fully displayed its very interesting fructification, and among the Australian Hymenophyllums were several bits of the Tunbridge Wells Fern, which often comes to Glasnevin from Australia. The Ouvirandras fenestralis and Berneriana were finely grown in a hot pit, built like the monitors, considerably below the wind and water-line to expose as little surface as possible to the enemy. The plants of both species were growing on large lumps of firm peat, the kind of peat least likely to decompose in water. Young Pitcher plants were very abundant in this the hottest and moistest of Glasnevin structures, and the rarer species were finely grown, there being a magnificent plant of Nepenthes sanguinea with N. lanata, Phyllamphora, lævis, Dominiana, ampullacea, picta, and Rafflesiana. The collection of Pitcher plants in fact is almost unique for a botanic garden. Fine and rare fruits and medicinal plants were here too, such as the Mangosteen, the Brazil Nut, the famous Manchineel tree, the true Douin Palm, Calyptrogyne sarapiquensis, the Stephensonia and other extremely rare young Palms, with choice succulents and Ferns requiring great heat; among the latter were a multitude of Trichiocarpa or Cionidium Moorei, the Golden Cheilanthes, and some new Lindsæas. At the extreme end of this structure was a partition of glass dividing off about one light's-length, and this being lined with turf was a capital place for raising choice Ferns from spores, growing Trichomanes, &c. Never before had I seen so many rare and choice things in a "pit," but there is yet a bye way or two of the indoor department to be explored, especially an intermediate "store house," in which were the Cinchonas, the Sarracenias, numerous plants received from Swan River, and many Cape bulbs. Here again was interest for the Fern-lover, contributed by rarities such as Ceterach aureum, Gleichenia alpina, rupestre, and others, the true Pteris argentea, Selaginella obtusa, and a little stock of Mohria achilleæfolia—a beautiful Fern. Drosera dichotoma was abundantly grown and flowered here—placed up close to the glass; and there was also a plant of the Wooden Pear, a new Tupa, Araucaria Rulei, a new Bougainvillea, and I believe the only flowering plant of Combretum macropetalum in the country.

Amongst the potted Alpines arranged behind this house a good many Laplanders were to be seen, but the Diapensias brought home by Dr. Moore were dead, proving themselves very difficult to cultivate. Rubus Chamæmorus, brought from the same region, was growing very fairly in a pan of wet peat against a north wall, roof-water being allowed to trickle over it from a spout. Woodsias were abundant, and Androsace Laggeri, a very distinct and rare Alpine, was also present. Many were the plants correctly catalogued "British," that for all most of us see of them in a living state, might as well inhabit the bogs and weird places of Patagonia, so that it is always acceptable to make the acquaintance of some of them in a botanic garden. In frames devoted to such subjects might be seen amongst other rarities, the Rhynchosporas, the Elatines, Isoetes of various species, Ceratiola ericoides a rarely seen American, Pyrolas in fine health, Herminium Monorchis, Pilularia globulifera, and Sturmia Lœselii.

New plants generally I have purposely omitted, as of course they all find their way to Glasnevin as soon as "sent out," but a very interesting, and probably very hardy Palm, Chamærops khasiana, must not be passed over. It is quite distinct from Fortune's Palm, and the seeds from which the plants were raised were gathered in the Himalayan region by Major Madden "where there were 4 feet of snow at the base of the trees." Some of the Chamædoreas too, such as C. graminifolia and Ernesto-Augusta are well worth recommending for the decoration of large stoves, &c, as nothing can surpass the exquisite grace displayed by these plants at Glasnevin.

The Museum is a small shed-like building of iron, containing some useful and interesting collections, but from its small size and want of any conveniences for arranging objects, utterly unsuited for its purpose, and quite out of keeping with the garden. Surely, if it is impossible to get a grant for a museum building worthy of the garden, and of Dublin, it would be wise to remove the collection to some respectable Dublin museum, and hand the present building over for a lecture or garden store room, for either of which it is well adapted. But this is after all but a slight blemish, sure to be remedied at no distant day, and even if not, there are few who would miss the cut and dried department, where there is so much living interest and beauty. I have next to treat of the out-door attractions and arrangements, which it would be difficult indeed to increase or improve upon. *Wm. Robinson.*

(*To be Continued.*)

CLAY GARDEN SOILS.

THE following remarks have been thrown together principally in reply to an inquiry from a Correspondent at Newcastle, who desired to know how he could best improve the soil of a new garden, which soil was composed of 30 inches in depth of almost pure yellow clay, lying on a substratum of sandstone; and also the utility or otherwise of giving a dressing of river sand and lime. The subject is not without a certain degree of interest, and it is hoped that a rather extended reply may prove of more general use.

There are various methods in practice for improving both the texture and fertility of clay lands, such as what is sometimes called smother-burning; also the application of quicklime, and siliceous or other sharp materials. The two former act as ameliorators and fertilizers; the latter contributes principally to the better working of the soil; but at the same time greatly assists the chemical action of manure, and the influence of the atmosphere by keeping the soil open and porous, so that such ingredients must be considered as indispensable to a state of fitness for cultural purposes.

The ultimate success or utility of whatever operations may be entered upon with a view to improve the texture and increase the fertility of clay soils, will greatly depend upon the porosity of the substratum. If it is not naturally sufficiently porous to carry off within a reasonable time all the superabundant water, it must be made so by thorough drainage. This is imperative, for it would be useless to break up and open the soil for the passage of water, if that water were permitted to lie at the bottom in a state of stagnation. Drainage then being indispensable, must be made efficient. Draining pipes alone are not efficient in pure clay; they are useful for the passage of air, and as a channel for the water to pass away, but they should be covered to a good depth with broken bricks, or stones, or even vitrified clinkers from furnaces. The depth at which the draining pipes should be laid must be regulated by circumstances. If the garden is intended for vegetable culture only, and the outfall is good, an average depth of 4 feet will be sufficient; but if fruit trees are contemplated to be grown after the ground is brought into a fit state to receive them, then an average depth of 5 feet is the least that can be allowed, and of that depth at least 18 inches of rubble should be laid over the pipes before filling in.

When this done the whole should be broken up, by the process of trenching, to the uniform depth of 2 feet, and as the operation proceeds the bottom of each trench should be covered with quicklime, a good dressing being also put over the next layer that is thrown in from the succeeding trench. The bottom spit of each trench should be thrown up roughly on the top in lumps rather larger than bricks, and when these lumps are sufficiently dry, it would be well to proceed to burn them at once. This may be done in a simple manner, in a neighbourhood where coal is abundant and cheap, by making up with wood and coals a good body of fire, and then heaping thereon the dried lumps of clay, taking care to strew small coals over the successive layers, which must be put on at intervals—that is to say, when it is found that the fire has got pretty good hold of the last layer, another is to be put on immediately. At the same time the process must be a gradual one, and too much must not be laid on at first; but when a large body of fire is obtained, it is best then to heap on a large supply, and to cover it with some of the finer soil so as to confine the fire, and thus to calcine the lumps of clay rather than incinerate them by burning to a red heat. In this method any amount of clay may be burned in one large heap, but for the convenience of after removal it is best to have several fires, according to the space to be operated upon. When the heaps are all calcined, and the fires exhausted and cooled down, let the whole be spread out equally over the whole surface; and in the case to which these remarks more immediately apply, I should not hesitate to cover the surface with as much as three inches of the river sand alluded to, and then leave the whole quiet for a month or two, according to the season.

Whilst these operations are in progress for the amelioration of the surface soil, the lime below will have been silently performing its due share of the work, as it is comparatively quick in its action on clay, and soon becomes assimilated with it, so that after the expiration of two months or so, as the case may require, the process of incorporation may be commenced by turning the whole over again down to the lime at the bottom of the trench, taking especial care to thoroughly mix all the ingredients together as the operation proceeds. There is, however, no objection to there being a few lumps of clay left in a disintegrated state, as they will help to keep the soil open.

The ground will now be in a fit state for cropping, but by no means must any manure be applied the first season, nor, indeed, until after another turning over, so that the lime may become more intimately assimilated with the soil; because lime and fresh manure do not act well together. And for this reason, the first dressing of quicklime ought to be a pretty good one, as it would not do to be often repeating the dose on fresh land which is under a course of manuring and cropping. With old garden soil, which has been manured year after year, the case is different, for then there is a quantity of inert vegetable matter which a good dressing of quicklime brings into immediate action.

Previous to cropping, as the soil will be found in damp weather to be very greasy and clammy, I would strongly recommend the operator to cover the whole surface with a couple of inches of finely sifted coal ashes, from which every particle of cinders or clinkers have been removed. This will greatly facilitate the operative part of cropping, on account of its being so clean to walk upon, and at the same it is one of the very best dressings which can be given to heavy clay land; and this dressing may be repeated with advantage at each successive cropping.

The following season, after the soil is again turned over and mixed, the application of manure may be commenced for such crops as require it. At the same time, if the clay still appears to predominate so as to make the soil difficult to work, more sharp materials must be added, and in a very few years the character of the soil will be entirely changed. *John Cox.*

Home Correspondence.

Pampas Grass.—I think you are under a mistake respecting the character of the male and female Pampas Grass (p. 992). I have two splendid plants 8 years old, in great beauty, male and female, the male a silver white, the female slightly tinged with red and drooping, now full of seed. I enclose a part of the flower of each. I have no doubt that seedlings vary—indeed I have another female plant with flowers twice as large and almost red, but the flowers are so heavy that the stem will not stand the winds. The Pampas Grass, when well grown and well managed, is one of the finest things that has ever been introduced. I was at Elvaston and Chatsworth a short time since, and was informed that at neither place could they grow it. Why?—because it was not planted in a suitable situation. It requires a deep—very deep—and rich soil, and wet. During the past summer I have given my two plants 15 to 20 gallons of water each, twice a week, and they have not a dead or drooping leaf. When winter approaches I place a good coating of long dung around the roots, and also some Spruce branches, say 2 to 3 feet thick. This keeps the plant in health during the winter. In May, as soon as the young shoots begin to grow, I put on a strong pair of gloves and pull out every dead flower-stem of last year and all the dead leaves, of which this spring I had a basket full. Wherever I have seen it grown this is neglected, and the consequence is an unsightly plant, and should a severe winter come, death—not, I think, from frost, but from the old leaves and stems retaining a great amount of moisture, which rots the plant at the heart. *J. D. W., Manley Rectory.* [What you send as the female, bearing seed, is in reality the male, with undeveloped stamens, as may be seen by carefully examining the forwardest of them as they protrude from the glumes. The silvery specimen is female, but a large proportion of the flowers appear to be abortive.]

Pear-tree Fungus.—Some years ago I was much troubled with this Fungus, and was recommended as a cure to pick off and destroy by burning the infected leaves. This would have been an endless work, and dangerous to the trees, as some of them had almost every leaf diseased, and few plants will stand such a denuding process while in active growth. I tried sulphur, and I am happy to say have entirely or almost entirely put the enemy to flight, so that for some years I can scarcely find a diseased leaf on trees that previously scarcely furnished a sound one. The time and mode of application were as follows: choosing the morning of a dry day just when the leaves were unfolding in spring, I syringed the trees thoroughly with water impregnated with flowers of sulphur—say a handful to five gallons; and also gave them a dusting of dry sulphur when done. To make sulphur mix with water kindly, moisten it previously with a little strong spirits or alcohol. The first season I think I did this twice,

and I was much gratified to find that the enemy had been routed, as the foliage remained quite healthy all the season. The following season I did the same, and I have now to add that I am entirely rid of the pest, for which I am truly thankful, as it had got so bad that I feared I should have been forced to root out the trees. *John Lyell, M.D., Newburgh, Fife.*

Orchard-house Fruit.—Seeing an account of some remarkable Pears in your columns (p. 989), I have been induced to send you the following remarks concerning a Duchesse d'Angoulême tree, grown in an 11-inch pot, three years old from the graft, which was exhibited by Mr. Thomas Tweedie, Merchant, Annan, and which drew forth especial notice at our Lower Annandale Horticultural Show; the tree bore eight Pears, the largest of which weighed 20 oz., and the eight collectively, 7 lb. 14 oz. I have had frequent opportunities of viewing Mr. Tweedie's garden and orchard-house, in which he practises with such success as an amateur, and I am sure that if others saw what he accomplishes with considerable care, but at comparatively small pecuniary cost, the luxury of an orchard-house would be much more generally indulged in. Mr. T. had plenty of Vines in pots with from 10 to 12 bunches on them, weighing upwards of 1 lb. per bunch. *Christopher Scott, Annan Nursery.*

Fruiting of Wistaria sinensis (see pp. 941, 965).—It may be worth recording that this fruited three times during the 10 years I was at Golder's Hill, Hampstead. We had a fine plant of it in the conservatory; the largest number produced in one year was seven pods, which contained five good seeds; these all vegetated and made strong plants, two of which flowered the second year after sowing. In the other seasons there were but three pods, with two good seeds in them. *T. Pilbeam, Nantwich, Cheshire.*

Bananas.—Seeing at p. 1012 a letter from a "Gardener" relative to Bananas, I beg to inform him that the usual custom, as seen by myself in Peru, was to cut the bunch of fruit from the Banana plant when quite "full" (the term used in that country) and to hang the bunch in a kitchen or warm room until yellow and ripe and fit for eating. *Sailor.*

Popular Names of Ferns.—Rusty Back is the common name for the Ceterach Fern here in the West of England, especially in Somersetshire and Devonshire, where I have seen it growing very abundantly, and it is a very much better one, I think, than Scaly Spleenwort, which it is called by in Moore's "British Ferns," and other books. For the Ceterach, as you know, is not a Spleenwort at all; [How then comes Sir W. Hooker to revert to the old Linnean name Asplenium Ceterach?] whereas the rusty appearance of the under surface of the fronds, especially as they get old, is very remarkable. The separate scales are like atoms of French lace, and one of the most beautiful objects I have ever seen in the microscope. The other Fern name you mention with disapproval, as employed by Mr. Grindon, Centipede Spleenwort for the Asplenium Trichomanes, appears to me one of the most ingenious ever applied, for the fronds as they lie pressed against the wall while young, curving hither and thither, with their rows of little green feet on either side, do certainly bear a most curious and striking resemblance to the creature in question. I hope you do not approve of the name of Common Maiden-hair Spleenwort, usually given to this pretty species. [It has been so these two centuries and more. Old Gerarde calls it the Common or English Maidenhaire, of which the very name Trichomanes is indeed suggestive.] Confounding the name of one genus of plants with another, and mixing them up in this way, leads the young botanist into the most serious and deeply-rooted errors; and I think we ought to be glad when any one suggests a new and expressive name that will prevent mistakes. I procured Mr. Grindon's book directly it came out, and have been quite delighted with the appropriateness of the English names in it, many of which I never heard before. Whether they are his own or not I do not know. *M. A. E., Penzance.* [Notwithstanding its aptness in the eyes of our Correspondent, the name "Centipede Spleenwort" might fairly be supposed to belong to Scolopendrium rather than to Asplenium Trichomanes, inasmuch as the Hart's-tongue was an Asplenium or Spleenwort no further back than the time of Linnæus, and the name Scolopendrium itself (from Scolopendra, a centipede), was given from a fancied resemblance to these creatures.]

Rosemary.—Can any one inform me in what part of England I am likely to find a supply of 50 to 100 plants fit for transplanting at this time? I do not find the plant mentioned by your Correspondent Mr. Cuthill amongst those which are cultivated at Mitcham, nor is it named in your more recent volumes as in cultivation at Hitchin. I had directed my gardener to procure some slips from the neighbouring cottagers last spring, and he now tells me that all the plants in this neighbourhood were killed by the frost of the winter 1860-61. *Diss.*

Edible Snails (see p. 1016.)—Helix pomatia is not the only species which affords wholesome food. H. aspersa is one of the species which furnishes the snail-feasts of the Newcastle glassblowers; the common banded Helix of our hedges is also occasionally eaten, and is used especially to make the snail-broth which is sometimes recommended in consumption. H. lucorum is eaten in Italy, and the large rosy-mouthed Helix of Teneriffe is sent off packed in barrels by myriads to the West Indies, where this kind of food is in request. As regards H. pomatia, it is a local species, and probably does not extend far north. It is however found at Woodford, in Northamptonshire, though a long time since an attempt to naturalise it was made at Kirby, in the same county, the seat of the Lord Keeper Hatton, some 10 miles further north, without success, as reported by Lister. It certainly likes a calcareous soil, its large shell and the false operculum with which it closes its aperture as winter advances requiring a considerable amount of lime. If your correspondent wishes for any further information, we recommend him to refer to Mr. J. Gwynne Jeffreys' British Conchology, where he will find a large amount of information respecting this and some other species, or to Mr. Lovell Reeve's Land and Fresh-water Shells. *M. J. B.*—Helix pomatia may be met with in abundance at Stonesfield, near Woodstock, Oxfordshire. It may be easily known by its large size, whitish colour, with three yellow or orange bands round it. The pretty Helix lapicida may also be found in the same locality. Dr. Gray's book on British Shells gives coloured drawings of all land and fresh-water shells of Britain. *J. S. Milne, Buckland, Faringdon, Berks, Oct.* 27.—The large brown snails gathered in gardens are very good eating, and by some persons are very much liked. A year or two ago the master of a French vessel obtained leave to gather them in the garden to take on board his vessel, and they were eaten by the whole ship's company; in return the master was good enough to gather, prepare, and serve the snails up for our family dinner party, which he joined, that he might be certain of the cooking being perfect. The instructions were to use only those snails whose shells were at the edges sufficiently hard to resist the nail without breaking; to be careful not to gather the snails from off either Ivy, Box, or other Evergreen, as snails so feeding were deemed unwholesome; to put them in water with a handful of salt to spit, that is, to cause them to clean themselves; and to boil them gently, when they come out of their shells with ease. We were then to prepare the frying pan with a little lard and Parsley, and to fry the snails delicately; they thus form a dish a poor man might feast on and a rich man enjoy. Bread crumbs might be added if liked, and the snails might be stewed, but the mode of cooking just given pleased our family best, and formed a dish we have often tried since we received the instructions from the master of the French merchant trader. *H.S.*—Much information about snails may be found in "Life in Normandy." In the south of France, Helix pomatia, H. aspersa, H. pisana, H. nemoralis, H. lactea, and vermiculata are eaten, but Helix aperta is preferred to all others. Kept for a week or so and fed on oatmeal, then fried in oil with vinegar, salt, and pepper, they are considered *bien délicats. A. C.*

Ancient Gardening (see p. 965).—For information relative to Mr. Darwin's question, I beg to refer him to the "Florest's Vade-mecum, by Samuel Gilbert, Phileremus. Third Edition. Printed for J. Taylor, at the Ship in Paul's Yard, London, 1702." In that book there are monthly directions for the Kitchen and Flower Garden for ever. He saith, set French Beans in April. John Parkinson in his "Paradisus Terrestris," printed in London, in the year 1656, speaks of the French or Kidney Bean at page 521, but saith nothing as to the time of sowing. *J. Mitchell, Tremorvah, Truro.*

Potato Sets (see p. 1011).—I have read with much interest your Correspondent's remarks on the economy of planting large-sized Potatos. The results are certainly very striking; but I think that further experiments are needed in order to settle the matter satisfactorily, such as planting the smaller Potatos nearer each other than is usually done, so as to have the same weight of sets put in per acre, and again trying the effect of large tubers cut into several sets each. This is the plan I generally adopt in order to have two or three haulms only to each root, which seem to stand a better chance of producing good sized tubers than when more are present, and to this end I think it would be advisable to take out some of the eyes when too numerous, and I believe those nearest the nose end of the Potato to be more vigorous than the eyes on the side. Your Correspondent intimates that Potatos might be improved (I suppose permanently), by selecting large sets according to Mr. Darwin's theory, and Mr. Hallett's practice with seed Wheat. This is of course impossible, as planting Potatos of any one kind is but continuing the life of one individual plant, originating from some one seed of a Potato berry (or apple). Mr. Hallett's plan could not be applied to Potatos, except by raising a lot from the berries. Fluke Potatos will continue to be Flukes, true to the original, varying in vigour of growth according to circumstances, until the sort dies out from old age, like some of our older kinds of fruit. *H. T. F., Burton-on-Trent.*

Roses on the Manetti Stock on Raised Banks.—Roses like plenty of heat, water, and manure. Though they are fond of water, however, they do not like standing in a swamp. If the summer is extra warm and dry, then they will do well in wet ground, because of the evaporation. In your Paper, and also in the "Florist," I gave an account of some Roses on raised banks and also of their treatment. Nothing could have done better than they have done here during their two seasons of trial. Some that were little pot plants two springs back have this year made shoots 8 feet high, and yet have bloomed continuously and abundantly. I have just made another, and planted in double lines 13 plants of La Duchesse de Morny, five of Lord Macaulay, three of Madame Victor Verdier, and three of Alpaide de Rotalier. I have also made two other banks to be planted with the four best crimson Roses known, namely, Maurice Bernardin, Charles Lefebvre, Senateur Vaisse, and Duc de Rohan. I have not named them in the order of merit, for they will occasionally beat each other, and they will take some beating. Gloire de Santenay is first-rate, but not quite certain. Nothing could surpass the beauty of the flowers of the two first and last of the above four Roses on raised banks this summer, or of the third, which is planted in large numbers on the flat. Instead of buying new untried Roses, I have multiplied my stock of these beautiful varieties. At the same time I have rejected many that are either superseded or unsuitable to my locality, or that never should have been propagated at all. Probably in high and dry situations, and where there is not free access to abundance of water, it would not be wise to plant them on raised banks, which in hot summers are like forcing houses out of doors. The sun acts on the centre and on both sides of the banks. Consequently abundant mulching with black dung, and burnt ashes on the top of the dung to retain moisture, and plenty of water once or twice a week poured into the centre of the banks, become necessary. This has been practised here for two summers, and myself and reviewers have been immensely gratified. It cannot be too hot for Roses, if manure and moisture are supplied sufficiently. I have no desire whatever to exalt the Manetti stock unjustly over the Briar; but I must say that here in two different soils, the one chalky, and the other shallow and gravelly, the Manetti Roses have always, and especially this summer, signally beaten the Briar varieties; indeed a great many of my home-budded Briar Roses have died this summer. As far as my situation is concerned, I would rather buy Manetti sorts, than, with a few exceptions, accept Briar Roses. I bud novelties on the Briar for earlier information, and because it is more agreeable than Manetti-budding. Taking this kingdom at large, I think ground plants will greatly supersede standard Roses. Instead of standards in lawn-holes, plant Manetti Roses, especially if the quality of the soil is inferior and dry. I have thrown away all the Briar Roses which were on my lawn, and shall supply their places wholly with Jules Margottin on the Manetti stock. There is an early beginning and scarcely any ending to the blooming of Roses here on the Manetti. The failures must be divided between the propagator and the cultivator. At my dinner party, Oct. 20th, I cut as fine Roses from the Manetti stocks as a man could wish to see. I have had a daily exhibition throughout the season. The earliest Rose out of doors on the Manetti stock was cut May 7th. A new era will set in when Manetti pot plants are planted on raised banks, and are properly attended to. *W. F. Radclyffe, Rushton.*

British Queen Pear.—When speaking of this in Mr. Ingram's collection, noticed at p. 1013, I observe you inadvertently call it Queen Victoria. As there is a great distinction between Victoria and British Queen, and as some confusion may result from allowing the error to pass unnoticed, I beg to say that British Queen, a celebrated kind, was that which was shown by Mr. Ingram on the occasion in question, and not Victoria. *J. P.*

Foreign Correspondence.

Report on the Brisbane Botanic Garden.—The following interesting particulars are taken from the Report of the Director, Mr. Walter Hill, to the Secretary for Lands and Works, dated July 18, 1864:—

The results obtained during the last two years confirm the success of the experiments made in the cultivation of Cotton, Tea, Coffee, Sugar, Cinnamon, Allspice, Ginger, Indigo, and Tobacco.

My anticipations, as expressed in my last Report, that the Peruvian variety of Cotton could not be grown with success, have been realised. The tree does not bear until the second year, and then yields only a small crop. The occasional high winds of the colony also prove destructive to it, and the Cotton is of an inferior quality. All the other varieties of Cotton that have been introduced can be successfully cultivated

The Coffee plantation, formed two years ago from seeds taken from isolated trees in the garden, is thriving admirably, and a first crop may be expected the season after next. From one Coffee plant 8 lbs. weight of berries were gathered; and these, together with a large number of young plants, have been freely distributed to applicants, most of whom reside in the Northern Districts of the Colony.

A Cinnamon plantation has been formed from seed taken from the only tree we had in the garden; and the result proves that this tree of commerce is one of the numerous imported trees which may be successfully cultivated in Queensland. The following tropical plants, introduced into the garden within the last five years, have already produced fruit; viz: the Mangifera indica (Mango), Anona squamosa (Custard Apple), Anona Cherimolia (Cherimoyer), Anona muricata (Sweet Sop), Diospyros Kaki (Chinese Date Plum), Dimocarpus Longan (Longan), Ziziphus Jujuba (Jujube), Tamarindus officinalis (Tamarind), and Chrysophyllum Cainito (Star Apple). Also Artocarpus integrifolia (Jaca tree is bearing fruit this year for the first time. This tree is much cultivated in the southern and warmer parts of India, for the sake of its nourishing fruit, and for its timber, which is in some requisition for dyeing and other purposes. I regard the fact of its bearing fruit here with great satisfaction, as indicating that other plants grown in those tropical regions where the Jaca tree flourishes, may also be introduced into the Colony with similar success.

An Oak plantation has been made between the bank of the

river and the lagoon containing the Water Lilies. It consists of a valuable assortment of 18 species of imported Oaks, indigenous to Europe, Asia, and America, including the Valonia Oak from the Levant, the bark of which is held in great esteem for tanning purposes. The plantation will prove a desirable ornament, and, in other ways, an acquisition to the arden.

A new Sugar-cane plantation has been formed near the clumps of Cinnamon and Coffee. This plantation is composed of several new varieties lately introduced into the colony, principally from the South Sea Islands and the Mauritius, being the varieties known as the "Walta," "Tiloo-ura," "Tiboo," "Chica-ga," "Pinang," "Diard," and "Guinghan." The object aimed at in the formation of this plantation is to test the relative value of the varieties of the cane which are suitable to the Colony, and their comparative adaptability to our soil and climate. Twelve months or more will have to elapse before any decisive opinion can be pronounced as to the relative merits of the varieties of cane referred to. All the varieties of cane comprised in the plantation which existed at the time of my last report have flourished. In these are included the ribbon, the green (or yellow), and the Tahitian cane. The last-named variety, so far as my experience is concerned, will not prove so profitable to the grower as the yellow cane, although a hardier plant, as it does not contain so much saccharine matter. The anticipations that the Sugar cane will be extensively cultivated in Queensland are, in my opinion, sure to be realized; and it gives me great pleasure to state that I have been enabled to distribute a great number of canes amongst intending growers, and that the demand for them far exceeds the supply which can be sent from this establishment without detriment to its interest.

The Cinchona Calisaya (the tree which yields quinine) is in a healthy condition, and I have written to Sir William Hooker, Royal Botanic Gardens, Kew, and to Sir William Denison, Governor of Madras, in order to procure the other species of this valuable tree. Its great commercial value is sufficiently proved by the strenuous exertions made during the last few years to introduce and propagate it in the East Indies, as well as in Ceylon, and in the West Indies. There is abundance of land in Queensland suited by soil and situation for the growth of the Cinchona, and its product must be extremely profitable to the grower, especially when we consider the high price which the Peruvian bark fetches at times in this country. It would certainly become a very general article of cultivation if we had the materials at our command, but at present the plant in the garden is the only one which has been imported into the colony.

In the Orange plantation, the varieties that have succeeded best are, the Mandarin, St. Michael's, Bahia, Siletta, Blood, and Parramatta; these bear a more abundant crop than the other varieties, and are not so liable to disease.

One of the first works which must be carried out in the garden will be the construction of a new lagoon for the reception of Water Lilies. The existing lagoon contains the Nelumbium Leichhardtii (pink Water Lily) and several species of the Nymphæa and Nuphar, and it is found that the rapid growth of the first is proving destructive to the other two kinds in the confined space in which they are enclosed. The formation of another lagoon for the reception of the Nymphæas, &c., would add another ornament to the garden, and is necessary for the preservation of the plants at present in our possession.

Amongst the plants of utility which have been introduced into this establishment during the last two years, are two new varieties of Banana, received from the Fiji Islands, through the kind instrumentality of T. Hood, Esq., Darling Downs. The Bread-fruit tree placed in the garden perished. The Bananas have flourished, and the fruit is of a flavour superior to the ordinary varieties. I have also received plants of the Jatropha Manihot (Cassava). The following interesting plants also have been introduced, viz.:—Araucaria Rulei, *Dammara Moorii*, *Stillingia sebifera*, *Jacaranda mimosæfolia*, *Berberis Leschenaultii*, *Ravenala madagascariensis*, *Poinciana regia*, *Argania Sideroxylon*, Santalum album, *Bowenia spectabilis*, &c.

The Botanical Library and Museum are now open to the public. The former contains a number of books valuable to the botanist and to the horticulturist. The sum voted by the Legislature for 1862 and 1863 has been forwarded to Sir William Hooker, Royal Gardens, Kew, for expenditure in works most suitable for the Library. The Museum and Library are open to the public from 9 A.M. to 6 P.M. every day except Sunday. The gardeners employed in the establishment have access to the Library between the hours of 8 and 9 A.M. In other respects, they are on the same footing as the general public in this particular.

I regret that my increasing duties have precluded me from devoting so much time as I wished to collecting contributions to the work on the Australian Flora by Mr. George Bentham, President of the Linnean Society. My visit, however, to the northern shores last year, in H.M. ship "Pioneer," enabled me to collect some new specimens of the Flora, which were forwarded to Sir W. Hooker, Kew. It will not be out of place to mention, that during this visit I met with Santalum album, the tree which furnishes the Sandal wood of commerce, in the first place on the banks of the Endeavour River, and subsequently at Port Denison.

Societies.

BRITISH ASSOCIATION: *September* 20.—In Section D (Zoology and Botany), Dr. Riddell read a paper on "Balatta and other Gums regarded as a Substitute for Gutta Percha." The writer regarded the gum as a very excellent substitute for, and quite equal to, the adulterated or re-boiled gutta percha from Singapore. They were indebted to Dr. Van Holst, of Amsterdam, Berbice, for bringing this gum first into notice in 1860. It abounded in the forests of British Guiana, and was especially prolific at the time of the full moon. On the day of the full moon the yield of gum was from six to 10 times greater than at other times. After the tree had been tapped, it could be tapped again every two months. The wood was used for building purposes and for furniture, and he was informed the tree was not injured by being tapped. A tree yielding a gum similar in every respect was discovered by General Cullen and Colonel Cotton, in 1853, growing along the whole line of the Western Ghauts on the Malabar coast, Southern India, from lat. 8° 30′ to lat. 10° 30′ at an elevation of from 2500 to 3000 feet above the sea. The climate of the country where the Bullet tree is found in Berbice is unhealthy; but probably some of the free slaves of America might be induced to settle there and become tradera.—The Rev. A. M. Norman, alluding to the fact mentioned by Dr. Riddell, of the sap flowing more freely at the time of the full moon, said, some people were inclined to laugh at such statements, but there could be no doubt that the moon had an important influence on the vegetable world.—Dr. Riddell said: It was well known to the natives of India, that Bamboo cut at the full moon was much more subject to the attacks of insects, rotted and decayed sooner than when cut during the dark nights.—Specimens of the gum in a liquid state, also in a large block, and rolled, as well as in a manufactured state, as vulcanised, hard and soft, and in a state of ebonite, were exhibited. Since the Exhibition, a patent has been taken out for working it, particularly for the insulation of electric wires, combined with caoutchouc and various other substances.

Prof. Buckman read a paper "On Datura Stramonium and Datura Tatula," the object of which was to show that these plants were identical in points of structure, and therefore could only be considered as varieties of a single species.

Of other botanical papers there were:—"Notice of some Rare Scotch Plants and their Localities," by Prof. Balfour; "On the Old Welsh Mistleto Cure for St. Vitus's Dance," by Mr. M. Moggridge; and "On Euphorbiaceæ," by Dr. Müller.

In Sub-section D (Physiology), Dr. Cobbold brought before the Association, in three separate papers, the question of "Food as a Source of Entozoa." The papers treated severally of meat, fruit and vegetables, and drink, all of which, it was stated, were more or less liable to harbour parasites of some kind or other. There was no doubt that entozoa were introduced with vegetable food. Small molluscs harboured larval parasites in prodigious quantities; and they were the source of one or more of the parasites that occasionally invaded the human form. These entozoa might be swallowed from water-drinking, but they were much more likely to be taken from Water-cresses, or other vegetables of the kind. It was necessary, with all vegetables, that the greatest cleanliness should be observed in preparing them for the table; and care should be taken to avoid swallowing these small molluscs, which were very likely to escape observation. A small species of fluke-worm, discovered in Egypt, would, he was afraid, be brought to this country at some time from our colonies; and, if ever it got place amongst us, it would be difficult of extermination. Eggs and living specimens had been found in this country, both in men and monkeys, but only to a very small extent. As to the little thread-worm, he had never been able to rear it in Apples and Pears; and there was no evidence to show that any species of entozoa was derivable from fruit. It was not likely that fruit was ever an intermediate habitation for any of the parasites which ordinarily occupied the human body. A great many evils in children were charged to eating unripe fruit; but, as far as entozoa were concerned, that fear was entirely groundless; and, if they should be so introduced, the chances were that the larvæ would be taken from the surface of the fruit. With regard to Celery, Cabbages, and all the ordinary market-garden vegetables, all decomposing animal and vegetable matter sustained entozoa; and the more filthy the water or liquid manure employed to secure the fertility of the garden, the more likely were entozoa to be supplied with the vegetables grown upon the land. The most careful washing was therefore required; and it had been suggested that vegetables should also be soaked in salt. Turning then to water as a source of entozoa, the first species to which attention was drawn was the ancient guinea-worm, which was supposed to be the fiery serpent of Moses. Parasitic larvæ might be found in water that was, to all appearance, perfectly pure; but, speaking generally, it might be inferred that fresh spring-water was perfectly innocuous. The same thing could not be said of water stored in large tanks in hot climates. The people of these islands suffered from entozoa, which must have been introduced by drink in some form or other. Amongst this class the smallest tape-worm, one-tenth of an inch long, carried 30,000 eggs, and went through marvellous transformations. The presence or absence of the larvæ of human entozoa in water was dependent upon the place from whence the supply came, and upon the condition of the water. The pork measle might be readily communicated to human beings in this way; and there was another species taken from water, the habit of which was to esconce itself in the brain, causing death, which the Registrar-General invariably set down to cerebral disease. The way in which it reached the brain was from the coats of the stomach, through the circulating medium. There was one kind inhabiting dogs which was often communicated to the human being. One-sixth of all persons who died in Iceland perished from a little creature so small that, in its adult state, it could scarcely be seen. If neither dog nor wolf existed we should get rid of these species altogether. No one need drink water impregnated with these entozoa. Water to which dogs had no access could not contain them; neither were they likely to be found in spring or well water. Open waters into which the carcases of dogs were occasionally thrown would probably contain them, and the eggs might be carried to food washed in such water. The danger would be got rid of if the water were always carefully boiled, filtered, or distilled; but a filter, to be effectual, ought not to pass anything larger than one-thousandth of an inch. Sand and charcoal filters were of very little use; paper filters should be employed. All entozoa not preserved for scientific experiments should be destroyed by fire, and under no circumstances should they be thrown aside as harmless refuse. Then as to beer, porter, &c., these fermented drinks were perfectly harmless. Even though impure waters should have been employed, the boiling of the wort would be alone sufficient to destroy any number of parasites. Unfortunately, we could not be perfectly certain about unfermented drinks, such as ginger-beer, lemonade, and the like. All must depend upon the source and the supply of water. It might, however, be concluded that the manufacturer would get his supply from the purest source open to him, and that, therefore, we need be under little or no apprehension. In regard to wines, the same remarks were applicable. Alcohol, added to water, was sufficient to destroy the parasitical eggs; but it was questionable whether the amount of spirit in our home-made wines was sufficient for the purpose.

September 21.—Prof. Buckman read a paper "On a Curious Form of Aquilegia vulgaris." In the usual flower of the Columbine each petal is so spurred as to produce a form not unlike a cornucopia. In the example under notice the claw and limb of each petal were so entirely flat as to give the flower the form and appearance of some of the more showy-coloured species of Clematis. This accidental form, so far assimilating itself with Clematis, Anemone, and others, gives rise to the following consideration:—Is not the patent unspurred form of Columbine its normal condition, and the spurred form a result of cultivation?—Professor Balfour did not agree with Professor Buckman that the spurred form was produced by cultivation. They often saw the common Columbine, in place of being spurred, become regular.—A paper "On some Specimens of Cycas revoluta, Cycas circinalis, and Ceratozomia mexicana," by Prof. Balfour, was also read.

Notices of Books.

Flora of the British West Indian Islands. By Dr Grisebach. 8vo. In 7 Parts. London: Reeve & Co.

This capital book is now completed, and does honour to its author, one of the most able of systematic botanists; but it does not descend lower than the Ferns. It has an ample index of names, which contribute much to its utility, among which we must not omit to mention most especially that called "Colonial," which consists of a complete list of the English terms for plants, together with the Latin names of each.

Le Jardin Fruitier du Muséum. By Prof. Decaisne.

(*Continued from p.* 967.)

Pêcher Galande.—Syn. Bellegarde, Noire de Montreuil, Grosse Noire de Montreuil, Belle de Tillemont. Leaves with globose glands; flowers *small, bright rose* —by which alone it may be distinguished from the Late Admirable, which has also small flowers, but they are pale dull red. The fruit is large, roundish, deep purplish red next the sun, clouded with a darker tint. From the very dark colour which it assumes when well exposed it acquired the name of Noire de Montreuil. The flesh is yellowish white, very fine, melting, and rich. [Although perfectly melting, it is of closer texture than many other melting sorts; and owing to this it keeps, and bears carriage, better than most other melting Peaches. We have known it to have been sent 500 miles by railway, and yet to have reached its destination in excellent condition. But it may be useful to observe that the Peaches which were conveyed so far and so safely were not *loosely* packed, nor was the packing lightly strewed amongst them. Cotton is perhaps the most convenient substance with which to line the box at the bottom and sides; and the Peaches may be individually wrapped in tissue paper; then the intervals between the fruits should be *firmly* packed with as much cotton as possibly can be introduced without actually bruising the fruit—just short of doing this the box may be considered properly packed; but whilst a particle more can be introduced, it is not. It often happens that when Peaches are ripe in the south, the owners of gardens there, and their friends, are far away in the north; and by the time they return, the crop, ripening in due season, and generally in superabundance, is all over without having been seen or tasted by those at whose expense it was grown. Of this they with reason complain; but as by attending to the above remarks, the cause of complaint may be remedied, this digression may be pardonable, and the cultivation of the Peach, seeing that its fruit can thus be better utilized, may be encouraged. A better melting sort to plant than the Bellegarde for the purpose of carriage cannot be recommended.] The Bellegarde is a very old variety. According to Triquel (*Instruction pour les Arbres fruitiers*, 1658), it was named after M. Galand, a great amateur of fruit trees.

Poire Petit Muscat.—Syn. Muscadelle, Sept-en-Gueule. This is perhaps the smallest and earliest of all Pears. Occasionally cultivated for its earliness. A branch or two of it is enough in any collection; a tree is too much, for the fruit keeps but very short time.

Poire d'Angora.—Fruit large, or very large, with a strong stalk, which is thickened and fleshy at its insertion; skin pale yellow; flesh melting, very granular, sweet, but not highly-flavoured. Season, end of October. The author remarks that the name of Poire d'Angora has been given to several large Pears, such as the Catillac, and Belle Angevine or Uvedale's St. Ger-

main. [The Pear received by the Horticultural Society as the Poire d'Angora proved to be the Catillac; but from these the one figured is very different. The first mention of this Pear was by Tournefort (*Voyage du Levant*, ii. 464). "The 2d of November," he says, "we left Angora for Brussa. Beibazar is a small town built on three hills, of nearly equal form and height, in a confined valley. Thence come the excellent Pears that are sold at Constantinople under the name of Poire d'Angora; but they are very late, and we had not the pleasure of tasting them." Now, Beibazar is situated 2788 feet above the level of the sea, and in latitude 40°. Constantinople is nearly 10° warmer than London in summer; but Beibazar from its elevation, if on a table land, should be about 11° colder than Constantinople, and consequently about 1° colder than London; but being in a confined valley, there is every probability that it is even warmer. Tournefort, however, describes the Poire d'Angora as being very late, so that in the beginning of November it was not fit to eat. After making what we consider a fair allowance for latitude and elevation, we cannot avoid coming to the conclusion that a Pear such as that figured in the work before us, and which ripens in the end of October, cannot be the same kind of Angora Pear as that described by Tournefort.]

Pêcher à fleur Blanche.—Syn. White Blossom, Snow Peach, Willow, Blanc d'Amerique. Leaves narrow like those of a Willow; glands reniform; flowers large, white. Fruit rather small; skin yellowish white, without any red, very thin, so that it will scarcely bear to be handled, and on this account it is not much esteemed in France, to which country it was introduced from America in 1829.

Pêcher Hunt's Tawny, or Brugnonnier Hunt's Tawny. This is Hunt's Tawny Nectarine. Contrary to that which is the case with Nectarines generally, it is found to do well in rather strong soil.

Poire Arbre Courbé.—Syn. Colmar Charnay. Fruit middle-sized or large, oblong-turbinate; skin yellowish, marbled and dotted with brown; flesh very melting; fine, and juicy, with an agreeable perfume. Season: September and October. A very good Pear. The raising of this variety is generally attributed to Van Mons; but it appears it was raised by M. Léon le Clerc, of Laval, previous to 1833, and to have been sent by him to Van Mons about that time.

Bergamotte Panachée.—Syn. Bergamotte d'Automne Panachée, Bergamotte Suisse. This is considered to be merely a striped variety of the Bergamotte d'Automne of the French, which is different from the Autumn Bergamot of the English, and not so well suited for this climate. It is often confounded with the Amoselle or the Double Fleur Panachée.

Pêcher de Malte.—Syn. Malta, Belle de Paris, Pêcher de Paris. Leaves serrated, without glands; flowers large; fruit nearly middle sized, roundish obiate; skin pale green where shaded, red next the sun, marbled with darker red [like the Noblesse]: flesh whitish, parting from the stone, fine, melting, very juicy, sugary, very rich and agreeably perfumed. [Such is the character of this excellent fruit at Paris, and such we have found it to deserve in England. The author expresses his surprise that it is not more cultivated than it is; in this we agree. Owing to its not being so large nor so highly coloured as some others, he says it is probably not so good for sale. It is not so large, for instance, as the Noblesse, nor so highly coloured as the Royal George; nevertheless it is handsome, with a very rich aromatic flavour, and ought to be in every good collection. It is one which succeeds in the comparative cool climate of Normandy. It is said to reproduce itself from the stone without degenerating; if that hold good, it must be a valuable sort for our colonists, who have frequently neither stocks, nor time or skill to work them.]

In the *Botanical Magazine* for October the following plants are figured:—*Thladiantha dubia*, an elegant Cucurbit from China, having slender rambling stems, broadly ovate cordate velvety leaves, and bright yellow bell-shaped five lobed flowers, succeeded by oblong succulent berries. The plants flowered at Kew were received from Messrs. E. G. Henderson & Son.—*Dendrobium nodatum*, a handsome Moulmein species with knotted stems, oblong leaves, and gay solitary ochroleucous flowers with a deep orange-coloured lip having a pale tip and a deep red blotch at the base; it has been introduced by Messrs. Low.—*Cyanotis nodiflora*, a rather curious Commelynaceous plant from South Africa, introduced by W. W. Saunders, Esq., having erect simple or sparingly-branched stems, and lance-shaped leaves with a sheathing base, out of which issue the clusters of purple flowers chiefly remarkable for their long feathery stamens.—*Vitis Bainesii*, well designated a "gouty Vine," having a short thick Turnip-like succulent stem, from which grow short erect leafy branches, the leaves ternate, and the green cymose flowers quite inconspicuous; it was sent to Kew from Namaqua land by Mr. T. Baines, and is closely related to Dr. Welwitsch's C. macropus from Benguela.—*Amphiblemma cymosum*, a large-leaved pink-flowered stove Melastomad from the Niger country.—*Linum Macraei*, a gay Chilian Flax introduced by Mr. Veitch, and described as the most floribund of the genus, though as we have seen, it not carrying a sufficient head of flowers; it is a subshrubby herb, with twiggy branches, lanceolate leaves, and large bright orange-yellow flowers.

The *Florist and Pomologist* has a good figure of the handsome *Trichinium Manglesii* from Mr. Thompson's specimens. It has already been noticed by us at p 555.

The *Floral Magazine* gives representations of the following subjects:—*Rose King's Acre*, a fine-looking Herefordshire seedling raised by Mr. Cranston, and described by him as a very hardy variety of a "bright vermilion rose," by which is indicated, according to the figure, one of these deep rosy carmine tints which are so common among Hybrid Perpetuals; *Linum Macraei*, under the name of L. Chamissonis; *Clematis rubro-violacea*, one of Mr. Jackman's fine hybrids; and *Pelargoniums John Hoyle* and *British Sailor*, two of Mr. Hoyle's fine varieties of the present year.

In *Seemann's Journal of Botany* is a figure of *Aphelandra ornata*, a Brazilian Acanthad, recently flowered by M. Linden. It has handsome oval oblong leaves, tapering down to the base of the petiole, and marked with a broad whitish band down the centre, and bears elongated spikes of bright yellow flowers elevated on purple leafless scapes. The principal papers are:—a continuation of the Revision of the Hederaceæ, by the Editor, this portion being devoted to genera with a single style; a long account of the Rice-paper tree, here called Tetrapanax papyriferum, by Dr. Bennett, who states that it is naturalised in New South Wales; and a supplementary list of Plants producing double-flowers. The whole number of species known to produce double flowers now amounts to 290, of which 242 are Exogens, and 48 Endogens.

Catalogues Received.—*Rivers's Catalogue of Fruit Trees* is a most useful descriptive list of all the best sorts of fruits, with a good many valuable cultural and practical remarks interspersed. Those who are about forming or extending a collection of fruits would do well to consult it.——*Rivers's Descriptive Catalogue of Roses*, 1864, has reached the 31st edition! It is made very select, and in the case of Hybrid Perpetuals divides the varieties into three groups, the first consisting of those which combine free growth with full size, fine shape, and perfect colour—such as may be selected from at random with full satisfaction; the second including popular sorts, but surpassed by those of the former list; and the third made up of those with brilliant or singular colours, not quite perfect enough, but "wondrously beautiful when viewed aright, *i.e.*, on a Rose tree in full bearing."——*Van Houtte's Catalogue des Plantes de Plein Air* is a very complete list of hardy trees and shrubs, including Coniters, Roses, and Rhododendrons; of hardy herbaceous plants with numerous specialties; and of hardy fruit trees, amongst which Pears predominate.——*Turner's Select List of New Pelargoniums, &c.*, contains Hoyle's new varieties; and a *Catalogue of Roses, Fruit Trees, &c.*, records a good variety of well selected sorts. Among Strawberries Mr. Turner offers the fine new variety called Sir Joseph Paxton, which is said to be a great acquisition.

Garden Memoranda.

Mr. Richard Smith's Nursery, St. John's, Worcester.—Among what are termed provincial nurseries this is one of the most important, both as regards extent and stock. Its principal entrance is from the Bransford Road, where, on entering, a straight avenue of nearly 1200 yards in length at once arrests attention. This is planted on either side with Conifers, varying in height from 1 foot to 8 feet, the border being backed up and set off to good advantage by a substantial Yew hedge. To the left of the entrance are Mr. Smith's offices and foreman's dwelling-house, the latter a commodious building surrounded by a well kept lawn, dotted about on which are many fine specimens of ornamental trees, chiefly Conifers, a class of plants for which this nursery is famous. On careful inspection it was found that an Araucaria imbricata growing here measured some 20 feet in height; Pinus Lambertiana, one of the largest of Californian Pines, was 18 feet in height and 10 feet through; a Chinese Juniper of equal height, close and compact—in short, forming quite a column, its width at the base being scarcely more than 3 feet; Juniperus excelsa, of similar height, was also very handsome. The same remark equally applies to Juniperus thurifera, 15 feet, to an Abies Douglasii, 25 feet, and to a noble Cedrus argentea, 11 feet high. Of Abies Menziesii we noticed a specimen 30 feet in height, and of the beauty of Pinsapo, nobilis, and Nordmanniana it is impossible to speak in too high terms, the soil of this locality, a light fertile loam, apparently furnishing all that such trees require for their perfect development. Among other Conifers planted as specimens we observed thriving examples of Abies Morinda, 16 feet in height, a handsome Wellingtonia about 9 feet high, Thuja aurea and japonica, the latter more upright in growth than the former, which was at least 7 feet in height. Among weeping Conifers was an example of Juniperus viridis pendula, 11 feet high, a capital tree for cemeteries, being deep green in colour and as pendulous as a Weeping Willow.

To one specimen of Abies nobilis special attention ought to be directed; it is 32 feet in height, and the stem 58 inches girth at the ground level; it has borne cones in abundance. This tree is unusually glaucous in aspect, and though grafted has done equally well with plants raised from seed. A. orientalis is a neat close growing kind; and of Pinus macrocarpa we noticed an example 25 feet in height. Thuja gigantea, some 10 or 12 feet in height, was so rich in colour, and altogether so charming in general appearance, that it would not be inaptly termed a tree Lycopod. Near the edges of the walks were planted Golden Yews, dwarf Arbor-vitæs, and pygmy Firs, the diameter of which though many years old, is not more than 18 inches.

Among other kinds of trees were Quercus Fordii, a small-leaved evergreen Oak, some 20 feet in height, and compact and handsome in growth; a magnificent specimen of Weeping Beech, concealing many square yards of turf beneath the sweep of its drooping branches; the Colchic Laurel, a seldom seen but very handsome sort; ornamental Hollies of different kinds, the Laurel-leaved Oak, and a plant of the close-headed prettily drooping Sophora japonica. The father of pendulous trees is, however, a weeping Ash, with sturdy trunk and noble head of drooping branches.

We were much pleased also with the appearance of the beds on the lawn, which during summer had been filled with flowers: they are now tastefully stocked with either silver Tree Ivy (in pots) or Golden Yew, Irish Yew, Aucuba, Pernettia, Retinospora, Irish Gorse, variegated Holly, Laurustinus, or some kind of shrub that looks well in a mass, and contrasts satisfactorily with the neighbouring beds, giving the lawn a pleasing effect during the dead months of winter. These little shrubs are planted in autumn, and are removed in May when the bedding plants are put out.

In a border, backed by a Yew hedge, by which the ornamental department is encircled and cut off from the propagating ground, are Gold-striped Yews, Thujopsis borealis, Irish Yews, Deodars, Thuja Wareana, Araucarias, and Standard Rhododendrons planted in alternate rows and graduated from 2 to 8 feet high.

On a tastefully formed rockwork, behind which is hidden a range of propagating houses, are planted Ferns, Irish Gorse, Berberis Darwinii, Tree and other Ivies, with Alpine and other plants, all so skilfully worked up as to furnish a charming illustration of wild Nature by no means unattractive even in the midst of highly dressed grounds.

On the right of the entrance is a house 117 feet in length and 17½ feet in width, appropriated to the growth of Vines for fruiting in pots, and adjoining it are two Orchard houses, each 25 feet in width, one 45 feet in length, and the other 115 feet in length. These are filled with young fruit trees in pots, consisting of Peaches, Nectarines, Apricots, Figs, Oranges, Apples, Pears, Plums and Cherries, all of which in their season produce capital crops of large and finely flavoured fruit. It was on a tree obtained from this collection that the fine Duchesse d'Angoulême Pear (see p. 989), which measured no less than 14 inches in circumference, was ripened, and it was as good in flavour as it was large in size. Orchard houses indeed possess in Mr. Smith a redoubtable champion, so thoroughly convinced of their utility as to be ready to defend them whenever required to do so. In addition to those just named, in another part of the ground he has one no less than 196 feet in length and 27½ feet in width, full of excellent young trees in pots, capable of bearing heavy crops next season, being thoroughly ripened in the wood and full of fruit-buds; this forms a portion of his trade, on which immense pains and labour are bestowed. Nor do the trees alone receive attention; the construction of the houses has also been well considered. They have fixed roofs, and are not only light and roomy but well ventilated. The last is effected by means of small lights in the roof, which lift up and let down as may be required, and at the sides lateral ventilation is secured by horizontal sliding boards 50 feet in length, having holes cut in them to correspond with apertures of similar size in the wall. Cheapness as well as efficiency has also been aimed at, and persons contemplating the erection of such houses would do well before commencing to inspect Mr. Smith's arrangements. In other glass houses, which are numerous, are grown stove, greenhouse, and other tender ornamental plants.

It is hardy stock, however, to which we more particularly wish to direct attention. For the propagation of this most ample means are provided, not only in the shape of uncovered brick-edged beds, occupying nearly 3 acres of ground, but also in the form of ranges of glass-covered pits, a thousand in number, in which are raised all the more valuable and choice Conifers and other evergreens, which must number some millions at the present time. These when large enough are transferred to open quarters, from which again the finest specimens are selected to decorate the sides of a drive which runs through the centre of the grounds, and which is more than a mile and a quarter in length. Both sides of this are ornamented chiefly with Conifers of the most beautifully formed and thriving description, the whole varying from 2 to 9 feet in height, disposed in rows of different colours in the style of our modern ribbon gardening. To furnish descriptions of these plants would occupy too much space; but persons desirous of obtaining them will find them given fully in Mr. Smith's carefully arranged and very excellent catalogue. We may add that great attention is paid to make every plant a specimen of its kind, a

remark which does not apply to fine things alone, but also to such as Yews, Laurels, and Spruce Firs. Stiffness and formality of outline are, however, carefully avoided. They are also all transplanted every two years or so, and, therefore, move well when wanted.

Roses are also grown largely here, upwards of 8 acres being employed in their cultivation; owing to the fine autumn with which we have been favoured; some good late blooms may even yet be obtained from Aimée Vibert, Gloire de Dijon, Mrs. Bosanquet, Queen of Bourbons, Général Jacqueminot, John Hopper, and others, the wood of which is clean, strong, and healthy, the soil being apparently equally suitable for them with that of Hertfordshire.

Young fruit trees may be obtained here in any quantity, 150,000 to 200,000 stocks being annually used in their propagation, and to this branch of Mr. Smith's business unusual attention is paid in order that everything may be true to name. The better to ensure this, a specimen tree of each kind is kept, and the operation of cutting off buds and grafts confided to the care of one man, who likewise examines the stock three times a year, viz., at the period of its coming into leaf, when the foliage is fully grown, and at its fall, with the view of ascertaining if all is correct. Under such active supervision, therefore, errors in nomenclature can hardly take place. Each tree is also a perfect specimen of its kind, summer-pinching being constantly exercised, and the soil being well tilled, their health and vigour, even during this dry season, are truly astonishing. Young shoots of Cherries were found to be, on actual measurement, 5 feet in length, those of Pears 6 feet. Plums 8 feet, and Apples 4 feet. Small trees, therefore, soon reach a fruit-bearing stature, and as regards form they may be had in the shape of dwarfs, pyramids, half-standards, and standards—in short, any shape required, both trained and untrained, some 40 acres being devoted to their culture. With respect to varieties Mr. Smith's Fruit-tree List will be found to furnish ample information.

About 30 acres are set apart for the culture of Conifers and other ornamental trees and shrubs, besides that used for what may be termed miscellaneous stock. Among the latter we noticed a fine variety of Weeping Spruce, and many fine examples of the variegated Acer Negundo. Of Standard and Pyramid Portugal Laurels, intended to be used as substitutes for Orange trees, we observed multitudes of handsome examples, as well as of what is called Quercus austriaca hybrida, a very hardy and useful looking Oak. We were also delighted with the beautifully glaucous colour of Abies nobilis, the stock of which is most extensive; quarters of Nordmanniana are also abundant; of these and Wellingtonias, Deodars, Araucarias, Thujopsis, Cupressus Lawsoniana, Thuja aurea, Chinese and other Junipers, Abies Douglasii, orientalis, and others, we likewise observed an immense stock, arranged according to sorts and graduated to facilitate selection. It will therefore be seen that among first-class establishments this holds no inferior position. Order, neatness, skilful management, and good cultivation are its distinguishing characteristics, and owing to the pure air and fertile soil of this fine county, blight and its attendant evils are unknown.

Miscellaneous.

Saxon Potato Society.—A society has been established at Planitz, in Saxony, under the title of "Society for the Cultivation of Potatos." The Society has already published a number of reports, in one of which it states that the best specimens of Potatos grown in sandy soil have quickly degenerated and given only an indifferent crop in the strong clayey land in the neighbourhood of Planitz. Since the foundation of the Society, in 1860, the members have made numerous experiments on strong, light, clayey, gravelly, and stony soils. The Society procured samples of every description of Potato sold, and they propagated those which produced the best results. After a year's trial they had generally found that the greatest number of Potatos succeed best in light and slaty land. They found, however, that the long Potato from Algiers became rotten in sandy soil, and produced large and perfectly sound Potatos in strong land. The white English Kidney Potato planted in stony ground produced Potatos quite red. The Society has lately offered 10 kilogrammes of seed Potatos to any cultivator who will contribute 5f. annually, on the sole condition that he will furnish the Society with a statement setting forth the quantity of Potatos produced and the nature of the soil in which they were planted. The cultivation of the Potato is of such importance to the Saxon population that the number of subscribers to the Society is rapidly increasing. *Times Correspondent.*

Calendar of Operations.

(*For the ensuing week.*)

ALTHOUGH the weather is still comparatively favourable, all half-hardy plants intended to be wintered out of doors should now, if not already done, receive some kind of protection. Various materials are used for this purpose, but the principal point to be aimed at is to keep the plants dry, as well as to protect them from cold; for it is well known that they will endure a much lower degree of temperature without injury if the ground is dry below them, and if the stems are kept dry, than when in a wet soil, and exposed to rain. Deciduous plants may be tied together as soon as the leaves have fallen; the ground about their roots may be covered with ashes or Cocoa-nut refuse, and the stems thatched over with Fern or straw. Evergreens may be protected with a covering of mats, or some other material of that description, put on so as to open towards the north in favourable weather. Leaves, ashes, old tan, and many other articles are all useful, and can be got together now for the protection of tender herbaceous plants. Branches of Evergreens are also extremely valuable for tying against plants on walls. Mats should now be got in readiness for covering frames and pits.

FLOWER GARDEN AND PLANT HOUSES.

At this season every effort should be employed to keep up a good display of bloom in Conservatories and Greenhouses. They will now be used much more than when the weather is favourable for out-door exercise; their inmates, if attractive, will therefore be much more valued now than they would be at any other period.

CHRYSANTHEMUMS.—These are now coming fast into bloom, and care must be taken to see that they do not suffer from want of water. A little weak liquid manure given occasionally will also assist them in making a better display than they otherwise might do.

CROCUSES.—While bulbs of these in pots are kept in a dark place, very little water need be given, merely sufficient to keep the soil, Moss, or sand from becoming too dry. When the roots have made some progress, the crowns will soon make their appearance; and as soon as these are observed, remove the plants to the greenhouse or conservatory.

FORCING GARDEN.

CUCUMBERS.—These must be well attended to in order to ensure success. A temperature of about 70° should be maintained artificially, which will allow of a little air being given on comparatively cool and dull days. Stop progressing shoots at every second joint, and pinch off all tendrils and young fruit that are not wanted to swell as soon as they appear.

PEACHES AND NECTARINES.—Prune and otherwise prepare the trees in the earlier houses for forcing, which, however, except under particular circumstances, should not be commenced for several weeks yet; but let it be remembered that these fruits will not admit of rapid forcing in the early stages of the process, therefore fire-heat should be applied with caution, so that the night temperature does not exceed 50°, otherwise the blossoms will be weak and liable to drop; during the day the temperature may rise to 60°, with plenty of air on every favourable opportunity. Cover the outside border with leaves or litter, for the purpose of excluding frost and heavy rains. Tie in the trees in the later houses, and get all ready for starting when required.

PINES.—Portions of the stock expected to furnish the autumn supply next year should not be too much checked at present, indeed these may be kept growing slowly all the winter, which is perhaps the most certain method of preventing their starting too early in spring. Where the plants likely to fruit without making further growth are considered insufficient to meet the demand until next autumn the stronger plants of those for late fruiting should be encouraged to make growth as early as can be done without weakening the foliage, with the view of preparing them for starting in April.

VINES.—Where early forcing is carried on, as soon as the buds are fairly started, the temperature should be increased to 60° at night and 65° by day, allowing it to rise 10° on bright days. Take every opportunity of admitting a little fresh air, but recollect that the foliage will not bear exposure to cold winds, therefore air should be admitted in contact with the heating apparatus. Where the border cannot be warmed, see that it is well protected from wet, &c., by a thick covering of dry litter. If fermenting material is used it will be advisable, however, to have some dung and leaves thrown up to heat, as there would be some danger of chilling the bed by turning it in the event of frosty weather, and mixing it with the dung or leaves which had not commenced fermenting. Houses which it is intended to commence forcing the beginning of next month should also have some fermenting materials placed on the borders so as to encourage the roots a little before the Vines are excited, which will be of great service towards getting the buds to push strongly and without loss of time.

HARDY FRUIT AND KITCHEN GARDEN.

Apple stores should now be often examined, picking out all that show symptoms of rotting. Any of the more choice varieties of Pears that do not ripen properly should be removed to a warm dry room for a few days, which will be found to greatly improve them. Keep all fruit as cool and dry as possible. If frost is excluded from the house it can scarcely be too cool, where the object is to preserve fruit plump and sound as long as possible.

CABBAGES.—Where the late dry weather has hitherto prevented these from being planted, now that wet has come no time should be lost in getting them in. Where they have been well looked after they will be good sized plants, and if carefully transplanted they will be nearly as forward next spring as if they had been put in earlier.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Oct. 26, 1864, as observed at the Horticultural Gardens

October.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep	Wind	Rain.
Thurs. 20	19	29.308	29.197	68	30	49.0	55	55	S.W.	.00
Friday 21	20	29.481	29.292	60	45	52.5	55	55	E.	.38
Satur. 22	(	29.125	29.006	58	45	51.5	55	55	S.	.30
Sunday 23	22	29.217	29.038	57	27	42.0	55	55	S.W.	.51
Mon. 24	23	29.436	29.297	61	29	45.0	53	44½	S.W.	.00
Tues. 25	24	29.495	29.343	58	43	49.5	53	54	E.	.00
Wed. 26	25	29.425	29.194	56	49	52.5	53	54	N.E	.20
Average.		29.355	29.196	59.4	38.2	48.8	54.1	56.4		1.19

Oct. 20—Clear and windy; fine, very slight frost.
— 21—Fine, partially overcast; overcast, rain.
— 22—Overcast and mild; densely clouded; boisterous with rain.
— 23—Cloudy and boisterous; fine at night; frosty.
— 24—Slight fog; exceedingly fine throughout.
— 25—Foggy, overcast; cloudy, overcast at night.
— 26—Hazy and mild, hazy, overcast, mild at night.
Mean temperature of the week ½ deg above the average.

STATE OF THE WEATHER AT CHISWICK

During the last 38 years, for the ensuing Week, ending Nov. 5, 1864.

October and Nov.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 30 .	55.1	38.7	46.9	19	0.98 in.	3	8	3	3	5	13	2	1
Mon. 31..	53.9	38.2	46.0	20	0.88	1	4	4	2	2	14	7	4
Tues. 1..	54.4	38.2	46.3	22	0.58	3	2	5	3	4	8	10	3
Wed. 2..	54.4	37.8	46.1	17	0.61	1	3	6	3	2	16	3	5
Thurs. 3..	53.4	36.5	45.0	18	0.82	2	2	10	—	7	8	5	1
Friday 4..	51.8	37.1	44.4	20	0.44	2	4	8	1	7	9	5	2
Satur. 5..	53.1	38.0	45.6	19	0.69	4	2	4	4	5	12	3	4

The highest temperature during the above period occurred on the 30th, 1833, and 31st, 1854—therm. 67 deg.; and the lowest on the 3d, 1861—therm. 19 deg.

Notices to Correspondents.

BOOKS: *M A E.* There is no better book that we know of for the names of garden plants than "Loudon's Encyclopædia of Plants" but it has the demerit of being too bulky, from including hosts of weeds now almost forgotten, and also that of not being brought down to the present day. How came you to fail to find Leycesteria by its aid, when it is so characteristically figured under Pentandria monogynia! And in the other book you mention, how came you to be able to connect holly-edged leaves and copper-brown flowers with each other, and with Chorozema, so as to make out your plant to belong to that genus? A really good book, giving the clue to the names of popular garden flowers, would be a boon to amateur plant-lovers.—*J C.* The Indoor Gardener, by Miss Maling, and Paxton's Botanical Dictionary, will probably answer your purpose.

BULB PACKING: *Bulb.* The name of the plant which furnishes the triquetrous nuts, the husks of which are used for packing imported Dutch flower roots, is Fagopyrum esculentum, or Buckwheat.

CORYDALIS SPECIOSA: *Fumaria.* We believe this was first flowered at Glasnevin some year or two since. It is a fine plant with golden yellow flowers, and comes from the Amoor country.

NAMES OF FRUITS: *W S T.* 1, Brown Beurré; 2, Napoléon; 3, Bishop's Thumb; 4, Urbaniste; 5, Easter Beurré; 6, Beurré Diel.—*H H.* 1, Afriston; the other not known.—*J C.* Seedling Apple No. 1, regularly formed and pretty, but too acid; Seedling No. 2, small, conical, pale yellow, no flavour; 3, Blenheim Pippin: 4, Pennington's Seedling; 7, Syke House Russet; 9, King of the Pippins.—*D D* Appears to be the Kentish Fill-basket. Apples next week.—*T. Smith.* The Trumpington or Eve Apple.—*T W.* 1, not known; 2, Court of Wick.—*R C.* 1, Carraway Russet, 2, King of the Pippins; 3, Court of Wick; 4, Dumelow's Seedling; 6, Gravenstein.

NAMES OF PLANTS: *Anon.* Delphinium peregrinum.—*J R.* 1, Onoclea sensibilis; 2, Selaginella cuspidata; 3, Adiantum macrophyllum; 4, Phlebodium areolatum. We never name more than four plants at one time. We shall be quite ready to find space for your remarks on thrips, &c.—*M C W.* Salvia porphyrantha.—*T Elder.* 1, Scolopendrium vulgare, the frond peculiar at the base; 2, Onychium japonicum; 3, seedling Lastrea dilatata, with the tootning abnormal.—*R J.* Chrysopteris is only a synonym of Phlebodium, the type of which is the Polypodium aureum of Linnæus.—*P G.* 1, Asplenium Ruta muraria; 2, Asplenium Trichomanes; 3, Asplenium Adiantum-nigrum; 4, Lastrea dilatata. *H*—1, Athyrium Filix-fœmina; 2, Polystichum angulare; 3, Vicia sepium; 4, Crepis virens.—*W. K.* Platyloma falcatum.—*W. Hadwen.* Pteris hastata, and P. hastata macrophylla.

PACKING AND STORING FRUIT: *Nobis.* The plan of packing and storing fruit in bran has been strongly recommended by Mr. Tillery, in a communication to the Royal Horticultural Society, of which the following is the substance. He writes:—"I find bran the best of all substances for packing late Apples and Pears in shallow boxes. They want no care afterwards, as all sweating and decay are dried up. When sand is used in jars and boxes it is usually too wet or too dry, and particles are left on the fruit about the eyes and stalk. Bran is likewise an excellent clean elastic substance in which to pack Peaches, Apricots, and Grapes to go long distances. I have used it to send fruit to Caithness, and they travelled quite safely all that great distance both by sea and land.

PINE NUTS: *R M.* It is the seeds of the Stone Pine, Pinus Pinea, which are eaten at dessert. They are largely used in Italy, and come chiefly from Tuscany and Ravenna. At Lisbon they are brought to market strung upon threads like beads. In the South of Europe they are called Pignons doux. In Switzerland the seeds of Pinus Cembra are eaten.

PITCHER PLANTS: *Charles.* These require a hot moist atmosphere, and do well in a damp stove trained over a water tank. You will not succeed except you can command plenty of both heat and moisture.

POLYSTICHUM: *C M F.* The proper mode of pronunciation is Pō-lys'-tichum, not Polysti'-chum. Your nurseryman friend who calls it Polly-stick-um is certainly not to be taken as a guide.

TOMATO SAUCE: *Eleanor.* There are many ways of making it. A good authority near at hand says, that after selecting sound ripe fruit, they are to be boiled without water for at least six hours till they have become wasted by evaporation. The pulp is then to be rubbed through a hair sieve till nothing but the skins and seeds remain. To a quart of this pulp add half a dozen pickling Onions, one ounce of bruised ginger-root, two blades of mace, a tablespoonful of white pepper, and two tablespoonsful of Chili vinegar, and then boil up again for half an hour, or until it is of such a consistency as to adhere to the spoon; it must be kept well stirred, and should be made in a glazed saucepan kept uncovered. When of the right consistency—that is not at all watery—it is ready for use. For keeping it should be bottled and kept air-tight. Small bottles are best. A few Chilis may with advantage be dropped into each bottle. Thus made it will keep for seven years.

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The Metropolitan Board of Works hereby give notice that they will be prepared on TUESDAY the 8th of November next, further to consider the several TENDERS which have already been received, for the economical application of the Sewage of the Metropolis, together with any additional plans and suggestions which may be forwarded to them on or before Monday November 7, at 12 o'Clock at noon.
All communications to be addressed to the Metropolitan Board of Works, Spring Gardens, and to be endorsed "Sewage of the Metropolis."

Relief to Landowners.

MR. HOWARD REED, Author of the Pamphlet "Land: its Registration and Transfer," price 1*s.* (E. WILSON, 11, Royal Exchange, E.C.), is prepared to give ADVICE to LANDOWNERS wishing to avail themselves of the Land Registration Acts, and to conduct all proceedings necessary for obtaining an indefeasible title. Preliminary opinions given on abstract of Title, and terms stated beforehand. Communications personally or by letter.
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Land Drainage, & other Agricultural Improvements

MR. BAILEY DENTON, C.E., maintains a large Staff for the Execution of Land Improvements by a commission of 5*s.* per acre for Under Drainage, and a fixed charge for Outfall and other works.
For particulars, apply to him, at 52, Parliament Street, Westminster.

Drainage of Land.

MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
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AGRICULTURAL MACHINERY.—Chaff Cutters for hand or power, Threshing Machines, Carts, Waggons, Ploughs, Harrows, Turnip Cutters and Pulpers, and all kinds of Agricultural Implements; also the Prize Churn, Wire Netting, &c. Delivered carriage free Price Lists on application.
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THE NATIONAL EXHIBITION of SPORTING and OTHER DOGS.
President—His Grace The DUKE of BEAUFORT.
Vice-President—The MAYOR of BIRMINGHAM.
The FIFTH GREAT ANNUAL EXHIBITION of SPORTING and other DOGS will be held at BIRMINGHAM, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, and 30, and December 1.
Copies of the Prize Lists and Regulations, with the statement of Receipts and Expenditure for 1863, may be obtained from the Secretary. The ENTRIES CLOSE on NOVEMBER 1.
GEORGE BEECH, Secretary.
Offices: Rectory Chambers, Temple Row, Birmingham.

THE NATIONAL EXHIBITION of SPORTING and OTHER DOGS, at BIRMINGHAM.
The LAST DAY for RECEIVING ENTRIES is TUESDAY NEXT, November 1.

THE BIRMINGHAM CATTLE and POULTRY SHOW, 1864.
The SIXTEENTH GREAT ANNUAL EXHIBITION of FAT CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, CORN, ROOTS, and IMPLEMENTS, will be held in BINGLEY HALL, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, 30, and December 1, when Prizes to the amount of £1995 will be awarded in the following Divisions, viz.:—

FAT CATTLE ..	£794 10	BREEDING PIGS ..	£76 10
FAT SHEEP.. ..	200 5	CORN and ROOTS ..	71 8
FAT PIGS	60 5	POULTRY and PIGEONS	693 0

Prize Lists, Certificates of Entry, and every information may be obtained from the Secretary.
The ENTRIES CLOSE on TUESDAY, November 1.
JOHN B. LYTHALL, Secretary.
Offices: 13, Temple Street, Birmingham.

SMITHFIELD CLUB FAT CATTLE SHOW.—The ANNUAL SHOW of FAT CATTLE, SHEEP, and PIGS, will be held at the AGRICULTURAL HALL, ISLINGTON, on MONDAY afternoon, December 5, and four following days.
Intending Exhibitors are requested to apply for Certificate forms by the reference letters as under:—

CATTLE.	Form A.	For an Ox or Steer (in any Class).
	,, B.	For a Cow or Heifer (in any Class).
	,, C.	For a Beast in Extra Stock.
SHEEP.	,, D.	For a Pen of three Wethers (in any Class).
	E.	For a single sheep in Extra Stock.
PIGS.	,, F.	For a Pen of three Pigs (in any Class).
	,, G.	For a single Pig in Extra Stock.

ENTRIES for LIVE STOCK CLOSE NOVEMBER 1.
Prize Lists, Forms of Certificates, and all information may be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, Corner of Half-Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words "Smithfield Club."

The Agricultural Gazette.

SATURDAY, OCTOBER 29, 1864.

THE importance of the steam cultivation competition at Newcastle has no doubt led many who are interested in the progress of agriculture to study the report of the judges with considerable attention. The prizes offered by the Society show that steam culture has so far progressed that competition may now be encouraged in the details, and that there is no longer occasion to confine the prizes to entire systems.

"A." may have the best plough, "B." a superior cultivator, and "C.'s" mode of applying the steam-power may excel either of the others. But it is essential for a satisfactory award of the merit in each class, that the thing to be judged should be clearly understood, and this does not seem to have been generally well accomplished in Classes 1 and 2.

In the first place there was evidently an original misconception on the part of those who drew up the prize list as regards the latter of these classes, which was for "the best application of steam power adapted for small occupations," the intention being to give prizes for less powerful and costly machinery. The fact however is, that generally the large occupations of this country are on the light lands, which require less powerful machinery, and that the heavy clays, which demand the greatest power to work them efficiently, are in the hands of small occupiers. Instead of this being borne in mind, the land selected for the small occupation trials "was uniform in character and easily stirred."

Then, again, as regards both the classes. The point for the judges' decision was the "best application of steam power for the cultivation of the soil," and it is clear that all disturbing elements should have been removed as much as possible. This was done in the case of the other classes, in which prizes were offered for particular tools, by employing the same power for all the implements. Instead of this we find the same "application of steam power" entered and competing with a variety of implements, and when the cultivators were employed as the test, the judges appear to have discovered the absurdity of the case by their remark—"Mr. STEVENS having no *power* to draw his implement was unable to compete, which was of the less importance as it came into competition in Class 4." How could he compete at all for the best mode of applying power when he had no power to apply!

The work done by the engines, which for the trial of the application of power might have been merely the dragging to and fro of a certain weight, should have been uniform and independent of the superiority of one plough or cultivator over another. Instead of this we find Mr. FOWLER in one case "specially desirous of showing good ploughing"—with another set of machinery, "evidently desirous of showing economy of cost rather than excellence of work." And again with the cultivators: "his original intention was to use the 7-tined balance cultivator, but finding the soil too firm for this implement, he sent for a powerful 3-tined digger, using COTGREAVE'S forked breasts." Again, GARRETT, competing with HOWARD'S cultivator, does not work so deeply as FOWLER, and on being requested to work deeper, "the implement immediately clogged up." How was it possible for judges to come to a just decision with such varied elements interfering with the result?

Another remark which must be made upon the report relates to the occasional indefiniteness of which it is guilty. Instead of the judges remarking upon the "excessive" speed, the actual maximum speed of the ploughs and cultivators should have been specified, and each engine should have had the same plough or cultivator at the same depth to draw at the given velocity. Having the same work done by each engine or pair of engines, the expenditure of coal might then usefully be determined. This is an item no doubt of very great importance, but depending nevertheless quite as much on skill in the manufacture of the boiler and engines as upon "the mode of application of the steam-power." The work done being then in every case exactly the same, the other items of comparison would reveal the differences in the several systems; and then would arise the questions of facility of removal from field to field, expedition in getting to work, wear and tear of rope, complication of the machinery, as indicating liability to accident or otherwise, and all the other points on which a decision rests. These are the elements of a true award of merit, when the best application of steam-power has to be determined. And yet we have some of them passed over as constants from one yearly meeting to another! Certainly it appears to us that Messrs. GARRETT have, in this particular, good ground for the complaint which their recent letter makes.

Let each competitor be required to return the heating surface of the fire-box and tubes of his engine, as well as the diameter and stroke of the piston, and the judges will not have to remark upon "a nominal 7-horse engine doing the work of a 12 or 14-horse engine," and on "the greater extent of heating-surface in the boiler" in one engine as compared to another in proportion to the horse-power.

We throw out these hints for the consideration of those who may have to prepare future lists of prizes and make arrangements for future trials.

THE voluminous reports from many counties which we have published during the past few weeks, while they indicate how general the loss of the Turnip crop and the failure of the young Clover plant has been throughout the Southern and Midland counties of England, are yet not generally definite and precise enough in the specifications which they offer of the treatment which, in the absence of their usual food, the live stock of the farm is during the coming winter to receive. Probably Mr. STRATTON'S statement that he has found his cattle on straw and 4 or 5 lb. of Oats apiece a day to do as well as they used to do on hay and Turnips, is the most practical contribution that has been made to the discussion, and to this agrees Mr. CURTLER'S recommendation made at the recent meeting of the Worcester Agricultural Society. Mr. CURTLER has no Turnips, very few Mangels, and very little hay, but he has good crops of straw; so that he may be considered this season, as he no doubt is at all times, a good model farmer. What then is his remedy for the difficulties in which he is placed? He finds that he can buy good Irish Oats, weighing 39 lbs. a bushel, for 20*s.* per quarter, and of these he has been giving his lambs a quart a day; and, though they have but little to eat from the bare pastures, he finds that they are looking remarkably well. He can keep them for 1*d.* per day on these Oats, and if he chose he could do the same with Maize.

The following is the substance of what he is reported to have said on this subject:—

"He could afford to give his cows a peck of Maize per day, and by this means he could keep them at the rate of 4*s.* 6*d.* per head per week; but if they liked to keep their stock a bit better and get them fatter, they had nothing to do but to cut their Bean-straw into chaff, put it in a large vessel by the side of the engine

and wet it, adding to it so much corn per cow, and then they had a mucilage that would feed them and get them fat. In this he did not think there was more expense incurred than that which attended the growth of Turnips. The same system might be adopted with regard to their cart horses."

Mr. CURTLER then alluded to the difference of price between oilcake and Maize, and wanted to know whether 1 lb. of oilcake was worth 2 lb. of Maize or of Oats? He thought there was no pretence for keeping up the former at the price for which it was sometimes sold, and farmers ought to determine, having found a substitute, not to buy it, so that in time the price would be brought down to what it ought to be. Oats and Maize for sheep and cattle, and for horses, and mixed with Barley and Wheat if they chose, would be proper food for stock during the winter, and it would be found that this could be supplied at a less price than Turnips could be grown.

Mr. HUDSON followed with remarks on the importance of mixing food; and on the use of the chaff-cutter as enabling this.

The account given in a previous number of this Journal by our Correspondent Mr. SAMUEL JONAS, of the wholesale chaff cutting adopted in Cambridgeshire, where MAYNARD'S chaff machine cuts up the straw as fast as it is threshed, so that it is at once stored in comparatively small space—a whole winter's food in one mass well trodden down along with a' little salt—appears to us to deserve greater attention, and to describe a practice worthy of more general imitation than it has yet received.

"CONDITION" IN GRASS LANDS.—No. I.

HAVING studied that ambiguous term "condition," as applied to arable land; having seen that its value can be ascertained, and that it will pay, let us now consider the same questions as regards Grass land—and first, what Grass land? I have no experience or knowledge of the large tracts of feeding pastures, which, extending from the Lincolnshire coast across Great Britain, will fat out a bullock and half a dozen sheep per acre every summer with no more trouble or expense than casually looking at them—nor of the equally large tracts of dairy land in Wilts, Gloucester, and Somerset, devoted to cheese-making, which have been so ably treated in the admirable lectures of Mr. Harrison, lately reported in the *Agricultural Gazette*.

The Grass lands I propose to consider are the low-lying and neglected portions of farms interspersed among the arable lands of this country, which from their situation or want of drainage cannot be profitably ploughed—moory soils, frequently mown, seldom dressed, and left as nearly as may be in a state of nature. These lands are generally reckoned in with the farms to which they are attached at the average cost of 1*l.* an acre, including tithes, taxes, and all outgoings about 30*s.* per annum. The annual produce may be taken at three-quarters of a ton of hay—and about half that quantity of after feed, or about 7 tons of Grass per annum, taking 5 tons green to make 1 ton of hay. I have known large tracts lying near the banks of rivers from which this annual crop has been regularly mown and carried off for a series of years, and no dressing ever returned. We may take this, then, as the average annual productive capacity of such lands; and that if made into hay it will just pay the rent and expenses, leaving little or no profit to the tenant. The amount of chemical constituents thus annually removed appear to be—nitrogen, about 45 lb.; minerals, about 150 lb., containing potash, 36 lb.; phosphate of lime and silica, about 34 lb. each. This is a somewhat larger amount of chemical constituents, though very nearly in the same proportions, than are removed by 2 quarters of Wheat, which we found to be the annual productive capacity of arable land. Nothing evinces more strongly the enormous reproductive powers of Nature, or the inexhaustible resources of the great storehouse, the soil, than the annual removal of such a quantity of minerals. Here, if anywhere, might be expected to be realised Baron Liebig's prophecy of the eventual exhaustion of our land. We saw that in the case of arable land the organic elements were derived from the annual rainfall and the atmosphere, and that the minerals were for the most part returned in the dung. But here we see 150 lbs. weight carried off year by year with no return, and without the assistance of the aeration and subsoiling which added so much to the produce of corn. Yet here, with no cultivator but the earthworm, and no manure beyond the decay of the Mosses and roots of the annuals in winter, the Grass springs up green at the first blush of spring, and brings its annual tribute. Doubtless the crop in such cases is a poor one. There are no fine Grasses or Clovers in the sward; the stronger plants alone, which can dive deeper into the subsoil, have won the victory in this battle of life, and proclaim the poverty they conceal. On such Grass lands what is Condition, and will it pay?

The first requisite will probably be drainage of some sort. An occasional flooding in the winter will do no harm, if the water does not lie anywhere long, and if the general level of the water is more than 18 inches or two feet below the surface; but low spots where water stagnates must be cured, or no good Grasses will grow. The second requisite is generally greater firmness or consolidation of the surface. Where meadows are not fed constantly, the roots of the Clovers and finer Grasses, even if they exist, get thrown out of the ground during the winter, and Mosses take their place; perhaps the only cure for this is constant and hard feeding. And this, if effectually carried out, will be the great restorer of condition.

A heifer or store bullock per acre during the early summer months, assisted with a little corn or cake as the pasture gets bare, will gnaw down the coarser Grasses and consolidate the earth round the roots, and a flock of sheep penned over the same field in the autumn with a little corn before going on Turnips, will insure a finer herbage, and could this treatment be adopted for any time, the Clovers would gradually spring up, and the produce become not only earlier, but much more valuable as feed; and this system, if pursued with judgment and skill, we saw when calculating the profit of feeding stock would also be profitable. But I am aware that in many cases it would be impracticable to carry out. The price of hay, though chemically not superior to the Grass it is made from, shows its agricultural importance. A farmer generally cannot keep more stock during the summer months while the Grass is plentiful, than he can make off in the winter. He would otherwise be forced to buy in the dearest and sell in the cheapest season. And a good stack of sweet hay, though it can to some extent be substituted by straw chaff with Linseed, &c. is almost a necessity for the milch cows, horses and young stock. We must therefore continue to mow a large portion of our Grass. And having by draining and by feeding got our land into tolerable condition, I think we may do so without injury. But then comes the question of manure. Our hay crop we may fairly hope will even be better and earlier. We may expect, one year with another, to get more than a ton per acre, and of superior quality, worth 4*l.* instead of 3*l.*, and to be made in the month of June instead of July. We may also reckon the value of the aftermath to be 1*l.* instead of 10*s.* Our net returns, therefore (the expenses remaining the same) will be nearly or quite 2*l.* per acre more than the original calculation, and this extra return would be well purchased by an outlay of 1*l.*

Let us see whether, as in the case of the arable land, we can make 1*l.* in manure produce 2*l.* in the crop. Of this larger crop and of improved quality every time we mow an acre we shall remove, say 50 lb. of nitrogen and 30 lb. each of potash, of silica, and of phosphoric acid. Of the former, the greater part, we have seen, will be restored by the air. Of the minerals we must restore the greater part ourselves if we would secure the growth of Clovers, which are the most valuable of our mixed Grasses. A portion of all these ingredients will be returned by the cake and corn which must always be given with the afterfeed either to beasts or sheep, and which we know (p. 732) they will pay for. The remainder must be brought on as manure, either cart-dung or compost, or in liquid manure. This latter, by far the best and cheapest method, is I fear seldom available in the cases we are considering, where the meadows are at some distance from the homestead, and good spit dung (except near towns where it can be bought cheap, and hay, sold for 5*l.* the ton) will be too expensive a dressing. So we shall be driven to consider the application of composts. *J. B. M.*

MANAGEMENT OF STOCK.

[The following is an abridgment of a paper recently read on this subject before the Hungerford Farmers' Club by Mr. S. Wentworth.]

As we are anxiously thinking what to do with our flocks this winter, I cannot do better than confine my remarks principally to them. To begin with the breeding flock. About a fortnight before we intend turning out the sheep, which is in this neighbourhood about the middle of September, we ought to push the ewes on as fast as possible. Rape or Turnips just now is the best food they can have; with lattermath Grass; half a pint of corn to each is not thrown away; and if they have Rape or Turnips, a great many twins generally follow. The sheep used require proper management as well as the ewes. We often go to fairs and sales and buy rams and ram lambs which have always had the best of everything, bring them home, turn them out with ewes, often on the down, or where they have to work for their living, and the consequence is they require great care and good living all the winter to keep them alive. I gained my experience, having in one year lost three lambs out of ten that I bought, as they never recovered the hard living they had when with the ewes. In my opinion, rams are best kept by themselves in the day, with plenty of fresh food and corn, and turned with the ewes at night. After the breeding begins one generally looks round to see what roots he has; and this year, I am sorry to say, there is a poor prospect for every one. If you can afford to begin your roots with the ewes, so much the better. The morning, of course, is the time to give them, as the ewes do not then look for them all day as they would if given at night. If you have no roots to spare—and it will not do to begin without being able to keep on—hay at night, or a little corn, must be given in the morning.

It is very bad policy to let the ewes go back before the winter. Begin the dry food soon enough. There is not, however, much need of that caution this year, but sometimes a great many ewes cast their lambs from living too much on green food, and not having enough to keep them healthy. The best and cheapest corn I believe to be Indian Corn, Barley and Wheat mixed and ground or crushed together. Indian Corn is about 6*l.* 10*s.* per ton, Barley about 7*l.*, and Wheat 7*l.* 5*s.* to 7*l.* 10*s.* per ton. About a bushel to 100, mixed with a little hay-chaff. In the three months that the ewes will want it, they will eat rather more than a bushel each, or about 5*s.* per head, which, I think, is cheaper than hay at 6*l.* per ton, and the manure is better as well. After the Grass is gone, or when the wet, cold weather sets in, I should give them about one and a-half bushel in the morning or part in the morning and part at night, mixed with their chaff; but instead of having all hay, about half Oat straw, Oat caving or Wheat caving cut fine, they will eat very well. I know gentlemen in Hertfordshire who never think of giving hay to their ewes until after they have lambed. They certainly have generally plenty of roots; they cut all their straw, except what they want for litter and thatching, into chaff; they cut it fine and sift it, tread it firm into the mow of a barn, with a few bushels of salt to 20 or 30 tons of chaff, stored away like this, comes out very sweet, and all cattle and sheep are fond of it. In the middle of the day, having made a straw pen, I should let the ewes have what Oat, Barley, or Bean straw they would look over; Barley straw I believe to be of the least value. I have put it in the racks, but think they will eat more of it if put about the pen in small heaps. I only used the racks once. It is very requisite for the ewes with all dry food and no roots to have water always before them. They would drink to excess if kept short at any time. Salt is also very wholesome, and assists digestion. They require it more particularly with no roots, for all roots contain salt more or less. I should continue this until I could afford a few roots, when I should give a little less corn or less hay, if the hay ricks will not hold out. I think it advisable, a few weeks before the lambing season, to discontinue the corn altogether until after the lambs are in. I believe the ewes to be in a better state for lambing if they have only hay and water. My father lost 50 ewes one year, in a very short time, by giving them malt-dust when the lambs were falling; he discontinued the malt-dust, and saved his ewes. Two neighbours of mine last year, thinking their ewes were too poor just before lambing, gave them Oats. This forced the ewes, but a number of them died, until the Oats were left off. This is the time for those who have any Pea-haulm to give it to the ewes in the middle of the day. They are fond of it, and I think it favourable for milk. A few other little things must be attended to as well as the food. Ewes when in lamb require a little gentle exercise every day. If the straw pen be made a little distance from their fold at night, it would answer the purpose; or else let them go out for an hour in the middle of the day in a field of rough pasture, or by ground, or on the down.

Another thing to be looked to is lodging. In wet weather the ewes ought to be taken to a pen well bedded up with straw, that they might be able to lie down, especially on some land which gets very dirty with a little rain. Numbers are very soon lost by not being able to lie down for several nights together because of the mud. I know an instance of a gentleman at Ham, who some years ago farmed land at the bottom of the hill and some at the top. He divided his flock into two parts—the young ewes were at Turnips under the hill, the old ones on the top. A fortnight's rain came on just before the lambing season, and the young ewes were unable to lie down in the mud the whole of the time, it was so wet. Out of 440, 100 died in the lambing season. The old ewes, between 200 and 300, being on stony ground which was clean, were able to lie down at night, and only one was lost. They had been living together nearly all the winter before. I am also very prejudiced against small lambing yards. I like a good large pen made in the open fields, and sheltered from the cold winds. Of course, much more straw is required: but I believe the extra expense is more than repaid by its being so much more healthy. I never like them to stop in any pen more than a month or five weeks. The manure gets hot and tainted, which is very injurious to both ewes and lambs. I am not fond of doctoring the ewes after lambing. If they are healthy, none is required: if they are in a bad state, then no medicine will scarcely ever save their lives. After the lambs are all in, I conclude every one to be able to give his ewes roots. I should not attempt to keep a breeding flock without any roots at all.

To start the lambs well, begin to give the ewes corn, Oats, and cake I think best now when the lambs are two or three weeks. I do not care to give them corn until after they are weaned. A little bran keeps them healthy; but I think it rather expensive food for lambs, as it does not show much in the land. I like the lambs to have plenty of room to run before the ewes, and to have a little of the best hay on the farm as soon as they will eat any. I do

not care to shut them up at night unless obliged to do it. Lambs which have the chance of always getting green food are not so likely to eat injurious things as those which are only let run forward at certain times. I think it better even on white frosty mornings for lambs to have the chance of running out if they are kept shut up till 10 or 11 o'clock. They often eat in a hurry the frosted leaves, and very often scour. I have found frosted Turnips injurious to the ewes, having lost seven in two mornings last year from red water, caused by eating too many Turnips on a white frosty morning. I moved them to Swedes, and gave them less. I lost no more afterwards. The lambs at that time were out early in the morning, but I never lost any from scour. It is rather a critical time when the lambs first begin the spring food. Rye I think quite safe, and winter Barley good feeding, but winter Oats are dangerous—very apt to scour the lambs unless it is much older than either Rye or Barley. Vetches follow, and the best of all feeding crops after that, Cabbage. I intended saying a few words on dry flocks, but had no time to write them down. I shall be glad to join in any discussion which may arise on their management, as well as on working stock, horses, and oxen, or growing stock, young cattle and colts, and fattening stock, both pigs and fattening sheep. The great art is to keep all stock improving, instead of going back.

Mr. Williams said Mr. Wentworth had forgotten to add that his father had sold some lambs at Weyhill on Monday at 53*s.* each, which was the top price realised.

Mr. Owen would not advise any one to keep a flock of ewes who had no roots to give them. He recommended looking after store stock, and said they could keep poor beasts in the yards as they would eat the straw with little difficulty. He thought there ought to be something mixed with the straw. He thought pigs were only profitable in the manure they made, as it was the best and most costly for land. He had also found the manure from a bullock's shed as good as sheep's. He thought there were no better roots than Mangel for ewes with lambs, when a root or two were thrown into them at a time; and they might do this any time of the year.

Mr. Stagg thought they could not give Mangels too early in the season. He was feeding the whole of his stock on Mangels now; and it only required additional care the earlier they fed them, giving them less at first. He thought it was necessary for them to see whether they could not grow something as a substitute for Turnips, and not be always dependent upon them. He had grown some Flax this year, and he had been feeding his lambs with the seed in the proportion of half a bushel of seed to 30 gallons of water, and he never saw lambs thrive better. The seed was mixed with chaff, of course. The Flax straw was a very valuable crop, and he thought it was a capital substitute for Turnips. Then, again, in his Bean country, they found that the produce of Beans would keep sheep longer than the Turnips grown on the same area.

Mr. Williams said there was no question every farmer would be put to his wits' end to get food in the month of May for stock; but there was no doubt the Almighty had provided the means if they would set about procuring it in the right way. Unfortunately, their hay-ricks were as scarce as the Turnips; but, on the other hand, they had been blessed with a harvest of straw superior to anything ever known, and there was no question the straw would form the bulk of the food which the cattle would consume this winter. The straw, however, unassisted, was poor stuff; and the question was how to improve it. With regard to growing Oats, he thought that crop would produce more money in the market than any other; and was it therefore wise to cut them up for food for cattle at home? The Chancellor of the Exchequer, he considered, had treated the farmers with the greatest contempt, and regularly insulted them in giving them the Malt Bill. Still, he could not help thinking that, if they were going to keep their stock in the most advantageous way, they should use that which they had had a first-rate crop of—viz., Barley. There was no question, as practical men had tested it, that malt was one of the finest things they could give to their cattle. It struck him that the steam chaff cutter would be a most valuable thing to use this winter; and that the Bill of the Chancellor of the Exchequer, which was never intended to do any good, except if possible to reduce the price of mutton 1*d.* per lb., might come to the rescue this winter. He had been told by an eminent gentleman that if they put a quarter of malt ground up with a quarter of Barley, the whole of the Barley instead of becoming starch would be converted into sugar by the law of affinity; that brewers did it, and they could do it if they chose. If there was straw chaff mixed with the malt, adulterated with linseed, he believed the whole would be so sweetened that the cattle would eat it with great avidity. By using the malt it would prevent the Barley from sinking in price, and the cattle would not lack for good food. Cattle kept in the yard and fed on dry food ought of course to have water constantly. He believed it was very damaging to keep it from sheep for two or three days at a time, as they became feverish and thirsty, and then when they got the water drank too much. He believed they would all be benefited by making use of the Malt Bill so far as they could this winter. He thought they should either give the lambs sufficient roots to moisten or none at all, and not to give half water and half roots, or they would have a good many dead lambs.

Mr. Wentworth said there was no one making malt for cattle, and he could not obtain any. He would be glad if he could.

Mr. Redman thought if they looked more to dry feeding and less to roots, they would be better farmers, and this season would teach a useful lesson in that respect.

LONDON SEWAGE.

One hundred millions of tons of sewage manure are now running every year to waste from North London only. This is a great improvement and advance upon the experience of recent years. Then it had to be declared that the fæcal matter contained in this enormous bulk was festering in the midst of three millions of people—putrifying in their cesspools, rolling to and fro in the channel of their river, and contaminating the air they breathed. It is now or soon to be the case that this nuisance is entirely abated. Life in London will be the longer, healthier, more vigorous for its removal; and that is, as we have said, an advantage which Londoners of 1864 possess over those of ten or a dozen years ago, and which they can hardly over estimate.

Nevertheless it is a scandalous fact, agriculturally, that the waste of 3,000,000 of people should be running to waste; and, therefore, though the Board of Works have done well to get rid of it as a nuisance, yet our agricultural teachers are very properly dissatisfied, and ratepayers think that the agricultural value of their wasted drainage is being lost to them, and engineers and promoters urge them and their representatives, and so Parliamentary Committees sit, and blue books are published. There are two principal schemes for dealing with it. One contemplates lifting the whole body of the waste to some enormous tank high enough to command perhaps a million acres, on to which it may flow at the rate of perhaps 100 tons per acre. Its promoters declare that it is worth 2*d.* per ton, and that 100 twopences will be an ordinary annual expenditure to make in manuring an acre of land—one that the farmer will, therefore, not be indisposed to make—and from which he will derive a large increase of produce and of profit. In the other scheme it is supposed that to lift the whole of London sewage, in order that the upper portions only of this great area may be thus manured, will involve an enormous waste of power. On to a large portion of this district the sewage will flow naturally; on to a still larger portion it will flow on being lifted a very few feet; and although it is probable that the highest parts of all will benefit the most, yet only a portion of the material needs to be lifted up so high. Moreover, it is said, that there is no experience to show that 100 tons per acre of this London sewage will materially benefit the land. On the contrary, all experience hitherto declares that many times that quantity are needed; at the very least it shows that all the instances of its fertilizing influence which can yet be enumerated have been obtained by the use of many times that quantity. One hundred times that quantity, and even more, have been applied so as to obtain the 30, 40, and 50 tons of succulent growth per acre, which are known to have been produced from Grass lands thus treated; and instead of one million acres receiving 100 tons per acre, 20,000 or 30,000 receiving 50 to 30 times that quantity per acre are all that any reasonable scheme requires. Instead, therefore, of Primrose Hill for a central reservoir, with a net-work of arteries, its distributors over 1200 square miles, it merely needs that the bulk of the sewage be lifted 30 or 40 feet, and that it be then set a flowing in a channel, "New River" fashion, along some contour line of gradual descent, say 1 foot to every mile, and delivered on the shore, if it should ever reach its terminus 40 miles away. Below this contour river there is land enough on to which its tenants will gladly welcome it. Would they not have welcomed it this summer, when growth has been retarded by a deficiency of at least 8 inches of rainfall—almost stopped for want of water? 100,000,000 tons, or say 50,000,000 only for the summer season, would have supplied the missing 8 inches for a great extent of land. And had it been available this summer, we can hardly doubt that a most successful beginning would have been effected in the agricultural usage of London sewage all along the northern shore of the Thames.

There are several special advantages connected with the second scheme for the utilisation of London sewage which must not be forgotten. The district where it would thus come into use is not a residential district. The country which would thus be fertilised is very thinly populated. And any nuisance which might be created would thus affect but very few. Again, at the end of the 40 miles of line, there is a tract of foreshore—the Maplin Sands and the Dengie Flats—where 20,000 acres or more might easily be embanked from the sea. So that here we have at once an estate to be fertilised, where every 10,000 tons of sewage may be converted into 30 or 40 tons of Grass, and this into about 5 or 6 cwt. of meat, or a corresponding value of milk, which will be sufficiently profitable both to tempt and pay expenditure. There would thus be an outlet at once for this 100,000,000 tons of sewage; and this poor land, which would need at first enormous supplies of fertilising matter, might thus for a few years receive nearly the whole of this enormous quantity. In the mean time all the low-lying land along the course of the new sewage river would gradually be receiving a portion here and there, as its tenants realised the advantage of the dressing, and ultimately, in all probability, only a portion of the material would reach the terminus estate, which would, however, by that time be in a condition to do with less. And ultimately, no doubt, if the supply should exceed the demand for both these purposes—reservoirs might be obtained here and there along the line, into which pumps will deliver portions of the manure, so as to command the higher land, for which a portion of the sewage may be wanted.

It seems to us that the South Essex scheme—using the sewage in the district towards which Mr. Bazalgette's channel already takes it—using it in a district where the nuisance it will create must be a minimum—taking it along a line where cheap land is to be had to a terminus where an absolute waste exists, which may be enclosed and fertilised—is most in accordance with the existing experience in the use of sewage. In its terminal inclosure, and the long line of suitable country which may ultimately be benefited—it combines all the elements of ultimate success. *Oxford Jour.*

THE PAST HARVEST AND THE COMING WINTER.

Gloucestershire: *Elkstone.*—So little of the produce of the late harvest has been threshed that little actual experience has been ascertained of the yield. Wheat and Barley, however, it is expected will give nearly an average yield, whilst the crops of Oats and Peas are much below the quantities usually grown. The all-absorbing consideration with the stock farmer is how to sustain the live stock with next to no food. The hay crop of last season is scarcely worth mentioning, and the roots are in many places an entire failure, whilst, where there is a plant, owing to the dry weather and the injury those not entirely destroyed by the grubs have sustained, the quantity of feed these fields will yield is exceedingly small. The Turnips and Swedes now alive present a most stunted appearance; indeed, in some cases, they are prematurely ripening. The straw from the cereal crops, however, is very good, and will have to be cut into chaff to a very great extent. The low price of grain will enable stock farmers to meet this great difficulty with less loss than if the corn were dearer, but this circumstance is portentous as regards the money receipts from the farm, for instead of the corn crop going to market to realise the usual receipts, it will be used for stock to make up the deficiency in the fodder supply, and which stock at the usual time for selling will not probably fetch as much money as in other seasons without this consumption of corn. *J. M. Read.*

THE CATTLE MELON.

Cassiobury Park, Watford.

Sir,—As you express a wish in your Journal of the 15th, that any of your Correspondents who may have tried Mr. Blundell's Cattle Melon should give their experience of it, I will venture to give mine. I obtained 1000 seeds last March or April from Mr. Blundell's agent at Southampton (1200 indeed, there were), for which I paid 2*l.* The middle of May I dibbled them in rows 2 yards apart, and about 1½ yard in the row, in excellent land, deep ploughed, and highly manured, as for Mangel Wurzel; but of the whole number of seeds so planted, only 184 vegetated, or at least appeared above ground. Five seeds taken at random I gave to my gardener to put singly into pots, of which only two vegetated, and the other three when afterwards picked out and examined were found to be quite light and effete. I am bound to own that many of the plants which did grow bore some very good fruit, though very far from the rate of 40 tons to the acre. There cannot be a doubt that a very large proportion of the seed was downright bad, and I cannot but think that when seeds are sold at the rate of nearly three farthings each (5*s.* per 100 when sold in that quantity), some test should be employed by the vendor to ascertain that they are really good and sound. If Mr. Blundell's salesman would send out none but such as sink in water, he would be more likely to give satisfaction to his customers. That test holds good with most seeds, for light floating seeds are generally more or less bad. Having, however, a great opinion myself of the plant, and of its great value at the season of year when it is fit to eat, I shall preserve my own seed this year in the hope of having better luck with my next crop.

Yours faithfully, Essex.

SMITHFIELD CLUB.

We beg to call the attention of our readers to the 1st of November being the last day for entries of Live Stock.

ON STORING ROOTS.

BY T. BOWICK.

A quarter of a century ago, much less care was bestowed on the winter storage of root crops than at present. And, in fact, much less care was needed. Even in Scotland, where the winter is more severe than in our southern or mid-England counties, Swedes used to keep well through the season without any—or at the most very little—care being bestowed upon them. A double mould plough might by some careful men be run up betwixt the ridges, say in November or December, throwing additional soil around the bulbs; but storing, in the present acceptation of the term, was then unknown.

What has led to such a change of practice? Have the winters become more severe? Or has the constitutional hardiness of our roots deteriorated? The latter may in some measure be the right suggestion, but it does not contain the whole truth. One or two causes can be mentioned as combining to produce this state of things.

In the first place, our seedsmen, in aiming at suiting the popular taste for large bulbs with small necks and tops, have probably been breeding from too fine a stock, generation after generation. Skirving of Liverpool, to whom all root growers are more or less indebted, remarked to us, a couple of years ago, at the Smithfield Show, that he had by repeated experimental

selections of this kind, managed to raise roots with scarcely any visible neck, and possessed of only two or three leaves sprouting from it. He, however, well knew that this was obtained at the expense of hardihood of constitution, and that such roots would be injured by even a very moderate frost. He therefore discarded that class of root for a more robust and larger topped development.

Again, in the race for bulk of individual specimens, and of large acreable returns, stimulating manures have been very extensively employed. Few will argue that this has been unattended by deterioration of constitution.

In many districts, too, an increase of game compels the farmer to secure his root crops from being gnawed and injured, and consequent loss sustained.

Hence it is only natural that more care should be bestowed in storing, than in bygone days. The Royal Agricultural Society of England—see Journal, Vol. 2, page 225—directed attention to this subject; but it is respectfully submitted that the plan there officially sanctioned is not now the best which can be availed of by the farmer. Neither is the generally adopted method of storing in small round heaps in the field free from objections. The drawbacks to this method are that the roots have generally to be thrown a considerable distance to the heap, all round—the skin is thereby injured, and decay too often follows. The fact of their being piled up, also, above the surface of the ground, exposes them much more to climatic influences; those near the surface on the sunny side of the heap begin sprouting apace: while the outlay in labour, with a large crop, is assuredly no mean item.

The writer has tried various plans of storing, but having found the following method to answer every purpose—to be at the same time economical and effective, he has no hesitation in recommending it.

For the main crop of Swedes, from the beginning of November to the second week of December is generally the most suitable period for raising. With a common ridge horse-hoe, run up betwixt the drills, cutting the rootlets and point of the tap root, at a sufficient depth in the ground. In order to do this, it is only necessary to set the cutting blades outwards instead of inwards. The pulling may follow at convenience, and that is very greatly expedited by the operation previously referred to. Then throw out, with a double turn of a common plough, an open furrow, at each 12 yards distance, throughout the field, and let the pullers store the roots in the furrow thus opened. Care has of course to be taken that the bulbs are not roughly used when thrown towards the furrow, so as to injure each other. This however is easily managed. We have been in the habit of cutting off only the tops, leaving the further cleaning and trimming until the Swedes are required for use. Their being so left does not entail greater expense at one time than at another, while we have no hesitation in affirming that they come out of the soil fresher by this plan than by any other. A double turn of the plough accomplishes the chief part of the covering—a neat finish being readily made by the spade. It will be observed that the stored roots are much less exposed to the change of weather by this mode than by throwing them together in round heaps above ground. Where a crop requires to be carted off before winter, a different method must of course be adopted, though even in that case we should strongly recommend a similar style of storing, upon any convenient headland.

With Mangels we have ere now successfully adopted the same plan. But as this crop is generally carted off for consumption elsewhere, it is better that they be stacked in the like way, where needed. A pit 9 feet in the base, if dug out 15 inches deep, will give soil enough for a moderate covering to the crop. At all events let us urge the covering with soil. An inch of soil is worth more, in a severe frost, than a foot of straw. If you want to thatch let the thatching be over all. For ventilation we generally employ a common 4-inch drain pipe, running the full length of the Mangel stores, and having an upright chimney of the same kind, at each 6 or 8 yards apart. Great attention should be paid to the handling of Mangels, as they are even more readily bruised and injured than Swedes. With them, too, we recommend that the roots remain untrimmed until required for use.

Potatos follow next. Our subject has to deal with the storing rather than the raising of roots, and we cannot therefore enter into the many different modes employed in raising. Where the soil and season are not too wet, we employ a Potato-raising body, attached to the frame of a common double mould plough. And, with the needful harrowing, one man and a pair of horses keeps a score of active pickers well at work. Our stores are formed 6 feet wide, dug out 10 inches deep, and continued of any length. A very light sprinkling of straw is strewed over the Potatos for the purpose of keeping the soil from getting too far in amongst them. The stores are ventilated in the same way as recommended for Mangels; and from such stores we were throughout the past winter regularly sending excellently conditioned esculents to the London market.

With Carrots some care and attention are needed in the raising, else the job will prove alike inefficient and costly. Run a subsoil plough, drawn by two horses yoked in tandem fashion, down betwixt the rows, thus slackening one row at a time.* They are then readily pulled without digging or forking, and the cost materially lightened. The crown should not be injured in cutting off the top, and pretty careful oversight is needed to secure this.

Let them be stored in oblong heaps of about the same width of base as the Potato stores. Ventilate similarly, and let especial attention be paid to the fact that the looser and more carelessly they are heaped together the better. That is, that they be not neatly and stylishly packed, with the crowns showing outwards in the way that farm labourers would generally prefer. Cover up also with loose earth 10 inches thick and sort over in February, when they should be found in first-rate condition. With care they will keep well for two months longer, but we know of no good end to be accomplished by so doing. Mangels or Swedes are better keepers for late spring feed, if stored according to the plans suggested.

PATERSON'S SEEDLING POTATOS.

RATHER more than a year ago we published the results of several remarkable experiments made by Mr. William Paterson, fruiterer, Union Street, Dundee, in the rearing of new varieties of Potatos from the apple. The productiveness of the new Potatos so greatly exceeded that of the old varieties that people who had not seen them unearthed as we did, at once set down our report as being, if not apocryphal, at least somewhat exaggerated.

That there might be no room for scepticism or gainsaying, the trial of the seedlings was gone into this year in presence of a competent jury. The assize was held in a field of about 16 acres on the farm of Balmydown, on the estate of Baldovan. The parties present on the occasion were the following, viz.:—Norman Ogilvy, Esq., Baldovan (representing his father, Sir John Ogilvy, Bart., M.P., who was unavoidably absent), Councillor James, Dundee; John Coutts, Esq., Potato-factor, Covent Garden, London; Edward Chapman, Esq., Potato-factor, Farringdon Market, London; Thomas Wordley, Esq., farmer, South Ockenden, Essex; George Sibbald, Esq., farmer and market gardener, Drumgeith; George Elder, Esq., farmer, Mains of Longforgan; Peter Luke, Esq., farmer, Logie; Charles Christie, Esq., Potato and fruit merchant, Dundee; and William Miller, Esq., farmer, Balmydown. A glance across the field was sufficient to show that its crop belonged to a more robust sept of the Potato race than those to be seen in neighbouring fields. Most of Mr. Paterson's varieties were growing as vigorously as if it had been the month of July, instead of the first week of October. One or two of the kinds were covered with blooms, and all of them were weighed down by a magnificent crop of fully developed apples—a spectacle by no means common in Potato-fields since the plant was so mysteriously smitten down by disease 18 years ago. Beginning at one side of the field, the digging was carried on right across, a yard of each kind being taken, and weighed with the following results:—

	lb.
Paterson's Regent	7½
Walker's Regent	4½
Paterson's Magenta, or Forfarshire Red ..	6
New Perthshire Red	10
Paterson's Blue	10½
Paterson's Red	10
Victoria (still in bloom)	12
Scotch Blue	11½
Irish Blue	11¾
Goliah Kidney	8¾
Seedling Rock	8

With the exception of Walker's Regent, all the above varieties are Mr. Paterson's own seedlings. The produce, it will be observed, is very large—in the majority of cases, indeed, enormous. As regards one or two of the varieties, we find, on referring to our last year's report, that there has been a slight increase in production this season, notwithstanding that this year's Potato crop is in general much inferior in weight to that of last year. One variety, the "Victoria," shows 12 lbs. to the yard this year, while last year it produced, under similar conditions, no more than 9¾ lb. The Victoria is remarkable for symmetry and quality, as well as for its vigour and productiveness, and promises to become a general favourite with Potato-growers. It is well reported of by all who have given it a trial. Mr. Paterson has another seedling, which he has dubbed the "Napoleon," even more robust and healthy-looking than the Victoria; but as it was late in being planted, and not nearly ripe, no trial was made of it. When at maturity, however, its tubers are quite equal in point of quantity, quality, and shape to those of the Victoria. Its stems, which rise to 2 or 3 feet in height, are more like trees than Potato "shaws." One of the gentlemen present (Mr. Chapman) pulled up a plant of the New Perthshire Red, the produce of which weighed 7 lb.

The field on Balmydown Farm was manured by Mr. Miller with ordinary farmyard manure. Mr. Miller also gave it the horse labour, the manual labour having been done by Mr. Paterson. The treatment was in every respect similar to that generally adopted in field culture, so that the extraordinary productiveness of the crop must be owing entirely to the inherent qualities of the plants themselves, and not to any process of nursing or coddling on the part of the grower. We may add that the gentlemen above-named expressed their entire satisfaction with the means adopted to ascertain the weight of the different varieties, and also with the results. *Dundee Advertiser.*

* Mr. Smith, of Wooiston, has managed the slackening still more readily and efficiently by the aid of steam power.

DEAR MEAT AND CHEAP STOCK.

YOUR meat producers in England are in many cases now puzzled as to how they shall produce food for their fattening or even store stock. Ours in Ireland are puzzled more sadly as to how they will dispose of their store stock when your stock feeders are in so many cases over-stocked. Your feeders are over-stocked because of the scarcity of ordinary feeding stuffs. Ours are over-stocked though we have an over-supply of such food. Some time ago store stock in Ireland ran so short as to induce one of our public instructors to recommend the enactment of a law to prohibit the slaughtering of calves and lambs. One of your public instructors went farther, and desired that such a law should extend to pigs and even poultry. People smiled at the honest simplicity of our instructor, but they laughed outright at the ridiculous nonsense of yours. We, I repeat, have now more store stock than your people can purchase, at prices remunerative to the holders; whilst they have at home, either on their own farms or near their own doors, feeding stuffs of the best kind which can be purchased so cheaply, and judiciously applied, would pay from 50 to 100 per cent. interest on the money thus expended.

We have not in many cases the money required to purchase such food, nor have those who own the stock in such cases the power of holding their own, even did they possess the food and the intelligence necessary to its economic application. No; they have their rents to pay in all cases, and the landlords can but in a few cases allow them to remain unpaid. Nay, more than that; many stockholders in Ireland purchased stock last April and May with money borrowed from cattle salemasters or usurious bill-brokers. The bills and rents are now due, and paid they must be, even though the stock purchased last April and May must sell for less money now than they then were bought for, leaving no margin to pay the rent of the land they fed upon, or the interest of the money borrowed to purchase them. That, so far from being an overdrawn picture, is but merely the outline, and the filling up of it would occupy more time than I can command, and more space than you could spare for it. Your people are exercising their great ingenuity, in which you are yourself ably helping them, to devise such means as will enable them to economise their food, by the application of windmills and steam-wrought machinery. We have as strong winds as you can have, and certainly not less regular in their action. But we have not the steam-power, nor the means of applying it if we had it, that you can command; not but we have as good fuel as you have, but another kind, were we in a position to use it.

We have what is better than wind or fire, because more regular in its action than the one, and far cheaper than the other—we have an abundance of water-power, passing idly by or through our farms, or in many cases, worse still, deluging and perishing both the lands, whose resources it is so well calculated to develope, and the stock and crops produced on them. Why is this a true description, so far, of such things, and what is the cause? There is one cause, and the primary one, which every man can discuss without fear of contradiction by any one, however humiliating it must be to all. The cause is ignorance; yes, downright and, to a certain extent, confirmed ignorance, which, with the exception of a few professional men and rent-paying farmers, pervades through all classes, from the highest peer of the realm in Ireland or out of it as a landed proprietor, to the lowest holder of a few acres in the wilds of Donegal, Connemara, Mayo, Kerry, or any other county in Ireland. You have for a long time devoted much attention, but more especially of late, to the consideration of agricultural education even in Ireland. In your last notice of it you have paid a marked compliment to Dr. Kirkpatrick, who has resigned the agricultural Inspectorship of national agricultural schools and model farms in Ireland. Every man who knew the doctor well would be disposed to join in that compliment in as far as good intentions went; but there was much more than good intentions required in such an affair; characteristics which, however indefatigable in his profession, and however amiable in his disposition, the doctor did not possess.

Even if he had possessed those characteristics in the fuliest degree, it is very doubtful if the stringency observable in the conduct of the Board of National Education—constrained to it no doubt by the Government in each successive case—would permit him by example to remedy to any appreciable degree the evils I have just glanced at. Neither the doctor nor the Board, if he did his duty, can plead ignorance of the causes which led to the failure of those agricultural schools in remedying those evils, in as far as their influence should go and could have gone. The means that could and would have so far beneficially operated, were more than once described to him as within his reach, if put into requisition, which could have been readily done with

not only in any case very little additional outlay of capital, but with a saving of capital in some others, and an increase of it in many more.

What these means are, Ireland, poverty-stricken as she is, possesses within herself, and quite easy of application, and which I would now point for the consideration of your readers, who are numerous at both sides of the Channel, for the matter concerns all; but I prefer withholding them, pending the appointment of Dr. Kirkpatrick's successor, which appointment may be made at this moment for aught I know or can know.

Whoever the successful candidate may be in this important contest, I with, I hope, becoming respect, here warn him against the errors hitherto so observable in the agricultural teachings under the Board of National Education in Ireland. Attempts have been already made to expose the shortcomings of such teachings, but as they were made by men who were ignorant of what such teachings should be, or prejudiced against what they could be, their objections were quite unavailable for good, but fraught with some evil, no matter how intended. Your English readers may in some cases think this writing rather enigmatical, for such it must appear.

There may not be any occasion for further elucidation. However, if any such occasion should hereafter present itself, I promise them, if spared and that you permit it, they shall know why the Board of National Education in Ireland by its teachings, indirectly if not directly, rather encourages than removes the necessity for the sale of Spanish beef in the markets of Dublin, whilst we have Irish cattle in abundance, which, if fed on Irish produce equally abundant as to defy competition from Spain at least, besides giving an abundance of store stock, and if needs be crops to feed them, at a cheap rate to your stock feeders, would increase the profits of the producers in Ireland. How this can be done it will be, in part at least, the duty of the new Agricultural Inspector to show. *Edward Carroll, Dublin, Oct.* 3.

Home Correspondence.

On Crossing the Breed of Animals.—The cross-breeding of farm stock in England must be considered of great importance when it commands the attention of such a statesman as Mr. Disraeli. Be that as it may as regards English breeders, it is certainly of vast importance to Ireland as regards the breeding and feeding of stock; and hence it is I wish to offer a few remarks on it, and in doing so, supply so far the facts called for by your intelligent correspondent, Mr. S. Taylor, in your last week's issue. If in giving those facts I appear as if controverting some of the theories laid down by Mr. Taylor, I do so with becoming and respectful deference. Mr. Taylor writes, "But when the female from her size and good constitution is more adequate to the nourishment of the fœtus of a smaller male than herself, the growth must be proportionally greater." My experience in cross-breeding with every species and variety of farm stock, for now close upon half a century, leads me to entertain an opinion in many important cases directly in the opposite direction. I believe the discussion arose from Mr. Disraeli having recommended the crossing of the Southdown ewe with the Cotswold ram. If I am rightly informed, your fine Oxford Downs were obtained from such crossing. This much I know of my own knowledge: that in Ireland those very Oxford Downs have been increased in size, and in the weight of both mutton and wool, by another cross with the Cotswold ram. Mr. Taylor goes on—"The large female has also a greater quantity of milk, and her offspring is more abundantly supplied with nourishment after its birth." That I deny *in toto cælo*, as regards three of the most important herds of the day compared with three others thought far less about. The important breeds I allude to are the Short-horned, the Hereford, and the Devon cows, compared with the Ayrshire, the Kyloe, and the little Kerry, to which I could add other distinct breeds if necessary. Those breeds I have crossed in both ways, and every way that I could conceive it possible to produce the best results with, and those were with the best bred Short-horned bull, and the larger, if well formed, the better, and each and every one of the smaller cows I have named. In these cases I have found the fœtus much larger, strange as it may appear to Mr. Taylor, and the respective dams to produce more milk, and of a better quality, than the majority of the finest, largest, and best bred Durham cows. Mr. Taylor proceeds, and quotes from Cline: "The great improvement of the breed of horses in England arose from crossing with those diminutive stallions, Barbs and Arabians, and the introduction of Flanders mares into this country was the source of improvement in the breed of cart-horses." This may have been the case in England for aught I know of my own knowledge to the contrary, but this much I know—that the great degeneracy of Irish horses is owing to the use of small though highly bred horses on every description of mare, whereas the contrary effect has been produced by using large well-bred horses of every variety on medium-sized and even small pony mares. These are facts which no good authority, in Ireland at least, will attempt to gainsay. Mr. T. still proceeds: "The form of the swine has also been greatly improved by crossing with the small Chinese boar." If my opinion on stock breeding of any kind is of more importance in any one class of stock than in another, it is on pig breeding. I have had the Chinese, the West Indians, the Westphalians, "the Irish greyhound pig," the Neapolitan, the Berkshire, the Yorkshire, large and small, and a great many others said to be distinct kinds, all under my charge at once and for a long time. I have crossed them, as Paddy would say, "hither and over;" and the best and most profitable crosses I ever had were with the largest and best Berkshire boar I could procure, on each and every one of the above breeds, large and small; whereas by crossing with any of the small boars I never could produce profitable stock on any sow, large or small, of any of the breeds, that is compared with the opposite crossing. In following Mr. Taylor I must again return to sheep. "Some of the graziers in the Island of Sheppy conceived that they could improve their sheep by large Lincolnshire rams, the produce of which however was much inferior in the shape of carcase, and the quality of the wool, and their flocks were greatly injured by this attempt to improve them." Personally I know nothing whatever of "the Island of Sheppy" or its sheep; but I know the highlands and mountains of Ireland well, and the different breeds of sheep found to do best on them, beginning with "the native Cotthough sheep." The Shrimoughs,* taking in the Scotch Highland "hornies," the Cheviots, the different "Downs," the large "Roscommons," the Cotswolds, the Lincolns, the pure Leicesters (if there be now such things), "the border Leicesters," *et hoc genus omne*, and the best crosses I have ever had, or have known to be had by any one else, were those from the large, strong, sound, well-bred rams, on every description of ewe, large or small, suited to such high and exposed situations, and the very worst from the small rams. And here again I would join issue with Mr. Taylor, both as regards the fœtus from, and the milking qualities of the small ewe compared with the largest, *cæteris paribus*. I would go even farther than Mr. T. has gone in supplying "facts," for I could, if necessary, give the cases also of dogs and poultry, nay, include hares and rabbits, for although no sportsman myself, having never seen a greyhound coursing match in my life, nor ever shot a hare or a game bird of any kind, I have had a great and varied experience nevertheless in contributing professionally, sometimes against my will, to the production of pabulum for those whose tastes and avocations were different to my own. If my object was to write an elaborate essay on the cross-breeding of stock, I would feel coerced to give in all cases exceptions to the rules thus cursorily glanced at, but like all exceptions, they would but prove the correctness of such rules. One rule I have made it a point to observe in all such cases—to guard against putting a large sire to a small female if the sire's head was a large one (I mean very broad across the forehead) as the only inconvenience I have ever experienced in such crossings arose during the period of parturition. In concluding this I fear over lengthened letter, permit me *pro bono publico* to ask Mr. Taylor and those who may think as he does in cross-breeding stock—How is it that the wild cattle, wild horses, wild pigs, and wild poultry, as well as our own deer, contrive to keep their species from degeneracy? Surely it is not by permitting the small and consequently weakest males to become lords of the respective harems. *Edward Carroll, College Hotel, College Street, Dublin, Oct.* 17.

* "Cotthough sheep" are sheep time immemorial found on the Irish hills and mountains. They are small sheep, with very small ears, and sometimes without any ears at all. "Shrimough sheep" are sheep with spotted black and white faces, which, as lambs, have brown ears, and brown legs; once common on our lower and medium quality of lands. They were good in their day as mutton and wool producers, and famous nurses. They are now, I fear, all but extinct, certainly so as a distinct breed. Nothing is known of their history, and less still of the sheep resembling the Merinos, in Ireland time immemorial. *E. C.*

Societies.

Social Science Congress at York: *Piece-work in Agriculture.*—Mr. E Chadwick, C.B., read the following paper on this subject:—We have been requested to make provision in the section of Social Science for the discussion of agricultural economy. It may be advantageous to both to observe the application of the same economical principles under different conditions. I am only repeating the testimony of a person of wide experience as a land valuer and successful land improver in manufacturing districts, when I say that if the rudimentary economical principles to which the great progress in manufactures is due, were applied to the land, large differences in agricultural and economical results would be obtained. The contrast of the miserably low rates of wages in agriculture, as compared with the rates of wages in manufacture, is attended by corresponding slowness of operations, and differences of result. One advantage, however, on the side of manufactures, is the conditions which admit of the easy application of the principle of payment by the piece. It is admitted that manufactures, and certainly not the cotton manufacture, could not be carried on at the present rate or at the present net wages, if it were necessary to use the large population of day work that is used in agriculture. A great deal of this is due to the low education of farmers, many of whom have not had a common elementary education, and cannot write their own names, and are therefore unapt at laying out piece-work or keeping any account of it. Market garden agriculture, some of it on a very large scale near the metropolis, where three or four crops a year are obtained, where they have no fallows, presents examples of the more extended application of the principle of piece-work, with advanced results such as practical witnesses declare to be applicable to the working of farms. On the piece-work principle in market garden culture, the wages are brought up closely to moderate wages in towns, or a 30 per cent. in advance of the common agricultural wages. But what would be the progress of manufacturers if the manufacturer, before he hired a workman, were placed under a position in which he would have to inquire not as to his skill, but whether he belonged to that parish; and if he did not, were to have to refuse him, or only to engage him if he resided beyond it, and had often to do a large part of a day's work in returning to and from the place of work. Yet such are the obstructions to the free circulation of labour still maintained in a large proportion of parishes in the south by the retention of the law of parochial settlement in defiance of the evidence and conclusions presented upon it under the Poor Law Commission of inquiry. Agriculture, as compared with manufactures, labours not only under a greater deficiency of interest in the labour, but under a lack of interest in the results on the part of the superintendents of cultivation by farm bailiffs or stewards. This is a topic of greater economical importance to the whole of the industry of the country, commercial as well as manufacturing, than is yet apprehended, and merits the especial attention of this department of the Association. A provision in a Bill brought forward during the last session by Mr. Scholefield did not receive the attention which its importance demands. It enabled the principal, or the employer in any concern, to give to his subordinates shares of profits, and also imposed responsibility for losses without making them partners. Such a provision would be of peculiar importance for agriculture, especially in the case of owners engaged in professional and other pursuits who wish to farm their own lands, and to make improvements in their working. Improvers of this class commonly fail in the execution of their plans for want of superintendence and zeal to overcome difficulties which only a direct interest will impart. The piece-work principle is only efficient in agriculture when it is vigilantly and laboriously checked, and that is the point at which gentlemen farmers with other and various objects of attention particularly fail. It is only gentlemen farmers or persons of income from other sources who can afford the risk of trial works or experimental courses. New machines fail in the hands of labourers who have no interest in their success, or that are interested in their failure. Machine makers are often obliged to bribe farm labourers to work machines on their introduction. As it is, there is as much useful invention unused as there is of machinery used, and it is unused from the ignorance or the inaptitude, or want of interest of the labourers. I am informed by an eminent agriculturist of Holland, Mr. Amerfordt, the Mayor of Haarlem, that a system of agricultural payments for results in addition to fixed wages excites zeal and vigilance, and that it works excellently. The steam plough is introduced, and over and above the regular wages a certain extra payment is made for each hectare which is pronounced to be well ploughed; the payment being divided between the engine man and ploughman and boys in attendance. The horsekeeper, over and above his fixed wages, has a payment for each living foal got from a mare; the cowkeeper has an extra allowance for each living calf got; the shepherd, an extra allowance for each lamb sold or living six weeks after it is born; the poultry keeper, an extra allowance upon each hundred eggs delivered to the housekeeper, and upon each hen or cock sold; and the dairymaid, an extra allowance for each lot of butter and cheese sold, without reasonable objection to its quality from the purchaser. On this particular farm the cereals are at once worked up into bread for sale. The baker on the establishment has a fixed wage allowance, for which, however, he must sell not less than a given quantity of bread. For all that he sells above a given quantity, he has a per centage. Fines for irregularities, coming late, neglecting horses, are put in a common fund, which is every quarter divided equally amongst the men, so that the punctual and diligent have an interest in looking after the laggards. The principle of payments for results, of which, by the way, I believe I first talked in respect to school teaching, where it has been applied in a defective manner, has been applied in agriculture in Scotland in the payment of shepherds. In England there has, I am told, been a glimpse of the principle in one district in game preservers, who find it to their interest to make it the interest of farmers to be preservers too in paying them per covey of partridges preserved on their farms. This system, I am assured, works as persons conversant with manufactures would expect it to work. The stated agricultural action is replaced by a vivacious outlook and intelligence. The food manufacturer is saved the labour and distraction of superintendence and incessant fault-findings for carelessness. With us the benighted law of partnership would prevent the baker and other servants being

made responsible for losses as well as sharers in the profits, making them partners, and rendering the employer liable in his whole property for the defaults of each. The association would render much service to agriculture as well as to trade by agitating to free it from such injurious restraints, and advance the great social and administrative object of making interest coincident with duty.

Reviews.

The Journal of Agriculture and the Transactions of the Highland and Agricultural Society of Scotland. Blackwood.

The most interesting paper in the October number of this periodical is the account by "An Old Norfolk Farmer" of the deterioration of the Turnip plant, and of the late prosecutions in Ireland on that account. He quotes a great many passages from the oldest agricultural writers to show that it is no new misfortune that has befallen the plant, but that in all times, from those of Columella downwards, men have occasionally sown the seed of the Turnip, and have grown a Rape like plant which would not form a bulb.

The case at the Cavan Quarter Sessions, to which the article principally refers, was reported at the time in our columns. Mr. Drummond's evidence clearly proved that the seed of the Swedish Turnip does in this way exhibit great liability to sport; and the only ground, as it appears to us, on which the buyer of such seed can rest any hope of hereafter recovering damages against a seedsman lies in this—that this liability is to some extent the result of the previous education, so to speak, of the seed itself. It is not solely due to the peculiarities of treatment, soil, or climate which it experiences in the hands of the buyer, but it is owing to the character which it already possessed previous to its purchase. The grower of the seed is to some extent responsible for its character, and he has no right to send it into the market under false colours. If grown carefully from successive generations of transplanted and properly cultivated roots, the tendency to sport is reduced to a minimum; but it is still Turnip seed, though it may have been harvested from a late-sown crop, which never came to size enough for food, and therefore was allowed to stand another year and seed. In the latter case it is worth less than nothing, often doing a great deal of mischief. And the difference between the two ought to be specified by the salesman, and well paid for by the purchaser. There is a clear dishonesty in selling *that*, as likely to produce a crop of Turnips, which is likely only to produce a crop of leaf and stem.

The Old Norfolk Farmer concludes that there is a "decided tendency of the Turnip, and particularly of the Swede Turnip, to revert to its original character of Rape or napus (or navew, as the ancients called it) under various conditions, some of which, like the one just quoted, are well and strongly defined, whilst others are involved in mystery; but all of them are sufficiently characteristic to clear an honest seedsman from responsibility. As justly might a farmer claim compensation for the disease in a crop of Potatos from the person of whom he purchased the seed-tubers, though there might be no appearance of the disease upon them. We should expect that, after the light that has been thrown upon the subject by the evidence adduced on the late trials, and since, in the public prints, no seedsman will henceforth venture to give a guarantee with Turnip-seed, or fail to announce such a resolution at the head of his bills; for it is evident that in future, when such actions are brought into court, the question of damages must turn solely upon that of a guarantee; and if none is given, no responsibility can be adjudged."

He then recapitulates as follows the facts which his paper proves:—

"1st. That the Turnip plant, in all its varieties, is considered by naturalists to have been derived by cultivators from different species of Rape.

"2d. That there is a constant tendency in the plant to revert to its original state and character of Rape.

"3d. That this tendency has been known, observed, and recorded by agriculturists from the earliest ages, especially by those eminent writers of the first century of the Christian era, Pliny and Columella.

"4th. That this tendency in the Turnip plant to degenerate, or revert to its original condition of wildness, is promoted by various causes, as—

"(1.) By imperfect cultivation and want of draining.

"(2.) By the soil being either too poor or too rich.

"(3.) By sowing too thick.

"(4) By the neglect of hoeing till it is too late for the plants to bulb properly.

"(5.) By the improper use of lime in a caustic state.

"(6.) By various causes of soil, climate, atmospheric phenomena, &c., too occult to be defined, but which are supposed to operate injuriously, particularly in Ireland, where this tendency of the Turnip to 'sport' is more prevalent than in England or Scotland.

"5th. That seed produced from the most carefully-selected and transplanted bulbs are not sufficient to insure the crop against deterioration or 'sporting,' to a greater or lesser extent.

"6th. That therefore to sue for damages against a seedsman, with no better proof of fraud than the simple fact of deterioration, is unjust, and can only be successful through the ignorance of both judge and jury of the character and history of the Turnip plant."

It is on the fifth point that his argument is not quite conclusive. Carefully grown seed is much less likely to sport than that which is without a good pedigree; and to sell the latter as though it were trustworthy like the former is a wrong for which we imagine that the law will still provide a remedy.

Outlines of Modern Farming. By Robert Scott Burn. Vol. IV. *The Management of the Dairy, Pigs, Poultry.* Virtue, Brothers: 1, Amen Corner.

Mr. Burn here presents us with another section of his rudimentary treatise for students of agriculture. The whole series will prove a very closely and well packed compilation, containing a multitude of facts relating to every part of the agricultural field, which a good index will make accessible to any one, whether mere student or a reader in actual farm practice. We extract a passage on the winter feeding of cows, appropriate to the present occasion:—

"Dr. Voelcker, as corroborative of the fact, which seems obvious enough, but, nevertheless, is really very much overlooked by dairymen, that the food has an influence on the quality of the milk, mentions that the cows of the Agricultural College, when taken in from the scanty supply of the Grass in the October fields, and placed in stalls, and fed with hay, roots, and meal, the quality of the milk increased at once, and gave 4½ per cent. of butter in place of 3½ per cent. when not so treated; the evening's milk, after the cows were out all day at Grass, yielded only 3 per cent. of butter. In the winter months the cows were wholly kept in doors, when the milk was at once more abundant and richer in quality. In February the daily food was as follows:—

At 6½ A.M. 12 lbs. of hay.
9 ,, 15 lbs. of Mangels, cut fine, and mixed with 3½ lbs. of straw chaff and 1 lb. of hay chaff.
11½ ,, 4 lbs. of Rape cake.
3½ P.M. 15 lbs. of Mangels, cut fine, and mixed with 3½ lbs. of straw chaff and 1 lb. of hay chaff.
5 ,, 12 lbs. of hay.

"We now give brief details of other modes of feeding, the first being taken from the *Agricultural Gazette*:—

"'Half a cwt. of Turnips, 16 lbs. of hay, and 24 lbs. of Wheat and Oat straw daily are very large rations for a small cow—say 6 score a quarter. Cut the straw into chaff, mixing a very small quantity of hay, and pulp the roots, mixing them all together. You will thus save much hay.'

"The following is the mode detailed in the Prize Essay on 'Dairy Management,' published by the Yorkshire Agricultural Society, and of which the Rev. Mr. Pulline is the author:—

"'It is a good plan to take up the cows as soon as the nights become cold—say the middle of October—as the white frosts which occur about that time cause them to run off their milk. They are turned out during the day till the middle of November, if the weather keep fine. From that period till May Day they are kept entirely in the house, except being turned out a few minutes every afternoon to water. They are milked at half-past 5 o'clock, morning and evening. As soon as the man who feeds them comes in the morning, the dung is all removed, and each cow has a feed of 28 lbs. of roots:—

At 7 A.M. 7 lbs. of chopped hay.
9 ,, A pail of water, with ½ lb. of Bean meal stirred into it.
10 ,, 2 lbs. of Linseed cake.
1 P.M. 7 lbs. of chopped hay.
2 ,, Turned out to water, and then 2 lbs. of Linseed cake.
5 ,, 28 lbs of roots.
8 ,, 7 lbs. of chopped hay.

"On this system of management five cows produced in seven weeks, from the 25th of March to the 10th of May, 191 rolls of butter, 24 ozs. to the roll—equal to about 254 lbs., 16 ozs. to the lb. To this must be added, 154 quarts of new milk, and 42 quarts of cream, consumed in the house. The milk was not regularly measured, but averaged about 60 quarts per day.'"

The present number of Mr. Burn's series contains a great deal of information on the treatment of live stock in disease, which has been prepared for it by a veterinary surgeon.

Farm Memoranda.

Glasnevin.—I was told that both at Cirencester and at Glasnevin the attempt to teach either the science or the practice of agriculture had entirely miscarried, besides incurring ruinous expense; and that the precedent should be taken rather as a warning than an example. I felt that if these assertions were true, it was at all events desirable to know what had been the causes of failure; and happening to be in Ireland, on a geological excursion, I resolved, on my way back through Dublin, to pay a visit to the Albert Training School. . . . Shortly after passing the Botanic Gardens I found myself driving by the side of a better trimmed Thorn hedge than any I had seen in Ireland, and over it I saw heavy crops of Oats, Mangels, and Italian Rye-grass, which unmistakably showed that I had reached the Model Farm of Glasnevin Training School. . . . Mr. Boyle, to whom I was referred on the occasion of my visit, is the agriculturist who, under Dr. Kirkpatrick, manages the model farm, and gives practical instruction to the pupils out of doors. He had himself been trained as a pupil at Glasnevin.

I was conducted first through the buildings—they are partly educational, partly farm offices. The educational consist of a large schoolroom, the walls of which are hung with maps and diagrams, bearing on agricultural questions. Adjoining the schoolroom there is a museum, a laboratory for chemical experiments, and a dispensary for veterinary medicines, &c. I was shown also a dining hall and a number of well ventilated dormitories capable of accommodating about 90 boarders.

The farm offices consist of dairy, cow, byre, cattle sheds, stables, and barn with steam engine. There are tanks for receiving and retaining the sewage of the establishment—and which at suitable times is pumped up by the steam engine for irrigating the fields of Italian Rye-grass.

The land attached to the buildings consists of a farm of about 164 acres, and a garden, which with the shrubberies extend to about 10 acres more.

There are two gardens—one has specimens of common plants indigenous to Ireland, botanically classified and named; the other, in which also there is a vinery and greenhouse, is devoted to fruit trees, vegetables, and flowers.

The farm bears the usual cereal, pasture, and green crops,—according to two systems of rotation. The heaviest crops of Oats and Wheat which I saw in Ireland were at Glasnevin, and were being carried to the stackyard on the day of my visit.

A large herd of dairy cows were in the pasture fields,—a cross between a Short-horned bull and the best Irish cows purchaseable in the Dublin market. The milk, so far as not consumed at Glasnevin, is sold in Dublin.

The pigs were of the Yorkshire and Berkshire breeds. I do not remember having noticed the sheep. There were well arranged and well-kept poultry-sheds and courts near the stackyard.

The whole establishment, both in and outside, had the appearance of neatness and tidiness. They presented in this respect a striking contrast to what is too general in Ireland, and read a lesson which the directors of the great Public Cemetery, and even the managers of the Botanic Gardens at Glasnevin would do well to profit by.

The farm buildings were in excellent order. The farmyard was clean, though at the busiest time of the year. The fields and hedges were remarkably free from weeds.

My conversation with Mr. Boyle, in the course of our forenoon walk, satisfied me that he was eminently qualified for his post. He is a thoroughly practical farmer;—has evidently had a good education; and he possesses a cheerful animated manner, which must be pleasant to his pupils.

Mr. Boyle was most frank and communicative on all the points which occurred to me for inquiry. Even on the tender point, "Does the farm pay?" he at once made the fullest avowals. . . .

It appears that last year the expenditure exceeded the returns by 93*l.*; and that the year before, the returns exceeded the expenditure by 109*l.*

It is only, however, fair to add that the farm is not debited, as it might be, with the labour of the pupils who are boarded at Glasnevin, and who work on the farm—Mr. Boyle thought that the value of their labour might be stated at from 150*l.* to 200*l.*

It will be observed that the farm is debited with a rent of nearly 4*l.* per acre, which is rigidly exacted; and which with reference to the apparent quality of the soil, seemed to me rather exorbitant.

This financial question, however, I consider a very subordinate one. The intention and use of the farm, as a pertinent and appendage of the school, is partly to illustrate and explain the lessons which are taught there, partly to familiarise the eyes and hands of the pupils with the implements, crops, stock, and general operations on a well managed farm. It can scarcely be expected that a farm which is conducted with a view to these objects chiefly, has much chance of yielding a profit, after paying a heavy rent. The absence of profit is just the price, which the managers of the Institution have to pay, for making the farm an auxiliary to the school, but the use which it is of, in that respect, is so important, that the price, or in other words the absence of profit, should not be grudged—if not excessive. Now, judging by the two years' balance sheets given above, I really think that it is wonderful that such returns as these show are obtained from the farm. They appear to me to prove that whilst the farm is made to serve for educational purposes, maxims of economy are not disregarded, and that everything is turned to the best account.

I shall now attempt to explain in what way the pupils are taught. I may just premise, that though I saw accommodation for 90 boarders,—the number during the last few years allowed to be at Glasnevin is only 60. This was a concession to a Parliamentary outcry for retrenchment.

The pupils when they enter Glasnevin must not be under 17 years of age; and they remain two years if they conduct themselves properly and conform to the rules of the Institution. During the last five years there had been only one case of dismissal.

Mr. Boyle informed me that so eagerly is the privilege of studying at Glasnevin as a boarder prized, that for every 20 vacancies there are generally from 70 to 80 candidates.

The candidates undergo two examinations, to ascertain that they are persons of intelligence and have had a good education. The admissions are half-yearly—viz., in January and July. Two months previously the first examination takes place, when if there are 20 vacancies, 30 of the best candidates are taken. These examinations are held in the country schools of the district, where the boys reside. These 30 are then sent to

Dublin to undergo a competitive examination, to decide which of them shall be admitted.

The instruction in the class rooms is literary as well as agricultural. The literary classes are for Spelling, Grammar, Composition, Book-keeping, Writing, Mapping, &c. The agricultural classes comprise Husbandry, Chemistry, Botany, Geology, Surveying, and Mensuration. These classes are taught by professional men who are selected by the Commissioners.

The out of door instruction is partly in the gardens, and partly on the farm. In the gardens the pupils are made to dig,—to sow at the proper seasons,—to graft trees, and rear vegetables and flowers,—under the directions of an experienced practical gardener. On the farm, they not only receive from Mr. Boyle explanations of the several operations, but they are made to take part, and put their hand to everything going on.

In the garden I saw two lads digging a border in a very efficient manner,—using for that purpose a four pronged steel fork, which seemed to do the work much better than a spade. On the farm I saw several lads in the corn fields and stack-yard, with their coats off, who I was told were pupils, helping to get the grain carted to the stacks. . . .

The Institution has now existed for 14 or 15 years, and on an average about 30 pupils annually have left it, trained and fitted for useful agricultural work of one kind or another. Upwards of 400 persons must therefore have gone forth possessing a large amount of agricultural knowledge, scientific and practical. Mr Boyle informs me that about 100 of these are employed as agricultural teachers at model farms, national schools, and workhouse schools, and that of the remainder, the largest proportion are either farmers or stewards.

[The above are passages from an interesting report by Mr. D. Milne Home, of Milne Graden, Coldstream, in the *North British Agriculturist*.]

Cheshire.—We have now to add to our recent reports of the Cheshire prize farms the following particulars of those which have this year won the prizes of the Manchester and Liverpool Agricultural Society:—

Marthall.—Prize 10*l.*, for farm above 140 acres, to John Hope, Marthall.

The meadow land and Clover on this farm is in highly productive condition. The pasture, upwards of 70 acres, is in five fields, is well managed, and must have had great help, as the soil is not very fertile naturally. All the Wheat is one field, thick on the land, healthy and clean. Oats 22 acres, a specially nice crop, with Clover and other seeds sown, which show equal to the best we have seen this year. The Oats were in two fields, and both very good, except about 2 acres in one field, and near a gateway, which were somewhat shorter. The Potatos, 4 acres, in good state and well managed for the character of the land; being strong adhesive soil. Beans, 2 acres, not good. Beans on the whole are much deficient this year. Turnips, 2 acres, a healthy and clean crop. This farm appears to have been remodelled as to size and form of fields, and nearly all the fences are modern and growing well. The house is respectably kept; orchard and garden productive. Everything about the place seems to have due attention. The claimant produced vouchers which showed an expenditure of 289*l.* 8*s.* 10*d.* [on manures], in the last six years.

Mere.—Prize 8*l.*, for farm above 110 acres—to Charles Morrey, Mere.

The Clover and mowing land is 22 acres, all in high cultivation. The pasture is 56 acres, all equal to the best we have seen in our inspection. Wheat, after green crop, 12 acres, equal to the best we have seen. Oats, 12 acres, after leas; a very large and healthy crop, equal to the best seen in the district. Potatos 9 acres and upwards, seven marketed. Turnips, 3 acres—have seen none better in the locality. The farm altogether well managed, and has been entirely re-modelled at his expense, in 10 fields, in proper size and form. In the first 10 years, claimant states he expended 80*l.* or 90*l.* per annum in bone manure, and in the last six years he has expended in bones from 40*l.* to 50*l.* every year; and he showed the Inspectors 63 vouchers which corresponded with his statement. He showed the Inspectors the building he had done. All the fences planted are in a good growing state, and the farm altogether productive and in high condition.

Peover Inferior.—Prize 6*l.*, for farm above 80 acres, to Henry B. Leech, Peover Inferior.

This is a good farm, lying a little out of the way of good roads. The soil of good quality, generally, and the surface in gentle undulations, with a good supply of water. Not much old Grass, but the land allowed to lie four or five years between each course of cropping. Had 6 acres of early Potatos, mostly gone to market. Two acres of this land sown with Grass seeds, and were up when inspected. Four acres planted or sown with Turnips, Cabbage planted between the beds, before the Potatos even taken up. The winter Potatos very vigorous. These green crops and head-ridges very clean. Wheat, one-half a very light crop, the other half a full crop; all of good colour and ripe. Oats, a full average, Corn crops, clean. Clover, good produce for the season, and free of weeds. Grass, cut from two to five years' down, pastured. Produce good herbage, but bare of Grass for want of rain. An old Grass field of 8 acres, mown this year, much the same as to quality of herbage. The Osiers, a tall thick crop. A well selected dairy stock, pigs, &c. Gates, posts, fences, watercourses, roads, and all the home premises, in very proper and neat order.

Marthall.—Prize 4*l.*, for farm above 50 acres, to Joseph Mason, Marthall.

This is a strong clay land farm, and a well cultivated dairy farm. Lies to a very good road, and near a railway. Roots, corn, hay, and straw, consumed at home. The land is in detached parts, which makes the occupation inconvenient, and spoils the appearance. The Swedes, Mangel and Potatos, all very clean and vigorous, and the headridges well fallowed, and crops dressed. Wheat and Oats, thick tall crops, and the corn well fed, with Clover and seeds, looking well, in the Wheat. Clover, of first year, the second cutting promising for a fair crop for the season. The old meadows produced good herbage, but the after-grass required rain. The old pastures showed evidence of having smelled of bone manure, and one field of 13 acres had more Grass upon it than can be seen on most fields this season. No coarse weeds on any of the Grass land or fences. These, the gates, posts, and entire home premises, in good and neat keeping. The live stock, mostly young, home-bred, and of a useful sort, showing care and attention. The farmer said he did not like work; but somebody did it, both in the house and out of it. Perhaps the wife did it all, as she was busy in the cheese tub.

Hale.—Extra prize, 2*l.*, given by Lord Egerton for farm above 50 acres, to John Goolden, Hale.

This is more an arable farm than a dairy one, and is under good cultivation. The fences, gates, posts, and home premises, are kept in neat and good order. The soil is a good strong loam generally—some portions a light soil and approaching to a peaty soil. Potatos a very vigorous-looking crop, grown in 3 feet drills, and very clean. The Swedes and Mangles promising, but wanted rain. Beans grown in 30-inch drills, and very clean, likely for an average crop, but were sown rather too thick. Oats and Wheat, full average crops; the latter in reaping, and very low and neatly done. Clover of first and second years, a good produce of good herbage. Old meadow appeared productive. The claimant is evidently a tidy, persevering, and industrious man.

Gardens.

First prize, 4*l.*, to James Hobson, Marthall.

This claimant's garden is about 40 perches, and has been mostly taken from waste on the public road side. It contains upwards of 50 fruit trees, Apple and Plums, of the best variety, especially Apples, bearing very fine fruit. The same remark also applies to the Plum trees. In vegetables there are Peas in variety, one new which we had not seen before. This showed a superior variety. Potatos, Celery, Strawberries, Raspberries, Cauliflowers, Cabbage, Parsley, and other edibles. Culinary herbs of variety. In flowers—Pinks of variety, Stocks varieties and superlatively well grown. Dahlias first sorts. A Water cress bed in a small rivulet of water on one side of the garden; also a very small piscatorial conservatory. And amongst many other things, some ornamental, but mostly for use, a very neat green-house, of humble architecture to be sure, but very simple and tasteful; and in looking through and around this little paradise we might, we think, truly observe—

Within this humble cot
There plenty, peace, and pleasure dwell;
When man's contented with his lot,
Smiling joy can grace a cell.

Second prize, 2*l.*, Peter Falkner, Bradshaw Brook, Allostock.

This claimant's garden is upwards of 30 perches of land, apparently taken from a wide and neglected lane. It contains about 50 Apple trees, healthy and young, and including most of the best varieties now cultivated in the county. Also many Plum trees of various sorts and ages, including some good plants for sale. In culinary vegetables, Cauliflowers, Cabbages, of variety. In Peas a new variety, the thickest crop we have seen. Onions, Carrots, Beans, Potatos—in Peas three varieties, and everything luxuriant. In flowers, Dahlias in variety, Carnations, and other flowers. Also a frame with glass for raising Cucumbers and other tender plants. Every inch of ground well done in rustic simplicity. Cottage clean, and the walls inside scarcely a hand's breadth not covered with some device, print, painting, or engraving; all instructive, some grave, some divine, some incite the mind to a merry mood, and amongst this medley of rustic taste for literature and refinement, is an original painting of John Collier and his wife Mary, no doubt by the facetious Tim Bobbin himself, who wrote and published, near a century ago, the book known as the Lancashire Dialect. Of another character we took some lines from five stanzas in needle-work, framed and hanging against the house wall:—

Forward and fear not, though trial be near,
The Lord is thy refuge, whom then should thou fear?
His staff is thy comfort—thy safeguard His rod,
Be sober, be truthful, and hope in thy God.

Third prize, 2*l.*, to George Bowden, Budworth.

This claimant's garden is about 20 statute perches of land. It contains about 20 Apple trees of the best varieties, viz.: Suffields, Golden Spire, Potts' Seedlings, and others. Pear trees, Plum trees, Onions, Peas, Beans, Potatos, and almost all other vegetables for common culinary purposes, besides a forcing bed in frame and glass for more delicate plants, Cucumbers and Marrows, and Carrots. The garden is well protected with high fences, and in the interior, along with useful fruits and other vegetables, are cultivated many varieties of our best old English flowers. Everything is luxuriantly grown. The garden altogether and cottage very neatly kept.

Fourth prize, 1*l.*, Thomas Sorton, Tapley Superior.

This claimant's garden may be 20 perches. It contains in fruit trees, Apple, Plum, Pear, of sorts, some of them past the best; others in thriving state. In culinary vegetables, Cabbage, Rhubarb, Potatos, Celery, Beans, Peas, Broccoli, Cauliflower; with an assortment of various flowers. Also glass in frame for raising Cucumbers, &c. In fruit also, Gooseberries and Currants. This garden is well attended to, and is in useful cultivation. *Macclesfield Courier.*

Miscellaneous.

The Lichfield Agreement.—The following is a copy of the agreement referred to by Lord Lichfield in his speech at the meeting of the Staffordshire Agricultural Society:—

AN AGREEMENT entered into this day of between (who and whose heirs and assigns are hereafter represented by and comprised in the term landlord) of the one part, and (who and whose executors or administrators are hereafter represented by and comprised in the term tenant) of the other part.

WITNESSETH that the said landlord hereby agrees to let unto the said tenant, who hereby agrees to take all those buildings and lands, with the hereditaments and appurtenances belonging to the same, situate in the county of called now in the occupation of and containing particularly described in the schedule reserving all woods, trees, mines, minerals, and quarries, upon or under the same, with full power, and authority for the said land, or his agents, or servants, to fell, work up, bore, search for, get, and carry away the same respectively, and reserving all fish, hares, and game, and rabbits, except as hereinafter provided, with right to preserve the same, and with liberty to himself, his friends, and servants, to shoot and sport over the said land, at the yearly reserved rent of payable quarterly, the first payment whereof will become payable on the twenty-fourth day of June.

Landlord's Covenants.

1.—To pay the land-tax, chief rents, and landlord's property-tax.

2.—To put the buildings in repair at the commencement of the tenancy. To provide bricks, tiles, and lime, at the kiln, and timber in the rough, or five-sixths of the value in scantling, on the said premises, or within five miles thereof, for repairs when needed, and one-half the cost of painting the outside woodwork of the buildings, and the gates and gate posts adjoining the homestead, which shall be painted at least once in four years; and also to find gates at shillings each, and timber in the rough for gate posts. In case of fire to allow a fair proportion of rent for loss during the restoration of the buildings.

3.—To allow for any damage done to the tenant's crops in the exercise of the rights reserved in regard to the mines, minerals, quarries and timber.

4.—To permit the said tenant to destroy the rabbits by ferreting and digging, but not with guns or snares, in the fields and hedgerows (except the hedgerows of woods and plantations) from the first day of November to the first day of March, and to make compensation for damage done by game, if any be done over and above per acre allowed in the annual rental value of the farm for damage by game reserved.

5.—To allow for stubbles ploughed well in the autumn or winter preceding the end of the tenancy; also, for the cost of labour in carting and spreading manure upon the Clover seeds, and on meadow and pasture land.

6.—To pay for carrying out the conditions of clause 3 of tenant's covenants, so far as it relates to ditches, drains, watercourses, and irrigation, during the autumn, winter, and spring, previous to the end of the tenancy.

7.—To pay at the expiration of the tenancy the value of the out-going tenant's share of the growing Wheat, namely, two-thirds after well manured summer-fallow, and one-half after Clover root, Potatos, Turnips, or Mangels; but if the extent sown shall exceed one-fourth of the arable land, the excess shall not be paid for.

8.—To allow a consuming price for hay, Clover, and straw which may be left unconsumed at the end of the tenancy, according to conditions in clause 15 of tenant's covenants.

9.—To allow for good clean Clover and Grass seeds according to clause 13 of tenant's covenants. To allow 30*s.* for every acre over and above one-fifth of the arable land which is left in good Clover and Grass seeds at the time of quitting.

10.—To allow for Linseed cake consumed by stock (except horses) one-third of the amount consumed during the last year, and one-fourth of the amount consumed during the last year but one, in properly littered yards and close sheds, and by sheep while consuming Turnips on the land on which they are grown, or in littered yards or on boards under cover. To allow one-half the proper cost of all good purchased manures applied to root crops (except Potatos) during the last year of the tenancy, and one fourth of that applied during the previous year. Also for all good bones and lime, and for all burnt clay or marl, when the dressing of such clay or marl has not been less than 60 cubic yards to the acre, and if used on the farm during the last two years of the tenancy, as follows, two-thirds of the cost price for what has been properly used during the last year of the tenancy, and one-third of such properly used the preceding year. These allowances to extend only to manure and food purchased over and above and in excess of that purchased with the money realised for straw permitted to be sold.

For the following more permanent improvements, if they have been made at the sole cost of the tenant and with the consent in writing of the landlord or his principal agent.

11.—For pure bone manure properly applied, at the rate of not less than 1 ton or more than 25 cwt. to the statute acre, on lands described as pasture, deducting from the cost one tenth part annually.

12.—For the pipes and labour of efficient pipe underdraining, deducting one tenth part of the cost annually. The Lady Day next after the completion of the drainage to be considered the time from which the 10 years' allowance is to be computed.

13.—To provide the best Grass seeds for laying down to permanent pasture, if clean and in a good state of cultivation. And if, within eight years from the time of laying down the said land, the tenant shall quit, to allow such a fair proportion of rent for every acre of land so laid down, being in turf, and not having been mown, as the arbitrators or their umpire may award.

15.—For healthy fruit trees, planted within seven years, the fair cost price. For having reared new quickset fences, the same having been kept clean and well taken care of, the cost thereof, after deducting one-tenth part in respect to each entire period of twelve months that shall have expired since the date of their completion.

15.—For building, which has been efficiently erected at the cost of the tenant, such sum as may have been agreed upon in writing.

Tenant's Covenants.

1.—To pay the said rent as it becomes due, together with such additional payments as may hereafter be agreed upon.

2.—To pay all levies, rates, taxes, and assessments whatsoever, including tithe rent charge, but excepting land-tax, landlord's property-tax, and chief rents. At the expiration of the tenancy the landlord may deduct from the amount payable by him to the tenant under any of the covenants of this agreement, all rent and tithe rent charge due, and also a proportionate share of the accruing half-year's tithe rent charge to be calculated up to the day on which the tenancy shall expire.

3.—To keep the buildings, gates, stiles, hedges, ditches, fences, and every part of the said premises in good repair, order, and condition, until the time of quitting. The landlord finding materials, as provided in Clause 2 of landlord's covenants. To keep the fences against the private roads low and neatly cut, and also to keep the farming roads in good repair, and the farm homesteads and the roads about them as neat and clean as possible. Properly to clean out the ditches, drains, and watercourses, also the gutters and carriers of the irrigated meadows, and properly to irrigate them during the autumn, winter, and spring previous to the end of the tenancy.

4.—The landlord, or his agent, or whosoever shall be appointed by them, to be at liberty to enter upon the said lands and premises to view and inspect the same when the said landlord or his agent think fit; and if the buildings be not in good repair, the landlord, after giving two calendar months' notice to the tenant, may cause the necessary repairs to be undertaken and executed, and the tenant undertakes to pay the workmanship and his share of the materials to the next rent day after their completion.

5.—To preserve the game and fish on the said lands, except the rabbits, which the tenant has liberty to destroy in the manner and during the time stated in landlord's covenants, Clause 4—and at any time sign notices to persons trespassing, and permit his name to be used in any prosecution or action to be brought against such trespassers at the landlord's expense. And if the landlord should give up his reservation of the game, then the tenant agrees to pay as additional rent per acre.

6.—Not to lop, top, or crop any timber or other trees, poles, or underwood, except such Pollards as have been usually topped or lopped by the tenant.

7.—To cultivate, manure, and manage the said lands according to the best and most approved systems of husbandry.

8.—Not to convert into tillage any of the lands described in the schedule as meadow or mowing land, or pasture land.

9.—Not to graze the irrigated meadows or land described in the schedule as meadow or mowing land, after the tenth day of November preceding the end of the tenancy, and not to injure the turf land by the treading of heavy cattle.

10.—To prevent the Nettles, Thistles, and Docks on the farm from going to seed, also all weeds in the hedges, ditches, and waste lands.

11.—To plough in a proper manner in the autumn and winter such part of the lands as shall be in stubble in the autumn preceding the time of quitting, being allowed a proper compensation for the same, and on the second day of February preceding such time, to permit the landlord or any person appointed by him to plough and cultivate any other part of the said arable land to be sown with spring corn or to be fallowed, and, if practicable, to provide proper accommodation for horses so employed,

12.—To accept a compensation in money for share of the growing Wheat on quitting, and to bear the expense of reaping the whole crop, and not to claim any allowance for straw.

13.—Not to sow more than one-fourth (as near as the size of the fields permit) of the arable land with Wheat the autumn previous to the end of the tenancy. At the expiration of the tenancy not to have less than one fifth of the arable land in good Clover and Grass seeds properly put in, with corn sown on clean well manured fallows, and which seeds shall be properly taken care of, and not be grazed after the first day of October preceding the termination of the tenancy.

14.—At the termination of the tenancy, to leave on the premises one-tenth part of the Wheat straw, and one-tenth or thereabout of the hay, Clover, and Oat and Barley straw grown during the preceding year, receiving a consuming price for the same. The usual number of stock shall be kept upon the farm until the 28th day of February preceding the termination of the tenancy; and at the termination of the tenancy, all farmyard manure and compost shall be the property of the landlord.

15.—Not to mow any of the lands described as pasture land, or meadow or mowing land, more than two years in succession without being sufficiently manured or improved by irrigation. Not to grow more than a due and proper proportion of Wheat or other corn in any one year. To consume on the lands and premises all Turnips, Mangel Wurzels, Potatos, Carrots, Cabbages, or other green vegetable crops, except acres of Potatos, which may be grown for sale in each year, save and except the last year of the tenancy. Not to remove from the said lands or premises any of the hay, Clover, straw, farmyard manure, soil, or compost arising therefrom, and to use and consume the same on the said lands and premises, according to the usages of good farming, except ten tons of straw for every hundred acres of the arable land, and in like proportion for a greater or less extent, bringing back to the farm and properly applying thereon, good manure of the value of the straw sold.

MUTUAL COVENANTS.

1.—If the tenant become bankrupt, or make an assignment of his property and effects to any person, or make any deed of assignment with his creditors, or in case of his underletting the premises without consent in writing, or in case the rent hereby reserved and made payable be in arrear and unpaid for nine calendar months next after the same shall become due, or in case the arbitrators, or their umpire appointed as herein directed, consider and report in writing that waste and injury have been done to the said premises, a twelvemonth's notice shall not be necessary, but the tenancy shall cease at the Lady Day following.

2.—It is mutually agreed that in case of any distress for rent or of an assignment, the hay, Clover, straw, Turnips, and other root crops shall become the property of the landlord, who shall allow a consuming price for the same, and the manure shall then be the property of the landlord, as in the case of the termination of the tenancy.

3.—Any damages or compensation payable, and any dispute or difference which may arise between the landlord and tenant during the tenancy, shall be settled from time to time as the same may arise, and every valuation to be made and compensation to be paid at the termination of the tenancy shall be determined on or about the 1st day of March previous thereto, and all such matters shall be determined by reference to two valuers, one to be chosen by the landlord and the other by the tenant, and all the provisions of the Common Law Procedure Act, 1854, relating to such a reference are hereby adopted, and this agreement shall be deemed a document authorising the reference; and the award to be made pursuant to it shall be final.

4.—Also that this agreement shall take place from the 25th day of March next, and continue in force from year to year until 12 calendar months' notice in writing shall be given by either of the said parties to the other to quit the possession of the said premises previously to the end of the first or any subsequent year that the same may be held by virtue of this agreement, except the tenancy be terminated by any of the cases set forth in Clause 1 of Mutual Covenants.

In witness whereof, the said landlord and tenant have hereunto respectively set their hands the day and year first above written.

Witness to the signature of the landlord, }

Witness to the signature of the tenant, }

Leases.—At the meeting of the North-west Bucks Agricultural Society the other day, Mr. J. Holdom, farmer, Thornborough, said: After the hearty concurrence given by the meeting to Sir Harry Verney's wish that some practical man should address them, he felt tempted to make some observations upon a subject of great importance. Before, however, he did so, he would ask the tenant-farmers at the other end of the room whether they were satisfied with having their land under the year-to-year system? (Considerable uproar, and cries of "No, no, no," from farmers addressed.) There had been several subjects discussed, but that was a matter to which no reference had been made. He would narrate an instance of the injurious working of the system, which had come to his knowledge that day. A young farmer competed the previous year for cultivating in the best manner. He did not get the prize, but his farming was of undoubted excellence, and was mentioned favourably. That young man's rent within the last few days had been raised 20 per cent. If he had taken the prize he competed for last year, it might have been 50 per cent. instead of 20. He would ask whether that treatment was a stimulus to good farming. For his own part, he knew what it was to live under both systems. At the present time he held a lease of one-and-twenty years, twelve of which had expired, and he had grown wonderfully during those 12 years. (At this point of the proceedings the room was in a state of uproar. Two or three individuals tried to prevent Mr. Holdom continuing his speech, while the farmers generally encouraged him to proceed. The noise was somewhat abating, when Mr. J. Osborne turned on Mr. Holdom and said, with reference to the system of which he complained, "I should think that is under Dr. Lee;" to which Mr. Holdom replied, "I don't know about that, Mr. Osborne; Dr. Lee is probably as good a landlord as you have got). Now, he could not understand why landlords should not grant leases to good tenants; but some people say the landlords cannot hold the tenants in their reins if they are not under the year-to-year system. A landlord ought not to have undue influence over his tenants; but for his part he never knew a tenant who would not oblige a good landlord, even though he held his farm by lease. If they were under the year-to-year system, they would not so much as plant a Currant or Gooseberry tree; and if the pigsty wanted repairing, they told John not to put more than one nail in the board, for they did not know how long it might be in their possession. They might depend upon what he said. It was a bad system. If the tenant-farmers would only take farms under landlords who would grant leases, they would see what could be done. If he might be allowed to address the landowners present, he would say—If you have a bad tenant, turn him out, but grant your good ones long leases. He had, no doubt, said too much to be liked by some gentlemen present. It was a matter of great importance, on which he felt and spoke warmly, but he would trespass on their time no longer.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATER, Streatley, near Reading.

At 9 A.M., Railway Time.

Day of the Month.	Day of the Week.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Reading of Dry Bulb.	Thermometer. Reading of Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
Oct. 21	Friday ..	Inches. 29.48	49°	48°	S.	1	10	59°	38°	60°	31°	..
22	Saturday ..	29.08	53	52	S.E.	2	10	56	48	61	43	0.24
23	Sunday ..	29.03	53	51	S.W.	3	10	57	50	63	45	0.18
24	Monday ..	29.32	45	43	S.W.	1	9	55	35	62	29	..
25	Tuesday ..	29.50	52	50	E.	0	10	58	36	74	29	..
26	Wednesday ..	29.37	54	53	E.	2	10	55	48	60	41	..
27	Thursday ..	29.26	54	54	N.E.	0	10	58	53	63	50	0.65

Notices to Correspondents.

ANALYSIS: *Cor.* We will endeavour to give the analyses next week.

GRACE'S WHITE WHEAT: *R W P.* We recommend you to apply to Mr. Pawlett, of Beeston, Sandy, Beds.

PUBLISHER: *T O G.* Mr. Moule's pamphlets are published by Bradbury & Evans, of Bouverie Street, Fleet Street. Mr. Lawes's papers have been published hitherto only in the Journal of the Agricultural Society (Murray). Mr. Cline's book is out of print.

John Geddes, late

H. J. MORTON AND CO.,

CORRUGATED GALVANISED IRON ROOFS & BUILDINGS.
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ASPHALTE ROOFING FELT, 1*d.* per Square Foot.

Illustrated Catalogue and Estimates, free on application.

12, Great George Street, Leeds.

Exhibition Prize Medal, 1862.

HOTHOUSES for the MILLION.—On the principal invented and patented by Sir Joseph Paxton, M.P., combining simplicity, cheapness, excellence, and durability. SPAN-ROOF HOUSES, painted three coats, and glazed with English Sheet Glass, ready for fixing, 21 ft. by 13 ft., 24*l.*; 43 ft. by 19 ft., 73*l.* 5*s.*; 64 ft. by 25 ft., 161*l.*

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Also, A HANDBOOK on VINE and FRUIT TREE CULTIVATION, 2d Edition, price 1*s.*; post free, 1*s.* 1*d.*

Exhibition Prize Medal, 1862.

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This Stove is the nearest approach to Warming by Hot Water

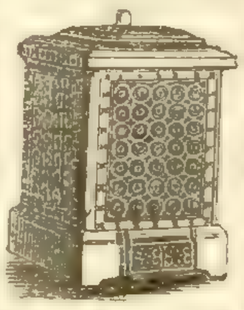

It will burn in churches from Saturday till Sunday evening, without attention during the hours of worship. In Halls will burn day and night for weeks, with little care. Capable of Warming a large Apartment for 24 hours, at a cost of 3*d*; and deserving of special attention, because of its safety, healthfulness, durability, and extreme simplicity.

It is also made for small Conservatories, with a vapour chamber.

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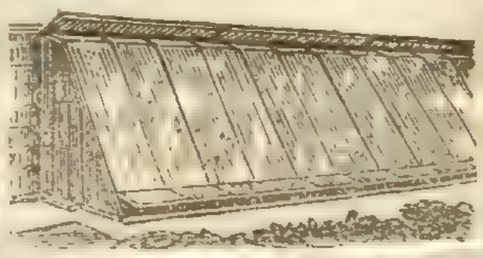

C. & H. beg to call attention to their NEW TREE COVER, or Continuous Glass Covering for Garden Walls; which is constructed of Cast and Wrought Iron, glazed with or without putty, and fitted together with bolts and nuts, constituting a Tenant's Fixture. It can be made 6, 7, or 8 feet wide, and 10, 12, or 14 feet high; the Lights being opened together, by means of simple and durable machinery, in lengths of about 50 feet; and the cost does not exceed that of a wooden structure.

Further particulars, with prices, forwarded upon application; and on receipt of the amount in postage stamps, a Book of Designs, plain 1*s.* 6*d.*, coloured 2*s.* 6*d.*, for Horticultural Buildings, &c.

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HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, TUBULAR, and Elliptic, from 24*s.* each. Improved Boilers and Iron Stands to use without brickwork, 50*s.* each. Valves from 10*s.* 6*d.* each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at

Mr. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S. Price List on application.

W. J. HOLLANDS, IRON MERCHANT,
31, Bankside, London, S.E.

HOT WATER PIPES, from Stock, per yard:—2-inch, 1*s.* 4*d*; 3-inch, 2*s.*; and 4-inch, 2*s.* 7*d.* BENDS, from Stock, 1*s.* 7*d.*, 2*s.* 6*d.*, and 3*s.* 3*d* each. THROTTLE VALVES, 10*s.* 6*d.*, 13*s.* 6*d.*, and 15*s.* each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day. A discount to the Trade.

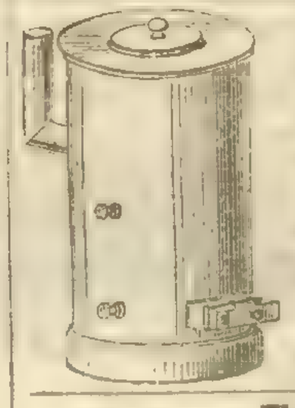

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Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the Patentee's Warehouse, 155, Cheapside, London, E.C.

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The Gardeners' Chronicle.

SATURDAY, NOVEMBER 5, 1864.

MEETINGS FOR THE ENSUING WEEK.

TUESDAY,	November 8	Royal Horticultural (Floral Committee, noon; Lecture by Major Trevor Clarke on the Cotton Plant; and Show of Cattleyas, with remarks by Mr. Bateman), at South Kensington, 2 P.M.
WEDNESDAY,	— 9–11	Royal Horticultural (Chrysanthemum Show), at S. Kensington.

DURING the last ten years the FRENCH have made great progress in two things—horseflesh and GARDENING—two points on which we English are apt, and justly, to pride ourselves. No matter where you walk, long vistas of street and of avenue are springing up, piercing, as if to avoid the charge of favouritism, every quarter of the town. New parks are being formed, new gardens planted, new barracks and stables built, and all with a rapidity which is not the least astonishing part of these marvellous alterations. The question naturally arises: Where do they get the money to carry on the works? Every one has heard of the splendour of the fêtes annually held at Paris and at Versailles, more than usually brilliant this year in honour of the King of SPAIN'S visit; and unequalled in Europe beyond all word painting on such special occasions as the triumphant return of the army from Italy after the seven weeks' fighting of 1859. Like our own HENRY VII., NAPOLEON III. usually contrives to make his undertakings pay; and although the costs of these fêtes are enormous, yet after all expenses are defrayed, there is a handsome surplus left in the hands of the city administration, yielded from the immense harvest that accrues to trade generally. To understand this we must take a cursory view of the Parisian system of taxation, as with many peculiarities, they have one trait common to us all—a natural aversion of "rendering unto Cæsar" more than is actually necessary.

The French Government possesses two monopolies—salt and tobacco—and on the latter the price has been lately raised. Besides these trade licences and other taxes, there is an octroi, or town duty levied upon all articles of consumption—meat, butter, eggs, bread, or wine—vended in the city of Paris. For example, a cask of wine (four to the ton), which may cost from 200 to 2000 francs,

pays an equal duty of 45 francs, although to discourage the increase of public-houses there has been a deferential duty lately established in favour of private consumers. Thus anything that attracts a large influx of visitors, contributes very materially to the consumption of the necessaries of life, and the greater the consumption the greater the revenue raised from it by the octroi. The annual income from this source alone has been estimated as high as 5,000,000*l*. But allowing a considerable surplus from the octroi, how is it possible to meet such enormous expenditure? Well, land becomes dearer every day, and a new Boulevard is occupied, almost as quickly as it is run up; the plots not required for it are either let at increased ground rents, or sold for shops, hotels, or private residences, and thus a profit is realised on the original purchase money of the property, which goes far towards defraying the expenses of construction.

In forming a new Boulevard, they begin thus:—The plan has been carefully studied and arranged by the city engineers, so as to be equally available for commercial or military purposes. Perhaps 10,000 francs is asked for your house, they offer you 6000, when the matter is referred to a jury, and the case may be considered settled. Fabulous prices are nevertheless paid for buildings, land, and indemnity for loss of business. On the latter score, a few months ago, a house (something on the scale of SHOOLBRED'S), "Le grand Magasin de la Chaussée d'Antin," in the *entourage* of the grand opera now building, received no less than two and a-half millions of francs, equal to seven or eight years' purchase.

There is one class whose interests are for a time seriously affected by these improvements, and that is the lower orders. Driven from their usual haunts they hardly know where to lay their heads, and the outcry among them is very great. Nothing human is, however, perfect, and we may rest assured that the grievance will not be long allowed to remain without a remedy.

In forestry, or the after management of plantations, the French have yet to learn the simplest rudiments. It is true this is a sore point both at home and abroad, as OVID has sung—

"Of the impious axe he plies."*

But while yielding to none in the admiration of a noble tree, we hold it to be absolutely necessary for the attainment of this object to thin out young plantations as they increase in size, so as to preserve their beauty and secure their longevity. In fruit growing and pruning they still excel us. In agriculture again they are rather at a standstill, as there is not the same interest taken in it as by landed proprietors in England; for Monseigneur is in the habit of spending most of his cash amidst the stirring gaieties of the capital, and looks upon his château as a pleasant kind of "Botany Bay" retreat, admirably adapted to the requirements either of health or finance. The French farmer too is often a ploughman, while the English farmer is valuable to the nation, not only for the interest on his stock, but for his intelligence.

Everything French radiates upon one head, the EMPEROR! And in the wonderful organisation and centralisation of power we may trace the secret of their progress. The Government is at present engaged in sending out an expedition to Mexico for the purpose of advancing the sciences of geology, mineralogy, and botany, and from this we may anticipate many interesting novelties. The plantations and promenades, lately made over by the EMPEROR to the city, under certain conditions as to their future embellishment, form a branch of the "Travaux Municipals," under the immediate control of Baron HAUSSMAN, Prefet de la Seine, who has had the responsibility, and deserves the great credit not only of the improvements, but of the present high state of French gardening; and in acknowledgment of these services the rank of Senator has been conferred upon him. M. ALPHAND is the chief engineer, and M. BARILLET, head gardener to the city. The latter works hard, and most successfully, to keep the flower gardens of Paris if not in advance, certainly not in arrear of any other European capital.

And here we may learn a lesson that at once comes home to us. Of all the great cities in the world there is none so capable of acquiring that grandeur and beauty so intimately associated with power as London. Who would for a moment compare the Seine of Paris, the Spree of Berlin, the Danube at Vienna, or even the Neva of St. Petersburg, with the Thames of London! Where, again, are to be found such glorious expanse of wood and glade as in our Parks? And yet we may have a fine river, fine parks, and fine streets, though at present they are few and far between, but scarcely a fine city. Nor can we hope for so desirable a result so long as its embellishment is dependent upon an Office of Works, with a First Commissioner whose very existence hangs not only upon every general election, but upon every question, Home or Foreign, which affects the Ministry.

The difficulty then would appear to be this: the necessities of a constitutional government demand that in the House of Commons there shall be a representative to answer any questions relative to the expenditure of money voted. Such a post of course involves obligations which are incompatible with the duties of a professional man. Still there appears to be no reason why a permanent servant should not be appointed whose business it would be to superintend any improvement or alterations that might suggest themselves, and thus prevent the link of connection being broken by the accession to power of new men,

> "Whose glories float between the earth and heaven,
> Like clouds which seem pavilions of the sun,
> Yet are the playthings of the casual wind."
> *Richelieu.*

So long as we have a head like Mr. COWPER all goes well, but to-day he lives and to-morrow he politically dies—and another man reigns in his place, with new ideas, new interests of party to serve, and, may be, new lessons to learn in the special requirements of his office. What was to have been classic becomes Gothic, gardens full of promise are left to "wander at their own sweet will," and everything is liable to a check, which of itself is sufficient to account for our slow progress in all matters of national taste. *Z.*

WHEN lately inviting attention to the appearance of a 12th edition of Mr. RIVERS'S *Miniature Fruit Garden*, we casually referred to the great change in the aspect of our fruit gardens and our fruit rooms too, which had been brought about by the free introduction of Dwarf Fruit trees, the vegetative vigour of which had been diminished, while their prolificacy had been increased, by a judicious application of Quince and Paradise stocks, and a certain course of restrictive cultivation. The favourite form amongst these dwarf trees has been we suppose the Pyramidal, but our horticultural NESTOR points out in this new edition how readily and with what success the Bush form may be adopted. It is to these bush-formed trees that we now especially invite attention.

"I have reason to think," observes Mr. RIVERS, "that a great change may be brought about in suburban fruit culture by these bush trees. I have shown how Bush Pears on Quince stocks may be cultivated. Pears are, however, a luxury; Apples and Plums are necessaries to the families of countless thousands" who live in the vicinity of our large populous towns and cities; and a new chapter of the *Miniature Fruit Garden* is therefore devoted to an explanation of the manner in which Apples may be grown on bushes on the Paradise stock. There is this too, in addition to the question of profitableness, which may be urged in favour of bush-formed trees, that some good sorts which are not exactly tractable when the pyramid form is imposed upon them, are yet manageable enough under the less formal character of bushes, and such are exceedingly well adapted for small gardens.

The treatment of these bush trees is very simple, and the return, if they are judiciously managed, certain. First of all it is to be remembered that the trees are to be worked on the Paradise stock, and like other fruit trees, are all the better for going through a preparatory course of treatment in the nursery quarters. Trees of two or three years old are those recommended to be used, and such, if the preparation has been judicious, may be expected to commence bearing the first season after planting. The space originally allotted to them should be three feet from row to row, and three feet in the row, for ordinary sorts; but for large growers, such as Bedfordshire Foundling, a space of four feet should be allowed. When the trees have grown so as nearly to touch each other, every alternate one should be removed—these being available for another plantation—so that they may stand four and a-half feet apart in quincunx order, the formula for accomplishing which is to take away all the trees represented by odd numbers in the first and third rows, and those represented by even numbers in the second and fourth, and so on alternately, or *vice versâ*. The larger growers are to be thinned out upon the same plan. After the lapse of 16 or 20 years the trees of every alternate row must be taken away, and planted elsewhere.

Then as to the summer treatment of these trees, the principal feature is the assiduous carrying out of the mode of pruning denominated "summer pinching," which consists in regularly, from the beginning of June to the end of August, pinching or nipping off the end of every shoot "as soon as it has made five or six leaves, leaving from three to four *full-sized* ones;" or if the leaves are very thickly placed, as they are on some varieties, the rule may be to leave the shoots at from 3½ to 4 inches in length.

If it should happen that from the favourable condition or fertility of the soil, the trees are inclined to grow too vigorously, the cure is to remove them biennially, or rather to cut their roots, the plan Mr. RIVERS recommends being to dig a circular trench 1 foot from the stem of the tree, and introducing the spade under its roots to heave it up so as to detach them all from the soil; then to fill in the earth dug from the trench, and tread it gently on to the roots. If the "pinching in" suffices to moderate the vigour of the trees, and a state of healthful fertility is induced by this treatment alone, then the transplanting or root-cutting may be deferred for a longer period.

A plantation of bush Apple trees ought to be remunerative, and Mr. RIVERS instances his own plot of 100 trees of Cox's Orange Pippin planted in the spring of 1862, which bore a fine crop of most beautiful fruit in 1863, and an almost over-abundant one in the present year. These trees, which are on the Paradise stock, "will this season, the third of their growth in their present quarters, and the fourth of their age, give an average of a quarter of a peck from each tree, so that we might have from 4840 trees, growing on 1 acre of ground, 302 bushels of fine Apples, which even this abundant season would be (if Cox's Orange) worth 5*s*. per bushel, or 75*l*. In 1866, the trees, then averaging half a peck each, would double this sum, and make an acre of Apple trees a very agreeable and eligible investment." And that his readers may feel satisfied he is not theorising, but deducing facts from a sound basis, Mr. RIVERS points out that besides his plantation of Cox's Orange Pippin, he has another consisting of 400 bush trees, which has been in existence for upwards of 10 years, so that he may be accredited with ample experience of the subject.

Some further illustrations of this mode of cultivating Apples in its bearing on the future may be briefly referred to. Let us suppose, with our Mentor, "a rood of ground planted as described, with 1210 Bush Apple trees. In the course of eight or 10 years half of these, or 605, may be removed to a fresh plantation, in which they may be planted 6 feet apart; they will at once occupy half an acre of ground. At the end of 16 or 18 years, every alternate row of trees in the first plantation, the rood, will require to be removed, which will give 302 to be planted 6 feet apart, leaving 303 on the original rood. The 1210 trees will by this time occupy 1 acre of ground at 6 feet apart. With proper summer pruning or pinching they will not require any further change, but continue to grow and bear fruit as long as they are properly cultivated. The great advantage reaped by the planter is the constant productiveness of his trees; from the second year after planting they will be always 'paying their way.' The unprejudiced fruit cultivator will quickly find out the great advantage of my mode of Apple and Pear cultivation."

These pictures are tempting enough, we imagine, to set us all planting Bush Apple trees. That it is a very interesting as well as a profitable mode of culture seems unquestionable, that it is especially suited for the small gardens of amateurs is certain, and that it offers a very ready means of obtaining good samples of the choicer sorts of this most useful of fruits, and of securing a crop, too, from the ready manner in which protection might, if necessary, be afforded, is equally beyond doubt.

THE CHRYSANTHEMUM is once more pushing up its flower buds and expanding its blossoms in our dullest season of the year, when trees are leafless, and when both our indigenous and exotic flowers are comparatively few in number. We can scarcely imagine how dull and cheerless our gardens and conservatories would be at this time of the year if we had not this flower to enliven them. And then it is not one of those plants which requires the most careful treatment in order to induce it to

* Spectator, No. 589

bloom freely; it is easily cultivated, and it will grow and flower readily almost anywhere.

About this time last year we made some observations in this Journal (p. 1107, 1863) on the history and cultivation of the Chrysanthemum, and showed what progress had been made in the introduction of new and improved varieties. We also drew the attention of our readers to the curious way in which certain individual plants throw off "sports," which bear flowers of a different colour from themselves, and in this way give us new kinds, and sometimes very pretty ones, without the trouble of reproducing new individuals from seed. It is, however, the remarks then made on the cultivation, and more particularly on the training of these plants, which induces us to return to the subject to-day.

In the article to which we allude, we noticed the barbarous system of training which is sometimes practised, and which ends in the plant having a long bare stem and a single bloom on the top of it; and we drew attention to the great importance of having leaves on the plant, as well as blossoms. "Our idea of perfection in cultivation would be a bushy plant covered with bloom, and at the same time exhibiting a green and healthy foliage all over it. * * * In all cases a green and healthy foliage adds greatly to the beauty of the specimen." We may now state that plants of this kind may be seen in the Garden of the Royal Horticultural Society at South Kensington. They have been placed in the covered entrances leading from the Prince Albert Road and the Exhibition Road into the Garden. Many of them are large specimens; all are in the highest state of health, exhibiting first-rate cultivation. They have not been twisted and tied down into ugly forms like some fashionable plants we have met with at former exhibitions of this flower, but are trained in a natural and pleasing way. Moreover, the plants are clothed with foliage of the healthiest green colour, which is very pleasing to the eye, and which at the same time brings out the colour of the blossoms in the most effective way.

We have great pleasure in directing attention to these plants, as they exhibit much skill in cultivation, and, what is almost of equal importance, an example of good taste in training. We need scarcely add that they will afford a rich treat to the Fellows of the Society, and to all who may have an opportunity of visiting the Garden during the time they remain in bloom.

We have alluded to the curious way in which Chrysanthemums "sport," and produce flowers of different colours. This habit is well-known in those Oriental countries to which the plant is indigenous, and is taken advantage of to propagate new varieties. A friend of ours tells us how an old lady in China astonished some missionaries by relating to them the way in which she had obtained the different varieties she cultivated in her garden. One day they were admiring her collection, which consisted of flowers of various colours, —of yellow, white, and lilac, when she told them that, originally, she had only one kind, and that all those they now saw had sprung from it. "You have raised the others from seed then?" was remarked by the missionaries. "Oh no, I have not done that," said the old lady; "the new kinds grew out of the old." The good missionaries were too wise to believe this, and went away wondering how it came to pass that these Orientals are so fond of telling lies! The old lady's story, however, was probably quite true, although it might appear rather strange to those unacquainted with the habits of the Chrysanthemum.

Mr. Salter, of the Versailles Nursery, Hammersmith, to whom we are indebted for a large number of our fine Chrysanthemums, and who is raising new ones year by year, is about to publish a book upon the subject. He is well able to give us much interesting information not only as to culture, but as to the history of the plant, to the mode of raising new kinds, and to many other matters connected with the way in which it has been brought to its present high state of perfection in our gardens.

— We have to announce with regret the death of Mr. John Green, of Lower Cheam, Surrey, who passed from amongst us on Monday last, the 31st ult., in the 59th year of his age. He had been ailing for some considerable time, but his death was little expected until a few hours before it took place. Few Gardeners were better known than Mr. Green; he was one of the earliest and most successful Exhibitors at Chiswick in days gone by, and at other Great Shows in the neighbourhood of London he has played a foremost part even as late as the present season. The noble Azaleas shown by him at these great displays of horticultural skill will long be remembered by all who had the good fortune to see them. He was appointed Gardener and Steward to Sir Edmund Antrobus, Bart., when very young, and up to his death he enjoyed the utmost confidence of his employer. He died much respected by a wide circle of friends, and Horticulture has lost in him a staunch and warm supporter.

— Whoever has traversed the streets of London in the season of ripe Strawberries must have become familiar with the fact that vast quantities of this excellent fruit are consumed by its inhabitants. But of the real magnitude either of Strawberry consumption in London, or of Strawberry production in places whence the bulk of the supply comes, we suppose very few persons would form an adequate conception. Some light is, however, thrown upon this matter by a paragraph from one of the Aberdeen papers, which has been going the round of the press, and which, as indicating only what has been done in a single locality, is strongly suggestive of the enormous aggregate weight of this perishable fruit which must be sent to market within a comparatively limited space of time—for very few weeks see the commencement and close of the Strawberry season. The Aberdeen market-gardeners, as we learn from the source just indicated, have long been highly successful cultivators of the Strawberry, but few people have any very tangible notion of the actual extent to which the cultivation of the Strawberry has grown in that distant locality. "We usually think of Strawberries in pints or quarts, not in hundredweights and tons; yet Strawberries by the ton have become an actual item of export 'from Aberdeen,' and during the present season the quantity brought into the market and sent southward, chiefly to London, to be manufactured into preserves, amounted to about 35 tons. This is independent of considerable quantities used at home for the manufacture of 'preserves' on the wholesale principle and for ordinary domestic use, &c., which must have brought up the total quantity to something like 50 tons; and, if we take into account that a ton of Strawberries is worth from 25*l.* to 30*l.* (probably only smaller quantities reaching the latter rate), it will be seen that this has become no unimportant branch of market gardening. It is a branch, moreover, that promises to extend. It is only a few years since Strawberries began to be exported southward at all; but the demand is, we understand, very keen, and even beyond the supply, and contracts to the extent of 30 tons have been already entered into for next season, while some of the principal growers are considerably extending the breadth they have under cultivation. Of the Strawberries preserved by wholesale 'curers' no inconsiderable part is exported to the Continent, and some even to India."

— By a slip of the pen, the curious dwarf curly variety of Hart's-tongue, described at p. 1035, was called Couzensii, instead of Cousensii. The fortunate finder was Mr. J. Schott Cousens; and we may add, more exactly, that the habitat in which the plant was found was at Torrington, in North Devonshire.

SPRING FLOWERING BULBS.

The Narcissus.

Of the several classes of bulbs that make our windows and gardens gay in spring, this is by no means the least interesting. The flowers yield a rich perfume, which, however, in a confined atmosphere becomes sickly and unbearable. Maund, in his "Botanic Garden," says—"The agreeable perfume of this plant, when diffused through a close apartment, becomes decidedly deleterious, by producing headache, giddiness, and other affections of the brain. In the garden, when mingled with a wholesome and exhilarating atmosphere, amidst objects that awaken the most delightful sensations of our nature, these sweets are a part of our gratifications, and health is promoted as a consequence of enjoyment so pure."

Ovid informs us that the Narcissus commemorates a self-enamoured youth changed into this flower; but Pliny says: "It produces dull heavy headaches; hence it received its name from *narce* (torpidity), and not from the youth Narcissus, mentioned in the fable."

The section known as the Polyanthus Narcissus (Narcissus Tazetta vars.), from a similarity of arrangement of the flowers on the stalk with those of the Polyanthus, comprises the best of these interesting plants. The bulbs are annually imported from Holland in large quantities, and many of the varieties are to be obtained at a very reasonable rate. As regards cultivation, ordinary treatment is all they require; in or out of doors, they succeed well; and even under most disadvantageous circumstances they will flourish out of doors. They are, however, apt to suffer from frost, which sometimes makes sad shipwreck of the delicate tints and fragile structure of the flowers.

In regard to colour there are yellows, whites, whites with orange cups, and whites with citron and lemon cups. There is not much variety in these divisions of colour, on the contrary there is a great sameness among many of them; but Dutch growers either do not possess that skill in hybridization which exists in England, or the results of its application as regards this flower are very unsatisfactory indeed. Of white flowers there are the Single Italian, a paper white; Grand Souverain, Reine Blanche, and one or two others that appear to possess a plurality of names; with the exception of the first, which cannot be too highly recommended, the others are little grown. Of yellows there are Juno, Staaten General, La Favorite, Primo Sterkhoren, and L'Etoile d'Or, but, excepting the two first and the last, they are but little known. L'Etoile d'Or deserves a larger share of recognition than it has yet received: it is a dwarf kind, being only about 12 inches in height, and in colour deep golden yellow. It flowers very freely, and is therefore well adapted for pot culture; it cannot be too strongly recommended. The two largest divisions are those possessing white flowers with orange or with lemon or citron cups. Many of these flowers, though denominated white, are not really so, being suffused with a pale sulphur. There has not yet appeared what would indeed be a great desideratum, viz., a yellow or orange flower with a pure white cup. This may possibly however be in store for us, and that at no distant date, as the demand for new Hyacinths is giving an impetus likewise to the production of newer and better varieties of Polyanthus Narcissus.

The best of all the varieties having white flowers with yellow cups is Bazelman major. From the spathe surmounting the flower-stalk issues seven or eight very large and showy fragrant blossoms. Though this variety does not produce so many individual flowers as some of the others, the loss is amply compensated for in the unusual size of the blooms. No variety taxes the energies of our bulb importers to provide a sufficient supply of so much as this, the demand for it being great. Florence Nightingale and General Wyndham are two fine varieties, having white flowers with deep yellow cups; from the last named, and also from Czar Alexander, a sulphur flower with golden cups, have been seen flower-stalks surmounted with 18 or 20 blossoms. Other good varieties are Gloriosa, with yellow cups; Grand Primo and Grand Monarque, both with lemon cups; and Grootvorst, with citron cups. There are also yellow-flowered varieties of both Grand Monarque and Grand Primo, but it is the white-flowered kinds that generally find their way into the London market.

Of yellow flowers, with lemon or orange cups, we have Soleil d'Or, bright in colour, with lemon cups; Lord Canning, sulphur, with deep yellow cups; Sir Isaac Newton and Sulphurine, both with orange cups; and Belle Princesse, with bright golden cups.

In each division of colour sameness is inevitable, and the yellow flowers with orange or lemon cups seem to glide almost imperceptibly, as it were, into self yellow flowers. One half dozen varieties of Polyanthus Narciss, carefully selected, may be made to include all the real distinctness that exists among them.

The Double Roman Polyanthus Narciss has an individuality of its own, and there is no great anxiety on the part of growers of the Narcissus to have an addition to the double flowers, unless these should comprise a great increase of quality as well. The Double Roman blooms very early; were it not for this it would not be worth cultivation.

The Border Narcissi form a division round which a good deal of interest clusters. Maximus, or Trumpet Major, and Trumpet Sulphur, are two large and showy single varieties, the first yellow in colour. There is also Narcissus Bulbocodium, or the Hoop-petticoat Narciss, in colour bright golden yellow, and very effective for pot culture. The Poet's Narciss (N. poeticus) is so well known as not to need description, but everybody loves to see it in the spring. The common Daffodil (N. Pseudo-Narcissus) is also a familiar spring flower; but not so widely known are two aristocratic-looking Daffodils, known as the Orange Phœnix and Sulphur Kroon, apparently improvements on the common double white border flower (N. alba plena). The former has an orange blotch in the centre of the flower; the latter a sulphur blotch. A few bulbs in a large pot would make a good display in the conservatory about the end of March.

The Jonquils (N. Jonquilla) also deserve a word of notice. The double and single varieties are well known for their exquisite fragrance, and they succeed well either in pots or borders. The large-flowered single Campernelle is scarcely so well known perhaps as some others, but as a border plant it is very effective. The Jonquils are all yellow.

I have avoided making remarks on all the varieties that appear in the several divisions of this class of flowers, my object being more to record the results of my own observation, than to attempt in any way to give complete lists of the many flowers now under notice. *Quo.*

ROSE JUDGING.

I have never seen in London a manifestly unjust adjudication. I have seen Rose boxes so nearly equal that the prize might have been given either way, or what would have been better, they might have been placed as equals. As honour, and not money, is the compensation for travel and trouble, I think such cases would be better placed equal, especially as it enables the judges to award another prize to a meritorious box. In country places, either from ignorance or favouritism, the awards are so unrighteous, that I have made up my mind never to send my Roses for country adjudications. I could point to the cause of these unrighteous judgments, but in doing so, I must either point to individuals, or condemn a class of men among whom there are many

honourable exceptions. I can only say that nothing would induce me to favour my own brother; and that he is not to be envied who goes home after an unrighteous adjudication with the loss of floral credit and a dishonoured mind. It is to be feared that Rose-racing is much assimilated to horse-racing, and subject to similar mal-practices—a mere change of the "venue." From places where these things occur, I at once retire. Where unjust decisions, a breach of established rules, or the addition of foreign substances, as leaves, are permitted, I will not go. I withdrew from a society in another county on these accounts, and when requested to rejoin, I wrote a civil answer, stating my objections; and to myself I said, "They stole my hat last time, and if I go again they will have my wig!" Floral competitions are very nice, useful, and gratifying, when honourably conducted; but they become disgusting' when they are made the instruments of dishonour. I can hardly expect that your readers will believe the following, but it is true. I sent some years ago 24 beautiful trebles into a neighbouring county to split a lance with the great Rose-grower of the county. The Roses opposed to me, so far as blooms were concerned, were about equal to mine, but mine were sent as cut from the tree with their buds and own foliage; mine opponent's had not a single leaf of their own! They were all dressed with foreign foliage, apparently that of "Kean" (a trago-comedic act!) without any attempt at concealment. One of the trebles was the famous Cloth of Gold! To this lot was accorded to my amazement, and to the disgust of the bystanders, (not of my own county) the first prize! and to myself the second! The dressing of Rose trusses with leaves of any kind is a gross fraud on the spectators, who are induced to buy a Rose that otherwise they would not buy, the foliage being the index of vigour and constitution, and therefore of endurance. Of course it is unjust towards a competitor, who, if he is a true rosarian, will not dress with extra leaves, even were he permitted to do so. In London one loose leaf that could not be fitted to its place on the truss, will disqualify the box.

The men usually selected to act as judges of Roses in London need no hints from me; but as few people grow Roses to any extent, or with concentrated observation, in the country, I have thought it might aid persons desirous of being just if I give a few hints to them previous to their undertaking the office of censor.

1. Do not suppose that a Rose is necessarily a show Rose because it is large, without reference to other excellences.

2. Do not suppose that a box containing all large Roses must necessarily deserve the prize.

3. Do not suppose that Roses out of condition, whatever their size may be, deserve a prize at all. A horse, ox, sheep, or pig cannot win unless it is in condition. Dahlias must be in condition, why should not Roses be required to be so?

4. Do not suppose that a box of Roses necessarily deserve a prize because they are well matched in size. If they are large and matched in size, they will usually lack variety and choiceness of colour. The maroons, blacks, yellows, and whites cannot be got large enough to match Roses in the commoner colours. Twenty-four splendid show Roses means very often 24 sprawlers, falling to pieces, or revealing a 2-shilling eye before the exhibition is over. It has been truly said "that some men judge Roses as some farmers judge a hayrick, that is, by the number of square yards in it, without reference to other qualities.

5. Do not suppose that you are to judge Roses by what they have been, but by what they are at the time of adjudication; and yet, though you are not answerable for the future, you ought, as a judge, to know whether they are in sufficient condition to last out the show.

Having cleared away the "debris," I will now point out what are excellences of Roses.

They are—1, correctness of outline; 2, fullness to the centre; 3, substance and quality of petal; 4, disposition of the petals; 5, smoothness of the edges of the petals; 6, roundness of the petals; 7, depth of the petals; 8, choiceness, intensity, and fixity of the colours; 9, general levelness of the flower; 10, good condition; 11, good foliage; 12, erect habit, or firmness of stalk.

Whether a Rose is big, medium, or small, these are the points to be looked to; and that is the best Rose in the box, whether it be big, medium, or small, that has got most of these excellences.

In country places, the 1st, 2d, and 3d prizes are usually decided by size only, and very frequently without much reference to the condition of the flowers.

People may be good judges of other flowers, but very bad judges of Roses. In country places, I think fairer adjudications would take place, if the judges of Roses were selected from the ladies, or dealers in Southdown sheep, both of whom have symmetrical eyes. *W. F. Radclyffe, Rushton, Oct.* 13.

ELIZABETHAN GARDENING.

(*Concluded from p.* 941.)

THE Elizabethan garden was never without sundry arbours for shade and rest: either a pleached arbour, or one of topiary-work. Care was taken, whatever the material it was composed of, that sweet-scented shrubs should surround and creep over it; either 'honeysuckles ripen'd by the sun, forbid the sun to enter,' o it was 'quite over-canopied with luscious Woodbine, with sweet Musk-roses and with Eglantine.' The Eglantine, from the sweet scent of its leaves, seems to have been invariably used as a part of the arbour—at least the Elizabethan poets rarely describe an arbour without it. Thus, Barnfield in 'The Affectionate Shepherd:'—

> I would make cabinets for thee, my love—
> Sweet-smelling arbours made of Eglantine.

And W. Browne describes—

> An arbour shadowed with a Vine,
> Mixed with Rosemary and Eglantine.

In Spenser's 'Bower of Bliss' the Eglantine forms a principal feature:—

> ——Art, striving to compare
> With Nature, did an arbour green dispread,
> Framed of wanton Ivie, flow'ring faire,
> Through which the fragrant Eglantine did spread
> His pricking arms, entrayl'd with Roses red,
> Which dainty odours round about them threw;
> And all within with flowers was garnished,
> That, when mild Zephyrus amongst them blew,
> Did breathe out bounteous smells, and painted colours shew.

From what has been said, we may deduce that the principles regulating Elizabethan gardening were as follows:—

1. To lay out the garden in accordance with the domestic architecture of the period, viz., in long terraces and right lines (forthrights), to harmonise with the rectangular lines of the building, and the long galleries of the interior; and, at the same time, to break up the monotony of the straight lines with knots and beds, often of intricate patterns; in like manner as the bay windows, clustered chimneys, intricate tracery, and ornamented gables relieved the straight lines of the ground plot of the building.

2. To plant the beds with mixed flowers, and to let the colours so intermingle and blend together, that the whole should produce a mosaic of rich indeterminate colour; ever new and ever varying, as the flowers of different seasons succeeded each other.

3. To produce a garden of flowers and shrubs for all seasons, to tempt the owner to take pleasure and exercise therein at all times.

4. Another point which engaged the attention of the Elizabethan gardener — but which is necessarily neglected by the modern gardener, who is obliged to sacrifice everything to colour—was to give delight to the sense of smell as well as to the sense of vision. He was aware that to accommodate one sense at the expense of another could not afford any gratification; and he would not have filled his flower-beds with the strong aroma of Geraniums and Nasturtiums merely for the sake of their brilliant colour. So careful was he to avoid the least unpleasant taint within the precincts of the garden, that Box for edgings, though preferred on every other account, was objected to, because it was alleged to have an unpleasant smell; yet to modern olfactories the dwarf Box is nearly scentless. Great care was taken to introduce plants which should perfume the air of the garden at all seasons of the year, 'because the breath of flowers is far sweeter in the air (where it comes and goes like the warbling of music) than in the hand, therefore nothing is more fit for that delight than to know what be the flowers and plants that do best perfume the air.' (Bacon).

For this purpose, the evergreen sweet herbs were selected for border edgings; such as Germander, Thyme, Marjoram, Hyssop, &c.; and various sweet-scented shrubs and flowers were introduced into the borders merely for the sake of their perfume, though valueless for colour; and even, says Bacon, 'you are to set whole alleys of them, to have the pleasure when you walk or tread.' Indeed, our ancestors seem to have taken more delight in the scent of flowers and herbs than we do. They were not troubled by any fantastic notions about their being unwholesome, and did not fear to introduce them freely into their domestic apartments and places of resort. The great banqueting hall was freely strewn with Rushes (the sweet-scented Flag, Acorus calamus), Germander, Hyssop, and other sweet herbs grown especially for the purpose; and on high festivals the churches were strewn in like manner, and also decorated profusely with flowers—a custom still perpetuated in some country parishes, and of which the evergreen decoration of churches at Christmas is a universal remnant. Special times were appointed for the various plants to succeed each other; and the old recipe books contain elaborate directions for 'making a sweet strewing.' We learn from Drayton the names of some of the favourite kinds:—

> Some Lavender, with Rosemary and Bays—
> Sweet Marjoram, with her like, sweet Basil, rare for smell;
> The healthful Balm and Mint:—
> The scentful Camomile, the ver'rous Costmarie;
> Clear Hyssop, and therewith the comfortable Thyme;
> Germander with the rest, each thing then in her prime.
> Amongst these strewing kinds some others wild that grow,
> As Burnet, all abroad, and Meadow-wort they throw.

The times for changing the 'strewings,' we learn from a song of Herrick's. Christmas was ushered in with Rosemary and Bays, Mistleto and Holly; which at Candlemas gave place to Box until Easter, when Yew took its place; at Whitsuntide the Yew was succeeded by fresh budding twigs of Birch; after which the summer furnished Rushes, Bents, and cooler Oaken boughs,' till winter required Evergreens again. We are not prepared to try it ourselves; but we heartily recommend some of our friends who are far gone in mediævalism to substitute strewing herbs in their apartments for carpets, which, for the floor, are quite a modern innovation.

But seriously we do recommend that the Elizabethan house, be it large or small, should have the garden which adjoins it laid out in the style of the same period, since there is nothing in it incongruous to modern notions of convenience or taste. Like that of the house, it is a style suited to an abode of any extent, and it may be equally adapted to several acres of land, or to 500 square yards. Like that of the house, it is a style peculiarly domesticated and English, for it affords to its owner a smiling welcome all the year round. The flowers which deck it are for the most part old familiar faces, so long introduced into this country that they are almost like natives; many of them are familiar to our literature, are endeared by pleasing associations, and sanctified by the highest efforts of poetical genius. While they have enough of art to indicate that they pertain to the abode of man and owe their place to his care, they have enough of Nature to lead the mind to the works of the Great Author of Nature. Their subdued colours harmonise with the English climate; and the constant variety of form and colour which each day presents, as the flowers of the mixed border develop themselves, affords a constant source of pleasure and varied enjoyment. We cannot say the same of the modern fashionable garden. Its colours and forms being fixed for the season, there is no further interest in watching its progress, and there are no changes to note; its colours, well adapted to the climates whence the plants are brought, are, in this country, glaring, hot, and vulgar, and are rendered still more so by the manner in which a vulgar, uneducated taste violently contrasts them. They are so formal, harsh, and artificial that it is impossible to regard them as works of Nature; but only as the studied efforts of the professed gardener. They are strangers to us and have no familiar greetings to welcome us; no poet has sung their praises; no peasant has given them a loving and heart-stirring English name. They bloom but for two or three months, leaving the gardens desolate and unwelcome all the rest of the year, and are therefore unsuited to the residence of the great majority of Englishmen, who have but one abode, and spend the whole of their lives within it.

There is no reason why recently introduced plants should be excluded from the Elizabethan garden. It would be a ridiculous pedantry to limit its flowers to those only introduced in that period. On the contrary, we would imitate the Elizabethan gardener in this—that we would seek out new plants wherever we could find them. But even if some strict pedant were—like the modern mediævalist in church decorations—to insist that none but plants known at the period should be introduced into the garden, he would find an abundant supply in the old gardening books. He would from these be able to make a selection far more numerous than the modern horticulturist can boast of; for in gardening, as in many other things, the rage for novelty has superseded numerous valuable varieties of flowers, which have either wholly disappeared, or are only to be occasionally met with in some cottage garden or old-fashioned mansion.

Home Correspondence.

Ancient Gardening.—It was a pleasure to hunt up in a few old gardening books I have got, a little information for one who has opened up to us such a world of thought; but not finding accurate dates for the sowing of Kidney Beans, I deemed it better withheld, thinking some with good garden libraries would supply more ancient and useful information. The following may, however, be of use. In "A New System of Agriculture and Gardening, being a complete body of Husbandry and Gardening in all parts of them," &c., by John Lawrence, M.A. London, 1726, at p. 373 it is said:—"Although Kidney Beans is an ancient food, and was held in great esteem amongst the old Italians, yet it is not a century since it was accounted an extraordinary rarity in England. It is now indeed a known and much-admired food, either eaten by itself or as a boiled sallad to all sorts of meat, both boiled or roasted, lasting in season from the beginning of July till after Michaelmas; and it comes in sooner still if forwarded by hot-beds as the method about London is." After giving the number of varieties, "above 50," and other information, it relates that "eagerness to have this delicacy early tempts many to sow them in the beginning of April. But yet it is to very little purpose to sow before the beginning of May, because those sown a month sooner will not have above two days advantage in their ripening, and then they are subject to great hazards of wet and frost. In "The Compleat Gard'ner," &c., of De La Quintinye, "made English" by John Evelyn, Esq., London, 1693—a very interesting and curious book—at p. 188 "The *Aricó*, French or Kidney Beans, are," it is stated, "sown about the latter end of April, and all the month of May, and are very sensible of the frost." In the Calendar of works to be done in April, at p. 158, it is recommended that the first Haricots or French Beans be sown in April, "the second being to be sown about the middle, and the third at the latter end of May, that so we may have a crop of them about two months after sowing." There is an extensive and rather particular monthly Calendar of Operations in this book. Parkinson, in his delightful old book, says the Kidney Beans "are a dish more oftentimes at rich men's

tables than at the poor," but does not give the time of sowing. There is a great deal of interesting and amusing matter in "The Compleat Gard'ner" of M. De La Quintinye. In telling "How to make choice of a good gardener," he says, "I shall begin with the good qualifications of the outside, of which the eyes are the only and first judges; for often at first we find ourselves all of a sudden inclined either to a good liking and esteem, or scorn and aversion for the gard'ner that offers himself." *Wm. Robinson.*

Habitats of Orchids.—I can fully corroborate the statement in your last week's impression (p. 1034) relative to Orchids not generally growing in "dense shady places" in their native home. A residence of some four or five years in Jamaica enabled me to investigate to a considerable extent the habits of that remarkable and interesting family. In very few instances did I discover Orchids growing in "dense shady places;" almost invariably they were to be found in places exposed to the light and heat of the sun. I allude here only to epiphytal Orchids, for I have found terrestrial Orchids growing where there was a considerable amount of shade. Trees at the margins of woods were evidently their favourite habitats. I did not observe the epiphytes to affect particular trees. The larger number were possibly to be found on species of Bombax, whose nearly horizontal branches afforded a ready location, not only for Orchids, but also for Aroideæ, Filices, &c. The absence of large trees from most parts of the lowlands of Jamaica occasions a great paucity of Orchids in those districts. Amongst the glories, however, of the lowlands of the West India Islands, most assuredly stands first the lovely Broughtonia sanguinea, the location of which—with my preconceived notions of how Orchids grew—struck me as being remarkably strange, being none other than the nearly perpendicular scarped face of a limestone rock, facing the south-west, and in a notoriously dry district where rain very seldom fell. The plants (for there were possibly 50 within a space of 100 feet by 50), were growing most luxuriantly and flowering abundantly, the colour of the flowers being a bright reddish-purple, precisely the same as that seen in a glass of claret when held between the eye and the sun. It has, since my return from Jamaica, always struck me that the mode of growing Broughtonia sanguinea in this country is decidedly faulty, for with one solitary exception I have never seen the colour of the flower in an Orchid house in England other than a dull coppery hue. The exception to which I have alluded was in the Orchid house of the late Mr. George Loddiges, to whom I had mentioned the manner in which I had seen the plant growing in Jamaica. Mr. Loddiges had placed the plant close to the rafter of the house, consequently in a situation where it did not get a superabundance of moisture, but a large share of light and heat, and the flowers certainly nearly approached in colour the rich hue they have in Jamaica. The only other Orchids I remember as growing in the immediate vicinity of the lowlands of the island, were two small species of Oncidium, with whitish or pale purple flowers, and the pretty Ionopsis pallida. These I have frequently found on railings or on the barkless branches of dead trees, but I never saw either of them growing on living trees—indicating thus an objection to a humid atmosphere. I often took plants of Broughtonia sanguinea to my mountain residence, which was surrounded by dense woods, and at an elevation of about 1500 to 1800 feet above the sea level; but I could never succeed in obtaining flowers of the same richness of colour they had in the lowlands, for what they produced were of the same coppery tinge that I have so often seen in this country. The leaves of the plants soon became discoloured and blotched with yellow patches, and in the course of two or three months the Broughtonia invariably died. *R. H.*

Greyia Sutherlandi.—I am induced to inquire through your columns something about Greyia Sutherlandi, which I hear is a new plant of unusual attraction. I know not to what natural order it belongs, but having this summer seen it in the collection of M. Linden at Brussels, I can only liken it to a rigid Pelargonium in growth. Its flowers, I am told, are strikingly beautiful, rendering it one of the most valuable greenhouse plants of recent introduction. Of what country is it a native? *A Devonian.* [Greyia Sutherlandi is, according to Dr. Harvey, a Saxifragaceous small tree or large shrub, with stalked roundish-cordate multilobulate and crenate leaves, and dense racemes of very handsome five-petaled crimson flowers; it grows in rocky exposed mountainous places, near Port Natal, at from 2000 to 6000 feet elevation. We presume the plants in cultivation want age before they can be expected to produce their flowers.]

Trebbiano Grape as a Stock.—It struck me last year, after reading the experiments of Mr. Thompson and Mr. Hill on the best stocks for Grapes, that the Trebbiano would answer well for shy rooting White Grapes. I intend this spring to inarch Chasselas Musqué, Muscat, White Frontignan, and some of the Sweetwaters, on strong young Vines of this variety. As the Trebbiano belongs to the Syrian section of Grapes, it is one of the strongest rooting and vigorous growing varieties with which I am acquainted, and it is easily known by its gross young shoots and large succulent downy leaves. Its root action in the winter months is likewise remarkable, for I have kept bunches on it quite plump and good till the beginning of April, although ripened in August, with the colour of the berries of a deeper amber than that of any White Grape I have yet seen. I have measured the stem of a particularly strong young Vine of this variety planted out six months ago, and I find it to be 6½ inches in circumference, or more than 2 inches in diameter. *William Tillery.* [Is excessive vigour in the stock advantageous either generally or specially? That seems to be one of the questions that require further elucidation; and upon which comparative experiments are desirable.]

Autumn-flowering Orchids (see p. 989).—With a little forcing or retarding, the following may be had in bloom at the end of August or beginning of September. They are all good, and moderate in price, viz.:—Phalænopsis grandiflora, Aërides suavissimum, Saccolabium Blumei majus, Vanda cœrulea, Epidendrum vitellinum majus, Miltonia spectabilis, Odontoglossum grande, Phaius albus, Zygopetalum maxillare, Cattleya crispa superba, C. Harrisoni, and C. hybrida. *G. Toll, Pendlebury, near Manchester.*

Scale on Plants.—Is borax and water ever used to eradicate this? It rather recalls babies and thrush. *A.C.*

Edible Snails.—Having noticed in your last Number a paper on this subject, I beg to observe that the Helix pomatia has existed for many years at Melchbourne, Bedfordshire, the tradition being that it was imported from Nice by a member of the St. John family, which may also account for its being found at Woodford, Northamptonshire, at that time part of the family possession. Can any of your correspondents trace a similar reason for its being found at Stonesfield, near Woodstock. *S.*

Potatos from Seed.—Your correspondent "J. C. N." should carefully wash his Potato berries, spread the seed in them out to dry, and keep it in that state till March. He should then sow it in a gentle heat, and when the young plants are up, prick them off, until large enough to plant out in the end of May. The first year the tubers will be about the size of marbles; they must be taken up in the autumn and stored in the usual way; and in the next spring planted out. This is the way I went to work years ago under the direction of an older head than my own, and the result was 26 varieties of fine Potatos. It would have been better if your Correspondent had carefully hybridised the sorts while in blossom. *J. Rust, Fulham.*

Primula sinensis fimbriata.—I have repeatedly bought seed thus named from eminent nurserymen, the produce of which has been most uncertain. I have also saved seed from the best flowers with similar results. To be certain of possessing the best flowers it is absolutely necessary to have three or four times the number of young plants one wishes to keep. I sow the seed in a pan and prick out each plant when it has pushed two rough leaves into a 60-sized pot. In about two months the first bloom generally appears, when I discard all that do not come up to what I am content with. The flower-stalks are then picked off such as I desire to retain, and I continue to do this until the plants get strong, and I wish to have them in bloom. In this way I get a good collection of fimbriated-flowered plants that remain in bloom during the winter and spring months. The young plants seem to grow best in a frame with a north or north-east aspect, and with abundance of air at all times when the weather is not frosty. *N.*

Woollen Refuse.—I directed attention in your columns to this material as a fertiliser some time ago (see pp. 1133 and 1181, 1863). I now send you a small bunch of Grapes, cut from Vines planted in a border composed of light garden loam mixed with this refuse to the extent of one-third of the whole. I may add that little or no artificial means have been required to ripen the fruit further than the protection of glass. My chief object in sending the bunch in question is to draw your attention to one quality which the berries possess in a superior degree to any Grapes grown by me in richly manured borders, namely, their rich saccharine juice. *J. T., Wortley, near Leeds.* [The Grapes received, though rubbed and otherwise injured by carriage, were sweet and well coloured, but not more so than fruit we have tasted from borders in which no woollen refuse had been used.]

Popular Names of Ferns (p. 1037).—I have no doubt that "M. A. E.," of Penzance, is able to answer your question as to the propriety of the Ceterach being called a Spleenwort by Sir W. Hooker. Perhaps I may be allowed, nevertheless, to interpose a remark or two, having lived much amongst Ferns, and been frequently brought in contact with Fern lovers, who have made me keenly conscious of the misunderstandings and disappointments that arise from mixing up generic names after the fashion of "Maidenhair Spleenwort." It is time such misleading names were abolished. Centipede Spleenwort for the Asplenum Trichomanes, though the novelty makes it sound at first a little odd, is certainly an improvement. If we are to retain certain two-century-old names, because they were used by Gerarde, and have been general since his time, however ill applied, it might be well if Mr. Bentham would give us back Cat's-ear, in place of Long-rooted Hypochæris; Forget-me-Not for Water Myosote, &c. [We quite agree.] As for the idea of likeness to a centipede being already expressed in the scientific name of the Hart's-tongue, and confusion being likely to happen in consequence, there is not one Fern-lover in a hundred who knows the literal meaning of Scolopendrium. The friend who is sitting by me while I write had no notion of it till this moment, and could not see the drift of your remark. Centipede is a familiar word, but it takes a Latin scholar to know the meaning of Scolopendrium. Hart's-tongue, moreover, is the sole and precise name for this fine old Fern. It involves no confusion of ideas, it was never given to any other Fern, and it is not likely that any one would desire to see it abolished, or think that Centipede Spleenwort could possibly apply to it, or be intended for it. A good and expressive name being given to one plant is no reason why a good one, based on the same idea, should not be given to another. If Centipede be objectionable, because we have already got Scolopendrium, how about Epidendrum and Dendrobium? As for the Ceterach being a Spleenwort, how is it that Bentham and Babington agree in keeping it distinct as a genus, and that Moore and other Fern authorities do the same? Would you recommend us to follow the one author or the many? Mr. Grindon does well in reverting to the good old West of England name of Rustyback, and is entitled to gratitude for his attempt to improve our current nomenclature. I may add that his analysis of the British Ferns is the easiest to make them out by that I ever met with. *J. L.* [Our Correspondent seems to overlook the circumstance that all or most of the genera of modern Aspleniæ have been cut out of Asplenium, and are by no means universally adopted, the old names being still employed by distinguished scientific men. Hence these plants might all fairly retain, as they do with those who hold such views, the popular name of Spleenwort. There would be nothing very startling in their doing so, even when different scientific names are adopted, for the thing is of common occurrence throughout our popular nomenclature. Probably some half dozen totally different genera bear the name of Cabbage, for example.]

Late Peas.—As a proof of the mildness of the season in this part of Ireland, I send you the names and date of sowing of two Peas which are yielding us a good supply now. They are Lord Raglan, and Hairs' Dwarf Green Mammoth; both were sown on the 15th June. Of the two, Lord Raglan is the best late Pea. I have also a good supply of Cherries from trees on a north wall without any other protection than a net. I may also mention that there is a fine bloom of Tea, and Noisette, and Hybrid Perpetual Roses here at the present time. I have a young Apple tree named Warner's King, planted in 1859, which fruited this season; four dozen of the fruit came to maturity, two of the largest weighing 1 lb. 11 oz. *James Maclean, Gardener to Col. Leslie, M.P., Glasslough, co. Monaghan, Ireland, Nov.* 1.

Foreign Correspondence.

Queensland Acclimatisation Society.—This Society is, we are informed, making considerable progress in its arrangements for collecting and acclimatising various descriptions of plants and animals. The Government has granted it a small island in Moreton Bay, which may, with some expenditure, be made a very eligible spot for the establishment of a zoological and horticultural pleasure ground. A quantity of ground at York's Hollow, in the immediate vicinity of the city, has been also granted to the Society, and has been cleared and enclosed. It is to be called Bowen Park. The laying out of the grounds, &c., has been confided to the superintendence of a sub-committee, who will secure the assistance of Mr. W. Hill, the director of the Botanical Gardens. The quantity of ground enclosed is about 32 acres, and it seems to be admirably adapted for the use to which the Society has applied it. There is a good deal of water, and it will be easy to form ornamental ponds, where various kinds of water fowl and aquatic plants can be reared.

Notices of Books.

Flora Australiensis, a Description of the Plants of the Australian Territory. By George Bentham, F.R.S., P.L.S., assisted by Ferdinand Mueller, M.D., F.R.S., F.L.S., Government Botanist, Melbourne, Victoria. Vol. II. Leguminosæ to Combretaceæ. Published under the authority of the several Governments of the Australian Colonies. London: Reeve & Co. 1864. Pp. 521.

The second volume of this most important Flora has been issued within the last week or two, and, like its predecessor, may be characterised as being in all respects a model of what such a work executed in English should be—accurate, concise, clear, with the genera and species judiciously limited, their descriptions conscientiously elaborated, their synonymy curtailed to practical limits, their habitats and discoverer's or collector's names properly grouped by districts. A slip at the beginning of the volume informs the reader that it contains less matter than its predecessor, and should have run to 600 pages; but that as this would have necessitated the partition of the great and most natural family Myrtaceæ in two volumes, it was judged expedient to close this second volume and enlarge the third proportionally.

The general plan pursued in the work was detailed in our review of the former volume, and need not again be

described; the chief feature of importance is the habitual prefix of admirable keys to the genera and species; but for which the labour of discovering a species in the huge unwieldy genera of so large a Flora as the Australian would be very great indeed.

The great feature of the volume is the order Leguminosæ, the second largest of flowering plants, whether in Australia or on the whole globe. Mr. Bentham describes no fewer than 92 genera (including between 900 and 1000 species) of which he observes that 34 are endemic (confined) to that continent, 33 are very generally distributed over the warmer regions of the globe, one is found only in Africa and Australia, and one other (Clianthus) only in New Zealand and Australia. The more showy genera, which include the most peculiar, belong to the tribes Podalyrieæ and Genisteæ, and are especially frequent on the south-west quarter of the continent; among these occur the genera Brachysema, Oxylobium, Chorozema, Gompholobium, Jacksonia, Platylobium, Pultenæa, and many others, of which a few species have been occasionally cultivated and admired, but which, either from rarely seeding in this country, or from not being readily propagated by cuttings, have never been extensively cultivated. Nevertheless, they include some of the most ornamental greenhouse plants that have ever been introduced, and which, from their flowering in winter and early spring, and from their neat habit and evergreen foliage, will surely one day be conspicuous features for winter decoration. And here it may be well to mention a fact of some importance as regards the cultivation of these plants, but which though (thanks to Mr. Darwin) it is well known to scientific botanists, is not sufficiently known to gardeners; viz., that most, if not all, Papilionaceous plants require artificial impregnation, which may in many cases be readily effected by moving the keel up and down, and thus brushing the pollen from the stamens on to the stigma.

Of the other genera of Leguminosæ, Acacia is in every way the most remarkable, as well as the most interesting to the horticulturist. Of this genus Mr. Bentham describes no fewer than 293 species, of which only one is found in any other part of the world. Of these 270 and upwards have the petiole of the leaf developed into a leaf-like blade (phyllodium), the leaflets being either wholly absent or seen only in the very young state of the plant. What the significance of this curious physiological modification is, has never been even surmised; it is almost confined to the Australian species, occurring otherwise only in a few species found in regions skirting the Australian. Rosaceæ, with seven genera and 17 species, present nothing worthy of remark, except the "Nonda" fruit, Parinarium Nonda, a plant related to the Chrysobalanus Icaco, and which bears one of the very few edible fruits of Australia.

The Saxifrageæ, with 20 genera and only 27 species, follow, including some well-known plants, as Cephalotus follicularis; the beautiful genus Bauera, one of the very prettiest greenhouse shrubs; Eucryphia Billardieri, a most handsome evergreen bush, covered at the flowering season with large white flowers, and which has never yet been introduced; Ceratopetalum gummiferum, one of the handsomest small trees in the world, which blossoms more profusely than the Lilac, and the flowers of which are of a lovely rose-red colour; and, lastly, Anopterus glandulosa, a brilliant green evergreen bush, with racemes of cream-white flowers, larger than those of Clethra; it is a native of Tasmania, and has flowered in the Royal Gardens, Kew, according to the Botanical Magazine (t. 4377).

Droseraceæ includes but two genera, viz, Byblis with two species, and Drosera with no less than 41 Australian species, which are almost exclusively endemic; many are most beautiful, and would certainly succeed under the same treatment as Cephalotus.

Halorageæ follow, with seven genera and 56 species, all, with the exception of the curious Loudonia, ugly weeds. Rhizophoreæ, the Mangrove family, is represented by five littoral Mangroves, all tropical or sub-tropical, and equally natives of the Asiatic shores; whilst Combretaceæ, a family of tropical trees and shrubs, with four genera and 24 species, none of any horticultural interest, concludes the volume.

As with the former volume, so with this, the genera and specific characters are worked up wholly by Mr. Bentham, and chiefly from the specimens contained in the Hookerian Herbarium at Kew, and that of Dr. Mueller transmitted from Victoria for this special purpose. The amount of synonymy is not so great as in the former volume, partly because so many of the Australian Leguminosæ, including all the most difficult endemic genera, have been long ago worked up by Mr. Bentham himself; partly because the species are to so great a degree endemic, and partly because comparatively few are in cultivation. Still the number of synonyms in the index almost exactly equals that of the species described!

We cannot conclude without congratulating our Australian brethren on the ability and expedition with which their Flora is being brought out. At the present rate they may expect to see it completed in five or six years at the outside; and we may add, that they are either singularly fortunate or remarkably well advised in having selected an author who is not only quite unrivalled as a descriptive systematist, but who has the leisure to devote himself to the task, the ability to do it the amplest justice, and the energy to prosecute it with the least possible delay.

An Essay on the Benevolent Distribution of the Sense of Pain. By G. A. Rowell, Hon. Mem. of the Ashmolean Society, and Assistant in the Oxford Museum. Pp. 48. Williams & Norgate. London, 1862.

It seems that in 1847 Mr. Rowell submitted to the Ashmolean Society a paper on the above subject, which was well received in various quarters, and subsequently printed. The view which he takes is very interesting; and is briefly this—"That the sense of pain is not an infliction, but one of the most useful and important senses we possess. That it is given to animals only in as great a degree as is necessary, and that no creature has a higher sense of pain than is required for the preservation of the class to which it belongs."

Man (he contends) is liable, from many causes, to injuries from which other creatures are exempt; he alone has a knowledge of, and uses, fire, edge tools, destructive chemicals, &c., for which and for other reasons he requires some protection, more than other creatures have, and this is given him in his possessing the sense of pain in a higher degree; while these animals are mostly adapted for the localities in which they dwell, and are clothed by Nature accordingly, man has no such covering, and the sense of pain drives him to self-protection, and the use of proper means enables him to live without injury either under tropical heat or arctic cold.

Mr. Rowell bids us observe that sensibility of touch must not be confused with sense of pain, for the actiniæ or sea-anemones have exquisitely sensitive tentaculæ, which carry food to their mouths, and yet these creatures may be cut in pieces, and each piece soon becomes a distinct and perfect organism.

If we look at the distribution of pain in the human body we find it almost confined to the skin. Exposed parts about the eye are exquisitely sensitive, but the back parts of the eye are not so. The heart, brain, and lungs, though the most vital organs, have no need of pain, because they are sufficiently protected from injury by their situation; and here we may observe that the famous Dr. Hervey was once enabled to get at and touch a man's heart, but it caused the patient no pain whatever, and he says, "this young nobleman knew not that we had touched the heart." Sir Charles Bell, speaking of the brain, tells us, "It is as insensible as the leather of our shoe, and a piece may be cut off without interrupting the patient in the sentence he is uttering." That which is sufficiently guarded needs not the extra guard of pain.

The painful sensation caused by extreme cold warns people of their danger, but if they despise this warning, the pain ceases when it becomes useless, and drowsiness succeeds, then insensibility, and a painless death. Pain, then, is manifestly and indispensably necessary for man, but is it so necessary for the inferior animals? We think not. Mr. R. hopes "to show cause for believing that the sense of pain is given to animals—let their degree of organisation be what it may—only as far as is necessary and useful to guard them from injury, or to compel them to the function they have to perform; and that many of the lower animals do not possess the sense of pain, as to them it would not only be useless, but an infliction. In fine, my object is to show (he says) that the distribution of the sense of pain, and the great law of nature, 'Eat and be eaten,' by which animals of one class live on those of another, are both conducive to the well-being and happiness of all classes of the animal creation, and afford the strongest evidence of the mercy and benevolence of the Creator."

As the question does not admit of absolute proof, the philosopher must be satisfied if he arrives at a fair and probable conclusion. We cannot, of course, give even an outline of the arguments used, but there are many points well worthy of attention. The common flesh-fly is spoken of as affording an apt illustration both of the fecundity of the lower animals, and the importance of the check Nature has provided against a super-abundance of them. The mission of these flies is to do the scavenger work of the world wherever their wings can carry them, and their work must be done quickly too. Reaumur has stated that one fly will deposit 20,000 eggs; these are hatched almost as soon as deposited, and the young maggots then set to work in earnest. When their work is done they lie a short time in the pupa state, and no sooner do they change to the perfect fly than they become the prey of birds, bats, frogs, &c.; thus the balance is restored, and the flies become in their turn a source of sustenance and enjoyment to other animated beings. The necessity for this destruction is obvious. Reaumur has ascertained the number of eggs that a single fly will deposit. It takes from 16 to 20 days for the egg to develope into a perfect fly, but let us give a month for a generation of flies. If we suppose half the brood to be females, the sixth generation would amount to a number so prodigious, that it would cover the whole surface of the world—earth, sea, and all, to the depth of a mile and more. We have verified Mr. R.'s figures, and freely confess, that if there is a necessity for these flies to be produced in great numbers, there is a far greater necessity for their wholesale destruction: but, can there be any necessity for their feeling pain in their destruction? Pain would not assist them to discover and escape from their enemies; it could produce no moral effect upon them, as it assuredly does on man; they are created to be destroyed by a violent death, and pain to them would be simply an infliction.

Undoubtedly there is a good deal of misapprehension on the subject of pain. The cry of animals cannot be depended on as a proof of pain. A pig will make the most alarming outcry if you take it up ever so tenderly, and all wild animals may be expected to struggle violently when under restraint.

Very few hares or rabbits in a wild state die of old age—they are the natural prey of foxes, wild cats, martens, polecats, stoats and weasels, which could not exist without them. They have no means of defence when once caught, and therefore pain would be useless to them, either to warn them of danger, and to make them exert themselves to escape. But they have eyes, so prominently placed, that they can see before, behind, and all around them, ears that can catch the slightest sound, and a degree of timidity which keeps them always on the alert. Pinch a dog or cat and he will be highly indignant, and will bite and scratch you; but if the skin of a tame rabbit be pinched very hard, between the finger and thumb, the creature will scarcely wince.

There are numerous cases of horses, one of which having met with a dreadful accident was a spectacle of woe, yet nobody liked the task of putting the creature out of its misery, and while they looked on in horror it began to eat the beautiful green Grass around it. Carnivorous beetles sometimes get loose, and walk about with a pin through their bodies, and eat up the other specimens; even the sexual habits of animals appear to be little affected by injuries they have received. And, on the whole, there is reason to believe, that the system of prey, by which some animals feed on and destroy others, is productive of very little pain and misery; and much less than would be the result if all animals were to die by what is termed a natural death.

As to the pain felt at the moment of violent death, there is reason to think that it is next to nothing. Mr. Rowell was struck on the head by a flower-pot, which fell upon his shoulder and head. He felt nothing till they brought him to. A gentleman was hanged accidentally in a half-drunken frolic, and all he remembered was a flash of brilliant colours, at the moment, as he supposed, of his suspension. Dr. Livingstone had the misfortune to be seized by a lion, and was severely injured. Yet at the time, although he was fully aware of what had taken place, he felt no pain, or even fear. The excitement of the moment seemingly suspended both those senses; and he believed, that had he been killed at once his death would have been painless. Such also Dr. L. believed must be the case with all creatures under similar circumstances. Here, however, we must close this account, commending Mr. Rowell's pamphlet to the notice of our readers.

The Journal of British Ophthalmology, and Quarterly Report of Ophthalmic Medicine and Surgery. Edited by Jabez Hogg. London: J. Churchill & Sons, October, 1864.

It is a very common practice with second-rate men to depreciate everything that is done at home, and to laud to the skies all that comes in a foreign dress, whether it really proceeds from men of talent and invention, or from sources as little distinguished as themselves. In some such spirit it has been the fashion to cry down British Oculists, though most of the real improvements have originated at home, and to extol men like Graefe, who, whatever their real merits may be, have derived a great deal of their inspiration from this country. If this practice be combined with selfish motives, or a lazy disinclination for personal inquiry, and a consequent disposition to put up with anything which may pass current with the world, either from eccentricity or boldness of practice, especially where such indiscrimination leads to formidable results, it is high time that our own countrymen should bestir themselves, as well to take their proper place, as to prevent mischief—which seems otherwise inevitable.

It is with a laudable feeling to meet alleged practices of this kind that this new Quarterly Journal is put forward, and we must say that the Number is highly creditable for the varied, interesting, and important matter which it contains. In one or two articles there is perhaps too much of a controversial tone, inseparable possibly from the object in view, but it is not likely that this should be kept up to any extent, nor is it to be wished, as experience shows us that there is nothing which readers so soon get tired of as controversy. To the uninitiated there seems no necessity to use such words as synechiæ for adhesions, or mydriatic for dilative, though possibly good reasons may be given for retaining words which have been long in use—and the latter in its primitive form is as old as Celsus; while experience shows that the more needless technical terms we can get rid of the better.

It would be quite out of place in a journal like the present to enter upon any analysis of the contents, which, however valuable, are of little interest to the general reader. We may, however, mention that the Calabar Bean, the Ordeal Bean of Old Calabar, Physostigma venenosum, (not Physostygoma) belonging to the natural order Leguminosæ, the poisonous qualities of which so fatally affected several children at

Liverpool, as noticed at p. 800, has of late been much used on account of its active contraction of the iris, and its property of increasing refraction, on which account, as well as its antagonism to Belladona, it was first brought into use two years ago by Dr. Robertson.

The periodical professes to be a fair and impartial exponent of the views and practice of English Ophthalmic Surgeons, and if it is conducted according to the promise of this first number, it will be a welcome source of information to general practitioners.

The Useful Knowledge Society's Family Atlas, in 20 Parts. Edward Stanford, Charing Cross. 1861.

This capital Atlas is a new issue of a work, originally published under the superintendence of the Society for the Diffusion of Useful Knowledge. It comprises a selection of 80 maps, with the new discoveries, and other improvements to the latest date, and has in addition to the general index, what has been designated a thumb index, said to be particularly convenient for the purpose of rapid reference. The utility of the thing is admitted, but the expression thumb-index is surely singularly awkward. Many years ago, this most useful Society deservedly earned a high reputation for their publications, which combined what were before that time thought to be two seemingly impossible qualities, viz., cheapness and excellence, and from the first, their maps did them the greatest credit. Whether the maps of the United States of America were exceptionally good or not, it is certainly true that we have on many occasions found them particularly valuable of late, when people have been endeavouring to discover the locality of some recent battle, or to follow the course of the opposing armies in that land. Here we have often found the information which we had failed to obtain elsewhere. This is no small praise, when one considers the changes that are wrought in the face of a country by the railroads, especially in a go-ahead age like the present, and in a country like America. In addition to the causes glanced at above, which tend to render old maps obsolete faster than ever, immense fields of discovery have recently been opened to the enterprising traveller, in every quarter of the globe. British Columbia, Australia, and various parts of the great continent of Africa, are constantly furnishing matter for new maps, and even the laying down of railways in India and elsewhere demands continual attention.

We have before us more than half the numbers of this capital Family Atlas, and the unanimous opinion of all our friends who have looked at the maps, has coincided with our own, that it is a work extremely well executed, and one which may be confidently recommended. The size of the Atlas when bound will be about 19 inches by 16. The price is half a crown a number.

Miscellaneous.

Evils of Pot Culture.—Among the utensils for carrying on the operations of horticulture, the flower-pot is perhaps one of the most indispensable. At the same time the evils attending its use under certain circumstances are probably of more consequence than we are aware of, or if we are, we are not at sufficient pains to counteract them. I allude more particularly to the common system of growing our hothouse plants upon the exposed shelves and stages of our stoves and greenhouses. To the most superficial thinker such a system cannot appear otherwise than contrary to the most common laws of nature, and not at all in accordance with any plan which the least acquaintance with vegetable physiology would teach us to adopt. We readily comprehend the importance of maintaining an equable atmospheric temperature in our hothouses, and the evil consequences arising from neglect in such matters to the flowers and foliage of the plants. Of how much, and even more importance then, must it be to protect the roots with the same care, which are far more susceptible of injury from such causes; and yet in the majority of cases they receive the least attention. In fact, where plants are grown in the manner before referred to, it is hardly possible to suit the conditions of both. It is plain that the roots of a plant growing in its natural state cannot be subjected to the same variations of temperature and moisture to which the leaves and branches are. The nature of the medium in which the roots are developed prevents this, and every practical gardener knows the importance of guarding against such evils. Yet, in the case of plants grown in pots exposed to the sun and air, these evils have full play, and must affect health to a very considerable extent. The pot being an active conductor, and presenting a large radiating surface, it is to the ball of soil which it encloses, exactly what the wet cloth which the reaper wraps around his pitcher in the harvest field to keep the water cool is to the water. Let us take an instance. We shall suppose that the plant is watered in the morning until the ball of soil and the pot is moistened through; it turns out a bright sunny day; there is a dry circulation of air; rapid evaporation takes place from the side of the pot; the heat is carried off along with the moisture, and the temperature of the soil is reduced to the lowest point, just when the leaves and branches are enjoying the highest, and when in nature the roots would be also. Then follows a reaction; as evaporation ceases the heat increases; if the roots were frozen before they are roasted now, until—as often happens in the case of pot-bound plants—the ball of soil shrinks away from the side of the pot. Under such circumstances to lift the plant out of the pot entirely and set it upon the shelf would be an aggravation of the evil, but nothing more. No doubt strict attention to shading and watering lessens such evils considerably; but no amount of attention that the gardener is able to bestow can altogether compensate for the disadvantages of such a system. I fully believe that a large proportion of the diseases and difficulties that we encounter in the cultivation of some of our more select stove and greenhouse plants arise chiefly from this cause. The liability of some plants to the destructive attacks of red spider and thrips is greatly increased when grown in pots, and remarkable instances of this often come under the gardener's attention. I have seen pot Vines, when not plunged, brown with spider, while others that have been planted out beside them would escape almost unmolested; and it is well known that nurserymen who often plunge their pot Vines in order to save labour in watering and such like, seldom suffer to any extent. The prevalence of this disease more or less, which is certainly one of the most formidable that the gardener has got to contend with, is generally attributed to the character of the season—a cause no doubt that exerts great influence in inducing diseases, especially of the parasitical class; but the occurrence of red spider in particular cases cannot be accounted for by such general causes. In such cases the cause is entirely local, and one of the most common I believe to be dryness at the root. Evidence of this is abundant everywhere. It will be found that in shallow soils upon dry subsoils, fruit trees in general, and everything liable to its attacks, always suffer worst, and sometimes to a very great extent. Plants grown in pots, often and unavoidably subjected to severe checks from being irregularly supplied with moisture, suffer in the same way; and everyone who has forced a few Strawberries, knows that if he keeps their roots regularly supplied with moisture, he has little to fear from its attacks; but allow them to suffer but once or twice from drought, and the pest will develop itself with a rapidity that is perfectly astonishing. The same may be said of other things as well as Strawberries. When a plant is in a vigorous growing state and the leaves full of sap, red spider will seldom make its appearance. This fact is well known, and until Vines and Peach trees have about completed their growth, and commence to ripen their wood, gardeners seldom dread its appearance. If it does appear before then, it is owing to the causes before mentioned. This seems to confirm the idea that it is only when the leaves are suffering from an insufficient supply of moisture that the insect is able to make progress, as when the leaves and wood have attained their full growth, and the ripening process has commenced, the free and active circulation of the sap may be said to have ceased to a certain extent. *Scottish Gardener.*

Remarkable Portugal Laurel Tree.—I am requested by Lord Vernon to furnish, for the information of the Arboricultural Committee of the Royal Horticultural Society, some account of what was once a somewhat remarkable Portugal Laurel tree growing in the grounds of Sudbury Hall, unfortunately killed to the ground by the severe winter of 1860-1. What made this tree remarkable among its fellows, was that it had from one plant originally become a large group of trees by self-propagation. The points of the lower branches, by resting on the ground, had in time taken root, from which strong erect shoots had proceeded, and ultimately became independent plants; these, in their turn, as they became larger, laid their outer branches down and formed a second circle of trees, and so on in successional layers, until this group of Portugal Laurel was about 35 yards in diameter, having the appearance, at a short distance, of an immense bush, which in all probability would have gone on extending itself had its career not been cut short by the frost. Its height was not particularly remarkable, perhaps never much exceeding 20 feet, but the dense mass of shining green foliage made it an object of interest to all who saw it. Nor was it less interesting to walk through it on a fine summer day, with the sun's rays broken by the mass of foliage overhead, and examine the connecting links between the different trees as they still lay on the surface of the ground, after the manner of Strawberry runners, many of which not thicker than a rake or hoe handle, while there stood at each end of them upright trees, of sizes from the thickness of a man's leg to that of a diameter of 9 or 10 inches. Thus, it appears, that as soon as any branch took root near its point, it ceased to increase in size between the parent and young plant. The circumference of the whole group at the point of the branches was about 110 yards. I have no means of ascertaining the age of the original tree, which doubtless was considerable, as it had been in a state of decay some years previous to 1860; the stump of it, however, is still to be seen, the diameter of which is 3 feet 6 inches near the ground. On the breaking up of the frost of that disastrous winter mentioned above, it was hoped that this group would have escaped with little injury, and it was permitted to remain for a season to give it every chance of breaking again. This, however, it refused to do except at the surface of the ground, and it was therefore cut down to the living parts, but the feeble efforts at growth it has made since afford little hope of its ever again becoming an object of interest. It may be worthy of mention here, that this tree used to flower profusely, and produce immense quantities of fruit, which had a very rich appearance when ripe, and in time afforded a glorious feast for the wild birds. The fruit, however, perhaps owing to its extremely bitter taste, did not appear to tempt blackbirds or thrushes much until it was perfectly ripe, and other fruits getting somewhat scarce; they would then commence an attack upon it, and make short work of the immense quantities with which these trees used to be loaded in fine seasons—every berry disappearing in the course of a few days—and no wonder, when the number of birds is considered, which must have been seen to be believed. They seemed during those few days to have congregated here from every point of the compass. Situation rather sheltered; soil a stiffish loam, drained, but not very dry; subsoil gravelly clay. *Andrew Dick, in the Proceedings of the Royal Horticultural Society.*

The Cowslip and its Allies.—This plant is common in gardens, both in its original form and in its lovely progeny, the innumerable varieties of Polyanthus. Many varieties also occur which cannot be legitimately called by either name, having the form, though more luxuriantly, of the pasture Cowslip, with the colour, incipiently, of the Polyanthus. The most curious are those in which the calyx is partly or wholly changed into corolla. In one, tolerably common, and called King Charles, the calyx is half green and half crimson; in another, a very old-fashioned plant, called Hose-in-hose, the calyx is an exact duplicate of the corolla; and in a third it is formed of five distinct leaves, miniatures in every point of the ordinary foliage of the plant, excellently illustrating the physiological principle, that all the parts of flowers are resolvable into the leaf, as their common type. The grandest elucidation of modern botany is that the leaf, the sepal, the petal, the stamen, and the carpel, are so many different modifications of a single organic base, impressed with different forms and entrusted with different functions; but essentially the same, and under certain circumstances exchangeable one for the other. Whether the Primrose and the Cowslip be really distinct, is by many botanists doubted, and some do not hesitate to call them modifications of a single type. For my own part I believe them genuine species. Specific distinctiveness is not a matter wholly of shape. It includes the whole nature of a plant, its habits, tendencies, and capacities, and every circumstance connected with its life and position in the economy of the world. The Primrose loves shade, growing on sheltered banks and in sylvan retreats, and blooms with the Wood Anemone, or just as the latter is on the wane. The Cowslip on the other hand seldom or never seeks the protection of trees, but courts the sunshine in the open fields, blossoming in its wild state when the Primrose is past its prime, and keeping company with the Meadow Orchis, which rarely opens till the Anemones are all gone. The difficulty about them appears to have arisen in great measure from a long-standing confusion with regard to the Oxlip. The plant commonly called the Oxlip is frequent in the Cowslip and Primrose districts, growing with the former in the open fields, though always as a solitary individual. It is a great favourite in cottage gardens, and is figured in Curtis (iii., 458) as Primula elatior, under which name it is also described by authors generally, but to which it has no right. It resembles the Cowslip in its inflorescence, but the limb of the corolla is nearly flat, the stalk is stouter and taller, the flowers are of proportionately greater size, and half-erect, like those of the garden Polyanthus, of which it is probably one of the intermediate or proximate sources. Pale-flowered varieties remind us of the umbellated Primrose—in fact, it often resembles a handful of Primroses placed on the scape of a pasture Cowslip. The seeds produce, along with Oxlips resembling the parent, Cowslips, and even Primroses. This is good evidence of its being a mule or hybrid between the Cowslip and Primrose. Moreover, on the continent, where the Cowslip and Primrose are said to be rarely seen together, this common Oxlip appears to be unknown. There the Primrose is rather a southern plant, extending from France to the confines of Asia, while the Cowslip is more of a northern one, extending as far as Finland. Both Primrose and Cowslip occur, it is quite true, near together beyond the Alps, but the former always as a plant of warm valleys, the latter as one of the mountains, and too far apart from one another to hybridise. Their intermixture in England is a lively type of the twofold nature of our climate, and it is not surprising that they should issue a form partaking of the characters of both species. The true Oxlip is a very different plant, common on the Continent, but in England confined to the county of Essex. Though figured in Eng. Bot. in 1799, it was only determined to be a native of this country in 1842, when Mr. Doubleday, of Epping, discriminated it as the Bardfield Oxlip, by which name it is now known among botanists. It blossoms a month earlier than the hybrid; the flowers are scentless; they droop instead of standing nearly erect, and it reproduces itself unaltered, and without any intermixture of Primroses and Cowslips among its progeny. This, at least, is the experience of my friend Mr. Sidebotham, who has cultivated and carefully watched the plant for nearly 20 years. There are in England, accordingly, three genuine species—the Primrose, the Cowslip, and the

Bardfield Oxlip; and, in addition to these, the hybrid or common Oxlip. *Grindon's British and Garden Botany.*

Poisoning from Contact with Tobacco.—M. Namias has communicated to the French Academy an account of the case of a smuggler who suffered under strong symptoms of Tobacco poisoning, through hiding under his clothes and all over his body, in contact with his skin, a quantity of the leaves of the Tobacco plant.

A Horse Chestnut Tree.—Dr. Davy read a paper at Bath on *the* Horse Chestnut; will any one read a paper on *a* Horse Chestnut? The tree stands on a flat stone. Its root grows up through the air for 7 feet, turns over a wall, and descends 7 feet into the earth. So that the root passes for 14 feet through the air before it enters the earth. The celebrated Dutrochet, by experiment, convinced the still more celebrated De Candolle, and all European vegetable physiologists, that roots will only grow straight downwards. On this, I set to work to show that they will grow in any direction in which they can find food. If any one doubts this fact, let him inspect my tree, which is now 21 years old. In imitation of Dutrochet's beautiful experiment, I placed a great variety of seeds (single as well as double) in flower-pots, suspended them upside down on wire-work, and watered them from above. Each seed sent a tap-root down into the air, which died; but the branch roots (as I have named them) and the plants grew, and corn ripened in this way. But cuttings placed upside down, though they grew and bore fruit for years, showed no root below. I thus blundered on the fact that every seedling has a tap-root, whose downward determination nothing can pervert, a provision and contrivance for the fixing of the plant, and a beautiful proof of the design of a Creator. But the downward tap-root is as peculiar to the seedling as the "seed leaves" are, and all branch roots will grow in all directions. I published this in the second edition of the "Treelifter," in 1853, where the details may be seen. Those who have published it since have neglected to say where they got it from. I preserved one Horse Chestnut by placing it on a flat stone, and replacing the flower pot with a chimney pot full of earth, and, by degrees raised a column of chimney-pots. I then built up a column of earth on the opposite side of the wall, turned the roots into it, and when they were established in the ground, I took away the two columns of earth. I think that Virgil's tap-rooted Esculus (*quæ quantum vertice*, &c.) is the Horse Chestnut. Virgil (second book of Georgics) mentions it as distinct from the Quercus and Castanea, and Ovid (Met. x. 91) as distinct from the Fagus and Ilex. It is then a feat to make its radix tend to heaven instead of to Tartarus. With regard to the name from Esca, it is true that neither man, horses, nor pigs will eat Horse Chestnuts, but sheep, cows, and deer are ravenously eager for them. *Col. Greenwood, in Athenæum.*

Calendar of Operations.

(*For the ensuing week.*)

Now that we have had rain enough, all sorts of evergreens, if not already done, should be planted. Any shrubs or trees considered too tender for our climate should be planted in as warm situations as possible in order that their young wood may get well ripened. The stronger growing Roses may be at least partially pruned, to prevent the winds from swaying them so as to affect the roots. Tender Tea-scented varieties, in beds, in cold places, may be taken up and put in thickly by the heels in a sheltered place, or receive some kind of protection where they stand. Laying turf may still be proceeded with when the weather is open and mild. This is better done now than in spring.

FLOWER GARDEN AND PLANT HOUSES.

All walks and drives should now, if not already done, have a thorough cleaning; this will carry them through till next May or nearly so. Let lawns be well rolled, and receive a good mowing close on the heels of it, which will keep them in repair for a long time to come, unless unusually mild weather should occur.

CAMELLIAS.—Plants started early last spring will now or soon be again in flower; therefore these and others should be well attended to with water.

CINERARIAS.—If mildew is troublesome, dust with sulphur the moment the pest is perceived. Forward plants may require a shift, and if so use a rich compost for the purpose, consisting of good fibrous loam and well decayed leaf mould, with a proper admixture of silver sand. Let the plants be placed thinly on the shelves on which they stand, and as near the glass as possible. Fumigate occasionally to kill green fly. Keep the plants secure from frost, by which they are easily injured.

JAPAN LILIES.—As soon as the bulbs are sufficiently matured, which will be known by the decay of the leaves and stems, they had better be repotted; not that this is of importance at present, but it will economise space, and prevent the operation being neglected until after they have made fresh roots. The soil in which they have been growing ought to be entirely removed from the bulbs, and the latter divided as may be thought proper, for there will always be found about the crown of the parent some small bulbs, which may be placed in 4-inch pots. If the ripening has been complete, the roots will not be troublesome; but if not, there will be found a quantity of fresh roots remaining. When such is the case, leave them to themselves for some time longer; never pot while it is necessary to cut or break the stronger roots, but strip your fingers through them, in order to remove those that are decayed. The pots should be just sufficiently large to receive the bulb and strong roots adhering to it; give a moderate watering, to settle the soil, and place them in a greenhouse or cool pit. They will require no further attention until the season begins to excite vegetation, when they must be regularly attended to. Water as soon as you see signs of growth, but sparingly until they have made leaves, &c.. to draw up and give off moisture.

WINTER FLOWERING PLANTS.—Azaleas which set their buds early will readily push into flower, if placed in a warm moist temperature, and some of the early-blooming Rhododendrons require very little forcing to bring them into blossom at any time after this season; therefore where there is a good stock of these, and Ghent and other hardy Azaleas, well set for bloom, a portion of the plants should be placed in heat during the winter months at intervals of about three weeks, and as they are very showy and last long in beauty they will be invaluable for purposes of decoration. These, together with Camellias, Heaths, Epacrises, Acacias, Daphnes, Gesneras, Cyclamens, Cytisuses, Chinese Primulas, Cinerarias, Mignonette, Tree Violets, and other things which bloom naturally in winter, will afford a good display. Monochætum ensiferum is also an invaluable plant for winter decoration.

FORCING GARDEN.

CUCUMBERS.—Keep the Vines of these thin by means of constant stopping of laterals, and removing even main shoots where too much crowded. Keep up a bottom heat of about 85°, and a moist atmosphere. Let the top heat range from 65° to 70° by night, and from 70° to 75° by day.

PINES.—We now look forward to every day dawning duller and later than its predecessor, and as the power of the sun declines, so also must our artificial temperatures be somewhat decreased, and in exact accordance with the latter, must the amount of moisture be regulated. Till our hothouses are furnished with hygrometers of a simple construction, this matter must still be managed according to the best of our judgment, aided by practical experience. Take care that the moisture is not so excessive as to condense in quantity upon the glass, &c., close up the laps, or run down into the hearts of the plants. To prevent this, the evaporating trough should be more sparingly filled. In fine clear weather, when a greater quantity of air can be admitted, the amount of moisture may also be slightly increased. Watering should be done with great care, and syringing is only admissible on the mornings of very fine days. It should be done with a fine rose, and driven, not into the plants, but into the atmosphere of the house or pit with such force, that they may receive it in the shape of very fine dew.

VINES.—In the anxiety to keep houses containing fruit sufficiently dry, be careful to avoid the extreme, even in that direction. If the houses are kept too dry by fire heat, the berries will shrivel, an evil nearly as bad, with regard to some kinds, as decay, the result of opposite management. It is easy to comprehend what is wanted, viz., a dry but not an arid atmosphere; but to regulate it to this nicety requires more care and judgment than is generally found, except in a very experienced practical gardener. If not already done, let all spare time be now devoted to cleaning the sashes of the different structures, pits and frames included, from the dust and dirt accumulated upon them during the summer. Nothing conduces more to the health and well-being of their occupants than the free admission of light.

HARDY FRUIT AND KITCHEN GARDEN.

Storing fruit and root crops, wheeling manure and trenching and ridging will now be the chief work to be done here. All alterations required should also be proceeded with without delay while the weather is favourable.

CAULIFLOWERS.—Let those under handlights have all the air possible, protecting them only from frost, rain, and very cold winds. The lights should be quite closed during severe weather only, and the tops should be tilted in wet; but during fine mild weather they should be lifted off and set on bricks, to keep them clean. Watch closely for slugs, and check their ravages by timely applications of soot. A little finely sifted clean coal ashes is an excellent thing for covering the surface of the soil between young plants of any kind, as our slimy enemies have an insuperable objection to crawl over it.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Nov. 2, 1864, as observed at the Horticultural Gardens

October and Nov.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 27	26	29.441	29.202	59	48	53.5	54	54	S.W.	.02
Friday 28	27	29.507	29.400	58	40	49.0	54½	54½	N.E.	.00
Satur 29	28	29.837	29.608	61	44	52.5	55	55	N.E.	.00
Sunday 30	○	30.051	29.899	52	35	43.5	54	54½	E.	.00
Mon. 31	1	30.167	30.128	50	33	41.5	53	54½	E.	.00
Tues. 1	2	30.167	30.110	49	37	43.0	52	53	E.	.00
Wed. 2	3	30.123	30.100	51	32	41.5	51	53	N.E.	.00
Average.		29.902	29.778	54.3	38.4	46.3	53.3	54.1		.02

Oct. 27—Hazy and mild; cloudy; slight rain and warm at night,
— 28—Foggy; very fine, overcast at night.
— 29—Slight haze; overcast; dull and overcast.
— 30—Overcast; fine throughout.
— 31—Dry haze; cold wind; fine at night.
Nov. 1—Foggy; cold and dry; overcast.
— 2—Fine; cold and dry; fine; at freezing at night.
Mean temperature of the week equal to the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Nov. 12, 1864.

November.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 6 .	53.0	38.0	45.5	19	0.76 in.	2	6	2	3	5	14	4	2
Mon. 7..	52.4	37.5	45.0	18	1.02	2	6	2	3	4	12	6	3
Tues. 8..	51.1	35.0	43.1	18	0.58	2	5	1	2	2	15	6	4
Wed. 9..	50.0	34.4	42.2	15	0.40	3	5	3	3	5	0	3	6
Thurs. 10..	50.5	34.9	42.7	22	0.67	3	6	3	2	8	11	2	3
Friday 11..	50.7	34.7	42.7	15	1.02	3	6	6	1	7	8	5	3
Satur. 12..	50.4	33.7	42.0	16	0.50	4	5	7	3	3	7	7	2

The highest temperature during the above period occurred on the 12th, 1841—therm. 63 deg.; and the lowest on the 9th, 1854—therm. 18 deg.

Notices to Correspondents.

BERBERRIES: *Alpha.* There is a seedless Berberry, which is recommended for preserving, but it is said that it only puts on this character when of some age, and that suckers from a seedless tree will, while young, produce fruit with seeds.

BOOKS: *Mentor.* Read and study, and master if you can, the Theory and Practice of Horticulture. That, and Solly's Rural Chemistry will give you a good foundation to build upon by your own observation.—*Hortus.* The address you ask for is No. 22, West Howard Street, Glasgow.—*M H N.* The new edition of English Botany, by Syme, if you can afford it. If not, Bentham's Illustrated Handbook of the British Flora.—*T P.* M'Nicoll's Dictionary of Natural History Terms, and Henry's Glossary of Scientific Terms, will supply a good deal of the information you seek.—*A H* Reeve's Land and Fresh-water Mollusks, in which you will find much interesting information.—*W H H and others.* British and Garden Botany next week.

FRUIT TREES: *Loudham.* Cherries may be trained on a low wall, but of course they will succeed better on a high one. The sorts may be the May Duke, Knight's Early Black, Elton, and Late Duke. Late Pears for a wall with a N.E. aspect are not to be recommended; on such, certain kinds of Plums and Cherries will be more appropriate, but you may try Knight's Monarch, Ne Plus Meuris, and Winter Nelis. For Kitchen use you cannot do better than plant the Verulam. ‖

FUCHSIAS: *Young Gardener.* Twelve good Fuchsias, are Sir Robert Peel, Lord Warden, Souvenir de Chiswick, Constellation, Sir Colin Campbell, Universal, Madame Cornelissen, Princess of Prussia, Wiltshire Lass, Annie, Fairest of the Fair, and Minnie Banks.

NAMES OF FRUITS: *W S.* 1, Beurré Diel; 2, Beurré Rance; 3, Beurré de Capiaumont; 4, Easter Beurré; 5, Marie Louise; 15, Kentish Codlin; 17, Minchall Crab; 18, Blenheim Pippin; 19, 20, King of the Pippins.—*S B.* 1. Doyenné Gris; specimens of the others imperfect.—*J C.* 1, Belle et Bonne, which is now called by the French Bergamotte sans Pepins; 3, Bon Chrétien Fondante; 4, Brown Beurré; 5, Chaumontel; 6 Winter Nelis: 7, Passe Colmar; 8, Easter Beurré; 9, Doyenné Blanc; 10, Vicar of Winkfield.—*Old Sub.* 1, Beurré Diel; 2, Glou Morceau; 4, Napoléon; 5, Hacon's Incomparable.—*W G.* 1, Orange Pippin; 2, Hanwell Souring; 3, King of the Pippins; 4, Loan's Pearmain; 6, Dumelow's Seedling.—*T F.* 1, Old Colmar; 2, Easter Beurré; 3, 4, Marie Louise; 5, Beurré Rance; 6, Hawthornden Apple.—*I G.* Vicar of Winkfield Pear; 1, Downton Nonpareil; 4, 6, Dumelow's Seedling; 5, Cornish Aromatic.—*E T R.* 3, Winter Nelis; 4, Beurré Rance.—*F Kelly.* 1, Alexander; 2, Scarlet Crofton; 3, resembles the Ribston, but may be different.—*H B,* 1, Duchesse d'Angoulême; 2, Glou Morceau; 3, Bon Chrétien Fondante; 4, Winter Nelis; 5, Beurré d'Aremberg: 6, Passe Colmar. ‖

NAMES OF PLANTS: *L V H.* One of the varieties of the Lucombe Oak.—*J R* 5, Pteris longifolia; 6, Nephrolepis exaltata; 7, Selaginella uncinata; 8, Adiantum Capillus-veneris; 11, Blechnum brasiliense. The others, both Selaginellas, were too much crushed.—*P G.* 5, Pteris aquilina; 6, Athyrium Filix-fœmina; 7, Polypodium vulgare.—*Usk.* Athyrium Filix-fœmina, and Lastrea dilatata.—*A B.* Bupleurum fruticosum.—*R S.* 1, Pteris cretica; 2, Pteris hastata macrophylla; 3, Woodwardia (Doodya) caudata; 4, Adiantum pubescens—probably, for the specimens are such starvelings, that they are not to be named with certainty.—*W B Page.* Allium intermedium.

PAMPAS GRASS: *H F.* Our autumns are not long enough, nor warm and dry enough to allow the ovaries to become perfect out of doors, at least we never remember to have heard of an instance of the plant bearing seed in the open air. If grown in a tub, and kept in a greenhouse, a panicle of the polliniferous plant in a fit state (which may be got by cutting it when the anthers are fully grown, and allowing them to burst in the dry air of a greenhouse) being shaken over it when the stigmas are protruded, you would probably succeed. It certainly has been seeded when flowered indoors.

PETUNIA: *W D S H.* Your seedling is a well marked striped variety belonging to the large form of Petunia, the centre of each division of the flower having a bold white band. Its value will depend on its constancy in respect to this marking, and its habit and prolificacy of bloom. We should not regard it as so refined a flower as those exhibited by Mr. Holland, for instance, but it may be a very showy one.

RHODODENDRONS: *C W.* The leaves of Rhododendrons taken from small plants growing under the shade of Fir trees, have apparently been eaten by insects, but we see no further trace to indicate who were the depredators. Most likely the mischief was done by caterpillars, certainly not by ants.

SHRUBS FOR CHURCH WALL: *Diss.* We should recommend you to try, in the position you mention, some or all of the following, which are quite hardy:—Berberis Darwinii, Cotoneaster buxifolia and Symonsii, Garrya elliptica, Hedera Roegueriana and some of the variegated Ivies, Ceanothus dentatus, rigidus, and several others, Cratægus Pyracantha, and Escallonia macrantha, among evergreens; and Lonicera brachypoda aureo-reticulata, Cydonia japonica, Forsythia viridissima, Jasminum nudiflorum, Ampelopsis heteracea, and Chimonanthus fragrans, among deciduous species. A single shoot of Wistaria sinensis, kept spurred in, carried along the top of the trellis, would form a beautiful border.

VEGETABLE MARROWS: *H F.* wishes to know the best way, or if there is any way, of preserving Vegetable Marrows for winter use.

VINES; *E C.* Your Vines have suffered from red spider. We see living specimens still running about. The whole appearance of the leaves indicates that the air of the house has been at some period of growth far too dry, and probably the roots have been dry too. The Grapes are well flavoured, though decaying. Have you kept your house too warm at night? This is a common source of mischief. The red spider would scarcely have attacked the leaves as they have, but for excessive dryness of the air within the house. The canes look very healthy. *M J B.*

WATERING: *S D.* This is no doubt one of the most important operations of plant culture, and should be so carried out that the roots may never know want or excess. It is better that one man should have the watering of a set of plants, because if he takes interest in his occupation—and if he does not he is not fit for a gardener—he should be in a position to know the wants of each. Many valuable plants are killed from insufficient watering—more perhaps than from the opposite extreme, because a condition of soddenness is more evident than internal dryness of the earth about the roots.

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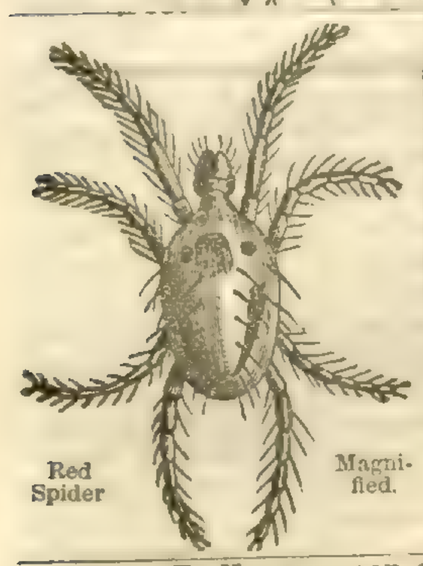

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which are to the Stock Breeder and Farmer of the most inconceivable value, inasmuch as paining in Ewes in bad lambing, Cows in bad calving, swollen udders, sore teats, and all bad wounds, bruises, and swellings in all Animals, are dissipated and finally annihilated by the "Extract," while the "Gaseous Fluid" for Ewes weakly after bad lambing, Cows after bad calving, Mares after bad foaling, by its balsamic and electrical influence imparts the greatest life and animation. It is proverbial for its marvellous cure of the Fret, Colic, and Gripes in Horses, and for Diarrhœa (or Scour) in Calves, Sheep, and Lambs. Such is the permeation of the "Extract" by rubbing in, and of the "Gaseous Fluid" by dosing, that they draw the acrid humours which cause disease out of the parts affected, and excite the curative powers of nature into action; when life, vigour, and the soundest health ensue. This is the secret of their wonderful popularity. Price of "Extract," 2*s.* 6*d.* and 7*s.* per bottle; or quarter of dozen in wood box, 7*s.* 6*d.* "Gaseous Fluid," 1*s.* 8*d.* per bottle, or 20*s.* per dozen in wooden box. Plain directions for use given with every Article.
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SAMPLE MEDICINE CHEST. 16*s.* 6*d.* Carriage paid.
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Address, 22, Dorset Street, Baker Street, London, W.; and Wantage, Berks. No other branch in the kingdom.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society &c.
PROTECTION from COLD WINDS and MORNING FROSTS.
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An improved make, 2 yards wide .. 1*s.* 9*d.* per yard.
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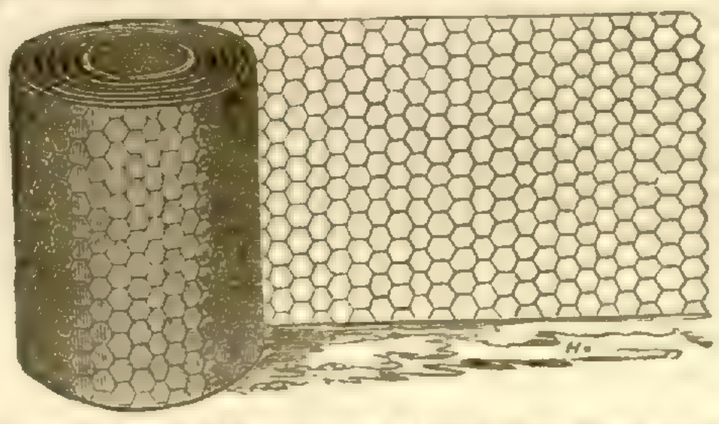

BARNARD, BISHOP, & BARNARDS beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

	Gauge.	Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide	No. 19 ..	4½*d.* per yd.	3½*d.* per yd.
2-inch " " " .. "	18 ..	5 "	4 "
2-inch " " " .. "	17 ..	6½ "	5 "
2-inch " " " .. "	16 ..	8 "	6½ "
1½-inch " " " .. "	19 ..	4½ "	4 "
1½-inch " " " .. "	18 ..	6 "	4½ "
1½-inch " " " .. "	17 ..	7 "	5½ "
1½-inch " " " .. "	16 ..	9 "	7 "

All the above kinds can be made any width (under 6 feet) at proportionate prices.
Strong GALVANISED POULTRY NETTING, 7½*d.* per yard, 3 feet wide. GALVANISED SPARROW-PROOF NETTING for Pheasantries, 11*d.* per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.
Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1*s.* per yard.
The same with Galvanised Wire Rope, 1*s.* 2*d.* per yard
Illustrated Catalogues, with prices of every variety of Wire Fencing and Wire Netting, forwarded free on application.
*** Wire Fencing and Netting delivered Carriage Free at all the principal Railway Stations.

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MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
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THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
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TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.
The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose Engines or Machinery for Drainage or Irrigation.
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4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

SMITHFIELD CLUB FAT CATTLE SHOW.—The ANNUAL SHOW of FAT CATTLE, SHEEP, and PIGS, will be held at the AGRICULTURAL HALL, ISLINGTON, on MONDAY afternoon, December 5, and four following days.
Intending Exhibitors are requested to apply for Certificate forms by the reference letters as under:—

CATTLE.	Form A.	For an Ox or Steer (in any Class).
	" B.	For a Cow or Heifer (in any Class).
	" C.	For a Beast in Extra Stock.
SHEEP.	" D.	For a Pen of three Wethers (in any Class).
	E.	For a single sheep in Extra Stock.
PIGS.	" F.	For a Pen of three Pigs (in any Class).
	" G.	For a single Pig in Extra Stock.

ENTRIES for LIVE STOCK CLOSE NOVEMBER 1.
Prize Lists, Forms of Certificates, and all information may be obtained on application to Mr. DAVID PULLEN, Assistant Secretary, at the Office of the Honorary Secretary, Corner of Half-Moon Street, Piccadilly, London, W.
N.B.—All communications respecting the Show must be addressed to the ASSISTANT SECRETARY, as above, and should bear outside the words "Smithfield Club."

The Agricultural Gazette.

SATURDAY, NOVEMBER 5, 1864.

THE deficiency in the supply of roots, although in some districts much greater than in others, appears to be on the average throughout the kingdom, as near as we can gather, about two-thirds—an enormous amount of food certainly to be made up, and of enormous value; for although a considerable amount is wasted every year from being given injudiciously and too profusely, filling the animal with double the quantity of water that health requires, yet, notwithstanding this, it is next to Grass the cheapest source of nourishment produced. Fortunately fodder is plentiful and well saved, although not enriched with young Clover; and Wheat and Barley are plentiful and cheap, and farmers have already commenced to feed largely on these grains, the more so as the Pulse crop was exceedingly deficient. Amongst the many useful suggestions that appear, some recommend the grain to be ground, others to be wetted or steeped or boiled, and some to be given whole. All these plans are, of course, "successful," for it is not customary to insert the numerous deaths that have occurred from giving Barley and Wheat in a crude state. There appears amongst many farmers, and we were rather surprised to observe it in a communication last week, a disposition to run a muck against the use of Linseed cake, with the view of reducing the price of this article materially, and enhancing that of Wheat and Barley. Now such attempted combinations are always unsuccessful; they are inconsistent with a state of peace, under which trade and commerce flourish; they belong rather to a state of war, without the organisation which is necessary to render war successful. Why do not farmers abstain from bringing any Wheat to market for several weeks, in order to enhance the price! Such a proceeding, equally reasonable, would no doubt meet the fate of most strikes, and would soon succumb to the law of supply and demand. What advantage there can be in buying foreign Oats for feeding in order to abstain from buying foreign cake or linseed it would puzzle a political economist to determine, yet such is the practice of many.

If a combination against the use of cake were to succeed, it would in the end be more injurious than beneficial to agriculturists, as the effect would be to deter importers from repeating their losses, and to induce them to employ their capital in other channels, and refrain from catering to the farmer's wants. By far the greatest amount of mutton

slaughtered in this country is derived from sheep that have not completed their full growth, and the great reason why fatting young animals is more profitable than older ones is, that the increase consists of bone and flesh as well as fat. Thus all the elements of the food are rendered more available. It is well to remember that a pound of fat requires for its production more than 2 lb. of starch or sugar, whilst a pound of flesh contains only the elements of a quarter of a pound of albumen, for three-fourths of flesh consists of water. Although thus diluted it is worth 9*d.* per lb. Again, the wool which has sold so well of late is a highly nitrogenised product; its yolk abounds with oil, and experience shows that no food conduces so much to the growth and quality of the wool, as Linseed-cake. As to the question of manure, there can be little dispute, for it can be proved, both by practice and science, that in this respect 1 lb. of cake is equal to 2½ lb. either of Barley or Wheat consumed by animals.

For these reasons we enter our protest against the advice now so generally given, to supplement the deficiency of roots wholly by giving a food still less nitrogenous. The proportion of this element to the carbonaceous in Barley is as 1 to 10, in Turnips it is (water excluded) as 1 to 5, and in milk, the true pabulum of a growing animal, the proportion is as 1 to 3. Does Nature err in supplying this proportion? or does she furnish these nitrogenous elements merely for the major part to be passed uselessly through the animal. And if Nature is right, shall we be far wrong if in preparing a diet for the still growing animal, we dispense in some measure from Nature's own recipe—and the more so when we find such food agree with the young animal's health. The use of Pulse and cake is found to accord well with young animals, and to conduce both to their health and their growth, and thus when the Pulse crop has to a great extent failed, it is scarcely consistent with science to recommend in its stead a total reliance on the food of pigs. Can we possibly do better than to ascertain the relative amount or proportion of nitrogenous and carbonaceous elements that is found to exist repectively in the most approved food for stock and for fatting animals, and to supply these elements in similar proportions from the various sources from which they can be best procured. If this is done, it will be found that however desirable it may be to employ Wheat and Barley, it is still more so to combine with them Linseed-cake or meal, which abounds in the two elements in which these grains are mostly deficient. It was thoroughly proved by the experiments at Woburn, that meal made from the best oilcake is superior in its effects, weight for weight, to that made from Linseed itself; or in other words that the albuminous and mucilaginous materials are more productive of increase than the oil pressed out, of which they occupy the place.

Some years since chemists were no doubt in the habit of assigning too great a preponderance of value to the nitrogenous element of food, and were in the habit of taking its amount as almost the only guide in estimating the relative value of different kinds of food. At the present day they are disposed to run into the opposite extreme, and because a much smaller amount of the nitrogenous element than of the carbonaceous is retained by the animal in its increase, they are almost inclined to regard it as a secondary constituent in the food of a fatting animal, forgetful of the fact that the nitrogenous element is in constant requisition in supplying the used up muscular and other tissues of the body, and that whilst the fatty deposition may remain comparatively unchanged, the muscular or fleshy parts are subject to constant wear and tear and continual renewal, and that the animal temperature may be sustained by the decomposition of these nitrogenous constituents as well as by that of the carbonaceous elements. The urine of an ox contains twice the percentage of nitrogenous elements as the dung, and forms also the largest portion of the excrements, and we may at any rate correctly assume that at least that portion of the nitrogenous food which is essentially found in the urine has performed its proper mission. This it has done by renewing in the first place the muscular fibre, and then in its turn becoming a portion of these used up tissues, and after contributing its carbon to the preservation of warmth, passing out of the body through the kidneys in a state of solution. We may equally assume that so long as an animal continues in a state of health we have no reason to consider that it consumes too much of the nitrogenous element of food, but that on the contrary such food is necessary to maintain the vital functions, increase the growth, and renovate the muscular system. It is extremely difficult to appraise respectively the values of the albuminous elements of food, and it can scarcely be done in any other way than by taking the average price of Beans and Oats. And as we find that the former steadily maintains a higher value than the latter, we are justified in taking the excess and placing it on the superior value of the albuminous element, of which Beans and Peas contain more than double as much as Oats. *W. C. S.*

—— Mr. Scott, the Drainage Engineer, adds his estimate of the past harvest to those previously published in the daily papers by other writers. He considers Wheat "an average crop, or say 32 bushels per acre, of fine dry quality, much of it having had to be cut during the night, when the dew was on, to prevent it shedding; Barley a sixth over an average crop, or say 56 bushels; Oats one-third under, or 40 bushels; Beans two-thirds of a crop, or 36 bushels; Peas half a crop, or 22 bushels; Tares two-fifths of a crop, or 16 bushels; hay (Clover and meadow) half a crop, or 18 cwt., and no second cutting has been obtained off meadow land for Rowen hay, nor for seed off Clovers, the light aftergrowth in both cases having been consumed by stock; Sainfoin hay, grown on chalks and corn brashes, four-fifths, or 32 cwt.; Hops, five-sixths, or 5 cwt. (some in Kent are total failures, and have not been picked); Potatos two-thirds of a crop, say 4 tons of very small, but generally sound tubers; Swedes are about a sixth of a crop on the land where the plants have been allowed to stand, or four tons; but one half the land sown with this important crop has been ploughed up, and the roots on the remainder are very small, woody, and inferior in quality. Mangel is about half a crop, or say 14 tons. Clover seed is about one-fourth, derived entirely from the first cutting, as no second, usually appropriated for seed, has been obtained almost anywhere. Rye-grass seed will be nearly a full crop."

His estimates of the green crop tally with our own; those of grain are much too high. It is probable that his descriptions of these may be nearly the truth, but the figures by which his descriptions are explained are unquestionably excessive.

Thirty-two bushels of Wheat, 48 bushels of Barley, 60 bushels of Oats, 54 bushels of Beans, and 44 bushels of Peas, at which he puts an average produce per acre of three crops respectively, are outrageously beyond the truth; 28, 34, 42, and 30 respectively would be much nearer the real average experience of the country.

The current autumn is showing in several places the admirable qualities of Mr. Smith's (Woolston) combined steam cultivator and drill. We cannot speak too confidently of the merits of the tool; and we have no doubt that his patent rights in it are among the most valuable of those which he holds in connection with steam cultivation. Wheat may be sown at once by it upon a Bean stubble, Barley on a sheep-fold, without any preparation, and a most effective seed-bed thus receives its seed at any rate that may be desired, with a minimum of labour at a maximum of speed. Having seen the implement at work last spring, we are able to speak from personal knowledge of its merits, and the following testimony by Mr. Bignell, who farms a stiff clay land arable farm near Woolston, is conclusive. He says:—

"I have just returned from a visit to Woolston, whither I went yesterday for the purpose of seeing the combined drill and cultivator at work. Unfortunately when I got there (about 12 o'clock) the piece of 12 acres on the light land had just been completed. I mention the time thus particularly, as I was told that the work was only commenced at 9 40 the day before, so that nearly an acre an hour had been accomplished, and this included the headlands and about three acres of corner work to finish the field. A more perfect piece of steam work I have never yet seen, the land having been by one operation converted into splendid tilth, and the seed deposited.

"To-day I found them at work on the heavy land, the engine and tackle having in the meantime been removed two miles, and at 12 o'clock about 6 acres, including the headlands, had been done, and done in a manner that the most fastidious must have pronounced faultless. It is true the land was in very capital condition for working, perfectly clean, and, from previous deep culture, the draught was comparatively light; but it is steam to which that condition is due. Up to this time I have never been able to accord my full approval to this machine. It was cumbrous in appearance and had in my opinion other serious defects. It is now made lighter, the defects to which I have adverted have been remedied, and it has in other respects been so modified and improved that it bids fair to be a valuable addition to steam-drawn implements. I should have much liked Colonel Fane to have been there, to have seen what can be done on a regularly steam-cultivated farm with good machinery by men well accustomed to its use."

CONDITION IN GRASS LAND.—No. II.

We found that draining and consolidation by feeding, with the addition of cake and corn, would raise the net value of Grass land some 2*l.* per acre. We also found that where this was necessarily mown, an application o mineral as well as nitrogenous manure was requisite to maintain its condition, and that the cost of the application must not exceed 1*l.* per annum. The reason of this may be worth a little farther inquiry. Upon an acre of arable land when well cleaned and cultivated, 2*s.* 6*d.* laid out in dung was proved to produce 5*s.* in corn, a full agricultural crop being worth 10*l.* per acre, while a crop of hay will not be worth more than 3*l.* on the ground. And it appears from Mr. Lawes's reported experiments on manuring Grass lands that it requires 400 lbs. of artificial manure, or 20 tons of good yard dung, per acre to produce an increase of 1 ton of hay, which will evidently not pay unless where hay can be sold off at a high price. We must also bear in mind the great difference between arable and Grass, as regards cultivation. On the former we found cleanliness and aeration equal to a good coat of dung; but here we can neither weed nor subsoil to any purpose. When we have eradicated the Docks and Thistles, and run the manure over the surface, we have done all that our present machinery permits. Therefore small doses, frequently applied, will be more likely to nourish the roots as they descend into the soil. The finest Grasses and Clovers, which it is our interest to foster, root nearest the surface. When a heavy dressing of chalk or marl has been laid on, it is found to descend through the soil at the rate of nearly an inch a year, until only the deepest-rooted Grasses can take advantage of it; and were it not for the annual labours of the earth-worm it would be utterly lost in a few years.

Next, as to the ingredients. Several treatises have been written advocating the use of *lime*, and as many different reasons have been given for its efficacy on as many different soils. Whether it is an ingredient of the vegetable organism in which the soil is deficient—whether it hastens the decomposition of dead vegetable matter, so as to fit it for re-absorption by the living rootlets—whether it acts chemically as a base in setting free the more valuable alkalies—whether it acts as a nitre bed in the soil, assisting in the absorption of ammonia from the air, or for some recondite reason not dreamt of yet in our philosophy, it certainly bears the first place in all composts. Whether put on as fresh lime, or in the form of gypsum, or gas lime, or as common chalk, must depend more on the locality than on any great superiority of one over the other. Practically it is a great sweetener of the herbage, and should be used more or less on all soils.

The next chief ingredient will be ashes. Where the house ashes from a town or from cottages can be procured, they will be a valuable adjunct to our compost heap. Where these are not procurable, all the vegetable refuse of the farm—Couch, Nettles, seeds of weeds, &c.—should be got together and burnt or charred in a heap, to which the scourings of ditches and parings of banks should be continually added. We saw that in every ton of hay we removed there were 30 lbs. of potash lost to the soil. The chief or only means by which a portion of this can be restored is by ashes. Large quantities of peat-ashes were until lately applied to the artificial Grasses, and as young Clovers seem to require and thrive upon this mineral, it was probably the potash contained in them which gave them their value, and it is worth inquiry whether the Clover sickness has not increased through their discontinuance.

These ashes and any other refuse, earthy or vegetable, that can be procured should be turned frequently, so as to mix intimately, and in the form of a powder to be sown or shovelled at once out of the cart over the Grass, and if possible in the summer time. There are several reasons for this recommendation. If spread at once out of the cart, a small quantity will go further and be distributed more evenly than if left in heaps, and the spots where heaps have lain are apt to be stained. If laid on in summer after the hay time, or when the Grass has been fed down, the manure penetrates to the roots while they are active and can at once assimilate it, as will be shown by the immediate change of colour where applied; whereas, if laid on in winter, while the roots are dormant, it runs the chance of being washed below the surface before they have time to reap the benefit of it, and the stronger-rooted Grasses would thus be encouraged at the expense of the finer. I shall content myself with referring any reader anxious to improve his Grass land economically to an able article in the Royal Agricul-

tural Journal for 1858, by the Rev. R. W. Bowditch, in which he will find this question of composts fully treated, as also the second question—will it pay? In answer to this we have already seen, p. 1042, that 1*l.* laid out in manure will produce 2*l.* in extra value of crop. But here again is to be noted a difference between arable and Grass. Half a crown laid out on well tilled land produced 5*s.* in the next crop of corn. But the improvement on Grass land is slower. It takes time to get rid of the coarse Grasses, and to introduce the Clovers and finer Grasses in their place. It also takes more time to reduce the condition of Grass when once improved. Hence the unwillingness of landlords to allow it to be broken up. From the comparative slowness of these processes arises, too, the backwardness of tenants to improve their Grass. But that the improvement of this is equally a paying speculation there is no reason to doubt, or that the interest of an outgoing tenant in such improvement might be equally assessed. At any rate the manurial value of the imported food, and the cost of the cart dung laid on since the last hay crop was removed, might be allowed, and would generally be cheerfully paid for.

I conclude these letters on Condition with my thanks for the space granted to me in these columns. I began them with the hope, not of teaching my brother farmers how to farm, but of showing them that the concentration of capital on the land is not only a profitable but also a secure investment; that the periodical beggaring of farms at the end of each lease is not a necessary but a very wasteful expedient; and that the extra condition may be assessed and would be willingly paid for. And if my conclusions are true, that 1*l.* laid out in manure will produce 2*l.* in extra crop, and the return of the capital invested may be secured, surely in these money-making days the improvement of our farming cannot be far distant. How much room there now exists for such an improvement any one travelling 10 miles over any part of England cannot fail to see. *J. B. M.*

SEWAGE.

Having been asked by a friend what I thought of "Sewage," I sent him the following answer:—On a hot July day, some years ago, I went to inspect two herds of cows, stall-fed, one for the dairy, the other for the butcher. There were about 30 in each shippon. They lay upon bare planks, each plank 4 inches wide, and 1 inch apart; a large tank below received all the "sewage," which was conveyed by pipes into a meadow, and poured over it. The cows were fed upon the Grass, then being cut for the third time. The dairy cows had, in addition, some dry crushed Oats with chop; the feeding cows had hot pudding composed of crushed Oats and Peas, Linseed, Irish Moss, and chop. In these hot unhealthy buildings, over stinking tanks, these wretched animals existed, day and night, week after week, month after month, breathing the same foul air, and eating the same unwholesome food—their own sewage in fact! Go to a farmyard, look at the gutter down which sewage runs; you will see tall, broad-leaved dark-green Grasses growing, which neither horse nor cow will eat; go to the haystack made from these Grasses, cut in an unripe state, without seed, without nourishment in them—neither horse nor cow will grow fat upon such hay. Yet no doubt sewage is valuable. Sow it with Turnip seed, plant it with Mangels, throw it over exhausted tillage land, pour it over meadows, selling the hay—but do not eat butter or beef produced by it in establishments such as I have described. I am happy to say that both failed, and were given up, and I hope no similar establishments are now to be found in the country.

After all, the old Cheshire plan is the cleanest and the best; fill the cesspool with soil, and spread it, when dry, adding a little lime, upon Grass land. *Harry Mainwaring, Peover Hall, October* 17.

LOCAL AGRICULTURAL MEETINGS.

The yearly meeting of a local agricultural society is in theory, and according to the leading noblemen and gentlemen who talk on such occasions, a gathering where the landowners and their tenants meet, compare notes, learn something of the wants and wishes of each other, and offer sundry suggestions and explanations, which, if they do not directly promote agricultural improvement, at least tend to foster a community of sentiment and respect between the class of landlords and the class of tenant-farmers, and thereby indirectly promote that co-operation of the two classes, without which agricultural improvement remains a negative quantity. They have common interests in the advancement of the art and practice of husbandry, their opportunities of coming personally into contact are few and far between, it would be therefore most natural and wise on the part of the landowners to avail themselves of such an opportunity to discuss the topics which seriously affect such interests. When it was supposed that the repeal of the Corn Laws would injuriously affect these interests, there was no hesitation on the part of land-owners in urging at agricultural meetings all they could imagine or invent in support of their existing law of monopoly. Why, then, do we not occasionally hear, as we heard from Lord Stanley, something of the actual circumstances of local agriculture which are controllable by landlords or by tenants or by both? Are there not many such circumstances? And is it not an admitted, a proverbial fact, that by combined action on the part of landlords and tenants in nearly every district of England, a vast increase of produce might be obtained from the soil?

Why, then, is it that the landowners and public men, who obtain exclusive audience at the local agricultural meetings, so seldom even approach the topics which really and practically affect the interests of the farmers? This was forcibly illustrated at the Thame Agricultural Society, which met lately in Thame (Oxfordshire), and at which two of the county members, Colonel North and Colonel Fane, were present. What may be called party politics were, perhaps, wisely avoided, but the Rev. Mr. Ashurst gave the cue to a real consideration of agricultural questions, when he said, "In an agricultural district every one must feel peculiarly interested in the prosperity of agriculture. When the land was well tilled and brought to a high state of perfection, it was advantageous to the landlord, profitable to the tenant, and beneficial to the labourer in providing him with remunerative employment." The rev. gentleman then referred to the horticultural show, which was combined with the agricultural, and remarked that the only drawback on the enjoyment of the exhibition of the day was "the noise outside, and the obstruction caused by the shows and stalls at the entrance of the show ground."

Here we have the ball of "agricultural improvement" fairly set a rolling, and the farmers might reasonably have expected the two county members and landed magnates to take up the game and tell them something of the realities of local agriculture. It cannot be said that there are no improvements to be suggested, no omissions to be supplied on the part of the landlords and the tenants in the Thame district. We turn to the prize essay on "The Farming of Oxfordshire," in the 15th Vol. of the Royal Agricultural Society's Journal," and we find numerous statements as to the state of things agricultural in Oxfordshire generally, and around Thame in particular, which surely might have been deemed worthy of comment by the representatives of the landed interests in Oxfordshire.

Thus we are told that "The Thame stream [a tributary of the Thames] is in a dreadful state; in some parts the river is nearly silted up. A good rain is sure to send the waters out. There have been 17 floods in 12 months, and a third of the hay this season [1853] has been washed away. Many years ago a commission was appointed, and the bed of the river was cleared out; a rate being levied on the landowners to provide for the necessary outlay. This measure needs to be repeated, and the occupiers of the meadows would gladly submit to an annual charge of 5 per cent. on the cost. The banks of the river are planted with Willows, and weeds and Rushes for the most part enjoy unmolested security. . . . If all the proprietors of land intersected by this river would adopt the same plan, the destructive summer floods would become less frequent." Now has or has not the requisite improvement of the Thame been effected in the 10 years which have elapsed since 1853? If not, why not? If it has been done, surely a word of praise or encouragement might have been uttered by the county members at the Thame meeting. If it has not, how could the local representatives have more usefully occupied the attention of the landowners and farmers present than by explaining the facilities which recent Acts of Parliament have afforded for the execution of such works, and suggesting the propriety of availing themselves of those facilities? True, we have had a dry summer, and consequently no floods, but the farmers who have suffered losses from such floods would have recollected that all summers are not dry, and would have been well pleased to have heard their interests so practically advocated by their county members. Suggestion on this subject would have been useful to the landlords and gratifying to the farmers.

Again, Mr. C. S. Read, the prize-essayist, says, "In this county, where every agreement directs that the ditches and water-courses are to be well cleansed every year, the operation is performed about once in eight years. Half of the ditches now are choked with rubbish, or trodden nearly full by cattle. The water that may trickle into them has no chance of escape, and of course saturates and poisons the surrounding land. There is no doubt that at little cost an immense amount of benefit would accrue to stiff meadow lands by proper attention paid to ditches . . . . If scoured out every year, and proper means taken to convey the surface-water from the furrows rapidly into the ditch, much land now excessively wet would be comparatively dry without the expense of under-draining." And this applies especially to the Thame district, which is on a clay soil, and consists largely of "stiff meadow lands." Would not a hint on ditch-cleansing have been useful in the interest alike of the landlords and the tenants? Would not three or four sentences on this subject by Colonel North or Colonel Fane have excited attention to a grievous and wasteful omission on the part of the farmers of the district? And might not one of their body have made some practically useful statement in apology or explanation? Or again, Mr. Read says, "A well-arranged and convenient farm-steading is quite a wonder in Oxfordshire. . . . Nor are these evils easily got rid of. There are the buildings, and rearing new ones is an expensive affair. . . . Though most parts of the county are well off for building materials, and some good farm-buildings are to be found in various parts of the county, these are more frequently in the occupation of the landlord than enjoyed by the tenant."

Here, again, the representative of an agricultural district and the landed classes might have said a word in season with propriety and perhaps with effect. So in reference to that corner-stone of agricultural improvement, a lease, Mr. Read says that in Oxfordshire "Farm leases are the exception, not the rule; one may be found here and there, but almost all the land is held from yearto year, subject to six months' notice to quit. Landlords do not like granting leases, they still argue as they did in the days of Arthur Young; 'to grant leases is to give away your estate; it is to bind yourself and leave your tenant free.' . . . . But it may be asked where are gigantic and permanent improvements to be found?—in Oxfordshire or in the Lothians?—which estates have been most improved by the tenantry, Blenheim or Holkham? It is easy to say that a farmer with a lease can begin to exhaust his land with impunity. Under the year-to-year system he seldom puts his land into a condition that will admit of exhaustion. The clay lands of the county are in much the same state as they were a century ago. . . . . Every agriculturist must know the great difference between a farm where good and expensive management is exerted, and another in which the main object is to do as little as possible. Some of the tenants of this county follow the latter course, for they know that in six months time it is possible for them to be removed, and others will then enjoy the benefit of their improvements if they have made any."

Here, again, an agricultural representative might have noted past improvement, if any, and have stimulated the unready landowner or farmer.

Then, in 1853, it was reported that "The improvements still required are both numerous and important; the principal are of such magnitude that they can only be originated by the landlords. Throughout the county there is great need of better situated, more extensive, and more convenient farm-buildings; also the formation of good farm-roads, the extension of an improved system of drainage, the steady adoption of some effectual means of obviating summer inundations, and giving the occupiers of land increased security of tenure." Now, if anything material has been done since 1853 towards the then needful improvements, the two county members, when at an agricultural meeting, could not have allowed a theme so congenial to the occasion, and so creditable to the landowners of the county, to have remained unnoticed. Those who know the county well, say the improvements are still wanting, and this may, perhaps, account for the utter silence of Colonels North and Fane. For the former said not a word about agriculture or the economy of land and rural life, while Colonel Fane, overlooking Mr. Ashurst's challenge to refer to the circumstances on which the prosperity of agriculture depends, took up his reference to the noise and the show booths after an almost puerile fashion. He said, "He could not entirely agree in all the remarks which had fallen from his reverend friend, relative to the noise outside the show-ground, causing an interruption to the proceedings, and obstructing the access of the visitors. . . . He was accompanied by two ladies and two young children, and did not experience the slightest difficulty in obtaining access to the show-ground;" and then he wandered on about peep-shows and others of the juvenile entertainments common at rustic fairs, in a manner that produced shouts of ironical laughter from the farmers. He wound up by saying that he had not seen the ploughing, and that he believed with Mr. Henley "that after all the benefits derived from machinery there was nothing like the old plough," and intimated that steam ploughing can't pay.

The farmers don't want the great landowners and Parliament men to come down to their agricultural meetings to talk such childish twaddle as this, but they want to make these occasional public meetings of landowners and tenant-farmers the opportunities of some discussion of the realities of agriculture. *Economist.*

SOCIAL SCIENCE CONGRESS AT YORK.

[In the Agricultural Section, presided over by Mr. Holland, M.P., papers were read by the President, Mr. Strickland, Mr. Gordon, and others, of which the following are abstracts.]

(*Concluded from p.* 1046.)

Agricultural Gangs.—The Rev. T. Hutton, M.A., Rector of Stilton, read a paper on "Agricultural Gangs: their Influence upon the Morals and the Education of the Young." The paper described agricultural gangs as a form of organised labour which had sprung up within the last 25 years, and appeared to be mainly confined to the district of the Fens. There were gangs of women at Shippey, Spalding, Hull, New Romsey, and Lewes, which were the cause of a fearful amount of infanticide, illegitimacy, and immorality of every kind; but the writer wished to speak more especially of gangs of children which prevailed in Lincolnshire, Cambridgeshire, Huntingdonshire, and Northamptonshire. These gangs consisted of children of both sexes, numbering from 10 to 50 or 60 in each. An undertaker hired them from the parents, and then contracts for them with the farmers at so much per score per day, or per acre. The ages of the children

range from 5 to 16 years. They were employed in weeding, hoeing, thinning Mangels, and in almost all kinds of farm labour. They went from one parish to another, and had frequently to walk several miles to their work. The writer went on to show that this system had a most injurious effect upon the health, the education, and the morals of the children so employed in field labour in all weathers, and described a parish where the system was encouraged by the farmers, and in which there were eight gangs at work, containing about 40 children each, the educational status of the parish being 50 per cent. lower than that of the manufacturing districts of Lancashire and Yorkshire. The younger children were demoralised by constant association with hardened and wicked boys and girls of 15 and 16 years of age; and they might be frequently seen on a Saturday night at 10 o'clock going among the beer-shops, in search of their driver, for their week's wages. After noticing the various evils arising from the system, and the importance of providing some remedy, Mr. Hutton advocated the establishment of a half-time system, similar to that under the Factory Acts, and recommended that in the Act of Parliament establishing such a half-time system, mixed gangs of boys and girls ought to be suppressed, and children of tender years ought not to be allowed to work in gangs at all. If some half-time could be adopted embracing these conditions, not bearing with undue stringency upon the most busy seasons of field-labour, he was persuaded that such a measure would confer unspeakable benefit upon the farmers themselves, as well as the labouring classes, to say nothing of the general welfare of the country at large.

THE SALE AND TRANSPORT OF CATTLE.—The Rev. Dr. Burgess, of Chelsea, read a paper, written by Captain O'Brien, of The Mount, York, on "The Sale and Transport of Cattle." In the outset of his paper he referred to the prevalence of panics about unwholesome food which came like gusts of wind across the minds of the British public. Among these he classed the reports and statistics recently circulated as to the frequency of fatal cases of pleuro-pneumonia, and as to the foot-and-mouth disease being found in every parish. The trumpet of alarm, he said, was blown long and loud by a learned Professor in Edinburgh; and the excitement might be fairly described as approaching to panic if the anecdote, given in evidence, were true, that in the discussion of these matters in the Town Council of Edinburgh, an old gentleman, one of the Magistrates, declared he believed that he was now breeding tapeworm himself. As a summary of the evidence given before the late Select Committee, the writer gave the following: — Pleuro-pneumonia appeared in this country about 1842. It spreads very rapidly either by infection or contagion, and breaks out suddenly without apparent cause. It is intractable, and sometimes very fatal, carrying off occasionally three-fourths of a herd. It is aggravated by local circumstances (the loss on cows in the town dairies being very great) and also by atmospheric conditions. It may remain latent for a month and then suddenly develop itself and kill the animal in 24 hours. The foot-and-mouth disease appeared first in 1839. It is an eruptive fever; the gums, mouth, and tongue are affected; the animal slavers at the mouth; the hoofs crack, bleed, and in bad cases actually come off. It is seldom fatal, and is easily cured, though it greatly reduces the condition of fat animals. It is an epidemic, and also extraordinarily infectious or contagious. It is incredibly prevalent, from one-third to one-half of all the animals at a fair being affected by it. It may remain latent for three weeks, and then be suddenly developed by exposure to wet and cold, by change of weather, or by local causes. With dairy cows it produces an eruption on the teats, by which the milk is affected. The most horrible of all cattle maladies are the parasitic diseases, caused and subsequently propagated by eating diseased meat, chiefly pork. Measly pork contains the embryos of tapeworms; and when these pass into the human body, they develop into complete tapeworms. After some further remarks descriptive of the evidence as to the injury done by the trichina, a small worm, and also of what the writer termed "the horrors of pig-feeding," which were beyond belief, Captain O'Brien went on to quote a series of statistics produced in support of the Bills introduced into Parliament last session, which have already been published, after which he gave an abstract of the leading provisions in these Bills as originally introduced, and of the objections brought forward to the Cattle Diseases Prevention Bill by the Highland and Agricultural Society. He then went on to maintain that all the statistics which had been adduced must for the present be deemed wholly unreliable as a basis for legislation, as both parties in the late controversy had proved that nothing could be more fallacious than their opponents' facts except their figures. He passed over the whole subject of dead meat, including parasitic disorders, to come at once to the great question whether the meat of an animal affected by pleuro-pneumonia was or was not fit for human food. On this point he maintained that medical testimony absolutely, unimpeachably placed beyond doubt that this meat, at all events in all but the latest stages of the disease, was perfectly fit for food. This fact was of the last importance, not only in reference to the public health—for this meat was used in every household—but in regard to the spread of the disease. The Bill was therefore not necessary on the ground of the public health. Still, it might be expedient as a means of preventing disease. Its general character certainly raised a presumption against it. It was a Bill of restrictions and penalties, the effect of which, in the judgment of the men most competent to form a sound opinion, would have been to raise the price of meat 25 per cent. The foundation of all measures for preventing the spread of disease among living animals must be inspection, and the magnitude of the scale on which inspection must be established presented serious practical difficulties. The veterinary surgeons had no reliance on the butchers, the butchers had no confidence in any but themselves, and the largest salesman in London "does not attach to veterinary evidence the importance he does to practical experience." And yet the inspectors must be numerous, competent, above influence, and inspire confidence in their judgment. The expense of such inspection would probably be greater than the country would submit to. Inspection, too, would infallibly break down where it would be most wanted—at such great fairs as Weyhill, Ballinasloe, or Falkirk Tryst, where the number of animals collected together was so enormous—the sheep at Ballinasloe amounted to 70,000—as to render real inspection an impossibility. The whole system of legal regulation rested on inspection, and no one had yet suggested a practical way of dealing with the inspection of living animals; while those in the trade now state that they would place no value either on the inspection or the opinion of the inspector, and in fact scout the whole thing as an absurdity. Next in importance was the separation of infected from healthy cattle—that was indeed a cardinal point. Farmers, however, would never tolerate the interference of inspectors and constables on their own farms. Moreover, "unenclosed land" meant all the Highlands of Scotland, half of Ireland, and large districts in Cumberland, Westmoreland, Norfolk, Wiltshire and Hampshire. After some further criticism adverse to various provisions in the Bill, chiefly on the ground that they were unworkable, and that they would seriously injure the trade in cattle without preventing the spread of disease, Captain O'Brien proceeded as follows:—The foot-and-mouth disease is so catching that precautions by Act of Parliament against its spreading are vain. Being easily cured, the general opinion is that it should be left to the owners of the stock, whose pecuniary interest it is to take the best measures medical skill can devise to arrest the disorder. Pleuro-pneumonia, though not so prevalent, is far more fatal. With fat cattle the best and cheapest remedy is the knife the moment the disease appears, when the animal is not yet reduced in flesh, and while the meat is still good and wholesome, and will bring a fair price. If, as proposed, the sale of such meat had been prohibited, it would have been impossible to have got rid of the animals, and a great impulse would have been given to the spread of the disorder. Lean beasts present a difficulty. The only thing to be done is to send for the veterinary surgeon. There is little fear of their being sent to market, as one diseased beast would injure the sale of the whole lot, and possibly those of the owner on future occasions. The example of foreign countries is far from conclusive, especially as, in point of fact, their elaborate system of regulations had failed to stop the spread of pleuro-pneumonia. Mr. John Honck, a large importer of foreign cattle, said that in Slesvig and Holstein, where the Government had really taken the matter in hand, the remedy was worse than the disease—the precautions had not had the least effect, and had given the greatest dissatisfaction. The disease itself was one of those epidemics which from the earliest ages had occasionally passed over Europe, and after a time disappeared. There was already good reason to believe that this one would resemble its predecessor; that it was of a milder type than when it first appeared, and would gradually die out. The whole of the recent inquiry had again taught the good old English lesson that individual effort was better than Government assistance; that Government could hardly ever interfere in the course of trade without doing mischief; and that more could be effected by attention, care, and skill than by all the most stringent regulations of an Act of Parliament, or even an Order in Council. It certainly was very remarkable, and spoke volumes in favour of the good sense of the gentlemen who undertook the task of legislation, that, though they entered upon it with the view of enforcing regulations, much impressed with the necessity of doing something, and anxious to shape the crude proposal into a measure of some real utility, the only practical result was a recommendation to relax an Order in Council with reference to the examination and detention of foreign cattle.

THE PAST HARVEST AND THE COMING WINTER.

SUSSEX: *Mid Lavant.*—With regard to the past harvest in this neighbourhood, the Wheat crop is generally an average one, and stacked in first-rate condition. Oats and Barley, though deficient where late sown on very dry soils, will on the whole be quite up to the average. Beans are not grown, and the Pea crop is an almost total failure. Our prospects for the coming winter with regard to the keep of cattle and sheep are anything but bright. The failure of the Turnip crop over a large district, and a very light crop of Mangels, will of course very materially lessen the number of cattle and sheep fattened. We may consequently expect very high prices. Not since the year 1818, I believe, has the Turnip crop failed to the extent that it has done this. A full heavy crop is not to be seen in any of the fields; small patches are dotted about on some, others have a tinge of green now on them from the second sowing of seed put in since the harvest. If these, the "stubble variety," make any progress, and frosts do not set in too early, there will be yet time for them to make small "heads," but they grow very slowly. Other fields are quite bare of Turnips, and these in some cases have been drilled with winter Barley or winter Oats or Rye for spring feed. But little can be done at this time of the year to secure winter feed for sheep in any quantity; a kind growing autumn will be of the greatest benefit to us, by making the Grass hold out as long as possible; afterthat is gone, I expect a great many sheep will have to be kept in yards. Our straw this year is remarkably sweet and good, and it and a few Oats or other food will be all that a great many Down flocks will get through the winter. Where there is plenty of hay, it, with water, would be given; but few farms grow sufficient hay to keep their whole sheep stock entirely on it, and few farmers will buy hay at the price it will probably be this winter. The few Turnips and Mangels will be kept till after the lambing time. Much larger breadths than usual for spring feed have been sown of Rye, winter Barley, winter Oats, Tares, and of Trifolium incarnatum, and all these are looking well, being got in early this year. The late rains and mild weather are making the Grass grow very fast, and where possible, portions of meadow or down land are laid up for winter supply. We all hope for a late autumn and an early spring. *A Down Farmer.*

Home Correspondence.

The Cattle Melon.—As you intimate a wish for notes on the growth of this plant, I have much pleasure in contributing the results of my experience, though I fear it is but a case of want of success. A friend having given me nine seeds of Cattle Melon, I planted them singly in small mounds 6 feet apart, beneath which I had placed a little rotten manure. Only one seed came up, and as the season was so uncommonly dry, the plant was watered from time to time in the hope of securing some seed. In my single example the bine spread as much as three yards, but I have only one Melon, not so big as some Swedes and Mangels in the same field, and that is light and spongy in texture. Now the climate of Dorsetshire is quite mild, and in this case the plant was on a nice slope with a southern aspect, but the result made me feel glad that I had not a large space occupied with the Cattle Melon. We hear of from 40 to 50 tons of Melons being grown to the acre, but as I believe they contain more than 96 per cent. of water, I confess that I am not sanguine as to the future success of this crop. I can testify to the fact that sheep will readily eat Vegetable Marrows, for having had a superabundance of these this season, and some of them of large size, I have used them as sheep feed, but these have as much water, as little "proof" as the Cattle Melon. *J. B., Bradford Abbas.*——I beg to send you my experience in the cultivation of the Cattle Melon. Last April my employer procured from Mr. Blundell 50 seeds, at a cost of 2*s*. 6*d*. Enclosed with the seeds were printed instructions for sowing, &c. Now if I had followed these instructions the result would have been a plant here and there across the field, the seed being bad. The plan I took was this. The first week in May I sowed the seeds into flower-pots, and had them put into a cold frame. Out of the 50 seeds 13 came up. These I had carefully potted off singly, and every care taken of them till the first week in June. I then had a rod of ground measured off in the corner of a field, where it was good deep loamy soil. I had 10 cwt. of rotten farm-yard manure well trenched into it, to the depth of 18 inches. I then planted nine of the plants; the other four I put into an old Vine border in the gardens here, so that they might have plenty of room for the time to spread. Off the nine plants in the field I cut in September 15 fruits, the whole weighing within one pound of a hundredweight, which is at the rate of about 8 tons per acre. The four plants in the garden were rather better; the produce of them was nine fruit, weighing 1 cwt. 63½ lb. I may add that both lots of plants had several good waterings during the dry weather, which seemed to do them a deal of good at the time. After midsummer the plants got much infested with the black aphis. After taking all things into consideration, in my opinion the Cattle Melon is a delusion and a snare, or in other words a catch-penny. *J. M'Indoe, The Gardens, Bromley Palace, Kent.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

MONTHLY COUNCIL: *Wednesday, Nov.* 2, 1864.—Present, Sir E. C. Kerrison, Bart., M.P., President, in the Chair; the Earl of Powis, Lord Chesham, Lord Feversham, Lord Tredegar, Lord Walsingham, Major General the Hon. A. N. Hood, Hon. A. H. Vernon, Sir A. K. Macdonald, Bart.; Mr. Acland, Mr. Raymond Barker, Mr. Bramston, M.P.; Mr. Cantrell,

Colonel Challoner, Mr. Dent, M.P.; Mr. Druce, Mr. Brandreth Gibbs, Mr. Holland, M.P.; Mr. Wren Hoskyns, Mr. Lawrence, Mr. Milward, Mr. Randell, Mr. Rigden, Mr. Sanday, Mr. Shuttleworth, Mr. Robert Smith, Mr. Wells, Mr. H. Wilson, Mr. Frere, Prof. Simonds and Dr. Voelcker. The following new members were elected:—

Alexander, James C., Herne Hill, Faversham.
Burroughes, Randall, Hoveton Hall, Norwich.
D'Azy, C. Benoist, 88, Rue de Grenelle, St. Germain, Paris.
Fenn, Thomas, Stonebrook House, Ludlow.
Gray, Frederick, Tarring Neville, Newhaven.
Ingham, William, Monkton Mains, Ripon.
Leigh, Joseph, Belmont Hall, Northwich.
Maple, John, Earlswood, Horley.
Musters, John, Annesley Park, Linby, Notts.
Newton, Martin, Oldfield, Altrincham, Cheshire,
Neame, Robert, Boughton Blean, Faversham.
Parr, George, Jun., Manchester.
Ruffle, John, 17, Edward Street, Portman Square, London, W.
Spencer, John, Bowood, Calne, Wilts.
Widdowson, James, Hucknell, Forkard, Nottingham.

"Finances.—Major-General the Hon. A. N. Hood presented the Report, from which it appeared that the Secretary's receipts during the past three months had been examined by the committee and by Messrs. Quilter, Ball & Co., the Society's accountants, and were found correct. The balance in the hands of the bankers on Oct. 31 was 2,366*l.* 6*s.* The balance sheet for the quarter ended September 30, and the statement of subscriptions and arrears, were laid upon the table; the amount of arrears then due being 1252*l.*

The Secretary, by the direction of the Committee, has recently issued a circular to those members in arrear of their subscriptions. The Committee recommend that the sum of 2000*l.*, part of 3000*l.* now on deposit with the London and Westminster Bank, be invested in the New Three per Cents. Stock. The report was adopted.

Veterinary.—Mr. Raymond Barker presented the Report from the Governors of the Royal Veterinary College for the past year, which was read and referred to the Journal Committee. The annual grant of 200*l.* for the current year was voted to the College on the motion of Mr. Raymond Barker, seconded by Colonel Challoner.

General Plymouth Committee.—Lord Feversham reported that Mr. Torr and Mr. Randell having been deputed by the Council in August last to settle with the Plymouth Executive Committee the exact boundaries of the Showyard there, have to report that on the 8th of that month they met the Chairman and other members of the said Committee at Plymouth, and exchanged with them the following memorandum:—

Royal Agricultural Society, Plymouth Meeting, 1865.

Memorandum, August 18, 1864.

It is this day agreed by the Executive Committee and the undersigned Members of Council, that the land for the show yard shall be taken as shown upon the plan signed by the Chairman of the said committee and the said members of the Council, the extent being 35a. 0r. 30p.

That the fences within the said piece of land shall be removed, and the sites thereof sown with Grass seeds by the end of October next.

That the piece of land below the show yard marked A on plan, be made available as an approach to the entrances, and any necessary levelling within the showyard, as also the removal of the fences, to be done under the direction of Mr. Moore, assisted, subject to the approval of Mr. St. Aubyn, by Mr. Ash.

That the railway riding as shown upon the plan be considered as approved, and be carried out under the direction of Mr. Bush. (Signed) Massey Lopes,
Chairman of Executive Committee.

The plan of the Show-yard was approved, subject to such modifications as may be found necessary, the preliminary plan to be drawn on the scale of the preliminary plan at Worcester. The Committee recommend that 50 horse boxes of the strongest kind be ordered, 25 of the second kind, and that the contractors prepare a plan for improving the shedding for horses, so as to make them warmer and more comfortable than the ordinary open shed, at a cost not exceeding 2*l.* per horse, including the shedding; and also to state the cost of a rack and manger for each. The contractor would also be required to estimate the cost of boarding up the front of the cattle sheds to the height of 4 feet, and of entirely closing the ends of each shed. This report was adopted.

Education.—Mr. Holland, M.P., having moved that the Council from time to time appoint public examiners to conduct examinations in practical and scientific agriculture, on occasion of any request being made for such examiners, and complied with, the expenses to be disbursed by the Society. Mr. Acland moved the following amendment, which was seconded by Lord Feversham:—That it is desirable to obtain further information as to the institutions available for the examination or education of agriculturists before deciding in what way this Council may most effectually "take measures for the improvement of the education of those who depend upon the cultivation of the soil for their support."

On a show of hands the amendment was carried by 15 ayes to 6 noes.

The following resolution was then proposed by Mr. Acland, seconded by Lord Feversham, and carried unanimously: That the Committee on Education be instructed to endeavour to obtain such further information, and particularly to inquire into the willingness of existing examining bodies to co-operate with this Society.

Plymouth Meeting.—On the motion of Mr. Milward, seconded by Lord Tredegar, Monday, July 17, 1865, was named for the opening of the Plymouth meeting.

Cattle Show at Stettin.—The following letter was read:—

Foreign Office, October 18, 1864.

Sir,—I am directed by Earl Russell to transmit to you for the information of the President of the Royal Agricultural Society of England, the accompanying Prospectus of a Cattle Show and General Exhibition of Agricultural Produce, and also a copy of the Plan of the General Exhibition of Industry which will be simultaneously held at Stettin in the month of May next.

I have, &c. (Signed) James Murray.

H. Hall Dare, Esq., Secretary
to the Royal Agricultural Society of England.

"In the second half of the month of May, 1865, will be held at Stettin, under the direction of the Pomeranian Agricultural Society, a General Cattle Show, as well as a General Exhibition of Agricultural, Silvicultural, and Horticultural Machines, Implements, Utensils, and Products, which will be open to Exhibitors of all countries.

"Competition will be free and prizes awarded.

"Extensive purchases will be made of all kinds of articles exhibited for the purpose of forming a Lottery; and, in so far as Exhibitors may deem it expedient, an auction of Exhibited Articles will take place.

"Free carriage of unsold Articles to the Railway Stations from which they were forwarded to the Exhibition has been secured on all the lines of the North German Railway Union, and, there are grounds for expecting, will be secured on the other German Railways also.

"No charge will be made for Exhibition Room.

"All the Machines, Implements, Utensils, and Products will be insured against fire at the Society's expense.

"A Special Prospectus will shortly be published.

"Stettin, Sept. 19th, 1864."

The Committee.—A. v. Hagen-Premslaff, President of the Pomeranian Agricultural Society; Flügge Spook, Manorial Proprietor; v. Hellermann-Cartzin, Provincial Counsellor: Hering, Professor; v. Kuylenstjerna-Roggow, Manorial Proprietor; G. A. Toepffer, Merchant; Triest, Government Counsellor; Wartenberg, Head Ranger.

Evesham.—At the annual meeting of this Society, the chair was occupied by Sir J. S. Pakington, M.P., G.C.B., who called attention to the subject of Leases, as one of the most important questions connected with the whole subject of agriculture. He held in his hand a series of regulations, which were adopted as the result of their deliberations, and which constituted a very well-devised code, showing how to give compensation to the outgoing tenant of a farm for unexhausted improvements made. He expressed his regret that, instead of that code of regulations, or at all events in conjunction with it, they had not recommended a system of long leases. The more he had reflected upon this subject, the more he was convinced that no system of tenant right, however well devised, would be a real and satisfactory substitute for the security given by leases. When he spoke of leases, he did not mean to speak of seven years' leases, for he believed that they would be little better than an annual holding. Now, what proportion of tenants was there in the whole county who held their land upon any security, who were not tenants from year to year, and who had no benefit from leases or tenant-right whatever? He believed they would find there was an overwhelming majority of those who held their land upon terms which he thought could not be considered satisfactory, and which he believed had not and never would conduce to a system of high cultivation. They heard it said on every side, "We are content, and do not want leases, as we have perfect confidence in our landlords." As a landowner he (Sir John) repudiated such an idea altogether. He certainly thought that confidence in a landlord was an excellent thing. But when they were talking of embarking their capital on the land, as they would do in large commercial transactions, he said, let them deal with it as they would do in commercial transactions of any kind, and instead of trusting in confidence to their landlords, to place their confidence in a written agreement, from the terms of which no landlord could depart. He had never heard but one serious objection made to the system of leases, and that was, that if a landlord let a farm on a long lease he was liable to have his farm worked out during the last two or three years of the occupancy. Well, every one knew that an enterprising farmer, with sufficient means to enter a large farm, would not work it quite on the same principles during the latter as he would do at the early part of his tenancy; but in a very large proportion of instances they would find that during the concluding years of a lease, where the farm had done well, the natural course would be that an arrangement would be entered into for a renewal. Of course that would not be the invariable rule, and cases would arise where the occupancy ceased with the expiration of the first lease. Mr. Randell was right when he said that they might have covenants introduced into their leases which would be of binding effect during the concluding years, and thus the objection, such as it was, would vanish. But was that fear of what might be done by a tenant during the concluding years of his lease the only motive which influenced the dislike to leases? He believed not. He was speaking with frankness, and he did not hesitate to express his belief that both on the part of the landlord and the tenant there were other motives at work. On the part of the tenant there was the fear, which many did not hesitate to avow, that bad times might come, that prices might fall, and that they might find themselves hampered by a farm for a great number of years, and that they would have to run the risk of being ruined. He, as a landowner, thought he should not be doing an injustice to some other landowners of England if he were to say that in some cases their objection was, that they did not like to deprive themselves of their power over the land. Well, what did those objections mean? The tenant's alarm might easily be disposed of, and, if the meeting would bear with him, he would appeal to that answer which was the result of practical experience, and which he believed to be the real fact with regard to those owners who entertained this view. On the part of the tenant, and on the part of the landowner as well, he had no hesitation in saying that their views were erroneous; and he was afraid that if they were to analyse the motives of many owners who said they did not like to part with their power over the land, and if they could dive into their minds, there would be found there lurking feelings about game and politics. He was afraid there might be some landowners who would not like what he had said, but he would tell them that they ought to come round to his views, and he believed the time would come for them to do so; at all events he considered the views held by them were short-sighted and erroneous. With regard to game in excess, he would say that he looked upon it as a money question on the part of those gentlemen who chose to indulge in it. If a gentleman was fond of game, and chose to have it to an injurious excess, he must make up his mind to two things—first, he could not expect to have good tenants; and next, a good income from his land. On the other hand, he thought the tenant-farmers as a body would not object to anything like moderation in game, which every owner of land had a right to enjoy without injury to others. He must frankly say, that still less did he think it worth the while of any man to subject his estate to an erroneous course of cultivation in order to maintain a large quantity of game; and much less was it right, on the ground of politics, for a man to make a lease of his estate, because at some election some Tory owner might coerce a Radical tenant, or some Radical landlord a Tory tenant.

Sir John then alluded to a pamphlet recently published, which he said was well worth the study of every agriculturist in England, with the exception of Mr. Holland, for he was one of those far-seeing men whose tenants had leases. The pamphlet was by Mr. Sanderson, a very eminent land agent, who delivered an address before the Oxford Farmers' Club, and at whose request it had been published. He had taken from it two or three extracts, which bore mainly upon the question whether it was for the interest of the landlord or the tenant to give long leases of a farm. The first fact he would mention was an agreeable one. In the south of Scotland, where long leases were granted, rents had risen during the last 35 years upwards of 37 per cent., but in England, where yearly tenancy prevailed, they had, during the same period, not risen 20. He would mention another case in the north of England, where farms were large and rents were high; it impressed his attention at the time he read it, and he hoped it would go forth through the usual channels to the public. Mr. Gray, of Dilstone, who was a very eminent man, a man of great experience, informed the Hexham Farmers' Club that he had two farms to let in 1856, and he offered them for competition by tender. For one of those farms, which was a large one, he had 2000*l.* rent per annum, and it was his (Mr. Gray's) proposal to those who wished to take it that it should be let under a lease for 15 or 21 years. He received a great many tenders, but there were only three who tendered for the short period of 15 years, and those three also tendered for the 21 years. Each made two tenders, and the first one offered for the farm under the 15 years' lease the sum of 1630*l.* per annum, and for the 21 years, 1760*l.*; the second offered for the 15 years' lease the sum of 1620*l.* per annum, and for the 21 years, 1730*l.*; and the third tender for the 15 years was 1400*l.*, and for the 21 years, 1626*l.* This was a fact which spoke for itself. No doubt the farmers who tendered were men of ability, men competent to deal properly with a large holding, and, as would be seen, there were differences in the first instance between the 15 and the 21 years' leases of 130*l.*, in the second of 110*l.*, and in the third of 226*l.*, i.e., that the third man who tendered offered 226*l.* more for the farm under the 21 years' lease than he did under the 15 years. He thought this was a sufficient answer to the landowner, who said that he did not like to part with his power over the land. Was there anything that a landowner could set up in the right he enjoyed against those increased sums of additional income? They knew that such men would effect an improvement in the farms they held, and that improvement would bring increased rentals. Mr. Sanderson used these words:—"Sooner would such farmers give up their calling than change from a lease to annual tenure."

Sir John then called attention to the evidence given before Mr. Pusey's committee of the House of Commons on the "Tenant Right Bill." One of the most intelligent farmers in this country, in giving evidence as to his own parish, said there were 27 farms, six of which were held by owners, three were let on lease, and 18 were yearly holdings. Those held under security formed one-fourth of the parish, the others were the remaining three-fourths, and the witness said that there was as much stock kept up on the one-fourth as upon the remaining three-fourths. There was double the amount of stock fatted off the one-fourth, and there was 50 per cent. more labour employed on that one-fourth, with one-third more grain produced on it per acre, than upon the three-fourths. This was a tenant-farmer's view of the question. Great changes in farming could not be brought about in one year; they required time. They must first of all impress the minds of all concerned with the real importance of the points to be observed, then they must make the tenant fit for the occupation of a farm, and impress upon him the habits to be observed; and he (Sir John) thought that all such public occasions as the present, when all persons connected with agriculture could meet together to consider what best could be done with the land, were most valuable.

Mr. Holland said—Upon the subject of the advancement of agriculture the right hon. baronet had in so liberal and ample a manner, so clearly, so distinctly, and so eloquently placed before them the present position of landlord and tenant, and the causes on the

part of each which prevented that advancement which they so much desired, that he (Mr. Holland) would not dwell long upon that question, but would make one general remark—that agriculturists, like those connected with any other great industrial process, had to wait for great changes; more particularly from that cause to which Sir John had alluded—that they lived separate and apart, and could not exchange their ideas without meeting together in Societies like that. He (Mr. Holland) might be wrong, but, taking the whole of England into consideration, his impression was that the objection on the part of the tenant to the lease was because he had not sufficient capital—(A voice: "That's it")—for capital was required to farm at the high pitch which was requisite to secure success at the present day. It might not be the case in all places, but there was a great deal of truth in what he had said. They found that it was better for a large amount of capital to be expended upon a fewer number of acres of land than for a small amount upon a larger number. He was sure that no one wished to hurt the small men, but, taking any branch of trade, what had been their history? They could not compete for any length of time with the large men. Many would remember the struggle which existed between the hand-loom and the power-loom weavers, but such things, such changes, could not be helped. It was the very nature of civilisation to improve, invent, and introduce machinery for the purpose of making an article which was sufficient to meet the increasing wants of an increasing population, and to allow people to have it cheaper. Then, if they went to their fields they would see steam smashing up the land, and doing that in a day which would formerly have occupied a week. By machinery they managed to counteract the change of seasons, so that in the present state of things it would be very difficult for the small farmer, with his small plough, to keep pace with the large farmer and his steam plough. Year by year the erection of houses, the construction of railways, and so forth, took away large quantities of land which used to be employed in growing food for the million, and hence, with a restricted breadth of land to cultivate, it was evident their utmost power would have to be exerted to make that which they had produced sufficient to meet the requirements of the population. He thought they were doing their utmost in this respect in the locality to which they belonged.

Mr. RANDELL said a vein of feeling ran through the right hon. baronet's speech, that the committee proposed tenant right as a substitute for leases. It was not so. (Sir John—Then I misunderstood you.) They had found that the question had not made so much way as they could have wished it to do, and that something more was required. They felt that something should be engrafted upon leases in the shape of compensation, for they all knew that when a man entered upon a farm the first two or three years were occupied in undoing that which his predecessor had done, in making improvements, and in putting the farm into proper order. That which they proposed was, such a code of regulations as would make it the interest of the outgoing tenant to farm the land to the end of his tenancy with the same skill and care that he had observed under the earlier part of his lease. It would then be to the benefit of a farmer to leave the land in a high state of cultivation rather than in a state which would be injurious to his successor.

Farmers' Clubs.

TRING.—At the recent agricultural meeting here, Mr. W. LONGMAN proposed "Prosperity to the Tring Agricultural Association," and congratulated them on the 23 years of success which the Society had experienced. A friend of his had recently told him that he was about to cut his fifth crop of Italian Rye-grass this season, by the aid of irrigation and sewage manure. Until within the last 30 years no one regarded town manure, it was considered worthless, and was poured into the rivers to pollute the waters and poison the fish; and even now we disregard the value of sewage, while we go thousands of miles to fetch manures, and let that which is at our own doors be wasted. He believed that next session measures would be brought forward for a general utilisation of town sewage, and that a gentleman would be entrusted to carry out the plans who had recently been making experiments with the sewage of a town containing a population of 1000 persons.

Mr. ABEL SMITH said: the great object of a farmer necessarily is to increase his produce and to decrease the cost of production; to give up those portions of his system of management which seem to have become unprofitable, and to take advantage of the best information which the Royal Agricultural Society offers, and which is so essential in a season like the present. It is evident that farmers must increase their stock: they cannot depend only on corn at the present prices; they must increase their stock—especially in sheep; for the consumption of meat has very much increased of late years, owing to the general prosperity of the country. I see by the statistics in the Royal Agricultural Society's Journal, that in the 10 years ending 1863 the price of beef has increased 20 per cent. and that of mutton 30 per cent. Gentlemen who have increased their stock have found their interest in so doing, and this is one way to remedy low prices. There is, however, great difficulty in doing this on heavy land farms: but I hope that steam cultivation will help them. There has been a great increase in steam cultivation. At the Royal Society's meeting at Newcastle in 1846 only one steam cultivator was exhibited, but about two years ago there were 135 steam engines, ploughs, and cultivators of different kinds. This shows how fast the system is increasing; and I hope it will keep on improving.

Mr. BROWN then read the report of the judges who had inspected the farms to award the prizes for best cultivation.

CLASS I. *Mr. Southernwood, Tring Grove.*—The farm is nearly 400 acres: arable, 300; grazing, 100. On this farm we find the crops as follows, viz:—Wheat, 67 acres; Barley, 64 acres; Oats, 18 acres; Beans and Peas, 27 acres; Clover, 45 acres, 21 acres of which are fed off, 24 acres mown; Turnips, 53 acres; Mangel, 7½ acres; and Tares, 7 acres. As we find here that a regular course of cropping is not adhered to, we are unable to classify them; but having great facilities for manure by canal from London, are pleased to say we found all the crops exceedingly good, the Wheat so much so that we had great difficulty in riding through them: the Swedes are very good for the season; Mangel Wurzel very good indeed; the whole of the arable land being perfectly clean, and in an excellent state of cultivation. The grazing land, part of which is mown, the remainder being grazed by fattening bullocks, which have a little cake, and afterwards put in the yards and fed on flour, cake, &c. The sheep stock consists of 155 breeding ewes and 200 tegs, the latter we find at Turnips, having cake and corn. The whole of the stock we consider extremely well managed. The fences generally we find in good order, with the exception of a few old ones which are nearly worn out. The gates are in excellent repair. The stack-yard is well filled, a considerable quantity of old Wheat still remaining: ricks are well thatched and all very creditable. We consider him fully entitled to the 1st prize.

Mr. Underwood, Home Farm, Little Gaddesden.—Farm, 422 acres: arable, 234; pasture, 188 acres. This farm seems to be managed on the four course system. 1st, roots; 2d, Barley; 3d, Swedes, Beans, and Peas; 4th, Wheat. We find the crops as follows:—Wheat, 34 acres; Barley, 48 acres; Oats, 34 acres; Peas and Beans, 42 acres; all of which we consider good and clean considering the nature of the soil. Swedes, 49 acres, which are well managed, very clean, and a good crop for the season; seeds, 27 acres, part mown and part grazed. On this farm we find a large number of stock kept, viz: cows and young cattle, 111; breeding and store sheep, 908; horses, 36; pigs, 56, which is more than this farm can carry for the year. A large quantity of corn is consumed, consequently being of great benefit to the land, likewise keeping the stock in excellent condition. The fences and gates are all in excellent order. The stackyard is well filled; the stacks creditably built and neatly thatched. We, therefore, consider him entitled to the 2d prize.

CLASS II. *Mr. T. Mead, Gubblecote.*—Extent of farm, 120 acres. Arable, 106 acres; grazing, 14 acres.—The system pursued on this farm is the four-course, viz:—1st, roots: highly manured, very clean; Mangel Wurzel an excellent crop, Swedes and Turnips nearly a failure. 2d, Barley; 3d, seeds, Beans, or Peas; 4th, Wheat—all of which were very good, and remarkably clean. From this farm part of the straw is sent to the London market, in lieu of which a large quantity of London manure is returned: consequently, we found the farm in a high state of cultivation. There is also a large number of stock in proportion to the size of the farm, viz., 117 very good breeding ewes, 60 lambhogs, 9 cows, with a large number of excellent pigs fattening. The fences and gates are good, and in capital order. The stack yard is very neat, and well filled The buildings also in good repair. We therefore award him the 1st prize.

Mr. J. K. Fowler, Prebendal Farm, Aylesbury—Extent of farm, 195 acres; arable, 103; pasture, 92. We are not sure of a regular system of cropping being here carried out, and will therefore give the following, viz.:—Wheat, 35 acres; Barley, 20 acres; Beans, 15 acres; Clover, 15 acres; roots, 18 acres. The corn crops were all good, with the exception of a few acres of Wheat, which contained some Couch Grass and Charlock. The Swedes a fair crop for the season; Mangel Wurzel very good. The farm being close to Aylesbury, allowing great facilities for manure, we find the land as a whole in a high state of cultivation. Steam culture is here carried on, which we consider a great advantage. There are a number of cattle kept. Cattle, 37; grazing colts, 6; breeding ewes, 50 in winter, and in summer 60 wethers fed off. Gates and fences all in excellent repair. The stacks all carefully built, and neatly thatched. On the whole, we consider him a spirited farmer, and entitled to the 2d prize.

There are two or three farms which we might commend, and some highly, but have been advised—and think justly so—not to mention names, as it might deter others from coming forward in future years.

Mr. HAWKINS, of Pitstone, proposed "the healths of the judges of the land."

Mr. DOIG said: He believed the judges had done their duty to the best of their ability. They had been over about 3000 acres. He had examined every field, and every fence, and every gate; this was done in July, a busy time of the year, and they would agree with him that the judges had done a great deal. He thought it requisite to say something respecting the amount of stock on Mr. Underwood's farm. He found a greater number of stock on the farm than the land was qualified to hold; but it was not the large number of stock that gained the prize, it was entirely the general management, and he was fairly entitled to the prize he had received. He begged to make a remark or two on what had fallen from preceding speakers. They had been told not to expect prices for Wheat to be much higher; and if so, they had but a poor prospect before them. He agreed that they should strain every nerve to increase their flocks; but still they could not do without Wheat; and what were they to do if these prices lasted? There was a time when 70*s.* was considered only about a paying price; now, the price is 36*s.* and 38*s.*; and he would tell the landed proprietors that if that is to be the order of the day, the farmers must turn their attention to something else. It is all very well to say you must have more stock; but the question is, How are we to keep what we have got? I am no alarmist, but I tell you that I dread the coming winter. We have been told that this is a golden year. We grow our crops, Turnips, Swedes, Mangels, and Clover, but the fields are nearly all a failure; and with Wheat at 36*s.* to 38*s.* per quarter, I say we have a gloomy prospect before us. Now a word as to steam. One of the competitors has steam apparatus, but he is not the best farmer in the neighbourhood. Steam is a great improvement for a large occupier, but where one can do with it, hundreds will do better without it; you can't do much with it in small fields; and I was very much pleased to-day to see the ploughing so admirably done. I thank you cordially for the honour done us, and hope if we are spared to next year we shall see a greater competition for good cultivated farms. A gentleman has said to-night "I think I shall try myself next year," and all this tends to good, and to improved management. It is not only a question of a good beast, or a few good roots; but when the farm as a whole has to be taken into consideration, it is important that a right decision should be arrived at. Mr. Southernwood has obtained a purse of 50 guineas for the best farm in a good cultivated district, and I have seldom seen a better cultivated farm, and I say it is an honour to agriculture for Mr. Southernwood to have obtained such an elegant prize. I say you cannot offer a better prize than that for the best cultivated farm, and I trust no landlord here, or about here, will take advantage of his tenants to raise their rents if they compete for the best cultivated farm. I am sorry to say such has been the case in our neighbourhood, where a farmer, who competed for a similar prize, has had his rent raised 25 per cent. Mr. D. again thanked the company for the honour done to the judges, and sat down amidst much applause.

Mr. BUTCHER said: a tenant of mine has taken the first prize for a good cultivated farm, and he need not fear any advance in his rent. I believe he has the farm at his own price; and if it is too dear, he has only to say so. I sincerely congratulate Mr. Southernwood, and it gives me great pleasure to think that he has taken such a prize. I consider I ought to be proud of having such a tenant. I consider a good tenant deserves a good landlord.

R. BRIGHT, Esq., proposed the health of the successful candidates for the special prizes. He said it was always considered that luck went a good way in the obtaining of prizes, but the class of prizes he had to allude to was one in which luck had no place at all, for it was the prizes for good cultivation. There were two classes of farmers, one under the old system and one under the new, and which some persons hoped would one day supplant everything else. He considered Mr. Southernwood as good a specimen of a farmer of the old system as could possibly be; but yesterday he saw Mr. Fowler's steam plough at work, and trusted the question of steam *versus* horse ploughing was an open question which would be discussed this evening. Whatever the merits of the steam plough might be, it had not gained the 1st prize for Mr. Fowler. He should be glad to hear from Mr. Fowler what he thought of the application of steam culture to the soils about Tring, for there were no chalky hills on his (Mr. F.'s) holding. He should also be glad to hear something of the economical working of the system.

Mr. FOWLER said the prize he had gained was the first result of the new system of farming he had adopted, and he should be glad if every one in the room would follow his example and profit by the experience he had acquired. Steam cultivation had led to his success to-day. He had succeeded entirely through using the steam plough. ("What's the cost per acre?") He was only a small farmer himself, and if it answered for him it would do so for other small farmers also. The cost of steam cultivation on his farm did not exceed 9*s.* per acre, and it would break up nine to ten acres daily. He was certain it was a most desirable thing to introduce; it broke up the land, fetched new soil to daylight, and almost made the farm a new one. He considered it a great honour to Buckinghamshire that a man of that county, Mr. Smith, of Woolston, should have introduced the steam cultivator, and progressed in spite of opposition and prejudice. He had been followed by Howard, Fowler, and others, and he hoped the system would soon become general. He had gone over 130 acres twice in 50 days, equal to 260 acres, at a cost of 50*s.* per day, including all cost of men and teams. He considered that he took the prize on account of his root crops chiefly, and that said something for Mr. Smith's plan. He believed that the steam cultivation was as well adapted for the farms about this locality as for any large farms in the north of England. ("How about the chalk hills?") He believed the cultivator was better adapted for the hills than for level land. If ploughing is done by the old-fashioned system on a hill side, the horses have to pull up a plough when they have often enough to do to get themselves up, so there is a loss of power which is important. But the steam engine is fixed and has only the implement to draw, and the extra power required to draw the ploughs up hill is almost imperceptible. He thanked them for listening to his remarks, and hoped they might long meet to compete together in a friendly spirit, and if he was spared in health and strength he hoped before many years to let them see on his farm that steam cultivation would triumph over everything else.

In reply to the toast of the judges, Mr. WOODMAN

returned thanks as the judge of thatching, and said he thought the price for the work ought to be fixed. One shilling per square was enough, and the prize ought to be awarded to the best work at that price. He wished to say one word with respect to the best managed farm. The farm in the highest condition is not always either the best managed or the best cultivated: the decision required great care, and he suggested that this should be taken into consideration. Then there had been something said about keeping more stock and growing less corn. It was an old saying that they must not look to the barn door for everything: and they did not wish to look to it any more than they were obliged; but in a season such as this, he should like to know where else they could look to, except to the barn door? He did not believe all the stock kept in the county of Hertford for the last seven years—cattle, pigs, and sheep, had paid 1*d.* profit on the cost of their keep, beyond the manure they had put on the land: there was nothing left beyond: and if they were to try and keep more stock this winter, he should like to know how they were to be fed? And then as to the land, before he got 1*d.* for himself he must make every acre of land produce him 7*l.* 10*s.* at least, and if it is Wheat, 8*l.* 10*s.*; but let them look at the Clover and say what chance there was of getting either 7*l.* 10*s.* or 8*l.* 10*s.* from that?—He thought the extra prizes awarded to-day would have a good effect on farming generally, but they could not make good crops when the seasons were against them, nor ensure their paying prices.

Mr. MANN, one of the judges for roots, next spoke. He alluded to Mr. Disraeli's advice as to crossing the Cotswolds and Downs, and said it was nothing new to many farmers in his locality, and the South Bucks farmers were not behind their time.

Mr. VALPY proposed Mr. Dawes, treasurer, and Mr. Brown, secretary to the Tring Agricultural Society.

Mr. BROWN returned his sincere thanks for the honour done him in drinking his health after 23 years' service. He had hoped that with reference to a hint he threw out earlier in the evening, some observations would have been made on the question of how to feed cattle during the coming winter, which he knew must with many farmers be a difficult problem to solve. Mr. Longman had alluded to the question of utilisation of sewage. That was a question which cost him not only some time, for he had paid great attention to it, especially with regard to the sewage of London; but it had also cost him some money. He was guided by the late Mr. Smith of Deanston, in taking shares in the Metropolitan Sewage Company for the drainage of London, by which he had been a heavy loser; but still he had no doubt that ultimately the matter would be brought to bear, and the sewage profitably disposed of. There was no question but that it would be of immense benefit to the farmer, but then there was this question—how can it be got to him so that he can obtain it sufficiently low as to use it with profit? and in what shape can he have it, without its being deprived of its most valuable properties? All this deserved the attention of experienced scientific men, but hitherto little or nothing had been done in the way of attempting to utilise the sewage. All efforts hitherto had been merely those connected with draining and what was called purifying the towns. The sewage is drained off, dried, and got rid of. He hoped the question would be satisfactorily settled before long. The Metropolitan Board had done nothing at present towards making the sewage useful for the land; all their efforts hitherto had been directed to getting it away from London; but to get sewage out of the way was only half doing the thing. But the manure was wanted back on the land, and the country couldn't go on much longer wasting our best natural manures by sending the refuse of towns into rivers. What has happened in London will happen by-and-by to other places; the sewage must be got rid of; and the true value of sewage manure will force itself on public attention. The great point to ascertain is, how far the essential and soluble portions can be retained for agricultural purposes, and the other portions also made serviceable without dilution. He hoped that light would be thrown on the subject before long; it was one of the greatest importance; and the man who could render town-manure available for the land would be one of the greatest benefactors to his country. He thanked them all for the recognition of the services of Mr. Dawes and himself, and he felt especially gratified by the very flattering manner in which the toast had been introduced to their notice.

Mr. D. GRIFFIN (one of the judges of root crops) said he wished to make a few remarks on the cultivation of farms. The judges had been over several farms to judge of the roots, and Mr. Taylor's farm was the best cultivated of any he had seen this year, or he might say that he had ever been over; but he had not got the prize, and never would so long as his farm had to feed such a number of hares and rabbits. He would never farm land himself to be eaten up with hares and rabbits in that way, because, do what a man might, it would beat him out of the field. As for rabbits, he didn't call them game, he called them vermin. Hares were bad enough, and there were more on many farms than he liked to see; but he never would try to farm against rabbits; the best farmer couldn't stand against them. He never remembered seeing any roots (we are not sure as to the number of acres that Mr. Griffin stated) so well cultivated as those of Mr. Taylor's (of Studham). But he would never get a prize so long as he was eaten up in that way, by his land being infested with vermin—for he could not help calling them so. He considered rabbits next to rats, the greatest curse a farmer could have. The landlords must do away with the rabbits, or the tenant farmers couldn't continue to farm their lands; and he considered it a shame that all the reward Mr. Taylor got for his good cultivation, was simply compliment, because the hares and rabbits on his farm prevented him getting the prize; and it was them and nothing else that did prevent him. *Herts Guardian.*

WOKINGHAM.—At the recent annual meeting of this association, Mr. WALTER said:—They all knew that they had great reason to be thankful for the unprecedented summer they had all enjoyed; even the youngest among them could not venture to hope to live to see the like again. Not only had it been a season of great enjoyment, but a season of more than an average fertility and prosperity. They had had a fine average crop of Wheat and Barley, and though Oats in many places were scanty, yet in some parishes there was a fair yield. It was true the root crops were small, and some farmers did not know what was to become of their stock next winter; but there was one very remarkable circumstance from which he had been able to learn, he believed, that there never had been a period in which stock had been in so healthy a condition. This was not only the case with sheep and stock of every kind but he was told the other day, during a day's walk with the Deputy-Surveyor of Windsor Forest, that he never recollected such a season for the deer; the herd of deer had never been so healthy, notwithstanding the apparent want of Grass. His gallant friend on the right had made some striking remarks about the wonderful improvement that had taken place in his profession during his lifetime, and every farmer must admit that great improvements had taken place in his walk of life. Agriculture had exhibited wonderful improvements during the last half-century, and when they met for these annual ploughing matches, and saw more or less favourable specimens of horse labour and the old-fashioned style of ploughing, they must look forward to the time when they would not be content with this alone, but demand to see exhibitions of steam ploughing. He could bear witness himself to the great merits of that invention, and the extraordinary effects it produced on the cultivation of land. No doubt a few years hence, instead of seeing rows of horses and men ploughing, they would see rows of steam ploughs, especially when they had such fine open fields for such a display as they had had that day. Recollect it was only a few years ago since threshing machines were introduced, and they had witnessed the great benefits arising from them. Some sentimental farmers might regret these changes; they might like to see the teams doing their work; no doubt it was a beautiful subject for a picture; but the time would come when practical considerations would take effect, when a great portion of that unnecessary labour would be done away with, and steam ploughing play its part in the cultivation of the land. He was much struck the other day, while looking over a curious book written by Cobbett 40 years ago, to meet with a passage having reference to that particular neighbourhood, and which served to illustrate how differently people looked at things at that period. Well, Cobbett thus wrote:—

"On leaving Oakingham for London you get upon what is called Windsor Forest—that is to say, upon as bleak, as barren, and as villainous a heath as ever man set his eyes on. However, here are new inclosures without end, and here are houses too, here and there, over the whole of this execrable tract of country. . . . At the end of this blackguard heath you come to a little place called Sunning Hill, which is on the western side of Windsor Park. It is a spot all made into grounds and gardens by tax-eaters. . . . . Considering the miserable soil I have passed over to-day (*i. e.*, from Burghclere westwards), I am rather surprised to find Oakingham so decent a town. It has a very handsome market-place, and is by no means an ugly country town."

They would admit that was not a very flattering description of the tract of country between there and Windsor 40 years ago. Since that time such changes had taken place as would entitle that tract of country to a very different description. He quoted that passage as showing how very differently a country would look, if it had been properly attended to and improved, after a lapse of 40 years. Mr. Disraeli seemed to think landlords wanted a great deal of encouragement, and that the landlord who built cottages ought to have a blue riband. He hoped Mr. Disraeli would succeed in getting a blue riband for so excellent an achievement. He (Mr. Walter) did not aspire to such a distinction. Some few years ago he offered a prize (which he hoped his friend Mr. Benyon was going to compete for) for the best number of new cottages in a particular district, but he had had no response to the appeal. They might depend upon it there was nothing like a good cottage to keep a good servant, and those who built them would get the best. It was not a cheap process; it would not pay as a matter of pounds, shillings, and pence, probably; but it would pay in the improved respectability, decency, and health of the labouring classes. There was another topic upon which the same distinguished speaker dwelt at the same meeting, and which was of a more purely agricultural character, and he (Mr. Walter) mentioned it by way of drawing attention to it, and eliciting opinions confirmatory or the reverse of its utility. For his own part, he confessed he had doubts upon the subject. Mr. Disraeli said he was very much struck by the want of improvement in the breed of sheep in Buckingham, and was surprised they did not cross with some of the Gloucestershire and Leicestershire breeds in order to produce long instead of short wool, as the former realised such high prices. Now he (Mr. Walter) thought the more they improved their wool, the more they were likely to deteriorate the quality of their mutton; they could not have it both ways, and he for one should not feel disposed to adopt the suggestion.

Farm Memoranda.

MR. LAWES'S FARM AT ROTHAMSTED.—The readers of the elaborate papers in which the results of the Rothamsted experiments are recorded can have no adequate conception of the exact and laborious system by which those results are obtained.

The experimental farm and laboratories are conducted on a scale that gives them rather more the character of a public institution than that of a private undertaking. About 50 acres of arable land and 6 acres of pasture are devoted entirely to the purpose of successive experiments on various crops. The results of these investigations find a sufficient record in the series of able and exhaustive papers published in this Journal. We will, therefore, confine our attention to a survey of the system of management adopted on this demesne farm of a Hertfordshire landowner, who possesses in an eminent degree the practical qualities requisite to make such an undertaking successful.

The home farm consists of about 450 acres, including 94 of park. The soil is a strong loam on a clay subsoil resting on chalk at a depth of about 12 feet, and sufficiently dry without artificial drainage. Chalking has been here practised by the method already described.

One or two fields were drained, with the idea that they might be sufficiently altered in texture to admit of their being folded by sheep in winter without injury to the land. The result, however, only confirmed Mr. Lawes in the opinion that on such strong soils Barley after winter folding is an unsafe crop, owing to the mechanical condition of the land, which is not corrected even by the frost.

"Barley," to quote Mr. Lawes, "will generally succeed better on this land after Wheat than after roots, provided it receives a proper application of artificial manure." The artificial manures for corn-crops are sown and harrowed in with the seed, and top-dressings are avoided as far as possible.

So wide an interest is felt in this well-known farm that a detailed summary of its cropping may be of service.

NUMBER OF ACRES IN VARIOUS CROPS IN EACH OF THE 14 YEARS.

YEARS.	Wheat.	Barley.	Oats.	Beans.	Roots and Tares.	Clover and Grasses.	Total.
							acres.
1850	78	..	..	..	97	75	245
1851	172	50	..	..	14	9	245
1852	23	108	5	..	63	46	245
1853	38	72	39	..	53	38	245
1854	95	63	..	14	35	40	245
1855	131	10	28	14	44	18	245
1856	42	25	82	..	52	36	237*
1857	56	32	32	5	66	46	237
1858	68	30	75	11	32	18	237
1859	42	33	60	..	46	56	237
1860	50	14	74	6	56	37	237
1861	43	..	86	..	52	56	237
1862	74	9	72	5	47	30	237
1863	43	36	72	..	34	52	237
	950	482	631	58	691	551	3366

The following is a summary of the number of acres in corn, in Beans, and in green crops in each of the 14 years:—

SUMMARY OF CROPPING.

DATE.	Corn Crops.	Beans.	Green Crops.	Total.
				acres.
1850	73	..	172	245
1851	222	..	23	..
1852	136	..	109	..
1853	149	..	96	..
1854	158	14	73	..
1855	169	14	62	..
1856	149	..	88	237
1857	120	5	112	..
1858	173	14	50	..
1859	141	..	96	..
1860	138	6	93	..
1861	129	..	108	..
1862	155	5	77	..
1863	151	..	86	..
	2063	58	1245	3366

The average yearly acreage of each crop has been:—Corn, $147\frac{5}{14}$; Beans, $4\frac{1}{7}$; green crops, $88\frac{13}{14}$.

An excess of horse-power is necessarily kept for occasional work connected with the estate and the experimental lands, giving a reserve force which can be concentrated on the farm when needed. Without this reserve, or that of steam, the above system of cropping would not be practicable. The fallows for roots are broken up in the autumn, with three or four

* Eight acres appropriated in 1856 to experimental purposes.

horses, to a depth of 9 or 10 inches; ploughed backh spring, then twice across, and bouted in 27-inch ridges. Swedes get 12 tons of dung per acre, and Mangel about 25 tons of dung; of which, part is applief in autumn, and the remainder in spring. 2 cwt. o guano are sown on the dung, and 2 cwt. of superphosphate drilled with the seed. Mangels are drilled the last week in April, Swedes the first week in June. They are horse-hoed, and cultivated in the usual way in all respects. The crop of Swedes averages 15 tons; of Mangels, 30 tons per acre. Both are commonly drawn off the land. Salt has on this land proved even injurious as a manure for Mangel. We saw a field just previous to storing (1863) where a trial of different weights of salt has been given at rates varying from 5 to 10 cwt. per acre, and in every instance the leaves looked yellow and the roots were smaller than when the salt was omitted, and the injurious effect was greater in proportion to the quantity of salt given. Wheat usually follows the roots after a 5-inch furrow, 2 bushels of seed per acre. Browick and Rostock (red varieties) are drilled in 9-inch rows from the first week in October till the end; average crop, 35 bushels per acre.

Chevalier Barley usually follows Wheat, or other corn, and proves of better quality than when grown after roots. The land is ploughed once with a 6-inch furrow, usually in December, and 2¼ bushels of seed per acre are drilled, in 7-inch rows, in February or March; 2 cwt. of guano and 1 cwt. of superphosphate is the usual dressing. The crop averages 6 quarters per acre.

Tartarian Oats are drilled after corn, 7 inches apart, with once ploughing; 4 bushels of seed per acre, 2 cwt. of guano, and about 1 cwt. of sulphate of ammonia. Red and Canadian Oats are drilled after roots; 3 to 4 bushels of seed per acre, with 2 cwt. of guano. The Tartarian are sown in February, and the average crop is 10 quarters per acre. The red Oats average 8 to 10 quarters; and the Canadian, which are the last sown, 6 to 9 quarters.

All the corn crops are rolled in spring; they are kept clean without hoeing.

A good deal of straw is used for the estate and to thatch the little stacks on the experimental plots; some is sold.

A flock of 200 Southdown ewes is kept on the Grass-land, or on Clover with Mangel, and during the winter is brought into well-littered yards for the night. The details of management are the same as on any other well-managed heavy-land farms.

At present there is no indication of diminution in the productive power of the land. Corn undoubtedly bears frequent repetition on the same land better than roots, even if they be folded on the ground. Of this we saw a marked instance near Rothamsted. By grubbing up a fence some ill-farmed land, which had not been in roots for many years, was added to one of the fields cropped with Turnips in the usual rotation. The whole field, similarly treated as to manure and tillage, was sown with Swedes, and these, though healthy throughout, were more vigorous in growth and proved a heavier crop on the new land.

The practical lesson taught by this branch of Rothamsted farming is, that on strong land corn crops are more profitable than green crops; and that they may be repeated on such land for a series of years, without the usual intervention of fallow crops, with no apparent decrease in the productive power of the land. To carry out this system two conditions are essential,—a reserve of mechanical power on the farm, and a proper use of artificial manures. Mr. Lawes has endorsed his opinion and practice by letting a farm of 400 acres for 21 years without restrictions as to cropping. *Journal of the Royal Agricultural Society.*

Miscellaneous.

Sowing Grass Seeds.—I quite agree with Mr. Sutton's remarks, contained in the *Times*, on the sowing of Grass seeds for permanent pasture, and as to the advantage of sowing these without a crop; but as to the Grasses Mr. Sutton recommends, I am only afraid that the long and formidable array of botanical names enumerated, looking so very mysterious to many of our practical farmers, are enough to frighten them from "going into" the mixture. I find there are in all 21 Grasses and Clovers; six of the former are varieties of Fescue Grass. Now, my experience leads me to believe in only two sorts of Fescue worth distinguishing for agricultural purposes; these are the Meadow and the Hard. The Sheep's Fescue I consider, from its dwarf, tufty, and wiry growth, combined with its small narrow foliage, and consequent smallness of produce, to be of little use as a pasture Grass. The same objections may be made to the fine-leaved variety. The Red or Creeping Fescue is of little use to the agriculturist generally, but may be used to advantage on light lands. Perennial Rye-grass and the Clovers are, in my humble opinion, the groundwork of all pasture; but in this mixture I find only 7 lb. per acre allowed; this quantity consisting of three varieties—viz., Suttonii (no doubt a local name), Paceyanum (well known as Pacey's Rye-grass, a variety specially adapted for pasture from its permanent character and from the abundance of leaves which it produces), and Evergreen (a variety better suited for lawns than pasture, as, though it does not yield such a bulky crop as the Pacey's and some others, it retains its verdure longer than others). Then, again, I find Trifolium repens (white or Dutch Clover), and Trifolium repens perenne. May I ask where the difference lies? White Clover, whether saved in this country or on the continent, is a perennial; but I certainly give the preference to English-saved seed, for the produce will naturally be hardier and of a more robust constitution than seed saved in a warm climate, such as Germany. In these days, when stock of all kinds is bringing such high prices, and the growth of wool is of so much importance to the farmer, it would be well if those who have had experience in sowing down land for permanent pasture would state their experience. Cocksfoot, I find, is a coarse growing Grass, and cannot be too closely eaten down. It grows on a variety of soils, is one of the earliest Grasses, yields abundant produce, and on this account I give it a prominent place in my mixture. I prefer the month of April as being the safest month to sow without a crop. When sowing is deferred till August I would recommend a heavy roller to be put over the field before frost set in, so as to firm the Clover plants in the ground, and prevent them from being thrown out by the winter's frost. This may again be repeated in the spring. For the last 14 years I have been connected with the sowing down of many hundreds of acres with Grasses for permanent pasture, both with and without a crop; therefore I take the liberty of sending you these jottings, with the mixture I have been using without a crop for several years past, and which I find succeeds well on any common Barley land:—20 lb. Perennial Rye-grass, 4 lb. Italian Rye-grass, 4 lb. Cocksfoot, 2 lb. Timothy, 2 lb. Crested Dogstail, 2 lb. Rough-stalked Meadow-grass, 4 lb. White Clover, 3 lb. Alsike, 3 lb. Yellow, and 2 lb. Cow-grass. We prefer Perennial Rye-grass weighing from 26 lb. to 28 lb. per bushel to that of a lighter weight, and from the second year's crop, as being surer of being the true Perennial. The above mixture would cost about 25*s.* per acre. *W. M., in the Times.*

Calendar of Operations.

MERSE OF BERWICKSHIRE: *Oct.* 29.—At last we have got a soaking, enough and to spare. After our harvest the drought resumed as severe as ever; the land was firm as a road under the manure cart, and it took three horses to turn a good stubble furrow. But, on the 19th, 2 inches of rain moistened the land nicely through, and 3° of frost on the 21st showed thin ice on the pools. Next day it set in to rain from N.E., and has scarce been fair since. Last night the streams were higher than has been known for many a year, bringing down lots of Turnips; and the hollows are pools or lakes. The rainfall of these 11 days is just 8 inches, being as much as fell during 5½ months preceding. Those who bought cattle at Newcastle on Wednesday would make a bad beginning; but we believe most of the cattle already in hand were housed, or had housing ready for them, when the weather broke. We fear, however, that little has been done in the way of storing Turnips, and none but the lightest soils can be approached for many days to come. It has been a bad week for sheep. Of course they have got their Turnips laid down in Grass fields, and it has often been very difficult to wade for the needed supply. These rains have come not a day too soon to save the root crop, which, even on the deepest soils, was beginning to show signs of mildew. The temperature being mild, we may count upon a considerable increase in Swedes; and they may be a good crop, if we have fitting weather to store them by-and-by. Of the yield of corn little can yet be said, unless unfavourable; but it is astonishing to see how little of fine quality is shown in our bulk market. The wind got his share, and he likes the best. *J. T.*

Notices to Correspondents.

APPLE REFUSE: *A Young Farmer.* Apple "must" may be rammed into a heap in any walled corner, and it will keep very well for use during winter. Give it with any wash to the pigs, as you would 'grains.'

CATTLE MELON: *Constant Reader.* The following is Dr. Voelcker's Analysis:—

First General Composition.

Water	92.030
Organic matters	7.350
Mineral matters (ash)	.620
	100.000

Second Detailed Composition.

Water	92.030
† Soluble Albuminous Compounds	.619
* Insoluble Albuminous Compounds	.156
Sugar and Mucilage	4.661
Woody Fibre (crude)	1.914
Soluble Mineral Matters	.510
Insoluble Mineral Matters	.080
	100.000
† Containing Nitrogen	.099
* Ditto Ditto	.025
Total Nitrogen	.124
Equal to Albuminous Compounds (flesh-forming matters)	.775

CATTLE MELON: *M S*, of Newick, requests that any communications that Mr. Blundell or others may wish to make should be addressed to her Gardener, Mr. Richard Harbown, Kilcher, Newick, Uckfield.

POOLS: *X Y Z.* The art of making pools is well understood in chalk counties. We will endeavour to get a specification for you.

RECLAMATION OF LAND: *A Subscriber* says: with reference to the inquiries of a Correspondent as to the mode of reclaiming coarse and neglected ground, allowed to become wild and only a covert for game, permit me to direct your Correspondent's attention to a paper for which a prize was given to Joseph Lusk, Esq., by the Bath and West of England Agricultural Society, published in their Reports, which describes the process of reclaiming ground, of precisely the same nature as that alluded to by your Correspondent.

WALSH'S GORSE CRUSHER: *Agricola.* Apply to Mr. J. Walsh, Stedalt, Balbriggan, Ireland. See his Advertisement, p. 1008, col. *a*.

YEARLINGS "OCCASIONALLY" AT 19*l.*: *A Farmer.* You will see the account, as given by Mr. Oakley, of Lawrence End, himself, in Mr. Evershed's account of Hertfordshire, published in the late Number of the English Agricultural Journal.

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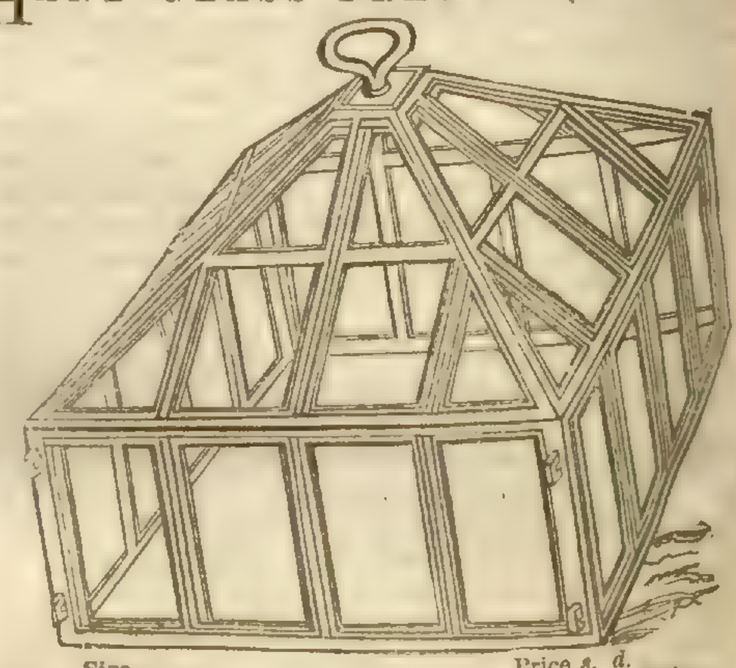

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ESTABLISHMENT for NEW and RARE PLANTS, KING'S ROAD, CHELSEA, LONDON.

GENUINE NEW GARDEN SEEDS.

JAMES CARTER & CO.

ARE NOW PREPARED TO EXECUTE ORDERS FOR

EARLY PEAS, BEANS, CARROT,
CUCUMBER, RADISH,

And other GARDEN SEEDS for AUTUMN and EARLY SPRING SOWING, from Seed saved at their Dedham and St. Osyth Seed Farms during the present Autumn.

☞ The Crop of most descriptions of Seeds is short, but the QUALITY is extremely good in consequence of the continued dry weather during the last Summer and Autumn.

JAMES CARTER AND CO., HIGH HOLBORN, LONDON, W.C.;
DEDHAM and ST. OSYTH, ESSEX; CRYSTAL PALACE NURSERY, SYDENHAM, S.E.

NEW KINDS OF FRUITS.

MESSRS. THOMAS RIVERS & SON

BEG TO CALL ATTENTION TO THE FOLLOWING

NEW OR RARE VARIETIES OF FRUITS,

all of which they can with confidence recommend.

Nectarines.

VICTORIA (RIVERS).—The finest known; bearing trees in pots, young Trained Trees and Standards. 10s. 6d. each.
PINE APPLE (RIVERS).—A large Orange Nectarine, bearing trees in pots, and young trained trees. 5s. each.
PRINCE OF WALES (RIVERS).—The latest; bearing trees in pots and young trained trees. 5s. each.

Peaches.

EARLY ALBERT (RIVERS).—Bearing trees in pots and young trained trees. 5s. each.
EARLY VICTORIA (RIVERS).—Bearing trees in pots, young trained trees, and standards. 5s. each.
PRINCE OF WALES (RIVERS).—Trees in pots, and Maiden trees, 5s. each.
PRINCESS OF WALES.—One of the largest of Peaches; bearing trees in pots and young trained trees. 10s. 6d. each.

Apricots.

OULLINS' EARLY PEACH.—Maiden trees, 3s. 6d; young trained trees, 5s. each.
EARLY MOOR PARK.—Maiden trees, 3s. 6d. each.

Cherries.

TRANSPARENT, LARGE, AND FINE.

EARLY RED BIGARREAU, very early.
LOVE APPLE, a Spanish sort.
LUDWIG'S BIGARREAU, large and early.
BIGARREAU REVERCHON, large and late.
RIVAL.—Black, very late.
Young trees, Pyramids and Dwarfs, 2s. 6d. each.

Grapes.

EARLY SMYRNA FRONTIGNAN, the earliest and richest, bearing rods, 10s. 6d. each.
PRIMAVIS FRONTIGNAN, ditto, 5s. each.
SMYRNA FRONTIGNAN, ditto, 10s. 6d. each.
TOKAY FRONTIGNAN, ditto, 5s each.
TROVEREN FRONTIGNAN, ditto, 5s. each.

Pear.

SUMMER BEURRÉ D'AREMBERG (RIVERS).—Fine pyramids, 10s. 6d. each.

Strawberries.

ROYAL HAUTBOIS (RIVERS).—The largest and finest of the race. Plants, 3s. per dozen; strong bearing ditto, 6s. per dozen.
BLANCHE D'ORLEANS.—A large White Alpine, 3s. per dozen,

The above are all fully described in the CATALOGUE of FRUITS, by

THOS. RIVERS, NURSERIES, SAWBRIDGEWORTH, HERTS.

NEW SCARLET CLOVE CARNATION GARIBALDI.

YOUELL & CO.

Have much pleasure in offering the above magnificent variety, far surpassing any in cultivation; colour intense vivid scarlet, large and bold flowers, fine pod free from bursting; the delicious clove scent which it possesses is not to be equalled in any of its class. 5s. per pair.

CARNATIONS and PICOTEES.

YOUELL & Co.'s Collection of these is probably the most extensive in the Trade, and having for a series of years paid special attention to their cultivation, introducing the best of the new varieties, they are enabled to offer them at the following prices for fine strong well-rooted plants:—

CARNATIONS, finest first-class varieties, by name, 18s. and 24s. per dozen pairs.
PICOTEES, finest first-class varieties, by name, 18s. and 24s. per dozen pairs.
PICOTEES, on yellow grounds, 30s. and 30s. per dozen pairs.
Finest mixed BORDER CARNATIONS and PICOTEES, 9s. per dozen pairs.

True old Clove CARNATIONS, 12s. per dozen pairs.
Scarlet old Clove CARNATIONS, 18s. per dozen pairs.
FIRE KING, fine light scarlet CLOVE, very fragrant, 2s. 6d. per pair.
Wheeler's perpetual-flowering CLOVE, 12s. per dozen plants.
YOUELL'S KING of SCARLETS, new perpetual-flowering scarlet CLOVE, very brilliant and highly fragrant, 18s. per dozen plants.

NEW ITALIAN YELLOW CARNATIONS.

YOUELL & Co. have succeeded in importing 25 very choice, distinct, and beautiful varieties of the above—the ground colours being a rich yellow, striped and suffused with various shades of scarlet, crimson, purple, plum, and blue; they are extremely hardy, very strong growers, highly fragrant, and will give general satisfaction. Price 3s. 6d. per pair or 40s. per dozen pairs, of distinct kinds.

PERPETUAL FLOWERING or TREE CARNATIONS.

FLOWERING SUMMER AND WINTER.

This deservedly popular class has of late received many additions to its hitherto general favourites. They cannot be too strongly recommended not only for their delightful fragrance but the brilliant display they afford during the autumn and winter months, either in the Greenhouse, Conservatory, or open Garden.

Price for 50 or 100 Pair to Trade on application.

ROYAL NURSERIES, GREAT YARMOUTH.

JAMES VEITCH begs to announce that the following CATALOGUES are now ready, and will be forwarded free on application.

A DESCRIPTIVE CATALOGUE of HARDY PLANTS.
A DESCRIPTIVE CATALOGUE of FRUIT TREES.
A DESCRIPTIVE CATALOGUE of ROSES.
Also may be had
A GENERAL CATALOGUE of STOVE and GREENHOUSE PLANTS (Ferns and Orchids being included).
A CATALOGUE of NEW and RARE PLANTS for 1864.

Royal Exotic Nursery, King's Road, Chelsea, S.W.

New Seeds, Growth of 1864.

ROYAL BERKSHIRE SEED ESTABLISHMENT.

SUTTON AND SONS are now prepared to execute orders for all kinds of GARDEN SEEDS.

The prices are moderate and the quality fine, owing to their having been harvested well.

Royal Berkshire Seed Establishment, Reading.

ROYAL HORTICULTURAL SOCIETY,
SOUTH KENSINGTON.

CHRYSANTHEMUM SHOW, WEDNESDAY, November 9, 1864.

AWARDS OF THE JUDGES.

CHRYSANTHEMUMS.

CLASS I.—Six Plants, distinct varieties, on single stems.
Mr. A. Forsyth, Brunswick Nursery, Stoke Newington, First-class Certificate.

CLASS II.—Three Plants, distinct varieties, on single stems.
Mr. A. Forsyth, Brunswick Nursery, Stoke Newington, First-class Certificate.

CLASS III.—POMPONS: Six Plants, distinct varieties, on single stems.
Mr. A. Forsyth, Brunswick Nursery, Stoke Newington, First-class Certificate

CLASS IV.—POMPONS; Three Plants, distinct vars., on single stems
Mr. A. Forsyth, Brunswick Nursery, Stoke Newington, First-class Certificate.

CLASS V.—Six Standard Plants, Large flowers or Pompons.
Mr A. Forsyth, Brunswick Nursery, Stoke Newington, First-class Certificate.

CLASS VI.—Six new varieties of last year.

CLASS VII.—Six new varieties of the current year.
Mr. A. Forsyth, Brunswick Nursery, Stoke Newington, First-class Certificate.

CLASS VIII.—Twenty-four Cut Blooms, distinct varieties.
Mr. A. Forsyth, Brunswick Nursery, Stoke Newington, First-class Certificate.

CLASS IX.—Twelve Cut Blooms, distinct varieties.

CLASS X.—Six Cut Blooms, distinct varieties.

CLASS XI.—One Specimen Plant, either Large flowers or Pompons.
Mr. A. Forsyth, Brunswick Nursery, Stoke Newington, First-class Certificate.

ROYAL HORTICULTURAL SOCIETY.
FLORAL COMMITTEE,
LIST OF AWARDS, NOVEMBER 8, 1864.

FIRST-CLASS CERTIFICATES.

ATHYRIUM FILIX-FŒMINA VICTORIÆ, from Messrs. Ivery & Son, Dorking
ATHYRIUM FILIX-FŒMINA VERNONIÆ, from Messrs. Ivery & Son
CUPRESSUS LAWSONIANA ARGENTEA, from Messrs. Waterer & Godfrey, Knaphill
EPIDENDRUM AMABILE, from Messrs. J. & C. Lee, Hammersmith
EPIPHYLLUM TRUNCATUM TRICOLOR, from Messrs. J. & C. Lee
POLYSTICHUM ANGULARE GRANDICEPS, from Messrs. Ivery & Son
POLYSTICHUM ANGULARE ROTUNDATUM, from Messrs. Ivery & Son

SECOND-CLASS CERTIFICATES.

CHRYSANTHEMUM (POMPON) ALICE, from Mr. Ingram, Royal Gardens, Frogmore
CHRYSANTHEMUM (POMPON) PRINCESS BEATRICE, from Mr. Ingram
BEGONIA ORNATA (HYB.), from Major Trevor Clarke, Welton Park

SPECIAL CERTIFICATES.

To Messrs. Ivery & Son, for a collection of HARDY FERNS
To Messrs. Downie Laird & Laing, for CHRYSANTHEMUM blooms

The NEXT MEETING will take place on December 7, in conjunction with the International Fruit Show.

THOMAS MOORE, Secretary to the Floral Committee.

The Gardeners' Chronicle.

SATURDAY, NOVEMBER 12, 1864.

MEETING FOR THE ENSUING WEEK.

THURSDAY, NOV. 17—Linnean .. .. 8 P.M.

WE resume some notice of the Collection of GRAPES exhibited from the Garden of the Royal Horticultural Society at Chiswick, October 19 to 21, 1864. It consisted of the following varieties:—

WHITE.

White Muscat of Alexandria
Canon Hall Muscat
Royal Muscadine
Reeves' Muscadine
White Frontignan
Golden Hamburgh
White Nice
Blussard Blanc
Raisin de Calabre

BLACK.

Black Hamburgh
Frankenthal
Dutch Hamburgh
Muscat Hamburgh
Violet Frontignan
Esperione
Black Prince
Morocco Prince
Burchardt's Prince
Oldaker's St. Peter's
Prune d'Herault
Lady Downes' Seedling
Black Morocco
Siderites Smyrna
Catalenesia Nera
Black Monukka

RED, OR ROSE COLOURED.

Chasselas Rose de Falloux
Tokay des Jardins
Abbée

These Grapes were grown in the large Conservatory at Chiswick. The Vines were planted about seven years ago, but many of the original plants have since been removed and replaced, or grafted with other sorts. Half of them have their roots outside, while the other half are planted inside. The strongest plants, all other circumstances being equal, are those having their roots outside, and they bear the largest bunches and berries. No border was purposely made for them, except to a width of from 2½ to 3 feet from the wall, which was prepared with good soil for them to start in. Beyond this they had a terrace, level on the top, which was originally nearly 3 feet above the general level of the garden. This terrace was composed chiefly of clay loam from an excavation in the garden. Consolidated

from the time it was laid down nearly 30 years ago, it was not moved when the Vines were planted, and their roots had nothing more penetrable before them than this crude heterogeneous mass, which was intended to be gradually removed and replaced with more tender materials. The plants, however, as it appears, required only a little encouragement at the start, and then they proceeded to attack the more solid earthwork of the terrace, and succeeded in taking complete possession of it with their roots.

The varieties of Grape Vine above-mentioned form part of the large collection which exists at Chiswick. The best for a general crop among the black sorts is unquestionably the Black Hamburgh, and especially that variety of it called the Frankenthal. The Dutch Hamburgh is larger, but comparatively coarse, and is by no means to be preferred. The Muscat Hamburgh is esteemed by those who like the Muscat flavour; its bunches and berries are improved in size by being grafted on the Black Hamburgh, on which it also sets better. The Esperione colours well, being of a bluish black; but we observe that under this name the true sort is not always met with. The Black Prince is well deserving of a place in a collection; some remarkably fine bunches of this old variety were exhibited in the past season. The Morocco Prince, said to have been raised between the Black Prince and Black Morocco, has a sprightly flavour. Burchardt's Prince is capable of being grown to a large size, but it requires rather more heat than the Black Hamburgh to develope it in full perfection; it hangs well, forming a succession to the Black Hamburgh varieties. The same may be said of the Black Morocco. As a late sort, Oldaker's West's St. Peter's must be reckoned very useful; although not so large as the Black Barbarossa, its bunches are more compact. As a late sort, however, Lady Downes' Seedling is perhaps the best for flavour, and it produces handsome bunches of a fine black colour. Catalenesia Nera has tolerably large bunches, black, as its name implies, but the berries are not sufficiently large. The Black Monukka forms a large bunch, with berries not very large, but stoneless. This being the case, it may become valuable as a stoneless raisin Grape in those countries or colonies which possess a climate sufficiently hot and dry for rendering the fruit an article of commerce. The Siderites Smyrna is a large late Grape, but coarse-fleshed and hollow.

Of the white Grapes exhibited, the White Muscat of Alexandria must still rank at the head; for although the Canon Hall Muscat is larger, both in bunch and berry, yet it is not so rich; still it is a noble looking Grape, and well deserves cultivation, but by no means to the exclusion of the old sort. The Royal Muscadine is a good bearer, and can be grown where a less degree of heat can only be afforded than that which the Muscats require. Reeves' Muscadine forms a compact bunch, will succeed in the same temperature as the preceding, and is deserving of cultivation. Of the old and deservedly much esteemed White Frontignan good bunches were exhibited; and there were very fine bunches of the Golden Hamburgh. The White Nice is not reckoned first-rate as regards flavour; but its bunches are large, hang long, and are sometimes ripened to tolerably good flavour. The Blussard Blanc is a wine Grape. The Raisin de Calabre is good looking, hangs long, and is sometimes desirable and useful on account of these properties; in quality it is tolerably good, but not rich.

Of red or rose-coloured Grapes, the Chasselas Rose de Falloux has a long slender bunch, with berries of a beautiful reddish tinge. The Tokay des Jardins resembles the preceding, but is not so good. The Ahbée, an Indian Grape, from the Deccan, is always much admired for its beautiful rose-coloured tinge; it has a Sweet-water flavour, but is not rich.

From this exhibition it will be seen that by fruiting the numerous varieties in the extensive collection of the Royal Horticultural Society at Chiswick that have yet to be proven, and exhibiting them, a knowledge of the best varieties may at length be disseminated amongst those interested in the cultivation of this excellent and highly useful fruit; and by making selections again and again, those most worthy of the expense and care attending their production need only be ultimately employed. Thus we may ensure in this country the finest Grapes in the world. This too, we may observe, is creditable and legitimate work for a Horticultural Society to engage in; and it alone stamps a value upon plain practical Chiswick, which is to be sought in vain in acres of fashionable parade ground.

OUR readers, who are not exclusively water drinkers, have probably each some particular beverage which they prefer, and of which, when it is to be had, they freely partake. It may be port or porter that is their usual choice, but they do not restrict themselves to it; they scruple not to drink any other good liquor that comes in their way; and the liberty they claim for themselves they concede to others. It is desirable that the same freedom should prevail as to STYLES IN FLOWER GARDENING. On this subject many have very narrow ideas, and can hardly speak of any tastes besides their own without a sneer or sarcasm. Not unfrequently quite an outcry is raised against the autumnal flower garden which is arranged and adorned on "the bedding-out system" as it is called. An able writer on "Elizabethan Gardening," whose article in *Fraser* has been given at length in our pages, remarks: "The modern horticulturist's idea of planting a garden is in such fashion, that for nine or ten months in the year, it shall be a desert without a flower or shrub of any interest. . . . He has but one idea, and that is to force a few coarsely contrasted plants, without scent, without variety, stiff and formless, to make a show of glaring colours in August and September." This censure is doubtless to some extent deserved by those who devote themselves to no other kind of flower gardening. They defraud themselves of much enjoyment. It is natural too for the botanist, and florist, strictly so called, to be disaffected towards this style of ornamentation. Those whose chief interest lies in particular plants will doubtless be indifferent to a blaze of colour.

It is not to be denied, however, that the *tout ensemble* of a fine autumnal flower garden is often magnificent. Few can stand in presence of a well executed example of this style, and resist the momentary fascination of the scene. And then it is to be remembered that its splendour lasts for three months at least, during our most agreeable season for walking out of doors. It goes on improving, too, till nearly its close—the Gazanias being less affected by passing clouds, and the Dahlias assuming a more graceful matronly shape, and producing more consummately perfect flowers as September draws to its cool and dewy close. The objection as to the want of variety of the plants employed might easily be obviated, and in fact is becoming every day less valid. The Geraniums now available for bedding purposes are a host in number, and are greatly diversified in variety—so are the Gladioli, and many other things.

Where a wall with a southern aspect borders the garden, it may be clothed with the greenhouse Tropæolums, Cobœa, Maurandia, Clematis, &c. Beds might be filled with Cannas, Tritonias, and other denizens of the greenhouse. In short, the gardener might easily fall into the *embarras des richesses*. If he would only contract his canvas, for he is generally too ambitious of extent, and refine and diversify his colours, he might easily produce a picture which even the most fastidious would regard with admiration.

It is admitted that this style is best fitted for the families that spend their summers in London, and visit their country seats only in autumn. But why should not their pleasure be consulted? If it is reasonable to arrange vegetable crops, and to force Vineries so that supply may be contemporaneous with demand, why should not flower gardens be dealt with in the same way? A member of Parliament or man of fashion, worn and wearied with London life, will be glad in autumn to find his residence in the country as gay as possible, and certainly he has a right to please himself. A casual visitor might as reasonably condemn the pattern of the carpet in a lady's boudoir, as the style which she selects for her flower garden.

Of course this reasoning does not apply when a gentleman resides on his property throughout the year. If he patronises exclusively the bedding-out system, he is like a man who addicts himself to a liquor which is in season only three months in the year; and he may be in danger of committing this absurdity. Clever gardeners, who very frequently train the tastes of their employers, may find that they cannot do anything effective in any other way, and naturally take to the bedding-out style of ornamentation: whence it is sometimes seen, especially in the north, even in kitchen gardens, and in incongruous conjunction with Peas and Cabbages, and other culinary articles. A gentleman, who is a constant resident on his property, should have a pleasure garden for every phase of the seasons. It is long since Lord BACON proposed winter, spring, and summer gardens; but it is seldom that his ideas have been adequately realised. Perhaps the arrangement and co-ordination of these season gardens are not so easy as at first may be imagined. We may hazard a few remarks on this subject at another time. Meanwhile we would beg to represent that there is little sense or taste in pouring contempt on the department in which the most complete success has been attained.

THE following letter having reference to the EXHIBITIONS OF THE ROYAL HORTICULTURAL SOCIETY in 1865, has been partially circulated amongst the Fellows of the Society:—

Royal Horticultural Society's Gardens,
South Kensington.

As Chairman of the Committee for re-organising the Shows of the Royal Horticultural Society, I beg leave to enclose for your consideration the accompanying List of Plants, which has been prepared with the view of ascertaining from yourself and other Fellows of the Society who are practically interested in Horticulture, how far it may be possible to establish among the Fellows of the Society during the year 1865 a weekly show of Flowers, Fruit, and Vegetables, each in their season.

The Committee are of opinion that a weekly show would be of interest to the Fellows, and useful to the progress of Horticulture.

They consider that it would not be difficult to organise it at South Kensington, where accommodation suitable at *all* seasons of the year, and with proper temperatures has been provided, and that all that is wanted is the hearty co-operation of the Fellows themselves to enable it to take place.

The Committee consider that a weekly show has the following advantages over the present system of Great Shows:—

1. It would greatly increase the number of exhibitors, the majority of whom refrain from contributing to a Great Show a solitary specimen of well-known species, however fine. A weekly show would enable exhibitors of all kinds to select their own time of the year for the exhibition of what they might think proper to send.

2. It would bring before the Fellows a much more complete representation of the current state of Horticulture throughout the year.

3. It would enable the specimens to be examined much more deliberately and usefully than it is possible to do during the bustle and excitement of a one day's great show, and would consequently be calculated to promote the steady progress of scientific Horticulture.

4. It would advantageously extend those limits to the varieties of plants necessarily imposed by the Schedules of Exhibitions drawn up for a single day.

5. The details of the weekly shows will be announced, but it may be stated that it is not intended that the weekly shows should supersede one or more great shows taking place during the year.

I am permitted to mention that Her Majesty the QUEEN has graciously consented to direct that specimens shall be furnished to the Weekly Shows from the Royal Gardens, and several of the most influential Fellows of the Society have promised to contribute to them.

I shall be greatly obliged by your marking on the accompanying list which of the plants you would undertake to cultivate with the view of being sent in 1865.

The Committee are in hopes that they will be able to obtain facilities from the Railways for the transmission of the specimens.

I have the honour to be, &c.
JOSEPH PAXTON.

The list referred to in the foregoing letter is annexed; and Fellows who are disposed to exhibit any of the plants, or others not named, at any time during the year 1865, have been requested to state at what date they will forward specimens:—

Acacia, Achimenes, Allamanda, Alocasia, Amaryllis, Anemone, Anthurium, Antirrhinum, Aphelandra, Aphelexis, Arum, Aster, Auricula, Azalea, Balsam, Begonia, Berberis, Bougainvillæa, Bouvardia, Bromelia, Buddlea; Cactus, Cereus, Opuntiæ, &c.; Caladium, Calceolaria, Callistemon, Calochortus, Cyclobothra, Camellia, Campanula, Candytuft, Canna, Carnation, Ceanothus, Chrysanthemum, Cineraria, Cistus and Helianthemum, Clematis, Clerodendron, Cockscomb, Convallaria, Correa, Cotton Plant; Crassula, Kalosanthes, &c.; Crinum, Crocus, Croton, Cuphea, Cyclamen, Cycas, Cytisus, Dahlia, Daisy, Daphne, Delphinium, Deutzia, Dielytra, Dieffenbachia, Dionæa, Diosma, Disa, Dorstenia; Double flowering Peach, Cherry, &c.; Draba, Dracæna, Epacris, Eranthemum, Eriostemon, Erythrina, Escallonia, Euphorbia, Ferns, Ficus, Fritillary, Fuchsia, Gardenia, Gentian, Geranium, Gesnera, Gladiolus, Gloxinia, Heath, Hedychium, Heliotrope, Hellebore, Hepatica, Hibiscus, Hollyhock, Honeysuckle, Hovea, Hoya, Hyacinth, Hydrangea; Iris, Ixia, &c.; Ixora, Jasmine, Lantana, Lapageria, Lilac, Lily, Lobelia, Lupine, Lychnis, Magnolia, Maranta, Mertensia, Mignonette, Mimulus, Mosses, Musa, Myrtle, Narcissus, Nasturtium, Nemophila, Nerium, Olea, Orchids, Oreopanax, Enothera, Palms, Pandanus, Pansy, Passion Flower, Pea

Pelargonium, Pentstemon, Pæony, Petunia, Phlox, Picotee, Pimelea, Pine, Pink, Pitcher Plant, Polyanthus, Poppy, Potentilla, Primula, Pyrethrum, Ranunculus, Rhododendron, Rocket, Rose, Salvia, Saxifrage, Scabiosa, Scilla, Sedum, Solanum, Spiræa, Statice, Stock, Tea plant, Thibaudia, Tulip, Vaccinium, Vallota, Verbena, Veronica, Violet, Dog Tooth Violet, Russian Violet, Wallflower, Yucca, Zinnia, and other plants not specified above.

— CONIFERS ARE GRAFTED, it appears, with very great success at Castle Kennedy, the grafted plants, of which large numbers have been used, being quite equal in symmetry to those raised from seeds. By adopting the plan of wedge-grafting it is found that all danger of damage by wind is avoided, and in a short time the point of union between stock and scion becomes scarcely discernible. Mr. Fowler has by this means been enabled to furnish the grounds at this fine place with handsome plants many years sooner than it could have been done by means of seedlings. The grafting of Conifers, as observed by a northern contemporary, has sometimes been condemned, but any one who sees what has been accomplished by it at this place cannot fail to be convinced of the soundness of the practice.

New Plants.

280. ODONTOGLOSSUM ALEXANDRÆ—THE PRINCESS OF WALES' ODONTOGLOT.

O. pseudobulbis ovatis compressis diphyllis, racemo simplici multifloro foliis subæquali, bracteis cucullatis acutis, floribus membranaceis pedicellis æquantibus, sepalis petalisque sæpius subæqualibus (interdum petalis multo latioribus), sepalis lanceolatis acuminatis petalis ovato-lanceolatis acutis laceris, labello breviore unguiculato acuto margine crispo apice recurvo disco maculato cristâ simplici bilamellatâ, columnâ arcuatâ clavatâ.

This splendid addition to the genus Odontoglossum has been lately received by the Horticultural Society from its collector Mr. Weir, who was fortunate enough to discover it in the gloomy forests of Santa Fé de Bogota at an elevation of 9000 feet above the sea level. It is allied to O. Pescatorei and O. crispum, but is quite distinct from both, and probably more lovely than either. Its flowers, according to its discoverer, vary in their form and size and colours, more or less of purple mingling in some cases with the usually pure white of the sepals and petals; while red spots and purple radiating lines, and a rich yellow stain down its centre, all contribute to the decoration of the lip.

As this new Odontoglot is eminently beautiful, and is certain to prove a universal favourite, I have not scrupled to dedicate it to the illustrious Princess whose name it is henceforth to bear. It will doubtless be of the easiest cultivation in a cool house. *J. B.*

ORCHIDS AND THEIR CULTIVATION.—No. I.

TIME was when one could enumerate, in a line or two, all the collections of Orchids cultivated in this country. In days gone by their importation was not so much a matter of merchandise, because then very few people knew anything about the peculiar organization, and great diversity of colour, of the flowers; or had either heard of or seen the strange insect-like forms which they more or less represent. Commercial gentlemen who had business to do with foreign countries introduced a few to botanic gardens, and to such of their friends as would take the trouble to grow them; but very few availed themselves of the opportunity. It was only in botanic gardens, where the flowers as they opened came under scientific eyes, that their merits were brought before the notice of the public. Chatsworth, Wentworth, and Kew were once famous in this respect; but these collections are now completely eclipsed by those of many private growers in the country. Messrs. Loddiges' collection was also famous, but it is now scattered. The only very old one whose name has sounded familiar in our ears for 20 years at least, that may be said to have kept pace with the times, is that of Mr. Rucker, of Wandsworth. I am aware that more could be named, but these are a few of the principal in England. Turning to Scotland, the Botanic Garden at Glasgow, by the enterprise of her citizens, who trade largely abroad, had received importations again and again, many many years ago. They have, however, been chiefly of a common order. Edinburgh, though probably not to the same extent, has always had a good collection; for, go there when you may, you will always find something worth seeing. Smeaton and Dalvey, the one in the East Lothians, the other in Morayshire, both properties of private gentlemen, had very good collections many years ago; and still contain, as may be readily supposed, some unique plants; but judging these by the present standard they lag a long way behind. Twelve years ago Scotland could not boast of one other single collection worthy of the name, unless it were the few grown at Dalkeith and Bothwell Castle. But what is their history now? Hundreds of gentlemen are growing them for tens that grew them before, and their popularity is increasing every year. The more people know them the more they admire them, and the more anxious are they to become possessed of choice collections. They are the gems of all the flowers of the garden. Among them are found a variety and contrast of colours that may be sought for in vain in any other order. Ill disposed critics, and there are some of them in the world, who admire their own shadow, may laugh at your newly imported Cattleyas, and liken them to an assortment of dried bones standing up on end. They may point to the fleshy roots of some healthy specimen of the more prominent subdivisions of Vandeæ, which has a tendency to throw out roots all the way up the stem, and ask you to cut them off if you are anxious to have a really handsome plant in your possession; but some people know very well that all this hostile criticism only goes to show that if these parties consider themselves advanced students of Nature they are sadly mistaken.

However, let me illustrate these ideas practically. If you want to see a scene of gorgeous loveliness, where each individual flower will grow in your estimation the more minutely you examine it, go either by road or rail to Mr. Rucker's, at Wandsworth, and you will see such a variety of Brazilian Cattleyas of all shades of colour as will put you out of sorts with most flowers that commonly meet your gaze. Or go to Mr. Warner's at Broomfield, in the months of May and June, and you will see such a collection and variety of Cattleya Mossiæ, and its lovely congener Lælia purpurata, as I believe was never seen for purity and size of flower in La Guayra, in any part of Venezuela, or in Brazil. Again, if you want wreaths of rose, crimson, and white blended together in such a way as to defy the imitation of man, and make you for a moment pause, and get bewildered among such a forest of beauty and comeliness, go to Mr. Day's, at Tottenham, during the very same period, and you will find as many wreaths of Saccolabiums and Aërides as would supply the heads of all the fair sex who are privileged to attend "Her Majesty's Drawing-room," such a display and in such condition, I venture to say, as was never seen in Java or the East Indies. But oh! if you want purity of whiteness and chasteness of form, go to Low's, Veitch's, Williams's, or almost everywhere where collections are grown, and look at that moth-like flower which has been sent from Borneo, Java, and the Philippine Islands, and which forms festoons of flowers regularly and artistically disposed when under a high state of cultivation, and tell me if its equal has yet been found. If you want curiosity of form and a nearer approach to the animal kingdom, get the Dove-plant (Peristeria elata), and you will see an exact representation of the head and shoulders of this harmless bird nestling in the interior of a pure white dove-cot, and apparently ready to sip of the crystal stream in the font below; or the Butterfly Oncid (Oncidium Papilio majus), with its perfect antennæ, monkey-like face, perfect wings, small waist, and broad fluttering body; or the primrose-coloured Anguloa (Anguloa Clowesii), with its column and labellum, almost a fac-simile of the frontispiece of our humorous and highly popular publication—*Punch;* or Henshall's Bolbophyllum (Bolbophyllum Henshallii), with its curious jointed labellum that turns topsy-turvy, on a far more elegant pivot than human hands could make, and with a vast deal more simplicity than any mountebank that ever performed; or the three-toothed Catasetum (Catasetum tridentatum) which, when touched upon the stigma, sends its pollinia from its dark, cavern-like mouth, like a gun shot at its enemies.

Instead of amateurs sending out an occasional traveller on an exploring expedition, we now have them sent out by enterprising nurserymen in half dozens to ransack all the temperate and tropical regions of the earth. The names of Veitch and Rollisson have long been associated with Orchids and Orchid cultivation; so have those of Pescatore, Linden, and others on the Continent. All these gentlemen have done much in times past, and some of them are doing a great deal still, in introducing choice things, and showing the proper mode of cultivating them. Their ranks, however, have been recruited with new blood; and foremost among the names of those who have been catering for the public for the last few years, and with an energy which does him credit, is Mr. Stuart Low. One of our best cultivators has also entered the lists, and carries with him a knowledge of the proper cultivation of the family which few can boast of. Others, both at home and on the Continent, are driving a good trade in this way. Private speculation is not at an end, for numerous boxes are consigned to the popular Mr. Stevens, of Covent Garden notoriety. The boxfuls that come by the mail steamers from the far east, and the far west, have multiplied at least tenfold within the same number of years, as any will find who will take the trouble to read the *Times* summary of cargo arrived at port.

Now comes wonder the second—Where do they all grow? They must represent a fabulous lot of money. Everybody, it may be presumed, has heard about the value put upon a collection of Orchids, and many may think the sum ridiculously large. But before coming to a hasty conclusion, let any one estimate the amount of money that must be disbursed before valuable plants can be collected on the spot, then their consignment home, their liability to death on the way, and the considerable difficulty in getting many of the sorts not only to live but to reproduce themselves by division of the stem; and after reckoning all the care, the house-room, the fuel, the every little thing necessary to induce and maintain health, his ideas about extravagance will be a little sobered down. It is an astonishing, although it is nevertheless a pleasing fact for all lovers of flowers, to know that these imported plants do change hands, and that, too, in considerable quantities. Any one in the habit of walking round the London nurseries every year will find, in those places where Orchids are grown, that the greater bulk of the plants seen 12 months before are gone, and others are occupying their places. Specimen plants will probably be seen, time after time,—plants kept for exhibition during the season of the great shows. In all likelihood a few of the more common things may be also seen; but there are less of these remaining than was wont to be the case, and this clearly enough shows that the list of growers has been increasing.

On the Continent generally, I believe the trade will tell the same story. At least in Paris the growers for sale admit that they are driving a brisker trade than formerly. All this information goes to show that they are now pretty well scattered over the country. How tenaciously do some of our friends cling to new and rare plants of this order; and how difficult it is to get them, as it were, from their sight! Never was this better illustrated than when the writer visited the nurseries of Thibaut & Keteeler, and of M. Luddeman in the environs of Paris. Neither my friends Messrs. Keteeler or Luddeman, from whom I received much kindness and personal attention, would put a price upon a plant unless they had duplicates in their possession. There were, to my mind, something more than mere mercenary motives exemplified here, and all honour to them for it.

For the benefit of young growers, and with the view of placing upon record the intelligent practice of our own day, I shall proceed to investigate and treat upon the subject at length; and in the first place it will be well to discuss the style and formation of house which is best adapted for Orchid cultivation. *James Anderson, Meadowbank.*

NOTES ON GARDENS.—No. XXII.

ROYAL BOTANIC GARDEN, GLASNEVIN.

(*Continued from* p. 1036.)

THE garden rests on calp limestone, and is in consequence unfavourable to the growth of many American plants, but the Pines seem thoroughly at home. The visitor on entering, instead of being confronted by a geometrical array of strongly contrasted colours—the most unnatural of all displays—or by angularity of any kind, finds himself easily led amongst beautifully grown Arbor-vitæs and Cypresses, with fine Wellingtonias and rare Pines among them; while here and there he meets with magnificent tufts of the Tritoma, (which does far better at Dublin, both as to size of plant and length of spike, than I have seen it on this side the Channel, the fine effect produced by these plants—never grown in lines or masses, but dotted about here and there—being very remarkable); and noble plants of Pampas Grass, which was first introduced to and distributed from Glasnevin. Pines are planted to a considerable extent in various parts of the garden, but particularly in its highest quarter, in some parts of which visitors might fancy themselves in a Pine country, so well are they developed. The largest Deodar in the Pinetum was once a cutting obtained from Skirving by Dr. Moore, and brought to Ireland in his travelling bag. The chiefs of the older Pines were two specimens of P. Pallasiana, venerable, grim, and about 70 feet high; and a fine old plant of P. Cembra, grafted—40 years ago—on the Scotch Fir. Picea nobilis bore many cones, and was 20 feet or more in height, a noble plant indeed in that state: and P. Nordmanniana, with Pinus Gerardiana, P. Montezumæ, and P. Coulteri, were also good specimens. The last named was raised by Mr. Niven from seeds which had been 20 years in Coulter's herbarium. Many beautiful and finely developed specimens of Cupressus are to be seen, particularly C. macrocarpa, Tournefortii, Goveniana, Uhdeana, funebris, and filiformis—C. Uhdeana being another travelling-bag importation. Of Pinus Gerardiana, a very handsome and distinct species, which affords food to the Nepalese, there was an excellent plant, thriving as well as those of Thujopsis borealis—the latter a great ornament to the garden. A plant very like to, if not identical with, the Stone Pine was pointed out to me by Dr. Moore as having been raised from some of the batch of seeds that saved Tweedie and a Spaniard from starvation when crossing from Buenos Ayres to Patagonia. Tweedie started with as much food as he calculated would suffice till a fresh supply could be obtained; but the rivers became swollen and impassable, and starvation disagreeably apparent, when he saw at a distance over the plains three dark objects, which proved to be Pines, on the seeds of which he and his companion lived for 10 days; from a packet of seeds from these trees the Glasnevin plant was raised. Widdringtonia juniperoides looked a very gem among the smaller Conifers. It was growing freely and compactly, and had been out for some years.

Among the Pines I met Paul Boshell, of whom the reader may ask—"Who is he?" Well, a hale old man who has been in the garden since its formation, who had the sagacity to run up a chimney in '98 when the rebels were reported near at hand, who could mow before my grandfather first opened his eyes, and who is still able to "cut around any man in the garden." The Mistleto was growing freely on a [illegible] Rose

(Earl Talbot), and on numerous other plants; but though often tried on the common Oak, and on other species of Quercus, it had always failed to grow, though the seeds vegetated. On the branches of Quercus Daviesii there were many little dead plants of Mistleto, which had vegetated freely, but perished as soon as they endeavoured to penetrate for food. "Addison's Walk" is said to have been a favourite resort of the famous essayist, and it is margined and shaded over by massive old Yews, planted by Addison and Tickell.

Apart from the great central scene, containing the ornamental ground, houses, Pines, &c., there is a large natural arrangement of exotic herbs, one of British plants, one of hardy medical plants, a Willow garden, a very useful and important agricultural and horticultural garden, a reserve garden of considerable size, an arboretum arranged on the Linnean system, a garden of hardy fruit trees from which scions are distributed to those who apply for them, and a garden of Roses. In the ornamental ground there was a little "bedding-out," but no approach to the wall-paper type of decoration—geometrical figures, straight lines, and ceaseless repetition. Roses and numerous ornamental shrubs and plants were scattered about singly and very plentifully, the rings at the base of the standard Roses being in most cases planted with the little Phloxes, so that with abundance of Tritomas and a goodly sprinkling of other first-class herbaceous plants, bulbs, &c., there could be little lack of flower in the above department during nine months of the year.

Glasnevin is a great garden for herbaceous plants. They muster a goodly army in the natural arrangements, make a very select company in the reserve garden, display a numerous and, still choicer band in the borders that surround the two great ranges of glass, marshal scores of the really useful individuals in the economical garden, and as before indicated, present the most ornamental and graceful species here and there throughout the garden. The Lily, Daffodil, Allium, and Iris sections of the natural arrangement appeared to me quite unique for numbers of interesting species, and they must afford an extraordinary treat to the bulb-loving botanist during the flowering season. Walking round outside the houses at Glasnevin will, however, afford one of the greatest treats to a lover of herbaceous plants, &c. 'Every plant has a place,' if we could only find it, and for a great many choice and curious things that will not grow or may not be accommodated indoors, and will not do when fully exposed, that place is very often at the bottom of a wall, north, south, or as the plant may require. Whoever has seen Oxalis Boweana half so well done indoors or out as it may be seen in the Chelsea Garden, running wild along by the wall of a stove! I could find many other instances. If you see the curator of a botanic garden running a line of bedding "stuff," that would grow anywhere, along the front of his warm walls, where many curious and beautiful inhabitants of sunnier climes might sap out the congenial lime and warmth, it would not be too much to deduce from it that he had mistaken his vocation. In a narrow peaty border on the north side of the Palm house range at Glasnevin, the finer and rarer North American Ferns were beautifully grown, with Drimys Winteri, many shade-loving herbs of rarity, and the best developed specimens I have seen—numerous too—of Cypripedium spectabile. The flowers produced by these plants must have been worth some trouble to see. Those who have the plant in pots should, I think, plant it out in a similar situation, using a deep peat or other light moist soil. In narrow borders on the sunny side of the houses, Camellias, Nepal Saxifrages, Guernsey Lilies, Tritonia aurea, Abelia triflora, Dietes bicolor, Diplarrhena, Moræa, and Ficus repens, were all doing healthfully. Clerodendron fœtidum, an old stove plant, grew in luxuriant tufts, each shoot forming a flower truss; the plant, which is much valued for autumn flowering, is quite hardy, and quite wild in some parts of the garden; and along with it Abutilon vitifolium, which furnishes plenty of its large and pleasingly-coloured flowers; the fine Viburnum macrocephalum, curious Moluccellas, beautiful dwarf Irises, such as I. reticulata and cristata, and the very striking Carpesium Richii, a first-class plant, which from its neat habit, hardiness, and soft spherical beautiful yellow flower-heads, will assuredly become very popular. Sauromatum guttatum, which is sometimes grown in the stove in the neighbourhood of London, was also here, and is quite hardy at Glasnevin. This use of low walls and the making most of circumstances and capabilities, displays the real botanic gardener. A very singular little Hypericum, H. decussatum, grew here too, with Reaumuria hypericoides, a pretty and rare plant; Eurybia Gunneri, Arundo conspicua, Abelia floribunda, Convolvulus Cneorum, Libertia formosa, Cistuses, rather tender; and many other plants that could not be well and safely grown elsewhere in the gardens. Helianthus orgyalis and Silphium laciniatum were remarkable in the Compositæ bed; the former, one of the tall-growing hardy species, with narrow and somewhat gracefully drooping leaves, is much used on the continent for sub-tropical gardening; the latter, the Compass-plant of the American Indians, is, if anything, better suited for such decoration—certainly much more so than many plants I have seen used.

The note of preparation for this sub-tropical gardening is ringing loudly in some places, and I fear we shall have some wretched imitations of Battersea. Some are ardently waiting for the time to come round when they may turn out their best plants. I hope they won't lose them! The system must be tried with great caution, and to a very moderate extent. Overdone I think it a false system of gardening, and may find time to prove it so by and by. I believe the expense, time, and skill required to develope a great sub-tropical garden would, if well spent on hardy trees, Pines, flowering shrubs, and the finer herbs, such as Pampas Grass, Tritomas, and the thoroughly hardy but fine-leaved Composites and Umbelliferous plants, produce a scene superior to any to be made from plants carried out for the summer months; a scene moreover, which would be enjoyable almost every day in the year, and one of which the first would be the chief cost; whereas the continued plunging out and protecting of a vast number of tender plants must palpably be the cause of endless expense and trouble. If I dare criticise this natural arrangement of exotic herbs, it would be to the effect that one division of it occupies rather too central a position in the garden, though it could scarcely be removed now, unless by an addition being made to the extent of the latter, of which there are hopes, and certainly a fine opportunity, as a field of 10 acres with very tempting undulations lies to the north-west—runs by the river too—could be easily joined to the arboretum, and would make a most telling addition to Glasnevin.

And why not the herbaceous arrangement in a central position? Because a "natural" arrangement is one of the most monotonous ones conceivable, and in one sense the most unnatural, for it is the most diverse from that which I am not aware has yet displeased any—Nature's own admixture of tree, shrub, herb and Fern, sheltering, supporting, shading, nourishing, and beautifying each other. The system which places all the obtainable species of a genus together—subjects more like each other than anything else in nature, gives us the essence of monotony; and abhorring that, I say such an arrangement, if a necessary, should not be a conspicuous feature in a great garden. These collections of species too could be reduced with great advantage, as in many gardens half the number of species, or supposed species, would do the work as well, and the reduction would very much tend to correctness of nomenclature. A good mixed arrangement of herbaceous plants is worthy of a front rank in any garden, but that place is to be pitied which, being of limited extent, is necessarily covered by plants scientifically arranged, and has no room for glade, wood, or thicket. At Glasnevin a waving lawn decked by trees, Pines, and shrubs, of all ages and sizes, surround these scientific arrangements, and consequently the effects alluded to, so deplorably visible in some places, are unseen. *W. Robinson.*

(To be Continued).

Home Correspondence.

Rose Judging.—I have received the following approval of my remarks on this subject (see p. 1059) from a Nurseryman and Floral Secretary:—"Just a line," he observes, "to say that I think you have spoken out none too plainly respecting Rose judging and Rose judges. Your paper on the subject most wonderfully fits some persons. I am inclined to think that we want 'professional judges,' who might be engaged in the same way in which Mr. Baily, of Grosvenor Square, is engaged to judge poultry. I presume, however, that that would be too expensive for some Societies. Country exhibitions, as now managed, will never insure justice to exhibitors, since exhibitors are too frequently both judges and exhibitors; they are often appointed to decide the merits of things for which they have no reputation as growers. Then there are local influences at work. 'C.' gardener knows 'B.' gardener's plants, 'B.' gardener knows 'C.' gardener's fruits; and when the distinction is not great, the trifle is thrown in in favour of friends. I know this, and have been served badly in my time." With all this I agree; the difficulty is the expense. Such men as Mr. W. Paul, Mr. Wood, and others of equally well-known integrity would be the very men: but alas! we are in Dorset, over 100 miles S.W. of London. Still I think such men would be cheap at any money, and cause a wonderful impulse to country societies. People have no faith in the secretary, if professional, or the judges, if local and professional. Perhaps this will lead to observations from men more experienced than myself. I know nothing whatever of any flower but a Rose—I want no other; I will keep no other. I would rather be "knocked down" by a Rose than "picked up" by any other flower. To-day, Nov. 8, is my eldest brother's birthday, and also my own, and I shall irradiate him and 23 of his hunt at dinner to-day, with as beautiful a vase of Roses as heart could wish. I shall not cut a Rose after this day, as they have kept me in constant delight for six months, are in famous condition for next year, and deserve immunity from the knife! I may add that the Blandford Society is admirably managed, and that I have never heard of any complaint being made by competitors against the decisions of three of the gentlemen's gardeners selected from the neighbourhood. I believe Mr. White, of Poole, and Mr. Frederic Gill, of Blandford, nurserymen, to be good floral judges, and of the strictest integrity. No doubt there are others. If I were a nurseryman, I would not have anything to do with floral societies beyond exhibiting my commodities "gratis." *W. F. Radclyffe, Rushton, Blandford.*—I have read with pleasure Mr. Radclyffe's article upon Rose judging, and with your permission I will offer a remark or two upon that subject. I may state at once that I am totally at issue with your correspondent when he advocates the awarding of equal prizes. "I have seen (he says) stands of Roses so nearly equal that it would have been better to have placed them equal;" and as an additional argument he says that it would enable the Judges to award an extra prize to another meritorious collection. Now I contend that the awarding of equal prizes should never be resorted to except under very extraordinary circumstances, and certainly not when the contending productions are only *nearly* equal. If this mode of judging were to receive encouragement, I am of opinion that it would give universal dissatisfaction, and would open the door for loose and unjust awards, because if any difficulty presented itself, or any very nice point was to be decided, instead of resolutely facing such difficulty, a ready means of escape would present itself by the plea—"Oh, make them equal!" I contend that it is only when these very nice points are to be decided, and when it is required to make minute distinctions, that you discover whether your judges are up to their work or not; and it is upon occasions of this kind that the awards are canvassed, discussed, and—I *think* I may say—generally appreciated. With regard to your correspondent's suggestion that we should have Lady Judges for country Shows, I should stipulate that they be young ladies, for we have already too many old ladies in connection with country exhibitions. *W. H., Hackney.*

Potatos from Seed.—In the end of last March, when I sowed my Parsnips and Carrots, I sowed upon the same ground some seed of Potatos from the Alma and Alstone Kidneys, and by the end of May, when the Carrots were ready for thinning, the Potato plants were from 2 to 3 inches high. I had some drills drawn out, similar to those in which Peas are sown, upon a piece of ground that had been double dug during winter. The drills were then filled with fine mould and the Potatos planted 9 inches apart, in rows 2 feet asunder; they were watered two or three times during the dry weather, and twice moulded up. Finding that they grew freely, I had a stake put to each plant about 3 feet long, and I kept them tied to the stakes as they grew; ultimately they reached from 3 to 4 feet high. Last week I had them taken up, and I have selected 40 of the best looking roots of different kinds, and have put each sort into a flower-pot to plant *in spring*. Seven of the plants yielded as follows:—No. 1 bore 10 Potatos, weighing 1 lb. 1 oz.; one of them measures 5½ inches in length, 6½ inches in circumference, and weighs 7¼ oz. No. 2 bore 22 Potatos, weighing 1 lb. 7 oz. No. 3, 16 Potatos, weighing 15 oz. No. 4, 18 Potatos, weighing 1 lb. 4 oz. No. 5, 22 Potatos, weighing 1 lb. 2 oz. No. 6, 22 Potatos, weighing 1 lb. 4 oz. No. 7, 11 Potatos, weighing 12 oz. Altogether I have about 2 bushels of Potatos from 220 seedlings. *Samuel Hodges, Imperial Nursery, Cheltenham.*

Sports in Grapes.—When I was at Clumber Park, Nottinghamshire, Mr. Moffat, the gardener there, pointed out to me a bunch of Grapes growing on the Black Frontignan Vine, the berries of which were half black and half white. This was the sample forwarded to you, and noticed at p. 986. I have never met with a similar case. I may mention in connection with this that Foster's Seedling white Grape was raised from a seed taken out of the same berry from which the Lady Downes' Seedling black Grape was raised. Both are curious facts. Perhaps some of your correspondents may be able to give some reasonable explanation of them. *Jno. Lee, Hammersmith.*

Trebbiano Grape as a Stock (see p. 1061).—A paragraph on this Vine in your last week's Paper contained a mistake which I wish to correct. Instead of the young Vine of this variety which measured 6½ inches in circumference being only six months planted, it should have been six years. *William Tillery.*

Grindon's British and Garden Botany.—The remarks made by your Reviewer upon the Key in this book induce me to express a wish I have long entertained, and for the expression of which your columns are eminently suitable, namely, that some veteran botanist would give us a Key to all plants ordinarily met with in this country, both wild and exotic;—a Key so constructed that it should meet all the practical requirements of the student, and at the same time be technical, or at all events not such as your Reviewer says "a sharp critic would call mere muddle." Loudon's Encyclopædia in some measure provides a clue to exotics, but a very large portion of it is wholly unpractical. I should be glad if it were only a Key to British plants in the first instance, published, say in the form of a pamphlet. The boon would be inestimable. The best that Mr. Babington has to say of the Key prefixed to his "Manual" is that it is "constructed on the plan of the analytical Keys used by the French school of botanists, but slightly modified so as to be less likely to mislead"! With Mr. Bentham's, prefixed to his "Handbook," I have succeeded pretty well. On the whole, the student has not much to complain of in it, nor is he foiled except with such plants as Paris quadrifolia, and Glaux maritima, the female plants of Lychnis dioica, or of Mercurialis perennis, or the female

individuals of almost any other dicœcious plant. When however he leaves the preliminary, and comes to use the secondary keys in the "Handbook," or those to the species contained in the large natural orders, whatever may be the merits of the former, he will, in several of them, break down as completely as with Mr. Babington. I am not designedly placing myself in antagonism with any reviewer; but I must beg leave to protest against the summary verdict pronounced by your own, and to invite your attention to a few facts in my own experience, bearing, as they do, on the desideratum of an accurate and unobjectionable Key, and having reference to a plant of the natural order which your Reviewer thinks Mr. Grindon has managed so badly. One of the commonest Umbelliferæ hereabout is the Ægopodium Podagraria. It flowers freely, but never ripens fruit; at least I have never been able to detect any, though I have carefully watched for it. Let any one try to make out this plant, in the only state in which we can get it, by Mr. Babington's Manual; and then let Mr. Bentham's Key be tried. In both cases the student will be stopped at the outset, by reference to characters founded on the perfectly ripe fruit. When, on the other hand, he takes Mr. Grindon's Key, he may work it out in five minutes. I have had similar difficulty on the one hand, and ease on the other, with Pimpinella Saxifraga, Helosciadium nodiflorum, and several other plants. In Mr. Bentham's Key to the Compositæ there is no adequate clue to the common Groundsel, and to the Coltsfoot. The object of this letter is to inquire if something cannot be constructed that shall possess simplicity, clearness, certainty, and practical value, and at the same time the technicality of Mr. Bentham's and Mr. Babington's. Allow me to submit the question thus publicly to the consideration of those gentlemen and our other distinguished working botanists. The subject cannot be unimportant, or those two eminent authors would not already have bestowed their time and skill on the construction of Keys, which, after all, do not serve the purpose they profess. Mr. Grindon's Key deserves a fair trial, to say the least. From my own knowledge I can state that his book has been extensively purchased in the Lancashire district, where floriculture is the pastime of all classes, and where the two largest Field Naturalists' Societies in the country now exist, and that it has been found to answer the requirements of the student and to be consistent with its professions. I find that a critic in the current number of the "Natural History Review," page 524, takes the same view of Mr. Babington's Key that I have expressed; and this reminds me that a reviewer in a late number of the "Reader," evidently an expert botanist, said that he had found Mr. Grindon's Key, as far as he had tried it, "absolutely correct." *William Henry Heys, Vine Cottage, Hazel Grove, near Stockport.*—— I have to complain of misrepresentations made by your Reviewer with respect to certain particulars in my "British and Garden Botany." He states, truly, that I claim superiority for the Key to the above-named work, when compared with the Keys in Messrs. Bentham's and Babington's books, on the ground of my not commencing with characters taken from the fruit, the latter being often not procurable. He then charges me with inconsistently departing from my rule, and instances the British Geraniaceæ. On reference to my work it will be perceived that I do nothing of the kind, the characters furnished by the fruit being cited after those taken from the leaves, *i.e.*, as supplementary rather than initiative. He further leads the reader to suppose that I make distinctions of species to depend largely upon the colour of the flowers, and instances three species of Centaurea. Reference to my work will show that this likewise is contrary to fact. The allusion to the colour is merely incidental. I should not have cared to notice these matters had your Reviewer manifested anything like a spirit of fairness in his general comments. Give me credit at least for an honest effort to simplify the study of botany, and to extend the knowledge of plants. If I have failed, at all events do not let me be misrepresented. That I have made mistakes I am not surprised to learn, and I should like to be told of the book of 860 pages, dealing with thousands of facts, that is not blameworthy in the same respect. On again looking at the notice, I perceive it most unfairly refers to a portion only of my section-characters of the Ferns, leading your readers to suppose that it is the whole. Bad as the book may be, at all events do not misrepresent me. *Leo H. Grindon, Manchester, Nov.* 2. [We are not aware of any misrepresentation. In the case of the Geraniaceæ, as we read the book, the characters derived from the ripe fruit are made as prominent in defining the two leading divisions as those obtained from the leaves; they are not printed as alternatives or supplementary, but as part of the distinctions between sections A and B respectively. To say they are printed after the leaf-character is to beg the question; for both are printed alike, and stand as parts of the definitions, whatever may have been the intention. As to the Centaureas we can only repeat that the distinctions we mentioned are given among the marks by which to separate C. Isnardi from C. nigra and C. Scabiosa. Then leaving out of view the Ferns not affected by our remarks, the distinctions among these are put thus:—Fronds simply pinnatifid or quasi-pinnate, the margins of the segments entire or nearly so: e. g. Polypodium vulgare and Asplenium Trichomanes. Fronds simply pinnatifid or quasi-pinnate, none of the segments divided or cleft, but all with the margins notched serrate or crenate, especially towards the tip: e.g. Polypodium vulgare and Polystichum Lonchitis. Fronds simply pinnatifid or quasi-pinnate, the pinnules deeply cut into lobes or segments: e. g. Asplenium germanicum, Polypodium Phegopteris, Athyrium Filix-fœmina and Lastrea dilatata. If any one can comprehend this, we cannot. Mr. Grindon must not be angry with our Reviewer for intimating that he has spoilt his book by attempting too much. Let him economise the much waste space of the present volume caused by a double entry of each plant, make his 'keys' more brief, and more clearly contrasted, and cut out the gossip about exotics, occupying the space thus gained with clearly arranged analytical keys, briefly worded, of all the chief exotic garden plants, and he will have produced a useful book, and one for which there is a real want. The definitions in an analytical key should, however, be composed of short terse sentences, not long-winded descriptions, as are too many of those in the present book. We cannot find space to carry this discussion further.]

Pampas Grass.—I agree with your Correspondent (see p. 1036) that there is in many instances an apparent want of success in the cultivation of this Grass. In this neighbourhood its failure is attributed to its being planted in unsuitable situations. I am confident, however, that situation is not the only cause of failure. I have been most successful with it in a situation fully exposed to the sun, with a dry subsoil, and sheltered from high winds. If the shelter is not perfect, the flower stems are apt to get broken. When planted on turf and backed with evergreens, the dark green foliage and rich silvery plumes of this Grass are most effective. To insure rapid growth a deep rich soil well manured, with a little peat added, will be found most suitable. A dry state at the roots while dormant is best; but they should have an abundant supply of water during the period of active growth. Sloping banks of ornamental water afford a good situation for this Grass, which when planted in groups is remarkably effective; it seems to receive benefit from the vapour arising from the water. It also enjoys a little elevation above the ordinary level. In cold situations it is necessary to protect the plants during winter, and to maintain as far as possible dryness at the roots. I find straight Wheat straw to answer the purpose of protection best. Having tied the plant together, I place round it a few stakes which are brought together at the top, and otherwise made fast; then I apply a thin covering of straw tied round with a few coils of string to keep it in its place. This makes a very effective and neat protection, which throws off water, preserves the plants in a state of perfect health, and insures an early growth, without which we cannot depend on an annual supply of flower spikes. April is the best month in the year for transplanting large specimens of this Grass. It is quite requisite to move the Pampas Grass frequently, say every three or four years, or as often as the plants are perceived to be losing vigour. If it is found that the balls are too dry, they ought to have one or two thorough waterings a week or so preceding the operation of removal. After planting in the fresh compost finish with a good watering. May is perhaps the best time to turn Pampas Grass out of pots, and any extra care that may be bestowed upon it afterwards will be well repaid by its increased stateliness and beauty. *G. Westland, Kingston Hall, Derby.*—— In your last impression you state that "you never remember to have heard of an instance of Pampas Grass bearing seed in the open air." I beg to inform you that perfect seeds have been produced here these two years, on a plant growing by the side of a brook; a male plant being on the other side, at a distance of 25 feet. No artificial means of impregnation have been adopted. Last year at this time I observed about a dozen fine plants growing on some Moss-covered stones in the brook. When the panicles of bloom growing on the plant assumed a downy state indicating ripeness, I secured two of the finest of them, from which I have this year raised a batch of healthy plants. *Thos. Gell, St. Lawrence, Ventnor, Isle of Wight.*

Societies.

Royal Horticultural: *Nov.* 8.—The following candidates were elected Fellows, viz.:—J. McClelland, Esq., Mrs. Alfred Bingley, Lady Edward Howard, Mrs. Ernest Lloyd, J. T. Ludlam, Esq., Mrs. Mathew, S. Mendel, Esq., Colonel P. Paget, Mrs. Rose, Lieutenant-Colonel Scott, R.E., J. C. Thurn, Esq., J. Willing, Esq., Mrs. Edward Wood, Dr. Woolley, Ordinary Fellows; and M. Casimir De Candolle, a Foreign Member.

J. Bateman, Esq., offered on this occasion a few remarks respecting Cattleyas and other Orchids, most of which came from Messrs. Low, of Clapton. One, the Brazilian Cattleya bicolor, with slender stems some two feet or so in height, and handsome flowers, numbering when in good condition as many as six on a spike, was said to be remarkable for the ease with which it may be cultivated, and for its richly-coloured lip being independent of the column, *i. e.*, not wrapped round the latter, as in most other kinds. This, when better known, cannot fail to be a favourite. Of a Cattleya sent home from New Grenada by the Horticultural Society's collector, Mr. Weir, it was said that it belonged to the labiata section; but it was shown that its blossoms are much larger and finer than those of that well-known kind. It was stated to be what is termed a cool Orchid, and therefore a greater acquisition than kinds requiring warmer treatment. C. marginata, so named on account of the light edge possessed by its lip, was reported to be now, as it should be, generally known by the name of Lælia marginata, and of this C. Pinelli and others were stated to be synonyms. Of Sophronitis grandiflora, several small plants were exhibited in bloom; of this it was remarked that it is one of the few Orchids which have really scarlet blossoms; and that early collectors of it in the forests of Brazil stated that it literally wrapt the trunks of trees on which it grew in a sheet of flame. A very fine new rose-coloured Epidendrum from Messrs. Lee, named by Mr. Bateman E. amabile, and which is possibly a variety of E. dichromum, came under notice; as did also a new copper-eyed variety of Calanthe vestita named cuprea, exhibited by Messrs. Low, a very nice addition to these useful early winter-flowering plants.

Mr. Bateman then introduced Major Trevor Clarke, who delivered the following highly interesting lecture on the Cotton plant. The lecture was amply illustrated by samples of Cotton of the Major's own growth under glass in this country; also by living Cotton plants from his conservatory, in most instances well furnished with pods; and by others in blossom grown at Kensington.

In the spring of the present year I was one of a party of officers—of this Society, by whom the idea was started, that a series of short lectures, each illustrative of some one plant, should be undertaken by ourselves and other Fellows who might have made such plant or family of plants his particular study.

As it was known to some present that I had for several years turned my attention to the improvement of the Cotton plant, by cross breeding, with a view to its better cultivation in India, and as I happened to have one of the beautiful golden blossoms of the illustrious Sea Island plant in my button-hole, I was at once "told off" "to do" Cotton. I accepted the challenge, but I knew not what I had undertaken. The Cotton plant is a vast and difficult subject; its cultivation at home or abroad is yet a problem; its history and commercial statistics voluminous; its botany impossible. I use this word advisedly, and will explain presently why I do so. In the mean time, in deprecation of the many short-comings which will inevitably appear in my lecture, I must, in justice to myself, now glance at the difficulties I had to encounter.

Seed was scarcely to be had in England, and the habits of the different kinds under glass were almost unknown. Now, to carry out the scheme properly, I had to show the plant—its species and varieties—to the botanist in flower and fruit, to the horticulturist in pride of its strength and beauty; and to the commercial mind of our country it was due that I should display, not only the plant decked in its fleecy ornament, but should be able to turn out my own little harvest in as great variety and quantity as possible, accompanied by such specimens in the pod or seed, from the countries where it is cultivated, as I could get together in the time. Now, the different sorts come into bloom from about four months to eight from the sowing, and the fruit takes two other months after that to ripen. In some places the plant is scarcely adult the first year at all, and certain sorts, at any rate when cultivated in England, do not appear to show for flower, even in the second year, till October or November, when the weak and scanty sunlight of our English autumn and winter fails to keep the Cotton—essentially a sun-plant—in a growing state, with its reproductive powers unimpaired. Again, after the crop, a most valuable consideration to the cross-breeder, has been secured, the plants have become shabby and exhausted, and blossom is then out of the question; when one does appear it is "like a dying lady wan and pale," not like the last Rose of summer, bright in its decadence, and fair as ever.

In the summer time, however, but little ripe produce could be shown, and plants, under experiment, were too precious for removal. I could not now have produced this case of hybridised pods had I sent away my plants and lost my time at that working period of the year. And so November was decided upon as being upon the whole the best fixture for most purposes. I look forward, as I write, with great apprehension as to the appearance my collection will present, especially after their transit by railway; but, thanks to the unsurpassed horticultural skill of the Garden Superintendent, I am able to show you some splendidly grown specimens, in a younger state, from the Kensington department of our Society.

My present difficulty is simply this: how to say a very great deal in a very short space of time. To describe the various sorts, that is seminal or climatic varieties, with their ever-varying forms and their apparently great but really invalid points of difference, would be taking up your time to no present purpose; suffice it to say, they are as numerous as the kinds of Wheat in our corn fields or Peas in our kitchen gardens. In India especially, every great geographic division, seaboard central or peninsular, every district, nay, almost every mountain or valley, cultivates its own form or variety. Could all this be told in half an hour? For the same reason I am obliged to omit the history, rise, and progress of the trade and manufacture of the raw material.

Unwillingly I pass by the lives and labours of those gifted men who, starting from the simple distaff and wheel, and the rude handloom of the cottage weaver, invented and improved, modelled and re-modelled, the long series of mechanical contrivances, of which the crowning result was that wondrous and beautiful marvel, the self-acting Mule Jenny. It is a romance in itself, that story of the machines. It has been told, and told again, never too often, and the names of Hargreaves, Arkwright, Cartwright, and Crompton, are among the "household words" of the country of their birth. But our business is with the plant and its produce. Let us take its early history. The history of the Cotton plant is old, old: so old that no man may tell when or where it was—in the dim Cyclopean times, ages, incomprehensible ages ago—that the thoughtful observer first saw and plucked that fair and fleecy treasure from the tree—the "wool-tree," from which he might clothe himself without bloodshed, and which stood before him, as if planted by the hand of the Creator for the comfort of his creatures. Did he dream that those silver threads—and who shall view them through the optician's achromatic glass and say that they belie the designation?—did he dream that the silvery fibres of the pretty Cotton pod would be changed into gold by the magic of time, to the golden fleece half worshipped by a busy world. Perhaps it was a woman. It was, it must have been. I see her even now—the lithe Asiatic form, glowing in deep sun tints and instinct with life and beauty. She seems lost in admiration of some object before her. It is a little shrub of rare beauty; she plucks the fair blossom, cinque-spotted purple in its golden chalice, and weaves it in her crisped hair; then the ripe fruit pod, with its white and downy flocks of spotless purity. Now she plays with it—she puts it from hand to hand, and while lost in thought unconsciously twists

it into a thread—the first thread ever twined by human fingers.

Certain it is that the Hindoo women 2000 years ago produced threads and wove muslins only very lately surpassed by the power loom and Mule Jenny. Spinning Jenny! still female.

The thread of my story has led me to the East. Let us follow the clue. To the well preserved literature of ancient India we owe the fact, that Cotton was well known and manufactured 800 years before the Christian era. In the book of the Institutes of Menu, perhaps the oldest law books in existence, occurs the following passage, "Let a weaver who has received ten palás of cotton wool give them back increased of eleven by the rice water and the like used in weaving; he who does otherwise shall pay a fine of 12 panás." So that sizing, and the abuse of it, is nothing new. Arrian mentions Cotton as an article of import into Rome, from India, and describes the means of transit, the principal marts, and the commerce in general. But it appears to have been costly, and only used sparingly by the higher classes, who stuck to the toga, and it is on record that Horace's father had no pocket handkerchief, Cotton or otherwise.* The Greeks were as perfectly acquainted with Dacca muslins as we are.

Nearchus describes the Indians as having garments of "tree-wool" which reached to the middle of the leg, a sheet folded about the shoulders, and a turban round the head. One would think it was but yesterday, the description is so perfectly that of the modern Mussulman in his outer man. Long before this, Herodotus, a young Greek nobleman, travelling in India for pleasure and information, speaks thus, in his own grand language, "*τα δε δενδρεα τα αγρια αυτεθι φερει καρπον εις παλλον τε προφερεοντα και αρετη των οιων· και ισθητι οι Ινδοι απο τουτων των δενδρεων χρεωνται.*" And in language "understanded of the people" as follows. "The trees of the field there bear wool as fruit, in beauty and quality surpassing that of sheep, and Indians use clothing from these trees." He came home, and, as was the custom in that classic and sporting land, recited his observations which were accurate, and his priest-imparted stories which were "crammers" at the Olympic Games. Fancy Lord Dufferin or Sir Gardner Wilkinson reading their experiences of Greece and Egypt at Tattenham Corner! The word "Cotton" occurs in many etymological forms, as Gotn, Kotun, and so on. Pliny first mentions it as Gossypium or Gossympium, while other old authors, and, following them, the earlier botanists, use the word Xylon. But the oldest designation of the manufactured article is the Sanscrit kurpasum. Hence the Greek *καρπασον*, the Latin carbasum, and our canvas and cambric. Cotton, as a cultivated crop, did not get into China till the 13th century, though they had long possessed the handsome red-flowered G. arboreum as a garden plant. It is curious that the Celestials, who never do anything like anybody else, seemed to have taken a fancy to the brownish yellow stapled sort produced principally by the Indian form called religiosum, but also by the American plant. This was imported, rather largely, at one time to make Nankin trousers for the English fashionables, having first attracted notice from its strength and durability. Seeing this, the crafty Chinaman began to dye his common white Cotton yellow, and the depreciated article lost him his trade. This sort is said to be one of those held sacred by the Asiatics, and, as such, used only for the head and upper parts of the body, while the British dandy's practice was just the contrary. Undoubtedly ancient as the use of Cotton was in Egypt, I fear the mummy clothes were not made of it. This, however, was long supposed to be the case, but the matter was settled a few years ago by my friend Sir Gardner Wilkinson, who pronounced it to be linen, and the microscope, in the able hands of Thompson and Bauer, confirmed his decision.

Old as our subject is in India, it can boast as high, and probably, a higher antiquity in the western world, and the botanical genealogy of the Occidental plant is far more inscrutable than that of the Oriental. Columbus found it in the West Indies, Magellan in Brazil. Ferdinand Cortez found the Mexican Court clad in Cotton, and presents of it were brought home by the gorgeous and cruel buccaneer to his Imperial master—better had they not been stained by the blood of Montezuma! Cotton, both in its raw state and beautifully woven, has been found in the ancient Peruvian tombs.

The Indian plant however appears to have been first cultivated by the British colonists in America prior to the French Revolution, before the high qualities of the indigenous Mexican form, so close at hand, were known. Cotton was grown on a limited scale in Maryland, in 1736, by Miss Lucas, daughter of the then Governor of Antigua. Again a lady! No conjured vision now, but an enterprising English girl. Listen to her journal: "July 1, 1739.—Wrote to my father to-day on the pains I had taken to bring the Indigo, Ginger, and Cotton to perfection, and that I had greater hopes," &c.

In 1775, just before the revolutionary war, the Southern States of America had begun to turn their attention to Cotton growing, and the cultivation of 33 acres, by one person, of "Green seed Cotton," probably the Xylon americanum præstantissimum semine virescente of the old botanist Schwatz, was considered a great feat in those days. After the peace in 1783 the independent spirit of the Americans was directed more to their own manufactures at home, than to their exports or imports, and Mr. Madison expressed his conviction that the United States, in the extensive regions south of Maryland, would certainly become a great Cotton country. Shortly after, an American gentleman came to England to purchase machinery. British law then forbade its exportation. So a Mr. Slater, who had been Arkwright's pupil, carried off the fruit of his master's brains to America, and working from recollection, his plans and models having been seized, made the first Cotton machinery ever used or seen in the United States. In 1784, eight bales had been shipped to Liverpool, and seized at the Custom House as an illicit importation of British colonial produce, but were restored to the consignees so soon as it was discovered that so "large" a quantity of Cotton could be grown on the American continent. Exportations have continued from that day to this. The Blockade can only be considered as a temporary inconvenience with a great resulting advantage. It has taught the world to grow Cotton. But enough of dry history; let us get to the botany.

I must now refer you back to a remark I made, perhaps a flippant one, but I am sure excusable in the case of any one who has painfully floundered through the subject as I have, "that the botany of Cotton was impossible." It is not alone I that have said this thing. Better men have given it up in despair, quieting their consciences by lumping the whole family—with its numerous and undefinable clanships—into two or three specific heads, leaving even these to fight it out like the cats of Kilkenny, till nothing be left to tell the tale, and one Gossypium, genus and species, be left alone in its glory.

All are agreed that the genus is good in law, but the specific differences are so slight, and the seminal variation so great, that botanists have always been in a perpetual puzzle on the subject; and what is worse, they seem to have shaken up their specimens and descriptions in one bag, and their names in another, put them together at random, and returned them to their herbariums to puzzle posterity. Linnæus admits five species: Lamarck follows with eight; Poiret describes four more; Roxburgh adds two more, and with reason, as they would appear to be stirpes or really wild forms; De Candolle enumerates, not insists upon, thirteen, and rests upon his oars, quietly remarking that all were uncertain, and that no genus more required the labours of a monographer, who could describe them from living specimens; and I believe our own Lindley is of much the same opinion. The distinguished botanist and traveller, Dr. Welwitsch, adds another undoubted wild species. G. microcarpum, Welw. from the district of Mossamede, near Loanda, in Western Africa. I shall have the gratification of being able to show you a specimen by and by, of this very curious plant, which I shall always be proud of as a present from the discoverer of Welwitschia mirabilis.

I need not say that the popular accounts of the plant present an amount of error and confusion past all understanding. But there is reason and excuse for all this. Cotton is a domesticated plant, and has been so through unknown ages, in every part of the world where the climate would bring it to perfection. What the Caninæ are to the Zoologist, fowls and pigeons to the Ornithologist, cereal grain, Potatos, Pinks, and Polyanthuses to the farmer, gardener, and florist, this has Cotton been to the Botanist. Naturalists know that no two reproductions of animal or vegetable life are exactly alike. However slight it may be, each has an individuality, more or less visibly stamped upon it. This disposition to sport, as it is termed, is enormously increased by cultivation, by which I mean, rich food and immunity from disturbing influences.

Upon any plant weeded, watered and manured, fenced in and fostered by the hand of man, Nature rings her weird changes with unbridled energy, and in no case more curiously than in the genus Gossypium. What are or were the countless Gossypian legionaries, Uplands and Lowlands, Sea Islands, and Bourbons, long staples and short staples, with the botanical hirsutums, glabrums, vitifoliums, and latifoliums of the West? what the albums, nigrums, rubrums and purpureums, palmatums and tricuspidatums of the Eastern World? They are mastiffs, greyhounds, pointers, setters, pugs, poodles, and turnspits, Taylor's Bright Venuses and Buck's George the Fourth's, White Talavera and Brown Lammas, beautiful man-made monsters, fair to the eye and good for food and raiment and other wants of the world, but inscrutable as to their origin and a stumbling block to systematism?

But it is time to get to work.—*Loquitur* Royle.

The genus Gossypium is distinguished, that is from other Mallow-worts, by having a double calyx, or in other words a simple calyx supported externally by three leaf-like bracts, forming an involucre, and a three to five-celled capsule, with seeds immersed in the wool-like substance, so well known by the name of Cotton. Time compels me to refer you to Royle or other reliable botanists for the general description.

Slight as are the real specific distinctions, in the strict scientific sense of the word, there is an outward physiognomic difference between at least two great and important races of the plant, to wit, those of the American and those of the Asiatic continent, which no person, however slightly acquainted with plants, can fail to observe. And this outward appearance is accompanied by an equally great and important difference in the commercial product. We will first take the American forms. These, according to the best and latest authorities, are but two in species, far the greater part of them being derivations of one Gossypium barbadense.

They are handsome, more or less short-lived trees, biennial or perennial in warm climates, annual wherever a true winter ends the year. The Bourbon plant is generally received as a type, or varietas princeps, of the species. It is supposed to be indigenous to the hottest regions, the Terras calientes of Mexico, whence it was taken to the Isle de Bourbon, Anguilla in the Antilles, the Mauritius, and finally to Barbados; and these islands were undoubtedly the Nurseries from whence came the stock which supplied plants to the Cotton producing States of America. The varieties into which this species runs, take their peculiar forms, and qualities of staple, from the various aspects, soils, sites and altitudes, in which they have been cultivated. Some of these variations are extremely curious, as in the case of seed, which in the same sort varies from a smooth black naked grain, parting from the wool with a very slight pull, to a distinct looking form, covered with a short green or brownish nap, to which the tufts of available fibre cling with more or less tenacity. The celebrated Sea-Island plant is the form taken by the Barbadian type when transferred to the warm, moist climate, and rich low-lying lands, on the Georgian coast, and in the adjacent islands. The fibre is long, strong, and of the highest excellence. Cultivated in Egypt it retains its properties, to a certain degree, is a good, useful, long cotton, and is much used for the same purposes. The appearance of the plant is slightly modified by the climate.

Uplands, or short-stapled American (not Surat) now includes, according to Royle, the produce of the interior and upland country of Georgia and Carolina, as well as of Alabama, Mississippi, Louisiana, and Tennessee—Bowed Georgian as it was once called, from having been first cleaned by the Indian contrivance of a bow and string, flicking the fibre from the seed. Just now the fashionable sort is called the Mexican Gulf Hill seed. I am indebted to the Cotton Supply Association for a sample of this. Three seeds of it produced me three very different looking plants. One nearly approaching the type, with glabrous foliage much angled and divided. Another with hirsute strong branches and more spreading habit; and another with the most remarkable foliage of any I have hitherto seen of its race: the lobes, especially the central one, are so long as to give the leaf almost the palmate appearance of the Indian plant, and the individual lobes are also curiously divided. The seed was peculiar and different from the rest in being very small and nearly clean or naked. There is a sort called Little Mexican or Petit Gulf; I think this may be it. Venezuelan seed, also from the Association, resembled this. The plants, however, were like the Gulf seed, but a little more hairy. These were all sown very early this spring, but have, at present, shown no signs of flowering.

But the favorite staple of the Manchester men is produced by the New Orleans plant; it has more of an herbaceous or annual habit than the Upland race, comes to maturity in a few months from the seed, rests for a few weeks after the effort of producing its beautiful wool, and either dies if touched by frost, or shoots forth again, bearing a second, and often the best crop. The flower is large and saucer-shaped, of a pale yellow tint, or nearly white, wanting the purple basal spots, with cream coloured anthers, and elliptical pod. I have here a beautiful coloured drawing of it done by my friend and neighbour Mrs. Hugh Wood, of Balby House, Northamptonshire. Closely allied to this sort, and indeed undistinguishable before the pod bursts, is the American Nankin plant.

The Sea Island is by no means so conspicuous an object, as far as the pod of fibre is concerned, though the fibre itself is more costly and showy. Its habit is different from that of the last. The whole plant is more or less glabrous, the branches slenderer, and set on at a more acute angle; the blossom is golden yellow, almost tubular from the convolution of the petals, each of which has a rich brown-purple spot at the base; the pod long-oval, often much acuminated, and rough, with pitted depressions. Like the New Orleans this comes quickly to maturity, and, like it, is often treated as an annual, though they will both live several years in a winterless climate. The seed is black, clean, and free from nap, except at the extremity or extremities, where there is a little tuft to which the lock of Cotton adheres loosely. It varies with an entire covering of greenish nap, which it is said to put on, as a gentleman puts on his great coat, when taken up to the hills or into a cooler climate. I have raised plants from both kinds of seed, and find the habit reproduced in the seedlings respectively. It has been said, upon the authority of Cotton farmers, that these two races interchange habit, appearance, and quality with each other after cultivation for a generation or two, under opposite conditions respectively.

I should feel very much obliged to any observer of the plant in its own climate, if he could tell me of any authentic instance where the change of appearance of seed was accompanied by a corresponding alteration in the flower—whether, in short, the Sea Island plant has ever put on the widely expanded, pale self-coloured Hollyhock-like blossom and large smooth-lipped pod, of the New Orleans or *vice versa*. Every monographer, or even pseudo-monographer, like myself, has a conceded right to a crotchet, and mine is that there exists, or has existed somewhere among the Aztecs or elsewhere, a typical Gossypium hirsutum distinct from the smooth barbadense.

Here is Mr. Wanklyn's superb "Vine Cotton," the seeds of which were kindly presented by him to our Society. The Vice Secretary sent me three, one of which grew into the plant before you. There must have been some misconception in the description given to Mr. Wanklyn as to its habit of rambling like a Vine. The plant is simply a gigantic form of New Orleans, differing only from the normal sort in a general exaltation of development in all its parts. The staple, although injured by the syringe, in the small propagating house here at Kensington, was pronounced by Dr. Forbes Watson to be of very high quality.—Away now westwards across the sultry continent: we have had enough of the Bourbons, like our neighbours.

Brazil and Peru boast of the most curious and distinct Cotton tree known. A noble great fellow he is; too much so for me. My hothouse is 14 feet high, and in another week he would have broken his neck against the lufter boards! The seeds in the species are agglomerated together into one kidney-shaped mass, to which the Cotton adheres so slightly that it is easily separable by the hand or machine. Some of you may remember to have seen a curious looking specimen, enshrined in a glass case here at Kensington, and labelled "native African." Of this my friend Mr. Murray surrendered me a seed or two, and here is the result. It produces I believe the Pernambuco staple or Pernams of the trade. The flower has not yet appeared, nor do I know what it will be like, but I think I can anticipate the bright yellow tube and purple spots of the Sea Island. And here, again, crops out my crotchet. In two separate pods of the Sea Island I found seeds adhering to each other by twos; they are, very like those of acuminatum, our present subject, and so is the whole plant except in stature.

I have another plant here very nearly resembling this in habit, size, and other particulars. It is the Peruvian Cotton of Mr. Clements Markham, well known on account of his services in the establishment of the Quinine plant in India. He has succeeded in introducing this fine Cotton also,* and the Indian grown produce has been pronounced most satisfactory. The seeds, however are free, and not massed as in the Kidney Cotton.

Away again, Eastward Ho! and we are in India with the anything but gentle Hindoo, and his despised Surat Cotton.

What a different plant it is, with its deeply cut five-fingered leaf, and dull-tinted foliage, sometimes a short and shrubby bush, sometimes tall and slender as a fairy fishing-rod. The flower is very handsome—purple and gold—like that of the Sea Island aristocrat, but the Cotton—the Cotton—is nowhere. It is usually short, harsh, and only useful in Manchester, when mixed with the medium-stapled sorts from America. Some varieties, however, have the silky quality. The fibre of these is also so extremely fine, that the native women, by their wonderful hereditary fine sense of touch, have been, and are still able, to spin those gossamer threads and weave those "webs of woven air" which have been the admiration of all times, and have been even sung in soft Sanscrit by the dusky poets of the land.

I have been able, by the kind assistance that has been given to me, to get together several of the numerous varieties of the Indian plant. Here is the celebrated Dacca sort—at least it pretty well answers the descriptions. Here is the Sacrosancte religiosum, if indeed religiosum it be: for, in hunting among the books, religiosum is generally found to be something else, and something else to be religiosum. It has broader lobed leaves than the common sorts, tinged and veined with brownish pink, and bears very decidedly green seeds. I have raised it from a sample sent me, under that name, by the Cotton Supply Association; and also mixed with the sort called Oopum, from the same source. The Oopum plant I have retained at home, in hopes of ripening the one single late-set pod which it produced. Very like it, with the same green seeds, but with more acute and numerously-divided lobes, is the very interesting species arboreum. I assume it to be such, upon the authority of the Botanic Garden of Saharunpore, associated as the name is with Royle and Cotton. My plants were raised from seed received from thence through my friend Mr. Arthur Grote, of the Asiatic Society at Calcutta. Now this arboreum was, on many accounts, a desideratum—a desideratissimum. For years it eluded my search with the cunning of a fox. I was once fond of fox-hunting, and could hold my own across a country as well as my neighbours; but of all the foxes to hunt, for intense excitement, there is nothing like a scientific fox. I first "put up" the arboreum fox in the covers of my old friend Tenore, at Naples, kept it for years, and never could do anything with it as it always showed for bloom in November, and I went leafless to rest in December. Again, I got the same plant from Chiswick, but now under the name of South Sea Island. I have it now just trying to ripen a pod. It is the acclimatised Bourbon of India. So for 10 years I was "running hare." I then took to books, botanic gardens, and friends in the tropics. Tropical friends sent big Bombaxes, and the eternal Bourbon again, with a sprinkling of acuminatum. Botanic gardens were out of the question, as they always stuck religiously to the label the captain in the navy, collector of customs, or consul's wife sent with the seed. Books were worse than botanic gardens, as almost every writer had a pet arboreum of his own. Now, for popular and general information, every Brahmin, you must know, wears a hank of Cotton of three threads round his neck for religious motives, and this arboreum, a plant nearly resembling the ordinary Indian Cotton in all respects, except in bearing a red flower, and being a decided perennial, is known to be cultivated in the gardens of priests and fakirs, and in the precincts of temples, for the purpose of furnishing the mystic threads. But travellers say that the large Kidney Cotton plant is used for the same purpose; and we read that Linnæus named another sort religiosum, as being a Cotton tree under the shade of which religious ceremonies were performed, and which furnished the sacred threads. It was afterwards said that this tree was simply a Bombax. Here I was running four foxes at once. Finally, I ran into my fox in Royle's Illustrations. Here it is; it answers pretty well to Royle's figure which I now exhibit. It has not yet flowered. It closely resembles religiosum in the tinted foliage and green seeds. From a sample of Kupas, or seed with the wool on it, labelled "good native Cotton, Dholerah," I raised plants with very distinct habit and foliage, with short broad elliptical sometimes mucronate leaves, and many hirsute zig-zag branches. The segments of the outer calyx are much expanded, so as to give them a sort of butterfly appearance. The Cotton is long and soft, and approaching in quality to the American staple. Here is a very fine form of the Indian plant from one of Dr. Forbes Watson's samples, marked, "From Nymansing, Assam," with thick dark green leaves, lance late, and wanting the small supplementary lobes; the nearly entire bracts enclose large long pods, rivalling in size those of the American plant. This sort was detected by the keen eye

* Quoties rudi patrem tuum digito se emungentem.

* The Piura and Imbabura Cottons of Spruce.

f the Doctor among the Indian specimens sent over to the last Great Exhibition. The staple appears bulky, strong, and, I believe, is very good. Here is an exquisite drawing of it by Mrs. Wood. Seeds from the same packet produced a beautiful little miniature form, with small round pods. Another packet from Assam, gave me a plant somewhat like the last, but with a yellowish tint in the leaf, and smaller pods.

These comprise my Indian menagerie of cultivated kinds. And now I must show you perhaps the most curious and interesting thing in my whole collection, Dr. Welwitsch's wild African species. If we look with Darwin back into the dim pre historical ages and watch as it were our beautifully developed forms fading back into one first created wild type, I am afraid the dark lady of my dream would have had stiff work to spin a thread from this. Here is the seed with the Cotton on it. The colour of it is Nankin.

I must now, at the risk of wearying my audience, touch upon the all-important subject of the cultivation of American staple in India, and as it will be absolutely necessary to explain the commercial relations which the Indian and American staples bear to each other, I will read part of a capital speech made by Mr. Smith, once member for Stockport, which gives a short and masterly explanation of the subject. It is from a capital book—"The Cotton Trade," by George McHenry, published by Saunders & Otley. It has a strong Yankee leaning, but is exhaustive of the subject as a commercial history.

"The long staple, or long-fibre Cotton, is used for making the weft, as it is technically called, *i. e.*, the longitudinal threads of the woven tissue. These threads, when of the finer sorts—for all numbers, say above 50's—must be made of long-staple Cotton; for numbers below 50's they may be made of it, and would be so made were it as cheap as the lower qualities of the raw material. No other quality of Cotton is strong enough or long enough either to spin into the higher and finer numbers or to sustain the tension and friction to which the threads are exposed in the loom.

"The medium-staple Cotton, on the contrary, is used partly for the lower numbers of the warp (and as such enters largely into the production of the vast quantities of 'Cotton yarn' and sewing thread exported), but mainly for the weft, or transverse threads of the woven tissue. It is softer and silkier than the quality spoken of above, makes a fuller and rounder thread, and fills up the fabric better. The long-staple article is never used for this purpose, and could not, however cheap, be so used with advantage; it is ordinarily too harsh. For the warp, strength and length of fibre are required; for the weft, softness and fullness. Now, as the lower numbers of 'yarn' require a far larger amount of raw Cotton for their production than the higher, and constitute the chief portion (in weight), both of our export and consumption; and as, moreover, every yard of calico or Cotton-woven fabric technically called cloth, is composed of from two to five times as much weft as warp, it is obvious that we need a far larger supply of this peculiar character of Cotton, the medium-staple, than of any other.

"The short staple Cotton is used almost exclusively for weft (except a little taken for candle-wicks), or for the very lowest numbers of warp, say 10's and under. But it is different in character from the second description, as well as shorter in fibre; it is drier, fuzzier—more like rough wool; and it cannot be substituted for it without impoverishing the nature of the cloth, and making it, especially after washing or bleaching, look thinner and more meagre; and for the same reason it can only be blended with it with much caution, and in very moderate proportions. But its colour is usually good, and its comparative cheapness its great recommendation.

"It will be seen, therefore, that while we require for the purposes of our manufacture, a limited quantity of the first and third qualities of raw Cotton, we need, and can consume, an almost unlimited supply of the second quality. In this fact lies our real difficulty; for, while several quarters of the world supply the first sort, and India could supply enormous quantities of the third sort, the United States of America alone have hitherto produced the second and most necessary kind."

I have read most attentively the history of the Indian experiments. They tell of the well directed skill, the stout and willing heart, the rough hard toil and untiring energy of the Royles, Wights, and other earlier and later labourers in the field of Indian experiment. They prove that good useful Cotton, such as goes by the name of good middling New Orleans in Manchester, can be, and has been, produced on Indian soil. The accounts, the authentic accounts, and the samples received from time to time, only strengthen the conviction. The long series of experiments carried on under the auspices of the Indian Government for now nearly a century, go to prove that the principal impediments to the production of good Surats, are the filthy habits of the gentle Hindoo, and the religious prejudices of his priesthood.

In the case of the cultivation of the exotic species by Europeans or Natives, the casualties would appear not to differ greatly from those to which every agricultural crop is subject in India or England either. Even the elements can be coaxed if not controlled. Irrigation is now no problem, and the periods of sowing can be so arranged that the wild monsoon may foster rather than injure. Each and all of these difficulties seem to have vanished wherever the strong will of these gallant pioneers had determined they should do so. Royle alludes to experiments in hybridisation once or twice, but no details or authenticated results have been recorded. A year or two ago, however, certain of the American sorts were intercrossed, both by myself and Dr. Bonavia, of Lucknow. We are now waiting the final report of the Doctor's experiments. Mine produced what is apparently a very beautiful and prolific Cotton, second only, according to Watson—the Cocker of Cotton fibre, to the best Sea Island.

I must here offer my tribute of thanks to all good friends who started me and helped me on my way. First and foremost to my kind friend Dr. Lindley, who, always ready alike to encourage an aspirant or smash an impostor, supplied me with advice and introductions. To Dr. Wight the same. To the Manchester Cotton Supply Association, Dr. Forbes Watson, Mr. Clements Markham, Mr. Arthur Grote, Mr. P. L. Simmonds, and Dr. Welwitsch, for plentiful supplies of seed of commercial or botanic interest; and last, but not least, to my friend Mr. A. Henderson, of Pine Apple Place, for the seeds of the Nankin and Sea Island, from which I produced my first cross-bred plant. In Cotton literature I have profited by and used largely the contents of Royle's great work, the prize Essays by Dr Shortt and others, and the Journal of the Agri-Horticultural Society of India. There was one want however which neither men nor books seemed able to supply. Search where I would I could not find "the poetry of Cotton." One could wander through ferny glades with Mr. Moore, and feel inspired; there was poetry in the fairy bells of the modern and in the mournful *ai ai* of the mythic Hyacinth; the Rose was bathed in it; but there was no poetry in Cotton. At last I found it—in a Negro melody: "picking Cotton in the field, there first I saw a yellow girl, her name was Lucy Neal." Nay, scoff not; Nigger melody though it be, it is one of the most exquisitely pathetic ballads of modern times. Listen to the last verse, the outpourings of the poor negro's profound love melancholy.

They bore her from my bosom, but the wound they cannot heal,
For my heart is breaking, breaking, for the love of Lucy Neal;
Ah! yes, and when I'm dying, and dark visions o'er me steal,
The last low murmur of this life shall be poor Lucy Neal.

Farewell now, my friends, and thank you for your kind attention. If I have mixed science and Lucy Neal, it was that you should not be sent home to your firesides with ears quite stuffed with Cotton.

Some very fine blooms of Chrysanthemums were shown by Messrs. Downie Laird & Laing; among them were the fine yellow kind called Jardin des Plantes, Queen of England, Lady H. St. Clair, which proves to be the same as White Queen of England, and Striped Queen. A neat small yellow Pompon Chrysanthemum called Alice came from Mr. Ingram, of the Royal Gardens, Frogmore, as did also a pretty brown kind edged with gold called Princess Beatrice. Messrs. Lee furnished a distinct-looking variety of Epiphyllum truncatum, called tricolor, a coppery red with purple throat. A charming glaucous variety of Cupressus Lawsoniana named argentea—a real acquisition—was shown by Messrs. Waterer and Godfrey; and from Messrs. Ivery, of Dorking, came a very fine collection of hardy Ferns, Polystichum angulare grandiceps, P. angulare rotundifolium, Athyrium Filix-fœmina Victoriæ, and A. Filix-fœmina Vernoniæ, receiving First-class Certificates.

An exhibition of Chrysanthemums was held under the auspices of this Society on Wednesday, Thursday, and Friday last, at which the whole of the awards (Certificates) were carried off by Mr. Forsyth, Nurseryman, Stoke Newington, who was nearly the only exhibitor. In order to improve the display the Society furnished some well-grown plants from its Garden at Chiswick.

Notices of Books.

Handbook of the British Flora. By George Bentham, F.R.S., &c. Parts XXI., XXII. Reeve & Co. 1864.

The numbers before us comprise the Hydrocharideæ, Orchidaceæ, Irideæ, Amaryllideæ, Dioscorideæ, Liliaceæ, and Juncaceæ. In no part of our Flora are there so many doubtful natives, and Mr. Bentham will scarcely be blamed for the eliminations which he has made, as he might fairly have carried them even farther. We think it quite right however that such species as Crocus nudiflorus should be retained. Any one who has seen the profusion in which it appears on the Derby race-course, and how perfectly it seems at home, would at once allow that it has very strong claims for admission, from whatever source it may have originally been derived. It is sometimes possible to assign the time when plants which are now widely diffused first made their appearance. Diplotaxis muralis is said to have been introduced into the Isle of Thanet, where it grows in great abundance, by the wreck of a ship laden with corn; and we ourselves recollect when Lepidium Draba was confined to a single spot, whereas it is now to be found in the greatest profusion all over the island, and must strike every botanist from the luxuriance in which it grows along the railroad leading to Ramsgate.

Some species of Lupine, probably Lupinus rivularis, is now naturalised in a single spot along the rocky banks of the Dee in Aberdeenshire, a few miles below Ballater. It is very likely that it will spread from that point, as it seems to flourish as vigorously there as in its native river beds. In all probability the plant was introduced from Balmoral, or from some garden at Ballater.

The Orchidaceæ, on the other hand, seem all legitimate natives, and within a few weeks an important addition has been made to the list in the discovery of Aceras secundiflora in Ireland, where, like Spiranthes cernua it appears at a considerable distance from what may be called its home.

It is so short a time since we noticed Mr. Bentham's work (see p. 674) that we have little to say in addition to our former remarks. To speak too highly of its execution is scarcely possible, whether as regards accuracy of definition, or judgment as to the limits of species. We do not, however, wish to condemn such Floras as are more discursive. They have their own use and merit, but whether that merit is of the highest order is questionable. A Flora like that of Mr. Babington, which gives accurate characters of the various forms which species of the same genus may assume, is not without its use, especially to beginners, though in the most natural genera, as Rosa, Rubus and Salix, the characters are so unstable that it is scarcely possible to make out many a supposed species accurately. The attempt indeed is often enough to make a young student who should unhappily attack them first, throw down the subject in despair. The end which Mr. Bentham has before him is, we think, far the most philosophical as regards the connection of botany with other sciences, or as a mental discipline, far more profitable. On this account, as on many others, the appearance of a new number is always an unmixed source of pleasure to us, and we rejoice in the hope that we shall soon have the work complete (*totus teres atque rotundus*).

Catalogue of Plants in the Royal Botanical Garden, Mauritius. By James Duncan. Folio 106 and viii. H. Plaideau, Government Printer, 1863.

The Botanical Gardens in our foreign possessions are not always considered, by those most nearly concerned in their support, as scientific institutions, so much as means of introducing plants of utility or ornament, or as convenient and agreeable promenades for the neighbouring residents. We must not therefore blame their directors if their condition does not always come up exactly to our own preconceived notions of what they ought to be. This has been pre-eminently the case in Ceylon, where the garden is under the care of a most diligent and accurate observer, who has been obliged to devote more time and space in accordance with the views of his employers than to pure science; and it is much the same in Mauritius, where science is apparently a very secondary consideration. The catalogue before us is an abundant proof of this, the collection of ornamental plants, as of Roses for example, being far more important than that in other departments. Mr. Duncan, who is an excellent cultivator and very worthy man, has however had another thing to contend against, which is the prevalence of terrible hurricanes, which sweep away in a few minutes what has cost years of anxious labour. To this cause, doubtless, it is owing that we miss in the list some of the most interesting plants, as for example, Telfairia pedata, which formerly existed in the collection. It is indeed a case where a man must of necessity, more or less, sow to the wind and reap the whirlwind. Some absentees, however, surprise us greatly. We do not see a trace of any of the more common species of Cucurbita, except the Cucumber and Melon, nor do we find the Water Melon, though the Sechium appears, of which a variety with very large fruit is cultivated.

The hurricanes indeed are not always of short duration. The last severe hurricane of February, 1861, lasted a whole week. During that week, says Mr. Duncan, "a large number of valuable plants perished, some of which we have not been able to reintroduce."

The Catalogue is arranged alphabetically, the natural order of each genus being appended, its popular name in Mauritius, where any exists, and the place from whence it comes. "It is hoped that it will not only be useful to the public of Mauritius, but also to correspondents in other countries, by affording them the means of readily ascertaining what the collection consists of, and thereby giving such information as is required to secure an advantageous system of exchange of plants to both parties." A few short notes are scattered here and there, one of which under Amaryllis is as follows: "I have raised upwards of 200 very distinct varieties, comprising many shades of scarlet, purple, white, striped, spotted, &c. Amaryllis may be considered the Tulip of the Tropics, and may, I think, be brought to such perfection as to rival that favourite flower in beauty and marking of colours."

Garden Memoranda.

Temple Garden Chrysanthemums. — Notwithstanding the dry and dusty summer we have had, and the unfavourableness of the season generally for fine out-door displays of flowers, these Chrysanthemums are about in as good condition as in former years, and viewed as a whole they have a gay and cheerful aspect, quite astonishing to Londoners during this dark and dreary month. Mr. Broome's principal border, which is about 75 yards in length, is well worth inspection. Of fine individual blooms we noticed beautiful examples of the following:—Queen of England, Alfred Salter, Seraph, a pale sulphur-coloured sort; General Slade, a variety in the way of Dupont de l'Eure, but an improvement on that fine old kind; and Chevalier Domage, a useful yellow sort for out-door work; also Formosum and Cassandra, both good whites; Progne, dark red; Rifleman, Hermione, Cassy, Antigone and Plutus—still a certain yellow; Beverley, white; and last, but not least, Lady Harding. Among Pompons one named Helen Lindsay, a blush kind, is remarkable for fine form; and Mr. Broome has also some charming sports from the well-known Cedo Nulli, which latter for purposes of bedding promises to be an acquisition. Borders and open beds are as gay as the season will permit, and tasteful in grouping, the plants being skilfully arranged as to size. Mr. Broome contrives to get four crops off his little beds in one year; the first is bulbs, the next annuals, then bedding-plants, and lastly Chrysanthemums—the whole wonderfully fine, considering they are in the very heart of London.

In the Middle Temple, Mr. Dale has also a beautiful display, especially of large kinds, on a wall under protection. Here some of the blooms are very perfect and of large size. Among the best are Queen, and its Golden variety; Novelty, Lord Palmerston, Cherub, Little Harry, General Slade, Lady Slade, Madame Poggi, Formosum, Yellow Perfection, Campestroni, and the Anemone-flowered sort called Fleur de Marie. Among other kinds were some charming blooms of Vesta, a well-known, but still most useful variety. Pompons bedded out are just in perfection, and they are well worth inspection, if only for the purpose of seeing how well small kinds are suited for ordinary London gardens. A few of the best for out-door purposes seem to be General Canrobert, Cedo Nulli, Hélène, Surprise, Duruflet, Mrs. Murray, Salamon, and Florence. As we have stated on former occasions, with these in beds, and some of the large flowered kinds in borders, suburban squares and gardens might be made to present a much more attractive appearance than they now do. An inspection of Mr. Dale's and Mr. Broome's collections may, therefore, furnish a useful lesson.

Mr. Salter's Nursery, Hammersmith.—Here as elsewhere the grand feature at present is Chrysanthe-

mums, of which there are fine collections in the open air and under glass. The sides of a walk, 500 feet long, are lined with all the leading varieties, and should the weather remain at all favourable, the collection will be well worth visiting during the next week or two. Two large houses converted into a winter garden are also full of Chrysanthemums beautifully arranged, and tastefully associated with other plants in picturesque groups.

By the side of a winding path which runs through the houses in question are small beds of Pompons and plants remarkable for the beauty of their leaves. Among the latter Centaureas have a very ornamental appearance, as have also some hanging baskets filled with Woodwardia radicans, a gracefully drooping Fern for such a purpose. In the principal bank of Chrysanthemums we observed many new sorts, of which some account will be given hereafter. Among fine blooms of the best varieties of former years were striking illustrations of Queen of England, a flower raised by Mr. Salter years ago, and one which still keeps a prominent place; Lady Harding, General Slade, Novelty, White Queen, Golden Queen, Dr. Bozas, Alfred Salter, Seraph, Little Harry, Lord Ranelagh, Golden Trilby, Vesta, Beauty, Prince Albert, Jardin des Plantes, one of the best yellows; Cherub, Sparkler, Yellow Perfection, Dido, Boadicea, Dupont de l'Eure, and Nil Desperandum. In a span-roofed house, adjoining the winter garden, are many very fine seedlings—some in flower; but others are not yet out. Of these a full account will be given as soon as they are in proper condition for inspection.

Miscellaneous.

The Mistleto in Herefordshire.—The favourite site of the Mistleto is certainly the Apple tree. There is scarcely an orchard of any standing in the county without it, and in many it grows far too luxuriantly. The proportion of Apple trees which bear Mistleto in the central districts of the county, as obtained by a separate examination of more than two thousand trees, as they came, in several orchards, is as follows:—In orchards of comparatively new kinds of fruits, principally French and Italian Apples, the average number of trees which bore Mistleto, ranged from 13 to about 30 per cent.; in old long established orchards, the proportion varied from 30, to as high as 90 per cent.; whilst the general average from all the trees marked down was 39 per cent. of Mistleto-bearing trees. The actual numbers were 784 with Mistleto, and 1218 without it. Whether the Viscum album shows any preference for any particular sorts of Apples, is a point requiring further investigation. There are certainly some facts which seem to show that this is the case. Some observers, with much orchard experience, think it likes best the more acid kinds of fruit, as the varieties of the Crab, the "Old Bromley," "Skyrme's Kernel," "Hampton's Delight," &c., and is much less common on the "Bitter Sweet," the "Royal Wilding," the Norman, French, and Italian fruits, and on "pot-fruits" in general. It has also been observed that trees bearing white-fleshed Apples are much more liable to be attacked by Mistleto than those which bear yellow-fleshed Apples. The former correspond to the acid fruits, whilst the latter embraces nearly the whole of the new and French fruits of recent introduction, called Bitter-sweet Apples, and from which the best and mildest cider is made. The Mistleto has now actually become an established export from this county, and there, perhaps, never was a year when so many people rejoiced in its presence at their Christmas festivities, as during that of 1863. The following is an approximation towards the correct return of the quantity of Mistleto actually sent out of this county last December. The exact returns are as follows:—

	Tons.	cwt.	qrs.
Hereford sent off	25	0	0
Withington	7	15	0
Ledbury	15	2	3
Moreton	2	11	1
Dinmore	3	3	0
Leominster	12	14	0
Berrington	0	16	0
Woofferton	2	0	0
Ludlow	0	1	3
Ross	15	0	0
Moorhampton	5	0	0

Making a total of 89 tons 3¾ cwt. actually sent off by invoice. But the guards and engine-drivers had the privilege of exporting Mistleto on their own account, and did so by almost every train that left the county during the early part of December. An immense quantity went off in this way, and I am told that I greatly under-estimate it when I put it down at 25 tons in addition—thus making a grand total of more than 114 tons. The places to which it was chiefly sent were Manchester and Liverpool—for their supply and that of towns further north,—London, and Birmingham. The established price paid for it, when delivered at the stations, was from 4*s.* to 5*s.* per cwt. according to its condition; and the average rate of charge for the transit was about 30*s.* per ton; so that the whole expense of delivery may be said be from 5*l.* to 6*l.* 10*s.* per ton. I have purposely given all these details; they are distinctive of the age in which we live. It is a practical, commercial, unpoetical period, when trains will wait for neither the peer nor the peasant, and when common-place railway trucks carry off romance—in the shape of Mistleto—at so much per ton! Had good Sir Walter Scott lived in these days, it would never have occurred to him to send his "merry men" to the "woods" for it—where, by the way, they would never have found it—but the Mistleto none the less would have reached him; and if he had chanced to look over his greengrocer's bill, he would, doubtless, have found some such items at these:—To a bunch of Mistleto, fine and full of berries, 1*l.*; To a bunch of Mistleto, fine and full of berries, 1*l.*; To pieces of do. do., for decoration, 7*s.* 6*d.* *Transactions of the Woolhope Naturalists' Field Club*, 1864.

Calendar of Operations.

(For the ensuing week.)

THE beneficial influence exercised by light on vegetation is universally admitted, and at this time of the year it is of the utmost importance so to arrange stock in houses as to secure a due proportion of space to each plant, remembering especially those from brighter climes. All retarded autumn flowers should have as light a situation as possible. Above all things, let every sash receive a thorough washing, both those of the houses and also those of the frames or pits. In order to keep glass clean as long as possible, let mats and covering of all kinds be constantly suspended on rails or posts. This is absolutely necessary, not only for the glass, but for the sake of proper economy, as Russian mats are at all times rather expensive means of protection.

FLOWER GARDEN AND PLANT HOUSES.

If the weather should continue frosty, conservatories will require great nicety of management. Atmospheric humidity cannot by any means be entirely dispensed with, yet this if unskilfully applied will produce drip, which we need scarcely say is most prejudicial to the delicate texture of Camellia blooms and other gay plants. The best plan is to keep as low a temperature as can possibly be allowed, say from 40° to 45° at night, and to leave a little back and front air all night if the weather is at all favourable. The front air must be very moderate, or the atmospheric moisture, instead of passing quietly away by the back apertures, will be condensed as it arises. With a good roof covering in the case of small conservatories 40° would be sufficient, and then there would be atmospheric moisture enough at all times, without the special application of water.

CAPE HEATHS.—Let these have close attention as to watering; if they stand unfortunately near hotwater pipes, they may become suddenly very dry. Keep up a quiet ventilation day and night if possible; let the air steal in moderately, and dispense with strong fires.

PELARGONIUMS.—Give air whenever the weather will admit of it; but avoid cold draughts, and keep out frost. On the other hand, be careful, however, not to use too much fire-heat. Training and shifting must also receive attention.

ROSES.—Hitherto little has been said about the protection of tender Roses. No time should now, however, be lost in regard to this matter. The tops of standards, worked on ordinary stocks, may be protected by straw bands bound amongst and over their branches, or by tight canopies firmly fixed. Beds or masses of certain kinds of Teas, or other tender kinds, should have some porous material strewed amongst them, to afford a little protection, especially during very severe weather. Cocoa-nut refuse or even a coating of half-decayed leaves would answer the purpose of protecting their stems about the "collar." Four or five inches of such materials may keep them safe in the event of a severe winter. If it is desirable to protect the tops efficiently, mats thrown lightly on them will suffice, taking care on the breaking up of frost, to expose cautiously, and not until after they have become thawed.

SOILS.—Compost yards, if not already filled with the different soils used for potting, must now have immediate attention. This most important adjunct of good gardening is doubtless, in many cases, still behind the improved practices of the present day, in point of good management. Such is not always the fault of the gardener, but, frequently arises from an inadequate supply of labour at certain periods. One of the most important points in this department is to see that the drenching autumn rains have every facility for escape. The best of soils, be they ever so well harvested, will become soured in a very short period by the lodgment of stagnant water. A good compost yard on this account should be a steadily inclined plane, and the soils or composts should invariably run the way of the descent in parallel ridges. Now, although the special mixing of soils a long time beforehand is by no means to be recommended, yet it so happens that in general gardening much surplus soil or vegetable matter comes to hand in the course of the year. Such in all cases cannot and need not remain separate; for in a mixed state there will soon arise a demand for it—if only in repairing the beds of the flower garden. Those who have not harvested their loam should lose no time; for assuredly a little should be obtained annually if possible. To the storing of this and of peat we have alluded on former occasions; it only remains, therefore, to repeat, that not only should such soils be kept clear of standing water, but that provision should be made to prevent the rain from entering. Those who are procuring loam now may let it remain on the ground where dug until hard frozen; it may then be carted away without destroying its texture.

FORCING GARDEN.

ASPARAGUS.—Where this is wanted early it may now be introduced into gentle heat. It must, however, have plenty of air on every favourable opportunity, and all the light that can possibly be given it will be of benefit to it.

CUCUMBERS.—Attend closely to these; a little neglect now would render all previous pains and labour useless. Give air as often as the weather will permit, but make it a point to shut up warm. Use additional coverings on cold nights, which will save fuel, and be better for the plants.

PINES.—Winter watering of Pines in pots is rather a doubtful proceeding; a better way with general stock is to cover over the pots with Cocoa-nut refuse, or some such material, 2 or 3 inches thick, provided the bottom-heat is in proper condition.

VINES.—If any portions of the stems of Vines now in forcing are near the influence of hotwater pipes, they should be bound with Moss, old mat, or any other material, to ward off the dry heat. Keep the temperature at present down to 60° in the case of sunshine in the day time, sinking to 50° at night. Do not give air unless to depress the thermometer, or to avoid a superabundance of rank steam from fermenting matter. Let the syringe be applied two or three times a day, suffering the wood to become dry between the applications.

HARDY FRUIT AND KITCHEN GARDEN.

Trench, dig, and ridge every spare inch of ground when frost permits; this is particularly to be observed in gardens inclining to a clayey texture. During frost let the manure necessary be wheeled out for the whole of the spring cropping, laying it in heaps, either on the spot where it will be wanted, or as near as possible to it. That portion not required for immediate digging in should be piled in small mounds and soiled over, to prevent loss by evaporation.

FRUIT TREES.—Planting ought now to be pushed forward with vigour. With regard to bush fruit, if dressings with hot lime and soot when the trees are wet were more attended to, we should not hear so much of the ravages of birds upon the buds, and we would recommend their application also to standard Plum trees wherever practicable, as they not only keep them free from Moss and Lichen, but assist in the extirpation of those insects, in the search for which birds commit such ravages.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Nov. 9, 1864, as observed at the Horticultural Gardens

Nov.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs. 3	4	30.290	30.203	54	20	37.0	50½	52½	N.E.	.00
Friday 4	5	30.399	30.317	54	22	38.0	49¼	52	N.E.	.00
Satur. 5	6	30.375	30.208	55	29	42.0	47	51	N.E	.01
Sunday 6	7	30.576	30.493	50	22	36.0	48	50	N.E.	.00
Mon. 7	8	30.426	30.192	48	20	34.0	48	50	N.E.	.00
Tues. 8	9	30.094	30.066	49	26	37.5	46	50	W.	.00
Wed. 9	10	30.104	29.990	49	17	33.0	46	48½	E.	.00
Average.		30.323	30.218	51.3	22.3	36.8	47.8	50.5		.01

Nov. 3—Clear and fine; very fine; sharp frost at night
— 4—Frosty; clear and fine; frosty.
— 5—Foggy; slight fine drizzle; cloudy; fine at night.
— 6—Quite clear and cloudless; very fine; frosty.
— 7—Slight haze; fine but cold; sharp frost at night.
— 8—Overcast, hazy; fine; slight frost.
— 9—Fine throughout, sharp frost at night.

Mean temperature of the week 7½ deg below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Nov. 19, 1864.

November.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds.
Sunday 13 .	49.6	35.5	42.6	20	1.16 in.	2 3 4 2 7 5 3 4
Mon. 14..	48.1	33.8	40.9	19	1.24	6 5 4 5 2 6 5 5
Tues. 15..	48.6	34.6	41.6	16	0.34	3 3 5 3 4 10 5 1
Wed. 16..	48.7	33.1	40.4	13	0.34	6 3 4 3 5 9 6 2
Thurs. 17..	47.7	31.1	40.4	17	0.38	9 5 3 1 7 8 2 3
Friday 18..	47.8	33.4	40.1	19	0.56	3 7 3 2 4 11 3 5
Satur. 19..	48.5	33.8	41.1	16	0.87	1 5 4 4 4 12 2 6

The highest temperature during the above period occurred on the 16th, 1840—therm. 62½deg.; and the lowest on the 15th, 1848—therm. 18 deg.

Notices to Correspondents.

CHOROZEMAS: *M A R.* Your connecting the two features of holly-like leaves and coppery-yellow flowers, and thus making out Chorozema, was a lucky accident, for your authority gives no such clue. These features do not indeed separate Chorozema from some other plants equally likely to be met with, Podophyllum to wit; nor do they indicate more than a few of the Chorozemas to be met with in gardens.

CUCUMBERS: *J R* writes, "I have two very good Cucumber houses well stocked with good strong plants, but to my great surprise they die off one after another, perishing in a few hours. The roots appear good. They have a bottom-heat of 65°; top heat, 70° at night; good soil, and quite clear of spider, &c. He wishes to know if any one can point out the cause of his plants dying off in this way. We should say a deficiency of bottom-heat to the extent of 20°.

GRAPES: *W B H.*, and others. Next week.

INSECTS: *P M, Reigate.* The minute insects which swarm in your kitchen are the troublesome house ant (Myrmica domestica). Find out their runs and nest if possible, and stuff bits of rag moistened with turpentine in the hole; or lay bits of meat in their way, and when they are upon it by hundreds, as they quickly will be, dip it in scalding water, and repeat the experiment till all are scalded to death. *W.*

NAMES OF PLANTS: *J B B.* Abies excelsa nigra.—*M M.* Phlebodium aureum.—*M P.* 1. Athyrium Filix-fœmina; 2. Lastrea Filix-mas; 3, Blechnum Spicant; 4, Polystichum angulare.—*Creeper.* Physianthus albens. The Quassi-like leaf is apparently that of some Paullinia, perhaps P. curassavica.—*Y.* 1, Catabrosia aquatica; 2, Molinia cœrulea; 3, Callitriche aquatica; 4, some imperfect Orthotrichum.—*H W G.* We have no knowledge of any plant called "Corracolus suaveolens." If you can give us any clue to what is meant, we may be able to answer your inquiries respecting it.—*Faber marinus.* Diplacus glutinosus, Abelia floribunda, Hakea suaveolens.

POTIRON: *M D H.* This word, which is more usually applied to a kind of Gourd, is sometimes used in France for the esculent Boleti. *M. J. B.*

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.
Address, 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c.
They also continue to supply GIBBS' PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

LAWES'S WHEAT MANURE for AUTUMN SOWING.—A supply of the above Manure is now ready for delivery, at J. B. LAWES' Factories, Deptford, and Barking Creeks. Price 8*l.* per ton.
2 to 3 cwt. per acre to be harrowed into the land before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents; also
SUPERPHOSPHATE of LIME £6 6
MINERAL SUPERPHOSPHATE 5 5
Genuine Peruvian Guano direct from the Importers, and all Chemical Manures of value.
American and other Cakes at Market prices.
Address JOHN BENNET LAWES. Offices; 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

Autumn Sowing.

THE PATENT NITRO-PHOSPHATE or BLOOD MANURE COMPANY (LIMITED),
Consisting of Tenant Farmers occupying upwards of 30,000 Acres of Land.
Chairman—JOHN CLAYDEN, Littlebury, Essex.
Managing Director.—JAMES ODAMS.
Offices—109, Fenchurch Street, London, E.C.
Manufactory—Plaistow Marshes, Essex.
ODAMS'S BLOOD MANURE for WHEAT.
This Manure, specially prepared for AUTUMN SOWING, has been in use for upwards of 12 years, and has given great satisfaction to consumers. Orders may be sent to the Company's Agents throughout the country, or direct to C. T. MACADAM, Secretary.
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Price 7*l.* 10*s.* per ton, delivered at any Railway or Wharf in London.

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DOWN'S FARMERS' FRIEND, for preventing the Smut in Wheat, and the ravages of the Slug, Grub, and Wireworm.
A 9*d.* packet is sufficient for 6 bushels of Seed Wheat, which can be dressed and fit to sow in a quarter of an hour.
Testimonials from the largest Wheat-growers in the Kingdom, bearing testimony to its great power and efficacy, may be had of Agents, who are appointed for every district.
Full directions for use are given with each packet.
Prepared at the Manufactory, Woburn, Beds.
CAUTION.—To guard against fraudulent imitation and consequent disappointment, see that the signature of HENRY DOWN is on the label.
Agents in every Town throughout England, Scotland, and Ireland.

Important Notice.
SMITHFIELD CLUB CATTLE SHOW, Dec. 5 to 9, 1864.
EAST GALLERY, STAND No. 155.

JOSEPH ROWELL, Aberdeen, Glasgow, and London; PATENTEE and MANUFACTURER; will exhibit a novel variety of his newly invented and patented Improvements in FENCING LANDS. Also the following, for the manufacture of which he is Sole Licensee:—New Patent Enduring Portable CHAIN NETTING, to supersede Hemp Sheep Netting; Patent Economical IRON HURDLE STAKES; Patent Regulating GATE HANGERS; and Patent Portable TENTS and IRON HOUSES.
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HANCOCK'S IMPROVED HORSE-SINGEING APPARATUS, with India-rubber Tubing, Stop-cock, and Two Gas Burners Complete.
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INDIA-RUBBER TUBING for DO.

PLAIN (per foot).			SNAKE PATTERN (per foot).		
¼ in. 2*d.*	5/16 in. 2½*d.*	⅜ in. 3*d.*	⅜ in. 3½*d.*	7/16 in. 4*d.*	½ in. 5*d.*

HOSE PIPES for conveying Hot or Cold Water, Beer, Cyder, &c., for Brew Houses, Baths, Fire Engines, Gardens, &c.
Price Lists, with full particulars, on application.
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A FEW SHARES remain for DISPOSAL in a PATENT MANURE COMPANY, LIMITED—having the Contract for the Sewage of a large Town.
The Works, which are now being re-erected, and in consequence requiring an outlay of additional Capital, are nearly completed, and will be ready for operation in a few weeks.
For particulars and Prospectus apply to A. MANNING, Esq. (the Company's Engineer), 1, Raymond Buildings, Gray's Inn, London, W.C.

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Works of Drainage of any extent, Irrigation, Enclosing, Wood-grubbing, Road-making, Farm Houses, Farm Buildings, and Labourers' Cottages, are executed on all descriptions of property, whether freehold, entailed, mortgaged, trust, ecclesiastical, corporate or collegiate; or Loans granted for the purpose to landowners who desire to execute the works by their own agents.
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ESTABLISHED IN THE YEAR 1844, AND INCORPORATED BY SPECIAL ACT OF PARLIAMENT, 11 & 12 VICT., C. CXLII.
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TERMS MUTUALLY ADVANTAGEOUS TO LANDLORDS AND TENANTS.
Lands Drained and improved without any expense whatever to the Owners, a small increased Rent paid by the Tenants being sufficient to meet the only payment which Landlords are required to make, viz., merely the interest of from four to five per cent. on the loan, this Company's Act not requiring them to pay off the principal; all expenses may be a permanent charge on the property, or made redeemable at any time, or liquidated over any term of years.
Tenants for Life and Mortgagors can likewise Drain and Improve their Estates without any expense to themselves.
The Works are undertaken by the Company, who keep in constant employ a very extensive and experienced staff of Engineers, Surveyors, and Workmen; or Proprietors may avail themselves of the powers of the Act only, and get the Works executed under their own superintendence, or by Agents appointed by themselves.
Outfalls through adjoining lands are obtainable under the Company's Act.
Works are also executed by the Company for parties advancing their own Capital or not wishing to borrow the money.
FREDERICK BRODIE, Secretary, Castle Street, Exeter.
Offices: Castle Street, Exeter; 30, Parliament Street, London.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.
The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.
1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose Engines or Machinery for Drainage or Irrigation.
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Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.
No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.
For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

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MR. BAILEY DENTON, C.E., maintains a large Staff for the Execution of Land Improvements by a commission of 5*s.* per acre for Under Drainage, and a fixed charge for Outfall and other works.
For particulars, apply to him, at 52, Parliament Street, Westminster.

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MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22, Parliament Street, Westminster, S.W.

THE NATIONAL EXHIBITION of DOGS.—The FIFTH GREAT ANNUAL EXHIBITION of SPORTING and other DOGS will be held in Paradise Street (near Bingley Hall), BIRMINGHAM, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, and 30, and December 1, the week of the Cattle and Poultry Show. For SPECIAL RAILWAY ARRANGEMENTS, see the Advertisements and Bills of the Companies.

BINGLEY HALL, BIRMINGHAM.—The SIXTEENTH GREAT ANNUAL EXHIBITION of FAT CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, CORN, ROOTS, and IMPLEMENTS, will be held on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, 30, and Dec. 1.
The Exhibitors and the Public will be admitted to Bingley Hall to WITNESS the JUDGING of the Cattle, Sheep, Pigs, Roots, and Corn, on SATURDAY, November 26, at 9 o'Clock A.M., upon payment of 10*s.* each. There will be no admission to the Poultry Department until after the Judging is completed.
For SPECIAL RAILWAY ARRANGEMENTS, see the Advertisements and Bills of the Companies.

The Agricultural Gazette.
SATURDAY, NOVEMBER 12, 1864.

MR. BAILEY DENTON'S recently completed volume on the FARM HOMESTEADS OF ENGLAND* is the noble execution of an admirable design. Desiring to urge the adoption of sound principles in farm architecture, the author has wisely sought his end by a description and discussion of actual performances and experience, rather than by an assertion and defence of mere proposals, schemes, or speculations of his own. Two dozen of the best homesteads of this country, already erected and in operation, are selected for representation by plan, perspective and elevation all admirably executed, and by well-chosen words, which relate such particulars of the farms on which they are built as will enable the reader to realise their fitness to their circumstances.

And at the close of this, the principal portion of the volume, the Editor collates the facts which have been thus collected and presented; and educes the general principles which ought to guide the erection of farm homesteads generally.

The purchaser of this handsome volume, than which no better illustration of English ability, whether of the publisher, the author, or the farmer, lies upon the shelves of the agricultural library, thus has within its pages the best specimens of existent farm architecture presented in detail as models to be copied, and at the same time such a study of the features common to all and of the general rules which have been more or less observed in all as will enable him to alter or correct any one of them up to a fitness for the special circumstances which his own estate or farm presents.

We shall next week discuss in more detail the main features of the volume. Meanwhile the author may be heartily congratulated on his most successful achievement of the large and ambitious plan which, in its programme, was laid down for the guidance of the work.

* CHAPMAN & HALL.

WHAT a magnificent seed time for the Wheat crop we are experiencing! The texture of the soil is at the least as important as its composition, so far as its character as a seed-bed is concerned. And great care is taken at this time of the year to provide just that texture which the young Wheat plant needs. A stale furrow slice is in most districts thought necessary, because of the firmness which it thus acquires. The Clover stubble is turned over as early as August, and lies many weeks undisturbed before being harrowed down for Wheat sowing. On the Cassiobury Park farm, the other day, we saw Wheat sowing proceeding upon light soil, which trod too loosely for the purpose; and here a flock of sheep was being herded to and fro, immediately behind the drill, to give the land the requisite firmness. During the previous week, all through South Essex, we had seen the Wheat sowing hurried on by the clay land cultivators there, who know that the time fit for dealing with their soil is generally short, and must all be turned to good account. The ridges are all made to suit the width of the tool; the harrows and the drill are drawn by horses walking in the furrows; not a hoof is allowed to tread the land, and the double mould-board plough follows immediately behind the sowing, to clean out the furrows, and provide that surface drainage of the land which is all that is there depended on. The weather of the last few weeks has suited both these clayey districts and the lighter lands extremely well. In the former the seed has been laid in well-tilled mould, whose natural tenacity ensures sufficient firmness of texture; in the latter artificial means, where needed—land pressers, clod crushers, the sheep-fold, and the like—have been satisfactorily employed. And thus the welfare of the young Wheat plant is secured until the period of rapid growth in spring.

There can be no doubt that even then it will find itself in circumstances made all the better for it by these mechanical processes. There is nothing which affects the texture of the soil which does not to some extent influence its composition also. Tillage, land drainage, the action of the harrow and the roller, all bring to activity and life what Dr. URE called the potential but dormant character of the land. Clays possess more of this dormant power than sand, and good tillage exercises a more important influence on their current fertility than on that of sand, but even on the latter both the disturbance and the pressure of the land in which tillage processes consist tend to that chemical reaction between soil and air, and between the component parts of the soil itself, which results in the preparation of food for plants. In spring however, when the plant is growing rapidly, the direct manuring of the soil, the direct supply of food for the crop, soon tells upon the rapidity and luxuriance of the growth. And it becomes us to consider what are the special foods which the Wheat plant needs under the natural circumstances of an ordinary soil.

Messrs. LAWES & GILBERT have given us in the last Number of the English Agricultural Society's Journal the result of their investigations, carried out now with the utmost care for 20 successive years. We presume that there is no such record extant of direct and immediate interest to the Wheat grower in this or any other country.

It appears that about 16 bushels of Wheat have been grown annually without manure for 20 successive years, on an ordinary, or, as we remember it, a rather 'unkind' clay loam resting on chalk. With a dressing of farm-yard manure applied every year, the crop has increased from 20 to 40 bushels during the same period, averaging 32 bushels per acre all that time.

With mineral manure alone hardly any increase of produce has taken place, the average produce having been little more than 16 bushels per acre. Nitrogenous manure alone on the other hand increased the produce very considerably for many years in succession, hence it is concluded that the soil in its practically exhausted condition has proved to be relatively much richer in available mineral constituents than in available nitrogen. The largest crops were obtained when animal and nitrogenous manures were employed together, and it was by such mixtures, even though they supplied no silica (nor carbon), that the produce by farm-yard manure was far exceeded, although the latter supplied not only both silica and carbon, but all other constituents in larger quantity than they were removed in the crops.

The authors infer from these facts, which they corroborate by the experience of similar observers elsewhere, that under the existing conditions of agriculture in this country the nitrogen in manures has justly a preponderating value attributed to it.

What these conditions are they discuss at length. They state the practice of good farmers as to the purchase and consumption of cattle foods and manures, and conclude from the history, "that the modern practices of this country, taken as a whole, do not tend to the injurious exhaustion of the mineral constituents in anything like the degree that has been assumed by some. Further than this," they say, "we think the evidence is more in favour of the supposition that, in a great majority of our soils, they are, by the combined aid of progressive liberation, and of restoration from without, becoming, in the course of cultivation, richer rather than poorer in immediately available mineral constituents relatively to immediately available nitrogen. So far as this is attained at the expense of the constituents of the soil itself, there is, of course, the less to fall back upon within a given depth from the surface. But it surely cannot be denied, that if there really is an annual liberation of mineral constituents in available form for the growth of plants, at least a portion of this may, with propriety, be sold off the farm for good and all.

"The exact amount of annual loss of mineral constituents which any soil, with its workable subsoil, can permanently support without injury, cannot, indeed, be proved. But such evidence as is at command goes to show, that, under the conditions at present existing, the nature and extent of the loss to which our soils are subject are such that the majority are deficient of available nitrogen rather than of available mineral constituents, so far as the requirements for full crops of the cereal grains are concerned.

"Insisting strongly, then, as we have always done, upon the absolute necessity of a full supply of available mineral constituents within the soil, relatively to that of nitrogen, we still believe that, in the actually existing conditions of British agriculture, it is not they, but the available nitrogen, that is generally found to be relatively deficient."

The question then arises, What are the sources of available nitrogen to which the farmer must look? The main resource is the adoption of such a rotation, including green and fodder crops, as shall conserve upon the farm in the form of manure the nitrogen which these crops by their expanded leaf systems have no doubt absorbed originally from the air. But besides this, there is the possibility of purchasing and applying directly nitrogenous manures. And the immediately practical inference from the whole discussion appears in the last paragraph of the paper, which we extract:—

"On many of our heavier soils, and even on lighter ones, if purchased cattle food be liberally employed, corn crops may be grown more frequently than is consistent with what have generally been considered the established rules of good farming, not only without injury to the soil, but with pecuniary benefit to the producer. On heavy soils Barley of better quality may be obtained after Wheat than after a root crop. But when corn is taken after corn, great attention should be paid to the cleaning of the land, and manure should be liberally applied. When Wheat follows another corn crop, not less than 50 to 60 lb. of ammonia (or its equivalent of nitrogen in some other form) should be applied per acre, and when Barley or Oats follow a corn crop, from 40 to 50 lb. The quantity of phosphate employed with the ammonia should be greater for spring than for autumn-sown corn crops. The manures should be applied at the time of sowing the seed."

Dr. VOELCKER'S experiments at Cirencester, recommending nitrate of soda at the rate of 1 cwt. or so per acre as a dressing to the corn crops of the farm, are quite in keeping with the conclusion to which English agricultural chemists have thus directed us.

ON THE STORING OF ROOTS.

THE SWEDE.

THE harvesting and securely storing the root crops is now generally admitted as one of the most important operations of the farm. The enhanced prices and increasing demand for butchers' meat of all kinds, as also the value to which wool has attained, and the ruinously low price of corn, render it imperatively necessary for the British farmer to use his utmost endeavour to increase the produce of his root crops by deeper cultivation, the use of artificial manures and every other modern appliance; as the man who can grow the heaviest crops, and consequently keep the greatest number of stock on his farm, will under present circumstances be most successful. After the great expense and anxiety attending the cultivation of the crops, and the effort so far being attended with success, the crop is still left exposed in the field to the deteriorating influence of a varying and uncertain climate, and should they be eaten by game, or destroyed by frost, the man who allows them to remain so deserves neither redress nor sympathy. Within the last few years a great advance has been made, and the harvesting the root crops now receives a greater degree of attention than formerly. Still, upon the whole, there is ample room for an extension of the system. Throughout a large district of good Turnip soil in the Midland Counties during the early part of 1855, the partial thaws, followed again by severe frosts, greatly injured, and in many places rendered the crops completely worthless.

At that time storing was the exception. Since that year the practice has been on the increase, till the present season, 1864. What was then the exception has now become the rule, and throughout the district before referred to, only a few crops remain unsecured. It is now freely admitted by intelligent agriculturists that beside the loss the root sustains, the land is likewise considerably exhausted by having to support a vegetation some feet in height, as is sometimes seen in many fields late in the spring, and as far as its feeding properties are concerned, of a small degree of value. The attacks of game also, and in many parts of the country the wood pigeon are very destructive to the growing crops.

During severe weather it is not an unfrequent occurrence to see whole fields denuded of their leaves, and the bulb attacked, and small cup-like cavities bored in the crown and sides of the roots. Those cavities become filled with water on the first fall of rain, which soon causes the root to rot. In some districts the practice still lingers of turning the sheep on the growing crops, particularly during the early part of the season when they are first put to Turnips; a large fold is set and the sheep turned in and left to graze them down pretty close to the ground, the best or most forward in condition having the first run, and are either followed by the lambs or stock ewes, who pick up the hulls or bottom part of what is left. Except as a pen or two for the lambs when first put on Turnips, in order that they may take to them more freely, we think the system neither economical as regards food, nor beneficial to the health of the animal, though we have often seen sheep do well which had the first run of a pen fed in the way referred to; but those who followed after were under the most favourable circumstances of weather, &c. A great quantity of earth must unavoidably be introduced into the system, which always acts injuriously on the health of the animal, more particularly on sandy soils. We have known great losses take place from this cause, the great quantity of sand taken into the system along with the food causing obstructions and inflammation of the urinary organs, which frequently terminate fatally.

The Swede crop after having been got up and pitted for some time undergoes a chemical change, a part of the acids being converted into sugar, as in the ripening of the Apple and other fruit. After this change has taken place, they become not only more nutritious, but they are also more palatable and wholesome as food for stock. It is a fact well known to all experienced flockmasters that there is great danger attending the changing of sheep from White Turnips to Swedes, requiring the utmost attention and discrimination on the part of the farmer, so that the change may be gradually and judiciously effected. The Turnips and Swedes should be mixed together for several days; by this means the ill effects of the Swede are counteracted, and the change becomes less felt. Great losses frequently take place, particularly when the sheep are in a forward state of condition, and the change has been rapidly made from White Turnips to Swedes, either growing or recently got up—inflammation being the disease from which they invariably suffer; and the writer has several times had to bleed and physic flocks of two or three hundred sheep, in order to arrest the progress of the inflammation brought on by a too rapid change. When the Swedes have been stored for some time, and have undergone the change elsewhere referred to, they become perfectly safe, and the change may be made from a full feed of White Turnips to the same of Swedes, without any danger or fatal results.

It is asserted by some that selection and forcing have rendered the Swede less hardy than formerly. This to a trifling extent may be the case, as we know some varieties in which a certain degree of hardness has been sacrificed for size. Still we think the change beneficial to the interests of the cultivator as producing a far greater weight of food, and if seasonably secured is equally valuable weight for weight in the one case as the other. The old hardy Green-top would, under favourable circumstances of soil, season, and cultivation, not produce more than 18 to 20 tons per acre, while Sutton's Champion or Skirving's Improved, under the same management would give a return of fully 5 tons per acre more, while a chemical analysis assigns to each the same feeding value. As a proof of the keeping qualities of the less hardy kinds, we have kept both Aberdeen Yellow and the common Green-top White, both quite sound till late in the spring. In each case they were got up without frost, and were stored perfectly dry. While on this point we would beg the reader's permission to be allowed to say that it is our opinion if a greater breadth of White Turnips were on many farms to be cultivated, and a less breadth of Swedes, the land, and eventually the occupier, would alike be benefited.

Like all other vegetable productions, soil and climate exercise a marked influence on the produce of the Swede crop, and throughout the greater part of the southern and midland counties of England, to ensure a heavy crop they must be sown from the 25th of May to the 10th of June, whereas for a good crop of many varieties of the common Turnip, a month to five weeks later will be a good time of sowing—an advantage if well employed of no mean importance, which all will admit is of great benefit, not only for cleansing but aërating the soil, and by being reduced to a fine state encouraging the vegetation, and consequently destroying myriads of annual weeds; this will give the land the partial benefit of a summer fallow, the good effects of which on some soils may be observed for years.

In these days of high farming, when large quantities of the most stimulating manures are used, the keeping qualities of the roots are said to be impaired from the application of highly forcing substances inducing a rapid growth, rendering the plant so grown more susceptible to the attack of frost. Crops so grown will not stand the winter so well if left exposed as others will do which have not been so forced is because an ample supply of suitable food properly prepared and ready for assimilation was placed within the reach of the plant, thus enabling it to arrive at an early maturity; and as nature cannot stand still, the natural decay and death of plants appear to follow the same law as the natural decay and death of animals. As it approaches maturity the sap flows more feebly through its vessels, and it is no longer propelled through every part. The opposite principle of chemical affinity begins to act, and the various elements that compose the plant fly off to combine with other elements, so as to form new substances. We believe the modern system of cultivation to exert a more destructive influence on the keeping properties of the Swedish Turnips when left growing on the land during winter than most other causes. The system of ridging or drilling at wide intervals, the frequent use of horse and hand-hoe, is well known to all experienced growers of roots to stimulate and encourage their development, and also to ward off the attacks of mildew; and yet the same operation that opens the soil, allows the air to penetrate, producing chemical changes, without which the vegetable and mineral matters contained in the soil could not become subservient to the requirement of the plant. This process of hoeing so often repeated leaves the tenderest part of the bulb more exposed to atmospherical influences by the earth being worked away from the roots than under the old system of broadcast cultivation, where one or at most two choppings over with the hand-hoe was all that was attempted. Under this system the roots, from being near together and the soil being little stirred, seldom attained a large size, but, burying themselves deep in the ground, could stand a much greater degree of frost than when grown on the modern system, from the reason already referred to. We have often observed during the months of March or April, following a severe winter, that the roots grown on wide cultivated ridges had suffered far more severely, a greater per centage being rotten, than those grown on the flat in the same field. During severe frosts—we may instance that of the past season, where sheep were feeding on Turnips, which had not been secured—the difficulty and expense of getting up and cutting them was very great. The sheep did not generally get a sufficient allowance to satisfy the cravings of hunger, except in cases where artificial food was freely used. Consequently the system was chilled, and instead of the animals progressing the opposite was the result. Where they were penned in and forced to gnaw the frozen roots in the ground the case was still worse, the exertion they had to make in order to bite them was painful to witness, and presented a strong contrast to others that were living on roots securely stored, and which came out of the heaps as clear and sound as if there had been no frost. *G. Murray, Overstone.*

(To be Continued.)

ON FURZE AS FOOD FOR CATTLE.

A CORRESPONDENT put his interrogatories formally, and I shall attempt to reply to them in the order in which they were put.

1st. Has any machine been yet invented which effectually bruises Furze at a paying cost, whether worked by steam, horse, or hand-power?

Mr. Walsh, of Balbriggan, has had his patent Furze pulping machine for some time before the public, and a paper in reference to it has just appeared in each of the two last numbers of the *Gardeners' Chronicle and Agricultural Gazette*. This machine was tried against time before the committee of the Agricultural Society of this county, and the result of the trial is published in the annual report of the Society for 1863. It was to the effect that the machine is capable of bruising and tearing the Furze into fragments so small as to offer not the least impediment to its use, not only by horses and cows, but even by calves and sheep; that, worked by means of a one-horse gear, it is capable of so preparing Furze at the rate of 3 cwt. per hour; that unless the greatest care be observed by the feeder to forward no more than the exact quantity it was capable of taking, it was liable to choke, and must be reversed before it could again work; and that it was adapted to meadow, and not to bush Furze, inasmuch as a bit of old stem, half an inch in diameter, might injure it. These defects the report stated must be remedied before the machine can be

considered efficient. No doubt it has been since improved, but of this I am not aware.

A millstone fixed vertically at the end of a pole, and moving round in a flagged path, being drawn by a donkey or horse, would pulp an immense quantity of Furze previously cut into 3 or 4-inch lengths, and at a very small cost. But, with the exception of Mr. R. Bolster, of Glentane, near Mallow, in this county, who, by means of a small water wheel cuts the Furze into 2 or 3-inch lengths, and then bruises it in a bark mill, I know of no farmer in this part of the country who pulps his Furze. There cannot be a doubt that for calves and sheep, and probably for cows, pulping would greatly facilitate the consumption of Furze. I, however, adopt the common practice of the district, and cut it by means of a chaff-cutter into ½-inch lengths; and in this state cows (after a little time) consume it freely, and are very fond of it. Worked by a man of average strength, and fed by another, my machine cuts 20-stone weight per hour; or by a horse, in one-horse gear, which I obtained from Mr. M'Kenzie, of the Agricultural House, Cork, it easily cuts twice that quantity.

2nd. Would it pay to bruise Furze by steam for a dairy of 12 cows?

It certainly would not pay to provide steam power expressly for preparing food for 12 cows, nor for 20 cows; but wherever steam, water, wind, or horse power is constantly, or even two or three times a week, at work, meadow Furze may, by means of a pair of metal cylinders, be pulped, even without the trouble of previous chopping, at a merely nominal cost.

3rd. Must not the land be rich, deep, and dry to grow Furze successfully, and if drained by covered drains would they not be quickly choked by the roots of Furze, no matter how deep?

Dryness alone of the above conditions is essential to successful culture of Furze, at least beneath an elevation of 300 or 400 feet. My Furze meadow occupies a portion of the farm the soil of which is a shingly loam, with a subsoil of shingly clay over carboniferous shale. It does not require draining, and is value for about 10s. per statute acre, and the produce of two years' growth is about 12 tons. On better land in this county 12 tons of annual growth are obtained, but land still inferior to mine produces good Furze meadows, some of which have been mown each alternate year for 20 years and more, and continue, as I am informed, as productive as ever. I have met persons who have so high an opinion of this crop that they stated they would not hesitate to sow it on the very best land they could obtain. Judging from the known effect of the roots of trees and bushes in choking covered drains, even at a great distance, and of Mangel and other farm crops in plugging up drains 3 or 4 feet deep, I should say that the roots of Furze would speedily render covered drains useless; but if I were preparing wet land for Furze, I would dry it by open drains, such as are used in preparing wet land for planting with trees.

4th. If mown in winter, would not frost kill the plants?

I don't think it at all likely; at all events, I have never heard of anything of the kind occurring in this district.

5th. In places where the soil and climate are favourable to the growth of Turnips and Mangel, do you think it would be judicious to undertake the culture of Furze?

Except under the most favourable—indeed, unusual—circumstances, the cost of the manure and labour necessary to raise a good crop of these roots is a great drawback to their culture; whilst Furze on good land produces a large annual return at no cost for manure, and very little for labour. On the contrary, deriving, as it does, its mineral food from depths inaccessible to other cultivated crops, and yielding up these fertilising ingredients in the excreta of the animals which consume it, to be applied to other portions of the farm, it serves, like irrigated meadows, to maintain the fertility of the farm, and, consequently, to diminish the necessity of procuring auxiliary manures.

Another of your readers requested me to inform him what weight of Furze ought sound, dry land, which is good value for 1*l.* per acre, statute, produce annually, and what I consider to be the value of Furze as cattle food as compared to hay.

In reply, I would say that such land, under the elevation I have mentioned above, ought to yield an annual cutting of 10 tons per statute acre; and with regard to the comparative value of Furze as provender, we have in the report of the Cork Agricultural Society referred to above—viz., for 1862—the analysis of Furze by Dr. Blythe, the eminent chemist of the Queen's College, Cork, made for the express purpose of determining this question. The analysis in detail appeared in the *Farmers' Gazette* of the time; and a reference to and close consideration of it will well repay the trouble. I shall here only quote Dr. Blythe's summary, as given at the close of his report:—

	Fresh Furze.	Fresh Grass.	Fresh Clover.
	lbs.	lbs.	lbs.
Total albuminous (or flesh-forming) substances in 100 lbs.	4½	2 to 4	3 to 4
Total respiratory (or heat-producing) substances in 100 lbs.	8¾	10 to 13	6 to 9
Oil or fatty matter	2	½ to 1	½ to 1
Woody fibre	20	10 to 13	3 to 7
Mineral matter (ashes)	4	2 to 3	1 to 3
Water	51½	60 to 80	75 to 83

The ashes of these plants contain respectively—

	Potash. lbs.	Phosphoric acid. lbs.
In 100 lbs. of Furze	20	8¾
,, Grass	20 to 30	9
,, Clover	30	7

It must be borne in mind that the question proposed by the committee of the Society to Dr. Blythe was, to determine the feeding quality of Furze, and the amount of the two valuable ingredients in the ashes of plants, viz., potash and phosphoric acid. He, of course, also determined, as will be seen by a reference to the analysis, the percentage of nitrogen, which was nearly ¾ lb. in the 100 lb. of fresh Furze, or, more accurately, 0.71 per cent. The following are the doctor's conclusions:—"Thus, whilst the respiratory matters are nearly in the same proportions in 100 parts of fresh Furze, natural and artificial Grasses, in the first substance they are nearly all soluble in water, which is not the case in the others. The albuminous matters are also higher, and probably also soluble in larger proportion, in Furze than in the other two, and the oil is in much larger proportion. In the ashes the phosphoric acid is about the same in the three, but the potash is somewhat lower in Furze. A comparison of these analyses leaves no doubt, however, that fresh Furze is a more valuable feeding substance than natural Grasses, and, in some respects, is superior to Clovers; and the refuse matter from Furze is scarcely, if at all, inferior to that from the other two as manure." Now, if fresh Furze, as taken from the field, be weight for weight equal in feeding power to meadow Grass, and as hay is to Grass as from 1 to between 3 and 4, it follows that 1 ton of fairly saved hay is equal in feeding value to between 3 or 4 tons of Furze. My horses, which are somewhat over the ordinary size of farm horses in the district, consume 6 stone of chopped Furze as their night's provender, and I consider that they get through their work better, and certainly they look better, than when in spring—the Furze then coming into blossom and not being so palatable—from a stone and a half to two stone of hay is used as a substitute for the Furze.

Each of the gentlemen who have asked my opinion on this subject has requested that I would add to my reply anything on this matter which I think of importance. In doing so I would desire to guard persons about to cultivate Furze against an error into which I myself fell in my first endeavour, viz., take care to pulverise the land effectually previous to sowing, and, above all, do not stint the seed. For want of the experience I now possess in this respect, a four-acre field which I sowed with 30 instead of 50 lb. of seed per statute acre, and which was not sufficiently harrowed down before sowing, was much too thin, but is now thick enough from a second sowing over the thin parts. Since I used 50 lb., and made the surface perfectly fine, I have no further trouble. I find August or September as good months for sowing as March or April. I may also add that cows fed on Furze not only milk well, but produce as good flavoured butter as they do on the summer Grass.

I shall conclude a letter which has, I fear, made an unwarrantable demand on your space, by strongly advising every farmer, especially such of them as have a piece of dry land, no matter how poor, to break it up, fallow it until the sod is well reduced, and sow it down with good Furze seed, not less than 50 lbs. per statute acre. Of course, those who can prepare such land for a crop of Turnips, and feed them off with sheep, and then sow Furze, but without a Corn crop, will be well repaid by the superior strength and produce of their Furze meadow. In either case I can promise them they will not regret having taken the advice here given. *Michael Murphy, Horse Hill, Bandon, Oct.* 26, 1864, *in Dublin Farmers' Gazette.*

AGRICULTURAL LABOURERS' COTTAGES.

Doubtless it will be remembered by many of your subscribers, that in the month of November last the Society of Arts, London, (through the liberality of J. B. Denton, Esq.,) commenced a movement, the object of which was to improve in a moral and sanitary sense the wretched dwellings of this useful section of the labouring classes, and to inquire into the possibility of erecting suitable accommodation at a rent within their means.

Accordingly the Council of the Society advertised for designs, specifications, and estimates for the same, restricting competitors to carefully prepared conditions and other instructions, containing such dimensions for the various apartments as have been found practically to answer, and also a rate of prices for the various materials, upon which the estimates were to be based. Conforming the designs in point of construction and substantiality to the memorandum of the Inclosure Commissioners as applied to agricultural buildings under the several Improvement Acts, and limiting the cost of each cottage to 100*l.*, which sum had to embrace the perfect completion of the building, including fixtures, fittings, &c., and 25 per cent. for builder's profit and contingencies; for which two prizes with the Society's medals were offered. One specially to the members of the Architectural Association, London, and the other to the United Kingdom. In reply to which in January following, 134 designs, estimates, &c., were submitted from 107 competitors residing in all parts of the United Kingdom, and after a careful and minute examination of the various designs, specifications, &c, by the Judges appointed, viz.: C. F. Hayward, Esq, architect; John Clutton, Esq., land agent; and Geo. Dines, Esq., builder, only one prize was awarded, namely, that open to the United Kingdom.

Subsequently a Special Conference was held at the Society's house on the 26th and 27th of May last, when this important question was ably discussed and considered in all its points, from which I hope much good may result, and that the day is not far distant when the Legislature may be induced to take up the matter, and make provision for the proper lodging of the agricultural labourer, conducive to his moral and physical welfare and improvement.

The agricultural population has been for some time on the decrease, and will doubtless continue so long as they are suffered to huddle together in the wretched hovels so frequently to be met with in agricultural and other labouring districts—demoralized, degrading, and inconsistent with the present age. I hope that the labouring classes may be soon taught to know that it is essentially necessary for their own well-being and prosperity, as well as to the benefit of those to whom they are beholden, that they should have comfortable and decent dwellings, with separate sleeping apartments for the sexes of their family.

As the author of the design to which was awarded the prize open to the United Kingdom, and feeling anxious to add my humble effort to the cause so ably and laudably advanced by this Society, I am glad to place before your readers the annexed particulars of it, and beg to say that I have successfully adapted the plan to rows of similar buildings, thus effecting in the aggregate a considerable saving in the party walls, drainage, &c. *John Birch, Architect, 55, Page Street, Westminster, S.W.*

Extract from Specification and Estimate.—The several walls are proposed to be built with good sound hard burnt stock bricks, the ground floor, yard and out buildings being paved with brick and tiles. A cesspool common to both cottages, with drainpipe to same from water closets, is placed at the end of the garden, with liquid manure tanks to each cottage. To insure ventilation it is proposed to insert air bricks in the external walls at floor level, with moveable frames inside, and similar air bricks over the fireplaces near the ceiling communicating with the flues. The roofs are covered with countess slating, or well burnt plain tiles laid to close gauge. The timber used to be of the best Dantzic, Riga, or Memel Fir. The battens to be of best St. Petersburg, all the internal finishings (excepting ground floor) to be of the best white deal, carefully selected, free from knots, sap, shakes, and other defects, and thoroughly seasoned. A well is provided in the back porch, which by means of a double action force pump supplies the cisterns immediately over same, from which branch pipes are taken to the water-closets, sinks, and coppers in sculleries. The greatest portion of the rain-water is saved by the provision of a suitable water butt to each cottage, and the remainder is conducted into the soil drain by means of a small agricultural drain pipe round the building, and serves as a good flush to the water closet drain. The estimated cost of the pair of cottages is 203*l.*, which sum includes the entire buildings, paving, sinks, coppers, well, water supply, water butts, water-closets, drains, cesspool, and liquid manure tanks; also fixtures, comprising ranges with ovens, stoves, dwarf cupboards, shelving for books, &c., linen closets, plate racks in sculleries, towel rollers, hat and cloak plates, and every requisite necessary to render the cottages complete and fit for immediate occupation.

On the ground plan is Front Entrance Porch—Living Room, 12′ 6″ by 12′ 0″—Scullery, 16′ 9″ by 7′ 3″—Pantry—Fuel Store—Back Entrance Porch—Tool House—Yards—Dustbins—Water Butts—Cesspool and Liquid Tanks, end of garden—Gravel Walks—Superficial area of living room and scullery, 228 feet. Cubic feet of space in same, 1824 feet.

On the chamber plan are Bedroom, No. 1, 12′ 6″ by 9′ 6″—Bedroom, No. 2, 9′ 0″ by 8′ 0″—Bedroom, No 3, 7′ 6″ by 6′ 0″—Stair Landing—Linen Press—Superficial area of bedrooms, 235 feet 9 inches. Cubic feet of space in same, 1886 feet.

Home Correspondence.

Flax Cropping in Mayo.—I have lately met Dr. Sullivan, Professor of Chemistry to the Catholic University, and of the same science in the Museum of Irish Industry, Dublin, just returned from a tour through the interesting barony of Costello in that county. Knowing him to be the highest scientific authority of the day in all things relating to Flax, its growth, management, and manipulation, as also possessing the best practical views I ever heard expressed by any such scientific man, I asked him his opinion on "the Flax movement," as it is called in the west. His answer was, "You know the lands of the barony of Costello, and the people engaged in their cultivation, better than I do, but I know what perhaps you had not an opportunity of seeing when assisting in the reclamation and valuing such lands. I saw with Mr. Thomas Strickland at his Flax mill, Castlemore, near Ballaghaderrin, steeped, retted, and dried, three and-a-half tons of Flax straw to the Irish acre, and whose produce in fine fibre alone was an average of 18½ per cent., which Mr. Strickland, when dressed, sold at 7*s.* per stone of 14 lb.,—you can now judge of it yourself;" adding—"I have also seen a higher produce per acre, whose per-centage in fine fibre was 22½ per cent., and whose marketable value would be 10*s.* a stone, but this was a pet crop, grown in highly cultivated land, and no fair criterion by which to judge of such crops as they are, though proving what they can, ought, and hereafter will be." At this rate of produce and average quality the gross sales of the fine fibre would stand somewhat thus:—

104 stones of Flax at 7*s.* a stone	£36 8
Seed, 40 bushels, at 6*s.* per bushel	12 0
Making a total of	£48 8

If in round numbers and for ease of calculation we set down 18*l.* 8*s.* as for rent, taxes, seed, and labour, there

will still remain 30*l.*, or over three times the average rent of any 20-acre farm which I have myself valued, for rent-paying purposes, about 10 years ago, and the rents remain so still, and will for 20 years yet to come, or the excellent system of management by Mr. Charles Strickland, Lord Dillon's agent, will be greatly changed for the worse, of which I have little fear and the tenants less. Let me turn to another crop or two that can be grown in rotation with Flax on such land compared with Wheat as sold in the Dublin markets. The crops I allude to are Rape and Italian Rye-grass. My opinions on the latter are too well known to your readers to require more being said by me about them just now. And I will confine my remarks to Rape as a marketable crop, being now less profitable to the grower than when used green for stock-feeding.

Produce per Irish acre.	Price per barrel of 20 stone.	Amount.
Rape seed, 10 barrels	.. at 30*s.*	£15 0 0
Wheat, 6 ditto	.. at 20	6 0 0
	Balance in favour of Rape seed ..	£9 0 0

or one year's rent of 18 Irish or nearly 30 statute acres. There are as many thousands of acres on that immense property capable of growing more than 10 barrels of Rape-seed to the acre as there are scores of acres capable of growing even 5 barrels of Wheat to the acre. Barley is seldom if ever grown, because of the humidity of the climate. Oats, Turnips, and Cabbages grow to great perfection, though. This vast estate is but one out of thousands that are naturally better circumstanced, not only in Mayo, but in many other counties of Ireland sadly neglected. *E. Carroll, Dublin.*

Michaelmas Corn Averages.—Although the fluctuations in the average prices of Wheat, Barley, and Oats in the farmer's year ending Michaelmas, 1864, have been very moderate, it may be useful to those interested in agricultural pursuits to see the annexed weekly progress, which produces the following averages for the 53 weeks ending the 1st of October, 1864:—

Wheat	40*s.* 9*d.*	per imperial quarter.
Barley	31 1	,,
Oats	19 11¾	,,

The highest and lowest prices during the same period are as follows:—

	Highest Price.	Lowest Price.	Difference.
Wheat,	Aug. 12, 1864 44*s.* 1*d.* ..	May 13, 1864 .. 38*s.* 9*d.*	5*s.* 4*d.*
Barley,	Oct. 9, 1863 35 4 ..	July 8, 1864 .. 27 2	8 2
Oats,	Aug. 26, 1864 22 11 ..	3 Oct. and 13 Nov., 1863 18 7 ..	4 4

The fluctuation in the average price of Wheat—viz., 5*s.* 4*d.* per imperial quarter—has been less in any year ending Michaelmas since the passing of Sir Robert Peel's Corn Law Act on the 26th of June, 1846. The greatest fluctuation occurred in the year 1847, when it amounted to no less than 52*s.* 11*d.* per imperial quarter between the 29th May and 18th September.

WEEKLY AVERAGE PRICES OF WHEAT, BARLEY, AND OATS IN ENGLAND AND WALES, FOR 53 WEEKS ENDING OCT. 1, 1864.

Per *London Gazette.*		Wheat.		Barley.		Oats.	
1863.		*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
October	9	42	2.485	35	4.559	19	8.807
	16	41	0.111	34	7.163	19	4.511
	23	40	4.013	34	0.591	18	8.903
	30	40	0.167	33	11.280	18	7.385
November	6	39	10.973	34	0.569	18	11.443
	13	40	0.967	34	2.513	18	7.862
	20	39	10.349	34	0.677	18	9.004
	27	39	11.868	33	11.813	19	11.662
December	4	40	3.457	33	7.359	19	7.788
	11	40	9.014	33	6.617	19	5.674
	18	41	1.831	32	10.740	19	3.325
	25	41	2.554	32	6.118	19	0.433
1864.							
January	1	40	5.265	32	0.089	19	0.815
	8	39	10.294	31	8.872	18	9.735
	15	40	2.236	31	7.877	18	8.094
	22	40	11.222	31	10.428	18	10.401
	29	41	3.763	32	5.012	18	9.500
February	5	40	8.152	32	1.779	18	11.016
	12	40	4 591	32	0.302	18	9.377
	19	40	8.671	31	11.517	19	1.615
	26	41	1.206	32	0.300	19	8 966
March	4	40	6.620	32	0.687	19	4.058
	11	40	2.325	31	6 037	19	10.455
	18	40	1.981	31	5.454	18	8.527
	25	39	9.233	31	4.009	19	2.789
April	1	39	11.518	30	10.798	19	0.300
	8	40	2.501	31	0.530	19	2.606
	15	40	1.363	30	9.687	18	11.809
	22	40	1.179	30	10.010	19	3.055
	29	39	7.595	31	1.001	19	9.018
May	6	39	2.506	30	6.995	19	4.671
	13	39	9.622	30	3.102	19	5.432
	20	39	3.512	29	9.312	19	8.130
	27	39	8.700	29	6.540	20	0.727
June	3	39	5.837	29	0.981	19	10.269
	10	38	11.522	29	6.214	19	10.872
	17	39	6.392	27	11.636	20	0.286
	24	40	3 794	27	6.345	20	4.348
July	1	40	0.425	28	0.176	20	8.124
	8	40	9.043	27	2 830	20	9.776
	15	41	9.188	27	8.513	21	10.179
	22	42	6.439	27	10.114	21	7.054
	29	43	0 562	27	3.122	21	0.358
August	5	44	0.055	27	7.268	22	4.434
	12	44	1.885	28	3.390	22	10.276
	19	43	6.044	28	1.574	22	0.057
	26	42	7.439	28	7.621	22	11.809
September	2	42	5.502	29	1.551	22	0.620
	9	42	3.008	31	1.601	22	5.446
	16	42	4.125	32	1.149	21	9.905
	23	42	0.809	32	2.089	20	11.331
	30	40	11 608	31	5.282	20	11.131
October	7	39	8.928	30	11.538	20	7.540
	53)	2160	8.419	1647	7.328	1059	1.708
		40	9.215	31	1.043	19	11.805

Charles M. Willich, Actuary University Life Assurance Society, 25, Suffolk Street, Pall Mall, S.W., Oct. 28.

The Potato Harvest.—There are many conflicting accounts relative to the present season's Potato crop. In many districts they are said to be small and unproductive; in others that they have ripened too soon, owing to drought, the produce therefore is short and defective; again they are said to be partially diseased, particularly some varieties. Again, some of the popular sorts have manifested symptoms of declension, while others are in the ascendant, and are improving in character. These and many other reports of the year's Potato crop are no doubt in substance perfectly true, but we incline to think that most of the unfavourable accounts may be entirely owing to the soil and season. It has been a most peculiar season. The early planted crops on mild soils have gone on prosperously from the first; and are now yielding the best crops known for many years. The later plantings on mild soils have done tolerably well, but on dry and stiff soils they have suffered surprisingly, and in some cases the crop was lost. No management, however good and judicious, can withstand such a summer as that of 1864. The drought has been so excessive as to penetrate beneath the Potato ridges on dry soils, and stop their growth; on mild, open porous soils many plants have died, thus rendering the crops thin and irregular. Of course growers are on the alert to ascertain the causes of failure or success, and many are the sage remarks that are hazarded respecting it, and much positive assertion is made relative to mismanagement and errors in practice. We think this is wrong, and displays no small degree of ignorance and presumption. Unquestionably it is the season, and the season only, that has chiefly caused so many failures and thin crops. We name this in order to deter growers from discarding good and well established varieties. It is also quite certain that some varieties have withstood the drought better than others, but that is not altogether a valid reason for discarding those which have been less prosperous. We know that only in the very last year some of these very sorts were decidedly the most profitable, and no doubt will be again under different circumstances, and under the best and most experienced modes of planting and culture. In an ordinary season, for instance, Potato sets of medium size will progress favourably; but in this season the large sets, or the large full-grown Potato, have produced by far the best crops. In the district from whence we write this is abundantly proved, so much so as to constitute it an established fact, and that henceforth our best growers will only plant the best and finest tubers, and these uncut, or at most just so much cut as to deprive the sets of any superabundance of eyes, and thus to produce fewer stems. The Potato harvest in Cambridgeshire, Lincolnshire, and many parts of Yorkshire, is exceedingly good, with scarcely a diseased one to be found. The crop has suffered very severely from the attacks of the larva of the dart moth and others, and thousands of tubers have holes drilled so far into them as to make them unsaleable. This will render good crops nearly unprofitable in money value, but they will leave a large bulk for stock consumption or future seed. The Fluke variety has this season yielded the lowest produce in bulk, and not first-rate in quality. This is a slow growing sort, and not prolific in top, therefore in a season like this it is sure to fail in some degree. It requires a fine free-growing season to produce profitable results. The best sorts of Regents yield admirably; Rocks have produced capital crops; the Snowball variety grow very large this year—100 picked tubers of this kind are said to weigh 2 cwt.; Early Dalmahoys have not done so well; the Red Regents (a new variety) have yielded well, and are of fine quality. The harvest is nearly got in, and in most excellent order. The graves or piles are very promising, and are laid up clean and dry. It is a source of great gratification and thankfulness to find the crop free from [that dire pest,] the Potato disease. *O. F.*

Steam Power.—The employment of steam power is of immense importance and advantage to those who are engaged in trade and commerce, and may not the English agriculturist also look forward to even a greater share of advantage from the employment of steam power in cultivating the soil. One-third of the arable land throughout the country might be laid down to permanent pasture for grazing and fattening of stock without diminishing the arable produce of the soil—for what would be lost in breadth could be obtained in depth by subsoil ploughing and deep cultivation, allowing the plants to send their roots freely through the soil in search of food, but it should be remembered that searching for food is not obtaining it. Subsoil ploughing and deep cultivation should be followed by a liberal supply of good yard manure, made under cover, and to obtain the best results from this system, the subsoil should be stirred to the depth of 20 inches at least once a year, the ordinary ploughings should be increased in depth by degrees until the depth of at least 12 inches of good soil is obtained. The arable land should be as near as possible to the farmstead. A deal of valuable time is lost in moving the steam tackle from field to field. A good solid road should pass through the centre, that the steamer may easily pass down its place of employment at the farm to the field. There would also be a great saving of expense in getting home the corn and roots. *B. Ransley, Perrysfield Farm, Oxted, Surrey, Nov. 3.*

Societies.

BATH AND WEST OF ENGLAND: *Nov.* 5.—The Hereford Meeting was fixed to commence on Monday, June 5, 1865, and it was directed that all entries of Stock must be made, the certificates properly filled up, signed, and returned to the Secretary, on or before the 15th of April. The Stock Prize Sheet was, after considerable discussion of minor details, ordered to be printed for immediate distribution. The amount of money offered by the Society will considerably exceed that given at any former meeting, and this will be augmented by the sum of 400*l.* offered by the Hereford Local Committee, thus making a total of 1500*l.* at Hereford, as against 1147*l.* at Bristol. The Council have decided to give a third prize in the 3-year old bull class of each breed, and to increase the prizes for cows in-calf or milk, from 12*l.*, 8*l.*, and 4*l.*, to 20*l.*, 10*l.*, and 5*l.* respectively. In the sheep classes, the Shropshire Downs are put on the same footing as the Leicesters and other breeds, and in each class, excepting that for mountain sheep, the prizes for pens of 5 yearling ewes will be increased from 5*l.* and 3*l.* to 10*l.* and 5*l.* In the horse classes there is not only an increase in the amount of prize money, but in the hope of bringing better animals into the show yard, all limitations as to the district in which they may serve, or be bred, have been swept away. Care, however, will be taken to ascertain that brood mares fully conform to the representations on their certificates. The prizes for shoeing smiths, offered by Mr. Miles, of Exeter, will be again renewed. The Hereford local prize list, as announced by Mr. T. Duckham, is not only very liberal, but also comprehensive in its range. Prizes to the amount of 150*l.* are offered for Hereford cattle; 15*l.* for Welsh cattle of any pure native breed; 50*l.* for Ryeland sheep, for which there are four classes; and also prizes for Shropshire Downs, long-woolled sheep, close-woolled white-faced sheep, and Welsh mountain sheep. In the horse classes, prizes are offered for hunter, hacks, and ponies; and there are special premiums for Hops, cider, and perry. A novel feature is the proposed competition in sheep shearing in the yard, on the first day of the exhibition; prizes to the amount of 10*l.* having been offered for this purpose by Mr. C. Anthony. The liberality of the Hereford Local Committee was cordially recognised by the Council, and to prevent any unnecessary delay in issuing the lists, a special Committee was appointed to sit at the close of the Council meeting, for the purpose of making all necessary arrangements. On the motion of Mr. Jonathan Gray, it was resolved that the same grant of money be made for music and horticulture at Hereford as on the occasion of the Bristol meeting. The Poultry prize list was brought up by Mr. Pitman, and will be confirmed at the next Council meeting.

Time of Shearing.—Mr. Knollys called attention to the memorial and letters addressed to the Council by breeders of Cotswold sheep and others, as to the proper time for shearing sheep intended for exhibition, and it was resolved, after some discussion, that as it was desirable to assimilate the practice to that of the Royal Agricultural Society, the time should be altered from the 1st of May to the 1st of April.

Farmers Clubs.

LONDON: *Nov.* 7.—The following paper on County Taxation, by Mr. W. Spearing, was read on Monday last, on the re-opening of the session of the London Farmers' Club:—

Mr. SPEARING said—After the able paper which was read on this subject about two years and a half ago by Mr. Corbet, I trust I may be excused if I do not take you back to the commencement of county rates. I would rather endeavour, in the first place, to show, in my brief paper on this question, how in my own and neighbouring counties there is not due regard paid to the pockets of the rate-payers; and then with respect to local taxation, call your attention to some few items which are much larger than they ought to be, instead of opening up such a wide field of discussion as would necessarily arise from entering into the whole system of our local taxation. It appears, from an abstract of the accounts of the several county treasuries in England and Wales, that the receipts for the year ending Michaelmas, 1863, were 212,150*l.* 4*s.* 11¾*d.*, and the total disbursements 1,905,751*l.* 7*s.* 9¼*d.* It further appears from the same abstract, that the total assessments for the same year amounted to 71,339,174*l.* 1*s.* 4½*d.*, and the total amount of debt to 2,444,393*l.* 16*s.* 9*d.* So that this is no small matter as it affects the rate-paying community. To show the way in which this money has been spent, it is only necessary to notice the enormous outlay upon our county gaols, lunatic asylums, militia stores, &c., and this not merely as relates to the building, but to the continual alterations which are being made—the restless activity on the part of magistrates generally to be making what they deem improvements, but which may be more properly designated a wasteful expenditure of other people's money. In support of my assertion I would read the following extract from the report of the committee of visitors of the Wilts County Asylum, signed by Mr. Lowther the chairman:—

"The amount from the rates during the year has been 3,555*l.* 4*s.*; out of that sum 2000*l.* has been paid off—

1,441*l.* 14*s.* 4*d.* as interest on the debt; 750*l.* 10*s.* 8*d.* as balance on this account, which will be required for the payment of interest amounting to 503*l.* 6*s.* 7*d.* due before the Easter sessions."

2,000*l.* has been paid off during the year; but it has been necessary to borrow 2500*l.* by the authority of the sessions to meet the expenditure on the new buildings, leaving a present debt of 34,000*l.* Then under the head of "new buildings" from the same report, you have about as unsatisfactory a statement of the management of affairs as you can well find. The report says:—

"Your committee are glad to inform the Court that the new buildings are finished and occupied by the patients for whom they were designed, and that they fully answer the expectations of the medical superintendent. Additional accommodation has been supplied for 80 female patients. Much delay in the progress of these works has taken place, and complaints of the manner in which portions of the work have been executed have been made, and, in some instances, of the materials. These complaints have been investigated, and the things complained of rectified. The work appears to have been very substantial, and to have been now left in a satisfactory condition; but the final report of the surveyor has not been received."

And then, after having heard that complaints have been made of the work, we have the satisfactory announcement "that a considerable demand for extras has been sent in by the contractor, which has to be investigated by the county surveyor: but his report has not been received." It seems that after this report was issued an adjourned sessions was held in February last, and this expensive way of doing things, coupled with another matter, led to the resignation of the county surveyor; but in looking into the whole affair it has struck me that the unfortunate surveyor, who no doubt was to blame, was made a scapegoat for the committee's incapacity. The surveyor applied for extra remuneration, and it appears that he obtained about 90*l.* for his mistakes. It further appears with regard to some cottages, that these were built with only two bedrooms, three of course being soon required. Perhaps I cannot do better than read the remaks on this subject of Mr. R. P. Long, the member for Chippenham, to whom the ratepayers of Wilts are greatly indebted for the pains which he has taken to sift this and other matters, although he meets with little or no support from his brother magistrates. He said:—

"It was with great regret he expressed any opinion of his own upon acts which had already taken place; but at the same time he felt bound, as an independent magistrate, to speak out plainly. With regard to this particular work, it had been most unsatisfactory from beginning to end. These cottages, as he understood the figures which had been given to him, had up to Michaelmas last cost the county no less than 145*l.* each, exclusive of the proposed outlay of 184*l.* of the estimate of 620*l.* which had now been submitted to the Court, and of 300*l.* for the purchase of land adjoining; so that they would find, when they had finished building, repairing, and altering, that the 10 cottages would stand the county in upwards of 250*l.* each. These were very awkward figures; and looking at the unsatisfactory position in which the whole question now stood before the county—as the fact that the cottages were first of all most unfortunately placed, and that they were built in so unsatisfactory a manner as to require the outlay of so large a sum of money to make them decently habitable—he honestly thought that the best thing the county could do would be to wash its hands of them; to sell them to anybody who would buy them, and go back to the old plan of accepting the lodging allowance from the Government. That would, he was convinced, be the cheapest and the most satisfactory plan of repairing the mistake that had been made; and if the Court acquiesced, he would move that that be the course adopted. It would be most unsatisfactory to those who paid the rates, if matters like this were allowed to come before the Court, and to pass merely from a dislike to go into a disagreeable question. That laches existed somewhere—he would not say where; that there had been a great want of responsibility and control, first over the site and then over the plan, no one could gainsay, because no gentleman who built cottages in these days would think of doing so without providing three bed-rooms. To provide three bed-rooms in a cottage was now considered a matter of course, and why the county should have been satisfied to build such cottages as no private individual would think of building, and that in a position below the level of the road, and below the dam of the canal, he could not understand. Nor was this all; the drainage appeared to be as defective as the cottages themselves. The only provision for the sewage underground was by ordinary unglazed unsocketed pipes, through which liquid matter would necessarily penetrate. In short, the whole affair showed that there had been great want of supervision on the part of the county surveyor, or on the part of those who directed him, and unless some explanation could be given which would completely exonerate the magistrates, he should oppose the extravagant outlay that was now suggested, and propose that the paragraph in the report which recommended it be struck out, and that the Court sell the cottages, and revert to the original plan of receiving lodging allowance for the militia staff from the Government."

It is hardly necessary to say that such a motion found little favour with the Court; and on its being put to the vote, only one hand besides Mr. Long's was held up for it, plainly showing how great a regard magistrates have for ratepayers' pockets. Then, again, there is the system of keeping so many prisons in the different counties, and the staff of officers necessary for the work. Take the county of Berks for instance, and observe the expense incurred by keeping up the different prisons. In order to show how business is transacted there, I would quote from what took place at the last Easter sessions in that county. After the report of the Finance Committee had been read by Mr. Crutchley, the Hon. P. P. Bouverie asked Mr. Crutchley—

"Whether the finances of the county were in such a position that he would be responsible for them?" adding that "that was the most heavily rated county in England, with perhaps one exception." Whereupon Mr. Crutchley said: "He only saw that things were paid for by the authority of the Court; the various officers gave the orders: he ordered nothing. He understood the county rate was a halfpenny less than last year." Mr. Bouverie said, "A year or two ago the Court refused to appoint a finance committee, Mr. Crutchley having kindly undertaken to discharge the duty. They were told some time ago that they were in fault in not knowing anything about the expenditure. Hereford was the only county that was rated higher than Berkshire, and he extremely regretted the decision the Court had come to, in not having a finance committee. They were binding themselves to a very considerable expenditure for the lunatic asylum. They were bound in fairness to the ratepayers to have a clear examination as to the position of their finances. He had reason to believe that some of their loans were not quite in accordance with what was thought right by those who examined the accounts. He thought they ought to have a finance committee." The Chairman then said: "There was a finance committee, and it was open to any person to attend." Whereupon Major Court made the sensible observation that "What is everybody's business is nobody's." Mr. Young said: "It appeared that Mr. Crutchley was only the auditor of the accounts. He thought, looking at the large indebtedness of the county, and the demands for the lunatic asylum, there was required something more than a mere audit. It should be clearly ascertained whether they borrowed money on the best terms, and whether it was laid out in the most judicious manner, and if it were moved, he should vote for a finance committee. Everybody was complaining that the rates were so high, and yet there was only a mere audit of the accounts going on." Mr. Bouverie rejoined: "The audit which Mr. Crutchley undertook was very imperfect. The treasurer was called upon to pay certain expenses of the police, and it was not in the treasurer's power to refuse the payment of those bills, if the charges were wrong in any way, and not according to scale, which they might occasionally be unless he were strengthened by a finance committee. In Somersetshire the expense of sending prisoners to gaol was set down at 100*l.*, while in Berkshire it was 600*l.* It was the duty of somebody to show that the money was laid out properly." And then, to conclude the matter, Major Court said: "There were charges frequently made by the police which might be avoided. The police made the expenses as high as they could, that the amount might appear to their credit.'

I should not have taken up your time in reading these extracts, but I thought they would show better than any remarks of mine the way in which our money is squandered away; and if evidence were wanted to prove the unsatisfactory state of things, I am convinced we could not do better than by taking the report of what passes at the Quarter Sessions. There is, again, a heavy item in payment to coroners; but the present method of paying by a fixed salary is better than fees. The average expense of holding inquests for the seven years ending 1862 was about 65,000*l.* a-year, and the expense of each inquest 3*l.* 3*s.* Then, again, there is the expense of maintaining the police force—a very heavy item in our county expenditure. I think that ratepayers generally have great reason for complaint at the way in which this force is often employed, and the recent Act with regard to game has tended more to take them from what ought to be their legitimate employment, and made them less useful to those, who, considering their money payments, ought to have a greater share of their services. To illustrate this, I cannot do better than mention the case of Fuller the higgler, who was brought before the Norfolk bench of magistrates, and convicted on the evidence of two policemen, which case so miserably broke down in the Court of Queen's Bench; and upon which most of you have, no doubt, read the able article in the *Mark Lane Express*. I would congratulate the grand jury of Devon on the way in which they spoke out on this matter at the last Quarter Sessions at Exeter. These gentlemen having been engaged in several cases, from which it appeared the police were continually employed in watching preserves and endeavouring to apprehend poachers, instead of performing those duties that properly fall to their share, at the end of their labours made the following presentment to Sir S. Northcote, the Chairman:—

"The grand jury wish to represent to her Majesty's justices of the peace for the county of Devon, that the functions of the police are much misapplied by their being called upon to watch and assist in the preservation of game. As an instance of this position, they would draw the magistrates' attention to the case of Thomas Rice, charged with stealing gins."

Again, take the maintenance of prisoners and the keeping up of so many separate prisons, entailing a very heavy expense upon ratepayers. If calculations were accurately made, it would be found that the over-preservation of game tends not merely to injure tenant farmers as occupiers, but is the cause of a two-fold injustice, inasmuch as they have to pay a very heavy amount for the maintenance of those who, but for this temptation, would have no incentive to crime, and consequently we might hope would never become the inmates of a prison. And now, having glanced at the manner in which the county expenditure is managed, I will endeavour to show from my own experience how heavily it bears upon individual ratepayers. Living in a very small parish, and paying considerably more than half the rates, I am enabled to speak feelingly in this matter. I need hardly say I consider that county-rates would not be submitted to so quietly as they are, if the greater part of the ratepayers knew the amount they paid; but for some reason or other the county-rate has been jumbled together with the poor-rate, and except a little grumbling now and then about the expense of poor-rates, little is heard or thought of the subject. To show how heavy in a small parish the county-rate is, I give you the separate amounts paid each year since 1858, for the relief of the poor of my parish, the county-rate, and the common fund charges, distinguishing each:—

				£	s.	d.
Poor-rating for year ending	Michaelmas	1858 ..		21	1	0
,, ,, ,,	,,	1859 ..		10	1	10
,, ,, ,,	,,	1860 ..		9	13	0½
,, ,, ,,	,,	1861 ..		11	15	1½
,, ,, ,,	,,	1862 ..		9	15	8½
,, ,, ,,	,,	1863 ..		14	16	10
		Total ..	..	£77	13	3½

The county-rates during the same years are as follows:—

				£	s.	d.
Year ending Michaelmas,		1858 ..	..	£14	17	0
,,	,,	1859 ..	..	18	10	2½
,,	,,	1860 ..	..	15	5	3
,,	,,	1861 ..	..	18	18	1½
,,	,,	1862 ..	..	14	17	0
,,	,,	1863 ..	..	17	6	6
		Total ..		£89	11	1

The common fund charges were as follows:—

				£	s.	d.
Year ending Michaelmas,		1858 ..	..	£8	4	11½
,,	,,	1859 ..	..	8	4	1
,,	,,	1860 ..	..	9	13	9½
,,	,,	1861 ..	..	10	0	4½
,,	,,	1862 ..	..	9	15	8½
,,	,,	1863 ..	..	33	0	0
		Total ..		£60	18	11

Being the amount after the alteration with regard to contribution to common fund now charged on the rateable value of the parish. You will see by these figures that our contribution to the county rate is considerably more than we pay to the relief of the poor of the parish, and would, but for the last year, have been equal in amount to the whole of our poor-rate and common fund charges. I have no doubt that all those present who reside in small parishes may be able to corroborate me. I might have given you the whole amount of the union, but I trust enough has been said to prove the burden these rates are upon the ratepayers. And now, having endeavoured to prove that the county rates are a heavy item in our expenditure, and that in many, if not most, instances they are considerably increased by mismanagement, I would ask, Who are the parties entrusted with their administration?

How often, if you read over the names of those who conduct this business at sessions, do you find the names of many gentlemen who have little or no stake in the county! Others—as, for example, some of our parochial clergy—though excellent men in their proper sphere, are not qualified, either as large ratepayers or otherwise, to assist in the spending of such a heavy amount. Why, I have a near neighbour, who has very lately become a considerable landed proprietor, the rateable value of whose farms must have been 3000*l.* per annum, and yet he has no voice in our county expenditure. Taxation without representation is inconsistent with those principles upon which our constitution is based; yet, as regards this matter, this principle is departed from, and the ratepayers, whose voices are heard through the guardians at the poor board and the waywardens at the highway board, are from some as yet unexplained cause debarred from voting in any way upon a question which concerns them as intimately as either of the foregoing. With regard to our local taxation, I will not now enter into the question whether the present mode of assessing to the poor-rate is a correct one, that subject having so lately been under discussion here; but there are items which, although seemingly small in themselves, ought to be considerably lessened: I allude more particularly to those which are classed under the head of "Costs of Proceedings before Justices," "Justices' Clerks' Fees," and the like, which seem to be regulated on no fixed principle, but are treated as amounts to be taken from the several parishes almost at the caprice of the clerk to the magistrates. These are matters which could be managed equally well by the board of guardians itself, as by the magistrates sitting at a petty sessions. We, as ratepayers, fill our parochial offices, and are often put to considerable inconvenience and expense by being called upon to attend the meetings. We are called upon to pay for our attendance, when, as I said before, the whole matter might as well be done elsewhere. Take, again, the Highway Act. It may prove, for aught I know to the contrary, a useful measure; but here, again, any disputed matter is referred—to whom? Why, to the very men who frequently know far less than the board of waywardens. We are bound to submit to the superior decision of a body who know little or nothing of the expenses attendant upon repairing what may very frequently prove a useless road. It behoves every ratepayer well to consider his position, and to see whether, under the plausible pretext of improvement in much of the legislation that takes place, there is not a clause or two in most Bills inserted which strikes at the root of local self-government. Take the question of church-rates—I do not allude in any way to their repeal or otherwise—but there are items under this heading which we are called upon to pay, small in many instances in amount, but still making a considerable sum in the course of a few years. Being a churchwarden, I cannot appreciate the privilege of having to pay out of my own pocket at every visitation something like 1*l.* or 1*l.* 10*s.* for "Pentecostals and Apparitors' Fees," and nobody knows what besides. These are not heavy items, but you have similar ones, as I have said before. What of your highway-rate you get in your poor-rate—and the total together makes something considerable. And it is to be traced to what I wish to impress upon you by this paper, namely, to the fact of the ratepayers not, either in their own persons or through their representatives, exercising a sufficient control over the expenditure.

And now, gentlemen, as to the question of a remedy for these grievances: I am ready to admit that I know of no other than that pointed out by Mr. Corbet, in his paper on this subject, and which has also been brought before the House of Commons, viz., the establishment of county financial boards, to consist of representatives either from the board of guardians, or the ratepayers themselves, and a like number from the magistrates of the county. I believe many of those gentlemen, equally with the ratepayers, would gladly submit to a plan by which our county finances may be subjected to a closer supervision; but it is difficult to reform anybody so little amenable to control as our county magistrates, viewing them financially. It may be stated that this is not a tenant's question; but surely, from the large amount invested by tenant farmers in land, any additional increase or burden is so much money drawn from their pockets, and equal to additional rent, and consequently they have as great an interest as any others in this matter. In conclusion, let me say that I should not have trespassed upon your time this evening had I not believed that now, on the eve of a general election, is the time for making ourselves heard. And in appealing to the ratepayers in our rural districts, I would impress upon them that this question of county finances is a matter the mismanagement of which causes them

to be really out of pocket. It is, if I may so term it, a breeches-pocket question. It is not dependent on dry or wet seasons, the poor-rate being enhanced very frequently one-third and sometimes one-half. This is a question which you must impress upon the candidates for suffrages at the next election. It is such questions as this, and the repeal of the malt-tax, and one or two others, that ought to decide our votes; and Conservative as I am, I cannot but confess that "measures, not men," should be the watchword of those who really mean to move in this matter. If we let this election pass over, we shall be reminded at our agricultural meetings of the advantages of high farming and such like questions; and unless we improve the present occasion, our debating here will be little better than idle talk. Finally, take every means of showing that you are suffering an injustice, that there are means by which that injustice may be remedied, and I have that confidence in the justice and wisdom that eventually prevail with Englishmen which leads me to believe that the remedy we seek will eventually be applied.

MIDLAND.—At a special meeting of this Club, held in Cannon Street, Birmingham, Mr. Osborn read a paper on the subject "How to provide food for cattle and sheep in the best manner during the coming winter." R. C. Chawner, Esq., presided, and there was a large attendance.

Mr. OSBORN commenced by remarking that gentlemen present must not expect that he was going to teach them any new plan of feeding, as he did not pretend to do anything of the kind; he should only lay before them a plain statement of his own case, and he hoped it would be the means of eliciting remarks which would throw some light on a subject wherein they were all so deeply interested. In order to comprehend the difficulties under which farmers were labouring, it would be necessary to bear in mind that the spring of 1863 was peculiarly unpropitious, and that in many cases the mixed seeds usually sown with the winter corn did not vegetate, while in others they had but a puny and sickly existence, until cut down by the winter's cold. Thus arable farmers were not only short of winter keep, but they had no place in which to depasture their animals in summer. In addition to this, the hay crop was one of the lightest which has been known since 1826, and many of the seeds are again a failure. From these facts it would at once be clear that it was impossible to exaggerate the importance of the crisis to stock farmers. The failure of the Turnip crop was, however, the greatest calamity the husbandman had to contend with. From inquiries he had made in various directions he was led to conclude that the root crops in the midland and southern counties did not come up to one-fourth of their usual average. His farm consisted of a little under 400 acres, 350 of which were arable; and as he was perfectly free from restrictions as to cropping, and had long been impressed with the importance and value of green crops, he had always grown as large a quantity of them as possible. His land requiring the mechanical pressure of sheep to consolidate it, he kept a flock of from eight to nine score Shropshire ewes, which, being a prolific race, give a large fall of lambs. These are kept until they are two years old, so that without purchases he usually commenced the winter with between 500 and 600 sheep, and generally reared 20 or 30 calves. His custom in feeding on Turnips was to draw off one-third of the crop for use in the sheds, giving them pulped and mixed with cut straw to the cattle, which were also allowed loose straw *ad libitum*. The feeding stock were fed upon Swedes, with an allowance of malt dust, Barley or other chaff, oilcake, and bran. The tegs were not generally allowed much corn during the first winter, except those which were the most forward, and which were selected for forcing, in order to get them ready for market soon after shearing day. He generally calculated upon having 1200 to 1600 tons of roots at this time of the year; but although he had sown about 100 acres with Turnips, Mangels, Rape, and Cabbages, he did not think he had more than 400 tons. It would thus be apparent to all that he must exercise the strictest economy in order to keep his usual quantity of stock upon one-fourth of his usual provision. The chaff engine and pulping machine would have to be in constant requisition; and these mechanical contrivances must be supplemented by a large quantity of corn and cake. Although it was necessary to give Mangel tops to animals with very great caution, yet, as the case was now so urgent, he proposed to pass them, with a large quantity of straw, through the chaff cutter, and thus he hoped, with very little adventitious aid, to make a good useful food for store stock. Immediately after harvest he sowed 50 acres of Wheat stubble with Rye, which was fast becoming a good pasture, and would probably keep about 200 tegs for six weeks or two months. The Cabbage crop had been a very precarious one, but he had a tolerably good crop on an acre or two of land. The largest and best of these would be pulped and mixed with other food, and thus form a nutritious compound. Mr. Osborn strongly advocated a more general cultivation of the Cabbage, notwithstanding the objection urged by some persons that it exhausts the soil. There was as much nutriment in 5 lb. of Cabbage as in 10 lb. of Turnips, and the former had also the advantage of being cultivated under peculiarly favourable circumstances. They were very good articles for lambs at weaning time, or at any time, when they were attacked with diarrhœa. It was pleasing to know that the straw of this year's growth, though light in quantity, was unusually bright and good, and was therefore very valuable when cut and mixed with meal and other preparations. Flax, also, with the aid of Linseed, was as good and cheap a food as could be procured. This winter he proposed to steep a peck of Linseed in about 30 gallons of water for three days, when the mixture would become mucilaginous, and when sweetened with a little treacle, and poured upon a large quantity of chaff, and left to ferment for about 12 hours, would be eaten by the stock with great avidity. This mixture he should give to store cattle with about 3 lb. of mixed Barley and Pea meal, and 3 lb. of cotton cake, with as much Barley and Wheat straw as they liked to eat. Feeding beasts would of course require more liberal treatment, and he hoped to spare for the few he meant to stall-feed about 60 lb. of pulped Turnips per day, mixed with chaff prepared in the same way as that for store beasts. This quantity of Turnips should be added to two bushels of chaff, 6 lb. of meal, 4 lb. of cotton cake, and a small portion of Beach's farinaceous food, or Griffin & Morris's compound for cattle, both of which compositions were most valuable auxiliaries in inducing cattle to consume a large quantity of chaff. It was much more difficult to economise Turnips in feeding sheep than cattle, where land requires treading to prepare it for future crops, and his sheep would have pulped Turnips mixed with chaff and meal given to them on the ground where the Turnips grew. Some agriculturists were of opinion that they ought to take advantage of Mr. Gladstone's permission to use malt as food, but every practical man knew that the restrictions of the Act of that gentleman were so severe as to make the permission inoperative. It might be urged that his remarks were at present only serviceable to those persons who had a portion of a root crop, and the question might be asked, what are those farmers to do who have no roots at all? In answer to that he read Mr. Frere's letter published some weeks ago in our columns, on the use of Wheat as food. He knew several practical men who had adopted Mr. Frere's plan of using boiled Wheat, and were perfectly satisfied with the results. Mr. Osborn also read a letter from Mr. John Peel, M.P., and then said the practical conclusion to which he (Mr. Osborn) wished to direct attention was, that the use of the chaff cutter and pulping machine must become general, and that as long as only the present low prices could be obtained for their produce, it was better for them as agriculturists to use their corn liberally to fatten their stock than to draw it a long way to market, to sell it at a price which was not only unremunerative, but would not pay the cost of production.

Mr. WIGGIN recommended for cattle the use of grains with kibbled Oats and chaff of either Wheat or Barley straw, as he found cows did exceedingly well upon this kind of food, and gave a considerable quantity of milk, even at this period of the year. Such a consumption of Oats was much better than selling them at their present low price.

Mr. MAY referred to the necessity of taking into account the relative feeding properties of the various articles to which attention was directed, and distinguishing between the nitrogenous and carbonaceous elements of which they are composed. Beans and Peas stood first in regard to their flesh-forming elements. Next came Wheat, and then Linseed cake and cotton cake, which were reckoned of the same value, although farmers preferred the former. Bran was placed next by the chemist as a valuable food, being followed by Barley and Oats, the cheapest article being Indian Corn. The plan of supplementing other food by grains, alluded to by Mr. Wiggin, was adopted to a very large extent by many persons not only near to Burton-upon-Trent, but at very long distances from it; but at 5*d*. per bushel up to the 1st of June, and 6*d*. per bushel during the rest of the year, the article appeared to be dear and bulky. Mr. May advocated the moderate use of treacle for lambs. Yeast was also a cheap and valuable article of food.

Mr. J. BALDWIN spoke of the great value of Indian Corn for feeding. At present prices it was cheaper than grains, could they be had for the mere fetching from Birmingham.

Mr. JOHN LOWE thought that the recent very dry season would to some extent be useful to the farmers in teaching them to husband their resources, and arrive at conclusions which would be beneficial to themselves, and also to future generations. He had lately been conversing with several gentlemen who were using cotton cake to a large extent, and they all spoke in high terms of its good feeding qualities. He thought it might be with advantage used more extensively in future.

Mr. WRIGHT said that in most of the communications to the public journals on the subject of feeding stock during the winter, he found it recommended that the chaff, meal, &c., should be sprinkled with something to moisten it before being used, and he ventured to suggest that hay tea would be found very useful for this purpose, and make the mixture fragrant and palatable. His attention had been drawn 20 years ago to the employment of hay tea for pigs, by reading what had been done by a gentleman in Gloucestershire, and he had used it frequently, and, he considered, with success; for it appeared admirably adapted for young growing stock, which became sleek and grew well upon it. The attention of a French chemist was drawn to hay tea some ten years ago, and the opinion he gave as to the result of his own analytical researches was that it appeared to form "a very rational drink, which independently of its aromatic, tonic, and stimulant qualities, offers to young animals, in a form which pleases them, a food which is rich in nitrogenous principles, and containing, moreover, in very considerable proportions, the principles necessary for the development of their bony structure." The process entailed very little trouble, the hay being pressed closely into a sack, which should be placed in a furnace filled with water and boiled for about half or three quarters of an hour. The better the hay the better would be the tea, and perhaps Clover was the best of all to use for the purpose named. In some of the communications to which he had alluded, reference was also made to the use of Locust Beans, which, in conjunction with other articles, must be of considerable value as cattle food, containing, as they did, not less than 48 per cent. of sugar. A friend of his, who, like all other farmers, was making preparations to meet the coming winter, told him (Mr. W.) that he had last year used the Locusts for his stock, merely breaking the Beans for sheep, and boiling or mixing with hot water those required to use with other food for cattle. The question had arisen as to whether the seeds of the Locust Bean were injurious, but the friend to whom he referred said he believed they were not so to ruminants. He (Mr. W.) had on several occasions given this food to young growing pigs with good effect, but these appeared to reject the seeds, which were so hard that it was almost impossible to break them. Reference had been made by Mr. Osborn and other gentlemen to the cultivation of Cabbages for stock, and there appeared to be a general impression that this might be advantageously adopted to a much greater extent than had hitherto been the case. In the early part of the present year he had some conversation with Mr. Clarke, the intelligent farm agent of Mr. Holland, at Dumbleton, and that gentleman had informed him that he commenced with growing only a limited quantity of Cabbages, but finding them so very productive he had gone on increasing the acreage, and with perfect success. In anticipation of that meeting, he (Mr. W.) had written to Mr. Clarke, asking him to kindly supply a few facts as to his mode of cultivation, &c., and he had received a communication from that gentleman, which he would read, and one passage of which he thought might be considered, to some extent at least, to meet the statement that a crop of Cabbage unduly exhausted the soil. Mr. Clarke said:—"In reply to your enquiry, I have to state that I have grown Cabbage on all kinds of soil, but a deep clay suits it best; and, with a good dressing of farmyard manure, I have rarely failed in growing a good crop. This year, the early planted gave a good yield upon stone brash, where Cabbage has been grown five years out of seven, but the dry weather was too much for the later planted, although where the plants stood they have latterly grown rapidly. I am now planting, notwithstanding it is late, with the chance of getting some spring keep. I have no hesitation in saying this is a most valuable crop, and will feed all kinds of stock well, and produce a greater weight of keep per acre than any other crop. It should have five to seven loads per acre more manure than Swedes or Mangels; this would be equivalent to the artificial manure applied to the latter. Half the crop may be eaten off by sheep on the land, and the other half carted off for cattle. I pulp some, and mix with chaff and flour for my dairy cows, and the butter is as good in winter as when they are eating Grass in summer. I generally plant Wheeler's Imperial for my first crop, and Drumhead for autumn. The King of the Cabbage and Early York are good for intermediate planting.

Mr. H. ADKINS described the mortality which took place in his flock of sheep a few years ago, when 35 out of 50 died, as he believed, from the use of cotton cake.

Mr. PEEL said he had no doubt the losses spoken of were caused by adulteration. He was using five tons of cotton cake per month. There was nothing at all injurious in it when it was genuine; but it was sometimes adulterated with mustard seed, and the essential oil of mustard. He had used cotton cake in large quantities for three years, and his neighbours could testify that he had sent some tolerably good stock to market.

The PRESIDENT said he considered the present a very trying time, especially for those gentlemen who kept a large number of sheep. How they, and not the cattle, were to be fed formed the most difficult question to solve. Mr. Lowe had mentioned chaff cutters and pulping machines, but had he an engine to work such apparatus? He (Mr. Chawner) had for some time employed a small steam engine for this purpose, and he thought it the most useful article upon his farm. He concurred with what Mr. Baldwin said about Indian Corn, as he had kept a large number of cattle for 30 years, and had never found anything equal to it. He did not believe that they could find a more wholesome and flesh-producing article than Indian Corn, which could either be ground, broken up, or steeped. He always found in spring, when the root crops were exhausted, it came in very useful for the support of stock. The present crisis would be felt to be more pressing when the sheep began to look for something different to eat to what they receive from the troughs. Those persons would be the best off who had doubly manured those seeds and turf which were intended for the reception of stock. Such would bring their sheep free from disease and in best condition for market. They were obliged to Mr. Wright for his suggestions respecting Locust Beans and hay tea, the latter of which was very valuable for moistening the chaff. He also begged to thank Mr. Osborn for his valuable paper.

From the Midland Counties' Herald.

SMITHFIELD CLUB.—At last week's Meeting of the Council the judges to act at the ensuing December meeting were appointed. The House list of the eight Members whom the Council proposes for election in place of those who will have to retire (not re-eligible for one year) was prepared. Members can obtain a copy of this list by applying to the Secretary, either on the day of the General Meeting or on any of the three days previously (Sundays excepted) between the hours of 10 and 4 o'clock.

The Hon. Secretary requested the Council to define the arrangements under which the award shall be furnished to the Press on the day of adjudication, and suggested the following, which was carried unanimously.

1st. That for the information of the Agricultural and such other Journals as may wish to publish the awards the same evening, the winning numbers be posted on a placard in the galleries from time to time as the judges proceed.

2d. That the Reporters of the Press generally shall obtain the complete award by applying at the Hon. Secretary's office in the Hall at 3 o'clock, when a clerk will be in attendance to read over the numbers so that the Reporters may mark their Catalogues, as is usual at the country meetings of the Royal Agricultural Society of England.

Thirteen new members were elected.

Reviews.

Agriculture: Ancient and Modern. A Historical Account of its Principles and Practice, &c. Part VII. By "The Old Norfolk Farmer." J. S. Virtue.

The seventh part of this work pursues the description of farm crops—Wheat, Oats, Barley, Rye, Maize, Buck Wheat, Beans and Peas, Vetches, Grasses, artificial Grasses, the Turnip, Kohl Rabi, Parsnip, Carrot, Cabbage, and Potato.

The several sections in which these crops are described certainly give a good deal for the information of the cultivator; but they do not teach as they ought to do their cultivation. The chapter on Potatos, for instance,

tells us the whole history of the plant—the statistics of the cultivation in the various countries of Europe, the chemical composition of it, the diseases to which it has proved liable, and the whole history of the Irish famine—but how many bushels of sets are needed to an acre, and how far apart and when they should be planted, and what the best method of cultivation is, we are not informed. In the section on Barley we are told a foolish story about the growth of Barley from seed of Oats, and we are assured that the doctrine of the transmutation of species in plants, although repudiated by the generality of naturalists as contrary to all rational science, yet has been proved true by so many experiments as to set all doubts at defiance! The Number is not a satisfactory one. We make the following extracts:—

1. *Of Transmutation of Species.*—"We will here give an account of a new variety of Barley which has not that we know of, yet received any name, but which was procured under such singular circumstances as to demand a notice. The circumstances were as follows:—In the summer of 1856 Mr. John Ekins, of Bluntisham, in Huntingdonshire, sowed some Oats in his garden in the beginning of June. It should be premised that this was done by way of experiment, to test the truth of the transmutation of Oats into Rye, which, it is affirmed, has frequently taken place under particular treatment. The plants were cut down when they had attained about 1 foot of height, and this was repeated thrice, after which, as the weather became cold, and they no longer grew rapidly, they were left to stand the winter. Those which survived till the spring threw out fresh tillers, and at the proper time shot forth ears, but, to the astonishment of the experimenter, neither of Rye nor Oats, but Barley. The produce was sown the next spring, and produced the same grain, but of a better quality; and since that period so superior has the variety proved, and so much esteemed by the maltsters, that it has been adopted generally by the farmers in the neighbourhood, who are satisfied both with the quality and the yield. We have now a sample of this Barley before us, which is pronounced by a corn-factor to be of excellent malting quality.

"The doctrine of the transmutation of species in plants, although repudiated by the generality of naturalists as contrary to all rational science, yet has been proved true by so many experiments as to set all doubts at defiance. The two instances we have already stated in the case of Wheat are of this nature; and this one of Oats transformed into Barley is not more wonderful, the two plants being of the same natural order. The following remarks by Dr. Keissenborne, a German naturalist, are confirmatory of the truth of the doctrine:—

"'With reference to the transmutation of Oats into Rye, this remarkable phenomenon has not only been verified by new experiments, but we have caused beds to be sown with Oats, in order that we may be able to silence disbelievers by producing Rye stalks which have sprung from the crown that still shows the withered leaves of the Oat plant of the previous year. I repeat that this transformation does take place (about midsummer), the plants being cut twice (or thrice) as green fodder before shooting into the ear; the consequence of which is, that a considerable number of Oat plants do not die in the course of the winter, but are changed in the following spring into Rye, forming stalks that cannot be known from those of the finest Rye. The Society (agricultural) of Coburg takes credit to itself for perseverance in having struggled against the opinion of the public for several years, in order to establish a fact which no physiologist would believe, because people are always apt to confound the laws of nature with those of their own system.'"

2. *Turnip Feeding.*—"It has been asserted of late years by agriculturists of standing and eminence, that the Turnip and other root crops are so far from being profitable to the farmer, that when all expenses of cultivation and attendance upon the cattle are taken into the account, the balance-sheet would show a heavy loss at the end of the season, without reckoning the loss of animals by accident or disease, which is frequently also very heavy; and they argue from this, that farming would be more profitable if they could dispense with root crops and cattle grazing altogether, so far as the winter is concerned, the bullock shed being, at best, only a manure manufactory, and the cattle the working machines in it.

"This, however, is a very narrow view to take of the question; because, if it is admitted that the direct return for the expense of raising a Turnip crop and consuming it by bullocks is usually very small, and probably may sometimes exhibit a balance on the wrong side of the page, those expenses ought in fairness to be spread over the whole course of crops, which receive a double benefit, in the better condition and cleanness of the land, and in the unexhausted manure in the soil after the Turnips are removed. If we add to these the conversion of the straw into manure of a far superior quality to what was formerly made by lean cattle, it needs no calculation whatever to prove that the Turnip husbandry is the basis of agricultural prosperity; and we see the proofs of it in the condition of the land, as well as of its cultivators, as compared with what it was before the alternate culture and the Turnip husbandry were introduced.

"It is not always, however, that cattle winter grazing is unprofitable, or attended with a loss: and at the present, which seems likely to be the permanent, price of beef and mutton, we might expect to find the reverse to be the case, and that independent of the collateral advantages there would be a direct profit upon the consumption of the Turnip or Mangel crops. If we estimate the whole expense of raising them, in round numbers, as averaging 9*l.* per acre (which we believe to be not far from the truth), that quantity of Swedes will fatten a bullock of from 60 stone to 70 stone, that may be purchased at any of the fairs at Michaelmas for 14*l.* When fat, it will fetch 8*s.* per stone, or from 24*l.* to 28*l.*, which certainly will entail no loss on grazing. We have, however, given the extreme cost price of the lean animal, which may frequently be purchased for 12*l.* or 13*l.*; but the above estimate is sufficient to show that cattle grazing is not necessarily or invariably a losing game. If corn or cake are employed, the fattening process will be hastened, with a corresponding decrease in the consumption of the Turnips, so that it will benefit rather than injure the account."

Farm Memoranda.

Cassiobury Farm.—The Cassiobury Farm, within this district, presents a new feature of agricultural movement, in the application of town sewage by steam-power to arable and Grass land. It thus claims a notice as one of the remarkable farms of Hertfordshire. When the Health of Towns Act was adopted by the town of Watford, the Earl of Essex made an agreement with the Board to take the sewage for agricultural purposes at the point of its discharge, bordering on his land in the valley of the Colne, to the south-westward of the town, which consists principally of a long street, which rises with a gradual inclination of about 60 feet on the north bank of the river. It is well-calculated for the discharge of its drainage, assisted by an abundant supply of water. The population contributing its sewage matter is calculated at 4000.

The works where the sewage is received consist of a series of brick-built tanks on a back stream connecting with the river, from whence it is pumped by a 12-horse stationary engine by pipes, laid across the farm, which lies partly on the slope of the hill, but of which the greater part is a "plateau" of a superior soil of deep argillaceous loam resting on the chalk, naturally drained, therefore well fitted for the purpose, though perhaps not affording so good a test of this system as would be secured in an inferior soil. The farm is very generally cleared of all superfluous hedgerows.

The irrigation is by hose and hydrant, as in use where this system is carried out elsewhere. When the entire quantity of the liquid sewage is not wanted, or when the ordinary flow of the drainage is augmented by rain, the waste is turned through several covered filtering beds, which partly purify the liquid as it flows through them to the river. Not more than 50 or 60 acres of arable land of the farm are under this treatment; the application of the sewage is chiefly confined to 7 or 10 acres annually, which is under Rye-grass in rotation. The crop is used to soil cattle in the summer, and is mostly cut with the scythe four or five times during the year.

From the arable land the pipes are carried across the turnpike road leading from St. Alban's to Rickmansworth, which divides this (Harwood's) farm from Cassiobury Park, where the sewage is distributed over 36 acres of the green sward in the park. This space is enclosed by an iron fence, so that the crop may either be mowed for hay or fed with cattle. The results of this application of town sewage are deemed satisfactory in both these cases, of which fuller details may be found in the evidence of the Earl of Essex, given before a Committee of the House of Commons in March, 1862.

Before this experiment was commenced, the application of liquid manure had been carried out on another part of the Cassiobury estate, which is not described in his lordship's evidence. This was done on the home or dairy farm, where arrangements were made in a well constructed cow-house built for the purpose of catching the drainage from 24 stalled cows used for dairying. The liquid manure is diluted with water raised from the river which runs through the park, and is distributed after the manner before described, by a small steam engine. This has wonderfully improved a soil remarkably sterile by nature, on which it forces large green crops, especially Italian Rye-grass, used as fodder for the cows and some young stock raised on the estate; a system lately adopted and improved by the infusion of blood from the well-known stock of the late Mr. Stewart Marjoribanks, of Bushey Grove, in the neighbouring parish, from whence the dairy stock is to be gradually replenished.

The White Pigs kept on this farm are of a breed superior to that generally seen in this county. Though the buildings, with the exception of the dairy and cow-house, have not a model aspect, here and at Harwood's farm, the old buildings have been adapted to modern improvements. The yards are roofed over with ¾-inch boards, covered with asphalte felt, tarred and sanded, which, with well-seasoned Larch poles set in iron sockets, forms a sufficient but inexpensive covering at 5*s.* per square yard; by this means Lord Essex considers that a great saving is effected in the consumption and carting of straw converted into manure, thus saved from rainfall saturation. Though the herd of deer kept in the park curtails its use as a sheep walk, it assists in maintaining a flock, usually Sussex Downs, added to which a certain number of neat stock are grazed. At the present time a new flock of this breed is being formed by direct importation from Sussex. This stock, as has been specially urged, are fitted for park feeding, and should under no circumstances be in such cases crossed with other breeds. Much of the timber on this estate is worthy of notice; the Oak, Spanish Chestnut, and Beech are of noble growth, though the grove of Firs in the wood walks will attract the greatest attention.

The subsoil of this district serves to fertilise the surface. Chalking the loams and gravels is an old and general practice, extending its advantages over 20 years. The operation is simple; shafts are sunk through the gravel or loam to the chalk, of which the surface undulates in so-called pillars. It is then raised by a windlass and bucket and wheeled on to land; the barrows hold a bushel, of which 20 go to the load, by which the work is calculated. The expense by contract, with filling the pits, amounts to about 2*l.* per acre on the average. *J. C. C.*

Miscellaneous.

The Secretaryship of the Yorkshire Agricultural Society will be vacant at the end of the year, Mr. Hannam, who is so well known as an agriculturist and land agent, having tendered his resignation, "in consequence of extended professional and business engagements rendering him unable to give to the affairs of the Society that time and attention which is essential."

The Birmingham Show.—The Birmingham Show is so firmly established in public favour, and so well supported, that the Council are now enabled to put forth a most liberal prize list, and to make any changes from year to year which are proved to be desirable. In addition to the Society's prizes, the number of special premiums is also increasing, and as these are judiciously disposed of, the list in its complete form becomes one of the most attractive of the year. Amongst the special prizes for cattle this year, we may mention the following:—By the President, Lord Walsingham, a Silver Cup, value 25 guineas, for the best ox or steer of any age or breed, bred and fed by the exhibitor; by the Earl of Aylesford, 15*l.*, for the best Short-horn in the four classes for that breed; and by the Hotel and Innkeepers of Birmingham, a Silver Cup, of the value of 25 guineas, for the best animal in the Cattle Classes; the four extra prizes, of 25*l.* each, for the best Hereford, Short-horn, Devon, and Scot, and the two Gold Medals, value 20*l.* each, the first for the best ox or steer, and the second for the best cow or heifer of any breed or age, being also continued. A class has been opened this year for the first time for Norfolk and Suffolk polled oxen or steers of any age, with first and second prizes of 10*l.* and 5*l.* The following new regulation is now in force:—"No ox, steer, cow, or heifer can be shown a second time in Bingley Hall." The show of sheep in Bingley Hall is steadily increasing in importance, and in this division we have pleasure in noticing the following special premiums:—By the Mayor of Birmingham (William Holliday, Esq.,) 10*l.*, for the best pen of long-woolled yearling sheep; by Mr. Alderman Hodgson and Mr. Councillor Baldwin, 10*l.* 10*s.*, for the best pen of South or other Down wethers; by C. N. Newdegate, Esq., M.P., a Silver Cup, value 10*l.* 10*s.*, for the best pen of Shropshire wethers; by the Linen and Woollen Drapers of Birmingham, 25*l.*, for the best pen of yearling wethers in the Exhibition; and by Messrs. Mapplebeck & Lowe, a Silver Cup, value 5*l.* 5*s.*, for the best single Shropshire wether, of any age. The classes for sheep are now arranged as follows:—Leicesters; Long-woolled not being Leicesters; South and other Down sheep, yearlings, and two-year olds; Shropshire sheep, two classes; single Shropshire wethers, of any age; Oxfordshire Downs: and cross-bred Sheep; there being also classes for single fat Leicester, Lincoln and Cotswold, South and other Down, and Shropshire ewes. Three Silver Cups, of the value of five guineas each, are offered for pigs, the first in the two classes for pigs not exceeding 10 and not exceeding 15 months old; the second for Berkshire breeding pigs, and the third for breeding pigs of a small breed; three extra silver medals being also placed at the disposal of the Judges as extra prices in the three classes for breeding pigs. In five of the classes for pigs, three premiums of 10*l.*, 5*l.*, and 3*l.* respectively are offered; and in the other class, for single fat pigs exceeding 15 months old, the prizes are 6*l.*, 3*l.*, and 2*l.* The experiment of offering prizes for grain last year proved a complete success, and similar classes form a portion of the list now before us, namely, for White Wheat, Red Wheat, Barley, Oats, Beans, White Peas, and Peas of any other variety, one bushel of each to be shown; and it is required that 20 ears, with the straw attached, be sent with the samples of Wheat, Barley, and Oats, and 10 stalks of Beans and Peas, with the corn unthreshed. No change has been made in the classes or prizes for roots, but there are two extra premiums offered, namely, by Messrs. Proctor & Ryland, of Birmingham, a Silver Cup, value 10 guineas, for the best collection of Long Mangel Wurzel, Globe Mangel Wurzel, Swedes, and Carrots, six roots of each to be shown; and by Messrs.

Griffin, Morris, and Griffin, a similar prize for the best collection of Long and Globe Mangel Wurzel, Swedes, and Ox Cabbage, six of each kind to be shown, the Mangel to be selected from crops of not less than two acres, the Swedes from not less than five acres, and the Cabbage to be field culture. We may also call attention to the subjoined regulation:—"Exhibitors are expected to state the nature of the soil upon which the grain has been grown, the previous crop, kind of manure used, if any, date of sowing, and any other particulars, which will be printed in the catalogue of the exhibition;" and, with respect to the roots, it must be stated whether the crop was produced after a fallow or otherwise, the kind of manure used, and dates of sowing. Although this division of the show cannot be expected to prove equal to that of last year, still we are now receiving reports of some very fair root crops, and there is every probability that the competition will be much greater than might have been expected a couple of months ago, and that a number of fine specimens will be staged, especially from those districts where steam cultivation has been introduced. The space allotted for implements, seedsmen's stalls, &c., will be the same as last year, and will, we doubt not, be equally well filled, and form a valuable portion of the Exhibition. Some additions have been made this year to the Poultry Prize List, which, we think, will now be considered by exhibitors generally as very complete and satisfactory. Five premiums are offered in each of the classes for pens of Coloured Dorkings, viz., 5*l*., 4*l*., 3*l*., 2*l*., and 1*l*., and the same for single cocks of this breed. Here, also, there are several special prizes to give increased attractions to the list, Mr. G. F. Greensill, of Birmingham, contributing a Silver Cup, value five guineas, for the best pen of Game Fowl in the exhibition; Messrs. M. Billing, Son, & Co., of Birmingham, a like premium for the best Game Cock in the classes for single birds; and a few amateurs 9*l*., for the best pen of Black-breasted or other Red Bantams. This will be the 16th exhibition held in Birmingham, and the success which has attended these pleasant gatherings, and the wide influence they have exercised, proves what can be accomplished by judicious and liberal management, and an earnest desire to promote practical objects connected in various ways with one great branch of our national industry. *Midland Counties Herald.*

Death of Richard Booth, of Warlaby.—Many will learn with regret that this distinguished breeder of Shorthorns and most estimable gentleman, who has been confined to the house for about two years, died on Monday the 31st ult., about two o'clock.

Death of Mr. W. Bullock Webster.—This gentleman, so well known in the agricultural world from his researches and labours as a drainage engineer, died at Cairo, in Egypt, on the 5th of October, in the 46th year of his age. Mr. Webster had been for some time residing in Egypt, where, at one period, he was engaged upon some extensive operations. In the course of his career he published a number of pamphlets, as well as a work on the resources of Ireland, where, at one period, he was almost a continual resident. Of a kindly, generous disposition, and with the thorough feelings and manners of a gentleman, Mr. Webster was deservedly popular in society, even with those who did not coincide with his peculiar views or go to the full length of his sanguine expectations. *Mark Lane Express.*

Sale of Herefords.—The Westonbury Herefords' descended from the Monaughty herd (one of the oldest and the most celebrated herds of whitefaces ever founded), were lately sold, in consequence of the death of the owner, Mr. Rea. Several of the animals went to the royal herd, and the Hon. Noel Hill, Lord Wenlock, Mr. Arkwright, Mr. Shirley, of Bowcott, and the blind veteran, Monkhouse of the Stowe, were amongst the purchasers. There were about 100 lots, and many of the animals fetched great prices. Spangle the Second, by Wellington, and descended from Old Court, on the side of the dam, was purchased by Mr. Baldwin, of Luddington, Stratford-on-Avon, for 101 guineas; and her bull calf, by Sir Richard, was purchased by Mr. Taylor, of Thingehill Court, Herefordshire, for 121 guineas. Kate the Second, by Sir Benjamin, and Bella, by Grenadier, for 40 guineas each, to Mr. William Wiseman and Mr. Monkhouse respectively. Lucy, by Chieftain, and descended on the side of the dam from Old Court, 40 guineas, Mr. Lewis Breenton; and her calf, by Sir Benjamin, to Mr. Taylor, Showle Court, for 80 guineas. Isabella Second, by Sir Benjamin, for 39 guineas, to Hon. Noel Hill. Minnie Second, 36 guineas, Royal herd; Sir Richard, 50 guineas, to Hon. Noel Hill; Victor, 40 guineas, Mr. Burlton, Luntley; Sir Cornewall, 76 guineas, Mr. Bevan, Hyde; Earl Berkeley, 31 guineas, Mr. Shirley, Bowcott. At the conclusion of the sale it was found that the sum realised was from 4000*l*. to 5000*l*.

North British Columbarian Society.—Their Show of Pigeons and Canaries will be held at Glasgow on the 23d and 24th December. Entries close on the 7th. Hon. Sec., Jas. Ruthven.

Notices to Correspondents.

CIDER MAKING: *M D.* See last volume of the English Agricultural Society's Journal.

CORN AVERAGES: *J B.* The average of the year is given by Mr. Willich in another column. The average price of the last 7 years is 6*s*. 3½*d*. per bushel for Wheat; 4*s*. 5½*d*. for Barley; and 2*s*. 11½*d*. for Oats.

GORSE BRUISER: *Agricola.* Mr. Walsh must tell us where his machine is to be got in England. See another page.

ROOT PULPER: *H R W.* Messrs. Bentall, Maldon, Essex.

AGRICULTURAL IMPORTS during the Nine Months ended September 30, 1863-4—

ARTICLES.		Quantities Imported. 1863.	1864.
Animals Living—Oxen, Bulls, and Cows	No.	58,297	99,783
Calves	..	27,211	36,899
Sheep and Lambs	..	268,790	322,318
Swine and Hogs	..	12,173	46,909
Ashes, Pearl and Pot	cwts.	120,154	111,679
Flax	cwts.	979,911	1,522,487
Guano	tons	187,382	82,683
Hemp	cwts.	649,663	694,434
Hides, dry and wet	cwts.	477,561	395,695
Hides, tanned or dressed	lbs.	3,522,364	3,999,373
Hops	cwts.	82,721	66,221
Oil Seed Cakes	tons	62,538	65,761
Potatos	cwts.	997,352	493,028
Provisions—Bacon and Hams	cwts.	1,671,938	937,924
Beef, salt	..	206,367	250,028
Pork, salt	..	145,506	170,771
Butter	..	626,278	673,713
Cheese	..	454,637	533,186
Eggs	No.	212,824,920	272,050,560
Lard	cwts.	459,873	165,373
Rice not in the husk	cwts.	1,708,456	1,450,588
Saltpetre	..	258,618	241,573
Cubic Nitre	..	305,421	474,900
Seeds—Cotton	tons	52,370	61,752
Clover	..	246,486	192,517
Flaxseed	qr.	683,464	915,910
Rape	..	168,982	144,159
Tallow	cwts.	530,081	391,183
Wool, sheep and lambs'	lbs	125,295,587	148,140,746
Wool, Alpaca and the Llama tribe	..	2,151,340	1,526,903
Yeast, dried	cwts.	75,164	84,220
Corn*—Wheat—From Russia	cwts.	2,919,800	2,825,463
Prussia	..	3 164,404	3,616,145
Denmark	..	395,542	853,056
Mecklenburg	..	253,223	466,392
Hanse Towns	..	197,435	465,647
France	..	61,338	481,073
Turkey and Wallachia and Moldavia	..	344,626	377,646
Egypt	..	1,969,669	366,860
United States	..	6,726,742	7,100,042
British North America	..	1,630,885	824,806
Other countries	..	406,488	346,203
Barley	cwts.	5,088,372	3,798,086
Oats	..	5,506,952	3,825,533
Peas	..	1,037,489	752,310
Beans	..	1,495,817	602,632
Indian Corn, or Maize	..	10,892,375	3,636,560
Wheatmeal and Flour—From Hanse Towns	cwts.	210,440	248,293
France	..	757,269	1,508,393
United States	..	2,083,194	1,631,103
British North America	..	685,156	336,655
Other countries	..	98,839	87,454
Indian Corn Meal	..	8,265	3,466

* Since September last all kinds of imported Corn and grain (malt excepted) have been entered at the Custom House, and charged with duty by weight instead of measure as formerly.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Month.	Day of the Week.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
Nov. 4	Friday	Inches. 30.46	39°	38°	N.E.	0	0	57°	27°	61°	22°	..
5	Saturday	30.33	41	41	N.E.	0	10	49	31	60	24	..
6	Sunday	30.59	40	38	N.E.	1	0	48	32	49	28	0.01
7	Monday	30.51	33	31	N.E.	0	3	52	26	61	19	..
8	Tuesday	30.12	36	35	N.E.	0	10	43	27	56	21	..
9	Wednesday	30.18	40	39	N.E.	0	2	44	32	47	24	..
10	Thursday	30.09	30	30	N.E.	0	0	51	25	55	19	..

£1000 UPON the WOOLSTON TACKLE against the NEWCASTLE "best application."
WILLIAM SMITH, Woolston, Bletchley Station.

RICHARD GARRETT AND SONS,
LEISTON WORKS, SUFFOLK.
Illustrated Catalogues.

SHAW'S TIFFANY
For samples and prices apply to
J. SHAW & Co., 29, Oxford Street, Manchester.

GREEN'S PATENT LAWN MOWERS have proved to be the best in all cases of Competition.
Leeds, London, and Dublin.

"THE HYDROPULT"
142 & 143, Cheapside, London, E.C.
Illustrated Prospectus with Testimonials sent free on application.

The Original Seed Bag Manufactory.
ALEXANDER NICOL AND CO.
MANUFACTURERS of
SEED BAGS, CORN SACKS, &c.
Chalmers Street Works,
Arbroath, N.B.

Mangel Wurzel and Swedes.
GRANT'S PORTABLE RAILWAY supplies a cheap complete and economical means of clearing crops of Mangel and Turnips off wet land without injury to the soil, thus overcoming the only serious objection to growing those valuable roots on heavy land.
For particulars apply to the Manufacturer and Patentee, J. Grant, Linton, Kent.

AGRICULTURAL MACHINERY.—Chaff Cutters by hand or power, Threshing Machines, Carts, Waggons, Ploughs, Harrows, Turnip Cutters and Pulpers, and all kinds of Agricultural Implements; also the Prize Churn, Wire Netting, &c. Delivered carriage free. Price Lists on application.
BURGESS & KEY, 95, Newgate Street, E.C.; Works, Brentwood, Essex.

FOWLER'S PATENT STEAM PLOUGH and CULTIVATOR may be seen at Work in every Agricultural County in England. For particulars apply to
JOHN FOWLER & Co., 28, Cornhill, London, E.C.; and Steam Plough Works, Leeds.

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS, Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.
Stamp End Works, Lincoln, and 78, Lombard Street, London; also at LOWENGASSE, No. 41, Landstrasse, Vienna; and Gegenüber der Bahnhof, Pesth.
Descriptive, Illustrated, and Priced Catalogues, Free per Post.
Special Drawings when required.
[*The best Steam Threshing Machinery made.*]

Iron Works.
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2, Winsley Street, Oxford Street, London, W.

COTTAM & Co. manufacture all kinds of Implements and Machines for Garden and Horticultural purposes, Verandahs, Greenhouses, Conservatories, Hot-water Apparatus, &c.; Iron Fencing, Gates, and Hurdles.
Illustrated Catalogues free of COTTAM & Co., Iron Founders, &c., 2, Winsley Street (opposite the Pantheon), Oxford Street, London, W.

WILLIAM SMITH begs to call attention to his large Stock of LIGHTS of various sizes, suitable for any kind of house or pit. He also begs to state that he will make GREEN HOUSES and CONSERVATORIES at 1*s*. 1*d*. per square foot. Ventilating Apparatus on the most approved principle. Two-inch Lights made to any size, with the best yellow deal, at 8*d*. per foot; ditto, unglazed, at 4*d*. per foot.
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FOR SALE, a SPAN-ROOFED IRON GREENHOUSE, 20 feet long, 15 feet wide, and 12 feet 6 inches high. This is a very neat and elegant House, and will be Sold Cheap.
Particulars on application to A. SHANKS & SON, 27, Leadenhall Street, London, E.C.

By Royal Letters Patent.
AGATE'S GROOVED SASH-BARS for Greenhouses, Railway Stations, Warehouses, Photographic Studios, Skylights, Public Buildings, &c., manufactured by Steam Power, in either Wood or Metal.
Apply to R. AGATE, Horticultural and General Builder, Hornsey.
N.B. A GREENHOUSE for SALE, a Bargain, size 25 feet by [illegible] feet, with the Patent Grooved Sash-Bars; also a quantity of OLD LIGHTS. Greenhouses erected and heated on the most approved principles.

Caution to Gardeners.—When you ask for SAYNOR AND COOKE'S WARRANTED PRIZE PRUNING and BUDDING KNIVES, see that you get them. Observe the mark SAYNOR, also the corporate mark, GREAT WARRANTED, without which none are genuine.
S. & C. regret having to caution Gardeners and others, but are compelled to do so, in consequence of an imitation, of common quality, having been sold for the genuine one, and which has caused many complaints to be made to them of Knives which were not their make, all of which are warranted both by sellers and makers.
S. & C.'s Pruning and Budding Knives are the best and the cheapest in the market.
Paxton Works, Sheffield. Established upwards of 125 years.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland, Syon House, his Grace the Duke of Devonshire for Chiswick Garden, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society &c.
PROTECTION from COLD WINDS and MORNING FROSTS.
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.
Two yards wide .. .. 1*s*. 9*d*. per yard run.
Four yards wide .. .. 3*s*. 6*d*. per yard.
An improved make, 2 yards wide .. 1*s*. 9*d*. per yard.
An improved make, 3 yards wide .. 2*s*. 8*d*. per yard run.
Also "Frigi Domo" Netting, 2 yards wide, 1*s*. 6*d*. per yard run.
ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.
"It is much cheaper than Mats as a covering."

GENUINE NEW GARDEN SEEDS.

JAMES CARTER & CO.

ARE NOW PREPARED TO EXECUTE ORDERS FOR

EARLY PEAS, BEANS, CARROT, CUCUMBER, RADISH,

And other GARDEN SEEDS for AUTUMN and EARLY SPRING SOWING, from Seed saved at their Dedham and St. Osyth Seed Farms during the present Autumn.

☞ The Crop of most descriptions of Seeds is short, but the QUALITY is extremely good in consequence of the continued dry weather during the last Summer and Autumn.

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THE "FIRST CROP" PEA.

(THE EARLIEST PEA IN CULTIVATION.)

JAMES CARTER & CO.

Beg leave to announce that they can now offer the above FIRST-CLASS PEA, which they have grown for the last three years, and BEING FULLY AWARE OF THE IMPORTANCE OF TESTING AN EARLY PEA IN EVERY WAY BEFORE SENDING OUT, they wish to assure the public that they have thoroughly proved the "FIRST CROP" PEA against all the Early Peas at present in cultivation, and the result of these careful trials and comparisons enables them to state that

THE "FIRST CROP" PEA IS EARLIER THAN ANY PEA

ever offered, and also has another advantage over all other Early varieties in being the MOST PROLIFIC EARLY PEA in CULTIVATION. Height about 2½ feet, and the haulm is literally covered with Pods.

☞ *The above will be sent out in quart packages "sealed," price 2s. 6d. per quart.*

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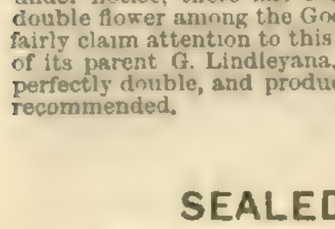

CARTER'S

LIST OF NOVELTIES FOR 1865.

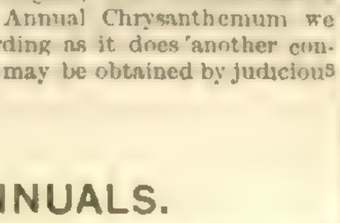

Clarkia integripetala flore-pleno.

To the fine class of entire-petaled Clarkias, of which we were the original producers, we have this season the gratification of adding this magnificent DOUBLE variety, which is by far the finest of its genus; the bloom is very double, large, of a rich magenta colour, and produced in the greatest profusion; we anticipate that this will supersede entirely every other variety of Clarkia in cultivation as soon as its great merits have been observed.

Nasturtium King of Tom Thumbs.

The great usefulness and beauty of the Tom Thumb Nasturtiums are now very generally appreciated throughout the whole Floricultural world, and any improvement upon them is very desirable; the variety now offered is by far the finest of all, and we much question whether any bedding plant of any kind can equal it in effect, the lustrous blue-green foliage, contrasting vividly with the intense scarlet of the blossoms, produces an unequalled blaze of brilliance, and the plant must become a universal favourite.

Nemophila maculata purpurea.

An extremely pretty variety of this well-known tribe, the old variety of which is generally considered the handsomest of its tribe; colour, purple, with a dark violet blotch at the apex of each petal; altogether a very novel and desirable acquisition.

Godetia Lindleyana flore-pleno.

A startling novelty among this much-admired profuse-blooming class of plants; we are not aware that, previous to the variety now under notice, there has ever been seen anything approaching to a double flower among the Godetias, so that we consider that we may fairly claim attention to this striking innovation; its colour, like that of its parent G. Lindleyana, is a rich rosy purple, the blossoms are perfectly double, and produced in the greatest profusion: strongly recommended.

Whitlavia grandiflora alba.

Since the introduction of the purple Whitlavia some 10 years ago, it has speedily risen into favour, and has now become a leading favourite amongst Annuals; we think therefore that we can pay no higher compliment to the variety now offered than to say that it possesses all the merits of its predecessor, with the additional value of being pure white in colour. It must necessarily rank in the first class of Californian Annuals, and we strongly recommend it as one of the best Novelties ever introduced.

Chrysanthemum tricolor Dunnetti, fl. pl.

This charming flower may be considered the Gem of the Season; it has been produced by the most careful and assiduous cultivation from the well-known Chrysanthemum tricolor. Its colour is snow-white, and its great charm consists in its immense superiority over the other varieties in being perfectly double, even as the Truffaut's Pæony Aster, and blooming at a time (June to August) when the Aster shows foliage only; to all admirers of the Annual Chrysanthemum we strongly recommend this variety, affording as it does another convincing proof of the great results that may be obtained by judicious selection and careful growth.

SEALED COLLECTIONS OF NEW MEXICAN ANNUALS.

For the first time this last 10 years we are enabled to offer an entirely New Collection of these popular favourites; among them will be found some Novelties of a peculiar and unique character, and we feel the greatest confidence in recommending them to public notice.

No. 1. GODETIA REPTANS(?) ALBA.—A charming trailing perennial, running close upon the ground, producing blossoms in the greatest profusion, especially in the second year of growth; colour similar to that of the beautiful Godetia rosea-alba, viz.: pure white, with a crimson blotch at the base of each petal. We think this flower will be found admirably adapted for rock-work, baskets, and banks, and being a perennial it increases in beauty each succeeding year. For decided novelty, prettiness, and general effect, we consider this one of the best introductions of late years.

No. 2. GODETIA REPTANS(?) PURPUREA.—Exactly similar to the former with the exception of colour, which in this instance is a rose pink, with a purple blotch on each petal; very charming.

No. 3. GILIA MINIMA CERULEA.—Another interesting addition to this numerous and pretty race of flowers; colour, pale blue; height 3 inches.

No. 4. ŒNOTHERA PARVIFLORA.—A very neat small blooming variety, totally dissimilar from any other.

No. 5. COLLINSIA CORYMBOSA.—A Collinsia of an eccentric and peculiar character, blooming in a corymbose or disc-like form, whereas all the other varieties are pyramidal; colour, pale lilac.

No. 6. ŒNOTHERA DIVERSIFLORA.—Another beautiful variety, similar to Nos. 1 and 2, with the exception of diversity of colour, this one producing its flowers sometimes white, sometimes rosy pink of various shades, but always with a crimson blotch at the base of each petal; extremely pretty.

*** *The foregoing were received from our North American Collector some few years since, and have all been carefully grown at our Seed Farms, so that the descriptions may be depended on as correct.*

ORNITHOGALUM THYRSOIDES ALBUM.

J. C. & Co. beg to announce that they have been successful in saving a small quantity of good growing Seed of the above splendid Novelty.

*** *Price of the above to the Trade on application. Coloured Drawings in a few days, price* 1s. 6d.

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CARTER'S GARDENER'S VADE-MECUM.

American Plants.

AS EXHIBITED IN THE ROYAL HORTICULTURAL GARDENS, KENSINGTON.

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HYACINTHS, TULIPS, and other DUTCH BULBS, Imported by WM. CUTBUSH & SON.

TWENTY-FOUR PRIZES awarded to their Collections last Spring, TWENTY-TWO being FIRST PRIZES.

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Early orders earnestly solicited, as the supply cannot possibly meet the increasing demand.

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Unrivalled Collections of Bulbs.

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The Gardeners' Chronicle.

SATURDAY, NOVEMBER 19, 1864.

THE first fasciculus of an extended series of observations on what are called VEGETABLE MONSTROSITIES, by Dr. MARCHAND, has lately appeared, extracted in a separate form from the Number for last June of *Adansonia*. In another part of this Journal (p. 1111) we have made some observations on the subject while noticing the translation of GOETHE'S treatise edited by Dr. MASTERS. Our object now is to give a sketch of a very important example, amongst several others, as it includes a vast variety of changes, bearing upon almost everything except the development of pollen.

The instance occurred in the common field Pimpernel, Anagallis arvensis, and is quite intelligible without the aid of the excellent figures which accompany the memoir.

We will take that instance first in which the parts of the flower departed least from the more normal condition, and then the others in their proper order. In all the parts there was a greater or less tendency to assume a green tint; in some they were entirely green, in others the brighter colours were confined to the more recently developed parts.

1. In the first case then, the sepals and petals were in their normal position, though rather more dilated than usual; the anthers were fertile, the principal change existing in the ovary, the upper part of which was wanting, so that the ovules were exposed seated on the central placenta.

2. In the next step the calyx, more developed than usual, was separated from the corolla by a long peduncle, and the ovary, which was ovate, contained instead of a placenta a sort of plumule or young shoot.

3. In this case the corolla and calyx were distant from each other; there was no trace of stamens, but the axis was continued from the centre of the corolla, and ended in a leaf-bud.

4. The calyx and corolla nearly as before, but instead of stamens a whorl of little leaves was developed, in the centre of which the axis was continued, bearing at its tip two whorls of leaflets alternately three and three.

5. In this case two out of the five stamens were

normal, the other three changed into leaves, showing clearly the origin of the leaflets in the last case, which took the place of the stamens.

6. The ovary varied in different flowers. In some the placenta was crowned with ovules; in others the ovules were replaced by a single whorl of leaflets; in others there was every shade of change from ordinary ovules to perfect leaflets; while in others, again, every ovule was converted into a leaf with a long petiole.

7. We now come to another form in which shoots were developed in the axils of the sepals, or on the face of the petals between the point of their insertion and that of the stamens, and, what is most curious, in the interior of the ovaries round the foot of the placenta.

8. Here again we have a very singular condition: the calyx and corolla separated from each other, the stamens partly developed, the axis continued beyond the corolla, branched and bearing normal leaves so as exactly to resemble an ordinary stem, while in consequence of the calyx and corolla being bent down to the ground, adventitious roots were developed from the axis on the under side above each of them. In another case, where the calyx and corolla were approximated, the ovary was open above, and sent out six shoots from within, perfectly developed, clearly representing the central placenta and five axile buds, and each giving out a number of adventitious roots at its base.

Dr. MARCHAND does not enter into the deductions which arise from these curious facts, contenting himself with simply registering what he has observed, while he leaves to others the task of reconciling them with theory.

In this direction nothing can well be more important. This instance shows distinctly not only the conversion of sepals, petals, stamens, and ovary into leaves, but the axile nature of the placenta in Anagallis, together with the origin of at least the outer integument of the ovules from a leaf. Nay, more than this, we have not only the development of the axile bud from the sepals and petals, but also from the leaflets of which the ovary is composed. A more complete confirmation of the doctrine of metamorphosis, or of the true foliaceous origin of the several organs, with the exception of the central placenta, can scarcely be imagined, and we are greatly indebted to Dr. MARCHAND for his admirable illustration of the subject. *M. J. B.*

THE PROGRAMME of THE ROYAL HORTICULTURAL SOCIETY for the year 1865, which will be immediately laid before the public, and which has reached us too late to appear in our advertising columns to-day, will be seen to embrace some important changes both as regards the public and the Fellows. We have not yet had time to consider the bearing of all these changes, and therefore reserve our opinion as to the expediency of some of them. In the meantime we may lay before our readers a brief summary of the principal features which present themselves in this new programme.

As regards the Shows, we are glad to see that wiser counsels have prevailed, and that some of the blundering and absurd experiments which have been made during the past year are abandoned. Thus the attempt to keep the great shows open for more than one day has been given up. And at all the great and special shows next year, money prizes will be offered. The shows are all to be held on Saturdays. They are divided into three classes:—Great shows, special shows, and weekly shows. There are, as formerly, to be three of the great shows with which the public is familiar; and in addition to these, eight special shows, more of the nature of the old spring shows, are to be held. We see, for example, a special show for Hyacinths and Camellias; another for early Azaleas and spring flowers; a third for Orchids; a fourth for all kinds of Pelargoniums; and others for Azaleas, Liliaceæ, Amaryllidaceæ, plants of ornamental foliage, and Ferns and their allies. For all these special schedules are to be issued.

The weekly shows are a new feature. A show is to be held on every Saturday not preoccupied by a fête day. It is intended by these to secure a constant display of the greatest novelties and beauties of every season, as they successively come into bloom. It often happens that a gentleman has some plant of very great interest or beauty coming into flower at a time when there is no show to which to send it for exhibition. With this weekly show open every Saturday there will always be a place for its reception, where it can be seen and appreciated. If once fairly established, it will be the interest of every nurseryman to send there his greatest novelties; but the Council have not trusted to the chance support of the exhibitors for the success of these shows. They have appealed to the principal amateur horticulturists for their support, and the promises of contributions have, we understand, been most satisfactory. We learn that the QUEEN has been pleased to command that contributions shall be sent from the Royal Gardens, Frogmore, and many Fellows have followed HER MAJESTY'S example, and intimated their intention to contribute on particular weeks.

One result of having a show every Saturday will be that the Fellows will lose on that day their right to introduce friends, that privilege not extending to show days. On the other hand they will have the opportunity of always seeing something new and good in the Garden, and it is not unreasonable to expect that the Fellows, at least those in the neighbourhood, will soon acquire the habit of dropping in for a short time every Saturday to see what is new in the Horticultural Garden. We remember to have heard Sir JOSEPH PAXTON narrate how in the days of the late Duke of DEVONSHIRE it was part of his duty to provide such a succession of novelties at Chatsworth. A fresh plant, cultivated to the highest degree of perfection, was placed every day in a small conservatory room; his Grace saw it in the morning; and the beauty and fashion of the neighbourhood used to drive down in the afternoon to see the new plant. There is no reason why the Horticultural Society itself, without foreign aid, should not be able to make an interesting weekly exhibition. There are difficulties, however; and success must depend in a great measure on the support given to it by the Fellows themselves. Medals and Certificates, but not money prizes, are to be awarded at these meetings.

But this is not all for the Saturdays. Every other Saturday (except in August, September, and October), a meeting is to be held for the transaction of scientific business, for receiving the reports of the Floral and Fruit Committees, &c., and for comments upon any new or rare plants sent for exhibition.

The Conversaziones are to be repeated, and a *déjeûner*, reminding us of the bygone glories of Chiswick, is to be held on the 3d of June, the anniversary of the opening of the Garden by the PRINCE CONSORT.

A number of other accessory objects of interest are to be provided. Among others Mr. FRANK BUCKLAND'S fish-hatching apparatus, which has proved a source of unfailing interest to the Fellows; aquaria of Seaweeds; bee hives of different kinds; and the culture of the Ailantus silkworm, under the auspices of Lady DOROTHY NEVILL.

In the spring a continuous show of Tulips by Messrs. HENDERSON, of Wellington Nursery, is to be made in the open borders of the Garden. Those who have seen the sheets of bloom in the thickly crowded beds in the gardens at Haarlem, or even at Messrs. HENDERSON'S own nursery, will be able to form some idea of the display which will be made, when we state that upwards of 50,000 Tulips are to be employed for this purpose. Following this, Messrs. WATERER & GODFREY are to make a show of Rhododendrons under the great tent. Several shows throughout the year are also to be held at Chiswick.

Other matters more of interest in a national or horticultural point of view have, we are informed, occupied the attention of the Council. The scheme for the education of gardeners, about which so much was said last year, and in considering which the Council and a special committee had bestowed so much time and attention, has resulted in a system of examinations being instituted for all gardeners who may choose to present themselves. Prizes are to be given for the cultivation of gardens by soldiers in barracks, by sailors in homes, and by dockyard workmen, as well as for the window gardening of the working classes in the metropolis.

With regard to the privileges, some addition has been made to those of the Four-guinea Fellows; both of their tickets are to be transferable. None but Fellows or their friends or debenture holders, can enter the gardens before 1 o'clock on any day. On Sundays friends can only be admitted by personal introduction. A new class of tickets, conferring merely the right of personal admission every day in the year, has been established. The price of these is to be 20*s*. for summer, and 10*s*. for winter.

Another important new class is that of country subscribers, who by payment of one guinea subscription and one guinea admission fee, may secure that portion of the privileges which a person residing at a distance would most wish to possess, viz., occasional admission, the receipt of the Journal, and a share in the ballots for plants. They are to have the right of proposing country Horticultural Societies for union with the Royal Horticultural Society—a union which cannot fail to be of great benefit both to the parent and affiliated societies. These are some of the many promises of the programme for 1865.

Of one thing however, we must remark, there can be no doubt, and that is, that to ensure the public sympathy and support there must be real horticultural action as well as profession, and above all, the confidence which has been destroyed by the late jumbling management must be re-established. Then we believe all parties would work heartily together for the common good, but if not, not.

THE TUILERIES GARDENS should be seen on a fine day, when the life and animation of the gay Court of Le Grand Monarque may be conjured up in the throng of people crowding its shady avenues, some promenading chatting or flirting, others laughing at the comical scenes of the Théâtre de Bambochinet, or seated in varied though compact masses listening to the martial strains of music. Statues, vases, and Orange trees are ranged around in endless profusion, and the Zouave, Dragoon, and neatly dressed women of Paris assist in producing a brilliant *ensemble*.

During the reign of LOUIS XIV.—an epoch, not only memorable in the annals of France but of the world, and which seems, in the establishment of the French and English in America and India, in the extension of Dutch commerce with Africa, Japan, and the Indies; in the commencement of the Russian marine under PETER THE GREAT, and in the immense impetus given to the science of war by VAUBAN and BERNARD RENAUD, to have produced the seeds of the mighty changes only yet in process of development—French and English gardening received a great impulse. The present piece of ground, some 67 acres in extent, was partly occupied by a street immediately fronting the Palace, and a small garden comprising an echo, menagerie, fish ponds, dog kennels, and flower borders, all huddled together—if we may believe French authors—in a manner at once incongruous and disagreeable. EVELYN again describes them as "being kept with all imaginable accurateness as to the Orangery, precious shrubs, and rare fruits," and deemed it "a Paradise;" but whichever may be the true estimate of its beauty, there can be no doubt that in extent it was far too limited for such an important adjunct to a palace. In this reign, and contemporary with CLAUDE LORRAINE the painter, there rose into notice two men of extraordinary talent—LA QUINTINIE and LE NÔTRE. The former was a planter and cultivator, and to him we owe the fundamental principles of pruning and tree transplanting, as well as many improvements on the previous culture of fruit and vegetables. The latter, a man of different calibre and more refined taste than LA QUINTINIE, may be judged by the classical gardens of Versailles, St. Cloud, and the Tuileries, as well as the parks of Greenwich and St. James, which are sufficient to attest the general beauty of the magical transformations said to have been accomplished by him. And here we may remark in a friendly way that most of us are rather inclined to look down upon French gardening as the exemplification of all that BACON criticises so severely. Now MASON says: "in ADDISON'S* time France and Italy far excelled us in artificial rudenesses," and we should recollect that though of late years they have gleaned from us many of the ideas they originally imported, as well as many others exclusively English, we were much indebted to their originality in the first instance; and if they are sometimes obliged to come to us for a hint, we in turn may take many a good hint from them, especially in growing young trees, and in the culture of foliage plants; while, so far from the exchange of ideas being a robbery, it is highly creditable and beneficial to us both. To LE NÔTRE, then, was entrusted the arrangement of these grounds; the street was pulled down, the garden demolished, and the whole replanned and planted much as it is at present.

We will begin with the private Garden in front of the Palace. This is modern: and has been

* Spectator, No. 414.

ruled over with parallel strips of walks, Grass plots, and flower borders of Phlox, Zinnias, Salvias, Dahlias, Petunias, Geraniums, &c., planted cottage-garden fashion, and by no means palatial. In the middle of the Grass-plots right and left, though partially screened by shrubs, are round water basins, with a slight slope swelling towards the stone rim, so as to render nugatory as far as possible the effect of the water. There are also splendid Orange-trees, vases, and statuary; and a band of planting that separates it from the public garden answers the double purpose of ornament and seclusion, and partly returns on either side of the main central walk. This latter continues past a slope, sunk alley, and retaining wall (the boundary of the private garden) until it is stopped by a large circular basin, on which the first portion of the public garden radiates. Working round the basin through a Horse Chestnut avenue, with a wood on either side, it is checked again by a still larger octagonal basin, a favourite spot with children. Between the kerb of this basin designed by LE NÔTRE, and those of the new fountains in the Rond-point des Champs Elysées, there is a striking contrast. The latter are some 9 inches above the turf, but the former is barely 3, and while just sufficient to keep dirt and gravel from falling over its edges, allows the eye at once to rest on the principal attraction, the water—on the picture and not the frame. In our own Trafalgar Square we find the basins are raised like most of the new fountains erected in Paris. Now some one says—not Mr. RUSKIN, although he enlarges on the sky-blue reflections that may be seen even in a puddle—"Water naturally seeks the lowest level, and the lower it is placed unobstructed by intervening obstacles the more accessible it will be from any given point of sight." These fountains have afforded wags and critics a never-ending theme, from the thunder of the *Times* down to the good-natured squeaks of *Punch*; still they would appear rather to have been an oversight or mischance than a deliberate mistake, as Sir CHARLES BARRY was not only in architecture one of the first men of his day, but might fairly have disputed precedence with many of the leading garden architects.

Beyond the octagonal basin a high wall, faced with a Hornbeam hedge, and supporting rampart terraces, defines this end of the garden; and encloses large parterres of Orange trees, mixed borders, and sunk Grass lawns in a semi-octagonal outline. Cross steps lead down from it on either side end towards the centre of the fountain; and curved gravel ramps 60 feet wide ascending towards two long terraces on the same level as the semi-octagonal ramparts, parallel with the Palace, and overlooking the Place de la Concorde, flank the termination of the main walk north and south, forming a crescent space below. Minor avenues stretch through the wood, and the Napoleon Column in the Place Vendôme forms the *point d'appui* of a central cross avenue. Between this and the Palace are two old bowling greens, said to have been designed by ROBESPIERRE and turned into gardens. The marble seats at one end of them are worthy of a more useful fate. We must not omit mention of the avenued terrace that bounds the Seine, of the Allée des Orangers, a perfect sea of heads on a Sunday afternoon, or of the main vista from the Palace towards the Arc de Triomphe, broken by the needle point of the Obelisk of Luxor steepling high above it. This is left unobstructed by means of an iron *grille* and entrance gates placed between the north and south terraces. The trees (particularly the Horse Chestnuts) are crowded and drawn up, and many of them in a very precarious condition, while the Imperial gardening is about as bad as it well can be.

As combining shady terraces for the views, shelter from draughts at all seasons of the year, and a certain amount of wood and water, this town garden is an admirable essay, but LE NÔTRE, though endowed with a mighty genius, was lost even in the main features of detail, and his works generally leave the impression of a man who reversed the old proverb in being able to run though unable to walk. With magnificent ideas —and the centre canal at Versailles mingling its waters with the distance is unequalled in its way —the cost of his successes was so enormous as to be almost ruinous in itself; and these successes were moreover achieved somewhat after General GRANT'S fashion in America — by continually "pegging away" at every spare plot of ground with fountains, water basins, and avenues *ad nauseam*. Hence he becomes a dangerous model for any man who is not an artist, as it requires a nice discrimination to steer clear of his errors, and almost equal genius, and certainly equal patronage, to reproduce his grandeur.

The only attempt known to the generality of our readers is the garden of the Crystal Palace; and in order to judge how far this is successful or otherwise we will capitulate a few principles of geometrical composition. The first and greatest of all is Unity. However beautiful and complex the details may be in themselves, they can only be justified by their unison as component parts of simple symmetry. Take the noblest work in creation, for instance—Man. He is constructed with arms and legs symmetrically balanced, and pendants to one another. These are subordinate to, and are welded into unity by the trunk, and crowned again by an apex of exceeding grandeur in the head. At the Crystal Palace there are minor features, as vases, statues, and water basins in superabundance, subordinate and pendant to one another; but the connecting bond, the main feature, or the head, is wanting. "Whence it appears (as KNIGHT says) neither quite regular nor irregular; but with that sort of lame and defective uniformity which we see in an animal that has lost a limb." What would KNIGHT have said to an animal without either body or head? The fountains also are dispersed, and thus not only inadequately represent the enormous expenditure of water force, but are faulty in general arrangement. Water should be used rather as a principal than a subordinate, as its magnetism at once attracts the eye, and if misused distracts it by counteracting the focus of centralisation. In Nature we may often see a river winding from nearest foreground to extreme distance, tying together a whole landscape, as is charmingly illustrated in TURNER'S picture of the "Crossing of the Brook;" and in gardening something of the same kind has been attempted in LE NÔTRE'S geometrical canal at Versailles; but a series of pools scattered upon a plain, or worse still, upon the sides of a hill, become so many spots—the one destructive of the beauty of the other. The terraces, again, are mismanaged, for this reason, that they obstruct the views of the garden, especially from the main points of sight, instead of assisting them by means of their great elevation. The distant scenery nevertheless is enchanting, if not perfection, and insensibly pleads hard for the many errors of foreground. We will only suggest one thing, that a huge geometric sheet of water placed at the end of the garden, and backed by a portion of the once existing wood, might almost have equalled the thought of LE NÔTRE, in the spirit of Madame de STAËL'S remark that "Nature seems to have placed lakes in the midst of her grandest scenes, in order to serve as mirrors, and multiply their charms." *Z.*

—— WE observe that Messrs. LAWSON & SON are to send out next autumn the CASTLE KENNEDY FIG, a variety which was first observed growing untrained and unpruned against an old wall at Castle Kennedy, near Stranraer, in the south-west of Scotland. In that neglected state it was found in fine seasons to ripen abundant crops early in August. The large size and fine quality of the fruit arrested attention; and in due course provision was made to cultivate it under glass, where, for the last two seasons, it has produced extraordinary fruit, some of which weighed nearly seven ounces. At Castle Kennedy it also has occasionally ripened fruit when grown as a standard. It appears to have been successfully exhibited in Scotland, and among other awards obtained during last summer was a First-class Certificate from the Edinburgh Horticultural Society. Mr. THOMSON, of Dalkeith, bears testimony to the great excellency of this Fig, which he says has borne him the largest Figs, by far, that he ever saw, the flavour being equal to that of any Fig known to him.

—— We may mention that the NEW POMOLOGICAL WORK published under the direction of the Society for Regulating and Improving the Varieties of Fruit-trees at Boskoop, *De Nederlandsche Boomgaard*, &c., the first part of which, with Dutch descriptions of the plates, was noticed by us at p. 678, is also to be issued under the title of *Le Jardin Fruitier Neerlandais*, with a French text by Dr. DE GAVERE, and with a Preface by Professor KARL KOCH. Such a work, it is observed in the prospectus, representing faithfully the races of fruits, with all the distinguishing marks with which Nature has impressed them, and accompanied by clear and concise diagnoses, seems to be absolutely necessary as a means of clearing up the confusion which exists amongst fruits. The drawings are to be made from Nature by M. S. BERGHUIS, and the plates prepared in chromolithography by M. G. SEVEREYNS, of Brussels. The work is to be published in 20 parts, each containing four plates, and descriptions of from 8 to 16 varieties of fruits, and eight parts are promised in one year, the price of each part being 5 francs to subscribers.

—— Twenty-one years ago the HANDSWORTH HORTICULTURAL SOCIETY held its first show. Since that period four exhibitions have been held annually, and it is not too much to say that few if any provincial societies have done more to encourage the science than the one just mentioned. Three years since it was thought advisable to do away with the July show, and substitute for it an exhibition of Fruit and Chrysanthemums in the Town Hall, Birmingham, at the same period as the Cattle and Poultry shows are held. Hitherto these meetings have been highly instructive to those who wish to learn somewhat of pomology, a class being provided for exhibitors residing within 15 miles of Birmingham; and another class for fruits grown on the Continent, in the Channel Islands, or in any part of England. Some marvellous displays have been produced, and after so fine a fruit season as the one just past we anticipate that no falling off will take place this year. The noble Town Hall, the use of which is annually granted to the Society by the Mayor, is a fitting building for such a show, which all visitors to the Midland metropolis during the exhibition week, should not fail to see. The show commences on November 28th, and lasts till December 1st; but entries must be made on or before November 24th.

GRAFTING THE VINE.

IN a recent Number of the *Gardeners' Chronicle* (see p. 1035), allusion is made to an opinion expressed by me in favour of the Trebbiano, as a stock for the Muscat of Alexandria Vine, which further experience has not justified.

In reflecting on subjects of this kind a few years ago, it occurred to me that by grafting the Muscat of Alexandria on the Trebbiano, one of the strongest growing and freest-rooting Vines we have, it would receive abundance of sap, and produce large bunches and berries, and perhaps carry a heavier crop than the Muscat usually does on its own roots. I did so, and the result up to a certain stage was all that could be desired. The wood was unusually strong, the clusters were large, the berries remarkable for their size. This is the first season the Vine so grafted has borne fruit. During the autumn I showed it to numerous gardeners and others visiting here, and all agreed with me in considering the stock a good one for the Muscat of Alexandria. All went merry as a marriage bell up to the period when the fruit was nearly ripe; the berries were plump, and the colour a fine amber, clean, and without a spot. The weather had been fine and dry for a considerable time previous; but rain now fell in abundance, and soon after the berries commenced to burst at the footstalks, and continued to do so till more than half had to be removed, the remainder soon becoming less or more discoloured, and the bunches being totally unfit for presenting at table. A fine crop of Muscats was growing alongside, not a berry of which suffered in this way, thus showing that the extra vigour of the stock was the cause of the bursting of the berries, discoloration, &c., by supplying more sap than the berries could at this stage assimilate; and tending to prove that we may err in using too vigorous stocks, as in this case I had done.

Few questions are at present occupying more attention among Grape growers than the selection of suitable stocks whereon to graft, at least some of their favourite Vines. There are various reasons for grafting Vines. Amongst others I may notice that weak-growing varieties, such as the Frontignans, want more vigorous stocks so as to increase their strength, and improve the quality and quantity of their fruit, and thus to aid in doing away with that tendency to shrink to which these high-flavoured varieties are so liable. The same reason may be given, but in a lesser degree, for grafting the Muscat Hamburgh, the Golden Hamburgh, and possibly that early and really highly-flavoured fine new Grape, the Duchess of Buccleuch.

By grafting some sorts, such as the Black Barbarossa, which takes nine or ten months hard forcing thoroughly to ripen its fruit, on a moderate-growing earlier stock, as has been done in the case of the Black Hamburgh, which is said somewhat to decrease the size of the bunch, but to improve the colour and size of the berries, we may expect to shorten the period of growth—an object of considerable importance in an economical point of view.

It is highly probable that if the Muscat of Alexandria were grafted on the Sweetwater, an old, hardy, early, and healthy variety, but a comparatively weak grower, it would ripen its fruit a fortnight, three weeks, or a month earlier than when on its own roots. This for early forcing would be very advantageous; and till we get an early variety with Muscat flavour, such a plan as this, if found to answer the purpose, would be worth adopting.

Although, for the reasons stated above, I am in favour of grafting some sorts of Vines, still I am one of those who believe that most varieties can be grown to great perfection on their own roots, as has again and again been demonstrated at our great Metropolitan and other fruit shows, where nearly all the Grapes shown have been thus grown. To do so with some varieties requires more favourable root conditions than

necessary when they are grafted on hardier and otherwise suitable stocks; and this is often supplied in a well prepared border for a few years after it is formed, while it remains open and pervious. When, however, the border becomes consolidated, particularly if manure has been freely used in its composition, the effect is first seen on such shy rooters as the Frontignans, the Muscat Hamburgh, and the Muscat of Alexandria—in short, on all the very highly-flavoured varieties; and in a less degree on the free-rooting sorts, such as the Black Hamburgh, the Trebbiano, the White Nice, Lady Downes' Seedling, West's St. Peter's, and many others. All varieties of the Vine like a higher temperature than an ordinary Vine border supplies, unless artificially heated. This is particularly apparent in the more northern, cold, and wet localities of these kingdoms, and should induce those having to do with their formation, not only to take the utmost care in providing proper soil, &c., but also to use some artificial means to heat them, whether simply aërating, which in most cases will be found to answer the purpose, or by heating with hot-water pipes and flues, which for very early forcing is essential. *Archibald Fowler, Castle Kennedy, Stranraer.*

EARLY FLOWERING BULBS.

THE TULIP.

TULIPS with me are great favourites, whether grown in or out of doors. My intention now is to treat more particularly of the early single varieties, of which there is a large and imposing array. Within the last few years fresh vigour has been infused into their cultivation, and with this has come a corresponding extension of the varieties grown for exhibition, as well as for ordinary decorative purposes.

The wild Tulip (Tulipa sylvestris) may still be found in the northern and southern suburbs of London, and its bright yellow flowers, externally of a greenish hue, and somewhat fragrant, are always objects of interest. This variety seems to be identical with T. florentina odorata of bulb catalogues, and with it are associated some other members of this branch of the family, viz., T. cornuta, the yellow horn-flowered Tulip; T. Oculis solis, bright crimson with purple centre; T. persica, white with purple centre; and lastly, and best of all, T. Gesneriana, the parent of the almost numberless varieties of garden Tulips. It is surprising that this species is not more generally grown for garden decoration than it is. The flowers are of a deep crimson scarlet, very large and showy. I have seen beds of it on a Grass plot that were very effective indeed, quite startling to those who were not familiar with the beauty of this kind. It flowers rather later than the early single varieties, but it is not quite so late as that section known as the single late border Tulips, a strain identical in character with the fine exhibition varieties. It is not, however, adapted for pot culture, as it grows tall and lanky.

Early Tulips are divided into double and single flowered sorts; the latter are by far the best, and they are also earlier in blooming. The single Tulips branch out into three smaller divisions, the origin of which is to me unknown. All my inquiries in that direction have as yet been without any successful result. These divisions are the Van Thols, of which there are the common red and yellow, the earliest of all; the rose, yellow, scarlet, white or blush; and the gold striped, the last named being a scarlet flower striped with gold. With these must also be classed the well known old double variety. Among Van Thols the best is the scarlet, a very handsome flower for pot culture, being dwarf and very showy. Compared with this the others are hardly worth cultivation. The Pottebakkers indicate an advance on the Van Thols. Of these there are the yellow, red-striped, a pale yellow flower with small red stripes almost a self yellow, and the white variety. This is the best of the batch, and also the best white Tulip among the early single varieties. It is large, stout, and pure in colour, but under high cultivation I have seen it faintly striped with red. The Yellow Pottebakker ranks next in value, but the area of cultivation of the white trebles that of the others put together. An astonishing quantity of this variety is annually imported to England, and yet the demand always exceeds the supply.

I come now to the largest division of the early single Tulips, and my object will be to point out some of the best of each shade of colour in that class.

There are but very few white self-flowered sorts among them, probably because it is really difficult to get any great variety among pure white self-flowers. I have met with two, White Swan and Pax Albo; my impression is that these are the same, or if not, too much alike to be both grown where variety is sought for. Both come with a kind of sickly cast of cream colour spread over the white ground; and they bear no comparison with the white Pottebakker for size, purity, or effectiveness. Self-yellows are also somewhat scarce, but a really good flower like Yellow Prince, known also as Canary Bird, Canary Vogel, La Pluie d'Or, &c., amply supplies this colour, backed up by the yellow and striped Pottebakkers. In colour it is clear bright gold, and whether used for pot culture or for massing, it is alike invaluable for decorative purposes.

Prince de Ligne is spoken of as a good bright canary yellow, but I have not met with it. In Thomas Moore, another really good flower, the colour is golden buff suffused with orange. This variety should always be included among those planted in beds for spring decoration. A step farther on, and flowers are reached with fawn or chocolate grounds or edges, like Cerise Gris de Lin, rosy chocolate, edged with fawn. Flowers of this character are very scarce, and I do not think they will ever be popular. Among self-roses there are some really beautiful varieties. The old Rosa Mundi, light rose, is completely distanced by such splendid flowers as Proserpine, rich silken salmon rose; and Rose Luisante, and Rouge Luisante, both deeper in colour than Proserpine. Sometimes there is a deeper shade of colour in the last of these two; and occasionally I have seen them identical in character. Rose Gris de Lin is a very pretty pale pink flower; Florida, purplish violet; Fabiola, a very handsome white ground flower flamed with glossy rose; Le Matelas, deep rose; and Molière, purple, with yellow base. I have classed Fabiola with the self flowers; it is neither a self nor a striped kind, but it approaches nearest the former. Scarlet or crimson selfs are numerous and comprise some very fine varieties; foremost among them is Vermilion Brilliant, rich glowing vermilion, a flower somewhat difficult to get true, as very often Scarlet Van Thol, a smaller and slightly lighter-coloured flower, is sent to England for it. Next come Belle Alliance, Cramoise Superbe, cerise crimson; Couleur Cardinal, scarlet shaded with bright yellow; Feu Rouge, bright scarlet flamed with orange; and Epaminondas, rich deep crimson, sometimes faintly streaked with white.

Of Edged Flowers there are some fine varieties; prominent among them are Keizer's Kroon, or Grand Duc, rich red with golden yellow edges, very large and fine; Duc d'Aremberg, bronzy red with yellow edging, the border being of greater depth than that of Keizer's Kroon; Duchesse de Parma, bronzy crimson bordered

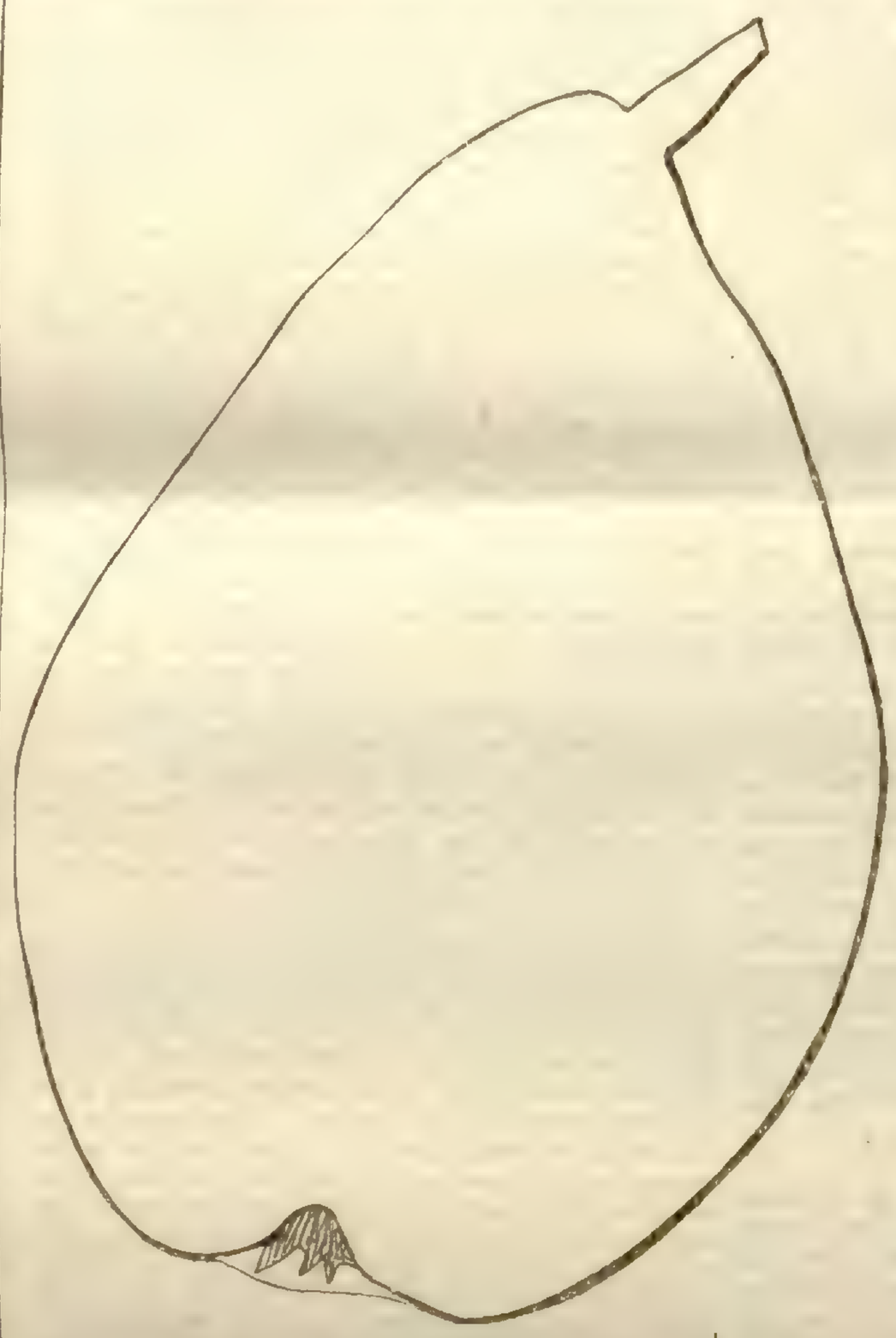

with orange; Archduc d'Autriche, rich crimson edged with yellow; and Mathilde, pale crimson slightly feathered with white. This list by no means exhausts the best of the varieties of this section, but only some that I have seen.

Striped flowers are also very numerous, and comprise such varieties as Brind van Haarlem, white with red stripes; Royal Standard, white with rosy crimson; Grootmester van Maltha, deep rose, with broad flakes of white; Comte de Vergennes, white, slightly striped and feathered with rosy crimson; Cottage Maid, rosy pink with clear white stripes and feather, a small flower but very pretty; Roi Pepin, white with scarlet flakes, a very fine and beautiful flower; Globe de Rigaud, white, with rosy purple flakes; Marquis de Wessenrode, golden yellow, pencilled with red; and Marie de Medicis, yellow with crimson streaks, a flower of novel character.

Of double flowers but little can be said. With but one or two exceptions, in comparison with the single varieties they are not worth growing. The best of all of them is the old Tournesol, red with yellow edges; it is excellent for beds, and when the flowers are fully expanded they are very effective. The yellow Tournesol is smaller than the common one; the flowers are pale yellow with faint brown blotches. Yellow Rose is also a fair yellow flower, and in contrast with bright colours makes a good bed. The old scarlet Rex Rubrorum is hardly worth planting; Imperator Rubrorum is better, being quite destitute of those reddish green petals that always spoil the old variety. La Candeur is the only white I know of; its colour is creamy white, and it is also not worth planting. Bleu Celeste, or Blue Flag, is a poor purplish violet flower. Couronne Imperiale and Mariage de ma Fille are two white flowers, feathered and streaked with crimson, the last heavily streaked; they also flower very late. Duke of York is a rose ground flower with white border. Extremité d'Or, red, bordered with yellow; and Overwinnaar, or La Belle Alliance, white, densely striped with purple.

All spring garden decorators should grow Tulips for that purpose, but let them be single varieties, with the addition of the double-flowered Tournesol. As I have already said, double sorts are not nearly so effective as single varieties, they will never be such favourites, unless, indeed, there should occur a period of rapid improvement, of which, at present at least, we have no indications of the possible advent. *Quo.*

PITMASTON DUCHESSE D'ANGOULÊME PEAR.

FRUIT very large, 4¾ inches long, and 3¼ wide, oblong-obovate; stalk short, obliquely attached, projecting more on one side than the other; eye in a moderate sized depression, with the segments of the calyx erect, and projecting to the level of the fruit; skin soft, smooth, yellow, with slight thin russet near the stalk. Flesh yellowish white, exceedingly melting, buttery, very juicy, and rich.

Mr. Stevens, gardener to F. E. Williams, Esq., of Malvern Hall, Solihull, by whom the fruit of this Pear has been sent, informs us that it is a seedling raised by the late John Williams, Esq., of Pitmaston, in 1841, and is a cross between Duchesse d'Angoulême and Glou Morceau. Mr. Stevens writes:—"It is a vigorous grower and free bearer, and I think will attain great size in more favoured parts of the country. My employer has directed me to offer grafts of this variety to the Royal Horticultural Society, if it is considered worth distributing."

This is a very handsome and most excellent Pear. Ripe in the end of October, or in ordinary seasons it may probably keep till the middle of November. Few of the new Pears can compare with it as regards size, appearance, and quality. It partakes more of the nature of the Marie Louise than of the Glou Morceau. We regard it as quite an acquisition.‖

Home Correspondence.

Pampas Grass.—At p. 1064 it is said, "our autumns are not long enough, nor warm and dry enough to allow seed to become perfect out of doors." The seed inclosed was grown in the open air. Last summer I sowed a small quantity, and have got 30 plants about 2 feet high. The seed was sown and raised on a tan bed in June. Mr. Maule, of Bristol, who made and laid out this place in 1862, planted three small plants together; one proved to be a male, the other two females. In August 1863, they put up 11 fine spikes, four of which burst out on one morning. I observed fine pollen on another spike, such as I had not seen before; this I shook over the four just mentioned, and the result, without any further care, was the seed of which I send you a portion. The plants have never had protection at any time, though growing in cold stiff yellow clay; nor have they ever received any manure. They are now in fine bloom. *R. D., Bridgewater.*

[This seed appears good. Both Bridgewater and the Isle of Wight (see p. 1085), however possess considerable climatal advantages.]

Gardeners a Century and a Quarter ago.—I have been looking over an old book called "New Principles of Gardening," by Batty Langley, published 1739, second edition. In that I find a long story about French Beans, which I will send you if Mr. Darwin wishes it. At present I have made the following extract, on quite another subject, which applies to the present time nearly as much as to that of Batty Langley himself. At all events it has amused me very much. It runs thus:—"I cannot well conclude this section without taking notice of the great happiness a gentleman possesses when he is so well fixed with a skilful industrious gardener, by whose judgment and care he is daily enjoying the pleasures and advantages of the best fruits, herbs, sallets, &c., in the greatest perfection, which recompence is all as can be received for the expences and labours thereof. And on the other hand, how unhappy it is for a gentleman to have an

unskilful person, descended from the tail of a coach, stable, &c., who taking upon him first a blew apron, and then the name of a gardener, assumes the government of choice trees, committed to his care because he has been much acquainted with cleaning knives, sweeping stables, &c., which he thinks are necessary towards their pruning, as well as making hotbeds, &c., without considering that those trees and plants were obtained with much labour, long time, and great expense, which, by his unskilful hand shall, in one or two years' time, be totally ruined, to the great loss of his master, and his eternal shame. I say where misfortunes of this nature happen, which is too frequent, it is a very great loss and disappointment, and a crime unpardonable; and therefore I cannot but take the liberty to say that a good gardener deserves a much greater respect and encouragement than that of stewards, butlers, &c., who oftentimes undeservedly possess a much larger share thereof." *J. Miller, Nurseries, Speen, Newbury.*

Rose Judging.—In my article on this subject (see p. 1059), I believe that I destroyed the force of the word "nearly," by adding that the prize might be given either way. I however thank "W. H., Hackney," for calling my attention to it. If a box is only "nearly" as good as another, of course it is inferior, and the two cannot be equal. I withdraw the word "nearly." It is only where two boxes of Roses are so equal that you cannot decide which is best, that you should place them "equal." I have had letters of thanks for my remarks on the subject. "W. H." will be in great favour with young ladies: but I advise him for awhile to steer clear of the "old ones." I remember observing to an old friend that "all flesh is Grass:" to which he replied "yes, yes, and old women are hay!" I advise "W. H." to stick to the Grass without offending the hay! To his other remarks I quite consent. *W. F. Radclyffe.*——Mr. Radclyffe is, I believe, quite correct in stating that the prizes at our metropolitan Rose Shows are as a rule awarded to the best stands of flowers. There was, however, one marked exception to this rule at the Crystal Palace Show last June. There the first prize was given in the class for 18 blooms shown by amateurs to one of the worst boxes of Roses in the whole class. I heard but one opinion expressed as to this award, viz. that it was altogether a mistake. There were 10 or 12 stands shown in the class, and I am certain that if they had been correctly judged, the box in question would not have received even a commendation. *P.B.R.*

Small Birds.—Owing to the dry character of the past summer it has been almost impossible to keep fruit from birds, especially in gardens near shrubberies and plantations. My employer being a strict preserver of them, they have multiplied lately with us to a great extent, and most kinds of culinary seeds and fruits have to be netted over, no expense being spared for that purpose. Some gardeners however have not the same means at command, and therefore if not constantly watching and shooting these depredators, damage is sustained. In order to show how daring birds are when short of their natural food, I will just record one instance which came under my notice this summer. Having sown some beds of early Cabbage seed one day in July, they were netted over, the nets being pegged close to the ground, and the beds well watered. Next morning there were found seven thrushes, three blackbirds, and a partridge, all of which had wriggled under the nets and had got fast. No doubt the damp beds had tempted them, especially the thrushes and blackbirds, to search for worms and grubs. Blackbirds and thrushes here will even get to Cherries through nets, unless the latter are held a good way off the wall by means of pegs or stays. A great deal of sentiment has lately been expended on the too great destruction of small birds, but in country places where they multiply fast, I think the best and safest way is to keep them within bounds. It is paying too dear for "their whistle" to have to go to the expense of always watching or netting the produce of our gardens and orchards in order to secure it. *W. T.*

Habitats of Orchids.—I regret that "R. H." (p. 1061) has not mentioned the part of Jamaica in which his researches were made. During my own residence in the parishes of Westmoreland and St. Elizabeth's, on the south side of the island, toward the western extremity, I, too, made some careful observations on the distribution of the Orchideæ, which I have recorded in "A Naturalist's Sojourn in Jamaica," pp. 481—489, *et passim*. In that locality many other species are common in the lowlands besides those "R. H." mentions, coming down to the very beach of the Caribbean Sea. Of these, Broughtonia sanguinea, Oncidium luridum (erroneously named O. carthaginense in my work above referred to), and Brasavola nodosa are by far the most abundant. The Broughtonia is found profusely on the stipes of a dwarf Fan-Palm (a species of Thrinax), in Crabpond Morass, a fœtid swamp, which actually margins the sea, and is often overflowed by it. The Palms constitute a close grove, scarcely exceeding 6 or 8 feet in height, and the dense tufts of Orchid bulbs cling to the stems, and throw out their elegantly pendent crimson racemes at about 4 feet from the ground. Here they are exposed to the full blaze of the sun; while all along that portion of the great sea-side road which leads from Bluefields to the Paradise River, the same species is continually detected far above our head, near the summits of the towering Figs and Silk-cotton trees, 100 feet and upwards beyond reach. Here again its elevation throws it fully into the glare of the sun. It is, moreover, often seen on the Calabash, the Hog Plum, and other moderate-sized trees in the open pastures of the lowland pens, and on the slopes of the secondary hills; but like "R. H.," I do not remember ever to have seen Broughtonia sanguinea in the mountain regions,—perhaps not more than 500 feet above the sea. With respect to the colour of this flower in cultivation, I may say that I have flowered it during this summer, and found it of the same lovely crimson hue as I had been familiar with in its wild state, and as compared with a carefully finished painting of a clump that I had made from Nature in Jamaica. I grew my specimen near the glass. I take this opportunity of noticing a curious peculiarity in my specimen of this charming Orchid. One of the spikes, having continued in bloom from May 30th to Aug. 26th, ceased, the last flower withering. But a few days after a new bud was seen pushing from about the middle of the old naked flower-stalk, which I had omitted to cut off; this rapidly developed a new subspike or branch of blossom, which continued from Sept. 16th to Oct. 20th. I have read that Phalænopsis will flower again from the old peduncle, but I have not seen it do so. To return, however, to Jamaica. The Oncidium luridum chiefly affects the main forks of middling-sized trees, as Crescentia, Citharexylon, Spondias, &c., that fringe the high-road and the open pastures. It seems to exercise very little selection of trees, the angle of a stout limb some 15 or 20 feet from the ground, of almost any species, serving its purpose. But it certainly is found mainly on the sun-facing side of the road, and in other situations, with no more shade than the foliage of its own tree affords. It is very abundant, and its large massive leaves render the clumps conspicuous at all times; but specially striking are they, when all at once, in the first week of April, the traveller to Savannah le Mar sees the wide and long straggling spikes some 8 or 10 feet long, from every tuft, which hitherto had been scarcely noticeable, burst into yellow and brown blossom, dangling in his face and brushing him as he rides along beneath the arching trees. Brasavola nodosa (or cordata, for I think they are but one species), more abundant than either, is the frequent companion of Broughtonia, and manifests the like indifference to the particular altitude of its site; any point of a tree-trunk, from 5 to 100 feet, suiting it equally well. It, too, loves the sun, but less exclusively, for it frequently occurs in tall woods; but not in humid, steamy woods, nor in mountainous districts. An Ionopsis (probably pallida, or utricularioides) sprawls about the hedges of Logwood that constitute the fences of much of the lowland pasture land. The Logwood bears the very closest resemblance to our own Hawthorn, so that a yard or two off, where you lose the individual forms of the leaves you would scarcely know the difference; on the scraggy, slender, thorny twigs, all matted and intertwined, sits the Ionopsis, and occasionally a nest of the great-leafed Oncidium too, so that if you suppose these Orchids lying on the summit of a compact Thorn hedge, you may guess how much of shelter from a tropical sun they enjoy. Besides these, many smaller sorts of Oncidium, many of Epidendrum, and other genera even less conspicuous for beauty, grow on the limbs of trees more or less exposed to the sun in the very lowest levels of western Jamaica; while others, on the same levels, evidently retire from the sun. A species with large round flattened bulbs, which I cannot name, as I saw it not in flower, grows in abundance on the Alligator Apple trees (Anona palustris) of a dark morass that borders the shore at Cave, always in the deepest shadow. And the very curious Angræcum funale, with beautiful cream-white flowers, but no vestige of leaves, throws out its plexus of long cord-like white roots from a branch of some low tree over a stream, but dares not face the sun's scorching beams. A most lovely Ionopsis, flowering in a compact spike of the richest violet purple (probably the I. tenera, var. E of the Fol. Orch.), I found rather sparsely in a sombre humid forest about half-way up the mountains of St. Elizabeth's, presenting a strong contrast in its habitat with the sun-loving kind of the Logwood hedges; and showing how much we may sometimes err in predicating the requirements of a plant from knowing those of its congeners. When we attain the summits of the mountains, as the Bluefields Range, from 2500 to 3000 feet above the sea, we meet with a much greater variety of epiphytal Orchideæ. Some of these do grow on single trees in open glades, which are dry and sunny; but the majority are found on trees at the margins, or a little way within them, of the tall dense woods; and not a few occur in the perpetual shadow of the heart of the grand old forests. But of such as affect the margins of the woods, the climate is very different from that of the lowland, roadside, seashore-loving species. The air is never more than temperately warm; in January and February, during the bluster of those winds emphatically called "Norths," it is uncomfortably cold, falling to 50° or lower; and the air, even during the protracted droughts which parch up the lower regions, remains always moist, so that each morning the great flat leaves of the Aroideæ are loaded with sparkling accumulations of water, the condensation of the copious night vapours; and the lowly vegetation of the ground—the Mosses and Lycopods and Ferns—feel to the tread like a saturated sponge. Numbers of kinds of Epidendrum, Oncidium, Brassia, Maxillaria, and humbler genera, are found in such conditions; exposed to a good deal of light, occasionally receiving the sun's full rays, but constantly, or at least habitually, surrounded by saturated air. Fear of trespassing on your valuable space prevents me from entering into fuller details; but I have said enough to show how varied may be the natural conditions of Orchids collected even in an island so small as Jamaica; and how differently we should treat Oncidium luridum from O. triquetrum, Epidendrum cochleatum from E. nutans, Ionopsis utricularioides from I. tenera, if we strictly imitated their original habitats and habits. This strictness is probably unnecessary; but a more perfect acquaintance with the conditions of elevation; temperature (including the extremes, and the average at different seasons, as well as the mean); moisture and dryness, with their alternations or respective perpetuity; sunlight or shadow, and the degree of either; aspect, if any particular one is affected; average height from the ground and its range; choice of trees, if any, and the positions normally chosen; and many other particulars difficult to be prescribed, would be valuable; and might be attained, if your travelled correspondents would kindly communicate to your columns what they themselves know, avoiding that tendency to a too hasty generalisation from insufficient data, to which all of us are liable. *P. H. Gosse, F.R.S., Torquay.*

Foreign Correspondence.

Parisian Gardens and Improvements.—A correspondent writing from Nice on the 14th inst., in reference to the remarks on the improvements going on in the French capital, at p. 1057, says:—

"Baron Haussman, the Prefect of the Seine, is the genius and right hand of the Emperor in everything connected with the reconstruction of Paris. I recollect well some five years ago, on the occasion of the marriage of his eldest daughter, his telling me that at that time the octroi of Paris exceeded 130,000,000 of francs. This was just before the extensive suburbs of Paris were subjected to the octroi, and owing to the stupendous buildings and public works now in progress, and the consequent influx of all varieties of workpeople concerned in the building trade; to the increase of the population, and the fact that all classes live better and consume more than they did a few years ago—for these and other reasons too long to detail, I should be inclined to estimate the present revenue from the octroi at seven to eight millions sterling, or say between 175 and 200,000,000 francs. In the time of the Bourbons it was known to fall short of 60,000,000 of francs, and the Tobacco duty, which till 1830 contributed no more than 55,000,000 of francs, and in 1846, 95,000,000, has gradually increased, till now it almost equals the whole octroi of Paris.

"The thermometer here is 60° F., and we have Roses, Heliotropes, Pinks, Stocks, Passion-flowers of all kinds, Geraniums, &c., growing splendidly, and shall soon be surrounded with a blaze of flowers. One bed of Pansies, sown in July, is magnificent, and in full bloom. The Tuberoses are also in good flower; and the Bignonia jasminiflora, the Lantana Queen Victoria, and Heliotrope, some 15 to 20 feet high, cover our galleries, but the gardens here are in a most wild and primitive state. What wonders might be accomplished in such a climate with a little more care and attention bestowed upon the gardening!"

Societies.

Amalgamated Metropolitan Chrysanthemum.—This Society held its exhibition this year in the Agricultural Hall, Islington, which was tastefully decorated for the occasion by Mr. Crute, and contained, thanks to the exertions of Mr. Jefferies, a large assemblage of well-grown Chrysanthemums, both in pots and in a cut state.

In the Class of Six Large-flowered Plants (Nurserymen) the best plants came from Mr. Forsyth, Stoke Newington, who contributed Lady Hardinge, Golden Christine, Annie Salter, Alma, Arigena, and White Christine. Mr. Merry, Stamford Hill, had Abbé Passaglia, Golden Eagle, King of the Netherlands, Duchess of Buckingham, Talbot, and Golden Christine.

In the Class of Three Large-flowered Plants, Mr. Forsyth, who was the only exhibitor, sent finely-grown and well bloomed examples of Insigne, Vesta, and Chevalier Domage.

In the Class of Six Pompons Mr. Forsyth contributed excellent specimens of Salamon, Cedo Nulli and its Golden and Lilac varieties, Hélène and St. Thais. Three plants of Pompons shown by the same exhibitor consisted of Cedo Nulli and its Lilac and Golden varieties.

A group of plants shown for effect was set up with much taste by Mr. Forsyth. It consisted both of Pompon and Large-flowered varieties, the two being intermixed in such a way as to present a very pretty appearance. Several of the Pompons were in the form of Standards, which, when in good condition, as these were, produce a very effective contrast with their more humble associates. Cedo Nulli and its varieties appear to suit this mode of training admirably, as did also Florence and Andromeda.

In the classes set apart for Cut Blooms (Nurserymen) the contest for prizes was confined to Messrs. Forsyth, Merry, and Saltmarsh, in all of whose stands were

many remarkably fine flowers, consisting of most of the leading varieties at present in cultivation. Queen of England, Jardin des Plantes (one of the best yellows in existence), Novelty, White Globe, and others could not measure less than 6 inches in diameter, the petals broad and fleshy, overlaying each other with wonderful regularity. In short, people who have not had the good fortune to see Chrysanthemum Shows got up as they are about London, have no conception of the size and beauty which these flowers can be made to acquire in skilful hands.

In the Class of Six Large-flowered Plants (Gentlemen's Gardeners) the best came from Mr. D. Monk, who showed well-bloomed examples of Annie Salter, Beauté du Nord, Defiance, Golden Christine, Alma, and White Christine. From Mr. Ward came Prince Albert, Golden Christine, Defiance, Annie Salter, Alma, and Lady Hardinge. Mr. Glover, who was placed 3d in point of merit, had very pretty plants, which were remarkable for uniformity not only of the plant but also of the flowers. His varieties were Jewess, Vesta, Christine and its Golden variety, Chevalier Domage, and Maréchal Duroc. Mr. George sent Little Harry, Defiance, Golden Christine, Alma, Little Annie, and Beauté du Nord.

In the Class of Three Large-flowered Plants, the best came from Mr. D. Monk, who contributed fine examples of Golden Eagle, Annie Salter, and Sparkler. Mr. Glover sent Prince Albert, Dr. Maclean, and Alma. From Mr. Beecher came well-bloomed medium-sized plants of Sparkler, Alma, and Mrs. W. Holborn, the last a useful white kind. Mr. George had Jewess, Christine, and Insigne. Mr. Ward and Mr. Rowe contributed Alma, Christine and its Golden variety, Annie Salter, and Beauté du Nord.

In the Class of Six Plants of Pompons, the best exhibition came from Mr. Ward, who furnished finely bloomed examples of General Canrobert, Cedo Nulli and its Golden and Lilac varieties, and Andromeda. From Mr. Beecher, who was second in point of merit, came Cedo Nulli and its Golden and Lilac varieties, Salamon, Madame Rousselon, and Duruflet. Mr. Weston sent flatly-trained examples of Attila, Miss Julia, Cedo Nulli and its Golden variety, Hélène, and Adonis. From Mr. Glover and Mr. Butcher came Salamon, Brilliant, a handsome red kind in the way of Bob, Cedo Nulli and its varieties, all of which rank among the handsomest of Pompons, Duruflet, General Canrobert, and Miss Julia.

In the Class of Three Plants of Pompons, Mr. Ward showed the different varieties of Cedo Nulli. Mr. Beecher, whose plants were drawn to "a face," sent Duruflet, and two varieties of Cedo Nulli. Mr. Glover had Andromeda, Hélène, and General Canrobert.

Respecting groups of plants set up for effect by gentlemen's gardeners we have little to remark. They consisted for the most part of two lines, the first of which was Pompons, the second Large-flowered varieties —all well bloomed and finely grown. In these sets of plants contrast of colour appeared to have received attention; but they wanted a few standards introduced among them to furnish variety. The exhibitors in this class were Messrs. Howe, Glover Brown, and Monk.

Of Cut Blooms shown by the exhibitors just named and others, there was a large display, in which were representatives of most of the varieties of Chrysanthemums in cultivation. The different varieties of Christine, Lady Hardinge, Julie Lagravère, Her Majesty, Jardin des Plantes, Alarm, Alfred Salter, Anaxo, Beverley, Cassandra, Cassy, Cherub, Chevalier Domage, Yellow and White Formosum, General Slade, White Globe, Hermione, Novelty, Queen of England, Rifleman, Queen of Isles, Vesta, were conspicuous among large kinds. Among Pompons were examples of most of the different varieties named in the classes recorded above; and among small Anemone-flowered sorts we noticed Antonius, Queen of Anemones, Marguerite de Wildemar, Madame Carnac, Mr. Astie, Mr. Frederick Smee, Perle, and Golden Drop. The white seedling named Princess Dagmar, from Mr. George, promises to be a fine addition to this class.

Amateurs' Classes were not so well supported as those in other departments of the Show. The productions contributed by Messrs. Parker, Bolton, Horwood, Hillary, Slade, James, Robinson, Moxham, Delvalle, and others however, did these enthusiastic cultivators credit, as did also the fine blooms of Queen of England, Prince Alfred, Jardin des Plantes, Princess Royal, and White Formosum, shown in the classes for plants grown in the parish of Islington, by Mr. Orson and Mr. Crute. The plants themselves, however, were of so tall and lanky a description as to be useful only when intermixed with others which would hide their naked stems.

Specimen Plants were in beautiful condition, and very effective. Among large-flowered kinds the best came from Messrs. Forsyth, Monk, and Glover; the best Pompons from Messrs. Bolton, Parker, and Ward. The varieties consisted of Christine and Sparkler among large kinds, and the different varieties of Cedo Nulli among small sorts.

Pompons trained in the shape of pyramids were shown in considerable numbers, and as objects of decoration they were exceedingly pretty. They were in 8-inch pots, stood nearly 3 feet in height, could scarcely measure more than a foot in width at the base, and being well flowered, were highly effective, more so even than standards. They came from Mr. Beecher and Mr. George, and were certainly good examples of skilful management.

Prizes offered by Mr. Salter for Prince Alfred and General Bainbridge induced Mr. Howe and others to furnish good blooms of these two fine kinds, and Mr. Alfred Smee's prize for Chrysanthemums mixed with Ivy, Fern leaves, and other foliage in glass stands for dinner-table decoration, elicited two fine exhibitions in that way—the first from Mr. Hill, the second from Mr. George.

We also noticed a charming little display of fine-foliaged plants in ornamental pots from Mr. Williams, of Holloway.

STOKE NEWINGTON CHRYSANTHEMUM.—The annual exhibition of this Society was held a few days ago in the Tabernacle, Kingsland Road, and was altogether highly successful. The display of specimen plants and cut blooms was even better than in former years.

For Six Plants, Mr. Ward was first, with Prince Albert, Golden Christine, Defiance, Annie Salter, Alma, and Lady Hardinge. Mr. George sent fine plants of Alma, Jewess, Little Harry, and Defiance. Mr. Forsyth furnished Vesta, Annie Salter, Lady Harding, and others.

In the Class of Three Plants, Mr. Howe had Vesta, large and fine; Riflemane, and Lady Harding. Mr. Forsyth sent Prince Albert in excellent condition.

In the Class of Six Pompons in 8-inch pots, Mr. Ward showed Salamon, General Canrobert, and Duruflet. Mr. Forsyth had, among others, fine specimens of Cedo Nulli, its Lilac variety, and Duruflet.

In the Class of Three Pyramid Pompons, Mr. Butcher sent good plants of Cedo Nulli, Andromeda, and General Canrobert; from Mr. George and Mr. Ward came Duruflet, General Canrobert, Cedo Nulli, and others.

In Collections, Mr. Howe showed Prince Alfred, large and fine, White Globe, at least 4 inches across, and beautifully incurved, also Lord Ranelagh, Lady Hardinge, Antonelli, Annie Salter, and Alma. Mr. Forsyth had Beverley, Chevalier Domage, and others; and among Pompons, Golden Circle, and Cedo Nulli in the form of a Standard.

Among Cut Blooms the following were remarkably fine, viz.:—Queen of England, Lady St. Clair, White Globe, Lady Harding, Themis, Princess of Wales, Prince Alfred, Jardin des Plantes, Beverley, Nil Desperandum, and others. Mr. Butt had a nice stand of Anemone-flowered varieties, and good stands of 36 Anemone Pompons came from Mr. Ward and Mr. James. Mr. George had a First-class Certificate for a seedling called Princess Dagmar, blush white with a full centre. Several extra prizes were offered by members of the Society to winners in certain classes; three by Mr. Salter, for blooms of Princess of Wales, and three for Robert James; three by Messrs. James and Howe for Robert James; and one by Mr. Snare for Jardin des Plantes. The last, from Mr. Cornwall, Kingsland, were of large size, and otherwise in very fine condition.

LINNEAN: *Nov.* 3.—G. Bentham, Esq., President, in the chair. H. Stevenson, Esq., was elected a Fellow. The following communications were read:—1. *Letters from Sir H. Barkly, K.C.B., Governor of the Mauritius, and from Swinburne Ward, Esq., Civil Commissioner*, in reply to the memorial of the Linnean Society, relative to the wanton destruction of the Coco de Mer, Lodoicea seychellarum. The Commissioner had reported to his Excellency that although in many parts where the Palm abounded, it has been destroyed by accidental conflagration and by ruthlessly cutting it down to make room for Mandioc cultivation, yet that on the southern point of the Island of Praslin he had found a valley surrounded by hills on the property of Mr. Campbell, the sides and crests of which were covered with the Lodoicea, several hundred in number, and in all stages of growth, from the sharp sword-shaped spathe just shooting from the ground, to trees of 120 feet high. He ascertained that though no nuts were planted, some were allowed to remain and take root where they fell. The leaves of the male plants are cut for the sake of the material they afford, and which is used for making hats and baskets, but those of the male only, which preponderates over the female, are so cut. Cutting the leaves prevents the blossoming of the trees, but inaccessible specimens which flower undisturbed are quite sufficient to fecundate all the female plants in the district. In Curieuse comparatively few trees were found, and these ,smaller than those of Praslin, but directions have been given to keep up the supply by planting germinating nuts—in fact to plant all the germinating nuts that can be found. A Coco de Mer with a healthy germ a foot long had been forwarded to Kew. The Governor stated that as Praslin is almost entirely private property, the Government could only interfere in the way of exhortation and remonstrance, but that in Curieuse, which is still vested in the Crown, and used for a purpose which renders it inaccessible to the public, he trusted there would be no danger, under any circumstances, of the extinction of this interesting species.——2. *Observations on some Orchids of the South of Europe*, by J. T. Moggridge, Esq., communicated by the President. The Orchis longibracteata was said to be fertilised by Xylocopa violacea, a specimen of which the author had seen taken bearing the pollinia of this plant on its forehead, and, he added, "I have myself seen O. longibracteata visited by several species of hymenopterous and dipterous insects." At Mentone the author had never seen any tendency to self-fertilization in Ophrys Scolopax, a species closely analogous to O. arachnitis, but all the spikes of a large bundle sent to him from Cannes were so without exception. This material difference was stated to be accomplished by a very slight bend in the anther cells, which were prolonged into a beak of variable length in the case of the self-fertilising blossoms. It was mentioned as a remarkable coincidence, that at Mentone the Bee Ophrys is scarce, and at Cannes very abundant. So that, observed the author, within 30 miles of one another we have one spot where self-fertilisation is in full action, and another where it appears to be unknown.——3. *Notes on the Chatham Islands*; by H. H. Travers, Esq., in a letter to his father, W. F. L. Travers, Esq. Mr. Travers visited Chatham Island in October last. At Waitangi, the chief Maori settlement, he found a chapel of the Church of England natives, the inside walls of which were lined with fronds of Tree Ferns, from which the pinnules had been stripped, interwoven in a curious manner with leaves of Phormium tenax. The Maories cultivate large quantities of Potatos, Maize, Pumpkins, and Onions, which they supply to American whaling ships, and occasionally export to New Zealand. They did not appear to cultivate any European fruit, but they use largely that of a small species of Nightshade, indigenous to New Zealand, which they had introduced to the Chathams. The bush consisted principally of Eurybias, Coprosmas, Dracophyllum, Solanum, &c., along with several Tree Ferns, among which large numbers of Cyathea dealbata were seen. There were also a Lomaria near discolor, Phymatodes Billardieri and pustulata, and several others common in the bush in New Zealand. On the beach the Myosotidium nobile grew with rank luxuriance wherever it had not been invaded by the pigs, which feed eagerly on the roots. The Maories dry the leaves and smoke them as a substitute for Tobacco. On a sandy tract between Wangaroa and Tubong were large quantities of a small, but beautiful shrub, apparently belonging to the genus Leucopogon. The low country is covered with Grasses and Sedges, mixed with Pteris esculenta, and with here and there occasional patches of Phormium tenax. The general surface of Chatham Island, to the north of Petre Bay, is low and slightly undulating, with occasional hills; the peninsula to the south of Petre Bay is more hilly. The soil is peaty, and often 50 feet deep. In several parts of the island this peat has been on fire for years, burning at a considerable depth below the surface, which when sufficiently undermined, caves in and is consumed. The surface growth, exclusive of bush, consists principally of Grasses and Sedges, with patches of Fern. Several introduced plants are spreading rapidly, for example White Clover, English Daisy, Dock, Mustard, English Burr (which grows with the utmost rankness in the bush on Pitt's Island), the Polygonum found on Canterbury plains, Wild Strawberry, and others. Indeed, from the luxuriance and rapidity with which these plants grow, Mr. Travers had little doubt that if not checked they would soon overcome and replace the indigenous herbaceous vegetation. —— 4. *On the genera Sweetia of Sprengel and Glycine of Linnæus, simultaneously published under the name of Leptolobium.* By G. Bentham, Esq., President. Under the name Leptolobium, Dr. Vogel published a genus of Leguminosæ, which seemed to form the connecting link between Papilionaceæ and Cæsalpiniæ; while Mr. Bentham had described in the same year, under the same name, a plant which had before been commonly referred to Kennedya. The latter was changed to Leptocyamus, but it now turns out that neither one nor the other are tenable: for the former proves to be reducible to Sweetia, and the latter to Glycine. —— 5. *A Brief Account of the Myrmica Kirbii, as found in Southern India*; also 6. *Account of a Heronry and Breeding Place of other Water Birds in Southern India*, both by Dr. Shortt. ——It was announced that the third and concluding Part of Vol. 24 of the Society's Transactions was ready for distribution.

ROYAL.—The President and Council have caused the following balloting list for the election which takes place on November 30, to be circulated amongst the Fellows. The persons they recommend for election are the following:—*President:* Major-General E. Sabine, R.A. *Treasurer:* W. A. Miller, M.D. *Secretaries:* W. Sharpey, M.D.; G. G. Stokes, Esq., M.A. *Foreign Secretary:* Prof. W. H. Miller, M.A. *Other Members of Council:* *Prof. J. C. Adams, M.A.; J. Alderson, M.D.; G. Busk, Esq., Sec. L.S.; Colonel Sir G. Everest, C.B.; H. Falconer, M.A., M.D.; *J. P. Gassiot, Esq.; *J. E. Gray, Ph.D.; *T. A. Hirst, Ph.D.; *Sir H. Holland, Bart., M.D.; H. Bence Jones, M.A., M.D.; *Sir R. I. Murchison, K.C.B.; *W. Odling, M.B.; Prof. W. Pole, C.E.; *Rev. B. Price, M.A.; *Sir J. Rennie, Knt.; *The Lord Stanley. The Fellows whose names are marked with an asterisk were not members of the last Council. Here is a good example which other Societies might follow with much advantage.

Notices of Books.

Goethe's Essay on the Metamorphosis of Plants. Translated by Emily M. Cox; with Explanatory Notes by Maxwell T. Masters, M.D., F.L.S. 8vo, pp. 34. Reprinted from the Journal of Botany, December, 1863.

So much has been said about Goethe's merits as the discoverer of the doctrine of the conversion of leaves into the several parts of which the flower and fruit are composed, and so few have ever met with his treatise, that a faithful translation of it, especially when accompanied by explanatory notes and illustrations, of which it stands so much in need, is quite a boon to botanists who care to look a little beneath the surface. It is unfortunate that the essay was originally published without illustrations, and that besides the unhappy use of the word transformation instead of modification, there is so much of fanciful theory mixed up with accurate observation and legitimate deduction from indisputable facts, as these circumstances combined prevented in all probability the general acceptance of the justice of his views for some years, and in consequence retarded science. "An edition," says Dr. Masters, in one of his instructive notes, "of Goethe's papers on Natural History was published at Paris in 1837, by Dr. C. F. Martius, accompanied by an atlas containing the author's original drawings, as well as three by Turpin, with notes illustrative of the metamorphosis—thus carrying out a wish expressed by Goethe in a paper entitled "Wirkung dieser Schrift und weiterer Entfaltung der darin vorgetragenen Idee," 1830. (The working of this doctrine, and the further development of its leading idea.) Dr. Masters has himself accompanied the memoir with a plate containing a few well selected examples.

Goethe does not profess to be the prime mover in this doctrine. Linnæus, and more especially Wolff, in his Theory of Generation, anticipated him in some respects. The views of the latter were in many respects so just and sagacious that they accord wonderfully with the teachings of modern physiologists, while those of Linnæus were impeded by his theory of the part which the bark wood and pith, bore in the development of leaves, flowers, and fruit. Goethe had the merit of working out the subject as thoroughly as perhaps was possible in the existent state of science, and he is not to be blamed if in a few instances he was wrong, where science itself was imperfect. In such cases Dr. Masters has not failed to show what the right doctrine is, while Goethe's notions of the action of spiral vessels in the formation of organs, and the effect of pure fluids and gases fall to the ground, as being the creatures merely of his own imagination, and not resting at all on facts.

No Journal perhaps contains more important materials for the establishment of this doctrine than our own, as we have never lost a fitting opportunity of giving illustrations of such anomalous developments in flowers as serve to illustrate the doctrine that sepals, petals, stamens, pistils, and ovules are all, in whole or in part, modifications of leaves. In some cases it seems quite clear that we must take the axis also into account, as also perhaps in the case of ovules. Though it is quite clear from such examples as the common one of the White Clover, that the outer coat at least is foliaceous in its origin, it is very probable that the central part, from which the embryo sac is developed, is derived from the axis of the ovular bud. Whether, however, ovules be regarded as buds or not, this may equally hold good. The exact relations, indeed, of the different parts of which the ovule is composed in different plants are not at present clearly established. At any rate the embryo itself is an entirely new growth, with the poles of its axis in the first instance precisely contrary to those of the parent, at least in phenogamous plants, though this apparently is not the case in the higher Cryptogams.

It may be well for the information of those who would like to ascertain what the steps were by which the doctrine advanced, up to the time when Goethe took it up, to state, that Dr. Masters has supplied the requisite materials in an article entitled "Vegetable Morphology, its History and Present Condition," in the British and Foreign Medico-Chirurgical Review for January, 1862.

Contributions to the Knowledge of Spermatozoids in the Vegetable Kingdom. By Dr. Hermann Schacht. Berlin. 1864. 8vo, pp. 54. Tab. lith. 8.*

It is scarcely possible to overstate the importance of the subject to which Dr. Schacht has devoted this treatise. The discovery of organisms in the vegetable kingdom so closely resembling in many respects the minute bodies by which impregnation is effected in animals, was at first so startling that their analogy was scarcely allowed, much less their identity; and a sort of compromise was made by naming the vegetable organisms spermatozoids, while those of animals were called spermatozoa. We see however no valid reason for the difference, and the more so because no one in the present day believes that they are really animals allied to infusoria.

Dr. Schacht has with great expense of time and labour investigated these bodies in the vegetable kingdom so far as the higher Cryptogams are concerned, but his researches do not seem to have been extended equally to the lower Cryptogams.

It would be quite out of place in this Journal to enter into any details as to minute differences in their development. We must rather content ourselves with giving a portion of the results at which the author has arrived.

Spermatozoids are formed within mother cells, from which they at length become free, and consist of two parts, a soft variously-shaped body, furnished with two or more lash-like appendages, by means of which they move about with greater or less rapidity in water. They have the nature of cells, but are not surrounded by a covering of cellulose, nor in general do they possess any nucleus.

In Algæ the body is subglobose or subelliptic, bearing two or more cilia at some definite point. In Ferns and pseudo-Ferns, the body forms a flat spiral riband, attenuated at one end, and bearing there on one side a row of cilia. In Charads, Hepaticæ, and Mosses the body is much elongated, at first wrapped up spirally within the mother cell, and bearing at the extremity two long cilia.

We may then distinguish three typical forms of Spermatozoids in Cryptogams:—First, that of Algæ; secondly, that of Ferns and pseudo-Ferns; thirdly, that of Charads; and there exists, moreover, with respect to the germination and growth of the sexual organs, an intimate relation between the families which belong to each type.

In the Algæ we have the simplest sexual organs, and a direct germination. With the type of Ferns and pseudo-Ferns, on the contrary, we have the development of complicated sexual organs and a pro-embryo, or, if we include Lycopods and Rhizocarps, the growth of the female apparatus on the pro-embryo. Finally, with the type of Charads (including Hepaticæ and Mosses), we have similarly-constructed sexual organs on the fully developed plants; no direct germination, however, follows, but rather the formation of a pro-embryo from the spore, on which a knot is developed, from which the young plant springs. The Charad type is just intermediate between that of Algæ and Equiseta.

Spermatozoids closely resemble the zoospores of some Algæ and Fungi, but exact as the resemblance sometimes is, they differ in function, and in the impossibility of their being developed by germination into new individuals, as they never acquire a coating of cellulose. They are essentially short-lived organisms. The swarming cells of Algæ at length acquire an envelope of cellulose, which makes them far less transitory, and these give rise to new individuals.

* Die Spermatozoiden im Pflanzenreich ein Beitrag zur Kenntniss derselben von Hermann. Schacht.

Garden Memoranda.

Witley Court, Worcestershire, the Seat of the Right Hon. the Earl of Dudley.—Among first-class garden establishments, this stands in the first rank. It is situate within nine miles of Worcester. The mansion, a princely building, apparently of Bath stone, with noble porticos and flights of stone stairs on three fronts, stands in the centre of a fine park well filled with deer, beautifully wooded, and enriched with that charming inequality of surface which might be looked for in a locality within sight of the Malvern Hills. The flooring under the porticos just alluded to, consists of polished marble of different colours and patterns, flights of steps, some 30 yards in width, leading to a beautiful turf-covered terrace, supported by a stone-faced wall 4½ feet in height, and traversed by a gravel walk 16 feet in width.

Attached to the mansion is a beautiful conservatory 90 feet in length and 60 feet in width, with upright sides some 20 feet in height, ornamented by handsome Corinthian pillars surmounted by a curvilinear roof of iron and glass. Trained against the back wall of this house are Camellias, Orange trees, and other attractive fine-leaved plants. In the beds is a rich and luxuriant vegetation, from among which rise stately Tree Ferns, Araucarias and Camellias, set off at the more prominent points with the red-coloured Coleus Verschaffeltii, Dasylirion serratifolium and other plants of an equally ornamental kind. Surrounding the beds, which are edged with dressed stone, are marble-paved pathways 7 feet in width, and in the centre is a small Convolvulus fountain and basin, which when playing has a beautiful effect, reflected as it is by a noble mirror placed in the back wall.

The flower garden stretches out in front of two sides of the mansion, and is cut off from the deer park by means of a neat balustraded wall enclosing some 8 acres of dress ground, circular in outline, and laid out with that taste and skill for which its designer, Mr. Nesfield, is distinguished. This garden occupies two sides of a valley, at the lowest level of which is an irregular oval-shaped piece of water, furnished with magnificent fountains, the main jet of which when in full operation rises to a height of 145 feet. The central design consists of Perseus and Andromeda, the former on horseback destroying some sea monster, from which the latter, chained to a rock, is apprehensive of danger. Cupids seated on dolphins at either end of the basin, throwing water towards the central group, together with other aquatic contrivances, all make up a series of water works unequalled of their kind. Another fountain, equally classic in design and effective in action, is placed so as to form a striking object looked at from another side of the mansion, and the two together, when in full play, throw out per minute no fewer than 12,000 gallons of water.

Entrance to the flower garden from the park is effected through richly gilt iron gates, as well as from the conservatory, which can be entered from the mansion without going out of doors. In a warm corner at one end of the conservatory is a series of neat flower beds, which are kept gay in summer with ordinary bedding plants, and in spring with bulbs, of which there is in this spot always an admirable display, the reflection from surrounding walls favouring their perfect development. Two colossal lions, chiselled out of huge blocks of white marble, guard the flight of steps by which the ornamental ground properly so called is reached from the terrace on which the mansion stands, and on the gently sloping declivity between this and the fountains in the hollow are fine masses of Rhododendrons, that give breadth and character to this part of the garden. On the corresponding slope on the opposite side are prettily designed beds on gravel, intermixed with Box embroidery work, which, viewed from the windows of the mansion, have a rich and pleasing appearance. A walk led round the entire garden, within a few feet of the boundary wall, passes in its course through two neat temples, one on each side of the grounds, furnished with seats and lighted at top through amber-coloured glass. The two temples just named are joined together by means of a straight grass walk, along the sides of which is a variety of small beds, surrounded by Box and gravel, neat and elegant in design. Irish Yews, pyramidal Box trees, standard Laurustinus, Roses, and plants of that description planted here and there in suitable positions, form appropriate ornaments in highly kept geometrically laid out grounds of this kind.

Another division of this garden, separated from that just alluded to by a noble terrace walk, contains an elaborate design laid down in Box and different coloured gravels, the whole in a sunken panel and substantially edged with stone. Among the embroidery work in Box are introduced bulbs in spring and bedding plants in summer. Choice Conifers are dotted about in the neighbourhood of this garden, as are also masses of Rhododendrons and hardy Azaleas, the latter surrounded by belts of Berberis Aquifolium, which, when in flower, look at a distance not unlike an edging of gold, and its glossy evergreen leaves also serve to give these otherwise rather naked looking beds a warm and comfortable aspect during winter. Vases and tazzas, brilliant with flowers, occupy prominent and effective positions in this garden, on the N.E. side of which is a deep thickly-wooded glen, through which the main approach to the mansion passes. Water, well stocked with fish, plays an important part in this woodland scenery, and also all along that side of the park next the carriage drive, where, in the form of a series of lakes, it has a fine effect, especially when viewed from the upper windows of the house.

Among Conifers planted as specimens we noticed a beautiful Wellingtonia, some 12 feet in height, with a wonderfully compact cone-like appearance; fine examples of Abies nobilis, Nordmanniana, Pinsapo, and other equally valuable varieties. A. cephalonica was also growing here, but its appearance plainly indicated that it was too tender to withstand spring frosts.

Among bedding plants Mrs. Pollock is a favourite Pelargonium, here as elsewhere, on account of its handsome foliage, as are also Golden Chain, Alma, and Mrs. Lenox; among other Pelargoniums we noticed Stella, a nosegay sort, which stands the weather well both in beds and vases, Trentham Rose, Tom Thumb, and Cerise Unique. Yellow Calceolarias were abundant, as was also Lobelia speciosa, which forms a fine edging next the light grey stone of the vases and of raised beds withheld by it. Gazania splendens makes a showy and excellent late bed. Among Dahlias were Crystal Palace Scarlet, Golden Ball, and Alba Floribunda, all dwarf free flowering sorts.

The kitchen gardens are worn out, and new ones, in a style commensurate with the grandeur of so fine an establishment, are about to be formed. Indeed, some of the brickwork connected with new ranges of glass houses is already up. Young Lettuces planted out in borders here are suffering greatly from the attacks of the surface caterpillar of a moth called Agrotis segetum, which this season has been exceedingly destructive to Turnips and other root crops throughout the country. Unfortunately we know of no more effectual remedy for it than handpicking—a tedious task, and at best something like "locking the door when the steed is stolen," inasmuch as the real guide to the whereabouts of the pest is the decay of the plant.

In the park and pleasure grounds are many noble specimens of Beech trees, some of which, broken and time-worn, have a highly picturesque appearance. On a few, unfortunately dying, we observed a cottony production, usually referred to Fungi, and sometimes called Psilonia nivea. It is, however, undoubtedly the work of an insect. We have seen it on healthy trees; but it probably destroys them sooner or later. The only remedy with which we are acquainted, is brushing the cottony substance off and rubbing the parts affected with a mixture of tar and grease. This, however, would be an expensive and tedious matter with trees of the size of those under notice.

The country around Witley is exceedingly beautiful

especially in autumn, when the Apple Orchards are red with ripe fruit to be used in cider making. On ome farms as many as 500 hogsheads of this beverage are made in one season. Wood-clad hill tops rise up from among fertile fields and deep ravines, and the parish church, in connection with the mansion of Witley, adds to the interest of this fine place.

The management of the gardens and dress grounds under Mr. Lauder was all that could possibly be desired; the turf was in admirable condition, the walks scrupulously clean and well rolled, the flowers brilliant, the different shrubs planted out as specimens neat and trim without stiffness or formality, and the kitchen department so arranged as to meet the extensive demands that are daily made on it. In short, we found everything conducted so as to verify the old proverb that "the best goods are the cheapest."

Miscellaneous.

Royal Society's Medals.—The Copley, Royal, and Rumford medals have this year been awarded as follows:—Copley Medal—Mr. Charles Darwin, F.R.S., for his important researches in geology, zoology, and botanical physiology. Royal Medals—Mr. Jacob Lockhart Clarke, F.R.S., for his researches on the intimate structure of the spinal cord and brain, and on the development of the spinal cord; Mr. Warren De La Rue, F.R.S., for his observations on the total eclipse of the sun in 1860, and for his improvements in astronomical photography. Rumford Medal—Dr. John Tyndall, F.R.S., for his researches on the absorption and radiation of heat by gases and vapours. It is especially satisfactory to find the work of a philosopher, who, like Darwin, is not only the author of numerous monographs of the most varied as well as the most valuable description, but has revolutionised biology by the introduction of new fundamental conceptions, so early and so fully recognised by the Council of the Royal Society. *The Reader.*

Mr. Donald's Nursery Stock.—It will be seen by an advertisement in another column, that the valuable stock belonging to Mr. Donald, of the Goldworth Nurseries, Woking, is to be sold on Monday, Nov. 28, and following days, by Messrs. Protheroe & Morris. It is stated to consist of some thousands of fruit trees of all kinds, trained and standard; and an enormous quantity of evergreen shrubs, ornamental trees and Conifers, all of which are stated to be not inconveniently large and in good condition for moving. All who contemplate making new plantations, either for profit or ornament, should therefore embrace so favourable an opportunity of obtaining materials suitable for their purpose.

Trap-door Spider.—This spider, which comes from Corfu, makes a dwelling-place for himself by excavating in a sloping bank a circular hole about 3 inches in depth by one-third in diameter; this he lines with a silky web, and at the mouth of the hole he fixes, in a most artistic manner, a circular door with a hinge, composed of clay moistened with the glutinous substance of which the web is composed. This door he always shuts after going in or out. As soon as he finds a stranger at his door he secures it on the inside, possibly by holding it down with his claws, which are very powerful. It is necessary to use some force to open it. *R. F. Wright, at Meeting of British Association.*

Prolific Potatos.—Mr. Campbell, gardener at Colliston, dug from 1 yard of a drill of Potatos, containing three shaws, the enormous yield of 27 lb. One of the tubers weighed within half-an-ounce of 2 lb., and the united weight of 12 was 16 lb. The Potatos, which were of the sort called Paterson's Seedling Regents, got nothing but leaf-mould for manure. *Arbroath Guide.*

Calendar of Operations.

(*For the ensuing week.*)

THE rains which we are now experiencing will have the effect of softening the ground, left dry by the late hot summer and comparatively showerless autumn, and will enable all operations in the way of planting to be pushed forward under advantageous circumstances. Root pruning may also now be proceeded with. The principle upon which it rests, diminishing the supplies, is unquestionably correct, but the manner of applying it is in some instances that have come under our notice as unscientific as pruning Gooseberry trees with hedge-shears. In the cases just alluded to, a trench has been dug out within a short distance of the stem, and the whole of the roots, good, bad, and indifferent, cut off without distinction; the effects of this rude mutilation will doubtless have been made disagreeably apparent in many instances during the past summer. The same principle, however, carried out in a more efficient way has been productive of the very best results. In the case of wall trees, taking up and replanting generally gives them sufficient check. The strong downward growing and ill-placed roots can then be removed in proportion to the vigour of the trees, while those retained can be spread out in a proper position, that is, nearly horizontal. By this method (which also affords greater facilities for trenching, raising, or draining the border) a tree would suffer less, and yet be sufficiently checked to alter its habit; the roots being likewise brought to the surface and properly spread out, would be less liable to penetrate too deeply in the ground, which always tends to promote luxuriant growth and consequent barrenness. Old wall trees which, from their size, it is impracticable to transplant, we would root-prune; not, however, in the way alluded to above, but by undermining the roots and cutting off the lower and stronger ones only.

FLOWER GARDEN AND PLANT HOUSES.

Now that frost has left us, look carefully over half-hardy stock, and if any has not already received sufficient protection, let no time be lost in rendering it as secure as possible for the winter.

CLIMBERS.—Particular attention should be paid to ecuring as much light as possible in all structures containing plants; and where the rafters or roofs are used as trellises for climbers, the latter should be reduced within convenient bounds, as the growth of nearly all is or ought now to be completed. Late autumn-flowering sorts as yet unpruned, such as Mandevillas and Ipomœas, will now be sufficiently ripened for the purpose, but little more should be done after removing the changed leaves than to prune the weakest shoots; their final pruning should be deferred till March or April. If larger and stronger shoots are cut now, they are apt to commence growing, in spite of the moderate temperature, and thus expend the strength which ought to be reserved till spring. The shoots of Maurandyas should be considerably reduced in bulk, as they are affected by the slightest damp during winter. If any of the late growing Passion-flowers or other creepers impede the ingress of light, they should on this account be reduced; deferring, however, their final pruning until they are about to commence their new growth in spring.

FORCING PLANTS.—The free admission of light and air is indispensable to these, and especially the latter, in order that the plants may be kept moderately hardy, and thereby better enabled to bear moving about during cold weather.

PELARGONIUMS.—Give air whenever the weather will admit of it; but avoid cold draughts, and keep out frost. On the other hand, be careful, however, not to use too much fire-heat. Training and shifting must also receive attention.

FORCING GARDEN.

ASPARAGUS.—In forcing this for early use, guard particularly against too much heat in the bed, which would be sure to injure the roots. Upon the first indication of this give a good watering, and if the weather is at all favourable let the lights remain off. If these remedies do not answer, make holes in the sides of the bed with a pointed stake. Prepare materials for another bed for succession.

CUCUMBERS.—Give those growing in pits all the light possible by taking off the covering early in the morning when there is no frost, and keeping the glass clean. Be careful that red spider does not establish itself upon plants which may be in Pine stoves, where the drier atmosphere favours their increase.

PINES.—Do not allow cold weather to seal up the ventilators; the admission of air must, of course, be gradually reduced in accordance with the advancing season, but this is a very different matter to almost discontinuing it. Let water be very sparingly used during dull weather, but have an eye to those plants which stand near flues or hot-water pipes, as they are liable to get dry before their neighbours.

VINES.—In some instances houses from which the fruit is cut will by this time be converted into greenhouses; the Vines require to be kept cool and dry, and the plants want very nearly the same treatment; frost, however, must be carefully excluded. While the plants are in these temporary dormitories, particular care should be taken to keep them perfectly clean and free from insects of all descriptions, or these latter will leave broods behind them, which will be very troublesome another season. If possible, avoid putting plants into those houses in which the fruit is still hanging; but if it is necessary to do so, let them be of such kinds as require the smallest quantity of water during winter.

HARDY FRUIT AND KITCHEN GARDEN.

Examine fruit and root stores to see if all is in a state of good preservation. Trench and ridge all vacant ground.

CAULIFLOWERS.—These should be examined every three or four days, and those which have arrived at maturity, if not required for immediate use, should be lifted when dry, and after tying their leaves together, should be laid in by the heels in a sheltered situation, or hung up in an airy shed, where they will be protected from wet and frost.

PEAS AND BEANS.—Those who reside in favourable localities may now make a sowing of these vegetables for an early crop. The seeds should be sown on the leeward side of low ridges, the crowns of which will protect the young plants from cold winds, and the hollows between will aid in keeping the soil dry. Some chopped Furze, or other similar material, should be sown along with the seed, to prevent the depredations of mice. There is a chance, in warm dry localities, that these early sowings will produce good crops; but in medium or late situations the chance of success is very small. In the latter case there is less trouble, and more certainty, by sowing in boxes or turves early in spring, and planting them out with a slight shelter towards the end of March.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Nov. 16, 1864, as observed at the Horticultural Gardens

Nov.	Moon's Age.	Barometer Max.	Barometer Min.	Temperature of the Air Max.	Temperature of the Air Min.	Temperature of the Air Mean	Temperature of the Earth 1 foot deep.	Temperature of the Earth 2 feet deep.	Wind	Rain
Thurs. 10	11	30.064	29.942	44	18	31.0	45	48	E.	.00
Friday 11	12	29.902	29.846	40	25	32.5	44	47½	E.	.08
Satur 12	13	29.806	29.679	46	30	38.0	44	46½	E.	.07
Sunday 13	○	29.370	28.813	54	40	47.0	44½	46½	S.W.	.73
Mon. 14	15	28.727	28.715	54	24	39.0	46	47	S.W.	.33
Tues. 15	16	28.905	28.727	48	39	43.5	46	47	N.E.	.06
Wed. 16	17	29.448	29.208	50	25	37.5	46	47½	E.	.01
Average.		29.446	29.282	48.1	28.7	38.3	45.1	47.1		.10

Nov. 10—Frosty; fine; thermometer lower at night than it has hitherto been this season.
— 11—Sharp frost, fine; overcast, frosty.
— 12—Foggy; hazy; overcast at night.
— 13—Rain; barometer very low, rain at night.
— 14—Very clear, quite cloudless; barometer exceedingly low frosty.
— 15—Dense fog; barometer still very low; foggy; drizzly.
— 16—Uniformly overcast; hazy and cold; fine at night.
Mean temperature of the week 2¼ deg below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Nov. 26, 1864.

November.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 20	49.8	34.8	41.8	13	0.35 in.	1	7	3	—	7	8	6	6
Mon. 21	49.4	36.5	42.9	23	0.41	4	5	4	3	5	11	4	2
Tues. 22	49.0	34.1	41.6	21	0.30	3	4	6	3	4	8	5	8
Wed. 23	47.2	31.4	40.3	16	0.36	1	6	3	2	5	12	4	5
Thurs. 24	47.3	32.4	39.9	12	0.61	5	8	3	2	6	8	2	1
Friday 25	46.3	33.5	39.9	19	0.34	3	4	7	3	7	8	3	3
Satur. 26	47.2	33.2	40.2	19	0.70	2	6	6	2	4	12	7	4

The highest temperature during the above period occurred on the 23d, 1853—therm. 33 deg.; and the lowest on the 23d, 1838—therm. 9 deg.

Notices to Correspondents.

AUBRIETIA HENDERSONI: *A C.* This is one of the most lovely of rock plants, and far in advance of the other Aubrietias commonly cultivated. The deep violet purple white-eyed flowers are very effective; the flowers are also better formed than those of the older kinds, and the habit appears to be closer or more tufted. We do not know its origin; perhaps some of our readers may be able to throw some light on this point.

AZALEAS: *R Pitt.* The best whites we know are Queen of Whites, Marie Vervaene, Reine Blanche, and Flag of Truce. The best striped whites, Flower of the Day, Madame Mieller, Tricolor, and Beauty of Reigate. For bright scarlets take Mars, rich orange scarlet; and Stella, orange-scarlet dashed with purple.

GRAPES: *T T H X.* Yours is certainly not a case of common shanking, nor do we consider your Grapes diseased. They have arrived at full maturity, and in the natural course of things are beginning to go off. It is probable that the richness of the soil, rather than any other cause, prevents their keeping so long as you would wish them. There is no tendency to mould, and therefore we suppose the house is properly ventilated.—*T J.* As your Vines ripen their wood and foliage early, you can scarcely expect your Grapes, which appear to be small though well flavoured, to hang so long as those which have come to perfect maturity at a later period. The mulching is rather in their favour, as, in all probability, the ground beneath is dry, and it is not desirable that there should be at the present moment too free a supply of water to the roots. Perhaps their being too dry in the summer has been the cause of the foliage ripening so soon. Your Grapes are a little mouldy, but the mould has perhaps grown since they were sent. *M J B.*

LARCH DISEASE: *J B.* After the most careful examination we can find no trace of an insect upon your Larch twigs. The affection appears to be a disease of the cellular tissue of the bark, very similar to one which sometimes takes place upon a large scale in the Scotch Fir. We shall hope to advert more fully to the subject before the end of the year. Meanwhile, would you kindly inform us whether the cankered spots appear on the trunk or larger branches, as well as the twigs, and whether the trees are in a plantation or nursery. *M J B.*

MEDLARS: *C R S.* The most recent explanation of the process of blotting is, that after vitality has ceased, certain chemical changes set in. Air enters the cells, and acts upon the sugar, causing alcoholic fermentation with disengagement of carbonic acid and formation of alcohol; and this is in turn acted on by the acids of the fruit and forms ether, to which the aroma is due. The air then attacks the ether itself, which becomes coloured yellow. See an article at p. 577.

NAMES OF FRUITS: Correspondents should not be unreasonable in their demands. We really cannot undertake to name whole baskets full of different fruits, and in future must make it a rule not to name more than six sorts' whatever number may be sent.—*S B B.* 7, Scarlet Nonpareil; 18, Dutch Codlin; 35, Fearn's Pippin; 40, Thompson's. Several decayed.—*C M F.* From the sketch and description, perhaps the Louise Bonne.—*Philip Lang.* 1, 2, Thompson's; 3, Doyenné Gris; 6, Rouse Lench; 7, Glou Morceau; 8, Beurré Bosc; 9, La Fortunée de Parmentier; 12, Chaumontel.—*F C S.* 1, Cornish Aromatic; 2, 5, Blenheim Pippin; 3, Eastern Pippin.—*R W, Crofton.* B, King of the Pippins; C, London Pippin; E, Urbaniste; F, Brown Beurré.—*Wedgwood.* (Mostly decayed.) 1, Blenheim Pippin; 2, Sturmer Pippin; 3, Beurré d'Aremberg.—*T T H X.* 1, Ross Nonpareil; 2, Blenheim Pippin; 3, Herefordshire Pearmain; 4, a seedling (to be examined); 5, Rymer; 6, Golden Noble.—*T F.* 6, Court of Wick; 8, Herefordshire Pearmain; 10, Lemon Pippin; 12, Court Pendu Plat.—*X Y.* 2, Yorkshire Greening; 3, (worthless); 4, Winter Pearmain; 5, Autumn Pearmain; 6, Hollandbury.—*G H L.* 1, Blenheim Pippin; 2, Golden Reinette; 3, Fearn's Pippin.—*B J M.* Doyenné Blanc.—*G T.* Fine specimen of Beurré Clargeau.

NAMES OF PLANTS: *H Z.* Our rule is to name four plants at one time and no more. Your Ferns appear to be: 1, Gymnogramma peruviana; 3, Gymnogramma L'Herminieri; 2, a Polystichum, of the angulare group; 4, Polystichum vestitum pulcherrimum; but the scraps are insufficient for certain determination.—*T Davis.* Gnaphalium lanatum: it requires the same treatment as other half-hardy bedding plants.—*G B.* Lastrea Filix-mas.—*B W.* Callicarpa purpurea.—*W B.* 1, Nasturtium amphibium; 3, Senecio sylvatica; 4, Potamogeton crispum. We do not as yet recognise No. 2.

ORNITHOGALUM THYRSOIDES: *W P.* This fine Cape bulb is not new to gardens, but revived or reintroduced. You may not find the bulbs flower so finely the second year as the first after importation, but by careful cultivation of the leaves and thorough maturity, a very good bloom may be secured. This is indeed the secret of bulb growing—to take care of the leaves. The flowers will follow in due course.

ROYAL HORTICULTURAL SOCIETY'S PRIZES: *Inquirer, Colgate.* Apply to the Assistant Secretary, at South Kensington. We do not know when they will be distributed.

MISC.: *A Subscriber* will be glad if any one can furnish him with the address of Messrs. Adams & Co., Nurserymen, late of London Road, Gloucester.

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2 to 3 cwt. per acre to be harrowed into the land before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents; also
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NORTH HANTS AGRICULTURAL SOCIETY.
AWARDS MADE NOVEMBER 16
FIRST PRIZE for Ten Acres of Swedes—Mr. Booth, Sidmonton—SUTTON'S CHAMPION
FIRST PRIZE for Pulled Roots of Swedes—Mr. Beckingham, Dell Farm—SUTTON'S CHAMPION.
SECOND PRIZE for Pulled Roots of Swedes—Mr. George Palmer, Norcot Farm—SUTTON'S CHAMPION.

THE NATIONAL EXHIBITION of DOGS.—The FIFTH GREAT ANNUAL EXHIBITION of SPORTING and other DOGS will be held in Paradise Street (near Bingley Hall), BIRMINGHAM, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, and 30, and December 1, the week of the Cattle and Poultry Show.
For SPECIAL RAILWAY ARRANGEMENTS, see the Advertisements and Bills of the Companies.

BINGLEY HALL, BIRMINGHAM.—The SIXTEENTH GREAT ANNUAL EXHIBITION of FAT CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, CORN, ROOTS, and IMPLEMENTS, will be held on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, 30, and Dec. 1.
The Exhibitors and the Public will be admitted to Bingley Hall to WITNESS the JUDGING of the Cattle, Sheep, Pigs, Roots, and Corn, on SATURDAY, November 26, at 9 o'Clock A.M., upon payment of 10*s.* each. There will be no admission to the Poultry Department until after the Judging is completed.
For SPECIAL RAILWAY ARRANGEMENTS, see the Advertisements and Bills of the Companies.

The Agricultural Gazette.

SATURDAY, NOVEMBER 19, 1864.

THE sewage question seems to be on the point of a decision. The Sheffield magistrates are petitioning Government for a Bill to forbid the defilement of the rivers by the towns. The Main Drainage Committee of the Metropolitan Board of Works have been visiting Croydon, Rugby, Carlisle, and Edinburgh, and reported their observations to the Board last Tuesday. The Corporation of London have been informed by their Committee of the value of that "great estate" which Mr. THWAITES and his party, according to the *Times*, had gone north in search of—and their report, received last Saturday with great satisfaction, has been reported on by Messrs. NAPIER and HOPE, who are among the promoters of schemes for the utilisation of London sewage.

Let us look at the report to the Corporation and the comments which it has excited. At a special meeting of the Common Council last Saturday, this report, founded upon information given by Lord R. MONTAGU and Dr. BRADY, chairmen of recent committees of the House of Commons on this subject, was read. It declared that the sewage of the metropolis amounted to 266,052,440 tons per annum, containing ingredients which if extracted and dried would be equivalent to 212,842 tons of Peruvian guano, worth 2,899,972*l.* It quoted Lord ESSEX's experience at Cassiobury, Mr. MILES's experience at Kingsweston, and Mr. Alderman MECHI's experience at Tiptree, to show that in small quantities per acre, applied by hose and jet, the sewage will create an increased produce of all kinds of crops sufficient to yield a profit of 28*s.* per head of the population. And it declared, accordingly, that it is by careful and moderate dressings, applied by the hose and jet over large areas, and not by large applications flooded from open carriers over small areas, that the home supplies of food will be most increased by the utilisation of the metropolitan sewage, and that the farmers using that sewage will be best enabled to pay a fair price for the manure. And, having regard to the vast quantity of the metropolitan sewage, and to the fact that it will only be used in addition to the farmyard manure made on the land, it recommended that to insure its being sold at its value, works of distribution be laid down, so as to bring it within reach of a very extensive area—it having been stated by a competent witness before the Select Committee of the House of Commons that it should not be less than from 500,000 to 600,000 acres.

The report further quoted Baron LIEBIG in favour of this view; and concluded by insinuating charges inculpating the Metropolitan Board of Works. It was adopted after three hours conversation, in which almost every speaker was confident of the great value, not only intrinsically but to the rate-payers, of the material now flowing to waste. Mr. Deputy ELLIOTT had never before seen a more satisfactory report, or one which manifested more exhaustive good sense and ability. He believed that the present knowledge on the subject was comparatively little—so small, indeed, that it was impossible to institute any constructive measures. He would say nothing to those who carried out experiments upon insufficient data, beyond this—that if you fed men or horses, or raised Turnips, beyond a certain limit, you produced disease. There would shortly be an agricultural show in London, and there would then be seen beasts with diseased structures, simply because they had been overfed. In the same manner, if an excess of manure were applied to the land, he believed it would produce results far different from what was intended. This gentleman is clear for the extensive rather than the intensive system of agriculture. The Smithfield Club manufacture unwholesome beef and mutton—the Turnip crop is the worse for the discovery of guano and the invention of superphosphate—and even as regards men and horses it is plethora rather than starvation that is the cause for fear.

The Corporation report has been replied to by Mr. HOPE for himself and Mr. NAPIER. Lord ESSEX, who had been quoted on behalf of the extensive system, is shown to have given it for his opinion that he had erred in distributing the sewage of Watford over too large an area. He ought not to have laid down pipes for more than 60 acres, and we know that he now confines its use to 6 or 7. Mr. MILES, whose estimate of his return from sewage was quoted at 28*s.* per head of his household, had confessed that he really could not give the profit or loss of his operations. Mr. MECHI, whose opinion was also quoted, had had experience only of the liquid manure of the farm — none at all of town sewage. Baron LIEBIG, whose letter was appended to the report, declares that sewage does not contain all the elements necessary for the support of vegetable life, apparently ignorant of the fact that on the sea-sand of Craigentinny an uninterrupted succession of most luxuriant crops has been obtained for upwards of 40 years, and these crops were no poorer this year than the first year, nor poorer the first year than they were this year, showing, surely, that, as Lord ESSEX says, and Professor WAY and Mr. LAWES, and a host of other witnesses, Grass is the crop best adapted to utilise the manure contained in sewage, for growing Grass in sea-sand is like growing Mustard and Cress in flannel. The sand possesses no valuable property of its own; it is only the medium through which to apply the nutritive element.

It is plain that the extravagant anticipations of the Corporation Committee fall to pieces in the hands of Mr. HOPE, who thus concludes on the visionary and impracticable nature of the scheme of Dr. BRADY, Lord ROBERT MONTAGU, and Mr. ELLIS, which this Committee have adopted.

"They propose to pump the entire sewage of London, consisting of upwards of 70,000 tons per diem, to a height, we believe, of 400 feet, and from that lofty elevation to distribute it, through many thousands of miles of pipes, over several counties. Now, apart from the gigantic capital outlay required for such a project, and the ruinous expense of maintenance of such wide-spread works, we venture to draw your attention to the fact that the wages of the labourers through whose hands this enormous volume of liquid would have to pass in the hose and jet would eat up the whole of Dr. BRADY's and Mr. MECHI's and Mr. ELLIS's 2*d.* per ton. It would require no less than 20,000 men to hold 20,000 hose to dribble out the

sewage on their principle, and the wages of these would amount to 1,135,000*l.* a year."

We have only to add that a concession of North London sewage was on Tuesday last granted to Messrs. NAPIER & HOPE by the Metropolitan Board of Works, thereby adopting their plan of intensive application of the sewage over a comparatively small area at a distance from the metropolis.

AMONGST the earlier sets of tackle manufactured by Mr. FOWLER was the one sent to Elkstone, near Cheltenham. The position of the farm it has tilled, the circumstance that it had to take the place of 30 oxen which were sold off upon its arrival, and the fact that ever since then an exact record has been kept, both of the work it has done and of the cost of doing this work—all combine to make the history and progress of this implement peculiarly interesting in elucidating the capabilities and value of the steam plough.

We accordingly gave in 1861 a very full report of the behaviour of this tool during the first season of its use, and the owner, in his "Essay on Steam Cultivation," subsequently gave fully detailed particulars of its performances in 1862. No detailed account, however, has since appeared of its career, and having recently visited the scenes of its workings, and made ourselves acquainted with the particulars, we offer now, therefore, to our readers the result of our inquiries.

Let us in the first place briefly recapitulate some of the facts and circumstances connected with the introduction of the steam plough on the farm. Elkstone Manor Farm consists of 1026 acres, about 800 of which are under tillage. Some parts of this farm rise to an elevation of 1000 feet above the level of the sea, and having no shelter from neighbouring hills or woods, but rather affording these good offices to other localities, it is very much exposed, so as to render the cultivation of the cereals especially precarious.

On so poor a soil, and at an elevation which makes the climate very humid as well as cold, the land also being mostly an unyielding clay, when animal power alone was used to cultivate, the occupier was left, particularly in bad seasons, with this alternative—either inadequately to cultivate the farm, or else to use working animals in such numbers as to trench most inconveniently on the scanty fodder supply yielded by the land. Before steam was adopted at Elkstone, we are informed that 100*l.* was often lost in adverse seasons from the difficulty of getting the land properly tilled in season. With a large quantity of work to do, it frequently happened that a field was planted out of season and left to chance for a crop.

We propose now to give the quantities and cost of each year's work since the introduction of the steam-plough at Elkstone, and afterwards to compare the position of the tenant as regards the tillage of the farm now and as it was formerly under cattle cultivation.

In 1861 the tackle worked 1218 acres, at a cost of 8*s.* per acre. During the year following, owing to the incessant wet weather which prevailed, the steam plough did not accomplish so much; only 509 acres were ploughed, dug, or smashed, and this cost after the rate of 10*s.* per acre. Of these two performances the particulars and the details having been already fully discussed in our columns, we now merely give the totals of work and cost.

No detailed account has however yet been given of what this set of tackle has done in the years 1863 and 1864, and we now therefore give more copiously the results of these two seasons, and thus complete its history to the present time. The summer of 1863, unlike its predecessor 1862, was very dry, and the land, owing to the absence of frost, and the condition in which it had been previously worked, was very hard. Referring to the book in which Mr. READ has had all the records of his steam plough kept, we find that in 1863 it commenced working on February 24th, and finished on November the 12th. Steam was got up on 151 days; the tackle was shifted 45 times, occupying 15 days of 10 hours; the tackle was in actual work 101 days of 10 hours each day, and during the whole of the season 713 acres were tilled by the plough, and 436 acres dragged, making a total of 1149 acres. To accomplish this amount of work, 81 tons 11 cwt. of coals were used, and 19½ gallons of oil were consumed, and the cost of repairs was below that of the preceding years, so that the comparison of steam cultivation with that of cattle was still more favourable to the former.

On the 19th of March of this year the apparatus was again set to work and worked up till the 14th day of May, when, having done all the work upon Mr. READ'S farm, it lay idle until the 16th of June, at which time its use was required on an adjoining farm under very peculiar circumstances, the particulars of which we shall immediately give. On the 29th of August it was again employed at home, and then it worked until all it had to do was done, which was accomplished by the 19th of October. The record informs us that steam was raised on 139 days; that during 791 hours of that time, or 79 days of 10 hours, it was engaged in actual work. It was shifted 38 times, occupying 11 days or 114 hours: 88 tons 4 cwt. of coals were used, and 18 gallons of oil.

During the whole season, inclusive of 586 acres, 3 rods, 30 perches done upon the adjoining farm, the total extent gone over by implements propelled by this steam-plough engine was 1184 acres. The land upon Elkstone Farm, from the mellowing frosts of the previous winter and the continued fine weather of the spring, worked easily, so that greater progress was made at less cost, and with fewer breakages, than in any previous year of its working.

If we put together the number of acres in the four seasons it has been in operation, which the steam plough tackle has done, it will appear that in 1861 no fewer than 1218 acres; in 1862, 509 acres; in 1863, 1149, and in 1864, 1184 acres have been tilled, making a total of 4060 acres worked by the same set of tackle. And as the management of the tackle has become better understood, so has the cost become less.

Let us now revert to the employment of the tackle during the interval between the 15th of June and August 9th. Its work then completely tested the capabilities of the steam plough under the most trying circumstances.

The adjoining farm, Coomb End, belongs to Mr. DUNN, of London, who in an unfortunate hour had granted a lease to an incompetent tenant. After this farm had been occupied for 8 or 9 years, unable to exact more from the land and landlord than he had already done, the tenant abandoned the farm and the country, and it was not until after suffering "the law's delay" for several months that the landlord could legally take possession, so that the farm lay for nearly six months without man or beast upon it.

In this neglected state the proprietor about the middle of June obtained possession. How was he to begin at this season of the year, without a labourer or a working animal? Mr. READ'S steam plough had done all its summer work and was lying idle. The agent secured the services of this implement. On the 16th of June it was therefore set to work on this farm of 800 acres, about one half of which is in tillage.

The first field it did was one on which Swedes had been roughly planted the year previously, but it had not been touched since the crop was eaten off, and was then a perfect wilderness of Couch, Docks, Thistles, and Dandelions. The steam-plough ploughed this three times, and dragged it six or eight times over, and very soon the field was made perfectly clean and planted with Turnips. The next field received similar treatment. The third is of especial interest as illustrating the power of the steam-plough under the greatest disadvantages. It had been uncultivated for four or five years, having had only one crop planted upon it during that period. Its soil was matted together by a network of Couch, and to break up in the middle of the last dry summer this Couch-bound sun-hardened soil, seemed like attempting to break up a turnpike road. This field is 35 acres in extent, and the engine was set to work in it July 7th, and left it on the 22nd, having ploughed, cultivated, and dragged the most part of it six or eight times to a place.

Under the active and judicious management of Mr. JOHN ATTWATER, who had singularly propitious weather to help him, after the steam plough with drag attached had begun work, there followed drags, rolls, and harrows, with labourers to collect and burn the filth. And no sooner had the steam plough done it once than the same thing was repeated; and by this means in little over a fortnight this land, which was in a most wretched state, became perfectly clean, and now there is good plant of Turnips growing upon it. The exact quantity of work done and paid for on Coomb End from the 16th of June until the 9th of August was—

	A.	R.	P.
Ploughing	179	0	14
Cultivating	49	2	28
Draggings	358	0	28
	586	3	30

The farm is now restored to a comparatively clean state, and a greater triumph of steam cultivation we have never known.

The occupier of Elkstone by no means thinks of making it an example farm, but the advantages of the steam plough are very manifest upon it in the state of his land. And what appeared to us very satisfactory was that at so early a date this season as the 19th of October, the work of the farm, with the exception of such small fields as the steam plough is not applied to, had been done; and the apparatus is put by, stacked in straw—owing to the lack of suitable buildings on the farm—and thatched like a rick for the winter. *S.*

Two prosecutions for having diseased meat on sale are reported at great length in the Edinburgh papers. In both instances the presiding magistrates found the charge proven, and ordered the carcases to be confiscated. Professor DICK, the leading authority on veterinary subjects in Scotland, and Dr. ALEXANDER WOOD, a well-known and experienced Edinburgh physician, had nevertheless declared the meat to be sound and wholesome. On the other hand, the inspectors of markets had condemned the carcases, and Dr. LITTLEJOHN, the Medical Officer of Health, had declared the meat unsound; and Professor GAMGEE had agreed with them. The Act declares that "any person having in his possession a carcase, or any part of a carcase of any animal, which in the opinion of two competent judges is unfit for food, shall be liable to a penalty." The medical officers of the city had given their opinions, and the magistrate probably felt that he had no alternative but to pronounce accordingly. It seems nevertheless, not a little extraordinary that penalties should be inflicted in instances where the very highest scientific authority declares that no harm has been done.

It is not to hinder the trade in meat about which first-class medical opinions differ, but to put a stop to traffic in what no medical man will declare to be wholesome that is the object of the Act. Certainly Edinburgh would have every reason to be satisfied on this score if Professor DICK and Dr. ALEXANDER WOOD were its market inspectors. But these gentlemen would have confidently passed the meat which has been here condemned. And it seems plain to us that if convictions against such opinions as theirs are possible, the powers of the Act being overstrained must *ultimately fail.* Unless convictions under it are in accordance with the convictions of the public whom it protects, a mischievous reaction must ensue.

ON STORING ROOTS.

(*Continued from p.* 1090.)

THE MANGEL WURZEL.

THE best time for storing the Mangel crops is from the middle of October to the 10th of November. In some parts of the country the crop is stored in the fields and fed off by sheep in the spring in the same way as Turnips; where this practice is followed, they may be stored in small conical heaps in the way already described for Swedes. The system more generally obtains of consuming them by cattle in the yards during the spring and summer months, and they are then, when harvested, stored as near the homestead as circumstances will permit. Some are of opinion that in getting up the crop the tops should all be twisted off with the hand, as cutting them off with a hook or trimmer in the same way as Turnips would injure the bulb and endanger its keeping; our practical experience is not in favour of the system, separating the leaves from the bulb with the trimmer being more expeditious, consequently cheaper, and when carefully performed is equally as uninjurious to the keeping properties of the bulb. The principal thing to be guarded against in performing the operation of trimming is not to cut too closely to the crown of the root. The tops are only cut off, without any further cleaning. They are thrown in rows, a sufficient space being left for the carts to pass between each two rows, so that the fillers when loading them can easily work on each side of the cart; some prefer collecting the roots into small heaps in the field, and covering them with the tops, in which state they are generally allowed to remain for many days, in order it is said to prevent fermentation in the stack. We think the practice objectionable and attended with considerable danger to the safety of the crop, and should a severe night's frost occur under those circumstances, the crop will be permanently injured, and unless immediately used will certainly not keep sound through the winter. As soon as got up they should at once be carted away and properly stacked; they will then be equally secure, both from the attacks of frost and danger of injury by fermentation. We cannot too forcibly impress on the cultivator the great importance of daily carting and scouring the crop as the work of pulling proceeds, as at the season of the year a single night's severe frost often produces most disastrous consequences. In making the stack or heap a dry piece of ground is selected, as near the farm-yard and as well sheltered from the north and east winds as possible. The bottom of the heap is set out about

9 feet wide: the roots are stacked up each side in regular courses, tapering to a single root at the top. The sides of the heap should not be carried up too steep, as they are apt to give way. The carts are backed to the heap as the work proceeds, and their contents tipped out every night. The heap should be covered with any short straw or stubble to the depth of several inches. In this state they will be safe from an ordinary degree of frost. If severe weather is likely to continue, the covering of straw must be increased. We always cover our heaps with about 18 inches thick of dry straw or stubble, and on the top of this thatch them neatly down with another thickness of 6 inches, or in all 2 feet of straw, which in our case has always been a sufficient preventive from frost, while at the same time it insures a free ventilation. Covered in the way we have already described, our Mangels were perfectly uninjured during the severe frost of 1860-61, which was one of the severest on record for the last quarter of a century. We always prefer placing the heaps north and south, not only as being more equally exposed to the sun's rays during severe frosts, but also, as the spring advances, when placed in a different direction they grow much more rapidly on the side of the heap facing the sun. On the 9th of November last, one of the wettest days of the whole season, we carted together and stacked the produce of 4 acres; they were placed by the side of an old hedge on one of the highest and most exposed parts of the farm, and were covered with straw and thatched down in the usual way. We now (February 25th), begin using them for the lambing ewes and found them perfectly dry and sound, while those belonging to a neighbour got up about the same time, without having been injured by frost, had to be uncovered and turned during the severe weather of January last, a part of them being rotten. During the last 15 years we have been a cultivator of Mangel on a considerable scale, and also a successful exhibitor in various places, and never during the whole of that time have we ever used earth as a covering, nor have we ever sustained any loss or injury from frost or overheating. We are well aware that in many places it is not practicable to cover the crop in the way we have described. To those who have no other alternative but earth, we would say, be careful to use means to ensure a good ventilation; this is best effected by placing a continuous row of faggots on the ground, running along the centre, and extending throughout the whole length of the heap, and there should also be a free communication at short distances, both with the sides and the top. When circumstances, or the caprice of the cultivator, necessitates the use of earth as a security from frost, we would recommend the heap to be covered with straw, and the final covering with the soil deferred to as late a period as would be deemed consistent with the safety of the roots, in order to afford the heating process time to have fairly subsided, so that the risk of loss by fermentation may thereby be lessened.

THE CARROT.

The Carrot as a field crop is less hardy and more susceptible to the attacks of frost than either the Mangel or Swede when once they are pulled, although when growing they will stand without injury a considerable amount of frost. So much is this the case that some growers prefer leaving the crop in the ground and getting them up as they are wanted for use. Even should they keep well, the system appears to us slovenly and unbusiness like, and would during severe weather be attended with great inconvenience, and at sometimes wholly impracticable, and as the spring advances, would be in the way and retard the necessary operations for preparing the land for the succeeding crop. We have kept Carrots in barns, and where the barns are not wanted for other purposes they may be kept well, and are easily got at at any time; still, they require constant attention to guard them from the attacks of frost, and should be turned at least once a month if in large heaps, in order to check fermentation, and each time they are turned any diseased roots thrown out, and thus prevent an extension of the evil. Of all the plans of storing Carrots now generally practised, we prefer that of placing in stacks, as we have already fully described for Mangel, with the exception that the heaps should be made much less. We generally make ours 4 feet wide at bottom, carefully stacking them with the crowns outward, the heap attaining the height of 3 feet. We have kept them both ways, but greatly prefer thatching as before described for Mangels to that of earthing; if earth is used it is essential that a sufficient number of spaces be left to ensure a thorough ventilation: if this be neglected they will seldom be found to keep well. In early spring, as soon as the weather will permit, they will require to be unearthed, and all turned and sorted by hand; those showing any signs of decay should be thrown out for immediate consumption; if not so treated, the diseased roots are not only sacrificed, they communicate the same to those coming in contact with them. The keeping of the Carrot in a sound state of preservation till an advanced period of the season depends in a great measure on the care and attention bestowed on the raising and trimming the roots, if much broken by careless pulling, or by wounding or cutting off the crown of the root in separating the leaves. We find the best tool for raising Carrots to be a straight two-tined fork from 12 to 16 inches in the tines; by thrusting this fork into the rows the roots are loosened, and so are easily pulled up without injury to the roots. They should all be laid with the tops in the same direction, when a boy or woman follows armed with a common Turnip trimmer or knife, separating the tops about half an inch above the crown of the root. Although, as the spring advances, they will shoot out more freely than when the crown of the root is cut off, yet we have always found them keep much better, as all who have paid any attention to storing of the Carrot must allow. We have often observed when trimming the heaps in the spring that where a few decayed roots were found in a heap, on a closer inspection they generally turned out to have the crown cut off, or to have been otherwise injured before being stored.

We have thus tried to record in a concise manner the observations and results gathered during a 15 years' practical experience of root cultivation on an extensive scale, and in conclusion we would still further endeavour to impress on the minds of the agriculturists of the country the great utility of early securing the root crops. The farmer who would neglect to secure his grain crops would be regarded as a disgrace to the locality in which he resided, and be scornfully pointed at by every passer by. Under present circumstances the Turnip crop is, in many cases, of equal value to that of a crop of corn, which, if fully considered, would insure it receiving a greater degree of care and attention in securing than has generally been bestowed upon it. *G. Murray, Overstone.*

DISCOURAGEMENTS TO HIGH FARMING.

At this season of the year, when the landed gentry are in the habit of meeting more frequently than usual their tenantry and others engaged in the cultivation of the soil—when at every agricultural gathering landlords and tenants are found mixing in social intercourse or engaged in friendly rivalry, it appears a favourable opportunity, in the crisis through which the farmer is now passing, to consider their relative rights and duties.

Since the collapse that followed the advent of Free Trade, the prospect of the British agriculturist has never been of so gloomy a character. With Wheat at 38*s.* a quarter—with the Bean crop in favourable instances perhaps half a crop, in many cases an utter failure—with no Turnips and a small haystack—with Oats not more than half a crop, there was nothing but a fair crop of Barley which the farmer could regard as being at all likely to be remunerative, and this his only hope, if the price continue to recede, will prove abortive.

We receive in after dinner speeches a great deal of good advice. We are told that we must not expect high prices for corn; our chief dependence must be on meat; but will any one be bold enough to assert that, by converting our Wheat into beef, it will make as much money per acre as will make it a paying crop?

Wheat on arable farms has ever been regarded as the chief reliance for raising money (it usually being all sold), while other cereals in all cases enter more or less into consumption. Hence the difference in price of these is less perceptibly felt. Three quarters of Wheat to the acre (which Mr. Caird, I believe, gives as the average) at 38*s.* per quarter, whether it is made from the stall or the barn door, will not leave much margin for rent or provision for a family. To the tenant on a moderate sized farm, who grows 300 quarters of Wheat, it makes a very considerable difference whether he gets 900*l.* or 570*l.* as his return, and 3*l.* a quarter is not an extravagant price.

We are told by others to improve our flocks by judicious crossing (a piece of very good advice too, and which might in many instances perhaps be resorted to with advantage), but there are many cases in which such a course is not desirable. This is, however, a matter on which every farmer is best able to form his own opinion. Farmers as a class are not less alive to their own interests than other men, and generally find out what pays best under the special circumstances in which they are placed.

In the present trying period it appears pretty plain that he will best tide over his difficulties who keeps the most stock and grows the most corn at the least expense.

Protection has gone, and gone for ever. We ask not for it back again, but we ask for that to which we believe ourselves entitled—free trade in its entirety, and security for our capital.

To grow the most corn at the least expense involves a heavier outlay of capital for stock and improved machinery, and no man can reasonably be expected to risk his money in the purchase of steam cultivators, reaping machines, and the like, or in the use of expensive manures, &c., without a permanent holding. Let us have leases on fair terms. Let us have free trade in Barley as well as Wheat.

As to the former of these propositions, many of us know to our cost that for the last few years rents, despite the prevalence of low prices, have risen. The reason for this is obvious. Land, like every other commodity, obeys the law of supply and demand. Now the natural tendency of an increasing population is to give an increase of farmers' sons who require to be placed. In addition to these the number of applicants for farms receives considerable additions from the professional and trading classes—men who are induced to adopt agricultural pursuits through having an eye to the pleasures of a country life, without sufficiently weighing the counterbalancing anxieties. On the other hand the number of farms is yearly considerably diminishing, owing to the absorption of small farms into larger ones, and in many instances the breaking up of many large ones, on their falling in, to increase the size of other tenants' holdings. Hence, with fewer farms and more customers, increased competition is a natural consequence.

It is a knowledge of this fact which makes many a man submit to a rise of rent without concurring in its justice. He knows too well that if he goes elsewhere the screw will be put on in the event of a change of tenant, and he naturally thinks that he may as well endure that pleasant operation when he is on a farm with the capabilities of which he is acquainted, as venture on a new undertaking (which is always more or less uncertain), and incur the loss and trouble attendant on a removal.

Viewed abstractedly, both landlord and tenant have an interest in the land, and provided both have their fair share, neither has any business to grumble. Landlords ought not to be expected to give away their property. No tenant ought to expect to hold land at other than a fair rent. The letting and taking of land is a purely commercial transaction, and ought to be governed by commercial principles.

The point, however, that I wish to bring out is this. We will suppose A. and B. to have taken farms of equal extent, of equal capabilities, and at equal rents. Their farms we will regard as two machines which have been hired. A puts twice as much through his machine as B. In other words, he employs twice as much capital as well as more energy and skill. The result is, that his flocks and herd are greater, and his rickyard better filled. What is too often the consequence? After a few years perhaps the landlord thinks that A. must be getting money fast. His farm will stand the screw. Hence the man who has benefited the community indirectly by sending in more beef and bread to the market—thus in effect cheapening their prices—and shown himself to be the best friend of the working classes, as it is impossible to have enlarged produce without a more liberal expenditure for labour, has the disagreeable alternative of losing the legitimate fruits of his enterprise in an increase of rent, or leaving no mean portion of his capital behind him: while B., who has simply kept his talent wrapped in a napkin, escapes the screw. Doubtless A.'s farm would let for more than B.'s, as for one tenant who will venture on a farm that is foul and poor, 20 would be ready at an advance of rent to take one in a good state of cultivation and in good condition.

B., however, chuckles as he says, "See what Mr. A. has got with his fine farming and taking prizes at the agricultural show, and such like. He's under notice. None of your fine-fangled ways for me. I'll go on in my old way."

Is this justice? If a landlord, having let a farm at fair value, afterwards expends money in drainage, the erection of improved buildings, or in any way permanently improves the property, no reasonable tenant will object to pay a fair proportionate increase of rent. If the value of the land is enhanced by legislative alteration, a prolonged war, or other cause, the same rule will apply; but if the land is made more valuable solely by the tenant's skill and capital, he ought in common honesty to be allowed the advantage or receive fair compensation.

A very common reproach cast upon farmers is that they are a slow jog-trot race—that they cannot move out of the beaten track of their forefathers. The discouragements to which I have adverted have a tendency to keep them so. Let these be removed, and I will venture to say they will not contrast unfavourably with their trading brethren. Even as it is, I doubt if any class of men can be found who, as a rule, spend so much money on another man's property with no more than six months' security.

Now for my second proposition. "Give us free trade in Barley." I have during the last week given ten quarters of Barley for five quarters of malt, and this at their respective market prices was a fair exchange. I am thus obliged to give one five quarters to be allowed to convert the other into beer to give away. Is not this muzzling the ox? Had this malt been sent abroad, my foreign competitor might refresh his labourers with untaxed beer, or if he chose to give it to his beasts, his beef would cost him less in making than mine, and possibly be sent over to be sold in the same market. Is this justice?

Finally, I repeat, give us security of tenure on fair terms. Let us have fair trade. If these are conceded, I have no fear but the much abused British Farmer will hold his own. Let the landlords do all in their power to remove his discouragements, and the floodgates of a tide of high farming would burst open. There are plenty of men, with capital and skill, who are positively afraid to farm up to their means and knowledge. If these concessions are not made, there is no doubt but, like other evils, it will in time find its own remedy, but not until many a widow's sustenance and many a child's portion have been lost. Men will not continue to occupy land at advanced rents, with no prospect of advantage, for ever, and I honestly hope that our Legislators and our Landlords will see this in time. *F. W. Bignell, Loughton, in the Bucks Herald.*

THE CATTLE MELON.

AFTER the manner in which you had given prominence to my article upon the Cattle Melon in the *Gazette*, and also calling upon others to give their experience in their cultivation during the past season, it was to be expected that correspondents would have given their views and ideas relative to the advantage or otherwise of growing them as an agricultural crop. The first correspondent, the Earl of Essex, writing from Cassiobury Park, speaks favourably of them, and says he shall grow more another season, but reports unfavourably of the crop, and also complains of the seed being defective to a great extent, and I make no doubt his failure in obtaining a good acreable produce is to be attributed in a great measure to the circumstance of the seed proving bad, but partly also to the drought during 12 weeks of the summer; for in my own case I suffered in a similar way, the seed proving defective to a considerable extent, arising I fear from its being taken from the fruit too soon, and perhaps imperfectly dried before storing or seeding away for sale; this matter however shall be obviated this year under my own care and supervision, and I hope to send out no seed but will grow freely, either of "Melons" or "Marrows." In my desire to furnish the purchasers with as much seed as possible in order that the experiment might be extensively tested (for I could not obtain anything like half enough to supply the demand), I fear that care enough was not taken last year to select the seed previous to sending away. Another correspondent, "J. B., Bradford Abbas," also complains of defective seed, and at the same time speaks of the deficiency of his produce from the one plant which he saved. This deficiency we can readily trace to the great absence of moisture for such a lengthened period. He however goes on to speak of the feeding value of the Melons, and also of Marrows, and states that his fruit contained 96 per cent. water. Now last year Dr. Voelcker's analysis from a fruit I sent him was as follows:—

Water	92.030
Organic matters	7.350
Mineral matters (ash).. ..	.620
	100.000

This analysis I published last year when I sent out the seed, and I have never claimed for the fruit a feeding value equal to either Swedes or Mangel; but I still think that the best sorts I have grown this year being much more solid and weighty than the fruit analysed last year, will prove equal in value to common Turnips for fattening purposes. Common Turnips contain 90 per cent. water, and my best kinds of Melons I believe no more; but be that as it may, the difference is but slight. However, as regards feeding value for milch cows—for which purpose let it be borne in mind that I introduced the Melon as being especially adapted, as entirely free from all acid matter calculated to affect the quality of butter or milk—it stands pre-eminent at the period of the year I recommend their use, namely, August, September, and October, these being the months when Grass is usually scarce on the dry pastures. The last correspondent, Mr. J. M'Indoe, also complains of defective seed which he obtained from me, and states that had he followed my directions sent with the seed he would have had only a plant here and there. Of course, the seed being defective, the plant must be deficient. He then details to some extent how he proceeded to obtain his crop, viz., by raising the plants in flower pots, and afterwards potting off singly the first week in June, and then planting nine of them on a rod of well prepared loamy ground—the crop it appears was only 8 tons to the acre, after receiving several good waterings during the dry weather. Now, it should be well known by all gardeners, that it is better not to water such plants at all, unless it be continued at frequent intervals during a dry period, and last summer we had no rain to benefit vegetation for 12 weeks, viz. from May 16 to Aug. 23. Now several good waterings during a period like this are totally inadequate to the requirements of all Cucurbitaceous plants. Again, planting out is not equally advantageous to raising the plants in the field where they are intended to grow, as I have proved for some years, either in dry or moist seasons. Mr. J. M'Indoe, The Gardens, Bromley Palace, Kent, goes on to say, in his opinion the Cattle Melon is a delusion and a snare, or in other words, a catch-penny; and I must say, these observations exhibit a great want of intelligence and discretion in their author. I trust, however, that plenty of people will this year aid in the experiment of introducing the Cattle Melon for various feeding purposes, and for different kinds of cattle, pigs, &c. I must conclude by expressing my deep regret that the seed supplied last year to my customers should have proved defective, and I can only say that it will give me great satisfaction if the parties will send to Mr. Page, seedsman, of Southampton, their names and the number of seeds which proved bad in each case. I will then undertake to supply them gratis with good seed of this year's growth, both of Melons and Marrows, to the same number or extent that proved defective last year.

N.B. My seed of this year's growth will not be ready to send out before February or March next. *Joseph Blundell, Bursledon, Southampton, November* 14.

TOWN DAIRIES.

AT the re-opening of the New Veterinary College at Edinburgh the other day, Professor John Gamgee said:—I have striven for a number of years past to show that hitherto veterinarians have only gained an adequate livelihood by attendance on the horses which are chiefly kept for the pleasure and comfort of the wealthy. It is a well-known fact that we have been ill-paid and poorly encouraged to relieve the sufferings of the far larger number of animals employed for the purposes of trade. Agricultural stock suffers serious neglect. I venture to assert that 90 per cent. of the cattle which suffer from disease throughout the United Kingdom annually are never seen by veterinary surgeons. Indeed, the ignorance of those who have held foremost positions amongst us on the subject of the amount of disease in the country can only be explained by the fact that if we do not search for information regarding mortality amongst stock, we are not in the way of gleaning it in daily practice. For instance, in the city of Edinburgh we have 2000 cows; in London there are 12,000 or 14,000, and so on in proportion in other cities. Disease is raging frightfully without intermission. During 15 days of the past summer as many as 100 cows were taken, sick or dead, from the byres of this city, and last week I traced 16 within the short space of 24 hours sold in all stages of pleuro-pneumonia. In my report to the Privy Council in 1862, I published a table referring to the losses amongst cows in 12 months in the Edinburgh dairies. Inquiries conducted by me with the greatest care resulted in the remarkable revelation that out of 1839 cows kept in 88 dairies, 1075 were sold diseased to butchers. That table, which formed but a small part of the statistical information I collected for Government, has this year been attacked by Mr. Hall Maxwell, causing the dairymen of this city to assert that the table could not be correct, because they had not furnished me with any information on the subject. It is a remarkable fact that the figures above quoted were only deficient from the entire number of diseased cows not having been traced, and the truth is more fairly represented by asserting that, generally, the dairymen sell within the year as many animals in a state of disease as the number they usually have in their sheds. In fact, a dairyman who keeps 30 cows usually buys between 50 and 60 per annum, owing to the rapid manner in which town stock is destroyed. All the independent inquiries that have been made confirm this truth. This year I have secured on two occasions from gentlemen who wished to test the statistics published, evidence tending to confirm the results I had arrived at. The first I received on my return from London in June last, and referred to 10 dairies in this city, in which the losses were as follows:—

Dairy.	No. of Cows.	No. sold diseased.
1	30	27
2	25	20
3	35	41
4	30	25
5	6	5
6	11	9
7	9	4
8	40	20
9	35	21
10	26	14
	247	195

The rate per cent. sold diseased within 6 months in these 10 dairies amounts to 79.75. Another person who doubted the statements made was astonished by his visits to the dairies of this city, and favoured me, and that only last week, with the following notes:—One cowfeeder, visited on September 22, had 31 cows in his byre, and confessed to having sold 6 diseased within a month. A second, visited on the same day, keeps 4 cows, and he had sold 6 diseased since May. A third, who keeps 7 cows, has sold 7 diseased and dead since January last. A fourth, who keeps 6 cows, had sold 18 diseased and dead since last December. A fifth keeps 8 cows, and has sold 11 diseased since January. A sixth, with a stock of 20 cows, has sold 40 diseased in the same time. A seventh keeps 30 cows, and sold 17 diseased during the past summer. An eighth, visited on September 27, and who keeps 6 cows, has sold 12 dead or affected since Whitsunday last. A ninth, with a stock never exceeding 20 cows, sold 17 diseased in 4 months. A tenth, who owns 40 cows, was visited on September 30, and stated that he had sold 40 diseased cows since last January. The eleventh, who keeps 8 cows, visited on the same day, had 2 suffering from pleuro-pneumonia at the time, and had sold 16 dead or dying since the month of April last. A twelfth, with 11 cows, had disposed of 5 in a state of disease within a week. I am prepared at any time to praduce ample evidence of the truth of the above statements; and were it not that my statistical details are not well suited for the present occasion, I could add more to the facts above set forth. Truth must prevail in the end, gentlemen, and no better confirmation of all I have said can be obtained than that derived from the state of anxiety and alarm which now exists amongst the dairymen in this city in consequence of our Town Council having appointed an inspector, chosen on the recommendation of the Edinburgh butchers, and who, by condemning the carcases of diseased cows, threatens to ruin the dairymen of this city. It is true that stopping this sale here will cause the sale of the cows elsewhere; but why shall we not strive to prevent the extraordinary ravages by pestilence, which we can daily witness if we watch for them? Why shall we not frame measures to protect the dairymen? In their great difficulties they have adopted the only means which could protect them from ruin—viz, selling their diseased stock; and if we are determined to stop this for the public good, it is hoped that some system to substitute may be devised. I am altogether opposed to the oppression of any class of men, and I am confident that the Dutch plan of insurance, based on the prevention of disease, and the medical treatment of any animals which fall sick, will meet the case. Permit me to ask—What is being done in the way of prevention? Hotbeds of disease require to be dealt with in a special manner. If an outbreak of human cholera or small-pox occurs, we set to work and drain, ventilate, and vaccinate; but as cattle proprietors wish to preserve secrecy, and disregard all measures of sanitary reform, nothing is done. I was recently advised by a worthy friend not to trouble myself with the cattle-disease question, considering the temper and the feeling of stock owners on the point. It is needless to remind me of the ill-will I have incurred amongst those who bolster up a vicious and disgusting traffic, and it is equally needless to ask me to desist in my endeavours to supplant a system based on reckless folly and mismanagement by one which must contribute to the good of the country, and especially to the benefit of those who have been most loud and vindictive in their attacks on myself. If the farmers in this country think that their interests are looked after by those who strive for popularity in asserting that cattle with the foot-and-mouth disease should be allowed to come in from abroad—that animals with lung disease should be freely bought and sold, or conveyed by railway—that scabby sheep are too numerous to be inspected—and so on, all I say is, that the farmers deserve to suffer. I have no pity for them; and I must ask the public at large to refuse to be imposed upon by people who, always ready to impute bad motives to others, are guilty of the transparent expedient of trying to convince us that we must choose between starvation or buying diseased meat.

LAND DRAINAGE AND DEEP CULTIVATION, &c.

[The following is an extract from the first of a short series of Lectures by Mr Wallace Fyfe, lately given before the Royal Agricultural College.]

THERE are a good many arguments in favour of deep cultivation, of which subsoiling is the first course and drainage the foundation. The difference of vegetation on cultivated and uncultivated land is sufficiently remarkable; the crops and produce of the deeply-cultivated gardens, as contrasted with ordinary tillage crops, equally so. What causes the difference? Is it not manifestly proportioned to the depth of cultivation? And why should deep culture not be prosecuted? The same original materials composed both soil and subsoil, the sole difference arising from the one having been stirred by the plough having become or remained accessible to the fertilising influences of the atmosphere, (which Mr. Parkes somewhere calls "Nature's grand storehouse of manure,") purified of noxious principles, deepened and made productive. The worst lands have been made productive by trenching and mixing. Trenching, as you are aware, is the foundation of all garden cropping, and the deep artificial garden soil always admits of that operation, whereby three or more spades deep of earth are removed and interchanged. But it has been remarked that the process applied to the best garden ground and the worst waste land has been neglected in the case of the superior arable lands of this country, which have never been moved beyond 9 inches deep, the ordinary depth of a plough furrow. A practical essay was recently published by an East Lothian agriculturist to show that double or treble that depth must produce larger crops and bring good lands to the highest pitch of their fertility. Nor can it be doubted that the limits of quantity in agricultural produce are far from being reached. Palestine and some southern countries yield a hundred fold, and even more. In Sir Gardiner Wilkinson's "Topography of Thebes" we have a statement respecting the cultivated plants of Egypt in which the returns are even larger, and certainly quicker, whether in the winter or the summer cultivation (for they have both). But it has been justly said that the British farmer would be thankful if, with all the aid of science, he could reap fifty after one. The preliminary drainage improvements having been so extensively effected, why should not the deepening of cultivation keep pace with the new opportunity of increasing our produce thus afforded? The Flemings, who have derived from long experience much of what we are now beginning to attain from scientific disclosures, have a custom of annually digging at intervals the bottoms of furrows, and laying the fresh earth on the surface. But how much less effective is this tertile culture than the systematic subsoiling of every furrow you are by this time in a position to judge. All naturally rich soils are deep, and composed of a variety of constituents intimately blended—subsoiling and deep cultivation following it up at an interval regulated by the nature of the materials (for the geological facts must be kept in view), merely copy Nature in this respect—moving and mixing a

greater bulk of materials—bringing new earth into action, making valuable additions to the soil. The chemical effect of this admixture is to bring mutual solvents into contact and liberate long dormant gases and principles to nourish vegetation. Take the case of pure clay and pure sand. Apart and unmixed each is the extreme of barrenness; but intermixed they constitute a fertile earth. It must not be forgotten as one of the permanent benefits of drainage that the new mechanical texture or composition imparted to the soil enables heat and moisture to be absorbed, retained, or parted with precisely as required by plants.

So fertile sometimes are soils whose ingredients are thoroughly intermixed, that Bakewell mentions "on the summit of Breedon Hill, in Leicestershire," having seen "a luxuriant crop of Barley growing on land that had borne a succession of 20 preceding crops without fallowing or manure."

Mr. Smith, of Deanston, declared before the Committee on Agricultural Distress in 1836 that he had employed his most formidable invention the subsoil plough through a first rotation on the farm of 200 acres formerly mentioned, and on beginning a second ploughed up the previously stirred subsoil, whereby the produce of Oats was increased from 24 or 30 bushels per acre to nearly thrice these quantities, superior in quality, and the rented value of the land raised from 15*s.* to 2*l.* Such immediate effects are not always to be expected from subsoiling, which is a mere preparative for deepening the cultivation, as drainage is for subsoiling itself. The full benefit cannot be obtained till the loosened soil is capable of being ploughed up and mingled with the active crust. The late Mr. Murray, of Polmaise, introduced a practice which he termed winter fallow, for it produced a crop, and was thus preferable to vacant summer fallowing of land, a resource reverted to, as we have seen, in the absence chiefly of the mechanical improvements we are this day discussing. At the removal of the crop he ribbed across drained land at right angles to the drains with the common plough, and subsoiled the space between the drills, split these drills in January, and then subsoiled the spaces on which they rested. A seed furrow afterwards levelled the surface and completed the preparation for Barley or other spring crops. The object of this operation was to keep dry tenacious lands, expose a greater surface to frosts, pulverise and mix the most stubborn materials, throw out the weeds, afford uniform depth and fertility of soil, and instead of the unequal growth seen on crown and furrow, a luxuriant crop ensues, covering the surface equally well. It is much in favour of deepening our ordinary cultivation that manure put into a deep furrow is certain to reach the plant, whose roots will either descend to it, or its influence will ascend to them. Lord Kaimes has a strange observation regarding churchyards, in which he notices that the earth is only enriched upwards. In fact the levity of the gases, decomposing substances, compels them to ascend. In like manner the very atmospheric action being deepened in the soil, if the atmosphere be as everyone who studies the provisions of nature and contemplates the extent and abundance of leafy surface spread abroad by the humblest flower or the hugest tree to catch its influence must acknowledge, an inexhaustible magazine of vegetable nutrition—this must promote the progress of plants. There are various prejudices against pushing these advantages fairly to an issue. The first is derived from the experience in deep ploughing undrained lands, which has been found to prepare a lodgment for water which has no outlet; but this it is the very business of drainage to cure. The second is derived from experience in subsoiling itself, as ploughing down the soil and up the subsoil is certainly attended with a temporary loss of fertility; but the precautions employed in subsoiling of stirring the subsoil without covering it up, and maturing it where it lies, before bringing it into use, remove this obstacle also. A third obstacle comes under the head of a besetting sin—for it is nothing but indolence—an apprehension of the severity of the work for man and beast; but even this our improvements go far to modify, since the soil, rendered more friable and easy in working, will become more so as steam ploughing is adopted, and manipulation proceeds. Such has been the influence of these miserable obstacles that the railway sections all over the kingdom have disclosed nothing more striking than the depth of our soil and the shallowness of our cultivation. If I were drawing you a rhetorical sketch of our agricultural deficiencies, no more ample scope could be found than in what is here exhibited for denouncing our whole operations as characterised by a wilful improvidence and rejection of the bounties of Nature and of God. Here lies the thin stratum of cultivated earth, tortured and exhausted by the extraction of all manner of crops, and underneath it depths of fertile substrata, not only untouched but walled down by the beaten road which the long and exhaustive operations of husbandry carried on above it have trodden so as completely to cut off its benefits.

Plants themselves send down their roots naturally to a depth which, strange to say, is so little known as scarcely to be credited. In the case of Beans, Turnips, and Red Clover, we are familiar with the fact that their roots penetrate to double the depth of ordinary ploughing; we raise up the Turnip on drills to help it, and we expect the Pulse and Grass crop to perforate and deepen the soil to help us. But there is not a cultivated plant which does not naturally send down its roots beyond 9 inches. The cereals on which our agriculture mainly depends are indeed endowed with the power of forcing their roots deep and far into the solid earth in search of food, and as the investigation of drainage obstructions has lately shown, it is impossible by any process short of actual tracing to fix the distance to which the roots of trees and hedge plants will penetrate—so is it found that Wheat and our other cultivated Grasses extend their roots much farther into the soil than is at all generally supposed. Johnston, in his drainage lecture, says that deep-rooted plants, such as Lucerne, often fail, even in moderately deep soils, because an excess of water or the presence of some noxious ingredient which deep drains would remove, prevents their natural descent in search of food. "Even plants," he adds, "which like Wheat or Clover do not usually send down their roots so far, will yet, where the subsoil is sound and dry, extend their fibres for 3 or more feet in depth, in quest of more abundant nourishment." But I repeat, it is not thoroughly understood how deeply the roots even of Wheat and Clover descend. The Earl of Macclesfield, in a letter to the Society of Arts, mentions that a few years ago Mr. Badcock, a shrewd, sensible, observing, and very considerable farmer at Pyrton, Oxon, having occasion to dig the foundation of a building on a field under Wheat, was much surprised by observing the small fibres of the roots of the Wheat much deeper in the earth than he had any idea of. Endeavouring to trace how deep they really went, he had the ground opened close to some plants, dug perpendicularly down to the depth of 6 feet, and having fixed a narrow board close against it, proceeded in the same manner on another side of the plant, and so on till he had secured the earth to that depth between four boards firmly lashed together. He then had it placed upon an inclined plane, and carefully removing the boards, with great caution and perseverance washed away all the earth adhering to the root and its very small fibres, and was much surprised at their extent. He repeated the trials on several other Wheat plants, and traced their depth to within five and six feet. The late Mr. Fane, M.P. for Oxfordshire, had one of these plants, now presented by Lord Macclesfield to the Society of Arts, secured in a close glass tube. My friend Dr. Atkin and myself have traced the roots of Wheat in Berwickshire to five or six feet of perpendicular depth in garden soil.

THE LICHFIELD AGREEMENT.

[Mr. Sanderson, the Land-Agent, of 15, Manchester Buildings, Westminster, has sent to us a copy of a letter to Lord Lichfield on the model agreement between Landlord and Tenant given in our columns the other day. We extract the following from it.]

(1). An objection of some force may be advanced against the agreement at the outset, viz, that the period (Lady Day) which it assigns for the termination of a tenancy is not the most suitable. At Michaelmas all the field operations essential to the raising and reaping of crops are completed, and then too commences the annual round of labour, which ends with the ingathering of the harvest. There is consequently at Michaelmas no clashing of interests between outgoing and in-coming tenants, the one paying for labour in the executing of which he had no control, and the other performing inefficient and unnecessary labour to increase his outgoing bill. Nor is Michaelmas entry less favourable to stock farmers, for then it is that fresh arrangements are required for the purchasing of store and fattening cattle, and for reproducing the annual yield of store sheep. Nature has therefore fitly assigned the end of harvest as the best season for farms to change occupiers, and man would act wisely in obeying its dictates.

(2). The agreement allows for Linseed-cake consumed by stock one-third of the amount consumed during the last year, and the same for Linseed-cake consumed by sheep while consuming Turnips on the land on which they are grown; to allow for Linseed cake consumed upon land on which Turnips are grown, and not when Turnips are consumed upon pasture land, appears to me to be unsound in theory and unwarranted by agricultural practice. The manurial value of oil-cake consumed upon pasture land is greater than that consumed on Turnip land of a clayey character; while there are many districts in which Turnips can only be consumed by sheep on Grass land. This clause, indeed, tends to lessen the area under Turnips, as valuable roots are produced upon land not suited to sheep folding. No allowance is made for Rape-cake, although equally valuable as Linseed-cake in a manurial point of view. The consumption of Oats and Barley for fattening stock is now very great, and all experience proves that these native products produce valuable manure. The agreement, however, ignores the manurial value of these foods altogether, and enjoins that the manure made from home food must be free, while that from purchased food must be paid for. So much for the outgoing tenant's interest in the extraneous food he uses. But, has the incoming tenant a sufficient guarantee that he obtains full value in the cake consumed by his predecessor for that which he has to pay? Suppose a case, where a tenant occupies two contiguous farms; his cake bills are no valid guarantee for the exact quantity of cake consumed on each. In many cases, too, is not the manurial value of cake rendered *nil* by dung being carelessly thrown upon sloping banks, and, therefore, its best ingredients allowed to be carried away by the stream?

(3). Allowance is made for bones applied to pasture land, if the quantity is not under 20 cwt. per acre, the allowance to be graduated over 10 years. This provision appears to me objectionable, first, because for any description of pasture land from 10 to 15 cwt. per acre is a sufficient dressing; secondly, supposing 20 cwt. of bones per acre are essential every 10 years, two applications of 10 cwt. per acre at an interval of five years are more efficient and less costly than one application of 20 cwt.; and, thirdly, because a tenant may indiscriminately apply bones to land, whether pastured with dairy or with fattening stock; or, in other words, to land rich in phosphates or otherwise. In short, this clause, as stated in the agreement, only allows the outgoing tenant for bones when he uses too great a quantity, and makes the incoming tenant pay for bones whether judiciously or injudiciously applied.

(4). Allowance for efficient drainage graduated over 10 years, seems at first sight to be equitable; yet it is open to grave objections, and affords scope for great abuse. Ten years is too short a term to repay the outlay on efficient drainage; and the clause assumes that all drainage will yield on the outlay 12 per cent., and that all land, rich or poor, will by drainage be increased in value 12*s.* per acre. In many cases farmers are compensated for draining in a shorter period than 10 years, as it allows them to carry out important improvements, which they could not otherwise do; but as the operation—if efficiently executed—is permanent, and involves a large outlay, and on some descriptions of land is several years before it yields the desired result, so the minimum term over which allowance should be made—if made at all—ought to be 14 years. But what security has the incoming tenant that he is paying for efficient drainage? I confess I cannot imagine, unless the drainage had been inspected and certified by a Government drainage inspector, and this would involve so much expense—as farmers generally drain a small area at a time—as to put an effectual stop to drainage altogether. To show that gross injustice is done to incoming tenants by charging them for inefficient drainage, the following is one of many similar cases which have come under my own observation. About four months since I was consulted by a landowner respecting the justice of an award for drainage which one of his tenants was asked to pay. I met the valuer for the incoming tenant upon the spot, who at once frankly admitted that he had not inspected the drainage at all, that he did not know whether it was efficient or not, and that he based the outgoing tenant's claim for drainage solely upon the statements of the latter. I at once carefully inspected the drains, and found the outlets blocked up, the drains from 20 inches to 2½ feet deep, and the pipes in several places broken and choked with sediment.

(5). Too much latitude is given to the outgoing tenant in clause 11 of tenant's covenants, which allows him to plough stubbles either in autumn or in winter; for when the ploughing of stubble land is delayed until winter the success of the Turnip crop is extremely hazardous.

(6). Clause 13 of tenant's covenants virtually enjoins that not less than one-fifth of the arable land shall be sown with Grass seeds every year, and that the same area each year shall be fallow. Covenants happily unsuited to few districts, and inconsistent with an advanced mode of husbandry.

(7). With the exception of 10 tons of straw for every 100 acres of arable land, and a few acres of Potatos not defined, the agreement provides that all roots, Clover, hay and straw shall be consumed on the farm. On farms situate in close proximity to towns this clause would operate adversely, while on all farms the restrictions it enforces are strikingly at variance with the liberal use of extraneous manures, and the extensive consumption of artificial food at the present time.

(8). As a tenant, according to the agreement, does not know until Lady Day whether he may occupy his farm for another year, so he cannot adopt the system which enlightened practice sanctions of planting prior to Lady Day the exact area of Potatos he is permitted to sell.

As time would fail me to dwell upon all the clauses, I shall merely mention some points in the agreement not already alluded to, which appear to me contradictory.

(9). Provision is made that farmyard manure, the value of which is easily ascertained, must be left free, while oilcake (the manurial value of which is doubtful) must be paid for; Potatos, which are an exhausting crop, are permitted to be sold, while Turnips, which are a fertilising crop, must be consumed on the farm. Purchased manures applied to Potatos the last year of the tenancy are not to be paid for by the incoming tenant, although the Potatos in the said year cannot be sold; and one-tenth of the straw left at the expiry of the tenancy must be paid for, while if the same had been converted into manure it would be left free.

(10). The agreement favours summer fallows—a system unworthy of progressive husbandry; recognises only a four and five-course rotation; underrates Turnip husbandry—the basis of all good farming; gives no countenance to the use of corn for stock; ignores autumn cultivation; overlooks the importance of many

agricultural improvements, and restricts the outlay essential to the developing of the resources of the soil.

(11). According to the agreement, the tenant, without the consent in writing of the landlord's agent, cannot drain his land, however wet; cannot lime it, however retentive; cannot manure it, however poor; in short, can effect no outlay which twelve months cannot recover. A tenant under this model agreement is indeed a mere tool in the agent's hands, and consequently has no inducement to follow any course other than that hand-to-mouth system which is invariably associated with a reduced fertility of soil, and with increasing poverty on the part of the tenant. I by no means say that there are not many agents who are eager to promote improvements, but it casts no stigma on these to assert that there are also agents who are totally ignorant of agricultural requirements.

The fact that in the agreement the landlord is made to represent the incoming tenant, by no means places it in a more favourable aspect. On the contrary, it may be reasonably assumed that the agents who are supposed to control and certify all improvements will in many cases be indifferent respecting the execution of work for which they know a tenant will readily pay.

I cannot imagine that the framers of the agreement believe that they have allowed for all requisite improvements; but surely they must see how far short it falls of proper security for outlay to a tenant, as it takes no cognisance of subsoiling, deep tillage, capital sunk upon costly implements, the grubbing of superfluous hedgerows, the straightening of fences, the removal of surface boulders, the filling up of ditches, and the transporting of soil from deep hollows to bare hillocks —improvements, the effects of which are not limited to a few years.

Viewing the agreement as a means of promoting good farming, of affording sufficient security to a tenant for carrying out necessary improvements, and as a means of equitably adjusting the respective rights and duties of landlords and tenants, I regard it, with all respect for its enlightened framers, as an absolute failure, and totally unworthy of an advanced age. If such, then, is the result of long study on the part of the enlightened agriculturists of Staffordshire, I would, seeing that all agreements associated with annual tenure, instead of promoting, retard agricultural progress, respectfully solicit your lordship to consider whether you would not greatly benefit the cause of agriculture by at once espousing the system of long leases—a system which affords the best security to a tenant, and yields the largest revenue to a landlord. Under this system tenants carry out costly improvements, and ask for no compensation; the outgoing tenant cannot defraud his successor, and landlords not only secure the highest rental, but frequently get their estates doubled in value without expending one shilling of their own.

One word respecting your lordship's speech at the meeting of the Staffordshire Agricultural Society. Your lordship is reported to have said, "That it will be a long time before you persuade all the landlords of this county that a lease is not a one-sided arrangement." Now, I respectfully submit, that while leases benefit both owners and occupiers, yet the greatest benefit must accrue to the party who has the permanent interest in the land. For myself, I have generally succeeded in making those landlords for whom I act change from the system of annual tenure to that of leases. I find, however, that there are others more strongly opposed to leases than landlords. Very recently I succeeded in advising a landowner in a Midland county where tenant right prevails to adopt granting leases. So soon as his intention became known, his local agent and the rector of the parish wrote to him not to carry out so foolish an act, as he would terrify his tenants, and introduce untried customs into the district. Ultimately, however, the landlord carried out his resolution, and has no cause to regret it, as I have obtained tenants of skill and capital, and an increase of 35 per cent. of rental. (As a guarantee of good faith, I forward you the name of the estate.) The question, indeed, between annual and leasehold tenure resolves itself into this, viz., whether landlords prefer retaining the powers of ejecting their tenants when they choose, and have inadequate rentals, estates undeveloped, a poor tenantry, and a pauper peasantry, to the granting of a 19 or 21 years' lease, which secures an industrious and prosperous tenantry, full value for land, and estates rapidly increasing in value? I would by no means grant a lease to a tenant without skill and capital; yet I have always found that the best mode of developing skill and of increasing capital is to give that security of tenure which a lease affords.

Home Correspondence.

Influence of London on Hertfordshire Farming.—It would be easier to treat this question as a matter of speculation than of fact. The latter is the only honest course; the nature of the difficulty is best known by those who are acquainted with the part of Hertfordshire nearest to London. As London increases in area and population its influence on the country at large will extend also; but coincidently with, and in part cause of its increase, a revolution has been wrought in the means of communication by railways. Thus, the butter and cream, eggs and poultry, which leave Devonshire to-day are on the tables in London to-morrow. Meat ready slaughtered comes from the remotest districts; fodder, litter, roots, in spite of their bulk, come from distances which show that the circle of supply is only limited by the shores of the sea-girt isle. How then is this question to be answered? A significant fact is taught by the increase in the disposition to sell stock in the country market and make the London butcher fetch his meat from thence. After due consideration the writer sees that the practice of the present has to do with the custom of the past, and that the trade, for instance, in hay and straw, which bears more directly on the interests of the farming of Hertfordshire, is rather a remnant of the past than a characteristic of the present. Before the railway was constructed, light carts with sorry horses were seen toiling to London with an overload of hay or straw, and returning on the morrow with manure only sufficient to clear the turnpike toll. And so it is still; how is the balance against the land settled between the two? Here the London market takes much and returns but little. To take a glance at the past: Walker speaks of manures from London, as soot, ashes, furriers' clippings, horn shavings, and sheeps' trotters—such things may be imported still. Again, Arthur Young took much pains to ascertain from Mr. Newman Hatley and Mr. Leach the advantage, if any, of dung from London, brought to their very doors by the canal. In one case it appears that only night soil and street sweepings were used; in another it is said that the practice of importing London dung did not answer, and that Mr. Leach and others had given it up; and A. Young says that the carriage by road to and fro goes on from the banks of the canal, and that "this does not answer when brought by navigation." This all tends to involve the question in difficulty. To turn to some known facts as illustrating some of the practices of the present time:—The hay farmers near London depend almost entirely on London manure to replace the crops they sell, and this is true as regards those in Hertfordshire, who occupy that part of the county which, like Middlesex, is under Grass. There is, moreover, a well-known instance of a large arable farm on the banks of the canal, from whence every atom of produce is sold; not a single head of stock is kept, and the cultivator depends entirely on manure brought by barge from London to replace the produce sold. It is clear that such a system as this is utterly at variance with all the acknowledged principles on which the best husbandry is carried out. *J. C. C.*

The Root Crops.—The rains here, which during the past month amounted to 1½ inch, have even at this advanced period of the season been productive of immense benefit to the Turnip crops generally, more particularly the late-sown common varieties. The Swedes have also made a fresh start, and are not only increasing in size, we find them also greatly improved in quality. Should the weather continue mild and open during the month, we expect even now a still further improvement in size; the great absence of rain, for which this season has been particularly remarkable, had previously prevented the manures from acting, still under the most favourable circumstances we think the crop cannot be less than from one-third to one-half deficient. On most farms this season the plants are thin on the ground, owing in great measure to the ravages of the surface grubs, which attacked the young plants during the early stages of their growth. The Mangel crop has been already secured; the produce is considerably under an average. We think the quality will generally be first-rate. The early completion of harvest and the fine weather since have all been fully taken advantage of, and a large breadth of different kinds of crops have been sown, in order to come in as spring food to meet the most critical period. Rape, Trifolium, Winter Oats, Rye, Tares, and Cabbages of various kinds, have all been extensively resorted to, so that with an ordinary winter and a mild spring we may not be so badly off after all. On November 4 we found wild Strawberry plants in full bloom at an elevation of 325 feet. *G. Murray, Overstone.*

Societies.

CHEMICO-AGRICULTURAL, ULSTER.—COUNCIL MEETING: *Nov.* 4.—Dr. HODGES said that at the present time the subject of cattle feeding was of pressing interest to the farmer, and he hoped that the members of the Society would give the results of their experience with respect to the most suitable and economical methods. He prefaced the consideration of the subject by some observations on the principles which should guide the farmer in the selection of food, and remarked that, from the result of experimental observations, there is reason to conclude that for every pound weight of nitrogenous matter which the fattening animal adds to its substance, it will gain 10 lbs. of fat and about 3 lbs. of water. If an animal receive a supply of food beyond the quantity required for the support of the processes of life, for the renewal of the matters which are incessantly, whilst life continues, being worn away, it gains in weight, but after a time the amount of food necessary to add to its weight becomes much greater, and its appropriation proceeds so slowly, that the amount of new material deposited ceases to meet the expense of the extra food consumed. In considering analyses of food, it must also be remembered that all the respiratory materials—starch, sugar, fat, &c.—do not possess an equal value in the production of fat. Thus, it has been found that while a pound of fat, or oil, is capable of adding a pound of fat to the animal's body, it requires 2½ lbs. of starch or sugar to give a pound of fat. Bearing this fact in mind, we may derive much useful information from the analyses of cattle food, and learn how to supply the various kinds of food in the most available proportions, and in the most economical manner. As yet, much remains to be done in ascertaining the composition of our food plants, though we owe to Professors Voelcker, Way, and Anderson numerous trustworthy and instructive analyses; and in addition to purely chemical investigations, we require careful experimental inquiries into the effects of the various kinds of food on the organism of the animals fed on our farms. Considering that it is only within a few years that anything like scientific accuracy has been introduced into the investigation of this difficult subject, we have every reason, from the results already obtained, to expect that we shall yet obtain more accurate data to direct practice; and now that chemistry has given us so much useful information respecting the various articles employed as food, we shall be able to advance more rapidly in this most important branch of agriculture. He proceeded to point out that the food of the different classes of farm animals must be adapted to their organisations. The cow, provided with elaborate digestive organs, and with an arrangement for the complete mastication and insalivation of its food, by which it is submitted to the action of chewing and of the saliva, can extract from the bulky and crude mass which it collects in its stomach the constituents necessary for the support of its body; while the horse, and flesh-eating animals, with stomachs of small capacity, require more concentrated and a more frequent supply of grains and highly nutritious food. Dr. Hodges then directed attention to the rich store of nutriment contained in Flax-seed, an article 100 lb. of which were capable of yielding almost 34 lb. of fatty matters, while oil-cake contained only from 12 to 17 per cent. He gave the following analysis of a sample of mill dust which had been forwarded to him for examination by Mr. Carmichael, of Millisle. 100 parts of this dust contained as follows:—

Moisture	8·25
Nitrogenised (Plastic) Compounds	7·36
Fatty Matters	3·50
Starch	35·60
Fibre	37·80
Mineral Matters	8·09
	100·00

The oil was extracted by treatment with ether; the nitrogenised compounds were calculated from the amount of nitrogen in the ammonia, obtained by combustion of the sample with soda-lime, &c.

The CHAIRMAN remarked that at Crawfordsburn the mill dust, which was formerly neglected, was at present carefully collected by the farmers.

Mr. ANDREWS said that Dr. Hodges had some time ago analysed a sample of mill dust for him, and its composition showed its nutritive value to be high.

Farmers' Clubs.

DORCHESTER: *Manures for the Land.*—Mr. G. J. WOOD spoke as follows on the occasion of a recent address to this Club:—

No consideration can be of greater importance to the farmer than the best method of fertilising the land, or, in other words, the best and most economical method of restoring and increasing its fructifying power. On the other hand, no consideration can more worthily occupy the attention of the country than that which is now occupying its attention, viz., the health of its inhabitants. To this the efforts of philanthropists have been directed, and the Government has very properly given them assistance; but in one special particular I submit they have taken a vicious and wasteful course. You are all aware that the present plan of cleansing cities and towns is by a system of sewers, which, being flushed with water, are emptied of their contents into rivers and estuaries; and you are all sufficiently aware how ineffectual the system has sometimes proved when the tides have been high and the springs low, to the insufferable pestilential annoyance of the inhabitants. But taking the commonwealth as our stand-point, how blindly prodigal of the resources which Nature has provided—how absolutely suicidal does the plan appear! Look at this proposition. A given area of land is capable of supporting in its normal or natural condition a hundred inhabitants. By a course of judicious cultivation, and the careful restoration to the land of all its products in the form of animal excreta, and without any extraneous aid, it is found equally capable of supporting a thousand population. Nor can you well find the limit of increasing productiveness, except it be the occupation of the space by the dwellings of the population. Or look at it in another form; a field is sown to roots, those roots are fed off by a flock of sheep, which are faithfully folded on the same field, and then the field is found in higher condition than it was in when the Turnips were sown; another field is sown to Wheat, and the results of the crop being faithfully restored to it in the form of animal excreta, that

field is found in higher condition than it was before the Wheat was sown. I believe this to be a wise and gracious provision of Nature, and the dictate of right reason is to act according to this law. Now see how fearfully this law is violated by the system of sewerage before alluded to. Do you say we see all this, but we know not the method by which it can be accomplished? Where, then, is the genius and the enterprise of the Anglo-Saxon? The Chinese do better than you; they prove to you that that can be done which you can do in a far better and less offensive method; earth is the best deodoriser. The system of sewerage is a very expensive one. Is this liquid mode of cleansing less expensive than a dry one, which would obtain a large pecuniary return? But from our commonwealth stand-point we take up the question of expense, and we say you have two grand national objects to accomplish, involved in one great issue, either of which, I venture to say, will pay, if taken separately; but which, if taken together, will be doubly profitable. The system of town sewerage cannot be too strongly reprehended. You cast aside as worthless the resources which Nature has provided at your hands, and to find a substitute you crown your folly by sending 7,000 miles for the dung of tropical birds. When will this question be taken up in a practical way? Surely it is time, now that you have discovered the fertilising properties of the organic remains of animals, and found out the way to utilise them—now that you profess to be able to detect the chemical elements which either the soil, or the crop to be sown thereon, requires; it is time, I say, to address yourselves to this important question. And here, I would say, we cannot too highly value the efforts of such men as the excellent Vicar of Fordington, who has indicated, I have no doubt, the right method of procedure in the plan of his earth-closets. It remains to be shown how some such plan can be brought into general operation, and to supplement it by a more public method, where from circumstances such a plan cannot be brought into operation at all. There is no need to show cause for giving prominence to the subject; but if an apology were needed, I might find it in the inaugural address of Lord Brougham at the Social Science Meeting, lately held in York, wherein he says, "An inquiry in the Commons upon the health of towns, as affected by sewerage, has led to a report of great importance, and the subject will be taken up in our sanitary department. It appears clearly that the process for cleansing towns has led to the greatest impurity in streams, and the report shows incontestably that all sewage may be conveyed into the country at a moderate cost, and even with a profit by the farmers who purchase the manure. At a time when the supply of guano is found less than the demand for it, nothing can be more valuable to agriculture than the process recommended by the report as so beneficial to the health of towns." Most welcome then is it to learn that the subject is being taken up by the Legislature, because it is obvious that the sanitary part of the question requires the regulation and enforcement of wholesome laws. But it will become, no doubt, the subject of large commercial transactions, and then it will become a serious consideration for us farmers to guard against imposition as to quality. We have had experience of this in the compounds that have been supplied to us under the name of superphosphate. Without possessing an adequate amount of chemical science, or the means of analysis, farmers have gone very much upon trust as to the quality of their purchases; and when we hear of large fortunes being made in the composition and trade of these articles, we can hardly avoid the entrance of suspicion that all has not been right. For myself I must testify, after more than 25 years' experience, I have never grown such Turnips as when I have bought bones and sulphuric acid and made the superphosphate at home; and I believe there is evidence that where the plan has been adopted this year, the crop has progressed against the drought better than those sown with the compounds sold in the market. I believe it is incorrect and deceptive to class all these manures under the name of superphosphates. Many of them made with coprolites should rather pass under the name of biphosphate, an article of inferior fertilising power. But all these are questions of detail, and there is no doubt of the general importance and wisdom of utilising the products of Nature for the purposes of reproduction, or of the folly of flying to the antipodes for that which Nature has provided at our feet.

Reviews.

The Farm Homesteads of England. A Collection of Plans of English Homesteads existing in different parts of the Country, carefully selected from the most approved Specimens of Farm Architecture to illustrate the Accommodation required under various Modes of Husbandry, with a Digest of the leading Principles recognised in the Construction and Arrangement of the Buildings. Edited by J. Bailey Denton, M. Inst. C.E., F.G.S., Honorary Member of the Royal Agricultural Society of Hanover, Engineer to the General Land Drainage and Improvement Company. Chapman & Hall, 193, Piccadilly.

We shall confine our present notice of this magnificent volume, which was alluded to last week, to an enumeration of its contents, leaving till another occasion a discussion of those principles of farm architecture which it inculcates. The work fills a large quarto volume, containing full plans and descriptions of 24 of the best homesteads in England. The Royal Flemish Farm homestead is the first of the series. It illustrates the plan of covered yards, which is one of the foremost methods now adopted by farm architects. There is here accommodation for 12 horses and 100 head of cattle.—Therney Farm, in Cambridgeshire, the property of the Duke of Bedford, is then described. The homestead here is on the plan advocated by Professor Low, where the buildings, classed according to their uses, are arranged systematically in a long rectangle, with the open yards facing south. The parallelogram has this advantage, according to Mr. Mein, who erected these buildings, that where brick is the material used, as the shelter sheds divide the yards, they by their weight of roof protect the division walls from damage occasioned by the pressure of manure or the rubbing of heavy stock. Thorney is a fen farm of 500 acres. There is accommodation here for 76 head of cattle, in a succession of yards arranged end to end in a long parallelogram.—Brickden New Farm, the property of Colonel Linton, has a simple homestead accommodating 40 cattle and 12 horses. The buildings are here arranged around a square divided into two yards by a central detached piggery, &c. In the Maisemore farmery, near Gloucester, which is adapted mainly for the accommodation of stock, the central division is a main portion of this accommodation—the whole ground plan forming a trident, of which the central tine is thicker than the other, providing two rows of boxes. We hope hereafter to describe Maisemore Farm in detail, and to refer to the history of the capital herd of pure-bred Short-horns which Mr. Morris has here for many years cultivated.—Portland farmery is another trident arrangement, in which the central line of buildings are continued backwards, as it were, along the shaft of the tool.—The North Brook Farm at Kirtlington, near Oxford, is another capital illustration of the covered yard system, or rather of the combined covered and open yard plan, in which provision is made for all kinds and ages of stock.—Toothill farm, the property of Lord Palmerston, is a trident arrangement, with a short prolongation of one of the side row buildings for the accommodation of horse power, gangway and hay loft.—The Down Place farm near Guildford, is another good specimen of the covered yard homestead.—Sancton Hill farm, Howden, is a large trident arrangement with great open courts between the lines of building, proper for illustration as one of a class of buildings, but not desirable as a model for imitation.—Haines Hill farm has been already illustrated in these columns. It is the property of T. C. Garth, Esq., near Twyford, Berkshire. It illustrates the covered yard plan as carried out by Mr. Chancellor of Chelmsford. The entire roofing of the ground plan, and the ventilation of the central yard by a lofty roof, are the chief features.—Uphampton farm near Shobdon, Herefordshire, is an instance of covering the ground plan by a lower and closer roof. There is here accommodation for 100 head of stock, and elaborate farm machinery for the preparation of food, threshing of produce, cider making, &c. The whole cost, with machinery, 4500*l.*, or 8*l.* per acre of the farm, of which it is the very complete equipment.—Longleat Park farm, in Wiltshire, is furnished with capital buildings by Mr. Wilkinson, architect, of Oxford. They cost 7000*l.*, and include large covered yards, stalls, boxes, barn and food stores, piggeries, &c. There is accommodation for 18 horses, 17 cows, 14 fatting beasts, 30 pigs, and 30 head of loose cattle.—The Brome Hill farmery in Suffolk is an extremely elaborate homestead, including covered and open yards, with other accommodation for all kinds of stock.—The Tattenhall Hall farm, in Cheshire, is an extremely well designed and very original arrangement, by which the labour of a large cow-house and dairy is reduced to a minimum. It accommodates 80 cows and 26 other stock, besides nine horses and many pigs; and the cost was only 1600*l.* The main feature is the central cow-house, with barns and food-houses, all in convenient connection. Stables and cart-sheds are detached. Many other examples of good homesteads are given, and with reference to each, the character of the farm—its mode of cropping—its quantity of stock—the character of the soil and of the rainfall—and the cost of the erection is given. Then follows a chapter on Farm Machinery, with particular descriptions and elevations of Lord Bateman's machinery at Uphampton, and of Mr. Hegan's machinery at Dawpool, and of Mr. Garth's machinery at Haines Hill, and of Mr. Page's machinery at Southminster. A chapter follows on Farm-houses, with ample illustrations, in which the same rule is followed of giving instances actually erected—and another on Labourers' Cottages, with a collection both of examples and designs.

The rest of the volume contains a digest of the principles recognised in the construction and arrangement of approved farm buildings, in which the facts so industriously collected and so perfectly presented to the reader in the former part of the volume are collated and discussed in order to bring out the principles which should guide the reader in adapting any of the examples before him to his own particular circumstances.

To this Digest we shall hereafter direct the attention of our readers.

Miscellaneous.

Death of Mr. Robert Ransome.—We have this week to record the death of a man who, through a long life, has been connected with the improvement of agriculture, and whose works and name are not only familiar to the farmers throughout this country, but to most of Europe and other more distant parts of the world—that of Mr. Robert Ransome, the senior partner in the great firm of Messrs. Ransomes & Sims, of the Orwell Works, Ipswich. As one of the pioneers who helped to clear away the old cumbrous instruments of culture, and introduce the modern class of implements on the farm, his name is entitled to remembrance and honour. Mr. Ransome had reached the good old age of 70 years; and his death, at last, appears to have been rather sudden. About the middle of last month he resolved on a continental tour, and left Ipswich for Germany and the Rhine in company with his nephew, Mr. Stafford Allen. On the Wednesday of last week a telegram was received by his friends in Ipswich, stating that, at a village called St. Stogar, about 20 miles from Coblentz, Mr. Ransome had become seriously indisposed. On the following day, a further and more alarming message was received, when his regular medical attendant, Dr. Hammond, in company with Dr. Otto Sillen, of the Orwell Works, left Ipswich on Friday morning, by mail train, to attend him. These gentlemen reached their destination on Saturday, and, after seeing their patient, at once telegraphed to the members of his family to hasten to his bedside, as there was no hope that his life could be saved, the deceased having received a fatal stroke of paralysis. On Sunday evening, the 6th inst., Mr. Ransome expired, before, it is feared, his children had reached him. The sad news was telegraphed to Ipswich on Monday, and caused considerable sorrow among a large circle of relatives and friends. Mr. Ransome, throughout a long life, took a deep interest in various religious and philanthropic movements. The last public meeting over which he presided was in connection with the British and Foreign Bible Society. The body was brought home on Thursday evening; and the funeral took place last Monday. The Mayor invited his fellow-townsmen to meet him at the Town Hall at half-past one, and join in the mournful procession, headed by the men employed at the Orwell Works, who desired to be allowed to join in this demonstration of respect to the memory of their departed employer. *Mark Lane Express.*

Is a Portable Steam Engine liable to Toll?—On the 10th inst. an information was laid by Thomas Jackson, the toll collector at the Small Briggs Bar of the Doncaster and Bawtry Turnpike Road, under the provisions of a local Act, against John Rowbottan, a servant of Messrs. Sellars, of Cantley, for passing through the gate without paying toll for a steam engine that was drawing a threshing machine, such toll being demanded of the toll collector. Mr. Shirley, who appeared for the defendant, contended upon that occasion that by the 14th and 15th Victoria, cap. 38, sec. 4, the words "implements of husbandry" (mentioned in the 3d of George IV. cap. 126, sec. 32) "were thereby declared to cover the threshing machine," and that, consequently, the steam engine attached to it and propelling it along the road was free of toll equally with the threshing machine itself. Mr. Jackson, in giving the decision of the Court—which had been reserved—alluded at great length to a case "The Queen against Matty," reported in the 27th volume of the *Law Journal* (Magistrates' Cases) page 59. In that case it was held that, although the steam engine was separate from the threshing machine, and drawn by horses, the two constituted an implement of husbandry within the meaning of the Act, and that toll could not be demanded. In the information now before the Doncaster Justices the evidence was that the defendant's steam engine and threshing machine were fastened together by a coupling chain, or something of the kind; that neither of them was drawn by horses (as in the case decided upon by the Court of Queen's Bench—that of "The Queen against Matty") but by the action of steam, and both were passing along the highroad from one farm to another to be used for the purposes for which they were employed in husbandry. It might be urged that the decision of the Court of Queen's Bench affected only such engines and machines as were drawn by horses, whereas this one was moved by steam. Did that in reality make any difference? The Bench were disposed to say that it did not. By the 3d of George IV. toll was not payable either for horses or carriages employed in carrying or conveying any implements of husbandry. The words were in the disjunctive—"horses or carriages," and, therefore, if by the ingenuity of man a carriage, which this engine was, was enabled to go without horses, and to pass along a road *ex suo motu*, by force of some active power within itself, and by means thereof could carry or convey an implement of industry, which both engine and machine were alike held to be, it did appear to the Bench that the exemption well applied to them both, and therefore ought to prevail. If these carriages were exempt when drawn by horses, *a fortiori* were they so without them. There was an Act of Parliament which was not referred to in the discussion, to which he (Mr. Jackson) would direct attention—the 24th and 25th of Victoria, cap. 70, commonly called "The Locomotive Act, 1861." It was entitled "An Act for Regulating the Use of Locomotives on Turn-

pike Roads, and Tolls to be Levied on such Locomotives," and as the waggons and carriages drawn or propelled by the same. This Act appeared to be applicable only to locomotives used for the carrying of goods for profit. At all events there was the following section, the 10th, which reserved existing exemptions from toll:—"All waggons, carts, or carriages as heretofore described, drawn by any locomotive loaded with any materials such as were now exempt from toll, under the provisions of any general or local Act, shall be entitled to the same exemption as they would be if drawn by animal power." Finding, therefore, as the Bench did, that moveable threshing machines were defined by statutes "implements of husbandry," and that steam engines therewith used had been held by the Court of Queen's Bench to be the same also, and believing as they did, that, whether carried or conveyed along the road by horses or by steam, both were intended to be exempt from payment of toll, they arrived at the conclusion that the information failed, and in their opinion, it must therefore be dismissed. Mr. Jackson added that this decision was that of the magistrates only who heard the case, and therefore if it was erroneous, as perchance it might be, they did not desire to compromise the rest of the Bench by anything they had said. This decision—unless it is overruled—decides that a steam engine drawing a threshing machine on a turnpike road, and when intended to work the same, is exempt from toll, as forming part of the machine itself.

The Highland Society's Show at Stirling.—Our readers will recollect that one of the most interesting and suggestive features of the Highland Society's Show in August last, was the novel exhibition of seeds, grain, and plants, of our esteemed townsmen Messrs. Drummond & Sons. The voluntary admiration which their tasteful collection elicited from every visitor to the show-yard, was perhaps as much reward as the Messrs. Drummond looked for. It must, however, be doubly gratifying to them, to have received the following official recognition of their efforts to make the Show, so far as they were concerned, a great success, viz.:—

"Excerpt from the Minutes of a Meeting of the Directors of the Highland and Agricultural Society at Edinburgh, 2d November, 1864.

"The directors having taken into consideration the exertions of Messrs. William Drummond & Sons to promote the success of the Stirling Show, resolved to record in the minutes of the Society the sense which the board entertains of the services rendered by these gentlemen, in having provided, at their own cost, so attractive and interesting a feature of the Show as their exhibition of seeds, grains, and plants, which, in extent, completeness, taste, and general effect, was worthy of the highest commendation.

"(Signed) ARGYLL."

Stirling Observer, Nov. 10, 1864.

African Palm Oil.—In the discussion which followed the reading of Capt. Burton's paper on the ascent of the Congo, at the recent meeting of the British Association at Bath, Mr. Crawfurd maintained the superiority of the west coast of Tropical Africa to the east coast, owing to its producing Palm oil, of which 1,300,000 gallons were exported in 1863. Palm oil was, he said, the great civiliser of Africa—more efficacious in suppressing the trade in slaves than the British squadron, but the east coast was deficient in oil-producing Palm trees. Dr. Kirk however stated that Dr. Livingstone and himself found a Palm tree which did not differ, except in size, from the Elais guineensis of West Africa, growing abundantly on the shores of Lake Nyassa, near the east coast, and he believed that the cultivation of the trade in the oil of this Palm would be a great blessing to the suffering nations of this populous region. It was true that the district was nearly 300 miles distant from the sea-coast, but there was water navigation nearly the whole way. The Mozambique country was rich also in other valuable oils; the Cotton was undoubtedly of good quality; but to make this and the oils of the country available, there must be free navigation of the Zambesi. *Athenæum.*

Calendar of Operations.

CHATTERIS, ISLE OF ELY.—We still continue to have but slight falls of rain, scarcely sufficient for agricultural purposes; the Wheat seeding has consequently been a difficult operation, and unsatisfactorily performed. We were 10 days later in commencing to sow than is our usual practice, and even then had to deposit the seed into soil where the surface was a mere dust-heap, but under which there appeared just moisture enough to enable it to vegetate. We hesitated before we took this step, but knowing the almost universal loss sustained on these lands by late sowing we ventured to take it, feeling persuaded that we were incurring the less of two evils; and subsequent observation leads us to infer that we acted prudently. Our land was all ploughed, so we were able to employ all our horse power in putting in the seed, and in seven days we managed to sow 215 acres. We then had to wait, as our other lands designed for Wheat were not sufficiently comminuted to receive the seeds; but rain fell rather copiously in a few days, and we were enabled to recommence, and our 317 acres of Wheat were all sown in October. Those put in prior to the rain are now looking green, but the plant is not so strong as we usually have it, and it has not come with that regularity which is commonly discernible on our fen soils. On those spots containing the most moisture the Wheat has vegetated more quickly, whilst on those that were more droughty it has shown a slower growth; but as far as we can see we shall have a sufficient plant, although irregular as to size; but a few weeks of genial weather, with showers, and an average temperature, will soon hide all this. The continuance of dry weather has enabled us to put the manure on upwards of 60 acres, designed for Beans and Peas, an operation which generally has to be performed during a hard frost. We are now busily engaged in ploughing these lands, and find in one or two instances they are as hard and stubborn at bottom as they were immediately after harvest, the rain not having penetrated to nearly the depth we are ploughing. We steam cultivated 117 acres after harvest, 62 of which were Bean stubbles for Wheat, and the remainder lands designed for spring corn. This operation was most satisfactorily performed, as the season was so favourable. We are now wishful to commence steam-ploughing on those fen lands which we purpose fallowing and sowing with Coleseed for sheep feed another season, but our engine is at present occupied with threshing Oats and Barley to provide food for our cattle. We have upwards of 100 acres which we purpose ploughing in this way from 12 to 18 inches deep—the depth being regulated by the character and composition of the subsoil. We attach great importance to deep cultivation. We have taken up our Mangels, and find the crop, for the season, good. We had 21 acres, grown on cool-bottomed lands, and the bulbs are a fair size, fully as large as in favourable seasons; we grow them on dry soils, but not quite so large as these cool lands usually produce. We have 420 lambs which have been bought in the Lincolnshire fairs, at an average of about 34*s.* per head. These are at present on the pastures, which are good, having been reserved for them, and are getting a quarter of a pound of cake per day, Linseed and cotton mixed. Early in next month they will be put on Coleseeds, and then in January will come into the yards to be kept in our usual way on Mangels, cake, corn, &c. Our cattle have been in the yards for some weeks, and with straw get two pounds Linseed and two pounds cotton cake daily, and appear to thrive well. They were purchased in Scotland in September, and cost a little under 12*l.* per head. Our report of the harvest must be about the same as we have before given. Wheat yields well, and in our own case will prove a better crop than last year. Barley also yields well, but was not so bulky, and consequently not so abundant a crop as last year. Oats, even where a good crop of straw, are yielding badly, and are lighter in quality than we usually grow them. Beans and Peas are both deficient, and, in some instances, very much so. The corn trade is bad indeed, and the money return per acre will be small. Meat sells well, and gives a good profit to the grazier. *A. S. R., Nov.* 15.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday ..	Nov. 11	29.94	52	50	N.E.	3	10	49	25	56	17	..
Saturday ..	12	29.80	38	36	S.W.	0	10	38	31	46	25	..
Sunday ..	13	29.33	46	46	S.E.	2	10	45	36	46	26	0.07
Monday ..	14	28.76	48	46	S.W.	2	2	50	43	51	36	0.80
Tuesday ..	15	28.74	45	44	E.	0	3	55	33	60	24	..
Wednesday ..	16	29.28	45	44	N.W.	3	10	51	39	57	34	.
Thursday ..	17	29.81	47	46	S.E.	3	10	50	31	55	26	0.06

Notices to Correspondents.

COUCH GRASS: *Subscriber.* You must get rid of it by breaking up the land, a thorough fallow and laying it down again with good Grass seeds. There is no other way.

FATTING BEASTS: *J Elmore.* A good sized fatting beast, being well fed and making good progress, should make a cwt. of beef in six weeks. That will be a clue to the answer to your question as to the time it takes to fatten a lean bullock, or a cow after drying her milk off. But the time will depend of course on the quality of the beast and the quality of its food.

POULTRY MANAGEMENT IN FRANCE: *H S P.* The management of the broody hens, and the manner in which the young birds are reared in France, differ but little from our own modes, except that there the chickens play a much more important part in the revenue of the countryman than they do here, and consequently they get much more attention paid them. In some districts the farmers appropriate rooms called "couvoir" for their setting hens, round which are laid planks raised on tressels about 18 inches from the ground; on these planks are placed little baskets of Osier, close made at bottom and round the sides, but with widely barred tops; each of these baskets contain one hen. Some of these couvoirs are adapted to hold from 300 to 400 hens; which are all taken off at intervals to feed, and to have their legs washed and cleansed. The hens are generally set in lots of from 6 to 10, so that at hatching time the broods may be increased or diminished, according to the success of each hen. The coops in use for the broods are large, and a hen is often allowed from 18 to 24 chickens. As fast as the chickens are hatched they are taken with the hen that is selected to act as mother to them to an orchard or enclosed space, and are there fed and tended until big enough to shift for themselves. *J. B.*

SMITH, BECK, AND BECK'S GREENHOUSE and HOTBED THERMOMETERS.—These Instruments are of the very best construction, and at moderate prices.
31, Cornhill, E.C.

Universal Microscope. Price £5 5s.
SMITH, BECK, AND BECK,
31, Cornhill, E.C.; late 6, Coleman Street.
**** Catalogues sent on receipt of 6 postage stamps.

NEW IMPROVED PREMIUM WIRE NETTING
Great Improvement with Reduced Price.

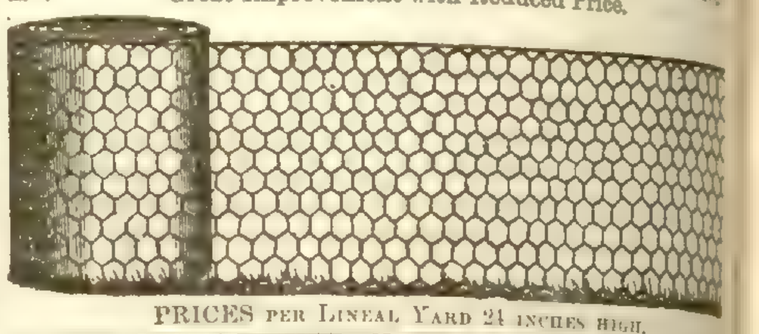

PRICES PER LINEAL YARD 24 INCHES HIGH.

Size of Mesh.	Mostly used for	Light. Jap	Light. Gal	Medium Strong. Jap	Medium Strong. Gal	Strong. Jap	Strong. Gal	Extra Strong. Jap	Extra Strong. Gal
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
2½ in.	Hares, Dogs, Poultry	0 3	0 4	0 3½	0 5	0 4½	0 6	0 5½	0 7
2 in.	Game or Poultry Netting	0 3½	0 4½	0 1	0 5	0 5	0 6½	0 6½	0 8½
1⅓ in.	Small Rabbits, Hares, &c.	0 4	0 4½	0 4½	0 6	0 5½	0 7	0 7	0 9
1½ in.	Smallest Rabbits ..	0 5	0 6	0 5½	0 7	0 7	0 9	0 9	0 11
1 in.	Pheasantries, &c. ..	0 9	0 11	10½	1 1½	1 3	1 6	1 9	1 9½
¾ in.	Aviaries, &c.	1 0	1 3	1 3	1 6	1 6	1 9	..	..

Quantities of 100 yards or upwards delivered free to nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland and Ireland.

**** Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally

IRON HURDLES, CONTINUOUS BAR FENCING, IRON and WIRE FENCING, FENCING WIRE, FIELD and ENTRANCE GATES, GARDEN ENGINES, GARDEN ROLLERS, GARDEN SEATS and CHAIRS, CAST IRON VASES, and every description of HORTICULTURAL and AGRICULTURAL MACHINES, TOOLS and appliances.

Lists Free on application. Every article guaranteed to be satisfactory.

J. B. BROWN & Co., 18, Cannon Street, City, London, E.C.

BARNARD, BISHOP, AND BARNARDS,
Norwich.
FURTHER REDUCTION in the PRICE of WIRE NETTING.

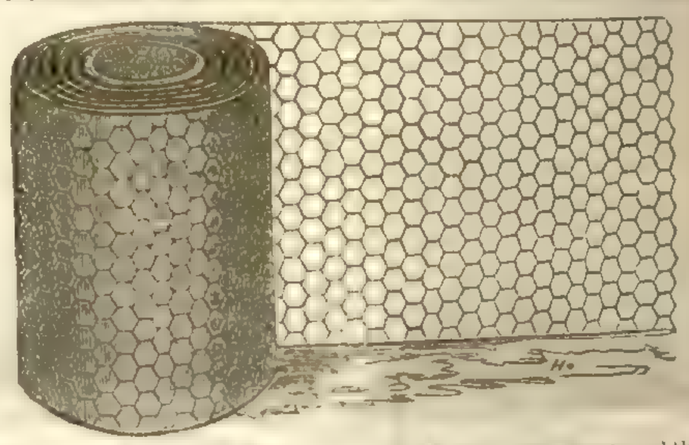

BARNARD, BISHOP, & BARNARDS beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

	Gauge.	Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide	No. 19 ..	4½d. per yd.	3½d. per yd.
2 inch ,, ,, ,, .. ,,	18 ..	5 ,,	4 ,,
2-inch ,, ,, ,, .. ,,	17 ..	6½ ,,	5 ,,
2-inch ,, ,, ,, .. ,,	16 ..	8 ,,	6½ ,,
1⅔-inch ,, ,, ,, .. ,,	19 ..	4½ ,,	4 ,,
1⅔-inch ,, ,, ,, .. ,,	18 ..	6 ,,	4½ ,,
1⅔-inch ,, ,, ,, .. ,,	17 ..	7 ,,	5½ ,,
1⅔-inch ,, ,, ,, .. ,,	16 ..	9 ,,	7 ,,

All the above kinds can be made any width (under 6 feet) at proportionate prices.

Strong GALVANISED POULTRY NETTING, 7½*d.* per yard, 3 feet wide. GALVANISED SPARROW-PROOF NETTING for Pheasantries, 11*d.* per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1*s.* per yard.

The same with Galvanised Wire Rope, 1*s.* 2*d.* per yard

Illustrated Catalogues, with prices of every variety of Wire Fencing and Wire Netting, forwarded free on application.

**** Wire Fencing and Netting delivered Carriage Free at all the principal Railway Stations.

HAND GLASS FRAMES (LOOSE TOPS)

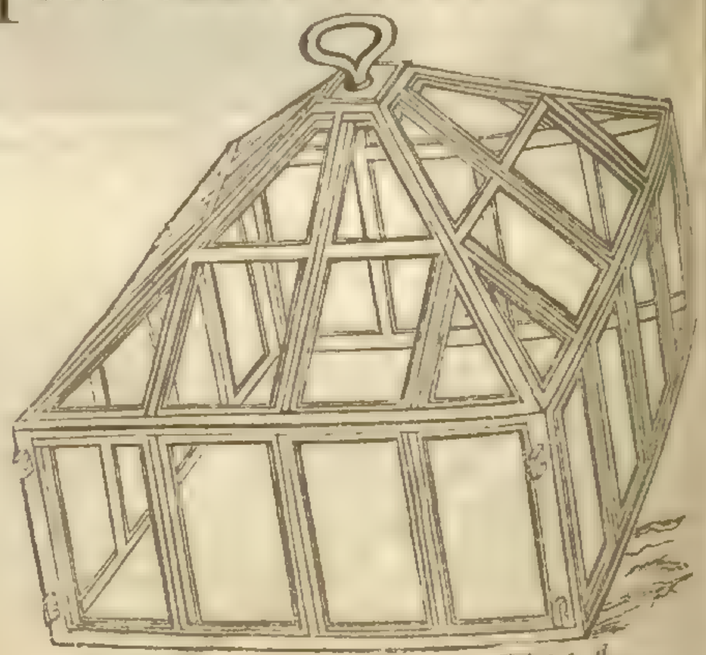

Size.	Price s.	d.	
14 by 14	4	0	Each.
18 by 18	5	9	,,
20 by 20	6	6	,,
22 by 22	7	0	,,
24 by 24	8	0	,,

Delivered Free to any Station in England if 12 or more are ordered.
J. JONES & SONS, 6, Bankside, London, S.E.

ROYAL HORTICULTURAL SOCIETY,

SOUTH KENSINGTON.

Patron—HER MAJESTY THE QUEEN.

President—THE DUKE OF BUCCLEUCH, K.G., ETC., ETC.

REGULATIONS FOR THE YEAR 1865.

1. The Society has two Gardens, one at South Kensington, the other for experimental Horticulture at Chiswick. The Chief Exhibitions, Fêtes, and Promenades are held at South Kensington.

2. For convenience in the necessary arrangements the year is divided into two seasons, an out-of-door and an in-door season. The out-of-door season is from the 1st May to the 31st October, the in-door season from the 1st November to the 30th April.

3. During the out-of-door season, Plants and Flowers are Exhibited as far as possible in the Gardens; during the in-door season the South Kensington Exhibitions and Promenades take place in the Conservatory, Glazed Arcades, Pavilions, Orchard Houses, &c. These buildings afford an uninterrupted walk of about the third of a mile, and are protected from draughts. They are warmed to the temperature required for the various plants exhibited.

ADMISSION TO THE GARDENS.

4. The Gardens at South Kensington are open to Fellows on all ordinary days throughout the year from 9 A.M. till sunset, except Sundays, when they are opened at 2. On week days, except on certain fête days, the Gardens are private to the Fellows and their friends up to 1 o'clock: after 1 o'clock the public are admitted on payment.

5. The Garden at Chiswick is open to Fellows and the public daily, except on Sundays, from 9 A.M. till sunset. On Sundays it is closed.

FÊTE DAYS.

6. The following are established fête days in each year:—The Queen's birthday or the day on which it is appointed to be held: the 26th August, the anniversary of the birthday of the Prince Consort, the founder of the South Kensington Gardens; when it falls on Sunday it will be held the Monday following: the 5th June, the anniversary of the opening of the Gardens in 1861, when a Horticultural *dejeuner*, limited to Fellows, will take place; the 1st May and 1st November, the first days of the out-of-door and in-door season; (if any of the three last days fall on a Sunday, these fêtes will be held on the preceding Saturday): also Easter Monday and Tuesday, and Whit Monday and Tuesday. One or more bands will play on all fête days.

SHOWS.

7. All Shows at South Kensington take place, or commence, on Saturdays throughout the year. At the weekly Shows, medals and certificates of merit only will be given. At the other Shows, money prizes as well as medals and certificates of merit will be offered.

The following Shows are fixed for the year 1865. Schedules will be duly issued.

GREAT SHOWS.

A Great Show of all kinds of Flowers, Plants, and Fruit, will be held on the Saturday in June, which falls between Ascot and Derby weeks, viz., 10th June. The Show will last only a single day.

A Great Show of Roses on the first Saturday in July. (1st July). It will last only a single day.

A Great Show of Fruit and Vegetables on the fourth Saturday in July. (22d July.)

SPECIAL SHOWS.

A Show of Hyacinths and Camellias on the third Saturday in March. (18th March).

A Show of Early Azaleas and Spring Flowers on the second Saturday in April. (8th April).

A Show of Orchids on the second Saturday in May. (13th May).

A Show of Pelargoniums, including scarlet and variegated varieties, on the first Saturday in June. (3d June).

A Show of Azaleas, with the flowers trained, partially trained, or in their natural growth, on the third Saturday in June. (17th June).

A Show of Plants of Ornamental and Variegated Foliage on the second Saturday in July. (8th July).

A Show of Liliaceæ and Amaryllidæ on the third Saturday in July. (15th July).

A Show of Ferns and their allies on the last Saturday in July. (29th July).

FLORAL DECORATION SHOW.

8. A Show of Decorations for Dinner and Supper Tables, and of Bouquet holders. This Show will be held on the fourth Saturday in June (24th June), and will also be open in the evening.

SHOWS BY INDIVIDUAL NURSERYMEN.

9. A continuous Show of Tulips will be held in the spring by Messrs. Henderson, of Wellington Nursery, St. John's Wood Road.

10. A continuous Show of Rhododendrons will be held in the summer under the Great Tent by Messrs. Waterer and Godfrey, of Knap Hill, Woking.

11. A continuous Show of Chrysanthemums will be held in the winter.

INTERNATIONAL SHOWS.

12. An International Show of Horticultural Implements will be held during the month of July.

13. An International Show of Fruit and Vegetables will be held during the second week in December.

FORTNIGHTLY MEETINGS AT SOUTH KENSINGTON.

14. Fortnightly meetings for the election of Fellows, reading of papers, and transaction of scientific business, will be held in the Council Room, except in the months of August, September, and October, on every other Saturday throughout the year that is not preoccupied as a fête day, or for one of the Great Shows. Chair to be taken by the President, or in his absence by some Fellow, at 12 o'clock.

15. At these meetings notice will be taken of flowers, fruit, and vegetables sent for exhibition, and certificates of merit will be awarded.

WEEKLY SHOWS AND PROMENADES AT SOUTH KENSINGTON.

16. On the afternoon of every Saturday throughout the year there will be an Exhibition of Flowers in Pots, and of Fruit and Vegetables by the Fellows and others. The Shows will commence at 2 o'clock, and will be continued until the following Wednesday.

17. Medals and certificates of merit will be given.

18. The Queen has been pleased to command that contributions shall be sent from the Royal Gardens, Frogmore, to these Shows, and numerous Fellows have promised to exhibit.

19. There will always be a promenade with music at these Shows at 3 o'clock in the out-door season, and at 2 o'clock in the in-door season

VARIOUS EXHIBITIONS.

20. In addition to the above Shows there will be continuous exhibitions at South Kensington of the hatching and growth of trout and salmon directed by Mr. Frank Buckland; of sea plants; of bees and beehives; and of the Ailantus silkworms, belonging to Lady Dorothy Nevill.

PRIZES.

21. Prizes for the best plants and vegetables cultivated by soldiers in barracks, by sailors in homes, by coastguard men, and by workmen employed in Her Majesty's Dockyards, will be awarded on the first Monday in August. A schedule will be issued.

22. Prizes given for specimens of Window Gardening among the working classes in metropolitan parishes will be awarded at a public fête on the first Monday in September. A schedule will be issued.

CONVERSAZIONI.

23. There will be two Conversazioni which are open to Fellows only, and not to the public. The evenings will be appointed by the President in May and June,

CHISWICK SHOWS.

24. Strawberry Show and fête in June, Show of the Chiswick Trial Flowers in August, and Show of Vines and Fruit grown at Chiswick, in September. These Shows will be held on Wednesdays hereafter to be fixed according to the general character of the season.

EXAMINATIONS AND CERTIFICATES FOR GARDENERS.

25. Central Examinations of Gardeners in Theoretical and Practical Gardening will be held annually at South Kensington, and local examinations will be held in the country. Certificates of competency and prizes will be awarded at both examinations.

FELLOWS AND THEIR PRIVILEGES.

TWO GUINEA F.R.H.S.

26. Fellows paying an entrance fee of two guineas, and an annual subscription of two guineas, have personal admission every day, and to all Shows, fêtes, and Promenades, both at Chiswick and South Kensington. They have also the right of introducing personally two friends, on Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, and Sundays, but not on Saturdays. In addition to these privileges they receive 20 tickets which are each of the value of one shilling, and are available for any day when the entrance is one shilling or less; a copy of the Journal of Proceedings of the Society is gratuitously issued to them; they share in the distribution of seeds, and they have the right to enter the ballot for rare plants, and to purchase fruit from Chiswick. They have admission to the Conversazioni.

FOUR GUINEA F.R.H.S.

Fellows paying four guineas have double the privileges of two guinea Fellows, as respects the right of introducing friends, the distribution of seeds, the ballot for plants, and the number of tickets they receive, with the further advantage that both their yearly tickets are transferable. They have also the privilege of purchasing any number of transferable tickets for two guineas each. These transferable tickets confer on their bearers all the privileges of personal admission, and of introducing friends, which the Fellows themselves could exercise. Admission to the Conversazioni is limited to Fellows, the holders of transferable tickets, debenture holders and their nominees.

The Fellows of the Royal Horticultural Society have the privilege of purchasing tickets for the Shows at a reduced price before the day of the Show, viz.:—

At 3*s.* 6*d.* for each of the Great Shows, and 2*s.* 6*d.* for each of the Special Shows.

COUNTRY SUBSCRIBERS.

27. Persons residing beyond 20 miles from the metropolis may be admitted to limited privileges. On payment of one guinea entrance and one guinea annually, they receive a copy of the Journal gratis; and they obtain admission to the Gardens at Kensington and Chiswick by means of tickets of the value of the annual subscription. They have no votes and cannot attend general meetings. They may nominate local Horticultural Societies to enter into union with the Royal Horticultural Society.

TOWN SUBSCRIBERS FOR SEASON TICKETS.

28. Personal Season Tickets, not transferable, may be purchased for 20*s.* for the out-door season and 10*s.* for the in-door season. These will give admission for every day in the year, including all Shows, Promenades, and day fêtes, at South Kensington. These tickets do not confer any of the special rights of Fellows.

DEBENTURE HOLDERS.

29. Persons holding debentures, and their nominees, have the privilege of free admission to the Gardens whenever they are open.

CHISWICK SEASON TICKETS.

30. Annual Season Tickets, not transferable, and giving admission only to the experimental Chiswick Gardens and Shows, may be purchased by residents at Chiswick and others, for 10*s.* each.

ADMISSION OF THE PUBLIC.

31. Admission to each of the Great Shows is obtained by the public by tickets, to be purchased for 5*s.* each before the day, and for 7*s.* 6*d.* on the day of the Show.

32. Admission to each of the Special Shows is obtained by the public by tickets, to be purchased for 3*s.* 6*d.* each before the day, and for 5*s.* each on the day of the Show.

33. The admission to the first day of all other Shows at South Kensington, and to the Saturday weekly Shows, is 2*s.* 6*d.*, except in August, September, and October, when it is reduced to 1*s.*

34. The admission to the Shows held at Chiswick will be 2*s.* 6*d.*

35. Admission to the South Kensington Gardens after 1 o'clock on the days mentioned below, not being Show, fête, or Promenade days, will during the London season be as follows:—

Saturdays, 2*s.* 6*d.*

Sundays, the Gardens are closed to the public but open to Fellows and their friends personally introduced.

Mondays, 6*d.*

Tuesdays, Wednesdays, Thursdays, and Fridays, 1*s.*

Admission during the months of August, September, and October, when the London season is over, 3*d.* every day but Saturday. On Saturday it is 1*s.*

Admission on the Queen's Birthday, 1*s.*; on Easter Monday and Tuesday, and Whit Monday and Tuesday, 3*d.* each day.

36. On the 26th August, the Anniversary of the Birthday of the Prince Consort, the founder of the South Kensington Gardens, these Gardens are open free at the wish of Her Majesty. Above 153,000 persons visited them on the 26th August, 1864.

37. Admission to the Experimental Garden at Chiswick, excepting on Show Days, 1*s.* daily, throughout the year.

GUIDE BOOK.

38. A Guide Book to the South Kensington Gardens, price 6*d.*, is to be had at the Gardens and of all booksellers.

TESTIMONIAL to MR. INGRAM, CHIEF GARDENER to HER MAJESTY at FROGMORE.

The following Gentlemen have consented to form a GENERAL COMMITTEE for carrying out the above object:—

The Viscount Kirkaldie, Windsor.
The Hon. and Very Rev. Dr. Wellesley, Dean of Windsor.
Major-Gen. Hood, Cumberland Lodge, Windsor.
The Rev. E. Coleridge, Eton College.
The Rev. Joshua Dix, M.A., London.
The Right Hon. Charles Lawson, Lord Provost of Edinburgh.
The Right Hon. Sir W. G. Hayter, M.P., South Hill Park, Bracknell.
Sir James Clark, M.D., Bagshot Park.
Sir Joseph Paxton, M.P., Sydenham.
Mr. G. Allen, Old Windsor.
J. J. Blandy, Esq., Reading.
Mr. Brebner, Norfolk Farm, Windsor.
Mr. Carmichael, Sandringham.
Mr. George Eyles, Chiswick.
Mr. John Fleming, Cliveden.
E. B. Foster, Esq., Clewer Manor, Windsor.
A. F. Godson, Esq., Inner Temple, London.
Mr. James Gray, Chelsea.
Mr. Arthur Henderson, Edgware Road.
Dr. Robert Hogg, Pimlico.
G. W. Johnson, Esq., London.
Mr. Joseph Knight, Hampton Court.
Mr. John Keynes, Salisbury.
Mr. John Lee, Hammersmith.
Mr. Charles Lee, Hammersmith.
Mr. Mackenzie, Alexandra Park.
Mr. J. McIntosh, Drumlanrig.
Mr. W. Menzies, Windsor Great Park.
Mr. J. F. Meston, Kentish Town.
Dr. Moore, Glasnevin.
Thomas Moore, Esq., Chelsea.
Mr. Richard Oxley, Windsor.
Mr. William Paul, Waltham Cross.
Mr. Thomas Rivers, Sawbridgeworth.
Mr. John Salter, Hammersmith.
Mr. John Spencer, Bowood.
Richard Stains, Esq., London.
Mr. John Standish, Ascot.
Mr. Henry Tait, Shaw Farm, Windsor.
Mr. William Thomson, Dalkeith.
Mr. Charles Turner, Slough.
Mr. James Veitch, Chelsea.
Mr. B. S. Williams, Holloway.

COMMITTEE OF MANAGEMENT.

Chairman—Dr. ROBERT HOGG.

Mr. G. Allen.	Mr. Mackenzie.
Mr. Brebner.	Mr. J. F. Meston.
The Rev. Joshua Dix, M.A.	Thomas Moore, Esq.
Mr. George Eyles.	Mr. William Paul.
Mr. John Fleming.	Mr. Rivers.
A. F. Godson, Esq.	Mr. J. Salter.
Mr. James Gray.	Richard Stains, Esq.
Mr. Arthur Henderson.	Mr. J. Standish.
Mr. J. Keynes.	Mr. Henry Tait.
Mr. Joseph Knight.	Mr. Charles Turner.
Mr. John Lee.	Mr. James Veitch.
Mr. Charles Lee.	Mr. B. S. Williams.

Honorary Secretary—Mr. EDWARD BROWN, Slough, Bucks.

Honorary Secretary for Scotland—Mr. WILLIAM THOMSON, The Gardens, Dalkeith Park.

Honorary Secretary for Ireland—Dr. DAVID MOORE, Glasnevin Botanic Garden, Dublin.

It has been well observed—"That it is always an agreeable task to do honour to those who have long and well occupied a responsible position, and all the more so to Horticulturists, if that position has been a prominent one in the world of Horticulture."

It is but rarely indeed, that an opportunity presents itself for the recognition of the fulfilment of arduous and important duties for the prolonged period of half a century with so much credit and so as to win universal respect, such as that which occurs in the case of MR. INGRAM, who has entered on the FIFTIETH YEAR OF SERVICE in the ROYAL GARDENS at WINDSOR.

Most of the Members of the gardening community are aware of the great interest which Mr. INGRAM has always manifested in the cause of Horticulture: and appreciate the correctness of his endeavours, and the success that has attended his labours for the advancement of that science. His great experience and general knowledge; his readiness at all times to impart information; and the kindness and courtesy which has invariably characterised his intercourse with all, have naturally and justly engendered a feeling of the deepest respect.

It is, therefore, proposed that a TESTIMONIAL should be presented to Mr. INGRAM as a mark of the high esteem and cordial regard universally entertained for him, and that a SUBSCRIPTION be at once opened to enable the Committee to carry out this desirable object. The co-operation and support of the Horticultural public, and of the numerous friends of Mr. INGRAM, is hereby respectfully solicited.

Subscribers in England are requested to send their Contributions, with their names and addresses in full, to Mr. EDWARD BROWN, Slough, Bucks. The amount of subscriptions is not limited. Post Office Orders should be made payable at Slough; and Cheques crossed "REID & Co.," Windsor.

With the view of facilitating the collection of Subscriptions, it has been arranged that two Secretaries should be appointed for Scotland and Ireland respectively, to act jointly with Mr E. BROWN; and Mr. W. THOMSON, the Gardens, Dalkeith Park, who has consented to act in Scotland, and Dr. DAVID MOORE, Glasnevin Botanic Garden, Dublin, in Ireland, are authorized to receive Subscriptions that may be sent to them for the Testimonial Fund.

Committee Room, Anderton's Hotel,
Fleet Street, London.—Nov. 1864.

The Gardeners' Chronicle.

SATURDAY, NOVEMBER 26, 1864.

MEETING FOR THE ENSUING WEEK.

THURSDAY, Dec. 1—Linnean .. .. 8 P.M.

WE have received from P. L. HINDS, Esq., of Byfleet Lodge, Surrey, a fruit of the PAPAW, Carica Papaya, which has just been ripened in a small tropical fruit stove at Byfleet, under the care of that gentleman's gardener, Mr. CARR.

The plant from which the fruit was gathered has been subjected to strong bottom-heat, which seems necessary to its success, and which is supplied at Byfleet by means of tan and hot-water pipes combined. The plant itself is young, and the fruit consequently small; nevertheless it measures 11½ inches in circumference, and 7 inches in length from the stalk to the apex, the form being long-ovate and obsoletely angular, and the colour a uniform dull orange. The flesh is throughout of the same orange colour as the skin, and in texture and succulency resembles that of a ripe Melon, but such flavour as it possesses is mawkish, and altogether wanting in the qualities looked for in a dessert fruit. Mr. HINDS is of opinion that next year he will be able to obtain fruit twice or three times the size of that which has been produced this season.

We fear, however, that the Papaw is not destined to take a high position amongst our cultivated dessert fruits. The specimen which Sir W. HOOKER figured in the *Botanical Magazine*, so long since as 1829, was not very highly spoken of as regards its flavour; nor does that which was figured in the *Botanical Register* in 1820 from the gardens at Syon, appear to have been more highly esteemed. In fact it is generally held that when ripened in our stoves it does not acquire such a flavour as to render it grateful to the palate, what-

ever may happen in the tropics. MILLER indeed went so far as to say that those which had ripened in England were detestable, and their only use after soaking them in salt water, was to form a pickle, which is a good substitute for that of Mangos.

Though the Papaw is largely cultivated in most tropical countries, its fruit is, we believe, seldom eaten raw. When ripe it is occasionally eaten with pepper and sugar, and is thought agreeable by some persons; but usually it is made into a sauce or preserved in sugar, and the unripe fruit is either pickled, or boiled and eaten like Turnips. Thus cooked it is esteemed by some persons, but it has little to recommend it. The chief value of the Papaw fruit is that in an unripe state its juice is a most powerful vermifuge; and it is worthy of remark that a constituent of this juice is fibrine, a principle formerly supposed to be peculiar to the animal kingdom and to Fungi. The tree, moreover, as well as its acrid milky juice, and an infusion of its fruit and leaves, has the singular property of rendering the toughest animal substances tender, by causing a separation of the muscular fibre.

WE received, two or three weeks since, some PEACH LEAVES from a correspondent, with a request that we would inform him as to the cause of their discoloration, about which he felt anxious, as nearly all the leaves were in the same condition, and the fruit was dwarfed and withered. On opening his letter we were at once struck with the exact resemblance which the spots on the leaves bore to some which appeared on Peach leaves sent to us from Madeira by Mr. SALWEY, and others from South Carolina, transmitted by Mr. CURTIS.

Our suspicion as to their identity was not, however, confirmed on closer examination—a warning amongst so many others against hasty judgments, for the parasite to which the spots were due proved none other than the common Puccinia Pruni, which is so frequent on many varieties of Plum, accompanied by its secondary form of fruit, which is published by LÉVEILLÉ as Leeythea Pruni spinosæ. Of this we give a figure (that at the right hand of our woodcut) representing two of the barren cells which surround the little cushion-like tuft, under a high magnifying power; one of the stylospores or secondary fruit, and the completely developed Puccinia, which is about $\frac{1}{1111}$th of an inch in length, while the stylospores measure about $\frac{1}{1500}$th.

The species occurs in all parts of Europe, and has moreover been found at Smyrna by LÉVEILLÉ on the Apricot. M. CASTAGNE has detected it at Marseilles on the Plum, and this is the most southern European station which is at present known. M. CASTAGNE, however, finds another parasite at Marseilles on the Apricot, which we believe is Uredo

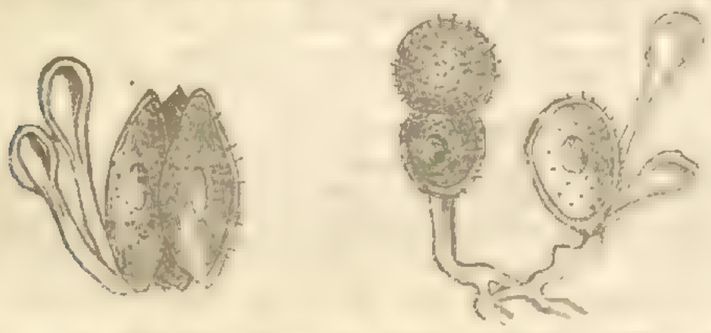

Castagnei of MONTAGNE, and which differs in having the secondary form of fruit far more elongated, though varying from $\frac{1}{1666}$th to $\frac{1}{333}$rd of an inch in length. The perfect form of this species has not been at present discovered, but as will be seen from our left-hand figure, the stylospores are accompanied by abortive cells as in the more common European species. M. CASTAGNE'S plant on the Apricot is the same with that of Madeira and South Carolina on the Peach, and as our correspondent's parasite proves different, we may at present congratulate ourselves that we are spared the introduction of a new pest. And indeed the more so, because it frequently happens that plants are not the most luxuriant in the country from which they were originally derived. This is notoriously the case with Phænogams, and if, as there is some reason to believe, the Potato mould was of South American origin, the same remark would hold good with respect at least to one Cryptogam. *M. J. B.*

THE death of Mr. JOHN GREEN, to which we alluded at p. 1059, recalls to mind a long period of progress in horticulture, which he was one of the first to commence, and in which he has had many worthy competitors. At the meetings of the Horticultural Society of London, some 20 or 30 years ago, all along up to the present time, the name of "Mr. GREEN, gardener to Sir EDMUND ANTROBUS, Bart.," is constantly met with in the prize lists. Along with him, and running the same race in the earlier part of his career, were the gardeners of Mrs. MARRYAT, of Wimbledon, Mrs. LAWRENCE, of Ealing Park, and Mr. NORMAN, of Bromley. Other names, too, will no doubt be recalled to memory, such for example as those of the gardeners to Mr. RUCKER of Wandsworth, Mr. ALLNUTT of Clapham, Mr. ARCHDALE PALMER, and Mr. BOYD MILLER, who were also early competitors with Mr. GREEN.

At the commencement of the time to which we are alluding, there were comparatively few cultivators of plants in this country who were able to produce such specimens of horticultural skill as those which Mr. GREEN and his rivals brought out to our exhibitions, although it is probable that they had little knowledge of the climate and natural habitats of the gorgeous Azaleas, Cactuses, Ixoras, Chorozemas, Boronias, Pimeleas, and other plants which they cultivated with so much success. This only leads us to give them a greater amount of praise for that keenness of observation which enabled them to hit upon the right mode of culture. We well remember that many persons who looked with admiration on Mr. GREEN'S large collections at our exhibitions were astonished when they visited him at home, and saw the small amount of space which he was able to devote to their cultivation. But he had studied carefully all the requirements of his plants. He knew the importance of having the young wood well ripened, in order that his specimens might be covered with flowers in the following year; and he knew also that most of them required a period of rest, during which time he could put them away in odd corners, and so economise his limited space. The false and stupid system of giving water indiscriminately, and having an even temperature all the year round, he entirely repudiated. And so, by thus giving certain plants what they required at the proper season of the year, he could get, at other times, the space they occupied for the cultivation of others whose requirements were of a different nature.

The old Horticultural Society of London has done much to encourage and stimulate the progress of gardening in this country. By means of the rewards which it offered at the Chiswick and Regent Street meetings, the best plants in the country were brought out, and cultivators were enabled to see each other's productions and induced to make greater exertions in friendly rivalry. The meetings that used to be held in Regent Street were probably of more importance than even the great exhibitions at Chiswick. As the former were held at stated intervals all the year round, everything that was beautiful and rare in the vegetable kingdom was brought forward in turn on these occasions; and everyone interested in such things came to see them. Botanists, country gentlemen, ladies, and all who had parks and gardens, or who had a love for gardening pursuits, were wont to crowd the rooms, and appeared to take a deep interest in what was brought under their notice. New plants were described and named, and successful examples of cultivation were pointed out and rewarded. In these days it was really necessary for nurserymen, and for all who were interested in the progress of horticulture, to attend the meetings of the Society. "Then," as Sir JOSEPH PAXTON so forcibly remarks in his late letter to the Assistant-Secretary, published in the last Part of the "Proceedings" of the Society, "a Certificate of Merit from the Society meant something, and was prized at a high rate; it insured the sale of any plant which received it, and often practically represented a prize of some hundreds of pounds sterling—as many nurserymen had orders before the exhibition closed for very large amounts."

A new race of cultivators has arisen since the early times of which we are writing, and the art of cultivation has been steadily progressing, year by year; indeed, it would seem as if the art had almost arrived at perfection, so large have our specimens become, and so magnificent are their blossoms. It is our duty and our privilege to encourage and assist the efforts that gardeners have made to cultivate with success those beautiful exotic plants which add so much to the charms of our gardens and public shows, and we have, therefore, more than once, pointed out the great importance of their acquiring a knowledge of the CLIMATE of those countries to which the plants they cultivate are indigenous. That knowledge is far more easily acquired now than in those days when the gardeners to whom we have alluded began their career. This is a travelling age in which we live, and we now know much of the climate and seasons of almost every country of the globe.

WE learn from an official programme that it is intended to hold an INTERNATIONAL HORTICULTURAL EXHIBITION AT VIENNA in the course of next spring. This Exhibition, which is to be devoted to Plants, Flowers, Fruit, and Vegetables, as well as to objects of art-manufacture relating to Horticulture, and in which foreigners are invited to take part, is to be held in the new Hotel of the Imperial Horticultural Society of that city, and is to be open from the 22d to the 27th of April, 1865. Those who propose to take part in the competition are required to send in lists of the objects they will exhibit to the Secretary, J. G. BEER, at the Hotel of the Society, "Ringstrasse, gegenuber dem Stadtparke, Wien," before the 18th of April, in order that they may be included in the printed catalogue of the Exhibition; and those who propose to compete for the principal prize, the Large Gold Medal, are required to send in, signed and sealed, by the 15th of April, a list of the plants intended to be shown. This latter prize is for a group of 12 new plants remarkable either for the beauty of their flowers or foliage, and in a high state of cultivation; the proportion of plants likely to become popular favourites to be taken into account in making the award.

The time devoted to the reception and arrangement of objects of competition is from the morning of April 18th to the evening of April 20th; at 10 A.M., on the 21st, the juries are to proceed to make the awards; from the 22d to the 27th the Exhibition is to remain open; and on the 28th a public sale of the subjects exhibited by nurserymen is to take place. Nothing will be allowed to be removed from the building till the Exhibition closes. The schedule contains 52 classes, comprising the various subjects usually met with at continental exhibitions.

It is announced in the same programme, that HIS IMPERIAL MAJESTY will give annually to Austrian nurserymen, two prizes, one of 40 gold ducats, (18*l.* 6*s.* 8*d.*,) the other of 10 ducats (4*l.* 11*s.* 8*d.*), to be called the Emperor's Prizes, and to be awarded for specially important contributions in the department of Horticulture. What a stimulus might we not expect to see given to some of the languishing Shows nearer home, if this example of the Austrian Kaiser were to be emulated in other high places?

A UNIVERSAL HORTICULTURAL EXHIBITION is announced to be held next spring at AMSTERDAM, in the Palais de l'Industrie, under the patronage of the QUEEN of the NETHERLANDS, the Honorary Presidency of the PRINCE of ORANGE, and the direction of the Royal Netherlands Society for the Encouragement of Horticulture, conjointly with the principal Horticultural and Agricultural Societies and Institutions of the Low Countries. This Exhibition, the date of which is not precisely fixed, will it is intimated open towards the middle of April, 1865; and an International Congress of Botanists and Horticulturists will be convoked at Amsterdam at the same time. An International Jury of distinguished botanists and horticulturists will award the prizes. The schedule of prizes, which extends to 175 classes, is already issued, and may be had on application to M. J. H. KRELAGE, of Haarlem, Principal Secretary of the Directing Commission.

—— WE seem not unlikely to be as much overrun with NEW CALADIUMS as we were with Variegated Begonias. There will be this advantage in the one case, as in the other, that we shall all the sooner set about selecting from amongst old and new, a few of the very choicest for general cultivation, and consign the rest to oblivion. Caladiums, after having made a start in the conspicuous importations from Pará which took place a few years since, are now being hybridised, and seedlings are being produced, though not perhaps in such numbers as was the case with the Begonias in their brief day. We are not indeed in the secrets of the raisers as to the origin of the most recent kinds which have found their way into commerce, but we are not without suspicion that they are rather to be attributed to Paris than Pará—to the plant hybridist rather than the plant importer. We have lately received specimens from Mr. BULL of some varieties of professedly hybrid origin which go to confirm this suspicion. Of course the true beauty of these novelties can only be brought out by the highest cultivation, and even then it will be necessary to see the best old sorts in the same highly-grown state before any certainty as to which are the best varieties can be arrived at. So far as appearances go, one called Chantinii fulgens, from having the red colouring arranged in more decided lines, and the white flecks more evenly distributed, may prove better

than its older namesake. Another called Lamartine, marked in the same way, only with red instead of white flecks, looks distinct, and will probably be effective. A third, Madame Andrieu, has red ribs, with a few reddish flecks distributed over the central portion of the leaf. These, as we are informed, are hybrids from C. pœcile, fertilised with Chantinii. Another, called Duc de Morny, raised from pœcile fertilised with Verschaffeltii, has the whole central portion of the leaf-blade of a deep crimson. Verily there is work for the Floral Committee to collect and test the numerous varieties.

—— We are much amused at the great change that has come over planters. Twenty years ago gardeners all decided that planting Pears on Quince stocks and root pruning were charlatanish, and to be avoided by all sound thinking men. Twelve years ago they said the same of orchard houses. The tables are now turned; the demand for such trees has always been large, but this season, we understand, it is beyond belief.

NOTES ON GARDENS.—No. XXIII.

Royal Botanic Garden, Glasnevin.

(Concluded from p. 1084.)

The reserve ground is a walled-in garden, chiefly devoted to rare and new herbaceous things difficult to get or keep; things that like to dwell amongst the moisture of Senecio vulgaris, and other creatures of peculiar temperament. Here in a peat border, slightly shaded by a wall, was a rapidly increasing stock of Andromeda or Cassiope fastigiata, a rare and singularly beautiful Himalayan Alpine shrub; Andromeda hypnoides, too, but that not as healthy as could be wished, it being so much more difficult to grow than either of the other species. The new and interesting A. fastigiata will probably prove the easiest of cultivation, as it is now "looking very much at home" in the open air of the N.W. district of the Himalayan agglomeration of brick, where A. tetragona is rather delicate. Epigæa repens was here too, and of necessity, for it is most fastidious; and so were the Parnassias and Lilium Michauxii, evidently a great thing amongst Lilies, being about 8 feet high, and with evidence of having flowered very freely a few weeks before my visit. It had been received from America, is in the way of L. superbum, and will, I hope, increase sufficiently for distribution ere long. At the base of the wall, Orobanche Hedera, growing on Ivy of course, was very abundant; and in front a whole collection of the varieties of Erica mediterranea, with Arum triphyllum, Arisarum erubescens, and a little nursery bed of Dodecatheon Jeffreyii—a gigantic American Cowslip—respecting which I say to all lovers of "good things" in the hardy way, the sooner you have it located with some deep rich and light soil in a snug spot of your garden, the better for yourself-respect. If, however, there is an individual who is only acquainted with the beauties of the stuff used for bedding, and who is accustomed to the flower garden in May being as destitute of floral interest as the war-ploughed fields of Virginia are at present, let him learn that D. Jeffreyi is not a rising Cabbage, for when well grown it has a brassicaceous development, and is quite a Banting amongst Dodecatheons—of course considering Mr. Banting as he used to be. Megacarpæa polyandra was also plentiful here, as were interesting and rare Grasses and Carices brought from Lapland and Norway, collected by Dr. Moore; but these, like the alpines, &c., from high latitudes and elevations, were difficult to cultivate, and consequently devoid of the intermingling proclivities of their British brethren. Hellebores, Epimediums, Gentians, Tritoma pumila, Indian Meconopsis, Fortune's Pæonias; rare British plants, such as Allium carinatum and the Linnæa, with the two Spigelias, and such interesting plants to the botanist as the small Gunneras, were well cultivated in this private enclosure, of which I have said enough to prove it worth asking the privilege of exploring. I must add, however, that there were some curious things on the walls, and among them Hydrangea radicans (?), which rooted and clung to the wall as compactly as Ivy.

The Agricultural and Horticultural Garden, as it is called, pleased me very much from its real utility to the young gardener, and farmer too, as far as beds of the agricultural Grasses, and forage plants correctly named can benefit the latter, but capable of being of the greatest benefit to the former. There have been weak attempts at such a useful arrangement as this economical garden in other places; but while they have run into a muddle and been given up, this at Glasnevin is an old-established success. A gardener of the slightest pretension should know at least the more important herbs and hardy economical plants, British poisonous plants, &c.; but how is he to get such information, when, as a rule, such interesting plants are banished from private places, and when, considering the time a young gardener has at his disposal, it is almost impossible for him to glean the required knowledge from an ordinary natural or Linnean arrangement. I really don't know of any garden which efficiently teaches this very desirable knowledge, besides this of Glasnevin. The department contained a small kitchen garden, with a square plot of each vegetable in common use; and collections of plants yielding oils, yielding dyes, and yielding fibres. In it was the collection of Grasses, a very extensive, and though it is dangerous to say so, yet I think very well named collection. The plants were grown in lines, with a considerable distance between, and also between the species; and thus they were kept far more distinct than usual. A complete collection of pasture and Meadow Grasses was a most useful feature, each species being grown in a bed by itself, 4 feet wide by 10 feet in length. Near this were lines of the sand-binding plants, such as Carex arenaria, as well for giving away to the experimentalist as for giving instruction to the student: for they are liberal in this way, and even provide Biddy Donohue, M.D. in her own estimation, with something "good for a cure" from the herb garden when she applies for it.

In a collection of forage plants I was glad to meet with the famous Hay plant, Prangos pabularia, very rare, by-the-by, in a true state. I have seen a Cow-Parsnip passing muster for it in a herbaceous arrangement. I was informed by Mr. McArdle, who has had charge for many years of the vast hardy department, from Alpines upwards, that the roots of this Prangos descend 10 feet into the ground. Mr. McArdle is very curious in grafts, and in his own little garden showed me a novelty in that line—14 distinct Rosaceous plants grafted and thriving on the common Quince, the whole forming a close head in which the mixture of pinnate and simple leaves, woolly and smooth-leaved Pears, Mountain-ash and Medlar, was very striking. Near the hardy Ferns, which are plentifully grown both in exposed beds in the natural arrangement and on shady rockwork, was a little half circle of Ivy hedge, shading from the mid-day sun and sheltering a little bed of the Pyrolas, and they seemed to like the plan. Near the entrance there is a lecture-room, in which the journeymen and apprentices of the garden, with others who wish to attend, hear lectures on Botany from Dr. Moore, who also delivers two courses during the season to the students of the Albert Model Farm, which is situated in the neighbourhood.

A walk round the Glasnevin Garden is, from the very fortunate diversity and beauty of the grounds, a very pleasing one. On entering the visitor may see the graceful and healthy forms of Cypresses, Irish Yews, Arbor-vitæs, &c., thrown into fine relief by the long, white, and beautiful curvilinear range beyond, and may congratulate himself that it is not a flat display of colour formed to "associate" with artificial buildings that occupies the precious space, but plants of everlasting beauty and interest, always occupying the ground and embellishing it, displaying distinct tints of the ever-grateful colour in spring and summer, waving majestically before the gusts of autumn, and tellingly beautiful when supporting on their deepest green the snows of winter. In front of and about the houses ornamental plants of all kinds on the verdant turf, afford interest to all tastes; and then down by the river, there is a solemn walk shaded by high banks and trees, but varied and easy all along till the glade begins to open, and the banks receding on both sides of the river, are covered by well grown wood, with here and there a hoary old Cedar or Pine, now and then a gigantic Willow, or perhaps rare Oak, such as Quercus Lowetti. There also is the aquarium, a long waving pond for the Water Lilies and smaller aquatics on the left; a little islet for Arundinaria falcata and other plants; and beside it an excavation getting ready for a "flow-bog" to grow many indigenous and other plants, rarely seen, as they ought to be, in botanic gardens, with the river still on the right till the northern extremity of the garden is reached. Then the visitor turns to the left and surveys the beautiful garden valley, with stream and pond and rising wood. And then up the ascent, and amongst the Pines, from which very pleasing views of the houses, the garden, and its vegetation may be had, passing through the arboretum, and by a large perfectly covered wigwam, made by growing Aristolochia Sipho luxuriantly over old branches—a thing well worthy of imitation in other gardens; and, finally, along many pleasant walks through the central portions of the garden, from whence O'Connell's monument, situated in the adjacent grounds—in shape like one of the beautiful and mysterious ancient round towers of Ireland, may be seen.

So now in concluding my notes on this really worthy national garden—of which the only blemish is the new Palm house, and that most fortunately is of wood and but a fleeting flaw, I plead the vastness of the subject and shortness of time for its examination as excuses for important omissions, if such have been made. That I have not needlessly lengthened matters will be apparent when it is stated that many score more plants than I have named were put down as worthy of remark, which space forbids me to indulge in. I must apologise also for sundry digressions. But where is one to talk if not in a garden after his own heart!

The people thoroughly enjoy without at all injuring the plants and beauties of Glasnevin. This of course must be gratifying to those who proclaimed the beneficial effects of opening the gardens on Sundays; and surely the great good effected—thousands brought from the miserable Sunday afternoon attractions of the whiskey-shop, and from the many coarse amusements which will and certainly always have been the resource of a great mass of the people on Sunday, to the pure delights of a garden conserving so much of the world's plant beauty, must be equally grateful to those who opposed the measure. Even long ago, before railways were heard of, before the London Parks were free to the people, and when it might be supposed that they must "stay at home and be good," did not the youthful Byron, after describing the sanguinary gusto of a Spanish multitude for the horrible bull-fighting "sport" which took place on the Sabbath, sing

> "London! right well thou know'st the day of prayer:
> Then thy spruce citizen, wash'd artisan,
> And smug apprentice gulp their weekly air:
> Thy coach of hackney, whiskey, one-horse chair,
> And humblest gig through sundry suburbs whirl;
> To Hampstead, Brentford, Harrow, make repair."

Hampstead and Harrow are sweet and pleasant places, but though donkey-riding at Hampstead may minister to the hilarity of the Cockney, yet it will hardly be doubted that neither this nor any other Sunday recreation can rival the equally healthful yet instructive and pure delight of an evening spent amidst the beauties and wonders of Kew. And so of the neighbourhood of Dublin. Why, it is within the bounds of possibility that some of the very "boys" who attend at Glasnevin and elsewhere, while the thousands enjoy and admire, might themselves be worse employed than at such a useful duty—might actually be forgetting dull care over a pipe and a "dhrop." What a treat to the thoughtful and quieter portion of humanity is this luxury of a garden, and what a bounteous feast for those who wittingly or unwittingly follow the creed of Coleridge, and love well "all things both great and small;" and then surely no place is so well calculated to foster the aspirations of the most devout, who of course do not alone to their Maker pray—

> "In Gothic domes of mouldering stone."

W. Robinson.

ORNAMENTAL PLANTING.

No. 6.—Pictorial Trees and Shrubs.

In continuation of my last paper (p. 1035), I come to speak of the second division, Colour, under the following heads:—

1. Trees and shrubs with the leaves light green.
2. Trees and shrubs with the leaves dark green.
3. Trees and shrubs with the leaves purple.
4. Trees and shrubs with the leaves yellow.
5. Trees and shrubs with the leaves white.
6. Trees and shrubs whose leaves acquire bright colours in autumn.
7. Trees and shrubs with red, yellow, or white bark.
8. Flowering trees and shrubs.
9. Trees and shrubs which retain their berries.

1. Trees and Shrubs with Light Green Leaves.

Evergreen:—

- Abies excelsa rubra
- ,, orientalis
- Berberis fascicularis hybrida
- Buxus balearica
- Cedrus Deodara
- Chamæcyparis sphæroidea
- Ilex balearica
- Juniperus chinensis
- ,, oblonga pendula
- ,, thurifera
- ,, virginiana
- Pinus pyrenaica
- Ruscus racemosus
- Thuja Wareana
- ,, orientalis
- Wellingtonia gigantea

Deciduous:—

- Acer platanoides
- ,, Pseudo-Platanus
- Ampelopsis hederacea
- Catalpa syringæfolia
- Chionanthus virginica
- Cistus capitatus
- Coriaria myrtifolia
- Gleditschia triacanthos
- Juglans monophylla
- ,, laciniata
- Lonicera hybrida nova
- ,, Magnevillea
- Negundo fraxinifolium
- Quercus laciniata
- Rhus Cotinus
- Taxodium distichum
- Tilia europæa
- Vitis vinifera apiifolia

2. Trees and Shrubs with Dark Green Leaves.

Evergreen:—

- Araucaria imbricata
- Berberis Darwinii
- ,, dulcis
- Cerasus lusitanica
- Cotoneaster microphylla
- Cupressus Lambertiana
- Garrya elliptica
- Hedera Rœgneriana
- Ilex Aquifolium
- ,, ,, fructu-luteo
- ,, ,, laurifolia
- ,, ,, scotica
- ,, ,, Shepherdi
- Ligustrum japonicum
- Mahonia Aquifolium
- Pernettia mucronata
- Picea, of sorts
- Pinus, of sorts
- Phillyræa, of sorts
- Quercus Ilex, of sorts
- Taxus, of sorts

Deciduous:—

- Alnus, of sorts
- Castanea, two sorts
- Euonymus, two sorts
- Clematis odorata azurea
- Cytisus Laburnum
- Fraxinus, two sorts
- Liquidambar
- Pavia, two sorts
- Potentilla dahurica
- Prunus, of sorts
- Ornus europæa
- Salix Caprea pendula
- Sophora japonica

3. Trees and Shrubs with Purple Leaves.

Deciduous:—

- Acer Pseudo-Platanus purpurea
- ,, japonicum atropurpureum
- Berberis vulgaris foliis purpureis
- Corylus Avellana purpurea
- Daphne Mezereum foliis purpureis
- Euonymus atropurpureus
- Fagus sylvatica purpurea
- Quercus pedunculata purpurea
- ,, ,, nigra
- Ulmus montana purpurea

4. Trees and Shrubs with Yellow Leaves.

The leaves here are not absolutely yellow, but the effect in the landscape is that of this colour.

Evergreen:—

- Abies excelsa finedonensis
- Aucuba japonica
- Buxus sempervirens aurea
- Cupressus thyöides variegata
- Euonymus japonicus foliis aureis
- Ilex Aquifolium aurea, &c.
- Juniperus virginiana aurea
- Hedera canariensis foliis aureis [gatus
- Osmanthus ilicifolius variePinus Pinaster variegata
- Rhamnus Alaternus foliis aureis
- ,, ,, maculatis
- Retinospora pisifera aurea
- Rhododendron ponticum variegatum
- Taxus fastigiata aurea
- ,, baccata aurea
- Thuja aurea
- Vinca elegantissima

Deciduous:—

- Æsculus Hippocastanum aureo-variegatum
- Acer Pseudo-Platanus variegatum
- Cornus mas foliis variegatis
- Castanea vesca variegata
- Fagus sylvatica foliis aureis
- Fraxinus aucubæfolia
- Hibiscus syriacus foliis variegatis
- Ligustrum vulgare variegatum [variegatum
- Liriodendron tulipiferum
- Quercus Cerris variegata
- Sambucus nigra foliis aureis
- Symphoricarpus vulgaris foliis aureis
- Spiræa opulifolia lutea
- Weigela rosea variegata

5. TREES AND SHRUBS WITH WHITE LEAVES.

Here as before the leaves are not absolutely white, but the effect in the landscape is that of that colour.

EVERGREEN:—
- Abies alba glauca
- Astragalus Tragacantha
- Bupleurum fruticosum
- Cedrus Deodara
- Chamæcyparis sphæroidea atrovirens
- Cineraria, of sorts
- Euonymus japonicus foliis argenteis
- ,, radicans variegatus
- Ilex Aquifolium argentea, of sorts
- Juniperus virginiana glauca
- ,, ,, foliis argenteis
- ,, Sabina depressa
- ,, ,, variegata
- Lavandula Spica
- Phlomis fruticosus
- Pinus excelsa
- ,, Strobus nivea
- ,, monticola
- Rhamnus Alaternus foliis argenteis
- Santolina Chamæcyparissus
- Taxus, two sorts

DECIDUOUS:—
- Amygdalus communis foliis variegatis
- Cistus algarvensis
- Cratægus Oxyacantha foliis argenteis
- Elæagnus argentea
- ,, fulva
- Hippophaë rhamnoides
- Negundo fraxinifolium foliis variegatis
- Philadelphus coronarius variegatus
- Populus alba
- ,, argentea
- Pyrus Aucuparia foliis variegatis
- Pyrus salicifolia
- ,, Malus foliis variegatis
- Rubus fruticosus foliis variegatis
- Ulmus campestris foliis variegatis
- ,, montana variegata

6. TREES WHOSE LEAVES CHANGE TO RED, SCARLET, OR YELLOW IN AUTUMN.

DECIDUOUS (RED):—
- Ampelopsis hederacea
- Acer circinatum
- ,, rubrum
- Azalea, of sorts
- Berberis vulgaris
- Cornus alba
- ,, mas
- Cratægus punctata
- ,, prunifolia
- Cerasus nana flore-pleno
- Diervilla humilis
- Euonymus atropurpureus
- Liquidambar
- Ostrya virginica
- Pyrus, of sorts
- Quercus coccinea and others
- Ribes aureum
- Rhus Cotinus
- ,, Toxicodendron
- ,, typhina
- Spiræa ariæfolia
- ,, prunifolia flore-pleno
- Viburnum Lentago
- ,, Opulus

DECIDUOUS (yellow):—
- Æsculus Hippocastanum
- Acer platanoides
- ,, Pseudo-Platanus
- ,, saccharinum
- Amelanchier Botryapium
- Amygdalus nana
- Betula of sorts
- Cerasus Padus bracteosa
- ,, virginiana
- Cratægus coccinea maxima
- ,, grandiflora
- ,, Oxyacantha aurea
- ,, pentagyna
- Euonymus latifolius
- Hydrangea nivea
- Gleditschia triacanthos
- Kolreuteria paniculata
- Liriodendron tulipiferum
- Magnolia tripetala
- Morus alba
- Pavia flava
- Populus, three sorts
- Pyrus torminalis
- Salisburia adiantifolia
- Spiræa lævigata
- ,, opulifolia
- ,, ulmifolia
- Syringa vulgaris
- Tilia europæa

7. TREES AND SHRUBS WITH WHITE, YELLOW, OR RED BARK.

DECIDUOUS:—
- Acer striatum (white)
- Betula alba (white)
- Cornus alba (red)
- Hippophaë rhamnoides (white)
- Fraxinus excelsa aurea (yellow)
- Populus argentea (white)
- Salix glauca (white)
- ,, purpurea (purple)
- ,, vitellina (yellow)

8. FLOWERING TREES AND SHRUBS.

EVERGREEN:—
- Andromeda floribunda
- Arbutus, of sorts
- Berberis Darwinii
- ,, dulcis
- Ceanothus, of sorts
- Cistus, of sorts
- Daphne, of sorts
- Erica, of sorts
- Garrya elliptica
- Helianthemum, of sorts
- Kalmia latifolia
- ,, myrtifolia
- Ligustrum lucidum
- Magnolia exoniensis
- Mahonia, of sorts
- Rhododendrons, of sorts
- Spartium junceum
- Ulex europæa flore pleno
- Viburnum Tinus

DECIDUOUS:—
- Æsculus, of sorts
- Amelanchier Botryapium
- Amygdalus, of sorts
- Azalea, of sorts
- Berberis, of sorts
- Buddlea globosa
- Calycanthus floridus
- Cerasus, of sorts
- Chimonanthus fragrans
- Clematis, of sorts
- Cornus mas
- Coronilla Emerus
- Cratægus, of sorts
- Cydonia japonica
- ,, ,, flore-albo
- Cytisus, of sorts
- Daphne Mezereum
- Deutzia, of sorts
- Forsythia viridissima
- ,, suspensa
- Fuchsia, 2 sorts
- Genista, 2 sorts
- Halesia tetraptera
- Hibiscus, of sorts
- Hydrangea nivea
- Hypericum Kalmianum
- Jasminum, of sorts
- Kalmia latifolia
- Lonicera, of sorts
- Liriodendron tulipiferum
- Magnolia, of sorts
- Pavia, of sorts
- Persica, of sorts
- Philadelphus, of sorts
- Prunus, of sorts
- Pyrus spectabilis
- Rhus Cotinus
- ,, typhina
- Ribes aureum
- ,, sanguineum
- ,, ,, albidum
- ,, speciosum
- Robinia hispida
- ,, viscosa
- Rosa, of sorts
- Spiræa, of sorts
- Syringa, of sorts
- Tecoma, of sorts
- Viburnum Opulus sterilis
- ,, macrocephalum
- ,, plicatum
- Weigela amabilis
- ,, rosea
- Wistaria sinensis

9. TREES AND SHRUBS WHICH RETAIN THEIR BERRIES.

EVERGREEN:—
- Arbutus Unedo
- Aucuba japonica (vera)
- Berberis Darwinii
- ,, dulcis
- Cotoneaster microphylla
- ,, buxifolia
- Cratægus Pyracantha
- Ilex Aquifolium, in varieties
- Gaultheria, two sorts
- Hedera, of sorts
- Ligustrum sempervirens
- Mahonia Aquifolium
- Pernettia mucronata
- Skimmia japonica
- Skimmia oblata
- Vaccinium Vitis idæa

DECIDUOUS:—
- Berberis vulgaris
- ,, ,, foliis purpureis
- Cotoneaster lævis
- Cratægus Oxyacantha aurea
- ,, coccinea maxima
- ,, Layii
- Ligustrum vulgare
- ,, vulgare xanthocarpum
- Pyrus Aucuparia
- ,, ,, fructu-luteo
- ,, Malus astracanica
- ,, ,, prunifolia

I have now reached the end of the task which I proposed to myself; and on reviewing these papers find that I have touched but slightly on certain points of interest and importance which appear well worthy of fuller treatment. It strikes me that the subject would be rendered of more interest to the readers of the *Gardeners' Chronicle*, if such were taken up by other hands. Fresh ideas would likely thus find utterance, and the purpose of my labour be more fully accomplished. *William Paul, Waltham Cross, N.*

THE CURCUMA.

SOME of the Curcumas are fine ornamental plants, on account of their exceeding singularity and beauty. There are many species, but I will only refer to three of the best that I am acquainted with.

C. Roscoeana has handsome Maranta-like leaves, about 3 feet in height, and about 6 inches in width, slightly undulated and recurving; and its flower spikes are thrown up from the centre of the plant and grow from 18 inches to 2 feet high, the flowers being arranged in five rows, and forming a beautiful spike. The principal beauty resides in the bracts, which are not unlike shell pockets; a fair spike should have as many as 40 of these bracts, which are of a glowing reddish orange, while the flowers are yellow, produced in their axils. After the flowers have perished the bracts remain perfect for a considerable time. The flowers are produced in August or September. I can strongly recommend this plant to the notice of any cultivator who is in the habit of exhibiting at the autumn flower-shows. It is a fine subject for such a purpose; a specimen with 10 or 12 spikes is a very attractive object. It is also very useful for home decoration.

C. cordata is perhaps not so showy as C. Roscoeana, but being very distinct is worthy of a place in a collection of stove plants. The bracts of this species are deep green, except a few on the top of the spike, which are of a light violet tipped with reddish purple. It is similar in habit to C. Roscoeana, but the leaves are somewhat broader, and not so long.

C. rubricaulis is a fine ornamental foliage plant, with long stems, of a deep red or crimson, bearing long Musa-like leaves, the midrib of which is of a deep red; the plant grows from 5 to 7 feet in height.

The compost for these plants should consist of rich fibrous loam and leaf-mould, or if leaf-mould cannot be procured, fibrous peat may be used instead, and if not sufficiently porous, a little grit or coarse sand must be added. The pots should be thoroughly drained. Early in spring the tubers should be shaken out of the pots, and divided as may be required; they should then be repotted into say 4-inch pots, and plunged in a strong bottom-heat, giving at first no water, and applying very little until they break into growth. They are occasionally a long time in breaking, and should therefore be examined from time to time. Indeed they frequently make roots before shoots. When they begin to root, if the bed is very hot, the pots should only be partially plunged, so that the roots may not be burned. The supply of water must be increased as the plants advance in growth; and as soon as the pots are well filled the plants will require repotting into 6 or 7-inch pots, and then they may be placed on the bed or on the stage. They grow very fast and will soon fill their pots with roots, and when this is the case they must have their final shift. If for decorative use employ the size pot which is most convenient—either 8, 9, or 10-inch; but if for a specimen for exhibition put as many of them together as can be got into one large pot. When they get well rooted after this final shift they must have plenty of heat and light, and a constant supply of weak liquid manure-water. I use nothing else in watering from the time the pots are full of roots to the time of their flowering.

When they have done flowering, water must be given more sparingly, and they must be allowed to go gradually to rest. When the leaves are yellow the pots may be laid under the stage, keeping them perfectly dry. These plants belong to the same family as the Ginger, and have tubers very much like those of that plant. *T. Brown, Tooting.*

Home Correspondence.

Oaks.—In your Number for Feb. 13 (p. 150), I promised to afford your correspondent "Diss" the following information, namely, "Whether the largest Oaks in Powis Castle Park were of the species pedunculata or sessiliflora?" I beg to state that I have this autumn carefully examined the large Oaks in the park here, and also large Oaks in the park of E. L. Winder, Esq., of Vaenor, along with Mr. Barnett, the gardener there. In both these parks I find that the largest and finest trees belong to pedunculata. This I ascertained by the acorns being placed on long fruit stalks, and by the leaves being short in the stalk; whereas the leaves of sessiliflora are long in the stalk, and the acorns grow in clusters close to the twigs or branches. Having raised all the Oaks from acorns that have been planted from time to time on my employer's estates hereabout, during a period of nearly 36 years up to this date, I have always had the acorns gathered from the finest trees, and those belong to pedunculata. I think it would be well therefore for nurserymen to have all acorns they sow or sell gathered from pedunculata. *Geo. Brown.*

Royal Horticultural Society's Shows for 1865.—I took upon myself last year the liberty of tendering advice to the managers of this Society, touching a two-days' show of cut Roses. That advice was not taken; and I was informed that the second day's Show was a poor affair, and would have been "worse had the sun shone out." I am glad to see that the second day's show of Roses is to be given up. In page 1106 of your Paper I am sorry to read that "all" the Shows, including of course the National Rose Show, are to be on a Saturday. I do not speak for other clergymen, of whom there are several, and most distinguished men, that exhibit: as, for instance, the Hon. Secretary, the Rev. S. R. Hole, to whose zeal we owe the origination of the Society, and the regeneration of the Rose cause; Canon Fisher, of Salisbury; the Rev. Henry Helyar, Pendomer, Somerset; and the Rev. G. E. Maunsell, of Thorpe Malsor, Nottinghamshire, besides, I dare say, many others; but I speak as a single exhibitor, and believe that in so speaking, I shall, if heard, benefit the Rose cause. Saturday is a most inconvenient, if not an impossible day, for the clergy, who, being debarred from other secular recreations, are, generally speaking, the most numerous florists in the kingdom; in country parishes they are mainly the growers of Roses. For a National Rose Show we want exhibitors from all parts. We have never yet had a *national* representation of the Rose cause, or anything like it. Money is a vulgar subject, I know; but if to expense you add a mighty inconvenience, entailing most likely still further expense, I fear that as regards amateur classes, which are by no means supported by Rosarians, from one cause or other, as they should be, the Society will find a further deficiency of exhibitors. If a National Rose Show means anything, it means that it is open to the nation, and that the day is so fixed (being neither Monday nor Saturday) that persons from all parts of the nation may come. The Crystal Palace Shows are usually on a Saturday. I, therefore, for one, have never been able to go to them. Saturday is a capital Metropolitan day, but it is a bad day for distant travellers, especially for the clergy. It may be said that the clergyman may send his servant, and bide at home. No man who has had any experience, I believe, will agree with this. The conveyance of Roses in condition, and their location and protection, is beyond the experience and mental acquirements of most servants. A Saturday's exhibition in London will entail a night's travel into Sunday morning, and a total unfitness for the highest and most honourable duty in the world. I merely ask the Society to give the subject a further consideration, limiting the request to the National Rose Show. In regard to the day of exhibition, as few if any Northerns attend, Mr. Turner as well as myself think that the day should not be later than the 25th of June. The small holders are bloomed out even by that time, unless their lands are very cold. I hope that the Society will also turn their attention to this point. *W. F. Radclyffe, Rushton.*—The proposed arrangement of the Royal Horticultural Society to have its Great Shows and weekly exhibitions on Saturdays will prove very inconvenient to many exhibitors and spectators. Residing at some distance from town it would be quite impossible for me to return home the same evening, and would oblige me to remain the Sunday in London, which would be both expensive and disagreeable. It would also, with a slight exception, "disqualify" the whole of the clergy. Why fix on Saturday? Would not Wednesday or Thursday do equally well? Any way the sittings of the Floral Committee on Tuesdays will, I trust, not be altered. *Exhibitor.*—Having seen it stated that the proposed Great Shows of the Royal Horticultural Society are to be held on Saturdays, I beg to state, as an exhibitor, that the day is anything but suitable to exhibitors generally. As the Royal Botanic Society has fixed its forthcoming summer Exhibitions for Wednesdays, as the exhibitors wished, the latter cannot, and I may say will not, take their productions to the Royal Horticultural on Saturdays. The best course for the Society to adopt would be to change to some more suitable day, if it is wished to have a good exhibition. *J. W., Stamford Hill.*

Rose Judging.—Allow me to correct an error into which your correspondent "P. B. R." has fallen (p. 1109), when he says, "that at the Crystal Palace Rose Show in June last, the 1st prize was awarded to one of the worst stands in the exhibition." The 1st prize was awarded to J. T. Hedge, Esq., for 18 magnificent blooms. It is the award of the 3d prize of which I think your correspondent "P. B. R." must intend to question the justice. In the opinion of myself and many others, these 18 blooms were much the worst in the exhibition, and the most slovenly set up. I think an explanation is due to exhibitors and the public from the judges in this class, as to the rules by which they were guided in arriving at their decision in this case. I think that some explanation should also be given as to the circumstances which brought one of the judges into the anomalous and undignified position of judge and exhibitor. *Senator Vaisse.*

Spiders' Webs.—When we walk on a bright summer's morning alongside our garden walls, those who have a very quick eyesight or a common eye-glass, may see the net-like webs of the common garden spider studded with minute drops glittering like dew; but as these do not evaporate when the sun advances, they must be something more substantial. Under the microscope they will be seen arranged with beautiful regularity on the cross bars of the web only. They are viscid to the touch; the web, in this way, being delicately

limed to take the smallest insects striking against it. When mounted as objects for the microscope, as they often are, the surprising fact at length grows upon us, that these minute beads of fluid, though kept in dry rooms and cabinets for months, and even years, never dry up, and apparently never change. What makes up these little persistent globules, and how are they arranged so evenly? If a newly spun web is brought down upon a slip of glass, and made to adhere to it, the viscid drops spread upon the surface, and show a little nucleus or core of gum in the centre of each; it will be seen too, that the viscid fluid surrounds not only the cores but the whole line of the cross bar, being collected only more copiously on the little cores dotted along it, and which have served as centres of attraction; but for these, the fluid, when poured upon the web, would have run into larger drops and fallen to the ground, or at least have been unequally distributed. The cores adhere but loosely to the web, and may be easily moved with a fine mounted hair; and in doing so it will be found that the cross bars, unlike the other lines of the web, are highly elastic. If the fresh viscid drops (still under the microscope) are made to touch blue litmus paper, they instantly sink into and redden it. The common solution of chloride of calcium also reddens the test paper; and it seems not unlikely that to the presence of this, or some other highly deliquescent salt, the undrying nature of the viscid fluid may be due. This spider's web is a complicated structure, and is composed of various materials: the side and radial lines of a fluid, which like silk, hardens as it leaves the spinneret; the elastic cross bars, which never harden; the little cores of transparent gum dotted along them; and the saline and viscid fluid poured over all; and yet, upon close examination of the spinneret, it is comprehensible that the web should be completed at one operation, that is, that no part of it should be gone over twice. A view of the insect at her work might clear up this point, and our Fern-cases might perhaps be turned to further good account for this purpose. But the spiders have now gone into winter quarters, and we must wait another summer. Meantime these few facts and queries may show us that there is something yet to learn of this curious and beautiful structure—the web of the garden spider. *S. S., Brighton.*

Stoneless Berberry.—At p. 1064, under "Notices to Correspondents," you say "there is a seedless Berberry." I can confirm it by having often eaten the jam, but is it not singular that I cannot obtain the tree? Will you say which sort it is that becomes seedless on attaining a certain age. I have a dozen trees in my garden, some over 20 years of age, but all, both old and young, have seeds in the fruit. Neither McIntosh nor Veitch in their fruit lists mention Berberry; Paxton's Botanical Dictionary has a list of 29 sorts under Berberis. Which of these in its old age bears the fruit for making such capital seedless jelly? I have been to two old experienced nurserymen in the country, and neither of them have ever known Berberries to bear fruit without seeds. These facts are curious. *H. S.* [The stoneless Berberry is Berberis vulgaris var. asperma, and has been known since the days of Bauhin, who calls it Berberis sine nucleo. Two stoneless varieties, a yellow and a purple, once grew at Chiswick.]

Habitats of Orchids.—With reference to Mr. Gosse's wish to be informed of the precise locality of the habitat of Broughtonia sanguinea, mentioned in my communication (p. 1061), I have to state, in reply, that it was at a short distance from Alligator Pond Wharf, in the parish of Manchester, where I first detected the mass of the plant referred to in my previous observations. I had frequently met with the species in the same neighbourhood, but never in such abundance as on that particular scarped rock—possibly from the circumstance that a large proportion of the plants were growing in perfectly inaccessible places; indeed, without a very lofty ladder few could have been procured. I found Broughtonia sanguinea also in the eastern part of the parish of St. Elizabeth (the only part I visited), at about the same height from the sea level as in Manchester, but certainly not in such abundance. Epidendrum cochleatum and Brassia caudata were always very conspicuous objects from growing in exposed situations—my remarks here more particularly refer to the parish of Manchester. The forest trees that margined the Coffee pieces (fields) were most frequently decorated with them. Oncidium luridum was of very common occurrence, not only on trees in small tufts, but more particularly in large masses, 18 to 25 feet in circumference, perched on flat rocks by the road-side. The vitality of this plant, under discouraging circumstances, is somewhat remarkable. I have often seen one of the large masses that had been detached from its resting place, either by the force of the wind, or oftener by wain-drivers on their journeyings, making its way to the base of the hill road, sometimes for two or three miles from where it was detached; but notwithstanding this rough treatment, it would yet produce flowers with the same vigour and beauty as if it had never been disturbed. I was struck, like Mr. Gosse, with the singular resemblance a Logwood fence bears to a Hawthorn hedge: it always brought home recollections very vividly before me. *R. H.*

The Regent's Park Avenue Gardens.—To my mind the Avenue Gardens, to which you referred in a Leading Article at p. 889, are quite equal, if not superior in design to any existing continental gardens, with all the merits of good simple English gardening superadded; and I have no doubt that in a year or two they will so develope themselves as to show their real merit. The laying out of the ground between them and the Colosseum would be a further improvement. What appears to me to be the great point of these gardens is, that wherever you are you have a grand vista, and of all formal features the view down an avenue is certainly the grandest. The Poplar avenue again forms a subordinate vista at either end, and by narrowing the view not only aids the perspective of distance, but by the contrast of its width gives greater breadth to the open and central portions, while the Elms, always towering above it, lose nothing in continuity. It gives space. As an object is large or small only by comparison, so I think the Avenue Gardens satisfy the mind by the proportions of their details, and leave an impression rather of great length than extreme narrowness. I do not know any other town garden that can in an equal degree present a general leading feature of equal interest as a compensation for the beauties of distant scenery so inevitably denied us. Sometimes of an evening, when the haze begins to settle mysteriously at the ends, there is an air of melancholy grandeur about it that pleases me immensely, and I like it almost better under that aspect than with the light and shade of the morning sun playing fitfully across it, although the gleams of colour in light shine with an intense brilliancy from contrast with their fellows subdued by the cast shadow of the trees. It is the same with colour as with size or form; everything either loses or gains by contrast, such contrast producing comparison. So far from partial shade being a disadvantage in growing flowers, it is of the greatest benefit in preserving the bloom, on the same principle that a conservatory with a north aspect is infinitely preferable to one with a south aspect. Already we have here nearly an evergreen garden, such as you suggest. There are beds of Golden Hollies edged by Green Hollies; Rhododendron ponticum edged by dwarf Ericas, or long lines of dwarf Box trees; and large numbers of Rhododendron ferrugineum, the beautiful Alpine Laurel-Rose. The whole of the Lilac belt, too, is interspersed with Ferns, and when the shrubs make head they will form a very pretty undergrowth. To conclude, I must observe that as all art is founded upon Nature, we can only produce good art by studying her, paying great respect and veneration to the principles that those who have worked and gone before us have deduced from her lessons, and so humbly try to add our own mite towards the improvement and maintenance of taste. *A Londoner who enjoys the Parks.*

Royal Horticultural Society.—As you have given your readers some account of the promises of the Royal Horticultural Society for next year, can you tell such of us as are Fellows of the Society, how another promise of some standing—to wit, that of submitting a new and liberalised code of bye-laws, by which the Fellows might obtain some share in the nomination for members of Council, &c., is progressing towards fulfilment. Time is flying, and yet we have heard nothing about this bye-law question, since the promise was made. *F.R.H.S.* [We are unable to give our correspondent any information on this point.]

Figs.—About three years ago a Fig plant appeared at the base of my fruit wall, and it has since become a large tree. My gardener nailed it to the wall, and has kept it pruned. It has not yet borne any fruit. Being self-sown, the growth I suppose of some seed dropped by a bird from the wall, will it bear fruit of itself without any grafting or inoculation with another Fig plant? and if so, when may I expect fruit from it? Shall I not do well to restrict the pruning to the nailing in of the leading branches, allowing the top ones to grow pretty wild? I fear my gardener has done too much with his knife, in order to keep up the shape of a regularly grown wall tree. *Constant Reader.* [Your Fig will doubtless bear fruit sooner or later; but being a seedling it may not become fruitful soon without resorting to artificial means. Budding and grafting you would probably find difficult. And so long as its roots are in a rich border it will throw up crop after crop of luxuriant shoots, like Willows that are annually cut down. This exuberance of growth must be checked by limiting the supply of nourishment for the roots. In the first place, therefore, take up the tree, reduce its roots, dig out the rich soil, and in the bottom of the hole place a layer of chalk a foot thick, ram it down firmly, and on this replant your Fig tree, covering the roots with sandy loam. By adopting this mode of proceeding you will probably soon be able to ascertain whether it is valuable or not.]

Vine Stocks.—I do not see that Mr. Fowler has any occasion to retract the opinion he formerly expressed respecting the utility of the Trebbiano as a stock on which to graft the Muscat of Alexandria, as according to his statement in your last issue, "all went merry as a marriage bell up to the period when the fruit was nearly ripe; the berries were plump, and the colour a fine amber, clean, and without a spot. The weather had been fine for a considerable time previous; but rain now fell in abundance, and soon after the berries commenced to burst at the footstalks." Now, I am of opinion that this is what any one might have expected, for, according to Mr. Fowler's statement, that heavy fall of rain was the cause of the mischief; therefore I still hold that if the rain had been kept out of the border the result would have been in favour of the Trebbiano as a stock for the Muscat. I should be glad if Mr. Fowler would reconsider this matter, and give us his opinion on this point. *W. W. D. P.*

Extraordinary Produce of Two Potatos.—Two large sized Potatos planted in Mr. Grimston's garden at Clifford, near Tadcaster, in Yorkshire, were dug up the other day, and were found to have produced 199 tubers, weighing in the aggregate 84 lbs. Half a dozen weighed 11 lbs. 3 oz. And one single Potato, selected from the half dozen, weighed 2 lbs. 9 oz. *Robert Abbey, Whitburn, near Sunderland.*

Aubrietia Campbellii, alias *Hendersoni.*—As information has been asked respecting the origin of this variety (see p. 1112), on which the very highest commendations have been bestowed by the *Gardeners' Chronicle*, I am induced to give you the following particulars:—Early in July, 1860, some seed of Aubrietia was sown. The seedlings were potted off in the middle of the following month, three or four in a pot, and were kept in a cold frame during the winter. In May, 1861, they were planted out, and the next spring they flowered freely. With the exception of one tuft they produced flowers much of the usual colour. This one plant, which bore "deep violet purple flowers, with a white eye," was allowed to remain undisturbed (with some of the others for comparison), and again in the following year (1863), when all were in bloom, it was still found as before to have better flowers, of a deeper colour. Being in the habit of submitting blooms of seedling flowers, &c., to Messrs. E. G. Henderson & Son, I forwarded some of this Aubrietia; and, as it met with their approval, they purchased the stock of it, conditionally that it should be called A. Campbellii. Last May it was exhibited by Messrs. Henderson & Son at the Regent's Park Show, where it was awarded a First-class Certificate, and was very greatly admired, but it was shown under the name of A. Hendersoni! However, in a letter now before me, Messrs. H. remark that this name was employed by mistake, and that they will alter it, and sell the plants by the name of Campbellii. When this new Aubrietia comes to be offered for sale, the above statement will explain any misconception that may arise as to its name. *E. Campbell, Queen's Graperies and Nursery, Brighton, Nov. 21.*

Societies.

Liverpool Horticultural: *Nov.* 23.—A Chrysanthemum and Fruit Show was held in St. George's Hall on Wednesday last, and appeared to be satisfactorily supported, not only the magnificent Hall itself, but also the different avenues which led to it, being thronged during the afternoon with a gay and fashionable attendance.

Fruit and Miscellaneous Stove and Greenhouse Plants, together with many remarkable for the beauty of their leaves, were arranged on three tables running nearly the whole length of the Hall, while the sides and one end were devoted to Chrysanthemums, the whole producing a display well worth travelling miles to see, especially when lit up in the evening.

As regards Chrysanthemums it was universally admitted that, owing to "a leaf having been taken out of Mr. Broome's book," they were shown in much better condition this season than formerly. There is, nevertheless however, room for improvement; and if we may judge from the minute way in which some of the less successful cultivators were examining the modes of growth and training represented by the exhibitions of their more fortunate brethren, material may be expected next year to furnish a show of this useful flower in all respects equal to those held about London. Some of the collections of Pompons were all that could be desired, both with respect to growth and flower; but with one or two exceptions large-flowered varieties were not so satisfactory. Cut blooms were a failure; they were few in number, and set up without taste, the boxes on which they were shown being of all kinds, and of various heights and sizes.

In the Class of Nine Large-flowered Chrysanthemums, the 1st prize was carried off by Mr. Dunbar, gr. to F. Brawn, Esq., who furnished well-flowered compact medium-sized plants of Edwin Landseer, Golden Queen of England, Chevalier Domage, Christine, Prince Albert, Gluck, Lady Hardinge, Her Majesty, and Sparkler. Mr. Allan, gr. to E. Banner, Esq., showed tall plants, which formed a somewhat unfavourable contrast with those just alluded to. They consisted of Rifleman, Annie Salter, Baron Scalebert, Christine and its White variety, Julie Lagravère, Alma, Lady Hardinge, and Sparkler. Mr. Sorley, gr. to E. Zwilchenbart, Esq., also showed nine plants.

In groups of Six Chrysanthemums the best came from Mr. Hutchinson, gr. to S. Withers, Esq., who contributed Chevalier Domage, Alma, Snowball, Queen of England, and Jardin des Plantes. Mr. Dunbar showed Ariadne, Christine and its Golden variety, Alma, General Slade, and Golden Hermione. Mr. Sorley also showed in this class.

Three Chrysanthemums, consisting of Queen of England, Lord of the Isles, and Christine, came from Mr. Hignett, gr. to C. Rowe, Esq., who also took the 2d prize for three plants. Mr. Hutchinson was 3d, and an extra prize was awarded to Mr. Turner, gr. to W. Preston, Esq. Among the varieties of which these collections consisted there was nothing new, nor could

it be readily ascertained where one group ended and another began, the marks dividing them not being in some instances sufficiently indicated.

A few plants were shown as single specimens, but with the exception of Alma from Mr. Woollam, gr. to N. Bousfield, Esq., none of them were remarkable for fine growth. Let us hope that this portion of the exhibition may be better supported next season.

In the Class of Nine Pompons the best plants came from Mr. Hignett, who showed a beautiful collection of dwarf well-bloomed plants, consisting of Andromeda, Dalilah, Julie Lagravère, Cedo Nulli and its Golden variety, Roseum majesticum, Mrs. Calvert, a pretty yellow kind; Bob, one of the best reds; and Léonie Nives. Mr. Turner, gr. to W. Preston, Esq., and Mr. Sorley also showed in this class.

Groups of Six Pompons were furnished in good condition by Mr. Lythgoe, gr. to H. Christian, Esq.; Mr. Hutchinson, Mr. Woollam, and Mr. Fleetwood, gr. to Mrs. Bird. In these collections the varieties most worthy of mention were Ninon, Salamon, Duruflet, Satanella, a fine old yellow; Golden Cedo Nulli, and Hélène.

Collections of Three Pompons, in which were good yellow and white Cedo Nulli, Bob, and others, came from Messrs. Hignett, Woollam, and Turner.

The best specimen Pompons were contributed by Messrs. Hignett, Hutchinson, Allan, and Dunbar, and the varieties selected for competition were chiefly Cedo Nulli and its Golden variety.

Standard Chrysanthemums were produced by Mr. Dunbar and Mr. Turner, both of whom furnished well managed plants.

Well-bloomed fringed and double Primulas were shown, and made an effective edging to one of the long side tables. The best came from Mr. Morris, gr. to W. D. Holt, Esq.; Mr. Davies, gr. to M. Dowie, Esq.; Mr. Fleetwood; and Mr. Leadbetter, gr. to R. D. Holt, Esq.

Stove and Greenhouse Ferns, very well grown and tastefully arranged, occupied a corresponding side table. The best collections of them were contributed by Mr. Brown, gr. to the Misses Yates; Mr. Morris; and Mr. Wright, gr. to Mrs. Liversage. The varieties did not differ sufficiently from those sent to our London shows to render a repetition of their names necessary.

Plants with variegated leaves were furnished by Mr. Hignett, Mr. Wright, and Mr. Everitt, gr. to J. Campbell, Esq. Among these we noticed Farfugium grande, well furnished with yellow blossoms, Dracænas, and other well-known ornamental foliaged plants.

Among specimen Stove and Greenhouse Plants, examples of which came from Mr. Wilson, gr. to J. E. Reynolds, Esq.; Mr. Fleetwood; and Mr. Jones, gr. to J. Hutchinson, Esq., was a wonderfully fine plant of Sweet Indian Daphne, literally loaded with blossoms so fragrant as to quite load the air in its neighbourhood with a delicious perfume. This came from Mr. Wilson, on whose skilful management it reflected great credit. Good bushes of Veronica Andersoni were also shown, as well as of Statice Holfordii, Æschynanthus, and other plants. Mignonette, both tree and in the ordinary form, was shown in tolerably good condition for the season. It, however, wanted the fragrance and healthy appearance of spring-bloomed plants of it.

Orchids were confined to the charming Calanthe vestita, examples of the red-eyed variety of which came from Mr. Fleetwood and Mr. Everitt.

Of Hand Bouquets several were produced, but we could not heartily approve of any of them. That to which the first prize was awarded had a somewhat confused appearance, and the rest were put together with no great amount of taste. One composed of Chrysanthemums was shown by Mr. Turner. Flowers and Ferns exhibited by Major Walter, and arranged with considerable skill on three of March's glass stands for dinner-table decoration, were very effective, and received, as they deserved, general admiration.

From Mr. Ker, the energetic Secretary of the Society, to whom the members must be much indebted for his activity and business habits in matters of arrangement, came plants of the charming gold-striped Lilium auratum; from Mr. Newman also came this fine Lily, with more red in its stripes than is generally found in this variety, which if constant will render it an acquisition. Some beautifully variegated Kale came from Mr. Ker, and a Cotton plant, both in flower and with pods on it, from Mr. Holt. Panfuls of Early Roman Hyacinth came from Mr. Morris and Mr. Turner; and Mr. Tyerman kindly supplied some handsome-leaved plants from the Botanic Garden for the purpose of decorating the Hall.

Fruit was extensively shown, and for the most part in excellent condition

Pine Apples, though not numerous, were beautiful specimens of good cultivation. The best came from Mr. Meredith, of the Vineyard, Garston; and Mr. Freeman, gr. to the Earl of Derby. Among the varieties were Smooth-leaved Cayenne, Black Jamaica, and Queen: of the last a beautiful fruit came from Mr. Dutton, gr. to J. Naylor, Esq.

Grapes were wonderfully fine, especially white kinds, most of which exhibited that fine rich golden tinge so desirable in fruit of this description. The best came from Mr. Manderson, gr. to B. H. Jones, Esq.; Mr. Smith, gr. to H. Littledale, Esq.; and Mr. Skinner, Aigburth Hall. Among the sorts shown were Muscat of Alexandria, Trebbiano, what was called Charlesworth Tokay, and Buckland Sweetwater. Black Grapes were equally good, especially the Alicante, beautiful bunches of which were shown by Mr. Smith. Messrs. Lane, of Berkhampstead, contributed Barbarossa, two bunches of which were stated to weigh 8 lbs. The last named exhibitors likewise received a first prize for Black Hamburghs. Mr. Turner and Mr. Wilson also both showed this variety. From Mr. Meredith came magnificent bunches of the following Grapes, labelled "not for competition;" viz. White Tokay, Black Prince, West's St. Peter's, Child of Hale, a promising new variety; Barbarossa, Trebbiano, Lady Downes' Seedling, Muscat of Alexandria, and a splendid bunch of Black Alicante.

Collections of fruit, in which were Red Currants in a state of good preservation, Pine Apples, Grapes, Pears and Apples, were shown by Mr. Smith and Mr. Davies.

In the Class of Eight Dishes of Dessert Pears, the best fruit came from Mr. Sorley, who contributed Crassane, Beurré Rance, Beurré Diel, Glou Morceau, Duchesse d'Angoulême, Passe Colmar Dorée, Josephine de Malines, and Easter Beurré. From Mr. Maries, gr. to Colonel Clifton, came Beurré Clairgeau, well coloured; Brown Beurré, Easter Beurré, Winter Nelis, Beurré Diel, Marie Louise, Napoleon, and Comte de Flandres. Mr. Copple, gr. to the Rev. W. S. Fielden, sent Marie Louise, Colmar, Napoleon, Beurré Diel, Winter Nelis, Beurré Rance, Easter Beurré, and Glou Morceau.

In Collections of Four Dessert Pears, the 1st prize was again awarded to Mr. Sorley, who had good fruit of Marie Louise, Glou Morceau, Easter Beurré, and Duchesse d'Angoulême. Mr. Smith was 2d with Hacon's Incomparable, Glou Morceau, Napoleon, and Beurré Diel. From Mr. Turner, gr. to E. Bates, Esq., came Vicar of Winkfield, Beurré Diel, Glou Morceau, and Marie Louise.

The best dish of ripe Pears came from Mr. Rylance, Town Green, who showed very fine fruit of Marie Louise. Winter Nelis came next in point of flavour.

Apples are stated to be more plentiful in this locality this season than they have been for these 14 years, and though not so large as they sometimes are, they are for the most part well-coloured.

For Four Dessert varieties the 1st prize was awarded to Mr. Smith, the 2d to Mr. Maries, and the 3d to Mr. Rylance. Among the sorts were Court of Wick, Ribston Pippin, Court Pendu Plat, and Blenheim Orange, which was also called Combermere Apple.

The best dish of Dessert Apples came from Mr. Smith, and consisted of Ribston Pippin. The same exhibitor also had Orange Pearmain ripe. From others came Pomona and King of the Pippins.

In the Class of Eight Kitchen Apples Mr. Smith showed fine fruit of Pearmain, Dumelow's Seedling, Mère de Ménage, well coloured, but not nearly so large as fruit of this sort sent this season to South Kensington; Emperor Alexander, also comparatively small; Blenheim Orange, Beauty of Kent, Wareham Russett, and Gloria Mundi. From Mr. Rylance came well coloured fruit of Cellini, Lord Derby, good examples of New Hawthornden, York Pippin, King of Apples which appeared to be Gloria Mundi; Blenheim Orange, Mère de Ménage, and Rose of Sharon. Mr. Rylance sent Lord Suffield, a useful Apple in most localities; Lord Derby, Alfriston, Dumelow's Seedling, White Pippin, a small pale-coloured fruit; Gloria Mundi, Cellini, and Scotch Bridget, a small rough fruit.

In Collections of Four Kitchen Apples, equally good fruit were contributed by Messrs. Smith and Rylance. The sorts were chiefly those just named.

The best dish of Kitchen Apples consisted of Gloria Mundi from Mr. Smith; and Mr. Rylance, who was placed second, had the same variety called King of Apples.

Among Miscellaneous fruit was a fine bunch of Banana from Mr. Lythgoe, gr. to T. B. Horsfall, Esq., M.P. It was hung up at the end of one of the tables, and seemed to be considered by many to be a great curiosity.

Notices of Books.

Homes without Hands. By the Rev. J. G. Wood, M.A., F.L.S. With numerous Illustrations. In 20 parts. London: Longman & Co.

This is by no means the first time that we have derived pleasure from the perusal of Mr. Wood's charming books on Natural History. He writes in a lively, natural, and perspicuous style, and has the requisite skill to make the subjects he treats of acceptable to the scientific reader; while, at the same time, he is most successful in rendering the information which he gives pleasant and intelligible to the unscientific.

It is perhaps rather a novelty in this little work that Mr. Wood has relinquished the usual method of classification, and adopted one founded upon the kind of habitation which the creatures he notices construct or dwell in. His method has its advantages, for these 'Homes without Hands," as he quaintly styles them, must necessarily depend in great measure upon the tools with which the little architects have been furnished, and serve to make us acquainted with the marvellous instincts with which they have been endowed. The curious construction of many of these homes, and their wonderful adaptation to the wants of their inhabitants, are sure to prove attractive to readers of all classes. There is abundant matter, also, to call forth the admiration of young people, and lead them to the contemplation of the great Creator's wisdom and goodness. And the fact that the homes are usually so much more durable than the creatures that made them is likely to induce many persons to begin forming a little collection for themselves, and that beginning may ripen into the systematic study of natural history. We hold that the man who renders any branch of human study pleasant and delightsome deserves the praise of his fellow men. Our readers will be able to judge from a few extracts whether Mr. Wood is entitled to this praise or not. We begin with a marine stone-borer:—

"A good example of the burrowing molluscs is the well known Pholas, popularly called the Piddock (Pholas dactylus), the shells of which are extremely plentiful upon our coasts, whether empty and thrown upon the beach, or still adhering to the living animal and deeply sunken in the rock. Almost in every part of our shores the Piddock is to be found wherever there is rock, and its dimensions and general appearance vary together with the locality.

"The shell itself is extremely fragile, and of a rather soft texture, and its outer surface is covered with ridges, that sweep in the most graceful curves from the hinge to the edge, and bear some resemblance to the projections upon a file. Yet practical naturalists have proved that, by means of these tiny points and ridges, the Pholas is able to work its way into the rock; for not only can a similar hole be bored by using a shell as a brad-awl is used to pierce wood, but the creature has actually been watched while in the act of insinuating itself into the chalk rock, a feat which was performed by gently turning the shell from right to left and back again."

Speaking of the Scorpion, Mr. Wood says:—

"The burrows of the scorpion can always be detected by the peculiar shape of the entrance, which is of a semilunar form, exactly fitting the outline of the animal which digs it. The shape of the aperture is not unlike that of the hole which is cut in the seats of wooden stools for the purpose of introducing the hand when they are lifted.

"In order to find out whether the scorpion is at home, a jug full of water is poured into the burrow. Scorpions detest water, and when they feel the stream pouring upon them, they issue from their holes in high dudgeon, their pincers preceding them and snapping wildly at the enemy. A fork or spade is then driven under the scorpion, and its retreat being thus cut off it is easily killed.

The experiment of surrounding the scorpion with a ring of fire has often been tried, and it has invariably stung itself to death. "The fiery circle was about 15 inches in diameter, and composed of smouldering ashes. In every instance the scorpion ran about for some minutes, trying to escape, and then deliberately bent its tail over its back, inserted the point of its sting between two of the segments of the body, and speedily died. The experiment was repeated seven or eight times, and always with the same results, so that a further repetition would have been but a useless cruelty."

As to the story of the gigantic hairy spider of Surinam, which was said to attack and kill birds, a tale which naturalists seriously doubted, the question has been satisfactorily set at rest, for Mr. H. W. Bates, who spent 11 years upon the banks of the Amazon River, was actually eye-witness to the murder of a small bird by a great spider. The spider was nearly 2 inches in length of body, but the legs expanded 7 inches; yet this repulsive creature does not inspire the natives with much disgust, for the same gentleman once saw a group of children amusing themselves with a gigantic spider of the kind which they had secured by a string round its waist, and were leading about as if it had been a dog.

Mr. Wood tells us that of all the burrowing spiders none is so admirable an excavator as the Trap-door spider of Jamaica, which constructs a flap of the same substance as the tube it lives in, circular in shape, and working on a sort of hinge, and fitting with such perfect accuracy, and so cleverly sprinkled over with particles of the adjacent earth, that the spectator who has actually seen the little lid lifted up and startled the spider in the act of peering about, often has to search in vain for the hole down which it has in an instant vanished.

We pass over very interesting descriptions of ant's and the whole race of earth-burrowing hymenopters, because their habits are comparatively better known than those of other insects; merely remarking that at the conclusion of a capital account of the domestic economy of wasps, Mr. Wood does what lies in his power to vindicate their character, which he thinks has been calumniously aspersed.

Mr. Wood's method of classification enables him sometimes to draw attention to the habits of an insect on account of peculiarities in its perfect state, at other times from its conduct in the larval state. The well-known Ant-lion (Myrmeleon formicarius) presents little worthy of remark when perfect, but is a truly wonderful being in its larval condition.

"Though predacious, and feeding chiefly on the most active insects, it is itself slow, and totally unable to chase them; and were it not furnished with some quality which serves it in the lieu of speed, it would soon die of hunger. The very look of the larva is enough to make the observer marvel as to its method of obtaining food. Thick, short, soft, and fleshy, the body is supported on

six very feeble legs, of which the hinder pair only are employed for locomotion, and these can only drag it slowly backwards. Indeed, the general outline of the body and head bears no small resemblance to that of a fat-bodied garden spider. So feeble are its limbs, that they are practically of very little use in locomotion, and even when they are cut off, the creature can move nearly as well as when they were in their places. From the front of the head project a pair of long, slender, curved mandibles, which give the first intimation that the grub has anything formidable in its nature. These mandibles are curiously made, being deeply grooved throughout their length, and permitting the maxillæ, or inner pair of jaws, to play up and down them.

"Inert and helpless as it may seem, this grub is a ruthless destroyer of the more active insects, and, moreover, seldom catches any but the most active. Choosing some sandy spot, where the soil is as far as possible free from stones, it begins to form the celebrated pitfalls by which it is enabled to entrap ants and other insects. Depressing the end of its abdomen, and crawling backwards in a circular direction, it traces a shallow trench, the circle varying from one to three inches in diameter. It then makes another round, starting just within the first circle, and so it proceeds, continually scooping up the sand with its head, and jerking it outside the limits of its trench. By continuing this process, and always tracing smaller and smaller circles, the grub at last completes a conical pit, and then buries itself in the sand, holding the mandibles widely extended.

"Should an insect, an ant, for example, happen to pass near the pitfall, it will be sure to go and look into the cavity, partly out of the insatiable curiosity which distinguishes ants, cats, monkeys, and children, and partly out of a desire to obtain food. No sooner has the ant approached the margin of the pitfall, than the treacherous soil gives way, the poor insect goes tumbling and rolling down the yielding sides of the pit, and falls into the extended jaws that are waiting for it at the bottom. A smart bite kills the ant, the juices are extracted, and the empty carcase is jerked out of the pit, and the Ant-lion settles itself in readiness for another victim."

We must now call attention to the extremely beautiful wood engravings with which these pages are profusely adorned; they are from original drawings made by the well known artists Messrs. Keyl and E. A. Smith, under Mr. Wood's own superintendence, and expressly for this work, thus enabling the student to take in knowledge by the eye, and forming a most attractive part of the work.

These illustrations are not confined to the homes of the insect tribe. There are some of pensile birds-nests and nests of various kinds. One of the most beautiful is that of the Harvest mouse (Micromys minutus), the smallest example of the mammalia in England, and nearly in the world. "This elegant little creature is so tiny that, when full-grown it weighs scarcely more than the sixth of an ounce, whereas the ordinary mouse weighs almost an entire ounce. Its colour is of a very warm brown above, almost amounting to chestnut, and below it is pure white, the line of demarcation being strongly defined. The genuine harvest mouse can be distinguished by its very small size and the bright ruddy hue of the back and the white of the abdomen. Moreover, its ears are shorter in proportion than those of the ordinary mouse, the head is larger and more slender, and the eyes are not so projecting. The harvest mouse surpasses all its congeners in the beauty and elegance of its home, which is not only constructed with remarkable neatness, but is suspended above the ground in such a manner as to entitle it to the name of a true pensile nest. Generally it is hung to several stout Grass-stems; sometimes it is fastened to Wheat-straws; and in one case mentioned by Gilbert White, it was suspended from the head of a Thistle.

"It is a very beautiful structure, being made of very narrow Grasses, and woven so carefully as to form a hollow globe rather larger than a cricket ball, and very nearly as round. How this little creature contrives to form so complicated an object as a hollow sphere with thin walls is still a problem. It is another problem how the young are placed in it, and another how they are fed. The walls are so thin that an object inside the nest can be easily seen from any part of the exterior; there is no opening whatever, and when the young are in the nest they are packed so tightly that their bodies press against the wall in every direction. As there is no defined opening, and as the walls are so loosely woven, it is probable that the mother is able to push her way between the meshes, and so to arrange or feed her young."

A single extract from the birds and we have done:—

"There is a wonderful little bird, popularly known by the name of the Tailor Bird, its scientific name being Orthotomus longicaudus. The manner in which it constructs its pensile nest is very singular. Choosing a convenient leaf, generally one which hangs from the end of a slender twig, it pierces a row of holes along each edge, using its beak in the same manner that a shoemaker uses his awl, the two instruments being very similar to each other in shape though not in material. These holes are not at all regular, and in some cases there are so many of them, that the bird seems to have found some special gratification in making them, just as a boy who has a new knife makes havoc on every piece of wood which he can obtain.

"When the holes are completed, the bird next procures its thread, which is a long fibre of some plant, generally much longer than is needed for the task which it performs. Having found its thread, the feathered tailor begins to pass it through the holes, drawing the sides of the leaf towards each other, so as to form a kind of hollow cone, the point downwards. Generally a single leaf is used for this purpose, but whenever the bird cannot find one that is sufficiently large, it sews two together, or even fetches another leaf and fastens it with the fibre. Within the hollow thus formed the bird next deposits a quantity of soft white down, like short cotton wool, and thus constructs a warm, light, and elegant nest, which is scarcely visible among the leafage of the tree, and which is safe from almost every foe except man.

"There are several nests of the Tailor Bird in the British Museum, one composed of several leaves, and the other in which one leaf is used. It is a pity that in all instances the leaf has been plucked from the twig on which it grew; and it is to be wished that when other specimens are brought to England the twig will be cut off, and that if the leaf should fall off, it may be replaced on the spot whereon it grew. Beautiful as is the detached nest, it does not give nearly so vivid an idea of its object as if it were still suspended to its branch."

Here, however, we must close our notice, once more thanking Mr. Wood for the entertainment which he has afforded us, and expressing our admiration of his charming book and its beautiful illustrations. If intrinsic excellence and moderate price (one shilling per number) go for anything, his "Homes without Hands" will assuredly meet with an extensive circulation.

Catalogues Received.—*William Bull's Retail List of New Plants* 1864-5, is a very full list of new Stove, Greenhouse and Hardy Plants, among which perhaps the most novel are some double-flowered zonal Pelargoniums, of which three varieties are offered: one Maréchal de Chanflourd, described as ranunculus-formed bright carmine with white centre, another Triomphe de Gergoviat large double bright red with white centre, and a third Auguste Ferrier, vermilion and semi-double.—*Peter Lawson & Son's List of Forest Trees and Shrubs*, October 1864, is a very carefully compiled classified list of subjects for planting at this season of the year. In most cases the size of the plants as well as their price, is given.—*William Chater's Catalogue of Hollyhocks* 1864, the 18th annual edition, contains descriptions of the many sterling novelties which have appeared during the season, 10 of which have won First-class Certificates, supplemented by an alphabetical descriptive list of the general collection, amounting to about 250 varieties.—*B. S. Williams's Catalogue of New Pelargoniums* contains Mr. Beck's novelties of the present season.—*Narcisse Gaujard's (successeur de Ad. Papeleu à Gand) Extrait et Supplément du Catalogue Général* is an extensive and partially descriptive list of fruit trees and of hardy ornamental trees and shrubs, accompanied by illustrations of several modes of training the former.

Garden Memoranda.

Seaforth Hall, Seafield, Liverpool.—In taking a retrospective glance amongst gardens, one does not require to be very old to see that gigantic strides have taken place in every department. It is not necessary for men in the prime of life to take down musty volumes from their library, and perplex their brain in finding out the length and breadth of the horticulture of the past, and the earlier portion of the present century, in order to make out a case that this branch of science and art has at least kept pace with the times. Twenty years ago gardening did progress steadily though slowly; but compare its progression since, year by year, and what do we find? Instead of a limited acreage of garden for the cultivation of hardy fruit and vegetables, with a small modicum of flowers, as possessed then by gentlemen of respectability, we have now as much in proportion covered with glass to furnish, both in season and out of season, all the luxuries in fruit, vegetables and flowers that could be named. Luxuries of this kind a few years ago were chiefly confined to noblemen and other lords of the soil. Commercial men scarcely ever dreamt of such a thing, but the mania has got hold of them, and that dogged and enterprising spirit, which is ever prominent in commercial transactions, actuates these gentlemen in this particular, and prompts them to rival if not eclipse their titled brethren. Such indeed is laudable ambition.

It may be that they cannot get possession of broad acres, a fine baronial mansion with historical associations, a splendid park, and huge specimens of trees dotted over the landscape. Such things cannot be created in a day, and are not often in the market. Those then who hold such enviable treasures may revert with pride to them, and mock at the puny attempts to imitate what requires the work of centuries to complete. Splendid palatial-like structures, with all the modern improvements known to architecture, however, can be raised. Acres of glass can be laid down in a block of ground to furnish all that is rare and beautiful in Nature, and can be put up to please the æsthetic eye, and form a grand feature in companionship with such a mansion. Grounds can be laid out by the garden architect so pleasing, and upon the whole so beautiful, as to be almost a perfect Eden.

Seaforth Hall, the seat of — Fernie, Esq., is one of those places which possess more or less of what has been indicated. Mr. Fernie is evidently one of those gentlemen who do not do things of the sort by instalments. The whole place has risen up in two years. What was a barren piece of sand driven at pleasure by the furious waves of the Mersey, at the mouth of which it stands, is now transformed into quite a fairy-land scene. At first a strong retaining wall, which was supposed to have been proof against wind and tide, was built, but the waves mocked both builder and wall, sapped its foundation, and utterly destroyed it. Go now and examine the piece of masonry that has recently been raised, and you will at once see the determination and spirit of the man who owns it. It is exactly 665 feet long by 70 feet wide, and 14 feet deep—a piece of solid masonry! The stones that make it up are ashlar, firmly cemented together, all quarried and brought from Yorkshire. Ye who know the price of mason work per cubic yard, estimate this! Deduct, however, the superficies of an artificial piece of fresh water, 600 × 24 × 3 feet, which considerably lessens the expense and adds to the beauty of the spacious promenade. This, of course, would make admirable groundwork in proper weather for skating and curling. Curling, however, is a Scotch game, as peculiar to that country as cricketing is to England, and may not be resorted to by Mr. Fernie and his friends. A neat cast-iron balustrade surrounds this piece of water, and one of the same pattern forms the extreme boundary line seawards.

The piece of ground is something less than 700 feet long, and judging by the eye cannot be very much wider. The mansion is situated in the centre of the block, and is a square pile of handsome outline, built wholly of stone in 6 inch courses, and looks well from any point of view. The back of it faces the sea: the lower and principal suites of rooms are well raised above the common level: and the topmost, besides being built with the same material as the lower ones, is overlaid with Welsh slates of uniform size, the better to ward off the cutting winds from the seaward.

Attached to the mansion is a glass corridor, 300 feet long by 18 feet wide, which forms a spacious promenade to the block of stove houses, greenhouses, and forcing houses that are erected in an open square at the extremity. This corridor is an exceedingly neat span-roofed erection, with perpendiculars about 9 feet high, the one of wood and glass, giving the promenader a glimpse of the river scenery, and the corresponding one of the same height being a dead wall faced up with cement and finished off to imitate stone work. The legs of the span run up at about an angle of 50° to longitudinal rafters, placed about 2 feet apart, from which aperture is a raised hood-like triangular top, so fitted up with gearing that a lever at one end turns the glass panels on a pivot so that air can be admitted at pleasure. The simplicity of both the lever and pinion systems, which are equally simple and effective, is admirable, and leads to their general adoption in all recent erections. The time saved in working either of the methods soon reimburses any additional primary outlay. Further, no style of erecting houses now-a-days can be considered complete where the architect does not stipulate for the principal sashes to be fixtures. Houses that have sloping sashes moving up and down are little better than huge shower baths in stormy wet weather. As a matter of economy, then, not to speak of the more handsome finish which houses with hood-like tops present, ventilation ought to be provided for in some such way as the one in question.

This spacious promenade, 18 feet wide, is equally divided into three parts—6 feet for the borders on each side of a 6 feet path. The path is of polished stone, with a handsome rounded curb-stone on either side. An ornamental cast-iron grating, 1 foot wide, is let in on either side for the better diffusion of heat from pipes underneath. The system of heating is very good; there are two rows of pipes at front and back, besides these double rows under the passage. The goddess of Fashion emphatically demands a spacious walk; and standing at one end and looking up this vista, one is compelled to admit that taste is moving in the right direction, for however admirable the finish and general contour of a house may be, it loses half its grandeur if you have not breadth of walking space to move along in. Ornamental wrought-iron arches, with arms welded on to support the roof, are placed at regular distances along this conservatory arcade, and form admirable supports for climbers, which run up and throw their branches like festoons from this pretty gilded archway. The rafters are toned up with light blue—Crystal Palace fashion—and the astragals are white, which colouring, taken with the broad panes of Hartley's rough plate, has a very pleasing appearance.

All this is very grand of itself, all very spacious. Without plants, however, and plants too of considerable age, and diverse in kind, it would not look one whit better than a splendid, gilded, stuccoed room unfurnished. Ranges of Vineries are got up in a twinkling, and furnished at comparatively little expense, but the gentleman who is ambitious enough to erect what might be called a winter garden like this, must count the cost beforehand, and be prepared

to furnish it on a scale of magnificence. It is scarcely necessary to say that in this case it has not been done niggardly. The first thing that strikes the eye on opening the side door of the mansion and stepping inwards, is a collection of huge Camellias, as thickly set with buds at most of the points as bunches of Filberts, and as vigorous and dark green in the leaf as those unique plants that grow wild in a dark Conservatory at Bretton Hall—a place somewhat famous as having been under the superintendence of a Marnock, who lives an honour to the country; and, alas! of a McEwen, who faded away in the prime of life. How these plants, which are not less than 13 feet high, and from 6 to 7 feet at the widest part, mostly clothed with foliage to the bottom, and having stems as clean and smooth as a fast grown Ash, were brought from Scotland unscathed, so as to be in such condition a twelvemonth afterwards, we cannot pretend to say. If there is one bud on the largest old White (alba plena) there are a thousand, and the flowers which were expanding were no puny substanceless things, but large in the extreme. They were in large green painted square boxes, with ornamental knobs, and one of them weighed 2 tons. These Camellias certainly are a credit to the gardener who produced them. Lady Hume's Blush, which is well-known to practical men as a straggling grower, is one of the plants, and far exceeds anything of its kind we ever saw; it is a pyramidal plant, measuring by the eye about 12 feet by 5 feet. In London, Glasgow, or Edinburgh, the blooms of these plants on gala days would bring a large sum of money. Camellias, like Orchids, when well managed, are always growing into money. What admirable decorative plants for a house of this sort are the varieties of Yucca, forming as they do here handsome individual objects in prominent places. Then again, what graceful spray from the frondage of that old Protead, Grevillea robusta, of which there is a fine specimen. Moving along, we observe shining out among grosser foliage, a fine squatty specimen of Eugenia Ugni, with its red berries, glistening like beads, making admirable contrast to the vigorous specimen of the Crested Lady Fern that stands near to it. How seldom do we stumble upon that fine Ericaceous shrub, Clethra arborea, and how well it looked here! Acacias make capital specimen plants when kept in limits, and form admirable leafage in all conservatories. Here they were tolerably numerous. Prominently stood out a couple of match plants of the most handsome of the whole race of them, being more easily kept within bounds, and more ornamental when well bloomed—A. Drummondii; these stood 7 feet by 4, clothed to the pot rim. Sikkim and the Himalaya mountains were well represented in numerous Rhododendrons, which are quite at home in this sort of temperature. Maddeni was well set with bloom; so was Nuttallii, Edgworthii of which there was a unique specimen, Dalhousiæ, and one or two of the dwarfer species—these being just the sort of plants to mix among Ferns, and such things as the handsome Cycas revoluta, which at all times catches the eye in any arrangement. Of New Holland specimens there were numerous examples—all valuable plants, which it would serve little purpose to name. We must not, however, omit to mention the handsome specimen of that charming Leguminous plant, which finds so much favour with the ladies—Bossiæa linearis. These houses are brightened up with flowering plants in season, brought from the other houses. Fuchsia Dominiana, with its long brilliant-coloured flowers, looked very well; so did Aster argophyllus, with its glaucous silvery foliage.

But let us glance a moment at the climbers which are twining round the arches, as well as those that are neatly trained against the dead wall. First and foremost there is Eccremocarpus scaber, with its showy orange and red trumpet-shaped flowers standing prominently out. Then there is Cobœa scandens variegata, quite as useful in its way. The variegated Honeysuckle, recently introduced, would also make an admirable clothing for one of these arches; and Mr. Hughes, the intelligent gardener, fully alive to this, has some in process of training, to be brought in when of some appearance. Hibbertia dentata makes a fine plant for a wall, throwing its yellow, rosaceous-looking flowers, in tolerable profusion; while Swainsona elegans, Heliotropes of sorts, Clematises, Tropæolums, Jasminum elegans, and a few others of less interest, are all effectively used. *J. A.*

Calendar of Operations.

(For the ensuing week.)

Now that all the great operations of fruit tree and other planting are about to be commenced, it may not be amiss to direct attention to the extreme importance of thoroughly breaking up the land that is to be planted, wherever that is practicable. No mistake can be more fatal to success in many parts of the country than to imagine that because the surface soil is loose and works easily, that therefore no further disturbance of the land is required. How often do we hear of lamentations over plantations, not only of fruit trees, but also of other things, which fail because the land burns in summer, or because it is water-logged in winter. A frequent cause of these evils is the presence of a hard "pan" a short distance below the surface, which cuts off the upper soil from the under. This hard layer must be broken up; but this is not all; there must also be thorough drainage—not mere gutters, but good deep drains, sufficiently numerous to rid the land entirely of stagnant water. This necessarily involves a considerable outlay of capital; but not to a greater extent than the nature of so important an operation demands. After having incurred a heavy charge, it is most unwise to refuse so much more in addition as will insure success, especially when withholding it is to insure failure. To the proper preparation of ground for planting therefore too much attention can hardly be paid.

FLOWER GARDEN AND PLANT HOUSES.

Indoors maintain a steady temperature, and employ sufficient moisture only to keep the plants in a healthy condition. In most gardens leaves can be collected, and when properly managed they form perhaps the most useful source of bottom-heat with which we are acquainted, except, of course, hot water. If not already done, all the leaves necessary for carrying on the business of the ensuing year should therefore be collected as early as possible, and laid close together to heat. After fermenting for three weeks or a month, they will be in excellent order for use; in this state they will both heat with more certainty and tread more closely.

CAMELLIAS.—Owing to the comparative mildness of the weather some of the very earliest Camellias may now be coming into bloom; and where that is the case take care to keep as low a temperature as possible, in order to prolong their beauty. All drip must also be avoided.

HYACINTHS.—The earliest varieties will soon be in flower, and with care, a succession of them may be kept up till spring. For late flowering bulbs the best pots are 5-inch ones (forty-eights) for one bulb, and 6 or 7 inch ones (thirty-twos and twenty-fours) for three bulbs; where a fine display is sought for, three grown together in one pot will secure that object much better than single bulbs. For potting, the soil should be as rich as possible; such as one-half fresh loam, cut from a pasture with the turf decayed in it, and well-decomposed cow or horse manure, and a small quantity of clean sand well intermixed. If, however, this kind of compost cannot be obtained, then the lightest and richest at command must be employed instead. Drain efficiently, and, after filling the pots lightly with the soil, place the bulbs upon the surface, slightly pressing them into the soil. After watering, set the pots out of doors on a dry bottom, and cover them with old tan, ashes, sawdust, leaf-soil, Cocoa-nut refuse, or any other light material. After remaining thus for a month or so, the bulbs will be sufficiently rooted to render it safe to remove them to a gentle bottom heat of about 55°, introducing the pots in numbers proportionate to the demand, at intervals of about a fortnight; in this manner, a succession of flowers will be secured. In forcing, endeavour to prevent the roots from penetrating the fermenting material.

FORCING GARDEN.

ASPARAGUS.—Three or 4 inches of additional covering should be laid over the roots when the stems appear at the surface, and if the bed has not yet received any water, some may be necessary. This may be ascertained by examining the mould about the roots. Prepare leaves and dung for a successional bed.

CUCUMBERS.—Bearing plants in pots and boxes should be fed once or twice a week with manure water, but take care that it is not too strong or cooler than the air of the house. If young plants have already been raised on a dung bed, they must be carefully guarded against damp and steam from the hot dung. A layer of sand over the surface will check the ascent of vapour through the light material with which seed beds are usually covered.

PEACHES.—Begin to force very gradually, giving air on every opportunity, and leaving a circulation day and night, if possible.

PINES.—Atmospheric moisture must not be withheld from Pines in a swelling state, although we have arrived at the dark days. Nothing has a greater tendency to premature ripening. Give little or no air at this season, except under the pipes. There should, however, be slight ventilation of this kind all day, and sometimes all night while the weather is mild.

VINES.—Where the buds on very early Vines are beginning to swell, or are starting a little, increase of temperature must be allowed—say 60° by day and 55° by night. Take care that plenty of atmospheric moisture is maintained by syringing or otherwise. Do not, however, keep them constantly wet. Allow the stems to become comparatively dry at intervals. The oftener the fermenting materials placed inside are turned the better. Let newly-introduced Vines be bent down where practicable, to equalise the flow of sap. As soon as the Grapes are all cut in late Vineries, let the Vines be pruned immediately. Whether taken out to rest or not depends, of course, on other arrangements. If they are taken out, be sure to cover them well with old mats and litter.

HARDY FRUIT AND KITCHEN GARDEN.

According as the weather is more or less favourable, the various operations of pruning, nailing, or digging amongst the smaller fruit trees should be forwarded. Should the weather set in frosty, wheel out manure as has been before recommended to all vacant plots of ground, where heaps may be made, and cover it with soil till wanted. In many cases, however, it may be trenched in at once, especially where Carrots, Parsnips, Beet, or Onions are to be grown. All these require to have the soil turned up previous to sowing time.

CAULIFLOWERS.—Great attention must be paid to plants of these in frames, and under handlights; stir the surface round them in mild weather, and give frequent dressings of dry soot, lime, and ashes, taking care also to give air whenever practicable.

WINTER GREENS.—All late Cabbages, &c., should be earthed up if not already done, and if dry leaves are plentiful they may be laid very thickly between rows of choice Broccoli, and confined there by sticking Birch boughs round the outside of the beds. Snow's Winter Broccoli, if coming in, should be taken up and protected whenever the heads are large enough for use.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Nov. 23, 1864, as observed at the Horticultural Gardens

Nov.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain.
Thurs. 17	18	29.372	29.109	55	44	49.5	46	47½	S.	.22
Friday 18	19	29.676	29.118	55	25	40.0	48	48	S.W.	.00
Satur 19	20	29.822	29.632	54	41	47.5	48	48	S.	.00
Sunday 20	21	29.693	29.509	54	28	41.0	48	48¼	S.W.	.09
Mon. 21	22	29.860	29.742	53	39	46.0	49	48½	S.	.00
Tues. 22	0	29.604	29.465	56	29	42.5	49	49	S.W.	.03
Wed. 23	24	29.631	29.373	48	37	42.5	48	49	S.	.95
Average.		29.652	29.421	53.5	34.7	44.1	48.0	48.3		

Nov. 17—Rain, with strong wind; fine at night.
— 18—Cloudy, boisterous; frosty at night.
— 19—Fine; very fine throughout.
— 20—Overcast; very fine; overcast; slight frost.
— 21—Dense fog; fine; rain at night.
— 22—Rain, with strong S.W wind; fine at night.
— 23—Rain; fine; partially overcast; very heavy rain at night.
Mean temperature of the week 3 deg above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Dec. 3, 1864.

November and December.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 27	47.0	34.4	40.7	17	0.88 in.	1	5	6	1	7	9	6	4
Mon. 28	48.2	34.9	41.6	18	1.21	2	4	3	2	9	7	7	4
Tues. 29	47.1	34.3	41.0	19	0.56	4	1	8	3	5	11	4	2
Wed. 30	48.0	34.7	41.3	20	0.30	4	4	4	3	3	10	8	2
Thurs. 1	48.4	35.4	41.9	18	0.25	2	2	3	4	5	7	11	4
Friday 2	47.7	34.2	40.4	17	0.63	2	4	4	1	5	12	3	7
Satur. 3	46.9	35.2	41.0	20	0.26	1	6	5	2	4	11	8	1

The highest temperature during the above period occurred on the 1st, 1857—therm. 62 deg.; and the lowest on the 30th, 1858—therm. 14 deg.

Notices to Correspondents.

BOOKS: *J Leman.* The last Supplement to Loudon's Hortus Britanicus bears date March, 1850; there is no similar list bearing a later date.—*R D.* You are not likely to meet with Martyn's Flora Rustica except at a second-hand book shop. You should commission some dealer in old books to look it up for you.—*J Pegler.* The last edition of Loudon's Encyclopædia of Plants is brought down to March, 1855. The last edition of Loudon's Hortus Britannicus bears the date of 1850.

DODDER: *Cuscuta* will find a very good account of British species of this genus of parasites in the second volume of the Transactions of the Botanical Society of Edinburgh. He may also consult Mr. Bentham's Handbook with advantage.

EVERGREENS FOR A TOWN GARDEN: *Constant Reader.* You will find Aucuba indispensible. To this add such plants as Euonymus japonicus, green or variegated; Hollies green or variegated, especially the vigorous broad-leaved sorts, such as Shepherdi; Laurustinus; and the hardy Yuccas. It would, however, be only fair to the plants to have the soil made as far as possible congenial to them. With this proviso, Rhododendrons may be introduced with every prospect of success. We cannot recommend Conifers generally, but Araucaria imbricata would most likely succeed.

FIG TREES: *Constant Reader.* The small fruits which appeared about September on your out-door Fig trees are useless, and will perish with the cold of winter; but if you apply a little shelter, so as to preserve the embryo fruits just visible now towards the tips of the shoots, they may produce you a crop next summer if all goes well. A sort of thatch of thick straw fringes, suspended tier above tier, and securely fastened, will probably afford sufficient protection, unless the situation is very unfavourable.

NAMES OF FRUITS: *B H.* The Grape from the Vine which you sent from Damascus is the Stoneless Oval Berried, which differs only from the White Corinth or White Kishmish in having the berries oval instead of round.—*D D D.* 1, 3, 5, Passe Colmar; 2, 4, 6, Glou Morceau.—*J Evans.* 1, Autumn Bergamot; 2, Beurré d'Yelle; 3, Golden Noble; 4, Alexander; 5, Beauty of Kent.—*W J C.* 1, 4, Franklin's Golden Pippin; 2, Rhode Island Greening; 5, Glou Morceau.—*F D H.* 1, 2, Glou Morceau and Passe Colmar (labels misplaced); 3, Glou Morceau; 4, Easter Beurré; 5, Aston Town? 6, Scarlet Pearmain.—*An Old Sub.* The scarlet Apple you describe, with pink flesh, is most probably the Sops of Wine.—*T T U X.* Your seedling Apple, No. 4, is very handsome, like the Alexander in size and form, with uniform blush of deep red next the sun; it may do for kitchen use.

NAMES OF PLANTS: *J D.* Your Moss appears to be an aquatic form of the common Hypnum rutabulum; but without fructification it is often very difficult to name Mosses, indeed they are not sufficiently horticultural.—*M J C.* 1, Polypodium vulgare; 2, Blechnum Spicant; 3, Asplenium Trichomanes: 4, Asplenium Adiantum-nigrum.—*W B.* No. 2 is only a very luxuriant form of Tare, Vicia sativa.—*Faber marinus.* Rhaphiolepis indica.—*H Z.* 5, Asplenium præmorsum; 6, Pteris tremula; 7, Asplenium bulbiferum; 8, Cheilanthes elegans.—*B C D.* Asplenium Adiantum-nigrum.—*A B C.* Gymnogramma pulchella, and Cestrum aurantiacum.—*Win.* We do not name Mosses; they are not of sufficient horticultural importance.—*J H.* Your Australian leaf is probably Tecoma diversifolia.—*H D.* It is impossible to name mere scraps of leaves; 2 is some Xanthoxylum; 3 is a Pleroma, perhaps heteromalla; the others not recognisable. You must send them in a more complete state.

WALNUTS: *G F* asks what is the best method of keeping Walnuts, for he has always failed to prevent them from becoming mouldy, notwithstanding that he has tried them packed closely in jars, spread out on shelves, and also packed in sawdust.

WHITE HOLLY: *W C B., Hexham.* We have no knowledge of any case in which a pure Albino like yours has been preserved for any length of time. Though yours has kept constant since the summer of 1861, its life has doubtless been dependent on the more normal portions of the tree. The most likely way to increase it would be by grafting; but the grafts must be kept in a close frame, and protected.

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"I received some Vegetable Seeds, also some Flower Seeds from your firm some 18 months ago, and they turned out first-rate."

May 15, 1863, *from* Sir R. MONTGOMERY, *Lieut.-Governor, Punjaub, India.*
"I am happy to tell you that the Seeds you sent last year answered very well. I carried off the first prize both for vegetables and flowers, as you will see by an extract from the *Lahore Chronicle*, which I enclose."

November 7, 1863, *from the* Rev. R. G. LAMB, *Green Point, Cape Town.*
"Your Seeds have answered right well; one pinch of such as yours is worth a handful of the stuff sold here, which generally goes to seed before coming to perfection."

October 6, 1863, *from* Mr. CHARLES HASELDEN, *Boyce Farm, near Auckland, New Zealand.*
"The Grass Seeds you sent me arrived in excellent condition, and already present a luxuriant appearance, with the promise of abundant feed early in the coming season."
Royal Berkshire Seed Establishment, Reading.

Smithfield Club Show.—Agricultural Hall.
JAMES CARTER AND CO.'S
STAND of PRIZE ROOTS, No. 96.

Smithfield Club Show.
STAND No. 98—GALLERIES.
WILLIAM SKIRVING begs to announce to his Friends and the Public that he will ATTEND, as usual, at the ensuing LONDON CATTLE SHOW (AGRICULTURAL HALL, ISLINGTON), to Exhibit Roots and Take Orders for AGRICULTURAL SEEDS of the most approved kinds.
Liverpool.—Nov. 26.

Smithfield Club Show.—Agricultural Hall.
DECEMBER 5, 6, 7, 8, 9, 1864.
STAND 56.
MESSRS. J. C. WHEELER AND SON, of Gloucester, will exhibit specimens of their well-known WHEELER'S IMPERIAL SWEDE, and ORANGE GLOBE MANGEL: and, by the kind permission of the Growers, the PRIZE WHEAT and BARLEY shown at the Gloucestershire Root and Grain Show; also, specimens of a NEW POTATO, of extraordinarily fine quality, called MILKY WHITE.
J. C. WHEELER & SON, Seed Growers, Gloucester.
STAND 56, Smithfield Club Show.
Seedsmen to the Gloucestershire Agricultural Society.

The Great International Show of Roots, Gourds, &c.
AT S. KENSINGTON, FRIDAY, DEC. 7, TO WEDNESDAY, DEC. 16.
SUTTON AND SONS, SEEDSMEN to the QUEEN, respectfully call the attention of their Patrons and the Public generally to their magnificent STAND at the above-named Show, comprising One Thousand popular kinds of SEEDS in GLASS CASES, with their English and Botanic names attached: One Hundred and Fifty specimens of GRASSES, all grown by SUTTON & SONS; Drawings by an eminent artist of the most useful sorts of Agricultural Roots: a large Collection of GOURDS; and Specimens of their improved varieties of MANGEL WURZEL, TURNIPS, &c., &c.
SUTTON & SONS, Royal Berks Seed Establishment, Reading.

Smithfield Club Cattle Show.
SUTTON AND SONS, SEEDSMEN to the QUEEN, respectfully invite the attention of their Patrons and Agriculturists to their magnificent STAND in the GALLERY of the AGRICULTURAL HALL, Islington, at the forthcoming Show, consisting of 200 distinct varieties of GRASSES for PERMANENT PASTURE and other purposes, all grown by themselves in their Trial Grounds, Reading; a large and choice Collection of GRASS SEEDS in canvas bags, and some very excellent specimens of their Improved MANGEL WURZEL, CHAMPION and other SWEDES, Yellow and White-fleshed TURNIPS, POTATOS, &c. Grown by their customers in various parts of the United Kingdom.
One of the Firm will attend at the Stand, where orders will be received for Seeds at moderate prices.
SUTTON & SONS, Royal Berks Seed Establishment, Reading.

Bingley Hall, Birmingham.
SUTTON AND SONS, SEEDSMEN to the QUEEN, respectfully call the attention of their Patrons and Agriculturists generally to their Magnificent STAND in the GALLERY of BINGLEY HALL at the forthcoming CATTLE SHOW, consisting of 200 distinct specimens of GRASSES for Permanent Pasture, Lawns, &c., all grown by themselves in their Trial Grounds, Reading. A large and choice Collection of GRASS SEEDS in bags, and some very excellent specimens of their improved varieties of MANGEL WURZEL, CHAMPION and other Swedes, Yellow and White-fleshed TURNIPS, POTATOS, &c., grown by their customers in various parts of the United Kingdom.
One of the Firm will attend at the Stand each day, where orders will be received for Seeds at moderate prices.
SUTTON & SONS, Royal Berks Seed Establishment, Reading.

Specimens of
SUTTON'S CHAMPION SWEDE,
(which has taken numerous Prizes again this season), may be seen on
MESSRS. SUTTON'S STAND,
BINGLEY HALL, BIRMINGHAM,
where Orders will be received.
Royal Berkshire Seed Establishment,
Reading.

THE MIDLAND FARMERS' CLUB.—A SPECIAL MEETING of the MIDLAND FARMERS' CLUB will be held at the Lecture Theatre of the Philosophical Institution, Cannon Street, Birmingham, on THURSDAY NEXT, December 1, at 3 o'Clock.
Subject for Discussion: "THE TENURE of LAND," which will be introduced by Mr. R. H. MASPEN.
Members will be enrolled on the day of the Meeting, for which purpose a Committee Meeting will be held at the same place, half an hour previous to the Special Meeting, and Members nominated at this Meeting will be eligible to attend the reading of the paper.
It is intended to publish the discussion for the use of Members.
Nov. 26, 1864. JOHN B. LYTHALL, Secretary.

THE NATIONAL EXHIBITION of DOGS.—The FIFTH GREAT ANNUAL EXHIBITION of SPORTING and other DOGS will be held in Paradise Street (near Bingley Hall), BIRMINGHAM, on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, and 30, and December 1, the week of the Cattle and Poultry Show.
☞ For SPECIAL RAILWAY ARRANGEMENTS, see the Advertisements and Bills of the Companies.

BINGLEY HALL, BIRMINGHAM.—The SIXTEENTH GREAT ANNUAL EXHIBITION of FAT CATTLE, SHEEP, PIGS, DOMESTIC POULTRY, CORN, ROOTS, and IMPLEMENTS, will be held on MONDAY, TUESDAY, WEDNESDAY, and THURSDAY, November 28, 29, 30, and Dec. 1.
The Exhibitors and the Public will be admitted to Bingley Hall to WITNESS the JUDGING of the Cattle, Sheep, Pigs, Roots, and Corn, on SATURDAY, November 26, at 9 o'Clock A.M., upon payment of 10*s.* each. There will be no admission to the Poultry Department until after the Judging is completed.
For SPECIAL RAILWAY ARRANGEMENTS, see the Advertisements and Bills of the Companies.

WITH the GARDENERS' CHRONICLE and AGRICULTURAL GAZETTE of SATURDAYS, December 3 and 10 (the weeks before and after the Cattle Show), will be published a SUPPLEMENT containing full particulars of the SHOW of STOCK and IMPLEMENTS at the AGRICULTURAL HALL, ISLINGTON. ADVERTISEMENTS intended for either of these Numbers should be sent to the Office not later than THURSDAY in each week. A Copy sent for Six Stamps.
Office for Advertisements, 41, Wellington Street, Strand, W.C.

WAITE'S ECLIPSE PURPLE-TOP YELLOW HYBRID TURNIP.

WAITE, BURNELL, & CO.

Beg to inform the public, that they can now supply SEED of this invaluable TURNIP. The ECLIPSE is a purple top, yellow-fleshed, and decanter-shaped variety, with a small top; it is a quickly growing Turnip, can be sown much later than the Swede, will store in the best condition till the end of May, and in the opinion of many farmers who have grown it, will keep better than the Swede. It is sound in flesh, rich in flavour, and preferred by Cattle to all other varieties.

This valuable TURNIP was introduced a few years ago by the late Mr. Waite, but from various causes, the stock has been nearly exhausted; after careful attention, W., B., & Co. have again secured a supply of the genuine and original stock.

Owing to the above circumstance the Purple-top Scotch (to which it is very superior) has been substituted by some houses for it, and great disappointment experienced, especially by those who know the Eclipse.

W., B. & Co. have considered it necessary to state that it is sent out by them in Canvas Bags, sealed, containing not less than a Half Bushel, and in Sacks marked

Price 50s. per bushel. *A Discount allowed to the Trade.*

Labels supplied to the Trade for placing on smaller packages.

SEED WAREHOUSE, 181, HIGH HOLBORN, LONDON, W.C.

The Agricultural Gazette.
SATURDAY, NOVEMBER 26, 1864.

IT is the noblest agricultural distinction of 1864 that especial attention has during it been paid to the important subject of Cottage Architecture. The conference on that subject, in which so many public-spirited and benevolent men took part before the Society of Arts—the prizes for good plans offered by Mr. BAILEY DENTON, and awarded after a competition superintended by the same Society—and the publication by Mr. C. W. STRICKLAND of a work* containing the results of similar competitions, superintended by the Yorkshire Agricultural Society—all honourably distinguish the past year. Mr. STRICKLAND's volume, dedicated to his "fellow workmen in CHRIST's kingdom, for whose sake he has studied the subject therein treated of," is a treatise not merely on the social importance of good cottages, which, as may be gathered from its dedication, is a point on which the author feels strongly, but on the practical details of cottage construction, which are so

* On Cottage Construction and Design: by C. W. STRICKLAND. MACMILLAN & Co.—Lady C. KERRISON's book of Cottage Plans must not be omitted from the list of this year's performances.

presented to the reader as to enable him both satisfactorily to estimate, and, if he thinks proper, easily to follow the author's guidance. The chapters are 1st, introductory, 2nd, on the arrangement of the plan of cottage, 3rd, on details of construction, 4th, on cottage design, and 5th, on details of design. The whole is fully illustrated with plans and elevations of all kinds of arrangements, including plans of cottages, (*a*) with a living room and scullery on the ground floor, and three upstairs rooms; (*b*) with only two upstairs rooms; (*c*) with parlour and kitchen and scullery on the ground floor, and either two or three upstairs rooms; and (*d*) pairs of cottages in which the rooms are arranged differently in the two cottages. Of most of these, several examples are represented and discussed in detail. Ample specifications are appended to the book of the work to be done by excavator, mason, carpenter, slater, plasterer, plumber and glazier, and ironmonger respectively, in order to the completion of good work; and the book concludes with a particular specification by the author of those whom he includes within the terms of his dedication.

We greatly prefer the general to the particular terms in which his dedication is couched. Mr. STRICKLAND entertains and expresses an altogether unjustifiable abhorrence of trades unions, and of strikes. These may have been generally mischievous enough, and doubtless men have been oppressed by them, and employers have been bullied by them often enough. But these results are not the object or the "purpose" of these unions. Their purpose is a lawful one; and whether it be in any particular instance practicable or not, it is perfectly possible to conceive of right-minded men uniting for the attainment of it. The author of this book has therefore no right to use the following words which we find in its concluding pages:—

"Let it not for a moment be supposed that, amongst my fellow-workmen in Christ's kingdom, I can include men who enter into unions, the purpose of which is to bully their employers and to oppress their fellow-workmen. The man who has sold his conscience to a club, and has become the slave of a club delegate, is no longer a servant of the Prince of Peace, but has become a worshipper of Baal, and his idol is lawless power. He can have no sympathy with the work that I am engaged in."

These words, however, do but little affect the value of the work, and, we repeat it, Mr. STRICKLAND's book is a thoroughly practical and useful treatise on the construction of cottages.

We referred the other day to the cottage plans of Mr. JOHN BIRCH, architect (55, Page Street, Westminster), which carried off Mr. BAILEY DENTON's prize offered through the Society of Arts. With greater elegance of design than many of those in Mr. STRICKLAND's volume, it unites the same accommodation—living room, scullery, and pantry on the ground floor, and three bedrooms on the upper floor—which is provided in several of the plans already named. There appears to us less waste of room, too, in passages and staircase; but on the other hand the plan offends against one of the principles of comfortable arrangement on which Mr. STRICKLAND very properly insists, viz., that living rooms ought not to be passages. The living room in Mr. BIRCH's plan is 12 feet 6 inches by 12 feet; but the way from the front to the back door lies through it and the scullery. The three bedrooms are 12 feet 6 inches by 9 feet 6 inches, 9 feet by 8 feet, and 7 feet 6 inches by 6 feet respectively. The cost of the pair of cottages, with a very complete equipment of offices, is declared to be, under ordinary circumstances, 203*l*.

AN advertisement announces that Mr. MARRIAGE, of Grasmere, near Mitcham, Surrey, is prepared to direct and superintend works for the agricultural utilisation of town sewage. We call attention to this advertisement, for Mr. MARRIAGE is, we believe, the only person whose experience hitherto can be safely quoted in anticipation of a profitable solution of this difficult problem. He alone can speak of having dealt with so large a quantity as one million gallons of town sewage daily. And although this is only 1 per cent. of the quantity at the disposal of the Metropolitan Board of Works on the North side of the Thames, it is more, we believe, than falls to be dealt with artificially anywhere else. It has been declared that the Croydon sewage which is utilised on the farm at Grasmere is woefully mismanaged; and that it is no example to be followed. To this the conclusive answer is that the stream which washes Croydon out comes turbid and filthy on to the upper end of Mr. MARRIAGE's farm, and leaves it clean and limpid. It is clean water when it leaves the farm, and if so, its fertilising ingredients have been all extracted and turned to account. The filthy water which leaves the town is cleansed, and thus a nuisance is abated; it is cleansed, too, by a profitable conversion of its filth into vegetable growth. And Mr. MARRIAGE, who has succeeded here, is the best possible adviser of those who may be in similar difficulties elsewhere.

— The Edinburgh papers announce the formation of a Chamber of Agriculture and Scottish Farmers' Club. The advantages of such an institution were thus fitly declared by Mr. HOPE of Fenton Barns at the meeting held last week to receive a report from the committee appointed at a previous meeting to make the necessary preparations for its establishment. He said:—

"It appears to me the establishment of such an association might prove of immense advantage to practical agriculture, and to the social and material interests of all connected with land. Doubtless, the Highland Society and other kindred, though humbler, institutions do much to further the progress of scientific and practical agriculture and to spread that knowledge abroad; but a Farmers' Club, if it embraced members from all parts of Scotland, would afford facilities which do not at present exist in any other institution whatever for personal communication and the formation of friendships amongst members of the body, which would stir up and excite a generous rivalry in the agricultural body from one end of Scotland to the other. A Chamber of Agriculture would tend much to unite together agriculturists as tenant-farmers. It would foster a spirit of manliness and independence, and enable them to act together in a way to ensure respect for their sentiments on all Legislative enactments affecting their interests in the Imperial Parliament. In such questions as the Law of Hypothec and the Cattle Diseases Bill, surely the united voice of the farmers of Scotland would not speak in vain. There are many other practical questions that would be more justly dealt with, and more satisfactorily settled, if half-a-dozen farmers had seats in Parliament, even if that class as a whole made that use of their influence which their numbers entitle them to."

During the subsequent proceedings the discussion turned on the question whether the proposed institution should be merely a Chamber of Agriculture or a Farmers' Club. The latter idea, including the item of hotel accommodation, was ultimately adopted unanimously, although the former view was at first strongly advocated by Mr. SCOT SKIRVING, who thus declared his preference of a merely discussional Chamber. He said:—

"In the first place, if gentlemen from a distance are so lukewarm that they will only join the association in consideration of the association giving something like bed and board, I would not be very anxious to open my arms to them, and on the other hand, it is perfectly delusive to suppose that the Club could give these advantages. No club could give all the farmers of Scotland bed and board. The wealthy clubs of Edinburgh, the members of which pay some 30 guineas of entry-money, and some five or six guineas a year, totally fail, when there is a large meeting in Edinburgh, to accommodate its members. It is only a few who are so fortunate as to get accommodation by sending previous notice. The Club, therefore, so far as giving beds to the far north, would be totally delusive. As to meeting with each other, it is very pleasant to meet one's fellows, but we do not just travel some 50 miles to meet a gentleman whom we see at home every day. When our friend the advocate or the writer to the signet in Edinburgh meets us, he says 'Will you look in at 6? I have asked some of your friends to meet me at dinner;' we would rather meet some strangers than those we meet every day, that we may hear nothing of agriculture, but get some new ideas. Then the table of the club-house is to be covered with agricultural journals. Why, we get those at home. I should like to see the men from the far north get the "Saturday Review" for a change, to get some new ideas, because we have all the agricultural journals at home. Then I fear the market will be carried into the Club; and the manure-merchant will have the mantelpiece covered with his samples, and the grain merchant with his cards, and there will be no escape from business. (Cries of 'No, no.') Why no? I see no reason why this should not be done; and if I were a manure-merchant I should be inclined to do what I could to sell my manure at the Club. I think it a great pity to put in this dead weight to one of the best proposals that was ever made for having a Chamber of Agriculture; and that is the reason why we have got so few members. For two or three guineas a year we can never get a good Club. We can only have a cheap and nasty Club at such a sum; but for 10*s*., or 1*l*. at most, we may organise the means of calling meetings together—we may organise an association, and have secretaries, and make a very powerful association for one-third of the money; but with the 3*l*. we shall do nothing.

Mr. SKIRVING's opinions were not generally accepted by the meeting; and its feeling being manifestly in favour of the combined Club and Chamber, he at length withdrew his opposition, and seconded Mr. M'LAGAN's motion for the immediate adoption of the proposal for a combined Farmers' Club and Agricultural Chamber.

— We have the satisfaction of announcing that Mr. THOMAS BALDWIN, of Glasnevin, whose name has been long and favourably known in the agricultural world and to agricultural readers, has been appointed to the office of Inspector of Agricultural Schools in Ireland, lately resigned by Dr. KIRKPATRICK.

STEAM CULTIVATION.

AUTUMN SEED TIME.

I SHOULD imagine there is scarcely a clay-land farmer who has not at some time or other felt the great disadvantage and loss arising from the fact of his being in arrears of work when the autumn seed time arrives: it being of the utmost importance that the work at all times on heavy land should be kept well forward, in order the better to contend with adverse weather. This does not indeed apply in any degree to the present season; in these parts Wheat sowing having progressed under very favourable circumstances. The reverse of this is not unfrequently the case when the autumn rains set in early; it then becomes an anxious period for the occupier of heavy land, and in addition to wet weather he may have to contend with a large amount of work in arrear, and the seed time is rapidly closing in upon him. The same amount of horse labour which would in earlier days easily and satisfactorily finish off the nine and ten acres per day, now with much difficulty and hard labour both to man and beast accomplishes but six or seven; neither is the work anything like so well done. The land is fast becoming extremely wet and unmanageable, and the drying winds of one day are succeeded by heavy drenching rains the next. The sun no longer shines with any power sufficient to cause any evaporation, and day by day the land becomes wetter and sodden with moisture, and now commence a series of disastrous complications. The drill machine refuses to work in a proper manner, and the unsatisfactory method of broad-casting is had recourse to, for somehow or other the Wheat must be got in. The small lands, too, or bouts, or ridges, or whatever other terms may be applied to those singular inventions of mankind for carrying off the water from the land when Providence ordains it should pass through and enrich it, now become useless at a critical time, failing when they are most wanted, and the poor horses sink fetlock deep in the miry furrows. The small birds, too, the farmers' friends in an ordinary sense, now become his bitter enemies, with appetites sharpened by the increasing cold, perseveringly follow the drill, not a seed escaping left uncovered, and attacking with avidity the spearing of the corn; the two or three bushels sown late produce not so good a plant as the bushel per acre sown at Michaelmas. It is a most unpleasant position to be in, and serious thoughts arise as to whether the Wheat sowing will be completed at all. Still hoping and persevering, the unfortunate individual struggles on, wet, frost, and bad weather dead against him, until finally winter comes on in real earnest, and puts a stop to all further progress; the elements apparently punishing severely for that want of activity and diligence which admits of no such day as to-morrow in its calendar.

It is not so, however, in another case where a good steam-engine is at command. A portable double cylinder 10-horse power engine will be all that is necessary to work the heaviest description of land; and, indeed, much better than one of greater power, for it must not be forgotten that ploughing is inconsistent with the true principle of economical working, and such a form of cultivation antagonistic to the motive power of steam. To overcome the great resistance afforded by the passage through the soil of three or four ploughs yoked abreast, and the transit of an engine on a common road instead of metal surface, a costly and powerful locomotive has been manufactured, which must ultimately succumb to the lighter portable engine, and the simple yet efficient steam cultivator. Let us imagine that the clay-land farmer is well provided with steam-power, that his root sowing is completed, and he is beginning in the July month to prepare for Wheat sowing—early days certainly, but not a whit too soon.

He commences with carting out his manure upon his leas, &c., and while his staff of horses is thus employed, carting and ploughing, his steam engine is at the same time smashing up his bare fallows, both powers working extremely well at this season of the year. This work is continued, save where interrupted by harvest, and by the time it is completed a large breadth of land is ready for the reception of the Wheat seed, and with the first autumn rainfall sowing commences. The stubborn clods, mellowed and reduced by alternate changes in the weather, break down into excellent

tilth, and a novice would scarcely believe such land to be heavy and wet clay while making such an excellent seed bed. A small quantity of seed, too, suffices, every grain almost forming a plant, and in a very short time the first great blow for the successful management of heavy clay land is completed; all other agricultural operations for the ensuing twelvemonth deriving benefit from an early and successful Wheat sowing. *W. S.*

ON STORING ROOTS.

(*Concluded from p.* 1116.)

Having laid before the reader a few of the many important benefits attending the storing the Swede crop, we will now more closely confine our remarks to the subject of this paper—the best method of storing the crop. We will therefore proceed by considering the different methods now generally practised of securing it from the attacks of frost, from heating, &c. On most farms a considerable quantity of the roots is consumed in the yards by cattle. Here good root houses are a valuable acquisition to the farmer, where a large amount of food can be safely secured without fear of injury from frost, and also easily accessible during the most severe weather, the value of which can only be appreciated by those who have experienced the difficulty, expense, and loss attending the carting the daily supply for a large number of beasts from distant fields, through deep snows, or in severe frosts. The best root houses we have seen are on the home farm of John Shaw Leigh, Esq., Hoo Park, Luton, Bedfordshire, and that of Earl Radnor, Coleshill, near Faringdon, Berks, the former of which is capable of containing 1300 tons of clean roots; but as root-houses form the exception, we will confine our remarks to the different systems of storing practised in the field and the homestead. In some places a deep furrow is opened with the plough going about and throwing a furrow to each side, thus leaving a considerable opening, into which is placed as many roots as it will hold; they are put in either entire, topped and tailed, or topped only, in accordance with the practice followed by different individuals, when one bout of the plough throwing a deep furrow over each side, and meeting at the top, completes the operation; by this method a large breadth can be quickly secured at a small cost. They generally keep well, and when wanted for use are turned out either by the plough passing through the middle of the row, or by hand, using a common three-tined fork; when the plough is used it is necessary to take out the coulter, and run the plough fairly under the roots, otherwise there is some danger of injuring them. Four years ago a neighbour of ours secured a field of Swedes in this way, and we could distinctly traces the lines where the roots had lain, not only throughout the following crop of Barley but also in the succeeding crop of seeds, the Barley on those parts being much more luxuriant, and lodged before harvest, while the other parts of the crop stood up. The following year the seeds were grazed, and here again the lines were plainly distinguishable by their lighter green colour, and on a closer examination by an almost total absence of Clover, though the rest of the field was well stocked with that plant. This can be easily accounted for, as the roots were covered without having been either topped or tailed, the tops decomposing greatly enriching the soil, and still further by a great quantity of manure adhering to the fibrous roots being collected together and deposited there. Another system of storing, termed 'placing,' is practised in some parts: a piece of sound dry old turf, or a gravelled courtyard is selected, and the Swedes pulled and carted there with both roots and tops left on; they are then placed as closely together as they can be put, with the roots downwards, the tops forming all the covering they receive. The system is not suited to an extensive scale, and is principally confined to the mild climate of the west of England. In storing the crop in the field to be consumed by sheep some prefer making large heaps, drawing them together with horses and carts; fortunately for the interests of the farmer the practice is now happily nearly abandoned. The damage and loss arising from fermentation, the unsatisfactory progress of the flocks from being too long and closely confined on the same ground, and the irregular state in which the manure was deposited over the land, were too objectionable to warrant its continuance. After repeated trials of all the different methods used for storing roots in the field, we think that of throwing into conical heaps, distant from each other about half a chain (of course the distance will vary according to the crop) not only the cheaper, but by far the safest way of securing either Turnips or Swedes, as both may be kept equally well by the same means. They are pulled by hand, and the tops only cut off, care being taken not to cut too close so as to injure the crown of the bulb; no trimming-knife should be allowed to be used having a hook on the back, which can be struck into the root, in order to assist in pulling it from the ground, while it endangers the keeping of the root. After being rounded up in a conical form, they are covered with from 4 to 6 inches of earth; the heaps being made at regular distances vary but little in size, which is of considerable importance when they come to be consumed. In light land we do not use straw, but prefer covering with earth only; some stick a wisp of straw in the top of the heap as a ventilator. In small heaps this is quite unnecessary, as it acts as a conductor of rain and frost, and according to our experience is more injurious than useful on heavy soils. If straw is abundant, a light covering might be used with advantage, as they strip more clean, though during the frosts of 18° on the 9th and 16° on the 10th of February of the present year, the frost had penetrated more into the heap covered with stubble and the same quantity of earth, than others in the same field, which were covered with earth only. This we attribute to the greater quantity of air in the heap where the stubble was used; stored in this way we have found them to withstand the most severe weather, and keep well till far in the summer. The only objection is, unless the utmost care is taken to spread the roots that are trimmed off when the crop is consumed, the following crop of corn will be lodged and worthless on those spots where the root-heaps stood, from the reasons before alluded to. This being more particularly the case in a dry season, as the bulbs are much more rooty, showing another of the wonderful provisions of Nature, by which the plant can accommodate itself to a variety of circumstances; with an absence of rain, the food is less soluble, consequently must be more widely sought for. One of the most fruitful causes of the roots becoming rotten in the heaps, is being put together in a frozen state; however slight the frost, the concussion breaks the fibrous cells, and hence they never keep well, if got up they had better be kept untouched till the frost is completely gone. If possible there should be a sufficient number of hands employed to pull, heap and cover, so that the work is completed as it proceeds, or the hands might pull in the morning and heap and cover in the afternoon, as the weather at this season of the year is generally changeable, and the roots that are pulled and exposed suffer much more from a severe night's frost than those that are growing will do. We have tried storing in the field the cleaned roots, that is, topped and tailed, but find they do not keep so well as when the roots are left on; they also become deteriorated in value by the loss of a quantity of juices from the bleeding of the roots at the wounds made in cleaning them; and even if perfectly clean when stored, if left undisturbed till late in the sprng, they begin to throw out many small rootlets, to which the earth adheres, and unless they are cleaned a second time, the stock fed on them will not progress satisfactorily. That portion of the crop to be consumed by cattle in the fold-yard, generally one-fourth, is commonly carted home to some convenient place adjacent to the feeding houses; at the same time the bulk of the crop is stored in the field, where root-houses are not used. The best way to store them is in heaps, 8 feet wide at the bottom, stacked rather flatly, with the crowns of the roots outwards, and tapering to a single root at the top. A piece of sound Grass or old turf is the best place on which to store them; they are covered with straw or stubble, and the whole neatly thatched down and secured with pegs and ropes to prevent the wind blowing it away. In rainy districts it is necessary to dig a small channel round the heaps, in order to prevent the rain-water flowing in and causing the roots to rot. Except a sufficient quantity for present use during the early part of the season, all those left unconsumed till after Christmas we greatly prefer incurring the extra expenses of carriage, &c., of the fibrous roots and earth adhering to them, as also recarting the same to dress some weak part of the field where the roots have been consumed, as we find them not only keep much better, but the stock fed on them thrive infinitely better than where the roots had been topped and tailed when put into the heap. The cost of securing the crop in the way we have described varies with the locality, the value of labour, and the kind of labour employed. Women and boys, with a trusty man to superintend them, are the best and cheapest for the purpose, as activity in this case is more necessary than strength. When well trained, a boy at 8*d.* per day will do as much as a man at 2*s.*, so that the price for the same work may vary from 5*s.* to 12*s.* per acre. Last November we knew both prices to be paid within a few miles of each other. We had 60 acres of Swedes and 10 acres of Mangels got up by contract; one-fourth of the Swedes and the whole of the Mangels were drawn home, the contractor filling them into the carts, and heaping and covering those left to be consumed upon the land. The price we paid for the whole was 6*s.* per acre. *G. Murray, Overstone.*

WINTER ECONOMY OF FOOD.

Let us now refer to Turnip-cutters, chaff-cutters, and machines for economising and utilising food. Referring to the Turnip-cutter, Mr. Pusey said:—"Its advantage is two-fold—saving the teeth of old ewes, for which the Swedish Turnips especially are too hard—saving the waste of this valuable root, which, when partially scooped out by the sheep, is rotted and trampled about with great waste. The economy effected by this simple machine has been stated to us, by an authority which would at once be admitted as very high, to be no less than one-third of the whole produce."*

The chaff-cutter, again, had long been well known to agriculturists; and, as named by Mr. Pusey, its use had that year been the subject of discussion before the Harleston Farmers' Club. The use of both of these machines has, however, latterly enormously extended. Chaff-cutters are turned out annually in thousands by single firms; and a single maker supplies to order nearly 5000 Turnip-cutters a-year. Cake-breakers and corn-crushers—implements of the same class—rarely used when Mr. Pusey wrote, are even more rapidly coming into general employment. The following are the numbers of cake-breakers made during the last five years by a firm not specially noted, that I have ever heard, for this particular implement—they were 172, 332, 264, 399, and 822, respectively. The winter of 1859-60, to which this last large number related, was indeed a great stimulant to the manufacture and the use of the whole of this class of machines. Scarcity of food enforced every possible method of economising it; and no other is so efficient as the mixture of palatable and nutritious food with that which, though nutritious, is not particularly palatable. Chaff-cutters cut up poor hay and straw; and Turnip-cutters, and root-pulpers, and corn-crushers, and cake-breakers reduce roots, and corn, and cake to a condition in which they can be mixed with this chaff, and so induce cattle to consume it.

Another manufacturer of oilcake breakers, who had made 50 or 60 annually (only 49 in 1859), had orders for 107 in 1860; and his manufacture of corn-crushers has exceeded 400 annually during the past six years. A third gives the following as his manufacture of chaff-cutters for the four past years—200, 420, 550, 760; while his corn-crushers during the same four years have been 40, 90, 110, and 130. And, as showing the increase of demand in a particular locality, I add the figures of a Shropshire manufacturer, whose name appears but rarely at the show-yards of our leading societies During the past few years he has made of chaff-cutters annually, 16, 18, 22, 28, 90, 135, respectively. These items, then, are evidence enough of the increasing use of this class of implements.

The economical use of much food that has hitherto been wasted, which we owe to the increased employment of Turnip-cutters and chaff-cutters, &c., has latterly rapidly extended since the invention of the root-pulper—an instrument of which the manufacture dates only from about four years ago, but which has come most rapidly into use.

The Turnip or the Mangel Wurzel is by this machine reduced much more nearly to pulp than it can be by any Turnip-cutter—not even excepting Moody's of Warminster, to which, however, very satisfactory testimony is given in the sequel—and thus a more thorough mixture of dry chaff of straw or hay with the juices of the root can be effected; and so an agreeable taste is substituted for that which, in the case of inferior hay, is unpalatable, and makes it less valuable as food than its composition indicates.

The use of the pulper shared with that of all other machines of this class an enormous extension during the winter of 1859 and 1860. The extreme difficulties in which stock-farmers, especially in the north of England and in Scotland, were placed by the destruction both of the Turnip and the Mangel Wurzel crops led to every possible expedient for economising food The following is a report of the position in which the farmer was that season placed:—

"The principal difficulties of the Westmoreland farmer commenced in October, 1859. The extremely short crop of hay, together with a very slender growth of corn, added to the failure of the Turnip and Mangel, placed him in a situation to dread a stormy winter, and this commenced in that month and continued at intervals through the succeeding months till April, 1860, creating such a scantiness of fodder as had not been experienced in the memory of any one living; indeed, had it not been for the importations of foreign hay, much live-stock must necessarily have perished; even as it was, great numbers of mountain sheep sunk under the privation, and the cost of supply was such as to embarrass the farmer greatly, the money provided for spring-rents being absorbed by the purchase of cattle-sustenance. Up to this moment (Jan. 1861) the cattle have not recovered their usual condition, nor has the farmer replenished his wasted means."

Mr. Dent, M.P., of Ribston Hall, Wetherby, thus describes the state of things in Yorkshire:—

"On my own farm and on the whole of this estate (about 5000 acres) the Turnips of last year were a miserable failure. They never promised well, grew badly all the summer, and were destroyed by the frost. My own were only half a crop originally, and after the October frost rotted away, until, in March, two out of three were bad; and this was generally the case here."

Mr. Dent adds that the Mangels in that neighbourhood, grown successfully and rather extensively, suffered from the October frosts; the Globes, however, continuing good till late in the spring; but the Long Reds being very rotten, so that much grain and cake had to be consumed with them. In the southern part of the island the severe October frost of 1859 caused an even greater destruction of roots; and a short supply of hay brought chaff-cutters and Turnip-pulpers in general use for turning such roots and hay as were available to the best account, along with an unusually large admixture of straw for quantity, and cake and grain for quality. It is in the use of these two classes of machines, rather than in that of steaming apparatus, that the ordinary practical farmer will find his cheapest plan of turning inferior fodder to account. Steaming apparatus is nevertheless coming more rapidly than hitherto into general use. A single manufacturer, who during the 10 years previous to 1855 had made 200 sets of apparatus for this purpose, has made 300 in the five years since that time, of which 95 were sent out in 1860. He says:—

"Owing to the scarcity and bad quality of all sorts of fodder this year, the demand at the present time for an apparatus for

* Royal Agri. Soc. Journ., vol. i.

steaming hay and chaff is unprecedented. As a proof of the economy of using this portable apparatus, price 18*l.*, we have only to say that it will steam sufficient roots, hay, or chaff, and boil water or compounds, for 30 head of cattle and as many pigs, at a cost not exceeding 9*d.* per day of 12 hours. supposing coal to cost 1*s.* per cwt. As to the effect of the process on different kinds of food, our experience leads us to believe that bean-straw as fodder improves more under it than any other kind; and we know that thousands of pounds worth of Potatos (diseased) might be made available for cattle-food annually, if steaming were universal."

Though, however, there is abundant and unquestionable evidence of the advantages of steaming cattle-food, I am bound to add that the prevalent testimony on the subject of economising and cheaply utilising food for cattle points to the use of pulper and chaff-cutter rather than of steamers for the purpose. A Herefordshire farmer wrote thus to the *Mark Lane Express* early last winter:—

"Unquestionably the most important consideration to the farmer is how best to economise food, and, as a primary step, the two best friends he can take into his confidence are a first-rate chaff-cutter and root-pulper; but there is something more required in this exceptional year, and when the damaged hay and straw are reduced to chaff, the deficiency in the nutritive and savoury qualities of both must be supplied from some other source.

"The steaming process is to some extent good, although I think the necessity of this expedient may be dispensed with, by blending the pulped roots with the chaff the day before the mixture is required, and then giving it to the animals in a state of sweet fermentation."

Here the use of all the implements just named is indicated, and the steamer is placed lowest on the list; and the use of grain or cake along with a diminished quantity of roots mixed or fermented along with an increased supply of chaffed fodder is pointed out. On these points I quote the following from a letter with which I have been favoured by Mr. Paget, M.P., Ruddington Grange, Nottingham. He says:—

"I am satisfied that I formerly gave both Swedes and Mangels in too large quantities. If cattle will eat straw enough, 80 lbs. of Mangel are quite as good as 120 lbs., and the pulping-machine enables the farmer to regulate the proportion of root and straw. I believe this applies to Swedes as well."

Mr. R. Bell, of Mosbro' Hall, St. Helen's, Lancashire, says:—

"The plan I adopt to economise my roots and fodder is to pulp the roots and cut the straw into chaff, ferment a little by mixing in a large heap, 24 hours before using in mild weather, 48 hours in cold, frosty weather. Hay, however spoiled, may be mixed in this way, and the cattle will eat it well—in fact, will prefer it so mixed to the best hay given in the usual way."

Mr. Bowley, of Siddington, near Cirencester, speaking of the untoward season and the casualties of 1859, says:—

"The consequence of all these misfortunes is an almost universal short supply of food for cattle of nearly every description, which, however, is much relieved by the now general use of the pulper. I use Moody's cutter myself, which cuts the roots into ribbons. and answers equally well for mixing with straw-chaff, and is worked more easily. I consider my cattle fed on this mixture are doing much better than those which are fed on hay."

Mr. Adkins, of Milcote, near Stratford-on-Avon, says:—

"I cannot too strongly express my sense of the advantage derived from pulping Mangels and mixing them, when sound, with cut-straw, allowing the mixture to ferment 24 hours before using. By this plan all the objections to the root as food for cattle appear to be removed, the animals fed on such mixture thriving most satisfactorily, and being entirely free from relaxed bowels, &c., so often consequent on the usual method of using it My experience leads me to believe that something approaching 50 per cent. of the Mangel is economised by thus preparing it."

The following is the testimony of Mr. T. Duckham, of Baysham Court, Ross, Herefordshire:—

"As regards the economy of food, I consider the pulper a most valuable acquisition. I use pulped roots and cut straw until February, when I commence giving a small portion of hay, increasing the quantity of the latter as the spring advances. When the roots were gone last spring, I had Linseed boiled and damped the cut straw and limited quantity of hay with it, adding a little miller's-refuse, and was thus enabled not only to save a considerable quantity of hay for this winter, but to keep the stock in good healthy condition to go out to Grass. This autumn I am giving the cattle cut straw, boiled Linseed and bran, in order to reserve sufficient roots to carry on with after they once commence eating them, until they leave the fold-yards."

The following is the Scottish experience—1st, of Mr. Simpson, of Teawig, Inverness:—

"Last winter, when our Turnip-crop was a very short one—hay too valuable (selling in April for 10*l.* per ton), for feeding cattle, and straw but little more than half an ordinary bulk—I derived much advantage from chaffing the straw and pulping the roots. I am continuing the same practice this season with very satisfactory results. Apart from the saving of roots and straw, which is fully to the extent of 50 per cent. (*i. e.*, you can feed 75 beasts with the same provender as would in the former system have been consumed by 50), there is superior health and more uniform progress in the cattle, and a freedom from all risk of choking or swelling. When short of roots you can use oil-cake, rape-cake, or meal at discretion."

Secondly, of Mr. M'Lagan, of Pumpherston, West Lothian:—

"I was enabled to economise my roots very much last winter by pulping them and mixing them with cut straw and chaff. I mixed with the pulp Indian Corn-meal, Rape-cake, and Bean-meal.

"My experience of last winter has convinced me that the farmers in Scotland do not derive the full benefit of the Turnip-crop, from giving the roots in the large quantities they do to live-stock. By pulping them and using them judiciously with Rape-cake or other oleaginous and farinaceous foods, they increase the value of the roots and the profits of feeding. I never was paid better by my ewe-stock than I was last year; and, though I have abundance of Turnips this season, I am feeding the ewes with pulp and mixed food very much in the same way as last year."

Coming back to the district of our own Society, we quote one more witness, whose evidence on the use of pulping roots may be regarded as conclusive. Mr. R. Corner, of Torweston, Bridgwater, says:—

"No roots of mine are used in any other way. All pass through Bentall's pulper, driven by water-power, and mixed with hay and straw chaff, and I put hay, more or less, as needed, and according to the condition of the bullock fattening. For some I put no hay at all. Hay can be made to go much farther, and a person can keep fully one-third more stock in the winter, with adopting the chaff-system over the old way of giving bullocks hay alone."

I add to these reports from correspondents the following, by Mr. Maynard, of Whittlesford, Cambridge, on the subject of chaff-cutting:—

"On this," he says, "I wish to offer a few remarks, as furnishing a lesson which I am somewhat surprised to find is yet to be learned by a large majority of the farmers of England.

"For years it has been the practice of the farmers here and in the counties around me to store cut straw, although from the paucity of means of cutting it the system was not carried out to the desired extent till within the last 14 years, when, to meet the wants of the farmers hereabout, I invented a chaff-engine for horse-power, suitable for easy removal from place to place, and capable of cutting much faster than any before brought out. The consequence was, that every one in the habit of letting out machinery to hire procured one, and it formed a new branch in the business to go from farm to farm with one of these engines, driven by the horse-power of his threshing machine, to cut up the straw he had previously threshed, which he was able to do at the rate of 800 bushels per day. After the introduction of steam, a demand arose for something easy of removal, to be used in the same manner and driven by that power. This want I met by a suitable machine, and sold many till 1856, when I took out a patent for a portable chaff engine, which is found not only capable of cutting very fast, but at the same time preparing the chaff for the chaff-house, by separating it from the imperfectly cut, and so saving a great amount of manual labour. I was not aware till afterwards that the practice of storing cut straw was only local; I find, however, that it is scarcely known except hereabout. Let me recommend to your notice a letter by Samuel Jonas, Esq., appended to Mr. Evershed's Prize Essay in the Royal Agricultural Society of England's Journal, last number.

"It is a pity the system is not carried out in all parts of the country, which I believe is only owing to its advantages not being known; and if you can say anything to extend it, it will benefit the agricultural interest generally. One of my neighbours cut sometimes as much as 50,000 to 100,000 bushels at one time, and he now has chaff cut nine months ago, made from straw only, which, having been fermented in the manner described by Mr. Jonas, has the scent and nutritive qualities of good hay."

Mr. Jonas's letter, referred to by Mr. Maynard, describes his method of storing the chaff. He mixes a little "green fodder or hay or tares" with the straw, cuts it into chaff, and treads it down in the chaff-house, mixing a bushel of salt with every ton. There it lies for several months, and slightly ferments. "Within the last few days," he says (July 17), "I have threshed and dressed the corn, and at the same time cut the straw into chaff, from about 80 acres of Wheat, at a cost, too, not exceeding 45*s.*, or 7*d.* per acre, for cutting the straw produced on an acre of Wheat." This refers to the small extra expense incurred when the process of chaff-cutting is carried on together with the threshing. "If the straw is stacked as threshed, and cut into chaff afterwards, the expense of cutting and sifting with Maynard's chaff-cutter would be as follows:—

1 man to move the straw from stack	£0	2	0
4 men to "yelm" the straw	0	8	0
2 men to carry away chaff	0	4	0
3 lads to tread chaff down	0	1	6
Hire of engine and chaff-cutter (including 1 man to feed chaff-cutter, and engine-man)	1	10	0
Coals, 5 cwt.	0	4	6
Water-carting	0	2	0
	£2	12	0

This will cut 600 to 900 fans * per day, according to the length of cut, the first cut being about 3-16ths of an inch in length, the latter about 3-8ths. The cost would thus be,—the very short cut 1*d.* per fan, the latter cut one-third of a 1*d.* per fan; but by cutting the chaff at the same time you thresh, you save 47*s.* per day, and in fact cut 800 fans for 4*s.* 6*d.*" So economical a method of turning to account that which is in itself a great economy of cattle food, is certainly among the lessons of recent agricultural experience. *J. C. Morton on Agricultural Experience, in Bath and West of England Agricultural Journal*, 1861.

* A fan is 5 bushels, and weighs 28 lb.

IRISH AGRICULTURE.

CORN growing in Ireland, as formerly disposed of, will not "pay" even in the best seasons, one of which we have just passed through. We have now Wheat weighing 60 to 66 lbs. per bushel selling in our markets at from 20*s.* to 25*s.* per barrel of 20 stone. We have Barley weighing 50 to 56 lbs. per bushel selling at from 12*s.* to 16*s.* per barrel of 16 stone, and Oats weighing 40 to 44 lbs. per bushel selling from 7*s.* to 10*s.* 6*d.* per barrel of 14 stone. And we have Flax seed weighing from 54 to 58 lbs. per bushel, except in very few cases not husbanded or sold at all, but let rot in the steep ponds, permitted to pollute the streams, poison the fish, and subject the owner to an action of law by the fishery boards and commissioners. In your last issue you report Mr. Curtler as saying "He finds that he can buy good Irish Oats weighing 39 lbs. per bushel, for 20*s.* per quarter, * * * and feed his lambs on it at 1*d.* per day." If your quarter, as some of us in Ireland think, weighs 280 lbs., at 20*s.* the price of one barrel of 196 would be about 14*s.* These Oats we sell at just half that price, and even less in some inland markets. So that we can feed our lambs at just one half what it would cost Mr. Curtler to feed his. Again he says, "He could afford to give his cows a peck of Maize per day, and by this means he could keep them at the rate of 4*s.* 6*d.* per head per week." What will that intelligent gentleman say to us, who can feed our milch cows on Wheat at 3*s.* pe week, and by the use of such auxiliary food increase our milk 100, and our butter 50 per cent. Now that is done at an establishment whose agricultural operations I once had the honour of directing—Clongowes Wood College, County of Kildare; and the results will be better by and by, when a cheaper arrangement will be made for cooking the cattle food. Of this, if an opportunity offers, I may tell you more in a future letter. You are aware that the Agricultural Committee of the Royal Dublin Society give special prizes for Grass-fed beef and mutton at their winter show of agricultural produce. As in preparing for all such shows of stock there has been some "jockeyism" in competing for these prizes, as some exhibitors stall-fed their stock by expensive means on imported foods during the previous summer months; nay, it has been said that preparations for competition had been going on during the previous two years, and hence a new class is being formed, and prizes made up by subscription, for fat stock that must be proved to have been fed outside of both sheds and houses during the previous autumn and summer—fed on Grass with or without any auxiliary food. This no doubt will be a check against the former jockeyism. Still many people fear, and I am myself of the number, that it will leave room for a new species of that significant term amongst men of fertile imaginations, of which there are a good many at both sides of George's Channel, as well as at both sides the Tweed, and the great Atlantic itself. But we shall see if our apprehensions be well founded, if not called to a more serious account at the other side the grave, and to prepare for which let us in the meantime seek to help each other as best we can.

Auxiliary stock-feeding on pastures is not a novelty to all men in Ireland. Necessity has long since compelled me and many others to adopt it on bad Grass lands. Even in dry summers some of those holding the best Grass lands had to adopt it.

The advantages of this I can, I think, best explain by giving you, though briefly, two examples in two cases, rather in the extreme each, as to the quality of the land. One is that of a friend, a business man in this city, who has a paddock of one acre, at a rent of 10*l.*, in the suburbs; this he used to let his horse out on during the summer months. He has a property in a southern county, where a small farm of dry land, resting on a limestone subsoil, was thrown on his hands last March, which he stocked soon after with an ordinary description of Kerry heifers, bought at an average of 6*l.* 10*s.* each. By the 31st of July they were starving of thirst as well as hunger. He offered five of them for sale, and could not get for them what they cost originally. He withdrew the horse from the paddock, and brought up these five heifers and put them in it. He fed them by additional food bought in the Dublin market, consisting of refuse Potatos, brewers' grains, bran, and cotton-cake.

He had them at Smithfield market last Thursday, and, though it was a dull one for such stock, refused a price that would pay him 50 per cent. interest on the money expended in purchasing the food, 5 per cent. interest on the capital invested in the purchase of the stock, besides charging them with a fair weekly proportion of the rent of the paddock, and attendance; and in addition to this he has the paddock so far additionally enriched as to be considered at least 25 per cent. better for any purpose next year than it was when he got it last May.

Thus far for auxiliary feeding on a rich pasture, and now a word on such feeding on a poor one.

A small farmer in the interior of the country had a small dairy of 10 cows, which, like the heifers of my other friend, were starving late in July last. He offered four of them for sale to make up his rent and meet some other liabilities, then pressed to pay. He had not his usual butter to meet those demands. He was offered 40*l.* for the cows, being little more than he had paid for two of them last autumn twelvemonths; but instead of selling them at that ruinous price he borrowed 40*l.* from a usurer at 10 per cent. interest. His tillage crops were ripe in the following order:—Flax, Dunwinter Oats, Barley, and Wheat; all good in their way on a well tilled but poor farm. He saved his Flax seed, which was worth 6*s.* a bushel, or about 1*s.* 6*d.* a stone of 19 lbs.; his Wheat, worth 20*s.* a barrel, or 1*s.* a stone; his Barley, 12*s.* a barrel, or 9*d.* a stone; and his Oats, 8*s.* 2*d.* a barrel, or 7*d.* a stone. He had those all ground together in the following proportions, and at the above rates of value:—

Flax seed, 2 stone, at 1*s.* 6*d.*	3*s.* 0*d.*
Wheat, 3 do., at 1*s.*	3 0
Barley, 4 do,, at 9*d.*	3 0
Oats, 5 do., at 7*d.*	2 11
	11 11

Or in round numbers, for ease of calculation, 12*s.*

He had the four cows put into a field of 2 acres, and fed with the above food weekly at the rate of 3*s.* per cow per week. When I last heard from him he said he was offered 15*l.* apiece from a butcher for the cows, which would pay him 100 per cent. over what the food would sell for in the market, the full interest on the money borrowed from the usurer, the full rent of the two poor acres, now vastly improved by the stock feeding on them.

With these facts, and many others of comparatively

equal importance which I could cite to show how much more profitable it would be to us to use our farm produce at home than to sell them to be exported and resold to such gentlemen as Mr. Curtler for feeding their stock? Well, paradoxical though to some it may appear, Mr. Curtler need not fear a dearth of such exports from us, for the following reasons, perhaps more paradoxical still: We will not adopt such systems of economy, because we cannot do so for the reasons assigned by me in a former letter, to which I could add others of which "the least said is soonest mended." But is it not possible that we could grow those crops, and sell them with profit at such prices in your markets as would defy competition from our foreign mutual friends, who may sooner or later become our mutual enemies?

Yes; it is not only possible, but easy of accomplishment, if the people of the United Kingdom would but become, as they should, and sooner or later must become, united, though I do not expect to see the happy day. We have in Ireland some six million acres of bogs and reclaimable lands, now comparatively valueless. These, if brought into cultivation, would give your stock feeders cheap stock and cheap food to fatten them; give your artizans and manufacturers cheaper food and cheaper materials to work upon, leaving all concerned fair profits; give the Irish landlords rents for lands now paying little or no rents; lessen the taxation on all by an increase of taxable property; create consumers of manufactures;—in a word, add strength to the nation in one of its weakest points. This must appear to your readers who know Ireland a threadbare story without facts to sustain my statements. Those who may think so would quite mistake both me and this country, for I could give facts from my own knowledge in abundance to prove all I say, and much more than ever I have said; and I will conclude this letter with an additional new one, that might not be credited were it not a public one.

At the late agricultural dinner of the Drumahair Agricultural Society, in the county of Leitrim, near the town of Sligo, the chairman, Joshua Kell, Esq., in speaking of one of the tenant farmer competitors in green cropping, said, "I cannot pass over Mr. Terence Cosgrave's crop of Turnips. He has 6 acres of Swedes that may challenge either England, or Ireland to produce better." I do not of my own knowledge know whether those Swedes were grown on ordinary arable or reclaimed bog land, but suspect they were grown on the latter; otherwise the judges of those crops would scarcely have given the following as the leading feature in their report. "In awarding the above premiums, in any doubtful case, the judges deemed it right to give the preference to Turnips grown in clay soils." Some readers may suppose the judges in this case, by this preference seemed to give encouragement to the owners of the clay soils, and a discouragement to the growers of such crops on boggy soils. But such was not the case, or at least ought not to be so, in my mind at least. But hear the judges out: "And they also recommend, that so far as practicable, a distinction should be made in the premium sheet hereafter, as the farmers occupying dry (re-claimed) bogs have a decided advantage over the clay soil farmers." Observe, good reader, that the words "clay soils" in Connaught do not bear the literal meaning attached to "clay soils" in England, or I am much mistaken. A clay soil with you, I think, means a thin cold surface resting on colder impervious clay subsoil. A clay soil in Connaught means a rich, strong, arable, deep surface, resting on a calcareous subsoil, or limestone bed; such a soil as an Englishman would delight in using his steam-wrought cultivators on for the growth of any farm crop. Yet those very bogs in Connaught, and many other parts of Ireland, when rendered dry, are better calculated to grow Swedes and many other crops than their best arable lands. Can they be cheaply rendered dry? Oh yes, they can—yes, the very deepest bogs, by the use of steam-wrought machinery, with fuel and water on the spot; and by such power do away with the cry that the cost of labour in such reclamation would be too great at any time, but now more especially, as the effect of emigration.

Steam power applied to such reclamation will effect a greater revolution in this respect than it has already effected in general cultivation in England. I may return to this latter subject again. *Edward Carroll, College Hotel, College Street, Nov. 6.*

ON THE GERMINATING AND CULTIVATING OF CEREALS.

In my other letters on this subject I have treated of the germinating powers of the different kinds of Wheat, and I showed, from long experience and many experiments, that it was nearly the same in all, or the difference was not sufficient to affect the crops of one kind more than another, or but to a very small extent: but of the several kinds, I stated the Bearded, being the hardiest and most perfect, are the least affected by the causes which injure the vital principle in the whole; but it is but seldom, I repeat, that any are so seriously injured as to affect the crop to any injurious extent, except when a homœopathic quantity alone has been sown, which is but very seldom indeed, but in other cases, according to the common quantity now sown, if one-half or two-thirds of it should refuse to germinate and grow, the crops would be all the better for it.

But Mr. H. Harrison has asked me to explain how 13 crops of Wheat can be grown on the same land in 17 years, or 10 crops in 10 successive years, and to these inquiries I now apply myself; but, first, I will state that the late Mr. Piper, of Colne Engame, a gentleman well known in these parts, grew 14 crops of Wheat on the same land in so many successive years, and every succeeding crop was better in quality and quantity than the preceding one, which I think proves, and incontestably, that more can be done in this way than what I stated in the letter wherein Mr. Harrison asks for an explanation.

The principle then is at the onset to get the land into complete working order. Let it be so deeply and thoroughly drained that it may receive the fertilising rains from the atmosphere without their running off it, but to percolate through it down to the deep drains, leaving the ammonia and other fertilising properties in the soil as it passes through it, like as water is purified in passing through a domestic water filter. By such a draining the temperature of the soil is also raised, and consequently the additional warmth to the roots causes them to grow and expand and stretch out here and there and everywhere within their reach after food proper for them to feed upon for the nourishment and development of the growing plants, that is, if the land has been previously treated as it ought to have been, by deep and thorough draining, and deep and thorough cultivation by the plough or whatever other implement or implements may have been used. By deep and thorough ploughing I do not mean that the land should be cut into slices and turned hither and thither, first one way and then another, 3 or 4 inches deep only, and then scratched over and made fine on the surface only; nor should I be satisfied with even 7 or 8 inches deep, if the soil would admit of going 10 or 12 inches, and it is certain it will in the great majority of cases where assurance is made by practical men that such depth could not be obtained. It is quite certain also that nine-tenths of the failures of the crops attributed to the seasons are caused by insufficient or no draining, shallow and imperfect cultivation, and over-thick and ruinous seeding. Had I space I would undertake to show, also, that the midge and other pests on Wheat, and the louse on Beans and Peas, are wholly, or nearly so, the effects of insufficient draining and cultivation; indeed, nowhere in this kingdom of enlightenment are the lands more than merely nominally cultivated; but let this be done, and effectually, by whatever instruments and machinery and moving powers be applied, and nine-tenths of the grumblings against the failures of the crops and badness of the seasons would cease to be heard: indeed, reflecting men with candid minds would not only be ashamed to utter such complaints, but feel humiliated when given utterance to by others. My own opinion is, that the lands of England are capable of growing food enough for all the inhabitants of England, or at least corn and meat enough, and I do not despair but some day or other, and perhaps ere long, this will be the case, and that this noble and highly favoured country will be rescued from the painful and dangerous and abnormal state it is now in, of being indebted to almost all other corn-growing countries in the world for a sufficiency of daily food.

But to return to my subject, which is to show how cereals, especially Wheat, can be successfully grown on the same land for many years in succession. For this, after thoroughly draining and thoroughly cultivating, the land must have supplied to it the requisite plant constituents, if it have them not naturally before, and this supply must be kept up as often as crops are taken off the land, and the supply must be of the proper kinds also, just as a man must keep replenishing his strong box and his purse who is constantly drawing the precious articles from them, and with the same kind of precious articles also, or both his strong box and his purse will soon become mere worthless lumber to him.

But having performed these preliminaries, the judicious farmer will put in his seed, and grain by grain, or one or two grains only in a place, or a hole, and not throw it into furrows by cupsful, or into holes by children's handsful, as the common custom is, namely, 6, 8, 10, 12, ay, and I have often counted near 20 in a hole; but I repeat, let there be but one or two cereal seeds only, and especially of Wheat, in one place, and whatever land-cultivator, whether landlord or tenant, should act in this obviously rational manner, he will find that it will be impossible for him to get into his land more than 2 pecks of seed an acre, let his rows be as near together as they will; and he will further find, that his crops will grow up healthier and stronger, his straw thicker and stronger also, and the ears on it larger and fuller, and the grain in them finer and plumper; and further, he will fear neither winds nor storms nor rains, for such will be the strength of the straw that it will bid defiance to all kinds of weathers—indeed, bending their heads, and bowing, and smiling, and laughing at rude Boreas and all his progeny, as we read, or I read, for I know nothing more, polite and polished courtiers bow and smile to their sovereigns and their lords.

But by so acting, any agriculturist, whether landlord or tenant, may turn his profession into a pleasure, and his fields will smile and laugh at and with him whenever he enters into them, and that will be as often as he shall have an opportunity; and, moreover, he will be able, should it be his pleasure so to do, to grow cereals, Wheat, Barley, or Oats, on the same land in succession for very many years, if, as I have explained, it be generously treated, and as a generous steed should be, always ready for his work, and never overworked, nor heavier burdens laid upon it than he is able to bear: so exactly should farmers treat their lands.

My readers will also allow me to warn them against all kinds of quackery. To poison seed Wheat in the darkest ages of our history might have been excusable; but to do so now is a satire upon our age. To suppose that the wetting of seed Wheat with poisonous compounds will prevent smut is of a kin to the nailing horseshoes on stable doors to keep out witches; but if gentlemen must do something, let them in this way: let them have their seed Wheat charmed, which will be equally efficacious for good, of less expense and trouble, and can do no harm. But above all, let thin-seeders rely upon nothing but skill and industry, and then they will be sure to succeed. *Geo. Wilkins, Wix Parsonage, Nov. 4.*

Home Correspondence.

The Important Subject of What is to be done with Sewerage occupies the attention of town commissioners and agriculturists. The desire of the former is to get rid of it at any cost, under the idea that in all states the effluvium arising from it is prejudicial to health. The latter are anxious to use it as a manure to increase the produce of the land. Though drains may be extremely disagreeable it does not always follow that the locality in which they exist is unwholesome; much depends upon the manner in which the fluid has been treated. If kept closed up in cesspools, without access to the air, the gases generated are dangerous to human life, and their escape in or near inhabited houses might produce fever; but the liquid passing through drains, as a running stream, would no doubt be offensive to the nose, yet changed in its deleterious properties, and comparatively innocuous. It is not the strong perfume proceeding from common drains or manure that engenders disease. Low damp situations throwing off vapours which are not perceptible, or scarcely so, to the olfactory nerves, are more insidious than a good honest farmyard compost, about which there can be no mistake in regard to smell. Needless alarm is often created by apparent danger, where real mischief is overlooked. Deodorising sewerage is both difficult and expensive, and in its natural state, to be remunerative as a dressing for green crops, the necessary quantity seems fabulous, and proves the value of the refuse to be small unless extravagantly employed in point of measure. Can liquid manure be profitably used on arable land? It appears so from experiments tried in a garden. Carrying the contents on to Grass land not having answered the purpose anticipated on a former occasion, in the spring of 1864, before turning over the muck heap, preparing for Mangel and Potato planting, it was well saturated with manure-water. The result was most satisfactory. In spite of the dry summer and autumn the crops were fine, the Potatos a capital sample, and the Mangel abundant. From these facts it may be presumed that the beneficial effects in the garden, and on the manure heap, were caused by the rapid absorption of the soluble salts, and the failure on the Grass would probably be in consequence of immediate evaporation on land not broken up. *Falcon.*

Pasture versus Arable Land.—During the last few months the conversion of arable land to pasture has been prominently before the public; it is considered by many that its adoption to some extent would be beneficial to the interests of the agriculturist. That the change would be attended with considerable expenditure either on the part of the landlord or his tenant does not admit of doubt. To change arable land to pasture involves not only the sowing of seeds, manuring, &c.; it requires time before it becomes of much value for grazing purposes, so that before making extensive alterations in that direction, or laying out much capital, it would be well to count the cost and consider the probable results. Much of the arable land of this country, from the effects of soil, of climate, or it may be from a combination of causes, is under the most liberal treatment and judicious management incapable of becoming good Grass land; at the same time we think much of the existing permanent pasture might be made to produce a greater return, in the shape of beef or mutton and wool. Considerable improvement has been made within the last few years, and with the increasing intelligence and energy of the British farmer we expect yet to see still greater; the use of bones in some localities, and of lime in others, has in many instances nearly doubled the produce of the land. The rearing or grazing of young growing animals has greatly deteriorated some of our best old pastures. This practice, if adhered to or a series of years without extraneous aids, soon reduces the best feeding pastures to ordinary store land. A great portion of the light, and some of the medium soils of this country will produce a much greater quantity of meat under tillage than they would if laid down to Grass, and it is not by turning the arable land into Grass, but by converting the produce of the arable land into beef or mutton and wool, that the British farmer can enter into competition with foreigners. More manure would be produced, and of a better quality,

a saving would be effected both in the purchase of manures and artificial foods, and thus the soil would be enriched, and would give a greater return. One argument held out in favour of converting tillage into Grass is the increasing cost of labour; as far as the wages of the labourer is concerned we admit the fact. The wages of the agricultural labourer has in many counties increased from 10 to 25 per cent. within the last 20 years. Yet in almost every department of farm management the use of agricultural machinery has considerably lessened the cost of the different operations; the facilities afforded by railway communication have also been of great value to the farmer. *G. Murray.*

Rational Seeding.—Several years have elapsed since I advanced the results of my experience on "thin seeding." All I could say and write then on the astonishing fecundity and producing capabilities of grains of Wheat, Barley, and Oats, singly and early planted, was considered frivolous, and put down as downright falsehood, and I was even openly avowed by prejudiced persons for "new fangled notions" as not trustworthy it was said, and that such statements as the following were declared "injurious to the interests of agriculturists generally, and the public weal was actually endangered thereby," namely, that "all cereals rightly managed, as I had grown many specimens and publicly exhibited them, were capable of producing four thousand fold! whilst from the general order of sowing, not more than 20 issue were realised from each grain sown (much less than one good common ear), in the United Kingdom." (Mr. Caird writes 8!) And Mr. Alderman J. J. Mechi stated in his late letter in the *Times* and elsewhere, that he has this year on a large scale on cheap land realised "236 grains for one," or 59 bushels per acre from 1 peck of seed. In order to appease the anger of my brother agriculturists for my advocating thin seeding at a vengeance, I resolved several years back on making the word "thin" for my own use obsolete, rendering it "rational" seeding, viz., advocating 1 bushel per acre—thus, for safety, drawing a line of distinction between the two extremes, 1 peck and 2 or 3 bushels, contending, as I had done 20 years before, and do still maintain, that 1 bushel per acre, early and well planted on perfectly cultivated land, is quite sufficient of any good grain to be planted on any soils or situation, allowing for all casualties the Wheat plant is subjected to from frosts, various insects, vermin, game, and its pursuers, snails, &c., during its growth. Now that Mr. Caird, F. F. Hallett, Esq., and moreover my esteemed friend, and, I venture to write, the most noble and distinguished examplar of all agriculturists, Alderman Mechi, has thought well of it, more than he used to think, and has acquired such admirable yields from my practice, and has of late, in the *Times* and other journals, come to my rescue, declaring his success, from similar proceedings, unmistakeable, I therefore venture boldly once more to assert my knowledge from repeated trials that for the best of producing plants of Wheat generally on all soils and situations, not more than half of Wheat seed and other cereals in current use is sufficient to produce the best of crops. I have at this moment some Wheat, two varieties, though I admit not on a large extent of ground, which I planted on the 1st of September in single grains, at less than 1 peck per acre, which would gratify any interested person to travel seven miles out of his way from the Great Eastern Railway Junction at Witham to Maldon, to witness, and even our worthy exemplars Alderman Mechi, F. F. Hallett, Esq., and other distinguished gentlemen. Each plant is already tillered or branched surprisingly, forming very many forthcoming ears, and presenting an appearance like plants of Pinks, as large as common tea saucers or plates, completely covering the ground with luxuriant foliage, and so strong and robust, and deep-rooted, as to defy any serious attacks on them from frosts or insects to destroy them during winter. In short, they are worthy of the notice, if not the admiration of all those who have set their minds against believing the truth of it; though there is nothing in the crop new and astonishing to myself. *Experimenter.*

Farmers' Clubs.

CROYDON: *On the Errors of Modern Farming.*—Mr. WOOD, of Wrotham Park, Sevenoaks, said: They heard of high farming, and low or dirty farming, but what they wanted to find out was good farming. He should say it was the practically finding and carrying out the full development of the soil, so that the greatest amount of produce might be obtained with a profit to the grower, on an average of years, for his capital and labour.

(1). On the present rage for converting arable land into pasture on account of the low price of corn. Having had some experience in laying down many acres, he would treat a little on the subject. That there were a great many acres of land that might pay much better as pasture than as arable, there was little doubt; but the time and expense required to get a good pasture was a great drawback even to an owner, much more to a tenant farmer; and from experience he believed that much of the land now being laid down would produce more and pay better under the plough by farming for roots, &c., for sheep and cattle, with some corn, than it could do for very many years to come as pasture. If they looked back at the improvements made by agriculturists in the last 60 years, it would be found that the increase of beef, mutton, &c., had been more from the improved system of farming arable land, by growing root and other green crops—Norfolk and Lincolnshire to wit—than from all that had been done by the increase of, and improvements in, meadow and pasture land. He therefore thought it would be well to look at the improvements made in arable land in many counties, before they went to the expense of laying down too much as permanent pasture.

(2). On the sowing more small seeds by farmers. There was, he thought, at the present time, and he might say had been for some years, a great error made by the farmer—more so now the price of Wheat was so low—in not sowing more Clover, Sainfoin, and many other seeds that they could sell or exchange with each other, instead of buying seeds that came from foreign countries, which they knew nothing about, and which often, if the seed would grow, many of them rarely brought a good crop, particularly Clover and Sainfoin. To the honour of the farmers, he could say he had never been deceived by them. He wished he could say as much of the dealers and mixers.

(3). On the keeping a sufficiency of farm horses in good condition for work. That much was lost by keeping them badly was certain—and what was often the reason assigned? Because they consumed so much of the produce of the farm; at the same time a farmer would keep cattle on a farm not adapted for it; would buy artificial food for them, and also consume much of the hay, &c., grown on the farm, sometimes at a loss, to make manure for his land, and by so doing would get his horses out of condition to the detriment of his farm and his pocket; when, by feeding his horses well, he would often make as much and better manure with his horses. And often there were not enough horses kept for the work there was to do. He was inclined to think there was more money lost by not keeping enough than by keeping too many, so that many things got neglected and not done at all, or only half done; and he always found over working and under feeding horses a losing game. He mentioned the error of fattening cattle, sheep, &c., on soils and situations not adapted for it. The farming for stock sheep would be a more profitable method in many such localities for the pocket, as well as for manuring the farm; and let the good pas ures and warmer situations fat for the butcher, would mostly prove a benefit to both.

(4). On the losses sustained in threshing corn out of doors. The losses from the present system, so generally, he might say universally, practised of threshing corn in the south of England was a great evil—almost a sin. The waste of straw, cavil, and chaff, sometimes unavoidable, but oftener from the insufficiency of hands to secure it as threshed, and often the straw stacks not being thatched at all, must be very great. The system pursued by many of tying the straw in a single band was often objectionable, as it was often done in such a hurry, and stacked so badly, that it was much more likely to be injured if not immediately thatched, than if stacked loose; if well built and raked down hard, it would not be so much injured if not thatched at all. It was very questionable if the threshing the whole of the produce of the land by steam in the south of England was the best policy, even if it really was so in the north. The losses were so great, and as he said, often unavoidable, that if a portion of it was threshed in the old way by the flail, the straw, chaff, &c., would be found to be of much more benefit, particularly in the present season, when hay was so scarce and dear. If there was a good floor or two to the barns it would be a great saving to have men to thresh; during the winter months at any rate, and especially on small farms, it must be much to their advantage to thresh a portion, if not the whole, of the corn in the old way.

(5.) On the necessity and use of clear or whole summer fallows. He would endeavour to show them that good and profitable farming could not be carried out without them. And that was really necessary, particularly on many farms, where Hops were grown, many of which were but very middling for growing corn or anything else, as the Hops require so much of the manure, that little could be grown without fallows. Some of them might say that there was plenty of manure to be got; but it was not so, and for many reasons, as a great many farms were taken by men of small means, particularly poor ones (as men of capital knew better than to take them), so that they could not, if they were so inclined, farm and manure them to the best advantage, or as many of them would like to do. But allowing that men of capital could be found to take them, he would like to know where all the manures were to come from, as not only were all the manures made in this country put on the land somewhere, but an immense quantity of artificial manures, many of which were of little or no use, were bought and used for that purpose. They sent nearly all over the world for bones and many other things, and the demand for them was so great that they were continually getting dearer. And who was it who got the best of the guano, bones, &c.? The men of capital who used the best land, which must tend to get the worse still poorer; and he should think there were but few counties in the United Kingdom to which these remarks would not apply. Now, if they admitted that he was right in his ideas, how were the poor heavy land farms in the country to be farmed with any benefit to the occupier without summer fallows? and how could a large portion of the better land be managed to the best advantage without them? He still believed they could not, and that the land required rest to produce the greatest and best continual good crops, as much as men and horses require rest on Sunday. Many might ask, what was the use of the fallow to the land? Why should it be idle the whole year? In the first place, why was it they heard so much of the wireworm, slug, and many other insects eating up and destroying the crops? and of the Thistles and other weeds growing to the extent they did, and impoverishing the land; that they could not get the Turnips, Swedes, Clovers, &c., to grow as they used to do? He believed the grand secret lay in the continual cropping without fallows. What could they do to exterminate the insects, weeds, &c., so effectually as a whole year's fallow? They could not starve the insects and destroy many of the weeds so effectually in any other way. So that for the want of a small portion of fallow, on nearly all soils, they often obtain but a middling crop. tWhat effect had the present bad crop of Turnips, Swedes, &c., had on the land sown with them this season? It was full of grubs and worms; but they would not find them in a clean fallow. Let any one try 1 acre of a field intended for Turnips, &c., or where he intends a crop of Peas, &c., and mark the result in four or five years' rotation; and, from his own experience, he firmly believed, if universally carried out, at the end of five years there would be more clean fallows in one year than there are now in five. Although he advocated fallows, at the same time he thought that much of the land was ploughed more than was necessary, and that if the scarifier was more used, as it was by Mr. Marmaduke Walker and others, a great saving would be the result, and often better crops. And he was still of the opinion that he had expressed there, that many of the foul fallows intended for Turnips and other roots were ploughed too deep (if not cleaned in the autumn), and would be much easier and more effectually cleaned by being ploughed only half the depth they often were; or even by raftering—that is putting one half on the other—or only half ploughing; and when cleaned in the spring, ploughed to the depth required, as the summer sun would benefit the soil more than the winter frost and snow, although both might be beneficial.

(6). On the finding constant employment for agricultural and other labourers, and the benefit that must ensue if carried out. What was it that caused many gentlemen as well as farmers to do with as small a number of hands in the winter months as they possibly could? There was much work that might be done as cheaply in the short cold days as in the long hot ones. He was satisfied that a man could either by the day, or the piece, do as much work in eight hours in the winter as he could in 12 hours in the summer, and with less fatigue. And how many things might be done, such as grubbing, digging, filling, and spreading dung, mould, chalk, marl, &c., where it would do good, and which was known to pay on many soils? Besides, if things were left to the spring, how many things were left undone altogether! Mechanics could do many things to expedite the work in the spring, and which would be much better both for the employer and employed than to get them to make eight days a week in the summer months, and earn so much, that often some of the best hands keep "Saint Monday" a great part of the week, to the injury of themselves and employers. When they saw the amount of money expended on able-bodied men in the unions, and for unproductive labour, which in the 64 years of the present century must have been immense, if it stopped it would be well, but taken in a broad and national point of view, what had it done? It had been the principal cause of thousands of their best labourers becoming poachers, which generally resulted in crimes of deeper dye, and ended in imprisonment, and transportation, or something worse, which created expenses severely felt by all classes, but more particularly by the landed interests of the country in poor, county, and other rates and taxes.

(7). That the limited use of both lime and chalk of late years in the process of agriculture—and the want of it began to be felt on very many soils—was one of the principal causes of so much of the land, even with good farming, often disappointing them in not obtaining crops as good as they felt they had a right to expect. Lime and chalk were known to be such sweeteners and purifiers to the land on most soils that he thought there could be little doubt that a general use of them would much improve their Root, Clover, and other crops, and that it was really what they required. If they would allow such was the case, what a field it opened for a great portion of the surplus labourers of this country in the cold winter months! Surely such a state of things as he had described could not be allowed by the landlords and tenants of their favoured country to continue any longer, and he hoped that all who wished its well-doing would set their hearts and minds to work to find as much labour as they possibly could, to employ their increasing population in the winter months. Mr. Wood concluded by thanking the members present for their kind attention, and resumed his seat amidst an outburst of applause.

Dr. SHORTHOUSE said—With regard to fallows, Mr. Wood had said that all land required to be fallowed.

Surely he did not mean to say that all light land required fallows? When they got a good level soil they generally had to pay such a high rent that he was quite sure they could not leave it for any length of time, for they could not afford to do so; and if they did not pay the rent required some one else would. About the land requiring rest, he would direct their attention to the market gardens at New Cross, where a weed was never to be seen, for the land was turned over and over, and therefore he was entirely against fallowing. Continued cropping was in his (Dr. Shorthouse's) opinion far better for extirminating weeds than fallowing.

Mr. Walker said Mr. Wood had headed his paper "On the Errors of Modern Farming," but he thought it would have been much better if he had headed his subject, "It was an error to farm at all." As to converting arable into pasture, if it was not first-rate pasture it would not pay. As to growing their own seeds, he (Mr. Walker) generally grew the Dutch seeds, and he did not lose a single plant. As to labourers, he did not employ more labourers in summer than he did in winter—for he could always find enough for them to do.

Mr. Brown said he had laid down some land to pasture, and it had grown a little, but he was obliged to plough it up; at the same time he thought that if it had been his own land, he might have been able to have got it into a middling state in time. He had a few fields that he had laid down for eight or nine years, and with draining them well they were now a great deal better. These fields had cost him something, for he had manured them to some extent, and he thought that if they continued for another seven or eight years they would then begin to pay him; but he was quite sure that he had lost by them up to the present time. He agreed with Mr. Wood, that if they made good fallows, the land was safe to grow Clover. Threshing out of doors he was almost disgusted with. He was in favour of the use of chalk on the land, and he was chalking at the present time, but it was an expensive process. Lime was a sweetener of the land and killed insects. *Abridged from Surrey Standard.*

Farm Memoranda.

Canisbay, Caithness.—We recently announced that the Earl of Caithness had purchased a steam plough from the celebrated Messrs. Howard, of Bedford, and was about to employ it on his estate in Canisbay in this county. The plough arrived some weeks ago, and it is worthy of notice that on the first occasion on which steam has been employed in ploughing and similar purposes in the north of Scotland it has been set to work in the immediate vicinity of the Pentland Firth, in sight of the "stormy Orcades," in the most northerly parish in Scotland, and by the Lord-Licutenant of the county, who a short time ago entered the county in triumph on a steam locomotive.

Philip's Mains, besides being attractive on this occasion, has features of peculiar interest. It has been, we may say, entirely reclaimed from moor by the enterprise of the Earl within the last few years, and is already yielding a suitable return for the outlay which the improvements necessarily involved. It contains some beautiful fields of grain and Turnips; good farm roads have been made upon it, and a really fine farm steading is in course of construction; the servants' houses, besides being externally attractive and excellent in architectural features, being internally models for comfort and compactness, while the stables and other houses in course of construction are in all respects suited to such a farm, and in every feature creditable to the taste of Lord Caithness and those in his employment.

The field chosen for the display of the feats of the iron horse was one of stubble land, certainly not fitted, either by its dry or otherwise favourable condition, for giving an undue advantage to the Messrs. Howard. The soil was excessively wet, and was otherwise unfavourable for a first exhibition of a new implement, notwithstanding which the ploughing was well and speedily executed, and the entire exhibition was in all respects eminently satisfactory.

The makers, as the result of information acquired from various sources, state the following as some of the advantages to be gained by applying steam power for agricultural purposes:—

1. That for the hard work of the farm, steam is a cheaper power than horse power.

2. That deeper and more efficient cultivation is obtained.

3. That it enables the farmer to perform his tillage operations at the best season of the year.

4. That better crops with less manure can be obtained, especially on clays and loams.

5. That the land may be more quickly and effectually cleaned and freed from weeds.

6. That tenacious soils are rendered more friable and porous; good drainage is promoted by stirring the subsoil and breaking the "pan," and open furrows are unnecessary, even on the strongest land.

7. That the steam cultivator, plough, or harrows may be frequently worked to advantage in an unfavourable season, when it would be impossible to work with horses.

8. That not only a considerable diminution in the number of horses employed can be effected, but that the horses which are still necessary can be kept at less expense.

The plough was employed for nearly two hours, and it was found that notwithstanding the unfavourable state of the land, an acre was ploughed in an hour and 20 minutes, the furrows being straight and equal, and the depth about 10 inches. The agriculturists present, who naturally watched the execution of the work with great interest, expressed themselves as entirely satisfied with the manner in which it was done,

Thereafter his lordship had the grubber put in operation for a few minutes, and here too the work was quite satisfactory.

It may be useful here to quote the opinion of these implements of one of the most intelligent and spirited farmers in Scotland, Mr. Hope of Fenton Barns, who thus writes the makers:—

"Fenton Barns, Drem, Nov. 20, 1863.

"Dear Sirs,—As I have now finished sowing winter Wheat, and have had a fair trial of your Steam Cultivator, I beg to tell you how very much pleased I have been with its performances ever since we commenced work on the 25th of September last.

"We first cultivated 50 imperial acres of stubbled land, intended for next year's Turnip crop. Since then we have done upwards of 110 acres after Beans and Potatos, which have been sown with Wheat. We have thus gone over fully 160 imperial acres, and might have done considerably more stubble, if the engine had not been kept stationary to get Wheat sown, as Potatos were removed from the ground.

"I count the working expenses to be about 4s. per acre on what I have done. The interest on the cost price of machinery, with allowance for tear and wear, may be 3s. 6d. per acre more. This of course depends on the number of acres gone over; but if we succeed as well with spring work as we have done hitherto, the sum named will be amply sufficient in my case. Indeed, I think I have rather over than understated the expenses, but I consider the work cheaply performed at the money. Though we have come on numerous boulder stones, our breakages are scarcely worth mentioning, as they do not amount to 10s. together.

"Our people understood readily the working of both engine and tackle, and took to it heartily. Everything from the first day has gone on smoothly and satisfactorily, and with every added day's experience of steam-cultivation I like it better, if possible, and value it more highly.

"I am, dear sirs, yours faithfully, George Hope."

"Messrs. J. & F. Howard, Bedford."

Similar testimonies are given by many leading English landlords and farmers, who unite in testifying to the completeness and simplicity of the machinery, its efficiency for the purposes indicated, and its cheapness, when compared with manual labour.

Three and a half hours being now spent in the exceedingly interesting exhibition, the whole of which was most satisfactory, and proved the simplicity, applicability, ease of working, and other of the implements' features, the company broke up, grateful to the noble Earl for having given an opportunity of seeing the steam plough at work for the first time in Caithness, and gratified to a degree with the complete success of its performance. *Northern Ensign.*

Miscellaneous.

Fattening Poultry.—Chickens intended for market should be separated from the older fowls, and confined in more restricted quarters and fed liberally with a variety of food, of which grain of some sort should form the basis. They should be regularly fed three times a day—the first time as soon after daybreak as possible or convenient. It is hopeless to attempt to fatten chickens while they are at liberty and growing; they must be confined, and during their confinement they must be supplied with abundance of pure fresh water, gravel, old lime mortar, crushed bones, or broken clam or oyster shells, if to be had. In about three weeks they will be in condition for marketing. It is equally hopeless to attempt to fatten older fowls unless confined in a proper coop; and this, like most other appurtenances, need not be expensive. To fatten a dozen adult fowls, of common size, a coop may be made 3 feet long, 18 inches deep, made entirely of slats, open on all sides, top and bottom. Discretion must be used according to the size of fowls cooped. They do not require much space—indeed, the closer the better, if they can all stand up at the same time. Fowls selected to fatten should be in good health. One diseased fowl might contaminate the whole. Besides, if there are any that seem inclined to be quarrelsome, they should be removed at once. Quarrelsome fowls will not fatten kindly. Care must be taken to put up such as have been accustomed to be together or they will fight, and, like other bad examples, it soon finds imitators. The food should be ground Oats, Indian meal mixed with water or milk. The latter is the best. It should be slaked, forming a pulp or paste. The food should be varied. Barley, Buckwheat and Wheat-screenings, boiled or baked Potatos, form excellent fattening materials for fowls. Regularity when fed should always be observed in the hours of feeding, also in the quantity of food given—not to surfeit them one day and starve them the next, but give the fowls their food as regular as you take your own meals. They must be well fed three or four times a-day—the first time as soon after daybreak as possible or convenient, and then at intervals of four hours. No animal is easier kept than fowls. No kind of food comes amiss to them. When at liberty they obtain their living promiscuously, and pick up everything that can be made use of as food in the barnyard. Even the worms, grubs, and bugs give them the most nutritious food. And if insectivorous food is wanted, there is nothing perhaps more easily obtained, at almost any season, than by what the French term a *verminer*. Procure a deep crock, in which put some bran, and on it lay a piece of carrion or other flesh. Cover it with a glass cap so as to admit light, but exclude rain. In a few days it will be a moving mass of living insects or worms, which may be thrown out to young poultry, young turkeys in particular. There is nothing they will devour more greedily; but they should be sparingly given, as the fowls are so fond of them that if given abundantly it will prevent them taking their usual food. We have practised another method for fattening fowls, which has proved successful. We confined a number of fowls, ducks, and turkeys, in the month of November in a small, dark room, only giving them light when feeding. By depriving them of light they were kept perfectly quiet, nothing to do but eat, drink, and grow fat, spending most of the time quietly on the roost. Feed was kept constantly before them in a flat box, consisting of a mixture of Corn, Oats, Barley, and Buckwheat, with pure fresh water supplied daily. They were also provided with broken bones, oyster shells, gravel, and pulverised charcoal, of which they ate quite a large quantity. *C. N. Bement, in Genesee Farmer.*

Royal Berkshire Root Show, Reading.—This root show, which has now become one of the largest in the kingdom, was held on Saturday last in the large and capacious warehouse of Messrs. Sutton, Reading. The roots exhibited were beyond what could be expected from such a dry and unfavourable season as the one which has just passed, and came up to any previous year. There were a great many different lots set down from various parts of the United Kingdom, the finest specimens coming from the South and West of England, and from Ireland. The root-growers, however, in the county of Berkshire sent some very creditable specimens, amongst which we noticed some fine Mangel Wurzel and Kohl Rabi from Mr. Wren, and equally fine Wurzel from Messrs. Ayres, both of Whitley; some remarkable Wurzel, Kohl Rabi, Swedes, and Carrots from Lord Boston, R. Benyon, Esq., M.P., Rev. Thos. Stevens, and J. H. Clark, Esq. B. H. W. Way, Esq., of Denham Place, Uxbridge, sent a good and well-grown collection; Wm. Fox, Esq., of St. Bees Abbey, sent Champion Swedes, which were certainly perfection, both as regards size and symmetry of form, and by far the best we have seen for some time past. We must not omit some enormous Champion Swedes (23 lb. in weight), and Yellow Globe Mangel (31 lb. in weight), from Henry Crawshay, Esq., Oatlands Park, Newnham. The show was visited during the day by a large number of the neighbouring gentry and agriculturists.

Death of Mr. R. Ransome.—Born in Ipswich on the 27th February, 1795, the son of Mr. Ransome, of Norwich, who established himself in this town as an ironfounder towards the close of the last century—in 1809 he became apprentice to his father and brother, and in 1818 he joined them in partnership in the business, which has since attained not merely great eminence but a world-wide reputation. He was thus for 50 years connected with and nearly all the time actively engaged in the management of the largest agricultural implement manufactory in the world. His strong natural sense, sound judgment, and habits of attention, qualified him well for public business, and these qualities, combined with his affectionate and social habits, contributed greatly to promote th extension and interests of the firm . . . [Mr. Ransomee as has been already announced, died at St. Goar,, Rhenish Prussia, on the morning of Sunday, the 6th of November.] There has thus passed from among us a man who, early trained to business under the example of a high-minded and industrious parent, manifested throughout a long life a line of conduct that caused him to be deservedly respected and universally esteemed. His active and persevering habits, his broad, liberal, and practical views, joined with his love of method, order, and punctuality, and, above all, his sterling conscientious integrity, combined to fit him for a high eminence as a man of business. He had that strong common sense which enabled him to adopt the right view of a subject, as well as the foresight and promptitude to avail himself of first opportunities. These qualities gained for him the respect of intelligent men, whilst the integrity, affability, and benevolence, evinced in his intercourse with the 1000 or 1200 hands employed by the "firm," won from the mass of them strong personal attachment. Rarely, indeed, was there a case of severe illness amongst the workmen in which the patient's wants were not relieved by the master's purse, or his feelings gratified by the master's frequent presence at his bedside. Perhaps the best testimony that can be offered to the conscientiousness of his disposition, and the affectionateness of his manner, can be found in the frequency with which he was appealed to for the settling of disputes. He was looked upon as the "peacemaker," and both sides were willing to submit to his decision. He invariably encouraged the well-disposed, and reproved with calmness and excessive mildness where reproof was necessary. Though strict, indeed, in his notions of right and wrong, he was tender in the extreme to the failings of others, and invariably endeavoured to speak the truth in love. He was gifted with great benevolence of disposition, and his hand was always open to administer relief, as he made diffusive charity the channel in which that benevolence should flow. There was in him a fervent desire to use the wealth entrusted to his care "as a faithful steward"

for his brothers' benefit, and his Master's glory, and his experience and sound judgment guided his good heart in such a manner as enabled him to discriminate between the meritorious and the profligate, but at the same time to contribute to the necessities of all. Few lives that have extended over so long a period can be named which have exhibited such a continued and successful application of the best principles to their proper objects—mechanical improvements, industrial and educational progress, benevolence, philanthropy, and religion. *Ipswich Paper.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

Day of the Week.	Day of the Month.	At 9 A.M., Railway Time. Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	Nov.	Inches.	°	°				°	°	°	°	Inches.
Thursday	18	29.20	51	48	S.W.	4	9	54	49	55	43	0.42
Friday	19	29.82	44	43	S.W.	1	10	56	37	59	31	..
Saturday	20	29.52	49	48	S.E.	2	10	53	44	59	40	..
Sunday	21	29.35	42	42	S.W.	0	10	54	36	59	31	0.02
Monday	22	29.55	50	49	S.W.	1	5	52	41	59	41	0.17
Tuesday	23	29.63	40	40	S.W.	0	4	55	34	57	29	0.03
Wednesday	24	29.27	37	37	N.W.	1	10	47	35	48	33	0.97

Calendar of Operations.

NOVEMBER.

WEST SUSSEX: *Nov.* 22.—There is little now of great importance going on upon the farm; work is perhaps slacker than has been known at this time for many years. Wheat sowing is finished, except where any temporary crop, such as Rape or Mustard, has to be got off, and has been got in in the best of order, and is mostly all up and looking well; we do not find the slug at it yet, although everything has been so infested with it during the past summer. There has been a good deal of threshing going on since harvest; the yield is better than was expected, and the quality perhaps was never surpassed—it weighs from 64 to 68 lb. per bushel; but the price is low, and some are using it for cattle and pig fatting, along with Barley, and there is no doubt there will be more corn consumed on farms this year than has been for many years, especially in pig fatting, as they not requiring roots are better suited to the present circumstances of the farmer; though it is not likely that they will pay much, as the lean ones are bought so very much dearer than usual. There is not likely to be so many cattle fed, and no doubt good beef will be dear during the coming winter. Barley has turned out well, and is of good quality, but the price is not at all what was expected, 30*s.* to 34*s.* being the price, and some of it weighs from 56 lbs. to 58 lbs. per bushel; and what, according to quality, would often sell for malting, is not considered fit for that purpose this year. Altogether this will not be one of the best of years for farmers. Work being so far advanced, a little may be saved in labour, and as there are many public works going on the labourer need not be worse off; but perhaps many of those that are the first to be spared from the farm are not those that will be most useful as navvies. Mangels are all stored, and a very light crop they are in most cases. Swedes are perhaps a little better, but far from an average crop. Turnips may be said to be almost a complete failure, the early sown having rotted off, while the later have not grown. There is little work now going on except threshing, attending cattle, carting chalk, dung, &c.; and horses are perhaps cheaper now than they have been for a long time. *G. S.*

Notices to Correspondents.

APPLE WASTE: *D D.* Can any of our readers inform us how the seed can be readily cleaned from the must or pulp that comes from the cider mill, for which we should be much obliged.

[illegible]: *R H.* Inquiry has to be made—hence the delay of a week.

CARTER'S FARMER'S VADE-MECUM.

NATURAL GRASSES: their Names and Derivations; Quality, Produce, Elevation, Situation, Soil, Use, Peculiarity, Season, Growth, Increase, Time of Flowering, Price, &c. Free for One Postage Stamp.
RICHARD SMITH, Seed Merchant, Worcester.

WINTER BARLEY.—Hardy Two-rowed Barley for Autumn sowing. Crop last year, 10 quarters per acre; sold at 38*s.* per quarter for malting. It is of vigorous growth, and succeeds well sown on a Wheat stubble, with 2½ cwt. of guano per acre. Price 45*s.* per quarter, delivered at Braintree Station.
Apply to HENRY EVERSHED, Park Hall, Gosfield, Halsted, Essex.

DIXON'S NEW MAMMOTH WHITE CELERY.—The best White Celery grown. It is very early, extremely solid and crisp, and wherever exhibited has always obtained the First Prize. To Market Gardeners we specially recommend this variety. Price 1*s.* per packet.
E. P. DIXON & SONS, 57, Queen Street, Hull.
May be had in London of Messrs. HURST & SON, 6, Leadenhall Street, E.C.; Messrs. COOPER & BOLTON, 152, Fleet Street, E.C.; Messrs. JACOB WRENCH & SONS, London Bridge, E.C.

Garden Peas.
CHARLES SHARPE AND CO., Sleaford, have fine Stocks of the following, viz.:—

DANIEL O'ROURKE	SCIMITAR
PRIZETAKER	DICKSON'S FAVOURITE
WOODFORD'S MARROW	DILLISTONE'S FIRST EARLY
BEDMAN'S IMPERIAL	

Samples and Prices on application.

THE EARLIEST PEA known is CARPENTER'S EXPRESS, gathered May 7. See Testimonials, among which is the following from Mr. JOHN COX, Gardener to W. Wells, Esq., Red Leat, Penshurst, Kent:—
"Dear Sir,—I beg to say I have tried your Express Pea this season, and am glad to be able to speak very favourably of it as the earliest Pea I have ever grown. I gathered in quantity this season nine days in advance of any other early variety, and earlier also than have ever been gathered in these gardens in the open air."
Price 3*s.* 6*d.* per quart. Trade price on application. Remittance requested from unknown correspondents.
EDWARD CARPENTER, Seed Merchant and Grower, Brighton and Sussex Seed Warehouse, 96, St. James Street, Brighton.

"The Essex Rival Pea."
WORTHY THE ATTENTION OF GENTLEMEN, SEEDSMEN, GARDENERS, AMATEURS AND OTHERS.
THOS. ELEY having succeeded, after five years' careful cultivation, in raising a Stock of the above Splendid PEA, is now in a position to offer it to the Public.
The above Pea is distinguished by the following excellent features, viz., it is hardy, very prolific, and early; and possessing the great desideratum of being far superior in flavour and distinct from all other early varieties, a superiority is claimed for it over the general class of Early Pea.
Mr. ELEY, desiring that the foregoing merits of this most valuable Early Pea should be fully tested by competent and well-known authorities before its introduction to the Public, has submitted it for trial and cultivation to several of the leading Seedsmen and Gardeners in Essex, London, and elsewhere, from whom he has received the most flattering testimonials, fully endorsing the representations herein named Price 2*s.* 6*d.* per quart.
The Trade supplied at the usual discount. Testimonials forwarded on application.
Sible Hedingham, near Halstead, Essex.

SEED POTATOS.—MYATT'S EARLY PROLIFIC KIDNEY, EARLY DALMAHOY ROUND, and all the earliest and best varieties, of the finest quality, free from disease, and at very moderate prices.
Apply to H. & F. SHARPE, Seed Growers and Nurserymen, Wisbeach, Cambridgeshire.

New Vegetables.
STUART AND MEIN, NURSERYMEN and SEEDSMEN, Kelso, N.B., beg to intimate that they have the pleasure of sending out this season for the first time, the ALBERT SPROUT. The Albert Sprout was raised by Mr. Melville, Dalmeny Park, is one of the most successful efforts of this ingenious hybridizer, and "will prove a most useful vegetable for both the peasant and the peer." It is a hybrid between the Drumhead Savoy and the Brussels Sprout The stems are long, studded with Hearting Sprouts, and having a top resembling a small Savoy. As a late hardy winter vegetable it will be found most invaluable, being fit for use when other Sprouts are over, and vegetables are scarce.
"Coming in between the time when Brussels Sprouts are over and the coming in of Young Cabbage makes it doubly valuable." *Scottish Gardener*, June, 1864.
"The flavour after cooking was all that could be desired, being mild and mellow without any kind of coarseness." *Gardeners' Chronicle*, April 23, 1864 Price 1*s.* 6*d.* per packet.
DALMENY SPROUTS (MELVILLE).—A hybrid between the common Heading Cabbage and Brussels Sprouts. The growth is the same as that of Brussels Sprouts, being a tall stem, a foot high, thickly set with Sprouts or Small Cabbages, and terminated by a Cabbage of medium size. It differs from Brussels Sprouts in being altogether a Cabbage; while the latter is a form of the Savoy. The flavour is that of the Cabbage, and free from the Savoy Sprout taste After the tops are cut off, a fine succession of Sprouts is obtained for a lengthened period. Awarded a First-class Certificate by the Royal Horticultural Society of London, April 9, 1861. Price 1*s.* per packet.
FEARNOUGHT CABBAGE (MELVILLE).—A hybrid between the early Dwarf Cabbage, and the Hearting Scotch Borecole. It is delicate and well-flavoured, and the hardiest of the Brassica family. Awarded First-class Certificate. 6*d* per packet
ROSEBERRY BRUSSELS SPROUTS (MELVILLE).—A tall grower with large Sprouts. The seed now offered was saved by the original raiser. 6*d.* per packet.
VARIEGATED GARNISHING BORECOLE (MELVILLE).—1*s.* per packet.
MONARCH CABBAGE (OLIVER).—A distinct dwarf variety and very early. 6*d.* per packet.
GIANT AYTON CASTLE SCOTCH LEEK (True).—6*d.* to 1*s.* per packet
TRIPLE CURLED DARK-GREEN PARSLEY (MELVILLE).—A choice variety. 6*d* per packet.
HARDY SCOTCH BROCCOLI.
DALMENY MAY (MELVILLE).—The heads are large and compact, and nearly as white as those of Cauliflower, extra fine.
LATE WHITE (SHEARER).—Heads large and compact, pure white, fit for use in April and May.
The above two Broccoli are strongly recommended for their hardiness and superior quality. 1*s.* per packet.
Prices of the above to the Trade may be had on application.
CATALOGUE of VEGETABLES and FLOWER SEEDS published in December, and will be found to include many choice Novelties.

Quicks for Sale.
TO THE TRADE AND RAILWAY CONTRACTORS.
500,000 THORN QUICKS to be Sold, of various ages and strength, together with corresponding Stocks of Forest, Evergreens and Ornamental Trees.
Apply to JOSEPH SMITH, Sen., Tansley Nursery, Matlock, Derbyshire.

HAWS, HOLLY BERRIES, HORSE CHESTNUTS, and ACORNS to be had at very moderate prices, f. o. b. at Waterford. For further particulars apply
D. H. HIGGINS, The Nurseries, Clonmel, Ireland.
A large number of SPRUCE FIR, 1½ to 3 feet, will be sold under regular price.

Forest Trees, Shrubs, &c.
THOMAS KENNEDY AND CO. beg to intimate that they have this Season a very large and superior stock of FOREST TREES and SHRUBS of various sizes, adapted for extensive Planting and for giving immediate effect in the formation and improving of Ornamental Parks, Pleasure Grounds, &c., and which they are now selling at very moderate prices.
Their NEW DESCRIPTIVE PRICED CATALOGUE for AUTUMN 1864, and SPRING 1865, of FOREST and ORNAMENTAL TREES, ROSES, BEDDING PLANTS, &c., is ready, and may be had free on application.
Dumfries, from its central position and increased Railway accommodation, enables T. K. & Co. to transmit Goods daily to all parts of Great Britain and Ireland.
Nursery and Seed Establishment (Established 1787), Dumfries.

Forest and Ornamental Trees.
PETER LAWSON AND SON'S CATALOGUE for SEASON 1864-65 is now ready, and will be forwarded free upon application.
PETER LAWSON & SON undertake the FORMATION of PLEASURE GROUNDS and GARDENS by Contract, under the Superintendence of competent Foremen.
28, King Street, Cheapside, London, E.C.; and at Edinburgh.

Larch, True Native Scotch Fir, Spruce, Oak, Quick, &c.
DICKSONS AND CO., 1, Waterloo Place, Edinburgh, have this season an extensive and very healthy stock of the above, as well as of all other kinds of Seedling and Transplanted FOREST and ORNAMENTAL TREES and SHRUBS. They are all well ripened, and are in excellent condition for present planting.
CATALOGUES and samples may be had free on application.

A Splendid Stock.
CEDAR of LEBANON, from 6 to 12 feet; DEODARS, 4 to 7 feet; PORTUGAL LAURELS, 5 to 6 feet, and as much through; ARBUTUS, 3 to 4 feet, and bushy. The above are such as are seldom to be procured, and will all move with perfect safety. To be Sold, a Bargain.
Apply to J. SCOTT, Merriott Nurseries, Somerset.

To the Nursery Trade.
ONE and Two-Year Transplanted LARCH, 9 to 12, 12 to 18, 18 to 24, and 24 to 30 inches; also Seedling LARCHES, all well topped, healthy, and very hardy Plants, the produce of Scotch Seed.
RHODODENDRON PONTICUM, from 3 to 18 inches.
Trade Prices of these and other surplus Nursery Stock, on application to HOWDEN BROTHERS, Inverness, N.B.

Transplanted Larch and Quicks.
CHIVAS AND WEAVER (late GEO. CHIVAS), Chester, offer several Millions of TRANSPLANTED LARCH, from 1½ to 4 feet high, of unexceptionable quality, also several Millions of TRANSPLANTED QUICKS, a large quantity of which are of great strength. Together with corresponding stocks of SPRUCE, SCOTCH, OAK, &c. A very large stock of superior EVERGREENS and ORNAMENTAL TREES, and many thousand STANDARD APPLES of superior quality.
For prices and conditions of free delivery, see CATALOGUE, which will be forwarded on application.

LAND to be CLEARED this SEASON, which contains as below, all having been twice transplanted, except those noted.

		p. doz		p 100		p. 1000	
		s.	d.	s.	d.	s.	d.
5000	PRIVET, strong bushy stuff, cut down last spring	0	9	3	0	25	0
1000	WEYMOUTH PINES, 1 to 1½ foot	1	0	6	0	50	0
600	COB NUTS, good bushes, 2 to 3 feet	2	0	12	6	110	0
300	SPIRÆA, good, 2½ to 3 feet	2	6	25	0	..	
1000	BERBERIS DULCIS, 2 to 2½ feet	1	6	7	6	60	0
2000	Do. ANGUSTIFOLIA, good bushes, 1 to 2 feet	2	0	10	0	90	0
25,000	QUICK, 1 to 1½ foot, stiff stuff	..		1	6	10	0
1000	HORSE CHESNUTS, 1 to 2 feet	..		3	6	30	0
1000	,, ,, 2 to 3 feet	..		5	0	45	0
1000	,, ,, 3 to 4 feet	1	0	6	6	60	0
2000	,, ,, 4 to 5 feet	1	9	12	0	100	0
1000	,, ,, 5 to 6 feet	3	0	20	0	160	0
1000	AMERICAN ARBOR-VITÆ, 3 to 4 feet	1	9	12	6	120	0
4000	CHINESE do. (once transplanted), 1 to 1½ foot	1	0	6	0	50	0
3000	BEECH, 1 to 2 feet	..		2	0	17	6
2000	,, good, 2 to 3 feet	0	9	3	0	25	0
2000	,, very good, 3 to 5 feet	1	0	5	6	40	0
10,000	SPRUCE, 1 to 2 feet	..		5	0	30to40	
500	PINUS AUSTRIACA, 1 to 2 feet	1	0	6	0	50	0
2500	COMMON ELM, 3 to 5 feet	0	9	4	0	30	0
250	SNOWBERRY, 2 to 4 feet	1	6	12	6	..	
1000	STANDARD ROSES, well grown and good sorts	12	0	75	0	600	0

25 pairs very fine IRISH YEWS, 6 to 7 feet high, 7*s.* 6*d.* the pair.
All orders executed in strict rotation. Delivered free on to the N. E. Rails at Thorp Arch Station on the Ch. Fenton and Harrogate Branch. Post-office orders payable at Boston Spa.
For further particulars apply to J. C. P., Providence Nurseries, Boston Spa, near Tadcaster.

A. VAN GEERT, NURSERYMAN, Ghent, Belgium, has the pleasure of offering the following articles, at the very reasonable quoted prices; this being a favourable season for planting:—

		£	s.	d.
100	YOUNG, DOUBLE, and CHOICE CAMELLIAS, in 50 varieties, no buds	3	10	0
100	Ditto, INDIAN AZALEAS, mostly with buds	3	0	0
100	Ditto, NEW HOLLAND PLANTS	3	0	0
100	Ditto, HOT-HOUSE PLANTS	3	0	0
100	BULBS GLOXINIAS, in 20 varieties	1	10	0
100	FERNS, in many sorts	2	0	0
12	Fine Plants of DASYLIRION GRACILIS, GLAUCA, and ROBUSTA	1	16	0
12	Ditto, CHAMÆROPS HUMILIS	1	16	0
50	LATANIA BORBONICA	1	10	0
24	Strong Plants LOMARIA FLUVIALIS	1	10	0
24	Ditto, LOMARIA DISCOLOR	1	5	0
24	Ditto, WOODWARDIA JAPONICA	1	10	0
24	Ditto, PTERIS CRETICA FOLIIS ARGENTEIS	0	10	0
24	Ditto, PTERIS ARGYRÆA	1	0	0
24	PASSIFLORA CŒRULEA	0	10	0
12	POLYGALA DALMAISIANA	0	9	0
24	ERYTHRINA CRISTAGALLI	0	12	0
100	ROOTS of CANNAS, in 10 varieties	1	10	0
100	GHENT HARDY AZALEAS, mostly with flower buds, in 50 varieties	3	0	0
100	Hardy Choice RHODODENDRONS, in 50 varieties	3	0	0
100	Strong BULBS of LILIUM LANCIFOLIUM RUBRUM	2	0	0
100	Ditto ALBUM	1	10	0
12	Ditto AURATUM	5	0	0
100	ASCLEPIAS TUBEROSA	1	5	0
24	Fine Plants of YUCCA PENDULA	2	0	0
50	Varieties of Choice HERBACEOUS PÆONIAS	1	10	0
24	Ditto, TREE PÆONIA	2	10	0
12	Fine Plants of the New Hardy RHODODENDRON AUG. VAN GEERT	2	0	0
100	Fine STANDARD ROSES of the choicest varieties	5	0	0
100	Ditto, HALF STANDARDS	4	0	0
100	Ditto, DWARF	2	0	0
100	Ditto, on own roots	2	10	0
24	DWARF ACER NEGUNDO FOLIIS ARGENTEIS	1	0	0
50	Strong Plants, VIRGINIAN CREEPER	1	0	0
100	Strong Plants, GLYCINE SINENSIS	2	10	0
25	Ditto, BIGNONIA RADICANS	0	10	0
12	CLEMATIS AZUREA GRANDIFLORA	0	6	0
12	,, HELENA	0	6	0
12	,, SOPHIA	0	6	0
12	,, VITICELLA VENOSA	0	9	0
12	,, ODORATA	0	3	0
100	DELPHINIUM, in 20 varieties	1	10	0
100	,, FORMOSUM	0	10	0
50	EPIMEDIUMS, in 10 varieties	1	0	0
100	DEUTZIA GRACILIS	2	0	0
100	HEDERAS, in 4 varieties	1	0	0
100	ILEX, in many varieties, fine plants, 2 years grafted	3	10	0
100	HARDY CONIFERS, in 50 sorts	4	0	0
24	MAGNOLIA THOMSONIANA, 2 years grafted plants	2	0	0
24	,, PURPUREA, bushy	1	0	0
50	,, TRIPETALA, strong	2	0	0
12	,, MACROPHYLLA, in pots	1	10	0
100	RHODODENDRON MAXIMUM, 4 years	1	0	0
100	,, PONTICUM, fit for immediate grafting	0	12	0
12	LAURUSTINUS, on stems	1	10	0

N.B. Reference required from unknown correspondents
Agents: Messrs. R. SILBERRAD & SON, 5, Harp Lane, London, E.C.

REIGATE SILVER SAND (best quality for Plants, &c.), 7*s.* 6*d.* per ton; packed 16*s.* per ton, delivered to Reigate Station. Various kinds of excellent Peat and Loam, Bog Mould, Sphagnum, Rock Sandstone, &c. Circulars, containing List of Prices, with other information, post free on application
W. SHORT, Sand and Peat Depôt, Reigate, Surrey.

HOTHOUSES FOR THE MILLION.

AWARDED A PRIZE MEDAL, 1862.

INVENTED AND PATENTED BY

SIR JOSEPH PAXTON, M.P.

Manufactured in London; Newton in Cartmel, Lancashire; Gloucester, Coventry, Aberdeen, and Paisley.

"Nothing can be more easy than to build them, nothing more simple than to remove them."—*Daily News*, May 22, 1862.

COMBINE SIMPLICITY, **CHEAPNESS,** AND DURABILITY.

FULFIL ALL THE REQUIREMENTS OF HORTICULTURE.

SPAN-ROOF HOUSES, with two ends and doors, can be supplied, Painted and Glazed, ready for fixing, 21 ft. by 16 ft., 32*l.*; 42 ft. by 16 ft., 54*l.*; 54 ft. by 19 ft., 88*l.*; 64½ ft. by 22 ft., 130*l.*; 86 ft. by 25 ft., 207*l.*, &c., &c.

ILLUSTRATED CIRCULARS, with Prices, can be had on application to

SAMUEL HEREMAN, AGENT, 7, PALL MALL EAST, LONDON, S.W.

A HANDBOOK of VINE and FRUIT TREE CULTIVATION, as adapted to the above Patent Hothouses, may be had of Mr. HEREMAN. Second Edition, price 1*s.*; post free, 1*s.* 1*d.*

HOT-WATER APPARATUS,

WITH TRUSS'S PATENT PIPE JOINTS.

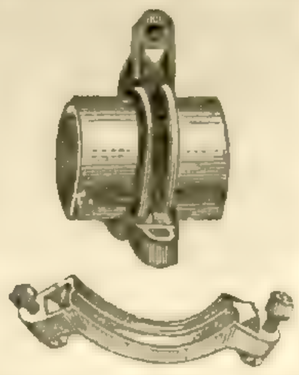

T. S. TRUSS, C.E.,

53, GRACECHURCH STREET, LONDON, E.C.

By means of these Joints the work is executed in less than half the time required for Socket Joints, and alterations can at any time be made, or the entire Apparatus removed and erected elsewhere with the greatest facility. A considerable saving in cost is also effected.

These Joints have been used for several years, giving entire satisfaction, and may be seen in use at the Royal Horticultural Society's Gardens, Chiswick, and many other places in Horticultural and Public Buildings. They are also exhibited at the Society's Gardens, South Kensington.

For a few prices, see last week's Advertisement.

ESTIMATES, PLANS, AND PRICE LISTS FORWARDED ON APPLICATION.

ST. PANCRAS IRON WORK COMPANY,

OLD ST. PANCRAS ROAD, LONDON, N.W.

BY ROYAL LETTERS PATENT.

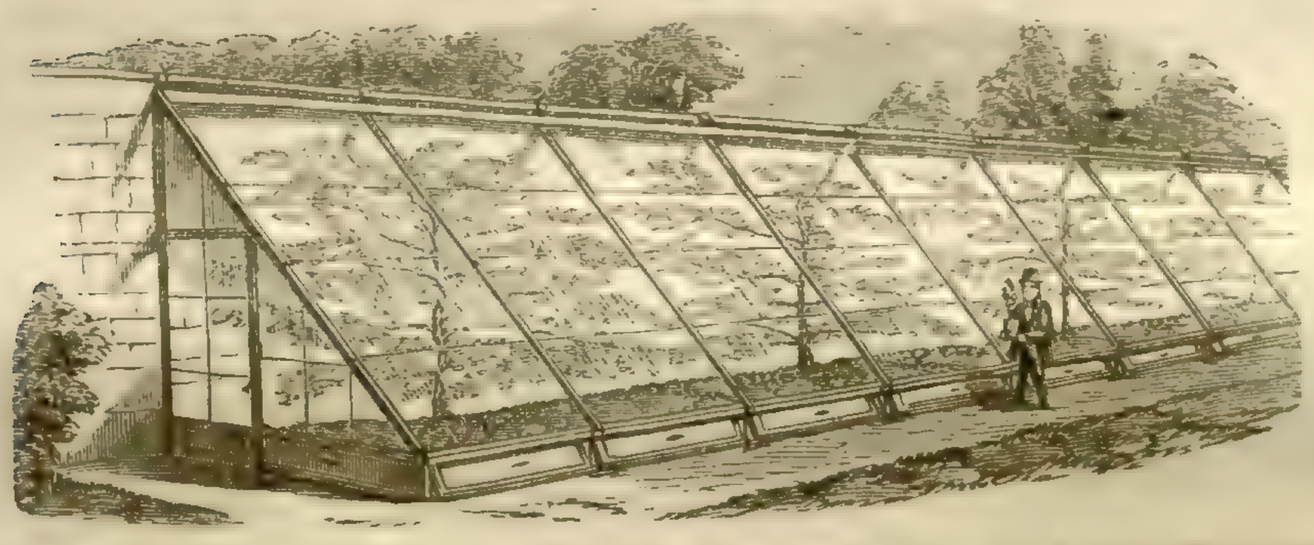

SCOTT'S GLASS WALLS AND ECONOMIC GREENHOUSES.

Designed to meet the suggestions of JAMES SCOTT, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES	PINE and MELON PITS	BALCONIES	GATES
GREENHOUSES	VASES	IRON SASHES	TANKS
HOTHOUSES	VERANDAHS	IRON HURDLES	HOT-WATER WORKS

PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. Lists Free.

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SAMUEL N. McGERROW,

GENERAL HORTICULTURAL BUILDER,
Knotty Ash, near Liverpool.

Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

Heating by Hot Water.

HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, TUBULAR, and Elliptic, from 24*s.* each. Improved Boilers and Iron Stands to use without brickwork, 56*s.* each. Valves from 10*s.* 6*d.* each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at

Mr. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S. Price List on application.

Heating by Hot Water.

W. J. HOLLANDS, IRON MERCHANT,

31, Bankside, London, S.E.

HOT WATER PIPES, from Stock, per yard:—2-inch, 1*s.* 4*d.*; 3-inch, 2*s.*; and 4-inch, 2*s.* 7*d.* BENDS, from Stock, 1*s.* 7*d.*, 2*s.* 6*d.*, and 3*s.* 3*d.* each. THROTTLE VALVES, 10*s.* 6*d.*, 13*s.* 6*d.*, and 15*s.* each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day. A discount to the Trade.

RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER

for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the

Patentee's Warehouse, 155, Cheapside, London, E.C.

Price complete from 3*l.* 10*s.*

Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

West of England, Ireland, and Wales.

VINCENT SKINNER (*late Partner with* J. WEEKS & Co.),

HORTICULTURAL BUILDER and HOT-WATER APPARATUS MANUFACTURER, HEATING on the ONE-BOILER SYSTEM. Plans and Estimates on application.

VINCENT SKINNER, Bridewell Street, Bristol.

Midland Steam Power Horticultural and Hot-water Works, Loughborough.

T. G. MESSENGER, the Proprietor of the above Works, finding it necessary (through the great demand for his Horticultural Buildings and Heating Apparatus) to make large additions to his Premises, and to Fit the same with an entire set of STEAM-POWER MACHINERY, is now enabled to execute any Orders entrusted to him with the greatest dispatch, and at the lowest possible price consistent with good and substantial work.

Illustrated Catalogues, Working Model, Plans and Estimates, free on application.

The only Stove without a Flue.

JOYCE'S PATENT, for Warming Chapels, Halls, Shops, Conservatories, and all other Places. Price from 12*s.* 6*d.* each.

JOYCE'S STOVES are Portable and Economical, and burn 12 hours with one supply of fuel, requiring no attention.

STOVES for GREENHOUSES are made to burn all the Winter. Temperature always the same. Patent Fuel, 2*s.* 3*d.* per bushel.

SWAN NASH, Patentee, Ironmonger,
253, Oxford Street, W.; and
119, Newgate Street, London, E.C.
Illustrated Catalogues post free.

DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the

best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water-tight Roof insured.

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

For Prospectus, &c., address T. H. P. DENNIS, Horticultural Builder, Hot-Water Engineer, &c., High Street, Chelmsford, Essex.

WINTER DRESS all FRUIT TREES with GISHURST COMPOUND.

Copy of a Letter from MR. RIVERS.

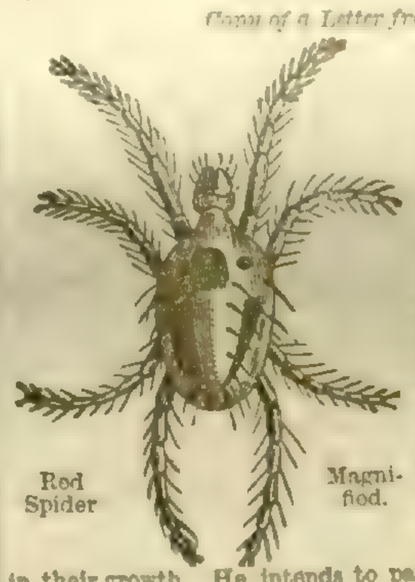

Red Spider — Magnified.

"Nurseries, Sawbridgeworth
Herts, 22d Oct., 1861.

"I must tell you what I heard to-day from a very clever gentleman farmer, Anthony Bubb, Esq., of Witcombe Court, Gloucester. He has a wall, to which Peach-trees are trained. Well, last autumn they were in a wretched blighted state. As a desperate remedy he unnailed them all early last February, and gave all but one a thorough painting with Gishurst Compound, 1 lb. to the gallon of water; his trees, all but the one, commenced to grow favourably in spring, and are now pictures of health. The tree not painted is in a half-dead blighted state. He used the same dressing to his Apple-trees; it killed the woolly aphis entirely, and has made his trees clear and vigorous in their growth. He intends to paint his wall-trees annually, and tells all his friends to do the same. I shall certainly serve all my young Peach-trees against my walls in the same manner. The Compound is, I believe, more efficacious than the usual offensive mixtures of clay, soot, sulphur, &c., and it does not blacken the shoots on the walls."

For Orchard-house trees 4 ozs. to the gallon will be found a good strength; when used stronger some buds on weakly trees may be injured.

GISHURST COMPOUND is Sold Retail by Nurserymen and Seedsmen, in boxes, 1*s.*, 3*s.*, and 10*s.* 6*d.* each.

Wholesale by PRICE'S PATENT CANDLE COMPANY (LIMITED), Belmont, Vauxhall, London.

Vines, Extra Strong, for Fruiting in Pots.

LUCOMBE, PINCE AND CO. beg to offer the above with excellent Canes, thoroughly ripened, having prominent Eyes, and certain of carrying a heavy crop of Fruit next season. Also a splendid stock of Extra Strong VINES, of all the leading sorts, for planting out;

PRICED LIST of SORTS sent on application.
Exeter Nursery, Exeter.

Vines, Vines—extra strong.

J. MEREDITH, The Vineyard, Garston, near Liverpool, begs to inform the public that he has a very fine stock of VINES of various sizes, both for planting out and fruiting in pots. The wood is thoroughly ripened, so that they may be forced early if necessary. The stock has been propagated from the Vines that produced the fine Grapes which have been so successful for the last four years at the London and Liverpool Exhibitions.

High Beech, Essex, N.E.

VINES.—A Large Stock of fine healthy Canes for Fruiting and Planting out at low prices. Also a select Collection of ROSES as Standards and in pots. An excellent selection of Hollyhocks, Dahlias, Evergreens, and Ornamental Shrubs. Hothouse and Greenhouse Plants in great variety.

A fine Collection of Exotic and Homogeneous Ferns, &c., offered by JAMES CRAWFORD.

Vine Duchess of Buccleuch.

ROBERT PARKER has much pleasure in announcing that he is now distributing this distinct and valuable early GRAPE, which will supply the long felt desideratum of a White Grape with Muscat flavour that may be grown and ripened with the Black Hamburgh.

The following Certificates and Prizes have been awarded at various London and other Exhibitions.

Two Certificates of Merit.
Three First-class Certificates.
Two First Prizes in open competition for the finest flavoured Grape of any colour. Chasselas Musqué, Muscat of Alexandria, and Frontignan competed for these prizes. For further description see *Gardeners' Chronicle* of October 1st and 22d, pages 943 and 1008.

Also New GENERAL CATALOGUE, containing Priced and Descriptive Lists of Miscellaneous, Greenhouse, Hardy, and Stove Plants, Azalea indica, Conifers, Ferns, Fruit Trees, Grapes, Rhododendrons, Roses, Dutch and other Bulbs, &c., which will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

New Melon "Malvern Hall."

B. S. WILLIAMS has much pleasure in offering for the first time this VALUABLE MELON, which has been fully proved, after three seasons competitive trial with all the best sorts in cultivation, to be the earliest to ripen and the first in setting its fruit. It has taken many First Prizes during the last and previous seasons at different Provincial Shows.

The following description is supplied by the Raiser, Mr. STEVENS:—"Plant of robust habit and vigorous growth, a very free setter and sure cropper; quite ten days earlier than any other variety. Fruit from one to two pounds in weight; scarlet flesh, rind tender, yellow mottled and streaked with dark green; fine flavour."

Price 2s. per packet.
Paradise and Victoria Nurseries, Holloway, London, N.

Magnificent Dwarf-trained

MORELLO and MAY DUKE CHERRIES, ROYAL GEORGE PEACHES, MOOR PARK APRICOTS, PEARS, and PLUMS, of the best leading kinds.

WM. WOOD AND SON have to offer a large Stock of the above, grown on maiden soil. The trees are very large and have been most carefully trained. Finer trees could not possibly be wished for.

W. W. & S. have also some very fine Standard SCARLET HORSE CHESTNUTS left. Stems with fine heads.

Address, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

The Castle Kennedy Fig.

PETER LAWSON AND SON have made arrangements to send out the above next Autumn. They are now booking Orders, which will be executed in strict rotation as received. Plants, 10s. 6d. each; a few extra strong at 21s. each—with the usual Discount to the Trade.

Full printed particulars to be had on application.
Edinburgh and London.—Dec. 3.

To the Nursery Trade.

MESSRS. FRANCIS AND ARTHUR DICKSON AND SONS, The "Upton" Nurseries, Chester, beg to offer to the Trade 5000 DWARF-TRAINED PEACHES and NECTARINES, all the leading kinds, 1 and 2-year Trained. They are unusually fine clean-grown healthy Plants. Price 36s. to 42s. per dozen, according to size, &c. Their Trade NURSERY LIST may be had on application.

STANDARD APPLES for Orchard Planting, strong choice named sorts.—SPRUCE FIRS, 3 to 4 feet, strong and handsome; AUSTRIAN PINES, 4 to 6 feet, ditto, ditto; and all kinds of FRUIT TREES, EVERGREENS, and ROSES, all recently transplanted, at

WOOD & CO.'S, Barbourne Nurseries, Worcester.
Prices upon application.

Fruit Trees.

J. SCOTT, Merriott, Somerset, offers selections from one of the most complete Collections of FRUIT TREES in this country, numbering above 1000 sorts.

A DESCRIPTIVE CATALOGUE, 84 pages, for 7 stamps.
NEW GENERAL NURSERY STOCK CATALOGUE, one stamp, containing Forest Trees, Coniferæ, Flowering Shrubs, Evergreens, American Plants, Roses, Camellias, Heaths, &c.

Fruit Trees in Pots.

H. LANE and SON having paid great attention to the above (of which the numerous Prizes they have received is a proof), are enabled to supply PEACHES, NECTARINES, APRICOTS, PLUMS, PEARS, APPLES, FIGS, &c.

All the different CATALOGUES may be had upon application at the Nurseries, Great Berkhampstead.

Dwarf-trained Trees.

BY THE THOUSAND, HUNDRED, OR DOZEN.

APPLES, PEARS, PLUMS, CHERRIES, PEACHES, and NECTARINES.

Fine, flat, well trained, of best quality and true to name.
RICHARD SMITH, Nurseries, Worcester.

Extra Size Fruit Trees.

PYRAMIDAL PLUMS, PEARS, &c., of extra size and first quality, very handsome. Prices, names, and sizes, may be had on application.

Also the DESCRIPTIVE FRUIT CATALOGUE.
STEPHEN BROWN, Seed and Nursery Establishment, Sudbury, Suffolk.

Pyramidal Fruit Trees.

H. LANE AND SON have to offer a fine Stock of PYRAMIDAL APPLES, well set with Bloom Buds, Good and Strong, PLUMS, PEARS, &c. Also Standard and Dwarf-trained APPLES and PEARS. CATALOGUES may be had on application at The Nurseries, Great Berkhampstead.

Orchard House Trees.

JAMES VEITCH is commissioned by a Gentleman to offer for Sale the following PEACH and NECTARINE TREES. They are of fine pyramidal shape, 4 to 6 feet high in Pots, well furnished with good fruiting wood thoroughly ripened; for the last three or four years they have been fruited in an Orchard House, and to any one requiring such they are worthy of especial attention.

PEACHES.

1 ACTON SCOT	1 LATE ADMIRABLE
1 BARRINGTON	1 BELLE BEAUCE
1 GROSSE MIGNONNE	1 NOBLESSE
2 ROYAL GEORGE	1 ROYAL KENSINGTON
2 VIOLETTE HATIVE	1 WARBURTON ADMIRABLE

NECTARINES.

2 BRUGNON	2 DOWNTON
3 ELRUGE	1 HUNT'S TAWNY
1 PITMASTON ORANGE	1 VIOLETTE HATIVE

The trees are at Roehampton, and can be seen if required, previous to purchase.
Royal Exotic Nursery, King's Road, Chelsea.

ROYAL HORTICULTURAL SOCIETY,

SOUTH KENSINGTON.

Patron—HER MAJESTY THE QUEEN.

President—THE DUKE OF BUCCLEUCH, K.G., ETC., ETC.

REGULATIONS FOR THE YEAR 1865.

1. The Society has two Gardens, one at South Kensington, the other for experimental Horticulture at Chiswick. The Chief Exhibitions, Fêtes, and Promenades are held at South Kensington.

2. For convenience in the necessary arrangements the year is divided into two seasons, an out-of-door and an in-door season. The out-of-door season is from the 1st May to the 31st October, the in-door season from the 1st November to the 30th April.

3. During the out-of-door season, Plants and Flowers are Exhibited as far as possible in the Gardens; during the in-door season the South Kensington Exhibitions and Promenades take place in the Conservatory, Glazed Arcades, Pavilions, Orchard Houses, &c. These buildings afford an uninterrupted walk of about the third of a mile, and are protected from draughts. They are warmed to the temperature required for the various plants exhibited.

ADMISSION TO THE GARDENS.

4. The Gardens at South Kensington are open to Fellows on all ordinary days throughout the year from 9 A.M. till sunset, except Sundays, when they are opened at 2. On week days, except on certain fête days, the Gardens are private to the Fellows and their friends up to 1 o'clock: after 1 o'clock the public are admitted on payment.

5. The Garden at Chiswick is open to Fellows and the public daily, except on Sundays, from 9 A.M. till sunset. On Sundays it is closed.

FÊTE DAYS.

6. The following are established fête days in each year:—The Queen's birthday or the day on which it is appointed to be held: the 26th August, the anniversary of the birthday of the Prince Consort, the founder of the South Kensington Gardens; when it falls on Sunday it will be held the Monday following: the 5th June, the anniversary of the opening of the Gardens in 1861, when a Horticultural *déjeuner*, limited to Fellows, will take place; the 1st May and 1st November, the first days of the out-of-door and in-door season; (if any of the three last days fall on a Sunday, these fêtes will be held on the preceding Saturday): also Easter Monday and Tuesday, and Whit Monday and Tuesday. One or more bands will play on all fête days.

SHOWS.

7. All Shows at South Kensington take place, or commence, on Saturdays throughout the year. At the weekly Shows, medals and certificates of merit only will be given. At the other Shows, money prizes as well as medals and certificates of merit will be offered.

The following Shows are fixed for the year 1865. Schedules will be duly issued.

GREAT SHOWS.

A Great Show of all kinds of Flowers, Plants, and Fruit, will be held on the Saturday in June, which falls between Ascot and Derby weeks, viz., 10th June. The Show will last only a single day.

A Great Show of Roses on the first Saturday in July. (1st July). It will last only a single day.

A Great Show of Fruit and Vegetables on the fourth Saturday in July. (22d July.)

SPECIAL SHOWS.

A Show of Hyacinths and Camellias on the third Saturday in March. (18th March).

A Show of Early Azaleas and Spring Flowers on the second Saturday in April. (8th April).

A Show of Orchids on the second Saturday in May. (13th May).

A Show of Pelargoniums, including scarlet and variegated varieties, on the first Saturday in June. (3d June).

A Show of Azaleas, with the flowers trained, partially trained, or in their natural growth, on the third Saturday in June. (17th June).

A Show of Plants of Ornamental and Variegated Foliage on the second Saturday in July. (8th July).

A Show of Liliaceæ and Amaryllidæ on the third Saturday in July. (15th July).

A Show of Ferns and their allies on the last Saturday in July. (29th July).

FLORAL DECORATION SHOW.

8. A Show of Decorations for Dinner and Supper Tables, and of Bouquet holders. This Show will be held on the fourth Saturday in June (24th June), and will also be open in the evening.

SHOWS BY INDIVIDUAL NURSERYMEN.

9. A continuous Show of Tulips will be held in the spring by Messrs. Henderson, of Wellington Nursery, St. John's Wood Road.

10. A continuous Show of Rhododendrons will be held in the summer under the Great Tent by Messrs. Waterer and Godfrey, of Knap Hill, Woking.

11. A continuous Show of Chrysanthemums will be held in the winter.

INTERNATIONAL SHOWS.

12. An International Show of Horticultural Implements will be held during the month of July.

13. An International Show of Fruit and Vegetables will be held during the second week in December.

FORTNIGHTLY MEETINGS AT SOUTH KENSINGTON.

14. Fortnightly meetings for the election of Fellows, reading of papers, and transaction of scientific business, will be held in the Council Room, except in the months of August, September, and October, on every other Saturday throughout the year that is not preoccupied as a fête day, or for one of the Great Shows. Chair to be taken by the President, or in his absence by some Fellow, at 12 o'clock.

15. At these meetings notice will be taken of flowers, fruit, and vegetables sent for exhibition, and certificates of merit will be awarded.

WEEKLY SHOWS AND PROMENADES AT SOUTH KENSINGTON.

16. On the afternoon of every Saturday throughout the year there will be an Exhibition of Flowers in Pots, and of Fruit and Vegetables by the Fellows and others. The Shows will commence at 2 o'clock, and will be continued until the following Wednesday.

17. Medals and certificates of merit will be given.

18. The Queen has been pleased to command that contributions shall be sent from the Royal Gardens, Frogmore, to these Shows, and numerous Fellows have promised to exhibit.

19. There will always be a promenade with music at these Shows at 3 o'clock in the out-door season, and at 2 o'clock in the in-door season.

VARIOUS EXHIBITIONS.

20. In addition to the above Shows there will be continuous exhibitions at South Kensington of the hatching and growth of trout and salmon directed by Mr. Frank Buckland; of sea plants; of bees and beehives; and of the Attacus silkworms, belonging to Lady Dorothy Nevill.

PRIZES.

21. Prizes for the best plants and vegetables cultivated by soldiers in barracks, by sailors in homes, by coastguard men, and by workmen employed in Her Majesty's Dockyards, will be awarded on the first Monday in August. A schedule will be issued.

22. Prizes given for specimens of Window Gardening among the working classes in metropolitan parishes will be awarded at a public fête on the first Monday in September. A schedule will be issued.

CONVERSAZIONI.

23. There will be two Conversazioni which are open to Fellows only, and not to the public. The evenings will be appointed by the President in May and June.

CHISWICK SHOWS.

24. Strawberry Show and fête in June, Show of the Chiswick Trial Flowers in August, and Show of Vines and Fruit grown at Chiswick, in September. These Shows will be held on Wednesdays hereafter to be fixed according to the general character of the season.

EXAMINATIONS AND CERTIFICATES FOR GARDENERS.

25. Central Examinations of Gardeners in Theoretical and Practical Gardening will be held annually at South Kensington, and local examinations will be held in the country. Certificates of competency and prizes will be awarded at both examinations.

FELLOWS AND THEIR PRIVILEGES.

TWO GUINEA F.R.H.S.

26. Fellows paying an entrance fee of two guineas, and an annual subscription of two guineas, have personal admission every day, and to all Shows, fêtes, and Promenades, both at Chiswick and South Kensington. They have also the right of introducing personally two friends, on Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, and Sundays, but not on Saturdays. In addition to these privileges they receive 20 tickets which are each of the value of one shilling, and are available for any day when the entrance is one shilling or less; a copy of the Journal of Proceedings of the Society is gratuitously issued to them; they share in the distribution of seeds, and they have the right to enter the ballot for rare plants, and to purchase fruit from Chiswick. They have admission to the Conversazioni.

FOUR GUINEA F.R.H.S.

Fellows paying four guineas have double the privileges of two guinea Fellows, as respects the right of introducing friends, the distribution of seeds, the ballot for plants, and the number of tickets they receive, with the further advantage that both their yearly tickets are transferable. They have also the privilege of purchasing any number of transferable tickets for two guineas each. These transferable tickets confer on their bearers all the privileges of personal admission, and of introducing friends, which the Fellows themselves could exercise. Admission to the Conversazioni is limited to Fellows, the holders of transferable tickets, debenture holders and their nominees.

The Fellows of the Royal Horticultural Society have the privilege of purchasing tickets for the Shows at a reduced price before the day of the Show, viz.:—

At 3s. 6d. for each of the Great Shows, and 2s. 6d. for each of the Special Shows.

COUNTRY SUBSCRIBERS.

27. Persons residing beyond 20 miles from the metropolis may be admitted to limited privileges. On payment of one guinea entrance and one guinea annually, they receive a copy of the Journal gratis; and they obtain admission to the Gardens at Kensington and Chiswick by means of tickets of the value of the annual subscription. They have no votes and cannot attend general meetings. They may nominate local Horticultural Societies to enter into union with the Royal Horticultural Society.

TOWN SUBSCRIBERS FOR SEASON TICKETS.

28. Personal Season Tickets, not transferable, may be purchased for 20s. for the out-door season and 10s. for the in-door season. These will give admission for every day in the year, including all Shows, Promenades, and day fêtes, at South Kensington. These tickets do not confer any of the special rights of Fellows.

DEBENTURE HOLDERS.

29. Persons holding debentures, and their nominees, have the privilege of free admission to the Gardens whenever they are open.

CHISWICK SEASON TICKETS.

30. Annual Season Tickets, not transferable, and giving admission only to the experimental Chiswick Gardens and Shows, may be purchased by residents at Chiswick and others, for 10s. each.

ADMISSION OF THE PUBLIC.

31. Admission to each of the Great Shows is obtained by the public by tickets, to be purchased for 5s. each before the day, and for 7s. 6d. on the day of the Show.

32. Admission to each of the Special Shows is obtained by the public by tickets, to be purchased for 3s. 6d. each before the day, and for 5s. each on the day of the Show.

33. The admission to the first day of all other Shows at South Kensington, and to the Saturday weekly Shows, is 2s. 6d., except in August, September, and October, when it is reduced to 1s.

34. The admission to the Shows held at Chiswick will be 2s. 6d.

35. Admission to the South Kensington Gardens after 1 o'clock on the days mentioned below, not being Show, fête, or Promenade days, will during the London season be as follows:—

Saturdays, 2s. 6d.
Sundays, the Gardens are closed to the public but open to Fellows and their friends personally introduced.
Mondays, 6d.
Tuesdays, Wednesdays, Thursdays, and Fridays, 1s.

Admission during the months of August, September, and October, when the London season is over, 3d. every day but Saturday. On Saturday it is 1s.

Admission on the Queen's Birthday, 1s.; on Easter Monday and Tuesday, and Whit Monday and Tuesday, 3d. each day.

36. On the 26th August, the Anniversary of the Birthday of the Prince Consort, the founder of the South Kensington Gardens, these Gardens are open free at the wish of Her Majesty. Above 153,000 persons visited them on the 26th August, 1864.

37. Admission to the Experimental Garden at Chiswick, excepting on Show Days, 1s. daily, throughout the year.

GUIDE BOOK.

38. A Guide Book to the South Kensington Gardens, price 6d., is to be had at the Gardens and of all booksellers.

New Seeds Growth of 1864.

ROYAL BERKSHIRE SEED ESTABLISHMENT

SUTTON AND SONS are now prepared to execute orders for all kinds of GARDEN SEEDS.
The prices are moderate and the quality fine, owing to their having been harvested well.
Royal Berkshire Seed Establishment, Reading.

To the Seed Trade.

NEW ANNUALS for 1865.

WAITZIA AUREA,
Brilliant Yellow Everlasting, from Swan River.
WAITZIA CORYMBOSA,
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The Gardeners' Chronicle.

SATURDAY, DECEMBER 3, 1864.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY Dec. 7 { Royal Horticultural International Fruit and Vegetable Show, at South Kensington—Noon.
WEDNESDAY Dec. 7 { Royal Horticultural Floral Committee, at S. Kensington—10 A.M.

THE genus EPISTEPHIUM has long been known to botanists, having been originally established by HUMBOLDT and BONPLAND in their *Nova Genera et Species*, where a somewhat indifferent representation of E. elatum appeared more than half a century ago. Twenty years later a second species (E. amplexicaule) was figured by POEPPIG; to which REICHENBACH has more recently added a third under the name of E. Friderici Augusti, and which forms one of the most interesting plates in that author's *Xenia Orchidacea*. But although the undoubted beauty of these plants naturally rendered them objects of desire to collectors, and although a few individuals have been occasionally imported, still no success appears to have attended their cultivation, and more than 30 years of the Orchid mania had passed away without an Epistephium having ever been seen in blossom in the hothouses of Europe! Happily, the reproach has at length been removed, for under the skilful auspices of Mr. SMITH, the new Curator of the Royal Gardens, Kew, a veritable species—making the fourth—of the genus has flowered beautifully during the autumn of the present year. Of this plant a figure has just appeared in the *Botanical Magazine*, which will enable our readers to judge of its attractiveness, and will likewise, we trust, induce nurserymen to redouble their exertions to obtain the other species in a living state.

The plant figured in the *Botanical Magazine* is called E. Williamsii, after the gentleman who sent it to this country from Bahia, its native habitat; it is therefore not impatient of heat, while the other kinds, being found at an elevation of from 4000 to 6000 feet on the Andes of New Grenada and Peru, naturally affect a lower temperature, and must be treated as belonging to the warm section of "cool" Orchids. It was no doubt through ignorance of, or inattention to this circumstance, that we lost some beautiful specimens that the luckless WARSCEWICZ had carefully transmitted to this country, and which we remember to have seen, soon after their arrival, in excellent condition at Messrs. VEITCH's nursery.

Epistephiums are terrestrial plants having somewhat the appearance of Sobralias, but their habit is much more compact, and their flowers are produced in conspicuous racemes at the end of stems covered with beautiful glossy leaves not unlike those of Epidendrum crassifolium. This compactness is itself a great merit, for as cultivators must have found to their mortification, some of the finest species of Sobralia—S. Liliastrum for instance—are practically worthless in consequence of the inordinate length to which their reedy stems attain.

AMONGST other seeds of Cucurbits kindly communicated to us last spring by M. NAUDIN, were those of a small-fruited hybrid, the produce of Cucumis trigonus, fertilised with the pollen of a Melon. The possibility of a cross between two species so widely different is a matter of such interest, and the fruit so pretty, that we are glad to be able to give a figure.

The stems, which creep widely, attain a length of several feet, and have not the slightest disposition to become perennial. The leaves are deeply cut, occasionally somewhat crisped, and slightly rougher to the touch than those of the Melon; and the fruit, which is obovate, pointed towards the stalk, and perfectly even, scarcely exceeds two inches in length, and is of a pale yellow shaded with green, and variegated with about ten rays of green spots, between which is a delicate line, proceeding like a meridian line from pole to pole, but distinct only at the apex. The flesh is very thin, and the seeds, which are about two lines long and rather more than half a line broad, are attached by an evident stalk to the three-forked placenta and immersed in a pale green pulp. There is very little if any bitter flavour, even in the rind, but the smell, and indeed the taste, is just like that of a ripe Cucumber. In our climate the plant will not succeed in the open air, but trained up against a trellis it might not prove an unwelcome guest in the stove. We shall be very curious to see what the produce of next year will be, as notwithstanding the evident tendency to revert to the type of Cucumis Melo, we can scarcely conceive that any series of self-impregnations could produce a moderately-sized well-flavoured Melon. As in the Cucumber, each seed is contained in a little gelatinous sac, a circumstance which we have also observed in two buff-seeded varieties of Cucurbita maxima.

It should be observed that the seeds were marked by Monsieur NAUDIN as those of the first generation, the result of which would probably be nearer to the Melon than to the female parent Cucumis trigonus, a fact not merely confirmed by habit, but by the absence of the intensely bitter taste. Our figure is exactly of the natural size. *M. J. B.*

THERE are some items in the ROYAL HORTICULTURAL SOCIETY'S PROGRAMME for 1865, of which we gave a hurried sketch at p. 1106, and which appeared in more detail in our advertising columns last week (p. 1129), of so much importance as regards their bearing upon the position of Horticulture and Horticulturists that we must devote a brief space to their consideration.

And first of all, viewing the Programme as a whole, we cannot but express our regret that it should contain so large a proportion of chaff to so little grain, and that so scanty a crop of progress should be the only result of all the past harrowings, and rakings, and seed-sowings. Dropping the figurative for the real, we may state more plainly, that for some time past the horticultural community has been waiting with resignation but with determination, to see what would be done by the present management towards carrying out the legitimate object for which the Society was chartered, namely, "the improvement of Horticulture," and for the "still further promoting" of which, a new charter was recently obtained. The soil had been well prepared, and abundant fertility was looked for, but under the magician's wand it has turned to—ashes. The field from which an abundant harvest of grain, in the shape of horticultural work, was expected, has brought forth little besides tares, and poppies, and rankling weeds.

Taking these new "Regulations" in detail, we come to the first great stumbling block at No. 7—"All shows at South Kensington take place or commence on Saturday throughout the year." What the exhibitors think of this announcement will be apparent from a letter from one of the most prominent among them, printed in another page, and we cannot doubt from what we hear, that the feeling thus honestly expressed is general if not universal amongst the exhibiting class. What then is the prospect? Exhibitors are too important a body to be thus cavalierly treated. Without exhibitors no "regulations" can make a show. If but a moiety of them stay away in consequence—as a moiety will certainly do—the show is damaged; if the bulk of them stay away, as is not improbable, the show is ruined. If it is still thought that exhibitors are to be marshalled like a company of engineers, and that it is only necessary to say to this man "go—and he goeth," and to another, "come—and he cometh," the empty benches of the past season should have taught a truer lesson. How easy to have avoided this fatal rock, as another Society, profiting by past experience, has wisely done! How much better to have sought judicious counsel, than thus to have floundered amongst the speculations of blundering amateur management!

Passing by some minor mistakes, such as fixing a show of Scarlet Pelargoniums six weeks before the plants can be properly in bloom, and naming the unnecessary and inconvenient hour of 12 o'clock for the fortnightly meetings, we come in No. 16 to the weekly shows, and these we must conclude have been fortuitously *almost* correctly designated—for that they will be, and must be of a weakly meagre nature, after the flush of novelty has passed, no one can doubt. We picture them as very much diluted copies of the present Floral Meetings. Seriously, the ever-recurring weekly show must be surfeiting. It can virtually prove to be nothing better than the Society itself is able to furnish, and the Society has hitherto had a capital perpetual show—thoroughly creditable to Mr. EYLES—in its own conservatory, so that nothing will be gained. Such a feverish expedient was utterly uncalled for. It would be far better to abolish the weekly shows and throw additional interest into the fortnightly meetings, which are correct in principle, if not in detail, and might then perhaps be worth a visit from those who live at some distance, as well as by "residents in the immediate neighbourhood."

We hasten past such expensive and anti-utilitarian toys as cultivating "sea plants" (bah!), and in No. 24 alight on some Chiswick shows. We have nothing to say against these. They are right so far as they go; but they go a very small way towards that recognition and utilisation of Chiswick on which a large body of Fellows have insisted, and will still insist.

It will be in the recollection of our readers that at the last anniversary meeting a good deal was

said about Chiswick, and the determination of the Fellows to maintain it as a school of horticulture was very clearly expressed. This led to the appointment of a Committee, which has very fully examined the whole subject, and laid before the Council a report in accordance with the general feeling expressed at the meeting referred to. This report has been—SHELVED. All that comes out of it is (No. 25) that "examinations of gardeners in theoretical and practical gardening will be held annually at South Kensington;" and the "school of horticulture at Chiswick," which was the very basis of the reference to the committee, and the sop o the meeting, is ignored.

The inference from all this, is, we fear, too obvious, namely, that Horticulture may go to the wall, and Horticulturists with it, for all that the present dominant party, or at least the acting portion of it, cares. It will however be a standing reproach to the country, if with so much prestige, and so fine an opportunity, the national Horticultural garden is suffered to dwindle into a mere aristocratic playground. The best possible arrangement that could be made under the circumstances, seeing that the Society is tied hand and foot by its wily patrons, would be to separate: the one party taking Kensington, and converting the Garden, as no doubt could be done with full success, to suit its own ends; the other taking Chiswick, notwithstanding the interested opposition thereto, and carrying out there the advanced Horticulture of the present day, with the view of imparting sound instruction to those into whose hands, in the ordinary course of things, the management of English gardens, public and private, will in due time fall. And as the horticultural body would perhaps not be able unaided to find the means of carrying out this desirable change, the Government might do worse than lend a helping hand; or in fact, Chiswick might be made a Government School of Horticulture, such as those which exist in Belgium.

WE print elsewhere (p. 1157) a letter from a gentleman who has won some fame as a raiser of new flowers, on a question bearing upon HORTICULTURAL EXHIBITIONS, which is not without importance, and which deserves to be calmly considered and temperately discussed. The question, indeed, which "Florist" has propounded, and which resolves itself into the inquiry Who is to win? appears to us to be very much one of private arrangement between gentlemen and their gardeners, for so far as the mere awarding of the prizes is concerned, it must be perfectly immaterial to the societies whether the award is made to A., or to B. gardener to A. The present practice has probably sprung up without design on either side; but so long as the subjects of competition are entered as coming from B. gardener to A., and not from A. himself, we do not see how any society is warranted in taking steps in the matter, because if A is aggrieved, the remedy is in his own hands.

We would not, however, convey the impression that this is an unimportant question, or altogether a private one; for if, as our correspondent alleges, the employers of gardeners are kept by the practice now followed, from taking any interest or even from taking so much interest as they otherwise would do, in horticultural exhibitions. such a state of things is manifestly detrimental to horticulture, and renders the question one of general interest and application. And it is on the ground that a different system would to a greater extent win the sympathies of the upper classes in the cause of gardening, and not as depreciating gardeners, that we understand our correspondent to rest his complaint. Indeed we can vouch that the latter is by no means his object, but rather that gardeners should be directly benefited by the greater impulse which, as he believes, would be given to horticultural pursuits if the plan he proposes were adopted.

The subject has been very fairly opened by our correspondent, and we shall be glad to learn whether the feeling to which he alludes is really so prevalent as he supposes, with the view of assisting if necessary in its removal, so far as it may be proved injurious to the interests of gardeners and gardening.

—— Messrs. STUART & MEIN, of Kelso, have sent us a sample of the FEARNOUGHT CABBAGE, a hybrid between the Early Dwarf Cabbage and the Hearting Scotch Borecole, raised by Mr. MELVILLE, the gardener at Dalmeney Park. The sample sent to us consisted of close-hearted ovate heads, which, when close-trimmed for cooking, weighed about 1½ lb. each. When boiled they were quite tender and well flavoured, as good, indeed, as any close-hearted winter Cabbage we have tasted. The merit which is more especially claimed for this Scottish Cabbage is, that it withstands frost and damp better than any other variety, and, moreover, that it is not so liable to burst when arrived at maturity. Hence it is held to be invaluable for winter use, more especially to amateurs and cottagers. Like most hybrids we learn that it has a tendency to sport, but the produce is described as being in all cases a valuable winter vegetable. That it is a tender good-eating sort we can bear testimony, but of its hardiness we have no personal knowledge.

OUR SUMMER AND AUTUMN PEARS IN 1864.

As far as my observations have gone, we have never had a more favourable season for the ripening of Pears than this of 1864. I am therefore tempted to notice a few sorts that have attracted my attention for their size, beauty, or excellence of their flavour. In doing so I shall divide them into three series—summer Pears, or those that ripened in July, August, early in September, or early autumn; those that ripened in September, October, and late autumn; those that have ripened during the month of November—premising that nearly all have been gathered from pyramids or low bushes grafted on the Quince stock and growing in a stiff calcareous loam inclining to clay, and in a deep sand highly calcareous; the site about 20 miles to the north-east of London.

Among the first series the first to ripen was the Summer Doyenné (Doyenné d'Eté); this was, I think, fully ripe by the middle of July, and quite as early as that favourite little Pear of our boyhood, the little Muscat, or "Primitive" as it used to be called here in old times. Our Doyenné Pear trees bore a most abundant crop, and when eaten from the trees before they were too yellow they were very nice. This sort is so fertile that when grafted on the Quince it often kills itself with overbearing; it is therefore more healthy when grown on the Pear stock, or double grafted on some free-growing sort on the Quince. One very old Pear, Citron des Carmes, ripened immediately after the above, and was unusually good, for owing to the dry warm weather it did not crack as usual. The tree is very liable to canker in some soils on the pear stock; on the Quince it is short-lived; when double grafted it forms a healthy tree, and is worthy of cultivation. Closely following the last mentioned was Beurré Giffard, decidedly one of our best very early Pears, with a grateful Noyau-ish flavour.

The Pears of our boyhood, the Green Chisel and the Yellow Chisel—Heaven knows the origin of the name of Chisel, unless the Green was the sort the costermongers chiselled the boys with in old times—bore large crops this season, and the former was quite juicy and agreeable. What large standard cankered trees of this sort used to exist in old gardens, bearing on the branches that were partially cankered immense clusters of fruit; these when gently yellowed by ripeness used to fall off—were they not delicious? I used to think so, and I endeavoured to think so this season, but I suppose the boy and the old man differ in their tastes; for I could not think so now. Ah! lack-a-day!

Among other July and August Pears were Précoce Goubault, much like Beurré Giffard, but not so good; and Duchesse de Berri d'Été, a very nice early Pear, and quite distinct from Doyenné d'Eté; and then towards the end of August came a crowd of early Pears; the only feeling they created was surprise that such fine sounding names should ever have been given to them by their French raisers.

Our very old favourite Pear, the Jargonelle, was remarkably fine. There is one peculiarity in this sort deserving of notice; unlike many of our Pears, it is always excellent from wall trees, even on a warm exposure. It does not succeed well on the Quince; at least it is short-lived on most soils. Double grafted on some free-growing sort on the Quince, Beurré d'Amanlis for instance, it forms a nice healthy prolific tree in the open borders of the garden. There is another peculiarity about this sort: as a standard in the south, unless in the valley of the Thames, it is apt to canker and become unhealthy, while in some parts of Yorkshire it forms a prolific orchard tree. Williams's Bon Chrétien or "William," in the London costermonger's phraseology, was particularly abundant the past season, and, with the exception of fine handsome yellow specimens from wall trees, was very rich and excellent; the smaller fruit from standards, with dark specks and patches of russet, especially deserved this high character.

Beurré d'Amanlis, coming in seasoa just after the preceding, was remarkable for its size and beauty, and although not rich, was melting, juicy, and agreeable. This sort succeeds well in the north, and bears abundantly as a standard. Beurré Goubault, a very pretty round Pear, not large, ripened about the middle of September; this sort is remarkable for its bearing quality, even on the Pear stock. Madame Treyve, a new Pear from Troyes, ripened the end of August, and is a very excellent, large, melting summer Pear. Monseigneur de Hons, another new French summer Pear, ripened also quite the end of August, and as, like the preceding, it is free growing and hardy, it is likely to prove acceptable as an early Pear. Rokeby, a sort raised by M. Bivort, in Belgium, is one of the most prolific Pears known, for small bushes, not more than 18 inches high, were loaded with fruit, some of them resting on the ground; and Tyson, an American sort, rivalled it in fertility; these are both late summer Pears, juicy and agreeable, sometimes rich and good.

Among the second series I have been much struck with the richness, coupled with that most agreeable vinous flavour—peculiar to this type of the race—of the old Brown Beurré. Some specimens of this very old Pear, grown on a trellis covered with glass lights till the middle of June, were large and perfectly delicious; its two congeners, the Beurré Rouge and Beurré de Caen, differing only in the trees being hardier or the fruit of the former being longer and having a deep red cheek, were of equal excellence. The Crassane, a Pear now but little known or cultivated, gathered from the trellis above alluded to, has had its peculiarly rich flavour fully developed; but the Pear of Pears as regards richness of flavour is the Gansel's Bergamot. Specimens of this fine old Pear, gathered from a double-grafted tree growing on the trellis, were of unequalled richness; no Pear could be imagined more delicious. It will however illustrate the capriciousness of Pears as regards flavour that in 1862 and '63 fine specimens of this Pear, gathered from the same trellis and the same tree, were very inferior in flavour. The Pear ranking next in flavour is Beurré Superfin, one of the hardiest of trees, and bearing abundantly either as a bush or pyramid; its very rich flavour, large size, russety coat, and rosy cheek when growing in a sunny place, place it in the first rank for beauty and excellence among October Pears; no garden should be without a tree or two. Another October Pear, Beurré Hardy, deserves almost equal commendation; the tree has large foliage, a most robust habit, and forms in a short time a beautiful pyramid. The fruit is large, its skin nearly covered with russet (it is remarkable that all fruits, from the Nectarine and Green Gage Plum to the Apple and Pear, that are more or less russety, are distinguished by richness of flavour), and its flesh melting and beurré-ish, with a peculiar and most grateful aroma.

Doyenné Boussoch has been remarkable for its enormous size, weighing down the branches of the bush in which the fruit grew till they rested on the ground. Owing to the warm season it ripened in September; its flavour is almost too honey-like in its sweetness. A friend who sends his Pears to "The Garden," sent this autumn some specimens of this Pear properly named; his man was accosted by one of the London fruiterers, who was making his purchases in the market, as to the quality and name of the Pears, which he could not make out. On being told the proper name, Doyenné Boussoch, he replied indignantly, "Don't tell me about a dog's head and a Bussock, they are Gansel's Pears," and as Gansel's Bergamot Pears he bought them.

Colmar d'Eté, remarkable for the beauty of the tree as a natural pyramid, ripened early in September, and though not rich, the fruit were very juicy and agreeable. Duchesse d'Orleans, a large handsome Pear, and of the true pyriform shape, had a most agreeable Bergamot aroma, and is quite worthy of a place in the Pear garden. Fondante d'Automne, one of the best of our autumn Pears, ripened on the trees in September, and was not nearly so melting and rich as usual, but the trees with their neat pyramidal growth, and studded with their very handsome fruit were beautiful objects. Urbaniste ripened very early this season, and only just followed the preceding; it was very rich and good. No early autumn Pear could be more melting, juicy, and rich than Jalousie de Fontenay—not large, but like all the russety reddish Pears, most grateful on a warm September day; little compact bushes of this sort not more than 2 feet in height were perfect pictures of fertility.

Gratioli of Jersey, one of our most robust-growing and prolific Pears, ripened the end of September, and was as usual very rich and good, but of very short duration. One of the queens of autumn Pears, if not the queen, Louise Bonne, or, as they call it in that enlightened pomological district Covent Garden, "Bon Lewis," was more than usually beautiful and good. It is remarkable that the very large and beautiful specimens, either from a wall or pyramid, were not equal in flavour to those that were a little deformed; a crooked Louise Bonne, with a patch of russet in the hollow part, is a delicious morsel. Marie Louise, or "Marias" as the costermongers call them, has seldom been so abundant as this season; large yellow specimens of this well-known sort from walls, generally lacked piquancy—they were something like a beautiful young lady who distributes tracts and eschews dancing, but smaller fruit from pyramids or standards, when patched with a little russet, and a little cracked, were delicious. The most perfect method of growing this Pear is on pyramids or bushes in the open air, double grafted, but this only in climates with sufficient ripening power.

Marie Louise d'Uccle, so named from a village near Brussels, is a free-growing sort on the Quince, and very hardy; its russety yellow coat is a good sign, and it does not deceive, for it is a rich, melting, excellent Pear. The Seckle, as usual, was rich and delicious. Unless well cultivated this sort is apt to be small; it should be double-grafted on some free-growing sort on the Quince stock and cultivated as a pyramid. The Yat, a very old Dutch Pear, a free-growing hardy sort, was very rich and good, but like the Gratioli it passed too soon.

With respect to my third series it must be stated

that many kinds of Pears whose usual season is December, ripened this season in November, and were for the most part of excellent flavour. Alexandre Lambré, one of the hardiest and most prolific Pears known, is in this category, and specimens greatly covered with russet were excellent, but those of a fine clear yellow were not nearly so good.

Among these quasi-winter Pears the Beurré Diel has been the most remarkable; my specimens were very large and beautiful; some of them with a light rosy cheek—a most unusual feature—commenced to ripen early in November, and are now past their goodness. No Pear can be more capricious than this well known sort; five miles to the east of this place it is always reckoned the best dessert Pear known; five miles to the west it seldom or never ripens, and is used for baking or stewing only.

Conseiller or Maréchal de la Cour, one of the most robust free growing and hardy Pears known, has been this season of high excellence even in the north, and has been reported on by a Reverend Amateur gardener near Newark, Notts, as a Pear well adapted to the Midland counties; it is large, melting, and rich. Ranking with this in the beauty and hardihood of the tree and its free-growing nature on the Quince, is Doyenné du Comice; like the preceding, it is large, has a russety coat, and is melting, rich, and excellent. These two kinds, from their regular and robust growth on the Quince, would form an excellent Pear-tree hedge, and no summer blind can be imagined more interesting. General Todleben, a new kind, proves to be a very hardy free-growing tree on the Quince stock; its fruit, large, pyriform, and of a bright yellow, was melting and good, but with no remarkable aroma. Of all our late autumn Pears there is not one that surpasses in size, beauty, and excellence, Van Mons (Léon le Clerc); my specimens were large, of a bright yellow, tinted with russet, and delicious; the tree is however rather delicate in its habit in most soils, and should be double-grafted on some robust-growing sort on the Quince, such as Conseiller de la Cour or Beurré d'Amanlis.

I have thus far described a few of the most popular kinds of summer and autumn Pears, and I hope to be able some day to do the same by our winter and spring Pears, which up to this time look fine and promising. *T. R.*

TO WHOM SHOULD PRIZES BE AWARDED?

A system has become prevalent at the leading metropolitan horticultural exhibitions of allotting the prizes to the gardeners instead of the employers, and as I consider the custom highly injurious to floriculture in general, and more especially to floral exhibitions, I am led to trouble you with a few remarks on the subject.

The spirit of emulation is well known to be one of the leading motives of human exertion, and the reason of many persons coming forward in public who otherwise would shrink from so doing. Now this spirit, which works so advantageously in other pursuits, causing men to endeavour to excel at any cost of time or money, does not obtain in the case of floriculture under the present exhibition arrangements. Should a gentleman with ample means at his command happen to take a "Florist's fancy" for any flower—say the Rose, he hastens to make the finest collection he can of his favourite, and has it cultivated under his eye and superintendence to the highest pitch of excellence. Full of his fancy, he visits the great Rose shows, and sees stands obtaining first honours very inferior to what he thinks he could himself exhibit, and so determines the next season to enter the lists. But here a difficulty meets him which he cannot surmount. He notices the prizes are awarded to the gardeners and not to the masters, with a few exceptions, such as Messrs. Hedge, Hole, Radclyffe, &c., and so he would have to compete with persons who, though highly respectable, still were not his equals in position, but the "servants of his equals." A wet blanket is thus thrown upon his new-born zeal, and his Roses consigned to privacy and repose. But mark the consequence. Deprived of this incentive his fancy quickly wanes, and in a year or two, though still fond of his old favourites, he can no longer be termed a "florist." No more he searches the *Chronicle*, the *Florists' Guide*, the *Florist*, &c., for the contributions of his Rose friends Messrs. Hole and Radclyffe; nor diligently scans Rivers's, Paul's, Cranston's, and Turner's catalogues for the new varieties recommended, all which he at one time so eagerly purchased. No, his fancy has turned to the sere and yellow leaf, and soon comes to an untimely end, and he turns to other pursuits which afford more excitement and therefore more pleasure.

And now let us consider how this prize arrangement would work in other competitive amusements to which gentlemen turn their attention. If we take racing to begin with—on the principle in question the 1863 Leger and Doncaster Cups ought not to have been awarded to Lord St. Vincent and Mr. Naylor, but to the persons who trained Lord Clifden and Maccaroni for their engagements. But under this rule how long do we suppose would those gentlemen remain on the turf? Would they be satisfied with the privilege of paying the piper in a heavy bill for stakes and expenses, and leave the honour and profit to their trainers? Again, as to yachting; why should Lord Birmingham display on his sideboard the 100-guinea cup won mainly by the skill and energy of Captain Blowhard, his sailing master. So, also, with Short-horn sheep and pig exhibiting. We are all aware how proud the Prince Consort was of the many prizes he received for his improved Leicesters. And as to the cattle and sheep, have we not often seen noblemen like Lords Feversham and Walsingham carrying off the Royal Society's gold medals?—achievements of which we may be sure they are not a little proud. But had the Metropolitan Floral System prevailed, the medals would have adorned the Sunday coats of Wilson and Thompson, the men who attended on the premier bulls, groomed them, "Thorleyed" them, in short, got them up into prize condition; but in such case it may be easily guessed how many more prize bulls those noblemen would have been at the trouble and expense of rearing. Now let us scan the prize awards of the last Crystal Palace Poultry Show. We behold the Countess of Broadacres taking 1st prize for some beautiful Cochins, and Lady Elizabeth Hauton, the same for a pen of magnificent geese. But why was not the Crystal Palace Floral prize card custom followed out, and the prizes awarded to Hannah Smith and Betsy Brown, their ladyship's respective henwives! And lastly, let us consider this system when applied to floral exhibitions, and carried out to its legitimate results. It is said (see "Gossip of the Garden," 1862, p. 352) to be "absurd to award a prize for Parsley to Lady Mary Vyner, or for Carrots to the Bishop of Ripon." Now would it not be still more absurd to name as the prize takers Messrs. Jones and Robinson, their respective head gardeners, seeing that the said Messrs. Jones and Robinson had no more to do with those vegetables than their masters—nay, much less—the latter having found the seed, ground, and labour. If we are to go on the system of "Palmam qui meruit ferat," and such is, I presume, the argument on which the whole arrangement is supposed to rest, I say let it be thoroughly carried out. Assign at once the prizes to Messrs. Jemmy Green and Carroty Bob, the apprentices who had the entire management from youth to age of those valuable esculents.

I shall say no more, save that it will please me much should these remarks be the means of having the matter fully discussed and placed on a proper footing. It is not against gardeners I write, but in their behalf; for under the right system we should find gentlemen taking much more interest and delight in the cultivation of flowers, and a community of feeling would spring up between the employers and the employed, which could not but tend to the increased well-being of the latter. *Florist.*

THE PERISTERIA, OR DOVE-FLOWER.

This fine Orchid comes from Panama, where it is known by the name of El Spirito Santo, or Holy Ghost flower, the centre of each blossom exhibiting a striking resemblance to a waxen dove. It is a very strong-growing species, with large oblong pseudobulbs, measuring from 12 to 18 inches in circumference, and with leaves rising from the crown from 3 to 4 feet in height, and as much as 6 inches in width. In spring, when the plants show signs of growth they should be repotted, picking off from the ball all bad soil and decayed or damaged roots, and using a well-drained pot of moderate size. Good fibrous peat should be used; and if it can be obtained, the peat from a wood where the leaves of various plants have naturally become decomposed is preferable. It should be used in small pieces, all the fine soil being shaken out so as to leave it full of fibre, and a few broken potsherds being then mixed with it.

When potted, the coldest end of the East India house is a suitable place for the plants. Water must be given sparingly at first, and must be kept away from the young growth. When it is required, the morning is the best time for supplying it. They will soon emit roots from the young growth, and then water may be increased accordingly. It is from these young shoots that the flower spikes are thrown up, and if the pseudobulbs are strong, there will generally be two spikes from a bulb.

By the time the new growths have formed bulbs, and are beginning to swell, the pot ought to be full of roots. I would then recommend that the plant should be removed to the hottest end of the East India house, and should receive abundance of water. The temperature being high, say from 90° to 95°, the bulbs will swell rapidly, and by the end of October or middle of November they ought to be fully grown. Then the plants must be allowed to go to rest gradually, and may be removed to the coldest end of the East India house, very little water being given through the winter, only just sufficient to keep the bulbs from shrivelling.

When well grown, this is a very free-flowering plant. I have exhibited it many times at the autumn shows. The greatest number of flower spikes I ever exhibited at one time on a plant was ten, and these were from four to five feet in height. The flowers are yellowish-white, with a peculiar fragrance, and they last for six weeks or more, if kept in a dryish atmosphere. August is the natural time of flowering. *Thos Brown, Exotic Nursery, Tooting.*

Home Correspondence.

The Horticultural Society's Exhibitions and Sir Joseph Paxton's Letter.—As an Exhibitor, I am very glad to find by your remarks (p. 1106), on the Programme of the Horticultural Society for next year, that we are likely (?) to escape the blundering management recently exercised in so far as regards the Great Shows; but I am sorry to see that Saturday Exhibitions have been determined on, for as regards exhibitors that day is a very inconvenient one, a great part of the Sunday after a show being taken up in getting our houses in order. Last year the exhibitors petitioned against the Saturday Shows at the Regent's Park, and the Council of the Royal Botanic Society, with its usual regard for the reasonable wishes of the exhibitors, and guided by its usual good taste, complied with their wishes. I trust, therefore, that every exhibitor will set his face against Saturday shows at the Horticultural Society. Many arguments might be used against Saturday exhibitions. One is the labour which it involves on the Sabbath. Another is, that most of our employers are at home on the Sunday, and, very naturally, like their establishment to be in order; but after (as is the case with many of us) being up the whole of the night previous to the show, and not getting home again with our plants until 1 or 2 o'clock on Sunday morning, we do not feel prepared to resume work at daylight, so as to get in trim by a respectable hour. If, moreover, Sir Joseph Paxton's remarks in reference to establishments from whence plants are shown, having bloom only two months in the year, were correct, it would be very important that none of this time should be lost, but that we should make the best display we could with our bloom when we had got it. *Apropos* of Sir Joseph's letter, which you hinted at as "opening up questions of general importance," I am much surprised to find that exhibitors have not displayed more interest in the question by replying to it. The only reason I can imagine for their not having done so is that their indignation predominates; and from the strong observations on the subject I have heard expressed by exhibitors, I think I am not far out in my conjectures. Sir Joseph has written about what he has never practised namely, growing plants for exhibitions. He might as well write down exhibitions altogether as write down the principles upon which alone plants can be exhibited. "Beautiful foliaged plants" are certainly "beautiful all the year round;" they are very good in their way, and require very much less 'training' than any other class of show plants; but they are of all others the last which a skilful gardener would boast of growing if he had a miscellaneous collection under his management. I would ask Sir Joseph how he would carry such plants as Azaleas, the most attractive of all show plants, over London stones, or along a rough country road, jolting in a van, to the rendezvous of an exhibition, without they were 'trained'—in other words without the flowers being so secured as to prevent oscillation. The same remark applies to Roses and Pelargoniums, and many others. It may be all very well to look at a rough old scrub at home, and say how natural it appears, but if that plant were taken to "win the stakes" the 'odds' would be at the 'tail' if 'backed for a winner,' and mark me, it would never go the round' again. I can most unequivocally assert that I should not like to meet my employer the morning after a show if I had exhibited any damageable plant without 'training.' Granted that Sir Joseph called to see what he says was a first-class London garden, while the plants were gone to 'win the stakes,' I can assure him that if the gardener had only six or eight plants left, the principle that was adopted "a good many years ago" would not do for the present day, or there would not be many stakes won. I could give some very different examples of plant-growing establishments of the present time. Let it first of all be understood that the gardens where exhibition plants are grown are not always the largest, or those where assistance is the most ample, or the houses of the most convenient class; neither are the 'spasmodic efforts,' which Sir Joseph thinks necessary for plant growing, always made in our employer's time, as few gentlemen really encourage plant growing, in consequence of the impression that the shows take the gardener away from his general garden duties. Many of us are on this account compelled to work early and late through the whole season to compensate for the time occupied by the shows in the summer months. I think my brother gardeners will bear me out that the six or seven shows that we attend are quite as many as we can possibly find time for; and if Sir Joseph's suggestion of continuous showing were to be adopted, some of us would be prohibited from showing altogether. Besides, is it not feasible that too many flower shows may altogether surfeit or damp the public interest in exhibitions? I beg further to differ with Sir Joseph when he states that gardeners who show are neglectful of having plants in bloom at other times than those in which the shows are held. If he were to make periodical visits to the best and most popular garden establishments during the asserted "ten months'" dearth of flowers, he would find the establishments from whence plants are shown to contrast favourably with those which do not show. It would be making a complete business of showing for gardeners to be taking their plants to exhibitions all the year round. Speaking plainly, no

gentleman would stand it. The solution would be this: we should have the anomaly of an exhibition without exhibitors. It may be all very well for the interest of the public, but gentlemen generally keep up their establishments for their private gratification rather than for that of the public; and plant showing is allowed as an encouragement to a persevering servant rather than from any great love the proprietor may have for his plants going to a flower show. I say therefore, let the system which exists elsewhere be taken as a guide by the Royal Horticultural Society. That it is a good system is proved by the flourishing condition of the Royal Botanic Society. Let the Horticultural go and do likewise. *G. B.*

Stoneless Berberry.—The two plants that were in the Chiswick collection, one of which bore pale yellow, the other purple fruit, when propagated and put in fresh soil, bore fruit with seeds. *R. T.*

Seedling Figs.—I have been advised to bring to your notice the following facts. In 1858 I found a seedling Fig growing under my south wall; it was destroyed by the winter of 1860. Last year another appeared, which is now a small tree; another has appeared this year some two feet from the first. I have also some ten seedlings in different parts of my garden. Is not this a rare instance of seedling Figs springing up spontaneously? I have no Fig tree here—*i. e.*, established tree—as the locality is too cold. Will some of your correspondents therefore say if the springing up of Figs in this way is a matter of common occurrence. *Adam Fitch, The Vicarage, Thornton Steward, Bedale.*

Pampas Grass.—I have seen in your columns lately a few notices about this Grass. There is a very good plant of the light variety of it here, which throws up beautifully plumed spikes. Our principal plant is a little over 40 yards from the sitting-room windows, and is planted in a rich deep loam, inclining at about 18 inches deep, to a brick earth. It is placed upon Grass and is well backed up with shrubs, principally Portugal Laurels, whose dark green foliage assists greatly to show this noble plant off to good advantage. It comes into full flower in the beginning of September, and unless when injured in some way or another it proves a most pleasing and effective object for months. Our soil is liable to shrink in very hot weather. It did so in some places last summer to such an extent that a person could have got his hand into fissures in it up to the elbow. We watered the Pampas Grass plants repeatedly during summer, and that with no sparing hand. They had four or five times a good liberal dose of manure-water from a tank in the garden. The one seen from the windows had on it in the early part of September 80 fully grown and well developed spikes of pleasing white plumes. They are not so long as I have seen them in former years, a circumstance no doubt attributable to the dry season we have had; for even if supplied at the root with water, the atmosphere has not been favourable to their growing to a large size. Unless the weather proves severe we do not give much protection to the roots; young plants have an old mat placed round them with some leaves inside of it, held in position by means of a few small sticks driven a little into the ground. In September we were visited by a strong gale of wind, which broke off a few spikes from our large plants; by way of protection from the storm, we drove into the ground a few Hazel stakes upon the windy side, and placed at different positions amongst the flower spikes strong bands of Cuba bast. These were very loosely tied so as to allow the Grass to remain as much as possible in its natural position; these, together with the Hazel stakes, not being very stiff, and yielding a little with a strong gale of wind, have up to this time saved the rest of the spikes. The diameter of the Grass, *i.e.*, the extent which its blades or leaves extend of themselves, is about 11 feet, but as most of the blades are over 7 feet long, they would, if held out, extend several feet more. *G. Dawson, Ryde, Isle of Wight.*

Apples.—I beg to send for your acceptance a collection of 50 varieties of Apples, grown here in the shape of pyramids and bushes on the Paradise stock, on a heavy clayey loam, with chalk in a comminuted state mixed with it. I may say that on this soil, upon the Crab and the common Apple stock, such Apples as Nonpareil, Golden Pippin, Ribston Pippin, and a few others, always get cankered and diseased; whereas on the dwarf Paradise stock scarcely an instance of canker is seen. The specimens sent are grown chiefly on trees planted from two to five years since, and have been (some of them) lifted once in that time. The Celini, Reinette du Canada, Old Nonpareil, and some others, were planted only two years ago. *S. Dillistone, Sturmer Nurseries, near Halstead, Essex.*——[Of the specimens sent—Mère de Ménage, Striped Beaufin, Flower of Kent (Beauty of Kent), Hawthornden, Celini, Dumelow's Seedling, Golden Noble, New Hawthornden, King of the Pippins, Yorkshire Greening, Reinette du Canada, Court Pendu Plat, Syke House Russet, Norfolk Beaufin, Paradise Pippin (Norfolk Paradise), and Fearn's Pippin, are a fair average size, and some rather larger than usual; Mannington's Pearmain, London Pippin, Wadhurst Pippin, Sturmer Pippin, Claygate Pearmain, Royal Russet, and Court of Wick, are about the medium size which they usually attain; Golden Reinette, Mank's Codlin, Herefordshire Pearmain, Wyken Pippin, Cornish Aromatic, Scarlet Nonpareil, Cockle Pippin, Rymer, and some others, have not acquired their full character and development. Those labelled Pitmaston, Nonpareil, Gravenstein, and Winter Queening are incorrect. There can be no question that in the case of bad subsoils, where Apple-trees are apt to canker, it is advisable to use the dwarf or Paradise stock; and also for limited space, and for early bearing. Doubtless there is yet much to be learned as regards the adaptation of certain kinds of stocks to certain varieties of Apples, as well as Pears, Vines, &c. Large-growing sorts of Apples, like several in the above list, have succeeded very well on this occasion; but whether they will continue to do so for many years, is a question which depends on time for its solution.]

Rose Judging.—I am obliged to "Senator Vaisse" for pointing out my error (see p. 1132). Mr. Hedge was 1st, and deservedly so. It was the 3d prize box I intended to refer to as in no respect entitled to its position. *P. B. R.*

Preserving Walnuts.—Soon after they are gathered remove the husks, then pack them in boxes in dry sand, and they will keep in this way for months. When required for use, roll them well up and down in a sack, which removes the sand from the shells; they are then ready for table. *W. P.*

Figs.—I observe you announce that Messrs. Lawson will let out next autumn an extraordinary new Fig, called Castle Kennedy. I would suggest that if any of your readers think of investing their money in the purchase of a plant, they had better first satisfy themselves that it really differs both from the Brown Turkey and the Brunswick, which have already figured under so many names. During the ensuing summer, and before letting it out, Messrs. Lawson will have an opportunity of growing a plant side by side of the two above-named sorts, and be able to certify to their customers that there is some real difference. I am induced to make these remarks, notwithstanding the respectability of the parties concerned, in consequence of the Singleton, which came out under equally respectable authorities, turning out the common White Ischia. In the latter case, I wrote to the party who first heralded it in your columns, and told him that from his own description, it was probably the Ischia. He denied it at the time. The plants were sold, but most people are now of my opinion. *S. B.*

Vine Stocks.—Permit me to state, in reference to the most suitable stock for Vines, that about five years ago, in a Vinery here, there were more plants of the Chasselas Musqué than I thought desirable, and knowing something of the difficulty there is sometimes to get young Vines to grow freely in a border already occupied with the roots of older ones, though with considerable misgivings as to the result, I inarched the Chasselas with Black Hamburgh. All the Vines in the house have borne fine crops, though more remarkable for high finish and, of course, quality than great size; and, contrary to my expectations, the fruit from the inarched Vines have been invariably the largest both in bunch and berry, and they have ripened from a week to a fortnight earlier than the Hamburghs on their own roots. Although it may be premature to conclude from this that the Chasselas Musqué is really a good stock, yet the experiment tends to show that we may find what we want among the moderate rather than among the very strong growers. I may add, in reference to the grafted plant of the Barbarossa in the great Vinery at Chiswick, that that variety on its own roots here has yearly produced heavy crops perfectly coloured, with bunches as compact as could be desired. *J. Bell, Bretton Park, Wakefield.*

Gate Posts.—Can any of your Correspondents furnish me with information as to the best material for making these? From the enclosed paragraph cut from a weekly Paper, it seems that in some districts they are curious things. "All the landed proprietors in the south of England know to their cost the difficulty and expense of providing substantial and durable gate-posts, particularly if the boys in the village are fond of swinging on the gates, after the model of Gainsborough's celebrated picture. But in the Lake District there is no difficulty. The purpose is served by a heavy monolith of clay-slate, for the most part undressed, varying from 2 inches to 4 inches thick, and the breadth of the section of the wall, with the hinges sometimes batted in and sometimes fastened through with a bolt and nut."

Societies.

ENTOMOLOGICAL: *November* 7.—F. Pascoe, Esq., F.L.S., President, in the Chair. The Secretary read an address, which had been handsomely engrossed on vellum, to accompany the presentation of a beautiful piece of plate (in the shape of an epergne representing a Palm tree with outspreading branches and with insects sporting at its base), to W. Wilson Saunders, Esq., F.R.S., for which a subscription had been raised amongst the members, in order to acknowledge the uniform liberality shown by Mr. Saunders towards the cultivators of Entomology in general, and more particularly towards members of the Society. To this address Mr. Saunders returned a suitable reply. Mr. Sidebottom exhibited four species of Curculionidæ new to the British lists; and Mr. F. Smith a new British species of humble bee, Bombus Pomorum, both sexes of which had been taken at Deal. Mr. Saunders exhibited some galls found attached to the rootlets of Oaks at a considerable distance underground, from which a number of wingless (female) individuals of a species of Cynips had been produced. It was difficult to understand how these insects could make their escape to the surface of the ground, or how, when there, they could discover and reach the rootlets of the Oak at such depths to deposit their eggs. No males had, however, been reared, and Mr. Smith stated that not a single male in the genus Cynips had ever been detected. Attention was however directed to the curious statements relative to the alternation of generations in these insects recently published in the American and German entomological publications. Mr. Saunders directed attention to a remarkable web-like secretion deposited by these gall flies soon after they had become perfect insects and escaped from the galls. Mr. Saunders also exhibited several other kinds of galls observed by himself in Switzerland; and Mr. Stainton a remarkable gall found on the Oak by Mr. Broome, resembling a small bale of Cotton wool. A note was read from Mr. S. Stone, of Brighthampton, confirming the fact of wasps dragging out their young grubs from the nest when diseased, as they had been this autumn to a considerable extent, so that although wasps were extremely abundant at the beginning of the autumn, in a couple of weeks scarcely any were to be seen. Professor Westwood attributed the destruction of these grubs to an epidemic similar to that known in the hive bee under the name of "foul brood." Mr. Stone also stated that he had succeeded in rearing the parasitic Ripiphorus from wasp combs. Mr. Carter exhibited some beautiful specimens of Trochilium sphegiforme reared from Alder stalks in North Staffordshire. The Secretary gave an account of the recent exhibition of objects of natural history at Huddersfield. He also read a translation of a memoir recently published in the Mauritius on a species of Coccus which is very injurious to the Sugar Cane in that island. In the discussion which ensued on this paper, Mr. Saunders stated that diluted spirits of wine (one-half water) was the most effective remedy for the destruction of mealy bug and scale insects in hothouses.——A paper by Mr. Baly containing descriptions of a number of new exotic species of plant-beetles (Phytophaga) was read. Also a letter from Mr. Wilson, of Adelaide, South Australia, giving a general sketch of the Entomology of our South Australian Colonies. Between 11,000 and 12,000 species of insects had been discovered, of which 5000 were Coleoptera, while 200 belonged to the family Carabidæ, 600 to the Curculionidæ, 450 to the Chrysomelidæ, 250 to the Longicorn beetles, 300 to the Buprestidæ, &c.

HANDSWORTH HORTICULTURAL.—The annual Fruit and Chrysanthemum Show in connection with this Society, was opened in the Town Hall, Birmingham, on the 28th ult., and continued for the three following days. It was in all respects a success; and the hall had a very handsome appearance, being well filled with excellent plants of Chrysanthemums, which for the most part were well grown, being dwarf and finely bloomed; and with beautiful collections of Fruit, which from their charming colour produced a pleasing contrast, especially in the evening when the building was lighted with gas. The season just passed has perhaps been one of the best on record for the proper ripening of out-door fruits, consequently the colour of many varieties was more brilliant than we are in the habit of seeing. This was especially the case with Chaumontel, Catillac, Gilogil, and Beurré Clairgeau Pears; and Blenheim Orange, Wellington, Cox's Orange Pippin, and Court Pendu Plat Apples.

Among the Large-flowered Chrysanthemums the most conspicuous plants were:—Chevalier Domage, Defiance, Vesta, Golden Christine, Rifleman, Golden Trilby, Annie Salter, Gen. Slade, Queen of England, and Ne plus Ultra; and among Pompons the three varieties of Cedo Nulli, viz., White, Yellow and Lilac, Modèle, Hélène, Attila, Priscilla, Andromeda, and Bob.

AWARDS (Members only).—9 Large-flowered in pots: 1st, Mr. C. J. Perry, Castle Bromwich; 2d, Mr. C. Millward, Hall Green; 3d, Mr. T. Webley, Lillywick. Six plants in pots: 1st, Mr. T. Ryland, Erdington; 2d, Mr. C. J. Perry; 3d, Mr. J. Hall, Moseley. Single specimen: 1st, Mr. T. Ryland; 2d, Mr. C. Millward; 3d, Mr. T. Greaves. Cut Blooms: 1st, Mr. T. Webley; 2d, Mr. C. Milward; 3d, Mr. Greaves. Pompons: 9 in pots; 1st, Mr. C. J. Perry; 2d, Mr. T. Ryland. Six plants in pots: 1st, Mr. C. Millward; 2d, Mr. C. J. Perry: 3d, Mr. Fewkes. Single specimens: 1st, Mr. Fewkes, Tyburn; 2d, Mr. C. J. Perry; 3d, Mr. T. Ryland. Extra prize of one guinea, given by Mr. C. J. Perry, for the best three Pompons, in pots: Mr. T. Webley.

Conspicuous among the Apples and Pears grown within 15 miles of Birmingham, were Cox's Orange Pippin, Nonpareil, Wyken Pippin, Golden Pippin, Ribston Pippin, Blenheim Orange, Northern Greening, Kentish Fillbasket, Hawthornden, Emperor Alexander, and Reinette du Canada Apples; with Beurré Diel, Beurré Clairgeau, Marie Louise, Napoléon, Josephine de Malines, Beurré d'Anjou, Eyewood Bergamotte, and Hacon's Incomparable Pears.

AWARDS.—6 Dessert Apples, 8 of a kind: 1st, Mr C. J. Perry; 2d. Mr. T. Hargreaves, Curdworth; 3d, Mr. G. Redfern, Sandwell.—6 Kitchen Apples, 8 of a kind: 1st, Mr. G. Redfern; 2d, Mr. C. J. Perry; 3, Mr. H. Lowe.—6 Dessert Pears, 8 of a kind: 1st, Mr. C. J. Perry; 2d, Mr. T Hargreaves; 3d, Mr. G. Redfern.—6 Kitchen or Stewing Pears, 8 of a kind: 1st, Mr. T. Hargreaves.—Collection of Fruit, not more than 12 dishes: 1st, W. H. Dawes, Esq., Moseley; 2d, F. G. Williams, Esq. (gardener, Mr. Stevens), Solihull; 3d, Mr. G. Redfern.

In the Collections of Fruits, 24 varieties, open to all the world, some wonderful examples of Chaumontel,

Beurré Diel, and Bon Chrétien d'Hiver Pears were shown. Also fine Smooth Cayenne and Queen Pines, Barbarossa Grapes, an Indian Melon, very large Alfriston Apples, and beautiful dishes of Cox's Orange Pippin and King of the Pippins Apples. In the Collections of 12 varieties were excellent specimens of Muscat, Barbarossa, and Black Hamburgh Grapes, Smooth Cayenne Pine, Chaumontel and Easter Beurré Pears.

AWARDS (Open to All).—Collection of Fruit, 24 varieties: 1st, a Silver Cup, value 10*l.* 10*s.*, Mr. C. J. Perry; 2d, C. N. Newdegate, Esq., M.P. (gardener, Mr. Evans), Arbury, Nuneaton.—Collection of Fruit, 12 varieties: 1st, Mr. C. J. Perry; 2d, Mr. J. Cole, fruit-dealer, 6, Union Street, and Aston Lane Nurseries, Birchfields.

Collections of Dessert Pears, 12 varieties, were remarkably well shown. Among them most conspicuous were Huyske's Victoria, Beurré Clairgeau, Beurré Diel, Chaumontel, Duchesse d'Angoulême, Doyenné d'Alençon, Bezi Vaet, and Alexandre Lambré. In the Collections of Stewing Pears were very large and highly coloured specimens of Catillac, Belle de Jersey, Gilogil, Bon Chrétien Turc, and Governor of Boulogne.

AWARDS.—12 Dessert Pears, 8 of a kind: 1st, Mr. C. J. Perry; 2d, Mr. J. Pluck, fruit merchant, Jersey; 3d, A. H. Royd, Esq. (gardener, Mr. Cox).—12 Stewing and Baking Pears, 8 of a kind: 1st, Mr. C. J. Perry; 2d, Mr. J. Pluck; 3d, Mr. T. Burley, fruiterer, Birmingham.—Extra Prize, given by Mr. E. W. Field (pair of Plated Fruit Spoons), for the best Six Dishes of Stewing Pears, Mr. J. Pluck.

Dessert and Kitchen Apples were well represented. Among the former good dishes of Cox's Orange Pippin, Ribston Pippin, Golden Drop, Court Pendu Plat, Cockle Pippin, Cornish Gilliflower, Scarlet Nonpareil, Adam's Pearmain, and Pigonette were shown; and conspicuous among the latter were large specimens of Alfriston, Grenadier, Wellington, Mère de Ménage, Northern Greening, Bedfordshire Foundling, and Royal Russet, all of beautiful colour.

AWARDS.—12 Dessert Apples, 8 of a kind: 1st, Mr. C. J. Perry: 2d, C. N. Newdegate, Esq., M.P., (gardener, Mr. S. Evans); 3d, Mr. Macpherson, fruit-merchant, Highgate.—12 Kitchen Apples, 8 of a kind: 1st, Mr. C. J. Perry; 2d, A. H. Royd, Esq., Crown East Court, Worcestershire (gardener, Mr. Cox); 3d, Mr. Macpherson.

Gourds were few in number, but two or three specimens were very fine, including a Vegetable Marrow of great size. The 1st prize went to Mr. Perry.

Cut blooms of Chrysanthemums were well shown. Among them were superb blossoms of Novelty, Jardin des Plantes, Cassandra, Queen of England, Beauty, Etoile Polaire, Lady Slade, Rev. J. Dix, Cherub, Plutus, Abbé Passaglia, Mrs. Wm. Holborn, Lady Hardinge, Sir E. Bower, and Golden Eagle.

AWARDS.—24 Cut Blooms: 1st, Mr. Tomlin, Camois Hall near Newmarket; 2d, Mr. George, Stamford Hill, London; 3d, Mr. T. Greaves. 18 blooms: 1st, Mr. George: 2d, Mr. Tomlin. 12 blooms: 1st, Mr. George; 2d, Mr. Tolmin; 3d, Mr. J. Carter, Wichnor Park, near Lichfield.

Primulas were not equal to those shown last year, although good. The 1st prize for 12 plants was awarded to Mr. T. Webley; and for six plants to Mr. T. Greaves.

Several thousand persons visited the exhibition during the four days, and the flowers remained in fair condition until the close.

Notices of Books.

Le Jardin Fruitier du Muséum. By Prof. Decaisne.

(*Continued from p.* 1039.)

Pêcher Admirable Jaune.—Syn. Admirable Jaune Tardive, Grosse Pêcher Jaune Tardive, Grosse Jaune, Scandalie, Sandalie, Hermaphrodite, Abricot, Orange, De Burai, De Bure, Abricotée. Leaves with reniform glands; flowers small. Flesh yellow, parting from the stone, tolerably good in warm dry seasons, but in those that are the contrary it is flavourless and mealy; ripens at Paris in the latter half of September. [The sort cultivated under the above names in England had large flowers, and ripened from the beginning to the middle of October. Duhamel, *Traité des Arbres fruitiers*, describes it as having large flowers; but he also mentions one under the same name as having small flowers, and this must be the variety described by Professor Decaisne, and that of the *Catalogue des Chartreux*, edition 1752, whilst in that of 1785 the flowers are described as large, as they are likewise by Le Berryais in 1789, and subsequently by Calvel and other Pomologists. The trees obtained by the Horticultural Society from various authorities had large flowers. It is thus evident that there are two yellow-fleshed Peaches to which the name of Admirable Jaune has been applied.]

Poire du Comice.—Syn. Doyenné du Comice. Middle-sized or large, obovate or turbinate, with a short thick stalk like that of the Doyenné Blanc; eye deep; skin bright yellow, tinged with red next the sun, marbled and dotted with brown. Flesh fine, melting, very juicy and sugary, slightly acidulated and perfumed. Ripens towards the end of autumn. This Pear was obtained by the Horticultural Committee of Maine-et-Loire, and was noticed for the first time in 1849.

Poire Dalbret.—Syn. Fondante d'Automne. Fruit middle-sized, pyriform; stalk rather thick, and of medium length; eye somewhat open; skin yellowish russet. Flesh white, fine, melting, very juicy, sugary, and rich. An excellent Pear. Season, November. This excellent variety was described by Poiteau under the name of Dalbret, but nurserymen have prefixed to this name the epithet of Beurré; in some Catalogues it appears under the name of Beurré *Delbret*, but it must not be confounded with the Beurré Delberg or Delbecq. It has the synonym of Fondante d'Automne, but what is known in England as such is very different. Jean-Baptiste Dalbret, after whom it was named, was born at Triel (Seine-et-Oise) in 1785; in 1811 he had charge of the culture of fruit trees at the Muséum, and published in 1834 a work entitled:—"*Cours théorique et pratique de la Taille des Arbres fruitiers.*"

Pêcher Téton de Vénus.—Leaves with globose glands; flowers large. Fruit very large, the height rather exceeding the breadth, generally more or less conical, and (mamelonné) terminating in a nipple-like point. [This nipple is made the principal distinction between it and the Late Admirable or Bourdine. To this latter the Téton de Vénus is made synonymous in the Horticultural Society's Catalogue of Fruits; and it was so after long and careful comparison of the fruits of many trees under these names, and grown under the same circumstances. Even some of the French authors admit that there is no difference between them. In treating of the Bourdine, the author of the work before us, states, that its fruit is very variable, so much so that on the same tree are produced fruits that are almost spherical, and others *très-sensiblement mamelonnés*, and similar to those of the Téton de Vénus. A difference of opinion has long existed on this subject. Are there no means of settling the question?—and presuming that the one might be found even but slightly constitutionally different and better than the other, is it not a legitimate question for Horticultural Societies to entertain?]

Pêcher Mignonne Hâtive.—Syn. Grosse Mignonne Hâtive, Mignonne Pourprée, Pourprée Hâtif à grandes fleurs. Leaves with globose glands; flowers large. [It is described as closely resembling the Grosse Mignonne, of which it is stated to be only a variety perpetuated by the graft, and of which the fruit ripens under the same circumstances, always a little earlier than that of the ordinary Grosse Mignonne, and it is with it that the Peach gathering season at Montreuil commences. There is a Pourprée Hâtive à Grandes fleurs which has leaves with reniform glands, and is consequently quite distinct from the one under consideration, and still earlier than it.]

Poire Chat Brulé. — Syn. Pucelle de Xaintonge, Rougeaude, Rouget. [A small russeted pyriform fruit, which takes a good colour in compotes, but is otherwise quite worthless.]

Poire Louise de Boulogne.—[A middle-sized, Bergamot-shaped fruit, which keeps till March; but its flesh is only half-melting, or intermediate between that of a kitchen and table Pear.]

A Cyclopædia of Practical Receipts, Processes, and Collateral Information in the Arts, Manufactures, Professions, and Trades, including Medicine, Pharmacy, and Domestic Economy. Fourth Edition. By Arnold J. Cooley and J. C. Brough. London: John Churchill & Sons, 1864. Pp. 1393.

Here are 1400 pages, closely printed in double columns, skilfully aided by the liberal use of abbreviations and condensations of every kind, and presenting the reader with a mass of information that would be bewildering, were it not so carefully arranged, upon every subject that can by possibility come within the wide limits indicated upon the title page. We find notices of the various substances forming the Materia Medica of our national Pharmacopœias, with brief and clear directions for ascertaining their purity and commercial value. We find the synonyms under which these substances are known among professional men or in medical works, in trade, at home and abroad; and then follows every kind of information that can possibly be wanted, whether for its production or for its use, by the scientific or the public, in the doctor's shop, laboratory, manufactory, or kitchen. We take at random the words "Hydrocyanic acid." After the synonyms, and a brief description, we have the ways of preparing—1, the anhydrous acid, according to the eminent chemists Gay Lussac, Liebig, and Vauquelin. Then 2, the dilute or medicinal, according to the London, Edinburgh, and Dublin Pharmacopœias, Apothecaries Hall, Dr. Clark, Everitt, Laming, Magendie, Scheele, Dr. R. D. Thomson, Winckler, and various Foreign Pharmacopœias: a most important piece of information, when it is found that these vary greatly in strength; Magendie's being six times as strong as the London. Next come the properties of the acid, the purity, tests, uses, effects as a poison, antidotes, &c.

Other matters are treated in the same comprehensive way. Under the head "Pills" there are about 22 pages, running through all the varieties, from Abernethy's to zinc pills. Medical receipts of course occupy a prominent place in this book; but every article of food; every substance used for clothing, fuel, or in the arts; every process and product of Nature, the laboratory, or the manufactory, has its share of space. Brewing, baking, wine-making, and similar processes are described, as carried on by the most successful in each department, either for private use or in the wholesale way, with a view to profit. The authorities are often given—Soyer for instance for the making of a pie; and we are sorry to add, there are directions given for the manufacture of British wines, as practised by the trade—from British Burgundy and Champagne, to port, sherry, and Tokay!

Most of the maladies to which the human frame is subject are briefly described, with symptoms and the treatment recommended in each case. We are told also what to do in accidents and emergencies, till a medical man can be sent for, as in cases of drowning, burns, or poisoning.

Then again we find good descriptions of the barometer, microscope, camera lucida, and other scientific instruments, with collateral information on a variety of subjects. Altogether, this is not only a first-rate authority on all pharmaceutical subjects (in which Mr. Cooley stands unrivalled), but it will be found extremely valuable, as a general book of reference, to persons engaged in trade or manufacture, as well as in the family.

It seems that a new Pharmacopœia has been issued this very year by the General Medical Council of the United Kingdom, in order "to reconcile the varying usages, in pharmacy and prescriptions, of the people of three countries." This is noticed in an Appendix of some length by Mr. Brough, who says that "its faults are very numerous," and some of these he points out.

The third and concluding part of the 24th volume of the *Transactions of the Linnean Society of London*, is one of the most bulky which the Society has ever issued, its bulk being owing to no fewer than about 200 pages and 4 plates being occupied by a first instalment of Mr. Murray's Monograph of the Nitidulariæ. There are several other papers referring to the lower orders of the animal kingdom. Among the botanical papers are:—Prof. Oliver on the Structure of the Legumes of Pentaclethra macrophylla, with one plate; Messrs. Mann and Wendland on the Palms of Tropical Western Africa, with six plates, two of them devoted to the natural habit of the plants, and the others to the details of structure; Mr. D. Hanbury on the species of Garcinia (G. Morella var. pedicellata) which affords Gamboge in Siam, with one plate; Mr. Currey's Notes on British Fungi, with one plate; Dr. Kirk on a new genus (Walleria) of Liliaceæ, from East Tropical Africa, with one plate; and Mr. Mier. on the Conantheræ, with one plate.

A Classified List of Contributions from British India to the New Zealand Exhibition of 1865, by Dr. Forbes Watson, enumerates upwards of 1000 articles, in the several classes. Among the fibres, the most important for spinning and manufacturing purposes are Flax (Linum usitatissimum), Rhea (Böhmeria nivea), Puya (Böhmeria Puya), Nilgiri Nettle (Urtica heterophylla), Mudar (Calotropis gigantea), Bedolee Sutta (Pæderia fœtida); and for the manufacture of cordage Sunn Hemp (Crotolaria juncea), and Jubbulpore Hemp (Crotolaria tenuifolia). Of all Indian fibres, however, that which attracts most attention is that of the Rhea. When "arrangements have been effected for its production, along with that of other species of Nettle which abound in various parts of India, it is anticipated that fibres from this class of plants will eventually occupy a position second only in importance to that of Cotton and Flax. Late experiments have shown that the fibre of the Rhea can be turned to account for the manufacture of a variety of fabrics of a very valuable and useful description." The great desideratum is an efficient machine for the separation of the fibre.

Garden Memoranda.

MR. SALTER'S NURSERY, HAMMERSMITH.—We have already adverted (p. 1088) to Mr. Salter's fine display of Chrysanthemums, which goes on year by year improving, and we are glad to learn has this autumn attracted a very large number of visitors. We now propose to mention briefly some of the new varieties which the present season has added to the already extensive muster roll of this popular autumnal flower; and though what we have found in the Versailles Nursery may not quite have exhausted the new varieties of the year, yet as the head-quarters of the Chrysanthemum in this country, one may reckon on having made acquaintance there with all the most important of them.

The preponderance in numbers, and probably also in quality, rests with the class of Orange-reds, among which there are no fewer than four first-class incurved sorts, and one with quilled florets. Among these, taking first the proved sorts, Golden Ball will probably be the leading favourite, on account of its remarkable brilliancy of colour, as compared with most others of the group, all the other qualities being moreover of the highest order—the blooms large and full, and the florets beautifully incurved; the bright and cheering aspect of this variety is no less attributable to its lively tint of red than to the clearness of the golden tips which the incurving of the florets brings fully into view. Mr. Brunlees is another of this set, large, full, and incurved, the colour Indian red, with distinct yellow tips. Sam Weller, again, is another, also Indian red with golden tips, but somewhat heavier in tone of colour than either of the foregoing, though the globular outline leaves nothing to be desired in regard to form. Another of this colour, called Quilled Beauty, has the florets wholly quilled and somewhat thickened upwards, and is distinct and telling amongst this class of flowers, and likely we should think to make a good pot plant for conservatory decoration. To this group also belongs a seedling of the present year, to be called John Salter, a flower at once remarkable for its size, for the breadth of its florets, for prolificacy of bloom, and for vigour of foliage, a bright orange-red withal,

and l kely, hereafter, to take the very highest position in this particular group.

Among Yellows we observed two fine novelties, which were sports. however, and not seedlings. They are respectively named Golden Beverley and Golden Dr. Brock, both decided acquisitions. We also noticed a pretty pale sulphur-coloured sort called Eve, which though rather too flat for a show flower, will be valued for decoration on account of its soft and delicate colouring. This latter is rather a late bloomer.

A very prince among the Purples is that called Prince of Wales, the blooms of which are of a deep purple amaranth somewhat paler at the back of the florets (as indeed is generally the case), and at the same time large full and incurved so as to form a fine show flower. Iago is a very dark Ranunculus-formed mulberry purple, somewhat darker, and some degrees better than Mulberry itself; while Ranunculus, another purple, duller and paler than the last, has small but thoroughly incurved blooms remarkable for the breadth of their florets. King of Denmark ranks amongst the finest flowers of the year, and is remarkable for the depth and fulness of its beautifully incurved blooms, the colour of which is a bright purplish-rose, with a silvery centre. Imogene is another decided acquisition, remarkable for its density, the florets being shorter than in most of the incurved sorts, neatly turned in and of a bright mottley rose, altogether quite first-rate. Lady Carey is a showy bright rose with silvery backs, the blooms very large and full. Albert Helyar, another large full incurving flower, is of a rosy tint, but with a paler centre, and changes with age to a deeper or purplish hue.

The paler rosy hues find a representative in Pink Pearl, which is a delicate pink, with a pearly tint towards the tips of the incurved florets; it is dwarf in habit, free and fine, and good either viewed as a show flower or for purposes of decoration. Attraction is of a totally different stamp, being large and reflexed, but it is admirably suited for conservatory decoration on account of its showy blooms, which are quite full, with broad florets, whitish with a faint margin of pale rose. Mrs. Kaines appears to be a late sort, not being fully expanded at the time of our visit; its blooms, however, are large, full, and incurved, of a delicate blush, with a decided tinge of yellow in the centre.

Among Whites we were thoroughly pleased with Virgin Queen, which bears profusely its rosettes of snowy whiteness, of faultless form, and of about medium size. Blanche of Castile, another full incurved medium-sized white, quite pure, seems admirably fitted for pot culture; while Album multiflorum, a decorative sort, is chiefly remarkable for its dwarfness and very free blooming habit.

Those who are fond of the Anemone-flowered Chrysanthemums, will no doubt be pleased with Princesse Marguerite, a very pretty large-flowered rosy-lilac with a silvery cast; and with Miss Margaret a large pure white, dwarf in habit, and prolific of blossoms. Another with remarkably large pale sulphur blooms having a golden centre, promising to be a grand acquisition in its way, is to be called Sunflower.

Miscellaneous.

Heat and Organisation.—The escape of heat by radiation from the earth's surface, varies according to soil, climate, and state of the weather. In clear, dry air it goes on with rapidity, so that frost at night follows a sweltering heat by day, and no animal or vegetable can live in such countries, unless fitted to bear sudden and violent extremes. Moisture, or vapour in the air, arrests the dispersion of heat by radiation, and hence climates that are temperate are never excessively dry. Even perfumes exert powerful effects. Most minute are the quantities of matter given off in the scent of flowers. No "chemist," as Profe-sor Tyndall says, "ever weighed the perfume of a Rose," but the perfume of the Rose absorbs radiant heat with 30½ times the power of the air, and that of Aniseed with 372 times the air power. It would be idle to speculate on the quantities of matter implicated in these results. Probably they would have to be multiplied by millions to bring them up to the tension of ordinary air. Thus—

> "The sweet South,
> That breathes upon a bank of Violets,
> Stealing and giving odour,"

owes its sweetness to an agent which, though almost infinitely attenuated, may be more potent as an interceptor of terrestrial radiation than the entire atmosphere from bank to sky (Tyndall). In the present state of investigation it is impossible to state the precise limits of heat and cold beyond which all living organisms are destroyed. On Alpine snows the Protococcus, a simple confervoid plant, forms red patches, and grows in spite of the cold, while other members of the same family rejoice in warm situations. If we pass from low to high temperatures, we meet with some curious examples of vegetable life flourishing at a heat we might have fancied fatal to its existence. "In the hot springs near a river of Louisiana," for instance, "of the temperature of from 122° to 145°, there have been seen to grow, not merely Confervæ and other herbaceous plants, but shrubs and trees; and a hot spring in the Marquesas islands, which raises the thermometer to 187°, has plants flourishing in it and on its borders. A species of Chara has been found growing, and reproducing itself in one of the hot springs of Iceland, which boiled an egg in four minutes; various Conferwæ, &c., have been observed in the boiling springs of Arabia and the Cape of Good Hope; and at the island of New Amsterdam there is a mud spring, which though hotter than boiling water, gives birth to a species of Liverwort" (Carpenter). Dry spores of Uredo, according to Hoffman, are not killed by a heat of 128° C.; but the experiments of Julius Sachs on the highest temperature that vegetation can sustain, throw much doubt on the extreme statements of certain other observers. M. Sachs found that in the space of 10 to 20 minutes, a temperature of 51° C. in the air killed the most diverse kinds of plants, and 43° to 46° C. in water sufficed to cause death. It does not however follow that because plants that had been growing at lower temperatures were killed by such an augmentation of heat as he describes, that similar plants might not have germinated and grown above the temperature of his experiments. From these facts it will appear that both high and low kinds of plants will stand what might be deemed an excess of temperature in the direction of heat; but few plants, except those of low organisation, will survive extreme cold within the polar circle. The nearest approach to a tree is a minute Willow six inches high; but the short summer is gladdened with Rushes, and a few flowers, such as Potentilla, Ragged Robin, and Bachelor's Buttons. The greatest cold is sustained by Cryptogams, and the Yeast-plant will survive 76° below zero. *Intellectual Observer.*

Calendar of Operations.

(For the ensuing week.)

ROSES and other plants with woody stems not yet protected which run any risk from frost should have soil banked up over their roots, and a little Moss spread over them, fastened down so as to prevent it from being blown away. The branches may be tied up in straw. In beds of dwarf sorts some plant cuttings of Laurels and other evergreens in such a manner as to cause their branches to intermix with those of the Roses to be preserved, and by that means a lively appearance is added to the security afforded. Of course this can only be done where evergreens are plentiful. In one instance of this kind the cultivator had some round beds about a yard and a half in diameter filled with tender Roses, which were subjected to the following process:—Having a large number of layers of Laurustinus, well rooted, and not knowing exactly where to plant them to advantage, they were placed in these Rose beds, in the spaces between the plants. Thus the Laurustinus and Roses mutually protected each other in severe frosts; besides the mixture would not by any means have a bad effect even when the Roses were in bloom; and the young evergreens would be nursing up for a year or two as well there as anywhere else, and when too large for the beds might be permanently removed. In this way young trees located in a nursery might be made to increase the beauty of th garden, and afford protection to more tender objects.

FLOWER GARDEN AND PLANT HOUSES.

Little can now be added to what has been previously stated under this head. Where lawns have not been well attended to, through pressure of business, rolling and otherwise dressing them up for the winter may take place. The bulk of the dead leaves should be removed immediately preparatory to a general cleaning. If the shrubs require a compost it is a much more cleanly plan to bring back some decayed vegetable matter when a digging occurs. If any of the stock indoors appears too much crowded, endeavour to weed out inferior or half hardy things, transferring them to other places of security.

CAMELLIAS.—The weather being still favourable, early kinds of Camellias will be coming into bloom; where that is the case take care to keep as low a temperature as possible, in order to prolong their beauty. All drip must also be avoided.

CHRYSANTHEMUMS.—After the beauty of these is over, move them to other quarters, and get such plants as had to be set aside for the time to make room taken back into their former situations, or so re-arrange matters that the whole may have a good effect. Any decayed Chrysanthemums removed should be cut down, suffered to become somewhat dry, and placed in cold frames. Those who cannot afford frame room may secure them in some shed or outhouse for a few weeks, covering them overhead with clean straw should frost occur. Young plants intended for next year's specimens should be at once secured.

FORCING GARDEN.

MUSHROOMS.—Where there is a proper house for the cultivation of these, it is often found to be one of the most useful structures about a garden. Seakale may be forced in constant succession with as little trouble as raising a crop of small Salad. The old plan of raising a bed of fermenting materials, over the crowns out of doors, is an uncertain process compared with this. It is equally well adapted for Rhubarb forcing. Nothing is needed but a long, narrow pit along the bottom of the house, on one or both sides, the top of the pit to be level with the floor. It should be 4 feet deep, and filled in portions as wanted, with any hot, fermenting material, to within half a yard of the top, which should be covered with a lid. The Kale and Rhubarb should be placed on the surface of the fermenting matter as thick as it can stand, and then filled in with soil or old tan. As to Mushrooms, make new beds as required to succeed those now in bearing.

PINES.—As previously stated, late-swelling fruiters, which have had little water, may receive a slight increase of tepid manure-water. There is, however, room for doubt as to whether it is absolutely necessary after this period. Plants managed in the old style (in houses or pits with flues), no doubt would require it. By modern plans, however, a much greater amount of atmospheric moisture is indulged in; and this should be duly considered. When sunshine occurs, instead of giving air, let the thermometer rise to 80° or even 90°, after which give air.

VINES.—Where forcing has commenced, and the roots are outside, every attention should be given to the borders. A proper degree of heat must be maintained in the fermenting material. Any kind of protection to throw off rain would be invaluable, and would improve the warming powers of the covering.

HARDY FRUIT AND KITCHEN GARDEN.

Push forward all work that can be done now with expedition. When things that might be done now are delayed until spring, there is sure to be a sacrifice of some importance. In wet weather let matting or bast required for the ensuing year be cut, sorted, and hung up ready for use. Besoms and baskets should also be prepared. The tool-house should be examined, and put in an efficient state, and in fact everything of this kind done that is possible.

CELERY.—Should frost set in, the best beds, if not already done, should be immediately covered with clean straw 6 inches thick.

PRUNING.—All pruning, except that of Figs and Apricots, and most of the nailing of wall trees, as well as the training of espaliers, should be finished as soon as possible, and the same may be said of bush fruit.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Nov. 30, 1864, as observed at the Horticultural Gardens

Nov.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain
Thurs. 24	25	29.202	29.170	48	22	35.0	47½	49	W	.00
Friday 25	26	29.010	28.891	48	31	38.5	46	48	S.W.	.11
Satur 26	27	29.273	28.917	48	29	38.5	46	47½	S.W.	.01
Sunday 27	28	29.740	29.687	52	30	41.0	46	47	W.	.02
Mon. 28	29	29.910	29.659	55	38	46.5	46	47	S.	.02
Tues. 29	●	30.311	30.249	54	25	39.5	46½	47	S.	.60
Wed. 30	1	30.189	30.013	49	24	36.5	46	47	S.	.27
Average.		29.660	29.606	50.5	26.4	39.5	46.3	47.5		

Nov. 24—Hazy, overcast. fine; frosty at night.
— 25—Partially overcast; cloudy, boisterous, with rain at night.
— 26—Clear; very fine; fine at night; slight frost.
— 27—Clear; very fine; boisterous, with slight rain at night.
— 28—Densely clouded; rain; fine at night.
— 29—Very clear, and fine throughout; slight frost at night.
— 30—Overcast; partially overcast; very fine through the day; heavy rain at night.

Mean temperature of the week 1 deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Dec. 10, 1864.

December.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain	Prevailing Winds N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 4..	47.7	35.3	41.8	17	0.33 in.	4	2	2	3	6	14	6	1
Mon. 5..	48.5	34.5	41.5	23	0.25	—	3	2	1	5	12	11	4
Tues. 6..	47.8	36.1	41.9	19	0.76	2	4	2	3	6	14	5	2
Wed. 7..	48.2	36.2	42.2	18	1.02	1	6	2	3	1	13	6	3
Thurs. 8..	44.0	34.2	39.1	17	0.58	2	5	1	2	2	15	6	5
Friday 9..	46.6	35.5	41.1	18	0.40	3	4	3	3	5	19	4	7
Satur. 10..	46.8	33.1	39.9	24	0.67	2	6	3	2	8	11	3	3

The highest temperature during the above period occurred on the 10th, 1848—therm. 60 deg.; and the lowest on the 5th and 6th, 1844—therm. 14 deg.

Notices to Correspondents.

COCOA-PLUM: *M B.* What is called the Cocoa-plum is not the Cocoa-nut, but a West Indian fruit borne by a tree called Chrysobalanus Icaco. These fruits have a sweet and agreeable pulp.

CONSERVATORY EDGING: *James Way.* A very neat and pleasing edging to groups of potted plants in a conservatory or greenhouse may be formed by filling sloping boxes of any convenient length with the common Selaginella denticulata, as in the plan contrived by Mr. Eyles for the conservatory at South Kensington, than which nothing can answer the purpose better.

FITZROYA: *J C.* This Conifer was named in compliment to its discoverer Captain Fitzroy. It will bear our ordinary winters without injury, and in Patagonia grows into an evergreen tree 100 feet high. It is not an expensive plant.

HOLLYHOCKS: *D C.* For a dozen good sorts, not very expensive, we recommend you to get the following:—Joshua Clark, Golden Fleece, Reine Blanche, St. Clair, Mrs. Chater, Illuminator, Mrs. Fyson, Candidissima, Electra, Excelsior, Lady King, Tyrian Prince.

HOT-AIR HEATING: *J M W.* You cannot do better than consult Hood's treatise on Warming and Ventilating, and the first volume of McIntosh's "Book of the Garden."

NAMES OF PLANTS: *W. Briggs.* Ruscus Hypoglossum.——*A Z.* 1, One of the forms of Selaginella Martensii; 2 Selaginella Galeotti; 3, not sufficient; 4, Nephrolepis tuberosa—*J J.* The orange-berried shrub found in the stony beds of the Rhine and Rhone is Hippophäe rhamnoides.—*E K.* 1, Aspidistra lurida variegata; 2, Probably Cheilanthes profusa, but insufficient; 3, Lastrea spinulosa; 4, Pteris hastata.—*R B.* 3, Pinus Pinaster; 4, P. austriaca. We do not recognise the others, unless 1 is P. Pinea not fully developed.—*H Z.* 9 and 11, Asplenium (Allantodia) axillare; 10, Polystichum aculeatum; 12, Adiantum pubescens.

SHRUBBERY PLANTING: *C M H.* The filling out of an old shrubbery, which has been over thinned so that the remaining trees are nothing but bare poles, is not an easy matter If the shrubs have only been cut down, some or all of them will break up and furnish an under growth. If they have been grubbed out, the bare ground as far as possible must be trenched and cleared of roots and replanted. Climbing Roses to cover the trunks of the bare trees would succeed, if you can feed them sufficiently; but without seeing the condition of the plantation we can offer no opinion as to whether they would succeed in your case. The free-growing Evergreen and Ayrshire varieties would suit the purpose best, and then there is Virginian Creeper, which might be sparingly introduced. If the soil is exhausted and very full of old roots, you had better sacrifice as many trees as can be spared, thoroughly trench the cleared ground, and replant it with evergreens.

Smithfield Club Cattle Show.

SUTTON AND SONS, SEEDSMEN to the QUEEN, respectfully invite the attention of their Patrons and Agriculturists to their magnificent STAND in the GALLERY of the AGRICULTURAL HALL, Islington, at the forthcoming Show, consisting of 200 distinct varieties of GRASSES for PERMANENT PASTURE and other purposes, all grown by themselves in their Trial Grounds, Reading; a large and choice Collection of GRASS SEEDS in canvas bags, and some very excellent specimens of their Improved MANGEL WURZEL, CHAMPION and other SWEDES, Yellow and White-fleshed TURNIPS, POTATOS, &c. Grown by their customers in various parts of the United Kingdom.

One of the Firm will attend at the Stand, where orders will be received for Seeds at moderate prices.

SUTTON & SONS, Royal Berks Seed Establishment, Reading.

Specimens of

SUTTON'S CHAMPION SWEDE,

(which has taken numerous Prizes again this season), may be seen on

MESSRS. SUTTON'S STAND,

AGRICULTURAL HALL, ISLINGTON,

where Orders will be received.

Royal Berkshire Seed Establishment, Reading.

Smithfield Club Show.

STAND No. 93—GALLERIES.

WILLIAM SKIRVING begs to announce to his Friends and the Public that he will ATTEND, as usual, at the ensuing LONDON CATTLE SHOW (AGRICULTURAL HALL, ISLINGTON), to Exhibit Roots and Take Orders for AGRICULTURAL SEEDS of the most approved kinds.

Liverpool.—Dec. 3.

Smithfield Club Show.—Agricultural Hall.

DECEMBER 5, 6, 7, 8, 9, 1864.

STAND 56.

MESSRS. J. C. WHEELER AND SON, of Gloucester, will exhibit specimens of their well-known WHEELER'S IMPERIAL SWEDE, and ORANGE GLOBE MANGEL: and, by the kind permission of the Growers, the PRIZE WHEAT and BARLEY shown at the Gloucestershire Root and Grain Show; also, specimens of a NEW POTATO, of extraordinarily fine quality, called MILKY WHITE.

J. C. WHEELER & SON, Seed Growers, Gloucester.

STAND 56, Smithfield Club Show.

Seedsmen to the Gloucestershire Agricultural Society.

Smithfield Club Show.—Agricultural Hall.

JAMES CARTER AND CO.'S STAND of PRIZE ROOTS, No. 26.

CARTER'S "FIRST CROP" PEA, The EARLIEST in CULTIVATION.

CARTER'S FARMER'S VADE-MECUM.

NATURAL GRASSES: their Names and Derivations; Quality, Produce, Elevation, Situation, Soil, Use, Peculiarity, Season, Growth, Increase, Time of Flowering, Price, &c. Free for One Postage Stamp.

RICHARD SMITH, Seed Merchant, Worcester.

TRADE

HALLETT'S [PEDIGREE] NURSERY WHEAT.

MARK.

PURE SEED OATS.

46s. a Quarter (with Sacks) for not less than Two Quarters.

Papers sent upon application, enclosing Stamp, to FREDERIC F. HALLETT, Esq., F.L.S., the Manor House, Brighton, Sussex.

Shaw's Patent Flexible Self-Adjusting Lawn Mowing Machines.

JOHN SHAW respectfully solicits an inspection of his improved LAWN MOWERS, at STAND No. 37, in the GALLERY of the SMITHFIELD CLUB FAT CATTLE SHOW, AGRICULTURAL HALL, ISLINGTON, on December 5, 6, 7, 8, and 9.

From the MARK LANE EXPRESS, *August* 15, 1864.

"SHAW'S 'Flexible' Lawn Mower is a decided improvement in that useful and much used class of implement. The handles being attached by hinged joints, enables the cutters to follow undulations of ground without affecting the height at which the workman holds the handles; and the Machine, by an instantaneous change, can be used as a simple Roller; and again, by another change, be most snugly folded up for convenient stowage in a tool house, or for travelling."

Illustrated Descriptive Price Lists, with Testimonials, may be obtained at the Stand, or post free direct from the Works, on application to

JOHN SHAW, Junction Works, New Wortley, Leeds.

Smithfield Club Cattle Show.

STAND No. 97.

BENJAMIN EDGINGTON (ONLY), MARQUEE, TENT, RICK CLOTH, FLAG, and TARPAULIN MANUFACTURER, 2, Duke Street, London Bridge, S.E.

No other Establishment.

Hoven or Choked Bullocks or Sheep.

CAUTION TO FARMERS.—"A flock of fine Ewes, all in Lamb, and amounting to nearly 100, were closely folded on Tuesday night upon Rape and Buckwheat at New Barn Farm, in the parish of Calbourne. On the shepherd paying a visit to his flock on Wednesday morning, 118 of them were dreadly dead from the effects of gross feeding—the animals getting blown; they were soon choked and turned over on their backs, without the remotest hope of saving them."—*Hampshire Independent*, October 1.

READ'S IMPROVED HOLLOW PROBANGS are a safe and a sure REMEDY for BLOWN or CHOKED CATTLE, SHEEP, &c.

Manufactured only by RICHARD READ, 35, Regent Circus, London; and will be exhibited at the SMITHFIELD CLUB CATTLE SHOW, STAND 108.

Smithfield Club Cattle Show 1864,

(IN THE GALLERY.)

HENRY CLAYTON AND CO., of the Atlas Works, will exhibit some specimens of their Improved Patent

BRICK MAKING MACHINES, combining Crushing, Pugging and Moulding.

BRICK and TILE PRESSING MACHINES.

COMBINED MOULDING and PRESSING MACHINE for Fire Bricks.

TILE and PIPE MAKING MACHINES.

NEW PAN TILE MOULDING MACHINERY.

PORTABLE MORTAR MILLS.

PATENT "PNEUMATIC SYSTEM" for Drying Bricks and Tiles.

Catalogues free by post on application at their new Manufactory, Woodfield Road, Harrow Road, London, W., (late of Upper Park Place, Dorset Square.)

£1000 UPON the WOOLSTON TACKLE against the NEWCASTLE "best application."

WILLIAM SMITH, Woolston, Bletchley Station.

RICHARD GARRETT AND SONS, LEISTON WORKS, SUFFOLK.

Illustrated Catalogues.

Mangel Wurzel and Swedes.

GRANT'S PORTABLE RAILWAY supplies a most complete and economical means of clearing crops of Mangel and Turnips off wet land without injury to the soil, thus overcoming the only serious objection to growing those valuable roots on heavy land.

For particulars apply to the Manufacturer and Patentee, J. GRANT, Linton, Kent.

AGRICULTURAL MACHINERY.—Chaff Cutters for hand or power, Threshing Machines, Carts, Waggons, Ploughs, Harrows, Turnip Cutters and Pulpers, and all kinds of Agricultural Implements; also the Prize Churn, Wire Netting, &c. Delivered carriage free. Price Lists on application.

BURGESS & KEY, 95, Newgate Street, E.C.; Works, Brentwood, Essex.

Land Drainage

EXECUTED by CONTRACT or on COMMISSION, and LOANS OBTAINED by

MR. THOS. SCOTT, LAND AGENT and VALUER, 18, Parliament Street, London, S.W.

N.B.—Mr. SCOTT has already Drained upwards of 10,000 Acres in England, and will be happy to show works in progress or completed.

Several most desirable Estates and Farms on hand for Sale and Letting.

Honourable Mention, International Exhibition, 1862.

SCOTT'S SELF-REGULATING SYPHON DRINKING TROUGHS for CATTLE and SHEEP.

Prices and Sketch sent on application to Mr. THOS. SCOTT, 18, Parliament Street, London, S.W.

THE LANDS IMPROVEMENT COMPANY.

Incorporated by Special Act of Parliament in 1853.

2, Old Palace Yard, Westminster, S.W.

TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.

The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

THE BIRMINGHAM and MIDLAND COUNTIES EXHIBITION of CATTLE, SHEEP, PIGS, ROOTS, CORN, IMPLEMENTS, and POULTRY.

The ANNUAL GENERAL MEETING of the SUBSCRIBERS of the Birmingham and Midland Counties Exhibition was held on THURSDAY, December 1, at the Hen and Chickens Hotel, New Street.

Present, the MAYOR of BIRMINGHAM (H. Wiggin, Esq.), in the Chair.

The Advertisement calling the Meeting having been read, and the Minutes of the last Annual General Meeting confirmed and signed—

Proposed by Mr. J. MATTHEWS; and seconded by Mr. J. LOWE; and—

Carried unanimously—

1. That the Right Honourable the Earl of HARDWICKE be appointed President of the Society for the ensuing year.

Proposed by H. LUCKCOCK, Esq.; seconded by Mr. T. B. WRIGHT; and

Carried unanimously—

2. That the most grateful thanks of this meeting be presented to the Right Honourable Lord WALSINGHAM, for his liberal support and courteous attention to the interest of the Society during the past year.

Proposed by the MAYOR; seconded by G. M. CALDECOTT, Esq., and

Carried unanimously—

3. That the thanks of this Meeting be given to the Right Hon. Lord Walsingham, the President, for his Prize of 25 Guineas; to the Right Hon. the Earl of Aylesford, for his Prize of 15*l.*; to the Hotel and Innkeepers of Birmingham, for their Prize of 25 Guineas; to the Mayor of Birmingham (William Holliday, Esq.), for his Prize of 10*l.*; to Alderman Hodgson and Councillor Baldwin, for their Prize of 10 Guineas; to C. N. Newdegate, Esq., for his prize of 10 Guineas; to Messrs. Mapplebeck & Lowe, for their Prize of 5*l.* 5*s.*; to the Linen and Woollen Drapers of Birmingham, for their Prize of 2*l.*; to Messrs. Proctor & Ryland, for their Prize of 10 Guineas; to Messrs. Griffin, Morris, & Griffin, for their Prize of 10 Guineas; to Messrs. Billing, Son, & Co., for their Prize of 5 Guineas; to the Poultry Amateurs, for Prizes amounting to 9*l.*; and to Mr. G. F. Greensill, for his Prize of 5 Guineas.

Proposed by Mr. J. MATTHEWS; seconded by W. JAMES, Esq.; and

Carried unanimously—

4. That the best Thanks of this Meeting be given to Mr. JOHN SHACKLE, for his great exertions in the arduous duties of the office of Honorary Treasurer, which he has hitherto fulfilled, and that he be re-appointed Honorary Treasurer for the ensuing year.

Proposed by G. C. ADKINS, Esq.; seconded by Mr. Alderman HOLLIDAY; and

Carried unanimously—

5. That the Thanks of this Meeting be given to Mr. F. SMITH for his kindness in granting the free use of his room on this and former occasions.

Proposed by H. LUCKCOCK, Esq.; seconded by Mr. T. H. MANSEN, and

Carried unanimously—

6. That the following Noblemen and Gentlemen be the Council for the ensuing three years:—

Warwick, the Rt. Hon. the Earl of	Chance, Mr. F. H.
Craven, the Rt. Hon. the Earl of	Couchman, Mr. Charles
Hill, the Rt. Hon. the Viscount	Dain, Mr. Benjamin
Calthorpe, the Hon. F. H. W. G., M.P.	Druce, Mr. Samuel
Chetwynd, Sir George, Bart.	Fowler, Mr. William, Jun.
Peel, Sir Robert, Bart., M.P.	Freer, Mr. E., Jun
Phillips, Sir G. R., Bart., M.P.	Gillott, Mr. Joseph
Newdegate, C. N., Esq., M.P.	Gwyther, Mr. Edwin
Holland, Edward, Esq., M.P.	Hodgson, Mr. T. R. T.
Adkins, G. C., Esq.	Horley, Mr. F., Jun.
Chawner, R. C. Esq.	Lort, Mr. W., Jun.
Jaffray, John, Esq.	Lowe, Mr. Henry
James, William, Esq.	Lowe, Mr. John
Lloyd, Thomas, Esq.	Mapplebeck, Mr. W. B.
Matthews, William, Esq.	Marshall, Mr. Henry
Muntz, G. F., Esq.	Matthews, Mr. W., Jun.
Holliday, William, Esq.	May, Mr. G. A.
Ratcliff, C., Esq.	Osborn, Mr. Henry
Whateley, John W., Esq.	Ryland, Mr. T.
Baldwin, Mr. James	Sabin, Mr. F.
Beach, Mr. William A.	Scott, Mr. W. J. B.
Burbridge, Mr. Thomas	Smith, Mr. Joseph
Burman, Mr. F. F.	Umbers, Mr. Samuel
Cattell, Mr. James	Woodward, Mr. William
	Wright, Mr. T. B.

The Mayor having left the Chair, and the same having been taken by G. M. CALDECOTT, Esq., it was

Proposed by H. LUCKCOCK, Esq.; seconded by Mr. T. B. WRIGHT, and

Carried unanimously—

That the best Thanks of this Meeting be given to the Mayor, for his kindness in presiding on this occasion, and for his offer of a Prize of Twenty Guineas.

Sewage of Towns.

JOHN MARRIAGE, the Lessee of the Lands upon which the Croydon Sewage is applied, advises and assists Boards of Health, Corporations, Owners of Estates, and Agriculturists, &c., as to the APPLICATION of SEWAGE to LAND, the mode of its Distribution, the suitability and manner of laying out such Land, and all the details connected with the profitable utilisation of Sewage.

Grassmere, near Mitcham, Surrey, S.

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.

Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.

22, Parliament Street, Westminster, S.W.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.

AUTUMN SESSION, 1864.

President.—The Right Hon. the Earl BATHURST.

Council.

The Rt. Hon. the Earl BATHURST	The Rt. Hon. T. H. SOTHERON ESTCOURT, M.P.
Hon. WILLIAM BATHURST.	EDWARD HOLLAND, Esq., M.P.
The Rt. Hon. the Earl DUCIE.	

Principal—The Rev. JOHN CONSTABLE, M.A. Trin. Col. Camb.

RESIDENT PROFESSORS.

Practical Agriculture—J. B. FLETCHER, Farm Manager. *T. BALDWIN, of Glasnevin. *R. SCOTT BURN, Co-Editor of the Book of Farm Buildings.

(*These Gentlemen will be in temporary residence.)

Chemistry.—ARTHUR H. CHURCH, M.A., Lincoln Coll., Oxon., F.C.S

Assistant to Chemical Professor.—R. WARINGTON, Jun., F.C.S.

Botany.—JOHN BAYLDON, M.B., Lond. B. Sc.

Veterinary Surgery.—A. J. MURRAY, M.R.C.V.S.

Mathematics and Surveying.—The Rev. W. MEREDITH LANE, M.A., late Scholar of Trin. Coll. Camb.

Drawing.—JAMES MILLER.

SPECIAL LECTURERS.

FINLAY DUN—On the MANAGEMENT of STOCK.

W. C. SPOONER—On the FARM HORSE.

SAMUEL COPLAND, "The OLD NORFOLK FARMER."

AGRICULTURAL CHEMISTRY.

THOMAS ANDERSON, M.D., Professor of Chemistry in the University of Glasgow, and Chemist to the Highland and Agricultural Society of Scotland—A COURSE of LECTURES.

ROYAL AGRICULTURAL SOCIETY of ENGLAND.—The GENERAL MEETING of MEMBERS will be held at the Society's House, 12, Hanover Square, on THURSDAY, Dec. 8, at 12 o'Clock. By order of the Council,

London, December 1, 1864. H. HALL DARE, Secretary.

The Agricultural Gazette.

SATURDAY, DECEMBER 3, 1864.

MEETINGS FOR THE ENSUING WEEK.

MONDAY,	Dec. 5 to	9	Smithfield Club Cattle Show in the Agricultural Hall, Islington.
FRIDAY,	—	9	
MONDAY,	—	5	London Farmers' Club (Mr. Mechi on Farm Profits), in the Great Room of the Society of Arts, St. John Street, Adelphi—5.30 P.M.
TUESDAY,	—	6	General Meeting of the Smithfield Club in the Agricultural Hall
WEDNESDAY,	—	7	—Council Meeting of Royal Agri. Soc.—11 A.M.
THURSDAY,	—	8	—General Meeting of Royal Agri. Soc.—Noon.

—— THE paper entitled TWENTY-FIVE YEARS' WORK IN IRELAND, which is this day published in our columns, well deserves a careful perusal by every one interested in the social and agricultural improvement of our country districts; although especially inspiriting and instructive as regards the prospects of agriculture and of all the classes dependent upon it in the sister island, its influence will be useful everywhere — for everywhere it teaches the efficacy of example, precept, resolution, when these are directed by intelligence and justice. We are fortunate in having the history of so good an instance of estate management entrusted to our publication. But the object of the author no doubt is to relate his experience as widely as possible for the general good, and we hope that our agricultural contemporaries will help him to make it known.

THE old fiction that it is possible to increase the produce of a plant by dipping in some fertilising fluid the seed from which it springs is being reproduced. Twenty years ago a Mr. BICKES had the help of all the agricultural journals, our own among the rest, to make known the alleged advantages of such treatment in the case of Wheat. And at that time we superintended and directed a number of ¼-acre experiments in a Wheat field, in which the usual quantities of seed were steeped in solutions of various ammoniacal and other salts before sowing. The results were sufficiently conclusive on the utter worthlessness of the application, so far as quantity of produce was concerned; and soon after the idea, which had originated in France, died away from public view. Another Frenchman however has come lately to the rescue.

"M. BOUTIN, an agriculturist, and formerly a chemist at Libourne, in the department of Gironde, France, who for many years past has devoted himself to the discovery of a manure which possessed the much-wished-for qualities of increasing the produce of seeds sown, and at the same time of diminishing the cost at

present indispensable to all who wish for abundant returns, claims to have succeeded in his researches, and the statements he makes are borne out by testimony which places the value of the discovery beyond all doubt. M. LÉON PLÉE, in a recent number of the *Siècle*, highly eulogises the process, which simply consists of the previous preparation of seeds by steeping them in a certain liquid, which imparts an extraordinarily revivifying force, and enables them to contend successfully against all the evil influences to which they are subjected after being committed to the earth.

"M. BOUTIN has met with his reward in seeing his fields covered with crops such as they never bore before, and such as were never dreamt of under the ordinary system of agriculture without a very great expense in the most costly manures at present known to science. The French Minister of Agriculture and other competent authorities have stated that 500 million francs are annually paid for the fertilising substances deposited in French soil; but M. BOUTIN knows nothing of this expenditure, as by his process he is enabled to raise his crops without resorting to the ordinary and much-vaunted manures. The method adopted is certainly not new, as VIRGIL informs us that, in his day, it was customary to steep seeds in nitre water or residue of oil—poorly fertilising processes at the best; but M. BOUTIN uses a liquid composed of powerful ingredients which forms around the grain a thin covering of quite a peculiar nature. This covering protects the seed against the enemies which habitually destroy it, and fortifies it in such a manner that some of the crops gathered from seeds thus prepared represent the astonishing increase of 2000 per cent."

A small barrel of liquid, we are informed, is sufficient to prepare seed for the sowing of a hectare of land. The Minister of Agriculture, M. ROUHER, appointed a commission to investigate the subject, and the following is stated to have been the result of their inquiry:—

"The soil offered by M. BOUTIN, and chosen by the Commission, was of a sandy nature, and was situated at a place called l'Epinette, near Libourne. It was known to possess but poor fertilising powers, but Wheat had been grown on it for two or three years without manure. It was arranged with M. BOUTIN that the Wheat should be sown on the land in the condition in which it then was, and that no manure or other fertilising substances should be laid on it without the knowledge of the Commission. One portion of the seed was treated in the ordinary method—that is, it was soaked in a solution of blue vitriol, and another portion was soaked in M. BOUTIN'S solution, the seed being sown on alternate furrows as proposed. On the 8th December, 1856, in presence of a sub-commission, 30 litres of seed prepared in the ordinary way and 45 steeped in M. BOUTIN'S solution were sown. Some portions were covered with stable manure, and some were not, but in the four portions of land on which the experiment was carried on no manure was used with the seed prepared with M. BOUTIN'S solution. Before the harvest on June 27, 1857, the commission inspected the growing Wheat, and, after a minute examination, it was decided that the parts sown with M. BOUTIN'S seed looked better than any of the others, even where manure had been used. On the 15th September following, after the whole of the Wheat had been reaped and threshed, the produce was measured and compared, when it was proved that the plots sown with grain which had been prepared with M. BOUTIN'S solution were more productive than any of the others. As a further test, some of the Wheat was weighed and ground, with a result equally satisfactory to the inventor.

"A company, having its seat in the Avenue des Ternes, at Paris, has been formed to carry out the discovery. Testimonials have been received from all parts of France. Six landowners residing at Libourne have also issued a certificate proving that for more than 10 years M. BOUTIN has cultivated his land with the aid of his solution without manure; that each year he has obtained magnificent crops on a soil by no means fertile; and that he has even raised many Wheat crops in succession."

Why have we heard nothing of this wonderful success till now, seeing that the Government Commission issued their report seven years ago? The great defect in all such statements as the above is the indefiniteness with which they are chargeable. It does not state actual quantities; but uses only qualitative terms. Moreover, no means seem to have been taken to determine the natural variation of productiveness in the plots compared. Great public good is done by the many inquisitive persons who are investigating the differences of growth and produce between plots of land and lots of cattle under different treatment; but even more good would be done if any one would undertake to examine and record the difference of growth and produce between plots of land and lots of cattle under *similar* treatment. Even greater differences would be occasionally observable, arising from no directed or observed agency whatever, than are sometimes the result, as is believed, of steeping seed for land, or using *e.g.* condiments in cattle food.

We need hardly say that we do not in the least believe in M. BOUTIN'S steeps for seed.

TWENTY-FIVE YEARS' WORK IN IRELAND.

IT may perhaps be useful to give some account of 25 years' work in the management and improvement of an estate in Ireland.

Five years ago much was heard of the greatly improved state of all classes in that country and their general prosperity. During the past two or three years, however, statements very much the reverse have been common. The gloomiest pictures have been drawn by some, and it has been doubted whether any substantial improvement in the condition of the people, especially the tenants, has taken place. It has been said the land is not paying even for outlay on drainage, that the settlers from England and Scotland are not thriving, and in short that hopelessness is as much the fate of Ireland as ever.

A plain narrative of what has actually been done on one estate may throw some light on these opposing accounts, and enable a judgment to be formed what degree of truth there is in either or both of them.

The estate is in the South of Ireland. It originally consisted of about 2000 acres, but has gradually been increased by purchase to near 4000. It had been left wholly to agents and thoroughly neglected. One hasty visit in two generations of owners was all the personal care known to have been given to it. It need hardly be said, no money had been laid out upon it. From accidental causes the farms were less sub-divided than on many estates. They averaged about 25 acres. Some contained 50 acres and over, and many were from 10 to 15 acres.

It is on the carboniferous slate formation. The surface is undulating, with somewhat rounded hills, 300 or 400 feet high. The soil on the hills is generally rather thin, *i. e.*, the rock not far from the surface and often breaking out, but in quality a fair Turnip loam. The bottoms and sometimes sides of the hills are wet with springs and peaty, often cut out peat bog, but occasionally deep good land. On the whole it is land of fair quality, but very little of it could be called thoroughly good land. The climate is one of the wettest in Europe, cool in summer and mild in winter.

The course of treatment (farming it can hardly be called) pursued formerly, was paring and burning for Potatos, with such manure as there was applied to the same crop. This manure was chiefly earth drawn the previous autumn to the yard, and mixed with such small quantity of dung as a starved horse or two and the few cattle kept made, and sometimes with calcareous sea-sand besides. The Potatos were followed by Wheat, and if the land would bear it, this again by Oats once or twice, and then left to rest, as it was called, three or four years, *i.e.*, to grow weeds, no Grass seeds or Clover whatever being usually sown, till some sort of skin was formed, enough to burn again. It may easily be judged what was the result of such a course. Very little stock could be kept; 20 bushels of Wheat per acre were thought a capital crop—12 bushels were more frequent. Green crops were almost unknown. Draining hardly thought of. Rents were very irregularly paid, and tenants were little better than paupers. A reduction of rents on the estate had been tried, but arrears still accumulated. There was never any certainty what money would be received, and it was a source of constant vexation and difficulty to the landlord, whilst the tenants were most of them always in trouble. All this was before the Potato failure was thought of.

It was at last resolved to try a system of improvement that had succeeded elsewhere.

An agent was altogether dispensed with. All former arrears of rent, with trifling exceptions, were wiped off, and it was announced that all future rent would be rigorously insisted on about three months after it fell due, on regular half yearly days, fixed to suit conveniently local fairs. Two or three of the worst tenants, believed to be incorrigible, were ejected *in terrorem*, and their farms divided among the better sort. The growth of small quantities of Clover and Turnips was made compulsory, and a Scotchman set to work to teach how to do so. Prizes of improved ploughs were offered for the best crops, and a small model farm was started.

It was uphill work for some time, and only carried out by personal influence and superintendence; but at the end of five years the stock on the estate had doubled, and the rent was regularly paid on a single day in each half year without trouble, whilst not more than six or eight tenants, including the first victims, had been turned out. It need hardly be added that the rest were better off than they had ever been before.

All this had been done by two or three visits in the year from England, but at this time circumstances led me to reside on the estate. Things went on thus improving for two or three more years, then the Potato failure and famine came, with the complete upset of the social state previously existing. By that time we had got into such a condition that the first failure of 1845 seemed hardly to affect the tenants. Even in the great failure of 1846 there was nothing like distress among them. The larger dependence upon stock, and the experience in the growth and use of Clover and Turnips, enabled them to face the troubles of the times much better than their neighbours; but when the summer of 1847 came with the great emigration, and prospect of still further failures, it became clear that the system that had formerly answered would no longer do so.

I think the direct effect of the break down of the social system in Ireland, depending on the Potato crop, has never been sufficiently observed in England. It was not merely a famine, where, as soon as it was over, people had only to go on again in the old ruts, but a great social upset, where, after it was over, quite new ways had to be entered on, which very few knew anything about, and in which no one could feel any confidence, whether he would succeed or fail. The difficulties to be got over were really immense.

In the district of which I am writing a complete truck system prevailed. The tenant provided the labourer with cabin, ½ Potato land (the labourer manuring it himself), Grass for two or three sheep, the wool of which was spun into freize for coats, &c., by the labourer's wife, a small patch of Flax, spun in the same way for linen, and he drew home the turf which the labourer and his family had dried themselves. All this was paid for by work at so much per day, the man being himself fed on Potatos by the farmer, whilst at work besides. The farmer thus got his labour and a manured field for corn the following year without money out of pocket, whilst the labourer got all the chief necessaries of his life in exchange for his labour, also without money.

It is easy to see the effect of the Potato failure upon such a system. Money wages at once became indispensable. This was just what the farmer had not to give, whilst the labourer could not otherwise live. He therefore could not stay where he was, and so the farmer lost his labour and manured field, whilst the cabin became roofless. And hence an entirely different social state was forced in; farming became more of a business, requiring outlay of money at least to some extent, and so dairy and stock farming have increased, because needing less of such outlay than tillage. This again has caused less employment for the labourer, whilst from the day his labour was paid for in money, the attraction of the higher money price of such labour in America operated with double force, and hence increased emigration. To the smaller and poorer farmers, who had little or no stock, the change was doubly severe. In addition to other troubles they were forced to buy meal on credit for themselves and their families for many months of the year. Doubtful if any new plans would succeed, and without means to carry such out, they were indeed between the upper and nether millstones.

But to return from this digression. In the summer of 1847 several of the worst-off tenants on the estate proposed to give up their farms and emigrate, although a reduction of rent had been made, to continue whilst the bad times lasted. They were given some help to enable them to emigrate, and many of them went off.

But a general discouragement and unsettlement throughout the country now set in. No one, either landlord or tenant, felt any confidence in the future, or in fact could see what was the best course to follow. Throughout the country numbers of tenants were giving up their farms and going away. Often all the tenants of a plough land would run off by night to a distance with stock and crops, leaving the landlord to recover the possession of the land as he could by ejectment, perhaps 12 months afterwards, and with a heavy arrear of rates upon it. It was a common saying among the tenants that "the landlords and labourers would soon have the land all to themselves." It was a terribly anxious time. No one could tell from half year to half year what course things would take, and that he might not have every acre he owned thrown on his hands. To lay out capital at such a time on improvements and doubtful farming was felt to be nothing less than spending what might be wanted before long for actual subsistence. Few who went through that time of wretchedness will ever forget it.

Of course, under these circumstances, it was impossible to relet any land thus given up at the former rent. Yet if relet for less, it would have caused still more trouble among the remaining tenants, who would have resorted to all means in order to get a like reduction on their own farms. It was therefore resolved to keep in hand any land that could not be relet at the former rent. Four to five hundred acres were thus taken up. This was done simply to avoid worse evils. The land, in spite of the improved condition of the tenants, was still miserably poor, and of course it was the worst who failed. All the objections to "gentlemen's farming" were strongly felt, and no instance was known in the district of such farming having paid. The opinion of those best able to judge was, that tenants could make such land pay best, and there were many instances of gentlemen taking up considerable farms, and after spending largely on them for a few years, being glad to get out of them again. Of course there was the general consideration the other way: that improved farming, with reasonable skill and judgment and capital, ought to pay better than the wretched system prevailing. But no one was known to have done it, and the almost universal opinion of the country found loud expression in the saying, "He will soon be tired of that." No one who has not tried it can tell what is required to face the discouragement of having to work out a plan against the universal opinion of everybody about him. Still it had to be done. It was partly smoothed over by the idea

that at worst it would answer to improve somewhat the very poorest of the land, and perhaps in a year or two times would mend, and, it might be, relet at the former rent. During the famine years a good deal of draining and reclamation of waste land had been carried on for the sake of giving employment. It was intended that the tenants should pay the interest on this, but they were generally unable or unwilling to do so. So a good deal of this sort of land had also to be held.

Thus another new system was started. The buildings of the former model farm of 50 acres were enlarged, and partially adapted for 500 acres now in hand; and it was resolved to try sheep largely, as not requiring outlay for buildings. The land was greatly scattered, just as it happened to be given up by the tenants. Some of it was three miles from the buildings, but it was well placed for roads. It has since been constantly changing to some extent; parts being let to adjoining tenants when it could be done to advantage, and other farms of tenants who failed added instead. One advantage we had. Much tillage was clearly unsuitable, both to the soil and climate. The rainfall and constantly mild moist atmosphere, so unsuited to corn, were the very condition needed for Grass. There was no trouble in getting a close sole of Grass in three years, such as an English farmer might easily suppose was old pasture; and most good farmers agreed that dairy and stock farming paid better than anything else in this district, even before the famine.

The course of farming followed was to break up the land for Oats, where it would give a crop; then Turnips manured, half of them fed on the land by sheep with hay, and the rest given to cows and young stock in the yard, only a few head being fattened. The Turnips were followed by Oats again, and Grass-seed, and the land was then left in Grass for four or five years, or till it was convenient again to go over it. The poorest fields were first attacked, because it was thought if the land was let again in a few years, an improved face on these parts would help to let it, and ensure a better rent. But in truth they looked such utter starve-alls, that for the sake of one's own feelings it was needful to improve them. The effect of the Turnips fed off with sheep was little short of magical, even on the waste land. It never failed at once to give a good crop of Oats and seeds after, and to put the land thenceforth in a state to pay something.

On parts of the land that were suitable, and where the old buildings answered, small dairies were started; the cows being let to some of the best of the labourers, whose wives understood butter making. Any tenants who were turned out and did not emigrate, were, if they liked, employed with their families, but treated merely as other labourers. Some of these have proved our very best men, and are still with us. It has for years been their pride to go to mass better dressed than the small farmers around.

Yet the results of the first three or four years, as shown in the balance-sheets, were far from encouraging: 7*s.* or 8*s.* per acre for rent and interest was the best that could be made after charging all that could be fairly charged to capital as permanent improvements, and for this a large outlay was needful. The land that had been gone over no doubt had a very improved appearance, but the whole required the same process. The lea Oats seldom returned the seed and labour, and 50 or 60 acres manured in a year made slow progress over 500.

But in spite of discouragement it was resolved to go on. The former rent of the land taken up varied from 9*s.* 6*d.* to 20*s.* per acre. It averaged on the whole about 17*s.* At length in 1851 the return for rent and interest rose to 12*s.* per acre; 1852 was no better; but in 1853, a year of high prices for everything, the balance suddenly started to 27*s.* The next year, however, it went back to 22*s.* In 1855 it was 23*s.* 6*d.*, and in 1856 it fell off again to 21*s.* 6*d.* In 1859, however, another great step was gained, and 31*s.* was reached, though in 1858, from accidental causes, it again went back to 22*s.* 6*d.* 1859 was somewhat better, but only 25*s.* At last in 1860 and 1861 it again exceeded 30*s.* Then came 1862, the first of our series of wet years, only producing 20*s.*, and 1863, still worse, 18*s.* These deficiencies were however partly caused by 80 acres of poor land having been thrown in and by a change of bailiff, and throughout it must be remembered that additions of poor land and other accidental causes, partly account for the fluctuations.

May, 1864, again however brought the profit up to 28*s.* 6*d.* It is believed we have not yet nearly reached the highest profit to be made. It is certain all the land is capable of far higher condition. These results have been *bonâ fide* balances, after charging bailiff's salary and all expenses; not landlord's improvements, as buildings, drains, and fences. They have been made up always to May 1, because corn and stock had then been mostly sold and so little was left for valuation, except permanent stock which has been kept at a nearly uniform and rather low price. A good deal of guano and bones were used yearly, and all charged to the year, but not much cake or corn was used for feeding, though we are now beginning to do so largely. It need not be said the crops have improved, especially where the land has come a second time under manuring. Now that the land itself is in a different condition, its whole appearance is changed. It would be hard for any one who had not seen the process to believe it is the same land.

Now as to the effect on the rest of the estate. After the famine years were over, the same course as before was pursued with the tenants. Whatever rents they had promised were punctually enforced, unless for very definite causes, and any tenant that could not pay was considered unfit to remain on the land. On the other hand they were allowed to understand, that no one paying his rent would have it raised or be dispossessed during his life, unless for gross misconduct. The objections to so long a tenure were not overlooked, but on the whole it was considered an advisable concession to the feelings and prejudices prevailing in the country. Of course when a tenant died or gave up, his successor had to make a new bargain, and in this way a steady rise in the rental is going on. No sale of his interest (as it is called) by a tenant to a successor was ever allowed, directly or indirectly. The tenants saw before I did, that the farm was paying. And the first result was to put an end to all scheming. The talk, "He will soon be tired of that," gave place to, "No wonder he can make it pay, with capital and no rent to pay." It was useless to pretend poverty and neglect their farms in hope of getting a reduction of rent, or throw them up in order to spite the landlord. They saw that the more land was surrendered, the better profit would be made.

The rent being strictly enforced, and yet never raised during a tenant's life, there was one clear way of success left open, and only one, viz., industry and manuring the land. All saw that if they did not take this way, they would lose their farms, from which a better profit would be made, whilst if they did succeed, they were safe to reap the fruits themselves for a reasonable time. In bad years the utmost exertion and economy were no doubt necessary in order to pay the rent, but then when good years came, nothing was hanging over them, and all the profit was their own. Any thing like habitual neglect or extravagance thus very soon felt the pinch. It made constant steady exertion and self-reliance almost compulsory, and thus tended to correct a weakness of national character. It is a remarkable fact, that from beginning to end there was not a single instance of a really industrious tenant having failed. However bad the times, every honest hard-working man has got through. Something also was perhaps due to the tenants seeing a determination that somehow the estate should be thoroughly improved. Building, draining, fencing, reclamation of waste, were all steadily carried on. The opinion of the labourers, who found themselves better off than their neighbours, with constant work for themselves and their families, was also not without influence.

As soon as it was found practically that tenants could make money under such a strict system (as it was thought), a considerable moral effect was produced. One must live in Ireland fully to appreciate the difference between "a warm" or even "snug" Irish farmer, and the same man out at elbows. It is hard to believe they are of the same race. Nothing has been done for many years to urge or encourage particular crops, even Turnips. The one only exhortation has been "manure your land better." It was very early seen that more manure is all that is wanted to make the land pay, and that nothing else will do it. Whatever the causes however, it is certain the tenants have thriven wonderfully, and are thriving more and more every year. They have every appearance of prosperity about them. The arrears on the estate at the present time amount to 3*l.* The rent day, instead of a day of long faces and complaints on one side, and sharp words on the other, is got over by three or four hours work, with pleasant greetings and cheerful words. I do not think it is possible there should be a better feeling between landlord and tenant than exists. No driver (or under agent as such men now call themselves, the vilest class in the country) has been kept at all for many years. I believe there are very few on the estate who do not feel that though the management is strict, yet it is considerate, and that they are regarded with sincere good will and personal liking. I know that they show similar good will in return.

I have said that in the past 10 years near 2000 acres have been added to the estate by purchase. This has been done by separate purchases of 300 or 400 acres each. The same plan has been followed with these, except in one important point, which perhaps, more than anything else, proves how thorough the success has been. Any really idle or bad tenants have been at once got rid of (there were however very few of these). With the rest, whenever there were no leases, the rents were considerably raised. I was under no engagement, express or implied, with these tenants, and therefore felt at liberty to make my own terms with them. I accordingly let them the land at the highest rent in my judgment it was worth to them. This was often a very considerable advance on the former rent, but was still less than in my judgment the land was intrinsically worth, and that I believed I could make of it by farming it myself. It could not have been carried through, unless the men had known I should take up the land myself, if my offer was not accepted; but nevertheless there was terrible grumbling in every case, and vehement predictions of certain ruin under such a rent. Three or four years in every case have however altered the story. Every single man has thriven. They had no choice but industry and manuring the land, and these soon made a much greater difference to them than the higher rent, and both the tenants and farmers are now in quite other condition than that they were in when the purchases were made. I need not add the purchases pay a good deal better interest than that at which they were bought. Two unfortunates were so unwise as to refuse the offers made them; many and bitter have been their lamentations since.

So plain has the whole thing become, that having lately taken an old tenant, in whose judgment I had confidence, to help me in valuing land to be sold, I had to discuss with him how much the rents could be raised. In giving his opinion that a much higher rent might be charged, he added, "Of course they will grumble, and maybe at first have hard work to pay, but in five years they will be as well off as the rest of us." I was met not long ago with the following speech:—"I cannot understand how it is your property is let one-third higher than many others in the neighbourhood, and yet your tenants are twice as independent and well to do as those who are paying so much lower rents."

The answer, I believe, is in the facts stated above. And this is the result of 25 years' work. I need not point out what a rise of 5*s.* per acre in the rent means to the landlord, if at the same time his land is in as good or better condition. I believe, besides this, that if raising the condition of the tenants and labourers had been the one object aimed at (and in truth it was in great part the original object, as a matter of duty), it could not have been more successfully reached in the time.

To conclude. I believe deliberately, that there is a mine of wealth for both landlords and tenants in the land of Ireland. Both classes are nearly equally to blame for not working it. The capital required is sufficiently within the reach of both. The proportion of the rent that the repairs of an English estate cost, would do the landlord's part quite as fast as is desirable; while on every estate there are tenants enough with ample capital to farm the whole of it well, if the idle drones were gradually got rid of. Many landlords are greatly to blame for ignorant neglect of their estates. All that is wanting on their parts is, that they should make the most of their land, with fair dealing towards the tenants, as men do elsewhere, and with the clear recognition of the fact, that the interests of landlord and tenant are really inseparable. On the other hand the tenants are to be blamed for very unreasonable expectations. They look on a farm, literally as the possession of an inheritance, not as a business, subject to similar risks and conditions as any other business, and from which if a man can make a living whilst in it, and when he leaves it can carry away something more than he began with, he may be well satisfied. They think that any improvement in their farms gives them a claim to indefinite consideration. It may have repaid them 10 times over, but that goes for nothing, and they lose far greater profits to themselves, for fear their landlords might gain by a higher rent even years after. Nothing can better show their feeling than the fact, that a 21 years' lease is thought hardly worth having. The instances of landlords unduly taking advantage of a tenant's improvements are at least as rare as in England or Scotland, and there is nothing but these silly expectations and the suggestions of tenant-right agitators to hinder any prudent tenant from farming well.

In judging of the state of Ireland, I think very few realise how utterly low the condition of the country was in the year 1800, or any time in the previous century that may be taken as a starting point. It was a state of excessive backwardness, not to call it by the harsher name of barbarism; and if this is lost sight of, no one can judge fairly of the progress that has been made. I believe forgetfulness of this fact is the key to half the contradictory views of the condition of Ireland: and that the truth is, great progress has been made, though the state of things is still far short of what is to be wished for. In some districts the progress has been far greater than in others. In the district I have been writing of, I am of opinion it has been immense. We are in a wholly different state in all respects from that we were in 25 years ago. Men's ideas are quite changed. I can remember when the improvement of an estate and its tenantry was always spoken of as an impossibility, the dream of an inexperienced enthusiast. It is very different now. I doubt whether in the same time greater progress was ever made in any country; but bad years of course check progress, and we are apt to forget how long it takes to remove the recollection of past evils and abuses, and to break clear of their effects. There are many men still alive who can tell all the incidents of the rebellion of 1798 in their own neighbourhoods from what they saw as boys. It is only a few years since men were alive who could tell what they had themselves suffered from the penal laws. Nevertheless, numberless facts could be mentioned, showing the utter backwardness of the country 50 years ago. Above all, it is certain there is still plenty to do, and will be for many a long year, and those who only look at what is wanting will have no trouble in making a strong case.

Should any of your readers wish to see for themselves what has been above related, you are at liberty

to furnish them with my name whenever you have reason to suppose it is for a *bonâ fide* object. I shall be happy to show them the estate and accounts. *An Irish Landlord.*

Home Correspondence.

The Cattle Melon.—If the expression of my honest conviction in plain words is indicative of want of intelligence, as Mr. Blundell wishes you to believe, I am willing to join issue with him, as to the value of his Squashes for an agricultural crop in this country. In the first place there can be no doubt about his having sent out seed, a fraction only of which germinated. This shows a total want of caution, to say the least of it, but it is almost incredible that so large a proportion of bad seeds could have been produced naturally. However, it has been introduced as something new, and by the coinage of a name we are led to believe that we have some hybrid varieties of peculiar value, whereas in my opinion they are nothing more than varieties of common Squash. If so, Mr. Blundell can lay no claim to paternity, unless this is conferred upon him by the simple growth of them for two or three years upon a garden farm in the south of Hampshire; where, even if 40 tons per acre have been produced under the most favourable circumstances of climate, soil, and high cultivation, it would be no proof of their suitableness for general purposes; and I have no hesitation in saying that until our climate is so changed as to enable us to grow Pine Apples and other tropical fruits to perfection in the open air, it will be totally unsuited as an agricultural crop for ordinary cultivation in this country; but if it could be grown it would require fruit-houses by the mile to keep it, and would not prove half equal to Vegetable Marrow in productiveness, or possess any advantage over it in nutritive value. *J. M'Indoe, The Gardens, Bromley Palace. Kent.*

Walsh's Gorse Crusher.—On the 12th ult. you reproduced from the *Irish Farmers' Gazette* a letter upon feeding with Furze, in which there is a passage which I am bound to notice. It is an extract from a report on my Furze Crusher by a committee of the Cork Agricultural Society in Nov., 1862. The said report would make it appear that the machine requires extraordinary care in the feeding of it; and that it is liable to choke if overfed in the least degree, &c. This remark I attach no importance whatever to; I have never yet met any implement or contrivance that went right when not managed as it was meant to be. It further states that the introduction of a branch half an inch thick would be productive of serious injury. To the stick it would, decidedly. What I seriously object to in the report is the conclusion then put forward and now revived, that the machine is suited to meadow Furze only, and not to bush or hedge Furze—the fact being that for two years before that date and ever since the machine has been in use almost exclusively for this latter description of growth. A few days after the trial alluded to, in a letter published by Mr. Townsend, the great authority in Furze matters, who was present, he says:—"It is the only implement I have seen, which reduces the hard coarse Furze to a pulp so as to be easily eaten by all descriptions of cattle." In justice to myself, and in fairness to the public, I have felt under the necessity of making these remarks; at the same time I disclaim any appearance of reflection on the letter itself, one of the most lucid and practical, in my humble opinion, that I have met with for a long time on agricultural subjects. In another part of your Paper I am requested to say where the Furze crusher is to be had in England. In reply, I have to say, that it is not to be had for sale in England at present. There is no stock on hand, and it is only to be had by communicating with me or with my agents Messrs. Edmondson, Dame Street, Dublin; or Mr. Thos. M'Kenzie, Camden Quay, Cork. *John Walsh, Stedalt, Balbriggan, Ireland.*

Societies.

MIDLAND COUNTIES AGRICULTURAL ASSOCIATION.

BINGLEY HALL, BIRMINGHAM.—The 16th annual Show of the Midland Counties' Association excels all its predecessors in the numbers, and in some Classes the excellence exhibited. Although no very extraordinary specimens of any of the breeds illustrated are shown, yet in some of its sections, and even in some whole breeds the Show has never been surpassed. For instance, we suppose that there has never been a finer exhibition of the Berkshire breed of pigs, which, as here displayed, is for all purposes the very best breed the English farmer has. The Leicesters and Long-woolled sheep, too, are shown in unusual force; and Lord Walsingham's pens of Southdown wethers, so far in advance of his lordship's own pens on previous years, we may say have never been before equalled. In the Cattle Classes the Hereford breed is in great and successful strength, and the West Highland Classes are also unusually good. The Poultry Show has grown even upon the enormous dimensions of previous years. The Show of Agricultural Implements is as good as usual. The display of Roots, notwithstanding the dry summer, is excellent; and the seedsmen make the most of the wall and platform area allotted for the exhibition of vegetables and seeds.

The following figures, giving the number of entries, indicate the steady progress which the Show has of late years made:—

	1859.	1860.	1861.	1862.	1863.	1864.
Cattle .	109	110	104	131	163	151
Sheep ..	44	42	66	110	92	104
Pigs ..	81	75	72	70	93	91
Roots ..	87	118	196	116	124	109
Corn ..	..	..	..	15	57	60
Poultry.	1342	1135	1397	1364	1505	1677
Pigeons.	214	168	220	232	275	290
Total..	1877	1648	2055	2038	2309	2482

The extraordinary liberality of the Prize List, which offers no less than 795*l.* for cattle, 299*l.* for sheep, 137*l.* for pigs, 71*l.* for corn and roots, and 693*l.* for poultry and pigeons, ensures a large competition. And besides the systematic 1st, 2d, and 3d awards in each class in accordance with the scheme of the Association—there are prizes offered by President, Companies, Guilds, and firms which make the possibilities of competition very large indeed. Take the following resumé of the offers in the Cattle Classes alone, as they are described in the Birmingham *Post*:—These special honours given partly by the Society and partly by individuals, number among them, in the cattle classes, a silver cup of the value of 25 guineas presented by Lord Walsingham, the President, for the best ox or steer, of any breed or age, fed and bred by the owner; an extra prize of 15*l.*, given by the Earl of Aylesford for the best Short-horn bred and fed by the exhibitor; a 25 guinea silver cup offered by the hotel and innkeepers of Birmingham, for the best animal in the cattle classes; four extra prizes of 25*l.* each, for the best Hereford, best Devon, best Short-horn, and best Scot; and two gold medals, value 20*l.* each, for the best ox or steer, and the best cow or heifer, of any breed or age, in the Exhibition, the six last-named prizes being given, as usual, by the Society. It thus appears that if a Short-horn, bred and fed by the exhibitor, happened to be the premier animal shown, he might carry off, in addition to the 15*l.* prize of his class, Lord Walsingham's 25 guineas, Lord Aylesford's 15*l.*, the Hotel-keepers' 25 guineas, with the Society's extra prize of 25*l.*, and gold medal of 20*l.*, making up the handsome total of 128*l.*, which, especially if it chanced to be repeated at the Smithfield Show, would constitute a liberal reward for the pains and skill bestowed on the animal's culture. It is seldom, however, that honours accumulate quite to this magnitude on one competitor, though it is an ordinary occurrence for them to reach close upon the value of 100*l.*

In fact Mr. Phillip's Hereford ox, which receives the Gold Medal as the best *ox* in the yard, the Silver Cup as the best *animal* in the cattle classes—the 1st prize in its class, and the prize as the best Hereford, thus clears off close upon 90*l.* at once.

The HEREFORD BREED has distinguished itself by carrying off both the prizes in which it comes into competition with other breeds. The best ox and the best heifer are both Herefords this year.

The older oxen number seven—a very even and well bred and well-fed class. Mr. Phillip's ox, with which he declares to have closed his career as a feeder for exhibition, is a grand, massive, and level beast, than which no Hereford breeder could wish for a better exponent of the merits of his stock. He was bred by Mr. Rawlings, of Stoke, near Tenbury. Lord Shrewsbury's 2d prize ox is also a thick-fleshed well-fed animal. The whole class is a capital illustration of the breed.

The younger oxen, a more numerous class, is hardly up to the merit of its seniors. Mr. Yeoman's 1st prize steer is a deep-sided, well-made beast, with good quality of flesh. Mr. Pitts' 2d prize is of great width and thickness of flesh over the back and loin; somewhat light in the thigh. Ten Hereford Cows represent the breed in the class which contains what in the official judgment is the best female in all the cattle classes. Mr. Stedman's cow is a heavily somewhat patchily fed animal. The Hereford Heifers are one of the prettiest classes in the yard. Mr. Baker, of Kidderminster, takes the 1st prize for a somewhat small but neat and compact heifer, which heads an uncommonly even and well matched company of seven. Mr. Baldwin's 2d prize, and Mr. Arkwright's 3d are two very well matched comparisons.

The SHORT-HORN Classes are more numerously filled than their competitors. No fewer than 45 compete in the four classes. The older oxen include 13 animals, Sir W. De Capel Brooke's 1st prize ox is a massive red and white well-made beast, thickly covered with first-rate quality of flesh. The younger class, containing many good animals, is headed by Mr. Pulver's Short-horn ox, which happening to be the best ox bred and fed by the same exhibitor, comes in for an extra prize of 25 guineas offered by the President. The Cow class contains 10 specimens, of which the 1st, 2d, and 3d prize animals were bred in Gloucestershire, the 1st and 3d by Mr. Stratton, the 2d by Mr. Stiles Rich. The Short-horn heifers are a remarkably good class of nine. The Duke of Sutherland, Mr. Spencer of Ashby-de-la-Zouch, and Earl Spencer, being respectively 1st, 2nd, and 3rd.

The DEVON Classes are scantily filled, not more than 12 being shown in all the classes, none of which contain anything very remarkable for merit—in either the butcher's or the breeder's eye.

The WEST HIGHLAND Classes are the principal feature of the Show. A remarkably fine collection of oxen is headed by a deep and massive well-fed animal exhibited by Lord Derby, possessing wonderful loin and rib and flank. And this is no especial exception to the general character of the class, which contains many good animals. The polled classes of Aberdeen cattle, not so well filled as regards numbers, contain many large and symmetrical and well-fed animals, exhibited by Mr. M'Combie, who takes the 1st and 2d prizes, Mr. Martin and others. The prize lists in these and the other classes are given in detail below.

The SHEEP classes are a larger show than has been usually exhibited in Bingley Hall. Mr. Foljambe takes the 1st and 2d prizes for Leicester wethers. Long-woolled sheep not Leicesters are represented by Yorkshire *Leicesters* (?) and Oxfordshire Cotswolds; Mr. Riley, of Beverley, taking the 1st prize, and Messrs. West and Faulkner, of Burford and Bletchington, taking 2d and 3d. They are a good class.

The Southdown classes are beautiful, as usual. There never were more perfect models of style and symmetry than the wethers of Lord Walsingham, which carry everything before them. Both the shearling and two-year wethers are heavier than those of last year. Lord Radnor's sheep are also exceedingly good.

The Shropshire sheep fill large and excellent classes. Yielding both wool and mutton of first-rate quality, and abundantly; possessing moreover a hardy constitution, and being in the hands of energetic and intelligent breeders—no wonder that this breed is no longer merely Shropshire, but is found in almost every county in England. The 1st prize sheep are exhibited by Mr. Smith, of Sutton Maddock. We understand that they are selected from a comparatively small flock, of which nearly one half the produce are yearly sold as rams! Lord Wenlock, Mr. Holland, M.P.; Colonel Dyott, and other well-known names, are among the other successful exhibitors. Oxfordshire Downs and Cross-bred sheep furnish good classes.

The CLASSES OF PIGS are of varying merit. The smaller breeds and the Berkshires are remarkably well represented. The class of five breeding pigs of the Berkshire breed of one litter has never been surpassed. The competition is very close; the results are given in the prize list below. Only one of the pens is disqualified by Professor Gamgee—three fat pigs declared littered on the 4th of March looking more like 14 or 15 months old, and convicted, on the evidence of the dentition, of being older than they are declared to be.

Among the larger Fat Pigs, those of the Countess of Chesterfield, the Hon. A. N. Hood, Mr. Melville Cartwright, Mr. Stearn, and others, may be named. The older fat pigs shown by General A. N. Hood, Mr. Morland, Mr. Wainman, are among the best.

The Breeding Pigs of a large breed are not a good show. Many of those of a smaller breed are excellent, and here again Major-General Hood, Mr. Morland, Mr. Sexton, Mr. Wainman, and Mr. Stearn may be named.

The walk round the Galleries where the roots and corn are exhibited is as interesting as usual. The weather of the past summer does not seem to have affected the growth of the specimen Turnips, Cabbages, and Mangel Wurzel. But, indeed, it is true here, as over the whole agricultural field, that agricultural maxima are utterly worthless as to any influence which they exert on average agricultural experience.

There were never more extraordinary Cabbages exhibited than those of Mr. Robinson, of Derbyshire. His six 1st prize Cabbages average 55 lb. each, and the six with which he takes the 2d prize, average 50 lb. apiece! One would like to know the precise history of these individual plants. The collections of Long and Globe Mangels, Swedes, and Carrots which compete for the 10-Guinea Cup offered by Messrs. Griffin, manure manufacturers, are first-rate. The 1st prize goes to Mr. Moore, of Warwick, who has now taken it three years successively. The collections of Mangel Wurzel are very good. Mr. Hall, of Westbury, Wilts, is successful with a remarkably fine collection of Mangels and Swedes and Carrots for Messrs. Proctor's prize.

The Kohl Rabi, shown by Colonel North, M.P., are wonderful. Swedes generally very good. Carrots not so large as usual. It will be seen that all the prizes for Swedes go to Ireland, which is significant of the difference of our climate, especially influential in a year like the past.

The collections of Corn are both numerous and good. The Prize List below contains all the information that words can convey, unless we had a history of the cultivation of the different lots.

The Implement department includes ploughs, Turnip cutters, rotary corn screens, and corn crushers, shown by Messrs. Ransome, of Ipswich; cart and plough by Mr. Ball, of Rugby; chain harrow, cake crushers, and mills, shown by Messrs. Mapplebeck & Lowe, of Birmingham; ploughs and harrows, shown by Messrs. Howard, of Bedford; cake crushers and chaffcutters and pulpers, shown by Mr. Bentall of Maldon; carts, &c., shown by Ball, of Northampton; corn crushers by Turner, of Ipswich; root pulper, by Corbett of Wellington; rotary harrows, small engine, steaming apparatus, &c., by Ashby, of Stamford; disc root pulper, washing machine, &c., shown by Messrs. Hornsby, of Grantham; roller, cake crushers, &c., and American grist mill by Amies & Barford, of Peterborough; 10-horse power steam engine, by Burrows of

Banbury; corn screen shown by Boby, of Bury St. Edmunds; engine and threshing machine shown by Clayton & Shuttleworth; chaff cutters, Turnip cutters, &c., shown by Messrs. Picksley & Sims, of Leigh; steam engine and threshing machine, by Underhill, of Newport Salop; chaffcutters, &c., by Richmond of Salford; grinding machine and pulper, by Woods & Cocksedge of Stowmarket. There are many stands by manure manufacturers, containing samples of their manures, and of the roots grown by means of them—the latter greatly inferior to what are shown by the seedsmen. Of these a very great display is made by Messrs. Sutton, of Reading, by Messrs. Dickson, of Chester, and others. Messrs. Sutton's stand, at the further end of the Hall, includes 200 distinct specimens of Grasses, both in straw and seed, for permanent pasture. There are also some excellent specimens of improved varieties of Mangel Wurzel, Champion, and other Swedes, yellow and white-fleshed Turnips, Parsnips, Robinson's Champion Drumhead Cow Cabbages, Carrots, and Potatos, all grown in various parts of the kingdom. Samples are shown at the stand of Mr. Hewitt, of Stowmarket, of the new Malt and Linseed meal, which is passed duty free by the Excise. It is offered at 12*l.* per ton, and contains 10 per cent. of Linseed—the remainder being malt.

The following is the Prize List:—

JUDGES OF CATTLE.—Mr. William Sanday, Holme Pierrepont, Nottingham; Mr J. E. Jones, Springfield, Brenton, Hereford; Mr. H. W. Keary, Aldenham, Bridgenorth; Mr. Samuel Bloxsidge, Warwick; Mr. A. Govan, Burton-upon-Trent.

JUDGES OF SHEEP AND PIGS.—Mr. John Moon, Maristow, Roborough, Plymouth; Mr. John B. Spearing, Oxford; Mr E. Gough, Gravel Hill, Shrewsbury.

JUDGES OF ROOTS AND CORN.—Mr. J. Mathews, Edgbaston House, Birmingham; Mr. Edward Davenport, Erdington.

REFEREE FOR THE AGES OF STOCK.—Professor John Gamgee, New Veterinary College, Edinburgh.

VETERINARY INSPECTOR.—Mr. E. Stanley, Stephenson Place, Birmingham.

STEWARDS OF STOCK.—Mr. Henry Lowe, Mr. W. J. B. Scott, Mr. John Lowe, and Mr. Joseph Smith.

STEWARDS OF SHEEP AND PIGS.—Mr. T. T. Burman, and Mr. H. Osborn.

STEWARDS OF ROOTS AND CORN.—Mr. T. Burbidge, and Mr. T. Ryland.

GENERAL STEWARD.—Mr. T. B. Wright.

SUPERINTENDENT OF STOCK.—Mr. Shrubb.

TREASURER.—Mr. Councillor Shackel.

SECRETARY.—Mr. J. B. Lythall.

HEREFORDS.

CLASS 1. HEREFORD OXEN, OVER THREE YEARS AND THREE MONTHS OLD.—1st, 15*l.*, Extra Prize of 25*l.*, Gold Medal, and Hotel and Innkeepers' Prize of 25 guineas, as best ox or steer, Mr. Jos. Phillips, Ardington, near Wantage, Berks: breeder, Mr. Rawlings, Stoke, near Tenbury; 2d, 10*l.*, Earl of Shrewsbury and Talbot: breeder, Mr. Bedford, Hadfield, Leominster; 3d, 5*l.*, Mr. Lewis Loyd, Monks Orchard, Addington, Surrey: breeder, Mr John Monkhouse, The Stow, Hereford. Commended: Mr. William Heath, Ludham Hall, Norwich.

CLASS 2. HEREFORD STEERS, UNDER THREE YEARS AND THREE MONTHS OLD.—1st, 15*l.*, and Silver Medal as breeder, exhibitor and breeder, Mr. Henry Yeomans, Llowes Court, near Hay; 2d, 10*l.*, exhibitor and breeder, Mr. George Pitt, Chadnor Court, Dilwyn; 3d, 5*l.*, Mr. Henry Betteridge, East Hanney, Wantage: breeder, Mr. William Tudge, Adforton, Leintwardine. Commended: exhibitor and breeder, Mr. Richard Shirley, Buncott, Munslow, Church Stretton.

CLASS 3. HEREFORD COWS.—1st, 15*l.*, and Silver Medal as breeder, and Gold Medal as best cow or heifer, exhibitor and breeder, Mr. William Stedman, Bucknell House, Shrewsbury; 2d, 10*l.*, Mr. John Baldwin, Luddington, Stratford-on Avon: breeder, Mr. Okey, Thurston, Hereford; 3d, 5*l.*, exhibitor and breeder, Mr. William Groves, Walk Mills, Leebotwood, Salop. Commended: Mr. John Williams, St. Mary's, Kingsland, Hereford; Mr. Henry Betteridge, East Hanney, Wantage.

CLASS 4. HEREFORD HEIFERS.—1st, 15*l.*, Mr. George Baker, Waresley, Kidderminster: breeder, Mr. W. B. Mair, The Grove, Edgware, Middlesex; 2d, 10*l.*, Mr. John Baldwin, Luddington: breeder, Mr. Tudge, Adforton, Leintwardine; 3d, 5*l.*, exhibitor and breeder, John Hungerford Arkwright, Esq., Hampton Court. Highly Commended: exhibitor and breeder, Mr. Thomas Garrett, Snipston-on-Stour; exhibitor and breeder, Mr. Thomas Garrett. Commended: exhibitor and breeder, Colonel Richard Dyott, Freeford Hall, Lichfield; Mr. Joseph Cotton, Chesterton, near Bridgenorth.

SHORT-HORNS.

CLASS 5. SHORT HORN OXEN, OVER THREE YEARS AND THREE MONTHS OLD.—1st, 15*l.*, and Silver Medal as breeder, exhibitor and breeder, Sir W. De Capel Brooke, Bart., Geddington Grange, Kettering; 2d, 10*l.*, exhibitor and breeder, Mr. Francis Carr, Heslington, York; 3d, 5*l.*, exhibitor and breeder, Mr. Thomas Price Outhwaite, Goldsborough House, Knaresborough. Highly Commended: The Earl of Gainsborough, Mr. Richard Stratton, Walls Court, Stapleton. Commended: Mr. Robert Moir, Mikel Tarty, Aberdeenshire.

CLASS 6. SHORT-HORN STEERS, UNDER 3 YEARS AND 3 MONTHS OLD.—1st, 15*l.*, Silver Medal as breeder, and the President's Prize of 25 guineas for the best ox or steer, exhibitor and breeder, Mr. Thomas Pulver, Broughton, Wellingborough; 2d, 10*l.*, exhibitor and breeder, Mr. William Henry Baker, Cottesmore, near Oakham; 3d, 5*l.*, exhibitor and breeder, Mr. Richard Stratton, Walls Court. Highly Commended: Mr. Robert Moir, Mikel Tarty. Commended: The Earl of Aylesford, the Earl Howe, Mr. William Hewer, Sevenhampton.

CLASS 7. SHORT-HORN COWS.—1st, 15*l.*, and Extra Prize of 25*l.* as the best Short-horn, Mr. Robert Sharpe, Courtlands, East Grinstead: breeder, Mr. Richard Stratton, Walls Court; 2d, 10*l.*, Mr. Henry Greenway, Hambrook, near Bristol: breeder, Mr. Stiles Rich, Didmarton; 3d, 5*l.*, Mr. Robert Sharpe, Courtlands: breeder, Mr. Richard Stratton. Highly Commended: Mr. Aaron Pike, Mitton, near Tewkesbury. Commended: Mr. John Clayden, Littlebury, near Saffron Walden.

CLASS 8. SHORT-HORN HEIFERS.—1st, 15*l.*, Silver Medal as breeder, and Earl of Aylesford's Prize of 15*l.*, exhibitor and breeder, his Grace the Duke of Sutherland; 2d, 10*l.*, Mr. Samuel Spencer, Snarestone, near Ashby-de-la-Zouch: breeder, Mrs. Dean, near Atherstone; 3d, 5*l.*, exhibitor and breeder, Earl Spencer, Althorp. Highly Commended: Mr. Richard Stratton; Mr. Thomas Forrest Spurstow Hall, Tarporley. Commended: Earl Spencer; Mr. Thomas Pulver, Broughton; Mr. William Fletcher, Radmanthwaite, Mansfield.

DEVONS.

CLASS 9. DEVON OXEN OR STEERS, OVER 3 YEARS AND 3 MONTHS OLD.—1st, 15*l.*, Mr. Walter Farthing, Stowey Court, Bridgewater: breeder, Sir A. A. Hood, Bart., M.P.; 2d, 10*l.*, Mr. William Smith, 85, Southernhay Street, Exeter: breeder, Mr. George Turner, Beacon Downes. Highly Commended: Mr. William Heath, Ludham Hall, Norwich. Commended: Major-Gen. the Honourable A. N. Hood, Cumberland Lodge, Windsor: breeder, his Royal Highness the Prince Consort; exhibitor and breeder, James John Farquharson, Esq., Langton House, Blandford.

CLASS 10. DEVON STEERS, NOT EXCEEDING 3 YEARS AND 3 MONTHS OLD.—1st, 15*l.*, and Extra Prize of 25*l.*, Mr. William Smith, Exeter: breeder, Mr. George Turner; 2d, 10*l.*, Mr. Walter Farthing: breeder, Mr. Thomas Norrish, Shobrooke, Crediton, Devon. Highly Commended: Mr. William Smith. Commended: James John Farquharson, Esq.

CLASS 11. DEVON COWS.—1st, 15*l.*, exhibitor, Mr. Walter Farthing.

CLASS 12. DEVON HEIFERS.—1st, 15*l.*, Mr. William Smith: breeder, Mr. John Bodley, Stockleigh; 2d, 10*l.*, exhibitor and breeder, Mr. John Blomfield, Warham, near Wells-next-the-Sea, Norfolk.

LONG-HORNS.

CLASS 13. LONG-HORN OXEN OR STEERS.—1st, 10*l.*, and Silver Medal as breeder, exhibitor and breeder, Sir John Harpur Crewe, Bart., Calke Abbey, Derby; 2d, 5*l.*, exhibitor and breeder, Sir John Harpur Crewe, Bart. Highly Commended: W. T. Cox, Esq.

CLASS 14. LONG-HORN COWS OR HEIFERS.—1st, 10*l.*, Mr. John Faulkner, Bretby Farm, Burton-upon-Trent; 2d, 5*l.*, W. T. Cox, Esq., Spondon Hall, near Derby. Highly Commended: exhibitor and breeder, W. T. Cox, Esq., Mr. R. H. Chapman, Upton, near Nuneaton. Commended: Mr. Joseph H. Burbery, The Chase, Kenilworth.

SCOTCH BREEDS.

CLASS 15. POLLED OXEN OR STEERS.—1st, 15*l.*, Mr. William McCombie, Tillyfour, Aberdeen; 2d, 10*l.*, Mr. William McCombie; 3d, 5*l.*, Mr. James Stephen, Conglass, Inverury. Commended: J. S. Leigh, Esq., The Hoo, Luton, Bedfordshire.

CLASS 16. WEST HIGHLAND OXEN OR STEERS.—1st, 15*l.*, and extra, 25*l.*, Earl of Derby, Knowsley, Prescot; 2d, 10*l.*, Mr Owen Wallis, Overstone Grange, Northampton; 3d, 5*l.*, Mr. Alexander Mennie, Brawlandknows, Gartly, Aberdeenshire. Highly Commended: Sir A. P. Gordon-Cumming, Bart., Altyre by Forres; B. E. Bennett, Esq., Marston Trussell Hall, Rugby. Commended: Duke of Athole. The whole Class generally commended.

CLASS 17. SCOTCH COWS OR HEIFERS.—1st, 10*l.*, Mr. R. Churnock Richards, Clifton Lodge, Preston. Commended: Duke of Beaufort, Earl of Southesk.

WELSH BREEDS.

CLASS 18. WELSH OXEN OR STEERS.—1st, 10*l.*, B. E. Bennett, Esq., Rugby; 2d, 5*l.*, Henry Platt, Esq., Bryn-y-Neuadd.

FOR OTHER PURE BREEDS AND CROSS-BRED ANIMALS.

CLASS 21. FAT OXEN OR STEERS.—1st, 10*l.*, Messrs. J. and W. Martin, Aberdeen; 2d, 5*l.*, Mr Andrew Longmore, Rattie, Banff. Highly Commended: Mr. John Faulkner, Bretby Farm. Commended: Mr. Robert Moir, Mikel Tarty.

CLASS 22. FAT COWS.—1st, 10*l.*, Mr. H. L. L. Morrison, Blair Guise, Whitehouse; 2d, 5*l.*, Mr. John Faulkner, Bretby Farm.

CLASS 23. FAT HEIFERS.—1st, 10*l.*, Sir A. P. Gordon-Cumming, Bart.; 2d, 5*l.*, Messrs. T. W. and C. Hardwick, Lower Court, Long Ashton, Bristol. Highly Commended: Mr. Andrew Longmore, Rattie. Commended: Mr. John Faulkner, Bretby Farm.

EXTRA CLASSES.

For Animals not qualified to compete in any of the preceding Classes.

CLASS 24. OXEN OR STEERS.—5*l.*, Messrs. J. and Isaac Bate, King's Heath, near Birmingham.

CLASS 25. COWS OR HEIFERS.—5*l.*, and Silver Medal as breeder, Sir Thomas Whichcote, Bart., Aswarby Park, Folkingham. Highly Commended: Rev C. W. Holbech, Banbury; Mr. Roger Churnock Richards, Clifton Lodge. Commended: Earl Howe.

SHEEP.

LEICESTERS.

CLASS 26. FAT WETHERS, UNDER 22 MONTHS OLD.—1st, 15*l.*, extra prize of 10*l.* given by the Mayor of Birmingham, and Silver Medal as breeder, G. S. Foljambe, Esq., Osberton Hall, Worksop; 2d, 10*l.*, G. S. Foljambe, Esq.; 3d, 5*l.*, Mr. George Walmsley, Rudston, Bridlington. Commended: Lord Berners, Keythorpe Hall; Mr. Francis Jordan, Eastburn, Driffield.

LONG-WOOLLED SHEEP, NOT BEING LEICESTERS.

CLASS 27. FAT WETHERS, UNDER 22 MONTHS OLD.—1st, 15*l.*, Mr. Edmond Riley, Kipling Cotes Farm, Beverley; 2d, 10*l.*, Messrs. Thomas and George West, Greenhill Farm, Bletchington; 3d, 5*l.*, Mr. John Faulkner Mills, Westwell, near Burford. Commended: Mr. John King Tombs, Langford; Mr. John Faulkner Mills, Westwell.

SOUTH AND OTHER DOWN SHEEP.

CLASS 28. FAT WETHERS, UNDER 22 MONTHS OLD.—1st, 15*l.*, Extra Prize of 25*l.*, given by the Linen and Woollen Drapers of Birmingham, and Silver Medal as breeder, Lord Walsingham; 2d, 10*l.*, Lord Walsingham; 3d, 5*l.*, Earl of Radnor.

CLASS 29. FAT WETHERS, OVER 22 BUT UNDER 34 MONTHS OLD.—1st, 10*l.*, Extra Prize of 10*l.* 10*s.*, given by Alderman Hodgson and Councillor Baldwin, and Silver Medal as breeder, Lord Walsingham; 2d, 5*l.*, Lord Walsingham. Highly Commended: G. S. Foljambe, Esq.

SHROPSHIRE SHEEP.

CLASS 30. FAT WETHERS, UNDER 22 MONTHS OLD.—1st, 15*l.*, and Silver Medal as breeder, Mr. Henry Smith, Sutton Maddock, Shiffnal; 2d, 10*l.*, exhibitor and breeder, Edward Holland, Esq., M.P.; 3, 5*l.*, exhibitor and breeder, Henry J. Sheldon, Esq., Brailes House. Highly Commended: Mr. Thomas Horley, jun., The Fosse; Lord Wenlock, Messrs. Bowen and Jones, Ensdon House, near Shrewsbury. Commended: Edward Holland, Esq., M.P., Henry J. Sheldon, Esq., Mr. James Hand, Ludlow.

CLASS 31. FAT WETHERS, OVER 22 BUT UNDER 34 MONTHS OLD.—1st, 10*l.*, Extra Prize of 10*l.* 10*s.*, given by C. N. Newdegate, Esq., M.P., and Silver Medal as breeder. Exhibitor and breeder, Lord Wenlock, Escrick Park; 2d, 5*l.*, Colonel Richard Dyott, Freeford, Lichfield. Highly Commended: Lord Wenlock, Colonel Richard Dyott. This class generally commended.

CLASS 32. SINGLE SHROPSHIRE WETHER.—Silver Cup, value 5 guineas, given by Messrs Mapplebeck and Lowe, Lord Wenlock. Highly Commended: Mr. Thomas Horley, jun., The Fosse.

OXFORDSHIRE DOWNS.

CLASS 33. FAT WETHERS, UNDER 22 MONTHS OLD.—1st, 10*l.*, and Silver Medal as exhibitor and breeder, Mr. Samuel Druce, Eynsham; 2d, 5*l.*, Mr. John Shrimpton, Easington Farm, Chilton, Bucks. Highly Commended: Mr. Charles Hobbs, Maisey Hampton, Gloucestershire. Commended: Mr. Nathaniel Stilgoe, Adderbury Manor Farm, Banbury.

CROSS-BRED SHEEP.

CLASS 34. FAT WETHERS, UNDER 22 MONTHS OLD.—1st, 10*l.*, and Silver Medal as breeder. Exhibitor and breeder, Mr. John Overman, Burnham Sutton, Lynn, Norfolk; 2d, 5*l.*, Mr. George Walmsley, Rudston, Bridlington. Highly Commended; Mr. Zachariah W. Stilgoe. Commended: Lieutenant-Colonel Loyd Lindsay.

LEICESTER EWES.

CLASS 35. FAT EWES, OF ANY AGE, HAVING BRED ONE OR MORE LAMBS.—1st, 5*l.*, Mr. Thomas B. Marshall, Branston, near Lincoln; 2d, 3*l.*, Mr. John Gregory Watkins, Woodfield, Ombersley, Droitwich. Highly Commended: Lord Berners, Keythorpe; Mr. Edmond Riley, Kipling Cotes Farm, Beverley. Commended: Mr. Thomas Marris, The Chase, Ulceby.

LINCOLN AND COTSWOLD EWES.

CLASS 36. FAT EWES, OF ANY AGE, HAVING BRED ONE OR MORE LAMBS.—1st, 5*l.*, and Silver Medal as breeder, Mr. Thomas B. Marshall, Branston, near Lincoln; 2d, 3*l.*, Mr. William Smith, Bibury. Highly Commended: Mr. Thomas B. Marshall, Mr. William Smith, Bibury. Commended: Mr. William Smith.

SOUTH AND OTHER DOWN EWES.

CLASS 37. FAT EWES, OF ANY AGE, HAVING BRED ONE OR MORE LAMBS.—1st, 5*l.*, and Silver Medal as breeder, exhibitor and breeder, Lord Walsingham; 2d, 3*l.*, Lord Walsingham. Highly Commended: Duke of Marlborough.

SHROPSHIRE EWES.

CLASS 38. FAT EWES, OF ANY AGE, HAVING BRED ONE OR MORE LAMBS.—1st, 5*l.*, and Silver Medal as breeders, Messrs. Bowen & Jones, Ensdon House, near Shrewsbury; 2d, 3*l.*, Mr. Thomas Horley, jun., The Fosse. Highly Commended: Lady Willoughby de Broke, Mr. John Coxon, Freeford, Lichfield. The Class generally Commended.

FAT PIGS.

CLASS 39. THREE FAT PIGS OF ONE LITTER, UNDER 10 MONTHS OLD.—1st, 10*l.*; Extra Prize of 5*l.*, and Silver Medal as breeder, exhibitor and breeder, T. R. B. Leslie Melville Cartwright, Esq., Aynhoe, Northamptonshire; 2d, 5*l.*, Mr Samuel Geater Stearn, Brandeston, Wickham Market, Suffolk; 3d, 3*l.*, Countess of Chesterfield, Bretby Hall, Burton-upon-Trent. Disqualified: exhibitor, Mr. Francis Hooke, No. 64, Parade, Birmingham.

CLASS 40. THREE FAT PIGS OF ONE LITTER, UNDER 15 MONTHS OLD.—1st, 10*l.*, and Silver Medal as breeder, Geo. B. Morland, Esq., Chilton Farm, Steventon, Berkshire; 2d, 5*l.*, Major-General the Honourable A. N. Hood, Cumberland Lodge, Windsor; 3d, 3*l.*, Geo. B. Morland.

CLASS 41. FAT PIG, OVER 15 MONTHS OLD.—1st, 6*l.*, and Silver Medal as breeder, William Bradley Wainman, Esq., Carhead, near Cross Hills; 2d, 3*l.*, Mr. Thomas Crisp, Butley Abbey, Wickham Market; 3d, 2*l.*, William Bradley Wainman, Esq., Carhead.

BREEDING PIGS.

PIGS OF THE BERKSHIRE BREED.

CLASS 42. FIVE PIGS OF ONE LITTER OVER THREE AND UNDER SIX MONTHS OLD.—1st, 10*l.*, Extra Prize of 5*l.* 5*s.*, and Silver Medal as breeder, Mr. Joseph Smith, Henley-in-Arden; 2d, 5*l.*, Mr William Yells, Round Robin Farm, Highworth, Wilts; 3d, 3*l.*, Mr George Mander Allender, Lee Grange, Winslow, Bucks; Silver Medal, Mr. John King Tombs, Langford, Lechlade; Silver Medal, Mr Richard Hawkes, Hunscote, Charlecote, Warwickshire. Highly Commended: Mr. T. B. Wright, The Quarry House, Great Barr, Staffordshire; Mr. W. J. B. Scott, Queen's Hotel, Birmingham; Mr William James Sadler, Bentham, Calcutt, Crick. Highly Commended: Mr. Heber Humfrey, Kingstone Farm, Ashbury, Shrivenham. Commended: the Rev. C. W. Holbech, Farnborough, Banbury; the Rev. Edward Roberts, Harborne, Birmingham; the Rev. William Gover, Saltley Training College, near Birmingham; the Rev. Henry G. Baily, Swindon; Abraham Dixon, Esq., Birches Green, Birmingham; Mr. W. J. B. Scott, Queen's Hotel; Mr. Charles Felton, Erdington, near Birmingham.

PIGS OF OTHER LARGE BREEDS.

CLASS 43. FIVE PIGS OF ONE LITTER, OVER THREE AND UNDER SIX MONTHS OLD.—1st, 10*l.*, and Silver Medal as breeders, Messrs. James & Frederick Howard, Britannia Farms, Bedford; 2d, 5*l.*, Thomas Walker, Esq., Berkswell Hall, Coventry. Third prize not awarded, there not being sufficient merit.

PIGS OF A SMALL BREED.

CLASS 44. FIVE PIGS OF ONE LITTER, OVER THREE AND UNDER SIX MONTHS OLD.—1st, 10*l.*, Extra Prize of 5*l.* 5*s.*, and Silver Medal as breeder, Robert Perkins, Esq., Spetchley Park; 2d, 5*l.*, Mr Samuel Geater Stearn, Brandeston; 3d, 3*l.*, Mr. George Mumford Sexton, Whersted Hall, Ipswich. Highly Commended: William Bradley Wainman, Esq.; Mr. George Mumford Sexton. Commended: Geo. B. Morland, Esq; Mr Samuel Geater Stearn, Mr. Thomas Crisp, Butley Abbey.

PRIZES FOR GRAIN AND ROOTS.

CORN.

CLASS 1. WHITE WHEAT.—1st, 2*l.* 2*s.*, Mr Frederick Lythall, Spittal Farm, Banbury; 2d, 1*l.* 1*s.*, Mr. Frederick Lythall. Commended: Mr Henry Hudson, The Elms, near Pershore.

CLASS 2. RED WHEAT.—1st, 2*l.* 2*s.*, Mr Henry Hudson; 2d, 1*l.* 1*s.*, Mr. Thomas Horley, jun., The Fosse, near Leamington. Commended: Mr. Frederick Lythall.

BARLEY.

CLASS 3.—1st, 2*l.*, 2*s.*, Mr. Joseph H. Clark, Altwood House, near Maidenhead; 2d, 1*l.* 1*s.*, Mr. Robert Wortley, Suffield Hall, Aylsham, Norfolk. Commended: Mr. Henry Lowe, Comberford, near Tamworth.

OATS.

CLASS 4.—1st, 2*l.* 2*s.*, Mr. Frederick Lythall; 2d, 1*l.* 1*s.*, Mr. Frederick Lythall. Commended: Messrs. Raynbird, Caldecott, and Bawtree, Basingstoke.

BEANS.

CLASS 5.—1st, 2*l.* 2*s.*, Mr. Frederick Lythall; 2d, 1*l.* 1*s.*, Mr. Joseph H. Clark, Altwood House, near Maidenhead. Commended: Mr. Henry Hudson, Mr. Frederick Lythall.

PEAS.

CLASS 6. WHITE.—1st, 2*l.* 2*s.*, Messrs. James and Frederick Howard, Britannia Farms, Bedford; 2d, 1*l.* 1*s.*, Mr. Robert Raynbird, Hengrave, near Bury St. Edmunds.

CLASS 7. PEAS OF ANY OTHER VARIETY.—1st, 2*l.* 2*s.*, Mr. Frederick Lythall; 2d, 1*l.* 1*s.*, Messrs. James & Frederick Howard. Commended: Mr. Frederick Lythall.

ROOTS.

CLASS 1. A Silver Cup, or other article of Plate of the value of 10 guineas, offered by Messrs. Proctor & Ryland, of Birmingham, as a Prize for the best collection of the four following varieties, namely:—Long Mangel Wurzel, Globe Mangel Wurzel, Swedes, and Carrots—six roots of each to be shown for this prize alone.—John Moore, Esq., Warwick. Sown, Carrots, April 12th; Mangels, April 18th and 19th; and Swedes, May 2d. Previous crop, for Mangels, roots; for Swedes, Wheat; for Carrots, Turnips. Manure used, for Swedes, raw farm-yard in autumn, and Griffin & Morris's when planted; for Mangels, farm-yard manure in autumn, and Proctor & Ryland's when planted; for Carrots, Proctor & Ryland's, and 4 cwt. of salt per acre; soil, sandy loam.

CLASS 2. A Silver Cup, or other article of Plate of the value of 10 guineas, offered by Messrs. Griffin, Morris, & Griffin, of Wolverhampton, for the best collection of Long Mangel Wurzel, Globe Mangel Wurzel, Swedes, and Ox Cabbage. Six roots of each kind to be shown for this prize alone; the Mangel Wurzel to be selected from crops of not less than 2 acres, the Swedes not less than 5 acres, and the Cabbage to be field culture.—John Moore, Esq., Warwick. Sown, Mangels, April 18th and 19th; Cabbages, April 20th; Swedes, May 2d. Previous crops,

for Mangels, roots; for Swedes, Wheat; for Cabbages, Wheat. Manure used, for Swedes, raw farm-yard in autumn, and Griffin & Morris's in spring; for Mangels, dressing of farm-yard manure in autumn, and Proctor & Ryland's when planted; for Cabbages, farm-yard manure and lime; soil, sand loam.

CLASS 3 KOHL RABI.—1st, 2*l.* 2*s.*, Colonel North, M.P., Wroxton Abbey, Banbury; 2d, 1*l.* 1*s.*, Colonel North, M.P. Commended: Mr. Peter Lowe, Marston, Stafford; Mr. Frederick Lythall, Spittal Farm, Banbury.

CLASS 4. LONG MANGEL WURZEL.—1st, 2*l.* 2*s.*, John Moore, Esq., Warwick; 2d, 1*l.* 1*s.*, Mr. Samuel Robinson, Shaw House, Melbourne, Derbyshire. Commended: Mr. Samuel Robinson, Mr. Alfred Hall, Westbury Farm, Westbury, Wilts; Mr. John K. Fowler, Prebendal Farms, Aylesbury.

CLASS 5. GLOBE MANGEL WURZEL.—1st, 2*l.* 2*s.*, Colonel North, M.P.; 2d, 1*l.* 1*s.*, the Rev. Thomas Stevens, Bradfield, Reading. Commended: Colonel North, M.P.; Mr. Samuel Robinson, Shaw House.

CLASS 6. SWEDES OF ANY VARIETY.—1st, 2*l.* 2*s.*, James Simson, Esq., Cloona Castle, Hollymount, county Mayo; 2d, 1*l.* 1*s.*, R. S. Doyne, Esq., Wells, county Wexford. Commended: James Simson, Esq.; R. S. Doyne, Esq.

CLASS 7. COMMON TURNIPS.—1st, 2*l.* 2*s.*, Mr. William McCombie, Tillyfour, Aberdeen; 2d, 1*l.* 1*s.*, the Rev. Thomas Stevens.

CLASS 8. CARROTS OF ANY VARIETY.—1st, 2*l.* 2*s.*, G. S. Foljambe, Esq., Osberton Hall; 2d, 1*l.* 1*s.*, G. S. Foljambe, Esq. Commended: G. S. Foljambe, Esq.; John Moore, Esq., Warwick; Mr. Frederick Lythall.

CLASS 9. OX CABBAGE.—1st, 2*l.* 2*s.*, Mr. Samuel Robinson, Shaw House, Melbourne, Derbyshire. (Champion.) Sown August 20th, 1863; transplanted beginning of April, 1864. Previous crop, Potatos; manured with a good quantity of ammoniacal liquor from gas works, put on the land in the winter, and cow and horse dung at time of transplanting; soil strong, inclined to be clayey. 2d, 1*l.* 1*s.*, Mr. Samuel Robinson, Shaw House, Melbourne, Derbyshire. (Champion.) Sown August 20th, 1863; transplanted beginning of April, 1864. Previous crop, Potatos; manured with a good quantity of ammoniacal liquor from gas works, put on the land in the winter, and cow and horse dung at time of transplanting; strong, inclined to be clayey.

CLASS 10. KIDNEY POTATOS.—1st, 2*l.* 2*s.*, Mr. Samuel Robinson, Shaw House, Melbourne, Derbyshire; 2d, 1*l.* 1*s.*, Mr. George Mangles, Givendale, Ripon. Commended: Mr. Samuel Robinson.

CLASS 11. ROUND POTATOS.—1st, 2*l.* 2*s.*, G. S. Foljambe, Esq; 2d, 1*l.* 1*s.*, Mr. Isaac Aston, Meaford Farm, Stone.

POULTRY.

We this week record with feelings of great satisfaction the results of the 16th exhibition of the produce of the poultry yards of Great Britain. Held in a town where every one is more or less a fancier, and consequently a critic, the marvellous assemblage of the best birds of the kingdom, which is here annually to be seen, cannot fail to strike even the most uninterested as a great feature in our national progress. We would also venture to hope that our leading agriculturists who visit this Show for the sake of the departments of it that hitherto have interested them more closely, may be induced, by the improvements visible in the size and qualities of the various breeds, to give to poultry in England generally the place it deservedly holds abroad.

An idea of the magnitude of the exhibition may be formed from the fact that there were 1677 pens of poultry and 300 of pigeons.

It is a very healthy sign, and a promise of still further development, that new names are constantly appearing in the prize lists; it shows that competition is on the increase, and that progress is the order of the day.

As may be imagined, in the Dorking Classes the struggle was indeed severe, and to those who are at all conversant with the principal strains of this bird, the names of those who took honours in the Class for old birds will be guarantees of the excellence of their fowls. We give them in the order of the Prize List:—Viscountess Holmesdale, Captain Hornby, Mr. Tatham, and Mr. Statter. In the Class for birds of this year the entries were much more numerous, and the competition consequently keener if possible. It was considered a great result, and will doubtless lead to an increased entry another year, that birds sent from Dublin arrived so little the worse for their journey that they won the 4th prize. The 1st and 2d prizes were taken by Captain Hornby, the 3d by Sir St. George Gore, the 5th by Mr. Frost. So impressed were the judges by the excellence of this class that they added 18 commendations to the already liberal allowance of prizes.

The two very useful Classes devoted to Dorking Hens and Pullets were well filled; the 1st prizes went to Mr. Bartlam and Captain Hornby; Mr. Boyle, of Dublin, won the 2d prize for pullets. The White Dorkings, delicate and attractive in appearance, mustered fairly in numbers; but were of unusually good quality. The first prizes were carried off by Mr. John Robinson for adults, and by Mr. Henry Lingwood for chickens.

There are few breeds of fowls so generally admired as the Spanish; the genuine Cockney fancies himself a judge of them, as he has been accustomed to see them from his childhood picking up the scattered Oats on the cab-stand, or foraging in the gutters of the mews in his neighbourhood. It is hardly to be wondered that these favourites should appear to great advantage at Birmingham; but we may safely say that classes of greater average merit have never been met with. The condition of the birds was splendid; and the prizes and commendations were divided between 26 exhibitors from all parts of the kingdom. Next on the list come the Cochins, who deservedly stand high with all who prize the luxury of new-laid eggs through winter, and who require setting hens for the early spring. The vicissitudes of public favour and prejudice have been fully experienced by this breed, and it must be highly gratifying to those who have bred them through evil and good report to find that they have now a fair position, gained by their own valuable properties. At no exhibition have we seen them of so good an average quality as at this. The competition was very close and severe; the size, colour, and condition of the birds left nothing to wish for. The prizes endorsed the reputation of the old strains. In the Buff Classes, Captain Heaton took 1st both for adults and chickens; Mr. E. Smith took 1st for hens, and Mr. Yardley for pullets. The classes for Brown and Partridge-feathered birds of this breed brought out some immense specimens. The White were good, and well represented in numbers.

The Brahma Poutras were excellent, and are steadily making for themselves a very high name in the poultry world. We think there is no breed would better pay for development. Mrs. Hargreaves bore off the 1st prize for adult birds; and Mr. Boyle, o[illegible] Din, that for chickens.

The Malays were good in quality, but seem to find but very few new admirers. The Rev. A. G. Brooke won the 1st prizes in both classes.

The Crêvecœurs are steadily making their way, and from their productiveness and docility are sure to find supporters. The Black Hamburghs formed a showy and attractive class. The Golden and Silver Pencilled Hamburghs were, as is their wont, in great force; but do not make as great progress in quality as could be wished. The Spangled were very good, the Golden especially. The Polands, the 1st prize birds of Mr. Adkins, were very much admired, as were those of Mr. T. P. Edwards; these very graceful and ornamental birds are worthy of a more extended patronage; they are good layers, and look very striking at a park lodge or gate. In the class for Fowls of any other variety, the 1st prize was taken by a pen of very good Cuckoo Dorkings, and 2d by a pen of La Flèche; these latter birds are a recent introduction; they are held in very high repute in France, and are said to be very excellent layers. It would be impossible to write a full report of the Game without considerably exceeding our limits; we can only say that the 14 classes were well supported by birds of great merit, shown in excellent condition and plumage.

The Classes for Single Cocks afford to breeders excellent opportunities for obtaining fresh blood, and from those now exhibited we may hope to see produce of still greater merit another season. The Dorkings were very fine, many of them of great size, as were the Cochin Chinas and Brahmah Poutras. The Spanish maintained their already high reputation. Game left nothing to wish for; the Polish were good in quality, and the Hamburghs told well both in number and excellence. The Bantam classes were objects of great curiosity. With the exception of the two varieties of white and black, the others may almost be considered as manufactures—the Sebright the produce of the last generation, and the Game of this. We are promised an additional attraction in the shape of Cochin Chinese Bantams.

We now come to a department of great interest and importance to agriculturists, namely, the classes for ducks, geese, and turkeys. We would ask serious attention to the weights of the winning pens, and hope that the effect of the exhibition of such may be the production of many more for the coming year.

Twenty-one pens of unusual quality contested for the honours allotted to the world-famous breed of Aylesbury. Mrs. Seamons of that town was 1st, with three birds weighing 27 lb.; the 2d prize pen pulled down 25 lb.; and the 3d, 24 lb. Next on the list, Class 84, and 50 pens of the breed of Rouen attempted an amicable Norman Conquest; they lost, however by 2 lb., the winning pen weighing 25 lb.

The Buenos Ayrean, or Black East Indian, for beauty of shape and colour never lack admirers: the class for any other variety brought a small collection combining the useful and ornamental. The Geese were a great feature—Mr. Duxbury's pen of old white ones weighed 84 lb., a marvellous difference when compared with our ordinary farm-yard stock. The young Toulouse birds came out well, the 1st prize pen pulling down 61 lb., the next 57 lb. The Turkeys were very numerous, and of high quality. The 1st prize for adult birds went to Mr. J. Smith, and for birds of this year to Mrs. Corbet Browne. In the foregoing many pens well deserving of praise are unavoidably unnoticed, as it would be impossible in a Show of such magnitude to condense into a report a description of all the good ones. The Committee were, as they always have been, most efficient and pains-taking. The Judges were—

The Rev. R. PULLEINE, Kirkby Wiske, Thirsk.
G. J. ANDREWS, Esq., Dorchester.
J. H. SMITH, Esq., Skelton Grange, York.
J. HINDSON, Esq., Everton, Liverpool.
Mr. BAILY, Mount Street, London.

We append to these remarks the following from the clever report of the *Times*:—

Perhaps admirers of the quadrupeds too much overlook the importance of these classes, wherein, strictly and literally, "birds of a feather flock together;" for it is no longer the mere fancy man who keeps fowls of some favourite "strain;" who talks of the "father" and "mother" of a chicken, and tells you on what day a particular duck was "born;" who watches the housing and feeding of his feathered live stock, or books his "winnings" of money and cups at the poultry shows now starting up in new districts every day. The number of fowls for land and water now kept in England is not half what it might be; and you can see by the size of quite young birds at Birmingham how your average "couples" sold to the cadgers are mere mouthfuls compared with pure-bred birds, and those obtained by a judicious crossing of the old barn-door sorts. But farmers are finding out that prize hens may lay the most and biggest eggs, that prize chickens may be heaviest and tenderest on the table, that a prize duck may weigh 9 lb. (as much as two ordinary ducks), that a turkey may be 23 lb. and a goose 26 lb. in living weight, and that the costly item of "attendance" had better be bestowed upon birds worth 5*s.* or 10*s.* apiece (to say nothing of so many sovereigns each at a show) than upon birds worth half that sum per couple. The improvement of British poultry is steadily progressing; pure-bred varieties cluck and crow and quack and gobble in hundreds of farmyards, and we may come some time to [illegible] published "Poultry Herd-book," as well as a "Poultry Chronicle" and a "Baily on Fowls."

No portion of Bingley Hall is so thronged throughout the week as this department of court-yard ornithology; and you can but admire the myriad choice specimens, whether of breeds for producing fresh-laid breakfast delicacies or for being offered as sweet-smelling sacrifices of savouriness on altars of either deal or mahogany. Take the perfect types of each fine variety. Captain Hornby's or Lady Holmesdale's "Dorkings,"—the broad, deep, substantial matrons, with their dark mottled-brown plumage and black neck-feathers; or, again, the "gray Dorking" hens, with sober ashen gray plumage and Robin breasts; true, homely, Partlets of the farmyard incomparable sitters and mothers. How handsome, too, their majestic protectors, with glossy black breasts, pale neck-feathers, saw-like combs, wattles pendant like patriarchal beards, arching tails of rich-looking green-lit black, and massive claws able to bear about the true king of fowls, bred for the dish, superlative in weight and quality of flesh. The "Cuckoo" Dorkings, again, are surely magnificent, every small feather having a rim tinged with lilac or lavender grey, like the petal of a Carnation. Again, Mr. Lane's handsome "Spanish"—black like ravens, but with beautifully contrasting light blue legs, pure white faces, and bright red combs—the cock bearing his erect, like a helmet crest, while his wives modestly droop their head-gear on one side. These birds are the friends of the town mechanic, the pets of his children, patient of confinement, picking up a subsistence in laystall and gutter, with little violence done to their hardy constitution. Of "Game" fowls we find an imposing brigade; brilliantly plumed, indeed, whether "Black-breasted Reds," "Duckwings," or "Piles," but their hardihood appearing even in the closeness and firmness of the feathering; born warriors, as visible in their upright dauntless carriage, the fiery eye, strong curved beak, fine snake-like head with "dubbed" comb, the sharp spurs, and wings compressed in readiness for a sudden spring. Lovers of bird beauty (as well as of eggs) linger before the cages of variegated "Hamburghs," enraptured over perfections of pencilling, spangling, barring, and lacing, of clouding, tanting, and blending, gold, silver, brown, black, and rich red, with marvellous nicety of finish in the hue and marking of each separate feather, all delightfully contrasted with blue legs, brilliantly-white ear-lobes, and thick vermilion combs of manifold spikes. A rare merit of these birds is their laying eggs in the season when others cease. Equally attractive are the "Polish" troops, in uniforms of spangled gold or silver; or black, with large white globular top-knots and dark-coloured legs. And you admire Mr. Adkins's noble birds, nodding their crests like bouquets of feathers and shining in argent plumage, in which each distinct feather has a ground colour of frosted silver imprinted with minutely regular black stripes, and at the end a single black spangle. Mr. Brooke's "Malays" (a breed that might be surnamed "longshanks") strike you with their tall, stalwart frames, yellow legs, hard plumage, cruel-looking faces, flat combs, throats naked even of down, and on the top of the breast, at the crop, and the ends of the wing-joints, singular red knobs of flesh. Their virtue is in laying eggs, which, though with dark-coloured shells, are highly esteemed for flavour, and they will live anywhere—"scratching in a dusthole and roosting under a waterbutt," still in good health and condition. With somewhat of awe you find yourself confronting, say, Captain Heaton's tremendous "Cochins," of dimensions almost fabulous; grotesque, too, in their knickerbockers of soft fluff, with their close-cut wings and denuded tails; and alarming in their loud, hoarse *sostenuto* vocalisation, when (to their hearts' delight) swelling the chorus of crowing that whirls through the whole show. Beautiful harmonising of tints, too, is seen upon all varieties of this breed; the bright yellow scaly legs supporting a mass of feather, coloured with every combination of umber, sienna, gamboge, and ochre. Hardy as ostriches and most docile in disposition, they are favourites in the farmyard for early and innumerable eggs, but by far too muscular for any sauce or stuffing of the epicure. The uninitiated critic may take "Brahmah Pootras" to be cousins of this breed; the hens pencilled like silver pheasants, the cocks with mottled breasts, light neck-feathers, and dark tails, and the legs of all profusely clad with plumage. Exquisite

and amusing are those birds of Lilliput, the "Bantams," —the "Game," impudent burlesques on a small scale of the figure, carriage, and expression marking the old English "Champion class," the gold and silver "Sebrights," drooping their mimic wings, and strutting with such outrageous coxcombry that tails and heads meet; and again, the old-fashioned Bantams, fussy and important, with mocassins of quill and feather to their very toes. Odd enough is the black "Crêvecœur" fowl, with beard, and top-knot, and comb, too; the latter ornament shaped like a pair of horns, sometimes with branches like the antlers of a young stag, giving the bird (says a French author) "the appearance of a devil." But it is a prime layer, and nice also on the dish. Then there is "La Flèche," like a Spanish fowl, with a comb compared to "the horn of a rhinoceros," but with black legs, unsightly on the table. Among ducks, you must admire Mrs. Seamons's "Aylesburys,"—milk-white, with flesh-coloured bills, and of amazing bulk and weight—27 lb. the three birds; and also Mr. Worrall's wonderful "Rouens," the weight 25 lb.; the ducks of a rich mottled brown, and the drakes resplendent with glossy green heads, white necklaces, chocolate-coloured bosoms, and silver-gray body plumage, delicately shaded—as in "stipple" or "mezzotint" waterfowl of Landseer. Both white and gray "geese" and ganders astonish by their colossal proportion, Mr. Duxbury's three weighing 80 lb.; Mrs. Seamons's, 61 lb.; and you never knew how grand and marvellous a bird a "Turkey" is till you saw him here caged for your near inspection.

A charming department is the columbine division of the show. No wonder that "the ancients" consecrated doves to the Goddess of Beauty, and that mothers offered them in temples on behalf of angelic babes. Carrier pigeons gyrated and darted off with the names of winners from the Olympic Games, just as they telegraph turf news in the present day. Roman generals used the birds in secret correspondence with besieged cities; and Cœur-de-Lion knew how to intercept the winged messengers by trained hawks, and again to let them fly with false *billets* on their feet. Pigeon fancying now-a-days is not all taste or whim, and you feel that they will pay for a little love and a little tending when you commonly sell "barbs," or "balds," or what not, at 5 or 10 guineas per bird, and not at half-a-crown per couple, to display their claws above a pie crust as an outward and visible sign of the luscious brown flesh that lies within. This year these beauties have a gallery range to themselves, visible at one view. One knows not which breed to fall in love with. Is your fancy for the arrowy, swift-looking "carrier," the greyhound of the air, with his wonderful eyes, encircled by rosettes of curious corunculated skin, or for the very similar "dragoon," noted for his impetuous flight? Is it for the dusky "barb," with full bosom, pert little globular head, with budding tuft at the back, and brilliant scarlet ring round his pearly eye? Are you pleased with the ludicrous "pouter,"—a fine bird, strutting and bowing, with crop inflated like a bladder, displaying his breast feathers glossed with metallic tints? Or by the little white "Fantail," extravagantly developed at the other extreme, with an Elizabethan frill of tail feathers; her round marble of a head thrown too far back to feel if the caudal glory is properly erect and quivering, as usual, in its place? Have you special regard for the religious orders? for the elegant fawn-yellow "jacobine," with his silky feathers on back and neck folding a monk's cowl over his head and decking his bosom with a double frill; or the pensive-looking "nun," with snowy hood over her sable head? Is your taste delighted with a graceful "turbit," with beauteous large bright eyes, in a head of purest white, with a curly tuft or crest, and a "purl" of feather on the breast like an antique shirt, frill—the very picture of lovely innocence? Do you patronise the "trumpeter," with his tuft like a military plume, rising from his beak backward over the forehead, more wing-heeled than Mercury, with odd-looking gaiters of feather trailing all over his toes, and treating you to an undovelike cooing that rings like a clarion? Are you amused by the antics and gambols of the "bald" and "bearded" "tumblers," those aërial acrobats, leaping, toppling, and back-somersaulting in the ether "without box or spring-board?" Or do you prize a "scandaroon," an "owl," a "spot," or a soaring transcendental "archangel?" Here you can find every variety in large numbers and utmost perfection, with Messrs. Harrison Weir and T. J. Cottle judicially guiding you to the pets of rarest worth and virtue.

The Fifth Annual Exhibition of Dogs is decidedly the largest and best; and the prize list has risen to 700*l.*; the pecuniary success of the undertaking being so great that 1100*l.* (within 100*l.* of the receipts at Bingley Hall) was taken at the doors last year, while the total income amounted to 2400*l.* There is a fine show of bloodhounds, including Mr. Cowen's "Druid." Age seems to improve rather than deteriorate these handsome animals,—giving still greater length to their pendent lancet ears and hanging chops. The deer hounds are in strong force, including both the big powerful variety and the smaller and truer type, instantly recognised as the hounds of "Sir Walter" and "Sir Edwin." Out of many greyhounds few possess any distinguishing merit. In spite of the season, we find a good show of foxhounds, including Mr. North's celebrated "Saffron," the Duke of Beaufort's "Magic," and "Raglan," and hounds indeed from the South Warwickshire, North Warwickshire, Atherstone, and Badminton hunts. The harriers, beagles, and especially the fox terriers form capital classes. Pointers and setters are in great numbers, new classes being provided in order to multiply the prizes. The "black and tan" and Irish setters are pronounced "unequalled." Retrievers are for the first time divided into classes, for the "curly" coated (partaking of the Irish-water spaniel character) and for small and "wavy" coated (more like the Labrador or small Newfoundland breed).

The water spaniels and, indeed, the spaniels of all classes, are of extremely great merit, far surpassing their appearance of last year. Mastiffs and Newfoundlands are very fine; and of sheep dogs we have a large and most valuable collection, including the intelligent Scotch collies, and the rough grey English dogs. The class of terrible-looking, but really quiet, inoffensive, much calumniated bull-dogs, includes Mr. Lamphier's "King Dick," a most noted prize-winner. There is a new class of the real fighting dogs—bull-terriers, uniting all the activity and punishing qualities of the terrier with the staying and holding qualities of the bulldog. Skyes, Pomeranians, Blenheims, Maltese, King Charles', and Italian greyhounds are attractive as ever, and one of the toy terriers is only 2 lb. 3 oz. in weight. Pugs, of late so scarce, have again multiplied.

Probably purchasers will be favoured next year with classes of "puppies;" but, as dogs' teeth are matured at six months old, it will not be easy to check mistakes in the alleged ages of specimens entered for sale.

Farm Memoranda.

MILLHILL, FORFARSHIRE.—The farm of Millhill, to the east of Rossie Priory, the residence of Lord Kinnaird, is the one on which his lordship has chiefly wrought out his experiments; and he has now had it in his own hands for such a length of time as to establish most conclusively the pecuniary advantage of "high farming." Millhill, which is partly upland and partly lowland, and is now of some 410 acres in extent, was, to the extent of 300 acres, previous to 1856, in the hands of a tenant, who gave it up from inability to pay the rent; and on its being thrown on his lordship's hands, he resolved to seize the opportunity to try what he could effect with it on an improved system. He, therefore, placed his present factor, Mr. M'Laren, then a young man, in the management of the farm, he undertaking to pay the same rent as the former tenant to Lord Kinnaird's agents in Dundee. This has been regularly done out of the proceeds of the farm, after paying all current expenses, including his own salary, equivalent to a farmer's expenses in maintaining his family, and a good balance over and above remained to the proprietor as interest on the capital expended. The total capital for stocking and implements was, we understand, about 1300*l.* The farm was drained, cleaned, and manured out of the proceeds without any additional capital being expended, except for the construction of the tank and pipes for irrigation of the fields by liquid manure, and for additions to the steading in order to carry out the improved system of cultivation. The result of this system has in every respect been a triumphant success; for, not only has the farm paid its way and left a handsome surplus over, but, under the able management of Mr. M'Laren, the stocking on the farm has been more than doubled in value and the farm kept in excellent order.

On his lordship getting the farm into his own hands he set about "covering in" the open cattle court, and constructing a covered receptacle for the manure. The ordinary plan in Scotland is to collect the manure from byres and stables into one monstrous dung-heap in the open court behind—and sometimes in front of—the farm-house; where it lies exposed to the action of sun, rain, and atmosphere, and consequently loses, by evaporation and chemical action, some of its most fertilising properties. Most people—unconnected with farming—who bestow a thought upon the matter have an idea that the covering in of a manure heap is chiefly an improvement by removing an eyesore and purifying the atmosphere; but, agriculturally, the results of this simple-looking improvement are so great as to be quite startling to the unpractical mind. In order to test the pecuniary advantage of the new system—to see, in short, whether it would pay to enclose manure heaps (which few would be apt to suppose)—Lord Kinnaird instituted a series of very careful and extensive experiments. He had a field divided into two equal parts, manuring one-half with dung made in the ordinary manner—*i.e.*, by being taken out from byres into the open court, and afterwards applied to the land—and the other half with manure taken direct from the covered courts or boxes and ploughed in at once. The result was that the portions manured on the latter system yielded the first year about 4 tons of Potatos per Scotch acre more than the former; and the second year yielded an excess of about 11 bushels of Wheat and 60 stones of straw.

His lordship's next measure was to have a tank constructed for the purpose of containing all the liquid manure from the dwelling-house, and from the byres, the stables, and the covered heap not absorbed by the straw. Fortunately for the experiment the steading of Millhill, as its name implies, is situated on the slope of a hill, and though there is a large portion of the farm above the steading, there is also a considerable portion below. The tank was constructed on the brow of the slope immediately to the south of the steading, and pipes laid down to the fields to which its contents were to be applied, to the extent of about 50 acres. The tank, which is beneath the level of the ground, is built of brick, and arched over in the form of a section of a tunnel. It will contain 90,000 gallons, and is filled three times a year—there being thus some 270,000 gallons collected and distributed annually. This large quantity, however, it has been found, is only sufficient for from 5 to 7 acres; but these are very rich, and grow fine crops of Mangel Wurzel, Cabbages, and such like. It is found, however, that liquid manure is not well suited for cereals, as, though it yields heavy ears, it softens the straw, and the crop is easily laid; but for Grass and every description of green crop there is nothing like it.

We now proceed to the inside of the steading. Though assured of the pecuniary advantage of the out-door processes we had noticed, we are sceptical as to the fact of a "covered steading" yielding anything like a return upon the outlay: but are assured that a covered steading can actually be built more cheaply than one on the old open principle! The saving in hewn work, on doors, and windows, more than counterbalances the extra expense of roofing, while the cattle are much benefited. This covered court is devoted to the feeding of cattle, of which it can contain about 70. The feeding cattle are arranged in double rows, each having a space of about 10 feet square, and divided from each other by horizontal poles, which can be removed at pleasure, to facilitate the carting out of the manure. Between the two rows is a narrow railway, along which the waggons containing the food are hurled; and so great is the economy of labour effected by the disposing of the cattle in this manner, and the use of the miniature railway, that whereas in England, and on the old method, it is calculated that one man can attend to and feed only 20 cattle, here one man with ease feeds upwards of 100 animals! The whole staff in the feeding department consists of one cattleman, one man to attend the engine and machinery, and one woman. The feeding troughs are on each side of the tramway, so that all the attendant has to do is to slide the waggon along and push off the food into the receptacles on either hand. The majority of the cattle in this court are what is called "box fed"—*i.e.*, each has a space staked off to itself, within which it is at liberty to move about. There are also a few "stall-fed"—or tied up. These latter take up less space, being confined almost to one spot. The butchers, however, prefer the box-fed animals to the stall-fed, and though they require more space than the latter, there is another source of profit connected with them. They are kept well supplied with straw for bedding, which is frequently renewed, so as to prevent decomposition or smell, and it is not removed till it is some 4 or 5 feet in depth. The stall-fed animals, again, are on a flooring of stout wooden spars, with spaces between to permit the liquid to fall through to the floor of the court. The cattle are thus kept dry and clean on the spars; but less manure is obtained, because much less straw for bedding is required. Of course the liquid is run off to a pipe in connection with the tank. The ventilation of the court is very good, the roof being of tiles, so arranged as to admit free currents of air, without doing so unduly.

In another part of the buildings the food is prepared; and here a small steam engine of some three or four horse-power has been erected, in which sawdust mixed with dross coal is burned to drive machinery for washing and cutting Turnips, for bruising Oats and oilcake, and for making meal to mix with the messes of cooked food. The Turnip chopper is a very ingenious affair—being in fact a combination of machines. The Turnips are put into a large hopper at the end of a skeleton cylinder, which revolves with the Turnips over, and dipping into, a large water trough. The cylinder has a screw frame inside along which the Turnips are worked till they emerge at the other end. They are then caught by iron hooks on a revolving belt; carried up to the storey above: and emptied into the pulper, which, we understand, does its work better than any other pulper known, and is the only one in use. The washings of the Turnips—which are valuable from the fact that a certain portion of manure or fat earth generally adheres to the roots—are conveyed to the liquid manure tank by means of pipes, so that nothing is lost. *Dundee Advertiser.*

(*To be Continued*).

Miscellaneous.

Chambers of Agriculture v. *Farmers' Club Houses.*—At a recent discussion in Edinburgh, Mr. Alexander Graham, of Capellie, said he put the greatest importance upon the Farmers' Club, and comparatively little upon a Chamber of Agriculture. When he came to Edinburgh he might meet a Writer to the Signet, an Advocate, or even a Lord of Session, and might be

invited to dine with them; but so much was his heart devoted to the agricultural interest, that rather than go to a Lord of Session's dinner, or an Advocate's dinner, or a Writer to the Signet's dinner, he would 500 times go to a club-room where he could meet some honest farmer and have some useful conversation about farming. They had heard something said about these journals. He was in favour of the press; but the press was nothing to the human voice. If any one was speaking to him about some idea he had in agriculture and agricultural improvement, he could see by the look of his eye and the muscles of his countenance whether he was taking in and believing what he was saying; and he could illustrate it and make him hear and understand, whether he would or not. A sentence in a journal was dumb—they might read it by gas-light or candle-light—they might be half asleep, and they might not notice it—it was in a manner lost to them. It was a most excellent thing, but the best thing it could do was to be a text for a conversation among farmers. He would not oppose a Chamber of Agriculture—he thought it might be a very good thing; but he thought the first thing was the Farmers' Club, and out of that should arise a Chamber of Agriculture. Just take the case that they started with, a Farmers' Club, and no Chamber of Agriculture, what would the result be of their meeting so frequently? If there was any great public question, it would be the easiest thing for the members of the Club to call a meeting and have a public discussion upon that question. Therefore he would say that the first thing was the Farmers' Club, and he had no objection to combine with it a Chamber of Agriculture. He did not belong to the far west or the far north, or to anywhere about Edinburgh—he belonged to the near west in the neighbourhood of Glasgow; but he happened to be a farmer, and unfortunately for himself, his landlord was himself. But at the same time he took as minute an interest in every agricultural operation, in every chemical analysis, and in the best mixture of manures for growing crops; and he would like to weigh his own opinions and experience with such a gentleman as he saw in the chair.

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Reading of Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday ..	Nov. 25	29.35	34	34	N.W.	0	0	41	27	43	22	0.00
Saturday ..	26	28.96	40	39	W.	1	5	46	37	46	31	0.18
Sunday ..	27	29.71	41	41	W.	2	5	44	37	53	29	..
Monday ..	28	29.03	54	53	S.W.	3	10	55	42	56	36	0.07
Tuesday ..	29	30.11	39	38	S.W.	0	0	53	36	55	30	0.00
Wednesday ..	30	30.16	47	45	S.W.	4	10	55	38	57	26	..
Thursday ..	Dec. 1	30.12	43	42	S.W.	1	0	40	37	51	31	0.38

Notices to Correspondents.

COW-HOUSES, &c.: *Subscriber* See Mr. Scott Burn's Book of Farm Buildings (Blackwoods) and Mr. Bailey Denton's Farm Homesteads of England (Chapman & Hall). The management of a small farm is not to be described in an answer here, but may be referred to hereafter.

THOUSAND-HEADED CABBAGE: *C D.* Will any of our correspondents give their experience of the cultivation of this crop for spring food for sheep. [We imagine they must be sown in June for transplanting about 1 yard every way in early August, on good loamy deeply tilled and well-manured land].

THE CATTLE MELON: *Mr. Newton* informs us that the seeds he received this spring failed altogether.

SMITHFIELD CLUB CATTLE SHOW.—STAND No. 65.

THE HYDROPULT.

NEW SHOW ROOMS, 142 and 143, CHEAPSIDE, LONDON, E.C.

THE HYDROPULT is invaluable for use in the GARDEN for WATERING BEDS, SPRINKLING PLANTS, DROWNING OUT INSECTS, CLEANSING TREES FROM SMUTS, DRESSING with LIQUID MANURE, ETC. ETC.

THE HYDROPULT is desirable in every HOUSEHOLD for WASHING WINDOWS, WETTING SIDEWALKS, SPRINKLING STREETS, WASHING CARRIAGES, EMPTYING CISTERNS, FILLING BARRELS A SPRAY BATH, ETC. ETC.

THE HYDROPULT,

PRICE: WITH BRASS CYLINDERS AND MALLEABLE IRON STIRRUP, JAPANNED IN OAK COLOUR,

32s. 6d.

Complete, with 2½ feet Suction, and 3 feet Delivery Hose, Galvanised Wire Strainer, Rose, and Small Jet.
Complete as above, with Copper Stirrup, TWO GUINEAS.

Weighs but 8 lb.

Will throw 8 Gallons of Water per minute 50 feet, when worked by the power of One Man.
It will draw water horizontally, if necessary, through 300 feet of Suction Hose, and force it through Delivery Hose, to an altitude of 100 feet.

ORDERED BY THE WAR DEPARTMENT AS FIRE ENGINES.

In proof of the real utility and efficiency of the HYDROPULT as a GARDEN IMPLEMENT, I beg to call the attention of the public to the following unsolicited Editorials from gentlemen whose testimony must have weight with the readers of the *Gardeners' Chronicle*:—

EDITORIAL, *written by* ROBERT HOGG, LL.D., F.L.S.

THE HYDROPULT.—The great secret of successful indoor gardening consists in the free and judicious use of the syringe. A greenhouse or conservatory that does not enjoy this luxury becomes a miserable lazar house of vegetable incurables. Vermin and filth hold unbounded sway, and people become disgusted with their own want of success. Well do we recollect the former days of plant culture, the days of "collections," when the use of the syringe was yet limited or unknown. What a time for red spider, scale, and greenfly! What fumigations and consumption of tobacco and tobacco paper, washings with tobacco water, and all sort of remedies were resorted to! We regard the introduction of the free use of the syringe as one of the events in modern gardening. To this is due the success of orchard house management, Vine management, and Plant management, but the old syringe with its slow suck and squirt, is now as much out of date in modern gardening as an old stage waggon in modern locomotion. Many are the improvements and complications of the old simple syringe. We have tried several of them, but for ease in working and efficiency in result, we have not yet met with anything to equal the Hydropult, sent us by Mr. BUTTON. It is powerful in operation, and so easy and comfortable to work, that one never gets fatigued. With such an instrument plants may be kept in perfect health, and quite free from insects and dirt. We first tried it on a few Geraniums in our conservatory, which were smothered with greenfly during our temporary absence of ten days, but on our return a stout discharge from the Hydropult sent them clean off across some unknown bourne, whence they have never yet returned.

EDITORIAL, *written by the* REV. HENRY H. DOMBRAIN, A.B.

THE HYDROPULT.—When we formerly noticed this instrument, we did so from merely seeing it at the Proprietor's; since then we have had an opportunity of testing it personally, and can bear testimony to the excellence of the invention. The force with which it throws a stream of water is almost incredible; while for syringing a greenhouse, a gentle shower, as fine as that from a hand syringe, with considerably more effect, can be easily given. We have a gardener, quite of the old-fashioned school, who does not generally fall in love with new-fangled notions, but he is perfectly enchanted with the saving of labour and time that the Hydropult will be to him.

EDITORIAL, *written by* SHIRLEY HIBBERD, ESQ., F.R.H.S.

THE HYDROPULT.—This is an invention introduced in a most spirited manner by Mr. C. P. BUTTON. It is at once a fire engine and a garden engine, is always ready for use at a moment's notice, is neat and portable, weighing only 8 lbs., and can be worked by a boy of moderate strength for some hours in succession without fatigue, the mechanical power employed being economised by combining the action of the hand and the resistance to the foot, between which the instrument is placed and used, as a double action pump. From the sole to the handle the Hydropult measures 24 inches. The two brass cylinders measure 12 inches in length, and 3¼ inches in breadth. At the top of these cylinders India rubber tubing is attached, on one side to feed, on the other to discharge the water. It will perhaps surprise the reader to be told that this little contrivance, which is pretty as a toy, and can be carried under the arm as easily as a trumpet, will throw from seven to eight gallons of water per minute a distance of 50 feet. But it will do it, as we know from having tried it, finding the experiment an agreeable exercise, and of special service in washing down a stuccoed wall, which it accomplished quite as well as if we had sent for the parish engine. Gardeners will not need to be told the value of a portable force pump of this simple kind. It can be used to produce a powerful stream to extinguish a fire, or a gentle shower to syringe a whole houseful of plants, without the necessity of moving a single step from the position most convenient for a supply of water. Wherever a pump or syringe is needed, the Hydropult can be brought into use, to remove water from a cellar or a boat, to cleanse a cistern, wash a pavement, or drench the foliage of trees loaded with soot, or annihilate at one fell swoop the whole insect population of a plantation of Roses. But we will not enlarge upon its merits, they are obvious, and having a Hydropult in use we can say that it will soon pay for its cost in a garden, besides being always at hand in case of an emergency of any kind which may require an immediate removal or discharge of water.

THE GREENHOUSE and CONSERVATORY HYDROPULT.

A NEW AND BEAUTIFUL IMPLEMENT,

Weighing scarcely 3 lbs.,

AND SPECIALLY ADAPTED FOR USE IN THE GREENHOUSE AND CONSERVATORY.

Price 35s.,

Complete with Brass Cylinders and Copper Stirrup, 2½ feet Suction and 3 feet Delivery Hose, Strainer, Rose, Jet, and Fan.

This NEW IMPLEMENT must necessarily supersede SYRINGES and other devices of the kind, for it will be found much more effective in its operation.

A LADY CAN WORK IT FOR HOURS WITHOUT FATIGUE.

HYDROPULT SHOW ROOMS, 142 and 143, CHEAPSIDE, LONDON, E.C.
CHARLES POMEROY BUTTON, PROPRIETOR.

ROYAL HORTICULTURAL SOCIETY,

SOUTH KENSINGTON.

Patron—HER MAJESTY THE QUEEN.

President—THE DUKE OF BUCCLEUCH, K.G., ETC., ETC.

REGULATIONS FOR THE YEAR 1865.

1. The Society has two Gardens, one at South Kensington, the other for experimental Horticulture at Chiswick. The Chief Exhibitions, Fêtes, and Promenades are held at South Kensington.

2. For convenience in the necessary arrangements the year is divided into two seasons, an out-of-door and an in-door season. The out-of-door season is from the 1st May to the 31st October, the in-door season from the 1st November to the 30th April.

3. During the out-of-door season, Plants and Flowers are Exhibited as far as possible in the Gardens; during the in-door season the South Kensington Exhibitions and Promenades take place in the Conservatory, Glazed Arcades, Pavilions, Orchard Houses, &c. These buildings afford an uninterrupted walk of about the third of a mile, and are protected from draughts. They are warmed to the temperature required for the various plants exhibited.

ADMISSION TO THE GARDENS.

4. The Gardens at South Kensington are open to Fellows on all ordinary days throughout the year from 9 A.M. till sunset, except Sundays, when they are opened at 2. On week days, except on certain fête days, the Gardens are private to the Fellows and their friends up to 1 o'clock: after 1 o'clock the public are admitted on payment.

5. The Garden at Chiswick is open to Fellows and the public daily, except on Sundays, from 9 A.M. till sunset. On Sundays it is closed.

FÊTE DAYS.

6. The following are established fête days in each year:—The Queen's Birthday or the day on which it is appointed to be held: the 26th August, the anniversary of the birthday of the Prince Consort, the founder of the South Kensington Gardens; when it falls on Sunday it will be held the Monday following: the 5th June, the anniversary of the opening of the Gardens in 1861, when a Horticultural *dejeuner*, limited to Fellows, will take place: the 1st May and 1st November, the first days of the out-of-door and in-door season; (if any of the three last days fall on a Sunday, these fêtes will be held on the preceding Saturday): also Easter Monday and Tuesday, and Whit Monday and Tuesday. One or more bands will play on all fête days.

SHOWS.

7. All Shows at South Kensington take place, or commence, on Saturdays throughout the year. At the weekly Shows, medals and certificates of merit only will be given. At the other Shows, money prizes as well as medals and certificates of merit will be offered.

The following Shows are fixed for the year 1865. Schedules will be duly issued.

GREAT SHOWS.

A Great Show of all kinds of Flowers, Plants, and Fruit, will be held on the Saturday in June, which falls between Ascot and Derby weeks, viz., 10th June. The Show will last only a single day.

A Great Show of Roses on the first Saturday in July. (1st July). It will last only a single day.

A Great Show of Fruit and Vegetables on the fourth Saturday in July. (22d July.)

SPECIAL SHOWS.

A Show of Hyacinths and Camellias on the third Saturday in March. (18th March).

A Show of Early Azaleas and Spring Flowers on the second Saturday in April. (8th April).

A Show of Orchids on the second Saturday in May. (13th May).

A Show of Pelargoniums, including scarlet and variegated varieties, on the first Saturday in June. (3d June).

A Show of Azaleas, with the flowers trained, partially trained, or in their natural growth, on the third Saturday in June. (17th June).

A Show of Plants of Ornamental and Variegated Foliage on the second Saturday in July. (8th July).

A Show of Liliaceæ and Amaryllidæ on the third Saturday in July. (15th July).

A Show of Ferns and their allies on the last Saturday in July. (29th July).

FLORAL DECORATION SHOW.

8. A Show of Decorations for Dinner and Supper Tables, and of Bouquet holders. This Show will be held on the fourth Saturday in June (24th June), and will also be open in the evening.

SHOWS BY INDIVIDUAL NURSERYMEN.

9. A continuous Show of Tulips will be held in the spring by Messrs. Henderson, of Wellington Nursery, St. John's Wood Road.

10. A continuous Show of Rhododendrons will be held in the summer under the Great Tent by Messrs. Waterer and Godfrey, of Knap Hill, Woking.

11. A continuous Show of Chrysanthemums will be held in the winter.

INTERNATIONAL SHOWS.

12. An International Show of Horticultural Implements will be held during the month of July.

13. An International Show of Fruit and Vegetables will be held during the second week in December.

FORTNIGHTLY MEETINGS AT SOUTH KENSINGTON.

14. Fortnightly meetings for the election of Fellows, reading of papers, and transaction of scientific business, will be held in the Council Room, except in the months of August, September, and October, on every other Saturday throughout the year that is not preoccupied as a fête day, or for one of the Great Shows. Chair to be taken by the President, or in his absence by some Fellow, at 12 o'clock.

15. At these meetings notice will be taken of flowers, fruit, and vegetables sent for exhibition, and certificates of merit will be awarded.

WEEKLY SHOWS AND PROMENADES AT SOUTH KENSINGTON.

16. On the afternoon of every Saturday throughout the year there will be an Exhibition of Flowers in Pots, and of Fruit and Vegetables by the Fellows and others. The Shows will commence at 2 o'clock, and will be continued until the following Wednesday.

17. Medals and certificates of merit will be given.

18. The Queen has been pleased to command that contributions shall be sent from the Royal Gardens, Frogmore, to these Shows, and numerous Fellows have promised to exhibit.

19. There will always be a promenade with music at these Shows at 3 o'clock in the out-door season, and at 2 o'clock in the in-door season.

VARIOUS EXHIBITIONS.

20. In addition to the above Shows there will be continuous exhibitions at South Kensington of the hatching and growth of trout and salmon directed by Mr. Frank Buckland; of sea plants; of bees and beehives; and of the Ailantus silkworms, belonging to Lady Dorothy Nevill.

PRIZES.

21. Prizes for the best plants and vegetables cultivated by soldiers in barracks, by sailors in homes, by coastguard men, and by workmen employed in Her Majesty's Dockyards, will be awarded on the first Monday in August. A schedule will be issued.

22. Prizes given for specimens of Window Gardening among the working classes in metropolitan parishes will be awarded at a public fête on the first Monday in September. A schedule will be issued.

CONVERSAZIONI.

23. There will be two Conversazioni which are open to Fellows only, and not to the public. The evenings will be appointed by the President in May and June.

CHISWICK SHOWS.

24. Strawberry Show and fête in June, Show of the Chiswick Trial Flowers in August, and Show of Vines and Fruit grown at Chiswick, in September. These Shows will be held on Wednesdays hereafter to be fixed according to the general character of the season.

EXAMINATIONS AND CERTIFICATES FOR GARDENERS.

25. Central Examinations of Gardeners in Theoretical and Practical Gardening will be held annually at South Kensington, and local examinations will be held in the country. Certificates of competency and prizes will be awarded at both examinations.

FELLOWS AND THEIR PRIVILEGES.

TWO GUINEA F.R.H.S.

26. Fellows paying an entrance fee of two guineas, and an annual subscription of two guineas, have personal admission every day, and to all Shows, fêtes, and Promenades, both at Chiswick and South Kensington. They have also the right of introducing personally two friends, on Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, and Sundays, but not on Saturdays. In addition to these privileges they receive 20 tickets which are each of the value of one shilling, and are available for any day when the entrance is one shilling or less; a copy of the Journal of Proceedings of the Society is gratuitously issued to them; they share in the distribution of seeds, and they have the right to enter the ballot for rare plants, and to purchase fruit from Chiswick. They have admission to the Conversazioni.

FOUR GUINEA F.R.H.S.

Fellows paying four guineas have double the privileges of two guinea Fellows, as respects the right of introducing friends, the distribution of seeds, the ballot for plants, and the number of tickets they receive, with the further advantage that both their yearly tickets are transferable. They have also the privilege of purchasing any number of transferable tickets for two guineas each. These transferable tickets confer on their bearers all the privileges of personal admission, and of introducing friends, which the Fellows themselves could exercise. Admission to the Conversazioni is limited to Fellows, the holders of transferable tickets, debenture holders and their nominees.

The Fellows of the Royal Horticultural Society have the privilege of purchasing tickets for the Shows at a reduced price before the day of the Show, viz.:—

At 3*s.* 6*d.* for each of the Great Shows, and 2*s.* 6*d.* for each of the Special Shows.

COUNTRY SUBSCRIBERS.

27. Persons residing beyond 20 miles from the metropolis may be admitted to limited privileges. On payment of one guinea entrance and one guinea annually, they receive a copy of the Journal gratis; and they obtain admission to the Gardens at Kensington and Chiswick by means of tickets of the value of the annual subscription. They have no votes and cannot attend general meetings. They may nominate local Horticultural Societies to enter into union with the Royal Horticultural Society.

TOWN SUBSCRIBERS FOR SEASON TICKETS

28. Personal Season Tickets, not transferable, may be purchased for 20*s.* for the out-door season and 10*s.* for the in-door season. These will give admission for every day in the year, including all Shows, Promenades, and day fêtes, at South Kensington. These tickets do not confer any of the special rights of Fellows.

DEBENTURE HOLDERS.

29. Persons holding debentures, and their nominees, have the privilege of free admission to the Gardens whenever they are open.

CHISWICK SEASON TICKETS.

30. Annual Season Tickets, not transferable, and giving admission only to the experimental Chiswick Gardens and Shows, may be purchased by residents at Chiswick and others, for 10*s.* each.

ADMISSION OF THE PUBLIC.

31. Admission to each of the Great Shows is obtained by the public by tickets, to be purchased for 5*s.* each before the day, and for 7*s.* 6*d.* on the day of the Show.

32. Admission to each of the Special Shows is obtained by the public by tickets, to be purchased for 3*s.* 6*d.* each before the day, and for 5*s.* each on the day of the Show.

33. The admission to the first day of all other Shows at South Kensington, and to the Saturday weekly Shows, is 2*s.* 6*d.*, except in August, September, and October, when it is reduced to 1*s.*

34. The admission to the Shows held at Chiswick will be 2*s.* 6*d.*

35. Admission to the South Kensington Gardens after 1 o'clock on the days mentioned below, not being Show, fête, or Promenade days, will during the London season be as follows:—

Saturdays, 2*s.* 6*d.*

Sundays, the Gardens are closed to the public but open to Fellows and their friends personally introduced.

Mondays, 6*d.*

Tuesdays, Wednesdays, Thursdays, and Fridays, 1*s.*

Admission during the months of August, September, and October, when the London season is over, 3*d.* every day but Saturday. On Saturday it is 1*s.*

Admission on the Queen's Birthday, 1*s.*; on Easter Monday and Tuesday, and Whit Monday and Tuesday, 3*d* each day.

36. On the 26th August, the Anniversary of the Birthday of the Prince Consort, the founder of the South Kensington Gardens, these Gardens are open free at the wish of Her Majesty. Above 153,000 persons visited them on the 26th August, 1864.

37. Admission to the Experimental Garden at Chiswick, excepting on Show Days, 1*s.* daily, throughout the year.

GUIDE BOOK.

38. A Guide Book to the South Kensington Gardens, price 6*d.*, is to be had at the Gardens and of all booksellers.

TESTIMONIAL to MR. INGRAM, CHIEF GARDENER to HER MAJESTY at FROGMORE.

The following Gentlemen have consented to form a GENERAL COMMITTEE for carrying out the above object:—

The Viscount Kirkaldie, Windsor.
The Hon. and Very Rev. Dr. Wellesley, Dean of Windsor.
Major-Gen. Hood, Cumberland Lodge, Windsor.
The Rev. E. Coleridge, Eton College.
The Rev. Joshua Dix, M.A., London.
The Right Hon. Charles Lawson, Lord Provost of Edinburgh.
The Right Hon. Sir W. G. Hayter, M.P., South Hill Park, Bracknell.
Sir James Clark, M.D., Bagshot Park.
Sir Joseph Paxton, M.P., Sydenham.
Mr. G. Allen, Old Windsor.
J. J. Blandy, Esq., Reading.
Mr. Brebner, Norfolk Farm, Windsor.
Mr. Carmichael, Sandringham.
Mr. George Eyles, Chiswick.
Mr John Fleming, Chveden.
E. B. Foster, Esq., Clewer Manor, Windsor.
A. F. Godson, Esq., Inner Temple, London.
Mr. James Gray, Chelsea.
Mr. Arthur Henderson, Edgware Road.
Dr. Robert Hogg, Pimlico.
G. W. Johnson, Esq., London.
Mr. Joseph Knight, Hampton Court.
Mr. John Keynes, Salisbury.
Mr. John Lee, Hammersmith.
Mr. Charles Lee, Hammersmith.
Mr. Mackenzie, Alexandra Park.
Mr. J. McIntosh, Drumlanrig.
Mr. W. Menzies, Windsor Great Park.
Mr. J. F. Meston, Kentish Town.
Dr. Moore, Glasnevin.
Thomas Moore, Esq., Chelsea.
Mr. Richard Oxley, Windsor.
Mr. William Paul, Waltham Cross.
Mr. Thomas Rivers, Sawbridgeworth.
Mr John Salter, Hammersmith.
Mr. John Spencer, Bowood.
Richard Stains, Esq., London.
Mr. John Standish, Ascot
Mr. Henry Tait, Shaw Farm, Windsor.
Mr. William Thomson, Dalkeith.
Mr. Charles Turner, Slough.
Mr. James Veitch, Chelsea.
Mr B S Williams, Holloway

COMMITTEE OF MANAGEMENT.

Chairman—Dr. ROBERT HOGG.

Mr. G Allen.
Mr. Brebner.
The Rev. Joshua Dix, M.A.
Mr. George Eyles.
Mr. John Fleming.
A. F. Godson, Esq.
Mr James Gray.
Mr. Arthur Henderson.
Mr. J. Keynes.
Mr. Joseph Knight
Mr John Lee.
Mr. Charles Lee.
Mr Mackenzie
Mr J F Meston
Thomas Moore, Esq.
Mr. William Paul.
Mr. Rivers.
Mr. J. Salter
Richard Stains, Esq.
Mr. J. Standish
Mr Henry Tait
Mr. Charles Turner
Mr James Veitch.
Mr. B. S. Williams.

Honorary Secretary—Mr. EDWARD BROWN, Slough, Bucks.

Honorary Secretary for Scotland—Mr. WILLIAM THOMSON, The Gardens, Dalkeith Park.

Honorary Secretary for Ireland—Dr. DAVID MOORE, Glasnevin Botanic Garden, Dublin.

It has been well observed—"That it is always an agreeable task to do honour to those who have long and well occupied a responsible position, and all the more so to Horticulturists, if that position has been a prominent one in the world of Horticulture."

It is but rarely indeed, that an opportunity presents itself for the recognition of the fulfilment of arduous and important duties for the prolonged period of half a century with so much credit and so as to win universal respect, such as that which occurs in the case of MR. INGRAM, who has entered on the FIFTIETH YEAR OF SERVICE in the ROYAL GARDENS at WINDSOR.

Most of the Members of the gardening community are aware of the great interest which MR. INGRAM has always manifested in the cause of Horticulture; and appreciate the correctness of his endeavours, and the success that has attended his labours for the advancement of that science. His great experience and general knowledge; his readiness at all times to impart information; and the kindness and courtesy which has invariably characterised his intercourse with all, have naturally and justly engendered a feeling of the deepest respect.

It is, therefore, proposed that a TESTIMONIAL should be presented to MR. INGRAM as a mark of the high esteem and cordial regard universally entertained for him, and that a SUBSCRIPTION be at once opened to enable the Committee to carry out this desirable object. The co-operation and support of the Horticultural public, and of the numerous friends of MR. INGRAM, is hereby respectfully solicited.

Subscribers in England are requested to send their Contributions with their names and addresses in full, to Mr. EDWARD BROWN, Slough, Bucks. The amount of subscriptions is not limited. Post Office Orders should be made payable at Slough; and Cheques crossed "REID & Co.," Windsor.

With the view of facilitating the collection of Subscriptions, it has been arranged that two Secretaries should be appointed for Scotland and Ireland respectively, to act jointly with Mr. E. BROWN; and Mr. W. THOMSON, the Gardens, Dalkeith Park, who has consented to act in Scotland, and Dr. DAVID MOORE, Glasnevin Botanic Garden Dublin, in Ireland, are authorized to receive Subscriptions that may be sent to them for the Testimonial Fund.

Committee Room, Anderton's Hotel,
Fleet Street, London.—Nov 1864.

CARTER'S "FIRST CROP" PEA,
The EARLIEST in CULTIVATION.

New Seeds, Growth of 1864.

ROYAL BERKSHIRE SEED ESTABLISHMENT.

SUTTON AND SONS are now prepared to execute orders for all kinds of GARDEN SEEDS.
The prices are moderate and the quality fine, owing to their having been harvested well.
Royal Berkshire Seed Establishment, Reading.

The Gardeners' Chronicle.
SATURDAY, DECEMBER 10, 1864.

MEETING FOR THE ENSUING WEEK.

THURSDAY, Dec. 15—Linnean .. .. 8 P.M.

THE remarks which we publish to-day at p. 1719, from Mr. BATEMAN, on the grievances of Orchid-buyers, touch a matter of considerable importance. His, however, is by no means the first complaint that has reached us on the subject. There can, we fear, be no doubt that the sale of Orchids under false names is an evil that of late years has increased, is increasing, and that ought, if possible, to be diminished. Nor do we see any great difficulty as to the application of an effectual remedy. If only purchasers would be induced to abstain from bidding for any lots to which the vendor's name was not attached, the evil complained of would speedily cure itself. And why should the vendor, if his intentions be honest, wish to withhold his name? There can be no more harm in disposing of the duplicates of a collection of Orchids than in selling the thinnings of a plantation, or the surplus stock of a farm. And in this, as in other matters, the most straightforward procedure has been always found to be the most profitable policy, for while uncertificated plants have realised exceedingly low rates, in the

recent sales of Mr. DAY and Mr. SKINNER—where the names of the vendors commanded the confidence of the buyers—the prices obtained must have surpassed expectation. But if such manifest advantages may be secured by simply giving the name of the party putting up his plants for sale, we may be quite sure that where an *incognito* is maintained there must be something in the background to account for so suspicious a course. And whatever that something may be, it should at all events make purchasers very chary of their biddings.

IN another page of this Journal (1180) we have given a translation of a memoir on SPOTS AND BURNS IN LEAVES, which appeared last year in a journal entitled *Adansonia*, not because we agree with all Monsieur NEUMANN'S arguments, but partly because of the importance and interest of the subject, and partly because he has taken great pains to acquire information, and has himself carefully investigated the matter. We should rejoice very much if the reproduction of this memoir should lead some of our more observant readers to record their own notions and experience, for it is quite certain that there is much to learn, and that any reliable information will be of much practical usefulness.

It must be remembered that spots and burns are of various kinds, and clearly arise from various causes. We must not then confound things which are essentially different.

If we take the subject of burns first, it is quite certain that some of them are caused by the direct action of heat or cold (for cold often performs the effect of heat), apart from any condensation or convergence of the heating rays of light. Leaves are not supplied rapidly enough with moisture, and they are scorched by the direct rays of the sun, especially while they are yet young and tender; or again they are in contact with the glass in a night of intense radiation, and their vitality is partially destroyed.

Some burns, however, arise from keeping up too high a temperature at night, in consequence of which, from the contrast of the temperature of the external air, dew is deposited in great quantities on the glass at the expense of the moisture contained in the air within the stove, and the leaves partially perish.

Burns again, such as one sees on a large scale occasionally in our more important stoves, arise frequently from the actual effect of the sun's rays. Every schoolboy knows that the intensity of heat produced by a pocket lens, does not depend so much on its magnifying power as on its size, even if he does not recollect the stories which he has heard of in Grecian history of ships being destroyed by large burning glasses. Lenses of great diameter, with very long foci, are quite capable of destroying the tissues of a leaf, and if the direction of the spots, which are often of considerable extent, is observed, it will be plain that no drop of water could run in such a way or through such a space as to produce the spot. Without, therefore, for a moment calling in question the correctness of M. NEUMANN'S observations, we would observe only that these sunburns may happen in more ways than one, and amongst others it is very possible that where water rests, the drop in connection with some lens in the glass may concentrate the rays sufficiently to produce mischief, though it is scarcely probable that by itself it could have sufficient power.

There are, however, other causes than the direct action of light, which may prove injurious, some of which our author has pointed out. Water resting for a long time on the leaves may act injuriously by causing a difference of temperature in the part with which it is in contact, especially where the air in the house is very dry, or by impeding evaporation from the part which it occupies, in consequence of which the juices stagnate at particular spots. Mr. IVISON, formerly gardener at Syon, told us some years ago that with a combination of water and a draught of cold air he could at once produce spotting in such tender plants as the Nutmeg and Cacao, a combination which we believe very often induces rust in Grapes. Monsieur NEUMANN'S observations in this direction deserve an attentive consideration.

We have not, however, done with possible causes of spotting. In Geraniums and many other cases the spotting, we believe, arises from the bad condition of the roots, sometimes induced by bad drainage, sometimes by over or under watering; [illegible] is clear that spotting in Grapes, as also [illegible] arises from some cause in the same direction. Some spotting again we believe to spring from constitutional weakness, the weaker portions of the leaf only failing while others remain sound, there not being sufficient vigour in the plant to effect the nourishment of the whole lamina. A similar weakness may be induced in plants where there has been no original defect, but where bad management of some kind or other has existed, it may be in respect of the soil, the supply of the requisite degree of moisture, or the want of sufficient ventilation and improper temperature. Such spotting is often attributed to thrips, where it is utterly impossible to find a single specimen of the insect, though occasionally an accurate search may show that the little insect is really the cause of evil.

Finally, in very many cases, spotting arises unquestionably from the attacks of parasitic Fungi, the spawn of which sometimes partially destroys the leaves, without ever coming to perfection. In some cases it is quite clear that the whole evil is due to the Fungus, while in others it is doubtful whether the parasite is a consequence or cause.

We have probably omitted some other known causes of spots, but the foregoing enumeration will not be useless, and we should receive gladly any information on the subject which is new. The use of blinds against direct sun light and nocturnal radiation, will assuredly prevent a good deal of mischief; and not suffering the air to get so dry as to wither the leaves, will prevent more. Where spotting arises from the condition of the roots, good cultivation will undoubtedly avail much, but as far as parasites are concerned, little or nothing can be done to prevent the growth of their spawn, and in a few cases only is there any remedy when the fungus has once arrived at perfection. *M. J. B.*

IT seems somewhat remarkable that so conspicuous a site as the PLACE DE LA CONCORDE of Paris should ever have been suffered to lie waste; but until the reign of LOUIS XV. it was an undedicated piece of ground separating the Gardens of the Tuileries (to which we have already adverted) from the avenues of the Champs Élysées, when the city corporation applied for and obtained leave to convert it into a square, the centre of which they occupied with an equestrian statue of the KING. This was melted down for cannon and coinage during the days of the Revolution, and by all accounts, whether considered as a work of art, or of historical interest, left little to be regretted in its destruction.

On emerging from the gates of the Tuileries, whose huge piers are crowned by groups of PERSEUS on Pegasus, and FAME on a winged steed, with pendants in the marble groups by COUSTOU at the entrance of the Champs Élysées, the Place de la Concorde* lies open before us. In the centre is the Obelisk of Luxor, a relic of ancient Egypt, said to have been one of two erected by RAMESES III. before the great temple of Thebes; and on either side bronze fountains cunningly wrought, but on the dumb-waiter principle, are scattering smoking wreaths of spray. The plan is a large parallelogram enclosed by a balustrade with carriage roads in the centre of each front, leading directly towards the Obelisk, and in the centre of each of its chamfered angles leading directly towards the fountains, where meeting they are cleft in their course, and diverge on either side of the fountains or the Obelisk. At each corner of the chamfered angles is a massive pier—little lodges in themselves, surmounted by representative figures of eight commercial towns of France. The four principal roads lead, one towards the gardens behind us, one towards the grand avenue of the Champs Elysées, with its long front of wood forming the west boundary; one to the south over the Pont de la Concorde towards a handsome building occupied by the Corps Législatif; and one on the opposite side, down the Rue Royale to the Madeleine Church, the classic rival of Notre-Dame, invisible from here, but not so from the bridge, where, under the afternoon sun, it retreats into silvery shade, behind the princely façade that lines the width of this, the north side of the Place. The elegant spires of the church of St. Marie, in the Faubourg St. Germain over this water, compose prettily from all parts of the Place, and further on to the south-west towers the turreted dome of the Hôtel des Invalides.

The Champs Élysées consist of a grand avenued road, with a gentle ascent at its extreme end, culminating at the Arc de l'Etoile. The latter, although very fine in the vast gloom of its central arch, is misplaced as a feature, being designed as a gateway, and not as a mere *point d'appui*; since this is analogous to a country gentleman building a church in his park for the sake of an object in the scenery, without further reference to its uses or association. A wood at this end, concealing gardens, stretches its whole front till it meets minor avenues or roads in a straight line with the outer or circumscribing roads of the Place. The left-hand or south one skirting the Seine extends from beneath the rampart terraces of the Tuileries past the Place up the avenue to the Palais d'Industrie, and at the commencement of the Champs Elysées, the Seine changing its course, three side roads avenued with intermediate walks for foot passengers continue with it.

The ground about the Exhibition is a series of gardens with cafés, band houses for promenade concerts, and laid out in the "Vallon" style with beds of Wigandias, Caladiums, and Cannas of such giant growth as to give almost as much intricacy to the walks as the trees and shrubs themselves. The latter are mostly evergreen, and planted in homogeneous masses. At either end, and in front of the Exhibition, are geometric gardens with long ribbon borders of Ivy Geranium and Pyrethrum margining the plot in an unbroken line, the centre being hollowed, dish-shaped, and dressed with a small water basin. The consequence of this arrangement is that the outside border completely blots out the centre from the principal points of sight. A rotunda just beyond the Exhibition terminates the southern grove, and we arrive at the Rond-point of the Champs Élysées, beyond which there is but one avenue.

The Rond-point is a garden hexagonally divided by three cross roads, and defined by circular rows of Elm trees. The corner of each compartment nearest the junction of the roads is occupied by a fountain of bullrush jets, the basins themselves having been previously compared with LE NÔTRE'S in the garden of the Tuileries. Why these unfortunate little plots have been tortured into "vallons" is not quite clear. They are not only out of character with the surrounding accompaniments, but being depressed and chiefly noticeable from the foliage beds that peep out of them, lose much of their importance in the general effect. The southern grove has not been completed above two or three years; but we find, if not on so large a scale, a still greater number of cafés, concert rooms, roundabout seats, either chevaux des bois, Chinese boats with gaily coloured sails, or léonesque monsters terrible to look at; stalls for the sale of balls, hoops, gingerbread and sweetmeats, and winding walks margined by flower beds shrubs and trees—many of the latter being large specimens of Pinus Pinsapo, Cembra and excelsa, lately transplanted, and in capital health.

The Place de la Concorde of London should be Portland Place. By this we do not mean that we should like to see an architectural display substituted for the existing trees. Quite the contrary, as it would be like putting old wine into new bottles, and would be sadly out of harmony with the unpretentious character of the adjacent buildings; but what we should like to see would be the road of Portland Place carried in its entirety up to the gates of the avenue in the Regent's Park, forming a direct vista in continuation of Regent Street, nearly a mile and a half in length. The details of the ground would become a question for after consideration, though we may surmise that their treatment should be simple, especially preserving the trees; while a landmark erected at the other end of the avenue would give a point and definition to the distance. It is useless to conceal that such a scheme as we have proposed would have to contend with considerable local opposition; but at the same time it is one of the easiest and most effective changes that could be made in the metropolis. And if carried out it would then be no longer possible to say of London that with all her ramifications of street, she was yet unable to point to a single connected feature worthy of her great name. *Z.*

* Formerly known as Place de Louis XV.

—— WE have, on more than one occasion, invited attention to the rich purple-flowered hybrids of Clematis raised by Mr. G. JACKMAN, and we now wish to point out in the CLEMATIS LANUGINOSA CANDIDA a beautiful pure-white variety, belonging to the same open-flowered race, which is admirably fitted to be grown in company with them for the sake of the contrast it affords. We are informed that it is a French variety, and reputedly a hybrid between C. cœrulea (patens) and C. lanuginosa. The plant has somewhat downy leaves, with a slightly undulated edge, and the flowers are of a pure white, thoroughly expanded, and

formed of six sepals, which have a cuspidate point. Judging from the appearance of the blossoms on a young and not very robust plant, the flowers will be of the full size of the ordinary forms of lanuginosa. We learn that another white-flowered hybrid has been received from the same source, under the name of C. LANUGINOSA NIVEA, but the flowers of this we have not seen. The plant which has furnished materials for this memorandum was sent by Mr. BULL, of Chelsea.

—— The admirers and collectors of the VARIETIES OF BRITISH FERNS will no doubt be glad to make acquaintance with the subjoined budget of novelties, all of which have lately come to our knowledge.

The first is a variety of the common Polypody, which we call SALTII, the distinguishing feature being the abbreviation of a portion of the segments after the manner which has become so thoroughly familiarised in the Frizelliæ form of Lady Fern. The whole frond, however, is not in this case affected, but about one-third either at or near the apex, the abbreviated segments being rounded and toothed, and the more normal portions somewhat eroso-sinuate and irregularly toothed. This was found near Bootle, in Cumberland, by Mr. Salt, of Ulverstone, and is the first indication among Polypodiums of a form of variation already familiar in the Lady Fern and Blechnum.

Then we have received from the neighbourhood of Loch Gilphead, where it was found by Mr. BROWN, a form of Lastrea dilatata (ATHYRIOIDES) so finely divided that at first sight it might be readily mistaken for one of the large deeply-cut forms of Lady Fern to which the name incisum is given. It is no undeveloped form of the plant, as will be evident when we state that the fronds are fully 2½ feet in height, and well proportioned, with a sturdy stipes and rachis. The outline of the specimen before us is broad lance-shaped; the pinnæ are equal-sided, the basal anterior and posterior pinnules being each about an inch long, pyramidato-lanceolate, and cut into about 10 or 12 pairs of adnate linear-oblong obtuse lobes, which are more or less deeply toothed according to their position. The sori are abundant, but in accordance with the small size of the segments, are of small size. In the equal-sided pinnæ and minute parts of the frond, combined with a perfectly normal-looking manner of growth, this is so far removed from typical dilatata, that had it turned up as an exotic plant, it would assuredly have been considered a distinct species.

Of Aspleniums we have received two or three well-marked forms from Mr. W. WILLISON, of Whitby. One them, A. FONTANUM RAMOSUM, is decidedly ramose from about the middle of the frond, and, as we learn, constantly so. A. TRICHOMANES WILLISONI has short dense barren fronds, the pinnæ of the upper half being confluent into a broad apex, and the remainder close overlapping and rounded. A. VIRIDE CRISTATUM has the apex three or four times dichotomously forked, forming a broad spreading multifid head, which in the frond before us consists of 13 terminal divisions. We are informed that all these Aspleniums prove constant under cultivation.

Among many forms of Hart's-tongue, we find two or three especially deserving of notice. Of these the variety REIDLE is one of the cristate series, in which the fronds are normal at the base, but developed at the apex into a glomerate crested tuft measuring about 3 inches through. This plant is growing in the Fernery of Mrs. REID, and has been brought under our notice by Mr. PARSONS. Another very remarkable form is CERATOPHYLLUM, received as the Stag's-horn Scolopendrium from Mr. WILLISON. The frond is about 3 inches high, the lower part irregularly toothed or incised, the toothing becoming deeper upwards, and more or less forked; at about one-third from the top it diverges into two ascending divergent antler-like branches, which are so much narrowed that the main rib is only slightly bordered, and furnished with distinct and rather distant forked linear tooth-like divisions. This is a seedling, as also is one called SEPTENTRIONALE, from its being strongly suggestive of Asplenium septentrionale in its small size and narrowed parts. Of the three minute fronds before us, one is an inch long, about half being stipes, and the other half a lanceolate blade with two or three prominent teeth. Another about an inch and a half long forks into two linear branches, the stipes and blades hardly distinguishable. A third of about the same length also forks into two branches, one of which terminates in a flabellate head of six linear teeth, and the other in two small divergent toothed arms. The plant we learn is not more than 2 inches high, and as much through, with from 40 to 50 fronds. It is certainly very curious, and very far removed from a normal Hart's-tongue Fern.

A batch of novel Lady Ferns and Polystichums must be reserved for some future occasion. *M.*

ORCHID SALES.

I SHALL, I think, be doing good service to the interests of Orchid growers if I briefly call your attention to certain abuses that detract very seriously from the manifold advantages of those well-known sales that take place from time to time in Mr. Stevens's Rooms at Covent Garden; and while taking this step, it is scarcely necessary for me to disclaim the intention of casting the slightest imputation upon Mr. Stevens himself, who is powerless to prevent what, in common with all his customers, he must unhesitatingly condemn. The abuses to which I allude are—first, the disreputable condition in which plants are sometimes offered for sale; and, secondly, the false names that are often—I wish I could believe *unwittingly*—given to them in the catalogues. In support of these allegations, I will briefly detail my own experiences during the past season.

My first purchases consisted of several new East Indian species, of which, though in apparent health, not one survived, a circumstance that need occasion no surprise, as the whole collection was frost-bitten—in fact virtually dead—at the time it was sent to be sold! I was next tempted by two New Grenada Orchids, purporting to be Odontoglossum auro-purpureum, and Brassia cinnabarina, on which I will only remark, that whatever they may be, they differ entirely from two plants that I received under the same names direct from M. Linden's establishment at Brussels. Disappointment the third was also connected with New Grenada Orchids, of which there was a sale about a month ago, comprising a so-called "Houlletia" and an "Odontoglossum? species." As I could not attend this sale myself, I purchased by proxy, under the above titles, an old and worthless Maxillaria, and an equally worthless Trigonidium! And to crown the vexations of the year, I have now in flower, after nursing it since 1861, a specimen of the common yellow Dendrobium densiflorum, which I had bought originally, and at a high rate, as the rare white variety of the species in question! Redress, as matters now stand, there can of course be none, for even if the clause in the conditions of sale as to "all faults and errors of description" did not effectually shield the vendors, I have no means of knowing who the delinquents are, they having discreetly kept their names concealed.

I have little doubt that many of your readers could make out a list of losses and disappointments much longer than my own; but what I have now stated may suffice to call attention to a great and growing evil—I say advisedly a growing evil, having particularly in view the popular Odontoglossa already beginning to appear at the Covent Garden sales—the species of which often resemble one another so entirely as to render it impossible for the intending purchaser, unless he can depend upon his Catalogue, to distinguish between the precious and the vile. *James Bateman, Biddulph Grange, Dec. 5.*

NOTES ON GARDENS.—No. XXIV.

KILLAKEE.

THE visitor to Dublin, fond of gardening, and fond too of beautiful scenery, cannot enjoy so satisfying a combination of both in any place with which I am acquainted, as at Killakee, situated about 7 miles from Dublin, on Montpelier, a ruin-crested hill, which may be distinctly seen from most parts of the Bay of Dublin. The house is built near the top of the hill on its east side, is surrounded by a fine and chaste terrace garden, and literally looks down on Dublin and its environs for miles around. The day of my visit was fortunately a pretty clear one, with a breeze to sweep away the vapours that often accumulate over the scene. To the north could be seen the mountains of Mourne mingling with the grey clouds, and nearer still the fertile and verdant champaign lands of Louth and Meath, merging gradually into the better wooded country south of Dublin, with Glasnevin, the valley of the Liffey, and the Phœnix Park, spread out like a map. To the east, between the Park and the sea, lay the fair city of Dublin itself. To the south the view was interrupted by the high hills of Killakee and others, forming an amphitheatre around that side of Dublin; but there were charming views of the hills of Killiney and Dalkey, with as good a bird's eye view of Kingstown harbour as of Dublin; and then the country enclosed by these hills lying between Killakee and the sea was so well wooded and occupied by seats and villa gardens that its appearance was most picturesque: for many square miles scarcely anything being seen amongst the apparently dense wood, but the spires of churches, glimpses of villas, &c. This pleasant land is as refreshing to one used to the flats about London as it must have been to the sagacious old sea dogs the Danes, when, ages ago, they selected Dublin for a home and chief stronghold. Though the mountains around are bleak, rocky, and barren, Killakee has its woods and Pines, its Rhododendrons and rare shrubs, as well as the richest lowlands, all planted by the late Colonel Samuel White, and annually improved by Mrs. White, who has the gardens kept in the first style—the geometrical gardening, and the miles of wild bank and walk by rushing mountain brook, being equally cared for.

The entrance front of the house is to the west; the eastern one, looking towards Dublin, and perfectly commanding the view I have already alluded to, opens to the terrace garden; while on the north side of the house is a garden of American plants, and on the south a Rose garden of like dimensions. An exquisitely furnished saloon occupies the greater part of the front of the house, and from every window of this the lovely scene may be enjoyed from a fresh point of view. The central windows open, and by a wide flight of steps a walk nearly 400 feet long and 20 wide is reached. At the base of this terrace, and high slope of velvety Grass, are 18 circles of choice Roses: and at some distance from, but immediately in front of the great central flight of steps leading from the terrace to the lower level, is a fine circular fountain, with a bronze Neptune in his car of shells drawn by sea horses, a pair of very symmetrical specimens of Araucaria imbricata, about 24 feet high, standing one on each side on the lawn to the right and left of the fountain.

I was glad to see but the slightest dash of "bedding out" proper, in this garden; a wide array of such would have spoilt the scene. But there were beds of a permanent and chaste character, containing Kalmias, Vacciniums, Rhododendrons, Heaths, Azaleas, and kindred shrubs, which highly relish the mountain air, and agreeably associate with the statuary placed about. The side descents from the terrace are in three levels instead of one, as in the central descent—each level having six beautiful specimens of Irish Yew, and each flight of steps four vases, one at each corner, the Yews being in line with the vases, which are filled with mixed plants, and, from being in each case immediately backed with the very dark verdure of the Irish Yews, afforded a most pleasing contrast.

On the north side of the house a variously planted American garden was very interesting, and was gracefully festooned and slightly shaded overhead by Ivy, Clematis, and other climbers, trained over a large, and, as far as I know, unique chain tent, the plan of the garden and chain tent being exactly paralleled on the opposite or south side of the house—the beds there being planted with the best Roses, and the chains of tent covered by climbing varieties. On the lower level single plants of the Pampas Grass stood boldly out, and as these plants grow in the neighbourhood of Dublin, few subjects in existence could produce a more graceful or more "sub-tropical" effect. Large bushes of the old Fuchsias were also very noticeable, being draped with flower, and so much more beautiful than Fuchsias are ever seen in pots. These plants are obtained by comfortably protecting in winter the stems, which grow four or six feet high, and giving them a rich and deep soil, and plenty of water in summer.

There was no "polychromatic" work in this garden. Such would have spoilt it, and prevented an unalloyed enjoyment of the scenery; for however desirable it might have been in La Quintinie's time, when the country was in a comparatively rude state, to encourage the draughtsman in ground and gravel, and astonish the natives with elegant twirlings on mother Earth, yet such a hash up from the scenes depicted in old French garden books can in the present day and in this country, where it is almost impossible to get away from all sorts of artificial lines, be only productive of what it has already yielded—an abundant crop of well-deserved ridicule. No situation could be better calculated to display the beauties of a chaste geometrical garden than this at Killakee, for the balustrade cuts it off from the rapidly descending lawn, margined by wildly diversified woods, which, with the bleak hill-tops around—looking much as they did when our "noble savage" ancestors gleaned the Blackberry brakes for food, and ate the pig nuts when they could get them; and the lordly progenitors of our nobility dashed after the wild wolf when on the look out for a garment—contrast most pleasingly with the gardening around the house.

The drive, about a mile in length from the chief entrance lodge, passes down through the woods between the house and the abruptly-rising hill, which, to many persons, would present as great an attraction as the gardens by which the house is flanked. It is a huge bank of natural rock disappearing a considerable distance up amongst Pines and mixed wood, but planted for about 500 feet opposite the west front of the house, with a host of Rhododendrons, and amongst them Kalmias, Spiræas, Cotoneasters, Heaths, Azaleas, and many choice deciduous and evergreen shrubs, and above and behind these by large Bays, Hollies, and Weeping Ashes, conducting gradually to common Pines and trees above. In front of the bank, within the drive's breadth of the mansion, little streams trickle down, and hardy Ferns peep out and grow away quite naturally amongst them—quite at home, being Osmundas. The British Heaths and wild flowers too have full scope, and the whole combine to form one of the most beautiful scenes possible in garden or in wood—a scene, moreover, which may be said to have caused no expense since the first planting—a scene of surpassing beauty when the American plants are in flower, but verdant, interesting, and beautiful at all times, from the season of the Violet to that of the Snowberry.

Before passing down to the other gardens, I may say that no offices of any kind are attached to this finely situated mansion, these being at some distance and completely shut off from the house by wood. To the south of the lawn is a picturesque and densely wooded glen, with mountain rivulet running for several miles through the demesne; and in this glen the principal gardens are situated. Going from the house towards these, the old Pinetum, with many fine specimens, is first encountered, intimately associated with huge and precipitous banks of Rhododendrons, &c., dense woods around, and mountains again appearing in the background, with brawling little falls of the rivulet, beyond which a glimpse of the top of a circular conservatory is caught, standing at the lower end of an exquisite terraced flower garden, walled in, and entered by massive iron gates of elaborate design. This garden, or the greater part of it, has been

cut in the hill side, and from its wooded banks beyond the upper or southern end the visitor may look as plainly down upon the garden and its charms as I now do upon this paper. Knowing this, I preferred, instead of entering the garden at once, to make a circuit and enjoy the view: passing on the way numerous natural and artificial falls, and dark pools in which "the finny darter with the glittering scales" was very abundant—only not so handsomely glittering as the trout of a clear lowland stream, for the water of mountain bog embrowns him; passing the Kerry Saxifrages fringing the rocks; passing the kitchen gardens hidden from the stream and dale by wood. These there was no time to explore, so leaving the stream—which runs through wood like an abridged Dargle for a mile above and below the flower garden—and turning to the left to descend the hill, the desired point of view was soon reached. The scene from this point was most enchanting: for many feet below, were mapped out the beauties of this unique garden, most conspicuous being one of Mr. Turner's best efforts—a very ornamental circular conservatory with a wing of curvilinear houses on each side, the end houses being circular, and the whole range—which stretches across the further and lower level of the garden—being of almost faultless symmetry and elegance. Round this garden ran a border of Roses, mixed herbaceous plants, &c.—a border which I was glad to find had not been sacrificed to the mania for streaks of red, yellow, and blue. The chief entrance is at the side of its upper level, lines of specimen Portugal Laurels in tubs producing a very good effect along the upper walk, but that is forgotten when the visitor begins to descend the central walk leading to the conservatory, for on each level there are choice and varied floral charms, with statuary and Conifers most tastefully interspersed.

In the centre of each half of the top level was a statue, surrounded by a chain of 10 beds, well filled and well varied with plenty of verdure, and on it large cones of pillar Roses. Iron vases were placed at each corner of the steps leading from level to level; and at certain distances along the turf of each level, were handsome china vases filled with the newer Pelargoniums. The middle level was for the most part decorated with bedding plants, 30 neat beds of these surrounding a statue placed in the centre of either half, with handsome Araucarias and very symmetrical Irish Yews—indispensable in all such arrangements. Here again the bedding was remarkably well varied, and of course so much the more interesting. Space forbids me to follow the practice of naming the contents of these beds, but amongst old favourites and things not often used for bedding I will mention Sedum cæruleum, which made the softest and prettiest of little beds; pretty masses of Fuchsia, both white and red; and Manulea formosa. The Gazania was here in much better flower than I had seen it previously, and in greater vigour too, caused, I was informed, by growing it in stiff soil, and giving plenty of water, though this garden—100 feet lower than the view commanding the terrace and house—is 700 feet above the sea level, and of course much cooler, moister, and later than the lowland region about Dublin.

The lower level had a handsome fountain and basin on each half, with a single chain of 10 beds encircling them; ribbon borders to the right and left of the conservatory, and again handsome Araucarias, iron and China vases, &c. "Ribboning," as frequently done, I think the quintessence of vulgarity in gardening; but when it approaches so near to truth and beauty, as in one line here—a mixture of Tritoma and the China Rose—the back row of a ribbon border leading from this garden to the culinary one higher up the hill, one can hardly object to the system. From the seat on the hill, whence this garden is so well seen, with the embowering woods around, and park and mansion beyond them, the visitor may, by looking to the right, see one half of Dublin Bay, and apparently sleeping in it, the Hill of Howth—the bay of Dublin, and this beautiful geometrical garden, from one rustic chair!

The conservatory was very tastefully decorated with both planted out and potted specimens. High up above the creepers were Vines in capital fruiting condition, and as may be supposed, not less ornamental than any other climber. Of the houses, however, space forbids me to do more than mention a few peculiarities. Herbaceous Calceolarias, always very welcome if well done, are somehow very often precarious subjects to manage, as even in gardens famed for their culture we know they frequently fail for a year or two. At Killakee, to my knowledge, they are regularly, well, and abundantly grown by Mr. Rorke, the very successful and persevering gardener. They are sown about the first of August in a rather cool, moist and somewhat shaded intermediate house, in which they remain till about the month of February. From the germination till they are large and strong enough to be placed, first in a greenhouse and then in a cold pit, the slightest check never occurs. The plants grow so rapidly during the autumn and winter, that some of them require potting almost every week during that time; and the peculiar standstill and sickly condition in which these plants are often seen with the best cultivators, is never apparent at any stage. Pereskia Bleo was planted against the back wall of a stove, and had been grafted with 18 varieties and species of Epiphyllum and other suitable Cactaceæ. The magnificent display made by some huge Epiphyllums on the Pereskia every autumn no doubt suggested this grafting, which is likely to produce so interesting and gorgeous a drapery for a high back wall. It is singular that these autumn flowering Epiphyllums, which grow and flower so freely and profusely on the Pereskia, but scarcely live on their own roots, are not more commonly grown, for good plants of them are certainly among the most beautiful stove or intermediate house plants we have at this season. Behind the range erected by Mr. Turner is a suite of garden offices also erected by him, quite worthy of association with the curvilinear range; and then against the end wall of the garden—hidden of course from its general scenery by the iron houses, is a range of plant houses, well filled with new and popular plants. The most telling effect, however, was yielded by an old but grand subject, Passiflora princeps, which was planted out under, and formed the most showy and graceful wreaths over the front bench of a plant stove. This, as I learned from Mr. Rorke, was nearly always in flower; and most valuable for room decoration of all sorts. The Granadilla suspended five dozen of fruit from the roof of the same house. The plant yielded four dozen of fruit in June, and three dozen had been cut during the month of August, beside those on the plant at the time of my visit. I had never seen anything worthy to be called a crop on this plant before. This remarkable fertility causes the fruit to be used as a regular article of dessert at Killakee. Mr. Rorke fertilises all the flowers of the Granadilla when he wants it to fruit, and this probably explains why we so rarely see the plant in that state elsewhere. Expanding in the still dull atmosphere of our hothouses, the noble flower may be said to "waste its beauty on the desert air," as far as regards attracting the necessary insects, and unless the cultivator removes the vivifying pollen, and so does the work of West Indian breeze or exotic fly, we are only favoured with the flower. In the Melon house two plants of the Silverton Park Scarlet-flesh Melon bore a second crop of very good-looking fruit.

Outside the lower end of the terrace garden the hill rapidly falls away into a dense wood; but on the level remaining outside the garden wall, and against the latter, a remarkable structure was being erected, which is entered from the plant houses and hidden from external view on all points. It is a very singular and interesting Fernery, 60 feet long by about 20 feet wide, and 15 feet high. Gothic arches, as in Mr. Bewley's Fernery, only much more contrasted, are raised over the central walk, with a line of smaller arches parallel on each side, these arches already affording very pretty perspective views, though not yet planted. In addition to provisions for Ferns of all sorts, there were oval basins getting ready for Nymphæas, a cool and warm tank for other aquatics, a *jet d'eau* and an alcove with statue at the end of the central walk, which must afford a charming little vista when the arches are draped with verdure. Thus future visitors to Killakee may expect a novel addition to the charms of its gardens.

I know of no better example of the advantage of extensively planting and draining a barren and elevated district than is afforded by this demesne of 500 acres. The late Colonel White found it a barren waste, supporting here and there a few miserable cottiers; but before his death abundant wood had sheltered and beautified the scene; productive land began to yield ample return for outlay; garden beauty appeared upon hill and in ravine; and the last geometrical garden spoken of, replaced an impassable thicket of briars. The gardens were laid out by Mr. Niven, the well-known landscape-gardener, and were made by Mr. W. Roylance, who, first as gardener and since as general superintendent, has had charge of the place for nearly 20 years, during which time most of the gardens and garden improvements have been made. These however are still continued by Mrs. White, and superintended by Mr. Roylance, last winter's work being the formation of a new Pinetum in a hollow glen of the woods; while at present the new Fernery is in hand. General visitors are admitted by cards on certain days, but Mrs. White's kindness to gardeners is even more comprehensive, for they are readily admitted at all times, and are thus favoured with no ordinary boon, for, apart from the enchanting scenery to be surveyed from many parts of the demesne, I have not yet seen the place in which the unities, so to speak, of good taste in laying out and keeping gardens, both geometrical and natural in style, are better preserved than at "White's, of Killakee."

Wm. Robinson.

ON THE CAUSES OF BURNS AND SPOTS ON LEAVES, ESPECIALLY IN STOVES.

(TRANSLATED FROM "ADANSONIA," 1862, p. 312.)

FOR a great number of years, French and other horticulturists have endeavoured to explain the causes of those unhappily too frequent affections which spoil the foliage in cultivation, and often induce the death of plants; and this without arriving at any sound conclusion. All however have established the fact that the sun and water are the principal agents in this evil, but as to the manner in which they worked, the interpretations have been very different, and in many cases even contradictory.

It would be useless to reproduce here all that has been said on this subject, as it is not my object to write the history of these observations. I wish only to record certain facts which I have observed for some years. Clever horticulturists have considered the burns and spots as being produced by lenses or faults which are frequently met with in the glass employed for covering stoves or frames. Others have assigned them to different causes, as, for example: water of condensation charged frequently with oxide of iron, where the frames are made of iron; stagnant moisture; inconstancy of temperature; copper instruments employed for syringing, &c. The first of these causes having obtained most credit, I shall dwell longer upon it, to show its impossibility. The most simple experiment will suffice to prove this. It is true that glass of the ordinary quality includes many faults or lenses, but the defective parts are in general too far from the plants for them to suffer from it. Besides, their inclination varies so much, without the effect ceasing to be produced, that it is difficult to accept this explanation of the phenomenon in question. We all know that to make a morsel of amadou take fire by help of a magnifying lens, it is indispensable that the object be very near the lens. Though the focus varies according to the thickness of the lens employed, it demands at most the distance of 2 or 3 inches. But vegetables in a stove or frame are at least a foot or a foot and a half from the glass, and frequently placed at a distance of many yards. Nevertheless they are attacked everywhere, even in the open air. This is not then the true explanation. Some English horticulturists have supposed that these lenses communicate with drops of water deposited on the leaves, and that the consequent warmth produced this mischief. In the *Gardeners' Chronicle* of 1858 a clever horticulturist attributes the spots to too great a degree of moisture combined with too low a temperature (at least for Orchids). Another practitioner in the same Journal, during the same year, says that by giving plenty of air and light, they are easily avoided. Such are the explanations most worthy of notice. Without rejecting them entirely, we may observe that they appear to be insufficient.

I remarked during 1861, in many Dracænas in the stoves of the Museum, burns which were produced in some instances in consequence of ill-timed syringing; that is to say when the sun was striking directly on the plants. I looked for the explanation of this in the direction of the glass, but though I found some faults capable of forming lenses, reason showed me immediately, that at so considerable a distance as that which existed between the injured leaves and the glass partition (about 9 feet) this cause was not admissible. I removed the plants, which were grievously injured by these burns, without being able to account for the causes which produced them. This year (1862) the same condition was induced in two fine plants of Cordyline australis in the same place, that is to say in front of the gates of entrance to the pavilion. The fine weather allowing me to leave them open, nothing at first took place, but as soon as the temperature without became too low for some delicate plants which were in the same stove, I kept them closed, and the first day, after a syringing made at too late an hour, there too the Cordylines were spotted. This time, then, I persevered longer in seeking the explanation of the phenomenon.

While the doors remained open I noticed nothing wrong. The first day that they were kept closed there were burns. The cause then evidently consisted in the suppression of free air from without. But how did the air prevent the injurious effect from being produced? This was the point which I wished to determine. I placed, then, drops of water on leaves which were uninjured, and closed the doors. At the end of some seconds the effect was produced before me. Each drop became strongly heated. As the thermometer rose its volume increased, and finally, following the inclination of the leaf, burnt the entire thickness of the leaf through the whole of its course.

After this experiment I opened the doors and moistened the leaves again. The rather strong breeze which entered made me presume that the same phenomenon would not be repeated in consequence of the instability of the leaves. That I might be perfectly satisfied on this point, I fastened some of the leaves by little threads, and I was able to see very clearly that when motionless they were burnt, though exposed to the air, and that it was only the motion of the leaves which could guard them from injury.

It remained, then, to ascertain, in admitting with some horticulturists that the drop of water now formed a lens, how it could burn while resting on the object. I made then some attempts with glasses of different convexities, and I acquired a certainty that the more spherical the lenses were, the more it was necessary to bring them near to the object, to obtain the result which I was trying to explain.

I do not pretend to attribute to the same cause all the spots which we frequently remark on plants in stoves, but I am sure that all those which are produced in a few seconds are due to the immobility of the leaves, when the plants are in a badly ventilated stove, and especially when they are watered too late or in too calm weather.

The water in resting too long on the leaves is likewise a cause of the disorganisation which we observe frequently in Orchideæ, Pelargonia, Begoniæ, Cacti, &c., but with a little attention we shall find that the effects are not the same in this case. The colour of the spots

moreover is very different. When there is a sunburn, the spots are yellow and all the thickness of the leaf is burnt. But when the lesion is due to the too long contact of moisture, it is frequently only the cuticle that is injured and the spots are black.

We may then recommend those who are occupied in cultivation to avoid watering and syringing the plants while the sun strikes on them directly, or rather to contrive that the water shall not rest on the leaves from 12 o'clock to 3 at least, and to ventilate the stoves and frames well, so as to take away the water of condensation or from the syringe, or in winter by the disengagement of dry heat or by currents of warm air. *L. Neumans.*

Home Correspondence.

Royal Horticultural Society's Regulations in Reference to Roses.—I see that July 1 is the marriage day of the Princess Alice. This is its only recommendation as a day for a National Rose Show. The temperature rises from the 6th of January to the 6th of July, and falls from the latter date to the former period. To hold a Rose show in July seems to imply that rosarians cannot get their Roses ready till the temperature is just upon declining; it, moreover, ignores the poet's substantial words, "the rosy month of June," and reduces them to an illusion, or poetic license—a license allowable to scholars, but not to rosarians. Now there are two Royal days "in the rosy month of June," which both happen to be Wednesdays, the most convenient days, viz, June 21, the Proclamation day, and June 28, the Coronation day of her Majesty. The former day, I believe, would bring most grist to the mill, as it would embrace the Summer Roses, the Teas, and Tea-scented Noisettes, as well as the other autumnals. Why have we so few Yellow Roses at the National Rose Show? Because of the lateness of the day. A day in July is a slur upon our climate, and also upon rosarians. It also rubs out of competition all the small holders, unless they live far North. If Rose plants are well managed and cut back from the 10th to the 15th of March, which is the best time for their future good, there will be legions of Roses (and increased competitors), more than there have ever yet been shown, and there will be centre blooms instead of side ones—a full truss instead of a broken one. It ought to be the object of the Society to encourage early blooming in June, and late blooming in September. The earlier Roses can be got into flower the better chance they will have of confirming their wood and of standing the severity of a premature winter, as in the case of 1860-1861. I found after that severe winter, that Rose plants that were cut back early, and which were never cut after they were in bloom, wintered perfectly well, as to their wood. The dropping off of the flower is the terminus in England, and the nearest approximation to the formation of seed, which is Nature's true terminus. If a quick succession of flowers is wanted, then the sooner the flower trusses are cut off the better, but it estops the maturation of wood. I should like much to try one year the 21st of June. If people know now that is to be the day, they will not of course move their Roses, or they will move them more carefully; and they will cut them back at the proper time, and also move up their land to let in sun-heat as soon as the severity of winter is over. It is "moonshine" to say that Roses in legions cannot be got by June the 21st. The fact is, out of the thousands who profess to grow Roses, or possess them, there are but few working and artistic men. A July show is a "bonus" for "large" stocks and "lazy" fellows. I am not surprised to find that other correspondents have d murred to Saturday as a day for a National Rose Show. *W. F. Radclyffe, Rushton.*

New Description of Vinery, &c.—I beg to send the following article for an opinion from some of your talented correspondents. The plan suggested is a bold experiment, but possibly none the worse for that, as some of our best things have been what may be called Utopian in their origin. There is another question I wish to ask. I have been working at Sclerogen microscopically, so as to get objects of all the structures I can; but I am struck with Sclerogen of the Pear as represented by Jussieu, and copied into Balfour's "Manual." I have examined all the Pears I have been able to get, yet not one of these possesses the slightest resemblance to the figure. I am therefore desirous to know if any of your correspondents have seen this structure, and are able to verify its accuracy. If so, will they kindly tell me in what Pear it is found. The following is the suggestion to which I first alluded. A friend of mine has repeatedly asked my opinion as to what I thought of the commercial value of an erection similar to what I am about to describe. This erection he thinks would be of great benefit to agriculturists, and produce an annual profit so as to eventually liquidate the expense of erection. The following is his plan:—To erect a place 30 feet high, and 30 yards square; the roof to be glass, the sides composed of a brick wall, 9 inches thick, from which would spring the glass roof. In the brickwork there would be iron columns every 5 feet, to the height at which the glass is intended to commence. At the base of these columns would be planted Vines, to be trained against them, and then connected wires from each side would form an arch underneath the glass roof. This, by means of the sun's rays, he thinks would ripen the Grapes, and he concludes that the produce would be such that in time it would pay for the erection by the sale of the Grapes. He would devote the interior to the housing of agricultural crops such as grain, and hay, which by being drawn in would prevent the necessity of thatching, and that would be a saving of some expense. Now the questions at issue according to my ideas are these: 1st, would not the opaque walls be detrimental to the growth of the Vines? 2dly, whether the height of the Vine also would not be detrimental, for there would be a direct growth of 30 feet before the rods reached the roof, and then the half of the roof of the house would be 45 feet on each side. 3dly, whether the produce for which the building is intended to be used would not by heating give out a gaseous product that would be seriously injurious to their healthy growth. There can be no doubt that beautiful berried fruit can be grown without artificial heat, for some of the finest I ever saw were grown without it; and I have also seen some of the finest Black Hamburgh Grapes grown in the Midland Counties on an east wall, without any protection. Therefore, it is not whether the fruit can be grown without artificial heat, but whether the height and size of the building and the exhalations arising from the produce intended to occupy the centre would not be detrimental to its success. I shall feel obliged if some of your Correspondents can give me information on this subject. *D. Westcott, Moseley, Birmingham.*

Berberries.—I have to-day eaten Berberry Jam without stones, and yet my trees bear fruit with stones. Surely this question ought to be decided by the authorities. *A.*

Ancient Gardening.—In the name of the Prophet, Beans! Availing myself of an unusual holiday, I have played, for the nonce, the part of "retired Leisure, that in trim gardens takes his pleasure;" and with a view to perform Mr. Darwin's behest, have wandered inquisitively amongst the pleached alleys, clipped Yews, peacocks, eagles, and battlemented hedgerows of our forefathers, caught each quaint old gardener by the button-hole, and plied him with the above startling apostrophe—In the name of the Prophet, Beans! The following clippings and cuttings are the result of my inquiry:—Petrus de Crescentiis: Ruralium Commodorum, lib. xii. 1471:—"Spargitur autem semen fabæ in locis calidis aut temperatis, Januario aut Februario. Sed et seri potest mense Martio." (This work, though published at the above date, was written early in the 14th century). Joannes Cuba: Ortus Sanitatis, De Herbis, Plantis, &c., 1491. (There is an earlier edition without date.)—"In principio mensis Novembris faba spurgenda est. In mensa Decembri faba circa septimum ydus potest seri." Book xiii., cap. i. Tusser: A hundreth good poyntes of husbandry. Imprynted at London in flete strete within Temple barre, at the signe of the hand and starre, by Richard Tottel, 1557.

"Novembre, verse 34.

Set gardeine beanes after Saint Edmonde the King:
The Moone in the wane thereon hangeth a thing.
Thencrease of one gallonde well proved of some:
Shall pleasure thy householde ere peskod time come.

Februarii, verse 62.

In Feverell rest not for taking thine ease:
Get into the grounde with thy beanes and thy pease.

Marche, verse 71.

Sow wheate in a meane, sow tiny Rie not too thin;
Let peason and beanes, here and there take therein."

Conradus Heresbachius: Foure Bookes of Husbandry, Conteyning the whole arte and trade of Husbandry. Newely Englished by Barnabe Googe, 1572. (The Latin version was published at Cologne in 1570):—"The beane is sowed fyrst of all other pulse in the spring tyme. French Beane. It is sowed of dyvers from the Ides of October to the Kalendar of November in some places, and with us in March. Book i. pp. 33—4. Maison Rustique, or the Countrie Farm. Compiled from the French Tongue, 1600 (1st French edit. 1586):—"Beanes may sowen at two times of the yeare, in Autumn, where it is a strong grounde, and the beanes be great, and in the Spring, the beanes being but small, but at what time soever you sowe them you must have special regard to sowe them all about the fifteenth daie after the change of the moon." The writer then goes on to inform us that "The flowers of beanes, notwithstanding they be of a pleasant and delightsome smell, doe hurt a weake braine, and such a one as is easily caried away and overcome and hereupon it commeth to passe that there are a great number of fooles, when beanes are in flower," pp. 694-5. Olivier de Serres, Seigneur de Pradel: Théatre d'Agriculture et Mesnage des Champs, 1619. (1st edit. 1600):—"Les pois hyvernaux se sement durant l'automne, en plusieurs fois, et tousjours en Lune estant vielle. En même terre, temps, et poinct de Lune, se logent les Feves de l'Hyver," p. 462. Blagrave's Epitome of Husbandry, 1669:—"Generally to sow after Candlemas, but especially let them be sown in the old of the moon," p. 18. Blome's Gentleman's Recreation, 1686:—"Beans delight in a rich, stiff, and deep mould; the season to set them is from Christmas to Candlemas, and also earlier or later," p. 218. Worlidge's Systema Agriculturæ. Kalendarium Rusticum:—"February—now sow Annise, Beans, Pease, &c., &c. November—Pease and beans may now be set," pp. 268 and 286. Dictionarium Rusticum Urbanicum et Botanicum, 1704:—"As for garden beans, they are usually set between St. Andrew's and Christmas at the wain of the moon; but the surest way is to stay till after Candlemass." Le ménage des Champs et de la ville, 1737:—"Il y en a qui les sement dès l'avent pour en avoir des premières, d'autres qui attendant jusqu'à ce qu'il n'y ait plus rien à craindre du côté des gelées," p. 274. Dictionnaire Universel d'Agriculture et de Jardinage, 1751:—"On cultive les Feves dans les Champs et dans les jardins au printemps et après le moisson." La Nouvelle Maison Rustique, 1790:—"On seme les haricots au mois de Mai." There are several other ancient works on Gardening, in which the culture of Beans is described, but no precise date given for the sowing. Amongst these are Gervase Markham's "Farewell to Husbandry," 1620, and a quaint old tome called the "Country-man's Recreation," 1640. The Table of Contents in the latter concludes with the following quatrain:—

"To God be praise on high
in all our worldy Planting,
And let us thank the Romanes also,
for the Art of Graffing and Gardening."

T. Westwood, Brussels.

Pinus ponderosa.—I find my trees of this suffer sadly from the attacks of insects, which perforate the bark, and cause a vigorous discharge of turpentine; the evil seems to increase every year, and I fear I shall lose many of my best trees. I have rubbed the bark of some with oil, but this seems to do little, if any, good; I should be glad to know if any of your readers have found an effective remedy for this pest? *E. Solly.*

Prize-taking at Horticultural Exhibitions.—Has "Florist" (see p. 1157) considered what would be the result of his proposed system of awarding prizes if it were adopted? I hardly think he has, or he would never have written about garden productions in the same way as about pigs, sheep, and cattle. As every one knows, there are but few gentlemen or noblemen who would hesitate to give orders concerning their cattle and other live stock, as to how and with what food they were to be fed, and how to be treated; but did any one ever know of a gentleman telling his gardener to grow Parsley in one way and Carrots in another, Verbenas in this way or Pansies in that way? Certainly not; and yet "Florist" would have us believe that the gardener's employer was entitled to both praises and prizes, as much in one case as in the other. Or, does "Florist" intend for all gentlemen to become practical gardeners? for every gentleman who owns a garden to give his gardener orders what to do every day—to tell him when to start the early Vinery or Peach house, when to sow Mustard and Cress, when to pot Orchids, and when to plant Potatos? When employers do that, then prizes should be theirs; but I think it would be very unjust to give the Duke of A. a prize for Cucumbers, and Lord B. one for Melons, when these noblemen had been respectively 200 or 300 miles away from their gardens, from the time the seed was sown, to the time the fruits had reached perfection. So much for the injustice of the case. Now for the result. If the employer is to reap all the advantages of the gardener's extra exertions, exhibitions will speedily become a failure, for gardeners will then lose every substantial payment for their trouble; and although your correspondent declares emulation to be a leading motive, it is not the leading one in this instance. Let gardeners win as they have always won, and employers will have their share of the spoil in the shape of first-class flowers, fruits, and vegetables; but let employers claim the prizes, and where the productions are now first-class, inferior articles would, I fear, take their place. *G. G., Coventry.*

——Suppose that A., gardener to B., has been an exhibitor for several years, and bought one-half of his show plants with the profits from other shows, and the next season B. wishes to have all awards and profits turned over to him, what would "Florist" do under such circumstances? Does he suppose that A. would put himself to the inconvenience which is necessary for weeks or months before a show, to say nothing about disturbed slumbers? No; he may depend upon it that the exertions made by A. are a matter of £ *s. d.* to him, while the chief honour goes to his master. Again, unless Mr. B. had his best plants in true character, he would not like to compete against Squire C., and as a consequence half of the exhibitors would keep their plants at home. To use your own words, "exhibitors are too important a body to be thus cavalierly treated." Intelligent gardeners should not be classed with Betsy Brown. *J. C. N., Selby.*

Erianthus Ravennæ.—I shall be glad to learn whether any of your readers have succeeded in flowering this new Grass in the open ground; seeds of which have been offered in most seed lists for several years past. From my own experience I conclude that it requires a higher temperature than is usually attained in these latitudes. It seems tolerably hardy in winter, but makes no growth in summer, or but a scanty one; an imported root has given no better results than seedlings raised by myself. *Quis.*

Societies.

ROYAL HORTICULTURAL: *Dec. 7 to 16 (International Show of Fruit, Vegetables, Roots, and Gourds).*—In many respects this is an extremely interesting exhibition; the display of fruit especially is extensive, and that of roots and vegetables tolerably satisfactory. Foreign produce, though not so plentiful as it was last

year, is also present in the shape of Apples from Nova Scotia, Pears from Belgium, collections of miscellaneous fruit from France, and last, but not least, some fine things from the garden of the Viceroy of Egypt.

In the Class set apart for productions from Fruiterers, M. Webber & Co., of Covent Garden, show a dozen enormous fruit of Uvedale's St. Germain Pear, the united weight of which is 29¼ lb.! The same exhibitors produce very fine specimens of Catillac, Monsieur le Curé, Easter Beurré, and Mathew's Eliza Pears, the last a rather new and good-looking variety; also beautiful examples of White Calville, Pomme d'Api, and Gloria Mundi Apples; excellent Tangierine Oranges; both Black and White Grapes, Pine Apples, and very fine fruit of Prickly Pear (Opuntia), which is now plentiful in London. From M. Chevet, the great French fruiterer of the Palais Royale, Paris, comes another collection, in which are nearly equally good Uvedale's St. Germain Pears, White Calville Apples, and other interesting fruit, among which occur specimens of two large kinds of Capsicum.

Pine Apples are not numerous; the best being a Smooth Cayenne, from the Royal Gardens at Frogmore; and the same variety being also furnished by Mr. Wallis, gr., Astle Park, Congleton. The best Queen comes from Mr. Heather, gr. to R. Pullford, Esq.

Grapes, likewise, though somewhat limited in quantity, proved excellent in quality. Of Muscat of Alexandria very fine specimens come from Mr. Tillyard, gr. to J. Kelk, Esq.; and three bunches, equally good in point of merit, are contributed by Mr. Ingram, gr. to J. J. Blandy, Esq., of Reading. Of Black Grapes, there are some excellent examples, chiedy from Messrs. Lane, of Berkhampstead, who of late years seem to have turned their attention most successfully to Grape growing. The varieties shown by them on this occasion are Black Hamburgh, Esperione, West's St. Peter's, Barbarossa, and Black Prince—all beautiful fruit, black as Sloes, and covered with a fine bloom. From Mr. Hill also come some admirable Black Hamburghs for this season of the year; and we also found good bunches of the same variety from the great Vine at Cumberland Lodge.

Of Pears there is a good display, especially of varieties fit for dessert. In the class of 12 dishes of the latter, the best fruit come from Mr. Ingram, gr. to Her Majesty at Frogmore, who furnishes beautiful fruit of Princess Royal, Glou Morceau, Moccas, Prince Albert (a handsome high-coloured variety), Easter Beurré, Chaumontel, Vicar of Winkfield, Jean de Witte, Knight's Monarch, Winter Nelis, Passe Colmar, and Chobden Court. From Mr. Cox, gr. to J. Wells, Esq., of Redleaf, who has been placed 2d, come Josephine de Malines, Beurré d'Aremberg, Winter Nelis, Glou Morceau, Baronne de Mello, Beurré d'Hiver, Easter Beurré, Beurré Rance, Passe Colmar, Vicar of Winkfield, Old Colmar, and Chaumontel. The next best lot is shown by Mr. Lumsden, gr. to Lady M. N. Hamilton, Sleaford, whose fruit, though good, is smaller in size and greener than that grown in the neighbourhood of London.

In the Class of 6 dishes of Dessert Pears, the best are contributed by Mr. Tillyard, who has beautiful examples of Chaumontel, Passe Colmar, Josephine de Malines, Beurré Rance, Glou Morceau, and Easter Beurré. Mr. Phillips, gr. to J. H. Burton, Esq., Pontefract, was placed 2d with Easter Beurré, Glou Morceau, Beurré Rance, Winter Nelis, Hacon's Incomparable, and Passe Colmar. Many others who show under this head have been disqualified, either on account of their fruit not being in good condition, or from its not consisting wholly of dessert kinds.

In the Class of 3 dishes of ripe Pears, the best come from Mr. Beasley, gr. to T. Wood, Esq., Twyford Abbey, who sends Easter Beurré, Chaumontel, and Glou Morceau; 2d, Mr. Earley, gr. to P. F. Pryor, Esq., Digswell, who shows Passe Colmar, Beurré Rance, and Glou Morceau; 3d, Mr. Ingram, gr. to J. J. Blandy, Esq., who furnishes Glou Morceau, Winter Nelis, and Winter Crassane.

In the Class of single dishes of ripe Dessert Pears, the best was Glou Morceau from Mr. Ford, gr. to W. E. Hubbard, Esq., Horsham; Beurré Diel, from Mr. Westbrook, of Abingdon; and Glou Morceau, from Mr. Plester, gr. to Mrs. Rush, of Stanstead.

Of single dishes of the heaviest Dessert Pears, the best come from Mr. Murray, gr. to the Rev. D. Williams, Tring Park, who shows Glou Morceau; Mr. Plester has Chaumontel, and Mr. Phillips Glou Morceau.

Of other dishes of Pears shown for weight, the best are Catillac, furnished by Mr. Ross, gr. to C. Eyre, Esq., Welford Park, Newbury; the second best, Uvedale's St. Germain, shown by Mr. Scrymger, gr. to R. Palmer, Esq., of Reading; and the third best, the last-named variety, from Mr. Cox, Redleaf.

Apples are numerous, in some instances unusually highly-coloured, and altogether in excellent condition. The best 12 dishes of Dessert varieties come from Mr. Ingram, gr. to Her Majesty at Frogmore, and consist of very fine fruit of Cox's Orange Pippin, Old Nonpareil, Ribston Pippin, Court Pendu Plat, beautiful in colour; Rosemary Russet, Scarlet Nonpareil, Blenheim Orange, Small's Imperial Scarlet Russet, Fearn's Pippin, Claygate Pearmain, and Gipsy King. Mr. Ford, gr. to W. E. Hubbard, Esq., Horsham, who is placed 2d, has fine examples of King of the Pippins, Ribston Pippin, Pearson's Plate, Adams' Pearmain, New Rock Pippin, Cockle Pippin, Wickham's Pearmain, Scarlet Nonpareil, Cornish Gilliflower, remarkably fine; Blenheim Orange, small, but very fine in colour; Scarlet Pearmain and Golden Russet. The next best collection is that of Mr. Betteridge of Milton Hill, near Steventon, who shows small but finely-coloured fruit.

Of 6 Dishes of Dessert Apples the best come from Mr. Betteridge, who has finely-coloured examples, uniform in size, of Fearn's Pippin, Old Nonpareil, Blenheim Orange, King of the Pippins, Ribston Pippin, and Court Pendu Plat. Mr. Kaile, gr. to Lord Lovelace, contributes Ribston and Fearn's Pippins, Blenheim Orange, Scarlet Nonpareil, Loan's Pearmain, and King of the Pippins. From Mr. Lane, St. Mary's Cray, come Old Golden Reinette, Winter Queening, Blenheim Orange, Spanish Pearmain, a lemon-coloured variety, like the last in form but earlier and a better keeper; also King of the Pippins and Prince's Pippin, the last a small carnation-striped Apple, of American orlgin.

In the Class of 3 dishes of ripe Dessert Apples, the best come from Mr. Betteridge, and consist of Ribston Pippin, Blenheim Orange, and King of the Pippins, the last remarkable for their clear yellow skin beautifully flushed with red. Mr. Ford, gr. to W. E. Hubbard, Esq., is 2d, with Herefordshire Pearmain (misnamed Winter Pearmain), Blenheim Orange, and Golden Reinette, the last large and fine. Mr. Bentley, gr. to Lord St. Leonards, comes next, with fine fruit of Scarlet Nonpareil, Blenheim Orange, and Cornish Gilliflower.

Of single dishes of ripe Dessert Apples, the best are those of Mr. Hall, gr. to Capt. Tyrrell, Ealing, who has fine fruit of Cox's Orange Pippin. Mr. Plester, gr. to Mrs. Rush, contributes the same excellent variety, and beautifully ripened Blenheim Oranges come from Mr. Ford, gr. to W. E. Hubbard, Esq.

In the Class of 12 dishes of Kitchen Apples, the best come from Mr. Betteridge, who furnishes large and fine fruit of Blenheim Orange, Hollandbury, Minshull Crab, Lucas's Pride, Jersey Codlin, Kentish Fillbasket, Rymer, Glory of Kent, Kentish Broading, Maysbury Pippin, Alfriston, and Mère de Ménage, the last small, but bright red in colour. From Mr. Cox, of Redleaf, come some fine fruit, though not so uniformly bright in colour as those just named. They consist of Castle Major, Bromley Apple, Tower of Glammis, Bedfordshire Foundling, Yorkshire Greening, Gloria Mundi, large and fine; Poor Man's Profit, Emperor Alexander, Waltham Abbey Seedling, Beauty of Kent, Blenheim Orange, and Golden Noble. Mr. Moffat, gr. to Viscount Maynard, is 3d with New and Old Hawthornden, Manx Codlin, Hollandbury, Herefordshire Pearmain, Grieve's Pippin, Melon Apple, a handsome variety; Reinette du Canada, Beauty of Kent, and others.

Among 6 dishes of Kitchen Apples the best are those of Mr. Betteridge, who has fine fruit of Blenheim Orange, Glory of Kent, Jersey Codlin, Hollandbury, Kentish Broading, and Alfriston. Mr. Parsons, gr. to R. Attenborough, Esq., of Acton Green, sends Emperor Alexander, Alfriston, Golden Russet, Wellington, Golden Noble, and Blenheim Orange. Mr. Heather and Mr. Kaile also both show good fruit under this head.

Among 3 dishes of Kitchen Apples the best come from Mr. Ford, who contributes Wadhurst Pippin, Dumelow's Seedling, and Alfriston. Mr. Betteridge has Glory of Kent, Alfriston, and Beauty of Kent; the last finely carnation-striped. From Mr. Wells, Holme Lacy, are fine examples of Blenheim Orange, and Mr. Scrymger of Reading, large and beautiful fruit of the Emperor Alexander.

Among single dishes of Kitchen Apples the best, consisting of New Hawthornden, come from Mr. Plester, gr. to Mrs. Rush. Mr. Wells has very fine Blenheim Orange, and excellent fruit of the same variety comes from Mr. Earley.

The heaviest Five Apples come from Mr. Lumsden, gr. to Lady M. C. Hamilton, Sleaford, who shows Gloria Mundi; Mr. Young, gr. to R. Barclay, Esq., Highgate, sends Alfriston; and Mr. Masters, Highgate, Blenheim Orange.

Currants, both red and white, are shown in a good state of preservation, from Mr. Ford, who has Raby Castle; Mr. Curd, and Mr. Tivey, who furnish red and white Dutch.

Nova Scotia has contributed a tolerably extensive and beautiful collection of Apples, which have arrived in fair condition, and though generally rather smaller in size than last year's contributions from the same country, are yet sufficiently fine to win equal prizes with some of the best of our English fruits of the same class. Among them some of the more striking sorts are Emperor Alexander, Calkin Pippin, a variety in the way of Gloria Mundi; Sponge, a carnation-striped sort; Rose Apple, another red streaked variety, as are also Red Pearmain, Snow Apple, and Hubbertson's Nonsuch; Spitzenberg is a high-coloured kind; and of Golden Ball, Gloria Mundi, and Gravenstein, we observed many beautiful examples. The Red Baldwin is a handsome fruit. Ribstons are not better than our own, and the same may be said of Blenheim Orange and others. On the whole, however, the collection is a worthy representation of the Apple culture of the country around Halifax, from whence it comes.

From the garden of the Viceroy of Egypt, Mr. Hardie, the gardener there, has sent some wonderfully fine Pomegranates, one of the largest of which measures 18 inches in circumference. In the same collection are also very fine Citrons and Shaddocks, together with sweet and common Lemons, longish-shaped rough-skinned bitter Oranges, Blood or Maltese Oranges, Seville and common sweet Oranges, and a Mandarin variety, but not the best of that class; also some small Medlars, two kinds of Papaw, one round, large, and green, the other Pear-shaped, green, and ribbed; fruit of Psidium pyriferum; Dates attached to the branches on which they grow; and specimens of Custard Apple, the last, perhaps, hardly ripe—altogether an extremely interesting collection. Mr. Blandy also contributes examples of Custard Apple from Madeira.

Among Miscellaneous fruit we noticed some Quinces, small Imperatrice Plums, American Cranberries, and a dish of Cuthill's Black Prince Strawberries, perfectly ripe, and of good size. From E. Stuart, Esq., of Nice, are examples of a beautiful small green and white speckled Lagenaria from Port Natal.

A collection of Pickles of different kinds are exhibited by Messrs. Burgess & Son, 107, Strand, and from Messrs. Fortnum & Mason are extremely interesting examples of preserved fruits.

M. Gregoire, of Belgium, has furnished an extensive collection of Pears, which, however, arrived too late for the first day's show. Among them are some highly interesting varieties, which may be inspected with advantage.

Among Seedling fruits is a new Pear, raised by the Rev. Mr. Huyshe, and named Prince Consort, to which a First-class Certificate has been awarded. It is stated to be a cross between the Beurré d'Aremberg and Passe Colmar; and being of good size and fine flavour, will doubtless prove equally a favourite with other fine varieties, for which we are indebted to the same raiser.

The Vegetable department is not the least interesting portion of the Show. Of Potatos, Mr. Curd, gr. to M. G. Thoyts, Esq., Reading, sends an admirable collection, in which are Daintree's Seedling, a good medium-sized white sort; Devonshire Red, Fox's Seedling, Bath Kidney, King's Kidney, Fluke, Early Oxford, Dalmahoy, and Imperial, all useful looking varieties. From Mr. Campbell, Winorick Hall, near Warrington, come among others, Manchester Prize, a red kind; Oxford Red, German Foxes, a small clean-skinned sort; Scotch Dons, and other large kinds. Among Kidneys, Mr. Veitch has a splendid dish of Prince of Wales, and from Mr. Taylor, a cottager living near Watford, are beautiful specimens of Huntingdon Kidney. Mr. Frisby, gr. to H. Chapman, Esq., Sleaford, and Mr. Moffat, gr. to Viscount Maynard, show among other Kidneys fine specimens of Lapstone, Jackson's Superb, Albion, Royal Ashleaf, Lemon, Flesh Skinned, Prince of Wales, apparently a fine variety; and Pink Fluke. Among round Potatos, the best come from Mr. Moffat and Mr. Curd, in whose collections are Pheasant's Eye, Painted Lady, Transell's Seedling, Early Ten-week, Early Shaw, Champion's China, and Red and White Regents. Among other kinds, Mr. Veitch has very fine examples of Early Frame; Mr. Ford, Horsham, Red Regents; Mr. Budd, gr. to Earl Darnley, Mona's Pride; and Mr. Masters and Mr. Robinson furnish good specimens of other varieties. Mr. Spary, of Brighton, shows the produce of one tuber which numbers 268 Potatos and weighs 39 lb. 3 oz.; it is a small round white Potato like a Regent.

Onions are not plentiful, and consist for the most part of the White Spanish, fine examples of which come from Mr. Westbrook, Abingdon; Mr. Earley, of Digswell, sends apparently the same variety; and Mr. Budd has James's Keeping.

Some remarkably fine Carrots come from Mr. Curd, whose specimens measure 14 inches long, and no less than a foot round the top. These are from the neighbourhood of Reading, whence also come some fine examples from Mr. Scrymger. Some very good Carrots of a useful size likewise come from Mr. Drewitt, The Denbies, near Dorking.

Parsnips are clean, straight, and in every way excellent. They consist of Hollow-crowned and Student, the difference between which in the specimens shown is not very apparent. Mr. Budd, Mr. Kaile, and Mr. Curd, are all exhibitors in this class.

Among Leeks are very fine specimens of London Flag, from Mr. Ingram, gr. to her Majesty at Frogmore. Others are not remarkable.

Beet consists of Nutting's and the Pine Apple, good examples of which are contributed by Mr. Westbrook and Mr. Drewitt. The former comes from Mr. Frisby.

Turnips are chiefly confined to the White Stone, the best of which are furnished by Mr. Ingram, from the Royal Gardens at Frogmore. Orange Jelly comes from Mr. Ford, and we also noticed the American Red-topped Stone.

Very good Salsafy is contributed by Mr. Earley, Digswell, who it may be remembered favoured us with his mode of cultivating it in our last year's volume (see p. 53, 1863). Mr. Kaile and Mr. Curd also show good roots of this esculent.

The best Scorzonera is supplied by Mr. Drewitt, The Denbies, near Dorking, and good specimens also come from Mr. Ross, gr. to C. Eyre, Esq.

Of late Peas a dish is contributed by Mr. Frisby from Lincolnshire; the sort is stated to be Ne plus Ultra.

Brussels Sprouts are excellent, especially some from Mr. Earley, Digswell. The Roseberry variety comes from Mr. Mobbs, Newport Pagnell, and Mr. Frisby. The Dalmeny Sprout is also shown. It is reported to

be milder and better tasted than the ordinary Brussels Sprout.

Of Borecoles good specimens are contributed by Mr. Veitch and others. We also noticed a few variegated varieties.

Broccoli appears to be all one sort, although Snow's, Osborne's, Walcheren and other names are applied to it. Good heads of it come from Mr. Budd, Mr. Ford, and Mr. Frisby.

Savoys of the kinds ordinarily cultivated are plentiful and good. They are furnished by Mr. Budd, Mr. Ingram, Mr. Frisby, Mr. Drewitt, and Mr. Ford.

Cabbage is chiefly confined to the Early Dwarf York kind. We, however, noticed examples of the Fearnought, which is very well spoken of; and of Lockhart's Rosette. The last comes from the Royal Gardens, Frogmore; the others from Mr. Ford, Mr. Budd and others.

Of Chinese Yams splendid specimens are shown by Mr. Tillyard, gr. to J. Kelk, Esq., who also has very fine sticks of Horse Radish, in the cultivation of both of which Mr. Tillyard is most successful.

Celery, notwithstanding the late dry season, appears to be good. The best red sort is Ivery's Nonsuch, from Mr. Hall, gr. to Captain Tyrrell, of Ealing; and the best white, called Wall's Invincible, is supplied by the same exhibitor. Mr. Budd and Mr. Ford also both show well in this class.

Endive, consisting of French, Moss, Curled, and Batavian, is exhibited by Messrs. Veitch, Frisby, and others.

Among Miscellaneous articles are Mushrooms, a Bromham Hall Melon, new Asparagus, French Beans, Seakale, Chicory roots, and an interesting collection of Gourds; the last from Messrs. Sutton, of Reading.

The last-named exhibitors also have a fine display of agricultural and other seeds, in little glazed cases; dried Grasses, Kohl Rabi, Long and Globe Mangel, Champion and other Swedes, Potatos, &c., all so tastefully arranged, and occupying so much room in the Western Arcade, as to form quite an agricultural exhibition of itself, well worth travelling to South Kensington to see. Mr. Veitch has also a good display of seeds and roots, consisting of Kohl Rabi, Mangel, Turnips, Parsnips, White Belgian Carrot; the Chardon, a large productive Cattle Potato; as well as Prince of Wales's, Lapstone, Royal Ashleaf, and other varieties, all neatly set up. Agricultural Cabbages and roots also come from other exhibitors.

Among plants submitted to the inspection of the Floral Committee, the following received First-class Certificates, viz., a handsome scarlet-flowered Manettia, with good foliage, from Messrs. Veitch; and Asplenium palmatum cristatum, from R. J. Gray, Esq., of Exeter. **The last is an extremely pretty variety.**

Notices of Books.

De Nederlandsche Boomgaard. By the Society for Regulating and Improving the Varieties of Fruit Trees at Boskoop.

(*Continued from p.* 678).

Of this work we have now received both a French and German text for Parts 5 to 8, containing figures and descriptions of the following varieties of Apples:—

No. 9. *Süsser Paradies Apfel*, Pomme de Paradis Douce. Pretty, but described as only of third-rate quality.

No. 10. *Du Halder.* The authors of the *Annales de Pomologie* reckon it of first-rate quality; but it is only second-rate according to the work before us. It was raised by M. Loisel, at Faquemont, in the province of Limbourg, Belgium.

No. 11. *Dutch Mignonne*, Grosse Casseler Reinette of the Germans, or Hollandische Goldreinette. The synonyms to this well-known sort in the Horticultural Society's Catalogue of Fruits are given, with the exception of Paternoster Apfel, which, it is stated, belongs to another sort. It is considered good for table and kitchen use, and for drying.

No. 12. *Pomme de Vin Rouge.* This is the Roode Wijnappel of Knoop. Middle-sized, oval, red; it is one of those Apples which are covered with a "bloom" like a Plum, and must be considered second rate.

No. 13. *Herefordshire Pearmain.* Colour too green, that of the flesh too white. We do not think it is the correct sort.

No. 14. *White Winter Calville.* In Holland, as in France, this variety is said to be much esteemed. In England it does not succeed well except in an orchard

Garden Memoranda.

Byfleet Lodge, the Seat of P. L. Hinds, Esq.—This interesting place is situated about two miles from Weybridge. The house is built in the Italian style, and has a conservatory attached to the drawing-room about 50 feet long and 20 feet wide. Three sides of it form part of the house, and it has a glass front facing the lawn: the roof is curvilinear, and it is ventilated at the sides and top. The walls are covered with Camellias, Acacias, Neriums, and Orange trees, and the roof is ornamented with Cobœas and Passion-flowers. A walk runs down and across the centre, and round the sides, making four borders, which are filled with flowering plants in pots. This arrangement is adopted in order that fresh supplies of plants might be introduced according to the season. Azaleas, Cinerarias, and other plants are in course of preparation for this purpose.

On the lawn in front of the house are some good specimens of Deodars and Araucarias, quite 20 feet in height: Taxodium sempervirens, 30 feet in height; Abies Pinsapo, 15 feet in height; and a fine bush of Magnolia, 15 feet in height, and as much through. The lawn is bordered by an ornamental lake, in which is an island, approached at its southern extremity by means of a bridge. On the island are several trees, whose branches form an agreeable shade in summer. There is also a boathouse, which, as seen from the lawn, is rather a pretty object. A gravel walk encircles the lake, which is margined here and there with large masses of Rhododendrons, and is fed through iron pipes from a canal about a mile and a half distant.

A low iron fence divides the lawn from the park, in which, planted here and there, are masses of Rhododendrons and fine specimen Conifers, which, seen from the windows, have an excellent effect. About two miles distant to the west is St. George's Hill, the property of the Countess of Ellesmere. It is covered with Scotch Fir, which has a comfortable appearance, especially in winter; to the south East Horsley Towers, the seat of the Earl of Lovelace, is seen in the distance. On the lawn is a fine specimen of the Tulip-tree, quite 70 feet high, and very symmetrical in form. During the past summer this has been covered with blossoms, many of the dead remnants of which are still hanging to the tree.

On the west side of the house are the fruit garden and houses. Foremost among the latter is a house for the growth of tropical fruits, which are Mr. Hinds' particular favourites; and as he has spent many years in the West Indies, where he studied the peculiar wants of these interesting plants, he has had this house built according to his own ideas as to what would be most suitable for their successful culture. This house was put up by Mr. Ormson in August, 1863, and the growth of the plants, which we shall proceed to give an account of, will serve best to show how far Mr. Hinds' plans have succeeded.

The house is 75 feet long, 35 feet wide, and 36 feet high. It is arranged so as to be divided, if necessary, into three compartments. The two outside ones have central walks and two borders; the centre is a square bed, 20 feet by 20 feet, without the central walk. All the beds have a hollow chamber for hot-water pipes; the central portion has eight 4-inch pipes, the other four beds have three 4-inch pipes to each. These are covered with slate slabs. There is a vault underneath the pipes, so that they can be examined with facility in case of any derangement. Eight 4-inch pipes are carried round the sides of the house, furnished at intervals with evaporating pans, and over these pipes is a slate bed 2 feet wide and 1 foot deep, filled with tan for plunging the plants in—3000 feet of 4-inch pipe are used for heating this house alone. All the beds are made on the floor, *i.e.*, they are not sunk, and the sides are raised about 3 feet 6 inches high. Wooden boxes 2 feet 6 inches square and the same in depth are placed all over these beds at certain distances apart, and in these the plants are placed. The intervals between the boxes are filled with good loam, in order to give the plants an opportunity of rooting into it when the boxes become decayed; and so desirous is Mr. Hinds of obtaining complete success in the culture of this class of fruits, that he has had a considerable portion of the soil the plants are found to thrive best in, in the West Indies, imported and mixed with the loam they are now growing in at Byfleet. At one end of the house is a large tank of water heated by hot pipes for the use of the plants, and at the other end is a similar tank with cold water. This we understood was all caught from the roof of the house.

The following are some of the most important plants growing here, viz. Musa paradisiaca, which is 15 feet high, with leaves 6 feet long; Musa sapientum equally large; and Musa vittata, 18 feet high. This latter plant was purchased from Mr. Van Houtte, but where well managed, as it is here, it loses much of its variegation. Musa Cavendishii grows very luxuriantly, and although this variety will thrive in a comparatively cool climate, it does not attain the size or exhibit the robust health of the plants grown here in a high temperature. A small variety of Musa imported from the West Indies, called the Fig Banana, is said to bear fruit of much better flavour and more juicy than any of the other Musas, although it is smaller. Here are also two fine plants of Eugenia Jambos, or Rose Apple, about 8 feet high. Of Guavas there are four species, viz., Psidium pomiferum, the common garden Apple of the West Indies; P. pyriferum, with fruit much resembling a Pear in form, but smaller; P. aromaticum, the leaves, and branches, and green fruit of which much resemble those of pyriferum; P. Cattleyanum, or common Guava. The Psidiums have grown vigorously, and many of them are quite 6 feet high. Laurus Cinnamomum, the true Cinnamon, is 2 feet high; Laurus Cassia is a fine healthy plant 5 feet high. Passiflora quadrangularis or Granadilla, and P. fœtida, or Love in a Mist, are likewise cultivated here. This last bears a very singular fruit, about the size of a small Gooseberry, covered by a beautiful lace-work: this plant is on a trellis about 3 feet high and 2 feet 6 inches through, which is literally covered with fruits, ripe examples of which have been picked for some months past, and it is now bearing a good second crop. Passiflora laurifolia is also grown here for the sake of its fruit, as are also Anona muricata, or Sour Sop; Anona reticulata, or Custard Apple; Anona squamosa, a fine plant, 8 feet high: and Spondias lutea and purpurea, both Hog Plums of the West Indies. Ochro is the native name of a Malvaceous plant which grows vigorously, and bears fruit used as a vegetable, and much esteemed. Kurrup tree, also a native name, represents a young plant with handsome foliage. The Cassava, or Manihot, from the roots of which is made the Cassava bread, also grows here, as does likewise the Carica Papaya, or Papaw tree, of which we noticed a vigorous young plant. In tropical countries they hang fresh meat up in this tree, with the view to make it tender. It also bears a fruit, which, though insipid to English tastes, is esteemed in the West Indies. Persea gratissima, so much esteemed in the West Indies as the Avocado Pear, is also in Mr. Hinds' collection; as are likewise Chrysophyllum Cainito or Star Apple; Zizyphus Jujuba, or Jujube, which is said to be a very pleasant fruit; together with Aromatic Cherry? Achras Sapota, or Sapodilla Plum, which is used in its native country as an article of dessert; Mangifera indica, or Mango, which is reported to be the most delicious of all fruits; and Anacardium occidentale, or Cashew Nut.

In the third division we observed Eugenia malaccensis, the famed Rose-apple of the East; E. Korthalsii, in appearance like the last; E. acris, Gilpea odoratissima, a large-leaved handsome plant, valued in its native country for its bark, Saccharum officinarum, the Sugar-cane; and S. violaceum, with stems of a violet colour. The Sugar-canes are growing very luxuriantly, and will soon get from 15 to 20 feet high. Andropogon Schœnanthus, or Lemon Grass, is also doing well. Eight beautiful Musas are placed at the end of this house, which alone gives it a noble aspect. The greater portion of these interesting plants have been raised from seeds or have been imported from the West Indies by Mr. Hinds, and cannot fail in the course of a year or two to form a feature of great attraction at Byfleet.

The West India Yam is planted out in the heated beds and is growing luxuriantly; the leaves and stems somewhat resembling those of a large Passiflora, and the tubers are said to be much superior to those of the Chinese Yam. The Nardoo Bean is also planted out here, and is very healthy.

Of many of the species here enumerated there are duplicates, and all may be truly said to be in perfect health. Ventilation is confined to the top lights, which slide down in the usual way, Mr. Hinds thinking bottom ventilation unnecessary and injurious for tropical fruits.

This noble house is placed on one side of a small walled garden, probably to give room for another of similar proportions if it should be required hereafter.

In the fruit garden, and near the tropical fruit house, is a Musa house, about 20 feet by 20 feet. This has a centre bed arranged and heated similar to that of the large tropical house. Four plants of Musa Cavendishii occupy the bed, each bearing a bunch of fruit, which must average when ripe from 60 to 80 or 90 lb. each. One of these fine bunches is nearly ripe. These specimens are planted in tubs and plunged into a bed of loam.

In this house Carica Papaya is bearing fruit in great abundance; it produced its first fruit just 3 feet from the ground, and already 11 ripe specimens have been taken from it, the heaviest of which weighed 1 lb. 9 oz. It has some eight fruit upon it of various sizes, all green, and about as many more at the top, with the flowers just fallen off: the latter are of a delicate yellow colour. The plant is also bearing flowers now, giving an indication of its being a perpetual bearer. The fruit is borne close to the stem, and is almost sessile. There is also a variety here called the Dwarf Carica, which has not yet fruited. In this house is a young plant of the dwarf Cocoa-nut tree raised from seed, apparently the same variety as the one that bore fruit at Syon, the leaves and stem having that peculiar yellow tinge.

Beyond this is a Pinery, similar in size to the Musa-house, filled with good healthy Pines turned out into the soil. A large collection of Capsicums is grown on the side shelves, many of which are very rare, collected for the most part in the West Indies by Mr. Hinds; one of these bears an almost black pod, and another a fruit almost white. Close to this is a range of pits, having in the centre accommodation for succession Pines, and two ends for French Beans, some of which are in bearing now, and others are just coming up.

On the back shelf of the Pine pit is a row of Strawberries in full bearing: the fruit looked well, but had very little flavour, doubtless on account of the absence of sun at this dull season of the year. The plants were forced in the spring, and in the summer were shaken out and repotted into 24 sized pots, and put into heat in October, and well they have repaid the trouble.

At the back of this house, against a south wall, is a long range of glass, an orchard house 65 feet by 12 feet, with the trees for the most part turned out and trained

to the back wall and a front trellis. This is used for stowing away greenhouse plants during winter; 102 dozen of Peaches and Nectarines were gathered from these trees last season.

Beyond this is a range of Vineries, 92 feet by 12 feet; the Vines in these are old and weakly, and they are in course of renewal, when the borders are to be heated, and everything is to be arranged upon the best principles of modern gardening. At each end of the Vineries are glazed lobbies where flowering plants are placed on low shelves; this is a good arrangement, as it prevents cold draughts into the Vineries during the early season when forcing is being carried on.

In a transverse position near the Musa house is a range of houses, span-roofed, 60 feet by 14 feet, consisting of a Cucumber house, a Vinery, and Peach house. The Vinery has heated borders, and is planted with Muscats on the south side, and Lady Downes' and Kempsey's Alicante on the north side. The Vines, which were planted last season, have done well; the canes are strong and well ripened.

The whole of the houses are heated by two of Ormson's large boilers.

Byfleet was purchased by Mr. Hinds about two and a-half years ago; since which time the greater portion of the houses has been built, and a new walled garden made. The garden for the supply of vegetables is some distance from the house, and near the river Wey, which forms on one side the boundary to the park. The gardens and park are under the management of Mr. Carr, and every department bear testimony to the assiduous care and attention he bestows upon them.

Miscellaneous.

The West African Oil Palm.—Throughout the tropics, Palms are amongst the most useful plants to mankind. This is more especially the case among people so little advanced in civilisation as the natives of West Africa, who obtain from them the source of many of their comforts. Foremost among the useful Palms of tropical Western Africa stands the Elaïs guineensis. The oil of the mesocarp of the fruit of this Palm constitutes in most parts the chief food of the natives, who hardly ever take a meal in which it is not used in some way or other. It is nutritious, and of an agreeable flavour—so much so, indeed, that it generally becomes a favourite dish with Europeans. Besides being used as food, the natives also use it for oiling their bodies, partly to keep away insects, and partly as a substitute for clothing, of which they are entirely destitute. The Bubis or Boobees of the Island of Fernando Po make an excellent poultice of it, which they apply when the hand of any person, found guilty of adultery, has, in accordance with the usage of these people, been cut off. Among the more civilised natives it is used, as with us, in the manufacture of soap; and it is also employed for lighting their huts, but the oil extracted from the kernel of the nut is generally preferred for this purpose. The exportation of the seeds of this Palm is rapidly increasing, and already large quantities are shipped from Sierra Leone and its neighbourhood. Were there less jealousy and more energy among the European traders, and could they induce or force the natives of the coast to give up their monopoly, much larger supplies could be obtained at the chief sources of the trade, as at Bonny, Brass, and Old Calabar Rivers, and this oil would be found much superior to that now obtained from the mesocarp of the seeds. Elæis wine, a drink much liked by the natives, is obtained by cutting off the male flower spike. This wine is also used by the Europeans instead of yeast in making bread. The main nerves of the pinna and the exterior of the petiole are used for basket work, for the making of brooms, and similar purposes. Dr. Welwitsch says that at St. Paul de Loando, the fibre at the base of the leaves, and also that of the spathe, is used for stuffing cushions, &c.; the soft centre of the upper part of the stem, consisting of the undeveloped petioles, is much relished as a vegetable. Finger rings, bracelets, necklaces, and other ornaments are cut from the endocarp of the seed. Many as are the benefits derived from this Palm by the natives, they are comparatively few compared with the uses made of its products by Europeans; of these we need not speak, as all must be more or less acquainted with them. It may, however, be worthy of mention that during the last three years 130,381 tons of Palm oil, of the value of 5,605,913*l.*, have been imported into Great Britain. *Mann & Wendland, in Transactions of Linnean Society.*

Thermal Waters.—In the neighbourhood of Redruth is a district equally remarkable for the high temperature of its deep mine-workings and for the enormous value of the copper ores extracted from them within the last half century. The constituent rock of this region is mostly the clay-slate, or killas, intersected by dikes of elvan or granitic-porphyry. Above a quarter of a century ago a valuable series of observations on the temperature of the water of mines in Cornwall was made by Mr. W. J. Henwood, F.R.S.: and his exact tables of statement and deduction showed the Redruth district to be one of the most remarkable for the high temperature, in its deep working places, of the waters, whether issuing from the lodes or from the encasing rocks. In 1839, a perpendicular shaft having been sunk to a greater depth than that at which the Old Lode had been worked, a cross cut was driven from it at the 190 fathom level (about 225 fathoms deep), and a large feeder of water was encountered, of a much higher temperature than had before been observed. The shaft being deepened by successive stages, it has been found that, at each deeper point at which the chief flow of water has been seen, it has shown a marked accession of temperature. Although 122° was the highest degree of heat which I observed, I think it highly probable that, when the hotter level, the 225, is advanced a little, the temperature will be found somewhat higher. The circumstance of the hot springs being attendant upon the rich and cindery-looking loose-textured course of ore has induced many to look for the cause of the high temperature in the decomposition of the pyrites; but the absence of sulphates of copper and iron in the water, and the fact that, where most exposed to oxidation nearer the surface, the rich lodes never exhibit phenomena so remarkable, appear sufficiently to set aside such a hypothesis. We shall therefore have to look to deep-seated sources of heat, such as have been adverted to by Sir C. Lyell, for a more probable explanation of the observed appearances. As regards the increment of temperature, it is somewhat startling. Between my last two visits, made at an interval of 9 years, on both of which I carried down trustworthy thermometers, the point of issue of the hottest water had been deepened 30 fathoms, or 180 feet, and the temperature was increased by 8° F: this would give 1° for 22½ feet. Mr. Henwood's observations give a much higher ratio: 1° for 16 feet. The same uniform rate of increase would bring us to the boiling point of water at an additional depth of from 1440 to 2000 feet. The facts are thus so full of interest, physical as well as chemical, that it is to be hoped the commercial success of the last increase of depth may be great enough to lead to a further advance into the deep. *From a Paper by Mr. Warington Smyth, read at the Meeting of British Association.*

Calendar of Operations.

(For the ensuing week.)

CLEARING up for winter, if not already done, must now receive immediate attention. There may be abundance of evergreens and winter flowers, and yet the garden may present a very repulsive appearance. Grass-plots literally rough with worm-cast; dead leaves crowding into every corner; what were once flowers, dangling from the stakes which supported them, and numerous dry stems, rattling in the wind, are sights and sounds too often seen and heard in really good gardens in the winter months. This state of matters, where it exists, must not, however, be longer allowed still to continue. The very act of sweeping is beneficial, and can scarcely be performed too often at this season, for it removes worm-casts and destroys the incipient Mosses which will otherwise soon turn gravel into a smooth sheet of green. If this clearing process is persevered in, the garden will preserve throughout a healthy appearance, and confer pleasure upon its possessor. Rose trees may now be pruned and trained, and everything in short be put into the position it is to occupy until the spring. Flower borders may now be dug with advantage, taking care to incorporate with the soil some leaf-mould, or very rotten dung from an old pit or frame. As a stimulus to exertion in the operation of clearing, the great value of the rubbish-heap, to which leaves and other refuse are conveyed, should be remembered. For recruiting flower-beds, this refuse vegetable matter, where thoroughly rotted, or better still charred, is invaluable.

FLOWER GARDEN AND PLANT HOUSES.

Of all things watering requires most careful attention at this season. Adhere strictly to the directions we have so frequently given, never to water till the soil immediately below the surface is sufficiently dry to warrant a full supply. Have a sharp eye to detect on the first appearance anything like sourness in the surface of the soil, and let it be immediately examined and rectified; worms frequently also render this necessary. Keep the houses as dry as the external atmosphere will admit of: not by the excessive use of fire-heat, but by avoiding as much as possible the creation of unnecessary moisture by spilling water, &c., and by admitting such a quantity of fresh air as shall, in connection with moderate firing, remove any superabundant moisture unavoidably created by watering, &c.

CAMELLIAS.—See that plants in the forcing pit are properly supplied with water, or their advancing buds are apt to fall off.

CARNATIONS.—Take care that choice sorts do not suffer from damp, which is more injurious to them than cold.

MIGNONETTE.—Plants of this in pots must be very sparingly watered. If kept too wet it is liable to damp off.

FORCING GARDEN.

CHERRIES.—These will require to be kept much cooler than other kinds of fruits. The advantage of growing these fruits in pots is that an early supply can be obtained, and even a succession kept up in the early season, without starting an entire house of established trees at a period of the year which is unfavourable for their growth, thus reserving the energies of these more valuable plants till a season more favourable for their development.

PINES.—It will be a trying task just now to manage these plants with no other heating material than fermenting litter. Every favourable opportunity should be taken to turn the linings, and add to them if required. Let them at least be protected by some kind of covering from the rain and snow; and if possible let them be entirely enclosed, that they may of themselves supply a sufficient amount of heat to do away with the necessity of keeping the pits covered during any portion of these short days. Young Pines are frequently much drawn during winter, and the mischief is not noticed until they are taken out in the spring to be repotted or planted; and then it is that the gardener repents not having given more air, and more light, by keeping the glass clean. If the bottom-heat is 80°, the top may occasionally be as low as 55° without the plant suffering; and particular care should be taken that no injury occurs from excessive dampness at the root from any cause.

VINES.—Plants in pots when first introduced into heat should receive gentle syringings twice or thrice a day, according to the state of the weather.

HARDY FRUIT AND KITCHEN GARDEN.

Before the general manuring and trenching of vacant ground takes place, it is necessary to decide on the rotation of crops which is to be adopted during the ensuing summer, that these operations may be carried out with special reference thereto. This arrangement should be made, not for one year only, but for a series or cycle of years. One of the first principles to be attended to is, that no annual crop be grown for two successive years in the same plot of ground. Another variation should be made by taking care that those crops which immediately succeed each other are not such as are liable to be preyed upon by the same kind of insects; as their increase is encouraged to a fearful extent by thus putting into their way the species of food which they are most fond of. It is important that both the manuring and the depth of the trenching be regulated by the requirements of the crops; and their rotation should be so arranged that the ground be not trenched to the same depth for two successive seasons, but so that different portions of the soil be brought to the surface in turn.

BUSH FRUIT.—This may now be pruned, and the ground between the rows manured if necessary, and dug, not so deeply, however, as to injure the roots.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Dec. 7, 1864, as observed at the Horticultural Gardens

Dec.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature of the Air. Max.	Min.	Mean	Temperature of the Earth. 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs.	1	2	29.[illegible]	29.[illegible]	52	24	38.0	46	47	S.W.	.00
Friday	2	3	30.339	30.221	49	25	37.0	45	46½	S.W.	.02
Satur.	3	4	30.292	30.273	51	12	46.5	45	46½	S.W.	.02
Sunday	4	5	30.267	30.221	54	43	48.5	46	47	S.W.	.00
Mon.	5	6	30.089	29.917	58	40	49.0	46½	47	S.	.00
Tues.	6	7	29.970	29.939	54	39	46.5	47	47	S.W.	.00
Wed.	7	8	29.878	29.725	51	40	47.0	47	47	S.W.	.02
Average.			30.146	30.064	53.1	36.1	44.6	45.1	46.9		

Dec. 1—Frosty, clear, fine, frosty at night.
— 2—Dense fog; fine, overcast at night.
— 3—Overcast; rain at night.
— 4—Uniformly overcast; cloudy; overcast.
— 5—Very fine; exceedingly fine throughout.
— 6—Overcast; fine; foggy at night.
— 7—Overcast; slight rain at night.
Mean temperature of the week 4½ deg. above the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Dec. 17, 1864.

December.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain	Prevailing Winds.							
						N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 11	45.7	32.6	39.2	16	1.02 in	3	5	6	1	7	10	5	2
Mon. 12..	45.5	33.5	39.7	16	0.56	3	4	7	3	3	7	8	3
Tues. 13..	46.7	33.0	39.8	21	1.16	2	9	4	2	6	6	5	4
Wed. 14..	45.1	33.6	39.9	19	1.24	6	5	4	5	2	6	4	4
Thurs. 15..	46.2	34.7	40.4	16	0.34	2	5	5	3	5	11	3	2
Friday 16..	45.7	34.3	40.0	13	0.34	6	3	4	3	6	8	6	2
Satur. 17..	46.0	33.8	39.9	18	0.38	9	5	3	1	7	8	2	3

The highest temperature during the above period occurred on the 12th, 1841—therm. 63 deg.; and the lowest on the 8th, 1851—therm. 16 deg.

Notices to Correspondents.

DOGWOOD: *T P.* The name of this shrub has no reference to the animal, but comes, as Dr. Prior shows, from the French *dague*, Spanish *daga*, and Old English *dagge*, equivalent to the German *dolch*, a dagger; a derivation which is supported by its synonym Prickwood.

EXHIBITING ROSES: *W L.* Mr. Radclyffe does not appear to have overstated the case. Of all the cut flowers which appear at exhibitions, Roses are the most ticklish to deal with—that is, to have them in first-rate condition, with all their natural glow and freshness preserved. It really requires some skill and forethought, and not a little care and watchfulness.

GAS STOVES: *Well Wisher.* If it possesses sufficient power to influence the temperature of the conservatory, and is exposed within the house, the stove would be unquestionably injurious to the plants. Such stoves are at best of doubtful utility, and should never be employed unless the fumes from them can be carried off entirely. A gas stove may, however, be so contrived as to work a hot-water apparatus of sufficient power to warm a very small house, or to drive out damp as you suggest; but the gas should be shut off completely from the atmosphere of the house, and an evaporating pan should be used if any part of the stove is at all exposed therein.

NAMES OF PLANTS: *R Locke.* The varieties of Holly appear to be:—1, Handsworthiana; 2, recurva, the Screw Holly; 3, compacta; 4, myrtifolia, 5 is some form of Arbutus Unedo. —*E S.* 3, Jasminum hirsutum; 4, Gesnera elongata. —*S.* Cystopteris dentata.

WINTER PRUNING OF FRUIT TREES: *Young Gardener.* You will find this subject amply treated, with illustrations, in our volume for 1847. If you cannot obtain access to these, we may perhaps be able to reproduce some of the figures shortly.

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DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
TURNIP MANURE,
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LAWES'S WHEAT MANURE for AUTUMN SOWING.—A supply of the above Manure is now ready for delivery, at J. B. LAWES' Factories, Deptford, and Barking Creeks. Price 8l. per ton.
2 to 3 cwt. per acre to be harrowed into the land before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents; also
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MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
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Orders to view the land may be had, and plans and sections of the Works, Map of the lands, and conditions of letting, seen at the Offices of Mr. THOMAS SCOTT, Land Agent, 18, Parliament Street, London, S.W., by whom offers will be received until Dec. 25.

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E. P. FRANCIS has great pleasure in offering the above distinct and most valuable Cabbage, raised by Mr. J. Hill, Gardener to Robert Hanbury, Esq., Poles, near Ware, Herts. It is of a most remarkable dwarf and close-growing habit, yet producing a medium-size head. It will undoubtedly prove the best Cabbage extant, and when known will supersede every other variety.
Mr. Hill (the raiser) says:—"This is the best Cabbage I have ever seen. I have grown every known variety against it, and in its dwarf and compact character it has proved itself superior to all. As a sprouting variety it is unequalled."
The following Testimonials will be a strong guarantee of its excellence:—
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"Hill's Incomparable Cabbage I consider to be the best dwarf sprouting variety I have ever seen. It is very compact, and I can with great confidence strongly recommend it as a first-class Cabbage."
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"In my opinion Hill's Incomparable Cabbage is the best variety I have ever seen, and will, when known, be invaluable to every gentleman's gardener."
Price, in sealed packets, 2s. each.
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Messrs. A. Henderson, Pine Apple Place, London.
Messrs. Sutton & Sons, Reading.
Mr. Denyer, Seedsman, 82, Gracechurch Street, London.
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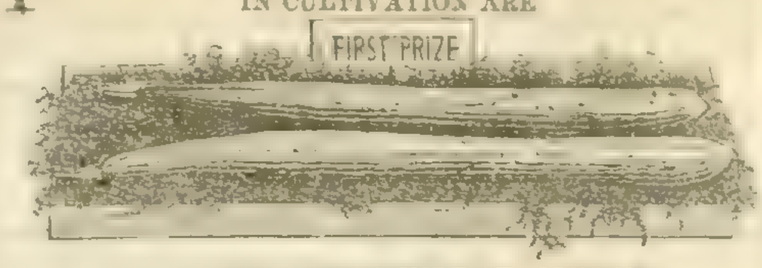

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WORTHY THE ATTENTION OF GENTLEMEN, SEEDSMEN, GARDENERS, AMATEURS AND OTHERS.
THOS. ELEY having succeeded, after five years' careful cultivation, in raising a Stock of the above Splendid PEA, is now in a position to offer it to the Public.
The above Pea is distinguished by the following excellent features, viz., it is hardy, very prolific, and early; and possessing the great desideratum of being far superior in flavour and distinct from all other early varieties, a superiority is claimed for it over the general class of Early Pea.
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The Trade supplied at the usual discount. Testimonials forwarded on application.
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This Pea has been tested against all the earliest varieties known, and has been found to come into bearing from 8 to 10 days before any of them. It is very prolific, producing a profusion of pods, which contain on an average 7 to 8 peas of fine quality and flavour. The habit is dwarf, growing about 2½ feet, and bears profusely the whole length of the haulm. It has been pronounced by many of the first practical Gardeners in the Kingdom who have tried it (see our Advertisement with Testimonials, November 26) to be much superior to any other early Pea in cultivation, both for earliness and productiveness.
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A PRICED DESCRIPTIVE CATALOGUE will be ready about the middle of December, and can be had post free on application.
All orders for Seeds of £2 value (grain &c. excepted) delivered carriage free to any part of the Kingdom.
FRANCIS & ARTHUR DICKSON & SONS, The Old Established Seed and Implement Warehouse, 108, Eastgate Street, and The "Upton" Nurseries, Chester.

Dixon's Yorkshire Hero Pea.
EDMUND PHILIP DIXON AND SON have pleasure in announcing their intention of again offering their New Dwarf Green Wrinkled Marrow Pea, THE YORKSHIRE HERO, which has during the past season fully maintained the character given of it. It is similar in appearance to Veitch's Perfection, but much dwarfer, considerably earlier, and more prolific; upwards of 70 pods have been counted upon a stem.
All who have tried this Pea have pronounced it the best variety of its class, and one which will become a great favourite in every garden.
We may remark that the crop this season, through the extreme drought, [illegible] one fourth what was anticipated; the consequence is that the [illegible] the same as last season.
For Testimonials, see [illegible]
Price 3s. per quart; [illegible]

	s.	d.
BROWN'S INCOMPARABLE NEW DWARF WHITE ELEPHANT COLE, the largest and finest yet sent out	2	6
DIXON'S NEW MAMMOTH WHITE CELERY, a very early variety, attaining an enormous size, remarkably solid and crisp	1	0
DIXON'S NEW CHAMPION GREEN COS LETTUCE, the largest and sweetest kind yet introduced, weight from 6 to 10 lb. each, 6d. and	1	0

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HALLETT'S [PEDIGREE] NURSERY WHEAT.
MARK.
PURE SEED OATS,
[illegible]s. a Quarter (with Sacks) for not less than Two Quarters.
Papers sent upon application, enclosing Stamp, to FREDERIC P. HALLETT, Esq., F.L.S., the Manor House, Brighton, Sussex.

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SUTTON AND SONS can supply good Seed, at very moderate prices, of the same sorts of MANGEL WURZEL and CHAMPION SWEDES which were so much admired on their Stands during the recent Shows at Birmingham, Islington Hall, and the Royal Horticultural Society's Gardens.
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BISCUIT MEAL, £9; Do. for Pigs, £8; FLOUR WASTE, £6 per ton; PADDY MEAL (Rice), from £6 to £8 per ton; LINSEED CAKE, £10. Other Feeding Stuffs at market prices. RICE and BAKERS' CRUMBS for Poultry, 10s. per cwt.; RICE, from 10s. to 30s. per cwt., or 10d. to 2s. 6d. per 7 lbs. SAGO, ARROW-ROOT, &c., at wholesale prices. Samples by post or otherwise.

AGRICULTURAL PUPILS.—A Gentleman farming 400 Acres of Light and Heavy Land has a VACANCY for TWO RESIDENT PUPILS, who will have every opportunity of gaining a thorough knowledge of practical and scientific Agriculture, including Agricultural Chemistry.—Address G. G., Post Office, Windsor.

ROYAL AGRICULTURAL COLLEGE
CIRENCESTER.
AUTUMN SESSION, 1864.
President.—The Right Hon. the Earl BATHURST.
Council.
The Rt. Hon. the Earl BATHURST. | The Rt. Hon. [illegible] SCOTT-MONTAGU, M.P.
Hon. WILLIAM BATHURST. | EDWARD HEATHCOAT, Esq., M.P.
The Rt. Hon. the Earl DUCIE.
Principal—The Rev. JOHN CONSTABLE, M.A. Trin. Col. Cant.
RESIDENT PROFESSORS
Practical Agriculture—J. L. FLETCHER, Farm Manager. *T. BALDWIN, of Glasnevin. *R. SCOTT BURN, Co-Editor of the Book of Farm Buildings.
(*These Gentlemen will be in temporary residence.)
Chemistry.—ARTHUR H. CHURCH, M.A., Lincoln Coll., Oxon., F.C.S
Assistant to Chemical Professor.—R. WARINGTON, Jun., F.C.S
Botany.—JOHN BAYLDON, M.R., Lond. B. Sc.
Veterinary Surgery.—A. J. MURRAY, M.R.C.V.S.
Mathematics and Surveying.—The Rev. W. MEREDITH LANE, M.A., late Scholar of Trin. Coll. Camb.
Drawing.—JAMES MILLER
SPECIAL LECTURERS.
FINLAY DUN—On the MANAGEMENT of STOCK.
W. C. SPOONER—On the FARM HORSE.
SAMUEL COPLAND, "The OLD NORFOLK FARMER."
AGRICULTURAL CHEMISTRY.
THOMAS ANDERSON, M.D., Professor of Chemistry in the University of Glasgow, and Chemist to the Highland and Agricultural Society of Scotland—A COURSE of LECTURES

MIDLAND FARMERS' CLUB. The ADJOURNED MEETING to discuss the subject of "The TENURE of LAND" (introduced by Mr. R. H. MASEN), will be held at the Lecture Theatre of the Philosophical Institution, Cannon Street, Birmingham, on THURSDAY NEXT, December 15, at 3 o'clock precisely.
Members will be enrolled on the day of Meeting, for which purpose a Committee Meeting will be held at the same place, half an hour previous to the Special Meeting, and Members nominated at this Meeting will be eligible to attend.
It is intended to publish the Discussion for the use of Members.
December 10. JOHN B. LYTHALL, Secretary.

The Agricultural Gazette.

SATURDAY, DECEMBER 10, 1864.

IT has been a busy agricultural week in town. Mr. Alderman MECHI discoursed on Farm Profits, or rather on the lack of them, on Monday, at the Society of Arts, to the members of the London Farmers' Club. The Smithfield Club's magnificent exhibition has been open in the noble Agricultural Hall at Islington all the week. The Council meeting of the Royal Agricultural Society was held on Wednesday, and the Report to the members was read at a general meeting of the body on Thursday.

We particularly direct the attention of our readers to the report of the discussion there on the subject of Agricultural Education; and they will do well to read the letter by "A Farmer" on that subject in another column. It is plain that the Council are being misled by the proposal to undertake the supervision or guidance and improvement of general middle-class schools; and we hope that notwithstanding the immediate effect of the discussion has been to some extent neutralized by the blundering inexperience of the mover in it, it may nevertheless do good by turning attention to the only point where the Society can usefully interfere, namely, the promotion of professional agricultural education. Mr. MORTON had every reason to be satisfied with the discussion, and was willing that his addendum to the motion for the adoption of the report, in which the subject of professional agricultural education was recommended to the attention of the Council, should be withdrawn, in the belief that the discussion by itself would have all the effect which the formal motion would have had. But it appears that this has not been done; the addendum has been retained, and only the word "professional," in its allusion to Agricultural Education, has been cancelled. The subject is thus remitted to the Council without any of that formal guidance as to their treatment of it, which it was Mr. MORTON's object to induce the General Meeting to give. We believe, however, that the

discussion, though somewhat stultified by the terms of the motion in which it ultimately issued, cannot fail to awaken the Society to one great power for good which it possesses, and which it has hitherto neglected. And it will moreover direct attention to the position of the Royal Agricultural College, and to that neglect of this Institution with which the Society has been hitherto chargeable.

The education of the labourer, no less than of his master, was referred to by the speakers, and Mr. MOORE, of Coleshill, who delivered by far the most practical and business-like speech of the morning, referred to the manner in which the over education, or rather, and in an important sense, the inadequate education given in our parish schools is creating a general prejudice amongst tenant farmers against the present educational system of the country—which is not sufficiently industrial in its tendency, not sufficiently directed to the adaptation of the child to its future lot.

Mr. ACLAND followed, and with what certainly appeared to us excessive extravagance, denounced that style of education (which Mr. MOORE had just been advocating, but) which he declared to be a mere effort to make the child of the labourer a better "tool" than his father. He hoped that the Society would never sanction so degrading an idea as that. The object of education, he declared, is to awaken and "evoke the soul of a man"—not to make a skilful drudge of him. And so strong is the degrading tendency (for this was really the nature of his argument) arising from the influence of the class immediately above the labourer, that he knew it needed "all the power of conscience and all the power of Christian love," to hinder the whole educational organisation of the country from degenerating into a mere machinery for making good hedgers and ditchers and good earners of wages.

And all this was addressed to the *Agricultural* Society! And we cannot doubt from it that Mr. ACLAND, who wishes the Society to undertake the middle-class education of the country, would probably still further confuse the individual duties of the members with those of the body in which for certain special purposes they have united. It is plain that his harangue leads to the belief that we are an institution also, for the purpose of awakening "the power of conscience and of Christian love." That, however, he surely needs not to be reminded, was never yet done by the loud talk of an excited partisan; and, moreover, it is no part of the duty of the Royal Agricultural Society of England. It is to be done only by the patient perseverance of a life at home, each one within the limits of his individual circle—by just such labour, in fact, as the excited speaker was unwittingly condemning in Mr. MOORE. But, indeed, the unfitness of Mr. ACLAND as a guide of the Council on this subject must have been plain enough, not only from the general nature of the harangue which he pronounced, but from the extravagance of his words on the other points to which he referred—whether it were the services of Mr. MORTON, or, shall we say, the advantage of a university education for agricultural editorship. Probably, however, the influence which he appears to exert on the Council in connection with this subject, notwithstanding the wildness of the views which he has expressed upon it, may be explained in this way:—that, after all, a man's conduct of affairs, and his expressions regarding them and regarding the principles involved in them, are inevitably to some extent diverse. Circumstances are stronger than will; and experience teaches us all that whatever opinion, whether, we must say, on personal or on general subjects, a man may express, his conduct relating to them does not always bear it out. We may therefore imagine, as the issue of the ambitious and inflated appeal to first principles to which English farmers had to listen on Thursday last, that even Mr. ACLAND may ultimately be found helping the Agricultural Society to discharge their comparatively humble duty of making labourers better handicraftsmen and farmers better agriculturists, leaving the directer exercises of "the power of conscience and of Christian love" (by both of which powers their discharge of this humbler duty will have been directed) within those circles of home and personal influence which severally belong to the individual Christian men of which the Society is composed.

Meanwhile the Council of the Royal Agricultural Society of England may be assured that the great body of English farmers accept the guidance of Mr. HOLLAND on this subject—not that of Mr. ACLAND. They choose to be led by the experience of a practical man who has been labouring all his life at agricultural education.

We are glad to add that immediately on Mr. ACLAND sitting down, Mr. MOORE not only vindicated, in the fewest possible words, his own well-known career of benevolent and successful effort for the real education of his neighbours of all classes, but firmly asserted the right of individual members to offer their suggestions at the general meetings of the Society, which really appeared to be endangered by the dogmatic condemnation with which Mr. ACLAND, as a member of the Council, had immediately followed his wise and practical suggestion.

—— We need hardly say that a gloom has been cast over the whole week's proceedings by the untimely death of Mr. JOHN FOWLER. An accident in the hunting field had laid him on his bed for a fortnight; but the broken limb was healing satisfactorily. On Friday of last week, however, symptoms of *tetanus* appeared, and he died on Sunday. He was only 38 years of age. There is no company of farmers in the kingdom who have not more or less taken interest of late years in his career, and his loss excites a universal feeling of sympathy and distress. It will be seen that reference was made to it at the general meeting of the Royal Agricultural Society.

MR. ALDERMAN MECHI'S discursive paper, read before the London Farmers' Club, and reported in an abridged form in another page, was followed by an equally discursive discussion. As the worthy Alderman had himself mixed up many topics having but slight relationship either to the subject on the card or to one another, so his followers also had a great deal to say of Town Sewage and other topics which really had no relation whatever to the question of farm profits which was nominally under discussion. The debate was opened by Mr. WALTON. The causes of the want of farm profits were want of security for farm capital ("no man, either tenant or landowner, will obtain the use of capital for farming or any other purpose unless he offers good security")—want of attention to commercial principles ("never be a party to any but a written bargain")—want of good buildings ("of what use are the worthy Alderman's recommendations if the tenant cannot adopt them because the landlord does not equip the land with adequate accommodation"?)—want of a fair equalisation of rates and taxes—want of power to reduce the number of hares and rabbits, and to reduce the covert for game and weeds in hedges—want of political influence!—Mr. EDMONDS, of Rugby, declared that many of the difficulties in the way of the farmer to which Mr. MECHI had referred were such as are common to all professions and trades—inevitable, and therefore of no use to bring under discussion. The main point for the farmer's consideration is that he ought to have what he pays for. If he takes land he ought to have it to himself, and not in partnership with another, who retains the power of stocking it with an indefinite quantity of his own live stock.

Dr. VOELCKER referred to the question of town sewage which had been mooted by Mr. MECHI. He did not believe in the superior nutritiveness of sewaged Grass; on the contrary, all experience has proved that the more rapid the growth of a succulent plant, the worse is its quality as food. He believed that poor sands are the proper lands to irrigate with sewage; rich pastures will be spoiled by it. The scheme which proposed taking London sewage down to the Maplin sands, seemed to him the most likely to promise a successful result of any that had been mooted. Dr. VOELCKER disputed Mr. MECHI's statement that common salt is a good manure for Mangel Wurzel on clay lands. His experience, and that of his friend and colleague Professor COLEMAN, has been entirely to the contrary.

Mr. WILLIAMS, of Baydon, led the meeting into a discussion of the currency question, and of the way in which excessive importations of corn during low prices damage the British farmer. He quoted the case of a merchant who, during the troublous times of the Danish war, had ordered 100 cargoes of Wheat, and had suffered to the extent of 70,000*l.* himself and brought great injury upon others. Mr. WILLIAMS did not tell us, however, what remedy he proposed for the folly of individuals. —Mr. BRADSHAW, of Guildford, reverting to the sewage question, spoke of the way they adopt in Milan of utilising the solid contents of cesspools. —Mr. JAMES HOWARD, of Bedford, brought back the attention of the meeting to the consideration of capital, intelligence, and perseverance as the three great sources of profit in farming as in every other business. He spoke also of the need of agricultural education and of good middle-class schools.

Mr. SANDERSON, of Westminster, pronounced an eloquent discourse, in rather too grandiose a style, however, for the taste of the meeting, on security for capital as afforded only by a well drawn lease.—Mr. WILSON referred to insufficient use of the existing appliances at the disposal of the farmer as really at the bottom of the inadequate returns which are complained of. And if, on the other hand, a man wished to add to his profit by diminishing his expenditure, that was to be done by laying down arable land to Grass, and by substituting steam-power for that of hand labour. —Mr. HOWELL suggested that one reason why farmers looked with suspicion upon proposals to utilise town sewage, lay in the fact that they were conscious they did not do their duty by their own sewage at home. If it be the duty of towns to turn their sewage to account, it certainly is that of the agriculturist to take care of the liquid manure and house sewage at home, both of which at present generally go to waste.

Mr. DRING, of Saxby, closed the discussion with an exceedingly clever and telling address. There are causes for failure which the farmer cannot remove. We are all helplessly liable to disease, bad seasons, and low prices, and it is useless to discuss these points; but there are others which are within the power of the landlord and the tenant; and in reference to these he would give them a sure and certain "receipt" for always putting money in their pockets as the result of the year's proceedings. 1st. Let there be good farm buildings placed in the centre of the farm. 2d. Let there be good and sufficient cottage accommodation on the land for the labourers employed upon it. 3d. Let the fields be square and large, so that all the horse and steam power operations on them may be economically performed. 4th. Let the roads furnish easy and good access to the fields, farmery, and market. And, 5th, said Mr. DRING, "Be sure that you bring your personal and household expenditure within the margin of your profits!"

When the merriment which this bit of good sense and good humour produced had subsided, the CHAIRMAN closed a somewhat rambling but amusing discussion by a reference to splenic apoplexy and other diseases which have lately been destroying or curtailing the profits of graziers and farmers in his own neighbourhood.

AGRICULTURAL EDUCATION.

I HAVE lately seen a Pamphlet on the subject to which the attention of the Council of the Royal Agricultural Society has been called, namely, the education of youth intending to become farmers; and which, accordingly, professes to have been written and printed for the enlightenment of the Council on that subject. There is, however, a very small portion of this Essay devoted to that object. So far from suggesting to the Council any *modus operandi* in the performance of the duty imposed on the Society by their Charter, the main scope of it, on the contrary, would seem to have been to impress on the Council the very acceptable doctrine that the duty in question is incapable of performance, and that they need not trouble their heads about it.

The Council are thereupon invited to mount behind the author on his hobby, and dart forward at once into the general education of the "middle classes." I venture to say that the agricultural whippers-in will do wisely in keeping the Council to their text in their Charter, and not allow them to ramble off into the education of the "middle classes," with which they have nothing to do as the councillors of the Society.

The parents of the rising generation in the classes referred to are quite capable of taking care of their education, as they have abundantly shown of late years. Every one moving about amongst those classes, at this time of day, must be well aware that the necessity of any public agitation in reference to their education is a mere delusion, inasmuch as they constitute the class *par excellence* that has made, during the present century, far greater progress in the advancement of useful knowledge, applicable to the varied acquirements of their several callings, than any other class.

Schools abound suited to every section of that class, whether in respect of terms, kind, or extent of instruction; the supply, it is to be feared, is somewhat in excess of the demand, for in a large proportion of such schools competition has led to terms for board and tuition which can only leave a very scanty remuneration for competent instructors.

That many schools exist in which the teaching and general management may be defective may be assumed. There are to be found incompetent instructors in every department of the service of the public; the avoidance of such must be left to the discrimination of parents.

It is only after leaving such schools that the future

ing in life is usually determined—whether the ler departments of law and physic—the various des of the merchant, the manufacturer, the engineer, e surveyor, the artizan, &c., for all of whom pprenticeships follow on the previous general education. The Charter of the Royal Agricultural Society has charged the Society with the duty of providing some such special provision for the training young men destined for agriculture.

Not many years ago the want was experienced of a class of schools by those who sought the benefits, but who could not afford the cost of Eton, Winchester, Westminster, Harrow, or Rugby. The want was quickly supplied (as such wants always are in this country), by the Cheltenham and Marlborough Colleges, and numerous other proprietary schools. Soon afterwards it was seen fit that the Civil Service of the State should be supplied by merit rather than by influence. Hence the examination of all competitors, and an invigorating effect on master as well as pupils.

It was not long before the formation of the Royal Agri. Society that agriculture assumed a rank amongst the sciences, and that the want felt of a more scientific training of young men destined for that pursuit was developed. Hence the establishment of the Royal Agricultural College in England—the establishment at Glasnevin in Ireland, and the professorships in that science, founded in Scotland. As that demand increases from an extended appreciation of the important development in scientific and practical agriculture, so will the supply, without the interference of the Royal Agricultural Society, or any other public body in establishing schools.

The duty of the Council of the Society would seem to be rather to visit, foster, and encourage existing colleges and schools dedicated to the especial training of young men for agricultural pursuits after the completion of their term in the schools for general education; and, as the want increases, which will ere long be felt in other parts of the kingdom, to encourage their extension. I have no doubt but that annual or biennial examination on practical agriculture and in some two or three of the dozen sciences held out *in terrorem* over the Council by the author of the essay referred to, resulting in honorary distinction, such as granting diplomas and the distribution of a few medals, would be attended with the same results as have followed similar proceedings in reference to other schools. *A Farmer.*

Home Correspondence.

On the Cultivation of Cereals.—I have read with much interest Mr. Wilkins' articles on germination and the cultivation of Cereals; they supply much useful information, and I agree with Mr. Wilkins that farmers commit a great error in over-seeding. It is a common practice for them to sow 8 or 10 pecks per acre, and no doubt less than half this quantity would produce better crops and better samples, besides the great ving in seed. I am of Mr. Wilkins' opinion that oper draining and deep cultivation is the best mode of anagement, as these means allow the rain to percolate rough the soil, and it receives the fertilising gredients of the rain, which raises the temperature of e soil, but all these conditions complied with, gether with the ordinary manuring—let it be either egetable, animal, or mineral—would not enable the armer to produce any quantity of Wheat or other ops consecutively. As Mr. Wilkins observes, e land requires the plant constituents, and in this es the secret—What are the plant constituents? Every plant draws from the soil and feeds upon a certain kind of food, and if farmers could return this food again to the land and restore it to the same condition it was in before the seed was sown, then I believe, with Mr. Wilkins, that farmers might produce a umber of either Wheat or other crops in succession. *T. Harrison, York, Nov. 29.*

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

MONTHLY COUNCIL: *Wednesday, Dec. 7, 1864.*—Present, Sir Edward Kerrison, Bart., M.P., President, in the Chair; Viscount Eversley, Lord Berners, Lord Feversham, Lord Tredegar, Major-General the Hon. A. N. Hood, Sir A. Macdonald, Bart.; Sir T. Western, Bart., Sir Watkin W. Wynn, Bart., M.P.; Mr. Acland, Mr. Amos, Mr. Raymond Barker, Mr. Barthropp, Mr. Bowly, Mr. Burgess, Mr. Cantrell, Colonel Challoner, Mr. Clayden, Mr. Druce, Mr. Brandreth Gibbs, Mr. Holland, M.P., Mr. Hoskyns, Mr. Hudson, Mr. Hutton, Mr. Jonas, Mr. Milward, Mr. Pain, Mr. Randell, Mr. Rigden, Mr. Sanday, Mr. Shuttleworth, Mr. Robert Smith, Mr. Thompson, M.P.; Mr. Torr, Mr. Turner, Mr. Wallis, Mr. Wells, Mr. Frere, Prof. Simonds, and Dr. Voelcker. The following New Members were elected:—

Beard, Frederick, Horton, Canterbury
Bethune, Alexander, Blebo, Cupar Fife, Fife, N.B.
Brooke, H., Wetheringsett, Stonham, Suffolk
Cookes, John Measures, Sandrock, Leamington
Foster, Henry West, Cranwell Lodge, Sleaford
Hardman, J. E., Mareham le Hill, Horncastle
Luttrell, Reginald F., Norfolk Farm, Staines
Normanby, Marquis of, Mulgrave Castle, Whitby
Pogson, Samuel, Anwick, Sleaford
Radcliffe, Godfrey, Rudding Park, Wetherby
Sebright, Sir John Gage Saunders, Bart., Beechwood, Dunstable
Shepperson, Thomas, Lenton, Nottingham
Simonds, Henry Adolphus, Iron Works, Reading
Suttle, William Benoni, Whalley Grange, Manchester
Sverdrup, Thorwald, Fredericksvaern, Norway
Jonge, William John, Morant's Court, Sevenoaks

Mr. Holland, M.P., presented the Annual Report,

FINANCES.—Major-General the Hon. A. N. Hood presented the Report, from which it appeared that the Secretary's receipts during the past three months had been examined by the committee and by Messrs. Quilter, Ball, and Co., the Society's accountants, and were found correct. The balance in the hands of the bankers on Nov. 30, was 773*l.* 1*s.* 11*d.* The Committee recommended that 54 names of members in arrear of their subscriptions from various causes be erased from the list of the Society. Numerous applications having been made to most of these defaulters, it was found that several have died and others become bankrupt: they also recommended that 2000*l.* which will be received from Plymouth should be placed on deposit immediately on receipt. This report was adopted.

JOURNAL.—Mr. Thompson, M.P., reported that in Class VIII. the judges had awarded the prize of 10*l.* to the Essay bearing the motto, "Scientia est pecunia;" the motto paper having been opened by the President, it was announced that the writer is the Rev. N. M. Brown, of Fairy Fort, Newtonlimavady, co. Derry, Ireland. The Committee recommended that the first Weekly Council discussion shall take place on Wednesday, the 15th February, and that the subject for discussion shall be Sewage, to be opened by Mr. Lawes. They also recommended that Earl Fortescue be requested to allow his name to be added to the list of the Committee.

AGRICULTURAL EDUCATION.—Mr. Thompson, M.P., reported that the Committee recommended that authority be given to them to invite examining bodies, such as the Universities of Oxford and Cambridge and London, the Royal College of Preceptors, the Society of Arts, &c., to appoint one of their members to confer with the Committee.

CHEMICAL.—Dr. Voelcker laid before the Chemical Committee an annual report of the work done in his laboratory.

In consequence of the lecture on the chemical composition and properties of "water," a larger number of waters were received for analysis than in any previous year. Several samples of water were found to be quite unfit for drinking.

The report next refers to cases of poisoning which were brought under the notice of the Professor in the past season. It then gives the results of the following experiments:—

1. On the efficacy of salt as a fertiliser.
2. Manuring experiments upon Turnips and Swedes
3. Field experiments on Clover.
4. Top-dressings on Oats and Barley.

On account of the great practical importance of the discovery of extensive potash-deposits in Germany, Dr. Voelcker lately visited the salt mines at Strassfurt in Saxony, in which these potash-deposits occur. The Chemical Committee desired their chemical officer to deliver a lecture on this subject in March.

On the occasion of a recent visit to the Continent, Dr. Voelcker made an inquiry into the disposal of human excrement in some of the large towns on the Continent. The removal of these excrementitious matters entails a certain expense upon the inhabitants of Berlin, Dresden, Leipsic, Frankfort-on-Maine, Brussels, Antwerp, and probably all large towns on the continent. The question how human excrements are most economically removed from large towns and utilised without creating a nuisance, is as much agitated in Germany at the present time as in England.

The failure of the Turnip crop has given greater prominence to the cultivation of the Cattle Melon. Dr. Voelcker's analyses appear to give the nutritive value of Cattle Melon not higher than that of Common White Turnips.

The numbers of analyses made for members of the Society during the past season was a full average. The following analyses of interest to the feeder of stock are mentioned in the report in detail:—The Composition of Pea-shells, Locust or Carob Bean Meal, Biscuit Meal, Rice-dust as Meal.

The Committee ordered the Annual Report to be handed over to the Journal Committee.

GENERAL PLYMOUTH.—Lord Feversham reported that the Committee had considered several plans, and after making alterations, had decided on one. They recommended that the name of Mr. Moon be added to the list of the Committee, and that he be requested to obtain such quantities of forage as might be required. Wednesday, the 12th July, would be the first day for trial of implements. This report was adopted.

Mr. RIGDEN having called the attention of the Council to the present unsatisfactory state of the railway arrangements with regard to the conveyance of stock, and the necessity of taking immediate steps for correcting the same to the satisfaction of exhibitors and for the success of the Plymouth Meeting, the Council appointed a Committee, consisting of Mr. Pain, Mr. Rigden, Mr. Thompson, M.P.; and Mr. Turner, to take this subject into consideration.

The Council then adjourned to their Monthly Meeting on Wednesday the 1st.

The Annual Reports of all the Standing Committees were presented by the respective Chairmen.

The Standing Committees for 1865, viz., Finance Committee, Journal Committee, Chemical Committee, House Committee, Implement Committee, Veterinary Committee, and Stock Prizes Committee, were appointed.

The Council having prepared their Report to the ensuing General Meeting, adjourned to a Special Meeting, when the Reports of the Implement and Live Stock Prizes Committees were received, and the Prize Sheets ordered to be printed.

The Papers for the next Number of the Journal, No. I. of the New Series, are:—

1. The Composition of Mangels grown with different quantities of salt.
2. Some Causes of Sterility in Soils.
3. Composition of Palm-nut kernel, meal, and cake.
4. Short Paper on Top-dressings on Wheat.

The Lecture by the Professor of Chemistry will be on the Natural Potash Deposits in Germany, on a Wednesday in March.

The General Meeting of Members took place on Thursday at the Society's House in Hanover Square, under the presidency of Sir E. C. Kerrison, Bart, M.P. There was an average attendance, and amongst those present were the Earl of Feversham, Colonel Challoner, Mr. Holland, M.P., Mr. Thompson, M.P., Sir T. D. Acland, Sir J. Heron Maxwell, Messrs. C. Stokes, H. Corbet, Torr, Barthropp, Jacob Wilson, Caldwell, J. C. Morton, Moore, Frere, and Prof. Voelcker.

Mr. H. HALL DARE, the Secretary, read the following Report of the Council:—

The Council have to report that during the past half year the Society has lost by deaths and resignations 35 of its members, while 478 new members have, during the same period, been enrolled on its lists, which is now constituted as follows:—

78	Life Governors
89	Annual ,,
1373	Life Members
4465	Annual ,,
17	Honorary ,,
6013	Making a total of

A new list of the governors and members of the Society having been published in the last Number of the Journal, the Council submit to the members on this occasion the following schedule, showing the districts to which they belong:—

	Number of Members	Amount of representation in the Council.		Number of Members.	Amount of representation in the Council.
ENGLAND—			ENGLAND—		
Beds	41	1	Sussex	15[illegible]	4
Berks .. .	148	2	Warwick .. .	1[illegible]	2
Bucks	73	3	Westmoreland ..	22	
Cambridge ..	5[illegible]	1	Wilts	133	1
Chester	121	1	Worcester .. .	17[illegible]	1
Cornwall	48		York	293	6
Cumberland ..	6[illegible]				
Derby	113	1	Total	5552	72
Devon	124	5			
Dorset	8[illegible]	2	WALES—		
Durham	17[illegible]		Anglesea .. .	8	
Essex	147	4	Brecon .. .	11[illegible]	
Gloucester	20[illegible]	4	Cardigan	11	
Hants	164	2	Carmarthen ..	24	
Hereford	15[illegible]	2	Caernarvon ..	1[illegible]	
Herts	10[illegible]	1	Denbigh ..	27	1
Hunts	57		Flint . .	2[illegible]	
Kent	22[illegible]	1	Glamorgan	38[illegible]	
Lancaster	177	1	Merioneth ..	7	
Leicester	6[illegible]	1	Montgomery ..	17	1
Lincoln	199	4	Pembroke .. .	3[illegible]	
Middlesex ..	350	2	Radnor	9[illegible]	
Monmouth ..	44	1			
Norfolk	152	4	Total	228	7[illegible]
Northampton ..	10[illegible]	1			
Northumberland ..	41[illegible]	1	SCOTLAND	8[illegible]	
Notts . ..	137	3	IRELAND	7	
Oxon	122	3	CHANNEL ISLANDS and ISLE OF MAN	17	
Rutland	12		FOREIGN COUNTRIES	57	
Salop	16[illegible]	1			
Somerset	149	2			
Staffs	13[illegible]	1			
Suffolk	15[illegible]	2	General Total ..	6013	74
Surrey	18[illegible]	1			

This schedule will enable those friends of the Society and of agricultural improvement generally, who reside in districts where the number of members is below the average, to remedy the evil by recommending to the Council for election the names of candidates who will no doubt be ready to avail themselves of the numerous advantages offered by the Society, and by their personal influence aid in the dissemination of the valuable information afforded in the pages of the Journal, in the lectures delivered to the members, and in the showyard at the country meetings.

The Council have elected Mr. Wm. Burgess, of the firm of Burgess & Key, to fill the vacancy caused by translation of Major-General the Hon. A. N. Hood to the list of Vice-Presidents of the Society.

The half-yearly statement of accounts to the 30th of June, 1864, has been examined and approved by the Auditors and Accountants of the Society. The finances were never in a more satisfactory condition than at present, the sum of 2000*l.* having been lately added to the funded capital of the Society, which now amounts to 18,705*l.* 1*s.* 10*d*, stock in the New Three per Cents.

The Council have appointed a Committee to consider the subject of the "Improvement of the Education of those who depend upon the Cultivation of the Soil for their support," and in order to obtain information on this important subject the Council have offered a Prize of 50*l.* for an Essay on Agricultural Education, and they have authorised their Educational Committee to invite examining bodies such as the Universities of Oxford, Cambridge and London, the Royal College of Preceptors, the Society of Arts, &c., to appoint one of their members to confer with the Committee.

The meeting at Newcastle-upon-Tyne was highly successful in the amount and character of the live stock and implements. The means for testing the power given off by agricultural machinery having this year been perfected in a striking and satisfactory manner, by the consulting engineer, Mr. Amos (of the firm of Easton and Amos), who invented a dynamometer, a description of which will appear in the Journal.

The Council deemed it right to appropriate a large amount of money to the trials of steam cultivators, and feel convinced

that the members generally have every reason to be satisfied that this was a judicious appropriation of the funds of the Society, and a thorough test of the advance of this most important branch of Agricultural Machinery.

The General Meeting of the Society held in the show-yard conveyed to the Mayor and Corporation of Newcastle and to the Local Committee who had so zealously co-operated with the Council on the occasion, their cordial thanks for the kind attention they had paid to the wishes of the Society, and the admirable manner in which they had made every arrangement required for promoting the success of the meeting. The Society are indebted to some railway companies for the arrangements they have made at their annual show, but regret to say that in some instances facilities have not been afforded to Exhibitors for the conveyance of Stock at a reasonable rate.

The Council have decided that the Plymouth Meeting shall be held in the week commencing Monday, the 17th of July, and the Prize Sheets will shortly be ready for distribution. Land for the trial of drills, manure distributors, mowing, haymaking and reaping machines, and horse-rakes, has been already placed under the necessary cultivation, and prizes amounting to 440*l.* will be offered among these classes of Implements, and 281*l.* for Stock.

The Council have from time to time been favoured with various Communications from Earl Russell, Her Majesty's Secretary of State for Foreign Affairs, the substance of which have been made public in the published proceedings of the meetings at which they were read.

Professor Simonds has delivered a Lecture before the Members of the Society on Small Pox in Sheep, which will appear in the Journal of the Society.

The Governors of the Royal Veterinary College have presented their annual report, by which it appears that more animals have been admitted into the Hospital of the College for treatment; also that there have been more consultations—and that other arrangements have been made tending to the further development of the veterinary art in respect to the pathology of cattle, sheep and pigs.

MR. J. C. MORTON, in moving the adoption of the Report, referred to the subject of Agricultural Education.

First, however, alluding to Mr. Fowler's death, he said:—Most unfortunately it falls to my lot, as happening to be the first of the general body of members who has risen to-day, to try to express the feeling of real distress, for it is nothing less, with which the members of this Society have heard and will hear of the sudden death of their late colleague and fellow-member—John Fowler. He has been taken away suddenly from the very midst of his busy and prosperous career, just as he was gaining that summit of success to which long years of persevering and most useful labour had given him so good a claim, and that surely is a fate which commands the sympathy and sorrow of any body of men. But it has an especial claim on ours; for we know of what usefulness in the agricultural world, and how serviceable to the great cause of agricultural progress his life has been—how large a share, in fact, of the usefulness of this Society has of late years been owing to the great ability, the untiring perseverance, and exuberant energy of which we now deplore the loss. I cannot doubt that before we leave to-day we shall have from our President, and from others of our leaders here, impressive testimony to the grievous and distressing loss which our Society has thus sustained.

I turn now to the subject of Agricultural Education.

I called attention last December to the fact that the promotion of agricultural education is specified in our Charter as one of the objects for which we are incorporated, and I then pointed out that up till then nothing whatever had been done in discharge of the duty thus imposed upon us. Since then one gathers from the columns of the agricultural papers, and from the pages of the Journal, and from the reports of the Council, that the subject has occupied a good deal of attention in this room. Mr. Holland has read a paper on it, and it has been remitted to a Committee of Council, who have reported their recommendation that a prize of 50*l.* be offered for the best essay on Middle-class Education in connection with those who are dependent on the cultivation of the land for their support. And that recommendation has been adopted by the Council. I may add that it is now several years since I mentioned to the chairman of the Journal Committee the existence of these hitherto neglected instructions in our Charter, and I then suggested to him the propriety, in accordance with these instructions, of publishing in our Journal a report on the existing means of agricultural education in this country. I do not mention this for self-justification at all, but simply for the purpose of pointing out the essential difference, as it seems to me, which exists between that proposal and the one which has been adopted by the Council. The one asked for a report on professional education for agriculturists, the other asks for a report on middle-class education for the children of farmers.

Now I venture to ask my brother members whether they think that the promotion of middle-class education is an object which this Society either should or can undertake. I do not think it is. It seems plain to me that although we may very properly be interested in the provision of professional agricultural education for those who are to be agriculturists, we have no more to do with the provision of middle class education for the families of agriculturists than we have to do with the provision of religious instruction for the families of agriculturists. But put the subject on the lowest ground in the first place. Our Charter does not speak of it. That must be read in the light of the time when it was written. The original promoters of this Society by whom this Charter was obtained never dreamt of it. Mr. Handley, in his letter to Earl Spencer, spoke on the proper application of farm manures—on the advantage of chalk and lime and gypsum and animal charcoal and common salt—on the practice of green manuring—on rotations of crops—on agricultural machinery, subsoil ploughing, and so on. It is plain that in his mind this Society was needed for the improvement of details and points in farm practice.

Lord Spencer, again, in his address at the Freemasons' Tavern, on May 9, 1838, spoke of the way in which the Highland Society had benefited Scottish agriculture, making that which was inferior to that of England its equal, and in places its superior. He also spoke of ploughing with four horses or with two, of drilling and broadcasting, and generally of diffusing amongst agriculturists the agricultural knowledge and agricultural superiority of particular districts. It is plain that he, too, imagined no other career for the Society than that of effort after practical improvement in the details of farm management. And neither have any of our leaders since ever imagined that it was the business of this Society to interest itself in any great social question, such as middle-class education. They have indeed fought altogether shy of great social questions. Even the relation of landlord and tenant—a strictly agricultural question, which lies at the bottom of all agricultural questions—has not been discussed in this room, or in the pages of our Journal, with anything like the fulness which its all importance might claim for it. And other points might be named illustrative of the unquestionable fact, and I will add the praiseworthy fact, that we have been engaged solely in effort after direct practical improvements in detail, and not with great social questions in which agriculture is only partly or incidentally concerned.

It may, however, be replied—and although I do not think it applies here, I entirely sympathise in the spirit of the rejoinder—it may perhaps be replied: "At any rate our Charter does not forbid our undertaking the promotion of middle-class education, and if it would be of agricultural use to do this, it would be a thing well done by the Agricultural Society."

To this, however, one rejoinder is:—The work is beyond our power. The Society of Arts has done a great work in this matter, and I suppose its great success is to be held out as our example. But the Society of Arts first associated with itself some hundreds of local and mechanics institutes, and thus organised a local agency all over the country. We have no such organisation. We know nothing here of the Farmers' Clubs of this country. We have kept ourselves aloof from all that, and pursued our independent and most useful course alone. And thus we have not the apparatus at our command which the Society of Arts possesses.

But apart from all this, and altogether silencing, as it seems to me, any further discussion of the point, I say there is obvious duty still neglected—duty which the Charter prescribes, remaining to be done, which certainly has the prior claim on our attention. The promotion of professional agricultural education is that duty—How is that duty to be discharged? One word more in answer to that question. Certainly not by the establishment or subsidizing of agricultural schools, but by such guidance and such stimulus offered to those which already exist, as public examinations would give. There are agricultural schools in this country. Let it be known that the Society recognises them, and will urge and guide them by its official examinations, and they will grow both in number and efficiency. In particular I must be allowed to say—although, strange to say, I believe it is for the first time in these rooms:—There is one large institution established so long ago as the year of the Society's meeting at Southampton—which, like ourselves, is incorporated by Royal Charter—which educates 70 or 80 students annually, and might educate twice that number. A thoroughly equipped school of agriculture; some 20,000*l.* or 30,000*l.* have been spent on its establishment and equipment. I believe it is the simple truth to say that this large and costly and well equipped institution has not only never been recognised by this Society, but notwithstanding that there is a condition in our Charter imposing on us the duty of promoting agricultural education, we have consciously, purposely, wilfully ignored its existence. The late Mr. Robert Brown, of Cirencester, by whose most praiseworthy labours it was founded, endeavoured at Southampton to enlist the sympathies of this Society in its behalf at that time. I know that he himself felt that he had nothing but cold water from us then. I see no trace or record of his subsequent success in the volumes of our Journal. There is no line in the index to these volumes pointing to the Royal Agricultural College. So strongly deterrent was the atmosphere of this room that even Mr. Holland, to whom we owe pretty nearly all we have in connection with the subject, did not venture in his recent lecture on Agricultural Education to call the attention of the members to the only school in England worthy of the name where a complete agricultural education is at this moment to be had. And I understand that a paper, descriptive of the College and its career, which was prepared for publication in the last volume of the Journal by the very ablest pen that could have undertaken the task, has been on one pretext after another postponed until the author is ready to withdraw it. Of course I admit it as possible that there *may* be a good reason for all this, but I respectfully submit to the Council of this Society, that we, the members whom they guide, ought to be informed what that reason is. I will engage to say that there is not a single member of this Society who has ever heard of the Royal Agricultural College but wishes it well. There is not one who has ever heard of the great sacrifices that have been made in its behalf, but sympathises admiringly with those who, at great personal cost and great personal labour and responsibility, have hitherto upheld it. And if in a matter so clearly within the Charter of our duties and responsibilities we all individually feel thus, why cannot we, in our corporate capacity, give some expression to this feeling and this judgment by our conduct? Our conduct has of course been under the guidance of the Council. I feel certain that many of the members join me in asking, "Why have we been guided thus?"

It will of course be cordially understood that I have no personal object whatever to serve by these remarks. Neither have I been asked by any one to make them. On the contrary, and as showing my entire independence in this matter, although I have taken no doubt a very small share in the great amount of unpaid labour which has been spent at Cirencester, I very much doubt whether the authorities there have sufficient confidence in my good will to entrust their case to me even if I am able to undertake its advocacy.

But indeed it is only incidentally that the College comes into the course of these remarks. Their case is certainly a glaring illustration of the way in which the duty which our Charter plainly imposes on us in reference to agricultural education has been hitherto neglected by us, and as such alone have I referred to it here. I hope no one imagines that either I, or I should think any other persons, want to see the Royal Agricultural College grafted as a department on this Society. Still less, however, do I want to see the whole middle-class education of our country districts attempted to be taken charge of here.

What I do want to see, and what I believe to be the duty which the Charter lays upon us, is the promotion of a sound professional agricultural education, by the organisation of such examinations by the Society's authority as will guide and stimulate not only the Royal Agricultural College, but every other institution which professes, or may hereafter profess, to turn out men with the knowledge and the skill which good farming now-a-days requires. And I think it is a thousand pities that Mr. Holland's proposal to this effect the other day in the Council was outvoted in order to a further delay in the hope, as it seemed to me, that meanwhile the opinion of the Council or the opinion of the Society might be guided towards ultimately taking part in that great movement for middle-class education which the Universities and which the Society of Arts have promoted, but which is as much outside us as it is outside Apothecaries Hall, or outside any of our great professional schools, military, medical, of divinity, or law.

If I might add one word more it would be to give entire credit—to give all honour to the motives of those whose plans I am opposing; and who have just wakened up to the fact that the *wording* of the Charter which I pointed out to them may perhaps enable them to convert this Society into a great middle-class educational institution for our country districts. It is impossible to imagine a nobler field of effort for those who think the middle classes of this country are unable to take care of themselves than that in which they are labouring; and, in particular, I don't in the least wonder that those who have acquired distinction by their labours in it, should want to bring every possible agency into work for their purpose. But then, we must not give exclusive credit to them. We have among us—happily, on our Council—one to whom more than to any other living man we owe whatever is good in the present condition of Agricultural Education in this country. And I say it is fortunate for us and for the Council that we can have the guidance of Mr. Holland in connection with this subject. But, indeed, I suppose we all want to do all the good we can. Well, then, I submit that one great means to that end is to keep things to their proper uses. The proper use of the Royal Agricultural Society of England unquestionably is to promote the improvement of the practical agriculture of the country. This it may do by seeing to the professional education of agriculturists, but it has nothing whatever to do with the subject of middle-class schools.

I now beg to move that the Report now read be adopted—and that the promotion of professional agricultural education be earnestly recommended to the attention of the Council.

MR. DUCKHAM, in seconding the motion, observed that Mr. Morton had occupied their time at such length, yet so very interestingly, that he should only make very few comments upon the Report. He felt, however, that there was one point in it which must be satisfactory to all the visitors to, and exhibitors at their annual meetings; he alluded to the paragraph which spoke of the accommodation afforded by the railways and the general arrangements at Newcastle. Reference was made to a want of liberality displayed by some railways in the kingdom. That want had been experienced in a great degree up to the present year, and he took occasion last year to mention the inconvenience the exhibitors were obliged to submit to in attending the annual shows. But their meeting at Newcastle had been everything that they could wish, and he felt that he should be wanting in his duty if he omitted to acknowledge the excellence of the arrangements made for that occasion, both by the railways and the town.

Mr. THOMPSON.—As Mr. Morton has alluded to the General Committee and the want of sufficient notice on the subject of Education in the Council, as well as by the Society generally, I feel it necessary to make a few remarks upon the question, more especially as having been a member of the Council, and as having, I believe, been present on most occasions when the question of education has been considered, I should like to say something about the want of decided steps taken by this Society in futherance of that object. The question is, whether we have been right or wrong in taking such steps, because as to the subject of agricultural education having been neglected by the Council—that I entirely deny. It has been taken up from time to time; it has been considered, and the decision has been that we should not take any active steps, because we did not see our way to any active steps that were likely to be successful. The question of whether we are right or wrong may be tested by the results of the experiences acquired upon the subject in other places, because though we have not acted as a body, the individuals forming the Council have been by no means idle in their respective localities in furthering measures which seemed likely to promote the objects of agricultural education, and, according to their opinions, more efficiently by those measures being conducted by individuals than if the subject had been taken up by a general body like this. Speaking of those institutions which have been founded with this object, and especially the one which Mr. Morton has alluded to as the Agricultural College at Cirencester, one of the best tests I think that that institution has not fully carried out the objects with which it was founded is, that it has assumed the name now of an agricultural college—it having in the first place been called simply a school. It is really efficient as an agricultural college, but education of that full and scientific character which is given there must always be so costly, that the demand for it must necessarily be small. It has been shown to be so; because, even though the College offers only limited accommodation it is not full; and limited as it is, if it is not filled I think we may fairly assume that that species of institution had it been made general, or rather if there had been several of those institutions founded in the country, they would have been complete failures in a financial point of view. I myself took a considerable part in another institution of a somewhat different character, but intended for the promotion of agricultural education. It was called the Yeomanry School. It was successful in so far as getting up a good building went, a considerable subscription having been made when it first began; but still as a model school for agricultural education it did not answer the purpose for which it was intended. Let us try the method which Mr. Morton especially recommends—the appointment of examiners. He says nothing can be easier than to appoint examiners by this Society, who may test education, and thereby do a great deal of good. But this has been tried by a body which has, perhaps, the greatest facilities of any for carrying out such an experiment—the Highland Agricultural Society of Scotland. There is no society that is so thoroughly national as that—that has such ramifications throughout every county in Scotland—a society which, by its local committees, is in possession of the ground, and can call to its aid the best known and most eminently scientific and practical agriculturists of Scotland. And how has the experiment succeeded? If it is easy to appoint examiners anywhere, it would be easy there. They certainly have the aid of science enough. They have practical acquaintance with agriculture, as well as the best scientific knowledge of the subject in theory. They have also material to work upon which is decidedly superior to anything in this country; for taking the country through, I have no hesitation in saying that the education of the people of Scotland is higher than it is here. Not only have they the best means of examining, but there is a greater readiness you would think among the young agriculturists of Scotland to submit themselves to such a test. But what has been the result? Our President received a letter quite lately from the Highland Agricultural Society, stating, as the result, after appointing examiners and putting forward a curriculum well suited for the purpose, that in seven years only 15 candidates had offered themselves for examination—little more than two a year; and of those ten only had passed. Well, that is not an experiment which would seem to show that it is an easy matter to appoint examiners by a great agricultural society who would do much toward promoting the great object which we all have in view, viz., agricultural education. I do not hesitate to say that this is one of the most important subjects we can have to consider, and it is only on account of the difficulty of dealing with it that this Society has abstained from taking any active steps in the matter. The words of the Charter, which point out what were the intentions of the founders of the Society, are "to take measures for the improvement of the education of those who depend on the cultivation of the soil for their support." When we first took up this question we considered this the strongest and most important part of it, and that which seemed most relevant was the education of the labourers. We considered that those who depended upon the cultivation of the soil for their support were the agricultural labourers, who at that time had no provision for their education. In that view the question seemed so large a one that we, as a Society, recoiled from taking any steps in connection with it; because we thought it was above our means, and we did not see our way to a successful result, notwithstanding that many of those who took part in the discussion of those questions at that time did take a practical and active part in the carrying out of those measures which have successfully, as I think, grappled with the subject, and which, though not perfect—for what human work is perfect?—have certainly furthered, promoted and improved most materially the education of the labouring classes. The largest portion of the question is therefore now, we may say, set at rest as far as the Society is concerned—for it is in more powerful hands. But the question which remains to us is the education of the farmer. I will not yield to any one in the amount of interest I take in this question, or the anxiety I feel to promote any measure on this subject which will commend itself to my judgment as likely to be successful. A committee is now considering this question again, and there seems to be a better opening now to some practical result than there has been before in a more general consideration of the question on the part of the great middle classes themselves. This is one of the most important preliminaries to the success of any such measure. That is taking place now, and I think there is a better opening than there was some years ago, and that we are greatly indebted to Mr. Holland for bringing the matter forward when there is a chance of doing something useful in it. At the same time I will not by anything that falls from me to-day in any way prejudice or limit or hamper the question. I will only say that we have it before us—that we take an interest in it, and will be happy to assist in the promotion of any measure likely to be useful. I say that the Council of the Society have not neglected the subject—whether they have been wise or not in not doing anything may be a fair question. I take the want of success of the efforts by others as a fair argument that we have shown a wise discretion in not doing more than we have done.

Mr. HOLLAND.—I must be allowed to set you right with regard to some of the expressions which have been used by Mr. Thompson as to the want of success at Cirencester. In first establishments, public or private, there are little domestic occurrences which sometimes interfere with the well-doing of an institution as of a private house. Such have arisen in the history of the Cirencester College. It started at first as a school expressly for farmers' sons, but always under the name of a college. The name has not been altered since its establishment. But when the original purpose failed, there came forward certain individuals who had the interest of the farmer at heart, and who determined, without reference to any other object but that of giving the best practical and scientific education in agriculture which it was possible to afford, to carry on the Institution. This has been done with success. In the first instance, the great object was to get a large number of pupils, and it was obtained under its late most effective and talented Principal. That Principal it was our misfortune to lose. Our system was still carried on, but we had to reform. We found that a large number of men came to us, not for the purpose of learning agriculture, but for the purpose of waiting until they obtained commissions in the army, or to idle away a certain amount of time. That was not the object for which the Institution was re-established, and therefore we got rid of those men, although at considerable burden to ourselves. In the course of time we have now, through the able assistance of our professors, established a system which is perfect, I should say, as far as it goes, in teaching both practical and scientific agriculture. It is easy to say so, but I look to facts. I yesterday had the pleasure of meeting at our annual dinner some old students of the Royal Agricultural College. We met about 80 in number, and though I did not take a census of those who were present, I believe that two-thirds were more or less tenant farmers or agents, and that they had obtained their position as agents, or had placed themselves in farms under better circumstances than ordinary farmers, in consequence of the instruction, practical and scientific, obtained at Cirencester. In course of time, and it is already occurring, these men are becoming noted throughout the land as agriculturists, and where a man has intellect, and capital, and talent, and is connected with agriculture, he is very likely to become a member of this Council. I therefore look forward to the day not being far distant when very many former students of the Royal Agricultural College, and many present students of the College, will also be members of this Council, and I have no fear of the results then of the nature of the education which will be adopted by this Council. In the meantime I can only say, with reference to your proceedings in Council, that I have no objection, as far as I am concerned, to go quietly and tardily to work, and I think Mr. Thompson will at all events admit that we have not been in a hurry in considering this subject. As to the want of success of the examinations of the Highland Society, and of their having stuff "to work upon in Scotland," five of our pupils of the Royal Agricultural College at Cirencester have gone up to those examinations, and have carried off the prizes. But those who have paid any attention to the examinations instituted at Cirencester will have remarked that nothing could be more *jejune* than purely scientific education—nothing more absurd than instruction in abstract agriculture. Although we vary in our views of the education belonging to this Council, and although some are in favour of starting with middle-class education, and having our attention directed to middle-class instruction generally, yet at the same time the duty of this Society is I believe to pay attention especially to practical instruction in agriculture, and I am of opinion that the words of the Charter apply to such a system of instruction—and that instruction we all agree can only be given after a boy has gone through this middle-class general education. Therefore I say that our way is clear; that we have no difficulties to contend with; that the success of Cirencester College, both in examinations and in practical and scientific agriculture, proves that everything is possible; that there is no experiment even to be tried; that a clear and straightforward path is before the Council of this Society, and that if they follow it they will be promoting scientific and practical education, and improving in that respect the position of the tenant farmer.

Mr. MOORE.—I believe that no subject more important than this subject of agricultural education can engage the attention of the Council or the members of this Society. I myself sympathise very much with the observations of Mr. Morton. I think the professional education which he speaks of is the particular part of the subject with which this Society has to do; and although it is now impossible to enter into any detail upon the subject, what I am anxious for is that the Society should in some way or other, as the Council may think fit, adopt measures to obtain the sympathy of the members of the Association generally and of the country in this question of education—whether by farmers' clubs, or in any other way that may be deemed desirable. We have often had allusions to it in the Journal, and other subjects connected with it; and I think, considering the great expenditure that now takes place, the large sum paid to the Editor of the Journal, which appears somewhat out of proportion to the service—we might expect to have this and kindred subjects more thoroughly canvassed, and brought more prominently forward. I have no doubt that the Editor is a very able gentleman in every respect, but the country knows nothing about the operations of this Society. They do not seem to feel any interest in it, except on the occasions of its great annual shows. In the exhibitions of stock we see that the country does take an interest in our proceedings. I have always thought that the subject of education has not received the attention that it deserved. It has been again and again before the Council, but the members generally know nothing about their proceedings, or the amount of interest taken in it by them. Not knowing what has been done, we have felt that the question has been neglected. But now that the subject has been taken up, we hope that more will be done than has been done hitherto. An important part of the subject to which Mr. Thompson referred, is the education of the labourers. I feel the great difficulties of that question in all its aspects, but there is no doubt that the education of the working classes in the rural districts of this country has been to a great extent a failure. Whether this Society could communicate in any way with the Privy Council on Education so as to offer suggestions on the subject is a question for consideration; but what we want in the country is the industrial training of our labourers. It is no use sending them to school to harp on a great many strings which would be valueless to them hereafter. What we want to see is the boys and girls taught those things in which they will be occupied during their after lives, and what we feel is that no attention has been paid to that in this country as a rule. I have known of a great variety of schools in the country where the education is very good as far as it goes, but where the children are taught nothing of those occupations by which they will have to support themselves. I am not an opponent of education of any sort; but first you must teach the children their occupation, and then if any of them show ability to rise out of the position in which they find themselves, I believe they will rise in spite of the difficulties by which they are surrounded. I think it is a mistake in principle to instruct them in anything beyond what they are likely to reach. I have taken great interest in this question. I know there are difficulties connected with it, but I think upon the question of middle-class education, what the Royal Agricultural Society has to do is to indicate in some way or other the best mode of proceeding with regard to schools for farmers. As a rule, farmers in the country do not know where to send their children. They want now better education than their forefathers demanded. They find a good school too heavy in expense for them, and they do not like sending their children to parochial schools. I am anxious for the commingling of classes of all who feel a common interest in what affects the welfare of ourselves and the country, but I do not think it desirable that the farmer should be compelled to send his children to the parochial school, to be educated perhaps by a young pupil teacher sent from a training school of that class that has made the very name of schoolmaster repugnant to the labouring classes. This is a question which is well deserving the consideration of the Council and the members of the Agricultural Society at large, and the one point which I wish particularly to dwell upon is this, that it would be desirable if the Society could in any way let the country know what they were doing more than they do now. We get the Journal twice a year, and the majority of us, I dare say, never read it at all. Some of the articles in it are fit to become standard works in our libraries, but they are not the kind of reading that is likely to suit the taste of farmers. What we want is means of communicating with the country—that the country may know what is taking place in Hanover Square, and that Hanover Square may know what are the feelings prevailing among the farmers. Another question is that of railway conveyance to our shows; I believe that that question has enjoyed the attention of the Council, and that it was to have been before them yesterday. It is a question of the greatest possible importance to members of the Society, and I am quite sure of this, that though the Show increases—it has increased this year, and will increase as means of communication are opened up throughout the country; yet what I fear is, that with the present system we shall continue to find a great many farmers whom we should like to see at our Shows kept away from them. Our object is not to see a great number of gentlemen from the country at our Shows every year, which we always see, but we want the great mass of the farmers of the country to become practically interested in them. Numbers of times men have spoken to me of the expense farmers are put to personally, and in the carriage of their animals. We have no favour to ask from the railway companies. We are bringing a large and profitable traffic over their lines, and what I would suggest to them is, that they should take our stock by special trains if there is enough; but if not, to give us at least the privilege of sending our animals in horse boxes by passenger trains and goods rates, instead of sending them by luggage trains and shunting them backwards and forwards, according to the convenience of other traffic. Men are constantly complaining that their sheep are injured by the delay of the present system of transit, and I think we are at least entitled to call upon the railway companies to give us a quick passage for our stock, over their lines, which they might accord to us without loss to themselves.

The PRESIDENT: I am exceedingly glad, as I am sure many members of the Council must be, that a discussion has been raised on this most important question of Agricultural Education. I have to thank Mr. Morton for having gone fully into the subject, as it gives those who like myself, Mr. Holland, Mr. Thompson, and many others in the Council, take a deep interest in the question, as well as agriculturists generally, an opportunity of stating our opinions on the subject. At first I was afraid that it was the intention of Mr. Morton to throw cold water upon it; for, at the commencement of his speech he said, "we ought to read the Charter rather differently, considering the distant period when it was first made—so many years having since elapsed, the words of the Charter being 'to take measures for the improvement of the education of those who depend on the cultivation of the soil for their support.'" I was afraid that he was going to throw cold water on efforts to ameliorate the condition of that class. He mentioned the education of the Highland Society. He has paid great attention to agriculture, and is well versed in this particular matter. What did that Society think of the result of taking up the question of Agricultural Education? They had not in their first Charter, granted in 1787, any power to deal with Agricultural Education at all; but in 1856 they applied for a special provision to be added to enable them to deal with it—so great was the importance which their experience led them to attach to it. I understood Mr. Morton to say that he would object exceedingly to our having to do with the general middle-class education of the country—to our subsidising schools in various parts of England—to our taking up any schools. But does he suppose that we should do anything of the kind? Afterwards, however, in the course of his speech, he wishes us to have taken up a school in one sense, and that was the one at Cirencester alone. He said—why had we neglected our duties as a Council? Why had we not given prizes to Cirencester—one that was really the Agricultural College of England? We have heard much of Cirencester, but would a hundred Cirencesters enable the agriculturist to be properly educated? The price is such—some 80 guineas each pupil—that it would be impossible for the agriculturists to attend them. Is it possible for the farmers generally to pay that amount? Some can afford it no doubt, and it is satisfactory to those who can to have such an institution to send their children to. It is said we refused a paper, but we passed it this very week, and there will be entered as full an account of Cirencester, as far as I saw it, as it is possible for any person belonging to that school to desire. I hope therefore that we shall not hear any more about our having done anything against Cirencester or any other school in England. The principle on which we ought to act is to try to encourage the general education of the farmers throughout the country, and there is our great and single difficulty. We should much thank you, gentlemen, who are members of our Society, if you would give us your assistance in ascertaining the easiest and the readiest mode of accomplishing that object. The difficulty is one which requires the most careful possible treatment, and in order that we may, whilst we on the one hand by medals, or prizes, or whatever it may be the view of the Council to give, try to encourage sound education throughout the country, we should not on the other have pupils crammed up in order to be a means of drawing others into particular schools, or in point of fact endeavour to raise one school over the other. We should simply have an examination, basing the interest upon a prize given by the Society and open to all candidates that can be brought up to a certain standard of education throughout the whole of England. That is our view—whether we shall be enabled to carry it out is another question. If it has not been done, it is not because we have not considered the question, but because the difficulties are so great of submitting a proposition which would meet with the general approval of the Society. I trust before the next year is out that some motion will be taken in the matter, and in the very next month we are going to meet the body most able of any body of men to give us information upon it. There is hardly any other point to which reference has been made, except that of the education of agricultural labourers, upon which Mr. Moore spoke. I quite agree with him that it would be most useful for the farmers generally if we could in any way provide a more practical education for the sons of labourers; but there is immense difficulty in the way. It is very difficult to get the children of that class to attend a school, even for the shortest time. We know what the Privy Council exacts, and it is exacting year by year more and more. It exacts individual examination for each boy, and those schools which cannot live without the grant have to cram the boys up to a certain pitch to obtain it. The question is more for the farmers themselves to take boys and train them, and they have neglected one very easy method

of doing it. They used to take boys into their houses and train them to agriculture, but they do not do that so much now, and that useful aid to education has been withdrawn. We have been urged to induce the railways all over England to give us those facilities for our Shows that we had at Bath and in the West, and I hope the Committee already named, and which will shortly proceed to its labours, will be able to induce the companies to give us farther accommodation than some of them now do. I was glad to hear one gentleman allude to a railway near Newcastle that did as much as it could to assist us in the conveyance of our stock to this year's Show.

Mr. MORTON was not aware that he had charged the Council of the Society with not having taken up Cirencester—what he complained of was that they had neglected a whole class of schools, of which Cirencester was one. He thought it was too much for the leaders of the Society to claim any credit for their interest in the subject, seeing that this was the 25th year of the Society's existence, but only the first during which any particular action had been taken in connection with it.

Mr. ACLAND felt personally indebted to Mr. Morton for having brought the matter forward. All that those who were as anxious as Mr. Morton on the subject dreaded was silence. The more it was discussed, and the more objections which might fairly lie against any plan brought before the public on the subject of education were considered, the more they might be assured that the great body of English agriculturists would arrive at a safe conclusion. Mr. Morton himself was one of the best educators in England. He (Mr. Acland) had long been in the habit of reading with surprise and astonishment the able articles in the *Gardeners' Chronicle*, and when he saw the power of mind brought to bear sometimes upon foolish questions and sometimes upon weighty matters, and remembered the intelligent, the benevolent, and philanthropic spirit in which agriculture was treated, he could not but reverence and admire the man who displayed these qualities. With reference to the education of the labourers it had been suggested that they ought to be taught more of what they would have to do in future life. Undoubtedly all men wanted to be prepared for their future duties; but he should be extremely sorry for it to go forth to the public, to the employers of labour, schoolmasters, and ministers of religion in England, that the object which this Society sought was to make tools and instruments of labour; that they were going in the country parishes and in the schools to make the poor little half-starved creatures into better tools to make money by. God forbid that that should be the object of agricultural education! He knew that it required great force of conscience and Christian love to prevent that being the perverted object of agricultural education. They should teach those children the duties of their future life, as fathers, husbands, and faithful and good servants, and was that to be done by teaching them the skill to be better diggers, delvers, and drainers? Was that the way to make them better members of society? They had the school to call out the soul and mind, and their fathers and masters and skilled teachers would teach them a great deal more of their work than all the gentlemen in England could teach. This threw great light on the question of the education of the master. They did not want to make better tools in educating the labourers, and in striving for the education of the farmers they did not want to produce mere money-making machines. He did not consider the Editor of the Journal over-paid at 500*l.* a-year.

Mr. MOORE denied having advocated a system of education which would make children mere machines.

Sir J. W. MAXWELL hoped that it would not go forth to the public that in saying sufficient attention was not paid to technical education the Society wished to ignore altogether the general education of the children of agricultural labourers.

The PRESIDENT, upon the question of providing special technical education, said that at a school in Devon the rule generally was that the farmers' sons who were sent to be educated as farmers turned out tradesmen, and those who went to be educated as tradesmen became farmers. He suggested that Mr. Morton might be satisfied with the discussion that had taken place, and simply move the adoption of the Report, without binding the Council by the use of the word "professional."

Mr. MORTON expressed his willingness to adopt that course, and the motion, amended as suggested, was carried. The auditors having been re-elected, and a vote of thanks awarded to them for their past services,

Mr. DUCKHAM suggested for the consideration of the Council whether the time at which the annual Show was now held (July) did not interfere with the parturition of cows. The date was fixed so that the animals might be as near 1, 2, and 3 years old as possible at the time of the exhibition, but without the slightest idea that it would have the practical effect of driving the breeders of animals intended to compete to adopt the worst possible months for parturition.

The Earl of FEVERSHAM moved a vote of thanks to the President, to whose constant attention to the interests of the Society he paid a well-deserved compliment.

The motion having been carried, it was briefly acknowledged by Sir Edward Kerrison, who referred to the death of Mr. John Fowler as a great loss to agriculture.

The proceedings then terminated.

THE SMITHFIELD CLUB CATTLE SHOW.

AGRICULTURAL HALL, ISLINGTON.—It is a very large and grand exhibition—the noblest possible illustration of the perfection to which the English farmer has brought his animals, his plants, and his means of cultivation. The classes are both more numerous and larger than usual. The implement exhibitors as well as the live stock men have this year the advantage of a catalogue; and both the catalogues are wonderfully well filled. There is but one thing which has damped the success and heart of the exhibition, and that is the death of Mr. John Fowler, of Leeds, to which reference is made elsewhere. The news of it, which arrived on Monday afternoon, threw a gloom over the whole of the first day's proceedings, and has created a universal feeling of sympathy and distress.

The superiority of the Hall to any other building yet devoted to the purposes of agricultural exhibitions is manifest on every successive occasion of its use. The inspection of the animals alongside of them is rendered easy by the large and roomy access given, and by the prominent and easily read announcements of their class, exhibitor, age, and fortune as to prizes. The examination possible of many of the classes from the galleries is also of great advantage. Of the sheep and pens of the cattle classes in particular, a capital opportunity of estimating their merit as to dimension and symmetry is given by the "ground plan" of them which this bird's-eye view presents. The galleries, too, afford roomy scope for the implement exhibitors and seedsmen. The lighting is however in places defective. The corners are in the dark during the day, and owing to the useless position of a whole row of lights, the range of gallery is inadequately lighted at night. The directors would do well to shift the lights which now hang in front of the spectator and dazzle him as he looks over the railing into the yard below, backwards into the space behind him; and the skylights which stretch overhead along the galleries should be extended so as to benefit the dark corners where some unfortunate exhibitors are at present lost.

THE CATTLE CLASSES.

The DEVON CLASSES, seen both alongside and from the gallery, present all the beauty and symmetry for which their best specimens are noted. They are much better filled than at Birmingham, though many of the prize animals there reappear and are again successful. Thus Mr. Farthing's 3 year and 11 months old ox is again 1st, and in a much larger class than it competed with at Birmingham. This older Class of Devon oxen is remarkable for the size of many of its animals. Mr. Senior's 4 years and 11 months' ox is enormous. The female Classes are scantily filled—only five in all; but they are good, and have all been thought deserving of prizes.

The HEREFORD CLASSES are very well filled. The younger class of oxen contains five animals, the 1st prize going to Mr. Pike for a wonderfully fine beast, so young as barely 2½ years old. The steers, between 2½ and 3½ years old, contain 11, the 1st prize going to Mr. Yeomans, for the very wide and well grown Hereford, which was 1st also at Bingley Hall. Mr. Pitt's ox shown there is here beaten by Mr. Druce and Mr. Hatcher. The older class of oxen contains 13 animals, and here Mr. Phillips's ox is again successful. He is an exceedingly long and very evenly fed beast—a true cylinder for an unusual length backwards, and of first-rate quality. The 2d and 3d are grand massive beasts, the 3d in particular covering an enormous quantity of ground in front. The heifer class contains only three, taking 1st, 2d, and 3d prize—not a very even lot. The cows are six in number. Mr. Steadman's cow is again successful; she is a thick heavily-fleshed beast—though perhaps rather patchily fed.

The SHORT-HORN CLASSES are unprecedentedly numerous, upwards of 70 competing in the various sections. The youngest class of oxen contains the best ox in the yard. He is only 2 years and 5 months old—and an extraordinary illustration of the precocity and early maturity of the breed—very deep and long, thickly and evenly covered, with wonderful rib and back and flank, and with capital coat of hair; he is a first-rate specimen of a good Short-horn. There is this interest attaching to him, that he is bred from the stock of Mr. Dixon, of Caistor, and is a grandson we believe of *Young Strawberry*, herself a granddaughter of one of the cows sold at Charles Colling's sale. So that here we have a Short-horn which cannot be very greatly altered from the type of half a century ago, beating all the best animals of the day. In the middle class of oxen Mr. Pulver's large upstanding heavy ox is again successful. The older class of oxen, also unusually numerous, contains the winners at Birmingham, and reproduces them in the rank there given, excepting this, that Mr. Carr's and Lord Gainsborough's were 2d and 3d there; they are 3d and 2d here; Sir W. De Capel Brooke's thick short-necked, massive red and white beast being at the head. The heifer class contains no fewer than 20 animals. And here, again, the Cup for the best heifer or cow in the yard is awarded to a capital specimen of a Short-horn in the younger class. Mr. Taylor's roan heifer is wonderfully fine in the bone, and thick everywhere else. The cow class contains many of the animals shown at Birmingham. There is a curious difference of judgment to record. Mr. Sharpe's 1st prize cow at Birmingham, bred by Mr. Stratton, was not entered for exhibition here; but his 3 1 prize cow there, also bred by Mr. Stratton, is shown and placed 1st in her class, over the head of Mr. Greenway's cow bred by Mr. Stiles Rich, 2d at Birmingham, and retaining its place as 2d here.

The SUSSEX CLASSES are not particularly well filled. The heifer class must be excepted, though, where Lord Leconfield and Mr. Shoosmith are respectively 1st and 2d. Neither are the Norfolk polled classes so well filled as usual; they are a massive, symmetrical, well-grown race, combining fitness for dairy and for the butcher in some respects better than any other breed in the country: and they thus well deserve the patronage of the Society. The Long-horns are perhaps hardly so deserving of it. They form here classes of considerable number and merit, and they are a picturesque addition to the exhibition; but it may be doubted whether the Society would not do better to confine its patronage to breeds of undoubted superiority.

The SCOTCH CLASSES are first-rate, Lord Derby's splendid ox, victorious over everything at Bingley Hall, is not here, but the class is very well filled as to quality, and sufficiently numerous. The Polled Classes too are exceedingly good; Mr. McCombie's grand and massive black Aberdeen being 1st again, as at Birmingham.

THE WELSH CLASSES and Irish Classes do not call for special report. The Irish Cattle may perhaps hereafter be better represented. At present one regrets that the money now spent on them is not devoted to a fuller reward for the large and important classes of Short-horns and Herefords, where the red and yellow prize cards stand about one to every six or seven animals, whereas almost every other of these smaller and inferior beasts is thus decorated.

The CROSS-BRED CLASSES are exceedingly interesting, many of them curiously successful in representing the mixture of blood which they contain. Mr. Martin's 1st prize great heavy ox, Short-horn and cross-bred, is, to all appearance, wholly Short-horn. Mr. Matthews' 2d prize Short-horn and Norfolk is also wholly Short-horn. Mr. Longmore's 3d prize Short-horn and Aberdeen is, on the other hand, barring the horns, almost wholly Aberdeen. On the other hand, Mr. Pollok's Short-horn and West Highland ox is a most complete mixture of the two breeds; so are Mr. Sewell's and Mr. Beare's Norfolk and Shorthorn.

The EXTRA STOCK CLASSES contain many good animals, and are a large class. Mr. Lewis Loyd's (of Addington) heavy and massive Hereford ox is the best, and decorated with the medal.

The following are the prizes awarded in the Cattle Classes:—

AWARD OF PRIZES.

CATTLE.

CLASS 1. DEVON STEERS UNDER 2 YEARS AND 6 MONTHS OLD.—20*l.*, William Smith, of 85, Southernhay, Exeter, Devon. 10*l.*, Robert Wortley, of Suffield, Aylsham.

CLASS 2. DEVON STEERS, UNDER 3 YEARS AND 3 MONTHS OLD.—30*l.*, Harry Frampton, of Blandford; 20*l.*, Robert Farthing, North Pethertn; 10*l.*, C. F. Perkins, of The Grange, Taunton.

CLASS 3. DEVON OXEN, ABOVE 3 YEARS AND 3 MONTHS OLD.—30*l.*, Walter Farthing, Stowey Court; 20*l.*, H. H. Ball, West Monkton, Taunton; 10*l.*, William Heath, Ludham Hall.

CLASS 4 DEVON HEIFERS UNDER 4 YEARS OLD.—25*l.*, William Smith, Exeter; 15*l.*, John Blomfield, of Warham, Norfolk.

CLASS 5. DEVON COWS, ABOVE 4 YEARS OLD.—25*l.*, Walter Farthing; 15*l.*, William Heath; 10*l.*, James W. Buller, Crediton.

CLASS 6. HEREFORD STEERS, UNDER 2 YEARS AND 6 MONTHS OLD.—20*l.*, Aaron Pike, of Mitton, Tewkesbury; 10*l.*, George Bedford, Leominster.

CLASS 7. HEREFORD STEERS, UNDER 3 YEARS AND 3 MONTHS OLD.—30*l.*, Henry Yeomans, of Llowes Court, Hay; 20*l.*, Samuel Druce, of Eynsham; 10*l.*, John Hatcher, of Thornburys

CLASS 8. HEREFORD OXEN, ABOVE 3 YEARS AND 3 MONTHS OLD.—30*l.*, Joseph Phillips, of Ardington, Wantage; 20*l.*, Robert Wortley, Aylsham, Norfolk; 10*l.*, William Symonds, of Lambourne, Romford.

CLASS 9. HEREFORD HEIFERS, UNDER 4 YEARS OLD.—25*l.*, John Baldwin, of Luddington, Stratford-on-Avon; 15*l.*, John H. Arkwright, Leominster; 10*l.*, Richard Dyott, of Freeford, Lichfield.

CLASS 10. HEREFORD COWS, ABOVE 4 YEARS OLD.—25*l.*, William Stedman, Bucknell House, Shrewsbury; 15*l.*, Henry Bettridge, of East Hanney, Wantage; 10*l.*, William Groves, of Walk Mills, Lebotwood.

CLASS 11. SHORT-HORNED STEERS, UNDER 2 YEARS AND 6 MONTHS OLD.—20*l.*, John Walesby Kirkham, of Biscathorpe House, Louth; 10*l.*, The Earl of Aylesford.

CLASS 12. SHORT-HORNED STEERS, UNDER 3 YEARS AND 3 MONTHS OLD.—30*l.*, Thomas Pulver, of Broughton, Wellingborough; 20*l.*, Frederick Leney & Son, of Wateringbury; 10*l.*, Thomas Greetham, Wragby.

CLASS 13. SHORT-HORNED OXEN, ABOVE 3 YEARS AND 3 MONTHS OLD.—30*l.*, Sir William de Capell Brooke, Bart., Kettering; 20*l.*, The Earl of Gainsborough; 10*l.*, Francis Carr, of Heslington, York.

CLASS 14. SHORT-HORNED HEIFERS, UNDER 4 YEARS OLD.—25*l.*, Richard Taylor, of Kingham, Chipping Norton: 15*l.*, The Duke of Sutherland; 10*l.*, William Aldworth, of Abingdon.

CLASS 15. SHORT-HORNED COWS, ABOVE 4 YEARS OLD.—25*l.*, Robert Sharpe, of Courtlands, East Grinstead; 15*l.*, Henry Greenway, of Hambrooke; 10*l.*, Robert Wortley.

CLASS 16. SUSSEX OXEN, UNDER 3 YEARS OLD.—20*l.*, W. A. Langdale, Dorking; 10*l.*, William Aird, of Cage Farm, Tonbridge.

CLASS 17. SUSSEX OXEN, ABOVE 3 YEARS OLD.—25*l.*, Thomas Barton, Robertsbridge, Hurstgreen; 15*l.*, John Shoosmith, of Berwick, Lewes; 10*l.*, George C. Coote, of Tortington, Arundel.

CLASS 18. SUSSEX HEIFERS, UNDER 4 YEARS OLD.—20*l.*, Lord Leconfield; 15*l.*, John Shoosmith.

CLASS 19. SUSSEX COWS, ABOVE 4 YEARS OLD.—No Entry.

CLASS 20. NORFOLK OR SUFFOLK POLLED OXEN, OF ANY AGE.—15*l.*, Edmund Beare, North Walsham; 10*l.*, John Sewell, Swaffham, Norfolk.

CLASS 21. NORFOLK OR SUFFOLK POLLED HEIFERS OR COWS, OF ANY AGE. 15*l.*, John Overman, of Burnham, Sutton.

CLASS 22. LONG HORNED OXEN, OF ANY AGE.—10*l.*, Sir John Harper Crewe, Bart.; 5*l.*, W. T. Cox, of Spondon Hall, Derby.

CLASS 23. LONG-HORNED HEIFERS OR COWS, OF ANY AGE.—10*l.*, John Faulkner, of Bretby Farm, Burton on-Trent; 5*l.*, W. T. Cox.

CLASS 24. SCOTCH HORNED OXEN, OF ANY AGE.—30*l.*, James Maxwell, of The Hill, Thorney; 15*l.*, Sir A. P. Gordon Cumming, Bart. (Class generally Commended).

CLASS 25. SCOTCH HORNED HEIFERS OR COWS, OF ANY AGE.—15*l.*, Allan Pollok, of Lismany, Ballinasloe; 10*l.*, James Stewart, Aberdeen.

CLASS 26. SCOTCH POLLED OXEN, OF ANY AGE.—30*l.*, William McCombie, of Tillyfour; 15*l.*, William Heath, of Ludham Hall.

CLASS 27. SCOTCH POLLED HEIFERS OR COWS, OF ANY AGE.—15*l.*, The Earl of Southesk; 10*l.*, J. and W. Martin, of Aberdeen.

CLASS 28. IRISH OXEN, OF ANY AGE.—10*l.*, Allan Pollok.

CLASS 29. IRISH HEIFERS OR COWS, OF ANY AGE.—10*l.*, Robert Christopher, of Swafield, North Walsham; 5*l.*, Lord Berners.

CLASS 30. WELSH OXEN (RUNTS), OF ANY AGE.—20*l.*, B. E. Bennett, of Theddingworth, Rugby; 10*l.*, Francis Neal, of Pagham, Chichester.

CLASS 31. WELSH HEIFERS OR COWS, OF ANY AGE.—10*l.*, W. B. Roberts, of Lovestone, Pembroke; 5*l.*, John Ransome, of Wheathamstead, Bury, St. Albans.

CLASS 32. CROSS OR MIXED-BRED STEERS, NOT EXCEEDING 3 YEARS OLD.—20*l.*, Thomas Dawson, of Poundsworth, Driffield; 15*l.*, Robert Farthing; 10*l.*, Robert Moir, of Meikle Tarty, Aberden.

CLASS 33. CROSS OR MIXED-BRED OXEN, ABOVE 3 YEARS OLD.—20*l.* J. and W. Martin, Aberdeen; 15*l.*, Walter Matthews, of Carbrook, Thetford; 10*l.*, Andrew Longmore, of Rottie, Banff.

CLASS 34, CROSS OR MIXED BRED HEIFERS, UNDER 4 YEARS OLD.—15*l.*, Sir A. P. Gordon Cumming, Bart.; 10*l.*, R. Birkbeck, Reigate.

THE SHEEP CLASSES.

The LEICESTER BREED is well represented. Mr. Walmsley, of Bridlington, takes the 1st prize in the Class of Shearling Wethers with a pen of the true fine bred Leicester type. In the smaller classes of wethers,

too, the prizes are in every case awarded to quality, such as Lord Berners', Mr. Bradshaw's, and Mr. Foljambe's pens, respectively 1st, 2d, and 3d.

The COTSWOLDS are a small but excellent class, with wonderful fleeces of wool and large frames. It is a pity that the leading breeders do not more generally take these public opportunities of advertising their unequalled breed. Messrs. West take the 1st prize. Mr. Read shows a pen with wonderful fleeces.

The LINCOLNS are also a small class of large sheep, here shown apparently thicker and riper than the Cotswolds, and with apparently less length and weight of fleece.

The ROMNEY MARSH are another useful class fairly represented—the 1st prize pen however looking more like true Leicesters than anything else.

The Extra Stock Sheep are almost wholly Leicesters. Some fine Long-woolled wethers, Cotswolds, and Lincolns, are here also shown.

The SOUTH DOWN CLASSES are wonderfully fine. Lord Walsingham takes the 1st prize and silver cup for the best Southdowns in the yard. They are in the class of younger wethers. They are beautiful sheep, of great and uniform width from end to end, as can be seen from the galleries. The Duke of Richmond takes the 1st prize in the older class of wethers.

The WILTSHIRE DOWNS are well represented by a small class of very large and useful sheep. Mr. Canning's and Mr. Walter's pen are of great size, and carry a great deal of wool.

The SHROPSHIRES are a small class. Mr. H. Smith is again at the head of them with his Birmingham pen. His experience is perhaps unparalleled as a prize taker. He lambs only about 130 ewes, and sells 40 to 50 rams—he thus had only nine wethers from which to select the successful three which have beaten all England.

The OXFORDSHIRE SHEEP are also well represented. They are a thick heavily-fleeced breed, with capital quality of mutton. There are a few Mountain sheep exhibited for the prizes offered. The Somerset sheep are a compact and useful breed—but what shall we say of the Herdwicks? There is a pen here taking a prize of 10*l*., which are certainly the worst animals of the sheep kind here. No doubt admirably adapted to their bleak mountain pastures—but hardly deserving of patronage at a metropolitan fat stock show. The extra stock classes of Southdowns are full of beautiful specimens. The Cross breed sheep too in the extra stock classes are very fine.

The following are the prizes awarded in the Sheep Classes:—

SHEEP.

CLASS 35. FAT WETHERS (LEICESTERS UNDER 23 MONTHS).—*10l.*, G. Walmsley, of Rudston House, Bridlington; 1*5l.*, P. Jordan, of Eastburn, Driffield; 5*l.*, the Hon. Colonel Lowther, M.P.

CLASS 36. FAT WETHERS (LEICESTERS UNDER 23 MONTHS). EACH SHEEP NOT TO EXCEED 220 LB. LIVE WEIGHT.—*20l.*, Lord Berners; 15*l.*, C. J. Bradshaw, Burley-on-the-Hill; 5*l.*, G. S. Foljambe, Worksop.

CLASS 37. FAT WETHERS (COTSWOLDS UNDER 23 MONTHS)—*20l.*, T. and G. West, of Greenhill Farm, Bletchington; 15*l.*, J. F. Mills, of Burford; 5*l.*, J. K. Tombs, Lechlade.

CLASS 38. FAT WETHERS (LINCOLN, UNDER 23 MONTHS).—*20l.*, William Greetham, of Stainfield, Wragby; 15*l.*, John Edwards, of Buckworth, Kimbolton; 5*l.*, W. Cranfield, of Buckden, Huntingdon.

CLASS 39. FAT WETHERS (KENTISH, &c., UNDER 23 MONTHS).—15*l.*, Edmond Riley, Beverley, Yorks; 10*l.*, Frederick Murton, Ashford, Kent; 5*l.*, J. Newport, of Elmsted Court, Ashford.

CLASS 40. FAT WETHERS (SOUTHDOWN, UNDER 23 MONTHS).—20*l.*, Lord Walsingham; 10*l.*, Duke of Richmond; 5*l.*, G. S. Foljambe.

CLASS 41. FAT WETHERS (SOUTHDOWN, UNDER 23 MONTHS). EACH SHEEP NOT TO EXCEED 200 LBS. LIVE WEIGHT.—15*l.*, Duke of Richmond; 10*l.*, Lord Walsingham; 5*l.*, Sir Thomas Barrett Lennard, Bart.

CLASS 42. FAT WETHERS (SOUTHDOWN, ABOVE 23 AND UNDER 35 MONTHS)—*20l.*, Lord Walsingham; 10*l.*, Duke of Richmond; 5*l.*, John Overman, of Burnham Sutton.

CLASS 43. FAT WETHERS (HAMPSHIRE OR WILTSHIRE-DOWN, UNDER 23 MONTHS).—*20l.*, W. B. Canning, Devizes; 15*l.*, John Walter, M.P.; 5*l.*, Stephen King, Lambourn.

CLASS 44. FAT WETHERS (SHROPSHIRE, UNDER 23 MONTHS).—15*l.*, Henry Smith, of Sutton Maddock, Shiffnal; 5*l.*, Thomas Horley, Jun., of The Foss, near Leamington.

CLASS 45. FAT WETHERS (SHROPSHIRE, ABOVE 23 AND UNDER 35 MONTHS.)—15*l.*, Lord Wenlock; 5*l.*, Richard Dyott, of Freeford.

CLASS 46. FAT WETHERS (OXFORDSHIRE, UNDER 23 MONTHS.)—15*l.*, Henry Overman, of Weasenham, Rougham; 10*l.*, Samuel Druce, of Eynsham; 5*l.*, Arthur Overman, Norfolk.

CLASS 47. FAT WETHERS (WHITE-FACED MOUNTAIN BREED, OF ANY AGE.)—15*l.*, William Smith, Exeter; 10*l.*, John Tapp, of Twitchen, South Molton.

CLASS 48. FAT WETHERS (BLACK FACED, OR SPECKLED-FACED MOUNTAIN BREED, OF ANY AGE.)—15*l.*, Jonathan Peel, of Knowlmere Manor, Clitheroe; 10*l.*, Richard Eastwood, of Thorney Holme, Clitheroe.

CLASS 49. FAT WETHERS (RYELAND, CHEVIOT, DORSET, OR ANY OTHER PURE BREED.)—15*l.*, John Bearcroft Downing, of Holm Lacy, Hereford; 10*l.*, Barwell Ewins Bennett, Rugby.

CLASS 50. CROSS-BRED FAT WETHERS (UNDER 23 MONTHS.)—20*l.*, John Overman, of Burnham-Sutton; 10*l.*, John White, of Parsonage Farm, Rickmansworth; 5*l.*, Clare Sewell Read, Norwich.

CLASS 51. CROSS-BRED WETHERS (UNDER 23 MONTHS.) EACH SHEEP NOT TO EXCEED 220 LBS. LIVE WEIGHT.—10*l.*, John Overman, of Burnham-Sutton; 5*l.*, George Hine, Jun., of Oakley, Bedford.

THE PIGS.

These are classed solely according to age. There are a greater number shown than have ever before been exhibited together under the auspices of the Smithfield Club, and several new names appear upon the prize list among the exhibitors.

Mrs. Warren, of Basingstoke, shows a very fine pen of black pigs. Mr. Stearn exhibits black pigs of great forwardness, and at the same time with plenty of hair and constitution. Mr. Morland's piebald appear in several of the classes as victorious. Mr. Stearn, too, Lord Radnor, Mr. Coates of Hammoon, the Hon. A. N. Hood, Mr. Crisp of Butleigh Abbey, the Countess of Chesterfield, and others, exhibit animals of great merit.

The prizes are as follows:—

PIGS.

CLASS 52. PIGS OF ANY BREED UNDER 6 MONTHS OLD.—15*l.*, Mrs. Pelham Warren, of Worting House, Basingstoke; 10*l.*, John Lynn, of Church Farm, Stroxton; 5*l.*, S. G. Stearn, of Brandeston, Wickham Market.

CLASS 53. PIGS OF ANY BREED, 6 TO 9 MONTHS OLD.—15*l.*, John Saunders, of Fifehead St. Quinton, Blandford; 10*l.*, John Kent, of Goodwood; 5*l.* The Countess of Chesterfield. Commended: Class generally.

CLASS 54. PIGS OF ANY BREED, 9 TO 12 MONTHS OLD.—15*l.*, Geo. B. Morland, of Chilton, Steventon; 10*l.*, S. G. Stearn; 5*l.*, Christopher Cattle, of Wiseton Grange, Bawtry. Class generally Commended.

CLASS 55. PIGS OF ANY BREED, 12 TO 18 MONTHS OLD.—15*l.*, John Coate, of Hammoon, Blandford; 10*l.*, The Earl of Radnor; 5*l.*, G. B. Morland.

EXTRA STOCK.

Silver Medal, for the best Steer or Ox; also, 5*l.* Prize, Lewis Loyd, of Monks Orchard, Addington.

Silver Medal, for the best Heifer or Cow; also 5*l.* Prize, Robert Sharpe, of Courtlands, East Grinstead.

Silver Medal, for the best Leicester Wether Sheep, C. Jas. Bradshaw.

Silver Medal, for the best Leicester Ewe, The Hon Colonel Lowther, M.P. Class generally Commended.

Silver Medal, for the best Long-woolled Sheep (not Leicester), Thos. B. Marshall, of Branston near Lincoln.

Silver Medal, for the best South-down Wether Sheep, The Duke of Richmond.

Silver Medal, for the best Southdown Ewe, Lord Walsingham.

Silver Medal, for the best Short-woolled Sheep not Southdown), R. and J. Russell, of Horton Kirby, Dartford.

Silver Medal, for the best Cross-bred Sheep, John Overman, of Burnham Sutton.

Silver Medal, for the best Pig, Thomas Chamberlayne, of Cranbury Park, Winchester.

SILVER CUPS.

Silver Cup, value 40*l.*, for the best Steer or Ox in any of the classes, John Walesby Kirkham, of Biscathorpe House, Louth, Lincolnshire.

Silver Cup, value 40*l.*, for the best Heifer or Cow in any of the Classes, Rich. Taylor, of Kingham, Chipping Norton, Oxon.

Silver Cup, value 20*l.*, for the best pen of Leicesters, Cotswolds, Lincolns, Kentish, or other Long-woolled Breed, in any of the Classes, George Walmsley, of Rudston House, Bridlington, York.

Silver Cup, value 20*l.*, for the best pen of 1-year-old Southdowns, Hampshire, or Wiltshire Downs, Lord Walsingham.

Silver Cup value 20*l.*, for the best pen of Shropshire, Oxfordshire, Cross-bred, or any other Breed of Sheep (not specified in Prize List in any of the classes), John Overman, of Burnham Sutton, Burnham Market.

GOLD MEDAL.

Gold Medal, for the best pen of Pigs in any of the Classes, John Saunders, of Fifehead St. Quinton, Blandford, Dorset.

The GALLERIES and the space under them are filled with the usual admirable illustration of the energy of our machine makers and seedsmen. We cannot give a detailed report. The Catalogue is a book of 60 pages, and only two or three points will therefore be named to day as deserving of notice.

Mr. Fowler's stand, containing his largest sized engine and plough, remained without a representative. At Mr. Howard's stand there is exhibited his new steam engine and windlass combined for cultivation purposes. It is a 12 horse engine placed with its boiler *across* the length of the framing, running on three wheels, which carries it, and the advantage is that there is thus afforded opportunity of side, single, or double drums which shall wind off and on their rope as the plough or cultivator is drawn to and fro—while the engine itself, stationed at the end of the furrow, stands transversely to its work, and thus able to resist the strain of the draught. It appears to be an exceedingly compact and well packed arrangement of parts, and some months experience of its fitness for its work has been now obtained, of which we hope soon to be able to give a report.

All the great manufacturers are here represented. Ransomes have a large and important stand, so have Clayton & Shuttleworth, Garrett, Hornsby, Crosskill, Samuelson, the Reading Company, Bentall, Burgess & Key, J. B. Brown & Co., and many others. Among the novelties may be mentioned Mr. Roby's clever Barley hummeller, Mr. Nalden's capital single, and compact and cheap rotary screen; Mr. Ferrabee's cheap, durable, and strong *untanned* leather straps; Greening's capital easily packed sheep-folding wire netting, which deserve to be known and used. It seems a very excellent thing, and costs 9*d.* per yard. Messrs. Garrett show a pair of Savory's steam-plough engines with winding drum.

The seedsmen are in great force. Messrs. Gibbs, of Halt Moon Street, have a splendid stand of roots, seeds, and Grasses; and Mr. Hallett here shows one of his wonderful cases of selected ears of Wheat, containing the result of four years education of an ear of Hunter's Wheat—the original ear, a good ordinary specimen—the dozen radiating monsters which have sprung from it, looking like any other of Mr. Hallett's well-known giant specimens.

Mr. Wright, of Great Bentley, shows good Mangel Wurzels and Swedes. Messrs. G. Gibbs & Co., of Down Street, show wonderful Cabbages, Blundell's Cattle Melon, Swedes, Mushrooms, &c. Messrs. Wheeler, of Gloucester, show capital roots and seeds, first-rate specimens of Wheat; so also do Messrs. Raynbird, of Basingstoke. Messrs. Carter have a very fine display of Swedes and Mangel Wurzels, Fosterton and Greystone and Green Globe Turnip, and a very large collection of Grasses and seeds; so also have Messrs. Sutton, of Reading, whose Mangels especially are of extraordinarily fine quality. By far the finest collection of Swedes, however,—looking like sections of a cylindrical pillar—is at the stand of Mr. Skirving, of Liverpool—one of the oldest Swede seed growers in the kingdom, and still unapproachable for the magnificent specimens he can show.

Messrs. Lawson show their Phospho-guano, which has now obtained a sale of close on 100,000 tons per annum! It is facts such as this which awaken one up to a realisation of the enormous scale and intense energy and activity which now pervade the agricultural world. There is at this stand a particularly interesting collection of Wheats, shown by Mr. Patrick Shirreff, of Haddington. We have a list of his Wheats and notes of their character, for which we cannot find room to-day. A cross between Talavera and the Bearded White Wheat produced an ear and grain of remarkably fine quality, and to the others reference will hereafter be made.

The daily attendance has been as large as usual, and the interest in farm produce taken by Londoners during the agricultural week has been in no degree diminished by the greater distance which they have now to traverse since the exhibition was removed from Baker Street to the Agricultural Hall.

We very much regret to learn that Mr. Sidney, the able, energetic, and courteous Secretary to the Agricultural Hall Company, has been disabled by illness during the week, when his services are so much needed. We have to thank Mr. Brandreth Gibbs, the Honorary Secretary to the Smithfield Club, for the facilities placed at the disposal of reporters on the first day of the show.

Farmers' Clubs.

LONDON: *Dec. 5.—Deficient Profits of Farming.*—This was the subject of a paper by Mr. Alderman MECHI, read before a large meeting of members, in the room of the Society of Arts, which had been kindly placed at the disposal of the Club for the evening.

The following is a very abridged report of Mr. Mechi's address. He said: In accordance with the notice on our paper of business, I purpose this evening to point out and investigate some of the causes that tend to render farming unprofitable. I shall classify them under the heads of uncontrollable and controllable, apportioning the latter between landlords and tenants, according to their responsibilities. In the tenants' department I shall consider the causes as affecting animal and vegetable management; also soil, climate, and manures. I need hardly say that it will be impossible to deal with so large a subject comprehensively within the time limited, but I will do my best to be brief, and, if possible, clear. If the farmers of Great Britain generally knew as well how to produce a profitable result as most of the gentlemen I now see before me, I should have no occasion to read this paper; but, as I have said before, this Club represents the sunny side of agriculture, and that is but a small area compared with the shady recesses of mismanagement, misfortune, and loss. "Plenty of meat and manure" must be, for the future, the motto of successful agriculture. The want of this is a prominent cause of unsuccess in farming. Farmers must learn to sell their crops to their animals, rather than to the miller: even with an immediate loss of 15 per cent., there is a greater gain in so doing. If sending away the crops from the farm impoverishes it, keeping them at home must produce an opposite result; and, therefore, if I want to know how a man is getting on, I ask him how many score pounds of meat per acre he makes over the whole area of his farm? 200 lb. per acre is a useful quantity. Apologising for this digression, I will now proceed to consider "some of the causes that tend to render farming unprofitable." Here is a long list of them:—

Not understanding the business of farming, especially the proper management of live stock; farming with insufficient capital, or taking too much land; extravagance in personal expenditure; not attending to your business; hiring your land without a lease; not stipulating for the power of selling or transferring that lease; hiring your land too dear; not suiting your crops to the soil and climate; buying too dear; selling too cheap; robbing, and thus starving, your Grass land; too many weeds, and too little hoeing; too shallow cultivation; too little manure, too little live stock; too little purchased food; too little purchased manures; too little good Grass land; the absence of steam power; fat horses and lazy ploughmen; the use of old-fashioned and improper implements; too many trees and fences; too small fields; bad roads and ill-placed homesteads; insufficient shelter for live stock, especially on heavy land; want of drainage on 20 millions of acres, according to Mr. Bailey Denton, one of our best authorities; being bound for an unsuccessful friend; too little experiment, and too much prejudice; not insuring against fire and hail-storms; family calamities; personal affliction; the seasons; murrain and blight; wind storm; incendiarism; inundation; local self-sufficiency, and want of general information and agricultural literature; difficulties in the transfer of land; want of agricultural statistics; a minimum crop causing a maximum per-centage of expense; too much seed; absence of piece-work; non-application of chalk or lime to poor, ferruginous, stiff clays, not having a good agricultural library; selling your produce on credit to unsafe persons; wire-worm; late sowing; being generally behind with your work; waste of manure; having a dishonest bailiff; having unskilled or incompetent labourers; neglecting the use of salt for animals and on the land: satisfaction with farming as it is; adulterated manures; adulterated oil cakes; the want of selection and great care as to sowing the very best seed; the neglect of good parentage in live stock; breeding in and-in with either live stock or poultry; being behind-hand in tillage, sowing, and the general work of the farm; the state of our laws as regarding the transfer of land; the want of associated capital for the purposes of agricultural improvement; the want of a desire on the part of landowners to seek the aid of associated capital; the want of improved arterial drainage; the want of water supply for summer irrigation.

In this list are many unavoidable causes, such as blight, murrain, and adverse seasons.

We have an illustration of the latter this year, when tens of thousands of acres on which nearly 10*l.* per acre have been expended in preparation for a root crop have partially or totally failed, owing to the protracted drought, thus depriving the farmer of that money return in meat on which he reasonably calculated, throwing him almost entirely upon his corn crop, which can only be disposed of at a very low price. Then, again, a cold wet season like 1861 deprived many a farmer of his year's profit, and in many cases trenched upon his capital. The furious gale that swept through parts of Scotland early in September, just at the period of harvesting threshed out the corn and caused an immense amount of damage. Against these the farmer cannot insure, although he can against hail storms.

Slowness of return is also a natural cause of moderate profit.

We sow our Wheat, and wait 11 to 18 months for its conversion into money; while a dealer in stock, with a good connection, will make his return and realise his profit daily or weekly, accumulating frequently money enough to purchase and occupy large farms. A dealer can thus readily obtain advances from his banker, or assistance from a friend, because the article in which he deals is tangible and readily transferable; while the trammelled farmer, who has necessarily invested capital in the improvement of the soil, cannot deposit his lease as security, for he has not (as we have in towns) the power to transfer or dispose of it; and in case of premature death or failure, his family may be deprived of the value of his investment in improvements. This is an anomalous and unbusiness-like state of things, and tends to diminish the value of land, and discourages the introduction of wealthy and independent tenants. I should like to know what would become of business in towns, if we could not dispose of our leases when it suited us to do so.

In considering the shortcomings of landlords, I deal with the question nationally, and not individually.

Landlords are like other men—naturally and properly anxious to preserve their own rights and privileges. Many of them, noble by birth and vast in estate, have taken an advanced view of the proper condition of British agriculture. They have emerged from, and cast off, old-fashioned feudal restrictions and restraints, and have ceased to look upon farmers either as churls or vassals, and have attracted, encouraged, and I may say created, on their estates men of high intelligence and considerable capital. They have granted leases, valuations, &c, in a business manner. The tumble down and insufficient sheds and hovels of antiquated farming have been swept away, and replaced by substantial buildings adapted to a large increase of stock, machinery, &c.; and such a class of tenants have been properly thought worthy of residential improvement. The labourer has no longer been looked upon as an incumbrance to be foisted on an adjoining parish; but a sufficiency of well-constructed cottages, with pure water, and the necessary area of garden, give evidence of a humanity and an intelligence highly conducive to diminished poor-rates and increased morality and efficiency. But has this emergence from feudal trammels abstracted aught from the dignity, the influence, the respect, or the esteem felt for these worthy landlords? Certainly not, but the reverse. Such men prefer intelligent respect to clownish or ignorant servility. It is gratifying to find noble dukes and great landlords treating agriculture as a business, and not ashamed to avail themselves of associated capital, to improve their estates and increase their rentals. I know some of them who prefer letting the shooting to their tenants, at 6*d.* or more per acre, rather than to strangers. Such a system does away with the heartburnings of game-preserving, and in some cases attract a superior class of tenants. But, unfortunately, the picture I have drawn does not apply generally, and there is abundant need of a more liberal and commercial system in letting land.

***Farming Profits.*—Farming is known to be proverbially a slow way of making money, although a healthy, pleasant, and independent occupation—permanent in its character, and not affected by fashionable changes, for appetite is ever recurring, and must be provided for; therefore, so long as there is a population to be fed, so long must the land be cultivated—farmed.**

On well cultivated arable farms employing 10*l.* per acre capital, 1*l.* per acre profit would be certainly a good average; and I know many very good farmers who consider 500*l.* a year on a 500 acre farm a full remuneration, having their residence, stabling, &c, rent free, and some trifling advantages of the farmyard. Where much money is realised in agriculture, it often begins in rigid economy, combined with very superior ability in hiring, buying, selling, and dealing, by great vigilance in the economy and superintendence of manual and horse labour, and a thorough knowledge of stock management. We have many notable instances of great wealth and position attained by those who once followed their own plough, sowed their own seed, fed their own stock, and so got "the fore horse by the head." In fact, sound, practical agriculture is composed, like our good old city of London, of self-made men, who began at the lowest step in the ladder, and reached competence and independence by their own good qualities. So strong is the belief in the truth of this theory, that a respected practical friend of mine in Cambridgeshire said to me, "I never knew a young man succeed as a farmer who began with 10,000*l.* capital." And on asking him why, "Well," he said, "his habits are usually too expensive for a beginner; he trusts too much to others, and is not sufficiently impressed with the necessity for personal supervision, vigilance, frugality, and general economy in the management of his farm."

***Mismanagement of Live Stock.*—If a farmer is wrong in the management of his live stock, he must bid adieu to all hope of profit.**

In the feeding of horses, and cattle too, I have often seen very great waste. If the loss of farm horses by mis-management could be ascertained, it would form a sum of astounding magnitude, and show a great deduction from the farmer's profits. Fat horses are, like fat men, unable to do a hard day's work. Plenty of muscle and condition, with good exercise and wind, pay better.

I hear of so many cases where, by the use of salt, disease and non-success in stock have been remedied, that I consider its absence as very prejudicial. I have always had rock-salt in the mangers; common salt will do as well.

***Fit Labourers well Supervised.*—The reverse of this causes much loss.**

The labour on an arable highly-manured farm, with a large quantity of stock and steam machinery, is probably, including bailiff and engineer, 45*s.* per acre. Mismanagement or neglect in this matter to the extent of 20 per cent. would cause a loss of 9*s.* per acre, or nearly half the farmer's profit. I prefer piece-work where possible.

***Damage by Game.*—The influence of game upon the farmer's profits is a matter deserving our consideration.**

I presume that we are all agreed that it is highly desirable that our great and dignified landowners should have every proper inducement and encouragement as residential notabilities. We all feel proud of our landed aristocracy, and know their residential value. I am myself an old and ardent sportsman, and therefore can appreciate the zest such an amusement affords to those who love it. Pheasants and partridges I look upon as real farmers' friends, assuming of course that sufficient food is provided for them by the landowner. The harm they do is trivial, compared with the benefit they confer as destroyers of grub and insect. The question of ground game presents a different aspect: hares and rabbits, however well fed, have a strong affection for the first shoot that comes from the germinating seed of Wheat in October or November. A hundred rabbits will clear off acres of these shoots in a single night: the consequence is, a deficient and blighted crop at harvest time. Hares take a wider range, and do less injury.

***The Sewage Question.*—Probably there is no more extensive or insidious cause of loss to agriculture than the waste of non-utilisation of our excreta.**

The great want in farming is more meat, more manure, and more artificial manures. I have been making up my books to 31st October, my usual period, and find that after paying for 660*l.* of purchased food (300*l.* of which, as grain, was bought of myself at market prices), my live stock have left me 7*l.* per acre for root and green crops. It would have been 9*l.* per acre but for the loss of 70*l.* by calves, which died owing to being allowed to help themselves to some rich luxuriant Italian Rye-grass. The quantity of meat actually made on the whole farm, 170 acres landlord's measure, was 220 lb. for each acre. I am convinced that the system of shelter and preparation of food, combined with a few acres of sewaged Italian Rye-grass, is the key to true economy and profit. Starving, or half-starving the land is one of the most certain and serious causes of unprofitable farming. Although I make so much meat and manure, and consume so much purchased food, still I find it profitable to have recourse to artificial manures, especially the best Peruvian guano and superphosphate of lime, and some salt.

***The Want of Sound Middle-class Education.*—The establishment of middle-class colleges promises to effect a great good—a sound and suitable education is much needed among farmers in certain districts—agricultural literature and examinations should certainly form a prominent part of such education—and then we might expect to find in each farmery a small but useful library of agricultural books, containing the valuable experience and advice of good and clever men who are no longer with us.**

In conclusion, there is, in perspective, a grand future for British agriculture, not merely by the reclamation of waste land, for of that there is but little left, but rather by intensifying our farming—by concentrating capital in a limited area. Taking out of view individual capability, which must ever vary, our general system will be based on commercial and manufacturing principles, looking rather to result than to cost. Education, intercourse, and intelligence, goaded by foreign competition, will cause our agriculture to emerge from its ancient customs and feudal restraints. Set free to act, the national character will exhibit in this as in manufactures, commerce, and railways—a vigorous, I would say a gigantic, action; but all this can scarcely be effected without a re-mapping of the country. Our crooked ways and cramped and wooded enclosures must give place to rectilinear extension, but not bare or untimbered enclosures. Landowners should lead the way, supported by capitalists, and then the sturdy British yeoman will not be found wanting in the good work of cheap and abundant production.

The discussion which ensued is referred to in a leading article.

Home Correspondence.

Gorse.—As one of the oldest writers in your Paper to recommend the use of Gorse, I was much pleased at the letter upon it in your last, and hope it will lead many of your readers to try it. Now is just the time; the Gorse is at its best. Hay is very expensive, and it is a charity to employ an old man or two at this time of year to cut it. I used to recommend a common chaff cutter, passing the Gorse twice through; but last year and this I find Walsh's machine answer so much better that I use no other. The report of it, though most favourable in many respects, is unfair as regards its choking, and also as to a stick of Gorse stopping it. I went straight from the perusal of your Paper to my man feeding it. He said: "There is no difficulty whatever in feeding it as fast as you like, with the most moderate care;" and in answer to my question as to whether a stick of Gorse would do any harm, he said, "It must be a very big one then, for I have seen it crush many to pieces and never was stopped yet." I am speaking of the machine for horse-power. I have not used the smaller. My boy came to me with quite a long face some weeks since, saying, "I can't get the horses to eat any chaff now."—"Why not?"—"They won't now they can get Gorse." *W. D. F.*

On Laying down Grass.—I observe that you have lately inserted under "Miscellaneous," a letter on "Sowing Grass lands," which I sent to the *Times*. I regret to see that the *Times* has omitted three important permanent pasture Grasses, which I included in the mixture, viz., 2 lb. of each of the following:—Meadow Fescue, Hard Fescue, and Meadow Foxtail. The omission of the two former, after what I said of them in my letter, appears rather contradictory. To insure a permanency of the Grasses sown, the land to be "laid down" should be thoroughly drained, well limed, and manured, otherwise I find the coarser Grasses sooner or later attain the pre-eminence. In our border counties we prefer as the best manuring and preparation, the whole of the previous crop or crops of Turnips eaten off with sheep; the ploughing being a light furrow, kept as close as possible, and sown down without a crop. The mixture I recommended has been long used by us without a failure. Sown as previously directed, the "seeds" are ready for pasturage early in June, keeping a pretty heavy stock of sheep; no cattle being allowed, and commonly letting from 2*l.* 10*s.* to 2*l.* 15*s.* per. acre, while the succeeding seasons on ordinary soils from 5*l.* to 6*l.* is readily given. *William Mein.*

CARTER'S "FIRST CROP" PEA,
The EARLIEST in CULTIVATION.

REIGATE SILVER SAND (best quality for Plants, &c.), 7*s.* 6*d.* per Ton, delivered to Reigate Station. Excellent PEAT, LOAM, BOG MOULD, SPHAGNUM, ROCK SANDSTONE. London-made FLOWER POTS, in every size. WORKING PLANS prepared for NEW GARDENS and ORNAMENTAL GROUNDS.
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REIGATE SILVER SAND, 12*s.* per Ton, at Swan Place; delivered five miles, or to any London Wharf or Railway 16*s.* per ton, or 1*s.* 6*d.* per bushel (sacks at cost price, or on hire). Kentish and Hampshire PEATS, YELLOW LOAM, LEAF-MOULD, and COCOA FIBRE REFUSE.
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COCOA-NUT REFUSE delivered within 2¼ miles of Charing Cross, at 2*s.* per bag.

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WINTER DRESS all FRUIT TREES with GISHURST COMPOUND.

Copy of a Letter from MR. RIVERS.

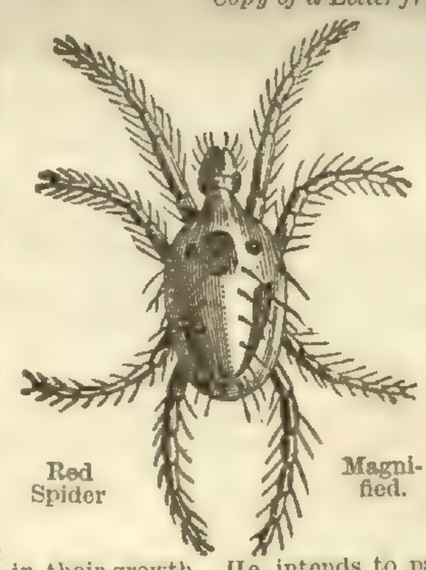

"Nurseries, Sawbridgeworth Herts, 22d Oct., 1861.

"I must tell you what I heard to-day from a very clever gentleman farmer, Anthony Bubb, Esq, of Witcombe Court, Gloucester. He has a wall, to which Peach-trees are trained. Well, last autumn they were in a wretched blighted state. As a desperate remedy he unnailed them all early last February, and gave all but one a thorough painting with Gishurst Compound, 1 lb. to the gallon of water; his trees, all but the one, commenced to grow favourably in spring, and are now pictures of health. The tree not painted is in a half-dead blighted state. He used the same dressing to his Apple-trees; it killed the woolly aphis entirely, and has made his trees clear and vigorous in their growth. He intends to paint his wall-trees annually, and tells all his friends to do the same. I shall certainly serve all my young Peach-trees against my walls in the same manner. The Compound is, I believe, more efficacious than the usual offensive mixtures of clay, soot, sulphur, &c., and it does not blacken the shoots on the walls."

For Orchard-house trees 4 ozs. to the gallon will be found a good strength; when used stronger some buds on weakly trees may be injured

GISHURST COMPOUND is Sold Retail by Nurserymen and Seedsmen, in boxes, 1*s.*, 3*s.*, and 10*s.* 6*d.* each.

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E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society &c.

PROTECTION from COLD WINDS and MORNING FROSTS.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1*s.* 9*d.* per yard run.
Four yards wide	3*s.* 6*d.* per yard.
An improved make, 2 yards wide ..	1*s.* 9*d.* per yard.
An improved make, 3 yards wide ..	2*s.* 8*d.* per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.
ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.
"It is much cheaper than Mats as a covering."

EXTRAORDINARY BARGAIN.—Must be SOLD, to make room for alterations, TWO of RICHMOND & CHANDLER'S No. 7 CHAFF-CUTTERS, and ONE No. 5 CORN MILL. These are the largest sizes made for steam power, and will be sold at 30 per cent. discount on manufacturers' prices. Quite new, having never been used. Also, an HYDRAULIC PRESS, by Hopkinson.
To be seen at THORLEY'S Spice Mills, Thornhill Bridge, Caledonian Road, King's Cross, London, N.

TO FARMERS.—In consequence of the increasing demand for THORLEY'S PENNY PACKETS of SPICY AROMATIC CONDIMENT, I am compelled to discontinue the manufacture of Condimental Meal, so as to devote the whole of my time to this important agricultural want.—JOSEPH THORLEY, Spice Merchant.
THORLEY'S Spice Mills, Thornhill Bridge, King's Cross, London.
N.B. No worms or parasites can exist in Horses and Cattle when this compound of Spices is used, and animals will fatten in half the usual time.

Patronised by 70,000 Stock Breeders.

DAY, SON, AND HEWITT, Sole Inventors of the Celebrated STOCK-BREEDER'S MEDICINE CHEST, containing as follows:—

Six Bottles (at 2*s.* 6*d.* each) of the UNIVERSAL CHEMICAL EXTRACT, matchless for penetrating, mollifying, and assuaging pain in all wounds, kicks, cuts, strains, &c., in horses and cattle; straining in ewes lambing, and swollen and inflamed udders in cows and ewes; sore feet in cattle, sheep, and dogs.

One Dozen Bottles (value 20*s.*) of the GASEOUS FLUID or BLACK MIXTURE, unmatched in the known world for curing diarrhœa or scour in calves, sheep, and lambs; for ewes weakly and exhausted after lambing; for horses and cows exhausted and sickly, and for the fret, colic, or gripes in horses and cattle. An instantaneous remedy for blown cattle and sheep.

One Dozen Packets (value 13*s.*) of the RED DRENCH or INFLAMMATION POWDER, for cleansing after calving or lambing, for straining in ewes, and for removing all feverish symptoms in cows and ewes after calving or lambing; for yellows in oxen, and for colds, chills, and all inflammatory cases in horses, cattle, and pigs.

One Dozen (value 7*s.* 6*d.*) of the RED PASTE or CONDITION BALLS (for horses). These Balls give vigorous health, purify the system, and produce a mole-like sleekness of coat.

Price of Chest complete, with Shilling Key to Farriery, 2*l.* 16*s.* 6*d.*, securely packed, and carriage free. Sample case, usefully assorted, 16*s.* 6*d.* Messrs. D., S., & H. respectfully urge their friends to send their orders early, so that no purchaser may be kept waiting.

Either preparation may be had separately in boxes, carriage paid.

Address—DAY, SON, & HEWITT, Animal Medicine Manufactory, 22, Dorset Street, Baker Street, London, W.; or Wantage, Berks.

Testimonials from all parts of the United Kingdon and Ireland sent free on application.

Established over One Quarter of a Century.

The Castle Kennedy Fig.

PETER LAWSON AND SON have made arrangements to send out the above next Autumn. They are now booking Orders, which will be executed in strict rotation as received. Plants, 10s. 6d. each; a few extra strong at 21s. each—with the usual Discount to the Trade.

Full printed particulars to be had on application.

Edinburgh and London.—Dec. 17.

Slater's New Hardy Prolific Melon.

J. SLATER AND SONS have great pleasure in offering the above MELON as being of a very superior quality, a very free setter, and an abundant bearer—each fruit weighing from 3 to 3½ lbs. Slightly netted; shape, oval; flesh, pale green; thick and juicy. Price 2s. per packet, post free.

J. SLATER & SONS, Seedsmen, &c., Malton, Yorkshire.

London Agents:

Messrs. HURST & SON, Seedsmen, 6, Leadenhall Street, E.C.

New Melon "Malvern Hall."

B. S. WILLIAMS has much pleasure in offering for the first time this VALUABLE MELON, which has been fully proved, after three seasons competitive trial with all the best sorts in cultivation, to be the earliest to ripen and the first in setting its fruit. It has taken many First Prizes during the last and previous seasons at different Provincial Shows.

The following description is supplied by the Raiser, Mr. STEVENS:—"Plant of robust habit and vigorous growth, a very free setter and sure cropper; quite ten days earlier than any other variety. Fruit from one to two pounds in weight; scarlet flesh, rind tender, yellow mottled and streaked with dark green; fine flavour"

Price 2s. per packet.

Paradise and Victoria Nurseries, Holloway, London, N.

Vines, Vines—extra strong.

J. MEREDITH, The Vineyard, Garston, near Liverpool, begs to inform the public that he has a very fine stock of VINES of various sizes, both for planting out and fruiting in pots. The wood is thoroughly ripened, so that they may be forced early if necessary. The stock has been propagated from the Vines that produced the fine Grapes which have been so successful for the last four years at the London and Liverpool Exhibitions.

Vine Duchess of Buccleuch.

ROBERT PARKER has much pleasure in announcing that he is now distributing this distinct and valuable early GRAPE, which will supply the long felt desideratum of a White Grape with Muscat flavour that may be grown and ripened with the Black Hamburgh.

The following Certificates and Prizes have been awarded at various London and other Exhibitions.

Two Certificates of Merit.

Three First-class Certificates.

Two First Prizes in open competition for the finest flavoured Grape of any colour. Chasselas Musqué, Muscat of Alexandria, and Frontignan competed for these prizes. For further description see *Gardeners' Chronicle* of October 1st and 22d, pages 943 and 1008.

Also New GENERAL CATALOGUE, containing Priced and Descriptive Lists of Miscellaneous, Greenhouse, Hardy, and Stove Plants, Azalea indica, Conifers, Ferns, Fruit Trees, Grapes, Rhododendrons, Roses, Dutch and other Bulbs, &c., which will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

Magnificent Dwarf-trained

MORELLO and MAY DUKE CHERRIES, ROYAL GEORGE PEACHES, MOOR PARK APRICOTS, PEARS, and PLUMS, of the best leading kinds.

WM. WOOD AND SON have to offer a large Stock of the above, grown on maiden soil. The trees are very large and have been most carefully trained. Finer trees could not possibly be wished for.

W. W. & S. have also some very fine Standard SCARLET HORSE CHESTNUTS left, Stems with fine heads.

Address, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

Dwarf-trained Trees.

BY THE THOUSAND, HUNDRED, OR DOZEN.

APPLES, PEARS, PLUMS, CHERRIES, PEACHES, and NECTARINES.

Fine, flat, well trained, of best quality and true to name.

RICHARD SMITH, Nurseries, Worcester.

Extra Size Fruit Trees.

PYRAMIDAL PLUMS, PEARS, &c., of extra size and first quality, very handsome. Prices, names, and sizes, may be had on application.

Also the DESCRIPTIVE FRUIT CATALOGUE.

STEPHEN BROWN, Seed and Nursery Establishment, Sudbury, Suffolk

RICHARD SMITH'S FRUIT LIST contains a sketch of the various forms of Trees, with Directions for Cultivation, Soil, Drainage, Manure, Distance, Pruning, Lifting, Cropping, Treatment under Glass; also their synonymes, quality, size, form, skin, colour, flesh, flavour, use, growth, duration, season, price, &c. Free by Post for one stamp.

RICHARD SMITH, Nurseries, Worcester.

Cheap and good Flower Seeds.

LOBELIA FAVOURITE and ERINUS MAJOR, 18 stamps.

FANCY PANSY, 24 stamps. | PRIMULA, 24 stamps.
CALCEOLARIA, 24 stamps. | CINERARIA, 18 stamps.

The above have been carefully saved from first-class varieties. Sent free by post by

ROBERT BULLEN, Seedsman, 52½, High Cross Street, Leicester.

TWO NEW FIMBRIATED PRIMULAS.

Seed Packets, 2s. 6d. and 5s. each.

PRIMULA CARMINATA SPLENDENS, a beautiful new coloured one.

P. FILICIFOLIA (Fern-leaved).

See other Advertisements of the older kinds of fimbriated Primulas.

E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

Rhododendrons.

JOHN WATERER begs to announce that his New CATALOGUE of Hardy, Scarlet, and other Choice RHODODENDRONS, as exhibited by him at the Royal Botanic Gardens, Regent's Park, is now published, and can be had on application. It gives faithful descriptions of all the esteemed varieties, as well as a Select List of Hardy CONIFERS, with heights and prices; also the leading kinds of EVERGREENS, ROSES, FOREST TREES, &c.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

EARLY SPRING FLOWERS, largest Stock in England and greatest variety.—WEBB'S Giant Polyanthus and Giant Cowslip, Cowslip from the Himalayas, Golden Chain Polyanthus, Florist Flower Polyanthus, American Primrose, Scarlet Primrose, Gentianella, Double Crimson Primrose, ditto Yellow ditto, ditto Purple ditto, ditto Rose ditto, ditto White ditto, ditto Lilac ditto, Double Pansy, ditto Negro Polyanthus, ditto Golden Chain ditto, ditto Pink Hepatica, Single Blue ditto, ditto White Violets, ditto Purple ditto. Seed of the above Polyanthus and Cowslip. LIST on application to Mr. WEBB, Calcot Gardens, Reading.

Superb Double Hollyhocks.

NURSERIES, SAFFRON WALDEN.

WILLIAM CHATER has now ready for sending out a fine healthy stock of Young Plants of all the old and approved varieties of the above; likewise a fine stock of his splendid New Seedlings shown by him in spikes before the Floral Committee of the Royal Horticultural Society will be ready for sending out in November. Older kinds can be supplied by the dozen, 100, or 1000. Prices on application. A very large stock of unbloomed Seedlings, 3s. and 6s. per dozen, or 20s. and 30s. per 100. Bloomed Seedlings with their colours attached, fine for borders, 6s. to 18s. per dozen, or 30s. per 100.

Seed saved only from finest varieties, new and very choice mixed, 2s. 6d. and 5s. per packet; in Collections of 12 separate named varieties, 4s. to 10s.

N.B. WILLIAM CHATER, Nurseries, Saffron Walden, Essex.

CARTER'S GARDENER'S VADE-MECUM.

DIXON'S YORKSHIRE HERO PEA, the best new Dwarf Wrinkled Marrow.

Price 5s. per quart, 2s. 6d. per pint.

E. P. DIXON & SON, 57, Queen Street, Hull.

LONDON SEED COMPANY, LIMITED, 68, Welbeck Street, Cavendish Square, W.

Orders for all kinds of SEEDS can now be executed.

COLLECTIONS of KITCHEN GARDEN SEEDS, 10s. 6d., 15s., 20s., 30s., 60s., 100s.

Seeds of the value of 20s delivered carriage free.

Notice, Seed Trade.

F. W. WENDEL'S, Erfurt, WHOLESALE SEED CATALOGUE, now ready, and will be forwarded Free and Post paid on application to F. W. W.'s English Agent,

GEORGE MACINTOSH, Exotic Nursery, High Road, Hammersmith, W.

To the Seed Trade.

NEW ANNUALS for 1865.

WAITZIA AUREA,
Brilliant Yellow Everlasting, from Swan River.
WAITZIA CORYMBOSA,
Red and White Everlasting, from Swan River.
VERONICA GLAUCA,
Dwarf Blue, from Greece
CALLIRRHOE INVOLUCRATA,
Crimson, from N. America.

W. THOMPSON, Tavern Street, Ipswich, respectfully announces to the Trade that he is now ready to supply Seed of the above interesting Novelties, of which full descriptions and prices will be forwarded on application. Of the three last only a very small quantity remains available for distribution.

American Plants.

AS EXHIBITED IN THE ROYAL HORTICULTURAL GARDENS, KENSINGTON.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE of RHODODENDRONS and other AMERICAN PLANTS will be forwarded on application. The Catalogue also gives a General Summary of their Stock, which contains probably the most extensive choice of all the Hardy and finest Evergreens and Conifers.

Knap Hill Nursery, Woking, Surrey.

Choice Camellia Blooms.

LUCOMBE, PINCE AND CO. have now a large quantity of extra fine CAMELLIA BLOOMS for disposal, which can be securely packed and sent to any distance with safety. Price on application. Exeter Nursery, Exeter.

Splendid Hybrid Gladioli.

THOMAS CHARMES can now supply Collections of the above, in Named varieties, from 6s., 9s., 12s., 18s., 21s., to 24s. per dozen. PRICED CATALOGUES free on application.

204, High Street, Exeter.

New Seeds, Growth of 1864.

ROYAL BERKSHIRE SEED ESTABLISHMENT

SUTTON AND SONS are now prepared to execute orders for all kinds of GARDEN SEEDS.

The prices are moderate and the quality fine, owing to their having been harvested well.

Royal Berkshire Seed Establishment, Reading.

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

LIST OF AWARDS, DECEMBER 7, 1864.

FIRST-CLASS CERTIFICATES.

ASPLENIUM HEMIONITIS CRISTATUM, from R. J. Gray, Esq., Exeter.

MANETTIA CORDIFOLIA MAJOR, from Mr. Veitch, Chelsea.

SPECIAL CERTIFICATE.

To a Collection of DRIED SEEDLING PELARGONIUMS, from E. Stuart, Esq., Nice.

THOMAS MOORE, Secretary to the Committee.

The Gardeners' Chronicle.

SATURDAY, DECEMBER 17, 1864.

MEETING FOR THE ENSUING WEEK.

SATURDAY, Dec. 24 to FRIDAY, — 31 } Royal Horticultural (Illustrations of the Sources and Preparation of Perfumes), at South Kensington.

THE CHRYSANTHEMUM EXHIBITIONS which have been held this year in the metropolis and in other parts of the kingdom have been fully equal in merit to those of former years. Perhaps there is no exotic cultivated in this country with which florists have been more successful than they have been with the Chrysanthemum, more particularly as regards the raising of new and improved varieties. We can remember a time when our collections included those kinds only which had been sent to us from abroad—some 50 or 60 in all. Thanks, however, to Mr. SALTER, of Hammersmith, and others, who have raised so many beautiful varieties from seeds, our gardens contain now upwards of a thousand new kinds. And then, too, with these new sorts we have obtained flowers of almost every hue of colour, the colours of many of them being particularly bright and effective.

On visiting the public exhibitions of this favourite autumnal flower we have been struck with the marked preference which exhibitors seem to show for those varieties which produce incurved blossoms. This is more particularly observable in the stands of "cut blooms." These flowers are evidently the fashion of the day, and anything else is looked down upon and considered as unworthy of notice. In looking along the tables on which these flowers are placed, one rarely, if ever, sees a bloom of the reflexed, or what we may perhaps be allowed to call the natural or normal form of this flower. Many of these incurved blooms are no doubt extremely beautiful, but nevertheless we cannot see why they should be considered so much superior to the reflexed ones. And then the colour of the incurved kinds is oftentimes entirely hidden by this peculiar form of growth. The bright colour of the flower is usually on the upper surface of its florets, and this surface is turned inwards and completely hidden from view in the incurved flower. We are aware that the preference to which we are alluding is chiefly confined to flowers exhibited singly as "cut blooms," yet we cannot see any good reason why the reflexed flowers should not be equally prized; indeed they used to be before fashion, or shall we say prejudice, introduced the change.

Prizes at our Exhibitions—where the encouragement of horticulture is the main object—ought to be given with a view to improve the productions of our gardens. Agriculturists at our cattle shows, in these enlightened days, pay more attention to the formation of good solid useful food, than to those mountains of fat so fashionable in the days that have gone by, and they are, no doubt, quite right in doing so. In like manner horticulturists should encourage those plants which are most effective as ornamental objects in our gardens and conservatories. And certainly Chrysanthemums which produce reflexed blossoms, although despised by many exhibitors of "cut blooms," are, speaking generally, far more useful and ornamental than many of those whose florets curve upwards and conceal their own bright colours.

While pleading for the despised race of reflexed flowers, we may urge in their favour the well-known fact that many of them are really quite up to the florist's mark as regards form. During a recent inspection of Mr. SALTER'S collection, we took down the names of a few kinds, in order to use them as an illustration on the present occasion. Let any unprejudiced person recall to mind the following flowers, and then say whether they do not deserve a place at our Exhibitions, even in the stands of "cut blooms":—Julie Lagravère, dark velvety crimson; Lord Clyde, bright crimson; Progne, amaranth or crimson carmine; Alma, rose crimson; Annie Salter, golden yellow; Invincible, tasselled white; Ariadne, cream and rose; and Attraction, rose or blush, a new variety of great beauty. Many others might be named, but these are perhaps enough to explain our meaning.

In those countries to which the Chrysanthemum is indigenous, incurved flowers are rarely met with, so that this peculiar form would not appear to be a natural one. It is probably the effect of high cultivation. We have several varieties in this country, such as that named Vesta for example, which produce reflexed flowers when grown in the usual way, and incurved ones when highly stimulated, or when a few buds only are allowed to remain and expand upon the plant. Many of these incurved flowers are no doubt extremely beautiful, and in what we have urged we have no wish to discourage their cultivation. All we contend for is that the reflexed ones are of equal if not of greater importance from an ornamental point of view, and therefore they ought not to be disparaged.

Keeping in mind the principle we have laid down, namely that prizes ought to be given with a view to improve the breed of plants for ornamental purposes, we cannot approve what is called the "dressing" of Chrysanthemum blooms in order to enable them to gain prizes. In so far as first-rate cultivation is concerned, by means of which fine healthy plants with blooms of a large size and good form are produced, it is quite fair that such cultivation should be appreciated and rewarded. But "dressing" flowers for exhibition, by pulling out some of the parts and setting up others, has only a tendency to deceive the public and lead to disappointment when the plants which have attracted so much admiration on this account at our Exhibitions, are purchased and come to be cultivated at home. We believe the practice we are alluding to was carried to a much greater extent some years ago than it is now; indeed we have heard of instances in which the centre of the bloom was entirely removed, and the regular florets pressed inwards to fill up the vacant space. All such attempts to make flowers appear to be different from what they really are, ought to be discouraged, and we are therefore glad to learn that the more glaring mode of "dressing" we have noticed, would disqualify the stand in which it was observed.

AN old fable tells us that once upon a time the birds resolved upon forming a club, which at its first meeting took a debating turn, when each insisted upon what in his opinion constituted the quality or character most worthy of estimation. The Parrot very strongly demonstrated that the power of mimicry and a retentive memory proclaimed an evident superiority in the possessors of this amusing faculty. The Peacock treated with

great contempt so mean and insignificant a talent, which amounted to nothing more than mere buffoonery, fit only to please the vulgar, and by no means to be compared to his stately and majestic carriage, and incomparably rich plumage. The Dove also modestly put forth her claims, grounding them on her purity of manners and unostentatious discharge of her daily duties,—when the Kite, enraged beyond control at the discourse, dispersed the assembly, and substituted brute force for reason.

FASHION is very apt to exercise just such an INFLUENCE UPON GARDENING as the Kite did upon the assembly of birds; and while the Dutch, Chinese, English, Italian, and French styles are struggling for pre-eminence, to disclaim them all and remain sole master of the hour. In our columns lately may have been found some expression of opinion regarding the intrinsic merits of the different styles, as well as some remarks on the annual bedding out best suited to our climate and scenery. We would gladly see more general interest taken in this subject, as it is a question that concerns not only the gardening community, but the pleasures of a large portion of mankind. We would, however, impress upon each advocate that nothing can be more confusing than to hear a principle condemned, however ably the prosecution is conducted, without sufficient reason being adduced for the conscientious finding of a verdict.

It is not enough to decry or ridicule a system as bad. The world naturally seeks some explanation of the causes of its badness, and is not content with mere assertion without corresponding proof. Indeed a habit of superficial thought and hasty generalisation is most detrimental to the interests of true gardening, since censure thus pronounced may offend but can scarcely convince. And no man, who is really master of a subject, and aware of the manifold difficulties it presents in all its bearings, would trust himself to run down others' opinions, especially with any intention of bolstering up his own. The question of annual bedding out is at all events worthy of more general consideration. Without disputing what are our own merits, or the shortcomings of others, we may endeavour by the aid of mutual experience to glean a few hints, which may enable us to make such changes in the floral decorations of our gardens during the coming year, as may seem consistent with the principles of good taste. If there is an evil in our present system, let us unite in remedying it: but it is wise to hold fast to what we know before committing our bark to unknown seas, without either rudder, compass, oar, or pilot—drifting we know not whither.

—— WE alluded at p. 1135 to the existence of a race of DOUBLE-FLOWERED PELARGONIUMS, and we find in a recent Number of the *Revue Horticole* some particulars respecting another variety of similar character, called Gloire de Clermont, which has been raised by M. AMBLARD, a horticulturist of Clermont-Ferrand. Our contemporary states that it will take a high place in our gardens, and describes it as bearing flowers as full as a small Ranunculus; and as having been produced from seeds gathered from a semi-double variety of doubtful merit. It appears that seven plants were raised from the seeds of this semidouble parent. Some of them produced instead of petals little tufts of green leaves or sepals, compact and imbricated, forming a globular bud which scarcely opened; others yielded flowers with a little red at the tips of the sepals; a sixth had flowers of a lively colour, but they did not open; while the seventh bore magnificent flowers, full, well expanded, and bright in colour. The constancy of these features has been proved, for the variety has been propagated, and more than a score of plants of the progeny have yielded their flowers. M. LECOQ the Director of the Botanic Gardens at Clermont, who describes this very remarkable Pelargonium, observes, that upon the plant then before him was an umbel of 14 fine flowers, which if the foliage were not seen, might be mistaken for those of Lychnis chalcedonica. The variety is said to be of vigorous growth, and to have large undulating green leaves without any sign of a coloured zone, although by a slip of the pen the new variety is classed amongst the zonal Pelargoniums. The flower stalk is stiff, and bears from 10 to 15 flowers, so arranged as to form a bouquet. The buds are globular; the petals, upwards of 40 in number, are disposed like those of a double Ranunculus, and are oval in form, rounded at the top, and of a lively vermilion with a white eye; the stamens are completely wanting; and the pistil is represented by a small green tubercle. It appears that M. AMBLARD, not being specially occupied in the culture of this class of plants, is desirous of parting with the stock.

—— The Imperial L. C. Academy Naturæ Curiosorum has, as we learn from *Seemann's Journal*, recently conferred the degree of Doctor of Philosophy on Mr. G. H. K. THWAITES, the indefatigable and talented Superintendent of the Royal Botanic Garden at Peradenia; and author of an extremely well executed *Enumeration of Ceylon Plants*, of which the concluding Part has been lately issued.

—— Dr. SCHÜBELER has been elected Professor of Botany and Director of the Botanic Garden at Christiania.

—— We notice amongst the awards made during the past summer by the FLORAL COMMITTEE OF THE FRENCH SOCIÉTÉ CENTRALE D'HORTICULTURE—evidently a very useful working body, like that which imparts some show of reality to the operations of our own professedly 'Horticultural' Society—that First-class Certificates have been given to a Tea Rose called Maréchal Niel, produced by M. EUGÈNE VERDIER, of Paris. This variety, which is figured in *L'Horticulteur Français*, appears to be one of the noblest of the yellows, and is described as surpassing Chromatella, Solfaterre, Isabella Gray, &c., the flowers being large globular and very fragrant, and of a fine bright yellow colour. M. FONTAINE also obtained a similar award for his Seedling Phloxes M. Thibaut, Arthur Fontaine, and M. Pierson; as did M. ADOLPHE FONTAINE for Phlox President Malet. Second-class Certificates have been given to M. MÉZARD for a new striped zonal Pelargonium called Coquette de Rueil; also to M. YVON for Aster repertus. M. CHARDINE obtained a Third-class Certificate for a fine Dahlia named Empereur du Mexique; and a similar award was made to M. FOURNIER, of St. Germain-en-Laye, for a variety of Dactylis glomerata with striped foliage.

—— The ACER PSEUDO-PLATANUS ERYTHROCARPUM is a variety of Sycamore, obtained from seeds by M. FERRAND, of Cognac, about 12 years since. It is not remarkable for its foliage or flowers, but for its fruits, which are of a decided dark red colour, and contrast well with the deep green of the leaves. The fruits of many of the Maples have a tendency to become red. Those of Acer tataricum, as well as certain forms of Sycamore, have a tolerably well-marked red colour, but are very much inferior in this respect to the variety obtained by M. FERRAND. The colour is deepest when the fruits are young. A figure is given in the *Revue Horticole;* where also is mentioned another variety of the Sycamore, which has leaves of a pale green all over, and fruits like the leaves of a very light green colour, never tinged with any deeper shade. This form is said to be quite distinct, and bears the name of ALBESCENS.

—— Dr. REGEL figures in the *Gartenflora*, under the name of TREVESIA SUNDAICA of MIQUEL, the fine arborescent Araliad previously known under the names of Sciadophyllum palmatum and Brassaia palmata. This plant, which originally came from the mountains of Java, is remarkable for the size of its leaves, which measure about 2 feet across, and are palmately divided into from five to seven oblong lance-shaped lobes, narrowed to the base, and there connected by a web-like portion of the lamina. It is a fine plant for a temperate stove. In the same work Dr. REGEL figures under the name of ARALIA RACEMOSA SAGHALENSIS, a fine hardy decorative foliage plant for large gardens. It differs from A. racemosa in its more robust habit and larger leaves, and in its flowers being often hexamerous. This was found by M. SCHMIDT in the island of Saghan.

—— We find in a recent number of *L'Horticulteur Français*, a figure and description of a Yucca Treculeana, which appears to be exactly the YUCCA CANALICULATA, published in 1860 in the *Botanical Magazine* (t. 5201) by Sir W. HOOKER, having the same rigid channelled leaves, widened above the base and asperous beneath, the same compact inflorescence, the same subconnivent cream-coloured flowers, and the same kind of stamens bent like a figure 7. Mr. SAUNDERS, by whom the Y. canaliculata was flowered, had moreover, it would appear, obtained a young plant of the same species from Paris, though the history of his flowering plant is somewhat uncertain. We gather from M. HERINCQ's account, that this is the largest of all the arborescent Yuccas. The French figure was made from a plant which had flowered in the collection of M. ALPHONSE LAVALLÉE at Segrez, and which was upwards of 7 feet in height before the flower stem appeared, and furnished with leaves almost from the base. The leaves were narrowed above their point of attachment, then much widened, and terminating in a stiff horny point, the under surface being rough like a rasp, and the edges cartilaginous, purple, and finely denticulated. Owing to the stem being cankered, the inflorescence was dwarfed, but it was dense and ovoid-oblong, with the creamy flowers in the axils of reddish-tinted bracts longer than the flower stalks. This Yucca was introduced from Mexico in 1849 to the garden of M. LOUIS NOISETTE, of Nancy, who found it amongst some imported Orchids. The original plant was acquired by M. LAVALLÉE in 1859, and was the finest example known in Europe, but has perished since flowering. It is satisfactory to learn from the experience of the French cultivators, that this fine species is hardy. At Nantes, in M. NOISETTE'S garden, it grew in the open air, and perfectly endured the winters which occur in that part of France. At Segrez, where it was at first protected by a case, it has been planted for two years in the open ground, sheltered only by a slight straw roofing, and has not shown any trace of injury from frost. We believe the same plant is cultivated in this country under the names of Yucca cornuta and concava.

New Plants.

281. LÆLIA GRANDIS, *Lindl. in Paxton's Flower Garden*, i. *Misc.* 91, *lign.* 38.

Although not strictly a new plant, this fine Lælia has virtually disappeared for upwards of ten years from our collections, where its name has been usurped by what is nothing more than a variety of a totally different species, viz. L. purpurata. The only time we ever remember to have seen it in flower was at one of the Regent's Park shows, where its singular flowers attracted considerable attention, being at least 4 or 5 inches across, with nankeen-coloured sepals and petals, and a white lip with purple veins. In habit it exactly resembles the one-leaved Cattleyas and Lælias, bearing two or three flowers on a scape. Messrs. Hugh Low & Co., of the Clapton Nursery, have at length succeeded in obtaining a limited number of plants from Bahia.

282. ODONTOGLOSSUM HYSTRIX, *Bateman.*

O. (Isanthium) pseudobulbis (?); racemo robusto erecto bipedali multifloro, bracteis scariosis brevibus acutis, pedicellis internodiis æquantibus, sepalis ovario longioribus oblongo-lanceolatis acuminatis undulatis integris, petalis minoribus unguiculatis ovato-lanceolatis sparsim laceris apice attenuatis, labelli breviter unguiculati limbo subpanduriformi apiculato, cristâ ad basin multidigitatâ, columnæ petalis triplo brevioris vix arcuatæ alis multifidis crinitis.

Habitat in montibus prope Santa Fé de Bogota, 8-9000 ped. —*Weir.*

This is another of Weir's remarkable discoveries in the vicinity of Bogota. It produces stout flower-scapes two feet high, bearing at least a dozen large handsome flowers, all of which appear, from the dried specimens, to have been in perfection at the same time. The sepals and petals are fully two inches long, and described as yellow spotted with rich brown. The crest of the lip when magnified seems to bristle with spines, which, when seen sideways, have no slight resemblance to "quills upon the fretful porcupine," and hence the name (*hystrix*, porcupine). It approaches in some respects the O. cristatum of Lindley, but that is a much smaller plant, and with a crest, lip, and column entirely different.

O. hystrix is no doubt among those lately received by the Horticultural Society, but in consequence of a confusion among the labels, it has been found impossible to identify the plants. *J. B.*

ORCHIDS AND THEIR CULTIVATION.—No II.

WHATEVER difference of opinion may exist among those who have studied the adaptability of one form of structure over another for plant cultivation, on this they agree, that it should be so planned as to offer the least opposing influences to a natural atmosphere. In other words, we are anxious to have a climate varying from a tropical to a temperate degree of heat, with all the accessories which such variable temperature demands. This we can only have, at best, in miniature, and not without the aid of glass.

Lengthened practice, which obviously confirms sound principles, points with singular unanimity to a style of house which presents the most direct surface to the morning and afternoon sun, and the least to the scorching rays of the sun in its meridian. A span-roofed house set due north and south exactly meets these requirements; and span-roofed houses set in that particular direction, or a point or two either east or west, are very generally built. Some, however, argue, and not without show of reason, that though houses constructed in this way are well enough adapted for six months in the year, yet during the other six months, which includes our darkest and most sunless period, the great body of the plants are not so favourably placed as they would be in a span-roofed house running east and west. Moreover, they reason to the effect that it is of less consequence to build a house mainly suitable for summer growing, which requires shading under any circumstances; whereas it is of the highest importance, in order to secure thoroughly consolidated pseudobulbs and foliage, and to promote the flowering properties of such plants as refuse to do so under unskilful treatment, to have a house or houses so constructed as to afford all available sun and light during autumn and winter. A few will also be found, and among them no less an authority than Mr. Bateman, who incline to believe that houses, especially for cool Orchids, ought to be built in a position facing the north, such as the north side of a wall, where no sun can influence or affect them at any season. Most people know that a house so situated is a capital medium for the cultivation of Ferns and Mosses; but the longer my practice extends, the more firm are my convictions that cool Orchids, of all others, arrive at the highest point of perfection in growth when placed in houses freely exposed to a circulation of air, and only slightly shaded from March to September, for about six hours of the day; and that they pine away and grow on sufferance in inverse proportion to the use or abuse of the system promulgated. Either of the first two positions spoken of are unobjectionable for either temperate or tropical plants. Some cultivators, indeed, seem to prefer the second mode, affording as it does some better positions for the enjoyment of solar light during winter; but what is gained in such cases is at the expense of the plants situated on the dark side of the house,

because the light is more obstructed in the one case than the other, especially where there is a centre stage. However it is only the common order of plants that stand in such positions; and very often Ferns and Club-mosses, and such others as luxuriate in shade, are introduced.

It is an axiom recognised by the general cultivator, that whatever the form of structure may be, the nearer the plant is brought to the glass so much the better will it grow. However much or however little we may require to shade our Orchid-houses, cultural success in a great measure depends upon a recognition and adoption of this principle. In planning a house, then, the first consideration is, what will be the maximum height of the plants about to be grown, and the probable quantity? I say the house may be 25 feet long, and it may be 250; but it must not be, unless under extraordinary circumstances, higher than 12 feet, and as low as practicable under that. For every foot of space an Orchid-house is raised unnecessarily, many difficulties for the gardener to contend with are created—such as a more rapid abstraction of moisture from the system of the plant without having the power to control it *ad libitum*, a demand for greater heating power, and worst of all, a certain degree of obstruction of light, all of which are more or less prejudicial to high culture. What we call spacious houses, that require breadth as well as length to give them a character, are not well suited for the uniform distribution of light, neither are the plants so easily examined from the pathways. For such things as Vanda, Aërides, and some of the taller Dendrobiums, a house wide enough to have a 6 or 7 feet centre stage, besides the usual passages and side stages, is indispensable; but for all the dwarfer growing species, narrow houses, with a path up the centre, are undoubtedly preferable.

In my opinion, the principal sashes of any house ought, on principles of economy, and with a view of reducing drip to a minimum, to be fixtures. Provision for ventilation should be made in some other way than interfering with either roof or side sashes, so as in the one case to prolong the stability of the house, and in the other to command a well-balanced system of circulation of air, upon which the health of all plants under glass so much depends. The question naturally occurs—what system can be recommended, and upon what grounds? All practical men have agreed that warm air should have an exit at the highest point of any plant or fruit house, and that the cold air which is introduced at the sides should, if possible, get heated to the general temperature of the house before it ascends among the plants. More than that, in obedience to natural laws, and to render the atmosphere of heated houses as little artificial as possible, the current of air ought to be introduced in an uninterrupted volume; and if it finds its passage out in the same undisturbed way, it is sure to circulate most advantageously for the plants within. So far this is sound practice. To obtain this there ought to be a clear vacuum of a foot right along both sides of span-roofed house, on the same level as the water pipes, which could be fitted with an ornamental cast-iron grating with a wooden shutter, hinged at top, and after being provided with self-acting gearing, could be turned out by means of a quadrant at one end. But what are we to fix our wall plate to for the support of the house? This can readily be supported by having cast-iron pillars placed at every 3 feet along the centre of the open grating. If this plan were adopted, the stone or brick-work on which the grating is placed need not be higher above the ground level than 6 inches, and the side sashes, be they high or low, made fixtures. With reference to ventilation at top there are diverse methods in practice, carrying out the principle of uniform distribution of air, and only differing in details. There are generally two longitudinal beams placed from 1 to 3 or more feet apart, as the case may be, upon which either side of the house is fixed. This aperture is often fitted with a dove-cot like ridge, the two sides of which could be furnished with gratings and wooden shutters, on the same principle as suggested for the sides. Only it would require a vertical rod convenient for manipulation in the interior.

This is what I call laying a good foundation for successful cultivation, and no house, however costly it may be got up, or however plain, more especially for cultivating valuable plants, can be considered up to the mark that has not special provision of this kind for a thoroughly tempered system of ventilation. It is no good to hem and ha, and mutter about what success has been attained with little or no ventilation at all, but only an occasional opening of the door in warm weather. Both theory and practice pronounce against such a course. Besides it is one thing to grow plants well, and another thing to grow them to a superlative condition of excellence.

Although many houses have come under my observation ventilated in the way I have described at the top, I do not know of a single instance of one so provided at the sides, that is, having an unbroken continuation of ventilating space, although due regard has evidently been paid to the position necessary for heating air as it enters. The best plant houses we have at Meadowbank are ventilated upon this principle, but with modifications. All our foundations are samples of red sandstone cut and dressed into ashlar form, and in cases where we have side sashes, never exceed 12 inches above the ground level. Only one-half of this space is made use of for ventilation purposes, the other half being the dead ashlar wall for support of the wall plate and superstructure. Were these, however, to be built again, I should recommend Mr. Dawson to adopt what I now consider the better plan.

It is a matter of little consequence for plant growing whether the structure be built of strong astragals alone, placed as they usually are, about 10 inches apart; or of rafters and sashes. There can be no comparison as to durability. My impression is, that the true way to study economy is to erect the most substantial structure at command in the first instance; for taking breakage and leakage into consideration, this plan is the cheapest in the end. No one practically acquainted with the subject will doubt that well-seasoned battens of Baltic Red Pine, cut out into rafters and sash-frames, will long outwear any other material that is introduced. Yellow Pine, which is generally free from knots, makes good enough astragals, but it ought never to be used as the main sinews of the house. Cheap 15-oz. glass, exposed as it is to expansion and contraction, more readily gives way than 21-oz.; and although the latter is about 1½*d.* dearer per foot, it is by far the most economical glass for hothouse building. *James Anderson, Meadowbank.*

TESTIMONIAL TO DR. LINDLEY.

[The following letter, addressed to Dr. Lindley, by Mr. Bateman, on behalf of the Contributors, together with Dr. Lindley's reply, has just been made public in the Proceedings of the Royal Horticultural Society.]

Biddulph Grange, Congleton, May 28, 1864.

Dear Dr. Lindley,—I conceive that I cannot better introduce the subject of the present communication than by referring you to a resolution in which you were personally concerned, and which was unanimously adopted on the motion of Mr. Alderman Copeland, at the annual meeting of the Royal Horticultural Society held at South Kensington in the spring of last year. It was to the following effect:—"That a circular be issued calling attention to the vote of thanks" (already passed) "to Dr. Lindley, and for presenting a Testimonial to him; each subscription to be limited to one guinea." This appeal—although by your own express desire but little publicity was given to it—called forth a most flattering response, and the subscription-list quickly numbered upwards of 200 names, amongst which were those of many individuals distinguished for their scientific attainments both in England and on the Continent. It now only remained for the promoters of the Testimonial to decide upon the mode in which the funds so liberally placed at their disposal might be most advantageously expended; and as the purchase of a piece of plate seemed to be the most natural alternative, they commissioned Mr. Williams, of Oxford Street, to furnish a design, which, while handsome in its general character, should also borrow some of the details of its ornamentation from the Orchids and other tribes of plants to which your studies have been more especially devoted. Mr. Williams having acquitted himself satisfactorily of the somewhat difficult task assigned to him, and having produced a work of much artistic taste and skill, your friends were desirous of presenting it to you through the medium of a deputation; and it was only at the instance of your medical advisers that this their intention has at last been reluctantly laid aside. Under these circumstances Mr. Williams has been instructed to deliver into your hands the Epergne which, on behalf of my colleagues in the Council of the R. H. S., and of the contributors generally, I have now the honour to offer to your acceptance; and be assured that this substantial token of our esteem is not unaccompanied by our prayers that you may ere long be again restored to your wonted health, and spared to prosecute for yet many years to come those scientific researches that have already secured you an imperishable name.—Pray believe me, dear Dr. Lindley, very sincerely yours,

(Signed) James Bateman.

To Professor Lindley, F.R.S.

Acton Green, Turnham Green, London, W.
July 19, 1864.

[My dear Mr. Bateman,—It is now some weeks since I received, through you, the very handsome piece of Plate with which some most kind friends have presented me, as a testimonial of their approbation of services rendered to the Royal Horticultural Society and Botanical Science.

I regret to say that the state of my health has hitherto been such as to prevent my acknowledging, in fitting terms, the receipt of the Plate; and even now I find myself unable to do so as I should have desired. I had hoped to be able to thank each subscriber separately for the kindness shown me, but, on looking over the long list of friends with whom I should have to communicate, I feel wholly unable, in my present state of health, to act as I would have wished.

Allow me therefore to express, through you, to the many friends to whom I am indebted for the Testimonial, my deep sense of gratitude for the honour that has been conferred upon me—an honour that I esteem the more highly as it has emanated solely from the kindest feelings towards myself on the part of my many dear personal friends

The delicate attention which has been shown in the design of the Epergne is, I assure you, thoroughly appreciated. My friends could not have selected anything more suitable to me; nor, let me add, could flowers, in my opinion, have been better executed in silver.

Pray, then, my dear Mr. Bateman, do me the service of conveying to the subscribers to the Testimonial my warmest and most grateful thanks, and accept the same yourself, for the kind and active part which you have personally taken in connection with it.

And believe me to be, most sincerely yours,

(Signed) John Lindley.

James Bateman, Esq., F.R.S.

THE DAHLIAS OF 1864.

The following notes upon the Seedling Dahlias of this year may be of service to some of your floricultural readers. The opinions expressed may or may not be correct, but I can honestly say they have not been hurriedly formed, but on the contrary are the result of a careful comparison of notes taken throughout the season. I shall place the varieties in accordance with my estimate of their merit, without reference to the awards which have been made. An unusually large number of Seedlings has this year been exhibited, but the majority of them have presented no improvement whatever upon existing varieties. Now for the list:—

Lean (Turner).—This stands first and foremost amongst the new flowers, and may be regarded as a gem. If I were to buy but one new Dahlia it would be this; its form and outline are beautiful, and the colour a rich yet soft golden yellow.

George Wheeler (Keynes).—A thoroughly good flower of great depth, and with a well-finished centre; apparently very constant; its colour is lilac, with the back of every floret heavily tipped with rosy purple, giving the flower a novel and striking appearance.

Champion (Keynes).—This is a noble and well formed flower of a rosy-purple colour; in the absence of Lord Derby this variety would have been highly prized; as it is, it must be grown.

Spitfire (Rawlings).—If this flower should prove constant it will be a favourite, notwithstanding its being rather small; there are but few new flowers of this season which possess more good properties than this; colour pale orange-red.

Lady Maude Herbert (Keynes).—This is a well-built bold-looking flower, and will, I think, be a favourite; colour pale yellow, tinted or tipped with buff.

Ne Plus Ultra (Perry).—This is a very distinct and somewhat striking flower, of a colour very difficult to describe; it is streaked and flaked with bronzy rose. Although this flower has only won a Second-class Certificate, I think it will take a place in the front rank of new flowers; the size is somewhat above the average, and the form is good, but I should have liked to have seen it brought out earlier in the season.

Edward Spary (Keynes).—This promises to be a very useful flower, being of good form and build; the colour is distinct—a dark claret or mulberry.

Princess Alexandra (Collyer).—Yellow ground, striped with dull red, the outline extremely good. It was shown well at the Crystal Palace, but later in the season was rather deficient in the centre.

Queen of Sports (Keynes).—This flower is very aptly named, it being very sportive in colour—white ground, tinted, flaked, and striped with purple. It will, I think, prove a very useful flower in this class.

Miss Roberts (Turner).—A large rosy lilac of a distinct shade; good florets, and appears to be a useful and constant flower, but rather flat upon the face.

George Rawlings (Keynes).—A purple. As shown early in the season it was very promising, and I regret having lost sight of it for the remainder of the season.

Queen of Primroses (Keynes).—A good second-class flower, and as such, I think, a very useful Dahlia; colour canary yellow.

Purple King (Rawlings).—A large useful purple.

Lightning (Legge).—A fancy variety of average merit; colour yellow, striped with purple.

Ambassador (Wheeler).—This flower was shown well in the early part of the season; colour claret, of full size; florets well cupped.

Brentford Hero (Hopkins).—A very distinct and novel variety; colour yellowish ground, tipped with mulberry

John Salter (Keynes).—A very showy striped variety; yellow flaked or striped with scarlet.

Hamlet (Keynes).—An Indian red, of fair average merit.

Striped Perfection (Keynes).—As shown early in the season this was a flower of considerable promise; colour whitish, striped with dark maroon.

—*William Holmes, Hackney.*

RETURNS FROM APPLE ORCHARDS.

Being a fruit grower for market to some extent, I have read your article on the subject of dwarf trees (p. 1058), and as you seem to be of opinion that the plan recommended will be unquestionably profitable, you will, I am sure, excuse my putting forth a few statements founded on absolute facts, and then leave it for those concerned to explain in what way the mode recommended can be remunerative, even under the most favoured circumstances.

By the plan recommended in the work to which you allude, it will take 4840 trees to the acre, and putting these trees at 1*s.* 6*d.* each, which is not a high figure, we have an outlay at the onset of 363*l.* per acre for trees, a somewhat heavy item certainly; and as fruit trees as well as other things are liable to the vicissitudes common to all crops, no one would be disposed to invest capital in this way at less than 10 per cent, and few would ever embark it at that rate, in such an undertaking. Even then we have 36*l.* a year saddled on the crop as interest for the trees alone. Though the custom in some fruit-growing districts is to allow an outgoing tenant no compensation for fruit trees that have been planted more than six years, and some deny it at the end of four, I have given a more liberal allowance by spreading the outlay over ten years, instead of six or four, as it would be in reality. I will not go into the various expenses of cultivation, rent, and other charges for the land, but merely state a few plain facts connected with the sale and prices of fruit the present season, so that your readers may draw their own conclusions on profits in prospect, as compared with profits in reality.

A neighbour of mine, who has several acres of Apple trees, in what might be called the best condition as to age and appearance, and whose crop has extended to some 6000 or 7000 bushels, sold the whole on the trees in the early part of summer at 1*s.* per bushel, the buyer gathering and marketing them. The kinds were various, but in a general way were the popular market sorts, and the sample a good average one. The bargain, I might also say, was as far as I can judge, a fair one; certainly it was not all on the side of the buyer, for about the middle of October he offered to relinquish the portion that was left, about one half of the crop, and including all the later keeping kinds. Now this is not a solitary case; for plenty of growers, who market their own fruit, will not realise more than a shilling a bushel, clear of deductions. I have seen several market tickets which exhibited not more than 1*s.*, 1*s.* 2*d.*, or 1*s.* 3*d.* for as good King of the Pippins, Wellington, and Blenheim Orange Apples as need be seen anywhere; inferior fruit have been advertised at 6*d.* per bushel; and I incidentally heard of a grower offering 3000 bushels, in a lot, at 4*d.* per bushel. Another neighbour of mine, who had grown this season about 4000 bushels, told me his sale up to the present time averaged about 1*s.* 1*d.*, which is about the same as my own, and may be taken at about a general average for what has been sold; but be it remembered that, in these last cases, the small and inferior fruit were not sent to market at all. Some inexperienced growers who sent the inferior fruit, had the mortification of having to pay a penny or twopence per bushel to get rid of them.

This is no fancied picture, no imaginary grievance put forth to rebut a new proposition. It is simply a statement of facts, and low as the price of Apples is, there are growers who regard the present as the best season they have had for years, the quantity, even at a shilling, paying. But if every acre of our orchards were saddled with an interest of 36*l.* for the trees planted on it, as your miniature orchard must be, all chances of remuneration would be out of the question. I need not, however, say more on this head, but would simply point out that to make the miniature orchards return the 36*l.*, each tree must produce over half a bushel of fruit, which is more than is anticipated when they are full grown. In what way, therefore, this mode is likely to become a profitable one, I am unable to see. A plausible theory often enough reads very well, and calculation may be made to sound all right, but the harsh ordeal of actual practice knocks it all on the head. However valuable we may regard the pets of our own rearing, others have to be persuaded into the same opinion, or there is no trading. I question very much if blunt John Bull will be willing to give 5*s.* per bushel for fruit grown on small trees, when he can buy the same kinds and probably better for 1*s.* 6*d.* grown on larger specimens. If it can be pointed out how I am to make more of my orchards than I now do, by showing where a better price can be had for what I grow, I shall be especially grateful, but such arguments will be necessary to gain converts amongst those who grow fruit for market. It is no great assumption on our part if we assert our right to know the Dr. and Cr. side of fruit growing quite as well if not better than those who have only vague theories to base their views upon. I am however in no way prejudiced, and am still willing to learn. *A Kentish Fruit Grower.* [We believe Mr. Rivers' calculations to have been founded on actual results—at least so we understood. It must be remembered, moreover, that it was the very choicest dessert sorts that were principally referred to, and not the ordinary Apple crop.]

KEELE HALL BEURRÉ PEAR.

WE received a few weeks since, the following letter, accompanied by fruit of the Pear to which it alludes :—

I send you specimens of the (with us) excellent Pear, called the Styrian, from a south wall. The fruit is smaller this year than usual, owing no doubt to the dry season. We find it very useful, as it comes in just before Marie Louise, Louise Bonne of Jersey, &c. I am surprised to find this variety so little known. I never met with a gardener who knew it, nor can our principal nurserymen supply it. In the Gardeners' and Foresters' Record (Vol. I., for 1833) may be found a very poor figure of it, with the following description :—'This is a new and very scarce kind. The tree is a most excellent bearer, and will be found to answer as a standard in warm situations, but better as a wall tree. The fruit is juicy, sweet, and melting. It is a fine variety, in use from October to December.' I find its season with us is all through October, not later. By grafting on Citron des Carmes I have it ripe in September, at least a fortnight to three weeks earlier than on the Pear stock. We also find it one of the very few standards that succeed in this climate—anything but favourable for Standard Pears generally. *W. Hill, Keele Hall Gardens, Oct.* 19.

The fruit received from Mr. Hill was large, pyramidal, and broad at the top; stalk about 1½ inch in length, thick and fleshy at its junction with the fruit; skin smooth, yellow, bright red next the sun. Flesh yellowish white, melting, buttery, sugary, and very good.

The same Pear as that grown by Mr. Hill was undoubtedly figured under the name of Styrian in the "Gardeners' and Foresters' Record" for 1833. It is not, however, the Styrian which was first received in this country by the Horticultural Society from M. Bosc,

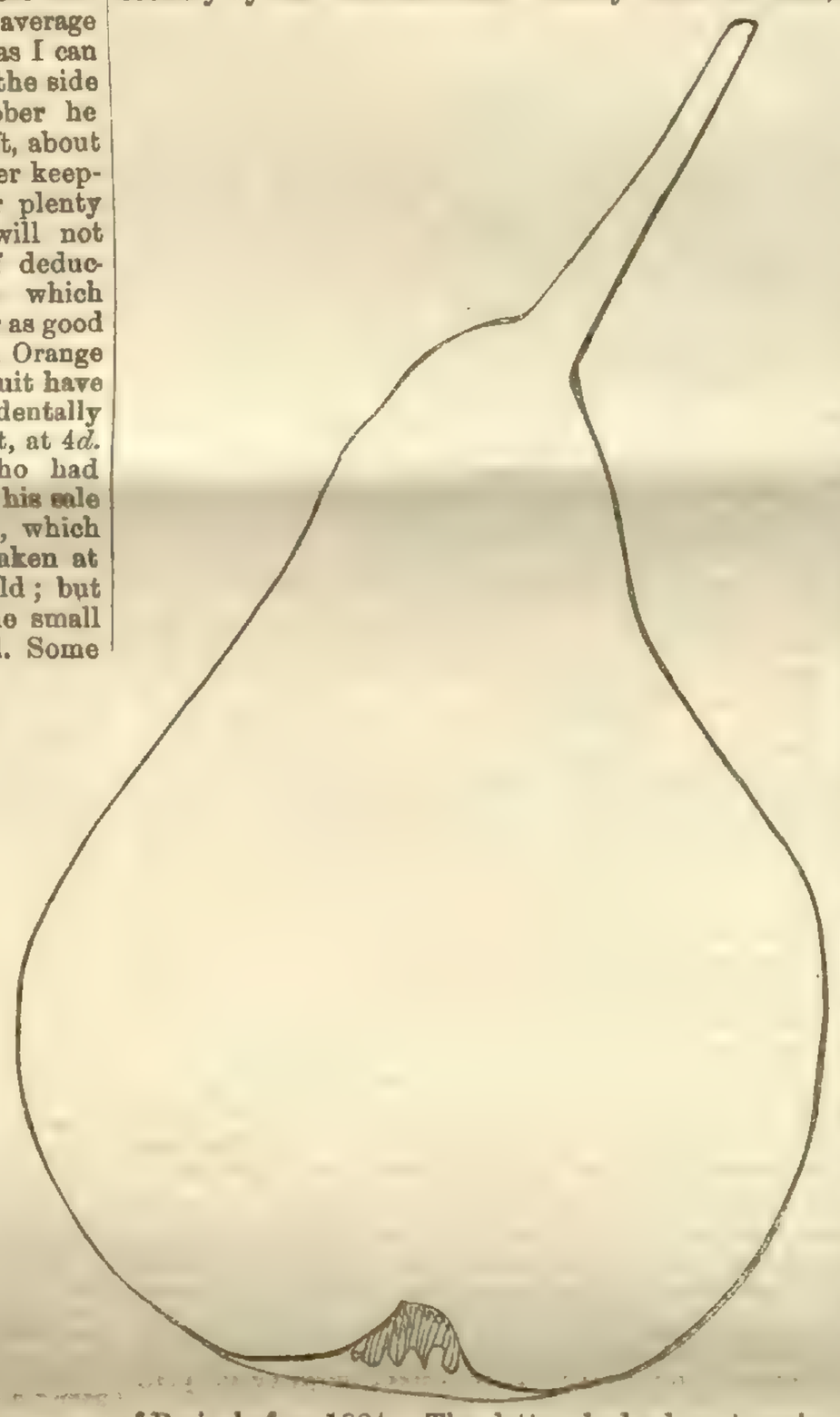

of Paris, before 1824. The latter had a long tapering form, and a beautiful bright red colour next the sun, and indeed nearly all over the fruit; the flesh moreover, was not so melting as it is in this sort. Hence, as the Pear now figured, which was found at Keele Hall by Mr. Hill on entering his situation 15 years ago, and deserves to be more extensively grown, has not hitherto been identified with any known variety, the name of Keele Hall Beurré may we think be very appropriately adopted.‖

Home Correspondence.

The "Jardin Fruitier" and its Pears.—On thinking over the highly finished figures of fruits given in this truly magnificent work, one is tempted to contrast the ways of the two Governments of France and England. We have only to suppose our present Government to have commissioned some one of our great pomological men to bring out a work of the kind, trusting entirely to him to select and figure the different varieties of fruits. Should we not pronounce it a "regular job" if month after month we saw the most worthless varieties of Apples grandly figured and lengthily described? I think so. Well, with much valuable information in the above-mentioned work, we have many—a great many—most inferior sorts of fruits figured, and pages of worthless—worthless because the subjects are so—descriptions written. Besides this we have a most capricious change of nomenclature, entirely uncalled for, and not followed by any of the experienced pomologists of France. Why should the Pear Doyenné du Comice, now well known throughout Europe, have its new name of Poire du Comice, and Beurré de Rance be changed to "Poire du Rance;" Beurré Diel to "Poire Diel;" Bergamotte Esperen to "Esperen;" Nelis d'Hiver, our Winter Nelis, to "Bonne Malinoise;" Beurré Giffard to "Giffard;" Beurré Bachelier to "Bachelier;" and Beurré Hardy to "Hardy?" And then we come to a list of the most abominably bad Pears ever known. The Burnt Cat (Chat Brulé) Pear, for instance; also Terrin de Boulogne, Impériale à Feuilles de Chine, Tuerlinckx, Angier, Sanguinole, and many others equally worthless, with many that, although not worthless, are yet of very inferior quality, and not worthy of cultivation at the present day. I am assuming that all the fruits described are figured—I have not seen any recent numbers of the work—and if so I think we must allow there is a great waste of talent and labour. Fruits and flowers that are not worthy of cultivation are, I think, not worthy of being immortalised; still there may be some scientific motive for the apparent waste of paper and print in this national work. *Pyrus.*

Heating.—May I venture to ask whether it is considered that the art of heating horticultural buildings—fruit houses of all kinds, has attained such perfection, that it is unnecessary and only troublesome to think of any other methods which may seem to be practicable, combining efficiency as regards heat (including bottom heat), economy, and the power of imparting more or less moisture to the atmosphere of the house? It is believed that these objects can be effected on a plan not hitherto practised, without the aid of an iron apparatus, which is necessarily expensive, however great its merits may be. We use what is called a hot-water apparatus, and no doubt it is so, but at the same time it produces only a perfectly dry heat, and does no impart any moisture to the atmosphere of the house, except by some contrivance apart from the mere circulation of the hot water in the pipes, which latter produces only a dry heat. If heat and moisture, both bottom heat and atmospheric temperature, can be imparted to a fruit house in such degrees and proportions as may be wanted, the various requirements of vegetation would seem to be provided for, and if moderation in cost, and simplicity in construction and workmanship, can be combined with these results, all objects would be attained. But it may be that no want is felt, and that existing arrangements are so perfect as to render it not worth while to think of any new system. *Heat.* [By no means].

Seedling Figs.—In reply to the question of your Correspondent "Adam Fitch" (p. 1158), I may state that it is probable that his plants come from the seeds of dried Smyrna Figs. These seeds germinate freely under glass, and would probably do so in the open ground. It is curious to observe the difference in the shape of the leaves of young and of old plants, the Fig, in this respect, resembling its congener the Mulberry. I recommend your Correspondent to destroy his seedlings. Even under glass they will tire out his patience before they fruit; and when they do, the chance is infinitesimal that they will be as good as our old varieties. One ought to have half-an-acre of ground, and that in the climate of Smyrna, to carry out such experiments fully, and bring them to a successful issue. *S. B.*

Should Prizes be awarded to the Masters or the Gardeners?—I have received a letter from "Florist" in reference to this subject, in which he wishes me to express an opinion concerning it. He writes, "I venture to address you, in the hope of obtaining your aid with a view to an alteration of the present metropolitan prize card system. I feel sure that you must entertain the same opinion as I do on the system of allotting the prizes to the gardeners and not to the masters; it prevents many gentlemen from exhibiting. A gentleman said to me, in the room of the Floral Committee, 'I purchased all Mr.——'s seedlings.'—'Do you not exhibit?' said I. 'Oh!' said he, 'that is quite out of the question, though I should like it; but I should have to bear all the expense and trouble, and my gardener would reap all the credit.'" I am very reluctant (to use a legal phrase), to "appear in the case." I am however always very tender of the interests of nurserymen and gentlemen's gardeners. Both are most excellent in their respective departments, the former most generous, and the latter, as a class, most meritorious and very inadequately paid. My gardening is in a very humble way. My worthy servant is "omnibus," but I never allow him to touch Roses, Strawberries, Peaches, Pears, or Raspberries—five things of my predilection. I never interfere with him in common culinary matters. If any one of these are exhibited, they stand in my name; and except in the case of Roses, I usually give him the prizes. There is a vast difference between such a man, and a head gardener to a great gentleman. Still I think that in all cases the prize should be awarded to its legitimate owner, and the gardener's name should be bracketed after the owner's. As regards prize money, it is the property of the owner of the commodity. The retention or donation of the prize money rests with the owner, in part, or wholly. Still I think that such hard working, intelligent, and generally ill-remunerated men as head gardeners usually are, should have a taste of, if not all of, the prize money. Where money is not an object to the exhibitor, I should be glad to know it was given to the gardener. In case of its being an object, it may be given to him, after deducting expenses, wholly, or in part; or it may be legitimately retained—whether beneficially to the owner and the public, I cannot say. The societies have nothing to do with the matter—it rests really with the masters. I can only say in conclusion, that whilst it is wise to encourage the masters, it is equally wise and just to encourage the servants. We all like glory, and there is no oil like "palm-oil." *W. T. Radclyffe, Rushton.*—Permit me to make a few comments on the complaint which "Florist" so well puts. I have often stated the same thing in private, and indeed the practice in question has been the principal reason why I have never joined the Royal Horticultural Society. I consider that gardeners have been put in the place of masters, and have in consequence gradually assumed some of their rights. The owner of race horses, of stock, or of poultry, gets the credit which is his due, and connoisseurs in such matters are well acquainted with the name of his trainer or bailiff; but gardeners appear before the public in quite a different light, and acquire a reputation, independent of their masters. This is somewhat fostered by the practice of nurserymen, who,

when a skilful man is out of place, gladly give him work, till by means of their recommendation and his public testimonials, he is able, to use a colonial expression, to obtain a run to his mind. I consider that whatever plants a gardener brings with him, or obtains by gift, or proper exchange with other gardeners, planted in the soil of and cultivated in the time of his master, become the property of the master, who, I hope, will never listen to any excuse for removing them. It is a matter of good feeling what presents he may make to a deserving man on his quitting him, or whether he will permit such an one to have a separate piece of land where he may call the plants his own, with perhaps some privileges in the hothouse, but I think such plants should be so marked as to leave no doubt as to their ownership. Now, as to the names of gardeners being habitually put before their masters' by reporters for the public press, I will give an example which occurs to me. The late Edmund Foster, Esq., was well known to all growers of Pelargoniums. Upon reading in the newspapers an account of a meeting of one of those benevolent societies, for the encouragement of which the late lamented Prince Consort was so conspicuous, I found words to this effect: "The tent was gaily decorated by Pelargoniums, sent by Mr. So-and-So, gardener to E. Foster, Esq." I have no doubt he never did such an impertinent thing, but was merely a willing agent in executing the orders of his master. If, however, the press writes up gardeners, let me not fall into the opposite error, by decrying a class raised both intellectually and morally above that from which they have sprung; many I know are deservedly held in the highest esteem by their employers. Let me only add that if, unfortunately, I should be obliged to change my gardener, I should consider it a disadvantage if any applicant had obtained prizes under the present system, and should forbid his contending whilst he remained in my service. *Faunus.* [We have been obliged to omit from this letter one or two paragraphs, which our Correspondent, on second thought, will, we doubt not, agree with us in regarding as unjust to gardeners as a class.]

Royal Horticultural Society's "Proceedings."—I am compelled to invoke your aid in what has at last become a most intolerable nuisance, viz., the delay in the issue of the Proceedings to the Fellows of the Royal Horticultural Society. The last Number is worse than all. It was delivered at my house in the S.W. postal district at 6 o'clock on the evening of the 13th inst.; and on the first page I find in the "Announcements by the Council" that a Special General Meeting of the Fellows will be held at 3 o'clock on Dec. 13th—just three hours previous to my receiving the notice. Is it to be wondered that the attendance at the meetings is so small? I also find that the band attended in the Garden on the 7th, 10th, and 12th inst. — a treat I should not have missed had I but known in time. Is one expected to wade through the advertisements of the newspapers in order to find out what the Society is going to do? If so, what is the use of spending so large a sum in printing the Proceedings? If this is to be the organ of communication with the Fellows, let us have it regularly published, so that we may know "what is to be" before, not after it has come to pass. *An Old F.R.H.S*

[Similar complaints have reached us from several other quarters.]

Winter flowering Thorn.—A White Thorn is now, (December 13), full of buds and bursting into bloom, in a shrubbery near Chepstow. *M. P.* [It is probably the Glastonbury Thorn, Cratægus Oxyacantha præcox.]

Foreign Correspondence.

REPORT ON CINCHONA CULTIVATION AT DARJEELING.—The following passages from the report of Dr. T. Anderson, Superintendent of the Calcutta Botanic Garden, showing the progress made between the 1st April, 1863, and the 15th July, 1864, will be read with interest:—

The period to which this report refers may be considered as the second year of the experiment of cultivating Cinchonas in the Himalaya, as the cultivation was commenced on the 1st June, 1862. In the first annual report submitted on the 3d August last year I referred to the numerous obstacles that had to be overcome before commencing the cultivation, as well as the difficulties that still continued to retard the more rapid increase of the stock of plants. Through more extended acquaintance with Darjeeling I have been able successfully to contend with many of these difficulties; but I am sorry to have to report that all my operations have been retarded, and much unnecessary labour incurred by the want of permanent buildings belonging to the cultivation and situated on Government land near the site chosen for the open air cultivation. The propagation of the plants is still carried on at Lebong in a private garden, which I have been obliged to rent for a second year, that is, until the end of April 1865. This garden, besides a dwelling house occupied by the European gardener in charge of the cultivation, had not a single appliance of any kind for carrying on cultivation beyond a small conservatory manufactured out of old doors and windows, and so dilapidated that it had to be abandoned six months ago. In its place a temporary conservatory, consisting of a glass roof and wooden sides, was erected in January. The glass and wooden frames for this conservatory were sent from Calcutta, as it was impossible to procure them in Darjeeling.

On finding that the nurseries could not be removed to the permanent site till the end of another year I made arrangements for adding a flue to the conservatory erected in January, and also for building a second conservatory with a flue. This second conservatory was completed about 15 days ago, and the flue of the other house is also finished. These flues, though not required at this season, will be an invaluable aid in carrying on the propagation during the coming winter. Owing to the want of artificial heat, propagation was almost entirely stopped during the winter months. Twenty-five large frames with glass lights, and of the form usually known as Cucumber frames, were provided during the last year to meet the large increase in the number of plants. The rooting of the cuttings has always been carried on in these frames with the assistance of slight bottom heat obtained from the decay of heaps of vegetable matter. A large number of additional frames will be required almost immediately, as the rate of increase in the plants has now reached 6000 a month.

The last published record of the number of plants is that dated 15th June 1863. The total number of plants on that date was 6530. The number on the 15th July was 19,616. As Cinchona Pahudiana was not increased at all during this period, it must be excluded while calculating the rate of increase during the past year, which is then 400 per cent. It is however deserving of notice as showing the great suitability of the climate of Darjeeling for the species Cinchona officinalis (var. Chahuarguera) that the rate of increase of that species has been nearly 2000 per cent. during the same period. The rate of increase is now most satisfactory, and the cuttings obtained monthly are large and healthy. Cuttings root in from 15 days to three weeks, depending on the amount of sunshine. They root more quickly in sunshine than they can do in rainy weather. As I have already stated, the entire absence of artificial heat and of suitable conservatories prevented me attempting any propagation during the winter months, December, January, and February. A small increase was obtained in March, and since then the propagation has steadily increased every month. It is now about 6000 a month.

In the middle of June 1864 I selected a suitable spot on the Government reserved land as the commencement of the open air cultivation of Cinchona. This place is 3743 feet above the sea as determined by the barometer, and is situated on the south eastern slopes of a long spur from Sinchul. It is known to the Lepchas as Rungbee, and I have adopted this name for the plantation. The elevation of the lowest part of the spur is about 1300 feet above the sea. The area of the land on it suitable for Cinchona cultivation is about 150 acres, from which a considerable deduction must be made for cliffs and rocky ground. Below 4000 feet the land is partially cleared for the native cultivation of Maize, Millet, and Eleusine. In the forest within the range adopted for Cinchona cultivation are found Talauma Hodgsoni, Gordonia Wallichii, three species of Saurauja, Actinidia, several Cucurbitaceæ, several species of Begonia, Saxifragaceæ, numerous Labiatæ, and at the lower altitudes, Albizzia and Bauhinia, with Clerodendron and Callicarpa, several Acanthaceæ, a lofty Artocarpus, and several species of Ficus. A large peltate leaved Rottlera is found everywhere on the spur up to 5000 feet. Endogenæ are abundant, though not numerous in species, and of them Musa forms the most marked feature of the vegetation of the spur up to 5500 feet. The trees are clothed with Pothos, Orchids, and epiphytic species of Zingiberaceæ (proving the extreme moisture and equability of the climate). Four species of Bamboo occur at different altitudes, one of them scandent and resembling in habit the Chusquea of the Andes.

Palms occur, of the genera Plectomia, Calamus, Areca, and Caryota. Ferns of the most tropical genera are abundant, and Tree Ferns are common from the base of the spur to 6000 feet. The temperature of the air at the plantation formed at 743 feet has been frequently recorded since the end of June; the maximum temperature observed is 78°, and the minimum 64°.

After having fixed on the site for a plantation, a road had to be made to it through the dense jungle. From the point in the forest where the road made by the Public Works Department ends, a path has been made 5 miles in length: the first part through tangled and prickly masses of Plectomia, and this was completed to the first plantation by the end of June, when the ground was also ready for the plants, having been cleared, trenched, and surface drained.

At the Nursery at Lebong the Cinchonas intended for planting out were removed from their pots, packed in baskets with Cocoanut fibre, and carried by coolies to the forest. Tents had been pitched there for the European gardeners, Mr. Mann and Mr. Jaffrey, who were engaged in planting out the Cinchonas during the three following days. The plants, varying from 1 to 2½ feet in height, were placed 5 feet apart, each species by itself, and were left perfectly unprotected from the weather. A light fence was placed round the plantation to keep off cattle and wild animals. The number of Cinchonas placed in the plantation were:—Cinchona succirubra, 100; C. officinalis, 100; C. micrantha, 50; C. Calisaya, 2; C. Pahudiana, 271: total, 523.

From this experimental plantation at 3743 feet important results will, I hope, be obtained, as the comparative growth of plants of the different species alongside of each other and under the same condition, will enable me to form an opinion of the altitudes best adapted to each. From this point the plantations to be formed next year (30 or 40 acres for all species, exclusive of Cinchona Pahudiana) will radiate in all directions according to what are found to be the requirements of the plants. The plants were not in the most satisfactory state for experimenting on, as from their rapid growth and large size no further time could be lost either in planting them or making cuttings from them. They were therefore taken direct from the warm equable air of the greenhouse, and they will have greater difficulties to contend with than if they had been inured by degrees to the open air and all kinds of weather. All plants grown in the conservatories will, in future, go through the process called by gardeners "hardening off" before they are planted in the open ground. Sheds have been erected at the plantation at three different heights, at 3743, 2500, and 1760 feet above the sea. In these I have placed a considerable number of all the species (in the lowest C. succirubra alone), which having yielded a great many crops of cuttings have become exhausted. By exposure to the open air they will after a while yield more vigorous cuttings than they have done lately, and afford at the same time some data concerning the comparative rate of growth of the species at different altitudes.

In April last I received 200 seeds of Cinchona Calisaya from Dr. Junghuhn.* The seeds were produced in Java by one of the trees brought by Dr. Junghuhn from the Botanic Garden, Leyden, where it has been raised from seed sent from Bolivia by Dr. Weddell, the French Botanist. Only nine of these seeds of this valuable species have germinated, but the young plants obtained are healthy and have already three pairs of leaves. In the same month I received a quantity of seed of Cinchona petayensis from Mr. Markham. The seeds were sent to Mr. Markham from South America by Dr Jameson of Quito. They were sown at Darjeeling in the first week of May in a slightly warm frame, but up to the 15th of July not one of them has germinated.

I am indebted to Sir W. Hooker for having nominated Mr. Gustav Mann for employment in the cultivation of Cinchona at Darjeeling. Mr. Mann had just returned from the West Coast of Africa, where he greatly distinguished himself in the capacity of Government Botanist under the orders of the Admiralty. Mr. Mann arrived in India on the 14th March last, and he has been appointed head gardener in charge of the Cinchona cultivation at Darjeeling. Mr. Jaffrey is attached to the cultivation as assistant gardener. Mr. Ryan as overseer has proved most useful in taking a general superintendence of the coolies; though not a trained gardener he has acquired several of the minor operations of gardening. It has been impossible to procure any class of natives except the lowest coolies. No sooner are these people taught to do the most ordinary work of the nursery without constant European superintendence, than they, either tired of the nature of the work or from some other cause, and almost unanimously without any notice, abscond with wages due to them. The annoyance and unnecessary waste of time in teaching fresh gangs of coolies, only to be deserted by them in a month or two, has become so serious an evil that I shall immediately on my return to Calcutta endeavour to procure a party of Darjeeling coolies on an engagement to remain in Darjeeling at least for two years. To secure such men a larger rate of wages must be given than I have estimated for.

Since last year the cultivation of Cinchona has been successfully commenced by two private individuals near Darjeeling, the plants having been obtained partly from Ootacamund and Ceylon. In one case the cultivation is carried on on a scale which it is evidently intended to extend with the increase of the plants. A European gardener conducts the operation, and the plants in the nursery already exceed 1000. The other experiment is on a smaller scale, and has been entirely conducted in the open air at an elevation of about 3000 feet, and with only one species, C. succirubra, but also with success. I have had application from other proprietors of Tea estates for assistance and advice in commencing similar experiments here, and in all cases I have rendered every assistance in my power.

* I have just received intelligence of the death of Dr. Junghuhn, who had charge for so many years of the Cinchona cultivation in Java.

Societies.

ROYAL: *Nov.* 30 (*Anniversary*).—The following gentlemen were elected to form the Council for the ensuing year:—*President:* Major-General Sabine, R.A. *Treasurer:* W. A. Miller, M.D. *Secretaries:* W. Sharpey, M.D.; G. G. Stokes, M.A. *Foreign Secretary:* Professor W. H. Miller, M.A. *Other Members of the Council:* Professor J. C. Adams, M.A.; J. Alderson, M.D.; G. Busk, Sec. L.S.; Colonel Sir G. Everest, C.B.; H. Falconer, M.A., M.D.; J. P. Gassiot; J. E. Gray, Ph.D.; T. A. Hirst, Ph.D.; Sir H. Holland, M.D.; H. Bence Jones, M.A., M.D.; Sir Roderick I. Murchison, K.C.B.; W. Odling, M.B.; Professor W. Pole, C.E.; Rev. B. Price, M.A.; Sir John Rennie; and Lord Stanley.

ROYAL HORTICULTURAL: *Dec.* 13.—W. Wilson Saunders, Esq., in the Chair. A Special General Meeting was held on this occasion to receive a report from the Council on the new Bye-laws recommended to be drawn up at the last Anniversary Meeting.

Mr. Chester, one of the Committee appointed to prepare the draft, read over portions of it, and directed attention more particularly to the following points. In reference to elections he stated that candidates for admission might be elected on the recommendation of two Fellows, instead of three as heretofore, the reason being that it was the wish of the Committee that as little difficulty should be placed in the way of admission as possible. After adverting to several increased advantages with regard to the privileges of Fellows, and stating that lady members might vote at General Meetings by proxy, he read the following new clauses, which had been introduced under Cap. XI. One of these is that "The Council may provide for the admission of any Horticultural Societies and their members into union with the Society, and partial participation in its privileges, upon such terms as the Council think fit." Another is, that "at the first meeting of the Council after the Annual General Meeting in each year, the Council shall appoint a Committee, to be called the "Education Committee," whose duties shall be to advise the Council what measures they can take for improving the education of gardeners, and to assist the Council in taking such measures as the Council may approve for that purpose." A third is, "That no member of Council shall at any exhibition of the Society receive any money prize, medal, or pecuniary reward of any description, in respect of any plant or other article belonging to him, or to any firm of which he is a member, or in the profits of which he is interested." After touching on the removal of members of Council from incapacity or otherwise, Mr. Chester stated, that it was provided that the election of members of Council and other officers, at the Annual Meeting, shall be conducted as follows:—

"The Council shall, in the month of January in every year, and on or before the 15th day of that month, cause to be prepared two balloting lists, in the forms marked F and G in the Appendix.

"The first of such balloting lists, Form F, shall state the vacancies (distinguishing in manner appearing in the said Form between the ordinary and extraordinary vacancies) created or expected to be created in the Council, and required to be filled up at the next Annual Meeting in the ensuing February.

"The second of such balloting lists, Form G, shall contain the names of such Fellows as the Council recommend to fill, during the ensuing year, the offices of President, Treasurer, Secretary, Expenses Committeemen, and Auditors. The balloting lists shall be circulated amongst the Fellows, either with the Journal of the Society or separately, some time in the month of January, not later than the 15th day of the month, and shall also be suspended in the Council Room.

"If any Fellow desire to substitute the name of any other Fellow for that of any one recommended by the Council for removal or election in the said balloting lists, such Fellow, within seven days after the said lists have been circulated, shall leave at the offices of the Society notice in writing of every such proposed substitution."

After adverting to one or two other points relative to financial matters, it was moved by Mr. Chester and seconded by Sir A. Scott Waugh,

that the draft of the Bye-laws now furnished to the meeting be adopted. At this stage of the proceedings some discussion took place, chiefly relative to the election of Members of Council, and the preponderance of power invested in the latter compared with that of the Fellows, and one or two amendments were proposed and lost. The following resolution was then read by the Chairman and adopted by the meeting, viz., "That the existing Bye-laws be repealed, and the new ones adopted, with the amendments made thereto." Mr. Chester also moved and Sir A. Waugh seconded—"That the meeting recommend the Council to take steps to get a new Charter."

After a vote of thanks to the Committee to whom the preparation of the new Bye-laws had been entrusted, and another vote of thanks to the Chairman, the meeting separated.

ENTOMOLOGICAL: *Dec.* 4.—F. Pascoe, Esq., F.L.S., President, in the chair. A large number of entomological publications presented to and purchased by the Society, were placed on the table. Mr. Jenner Weir exhibited a series of preparations for the microscope, consisting of the spiral tongues of different species of butterflies, which exhibited great diversity of structure, especially in the minute papillæ at the apex, even in closely allied species. Mr. F. Bond exhibited a drawing of the larva of Acronycta strigosa, and a photograph of a strange black variety of the common Magpie moth. The Rev. Hamlet Clark exhibited a collection of minute beetles made by the Rev. P. Cambridge above Cairo, and also a number of species of ants from the Holy Land, collected by Mr. Lowne. Mr. F. Smith exhibited a curious wasp's nest arranged in different coloured layers, having been formed by two distinct species, Vespa germanica and V. vulgaris, working together at the same structure. This nest had been built, so to speak, under the direction of Mr. S. Stone, who had placed an incipient nest of one of this species outside the window of a bed room, and a similar nest of the other species in a window of an apartment beneath the bedroom, and whenever an inhabitant of the upper nest flew low, it mistook the nest, and entered and worked at the lower nest. Mr. Stone also made some observations on the wasp parasite Ripiphorus. Mr. Evans sent for exhibition some New Zealand wool, in which a number of specimens of a small cockchaffer of that country had become entangled. The President exhibited some small globular spiders' nests from South Australia, resembling the seeds of Leptospermum, whilst the spider, which guarded the nests, resembled a lump of bird's excrement, and was thus able to deceive its prey. Mr. S. Stevens read a letter from Mr. Du Chaillu, dated Fernand-Vaz River, Aug. 20, 1864, in which the writer announced the despatch of a number of insects to England, as well as a living gorilla, which had unfortunately got loose in the boat conveying it to the vessel, and had died. Mr. Hewitson sent a memoir, consisting of a monograph of the Satyrideous genus Ypthema, and two new allied genera. Mr. Kirby read some notes on the synonymical nomenclature of various British species of butterflies; and the second part of Captain Hutton's memoir on the Silk insects of India, especially with reference to the regeneration of the Bombyx Mori, was also read.

Notices of Books.

Chronicles and Memorials of the Reign of Richard I. Vol. 1. Edited by William Stubbs, M.A. Longman & Co., London. 1864. Pp. 468, 4to.

For this volume we are indebted to an excellent suggestion of the Master of the Rolls, which has already brought a great mass of information beforetime locked up in ancient manuscript, within reach of the student. The volume before us contains a valuable introduction by Mr. Stubbs, a short history of the Siege of Lisbon in Latin, by Osbern, an eye-witness; an account of the calamities of Cyprus, by Neophytus, in Greek, with an English translation; and the Itinerarium Regis Ricardi, in Latin, which is the great subject of the book.

The Introduction first discusses, briefly but extremely well, the history of the time included in the short reign of Richard I., and then very properly enters upon the quetion of who was the author of this Itinerarium, giving strong evidence for regarding it as the work of one author, and ascribing the authorship to Richard the Canon of the Holy Trinity in Aldgate. The Itinerarium was considered from the time of its first publication to be a work of elegant taste and beauty—indeed, one author, who regards it as a translation (though probably mistaken in that view) speaks of it as translated "*tam eleganti quam veraci stilo.*" The classical scholar of modern days might possibly find fault, but anybody acquainted with mediæval Latin would recognise the justice of this encomium, and could not fail to admire the sonorous rhythm and graphic descriptions which prevail throughout. Mr. Stubbs remarks that the Itinerarium has most of the requisites of a good epic.

After having said all he can about the MS. and its supposed author, the Editor gives a rapid glance at the history of the Crusades, which soon becomes a running commentary upon the work he has in hand. His remarks appear to be very just, and fully borne out by the statements in the text.

Mr. Stubbs points out that as the reign of Richard I. did not fall in a period of transition, but in the lull between the reigns of Henry II. and King John, when men's minds were occupied with foreign rather than domestic affairs, this period will be found barren of incidents for the constitutional historian. The list of Richard's politicians is confined to a very few names, and his best and bravest men were used up in the Holy Land and in his French wars; yet the history of his short reign brings us in contact with a variety of men, and complications in politics unequalled in interest by those of longer and more important reigns. The Crusades brought East and West together, and the Powers of Europe into close contact with each other. Moreover, the King's family connections involved him in the conflicting interests of Italy, France, Germany, and Spain. As King of England; lord of Ireland, Scotland, and Wales; duke of Normandy, Aquitaine, and Gascony; count of Maine, Anjou, and Poictou; and superior lord of Brittany, Auvergne, and Toulouse; king of Arles; conqueror of Cyprus, and for a time the ruler of the kingdom of Palestine, he was brought into collision with almost every potentate in Christendom. Richard, with all his faults, possessed many excellent qualities. His matchless bravery, and his undoubted genius for military affairs, gained him many and ardent admirers. He was the life and soul of the Crusade. His very presence struck terror into the enemy and turned defeat into victory. His exploits, as here recorded, approach the fabulous, and elicited the admiration of foes as well as friends. But this was not all; he possessed the power of winning the love of better men, had a wonderful facility in pardoning personal injuries, showed a rare tact in the choice of his ministers, strangely contrasted with his want of tact in the rest of his conduct, and a certain blind faith in human nature which made him slow to suspect evil in the worst of men. His vices were those of the camp, glaring indeed, but without the smallest suspicion of anything worse behind.

It was not likely that such a king should want an historian. Nor did he. Many have given the history of his reign, but the writer of the Itinerarium has a great advantage over all the others, in that he was manifestly present at the siege of Acre, and an eye-witness of many of the scenes which he describes. For this there is abundant internal evidence. It is manifest also that he was conversant with the best classical authors, and that he was capable of writing Latin verse as well as vigorous prose. These are some of the important marks which serve to identify the writer.

In the chapters describing the relief of Joppa, the exploits of Richard appear to have reached their culminating point, and certainly the reader's interest is raised to a very high pitch. The king is the first to leap from his galley, and wade to the shore, which is lined with troops to oppose his landing. When these are at length put to flight, the king is the first to enter the town, where he displays his banner upon the wall, and the besieged Christians, thus encouraged, sally from the castle, and make a terrible slaughter of the Turks, thus caught between two fires.

Next day the Mamelukes and Koords undertake to surprise Richard at midnight as he lies too securely in his camp; and very nearly succeeded in their attempt. An alarm is given; the king, suddenly roused from sleep, puts on his coat of mail, and scarcely gets together 10 horsemen, and those almost all that he possessed, when the enemy are upon him, rushing on with horrible yells amid a shower of missiles. The king however has arranged his foot soldiers, holding shield to shield with their left hands, and thus forming an impenetrable barrier, each man planting his right knee upon the ground, against which he also presses his right foot; the left leg is bent well forward, and the lances are held in the right hand, their points bristling against the enemy, and the reverse ends firmly dug into the soil. The cross-bowmen are ranged behind. On come the Mamelukes like a whirlwind and charge in seven bands, but none can penetrate the wall of shields. As each troop in turn recoils, the cross bowmen shoot down as many men and horses as they can.

Then King Richard sallies forth with his 10 horsemen, and charges into the hosts of the enemy, slaughtering multitudes, and slashing off the head, shoulder, and arm of a notable Emir at a single blow. He rescues the Earl of Leicester and a knight who had been overthrown, and were being dragged away as captives. He plunges again into the midst of the fray, and anon emerges bristling, man and horse, with darts and arrows like a hedgehog.

The whole account is splendidly told, and gives a vivid notion of the scene of Richard's last and greatest exploit in the Holy Land.

But all was of no avail. Richard saw the hopelessness of the contest, and in the words of Mr. Stubbs, "a truce for three years (purchased by the cession of Ascalon) was the lame and impotent conclusion of this great and costly undertaking."

Osbern's history of the Siege of Lisbon is chiefly interesting as a contrast, showing the amount of religious zeal which distinguished the Crusaders of 1147, so little of which appears in the history of the Third Crusade. Here a party of pious and earnest men, maintaining the strictest discipline from a sense of duty, and animated by episcopal exhortations, but under the conduct of no leader of any note, were eminently successful, while all the military prowess of Christendom effected absolutely nothing in the Holy Land.

The *Botanical Magazine* for November contains portraits of the following plants:—*Renanthera Lowii*, a folding plate, showing the very singular dimorphism, alluded to at p. 914, which occurs in this Bornean plant, better known as Vanda Lowii. The figure was taken from Mr. Rucker's plant, which is stated to be 9 feet high, and to have produced six flower spikes, each bearing from 40 to 50 blossoms, which lasted in perfection for a month. The spikes attained to such an extraordinary length that they had to be supported on props. The two basal dissimilar flowers of each spike are tawny yellow dotted with crimson, the remainder much undulated, pale green, almost wholly covered on the inner face by large irregular blotches of reddish brown.—*Masdevallia civilis*, a Peruvian Orchid, with tufted terete vaginate stems, bearing one linear oblong leaf, and short radical peduncles supporting the curious dull brownish-yellow purple-stained flowers.—*Aquilegia cærulea*, a handsome hardy perennial from the Rocky Mountains, the flowers remarkable for their long slender spurs, their spreading purple sepals and their pure white petals. Mr. Burke, by whom it was collected, calls it not only the Queen of Columbine but the most beautiful of all herbaceous plants. *A. leptoceras* is regarded as an ochroleucous variety.—*Mimulus luteus cupreus*, the Mimulus cupreus of gardens, which Sir W. Hooker is "satisfied is only one of the many varieties of the Linnean Mimulus luteus," of which guttatus, variegatus, rivularis, and Smithii are given as synonyms.—*Vitis macropus*, a herbaceous Vine with a turnip-like stem! It resembles the V. Bainesii mentioned at p. 1039, and like it, is from tropical West Africa, but differs in having the leaves five-parted instead of three-parted. It is a great curiosity but of no beauty. This species was found by Dr. Welwitsch in South Benguela. The thick gouty stem is quite succulent.

In the December Number we have pictures of *Acmena floribunda*, a New Holland evergreen greenhouse tree of the Myrtaceous order, with oval-lanceolate acuminate leaves, and thyrsoid panicles of small green unattractive flowers, succeeded by bright purple berries as large as peas, which are represented as very handsome. The old Eugenia elliptica is a white berried variety. The flowers appear in winter, "and the berries succeed them in early spring, causing the extremities of the slender branches to bend down by their weight."—*Araujia angustifolia*, a slender Asclepiadaceous climber, discovered in the forests of Uruguay. It has hastate leaves, with a white bar down their centre, and cylindrico-campanulate whitish axillary flowers, marked in the throat with purple. It is a graceful plant, but not very showy.—*Dendrobium japonicum*, or as Mr. Bateman proposes to call it, D. castum, an epiphyte from Japan and the Island of Tsu-Sima, with slender stems and moderate-sized pure white flowers, not of a showy character, but having a delicious fragrance, which "at once recommends it for cultivation."—*Bartonia nuda*, a North American (Missouri) biennial, with pinnatifidly-toothed leaves, and large spreading greenish-yellow flowers. Mr. Thompson, by whom it was introduced, observes that "it can hardly be looked upon as a hardy ornamental plant; the flowering only takes place late in the evening, and at a season, October, when it is too late for the ripening of the seeds."—*Veronica Hulkeana*, a slender shrubby greenhouse plant, quite distinct from all the forms of Speedwell hitherto familiar in gardens. It is of New Zealand origin, and is of erect habit, with ovate or elliptic toothed leaves, and a great terminal paniculate inflorescence, crowded with rosy lilac flowers. It has flowered at Kew in a cool greenhouse, but from its elevation (15-2000 feet) in the Middle Island of New Zealand, it is expected to prove hardy in our climate.—*Epistephium Williamsii*, a beautiful terrestrial Orchid, related to Sobralia, introduced from Bahia, and noticed more fully at p. 1155.

In the two last issues of the *Florist and Pomologist* are figures of the *Vicar of Winkfield Pear*, and *Clematis rubro-violacea*, one of Mr. Jackman's purple-flowered hybrids.

The *Floral Magazine* contains, amongst other less important subjects:—*Achimenes Rollissoni*, a very handsome hybrid raised at Tooting, and the result of a cross between A. gloxiniflora (Plectopoma fimbriatum) and A. Scheerii (Scheeria mexicana). It is of robust habit, a free bloomer, the flowers very large, with a pale tube yellow at the base within, and speckled with crimson round the throat, the limb of a deep mauve purple; the flowers are represented as being 3 inches across.—*Iresine Herbstii*, one of the plants with dark brown-red leaves, and recommended by its introducers Messrs. Herbst and Stenger for summer bedding-out. It is said to branch freely, and to be much hardier than the Coleus, which is a strong recommendation, as the slight frosts to which we are liable as autumn approaches, often do irreparable injury to the latter long before the flower-garden season has been brought to a close. M. Verschaffelt has introduced the same plant, and published it under the name of Achyranthus Verschaffeltii, but as M. Verschaffelt's figure and description was not published till the end of August, and Sir W. Hooker's name of Iresine Herbstii was

printed, with descriptive notes of the plant, in our columns on July 9, the latter name takes precedence. —*Rhododendron Princess Helena*, one of Mr. Veitch's beautiful hybrids with pink long-tubed flowers, raised from R. jasminiflorum, crossed with an imported scarlet species which was not sent out. The flower-tubes are longer than in the variety called Princess Royal, to which it bears some resemblance.—The *three-coloured Japanese Saxifrage*, often called S. japonica tricolor, is represented under the manifestly erroneous name of S. Fortuni. The plant itself in its best variegated state—by the by it is rather capricious—is a very beautiful subject for suspended baskets in greenhouses or window conservatories.—*Gladiolus Eleanor Norman*, a handsome pink striped variety with crimson feather, while in the "sprouts," whatever they may be, there are semicircular spots of deep crimson. It is said to have been awarded a First-class Certificate by the Floral Committee [when?]—*Disa grandiflora superba*, the best form of this fine terrestrial Orchid.—*Pentstemons Princess of Wales* and *Attraction*, the first white tipped with pink, the second a white-throated rose-pink in the way of Mrs. Moore.

Garden Memoranda.

MESSRS. FRANCIS & ARTHUR DICKSON & SONS', UPTON NURSERIES, CHESTER. — Chester, one of the most ancient cities in the kingdom, is situated on the banks of the River Dee, and apart from its historical interest is well worth a visit on account of the peculiar form of its construction. It is encompassed by a wall of great strength, on the top of which is an agreeable promenade, from which not only the surrounding country, but also the antiquated architecture of the town may be inspected with advantage. On a circular tower in an angle of this wall is an inscription intimating the fact that from this spot Charles I. beheld the triumph of the Parliamentary forces over his own in the neighbouring plain on September 24th, 1645. It is, however, the horticulture of the place in which we are most interested, and foremost among establishments in that way stand the finely stocked and extensive Nurseries of Messrs. Francis & Arthur Dickson & Sons.

These are situated at Upton, about a mile and a half from Chester, and are remarkable not only for the excellence of their contents, but for the methodical way in which everything connected with their management is conducted. Some 80 or 90 acres are devoted to the cultivation of forest trees, and 10 or 20 acres to that of Roses and fruit trees, yet over all that extent of ground the utmost order and neatness are everywhere observable, and where necessary, numbers indicating varieties are boldly marked in good black paint on durable white painted Oak labels, in order that everything may be kept true to name—a matter the importance of which, especially in reference to fruit trees and Roses, can scarcely be overrated.

Bordering a drive leading from the entrance to the Counting-house and Offices are plantations of choice Conifers, among which we noticed beautifully formed plants of Abies Nordmanniana, nobilis, and Pinsapo; Thujopsis borealis, Wellingtonias, Cupressus Lawsoniana, Araucaria imbricata, Deodars, and others, all varying from 2 feet to 5 feet in height, well furnished with branches, and otherwise in excellent condition for planting on lawns or in other conspicuous situations. In the grounds connected with Mr. Francis Dickson's residence, a large and commodious building, are also some very fine examples of Conifers, conspicuous among which is a charming specimen of Araucaria imbricata nearly 30 feet in height, forming a complete cone, so thickly branched at the base as to effectually hide anything standing or growing behind it. Associated with this are beautiful plants of Abies nobilis, Pinsapo, and Nordmanniana, each measuring from 15 to 20 feet in height; other fine Conifers and trees of various descriptions, planted many years ago by Mr. F. Dickson, may also be found here.

In another part of the grounds is a second Araucaria imbricata, equally fine with that just referred to, but differing from it somewhat in habit, the branches having in this case a decidedly pendulous character, turning gracefully upwards at the points, and the leaves being stouter and broader than those in any other plant of the kind which we remember to have seen, thus giving the tree, a magnificent specimen, an unusually ornamental appearance. This stands in a small Pinetum, in which we noticed, among other things, a fine Wellingtonia gigantea about 12 feet in height; and examples of the different varieties of new Japanese plants, placed there with the view of testing their hardiness as well as adaptability for ornamental purposes.

This Nursery being fully exposed to the influence of west and north-west winds, which occasionally blow with great violence off the Welsh mountains and from the Irish Sea, is well furnished with excellent hedges, which are about 8 feet in height, and so trimmed as to occupy little more room than that which would be required for ordinary brick walls of similar height. These consist of Beech, Hornbeam, Holly, Yew, and Privet; but for strength as well as fine appearance, Messrs. Dickson are of opinion that the best is a mixture of Thorn and Holly, which, if properly managed, makes a beautiful half evergreen fence.

Snugly nestling amid such security as these hedges afford, are the glass houses, which are both numerous and extensive, well filled with excellent half-hardy and other stock. Among them is a span-roofed house, 100 feet in length, in which are wintered Pelargoniums, both for in and out-door decoration in summer; another fine house, even of larger size, divided in the middle, contains a fine collection of stove plants in one compartment, and New Holland and other hard-wooded plants in the other; Camellias, well set with blossom buds, occupy another house; contiguous to which is a stageful of magnificent specimen Azaleas, admirably grown and tastefully trained, which when in flower must indeed have a gay and imposing appearance. Associated with the latter we noticed fine plants of Dracæna australis, and in another house are stored away Roses in pots of all the choicest kinds to supply cuttings for plants on their own roots, which are grown by thousands here.

Of Vines a most extensive collection is cultivated, and being well attended to during their season of growth they are now in excellent condition, either for cultivating in pots or for planting out in the usual way. They are wintered in a long skeleton span-roofed pit on which are placed wooden shutters to protect them from the weather. In summer when not required for Vines, and the shutters are off, these pits answer admirably for Roses, which are placed in them on a gently heated bed of fermenting material, in which they make excellent growth.

In front of one of the ranges of glass houses is a geometrical garden, tasteful in design, and in summer quite a blaze of floral beauty; and contiguous to it is a Rosery, consisting of a series of circular 4-feet wide beds, which are divided from each other by means of good gravel walks, the whole being intersected by two principal pathways in the form of a cross. This Rosery occupies a square piece of ground, surrounded partly by evergreen hedges and partly by the glass-houses, against the walls of which the more tender varieties of Noisette and Tea-scented Roses are trained.

A border of Hollies, consisting of all the best of the green-foliaged kinds, together with Gold and Silver-leaved varieties, planted ribbon fashion, connects the ornamental ground with that of the Nursery properly so called, and, being edged with a double row of Box, between which Variegated Ivy is pegged down, the whole has an extremely pretty appearance, equally pleasing both in summer and winter.

The light loamy soil of this district seems to suit Rhododendrons equally well with the sandy bog of Bagshot; they are, therefore, in consequence grown here in wonderfully large quantities, and as cover for game the more hardy kinds are invaluable. Nearly 200,000 three-year-old plants, about 9 to 12 inches high, may be found in one plantation, and of all the choicest and newest varieties of the late-flowering hybrids there is a large stock, specimen plants of each of which are kept for the purpose of supplying grafts or cuttings; correctness of nomenclature is therefore in this way effectually secured.

One of the principal crops cultivated in this nursery is Larch, of which there may now be seen some 12 millions of one-year old plants; and owing to the late dry summer proving less injurious in this quarter than in other districts, the plants are in remarkably fine condition, and unusually large and strong for their age. Transplanted Larch, covering some 10 acres in extent, is also equally satisfactory, the plants being placed sufficiently far apart to receive the benefit of plenty of light and air. Scotch Fir is found to grow well on ground previously occupied by Larch, therefore the two crops are planted on the same land alternately, and of course in equal quantities. We also remarked huge breadths of Austrian, Scotch, Spruce, and Highland Pines, Douglas Fir, and Yews, both Common and Golden varieties, which being reared under circumstances of great exposure, thrive with increased vigour when placed in more favourable situations. Of choice Conifers the collection embraces many thousands of the best and most desirable hardy varieties, including those of recent introduction; and, being frequently transplanted, they can be lifted with the greatest safety, not the slightest check being experienced by that operation.

Among dwarf Spruces the best is reported to be A. Gregoriana, of which we noticed some interesting examples, very suitable for the ornamentation of terrace gardens. To the cultivation of forest trees of other descriptions some 70 acres are devoted, consisting of endless quarters of English Oak, Spanish and Horse Chestnut, Sycamore, Ash, Beech, Elm, Lime, Birch, Hornbeam, Poplar, Hazel, and Thorn or "Quick," and evergreens and other ornamental shrubs may also be had here in almost any quantities. Of the Ailantus, the ample foliage of which forms the food of the Ailantus Silkworm, we likewise observed a good stock.

Prominent among other crops in this extensive establishment are plants suitable for game coverts. Among these, in addition to Rhododendrons, Holly, Laurustinus, and Portugal and Common Laurels, which are cultivated by thousands, and of all sizes, are Berberis Aquifolium and dulcis, Box, Blackthorn, what is called Canadian Gooseberry, a fruit-bearing prickly bush, Deutzia scabra, Dog Rose, and Sweet Briar, Elder, Hazel, Honeysuckles, Privet, Scarlet-flowered Currant, Snowberry, Yews, Pinus Pumilo, Gorse, Broom, Buckwheat, and some of the coarser growing Grasses.

The culture of fruit trees forms another important feature of the Nurseries now under notice, and on this branch of the business much labour and pains are bestowed to render the collection as perfect as possible, both in regard to kinds, growth, and modes of training. Among pyramids we remarked many thousands of thriving young specimens, and equal numbers exhibiting examples of other modes of treatment. Lancashire show varieties of Gooseberry may also be found here as well as all the finer smaller-fruited varieties, which, as far as flavour is concerned, are deservedly the greatest favourites.

In the Seed department, which is equally extensive with that relating to forest trees and shrubs, the greatest particularity is exercised to have everything true to name and the best of its kind, an assertion, ample evidence of the truth of which may be found in the case of their "First and Best" Early Pea, a whole page of testimonials in reference to which from well-known gardeners is given at p. 1148 of our advertising columns. In commodious warehouses and offices adjacent to the shop, are stored away for the spring trade, extensive stocks of the leading kinds of agricultural seeds, for the excellence of several of which, such as their Improved Bronze-top and Select Purple-top Swedes, Improved Green-top and Purple-top Scotch or large Yellow Turnips, they have achieved a wide reputation. At a recent exhibition at Bingley Hall, Birmingham, some of the most important prizes were awarded to roots from different parts of the country, grown from seeds supplied by Messrs. Dickson. They have also in store some 50 tons of the best natural Grasses for permanent pastures, Lawns, &c., besides Perennial and Italian Rye-grasses, Clovers, Mangel, &c., in equal proportions. Their mixtures for sowing down land to permanent pasture are in great request, and are deservedly highly commended. It will therefore be seen that the Nurseries of Messrs. Francis & Arthur Dickson & Sons stand in the very first rank among provincial establishments of this kind.

Miscellaneous.

Death of Mr. John Lawrence.—Among the deaths registered in our impression of to-day, Dec. 14, is that of one whose merits and good example claim some notice at our hands. We refer to the late Mr. John Lawrence, a native of Aberdeenshire, for many years head gardener at St. John's, near Ryde. He was well known to many of our readers, and esteemed by all; and many of our summer visitors will remember the courtesy with which he showed them his unique avenues of Fig-trees, and also his intelligent conversation. He was an earnest student of nature, and had familiarised himself with the microscope, in its application to the structure of plants. But, while such acquirements are especially to be commended in one whose day was spent in bodily labour (for he did not think his duty done by merely directing the work of others), we have a stronger motive for bringing Mr. Lawrence's name before our readers. Having been brought up in the gardens at Haddo Castle, belonging to the Earl of Aberdeen, and having perfected his skill under the best practical gardeners of the time, he became gardener to the late Sir Richard Simeon, at St. John's, and continued there in charge to serve his son and successor, the present Baronet, till the day of his death—a period somewhat exceeding 40 years. It is said, "That good masters make good servants," and, doubtless, the adage contains much truth. That this good servant was appreciated as he deserved, and that he is now deeply regretted, the following lines, written by Sir John Simeon to a friend respecting Mr. Lawrence, will clearly show:—"It is impossible," says the writer, "to exaggerate the loss my poor old friend is to me, or to over-rate his many admirable qualities. No family was ever more honoured by the service of a more faithful and affectionate friend than he was to my father and myself during a service of more than 40 years, and I feel that the idea of replacing him is perfectly hopeless." A fitting tribute, well deserved. *Isle of Wight Times.*

Common Ivy.—Ivy is not a parasite, as commonly supposed, but has its roots in the earth, and simply adheres to the trees or other props by which it is elevated into the air. If the thick stems, which may always be observed at the base, be cut through, it usually dies like any other plant. The diameter of these stems near the ground is often 10 or 12 inches, and many are often found standing side by side. The age attained by Ivy is probably to be reckoned by centuries, for though often found trailing weakly upon the ground, bordering sylvan walks, and entangled in hedges, its true place is the time-worn and roofless abbey, and the crumbling middle-age castle, from the romance of which it is inseparable, and with the history of which it descends, making antiquity picturesque, and affording at the same moment a powerful physical protection. Some of the largest Ivies in England are probably those at Brockley Hall, Somersetshire, where they brace up the old trees with their friendly clamps, rendering them at the same time, as is the wont of Ivy, cheerful in winter; and for beauty there are none to be found grander than those of

Kenilworth. The lower walls of this famous ruin they ornament with green and shining arabesque; and from the upper ones they roll out magnificently in rich and massive cornices. The variety in the leaves of Ivy is often thought to indicate a difference of kind. But it is a variety connected merely with different stages of growth. While young, and as long as the stems have a wall or tree to attach themselves to, that is to say, closely, as if they were glued, inch by inch, the leaves are angular and three to five-lobed in innumerable variety; at this time also they are often beautifully tinctured with red or purple, or veined with white, or wholly yellow, especially on the terminal and zigzag branchlets that run like vegetable centipedes up trees and over the surface of damp walls and rocks. Mounting upwards by means of their root-like suckers, which are thrown out abundantly from the surface, the stems in due time reach the top of their support. They now elongate but little, becoming woody, and forming large bushy heads, which produce flowers and fruit, and the leaves of which are all ovate or elliptical, but still possessed of the characteristic polish, and with long petioles. Such leaves are produced only upon the branches that float into the air when the plant is attached to trees or buildings; or that form a kind of hedge along the top, when growing against an old wall; and it is only upon these, literally the very tops of the plants, that flowers and fruit are found. If the stem have suckers upon it, there are neither. Examples are known of Ivy ascending to the height of a hundred feet before it becomes disengaged enough to blossom. Irish Ivy, a native of the Canary Islands, is distinguished by its scaly pedicels and large leaves. Besides this, there are many varieties with delicately shaped and variegated leaves, which adapt them well for tapestry to garden walls; also the golden-leaved, which in spring seems a mass of yellow flowers, and the yellow-berried, which is probably the kind referred to by Virgil when he speaks of the *pallentes ederas* of Œbalia. Everywhere in his classic country, Ivy, as in England, spreads its dark-green vesture over the ruin; when we have contemplated Kenilworth to our content, we may reflect that Ivy grows also upon the tomb of Cecilia Metella. *Grindon's British and Garden Botany.*

Habits of Beetles.—The chief function of this family [Nitidulariæ] is that of scavengers. Their main business is to clear off decaying substances from the face of the earth, especially those minute and neglected portions which have escaped the attention of other scavengers whose operations are conducted on a larger scale. We may characterise them in one point of view as retail scavengers. They are, so to speak, users-up of waste materials. After the beast of prey has satisfied his hunger on the animal he has slain; after the hyæna and the vulture have gorged themselves on its carrion; after the fly with its army of maggots has consumed the soft parts; after the burying-beetle and the Silphidæ have borne their part in the clearing away, and when nought but the bones remain, then come the Nitidulariæ to go over what they have left, to gnaw off every fragment of ligament or tendon, and to leave the bones as nearly in the state of phosphate of lime as external treatment can. In another point of view, however, their employment is wholesale and wide enough. They conduct their operations all over the world; their branches extend into the most remote districts; the materials with which they have to do, although mere waste, have no other limit to their variety or their number than the organised substances found on the surface of the globe. As in all great establishments, too, the principle of division of labour is carried to a great extent. Each different kind of substance has a different member of the firm told off to take charge of it. One species confines itself to rotten Oranges, another to bones, a third to putrid Fungi, a fourth to decaying Figs. Decaying wood, decaying bark, decaying flowers, decaying leaves, all furnish distinct employment to different species. They are not all scavengers, however. Many pass their lives in flowers; others feed upon fresh victuals; and Mr. Frederick Smith, of the British Museum, has, whilst I write, brought to my notice a species of Brachypeplus (B. auritus) which he has received from Australia in a wild bees' nest, where it feeds, both in the larva and perfect state, on the wax and honey. *A. Murray, in Transactions of Linnean Society.*

Calendar of Operations.

(For the ensuing week.)

SOME very fine specimens of retarded Grapes were shown at South Kensington the other day by Messrs. Lane and Mr. Hill, and as no fruit is more generally admired or more useful for dessert than good Grapes, a few words respecting the mode of preserving them in good condition until this late period may not be without interest. The keeping properties of Grapes, under proper circumstances, are astonishing. Three conditions are particularly necessary in order to ensure success:—1st, they must be well fed in the berry; 2d, they must be thoroughly ripened pretty early in autumn; and 3d, they should receive abundance of ventilation. To be well fed they must possess good root action, which is of more importance than overloading the border with manure; thorough drainage, and such a constitution of soil as will at all times readily transmit moisture, are also necessary in order to ensure healthy growth. To be thoroughly ripened, they must have plenty of warmth, a dry atmosphere, and a free circulation of air day and night. The argument about cold currents, and a host of consequent calamities, does not apply so much to late Grapes as to forced Vines, the berries of which are in a tender state. They should, moreover, be well coloured before sun heat becomes deficient. Attention to these principles will scarcely fail to ensure success. As to the application of fire-heat, if the house is too cold, or too damp, keep fire enough to remedy the evil.

FLOWER GARDEN AND PLANT HOUSES.

Advantage should be taken of frosty weather to do any rough work in the principal part of the pleasure-ground, such as pruning trees and shrubs, the doing of which involves a considerable mess, which can be more easily removed in such weather. A similar opportunity should be taken to wheel old exhausted soil from the flower-beds, and to replace it with fresh material, as this kind of work can be done during frost in half the time that it would take if done when the ground and walks are soft, and with a tithe of the injury to both which would be inevitable in the latter case. At this time of the year, it often happens that severe frost follows heavy wet. When plants are overdone with moisture, they are more susceptible of frost than when moderately dry. It is therefore good policy for the amateur to guard against extremes of either one or the other.

AURICULAS.—A double mat will be advisable over the Auricula frame at night, but should it be possible, even in severe weather, to give air, by all means let it be done.

BULBS.—Tulip beds will be more safe covered than exposed; and Ranunculus and Anemone beds had better be thrown up, in order to sweeten and insure the destruction of insects, &c.

CARNATIONS.—Should any one have Carnation layers only partially rooted at this season, they must be examined after a frost, and again pegged down.

POLYANTHUSES.—These will, perhaps, now claim extra notice. Those on beds, if parted at the usual time, will often have the collar exposed too much, and the roots comparatively bare; independent of this, earthworms may have drawn leaves, &c., into their holes, which, with their castings, give the beds an untidy appearance. One plan is, to carefully fork up the soil, so as to disturb the fibres of the plants as little as possible, removing the decayed or broken leaves, then, with a mixture of decayed leaves and cow-manure, which had been prepared, and under cover some time previously, go carefully over the bed, filling up all inequalities, placing a couple of handfuls round each plant; in fact, giving them a complete top-dressing. This operation will prove highly satisfactory; and its result will be a strong and vigorous start in the spring.

FORCING GARDEN.

PINES.—Let the temperature of fruiting pits range from 55° to 60° by night, and from 65° to 75° during the day: bottom-heat should be about 80°. Admit as much fresh air as possible, moderating the quantity when the wind is very keen. The day temperature, and moisture, should be regulated by the clearness of the weather and the amount of air which can be admitted. Do not on any account allow the moisture to be in such abundance as to condense and run into the plants. Crownless and deformed fruit are the result of moisture being allowed to accumulate in the hearts of the plants at the time the fruit is coming up. Where the pot system is practised, the plants in all stages should be examined once in two or three weeks, and a portion of those whose roots have made the greatest progress should be repotted.

VINES.—In starting these, after washing the stems and glass, the woodwork, and everything else about the house, should be painted if not already done. If the outside border is not already covered with litter, this should be done before the Vines are started. Unless the roots extend into the interior of the house, the border should be covered with 18 inches of fermenting material, such as stable litter and leaves, to produce a gentle warmth in the soil before the inner temperature is raised higher than 50°. Before the litter is laid on, all loose or exhausted soil should be scraped off the border as far as the roots, and replaced by a top-dressing of charred turf, crushed bones, charcoal, and fresh horse-droppings. The inside border should also have the exhausted soil removed, and top-dressed with a similar mixture. Commence with a gentle heat of from 45° to 50° night temperature, and from 50° to 60° by day. The amount of moisture should be moderate at first, and increased gradually as the plants advance in growth. Syringe freely in fine weather.

HARDY FRUIT AND KITCHEN GARDEN.

Where fruit rooms are not furnished with a stove or a coil of hot-water pipes, considerable difficulty is often experienced at this season in excluding cold and damp. Of the two, perhaps, the latter is the greater enemy. It may, however, be remedied by spreading some unslaked lime in wide pans or drawers, exposing as much as possible of its surface to the atmosphere, and exchanging it for fresh as soon as its absorbing powers are somewhat satisfied. Frost should be excluded if possible; but if this is to be effected by the aid of artificial heat, the latter should always be used in connection with ventilation, that the moisture evaporated may be allowed to escape. If there are however no such conveniences, the simple means of matting up the doors and windows must be adopted; and if, in spite of these precautions the internal temperature falls below the freezing point, care must be taken to prevent a sudden thaw by keeping the room close and shaded for a short period after the return of warmer weather. This points out the advantage of constructing such places on the north side of a wall, as they are thereby preserved from extreme heat in summer and from sudden variations in winter. Many of the finest dessert Pears require placing in a temperature of 60° for a few days previous to use; there they will become quite ripe and will attain their full richness of flavour, while they would have lain in the cool fruit-room shrivelling till useless.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Dec. 14, 1864, as observed at the Horticultural Gardens

Dec.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs. 8	9	29.647	29.564	56	25	40.5	46½	47		.06
Friday 9	10	29.813	29.737	54	32	43.0	46	47		.[illegible]
Satur 10	11	29.814	29.776	48	26	37.0	46	47		.[illegible]
Sunday 11	12	29.713	29.573	55	40	47.5	46	46½		.00
Mon. 12	13	29.509	29.445	50	25	37.5	46½	46½		.02
Tues. 13	○	29.545	29.495	47	36	41.5	46	46½		.46
Wed. 14	15	29.756	29.716	42	33	37.5	45	46		.00
Average.		29.685	29.613	50.3	31.0	40.6	46 0	46.6		.10

Dec. 8—Rain; very fine; overcast at night; slight frost.
" 9—Foggy, very fine; overcast.
" 10—Slight haze; fine; very foggy.
" 11—Fine; very fine; dense fog; slight frost.
" 12—Cloudy; rain; fine at night.
" 13—Dense fog; hazy; overcast at night.
" 14—Slight rain; foggy; overcast.
Mean temperature of the week 1½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Dec. 24, 1864.

December.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 18	44 9	32.8	38.3	19	0.56 in.	4	6	3	2	3	12	3	5
Mon. 19	44.8	33.3	39.0	16	0 87	1	4	4	4	3	12	3	7
Tues. 20	44.1	33.6	38 9	13	0.76	3	9	1	2	5	12	3	3
Wed. 21	43.3	33 b	38.5	15	0.20	1	8	3	2	2	14	3	5
Thurs. 22	44.8	32.6	38.7	19	0.37	6	7	3	1	2	11	6	2
Friday 23	44.3	32.0	38 2	20	1.13	6	8	2	2	1	2	3	4
Satur. 24	44.0	31.6	37.8	16	0.30	4	4	4	2	1	15	4	4

The highest temperature during the above period occurred on the 23d, 1827, and 24th, 1839—therm. 57 deg.; and the lowest on the 24th, 1860—therm. 4 deg.

Notices to Correspondents.

BOOKS: *P Q.* Oliver's "Lessons in Elementary Botany" will give you the required information.—*Young Gardener.* Read carefully so as to understand the "Theory and Practice of Horticulture," and make the knowledge thus acquired the foundation of your daily practice.—*Lottie.* The title of Dr. Prior's book is "Popular Names of British Plants."

EXHIBITION PLANTS: *W C.* We do not agree with you that our exhibitions would be improved by cutting down the size of the "monster" plants, or by lessening the numbers in the several collections. We want both size and number, for effect. But great advantage would result from the better distribution of these masses of colour. They should certainly be relieved by the free intermixture of some of the fine foliaged plants which now often prove such dull-looking objects from being too much congregated. It should not be forgotten that these "monster" plants are noble examples of horticultural skill, even though some persons may think it misapplied. In our shows we want variety of arrangement, rather than change of material, and this not only as regards using the leaf-plants to set off the flower-plants, but *vice versâ.* What a charming effect would result from throwing out and lighting up with a background of colour some of the choice individuals amongst foliage plants, such as Tree Ferns, for example, which lose half their beauty when crowded amongst masses of similar objects.

FOXLEY'S BEADED BRICKS: *D D.* We have stated our favourable opinion of these at p. 698. The fact that they must conduce to the preservation of a garden wall by doing away with the necessity for pitting it with nail-holes, whi'e at the same time they afford an efficient means of training trees over its surface, should be enough to recommend their adoption where fruit walls are in process of construction.

FUNGI: *A J.* Your Fungus is Rhytisma acerinum, accompanied by a little gall. *M J B.*

NAMES OF FRUITS: *D L B.* 1, Brabant Bellefleur; 4, Norfolk Stone Pippin; 5, Thorle Pippin; 6, Paradise Pippin; 7, Verulam.—*G W G.* 2, Cornish Gilliflower; 3, Rhode Island Greening; 5, Bedfordshire Foundling; *J B.* 1, Adams' Pearmain; 2, King of the Pippins; 3, Cornish Gilliflower; 4, Golden Reinette; 5, Turk's Cap; 6, Round Winter Nonsuch.—*Young Jasper.* 1, Glou Morceau; 2, Thompson's; 3, Beurré Rance (unless for stewing, a north wall is not the place for it); 4, Beurré Diel.—*T F.* 1, Passe Colmar; 2, Napoléon; 3, Red Calville; 4, Scarlet Crofton; 5, Norfolk Beaufin; 6, Adams' Pearmain.—*J B.* 1, Blenheim Pippin; 2, King of the Pippins.—*W Heale.* The Rymer Apple, well coloured.—*J T.* 4. Beurré Diel; the Apples, excessively acid and bad, are not known.—*C W.* Bruised.

NAMES OF PLANTS: *M W.* 1, Doodia caudata; 2, Doodia media; 3, Goniophlebium appendiculatum; 4, Asplenium fontanum.—*R G.* Pteopeltis Phymatodes; 2, Selaginella pubescens; 3, Selaginella cuspidata; 4, Nothochlæna nivea.—*S W.* Plumbago rosea.—*Louisa.* Adiantum hispidulum, *alias* pubescens.

PRUNING: *M.* Nuts, Filberts, and Damsons may be pruned now.

ROYAL HORTICULTURAL SOCIETY: *Anon.* We quite agree with you: it is most absurd. The national Agricultural Society is managed by agriculturists; and the learned and scientific societies respectively by learned and scientific men, identified with the objects of the societies; but we lament to say that it is the fate of the national Horticultural Society to fall under the hands of managers, among whom are men who don't know how Hollyhocks grow on their stems, and have never heard of a *Gardeners' Chronicle!*

VINES: *J M.* You state that you have a strong healthy Vine of the Golden Hamburgh, for which you wish to substitute Lady Downes' Seedling. Whether it would be most advantageous to inarch the former with the latter, or to take up the Golden Hamburgh and plant a strong Vine of the Lady Downes', depends on circumstances. If you could not remove the existing plant without disturbing the roots of other Vines in the border, then cut back the Golden Hamburgh now and graft with the other in spring, but not before the stock has pushed into leaf. The stock being vigorous, the rod from the graft should reach the top of the house in the ensuing summer.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.

AUTUMN SESSION, 1864.

President.—The Right Hon. the Earl BATHURST.

Council.

The Rt. Hon. the Earl BATHURST. | The Rt. Hon. T. H. SOTHERON ESTCOURT, M.P.
Hon. WILLIAM BATHURST. | EDWARD HOLLAND, Esq., M.P.
The Rt. Hon. the Earl DUCIE.

Principal—The Rev. JOHN CONSTABLE, M.A. Trin. Col. Camb.

RESIDENT PROFESSORS

Practical Agriculture—J. L. FLETCHER, Farm Manager. *T. BALDWIN, of Glasnevin. *R. SCOTT BURN, Co-Editor of the Book of Farm Buildings.

(*These Gentlemen will be in temporary residence.)

Chemistry.—ARTHUR H. CHURCH, M.A., Lincoln Coll., Oxon., F.C.S

Assistant to Chemical Professor.—R. WARINGTON, Jun., F.C.S

Botany.—JOHN BAYLDON, M.B., Lond. B. Sc.

Veterinary Surgery.—A. J. MURRAY, M.R.C.V.S.

Mathematics and Surveying.—The Rev. W. MEREDITH LANE, M.A., late Scholar of Trin. Coll. Camb.

Drawing.—JAMES MILLER

SPECIAL LECTURERS.

FINLAY DUN—On the MANAGEMENT of STOCK.
W. C. SPOONER—On the FARM HORSE
SAMUEL COPLAND, "The OLD NORFOLK FARMER."

AGRICULTURAL CHEMISTRY.

THOMAS ANDERSON, M.D., Professor of Chemistry in the University of Glasgow, and Chemist to the Highland and Agricultural Society of Scotland—A COURSE of LECTURES.

Drainage, &c.

MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.

Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.

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Land Drainage

EXECUTED by CONTRACT or on COMMISSION, and LOANS OBTAINED by

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N.B.—Mr. SCOTT has already Drained upwards of 10,000 Acres in England, and will be happy to show works in progress or completed.

Several most desirable Estates and Farms on hand for Sale and Letting.

Honourable Mention, International Exhibition, 1862.

SCOTT'S SELF-REGULATING SYPHON DRINKING TROUGHS for CATTLE and SHEEP.

Prices and Sketch sent on application to Mr. THOS. SCOTT, 18, Parliament Street, London, S.W.

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.

Address, 89, Seed Market, Mark Lane; or Basingstoke.

Samples and prices on application.

ON SALE, for STOCK FEEDING, SUGARY TREACLE, in Puncheons and Half Puncheons.

MACFIE & SONS, 34, Moorfields, Liverpool

AGRICULTURAL PUPILS.—A Gentleman farming 400 Acres of Light and Heavy Land has a VACANCY for TWO RESIDENT PUPILS, who will have every opportunity of gaining a thorough knowledge of practical and scientific Agriculture, including Agricultural Chemistry.—Address G. G., Post Office, Windsor.

PROFESSOR J. BUCKMAN, F.L.S., F.G.S., &c., late Lecturer on Botany, Geology, and Rural Economy at the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture that he may be professionally consulted on all Scientific matters relating to Farms and Estates, such as Mineral Products, Economic Materials, Water-bearing Strata, and Water Rights, Improvements in Pasture, Analysis of Seeds, &c.

J. BUCKMAN has a VACANCY for one more PUPIL.

For particulars apply at his residence, Manor Farm, Bradford Abbas, Sherborne, Dorset.

The Agricultural Gazette.

SATURDAY, DECEMBER 17, 1864.

ERRATUM:—For "Cirencester" in the 51st line of the second column of page 1189, read "Edinburgh." This correction of our report of the proceedings before the general meeting of the Royal Agricultural Society of England is necessary; for Mr. HOLLAND was endeavouring to explain not any failure at the Cirencester Agricultural College, which indeed he altogether denied, but the failure of the agricultural diploma scheme of the Highland and Agricultural Society. It appears that during so many years only 15 gentlemen have submitted to the Society's examinations, and this is declared to be owing to the character of the examinations, which, while jejune in the extreme as regards the sciences on which agriculture depends, is excessively detailed and severe on the circumstances, methods, and results of farm practice in the field.

AT the late meeting of the Kingscote (Gloucestershire) Association, the subject discussed was "The best and most economical plan of wintering stock under the present circumstances of hay and roots being so scarce." We give the results of the discussion thus prominently, both as relating to what is now a specially interesting subject, and as illustrating a capital way of putting farmers' clubs to good use.

The President (T. J. HARRISON, Esq., of Frocester Court) introduced the subject by reviewing the difficulties under which farmers are labouring, pointing out a few facts bearing directly upon the subject, and requesting the members present to give the results of their actual experience carefully in detail. This was willingly acceded to, and we are thus enabled to give some information on the subject, which we trust may prove useful to our readers in the present emergency.

Taking good hay as the standard food, Mr. HARRISON stated that store sheep, according to their size, would require from 14 to 20 lbs. of hay per week to keep them in fair condition—

Calves coming 1 year old	.. ..	¾ cwt.	per week
Yearlings coming 2 years old	..	1	,, ,,
Two-year olds coming 3 years old	..	1¼	,, ,,
Dry Cows	.. ..	1¼	,, ,,
Cows in Milk	.. ..	1¾	,, ,,

He stated also that 1 cwt. of good straw and 3¼ cwt. of roots per week according to his own experience; straw (probably 160 lbs.) and 28 lbs. of Oats, Beans, or Peas per week, according to Mr. RICHARD STRATTON; or straw (say 160 lbs.) and 21 lbs. of Linseed cake per week, according to the usage on the Cotswolds, would keep a cow in good store condition. And he pointed out how nearly the totals of flesh, fat, and heat-producing substances accord in these several dietaries.

He then drew attention to the relative value of feeding stuffs in the market, and showed that at present prices Barley, Indian Corn, and Cotton cake are among the cheapest and best to purchase.

The following Table gives the details of the actual practice of several of the members.

WEEKLY QUANTITIES AND COST OF FOOD.

NAME OF INFORMANT.	Hay.	Straw.	Roots.	Barley Meal.	Oats Crushed.	Indian Meal.	Pea Meal.	Bran.	Oilcake.	Cost per head per week.	REMARKS.
HORSES.	lbs.	lbs	lbs.	lbs	lbs.	lbs	lbs.	lbs.	lbs.	s. d.	
Colonel Kingscote	..	147	105	..	7½	..	..	..	..	8 4½	Barley straw chaff.
Mr. Thomas	..	168	..	10	16	28	..	11	..	7 5	
Mrs. Ford	..	119	..	9	..	18	..	41	..	6 2½	Wheat straw chaff, working horses and colts.
Mr. E. Drew	28	168	..	36	37½	..	..	..	..	9 4½	
SHEEP.											
BREEDING EWES.											
Mr. Ford	..	10½	175	7	..	..	..	1½	..	1 10½	Cotswold—Green Globe Turnips
FATTING TEGS.											
Colonel Kingscote	7	..	98	2	..	1½	..	..	..	1 2	South Downs.
Mr. E. Drew	7	..	140	..	..	3½	3½	..	..	1 9	Cotswolds—Swedes.
Mr. Ford	..	8¾	147	7	..	..	..	1½	..	1 9	Cotswolds—Green Globe Turnips.
FATTING EWES.											
Colonel Kingscote	8¾	..	128	3½	..	3½	..	..	..	1 9	South Downs
OLD WETHERS.											
Colonel Kingscote	7	..	140	..	..	..	..	..	..	1 0½	South Downs.
STORE TEGS.											
Colonel Kingscote	8¾	..	77	..	..	..	..	..	..	0 8	South Downs.
Mr. Ford	..	8	77	..	1½	..	..	1½	..	0 10½	Cotswolds.
President	1¼	.	..	..	..	..	..	..	..	0 7½	According to size.
President	20	..	..	..	..	..	..	..	..	0 10½	
CATTLE.											
CALVES COMING 1 YEAR OLD.											
President	84	..	..	..	..	..	..	..	..	3 9	
Mr. Blackwell	42	42	..	8½	..	..	..	..	..	3 2	
Colonel Kingscote	..	98	70	7	..	..	..	..	..	2 8½	*Barley straw chaff.
Mr. E. Drew	21	70	..	10	..	11	..	..	..	3 8	Meal to be increased to 28 lbs. per week in 6 weeks.
YEARLINGS COMING 2 YEARS OLD											
President	112	..	..	..	..	..	..	..	..	5 0	
Colonel Kingscote	..	140	..	7	..	..	..	..	..	3 0	*Barley straw chaff.
Mr. Ford	..	84	..	11½	..	..	..	..	..	2 4	At Grass, Wheat straw, Meal boiled.
Mr. E. Drew	14	112	..	7	..	7	..	..	..	3 7	Meal to be increased to 21 lbs. per week in 6 weeks.
2 YEAR OLDS COMING 3 YEARS.											
President	140	..	..	..	..	..	..	..	..	6 3	
Colonel Kingscote	..	168	..	10½	..	..	..	..	..	3 9	*Barley straw chaff.
Mr. Ford	..	203	..	2	..	2	..	..	..	3 10	Barley straw chaff.
Mr. E. Drew	21	112	..	10	..	11	..	..	..	4 5	Meal to be increased to 28 lbs. per week in 6 weeks.—Steers.
DAIRY COWS DRY.											
President	140	..	..	..	..	..	..	..	..	6 3	
President	..	112	392	..	..	..	..	..	..	4 7	Chaff and pulp.
Mr. R. Stratton	..	160	..	..	28	..	..	..	..	4 9	Quantity of straw assumed.
President	..	160	21 lbs. of Linseed cake at 11*l.* 10*s.*							5 0	
Mr. Ford	..	112	..	11½	..	..	..	..	..	2 8	At Grass by day.
Mr. E. Drew	21	112	..	14	..	14	..	..	..	4 11	Graziers.
DAIRY COWS, IN MILK.											
President	196	..	..	..	..	..	..	..	..	8 8	
Colonel Kingscote	87	88	..	..	..	..	..	..	..	5 4½	At Grass by day.
Mr. Thomas	..	168	..	..	..	14	14	7	..	5 3½	At Grass, but hardly any of it.
Mr. Blackwell	80	80	..	25	..	..	..	..	..	6 9	Ditto.
FATTING CATTLE.											
Mr. Bennet	16	60	..	28	..	..	14	..	21	7 0	
Mr. Underwood	..	84	..	24½	..	..	..	..	28	6 1½	Wheat Meal mixed with the Barley Meal.
Mr. E. Drew	24	115	..	28	..	28	..	..	..	7 1	Chaff and Indian Corn steamed, Barley Meal added dry. Meal to be increased to 112 lbs. per week in 6 weeks.
Mr. Ford	..	168	..	50	..	50	..	25	..	11 6	Wheat and Pea straw.
Mr. Blackwell	84	28	..	62½	..	..	..	..	..	8 9	
WORKING OXEN.											
Mr. E. Drew	28	126	..	19	..	19	..	..	..	6 2	

* The food is mixed the night before it is given, and enough water is added to make it damp.

The weights are all in pounds, and the cost per week is carried out at the following prices:—

Hay	£5	0s. per ton	.. ..	0 53	pence per lb.
Straw ..	2	0 ,,	.. ..	0.21	,,
Roots ..	0	15 ,,	.. ..	0 08	,,
Barley meal ..	8	5 ,,	.. ..	0.88	,,
Crushed Oats	8	0 ,,	.. ..	0 85	,,
Indian Corn	8	0 ,,	.. ..	0.85	,,
Pea meal ..	8	0 ,,	.. ..	0 85	,,
Bran	6	0 ,,	.. ..	0 64	,,
Linseed cake	11	10 ,,	.. ..	1.23	,,

THE following parochial circular deserves publication beyond the parish to which it is addressed. The profitable employment of winter evenings, in which the agricultural labourers of other countries are so superior to our own, is certainly a subject to which the attention of both master and men in country districts ought to be directed. And the plan here proposed seems so practicable and well considered, so certain to produce good fruit in individual cases, and so likely to exert a useful influence over the whole "country side," that having requested and obtained permission to publish it, we gladly lay it before our readers. The names and places, dates, &c., are all reproduced exactly as in the copy which has reached us, so that any one desiring to obtain, or, perhaps, able to give, further information may know where to address themselves. It can hardly be doubted that some attempts to copy so good an example will arise from this publication of it. Indeed we may say that we already know of instances in which the whole scheme, circular and all, has been literally copied in other particulars—and without acknowledgment! It doubtless matters very little to the Rev. R. E. BLACKWELL, of Amberley, who is the author of it, and whose object is no doubt served by the widest publication of his plan, whether its authorship be acknowledged or not; but it matters a good deal to us who are interested in the security of literary property; and it matters, we think, somewhat to the success of the appeal wherever made; for certainly industry is not likely to be effectually fostered and encouraged except by honesty.

The following is the Circular:—

Amberley, Stroud, Gloucestershire,
October 31, 1864.

MY DEAR FRIENDS (especially my Poorer Friends),—You all know how many evils, and how much unhappiness, *idleness*, during the hours of a winter evening, too frequently leads to. That person, then, is your friend who will suggest to you any occupation which may amuse you—which may put some money into your purse—which may keep you at home,—and which, in many other ways, may indirectly be for your good. Many of you are clever in making certain things. One can do one thing and one another:—

If you will all only *try*, you will find that you can do many more things than you think you can. This *trying* will be very useful to yourself and others; for one person working will soon set another person agoing. My plan, then, is to try and set *all of you*—MEN and WOMEN—BOYS and GIRLS, to work in a pleasant way in your own houses—at your odd moments—during this winter—and for you to gain something by it. At some suitable time in the spring I should like to have in our school-room what we may call, AN INDUSTRIAL EXHIBITION. During the winter months I would have you *all* work for this according to your own different tastes and powers; one making one thing and one another. Everything you make will be your own. At the time fixed for the Exhibition I will endeavour to gather together our friends throughout the neighbourhood—and sell for you the things you have made—if you wish them to be sold. I do not promise to sell them—but I will try to do so. If we cannot sell them they will be returned to you. Every article exhibited, I would suggest, should have the name of the maker written upon it—so that your friends will see by whom every article is made. Let me mention certain things which one and another of you can do or make, and which I have seen you at different times doing and making, as I have called in at your houses.

BASKETS.—All sorts—all sizes—made of anything—for workmen to carry their meals, or their tools in, or for anything else.

WORK IN STRAW, OR RUSH, OR WILLOW, OR FERN, OR GRASS-MATS.—Housemaids' kneelers—flower pots—bee-hives, cradles for babies or dolls, &c.

RUSTIC SEATS, small and large—garden tables—stands for flowers, &c.

MODELS.—Any kind—of anything.

WORKS IN WOOD.—Picture frames—towel-horses—cap-stands—boxes—knife trays—washing stands—wheel-barrows rough and smooth, large and small, &c.

WORKS IN STONE.—Carved ornaments—vases—flower-pots, sun-dial stands, &c.

NEEDLE WORK.—All kinds, patch-work—quilts—bags, garden bonnets—knitting—netting—knotting—anything.

BIRDS STUFFED.—Collections of insects, &c.

TURNING.—Anything useful—pegs for hats—for door-handles—and for tobacco-stoppers.

STICKS FOR TYING FLOWERS TO.—Bundles in dozens—of Hazel sticks, or neatly split wood—or turned wood. Labels for flowers in dozens—little boys might make these.

ODDS AND ENDS.—Bits of cloth made useful, boys' caps—easy slippers—table covers—shoes made somehow and with anything. Drawings—children's toys—dolls—small wheelbarrows—fossils collected from quarries, and cleaned—glass covers for flowers—collections of different Mosses—or winter flowers in pots or dried, &c.

I would suggest that a Committee of Directors should be formed, such as Mr. C. PLAYNE, Mr. RICHES, Mr. BERRY, Mr. HARDING, Mr. GOUGH, Mr. ATLEY, Rev. EDWARD BLACKWELL. If the Committee see many working, and the thing likely to be a success, they would, previous to the Exhibition, print a Catalogue *of the principal articles about to be exhibited, with the name of the maker.* In certain cases the Committee might lend a few shillings to buy wood—locks—or other things—as might be required, to be repaid when the articles were sold. The Exhibition must be strictly confined to persons living in the parish of Amberley—or to those who belong to the Amberley church or schools. Every article exhibited must be made entirely by the person who sends it. Combined with the *Industrial Exhibition*, I would suggest, that any friends who have objects of interest to exhibit, should be requested to lend them for PUBLIC EXHIBITION on this occasion. The one exhibition would thus add interest, and give power to the other. The Exhibition to be open two or three mornings and evenings. The Amberley "Industrial" band to attend—when able. None of the things sold to be removed till the Exhibition is over. Such, dear friends, is a rough plan of my scheme. I am sure it would answer—and do good—if you would *all, big and little—men and women*—only *try* to do your best. *Let everybody make a something—however small or simple. Do not be shy—or hesitate* to join our band of workers. Let every person in the parish if possible *be an exhibitor*—and try and make something which will do him credit. Great moral benefits must result if we endeavour to spend our winter evenings in a profitable way. Let us look upon this effort in this light. Let us all remember the end we have in view. Let a family work together in common, and it must produce family love and union. The hearts of the fathers will be turned towards their children. If a small sum of money could be raised, we might bestow a few presents on those amongst our poor friends, where *industry and ingenuity* had been manifested—and where there had been *persevering effort*, amidst *poverty and difficulty*. —Your Minister and friend, R. EDWARD BLACKWELL.

P.S. It has been asked—could any rewards be given for lists of BOOKS, *read aloud*, by one member of a family whilst others are working; or to fathers who would keep a record of how many evenings, or part of evenings they devoted this winter to the instruction or training of their children. *R. E. B.*

—— WE have to announce that "THE FOWLER TESTIMONIAL" which, under the auspices of Lord PORTMAN, Mr. HOLLAND, M.P., and others, was rapidly approaching completion, will now take the form of a Memorial. We understand that a public meeting will shortly be held in London for the purpose of appointing a Committee for raising funds to erect a suitable monument in memory of one to whose untiring zeal the agricultural world is so much indebted.

Lord PORTMAN, the Earl of DUCIE, Mr. HOLLAND, M.P., Mr. H. THOMPSON, M.P., and others will act on the Committee.

OBSERVATIONS ON THE EFFECTS WHICH ARE PRODUCED BY FEEDING CATTLE AND SHEEP EXCLUSIVELY ON TURNIPS.

BY A. J. MURRAY,

Professor of Veterinary Surgery at the Royal Agricultural College, Cirencester.

AN examination of the conditions which favour the production of disease is of the greatest importance to farmers. The following remarks refer more especially to the effect produced on the system by the exclusive use of food composed of a single species of plants. I am well aware that among the more advanced agriculturists the advantages of a mixed diet are recognised. My own experience, however, is, that many agriculturists are not aware that food must supply to the blood a sufficient proportion of organic principles, and that if these are not supplied in sufficient proportion disease will result. It is true that the farmer may gain such knowledge by experience, but it must be acknowledged that such a method of acquiring information is rather expensive. It is desirable then that the experiments of a few persons should be of service to the public, so that others may not be under the necessity of acquiring information practically but painfully.

The Turnip, according to Dr. Voelcker, contains from 88 to 92 per cent. of water. It contains a very small proportion of the nitrogenised or flesh-producing matters—only between 1 and 2 per cent. The proportion of water is excessive, while the albuminous compounds are very deficient; and these two peculiarities explain why the exclusive use of the Turnip, as an article of food, is attended with such bad results. By comparing the composition of the Turnip with that of the Grasses, which may be regarded as the natural food of the sheep and ox, its deficiency is very marked. The proportion in which Nature has combined the various nutritive elements in the natural food of those animals must be adopted when they are kept under artificial conditions. The frequency of disease will thus be reduced to a minimum.

The disadvantages of a diet consisting exclusively of Turnips are—1st. That the introduction of a large quantity of water into the system, which in winter is frequently as low as 32° F., and must, when taken into the stomach, be raised to a temperature of at least 100° F., must greatly increase the consumption of the carbon and hydrogen compounds supplied to the blood in the food. The carbon and hydrogen consumed in this way are furnished by the oleaginous, starchy, mucilaginous, and saccharine principles of the food which have not been converted into tissue, and also by the disintegrated tissues themselves. A portion of the food which under more favourable circumstances would have increased the animal's bulk, is thus expended in maintaining animal heat, the wear of the body being at the same time accelerated.

2d. The digestive fluids are excessively diluted, so that digestion is imperfectly performed, and the nutritive elements which the food actually contains are not thoroughly dissolved out, and they consequently pass through the intestine with the innutritious matters. This frequently induces chronic disorder of the digestive system.

3d. The Turnip, as has already been shown, contains but a small proportion of the albuminous or flesh-forming constituents. The loss consequent on the wear and natural decay of the particles of the tissues is repaired by the incorporation of new nutritive principles into their substance. This process, however, can only be perfectly carried on when the elements contained in the food are identical with, and bear a certain proportion to those contained in the blood. When the proportion of any one of the nutritive elements is deficient, the blood does not obtain a sufficient supply of new materials, the wear of the body exceeds the process of reparation, and the animal consequently sickens and dies.

4th. Turnips are also injurious from the influence which such cold watery food exercises in depressing the action of the nervous system. The power of resisting depressing influences is thus impaired, and all the functions of the body are feebly performed.

The nutritive value of the Turnip is frequently reduced to a minimum by causes which I have not yet mentioned. The detrimental effects of frost and mildew on its feeding qualities are well known to the farmer. Turnips which have run to seed, and which consequently contain a large amount of woody fibre, are also innutritious and indigestible. In the disorders which have come under my observation, and which I have been able to trace to the exclusive, or the excessive use of a Turnip diet, I have occasionally noticed that the Turnips were affected by one or other of the above causes. Chronic indigestion and blood diseases are the usual results of such a diet, though we may have the one condition complicated by the presence of the other. The blood disorder consists chiefly in a diminution of the plastic or tissue-forming elements, and we may then have a disintegration of the blood globules which appear in the urine, giving it the red colour which is popularly known under the name of red water. In ewes and cows the effects of such a diet are usually noticed shortly before calving and lambing, and occasionally only after parturition, when the copious secretion of milk removes a large portion of the nutritive elements of the blood. This diet produces more injurious and fatal effects on female than on male animals, owing to the materials removed from the blood by the rapidly developing fœtus during pregnancy, and by the secretion of milk after parturition.

A case illustrating my previous remarks has lately been brought under my notice by a farmer. His ewes were taken from the ram during the first week in November; they were then fed exclusively on Turnips until the period of lambing. They appeared healthy, and even fattened well on this diet until about a fortnight before lambing, when some of them began to look dull, and they also gradually became weak. It was necessary latterly to have them in the fold, as they could not walk to the field, which was only 600 yards distant. They lay down in the yard until they lambed, after which some of the weakest ewes died in from one to three days. Some recovered after careful nursing and the administration of stimulants. The ewes most severely affected invariably had twin lambs, and though the lambs when dropped were tolerably strong, in a few days afterwards they generally sickened and died. In such cases nutritious food, such as hay, Oats, and oilcake must be given, combined with the administration of tonic and stimulant medicines. It will frequently, however, be found that the weakness induced by such a system of diet is so great, and that the digestive functions are so impaired, that the animal has no appetite for food. These lines, however, have been written not so much for the purpose of recommending treatment in disease as for the purpose of preventing disease. The importance of studying the causes of maladies was well estimated by Professor John Gamgee, when he said in a recent lecture at Edinburgh:—"Veterinary medicine is something more than the art of healing sick animals. It is the art of preserving animals from sickness."

THE GREAT CHRISTMAS METROPOLITAN MARKET.

THE enormous food-consuming capacity of this great metropolis, with its three millions of inhabitants, will have to put up with an unusually small supply as regards beef and mutton at the coming festive season. Suet for those British institutions, Christmas plum puddings and mince pies, will especially be limited in supply and correspondingly dear. The show of cattle, however, at the great Metropolitan mart on Monday last was of a far finer character than we, with the knowledge we have of the deficiency of the root crops throughout the country, could by any fair calculation have anticipated. But this remark applies only to the first-class stalls of cattle, and can be accounted for in a satisfactory manner. We have from time to time pointed out the want of ordinary meat-producing farm produce, and at the same time concluded or inferred that fat animals must be enormously dear unless great efforts were made, and the use of extraneous means adopted, by our leading graziers. This position has fortunately been fully realised by the farming community, and consumers generally may be pleased and gratified at the agricultural enterprise which has, under past difficulties, produced so good and useful a supply as is now distributed among the metropolitan butchers. This result is the more satisfactory to every one, as it is well known that the use of much corn and cake in the production of meat, particularly beef, at an average price, is sure to be done at a direct loss, and that only extraordinary prices, viz., low value of corn and high price of meat, can admit of a farmer being repaid, or the recipient of a direct profit, for such an investment. The first condition of this inducement to turn corn into meat has existed for some months, and although it is well known that much of the cause for the following high figures is due to the fact that even large graziers and feeders were obliged to sell many of their beasts off at a sacrifice in the autumn, it is to be hoped that they will be fairly recompensed for the hazardous speculations whereby the public has unexpectedly been so well served.

There is one important point of the present situation to which we must further refer, and this in a somewhat critical vein. But it is important to consumers and those who supply them, the butchers as well as farmers, that no interest or branch of the community should be misled. This attempt, it is quite clear, has been made by more than one London journal. The following flagrant instance, however, on the part of the *Standard* it is difficult to account for, particularly as this journal professes to be the daily organ of the country interest. On Tuesday morning, in the editorial "summary," no further than which the bulk of its readers look on such a subject, there is this statement:—"The number of beasts shown was greater than on any former occasion, and the quality was of a very high order—remarkably so when the drought of the preceding summer and the consequent decrease of food is taken into consideration." This deliberate falsification of facts is the more unaccountable, as in the previous evening edition of the same organ the statement of its own market reporter was merely adhered to, while the statements of the market officials had been published the previous evening. These facts show, that while there were only 8030 this

year, there were 10,370 last year, 8430 the year before, and 8840 the year before that. How, in the face of these facts, could it be said, "the number of beasts shown was greater than on any former occasion?" The mischief that will arise from these statements will not only be of a passing kind, but continuously injurious to the best interests of the country; for it is well known by all persons more directly connected with agriculture, that the supply of meat is, and will be so short, that the demand will naturally cause prices to rule high at the present season; and to lead people to think the contrary is the case, will cause a deal of unnecessary grumbling, and rob the graziers above referred to of that share of credit which is fairly their due. Besides, if the influential columns of the Press be employed to induce the "country interest" to believe that the present speculations in making meat from the corn they cannot sell at remunerative figures are founded on false opinions and hopes, the consumers of London and other large towns will be greater sufferers before the next Grass beef can be produced than they might otherwise have been. The market reports themselves have generally been pitched in a key that was quite high enough, if it were not too high. For although it has given us pleasure to point out that many of the beasts were of a very fine quality from skilled feeding, there were also many that were below middling condition; and of the 1000 foreign, a good many of them were young and only in store condition, many more were half fat, and what few prime Dutch heifers and oxen there were would not make this part of the market above satisfactory comments. To add, therefore, editorial extravagances to remarks which are certainly quite up to the highest point, if not overdrawn, is the way to produce and add to the mischief in question, while future supplies will be diminished by the same means, unless these matters are set right with the holders of fresh meaty animals.

To enter briefly into particulars, the Short-horns on the present occasion undoubtedly took the lead both as regards size and the condition to which they have been fed. Some of the stands of this breed were extraordinary; Mr. James Walton, of Stratford-on-Avon, had ten well fed and large ones belonging to Mr. Bicknell, of Witchurch, in the same neighbourhood, for which he was asking 40 guineas each. Butchers, however, early in the day were not disposed to give the prices which the salesmen demanded, on the strength of their confidence in the limited supply in the country. In this it will be seen their judgment was correct, for higher prices per stone have since been made at provincial markets, and particularly at the Auction Mart at Hitchin the following day, an account of which will be found elsewhere. Mr. Ellis Dean, of Dowersby Hall, near Lincoln, sold four immense Short-horns for 196*l.* or 49*l.* each, for one of which 55*l.* were refused. Another Lincolnshire feeder, Mr. Taylor, of Kirkby, near Sleaford, had 35 extraordinary good beasts for full flesh, firm fat, and great size; and these were expected, as they might fairly be, to average 45*l.* each. Mr. Broodual had seven others from near Lincoln, that were the perfection of feeding. Mr. Vorley had five equally good ones, fed by Mr. Attenborough, of Titmarsh, Northampton.

It may be remarked here that some of the connoisseurs and critics of prize cattle would do themselves good by attending this market a few mornings during the run of a year. If this were done, so much nonsense could not be written next Christmas as has recently appeared. Take for example the splendidly fed young animal from Biscathorpe House. Hereford men, and writers who were "inspired" by Herefordshire jealousies, ran about to tell every one they knew that his superior touch and form were due to his having had three pails of milk a day. There were, however, hundreds of animals in the Cattle Market on Monday last that had a touch quite as rich, mellow, and firm as had the (so called) "gold medal" steer of the Smithfield Club. The facts of the progress of this steer are few. That he came from a renowned stock is already known. He, with others, had milk till he was 22 weeks old, when he was treated in the usual way in which Mr. Thomas Kirkham, the celebrated Lincolnshire ram breeder, feeds his animals. Fifteen months before the show this animal looked unusually promising, and Mr. Kirkham's son asked his father to sell him, when after some private banter a bargain was made. Since this time, last August twelvemonths, he has been done as well as possible, as his appearance indicated, but his food has been confined entirely to such farm produce as roots, hay, and corn, with Linseed oil-cake. The only thing special about this success is, Mr. J. W. Kirkham followed the advice given two years ago to practical men to step in and show what could be done with the noble breed of Short-horns. That he picked an animal out of his father's herd, and subsequently brought him to the perfection he did, not only proves the value of this advice, but also that the son in this instance inherits much of the judgment and skill in feeding which have made his father's name so well and widely known.

Of West of England beasts there was a good supply, the size and quality from good feeders of the Devons being superior to previous shows. Most of these, however, had eaten an unusual quantity of corn and cake. Mr. Senior, near Aylesbury, had 40, most of which were pure North Devons, and some of them of great size. One was sold to Mr. Radcliff, a butcher near Southall, Middlesex, for 50*l.*; and owing to their general excellence the lot averaged 40*l.* each. Mr. Coggins, of Creese, Taunton, had 10 worth about 35*l.* each. Mr. J. Bond, Petherton Park, Bridgewater, had 30 Devons, 3 years old, fed by himself, and they made a great average, one making 48*l.*, another 47*l.*, and the next 46*l.*, and so on. There were also some excellent Herefords.

Of the Scots, Mr. James Steward had 56 cattle of great size. Mr. Mac Combie, of Tillyfour, had also a long lot, fed with the excellence for which he is justly celebrated. Mr. Maurice, of Huntley, had 40 capital beasts. These were on the stand of Messrs. Giblett & Son, who said the Scotch crosses were much sought after from the excellence of their meat.

There were a few big old Gloucestershire beasts that had been worked, and some of them were well fed up. Mr. W. Fairbrother had 17 fed by Mr. Ludbrook, of Burton Desert, Warwickshire. These were sold at an average of 40*l.* each, one making 50*l.* Mr. Ludbrook, near Aylesbury, had 23 averaging 43*l.*, two making 50*l.* each.

There were, also, more good Welsh runts than we have seen together for a long time, some of them being fine specimens of this hardy but much neglected breed.

The sheep were much about the usual character, without anything calling for special comment. As an instance, however, of the way continental countries are improving their flocks, some of the improved breeds, or cross-breeds, from Holland sold at 78*s.* each.

The trade, as we have intimated above, was not generally active, although the business done was at very high prices. An occasionally fine Scot made 6*s.* per 8 lb., a few made 5*s.* 10*d.* ditto, the general top figure for beef being 5*s.* 8*d.* per 8 lb. The top price for Down mutton was 6*s.*, and prime half-breds 5*s.* 10*d.*, the pure white faces making 5*s.* 4*d.* and 5*s.* 6*d.* per 8 lb., according to size and quality.

The following facts are of the usual interest:—

The total imports of foreign stock into London last week, amounted to 13,802 head. In the corresponding week in 1863 we received 8040; in 1862, 4496; in 1861, 5192; in 1860, 4415; in 1859, 4364; and in 1858, 5734 head.

Imports into London last Week.

From whence.	Beasts.	Sheep.	Lambs.	Calves.	Pigs.
Antwerp	24	..	..	21	..
Boulogne.. ..	50	..	..	..	653
Bremen	34	47	..	..	..
Calais	..	..	..	13	84
Dordt	146	374	..	..	..
Dunkirk	..	..	..	..	202
Gibraltar	100	..	..	..	..
Hamburg ..	81	1022	..	..	..
Harlingen ..	36	1459	..	18	..
Medemblik ..	48	1806	..	..	..
Oporto	49	..	..	..	..
Ostend	52	..	..	20	..
Rotterdam ..	1398	4997	..	280	663
Total	2024	9824	..	352	1602

The yearly comparison of Weekly Imports is as follows:—

	Beasts.	Sheep.	Lambs.	Calves.	Pigs.
1863 ..	1295	6201	..	530	104
1862 ..	463	3630	..	391	12
1861 ..	368	4039	..	124	61

Per 8 lb. to sink the offal.

	s.	d.		s.	d.
Coarse and inferior Beasts	3	8	to	4	4
Second quality ditto	4	6		5	0
Prime large Oxen	5	2		5	4
Prime Scots, &c.	5	6		5	8
Coarse and inferior Sheep	4	0		4	8
Second quality ditto	4	10		5	2
Prime coarse-woolled ditto	5	4		5	8
Prime Southdown ditto	5	10		6	0
Large coarse Calves	4	4		5	0
Prime small ditto	5	2		5	6
Large Hogs	3	6		4	4
Neat small Porkers	4	6		4	10

Suckling Calves, 18*s.* to 22*s.*; and Quarter-old store Pigs, 20*s.* to 26*s.* each.

Comparison of the Great Days.

Per 8lbs. to sink the offal.

	Dec. 14, 1863.			Dec. 12, 1864.		
	s.	d.	s. d.	s.	d.	s. d.
Coarse and inferior Beasts.	3	6	to 3 10	3	8	to 4 4
Second quality do... ..	4	0	4 6	4	6	5 0
Prime large Oxen	4	8	5 0	5	2	5 4
Prime Scots, &c.	5	0	5 2	5	6	5 8
Coarse and inferior Sheep .	4	0	4 6	4	0	4 8
Second quality do... ..	4	8	5 2	4	10	5 2
Prime coarse-woolled do...	5	4	5 8	5	4	5 8
Prime Southdown do. ..	5	10	6 0	5	10	6 0
Large Coarse Calves ..	4	0	4 8	4	4	5 0
Prime small do.	4	10	5 0	5	2	5 6
Large Hogs	3	6	4 2	3	6	4 4
Neat small Porkers ..	4	4	4 8	4	6	4 10

Supplies on Sale.

	Dec 14, 1863.	Dec. 12, 1864.
Beasts	10,370	7,030
Sheep	26,290	21 750
Calves	180	210
Pigs	260	390

Supplies on Sale.

	Dec. 15, 1862.	Dec. 16, 1861.
Beasts	8,430	8,840
Sheep	20,960	26,300
Calves	175	280
Pigs	410	400

GREAT CHRISTMAS SALE OF FAT STOCK AT HITCHIN.

Messrs. Page & Harding, auctioneers at St. Alban's, deserve all the success which has attended their enterprise and energy; for, irrespective of their having had erected the best arranged and perhaps the largest yard for a similar purpose in the kingdom, their energetic and straightforward manner of conducting their business has secured for them an amount of patronage in the neighbourhood of the above Midland Counties town which they themselves at the outset scarcely anticipated. Hitchin, however, is easily accessible from London, Cambridge, Peterborough, Bedford, and adjacent minor towns, and on Tuesday last there was a large attendance of butchers from these places, and particularly from the metropolis. These buyers repeat their visits because they have every confidence in the auctioneers and their patrons, being fully assured that no "running up" will be practised, and that every animal sent there is for absolute sale at the fall of the hammer. Where this confidence exists between auctioneer, graziers and butchers, there is no surer way of transacting business pleasantly, surely, and safely; indeed, it is a great relief to have this opportunity of disposing of stock ready for market on stated days without having to go through that bothering, haggling, and "legging" which too often occurs when rough dealers and butchers want to get, and succeed by fair pretensions in getting, the price of animals at home or in a public market.

The Hitchin Auction Mart consists of a large yard at the back of the Sun Hotel, through which it is easily reached from the market place. The sheep pens are of fixed iron hurdles, with asphalted floors, the alleys between them being brick-paved. The bullock pens are equally convenient and ample, and the "ring," covered as it is with glass and slate roofing, with complete waiting folds and entrance and exit gates, make the whole thing a thorough business-like and comfortable affair. To show that these matters are fully appreciated, we need only mention that this sale included 98 oxen and heifers, many of them being of first-class quality; 589 sheep, the greater part of which were above an average for size and condition; also 10 lambs, 3 calves, and 73 pigs.

The pigs and sheep were sold first, and made great prices, some of the latter, in lots of five, making as much as 75*s.* and 80*s.* each. Mr. Long's 10 averaged 88*s.* 6*d.* each. These were Hants and Wilts Downs and half-breds. Some extra good yard-fed sheep of the same breed, and crosses between Hants ewes and Lincoln and Cots rams, were sold singly. Mr. Richard Oakley, of Lawrence End, had six sold at an average, all but a trifle, of 5 guineas each. Mr. John Shaw Leigh, of Luton Hoo, had 18 Hants and half-bred, the two kinds making as near as possible equal prices, and the whole averaging 5*l.* 10*s.* 6*d.* each. One fat lamb made 38*s.*, and a calf weighing about 50 lb. per quarter made 7*l.* 2*s.* 6*d.*

But it was among the beef-yielding animals that the competition was most spirited. Seven 3 year-old Herefords, sent by Mr. C. Sworder, of Willian, made 244*l.*, or within 1*l.* of 35*l.* each; these were very nicely fed, but not thick. Mr. John Sworder had four Short-horns that, as things have turned out, might have been corn-fed sooner with advantage, but as it was they made 34*l.* 6*s* each. Some thin young polled Scots made from 22*l.* to 25*l* each, and a small Hereford cow from the same place (Mr. Long's, of Spondon), made 27*l.* 10*s.* Mr. Bates, of Piggott's Hill, sent a beautiful but not large 3-year-old Hereford, which made 41*l.* 10*s.* Mr. Fossey, of Cumberlow Green, sent two prime Short-horns, one making 40*l.* 5*s.* and the other 46*l.* 10*s.* Mr. Cole, of Tempsford, had two Short-horns sold respectively at 45*l.* and 43*l.* 5*s.* Mr. R. Oakley had two prime cross-breds (Devon Short-horns), which made 47*l.* and 44*l.* 10*s.* The climax of this spirited competition, however, very properly took place over the last four lots of two Highlanders and two polled Scots, sent by Mr. Leigh, of Luton Hoo. We never saw handsomer or better fed oxen. The first of the former made 43*l.* 10*s.* to Mr. Harris, of Hertford. The second 46*l.* to Mr. Brown, of Bedford. A black Galloway made 50*l.* to Mr. Crawley, of Luton; and a brindled Aberdeen, of small bone, but as ripe as we ever saw one, made 49*l.* 10*s.* to Mr. Walker, of Hitchin. These oxen were five years old, and they did great credit to the skill of their feeder. Their owner's name will be remembered as connected with two beasts and some sheep at Bingley Hall, and three Scots at the Agricultural Hall, Islington, one or more of which received "high commendations."

Besides the advantages referred to above, a respectable public sale of this kind has great influence in emulating neighbours to produce good stock. In point of fact this incitement is greater than that produced by a local agricultural show for prizes, for in the latter case there is much uncertainty from the taste and judgment of judges being biassed by preconceived notions, while in the former the test to which animals are subjected is their money value for consumption, estimated by the best possible judges, viz., the butchers, who obtain their profits by the skill with which they buy from week to week. The greatly improved character of Messrs. Page & Harding's show on Tuesday last, compared with previous sales, fully supports these views. The sale altogether realised nearly 5000*l.*

STEAM CULTIVATION.

AUTUMN SEED-TIME.

HAVING endeavoured to point out the great advantages to be derived from an early and successful Wheat sowing on heavy land, in connection with steam-power, I continue the subject, wishing to show how all other operations are benefited and materially aided by this first important step in the management. And I must mention an error in the former publication, where the steam-engine is described as breaking up the bare fallow; it should have been the Tare or Vetch fallow, or what is called in some places the Bastard Fallow, that is, where a crop of Tares has been fed off by sheep, and forming a most essential part in the rotation of cropping; the evil of treading, the great objection to folding on heavy land, being at that time of year avoided, and where fed off with corn or oilcake leaves the land in the finest possible condition for the ensuing Wheat crop; the bare or dead fallow being studiously avoided, and on no account forming a part in the regular course. I shall consider that the autumn seed-sowing has been finished by the first or second week in November at latest. My seed lair of 140 acres is all up and away from the birds, and will probably get well rooted before severe frost comes on; a consideration of very great importance, particularly where planted on thin chalky soil, which is very liable to be lifted or broken up in sharp weather, and when this takes place the effect will be seen at harvest time in the crop being termed by the reapers as "scrawled" or "root-fallen," a term misapplied or misunderstood, because the straw falls from want of a root, and is brought about chiefly by thick and backward sowing; want of nourishment from bad farming also will produce a like effect. The first great blow having been given in good time, nothing but excess of adverse weather will prevent from keeping so good a start in hand, and time will be given for atmospheric changes to work and pulverise the soil in a far better and more effectual manner than any implement could do; dispensing with all turnings back, cross-ploughings, clod-crushing, rolling, &c., those tedious operations which serve as obstacles to progress when seed time arrives. A rotation of cropping may be set out and depended on with the aid of steam, and with such a power at command it is very doubtful indeed whether the plans of which we hear so much, the conversion of arable land into pasture for the purpose of more stock-keeping, would be a right course to pursue. You say very truly that all that opportunity for growing those splendid crops of Tares, Mangel Wurzel, and other roots, and for which this description of land is especially favourable, is lost. The rule that a green crop should intervene between every grain crop, or two green crops to be followed by two corn crops, will probably hold its ground against any other system that may be brought to bear. A two years' lea is also an excellent plan where a good plant of Clover is obtained and the land is clean. I have some capital hay stacks, mainly owing to this plan, which will come in extremely useful in so scanty a season.

With such power for working the resources of the soil as steam is calculated to give, a climate and soil capable of growing the finest roots and Grasses, a largely increasing meat-consuming population, and a lease for the security and proper development of capital, there is nothing to fear from foreign competition; and although prices of corn just now are at a low point, I do not think there is ground for that "discouragement to high farming," which appeared a week or two since in your columns. It may perhaps appear a strange doctrine, but it is nevertheless a perfectly true one that in order to meet low prices an increased expenditure of capital is required, and hence the necessity of the lease for its security.

This may not apply with equal force to those occupiers of farms whose position is of long standing, and the good feeling that exists between landlord and tenant has been gained by an acquaintance and connection of many years. This good understanding, however, is liable to the grave objection of being broken at any moment by many an unforeseen occurrence, and may serve in some cases to afford a pretext for suspicion and mistrust where none should exist—consequently it is an unsafe and unsatisfactory system of tenure. Upon the subject of Leases I hope to say more at a future period. *W. S.*

NIGHT SCHOOLS AND EDUCATION FOR THE LABOURER.

[Lord Lyttelton has addressed the following letter to the *Times* newspaper.]

DURING the recent strike of the colliers in South Staffordshire I happened to remark, at a meeting of the South Staffordshire Adult Education Association, that some of the coalowners in the district attributed the evil of strikes to education among the working people, and were disposed in consequence to withdraw their aid from educational movements.

As this observation has attracted more notice than I had expected, and has been partly doubted and partly misunderstood, I shall be glad to be allowed, now that the strike is over, to say a little more on the subject.

I never meant it to be understood universally of the employers in the district. No one could think of applying it to Lord Dudley or Mr. Foster, or Messrs. Chance, or Messrs. Bagnall, or Mr. Lloyd, or the British Iron Company, or others who might be named. Nor did I say it of the coalowners as a class; but I say it is true of several of them.

I will give no names; but I can answer for the following having been said, and not on any merely private occasion, by some or other of the coalowners during the strike:

That they disapproved night schools; that the more a man was educated the worse workman he was; that they should for the future decline to assist the working classes in any way; that education and the —— penny papers had done all the mischief, and that publichouses were the proper place for working men to meet in; that they should leave the working classes to themselves for the future; that the more was done for the working classes the more ungrateful they were; that if education went much further there would soon be no colliers to be had, and that the utmost a working man should know was to read his Bible; that education had filled the men's heads with all kinds of nonsense; and that the best educated men misled the others.

I do not want to argue these points. In the general opinion of the country, as I conceive, they are beyond the region of argument. I would, however, say a word on the question of practicability.

These gentlemen are not speaking of education in the sense of moral training or discipline; they mean instruction or information. Now, that the information of the working men is very defective no one doubts, and there is some truth in the opinion that it had better be either more or less. These gentlemen wish it less. My belief is, that if it were less—suppose as it was 30 or 40 years ago—the then state of things would recur—quite as many strikes as now, in addition to outrages and disturbances which we are now free from. The recent strike was the worst we have had for 20 years, and there was some fear of serious disturbance; but nothing happened like what used to be a matter of course.

This, however, is not the point. No one can, in these days, diminish the amount of information diffused among the labourers. We may regulate or we may pervert it; we may cause it to be accompanied or unaccompanied by moral training and religious knowledge; but backwards towards mere ignorance we shall not go. They will get information,—*si possunt, rectè; si non, quocunque modo.*

Nor can they remain stationary. It follows that we should endeavour to increase and improve their knowledge. On this obvious truth I shall not dwell, only observing on a single point, that if the employers of labour here would but endeavour to get some acquaintance with the rudiments of political economy, of the laws that determine wages, into the heads of their men, they would, by that alone, do a good deal towards preventing any danger of the recurrence of these mischievous disturbances.

My main object, however, is to adduce a few positive facts with which I have been furnished as counter-evidence to the statements above recited.

The incumbent of one of the largest parishes in the district, full of colliers, tells me that only three of his parishioners took a leading part in the strike; that one of them was almost a professed infidel, and all three of them about 50 years old, and consequently uninfluenced in early life by our recent systems of education; that not one of the elder scholars of his schools joined the strike, and that the colliers, furnishing fewer boys to the schools than any other class, those boys, too, leaving school earlier than others, are the worst educated class among his people.

I have been favoured with a communication from an Inspector of Schools, acquainted with this district and with the cotton district. It is true that much must be attributed to the general advantage possessed by the latter in the regulative system of the Factory Acts, which apply to other things besides education, and some adaptation of which I hope is in store for this district. But the comparison as relates to school education is instructive.

I need not say that in the factory districts strikes and disagreements are far rarer than in the coal districts, and with regard to education these brief statistics seem nearly conclusive. Out of 500 worsted and woollen workers in the Halifax district night-schools, 95 per cent. could at least read easy narrative, full 70 per cent. could write from dictation. In the South Staffordshire night-schools 50 per cent. of the collier boys could not read easy narrative, between 30 and 40 per cent. of the iron-work boys could not read the New Testament.

There is another view of this subject. The collier population generally have some grievances. Much will be found about them in a volume called "Transactions of the Association of Coal, Lime, and Ironstone Miners," published at Leeds in November, 1863 (Longmans), of which an abstract and review will be found in the "*Spectator*" of the 6th August last. They are chiefly such as these—the demoralising employments still allowed to women; imperfect ventilation and imperfect inspection of the pits; want of proper provision for security; and employment of boys too young and too ill-educated. It is certain that the better the men are educated the more these grievances will be felt. But if any employers, consciously or unconsciously, make this an objection to education, they will assuredly meet with small sympathy in the country.

I may perhaps add, that I write with no prejudice against the masters connected with this strike; for, as a mere question of wages, though I have no practical acquaintance with the subject which could enable me to speak confidently, my belief is that the masters were right, and almost always have been right.

Home Correspondence.

Lord Kinnaird's Farming.—In the *Agricultural Gazette* of the 3d inst. I see you reprint from a Dundee newspaper an account of Lord Kinnaird's farm of Millhill, Perthshire, wherein several statements are made which are in the highest degree calculated to mislead. Since the thorough exposure which met the accounts of his high farming some 12 years ago there have been no further attempts to parade these results. It is certainly strange that now, when prices have again fallen to the low level they were at when the former accounts of his high farming were published, these should again reappear. To any one who has been engaged in ordinary farming in Scotland, be they landlord or tenant, some of the statements in the article in question must appear extremely absurd. Your southern readers, however, may be inclined to put some reliance on them. Seeing this, I wish to draw their attention to one or two of the statements there made. The first is one on which the whole fabric is reared, and as it is utterly absurd, the superstructure seems to be in the highest degree doubtful. We are told that "the total capital for stocking and implements was, we understand, about 1300*l.* The farm was drained, cleaned, and manured out of the proceeds without any additional capital being expended, except for irrigation purposes and the steading." The farm is said to contain 410 acres. Here then it is held forth that a capital of 3*l.* 3*s.* 5*d.* per acre is all that is required to produce results which are stated to have been a triumphant success. Of some eight or nine farms to which tenants have entered during the last two or three years, an equal sum has been expended the first year on manure alone, and I know no farms having any pretensions to high farming where a less sum than 2*l.* per acre is annually laid out on purchased manures. In all, on one farm near where I live, the tenant expended 20*l.* per acre before he received a single sixpence of return, another 16*l.* per acre, a third 15*l.*, and on others from 9*l.* to 14*l.* In the year 1836 a tenant entered to a farm of about 450 acres; and he expended the first year upwards of 2000*l.* on manure without it being considered more than was required. These instances are all of skilful, careful, industrious men who staked their all in farming and had no noble lord to back them, and who trusted and hope yet to be fairly repaid for their outlay when prices mend. It is in the highest degree hurtful to the cause of practical agriculture to lead landlords to believe or tenants to trust that 3*l.* 3*s.* is sufficient capital wherewith to begin farming. There is no better ascertained fact than this: that nine-tenths of all the failures of farmers have arisen from men with inadequate funds offering over-rents for land. Just now, when tenants of capital are shy to offer such enormous rents as formerly were promised, landlords will miserably deceive themselves if they listen to such statements as that proceeding from Millhill, and tenant farmers will richly deserve to suffer if they allow their ambition to over-ride their judgment, and take land with only 3*l.* 3*s.* per acre of capital. The next utterly absurd statement is as to manure made under cover. It may perhaps be the case that in Lord Kinnaird's farms it is the custom to "collect the manure from byres and stables into one monstrous dunghill in the open court behind, and sometimes in front of the farmhouse." Assuredly it is not the case as a rule over the country generally. Assuming that it is, the loss that arises from this mode of accumulating is not so great as represented by the Millhill experiments. I have tried box-made manure against open court-made dung, without discovering the least difference, and certainly the farmers of Scotland who have not covered courts for their dung are a set of obstinate fools for refusing to believe the accuracy or trustworthiness of Lord Kinnaird's experiments. When it is asserted that dung direct from covered courts or boxes produced four tons more Potatos per acre than a like quantity from the open court, as well as 11 bushels Wheat and 60 stones straw, such a statement as this is quite in keeping with 3*l.* 3*s.* per acre being capital enough to commence farming with. I do not mean to deny that when dung lies long exposed to the washing effects of rain it may become deteriorated, but this I can confidently assert, that when dung is carted direct from the beasts or boxes, put into a field dunghill, properly compacted by carting and pressure, then covered over with earth, there is not any great loss. It is quite right and proper that landlords should do what they can to introduce the most improved practices and best systems of cultivation. Neither they nor any one else can wish impossibilities, and assuredly few practical men in Scotland will give credit or act on the above facts said to come from Millhill. *A Scotch Farmer.*

Sewage Irrigation.—You will see by an advertisement in the *Gazette*, that I have to let in Wimbledon Park, 50 acres pasture land now irrigated with sewage from the town of Wimbledon by open channels and underground iron pipes and hydrants, and 50 acres

arable land that can be irrigated in the same way, and I call your attention to it, as it affords a good opportunity for making experiments, at the same time that it would be highly remunerative for good management. *Thomas Scott*, 18, *Parliament Street, S.W.*

Mr. Robinson's Cabbages.—In the account given in various papers of the Birmingham Show, I find it stated that the weight given of the six heaviest Cabbages shown by me is 326¾ lbs. This, I believe, is the same statement as given in the *Times*, but they proceed to state that this weight is given after their roots and outer leaves were denuded. I give you below a statement of each Cabbage when dug from the ground and cleared from all soil, weighed in the presence of four or five disinterested parties:—1st, 75 lb.; 2d, 69 lb.; 3d, 68 lb.; 4th, 60 lb.; 5th, 60 lb.; 6th, 59 lb.; total, 391 lb. As an old subscriber to your Paper I shall feel obliged if you will notice it in your next edition, as it will give a much more correct idea of their capabilities of production. *Samuel Robinson, Shaw House, Melbourne, Derbyshire.*

Trades' Unions and Strikes (see p. 1138).—You say that I am not justified in making the remarks which I have made respecting Trades' Unions. The passage which you quote is perhaps expressed in rather strong terms; but I think that the rest of what I have there said shows (as it certainly was meant to show) that I have no ill feeling towards the men who unhappily enter into these combinations, however strongly I may see the evil of the course which they pursue. It may be also, that in a book on Cottage Building it was not necessary to allude to the subject at all, and that it might have been better to have avoided it altogether. I certainly did not expect every one to agree with or approve of what I said. Far from it, in these days, when it is so much the fashion to flatter the working men, and to be afraid to tell them of their faults. But I have been for a great many years a subscriber to and an occasional contributor to the *Gardeners' Chronicle*, and am not indifferent to your opinion, and I therefore write these few lines to explain as well as I can why I have so bad an opinion of Trades' Unions. A Trades' Union is essentially a combination of workmen against their employers. It may be very well to say that it need not be this, and that it ought not to be. This is what in practice it always *is*, and what workmen and employers alike *understand it to be*. If this be a legitimate object of combination, then combinations of employers against workmen are equally praiseworthy, and civil war must be a good thing. The leaders of trades' unions certainly do think that it is a good thing if it tends to increase their power. For after all, the passion which really gives life to all these combinations is the craving for power. They talk of protecting the rights of working men, and of liberty, but to get more power is their real object. By looking at it thus, one may partly see why they should sympathise, as they so strangely do, with the promoters of the most terrible and the wickedest war that ever has been. For in America also the North are fighting professedly for freedom (of the negroes), but really for power. For the sake of their dream of earthly power they profess themselves ready (if they could do it) to exterminate the whole Southern population. Similarly the combinations of workmen against their employers have shown them to be ready to carry out their views by every species of violence and oppression. It is natural to expect that wrong principles should bring evil on the heads of those who act upon them. Surely the ruin, and misery, and degradation which strikes have brought upon thousands of working men, and their having completely broken up many branches of trade in places which before were prosperous, is sufficient to satisfy the doubts of any one upon this score. And again, what would be the result of such combinations amongst agricultural labourers? Most providentially the accursed principles of trades' unions (for I can call them by no other name), have not extended to the agricultural population. Think of the result of a strike over a large part of England, for four or five weeks in the middle of harvest! Yet if combinations of men against their masters be praiseworthy institutions, we should have no right to complain of such an event. Surely then, although the purpose of trades' unions may be as you say lawful in the sense of not being illegal, yet in a moral or a social, or a religious point of view, it is wholly and utterly wrong. It has always been a great object of mine to promote as far as possible a feeling of union and fellowship between employers and employed; and to make workmen feel an interest in their work for its own sake, and not only for the sake of what they get by it. And as far as the small amount of labour which I employ goes, I think that I have been successful. When, therefore, I see large and powerful combinations of men, whose purpose is the very opposite to this, who do everything to separate masters and men, and who treat their work solely as a means of getting money; when moreover I see them doing this with large pretensions of seeking the good and the improvement of working men, and when I see many excellent persons misled by these false professions, you must excuse me if I be a little too impatient and indignant at the sight of so monstrous an evil. *C. W. Strickland, Howsham, Dec.* 6.

The Cattle Melon.—The second letter from Mr. M'Indoe upon this subject being written in a deprecating style, I beg to make a few observations, and to say, when I first called public attention to the Cattle Melon, I spoke of them as varieties of the Gourd tribe which I had found from experience in the feeding of cattle and milch cows to possess valuable feeding properties not hitherto attributed to them in this country; but that such had been used by a friend of mine in America, in the State of Indiana, as cattle food for many years; it was therefore my wish, after having grown different varieties most suitable to our climate and having good feeding properties, to make it known to the agricultural world that these fruits were especially calculated to feed cattle, and particularly milking cows, at the most difficult period of the year, viz., August, September, and October, and this has been generally conceded; although Mr. M'Indoe in his letter says, "until our climate is so changed as to enable us to grow Pine Apples and other tropical fruits to perfection in the open air, it will be totally unsuited as an agricultural crop for ordinary cultivation." Now this is merely a bare assertion, in opposition to my own experiments given in detail, first by Dr. Voelcker's analysis, and my own experiments in bullock feeding and butter making, and also by my cultivation, in which I grew 40 tons per acre in the open field against 22 tons of Globe Mangel, the manure and tillage of the land being alike. The present season has further confirmed their value, for although the season was so dry, yet I kept all my cattle under cover upon the fruit for nine weeks, having no other kind of green food or roots to give them. Mr. M'Indoe continues: "but if it could be grown it would require fruit houses by the mile to keep it." I would remind my readers that I have never recommended the Cattle Melon as a crop to supersede Mangel, Swedes, and other roots, and they are therefore not intended to be kept, but to be cut as required for use during the three months before named. Mr. M'Indoe fails to see the advantages of the Cattle Melon, but goes on to say, "that they would not prove half equal to Vegetable Marrow in productiveness, or possess any advantage over it in nutritive value." This is, however, another bare assertion, in reply to which I beg to say, that I have used largely for cattle feeding not only the Cattle Melon but the best selection of the large kinds of Marrows, which I call Cattle Marrows, and have found but little difference in their feeding value, and I recommend parties to grow some of each, as the Marrows are rather earlier than the Melons, which will enable feeding to commence about a month earlier. It is difficult to conceive the object of Mr. M'Indoe in endeavouring to depreciate the value of the Cattle Melon, and I consider it would have been far more credit to him to have waited until he had some carefully tried experiments to back his assertions. This letter will close my correspondence as far as Mr. M'Indoe is concerned, but I hope to furnish an article for the *Gazette* about February upon the best method of cultivation, both of Melons and Marrows, this being the time I intend sending out my seed. *Joseph Blundell, Barsledon, Southampton.*

Societies.

SMITHFIELD CLUB.

THE following is the Report of the Council to the members at the recent General Meeting of the body.

The Council have the pleasure of laying before the General Meeting the annual report of their proceedings for the year 1864.

During the past year the Council have held three meetings, which have been well attended.

The following subjects have occupied their careful attention.

I. The preparation of the prize sheet for the present Show, including the suggestion made at the last General Meeting as to the date of calving. The Council determined not to alter the day to which the ages of animals have hitherto been calculated, viz. Dec. 1, but they have altered the classifications as to age. Instead of having two classes for steers and oxen, the one not exceeding 3 years and the other above 3 years, an additional class has been added to the Devon, Hereford, and Short-horn divisions, and the ages classified as follows:—

	Yrs.	Mos.
Steers or oxen under	2	6
Not exceeding	3	3
Above	3	3

In Sussex cattle a fresh class has been added, viz. heifers not exceeding 4 years old. The Council also determined to admit Freemartins (hitherto excluded) to compete in all the Heifer classes, and to establish a new class for Ryeland, Cheviot, and other breeds of sheep hitherto unprovided for by former prize sheets.

The classified ages of the pigs have been rearranged as suggested by the Veterinary Inspector last year, so as to obviate the objections pointed out in his report.

The total amount offered as prizes this year is 1965*l.*, together with two Silver Cups value 40*l.*, each for beasts; three Silver Cups value 20*l.*, each for sheep; one Gold Medal for pigs, 65 Silver Medals to the breeders of 1st prize animals, and one Silver Cup to the butcher who shall purchase stock out of the classes to the greatest amount.

II. The Council considered the suggestion for the admission of the members and exhibitors to the galleries during the adjudication of the prizes. This subject had previously to the suggestion being made been partially discussed by the Council, but as it was felt to be too late to make any alteration for last year's Show, the formal decision respecting it was deferred. The Council decided (with the consent of the Agricultural Hall Company) that this privilege should be granted.

III. The Council being anxious that the merits of the servants who are the actual feeders of animals should be recognised and rewarded, have determined to present to the feeder of the animals winning the 1st prizes in the respective classes a gratuity of a sovereign, together with a framed diploma.

IV. The following rules have been rescinded:—That which required the exhibitors of Mountain sheep to produce the breeder's certificate, and that requiring the Stewards to mark the ears of the one-year old sheep exhibited at the Clubs' Show.

V. It has been determined that all protests be delivered in not later than 6 P.M. on the Tuesday of the Show.

VI. The Council have deemed it necessary to check as far as possible the non-exhibition, without sufficient cause, of animals that had been entered for the Show, and they have therefore established the following rules respecting fines:—

"In order to prevent the non-exhibition of animals which have been entered for the Show, thus forming unnecessary preparations, expense, and the disarrangement of the Show-yard, a fine of 10*s.* will be levied for each entry of stock not exhibited, unless a certificate under the hand of the exhibitor, or his authorised agent, be lodged with the Secretary of the Club at least 14 days before the day of exhibition, certifying that such non exhibition is caused either by—(1), the death of the animal or animals; or, (2), contagious or infectious disease (confirmed by the explanatory certificate of a veterinary surgeon). All persons who shall neglect to pay in due course the stated fines incurred for non-exhibition shall be debarred from exhibiting at the future meetings of the Club."

VII. Various minor amendments in the conditions of the Prize Sheet have been adopted.

VIII. The Implement Committee appointed by the Council have also amended the conditions for the exhibition of implements, &c. An Inspector under the direction of the Stewards and Hon. Secretary is employed to be in attendance during the Show, to see that the rules of the Club are not infringed by exhibitors or their representatives in that department of the Show.

IX. The increase in the number of Judges last year was attended with such beneficial results, that the Council determined to continue that arrangement. The selection of Judges was regulated in the following manner:—Each member of the Council was invited to send in a list of those he recommended to serve as Judges, and from the names so returned the requisite number of Judges was taken by ballot.

X. The Council have sanctioned the suggestion made by Messrs. Thomas, the Club's silversmith, that the winners of the silver cups should have the option of exchanging them for any other design or description of plate of equal value.

XI. It has been determined to use coloured rosettes to distinguish the prize animals, instead of the small cards used last year for this purpose.

XII. Some inconvenience has arisen from the practice hitherto followed of sending a manuscript copy of the awards to the different Journals. The Council have adopted a fresh arrangement by which the Journals have been enabled to obtain the information at an earlier hour than hitherto.

XIII. The gratifying result of the attendance at the special service for the men in charge of the live stock last year, induced the Council to request Rev. D. Wilson, M.A., the vicar of Islington, to repeat it this year, which he kindly consented to do, and the Honorary Secretary reports the number present to have been in excess of the former occasion, and that the conduct attention of the men was most exemplary.

XIV. In accordance with the bye-laws of the Club the Council have prepared a house list of the members they recommend to be elected to serve on the Council in lieu of the eight who will have to retire by rotation (not re-eligible for one year). The Council have deemed it right to include in this recommendation those gentlemen whose names were drawn by lot last year, and who had to retire after having only served during a few months.

XV. The Council beg to lay before the meeting the annual balance sheet up to December 1st inst., duly audited, which shows a balance in favour of the Club on that date amounting to 4748*l.* 13*s.* 3*d.*, whilst the invested capital amounts to 2691*l.* 4*s.* 3*d.* stock, 3 per Cent. Consols, including the sum of 1500*l.*, accumulated surplus annual income invested some years back until required for current annual expenditure. The Council have ordered a further sum of 200*l.* to be invested.

XVI. It was the gratifying duty of the Council last year to report that the entries for the Show were in excess of any former occasion, and they have now the still greater satisfaction of recording that this year's exhibition exceeds that of last year by 92, viz., 1863—453 entries; 1864—545 entries.

In conclusion, the Council congratulate the Members on the prosperity of the Club, and express their wish to receive any suggestions which the Members may communicate to the Hon. Secretary from time to time to be laid before them.

MIDLAND COUNTIES: BIRMINGHAM.—The following are the statistics of the recent exhibitions here:—

CATTLE SHOW.

ATTENDANCE.—1861, 59,799; 1862, 60,961; 1863, 61,530; 1864, about 64,270.

RECEIPTS AT DOORS.—1861, 1341*l.* 6*s.* 4*d.*; 1862, 1257*l.* 5*s.* 6*d.*; 1863, 1226*l.* 17*s.* 3*d.*; 1864, 1330*l.* 17*s.* 4*d.*

DOG SHOW.

ATTENDANCE.—1861, 17,095; 1862, 20,187; 1863, 21,561; 1864, 23,629.

RECEIPTS AT DOOR.—1861, 792*l.* 11*s.*; 1862, 1302*l.* 17*s.* 10*d.*; 1863, 1114*l.* 15*s.* 9*d.*; 1864, 1193*l.* 8*s.*

SALE OF DOGS.—1861, 154*l.* 13*s.*; 1862, 268*l.* 11*s.* 5*d.*; 1863, 275*l.* 17*s*; 1864, 324*l.* 0*s.* 6*d.*

School Children admitted free 2336

BATH AND WEST OF ENGLAND.—At the last monthly meeting of the Council of this Society, after the routine business had been despatched, letters of invitation for 1866 were read from the authorities of Salisbury and Southampton, and eventually it was resolved, "That this Council, bearing in mind the fact that the Society was originally established in 1777 'for the encouragement of agriculture, manufactures, commerce, and the fine arts, in the counties of Somerset, Wilts, Gloucester, and Dorset,' is of opinion that it is desirable to hold a meeting in the county of Wilts at the earliest practicable period, and that the Council do send a deputation to visit the city of Salisbury, which shall report the result of their visit at the next meeting of Council, on the 4th of February." At a later stage of the proceedings it was arranged between the members of the Deputation and of the Local Committee then present, that the 25th of January will be the most convenient time, for all purposes, for the interview to take place.

DORCHESTER: *Nov.* 12.—*The best Mode of Utilising Sewage of Towns.*—The Rev. H. Moule, Vicar of Fordington, gave a lecture on this subject. After some

preliminary justification of his appearance in connection with this subject, Mr. Moule said:—

On the utilisation of sewage in a liquid form, such for instance as that which the metropolis pours forth at the rate of from 90,000,000 to 100,000,000 of gallons daily, I have nothing to say; nor do I believe that any one has anything to say that, in the true sense of utilisation, is either practical or practicable. I propose rather to consider the best mode of utilising the excrementitious matter and the animal and vegetable refuse of houses and towns.

By the adoption of the Dry Earth System then I assert and will show you that all the excrementitious matter of our population, whether in town or country, together with all the animal and vegetable refuse of our houses, may be utilised.

Now, as to an estimate of the value of these substances, I have met with none more reasonable in itself, nor resting on more simple and common-sense data, than that given me by one of your own society, Mr. R. Damen, and which, with his permission, I have inserted in the second and third editions of my pamphlet, "National Health and Wealth." That estimate is 1*l.* a-head annually for the members of a family or the population of a town; and he arrives at it in the following way:—He says that any intelligent farmer, who understands his business, will admit that one-third of the value of the corn, given to his cattle, goes on to his ground in the form of manure. And, applying this to the food and excrement of human beings (and I suppose he would include the kitchen waste) he reasons thus:—Take the average value of the meat and corn food of each individual, at 2*s.* a head per week or at 5*l.* a year; then, instead of one-third, take only one-fifth of this as the average value of the manure made by each person, and you have as that average value 1*l.* per annum. So that for this town of Dorchester the gross produce would stand for the whole population at 7000*l.*, and for Carlisle, a city of 30,000 inhabitants, of which I shall presently have to speak, it would stand at 30,000*l.*; while the manure that might be saved from the whole population of Great Britain and Ireland would, if rightly saved, be worth 30,000,000*l.* sterling a year. Many I know will think this estimate extravagant. If however the manure be saved without water, I am sure that it is not extravagant. But suppose for one moment that this value were reduced to one-half, or even one third, and you estimate it for the whole country at 15,000,000*l.* or at 10,000,000*l.*, or for Carlisle at 15,000*l.* or 10 000*l.*, or for Dorchester at 3500*l.* or 2300*l.*—is not the question of the right mode of saving and utilising these substances a question relating not merely to the various towns and their immediate vicinities, but to the great agricultural interest as well, and to the whole country as affected by that interest? And yet, after a good deal of study of Parliamentary inquiry and evidence, I am bold to assert that hitherto there has been absolutely no reasonable attempt thus to deal with this question. Every mode of utilising the sewage of towns that I have seen has been either far too partial, far too limited, or far too expensive; and the highest idea which those recommending these modes seem to entertain of the word "utilise," is the prevention of absolute and entire waste.

Let me state then as the first requisite of a good mode of using that which is at the same time the most offensive and the most valuable portion of the refuse of our towns, that while improving the sanatory condition and the comfort of the town, it should make that refuse a source of profit, or at all events prevent its removal from being a matter of burdensome expense. Then, and in order to this, the manure, so saved and removed, must be of such power or virtue, and in such a form, and obtainable at a price so moderate, that it shall be able, by setting the inferior price against the perhaps inferior power, to compete with foreign and artificial manures, and so command a ready sale. And again it is requisite that it shall be as easy of transmission to the most distant parts of the country, and as easily applicable to the land as any of those manures. If these requisites can be provided, there will be no need of my saying that hill farms and down farms and farms that from a distance send their corn and meat to the towns, have as great a claim on that manure as the valley below any particular town or the heath in its immediate vicinity. Those farms in that case will take it, and the towns on their part will be ready enough to supply it. All this then I will now proceed to show you can, by the dry earth system, be easily effected, and that in a way the most conducive to health and decency and comfort, and by a process of removal far less expensive than any that has hitherto been devised. It will serve to strengthen my statements of the necessity and the value of the several requisites above mentioned, if, before I describe the dry earth system, I give you by way of contrast two or three instances of what is considered a good mode of utilising the sewage of towns.

One person, who represents, I think, a company formed for utilising the sewage of the metropolis, states in his evidence before the committee of the House of Commons, that he would distribute that sewage over 30,000 acres. Another gentleman, and he quite an authority in such matters, says he should prefer 50,000 or 60,000 acres. Now take the lower estimates of the excrementitious matter and of other animal and vegetable substances together, namely, 10*s.* or 6*s.* 8*d.* a head, and add to this value the cost of public and of private works, and turning away your attention for one moment from the pollution of the Thames, say, is not this pouring of that, on so limited an area, which cannot be worth much less than 1,000,000*l.* sterling per annum, or say if you please 500,000*l.*, and removed at the cost of many millions, is not this to waste, or at least to squander rather than to utilise?

Next take the far-famed meadows near Edinburgh, which are irrigated by the sewage of that city. It is perfectly true that the produce of those meadows is almost fabulous. The sum of 40*l.*, and even 50*l.*, has been received as the rent of an acre; and every acre will carry 10 cows. But what is the amount and value of the manure given to this land? The sewage of 300,000 people, worth at the lowest estimate, if properly saved, 100,000*l.*, is poured over some 260 or 300 acres!

Then take Carlisle, which was placed in the schedule of the same Act of Parliament that placed this town of Dorchester under the Board of Health. If the cost of the works in that city bears the same proportion to the cost of ours as that population bears to this (I hope not, for Mr. Rawlinson carried those out himself), but if it does, then they must have spent on them from 60,000*l.* to 80,000*l.* At first they polluted their river, as we pollute ours—they thus throwing away 30,000*l.*, or if you please 10,000*l.*, and we 7000*l.* or 2300*l.* The sewage of 7000 of the population is avowedly thrown away. That of 23,000 deodorised by Mr. McDougal's admirable disinfecting powder is poured over 60 acres 23,000*l.* worth of manure, or if you choose 8000*l.* worth, raised at such a cost, spent on 60 acres!! Is not this again to waste or to squander rather than to utilise?

Now then for the contrast. Water, as you see, does not deodorise. It rather increases within a few hours the offensiveness of the smell, and itself needs to be deodorised. Whereas a pint and a half of dry earth or clay, if the evil be taken at once and in detail, deodorises immediately, and at the same time preserves the value of the urine and of the solid fæces; while instead of diluting, as water does, it may for certain soils add to the value of the manure, as, for instance, when various clays and silicates shall be used and afterwards applied in this mixed state to our heaths and light lands.

Next, for the application of this system, no public works are required. For if by means of it you get rid of the excrementitious matter and of the kitchen refuse, you may then, without offence or injury, allow the water used in washing, to descend into a cesspool. Then, the cost of the private works would not be above one-third of that incurred in the water drainage system.

It will, perhaps, astonish some persons when I assert that the supply of earth or clay for many towns, such, for instance, as this town of Dorchester, would be easier and less expensive than the supply of water. The facility of this supply of earth to towns is the greater from that property of dry earth or subsoil, to which I wish to call special attention, namely, its capability of repeated action in the absorption and deodorisation of offensive substances. For if after use and removal it be intimately mixed with the offensive matter, it is easily and inoffensively dried; and when dried it absorbs and deodorises the tenth time as readily and effectively as at the first. In the country and in situations in which the manure can at once be deposited in the earth, this repeated use is unnecessary. But in the case of towns, in which a manure company would be formed for the purpose of the supply of earth and of its removal after use, and of its sale when manufactured into a saleable manure, it will be of the utmost importance to condense this manure as much as possible, with a view to rendering it easy of carriage and of application to the ground, either in the use of the drill or by sowing it. Before stating the probable quantity of earth required in any particular town, I would have you notice that the value of urine as manure is about eight or 10 times that of the solid fæces, and that by the adoption of urinals on this dry earth system both in public places, in large establishments, and at railway stations, and in the use of a contrivance of Mr. White's for the reception of night urine, that which is now to a great extent wasted and lost, may with vast increase of comfort and to the great promotion of decency be almost entirely saved.

Now, first reminding you that I am perfectly unscientific and no man of business, and admitting that the estimates and plans of one who has so little time for these matters, are open to much modification, let me give you a rough estimate of the supply of earth and of its treatment. For all circumstances above mentioned, for public and private places, for the family and the kitchen, for night and for day, I would estimate the quantity of dry earth per head at 12 lbs. a day; that is, supposing it to be used only once, at two tons a year. This, for a population such as that of Weymouth, which I think is 14,000, would in that case be 28,000 tons for the whole town. Don't be startled, however, at these figures. I am going to reduce them. For, supposing a drying shed to be erected, which in its erection and its operation might be very inexpensive, and supposing the earth were used in every case five times instead of once, this would render the quantity necessary for one year for 14,000 people only 5600 tons. And if that earth so prepared by admixture with the excrementitious and other matters, and (as it might be) mixed with some other valuable substance, were in a well pulverised state sold at 3*l.* a ton, there would be a gross value attached to it of 16,800*l.* Take, however, only two-thirds of that sum, say 12,000*l.*, and supposing you have to purchase the soil from many of the houses, and thus your expenses amount to half that sum, or 6000*l.*, then a clear profit might be derived to the company of 6000*l.* a year. And if this can be done, and that in a way more conducive than any other to the health and comfort of the inhabitants, and at the same time with vast advantage to the agriculturists of the neighbourhood—if 12,000*l.* worth of additional manure can be thus provided for their land, a manure applicable with ease to land in any position, then I think, gentleman, this deserves to be styled a mode of utilising the sewage of such a town, and I venture to think it the best mode. Some perhaps may wonder whence the supply of earth is to be derived. Some of the Weymouth people, for instance, have asked this of me. To say nothing of other substances, there are clays around that town to supply its population for centuries. Some may be startled at the difficulty of the carriage of so much earth through the streets. Let such think of the carriage of coal and of ashes.

But, gentlemen, I would place before you, in as few words as I can, a scheme which has been suggested to me for the application of this system to such a town as I have just now mentioned. Let a company be formed with a capital of, say 30,000*l.* Remember, there would be no public works required, neither at the cost of the inhabitants nor of this company. All that the company would require would be, first, warehouses and drying sheds, and a staff of men and trucks and horses, with something of a mill for mixing and pulverising. Then they would have to supply, both for private houses and large establishments and other public places, closets and urinals, which would be their own (just as the gas meter is the property of the gas company), to keep in repair; and for the use of which, together with the removal of all this offensive matter, the owner or occupier of the property would pay a per centage of say 10 or 15 per cent. on the first cost. This for a cottage need not be above 5*s.* a year, and for some of the largest houses, in which several apparatuses would be required, 5*l.* or 6*l.* My belief is that the whole cost of these private works would not exceed for such a population 12,000*l.* or 15,000*l.* But then I would propose that the shares should be so many and at so low a figure, that the owner or occupier even of a 5*l.* cottage might take one, and that the shares should at first be taken in a number proportioned to the first outlay on the respective houses or properties. Now supposing the company should on its capital of 30,000*l.* make beyond the rental of 10 per cent. on 15,000*l.* a profit of 6000*l.*, that rental would be repaid to the inhabitants at least twice over. Instead of the removal then of offensive matters being to them a heavy burden, it would be a source of profit. This then again I say is to utilise; this I venture to think is the "best mode of utilising the sewage of towns."

The above passages from Mr. Moule's address constitute a mere abridgement of his paper, for the whole of which we regret we have not room.

In the course of the subsequent discussion Mr. MOULE said that Mr. Gee, vice-chairman of the Board of Guardians of Bradford, Wilts, who had taken great interest in the system, had applied it to a school of 55 children, and at the end of five months he wrote to say that, where formerly all was noxious pungency, everything was then sweet and wholesome. During that time 2 tons or putt loads of earth were used, and it was scarcely more than 2 tons afterwards. The truth was that what passed from the human system was chiefly water, which evaporated without any offence, owing to all the noxious elements being fixed by the earth. Mr. Gee had sold the 2 tons at 50*s.* a ton.

Mr. DAMEN said that it was as plain as possible that if they confined the question to corn alone, it would give 10*s.* a head as the value of the manure, so that, as the reverend gentleman said, the manure now thrown away in this town would be worth at the least 3500*l.* a year. This was a matter which ought not to be lost sight of. There was nothing that the people of England could not do if it was shown to be useful and profitable; and Mr. Moule, to his mind, had shown both. If not in his day, sooner or later the system must be brought to bear, and he believed that ultimately it would triumph.

LORD TREDEGAR'S STOCK SHOW.—The 46th anniversary of this meeting was held on Tuesday and Wednesday at Newport. Although one of the oldest stock shows in the country, and notwithstanding that the prize sheet retains somewhat of its primitive character in restricting the exhibition of animals except from particular localities, such as the counties of Glamorgan, Monmouth, Brecon, or within 25 miles of the town of Newport, there was a large exhibition of excellent animals, particularly in the open classes. For so important a show there seems reason to doubt the propriety of this exclusiveness, especially when nearly all local societies have abandoned these notions of having competing animals only from one locality.

Nearly all the prizes given consist of Silver Cups, which are distributed at the dinner table by the noble President, Lord Tredegar, to the successful exhibitors.

The Devons, as usual, were only represented in small numbers by the Rev. A. Morgan and the Hon. G. C. Morgan.

The Rev. A. Morgan won Lord Tredegar's Silver Cup, for the best yearling bull; and his 2-year old heifer was commended. For the best bull, cow, and offspring, the prize went to this herd without competition. For the best 2-year old heifer, the Hon. G. C. Morgan obtained the prize, and was highly commended for one in the same class.

For the best yearling Short-horn bull the Silver Cup was won by a large-boned, leggy animal belonging to Mr. Tombs, whilst one of Mr. Hitchman's was highly commended. Mr. Stratton's commended.

For the best 2-year-old Short-horn heifer Mr. Richard Stratton won the prize with an exceedingly fine specimen of his breed, of which we expect to hear further at some future date. Mr. Logan obtained a high commendation for quite a good heifer in the same class.

The next prize was for the best yearling bull of the Hereford breed, which was won with a very thick-fleshed, low-legged good animal belonging to Mr. Taylor, of Showle; Mr. Thomas being highly commended.

The prize for the best 2-year-old Hereford heifer breed was won by Mr. Rees Keene. This class, however, was but poorly represented.

The best yearling bull of the Short-horn breed was decided in favour of one of Mr. Geo. Garne's, of Churchhill Heath, a very promising animal, which scarcely eclipsed the commended one of Mr. R. Stratton.

For the best bull calf there were nine competitors, and so close was the competition that five were noticed by the judges—three of Mr. Logan's being commended, one of Mr. Robinson's being highly commended, whilst the prize was given to Mr. Thomas Garne, of Broadmore, for one of great merit.

Mr. Logan obtained the prize as the best heifer calf of the Short-horn breed, and was highly commended for another—the judges commending the whole class.

Mr. Thomas Bradstock took the next prize for the best Hereford bull calf.

The prize offered by W. T. Carlisle, Esq., for the best Hereford heifer calf, was won by Alethe, belonging to J. M. Read, of Elkstone, there being five other competitors, amongst which Mr. Edwards was highly commended.

The next class was one for the best yearling heifer, which contained Mr. Logan's splendid yearling, which has been exhibited seven times and obtained a 1st prize each time she has been exhibited; but now in addition she gets the Corporation prize, value 20*l.*, as the best horned animal in the yard. The competition, it is said, lay between Mr. Duckham's Commodore and her. She is of faultless form up to her hips, which may by some be considered too narrow, and the distance from the hip bones to the rump somewhat contracted; excellent in touch, and very heavy of flesh.

The Silver Cup offered by Colonel Wood for the best yearling heifer bred by a farmer not farming his own estate, was won by the Rev. W. H. Beever; Mr. Thomas's being commended, as well as the whole class.

Mr. Rennie's prize for the best 2-year-old heifers, the exhibitor residing in the county of Glamorgan or Monmouth, was won by Mr. Pride, of Llanvihangel Rogiet.

The Cup for the best pair of cows, given by Mr. Logan, was won by himself; Mr. Wigmore's Stately the Third being highly commended, the whole receiving a Commendation.

The next prize was one given by the Bank of Wales for the best stock bull above 2 years old and under 6. This was a strong class, composed of nine animals, and of Herefords and Short-horns, Mr. Duckham's "Commodore" being the successful animal; whilst Mr. J. M. Read's "Peremptorily" was highly commended; and Mr. Taylor's "Tamburine," the 1st prize winner at Newcastle, was only "commended;" as well as a Short-horn belonging to Bruce Pryce.

Mr. Justice's prize for the best fat cow was won by Mr. Robinson; and Mr. Keene took Lord Tredegar's prize for the best fat ox, both with no competition. To Mr. Henry Crawshaw was awarded Mr. Styles' Cup for the best fat cow, Mr. Farr being highly commended.

Two other prizes were offered for one of the exclusive Classes, but these and the six following prizes of the same sort we omit, as they provoked little competition and can only be of local interest.

We now come to the Sheep Classes, in which the prominent feature is the exceedingly fine show of local-bred Cotswolds, as well as some sent from their native place—the Cotswold Hills. So much do the Cotswolds flourish in this district, that notwithstanding Mr. Beale Browne and Mr. King Tombs sent some from the Hills, yet the local men took every prize. Indeed, so good a lot of Cotswold ram lambs we scarcely ever saw at this time of the year. To Mr. Thomas Thomas, of St. Hilary, Glamorganshire, who has bred Cotswolds in his county for fully 50 years, and in which county these Cotswolds have so overrun the native breed as now to be the principal breed of that county, was awarded the prize for the best long-woolled ram, and besides a commendation. There were no fewer than 15 Cotswold rams exhibited in this class, mostly out of Herefordshire, Monmouthshire, and Glamorganshire.

The next prize, for the best four shearling ewes, was won by Mr. Wigmore. The short-woolled sheep prizes were all won without competition by Mr. Moore, of Littlecot, with Hampshire Downs.

The prizes for Welsh sheep were taken by Mr. Ion Rhoswen and Mr. Edward Farr, of Remyworlodd.

The next three following prizes were taken by Cotswolds belonging to Mr. Thomas and Mr. Domne.

There were some excellent lots of Pigs exhibited for the respective prizes, amongst which the pig sent by the Royal Agricultural College, Cirencester, took the prize, and was deservedly much admired. The other prizes in pigs were taken by Mr. John Leys for the best boar; Mr. William Yells, of Round Robin Farm, for the best boar and sow under a year old; and Mr. H. Hall of Troston, for the best breeding sow with litter of pigs.

Amongst the winners for Horses, was Mr. Logan for the best yearling cart colt; Mr. Rees Parry Penlan, for the best 3-years-old cart colt or filly; Mr. Richard Williams of Tredunnock, for the best cart stallion.

In addition to these agricultural horse prizes, there were exhibitions of nags and hunters, besides some superb racing animals belonging to W. S. Cartwright, Esq.

Farmers' Clubs.

HEXHAM: *Breeding and Management of Black-faced Sheep.*—The following remarks are abridged from a paper recently read before this Club by Mr. COOK, the Secretary to the Club:—

In choosing Blackfaced ewes from which to breed, the mountain farmer must always have an eye to hardihood, for whatever other good properties the ewe may present, if she shows signs of softness, or want of constitution, I would reject as worthless, as her progeny, if ever she managed to have any in such exposed situation, would in all probality inherit her defect and prove unremunerative. Having secured hardiness in a flock of ewes, I would then select those of good frame, with broad back, good shoulders and quarters, with a prominent breast, and standing a good width between the fore legs, as well as betwixt the hind legs, and they should stand well and straight on their legs, on a good-sized, well-shaped foot, as I would reject all those having knock-knees or knock-houghs; neither do I like a sheep too long in the legs. The ewe for breeding from should have a good-sized head, a clear full eye, lengthy face, and good open nostrils. The horns should come from the head with a graceful curve, of fair width, and towards the lowest part of the curve they should incline a little forward, as I do not approve of the black horned kind, and the horns should be of a fair size. But I neither like too slender horns, which indicate weakness of the constitution, or coarse, which indicate want of quality. The head ought to be set on a neck which rises well from the breast and shoulders, and which is not of too short a length; and having mentioned the head, I must say a word about the tail. I would like to see it of a fair thickness, and would reject all those with very small tails, as this also indicates old age or weakness of constitution. Having described the body of a breeding ewe in a very imperfect manner—as I am quite sure that on seeing a stock of ewes before me, I can satisfactorily describe their good and bad properties in a much better manner than I can on paper from memory—let me say a few words respecting the wool. The Black faced ewe having to be exposed in the most ungenial climate of our kingdom to all the winter blasts, without, in general, having any shelter except what Nature furnishes her with, it is absolutely necessary that she should be well clothed with wool—this, in the first instance, to keep her comfortable, and, in the second, to render her profitable to the flock-master, as a great portion of the flock-master's returns arise from his clip of wool; and as that article has of late years commanded much higher prices than usual, this subject at present requires more particular attention. Well, then, I would choose my ewes well set with wool from the ears and cheeks, all over the body and tail, and well down the legs, but not on the shanks, below the knees and houghs. I would have the wool as thick-set as consistent with good quality and a fair length, but I would object to increase its thickness by choosing those animals whose wool is intermixed with kemp hair, as this breed of sheep is neither profitable to the farmer nor approved of by the woolstapler. Having described the selection of ewes for breeding, it now behoves me to describe the selection of a tup; and I may state that almost all I have said regarding the ewe applies with much greater force to the tup, inasmuch while the ewe seldom breeds more than one lamb in one year, the tup generally begets in one year threescore, so that any defect in a tup puts the whole flock out of order much sooner than the defects in a single ewe. I would select the tup with a robust constitution, a good firm horn, not coming too close to his cheeks (if possible) or not standing too wide; and I don't like a tup whose horns rise too much after leaving his head until they curve down, as such tups generally beget lambs of a light nature, which are generally very fatal to the ewes in parturition. I would also be very careful to reject all cloud horned tups—by this term I mean all tups whose horns do not separate before they leave the head. I would also reject all those having blood horns. Keeping in mind those remarks, and what I have here stated regarding ewes, I do not think any practical man would go far wrong selecting his tups, although I must say good ones are very difficult to lay hold of. The best time to put the Black-faced tup to the ewes on the Northumberland Hills is from the 11th to the 20th November, according to situation; but I would rather err by being a few days too late than by being too early, as the springs are so uncertain; and when the lambs arrive before the ewes have milk wherewith to suckle them, the loss of both is often extensive; and if these lambs do survive they are generally of stunted growth, while lambs in the same flock which are younger, but which have received plenty of milk from their birth, very soon outstrip them. I will not detain you longer respecting the breeding of Blackfaced sheep, but will pass on to the second subject—the management of Blackfaced sheep. In the management of Blackfaced sheep, a great deal depends on having a good sagacious shepherd to carry out in an effectual manner the instructions of his master; and I cannot do better than give you an extract from "Little Practical Observations on Mountain Sheep." Mr. Cook then read a long extract on the qualifications of the shepherd, pointing out more particularly that he should be active and careful in the training up of the young. I will take the management from the time of lambing in the spring. When the ewes are about to lamb, it is best to bring them into the most sheltered parts of the farm, and where there is the best bite of Grass for the ewe. After being lambed for a fortnight or so, according to the season, the ewe and lamb is generally turned out to the common, to afford a better bite for those ewes or gimmers which are latest in lambing, and so on until they are all lambed. About the middle of October the lambs are brought off the common and salved or smeared with a mixture of tar and butter or other preparation; but for high and exposed situations I have never found any plan answer so well as the mixture of tar and butter. After the lambs have undergone this preparation, they are placed in as sheltered a situation as is on the farm, or sent away to some more genial climate for the winter, where they remain until about the first week in April, and then return home to their native common. After the lambs are salved, the ewes and wethers undergo the same operation, after which the ewes are generally sorted for the tup. With regard to shearing, I may state Black-faced are usually shorn about the end of June or early part of July in each year. The wethers are generally kept till they are three years old, and are then usually sold for feeding purposes; but if they are not then sold, they are fed off on Grass during the summer, or on Turnips during the ensuing winter. The ewes are generally kept till they are about five years old, when they are sold as draft ewes, and their place in the breeding flock supplied by the shearling gimmers, which are at this age put to the tup as breeders.

Farm Memoranda.

MILL HILL.—In our last we described chiefly the system pursued in the tilling of the farm; in the economising of the manure, liquid and solid; in the housing of the cattle; and the machinery for bruising, chopping, &c. There now remains to be noted the cooking apparatus and the sheep loft. The steam pans, supplied with waste steam from the boiler, for preparing the messes given to the cattle a certain time before they are full-fed, are in the neighbourhood of the machinery. The chopped Turnips, the bruised Oats, the meal, &c., can all be emptied from conduits in a heap near the boilers, so that labour is saved in carrying. The steam tanks are put in use for about a couple of months before the cattle are sold, and the messes consist of Cabbage stalks, Mangel Wurzel, oil-cake, and meal—with, perhaps, a little Linseed or molasses. The cattle receive one feed of this steam mixture to two of Turnips and hay. The young stock are ranged in staked-off spaces by the edge of the railway, in the same way as the others. Water is here led on in pipes, and can be turned on at pleasure, and in every trough is a piece of rock-salt for the animals to lick. The sheep are in a large loft at the east end of the steading, but a line of rails is carried along the upper floor to the machine department, where the food is prepared; and the waggonettes are easily trundled along. The sheep are disposed in pens on each side of the line of rails in the same manner as the cattle; and in this loft we are informed that nearly 130 sheep can be fed and attended to by one woman, who also supplies with Turnips the washer when at work. The floor is sparred, so that the sheep manure drops into the covered heap below. At the outside of the covered heap is the refuse cartage—consisting of decayed vegetable matter collected from the fields, road scrapings, &c., which is decomposed by lime, and a layer of which is every now and then thrown into the sheep dropping pit, to cover the droppings, prevent smell, and form a still more suitable compost for the fields.

Lord Kinnaird has taken a great interest in arriving at a knowledge of which kind of sheep is the best and most profitable for wool combined with fattening qualities. It will be remembered that there was a discussion at the meeting of the Highland and Agricultural Society in Edinburgh as to the advisability of having two classes of the Leicester sheep at their Shows, and that a question was raised as to which of the Leicesters—the White or Border, or Blue or English, was the most profitable. The question, as Mr. M'Laren puts it, really came to be "to ascertain whether more sheep of small boned and finer kind could be kept on the same amount of food than the larger kind; and whether, although when sold not worth so much as the large kind, the proportion of profit in their case might not be more evenly balanced as per acre of land than the selling price at first seemed to warrant." The result is recorded in a report made to the Highland Society by Mr. M'Laren, which states that four lots of 10 wether lambs each were selected—10 from the flocks of Colonel Inge, 10 from Mr. Robert Hardie, Kelso; and two lots of 10 each from Lord Kinnaird. One sheep in one of the lots got its leg broken; and one out of each of the other lots had to be cast aside, so that the experiment was carried out with four lots of nine each. The sheep were placed on the 26th August last on a piece of rich old pasture divided equally into four, in each of which divisions were feeding hurdles, which were moved three or four times a day, as required. The quantity of Grass consumed by each lot was thus found out. They were afterwards fed with Oats, hay, Indian Corn, meal, oilcake, &c.—the trial lasting for 12 months—and the following is the result:—

AVERAGE COST OF FEEDING EACH SHEEP, NINE TO EACH LOT.

	£	s.	d.	
Colonel Inge	3	5	0	nearly.
Mr. Hardie	3	10	2	
Lord Kinnaird's Leicesters	2	19	6½	
Lord Kinnaird's Cotswolds	3	11	11½	

AVERAGE VALUE OF EACH SHEEP.

Colonel Inge	3	15	6
Mr. Hardie	4	1	10½
Lord Kinnaird's Leicesters	3	11	3½
Lord Kinnaird's Cotswolds	4	8	10½

This experiment proved conclusively that though the Cotswolds were the dearest and ate the most, they were yet the most profitable—the difference in favour of their value as against their cost being 17*s.* per sheep, as compared with 11*s.* 9½*d.* for the Leicesters: 11*s.* 8½*d.* for Mr. Hardie's; and 10*s.* for Colonel Inge's.

Lord Kinnaird has also prosecuted a series of experiments upon the feeding of cattle, the results of which were a few years ago presented to the Highland Society in a Report by Mr. M'Laren, his Lordship's farm manager. The point was to determine the comparative feeding value of pulped and of whole Turnips. To find out this, his Lordship had three lots of six cattle, each selected and tied up—the first being fed with whole Turnips and straw; the second with pulped Turnips, mixed with chaff, and given fresh; and the third with pulped Turnips, mixed with chaff, and fermented. The total weight of the first six cattle to be fed on whole Turnips and straw, on 18th October—the commencement of the trial—was 70 cwt. 24 lb.; and by the 1st March they had risen to 81 cwt. 77 lb.—an increase of 11 cwt. 53 lb. The second lot—fed on pulped Turnips, mixed with chaff and given fresh—weighed 70 cwt. 70 lb. at the commencement of the trial, and 81 cwt. 14 lb. at the end, being an increase of 10 cwt. 56 lb. The third lot—fed on pulped Turnips, mixed with chaff and fermented—weighed 70 cwt. 4 lb. at the commencement of the trial, and 82 cwt. 28 lb. at the end, being an increase of 12 cwt. 14 lb. It will thus be seen that the pulped Turnips and straw given fermented produced a much greater increase in weight than the other two methods of feeding; but from the feeding with whole Turnips being done at less expense, the increase on the cattle fed in that way seems to have paid better than on the others. The clear profit on each lot for Turnips consumed was 18*l.* 3*s.* 10½*d.* for those fed on whole Turnips; 13*l.* 2*s.* 10½*d.* on those fed with pulped Turnips mixed with chaff, and given fresh; and 17*l.* 13*s.* 10½*d.* on those fed on pulped Turnips mixed with chaff, and given fermented. From the following paragraph by Mr. M'Laren it will, however, be seen that he gives

the preference to the pulped Turnips for several very important reasons:—

"From the results of this experiment, it will be seen that, while whole Turnips, owing to the less expense in using them, leave the most free money per ton for the roots consumed, pulping and mixing with chaff, by enabling the feeder to keep from 10 to 15 per cent. more animals on the acre or crop (without taking into consideration the extra quantity of manure thereby obtained), gives the preference, in my opinion, to the latter mode of using them. One trial, however, does not seem enough to establish the success or failure of this or any system. I therefore hope that the experiment will be taken up by others, so that the farmer may shortly have sufficient data to enable him to judge which is the most economical way of producing meat for the increasing population of the country by the consumption of his root crops; at the same time keeping in view the very great importance of increasing the manure made on the farm."

Mr. M'Laren's confidence in the latter kind of feeding being the most profitable was remarkably verified by experiments in the succeeding year, when he again tied up three lots of Short-horned steers of six each, and fed them on the same three systems. The first increased during the time of trial 20 cwt. 58 lbs.; the second 24 cwt. 72 lbs.; and the third 23 cwt. 91 lbs. The profit on those fed on whole Turnips was only 15*l.* 17*s.* 4*d.*; on those fed with the Turnips pulped and chaff, given fresh, 23*l.* 15*s.* 10½*d.*; and on those with the Turnips pulped and chaff, fermented, 22*l.* 14*s.* 4½*d.* Thus the general result of the experiments has proved "that the pulping of the Turnips is a saving of the root in the feeding of cattle," and is well worth the attention of farmers and cattle-feeders.

Leaving the sheep loft and cattle-feeding court, we take a turn round the steading, and pass in our way a shed containing a number of implements, self-delivery reaping machines, improved by Lord Kinnaird, and for which his lordship got a prize at the Highland Society's Show at Aberdeen; a Potato digger, a Turnip sower, and several other minor machines. There are a number of matters of minor interest to be seen, but we have sketched the most important features of the management. We are assured that in every department the results of the system have been pecuniarily successful, and that, to parties interested, every information will be given for their guidance. *Abridged from Dundee Advertiser.*

Miscellaneous.

Agricultural Statistics.—Mr. Caird, M.P., in an address to his constituents the other day at Stirling, spoke thus on this subject:—On the discussion of the budget, I was fortunate enough to be able to persuade the Chancellor of the Exchequer to forego the intention be expressed of placing a duty on certain low-priced corn—Lentils, Millet, and Dari; and at a later period of the session I carried a resolution in favour of the collection of agricultural statistics. This is a question of growing importance to the general community. Previous to the repeal of the Corn Laws, it was computed that, in addition to our home supply, not much more than a fortnight's consumption of foreign corn was needed in the year. But during each of the last five years one-half of our population has been fed on foreign corn. This proves that the people are better fed, and also that much of the corn land in this country is being laid to Grass. But, dependent as we have thus become on foreign corn, it is of the utmost moment that we should have some knowledge of the extent of our home produce, and, consequently, of our foreign requirements. The only advantage our farmers now possess is being first in the market. To them beyond all others an early knowledge of the probable supply is of first importance. To the commercial and monetary interest it is scarcely of less moment. The mere movements of such vast supplies equal to 3,000,000 tons of grain, involving the employment of a great mercantile fleet, and the transfer of 30,000,000*l.* sterling of money, may, if not foreseen and provided for, most seriously embarrass the trade and commerce of the country. And here I cannot help again remarking on the influence which the two last bountiful harvests are already exercising on the welfare of the people. We shall this year pay 15,000,000*l.* less for imported corn than we have paid on the average of the four last years. The money pressure now being experienced is fortunately unaccompanied, as in former times, by dear bread. In 1847 and 1857, the periods of money panic, Wheat was 70*s.* and 80*s.* a quarter. During the present year it has scarcely exceeded 40*s.* But though the price has been low the imports have been enormous, and the figures will show you that they must have materially affected the price of money. In the three years preceding the panic of 1847 we paid 26 millions sterling for foreign corn; in the three years preceding the panic of 1857 we paid 62 millions; but in the three years preceding 1864 we paid 98 millions. It need not, therefore, be matter of surprise that this, with the derangement of the cotton market, should have caused a pressure for money. But nothing can more clearly prove the prosperous condition of the people than the enormous increase in their consumption of food Nor is it limited to corn. In 1859 we imported cattle, bacon, butter, cheese, and lard to the value of 5,285,000*l.* In 1863 we imported, of the same articles, to the value of 12,796,000*l.* All this has been accomplished during the life of the present Parliament, and is mainly due to the admirable financial policy of the Chancellor of the Exchequer.

The late Richard Booth.—The most celebrated breeder of Short-horns of the present day has passed away, in Mr. Richard Booth, of Warlaby, Yorkshire who has just died at the ripe age of 76. Mr. Richard Booth, though the most eminent breeder of his name, was one of a family of Short-horn breeders, and he carried the science of true breeding to such a pitch that for some years past "Booth blood" has been deemed essential to every herd pretending to fashion and fame. And it is a significant and suggestive fact, that Mr. Richard Booth steadily adhered to purity of blood, that is, he insisted on keeping within the narrow circle of a few tribes, and bred in-and-in, disregarding some absence of symmetry and a degree of coarseness in certain points, provided his animals were deep-fleshed and light in the offal. He was for many years a successful exhibitor of heifers and cows at the great agricultural shows, seldom exhibiting bulls, and he was amongst the first to show his stock in the high condition which has now become indispensable to prize-winning. We believe, however, that he did not over-feed the great body of his herd, but kept them in useful breeding condition, and hence in part came the extraordinary excellence of his bulls as sires in other herds. And it was chiefly to his bulls he owes his fame. The demand for his bulls on hire was generally greater than the supply, and for many years past his "bull rental" has amounted to 3000*l.* or 4000*l.* sterling per annum. Mr. Booth, a single man, devoted himself to the cultivation of his herd on a good estate of his own, favourably circumstanced in soil and climate for stock-breeding. He possessed many other requisites for a breeder. With a strong will and decided views as to the character of the animal he desired to produce, his judgment and perseverence carried him through some difficulties which might have diverted a less self-reliant man from his course. Indeed, so confident was he as to the merits of his own stock, that he listened with impatience to praises of other herds differing in type from his own, and was singularly uneasy under adverse decisions in the show-yard, commonly entering protests and complaining of the judges when the Warlaby animals were not awarded the positions in their classes which he considered they deserved. The well-known Short-horn correspondent of the *Mark Lane Express*, in a letter on Mr. Booth and his herd, mentions several characteristic circumstances and facts. He says:—"Some of his bulls might be 'idle,' or so rough in their points that 'Booth men' have chaffed at the bad tactics of a hirer in not sending them home before, or at least keeping them out of sight at a sale; but the grand old blood was there, though often under an ungainly guise, and go where there they might, they left a good and a lasting impression on a herd." This is a strong instance of the value of pure blood, producing, when united with females of lower breeding, but perhaps more general symmetry, a great improvement in the stock—improving at once the blood and the flesh. All the great prize-winning herds of modern days are largely indebted to Booth blood, and this sometimes formed the veterans consolation when his own animals were defeated in the show-yard. Mr. Booth's persistency in close breeding was sometimes blamed by the public. They knew the bulls of the season at Warlaby, and predicted that the herd must go down for lack of a cross. "But the old sage smiled at their fears, and some time before he died had a still better excuse for his 'prejudice' than even Queen of the Ocean, in two offers to take the herd at the 15,000*l.* valuation, or to send an unlimited cheque."

Calendar of Operations.

DECEMBER.

MERSE OF BERWICKSHIRE: *Dec.* 3.—November opened steady, with barometer high; yet, in the absence of dry winds the land recovered but slowly from the effects of the previous heavy rains. There was a frosty night or two, but generally it was quite soft and mild, excepting bare fallows, and they are confined to the strongest clays in these times of root culture. Nothing had been done in the way of Wheat-sowing. About the middle of the month Potato land and pieces first cleared of Turnips got into condition for ploughing, when rain resumed sufficient to prevent work, though not amounting to 3 inches. A beginning has now been made, but the wind is damp and slightly showery. We have often sown Wheat in December; but have not been so late in beginning since 1852-3, when none were sown until February 1. Unless the wind becomes drier, the mere absence of rain will not bring our stronger soils into proper order. A month of growing weather has wrought a change on the Swede crop, where not previously spoiled by mildew. But the puzzle is how to get them off the land, and we can only throw them into small heaps where they grow, and await the chances of frost or dry weather. The quality of White and Yellow Turnips is fine, not being too large, and cattle are doing capitally, with the addition of Barley-meal. The tupping season is over, and it has been remarked that ewes have not taken the sheep readily.

Notices to Correspondents.

THE COW CABBAGE: *C D.* Seedlings from sowings at the end of March are generally fit for final planting out about the middle of May, and the crop will be in full use throughout autumn. Seedlings from sowings in May are fit for final transplanting in July and August, and are ripe now, and if the frost be not severe will be good in early spring. If sown about the end of June they will generally be fitter for spring use than if sown earlier. Seedlings from sowings in August are in good condition for planting out in March. Seedlings may be pricked out 4 inches apart when the leaves are 2 inches wide, and in three weeks they may be pricked out again in rows 30 inches apart, on deeply tilled and richly manured land.

INDIAN CORN: *A Subscriber.* It is a more fattening food than Beans or Peas, if either of them be given alone, or with roots and hay. But the mixture would be improved by the presence of both Beans and Indian Corn, the latter in the larger quantity.

AGRICULTURAL MACHINERY.—Chaff Cutters for hand or power, Threshing Machines, Carts, Waggons, Ploughs, Harrows, Turnip Cutters and Pulpers, and all kinds of Agricultural Implements; also the Prize Churn, Wire Netting, &c. Delivered carriage free. Price Lists on application.
BURGESS & KEY, 95, Newgate Street, E.C.; Works, Brentwood, Essex.

FOWLER'S PATENT STEAM PLOUGH and CULTIVATOR may be seen at Work in every Agricultural County in England. For particulars apply to
JOHN FOWLER & Co., 28, Cornhill, London, E.C.; and Steam Plough Works, Leeds.

BARNARD, BISHOP, AND BARNARDS, Norwich.
FURTHER REDUCTION in the PRICE of WIRE NETTING.

BARNARD, BISHOP, & BARNARDS beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

	Gauge.	Galvanised.	Japanned Iron
2-inch mesh, 24 inches wide	No. 19 ..	4½*d.* per yd.	3½*d.* per yd.
2-inch " " " .. "	18 ..	5 "	4 "
2-inch " " " .. "	17 ..	6½ "	5 "
2-inch " " " .. "	16 ..	8 "	6½ "
1½-inch " " " .. "	19 ..	4½ "	4 "
1½-inch " " " .. "	18 ..	6 "	4½ "
1½-inch " " " .. "	17 ..	7 "	5½ "
1½-inch " " " .. "	16 ..	9 "	7 "

All the above kinds can be made any width (under 6 feet) at proportionate prices.
Strong GALVANISED POULTRY NETTING, 7½*d.* per yard, 3 feet wide. GALVANISED SPARROW-PROOF NETTING for Pheasantries, 11*d.* per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.
Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1*s.* per yard.
The same with Galvanised Wire Rope, 1*s.* 2*d.* per yard
Illustrated Catalogues, with prices of every variety of Wire Fencing and Wire Netting, forwarded free on application.
*** Wire Fencing and Netting delivered Carriage Free at all the principal Railway Stations.

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.
GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.
F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.
Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.
Also TESSELATED PAVEMENTS of more enriched designs than the above.
WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, White Copings, Red and Stoneware Drain Pipes, Slates, Cements, &c.
To be obtained of F. & G. ROSHER, at their Premises as above.

SILVER SAND (REIGATE, best quality), at the above addresses—14*s.* per Ton, or 1*s.* 3*d.* per Bushel; 2*s.* per Ton extra for delivery within three miles, and to any London Railway or Wharf. Quantities of 4 Tons, 1*s.* per Ton less.
FLINTS, BRICK BURRS or CLINKERS, for Rockeries and Grotto Work.
F. & G. ROSHER.—Addresses see above.
N.B. Orders promptly executed by Railway.

Patronised by 70,000 Stock Breeders.

DAY, SON, AND HEWITT, Sole Inventors of the Celebrated STOCK-BREEDER'S MEDICINE CHEST, containing as follows:—
Six Bottles (at 2*s.* 6*d.* each) of the UNIVERSAL CHEMICAL EXTRACT, matchless for penetrating, mollifying, and assuaging pain in all wounds, kicks, cuts, strains, &c., in horses and cattle; straining in ewes lambing, and swollen and inflamed udders in cows and ewes; sore feet in cattle, sheep, and dogs.
One Dozen Bottles (value 28*s.*) of the GASEOUS FLUID or BLACK MIXTURE, unmatched in the known world for curing diarrhœa or scour in lives, sheep, and lambs; for ewes weakly and exhausted after lambng; for horses and cows exhausted and sickly, and for the fret, colic, or gripes in horses and cattle. An instantaneous remedy for blown cattle and sheep.
One Dozen Packets (value 13*s.*) of the RED DRENCH or INFLAMMATION POWDER, for cleansing after calving or lambing, for straining in ewes, and for removing all feverish symptoms in cows and ewes after calving or lambing; for yellows in oxen, and for colds, chills, and all inflammatory cases in horses, cattle, and pigs.
One Dozen (value 7*s.* 6*d.*) of the RED PASTE or CONDITION BALLS (for horses). These Balls give vigorous health, purify the system, and produce a mole-like sleekness of coat.
Price of Chest complete, with Shilling Key to Farriery, 2*l.* 16*s.* 6*d.*, securely packed, and carriage free. Sample case, usefully assorted, 16*s.* 6*d.* Messrs. D., S., & H. respectfully urge their friends to send their orders early, so that no purchaser may be kept waiting.
Either preparation may be had separately in boxes, carriage paid.
Address—DAY, SON, & HEWITT, Animal Medicine Manufactory, 22, Dorset Street, Baker Street, London, W.; or Wantage, Berks.
Testimonials from all parts of the United Kingdon and Ireland sent free on application.
Established over One Quarter of a Century.

New Melon "Malvern Hall."

B. S. WILLIAMS has much pleasure in offering for the first time this VALUABLE MELON, which has been fully proved, after three seasons competitive trial with all the best sorts in cultivation, to be the earliest to ripen and the first in setting its fruit. It has taken many First Prizes during the last and previous seasons at different Provincial Shows.

The following description is supplied by the Raiser, Mr. STEVENS:—"Plant of robust habit and vigorous growth, a very free setter and sure cropper; quite ten days earlier than any other variety. Fruit from one to two pounds in weight; scarlet flesh, rind tender, yellow mottled and streaked with dark green; fine flavour."

Price 2s. per packet.

Paradise and Victoria Nurseries, Holloway, London, N.

Slater's New Hardy Prolific Melon.

J. SLATER AND SONS have great pleasure in offering the above MELON as being of a very superior quality, a very free setter, and an abundant bearer—each fruit weighing from 3 to 3½ lbs. Slightly netted; shape, oval; flesh, pale green; thick and juicy. Price 2s. per packet, post free.

J. SLATER & SONS, Seedsmen, &c., Malton, Yorkshire.

London Agents:

Messrs. HURST & SON, Seedsmen, 6, Leadenhall Street, E.C.

The Castle Kennedy Fig.

PETER LAWSON AND SON have made arrangements to send out the above next Autumn. They are now booking Orders, which will be executed in strict rotation as received. Plants, 10s. 6d. each; a few extra strong at 21s. each—with the usual Discount to the Trade.

Full printed particulars to be had on application.

Edinburgh and London—Dec. 24

Vine Duchess of Buccleuch.

ROBERT PARKER has much pleasure in announcing that he is now distributing this distinct and valuable early GRAPE, which will supply the long felt desideratum of a White Grape with Muscat flavour that may be grown and ripened with the Black Hamburgh.

The following Certificates and Prizes have been awarded at various London and other Exhibitions.

Two Certificates of Merit.

Three First-class Certificates.

Two First Prizes in open competition for the finest flavoured Grape of any colour. Chasselas Musqué, Muscat of Alexandria, and Frontignan competed for these prizes. For further description see *Gardeners' Chronicle* of October 1st and 22d, pages 943 and 1008.

Also New GENERAL CATALOGUE, containing Priced and Descriptive Lists of Miscellaneous, Greenhouse, Hardy, and Stove Plants, Azalea indica, Conifers, Ferns, Fruit Trees, Grapes, Rhododendrons, Roses, Dutch and other Bulbs, &c., which will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

PEACHES, NECTARINES, &c., in Pots.—A private Gentleman having more Trees than he can find room for wishes to sell about 20 or 30 of Fine PEACH, NECTARINE, and APRICOT TREES, full of Fruit Buds, and ready for immediate Forcing; also, Four FIG TREES in full bearing; and about Ten CAMELLIAS, full of Blossom Buds; and Five or Six AZALEAS; and also a few LEMON, ORANGE, and SHADDOCK TREES, of various sizes, some with Fruit on them. They were grafted by their owner from Trees brought from abroad, and their Fruit is full of Juice, and delicious.

Apply, by letter, to Mr. R. S., care of the Mistress, 40, Lime Street, Leadenhall Street, London, E.C.

Magnificent Dwarf-trained

MORELLO and MAY DUKE CHERRIES, ROYAL GEORGE PEACHES, MOOR PARK APRICOTS, PEARS, and PLUMS, of the best leading kinds.

WM. WOOD AND SON have to offer a large Stock of the above, grown on maiden soil. The trees are very large and have been most carefully trained. Finer trees could not possibly be wished for.

W. W. & S. have also some very fine Standard SCARLET HORSE CHESTNUTS left. Stems with fine heads.

Address, Westlands Nursery, Muresfield, near Uckfield, Sussex.

3600 Extra Strong STRAWBERRY PLANTS for forcing, in 32-size pots (many of the pots having two plants in each) consisting of the following varieties, viz., ADMIRAL NAPIER, BRITISH QUEEN, KEEN'S SEEDLING, &c., 50s. per 100; also Plants of the above, and also of ELTON PINE for Planting, 3s. 6d. per 100.

A Large Stock of fine sound Pot Roots of DAHLIAS (suitable for exportation), comprising most of the Leading Varieties in Cultivation, 42s. per 100.

Address, THOS. ANSELL, Camden Nursery, Grafton Road, Kentish Town, London, N.W.

STANDARD APPLES for Orchard Planting, strong choice named sorts.—SPRUCE FIRS, 3 to 4 feet, strong and handsome; AUSTRIAN PINES, 4 to 6 feet, ditto, ditto; and all kinds of FRUIT TREES, EVERGREENS, and ROSES, all recently transplanted, at

WOOD & Co.'s, Barbourne Nurseries, Worcester.

Prices upon application.

Dwarf-trained Trees.

BY THE THOUSAND, HUNDRED, OR DOZEN.

APPLES, PEARS, PLUMS, CHERRIES, PEACHES, and NECTARINES.

Fine, flat, well trained, of best quality and true to name.

RICHARD SMITH, Nurseries, Worcester.

Extra Size Fruit Trees.

PYRAMIDAL PLUMS, PEARS, &c., of extra size and first quality, very handsome. Prices, names, and sizes, may be had on application.

Also the DESCRIPTIVE FRUIT CATALOGUE.

STEPHEN BROWN, Seed and Nursery Establishment, Sudbury, Suffolk.

RICHARD SMITH'S FRUIT LIST contains a sketch of the various forms of Trees, with Directions for Cultivation, Soil, Drainage, Manure, Distance, Pruning, Lifting, Cropping, Treatment under Glass; also their synonymes, quality, size, form, skin, colour, flesh, flavour, use, growth, duration, season, price, &c. Free by Post for one stamp.

RICHARD SMITH, Nurseries, Worcester.

To the Trade.

BUNYARD'S IMPROVED SCARLET TOM THUMB NASTURTIUM.

True KENTISH COB NUTS.

" KENTISH FILBERTS.

Extra fine THUJA AUREA.

STANDARD and HALF STANDARD ROSES.

Prices on application to THOMAS BUNYARD & SONS, The Old Established Nurseries, Maidstone, Kent.

TWO NEW FIMBRIATED PRIMULAS.

Seed Packets, 2s. 6d. and 5s. each.

PRIMULA CARMINATA SPLENDENS, a beautiful new coloured one.

P. FILICIFOLIA (Fern-leaved).

See other Advertisements of the older kinds of fimbriated Primulas.

E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

Rhododendrons.

JOHN WATERER begs to announce that his New CATALOGUE of Hardy, Scarlet, and other Choice RHODODENDRONS, as exhibited by him at the Royal Botanic Gardens, Regent's Park, is now published, and can be had on application. It gives faithful descriptions of all the esteemed varieties, as well as a Select List of Hardy CONIFERS, with heights and prices; also the leading kinds of EVERGREENS, ROSES, FOREST TREES, &c.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway

EARLY SPRING FLOWERS, largest Stock in England and greatest variety.—WEBB'S Giant Polyanthus and Giant Cowslip, Cowslip from the Himalayas, Golden Chain Polyanthus, Florist Flower Polyanthus, American Primrose, Scarlet Primrose, Gentianella, Double Crimson Primrose, ditto Yellow ditto, ditto Purple ditto, ditto Rose ditto, ditto White ditto, ditto Lilac ditto, Double Pansy, ditto Negro Polyanthus, ditto Golden Chain ditto, ditto Pink Hepatica, Single Blue ditto, ditto White Violets, ditto Purple ditto. Seed of the above Polyanthus and Cowslip. LIST on application to Mr. WEBB, Calcot Gardens, Reading.

Notice to the Trade.

CARTER'S "FIRST CROP" PEA.

JAMES CARTER AND CO. beg leave to inform the Trade that, in consequence of the great demand for the above PEA, they will in future be able to execute Orders for Small Quantities only.

CARTER'S "FIRST CROP" PEA.

The EARLIEST in CULTIVATION

CARTER'S GARDENER'S VADE-MECUM.

New English Hybrid Perpetual Rose, King's Acre.

JOHN CRANSTON has the pleasure to announce that his New English Seedling HYBRID PERPETUAL ROSE, KING'S ACRE, will be sent out this autumn.

The colour of this truly beautiful variety is bright vermilion rose, reverse of petals satiny; the flowers are extra large, globular, of remarkable depth and exquisitely formed, having large, smooth, shell-shaped petals of fine substance: the foliage is ample and of a fine rich dark green colour, while the habit of growth is all that can be desired, being vigorous and robust.

Assured that the above is worthy of a prominent place in the most select collection, either on the Exhibition tables or in the Rosery, J. C. respectfully solicits early orders, and observes that such will be executed in rotation. Price 7s. 6d. each. The usual discount to the Trade when 3 or more are taken.

"SEEDLING ROSE (*J. Cranston*).—We regret that we did not see your Rose King's Acre in the season, for when such beautiful flowers are produced now, after such a drought, we may well ask, what must it have been then? Those you sent were very fine, globular, and of a colour much wanted—purplish rose, with the reverse of petals light. It is a really fine flower, and if, as you say, it grows, having withstood the season of 1864 as it has, it will be a valuable acquisition to our English raised Roses."—*Vide* Journal of Horticulture, Aug. 30, 1864.

A faithfully coloured Drawing, by ANDREWS, will be sent in exchange for 12 postage stamps.

Nurseries, King's Acre, near Hereford.

Superb Double Hollyhocks.

NURSERIES, SAFFRON WALDEN.

WILLIAM CHATER has now ready for sending out a fine healthy stock of Young Plants of all the old and approved varieties of the above; likewise a fine stock of his splendid New Seedlings shown by him in spikes before the Floral Committee at the Royal Horticultural Society will be ready for sending out in November. Older kinds can be supplied by the dozen, 100, or 1000. Prices on application. A very large stock of unblowned Seedlings, 3s. and 6s. per dozen, or 20s. and 30s. per 100. Blowned Seedlings with their colours attached, fine for borders, 6s. to 18s. per dozen, or 30s. per 100.

Seed saved only from finest varieties, new and very choice mixed, 2s. 6d. and 5s. per packet; in Collections of 12 separate named varieties, 4s. to 10s.

N.B. WILLIAM CHATER, Nurseries, Saffron Walden, Essex.

American Plants.

AS EXHIBITED IN THE ROYAL HORTICULTURAL GARDENS, KENSINGTON.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE of RHODODENDRONS and other AMERICAN PLANTS will be forwarded on application. The Catalogue also gives a General Summary of their Stock, which contains probably the most extensive choice of all the Hardy and finest Evergreens and Conifers

Knap Hill Nursery, Woking, Surrey

Choice Camellia Blooms.

LUCOMBE, PINCE AND CO. have now a large quantity of extra fine CAMELLIA BLOOMS for disposal, which can be securely packed and sent to any distance with safety. Price on application. Exeter Nursery, Exeter.

The Gardeners' Chronicle.

SATURDAY, DECEMBER 24, 1864.

MEETING FOR THE ENSUING WEEK.

MONDAY, to FRIDAY, Dec. 26 to 30 — Royal Horticultural (Illustrations of the Sources and Preparation of Perfumes), at South Kensington.

IN his celebrated Essay on Gardens, Lord BACON remarks:—"I hold it, in the Royal ordering of gardens, there ought to be gardens for all the months of the year, in which, severally, things of beauty may be then in season." He then proceeds to give a list of plants, mostly evergreen trees and shrubs, with which it is desirable to furnish grounds "for December, January, and the latter part of November," or which might form what we should now call a WINTER GARDEN. As with many of BACON'S other proposals, his suggestions were probably, for the most part, ideal. Few actual winter gardens have been executed in this country. Not unfrequently, however, pleasure-grounds, or what are sometimes called kept grounds, have, in whole or in part, been substantially winter gardens. The only thing to be regretted is, that this definite purpose has not been kept sufficiently in view, and on that account the results have not been altogether such as might be desired.

The characters or qualities to be aimed at in a winter garden are not far to seek. The following may be specified:—shelter from the north and east; a sunny exposure to the south and west; a dry subsoil, and an atmosphere genial and free from damp; easy access from the dwelling house, and good firm walks leading to it; and withal such an assemblage of trees and shrubs, as may pleasantly call the attention, and attract the steps of those who enjoy walking exercise in winter.

It must be owned that it is often easier to conceive of these requisites than to realise them in actual practice. Much must depend on the natural contour of the ground to be operated on. It is not always possible to take advantage of "boon Nature's old felicities." There are localities which have hardly any adaptation for this purpose. In inspecting the available ground, the designer may have the mortification to discover that the site best adapted naturally for a winter garden, is too distant for example from the mansion, or does not hold the position relatively to the other parts which he would wish it to have. In such a case, all that he is able to do, may be so to arrange the several departments of the kept grounds as naturally to lead the steps of the wanderer to the winter garden. It is a happy circumstance when the winter and spring gardens are contiguous, and when they pass by imperceptible degrees into each other. They should hardly ever be separated by fences, however carefully concealed. Indeed the most felicitous arrangement of the so-called seasonal gardens is, when, without the formality of distinct inclosures, each becomes successively a centre of special interest as the year rolls round. When the comfort and convenience of the proprietor is consulted, and due advantage is taken of the natural or acquired characters of the ground, all is accomplished that can reasonably be desired.

The style and materials of ornamentation in winter gardens are sufficiently obvious. The trees and shrubs should be chiefly evergreens, but not exclusively so; for they have no eye for natural beauty, who do not perceive that the forms and tints of deciduous trees, sparingly introduced, are essential elements in winter scenery. Unbroken masses of Evergreens, whether made up of the round-headed Portugal Laurel, or the spiry Spruce Fir, are formal and wearisome. Monotony, which is oppressive at all times, should be particularly avoided in the gloomy season of winter. Evergreens, however, particularly the Conifers, possess a considerable diversity of hue and form, and even in considerable masses, when properly handled, can be made to exhibit that intricacy and variety which charm the eye and sustain the attention. Small groves of Deodars, associated with the Cedars of Lebanon and Mount Atlas, may be introduced with advantage, as well as minor groups of Pines and Cypresses—either distinct or in combination. Single trees of Abies nobilis, Nordmanniana, Douglasii, &c., of the superb Wellingtonia, or the sturdy Araucaria, placed so as to stand out in full relief, may be made to afford examples of the most exquisite beauty. It may also be remarked that in a winter garden, seeing that it is a garden, the trees and shrubs should be rather of a *recherché* description—Scotch Firs and Wych Elms have no business there. On the other hand, an immense variety of single species is poor in the total effect, and provocative of irritation. A winter garden should no more be an arboretum, than an autumn garden should be a botanical arrangement; though a winter garden may have many of the charms of an arboretum. In certain gardens the well informed visitor has no difficulty in perceiving that the proprietor has got the sweepings of a nursery. A still worse fault is to be found in those long lines of Irish Yews, Junipers, &c., sometimes seen in places where there is an affectation of the Italian style; but which only remind one of the array of sheaves in a field of Beans, which have been reaped but not yet carried.

To these brief hints, which probably would require much expansion to be duly applied, it may be added that multitudes of Snowdrops, Winter Aconites, and early Crocuses, should be profusely scattered through the winter garden, particularly under the interspersed deciduous trees and shrubs. Along with these may be introduced Lilacs and Golden Daffodils for spring, and a Laburnum or two, with Harebells and whatever else will grow under shade in early summer. There is no reason why a winter garden should be destitute of a slight sprinkling of floral beauty at other seasons; for if the proprietor loves some magnificent specimen, say of Abies Douglasii, or Cupressus Lawsoniana, as he is sure to do if he has any taste at all, he will visit the winter garden in summer as well as in winter, and he will be glad to observe that while its main character is adequately preserved, it is not maintained with that pedantic exclusiveness which may be found in the works of man, but certainly not in the works of Nature.

WHY should the element of ornamentation be so often lost sight of, and the utilitarian principle made all in all in the planning and planting of KITCHEN GARDENS? This question has been suggested by some remarks which have been recently made by Mr. FLEMING, of Cliveden,* whose name will be sufficient to secure a candid hearing for any proposition he may submit to his professional brethren.

In kitchen gardens of course the primary object is to secure a good return of such esculents and fruits as the proprietor may happen to prefer; but if, besides securing this return, it may be converted at the same time into a pleasant promenade, that

* In the *Florist and Pomologist*, vol. iii., p. 210.

surely is an advantage not to be lightly estimated, the more especially when this pleasant state of things may, so to speak, be made to dovetail into the general arrangements for realising the primary object already referred to. Something of this kind is involved in the suggestion of Mr. FLEMING, which is, in the main, that fruit-trees should be planted along the sides of the walks, and both arched and inarched over them. Mr. FLEMING, indeed, only alludes to the amount of interest to be drawn from arches of Pears and Apples in "small gardens," where it is necessary to combine use with ornament as much as possible; but we do not see why larger gardens should not also share in this desirable combination. Hence we have taken the opportunity to invite attention to the suggestion.

We gather from Mr. FLEMING'S statement, that he has planted the walks of a kitchen garden with Pears, Apples, and Roses, in this way:—First, two Pear trees on each side opposite each other; then two pairs of Apple trees, and two pairs of Hybrid Perpetual Pillar Roses in the same way. This is continued throughout the garden. The walks are Grass, 6 feet wide, and the trees are planted close up to the edge; but a width of 8 feet is recommended as being preferable for the arch, giving a higher and better proportioned span, and taking the plants back from the edge of the Grass. The space between each arch is 10 feet. The result is spoken of as in every way satisfactory. It is however intended to introduce some of the beautiful-leaved American Vines during the present winter.

As to details, it is found that Pears and Apples simply require three upright stakes to each for a season or two, the trees when planted being headed back to within 18 inches of the ground, so as to get two lateral shoots, which are trained up at 2 feet from the stem to the height from which the arches spring. The arches are recommended to be of wood or some readily removeable material, on the score of economy, because it is part of the plan, that as soon as the trees have grown sufficiently over the top, the opposite branches should be inarched, and then, when they are sufficiently united, that the temporary supports should be removed. The trees will continue to support themselves afterwards, unless during the time the wood is young a very heavy crop should be borne. Pears and Apples, however, it is found seldom bear so heavily on young wood as to threaten injury from this cause, though arches of Plums have been completely broken down by the weight of the fruit, after having been three seasons inarched.

The varieties of Apples and Pears planted opposite each other are recommended to be of different varieties, not so much for the sake of variety in the crop, though that may be a desirable object too, but that by means of inarching, the trees may mutually benefit one another, the weaker moderating the luxuriance of the stronger by drawing off some of its surplusage of sap, and the stronger gaining in fertility in proportion to the degree in which it has assisted the weaker. It is hence evident that the habit and constitutions of the several varieties should be rather carefully examined into, before their places are assigned to them. The advantage of inarching in this way Mr. FLEMING enforces by an illustrative example:—Five very old and fine-looking wall trees, that never bore any fruit, were inarched one into the other seven years ago; the second year after they had a crop, and they have borne less or more ever since.

We have mentioned that for Apples and Pears temporary arches of wood are recommended because the trees will ultimately be able to support themselves; but for Plums, as well as Roses and Vines, and any similar habited plants it may be desired to introduce, the supports should be of a more durable material, such as iron.

We have referred to this subject chiefly for the sake of inviting attention to Mr. FLEMING'S FRUIT ARCHES, which, while they lend an ornament to the quarters of the commonplace utilitarian kitchen garden, may also do much towards yielding a supply of the choicer fruits, and at least may increase the capacity of a garden by economising the space occupied by the walks, whether of Grass or gravel. It is of course the intention that these trees should be submitted to the modern *régime* of regular root-pruning, although this is not enlarged upon in the paper to which reference has been made; and the same remark may also be applied to the pinching of the branches. This is evident from the concluding remark, which we quote *verbatim*:—"Orchard-house treatment demonstrates most distinctly, that nearly all our fruit trees become more productive under dwarfing treatment."

—— AMONG the PLANTS WITH REMARKABLE FOLIAGE employed by the Parisian gardeners for decorative purposes, we find MACLURA TRICUSPIDATA and GUNDELIA TOURNEFORTH are made use of. The latter is a great Composite of Syria and Asia Minor, with something the aspect of an Artichoke, and has been from time to time cultivated in Paris, but lost, as no doubt it has been with ourselves, until reintroduced by M. BALANSA in 1855. The plants raised from the seeds then obtained flowered in 1859, after M. DECAISNE had had them planted out. The bushy rigid aspect of the plant, which grows nearly a yard high, together with the form and elegance of its leaves, which are pinnatifid and spiny-toothed, the lower ones stalked, the upper somewhat stem-clasping, give it a very picturesque appearance. Unfortunately it is rare, and can only be multiplied by seeds. It is sufficiently hardy to survive in the climate of Paris, if planted in light deep soil not too moist, and protected by a hand-glass, surrounded by straw or dry leaves, and is therefore what we call half-hardy. The seeds (achenes) of this plant appear to be sometimes substituted for Coffee.

The Maclura was introduced to the Museum establishment in 1862, from China, and is remarkable for its leaves, which are very decidedly three-lobed. This is described by M. CARRIÈRE as a bushy well-branched shrub, milky in the younger parts, the branches somewhat pendent, and bearing in the axils of each leaf a simple sharp thorn. The leaves are deciduous, thick and shining, shortly stalked, and deeply three-lobed, with the middle lobe lengthened out. The leaves distinguish it at once from all the Macluras previously known. It is said to be very hardy, and independently of its merit from an ornamental point of view, it is suggested that it may probably become useful for hedges. The half-ripened wood, taken off in July, strikes freely enough under glass.

—— The scientific world has sustained several severe LOSSES BY DEATH during the year now soon to close. Without taking them in the order of their dates or of their importance, we may briefly mention the names of some of the botanists who have been taken from amongst us.—In January last M. NICOLAS TURCZANINOFF died at Charkow. He was a Councillor of State, and devoted himself for many years to botanical science; but owing to a fall, was latterly unable to apply himself with so much energy to his favourite studies. He was the author of several papers in the Transactions of the Moscow Academy.—M. CRÜGER, the Superintendent of the Botanic Garden of Trinidad, died in February. He was principally known by his physiological and morphological papers in the *Botanisches Zeitung*.—During the month of January, also, occurred the deaths of Mr. JOSEPH WOODS, a veteran British Botanist; and of M. GAY, one of the botanical magnates of Paris.—In May Germany lost one of the oldest of her botanical Professors in the person of M. TREVIRANUS of Bonn, a man whom Prof. MORREN calls the NESTOR of German botanists.—The traveller and naturalist JUNGHUHN died at Lembang in the month of April. He was Inspector of the Dutch Cinchona plantations in Java; and in his various capacities had accumulated a vast quantity of materials for scientific works—The death of M. HERMANN SCHACHT, Director of the Botanic Garden of the University of Bonn, took place in August last. Dr. SCHACHT was born in 1814 at Ochsenwerder on the Elbe, studied medicine at Altona, gained the prize offered by the Royal Academy of Sciences at Amsterdam for the best work on the origin of the embryo in phænogamous plants, and became assistant to Dr. SCHLEIDEN at Jena. He published a general treatise on botany, but his most distinguished work is an admirable treatise on the application of the microscope to the study of the vegetable kingdom, which has been translated into English. In 1860 he was appointed Professor to the University of Bonn, and director of the Botanic Garden there.—M. KICKX, Professor of Botany in the University of Ghent, died at Brussels in September, at the age of 61. He was author of several papers on the Cryptogamic portion of the Belgian Flora.—The Rev. A. SCHEELE died at Heersum, near Hildersheim, last September. He was author of several systematic papers published in the *Linnæa*.—In the month of July LEIBOLD, the well-known botanical explorer of Mexico and Cuba, died at Havana, whilst preparing for an exploration in Yucatan.

ALLAMANDAS.

HAVING been very successful in the pot culture of Allamandas, I beg to offer a few remarks on that subject. In this family are some beautiful species, which, when well grown, are very effective, especially for purposes of exhibition—Schottii, grandiflora, and Aubletii I consider to be the best. When sent out, violacea was expected to prove an acquisition, but, unfortunately it has turned out comparatively worthless. It is like the Scotchman's horse, bad to catch, and when caught of no value. Let us therefore return to Schottii. Like the rest of the family this species requires high cultivation; that is, it should be grown quickly until it shows flower; then it should be encouraged to ripen its wood perfectly, after which it must be well rested and properly pruned.

Allamandas are all easily propagated by means of cuttings, which strike readily in a brisk bottom heat. Let us, however, suppose that the cultivator has a nice established plant, say in February, with three or four shoots on it. In that case I would start it immediately by plunging it in a brisk bottom heat in a plant stove or hotbed, and as soon as growth had fairly commenced, I would prune each shoot back to the last two joints. When fairly broken, I would give a liberal shift, using the following compost for the purpose, viz., two parts rotten turf from a good pasture, and one part rough peat, well broken and mixed with the turf, the fine mould being sifted out of it. I would then add silver sand, and see that the drainage was perfect. I would now re-plunge into a brisk bottom heat, where the atmosphere was moist, and there was a considerable amount of light. Thus placed, the plants would make rapid progress, and would soon require stopping, which may be done when the young shoots are 2 feet long, shortening the strongest to two or three joints, and the weakly ones to one or the lowest joint. Suppose the young plant had four shoots on it when first pruned, it ought to have broken from two to four eyes on each shoot; there would therefore be at least 12 shoots to stop back. And the roots being in active progress, each of these would push from four to six eyes, when the plant would require another liberal shift, and as before, should be re-plunged in a brisk bottom heat, syringing overhead every evening, and watering frequently with liquid manure in a clear state—weak and often being the rule. The plant should now be kept as near the glass as may be convenient, and it will require stopping again for the last time. The exact period to perform this operation will depend on the time at which the plant is wanted to be in full flower. In ordinary seasons Schottii requires 12 weeks from the last stopping until it is in full blossom. Aubletii and cathartica take about 10 weeks, and the treatment just recorded is applicable to these also. At this last stopping each shoot ought to produce from four to six or more laterals, the whole thus amounting to 300 young flowering shoots.

During the latter period of their growth, and while in flower, Allamandas will require a very liberal supply of water, which should be for the most part weak liquid manure. When flowering is over, water should be gradually withheld to a certain extent, in order to aid the ripening of the wood, previous to wintering the plants in a lower temperature and a drier atmosphere. Early in the following February the plants may be pruned and started in bottom-heat as in the previous season. Prune back to from four to six joints from the commencement of last year's growth, and as soon as the plants have fairly broken they should be turned out of their pots, the balls reduced, and repotted into a smaller sized pot than that which they had previously occupied, and be treated as recommended for last season. This will be the third season, after which the plants may be destroyed.

At Darlington Flower Show, last year, I exhibited Aubletii, three years old, with upwards of 500 flowers open on it at one time; Schottii, with upwards of 300; and grandiflora, 18 months old, with upwards of 200 blooms. The last-named species requires to be treated somewhat differently from the others. The compost for it should consist of two parts rough turfy peat, of a fibrous nature, and one part turfy loam, with the fine material sifted out of it, together with silver sand and charcoal, to keep all open and porous. This plant being of a more delicate habit than any of the others, is also very likely to be infected with thrips, which immediately stops its growth. It therefore requires watching in order to be ready to fumigate it when necessary. Owing to its slender habit it will likewise not be prudent to stop it more than twice during the season, watering copiously with weak liquid manure, and mulching with sheep or deer dung, and using the precaution of fumigating with tobacco previous to the plant coming into flower. Grandiflora requires, moreover, to be pruned harder in than the three former varieties; it also requires longer to make a specimen plant, but as it is one of the best of the genus, it is well worthy of every attention. *Thomas Wilson, Upper Clapton.*

NOTES ON GARDENS.—No. XXV.

THE GARDEN-FARM AND NEW WINTER GARDEN, DUBLIN.

THE Garden-Farm is compounded of a very small infusion of farm, a good half of market-garden, a fourth of nursery garden, a slice of Alpine ground and two or three of experimental horticultural buildings, with a slight dash of the botanic garden, and a flavouring of the school for young gardeners — the whole spiced with fruit growing, and served up with an excellent illustration of economical rotation of garden crops. I have a distinct recollection of meeting with the Ivy-leaved Duck-weed in a small tank in the vicinity of young Wellingtonias, the Sea Heath not far from a capital crop of Asparagus, and several dozen varieties of Pears all growing on one tree, trained against Mr. Niven's house, within two minutes after passing through the very tasteful entrance gate and admiring its pretty surroundings. These were my first impres-

sions of the Garden-Farm, but they do not include the most remarkable, that having been furnished by the worthy owner himself, who, now far in his seventh decade, is still as active as ever. If Mr. Ninian Niven had gone to rest with John Claudius Loudon, it might have been with a happy feeling of duty done, for, years before the great worker for gardening and gardens had been laid in Kensal Green, Mr. Niven had, after effecting very great and improving changes there, resigned the curatorship of Glasnevin, to which he had been called from the superintendence of the Chief Secretary's garden—for many years back, as now, one of the very first of Irish gardens.

Since leaving Glasnevin, Mr. Niven has originated the Garden-Farm—before his occupation a wild and useless tract; and while very actively employed with its improvements and management, has regularly practised as a landscape gardener in all parts of Ireland. Men generally, including gardeners, are satisfied with the results of the hey-day of their matured energy, and rarely think of rooting up the successes of their 40th or 50th summer for new notions, whatever their source; but not so Mr. Niven. I question if more evidence of tact, youth, and life would be found in the gardens of our youngest workers than is manifest at the Garden-Farm, Drumcondra. A prettier, more healthful, or more suitable spot, for the *beau ideal* of a successful and first-class gardener to retire into, and peacefully, though actively, enjoy the autumn of life, is not fanned by mountain breeze—except, by the by, Mr. Wilkie's lodge in the Phœnix Park, to which I must give the palm of all gardener's gardens that I have yet seen. But Mr. Niven's is a commercial garden, and of course that makes all the difference.

On each side of the lawn before Mr. Niven's house the finer evergreens and Conifers are closely planted, some of the choicer kinds being in pots plunged in circular beds on Grass, in advance of plants arranged in the ordinary manner; and these, with the novel fruit-growing houses, which also run for some distance on each side of the walk leading to the house and some pretty pleasure-ground, effectually conceal the more commercial portion of the place. Cerastium arvense—a dwarf and compact form of it—acts as Mr. Niven's Spergula. I noticed it near the terrace on which his house stands in fair condition considering the season, and it possibly may be at least as useful as the Spergula for some purposes, such as greening rough banks, &c. Some of the beds containing mixed groups of choice Thujas and other Pines in pots (ready to be sold off and replaced) were edged with the best hardy Sempervivums and Sedums, and were indeed very ornamental and interesting.

Many acres of Strawberries and other small fruits are grown for the Dublin market, with abundance of vegetables and general nursery stuff, the cropping, &c., being so arranged that there is a continuous weekly series of returns from the Garden-Farm throughout the year. In December, January, and February, from the nursery department, by the sale of fruit trees, Pines, shrubs, &c.; in March, April, and May from the sale of vast quantities of Rhubarb, forced Strawberries, and other spring garden crops; in June, July, and August from Raspberries, outdoor Strawberries, small fruits of various kinds, and vegetables; and in the three remaining months from house Peaches and Grapes, Pears, Apples, and Plums, with of course general crops of vegetables.

The work of the place is chiefly done by lads and young men from 14 to 20 years of age, who are engaged as pupils for three years, and located within the gardens under Mr. Niven's discipline at all times.

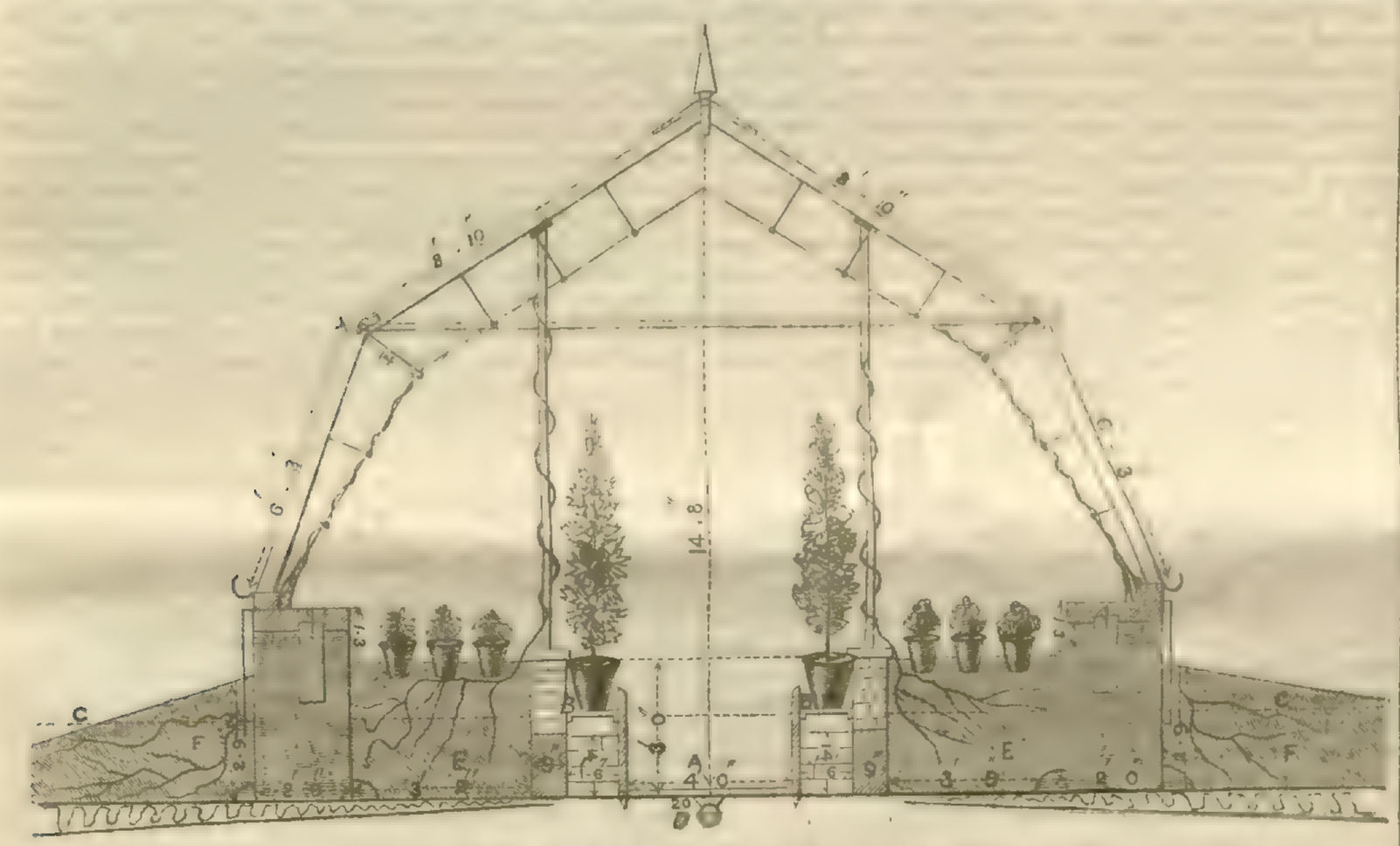

SECTION OF MR. NIVEN'S VINERY.

A. Floor 3 steps below Ground Level
B. Wooden Trellis
C. Ground Level
D. Drain Pipe
E. Inside Border and raised Beds
F. Outside Border.

From amongst them two foremen, one for the indoor and the other for the outdoor department, are usually selected. I should say this is a capital course for a young gardener to begin with, as market garden work is generally a mystery to gardeners; and so is often the knack of packing, and the generally useful "nous" acquired in a good nursery, except to those who have gone the round of the London and other great establishments. The peculiarities of vegetable culture at Drumcondra would be well worth recounting for the benefit of gardeners, young and old; but I had not time to get accurate particulars. It may, however, be noted that the suds from a great washing establishment adjacent, is a very active agent which Mr. Niven carefully conducts to many of his crops.

Some rather new houses furnished the greatest novelty, one large orchard-house being very effectively heated by earthenware pipes with cemented joints; but the most remarkable houses were not artificially heated, except by using in spring a small American stove in each to prevent danger from frost at that season, and yet displayed excellent crops of Grapes and Peaches. They are span-roofed houses, having the pitch of the sides and roof adjusted so as to receive the sun's rays at nearly right angles during the whole day. The roofs are fixed, little top air being given but by the spaces over the doors, and some moveable panes in the top near the centre, but the side ventilation is very efficiently and simply effected by having a long light board with openings at regular intervals, sliding in a groove exterior to the similarly perforated, but of course fixed side of the house. The Vines feed in the outer and inner borders, and along the centre a path is sunk 3 feet deep, while at 2 feet high on each side there is a narrow step on which to place a single row of fruit trees in pots, the remainder of the space between these plants and the glass on each side being devoted to early Strawberry work and similar uses, for which it seems well adapted. A house of Peaches more than 100 feet long, built in this way (the plants trained on the rod principle, fan-shaped, but with the carefully spurred rods of each plant allowed to cross those of its neighbours, thus making a sort of open network for admission of light to the interior, fruit, &c.) displayed at the time of my visit a first-class crop of fruit in all respects, but this was by no means so astonishing as a Vinery of similar pattern. In it the Vines were trained horizontally, and the roof was literally covered with Grapes—not, it is true, as large in bunch or berry as those to be seen at the Regent's Park show in July, but good marketable fruit, and of the right colour too. So much has Mr. Niven done with glass, in the cloudy clime of Hibernia; and he told me of having matured the Muscat Grape without artificial heat in this way.

The latest house he has erected on this principle, with inclined sides, is a very handsome octagon, with Vines trained horizontally at wide intervals to admit plenty of light to the standard Peaches in the central bed. With Vines up the slender pillars, and festooned overhead, and furnished with benches for very dwarf trees in pots, and shelves for Strawberries, this house looked the most novel and prettiest of orchard-houses. These houses have been put up within the past four years, at an almost fabulously small cost, are quite ornamental, and I doubt not have already sent more produce to the Dublin fruit market than has sufficed to repay the cost of adding such pretty winter-garden promenades to the Garden-Farm—which is 30 acres in extent, all tilled by hand and with the "patent fork," and the labour and expenses of which Mr. Niven informed me averaged less than 200*l.* per annum.

The Winter Garden and Grounds of the "Dublin Crystal Palace Company" are very conveniently situated in the fashionable or "west" end of Dublin, within a few minutes' walk of the chief squares and best thoroughfares of the city, and within easy reach of all parts of it. There is a very large building for concert and refreshment rooms, and numerous other offices apart from the iron and glass division: but this portion, while forming the east, and I suppose general entrance front, will be completely hidden from the grounds by the winter garden, which, though not covered over when I saw it, was yet sufficiently advanced to show its capacity for rivalling under good management some of the best plant aspects of the Sydenham building. The garden, about 15 acres in extent, was, with the exception of the parts near the building, almost completed and planted.

To the east of the garden, bricks and slates were very conspicuous, and these Mr. Niven, the designer, has taken considerable pains to hide by raising sweeping irregular mounds on that side. The rustic, gardenesque, and geometrical styles of gardening are about equally displayed in the disposition of these grounds. The rustic portion—that most remote from the building—was finished or nearly so. Along the front of the Winter Garden is to run a terrace 500 or 600 feet long, which is to be "set off" in the best style with statuary, vases, &c. Descending from this terrace by the central walk, a chaste and ornamental though not over elaborate geometrical garden was in course of formation, with panels, fountains, &c., this occupying nearly the centre of the grounds. Beyond this Pines and shrubs began to appear, and the grounds to assume a mixed and easy character, till they merge on the left into the rustic style; in front into the sweeping banks before alluded to; and on the right into a deeply sunken oblong archery ground about 350 by 150 feet, which can be flooded in winter, and thus converted into a skating ground.

At the end of the central walk furthest from the main garden entrance to the Palace, the chief water display—a novel one—will occur. It will issue from a basin elevated about 26 feet above the level of the garden, and fall as a rusticated cascade from that height, covering about 25 feet wide of the precipitous rockwork, which will be hollied, and mossed, and saxifraged as much as possible about the water. The banks, contrived to shut out the "groves of chimneys," are raised against the back of this "elevated basin." A Turkish kiosk was being built, and there was a finished specimen of the inevitable but barbarous labyrinth. The south side of the garden comprehends a rosarium, American ground, rockeries, and rooteries planted abundantly with rock plants, &c. This portion is well done, and while giving a pleasing variety to the garden will also form a pretty sight from the galleries of the Palace. The free use of roots, however, I presumed to think a mistake; they are, for various reasons, objectionable except in very peculiar and rare situations; and in this case several of the rising banks looked a little too porcupinish. The main supply of water will be derived from the roofs of the various buildings, conducted into a large reservoir, which is made to afford an ornamental bit of water at the head of the archery ground, and thence is distributed by steam power to the fountains, cascade, &c., returning directly from these to the reservoir.

Considering that the site of this garden offered the least possible advantages to Mr. Niven, and that the ground is much too small in proportion to the Palace, though more was not obtainable—much too small, moreover, for a great garden, I could not but conclude that the best arrangements had been made to afford gratification to all sorts of tastes (that for flower shows, of which the garden is to be the scene, among them), and, in short, to make a very pleasant garden for the people of Dublin. There were no tender plants to be seen at the time of my visit; probably the palace is ready to accommodate them now, but till it is furnished and the gardens completed, it is scarcely fair to pronounce an opinion on the establishment. *Wm. Robinson.*

STRATIFICATION OF SEEDS.

This is the placing of seeds in layers, in the soil, or in sand, till the time of sowing them arrives, the object being to prevent the envelope of the seeds from drying and hardening, in consequence of which germination is liable to be injured or retarded. All seeds do not, however, require the same care. Stratification is chiefly necessary for the Cratægus, Mountain Ash, Cotoneaster, Cornus, Oak, Beech, Juniperus, Ivy, Æsculus, Rosa, Pavia, Pinus, Araucaria, Palms, Salisburia, &c., and generally all stone fruits, and those with hard coverings.

It is necessary in the first place that the box or vase intended for the seeds should be well drained. The seeds are then arranged as follows:—first, a layer of seed, then one of fine sand, or dry light soil; again, a layer of seed, then one of sand, or soil, and so on in alternate layers. The vase is then covered with glass, slate, or a board, so that insects may not get in; and it is then placed in a cellar, or better, in the open ground, at a depth sufficient to be out of the reach of frost.

Towards the end of February the seeds are examined. If at this time no signs of vegetation are apparent, a slight watering is given, and the vase is returned to its place, and some days after the seeds are again examined. They ought then to be swelling, and several of the germs ought to be bursting their envelopes

The seeds should now be sown. For their reception some light fine soil should be previously prepared. In sowing, care should be taken not to break the germ of those that have pushed. The whole should be covered with a layer of vegetable mould, of greater or less thickness according to the size of the seeds, the smallest requiring to be but just barely covered. The mould is slightly pressed with the back of the spade, covered with a light straw mat, and then watered through the rose of a watering pot. The watering ought to be frequently repeated in dry weather, for if the seeds become dry in the soil, they lose their germinating powers.

I have mentioned the principal kinds of plants of which the seeds require the process of stratification; the others may be preserved in their natural envelopes, or in bags. But they ought to be kept in a place dry and airy, and in the dark rather than exposed to much light; and it is well to steep them in water for a night at least before sowing.

The seeds of aquatic plants require the same care; but in steeping them the water should be mixed with fine sand, and a little powdered wood charcoal. All seeds that are steeped should be sown as soon as they are taken out of the water. Stratification renders the germination of seeds more quick and certain. *Th. Denis, Curator of the Botanic Garden, Park de la Tête-d'Or, in Revue Horticole.*

Home Correspondence.

Castle Kennedy Fig.—In your Paper of the 3d inst. "S. B.," in speaking of this Fig, says:—"I would suggest that if any of your readers think of investing their money in the purchase of a plant, they had better satisfy themselves that it really differs both from the Brown Turkey and the Brunswick, which have already figured under so many names." By way of reply, I beg to inform "S. B." and your other readers, that there can be no reasonable doubt that it is neither the one variety named nor the other, for it not only differs, but that very greatly, both in size, flavour, and appearance, from both kinds alluded to. We have these two varieties of Figs growing side by side in the same house, all planted out and receiving the same treatment for these last two years, where they can be seen by "S. B." or any one else interested in the matter, next summer when in fruit. The Castle Kennedy appears as distinct from either of the Figs named, as a Ribston Pippin Apple is from a Keswick Codlin. The Castle Kennedy Fig is of a pale chestnut colour, growing on an average one-third larger than the Brunswick, which is one of the largest Figs in cultivation. I may state that last summer I weighed some of the largest specimens of fruit grown on two large plants trained against the back wall of one of the Fig-houses here, one of which is a Castle Kennedy, the other a Brunswick Fig. The largest Castle Kennedy Fig weighed nearly 7 ounces—two of a dish sent to Edinburgh for exhibition weighed upwards of 13½ ounces; while the largest Brunswick weighed only 4½ ounces—both trees being in full health and under similar treatment. All that is known of this Fig is already before the public. It has been shown at Edinburgh, Glasgow, and elsewhere: and as yet I have not met with any one who could name it, or say that it would not be an acquisition were it introduced into general cultivation. *Archibald Fowler, Castle Kennedy, Stranraer.*

Pampas Grass (see p. 1158).—We have here a good plant of the brown variety of this Grass, which this autumn has thrown up 99 beautiful spikes about 8 feet high. It was planted in the autumn of 1860 along with some shrubs on a mound raised about 2 feet above the ordinary ground level, and consisting of fresh stiff loam with clay underneath. Although very much exposed it has never had the slightest protection. The coachmen who used to drive between Hull and York, said that ours was the coldest place they passed on their journey, and there is no more shelter now than there was then. Our specimen has never been watered since it was planted, although our soil is liable to shrink in dry weather; it did so last summer, fissures taking place in it two or three feet deep, and two or three inches wide. I may add that this Grass has been admired by all who have seen it. *P., Hull.*——We have three plants of this fine Grass here, all that can be desired, planted on small banks of soil 18 inches high, each plant having about four barrow-loads of mould to itself. They have succeeded most satisfactorily. They get water twice a week during summer, but no protection whatever in winter. We think that climate has more to do with success than soil, as plants of Pampas Grass do well in any situation in the south of Hants. *Lymington.*

New Roses.—I have just received from M. Eugène Verdier one Maréchal Niel, on a standard Briar,—the wood is strong, denoting a good constitution. Also six on Manetti, of my namesake, Rushton Radclyffe, thus named by myself for brevity; they are capital plants; the wood is strong and healthy, and of the character of John Hopper, but a little twisted and more beset with thorns. I hope it will be a good Rose and please the "fancy." The pictures of Maréchal Niel, La Duchesse de Morny, and King's Acre have also been received. They are all very beautiful in the portraits, which I trust are faithful. King's Acre is a very superior Rose, globular, and of fine outline. La Duchesse de Morny is transcendental. If Maréchal Niel turns out equal to the portrait, it will shake all the yellows known. *W. F. Radclyffe.*

Poor Man's Friend Apple.—At the last September fruit and flower show at Brighton, I saw an Apple bearing this name; it was a splendid looking variety, equal in appearance to Lord Suffield or Reinette du Canada. I have not seen this name in any Nurseryman's Catalogue; perhaps, therefore, some of your Brighton Correspondents could inform me if Poor Man's Friend is a provincial name for another kind of Apple or perhaps the exhibitor might add some information respecting it. The finest specimens of Apples and Pears I ever saw, were shown this season at Brighton. *W. Brown, Merevale Hall, Atherstone.*

Hazard's Plan of Heating.—Can any of your correspondents inform me where Mr. Hazard is now living? After being 16 years in operation, my apparatus has taken damp, and one side has rusted and must be recast. The principle of this method of heating is the best I have seen, where a great degree of heat is not required, and perfect safety is essential. Mr. Hazard was living in Bristol when I first knew him, and then in chambers in St. Martin's Place, Trafalgar Square, London, but he has long since left both places. His method consists in warming currents of air admitted from without, but not "burning the air" by passing it over the heated body of the stove. *M.*

Ivy.—On reference to my scrap-book of last year, I find a note to the effect, that while on a visit to Kenilworth on Sept. 17, I noticed a fine old specimen of Ivy on the outer wall, left-hand side arriving from the lodge, and on measuring the stem, leaving one-third for the part closely attached to the wall, I found its circumference to be rather more than 8 feet. *James Ponsford, Loughborough Park Nurseries, Brixton.*

Spots and Burns.—Your observations on this subject remind me that some years ago I observed in my orchard-house that many Peach leaves were dying from their tips. The extreme point first became brown, and the leaf gradually died onwards, the part still unaffected appearing green and healthy. I sent you a leaf, and one of your Correspondents suggested that the evil originated from watering the plants with hard water. I also showed the leaves to some of our best living authorities, but they were unable either to tell the cause or suggest a remedy. I had no resource, therefore, but close examination and experiment, and these led me to the conclusion that the mischief was caused by the drops of water which hung on the tips of the more dependent leaves when they had their syringing at half-past 7 in the morning. It further appeared that when the tip was once killed, the death of the leaf progressed as a matter of course. For some time I felt unwilling to admit this solution, as morning syringing is prescribed both by Rivers and Pearson, and neither they, nor any other orchard-house cultivators seem to have experienced any evil from it. Their ventilation also commences, I presume, like mine, about 7 A.M. But desirous of testing the conclusion to which I had come, I omitted this year all morning syringing, and substituted a copious watering of the borders and paths, which was repeated in the middle of hot days. The plan has succeeded perfectly. Evening syringing was continued as usual. *S. B.*

Prize-taking at Horticultural Exhibitions (see p. 1181).—I am glad to find from "G." and "N.'s" letters (the only champions in favour of the present system) that my arguments were so unanswerable they were obliged to fall back upon the *£ s. d.* part of the question, as if I had written for the sole purpose of transferring the trifling money awards from the gardeners' to the masters' pockets! They have but beaten the air, as I have always considered it reasonable and proper the gardeners should receive the money—as a gift however, and not as of right. All I advocate is an alteration in the metropolitan system of placing the gardeners' names "first" on the prize cards, instead of that of the masters, and I still contend that the plan of placing the cart before the horse is inimical to the increase of gentlemen exhibitors, and consequently detrimental to the interests of nurserymen and gardeners. The rule at the leading country exhibitions is to award the prizes to the masters, placing the servants' names beneath; and I assert that were the masters to be ignored and country exhibitions to become a gardeners' concern alone, most of them would speedily come to grief. The "cart before horse" system must work injuriously when we find, as "N." states, some gardeners actually obliged to purchase the new flowers out of their own pockets to enable them to compete on equal terms. Were the master's fancy engaged, and were his flowers entered as of right in his own name, such necessity would no longer exist, for he himself would eagerly purchase all the new flowers, and his man would no longer be tied down to work in his "own time," but would receive every possible and needful assistance. I agree with "N." in thinking it absurd for a master to order his man when to sow Mustard, or when to fire the Vines, and for this reason: that the master keeps and pays an intelligent man for that purpose, and expects him to do his duty without telling; but because the man grows the Grapes to the best of his ability, as in duty bound, is he thereby justified in looking upon them as his own property, and in entering them at the Royal Horticultural Society and Crystal Palace in his own name instead of his master's? "N." states, that were the prizes awarded to the masters, then Mr. B. would not exhibit his plants against Squire C.'s if they were not up to the mark. Can a stronger argument be urged against the present system? Mr. B. now allows his plants to be exhibited, be they ever so ill grown, not caring in the least whether they obtain a prize or not, looking upon the exhibition as a mere gardeners' affair; whereas, were they entered in his own name he would take special good care they were up to the mark, and would be delighted at beating his neighbour Squire C. As it is, Mr. B.'s gardener shows his master's plants, though not fit for exhibition, enticed by the hope of the money award alone. Again, "G." says: let the gardeners receive the credit and money as at present, and let the masters be content with their share of the "spoil," (as he most appropriately and elegantly calls it,) in finer fruit and more beautiful flowers. Can there be a greater fallacy? Is it not a well-known fact, that as a rule, where growing for exhibition is the order of the day, except the fruit and flowers so grown, the remainder go more or less to the wall? Very many gentlemen will not allow their gardeners to exhibit, as, receiving none of the credit, they nevertheless reap all the expenses and inconveniences attending "growing for exhibition;" but give them, as I advocate, a direct interest in the matter, and these inconveniences and drawbacks will no longer be allowed to weigh, but, like Lord Walsingham and Mr. Foljambe, who send their sheep for exhibition to London, Birmingham, and Liverpool, they would derive equal pleasure and gratification with these gentlemen in seeing themselves in a leading position among the "Florists" of England. *Florist.*—Will you allow me to make the following remarks on this subject. I conclude that "Florist" is a gentleman amateur, and in that position he has an undoubted right to the honour and prize-money that may be awarded to his productions; his gardener or handy man merely follows his instructions, or possibly "Florist" may execute some portion of the work himself: in either case no responsibility rests with the man, therefore he can have no right to the prizes. But the same rule does not apply to establishments that are in the care of head gardeners. By such men are grown the fruit and flowers that grace the platforms of the principal London exhibitions, and the tables of the gentlemen who employ them; these productions are cultivated under their direct superintendence, and no head gardener would maintain his position unless he was equal to these duties. Be it remembered that all expenses of transit to and from exhibitions, let the distance be ever so great, are borne by the gardener, so that if he takes the prize money, it sometimes scarcely covers his expenditure. If "Florist" considers it beneath his dignity to meet a respectable gardener as a competitor in an open show, let an alteration be made in the "prize cards" to meet his views. Let the employer's name and residence be placed first, and the gardener's name in brackets, for it is an honour to both—to the employer who can send such specimens of horticultural skill from his garden, and to the gardener who knows how to grow them. *W. F.* [This is exactly what "Florist" urges. Other letters on this subject are necessarily deferred.]

Paxton Houses.—Do these answer equally well whether set from east to west or from north to south? *A.*

Mushroom House.—I believe you would oblige many if you gave detailed specifications of a thoroughly good Mushroom house, with bed for Seakale and Rhubarb. I have just put up a Mushroom house, and am not successful. *A.* [A plan of a Mushroom house, reported to answer perfectly, may be found in our volume for 1845, p. 99; it is, however, span-roofed. All that we have ourselves seen have been lean-to's, placed against a north wall, as at the Royal Gardens, Frogmore, and elsewhere.]

Gate Posts.—For the information of your Correspondent (see p. 1158), allow me to state that I find Spanish Chestnut the most durable of any wood for gate posts; it will last in the ground nearly as long again as Oak. I also find it equal to Oak for any purpose where bulk is required, and it is much more easily worked than Oak. Some 50 years ago a common was inclosed in this parish, on which was growing a quantity of Spanish Chestnut, whose tops were used for gate posts at the inclosure, some of which are still standing. I object to stone, because it is liable to be broken if a heavy load is driven against it—not an unfrequent occurrence. To any party purchasing I should say, buy wrought-iron gates and posts, they will be found the cheapest in the end; but on a well-timbered estate the less saleable portion of the wood can be converted into posts at no great expense. *Geo. Blake, Ombersley Court, near Droitwich.*

Joining Ligurian Queens to English Bees.—Introducing queens to fresh hives is always attended with risk, and I cannot find out the reason why one hive will sometimes not accept a queen that is offered to it and another stock will, while the hive that rejected the first queen will gladly accept another if given to it almost immediately afterwards. I had a case a short time ago illustrative of this point. Having imported several of the most beautiful Ligurian Queens that could be found in Europe, I placed one in a box, having a perforated zinc communication, for some hours on the top of a stock from which the queen had been removed two days. I then admitted to the box one bee at a time, and they behaved very well until half a

dozen had joined the queen, when they seized and attacked her, and I could not separate them from her without taking her up in my fingers and actually pulling the bees from her. This took place four times, when, seeing that the bees would not accept her, I put her over another stock, and when I admitted the bees in this instance they received her joyfully. I then offered the stock that had rejected the queen in question another of the imported Ligurian Queens, and in this case the bees received her in a friendly way, and conducted her in triumph into the hive. If some of your Correspondents could throw any light on this, to me apparent mystery, I should be obliged. *William Carr, Clayton Bridge Apiary, Newton Heath.*

Depredations of Mice in covered Vine Borders.—As it is the practice of provident gardeners at this season to cover their Vine borders with dry leaves, and these with a tarred cloth or some other contrivance to throw off heavy rains, I think it desirable to record an incident which occurred on the border of my Vinery last winter. Out of eight Vines, six were entirely killed, and two others were so much injured that they produced late in the season only very slender shoots. I was much surprised at finding the Vines did not break at the usual season, subjected as they had been for many years to the same treatment; and covering in all respects. On a careful investigation it turned out that mice had established themselves in the bed of leaves for their snug winter quarters, and had barked the Vines just above the earth, five of them of nearly 20 years' growth. As respects the two Vines which showed some signs of vitality, the stems were not entirely denuded; but a small strip of bark only was left untouched. As the destruction of Vines in full bearing is a very serious loss, and the practice of similar covering is most commendable, I would recommend in such cases, that the surface of the soil should be drawn away from the stems of the Vines for a couple of inches in depth, the stem then coated with tar just under the surface, and for a space of an inch or two above the covering, and the soil returned, mixed with a little broken glass around the stem. On bringing our Peach, Apricot, and other trees in pots, placed at rest under a shed during the winter, into an orchard house in March, we found they had all been attacked by mice in the same way to a considerable extent, and were materially injured, though not actually killed. *C. Lawrence, Cirencester.*

Protecting Grapes from Wasps.—I may describe a very successful mode which I adopted this season for protecting Grapes under glass from injury by wasps and flies, which were so numerous last autumn, and which are generally so destructive to ripe Grapes. My orchard house is one of Paxton's, with ventilators at intervals, folding back from top to bottom, with a division in the centre, and with wooden shutters at intervals in the brickwork on which the glass roof is supported. I had perforated sheet galvanised iron, very thin, fitted into each opening of the upper ventilators, and also over the openings under the wooden shutters, and kept the lower sections of the glass ventilators always closed when the Grapes began to ripen. The openings left for the racks to open and close the upper ventilators were stopped with wool. This being the third winter since this house was planted, we fortunately had a very fine crop of Grapes to supply the failure of the old Vinery, and not a single wasp or fly has been seen in this house since the first Grapes were ripe. *Charles Lawrence.*

Broccoli.—Your report of the Royal Horticultural Society's International Show of Fruits and Vegetables at South Kensington is both interesting and instructive, and I have no doubt that many gardeners like myself who had not an opportunity of seeing the show in question, had much pleasure in reading the report, which with one exception is, to me at least, very satisfactory, and that exception is the Broccoli. Your report states that the Broccolis "appear to be one sort, although Snow's, Osborne's, Walcheren, and other names are applied to them. Now, here we have side by side, and all planted on the same day, Snow's, Osborne's, and Backhouse's Winter White Broccolis, and they are distinct in appearance from one another as Sangster's No. 1 Pea is from the Blue Prussian or Ne Plus Ultra. It would therefore be conferring a favour on many inquiring gardeners if the exhibitors who carried off the First-class Certificates for Broccoli, would give the correct names of the sorts in their respective lots. I may mention in passing that the centre leaves of Osborne's are damping off with us; is this the case generally, or is it only local? *An Inquiring Gardener.* [What was intended by our reporter, was that the samples shown under the names quoted were alike; not that the varieties themselves were so.]

Fearnought Cabbage (see p. 1156).—This variety of Cabbage, recommended for its hardiness, proved last winter to be more tender here than any other kind, not excepting even the "Couve Tronchuda," by the side of which it was planted; for while the former was so completely killed as not to push even a few sprouts in spring, the latter suffered but little. It formed good compact heads in the autumn, but they rotted directly the frost came, although the thermometer at 5 ft. from the ground never registered more than 15° below the freezing point. *Thos. Woodford, Eastwell Park, Ashford.*

——The Fearnought Cabbage and Brussels Sprouts were the only varieties of the Cabbage tribe that stood the severity of the winters here both in 1862 and '63. All Broccoli, Savoys, and even German Greens were killed, while the Fearnought feared nothing. In severe weather I found it very difficult to protect it from pheasants and wood-pigeons. At table it is a delicate tender vegetable, notwithstanding its rough sportive appearance in the garden; and, in a cold damp climate and soil like ours, I have found it a great acquisition. *J. L., Balgowan, Perthshire.*

Societies.

Botanical of Edinburgh: *November* 10.—Prof. Balfour, President, in the chair. Mr. John S. Muir, Leith, was elected a member. Among the donations to the Museum were:—A sample of leaf tobacco as used by the Indians of the East African coast; Tobacco cultivated and manufactured by the people of Lake Nyassa; specimens of native Cotton; bark cloth; wood of a small Euphorbiaceous tree, called Mokunite by the natives; and several other valuable woods from the lake districts of Zambesi, all from Dr. Kirk; and a bronze medal struck in honour of Prof. Philip von Martius, presented by the Academy of Sciences of Munich.

The President, in his opening address, congratulated the members on the continued prosperity of the Society. Uniting as it did advanced botanists and junior students, it had acted most beneficially in promoting the cause of botany, and in diffusing a taste for it. He observed that during the past session, papers had been read on structural, physiological, systematic, economical and fossil botany; accounts had been given of botanical excursions and of additions to the flora of Edinburgh; and records had been kept of the state of vegetation in the Botanic Garden. Extracts had also been read from correspondence in various parts of the world—more especially India, Africa, Canada, Demerara, and Columbia; and some of the junior members had given abstracts of valuable botanical papers published in foreign journals. He adverted to the valuable paper by Dr. Alexander Dickson on diplostemenous flowers, in which the mode of development of the staminal whorls in several natural orders, especially the Malvaceæ, was pointed out; also to a practical paper on the fertilisation of Orchids, by Dr. Rutherford, who had recently graduated at the University; to an elaborate paper on Canadian Ferns and filicoid plants by Dr. G. Lawson, now Professor of Chemistry in Dalhousie College, Halifax, Nova Scotia—who was long connected with the Society as assistant-secretary, and who, compelled by the want of management on the part of the University of Queen's College, Kingston, Canada, to resign his professorship there, had, he hoped, acquired a better position in Nova Scotia; and to papers on the sexual changes in the inflorescence of Zea Mays, and on the sexuality of the higher cryptogams, by Mr. John Scott, lately foreman at the Botanic Garden, whose experiments were conducted with great care and ability, and who had now gone to India under the auspices of Mr. Darwin. It was pleasing, he said, to find a gardener thus raising himself in science, and acquiring a merited reputation for accuracy of observation and correctness of detail. His papers on the fertilisation of Orchids attracted the notice of Mr. Darwin, who was thus led to encourage him in his researches, as well as to advance his prospects in life. The curious researches on the hybridity of plants by Naudin had been given in English by Mr. Lowe, a zealous botanical student; while another student, Mr. R. Bell, had replaced Dr. Lawson at Kingston. The cultivation of Tea, Cinchona, and Cotton continued to attract much attention, and the reports which had been received from our Indian possessions drawn up by Dr. T. Anderson, Mr. W. Jameson, and Dr. Alexander Hunter (all former Edinburgh students), had been most satisfactory. From the Botanic Garden had been sent to India within the last few years five or six gardeners, brought up chiefly under the direction of Mr. M'Nab, the able superintendent; these men were doing credit to the garden as a school of horticulture as well as of botany. We have had the pleasure of welcoming back our friend Dr. Kirk, who accompanied Livingstone in his explorations, and who has given us an excellent account of the products of Zambesi and of Southern Africa. As regards the localities of plants, we may record the addition made to our flora in the finding of Goodyera repens at Dalmeny by M. Claudio L. Serra. It was remarkable that a Portuguese student should thus discover a new plant in a district which had been so well examined by Scotch botanists. The same thing might be said of the discovery of Asplenium viride, near Cramond, by Dr. Carruthers. This year two new localities had been found for Corallorhiza innata—one of them by Dr. Dickson, and the other by Mr. Sandilands. During the past year 13 ordinary members had been added to the list, and one foreign member. The total number of ordinary members was stated to be 335; of honorary members, 23; of foreign members, 81; of life members (ladies), 11; associates, 25—in all, 475. The Society had lost five members by death during the year. Dr. Balfour then proceeded to remark:—Edinburgh has long been famous for its School of Botany, and I believe that our Society was the first of the kind instituted in Great Britain. In 1670 a botanic garden was established in Edinburgh under the name of the Physic Garden—a name which is still retained in the locality where it existed. In 1676 a Professorship of Botany was instituted, and James Sutherland was appointed professor. At that time the collection consisted chiefly of medicinal plants, and the professor, besides his lectures, gave demonstrations on the plants in the garden. In a document in the possession of the Royal College of Surgeons, Sutherland appeals for the support of the garden, and intimates his willingness to give instructions in medicinal plants to the apprentices of Fellows of the College, and to others who are studying the articles of the materia medica derived from the vegetable kingdom. The science of botany was then in its infancy, and little was known of structure and physiology. The student had chiefly to study the external forms of plants, and to know their uses in medicine. One of the professors who succeeded Sutherland, Mr. George Preston, exercised his calling also as a druggist in Edinburgh. Dr. Hope gave an impetus to the study of botany when he succeeded to the chair, and he seems to have encouraged practical botany by offering a prize for the best herbarium of plants gathered within a limited district round Edinburgh, the Gold Medal for which was gained in 1782, by his pupil Sir J. E. Smith. Little, however, appears to have been done in the way of field work and of excursions with pupils, until Dr. Graham became Professor of Botany. In 1821 he made his first excursion to the Highlands, accompanied by Mr. William M'Nab. Dr. Balfour then gave an account of the extended excursions made by the Professors of Botany in Edinburgh with their pupils from 1827 up to the present date—including excursions to Clova, Glenisla, Braemar, Ben Lawers, Arran, Galloway, Hebrides, Sutherland, Ross-shire, Ben Nevis, Ben Lomond, Ben Ledi, Moffat, Cumberland, Northumberland, Ireland, Isle of Wight and Jersey, Switzerland, &c. After alluding to some of the recent discoveries in physiology, and remarking on certain strange materialistic statements on vitality which had recently appeared, he concluded thus:—I shall not attempt to enter on a review of all that has been done in botany during the last year. I have generally endeavoured during the session to give from time to time *resumés* of what is being done in different departments, and that plan I hope still to continue. No science is better fitted to call forth the power of observation in young men, and to give them habits of diagnosis and powers of description with accuracy of definition. Hence its value to all classes of the community, and especially to those who are about to enter upon the study of medicine. I say about to enter on that study, because I believe that the study of the natural sciences ought to precede purely professional study. Until that plan is generally adopted, we cannot expect that proficiency will be attained. The institution of degrees in science is calculated to encourage the study of the sciences, and all we want in our universities are fellowships in natural science to induce young men to devote their time and attention to such pursuits. We hope that the example shown by men of fortune of late in establishing fellowships in arts will be followed by others in the direction of science. All our researches in science, while they tend to foster the spirit of genial friendship, are at the same time well fitted to enlarge our views of the wondrous plan of creation, and when prosecuted in the right way, to lead us to contemplate the infinite wisdom, power, and goodness of Him who is not only the Lord of creation, but the God of all grace. Let us ever cultivate science and pursue our researches in the humble spirit of those who are seeking for truth, and not in the vainglorious strain of those who wish to magnify their own views. Let our work be done with calmness and dignity, conscientiousness and charity.——The following communications were read:—1. *On the Position of the Carpellary Groups in Malope and Kitaibelia.* By Alexander Dickson, M.D. The author finds that the development of the androecium, as regards the evolution of the staminal lobes, is essentially the same in both genera. The androecium at first appears in both as an even rim-like cushion, pentagonal externally, surrounding the flattened termination of the floral axis, which appears as a pentagonal depression. The external angles of the staminal cushion in both genera alternate with the sepals. The essential difference between the arrangements in the two genera consists in this—that in Malope the five angles of the central depression are superposed to the external angles of the cushion: that is to say, the sides of the depression are parallel to the outer sides of the staminal cushion; while in Kitaibelia, on the other hand, the angles of the central depression alternate with the external angles of the cushion, the sides of the depression thus lying crosswise to the outer sides of the cushion. This is seen long before there is any appearance of the carpels. In both genera five pairs of lobes, alternate with the sepals, and extending longitudinally in a radial direction, are developed on the surface of the cushion, which, as development advances, grows up as the staminal tube. The carpellary groups form the sides of a pentagon, which in each genus correspond to the sides of the original central pentagonal depression or cavity of the staminal tube. These groups are opposite the sepals in Malope and opposite the petals in Kitaibelia. Payer had observed this difference between the two genera, but has inverted the statement of the facts. A somewhat analogous case occurs in the Tiliaceæ, where the staminal groups are oppositipetalous in Tilia and oppositisepalous in Sparmannia.——2. *On the Discovery of Trichomanes radicans in Arran.* By Walter Galt, Esq.; communicated by Mr. John Sadler. The author doubts that this Fern is native in Arran, and tries to show that in

all probability it has been planted.——3. *Note on the Discovery of Asplenium viride near Edinburgh.* By Mr. John Sadler. The writer, in company with Mr. Naylor, had been shown by Dr. Carruthers, of Cramond, this Fern growing abundantly near that place. It was first found there by Dr. Carruthers in 1862.——A letter was read from Mr. W. Bell, dated "Botanic Garden, Saharunpore, 15th September, 1864," in which he says—"The heat of the weather here is a subject that the people in this district never weary of talking about. It is generally allowed that this season has been one of the hottest ever experienced in India. During the whole of July I never saw the thermometer lower than 88° at night, and sometimes as high as 95°, and during several days it averaged from 108° to 114° in the shade. I placed the bulb of a thermometer one day about 2 inches in sandy ground; in less than 10 minutes it rose to 142°. The rains were nearly a month later than usual, and it was generally expected that there would be another famine. In some districts there has been quite an average fall, in others more scanty. In this district there has been a good fall. The Rice crops will be fair, although rather late. The Cotton crop will also be late; the last commodity was selling at the rate of 1*s.* per lb., while a few years ago any quantity could be got for 2*d.* per lb."

Notices of Books.

The Vine and its Fruit, more especially in Relation to the Production of Wine; embracing an Historical and Descriptive Account of the Grape, its Culture and Treatment in all Countries, ancient and modern, derived from the best authorities, and incorporating a brief discourse on Wine. By James L. Denman, London, 8vo., 1864. Pp. xii. and 346.

The work before us contains a vast mass of information, but it is very far from being as satisfactory as we hoped it might prove on opening the very nicely printed and neatly-bound volume. The style is occasionally pretentious, dealing in such phrases as idyllian scenery, immobile nihility, &c.; the language not always correct, as where the word fictile is applied to glass vessels, and not to pottery; and the science very faulty, as where the author speaks of "parasitical plants of the class *oidio*," where he talks of varieties as species, while he seems to have no notion that the American Fox Grapes belong really to a different, or different species from what may be called, though not with strict correctness, the European Vine; or again, where he uses such loose expressions as the "gas being compressed by chemical affinities," "mouldy zoophyta," instead of mould, &c. Such mistakes as "mucidines" may charitably be considered as errors of the press. The information on especial points is sometimes, if not incorrect, at least defective. No allusion, as far as we have seen, is made to the works of Mr. Forrester, who so unfortunately perished by the upsetting of a boat about two years since, though they abound with the most valuable information. The account that Mr. Forrester gives of the origin of using jeropija in the preparation of port wine for the English market, a practice which has entirely done away with that first-class wine which used formerly to be so much admired in this country, and the remainders of which command such a high price whenever they appear in the market (16*l.* per dozen having been given not long since for wine of the vintage of 1820) is we believe the true one, and may be contrasted with the more general one in the volume before us.

"The taste which has gradually led to this state of things probably was good, and occasioned by an extraordinarily fine vintage, such as that of 1820, when all the wines were naturally unusually full, sweet, and highly flavoured. The merchants, finding those wines much sought for, insisted upon having the like in all times; and as such wine could seldom be obtained pure, seasons so fine being extremely rare, recourse was had to adulteration (*that* after all *is* the right phrase) to produce something like it, for what the purchaser demands, good or bad, somebody will always try to furnish; and the struggle among many of the exporters (the larger number it is to be feared if not the most considerable persons) was to send wine, each fuller, sweeter, and higher coloured than that of his neighbours."

For this manufacture of the jeropija (called by Mr. Denman geropiga, and which he describes as a mixture of brandy and fresh must) Elder bushes are largely cultivated and often surround the vineyards. The mixture is made as follows: to 56 lbs. of dried Elder berry and 60 lbs. of coarse brown sugar or treacle, add 78 gallons of unfermented Grape juice and 30 gallons of the strongest brandy. Each pipe of wine has an addition of from 6 to 18 gallons of jeropija, and is then considered fit for the English market, and none receives a first-class certificate which is not more or less doctored.

Large quantities moreover of jeropija are imported into this country, and spurious port wine is very extensively manufactured by the mixture of it with cheap white wines. A variety of interesting details will be found in Mr. Forrester's works, which certainly might have been consulted with advantage.

We do not find the correct method of distinguishing good from indifferent brown sherry at all noticed. Brown sherry, it is well known, does not derive its dark tint immediately from the Grapes of which it is made. The paler sherry is either browned with burnt sugar, or with a mixture of sherry boiled down till it has acquired a dark tinge. The latter plan is the only one which is admissible in a first-class wine store. Where the wine is browned with sugar a disagreeable flavour is always left upon the palate, while this is not the case where boiled sherry is used.

Our author mentions the Raspberry flavour which is possessed by certain wines. We believe that where this is the case, the Isabella Grape enters very largely into their composition.

He speaks of powdered sulphur as a remedy for Vine mildew. This is not correct. Powdered sulphur will often be found quite inefficient; the true remedy is sublimed sulphur, the particles of which have frequently a portion of sulphurous acid clinging to them.

The wines of Upper Turkey are omitted altogether, though good ones are made in some districts. We have received some excellent wine in wooden bottles from Servia, which might compete with good Burgundy. Some details might have been given as to the deficiency of tartar in certain years, and fraudulent substitutes. We might add more on the score of indefinite or erroneous statement, but we have said enough to vindicate our good faith as critics. We prefer giving some notice of the contents of the volume, and an example of the more interesting matter.

The work then, commences with some general observations on the Vine, together with notices of the character of ancient vintages, and customs connected in early days with the use of wine; the character and qualities of modern Vines succeed; and then, in separate sections, notices of the wines of the several Vine-growing countries of Europe, South Africa, Madeira, and the Canaries, of Persia and other Asiatic and Australian countries, and finally of those of America. The foxy taste of most varieties of American Grapes will probably prevent the wines of the United States ever becoming first-class wines, though some of them command a high price. American Vines when introduced into Europe have the advantage of seldom if ever being attacked by the Vine Mildew, though they are not without their own share of diseases. European Vines do not succeed well in America, and are subject as at home to the Vine mildew.

As a favourable example of the kind of information to be found in the volume before us, we shall extract a portion of what is said about champagne.

"Perhaps there is no production of the soil that requires more care than the Grape, to make it yield those delicious wines in full perfection, and this may be the main cause of a standing complaint against champagne, that it cannot be obtained of uniform quality, which moreover will never be obviated by the mistaken practice of tunning it into barrels of 160 litres only in size. The wine of each separate cask must and will vary, for the minutest change in the process of development affects in some degree the precision it is wished to attain.

"Great skill and attention are employed to meet the difficulties arising from the circumstance that the wines do not ripen uniformly. Some will effervesce after being in bottle 15 days, others will demand as many months. One wine will require a change of temperature, and must be brought from a deep cellar to another on the surface; a second will not exhibit a forward state before August; another kind when patience is exhausted, and the expected development is almost hopeless, will flush up all of a sudden. The difference of the spot of growth, the mixture of fruit, the process in making, the storing and preservation in the wood, the glass of the bottles, the aspect, depth, and ventilation of the cellar, all have a varied and often inexplicable influence on the phenomena of effervescence.

"In the sparkling kinds the strength of the bottles and their uniform thickness are carefully ascertained. They must be new, are closely examined and jingled together in pairs against each other, and every one with an air-bubble in the glass, or with too long or too narrow a neck, or with the least imperfection or malformation, is put aside. The bottles when carefully and expeditiously filled are laid horizontally in piles 5 or 6 feet high. They are first placed in the coldest cellars, and afterwards gradually removed to warmer temperatures. In July and August considerable breakage happens, occasioned by the expansion of the carbonic acid gas, and a loss of 4 to 10 per cent. is usually occasioned. Sometimes however it amounts to 30 or 40 per cent."

Speaking of Hungary, which we have no doubt is some day destined to supply our market with a very large quantity of excellent if not first-rate wine, our author remarks that the vintage there is later than any where else in Europe, and it is generally deferred till the first three weeks in November, when the weather is not only cold but snow even has fallen—indeed at the very last moment, just before the winter frost sets in, and at the risk of losing all; for this primitive people are such sticklers for quality, that they would rather have none than not have the best—their axiom being that if the sun of summer ripens the Grapes, it is the cold of autumn that perfects the wine.

This delay is often attended by impunity, as the late autumn is usually dry, but from a letter received a few days since from Transylvania, we learn that this season has proved extremely disastrous to the vintage from the excessive rains.

The object, undoubtedly, of a late vintage is to get rid of as much water from the fruit as possible, an object which is sometimes attained by twisting the stalk a short time before the Grapes are gathered.

Had we room, many interesting passages might be quoted, but we must content ourselves with simply referring to the section on the wines of Greece and the Western Archipelago, as containing a good deal of matter of general interest.

Where there is so much worth reading we are sorry to have felt obliged to find fault; but should another edition be called for, which is not improbable, it would be worth while to get some scientific friend to revise those parts which require an especial acquaintance with the objects of which they treat, while a little more care in the construction of sentences, and the weeding out of a few more or less affected phrases, would make the perusal of the volume a far more grateful task, added to which we would recommend a copious index, which would greatly increase the usefulness of the work.

Dictionary of Geography and Gazetteer of the World. By Alex. Keith Johnston, F.R.S.E., F.R.G.S., F.G.S., &c. New Edition, revised to August, 1864. Pp. 1402, printed in double columns. Longman & Co.

It is no easy task to estimate the accuracy of a Gazetteer, for there are few places that one knows sufficiently well to give at once their acreage and population, their latitude and longitude, their imports and exports, and manifestly it is not quite fair to expect, that every insignificant and out of the way place in the whole world should be found in such a dictionary; and yet the beaten track must be departed from, if one would apply any real efficient test.

Okak and Hebron are stations of those devoted missionaries, the Moravians, on the coast of Labrador. They are places, it is true, of no commercial importance, but still they are interesting, and almost the only settlements on that inhospitable shore. They are not mentioned in the Dictionary; but the omission may be considered no great fault.

Some of our friends passed a part of their vacation at Sixt and Zermatt, in Switzerland. These are small places, it is true, but they are well known to most English tourists, and we find them in the map, on the same parallel, but not in the Gazetteer. We have friends at Kineton, in Australia. It is one of about eight large towns in the diocese of Goulburn; but no mention is made in the Gazetteer either of the town or of Goulburn.

In India we fared better, for often after a long search under some unusual form of spelling the place looked for turned up at last, but Coonoor, Vepery, and Nagode baffled us altogether. It is possible that the latter, which was once of importance as a military station, is so no longer. Still, in the recollection of Sir John Lawrence's "durbar," we did expect to find a local habitation for our good ally, the Rajah of Jheend, who did so much service to the British in their hour of need, and had deservedly a place of honour at that great reception. At home omissions are rare. We miss however Little Faringdon, a parish of Berks, near Lechlade, and Great Faringdon is stated to be in the valley of Whitehouse, a misprint for Whitehorse, and a new corn exchange which really belongs to this little market town is assigned to a very small village of the same name in Hants; no mention is made of the fact that Great Faringdon is connected with the Great Western by a branch railway.

Chichester is spoken of as communicating with Portsmouth and Arundel by a canal, which a friend from that city assures us it did, probably 30 years ago. He says also that there are no longer 22 parishes in Sussex which are peculiar, for peculiars were abolished about 10 years ago by Act of Parliament. Lowestoft is said to have as edifices a church, a free school, assembly rooms, &c., whereas it certainly has three churches; its theatre and assembly rooms, if any exist, cannot deserve a pompous announcement, nor the "two forts and battery" by which the town is "defended."

It is an invidious thing to speak at all disparagingly of a work, which, on the whole, must prove extensively useful, and which must have cost an infinity of labour. It must be repeated, that a Gazetteer, in one volume, cannot contain the name of every place in the world; but the information which it does give, ought to be correct.

Garden Memoranda.

THE EARL OF SEFTON'S, CROXTETH HALL, NEAR LIVERPOOL.—Croxteth Hall is situated in the centre of a very large park, which may be said to be bounded by the suburbs of Liverpool on the one side, and by the co-extensive park and domain of the Earl of Derby on the other. A very handsome Gothic lodge, recently built, having all the appearance of comfort and size in the interior—a desideratum by the way too much ignored in many similar erections, with an equally handsome gateway, forms the entrance to the park on the road from Liverpool. An approach drive, laid out with considerable taste, so far as graceful outline is concerned, but far too narrow and contracted for the length

and breadth of the park, leads up to the mansion. These narrow approaches are a cardinal mistake, and almost invariably meet the eye in all large domains, having a tendency to contract and dwarf the effects of park and pleasure ground scenery, however well conceived and carried out.

Forest trees in the locality do not seem to attain any considerable dimensions. Doubtless the want of shelter has something to do with this, but even in dense plantations, where one tree shelters another, the timber is not remarkable for size. The pernicious influences of the sea breezes from the west are apparent, every tree at all exposed being comparatively scanty of branches on the windward side, and all inclining to one direction. The outskirts of the park present a large pasturage surface, fully establishing that the visitor is entering upon grounds laid out and embellished to present the most pleasing aspect; while the swarming herds that feed on its surface convincingly show that agriculture has been carried to a high state of perfection.

From the level nature of the country the eye commands a large portion of the landscape, that until lately has not been wooded to such an extent, in the foreground especially, as is characteristic of many fine old places. Quite recently numerous irregular clumps have been introduced over the surface, and planted with such trees and evergreens as are most suitable for the locality, and sufficiently thick to nurse and shelter those intended to be permanent. Scotch Fir seems to be largely employed in the South for this purpose; but, as most foresters are aware, this fine tree, when fast grown, produces worthless timber—so different to the specimens that are grown in the Highlands, and in fact in the greater part of Scotland, where the wood grows so consolidated as to be a most valuable timber, tough, and quite full of turpentine and resinous matter. This tree is never more at home than when its roots penetrate the clefts of rocks, and where soil forms only a thin stratum, living like a parasite in bleak exposed altitudes. Larch is better adapted for nursing general plantations, because it can be cut out and made into durable fences in less time and to better purpose than any other wood. These groups we had only the pleasure of looking at in the distance; but as we drew nearer the mansion, and came more within the dress circle of gardening, we noted the great luxuriance of Rhododendrons and American shrubs of all kinds, here quite at home, apparently revelling in the soil in which they grow, and presenting every indication of exuberant health, and abundant bloom.

The mansion and the stables are situated in contiguity, the one being within speaking distance of the other, which seems to have been part of the plan when erected. The mansion is a large square pile, with little pretensions to architectural adornment: and the stables are after the same style. The late Earl of Sefton, we were told, wished to be on the most friendly terms with all dependent on him, and rather considered the situation of the offices a desirable one. Little or no attempt has been made until within these few years to screen either the offices or the garden from the mansion, which clearly enough evinces the homely tastes and generous impulses of the deceased nobleman. In speaking of him, Mr. Bisset, his much respected gardener, says—"He was a man who had more desire to study the wants of a numerous tenantry than to make a show at home," but he adds, "no man but his father before him, had more exquisite taste in fruit and vegetables."

The present Earl of Sefton, however, actuated by the spirit of progress, and while following his father's footsteps in matters of agriculture, has also given scope to Mr. Bisset's ideas in promoting and encouraging decorative gardening; and there are now numerous plant houses instead of a few structures for Grape and Pine culture, of the merits of which Croxteth 40 years ago could proudly boast. The cultivation of the Vine was not so well understood then as now; and Grapes under glass in those days would be considered somewhat of a rarity. Mr. Bisset states that in the old range of houses at one time Pines and Vines were grown simultaneously. The Vines were planted in an outside border, and after the fruit was cut in August and September and the wood ripened, the rods were taken out and wintered in a covering of straw. This treatment did well enough so long as early forcing was not attempted, but when the pressure of heat within upon the wood had to contend with that of cold without upon the roots—aggravated, as in this instance, with a border 4 feet deep—the constitution of the plants succumbed, and Mr. Bisset had them taken out, fresh borders prepared, and young Vines planted, and is now acting upon the principle of fair play to all, giving each separate accommodation. In this old range were some very good samples of Bowood Muscat, very highly amber coloured, and also some of that fine old late Grape, West's St. Peter's; Oldacre's St. Peter's was also here—both varieties similar in bunch, but the one always having a russety leaf, the other quite green. Lady Downes' was also good. In this range, which is built against a wall, there are six houses, those at either end having a semi-octagonal front, being plant houses, while the others are Vineries. The house at either end of the range has been recently put up, and gives a character and finish to those that existed before.

The conservatory has blue slate paths, and tables supported on wrought-iron pillars, and was filled with a gay assortment of flowering plants, such as Scarlet Pelargoniums, a very fine batch of Primulas, standard Heliotropes, sweet with perfume, and some rich spikes of Gladioli which stood out very prominent at the time of our visit. Tropæolum Ball of Fire, trained against the wall, was a sheet of flaming scarlet, dazzling the eye: very much finer here, planted out in a narrow strip of border against a back wall presenting full face to the sun, than we have seen under any other mode of culture. The corresponding plant house was full of finely budded Camellias in rude health; a few good Heaths and Epacrises, and some nice plants of Azaleas.

A new range of orchard houses had been completed during the past season. It is divided into three—one for Plums; the centre one, which is 2 feet wider, for Vines; and the other for Cherries. They are 12 feet wide, built against a wall, and ventilated on the self-acting principle both at top and bottom. In the Cherry and Plum houses the trees are planted against the wall, which is a very good arrangement, because the yield of fruit from the wall is likely to be nearly as great as it would be if trees were planted on a trellis at a given distance from the glass; and then on economical grounds such a method is greatly superior, owing to the numbers that can be grown and fruited in pots, between the glass and wall, without obstructing the sunlight in any appreciable degree from the trained trees. On the contrary, the Vinery orchard-house, which is a comparatively high temperature one, is planted with single canes trained up each rafter, the rafters being 4 feet apart. The object here is at once apparent: to take a crop of Vines, which have a prepared border for the roots to feed upon, and to fill up the open spaces in the centre of the sashes with Vines in pots, either trained up the trellis, or grown in bush form as may be deemed desirable. The whole of the permanent Vines in this house are Tynningham Muscat. The back wall is intended to furnish such sorts of tropical fruits as will best succeed. Meantime several sorts of Psidium, including pomiferum and Cattleyanum, and Passiflora edulis have been planted.

There is an excellent stove house, with a bed for the better diffusion of bottom heat, large and commodious without being too lofty, containing a miscellaneous collection, prominent among which were one or two good Crotons, a well managed plant of the lovely Franciscea eximia, and some nice pieces of Orchids, which Mr. Bisset seems desirous to cultivate; although in the late Lord Sefton's time, he tells me, they had to be concealed in some out of the way place, such as a Mushroom house. I am not sure, speaking generally, if my friend is far wrong when he says that "Mushrooms were then as now a thing of far greater importance." In another house we met that lovely Cinchonad, Bouvardia delicata, one of the prettiest and most chaste of late autumn-flowering plants, covered with bloom; and a most splendid example of Bougainvillea glabra with a large boxful of soil to grow in, at one end of a Cucumber house, with its branches trained close to the glass, as one sometimes sees Stephanotis floribunda, and literally a mass of those mauve bracts which, from their singular texture, look more artificial than real.

Pines are cultivated to a considerable extent, and well managed throughout. There seems to be a general impression in this locality that Black Jamaica is by far the best winter Pine for quality, and it is grown here and elsewhere in large numbers. These and Queens, with a few Smooth Cayennes, which is a most handsome fruit, and not over plentiful, form the chief sorts in these pits. There are also several ranges of useful pits for Melons, Cucumbers, Strawberries, French Beans, Potatos, and other desirable vegetables, which seem to be greatly run upon by the family, and must be supplied at all seasons. Strawberry plants for forcing were particularly fine. The sorts grown here are the ubiquitous Keens' Seedling, and Prince of Wales, which is a very fine late variety, and is one of the very best for packing, for when others get crushed and pulpy, rendering them unsightly for an aristocratic table, this sort will carry quite uninjured if due care is used. Another new sort, called Duc de Malakoff, seemed to have strong crowns, and was rather prepossessing; but it is questionable whether it will eclipse Keens' Seedling, though we understand that it is given out to possess all the merits of that sort, and to be a much better "traveller." Tomatos were also treated to a pit, and were finished up in capital style; the climate out of doors is quite unsuited to their wants.

What an agreeable surprise to see such a splendid batch of Neapolitan Violets in the height of vigour, and capable of yielding hundreds of flowers every day, mustering as the plants do in such strong force, covering dozens of yards of framing. The system in practice is to strike cuttings in spring, and keep them going in a light compost, shading from mid-day suns, and afterwards planting them out on an east wall border; then transferring them to frames. The greatest trouble afterwards seems to be gathering the flowers. In these useful pits was also a choice lot of plants for forcing in winter and spring; such things as Deutzias, Roses, and Azalea amœna. This latter is a pretty hose in hose gem, and is here grown in scores, both large and small, beautifully set with flower, the prettiest thing imaginable for drawing-room stands, bouquets, and ladies' plant cases, and which is not cultivated to half the extent it ought to be for such purposes.

The kitchen garden is not of great extent, although it is actually larger than at first sight appears, being not only surrounded but subdivided by brick walls, which are apt to mislead one in judging of extent. Pears and Apples generally do well; but owing to the excessive rainfall in that part of Cheshire, the one is better to be grafted on the Quince and the other on the Paradise stock. The past season had been an unusually dry one, and some of the samples were not so large as in ordinary years. Nevertheless there were some beautiful fruit of Marie Louise Pear ungathered in the middle of October on espaliers. By allowing them to hang as long as possible on the trees the succession is longer kept up; for those pulled and laid on the shelves of the fruit room were then up to the highest point of mellowness, and would decay before the ungathered ones were fit for table. Three old span-roofed houses glazed with small panes stand in the centre of this garden as a type of the days when the duty on glass was a matter of serious consideration in hothouse building. These have quite recently been gutted, but sufficient remains to show the narrow deal stages in tiers, amphitheatre-like, and only suitable for the cultivation of plants either very young or very small.

Passing out of this walled enclosure, alongside of a venerable Jargonelle Pear which has grown and covered a great space of wall on one side, and is then trained over to cover a large space on the other—by this means producing fruit in condition over an extended period, we find ourselves at one end of another handsome row range of fruit-houses, the two centre of which are wider and loftier than those at either end. Peaches and Vines occupy this range, and so far as they have gone, indicate good management. The Peaches have a curvilinear trellis at front in order to give all the light possible to trees on the back wall. A slight screen of shrubs divides this wall from the flower garden, which is not extensive, but laid out in detached geometrical beds, with the surroundings made up of evergreens of sorts, which are admirable material, disposed in irregular beltings, and intervening between pure flower garden and park scenery.

The fruit room has been erected and planned with good taste, while at the same time it seems well adapted for preserving purposes. Pears are in one department by themselves, and Apples in another. Besides Marie Louise, we observed good samples of Winter Nelis, Brown Beurré, Louise Bonne of Jersey, Beurré de Capiaumont, Beurré Clairgeau, Glou Morceau, and very fine Passe Colmar; while in Apples there were very good Cox's Orange Pippin, Court of Wick, King of Pippins, Wareham Russet, and Dumelow's Seedling, which is found to be a most excellent kitchen Apple. This altogether is a fine old place, and the general management reflects much credit on Mr. Bisset. *J. A.*

Miscellaneous.

Romance of the Mistleto.—There can be no question that the chief virtue ascribed to Mistleto from the Oak by the Druids, was the *fructifying quality*, as Taliesin has it, or of *giving fertility to all animals*, as described by Pliny; and it was for this virtue when worn as an amulet, or when drunk in infusion, that the sprig of Mistleto was so anxiously sought from the hands of the Arch-Druid on the New Year's Day festival. It is always necessary to remember this in endeavouring to trace down the domestic history of the Mistleto in succeeding ages. It explains fully the personal hold it had gained in the esteem of the people, and its continued private use in spite of all opposition. Though books ceased to mention it, tradition would perpetuate its use. This peculiar virtue may perhaps serve to explain some points with regard to it which have not been otherwise satisfactorily accounted for. In one of Colepeper's MSS. at the British Museum, in a curious notice of Sir Peter Freschville's house at Stavely, Derbyshire, is this passage: "Heare my Lord Freschville did live, and heare growes the famous Mistletoe tree, the only Oake in England that beares Mistletoe;" and to this tree the following letter from the Countess of Danby to Mrs. Colepeper probably refers. It is without date, but was written between the years 1663 and 1682:—"Dear Cozen.—Pray if you have any of the Miselto of yor father's Oke, oblidge me so far as to send sum of it to yor most affectionate servant Bridget Danby." It has occurred to me whether the "fructifying virtue," given to the Mistleto by the Druids, might not explain, in part, why this plant should never have been generally used in decorating our churches. As a symbol of the Paganism of the Druids, its significance has passed away centuries since; and if this were the objection to its use, the Holly also should be rejected. "It seems something like caprice," says a writer in the "Quarterly Review," "which has excluded the Mistleto as well from the decorations of our churches at present, as from their ancient sculpture and carvings. We know of one instance only of its occurrence—sprays of Mistleto, with leaf and berry, fill the spandrels of one of the very remarkable tombs in Bristol Cathedral, which were probably designed by some artist monk in the household of the Berkeley's, whose ample and broad lands are among the chief glories of the west country, in which the Mistleto is now for the most part found. We do not remember to have seen it elsewhere, even lurking among quaint devices of Miserere; whilst the Oak—every portion of which in the days of Celtic heathenism was almost as sacred as the Mistleto which grew on it—was one of the principal trees 'studied' by mediæval sculptors, when, during the so-called 'decorated' period,

they reproduced leaf and flower with such exquisite beauty and fidelity—witness the Oak leaves laid into the panels of the Cantalupe shrine at Hereford, or the twisted sprays of Oak, clustered with acorns, which form one of the most graceful corbels in the choir of Exeter Cathedral." "Certain it is"—says a writer in "Notes and Queries"—"that Mistleto formerly had place amongst Christmas decorations of churches, but was afterwards excluded. In the earlier ages of the Church many festivities not tending to edification had crept in—mutual kissing amongst the number; but as this soon led to indecorum, kissing and Mistleto were both properly bundled out of the church." The Mistleto still holds well its place in the esteem of the people, if not in their veneration. There is scarcely a house or cottage in this county that has not its bunch of Mistleto for New Year's Day. The ancient custom is still observed aright in most of the farm-houses through the county; by all the old true Herefordshire inhabitants, and especially by the lower classes. The Mistleto bough is cut on New Year's Eve, and hung up in state as the clock strikes 12. The old one which has hung throughout the year, is at the same time taken down and burnt. The Mistleto does not appear to have been considered a Christmas evergreen until the close of the 16th or the beginning of the 17th century. "We have Christmas Carols in praise of Holly and Ivy," says Timbs, "of even earlier date than the 15th century; but allusion to Mistleto as a Christmas evergreen can scarcely be found for two centuries later." The old New Year's Day custom, indeed, is rapidly changing—even here, in the very centre of the Mistleto district, and where, as I have shown, its traditions endure so tenaciously. Partly from lapse of time, perhaps, but chiefly from change of inhabitants, the Mistleto is changing its character as a symbol of New Year's Day, to take its place with the Holly as an emblem of the festivities of Christmas. *Dr. Bull, in Transactions of the Woolhope Naturalists' Field Club.*

Tropical African Palms.—With regard to their utility to the natives [of W. Tropical Africa] the various species of Raphia rank next to the Elæis. The petioles furnish the materials of which their huts and beds are made, while the pinnæ are used for roofing; and the epidermis of the leaflets gives the material from which their clothing is made. In places where the Elæis is scarce, the oily substance between the scaly exterior of the fruit and the kernel, although bitter, is eaten with Yam, Cassada, &c., and the oil pressed out of it is by the women thought superior to that of Elæis for dressing their hair. The pleasant taste of the wine obtained from R. Hookeri has even been sufficient to overcome the innate idleness of the natives of Old Calabar, and has induced them to cultivate it. The wine is procured by cutting out the terminal inflorescence as soon as it makes its appearance; the wine is then produced in large quantities. The natives of Old Calabar manufacture cloths, &c., from the epidermis of the leaflets of this Palm; and in the south, at St. Paul de Loando, R. Welwitschi is used for the same purpose, and the petioles of R. vinifera are employed as poles upon which to carry the palanquins. On the river Sherboro the natives make hammocks from the former material, as well as all sorts of basket-work, mats, &c. The roofing made of the leaflets of R. vinifera lasts for three years, while that made from R. Hookeri, it is said, requires to be renewed every year. Wine is also obtained from Phœnix spinosa, and the fruits of this Palm are much liked by the natives. The very young leaflets, before the leaves expand, are used for the plaiting of hats and caps at Accra. The outer part of the stems of the climbing Palms of Western Tropical Africa is used for binding together the materials of which the huts are constructed. The Bafan people also make large cylindrical baskets of this in which to carry the rubber manufactured by them, and the same people take large quantities of Calamus (Ancistrophyllum) secundiflorus with them as food when they go into the hills of the Sierra del Crystal to procure the rubber. For this purpose they choose the extremities of the stem, cutting off the leaves to make the bundles more portable, and when required for use they simply roast the whole in the fire and then eat the soft central part, which is, however, rather bitter and tough for persons not accustomed to such primitive fare. The fruits of Podococcus are also eaten. The leaves of Sclerosperma are used for roofing and constructing the walls of the huts, being tied between the petioles of Raphia. *Mann & Wendland, in Transactions of Linnean Society.*

Prevention of Rust in Iron.—Many a valuable hint is to be obtained from an intelligent practical labouring man, which may lead the philosopher into a train of ideas that may, perhaps, result in discoveries or inventions of great importance. When bricklayers leave off work for a day or two, as from Saturday to Monday, they push their trowel in and out of the soft mortar, so that the bright steel may be smeared all over with a film of it, and find this plan an effectual remedy against rust. In Wren's "Parentalia" there is a passage bearing upon this subject:—"In taking out iron cramps and ties from stonework, at least 400 years old, which were so bedded in mortar that all air was perfectly excluded, the iron appeared as fresh as from the forge." Oxygen, which is the main cause of rust, is abundant in the composition of both water and the atmosphere; and that quick-lime has an astonishing affinity for it is evinced in the homely practice of preserving polished steel or iron goods, such as fire-irons, fenders, and the fronts of "bright stoves," when not in use, by shaking a little powdered lime on them out of a muslin bag, which is found sufficient to prevent their rusting. Another instance, very different and far more delicate, bearing upon the same principles—the manufacturers of needles, watch-springs, cutlery, &c., generally introduce a small package of quicklime into the box or parcel with polished steel goods, as security from rust, before sending it to a distant consumer, or stowing it away for further use. These cases are extremely curious, because, as a general rule, bright steel or iron has a most powerful affinity for oxygen; consequently it is very readily acted upon by damp, and is rusted in a short time, either by decomposing the water and obtaining oxygen from that source, or direct from the atmosphere. *Building News.*

Children's Flower Shows.—A Chrysanthemum Show on a small scale took place at the Schoolroom of Summer Town, near Oxford, last Monday week, the exhibitors being the children educated there. With the view of fostering a love of flowers amongst the children, 100 young plants were distributed in the spring to about 30 of them, boys and girls, by a late resident [J. O. W.], the only restrictions being that the children undertook to cultivate the plants themselves without assistance. Small prizes were offered, not so much for fine flowers as for care bestowed on the plants. The late dry summer proved unfavourable for the experiment, but 17 of the children produced their plants on Monday last, to nine of whom prizes were accordingly given, several of the plants being carefully trained and nicely bloomed. The girls appeared to have bestowed as much pains on their plants as the boys. *Oxford Journal.*

Calendar of Operations.

(For the ensuing week.)

PROTECTION from frost demands attention in every department at this season, and particularly in regard to pits and frames. These usually contain some of the most useful plants for both in-door and out-door decoration, as well as the choicer and more tender kinds of vegetables, either for present use, or in a progressive state for removing to the open ground at a more advanced period. In protecting these useful structures effectually and economically, it is of the first importance to keep them, and everything about them, as dry as possible. This points out the superiority of wooden shutters over mats or any other textile manufacture which is not impervious to moisture. Another advantage is in their not lying too close to the glass, as a cavity is thus secured, which, in conjunction with the non-conductive properties of the wood, tends to prevent the escape of heat. To this we may add that they are more easily put on or removed, and prevent the breakage of glass, which is scarcely avoidable in handling frozen mats with cold fingers. They are a little expensive in the first outlay, but their durability, in conjunction with the advantages just enumerated, are sufficient to silence any objection upon that head. Where mats are used, they should be hung or spread in the most convenient place for drying them during the day, as they are by this attention rendered much more serviceable in excluding frost. During very severe weather it is a common practice to place a layer of hay or straw between the mats and the glass; it is however very objectionable on account of the litter and untidyness which it unavoidably creates.

FLOWER GARDEN AND PLANT HOUSES.

As soon as any of the flowering plants in the conservatory become shabby in appearance, they should be removed to make room for others which are coming into flower. And in arranging these, let the situation of each be suited as much as possible to the nature of the plant; some kinds prefer a shady situation, and *vice versâ*. With regard to temperature, also, some require to be placed in the warmest parts of the conservatory, while others will be satisfied with a simple protection from frost.

AURICULAS.—Give these air on all favourable occasions; remove dead leaves, and keep the surface of the soil free from Moss. Water sparingly.

AZALEAS.—A few of the most forward plants of these may now be placed in heat and pushed into flower for the decoration of the conservatory.

CAMELLIAS.—Such as are now coming into blossom should be liberally supplied with water. Air must also be given whenever the weather is favourable.

CHINESE PRIMULAS.—Forward plants must be well attended to with water, and carefully kept out of the way of cold currents of air. As soon as those now in beauty have faded, replace them with others coming into flower.

PELARGONIUMS.—Plants of these intended for flowering early should be placed as near the glass as possible. Let the night temperature range between 40° and 50°, and see that none of the plants suffer from want of water.

VIOLETS.—In some places these will now be in flower. Their beauty and fragrance will be increased by letting them have plenty of air whenever the weather is sufficiently mild for that purpose.

FORCING GARDEN.

CUCUMBERS.—Do not push these too much at this dull season; but keep down thrips and red spider in houses heated with hot water by maintaining a moist healthy atmosphere.

PINES.—Plants intended for fruiting during the summer must now have careful attention. Let them have a steady bottom-heat, and a top heat of about 65° at night, allowing the thermometer to rise 10° or 15° higher during the day time.

VINES.—Let the fermenting material upon borders be examined, to see that it does not get either too hot or too cold; the former will render it necessary to open it out or remove a portion of it; but in the latter case it should be turned over and a fresh portion be mixed up along with it. When the Vines are in flower a somewhat drier atmosphere must be maintained, and syringing the bunches must be avoided until the fruit is fairly set. Avoid a high temperature at night, and admit air freely in fine weather, using the side ventilators only when it is showery.

HARDY FRUIT AND KITCHEN GARDEN.

All kinds of pruning should be pushed forward with as much expedition as possible, while the weather is favourable for that kind of work. Also let trenching of vacant ground be done with all convenient despatch, unless when it is frozen, for the clods, if turned under in that state, will remain a long time before they thaw. Instances have been recorded of ground being trenched during severe frost, and of the clods being found only partially thawed at Midsummer.

CAULIFLOWERS.—These, together with Endive and Lettuces in frames, must be frequently examined, and divested of decaying foliage. A little lime and soot sprinkled upon the ground will also be beneficial in keeping them free from the ravages of slugs.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Dec. 21, 1864, as observed at the Horticultural Gardens

Dec.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Of the Air. Min.	Of the Air. Mean	Of the Earth 1 foot deep.	Of the Earth 2 feet deep.	Wind	Rain
Thurs. 15	16	29.785	29.656	37	31	34.0	47	47	N.E.	.00
Friday 16	17	29.837	29.685	34	21	27.5	45	46	N.E.	.00
Satur. 17	18	29.794	29.735	30	10	20.0	43½	45	N.	.00
Sunday 18	19	29.795	29.765	37	18	27.5	43	44	S.E.	.00
Mon. 19	20	29.866	29.821	48	28	38.0	43	44½	S.	.09
Tues. 20	21	29.887	29.775	43	36	39.5	41½	44	S.	.10
Wed. 21	22	29.975	29.922	44	33	38.5	44	44	N.W.	.00
Average.		29.848	29.765	39.0	25.3	32.1	43.8	44.9		.10

Dec. 15—Overcast and cold, with N.E. wind; overcast at night.
— 16—Uniformly overcast; cloudy and cold; frosty.
— 17—Snow; overcast and cold; severe frost at night,
— 18—Uniformly overcast; cloudy; sharp frost.
— 19—Hazy; thawing; clear and very fine; slight frost.
— 20—Hazy; very fine; overcast at night
— 21—Hazy; fine; overcast.

Mean temperature of the week 7½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 38 years, for the ensuing Week, ending Dec. 31, 1864.

December.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 25 ..	44.62	32.47	38.54	9	0.45 in.	4	8	3	—	2	12	6	3
Mon. 26..	45.39	32.68	39.03	13	0.39	3	6	3	4	4	10	5	3
Tues. 27..	44.23	30.89	37.56	14	0.40	6	5	1	5	2	8	6	4
Wed. 28..	45.47	30.92	38.19	11	0.21	5	4	4	3	3	7	10	2
Thurs. 29..	45.78	32.00	38.89	17	0.62	2	5	1	4	5	8	8	5
Friday 30..	44.47	32.47	38.47	15	0.18	1	7	2	2	4	10	11	1
Satur. 31..	44.47	30.55	37.51	12	0.44	—	8	1	3	6	11	6	1

The highest temperature during the above period occurred on the 25th, 1827, and 28th, 1855—therm. 58 deg.; and the lowest on the 28th, 1860—therm. 1 deg. below zero.

Notices to Correspondents.

BOOKS: *M C.* Miss Maling's Indoor Gardener; and for our wild Ferns, Moore's Handbook of British Ferns.—*Colonist.* Dr. Hooker's Handbook of the New Zealand Flora will exactly suit you.

GROUND VINERY: *Enquiring Gardener.* This is the name applied to a cheap contrivance for growing Grapes. It consists of a low ridge of glass set over a furrow lined with slates or tiles, or over a paving of the same, the Vine stem being trained horizontally, and the Grapes either hanging down in the furrow or lying on the slate floor. The trench plan is the original, and the tile floor Mr. Rivers's improvement. The glass ridges are used in 7-feet lengths. The width at the base is 2 feet 6 inches for one Vine, and the depth in the centre 1 foot 6 inches. These rest on two rows of bricks placed endwise, with a 4-inch space between each for ventilation. The ends are closed with sheet iron, except a small aperture under the apex of the roof, which is left open to allow the escape of rarefied air

MOOR BALLS: *T S W.* This is the common name of one of the fresh-water Algæ, Conferva aegagropila, which forms sponge-like balls at the bottom of lakes. The whole plant consists of a compact mass of branched jointed green threads. The balls vary in size from 2 to 4 inches in diameter.

NAMES OF FRUITS: *William Brown.* The Apple is the Scarlet Nonpareil; the Pear from S. wall is the Old Colmar, the other is the Crassane. The difference between early and late gathering as regards the keeping of the fruit will be noticed. *A Correspondent.* Beurré Diel.]

NAMES OF PLANTS.: *R P.* Helichrysum vestitum.—*Devonian.* Chrysanthemum grandiflorum.—*M N.* 1, Athyrium Filix-fœmina; 2, Lastrea dilatata; 3, Lastrea spinulosa.—*C G.* Sparmannia africana, a fine old greenhouse shrub.

RHODODENDRONS. *Old Subscriber.* The Rhododendron being a hair-rooted plant, and always lifting with a good ball of earth, may be transplanted at any time when the weather is open; this may even be done late in the season, with proper attention as to moisture. For removing your large old plants we should now have preferred the first moist open weather after winter had passed; but as the plants are already lifted, rather than allow them to remain in that state, even though well covered at the root, we should plant at once, weather permitting. But, in truth, almost any convenient time may be taken for the work. You may prune them moderately any time before they start into growth, but if you require to head them back severely, it would be best to let them get a little established first.

ROYAL HORTICULTURAL SOCIETY: *F R H S. with a bad digestion.* Your letter is not gardening matter, and we will have nothing to do with it or any such grumbling, for which the columns of a Journal like this are not intended.

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PROFESSOR J. BUCKMAN, F.L.S., F.G.S, &c., late Lecturer on Botany, Geology, and Rural Economy at the Royal Agricultural College, begs to acquaint Landed Proprietors and those connected with Agriculture that he may be professionally consulted on all Scientific matters relating to Farms and Estates, such as Mineral Products, Economic Materials, Water-bearing Strata, and Water Rights, Improvements in Pasture, Analysis of Seeds, &c.
J. BUCKMAN has a VACANCY for one more PUPIL.
For particulars apply at his residence, Manor Farm, Bradford Abbas, Sherborne, Dorset.

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MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5*s.* per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out

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The arrangements for effecting improvements are threefold:—
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No. 3. The Company will undertake the entire responsibility of the improvements, prepare the plans, execute the works, and finally charge on the estate the actual amount expended, with their commission thereon, approved by the Enclosure Commissioners.
Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.
Works of Drainage and other improvements are also executed on commission for landowners, who merely require the skill and experience of the Company's officers and a staff in constant practice.
Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, S.W.

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Tenants for Life and Mortgagors can likewise Drain and Improve their Estates without any expense to themselves.
The Works are undertaken by the Company, who keep in constant employ a very extensive and experienced staff of Engineers, Surveyors, and Workmen; or Proprietors may avail themselves of the powers of the Act only, and get the Works executed under their own superintendence, or by Agents appointed by themselves.
Outfalls through adjoining lands are obtainable under the Company's Act.
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THE FOWLER MEMORIAL.
It is proposed to hold a PUBLIC MEETING in London, early in FEBRUARY next, to appoint a Committee for raising Funds for a suitable MEMORIAL in memory of the late JOHN FOWLER, to whose untiring zeal in the application of Steam Power to the Cultivation of the Soil, the Agricultural world is so much indebted.
PROMOTERS
Signed, p. p.
DUCIE, Tortworth Court, Wotton-under-Edge.
PORTMAN, Bryanston, Blandford, Dorset.
A. N. HOOD, Cumberland Lodge, Windsor.
EDWD. HOLLAND, Dumbleton Park, Evesham
CHARLES BARNETT, Stratton Park, Biggleswade.
THOMAS RAYMOND BARKER, Hambledon, Henley-on-Thames.
F. R TEMPEST, Ackworth Grange, Pontefract.
H S THOMPSON, Kirby Hall, York
A list of supporters will be given next week.
Communications may be addressed to CHARLES CLAY, Walton, near Wakefield, who has at the request of the promoters undertaken to act as the Hon. Secretary pro tem., and will publish further particulars in future Advertisements.
Any one wishing to support this movement, will oblige by forwarding his address in full as early as possible.

The Agricultural Gazette.
SATURDAY, DECEMBER 24, 1864.

WE called attention in general terms some time ago to the contents of the superb volume on the Farm Homesteads of England, lately published by Mr. BAILEY DENTON.* Particular reference was then made to the perfect style in which the whole work has been issued, as a credit alike to the agriculture of England, which it describes, and to the author and publisher by whom that description has been given to the world in so complete a manner.

One part of the volume, in which the details and examples here collected are collated, contrasted, and compared for the guidance of the reader, was not then alluded to. The digest of the principles recognized in the construction and arrangement of approved farm buildings, with which the work concludes, is an exhaustive discussion of those circumstances and conditions of English agriculture under which the different styles of farm management which it includes have arisen, and under which they can severally be the most profitably conducted. The pastoral, dairy, tillage, and mixed and suburban styles of farming, and the circumstances of soil and climate which have created these various classes of farms, are described. The temperature, rainfall, and winds which constitute the varying climate of the island—the varying altitude and character of soils, too, by which both climate and its influence upon agriculture are determined, all form the subject of elaborate discussion. And the value of the homestead as shelter—shelter for livestock, for produce, and manure, is sufficiently illustrated. We have thus a collection of all the existing knowledge on the relative value of yard and shed manure, and of all the facts on the economical consumption of food, on which after all the architecture of the farm ought to depend.

Thereafter, and as guided mainly by these considerations, the five "general principles" recognised in the erection of farm homesteads are discussed—namely, position with reference to the lands comprising the farm—the extent and arrangement of the buildings—the details of construction—the internal arrangement and furniture of each part—and the cost of the whole.

The true site of the buildings of a farm is of course the virtual centre of that farm—the point to which the annual carriage to and fro between the homestead and the fields will be a minimum. As to the extent and arrangement of the homestead, Mr. DENTON discusses at length the requirements of all the various classes of farms which he had enumerated, and points out how the examples he had already so elaborately described will enable each reader to determine for himself what are the real needs of any farm or estate in which he may be interested. The arrangement of the buildings, mainly dependent, as Mr. SCOTT BURN had pointed out, on the labour connected with the straw of the farm, is discussed in detail, and illustrative examples are quoted. The value of easy superintendence — of shelter against prevailing winds—of uniform rule as to breadth and other dimensions—of eastern aspect for those parts where early morning labour is required — of northern aspect for cart and implement sheds —of sunny aspect for cattle yards—of convenient proximity of those parts whose use is dependent on each other, as of stock to food—of good drainage, &c., are all illustrated and described in full detail.

Then come chapters on Construction; and we have an elaborate account of materials, foundations, walls, roofs (profusely illustrated), doors, windows, ventilation, flooring, water supply. The several arrangements connected with stack-yard, food and produce barns, with livestock houses, stables, accommodation for neat cattle, sheep, and swine, with the dairy, &c., are all illustrated with extreme fullness and elaboration. And finally there is a chapter on Cost. On this it appears that farms of 1000 acres and upwards of mixed husbandry require an expenditure of 4*l.* 10*s.* per acre for buildings—farms of 500 to 1000 acres need 6*l.* per acre—and farms of 200 to 500 acres cost 7*l.* per acre in buildings.

In many cases, however, these rates are exceeded, and 10*l.* an acre are sometimes profitably spent on the houses and buildings of a farm.

Mr. DENTON concludes his very full and admirable volume as follows:—"There still remains a considerable number of farmers who appreciate neither the advantages of well arranged buildings nor the saving of labour arising from centralisation. They would suffer considerable inconvenience rather than pay the increased rent due to an outlay on a good homestead; and if the justification of increased expenditure rested upon the evidence of this class of tenants, it would be indeed difficult to show that prudence was consulted by an outlay sufficient to meet the growing demands of an improved system of agriculture. But the fact is, farmers of this class are passing away, and a wide competition is arising for farms among men more liberally educated and better provided with the means of practically developing the resources of the land. Such men will not be content to inhabit the same description of house, and put up with the same buildings that have satisfied their predecessors, and this improved feeling affords the best assurance to the most rigid economist, since nothing can be more certain than that land farmed by well informed and wealthy and spirited tenants, provided with good buildings, becomes more remunerative both to owner and to occupier."

The volume which concludes with this passage is a capital example of a thoroughly exhaustive treatise upon a first-rate department of English agriculture.

* Farm Homesteads of England, &c. By J. B. Denton, M. Inst. C.E. Chapman & Hall.

—— WE direct attention to a remarkable specimen of thin seeding, as described in another column by Mr. HALLETT, of Brighton. The publication of the paragraph in question has been accidentally delayed.

THE GERMINATING AND CULTIVATING OF CEREALS.

IN pursuing this subject, I wish it to be understood that it is not the saving of seed that I am contending for, though this, whether on large or small farms, is of no small moment; but my object is to show that much more corn could be grown by pursuing the plans here recommended on given quantities of land, and at a much less expense than by the old and general, and I wish I could write, antiquated plans in common practice.

The plan I recommend, as I have many times shown, consists in the first place of putting the land as far as can be into good working condition, and as soon as this can be accomplished, for nothing can be more profitless or ruinous than to keep muddling on from year to year, as is too often done, on cold, wet, poverty-

stricken, undrained, and badly cultivated land, which in such cases is also generally full of Couch grass and other weeds. In land in such a state, and under such management, it is of no consequence as to what kind of seeding is adopted, whether thick or thin, for the crops must be wretchedly bad, and the farmer, whether land-owner or tenant, miserably poor. Nor are such cases so rare as many people might suppose; and especially when the means for draining, cultivating, putting in the seed, and keeping the crops clean from weeds are so easily attainable, for certainly the cost of performing these operations, and in a more efficient manner, is not more than half what it was some 30, 40, or 50 years back, if it be so much as half. But still, notwithstanding the improvements effected in machinery and husbandry implements, and the vast aids farmers have received from the science of chemistry and vegetable physiology, the cultivation of cereals and pulse remains very nearly the same it was as to principle in the days of Tull and the worthies who lived at or near his time, and for centuries before his time. I am aware that in this statement I shall bring upon me much censure from many worthy and excellent men. But half a century ago and more, I saw occasionally deeper and more complete cultivation than I do now, unless in rare cases, and equally as large crops as I do now, and those produced by the aid of farm-yard manures nearly alone, and certainly without any of those modern stimulating and exhausting compounds which for a few years—six, eight, 10, or 12—produce such unusually large crops, and then leave the land reduced so low, poor, and prostrate, that it will grow scarcely anything until renewed at a great expense. It is, however, as a set-off to all this, true on the other hand, and much to be rejoiced at, that the cultivation of root crops of all kinds appears to be nearly as perfect as labour and art will be able to accomplish. It may be asked therefore, how is this? Since cereals, Pulse, and roots are cultivated by the same men, how is it that those men are so perfect in the growing of one kind of crops, and, if I am right, so imperfect in the growing of other kinds? This inquiry is natural and interesting, and I think the solution of it is by no means difficult. For examples, root crops or Turnips, Potatos and Mangel are, comparatively writing, but mere modern introductions into this country, and especially the two latter, and as to the last I myself saw the first large crop of it that, I believe, was grown in this country, and which was all spoiled from having been placed in a closely shut up barn! But these being modern introductions, were first cultivated by scientific men, who applied all the art they were possessed of in the production of the largest and finest roots. Of Mangel Wurzel I myself can bear witness that such was decidedly the case, for the above crop of it, which I saw grown, was set out as wide apart, and some of the roots became as large as any I saw growing this last year. But the very nature of root crops also compels the cultivator of them to cultivate deeply for them, and to set them out thinly and singly, and to take care that they have a sufficiency of pabula for them to feed upon during their growth, both of a mineral and vegetable nature.

But the introduction of cereal and Pulse growing into this country and into Northern Europe also, was very different to this. Though introduced by a wise, polished, and learned people from the eastern parts of the world, the people were rude and without implements, among whom it was introduced; and though the Romans must have practised agriculture, and upon the best methods then known during the time they were in possession of this country, when they left it agriculture would sink down to the lowest possible state, and thus what little land was attempted to be cultivated, would be merely scratched over two or three inches deep only, and then a profusion of seed sown and worked in by the drag—an instrument then in use—in order to smother the weeds and herbage, or the weeds and herbage would have smothered the growing crops. And this was the origin of thick-seeding, practised as a necessity during those dark ages, when the cultivating implement was, under the misnomer of plough, hauled along by oxen, scarcely entered the ground; and the one to put the seed in with was somewhat like a rude harrow, and called a drag. The plough from this rude beginning, when it was little more than a crooked limb of a tree, in modern times has undergone many improvements, so much so that it is believed now to have nearly reached as great perfection as it can attain, or where the moving power of it is confined to animals. But the pre-Adamite Drag remains in its primitive simplicity to the present day, and was so only a few years since in Gloucestershire in full operation every spring and summer, covering over 3 and 4 bushels of cereal seeds an acre, lest on their germinating and growing as of yore, as I have said, the weeds shou'd smother them instead of their smothering the weeds. But I must draw to a hasty conclusion by merely adding that in my next I shall show how I grew in the same land three crops of Wheat one of Barley, and two of Clover in 17 years, the other year being fallow, and that my seed never exceeded 2 pecks an acre, and that my 13 crops averaged 44 bushels an acre. To this I add that the late worthy Mr. Piper of Colne Engaine, grew 14 crops of Wheat on the same land in 14 successive years, and that the seed he used was only 1 peck an acre, and that the average yield of his crops was considerably more than mine. My readers, or some of them, will recollect that Mr. Piper was in the habit of inviting inspection of his crop every year, and of publishing his balance sheet, which gave him a good figure on the credit side every year.

Mr. Alderman Mechi also this last year had several acres drilled with 1 peck an acre, and when I saw them in the spring I could not discover but those acres promised to yield as much per acre as the rest of the worthy Alderman's acres, seeded with four or five times as much, would yield; indeed, though I did not afterwards see those crops, yet I will venture to state that the yield from the 1 peck per acre seed would equal anything I saw th s last year elsewhere. I have also seen some acres done with Mr. Hallett's Wheat, the crops of which were very large indeed.

But my old-fashioned friends are still sceptical. I know they are, although I cannot see them shaking their heads and knocking the tobacco out of their pipes which they had only just lighted; but, my friends, be patient; I know you are a worthy race, and that by your labours and prudence, and I wish I could add science, it is that Great Britain is the pride and glory of her own sons, and the admiration, wonder, and envy of the rest of the world. But, my friends, although you are sceptical, unbelieving infidels as to the doings of what you call the new lights, I will finish this already too long letter by giving you an example of the doings of one of your own school. This gentleman last autumn had five pints of a superior kind of Wheat which he had dibbled on nearly an acre of ground down the middle of a large field, the rest part being drilled with 7 pecks an acre. In the summer he called upon me to ask me to go and see his "wonderful Wheat;" and I went several times, and every time it had improved from the previous visit. I went also after it was reaped and in shocks, when I liked it very much, the Wheat being beautifully fine and plump. But to be short: a fortnight since the owner called to tell me that he had threshed the Wheat from the acre, and, as he expressed it, "he never was so surprised in his life," for he believed that the produce, which was 10½ coombs or 42 bushels, was of more value than that of any other acre he had grown—and yet, my friends, he farms largely. Here, then, is an example from one of yourselves of the largest yield I have ever yet heard of from so very small a quantity of seed.
Geo. Wilkins, Parsonage, Wix, Dec. 2.

LAND DRAINAGE.

[The following is an extract from the second of a short course of Lectures lately given before the Royal Agricultural College, by Mr. Wallace Fyfe.]

Levelling.—The outfall is the first thing to be determined in drainage. The leading object is to secure a sufficient natural outfall from the leading or main drain. Fortunately water will flow on the very slightest incline, and there are very few situations in which a suitable outfall is not to be found, if only of 2 inches in 100 yards—for that in default of better will suffice. This dip or declination is so small that many agriculturists, although possessed of sufficient outfall, are often found harbouring the mistake that drainage is for them a thing impossible, when it is nothing of the sort. The eye, too, is often deceptive in regard to the ground level; and the use of instruments alone can determine the true state of the case.

Levelling is the easiest and most elementary task in surveying; yet it is one requiring the utmost nicety and attention. Various kinds of levels are constantly employed in setting off or finding the levels for drains. But in order to test the fall, cut the drain accurately and uniformly before laying in the tiles and other materials; three staves, two of equal length, about 2 feet, and one to suit itself in the drain to the height of these, having at one end cross pieces of wood 9 inches in length, are commonly employed where the ground is tolerably flat, and answer well when the drain is straight, though not when it is curved. The drain being first cut to the proper depth as far as the eye can judge, one short staff is held perpendicularly on the ground at the upper and another at the lower end of the drain, whilst the other staff, adjusted to stand at the correct height of the other two above the drain bottom, is moved along from one end to the other; the surveyor at one end of the drain bringing his eye down into the line with the upper edge of the cross-heads on the staves, notices whether or not that of the long staff keeps the eye line. According as in moving it along he perceives it rise above or sink below this line, the bottom of the drain must be altered so as to make the three cross-heads coincide. Care must, however, be taken to ascertain that the bottom does slope in the right direction, as these staves only test its regularity, not its inclination. Staves painted in strong contrast of colours are the most readily distinguishable.

The mason's plumb-level forms a very convenient instrument for the use of drainers. By making a mark as far off the plumb line as will subtend an angle equal to the intended fall of the drain, the leveller can always keep to the angle of inclination of the fall. Thompson's Workman's Level is an instrument calculated to enable drains to be carried out on a uniform slope. It differs only from the mason's plumb-level in having the uprights capable of being lengthened or shortened by shifting the hypothenuse, so that it will form any required angle with the base. There is an index head on which the rate of slope is indicated on a graduated scale; and the instrument is kept at any given point by tightening a nut in the index head. The instrument when in use is set in the slope of the drain, and all the workman has to do is to see that the plumb-line strikes the centre. Gillespie's patent inclinometer carries out the same principle by extending it from a triangle to a full parallelogram. In fact, when I first saw them applying it in levelling the drains on his estate of Tirbane Hill, I really think the machine was composed of the four spars of a common field gate, with a diagonal moving upon pins, which made the bottom spar down in the drain parallel with the top spar seen above it, when set to the required inclination. I thought the instrument very effective but ridiculously simple. But by the time it passed through the hands of the Patent Office, and I was called upon by the inventor to write the accompanying descriptive pamphlet which is issued with it by the makers, I found it had become quite complicated since I first saw it in its field-gate form; the top parallel necessarily represented to the eye the amount and direction of the slope, but now an additional limb or parallel was hinged at one end to the top bar, and from the other end depended a plummet. In action the movable limb had to be raised from its parallel position to one perfectly horizontal, as indicated by the plummet, and thus marked the rate of slope on an index spirit level, which is placed in a japanned frame with brass graduated arch, and mounted on a tripod stand with levelling screws to bring it into adjustment. To this is adapted an iron frame carrying two sights with cross hairs, capable of turning round on a centre, and of being raised or lowered at pleasure. The rate of rise or fall is ascertained on inspection. By levelling and traversing the instrument in the plane of the horizon it will also indicate the most favourable fall. The cost with tripod stand is 1*l.* 18*s.*

Gravatt's "Dumpy" Level is more popular amongst surveyors, but it is principally employed where the levels require to be continued for miles, and the height of one point above another determined to an inch, as in the case of railways. This level would be found useful where it became necessary to conduct water from a spring head to a considerable distance. All that the surveyor would have to do would be to determine whether the level of the fountain head was above that of the place to which the water had to be conducted, for if higher the water would assuredly find its way in pipes, however rugged the intervening surface, care being always taken to guard at any point against too abrupt a fall, since the water might otherwise rush in too rapid a current; and thus it is better that the pipes should be laid more nearly to the level or even in a curve, so as to produce the same effect; pipes being sometimes directed even a little upwards before approaching the point of discharge to restrain the velocity of the current.

Main drains or ditches on level lands should always be directed as straight as possible—a feat which gives no trouble to experienced drainers. "A good ploughman," said Mr. Pusey, in that superb report of his already quoted, "will set up a pole a quarter of a mile distant or more, and keeping this mark, almost invisible, steadily in his view, will on land perfectly smooth, trace up to the goal, until his horses knock it down as they pass on each side, a furrow so true that no eye can trace any divergence from absolute straightness." Such is the absolute skill, fast dying out, however [?], which distinguishes the English agricultural labourer. The difference betwixt a straight drain and a crooked one tells powerfully on the rate of outfall. Thus in scouring an old watercourse of 1200 feet long with a fall of 1 inch in 100 feet, it was found that a new course, measuring only 800 feet long, might be executed, and the rate of inclination consequently increased half an inch in the 100 feet. But whether straightened or not the outfalls from main drains should be regularly secured, and the mouths of the leading drains kept clear of all obstructions; instead of the old indolent practice of allowing the ditches to become nearly choked before being cleaned, by simply scouring the ditches often, and never permitting them to become deeply filled with mud, the keeping them in order is found to cost a mere unfelt trifle compared with the huge task of cleansing them after long neglect, besides supplying a peculiar covering for the compost heaps formed at various periods, which, as we shall see, when we come to treat of the economy of manures, is an essential object in fixing and retaining their volatile constituents—and pond and ditch mud, though valuable, when thus applied is really of very little importance. Where however you happen to have a thing, and it has a value, I am a great advocate for using it up on a farm, whatever that value may be. The great reason however for scouring your outfalls is that you may not literally be found undoing at that point what it has been the sole object of your drainage to effect. The essential point in drainage is that water should never be suffered to remain stagnant either in or out of the drains; indeed the drains themselves will never draw efficiently whilst their outlet remains imperfect. In like manner to secure a free flow at all times from the smaller drains, outfalls and main drains must alike be rendered perfect. So important has this been judged, even in a national point of view, that the Act 10 and 11 Victoria, c. 38, was passed for

no other purpose than to facilitate improvements by way of drainage, and to empower owners of property, under certain conditions and restrictions, to enter upon lands belonging to other owners to obtain outfalls. It is true that by sect. 9 no entry is to be made on any land for these purposes, except with consent of the proprietors, until the amount of compensation for damage shall have been agreed upon or ascertained and paid; still the right of obtaining an outfall even upon payment is a powerful recognition of the value and importance of drainage improvements.

CONDIMENTAL FOOD.

ALTHOUGH every farmer may not have used, there are very few who have not heard of the "Condimental Food for Cattle." This famous nostrum is a compound of some of the ordinary food substances, with certain well-known aromatic and carminative ingredients. It possesses a very agreeable flavour, and it is, therefore, much relished by horses, and, indeed, by every kind of stock. The price of this compound was at first so much as 60*l.* per ton; but, owing to competition, and perhaps to the attacks made upon the enormously high price of this article, it is now to be obtained at prices varying from 9*l.* to 24*l.* per ton.

The inventor of condimental food and the numerous fabricators of that compound claim for it merits of no ordinary nature. Its use, they assert, not only maintains the animal fed upon it in excellent health, but it also exercises so remarkably an energetic action upon the adipose tissues that fat accumulates to an extent which would alarm even Mr. Banting himself. Moreover, it is said that an animal supplied with a very moderate daily modicum of this wonderful compound will consume less of its ordinary food, though rapidly becoming fat.

Now, if these assertions were perfectly, or even approximately, true, Mr. Thorley would be well deserving of a niche in the Temple of Fame, and stock-feeders would ever regard him as a benefactor to his own and the bovine species; but we fear that Mr. Thorley's imagination outstripped his reason when he described in such glowing terms the wonderful virtues of his tonic food. Mr. J. B. Lawes, of Rothamstead, than whom there is no more accurate experimenter in agricultural practice, states that he made many careful trials with condimental food, and that he never found it to exercise the slightest influence upon the nutrition of the animals fed upon it.

This experimentalist, after describing the details of some of his experiments, remarks:—

"There is nothing, therefore, in the above results to recommend the use of Thorley's Condiment with inferior fattening food to those who feed pigs for profit. In fact, the following balance-sheet of the experiment, showing that in fattening for 12 weeks there was a balance of 1*l.* 10*s.* 11*d*, in favour of the lot fed without Thorley's food, notwithstanding that one of the pigs in that lot did badly throughout the experiment, as above stated:—

LOT 1.—WITH BARLEY-MEAL AND BRAN.

	£	s.	d.
4 pigs, bought in at 41*s.* 6*d.* each	8	6	0
1860¾ lbs. Barley, at 37*s.* 6*d.* per quarter of 416 lbs., including grinding	8	7	3½
1024¾ lbs. bran, at 5*s.* 6*d.* per cwt.	2	10	8½
	19	4	0½
88 stone 5 lbs. pork, sold at 4*s.* 4*d.* per stone, sinking the offal	19	4	0½

LOT 2.—WITH BARLEY-MEAL, BRAN, AND THORLEY'S FOOD.

	£	s.	d.
4 pigs, bought in at 41*s.* 6*d.* each	8	6	0
1,862¾ lb. Barley, at 37*s.* 6*d.* per quarter of 416 lb., including grinding	8	7	10½
1,020¾ lb. bran, at 5*s.* 6*d.* per cwt.	2	10	1½
105 lb. Thorley's food, at 40*s.* per cwt.	1	17	6
	21	1	6½
90 stone 1 lb. pork, sold at 4*s.* 4*d.* per stone, sinking the offal	19	10	6½
	£1	10	11½

"The results of these experiments with pigs, in which Thorley's condiment was used with inferior fattening food, may be summed up as follows:—

"1. The addition of Thorley's condimental food increased the amount of food consumed by a given weight of animal within a given time.

"2. When Thorley's condiment was given, it required more food to produce a given amount of increase in live weight.

"3. In fattening for 12 weeks, there was a difference of 1*l.* 10*s.* 11*d.* on the lot of four pigs in favour of Barley-meal and bran alone over Barley-meal, bran, and Thorley's food in addition."

At a meeting of the Council of the Royal Agricultural Society of England, held some time ago, the subject of the nutrimental value of condimental cattle food was discussed. As there is scarcely any kind of quackery, from spirit manifestations to Holloway's pills, that has not got its believers, there were, as might have been anticipated, some voices raised at this meeting in favour of condimental food; but the sense of the meeting was dead against it. Professor Simonds pronounced it to be worthless; and Mr. Lawes, from the results of actual experiments, proved its inutility.

Although the greater number of equine proprietors and feeders of stock are too sensible to throw their money away in purchase of these costly foods, still there are by no means an insignificent number who employ it under the idea that it preserves the health of the animals. These stuffs are also highly appreciated by many grooms and herds. Now, for the information of all believers, we may state that there is no mystery whatever in the nature of condimental cattle foods. They consist in substance of such matters as Linseed cake, Indian Corn, Rice, Bean meal, Locust Beans, and malt combings. These substances are flavoured by the addition of Turmeric root, Ginger, Coriander Seed, Carraway Seed, Fenugreek Seed, Aniseed, Liquorice, and similar substances. In addition to the nutritive and flavorous articles employed in the manufacture of these foods, some medicinal substances are also made use of, under the idea that they would prove useful in maintaining the health and stimulating the appetite of the animals. These medicinal ingredients constitute but a small proportion of the compound, although they add considerably to the cost of the manufacture. The following is a formula for a condimental food, which, in every respect, will be found fully equal, if not superior, to the ordinary high-priced articles:—

	Cwt	qrs	lb
Linseed meal or cake	7	0	0
Locust Beans (ground)	8	0	0
Indian Corn	4	1	0
Powdered turmeric	0	1	4
Ginger	0	0	3
Fenugreek seed	0	0	2
Gentian	0	0	10
Cream of tartar	0	0	2
Sulphur	0	0	20
Common salt	0	0	10
Coriander seed	0	0	5
	One ton.		

A ton of condimental food, manufactured according to this formula, will cost only about the same amount as an equal weight of Linseed, and will produce an effect fully equal to that of the food which at one time was sold at 60*l.* per ton.

Whatever may be the medicinal virtues of these foods, or however appropriate the term condimental which has been applied to them, it is quite certain that their wholesome designation, concentrated, was a misnomer. Their composition shows that they possess a degree of nutritive power considerably below that of Linseed cake, and but little, if at all, superior to that of Indian corn.

The following analytical statement will give an insight into the nature of these articles:—

Analyses of Condimental Food

	Thorley's.	Bradley's
Water	12·10	12·09
Nitrogenous or flesh-forming principles	14·92	10·36
Oil	6·08	5·80
Gum, sugar, mucilage, &c.	56·80	66·21
Woody fibre	5·46	5·32
Mineral matter (ash)	4·68	0·22
	100·00	100·00

As a ton of Linseed cake contains a greater amount of nutriment than an equal quantity of condimental food, the latter should be clearly proved to possess very valuable specific virtues in order to induce the feeder to use it extensively. Cattle and horses out of condition may be benefited by its carminative and tonic properties; but if they are, it surely must be a bad practice to feed healthy animals upon a substance which is a remedy in disease. It is asserted, and probably with some degree of truth, that when dainty, over-fed stock loathe their food, they are induced to eat greedily by mixing the condimental with their ordinary food. If such really be the case, let the feeder compound the article himself, and effect thereby a saving of 200 or 300 per cent. in the cost of it. *Irish Country Gentleman.*

COMPOSITION OF OILCAKES.

THE great importance attached to the employment of artificial feeding stuffs as auxiliaries to natural food in the rearing and fattening of stock, and the successful result of the judicious employment of oil-cakes and other artificial feeding materials, has led me to consider that a reference to the composition and analyses of a large number of oilcakes might prove interesting, especially to the stock farmer and the dealer. I have accordingly prepared a table giving the percentage ingredients of 84 samples of oilcake which I have analysed professionally previous to the present year, and submit the results of these analyses with the following introductory remarks:—

The ordinary food of stock, consisting of Grass, hay, and Turnips, is very bulky in its nature, and contains comparatively only a small percentage of flesh-forming ingredients, accompanied by a large proportion of heat producing constituents and refuse matter. The digestive systems of the sheep and ox are specially designed for making the best use of such food, but the fattening process proceeds slowly, unless an admixture of richer food is given. The oilcakes, which are now so extensively consumed by stock, supply in small bulk, and with comparatively little trouble to the animal, a large amount of fat and flesh-forming ingredients. The feeding qualities of oilcakes are mainly dependent on the presence of albuminous compounds to the extent of 20 to 35 per cent., accompanied by an average of 10 to 12 per cent. of oil; but besides these, there is a large amount of starchy and woody fibre, along with a little sugar and gum, and saline matter containing phosphates (the principal element in bones). In short, we have present in an oilcake the important feeding properties of the ordinary food of animals in a concentrated form, and readily capable, when partaken of by the animal, of becoming flesh and fat.

One of the great advantages of a feeding stuff with the composition of an oilcake is the presence of so much ready formed oil, as this is easily assimilated by the animal system, and is readily stored up as fat. At the same time the digestive powers act on the starch, gum, sugar, and part of the woody fibre, resolving these into compounds which, as they circulate through the blood, become elaborated into fat, capable of being also deposited in the tissues. The albuminous constituents also become transformed before and after entering the blood, and ultimately are applied into flesh in the living structure, whilst the phosphates are taken up into the blood and supply the wants of the bones.

LINSEED CAKE is regarded as the first class oilcake, and it is obtained from Linseed by bruising, steaming, and subjecting it to pressure in hot metal bags, when about 25 per cent. of oil is extracted, and Linseed cake is left. The better kinds contain 30 to 32 per cent. of albuminous compounds, and about 12 per cent. of oil. Linseed oilcake is liable to be mixed with inferior oil seeds, bran, and other cheap materials, which detract from its nourishing properties, and occasionally impart to it noxious properties. A simple way of detecting Linseed cake is to grate it, when about half its weight of oil will be set free. Another way is to put it in about half a number of water and heat for a short time. Good cake gives a light-coloured jelly, with an agreeable taste and smell. If other seeds be present as impurities, they communicate a disagreeable taste and an unpleasant odour, resembling refuse canary seed.

COTTONSEED CAKE is made from the seed of the Cotton plant in two ways. (1). The undecorticated cake, which is prepared by crushing the whole seed—husk and kernel—yielding a cake with about 20 per cent. of albuminous compounds and 7 to 10 per cent. of oil and which is objectionable as an article of food, owing to the presence of the fragments of husk and much cotton fibre. (2). The decorticated cake, which is prepared by first shelling the seeds so as to remove the husk, and the kernel so obtained is compressed so as to extract some of the oil and a very superior feeding cake is left, which contains from 30 to 35 per cent. of albuminous compounds and 15 to 18 per cent. of oil. In the shelled or decorticated cake no fragments of the husk should be observed. The newly-prepared or fresh cake is yellow in colour, somewhat resembling mustard, but becomes brown on the surface when exposed to the air—especially when damp—and the brown tint passes gradually to the centre as the cake gets aged.

RAPECAKE is one of the cheaper kinds of oilcake, but many varieties are equal to Linseed in composition, and in some cases have been found equally useful in the feeding of stock. It is prepared by bruising and compressing Rape-seed, which yields Rape oil, largely used as a lighting oil, and leaves in the bags the Rape-cake. This description of cake has naturally a pungent taste, which cattle and sheep rather dislike at the first, and very often it is found necessary to mix the bruised cake with Locust Beans, or merely to sprinkle the cake with treacle, which to a great extent masks or cloaks the pungency of the cake, and besides adds to the feeding properties. Rapecake is often mixed with other seeds, especially Mustard seed, which necessarily imparts blistering properties to the cake, and thus give rise to rather serious effects in the alimentary canal of the animal partaking of such a mixed cake. The presence of the Mustard seed may be easily determined by reducing the cake to powder, and mixing it into a thin paste with cold water in a pickle bottle, which can be corked up. If the quantity of Mustard is great, the characteristic smell of made-up Mustard will be decidedly apparent in a quarter of an hour: but failing its appearance then, the experiment may be allowed to go on for 24 hours, when, should no pungent odour be recognised, and the taste is not extra strong and pungent, then Mustard is not present in quantity to be at least productive of harm; but if the Mustard odour is obtained, and especially if a very strong pungent taste accompany it, Mustard may be present in quantity to be injurious to the health of animals partaking of the cake.

The judicious employment of the various kinds of cake in the feeding of animals is productive of the best results, but cakes of all descriptions are too rich to be given alone to feeding stock, and the daily quantity should be limited. In the feeding of sheep with cake, it would be safer if some plan could be adopted whereby each hogg would only obtain its allotted share. During every season several fatal cases happen, not only where a too liberal dose of the rapecake has been thoughtlessly given, but even where the proper quantity is weighed out for a given number of sheep; but as one sheep is allowed to appropriate its own and its neighbour's shares, evil consequences necessarily result.

In discussing the subject of oilcakes, special reference must be made to the very rich nature of the droppings, or manure obtained from stock fed on cake. The improvement in the nature of the manure through the instrumentality of the oilcake is mainly due to a part of the albuminous or nitrogenous compounds passing through the animal without having been taken up by the system. The proportion of the nitrogenous

ingredients of the oilcake which thus passes direct through the alimentary canal, and appears in the manure, is variously estimated at seven-eighths down to nine-twentieths of the whole, and therefore we may safely consider that the manure represents at least one-half of the total value of the oilcake.

[We have not space for the table, but that is the less to be regretted as Dr. Macadam summarises the results.]

In reviewing the analyses of the foregoing samples of oilcake, it will be observed that 42 samples are known to have been sold as Linseed cake, and in these, the principal feeding elements—viz., the oil, or heat-producing element, and the albuminous or flesh-forming compounds—vary much in quantity. Thus, one sample of Linseed cake contained so little as 8.48 (8½) per cent. of oil, whilst another contained as much as 17.28 (17¼) per cent., and the average amount of oil in the 42 samples was 11.87 (12) per cent. And in regard to albuminous or flesh-forming compounds, one sample yielded only 17.25 (17¼) per cent., whilst another gave 29.50 (29½), and the average amount of albuminous compounds in the 42 samples was 22.85 per cent.

The Rapecake also varies much in composition. Thus in regard to oil, one sample only gave 6.72 (6¾) per cent., whilst another sample yielded 13.80 (13¾), and the average of 12 samples was 11.13 (11) per cent. In albuminous or flesh-forming compounds, the Rape cakes yielded from 17.50 (17½) per cent., which is the lowest amount, to 25.75 (25¾) which is the highest, and the average quantity of albuminous compounds in the 12 samples was 22.08 (22) per cent.

The Cotton-seed cake exhibits the greatest variation in composition, arising from the different conditions in which it is sent into market. The undecorticated cake, having the husk present in it, naturally contains more woody fibre, and correspondingly less oil and albuminous compounds: whilst the decorticated cake, being freed from the husk, has necessarily a larger proportion of oil and albuminous compounds—one sample of Cotton seed cake yielded only 4 96 (5) per cent. of oil, whilst another sample gave 18.52 (18½), and the average of 12 samples was 12.59 (12½) per cent. of oil. The albuminous or flesh-forming constituents of the Cotton-seed cake varied from 14.81 (14¾) per cent. to 34.06 (34), and the average proportion in the 12 samples was 24.59 (24¼) per cent.

Besides the Linseed, Rape, and Cotton-seed cakes, there are given in the table the analysis of 18 samples of cakes, seven of which have been sold simply as "feeding cakes," and the remaining 11 samples are of varieties which are less known in the market. Classifying these 18 samples under the one head of various, we find that the oil present in each varies from 5.04 (5) per cent. to 18.36 (18⅓), and the average amount of oil in the 18 samples is 10.87 (11) per cent.; while the albuminous or flesh-forming ingredients range from 3.12 (3) per cent. to 33.47 (33⅓), and the average amount in the 18 samples is 20.32 (20⅓) per cent.

It is interesting to observe that, whilst there are great variations in the relative proportions of oil and albuminous compounds in the 84 samples taken as one class, yet the average of the whole represents the proportion of the principal feeding elements in a first-class cake. Thus, whilst in the 84 samples the oil varies from 4.96 (5) per cent. to 18.52 (18¼), the average is 11.65 (11 2-3ds) per cent.; and whilst the albuminous compounds in the 84 samples range from 3.12 (3) per cent. to 34.06 (34), the average is 22.44 (22¼) per cent. It appears therefore that, whilst very inferior cakes are occasionally met with, there are other cakes in the market which are of such superior quality that, taking the average of a large number of samples, the deficiencies of the former are made up by the excellences of the latter. *Stevenson Macadam, Ph.D., F.R.S.E., Lecturer on Chemistry, Analytical Laboratory, Surgeons' Hall, Nicholson Street, Edinburgh, Nov.* 19, 1864, *in the Scottish Farmer.*

Home Correspondence.

Ireland.—Men who have not visited Ireland for the express purpose of obtaining information relating to the resources of the country, and the character of the people, can form but a faint idea upon these points from newspaper reports, which are violent and one-sided, and therefore not to be depended upon. There are two great obstacles to the development of the wealth of Ireland and the tranquillity of the people—absenteeism and religious animosity. The residence of landowners on their property would at once meet the first difficulty, and mitigate the second. However kind and able an agent may be, yet he cannot have, and has not, the same influence a landlord would possess over the tenantry. An Irishman is susceptible of, and appreciates sympathy, and is much attached to the old families who reside amongst them. Associating with such a people, and not opposing captiously their hereditary prejudices, is the only way to discover their estimable qualities. The natives are suspicious, and not without some reason, if it is recollected how, in days passed by, their natural protectors left them at the mercy of others. Though this neglect has been since corrected in a degree, yet in many districts the advice and the example of resident landlords is much required. Wherever abuses have existed, and mismanagement reigned supreme for a long period in any county, a reaction will be gradual, and confidence not easily established, without practical proof of a desire on the part of both landlord and tenant to act on the broad and neighbourly principle of Christian charity, so conducive to peace and happiness either in a small or large community. The climate of Ireland is mild, the soil, taking the average, productive; with these advantages a large increase of vegetable and animal food should be sent to the markets. Nature has been liberal to the island—have the industry and knowledge of man turned to account the bountiful gifts of Providence? There are circumstances which prevent a more general improvement in the country—not accidental, but within the control of active intelligence and steady perseverance. More of this hereafter. *Falcon.*

Sowing Grass Lands.—I have read with considerable interest the able letters which have appeared from time to time in your columns upon this important subject, but I was particularly struck with the letter signed "W. M.," as being the most practical of the lot, and regret the writer did not favour us with his name and address, as from my experience of laying down a considerable quantity of land I am satisfied it is a good mixture for any description of soil. The only alteration I advise is that the quantity of Alsike and Cow-grass be doubled. You can (if you are so inclined) have a mixture of seeds mystified through the introduction of botanical names (which few of us understand), and a lot of useless seeds which generally die off the first winter, and for which we are charged an extravagant price—but be assured that any one sowing our friend's mixture will have no cause for regret. There is no pursuit so open to chicanery as that of farming; you are urgently advised to use this or that manure—to buy a lot of useless tools and machinery, and to sow various kinds of seeds—all this goes off with a lot of money, and in the present depressed state of farming there are few who can afford the "luxury" of experiments, therefore it behoves all to look out for the best and most suitable article, and at the lowest price. *Joseph Kitchin, Westerham, Kent, Dec.* 16.

Sewerage.—In using sewerage, its destructive power on iron piping should not be forgotten. Experience proves that on unadulterated "gutta percha." liquid manure has no injurious effect, or very little. *Falcon.*

The Exhibition of Agricultural Produce held annually in the hall of the Royal Dublin Society, has been more than successful this season. The annexed list of prizes will corroborate this statement, and it at the same time adds much to the fame already obtained by Mr. Thomas Smith as one of our first Irish agriculturists. Leamore Park is situated on the coast near Newcastle, in the county of Wicklow, and although like others of his noble landlord's tenants, he holds his farm "at will," Mr. Smith is nothing daunted, but year after year improvements are seen in all departments. At least he deserves much praise for his taste and perseverance.

Parsnips, 12, weighing 56 lbs.	1st prize
White Carrots, 12, 54 lbs.	1st ,,
Red do., 12, 39 lbs.	1st ,,
6 Long Yellow Mangel, 113 lbs.	1st ,,
6 Long Red do., 104 lbs.	1st ,,
6 Yellow Globe do., 108 lbs.	1st ,,
6 Red Globe do., 92 lbs.	2d ,,
White Wheat, 64 lbs., Imperial bushel	1st ,,
Red do., 63 lbs. do.	1st ,,
Field Beans, 67½ lbs. do.	1st

E. A. M., Dublin.

Rational Seeding.—In a recent Number "Experimenter" stated he had a small piece of Wheat planted at less than a peck per acre. In support of the cause of "Rational Seeding," I may perhaps be allowed to say that I have a field of 7 acres drilled (in one day, with only the ordinary expense) with 12½ gallons of white Wheat on the whole 7 acres, which is and will be open to the inspection of any one who will give me an intimation of his intended visit. The wireworm attacked it severely, but I will venture to challenge its produce per acre and its millers' value per quarter against any other 7-acre field in the United Kingdom to be now named. The soil of my field is a poor one, and no manure was or will be applied to the crop. *Fred. F. Hallett, The Manor House, Brighton,*

Diseased Meat.—It is a well known fact that any amount of diseased meat may be, and is, sold in all the large towns in the United Kingdom. How can this monstrous evil be prevented? The traffic in unwholesome flesh is illegal; inspectors are appointed to guard against the public exhibition of meat not fit for food, nevertheless carcases of animals which have died from fever, inflammation, &c., are disposed of to men whose trade it is to dress them up for human consumption; and then surprise is expressed at the severity of dysentery, diarrhœa, typhus, and stomach complaints at particular seasons, just about the time, in the natural course of events, from change of food and temperature, oxen, sheep, and pigs, are subject to illness, too often neglected because of the cost of veterinary attendance, and the certainty of the owner being able to sell the dead animal, as a compensation for loss. The weather, drains, and many other things have the credit of bringing amongst us most distressing diseases, which may be mainly attributed to the cruel practice of imposing upon the working classes poisonous food, creating contagious disorders, and spreading death and destruction amongst high and low. Is the system of employing butchers to get rid of such carrion so common, and the deaths of animals so numerous, that the agricultural interest would suffer if the law was stringently enforced? *Falcon.*

Societies.

HIGHLAND AND AGRICULTURAL.—At a recent meeting of this Society, Professor Anderson, of Glasgow, delivered a lecture on *Sewage Manure in its Agricultural Relations*, from which we make the following extracts:—Experience teaches us that the laws of Nature cannot be transgressed with impunity; and if rightly considered, we shall see that the offensive and polluted state of our rivers is only the mode in which the necessity for preserving the food of plants reasserts its supremacy, and forces us for our own good to restore those adjustments we have ignorantly deranged. The great problem to be solved must be looked at from a sanitary as well as an agricultural point of view. The farmer is not permitted to take the excrementitious matters of towns in their natural state, but is compelled to receive them in the condition to which sanitary considerations have reduced them, though this may not be that in which they are most useful to him. If sanitary requirements were to be disregarded, and the wants of agriculture only to be considered, it seems probable that the whole system of disposing of the refuse of towns would be revolutionised; but it would be mere waste of time to discuss this question, for we are practically tied to the existing state of things, in which the refuse matters are washed away by abundant supplies of water, and all that can be done is to ascertain how they can be best used when in that condition. 1. The first question which has to be considered is the agricultural value, on which subject the most absurd and unreasonable statements have been made, and, though often contradicted, are still current.

There are two ways in which an estimate can be formed—1st, By ascertaining the actual value of the excrementitious matters per head of the population; 2d, By determining the average amount and composition of the sewage. As regards the first of these methods, the extreme value of the manurial matters contained in the urine and fæces may be set down at somewhere about 6*s.* per head. An adult male excretes daily the following quantities of valuable matters:—

	In Urine.	In Fæces.
Nitrogen	214 grains.	24 grains.
Equal to ammonia	260 ,,	29 ,,
Phosphoric acid	50 ,,	25 ,,
Potash	55 ,,	5 ,,

This gives for the total annual production:—

Ammonia	15 lb.
Phosphoric acid	3 3 ,,
Potash	3 ,,

If these matters be taken at the price at which they are sold in guano, then the annual value will be:—

	s.	*d.*
15 lb. of ammonia, at 6*d.*	7	6
3.3 lb. of phosphoric acid, at 1½*d.*	0	5
3 lb. of potash, at 2½*d.*	0	7½
Total value	8	6½

This estimate, it will be noticed, applies to the excretion of the adult healthy male. Those of the females are less valuable by a fifth; and of children the amount and consequent value depends upon their age. In fact, the quantity goes on gradually increasing to the period of maturity, and then again diminishes when the bodily functions become less active towards the close of life. When the proper allowance is made for these (for which a rather elaborate calculation is required, into the details of which it is unnecessary to enter), it appears that the average value of the substances contained in the solid and liquid refuse for the whole population of both sexes and all ages is almost exactly two-thirds of that above given, or, in round numbers, 6*s.* per head. As far as the composition of sewage is concerned, it differs greatly from day to day, and at different periods of the day and night. Some idea of the extent to which the composition of sewage varies may be formed from the analysis of that of the town of Rugby, made in connection with the experiments undertaken by the Royal Commission on the Sewage of Towns during the years 1861, 1862, and 1863. During these years average samples were taken at frequent intervals, and the following table gives the number of grains of ammonia per gallon it was found to contain:—

	Highest.	Lowest.
1861	15.5	3.0
1862	11 0	2.5
1863	12.0	3.0

Now, the quantity of ammonia may be safely taken as a measure of the relative values of different samples of sewage, because it is the most valuable constituent, and the amount of all the other matters rises and falls in proportion to it. It appears, therefore, that the Rugby sewage is sometimes more than six times as valuable as at others, and it is scarcely necessary to observe that equally great variations must exist in other towns. The investigations made at the instance of the Sewage Commissioners have shown that the average quantity of ammonia per gallon is between 6 and 7 grains; and this result is arrived at from the analysis of a great number of samples taken at definite intervals from the tank into which the sewage is pumped. In no other town is the composition of the sewage known with anything like accuracy; and even as to that of London itself, notwithstanding the extent of the inquiries which have been made there within the last six or eight years, the information is still very imperfect. Mr. Way has found seven grains of ammonia per gallon; and extended investigation of a large number of samples carefully selected by Dr. Hoffmann and Mr. Witt have given an average of 8.2 grains; while Dr. Letheby, from a still more extended series of analyses, gives a little over six grains per gallon as the average. If this be the state of our information regarding the average composition of sewage, the doubts which exist as to its quantity are still greater. I find scattered through the different Parliamentary reports on the subject estimates of the quantity of the sewage of London, varying from 132,000,000 up to 328,000,000 tons per annum. If we accept the results obtained by Dr. Hoffmann and Mr. Witt, then it follows that, if there be 328,000,000 tons of sewage annually, it must contain above 85,000,000 lb. of ammonia. Now, the quantity of ammonia contained in the urine and fæces of the population is known with as great certainty as any such fact can be, and it amounts to 30,000,000 lb. This would leave no less than 55,000,000 lb. to be accounted for—a quantity which far exceeds that which could possibly be derived from the urine of animals or other sources. It is clear, therefore, that one or other of these estimates must be inaccurate; and my impression is

that by further inquiry both will be found to exceed the truth. Although the facts at our disposal do not admit of an accurate determination of the total value of the sewage of any town, they may be used to give an approximate estimate for that of a given quantity. This has been done by Dr. Hoffmann by calculating according to the market prices of the manurial constituents of the sewage, and he deduces from his analyses 2*d.* as the value of the substances contained in a ton. If we apply the same data to Letheby's analyses, which give six grains of ammonia in place of eight, the value will be 1½*d.* The latter will probably be found to be nearest the truth; but in the Parliamentary reports the former is most frequently referred to, and appears to be generally accepted; and as it certainly does not underrate the value, we shall make use of it here. In the estimate now given, and in that of the urine and fæces of the population, it will be noticed that I have been careful to state that the value of the manurial matters in the former is 2*d.* per ton, and in the latter is 6*s.* per head; but it must not be supposed that I thereby mean to assert that a ton of sewage is worth 2*d.*, for the values in question apply to the nutritive elements in a dry and marketable condition, and not to them as they are in the urine or in the still more diluted state in which they exist in sewage water. In the latter state, their application is much more costly, and the farmer, in estimating their value to him, must take this into account, and make such deduction as may appear necessary. The necessity for this may be made more obvious by a particular example. Suppose a person had a cargo of guano, which turned out to be a mixture of the pure guano with 12 times its weight of sand, and were to offer it for sale at 1*l.* a ton, and justify the offer by saying that in every 13 tons of it there was a ton of guano worth 13*l.*, he would state what was strictly correct; but no man in his senses would accept the offer, because he would see at once that all the expenses—such as carriage, cost of application, &c.—would be increased 13 times, and it would be necessary for him to take this into account. If, for example, the charges in question amounted to 10*s.* per ton of guano, they would be the same on each ton of the mixture, and he would be compelled to strike off that sum from the price of it; so that, by dilution in this way, one-half of the value of the guano would be annihilated; and it is easy to see that, if carried still further, it might be totally extinguished. There are many familiar instances in which the *entire* value of a substance is thus annihilated, and an excellent illustration may be drawn from the soil itself. An ordinary Wheat soil contains about 3 per cent. of metallic iron, and, reckoning soil and subsoil at 20 inches in depth, they must contain on every acre about 60 tons of iron, which at 2*l.* 10*s.* per ton (the current price of the metal) would be worth 150*l.*, or more than the agricultural value of the land. But certainly no one would gravely propose to dig up the soil to smelt it for iron, or to reckon the price of the metal if he wanted to sell his estate. Sewage offers so far a parallel case that the manurial elements contained in it cannot be reckoned at the same prices as those they would have in a dry state; and we shall see afterwards that when we come to calculate its agricultural effect and take into account the conditions by which its application is hampered, we must allow for it a much lower price—not more, in fact, than a ¼*d.* per ton.

2. ***Modes of Application.***—We come now to consider the mode in which sewage may be made available for agricultural purposes, and two methods have been proposed for the purpose.

The first of these is the process of precipitation, which first attracted the attention of the public, as it was expected to fulfil both sanitary and agricultural requirements. It has failed at Leicester, Tottenham, and several other places for the precipitation of sewage. The only other mode in which sewage can be applied is to use it in the fluid form, and by the process of irrigation; and it is universally admitted that it is the only way in which either sanitary or agricultural requirements are likely to be fulfilled. The Craigentinny meadows, and the wonderful crops obtained from them, have been so often referred to, and held up as an illustration of what can be effected by the sewage of towns, that it may perhaps be best to consider them in the first instance, especially as there are some points respecting them which appear to me to have received less attention than they deserve. It is unnecessary here to enter into any description of the Craigentinny meadows, further than to remark that they extend to 250 acres, and receive the sewage of about 80,000 of the inhabitants of Edinburgh. The point which appears to me to be of most importance to notice is the enormous quantity of manurial matter which is annually passed through them, and which is far greater than is usually supposed, even by those who are engaged in their management. The late Mr. Austin, C.E., examined into this point, and having ascertained the average flow of the Foul burn, he satisfied himself that, deducting Sundays, and assuming that the sewage flows only during nine months in the year, the annual application must have been about 8400 tons. It is easy to see, however, that if the meadows really receive the sewage of 80,000 of the population, even this last estimate must fall short of the actual quantity. The water supply of Edinburgh at present amounts to 34 gallons per head per day, which gives, for 80,000 people, 12,140 tons per day. If then, we assume that this is discharged into the Craigentinny meadows during nine months of the year, excluding Sundays, it would give no less than 11,400 tons per acre. This, it will be observed, is the amount yielded by the water supply alone, and the drainage water and rainfall will certainly add 25 per cent. to the quantity, bringing it up to about 14,000 tons per acre. If we assume, however, that its value is the same as that of the London sewage, which it probably is, and accept Dr. Hoffmann's estimate of 2*d.* per ton, then if 14,000 tons be used, the annual value of the manurial matters per acre must amount to 115*l.*; and if 8400 tons be the quantity, it must be 70*l.* When looked at in this point of view, we cease to be astonished at the crops the sewaged land produces, or the rent, now averaging 22*l.* per acre, obtained for it. Nay, we are rather surprised that the application of a quantity of manurial matters which, could it be obtained in a dry state like guano, would be considered a liberal application to 20 or 30 acres of arable land, should not produce a larger effect than it actually does. It is obvious, in fact, that the method adopted at Craigentinny is far from being an economical one; and, accordingly, all those who have attempted to use sewage in other places have arranged their works in such a manner as to apply a very much smaller quantity of sewage per acre; and in place of the open gutters by which it is carried through the Craigentinny meadows, and which are no doubt objectionable in a sanitary point of view, pipes are employed, and the liquid is in some instances distributed by means of gutta-percha hose. This is the system formerly used at Rugby, where the sewage of about 8000 people is, or may be, distributed over about 500 acres of land; at Alnwick, where the population is 5300, and 268 acres of land are piped; and at Watford, where the refuse of about 4000 people is applied to 210 acres of land. In these cases the application per acre is very much smaller than at Craigentinny, because whereas in the latter each acre receives the sewage of 300 of the population, the average in these three cases is that of about 20. Even this is still a large application, for the value of the sewage, reckoning only the urine and fæces, thus applied to an acre would in the shape of guano be worth about 6*l.* per acre, which is more than twice as much as would be applied to arable land. *A priori*, therefore, it might be anticipated that the effect should be highly favourable, but experience has shown the reverse. Lord Essex, who uses the Watford sewage, states that the quantity is not sufficient for more than 60 or 70 acres—in other words, that to get a profitable result he must apply manure which in the shape of guano would be worth 18*l.* At Alnwick the farmers have declined to use the sewage, although they can at any time obtain it for the cost of pumping: and at Rugby it has been found most profitable to apply a much larger quantity of sewage per acre, and even then Mr. Walker thinks the advantage barely sufficient to cover the rent of 50*l.* a year which he pays to the town of Rugby. It appears from these facts that the agricultural value of sewage is much less than that which the substances it contains would have if they were extracted and used in the dry state; and it becomes an important question to determine its true value to the farmer, so as to form a guide to him in using it. It was with this object that the experiments at Rugby were undertaken by the Royal Commission on Sewage of Towns. These experiments were conducted during the years 1861, 1862, and 1863; but only the results of the first season have yet been published. Fifteen acres were set apart, and divided into three sections—one for the Grass to be given to oxen, another to cows, and a third on which the Grass was made into hay. Each section was divided into four plots—one unsewaged, and to the others the sewage was applied to the extent of 3000, 6000, and 9000 tons per annum respectively. The results are expressed in the following Table:—

Produce Given to Oxen.

Plot.	Sewage required per Annum.	Actually applied to end of October.	Total Grass per Acre.				Increase of Grass per 1000 tons sewage applied.			
			ton	cwt	qr.	lb.	ton.	cwt.	qr.	lb.
1.	..	..	9	5	3	5	..	..	..	..
2.	3000	1872	14	16	3	8	2	10	1	7
3.	6000	4423	27	1	0	10	4	0	1	9
4.	9000	6153	32	16	3	8	3	16	2	9

On the Grass given to milch cows the effect was similar, except that the produce per 1000 tons of the sewage was higher, and amounted to about 4½ tons, which gives on the average of both sections very nearly 4 tons. If we reckon the sewage to be worth 2*d.* per ton, there has here been expended 8*l.* worth of manurial matter to produce about 4 tons of Grass. The Grass obtained as already mentioned was employed both for feeding oxen and milch cows. For the former purpose it was found not to be well adapted, but for the latter it proved very advantageous. The results are expressed in the following Table:—

Sewage applied.	No. of weeks the produce kept a cow.	Gallons of milk per acre.	Value of milk at 8*d.* per gallon.				Value of milk from increased produce of 1000 tons sewage.			
0	19	821	£10	14	8		£5	0	0	
1357	40.9	570.7	19	0	6		5	19	10	
2804	58.8	829.4	27	6	11		5	16	8	
4226	68.9	961.8	32	0	10		5	0	11	

It is obvious that the sewage here acted very beneficially, for it may be safely said that in no other way could the same amount of produce have been obtained from an acre of the Rugby soil; but at the same time it must be borne in mind that this successful effort is obtained by an enormous expenditure of manure, the estimated value of the sewage being 31*l.*, or almost as much as that of the milk produced. The experiments were extended to the composition of the Grass, and, without entering into the details of these points, it may be stated that the sewaged Grass contained a much smaller quantity of solid matters than the unsewaged; but, what is rather unexpected, it was richer in the nitrogenous matters, and it is to their abundance that the value of the Grass for the production of milk is no doubt due.

Farmers' Clubs.

Morayshire. — *On the Growing of Turnips.*—The question which had been propounded for discussion at a recent meeting was—"What is the experience of members in the growing of Turnips of late years, with reference to the different varieties, date of sowing, kinds of manure, and general management?"

Mr. Walker, jun., Altyre, said: The nature of the soil as well as the difference of climate had much to do with the rearing of Turnips; it affected not only the time of sowing, but the different varieties of seed, the different kinds of manure, and, in short, the general management. Speaking from his own experience and observation he would say, in a general way, with reference to the different varieties which formed the first point in question, that where the soil was good or suitable for the purpose, no doubt Swedish Turnips would be the more profitable crop. Along with these he would sow a few of the softer varieties, such as Purple-tops and Hybrids, to be used in the first place till the Swedes were come to maturity, say up till this season of the year, or three weeks or a month afterwards. At any rate, these softer kinds of Turnip, he should say, ought to be all used up by the 1st of the new year, when recourse would be had to the Swedes. If the land were deep loam, where the roots would sink deep into the soil, there was no doubt but the Swedes, as he had said, would be the more profitable crop, it being necessary, however, to grow as much of the softer and earlier varieties as would keep the cattle going until the Swedes were fully matured. As to the time of sowing he would say, judging from his own experience, commence about the 26th May, and get all your Turnip brake sown as soon after that as possible. Begin about the 26th May, and finish the whole as hard as you can work it off. As to manure, there were so many different kinds of manure now-a-days, it was a matter of some difficulty as well as delicacy to make a selection. It would depend so much, too, on the nature of the soil, the variety of crop to be raised, and various other circumstances that had to be taken into account. For himself, however, he would make farmyard manure and bones the staple, using along with these some of the lighter manures for forcing the growth of the plant—say a mixture of guano and superphosphate. If the land were good enough for the purpose, he would have it all in Swedes except four or five acres. If they were to let the Turnip stand to the spring, he would use some cake along with it. In reference to the storing of the crop, he would store the whole of it by the old term, or between that and the new year. The yellow Turnips he would "fur up." The Swedish Turnips for the use of sheep he would put up in heaps of cart-loads on the field, to be thrown out and sliced during the winter as the sheep might require them. As to the expense of taking up the Turnip crop in this way, he thought it would cost about 3*s.* an acre to pull, top, and tail them, and about half as much, or fully half as much, to heap them—say altogether from 4*s.* 6*d.* to 5*s.* an acre. As to the use of the shaws for covering, he did not care very much about using them, because they were apt to heat the heap and cause it to rot. Straw covered with a little earth would best answer the purpose. Earth was the best, and very little of it would suffice. Whenever it came frost, so that you could not pull Turnips from the drill, you had only to go and open up these heaps, and scatter out the fresh Turnips to the sheep, going on from heap to heap as occasion might require. The East Lothian Swede was as good as any. The Purple-top also was a very good Turnip. That, he thought, was the best Swede. It was not the Skirving Purple-top, but one very much like it. It was a low-set Swede, a very handsome bulb, growing well out of the ground, and there was no Turnip he grew of which he had such a crop as of this variety. Another variety he liked was the Greystone. His principal objection to the Greystone was that it was apt to shoot, and therefore if he were to grow this Turnip he would require to have it laid up now, by the month of November, so as to prevent its going to seed. It was particularly Hybrids he would sow for spring use; the Purple-top Yellow was one of the most successful he had grown, and he grew this variety instead of Globes. His rule in manuring, in so far as quantity was concerned, was to give as much as he could—always from 3 to 4 cwt., or he might even vary the quantity up to 6 cwt. an acre, in the form of a mixture of light manures—say 4 to 5 cwt. of these light manures, along with from 10 to 15 tons of farmyard manure. The artificial manures he would value at 9*s.* to 10*s.* a cwt., and the farmyard manure at from 4*s.* to 5*s.* a ton.

Mr. Williamson, Shempston, said that having but recently come into Morayshire as a farmer, he could not be expected to say much as to his experience of that county. His experience had hitherto been chiefly confined to Banffshire. In Banffshire they used to like to sow the whole of their Turnips before the 20th May. With regard to Morayshire, he thought it was perhaps otherwise. As for himself, he was very late this year in getting some of his Turnips sown; but these latest sown, from whatever cause, were making up to be the best crop. He was quite sure that, if they had been so late in sowing their Turnips in the neighbouring county of Banff, they would scarcely have had a crop at all. As to the different varieties of Turnips, he did not think there was anything like Skirving's Turnips for growth. They were decidedly the variety that produced the bulkiest crops, provided, of course, they were from a proper selection of seed—seed from proper bulbs, and bulbs that had been transplanted. He would appeal to Mr. Morrison, seedsman, whether it was not a most important point that the bulbs from which the seed was raised should be transplanted. Seed raised in this way was to be preferred to any other seed sold in the country; his opinion, in fact, being that none should be sold which is not raised from transplanted bulbs. He generally gave all his Turnips farmyard manure, and along with that three or four cwt. of these dissolved manures, which would come to 30*s.* or so per acre in addition to the farmyard manure.

Mr. Walker said he had tried the Greystone variety last year. This variety grew to a tremendous size certainly, but it was soft. By this time of the year it was as soft as fog, and worth little or nothing. This year he had the Pomeranian Globe, which he also got from Mr. Morrison, which was equally bulky, and which had the advantage of being hardier, and containing more saccharine matter than the Greystone variety. He would therefore prefer it to the Greystone—which was certainly not so hard as the name might seem to imply. They should be all eaten up by the 1st November, or at any rate by the 11th, because after that there was very little nourishment or feeding in them either for cows or otherwise. After that he would recommend the Aberdeenshire Yellow along with Swedes, on to the 1st February or even to the end of February, and then he would put them entirely on the Swedes. It had been said that Swedes were not so milky as Yellows, but he found that his dairy cows gave as much milk on Swedes as on Yellows. As to sheep, he thought they throve equally well on the one as on the other—his ewes in spring throve quite as well and were quite as milky. He did not slice his Turnips, properly speaking; he had a cross axe to cut them down with, and this served the purpose for calves and all; to his own mind this seemed the best plan. With regard to the storing of Turnips, he would store the whole if possible before the new year. He had been in the habit of "furring up" his Turnips to save them from the ravages of the hares; but he found it was not a good system for his soft land, which, in consequence

of the furrowing up, was found to be too soft when it came to be ploughed up for the seeding in spring. Than to furrow them up it would be better to get them all stored, and if they were stored properly they would be found sound and good as ever to the month of May. With regard to the manuring, he would say 12 or 14 tons of farmyard manure per acre, with about 4 cwt. of Kilbagie guano. Where he had not farmyard dung to go over the Yellows, he would strongly recommend a good proportion of bruised bones along with dissolved bones, because dissolved bones were very useful in forcing the braird, and the bruised bones were as good as the farmyard manure for carrying on the crop afterwards. As to the expense, he did not think that a good crop of Turnips could be raised under 3*l.* or 4*l.* an acre. Taking the dung and the light manure into account, he had found he could never do it under 3*l.* an acre, and was ready to admit that the cost came nearer to 4*l.* He valued the farmyard manure at 3*s.* to 4*s.* a ton, and the light manure at 30*s.* for the acre—say 43*s* worth of the former and 30*s.* worth of the latter, which would make the cost per acre about 3*l.* 15*s.*

Mr. BROWN, Westerton, being next appealed to for his experience, said that, as to the date of sowing, in his district they were in the habit of beginning about the 10th May, or the 12th, according to the weather. They liked always to sow in dry weather, not simply because the machine did not work so well in wet weather, but they found that unless they sowed in dry weather, and laid the seed down when the land was in good condition, the crop did not braird well, nor did it succeed well afterwards. And these were not the only important considerations which made it advisable that sowing should take place in dry weather. Laying down the Turnips when the land was in bad condition not only affected the Turnip crop itself, but would affect a series of future crops. Then, as to the manuring of the Turnips, his views coincided pretty much with those which had been expressed by Mr. Walker. He would give them as much dung as he could, along with four or five cwt. of artificial manure per acre, valuing the artificial manure at about 10*s.* the cwt. As to the variety of Turnips, he would say the Globe variety for early use, and the Swede afterwards. He was of opinion that the Swedes ought not to be eaten sooner than the 1st of the new year. Sometimes people were obliged to take them earlier when there was nothing else to take; but, on principle, he thought that they ought not to be eaten until they were fully matured, which would not be until the 1st of the new year. One had to study the apportioning of the different varieties according to the size of the farm in relation to the time of sowing, and so forth. You ought to have a certain proportion of Globe varieties to keep you going till the 1st December. Then, after that, you might have Yellows until the middle of January, by which time the Swedes would be fit for use. The White Globe was particularly well adapted for young stock and sheep. He would say they should begin early to fatten their stock. No doubt the Swede, from the amount of saccharine matter it contained, was the best for fattening, but he did not think it was a particularly good feeding Turnip until it was fully matured. He did not think it should be eaten until December at any rate. As to the different varieties, there was a variety he had been sowing very successfully—Shepherd's Golden Globe. Then there was the Purple-top Swede. (He thought all the different varieties of this Purple-top Swede were so closely akin to each other as to be scarcely recognisable as distinct varieties). Shepherd's Globe was rather an improvement on the Green Globe; it was an easily raised Turnip, a Turnip of good quality, and one which would yield a good quantity per acre. As to the roots, a good deal depended on the weather. In a very dry season your Turnips would always have much more roots than in a wet season. So much indeed depended on the season, that it was almost impossible to answer any question on this point. He did not think it so much depended on the kind of Turnip. With regard to Shepherd's Globe, there was a peculiarity about it which he thought was of some importance; besides being a pretty well shaped Turnip otherwise, it rose well on the top with an easy slope, and this was the peculiarity which he wished to point out as a recommendation in its favour. He did not care about a Turnip that was broad on the top, but liked it to rise like this Shepherd's Globe, somewhat in the form of a Pear, with such a rounded slope as to carry off the rain, or prevent the water from standing on the top, which was very apt to make the Turnip rot. He thought, therefore, it would be worth while to keep this shape in view in discussing the merits of the different varieties.

Mr. MORRISON, seedsman, wished to make an observation or two in regard to some of the varieties of Turnips that had been mentioned. He wished to say a word on the Kinaldie or Lane's foliage variety, which had been praised by Mr. Walker, and which he himself had been trying to praise before. Just the other day, Thursday, he walked down after dinner to see a field of Turnips belonging to Mr. John Murdoch, carrier, who was a farmer as well, and who had sown one half of a field with Shepherd's Golden Globe, and the other half with the green Turnip that had been mentioned. On examining the field, he found that Shepherd's Golden Globe was one-third heavier than the green one which they had been talking about. Mr. Walker, jun., had been talking about the East Lothian Purple-top Swede. He (Mr. Morrison) thought it was the finest of any of them—the very best Swede. He had seven varieties of Swedes growing in his garden. He got them all under different names, but, except that East-Lothian variety, the fact was he could see little difference between them. There was Skirving's Swede, grown by a Mr. Fairhead, a Turnip which bulbed capitally, but had a long neck. Then there was Skirving's Golden Globe, which was rather better; then there was the so-called "King of the Swedes," which was much better; then the "Improved," or (as he called it himself) the Child Swede; then Marshall's Swede, and the East Lothian. These he got under these different names as different varieties, but he could scarcely see the difference, except with regard to the East Lothian. In reference to the alleged sameness of some of the so-called "varieties," he might mention as an illustration the prosecutions that had lately been conducted with reference to the Skirving Swede. He repeated that the Lothian Purple-top spoken of by Mr. Walker, jun., was the prettiest and best Swede of the whole. The Kinaldie was not a Purple-top Swede; he should say it was a Hybrid; properly, it was a Green-top Swede; he could not say whether it was as hardy as the others. The Green-top proper was hardy—it was the hardiest of any of them. He went on to say that he was in the way of selling a great many Turnip seeds to people in different localities, not only in Morayshire but in Banffshire, and all up and through Glenlivet, and he found that they generally began sowing very early in these parts—about the 10th May or the time mentioned by Mr. Brown. Some of them, indeed, began about the 1st May; and, in fact, if they did not begin to sow early, people ran the risk of not being able to sow at all. It was different, however, in milder localities, and he should say that, on Speyside—or on such a place as that of Mr. Geddes, Orbliston—the proper time to commence sowing would be about the 20th May, which would give a better chance of a crop than when sown too early.

(To be concluded next week.)

Reviews.

On the Chemistry of the Feeding of Animals for the Production of Meat and Manure. By J. B. LAWES, F.R.S., F.C.S.

This is the title of a paper read before the Royal Dublin Society in March this year. It has been printed, we presume, for private circulation; and we reproduce the greater portion of it here as appropriate both to the season of the year, and especially to the difficult circumstances in which stall feeders are this winter placed. The following accordingly is the substance of Mr. Lawes' paper in a series of extracts:—

1. *On the Composition of Oxen, Sheep, and Pigs, in the Store and Fat Condition.*—I shall assume that an ox or a sheep will increase in weight by about one-half, and that a pig will double its weight during the so-called fattening period. Accordingly, I shall direct your attention to the composition of each of these descriptions of animal when in the lean or store, and also when in the fat condition, after it has increased in the proportion above supposed. I shall then show the average amount of food required to produce 100 lbs. increase in live weight, and also the composition of the food, of the increase, and to some extent of the manure also; and in doing so I shall assume that the animals are liberally supplied with good fattening food.

TABLE I.—*Composition, per cent., of Oxen, Sheep, and Pigs, in the Store and in the Fat Condition.*

	Oxen.		Sheep.		Pigs.	
	Store.	Fat.	Store.	Fat.	Store.	Fat.
Nitrogenous substance	18.0	15.0	15.0	12.5	14.0	10.5
Non-nitrogenous substance (fat)	16.0	30.0	18.0	33.0	22 0	44.0
Mineral matter ..	5.2	4.0	3.5	3.0	2.8	1.8
Total dry substance	39.2	49 0	36.5	48 5	38 8	56.3
Water	60.8	51.0	63.5	51.5	61.2	43.7
Total	100.0	100 0	100 0	100 0	100.0	100 0

Table I. shows the composition, per cent., of oxen, sheep, and pigs, both in the store and in the fat condition, the constituents given being the nitrogenous substance (lean), the non-nitrogenous substance or fat, the mineral or incombustible matter, the sum of these or total dry substance, and the water.

Taking first the nitrogenous substance, it is seen that in each description of animal there are several per cent. less of it in the fat than in the store condition. Of fat, on the other hand, there is in the case of both the oxen and the sheep nearly, and in that of pigs fully, twice as much in 100 lb. live weight of the fat, as in the same weight of the store animals. The mineral matter, again, like the nitrogenous substance, is found in less proportion in the fat than in the store animal. Lastly, the proportion of total dry substance is seen to be considerably increased, and that of the water diminished, as the animal passes from the lean to the fat condition.

In fact, the fattening process may be said to consist mainly in the diminution of the proportion of water, and the increase of that of fat. The actual amounts of both the nitrogenous and the mineral matter do, indeed, augment during the fattening process, as will be seen presently, when I come to speak more directly of the composition of the increase itself; but as they do so in so much less proportion than the fat, it results that their proportion in a given live weight becomes less and less, whilst that of the fat increases as the animal matures.

2. *Proportion of Parts, in Animals of different Descriptions, and in different Conditions of Maturity.*—Passing from the question of the chemical composition of oxen, sheep, and pigs, it will be desirable, before considering the relation of the increase and manure produced to that of the food consumed, briefly to point out some characteristic differences of structure or relative proportion of certain of their internal organs, as in these will be found the key to the difference in the character and amount of food which the three descriptions of animal respectively require. Table II. illustrates this part of the subject.

TABLE II.—*Relation of Parts in Animals of different Descriptions and in different Conditions of Maturity.*

	Per Cent.					
	In different Animals.			In Sheep in different Conditions.		
	Oxen.	Sheep	Pigs.	Store.	Fat.	Very fat.
Average of	16	249	59	5	100	45
Stomachs and contents	11.6	7.5	1.3	9 1	7.0	5.1
Intestines and contents	2.7	3.6	6.2	5.3	3.8	2.1
	14.3	11.1	7 5	14.4	10.8	7.2
Internal loose fat ..	4.6	6.9	1.6	4.5	6.0	7.3
Heart, aorta, lungs, windpipe, liver, gall-bladder and contents, pancreas, spleen, and blood ..	7.0	7.3	6.6	8.4	7.7	6.5
Other offal parts ..	13.0	15.0	1.0	17.9	16.1	11.1
Total offal parts ..	38.9	40.3	16.7	45 2	40.6	32.1
Carcase	59.3	59.2	82.6	53.4	58.7	66.4
Loss by evaporation, &c.	1 8	0.5	0.7	1.4	0.7	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

It is seen that whilst 100 lb. live weight of the ox comprises about 11½ lb. of stomach and contents, that of the sheep contains only 7½, and that of the pig only 1½ lb. Of intestines and contents, on the other hand, the ox contains only 2¾, the sheep 3½, and the pig 6¼ per cent. Again, of stomachs and intestines (and their respective contents), taken together, the ox contains about 14¼, sheep about 11, and pigs 7½ per cent. Thus, of the receptacles and first laboratories of the food, the oxen contain by far the largest, and pigs by far the smallest proportion, which would appear to indicate a great difference in the requirement for bulk of food, such, indeed, as we know in reality exists. Oxen require a larger proportion of woody fibre in their food than sheep, and sheep much more than pigs. On the other hand, the food of the pig contains much more starch, or allied digestible matter, than that of the sheep, and that of sheep more than that of oxen, reckoned in relation to the weight of the animal; and it is known that starch undergoes its primary change (into sugar) almost throughout the length of the intestinal canal. Accordingly, we observe that the pig has a larger proportion of intestines than the sheep, and the sheep more than the ox.

Of the further elaborating, or what may be called the skilled labour organs of the body, and their fluids—the heart, liver, lungs, blood, &c.—the proportion is seen to be nearly the same in the three descriptions of animal.

The proportion of internal or loose fat is greater in the sheep than in the oxen; but it should be observed that a large proportion of the sheep contributing to the average result given in the table were in a more advanced state of fatness than the oxen. The comparatively small proportion of internal fat in the pig is accounted for by the peculiarities of the animal. The proportion of its internal organs is comparatively small, and its speciality is to lay on fat in a greater proportion outside the frame.

The second portion of the Table shows the varying proportion of the different parts in one and the same description of animal according to its degree of maturity. The animals selected for illustration of this point are sheep. Records not given in the Table show that, as the animals grew and fattened, the actual amount, per head, of stomachs and contents increased considerably; that the intestines and contents did so in a much less degree; that the internal loose fat was more than trebled; and that the other internal parts, and their fluids, collectively, increased in nearly the same proportion as the stomachs and contents. The general result was, that the total offal parts increased in actual amount from the store to the very fat condition in the proportion of about 1 to 1¼; but the total carcase parts augmented from 1 to nearly 2½—much more, therefore, than the total offal parts.

Turning now to the figures in the Table, it is seen that the per cent., or proportion in 100 parts, of all the internal organs and parts, excepting the loose fat, diminished very considerably as the animals matured and fattened. Whilst the total offal parts diminished from 45.2 in the store to 40.6 in the fat, and to 35.5 per cent. in the very fat condition, the carcase parts increased from 53.4 in the store, to 58.7 in the fat, and to 64.1 per cent. in the very fat condition. That is to say, the so-called offal parts, which are chiefly composed of the organs of reception, elaboration, and transmission of the food constituents, increase in very much less proportion than those parts which it is the object of the feeder should be produced from the food consumed.

3. *Relation of the Increase, Manure, and Loss by Respiration, to the Food consumed by different Animals.*—We now come to the question of the description and amount of food consumed by the different animals to produce a given amount of increase, and to the collateral questions of the relation of the constituents in the increase and in the manure to those in the food consumed.

Table III. shows the amounts of certain foods assumed to be required for the production of 100 lb. of increase in live weight—of oxen, sheep, and pigs, respectively. The amounts will, of course, vary, according to the quality of the animal, the stage of its development, the external conditions to which it is subjected, the description and quality of the food, and so on: but the quantities assumed are approximately those which will be required, taking the average of large numbers of animals over the whole period of fattening, and supposing foods of the descriptions indicated, and of good quality, are employed, and that other conditions are moderately favourable.

The quantities of the different foods recorded in the table have been adopted after a very careful consideration of the results of numerous experiments on feeding on the large scale; and after the illustrations which have been given of the different proportions of the organs in the different descriptions of animal, it will be seen how consistent are the variations in the quantity and quality of the food recorded as required by the different animals. Thus, to produce the same amount of increase, oxen consume a much larger proportion of hay, containing so much indigestible matter, than sheep; whilst pigs are fattened on a diet as concentrated and containing as little indigestible substance as corn alone. The actual amounts of

food assumed to be required for the production of 100 lb. increase in live weight are:—For oxen, 250 lb. of oilcake, 600 lb. of hay-chaff, and 3500 lb. of Swedes; for sheep, 250 lb. of oilcake, 300 lb. of hay-chaff, and 4000 lb. of Swedes; and for pigs, 500 lb. of Barley meal.

It will be remembered that, when speaking of the composition of the animals themselves, their constituents were grouped under the heads of nitrogenous substance, non-nitrogenous substance, mineral matter, and total dry substance, and the same classification is, for convenience of comparison, adopted in reference to the composition of the food, increase, and manure of the different animals as recorded in Table III. As the food of the pig is the most simple, I will direct your attention to the figures relating to it in the first place. These will be found in the lowest division of the Table.

The 500 lb. of Barley meal consumed in increasing the weight of the pig from 100 to 200 lb. contained 420 lb. of dry substance, and the 100 lb. increase in live weight produced by it not quite 74 lb.; about 70 lb. remain in the manure, and 276 out of the 420 lb. consumed were expended in respiration and other exhalations from the body. Nearly two-thirds of the whole dry substance consumed have thus been expended in keeping in working order the living meat and manure-making machine.

Looking to the column showing the composition of the 100 lb. of increase, it is seen that it contains only 7 lb. of nitrogenous substance, and 66 lb., or more than 9 times as much non-nitrogenous substance or fat, whilst the mineral matter does not amount to 1 per cent. The general result is, then, that nearly two-thirds of the fattening increase in live weight were pure fat itself, and only about one-fourteenth of it nitrogenous substance or lean meat.

But to produce the 7 lb. of nitrogenous substance in increase, 52 lb. were consumed in food; by far the greater part of the remainder being found in the manure. To produce the 66 lb. of fat, 357 lb. of non-nitrogenous substance were consumed; but as it existed in the food almost entirely in the form of starch, and as it requires about 2½ parts of starch to form 1 of fat, it may be said that at least 165 lb. of the non-nitrogenous substance consumed contributed pretty directly to the formation of the 66 lb. of fat. Lastly, in reference to the increase:—Of the 11 lb. of mineral matter consumed, only about ¾ lb. were stored up in the increase of the animal.

It is observed, then, that a comparatively small proportion of either the nitrogenous substance or the mineral matter of the food is retained in the increase; the manure, on the other hand, retains a very large proportion of the former, and nearly the whole of the latter.

Of 100 parts of gross dry substance consumed, 1.7 parts of nitrogenous substance, 15.7 of fat, and 0.2 of mineral matter—in all 17.6 parts—are stored up in the increase: 14.3 parts, consisting of highly nitrogenous organic matter, and 2.4 parts of mineral matter, making a total of 16.7 parts, are retained in the manure; and 65.7 parts, consisting chiefly of carbon, hydrogen, and oxygen, are lost by respiration, &c. Or, if we reckon the proportion of each class of constituents consumed which is stored up in the increase, the last column of the Table shows that of 100 of nitrogenous substance consumed, 13.5 parts; of 100 non-nitrogenous substance consumed, 18.5 parts; and of 100 mineral matter consumed, 7.3 parts are retained in the increase.

It will not be necessary to follow so closely the figures in the Table relating to the sheep and oxen. It will suffice to direct

TABLE III.—*Food, Increase, Manure, &c., of Fattening Animals.*

OXEN.

	250 lbs. Oil-cake .. .. 600 lbs. Clover Chaff .. 3500 lbs. Swedes .. .. } Produce 100 lbs. Increase, and supply—				100 Total Dry Substance of Food supply—			Amount of each constituent stored up, for 100 of it consumed.
	In Food.	In 100 lbs. Increase.	In Manure.	In Respiration, &c.	In Increase.	In Manure.	In Respiration, &c.	
	lbs.	lbs.	lbs.	lbs.				
Nitrogenous substance ..	218	9.0	323.0	636	0.8	29.1	57.3	4.1
Non-nitrogenous substance	808	58.0			5.2			7.2
Mineral matter	83	1.6	81.4	..	0.2	7.4	..	1.9
Total dry substance ..	1109	68.6	404.4	636	6.2	36.5	57.3	..

SHEEP.

	250 lbs. Oil-cake .. .. 300 lbs. Clover Chaff .. 4000 lbs. Swedes .. .. } Produce 100 lbs. Increase, and supply—				100 Total Dry Substance of Food supply—			Amount of each constituent stored up, for 100 of it consumed.
	In Food.	In 100 lbs. Increase.	In Manure.	In Respiration, &c.	In Increase.	In Manure.	In Respiration, &c.	
	lbs.	lbs.	lbs.	lbs.				
Nitrogenous substance .	177	7.5	229	548.5	0.8	23.1	60.1	4.2
Non-nitrogenous substance	671	63.0			7.0			9.4
Mineral matter	64	2.0	62	..	0.2	8.8	..	3.1
Total dry substance ..	912	72.5	291	548.5	8.0	31.9	60.1	..

PIGS.

	500 lbs. Barley Meal produce 100 lbs. Increase, and supply—				100 Total Dry Substance of Food supply—			Amount of each constituent stored up, for 100 of it consumed.
	In Food.	In 100 lbs. Increase.	In Manure.	In Respiration, &c.	In Increase.	In Manure.	In Respiration, &c.	
	lbs.	lbs.	lbs.	lbs.				
Nitrogenous substance ..	52	7.0	50.6	276.2	1.7	14.3	65.7	13.5
Non-nitrogenous substance	357	69.0			15.7			18.5
Mineral matter	11	0.8	19.2	..	0.2	2.4	..	7.3
Total dry substance ..	420	73.8	70.0	276.2	17.6	16.7	65.7	..

attention to the chief differences of result obtained with the three descriptions of animal.

Whilst the pig required only 420 lb., the sheep required 912 lb., and the oxen 1109 lb. of dry substance in food to produce 100 lb. increase in live weight. In other words, the sheep consumed more than twice as much, and the oxen more than two and a half times as much, to produce a given amount of increase, as the pig. But the food of the pig was of a much higher character than that of the other animals. Whilst it consisted entirely of highly elaborated grain, closely resembling human food, the food of the other animals contained a large amount both of woody fibre and of crude succulent roots: the dietary of the ox containing the largest proportion of hay, with its high percentage of indigestible woody matter.

Turning to the columns giving the composition of 100 parts of the increase, they show that whilst that of the pig contained 73.8 parts of dry substance, that of the sheep contained rather less, and that of the oxen rather less still. The proportion of fat also was greater in the increase of the pig than in that of sheep, and greater in that of the sheep than in that of the oxen. The contrary was, however, the case with the proportion of nitrogenous substance, which was the greatest (9 per cent.) in the increase of the oxen, less (7.5 per cent.) in that of sheep, and less still (7 per cent.) in that of pigs. It will be observed, too, that the percentage of mineral matter in the increase of the ox and sheep is considerably higher than in that of the pig; and it is even rather higher in the case of sheep than oxen. Independently of any essential differences of structure in the different animals, this result is partly due to the fact that sheep and oxen, especially sheep, develop bony structure during the fattening process more than pigs. It is true that both sheep and pigs are, compared with oxen, fattened at an earlier stage of their development; but not only is the pig more naturally disposed to fatten instead of grow in frame very early in his career, if only liberally supplied with proper food, but the practice of feeders, to meet the demands of the market, is to encourage growth as well as fattening much more in the case of sheep than of pigs.

Comparing the constituents stored up in increase for a given amount of dry substance of food consumed in each case, the Table shows that for 100 gross dry substance of food, the oxen and sheep stored up less than 1 per cent., and the pigs more than twice as much of nitrogenous substance; that of fat the oxen stored up only 5.2, the sheep 7, and the pigs 15.7 parts.

Or, looking at the subject from another point of view, the last column of the Table shows that for 100 nitrogenous substance of food consumed, the oxen and sheep stored up little more than 4, but the pig about 13.5 parts; that for 100 non-nitrogenous substance in food, the oxen yielded 7.2, the sheep 9.4, and the pigs 18.5 parts of fat in increase; and that for 100 mineral matter consumed, the oxen stored up 1.9, the sheep 3.1, and the pigs 7.3 parts.

That a very much larger proportion of the constituents of the food of the pig than of that of oxen and sheep should be stored up as increase is, however, only what we should expect, when we consider that the former consists of matured grain, and the latter chiefly of comparatively immatured vegetable produce, containing a large proportion of indigestible and woody matter, and also a larger amount of nitrogenous and mineral matter in proportion to its digestible and available non-nitrogenous constituents.

But whilst the pig, with his much higher character of food, gave so much more increase than the sheep for a given amount consumed, and the sheep more than the ox, the ox returned as manure 36.5 per cent. of the dry substance he consumed, the sheep not quite 32, and the pig only 16.7 per cent. The proportion of the consumed matter that was lost by respiration was, on the other hand, rather the lowest with the ox, namely, 57.3 per cent.; whilst with the sheep it was 60.1, and with the pig it was 65.7 per cent. Or, reckoned in proportion to a given amount of increase produced, the oxen gave, for 100 lb. of increase in live weight, 404 lb., the sheep 291, and the pigs only 70 lb. of dry substance in manure; and for the same amount of increase, the oxen lost of dry substance, by respiration, &c., 636 lb., the sheep 548.5 lb., and the pigs 276.2 lb.

4. *Comparison of Animals as to Rapidity of Growth and Consumption.*—There is another point from which it is desirable to view the difference of the result obtained with the different descriptions of animal. This is illustrated by the figures given in Table IV., which shows for oxen, sheep, and pigs, respectively, the amounts of increase yielded, and of dry substance consumed in food, voided as manure, and lost by respiration, per 100 lb. live weight per week.

The first column of this Table shows that whilst the pig increases from 6 to 6¼ per cent. of its weight per week, the sheep increases only 1¾, and the ox little more than 1 per cent. No wonder, then (to say nothing of the difference in the character of the food), that the oxen and sheep, requiring so much longer time to add a given proportion to the weight of their bodies, should consume so much more food, void so much more as manure, and expend so much more in respiration, for a given amount of increase produced, as we have seen they do.

The other columns of the Table show, however, that neither the amount of dry substance of food consumed, nor the amount lost by respiration, by a given weight of animal within a given time, is in excess with the pig in anything like the proportion that its increase exceeds that of the other animals. In other words, the much higher character of the food of the pig shows itself in the much greater rapidity, and the much greater proportion of its conversion into meat—the most valuable product of the feeding operation.

TABLE IV.—*Amount of Increase yielded, and of Dry Substance consumed in Food, recovered as Manure, and lost by Respiration, &c., per 100 lbs. live weight, per week.*

	Per 100 lbs. Live Weight, per Week.			
	Increase yielded.	Dry Substance.		
		Consumed in Food.	Recovered as Manure	Lost by Respiration, &c
	lbs.	lbs.	lbs.	lbs.
Oxen ..	1.13	12.5	4.66	7.86
Sheep ..	1.76	14.9	5.10	9.62
Pigs ..	6.43	27.0	4.51	17.74

Lastly in regard to the results in this Table, it is remarkable that, whilst, for a given weight of the body within a given time, the amounts of increase yielded, and of dry substance consumed in food, and lost by respiration, are so very different for the different animals, the amounts of dry substance voided in excrements are almost identical. I shall show further on that the limit of consumption is much regulated by the amount of non-nitrogenous substance contained in the food; and hence it would appear that the respiratory function had much to do with determining the amount of food consumed. It would also seem, from the equality of amount of dry substance voided by a given live weight of the different descriptions of animal within a given time, that the limit of consumption had also some connection with the amount of transpired and effete matter that the system could pass; and hence that the surplus available for increase was fixed by the necessary proportion of digestible and assimilable to effete matter in the appropriate food of the respective animals.

Conclusion.—To sum up the points thus far illustrated, it may be said:—

1. That during the fattening process the proportion, in a given weight of the body, of water, mineral matter, and nitrogenous compounds decreases, whilst that of the fat very considerably increases.

2. That the carcase parts, or saleable meat, increase more rapidly than the internal parts or offal.

3. That the amount of dry substance of food required to produce a given weight of increase is larger with the ox than with the sheep, and larger with the sheep than with the pig.

4. That the dry substance of the food of the ox contains a larger proportion of indigestible matter than that of sheep, and that of sheep more than that of pigs.

5. That oxen require from 5 to 6, and sheep from 3 to 4 times as much time to add a given proportion to the weight of their bodies as pigs.

6. That the greater portion of the nitrogenous and mineral matters of the food is recovered in the manure; and that the greater part of the non-nitrogenous substance is lost by respiration and other exhalations—a much smaller proportion being retained in the increase, or voided in the manure.

7. That for a given amount of increase produced, oxen void considerably more substance as manure, and expend more in respiration, &c., than sheep, and sheep very much more than pigs.

8. That for a given weight of dry substance consumed, oxen void more as manure than sheep, and sheep much more than pigs; but oxen respire rather less than sheep, and sheep rather less than pigs.

9. That in proportion to a given weight of animal, within a given time, oxen both consume and respire less dry substance of food than sheep, and sheep very much less than pigs; but they void almost identical amounts of dry substance as manure.

(*To be Continued.*)

Miscellaneous.

Lord Palmerston on Agriculture.—At the recent meeting of the Romsey Agricultural Society, Lord Palmerston said:—I thank you from the bottom of my heart for the kind manner in which this toast has been proposed, and in which it has been accepted by the company which I have now the honour to see assembled. It must at all times be most gratifying to any man to meet with the expression of the goodwill and approbation of his fellow-countrymen; but, perhaps, if there is any portion of his fellow-countrymen whose goodwill and approval he may be most anxious to secure, it must be those in whose neighbourhood he lives, who have opportunities of forming their judgment from seeing him and from knowing what he does better than those who may live at a distance can do. I am, therefore, peculiarly gratified at the expression of goodwill and of kindness which I invariably receive from the people of the neighbourhood of Romsey. I am glad and proud to meet you upon the present occasion. It is honourable, I think, to the town and neighbourhood of Romsey that we should have erected this handsome and capacious building, to provide for that which was obviously a great want in the accommodation of the town. Agriculture, like every other industry, is promoted by the intercourse of man with man, by the interchange of ideas, by the mutual intercommunication of knowledge, by one man telling others what he has done, how he has succeeded, and how he has failed. All these things tend to enlighten the ideas and to promote that industry with regard to which that intercourse takes place. Hitherto the farmers who assembled in this town have been exposed to the wind and the rain. I do not mean to say to say they are not stout fellows who do not care for the wind or the rain. The wind will not blow their good thoughts out of them, and the rain will not melt away their good qualities. But, nevertheless, it is very pleasant to meet in a comfort-

able spacious apartment like this, and I am convinced that the erection of a building like this will tend to the advantage of this interesting agricultural district. Although I have had the honour of presiding at this agricultural dinner, I do not intend to take upon myself the task of talking to farmers about farming. Nor do I imagine that anything I could say would enlighten their minds as to the practice of the industry in which they are engaged, but I think I may be permitted to observe that this show to-day, both of cattle and roots, is honourable to the progress of agricultural industry in this neighbourhood, and I trust we are tending to advance and to improve year by year. Although I do not pretend to lecture upon agriculture, yet there are things which strike the eye and appeal to the understanding of every layman, however little he may be acquainted with the details of agriculture, and there are one or two things which I may be permitted to mention. In the first place, I believe that the industry of agriculture is destined very much to increase. The introduction of machinery has progressively added to the produce of the soil, and it has reconciled itself even to those labourers whose employment may at first sight appear to diminish in consequence of the introduction of machinery. When the first threshing machines were introduced there was a revolt, I may say, among the flail men. They thought that the threshing machine would take the bread out of their mouths, and the threshing machines were destroyed in consequence of jealousy of the flail men. The other day when I was down in Hertfordshire I was told by a farmer that the labourers considered the flail too severe an employment, that they would not thrash by the flail, but only by machinery. Then comes the question of ploughing. The steam plough is a recent and modern application of science to agriculture. I cannot help thinking that it is destined to spread generally, so as to be of the greatest possible service; and, although it may not be within the scope of the resources of all farmers to go to the expense of buying a steam engine and its necessary apparatus, why should not persons procure the necessary apparatus and let it out as they do threshing machinery, and thus improve the cultivation of the country. The great advantage of the steam plough is that it ploughs deeper than can be done by any other process, and anyone knows that the deeper you go the more you will let in the air and all other fertilising influences, and thus increase the produce. Again, modern science has lightened greatly the vehicles used in agriculture. We no longer see those enormous masses of timber which were formerly drawn by horses in the shape of carts and waggons, which in themselves were heavier than the loads which they were intended to convey, which it was quite unnecessary to make so large and heavy, which were not stronger by reason of their weight, because their weight destroyed their usefulness, and which were dearer. A great improvement has taken place in that respect. Many complaints have been made this year that the crop of Turnips has been scanty, not because the crop of Charlock has been scanty. I have seen a good deal of the variety of colours that ornament our stubbles, and I think if there is one thing to which the energy of our agriculturists may be devoted more than another it is to the extirpation of these weeds, which draw from the soil those elements of growth which ought to be devoted entirely to corn, Grasses, and other useful things. I will not detain you longer, except to say that I am very proud of having the honour to preside on the present occasion. I trust this is a fresh point of departure for Romsey, and that we shall be able to mark this day as a day of increasing progress in agricultural prosperity in this district. I now propose, "The Health of the Chairman and Committee of the Romsey Corn Exchange, and Prosperity to that Institution."

The Wheat Crop in 1864.—In October last you favoured me with space for a few remarks on the character of the Wheat crop of 1863. Founding my conclusions upon the produce obtained in a field of 14 acres, in which Wheat had been grown for 20 years in succession, on some portions without manure, and on others with different descriptions of manure, and also upon a careful comparison for many years past of the results obtained in that field with those of ordinary farming over a large area of the country, I gave it as my opinion that the crop of last year (1863) would turn out a remarkably abundant one; and such subsequent experience has proved it to have been. I now propose to direct the attention of your readers to a few of the results obtained in the same field during the season just passed, which is the 21st of Wheat year after year on the same land. Below are given, for the harvest of 1864, the number of bushels per acre, and the weight per bushel of the dressed corn obtained—on a portion left entirely unmanured during the whole 21 years, on another manured with 14 tons of farm-yard dung every year, and on others manured with certain artificial mixtures in each of the 21 years. And, for the sake of comparison with the results of the present season, there are given, in parallel columns, those of 1863, as well as the average over the last 12 years, during which period the description of artificial manure applied was the same year after year on the same plot as for the crop of 1864. It may be added that the different artificial mixtures contained the same mineral manure in each case, but in combination either with different quantities of ammonia-salts or with nitrate of soda.

BUSHELS OF DRESSED CORN PER ACRE:—

Plots.		Harvests. 1863.	Harvests. 1864.	Average of 12 years. 1852-63.
3	Unmanured	17¼	16	15½
2	Farm-yard manure ..	44	40	35⅝
7	Artificial manure	53⅝	45¾	36⅜
8	,, ,, ...	55⅝	49⅜	38
9	,, ,, ...	55½	51¼	34½
16	,, ,, ...	55⅞	51	38½

WEIGHTS PER BUSHEL OF DRESSED CORN—lb.

Plots.		Harvests. 1863.	Harvests. 1864.	Average of 12 years. 1852-63.
3	Unmanured	62.7	62.0	56.5
2	Farm-yard manure ..	63.1	62.5	59.3
7	Artificial manure	62.6	63.1	58.4
8	,, ,, . ..	62.3	63.5	57.8
9	,, ,, ...	62.1	62 6	57.1
16	,, ,, ...	62 4	63.2	57.6

It is seen that the produce of 1864 was in every case less than that of the extraordinary season of 1863; but that it was, on the other hand, in every case considerably higher than the average of the preceding 12 years. Indeed, on two of the plots the produce of the present season exceeded the average of the preceding 12 years by about 12, and on one by more than 16 bushels per acre. The quality of the grain is also very high, as indicated by the weight per bushel, which is fully equal to that of 1863, and very much higher than that of the average of the preceding 12 years. It is remarkable, too, that in three of the experiments the produce of the last two years taken together has exceeded 100 bushels per acre. In no other instance during the 21 years has the produce of two consecutive seasons given such a result. The nearest approaches to it were in 1857 and 1858, when one plot gave 92 bushels, and in 1862 and 1863, when several plots gave over 90 bushels per acre in the two years. Upon the whole, I think it may be concluded that, on the heavier soils, if in good condition, the Wheat crop of 1864 will prove to be much above the average. On light and badly-farmed soils, on the other hand, I think the produce will generally be below an average. The quality is doubtless pretty universally good, and above the average. With such a crop following one of such unusual abundance as that of last year, it is not surprising that the price of Wheat should be so low. *J. B. Lawes, Rothamsted, Herts, in the Times.*

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Streatley, near Reading.

Day of the Week.	Day of the Month.	Reading of Barometer corrected to Freezing Point at Mean Sea Level. At 9 A.M., Railway Time.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
		Inches.	°	°				°	°	°	°	Inches.
Friday	Dec. 16	29.77	35	33	N.E.	2	10	36	33	36	32	..
Saturday	17	29.83	33	33	N.E.	0	10	35	26	37	17	Snow
Sunday	18	29.79	27	27	S.	3	4	33	20	36	15	Snow
Monday	19	29.88	26	26	S.E.	0	9	36	28	36	22	Snow
Tuesday	20	29.78	43	43	S.W.	0	10	43	25	44	25	0.30
Wednesday ..	21	30.03	40	39	N.W.	1	10	46	37	47	29	0.02
Thursday	22	30.18	36	34	N.E.	1	10	42	35	48	32	..

Notices to Correspondents.

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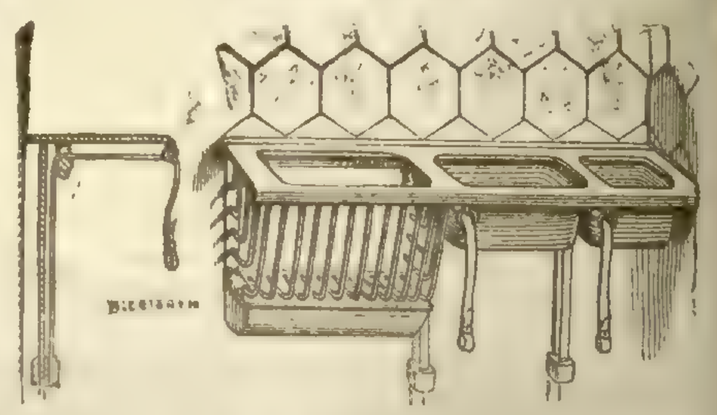

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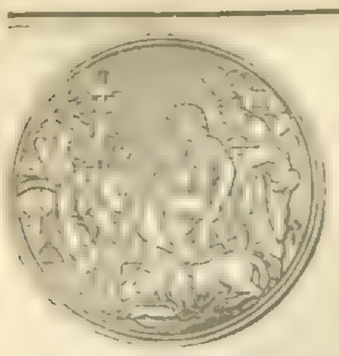

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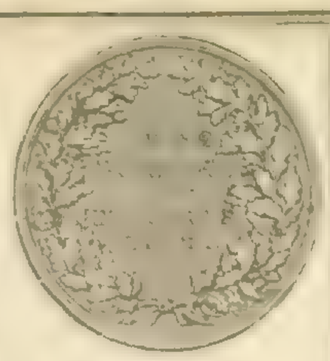

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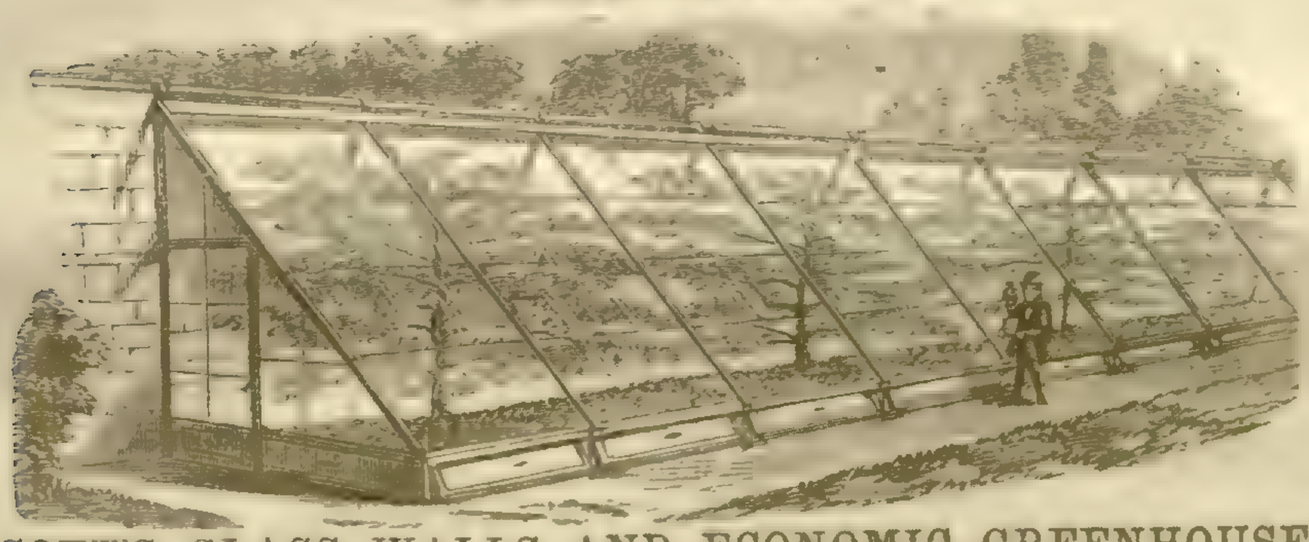

SCOTT'S GLASS WALLS AND ECONOMIC GREENHOUSES.

Designed to meet the suggestions of JAMES SCOTT, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES	PINE and MELON PITS	BALCONIES	GATES
GREENHOUSES	VASES	IRON SASHES	TANKS
HOTHOUSES	VERANDAHS	IRON HURDLES	HOT-WATER WORKS

PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. Lists Free.

ST. PANCRAS IRON WORK COMPANY, OLD ST. PANCRAS ROAD, LONDON, N.W.

DIXON'S YORKSHIRE HERO PEA.
the best Dwarf Pea in cultivation, 2s per quart, 5s 6d per pint
See Testimonials, page 1861
S. F. DIXON & SON, 37, Queen Street, Hull

CHOICE SEEDS.
1s Packets, Postage free
CATTELL'S DWARF PURPLE TOP BEET.—The best Red Beet in cultivation. 1s per packet.
CATTELL'S ECLIPSE BROCCOLI.—The surest, hardiest and best White grower. 1s 6d per packet.
CATTELL'S RELIANCE CABBAGE.—1s per packet.
KIRKLEES HALL DEFIANCE CUCUMBER.—Quite true. 1s 6d. per packet.
VARIEGATED GARNISHING KALE.—Mixed, Red, White, Purple, Green, &c.; very handsome. 1s. per packet.
Trade prices on application
James Cattell, Seed Grower, Westerham, Kent

WANTED, extra large PEACHES and NECTARINES.
The undersigned require a number of large, handsome, well-trained Peaches and Nectarines in a bearing state, and of kinds suitable for Forcing.
Gardeners having such to Dispose of, will please apply giving full particulars of age, size, kinds, &c.
FRANCIS & ANDREW [illegible] & Sons, The Exchange, Street, Chester

REIGATE SILVER SAND (best quality) for Paths, &c., 2s 6d per ton, 4s per 4 Tons, 7s per 6 Tons, 12s per 8 Tons, 15s per Ton for 20 Tons and upwards, delivered to the Reigate Station Railway rate to the Bricklayers Arms Station, London, 2s 6d per ton, but less than 4 Tons. Best Kent and Surrey POTS in every size
S.S. Lowest terms can be had direct on all the Railways
FLOWER POTS in every size at the lowest cash prices.
W. SMART, Sand and Peat Depôt, Reigate, Surrey

COCOA-NUT REFUSE
delivered within 24 miles of Charing Cross, at 2s per bag
For particulars, see how to use Rusden's Advertisement in Gardeners' Chronicle of the 21st March, 1863, or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames
Postage Stamps or Post office Orders payable to J. BARNHAM & Co.
BARNHAM'S BRUSHES and MATS are sold in every town.
CAUTION.—Every Brush is stamped, J. BARNHAM'S Patent.

THE LONDON MANURE COMPANY
have now ready in fine condition—
DISSOLVED BONES,
SUPERPHOSPHATE of LIME,
TURNIP MANURE,
BLOOD MANURE for Barley and Roots,
URATE,
MANGEL MANURE, &c. &c.
They also continue to supply GIBBS' PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.
Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. E. PURSER, Secretary.

LAWES'S WHEAT MANURE for AUTUMN SOWING.—A supply of the above Manure is now ready for delivery, at J. B. LAWES' Factories, Deptford, and Barking Creeks.
Price 6/ per [illegible]
2 to 3 cwt per acre is the proportion [illegible] should be sown before the seed is sown. It can be obtained of Mr. LAWES, or through any of his appointed Agents
SUPERPHOSPHATE of LIME £9 6
MINERAL SUPERPHOSPHATE 5 5
Genuine Peruvian Guano direct from the Importers, and all Chemical Manures of value
American and other Cakes at Market prices.
Address JOHN BENNET LAWES, Offices: 1, Adelaide Place, London Bridge, E.C. and [illegible], Devon

ODAMS'S BLOOD MANURE for CORN,
ODAMS'S BLOOD MANURE for ROOTS,
ODAMS'S SUPERPHOSPHATE of LIME

MANUFACTURED BY

THE PATENT NITRO-PHOSPHATE or BLOOD MANURE COMPANY (Limited),
Consisting of Tenants [illegible] occupying upwards of 20,000 Acres of Land
Chairman—JOHN CLAYDEN, Littlebury, Essex
Managing Director—JAMES ODAMS
Particulars of these and other Manures may be obtained at the Offices, or of the Local Agents
C. T. MADDAM, Secretary
Chief Office: 149, Fenchurch Street, London, E.C.
Western Counties Branch: Queen Street, Exeter
Manufactories: Purfleet, Essex, and Efford, near Topsham, Devonshire

Manures and Feeding Stuffs.

RAYNBIRD, CALDECOTT, AND BAWTREE.
Address, 27, Seed Market, Mark Lane, or Basingstoke.
Samples and prices on application.

ON SALE, for STOCK FEEDING, SUGARY TREACLE, in Puncheons and Half Puncheons.
MACFIE & SONS, 34, Moorfields, Liverpool.

GENUINE TOBACCO PAPER, in 4-lb. packets.—Price on application to HENRY APPLEBY, Foreman to Messrs. Ivery & Son, Dorking, Surrey.

TOBACCO PAPER, strong, 8d. per lb.
MYATT'S ASHLEAF KIDNEY POTATOS.
Prices to the Trade, also PRICED DESCRIPTIVE CATALOGUES on application.
H. BROWN, Seedsman, Liverpool

To Seedsmen, Gardeners, and the Trade generally.
ESTABLISHED 1850
ALDERSON'S TOBACCO PAPER for the Extirpation of the Green Fly, and for Fumigating Greenhouses its efficacy is unrivalled. Fifty Testimonials can be seen as to quality of the goods sent out. Warranted genuine at wholesale prices
JAMES ALDERSON, 30, North Street, Leeds

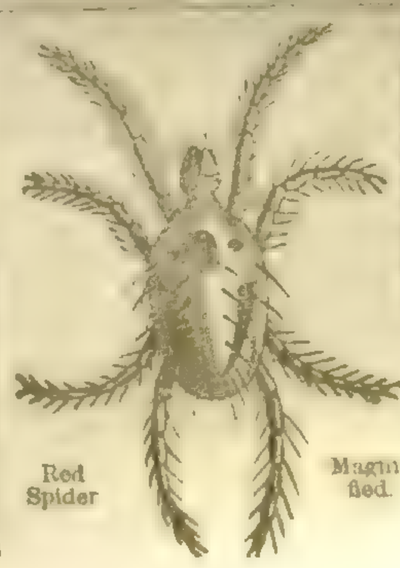

GISBURST COMPOUND, a powder used [illegible] Mildew, on Greenhouse Plants, as Winter Dressing for Trees at rest, should be dissolved 24 hours before use. It gets rid of scale, and if the Solution be decanted prevents any staining of foliage. A strength of from 1 to 2 oz to the gallon of water is recommended for growing Plants, one from 4 to 16 oz for Trees at rest.
Sold Retail by Nurserymen and Seedsmen, in boxes, 1s., 3s., and 10s 6d. each.
Wholesale by
PRICES PATENT CANDLE COMPANY (LIMITED).

CARTER'S GARDENER'S VADE-MECUM
is now ready.

EARLY SPRING FLOWERS, largest Stock in England and greatest variety.—WEBB'S Giant Polyanthus and Giant Cowslip, Cowslip from the Himalayas Golden Chain Polyanthus, Florist Flower Polyanthus, American Primrose, Scarlet Primrose, Gentianella, Double Crimson Primrose, ditto Yellow ditto, ditto Purple ditto, ditto Rose ditto, ditto White ditto, ditto Lilac ditto, Double Pansy, ditto Negro Polyanthus, ditto Golden Chain ditto, ditto Pink Hepatica, Single Blue ditto, ditto White Violets, ditto Purple ditto. Seed of the above Polyanthus and Cowslip. LIST on application to Mr. WEBB, Calcot Gardens, Reading.

Specialities.

RARE and CHOICE SEEDS.
The EMPEROR NAPOLEON'S GOLD MEDAL of HONOUR in 1864.
PRIMULA, CARNATION, PELARGONIUM, New Hybrid PENTSTEMONS, New Italian Striped VERBENAS, &c. The finest in the kingdom. In Sealed Collections orPackets at1s., 2s. 6d., 3s. 6d. and 5s.
STUART & Co., Seed Growers, 10, Southampton Street, W.C.

DIXON'S YORKSHIRE HERO PEA, the best Dwarf Pea in cultivation, 5s. per quart, 2s. 6d. per pint.
See Testimonials, page 1151.
E. P. DIXON & SON, 57, Queen Street, Hull.

Trees and Plants.

JAMES DICKSON AND SONS beg to draw special attention to their unusually good and almost unlimited stock of FOREST TREES, QUICKS, ORNAMENTAL TREES and SHRUBS, FRUIT TREES, ROSES, STOVE and GREENHOUSE PLANTS, as well as of all other Trees and Plants.
Fully PRICED and DESCRIPTIVE LISTS of which they will be glad to forward post free upon application.
The "Newton" Nurseries, and 102, Eastgate Street, Chester; also Nurseries, Newtown, Montgomeryshire.

Transplanted Larch and Quicks.

CHIVAS AND WEAVER (late GEO. CHIVAS), Chester, offer several Millions of TRANSPLANTED LARCH, from 1½ to 4 feet high, of unexceptionable quality, also several Millions of TRANSPLANTED QUICKS, a large quantity of which are of great strength. Together with corresponding stocks of SPRUCE, SCOTCH, OAK, &c. A very large stock of superior EVERGREENS and ORNAMENTAL TREES, and many thousand STANDARD APPLES of superior quality.
For prices and conditions of free delivery, see CATALOGUE which will be forwarded on application.

Larch, True Native Scotch Fir, Spruce, Oak, Quick, &c.

DICKSONS AND CO., 1, Waterloo Place, Edinburgh, have this season an extensive and very healthy stock of the above, as well as of all other kinds of Seedling and Transplanted FOREST and ORNAMENTAL TREES and SHRUBS. They are all well ripened, and are in excellent condition for present planting.
CATALOGUES and samples may be had free on application.

RICHARD SMITH'S LIST of all the EVERGREEN FIR TRIBE suitable for Britain, giving size, price, popular and botanical names, derivations, description, form, colour, foliage, growth, timber, use in arts, native country and size there, situation, soil, and other information, with copious Index of their synonymes. Enlarged Edition, Free by Post for 12 postage stamps.
RICHARD SMITH, Nurseryman, Worcester.

To the Nursery Trade.

ONE and Two-Year Transplanted LARCH, 9 to 12, 12 to 18, 18 to 24, and 24 to 30 inches; also Seedling LARCHES, all well topped, healthy, and very hardy Plants, the produce of Scotch Seed.
RHODODENDRON PONTICUM, from 3 to 18 inches.
1 and 2 year Transplanted NATIVE SCOTCH FIR.
Trade Prices of these and other surplus Nursery Stock, on application to HOWDEN BROTHERS, Inverness, N.B.

WANTED, FOREST TREES.

ALDER, 2 to 2½ ft.	HORSE CHESTNUTS, 1½ to 2 ft.
ASH, about 1 to 3 ft.	HORSE CHESTNUTS, 2 to 3 ft.
BEECH, 2 to 3 ft., and 3 to 4 ft.	HORNBEAM, 2 to 3 ft.
BIRCH, 1 to 2 ft.	SCOTCH FIRS, 1 to 1½ ft.

PINUS AUSTRIACA, 2ft. & 3ft.
Parties having the above to dispose of, or any other kinds of Forest Trees, will oblige by furnishing price to
WM. WOOD & SON, Woodlands Nursery, Maresfield, Uckfield, Sussex.

Seedling and Transplanted Forest Trees.

WOOD AND INGRAM have to offer the following, which may be depended upon as very fine stuff:—
ENGLISH ELMS, 1 year's Seedling, 5s. per 1000.
" " 3 years' Seedling, 8s. per 1000.
ENGLISH OAK, extra fine, 2 years' Seedling, 8s. per 1000.
SPRUCE FIRS, Transplanted, 1 to 1½ ft., 20s. per 1000.
" " " 1½ to 2 ft., 30s. per 1000.
" " " 2 to 2½ ft., 50s. per 1000.
BLACK ITALIAN POPLAR, 7 to 9 ft., 55s. per 1000.
Special offers for large quantities to the Trade.
The Nurseries, Huntingdon.

J. SCOTT, Merriott Nurseries, Somerset, has to offer fine LARCH, 1½ to 2 feet, 22s. 6d. per 1000; do. 2 to 2½ feet, 25s. per 1000; SPRUCE, same sizes, 30s. and 35s. per 1000; BEECH, do., 25s. and 30s. per 1000; SPANISH CHESTNUT, do., 30s. and 35s. per 1000; SCOTCH, do., 25s. and 30s. per 1000; extra strong THORNS, 25s. per 1000; strong do., 20s. per 1000. The above have all been twice, and many of them three times transplanted. CEDARS of LEBANON, 5, 6, 7, 8, 9, to 10 feet, at 3s. 6d., 5s., 5s. 6d., 6s., 7s. 6d., and 10s. 6d. each; DEODARS, same sizes and same prices; PORTUGAL LAURELS, 3, 4, 5, 6, to 7 feet high, and as much through, 1s. 6d., 2s. 6d., 3s. 6d., 5s. to 7s. 6d. each. Besides the above, J. S. can offer one of the finest Collections of TREES and SHRUBS in England, at equally moderate prices, CATALOGUES of which will be forwarded for one stamp.
The New Edition of the FRUIT TREE CATALOGUE is now ready, with full descriptions of upwards of 1000 sorts of Fruits, with Instructions on Planting, Training, Root Pruning, the Formation of Miniature Orchards, Cordon Training, the Formation of Pyramids, and a host of other useful matter on Fruit Trees. Price 1s., 88 pages.

To Gentlemen and Planters.

GEORGE DAVISON, White Cross Nurseries, Hereford, offers the following Large Trees:—
HORSE CHESTNUTS, MAPLE, MOUNTAIN ASH and ELM, from 9 to 11 feet high, 9s. per dozen.
TURKEY OAK, 18s.; ONTARIO POPLAR, 18s.
SPANISH CHESTNUTS, 18s.
WEEPING BIRCH, 9 to 11 feet high, 15s.
LAURUSTINUS, 1½ to 2 feet through, 9s.
PORTUGAL LAUREL, fine bushes, 2½ to 3 feet, 15s.
LARCH, 2 to 3 feet, 25s. per 1000.
HAWTHORN QUICK, 2 to 3 feet, 20s. per 1000.
STANDARD ROSES, 18s. per dozen.
CHINESE ARBORVITÆ, 4, 5, and 6 feet, 15s. to 30s.
AMERICAN ditto, 4 feet, 12s.
ABIES ALBA, 5 to 6 feet, 2s. 6d. each.
" MENZIESII, 4 to 5 feet, 2s. 6d.
" MORINDA, 3 to 4 feet. 2s. 6d.
BIOTA AUREA, 1½ feet, 4s.; 2 to 2½ feet, 7s. 6d.
" MELDENSIS, 3 feet. 5s.
" COMPACTA, 2½ feet, 5s.
" GLAUCA, 4 feet, 7s. 6d.
PINUS EXCELSA, 6 to 7 feet, 5s. to 7s. 6d.
" CEMBRA, 4 to 5 feet, 5s. to 7s. 6d.
" INSIGNIS, 2½ to 3½ feet, 3s. 6d. to 5s.
" STROBUS, 7 to 8 feet, 2s. 6d.
SILVER FIRS, 7 feet, 2s. 6d.
TAXUS HIBERNICA, 6, 7, and 8 feet, 5s., 7s., and 10s. 6d.
THUJA GIGANTEA, 3, 4, and 5 feet, 5s., 7s. 6d., and 10s. 6d.
" WARREANA, 7 to 8 feet high, 3½ to 4 feet through, 21s each.
" LOBBII, 4½ to 5½ feet, 5s. to 7s. 6d.
WELLINGTONIA, 2½ to 3 feet, 7s. 6d. to 10s. 6d.; 4 feet, 21s; 6 feet, 42s.
TRAINED FRUIT TREES, 3s. 6d. to 4s. 6d. each.
PYRAMID APPLES and PEARS, 2s. 6d. each.
The above are in the finest condition, and have been frequently all transplanted.

GENUINE SEEDS.

JAMES VEITCH

BEGS TO ANNOUNCE THAT HIS

CATALOGUE OF KITCHEN GARDEN AND FLOWER SEEDS FOR 1865,

WITH LIST OF IMPLEMENTS AND OTHER GARDEN REQUISITES,

Is now Published, and will be forwarded Free on application.

J. V. devoting his personal attention to this department of his business, can warrant his Seeds TRUE to NAME, and of the most genuine description.

The CATALOGUE will be found to contain all NEW VEGETABLE and FLOWER SEEDS of merit, in addition to those kinds in general cultivation.

THE ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, LONDON, S.W.

NEXT WEEK WILL BE PUBLISHED,

AND FORWARDED TO ALL PREVIOUS CUSTOMERS AND APPLICANTS,

B. S. WILLIAMS'

DESCRIPTIVE AND PRICED CATALOGUE

OF

VEGETABLE AND FLOWER SEEDS FOR 1865.

It will contain many Novelties worthy of notice, with a full description to each, and a few Hints for the guidance of Amateurs.

COMPLETE AND LIBERAL

COLLECTIONS OF KITCHEN GARDEN SEEDS,

TO SUIT GARDENS OF VARIOUS SIZES,

10s. 6d., 21s., 42s., 63s., and 84s. each.

All Orders amounting to £1 in value Carriage Paid.

PARADISE and VICTORIA NURSERIES, HOLLOWAY, LONDON, N.

HARDY, GREENHOUSE, STOVE PLANTS, AND SEEDS.

LOUIS VAN HOUTTE,

NURSERYMAN AND SEEDSMAN, GHENT, BELGIUM,

BEGS TO INFORM HIS CORRESPONDENTS THAT HIS

PRICE LISTS Nos. 103, 104, 105, AND 106,

ARE TO BE HAD AT

MESSRS. R. SILBERRAD AND SON, 5, HARP LANE, LONDON, E.C.

N.B. The Goods will be delivered free out of the Custom House in London, without any expense whatever to the buyer, but per contra 5s. will be charged in the account for each package.
The Seed Parcels are delivered free out of the Custom House in London, without any expense whatever to the buyer.

BARR & SUGDEN

12 KING ST. COVENT GARDEN

Orders amounting to 21s. sent Carriage Paid.

NEW SEEDS FOR THE SALE OF 1865.

BARR & SUGDEN'S SELECTIONS OF VEGETABLE SEEDS

FOR ONE YEAR'S SUPPLY.

Suited to Gardens of various sizes. They contain the most approved varieties, and such only as are best adapted to secure a succession of Vegetables from January to December. The Seeds are all of the very best quality.

10s. 6d., 15s. 6d., 21s., 30s., 42s., 63s., 84s., 105s.

For particulars of these selections see our "Kitchen Garden Guide."

☞ *The Compendium of our "Illustrated Guides to Kitchen and Flower Garden" will in a few days be sent to each of our Customers.*

20,000 GLADIOLI, the most effective for Massing, and the best for Exhibition.

5000 LILIUMS, embracing the splendid L. LANCIFOLIUM, varieties RUBRUM, ROSEUM and ALBUM, and the magnificent and deliciously fragrant L. AURATUM.

SURPLUS STOCK OF BULBS

For Conservatory and Flower Garden Decoration, 42s.; half, 21s.; quarter, 10s. 6d.

50 HYACINTHS.	200 GARDEN NARCISSUS.	300 CROCUS.	12 WHITE LILIES.
50 POLYANTHUS NARCISSUS.	300 TULIPS.	50 IRIS.	100 WINTER ACONITES.

The Cliveden Collection of Spring Flowering Plants, true, drawn from the Stock at Cliveden, £5; Half, 50s.; Quarter, 25s.; Eighth, 12s. 6d.

See previous Advertisement, page 1174.

BARR AND SUGDEN, SEED MERCHANTS and FLORISTS, 12, KING STREET, COVENT GARDEN, W.C.

The Castle Kennedy Fig.

PETER LAWSON AND SON have made arrangements to send out the above next Autumn. They are now booking Orders, which will be executed in strict rotation as received. Plants, 10s. 6d. each; a few extra strong at 21s. each—with the usual Discount to the Trade.

Full printed particulars to be had on application.
Edinburgh and London.—Dec. 31.

Slater's New Hardy Prolific Melon.

J. SLATER AND SONS have great pleasure in offering the above MELON as being of a very superior quality, a very free setter, and an abundant bearer—each fruit weighing from 3 to 3½ lbs. Slightly netted; shape, oval; flesh, pale green; thick and juicy. Price 2s. per packet, post free.

J. SLATER & SONS, Seedsmen, &c., Malton, Yorkshire.
London Agents:
Messrs. HURST & SON, Seedsmen, 6, Leadenhall Street, E.C.

Vine Duchess of Buccleuch.

ROBERT PARKER has much pleasure in announcing that he is now distributing this distinct and valuable early GRAPE, which will supply the long felt desideratum of a White Grape with Muscat flavour that may be grown and ripened with the Black Hamburgh.

The following Certificates and Prizes have been awarded at various London and other Exhibitions.

Two Certificates of Merit.

Three First-class Certificates.

Two First Prizes in open competition for the finest flavoured Grape of any colour. Chasselas Musqué, Muscat of Alexandria, and Frontignan competed for these prizes. For further description see *Gardeners' Chronicle* of October 1st and 22d, pages 943 and 1008.

Also New GENERAL CATALOGUE, containing Priced and Descriptive Lists of Miscellaneous, Greenhouse, Hardy, and Stove Plants, Azalea indica, Conifers, Ferns, Fruit Trees, Grapes, Rhododendrons, Roses, Dutch and other Bulbs, &c., which will be forwarded to applicants.

Exotic Nursery, Tooting, Surrey, S.

Magnificent Dwarf-trained

MORELLO and MAY DUKE CHERRIES, ROYAL GEORGE PEACHES, MOOR PARK APRICOTS, PEARS, and PLUMS, of the best leading kinds.

WM. WOOD AND SON have to offer a large Stock of the above, grown on maiden soil. The trees are very large and have been most carefully trained. Finer trees could not possibly be wished for.

W. W. & S. have also some very fine Standard SCARLET HORSE CHESTNUTS left. Stems with fine heads.

Address, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

To the Trade.

BUNYARD'S IMPROVED SCARLET TOM THUMB NASTURTIUM.
True KENTISH COB NUTS.
" KENTISH FILBERTS.
Extra fine THUJA AUREA.
STANDARD and HALF STANDARD ROSES.

Prices on application to THOMAS BUNYARD & SONS, The Old Established Nurseries, Maidstone, Kent.

RICHARD SMITH'S FRUIT LIST contains a sketch of the various forms of Trees, with Directions for Cultivation, Soil, Drainage, Manure, Distance, Pruning, Lifting, Cropping, Treatment under Glass; also their synonymes, quality, size, form, skin, colour, flesh, flavour, use, growth, duration, season, price, &c. Free by Post for one stamp.

RICHARD SMITH, Nurseries, Worcester.

TWO NEW FIMBRIATED PRIMULAS.
Seed Packets, 2s. 6d. and 5s. each.

PRIMULA CARMINATA SPLENDENS, a beautiful new coloured one.

P. FILICIFOLIA (Fern-leaved).

See other Advertisements of the older kinds of fimbriated Primulas.

E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

Rhododendrons.

JOHN WATERER begs to announce that his New CATALOGUE of Hardy, Scarlet, and other Choice RHODODENDRONS, as exhibited by him at the Royal Botanic Gardens, Regent's Park, is now published, and can be had on application. It gives faithful descriptions of all the esteemed varieties, as well as a Select List of Hardy CONIFERS, with heights and prices; also the leading kinds of EVERGREENS, ROSES, FOREST TREES, &c.

The American Nursery, Bagshot, Surrey, near Sunningdale Station, South-Western Railway.

Superb Double Hollyhocks.
NURSERIES, SAFFRON WALDEN.

WILLIAM CHATER has now ready for sending out a fine healthy stock of Young Plants of all the old and approved varieties of the above; likewise a fine stock of his splendid New Seedlings shown by him in spikes before the Floral Committee at the Royal Horticultural Society will be ready for sending out in November. Older kinds can be supplied by the dozen, 100, or 1000. Prices on application. A very large stock of unbloomed Seedlings, 3s. and 6s. per dozen, or 20s. and 30s. per 100. Bloomed Seedlings with their colours attached, fine for borders, 6s. to 18s. per dozen, or 30s. per 100.

Seed saved only from finest varieties, new and very choice mixed, 2s. 6d. and 5s. per packet; in Collections of 12 separate named varieties, 4s. to 10s.

N.B. WILLIAM CHATER, Nurseries, Saffron Walden, Essex.

British Fern Catalogue.

ROBERT SIM can now send, post free for six postage stamps, Part I. (British Ferns and their varieties, 36 pages, including prices of Hardy Exotic Ferns) of his New and PRICED DESCRIPTIVE CATALOGUE of BRITISH and EXOTIC FERNS, No. 7.

*** Part II. (Exotic Ferns) will be issued as early as possible.

Foot's Cray Nursery, S.E.

Surplus Stock of Bulbs.

TO BE DISPOSED OF, very Cheap, a Quantity of DUTCH BULBS, including several hundreds best named Hyacinths. Prices on application to

W. HAMMERTON, Nurseryman and Seedsman, High Street, Maidstone.

W. H.'s Wholesale CATALOGUE of SEEDS is now ready, and will be forwarded on application.

ALEXIS DALLIERE, NURSERYMAN, Ghent, Belgium, has now for Sale at his Establishment, fine strong STANDARD ROSES, of very superior quality, and of the best and leading varieties, at the very low price of 3l. per 100.

Unknown correspondents, who may honour A. DALLIERE with their orders, are requested to send a cheque for the amount to Messrs. R. SILBERRAD & SON, 5, Harp Lane, Great Tower Street, London, E.C.

New English Hybrid Perpetual Rose, King's Acre.

JOHN CRANSTON has the pleasure to announce that his New English Seedling HYBRID PERPETUAL ROSE, KING'S ACRE, will be sent out this autumn.

The colour of this truly beautiful variety is bright vermilion rose, reverse of petals satiny; the flowers are extra large, globular, of remarkable depth and exquisitely formed, having large, smooth, shell-shaped petals of fine substance; the foliage is ample and of a fine rich dark green colour, while the habit of growth is all that can be desired, being vigorous and robust.

Assured that the above is worthy of a prominent place in the most select collection, either on the Exhibition tables or in the Rosery, J. C. respectfully solicits early orders, and observes that such will be executed in rotation. Price 7s. 6d. each. The usual discount to the Trade when 3 or more are taken.

"SEEDLING ROSE (*J. Cranston*).—We regret that we did not see your Rose King's Acre in the season, for when such beautiful flowers are produced now, after such a drought, we may well ask, what must it have been then? Those you sent were very fine, globular, and of a colour much wanted—purplish rose, with the reverse of petals light. It is a really fine flower, and if, as you say, vigorous, having withstood the season of 1860 as a seedling, it will be a valuable acquisition to our English raised Roses."—*Vide* Journal of Horticulture, Aug. 30, 1864.

A faithfully coloured Drawing, by ANDREWS, will be sent in exchange for 12 postage stamps.

Nurseries, King's Acre, near Hereford.

American Plants.
AS EXHIBITED IN THE ROYAL HORTICULTURAL GARDENS, KENSINGTON.

WATERER AND GODFREY'S PRICED and DESCRIPTIVE CATALOGUE of RHODODENDRONS and other AMERICAN PLANTS will be forwarded on application. The Catalogue also gives a General Summary of their Stock, which contains probably the most extensive choice of all the Hardy and finest Evergreens and Conifers.

Knap Hill Nursery, Woking, Surrey.

Paul's Nurseries, Waltham Cross, N

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GARDENERS' ROYAL BENEVOLENT INSTITUTION.

The ANNUAL GENERAL MEETING of the Subscribers to this Society will take place at the BEDFORD HOTEL, Covent Garden, on FRIDAY, JANUARY 13 NEXT, for the purpose of receiving the Report of the Committee, and Accounts for the present year, and Electing Officers for the ensuing year. The Chair to be taken at 7 o'Clock precisely.—By Order. EDWD. R. CUTLER, Secretary.
14, Tavistock Row, Covent Garden, W.C.

The Gardeners' Chronicle.

SATURDAY, DECEMBER 31, 1864.

MEETING FOR THE ENSUING WEEK.

SATURDAY, January 7 { Royal Horticultural (Show of Chinese Primulas), at S. Kensington—2 P.M.

THE centralisation that characterises the government of Paris is gradually erecting its own monument in the rearrangement of the city. Indeed this march of centralisation cannot be carried much further without involving the total destruction of the old city, at least on the north side of the river; and though this necessarily includes the summary ejection of the poorer orders, yet upon the whole, even to them, the gain becomes greater than the loss, as the influx of the wealthier classes from all quarters of the globe has created a market for labour which is quite unprecedented. Paris has long been called the capital of the world; and there could hardly be a more striking illustration of her grandeur than the view of the city as seen from the summit of the Arcade L'Etoile. The very roads which converge towards this point, and which seem, like the sons of JACOB, to spread themselves over the whole world, impress a spectator with a vastness and magnificence too great for the requirements of one nation. Ten years ago they were seven in number; now they are twelve; and the complete manner in which they have triumphed over all obstacles reflects the highest credit upon their engineer, M. ALPHAND, and upon the controlling powers that authorised their formation. At the end of one of them, the Avenue de la Reine Hortense, there are new gardens. We say "new" advisedly; because, though long celebrated for their laying out and keeping up, Time, that great destroyer of human handiwork, had been rather severe upon them of late, and had encouraged noxious weeds and undergrowth to choke up the once charming groves; so that five years ago, excepting a few fine outside trees, it would have been rather a difficult matter for the unlearned to have realised the germs of gardenesque beauty that have since been resuscitated, like a new creation from the ruins of a chaos. The happy facility with which the French hit off a pleasant expression suggestive of others' foibles attached to these grounds the nickname of "Les Folies de Chartres," and who shall say but what the enormous sums expended upon them justified the criticism? for in reference to these gardens M. DULAURE writes: "There may be found every embellishment that the fancy can conceive: Gothic grottos, Greek ruins and superb peristyles; baths adorned with statues; Egyptian obelisks and Turkish turrets, and all these magnificent objects form a striking contrast to the rural simplicities of fields, thickets, hillocks, vineyards, cottages, clusters of trees, rocks and winding rivulets, which present a most enchanting landscape." And the Abbé DELILLE, when speaking of gardens whose verdure is preserved by art even in time of frost, cites MONCEAU as an example, thus:—

"J'en atteste, O MONCEAU, tes jardins toujours verts,
Là des arbres absens les tiges imitées,
Les magiques berceaux, les grottes enchantées,
Tout vient, croît, s'élève à tes lois. Là bravant les saisons,
La rose apprend à respecter au loin les glaçons,
Et les temps, les climats, vaincus par des prodiges,
Semblent de la féerie épuiser les prestiges."

We might almost expect to meet TITANIA and her attendants in a scene like this. It is as well to recollect however, how neglect had marred this fair picture, or we shall fail in our estimate of the work that lay before M. BARILLET when he undertook its reconstruction. It is true that in extent the grounds have been much curtailed, but this is rather in their favour than otherwise, as it permits of quantity being combined with quality; since of all the gardens in Paris there is none that affords so much interest to the horticulturist, or such an agreeable diversity of trees, shrubs, neatly kept lawns, foliage plants, and flowers. In order that our readers may be enabled to judge for themselves, we will endeavour to depict their contents as faithfully as is possible without the assistance of a drawing.

Terminating the Avenue de la Reine Hortense are gilded gates in the Louis Quatorze style of workmanship, through which a straight short road flanked with trees leads directly into the Park. These Plane trees, upwards of 30 feet in height, and in admirable foliage, shelter side walks bordered by ribbons of China Roses, backed by Veronica maidensis, and enclosed with a simple grille trellised with creeping Tropæolum. Emerging from this entrance the road (28 feet in width) traverses the Park longitudinally in an ogee curve, until it arrives at an opposite entrance from the Boulevard Malesherbes, precisely similar in detail, with the exception that Convolvulus takes the place of Tropæolum. A second ogee road, 20 feet in width and of minor importance, with double gates, and a stately line of grille on either side of a rotunda, at once invades the grounds, and crossing the main road sweeps onwards through an entrance from the Rue Valois, similar to the one we approached by. Returning to this point, immediately at the end of the straight run of road, cross main walks branch off right and left, and ever and anon flirting with the boundary, pass over the minor road near its entrance, finishing at the Malesherbes end just as they began. From these main walks or roads, concealed from one another by mounds, trees, shrubs, and masses of foliage, loop paths diverge here and there, sometimes from caprice, and sometimes at the apparent suggestion of circumstances. If we stop about the middle of the main loop walk, between the Rotunda and the Malesherbes entrance, we shall see one* of the catalogue of wonders enumerated by DULAURE. A semi-amphitheatre of Corinthian colonnade embosomed among trees encloses one end of a piece of water in an architectural outline. This breaks off abruptly with shattered columns, and a few detached fragments stand ranged along the banks. A small island of green turf, with a triangular group of Elm, and an outriding Maple feathering gracefully over the water, seems to connect the pool with the rustic scenery about it: while the reflections on its dark surface are as vivid and distinct as the objects themselves, save where a gleam of sunlight, playfully dancing, penetrates the surrounding gloom. Round the columns Ivy is trained, harmonising their colour, and adding to the air of neglect. From this pool has been lately made a winding strip of water, that should be a brook, only the water is stagnant. This is crossed by a bridge of some pretensions, that leads you up an incline previous to ascending its flight of steps—*cui bono?*—merely to bring you down again in reward for the pedestrian exertion. Following

* A peristyle. There is also a small Egyptian pyramid, used as a tool house.

the course of the "brook," intercepted here by the main road, we see before us a mass of rockwork, caverned and planted with Ivy, shrubs and Ferns, and shaded by overhanging trees. Passages lead beneath it, over it, and about it. Now a rockwork cavern suggests incongruous ideas, as the component parts are so small that it becomes doubtful whether it should be regarded as an architectural building, or a rustic feature in imitation of nature. If the former, it is in a debased style, and moreover looks dangerous—if the latter, it is something quite new in geological stratification. As we are unable to praise it, perhaps the least said the sooner mended, as its author, M. BARILLET, is an indefatigable worker, and a very clever gardener, who has been the means of bringing into general cultivation many (subtropical) plants, some of which have already found their way into our gardens, and, thanks to Mr. GIBSON's perseverance, are likely, we hope, to assume a permanent place there.

Long ribbons of the pink Solanum discolor, red and white Fuchsias, the violet Ageratum, and the warm yellow Cassia floribunda, the Daisy-white Chrysanthemum frutescens, and Scarlet Pelargonium, severally edge with broad bands of color masses of Rhododendron, Holly, Aucuba japonica, Privet, Lilacs both Persian and Common, and young plantations of trees. Then there are large oval beds of green Wigandia some 9 feet in height; of the glaucous Nicotiana, equally tall, and with leaves some 2 feet by 15 inches; of the sturdy Caladium esculentum and odorum, with leaves 3 feet by 2 feet 4 inches; of the spreading Aralia papyrifera, and the yellow-flowered Polymnia maculata, not less than 7 feet to 8 feet high; of the handsome Erythrina Crista-galli, an old favourite, of which many new varieties have been lately introduced; of the fine-growing Solanum marginatum, Solanum Sieglengii, in jungles, not less than 15 feet in height, and many others of this genus, though as yet not in numbers; and finally of the Hydrangea, which stands out all the winter. There are also long belts of bright green Canna Annæi, margined by the dusky hues of Canna nigricans, the whole tipped with scarlet flowers; the feathery and Fern-like Sonchus laciniatus, with its boldly thrown up yellow bunches; and flatter beds of the bronzed Coleus scutellarioides, edged by the bright madder-coloured Verschaffeltii, dotted near the walks. The beds themselves are raised rather high, and consequently form petty slopes that interfere somewhat with the general sweep of the ground. Single specimens of Datura humilis, of Ferdinanda eminens—like a large-leaved Plane tree, clothed to the ground and nearly 20 feet in height, of the giant Cow Parsnip, that grandly holds its own among the sub-tropical foliage, of Begonia ricinifolia with its flat leaves and outstretched flower-stalks, of Aloe-leaved Dracænas, of the frosted Eucalyptus, of Standard Hollies and Yews, and finally of Cupressus Lawsoniana and virginiana, Golden Thuja, Cedars of Lebanon and Deodars, P. austriaca and Cembra, and Wellingtonia gigantea, are sprinkled over the lawns; while free-growing climbers, such as the Ivy-leaved Delairea (Senecio mikanoides) and others, creep up the stems.

Some of the remains of the old wood are very beautiful, and there is a group of the Oriental cut-leaved Plane that in itself well repays a visit.

Groups of Maples, Ash, and Elm, mostly in separate masses, diversify the view, and all the young trees, consisting of Catalpas, Sophoras, and Magnolias (grandiflora) are thriving well, and making rapid progress. Under some of the groves Junipers have been planted, and being unfitted for the purpose should be removed as soon as possible. We shall allude at some future time to the ground work, which is in the Vallon style, and which can only be defended on formal principles, that is, in contradistinction to natural scenery, for the very name of a garden implies care and order, and the higher the state of keeping the more credit it reflects upon its gardener.

When the designer has finished his work, whether it be in the geometric, or whether it be in the English style, the success of a garden must henceforth rest with the gardener. The trees require gradual thinning, the shrubs have to be kept within bounds, the borders planted as the seasons come round, and those finishing touches annually bestowed, which, unlike the touches upon canvas, are ever in need of renewal. If carelessness be the order of the day, a masterly composition may yet, like one of TURNER's pictures, retain its indication of a soul, but without that pre-Raphaelite beauty in detail so necessary for its general interpretation. Indeed this care in details is the more attractive, as appealing to all, and with the multitude often atones for the want of every other virtue. As it gives pleasure to all, so it is easily acquired by all, and its absence in a garden should argue on the part of its gardener either woeful incapacity or wilful neglect. *Z.*

CULTIVATORS are pretty well aware, thanks more especially to repeated notices in this Journal, of the damage that awaits the objects of cultivation on every side from the pernicious effects of FUNGOUS SPAWN ON DELICATE TISSUES. It is frequently however, only by repeated notices that attention is permanently directed to matters even of vital importance, and we therefore make no apology for once more adverting to the subject.

A large Greengage tree in the autumn of last year, which had been in perfect vigour early in the year, suddenly perished, and on being removed, the roots, as we suspected, proved to be infested with a large quantity of white spawn. It was desirable to replace it with another tree, and it was determined that the substitute should be a Peach tree, in spite of the prejudice against planting a tree of the same natural order as the successor to one that had died. The danger was, we believed, not from exhaustion of the soil, which admitted of easy remedy, but from the old roots. The ground accordingly was trenched deeply, and every particle of root, as far as possible, removed. The eye, however, could not spy out every particle of spawn which might be mixed with the soil, and we were curious, moreover, to see how the new plant would fare even if any danger threatened it. Nothing could be more promising than the tree, which broke admirably, and all went on well for some months. At length, however, the shoots looked sickly, the leaves fell, and a week ago we found that the tree was quite dead. At first we thought that the summer's drought might have proved injurious, but on examination we found that the young tree had made abundant roots, and that the spongelets in general were quite sound and healthy. In parts, however, there was the fatal spawn, which we believe was the true cause of evil, though it had not proved immediately fatal to the stock, while the budding had completely perished, without gumming or anything wrong at the point of insertion.

The mode of action of spawn on living tissues is somewhat mysterious. In very soft tissues like that of fruit, the mere contact of fungous threads with the cells seems frequently to induce a putrefactive change; but in harder tissues the effect is not so immediate. Our belief is that in every case, the contents of the threads, imbibed through the membranes of the fungus and those of the tender roots, act as a putrefactive ferment, which from peculiarities of condition may be more active on distant tissues than those which are immediately in contact. This indeed is mere theory, but it is more or less supported by facts.

These white mycelia are not, however, the only ones which prove fatal. There is a copper-coloured spawn, of uncertain origin, which is injurious to plants of various kinds. In this country diseased Potatos, Mint, Lucerne, Saffron, and Asparagus have in turns called attention to the evil, and the past autumn has not been without examples. The evil has long been known in France, and the TULASNES have published admirable illustrations of the forms under which it appears on Lucerne and Saffron. We have however lately met with a memoir by GASPARINI, published in 1863, in which he notices its effects in Italy, on Vines and the Indian Fig, where it has also been observed on Sambucus Ebulus, Saffron, and Asparagus. It appears therefore to be quite as much to be dreaded as the white spawn, which seems extremely indiscriminate in its attacks. When once it spreads, the white spawn destroys everything in its way, the largest trees perishing as well as the humblest shrubs, and even such plants as Strawberries, or seedlings in pots where imperfectly decayed leaf-mould is used, are not exempt. We have not heard of the Copper Mould attacking Vines in this country, but we have been informed of at least one instance where the white spawn proved fatal.

We have long insisted on the need of the examination of the roots of plants in every case where disease cannot with reason be referred to something immediately affecting the leaves or stem, and this consideration of the effects of fungous spawn upon the delicate roots or spongelets is an additional motive for caution in the same direction. A timely search may in many cases save a valuable tree, as we can ourselves bear witness; and it must ever be borne in mind that delays in this respect are especially dangerous, as the disease is too often past remedy when it has once obtained an ascendancy. *M. J. B.*

WHEN it was said the other day that the political Millennium had arrived, we thought the announcement somewhat hasty; but while pleading guilty to a want of sympathy, even with the wish, we seriously do think that partisanship is misplaced, when it is led by excess of zeal to confuse Art with Politics. Our attention has been drawn to a paragraph from the pages of a daily contemporary, containing a criticism on some alterations that are being made in the ST. JAMES's and HYDE PARKS. The criticism we can understand, as what pleases one man may not please another; but when the bad taste alleged to have been shown in the arrangements, is advanced as a proof of the general incapacity of a Government, we confess to be as puzzled at the deduction, as at the language in which it is couched.

The facts of the case appear to be these:—A new ride is being made near the Birdcage Walk. It is an avenued road for equestrians, some 21 feet in width, and 400 to 500 yards long, and though narrow will bear favourable comparison in this respect with many of the rides lately formed in the Bois de Boulogne. The 8 acres of garden in the Hyde Park dwindled down, on nearer inspection, to about an acre and a half. We found also that the principal endeavour is to sweeten and enrich the ground so as to procure better turf, which is to be dressed eventually with a sprinkling of evergreen shrubs, without either flowers, foliage plants, or other gardenesque accompaniments. In this we can see no objection, as its proximity to Rotten Row and isolation from the rest of the Park, seems a reasonable excuse for bestowing a little extra care upon it.

We wish however to draw particular attention to the state of the trees near the Palace end of the Birdcage Walk. Some of them are so far gone as to be in a most precarious condition, and any one who has heard the crash of a falling Elm and seen the effect produced by it, or even the peal of thunder that accompanies the parting of a mighty bough, will understand the danger that is threatened to a thoroughfare, from the contiguity of thoroughly rotten Elm trees. Much has been done to avert calamity by the timely removal of the larger branches, but we trust the authorities will not rest content with these precautions, as although many of the trees may last for years, there are one or two that should be removed as soon as possible, since their loss, though no loss to the picturesque, would give increased security to the passing pedestriaan.

—— We learn from the daily papers that the French Minister of Public Instruction has just addressed to the rectors under his authority, a circular, in which he suggests that great advantages may be derived, and the public wealth increased, by the introduction of additional fruit trees, vegetables, and plants into the plots of ground which are attached to the 27,000 normal schools of France, for the instruction of the pupils in gardening, and the most improved methods of agricultural cultivation. The Minister announces that with this view he has concerted with the Minister of Agriculture, who has ordered the inspectors in his department to visit such schools as may be on their way, and give to the masters whatever counsels may be necessary. The French plan, or such a modification of it as would bring it into accordance with our institutions, might be adopted by the Government in this country with advantageous results; or failing this, it might afford scope for the energies of a National Horticultural Society—if we had one.

—— Amongst the manifest improvements which have been effected in the varieties of garden flowers, and the deviations from a normal condition, it is somewhat remarkable that we have, as yet, obtained so few really good STRIPED VERBENAS. There is the old Striata perfecta, now familiar to most growers of choice flowers, a constantly marked and really beautiful variety, with the limb segments of its flowers blush lilac, regularly and distinctly margined with white. During the past season a variety has been brought into notice by Mr. COOLING, of Bath, which has flowers of the same character as those of Striata perfecta, only the ground colour is carmine. This variety is called Annie, and is a most welcome addition to the class of striped flowers—which we trust to see still further enriched by the addition of other colours marked in a similar way.

If there is a scarcity of good striped Verbenas there is no lack of bad ones. Those who have visited Chiswick during the past season, or have attended the summer exhibitions and meetings, or have visited the nurseries in which this class of flowers is cultivated, will probably have seen a long series of them, with a set of most

unpronounceable Italian names, which out-do, if possible, the unmanageable titles borne by some of the French Roses. The set of Verbenas we are now referring to is, it appears, of Italian origin, and we are sorry to say that in the whole series we have not yet met with one which was worth growing as a garden flower. They have poor, paltry, misshapen flowers, inconstant colours, and inveterately bad habits. Perhaps our cross-breeders may make something out of them, and we trust they may, for a greater variety of good striped Verbenas is very desirable. These Italian striped varieties are unevenly flaked with purple or red upon a white ground, as in the case of Carnations, not bordered with white like the English varieties before alluded to.

SOLANDRA GRANDIFLORA.

Of late years a great variety of new plants has been introduced to our gardens, and amongst them many which must be regarded as valuable acquisitions; but while welcoming all such as these, we should take care not to forget the good old plants, which is a thing very likely to happen.

Among these good old subjects may be classed the Solandra grandiflora. It is indeed a remarkably fine thing when well flowered, and the way to obtain this success is as follows:—Take a healthy young plant about April, and give it a shift, putting it into the stove when there is a hot humid atmosphere, for all plants require excitement after repotting. Here it should have every encouragement, for it is a plant of free growth. Attention must be paid to nip off the top of every shoot at the third or fourth joint, and repotting must be frequent as the growth progresses, the branches meanwhile being staked and trained into a suitable shape. At the end of the summer the heat should be moderated, and moreover the soil should be kept rather dry. If it has done well, the plant may be started again in April as before; it will not require repotting, but perhaps a little top dressing, for it does not require a very large pot. The same attention to stopping the shoots must be given, and about the middle of the summer, when the plant is well filled with short shoots, the plant should be removed into a greenhouse, and should receive but little water. When the shoots appear to be somewhat hardened, the plant should be placed out of doors in a sunny aspect, and gradually allowed to get quite dry until the leaves drop off. It is on these short growths or spurs that the flowers are produced. Before the frost sets in, the plant should be removed into the coldest end of the stove, or into an intermediate house, keeping it quite dry. About March it may be placed on a shelf at the back of a Vinery where forcing has commenced, or at the hottest end of the stove, giving no water at first, but syringing overhead every sunny morning. The leaves and flower buds will soon appear, and then a little water should be given; and as the plant advances in growth, a more liberal supply is needed, and occasionally a little liquid-manure water is beneficial.

After the plant has done blooming, it should be treated as before recommended; it will not require repotting perhaps for years, but only a slight top dressing in spring. The flowers are very large, bell-shaped, and of a yellowish white. The best compost is good mellow fibrous loam; and the pots should be well drained. *Thos. Brown, Exotic Nursery, Tooting.*

THE DRUMSHEUGH RHODODENDRONS.

Miss Walker of Drumsheugh, has succeeded in procuring a set of Rhododendrons, so that one or other of them shall be in bloom during 12 successive months. We append a list of the varieties as they came into bloom, and the duration of the flowering of each. This list, we trust, will be found of importance to Rhododendron cultivators wishing a collection to flower in succession during the year. Had any of the plants been subjected to artificial heat, for the purpose of hastening their flowering, such a register would be fallacious; but as all the plants were exposed to the same treatment, the register becomes the more valuable, showing as it does the precise time of flowering, and the period each variety remained in bloom. It is not to be expected that the same variety will flower exactly at the same period each year, although in many cases they are not far removed. For instance, the identical plants of Rhododendron formosum, which flowered on 26th April, 1863, flowered this year on the 1st May; Rhododendron Edgworthii, which flowered on the 30th April, 1863, flowered this year on the 2d May; Rhododendron Dalhousiæ, which flowered on 26th April, 1863, flowered this year on the 3d May; and the Rhododendron Maddeni, which flowered last year on the 4th August, did not flower this year till the 15th August—and all under similar treatment each year. This variation depends much on the sunheat at the time the young growths are formed. If produced during dull weather, they become much elongated, and frequently run past flower-budding. If during fine sunny weather the growths are comparatively short, the greater are the chances of flower-buds being formed.

Of late years the Rhododendron has become such a favourite plant that some cultivators are giving their whole attention to the rearing of new varieties; and so successful have they been, that the British and foreign catalogues enumerate upwards of 800 named kinds, besides many thousand crosses raised from seeds, and cultivated without having received names. One of the chief points which Rhododendron fanciers should keep in view, is the rearing of a stock between parents consisting of those kinds which naturally bloom during the summer and autumn months. The winter and spring months are well represented by numerous free blooming kinds, and it is quite possible to mature or retard varieties to suit the late flowering sorts, and thus perpetuate a breed of summer and autumn varieties as numerous as the spring flowering kinds. It is now an ascertained fact that Rhododendrons flowered without the aid of artificial heat, beyond that derived from the mere protection of glass, continue their blooming season over a much longer period than the same species or varieties forced into bloom by artificial means, or even in the open air, where the uncertainty of the weather often experienced during the winter and spring months has also a tendency to shorten the period of flowering. During many seasons the flower-buds, however numerous, are often entirely destroyed by frost. To preserve the blooms, it is generally advisable to lift the best-budded plants late in autumn, and flower them in the conservatory, and return them to the borders again as soon as the period of flowering is over. Such plants, however, never have the same healthy appearance as plants cultivated in pots or tubs under glass, without artificial heat, as practised at Drumsheugh.

List of Rhododendrons flowered in the Cool Conservatory at Drumsheugh. (Copied from the Register kept at Drumsheugh.)

Name of Species or Variety.	Date of the First Bloom Expanding.	Date of Passing out of Bloom.
Nobleanum, No. 4	Oct. 19, 1863	Jan. 8, 1864.
,, No. 1	Nov. 1, ,,	,, 23, ,,
,, Dark variety	,, 20, ,,	Feb. 14, ,,
,, lancifolium	,, 20, ,,	Jan. 10, ,,
,, pallidum	,, 28, ,,	,, 30, ,,
,, No. 3	Jan. 15, 1864.	April 12, ,,
,, No. 2	,, 19, ,,	,, 12, ,,
Atrovirens	,, 19, ,,	Mar. 21, ,,
Ciliatum	Mar. 22, ,,	May 4, ,,
Nobleanum, No. 5	,, 22, ,,	,, 8, ,,
Arboreum roseum	,, 23, ,,	April 30, ,,
Hamburg Lilac	April 1, ,,	May 28, ,,
Nobleanum, standard	,, 4, ,,	,, 24, ,,
Fleur de Marie	,, 12, ,,	,, 27, ,,
Nobleanum hybridum	,, 14, ,,	,, 30, ,,
,, scarlet standard	,, 14, ,,	June 4, ,,
Albertus	,, 14, ,,	May 13, ,,
Wallichii var.	,, 15, ,,	,, 14, ,,
Venus	,, 19, ,,	,, 20, ,,
Harrisonii	,, 19, ,,	,, 24, ,,
Campanulatum	,, 19, ,,	,, 30, ,,
Sir Walter Scott	,, 23, ,,	June 13, ,,
Glaucum	,, 26, ,,	,, 10, ,,
,, pallidum	,, 28, ,,	May 30, ,,
Apple blossom	,, 28, ,,	June 2, ,,
Formosum	May 1, ,,	,, 8, ,,
Javanicum	,, 1, ,,	,, 2, ,,
Lawsonianum	,, 1, ,,	,, 8, ,,
Edgworthii	,, 2, ,,	,, 4, ,,
Hendersonii	,, 2, ,,	,, 3, ,,
Venosum	,, 2, ,,	May 30, ,,
Maculatum nigrum	,, 2, ,,	June 10, ,,
Dalhousiæ	,, 3, ,,	,, 12, ,,
Aureum superbum	,, 3, ,,	,, 25, ,,
Coriaceum	,, 9, ,,	May 20, ,,
Purpureum grandiflorum	,, 13, ,,	,, 31, ,,
Captivation	,, 13, ,,	June 4, ,,
Sir Isaac Newton	,, 14, ,,	,, 10, ,,
Psulla	,, 14, ,,	,, 5, ,,
Punctatum	,, 14, ,,	,, 25, ,,
Everestianum	,, 14, ,,	,, 5, ,,
Pulchellum album	,, 15, ,,	,, 16, ,,
Auranticum	,, 15, ,,	,, 18, ,,
Brayanum	,, 19, ,,	,, 9, ,,
Blatteum	,, 19, ,,	,, 17, ,,
Fastuosum	,, 27, ,,	July 15, ,,
Indian Lilac	June 5, ,,	,, 27, ,,
Jenkinsii	,, 5, ,,	,, 30, ,,
Anthopogon	July 28, ,,	Aug. 29, ,,
Maddeni	Aug. 15, ,,	Oct. 18, ,,

Abridged from the Scottish Farmer.

THE PEACHES OF THE "JARDIN FRUITIER."

There are several varieties of the "Admirable Jaune" Peach (see p. 1159), varying only in the size of their flowers and leaves. If 20 stones of this sort are planted, the trees they produce will all give yellow-fleshed Peaches—some with large, some with small flowers, and varying in the same way as to glands; some giving reniform and others globose glands, but their quality as regards flavour seldom or never varies, except that a Pavie often occurs among them. I have one of this race, which unlike the freestone varieties of the same colour, is remarkably juicy and agreeable—still it is a Pavie.

These yellow-fleshed Peaches are common on the shores of the Mediterranean. In hot climates, as Pavies, they attain a monstrous size, but they become generally dry and flavourless. A few years since these large yellow Pavies made their appearance in Covent Garden, magnificent to look at, but wretched in flavour. Owing to their advent, yellow Peaches are not now popular in the "Garden;" and the Salway, which was a seedling raised in England from a yellow Italian Peach, although in some seasons quite passable, is nearly unsaleable. The finest yellow Peaches are those that have been raised in America, probably from the Admirable Jaune, which has for very many years been the only yellow Peach cultivated in France.

Owing to the fierce sun of the American climate, these yellow Peaches are there held in high esteem, being rich, sugary, and Apricot-like in flavour. One of the most popular as a market Peach in the "States" is Crawford's Early, and when grown here in orchard houses, suffering the trees to bear but very few fruit, it is very rich. But perhaps the best of all is the Golden or Yellow Rareripe,* properly in pure Saxon "Rathripe," or early ripe; this is as early as Crawford's Early, and remarkably beautiful with its red cheek on its deep orange-coloured skin. If a very few are left on the tree so as to attain a large size, say 10 inches in circumference, it is a very fine rich Peach; but if the tree is suffered to bear too many it is quite worthless. These two varieties are, as far as is known at present, more worthy of extra care in their cultivation than any other yellow American Peaches; but a sort called Exquisite, which ripens here much later than the above; and another called Canary, two sorts received from Georgia, U.S., have proved very good in the sunny climate of Guernsey, in the orchard house of the Rev. T. Bréhaut.

In the South of England these two, to which may be added the Susquehanna, may probably prove valuable. There are a great number of varieties of these yellow Peaches cultivated and highly esteemed in the various States of North America, a country which will one day have as many "principalities and powers" as formerly had India—many that are doubtless remarkably rich there, but in our mild even climate never seem to attain their full flavour even when forced; the fierce unclouded sun and the open air—Nature's best ripeners—seem requisite to give them their full flavour. Besides the varieties above mentioned, the following kinds of yellow American Peaches have been introduced:—Bergen's Yellow, large and good, but a shy bearer; Cole's Large Yellow, not good; Crawford's Late, large and late, but not good here; Poole's Large or Late Yellow, very late, ripening with the Salway, and, even on a south wall, sometimes juicy and very good at the end of October; and Columbia, from Georgia, United States, a most remarkable Peach, its coat thick and downy, of a dark drab colour, and its flesh bright orange and red. It is described in the catalogue of a nurseryman who, a few years since, had a nursery at Augusta—now devastated—as "rich, luscious, melting, and juicy;" here, like the red-fleshed Peach, the "Sanguinole" of France, probably its parent, it is not eatable.

The early kinds of yellow-fleshed Peaches will, I think, be found quite worthy of culture. No Peach can be more beautiful than well-grown specimens of the Golden Rathripe and Crawford's Early, and if large and well-ripened they are very rich. As a rule they are better liked by those to whom Peaches are rarities than by Peach connoisseurs.

The Peach "Téton de Venus," described in the "Jardin Fruitier" (see p. 1159) is a good late Peach, but the name should not be given in such a work. If it were the type of a race, the name, distasteful as it is, might have been retained; but it is, according to my experience, merely a seminal variation of that very old Peach accurately described by Duhamel, the Bourdine, Bourdin, or Boudin—pomologists as well as doctors will disagree; or it may be, that as the Téton de Venus is also described by him as ripening only a little later, that when so described, they were considered as distinct varieties. Seedlings of the Bourdin Peach as often give fruit with the terminating nipple as without, and scarcely vary at all in season or flavour, so that one name, and that the Bourdin, seems quite enough for this excellent late Peach. Our Late Admirable, Gregory's Late, Chevreuse Tardive, Desse Tardive, Ward's Late (an American Peach), Merveille d'Octobre, and the Chancellor are all of this race and very nearly related; they all produce small flowers, and are late in ripening.

The Grosse Mignonne Hâtive or Early Grosse Mignonne Peach (p. 1159) is very accurately described in the "Jardin Fruitier." This, it seems, is not a seedling, but originated in a sport—a branch of the type bearing early fruit, as do the trees propagated from it; it is an excellent early Peach, with the same large and beautiful flowers as the original. In some seasons it ripens fully 10 days earlier than that popular Peach, but, like the Mignonne Grosse Tardive of Lepère, it is variable. I am inclined to think that this variety of Lepère's also originated from a sporting branch, but am not certain. The parent sort, and the two varieties of this fine race of Peaches should ripen at intervals of about eight days between each, so that, commencing with the Early Grosse Mignonne, and ending with the Grosse Mignonne Tardive, the dessert may be supplied with them for a period of three weeks or so. They are, however, somewhat capricious, for I have known them all three to ripen in nine or ten days under the same circumstances with regard to position, but acted upon by that most mysterious of all causes to the fruit gardener—the season, which sometimes, even when wet and cool, makes our winter Pears ripen in autumn, entirely contrary to our expectations. *T. R.*

ORCHARD MANAGEMENT.—No. VIII.

We come now to the consideration of planting the trees; and the first question which arises is, as to how deep the roots should be placed below the surface. Taking into consideration the fact that all ulterior

* The corruption of this word must not be imputed to the Yankees. In Cornwall they have an Apple called the Rareripe

success will, in a great measure, depend upon the attention paid to surface dressing, I am a strong advocate for shallow planting, but not indiscriminately so, for on this particular point we must be guided more by circumstances, such as the quality and condition of the soil, than by routine. For instance, if the soil is of a cold nature, and liable in its undrained state to be very retentive of moisture, however much its character may be changed by the routine of operations before mentioned, it will always retain such an amount of its original character, as to render it desirable to keep the roots on the surface. I should therefore in this case simply prick over the surface and place the roots on the ground level, and cover them with the prepared compost so as to form a large mound; but if, on the other hand, the soil is of a warm nature, on a dry bottom, and composed of a good sound loam of a moderate depth, it may be taken out from a hole having a larger diameter than the spread of the roots, to the depth of a foot, but certainly no more in any case whatever, and in filling in, some nice new compost should be placed about the roots alternately with the natural soil. Previously to filling in, it will be necessary in any case to take precautions to prevent the trees being swayed about by the wind, and this can be more efficiently performed without injury to the roots before they are covered.

As this is an important point, extra care should be taken at first, for then the trees will be sooner capable of standing without any support. I say an important point, because no fresh planted tree with a moderate sized head, can throw out new roots, so as to obtain a firm hold upon the soil, if it is not secured from swaying about. There are various methods of securing this object. I do not hold with fastening the tree to a single stake; two is much better than one, and three better than two. These should be very strong, and driven in very firmly at equal distances in a triangle, at from 18 inches to 2 feet from the stem of the tree. A very stout collar should then be made on the stem, large enough to allow an inch for play. The collar should be made of gaskin or twisted tow, and closely bound with tarred rope yarn. A hole should then be bored near the head of each stake pointing to the centre of the triangle, and a length of galvanised iron wire, $\frac{1}{8}$th of an inch in diameter, passed through the hole, one end being bent round the collar and securely fastened; each wire being then drawn just as much as will bring the stem quite upright, and the other end fastened round the stake. The best of this triangular fastening is that from whatever quarter the wind blows, there is always a counteracting support. On the contrary a single stake, only protects in one direction. The stakes, as before advised, should be driven in previous to covering the roots, but the after operation of fastening to the stakes must be left until the soil is all thrown over the roots, to prevent them from being injured by trampling. The final operation after planting and securing, is to level the surface, and cover it with a good mulching of rotten dung.

It is presumed that, in accordance with a former recommendation, the spaces between the trees will be cultivated and cropped for a series of years after planting, but that the diameter of the circles left uncropped around each tree will be annually increased, until the extension of the roots and branches renders it desirable that the whole should be laid down in Grass, which will be necessary in a greater or less number of years, according as the preparation and after treatment are liberal or the reverse. Previous to sowing Grass, the ground should be carefully raked over so as to fill up all the little hollows, and then rolled firm; for I find by experience, that Grass seeds come up thicker and better on firm than on loose soil, so that after sowing, the roller should be freely used, until the whole is consolidated. In after years the operations of dredging and rolling, as generally practised on Grass land, will be highly beneficial.

In order that nothing may be omitted that is material to ensure success, it is necessary to observe that it is not at all desirable to mow the Grass of the orchard, for this will tend to the impoverishment of the soil. On the contrary, it is highly desirable that it should be fed off by sheep and cattle, because whatever they devour from it is returned to the soil in a condition calculated to increase its fertility; by which alone the trees are maintained in a vigorous state of health. At the same time it must be understood that this feeding off with sheep and cattle will not of itself suffice to keep the trees up to that point of perfection to which they may be brought by judicious assistance. It will therefore be advisable to give annually top dressings of good rotten manure and other composts of fresh fertilising materials, which should be well pulverised and spread equally over all the surface, which after a time should be well dredged over, and afterwards rolled down. The best time to apply such surface dressings is in the autumn, after all the fruit is gathered, and after dredging and rolling in spring all traces of it will disappear, and the ground be ready for spring feeding.

Whilst on this subject of top-dressing, I will detail a plan which has been adopted in many places with very great success, more particularly in the case of trees which show signs of debility; and that is to make a temporary enclosure of hurdles, at a distance of 8 or 10 yards around a tree or trees, as the case may be, and to turn therein several hogs; these must be regularly fed and confined to the space for some weeks, more or less according to the number folded on the space. Some bedding, and a temporary shelter for it, should be provided in one corner of the space enclosed, and when it is considered that the ground is well manured, and mixed up with the surface soil by the routing and trampling of the swine, the whole should be shifted to another situation, when the process may be repeated. When I say well-manured, I do not wish it to be understood that I recommend an unlimited supply, because it is quite possible to overdo the matter. Apples are greatly benefited by regular supplies of manure mixed with other fresh compost, and applied on the surface in such proportions only as the trees will be able to assimilate in the course of the season; but if too much is applied at once, and more particularly if it is too strong, they become as it were gorged with rich food, and I have seen instances where young trees have been nearly killed by it. Very strong sewage manure will have this effect when used pure, but when diluted and moderately used it is highly beneficial. Even here, however, a distinction may be made between young and vigorous trees and old debilitated specimens; in the latter case a much stronger dose may be given with impunity, because most of the roots will be low down in the earth, and by well enriching the surface the roots will be induced to strike upwards to feed upon it.

Herein lies the great secret of success, and the profit to be derived from careful surface dressing, that the roots are thereby kept near the surface; for if the food is placed there in sufficient quantity they will come up to feed upon it, as I have proved over and over again; and although some of the principal roots may penetrate deep in the subsoil, it will be an advantage rather than otherwise, and the bad effects which in some cases result from that tendency, will be completely neutralised by the constant supply of suitable food kept on the surface. To this end all my observations have tended, and every point in practice is designed to lead up to the great end of encouraging the roots to remain near the surface. To ensure this the food must be there presented to them, and not, as is often the case, turned in deeply, under the idea that then other crops may be taken from the ground with impunity. This, in cases where the greatest perfection is required, is very short-sighted economy. If orchard trees are expected to pay well, it can only be by liberal treatment, and by making every other object entirely subservient to their culture. *John Cox.*

Home Correspondence.

Artificial Garden Manures.—Will any of your correspondents state their experience in the application of artificial manures to kitchen garden produce? We have in this neighbourhood a thriving Cottage Garden Society, where nearly all the cottagers of the neighbourhood exhibit, and in going amongst them I have been struck with the very great difficulty in procuring a sufficient supply of manure. Where no pig is kept, the cottager is thrown entirely on the resources of his household for the means of fertilisation, and when this cannot be added to by occasional road-scraping or purchase of manure, it is quite insufficient for the requirements of the garden. In this district stable manure cannot be purchased at a profitable rate, and if a portable artificial manure applicable to ordinary garden crops could be obtained, it would be a great boon to many of my poor neighbours. I have often wondered, whilst such success has attended the application of artificial manures to the Turnips and Mangel crops of the farm, that so little has been done in extending their use to the Potato, Carrot, Parsnip, Cabbage, Onion, and other staple crops of the garden. If Mr. Lawes would state his experience in the use of artificial manures to garden husbandry, and name the kinds of manure and the quantities per acre he considers would be applicable to each crop, I should like to institute a careful series of experiments on the subject. *George Maw, Benthall Hall, near Broseley.*

Origin of the Manetti Rose Stock.—I have received the following interesting particulars respecting this stock from my kind friend and valued correspondent, Mr. Rivers:—"It is just 30 years ago, this month," he says, "since I received one small rooted cutting of Manetti in a bookseller's parcel, through Messrs. Longman & Co. Its brother, raised in the same batch, came over with it, and was called 'Rosa indica grandiflora.' Our sort was called 'Rosa indica Manetti.' Both were raised by a Signor Crivelli, who dedicated the latter to Signor Manetti, the Director of the Botanic Garden at Monza, near Lago de Como. The first received was exactly like Manetti in leaves and habit, but not a cutting would grow. So, after some years, I destroyed it, which I now regret." Mr. Rivers further says, "So highly is the Manetti stock esteemed in the United States, that I have sent some hundreds of thousands there; and there is at this moment in the house an order for 50,000 for one nursery." *W. F. Radclyffe, Rushton.*

Prize-taking at Horticultural Exhibitions.—At most of the exhibitions in this part of the kingdom the prizes are nominally awarded to the employers, not to the gardeners: at the same time the employers do not receive a fraction of the prizes, but through a generous feeling, and as an incentive to further exertions, give them to their gardeners. Yet, from facts that have come under my own observation, I am convinced that the system does much mischief. I am acquainted with some gentlemen who refuse to exhibit altogether whilst the awards are made to the employers, knowing that mercenary motives may be, and in some cases are attributed to them. Through jealousy or personal feeling, Messrs. A., B., and C. directly insinuate that Messrs. D., E., and F. exhibit with a view to the money value of the prizes awarded to them. As a natural consequence, Messrs. D., E., and F. give up exhibiting altogether; and these I may add, are not imaginary cases which may possibly occur, but only a small portion of what have actually come to my own knowledge. Now if the awards had been made to the gardeners, there would have been no room for ill-natured insinuations. The prize animals, adduced by "Florist" in comparison with prize plants, do not strengthen his position—for this reason: the animal, to commence with, costs scores, and in some cases hundreds of pounds, while in the case of plants, with the exception, perhaps, of Orchids, the expense is not more than a few shillings. As the plant stands on the exhibition stage it is almost entirely a creation due to the gardener's skill and perseverance. It may be taken as a rule that the men who win the most prizes are not those who have the most money expended to enable them to do so. Gardening of the present day, as exemplified at the leading horticultural exhibitions of this kingdom, is certainly in advance of that of other countries; a circumstance directly attributable to the thoroughly liberal spirit which gentlemen have evinced towards their gardeners in all matters connected with their profession. Gardeners on the other hand have also done their best in order to make a suitable return for such favours; but if the views of "Florist" are to be carried out, I am afraid that a wet blanket would be thrown over their exertions. We have had some allusions lately from high authority to the effect that where showing is carried out, other things are neglected. It is possible that some gardeners may act short-sightedly in this matter; but, as a rule, I maintain that things are just the reverse. If I might be allowed to offer a word of advice, I should say to all gardeners who have the privilege of showing,—always make a point to fetch up in your own time that lost at exhibitions, and in preparing subjects for them. And if it is plants that are exhibited, be sure to have fruits and vegetables, and also the general keeping of the place, equal or even superior to those of men who do not show. Misrepresentations come from more sources than one in these matters. I know men who have tried their hands at exhibiting and who have been deficient in horticultural skill, and also in the necessary perseverance to insure success; such men have found it convenient to turn round and represent that it was not advisable to show, on account of loss of time, injury to plants, &c. At present, competitive exhibitions appear to be the mainsprings that move everything that is making progress—not in gardening only, but in other matters. I would suggest that all who write on matters of such importance as those relating to the regulation of exhibitions, should affix their signature to their observations, so that the public may be in a position to properly estimate the value of their opinions. *T. Baines, The Gardens, Summerfield, Bowdon, Cheshire.*——The system which "Florist" wishes to have altered, has been adopted and approved at the metropolitan exhibitions ever since their commencement, and that, it may be assumed, with the entire accord of employers generally, since they have the remedy in their own hands. "At country exhibitions," "Florist" tells us, "the prizes are awarded to the masters, and if the masters were to be ignored and the country exhibitions to become a gardeners' concern, they would speedily come to grief." This, however, is but an assertion, and requires proof. "Florist" goes on to say, "Mr. B. now allows his plants to be exhibited, be they ever so ill grown, not caring in the least whether they obtain a prize or not." I think if there be a solitary case of this kind, "Florist" might be able to trace it near home. I at least have seen many, many cases where the result has been the very opposite—where ladies and gentlemen have been delighted at their gardeners' success, and happy to receive the congratulations of their friends. Again, "Florist" says, "Is it not a well-known fact, that as a rule, when growing for exhibition is the order of the day, except the fruit and flowers so grown, the remainder go more or less to the wall." I say emphatically, no! If those who hold such a notion would take the trouble to visit the gardens of exhibitors, instead of taking it for granted that on show days there is nothing of interest left in them, they would find that, *as a rule*, everything is better done than in places where they do not exhibit. Again, "Florist" says, "Very many gentlemen (?) will not allow their gardeners to exhibit, as, receiving none of the credit, they nevertheless reap all the expenses and inconveniences attending growing for exhibition." Exhibitors would only be too glad to make "Florist" prove his words in this case; and if he had to make up the deficiency as a penalty for hazarding such random statements, he would find to his cost that the employers did not pay all the expenses, although it is well known that gentlemen and ladies too, reap an abundant harvest of gratification and real pleasure in looking at the beautiful specimens of their gardener's skill, and are quite willing to award him all the credit. I am surprised, if the alteration suggested would give gentlemen

the amount of gratification that "Florist" would have us believe, that it has not been adopted long ago, for, as you stated at the outset, the remedy has been in their own hands. But how does the matter stand? We will suppose that the gentleman buys all the plants and pays all expenses—they are decidedly his property. The gardener grows them and places them on the table for exhibition. What is the simple statement on the card? "Exhibited by Mr. A., gr. to Squire B.,"—clearly indicating the plants, and the gardener too, so to speak, as for the time being, the property of the employer. Viewed in this aspect, which I think is the right one, the gardener must be subordinate enough to satisfy even "Florist" himself. The fact of the custom having remained for so many years in force, is the best proof of its giving general satisfaction. *Antihumbug.*—— No person acquainted with the prize-taking gardeners and gardens of England, and with the relations existing between these gardeners and their masters, can for a moment suppose that the cry of "Florist" and others represents the feelings of the "rale gintlemin" of the country. The fair and true law on the subject is that where prizes are won manifestly by the exertions of the servant, it is only just that he should be named as the winner. A gentleman's name is not substituted for that of his ploughman when the latter wins a prize, and the gardener wins his prizes as fairly and as laboriously as any ploughman. Will "Florist" tell me why the prizes at the Poultry Show he alludes to were not given to the noble lords of the noble ladies? On his principle they should be given to the sole owner. He speaks as if a "community of feeling" did not exist between the gardeners of England and their masters. Well, you cannot expect those who are their own gardeners to know much about the matter; but they should not insinuate such an absurdity, for between no two classes of men so far apart in the social scale do such good relations exist, as between these. Every master may enter his plants in his own name, and I do not see why those who do so should be meanly jealous of men who have fairly won the merit awarded to them. The adoption of "Florist's" suggestions could, in my opinion, produce nothing but harm. *W.*—— It appears to me that there are very few of your correspondents who have written on this subject who are acquainted with the general principle upon which plants are shown. Those who have taken up the cudgels of war against the name of the gardeners being made prominent, generally appear to be florists. I have been looking attentively for the names of the employers of some of our great exhibiting men, but hitherto without being able to trace any of them. Not that I for one moment expected that they would trouble themselves about the matter, but as the agitation seems to continue, and because exhibitors generally have thought the entire subject unworthy their notice, "Florist" assumes he has carried all before him. If he has done so, it is by assertion, though he says his arguments are unanswerable, and that his opponents are obliged to fall back on the £ *s. d.* part of the question. Now those who know anything at all about specimen growing and showing are aware that the work is most laborious, and unless gardeners were remunerated for their exertions they would not injure their health by showing at all. I am not alluding to the cultivators of just one or two collections in the course of the season, but to the back and bone exhibitor—the men, in fact, on whom the societies are dependent to make their shows. If "Florist" will refer to my letter at p. 1157, he will find I there stated the secret as to how shows are supported. Taking the common sense view of the question, the prize cards at present indicate the facts. "So and So, gardener to A. B., Esq.," is the usual way in which the names appear, and, distort it how he may, I don't think "Florist" can improve the truth or the English. If any gentleman wished his plants exhibited in a manner so as to alter the reading of the sentence, he could always have it done, but it would imply no more than the existing plan, and would place him relatively in a lower scale. Passing by such trash as "Faunus" writes, I should think the managers of societies know their business too well to deviate from their present course, unless they received more authoritative testimony against it than any that has hitherto appeared. *G. B.* —— Let me ask if such non-contents as "Faunus" really know anything at all about exhibiting or the labour it entails; if they did, they would not grudge the gardener the hard-earned laurels he gets in the shape of reputation. Plant growing is only acquired by life-long experience and minute observation on the intricate mysteries connected therewith, and those who follow up showing year after year, as many do, know full well, to their cost of health and strength, that it is no child's play. Unless gardeners got some tangible benefits from their exertions they would be fools indeed to go through them. I can speak from experience of having had a far more liberal employer than "Faunus," as the more I got in shape of prizes the more he was pleased; and, thank justice, my case is no exception. *O. R., a Member of the Exhibitors' Society.*—— "Florist" questions the advisability of awarding prizes to the gardeners instead of the employers, and gives it as his opinion that the existing custom of awarding them to the former is highly injurious to floriculture and floral exhibitions. After an assertion of this kind, one naturally expects to find reasons advanced in support of the argument, but in vain is the article scanned to discover them, although the importance of the question in its various bearings is undoubtedly great. Had the desire of the writer been purely disinterested, it would probably have been largely discussed by more able pens, but an article so utterly devoid of even a single sensible argument is likely to have a larger portion of contempt than attention accorded to it. Allow me briefly to analyse that part of it which may be considered by some superficial readers to bear upon it the semblance of reason. Does your correspondent seriously entertain the idea that a spirit of emulation would be aroused if his suggestions were carried out? A gardener, in addition to being sufficiently acquainted with the various branches of his profession, to discharge his duties satisfactorily must have a tolerably good education, and devote a considerable amount of attention to this end; but when, in addition to this, a persevering and industrious man, desirous of improving his social condition, and zealous for the advancement of his art, bends all his corporeal and mental energies to the task to master the multitudinous and abstruse details thereof, he should, by every shadow of reasoning, be entitled to all the encouragement that can possibly be given to him; and on all occasions the employer should be ready to recognise him in every appropriate way. Can any rational being suppose that this desirable result can be secured by the employer systematically appropriating to himself any pecuniary benefit which his gardener has so praiseworthily earned through the extra and arduous duties which have devolved upon him, and which is therefore most justly his due. Besides, in a general way, the prizes that are awarded at floral exhibitions are not of any great value, only so far as they redound to the honour of the employer and credit of the employed. Stipulated wages to a conscientious servant will secure a faithful return of labour, and here I think the present system is found to work admirably well, for in however feeble a manner a man's services may be recognised, there is found in it the stimulating germ which will gradually develope itself, and inevitably be found practically to produce the most beneficial results. Where would be the incentive to progress if your Correspondent's remarks were adopted? I cannot consider his comparison of a gardener with a groom to be borne out by facts. Where is the analogy between them? There is none—the one being occupied in a purely mechanical way, and the other in a way requiring a combination of brain, highly refined taste, and numberless acquirements. In a fair and open competition for determining the merit of the various products in any particular branch of industry, happily the exploded notion that there is any dishonour in competing with "the servants of equals" is not generally considered a serious impediment. Intellect fortunately is that great desideratum in every department of trade, which most surely and steadily is asserting its supremacy and maintaining its sway; while the accidental advantages of birth, position, &c., without it, soon find their level. The cynical sneers of "Florist" will not terrify men who belong to the class of "Messrs. Jemmy Green and Carroty Bob." *A Gardener.*—— [Enough has been said on this subject. We printed "Florist's" letter in order to elicit whether the feeling to which he gave expression was at all generally felt amongst the employers of gardeners. Such does not appear to be the case, if we are to judge by the silence of those who are most interested; and indeed the general existence of such a feeling is all the less likely, inasmuch as employers could, if they had wished, at any time have altered the present system. Seriously we put it to our Correspondent "Florist," whether he can on mature consideration think it beneath him to meet a gardener in fair open competition at a garden exhibition.]

Vine-growing at North Elswick.—In the autumn of 1861 you published some remarks of mine relative to the Vineries at North Elswick, in the county of Northumberland, the borders of which were constructed by Mr. Milthorpe, of the Gowlands Nursery, upon a principle which was then comparatively unknown, but which I am glad to find is now becoming the rule in border-making rather than the exception. Formerly the construction of a Vine border was a very costly matter; the ground was first excavated to a considerable depth, then concreted, or otherwise rendered impervious to the filtration of water, the effect of which in many cases (especially where the concreted bottom had been made perfectly flat) was that the water collected at the bottom of the Vine border as in a reservoir, to the destruction of the roots of the Vines, thus producing the very evil which the concreted bottom was intended to guard against, viz., the penetration of the roots of the Vines into a wet and badly drained subsoil. The borders at North Elswick are altogether above the natural level of the adjoining ground, which, in the first place, was made to slope considerably towards a main drain along the south front of the border. There is a little border inside the house, slightly more elevated than the outside one. The Vines were planted outside, and were introduced under the wall plate, which is supported at intervals of about five feet by a small brick pillar. The roots have therefore full liberty to ramble both outside and inside, and are thus more independent of watering by hand within the house, and also enjoy the ameliorating atmospheric influences. On May 15, 1858, 38 Vines, one half of which were Black Hamburghs, and the other half Muscats and Frontignans, were planted. The same autumn the Vines reached the top of the rafters (about 16 feet) and half way down the back wall. In 1859, some of the canes were 3 inches in circumference. In 1860, the rods were superb, and were allowed to bear a few bunches, some of which weighed 4½ lbs. In 1861, there were 350 bunches, averaging 2 lb each, but many weighing 3 and 4, and a few 5 lb. a-piece. This year (1861) owing in some degree, no doubt, to the appearance in your columns of the account of the extraordinary success of the North Elswick vineries, they were visited and inspected by great numbers of gardeners from this and the adjoining counties. No one could deny that wonderful results had been arrived at; that it was rare indeed to see such Vines and such crops the third year after planting; but "stop a little," said they, "this will soon come to an end, the Vines are overworked, they may bear a year or two longer, but nothing but 'ruination' can be the end of such cropping as this," and so, with many shrugs of the shoulders and much shaking of their heads, they returned to the places whence they came, prophesying the speedy extinction of the North Elswick Vines. In spite of this croaking, however, Mr. Macpherson, the gardener (who is now in his 87th year), went on and prospered. In 1862, the 38 Vines bore 698 bunches; in 1863, 705 bunches; and in 1864, 728 bunches, varying from 1 lb. to 4 lbs. each. The Vines show no signs of exhaustion; they continue to make splendid wood, many of the stems (measured last week) being 5½ inches in circumference. They showed three and four bunches at the greater number of the buds, and it is a fact that 1700 bunches have this year been removed, leaving, as before stated, 728 bunches to come to maturity. Two Peach houses have been erected in 1863 at the ends of the Vineries; the same description of border has been constructed for them, and the result has been equally satisfactory. Seven Peaches and Nectarines were planted in the April of 1863, and each tree has this year borne on an average two dozen of exceedingly fine fruit. *X. Y. Z., Northumberland.*

Fearnought Cabbage.—In your Journal of the 24th inst. I observe a few remarks from Ashford upon this Cabbage, wherein the writer states that it did not stand the frost of last winter so well as the Couve Tronchuda. Owing to the Fearnought being a hybrid betwixt an early Cabbage and the Hearting Scotch (or Borecole Kail), of course like all hybrids it is apt to sport, some of the plants partaking more of the Cabbage than the Kail, and growing larger in the head than others. These are of course more susceptible of the influence of severe frost than more hardy seedlings; but I find from three years' experience, and comparative trials alongside of the Savoy, Late Drumhead Cabbage, and Broccoli of different sorts, that none stand frost so well as the Fearnought. In order to withstand a severe frost, I lay all my winter vegetables on their sides, facing the north, taking care not to remove any of their leaves. As to the merits of the Fearnought on the table as a winter vegetable, laying aside prejudice and giving it a fair trial against any of the Brassica tribe, even the most fastidious will at once pronounce it superior to anything until spring, when the Broccolis come in. The public are the best judges as to its value, and around where I reside the Fearnought Cabbage seems to have superseded in a great measure all other winter vegetables. *Francis Somner.*

Castle Kennedy Fig.—I consider the letter of Mr. Fowler, at p. 1228, quite satisfactory. From the description he gives of the fruit, it seems probable that the old and formerly neglected tree at Stranraer, remained the sole representative in this kingdom of a Fig cultivated by Miller, and which stands first on his list. Of Figs now cultivated here (except the recently imported Adam), the largest is the Brunswick. This was well known to Miller, who describes it. Yet he states that his No. 1 is decidedly the largest he knows, and therefore larger than the Brunswick. He speaks highly of its earliness, hardiness, and quality, nor does he say any thing disparaging, except its liability to crack in wet seasons, like many other thin-skinned fruits. He calls it the Large Brown or Chestnut Ischia; not the Small Brown Ischia, which is quite another thing. *S. B.*

Royal Horticultural Society's Programme.—I really was hopeful when I read your remarks on the Horticultural Society's Programme (p. 1106) that we were going to have some tangible improvements, but after looking most anxiously for the expected boon, and with the Regulations for 1865 before me, I am unable to learn anything remarkably satisfactory beyond this, that it looks very pretty on paper. As regards the promised Lilliputian (shall I say puppet?) shows, the mischief is that the managers are not catering for a Lilliputian public, but (leaving out entirely the interests of exhibitors) for the members of an aristocracy second to none in the world, and possessing refinement and true appreciation of all that is noble and good—thousands of whom if they visit the forthcoming pigmy affairs will look back with yearnings for the sound entertainment they used to enjoy at the old Chiswick shows. As an exhibitor for the last 14 years, during the latter 12 of which I have never missed any of the great metropolitan shows, I think I may be permitted, with a pardonable amount of egotism, to

assume having had some opportunity of observing the requirements of a good flower show, and the characteristic peculiarities of specimen plants generally. I beg, therefore, to offer a few remarks on the subject. In my opinion those who have anything to do with the management of horticultural exhibitions should most intensely study that magnetic word 'attraction' in all its practical bearings; and what is more attractive than a good flower show? See the thousands who throng the Royal Botanic Society's tent on one of their great gala days. On many occasions I have come in contact with visitors at the moment when they have entered the tent for the first time, and gazed upon that never yet eclipsed grandeur of floral display, and have listened to the exclamations of wondrous delight which have escaped their lips. The Council of the Royal Botanic Society know that a good flower show will attract the sight-seeing public, and they hold out practical inducements to exhibitors. The result is that miscellaneous groups of the finest specimen plants in Europe are staged, and the scene changes at every step by the judicious arrangement of dissimilar objects. They are not shows at which one species only is exhibited, or the prizes all taken by one or two individuals; but they contain all the cream of the aggregate productions procurable at the season. All this the authors of the Programme of the Royal Horticultural Society are neglecting to do, as effectually as they can. Let me ask any practical exhibitor of Orchids if he would choose the beginning of May for an exhibition of that family. Still more absurd is the time allotted to Azaleas, viz., the end of June, unless the Society wishes to see the kinds most adapted for late blooming, after every "spasmodic effort" has been made to keep them back to such a decidedly "unnatural state of things." But supposing the time fixed for these and the other pet special displays to be ever so seasonable, will the exhibitions of these particular species be any the better for this "family gathering?" Was the exhibition of Orchids any the better last season for the attempt at classification? I had it from the lips of one of the best growers of Orchids, and one of the most successful exhibitors, that he was disgusted with the arrangement, which only had the effect of introducing some specimens into collections for the purpose of "making up," which otherwise would have been left at home, while it prohibited more notable specimens from being shown, thoroughly proving the fact that the only quality portrayed was that of novelty. Nor will the scheme of 1865 make the subjects themselves any the better by the shows being especially devoted to one kind of plant. No! the isolated system will make the flowers of the Pelargoniums none the brighter, the Orchids none the choicer, the Azaleas none the more plentiful, and the foliage plants none the greener; but it will make the shows all the less attractive by placing only one kind of plant before the public; and I have the highest authority for adding that it will make the general body of exhibitors most dissatisfied. Who, in the name of common sense, are the Council trying to please? *O. R.*

Societies.

ROYAL HORTICULTURAL: *Dec.* 24 to 31.—An exhibition of Perfumes and of some of the plants from which they are derived, has been held at South Kensington during the past week, and has not been without interest. Ample illustrations of the most popular kinds of scents, both in the shape of solids and liquids, have been furnished by Messrs. Piesse and Lubin, and others, and lecturets on the different compounds shown have been delivered by Mr. Rimmel, of the Strand, and Dr. Piesse, of Bond Street, to tolerably large audiences daily.

In connection with the exhibition of perfumery, was a display of Egyptian fruit from Mr. Chapman, gr. to Halim Pacha, of Grand Cairo. It consisted chiefly of Citronworts, amounting to upwards of 20 dishes, among which were very fine Shaddocks, Oranges of different kinds, large and beautiful examples of Lemons, a Pomegranate, a Cucumber-shaped Gourd, long rod-like seed-pods of Cassia fistula, stated to be used by the Egyptians as medicine; Cotton, American, Egyptian, and South Sea Island; and a kind of Pepper, called by the natives Filfill—altogether an extremely interesting exhibition.

Mr. Rimmel's discourses on Perfumes related not only to modern, but also to the ancient uses made of them. After alluding to the history of the art of Perfumery, and adverting to the Linnean and other modes of classifying odours, he stated that his mode of arranging them was similar to that employed with regard to colours, the principle being that as there are primary colours from which all secondary shades are composed, so there are also primary odours or types by a combination of which most other aromas may be obtained. His odour types were stated to be the Rose, Jasmine, Orange-flower, Tuberose, Violet, Balsamic, Spice, Clove, Camphor, Sandal, Citrine, Lavender, Mint, Aniseed, Almond, Musk, Amber, and the aroma of fruit. With regard to these, however, and many other interesting matters relating to perfumery, ample information may be gleaned on the subject from a lecture by Mr. Rimmel, published in our volume for 1860. Dr. Piesse's observations on the subject are as follows:—

Perfumes derived from plants may be, for the purpose of description, conveniently divided into three classes.

CLASS I. are the most ancient, and have been in use from the earliest period of which there is record. They consist of the various odoriferous gum-resins, which exude naturally from the trees which yield them; and to increase the produce, the plants are often purposely wounded. The most important are Benzoin, Olibanum, Myrrh, and Camphor. No less than 5000 cwt. of these together, are annually imported into Britain. Gum-resins form the chief ingredients in incense, and in pastilles. These odorous bodies are principally consumed in certain religious ceremonies, and from the early custom of burning incense upon the holy altar, our word perfume, from *per fumus* (by smoke), has been derived. We may include in this class all those parts of plants which are fragrant, such as the long seed pod of the Vanilla plant; the Bean of the Dipterix odorata, or Tonquin Bean, which our grandfathers carried in their snuff boxes; the root of the Iris florentina, or Orris root, about 25 tons of which are consumed every year by Britannia at her toilet; the rhizome of an Indian Grass, known as vitivert or kus kus; fragrant woods, such as the Sandal, and the Myall, or violet-wood of Australia; odoriferous seeds, as Caraway and Nutmeg; in fact, our first division includes every vegetable substance which has a pleasing fragrance, like some dried flowers. Perfumers grind these several bodies to powder, then mix them in various proportions; the results are the various sachet powders in such universal use.

CLASS II. are those perfumes which are procured by distillation. This is the first step to separate the odorous principle from the material which contains it. As soon as the Greeks and the Romans learned the use of the still, which was an invention imported by them from Egypt, they quickly adapted it to the separation of the odorous principle from the numerous fragrance-bearing plants which are indigenous to Greece and Italy. An essential oil or otto thus procured from Orange flowers bears in commerce to this day the name of Neroli, supposed to be so named after the Emperor Nero. Long before that time, however, fragrant waters were in use in Arabia, as all may learn who read the Arabian Nights. Odour-bearing plants contain the fragrant principle in minute glands or sacs; these are found sometimes in the rind of the fruit, as the Lemon and Orange; in others it is in the leaves, as Sage, Mint, and Thyme; in wood, as Rosewood and Sandal-wood; in the bark, as Cassia and Cinnamon; in seeds, as Caraway and Nutmeg. These glands or bags of fragrance may be plainly seen in a thin cut stratum of Orange peel, from which the otto may be easily pressed out on to paper; so also in a Bay-leaf, if it be held up to the sunlight, all the oil cells may be seen like specks. All these fragrant-bearing substances yield by distillation an otto peculiar to each; thus is procured otto of Patchouly from the leaves of the Patchouly plant, Pogostemon Patchouly, a native of Burmah; otto of Caraway, from the Caraway-seed; otto of Geranium, from the leaves of the rose-scented Geranium; otto of Lemon, from Lemon-peel; and a hundred of others of more infinite variety.

All the various ottos are very slightly soluble in water, so that in the process of distillation the water which comes over is always fragrant. Thus, elder water, rose water, orange water, dill water, are, as it were, the residue of the distillation for obtaining the several ottos. A variety of these fragrant waters will be found here. We may distil so much of the plant with water as is just sufficient to render the water fragrant without any otto floating upon it. This is the practice when the water alone is the object of distillation. The process of distillation is very simple; the fragrant part of the plant is put into the still and covered with water, and when the water is made to boil the ottos rise along with the steam, are condensed with it in the pipe, and remain floating on the water, from which they are easily separated by decanting. Models of the still are here shown, and on the wall we have a sectional diagram of this wonderful instrument. In this way 100 pounds of Orange, Lemon, or Bergamot-fruit peel will yield about 10 ounces of the fragrant otto; 100 lb. of Cedar wood will give about 15 ounces of otto of Cedar; 100 lb. of Nutmeg will yield 60 to 70 ounces of otto of Nutmeg; 100 lb. of Geranium leaves will yield 2 ounces of otto. A simple mode of procuring the ottos from Orange, Lemon, and Bergamot is practised in Italy. The fruit is rasped, and the pulp produced is then pressed. The odours of the fruit thus procured are much finer than those obtained by distillation.

Every fragrant substance varies in yield of essential otto. The variety of ottos are as numerous as fragrant plants; but there are a certain relationship among odours as among tints. The lemon-like odours are the most numerous, such as Verbena, Lemon, Bergamot, Orange, Citron, Citronella; then the almond-like odours, such as Heliotrope, Vanilla, Violet; then spice odours, Cloves, Cinnamon, Cassia. The whole may be classified into 12 well-defined groups. All these ottos are very soluble in alcohol, in fat, butter, and fixed oils. They also mix with soap, snuff, starch, sugar, chalk, and other bodies, to which they impart their fragrance. And it is thus that we are enabled to transfer the odorous principle from the plant that produces it to an inodorous body, wanting fragrance alone to make it of commercial value. The principal consumption of the various fragrant ottos is for scenting soap. Windsor soap, almond soap, rose soap, and a great variety of others, consist of various soaps made of oil and tallow, perfumed while in a melted state with the several named ottos or mixtures of them.

Though snuff is by no means so popular an article in the reign of Victoria as it was in Anne's time, yet the increased population, and still more increased exports to colonies, cause a positively increased production in scented snuff over that of 50 years past; snuff perfumed with bergamot is especially in demand in the fur countries of Northern Canada. There is a large consumption of fragrant essential oils in the manufacture of toilet powders; under the various names of rose powder, violet powder, &c., a mixture of starch and Orris root powdered, differently scented, is in general demand for drying the skin after the bath.

More than 200,000 lb. weight of various ottos were imported into Britain in 1860, and valued at over 180,000*l.*; to this must be added at least one-third as much again distilled in England. Of the imported articles enumerated, oils of Lemon and Bergamot, from the Two Sicilies, reached 128,809 lb., valued at 57,054*l.*

We now pass to CLASS III. These are the perfumes proper, such as are used for perfuming handkerchiefs. Contrary to the general belief, nearly all the perfumes derived from flowers are not made by distillation, but by the processes of *enfleurage* or inflowering, and by maceration or infusion.

The odours of flowers do not, as a general rule, exist in them as a store or in a gland, but they are developed as an exhalation. While the flower breathes it yields fragrance, but kill the flower, and fragrance ceases. It has not been ascertained when the discovery was made of condensing, as it were, the breath of the flower during life; what we know now is, that if a living flower be placed near to butter, grease, animal fat, or oil, these bodies absorb the odour given off by the blossom, and in turn themselves become fragrant. If we spread fresh unsalted butter upon the inside of two dessert-plates, and then fill one of the plates with gathered fragrant blossoms of Clematis, covering them over with the second greased plate, we shall find that after 24 hours the grease has become fragrant. The blossoms, though separated from the parent stem, do not die for some time, but live and exhale odour: which is absorbed by the fat. To remove the odour from the fat, the fat must be scraped off the plates and put into alcohol; the odour then leaves the grease and enters into the spirit, which thus becomes "scent," and the grease again becomes odourless.

The flower farmers of the Var follow precisely this method on a very large scale, with but a little practical variation, with the following flowers—Rose, Orange, Acacia, Violet, Jasmine, Tuberose, and Jonquil. The process is termed, as said before, *enfleurage* or inflowering. In the valley of the Var, there are acres of Jasmine, of Tuberose, of Violets, and the other flowers named; in due season the air is laden with fragrance—the flower harvest is at hand. Women and children gather the blossoms, which they place in little panniers like fishermen's baskets hung over the shoulders. They are then carried to the laboratory of flowers and weighed. In the laboratory the harvest of flowers has been anticipated. During the previous winter great quantities of grease, lard, and beef-suet have been collected, melted, washed, and clarified. The great success of this process depends on the absolute purity of the grease employed and no pains are spared to this end. In each laboratory there are several thousand *châsses* (sashes), or framed glasses, upon which the grease to be scented is spread, and upon this grease the blossoms are sprinkled or laid. The *châsse en verre* is, in fact, a frame with a glass in it as nearly as possible like a window-sash only that the frame is 2 inches thicker, so that when one châsse is placed on another, there is a space of 4 inches between every two glasses, thus allowing room for blossoms. Every châsse, or sash, is about 2 feet long by 18 inches broad. The flower blossoms are changed every day, or every other day, as is convenient in regard to the general work of the laboratory or flowering of the plants. The same grease, however remains in the châsse so long as the particular plant being used yields blossoms. Each time the fresh flowers are put on, the grease is "worked"—that is, serrated with a knife—so as to offer a fresh surface of grease to absorb odour. The grease being inflowered in this way for three weeks or more—in fact, so long as the plants produce blossoms—is at last scraped off the châsse, melted, strained, and poured into tin canisters, and is now fit for exportation. In every moderate-sized flower laboratory there are employed from 2000 to 3000 sashes. Fat or oil is perfumed with these same flowers by the process of maceration; that is, infusion of the flowers in oil or melted fat. For this end, purified fat is melted in a *bain marie*, or warm bath, and the fresh blossoms are infused in it for several hours. Fresh flowers being procured, the spent blossoms are strained away, and new flowers added repeatedly, so long as they can be procured. The bain marie is used in order to prevent the grease becoming too hot from exposure to the naked fire; so long as the grease is

fluid, it is warm enough. Oil does not require to be warmed, but improved results are obtained when it is slightly heated. Jasmine and Tuberose produce the best perfumed grease by enfleurage, but Rose, Orange, and Acacia give more satisfactory products by maceration: while Violet and Jonquil grease is best obtained by the joint processes—enfleurage followed by maceration.

We have here a *chisse en ter*—this is for the enfleurage of oil. In the place of glass, the space is filled with a wire net, on which is laid a molleton, or thick cotton fabric—moleskin, soaked with oil; on this the flowers are laid, just as with cold grease. In due time—that is, after repeated changing of the flowers—the oil becomes fragrant, and it is then pressed out of the moleskin cloth. Oil of Jasmine, Tuberose, &c., are prepared in this way.

There is certainly something inscrutable to an Englishman about Olive oil. He only knows it as it were with a lamp like odour; but the Olive oil that is pressed from the native fruit of the Valley of Cannes, has less taste and less odour than the finest Aylesbury fresh butter. Such oil therefore is admirably adapted for inflowering, for it is obvious that bodies which have no odour of their own, are more easily perfumed than those in which the original odour has to be overcome before they smell of the substance with which they are odorated.

In order now to obtain the perfume of these flowers in the form used for scenting handkerchiefs, we have to infuse the scented fat or oil, made by any of the above methods, in strong alcohol. In extracting the odour from solid fat it has to be chopped up fine as suet is chopped or melted, and then put into the spirit, and left to infuse for about a month. In the case of scented oil it has to be repeatedly agitated with the spirit. The result is, that the spirit extracts all the odour from the fatty body, becoming itself "perfume," while the grease again becomes odourless. Thus is procured the essence of Jasmine, essence of Orange flowers, essence of Violets, and others already named, Rose, Tuberose, Acacia, and Jonquil. It is remarkable that these flowers yield perfumes which, either separate or mixed in various proportions, are the types of nearly all flower odours; thus, when Jasmine and Orange flowers are blended, the scent produced is like Sweet Pea; when Jasmine and Tuberose are mixed, the perfume is that of the Hyacinth. All the various bouquets and nosegays, such as "frangipanni," "white roses," "sweet daphne," are made upon this principle.

The commercial importance of this branch of perfumes may be indicated by the quantity of flowers annually grown in the district of Cannes. Flower harvest: Orange blossoms, 1,475,000 lb.; Roses, 330,000 lb.; Jasmine, 100,000 lb.; Violets, 75,000 lb.; Acacia, 45,000 lb.; Geranium, 30,000 lb.; Tuberose, 24,000 lb.; Jonquil, 5000 lb. The quantity produced at Nice I have been unable to ascertain; with Violets and Orange there are more, but with Cassie less than here stated.

In growing flowers for perfumery the item of wages is of course important. In the Valley of the Var, the summer wages are 2*s.* 4*d.* a day for those men who do the heavy work of the fields, and 1*s.* 1*d.* a day for the women who attend to the flowers. In winter, which is of short duration, the wages are 2*s.* a day for men, and 10*d.* for women.

Nothing can be simpler or more primitive than the farming operations. Roses for example: the field is first scantily manured—especially with the refuse matter left after the distillation of various plants; it is then ploughed with oxen at the yoke; young plants of Roses, procured from layers in the usual way by tongueing and laying at a joint, are then planted, and Nature does the rest. The Cabbage or Provence Rose is the kind cultivated. In the second year a considerable quantity of flowers appears, but it is not until the fourth year that they are fully developed. A plantation of Roses well tended will last from six to eight years; but for this the land must be well drained. It requires about 7000 Rose plants to cover an acre, and this acre will produce, in an average season, 5000 lb. weight of Roses of the value of 1*d.* to 1½*d.* per lb., yielding, say 30*l.* an acre.

For Cassie (Acacia Farnesiana), the land is prepared in a similar way. The young plants are raised from seed, which is sown in beds. The best plants are left, the doubtful ones removed. In the third year they have generally a height of 2 or 3 feet, and are then planted out in fields, each tree requiring about 12 feet square. The blossoms of the Cassie are successive, some being ready for plucking, while the others are scarcely formed. This is immensely useful to the farmer, one lot of blossoms being gathered and passed through the laboratory before it is time to gather the others. After the third year the tree produces flowers, growing at the same time till they attain maturity, when they reach a height of 10 or 12 feet, with branches 6 feet long, and a stem as thick as a man's wrist. Each full-grown tree will produce about 2 lb. weight of flowers, value from 3*d.* to 4*d.* per pound, say 30*l.* to 40*l.* per acre.

The Jasmine is cultivated by slips of the Wild Jasmine (that which is seen in our English gardens), grafted at the end of two years with the Spanish Jasmine (Jasminum grand florum). This produces a blossom the size of a shilling, of intense fragrance. It requires about 8000 plants to stock an acre; and they are not in full bearing till the second year after grafting; but when mature, every thousand plants yield about 60 lb. weight of flowers annually. They are planted in rows, horizontal poles being thrust between them for support, the branches being woven in and out, somewhat as the Raspberry canes are arranged by the Chiswick gardeners. Every August—the Jasmine season—the fields are alive with women, old and young, and children, each having a little basket at her side suspended by a strap across her shoulders, both hands actively engaged in picking the flowers, and filling the baskets. As each basket is filled it is conveyed to the shaded laboratory, and there weighed. An acre of land will yield about 500 lb. weight of Jasmine blossoms. The value of the blossoms varies from 1*s.* to 1*s.* 6*d.* per pound.

The Tuberose needs more care than any other flower of the farm. It is the most difficult to rear, but the best worth rearing; a good plantation on a good soil will last for seven or eight years. It is a bulbous plant, and propagates as they do; it throws out a stem like a Hyacinth, covered with fleshy flowers. And oh! what a fragrance breathes from it! what a bouquet, snatching perfumes from every flower with a superb eclecticism!

> The Tuberose, with her silv'ry light,
> That in the garden of Malay
> Is called the mistress of the night,
> So like a bride, scented and bright,
> She comes out when the sun's away

Orange trees are cultivated from seeds; at the third year they are grafted, either with the sweet Portugal or bitter Bigaradier. A tree requires 15 years to reach maturity, but will produce both flowers and fruit in four or five years. When in full vigour, each tree yields an average of 25 lbs. weight of blossoms annually. Many plantations of Orange trees at Nice are more than 100 years old. At Fontainebleau there are now to be seen Orange trees planted by an ancestor of mine 200 years ago. At Nice there is a public market for Orange-blossoms during the season: the bitter Orange flowers fetch 3*d.* per lb., the sweet about 2*d.* The Orange-tree yields not only the exquisite odour of the flowers by the enfleurage process, of which there are several examples here, but also the otto from the flowers by distillation; there is also quite a different smelling otto from the epidermis of the fruit, and also a very fine otto from the leaves. The market season for Orange-flowers at Nice lasts for more than a month, as an average, and during that time there are sold about 15 to 18 tons of flowers daily! and a ton of flowers will yield more than a kilogramme of otto, say 40 ounces, worth 20*l.* sterling; and the residuary water, highly saturated with odour, worth another 10*l.* note.

With us the Violet grows anywhere, and almost anyhow; but the terrible sun of Nice, during July and August, is but ill-borne by the Violet. Consequently, on the farms they are planted under the green shade of the Orange and Lemon trees, or close to walls and houses. The method of propagation is division of the roots. They are planted so as to grow in tufts or clusters about a foot apart all round; and this space enables the growers to gather the flowers without treading on them. A surface of land, equalling an acre of planting, yields 180 to 200 lbs. weight of flowers, valued as an average at 2 francs the lb. Violets may always be looked upon as an extra crop, growing as they do under the Orange and Lemon trees. The kind grown is the double Parma. About 25 tons weight of Violet blossoms are produced annually at Nice.

Oak or Rose-leaf Geraniums are grown for the sake of the Rose-like odour extracted by distillation from the leaves. A ton of leaves will yield about a kilogramme, or rather less, of otto. The Geranium is propagated by cuttings made in September, which are planted out in the spring.

Rosemary, Lavender and Thyme are also grown to a vast extent. One can hardly say "cultivated," since they grow like Brooms and Heaths on the wild wolds of Yorkshire. Any quantity may be found on the high regions of the Maritime Alps. Those persons who seek for the ottos of these plants carry the distilling apparatus up the hills upon the backs of mules, while they encamp themselves in tents near to some snow-stream. England has always been famous for the production of Lavender, and farms of it exist at Carshalton and Mitcham, in Surrey: also at Hitchin, in Hertfordshire. It requires about 3500 plants to an acre, and when the plant is in full bearing we can procure from this quantity about six to seven quarts of otto, which, at the present price of 54*s.* per lb., a good average price of ten years, yield 32*l.* per acre.

Although the mode of obtaining the odours from flowers by enfleurage and maceration has certainly been in practice for two centuries in the valley of the Var, in the south of France, it is only by my publications that the method has been made generally known in England.

The works published relating to perfumery are very few. In France, where this commerce has risen annually to the value of 3,000,000*l.* sterling, there are no published accounts or statistics by a native author relating to flower farming. My own little book, "The Art of Perfumery," has recently been translated into French, by Dr. Bavell of Paris, and is published by Ballaire. No cyclopædia, which is more than 10 years old, makes even mention of the enflowering process as a source of entrapping the exquisite odour of flowers, nor do any of the multitude of books relating to economic gardening notice this fact.

No wonder then that gardeners and horticulturists generally are unacquainted with this simple source of wealth, and if I interpret right the object of the Council of this Society now in arranging the subject of the odours of plants before the Fellows, it is that young gardeners, aspiring to emigrate to some of the warm British Colonies, may eventually lay there the foundation of a flower farm and perfume laboratory, such as can only at present be seen on the banks of the Var.

Notices of Books.

The Painless Extinction of Life in Animals designed for Human Food. By Henry MacCormac, M.D., Longman & Co.

Such is the title of a very small pamphlet addressed to the Society for the Prevention of Cruelty to Animals. Dr. M. thinks that if animals must be killed for food, we ought to take care that their departure out of life should be as painless as possible. He would forbid slaughter-houses in towns because they are disgusting. He would have none employed but skilled and competent persons. All this is very well; but when he asserts "that all the horrors of vivisection sink into nothingness contrasted with those of the slaughter-houses," Dr. M. is certainly not speaking from his own experience: he takes a mere spectator's view of the case, and we feel persuaded the unfortunate subject of vivisection, if he could speak, would give a very different account of the matter. All experience goes to prove that exquisite torture may be suffered while there need be nothing to disgust the beholder—no streaming blood, no crashing bones, no resounding blows. And, on the other hand, there are numerous cases to show that instantaneous death from a blow is in all probability absolutely painless.

Dr. MacCormac reminds us of the good-natured gardener, who was heard lamenting "Oh, dear! oh, dear, what am I to do! Miss Florence has told me to kill them snails, and says I must *do it tenderly*," so he sprinkled them over with salt.

The Doctor says the practice of "pithing" is good, but it is too delicate and difficult a process for general use. So are some other ingenious methods of killing, but the inhalation of carbonic acid gas he proposes as perfectly satisfactory. There is no need for him to prove that insensibility to pain may thus be instantly produced, we admit it: but a skilful blow with a pole axe we maintain does the work just as well. If a prejudice exists against eating the flesh of animals that have not bled, the doctor says it is groundless, and in fact the loss of blood in slaughtered animals is actually a loss of food for man. "The blood is as wholesome and digestible as any portion of the flesh of animals, and there is no way in which it can so readily be made use of, as by leaving it in the tissues wherein it subsists in life." More than that, he says the retention of the blood gives meat a kind of gamey flavour. So Dr. M. proposes to have a carbonic acid gas generator fed with chalk and sulphuric acid. From this a trough or reservoir will be filled, or an india-rubber hood may be adjusted to the creature's head—one gulp of the gas, and your ox is dead.

Le Jardin Fruitier du Muséum. By Prof. Decaisne.

(*Continued from p.* 1159.)

Pêcher Belle de Doué.—Leaves with globose glands; flowers very small. Fruit very large, globular, somewhat depressed, with a wide spreading cavity at the base; skin covered with fine short down, strongly coloured with purplish red next the sun. Flesh parting from the sun, white, rayed with red at the stone, melting, juicy and sugary. Ripens about the same time as the Grosse Mignonne, for which it might be mistaken; but these two may always be perfectly distinguished, the Belle de Doué having small flowers, whereas the Grosse Mignonne has large. This variety was raised by M. Dinat, a Nurseryman at Doué, in the department of Maine-et-Loire; and it was introduced in the trade by M. Jamin, Nurseryman, Bourg la Reine, Paris, well-known for his excellent collection of fruit trees.

Brugnon Hâtif d'Angervilliers.—Syn. d'Angervilliers, Brugnon Violet Hâtif. Leaves with reniform glands; flowers very small. Fruit at first pale yellow, then cherry red, and finally deep violet where exposed to the sun; flesh yellowish white, rayed with red at the stone, from which it parts; juicy, perfumed, with a fine musky flavour. This variety was noticed by Réné Dahuron in 1738, under the name of Pêcher d'Angervilliers (Angervilliers Nectarine). Prof. Decaisne thinks it comes very near the Violette Hâtive; and it appears to us but very slightly different.

Poire d'Argent.—Fruit small, roundish or turbinate, smooth, greenish or pale yellow; flesh white, fine, half melting, juicy, sugary, slightly perfumed. A very good Pear, though small. Season, August. This variety bears some resemblance to the Colmar d'Eté, but the trees differ considerably. It is seen in great abundance in the markets of Paris, either under the above name, or under the false one of Poire de Vache.

Poire de Saint-Ours.—Fruit small or middle-sized, turbinate, with a long stalk; skin yellow on the shaded side, and of a fine red, like the Seckel, next the sun. Flesh whitish, very juicy, firm, or half melting, very

sugary, slightly perfumed, with a peculiar but not musky flavour. Season, end of August or beginning of September. It was discovered towards the end of the last century, by the Comte de Galbert, when hunting in the wood of the mountain of l'Éschaillon; the original tree, 73 years of age, still exists at Brusse, Canton de Vavion, where it was transplanted.

Poire Liebart. — Syn. Chamoisine. Fruit large oblong, or obovate, with a remarkably short, very thick fleshy stalk; skin yellow, washed with brilliant carmine red next the sun; flesh white, breaking, dry and astringent. Season, September. This formed part of the collection of Van Mons, and is No. 512 of his Catalogue, 2d series. It is worthy of notice in order that it may be avoided; for its beauty is alluring, whilst its quality is decidedly bad.

Thompson's Pear.—Syn. Vlesembeek. Fruit large, oblong or turbinate, surface uneven; skin rather smooth, pale yellow or yellowish brown, with sometimes spots of fawn-coloured russet. Flesh white, very fine, melting, remarkably juicy and sugary, with slight perfume. Excellent. Season, September and October. The tree is a good bearer. After a very accurate and minute description of the tree, shoots, leaves, flowers, and fruit, Professor Decaisne states that he agrees completely with the opinion of M. Lesèble as regards this variety, which he says is "the best of Pears known, and ought to be in every first-rate selection;" but he cannot agree with M. Willermoz that it is a synonym of the Althorp Crassane, which is well-known to be a very different sort. It appears that at Professor Decaisne's request some account of what is known of the origin of this Pear was furnished to him by Mr. Thompson, and as the variety in question is becoming extensively cultivated, some of our readers may wish to know what that account was. Retranslated it is essentially as follows:—"As regards Thompson's Pear, it was not raised by me; it is one of the numerous varieties sent to the Horticultural Society by Dr. Van Mons about the year 1820. It had no name, but merely a number; and unfortunately another variety totally different, bore the same number. On fruiting [about 1830] it was found that a great number of the varieties sent by Van Mons were of inferior quality; but the one in question appeared to me highly deserving of cultivation; I mentioned this to the Secretary of the Society, and that it had no name; he proposed to name it Thompson's Pear. I agreed, remarking however, that if, amongst the numerous yet unknown varieties which existed in the collection of the Society, this one should be found with an original and better name, that of Thompson's should give place to it. I have not found it among the new Belgian varieties." No synonym is given in the work before us, in the article on the Pear above referred to; but subsequently in the list of fruits published, the Flemish one of Vlesembeck appears. By whatever name it may be called, the intrinsic merits of the Pear will always cause it to rank high in general estimation.

Garden Memoranda.

STREATLAM CASTLE, DARLINGTON.—About two years ago an account was given in our columns of some fine Orange trees which had been imported from France to the Gardens here, and which had suffered considerably from exposure in travelling—so much so that several of them became completely defoliated. These have not only become green and healthy, but have flowered most satisfactorily. They began to push vigorously in March, and by the end of June they had completed their growth. After that they were placed out of doors in order to ripen their wood. They remained thus situated until about the middle of September when they were placed in winter quarters. Water was then to some extent withheld, and indeed from September, to the middle of March very little was given them. At the last-named period their leaves received a thorough washing, and the surface soil of the tubs was renewed, when they get a good soaking of lukewarm water at the root—a matter of considerable importance, as warm water thus applied infuses activity into the soil, or rather into the roots, and invigorates the plants. A surface dressing was given, consisting of fresh maiden loam, leaf mould, and rotten cow dung, intermixed with a sprinkling of charcoal, the soil being applied in such a manner that the roots might receive the whole benefit of what water was applied to them. An occasional watering of liquid manure had also been found of much benefit to them. This had been made of a good handful of guano to every four gallons of rain water, made a sufficient time previous to allow the guano to settle to the bottom, so as to permit the liquid to be used clear. Trees thus treated are, in the opinion of Mr. Barclay, the gardener, calculated to blossom well every summer, sufficiently abundant to admit of Orange-flower water being made from them. Nothing in short could be more satisfactory than they are at present.

Miscellaneous.

The Jipijapa.—The Jipijapa (Carludovica palmata) is common in Panama and Darien, especially in half-shady places; but its geographical range is by no means confined to them. It is found all along the western shores of New Granada and Ecuador, and I have noticed it even at Salango, where, however, it seems to reach its most southern limit, thus extending over 12° of latitude, from the 10th north to the 2d south. The Jipijapa, or Panama hats, are principally manufactured in Veraguas and Western Panama. Not all, however, known in commerce by that name are plaited in the Isthmus; by far the greater proportion is made in Manta, Monte Christi, and other parts of Ecuador. The hats are worn almost in the whole American continent and the West Indies, and would probably be equally used in Europe, did not their high price, amounting often to 150 dollars for a single one, prevent their importation. They are distinguished from all others by consisting only of a single piece, and by their lightness and flexibility: they may be rolled up and put into the pocket without injury. In the rainy season they are apt to get black; but by washing them with soap and water, besmearing them with lime-juice or any other acid, and exposing them to the sun, their whiteness is easily restored. The "straw" (paja), previous to plaiting, has to go through several processes. The leaves are gathered before they unfold, all their ribs and coarser veins removed, and the rest, without being separated from the base of the leaf, is reduced to shreds. After having been put in the sun for a day, and tied into a knot, the straw is immersed in boiling water until it becomes white. It is then hung up a shady place, and subsequently bleached for two or three days. The straw is now ready for use, and in this state is sent to different places, especially to Peru, where the Indians manufacture from it, besides hats, those beautiful cigar-cases, which fetch sometimes more than 6*l.* apiece. The plaiting of the hats is done on a block, which is placed upon the knees; it commences at the crown, and finishes at the brim. According to the quality of the hats, more or less time is occupied in their completion: the coarser ones may be finished in two or three days, the finest take as many months. The best times for plaiting are the morning hours and the rainy season, when the air is moist: in the middle of the day and in dry clear weather, the straw is apt to break, which, when the hats are finished, is betrayed by knots, and much diminishes their value. *Seemann's Botany of the Herald.*

Deodar Cones.—There are cones of the Deodar now growing at Chiswick House (the Duchess of Sutherland's) near the fine Cedars of Lebanon, on which cones of this year are also growing. The colour of the cones at the same age is different—the cone of the Deodar being green, with the margin also green although of a different shade, while that of the Cedar has a narrow crimson margin to the green scales. *Proceedings of Royal Horticultural Society.*

Calendar of Operations.

(For the ensuing week.)

HYACINTHS, Narcissus, Crocuses, and other Bulbs placed either in pots or glasses, should be kept as close as possible to light, provided they are well furnished with roots and are commencing active growth. A slight amount of fire heat should be kept up in conservatories and greenhouses, in order to expel damp and keep out frost. All dead leaves on plants in these structures should be picked off and removed. Water should be given sparingly while the present dull weather lasts; and leaves, if dusty, should be carefully washed with a sponge. In short, thorough cleanliness should be enforced in every department.

FLOWER GARDEN AND PLANT HOUSES.

Conservatories should now be tolerably gay with such plants as Chinese Primulas, Correas, Luculia gratissima, than which a more useful plant at this season does not exist, Azaleas, Camellias, Violets, Mignonette, Roses, and forced hardy American plants. In removing the latter from the open border to force, where a stock is not already in pots, care should be taken to mutilate their roots as little as possible. An old Pine pit is a very suitable place in which to commence their forcing. They should have a bottom-heat of 75°, and an atmospheric temperature, averaging 65°, with abundance of atmospheric moisture permanently supplied. Out of doors attend to sweeping, rolling, and otherwise maintaining thorough cleanliness.

ACHIMENES.—A batch of these may now be started in heat for stove and warm conservatory decoration during next month. They may either be grown in pans or pots, according to the taste and requirements of the cultivator.

BEDDING PLANTS.—Cover securely at night, especially when frosty, but during favourable weather give air pretty freely during the day.

CALCEOLARIAS.—Herbaceous sorts potted last autumn will now be well established, and will require little attention beyond that of frequently fumigating them to keep down green-fly. Such as are required to bloom a little earlier than the others may soon be shifted and placed where they will have a temperature of about 45°, and a moist growing atmosphere. In shifting it is a good practice always to sink the ball a little, in order to admit of a top-dressing of fresh mould being put over the riper parts of the young wood, which thus treated soon emits roots, to the material increase of the strength of the plants. Thorough drainage, too, is a point to which particular attention must be paid if healthy well-bloomed specimens are desired.

FORCING GARDEN.

CHERRIES.—Follow Nature closely in the Cherry-house; no extreme heat will succeed. Plenty of air, permanency of atmospheric moisture, and a very moderate temperature, are the requisites.

PEACHES.—Proceed cautiously with these. Air can scarcely be given too freely if the weather is favourable, and the thermometer within can be maintained at 55°; let it, however, sink at night to 40° or 45°. If the roots inside have not been watered, or only slightly so, and the drainage can be relied on, apply a good watering with weak liquid manure.

PINES.—Plants expected to fruit early should now be allowed a slight rise of temperature. On light days let the thermometer indicate 70° or 75°, and should sunshine occur, 10° more may be indulged in.

POTATOS.—Endeavour to get a spare frame or pit for early Potatos; a bottom-heat of 70° that will last for a month will be amply sufficient; the sooner it dies away after that the better, as a continuance of bottom-heat too long will draw the halm.

VINES.—Ensure a permanent supply of atmospheric moisture to Vines breaking; if this is accomplished by fermenting materials so much the better. If not yet done, put abundance of covering on outside roots, and if it be slightly fermenting so much the better. In late houses in the majority of cases the last Lady Downes' and St. Peter's will now be cut; if the rods are to be taken out to rest let it be done forthwith. They are best laid on the ground, and covered up with straw to prevent injury by frost.

HARDY FRUIT AND KITCHEN GARDEN.

Proceed with digging, trenching, &c., whenever spare ground occurs, and time and weather permit. All fruit-tree planting not done should be proceeded with; wherever the subsoil is bad it should be entirely removed, and a platform of brick-bats, rubble, or cinder-ashes, rammed hard at about 1 foot below the ground level. On this place, if possible, a little rough turf in a fresh state, and be sure to mix some fresh maiden soil with the compost, using rather stiff loams for Apples and Pears; good mellow loam for Peaches, Apricots, &c., and free upland soil for Plums, Cherries, Vines, and Figs.

CAULIFLOWERS.—Plants in frames or under hand-glasses should now have free exposure, except during heavy rains. Should frost again suddenly occur, they must be protected.

CARROTS.—Sow Early Horn on a slight hot-bed.

STATE OF THE WEATHER AT CHISWICK, NEAR LONDON.

For the Week ending Dec. 28, 1864, as observed at the Horticultural Garden.

Dec.	Moon's Age.	Barometer. Max.	Barometer. Min.	Temperature. Of the Air. Max.	Min.	Mean	Of the Earth 1 foot deep.	2 feet deep.	Wind	Rain.
Thurs. 22	23	30.242	30.126	36	28	32.0	43½	44	N.E.	.00
Friday 23	24	30.351	30.218	34	24	29.0	42	43½	N.E.	.00
Satur 24	25	30.497	30.460	34	29	31.5	41½	42	N.E.	.00
Sunday 25	26	30.417	30.314	35	30	32.5	41	43	N.E.	.00
Mon. 26	27	30.324	30.274	36	22	29.0	41	42½	N.E.	.00
Tues. 27	28	30.267	30.235	40	24	32.0	41	42½	E	.00
Wed. 28	●	30.343	30.247	47	36	41.5	41	42½	W.	.00
Average.		30.348	30.296	37.4	27.5	32.5	41.5	42.8		.00

Dec. 22—Overcast and cold; frosty at night.
— 23—Overcast, cold and dry; frosty.
— 24—Overcast, with cold dry easterly wind; slight frost.
— 25—Hazy; fine; overcast.
— 26—Overcast; fine; overcast; frosty.
— 27—Clear and very fine; overcast; frosty.
— 28—Fine; very fine; overcast.
Mean temperature of the week 5½ deg. below the average.

STATE OF THE WEATHER AT CHISWICK,

During the last 39 years, for the ensuing Week, ending Jan. 7, 1865.

January.	Average Highest Temp.	Average Lowest Temp.	Mean Temp.	No of Years in which it Rained.	Greatest Quantity of Rain.	Prevailing Winds. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Sunday 1	43.5	31.3	37.4	12	0.70 in.	5	5	3	3	4	9	5	5
Mon. 2	42.5	29.6	36.1	15	0.21	3	4	2	2	4	11	6	7
Tues. 3	42.8	30.8	36.8	19	0.56	1	3	1	6	11	4	4	6
Wed. 4	42.3	31.3	36.8	17	0.86	4	7	6	5	2	10	3	2
Thurs. 5	41.6	30.8	36.2	14	0.46	4	8	4	4	4	10	4	1
Friday 6	41.0	28.9	34.9	14	0.33	4	7	5	3	5	10	3	2
Satur. 7	41.4	28.6	35.0	15	0.34	3	6	5	3	2	8	7	

The highest temperature during the above period occurred on the 5th, 1844—therm. 54 deg.; and the lowest ■■ the 14th, 1838—therm. 4 deg.

Notices to Correspondents.

EXHIBITORS AND PRIZES: *An Exhibitor.* You misunderstand us entirely. Our object has simply been to give both sides an opportunity of being heard. We do not at all agree with the sentiments to which you refer; but they have been answered by other Correspondents.—*Clewer and Others.* The subject has now been amply discussed. We must decline to print your advice to gardeners not to show at all. That would not be conducive to horticultural progress.

GARDENERS' RIGHTS: *J D.* Even in the strong case you put, we believe there would be no legal right on the part of the gardener, unless there was a distinct agreement of some kind by which he acquired it. Morally speaking, no doubt he had the right on his side, but that is a very different thing from a legal right. The gardeners' best "rights" lie in the reciprocal goodwill which fortunately does exist, in the generality of cases, between employers and the employed—a feeling which it is desirable to foster, rather than to extinguish by ill-natured remarks.

NAMES OF FRUITS: *Henry Townshend.*—1, Scarlet Pearmain; 2, Kirke's Golden Pippin; 3, Gravenstein; 5, Hanwell Souring.—*S. Churchill.* 1, A sort of White Calville; 2, Beauty of Kent; 4, 5, 6, and 6 A., Syke House Russet.—*J. Wood.* 1, Verte Longue; 2, Glou Morceau; 3, 4, Thompson's.—*D. S.* 1, Beurré d'Aremberg; 2, Passe Colmar; Apple, 1 (of little merit); 2, Like Chester Pearmain. ‖

THE PARKS: *Julius* will find the subject alluded to in another column. We are quite of his way of thinking, that people should never meddle with what they don't understand.

WORMS ON LAWNS: *Old Subscriber.* Give your worm-infested lawn a good watering with gas-lime water, such as may be had from the gas-works, but try its strength before applying it to a large surface. Or if this is not procurable, use lime-water, that is water with which caustic lime has been mixed; this, however, must be allowed to stand till it is clear before being used.

MISC.: *A B.* Thanks for your suggestion, which will be taken into consideration.

THE FOWLER MEMORIAL.

It is proposed to hold a PUBLIC MEETING in London, early in FEBRUARY next, to appoint a Committee for raising Funds for a suitable MEMORIAL in memory of the late JOHN FOWLER, to whose untiring zeal in the application of Steam Power to the Cultivation of the Soil, the Agricultural world is so much indebted.

PROMOTERS.

Signed, P. P.
Decie, Tortworth Court, Wotton-under-Edge.
Pearman, Bryanston, Blandford, Dorset.
A. N. Hood, Cumberland Lodge, Windsor.
Edwd Holland, Dumbleton Park, Evesham.
Charles Barnett, Stratton Park, Biggleswade.
Thomas Raymond Barker, Hambledon, Henley-on-Thames.
F. R. Tempest, Ackworth Grange, Pontefract.
H. S. Thompson, Kirby Hall, York.

SUPPORTERS.

Zetland, Asac, Richmond, Yorks.
Fitzwilliam, Wentworth Woodhouse, Rotherham.
Kinnaird, Rossie Priory, Inchture.
Lt.-Col. Loyd Lindsay, Lockinge, Wantage.
Lieut.-Col. Swinnerton Pilkington, Bart., Chevet, Wakefield.
J. Spencer Stanhope, Cannon Hall, Barnsley.
Joshua Hopworth, Ridgerthorpe Hall, Pontefract.
G. E. Lascelles, Moor Hill, Harewood.
John Dent Dent, Ribston Hall, Wetherby.
M. T. Bass, Burton-on-Trent
John Chalmers Morton, Streatley, Reading.
John Algernon Clarke, Long Sutton, Lincolnshire.
Robert Neilson, Halewood, Liverpool.
Thos Webb, Smallwood Manor, Uttoxeter.
John Fowler, Woodthorpe Hall, Wakefield.
John Key, Charlecote, Kineton, Warwick.
Thos. C. Jackson, Chesnut Farm, Wakefield.
Henry Brown, Fairmont House, Wakefield
Thos. Moore, Moor House, Badsworth, Pontefract.
Matthew Savidge, Sarsden Lodge Chipping Norton, Glo'ster.
Chas. Rodd, Edderthorpe, Barnsley
Henry S. Barrett, Horncastle, Wragby, Wakefield.
John Charlesworth, Headfield, Dewsbury.
Brady Nicholson, Sturton Grange, Leeds.
Clayton, Shuttleworth & Co., Lincoln.
W. Crosskill & Sons, Beverley.
R. T. Smith, Whitchurch, Salop.
R. Cuthbert & Co., Bedale.
Ed. Bowley, Saddington House, Cirencester.
John Walker Watts, Arlingbury, Wellingborough, Northampton.
Edmund Ruck, Castle Hill, Cricklade, Wilts.
Barrows & Carmichael, Banbury.
Clare Sewell Read, Plumstead House, Norwich.
Robt Charles Ransome, Ipswich.
James Kitson, Junr., Leeds.
Frederick W. Kitson, Brierley Hill, Leeds.
Thos. Parrington, Secretary to the Yorkshire Agricultural Society, Normanby, York.
William Pepper, Clarendon Road, Leeds.
John Thornhill Harrison, Frocester Court, Stonehouse.
John Wilson, Edinburgh University.
William Mears, Edinburgh.
J. M. Read, Elkstone, Cheltenham.
E. S. Sheppard, North Park Farm, Lewisham.
Wm Berthouse, Skelton, York.
Benjamin Dodfield, Spetchley, Worcester.
J. Tannett, Leeds.
R. Kay, Forcett Valley, Darlington.
Thos Hatfield, St Martin's, Stamford.
Carpe Brothers, Liverpool.
Hopkins & Co., Middlesborough
Colemen Hall, Prince's Gate, Romford.
Aveling & Porter, Rochester.
Webster & Horsefall, Hay Mills Birmingham.
George Wilkinson, 46, Monks Road, Lincoln.
Henry Hawking, Emmthorpe, Bowbridge.
W. M. Nicholson, Newark-on-Trent.
George Craddock, Wakefield.
George Greig, Harveston, Stonehaven.
A. A. Ewing, Orlingbury, Wellingborough.
Edward Ellis Acton, 5, Parliament Street, London.
Charles Lyall, Of Montrose.
Wm. Sadler, Ferrygate, Drem, N.B.
R. Craddock, Lyneham, Chipping Norton.
Thos. Begbie, Quenstonbank, Haddington, N.B.
Wm Cooper, Fen Drayton, St. Ives.
James Gozney, Heapham, Gainsborough.
Jacob Wilson, Woodhouse, Manor House, Morpeth.
James S. Rundell, Rudlen Lodge, Corsham.
John G. King, Beedon, Newbury.
Thos. H. Redman, Overtown, Swindon.
Edw. Roberts, Beedon Hall, Bishops Stortford.
W. Thos. Allen, Great Stambridge Hall, Rochford.
W. F. Faviell, Down Place, Guildford.
H. W. Fawcus, Elford, North Sunderland.
James Christy, Jun., Boynton Hall, Chelmsford.
Thos. Watson, Tol. Gavell, Beverley.
Geo. Pocock, Bourton, Shrivenham.
Ransome & Sons, Ipswich.
William Worby, Orwell Works, Ipswich.
J. R. Jefferies, Orwell Works, Ipswich.
John Hetherington & Sons, Vulcan Works, Manchester.
Wm. Affleck, Swindon, Wilts.
Wm. Savory & Son, Gloucester.
A. W. Gower & Son, Market Drayton.
James Jackson, 33, London Road, Brighton.
John Head, 9, Gracechurch Street, London.
Joshua Cautley, Thorney Parsonage, Peterborough.
J. G. Marriage, Redhill, Surrey.
The Proprietors of the *Leeds Mercury*, Leeds.
David Crowe, Scremerston, Berwick-on-Tweed.
Fredk. Gib, Beenham, Reading.
John Coleman, South Fields, Wandsworth, S.W.
James Arnot, Woodcote, Carshalton, Surrey.
Thos. Little, Norcote, Cirencester.
J. A. Williams, Baydon, Wilts.
Moore & Manby, Dudley.
Blyth & Squire, Stanford-le-Hope, Essex.
Joseph Craven, Victoria Foundry, Leeds.

Communications may be addressed to CHARLES CLAY, Walton, near Wakefield, who has at the request of the Promoters undertaken to act as the Hon. Secretary pro tem., and will publish further particulars in future Advertisements.

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The Agricultural Gazette.

SATURDAY, DECEMBER 31, 1864.

IF all the theories for the profitable development of agriculture which have been advanced during the last quarter of a century were sound, practical farmers would need to be walking encyclopædias and chemists' shops combined; and now, according to a recent authority, a dissecting room would have to be added to the ordinary farm homestead. Mr. FREDERICK JAMES GANT, Pathological Anatomist and Surgeon to the Royal Free Hospital, addressed, during the Smithfield Show week, a letter to a London daily contemporary on the subject of "prize cattle," and by the arguments he used and the conclusions he came to he has outstripped Dr. LETHEBY and Professor GAMGEE as alarmists. No doubt agriculture has not yet arrived at practical perfection, and doubtless scientific knowledge and research can materially aid the development of our natural resources, but the time has not yet come for it to be necessary for us to call in hospital surgeons to teach us how we should breed and feed cattle for profit to farmers, and for supplying the public with the greatest possible quantity and best quality of meat. If a false system of breeding be pursued, the flock or herd in a very short time becomes unprofitable, and the practice is abandoned by introducing "new blood." This has occurred in a few instances with flocks of sheep and herds of cattle and swine, but this did not arise from practical men not knowing better, but because the animals happened to belong to enthusiasts or whimsical persons who had fallen in love with agricultural pursuits, and aimed more at "sensational" results than at spending their money with a view to profit or in judgment and good taste.

After using a variety of arguments that would be most alarming, if true, Mr. GANT comes to this conclusion, which would be even more alarming, if it were not altogether unfounded:—

"The truth is, the interest of the public and that of breeders and feeders of stock are apparently opposed. The ready production of fat in order to turn capital for reinvestment, and the gradual production of nutritious food, are certainly antagonistic."

This statement somewhat startled us, as it appeared just at the time when we were congratulating our friends on the almost perfect and faultless condition of the animals gathered together at the recent national fat-stock shows. And if the influence which such statements are calculated to have were confined to agriculturists, they might be allowed to pass, as they would only be laughed at; but, as the consumers of meat are largely interested in this question, and town-bred people have already been trained to believe that nothing in agriculture is properly done, such a theory put forth on such authority is calculated to create a variety of mischievous results, if the fallacy of it be not in some measure exposed.

The following extract will give a key to the grounds on which Mr. GANT made the above statement, and also afford some insight into the motives and reasons for his presuming to be a competent teacher on breeding and feeding cattle. Mr. GANT says:—

"Any reduction of the period assigned by nature for the maturity of a particular breed or species—any attempt to anticipate by coercion,—in short, any high-pressure feeding against time—induces a diseased process of nutrition, resulting in fatty degeneration of the heart, &c., and consequent deterioration of the flesh for human consumption. That such has been the result of early maturity, so called, was shown *by my investigations*, and such must continue to be the probable result so long as the early fattening of cattle is considered equivalent to maturity. It becomes also a grave question whether any breed thus prone to deterioration as human food will not, if encouraged, eventually undergo permanent degeneration as a breed."

If these views were in any degree true, then most of the advances and improvements of modern agriculture have simply been of no value, our high Turnip culture has been superfluous, and improving cattle by selection, so that they might be fit to eat in half the time the same breeds were in our forefathers' days, has been erroneous. If Mr. GANT be not a vegetarian, his common sense has certainly been lamentably extinguished. According to his notion, we ought to go back to the days of hay and straw feeding through the winter, and to being content with hard unmellowed lean joints, or pickled and dried barons, clods, and rounds, that were the animal food—excepting fish and game—of Christmas and Whitsuntide feasts a few generations ago. We should very much like to know how it has been proved that the joint of a ripe young steer or heifer, with its muscles well distended with fine fat—a condition so much praised by connoisseurs—is less digestible and less nutritious than that of a fully matured ox, which would require the digestion of a navvie or coalheaver to make it fit for assimilation? According to the best authorities we have heard discuss this point, a finely bred early maturing animal, if treated as is the usual custom of modern farmers, is far more nutritious than an animal that had been so badly bred or neglected as to be as promising to the eye and hand of a grazier as is a Pollard tree.

On the breeding question touched on by Mr. GANT it is only necessary to say, if he had made the commonest inquiry, he would have known that the production of prize fat cattle—no matter whether they are of the patchy character that were brought for show a few years ago, or of the almost perfect form and quality now produced, has not the slightest effect on causing animals to "deteriorate as human food," as these animals are not taken back for breeding, and in ordinary practice, almost without exception, animals are deprived of the power of breeding, or are set aside as unprofitable for that purpose before they are put to the fatting yard, or feeding stall.

Mr. GANT'S notions about the interest of breeders and feeders being opposed to the public wants, and the profit on feeding and the production of nutritious food antagonistic, are not only utterly absurd in themselves, and contrary to what the public taste—no very bad natural guide—prefers, but they are opposed to the well-known every day practice of the most eminent medical men. Mr. GANT'S theory goes to ignore the domestic value of butter, for prime beef suet and mutton fat are as nearly as possible of the same chemical character as that favourite lubricant and heat-generating substance. To fatten an animal is to produce, in another form, that which is, in the animal economy, of the same value as or equivalent to butter. Every intelligent person knows the value of fat as food in this variable climate in preserving the temperature of the body. Mutton fat and

milk, cream and cod-liver oil, are commonly recommended by physicians to persons attacked with pulmonary diseases, and this with the best effect, as the want of animal heat in such cases is restored by these pure and wholesome substances. And, in cases of weak digestion, the pure fat which runs from rashers of bacon is also advised and taken with equal advantage. When it is further considered that the lean meat of well-grown animals is more easily digested, and therefore more nutritious to persons following sedentary, mental, and confined occupations, it is perfectly clear that, so far as the system practised by farmers for making a profit goes, it is not antagonistic to the public weal; but, on the contrary, much of the fat which now goes into the tallow tub might be advisedly recommended to, and used by the semi-starving, pallid, wan, and needy inhabitants of our large towns and cities. If Mr. GANT has nothing better to say than he has said in the letter before us, he cannot teach farmers the way to improve and increase the production of lean meat, but he may employ his time and talents well in showing consumers generally how they may better use the increased quantity of fine fat which the great skill of our leading agriculturists now places at their command and disposal, in addition to the increase of lean by selecting thriving and early maturing animals.

PROFITS ON FLAX CULTURE IN IRELAND.

AT one time profitable Flax culture was, with some few exceptions, confined to the North of Ireland, not because, as was supposed, the lands in the North were the best adapted for it, nor, as was by others supposed, that the people there, though better instructed, were naturally more intelligent than those of the other parts of the island, but because the Flax growers there had a ready market for the prepared fibre at their own doors, without incurring the expenses of a long land carriage to market, the commissions on sales by Flax factors, and many other risks and contingencies, which those far from the markets were subject to. Since the partial, for it is yet but partial, opening of markets in the south-west and midlands, the Flax growers in these places are beating out the Northerns not only in the acreable produce and quality of fine fibre, but in economising the Flax seed for sowing again, or for oil-crushing or stock-feeding, for all of which it is so decidedly advantageous, such seed saving being but little attended to, if not totally neglected in the North. A few examples of this successful practice may be now interesting to your English readers, far less because Flax bids fairly to become a substitute for Cotton, than because increased successful Flax culture in Ireland will be the means of affording better, if not cheaper, Irish beef, mutton, butter, and wool, to your manufacturers, and more abundant store stock to your stock-feeders; and, above all, be the means of keeping Irishmen at home to supply the ranks of your army and navy in time of need, instead of swelling the ranks of those who may hereafter render with you an expensive army and navy necessary. Last spring, when this Flax movement, as it is called, was gaining ground, a great many landlords in Ireland did as much as they knew how to encourage it amongst their tenantry, and the results are every day by degrees telling in favour of such wise courses. Several of such results have been made public, yet some of the most important are still kept private, except to friends, who may or may not make them public, as I believe all should do, *pro bono publico*. A good many of these private communications have been made to me, less with the view of obtaining publicity than to elicit advice. Indeed, a great many of those who have been most successful in such proceedings, for reasons of a private nature, whose existence is to be deplored, do not wish to have their names made known to the public, however praiseworthy their examples—one of which, from a midland county, only will I now give you in connection with three others, one from the far west, one rather due south, and another from the north, and in the following order. That from the west consisted of eleven cases on the property of Mr. St. George, of Headford, co. Galway. Flax grown by 10 farmers on his estate, and the 11th by his own land steward on his demesne farm, was sent up and dressed by machinery at the Dublin Society's Exhibition on a late occasion. The soils on which it was grown all rested on a limestone subsoil, hitherto erroneously considered unfit for Flax culture. The preceding crops were in all cases but one corn crops of some kind or other, perhaps in many instances corn cropping repeated without the intervention of any green or fallow crop. The exceptional case was one grown after a Turnip crop, and from the inferiority of its fibre, as you will hereafter see, further justifies the objection raised against this mode of successional cropping.* The quantity of fine fibre compared with the weight of the straw from which it was produced, was but 15 per cent., whereas the percentages of fine fibre in the others varied from 18 to 27½ per cent. The quality of the fibres in the respective cases varied in value at from 4*s.* to 12*s.* per stone of 14 lb. In other words, admitting the acreable produce (which was not given) to have been in all cases equal, the value of the worst crop would be about 16*l.* the Irish acre, or little or nothing over the rent of the land and cost of production, whilst the value of the best, even without calculating anything for the seed, would be over rent, taxes and other incidental expenses, over 32*l.* per acre. So much for good and indifferent management of a crop grown on the same soil the same year, and from the same seed, which was in all cases imported Dutch. The next experiment publicly reported upon was from a crop grown on one of the model farms in the north of Ireland under the Board of National Education. This report is given very fully in detail, but of too great length for me to give *in extenso*, and I will confine the account to a general summary of debtor and creditor, which stands per statute and Irish acre thus:—

	Statute.	Irish.
Acreable profit	£11 7 0	£18 3 0
Ditto expenditure	8 3 1	13 1 0
Ditto gross receipts	19 10 0	31 4 0
Yield of fibre	52½ stones.	84 stones.

"The Fernikey model farm is a poor inferior clay soil resting on a subsoil of retentive 'till,' and though much improved by a judicious expenditure of capital and labour, the present Ordnance valuation of 1*l.* per statute acre, (or about 1*l.* 12*s.* 3*d.* the Irish acre), will give an adequate idea of its agricultural value."

The next is a report from a small farmer named John Nolan, in the neighbourhood of Limerick, who for experiment grew one fourth of an Irish acre, sown with imported Riga seed, a summary of whose account would stand thus per Irish acre.

DR.	£	*s.*	*d.*
To rent and taxes ..	3	8	0
To seed, 4 bls. at 17*s.* 3*d.*	3	9	0
To labour expended	14	10	0
To profit	20	1	0
	£41	8	0

CR.	£	*s.*	*d.*
By 88 stone fine fibre, at 9*d.* ..	39	12	0
By 72 stone tow, at 6*d.*	1	16	0
	£41	8	0

It will be seen that the profits on the rich land of the south, charged with nearly 100 per. cent. higher rent, are greater than on the poor land in the north; and in either case, to use the words of the model farmer of the north, three times greater than would be on any corn crop. How much greater would they in each case be had the seed been saved, as was done in the case of the Midland farmer, which I will now give you in detail, taken from his letter, of which I am not permitted to even name the writer; although if I could give it in full it would throw some more light on how things go on for and against agricultural improvement in Ireland. The land which the crop I am now about to report upon was seven years ago what is called in Ireland "cut-away bog"—that is, land from which deep beds of peat are cut and carried away for fuel, leaving scarcely sufficient of the peat to form a soil of more than 10 inches deep in any place, and in many places none at all. The subsoil was a strong calcareous clay, studded with small stones and large boulders—and was valued by the Ordnance valuation at 5*s.* the statute, or about 8*s.* the Irish acre. The proprietor applied to the Board of Works to borrow money to improve it, and a Drainage Inspector was sent to value it, estimate the cost of reclamation and its value when reclaimed, in a manner to guide the Commissioners in their proceedings. He took the Ordnance valuation as his basis, and reported that it would take 10*l.* the statute, or over 16*l.* the Irish acre to drain, subsoil, and clear away the stones off it; and 2*l.* an acre to add a fair workable surface to it from an adjoining hill, and that then when reclaimed the increased value would not cover the Government interest charged at 6½ per cent., and the money to reclaim it was refused by the Board of Works. Acting on the advice of his estate agriculturist, who knew more of such things than did the Government inspector, the landlord set to reclaim it with his own money, and had the drainage, subsoiling, stone clearing, and claying done at less than 8*l.* the statute, or 12*l.* 10*s.* the plantation acre. The tenant has been cropping it ever since, and paying 10 per cent. interest over the Ordnance valuation in the capital expended in the reclamation, in the shape of rent and increased taxation.* He had it this year cropped with Wheat, Oats, Barley, Beans, Turnips, Mangels, Parsnips, Carrots, Italian Rye-grass, and once one of Flax for experiment.

The whole produce, including grain and straw, except the Flax straw and some Flax seed he is converting into flesh meat, butter, and wool by stock feeding, the results of which I may hereafter give you, confining myself now to the Flax crop alone:—

DR.	£	*s.*	*d.*
To rent according to Ordnance valuation per Irish acre	£0	8	0
To interest on 12*l.* 10*s.* at 10 per cent. ..	1	5	0
To Flax seed, 4 bushels, at 1*l.* per bushel			£1 13 0
To labour of all kinds, exclusive of Flax dressing			4 0 0
To dressing 105 stone of Flax of 14 lb. each, at 1*s.* ..			5 5 0
To balance to help support and education of family ..			12 11 0
Total			£65 15 0

CR.	£	*s.*	*d.*
By sale of fine fibre, 80 stone, at 10*s.*			£40 0 0
By sale of second class, 20 stone, at 8*s.*			8 0 0
By sale of interior class, 5 stone, at 6*s.*			1 10 0
By sale of tow, 60 stone, at 6*d.*			1 10 0
By Flax seed retained for sowing, 20 bushels, at 12*s.* ..			12 0 0
By Flax seed sold to oil-crusher, 8 bushels, at 7*s.* ..			2 16 0
By Flax seed, inferior, for stock feeding, 10 bushels, 6*s.*			3 0 0
Total			£68 16 0

The land that produced the above return is now again cropped with Rape and Italian Rye-grass sown mixed for sheep-feeding next spring, and, as I am informed, bids fair to vie in value with the crops on the small farm managed by Mr. Baldwin, as a model for small farmers in connection with the large model farm at Glasnevin.

Now, Sir, when it is well known that we have in Ireland over 4,000,000 acres of reclaimable land, much of which is far superior, and very little of it at all inferior in quality to the land on which that Flax crop was grown, to say nothing of the many millions of acres of deep bog and high mountain reclaimable land, it may be asked how can we reconcile with common sense the idea of not only permitting but still driving our people to emigrate, and to reclaim and enrich other countries, and as a consequence expose our own to still greater poverty and weakness? Let the truth be told and reiterated. It is all owing to our own ignorance—an ignorance which, in as far as the state and resources of Ireland are concerned, a great many at your side the Channel deeply share.

But why in this age of enlightenment is such ignorance allowed to pervade the majority, if not all classes on both sides the Channel?

The question is quite easy of solution to thousands, of which I am one of the number, did it become me to show how readily it could be solved, or that you could permit your pages to be the medium of it, which you could not, even were I to advise you to do so, which is far from my intention. *Ne sutor ultra crepidam.*

Edward Carroll, 6, College Street, Dublin.

THE FARMER AND THE CHEMIST.

A SHREWD chemist, devoting himself to the missionary work of building up farming by the aid of his science, pays a parochial visit to one of the backsliders whom he counts most needful of reformation. The backslider—I will call him Nathan—is breaking up a field, and is applying the manure in an unfermented and unctious state—the very act of sinning, according to the particular theory of our chemist, perhaps, who urges that manures should be applied only after thorough fermentation. He approaches our ploughing farmer with a "Good morning."

"Morning," returns Nathan (who never wastes words in compliment.)

"I see you use your manure unfermented."

"Waal, I d'n'know—guess it's all right; smells pooty good, doan't it?"

"Yes, but don't you lose something in the smell?"

"Waal, d'n'know; kinder hard to bottle much of a smell, ain't it?"

"But why don't you compost it; pack up your long manure with turf and muck, so that they will absorb the ammonia?"

"The what?—(Gee Bright!)"

"Ammonia; precisely what makes the guano act so quickly."

"Ammony, is it? Waal,—guanner has a pooty good smell tew; my opinion is, that manure ought to have a pooty strong smell, or 'taint good for nuthin'."

Scientific gentleman a little on the hip; but revives under the pungency of the manure.

"But if you were to incorporate your long manure with turf and other material, you would make the turf good manure, and put all in a better state for plant food."

"Waal—(considering)—I've made compo's afore now; dooz pooty well for garden sass and sich like, but it seems to me kinder like puttin' water to half a glass o' sperit; it make a drink a plaguey sight stronger'n water, no doubt o' that: but after all's said and dun—'taint so strong as the rum (Haw, Buck; why don't ye haw!)"

Scientific gentleman wipes his spectacles, but follows after the plough.

"Do you think, neighbour, you're ploughing this sod as deeply as it should be?"

"Waal—(Gee, Bright!)—it's as folks think; I doan't like myself to turn up much o' the yaller; it's a kind o' cold sile."

"Yes, but if you exposed it to the air and light, wouldn't it change character, and so add to the depth of your land?"

"I doan't know but it might; but I ha'n't much opinion o' yaller dirt, nohow; I kinder like to put my corn and Potatos into a good black sile, if I can get it."

"But colour is a mere accidental circumstance, and has no relation to the quality of the soil."

"(Gee, Bright! gee!")

"There are a great many mineral elements of food lying below, which plants seek after; don't you find your Clover roots running down into the yellow soil?"

"Waal, Clover's a kind of a tap-rooted thing—nateral for it to run down; but if it runs down arter the yaller, what's the use o' bringing on it up?"

The scientific gentleman sees his chance for a dig.

"But if you can make the progress of the roots easier by loosening the subsoil, or incorporating a portion of it with the upper soil, you increase the facilities for growth and enlarge your crops."

"Waal, that's kinder rash'nal; and ef I could find a man that would undertake to do a little of the stirrin' of the yaller,

---

* Many practical men believe that Flax will not succeed well after a Turnip crop, but can give no satisfactory reason for it, save that they have failed to produce good Flax in such cases themselves. I have spoken with some of the most eminent organic chemists of the age on this matter, who agree with me in believing, as I do from experience, that the difficulty, if desirable under certain circumstances to be overcome, can be effected by mechanical better than by any chemical means yet discovered. *E. C.*

* Increased taxation on land thus improved is a tax upon labour, a tax upon industry, and a tax upon skill, when economically employed by the owner's own capital, but to which land extravagantly and often very imperfectly improved with money borrowed from the Board of Works, under the supervision of in many cases very ignorant officers employed by the Board but paid by the borrower, is exempt for a certain number of years, as if to deter proprietors from expending their own capital profitably, and to cause them to borrow from the Commissioners money to be expended in many cases very unprofitably, and in some to do mischief instead of effecting any good. *E. C.*

without bringin' much on't up, and bord himself, I'd furnish half the team and let him go ahead."

"But wouldn't the increased product pay for all the additional cheese?"

"Don't know as it would, nohow, between you and I. You see you gentlemen with your pockets full o' money (scientific gentlemen coughs—slightly), talk about diggin' here and diggin' there, and turnin' up the yaller, and making compo's and all that takes a thunderin' sight o' work. (Gee, Bright! g'lang, Buck!)"

The scientific gentleman wipes his spectacles, and tries a new entering wedge.

"How do you feed your cattle, neighbour?"

"Weal good English hay; now and then a bite o' Oats, 'cordin' as the work is."

"But do you make no beeves?"

"Heh?"

"Do you fatten no cattle?"

"Yas, sometimes in the fall o' year I put up four or five head, about the time Turnips are comin' in."

"And have you ever paid any attention to their food with reference to its fat-producing qualities, or its albuminoids?"

"(Gee, Bright!) - bumy—what?"

"Albuminoids—name given to flesh-producers, in distinction from fatty food."

"Oh—never used 'em. Much of a feed? (G'lang, Buck!)"

"They are constituent parts of a good many varieties of food; but they go only to make muscle; it isn't desirable, you know, to lay on too much fatty matter."

"Heh?—keep off the fat do they? (Gee, Bright!) Dum poor feed, then, in my opinion."

By this time the end of the furrow is reached, and the scientific gentleman walks pensively towards the fence; while Nathan's dog, that has been sleeping under a tree, wakes up, and sniffs sharply at the bottom of the stranger's pantaloons.

I have written thus much, in this vein, to show the defensible position of many of the old-style farmers, crusted over with their prejudices, many of them well based, it must be admitted, and armed with an inextinguishable shrewdness. The only way to prick through the rind is to show them a big crop grown at small cost, and an orderly and profitable method gradually outranking their slatternly husbandry.—*My Farm of Edgewood, quoted in the Scottish Farmer.*

UTILISATION OF SEWAGE.

NOTWITHSTANDING all that has been said and written upon this subject, it is to be feared that many persons regard it as an ordinary scientific discussion, which may be safely left in the hands of engineers and scientific men; but a little reflection will show that while it is a matter of special interest to all who are engaged in the cultivation of the soil, it has also an important bearing upon the future health and sustenance of every man, woman, and child in the kingdom. By the term "utilisation of the sewage" is implied the purification of our rivers and streams by the interception of organic matter, which now flows into them from our sewers, and the application of that matter to the broad acres of this country, so as considerably to augment their food-producing power. In fact the object sought to be attained is to convert what is now a source of disease and death into a source of life and health by the proper use of that which now pollutes our streams and generates poison in its most insidious form.

This question owes its origin, its growth, and its importance to the sanatory measures of the past few years. Thirty years ago every house had its cesspool, the contents of which were periodically restored to the land. But as population increased and science advanced, it was discovered that these cesspools were the breeding grounds of pestilence and the lurking places of death, and the sanatory laws which were passed swept them away from our doors, but only to create a wide-spread nuisance in another form. Drains were made, and the noisome matters were conveyed into the nearest stream, until our rivers and brooks have been transformed into open drains emitting noxious gases and spreading poison throughout their course. At the same time a lamentable waste was being committed, for the manure which formerly found its way from the cesspools to the land was all washed away, and to supply its place guano and other manures had to be imported or manufactured at great cost, thus entailing heavy loss upon the country. Efforts were then made in various directions to correct the evil, but it was found that a serious difficulty had been created, for the matter which was sought to be restored to the land, was now mixed with a large quantity of water, which neutralised to a great extent its fertilising qualities and rendered its application more difficult and expensive. Works were established in several parts of the country for the purpose of deodorising the sewage, but the experiments failed, as the process was expensive, and destroyed the active properties of the alkalies which the sewage contained. In the meantime, the river Thames had become a reeking nuisance, and it was imperative that something should be done. Various plans were proposed, and the utilisation of the London sewage was freely discussed. In 1858, during one of the discussions on the subject, Lord Ebury observed that "the plan of expending several millions of money in carrying the sewage away to be thrown into the sea was a satire upon the age in which we live." Yet this is what has actually been done. The authorities not only in London, but the local boards throughout the country have expended millions of money in conveying the sewage, not to the land, but to the sea. This having to some extent been accomplished, we have now returned to the consideration of the original question, viz., the utilisation of sewage. That it can be profitably applied has been so clearly established by the experiments at Rugby, Croydon, Carlisle, Edinburgh, and elsewhere, that influential parties are keenly contending for a concession of the northern portion of the metropolitan sewage, and application has been made to Parliament for powers to carry out one of the schemes. Calculations have been made to show the value of sewage, but they are as far from each other as they are probably wide of the mark. Alderman Mechi and other authorities put the value of sewage at 2*l.* per ton, and calculate that the sewage from the metropolis will produce from 2,000,000*l.* to 3,000,000*l.* per annum. This would indeed, if realised, be a source of wealth, but the cost of conveying the sewage to the land, where alone it can be of any value whatever, does not appear to have been taken into calculation.

The experiments which have been made, although generally successful, have not been attended with unvarying results. In most cases, however, where the sewage has been judiciously applied, the land has been doubled in value by the application, while in one or two special instances results almost fabulous have been obtained. In all these instances the sewage has been applied to the land in its liquefied form, but various plans have been proposed for the application of the animal and vegetable refuse of our houses and towns in a more solid form. With this object in view a proposition has been made for the deodorisation and absorption of offensive matter by the frequent application of dry soil. This scheme was ably handled in a lecture, an abridgment of which was published in the *Agricultural Gazette* of Dec. 17; but though the best was made of the theory, it would be found difficult or impossible in practice. It would involve the pulling of every house to pieces to make the receptacles, as well all the nuisance attending a constant application of soil and its frequent removal, not to mention the proposal for subsequently drying the soil and using it five or six times over. We do not despair of something being ultimately done in the way of consolidating the sewage, but until some feasible plan be proposed we must be content to apply the sewage in its present form. That it may be so applied with profit and advantage is clear, and there is no reason why that which has been done at Carlisle and elsewhere should not be accomplished in hundreds of towns and villages throughout the kingdom. The sewage is there, and the land is there. All that is required is the application of the one to the other, and under judicious management the most advantageous results cannot fail to ensue.

In closing this paper I would suggest that this question would form a legitimate subject for discussion at the meetings of county agricultural societies, and the experience of the members in the application of sewage might be elicited with the greatest possible advantage. It must be borne in mind, however, that sewage varies very much in its composition in different localities, that it is not equally adapted to all kinds of land, and should only be applied at periods favourable to the growth of the crop. *C. Stuart Barker*, 12, *Buckingham Street, Strand.*

Home Correspondence.

Royal Agricultural Society.—As there are only three general meetings of the members of the Royal Agricultural Society in the year, viz., the December, the May, and the July meetings, and as the business of the latter is so formal and uninteresting that it fails to attract either numbers or interest, and as the May meeting is also badly attended in consequence of the expense members are subjected to in order to attend it specially when they have no other business in London—there should, I think, be an endeavour to make the December meeting what really it was originally intended to be—one well attended by the members generally, who should thus have the opportunity of making any suggestions, or of expressing their approbation or otherwise of the acts of the Council during the year. As, however, it would be quite impossible to hold such a meeting in the very limited rooms in Hanover Square, it would be extremely desirable that such a meeting should be held in the board-room of the Agricultural Hall. Time would thus be very much economised, and no doubt every facility would be afforded, both by the Smithfield Club and the Agricultural Hall Company. Of course the entrance to the room for meeting would be from the Hall, so that the show would be rather benefited than otherwise. A better attended and more popular meeting than the present would tend to keep up the general interest of the Society's proceedings, and prevent the danger of the Council degenerating into cliques: and many of its members would be reminded of what they are otherwise very much disposed to forget, that there are amongst the large body of members which compose after all the real bone and sinew of the Society many who have paid their subscriptions for the last 20 years, and whose exertions have been quite as great, as continuous, and as successful, both in the cause of agriculture and in the interests of the Society itself, as that of the members of the Council. I observe a great improvement in the Smithfield Club as to the mode of appointing the Judges, viz., by ballot by the whole Council for the nomination of its members, which might be well commended for imitation to the Royal Agricultural Society, for nothing can be worse than the system of secret selection by a committee; for although the appointments are nominally with the Council they are really with the committee, and all they have to do if they please select their private friends in preference to those who had proved their capabilities by their writings or their experience and services at any former meetings. One more suggestion I would venture to make in reference to the Smithfield Show. As it now lasts nearly a week, would it not be better for it to commence on the Wednesday instead of the Monday, and terminate on the following Tuesday? A day or rest in the middle of the Show would do both men and animals good. Of course such an alteration as this would be decided by the preponderance of the pros and the cons after being carefully weighed.

Molasses as Cattle Food.—In the valuable table of cattle and sheep food with prices in a recent Number (p. 1209) there is no allusion as to substitutes for Mangel or Turnips, of which this year shows so great a deficit. The straw of last season of all sorts is abundant; it is, therefore, obvious that fine cut straw should be given, and as much of it steamed as can be done conveniently and eaten fresh; but how is the saccharine quality of the Mangel, Beet, Turnip, or Carrot to be supplied by substitute? The reply seems to me to be easily by mixing molasses with the fodder. (Molasses should be bought wholesale at any great port.) Can your practical readers who make experiments oblige the public with the price and labour? The Turnip pulling, &c., is saved by the want of them. *Jamaica.*

Root Storing.—I have been much pleased with Mr. Murray's interesting account of his experience on root storing, as I am convinced there are few operations on the farm less understood; nothing can be more mischievous than the common practice of throwing the roots of Mangels into small heaps and leaving them for some time in that state covered with tops. Mangels in the ground will resist 6° or 8° of frost. Many of those in heaps covered with tops will be rendered unfit for storing by being exposed to 2° of frost. This season we commenced to lift and store on the 10th October, and finished on 3d November, the lifting and storing going on together, taking care to leave as few as possible from the store each night, as covering and uncovering, even if useful, is an expensive operation here. I cannot agree with Mr. Murray that cutting the top is either the best or most expeditious; however that is a matter of minor importance. The storing is the grand thing, and in that particular I think Mr. Murray is by far too kind. We have at least 1000 tons in our heap, and with a tithe of Mr. Murray's expense, I will venture to produce as good, if not better roots, by the 1st of next June, than he can. Our practice is this, to make the heap as large as practical, say 16 feet wide and 8 feet high; cover as you go on with any inferior straw or stubble 4 or 5 inches deep, and when you have finished storing, set the men to cover the heap with earth sufficient to resist any frost, with this exception, that not a spadefull of earth is put on the top of the heap in its entire length for a space of 24 inches wide. With this precaution I leave the Mangel and fermentation to settle the matter, with perfect confidence that I shall find sound, plump, with neither frosted nor contracted roots, which is often the case where too much ventilation is used. *P. Mitchell, Rainham, Essex.*

Suggestions on the Improvement of Grass Land.—Having for some years felt considerable interest in the improvement of Grass land, allow me to offer a few suggestions as to how it might readily be done. There is a great deal of poor Grass land held in tenancy from year to year, which would well repay a judicious outlay in manure, &c. which even tenants of capital do not consider themselves warranted in expending on their limited security, while in many cases the occupiers have not the capital to spare if they wished to improve it. Does not this suggest that it might be wise on the part of landlords to make some equitable arrangement for the improvement of such land? The payment for the manure, &c. might be spread over a limited number of years, so as not to involve any very great outlay on the tenant's part at first, and at the same time to allow of his deriving the benefit much in proportion as he incurred the expense. The term need not, I think, exceed four years, and if the land is dry the improved quantity and quality of the Grass over that time would in all probability repay the cost of tillage. For instance, the outlay required to improve poor Grass land would be from 2*l.* to 3*l.* per acre. Suppose 3*l.* worth of manure applied in March—I would say 1*l.* of this with half-year's interest on the 3*l.*, say 1*l.* 1*s.* 6*d.*, should be repaid in October; the next October another 1*l.* should be repaid toward capital, with one year's interest on the 2*l.*, viz., 2*s.*, and the following October the remainder of the debt, 1*l.*, with one year's interest, 1*s.* In this way the whole would be cleared off in two and a half years, the tenant would have had the benefit of three summers, and the condition of the land permanently improved. Now, if landlords or their agents would make some arrangement of this sort with their tenants, no doubt some of the manufacturers of manure would be willing, with such a guarantee, to become parties to such an arrangement, so as to spread the payment over such a limited period. After several years' careful observation, I am quite satisfied that much of the second-rate Grass land at some distance from large towns might, by an outlay of from 3*l.* to 4*l.* per

acre in draining, and 2*l.* to 3*l.* in manure, be made twice as valuable as it now is; and with the increased facilities now at our command, it seems a great pity it should remain in its unimproved state. I have this year made some careful experiments on the improvement of Grass land. After expending on a 3-acre meadow field 10*l.* in draining and 6*l.* in manure, I got 4 tons of hay more than the field had last year, and more than the land immediately adjoining. This, even at the ordinary price of hay, will repay the whole outlay, and leave the land in much better condition than before. *Henry Richardson, York, Dec.* 1.

Autumn v. *Spring Calving.*—In reply to the remarks I made at the recent meeting of the members of the Smithfield Club, Mr. Torr asserted that September was the best possible month in the year for cows to calve in; and Lord Feversham expressed himself opposed to the alteration I suggested, on the ground that it would prove destructive to the calf classes at the annual shows of the Royal Agricultural Society. With all due deference to such high authorities, I cannot help thinking that something more convincing than has hitherto been urged should be set forth as the reasons for upholding a system which is attended with so much practical inconvenience, expense, loss, and disappointment to those who follow it, and which is daily manifesting itself as a great national evil, inasmuch as it is professedly the best animals that are subjected to the unnatural treatment it involves. The questions of inconvenience and expense to the practical farmer I have repeatedly dwelt upon in my former letters. I now propose to account, on physiological grounds, for the loss and disappointment experienced by those who disregard Nature's laws, and endeavour to make them succumb to science, instead of bringing science to her aid. In order to do this I will take the case of a bull calf dropped in the autumn months. He is of necessity kept in the house, warm and well fed during the whole of the winter, and, if intended for exhibition, every kind of forcing food, with as much new milk as he can be induced to suck, form his diet. At 10 or 11 months old, when he has become so obese that he can scarcely walk, he is sent to the showyard, it may be to win a gold medal, and, having done so, he is the admiration of all who can look upon him without reflecting on the consequences of such a course of feeding. But, to the practical eye, his legs display something approaching deformity, and many are the expressions of regret that an animal which, under rational treatment, would have proved of great value, has been ruined, and his generating powers either destroyed or materially injured. After the show, if unsold, and it has been his good luck to escape cold or other illness from exposure to what, under different circumstances, would have been his natural element, he lives to return home, he is again placed within the walls of his house; and if intended for further exhibition, more forcing food is given, and it is usually in vain that his owner tries him to propagate his species, as his whole frame is (to use the words of Dr. Gant) diseased. But supposing he is not intended for further exhibition, and is to be used for stock purposes, great care and judicious treatment are absolutely requisite to reduce his condition, or death ensues. Besides, he has arrived at an age when he would be troublesome, or perhaps dangerous to be set at large; and therefore, from the day of his birth until his death, he never even beholds the green fields in which by Nature he was destined to graze. Is it, then, to be wondered at that loss and disappointment should be the result of the use of an animal so reared? That the cow put to him should refuse to breed? That abortion should follow his use? That his offspring should lack that constitution and flesh so absolutely requisite for the breeder's success, and which it may be the bull himself displayed? What, I would ask, would be the probable result if the human race were so treated? What if our children were confined in a room, and their appetites pampered with every luxury which the art and ingenuity of man could devise? Would they not soon degenerate? Compare the squalid appearance which the inhabitants of a closely-populated manufacturing town present with the ruddy complexion of the peasant, and ask—why is this? They are each natives of the same country, and the same blood runs through their veins; but—"they have not the same healthful occupation" must assuredly be the answer. I will now take the case of the bull calf dropped in the spring months (in accordance with Nature's laws). When a few weeks old he is turned out with his dam to partake of his natural food; the milk he sucks is enriched by the young and succulent Grasses; he playfully skips about the Grass fields, enjoys the race with others; has the care of his dam, with her rough tongue at once carding and washing his skin many times during the day; he does not fear the drenching rain by day nor the chilly dews by night; he grows strong and vigorous; and thus his constitution becomes established. Having arrived at a proper age for weaning, say 8 or 9 months, at the approach of winter he is placed in a yard with a hovel or shed to run in as he pleases; he continues to obtain healthy exercise, and the following July, if exhibited, at some 16 or 17 months old, he presents an appearance worthy of notice, his points are rapidly developing, and the judges and purchasers have each an infinitely better opportunity of judging of his merits than in the case of the fatted calf. Besides, we know that the Almighty has sent nothing in vain; therefore, it is not the mere affection of the animal for its young that induces the free use of the tongue of the dam; it is not for the mere sake of play that all young animals run and skip about; it is to create a healthful action of the skin, a healthy circulation of the blood, the full development of the muscles, and that the vital organs of the body shall become expanded and the constitution established. These things being so, I trust the Councils of our great national Societies will give this important subject that due consideration which in my humble opinion it merits. *T. Duckham, Baysham Court, Ross, Herefordshire, Dec.* 23.

English and Scotch Farming in Ireland.—During the last half century a great many English and Scotchmen commenced farming in Ireland, believing, and in many cases very justly, that in Ireland we had great room for improvement. The successes and failures of each are very varied. The Englishman did not so often succeed as did the Scotchman. The Englishman came from a country rich in many advantages and resources comparatively well developed ere he learned to farm, to a country poor because its resources were not developed, and the means he adopted were unsuited to the ends he had in view. The Scotchman came from a comparatively poor country, where he had learned many things well adapted to the land of his adoption. They both, though having learned much well adapted to the circumstances left behind them, had each something to unlearn under altered circumstances. John Bull was too full of pluck, and thought too much of himself to let him suppose he had anything to learn from or through Paddy. Sawney was more "canny," for though he knew he had many things to learn, even from Paddy's faults, he availed himself of every opportunity of doing so, but not only kept his ignorance but his skill as much a mystery to both John Bull and Paddy as he possibly could do, and "sucked the brains" of both without their feeling it. I have known many fine worthy Englishmen come to Ireland to farm, but who give it up, and return poorer, if not in sorrow. I have scarcely ever known a Scotchman to go back to his own country, except he was both richer and wiser. There were exceptions, it is true, in both cases, but they only helped to prove the general rule. Of those things I could give you many examples if needed. One or two of men who had nothing to unlearn but everything to learn, and one who had much to unlearn though he had fancied he could teach all Ireland and England, may suffice. About 30 or 40 years ago two Scotchmen, brothers, settled down to farm in a midland county. The younger had been all his lifetime ploughing and farming (well, I believe) in Scotland, whilst the elder from his childhood had been "ploughing the salt sea." The farms held by them stood beside each other, cheaply rented, and of a good but improvable quality. Here one would expect the man who had been bred to ploughing the land would have succeeded, and that in his agricultural operations the sailor would be more than ever "at sea." But the reverse was the case, for the sailor made a fortune, and the farmer became bankrupt; and then had to set to and learn from the sailor, whose education was obtained from having been a close observer of Paddy's trifling successes and his own brother's faults, which, when driven to necessity, he soon corrected; and he is now one of the most respectable and independent men of his class in the whole province, and in possession of his brother's property, who died without issue. Now for the case of an Englishman who had everything to learn and nothing to unlearn as a farmer. He was bred to another and a higher profession, where he had learned systematic habits and strict discipline. He acquired a new estate in the West, but on which circumstances did not admit of his residing, nor can he till the end of the next two years at nearest, as he must during that time remain in the south. To enable him to learn farming he purchased the tenant's interest in a small farm of 50 acres, on which to acquire that knowledge necessary for himself, and by which to help his tenantry when he goes to reside amongst them hereafter. The better to enable him to do so he engaged the services of an old Irishman to give him lessons on land cropping and stock feeding on a small scale for six months, and here are a few of the results of his experiments as I learned from himself this week at the Royal Dublin Society's Show. His land is high, dry, and kind for most kinds of cropping, but was, when he got it, dirty in the extreme; so much so that his Potato land produced last year over 10 tons of root-weeds, and but four of Potatos. Amongst his crops for experiment he had one acre of Beans; such were never cultivated within some score of miles of the place before. They were cultivated in various ways: by spade husbandry, in "lazy beds," and drills and ridgelets, respectively 15, 18, 21, 24, and 28 inches apart. The average produce of the whole proved to be 52 bushels per acre, for which he has refused from a seed merchant 5*s.* a bushel to retail again, or 14*l.* an acre (statute measure). But he will sell none of them, as he will sow the whole produce instead of cereal crops on his land that produced Potatos, Mangels, Carrots, Swedes, and rough-leaved Turnips. His Wheat on his cleanest and best prepared land paid him a little over 4*l.* per acre. His Mangels and Carrots, which were grown on alternate ridgelets, are valued, the former at 48*l.*, and the latter at 72*l.* per acre. For the former he was offered 1*l.*, the latter he is selling at 4*l.* 10*s.* per ton. [!] For his Potatos he is offered, according to variety, some being new and valuable ones, obtained from imported stocks, at from 35*l.* to 70*l.* per acre, to be retailed as seed stocks again. His farm stock is small in both number and variety. Indeed, those only worthy of especial notice are sheep of the Oxford Down variety. They are exceedingly fine, the parents having been imported from the best breeders in England—50 ewes at an average of 4*l.* each when at home, and a ram 20*l.*, making a total of 220*l.*

They reared 80 lambs, for which he has refused for breeding purposes 2*l.* 10*s.* each as an average ..	£200	0 0
Wool 250 lbs., sold at 2*s.* per lb.	25	0 0
	£225	0 0
First cost of sheep	200	0 0
Balance in their favour	£25	0 0
Value of ewes if now sold to a butcher, 40 at 3*l.* 10*s.*	£140	
Ditto of rams if sold same way	5	
	145	0 0
Total for sheep alone	£170	0 0

Or more than the rent of his farm, supposed by some to be a dear one. Those sheep, except the culls, he intends to stock one of his large farms in the West, to which he will add pure Hereford cattle as breeders. The above is a mere sketch of an English farmer's career in Ireland. The poor ignorant farmers and labourers in his neighbourhood as he produced looked on him as a little insane, and some of the rich farmers, in their jealousy, wished him to be so. It should be observed that from the dirty state in which he found the land, the high rate of labour, and having much artificial food and artificial manures to purchase, his profits will not be so great as we would expect from his high produce in the crops and stock alluded to. His Oats were very fine, and Swedes and Turnips fair crops, all of which he is consuming in stock feeding. His advantages were: first, he had good security in his farm; secondly, he had had capital to work it; and thirdly, although in his experiments he made several mistakes (which will be of use to him), he soon acquired such a fair share of both theoretical and practical knowledge as to render him better adapted for such farming than a man would be who had much to unlearn. I look forward with much interest to his next year's proceedings, and with more still to the time at which he will embark in farming extensively on his own fine western property, on which are some fine reclaimable bogs, which he encourages his tenants thus to reclaim. The first year rent free; second, 1*s.* per acre, with a rise of 1*s.* on each year till the rent comes up to 5*s.* (the Irish) acre, beyond which he will not raise it till the expiration of 31 years from the time at which they commence to improve it. I enclose you, but not for publication, the names of all the parties adverted to in the foregoing. *Edward Carroll, Dublin, December* 17.

Societies.

COGGESHALL.—At the recent meeting of this Society, Mr. PATTISSON said it was a great satisfaction to himself, after having been connected with the Society for 25 years, to find it so well sustained, and that there were even more than the usual number of applications for prizes for long services and for other objects most beneficial to the community. He quite agreed with the Chairman that this was neither a religious nor a political Society. With regard to the subject which more immediately concerned this meeting—that of agriculture—they were all agreed that everything which tended to improve the cultivation of the soil, and to enable farmers to meet the low prices of the present day, was most important to be discussed. It was therefore with great pleasure that he read an address lately delivered at a certain Club in London; but at the same time he could not but smile that so many practical men should sit at the feet of Gamaliel to learn how it was that farming had become so unprofitable. Alderman Mechi, who had endeavoured to enlighten them upon that subject, was certainly entitled to speak upon it, for he had made use of all the appliances necessary to make farming profitable, if the absence of those appliances rendered it unprofitable. Mr. Mechi had employed capital, made use of almost every improved machine, and had a vast quantity of stock upon his farm; but he (Mr. Pattisson) did not think he satisfied his audience at the end by telling them the result of what he had done. Many of the statements which he made were no doubt true, such as the want of capital in taking a farm in many instances; but he did not to his (Mr. Pattisson's) mind go to the cause which prevented the farmer from reaping a profit, viz., the many heavy charges upon land. The farmer had to contend against very heavy charges, such as poor's rates, the maintenance of highways, the support of the Church by tithes, Burial Boards, and Sanitary Boards, all of which very much tended to lessen his profits; but the greatest of all the drawbacks was of course the competition of the foreigner. The English farmer, with these burdens, was not in a position to meet the competition which they had from America, Russia, and other parts of the world, where they were able to cultivate their land at a very trifling expense, and consequently in a position to supply the English consumer at a very reduced rate. The British agriculturist was

therefore not placed in a fair position as compared with the foreigner, and, although many scientific improvements had been introduced which were expected to afford him considerable assistance in meeting the competition from abroad, experience had proved that these inventions had not accomplished their desired object. The Chairman had mentioned steam as one of the instruments with which the farmer would be able to compete with the foreign producer; but so far as his own experience went he must confess that he had not found steam at all economical as compared with manual labour. He had used a steam threshing machine, and he maintained that corn could be threshed at as cheap a rate by manual labour as by steam. He would appeal to many practical men around him if that was not so. His impression, derived from his own experience, was that very little of the new machinery which had been introduced had tended to render farming less expensive—that they grew their corn at the present time at quite as great an expense as they did half a century back, and did not think they obtained so much work for their wages as formerly. He should be very glad if any scientific man would tell him farming could be made profitable by the recent inventions. Even if they ploughed by steam they must have horses to carry out their corn; and unless they could to a great extent get rid of the cost of horses he maintained that the use of steam was an additional expense. If Mr. Mechi could tell them how to make farming profitable they should be very much obliged to him, and they were pleased to meet him upon all occasions, because he always received everything that was said with the greatest good humour. He had much pleasure in proposing the health of Mr. Mechi; and if on this occasion he could throw a little light on the subject of agriculture, and teach him how to farm at present prices, he should be personally obliged to him.

Mr. MECHI said it was a very great pleasure to him to come once more among friends by whom he had always been received with kindness, even when questions of agricultural improvement were more warmly discussed than at the present time. He missed with regret many old friends, especially the two gentlemen who were Presidents of the Society; but at the same time he rejoiced that they had been succeeded by one whose standing in the neighbourhood so well qualified him for that position. He congratulated them upon the possession of such a President, and he congratulated them also upon having two such zealous upholders of the Society as Mr. Pattisson and Mr. Hills. With regard to agriculture, he believed they were living in stirring times, and, whatever Mr. Pattisson might say, he believed that progress and improvement were the order of the day in agriculture. They could not go back, and they could not stand still. He was sorry to hear Mr. Pattisson give his opinion against steam power in agriculture, because it was contrary to all experience.

Mr. PATTISSON: I mean on the question of economy.

Mr. MECHI: Of course; he admitted that unprofitable farming was wrong. The great makers of steam engines were selling more and more every week; and the purchase of steam engines by agriculturists themselves was the very best evidence of their conviction that the use of steam in agriculture, as in every thing else, had a tendency to economy. But he could speak practically upon the subject. He had used steam power for 16 or 17 years, in times when it was very unfashionable in this county; and if he could thresh 70 quarters per day from long-strawed Wheat for 1*s.* per quarter, or less, it would never answer to pay a labourer 2*s.* or 2*s.* 6*d.* per qr. for the same work. A saving of 50 per cent. was thought something of in manufactures, and he thought it ought to be so in agriculture; indeed, he should begin to think that the profits of agriculture were very large if a saving of 50 per cent. in any operation was thought to be no object. They had evidence before them in every shape that steam was their great friend; all they had of utility and cheapness was owing to steam. Without steam he could not have come there that evening; nor could he have done it so cheaply, because time was money; and he had yet to learn that in agriculture, as well as other matters, a saving of time was not an increase of profit. He had happened lately to meet many large farmers who lived by the profits of their land; and they told him they owed a great deal to the use of the steam plough, not so much in saving expense as in enabling them to do work at the proper time. One of them said his land was ploughed and ready for the next crop by the 1st of October before there was any wet; and they knew that if their heavy land could be broken up when it was dry they not only checked the growth of weeds, but the soil became aërated and fertilised; and in the spring the scarifier soon set everything right for the spring crops. What had been the effect of not using steam in early cultivation this year? Those who unluckily left their work to be done in the spring had failed in their Mangel crop, whereas those who, like himself and others, prepared their land in the autumn, were blessed with a good crop of Mangel, which this year was of the utmost possible consequence. If therefore in this heavy-land county they could by the use of steam do in one month what it would require two or three months to do by horses, they at once rendered themselves in a great degree independent of seasons, and put their land in a state more likely to produce a good result in the ensuing crop, whether it were corn or roots. Again, he found it folly to pay a miller 2*s.* 6*d.* a quarter to grind his corn when he could do it himself for 1*s.* 3*d.* A steam-engine had no nerves or muscles, and if they gave it fuel and water it wanted no rest; the engine driver might sit with his pipe, almost asleep, but still the engine went on untiringly, not only all day, but if necessary all night also. It was a subject generally accepted throughout the country; and if any one were to propose to the great manufacturers to go back to horse-power they would say that he must have risen from the grave after a sleep of 200 years, and could not belong to the present generation.

The Chairman had alluded to another important subject—that of sewage. He wrote upon that subject 20 years ago; he had been agitating it ever since, and he had been often called a nasty fellow for talking about it as he had done; but by the constant agitation of himself and others the question had become fashionable; they saw long leading articles upon it in the *Times*, and anticipations were formed of the profit it would some day yield to the rate-payers.

That was a hopeful sign; there was the same movement about sewage that there once was about gas. It had taken 50 years to bring gas into the rural districts, but the thing had been done, and so it would be with sewage. He had no doubt that when he should be dead and gone, and Tiptree almost forgotten, they would be able to turn on a tap of sewage made in London just as they now could a tap of gas or water. He was speaking seriously, and not jocularly, because the engineering evidence taken upon this subject was most important. It showed that they could raise 1000 tons of sewage, which was equal to the rainfall of half a year upon an acre of land, 300 feet (or 100 feet higher than the Monument), for 13*s.* or 14*s.* They had no hill of that height in Essex; even Tiptree was only 180 feet above the level of the sea, and if sewage could be pumped up 300 feet, it could be made to flow wherever it was wanted, each farmer having his tap and meter, and paying for what he took. He could see it all in the future, and he knew how it could be done, because he had done it on his farm for the last 12 or 14 years; and it was just as easy to supply sewage to any particular district as it was to supply water or gas. He need not tell them how absurd it would be, after feeding 3,000,000 sheep upon the best cotton cake and Turnips, not to let their excrement fall upon the land, but into some neighbouring river. Any one making such a proposition would be called insane, but that was just what they were doing in London; they were sending their 3,000,000 sheep, fed on the best produce of their farms, for consumption in the metropolis, and the result was poured into a river, to be wasted as far as nature would permit, instead of returning to the farm which had been exhausted to produce it. The subject was a large one; it was engaging the attention of thinking men in various parts of the kingdom; and ratepayers were beginning to see that they had got something which they ought to take care of instead of throwing it away. The legislators of the country too were beginning to think that they ought to make a law to prevent the pollution of rivers, and to render it an indictable offence to throw into a river that which ought to go upon the land. He hoped that a law of that kind would be carried, because it was a simple logical deduction that bringing back to the land what it had been exhausted in producing must be restorative and fertilising.

He would now tell them a little experiment he had made in thin sowing. He believed it was agreed that they were all getting thinner sowers and higher farmers than they used to be.

Mr. DENNIS: Where there is no game.

Mr. MECHI believed that partridges and pheasants were great friends of the farmer.

Mr. DENNIS: But not rabbits.

Mr. MECHI did not say rabbits, though sometimes when he was out shooting he wished there were more of them. On a Clover ley, which was first mowed for hay, then manured and folded with sheep fed on cake, he told his man to put in four stetches with one kernel in a hole 4½ inches apart, which he found only required one peck to the acre, and the remainder of the field was drilled with his usual quantity—one bushel of seed per acre. The Wheat came up, but as the single little shoots on the four stetches could scarcely be seen, some of his friends thought he had forgotten to plant it. So it went on till the spring, when the plants began to tiller and shoot out horizontally, so that the ground was covered with a thick network of stems, which in due time turned upwards, and ultimately the crop became the thickest in the field. There were 18 stems from one kernel, and in many cases from 20 to 30. As harvest approached his visitors were unanimously of opinion that it was the thickest crop and the most straw; and not knowing, of course, how much seed was put in, some of his thick-seeding friends thought he must have sowed a large quantity—2 or 3 bushels, according to their own practice; and when he told them he had only used 1 peck per acre they were astonished. At harvest they very carefully kept the crop separate, and measured the ground accurately, and the result was that of Crabb's Red Wheat he had 7 quarters 3 bushels (59 bushels) per acre; and, what was more remarkable, the straw weighed 2¾ tons per acre. On the other part of the field, sowed with rough chaff Wheat, 1 bushel per acre, the produce was 6 quarters 6 bushels per acre, with a much less quantity of straw than where there was only 1 peck of seed. They must not infer, however, that he advised 1 peck per acre under all circumstances; but he thought they might take it as an indication that if Wheat was put in at the right time and the land in high condition, they might expect and should obtain a larger crop at a less cost for seed than from thick sowing; and as with good farming they considered 1*l.* per acre a fair profit (and he believed there were some who did not make so much as that), surely the saving of only a few shillings per acre in seed must be a considerable object to every farmer. He hoped gentlemen would try the experiment themselves on a small scale, and so be able to form their own opinion upon it. Certainly it was a disgrace to the country that they should only get a return of 9 for 1 in the general crops grown—that for 1,000,000 quarters of seed they only got 9,000,000 quarters of corn—a fact that was shown by Mr. Caird's statistics; but if they multiplied his 59 bushels by 4 pecks it gave a return of 236 for one, which was certainly better than the average rate of increase. He was sure that in many cases a vast amount of loss was suffered from thick sowing. This year Barley had been a great crop because they happened to have a remarkably dry season, which, with the few frosts in the spring, where there was high farming, kept the crop standing; but if they had had a moist and warm season their Barleys would have been laid flat, the Clover would have grown through it, and the yield light and deficient in quality, very injurious to the general welfare of agriculture. Most people were very anxious about losses from thin seeding; but where thick seeding resulted in loss they heard very little about it. Well, then, were they perfect yet in British agriculture? The land of this country available for agriculture was something under 60,000,000 acres, of which many millions of acres, such as the chalks and sands, were drained naturally, but according to Mr. Bailey Denton, who was a great authority, they had at this moment 20,000,000 of acres that really required drainage, which, at 5*l.* per acre, would absorb 100,000,000*l.* There was, therefore, plenty of room for improvement and investment of capital; and when people said that farming was being done very well, he came to the conclusion that landlords and tenants must make up their minds that there was a great deal yet to be done—a great deal more intelligence and capital to be invested in British agriculture, before they arrived at the most profitable means of producing a result.

There were many other topics he should like to talk about did time permit. He was sometimes asked what farmers were to do with Wheat at present prices.

Undoubtedly present prices were low, and one piece of advice he would give them was that they should not sell their corn to the factor or the miller, but sell it to their bullocks, sheep, and pigs; and even if there should be an apparent loss of 10 per cent. they would know it had not gone off the farm, and that it would return again in the shape of increased production another year. He was glad to see many farmers were following his experience in this matter, because one of the greatest mistakes made in farming was that they did not send enough of their produce off upon four legs. As a great maker of meat he had gone closely into the question, this year he had made 11 score in weight to every acre of his farm; and as the pecuniary result upon a farm of 100 acres, after paying for purchased food, and allowing 70*l.* for his unfortunate loss in calves, he got 7*l.* for every acre of green or root crops upon his farm. Was that satisfactory? He did not think they could do as much without some acres of Italian Rye-grass and sewage; but if they could avail themselves of sewage for a certain number of acres of Rye grass, if they grew a certain quantity of root crops, if they used food for their cattle upon the principle of cutting, pulping, steaming, and warming; and if instead of putting long straw under their cattle they had it cut up into chaff, they would find that all these things went to make profitable farming, for if they got a good return for their root crop, they need not fear getting a good return for their corn. His experience was that animals should be fed under cover; that the straw put under them instead of being used long should be cut up into inch lengths; and that what was carried from the sheds should not waste its fertilising qualities upon a dung heap, but be taken direct to the land, which saved expense as well as gave increased profit. These were not experiments with him: he had tried them for a long time; and if their landlords should appreciate their position and offer to build sheds for their cattle and charge 5 or 6 per cent. interest for the outlay, they would be cheaper and far more useful than barns. A landlord should say this—"I will put you up sheds, but you shall feed your cattle under cover; you shall use steam power, and you shall not have dung-heaps." The difference between their sheep fold and their farm yard manure was, that the qualities of the latter were wasted in the air or washed away by the rain; whereas shed manure was equal to any folding manure they could put upon their land. He must apologise for this very long story; he could say more, but he hoped at all events they would agree with him that landlords and tenants must pull together, the one finding the money for improvements, the other enterprise and capital for cultivation; and from that combination would arise improved intelligence and improved means for advancing British agriculture.

Mr. PATTISSON explained that he was not opposed to improvements or to the use of steam power: he had merely given the results of his own experience, viz., that manual labour was the cheapest. He could thresh his Barley by hand for 20*d.* per quarter, while by steam it cost him 2*s.*

Mr. MECHI: Have you a steam-engine of your own?

Mr. PATTISSON: No; I hire.

Mr. MECHI: That is another thing. My arguments had reference to a fixed engine.

Mr. PATTISSON said on a farm of 150 acres it was cheaper to hire.

Mr. MECHI: Not if you grind and do everything by steam.

Mr. PATTISSON: With regard to thin seeding, he had been a practical farmer nearly 40 years, and had grown as much corn as any of his neighbours, but he never had a large crop from a thin plant. His largest crops had always been from a thick plant.

Mr. MECHI: You could not call 20 or 30 stems for every 4½ inches a thin plant. I can assure you of one thing—that if the price of corn is low I have found farming more profitable than banking.

Mr. WOOD said: As a very young farmer he ought to apologise for the impertinence of speaking at all. Mr. Pattisson, whose experience was naturally of great weight among farmers, seemed to decry the aid of steam; while on the other hand Mr. Mechi, very little of whose profits probably were got by farming—[Mr. MECHI: 1*l.* an acre.]—seemed to think steam everything in agriculture; but he (Mr. Wood) thought there was a mean in everything, and independent of the question of expense, steam offered many advantages. If markets rose it was a great advantage to be able to thresh out their corn rapidly and send it in good condition to market. It was also a great advantage to cultivate their land very quickly after harvest; but at the same time he was not at all clear that incurring a very heavy expense to accomplish that object would be certain to yield a corresponding return of profit. The application of sewage, too, would no doubt do a great deal of good; but even gas, to which it had been compared, had not yet been brought into the rural districts, and how was a farmer to get his private tap for sewage? Whether by the use of steam or of sewage, he should be glad to know how to make farming pay with Wheat at 8*l.* a load, and although he hoped the Chairman was not right in saying he was going on like mad, he did not think farming could succeed in the present day with going a little a-head, which was all he aimed at doing.

Farmers' Clubs.

MORAYSHIRE: *Turnip Culture.*—(*Concluded from p.* 1238).—Mr. ROSE, Sheriffston, spoke next on this subject. As to the time of sowing, he thought from the 12th to the 15th May was about the proper season for himself to commence getting the crop all laid down, between that time and the 27th, or at any rate by the end of May. He was speaking of Swedes, which he did not think should be sown after May. As for yellow Turnips, he would never sow them earlier than the 3d or 4th June, finishing about the 15th June. He would, however, have every Turnip sown by that time if possible. Generally speaking, he thought they had the best crop of Swedes by sowing from the 15th to 26th May or thereabout. As to the manuring, he would give the Swedes farmyard manure at the rate of 15 to 20 cartloads an acre. He gave them all crushed bones—8 bushels of crushed bones and a little artificial manure besides. About 15 or 20 good cartloads would be about 12 or 15 tons of manure. Of the artificial manures—such as dissolved bones and tide-drawn manure, or something of that sort—he would give 2 to 3 cwt. along with the 8 bushels of bones. This was what he would give the Swedes. As to the Yellow Turnips he seldom gave them any farmyard manure, because he had it not to give after expending so much on the Swedes. He would just give them a little more artificial manures—say three cwt. with from eight to ten bushels of crushed bones. He did not get his Yellows and soft Turnips dunged at all this year. As to the different varieties he would certainly prefer the Pomeranian White Globes to the Greystone, and thought them an equally heavy crop,

His Greystone was a very heavy crop this year certainly; but he thought it a very rough Turnip. He did not think there was much feeding in it. It was much rougher than the Pomeranian, which was equally heavy, and much more sweet and juicy in the bulb. He thought these soft Turnips should be all done by about this time of the year, or by the 1st November—at any rate by the middle of November, by which time he would use sliced Swedes. He would therefore give Swedes earlier than the 1st December, his own experience being that by this time they were capital feeding for any kind of cattle. He would, however, have them sliced, as they were too hard to eat otherwise. As to the storing, he would, if he could, store all his Turnips by the new year. Last year they had more frost probably than they had experienced for many years, a bare intense frost, without any snow to protect the Turnip in the drill. He had a good deal stored before the severe weather set in, and he was sure a ton so stored was worth two tons pulled after the frost. His mode of storing the Turnips was to put them in a heap in any open place, just as he would pit Potatos, fastening on the straw with raips, sticks, or something to keep it on. The first Turnips he stored were very often the last to be used (he always took Turnips from the field when he could, and only had recourse to the pit when he could not get any from the field), and he never yet found the stored Turnips fail, but, on the contrary, found them as fresh and fine in quality up to the 10th May as they were when first covered up. He was thoroughly convinced that if they had weather suitable for the storing, it would be to their profit to store all their Turnips by the beginning of the year. The way he took up his Turnips for storing was this:—He took the mould off an old plough, and putting that on to the plough in use, as a sort of "fling-out" from the feather of the sock, ran this up every drill. He sent the women over the drills first to take off the shaws. If it was a dry day—for it was only in dry weather that the process of storing could be successfully carried on—he would run the harrow over the drills after they had been run up with the plough in the manner described. The operation was quite simple and successful. The Turnips came up very clean, and when stored would keep nicely till the spring. He could not say exactly what the cost of taking up and storing might be, but, speaking from his own experience, he found the process cheap.

Mr. GEDDES next proceeded to give his views, taking up the several points in their order. In the first place, as to the different varieties of Turnips sown, he thought, as he had already suggested, that it very much depended on the kind of ground one occupied. But taking land such as his own—some good land, a good deal middling, and some very bad—he should say that a very fair proportion for that county, and in different parts of the county, would be 60 per cent. of the farm laid out in Swedish Turnips, 30 per cent. in Yellows, and 10 per cent. in Globes. He thought that proportion would suit best with regard to the date of sowing, and give the farmer the best chance of a crop. With regard to the different varieties he should say that, if they were to put 60 out of the 100 acres in Swedes, 30 in Yellows, and 10 in Globes, they would come very near the thing, taking into account the quality of the land, combined with their purposes. The varieties, and perhaps still more the distinct varieties, had been so much discussed, he scarcely required to go into that. He had found Skirving's Purple-top Yellow was the Turnip that gave him on the whole the best return, and it was the easiest grown. He was inclined to think that there did exist between all these Purple-tops the affinities which Mr. Morrison had spoken of. He thought, however, a distinct variety did not signify so much as to be sure that the seed you got was from a Turnip likely to be a proper variety of its kind. With regard to the Yellows he thought it was very immaterial. In that county he did not think they could grow Aberdeenshire Yellows on the generality of land. It was better to grow Swedes upon that land. One he had found to suit him very well was Fosterton's Hybrid, which was very easily grown, and of very good feeding quality. It was a Turnip, too, that was not apt to go wrong by anything except frost. It formed a capital Turnip up to the 1st of the new year, and was an excellent Turnip for lambed ewes. It was an improved variety of Dale's Hybrid. There was another Turnip he had grown for the last year or two—Drummond's Early Yellow—in connection with which he might mention a circumstance which he thought was of some importance. There was a field he sowed partly with Yellows, partly with Swedes, partly with Globes, partly with these Drummond's Early Yellows, and partly with Greystones. He did this for the sake of experiment. He put down some acres of Swedes, and put these varieties in six different rows. The result was that Drummond's took the lead, and kept it. They were never checked by fly or anything else. They were the first Turnips hoed, and had kept ahead of the others throughout. He had been told that this Turnip was next to the Aberdeenshire Yellow for standing the frost. As to variety, there was a great deal that might be said. He thought if they were going to consume Turnips about the 10th or 12th September, which was the time they ought to begin feeding their cattle and sheep, they could not get feeding so cheap as early grown Turnips. He would certainly begin feeding not later than the 10th or 12th September. Of course you must get very early grown Turnips to do the work of the first ten days, or to get you up to the 1st October, when the ordinary varieties would be fit for use. The first Turnip he was in the habit of sowing was the White Globe and the Green Globe. Between these, indeed, he could perceive very little difference. He did not care much whether the one or the other, so as he got an early enough Turnip. The point was to get a good Globe of any kind ready by the middle of September. He would sow them before his Swedes. As to the date of sowing these, his time was that which had been mentioned by Mr. Brown—commencing about the 10th or 12th May. Put in a few acres of Globe the first thing you do, and then go on with your Swedes. His own experience was that the earliest sown Turnips were on the whole the better crop. The Swedes required a long time to come to maturity, and if they would have them ready early, they must sow them early. By sowing them a little earlier, they might have them ready for use by the end of November, instead of December. He thought they could never be wrong to commence sowing their Swedes by the 12th May at any rate. It was different with Yellows. If they were sown earlier they did not keep so well. They ought to be used or stored, but most decidedly they were not the Turnips one could depend upon in spring, and certainly not up to the middle of May, as in the case of Swedes. They must be all consumed by the middle of April. In regard to the time of sowing, they had been advancing of late years. It was of the greatest possible advantage to know, from experience, that they could sow so early. Some years ago they never used to commence until the 10th or 12th June. Then they had a sweat to get them down by July, a sweat to get them hoed, and a sweat all over. Now, however, by commencing a month earlier—by the 10th or 12th May—they were never in a hurry, but might sow on to the month of June, and had lots of time to do everything that was necessary. In reference to the manuring of Turnips, he happened to see at Mr. Williamson's farm a quantity of dissolved coprolites and dissolved bones, and found that, by applying four or five cwt. of these, he could grow Turnips worth 8*l.* 10*s.* per acre. Thinking this was something worth inquiring into, he (Mr. Geddes) applied to his friend Mr. Kynoch, Keith, if he could procure him some of these dissolved coprolites. Mr. Kynoch replied that what he professed to sell was dissolved bones, and that by supplying dissolved coprolites he might place himself in an awkward position with regard to his customers. Mr. Kynoch, however, while anxious not to compromise himself in any way, kindly agreed to dissolve some coprolites for him, and sent them to him as such in terms of his special request. He (Mr. Geddes) had used these this season against every other manure, and, so far as he knew, there was not one bad or deficient Turnip in the lot. The crop was excellent, and at nearly half the usual expense. He did not say that the same would apply to every man's land, but such was the case with regard to his own. There was, however, this important consideration: so far as regarded dissolved bones, and those very light manures in use, they were of no permanent benefit to the land—their whole purpose was to get up a crop of Turnips, and they were not of the slightest benefit to the land after the growth of the Turnip crop. He mentioned the circumstance regarding the coprolites, because it was his experience this year. He put them into five or six different fields over an extent of Turnips, and he had asked Mr. Kynoch to come and look at them, and satisfy himself as to the result. The grieve on the farm had the drills marked, so as to be able to point out the Turnips in the different fields raised by means of the coprolites. In regard to the laying down of these Turnips, they had no advantage whatever over the other Turnips in the same fields; yet, though laid down at about half the expense, they were as good as any of them. He could discover no difference, and should not have known which was which if his grieve had not been able to point them out to him.

Mr. WALKER asked what quantity of coprolites had been used. Was it value for value, or weight for weight, against the other manures?

Mr. GEDDES said he gave 4 cwt. coprolites alone—not value for value, but weight for weight against the others.

After some words of conversation,

Mr. GEDDES then proceeded to say that he approved of the storing of Turnips. He stored about the month of November, and his experience was that, when taken out of the pit in spring, they were perfectly sound and good. The earlier they could be stored the better, provided the Turnips had made their growth; or they might be stored with advantage even though they had not quite attained to maturity. Generally speaking he should say that, if they could be stored dry, they could not be stored too soon after the month of November set in. He thought the success of the Turnip crop depended very much on the drilling. For his own part he allowed 30 inches between the drills on his good land, and 28 inches on the poorer soil. He had just been showing Mr. Brown Turnips drilled at 28 inches on as poor land as there was in the county. For his own part he always gave his Turnips plenty of room to grow, and he had no cause to regret it. For Swedes and all he allowed 12 to 14 inches between the plants. It had been said that they could grow from 15 up to 22, and even 32 tons an acre; but all he could say was that, taking the medium of these figures, any man who could grow 22 or 23 tons an acre might well "rest and be thankful."

The CHAIRMAN then summed up.

On the general features of the question they were pretty much at one. For instance, they had particularised the different kind of Turnips, but he thought most of them agreed that what was called the East-Lothian Swede was on the whole the best. Still, several gentlemen had shown that there were other varieties that suited their farms better than even this. In short, as to mere variety, it had been shown that if either of them was well managed, with a good soil and plenty of manure, there was no fear but there would be a good crop. Then, as regards the time of sowing, they seemed pretty much agreed that from the 20th to the 29th May was the best time for the general crop; and that for such portion of the crop as was intended to be used early, the sooner one could sow them the better. In every case it was evident that it was on the White Globe, the Green Globe, and the Yellow varieties that they must depend in order to carry them on successively through the months of September, October, or on to the beginning of the new year—sooner or later—according as the Swedes might be fully matured and ready for use. As to the question of manuring, there could be no doubt that the farmyard dung was the best for the land, and should be used so far as it would go—that it should be eked out with the different varieties of lighter manures that might be required for raising a crop, and which varieties must depend very much on the nature of the soil to be placed under crop. In regard to the general management, he found it had resolved itself now very much into the good old system that prevailed when he was fifty years younger. In his early days, the storing of Turnips was as regularly gone about as the storing of Potatos. There were various causes for that. In those days the fields were not so much enclosed, and if the farmer did not store his Turnips, they were liable to be destroyed by wandering sheep, the hare, and the red deer. Apart from this, however, he thought that the storing of Turnips was a matter of necessity, in order to secure their value. They had now become of more value than ever; and there was no doubt that the sowing, rearing, and storing of them were matters of immense importance to the farmer, because on the success of Turnip growing depended the value of his stock, which had now become the staple commodity for the market.

Abridged from the Banffshire Journal.

Reviews.

On the Chemistry of the Feeding of Animals for the Production of Meat and Manure. By J. B. LAWES, F.R.S., F.C.S.

(*Concluded from p.* 1235)

We continue the publication of this Paper read last spring before the Royal Dublin Society.

1. *Comparative Feeding Value of different Foods, according to their Composition.*—I have endeavoured to indicate the characteristic points of distinction between the food of the ox, the sheep, and the pig, and to show in what respects its constituents are differently disposed of by the different animals; and for the purposes of my illustration, I have supposed the animals to be fed on such foods as are recognised as appropriate to them, and in such proportion and amount as experience justifies. I now propose to say a few words on the relative feeding properties of different foods, according to their composition.

Leaving out of view, just now, the incombustible or mineral constituents, it will be convenient, as before, to consider the other constituents of food to be grouped under the heads of nitrogenous and non-nitrogenous substances.

Among the nitrogenous substances, the most important of those which enter into our stock foods are albumen, casein, legumin, and gluten; and chemists and physiologists are accustomed to speak of these—the nitrogenous compounds—as the flesh-forming substances.

The non-nitrogenous constituents of our stock foods are starch, sugar, gum, pectin, oil, and cellulose, or woody fibre in different conditions of digestibility or induration. The non-nitrogenous compounds are spoken of as the respiratory or heat-producing, and fat forming substances.

Now, writers on agricultural chemistry and physiology have generally assumed that it is chiefly the proportion of the nitrogenous or so-called flesh forming substances contained in them, which determines the comparative value, for feeding purposes, of different foods.

[Mr. Lawes proceeds here to describe his experiments on feeding in relation to this point. His conclusions are stated as follows:—

Both the amount of food consumed by a given weight of animal within a given time, and that required to produce a given weight of increase, were determined by the amount of available non-nitrogenous substance which the food supplied. The quantities required would, doubtless, have varied within even narrower limits, had all the foods contained equal proportions of indigestible woody matter.

It may be observed that it is doubtful whether pigs are able to digest cellulose, or woody fibre, at all; but there is no doubt, as the investigations of ourselves and others on the point sufficiently prove, that oxen and sheep are able to digest a considerable portion of such matter, when it is not in too indurated a condition.

It will, of course, be understood that a certain amount and proportion of nitrogenous substance is essential in the food of animals; and if I were asked to state in general terms what was the approximate proportion of the nitrogenous to the digestible non-nitrogenous substances, below which they should not exist in the food of our stock, I should say (though with reservations), about such as we find them in the cereal grains; and since few of our stock foods are below, and many above, this in their proportion of nitrogenous substance, it results that we are more likely to give an excess than a deficiency of such constituents, so far as the requirements of the animal are concerned. The value of the manure depends, however, very much on the amount of the nitrogen which the food contains; but to this point I shall recur after directing attention to a few more points in connection with the comparative values of different foods as such.

Some years ago we published the results of some experiments on the equivalency of starch and sugar in foods, pigs being the subject of the trial. Several lots having each a fixed and limited quantity of Lentil-meal and bran allowed, one was permitted to take as much starch, another as much sugar, and another as much of the mixture of the two as they chose; whilst in another experiment the animals were allowed to select at discretion from Lentils, bran, sugar, or starch, each placed separately within their reach. The result was, that sugar and starch were found to have, weight for weight, practically the same value as constituents of food.

These results would, *à priori*, lead to an answer in the negative to the much agitated question, whether there is any

advantage in malting Barley for feeding purposes. The chief effect of the malting process is to convert starch into sugar—not, it is true, sugar of exactly the same description as that used in our experiments; but there is good reason for supposing that malt sugar would have a lower value than cane sugar as a food constituent; and direct experiments, made many years ago at Rothamsted, have shown that a given amount of malt, mixed with other food, gave less rather than more increase than the amount of Barley from which it was produced. It is obvious, too, that as the conversion of Barley into malt is a manufacturing process, attended with considerable cost, as well as actual loss of substance, the remission of the duty on malt employed for feeding purposes would not be likely to be of benefit to the farmer, unless either a given amount of malt sugar proved to be of considerably higher feeding value than the starch from which it was produced, or the other constituents were rendered more digestible and assimilable by the process.

This leads me, before leaving the subject of foods, to make a few remarks on some other manufactured foods for stock. Many complaints are made, and justly made, of the adulteration of oilcakes; and it is sometimes asserted that cheaper and better foods than the average of cakes now in use could be manufactured with advantage both to the maker and to the feeder. Linseed and other cakes are themselves, in one sense, manufactured foods. But the object of the manufacturer is not the production of cake, but of oil. If the farmer did not use the cake at all, it would still be made, and the oil would be sold for a higher price. As it is, the manufacturer makes the cake as a by-product, and the price he gets for it enables him to sell his oil so much the cheaper.

But if manufactories were set up for the special purpose of preparing foods for stock, the whole cost of the undertakings must be charged upon the food. Lentils, Beans, Peas, Indian meal, Barley meal, Linseed, and other good staple foods must be used; and although it might be possible so to combine foods together that a given weight of the mixture would possess a somewhat higher feeding value than the component parts used singly, there is every reason to suppose that the increased cost would more than counterbalance any slight benefit that could be derived in that way. Nor do I anticipate that the progress of science will aid us much in this direction. Condimental foods have been tried, and found wanting; and I have little doubt that a similar result will attend the manufacture and use of simpler food mixtures. Our hopes as feeders must be in increased and cheap supplies of ordinary cattle foods of a good quality, rather than in submitting those we have to costly processes of manufacture.

The results arrived at in regard to this portion of the subject may be briefly summed up as follows:—

1. The comparative feeding value of our current stock foods depends more upon the proportion of the digestible non-nitrogenous substances they contain than upon their richness in nitrogenous compounds; but the richer the food in nitrogen, the more valuable will be the manure.

2. Of the non-nitrogenous constituents of food, starch and cane sugar have, weight for weight, nearly equal feeding values; malt sugar has probably rather a lower value than either cane sugar or starch; digestible cellulose, in moderate proportion, has, for ruminant animals, probably nearly the same value as starch; and fat or oil have probably about two and a half times the value of starch for the purposes of respiration, or the storing up of fat in the body.

3. Some advantage results, in a feeding point of view, from the judicious mixture of a variety of ordinary stock foods; but the benefit to be derived in this way is not such as to compensate for the extra cost of a special manufacturing process to attain it.

2. *Connection between the Value of the Manure and the Composition of the Food consumed.*—The next and last branch of the subject relates to the comparative value of the different constituents in the liquid and solid voidings of the animals, and to the connection between the value of the manure and the composition of the food from which it is produced.

I have already pointed out that the greater portion of the carbon, hydrogen, and oxygen of the food either passes into the increase or off in respiration, and that comparatively little of any of them is recovered in manure. By far the larger portion of the nitrogen, and nearly the whole of the mineral matter consumed are, however, so recovered.

To show the economic connection between the feeding of stock for the production of meat and manure, and the growth of corn, I propose to adduce a few results obtained in experiments on the growth of Wheat by different manures. In the experiments in question, Wheat has been grown for 20 successive seasons on the same land.

In Table V. are given the average annual produce of corn and straw, and the estimated yield of carbon, per acre, over the last 12 years respectively, without manure, with mineral manure alone, with mineral and nitrogenous manure (ammonia salts), and with farmyard manure.

TABLE V.—*Average Annual Produce of Wheat, and estimated Yield of Carbon, per Acre, over 12 Years.*

Manures per Acre per Annum.	Average Annual Produce per Acre.			
	Dressed Corn.	Total Corn.	Straw.	Carbon.
	bushels	lbs.	lbs.	lbs.
Unmanured	15½	964	1662	1062
Mineral manure alone ..	18½	1157	1897	1234
Mineral manure and 400 lbs. ammonia salts ..	36½	2275	4212	2625
14 tons farm-yard manure	35½	2232	3869	2467

Where the farmyard manure was employed, more carbon, as well as more of every other constituent, was annually applied in manure than removed in the crop. In the other cases no carbon whatever was supplied in the manure; and yet it will be observed that where the mineral manure and ammonia salts were employed (the latter containing a large amount of nitrogen), the yield of carbon was greater than where a large amount of that substance was supplied by means of farmyard manure. This carbon must have been derived from the atmosphere. In several experiments in this field last year, from 1½ to 1¾ tons of carbon per acre were removed in the crop, without any being supplied in manure; but in these cases large quantities of nitrogen were supplied.

The quantity of carbonic acid required to yield 1½ tons of carbon to the crop is about as much as would be given off into the atmosphere in a year by 22 individuals of a mixed population of both sexes and all ages, and it will be seen that it is under the influence of ammoniacal or nitrogenous manure that this large amount of carbon has been fixed in the plant from the carbonic acid of the atmosphere.

The results given in Table III. showed how small was the proportion of the nitrogen consumed by an animal in its food that was stored up in its increase, and sent to market as meat. If there were none of the nitrogen of the food lost in the various exhalations from the body, the whole of that not stored up in increase would be found in the manure. But the investigations of ourselves and others show that a certain portion of the nitrogen is so lost. Our own experiments to determine the limit of this loss, and the circumstances under which it is greater or less, were commenced as far back as 1847, and have been resumed occasionally from that time to the present; and during the last few years we have collected a great deal of experimental data on the subject; but as the whole of the analytical work is not yet concluded, I do not feel that I am in a position to give any numerical statement of the results obtained. It may, however, be stated as beyond doubt, that by far the larger portion of the nitrogen consumed in food is rejected by the animals in their liquid and solid voidings; and that the higher the proportion of nitrogen in the food, the richer will be the excrements in that important constituent of manures.

Some years ago I published a Table, showing the estimated value of the manure obtained from the consumption of one ton of different articles of food used in ordinary farm practice. The valuation was founded upon a knowledge of the average composition of the different descriptions of food, and upon information, arrived at in the course of the experiments just referred to, as to the probable average amount of the constituents of food valuable for manure which will be obtained in the solid and liquid excrements of the animals.

Stating the results of these valuations in very general terms, it may be said that the estimated value of the manure from one ton of oilcake was considerably more than that from the same quantity of Linseed, Lentils, Tares, Beans, or Peas; from two to three times as much as that from one ton of Oats, Wheat, Indian Corn, Barley, or hay; from seven to ten times as much as from the same weight of Oat, Wheat, or Barley straw; and about 20 times as much as from one ton of roots.

It is obvious, therefore, that in the selection of purchased foods for stock, it is very important to consider their manuring as well as their feeding value. One illustration on this point will suffice. A ton of Locust Beans will certainly not yield nitrogen in the manure of the animals consuming it equal to more than, if to as much as, ¼ cwt., or 28 lb., of ammonia; but a ton of Rapecake will yield 1 cwt., or four times as much. If, therefore, we take the ammonia in the manure at 7d. per lb., the amount of it obtained from the consumption of a ton of Locust Beans will be worth only 16s. 4d.; whilst that from the ton of Rapecake will be 3l. 5s. 4d.

There is, in fact, far greater difference in the manuring than in the feeding value of most of the ordinary stock foods in the market.

In illustrating the comparative value of the manure obtained from different foods, by reference merely to the amounts of nitrogen or ammonia-yielding matter which they supply, it will not be understood that I in any way ignore or underrate the value of the mineral constituents associated with the nitrogenous matter in the excrements. But, inasmuch as the amount of mineral constituents voided is generally in excess of that required for the due effect as manure of the nitrogen with which they are accompanied, it results that the amount of the nitrogen or ammonia-yielding matter is practically the best index to the value of the manure.

3. *Appropriateness of Animal Food in the Diet of Man.*—It will be obvious that the importance of the subject which I have brought before you this evening rests upon the assumption that animal food is an important element in the diet of man. There are, indeed, some who maintain that a purely vegetable diet would be more suitable and natural than the mixed vegetable and animal one so generally preferred. If their view were adopted, we need no longer trouble ourselves about the connection between the food, the increase, and the manure of fattening oxen, sheep, and pigs. There are, however, various circumstances, economical and physiological, pointing to the appropriateness of admitting a certain proportion of animal food into the diet of man. To one or two of these I will briefly refer.

Walking is for man undoubtedly a very natural means of progression. Still, it is often very advantageous to ride, and so to employ the legs of a quadruped instead of our own. In eating meat we may be said to employ the stomachs of other animals to do that which we could not so well do with our own. As a few ounces of gold are separated from many tons of rock by the combined aid of mechanical and chemical processes, so the animals feeding upon crude, and often to us indigestible, vegetable matter, eliminate from it, and store up in their bodies some of its constituents in a form at once much more concentrated than that in which they consumed them, and much more easily appropriated by the human economy. A given amount of nitrogenous compounds in the form of meat is undoubtedly more easily digested and assimilated by man than if the same amount were supplied in the form of Beans. Then, again, the animals convert starch, sugar, &c. (and probably some of them cellulose, which we could not digest at all), into fat, which has twice and a half the respiratory and fat-storing capacity of the substances from which they produce it. It is, doubtless, true that man can produce fat, and keep up his respiratory function from starch and sugar; but it can hardly be doubted that there is some economy to his system in having a portion of fat supplied to him ready made.

Apart from the strong testimony of common experience on the subject, there is evidence in the comparative structure of man that he is adapted for a concentrated form of food. One illustration, in passing, may be adduced on this point. Table VI. shows the proportion of the stomach, by weight, in a given live weight of oxen, sheep, pigs, and man:—

TABLE VI.—*Proportion of Stomach in different Animals.*

Stomach in 100 lb. live weight:—

Oxen ..	5¼ ounces.	Sheep ..	9 ounces.
Pigs ..	14 ounces.	Man ..	6 ounces.

Relative weight does not, of course, necessarily represent with numerical exactness relative capacity or size. But there is little doubt that there is a gradation in the capacity of the stomach relatively to a given weight of the body in the animals enumerated, in the order, and to a great extent in the degree indicated by the figures given in the Table. Admitting this to be the case, we have seen that the sheep, with its less proportion of stomach than the ox, takes a somewhat more concentrated food; and that the pig, with its much less proportion of stomach than the sheep, requires a much more concentrated food than the latter. May we not conclude that man in his turn, with his less proportion of stomach than the pig, will also appropriately take a more concentrated food than his useful friend?

The food of man is, indeed, very closely allied, in a chemical point of view, to that of the pig. The staple of the food of both the fattening pig, and man, is cereal grain. The pig, it is true, consumes the husk as well as the farinal portion, whilst man does not; but we know that this proportion of indigestible woody matter is very nearly the limit of that which is appropriate for the fattening pig, and that on the addition of a small quantity of bran the proportion of increase diminishes, and that of the dry substance of the food voided as excrement increases. The only other essential difference is, that the pig takes, as a rule, the whole of his nitrogenous compounds in the form of vegetable products, and a much larger proportion of starch, and other non-nitrogenous compounds, more bulky in relation to their respiratory and fat-forming capacity than fat itself. Not, indeed, that the pig is at all exact or unwilling to adopt even still more closely the diet of man; for he will take animal flesh and fat when he can get them, and, what is more, he likes them better cooked than raw.

Were it not, then, that man separates the husk from the flour, and that he gets lower animals to eliminate in an easily digestible form a portion of his nitrogenous aliment, from foods which he could not himself readily digest, and that he gets them also to provide him with a portion of his respiratory and fat storing food in the concentrated form of fat itself, we could hardly account for the less proportion to a given weight of the body of the stomach—the receptacle and first laboratory of the food—in his case than in that of the pig. We know, indeed, that in the cases where man is reduced to depend for nearly the whole of the non-nitrogenous constituents of his food upon starch, in the form of Potatoes or Rice, there is a disposition to an enlargement of the abdominal organs, and to a diminution in physical and mental energy.

To conclude on this point, there can be no doubt whatever that the food of the labouring man is improved when he can add to his bread a portion of fat bacon, or butter, or fat in some other form, and it is better still if he can substitute or supplement a little butcher's meat. Indeed, that which common experience recognises as high quality of diet is, within certain limits, high proportion of animal to vegetable food, and with it high proportion of fat to starch and other non-nitrogenous compounds.

But not only do the animals which we fatten for our own food convert vegetable products which we either could not digest at all, or could do much less easily than they, into concentrated and easily digestible and assimilable material for our use, but in doing this they supply carbonic acid to the atmosphere, and return the most important manurial constituents of their food in their excrements, thus providing, to both the soil and the atmosphere, from crude vegetable products, that which is necessary for the luxuriant growth of cereal grain, and other vegetable produce suited for the direct use as food for man.

Were it not for such compensations, by the increase of man and other animals upon the surface of the earth (if it could take place at all), by the enormous quantities of carbonic acid evolved into the atmosphere from the combustion of coal and from other sources, and by the gradual destruction of forests, which are the chief natural agents for restoring the balance, the purity of the atmosphere would become affected. But the Grasses, which supply so large a proportion of the food of beasts, and the cereals and the other plants of the same great family which supply food to man in almost every climate, serve to re-use the carbon given into the atmosphere in the form of carbonic acid. It may seem at first sight strange that the humble Grasses, and the corn crops, reaching only a few feet from the surface of the ground, should be able to take up more carbonic acid, and evolve more oxygen, over an acre of land than an acre covered with forest trees. Still, there can be little doubt that more carbon is fixed in an acre of luxuriant Wheat than over the same area of woodland; and there can be as little that an acre of sugar cane would fix more than an equal area of the most luxuriant tropical forest.

4. *Conclusions.*—With a few general remarks of a practical nature I will conclude my discourse. The great change which has taken place in the practice of feeding stock in modern times has consisted in bringing the animals much earlier to maturity by means of careful breeding and more liberal feeding. Scales and weights were seldom used in agricultural experiments until comparatively recently; but there are some few records of the results of feeding as practised at the latter end of the last century, which will serve us in instituting a comparison between the results then obtained and those which are possible, or even common, at the present day.

In 1794 the Duke of Bedford made some experiments to determine the comparative feeding qualities of Southdown, Leicester, Worcester, and Wiltshire sheep. Twenty of each were selected and weighed on November 19, 1794. To each lot were allotted 16 acres of pasture, and in the winter some Turnips were thrown upon the pasture, and a small quantity of hay was also provided. On February 16, 1795, after a period of 65 weeks of feeding, the experiment was concluded, and the sheep sent to market.

Over the whole period the sheep gave an average increase of between 40 and 50 lb. per head; and as their original weight was nearly 100 lb. per head, they increased nearly 50 per cent. from the store or lean to the fat condition, which is the same proportion as that assumed in the illustrations to which Table III. refers.

Some years ago I tried a set of experiments upon the comparative fattening qualities of Southdowns, Hampshire Downs, Cotswolds, Leicesters, and cross-bred wethers, and cross-bred ewes, each lot consisting of between 40 and 50 sheep. They were put up in November, when their weights were very nearly the same as those of the Duke of Bedford's sheep; and when fat they had increased in about the same degree, namely, to an average of about 150 lb. each. The Duke of Bedford's sheep were about 65 weeks in adding 50 lb. to their weight, and mine in some cases 20, and in others a little more, or about one-third the time. It is somewhat singular that in May—the period at which my sheep were consumed as mutton—the Duke of Bedford's were weighed for the first time since the commencement of the experiment, and were found to have increased only about 6 lb. per head.

The difference of result in these two cases was almost entirely due to the difference in the mode of feeding. Formerly, sheep received perhaps a few Turnips on their pasture, and but little dry food, and that not of high feeding quality; and the consequence was that during the colder months of the year they either lost weight or increased but little. Now they have a liberal allowance of good food, and are frequently protected from the inclemency of the weather. In my own experiments, just referred to, the sheep were allowed from ¾ lb. to 1 lb. of oil-cake per head per day, according to their weight, about the same amount of Clover chaff and as many Swedes as they chose to eat, and they gave an average increase of nearly 2 per cent upon their weight per week.

There is no doubt that in rapidly fattening stock at an early age, quality of meat is to some extent sacrificed to quantity. But it is only by means of the modern system of liberal feeding and early maturity that meat can be brought within the reach of the masses of the population. The farmer, too, must look to that system which will pay him the best; and the difference between the price which the consumer will give for a pound of four-year-old and one-year-old mutton will, only under very exceptional circumstances of locality, remunerate him for the extra cost of production.

In conclusion I have only now to thank you for the very kind attention with which you have followed me through what I fear may be thought by many of you somewhat tedious detail. The subject of the chemistry of feeding is, however, essentially an intricate one; and I think you will have learnt from my lecture, if you did not know it before, that there still

remains much to be determined by careful investigation respecting it. But if I have in any degree succeeded in indicating the proper points of view from which this at once practical and scientific question should be studied, and in impressing upon your minds some prominent and important facts regarding it, so as to lead to improvement in practice by a better knowledge of principle, or to further inquiry, and so to an extension of our knowledge, I shall feel that the objects of my desire and endeavour in addressing you have been fully attained.

On the Utilisation of Night-Soil apart from Sewage. By a County Magistrate. J. Masters & Son, Bemrose, Derby.

This is a little tract advocating the solution of the sewage difficulty in detail, by the attention of each household separately. It is Mr. Moule's scheme over again, excepting that ashes and soot are to be used in place of mould. It is the earth system as against the water system that is here advocated.

The following are passages we have marked for extract:—

1. *On the Amount of Nuisance connected with the Two Plans.*—"I would ask any medical man or chemist to mix an equal quantity of night-soil and water together, and then an equal quantity of night-soil and dry dust, and keep each for a week, and say then which is the more valuable and which the least offensive to sight and smell; and I would point out that by the simple union of two substances—night-soil and dust or ashes, which are to be found in the poorest habitation, by a process the most simple, a valuable manure can be obtained, inoffensive to sight and smell, and removable in the same way that the cinders and sweepings of the houses are removed at present in all our large towns."

2. *The Practice of Eastern Nations.*—"There is probably nothing new to many in what I have said, but I repeat it because I consider the system I advocate has never had a fair trial in England. The Chinese, who consider themselves the most ancient people in the world, have practised it from time immemorial, and I am told they will even go the length of giving any one a meal of Rice on condition of remaining on the premises or returning for a certain purpose afterwards. With them nothing is wasted, all is returned to the soil and employed in agriculture.

"In India, where I lived many years, the same system prevails. Water is not used for removing night-soil, but it is not thought necessary to use earth as a deodoriser, although this in a dry state is abundant enough, and to this neglect may be attributed the unhealthiness of their towns, which we now see recorded and commented on in the newspapers. I will appeal to any one who has resided long in India, whether by the application of the earth system, as I have partially described it, the barracks of our European soldiers might not be rendered much more healthy than they are at present, and whether the soldiers, by the application of the manure thus obtained, might not be enabled to cultivate gardens, and amuse themselves beneficially and profitably at the same time. I remember once travelling in the Isle of France, and applying to my host for some place to which I might retire; his answer was in French, 'See, monsieur, there is the whole universe, and my own Sugar Canes in particular.'

"When staying at the Cape of Good Hope, I remember vessels coming seeking, as the phrase was, a cargo of guano, but they might have obtained this by remaining at home if they had adopted the directions of Mr. Moule in the second page of his pamphlet, 'Manure for the Million,' and used the same materials five or six times over."

3. *Practical Instruction.*—"The system I advocate, as applied to country villages, is most simple in operation, as may be seen in some houses in the village near to which I reside in Derbyshire; but supposing other villages to be unwilling or unable at once to adopt it, much may be readily done in the abatement of nuisances. We will suppose a privy or cesspool to have become offensive; this is caused by water from some channel or another having got into it in undue proportions. First stop this channel, and then apply a few barrowfuls, or a cart-load or two, of ashes or dry earth, and the whole can be removed and utilised at once without danger; and if in future the owners of the vault or privy would prevent water getting into it, and throw daily into it or even weekly the dust and ashes obtained from their houses, they would soon have a store of valuable manure for the garden. The system might also be employed most advantageously in small farms and more so even in large ones. We will suppose the small farmer to have no spare shed under which he could place his manure heap, but he might possibly have a spare stall, cow or horse, or he might erect a thatched shed. In this let him place daily the contributions of his cows, horses, and pigs, together or separately under cover, and daily place over them the dust obtained from his house or his cinders or dry road-scrapings or whatever of dried soil his farm affords, and in a few months he would have a collection of valuable manure exceeding in quantity anything he had before anticipated, and his straw would be all saved for chopping up; of course the large farmer might make more extensive and beneficial arrangements on the same principle."

The immediate purpose of the tract is to relate the perfect success of the plan as carried out at the Derby Gaol, and to recommend it elsewhere.

Miscellaneous.

Steam Cultivation.—Our 10-horse power steam engine, of Clayton and Shuttleworth's make, was taken from the railway station to a field of 33 acres, on Harmas farm. The cultivating tackle is Howard's patent. We began work with the narrow cultivator on September 6. As the land was full of rubbish, the object here was to shake and shake the surface, leaving the weeds at the top, and this was done thoroughly by the usual double operation, viz., once up the stetches (or lands), and then across. In each case we used five tines, armed with a share about 3 inches wide, stirring the soil 5 inches deep. Deep work, I may observe, turns over, and mixes soil and subsoil a great deal more, and would have turned in and planted the twitch. By a shallow stirring this legacy of the outgoing tenant was settled to our satisfaction. In this way we made very good work of that portion of the field enclosed by our 1400 yards of rope; but I wanted to get over more ground, having a great deal of stubble to break up, and not at all anticipating on September 6, the 40 working days which actually followed; so we broad-shared the rest of the field, once in a place, as deep as we could, and that in the excessively hard state of the land was only a few inches. The land was very well pared by the broadshares, but the surface was only slightly stirred, and as the harrows attached to the cultivator proved a hindrance, and did but little good, they were discontinued, and the broken surface dealt with by passing through it an implement drawn by horses, the teeth of which dropped through the tilth to the hard bottom and brought out all the rubbish. The tool thus used was a scarify-harrow, made by Mr. Ward, of Ford Street, near Colchester, which is the cleverest tool I have seen for surface stirring. So we got over 33 acres, less 2 acres of headland, &c., at a cost, according to the calculation appended, of 15*s.* per acre for the crossing, and 8*s.* per acre for once in a place. And now followed our first and only bad blunder. Over the hedge was a field of 8 acres, rectangular, but long and narrow; it is too narrow for a steam-cultivator ever to cross it with profit. But it was foul, and could be completed by running the rope through the hedge, without shifting the engine: so we set to work. The long way of the field was very well; but in crossing, the delay from short work was terrible, and, to make matters worse, the anchor on the hard headland, under the wood, kept slipping. This field, that is, the 7½ acres completed, cost 24*s.* 2*d.* per acre. At this date we have completed 138 acres, most of it crossed; some is done twice in a place the same way, which answers in some instances and saves shifting. To-day we are finishing, at once in a place, a 23-acre Mangel field, and are drilling it with Wheat in the finest order. We also drilled 11 acres of winter Beans and some Tares after the cultivator. Harmas farm of 220 acres, nearly all arable, came on hand this last Michaelmas. I bought for it five horses on October 2nd, and one since, and we have mastered the work, and shall complete Wheat sowing there and elsewhere by November 5th. But at another farm of 150 acres only, with fields too small for steam cultivation, we regularly employ six horses. To-morrow the cultivating tackle will go into winter quarters, and the engine will be put to work at the Barley stacks, and will have plenty to do grinding, bruising, cutting chaff, &c., for a head of stock which will shortly number 2000, chiefly sheep. The cost of our cultivation twice in a place has been 13*s.* to 15*s.* per acre. But this is too much, and we mean to reduce it. The pace being three miles an hour, and the cultivator being 4 feet 6 inches wide, 16 acres of ground should be completed in 10 hours; take the stoppages at the anchors and from all other causes at the enormous proportion of one-half the day, and you have 8 acres a day completed, costing 6*s.* per acre at once in a place, or 12*s.* at twice. As soon as we had increased our rope to 2200 yards, taking longer work, I found the cultivator was six minutes running from anchor to anchor, a distance of about 530 yards. But in small fields the anchors must, of course, be near each other, and the economy of the work entirely defeated. At starting in spring, we shall increase the speed to 4½ miles an hour for all but deep work, which I suspect can only be done at a slow speed. The depth of the work done, if measured fairly with a rule, did not anywhere exceed an average of 7 or 8 inches, though the subsoil was often torn up in lumps to a much greater depth. The roughness of the underneath portion of the work must approach to that of the surface, and this is a favourable condition of tillage as regards the percolation of water and aëration. The admixture of subsoil with the surface soil has, I think, been sufficient. In the spring, when the rain has penetrated, we shall pass a narrow-pointed share through the subsoil, without bringing it uppermost, at the greatest depth we can reach. The land here, though not of the stiffest, is of the very hardest. The depth described taxed the powerful engine to the utmost; and on trying to exceed it with only three tines, and those fitted with narrow points, the risk to the tackle was manifest, and I found by experience that while jolting over and against the firmly-bedded stones, a seat on the cultivator was anything but pleasant or secure. I ought to add that our men took kindly to the work, without any experience, except what one of them might have gained as anchor-man for a little while last year, when I hired steam-cultivating tackle. You are quite free to use these hastily-written notes of our first attempt, in any way you please. *H. Evershed, Park Hall, Gosfield, Halstead, Nov. 2, in Mark Lane Express.*

P.S. Some of my stubbles were cultivated the harvest before last with hired tackle, and left on the flat all the winter, and I shall leave them so again. Some heavy land cultivated after Turnips, and drilled with Mammoth Wheat on the flat, without a furrow, yielded this year the finest crop I ever grew.

ESTIMATE OF A DAY'S WORKING EXPENSES.

Interest, depreciation, wear and tear, &c.	£0	16	0
Labour	0	15	2
Half a ton of coal	0	10	0
Oil and grease	0	1	4
Water cart (except when we set down at a clay pit)	0	3	6
	£2	6	0

Removals and fixing have averaged 1*s.* an acre; bear 6*d.* an acre for twice in a place.

Steam on the Roads.—At the West Riding of Yorkshire Christmas Session it will be moved by J. W. Childers, Esq., "That application be made to one of her Majesty's principal Secretaries of State for an order pursuant to the provisions of the Locomotive Act, 1861, prohibiting the use of any kind of locomotive whatever, propelled by steam, or any other than animal power on the turnpike and other roads within the said West Riding, except between the hours of 12 o'clock at night and 6 o'clock in the morning, and also except in those parts of the said Riding where similar orders are already in force." Nothing can be more explicit; nothing more conclusive than this announcement. Steam is a nuisance. Steam shall be put down, at any rate in the enlightened West Riding of Yorkshire, or, as it is provided with admirable forethought, in those parts of the Riding where it is not put down already; or otherwise some sharp fellow might argue on the principle of two negatives making an affirmative, and so beat their Worships after all. Unfortunately, Mr. Morritt is a member for the North Riding, and not the West, or that honourable gentleman, as the story goes, might tell to his fellows on the bench, how once, when driving his team, he came at a narrow turn of the road quite unexpectedly, on such a *monstrum horrendum, informe, ingens!* and how, with the hand of a coachman, he stopped his horses, while the driver of the engine gave way at the same moment, and with a mutual compliment, something of that peculiar turn of the elbow so long associated with the courtesies of the road, each passed on his way rejoicing. We tremble, however, to think of what Mr. Childers would have done under similar circumstances. Would he have fainted outright, and left everything to the instinct of that noble animal the horse? Or would he have sworn that he went in bodily fear of that coke and coal-consuming cormorant, and had the offender up before a brother-beak? Or would he have done as he now has done, petitioned that such appalling appliances should only appear like evil spirits between the hours of 12 o'clock at night—awful hour!—and 6 o'clock in the morning? But why even then? Why these half measures? Or why not, as Hamlet has it, reform it altogether? Only assume, for instance, at this festive season more particularly, that Mr. Childers was about a little later than usual, singing the old year out, or dancing the new year in, and that as he drove home again between 2 and 3 on a hazy morning, he encountered one of these locomotives up betimes, as intent upon agricultural purposes. Why, at that dull, dreary period, the horrors of the infernal machine would be magnified and multiplied a hundred times over. Only imagine, for a moment, the peculiar glare of fitful light over the heavy looming body, the curious unaccustomed gait, and the strange seething sound with which it signalled its approach. The Fee-Fo-Fi-Fum! of the nursery giant is nothing to it; and what then would become of Mr. J. W. Childers, and his high-mettled horses, his dazed coachman, and his family carriage? Of what avail can be the interests of agriculture or the uses of steam when put in comparison with such a case as this? But, like Sterne, the picture we have raised is too painful to pursue, and we cannot go on. We have only to hope that the whole Commission of the West Riding will answer to the call, and in solemn conclave declare against these monstrous innovations, and so permit Mr. Childers to proceed in peace and quietness at his own jog-trot pace. It is true that we live in the 19th century, as that many years back a horse called Flying Childers is said to have run a mile in a minute, and so far, we ask no more for steam. But is Mr. Childers already unmindful of the fame of his ancestors? or is it that he owns to some little jealousy of the new locomotive? *Mark Lane Express.*

Calendar of Operations.

WESTER ROSS: *December.*—A continuation of finer autumn weather we could scarcely have had, and a large amount of out-door labour has been accomplished. A considerable quantity of rain has fallen, but the whole was needed, for the drought in summer was so severe that even after harvest the leas were all but unworkable, and our water mills were motionless from want of the propelling power; but for several weeks now the soil has been well saturated, and the mills have again been at work. Next year's green crop lot has received its winter's furrow, and a considerable breadth of Wheat has been sown in excellent condition. All the earlier sowings have come above ground rapidly, regularly, and beautifully; and so genial is the weather that the Grass fields are now more green than they were previous to harvest. The seed-furrowing of leas for Oats is now being proceeded with, and the work generally is far advanced. Should the weather con-

tinue fresh, we shall for some time be engaged in ploughing the remainder of the leas for Oats, in turning over the Turnip ground after the sheep for Wheat or Barley, in storing Turnips, and, should frost set in, the manure in the courts will require to be carted to the field. About harvest it was anticipated that the Turnip crop would be unusually light, and consequently there was a brisk demand for them at very high prices to be eaten off by sheep; but since that time, with the abundant rain and the very fine weather, the crop has so much improved that it is now a full average one, and prices are again declining. Both sheep and cattle are doing well, the former still having a good bite of Grass. Because of the high price of beef, and the low price of grain, a greater quantity of grain is being given to stock this season than perhaps was ever given in any previous year. Wheat is now fetching with us 36*s*, Barley 21*s*, and Oats 17*s*. per quarter. Last year the finer samples of our Barley were purchased for brewing purposes, and fetched a good price, but this year Barley of fine quality is so abundant in the south that our Barley is purchased only for distillation, and fetches, comparatively, a low price. There is little alteration in the wages of half-year servants, but labour is scarcer, and work-people are worse employed than they have been for several seasons. Only meal and Potatos are abundantly cheap. Should the projected northern railways be gone on with, which in all likelihood they will, there will be no lack of labour for several years to come. [The above was written in the second week of December.]

METEOROLOGICAL OBSERVATIONS—BERKSHIRE.

By the Rev. J. SLATTER, Stratley, near Reading.

At 9 A.M., Railway Time.

Day of the Week.	Day of the Month.	Barometer corrected to Freezing Point at Mean Sea Level.	Thermometer. Dry Bulb.	Thermometer. Wet Bulb.	Wind. Direction.	Wind. Force, 0—6	Amount of Cloud, 0—10.	Reading of Self-Registering Thermometers. In Shade. Max.	In Shade. Min.	Max. in Sun.	Min. on Grass.	Rain fallen in previous 24 hours on the Ground.
	Dec.	Inches.	°	°				°	°	°	°	Inches.
Friday ..	23	30.42	33	32	N.E.	3	10	36	31	38	28	..
Saturday ..	24	30.16	31	29	N.E.	1	6	33	27	35	21	..
Sunday ..	25	30.45	33	31	N.E.	0	10	33	29	38	27	..
Monday ..	26	30.42	33	30	N.E.	0	10	33	31	36	20	..
Tuesday ..	27	30.30	31	30	N.	0	10	33	29	35	24	..
Wednesday ..	28	30.43	34	33	N.	0	4	37	28	39	23	..
Thursday ..	29	30.47	42	41	S.W.	0	10	44	33	50	33	..

Notices to Correspondents.

DRAINAGE: *W C D.* By all means carry your drains in the direction of the inclination, otherwise, because water will not run up hill, one side only of your drains will work. In your clay by no means allow the distance from drain to drain to exceed 25 feet. You must scarcely expect to do your work, 4 feet deep, at less than 4*l*. 10*s*. per acre, considering the price of your pipes, and the stony subsoil. If you employ 1½ inch pipes for the first length of each drain, using ¾-inch pipes when the accumulation of water shows it to be necessary, the outlay will be somewhat reduced. The article Drainage in "Morton's Encyclopædia of Agriculture" will afford much valuable information.

FLOUR MILL: *A Y.* We do not know the Conical Mill to which you refer, and you should give your name and address as a guarantee that the question is not simply an advertisement, before we can publish it.

FOOT ROT: *Wm. Sayer.* Sulphate of lime powdered, 1 oz.; Sulphate of zinc powdered, 1 oz.; Creosote, 1 scruple; Stockholm Tar, 4 oz.; Lard, 4 oz.; to be made into an ointment and applied occasionally to the feet of the sheep and between the claws. *W C S.*

MANURE FOR PASTURE: *A Londoner.* In the absence of farm yard or town dung, in all probability bone dust would be most beneficial to the Grass. If you get some well broken and mix it with some damp mould to heat and rot before applying, it will be more immediately active: 16 bushels an acre are a good dressing.—The Thorn and hedges of it are to be grown just as any other plant is cultivated, by planting in land properly prepared, and taking care that no other plant is growing with it. Clean the hedge, stir the earth about the roots, and cover them up with good compost mould.

STANDS AT SMITHFIELD SHOW: *Chester.* Exhibitors of roots, &c., can obtain any width and height they please (in reason) for their stands by making application early enough. The stands at the last Show were of all heights, widths, and depths within very large limits.

TAKING A FARM: *Ploughman.* It is usual to estimate farm capital at 10*l*. per acre. But 100 acres of good land cannot be stocked and managed for 1000*l*. A grazing or dairy farmer is liable to risks of a different kind, but often quite as serious as those of arable culture. Pleuro-pneumonia may destroy your profits for several years at a single blow.

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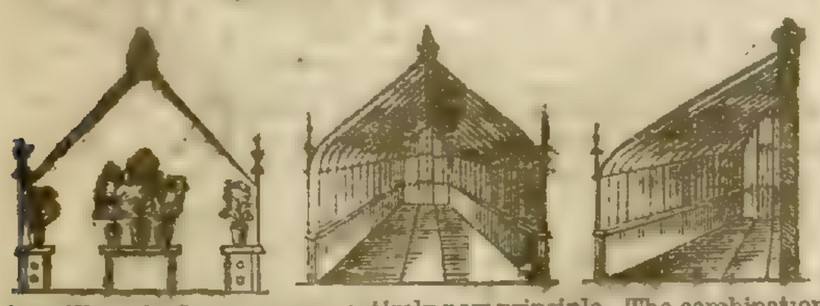

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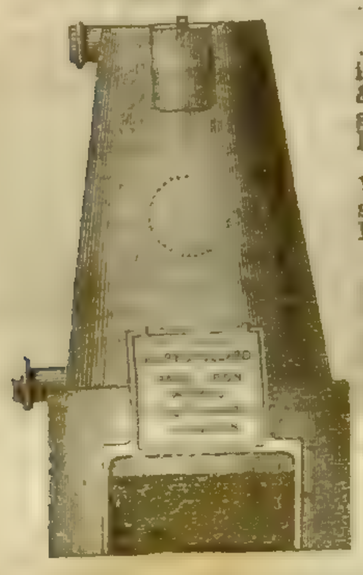

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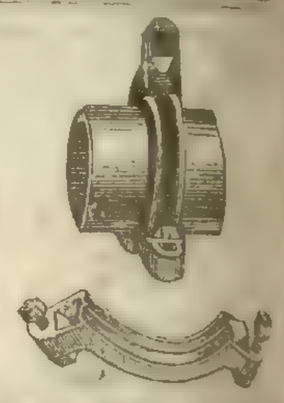

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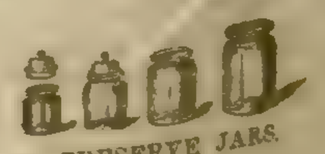

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The Gardeners' Chronicle Newspaper.

SATURDAY, JANUARY 2, 1864.

EVENING LECTURES at the ROYAL SCHOOL of MINES, Jermyn Street.—Professor RAMSAY, F.R.S., will COMMENCE a COURSE of TEN LECTURES on Stratigraphical Geology, on TUESDAY, January 12, at 8 o'Clock, to be continued on each succeeding Friday and Tuesday Evenings at the same hour. Tickets for the whole Course, price 5s., may be had at the Museum of Practical Geology.
TRENHAM REEKS, Registrar.

LECTURES to WORKING MEN.—The SECOND COURSE of SIX LECTURES on METALS, by Dr. PERCY, F.R.S., will be COMMENCED on MONDAY, January 11, at 8 o'clock. Tickets may be obtained by Working Men only on Monday, January 4, from 10 to 4 o'clock, upon payment of a fee of 6d. for the whole Course. Each applicant is requested to bring his name, address, and occupation, written on a piece of paper, for which the ticket will be exchanged. Written applications cannot be attended to.
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THE NATURAL HISTORY REVIEW.
No. XIII. (January, 1864.)

CONTENTS:—

1. Davy's Physiological Researches—2. The Mammals of the Australian Region—3. Peters's Memoir on Solenodon—4. Haast on recent Discoveries in New Zealand—5. Swinhoe on the Natural History of Formosa—6. Huxley's Lectures on the Origin of Species—7. Recently published British Floras—8. Vegetable Hybridity—9. The Lignite Formation of Bovey Tracey—10. Decaisne on the Variability of Species—11. Agardh's Species Algarum—12. Hartig's Contributions to Vegetable Physiology—13. Gulliver's Observations on Raphides—14. Lestiboudois on Laticiferous Tissue—15. Scracht on the Primordial Utricle—16. Salter's Essay on Monstrous Passion Flowers—17. Cesati and De Notaris's ascigerous Sphaeriacei—18. On Cranial Deformities (by Dr. W. Turner)—19. On Anomalies in Zoological and Botanical Geography (by A. R. Wallace, Esq.)—20. On the Replacement of Species (by Dr. J. D. Hooker)—21. On the Development of the Cranium (by Prof. H. Rathke)—22. Proceedings of the Scientific Societies of London—23. Miscellanea.

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THE EDINBURGH REVIEW, No. CCXLIII.—ADVERTISEMENTS intended for insertion are requested to be forwarded to the Publishers immediately. ADVERTISEMENTS and BILLS cannot be received later than SATURDAY NEXT.
London: LONGMAN & Co., 39, Paternoster Row, E.C.

FRASER'S MAGAZINE for JANUARY.
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The Highway of Nations.
Late Laurels.—A Tale. Chaps. XXV. and XXVI.
Christmas Evergreens. By Astley H. Baldwin
Stephen on Criminal Law.
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The Royal Academy Commission.
"Beyond." By Fred. H. Wnymper.
The Poetry of the Eighteenth Century.
The Story of Nala and Damayanti. Translated from the Sanscrit Text by Charles Bruce.
Japan.
"Far Away." By John S. B. Monsell.
Concerning Ugly Ducks: being some Thoughts on Misplaced Men. By A. K. H. B.
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News of the Week.

THE question of Schleswig-Holstein is rapidly assuming so serious an aspect, that a few days, or even a few hours, may witness the commencement of a war which will involve all Europe in its consequences. The KING of DENMARK, as we stated last week, in compliance with the urgent representations of England, Russia, and Sweden, withdrew the ordinance which regulated the relations of the German Duchy of Holstein to the kingdom of Denmark, thereby leaving the future status of that Duchy to be decided by negociations with the German Diet, or by the friendly mediation of the Great Powers. HIS MAJESTY also agreed not to regard the Federal execution in Holstein as an

act of war, and ordered the Danish troops to evacuate Holstein and Lauenburg as the Germans advanced. These concessions have not satisfied the German Powers, which now demand the withdrawal of the Constitution by which the duchy of Schleswig, which forms no part of the Federal territory, has been incorporated with Denmark. This demand was first made by Prussia under a threat that if it were not complied with, she would withdraw from the London Treaty of 1852. Austria has since joined Prussia in submitting a motion to the Federal Diet that Denmark shall be called upon to suspend the common Constitution with regard to Schleswig, with an intimation that, in case of a refusal, the Diet will protect the rights of Germany by a military occupation of the Duchy. On the receipt of this intelligence, England, Russia, and, it is said, Sweden advised the KING OF DENMARK to withdraw the Constitution in compliance with the demand of Germany, and HIS MAJESTY was disposed to convoke the Rigsraad for the purpose of obtaining their sanction to the concession. The Ministers, however, declined to assume the responsibility of such a step, and tendered their resignations, which were accepted. All attempts to form a new Ministry were unsuccessful until Thursday last, when Bishop MONRAD, who had filled the office of Minister of Public Worship in the late Cabinet, succeeded in forming an Administration. Meantime various circumstances had occurred to convince the KING and the Ministers that the withdrawal of the common Constitution is now impossible. On Saturday the members of the late Cabinet, and several eminent statesmen belonging to different parties in the Rigraad, had an interview with the KING for the purpose of urgently remonstrating against the suspension of the Constitution; and there is little doubt that, in the present temper of the Danish people, such a concession would be the signal for a revolution. The KING, therefore, has resolved to resist further aggressions on the part of Germany, and as the jurisdiction of the Diet does not extend across the Eider, any attempt made by the Federal forces to cross that river into Schleswig will be an act of war. With regard to Holstein, all the accounts concur in showing that the occupation of that Duchy has assumed a character totally different from that of a simple Federal execution. Wherever the German forces have set foot the banner of revolution has been raised; and although the question of the succession was distinctly stated to be reserved, Prince FREDERICK has been proclaimed as Duke of Schleswig-Holstein, with the tacit approval of the Federal Commissioners, and has announced to all the Governments of Europe his accession to the sovereignty of the united Duchies. In reply to this communication the EMPEROR OF THE FRENCH, while expressing his hope that the Prince's claims may be investigated by the German Diet and the result of their deliberations be submitted to the Powers that signed the Treaty of London, significantly reminds him that intervention may bring on very grave complications without deciding the question, and that if Denmark be oppressed by powerful enemies public opinion in France will incline towards her; while the British Cabinet is said to have informed the Courts of Austria and Prussia that England considers the Treaty of 1852 valid and binding upon all the Powers by which it was signed; that she will not look on quietly at the dismemberment of the Danish monarchy; and that in the event of the German troops crossing the Eider, she will be unable to refuse the assistance requested by Denmark.

Despatches from Pesth state that there is great agitation throughout Hungary, and that by order of KOSSUTH a manifesto has been published in the principal towns, announcing the establishment of a committee for the independence of the kingdom.

The latest accounts from the United States inform us that General LONGSTREET has turned upon his pursuers, and that his rearguard has repulsed General SHERMAN with heavy loss. The Confederate army at Dalton has been completely re-organised under General HARDEE, who is preparing for an active winter campaign. The official reports of the commanders of the Monitors engaged in the naval attack on Charleston, express disappointment at their capacity to overcome strong forts, and state that if the attack had been prolonged, all the Monitors would have been disabled.

A despatch from Shanghai of the 25th November, states that affairs in Japan are more pacific. Prince SATSUMA has proposed by way of settlement to pay an indemnity for the death of Mr. Richardson, and to erect a mausoleum to his memory. The war in New Zealand is proceeding, and the natives are said to be evacuating their stronghold.

The Revenue returns for the year and quarter ended the 31st ult., show a decrease of 562,809*l.* on the year, and a decrease of 60,762*l.* on the quarter. The decrease in both cases is confined to the Customs and the Property Tax, and is fully explained by the reduction of the duty on Tea and the partial remission of the Income Tax effected by the Budget of last year. All the other sources of revenue show a steady and progressive increase.

Home News.

THE COURT AT OSBORNE.—The Queen and Roya family continue at Osborne. On Thursday week Prince Leiningen arrived on a visit. In the afternoon, by her Majesty's command, the children of the workmen and labourers on the Osborne estate were assembled in the servants' hall at Osborne, where a Christmas tree, with presents, was arranged. At half-past 4 the Queen, accompanied by the whole of the Royal family, proceeded to the hall, and, assisted by the Royal family, distributed the presents to the children, which consisted of articles of wearing apparel, books, toys, &c. Afterwards her Majesty, in the same manner, gave the labouring men and women great coats, blankets, &c. On Friday morning, being Christmas Day, her Majesty, with the Prince and Princess of Wales, Prince Alfred, Princess Helena, Princess Louisa, Prince Arthur, Prince Leopold, and Prince Leiningen attended divine service at Whippingham Church. The Rev. G. Prothero officiated, and administered the sacrament. On Saturday afternoon the Queen walked in the grounds, accompanied by the Princess of Wales. The Right Hon. C. P. Villiers arrived from London, and had an audience of her Majesty. Dr. Watson and Dr. Jenner also arrived from London. On Sunday morning the Queen, Prince Alfred, Princess Helena, Princess Louisa, Prince Arthur, Prince Leopold, and Princess Hohenlohe attended Divine service at Osborne. The Rev. G. Prothero performed the service. The Prince and Princess of Wales attended divine service at Whippingham Church. On Monday morning the Queen and the Princess of Wales drove out. The Prince of Wales and Prince Alfred went out shooting. On Tuesday morning the Queen walked and drove in the grounds. Her Majesty afterwards drove out with the Princess of Wales. On Wednesday morning the Queen, the Princess of Wales, Princess Louisa, and Princess Beatrice drove out. The Prince of Wales and Prince Alfred went out shooting. Earl Russell and the Right Hon. T. Milner Gibson arrived and had audiences of her Majesty. In the evening Earl Russell dined with the Queen and Royal Family.

LORD LIEUTENANCY.—The Queen has appointed the Earl of Kintore to be Lieutenant and Sheriff Principal of Aberdeenshire, in the room of the late Marquis of Huntly; and Sir James Horn Burnett, Bart., to be Lieutenant and Sheriff Principal of Kincardineshire, in the room of the Earl of Kintore, resigned.

PARLIAMENTARY MOVEMENTS.—The election for Buckinghamshire took place yesterday at Aylesbury. The numbers are not yet announced, but it is known that Mr. Harvey obtained a large majority over Dr. Lee. The result of the poll will be declared on Monday. It has been determined to bring forward Mr. Ralph Neville Grenville and Mr. Richard Horner Paget as candidates for East Somerset at the next general election.

COLONIAL BISHOPRICS.—The Right Rev. Dr. Nixon has resigned the Bishopric of Tasmania. The clergy and laity of the colony have memoralised the Crown to select his lordship's successor, with the advice of the Archbishop of Canterbury and the Bishop himself, from the clergy of the Church at home. The Archbishop of York has presented the living of Bolton Percy to Bishop Nixon.

THE REVENUE.—The Revenue returns for the Year and Quarter ended the 31st ult. were published yesterday. They show a decrease of 562,809*l.* on the year, and a decrease of 60,762*l.* on the quarter. In the year's account there is a decrease in the Customs of 615,000*l.*; Property Tax, 1,298,000*l.*: and an increase in the Excise of 211,000*l.*, Stamps, 338,055*l.*, Taxes, 60,000*l.*, Post Office, 200,000*l.*, Crown Lands, 3,979*l.*, Miscellaneous, 537,157*l.* In the quarter's account there is a decrease in the Customs of 350,000*l.*, Property Tax, 799,000*l.*; and an increase in the Excise of 753,000*l.*, Stamps, 106,000*l.*, Taxes, 15,000*l.*, Post Office, 40,000*l.*, Crown Lands, 1,000*l.*, Miscellaneous, 173,238*l.*

Foreign.

FRANCE.—The Emperor presided on Wednesday at a Council of Ministers. General Forey will proceed shortly to Miramar on a mission to the Archduke Maximilian, who is expected shortly to visit Paris. The German papers publish a correspondence between Prince Frederick of Augustenberg and the Emperor Napoleon. In announcing to the Emperor that he has taken possession of the government of the Duchies, the Prince enters into long details respecting their rights and his own, and in the name of equity and of the principle of nationalities asks the support of the Sovereign of France. The letter concludes with an allusion to the similarity of their past fortunes, and to the kind welcome he formerly enjoyed at the Imperial Court. The following is the Emperor's reply:

"My Cousin,—I have read your letter with a lively interest, and hasten to reply to it. I know of nothing more honourable than to be the representative of a cause which rests upon the independence and nationality of a people, and in that respect you may rely upon my sympathy, for I shall always be consistent in my conduct. If I have fought for Italian independence, if I have raised my voice for Polish nationality, I cannot, in Germany, entertain other sentiments nor obey other principles. But the Great Powers are bound by the Convention of London, and their assembling could alone solve without difficulty the question which interests you. I, therefore, sincerely regret on this, as well as on many other accounts, that England has declined to attend the Congress which I proposed. It is a pity that the Diet has not been consulted respecting the rights of the Duchy which forms part of the German Confederation; Denmark may also have acted in some part wrongly towards Germany; but, on the one hand, I deplore that the Confederation has thought fit to intervene in Holstein before the question of succession has been decided, for the intervention, which may lead to the most serious complications, does not decide that question: and, should Denmark be oppressed by powerful neighbours, public opinion in France would turn in her favour. I therefore most sincerely hope that your claims may be investigated by the German Diet, that the result of its deliberations may be submitted to the Powers that signed the Convention of London, so that the national sentiment, which so energetically pronounces itself in Germany, may receive legitimate satisfaction by common consent. I have pleasure in taking advantage of this opportunity to offer you the assurances of my esteem and constant good will; whereupon, my Cousin, I pray God to have you in His holy keeping. NAPOLEON. Compiègne, Dec. 10, 1863."

A Report of Marshal Randon, approved by the Emperor, was published on Tuesday, announcing that general officers on service, no matter how employed, will be relieved of their functions as soon as they have reached the age of 70. The Turkish Ambassador had a private audience of the Emperor on Monday, and delivered the reply of the Sultan to his Majesty's letter of invitation to the Congress. The reply states, that as the Sovereign of an empire, the interests and prosperity of which depend, in great part, upon the maintenance of peace, the Sultan will experience a genuine satisfaction in seeing it established upon a solid and durable foundation. With regard to his personal views, his Majesty refers to a communication he has made to the French Ambassador, to whom he has expressed a desire to know beforehand the basis of the deliberations. The Ambassador's note of this conversation, which is published with the reply, says that the Sultan accepts the invitation of the Emperor, but added, that as his presence alone in France would not be sufficient, he should only undertake the journey if the other Sovereigns themselves go to Paris. The new official map of France is now terminated. This immense work, executed by the general staff of the army, has occupied nearly 60 years. A crime similar to that committed by the notorious Palmer is the subject of judicial investigation in Paris. A physician insured the life of his wife for 500,000f. (20,000*l.*), and shortly after the payment of the first premium the young woman died. The suddenness of the death and the large amount for which the life was insured created suspicion in the minds of the insurance company, and they determined to make the case known to the highest law authority. An investigation was commenced under the direction of the Imperial Attorney-General, in consequence of which the physician was arrested and committed to the prison of Mazas. It is said that M. Alexandre Dumas, the novelist, is no longer paid by the line, but by the letter, the "Sun Félice," which is now in course of publication, being paid for at the rate of a centime a letter. A Frenchman has patented an invention for pulverising the refuse of slate, and mixing with it some substance which produces a most durable material, and which answers the same purposes as some kinds of our most valuable stone.

SPAIN.—The Madrid papers deny that there is any truth in the rumours of a Ministerial crisis. A semi-official announcement states that the Ministers are decidedly favourable to the assembling of a Congress at Paris, in order to avoid the consequences of an European war. The following declaration was made in the Cortes by the Marquis de Miraflores, President of the Council, prior to the recent vote on the Address:—

"The Government will retain its post if your decision be favourable to it, possessing as it does the confidence of the Crown. But the Government will not do so from egotism, but because it desires to form a homogeneous and respectable majority. When such has been formed we shall tender our resignation, and indicate to the Queen the names of the men

of this majority, in order that a Cabinet may be formed which it will support."

Señor Nocedal and his friends voted against the Government upon the Address. The report that the Spanish Government is about to contract a loan of 300,000,000 reals in Paris is contradicted.

PORTUGAL.—The Channel fleet is at Madeira. A few cases of scarlatina have occurred on board the Black Prince. The Oporto Railway is completed, and will be opened this month. Great cold prevails in Portugal.

NORWAY.—Public meetings in all the large towns of Norway have resolved to send addresses to the Government, requiring it to support Denmark. The reason alleged is, that although the Federal Commissioners in Holstein had prohibited the inhabitants from proclaiming Duke Frederick of Augustenburg, this had, nevertheless, been done by a public meeting at Elmshorn, in the presence of the Federal troops.

DENMARK.—The Ministers last week tendered their resignations, which were accepted by the King. It appears that Russia and England had urged the King to withdraw the November Constitution in compliance with the demands of Prussia, who had threatened in case of a refusal to withdraw from the London Protocol of 1852. The King wished to obtain the sanction of the Rigsraad to a suspension of the Constitution, and to assemble that body for the purpose. The Ministers thereupon declared that they could not assume the responsibility of such a step, and would rather accept war even should Europe leave Denmark isolated. Several members of the Right were asked by the King to form a Ministry, but declined. General Oxholm, formerly Ambassador at London, was subsequently commissioned to form a Ministry, but without success. On Saturday the members of the Cabinet, and several eminent statesmen belonging to different political parties in the Rigsraad, had an interview with the King. They were all unanimous that a legal suspension of the common Constitution is now impossible. The reasons they gave were that wherever the Federal troops have appeared in the Duchy of Holstein, a revolution has been accomplished under their protection, by which King Christian has been deprived of his rights as Duke of Holstein; that Prince Frederick has also been proclaimed, and every expression of loyalty suppressed, in the presence of the Federal troops, while the principal clergyman in Altona has been compelled to fly from the town for remaining loyal to King Christian. The Ministerial crisis was not definitively terminated until Thursday, when Bishop Monrad, the late Minister of Public Worship, undertook the formation of a new Ministry. Bishop Monrad himself takes the office of President of the Council and Minister of Finance, and will act provisionally as Minister for Foreign Affairs. The War Minister, M. de Thestrup, and the Minister of Justice, M. Casse, remain in office. The King afterwards left Copenhagen to visit the army, and will shortly be joined by the Crown Prince Frederick, who is now residing in Schleswig. The Austrian and Prussian Ministers will leave Copenhagen in a few days if the Constitution of the 18th of November be not rescinded by the end of the year. The following protest of King Christian against the Federal Execution in Holstein, has been addressed by M. Hall, the Minister of Foreign Affairs, to the Governments of Prussia, Austria, Saxony, and Hanover:—

"The resolution passed by the German Federal Assembly on the 7th December is already deprived of all binding force for his Majesty's Government, by the circumstance that it has been passed after the illegal exclusion of his Majesty's Plenipotentiary from the Assembly. Besides, with regard to the fact that the said decree pretends to be founded on the preceding Federal decree of October 1, it is impossible for the King's Government to consider this latter as a valid motive for the proceedings of execution which has recently been resolved, for the following reasons:—That the ordinance of March 30 of this year, against which the said decree was directed, has afterwards been formally repealed. That the mediation offered by the British Government, with a view of reconciling the pending differences between Denmark and the Confederation, has been accepted by the Royal Government in the sitting of the 29th of October. That the King's Government in the same sitting, declared itself ready to meet the Confederation in every point in which the autonomy or equality of rights claimed for the Federal provinces should not be considered as being sufficiently guaranteed at present. But the singular character of the pretended Federal execution is rendered more perceptible since the Federal Assembly has proceeded to question his Majesty's right of succession, and the validity of the Treaty of London, of May 8, 1852. For, even considering the matter from the point of view of the German Confederation, it must be admitted that any demand on the part of the Confederation with regard to the position of Duke of Holstein, must be subordinate to a preceding acknowledgment of the King as Duke of Holstein and Lauenburg. Lastly, the request addressed to the King's Government is not in conformity with the prescriptions laid down in the regulations for the procedure of execution dated August 1, 1820 (Art. X), namely, in this important point, that it has not been made possible for the King's Government to avoid the execution by submission to any precise demand addressed to it. Far from this, the execution itself appears simply as the only object of the Federal resolutions. His Majesty is under these circumstances unable to recognise the so-called execution resolved by the Confederation as a legal proceeding founded in the Federal law, but intends, on the contrary, to reserve formally his Sovereign and dynastic rights. His Majesty therefore protests by this present, and in the most solemn manner, against the unquestionable encroachment which has been announced to him, and reserves for himself, in case such, further resolutions as he may consider reconcilable with his rights and interests."

THE DANISH DUCHIES.—On Friday the Federal Commissioners issued a proclamation stating that Altona will be their seat for the transaction of business, that the reports hitherto sent to the Minister at Copenhagen are henceforth to be forwarded to the Commissioners, and that prayers are to be put up in the churches only for the Government, its councillors, and servants. Another proclamation was published on Saturday, expressing itself in very decided terms against any premature measures on the part of the people, and especially against any act anticipating the decision of the Federal Diet by proclaiming the Prince of Augustenburg. The Commissioners further pronounce against any arbitrary removal of functionaries, and call upon the people strictly to obey their previous proclamation, in order that the Commissioners may not be obliged to adopt measures to restrain them within the limits of legality, at the same time stating that no objection will be made to expressions of sympathy with the House of Augustenburg. Another proclamation was issued on Tuesday, removing Count Moltke, the President of the Provincial Government of Holstein and Lauenburg, with the Government Councillors Rosen and Warnstadt, from their posts, owing to the present circumstances of the country. They have since dismissed the local authorities at Ploen from their posts. On Monday several deputations had interviews with the Commissioners. Among them were four Deans of Universities, requesting the recognition of Prince Frederick by the Confederation; and a deputation from the town authorities of Kiel, requesting a speedy despatch of troops, on account of excesses committed by the Danes. On Wednesday night Prince Frederick travelled by way of Harburg by steamer to Glückstadt, and thence by special train to Kiel, where he arrived at 3 o'clock. He entered the town in an open carriage, and was received with great enthusiasm. The Prince was proclaimed Duke of Schleswig-Holstein, and showed himself to the people. A deputation from the municipal authorities of Altona was about to proceed to Kiel to pay homage to the Duke in the name of the city. The Duke has since notified to the Federal Commissioners his entry into his country, and has informed them that he does not intend either to assume the government immediately or to oppose the Federal resolutions of the 7th ult. The Duke will remain three days at Kiel in a private capacity by request of the inhabitants; but in order not to aggravate the difficulties of the Federal Commissioners, he intends subsequently to return to Altona. The Federal Commissioners have applied to Frankfort for fresh instructions. The great popular assembly which took place at Elmshorn on the 23rd ult., was attended by about 20,000 persons from all parts of the country. The meeting adopted unanimously the following address to the Prince of Augustenburg:—

"As far as Schleswig Holstein has been evacuated by the Danes, the inhabitants have sent deputations to this meeting. Your Highness has been solemnly proclaimed by the Schleswig-Holsteiners here assembled as legitimate Sovereign and Duke of Schleswig-Holstein. Whatever sacrifices it may cost, the country will make them."

Herr Metz (from Darmstadt) declared in the name of the Frankfort Committee of the National Association that the German nation will support Schleswig-Holstein with all its power. Prince Frederick has also been proclaimed in Pinneberg, Glückstadt, Neumunster, Neustadt, Bramstedt, Marne, and Oldesloe. 450 Holstein soldiers of the Danish army who had been ordered to the north refused, on arriving at Ploen, to proceed further. Advices from Lauenburg to the 20th ult. state that popular demonstrations have taken place against the resolutions of the assemblies of the nobility and the landed proprietors in favour of Denmark. The Saxon troops have left Altona, which has been entered by the Hanoverian troops. The Danish troops left Neumunster on Sunday, and General Hacke has received official notification from the chief of the Danish general staff that Rendsburg will be evacuated forthwith. The *tête-de-pont* of Frederickstadt was blown up by the Danes on Wednesday night, and totally demolished. The Danes distrust the Schleswig regiments, and occupy them in the construction of earthworks. The six villages on the north side of the river Eider, formerly belonging to Holstein, and now incorporated with Schleswig have been evacuated by the Danes, and will forthwith be occupied by the German troops. The Federal Commander-in-Chief arrived at Ivenstedt on Wednesday, and was expected to reach Rendsburg on Thursday, when detachments were to be sent to Frederickstadt.

SAXE COBURG GOTHA.—Prince Frederick of Augustenburg on Monday at Gotha, received an official deputation from the University of Kiel, consisting of the Deans and Professors Fricke, Neuner, Litzman, and Thoulon, who were the bearers of an address of allegiance from the Academical Consistory. The Prince has announced to the European Governments his accession to the throne of Schleswig and Holstein.

WURTEMBURG.—In the Chamber of Deputies at Stuttgardt on Thursday, the Minister for Foreign Affairs, Baron von Hügel, declared that the Government considers itself released from the engagements entered into by its adhesion to the London treaties, and that it looked upon Prince Frederick as being entitled to the hereditary succession. The Minister further stated that the representative of Wurtemberg at the Federal Diet had received instructions to act in conformity with these views. In conclusion, Baron von Hügel announced that Wurtemberg, Bavaria, and Saxony were fully agreed upon the Schleswig-Holstein question.

FRANKFORT.—At an extraordinary sitting of the Federal Diet on Monday, the representative of Hesse Darmstadt moved the immediate occupation of Schleswig, to insure the rights of the German Confederacy. Austria and Prussia proposed the following motion:—

"That the Confederation should require Denmark definitely to suspend the November Constitution with regard to Schleswig, and should at the same time notify that, in case of refusal, the Confederation will be compelled to obtain satisfaction for the fulfilment of its just demands by the military occupation of Schleswig. That the Federal Diet shall also request the Military Committee to submit a proposition for raising the forces possibly required for the occupation of Schleswig to the necessary strength."

The motion was referred to the Committee on the Danish question. The following note from Sir Alexander Malet the British Minister, was also read and referred to the same committee.

"In consequence of instructions from the Government of her Britannic Majesty, the undersigned has the honour to communicate to his Excellency Baron von Kübeck, President of the Federal Diet, a copy of the London Treaty of May 8, 1852. The undersigned was the honour to request his Excellency to lay this treaty before the Assembly of the Federal Diet. The undersigned is, at the same time, instructed to remark that the High Federal Assembly will observe that by the treaty France, Great Britain, Russia, and Sweden agree to recognise King Christian IX. as the successor to all the possessions held by his Majesty the late King of Denmark. The recognition has already taken place by all these Powers. The undersigned is, therefore, instructed to point out to the Federal Assembly by any over-hasty step it might run a course opposed to the London Treaty, serious complications might result. The undersigned is further instructed to notify to his Excellency the President of the Federal Assembly that the Government of her Britannic Majesty is ready to discuss these subjects in a Conference which should assemble at any place that might be agreed upon, and in which all the subscribers of the London Treaty and a representative of the German Confederation should take part."

PRUSSIA.—Owing to his state of health the King did not receive the usual official congratulations on New Year's Day. The Royal Family, Court, Field-Marshal Wrangel, Commander-in-Chief, General Werder, Governor Schach, and the Ministry were, however, admitted. In the Chamber of Deputies on Thursday, the King's reply to the Address was read. The following is an abstract:—

The King maintains his Royal prerogative with regard to foreign relations. Mature consideration had resulted in the king's resolution to proceed in the matter of the Duchies in a manner becoming the honour of Prussia and Germany while observing respect to treaties. The Chamber could not expect that the King, without taking into account Prussia's international relations, should unilaterally withdraw from the European Treaties concluded in 1852. The question of the hereditary succession was being examined by the Federal Diet. The matter to be meanwhile considered by the Chamber was Prussia's Federal duty with regard to the execution and the defence of the country against dangers which might easily and soon rise out of that proceeding. The King, therefore, expected a speedy adoption of the proposed loan.

His Majesty's reply was referred to the committees on the loan. It is reported in Berlin and confirmed by the *Nord Deutsche Zeitung* of Thursday that England has protested against the adhesion of Prussia and Austria to the threatened occupation of Schleswig, and has stated to the Federal Government that in case German troops cross the Eider she will be unable to refuse the assistance requested by Denmark. It is also reported that the Crown Prince of Prussia, who is a personal friend of Prince Frederick of Augustenburg, is one of the warmest advocates of his claims to the sovereignty of the Danish Duchies.

HUNGARY.—The following proclamation, by order of Louis Kossuth, has been issued by the Hungarian National Committee, and distributed and placarded in all the cities and towns of the kingdom:—

"Faithful attachment to the flag of 1849 is unalterable in the heart of our nation. The great majority of the nation, rejecting every kind of compromise, is firmly resolved to shake off the detested yoke of the Austrian domination. But, as the outward signs of our national life have not latterly been in harmony with this resolution, doubts have arisen among our natural allies abroad with regard to the firmness of those intentions. These doubts have been the greatest obstacle to the efforts of our government, tending to effect the freedom of our country. To remove this obstacle becomes an imperious necessity in view of the new direction of European events, which offer a tempting perspective to all the peoples groaning under a foreign yoke. We must give some sign of life in order that our natural allies may be convinced that they can count with certainty upon the Magyar arm against the common enemy. We must be on our guard in order that the stratagems of alarmed Austria do not draw our nation into a snare. We must prepare ourselves so that we may be in a condition to energetically take advantage of the favourable opportunity. To obtain all this the Governor, Louis Kossuth, terminating all previous arrangements, has deemed it necessary to order the formation of a new general committee. By the present act it is therefore made known to the nation that in consequence of this order the General Committee of Independence has been constituted, and that, having as object the realisation of the declaration of independence of 1849, being ready besides to make every sacrifice, it has resolutely undertaken the direction of affairs, in conformity with the instructions received and to be hereafter received from the elected governor of our country. The committee counts upon the patriotic sentiments of the nation that the orders it may give will be promptly executed, its instructions followed, and its arrangements spontaneously carried out. At the same time, it seriously warns the open and secret enemies of the flag of 1849 to abstain from any plot or intrigue if they do not wish to incur the penalties inflicted upon traitors to the country. In any case, the General Committee of Independence declares that it has determined to secure obedience to its orders and the execution of its eventual arrangements. Let the nation live in good hope, and let every honest patriot prepare for action. Our device is '1849 and Victory.' Given at Buda Pesth, Nov. 26, 1863." [Here follows the seal of the committee, bearing the national arms, around which are inscribed the words, "General Committee of Independence."]

POLAND.—An order has been issued by General Berg that, until the complete restoration of tranquillity, all the police authorities, including the head of the police, shall be subordinated to the military authorities. Numerous arrests were made at Warsaw on Christmas

Day, and several others have since been made, particularly at the hotels. The celebrated insurgent warrior priest, the Abbé Mackevitch, has been taken prisoner. A gunner of the fortress of Wilna, named Casimir Sytcbouch, who had passed over to the insurgents, was shot on the 22nd ult. in the market-place of Wilna. Lieutenant Dominique Malekki, who had also passed over to the insurgents, has been shot at the same place. Chmielinski has been shot at Radom. A Podolian noble, M. Maurice Dnybacki, accused of having taken part in the revolutionary organization, was shot on the 11th ult. in the moat of the citadel of Kieff. The agents of General Berg in Warsaw, have commenced enforcing the signature of addresses expressing loyalty to the Czar. The first addresses were taken round in the Jewish quarter of the city. M. Pezewuski, the substitute of Archbishop Felinski, was required by an agent of the Government to issue a pastoral letter recommending the signature of the addresses, but he refused to comply. The National Government has made a fresh appeal to the insurgents in arms, and has issued a decree, dividing all the forces of the insurrection into four commands, the first three of which are apportioned to Bosak, Kruk, and Lada respectively. The fourth commander is not yet appointed. The *General Correspondenz* of Thursday confirms the intelligence of the insurgents having defeated the Russians at Wodzislaw, near Cracow. The Russians, who were commanded by Colonel Danilow, were pursued up to the gates of Miechow. A new insurgent corps, under the command of Zubr, has made its appearance in the government of Radow. Numbers of volunteers, including peasants, are waiting to be supplied with arms in the government of Lublin.

ITALY.—Garibaldi has sent in his resignation as deputy in the Italian Parliament on account of the recent vote sanctioning the acts of the Government in Sicily, as well as the cession of Savoy and Nice. The *Diritto* of Sunday publishes a manifesto, signed by 29 deputies of the Left, explaining the motives which determined the majority of the Left in Parliament not to quit their posts, but to remain in the Chamber. The *Stampa* of Monday denies rumours of extraordinary armaments being carried on by the Italian Government, and says:—

"Italy has been occupied for the last four years in forming her army. The possession of Venice by Austria is doubtless fraught with continual danger to peace in Europe, but it will not be Italy who by impatience will give the signal for war. Italy will not depart from that wise moderation of which she has given so many proofs, and to which she owes her successes."

On Christmas Day the Pope received the annual congratulations of the Cardinals, and delivered an allocution, recalling the triumphs of the persecuted Popes, and his confidence that the Church would recover possession of the usurped provinces by using firmness, constancy, and prudence. In receiving the functionaries the Pope declared that he expected serious events next year, but invited them to remain calm, "the Church always triumphing." The English Consul has been authorised by the Papal Government to sign passports and Italian papers.

VENETIA AND STYRIA.—The *Pays* says that great agitation prevails in Venetia, Styria, and several other southern provinces of Austria.

GREECE.—Advices from Athens announce that the Ministry had resolved that the military posts in Athens should be occupied by the police and gendarmes, instead of by the National Guard. Disturbances were consequently created by the latter. The sittings of the National Assembly were of a turbulent character. An address to the King requesting the dissolution of the National Assembly and a new Constitution was circulating in the provinces. The King has received a deputation from the Ionian Islands, requesting him not to accept the union of the Islands with Greece under the stipulated conditions.

TURKEY.—Advices from Constantinople to the 24th ult. assert that the Porte will shortly address an explanatory note to France on the subject of the Suez Canal, in conformity with its note of the 6th April.

EGYPT.—A telegram from Suez, dated the 30th ult., announces the inauguration of the meeting of the waters of the Nile with the Red Sea. A banquet took place on the occasion, at which toasts were proposed to Ismael and Said Pashas.

INDIA.—There has been no more fighting on the frontier. General Chamberlain has resigned the command to Major-General Garvock, on account of the wound he received in the late encounter with the revolted tribes. All is quiet at Peshawur. Sir William Denison was installed as Viceroy on the 2nd ult. The Peninsular and Oriental steamer Rangoon, in her passage from Calcutta to Suez, stranded near Aden on the 10th ult. Her passengers, mails, and cargo were landed safely, but the ship remained for 14 days in a critical position, when she was got off with the assistance of the Norma. She was apparently uninjured, and was to leave Aden for Calcutta in a few days.

CEYLON.—The Governor of Ceylon leaves for England with the present mail. The Alabama has captured and burnt the Amanda and the Winged Racer off Java. The United States' steamer Wyoming has gone to Christmas Island in pursuit of her.

JAPAN.—Advices from Japan arrived at Shanghai on the 9th November, stating that affairs were in a critical state. A great conference had taken place at Yeddo to discuss the advisability of entirely excluding foreigners from the country, the result of which was that the parties of the Tycoon and Prince Satsuma agreed upon the expulsion of foreigners from Japan. The yielding of the Tycoon was attributed to the pressure exercised by Prince Satsuma. Subsequent advices say that the state of affairs is more pacific. Prince Satsuma has proposed by way of settlement to pay an indemnity and erect a mausoleum to Mr. Richardson, and otherwise to atone for his death.

CHINA.—A despatch from Shanghai of the 25th November states that Major Gordon's steamer, the Firefly, has been seized by rowdies.

NEW ZEALAND.—Advices from New Zealand reached Melbourne on the 25th November announcing that the war is proceeding. The natives are said to be evacuating their stronghold.

NEW SOUTH WALES.—Five notorious Bushrangers called Gilbert, Ben Hall, Burke, Vane, and O'Meally, have for some months kept this colony in a state of excitement. Among their last exploits they entered Mr. Rothery's house at Limestone Creek just as that gentleman was sitting down to dinner. They handcuffed him and ate his dinner, calling for champagne. After dinner they played the piano, and before leaving tried two or three horses, so as to select the best. Mr. Rothery is a magistrate of the colony, and an extensive squatter in the neighbourhood of Carcoar. In another case they took up their quarters at the principal inn in a village, and after enjoying the best fare the landlord could produce, compelled him to get up a dance, at which they made the daughter of the chief person in the place dance with them.

UNITED STATES.—On the afternoon of the 14th ult. General Longstreet, who had been reinforced by Generals Van Cranch and Vaughan, turned and attacked the pursuing force of the Federals near Bean Station, on Cumberland Gap and Morristown Railroad, driving the Federals back a distance of half a mile, and capturing 22 loads of quartermaster stores. General Longstreet simultaneously extended a movement to cross the river and to get in the Federal rear, but failed to effect a passage across the river. The Federal General Wilcox, however, was driven back to Tazewell, where he is fortifying. On the 16th the Confederate cavalry commander Ferguson, with a small force, captured the train of the 1st Cavalry Division, while on the route from M'Minnville to Sparta, in Tennessee. The Union citizens were leaving Knoxville in the belief that Longstreet would again besiege the town. The Confederate guerilla General Morgan crossed the Tennessee River at Gillespie's Landing, 60 miles above Chattanooga, on the 13th ult., and joined General Longstreet in safety. Captains William and Robert Cummings, who escaped with him, from Columbus, were captured, together with 14 of their escort, during the ride from that town. Chattanooga despatches of the 18th ult. state that General Wheeler has rejoined General Hardee at Dalton, where he has posted his army, estimated at 35,000 strong, with pickets extending to the tunnel. General Wheeler is reorganizing his cavalry at Dalton for an active winter campaign against the Federal lines of communication. Generals Grant and Sherman have left Chattanooga for Bridgenorth. Advices from Charleston state that the Federals threw a large number of shells into the city on the 10th, provoking a heavy fire from the Confederate batteries. A severe gale has seriously injured the Confederate obstructions in Charleston harbour; it was believed sufficiently to render them ineffective against the Federal fleet. The official reports of the commanders of the Monitors during Admiral Dupont's attack on Charleston, has been published. They show that all the Monitors received severe damage, and that they were incapable of resisting the concentrated fire of heavy rifled ordnance. One commander says he was disappointed beyond measure at the experiment of Monitors overcoming strong forts, and considers it was a fair trial. A body of General Mosby's cavalry has captured one entire company of the 140th New York Regiment one mile and a half beyond Fairfax Courthouse. The Federal gunboat Perry has been captured near Charleston. The steamer Ceres has been destroyed off Beaufort. The Federal House of Representatives has passed a resolution by 93 to 64 that the war should be prosecuted so long as the rebels are found in arms. The Richmond press denounces President Lincoln's amnesty proclamation as an infamous document, which will but arouse the Southern people to new zeal and new efforts. The *New York Herald* has nominated General Grant as candidate for the next Presidency, and has put forward as an electioneering cry that he would crush the rebellion, obtain from England an indemnity for the depredations of privateers, or seize Canada and the West Indies, and expel the French from Mexico. The steamer Ella and Annie has recaptured the Chesapeake, with three of her crew, in Sambro harbour, Nova Scotia, and taken her to Halifax for judicial decision. A demand, under the Ashburton Treaty, for the return of the vessels and prisoners has, however, been made upon Lord Lyons by Mr. Seward.

MEXICO.—News from Vera Cruz to the 2d ult. has been received. The report of General Miramon's death is confirmed. General Bazaine is on his march towards the Pacific. Another corps is marching upon San Luis. Solas and Ormachez have resigned their posts as members of the Regency. General Negre commands at the city of Mexico. The French troops will shortly evacuate Vera Cruz, and the Mexican forces will occupy all the districts of the Terra Caliente actually conquered. M. de Saligny is about to return to France. The New Orleans papers contain an improbable report that the Mexicans had recaptured Puebla without resistance, and that the French garrison at Tampico is in a state of siege.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91¼ to 91 ex div. for Money, and 91⅛ ex div. for Acct.; Three per Cents. Reduced, 91⅛ to 91; New Three per Cents., 91 to 90⅞; India Five per Cent. Stock, 106⅝ to ⅞; Ditto Four per Cent., 100¼; Four per Cent. Enfaced Rupee Paper, 96; Exchequer Bills, 4*s.* to 7*s.* dis.—FOREIGN: Brazilian, 1863, 87½; Ditto Scrip, 1 to 0¾ dis.; Chilian Four and a Half per Cents., 83⅛: Egyptian, 100¾ to ½; Greek, for Acct., 24⅜ to 24; Italian, for Acct., 68⅛ to 67¾ ex div.; Mexican, 3½; Peruvian, 1862, for Acct., 86 to 84¾ ex div.; Portuguese, 1853, for Acct., 47¼ to ¾ ex div.; Ditto 1856, &c., for Acct., 47⅜ to ¾ ex div.; Russian, 1850, 85¼ to 86 ex div.; Ditto 1862, 89½ to 89; Spanish New Deferred, for Acct., 46½ ex div.; Ditto Passive, for Acct., 34¾ to ⅞; Ditto Certificates, 14⅜; Ditto for Acct., 14⅜ to ½; Turkish, 1854, for Acct., 90; Ditto 1858, for Acct., 70 to 69¾; Ditto 1862, 67¾ ex div.; Ditto 1000*l.* Bonds, 68⅜.

Gazette of the Week.

FRIDAY: *Dec.* 25.—BANKRUPTS.—T. ALCOCK, Greystock, Cumberland, Shoemaker—C. R. E. ARNOLD, Widegate Street, Bishopsgate Street, Baker—C. F. ANDREWS, Liverpool Street, Walworth, Baker—BIRTWHISTLE, Barton-under-Needwood, Staffordshire, Farmer—BENTON, Wakefield, Worsted Manufacturer—G. T. BURGESS, Great Yarmouth, Publican—J. BROADHEADS, Nottingham, Beerhouse Keeper—COLLINS, Bury, Lancashire, Commission Agent—W. COOLEY, Wolverhampton, Hosier—JOHN HURST CHEETHAM (and not JOHN HURST, of Cheetham as advertised in the "Gazette" of the 22d inst.), Manchester, Salesman—J. COLLINS and W. COLLINS, Bishop's Castle, Shropshire, Builders—W. DAWES, Bilston, Staffordshire, Draper—P. C. DEMVILLE, of Knutsford, Cheshire, Inn keeper—P. DICKINSON, Newcastle-on-Tyne, late Licensed Victualler—H. W. ETHERINGTON, Great Missenden, Buckinghamshire, Draper—J. EDE, Birmingham, Milliner—W. FOOTE, Sunderland, Brassmaker—JOB FLITCROFT, Pendleton, Lancashire, Laundryman—MARY FOX, late of Woolwich, Kent, Licensed Victualler—EDWARD GOODE, Guilsfo d, Montgomeryshire, Farmer—GEORGE CHARLES GRIFFITH, Wrexham Denbighshire, Stationer—THOMAS GAMBLE, Bradford, Yorks., Commission Agent—J GAMBLE, Palmerston St., Battersea, Cab Driver—W. GRIFFITHS, Ruthin, Denbighshire, Publican—R. GIBSON, Heaton, Cheshire, Beerseller—J. HAYWARD and C. BIDDLE, Ettingshall New Village, Staffordshire, Working Miners—W. HAWKES, Deptford, Blacksmith—E. HEINE (also known by the name of E. KRUEGER), Wigmore Street, Cavendish Square, Professional Agent—R. HODGES, Hayden's Mews, Portobello Road, Journeyman Smith—E. HAIGH, Blackwall, Halifax Yorkshire, Commission Agent—R. HURD, Southampton Street, Camberwell, Warehouseman—J. HOOPER, late of Osborne Villas, Haverstock Hill, Builder—J. HOLME, Eccleston, Lancashire, Farmer—W. J. HAZEL, Southsea, Hampshire, Boot and Shoemaker—J. HAYWARD, Hanley, Staffordshire, Potter—J. HOLDSWORTH, Cleckheaton, Yorkshire, Woollen Manufacturer—W. F. HANCHER, Wolverhampton, Japanner—H. M. HASTLAND, Westbourne Park Villas, late Farmer—J. JONES, Bethesda, Carnarvonshire, Draper—D. K. JONES, Beaumaris, Anglesey, Surgeon—T. KING, late of Hampstead, Plumber—F. LANGAN, Laurence Pountney Hill, City, Commission Agent—J. E. LLOYD, Liverpool, Commission Agent—S. LEVY and E. H. VALENTINE, Somerset Street, Aldgate, Boot and Shoe Manufacturers—H. MARTYN, late of Stockwell Street, Greenwich, Cheesemonger—OWEN MORGAN, Birkenhead, Cheshire, Builder—JOHN MORREY, Sandbach, Cheshire, Cooper—D. M'ISAAC, Liverpool, Shipbuilder—J. MEAD, Harlesden Green, Willesden, Wheelwright—T. MILLS, jun., Ecclesfield, Yorkshire, Wood Agent—H. MATHEWS, York Road, King's Cross, Soap Boiler HENRY ARTHUR MAY (sued as HENRY MAY), Isleworth, Middlesex, Chandler's Shopkeeper—E. MARTIN, late of Devonshire Terrace, Kingsland, Commission Agent—W. NORLOCK, Water Lane, Great Tower Street, City, Lighterman—J. PAPWORTH, Cirencester Place, Portland Road, Marylebone, Bricklayer—W. PATCH, Otterton, Devonshire, Wheelwright—W. R. POPE, Great Percy Street, Clerkenwell, White Lead and Colour Manufacturer—EDWARD JAMES PRETTEJOHN and not EDMUND JAMES PRETTEJOHN, as advertised in last Tuesday's Gazette, Scott's Yard, Bush Lane, Cannon Street, City, Cyder Merchant—H. POTTEN, Bedford, Tuscan and Straw Hat Manufacturer—W. PROBERT, St Dunstan's Road, Stepney, Carpenter—L. ROSENTHAL, Regent Square, Gray's Inn Road, General Dealer—H. W. ROYCE, South Luffenham, Rutlandshire, Miller—J. J. RYAN, Manchester, Journeyman Lithographic Printer—T. ROBINSON, Birmingham, Marine Store Dealer—J. R. ROSS, late of Fawsley Terr., Camberwell New Road, Commission Agent—W. RADCLIFFE, Adelaide Road, Haverstock Hill, Dealer in Shares—R. ROSE, Horwich, Lancash, Shopkeeper—E. H. REUTLINGER, late of Hulme, Lancaster, Beerseller—T. ROYLE & M. A. BROWN, Manchester, Sewing Machine Dealers—G. H. STANIFORTH, Baker Street, Portman Square, Secretary to the Del Rey Mining Company (Limited)—W. SNOW, Birmingham, Licensed Victualler—R. STRINGER, Wednesfield, Staffordshire, Journeyman Locksmith—W. SHIPMAN, late of Manchester, Baker—J. STEVENS, Beckenham, Kent, Builder—J. SIMS, St. James's Terrace, Caledonian Road, and General Dealer—J SLATTER, Croydon, Carpenter—E. A. B. TOWNE, Brighton—J. TUCKER, Tavistock, Devonshire, Turnpike Gatekeeper—TAYLOR, Liverpool, Merchant and Agent—J. TOYE, late of Church Street, Bethnal Green Road, Commercial Traveller—G. WATKINS, late Portsea, Hampshire, No Occupation—G. WOOD, Nottingham, Shoemaker—E. WILSON, late of Egham, Cattle Dealer and Horse Jobber—H. S. WILLIAMS, late of St. Paul's Road, Kennington, Plumbers' Tool Manufacturer—G. W. WESTROPP, Northumberland Court, Strand—S. WOOLLEY, Romsey, Hants, Wool Broker—P. WHITAKER, Habergham Eaves, Lancashire, Innkeeper—A. WILKINSON, Bradford, Fishmonger—J. WHITE, Cardiff, Glamorganshire, Butcher.

SCOTCH SEQUESTRATIONS.—J. M'SHANE, Glasgow, Contractor—BAYLEY, Edinburgh, Grocer—Rev. R MACLAURIN, Sandsting, Minister.

TUESDAY: *Dec.* 29.—BANKRUPTS—E. ABRAHAMS, Twickenham, Auctioneer—W. ADAMS & J. MARTIN, Wandsworth, Blacking Manufacturers—W. BROOKS, Nottingham, Assistant Servant—T. BEATTIE, Greystoke, Cumberland, Labourer—C. BRIGHT, Niton, Isle of Wight, Coal Merchant—ROBERT BROWN, Bradford, Yorkshire, Coal Merchant—W. BUSBRIDGE, Biddenham, Kent, Farm Bailiff—G. H. COOPER, Rye, Street, Hampstead Road, late Wholesale Stationer—P. CREAM, Kingston-upon-Hull, Carver and Gilder—C. H. V. CHARLTON, Leeds, Dispenser, Compiler—H. DESPLAN, late of Bristol, Surgeon—C. F. L. GOFFRIE, Russell Street, Wine Merchant—W. HAIGH, Honley, Yorkshire, Butcher, Assistant—J. HOLROYD & T. H. HOLROYD, Birstal, Yorkshire, Ruiamakers, R. JACKSON, Western Hill, Durham, Law Clerk—J. LECK, sued with G. LECK), Everton, Lancashire, Timber Dealer—G. LEDGER, Woolwich, Coal Merchant—E. LUSCOMBE, Maiden Lane, Covent Garden, Strand, Licensed Victualler—ELIZABETH SOPHIA LEGGE, Clifton Road, Peckham, Wine Merchant, G. OGILBEY, Pembroke, Innkeeper—A. B. PIKE, Woolwich, Clerk—F. W. POOL, late of Bristol, Beer Retailer—D. THOMAS, Trevethin, Monmouthshire, Colliery Proprietor—J. TROUT, Wombwell, Yorkshire, Beerseller—W. WATKINS, Canon Pyon, Herefordshire, Innkeeper—W. WILSON, Claypath, Durham, Cooper—W. E. WOOD and J. Y. GREENWOOD, Tamworth, Warwickshire, Brickmakers.

Metropolis and its Vicinity.

THE HOUSELESS POOR IN THE METROPOLIS.—The President of the Poor-law Board has issued a circular on the subject of the destitute houseless poor. It states that the aggregate accommodation for the houseless poor in the metropolis amounts to lodging for 99[illegible] persons, but that this provision is very unequally distributed. It asserts that it is a fundamental principle of the poor law that every destitute person, without reference to the question of settlement or residence, is primarily entitled to relief where he is actually destitute; and that it is the duty of the guardians to see that all necessary and reasonable arrangements are made for affording to every such person the requisite relief, whether in food, clothing, medical attendance,

lodging. This duty, it says, is not performed in several of the metropolitan unions and parishes, and while it grants that indiscriminate relief would be fraught with serious evils, it declares that the obligation upon the guardians and their officers to afford the requisite relief to all really destitute applicants is, nevertheless, imperative, and cannot be evaded. It therefore calls upon all the unions, and all parishes not included in unions, to see that adequate accommodation is provided for that class of the destitute poor who require a night's lodging.

METROPOLITAN BOARD OF WORKS.—The Annual Report of the Metropolitan Board of Works, giving full details of their operations during the past year, has just been published. After describing the progress of the main drainage works, and the great improvements which will be accomplished by the Thames Embankment, and the formation of the new street to the Mansion House, it states that there still remain to be executed many other works of vital importance to the metropolis. The opening up of new lines of thoroughfares, the abolition of toll-paying bridges, the formation of public parks, and the preservation of open spaces, are works to which the best energies of the Board will have to be devoted, but they are of opinion that for these other means than those derived from direct taxes ought now to be afforded, and they again express their earnest hope that the period is not far distant when such additional means will be placed at their disposal. They also observe with satisfaction the increased confidence reposed in them by the legislature and the public, and trust that they are justified in the conclusion that, from the additional duties with which they have been charged, the Board is accepted as the body to which are now confided all matters affecting the general interests of the metropolitan ratepayers. The following is an abstract of the works executed during the year:—

"*Northern High Level.*—The sewer, commencing at the river Lea, Old Ford, extends to Holloway, eight miles in length, and nearly 10 ft in diameter; is completed, at a cost of 181,722*l.* *Acton Branch.*—This sewer extends from Acton Bottom to Notting Dale, 1 mile and 2070 ft. in length, about 4 ft. in diameter; is completed, at a cost of 9820*l.* *Ranelagh Overflow.*—This sewer commences in Knightsbridge, passes under Hyde Park and Kensington Gardens, 1 mile 420 ft. in length, about 9 ft in diameter; is completed, at a cost of 31,580*l.* *Southern Outfall.*—This main drainage extends from Halfway Reach at Crossness along the Frith Marshes, through Woolwich and Greenwich, to the Deptford pumping station, a length of nearly 7½ miles, 11 ft 6 in. in diameter; is completed, at a cost of 310,684*l.* 2*s* 6*d.* *Northern Outfall.*—These works form the outlet for the whole of the sewage north of the Thames. They extend from Barking Creek to Old Ford, 14½ miles in length. These works are formed principally upon arching or solid embankment passing over the Lea, six other streams, and over two lines of railway. These works are nearly completed, the contract being taken by Mr. Furness for 615,000*l.* *Northern Middle Level.*—This work extends from Old Ford to Kensal Green, passing for nearly two miles under houses. It will be nearly 12½ miles in length, half of the work being excavated by tunnelling. It varies from 4 ft. to 12 ft. in diameter. The work is taken by Messrs. Brassey and Co. for 329,800*l.*, and is rapidly progressing. *Western Area.*—These works are intended for the interception of the drainage of Fulham and Hammersmith, about 4½ miles in length, and the contract for them has been taken by Moxon and Co., for 36,740*l.* *Southern Outfall.*—These works comprise two contracts—one for engines for lifting the sewage to heights varying from 10 ft. to 34 ft. This contract was taken by Watt and Co. for 44,900*l.* The other contract was for the construction of engine and boiler houses, sheds, reservoirs, &c., and was taken by Mr. Webster for 300,000*l.* These works are nearly completed. *Deptford Pumping Station.*—This work is also divided into two contracts. The engines were taken by Messrs. Slaughter for 22,300*l.*, and the boiler-houses, chimney-shaft, coal sheds, &c., were taken by Messrs. Aird and Son for 113,136*l.* *Southern High Level.*—This sewer extends from the pumping station at Deptford Creek to High Street, Clapham, with a branch to Dulwich. It is about 9½ miles in length, the sewer varying from 4 ft. to 10 ft. 6 in. The contract was taken by Messrs. Lee and Boules for 217,000*l.* This work is completed. *Northern Outfall Reservoir.*—This contract comprises the erection of penstock, houses, cottage, culverts, reservoir, and other works, extending over nearly 11 acres, and the reservoir will receive the whole of the sewage of the northern area of the metropolis, where it will be stored until the ebb of the tide, when it will be discharged at the bottom of the river, about 200 ft. distant from the river bank, so as to be conveyed down the stream. The contract was taken by Mr. George Furness for 164,000*l.* *Southern Low Level.*—These works commence at High Street, Deptford, passing through New Cross, Camberwell, Kennington, Battersea, and Wandsworth, terminating near Putney Bridge. The length will be about 9½ miles, varying in diameter from 4 ft. to 7 ft. 3 in. This contract was taken by Mr. Webster for 214,000*l.* *Bermondsey Branch.*—These works extend from near Deptford Creek, and terminate near St. James's Church, Bermondsey. This line is nearly 2¾ miles, varying in capacity from a single sewer, 5 ft. 3 in. to 7 ft. in diameter. The contract for this work was taken by Aird & Son for 107,000*l.* *The Fleet.*—A work of considerable difficulty has been executed during the year, which was a reconstruction of a portion of the Fleet sewer, arising from the damage done to it by the Metropolitan Railway Company during the formation of that part of their line near Victoria Street, Clerkenwell. The cost of this work amounts to 24,928*l.* 16*s.* 8*d.*, and application has been made to the company for payment of the amount. *Thames Embankment.*—The Board has obtained powers for making an embankment, to commence on the northern side of the Middlesex end of Westminster Bridge, to terminate near the eastern boundary of the Inner Temple, to be continued thence by a viaduct to the western side of the northern end of Blackfriars Bridge; to make an approach road from the embankment, communicating with Surrey Street, Norfolk Street, and Arundel Street; to make a new street from the embankment roadway near the east side of the Middlesex end of Hungerford Bridge to Wellington Street, Waterloo Bridge, and also short streets to communicate with Villiers Street, Buckingham Street, and Cecil Street, and new streets near George Street, Adelphi, and from the embankment at Whitehall Stairs to Whitehall, opposite the Horse Guards. The first portion of the embankment has been taken by Mr. Furness. *Deodorisation of the River.*—In consequence of a considerable fall of rain it has been found unnecessary to incur any expenditure under this head. *Utilisation of the Sewage.*—In consequence of the report of the committee of the House of Commons to inquire into the best means for utilising the sewage of the cities and towns of England with a view to the reduction of local taxation and the benefit of agriculture, the Board invited applications for taking the sewage, and it is hoped that the information which has been obtained would assist in the settlement of this important question. *Subterranean Survey.*—The subterranean survey is being reproduced, of which 140 sheets have been completed, and the rest are in progress. *New Covent Garden Approach.*—This communication extends from the western corner of Long Acre and St. Martin's Lane to King Street, and affords the means of egress from and approach to Covent Garden Market and the thoroughfares immediately adjoining. It is 140 yards in length and 50 feet in width. *Victoria Park Approach.*—This improvement commences at Mile End Road and terminates at the East India Dock Road, Limehouse. It is 1162 yards in length and 70 ft. wide. The expenses were 41,390*l.* 17*s* 5*d.* *Metropolis Gas Acts.*—The Board have erected two permanent gasmeter testing offices, one in White Lion Street, Spitalfields, for the eastern division of the metropolis, and the other in Castle Street, Southwark, for the southern district. A site for a testing house for the western district has been obtained in Great Smith Street, Westminster. During the past 12 months the number of gasmeters stamped was 26,327, and the fees received in respect of the same 976*l.* 7*s.* *Finsbury Park.*—The Board have selected for Finsbury Park a site immediately adjacent to the Seven Sisters Road at Holloway, bounded on the west by the Great Northern Railway, and on the east by the Green Lanes. It contains about 120 acres, and from its character was easy of adaptation for the purposes of a park. *Safe Keeping of Petroleum.*—On the 29th of July, 1862, an Act was passed by which licences for keeping petroleum were required to be granted by the Board; 13 applications were made, of which two were granted and 11 not granted. *Lines of Frontage of Streets.*—During the past year 382 applications have been made to the Board, of which 277 were granted and 105 refused. *Formation of Streets.*—For the formation of new streets or the regulation of width of others there were during the year 135 applications, of which 117 were granted and 18 refused. *Receipts and Expenses.*—The receipts during the year were 1,125,116*l.* 19*s.* 1*d.*; the payments during the same period, 1,115,610*l.* 7*s.* 4*d.*

FUNERAL OF MR. THACKERAY.—The funeral of Mr. W. M. Thackeray took place on Wednesday at Kensal Green Cemetery, and was attended by about 1500 persons, including a large number of literary men and artists. There was but one mourning coach, and in this and the private carriage of the deceased, which followed it, were seated the Rev. F. St. John Thackeray and Mr. James Rodd, cousins of the deceased; Captain Shaw, his brother-in-law; and the Hon. R. Curzon. The remaining carriages were those of Mr. Martin Thackeray, General Low, Lord Gardner, Sir W. Fraser, Hon. R. Curzon, Earl Granville, Mr. Macaulay, M.P., Sir James Colville, and Mr. Bradbury. The coffin, which was exceedingly plain, bore the following inscription:—William Makepeace Thackeray, Esq., died 24th December, 1863, aged 52 years.

THE GREAT EASTERN.—Some German capitalists of Frankfort have taken up the idea of disposing of the Great Eastern steamer by lottery. The capital is to be 240,000*l.*, in shares of 1*l.* each, the highest prize being 40,000*l.* and the lowest 500*l.*, there being 200 prizes in all. The scheme is said to be looked upon with great favour in Liverpool.

OPENING OF THE NEW SOUTHWARK STREET.—Yesterday afternoon the Metropolitan Board of Works formally delivered over to public use their first new street. It extends from High Street, Southwark, to the Blackfriars Road, and affords a direct communication along Stamford Street and the York Road between London and Westminster Bridges. It is only 1100 yards long, and has been formed through one of the very poorest districts of the metropolis, but its cost in freeholds, compensation and construction has amounted to 600,000*l.*

THE RECTORY OF HANWELL.—The Bishop of London has conferred this benefice, about to become vacant by the resignation of the Rev. Sir Charles Clarke, on the Rev. Derwent Coleridge, for many years Principal of St. Mark's, Chelsea, and honorary canon of St. Paul's.

THE SUPPOSED MURDER IN THE LEA.—It will be remembered that an engineer, named Driscoll, who had just arrived in London from Spain, disappeared on the night of the 31st October, and that his body was taken out of the River Lea, near Limehouse, on the 28th November. Suspicion fell upon a soldier of the 14th Hussars, whose military gloves were found in the deceased man's pocket. The soldier at once admitted that he had been in Driscoll's company, but said that it was on the 7th November, and that he parted from him alive and well. At the adjourned inquest on Tuesday it was proved that the soldier did not leave Manchester, where his regiment was stationed, till the 1st of November, and as there was no reason otherwise to doubt his story, which was voluntarily given, he was discharged, and the jury returned an open verdict.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended on Saturday, December 26, were 1312. The average number in the corresponding week of the 10 years, 1853-62, corrected for increase of population, was 1558. The present return is therefore 246 below the average. During the week the births of 805 boys and 727 girls, in all 1532 children, were registered in London. In the 10 corresponding weeks of the years 1853-62 the average number was 1828.

Provincial.

BIRMINGHAM.—On Friday last an Irishman called John O'Hara was brought up at the Police Court in custody, committed a burglary on Saturday, the 12th ult., at the residence of Mr. James Chivers, 45, Hagley Road. Mr. Chivers stated that he and his wife and their two daughters, had been sitting up late on Friday the 11th, and heard footsteps on the gravel walk in the front garden. Mr. Chivers looked out and saw two men on the causeway in front of the gate, and thinking it suspicious he sat up while Mrs. Chivers and the daughters went to bed, taking the precaution to bring out a life-preserver which was in the house. A second time he heard footsteps behind the house, but the noise he made in unlocking the gate alarmed them, and they went away. Thinking it unlikely they would return after being disturbed twice, he sat down in an easy chair, in which position he must have fallen asleep, but how long he slept he knew not, as he was awakened by the barking of the dog. He felt very cold, and the life-preserver in his hand reminded him of his previous fears. His first thought was that while he had been sleeping the thieves might have broken into the house. There was only a small nightlight burning in his room, Mrs. Chivers was asleep, and all the other members of the household had retired to rest. Fancying that he heard stealthy footsteps upon the landing outside, he opened the door, and in the darkness saw a man coming out of an ante-room which communicates with the schoolroom. On the impulse of the moment, Mr. Chivers went towards him, put his hand upon his shoulder and said, "Halloa." The fellow turned round, and striking Mr. Chivers a blow upon the head, made for the stairs. Fortunately the blow did not take effect, and Mr. Chivers, standing two or three steps above the burglar as he was descending the stairs, struck him such a blow upon the head that the man dropped, and for a few seconds was so stunned, that Mr. Chivers thought he had killed him; but he rallied sufficiently to stagger down stairs, bleeding profusely from the wound on his head, and made for the kitchen, where the gas had been lighted, followed by Mr. Chivers. He went towards the scullery door, and fell down the steps, apparently confused by the effects of the blow, and Mr. Chivers fell with him. As soon as he found that Mr. Chivers was upon the ground, it seemed to occur to him that his best chance of getting away would be to disable that gentleman, and he rolled over him again and again, struck and kicked him, and tried to wrest the life preserver from him. After a desperate struggle upon the ground, Mr. Chivers let him get up, telling him that if he did not keep quiet he would get another taste of the life-preserver. The man then went into the yard, apparently with the intention of getting over the wall by the same way that he had got in, but finding himself too weak for this he returned into the scullery, and sunk exhausted into a chair, Mr. Chivers still keeping close to him. At that moment a second burglar, who had, unknown to Mr. Chivers, been in the front room, dashed into the kitchen, seized a heavy pair of tongs and brandishing them over his head threatened to split his skull open if he came near him. Mr. Chivers had, on hearing the entrance of the second burglar, run up the steps from the scullery into the kitchen. He saw that the crisis had come, and without pausing to parley or even to consider, he dashed in at the fellow, and administered with his life-preserver such a crushing blow upon his shoulder that he dropped the tongs, his arm fell powerless, and he also sunk down writhing with agony. Mr. Chivers thinks he must have broken the collar bone, for the contortions of his face were horrible. Two burglars were thus placed *hors de combat*, and the odds were all in favour of Mr. Chivers, when the tables were turned by the entrance of a third burglar, who must have come from downstairs. At a glance this fellow seemed to comprehend the position of affairs. He saw one of his comrades almost senseless and smothered with blood, and another writhing with a disabled arm. He picked up the tongs which the second man had dropped, and swore that if Mr. Chivers approached him he would make him a corpse at his feet. In this position they stood for a few seconds, looking at each other, and hesitating to begin the deadly attack. This third burglar was a bigger and a more powerful man than either of the other two, and Mr. Chivers began to feel exhausted by the struggle. His mouth was so parched that he could not open his lips. He went back into the scullery, and held his mouth under the water tap to refresh himself. In that brief time the burglars had determined that they had better get away as soon as possible. On returning to the kitchen he saw the two last comers helping their comrade into the hall, and out by the front door, which, by the way, they had previously unfastened to make good their escape if disturbed. Mr. Chivers followed his visitors to the door, watched them cross the road, and saw them climb a wall on the opposite side. He then went back into the house, intending to dress and follow them, but a reaction after the previous excitement set in, and he became violently sick and ill. He remembers nothing further until he found himself in bed next morning, his face and hands scratched, his body bruised, and his shirt smothered with blood, which had flowed from the head of the first burglar. The most singular thing is, that neither Mrs. Chivers nor any of the family heard anything of the struggle. On coming downstairs, and examining the premises, the operations of the thieves could be traced from beginning to end. They had made themselves at home in the pantry, paying great attention to the wine. From almost all the rooms they had taken various articles, and had them packed up ready for removal. The stairs, the passage, the kitchen, and the scullery were covered with blood which had flown from the head of the first robber. Such being the facts of the case, the only question in regard to the prisoner was one of identification. Mr.

Chivers was quite positive that he was one of the three men, and his opinion was corroborated by the fact that the prisoner was a well-known burglar, that he had his head bandaged up, and that in his pocket was found an account of the attack on Mr. Chivers, cut from one of the local newspapers. For the defence a number of witnesses were called to prove an *alibi*, and also that the prisoner got his wound in a street brawl two days after the burglary. The police agreed that such a brawl really took place. The magistrate said that the case amounted to this, that either Mr. Chivers was mistaken in the man, or the whole of the witnesses called for the defence had committed deliberate perjury. The only view he could take of the matter was that Mr. Chivers was mistaken, and the prisoner would therefore be discharged.

CARDIFF.—The workmen belonging to Craig-yr-All colliery, the property of Messrs. Booker, have resumed work upon the terms of their masters. Operations have been suspended since July last, and, although the dispute was upon a small matter, a great deal of trouble has resulted.

CHESTER.—The execution of Alice Hewitt, *alias* Holt, for the murder of her mother by poison, took place on Monday in front of the county gaol. It will be remembered that she had insured her mother's life for 26*l.*, in the Wesleyan Assurance Office, having induced a woman to personate her mother before the doctor, and that in order to obtain possession of this money she administered arsenic in such large doses that the body when disinterred was found saturated with it. After her conviction she made two statements, attempting to throw the crime upon a man called Holt, with whom she lived; but the statements were not consistent. At the execution her courage failed her, and she was partly dragged and partly carried to the scaffold. On the platform she fell on her knees, and moaned piteously. "The Lord have mercy upon me," which she continued to do whilst Calcraft drew the bolt. The drop only fell partially, and when it was at last pulled down she swung about partially strangled for two or three minutes, the fall not being enough to break the neck. About 1000 people witnessed the scene.

DERBY.—On Saturday evening three eminent medical men were sent down at the request of Sir George Grey by the Commissioners of Lunacy to inquire into the state of mind of the condemned murderer, George Victor Townley, and on the same evening they had an interview with the culprit in the condemned cell. On Sunday they had a second interview of several hours' duration, and were also present in the Gaol Chapel while the condemned sermon was preached. The inquiry closed on Sunday evening, and the Commissioners returned to London on Monday for the purpose of making their report to the Home Secretary. This report, together with a certificate of the prisoner's insanity, signed by three justices of the peace and two medical gentlemen, has made it necessary to order his immediate removal to a lunatic asylum, and under these circumstances the execution of his sentence has been respited during her Majesty's pleasure.

FALMOUTH.—Since the discovery of the case of cruelty to a lunatic already noticed in this Paper, Dr. Byrne has been made acquainted with another, which is thus described by Mr. Sydney Hodges, in a letter to the *Times*:—

"A lonely cottage, surrounded by woods and orchards, standing close down by the waters of a remote creek, opening into a well-known river of this district. This cottage is to outward appearance an ordinary working man's abode, with the single significant exception that the door is fastened on the outside by a padlock. We enter this cottage, we will suppose at night, which was the fact in our own case. The partition walls have been removed, the whole ground floor thrown into one, and is used as an apple store. We know that we are within the solitary abode of a lunatic, and by the light of one tallow candle we look cautiously around to see if he be at large among the apples. Nothing visible but the piles of fruit extending to the outer walls, interspersed with the common lumber of a farm in a farm yard. We stumble up a staircase, or rather ladder, to the upper floor, gaining it rather cautiously, for the lunatic may encounter us awkwardly, as our heads rise above the floor. Another large square loft—apples again extending to the outer walls. A corner, screened off by some boarding, exactly 6 ft. by 7 ft., hardly attracts our notice, for we are still looking all round for the lunatic. But the father, aged 74, approaches this "box" in the corner, and pointing to a small door says 'Now, this is the place where we are obliged to keep him.' There is still some hesitation, for the mother, over 70, who is also with us, is a little nervous. The doctor seizes the candle, and without hesitation throws back the bolt. The well-known sickening stench meets us as we enter. There lies the lunatic crouched with the updrawn knees, which seems the rule in these cases. A raven black moustache and beard, a face pallid as snow, cramped, emaciated limbs, nails that might be measured by the inch, the limbs spotted with filth, cobwebs decorating the walls, and some mildewed spots upon them and on the bedstead which have an ugly look. But we have seen Porter in his den, and we don't think so much of this case. This man has a straw bed beneath him, a clean shirt on him (is it possible a visit was anticipated?), and some sacking, and an old quilt to cover him. We could hardly expect more—'He tears everything up.' Stul, for two years, confessedly, to be shut up in a box in the corner of an apple loft! No sweet breath of Heaven in summer; no fire, no light in winter; no companionship at any time, for he is the sole occupant of the house, his relatives living in another some 200 yards away. There is no window to this box, the only light that ever reaches its interior struggles over the top of the boarding, in the small space between that and the unceiled roof. Our guide told us the case had been long talked of; and that his wife had said that very night 'this ought to be inquired into.' 'The poor man has been like one dead to us these six years past,' he added. The poor wretch had been sick upon his pillow when we saw him, and the foul stuff was still there, not likely to be removed until the morning, as he was shut up for the night. This was about 7 o'clock. He is fed three times a day regularly, however, and eats well. Referring to his sickness, his mother told us he was like that once a month—'owing to the moon, sir.' He had been at the asylum some seven years before, and was returned to his parents in a somewhat improved state. Without, I fully believe, any absolute intention of cruelty on their part, things had gradually grown worse and worse, and dwindled down to this condition."

GUILDFORD.—At a special petty sessions for this borough on Monday, Mr. Piper, the late Mayor, obtained compensation to the extent of 17*l.* 11*s.*, with costs, for the damage done to his house in the riots of the 21st of November. At the county petty sessions on Saturday, Joseph Goss and Isaac Baker, two well-known pugilists, were summoned for committing a breach of the peace, at a prize fight for 200*l.* at Woking on the 17th ult. Goss did not appear, and the case against him was ordered to stand over till the next bench day. Baker was ordered to enter into his own recognisances in 25*l.*, and find a surety for the same amount to keep the peace for six months, and to pay the costs.

LEEDS.—Sir George Grey, on the recommendation of Mr. Justice Mellor, has commuted the sentence of death passed upon Patrick Furley, for the murder of Anthony Goulding in this town on the 22d of August last, to penal servitude for life.

LIVERPOOL.—A fatal affray took place in this town on Christmas night, when two Irishmen were stabbed by two coloured sailors from Manilla. One of them has since died, and the other is in a precarious state. There seems to be some obscurity as to the origin of the quarrel, but all the parties had been drinking, though they were not in each other's company. At the inquest on Wednesday the jury returned a verdict of Wilful Murder against one of the Manilla sailors, a man called Vrumea, who was committed for trial at the assizes.—On the following night a woman called Lewis was killed by her husband, Richard Lewis, a master carter, in Church Street, Soho. The woman was intoxicated, and a quarrel arose, in which the husband gave her a blow in the neck that proved fatal. He was taken into custody, and has since been committed for trial, by the verdict of the coroner's jury, on the charge of Manslaughter.

MAESTEG.—A terrible colliery explosion occurred on Saturday morning at the Gin Pit, near Bridgend. The colliery is the property of the Llynvi Vale Iron Company, and was worked to supply their ironworks with coal. Fourteen men were killed, and the inquest, which was opened on Monday, was adjourned until the Government inspector for the district has visited the scene of the accident.

MALTON.—Another incendiary fire occurred on the 23d ult., on the farm of Mr. Horsley, of Huggate; and another on the 26th ult. on the farm of Mr. Topham, at Low Mowthorpe. On Saturday Sir George Grey issued a notice that, in addition to the rewards already offered, Government will give a further reward of 50*l.* for the discovery and conviction of the perpetrators of any of the nine last fires which have occurred since the beginning of November, and will further advise a pardon to any accomplice, not being the actual incendiary, who shall give the required evidence. The total amount of the rewards now offered is 60*l.*

NEWCASTLE-ON-TYNE.—On Monday, the 21st ult., a serious accident happened to Lord Lambton, eldest son of the Earl of Durham, who is 8 years of age, while out with the Newcastle Harriers, near Washington. As soon as the hounds were thrown off his lordship galloped after them, but on taking a ditch his pony stumbled and fell over upon him, fracturing his thigh in two places. The sport was at once brought to an abrupt termination, and Lord Lambton was removed to Lambton Castle, where he is progressing favourably.

SHIELDS.—Six laden colliers which sailed from the Tyne in the last week in November for London have never since been heard of, and there is no doubt that they were lost with their crews, numbering about 60 men, in the recent gales. Eight or nine other colliers belonging to adjacent ports have also been missing for the last five or six weeks, and others have been wrecked on various parts of the coast. In addition to these disasters thirteen fishing smacks are missing on the east coast, and her Majesty's gunboat Lively, which was sent in search of them, has been driven ashore off Texel, in a violent hurricane which has ravaged the whole of the North Sea, and caused the loss of several other vessels. There is now no hope of rescuing the crews of the missing ships, and at the lowest computation it is supposed that 120 seamen have perished, leaving 500 widows and orphans.

ST. HELEN'S.—On Monday morning a shocking murder and attempt at suicide was discovered at St. Helen's, near Liverpool. A single woman called Mary Wood, aged 33 and a cripple, who kept a small school, was found in her bed with her throat cut, quite dead; and lying on the same bed, undressed, was a married man, named Clitheroe, with a wound in his throat, from which he appeared to be dying. There is however some hope of his recovery, and he has since stated that deceased and himself resolved to commit suicide together. At the inquest on Thursday the evidence showed that there had been a clandestine intimacy between the parties for some time past, though the prisoner's wife was not aware of their being acquainted. The jury returned a verdict of Wilful Murder against the prisoner, who was committed for trial at the next assizes.

Ireland.

BREACH OF THE FOREIGN ENLISTMENT ACT.—The late enlistment of men at Queenstown to serve on board the United States sloop of war Kearsage has, after many secret investigations, resulted in the committal of six of the 15 men for trial. They were brought before the magistrate at the Queenstown Petty Sessions Court on Wednesday week on warrants founded on sworn depositions. The defendants were disembarked by the Kearsage on the 14th ult., and appeared in the uniform of the United States' Navy. The magistrate committed them for trial at the next assizes, but agreed to accept bail in 20*l.* each, and two sureties of 10*l.* each.

MURDER OF A SOLDIER IN DUBLIN.—On Christmas night a soldier of the 86th Regiment was murdered by one of his comrades in the public streets. It appears that several soldiers belonging to the regiment, at present stationed in Beggar's Bush barracks, were in a house in Fulham's Court, when two of them, Henry Edwards and John M'Namara, had a quarrel. The latter drew a knife, which the other and and a wound in vain endeavoured to wrest from him. Edwards soon after left the house, but was followed by M'Namara into Brown Street, when the latter drew his knife and stabbed Edwards through the heart. He then tried to escape, but was arrested by the police, and has since been committed for trial on the coroner's warrant.

Scotland.

RECTORSHIP OF ABERDEEN UNIVERSITY.—The election of Lord Rector took place on the 21st ult. with the following result:—Earl Russell, 231 votes; Mr. E. Grant Duff, M.P., 133 votes. Earl Russell had a majority in the several nations as well as by vote. His lordship has intimated his intention of visiting Aberdeen in April to be installed into office.

Railways.

THE PROPOSED UNDERGROUND RAILWAY IN OXFORD STREET.—A meeting of the inhabitants of Oxford Street was held on Wednesday evening, to take steps for opposing the projected scheme of an underground railway from the Marble Arch to Farringdon Street. The expense and uselessness of such a railway, together with its depreciation of the property on the line, were strongly dwelt upon by the various speakers, who comprised the most influential residents; and it was determined to put in force every influence that could be brought to bear against the scheme.

Law.

HOME CIRCUIT: KINGSTON.—*Gazotte Robbery at Croydon.*—*Frederick Cox*, 30, *John Curry*, 17, and *James Elsey*, 18, were charged with a robbery, accompanied by violence, upon Edward Law. This case was one of a most daring and aggravated character. The prosecutor, who is a publisher residing in Essex Street, Strand, at half past 5 in the evening of the 25th of August was walking along Combe Hurst, about a mile from Croydon, when, as he was passing a small coppice, he heard a rustling in it, and at the same instant two men, whom he afterwards recognised as the prisoners Cox and Curry, rushed upon him, and Cox struck him a blow, either with his fist or a stick, at the back of the head, which felled him to the ground and rendered him for a time insensible. They then endeavoured to drag him out of the road into a field, no doubt for the purpose of rifling his pockets; but the prosecutor having somewhat recovered attempted to give an alarm, upon which Cox seized him so tightly round the throat with one hand that he was scarcely able to breathe, and with the other struck him several blows on the head. The prisoner Curry then snatched his watch from his neck, breaking the guard-chain; after which all of them ran away, in consequence, as the prosecutor supposed, of their hearing some one approaching. The prisoners were not taken into custody until November, when it appeared that Curry had sold the watch to a boy named Crouch, whose father suspecting there was something wrong in the transaction gave information to the police, which led to the prisoners being taken into custody. The prisoners asserted that they were not the parties by whom the robbery was committed, and accounted for the possession of the watch by saying that they picked it up. The jury found them *Guilty*. Baron Pigott sentenced Elsey and Curry to 12 months' hard labour, and Cox, as the ringleader in the affair, to five years' penal servitude, and to receive 25 lashes with a cat-o'-nine-tails.

NORTHERN CIRCUIT: LIVERPOOL.—*Shooting but Murder*—*Wm. Scandish Carr Standish*, of Duxberry Hall, near Preston, who had been out on bail, was indicted for unlawfully and maliciously firing a pistol and wounding John Hesketh and James Burke, on the highway near Ormskirk on the 8th September. A second count charged him with an assault causing grievous bodily harm, and a third with a common assault. No evidence was offered on the first charge, and the prisoner pleaded guilty to the other two charges. For the defence it was urged that in both cases the injuries sustained by Hesketh and Burke were of a trifling character, and whatever might be the judgment of the Court Mr. Standish was prepared to compensate them to the fullest extent. Mr. Standish had for several years past suffered from congestion of the liver, a complaint always aggravated by residence in warm climates, yet in spite of this he served with his regiment in India, and was present at the siege of Lucknow. He there became so ill that the Commander-in-Chief, at the request of his colonel, Sir William Russell, gave him permission to return to England. While at Calcutta, on his way home, he had a sun stroke, which shattered his nervous system dreadfully. On his arrival in England he continued very ill and suffering from complaint caused him such agony that he often could not sleep, and he smoked often to excess to try and ease his pain. It was after an unusually painful attack that he committed the offences to which he had pleaded guilty. He therefore asked that, taking all the circumstances of the case into consideration, the ends of justice would be answered by his giving security to such an amount and for such a period as would

protect the public from a repetition of similar acts. Mr. Sleeman and his friends were also willing that he should be placed under whatever medical restraint and treatment should be thought advisable. Mr. Justice Willes sentenced him to be imprisoned in the common gaol of the county for the term of six months, and to pay to the Queen a fine of 500*l.*, and be further imprisoned until the fine be paid. *Manslaughter at a Prize Fight.—Thomas Kidd*, aged 17; *William Murray*, aged 19; *James Hughes*, aged 17; and *Thomas Hockley*, aged 17, were indicted for manslaughter, aged 18; and *Thomas Hockley*, aged 17, were indicted for manslaughter at Sanford, on the 11th of October, feloniously killed and slew **James Burgess. After some conversation between** Mr Justice Willes and the learned gentlemen engaged in the case, during which his lordship was understood to say that if the prisoners were present at the fight at which the deceased lost his life, and, knowing what was taking place, remained and took part in the proceedings, they were responsible for the consequences that might follow, a brief consultation took place between the counsel for the defence and the prisoners. Mr. Tait, the prisoners' counsel, said it was impossible to deny that the prisoners were present at the fight, and it would be improper to waste the time of the court if his lordship thought that not bound them. His Lordship said they must consider themselves in the hands of the court. The court was far from wishing to press too heavily upon them, seeing that they were young fellows, and more likely to break the law in this way. Mr. Pope said that so far as Hughes was concerned he did not deny being there. His lordship said that some time ago he tried some persons at Cardiff, when he had an opportunity of consulting the Chief Baron, and they both came to the conclusion that if a person was at a fight and did not go away when he knew what was going on, then he became with the law, for it was fairly to be presumed he was there aiding, giving encouragement and weight to the proceedings, and, therefore, an accessory. Therefore, although the court might look into the circumstances of the case, yet it must be understood that when persons attended a prize fight, and, knowing what was going on, did not go away when they could, if two people fighting, then they must be answerable for what took place. **It was here intimated by the prisoners' counsel that they withdrew the plea of not guilty, and pleaded guilty to the charge. Mr. Justice Willes,** addressing the prisoners, said they had pleaded guilty to the offence of manslaughter, and he thought they had been well advised by the learned counsel, for there could be no doubt that every person who attended a prize fight, looked on, took part in the proceedings, as one of the spectators, with the intention of being a spectator, and remained and gave size to the crowd, or encouraged the combatants, or in any other manner took part in it, then no doubt they were answerable for the consequences that might follow. There could be no doubt that although these things might be conducted on what was called "fair fighting," yet those attending them committed a breach of the law, which repressed proceedings of this kind. Christian men could not be allowed to beat one another with their fists into mummies. The prisoners unhappily attended the fight at which the deceased had lost his life, and had committed an illegal act. He was very sorry to see from the depositions that this was a fight for money; and it was a great pity to see young men like the prisoners taking part in an affair of this kind. But they and others might depend upon it that if the law was broken in this way the law would prove strong, and they would be severely punished if the peace was broken by affairs of this description. The prisoners were not the sort of persons whom he felt called upon to punish in so severe a manner as he might have done if they had been older persons, and he did not think, under all the circumstances, that any good would be done to the country by locking them up any further, but they would have to get some persons to enter into recognizances that they would keep the peace for the next 12 months, and be called upon to up for judgment when called upon. *Murder at Stockton-on-Tees.*—*John Scales*, 26, a native of Stockton-on-Tees, was indicted for the murder of **John Rothwell**, a seaman, on board the ship Lemnos. The prisoner was a seaman on board the Lemnos, and when the vessel was in the river Guadeloupe, near Buenos Ayres, the sailors got ashore, and, having drank large quantities of native grog, went on board considerably intoxicated. The prisoner being troublesome and abusive, the captain ordered the boatswain to put him into the boat. This was being done, and some violence was used towards the prisoner, when Rothwell interfered and tried to persuade him to go quietly. The prisoner then stabbed him in the groin with a large clasp knife. There being no doctor on board, or obtainable on shore, Rothwell rapidly became worse, and died in a few days. Prisoner, when asked why he had done it, said he did not recollect anything about the matter, but if he had done it he was very sorry. The captain communicated with the English Consul, and the prisoner was brought home in irons. Mr. Justice Willes having intimated to the jury that this was not a case for a verdict of murder, they returned a verdict of *Manslaughter*, and the prisoner was sentenced to six years' penal servitude.

Obituary.

THE EARL OF CHARLEMONT died on Saturday morning in his 84th year. He was in his ordinary state of health until about 10 days ago, and retained all his faculties until a few minutes before his death. He was born in 1775, and having survived his two sons and two daughters, he is succeeded in his title and estates by his nephew, Colonel James Molyneux Caulfeild, lord lieutenant of Armagh, which he formerly represented in parliament. By the death of Lord Charlemont vacancies occur in the representative peerage of Ireland, in the order of St. Patrick, and in the Lord lieutenancy of Tyrone.

VISCOUNTESS BOYLE died on the 24th ult., a few days after giving birth to a son. She was the third daughter of the late Earl of Harewood, by the daughter of the second Marquis of Bath. She married in 1838 Viscount Boyle, eldest son of the Earl of Shannon, by whom she leaves three infant sons. Her ladyship was sister of Lady Louisa Mills and Lady Wharncliffe, and niece of the Duchess of Buccleuch and the Dowager Countess of Ellesmere. She was born in 1807, and was consequently in her 26th year.

THE HON. AND VERY REV. DR. PAKENHAM died on Friday evening, in his 77th year. He was the fifth son of the late Lord of Longford, and was Archdeacon of Emly prior to his promotion to the historic deanery of St. Patrick's. He was born in 1787, and married, in 1822, the daughter of the Rev. William Sandford, and sister of the second Lord Mountsandford, by whom he had ten children. It is stated that he spent above £3000 of his own money in repairing his Cathedral, which he found in a dilapidated state. His sister was married to the Duke of Wellington, who once wrote a characteristic note declining to make him a bishop on the ground of this relationship. His two brothers, Sir Edmund and Sir Hercules Pakenham, rose to high distinction in the army.

THE REV. SIR GEORGE SHIFFNER, BART., Canon of Chichester and Vicar of Arundel, Hampshire, died on the 14th ult. at Chichester, in his 72d year. He was second son of the second baronet, and was born in 1791. He graduated at Christ Church, Oxford, and after having been for some time curate in the dioceses of Exeter and Salisbury, he was appointed rector of St. Michael's, Lewes, a small living in the gift of the Lord Chancellor, and in 1828 was collated to the prebendal stall of Bartham, in Chichester Cathedral. Four years afterwards the Dean and Chapter elected him canon according to their peculiar privilege. He also held the family living of Hamsey, Sussex, to 1848, when he presented himself to the chapter living of Ampett, near Aylesbury. He succeeded his brother in 1849. He married in 1817 the daughter of the Rev. Croxton Johnson, of Wilmslow, Cheshire, by whom he had issue three sons and two daughters. He is succeeded by his eldest son, the Rev. George Croxton Shiffner, rector of Hamsey, Sussex, born in 1819, and married to the only child of Mr. John Greenfield, of Myddleton Hall, Lancashire.

COLONEL WAYMOUTH, late of the 2d Life Guards, died on the 26th ult., at his house in Upper Grosvenor Street, at an advanced age. He served in the Peninsula with the 2d Life Guards, from 1812 to the end of the war in 1814, and was present at the battles of Vittoria, Pampeluna, and the Pyrenees. He also took part in the campaign of 1815, including Quatre Bras and Waterloo, where he was severely wounded and taken prisoner when charging the French Cuirassiers. He retired in 1841, on the unattached list, with the rank of major. He had received the war medal, with two clasps, for Vittoria and Toulouse, and the medal for Waterloo. He attained the rank of Colonel in 1854.

MR. ADRIAN HOPE, whose death on the 18th ult. was announced briefly last week, was the second son of Mr. Thomas Hope, the author of "Anastasius," by the daughter of the first Lord Dacres, Archbishop of Tuam, who afterwards married Marshal Beresford. He was the brother of Mr. Henry Thomas Hope, of Deepdene, and of Mr. Beresford Hope, of Arklow House; and was the proprietor of one of the finest collections of paintings by the ancient masters in London.

BIRTHS.—On the 29th ult, at 7, Grosvenor Place, the Lady AUGUSTA STUART, of a daughter—30th ult, at 9, Princes Gardens, the Hon. Mrs. ASHLEY PONSONBY, of a son—26th ult, at Cuttley, the wife of the Hon. W. G. LEGH, of a son—28th ult, at 4, York Road, Edgbaston, Birmingham, the wife of Major Hon. L. W. MILLS, half pay, Rifle Brigade, of a daughter—29th ult, at 79, Lowndes Square, the wife of Colonel HENRY DALRYMPLE WHITE, C.B., of a son.

MARRIAGES.—On the 29th ult, at Kew, ALEXANDER STEPHEN DUNBAR, Esq., eldest son of the Rev. Sir William Dunbar, Bart., of Wawyns Castle, Pembrokeshire, to MINNIE, eldest daughter of JOSEPH BROWN RIGBY, Esq., of Priory Lodge, Kew—16th Nov., at St. Paul's Cathedral, Calcutta, Captain THOMAS P. CAREY, Royal Artillery, to FANNY LYDIA, eldest daughter of Major-General BUDGEN, late Royal Engineers—25th ult, Major CHARLES AGNEW, to MARY, widow of the Rev. H. J. WHARTON, late vicar of Mitcham—24th ult, at St. John's Episcopal Church, Edinburgh, Professor WILLIAM E. AYTOUN, D.C.L., sheriff of Orkney and Zetland, to FEARNE JEMIMA, second daughter of the late JAMES KINNEAR, Esq., Writer to the Signet.

DEATHS.—On the 30th ult, at Bletchington Park, Oxfordshire, the Right Hon. ARTHUR ANNESLEY, Viscount Valentia, aged 78—28th ult, at 46, Albemarle Street, suddenly, deeply regretted, Dowager Lady ABERCROMBY, of Birkenbog and Forglen—30th ult, rather suddenly, at her residence, 4, Stanhope Terrace, Hyde Park, Miss ALICIA CAMPBELL, only sister of the late Field Marshal Colin Lord Clyde—20th ult, at Rhyll, North Wales, Lady BROUGHTON, relict of Sir H. D. Broughton, Bart., of Broughton Hall, county of Stafford, and Doddington Hall, Cheshire—28th ult, at Torquay, JOHN LOUIS, youngest child of Sir JOHN and Lady RIVETT CARNAC, aged 13 years—24th ult, at St. Leonard's-on-Sea, CATHERINE, eldest daughter of the late Sir J. S. DOUGLAS, Bart., of Kelso, N.B.—25th ult, MARY, the wife of Rear-Admiral CORY—18th ult, at Elm Cottage, Brixton, the wife of JOHN GALBERT, Esq., youngest daughter of Baron Andlau, of Gothic House, Clapham Rise aged 26—25th ult, at The Close, Winchester, CATHARINE LYALL, relict of the Dean of Canterbury, aged 74—28th ult, at Kensington, Sister MARY ANNE BENEDICTA, Order of St. Benedict (MARY ANNE LÆTITIA DIGBY), daughter of Kenelm Henry Digby, Esq.—30th ult, at Tudor Cottage, Duppa's Hill Terrace, Croydon, WILLIAM ROBINSON WHITE, Esq., J.P., aged 60—24th ult, at Cambridge, GEORGE LEAPINGWELL, Esq., LL.D., one of the esquire bedels of the university, aged 62—25th ult, at 24, Gower Street, Dr. FRANCIS BOOTT, M.D., F.L.S., aged 71—24th ult, at Great Malvern, Dr. FRANCIS RADLEY, M.D. Lond., formerly of Toronto, Canada West, aged 6—28th ult, at Ryde, Isle of Wight, Dr. DAVID LEWIS, M.D., aged 65—26th ult, at Shirley Lodge, Hants, Dr. C. W. WHEELER, M.D., aged 71—24th ult, at Newcastle-on-Tyne, Dr. DANIEL BULMAN, M.D., third son of the late Job Bulman, Esq., of Cox Lodge, Northumberland, aged 58—23d ult, at 37, Hamilton Terrace, St. John's Wood, FANNY, relict of the Rev. ROBERT TWISS, LL.D., late of Trevallyn, Denbighshire, aged 84—25th ult, the Rev. ROBERT WHITEHEAD, rector of All Saints, North Street, York, aged 55—16th ult, suddenly, the Rev. JOHN BRIGHT, of Totterton Hall, Salop, aged 51—25th ult, at Amwell, Herts, WILLIAM C. MYLNE, Esq., C.E., F.R.S., Engineer of the New River Company, aged 82.

Markets.

COVENT GARDEN, Jan. 2.

Pine Apples, considering the time of year, are tolerably plentiful. Hothouse Grapes are now beginning to get scarce. **Of foreign Melons there is a good stock. Pears, which are getting scarce, are now confined to Ne Plus Meuris, Glou Morceau, and Beurré Ranee. Good English Apples are getting somewhat scarce. Some good examples of Ribston Pippin and American New Town Pippin may still be obtained. Kent Cobs are good, but in few hands. Oranges are plentiful; the best are realising from 5s. to 10s per 100. For Potatoes the market is still heavy. French Lettuces, Endive, and Radishes begin to make their appearance. Cut flowers chiefly consist of Orchids, Pelargoniums, Primroses, Mignonette, and Roses.**

FRUIT.

Pine Apples, per lb., 4s to 6s	Oranges, per 100, 4s to 7s
Grapes, per lb., 7s to 10s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 1s 6d to 2s 6d	Kent Cobs, 110s per 100 lbs.
Pears, per ½ sieve, 2s 6d to 5s	Almonds, do., 18s
Melons, each, 2s to 4s	**Walnuts, do., 14s to 20s**
Lemons, per 100, 5s to 8s	**Chestnuts, per bush., 10s to 20s**

VEGETABLES.

Cabbages, per doz., 1s to 2s	Celery, per bundle, 1s 6d to 2s
Cauliflowers, each, 3d to 6d	Garlic, per lb., 8d
Potatos, York Regents, p. ton, 6s to 80s	Lettuces, each, 1d to 4d
,, Shaws, do., 50s to 60s	Endive, p. score, 1s to 2s
Turnips, p. bunch, 4d to 6d	Horse Radish, p. bunch 1s to 4s
Carrots, do., 6d to 8d	Mushrooms, p. pott., 1s to 1s 6d
Spinach, p. sieve, 1s 6d to 2s	Parsley, p. 12 bunches, 3s to 4s
Cucumbers, each, 1s to 2s	Herbs, per bunch, 3d
Beet, per doz., 1s 6d	
Shallots, per lb., 1od	

POTATOS.—SOUTHWARK, MONDAY, Dec. 28.

During the past week the arrivals coastwise have been moderate, but more than equal to the demand, and it being moderate, but more than equal to the demand, and it being holiday week the trade has been very dull. Quotations:—Holiday week the trade has been very dull. Quotations:—Yorkshire Flukes, 80s. to 90s. per ton; do. Regents, 60s.—Yorkshire Flukes, 80s. to 90s. per ton; do. Regents, 60s. to 80s.; do. Rocks, 50s. to 60s; Dunbar Regents, 60s to 70s.; to 80s.; do. Rocks, 50s. to 60s; Dunbar Regents, 60s to 70s.; Kent and Essex Regents, 50s. to 70s; Perth, Forfar, and Kent and Essex Regents, 50s. to 70s; Perth, Forfar, and Fifeshire Regents, 50s. to 55s.; do. do. Rocks, 45s. to 50s. Fifeshire Regents, 50s. to 55s.; do. do. Rocks, 45s. to 50s.

COAL MARKET.—Dec 30

Cowpen Hartley, 16s 3d; Hastings Hartley, 16s. 3d; Walker Primrose, 14s. 6d; West Hartley, 15s. 3d; West Wylam, 16s. 6d.; Wylam, 17s. 6d.; Walls End Gosforth 16s.; Walls End Harton, 18s; Walls End Russell 19s; Tanfield Moor, 18s. 3d; Walls End Hetton, 19s; Walls End Tanfield, 18s. 3d.; Walls End Cassop, 19s; Walls End Hartlepool, 19s. 9d.; Walls End Heugh Hall, 19s; Walls End Kelloe, 19s; Walls End South Hartlepool, 18s 3d; Walls End South Kelloe, 19s.—32 ships at market.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Dec 31

Prime Meadow Hay	75s	to 85s	Clover old	95s	to 110s
Superior do.	84	90	Do. second cut	90	100
Inferior do.	65	70	New Clover	—	—
New do.	—	—	Straw	24	30
Rowen	—	—			

HARVEY & EASTON.

WHITECHAPEL, THURSDAY Dec 31

Fine Meadow Hay	84s	to 88s	Prime best Clover	110s	to 112s
Inferior do.	75	80	Inferior do.	100	105
Prime New Hay	—	—	New do.	—	—
Inferior do.	—	—	Prime Clover	100	105
Straw	27	30	Inferior do.	90	95

HOPS.—BOROUGH MARKET, FRIDAY, Jan. 1

Messrs. Pattenden & Smith report continued activity in the demand for both English and foreign Hops, which are daily becoming scarcer, and prices consequently advancing.

Currency:—

Mid and East Kents, p. cwt.				£4 10	to £6 0
Weald Kents				5 5	7 5
Sussex				3 0	4 10

NEWGATE.—Jan 1.

Best Fresh Butter	**1s per dozen lbs**
Second do. do.	**1s ,,**
Pork, 4s. 6d. to 4s. 4d. per 8 lbs.	

BRITISH WOOLS.—LONDON Dec. 31.

The year just passing away has been a prosperous one for the wool trade in most of its departments, but more especially in the worsted districts, where the high prices seem to have been apparently in favour of a high price for wool, but where the prime moving cause has been, lately the activity of the demand for France or other countries in the quarter. Flannel wool has been by no means in brisk demand, neither has blanket wool advanced in price; and as cotton is used in both these articles it is puzzling to find that they do not show any advance in sympathy with cotton.

Our trade continues in a tolerably healthy state, but has not recovered from the prostration brought about by the high rate of interest and the complication of the Schleswig-Holstein difficulty, which, if it should continue for some time, will operate very unfavourably by preventing merchants from making their usual purchases in Germany.

South-down Hoggets	s. d. 1 11	s. d. to 2 0	Leicest Wethers	1 9½	to 1 10½
Half-bred ditto	1 11	— 2 0½	Ditto Hoggs	1 1½	— 1 11½
Down Ewes	1 10	— 1 10½	Combing Skins	—	—
Kent Fleeces	—	— 2 0	Flannel Wool	1 4	— 1 9
			Blanket ditto	0 9	— 1 0

METROPOLITAN CATTLE MARKET.

MONDAY Dec. 28.

The number of Beasts is about the same as on Monday last; there is a fair demand for them, and the best qualities are nearly disposed of at fully late rates. The supply of Sheep is small, but quite equal to the demand: it is very difficult to effect a clearance at the quotations. Choice Calves are rather dearer. **From Germany and Holland there are 460 Beasts, 2160 Sheep, and 113 Calves; from Spain, 150 Beasts; from Scotland, 200; Ireland, 100; from Norfolk and Suffolk, 520; and 700 from the Northern and Midland Counties.**

	s. d.	s. d.		s. d.	s. d.
Best Scots, Herefords, &c.	4 10	to 5 2	Best Long-wools.	5 2	— 5 6
Best Short-horns	4 8	— 5 0	Do. Shorn	—	—
2d quality Beasts	2 10	— 4 0	Ewes & 2d quality	4 8	— 5 0
Best Downs and Half-breds	5 8	— 6 0	Do. Shorn	—	—
Do. Shorn	—	—	Lambs	—	—
			Calves	3 8	— 5 4
			Pigs	3 0	— 4 8

Beasts, 2410; Sheep & Lambs, 11,320; Calves, 117; Pigs, 180.

THURSDAY, Dec. 31

We are but moderately supplied with Beasts, and the weather being favourable the demand is active, at fully Monday's quotations. The number of Sheep is about as usual at this time of year. The demand is by no means large, but prices remain unaltered. Good Calves are in request at Monday's quotations. Our foreign supply consists of 305 Beasts, 790 Sheep, and 190 Calves. Milch Cows, 80.

	s. d.	s. d.		s. d.	s. d.
Best Scots, Herefords, &c.	4 10	to 5 2	Best Long-wools.	5 2	— 5 6
Best Short-horns	4 8	— 5 0	Do. Shorn	—	—
2d quality Beasts	2 10	— 4 0	Ewes & 2d quality	4 8	— 5 0
Best Downs and Half-breds	5 8	— 6 0	Do. Shorn	—	—
Do. Shorn	—	—	Lambs	—	—
			Calves	3 8	— 5 4
			Pigs	3 0	— 4 8

Beasts, 930; Sheep & Lambs, 3920; Calves, 244; Pigs, 190.

MARK LANE.—MONDAY, Dec 28.

The supply of Wheat from Essex and Kent to this morning's market was very small, and disposed of at former prices. The market was only moderately attended, and the business transacted in foreign, and also in Flour and Spring Corn, was very limited at our late quotations.

PER IMPERIAL QUARTER	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk	White	42	— 48	Red	40 — 48
— —	fine selected runs	ditto	44 — 52	Red	40 — 48
— —	Talavera		48 — 56		
— Norfolk			—	Red	—
— Foreign			36 — 54		
BARLEY, grind. & dist., 25s to 27s.		Chev.	34 — 38	Malting	29 — 33
— Foreign		grinding and distilling	22 — 26	Malting	28 — 32
OATS, Essex and Suffolk			18 — 22		
— Scotch and Lincolnshire		Potato	20 — 25	Feed	18 — 22
— Irish		Potato	19 — 22	Feed	—
— Foreign		Poland and Brew	17 —	Feed	15 — 20
RYE			30 — 32	Foreign	—
RYE-MEAL, Foreign			—		
BEANS, Mazagan	28s to 30s.	Tick	30 — 4	Harrow	30 — 34
— Pigeon	3 s to 40s.	White	—	Longpod	—
— Foreign		Small	36 — 42	Egyptian	30 — 32
PEAS, White, Essex and Kent.		Boilers	34 — 36	Suffolk	37 — 39
— Maple	34s to 36s	Grey	32 — 34	Foreign	32 — 40
		White	—	Yellow	—
MAIZE			35 — 40		
FLOUR, best marks delivered		per sack	28 — 34	Country	28 — 34
— 2d do.		ditto	28 — 34	Per sack	32 — 42
— Foreign		per barrel	15 — 25		

FRIDAY, Jan. 1

The weather since the 18th ult. has been remarkably fine and mild, with the exception of two or three days only, and about as many sharp night frosts. The Wheat trade has been inactive during the above period, and although English Wheat

has been purchaseable in the majority of markets at a slight decline, holders of foreign, more particularly of old, have succeeded in obtaining the previous rates, and in Liverpool, Glasgow, and a few other markets, an advance of fully 1s. per qr. has been established this week No alteration of moment has occurred in the value of any description of Spring Corn excepting Maize, which has an upward tendency. Business in Flour has been limited and its value unaltered. Since the 18th ult. 71 vessels have been reported off the coast. Up to Monday last the floating trade was nearly at a stand-still, but since then a moderate business has been done at previous prices for most articles; Wheat is a trifle better, Maize in good demand, but Barley is rather heavy. Paris, Dec. 30.—The prices of Wheat and Flour, after having been rather lower since the 17th inst., have recovered, and Wheat closes firm at the rates of that date. Flour about 1s. per sack higher. The six marks for delivery this month are quoted equal to 32s. 6d. per 280 lbs.; the present stock is estimated at 6680 cwt. The arrivals of foreign Barley are large, of all other grain and Flour very sm l. To-day's market was very thinly attended; nevertheless English Wheat brought the extreme rates of Monday last. Business in foreign was limited, but on the sales effected that day's prices were fully supported. Spring Corn was steady at our late quotations.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	640 qrs.	730 qrs.	— qrs.	390 sk.
Irish	—	—	4710	— ,,
				1850 ,,
Foreign ..	3190 ,,	12.340	6770 ,,	— brls

LIVERPOOL, December 29. — We have had a fair attendance of the trade at this day's market, and Wheat has commanded a much more active inquiry than we have experienced of late, the demand running chiefly on American red spring, which must be quoted from 2d. to 3d. per cental dearer than on this day week, whilst winter brings from 1d. to 2d. more money. Prime sweet parcels of barrel Flour are somewhat scarce, and command 6d. advance, but French is dull and the turn lower. Indian Corn again finds numerous buyers, and we raise our quotations 6d. to 9d. per qr. Oats and Oatmeal are the only exceptions to the general improvement. Beans, Peas, and Barley are offered sparingly, and prices of each are against buyers. The market closes healthy.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Nov. 21	39s 11d	33s 1 1d	19s 11 d	29s 7d	35s 6d	34s 2d
— 28	40 3	33 7	19 7	34 9	36 1	34 1
Dec. 5	40 9	33 6	19 5	29 7	35 3	33 7
— 12	41 1	32 10	19 3	29 11	34 11	34 2
— 19	41 2	32 6	19 0	29 4	34 9	33 7
— 26	40 5	32 0	19 0	33 6	34 4	33 8
Agg. Aver.	40 7	33 1	19 4	31 1	35 2	33 10

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Nov. 21.	Nov. 28.	Dec. 5.	Dec 12.	Dec. 19.	Dec. 26.
41s 2d	..	..	..	..	..	..
41 1	..	..	..	..	..	..
40 9	..	..	..	..	..	..
40 5	..	..	..	..	..	..
40 3	..	..	..	..	..	..
39 11 —	..	..	..	..	..	..

WANTED, at the Orphan Asylum, Wolverhampton, a MAN and WIFE to live at the Entrance Lodge of the Asylum. Candidates must be without incumbrance, and be between the ages of 35 and 45. Man to understand practical Gardening, and be willing to make himself generally useful; Wife to attend to the Lodge Gates. Wages, 14s. per week, with Coal —Apply by letter, with references as to character, &c., addressed to the Committee at the Institution, before the 31st instant.

By order. W. E. MARSH, Secretary.

WANTED, a PARTNER.—Address ADAMS & Co., The Horticultural Establishment, London Road, Gloucester.

WANTED, a PERSON to Raise NURSERY STOCK and GROW PLANTS for Market. A respectable competent party with small capital would receive a liberal commission.—NURSERY, Mr. H. Senior, Mulberry Street, Sheffield.

WANTED, for a London Seed Establishment, as HEAD SHOPMAN and TRAVELLER, a Man of good address and thoroughly qualified to undertake the entire Management of a Shop and Journey. He must be able to produce first-class commendation as to integrity and character generally. A liberal Salary will be given.—Address by letter only, stating age and qualifications, to R. S. H., Messrs. James Dowie & Co., 455, Strand, W.C.

MESSRS. ADAMS AND CO. are in Want of a thorough practical Man to grow Pines, Grapes, and Peaches (the latter in-doors and out), for Market. Applicant must state on what principle he grows. There is over 7000 feet of glass, erected and heated on best principles. About 400 yards of Peach wall.—The Horticultural Establishment, London Road, Gloucester.

WANTED IMMEDIATELY, a single Man as GARDENER, and to look after a Small Nursery. Good character from last place. – Apply, stating experience and wages required, to X. Y. Z, *Gardeners Chronicle* Office, W.C.

WANTED, a CLERK and PLANT SALESMAN.—Mr. WILLIAM BULL has a Vacancy for a person in the above capacity. Application to be made personally between the hours of 10 and 1.—Establishment for New and Rare Plants, King's Road, Chelsea, London, S.W.

WANTED, TWO UNDER SHOPMEN, in a London Seed Warehouse.—The situations are permanent, and preference will be given to those who have been used to the Wholesale Trade.—Address, by letter only, stating terms and where last employed, to SEEDS, Post Office, Charing Cross, W.C.

WANTED, a Junior Hand to assist in the SEED BUSINESS. — Age about 17 or 18 years. One who has been in the trade two or three years. None need apply unless he can produce a character for honesty and perseverance. —Apply to G. WINFIELD, 7, Westgate Street, Gloucester.

WANTED, a Respectable YOUTH to assist in the Office; he must write a good hand, and be quick at accounts.—Apply by letter in own handwriting to B. S. W., Paradise Nursery, Holloway, London, N.

WANTED, a YOUTH who has been accustomed to Drive and Work in the Garden.—Apply A.B., 25, Bishopsgate Within, E.C.

WANTED, a COWMAN and DAIRYMAID, in a large establishment —Wife to Manage the Dairy and to Bake. One without family will be preferred.—Particulars upon application, stating reference &c., to J. F., The Post Office, Maidenhead, Berks.

WANT PLACES.—Letters to be Post Paid.

NURSERY GOVERNESS, where Music and French are not required.—Age 16; has a thorough knowledge of Teaching, would not object to the care of Children's Wardrobes, or to help in the Housemaid's work.—E. A., Post Office, Turnham Green, S.W.

CARE of CHAMBERS, Offices, the Superintendence of a Laundry, or any post of trust.—A respectable Widow, age 44, who can be highly recommended.—P. G., Post Office, Turnham Green, W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 31, married, understands his profession in all its branches. Three years' good character from the gentleman he is leaving.—W. L., 8, Upper Avenue Road, Regent's Park. London, W.

GARDENER (HEAD).—Age 39, married; thoroughly practical and trustworthy. First-class testimonials from late employer, with whom he lived three years and six months. —B. B., 59, Andover Road, Hornsey Road, Holloway, N.

GARDENER (HEAD).—Age 30, married, no incumbrance; thoroughly acquainted with his profession in all its branches. Highest testimonials, &c. Good character from last situation.—A. B., 5, Brougham Place, Orleans Road, Twickenham, S. W.

GARDENER (HEAD).—Age 30, single; thoroughly understands his profession in all its branches; leaving his present employer on account of his giving up the establishment. Unexceptionable character.—F. M., Bramford Hall, Ipswich.

GARDENER (HEAD).—Age 34, married, without incumbrance.—WM. WOOD & SON are desirous of recommending as above a thoroughly competent Gardener, one who is conversant with all kinds of Forcing, and has a good knowledge of his profession in all its branches.—Address, as above, to Woodlands Nursery, Maresfield, Uckfield, Sussex.

GARDENER (HEAD).—Age 28, married; skilful and practical in Early and Late Forcing; also in the Cultivation of Stove and Greenhouse Plants, Fine-foliaged Plants, Ferns, Orchids, &c., and Flower and Kitchen Gardening. Wife an excellent Laundress. Good testimonials. —GARDENER, Mr. John Cattell's, Westerham, Kent.

GARDENER (HEAD).—Age 40, married; WILLIAM BURTON is now leaving his present employer, with whom he has lived 14 years. He will be glad to enter into an engagement with any nobleman or gentleman who is desirous of securing the services of a thoroughly experienced Man. Unexceptionable character.—WM. BURTON, Gardens, Langley House, Abbots Langley, Watford, Herts.

GARDENER (HEAD).—Age 33; one of the most successful Exhibitors at the Metropolitan Shows. Possesses the very highest and best of character; also testimonials from previous employers and several distinguished Horticultural gentlemen, and is extensively known and recommended as a thoroughly practical, energetic man.—H. W., 67, Hercules Buildings, Lambeth, S.

GARDENER (HEAD), to any nobleman or gentleman.—Middle-aged, married, without incumbrance; a thorough good practical Gardener, who perfectly understsnds his profession in all its branches, including Forcing of Fruits and Flowers; is a good Grape Grower, also an excellent Flower and Kitchen Gardener. Wife could manage Dairy or Poultry if required. Eight years' unexceptionable character.—J. WATERS, 2, Forest Hill Terrace, Forest Hill, Kent, S.E.

GARDENER (HEAD), age 32; no incumbrance.—The Rev. F. FITZPATRICK, Cloon Mohill, Co. Leitrim, wishes to recommend his Gardener, who is leaving him, to any nobleman or gentleman in want of a first-class man. He thoroughly understands the Forcing of Pines, Vines, Peaches, Strawberries, &c.; the Growing of Orchids, Stove and Greenhouse Plants, and the general routine of the Kitchen and Flower Garden. Has had much experience in the Laying-out New Grounds; also the Erecting and Heating of Hothouses. Liberal wages expected.—Address as above.

GARDENER (HEAD), or STEWARD and GARDENER.—JOHN ANDERSON is now leaving the Marquis of Bath, with whom he has lived 22 years at Longleat; he will be glad to enter into an engagement with a nobleman or gentleman who is desirous of securing the services of a thoroughly experienced man. Character and abilities unexceptionable.—Horningsham, Warminster.

GARDENER, or GARDENER, WOOD FORESTER, FARM BAILIFF, or GENERAL MANAGER on a Small Estate —Age 31, married, no incumbrance, Scotch; many years practice in some of the best places in Scotland. Nineteen years' good reference as to character and ability. No objection to Ireland.—J. M. G, 5, Castle Street, Carlisle.

GARDENER (SINGLE-HANDED or Otherwise).—Age 21; character and abilities good. Wages required, 15s. per week.—G. VARNEY, Post Office, Upper Norwood, Surrey, S.

GARDENER (SECOND, or SINGLE-HANDED).—Age 22, single; thoroughly understands Kitchen and Flower Gardening. Two years' excellent character.—G. R, 1, Crescent Cottage, White Horse Road, Croydon, S.

GARDENER (UNDER), or FOREMAN in a gentleman's Establishment.—Age 23; can be well recommended.—E. H, The Gardens, Osberton Hall, Worksop, Notts.

GARDENER (UNDER, or SINGLE-HANDED), near London; has a knowledge of Greenhouse, Vinery, Kitchen and Flower Garden, &c. Good character.—S. T., Post Office, Bridge Street, Cambridge.

GARDENER (UNDER).—Age 21.—W. T. C., Red Heath, near Rickmansworth, Herts.

FOREMAN, in the Houses, in a gentleman's or nobleman's family.—Age 26; well recommended.—R. A., 53, Upper Conduit Street, Leicester.

To Nurserymen.

PROPAGATOR (HARD-WOODED), GRAFTER, &c. —Has had extensive experience in some of the best Metropolitan and Provincial Nurseries; thoroughly sober, steady, and persevering. Can be well recommended.—H. W., Mr. F. Bailey, Stationer, &c., Streatham Place, Brixton, S.

LAND STEWARD and PRIVATE SECRETARY to a gentleman.—A gentleman of good education and considerable experience in Farming, both Light and Heavy Land.—S. S. L., Norfolk Farm, Windsor.

To Landed Proprietors.

AGENT, to any Nobleman or Gentleman.—Has had 16 years' practical experience in the general management of Landed Property. Reference to the gentleman with whom he has been engaged for the above-named period.—F. F, *Gardeners' Chronicle* Office, W.C.

FARM BAILIFF and AGENT.—By a respectable married Man, without incumbrance, from the West of England: understands the Modern System of Agriculture in all branches, Breeding and Feeding Stock, Farm Buildings and Repairs, Drainage, Irrigation, Woods, and Plantations, Mensuration and Accounts. Wife a thorough Devonshire Dairy and Poultry woman. Three-and-a-half years' unexceptional character.—A. A., Messrs. Sutton & Sons, Royal Berkshire Nurseries, Reading.

SHOPMAN (SECOND).—J. C., care of Mr. T. Whalley, Seedsman, Liverpool.

CHRISTMAS PRESENTS.—Elegant Copies of LETTS'S Diaries or Housekeepers, in their many varieties; Pocket Books of various leather; LETTS'S Boudoir Writing Desk; LETTS'S Reading Easels; LETTS'S complete Sets of Sermon Register, Sermon Books, Sermon Case, &c.; Library Catalogues; Ordnance Maps of Hunting Districts, Riding, Driving, &c.; Atlases, Globes, &c. Catalogues post free.
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Sauce.—Lea and Perrins'

WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE,"
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The public are respectfully cautioned against worthless imitations, and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper.
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DINNEFORD & Co, 172, New Bond Street, London, and sold

CORNS and BUNIONS.—A Gentleman, many years tormented with Corns, will be happy to afford other the information by which he obtained their complete removal in a short period, without pain or any inconvenience.
Forward address, on a stamped envelope, to W. GOODMAN, Esq., Epsom, Surrey.

ANOTHER TESTIMONIAL.—Cure of Bronchial Disorders by DR. LOCOCK'S PULMONIC WAFERS.—From Mr. Edwd. Thornton, Chemist, M.P.S, Lyme Regis. Nov. 28, 1863.—"Dr. Locock's Wafers are excellent in Bronchial Disorders, and where there is great irritation."—They have a pleasant taste. Price 1s. 1½d. and 2s. 9d. per doz. Sold by all druggists.

CONSTIPATION, Nervousness, Debility, Consumption, and all Bilious, Liver and Stomach Complaints are only aggravated and accelerated by drugs of every description, but perfectly curable by DU BARRY'S health-restoring
REVALENTA ARABICA FOOD,
As proved by thousands of cases which had been considered hopeless. We quote a few.—Cure No. 46,270. Mr. James Roberts, of Frimley, Surrey, of 30 years' diseased lungs, spitting of blood, liver derangement, and partial deafness.—Cure No. 47,121. Miss Elizabeth Jacobs, of extreme nervousness, indigestion, gatherings, low spirits, and nervous fancies.—Cure No. 54,816. The Rev. James T. Campbell, Fakenham, Norfolk, "of indigestion and torpidity of the liver, which had resisted all medical treatment."—In tins 1 lb., 2s. 9d.; 2 lb., 4s. 6d.; 5 lb., 11s.; 10 lb., 22s.; 24 lb., 40s.
BARRY DU BARRY & Co., No. 77, Regent Street, London, W; also at FORTNUM & MASON, and at 61, Gracechurch Street, E.C.; 4, Cheapside, E.C.; 63 and 150, Oxford Street, W; and at Grocers and Chemists in every town of the United Kingdom.

The Gardeners' Chronicle Newspaper.

SATURDAY, JANUARY 9, 1864.

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DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water tight Roof insured.

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

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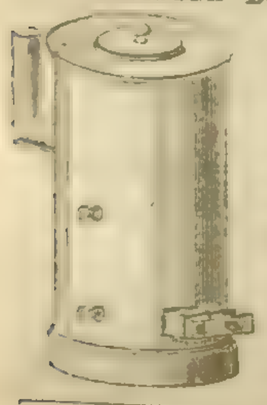

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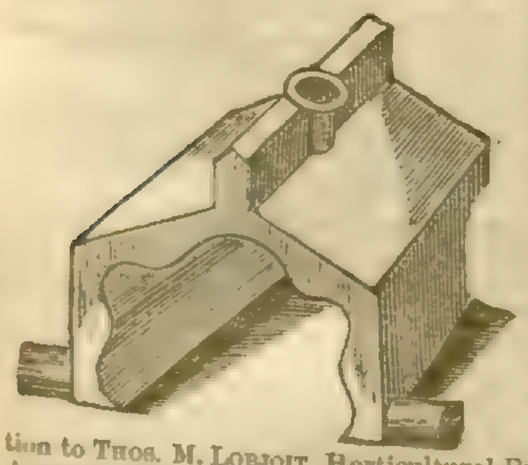

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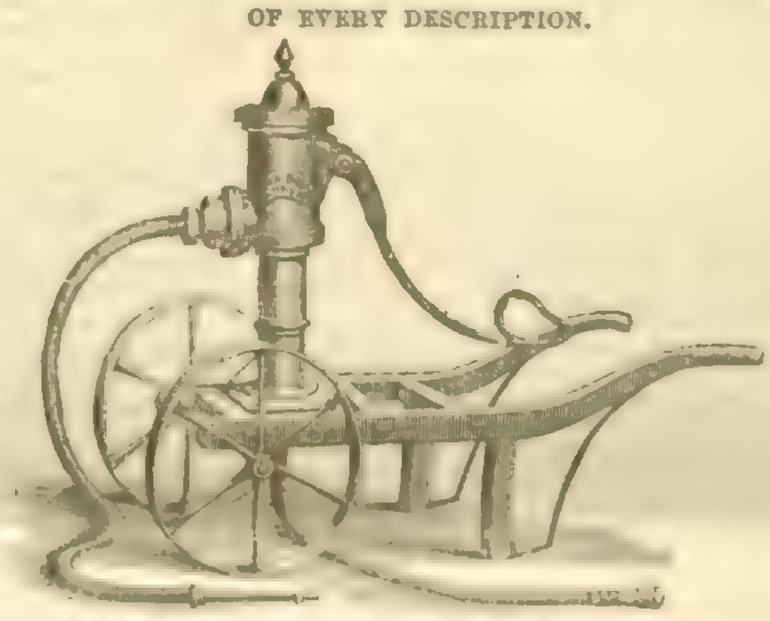

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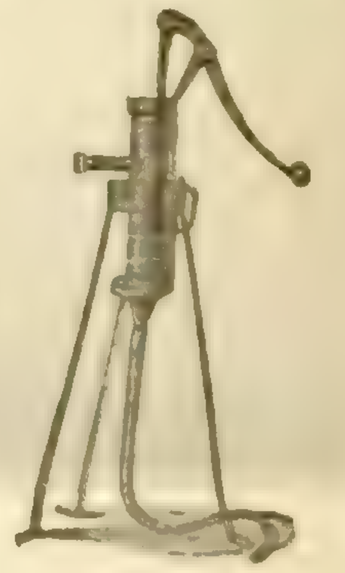

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A MONOGRAPH of ODONTOGLOSSUM.
By JAMES BATEMAN, Esq., F.R.S., F.L.S., &c.,
Author of "The Orchidaceæ of Mexico and Guatemala"

Although founded by Humboldt and Bompland early in the present century, it is only of late years that the genus Odontoglossum has received any considerable attention, either from the botanist or the cultivator. Not more than five species were assigned to it by Professor Lindley in 1832 ("*Genera et Species Orchidearum*," Part III.), these however had increased to 65 on the publication of the first Part of the same author's "Folia Orchidacea," in 1852, while they are now known to exceed a hundred, and we may expect to see that number doubled by the time that the favourite homes of the genus in the Mexican and Peruvian Andes shall have been thoroughly explored. In this case, Odontoglossum will become—next to Oncidium—the most extensive genus in the "Vandeous" Section of the great Orchideous family, and might therefore almost seem entitled to a separate Work even if it had no other claims to independent treatment. Such, however, may be readily found; for—

(1.) Its species affect exclusively the mountain-chains of Mexico, Central America, New Grenada, and Peru; not a single straggler having yet been discovered either in the West Indian Isles or in the low and sultry latitudes of the South American continent. In this remarkable fact we have clear indications of a distinct group.

(2.) A large proportion are eminently beautiful. They are usually of compact growth; their flowers are always exceedingly durable, and often deliciously sweet.

(3.) They do not require—indeed they will not endure—the great heat of most Orchid-houses; but they will thrive, with proper treatment, in a mean temperature of about 60°, which is that of an ordinary greenhouse.

Unfortunately, it was long before this latter peculiarity in their habits—and consequently the secret of their cultivation—came to be fully understood; what wonder, then, if the labours of a Karwinski or a Galeotti, a Linden or a Schlim, a Purdie or a Warscewicz, should have added little to our collections of living plants, and that many of their most brilliant discoveries should at present be only known to us from dried specimens in our herbaria! The principle of *cool treatment* having at length however been fully established, the most strenuous efforts are being made by nurserymen and others to obtain fresh supplies of what we formerly lost, as well to search out new forms, and with this object, not fewer than seven collectors are now (January, 1864) busily engaged in ransacking such portions of the New World as seem to promise the richest harvest of novelty or beauty.

As the various collections arrive, they will doubtless be found to comprise many fine Odontoglossa, the most remarkable of which it is proposed to figure in a Monograph, specially dedicated to the genus; and the Parts of which will appear with greater or less frequency, as the materials for illustration can be had. Not more, however, than Four Parts will ever be published in a single year.

Full descriptions of the plants (in Latin and English), as well as careful directions for their cultivation, will accompany the Plates; and with the concluding Parts an Analysis of the Genus, and Conspectus of all its known Species, will be given.

The first Part is expected to be ready in April, and will contain figures of O. nebulosum, O. Uro-Skinneri, O. Insleayii, O. Phalænopsis, and O. auro-purpureum.

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News of the Week.

THE EMPEROR OF THE FRENCH received the diplomatic body at the Tuileries on New Year's Day, and, in thanking them for their congratulations, said that their good wishes were a happy omen for the year which they were about to enter. HIS MAJESTY added, that notwithstanding the difficulties which had been brought about by certain events in different parts of Europe, he was confident that they would be removed by the conciliatory spirit by which the Sovereigns were animated, and that they should be able to maintain peace. The EMPEROR afterwards addressed himself to the American Minister, Mr. DAYTON, and expressed a hope that the year 1864 would be one of peace and reconciliation for the United States. The draught of the Address of the Corps Legislatif, in reply to the Speech from the Throne, was read to the members on Monday. It expresses a desire for industrial and commercial liberty, the promotion of public works and of interior reforms. It says that the most wisely governed nations cannot always escape foreign complications; and that although the expeditions to China, Cochin China, and Mexico, must inspire respect for the French flag, and may develope her maritime commerce, they have greatly disturbed the public mind on account of the obligations and sacrifices they have entailed, and the Chamber would be happy to see realised the good results which HIS MAJESTY had led them to hope for. With regard to Poland it says that feelings of humanity and the recollections of French history excite the most earnest sympathies for Poland, but it is impossible to disregard the advantages of the Russian alliance to France on important occasions, or to feel otherwise than grateful to HIS MAJESTY for not having committed her treasures and the blood of her children to a cause in which her honour and interests are not concerned. It states that the idea of a European Congress will be a lasting honour to HIS MAJESTY'S reign, and concludes by declaring that France fears no aggression, and has no other ambition than to assure her repose and develope her material resources and moral welfare by the gradual practice of civil and political liberties. The debate on the Address will commence on Monday, and is looked for with great interest by all parties. The report of the committee on the supplementary credits requested by the Government was presented on Tuesday. It unanimously proposes the adoption of the Bill, but warns the Government against engaging in dangerous entanglements, and advises it to put an end to the Mexican expedition as promptly as the interest and honour of France will allow. Four foreigners were arrested in Paris on Thursday, on their arrival from England, on a charge of conspiracy. Three of them are Italians, the fourth gave a name which is said to be evidently false. At their residence were found a large quantity of gunpowder, several revolvers and eight hand grenades, of the Orsini pattern. One of them is said to have made a full avowal of the conspiracy, and it is intended to bring them to an immediate trial.

The Danes have evacuated all the towns in Holstein, and are now stationed on the Schleswig territory. The two armies are confronting each other before Rendsburg, and the Danish Government is prepared to resist any attempt on the part of the Federal troops to cross the Eider. Fourteen thousand men of the reserve have already been called out, and the KING has addressed a proclamation to the army, telling them that they are in arms for the defence of their fatherland. His MAJESTY arrived at Flensburg on Friday, on his way to Schleswig, for the purpose of placing himself at the head of the army, and was received with great enthusiasm by the people of that Duchy. Prince FREDERICK has issued a proclamation, as Duke of Schleswig-Holstein, calling on his "faithful subjects" to obey the Federal administration, but pointing out that the powers they are exercising in Holstein are incompatible with his rights; and the Federal Diet has indirectly acknowledged his title to the Duchies by rejecting by a majority of 9 to 7 the proposition of Austria that it should be immediately summoned to quit Holstein. The latest news states that the operations of the two armies are suspended by the frost, and that the EMPEROR OF THE FRENCH at a Cabinet Council held on Wednesday assented to the English proposal of a Conference for the settlement of the difficulty between Denmark and Germany.

From the United States we learn that General JOE JOHNSTONE has assumed the command of the Confederate army in Tennessee, which has gone into winter quarters. The victory of General LONGSTREET over the Federals at Knoxville Station is confirmed, but General AVERILL'S cavalry has since succeeded in destroying about 12 miles of the Virginia and Tennessee railway, thereby severing LONGSTREET'S communications with Richmond. Numerous other raids have been made on the

sides for the purpose of harassing the outposts and intercepting the communications of each other. The Federal Congress has voted 20,000,000 dollars for bounties and advance pay to volunteers, and has passed a vote against submitting the legality of the Conscription Act to the Supreme Court. The Confederate Congress has abrogated the substitute sytem. The citizens of Halifax have rescued from the hands of the colonial authorities three of the Confederate prisoners captured on board the Chesapeake. Two of them have since been arrested at St. John's, New Brunswick. The conduct of the Halifax people in rescuing the prisoners has caused much excitement and ill feeling at New York.

A despatch from Shanghai states that Prince KUNG having refused to ratify the agreement made by Mr. LAY with Captain SHERARD OSBORN, the Anglo-Chinese fleet has been disbanded, and Captain OSBORN is now on his way to England for the purpose of selling the ships on account of the Chinese Government.

Home News.

THE COURT.—The Queen and Royal family continue at Osborne. On Thursday week the Queen walked and drove in the grounds, accompanied by Princess Helena. Prince Leiningen arrived on a visit to her Majesty. On Saturday the Prince and Princess of Wales took leave of her Majesty, and left Osborne for Frogmore. On Sunday morning the Queen, Prince Alfred, Princess Helena, Princess Louisa, Prince Arthur, Prince Leopold, and Princess Hohenlohe attended Divine service at Osborne. The Rev. G. Prothero officiated. On Monday morning the Queen walked out with Prince Alfred. In the afternoon Prince Alfred left Osborne on his return to Edinburgh. The Queen drove out, accompanied by Princess Beatrice. Professor Max Müller arrived on a visit. On Tuesday the Queen walked in the grounds, accompanied by Prince Arthur and Prince Leopold. On Wednesday the Queen drove out, accompanied by Princess Helena. Earl Granville arrived on a visit. Prince Arthur returned to Greenwich Park. On Thursday the Queen held a Privy Council, at which Parliament was ordered to be further prorogued from Wednesday, the 13th inst., to Thursday, February 4, then to meet for the despatch of business. Earl Granville had an audience of her Majesty.

VISIT OF THE KING OF THE BELGIANS.—King Leopold is shortly expected to visit this country, and will stay several weeks in the Isle of Wight, Westfield House, the residence of Sir Augustus Clifford, at Ryde, having been engaged from the 28th inst. for four weeks.

THE PRINCE AND PRINCESS OF WALES returned to Frogmore House on Saturday from Osborne. On Sunday their Royal Highnesses attended Divine service in St. George's Chapel. The Prince occupied his own stall as Knight of the Garter, and the Princess occupied the adjoining stall. On Monday the Prince went out shooting in the Great Park. On Tuesday his Royal Highness went out skating on the Balaclava Pond in the park. On Wednesday morning the Prince went out shooting. His Royal Highness in the afternoon went skating on the ornamental water at Frogmore. In the evening, being Twelfth Day, the Prince and Princess had a juvenile party. On Thursday morning the Prince skated on the ornamental water at Frogmore, with the officers of the Grenadier Guards and Royal Horse Guards, now quartered at Windsor, who had been invited to join the Royal party. The Princess was present during a portion of the day. Their Royal Highnesses afterwards entertained their visitors at lunch at Frogmore, and in the afternoon the skating was continued till a late hour.

PRINCE ALFRED left Osborne on Monday for Edinburgh, and arrived at Holyrood on Tuesday morning, having travelled from London by the night train. His Royal Highness left Edinburgh yesterday for Wishaw House on a visit to Lord and Lady Belhaven, and will return to Holyrood to-day.

THE MOURNING FOR THE PRINCE CONSORT.—The hatchment which had remained over the principal entrance to Holyrood Palace since the death of the Prince Consort two years ago was taken down on Friday.

THE EX-ROYAL FAMILY OF FRANCE.—It is said that the Count de Paris, who is now at Seville, is engaged to be married to the eldest daughter of the Duke de Montpensier, the Infanta Isabel. The marriage is expected to take place in May next.

THE CABINET.—A Cabinet Council was held on Saturday at the Foreign Office.

PARLIAMENTARY MOVEMENTS.—At the Privy Council held at Osborne on Thursday, Parliament was ordered to meet for the despatch of business on the 4th of February. The official declaration of the poll at the Bucks election was made by the high sheriff on Monday, when it appeared that the votes recorded for Mr. Harvey were 2311, and those for Dr. Lee, 313, giving Mr. Harvey a majority of 1998. Mr. H. J. Selwin, a son-in-law of the late Lord Lyndhurst, is announced as a candidate for Maldon in the Conservative interest at the next general election.

THE CHANNEL FLEET.—Orders have been sent to the Channel fleet, which left recently for Lisbon and Madeira, to return immediately to Spithead. The iron frigate Achilles, 1250 horse-power, which was recently launched at Chatham, is ordered to be brought forward with all despatch and fitted for immediate commission.

Foreign.

FRANCE.—At the reception of the Diplomatic Body at the Tuileries on New Year's Day the Papal Nuncio presented the good wishes of that body to the Emperor. His Majesty, in reply, thanked the Diplomatic Body for their good wishes, and said that they were a happy omen for the year which we were about to enter. The Emperor concluded by saying:—

"Notwithstanding the difficulties which have been brought about by certain events in different parts of Europe, I am confident that they will be removed by the conciliatory spirit by which the Sovereigns are animated, and that we shall be able to maintain peace."

The *Temps* of Friday, referring to the speech, adds that the Emperor addressed himself to the American Ambassador, Mr. Dayton, and expressed a hope that the year 1864 would be one of peace and reconciliation for the United States. The draught of the Address of the Corps Législatif, in reply to the Speech from the Throne, was read to the members on Monday. The following is a summary:—

"The population are profoundly attached to Imperial institutions, and applaud the resolution of the Emperor to anticipate public opinion in the path of industrial and commercial liberty. We wish that the public works should not be diminished, and that interior reforms should be developed. We believe with the Emperor that the most wisely governed nations cannot always escape foreign complications, and that they should regard them without illusion as without weakness. The distant expeditions to China, Cochin China, and Mexico have greatly disturbed the public mind in France on account of the obligations and sacrifices they entail. We acknowledge that these expeditions must inspire respect for our countrymen and for the French flag, and that they may also develope our maritime commerce; but we should be happy to see realised shortly the good results for which your Majesty has led us to hope. The recollections of our history and the feelings of humanity which animate us excite the most earnest sympathies for Poland, and we have seen with grief the failure of the combined efforts of three great Powers. Neither can we, however, disregard that the sincere and cordial support of Russia has been useful to France on important occasions. We should regret any coldness in our friendly relations with that Power, and have, therefore, accepted with profound satisfaction the idea of an European Congress, which will be a lasting honour to your reign. France, on whom you have bestowed splendour and glory, is grateful to you for not having committed her treasures and the blood of her children in causes in which her honour and interests are not at stake. Leave without regret, Sire, the few unjust prejudices against accepting your loyal and pacific propositions. Noble and sound ideas make way in the world, and take root in the heart of the peoples. Await calmly the effect of your generous words. France, homogeneous, compact, strong, and confident in you, fears no aggression, and now has no other ambition than to assure her repose and develope her material welfare by labour and peace, and her moral welfare by the sincere and gradual practice of civil and political liberties."

The report of the committee on the supplementary credits requested by the Government was published on Tuesday. It concludes as follows:—

"Our mission is to warn the Executive power with affectionate respect, and to hold it back upon the brink of dangerous entanglements. The best devotion is that which knows how to speak salutary truths in time of need. We are unanimous in advising that an end should be put to the Mexican expedition—far be it from us to say at any price, but as promptly as the interest and honour of France will permit. The expression of this wish certainly responds to the general sentiment of the country, and we think the Government of the Emperor will receive it with favour."

The committee unanimously propose the adoption of the Bill. It is asserted that the debate on the Address will commence in the Corps Législatif on the 11th inst. On Tuesday several members brought forward an amendment to the Address, expressing great sympathy with Poland, and an opinion that it is expedient to recognise the Poles as belligerents. On Wednesday six other members gave notice of an amendment expressing a hope that the expeditions to Cochin China and Mexico, on account of the uneasiness and sacrifices they involve, may speedily be brought to a satisfactory issue, and that a friendly mediation may at last effect a reconciliation between the States composing the old American Union. The Emperor presided at a Cabinet Council on Wednesday, to consider the proposition of England for a Conference on the Danish question. The *Constitutionnel* of Wednesday, in an article signed by M. Limayrac, referring to the proposition of a restricted Congress made by England, says that France will offer no impediments or obstacles to the plan, though every day shows its inefficacy, and proves the practical utility of the European Congress proposed by the Emperor. The *Temps* also says that it is rumoured that France will accede to the proposition of England for a Conference on the question of the Duchies. The police have arrested four foreigners, of suspicious appearance, coming from England. At their residence were found a great quantity of English gunpowder, four poniards, four revolvers, four air-guns of a new and ingenious construction, phosphorus, percussion caps, fuses, several metres in length, and eight hand grenades made on the Orsini pattern. In the pocket of one of these men was found a letter dated from London, very compromising for himself, his companions, and the writer. Three of the men are Italians, named respectively Tambuco, Grocco, and Imperatori. The fourth assumes a name evidently false. Two appear to have received an excellent education, and it is asserted that one of them has made a complete avowal of the criminal object of the conspiracy. The judicial investigation is being continued, and the trial of the prisoners will shortly take place at the assizes. A serious accident occurred on the Northern Railway on Tuesday, at the station of Pierrefitte, where two trains came into collision. Two carriages were smashed by the shock, five passengers killed, and 59 injured. A letter from Brest states that the repairs of the Confederate corvette Florida are completed, and she is anchored in the roads at 200 yards from the Federal corvette Kearsage. The engines of the Florida are to be tried on the 10th inst., and she is to sail towards the beginning of February. The two adversaries are to be accompanied to sea by a French ship of war beyond the French waters, allowing the Florida an advantage of 20 hours over the Kearsage, in accordance with the regulations prescribed by international law.

PORTUGAL.—The Cortes were opened on Saturday by the King in person. His Majesty said in the Speech from the Throne that the tobacco monopoly will be abolished next April. Tobacco may henceforth be cultivated in Madeira and the Azores. The Budget was satisfactory, and no deficit existed. Senhor I. Horta, formerly Minister of Public Works, is dead. A famine prevails at St. Vincent in consequence of the total absence of rain for the last 15 months. The King and Queen intend to visit Evora, to which town the railway is now open. The American brig A. S. Ellis has brought to Lisbon the captain and part of the crew of the English steamer Eva, wrecked on her voyage from Port-au-Prince to Liverpool. The American corvette St. Louis is in the Tagus.

DENMARK.—The new Ministry, although not yet definitively settled, has been constituted as follows:—Bishop Monrad, President of the Council and Finance Minister; Colonel Lundbye, Minister of War; Captain Lütken, Minister of Marine; Bishop Engel-toft, Minister for Public Worship and Education; Dr. Casse, Minister of Justice; State Councillor Nutzhorn, Minister of the Interior; M. de Quaade, at present Danish Minister at the Court of Berlin, Minister for Foreign Affairs. Until the definitive organisation of the Cabinet, Bishop Monrad will undertake the Ministry of Holstein, while Amtmann Simony will assume the Ministry for Schleswig. It is reported that the late Finance Minister Fenger will resume the direction of the entire Finance Department. About 14,000 men of the reserve have been called out by the Ministry of War; and the greatest activity prevails in the dockyards at Copenhagen with the object of getting afloat a considerable fleet as speedily as possible. King Christian on Tuesday issued the following proclamation to the army:—

"The New Year finds you in arms for the defence of our fatherland, and your King is therefore among you. I have entered upon the full inheritance of my predecessor in love to our native land. Our motto is the honour of our country, and it shall be upheld with peace, or, if requisite, by force of arms. No life is too costly for the salvation of the fatherland. From the former struggle the army has retained experienced leaders, whom the young troops will now follow with enthusiasm. Courage, not numbers, above all unhesitating military obedience, in all cases lead to victory. I shall soon gladly visit the different divisions of the troops."

Advices from Copenhagen state that it is generally believed in the capital that a French and an English fleet will soon appear in the Danish waters. The *Dagbladet* contains the following article on the Federal execution:—

"Will any honest men say that the intervention in Holstein comes under the head of 'Federal Execution?' In the instructions given to the Commissioners it is expressly laid down that they have to administer the affairs of the Duchy, reserving to the Sovereign all his rights and without doing prejudice to them. Is it, we say, in contromity with the tenour of that order completely to ignore the existence of the King of Denmark by allowing the inhabitants publicly to proclaim a new Sovereign? The Execution is nothing less than a mask to foster revolt. In the interest of peace Europe rejoiced when, on the 7th of December last, the Confederation voted by a small majority *execution* instead of the *occupation* of Holstein. What has now become of the distinction between those two ideas? Had *occupation* been voted, it would have been a direct infringement of international law. A heavy pressure has been exercised upon Denmark to compel her not to consider the Execution a *casus belli*, and to resist it by force of arms. The Powers who have made their will prevail at Copenhagen, and who, disdaining to listen to the wishes of the nation, have extorted that concession from the Government, have acted under the supposition that it was simply Federal Execution, and that any attempt to make a demonstration in favour of the Duke of Augustenburg would be rigorously prohibited. What will they say now, after it has been proved that the Plenipotentiary Commissioners of the Confederation patronise and facilitate everything which tends to deprive the Crown of Denmark of the duchy of Holstein? This pressure of the neutral Powers at the present moment is our greatest evil. We do not hesitate to say that the whole Danish people clothes with indignation at the inconceivable attitude assumed by the neutral Powers, who style themselves the friends of Denmark."

THE DANISH DUCHIES.—On Thursday the 31st ult. the Danish troops evacuated Rendsburg, when 5000 Saxons, under General Hake, immediately entered the town, and were enthusiastically received by the inhabitants. The Danish Commandant stated that he was without instructions respecting that part of the works called the "Crown Fort," and ordered the palisades which had been removed to be replaced. General Hake allowed until Friday morning for consideration, threatening that if the "Crown Fort" were not evacuated by that time he should employ force.

The Danes, however, still occupied the northern part of the works on Thursday last, and it is reported that the Danish pioneers have received instructions to blow up the bridges next the sluice-bridge immediately on the outbreak of hostilities. The Federal troops have erected earthworks opposite the fort. Hanoverian and Austrian pioneers, with a small pontoon train, arrived at Rendsburg on Monday, and it is said they will be employed in erecting defences. Contracts have been made for supplying provisions to the Federal troops. The Eider round Rendsburg is frozen. The district of Dithmarschen, in Holstein, has been occupied by the Federal troops. The Danish troops have not yet evacuated the six Holstein villages to the north of the Eider. The 13th Prussian Division has received orders for immediate concentration in the district of Priegnitz. It is believed that this order indicates an intention on the part of the Federal troops to immediately occupy Schleswig. The King of Denmark arrived in Flensburg on Friday on his journey to Schleswig, accompanied by the Crown Prince. From an early hour in the morning the churches, mills, ships, all the public buildings, and many private houses were decorated with the Dannebrog. The King arrived in the Royal steamship Slesvig, and landed at the steamers' bridge, which was handsomely decorated, and immensely crowded with spectators. His Majesty and the Crown Prince drove in an open carriage through the town amid the most vociferous cheering from the people. After a stay of about an hour, the Royal travellers proceeded on their journey to Schleswig. On Thursday the King and the Crown Prince again arrived at Flensburg by special train, and left immediately for Sonderburg. Thence his Majesty will at once proceed by the steamer Schleswig to Korsör, in order, it is said, to be present at the next sitting of the Council of State in Copenhagen. His Majesty inspected the fortifications of Friederichsstadt on Tuesday. The Commander-in-Chief, General de Meza, has already established his head-quarters in Schleswig. General Gerlach and Brigadier Lasson, with their staffs, arrived at Flensburg on the 31st ult, and proceeded on their journey to Schleswig on the next day. The 22d Regiment had previously arrived in several steamers from Copenhagen. The Danes have imposed very heavy requisitions on the south-eastern districts of Schleswig, one demand being for 200 three-horse carts, and another for 3,000,000 lb. of straw. Large reinforcements are to be sent from Eckenvörde to the Island of Fehmern. In case of war it is believed that flank attacks will be made from that position. Prince Frederick remains at Kiel, which he is said to intend declaring a free port. During his residence there he has received congratulatory deputations from all parts of the country. In reply to the leader of a grand torchlight procession he spoke of the necessity of union between the Government and its subjects, and expressed the confident hope that he would soon assume the government. On Friday the Prince, under the title of Duke of Schleswig-Holstein, issued a proclamation dated the 31st of December, addressed to the people of the Duchies, in which he says:—

"I would not hold back before your call. I fulfil a duty in sharing with you the cares of this momentous epoch. The Federal Execution, which from the beginning was not directed against my government, has now ceased to have any object. I am convinced that the Federal Diet will now acknowledge that the reasons which determined it to order the administration of the duchy by Federal Commissioners no longer exist. I expect that my faithful subjects will, however, respect the Federal Administration, and that they will avoid any conflict."

HAMBURG.—It is asserted that the Hamburg Senate will vote in favour of the recognition of the rights of the Prince of Augustenburg. The Assembly of the Citizens has almost unanimously agreed to a motion, expressing its confident expectation that the Senate on the occasion of the vote to be taken in the Federal Diet on the question of the right of succession in Schleswig-Holstein will vote in favour of Duke Frederick.

FRANKFORT.—At the sitting of the Federal Diet on Saturday, a motion, introduced by Baron Kübeck, the President of the Diet, on the part of Austria, to the effect that the hereditary Prince of Augustenburg should be immediately summoned to leave the Duchies, was lost by 9 to 7. Information from a reliable source states that Prussia and Austria have withdrawn their intended motion in the Diet for the employment of none but Austrian and Prussian troops in the eventual occupation of Schleswig. The *Breslau Gazette* contains a violent article against what it calls the "English threats," and says that Earl Russell's warning to the Federal Diet against "overhasty steps" are of no importance until the English Parliament has spoken, and the "trading policy" of England will make Parliament pause before embarking in a war for Denmark. It concludes by saying that neither England nor France will hinder the union of the Duchies whenever the Great German Powers earnestly will it. The other German organs take the same view of Earl Russell's despatch. The *Austrian Gazette* qualifies it as a "blustering policy," and advises Earl Russell "to go to school to the prudent Napoleon." The *Botschafter* only regards the English note to the Diet "as a diplomatic curiosity of the present day," and declares that Germany will not allow herself to be frightened "by a gross threat."

SAXONY.—In the sitting of the Second Chamber on Tuesday, Baron von Beust declared that the vote of Saxony in the Federal Diet, with regard to the stay of the Prince of Augustenburg in Holstein, was opposed to the proposition of the President, and was based upon respect for the responsibility of the Federal Commissioners, and on other reasons which justify the attitude of Saxony with reference to the loyal and political sides of the question. Baron von Beust further expressed a hope that the majority in the Diet would decide in favour of the claims of the Prince of Augustenburg, and declared that Saxony joined the proposition made by Wurtemburg at the Federal Diet.

PRUSSIA.—At a meeting of the committee upon the loan in the Chamber of Deputies on Monday, Count von Bismark repeatedly advocated free action for the policy of the Government. He hoped, in conclusion, that the House would rather grant the means requested than compel the Government to obtain them by its own authority. The debate then adjourned.

AUSTRIA.—It is stated that the Vienna Cabinet has positively declared to Prussia that it will not take any action in the question of Schleswig should Prussia in the present state of things withdraw from the London protocol. The semi-official *General Correspondence* of Thursday contradicts the rumour that Prussia had withdrawn from the proposition for the occupation of Schleswig made by Austria and Prussia conjointly at the Federal Diet. The same paper of Tuesday publishes an article cautioning the minor German States against acting against Denmark. It expresses doubts regarding their power to undertake attacks upon the integrity and independence of States belonging to the Confederation, and says:—

"The mission of protecting the Confederation against any chances which might result from European complications belongs only to the great German Powers, and the minor States are mistaken if they think to be able to carry out attacks against Denmark and her possible allies on their own risk."

The *Mémorial Diplomatique* of Sunday states that a proof of the perfect concord existing between the Emperor Napoleon and the Archduke Maximilian will shortly be given by a visit of the Archduke to the Court of the Tuileries. It also says:—

"The alarmists who are anxious to spread the opinion that the Archduke will not be able to obtain either men or money to establish a monarchy in Mexico will be not a little surprised to learn that offers from English, French, Belgian, Dutch, and German capitalists are constantly received at Miramar. We could mention three large financial firms who have already sent agents to Mexico to prepare for the creation of credit institutions to operate in that country as soon as they shall have obtained the sanction of the new Sovereign. A further most important fact is that none of these associations ask any other guarantee than the accession of the Prince."

The *Mémorial* also contains a statement said to have been made by the Archduke Maximilian to the editor. The Archduke dwelt upon the devotion with which he should endeavour to justify the confidence of the Mexican people. It would be his dearest care to avoid his crown being soiled by a drop of Mexican blood. Should he, however, find himself unable to secure the concord and independence of his empire, he would rather abandon the crown than occasion civil war, leaving the appreciation of his conduct to the impartial verdict of history. A subsequent telegram from Trieste states that the Archduke will embark for Mexico in time to arrive there before the end of March.

POLAND.—The Russians have imposed upon the Kingdom of Poland a fresh contribution of 6,000,000 roubles, of which amount 2,500,000 will be imposed on Warsaw. An ukase of the Czar has been published, calling under arms all soldiers now living in the Kingdom of Poland on indefinite furlough. 250 prisoners were despatched on the 2d inst. to Siberia, among whom was Count Stanislas Zamoyski. The Abbé Mackiewicz was hanged by order of General Mouravieff, in Kowno, on the 28th ult. Anthony Ilkowski, the priest John Hruszczyk, and Augustus Salomon, a Prussian subject, were hanged on the 19th ult., in the town of Szczeczew, in the district of Pruszany. General Kruk has had an engagement with the Russians at Kock, in the government of Lublin, the result of which was indecisive.

ITALY.—At the reception held by King Victor Emmanuel on New Year's Day, the King advised the deputation from the Senate to deliberate upon the Bills regulating the taxation. The people were prepared for the sacrifices required by the condition of the country. The King expressed his regret to the deputation from the Chamber of Deputies that the year 1863 had not afforded a favourable opportunity to accomplish the redemption of Italy. His Majesty considered that 1864 would bring about European complications not well defined, which might offer the wished-for opportunity. The country might reckon upon the King, as the King reckoned upon the country. A complete denial has been given to a statement recently furnished to a German newspaper by its Turin correspondent, to the effect that the Italian Minister of War had forwarded a circular to the military commander explaining the arrangements made for war against Austria in the coming spring. The Chamber of Deputies re-assembled on Monday. Signor Guerrazzi sent in his resignation as member of the Chamber. The debate on the Bill for the suppression of brigandage was then continued. Signor Dondes opposed the Bill from constitutional motives. Signor Massari pointed out the happy results obtained by the measures adopted against brigandage, which he said had been almost entirely suppressed. The law had concentrated all power in a severe but legal system, which rendered all arbitrary acts impossible. Signor Crispi spoke against the Bill, as he was opposed to any exceptional law. On Tuesday Signor Conforti spoke in opposition to the Bill, while the Minister of Justice defended its constitutionality and necessity. Signor Rattazzi announced that he should speak in favour of the Bill. General Bixio stated that the origin of the brigandage was Rome. In the sitting of Thursday the President of the Chamber announced the resignation of Garibaldi as a member. Several members advocated the non-acceptance of the resignation, while others spoke in favour of the opposite course. It was finally accepted, together with the resignation of nine other members of the Left.

GREECE.—The *Dagblad van's Gravenhage* of Tuesday publishes a telegram from St. Petersburg asserting that King George I. has quitted Athens, convinced of his incapacity to regulate the confusion of the country. The Paris papers state that the telegram is considered false.

IONIAN ISLANDS.—Advices from Corfu state that the cannon of Vido, the fort commanding the harbour, were dismounted and taken away on the 28th ult.

THE DANUBIAN PRINCIPALITIES.—Accounts from Bucharest state that warlike preparations are making in the Danubian Principalities. Parcels of arms are constantly arriving from France and Belgium. These preparations are believed to have some connection with the Italian armaments.

INDIA.—The Bishop of Calcutta is now engaged on his first visitation, as Metropolitan of the dioceses of Madras, Bombay, and Colombo. In his charge, which was delivered to the clergy of his own diocess before his departure, Dr. Cotton was emphatic in his denunciation of Bishop Colenso's errors, and showed the impossibility of such a thing as verbal inspiration. He also showed how much more liberal the Church is in the excision of the three obnoxious services for the Gunpowder Plot, &c., than the Nonconformists who so lately celebrated their bicentenary. He expressed a desire for a change in the Burial Service, suggesting that as it at present stands the whole should be read only over communicants of the Church, while a shorter and more general form is used in the case of others. He did not touch on political or educational questions farther than to urge the advantage of establishing a church college in Calcutta, where, as in Dr. Duff's great institution, undergraduates of the Calcutta University might study for degrees. The Bishop will return to Calcutta about the end of February.

MADAGASCAR.—The Paris papers publish advices from Réunion to the 5th December, stating that all hope of King Radama still surviving is almost abandoned.

CHINA.—Prince Kung having refused to ratify the agreement made by Mr. Lay with Captain Osborn, Captain Osborn proceeded to disband his force. The European Ministers protested against Prince Kung having the ships on his own terms, and Prince Kung then requested Mr. Bruce to sell the ships for him. Mr. Bruce having requested Captain Osborn to undertake their disposal, a part of the squadron were to sail for England, and Captain Osborn, with the Keangsoo, Quantung, and Amoy, had sailed for Bombay. Captain Osborn may be shortly expected in England. A despatch from Shanghai of the 25th November states that Major Gordon's steamer, the Firefly, has been seized by rowdies.

UNITED STATES.—The Richmond papers of the 19th ult. reported from Charleston that the Ironsides and three Monitors became entangled while endeavouring to pass the obstructions in the harbour; that the Ironsides would probably have to be abandoned, and that two Monitors were badly injured. The report is now declared to have been a fabrication, originated at some point between Fortress Monroe and New York, and designed to influence the price of gold. The Weehawken was about to be raised. Southern accounts of Longstreet's engagement at Bean's Station state that the Federals, after a stubborn resistance, retreated towards Knoxville with a loss of 200 killed and wounded. The Confederates lost 800 men, but captured a large number of waggons and prisoners. The Richmond papers of the 20th announce that a battle with Longstreet was expected near Jonesborough, Tennessee. General Joe Johnston has assumed the command of the Confederate army in Tennessee, which has gone into winter quarters. 800 guerillas are reported to be preparing to move through Pound Gap for a raid through the eastern portion of Kentucky. Another force is concentrating for a raid on the Louisville and Nashville Railroad. Forrest, Richardson, and other guerillas are actively campaigning in the interior of Tennessee. General Averill's Federal cavalry have destroyed six miles of the railroad between Staunton and Gordonsville, cutting off Longstreet's communication with Richmond. The telegraph wires were broken, and the depots at Salem with their contents destroyed, together with several bridges and culverts. General Averill on his return from this important feat found his path blocked up by the Confederates at different points, under no less than seven generals. He, however, evaded them under cover of night, and returned to head-quarters with trifling loss. The Confederates have been repulsed in an attack upon Fort Gibson, Arkansas. Kirby Smith's forces are concentrating to attack Little Rock and Fort Smith. Several Indian chiefs, of the Choctaw tribe, hitherto in friendly alliance with the Confederates, have voluntarily surrendered to General M'Neill, being desirous of returning to their allegiance to the Washington

government, under President Lincoln's amnesty proclamation. The Confederates have been repulsed in an attack upon the outposts of Natchez, Mississippi. Reports, said to be exaggerated, are current at New Orleans of a mutiny among the coloured troops in Fort Jackson. The Federals have abandoned the Teche country, leaving a small garrison at Brashear. General Butler has ordered an enrolment of white and black citizens in his department between the ages of 18 and 45, to be completed by January 1. General Rosecrans is to supersede General Schofield in Missouri. General Buford, the first cavalry officer in the army of the Potomac, died at Washington on December 16 of a fever contracted in camp. General Corcoran has been killed by a fall from his horse. General Burnside is in New York, receiving much public attention. The Federal commander of Wilmington denies the statement that blockade running into Wilmington is frequent. The destruction of the steamer Daylight is denied. The iron-clad Dictator has been successfully launched at New York. The Federal Congress has voted against submitting the constitutionality of the Conscription Act to the Supreme Court. The House of Representatives has voted an appropriation of 20,000,000 dollars for bounties and advance pay to volunteers. The substitute system has been abrogated in the Confederate Congress. The National Conservative Union Convention, assembled at Philadelphia, are reported to have reaffirmed the nomination of M'Clellan for the presidency, and nominated Judge Campbell for the vice-presidency. The *New York Herald* has commenced a systematic attack upon President Lincoln, saying that his fatuity and imbecility, where his personal partialities are concerned, pass all belief, and that he is an amiable sort of man, but his works are too costly. Three of the Confederate prisoners captured on board the Chesapeake were taken from the authorities by the mob while being landed at Halifax, and set free. Two of them have since been arrested at St. John's, New Brunswick, and taken before a police magistrate. The action of the people of Halifax in rescuing them has caused considerable ill feeling at New York, The passport system for passengers leaving by American vessels has since been revived. Federal war vessels have been stationed off the Narrows to overhaul vessels leaving New York; and in order to prevent future occurrences similar to that of the Chesapeake, all weapons found in the possession of passengers are taken from them just previous to their sailing, and are given in charge of the purser or the captain, to be returned to the owners on arrival at their destination. The English barque Circassian has been seized at New York by the provost marshal, and many arrests, both male and female, had been made on board. The New Orleans steamship Cromwell was seized by the authorities at New York on the 24th. Large quantities of powder and percussion caps, supposed to be intended for the use of the Confederates, and shipped by mercantile houses, hitherto enjoying the reputation of loyalty and patriotism, were found on board. Several passengers presenting a suspicious appearance have been arrested. The schooner Gerety, from Matamoras for New York, with cotton, has been captured at sea by six men who shipped as passengers. The steamer Vanderbilt has captured the bark Saxon off Capetown, and the Angela Pequina on the West Coast of Africa. The Italian frigate Ré d'Italia, built in New York, ran ashore in her trial trip, and has not yet been got off. The contest between Heenan and King has created great excitement throughout the country, and the result has caused much disappointment.

MEXICO.—It is reported that Vidaurri, Governor of Nuevo Leon, has declared in favour of the French.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91 to 91⅛ for Money, and 91⅜ for Account; Three per Cents. Reduced, 90¾ to 91; New Three per Cents., 91 to 91⅛; India Five per Cent. Stock, 106¼ to ⅜; Ditto Four per Cent., 100⅛ to ¼; Ditto Four per Cent. Debentures, 1866, 99¼; Ditto Bonds, par; Five per Cent. Enfaced Rupee Paper, 104⅛ to 104; Exchequer Bills, 3*s.* to 2*s.* prem., par.—FOREIGN: Brazilian, 1852, 1858, 1860. 88¼ to 87¾; Egyptian, 101¼; Greek, for Acct., 21½; Ditto Coupons, for Acct., 11¼; Italian, for Acct., 67⅜, ex div.; Mexican, for Acct., 36½: Peruvian, 1862, for Acct., 86 ex div.; Portuguese, 1856, &c., for Acct., 47⅜ to ½ ex div.; Russian, 1850, 86¼ ex div.; Ditto 1862, 89⅜ to 88⅞; Spanish, for Acct., 52⅜; Ditto Passive, for Acct., 34 to ¼; Ditto Certificates, for Acct., 13¾ to 14; Turkish, 1858, for Acct., 69¾; Ditto 100*l.* Bonds, 73 to 74; Ditto 1862, for Acct., 68 to 67½ ex div.; Ditto 100*l.* Bonds, 68⅛ to 67¾ ex div.

Gazette of the Week.

FRIDAY, *Jan.* 1.—BANKRUPTS.—J. F. ARCHBOLD, late of King's Bench Walk, Temple, Barrister-at-Law.—J. AITKEN, Hitchin, Hertfordshire, Draper.—WILLIAM ATTWOOD, Exeter, Glass Dealer—[illegible] ASTEN, Bromley, Kent, Wood Dealer—G. B. BICKERTON, [illegible] Row, Hoxton—J. BROWN, Burnley, Lancashire, Machine Maker—E. [illegible], Leamington, Warwickshire—W. BAILEY, late of Mowbray Terrace, Malden [illegible], Scottish New Town, Foreman Horse Keeper—J. CARRUTHERS, [illegible], Cumberland, Builder—G. CULLWICK, Preston, Staffordshire Potter—R. CLEWES, North Petherwyn, Devonshire, [illegible]—J. B. DAVIES, Ebenezer, Carnarvonshire, Joiner—E. DOBSON, Wadsworth Common, Yorkshire, Beerseller—J. K. DEVONSHIRE, Euston Road, Euston Square, Clerk in the Admiralty—H. EMES, Derwent Terrace, Crisp Street, Poplar, Cheesemonger—THOMAS EVANS, [illegible], Bermondsey Street, Greengrocer—W. FOX, Swansea, Glamorganshire, Boot and Shoemaker—G. FOSTER, Pilley, Yorkshire, Plumber and Glazier—J. FOSTER, Rockliff, Cumberland, Farmer—A. GRAHAM, Maryport, Cumberland, Shoemaker—J. GILL, sen., New Leeds, Yorkshire, Grocer—W. GRANT, Manchester, Engineer—J. GATE, Halifax, Yorkshire, Fruiterer—W. HILLARY, Thurvaston, Derbyshire, Farmer—R. HOLLIS & W. HOLLIS, Witney, Oxfordshire, Machine Makers—J. LEWIS & L. LEWIS, Brynlendring, Glamorganshire, Manufacturing Chemists—J. [illegible], Caterham, Surrey, Timber Merchant—J. MARTIN, Everton, Lancashire, Fruit Dealer—G. METCALFE, Hawes, Yorkshire, Shoemaker—C. MORGAN, Norwich, Chemist—F. MEYER, Pleasant Place, Kingsland Road, Cheesemonger—I. MORRIS, Llandilo-vawr, Carmarthenshire, House Builder—T. MATTHEWS, Leicester, Engraver—E. PYWELL, Hedgemead, Somersetshire, Butchers' Assistant—OWEN ROBERTS, Penrhyndeudraeth, Merionethshire, Coal Dealer—J. SMITH, Birmingham, Manager to an Electro Plater—M. SLATER, Carrbrook, Cheshire, Farmer—J. SHIPPAM, Mansfield, Nottinghamshire, Huckster—I. T. FAULKNER, Denton Holme, Cumberland, Hatter—R. TAYLOR, Winstanton, Staffordshire, Grocer—H. TASSELL, Strood, Kent, Boatbuilder—J. TOWNSON, Carlisle, Cumberland, Grocer—T. WARREN, Bristol, Fellmonger—W. WEBB, St. Georges Street, Peckham, Tanner's Foreman—B. WAKEMAN, Birmingham, Looking Glass Manufacturer—T. WATTS, Bedworth, Warwickshire, Grocer—J. WORLEDGE, Norwich, Fish Curer.

SCOTCH SEQUESTRATIONS.—D. CAMPBELL, Achavallich, Argyllshire, Farmer.—T. DRUMMOND and Co., Dundee, Corn Merchants—A. HAY, Edinburgh, Miller—A. WHITEFORD, Hamilton, Lanarkshire, Flesher—A. WILSON, Hayfield Hilton, Aberdeenshire, Farmer—R. WILSON, Hayfield Hilton, Aberdeenshire, Farmer.

TUESDAY, *Jan.* 5.—BANKRUPTS—W. N. ACKROYD, Leeds, Cloth Merchant—E. BATTERSBY, County Chambers, Cornhill, Coal Merchant—W. BARNSBROOK, Birmingham, Journeyman Die and Tool Forger—F. BARBER, Horningsham, Wiltshire, Miller—H. BOYCE, Sandown, Isle of Wight, Carpenter—W. BENNETT, jun., Borough, Green, near Wrotham, Kent, Carrier—J. BENN and W. BURTON, Little Ealing, Middlesex, Market Gardeners—J. D. BOAG, York Place, Kingsland Road, Auctioneer—K. BROWN, Great Dover Street, Southwark, Fish Salesman—J. BURNS, Salford, Fishmonger—R. CRANSTON, Gateshead, Durham, Timber Merchant—A. P. CHILDS, Surrey Street, Strand, Surgeon—T. COWELL, Bradford, Yorkshire, Butter Dealer—W. CLEMSON, Noble Street, City, Commission Agent—H. DAVIES, Brunswick Terrace, Waterford Road, Fulham, and T. BELL, Church Road, Lewisham, Auctioneer—H. DENTON, late of Bristol, Surgeon—E. DOBSON, South Otterington, Yorkshire, Stonemason—J. DEACON, Portland Road South, Norwood, Surrey, Draper—W. EVANS, Trimdon Colliery, Durham, Grocer—E. EDWARDS, Bolton, Oxfordshire, Carrier—J. FLACK, Middle Row, Spitalfields, Trade Dresser—G. FAIRCLOUGH, Bishop's Stortford, Hertfordshire, Beerhouse Keeper—G. L. GERRARD, Old Castle Street, Shoreditch, Picture Frame Maker—R. H. GISSELL, Princes Terrace, St. John's Wood, Advertisement Contractor—T. HICKINBOTTOM, Bilston, Staffordshire, Licensed Retailer of Ale—W. P. HOOK, Gloucester Street, Queen's Square, Holborn, Journeyman Hairdresser—C. HALL, Beckingham, Nottinghamshire—J. HUXLEY, Wolstanton, Staffordshire, Innkeeper—T. HART, Spitalfields Market, Greengrocer—R. HURFORD, Ferdinand Street, Camden Town, Tailor—R. HALLER, Worgate Street, Mintern Street, New North Road, Journeyman Wood Carver—THOMAS KNIGHT, Neithrop, Oxfordshire, Dealer in Hay—JAMES KING, Gosport, Jobbing Coachmaker—CHARLES KITE, Maidstone, Compositor—H. J. LANGE, Wageners Buildings, Gower Walk, Whitechapel, late Manufacturer of Gelatine Capsules—T. MARSDEN, Gilderstone, Yorkshire, Overlooker—R. METHLEY, Church Street, Old Kent Road, late Commercial Clerk—J. M'ALPIN, Market Street, Roman Road, Barnsbury, Commission Agent—D. MAY, Blossoms Inn, Lawrence Lane, Victualler—J. NORTH, Stratfield Turgis, Southampton, Pig Butcher—J. W. NEALE, Palace New Road, Lambeth, Engineer—M. NEWTON, Cross Court, Drury Lane, Dealer in Fancy Goods—R. NELSON, Harrogate, Yorkshire, Farmer—H. PARKER, Brighton, Bricklayer—J. PENNING, Wisbech, Cambridgeshire, Clothier—F. W. POOL, late of Bristol, Beer Retailer—S. PERRY, late of Porter St., Dairyman—A. PAUL, Mecklenburgh Sq., Surgeon—S. PROCTOR, Eccleshall, Staffordshire, Farmer—A. PROCTOR, Eccleshall, Staffordshire, Farmer—A. RANDALL, Sutton, Bedfordshire, Butcher—W. THORNTON, Birmingham, Licensed Victualler—J. TOWSER, Sutton, Surrey, Carpenter—W. TALBOT, Nottingham, Boot Maker—F. J. TURRALL, Warwick—R. SUTCLIFFE, Halifax, Yorkshire, Innkeeper—G. SWORN, Wareham, Dorsetshire, Common Brewer—J. SYMES, Bradford, Yorkshire, Commercial Traveller—A. SPARK, Offord Road, Barnsbury, Commission Agent—N. UNDERWOOD, Manchester, Commission Agent—P. WADDELL, Old Fish Street Hill, Doctor's Commons, Foreign Glass Importer—L. WOOD, Bilston, Staffordshire Licensed Dealer in Tea and Tobacco—H. WRIGLEY, Hyde, Cheshire, Gas Manufacturer—R. WILSON, Leamington Priors, Warwickshire, Attorney's Clerk.

SCOTCH SEQUESTRATIONS.—W. & J. MUNN, Luss, Dumbartonshire, Farmers.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,164,260	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	13,514,260
		Silver Bullion	
	£28,164,260		£28,164,260

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,957,189
Rest	3,306,816	Other Securities	22,432,763
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	10,001,962	Notes	7,416,000
		Gold and Silver Coin	682,494
Other Deposits	13,052,604		
Seven days and other bills	604,044		
	£41,518,416		£41,518,416

Jan. 7, 1863. M. MARSHALL, Chief Cashier

Metropolis and its Vicinity.

THE SPECIAL SERVICES IN ST. PAUL'S.—On Sunday evening the special Sunday evening services were resumed for the season in the metropolitan Cathedral, when the Bishop of London preached to about 3000 people assembled in the dome area.

THE PARKS.—The ornamental waters in the Parks are now completely frozen over, and sliding and skating have been carried on for several days on a large scale, while torchlight skating processions have taken place at night with entire success. The crowds assembled in the Parks to enjoy the animated scenes have been extremely great, and it is said that since the opening of the Great Exhibition of 1851 such a number of carriages and horsemen has not been witnessed on the banks of the Serpentine as were to be seen on Thursday, while the Serpentine itself was thronged during the day with from 7000 to 10,000 persons. The Thames is rapidly filling with masses of floating ice, and if the frost continues all navigation will soon be stopped.

THE WIDENING OF MANSION HOUSE STREET.—At the last meeting of the Metropolitan Board of Works, a motion made by Mr. Lowman Taylor, that the Board should contribute one-half the expense to be incurred in widening the street at the Mansion House, was strongly opposed, and lost by a large majority.

BRITISH MUSEUM.—The long established custom of maintaining a military guard at the British Museum was discontinued on the 31st ult., when the sentinels on duty at the principal entrance were permanently displaced, and the sentry boxes removed. The duty of watching over the safety of the national collections will, in future, devolve on the Metropolitan Police, some of whom will be constantly stationed within the building. This arrangement extends to the National Gallery and other public institutions.

THE PRISON MINISTERS ACT.—At the Surrey Quarter Sessions held on Tuesday at Newington, Mr Godwin Austin moved that a Roman Catholic priest be appointed to the Wandsworth House of Correction, at a salary of 150*l.* a year. Major Penrhyn moved as an amendment that the payment should be at the rate of 1*l.* per head per annum on the daily average number of Catholic prisoners. At the suggestion of Mr. Ewson, Mr. Austin agreed to reduce the proposed salary from 150*l.* to 100*l.* a year; and this proposal, after a long discussion, was carried by a majority of 41 against 9.

KING'S COLLEGE.—The professorship of ecclesiastical history in this college, vacant by the death of the Rev. Dr. M'Caul, has been conferred on the Rev. James Craigie Robertson, M.A., of Trinity College, Cambridge, one of the canons residentiary of Canterbury Cathedral, and author of several works on Church history.

ACCIDENTAL POISONING.—A coroner's inquest was held a few days since on a man who was accidentally poisoned by drinking beer from a can that had previously contained a poisonous liquid, used as an application to prevent rust on the inside of steam boilers. The man who put the liquid into the can tendered himself for examination, and stated that while engaged in using it he heard that one of his children had been scalded, on which he threw down the can, which was empty, and ran home, forgetting to tell his fellow-workmen of the circumstance. In his absence they sent the can for some beer, of which three who partook became seriously ill, and one died. The jury returned a verdict of Accidental Death.

THE WATERLOO MURDER.—Seven of the visiting justices of the Surrey prisons have addressed a memorial to the Home Secretary, praying for a reprieve in the case of Samuel Wright. The working men of Lambeth have addressed a similar memorial to the Home Office, signed by 2540 persons. Sir George Grey has replied that he sees no reason for complying with the prayer of the memorials, and that the law must take its course. The execution will therefore take place at Horsemonger Lane Gaol on Tuesday next.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, January 2, were 1642. The average number in the corresponding week of the 10 years, 1853-62, corrected for increase of population, was 1558. The present return is therefore 84 above the average. During the week the births of 1176 boys and 1132 girls, in all 2308 children, were registered in London. In the 10 corresponding weeks of the years 1853-62 the average number was 1828.

Provincial.

BUCKLEY.—On Monday evening the Chancellor of the Exchequer delivered an address to the members of the reading-room at Buckley, Flintshire. Sir Stephen Glynne occupied the chair, and the room was well filled. Mr. Gladstone, after referring to the immediate object which had called them together—the inauguration of a working-man's reading-room—said there was a striking resemblance between the natural habits of animals and men. It was natural for the animal to divide its time between labour, food, and sleep. So it ought to be with man; but man ought also to give a portion of his time to intellectual pursuits. What were the competitors with these institutions for the employment of the spare time of the labouring man? There was the publichouse, and though he would not speak in extreme language of those houses, as was the practice of some, they would, no doubt, agree with him that the public house was not a desirable place for a labouring man to spend that portion of his time which was not required for food or sleep, and that schools and reading-rooms were greatly preferable. Having spoken further upon the general question of the utility of working men's educational institutions of the kind they were then inaugurating, he dwelt upon the means which working men generally possessed for forming them. He said that Englishmen were not by far so thrifty as the inhabitants of Scotland and Wales; but not only were Englishmen less thrifty than Scotchmen or Welshmen, but they were less thrifty than the French labouring man, while the latter got 20 or 30 per cent. less wages than the former. It had been for many years the desire and effort of the Legislature of this country to do what they could to induce the labouring classes of this country to be thrifty and careful, and with this object they had established the Post Office savings banks, so that nothing now was wanting but the disposition to be provident, and that disposition, although it could not be supplied by an Act of Parliament, might be greatly encouraged by such facilities for investment as those to which he had referred. They could not possibly confer upon men of an independent free community like ours a greater blessing than that of enabling them to serve and help themselves. He referred at some length to the virtue of thrift, recommending it for the reasons that it enabled labouring men to put out their children to trades and businesses, and also prepared them for a rainy day, and concluded by remarking on the utility of the Post Office savings banks, which gave the working man all the security of a Government investment, with the certainty that the law ensured to him perfect secrecy as to the amount of his savings.

DERBY.—By an order of the Home Secretary, George Victor Townley has been removed from this town, and

is now an inmate of Bethlehem Hospital. It is stated that his removal was ordered under the provisions of the Act 3d and 4th Victoria, cap. 54, two of the borough justices of the peace, and two medical men having certified the insanity of the prisoner, and forwarded their certificate to the Home Secretary, as that Act directs. At the quarter sessions on Tuesday, Mr. J. G. Crompton called the attention of the county magistrates to the circumstances attending the reprieve. He said that the spirit of the Act of Parliament under which Townley had been reprieved had been violated, as the Act contemplates that the report as to the prisoner's insanity should come from the visiting justices, not from representations made from without. He censured the conduct of the borough magistrates who conducted the examination, and said that the effect of this reprieve on the country had created the feeling that there was one law for the rich and another for the poor. Mr. Mundy, M.P., as chairman of the visiting justices, and all the other magistrates, with a single exception, concurred in the justice of these remarks, and the following memorial to the Home Secretary on the subject was signed by upwards of 40 magistrates:—

"We, the undersigned magistrates of the county of Derby, beg to represent to you that, in our judgment, shared largely by the public, the circumstances under which George Victor Townley (who, at the late assizes for this county, was convicted of and condemned for the murder of Miss Goodwin) has been respited, on the allegation of his insanity, ought to be fully and publicly inquired into. It appears by his own undisputed and voluntary statement immediately after the murder that he committed the act deliberately, with full knowledge that he was thereby violating the law, and that he had rendered himself liable to be, and expected to be, capitally punished; he declared to Captain Goodwin that the woman who deceived him must die; he alleged that Miss Goodwin did deceive him and he put her to death. It was not the blind and furious impulse of a madman, but a deliberate act, which manifested the exercise of reason in his endeavour to prevail with Miss Goodwin, but, failing in his object, the spirit of revenge, which was sat ated by her death. His family treated him as sane. Neither the surgeon nor the governor of the gaol reported him to be insane, as it was their duty to do if they had so considered him. The learned judge stated that if the defence of insanity set up for him at the trial was to prevail it would be dangerous to society. It is alleged that he has since become insane. A commission was sent down by you to inquire into his sanity; subsequently to the inquiry by those commissioners the prisoner's professional adviser caused another inquiry to be made by two magistrates, aided by two medical men. The value of that inquiry can only be estimated by a full and open investigation into its origin and conduct. This appears to us to be called for. The result of these private proceedings has been a respite of the prisoner and an order for his removal to a lunatic asylum. The effect has been to cause much dissatisfaction, to create a feeling greatly to be lamented—that there is one law for the rich, and another for the poor; that justice has been turned aside by the power of money; and that if Townley and his friends had been poor he would have been executed, as a man named Thorley was in this county last year, for a murder under like circumstances. The inquiry by the commissioners is open to grave objections. It is one-sided. Townley's professional advisers and friends have acted with all the energy and effort which money produces. The prosecution has not been heard, nor the public interest adequately represented in the inquiry. It was private. The witnesses were, we believe, not sworn. No opportunity was afforded to the prosecution of cross-examining them, and they knew it would be so, nor of contradicting or explaining their testimony or opinion by other evidence. In this and other like cases the prisoner has been tried by a judge and jury, acting under the sanction of an oath, aided by counsel employed on both sides, witnesses examined and cross examined, all in open court. We think that respect for trial by jury, and confidence in the pure administration of justice, will be seriously weakened if a verdict and sentence following such a fair and solemn trial may, in this or any other criminal case, be interfered with by any inquiry less public and complete than the trial itself. We therefore most respectfully trust, also most earnestly urge upon you, the necessity and propriety of abstaining to act upon this private and *ex parte* information, and of causing a full inquiry to be made into the matters referred to by some responsible authority, and in as public, fair, and complete a manner as criminal trials are conducted."

CALNE.—On Wednesday week, while hunting with the Tedworth hounds near Dauntsey, Lord Clanmaurice, son of the Marquis of Lansdowne, was thrown from his horse, which kicked him severely in the face. His lordship was assisted to Bowood, where he is progressing favourably.

CAMBRIDGE.—The execution of John Green for the murder of Elizabeth Brown in a malting kiln at Whittlesea took place on Saturday in front of the county gaol. It will be remembered that after the murder he set fire to the person of his victim. Previous to his execution, he made a full confession of his guilt. There were few persons present at the execution, owing to a prevailing impression that it would take place at midday instead of nine o'clock in the morning.

MALTON.—Three more incendiary fires occurred last week in the East Riding, one on Tuesday, on the farm of Mr. Anderson, at Butterwick; another on Wednesday on the farm of Mr. James Snarry, of Sledmere; and another on Saturday at a farm at Holderness. A travelling sweep has been arrested on suspicion of having fired the stacks of Mr. Horsley at Huggate, on the 23d ult., and has been remanded for a week.

MANCHESTER.—At the weekly meeting of the Executive Committee on Monday, the Earl of Derby in the chair, Mr. Commissioner Farnall reported that on the 26th ult. there was an increase of 1213 in the number receiving parochial relief in the 27 unions, as compared with the previous week, and that there are now about 181,000 persons receiving weekly relief, being about 13,000 more than at the end of October, and there is little hope of amendment for many weeks to come. Compared with the last week in March there are now about 34,000 fewer operatives, 18,000 having migrated elsewhere, and near 16,000 having found other employment. Mr. Rawlinson reported that the Public Works Act has not yet done the amount of direct service that was contemplated. It is in operation in 49 places, representing a population of over a million. Seventy reports have been made and forwarded, and estimates recommended to the amount of 1,200,000*l.*; but only about 2000 men are actually at work under the Act, being an average of 40 men at each place. Mr. Rawlinson added that the Act is in every respect permissive, and that Government gives every possible facility and assistance, only stipulating that the works shall be of a beneficial and permanent character. Mr. Ashworth stated his opinion that after March, the supply of cotton would be sufficient for four and a half or five days working per week, and with this increased supply and the extended operations of the Public Works Act, he thought it would then become a subject for consideration whether the committee might not with advantage suspend or close its operations. The Secretary reported that 807*l.* 7*s.* 7*d.* had been received during the week, and that the balance in the bank was 225,005*l.* 9*s.*, including the sum of 5362*l.* 14*s.* 9*d.*, interest for the last six months of 1863.

OXFORD.—Mr. Hugh Hamersley, of Pyrton House, was on Monday, on the motion of Lord Churchill, seconded by the Earl of Macclesfield, unanimously elected chairman of the Oxfordshire Quarter Sessions, in the room of the Right Hon. J. W. Henley.

READING.—At the Berkshire Quarter Sessions on Monday, a long discussion took place on a motion made by Mr. Merry respecting the admission of the Rev. Canon Ringrose to visit the Roman Catholic prisoners in the county gaol. Mr. Walter, M.P., moved an amendment declaring the opinion of this Court that the visiting justices would do well to carry out the provisions of the Prison Ministers Act contained in the second part of the third section of that Act. Mr. Merry accepted this amendment, and on being put to the Court it was carried unanimously. A motion was afterwards submitted by Mr. Merry that the Trinity and Michaelmas Sessions, hitherto held at Abingdon, should in future take place at Reading. A long discussion ensued, and the motion was strongly opposed by Sir G. Bowyer, M.P., Mr. Norris, M.P., Lord Overstone, and other magistrates; but on a division it was carried by a majority of 27 to 19, so that all the Quarter Sessions will hereafter be held in the new Assize Courts at Reading.

STAFFORD.—At the Staffordshire Quarter Sessions on Monday, the Hon. and Rev. C. A. Talbot moved the appointment of a Roman Catholic chaplain, under the Act of last session, and that the visiting justices be requested to name a salary for him. He said that that there was an average of 73 Catholic prisoners, and that if the gaol had been situated in a town where there was no Catholic population and no priests, they would have been without any religious attendance whatever. The motion was opposed by the Right Hon. C. B. Adderley and others, and was lost on a division by a majority of 4; 27 voting in its favour and 31 against it.

TOWCESTER.—Whittlebury Lodge, the seat of Lord Southampton, near this town, was totally destroyed by fire early on Sunday morning. The flames made such rapid progress that none of the valuable contents of the mansion were saved; and Lord and Lady Southampton and their infant daughter narrowly escaped with their lives. The fire originated in that fertile source of the loss of so many of our finest specimens of architecture, the overheating and neglect of the flues.

UCKFIELD.—A pauper aged 82 was brought before the bench of magistrates in this town a few days since for refusing to work, and sentenced to 21 days imprisonment with hard labour.

WINCHESTER.—At the last Quarter Sessions the Earl of Carnarvon, as chairman of a committee of county magistrates, presented to the Court a report on the discipline observed in the county gaol. The report suggested that prison life should be curtailed of certain indulgences; that the convicts should not be supplied in future with entertaining books for their amusement; that the hours of sleep should be reduced, and the beds made less comfortable; that the time allotted for instruction should not be taken out of the hours of labour; that the dietary should be revised; and that the prisoners should be more effectually debarred from communication with each other. The visiting justices took exception to this report on the ground that it would entirely reverse the existing system, and finally the report was remitted to the visiting justices for consideration. On Monday last the whole question again came before the magistrates, when the Earl of Carnarvon moved the adoption of his report. Lord Cholmondeley, as chairman of the visiting justices, moved an amendment, giving the visiting justices more discretion than the report afforded them in carrying out its provisions. After some discussion, the Earl of Carnarvon's report was carried by a majority of more than two to one, the numbers being 47 to 19.

WORCESTER.—At the Worcestershire Quarter Sessions on Tuesday Sir John Pakington called attention to the irregularity in the system of punishment in the county gaols by hard labour, and the uncertainty and varying quality of the punishment inflicted after sentence. He did not propose to make any motion thereon—first, because he should not like to take any course that might possibly be construed as uncourteous to the visiting justices; and, secondly, because he had strong reasons for thinking that her Majesty's Government would in some way act upon the report of the recent Committee of the House of Lords, by introducing something like an uniform system of punishment in the gaols of the country. In the meantime he would suggest that the visiting justices should during the quarter direct their attention to the subject. The Rev. J. Pearson advocated the continuance of the present system, and said the inspectors of prisons and the gaolers were in favour of it. Mr. Curtler said that the sentences passed on some of the worst of criminals by her Majesty's Judges of Assize were very encouraging to crime, and he did not think anything could be done in the way of prison discipline as long as this encouragement was given by the judges. Earl Dudley said he could not hold out any hope that the Government would do anything in the matter. He approved of the industrial system, and believed that the treadmill was more effectual than solitary confinement, because it gave them what Leicester Gaol had the repute of being, a "hell upon earth" for the prisoners. Sir J. Pakington explained that he had no wish to abandon the reformatory or industrial system, but was desirous that they should not fly into the opposite extreme, which rendered imprisonment no punishment at all. He thanked Mr. Curtler for speaking out so boldly in regard to the sentences passed by the judges. He believed one of the most important points in connection with this great question of the administration of the criminal law was the injudicious leniency of the judges. It was the general opinion of the Royal Commission on Penal Servitude, of which he was a member, that the injudicious leniency of the judges of late years had produced a great increase of crime.

Ireland.

THE ARCHBISHOPRIC OF DUBLIN.—Dr. Trench was consecrated as Archbishop of Dublin on Friday morning in Christ Church Cathedral; the officiating prelate being the Lord Primate and the Bishops of Killaloe, Ossory, and Cork. The sermon was preached by his Grace's Chaplain, the Rev. Dr. Lee.

LORD MAYOR'S DAY IN DUBLIN.—The inauguration of the Lord Mayor for the present year took place on Friday under somewhat novel circumstances, Mr. M'Swiney, the new chief magistrate, having determined to revive the ancient splendour of the Lord Mayor's show. The procession, besides the usual detachments of military and police, included the City Fire Brigade, two knights in armour, trumpeters in state dresses, men at arms in coats of mail, galloglasses in chain mail, armed with the Irish battleaxe and wearing the saffron coloured mantle of the ancient Celt, a body of javelin men, and the "gold coach" drawn by six grey horses. The display was completely successful, and was witnessed with delight by immense crowds of spectators. On arriving at the City Hall, the Lord Mayor addressed the Council in a speech in which he described the preeminence of Dublin over other cities which had he said an "unenviable notoriety" for "grievous crimes, unnatural atrocities, dark revelations, and hideous deformities," with especial reference to the Divorce Court, and the practice of infanticide; and concluded by saying:—

"I cannot but hope that during my year of office I will be enabled to assert that which the ex-Lord Mayor so ably asserted during his year of office—the claim of Dublin to its proper position by prescriptive right of the second city of the empire, and that you will all sustain me whenever the city and our fellow-countrymen are attacked by an alien press—those who cannot put pen to paper without maligning the character of our countrymen, and taking advantage of the exceptions I have alluded to to represent us to Europe as demons, as wretches hardly removed from the lowest state of barbarism, and fit only to be arrayed at one side or the other of the massacres now going on in Virginia and Tennessee."

INAUGURATION OF THE STATUE OF OLIVER GOLDSMITH.—On Wednesday Mr. Foley's statue of Goldsmith, which has been placed in front of Trinity College, was inaugurated with great ceremony by the Earl of Carlisle. In his address on the occasion the Lord Lieutenant referred to the fact that he had suggested this statue six years ago when inaugurating the statue of Moore, and he hoped that six more years would not elapse before Dublin would see erected on the same spot a companion statue of Burke. This suggestion was received with great cheering, and a subscription was immediately opened for carrying it into effect.

Railways.

THE CHARING CROSS.—The final inspection of the London Bridge and Charing Cross railway was made on Monday by Captain Tyler, the inspector of the Board of Trade. The result was so far satisfactory that the officers of the railway were informed that the certificate of the Board of Trade would be granted, and that the railway might be opened for public traffic on Monday next. Every portion of the line has been subjected to the most severe tests, the bridges having to sustain a load four or five times greater than they can by possibility carry in the ordinary course of traffic, and have stood the trials in the most satisfactory manner. The deflection upon the bridge over the Thames has been much less than was expected, and the huge iron structure across the approaches to the station at London Bridge, unsightly though it is, has been found to possess an amount of rigidity which speaks well for the calculations of the engineer. The sta-

at Charing Cross will not be in a fit state to accommodate the through traffic of the line for some weeks, and the opening, which will take place on Monday, will be, in fact, only a partial opening; the local traffic between it and London Bridge and Greenwich being all that will be provided for. Passengers will start from and arrive at the bottom of Villiers Street until the frontage in the Strand is finished. They will pass under the brick arch at the bottom of Villiers Street by a flight of stairs to the booking-office, and start on their journey from the point at which the bridge widens out. Between Charing Cross and Greenwich there will be about 90 trains a day; between Waterloo Station and London Bridge, 24 trains a day. The trains to London Bridge will, it is expected, run every five minutes during the day. The fares between Charing Cross and London Bridge will be—6*d*. first-class, 4*d*. second-class, 3*d*. third-class, and the return tickets 9*d*., 6*d*., and 4*d*.

Sporting.

THE LATE PRIZE FIGHT.—An application was made on Saturday at the Judges Chambers on the part of King, for a writ of certiorari to remove the indictment for a breach of the peace from the Lewes Sessions into the Court of Queen's Bench, on the ground that a prejudice had been created, and that he could not believe he should have a fair trial in Sussex. Mr Justice Shee considered the application and the affidavit made by King, and on Monday intimated that he had granted the application. It was expected that the necessary document would have been prepared and signed on the following day, but it appeared that after the permission to issue the writ had been given, the parties altered their mind, and King was not disposed to incur the whole expense of the removal. The case therefore came in due course before the Earl of Chichester and the other county magistrates at the Lewes Quarter Sessions on Tuesday, when the Grand Jury returned a true bill against all the parties who had been indicted as engaged in the late prize fight—viz., Thomas King, John Carmel Heenan, John Calvin Noon, *alias* Jerry Noon, John Macdonald, James Mace, John Tyler, *alias* Bos Tyler, Thomas Sayers, and Robert Travers. Application was then made on behalf of three or four of the defendants for a postponement of the hearing till the next session. Counsel for the prosecution opposed the application, and as it was stated that Heenan and Sayers had returned to Brighton under the impression that the case would not come on, the chairman said that, under such circumstances, as all the defendants were not represented, the bench could not dispose of the application for a postponement, and the matter must therefore be adjourned till Wednesday. On that day all the defendants were present, and consented in the application for a postponement. The Chairman then announced that the Court agreed to postpone the trial on the defendants entering into the same recognisances as before.

Obituary.

VISCOUNT VALENTIA died on the 30th ult. at his seat, Bletchington Park, Oxfordshire, in his 73rd year. He was the son of the late Mr. Arthur Annesley, of Bletchington, by the daughter and heir of Admiral Sir Charles Hardy, and married in 1808 the daughter of Mr. Henry O'Brien, of Blatherwick Park, Northamptonshire. His lordship is succeeded by his grandson, Arthur Annesley, born in 1843, and son of the late Hon. Arthur Annesley.

THE HON. LADY LETITIA HESILRIGE died on the 3d inst. at her house in Upper Brook Street, in her 90th year. She was the last surviving daughter of the first Lord Wodehouse, by the only child of the Hon. Charles Berkeley, brother of the fifth and last Lord Berkeley of Stratton. Her ladyship married—firstly, Sir Thomas Maynard Hesilrige, Bart., who died in 1817; and secondly, in 1842, Mr. Frederick Fielding, of Gray's Inn, Barrister-at-law.

LIEUT.-COLONEL SIR JOHN CAMPBELL, K.T.S., died a few days since in his 84th year. He was born in Chatham dockyard in 1780, and entered the army in 1800. In 1807 he served as brigade-major in the expedition under General Crawfurd, and was in the action of the Miserere and the attack on Buenos Ayres in 1806. He served at Roleia and Vimiera, and with the cavalry under Lord Anglesey at Sabagun and Benevente in 1808. In the following year he entered the Portuguese army as a lieutenant-colonel. He served in all the campaigns of the Peninsula and the Pyrenees, as well as those subsequent to 1810, and remained in the Portuguese service until 1824, when he retired with the rank of major-general. In 1821 he was appointed to the command of the 75th Foot, and continued in that post until 1824, when he sold out. In 1827, when Dom Miguel took possession of the throne of Portugal, Sir John Campbell warmly espoused his cause. He was a Knight of the Tower and Sword of Portugal. He married, first, in 1816, Donna Maria Brigida de Faria and Lacerda, of Lisbon; and second, in 1842, the relict of General Sir Alexander Dickson.

ADMIRAL SIR WILLIAM HALL GAGE, Admiral of the Fleet, G.C.B., G.C.H., died at Thurston, near Bury St. Edmunds, on the 4th inst., in his 87th year. He was the youngest son of the 1st Viscount Gage, and entered the navy in 1789, when he was only 12 years of age. In 1796, being lieutenant of the Minerve, he distinguished himself in an action with two Spanish frigates and in the capture of a French corvette. In the following year he became a captain. In 1801 he took part in cutting out from under the batteries of Camaret, near Brest, La Chevrette, of 20 guns and 200 men. As post captain, he commanded the Tartus and the Indus. He attained the rank of Admiral in 1846, and in 1854 was made Vice-Admiral of the United Kingdom. In 1860 he was created a Knight Grand Cross of the Bath, and had previously been appointed a Knight Grand Cross of Hanover. In May, 1862, he was made Admiral of the Fleet. He held office from 1841 to 1846 as a Lord of the Admiralty, and was Commander-in-Chief at Plymouth from 1848 to 1851.

MAJOR-GENERAL WALPOLE, R.E. died on the 4th inst. at his temporary residence in Charles Street, St. James's. He had been in active service since 1816, and attained the rank of major-general in 1862.

THE VERY REV. DEAN NEWMAN, Dean of Cork, died at the Deanery House, St. Finbarr's, on the 5th inst.

THE VERY REV. DEAN MEYLER, parish priest of St. Andrew's, Westland Row, died on the 5th inst. at the age of 80. Like the late Archbishop Murray, he was well known for his liberal views regarding national education, and he remained to the last the only clerical member of the Board connected with the Roman Catholic Church.

MR. CORRY, the police magistrate, died at 42, Lower Seymour Street on the 5th inst., in his 74th year. He was called to the bar at Gray's Inn in 1813, and was a few years ago elected a bencher of that Inn. He was first appointed a metropolitan police magistrate by Lord Melbourne's Government in 1838. He first sat at the Thames Police Court, afterwards at Lambeth Street and Hatton Garden, then at the New Clerkenwell Court, and in 1851 at his own request he was removed to Southwark Court in lieu of the late Mr. Secker. During the time Mr. Combe presided at Southwark he was much respected by the bar and all who had business at the Court.

WILLS.—The will of Earl Beauchamp has been sworn under £80,000 personalty; Mr James William Casterton, of Bexley Heath, £60,000; Mr Samuel George Smith, of Lombard Street, banker, and Sopwell Park, Herts, £60,000; Mr. George Hobson, of the firm of Reid & Co., brewers, £100,000; Mr. William Gardner, of Sussex Gardens, £200,000; Mrs. Sarah Bridges Williams, of Torquay, £40,000. The latter, after leaving legacies of about £2,000 to her godchildren, has bequeathed the whole of her estate to the Right Hon. B. Disraeli, "in testimony of her affection, and of her approval and admiration of his efforts to vindicate the race of Israel;" and has expressed her wish that he should obtain permission of her Majesty to use the surname and arms of the families of Lara and Mendez de Costa, in addition to or precedent to that of Disraeli.

BIRTHS.—On the 2d inst, at Acton Park, Denbighshire, N.W., Lady LOUISA BROOKE, of a daughter—29th ult, at Birling Manor, the Hon. Mrs. RALPH NEVILL, of a daughter—27th ult, in Eccleston Street, S., the Hon. Mrs. NUGENT BANKES, of a son.

MARRIAGES.—On the 5th inst., at St. James's, Piccadilly, ALEXANDER HUGH BARING, Esq., M.P., eldest son of the Hon. Francis and Mrs. Baring, to the Hon. LUCY CAROLINE DIGBY, second daughter of Lord and Lady Digby—5th inst, at the Church of All Saints, East Clevedon, Somerset, GEORGE LOUIS MONCK, son of the Rev. JOSEPH GIBBS, of Chilton Hampden, Oxon, to LAURA BEATRICE, elder daughter of Sir ARTHUR ELTON, Bart., of Clevedon Court, Somerset—20th ult, at St. Mary Abbot, Kensington, ALFRED HENDERSON WHITE, Esq., 2d Dragoon Guards, youngest son of Lieutenant-General Sir Michael White, K.C.B., to MARY RISDEN, only child of EDWIN R. DAVEY, Esq., of Pilton, Devonshire—24 inst, at St. Gabriel's, Pimlico, Colonel HOLCOMBE, Royal Regt., to MARY ELIZABETH, youngest daughter of the late General Thackeray, C.B., R.E., of The Cedars, Windlesham, Surrey—2d inst, at St. Mary's, West Brompton, JOSEPH DESPARD PEMBERTON, Surveyor-General of Vancouver Island Colony, to THERESA, daughter of BERNARD AUGUSTUS GRANIOFF, Esq., of Elm Villa, Harley Road, West Brompton.

DEATHS.—On the 28th ult, at 46, Albemarle Street, suddenly, the Dowager Lady ABERCROMBY, of Birkenbog and Forglen—31st ult, at Balcaskie, Fife-shire, Lady TORRENS, relict of Sir Henry Torrens, K.C.B., K.T.S., aged 83—27th ult, at Florence, Captain RICHARD B. ADAIR, Royal Artillery, eldest son of the late Major-General Adair, C.B., aged 43—30th ult, at Southsea, ELIZABETH, eldest daughter of the late Rear-Admiral RENWICK—30th ult, at Weston super-Mare, FRANCES ELIZABETH, wife of Major W. D. HAGUE, and daughter of the late General C. Hamilton, C.B.—31 inst, at Eldon Villa, Torquay, Lieutenant G. M. RAYNSFORD, of the Madras Light Cavalry, youngest son of the late Brigadier Raynsford, of H.H. the Nizam's Service, aged 27—2d inst, in Duke Street, Portland Place, Captain THOMAS B. GASCOYNE, late of the 3d Ceylon Rifles, aged 74—1st inst, at 13, Royal Crescent, Bath, Dr. JOHN F. DAVIS, M.D., aged 90—23d ult, GEORGIANA FREDERICA ALEXANDER, wife of R. B. Alexander, Esq., and only daughter of the late celebrated Captain Ch. Morris, of Brockham Lodge, Dorking, Surrey—28th ult, at Burnham Abbey, Bucks, JOHN W. GOODWIN, Esq., of Leicester, aged 48—29th ult, at Woodcote Park, Epsom, the Rev. WALTER BROOKS, M.A., aged 26—1st inst, at Great Ponton Rectory, the Rev. B. POTCHETT, M.A., aged 52.

Markets.

COVENT GARDEN, Jan. 9.

Pine Apples, considering the time of year, are tolerably plentiful. Hothouse Grapes are now beginning to get scarce. Of foreign Melons there is a good stock. The present severe frost has almost cut off supplies of out-door vegetables, and prices are advancing. Good Pears have now become very scarce. Good English Apples are getting somewhat scarce. Some good samples of Ribston Pippin and American New Town Pippin may still be obtained. Kent Cobs are good, but in few hands. Oranges are plentiful; the best are realising from 4s. to 7s. per 100. For Potatos the market is still heavy. Coraish Broccoli is arriving in large crateфuls. French Lettuces, Endive, and Radishes begin to make their appearance. Cut flowers chiefly consist of Orchids, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Oranges, per 100, 4s to 7s
Grapes, per lb., 8s to 12s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Kent Cobs, 110s per 100 lbs.
Pears, per ½ sieve, 4s to 10s	Almonds, do., 18s
Melons, each, 2s to 4s	Walnuts, do., 14s to 20s
Lemons, per 100, 5s to 8s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d
Cauliflowers, each, 3d to 6d	Shallots, per lb., 10d
Asparagus, p. bundle, 6s to 8s	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s 6d to 3s	Garlic, per lb., 8d
Potatos, York Regents, p.ton, 60s to 80s	Lettuces, each, 1d to 4d
" Shaws, do., 50s to 60s	Endive, p. score, 1s to 2s
Turnips, p. bunch, 4d to 6d	Horse Radish, p. bunch 1s to 4s
Carrots, do., 4d to 8d	Mushrooms, p. pott., 1s to 1s 9d
Spinach, p. sieve, 1s 6d to 2s	Parsley, p. 12 bunches, 3s to 4s
Cucumbers, each, 1s to 3s	Herbs, per bunch, 3d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Jan. 7.

Prime Meadow Hay	80s to 90s		Clover, old	80s to 115s
Superior do. ..	—	—	Do second cut ..	70 105
Inferior do. ..	50	70	New Clover ..	— —
New do.	—	—	Straw	26 32
Rowen	—	—		

HARVEY & EASTON.

CUMBERLAND MARKET, THURSDAY, Jan. 7.

Sup. Meadow Hay .	88s to	96s	Inferior Clover ..	80s to 98s
Interior do.	70	80	New do.	— —
New do.	—	—	Straw	32 36
Superior Clover ..	108	116		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Jan. 7.

Fine Meadow Hay ..	84s to 88s		Prime 1st cut Clover	105s to 112s
Inferior do.	78	84	Interior do. do ..	100 105
Prime New Hay ..	—	—	New 1st cut do. ..	— —
Inferior	—	—	Prime 2d cut do...	100 105
Straw	27	30	Interior do.	— —

HOPS.—BOROUGH MARKET, FRIDAY, Jan. 8.

Messrs. Pattenden & Smith report the market very active for Hops of all descriptions of last year's growth, both English and foreign, at a further advance in prices of 6s. to 8s. per cwt. since this day week.

POTATOS.—SOUTHWARK, Monday, Jan 4.

During the past week the arrivals coastwise have been moderate, but plentiful by rail. Trade continues dull. Quotations:—Yorkshire Flukes, 80s. to 90s. per ton; do. Regents, 70s. to 80s.; do. Rocks, 60s. to 65s.; Dutch Regents, 60s. to 70s.; **Kent and Essex Regents, 50s. to 70s.: Perth, Forfar, &c. Fifeshire Regents, 45s. to 55s.; do. do. Rocks, 45s. to 50s.**

METROPOLITAN CATTLE MARKET.

MONDAY, Jan. 4.

We have a moderate supply of Beasts, and very favourable weather; consequently trade is brisk, and prices have advanced on all descriptions. The number of Sheep is very small. Choicest descriptions are readily disposed of at higher rates. A clearance is effected at our quotations. Choice Calves are in demand at higher prices. From Germany and Holland there are 750 Beasts, 1,200 Sheep, and 150 Calves; from Spain, 40 Beasts; from Scotland, 150; Ireland, 150; from Norfolk and Suffolk, 1,250; and 500 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	5	0	to 5	4	Best Long-wools.	5	4	— 5	8
Best Short horns	4	10	— 5	2	Do Shorn			— ..	
2d quality Beasts	3	4	— 4	4	Ewes & 2d quality	4	8	— 5	2
Best Downs and Half-breds ..	6	0	— 6	4	Do. Shorn			— ..	
Do. Shorn			— ..		Lambs			— ..	
					Calves	4	0	— 5	8
					Pigs	3	6	— 5	0

Beasts, 4130; Sheep & Lambs, 17,060: Calves, 170; Pigs, 430.

THURSDAY, Jan. 7.

The supply of Beasts is small, and the weather continues very favourable; trade is consequently active at Monday's quotations. Sheep are rather more plentiful; choicest descriptions are in demand at late rates, but these finished slowly, and a clearance is not effected. Calves are selling about the same as on Monday. Our foreign supply consists of 155 Beasts, 610 Sheep, and 150 Calves. Milch Cows, 150.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	5	0	to 5	4	Best Long wools.	5	4	— 5	8
Best Short horns	4	10	— 5	2	Do Shorn			— ..	
2d quality Beasts	3	4	— 4	4	Ewes & 2d quality	4	8	— 5	2
Best Downs and Half-breds ..	6	0	— 6	4	Do. Shorn			— ..	
Do. Shorn			— ..		Lambs			— ..	
					Calves	4	0	— 5	8
					Pigs	3	6	— 5	0

Beasts, 810; Sheep & Lambs, 4510; Calves, 188; Pigs, 150.

MARK LANE.—MONDAY, Jan. 4.

The supply of Wheat from Essex this morning was short, and from Kent fair; the whole was cleared at an advance of 1s per qr. upon the rates of this day se'nnight. Foreign was in somewhat improved demand, and generally held at 1s. per qr. higher prices, which in some instances were realised. Fine malting Barley was in demand at full prices, other descriptions were a very slow sale. Beans and Peas brought last week's quotations. The Oat trade was quiet at late rates. Flour was rather more inquired for.

PER IMPERIAL QUARTER	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	42	48	Red	40	46
— — fine selected runs .. ditto	44	52	Red	40	48
— — Talavera	48	56			
— Norfolk	—		Red		—
— Foreign	50	54			
BARLEY, grind. & dist., 25st to 27st .. Chev.	54	58	Malting ..	29	33
— Foreign, grinding and distilling	22	26	Malting .	28	32
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish .....Potato	19	22	Feed		—
— Foreign .....Poland and Brew	17	22	Feed	15	20
RYE	30	32	Foreign ..		—
RYE-MEAL, Foreign	—				
BEANS, Mazagan....28s to 36s...Tick	30	33	Harrow ..	30	33
— Pigeon .... 34s to 40s.. Winds.	—		Longpod		—
— Foreign .....Small	36	42	Egyptian	30	32
PEAS, White, Essex and Kent.. Boilers	36	38	Suffolk ..	36	38
— Maple .... 34s to 36s .... Grey	28	30	Foreign ..	32	40
MAIZE .....White	—		Yellow ..		—
FLOUR, best marks delivered.. per sack	35	40			
— 2d do ..... ditto	28	34	Country ..	28	34
— Foreign ..... per barrel	15	25	Per sack	32	42

FRIDAY, Jan. 8

The weather since the 1st inst. has been fine and bright (excepting the usual morning fog in and around London), with a continuance of severe frost. The returns from the principal ports show a very marked reduction in the stock of Wheat, varying generally from one-third to one-half of the quantities held at the close of 1862, which however were unusually large. The Wheat trade since the beginning of the year has improved in activity, speculative purchases having again been made here and in several of the leading markets, and prices both of English and of foreign have advanced fully 1s. per qr; the weather also tends to give a better tone to the market and to increase the consumption. Previous quotations have been realised for all kinds of Spring Corn, but the large supplies of English Oats have prevented the prices from advancing. Flour has met a better inquiry, and in some instances a slight advance has been realised. Some quantity of Norfolk has been taken on speculation. Since Friday last 21 vessels have been reported off the coast. Business in floating cargoes has not been extensive, but a few large transactions have been done in Wheat and Maize for forward delivery at rising prices. Wheat off the coast has advanced 1s. to 1s. 6d. per qr. Paris, Jan. 7.—The Wheat and Flour trades are firm but not active, and only in few transactions can a small advance be realised. The six marks for delivery this month are noted equal to 32s. 6d. per 280 lbs; the present stock of Flour is estimated at 66 of cwt. The arrivals of English grain by water this week have been trifling, fair of foreign Wheat, and of Barley and Oats large. There was a dense fog during the greater part of the morning, and the market was very thinly attended. Wheat, both English and foreign, was held for an advance upon the prices of Monday, and upon the business done, which was very limited; the rates of that day were rather exceeded. Barley of all descriptions was in better demand at full prices. Oats were easier owing to the large supply.

ARRIVALS THIS WEEK.

	Wheat	Barley.	Oats.	Flour.
English ..	160 qrs	1630 qrs.	70 qrs	470 sk.
Irish	—	—	1200	— ,,
				— ,,
Foreign ..	11,250 ,,	5830	40,680 ,,	— brls

—LIVERPOOL, January 5.—We have had a good attendance of both town and country millers and dealers at this day's market, and Wheat has met a healthy demand both for consumption and to hold over, at an advance of 3d. per cental on the week. Flour is held for 9d. per barrel and sack more money, which rather checks business. Indian Corn is offered freely to-day, and buyers fighting shy, the improvement of 1s. 6d. per qr. previously established is barely maintained. Oats are a better sale at late rates, whilst Oatmeal must be quoted 1s. up. Beans, Peas, and Barley have each advanced 1s. per qr. The market closes steady.

FRIDAY, Jan. 8.—**There was a fair attendance at market. Wheat in good demand, at an advance of 1d. to 2d. per cental. Flour, more money generally asked, but not freely paid. Indian Corn, moderate business in mixed, at 31s. to 31s. 3d. Egyptian Beans steady; Oats and Oatmeal quiet, without change in prices.**

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Nov. 28	40s 3d	33s 7d	19s 7d	24s 9d	36s 1d	34s 1d
Dec. 5	40 9	33 6	19 5	29 7	35 3	33 7
— 12	41 1	32 10	19 3	29 11	34 11	34 2
— 19	41 2	32 6	19 0	29 4	34 9	33 7
— 26	40 5	32 0	19 0	33 6	34 4	33 8
Jan. 2	39 10	31 8	18 9	30 0	33 8	33 1
Agg. Aver.	40 7	32 8	19 2	31 2	34 10	33 8

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Nov. 28.	Dec. 5.	Dec 12.	Dec. 19.	Dec. 26.	Jan 2.
41s 2d	..	..	..		..	..
41 1	..	..	..	..	..	..
40 9	..	..	..	..	..	..
40 5	..	..	..	..	..	..
40 3	..	..	..	..	..	..
39 10	..	..	..	..	..	

NEWGATE.—Jan. 8.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 12s. "
Pork, 4s. 0d. to 4s. 6d. per 8 lbs.

BRITISH WOOLS.—LONDON, Jan. 8.

We are still without improvement in demand for either long or short wool, but expect the latter would be favourably affected by the continuance of the severe weather.

	s. d.	s. d.		s. d.	s. d.
South-down Hogs	1 11	to 2 0	Leicest. Wethers	1 9½	to 1 10½
Half-bred ditto ..	1 11	— 2 0½	Ditto Hoggs ..	1 10½	— 1 11½
Down Ewes ..	1 10	— 1 10½	Combing Skins ..	—	..
Kent Fleeces		— 2 0	Flannel Wool ..	1 4	— 1 9
			Blanket ditto ..	0 9	— 1 0

AGRICULTURAL PUPIL.—A Practical Farmer occupying 300 acres in a South Midland County, has a VACANCY.—Address, A. B. C., Messrs. Howes & Co., 7, Thavie's Inn, Holborn Hill, London, E.C.

To the Seed Trade.

WANTED IMMEDIATELY, a Person who fully understands the Seed Trade, and can Travel. **An opportunity now offers itself to an energetic business man to join the Advertiser as PARTNER in a business where the Nursery and Seed Trade have been carried on together for nearly half a century. Satisfactory and full explanation will be given confidentially to respectable parties applying; some capital required. Application to be made in the first instance to either Messrs. BECK, HENDERSON, & CHILD, Seed Merchants, 11, Adelphi Terrace, Strand, W.C., or to Messrs. HURST & SON, Seed Merchants, 6, Leadenhall Street, London, E.C.**

WANTED, at the Orphan Asylum, Wolverhampton, a MAN and WIFE to live at the Entrance Lodge of the Asylum. Candidates must be without incumbrance, and be between the ages of 35 and 45. Man to understand practical Gardening, and be willing to make himself generally useful; Wife to attend to the Lodge Gates. Wages, 14s. per week, with Coal.—Apply by letter, with references as to character, &c., addressed to the Committee at the Institution, before the 31st instant.

By order. W. E. MARSH, Secretary.

WANTED, in the family of a clergyman residing near London, a steady, well-principled married Man as HEAD GARDENER, who is fully competent to undertake the Management of the Flower and Kitchen Gardens.—Address, by letter prepaid, to the Rev. J. E. FORSTER, Southend, Lewisham, Kent, S.E.

WANTED, a MAN who understands the Growing of Soft-wooded Plants for London Markets.—Apply to Mrs. WRIGHT, Stationer, &c., 200, Dover Road, Borough, S.E.

WANTED, in the RETAIL SEED BUSINESS, a young Man, about 20, of good address, who has had experience as above. Some knowledge of Plants is desirable.—Address, stating where and how employed for the last three years, to W. C., *Gardeners' Chronicle* Office, W.C.

WANTED, TWO UNDER SHOPMEN, in a London Seed Warehouse.—**The situations are permanent, and preference will be given to those who have been used to the Wholesale Trade.—Address, by letter only, stating terms and where last employed, to SEEDS, Post Office, King Street, Covent Garden, W.C.**

WANTED, a COWMAN and DAIRYMAID, in a large Establishment.—Wife to Manage the Dairy and to Bake. **One without family will be preferred.**—Particulars upon application, stating reference &c., to J. F., The Post Office, Maidenhead, Berks.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

To Noblemen, Landed Proprietors, and Others.

MANAGER (ENTIRE) of a Brick and Tile Manufactory.—**Married; a practical Man, who has had great practice, and would study the interest of any gentleman requiring his services. The best of references.**—X. Y. Z., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—**Middle age, single, Scotch; has a practical knowledge of his profession in all its branches. Has been 13 years in the situation which he has just left, where he has been very successful as a good Forcing and Kitchen Gardener.**—WILLIAM MILLER, 30, Southampton Street, Strand, W.C.

GARDENER (HEAD), married.—LAWMAN TEMPLE, Gardener to J. V. Machin, Esq., Gateford Hill, Worksop, Notts, is at liberty to engage as above. Three years' character from his present employer, and 10 years previous if required.

GARDENER (HEAD), to any nobleman or gentleman.—Age 28, married, confidential and trustworthy; thoroughly understands his profession in all its branches. Has lived in some of the principal Gardens in England. References of the highest order.—R. B., Mr. Young's, The Gardens, West Hill House, Highgate, N.

GARDENER (HEAD).—First class Grower of Grapes, Pines, Peaches, Stove and Greenhouse Plants, &c.; Flower and Kitchen Gardens, Laying Out Grounds, Superintending Land and Stock. Wife can manage Dairy if required. Seven years' good character, and 12 previous. No incumbrance.—**L. M., 6, Robertson Street, Lee, Kent, S.E.**

GARDENER (HEAD).—**Age 34, married, without incumbrance.**—WM. WOOD & SON are desirous of recommending as above a thoroughly competent Gardener, one who is conversant with all kinds of Forcing, and has a good knowledge of his profession in all its branches.—Address, as above, to Woodlands Nursery, Maresfield, Uckfield, Sussex.

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SIMPSON'S FARINACEOUS FOOD.

I hereby give notice that ALEXANDER SIMPSON is no longer in my service, and has no authority to transact any business on my account.

The goodwill of the business of the said ALEXANDER SIMPSON and of SIMPSON & BLUNDELL, has been sold to me by their Assignees, with the sanction of the Commissioner of the Birmingham Court of Bankruptcy; and I shall continue, as heretofore, to manufacture and sell the Farinaceous Food.

To avoid imposition or mistake, I shall henceforth call it BEACH'S FARINACEOUS FOOD," and every bag will be so marked. JOSEPH BEACH.

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	Fiddle or Old Silver Pattern. £ s. d.	Bead Pattern. £ s. d.	Thread or Brunswick Pattern. £ s. d.	King's or Lily Pattern. £ s. d.
12 Table Forks	1 13 0	2 0 0	2 4 0	[illegible]
12 Table Spoons	1 13 0	2 0 0	2 4 0	[illegible]
12 Dessert Forks	1 4 0	1 10 0	1 12 6	[illegible]
12 Dessert Spoons ..	1 4 0	1 10 0	1 12 0	[illegible]
12 Tea Spoons	0 16 0	1 0 0	1 2 0	[illegible]
6 Egg Spoons, gilt bowls ..	0 10 0	0 12 0	0 12 0	[illegible]
2 Sauce Ladles	0 6 0	0 8 0	0 8 0	[illegible]
1 Gravy Spoon	0 6 6	0 9 0	0 10 0	[illegible]
2 Salt Spoons, gilt bowls ..	0 3 4	0 4 0	0 4 0	[illegible]
1 Mustard Spoon, gilt bowl	0 1 8	0 2 6	0 2 0	[illegible]
1 Pair of Sugar Tongs ..	0 2 6	0 3 0	0 3 6	[illegible]
1 Pair of Fish Carvers ..	1 4 0	1 10 0	1 10 0	[illegible]
1 Butter Knife	0 2 6	0 4 0	0 [illegible]	[illegible]
1 Soup Ladle	0 10 0	0 12 0	0 16 0	[illegible]
1 Sugar Sifter	0 3 3	0 4 6	0 4 6	[illegible]
Total	9 19 9	12 9 0	13 9 6	[illegible]

Any article to be had singly at the same prices. A Case or Chest to contain the above, and a relative number of Knives, &c., 2l. 15s. Tea and Coffee Sets, Dish Covers and Corner Dishes, Cruet and Liqueur Frames, &c., at proportionate prices. All kinds of re-plating done by the patent process.

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The Gardeners' Chronicle Newspaper.

SATURDAY, JANUARY 16, 1864.

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	Fiddle or Old Silver Pattern.	Bead Pattern.	Thread or Brunswick Pattern.	King's or Lily, &c.
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
12 Table Forks	1 13 0	2 0 0	2 4 0	2 10 0
12 Table Spoons	1 13 0	2 0 0	2 4 0	2 10 0
12 Dessert Forks	1 4 0	1 10 0	1 12 0	1 15 0
12 Dessert Spoons ..	1 4 0	1 10 0	1 12 0	1 15 0
12 Tea Spoons	0 16 0	1 0 0	1 2 0	1 5 0
6 Egg Spoons, gilt bowls..	0 10 0	0 12 0	0 12 0	0 13 6
2 Sauce Ladles	0 6 0	0 8 0	0 8 0	0 9 0
1 Gravy Spoon	0 6 6	0 9 0	0 10 0	0 11 0
2 Salt Spoons, gilt bowls..	0 3 4	0 4 0	0 4 0	0 4 6
1 Mustard Spoon, gilt bowl	0 1 8	0 2 0	0 2 0	0 2 3
1 Pair of Sugar Tongs ..	0 2 6	0 3 6	0 3 6	0 4 0
1 Pair of Fish Carvers ..	1 4 0	1 10 0	1 10 0	1 10 0
1 Butter Knife	0 2 6	0 4 0	0 5 6	0 6 0
1 Soup Ladle	0 10 0	0 12 0	0 16 0	0 17 6
1 Sugar Sifter	0 3 3	0 4 6	0 4 6	0 5 0
Total	9 19 9	12 0 0	13 9 6	14 17 3

Any article to be had singly at the same prices. An Oak Chest to contain the above, and a relative number of Knives, &c., 2*l.* 15*s.* Tea and Coffee Sets, Dish Covers and Corner Dishes, Cruet and Liqueur Frames, &c., at proportionate prices. All kinds of re-plating done by the patent process.

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The goodwill of the business of the said ALEXANDER SIMPSON and of SIMPSON & BLUNDELL, has been sold to me by their Assignees, with the sanction of the Commissioner of the Birmingham Court of Bankruptcy; and I shall continue, as heretofore, to manufacture and sell the Farinaceous Food

To avoid imposition or mistake, I shall henceforth call it "BEACH'S FARINACEOUS FOOD," and every bag will be so marked. JOSEPH BEACH.

Steam Mills, Dudley.—Jan 2.

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WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE,"

Is prepared solely by LEA & PERRINS.

The public are respectfully cautioned against worthless imitations, and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper.

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Although founded by Humboldt and Bonpland early in the present century, it is only of late years that the genus Odontoglossum has received any considerable attention, either from the botanist or the cultivator. Not more than five species were assigned to it by Professor Lindley in 1832 ("*Genera et Species Orchidearum*," Part III.), these however had increased to 65 on the publication of the first Part of the same author's "Folia Orchidacea," in 1852, while they are now known to exceed a hundred, and we may expect to see that number doubled by the time that the favourite homes of the genus in the Mexican and Peruvian Andes shall have been thoroughly explored. In this case, Odontoglossum will become—next to Oncidium—the most extensive genus in the "Vandeous" Section of the great Orchideous family, and might therefore almost seem entitled to a separate Work even if it had no other claims to independent treatment. Such, however, may be readily found; for—

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As the various collections arrive, they will doubtless be found to comprise many fine Odontoglossa, the most remarkable of which it is proposed to figure in a Monograph, specially dedicated to the genus; and the Parts of which will appear with greater or less frequency, as the materials for illustration can be had. Not more, however, than Four Parts will ever be published in a single year.

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News of the Week.

THE nation at large with learn with heartfelt gratification that the PRINCESS of WALES was safely delivered of a son at Frogmore on Friday evening. Her Royal Highness was present at the skating at Virginia Water a few hours previous to her accouchement, in perfect health and high spirits, and took her part in the amusements of the day in a sledge. The QUEEN arrived from Osborne on Saturday morning, and remained with the PRINCESS until Wednesday. We are happy to add that her Royal Highness and the infant Prince are doing perfectly well.

The debate in the French Corps Législatif on the extraordinary credits demanded by the Government terminated on Saturday in the adoption of the Bill by the large majority of 232 to 14. The debate on the Address commenced on Monday, and is still in progress. In the sitting of Monday M. THIERS delivered a speech in favour of the liberties of France, which created an extraordinary sensation in the Chamber, and has since engrossed public attention in Paris, to the exclusion of every other question, foreign or domestic. In the sitting of Thursday the amendment of the Opposition respecting the elections was rejected by 198 to 44. The first paragraph of the Address was then adopted. The four Italians who were arrested in Paris last week are said to have made full avowals of the conspiracy. The official journals of Monday asserted that these disclosures had established the fact that the conspiracy was originated and directed by MAZZINI, who hired the men at Lugano for the purpose of assassinating the EMPEROR, and paid the expenses of their expedition. M. MAZZINI, however, has addressed a letter to the London daily papers, denying in the most explicit terms all knowledge of the plot, and denouncing the whole affair, so far at least as he is concerned, as a fabrication of the French police.

The new Danish Ministers have informed the Special Ambassadors of England and Russia, that Denmark is willing to accept the English proposal of a Conference, but only on condition that in the meantime no attempt is made to invade Schleswig. If a single German soldier should cross the Eider the Danish Government is resolved to enter upon war with all energy, and to prosecute it as long as the resources of the country will permit. In the Federal Diet last week, the Committee on the affairs of Holstein made their report, in which they expressed their opinion that the Treaty of London was unfair in point of absolute justice, and illegal in its bearings on the rights of nations, and that it fundamentally violated the rights of Germany and the Duchies. In the sitting of Thursday, the Diet rejected, by a majority of 11 to 5, the proposal of Austria and Prussia that the Diet should call on Denmark to suspend the Constitution with regard to Schleswig, and in case of refusal that the Confederation should take military occupation of that duchy. After the vote was taken, Austria and Prussia declared they would take the matter into their own hands. The Austrian Ministers have since warned the minor German Powers that if they overstep the bounds of their competency in the Duchies, the two great German Powers will settle the question themselves. Earl RUSSELL has also addressed a despatch to the German Powers, insisting on the integrity of the Danish Monarchy, and Mr. MURRAY, the British Minister at Dresden, has warned the Saxon Government that the most serious consequences will result if the Federal troops enter Schleswig before the Powers who signed the London treaty have stated their views on the question. The Federal Commissioners in Holstein have issued a proclamation deposing the Danish authorities in that Duchy, and transferring the administration of the law to the ducal authorities at Kiel, under the control of the Commissioners. The latest news mentions a report that the KING OF DENMARK has proposed to submit the questions at issue to the mediation of the Emperor NAPOLEON.

The committee of the Prussian Chamber o Deputies have unanimously reported against the loan of 12 million thalers demanded by the Government. In the sitting of the Chamber on Wednesday, the military budget of five million and a-half thalers demanded by the Government for the reorganisation of the army was rejected by a large majority. The proposition of the Ministry that the Chamber should grant the expenses as an extraordinary credit was also lost by a majority of 280 to 35.

In the Upper House of the Austrian Reichsrath on Wednesday, the Marine Budget, which had previously been reduced by the Lower House, was granted, after an animated debate, on the ground of the importance of the fleet in a strategical and commercial point of view.

The Italian Senate on Wednesday adopted the Treaty of Commerce and Navigation with France by a majority of 70 to 8. The Chamber of Deputies, after a debate of several days, had previously passed the bill for the suppression of brigandage by a majority of 150 to 46.

The Belgian Ministry has resigned in consequence of the diminution of the Liberal majority in the Chamber by the large number of members returned to the Chambers in the interest of the clerical party.

A telegram from Bombay announces the successful termination of the expedition against the hill tribes on the Punjab frontier. After two serious actions, in which the enemy suffered great loss, with the destruction of Mulka, the chief seat of the fanatics, the tribes surrendered and sued for peace, which was granted, hostages being taken to ensure the observance of their engagements. All our troops were therefore preparing to return to the plains. The Peshawur district and the Punjab were perfectly tranquil.

The news from Japan is also of a very favourable character. The difficulty with Prince SATSUMA has been arranged, the Government of Jeddo have withdrawn the decree for the expulsion of foreigners, and the building of forts round Yokohama has been discontinued.

Home News.

THE COURT. — The Queen, accompanied by the Princesses Helena and Beatrice, arrived at Windsor on Saturday from Osborne. On the previous evening her Majesty had received a telegram announcing the accouchement of the Princess of Wales, and gave immediate orders for preparations to be made for proceeding to Frogmore House early the next morning. At half-past 9 o'clock A.M. on Saturday, the Queen, accompanied by Princess Helena and Princess Beatrice, left Osborne and crossed over to Gosport in the Royal yacht Fairy. A special train conveyed her Majesty, the Royal Family, and suite to Windsor, where they arrived at 1 o'clock. The Prince of Wales met the Queen at the Windsor station, and drove with her Majesty to Frogmore House. The Queen was received by the crowd assembled at the station with the most enthusiastic cheering, and was much affected by the loyalty and kindness of her reception. On Sunday morning the Queen and Princess Helena attended Divine service in the private chapel. The Rev. H. Ellison officiated. Her Majesty passed the afternoon at Frogmore House. On Monday morning her Majesty and the Princess Helena went to Frogmore and remained with the Princess of Wales during the day. The Maharajah Dhuleep Singh visited her Majesty. On Tuesday morning the Queen and the Princess Helena drove out and went to Frogmore. Prince Arthur arrived from Greenwich Park and returned in the afternoon. On Wednesday morning the Queen, accompanied by the Princesses Helena and Beatrice, went to Frogmore to take leave of the Prince and Princess of Wales, and left Windsor at a quarter past 1 o'clock for Osborne. The Royal party travelled by special train on the Great Western Railway to Basingstoke, and proceeded thence by the South-Western to Gosport, where the Queen embarked in the Fairy for the Isle of Wight. The Royal party arrived at Osborne shortly before 5 o'clock. The Queen is expected to return to Windsor in about 10 days. On Thursday Sir George Grey arrived at Osborne from London.

ACCOUCHEMENT OF THE PRINCESS OF WALES.—The Princess of Wales was delivered of a fine boy at 9 o'clock on Friday evening. The Prince of Wales, the Earl Granville, Lord President of the Council, and the Lady of her Royal Highness's Bedchamber were present on the occasion. Her Royal Highness and the infant Prince are both doing well. The following bulletin was subsequently issued :—

"Frogmore, Jan. 8.

"Her Royal Highness the Princess of Wales was confined of a Prince at two minutes to 9 o'clock this evening. Her Royal Highness and the infant Prince are doing perfectly well.

"E. H. SIEVEKING, M.D.
"HENRY BROWN, Surgeon."

The bulletins issued during the week have announced that the recovery of the Princess has proceeded in the most satisfactory manner, and the latest bulletin was as follows :—

"Frogmore, Jan. 14, 10.30 A.M.

"Her Royal Highness the Princess of Wales is progressing most favourably. The infant Prince is in perfect health.

"ARTHUR FARRE, M.D.

A Committee of the Privy Council was held on Saturday afternoon at Whitehall, when it was ordered that a form of Thanksgiving for her Royal Highness's safe delivery of a Prince be prepared by the Archbishop of Canterbury, to be used in all churches and chapels tomorrow, Sunday, the 17th inst. A similar order was issued in regard to Scotland. It appears from the details of the accouchement published in the daily papers, that the infant Prince, like George III., is a seven months child, and that the suddenness of the event took everybody by surprise, as it had not been expected until March, when the Princess would be in residence at Marlborough House. As soon as her Royal Highness was taken ill, messages were sent for the medical men appointed to attend her Royal Highness, and also for Sir George Grey, the Home Secretary, but the confinement had taken place long before they could reach Frogmore. Mr. Henry Brown, a well-known general practitioner of Windsor, having had the honour of bringing the infant Prince into the world. Dr. Sieveking, the physician to the Prince of Wales, arrived from London shortly after the birth, and was followed by Dr. Farre and Dr. Gream, and later by Sir Charles Locock. It is said to be no violation of the sanctity of the domestic arrangements of their Royal Highnesses when it is stated that no arrangements had been made for the young Prince's reception. There was no nurse in attendance; but the maternal experience of the Countess of Macclesfield, the Lady in Waiting, was of inestimable value in extemporising all that was necessary for the young Prince. The other ladies of the Household were equally anxious to give every assistance in the emergency. Earl Granville, the Lord President of the Council, had arrived most opportunely at Frogmore from Osborne on Friday afternoon on a visit to the Prince of Wales, and was thus present at the birth of the Prince. It is understood that the Prince is to be suckled by a wet nurse, and that Dr. Sieveking has selected for this purpose from the list of the York Road Lying-in Institution, Mrs. Connor, a married woman, of irreproachable character, good health and antecedents, and possessing the requisite physical qualities. The Prince feeds well, and is said to be a fine and healthy child, presenting already a striking likeness to his Royal father, his features being unusually well marked. The report that he has been weighed and found to be 9 lbs. in weight is said to be entirely without foundation. The town of Windsor and neighbourhood all day on Sunday were in a state of joyous excitement. The event was also welcomed with all possible rejoicings in the metropolis and throughout the country at large, and was duly noticed in the services of the principal churches on Sunday. On Thursday morning the Duke of Cambridge, the Duchess of Cambridge, the Duchess of Mecklenburg Strelitz, and the Princess Mary, visited the Prince and Princess and their infant son, and lunched at Frogmore House.

THE PRINCE OF WALES left Frogmore Lodge on Friday morning in an open carriage and pair, with several gentlemen of his suite, and arrived at Virginia Water shortly before 12 o'clock. The Princess followed in a close carriage, accompanied by her ladies in attendance. Their Royal Highnesses immediately proceeded to the lake, where they were met on the ice by about 40 ladies and gentlemen, many of the gentlemen belonging to the London Skating Club. Two sides were chosen for the game of hockey. Those on the Prince's side were distinguished by a white riband on the left arm. The game was kept up with great animation until 2 o'clock, when the Prince and his companions repaired to the Fishing Temple, where they partook of a sumptuous luncheon. Afterwards they returned to the lake and resumed the game of hockey, which they kept up until a quarter to 5 o'clock, when the Prince left for Frogmore. His Royal Highness proved himself a first-rate skater and player, being as active with his hockey stick as he was on his skates, puzzling many of the most expert players. The Princess, who is an excellent skater, seemed much interested in the game, and was occasionally driven about in a sledge. The Princess left Virginia Water at 4 o'clock. Besides the Royal visitors and suite, there were upwards of 500 people present, including a large number of ladies, who displayed much skill and grace in the performance of several difficult figures. This exciting scene was much enlivened by the performances of the band of the Horse Guards Blue, who were comfortably seated round a large charcoal fire on the banks of the lake, near the Fishing Temple. In the afternoon Earl Granville arrived from Osborne on a visit. On Thursday morning the Prince went out shooting.

THE GRAND DUCHESS OF MECKLENBURG-STRELITZ landed at Dover on Saturday from Germany, and proceeded to Kew in the course of the afternoon on a visit to the Duchess of Cambridge.

THE CABINET.—A Cabinet Council was held on Tuesday at the Foreign Office.

ORDER OF THE BATH.—The Queen has given orders for the appointment of Commissary-General-in-Chief John William Smith, C.B., and George Frederick Edmonstone, Esq., late Lieutenant-Governor of the North-Western Provinces of Bengal, to be Knights Commanders of the Bath.

DIPLOMATIC MOVEMENTS.—Lord Wodehouse arrived in London on Wednesday morning on his return from the special mission with which he had been charged in the Court of Copenhagen. His lordship was accompanied by the secretaries to the mission.

THE NAVY.—The Duke of Somerset has appointed Sir Lucius Curtis to be Admiral of the Fleet, as successor to the late Sir William Hall Gage. His promotion raises Captain Drummond, one of the Lords of the Admiralty, to the rank of Rear-Admiral of the Blue. A

memorandum has been issued from the Admiralty, stating that her Majesty has sanctioned the introduction of distinctive colours to be worn with the gold lace stripes on the sleeves of naval officers, so that hence forth the different ranks, as well as the executive and civil branches of the service, will be distinguished by different colours. This alteration will probably be final, as it is understood that her Majesty has expressed a strong opinion against any important change being again made in the uniform of the Navy.

THE COURT MARTIAL ON COLONEL CRAWLEY.—His Royal Highness the Commander-in-Chief has recommended her Majesty to confirm the finding of the late Court-Martial, and has accordingly directed Colonel Crawley to resume the command of the Inniskilling Dragoons. Major Swindley, Surgeon Turnbull, and Adjutant Fitzsimon, who gave evidence at the trial, are to be removed from the regiment. His Royal Highness concludes by making the *amende* to Sir Hugh Rose, by practically withdrawing the censure passed upon him for having attributed Sergeant Lilley's death to excess.

Foreign.

FRANCE.—The ceremony of conferring the cardinal's hat upon Monseigneur de Bonnechose took place on Thursday. The Cardinal having addressed the Emperor, his Majesty replied as follows:—

"I have reason to say that honours are heavy burdens imposed upon us by Providence, which increases duties in proportion to rank. I often ask myself, therefore, if good is not as great a tribulation as ill fortune. But our guide and support is religious faith, coupled with political faith, confidence in God, and confidence in a mission to accomplish. You may be astonished, as I am, to see at so short an interval men hardly escaped from shipwreck again call winds and tempests to their assistance. God protects France too visibly to permit the spirit of evil to once more call forth agitation. The scope of our constitution is widely marked out. Every honest man can feel himself at ease within its bounds. Nearly every one can have the opportunity of expressing his ideas, of controlling the acts of the Government, and of taking an equitable part in public affairs. Exclusion no longer exists. The clergy are not only at liberty to occupy themselves with religious questions, but eminent chiefs still find legitimate place in the highest body of the state, into which you will bring a spirit of conciliation which does not separate the cause of religion from that of country, a spirit of tolerance which attracts and persuades, and a love of country which serves to draw closer those separated by difference of opinion."

In the Corps Législatif on Friday MM. Berryer, Gouin, and Ollivier spoke on the extraordinary credits demanded by the Government. M. Berryer commenced his speech by saying that at his age he had no prospects, but he felt it right to declare his opinion that there was nothing in the present state of French finance which need inspire alarm, provided the causes which led to the difficulty were removed. He denied that the expenses which have swollen the floating debt were such as could not be foreseen. He showed that they were foreseen, and might have been included in the amended Budgets, but were purposely omitted, with the design of concealing from the Chamber and the Government the real state of the finances. He charged the Ministers with violation of the law, and refused to be a party to any Bill of Indemnity to protect them from the effects of such violation. He pointed out how little France obtained in exchange for the enormous expenses with which her foreign expeditions had saddled her. Before the war with Cochin China the trade of France with that country amounted to 12,000,000 f.; since the war it had been reduced to less than half. The amount of her claim on Mexico was a few millions; the expenditure required to be made good by the pending loan is 210,000,000f. "Other countries," he said, "might be afraid to make the avowal, but France can say openly that she has need of peace." On Saturday, after speeches by MM. Galley St. Paul, Gueroult, and Vuitry, the credits in question were granted by 232 against 14 votes. On the same day the election of M. Pereire was declared valid. The debate on the Address in the Corps Legislatif commenced on Monday, when M. Thiers addressed the House in a speech of great length, which has created an extraordinary sensation in France, and for the time has superseded the interest of the Danish and all other questions. M. Thiers commenced with an investigation, from abstract principles, of the true theory of politics. He said that there were three necessary and fundamental principles of government—national sovereignty, order, and liberty; and that this liberty was of five kinds—personal liberty, the liberty of the press, liberty of election, the liberty of the representatives of the nation, and the liberty of debating such questions as may arise with the responsible Ministers of the Sovereign. He then proceeded to show that each of the five kinds of liberty of which he spoke was fettered or destroyed by the existing constitution of France. As to personal liberty, he said that the fact of its not being enjoyed in France, even up to the necessary point, resulted from the laws passed after the attempt of Orsini. That the liberty of the press does not exist completely was shown, he said, by the fact that the press, whose business it was to criticize the Government, was itself placed under the power of that Government, to warn, to suspend, and to suppress. As regards electoral liberty, he said that while universal suffrage was the great resource of modern times, and was permitted to decide on the fate of kingdoms and dynasties, in Italy, Greece, Mexico, and France herself, it was at once controlled by the Government when called in for the smaller business of electing the French Chambers, the electors being allowed to choose no candidate who was not agreeable to the prefect. As to the fourth kind of liberty, he claimed the power of introducing such questions as the Chamber pleased, instead of having its proceedings traced for it by the Government, and, moreover, that the Assembly should really have control over the finances and all other questions which came legitimately under its deliberations. As to the fifth kind of liberty, he asked for responsible government—for the abolition of the rule which vested the power of acting in one Minister, and the duty of defending what is done in another. All these things he said might be conceded by a few alterations in law and in practice without materially altering the existing Constitution, and if they were conceded he was of opinion that France would have little right to complain on the score of freedom. He deprecated any attempt to depreciate his proposals because they would bring the Constitution into closer similarity with that of England. He said that these were not the principles of English liberty only, but of liberty in general. The abstinence of the Executive from any interference with personal liberty, with the liberty of the Press, the liberty of election, and the liberty of free discussion, and the government by responsible Ministers which rendered it possible to effect a change in administration without a revolution—these were truly the minimum, the very smallest amount of powers and privileges which entitled a people to call themselves free. As to himself he justified his return to public life by the analogy of his conduct in the case of the Republic—a form of government which he did not approve, but under which he rendered the public essential services. He further justified himself by reference to the concessions in a liberal direction made by the Emperor, by the advice which he had given to his friends to take the oath of allegiance to the existing Government, and by the consideration that at his age, and after the posts which he has filled, he could not be for a moment accused of any personal or selfish object. He had served, he said, an august family, now a prey to misfortune, nobly borne, and he was resolved that they should never behold in him the old and tried servant, the parasite who clung to present power while his masters were still in the bitterness of exile. In conclusion he maintained that the Emperor might become the initiator of freedom, and that France was ripe for liberty. He warned the Government to take care, "for the country so ardent in its nature, and in which the exaggeration of desire is always so near its awakening, the country which demands its liberties in a deferential tone will one day exact them." On this condition he promised his unreserved support to the Government. M. Rouher, Minister of State, in reply, recalled the words used by M. Thiers, "The country will exact," and stated that he considered that expression a threat, of which the Government was not afraid, as it did not belong to those whom people menaced. He maintained that none of the liberty demanded by M. Thiers was deficient in the country, that the Parliamentary system which it was sought to bring back had had its day, that the Emperor reigned and governed, and that liberty would follow when the time had arrived, but that it was necessary to wait. M. Jules Favre, in reply to M. Rouher, repeated with the same energy M. Thiers's assurances as to the attitude of the country on some future day if refused its liberties when, as now, calmly and deferentially petitioning for them, while he disclaimed on M. Thiers' behalf, as well as on his own, any idea of provocation. The Government might rest assured that the country would know how to act its liberty, but all notions of violence were far from M. Thiers. What he alluded to was the sovereign and absolute right which the Government admitted in their language, but which they mutilated by their acts, the right which would exist in spite of them; and in regard to which they should take good care lest some day it might be enforced against them. In the sitting on Tuesday, MM. Latour Dumoulin, Taillefer, and Glais-Bizoin addressed the Chamber, and the general debate was then closed. On the amendment of the Opposition with regard to the elections, M. Segris protested against the assumption of the deputies of Paris in condemning the elections in the departments, and claiming for themselves the monopoly of independence. M. Marie surrendered his right of speaking on account of fatigue. M. Picard explained the amendment, which was rejected. On Wednesday the debate on the elections was resumed, when M. Ancel spoke against and M. Lafon de Saint-Mur in favour of the official candidatures. M. Jules Favre made a speech which caused great excitement. M. Rouland, the Minister, in reply, dwelt upon the disloyalty of the preceding speaker. This expression was received with loud dissatisfaction, and was subsequently withdrawn by M. Rouland at the request of the Duke de Morny. In the sitting of Thursday M. Thiers supported the amendment of the Opposition respecting the elections. He attacked the principle of official nominations, and expressed much respect for the rights and origin of the majority, but regretted the abuses of the Administration and the introduction of the name of the Emperor into the nominations. He was only able to understand official nominations upon the condition of every kind of liberty being respected. He pointed out the abuses of power with which the Opposition reproached the Government, and ended by declaring his opinion that universal suffrage will prove the sateguard of the country. Loud interruption having followed this expression, M. Thiers explained that his remark was not intended as a threat, but merely as a warning. M. Rouher declared that there was no difference in the views of MM. Thiers and Jules Favre, and showed that the right of the Government to interfere in the elections was absolute, and had existed under all Governments. The Minister then drew a picture of the elections under preceding Administrations, and criticised the conduct of the Opposition, his remarks calling forth the energetic applause of the majority. He declared plainly that the Constitution would only be modified by the Emperor, who reigned and governed. The Chamber declined to listen to another speech from M. Jules Favre. The amendment was then rejected by 198 to 44, and the Chamber adopted the first paragraph of the Address. It is reported in Paris that Denmark has proposed to submit the Dano-Germanic conflict to the mediation of the Emperor Napoleon. A circular Note has been addressed by the French Government to the secondary German States, explaining the position of France in reference to the proposal of England for the assembling of a Conference on the Schleswig-Holstein question. The following is stated to be a summary of this Note:—

"The London Conference of 1852 only created an imperfect work, which has been condemned by events. A new Conference must be based upon proper conditions. Such a Conference must take as its starting point the state of things now existing in Holstein, and must not be in opposition to the Federal Diet, as it would discuss questions which might have already been resolved by events. France would also wish the Diet to be represented at this Conference, but must first know whether the Federal Diet, which has hitherto objected to the interference of the foreign Powers who signed the Protocol of London in the quarrel with Denmark, has changed its views on that subject."

La France of Saturday evening says it appears certain that Germany will reject the proposal for a Conference. The decree stating the conditions of the new loan was published on Thursday. The public subscription will remain open from the 18th to the 25th of January. The issue price will be 66f. 30c. Interest will be reckoned from the 1st of January. Subscriptions of 6f. rente will not be subject to deduction. One-tenth of the amount taken is to be paid at the time of subscription, and the remainder in 10 equal instalments, on the 21st of each month. A bonus of 4 per cent. will be allowed on all instalments paid in advance. The official papers of Monday announced that the documents taken from the four conspirators arrested last week, had proved that Mazzini was the originator and director of the plot, and that he had paid the men's expenses. They had formerly belonged to the Papal brigade, and were, it was stated, sought out and engaged by Mazzini at Lugano with the object of assassinating the Emperor, Greco being the chief of the party. They stated that Trabuco, who had been convicted in London and Paris for robbery and swindling, had in a letter addressed to Mazzini solicited the rank of lieutenant under Greco. Mazzini was said to have replied favourably to this request, from a letter which he addressed to Trabuco, found at Greco's lodgings, while Greco had received from Mazzini a sum of 4000 francs. One of the conspirators also confessed that the daggers with which they were armed were all poisoned. In consequence of these statements Mazzini on Thursday addressed the following letter to the London daily papers:—

"Accusations of every description have been, since the arrest of four Italians in Paris charged with an attempt against Louis Napoleon, heaped on me by the organs of the French Government, and repeated by the English press. It has always been my known habit not to discuss accusations put forth against me by avowed enemies, and I feel a special dislike to do so when the accusations come from the agents of a man who, as far as in him lies, is by mere brutal force depriving my country of the unity which she claims, and making Rome the basis of operation of the *brigandage* infesting the South of Italy. Yielding, however, to solicitations of dear English friends, I do declare,—that I never did instigate anybody to kill Louis Napoleon; that I never did give to any man bombs, air-guns, revolvers, or daggers for that purpose; that Trabuco, Imperatori, and Saglio are entirely unknown to me; that, therefore, the meeting summoned at Lugano, the absurd place of sub-lieutenant given to Imperatori in a brigade of four men, and the giving of the photographs to the men, are absolute falsehoods; that my photograph with my autograph at the bottom are sold for the 'Venice Emancipation Fund,' at the office of the *Unità Italiana*, at Milan, and elsewhere; that no letter, with or without money, has ever been addressed by me to Greco in Paris. Greco I know. Hundreds, I might say thousands of young men belonging to our national party of action are known to me. Greco is an enthusiastic patriot, who took an active part in the enterprises of 1860 and 1861 in the South of Italy; and he has had, as such, contact with me. Any note of mine in his possession, if there be any, must, however, belong to at least nine or 10 months ago. Enough in reply to accusations hitherto merely grounded on French police reports. JOSEPH MAZZINI."

Marshal Forey has been appointed Commander of the 2d Army Corps. The Imperial Court in Toulouse has confirmed the decision of the tribunal of Castres, which had annulled the will of the late Father Lacordaire. Arnoldi, Bishop of Trèves, of holy coat celebrity, died of apoplexy on the 7th inst. An Imperial decree was issued on Tuesday, declaring the construction of a railway from Orleans to the Bourbonnais line to be a work of public utility.

SPAIN.—The *Official Gazette* of Wednesday publishes a Royal ordinance authorising the Spanish financial committees abroad to receive proposals for the

auctions of the first and second Interior Passive Debt and the Foreign Passive Debt. The *Politica* asserts that the English Ambassador has presented a despatch to the Spanish Government requesting a settlement of the question of the English certificates of the Passive Debt. The Budget for 1864 has been published. The increase of receipts is stated at 167,000,000 reals. The Finance Minister proposed to realise the bonds of the purchasers of national property, to impose a new tax upon travellers by railway, and to levy some further imposts. Marshal Narvaez declared on Saturday in the Senate that he had always considered that Gibraltar belonged to Spain, and regretted that Spain had not long since claimed it. In the sitting of Tuesday Señor Carrigniri brought forward a Bill for the construction of a railway from Pampeluna to the French frontier. The Congressional Committees will report upon the Bill. Some changes are expected in the Ministry on account of the Constitutional question. The journals announce the arrival in Madrid of representatives from the foreign holders of the Passive Debt.

BELGIUM.—At the election of deputies in the city of Bruges the candidates belonging to the clerical party were elected, thus still more diminishing the Liberal majority in the Chamber. The Ministry have since tendered their resignation.

SWEDEN AND NORWAY.—The King of Sweden and Norway has convoked the Norwegian Storthing for the grant of an extraordinary credit for war armaments. The Session will open on the 1st of February. Orders have already been given for the completion of the war *matériel* of Norway, and for the training of subaltern officers. The Duke of Wermland is seriously ill.

DENMARK.—The Danish Rigsraad met on Monday at Copenhagen for the discussion of the special affairs of the monarchy. It is stated that Bishop Mourad, the Minister-President, declared to the Extraordinary Ambassadors of England and Russia, Lord Wodehouse and Councillor Ewers, before their departure from Copenhagen, that the Danish Government would willingly accept the English proposal of a Conference for the settlement of the Schleswig-Holstein question, although of the opinion that it would scarcely lead to any result. But in any case the Powers who agree to the Conference must take care that in the meantime not a single German soldier crosses the Eider. Should this, nevertheless, take place, the Danish Government is resolved to enter upon war with all energy and to prosecute it as long as the resources of the country permit. It is stated that the Danish Minister for Foreign Affairs has addressed a note to the Austrian Cabinet, indirectly admitting that Denmark had not fulfilled her engagements, and requesting that the negotiations between Denmark and Germany might be continued from the point at which they ceased in 1851-52. Austria, however, has declined the offer to recommence negotiations with Denmark. 16,000 men, composed of the reserve lately called out, were quartered in Copenhagen on Tuesday. The class of soldiers of the age of 35 years has been called out.

THE DANISH DUCHIES.—The families of subaltern officers and others inhabiting the Castle of Gottorp have been ordered to evacuate it within 24 hours, as the Government of Schleswig will be transferred thither. It is said that the King and Queen may possibly take up their residence in the castle. The principal military force of Denmark, numbering 16,000 men, is concentrated in the city of Schleswig. The inhabitants of the city are heavily burdened by the number of soldiers billeted upon them. Liberty Square, in the city of Schleswig, is defended by five 84-pounder cannon. Colossal pallisades and extensive barracks are being erected at the dam of the Dannewerk. The ice upon the Schlei is mostly so thin as apparently not to allow of the passage of large bodies of troops. The Danes have opened the dams of the Eider near Tonningen, for the purpose of inundating the country. It is officially reported that the approach to Frederickstadt is partially obstructed. Postal communication, however, has not been interrupted. The Federal Commissioners arrived at Rendsburg on Tuesday. They are believed to have come to treat upon the matter of the six villages on the north of the Eider claimed by Holstein, but not yet evacuated by the Danes. A proclamation by the Federal Commissioners was issued on Wednesday, ordering a provisional regulation of the Customs. Dating from the 22d ult., Denmark and Schleswig are to be considered, with reference to Customs, as a foreign country. The navigation dues are to be paid according to the rate up to the present in force. The import of goods subject to duty can only take place by land *viâ* Rendsburg and Levensau. A previous proclamation of the Federal Commissioners decreed the reorganisation of the Central Administration of Holstein. According to this ordinance the Government authorities of Holstein, hitherto established at Plön, ceased to exercise their functions after the 12th inst. The whole Central Administration of Holstein is now carried on by Ducal authorities in Kiel, who administer the existing laws of the country under the control of the Federal Commissioners, whose orders they execute, and to whose decision they are to be subject in all such cases where the ratification of the King of Denmark was formerly necessary. Prince Frederick remains at Kiel, which he is said to intend declaring a free port. An Austrian major has been ordered to join the staff of Gen. Von Hacke, the commander of the Saxon troops.

SAXONY.—The Hon. C. A. Murray, British Minister at Dresden, addressed on the 5th inst. a note to Baron von Beust. In this note Mr. Murray says that the most serious consequences would result should the Federal troops enter Schleswig before the Powers who signed the London Protocol have stated their views on the succession question. The note further declares the conduct of the Federal troops in Holstein to be contrary not only to the resolutions of the Federal Diet regulating the Federal Execution in Holstein, but also to justice; and Bavaria, Saxony, and Würtemberg must be made jointly answerable on this account. Baron von Beust, in his reply, complains of the offensive tone of Mr. Murray's note, of the rashness of his assertions, and his ignorance of the real facts of the case, and says, "The conduct of the Federal troops in Holstein is a matter which does not concern foreign Powers." The address on the Schleswig-Holstein question voted at the public meeting at Leipsic on the 9th inst. was received by the King on Monday. A procession of the civic authorities, the professors, students, and citizens took place afterwards, cheering the King as the protector of German rights. His Majesty, thanking them, said he was glad public opinion had been expressed in favour of the question. It was not in his power to secure success, but he would maintain his policy unchangeably.

AUSTRIA.—It is asserted that Count Rechberg addressed a circular note on Tuesday to all the German States, formally requesting that the Federal Diet should strictly observe the limits of its confederacy. Should it go beyond these limits in the question of the succession to the Duchies, the two great German Powers would be compelled to settle the question themselves. In the Lower House of the Reichsrath on Monday the Finance Minister asked for a supplementary credit of 14,000,000 fl., of which 4,000,000 fl. were for war expenses dating from 1859, and 10,000,000fl. for the Federal Execution in Schleswig-Holstein. In the Upper House on Wednesday the entire amount of the Marine Budget asked by the Ministry, which had previously been reduced by the Lower House, was granted after an animated debate. The reason given for this vote was the importance of the fleet in a strategical and commercial point of view. In a Council of Ministers on Sunday, the Emperor presiding, it is said to have been resolved to oppose all resolutions involving the Schleswig-Holstein succession question in the pending dispute, and especially all such as hold out a prospect of the occupation of Schleswig-Holstein being turned to the advantage of special hereditary claims. The following series of questions, signed by numerous members of the Right and Left of the Lower House of the Reichsrath, has been addressed to Count Rechberg:—

"1. Is the policy pursued by Austria, in conjunction with the Prussian Government, only the result of Count Rechberg's advice, or does the entire Cabinet share this policy? 2. Does Austria intend to comply with the resolutions of the minor States even if Prussia should refuse? 3. Or will the Government refuse execution of the resolutions at the peril of dissolution of the German Confederation, or even of civil war? 4. How far, finally, does the understanding between Prussia and Austria extend?"

PRUSSIA.—In the sitting of the Chamber of Deputies on Saturday the Committee of the Chamber, on the loan of 12,000,000 thalers requested by the Government, agreed upon its report, and appointed Herr von Forkenbeck reporter. The committee unanimously recommended the rejection of the Government Bill, as well as the amendments. In the sitting of Monday Herr von Virchow asked whether Prussia, seeing that the November Constitution had not been recalled by the King of Denmark by the 1st inst., would withdraw from the London treaty. Count von Bismark replied that he would answer as soon as the House should come to a resolution on the loan of 12 millions requested by the Government. In the sitting of Wednesday the vote on the Military Budget was taken. The Conservative members, the Ministers, and a few Catholic members only voted for the expenses of the reorganisation of the army (5,500,000 thalers) as proposed by the Ministry. The Ministerial proposition was thus rejected by a large majority. The further proposition of the Ministry that the Chamber should grant the expenses as an extraordinary credit was likewise lost by 280 to 35.

FRANKFORT.—At the sitting of the Federal Diet on the 7th inst., Herr von der Pfordten brought up the report of the committee upon the affairs of Holstein. The committee were of opinion that the Treaty of London was unfair in point of absolute justice, and illegal in its bearing upon the rights of nations, and that it fundamentally violated the rights of Germany and the Duchies. At an extraordinary sitting of the Diet on Monday a renewed and urgent motion of Austria and Prussia was brought forward to call upon Denmark to withdraw the November Constitution. The motion further proposed that in case of non-compliance immediate occupation of Schleswig should take place. At the sitting of Thursday the motion was lost by 11 to 5. After the vote had taken place, Austria and Prussia declared that they would take the matter in hand themselves. Electoral Hesse and Mecklenburg having each one vote, and the following seven States—viz., Lichtenstein, Waldeck, the two branches of Reuss, Schaumburg, Lippe, Lippe-Detmold, and Hesse Homburg together having one vote, agreed with Austria and Prussia. The other States partly declined the proposition absolutely, and partly acceded to it conditionally. Even, however, where absolutely favourable to Austria and Prussia, these latter States would not constitute the required majority of votes. Saxony and Bavaria and some other States lodged a protest against the vote, which was replied to by a counter-protest of Austria and Prussia. It is asserted that Sir Alexander Malet has since handed another Note to the President of the Diet, in which the proposal of a conference is so energetically repeated that war or peace is made dependent upon its acceptance. It is also said that the English Government has addressed a similar note to the minor German States. Austria and Prussia will address identical Notes to those States who have not agreed to the Austrian proposition in reference to the stay of the Prince of Augustenburg in Holstein. These Notes will declare the policy of the States which formed the minority on the occasion of the vote of the Federal Diet on that question, and will announce that these States will reserve further resolutions on the subject. The complete understanding existing between the Austrian and Prussian Governments with regard to the policy to be pursued in the Schleswig-Holstein question has again been confirmed. The semi-official *Nord Deutsche Allgemeine Zeitung* of Saturday contradicts the report that Prussia intends to bring forward a motion in the Diet asking for its interference against the action of the popular Central Committee.

POLAND.—A Government ordinance was issued in Warsaw on Sunday, imposing upon all the towns an extraordinary contribution of 3 per cent. upon the rent of the houses. Warsaw, Praga, and other towns of Poland are to pay double the amount of the chimney tax. The time on or before which payment of this contribution must be made is fixed in Warsaw for the 31st of January, and for the other towns the 25th of February, under a fine of from 25 to 50 per cent. Another proclamation has been issued by the Russian Government ordering the collection of a contribution in four governments of the kingdom. The impost upon the proprietors of redeemed peasants' estates is equivalent to the chimney-tax, and to three and a half times the amount of that tax upon landowners among the higher clergy and the laity. All persons failing to pay by the 25th February will be subject to a fine of 25 per cent. upon the amount due. At a recent sitting of the State Council, General Berg intimated his intention of closing the Warsaw University.

ITALY.—In the Chamber of Deputies on Friday, Signor Ratazzi defended the Bill for the repression of brigandage. He also pointed out that the measures authorised by this law were not contrary to the Constitution, and said the Parliament must take care that the Constitutional institutions of Italy were not made use of to the detriment of the country by its enemies. Signor Castagnola affirmed that all the populations of the southern provinces which had been visited by the Committee of Inquiry were favourable to an exceptional law. The general debate on the Bill then closed. The debate on the clauses commenced on Saturday, and terminated on Monday in the adoption of the Bill by a majority of 150 to 46. During the debate the Minister of the Interior, speaking of suspected persons belonging to various parties, bitterly regretted the recent occurrence in Paris, which he said had aroused general indignation. In the Senate on Monday the Finance Minister delivered a speech approving the Bill for a tax upon moveable property. On Tuesday the debate on the Treaty of Commerce and Navigation with France was commenced. Signori Andiffredi and Pareto spoke against the treaty. Signor Minghetti, the President of the Council, dwelt upon the financial aspect of the treaty, and expressed his opinion that it was destined to draw closer the bonds between France and Italy. He seized the opportunity of expressing the sentiments of indignation felt by the country for the conspiracy organised against the Emperor. In the sitting of Wednesday the Minister for Foreign Affairs pointed out the utility and practical value of the concessions made and obtained by the treaty. He said that it was the consequence of the policy inaugurated by the alliance with France, and, in the second place, was the inauguration of a commercial system. The treaty was adopted by 70 votes to 8. The brigands taken from the Aunis have been sent to Naples, to be tried at the Court of Assizes in the Terra di Lavoro. The Italian Government has signed the contract for the purchase of the Bologna and Ancona Railway, and the treaty for the cession to the Roman Railway Company of the Ligurian River Railway and the railway from Nice to Spezzia. The Roman Railway Company has effected a fusion with the Tuscan and Leghorn companies. Mr. Home, of spiritualism notoriety, was last week ordered to leave Rome in three days; but on the intercession of the British Consul he was subsequently allowed to remain, on condition of his entering into an engagement, through the Consul, that he would desist from all communications with the spiritual world during his stay in Rome.

SICILY.—The Spanish ship with the Annamite Ambassadors on board, which was thought to have been wrecked, has put into Messina.

TURKEY.—Advices received from Constantinople state that the *Journal de Constantinople* had published a semi-official article complaining of the attitude of the Moldo-Wallachian Government, and that the Porte ha

protested against the vote of the Roumanian Chamber for the secularization of convent property. In addition to the Porte, the British, Austrian, Prussian, and Russian Legations have protested against the vote confiscating the property of the Danubian monasteries. The Porte has addressed a Note to the Russian Ambassador, protesting against the transport of iron plates in a Russian corvette up the Bosphorus to Nicolaieff.

THE BLACK SEA.—Numerous arrests continue to be made in Odessa, and great activity prevails in the arsenal.

INDIA.—The frontier force advanced on the 15th of December, and after having fought two actions, in which the enemy suffered heavily, and our loss was also great, the Bonair tribe surrendered their chief and made peace. The Cheri contingent and part of the force destroyed Mulka, the seat of the fanatics. All the troops are now returning to the plains. The immediate direction of the frontier force has been given to Sir Hugh Rose. A raid has been made near Peshawur by the Mounrods, who were repulsed. All is quiet there and in the Punjab, and the war is supposed to be at an end. Our total loss in one month's marching and fighting, from the 21st of October to the 20th of November, is 19 officers and 175 men killed, and 14 officers and 452 men wounded. The following is a list of the officers killed and wounded:—

Killed.—Lieutenant Gillies, R.A., Lieut. Clifford, Adjutant 1st Punjab Cavalry, volunteer; Lieut. Richmond, D.D., 20th Punjab Native Infantry; Major Harding, Bombay Staff; Lieut. Murray, 71st Highland Light Infantry; Lieut. Dougal, 79th Cameron Highlanders, volunteer; Lieut. Davidson, second in command, 1st Punjab Infantry; Capt. Smith, 71st Highland Light Infantry; Lieut. Jones, 79th Cameron Highlanders, volunteer 71st Light Infantry; Lieut. Chapman, 101st Bengal Fusileers; Lieut. Mosely, 14th Ferozepore Native Infantry; Capt. Aldridge, 71st Highland Light Infantry; Lieut. Inglis, 14th Native Infantry; Lieut. Sanderson and Dr. Peile, of the 101st Regiment; and Captain Aldridge. Among the Officers *Wounded.*—General Chamberlain, Colonel Hope, of her Majesty's 71st Highlanders; Colonel Wilde, C.B., of the Guides; Colonel Taylor, Colonel Campbell, 5th Punjab Infantry; Major Kayes, 1st Punjab Infantry; Major Rosse, Major Delafosse, Lieut. Brown, Royal Engineers; Lieut Drake, 32d Muzbees; Lieut Barrow, Survey; Lieut. Battye, of the Guides; Lieut. Oliphant, Lieut. Pitcher, 1st Punjab Infantry; Lieut. Forlong, of the Guides; and Lieut. Anderson.

Lord Elgin was buried on the 21st November, 30 hours after his death, as is necessary in India. A *post mortem* examination showed that the doctors were right in believing that he died of fatty degeneration of the heart and disease of the kidneys of long standing. A stone obelisk 27 feet high, with a white cross at the top, is to mark his resting-place, under a Himalayan oak in Dhurmsala Churchyard. Lady Elgin, who is in a delicate condition, reached Jullander on the 3rd of December, and left for Delhi on the 4th. She halted at Delhi on the 7th and 8th, and left Allyghur on the 9th, proceeding thence by train straight to Allahabad on her way to Calcutta. Sir W. Denison has arrived at Calcutta, where he has been sworn in as temporary Governor General.

JAPAN.—Intelligence has been received that after long discussions, extending over three days, the agents of Prince Satsuma have agreed to make immediate payment of the indemnity, and have promised in writing not to relax in active search for the murderers of Mr. Richardson, and to subject them when discovered to capital punishment, in presence of one or more British officers. The decree for the expulsion of foreigners has been withdrawn, and the building of forts round Yokohama discontinued.

NEW ZEALAND.—A supplement to the *London Gazette* was published on Wednesday, containing the official despatches describing the military proceedings in New Zealand up to the evacuation of Mere-Mere by the natives on the 5th of November, and including the details of an unfortunate skirmish between the natives and a small party of volunteers, in which Lieutenant Perceval was killed. The bodies, however, of all the soldiers killed were recovered. The despatches contain several recommendations of private soldiers for their courage and humanity in bringing the wounded men within the lines while exposed to a heavy fire from the natives.

UNITED STATES.—General Longstreet is reported to have retired to a position in East Tennessee capable of being strongly fortified, and having open communication with North Carolina and Virginia, thus necessitating the presence of a heavy Federal force in East Tennessee. The Chattanooga correspondent of the *New York Times* asserts that General Grant has forwarded to Washington a plan of campaign different from any hitherto submitted. General Pillow reports that Sullivan's column has returned to Harper's Ferry from a raid in Western Virginia, in which he captured 400 prisoners and a large amount of property. Southern journals assert that General Averill, in his late raid, lost 200 men and 8 officers. The Richmond papers assert that General Rosse has just completed an entire circuit of General Meade's army. Mobile despatches state that the mutiny in Fort Jackson, below New Orleans, was serious, three gun-boats having been sent to quell the disturbance. The Federals shelled Charleston from the night of the 24th till the afternoon of Christmas-day. Twelve buildings were fired, and one white man was killed and one white woman wounded. The Federal gunboats had a brisk engagement with the Confederate batteries on Johnston's Island. The *New York Times* states that Lord Lyons has had numerous interviews with Mr. Seward concerning the Chesapeake affair. The Federal Government have officially denied that they had stated they would never tolerate or recognise the Mexican monarchy. The correspondence submitted to Congress will show the true position of the Federal Government with regard to this question. The Federal Government have postponed the draft till the middle of January. The Governor of New York has removed the New York police commissioners on the ground that their reports of the New York riots were sectarian and partisan. Several more merchants of New York have been arrested for carrying on a contraband trade with the South. Archbishop Hughes, the Roman Catholic Archbishop of New York, is dead. The Confederate Congress has passed a Bill that no persons were exempt from military duty because they furnished substitutes, and forbidding people to deal in Federal currency. During the debate Senator Browne urged that the conscription should be extended to all men without exception capable of bearing arms. The *Richmond Sentinel* urges the people to assist the Southern cause by sending their gold, silver, and plate into the Treasury in exchange for bonds.

MEXICO.—Advices from the city of Mexico to the 7th, report that the French occupied Morella on the 30th ult., and had also possessed themselves of Acamboro, Cahija, San Miguel, and Salamanca. President Juarez and his Ministers are stated to have abandoned San Luis de Potosi, and gone to Durango. The Mexican General Negrete had succeeded Comonfort as Minister of War. It was asserted that Spain and Holland had recognised the Imperial Government.

SOUTH AMERICA.—A great battle has been fought between the Ecuadorians, under General Flores, and the Columbians, led by General Mosquera. The army of Flores was defeated with great loss, and Mosquera followed up his victory by crossing the Chota, and defeating an Ecuadorian force which was stationed there.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90⅜ to ⅞ for Money, and 91 for Account; Three per Cents. Reduced, 90⅞ to ¾; New Three per Cents., 90¾ to ⅞; Bank Stock, 237; India Five per Cent. Stock, 106¼ to ⅜; Ditto Four per Cent., 100; Ditto Four per Cent. Debentures, 1866, 99⅜; Ditto Bonds, par; Five per Cent. Enfaced Rupee Paper, 104; Exchequer Bills, par to 4*s.* dis.—FOREIGN: Brazilian, 1863, scrip, 1 dis.; Danish, 1825, 81½; Dutch Two and a Half per Cents., 64½; Ditto Certificates, 101⅜; Greek, for Account, 23⅞ to 24; Ditto Coupons, for Acct., 11¼ to ⅜; Italian, 67¾; Mexican, for Acct., 35⅛ to ½; Portuguese, 1853, 47⅛; Ditto for Acct., 47½; Ditto 1856, &c., 47⅝; Russian, 1850, 86¼; Ditto 1862, 88¾; Spanish, 52½; Ditto Passive, for Acct., 31¼ to ⅛; Ditto Certificates, 13⅝; Ditto for Acct., 13¾ to 14; Turkish, 1858, 70; Ditto 1862, 100*l.* Bonds, 67¾; Venezuela, 1862, for Acct., 55 to ½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,690,680	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	13,040,680
		Silver Bullion	
	£27,690,680		£27,690,680

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£10,077,189
Rest	3,365,581	Other Securities	20,555,386
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,264,097	Notes	6,927,185
Other Deposits	15,411,794	Gold and Silver Coin ..	667,917
Seven days and other bills	632,925		
	£39,227,677		£39,227,677

Jan. 14, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY: *Jan.* 8.—BANKRUPTS.—J. ALLAN, Fen Drayton, Cambridgeshire, Grocer—A. BAILLIE, Cheltenham—S. BURRAGE, sen., (known as S. BURRAGE), Golden Lane, St. Luke's, Grocer—J. BRITTEN, York, late Licensed Victualler—J. BROWN, Maryport, Cumberland, Joiner—W. CLIFFORD, Ware, Hertfordshire, Maltster—J. COLES, Newport, Monmouthshire, Hairdresser—W. CARDER, Cinder Hill, Nottinghamshire, Labourer—J. CHURCH, Weston Subedge, Gloucestershire, Brickmaker—G. DOMINY, Liquorpond Street, Gray's Inn Road, Merchant's Clerk—T. DARBY and E. DARBY, Birmingham, Iron Bedstead Makers—J. FOX, Sandbach, Cheshire, Painter—W. J. FIELD, New Cross Road, Clerk—C. GUTTERIDGE, Stanstead, Essex, late Brewer—W. GLADWELL, Eastwood, Essex, Farmer—T. GRUNDY, St. Martin's Lane, Charing Cross, Bootmaker—H. GALLON, Brompton, Kent, Tailor—J. GODDARD, Kessingland, Suffolk, Grocer—J. GRAY, Wednesford, Staffordshire, Farmer—J. HANDLEY, Bury, late Farmer—M. HADLEY, Birmingham, Journeyman Engine Fitter—THOMAS HOLT, Edward Street, Blackfriars Road, Iron Bedstead Manufacturer—J. HAY, late of Walton le Dale, Lancashire, Cattle Dealer—H. F. JADIS, late of Albion Villas, Sydenham, Director of the British Columbia Overland Transit Company—T. JENKINS, Aberystwith, Cardiganshire, Farmer—J. JUSTINS, Reading, Berkshire, Carpenter—F. I. JACOBS, East India Chambers, Leadenhall Street, Shipbroker—J. JOWETT, Bradford, Yorkshire, Worsted Spinner—J. JELLEY, Waltham Cross, Hertfordshire, Grocer—E KENT, Colt Lane, Bethnal Green, Timber Merchant—R. W. LINDOP, Sandbach, Cheshire, Auctioneer—H. W. LOCKWOOD, New Road, Whitechapel, Tailor—J. LEWIS, Skenfrith, Monmouthshire, Farm Bailiff—S. LEGGETT, Whitstable, Kent, Innkeeper—W. LEIGH, Warrington, Lancashire, Grocer—H. LEWRY, Mithurst, Sussex, Higgler—G. W. LOCK, Commercial Place, Commercial Road East, Stevedore—J. H. LAWRENCE, Birmingham, Commission Agent—M. MARSDEN, Royton, Lancashire, Yeast Dealer—T. MOUNSEY, Lavender Road, Battersea, Grocer—THOMAS MARLOW, Rugby, Warwickshire, China Dealer—FREDERICK JOSEPH MACKROW, Brighton, Draper—WILLIAM MASON, Norwich, Ironfounder—HENRY POTTS, Derby, Beerhouse Keeper—A. PARKER, Grenada Terrace, Commercial Road East, Cheesemonger—G. H. S. PERKINS, Plymouth, News Agent—H. H. PIERCE, Tonbridge, Grocer—H. R. ROATH, Glamorganshire, late Bailiff's Assistant—L. ROCHEFORT, Crown Street, Finsbury, Picture frame Maker—J. STRONG, Trydden, Flintshire, Mining Engineer—J. SOULSBY, Beddington, Northumberland, Tailor—T. SCRIVENER & T. LEES, Harwich, Essex, Painters—R. SAVORY, Hereford, Plumber—J. SMITH, Manchester, Woollen Cord Manufacturer—R. M. SPROAT, Cambridge, Dealer in Hides—J. TALLON, Kendal, Westmoreland, Blacksmith—E. TOOTH, Tonbridge, Kent, Boot and Shoe Maker—W. E. WOOD & J. Y. GREENWOOD, Tamworth, Warwickshire, Brickmaker—M. WALSH, Church, Lancashire, late Draper—H. W. WARD, jun., Seething Lane, City, Appraiser—G. YARLETT, Reading, Berkshire, Bootmaker.

TUESDAY: *Jan.* 12.—BANKRUPTS—J. ARCHER, Brandon Road, Belle Isle, King's Cross, Blood Drier—J. T. ABSDELL, late of Portsmouth, Insurance Agent—T. ATKINSON Owthorne, Yorkshire, late Farmer—J. BIRD, Barnsley, Yorkshire, Collier—W. BROWN, Great Suffolk Street, Southwark, Baker—J. BENTHAM, Bradford, Yorkshire, Commission Agent—O. BAILEY, late of Grove Street, Camden Town, Printseller—T. BARRETON, Manchester, late Oil Refiner—J. BERRISFORD, Stoke-upon-Trent, Staffordshire, Beerseller—R. R. BAKER, Grafton Crescent, Grafton Road, Kentish Town, Heraldic Engraver—J. E. BANNISTER, Commercial Road, City Road, Journeyman Printer—J. H. BLOCKEY, Manor Street, Commission Agent—S. COPPINGER, Epsom, Tailor—C. CROSS, St. Mary, Cornwall, Gentleman—R. CHATHAM, Liverpool, Carver—R. CLARK, Canterbury, Builder—WILLIAM ROE DUNSTAN, Northwich, Attorney-at-law—WILLIAM BOLT EASTABROOK, Devonport, Draper—W. EASTWOOD, Liverpool, Joiner and Builder—R. EASTON, Lancashire, Corn Merchant—J. H. FREER, Newick, Sussex, Grocer—I. FEARON, Braithwaite, Cumberland, Farmer—J. FAITHORN, Leeds, Journeyman Cooper—A. GUNDINING and G. DUNCAN, Leeds, Machinists—J. A. GRIFFITHS, Manchester, Commercial Traveller—J. GRAND, Norwich, Dressmaker—C. HOYES, Lincoln, Cabinet Maker—HEBDON and A. J. SULLIVAN, Dalston, Crinoline and Skirt Manufacturers—J. M. HUBBARD, Norwich, Beer Brewer—T. HARRIS, Oxford, Baker—C. B. HILLS, Barnett Street, Bethnal Green, late Cheesemonger—HEMBER, jun., Bristol, Innkeeper—P. HOWARTH, Macclesfield, Cheese Boot and Shoemaker—B. HUNT, Harley, Berkshire, Blacksmith—REUBEN JENKINSON, Rotherham, Yorkshire, Warehouseman—JOHNSON, Shaftesbury Street, New North Road, Hoxton, Plasterer—J. A. LEECH, Upper Street, Islington, Draper—W. T. MUGGERIDGE, Prince Wales' Road, Camden Town, Leather Dealer—J. M'EVOY, Manchester, Accountant—A. J. MITCHELL, Landport, Hampshire, Butcher—MALKINSON, Kettlethorpe, Lincolnshire, Baker—J. NICHOLS, Greenwich, Draper's Assistant—J. NOBBS, Yelverton, Norfolk, Butcher—J. POMERY, late of Freemantle, near Southampton, Surgeon—J. [illegible], Halifax, Yorkshire, late Innkeeper—J. QUINN, Liverpool, Egg Dealer—H. O. ROBERTS, Thurlstone, Yorkshire, Corn Miller—B. ROPER, Stockton-on-Tees, Builder—H. STANTON, Charterhouse Street, Charterhouse Square, Commercial Traveller—J. SMITH, Leeds, Grocer—T. P. SMITH, Fetter Street, Holborn, Licensed Victualler—R. STONE, Nettlebed, Oxfordshire, Chair Turner—J. SMOOTHY, Clare, Suffolk, Vestry Clerk—J. TAYLOR, North Street, Lisson Grove, Eating House Keeper—E. TEA and R. J. LEWIS, Milton-next-Gravesend, Tobacconist—W. WADDINGTON, Hulme, Lancashire, Professor of Music—J. WILDIN, Stoke-upon-Trent, Staffordshire, late Provision Dealer and Commercial Traveller—WARREN, Brinton, Hampshire—F. WRIGHT, Heigham, Norfolk—E. WILLIAMS, Trefreda, Cornwall, Farmer.

SCOTCH SEQUESTRATIONS.—W. RIGG & Co., Campsie, Lanarkshire, Power-Loom Cloth Manufacturers—H. CLARK & J. THOMAS, Montrose, Furniture Dealers—D. JAMIESON, Edinburgh, Auctioneer—J. [illegible], Glasgow, Warehouseman—G. ALLAN, Cumbernauld, Dumbartonshire, Baker—J. S. HAWICK, Roxburghshire, Seedsman—J. SCOTT & Co., Guildton, Perthshire, Masons—A. HODGE, Murrayfield, Edinburgh, Master—J. HARVEY, jun., Arbroath, Forfarshire, Clothier.

Metropolis and its Vicinity.

THE INSTALLATION OF THE DEAN OF WESTMINSTER.—The Installation of Canon Stanley as Dean of Westminster took place at Westminster Abbey on Saturday. The ceremony of installation was performed by Dr. John Thynne in the ordinary manner prescribed for such offices. A chapter was afterwards held, at which the dean presided. On Sunday afternoon the Dean preached to a crowded congregation from Romans xii.—"I beseech, you, therefore, brethren, by the mercies of God, that ye present your bodies a reasonable, holy and living sacrifice unto God." He said that the new year brought fresh notions of responsibilities to all, especially to him who now addressed them, and who had entered on a new position. It was his business to offer himself to do effectually the work to which he was called. Speaking of the Bible, he said there might be in it many things hard to be understood, but in spite of all human imperfections it was the guide of mankind. "Thy Word is tried to the uttermost," said the psalmist. It had been tried by investigation of friends and of enemies alike, yet it had stood its ground. Ancient creeds and modern professions must be tested on God's Word. There might be drawn a distinction between the essential and the non-essential, between the temporal and the eternal, between the letter and the spirit. Let them confute error, not by attacking *what* was false, but by stating what was true in all moderation and charity. Turning to his new sphere of duty, he spoke with enthusiasm of "the most august of England's temples," whose interests it was his duty to protect; he thought that a new life must be inspired into any one connected with the Abbey by the grandeur and beauty of the place. He spoke also of the great reminiscences associated with the "illustrious school" of which he was now the chief guardian; and then he spoke of the honoured deans whose successor he was, especially the wise, good, and gentle man who had been just removed from them, and who had opened the way for special services. He concluded with a grateful reference to the great efforts lately made for the remedy of the spiritual destitution of Westminster, in which one of the chapters was the guiding spirit—an allusion to Dr. Wordsworth which was at once appreciated by the congregation. Among the congregation were the Archbishop of Dublin, the Bishop of London, Lady Augusta Stanley, Canons Jennings and Nepean, and several other clergymen.

THE CITY REMEMBRANCERSHIP.—A special Court of Common Council was held on Thursday at Guildhall, for the Election of a Remembrancer for the City of London. The following were the candidates:—Mr. Woodthorpe Brandon, registrar of the Lord Mayor's civil court; Mr. H. E. Brown, solicitor, and parliamentary agent; Mr. Corrie, the Police Magistrate of Bow Street; Mr. James Crosby, solicitor; Mr. Geo. C. Oke, assistant clerk at the Mansion House justice room, and author of several legal works of repute; Mr. James Pearse Peachey, barrister; Mr. J. Samuel Wilde, of Serjeant's Inn; Mr. Henry Riley, M.A., barrister, editor and translator of 'Liber Albus;" Mr. Samuel Spofforth, solicitor, and parliamentary agent; Mr. Edward Walmisley, Solicitor, and Mr. John R. L. Walmisley, solicitor, and parliamentary agent. This list was first reduced by polls to 4, and then from 4 to 2, when the contest lay between Mr. Corrie and Mr. Brandon. At the close of the poll, which was kept open for an hour, the Lord Mayor stated that 100 votes had been recorded for Mr. Corrie and 57 for Mr. Brandon. He therefore declared the election to have fallen upon Mr. Corrie. We have already stated that the salary of the office is 1500*l.*, with 400*l.* for office expenses.

THE POLICE COURTS.—Mr. John Paget, of the Middle Temple and Northern Circuit, has been

appointed a metropolitan police magistrate, in the room of the late Mr. Combe. Mr. Woolrych will succeed Mr. Combe at Southwark, and Mr. Paget will take Mr. Woolrych's place at the Thames Police Court.

THE GREAT EASTERN.—This well-known vessel was offered for sale by auction at the Liverpool Exchange on Thursday, but only 50,000*l.* being offered, she was bought in. The reserve bid was 130,000*l.*

PIRACY ON THE HIGH SEAS.—Five men brought home from Montevideo in the Brazil Mail steamer Parana, were landed at Southampton a few days since, charged with having murdered the captain, the chief mate, and four of the crew of the ship Flowery Land, and afterwards scuttled the vessel. Five others of the crew also implicated in the crimes, with two witnesses, have since arrived at Liverpool from Montevideo in the steamer Uruguay, the British Consul being afraid to send such a desperate set of characters in one batch. The ten men were removed to London on their arrival, and on Saturday were taken before the magistrate at Bow Street. Only one witness was examined, and a difficulty arose as to making the prisoners understand the evidence. The case was ultimately remanded to Wednesday, when the evidence of the boatswain and others of the crew who were coerced into navigating the ship to South America, was taken. The prisoners were then again remanded.

THE WATERLOO ROAD MURDER.—The extraordinary efforts made by large numbers of people in Lambeth and Southwark, aided by the visiting justices of the county, to procure a commutation of the sentence having been unavailing, the convict Samuel Wright was executed on Tuesday morning in front of Horsemonger Lane Gaol. On Saturday and Monday notwithstanding Sir George Grey's refusal on the previous day, large meetings were held, at which it was resolved to make another appeal to the Government, and if that failed to petition the Queen for a respite on the ground of the birth of a Prince. On Monday a deputation had an interview with Sir George Grey, who expressed his decided conviction that the law must be carried out, and that there was no hope for any reversal of the sentence. The Queen was then appealed to through Sir C. Phipps, but without success, as her Majesty stated that she must be bound by the opinion of her constitutional advisers. Mr. Gurney, M.P., and Mr. Phillips, two of the visiting justices of the prison, next had an interview with Mr. Justice Blackburn, before whom the prisoner had pleaded "Guilty." They entreated the judge in the most earnest manner to interpose with the Home Secretary, but he stated that he could not see anything in the case that would justify his interference, and that the law must take its course so far as he was concerned. From that time it was felt that nothing more could be done to save the prisoner, although up to a late hour on Monday night it was still hoped that a reprieve might arrive. Meanwhile handbills, with mourning borders, had been circulated extensively in Southwark, entreating the people to manifest their indignation by abstaining from witnessing the execution, and from opening their shutters or window blinds while it was in progress. In accordance with this appeal, the blinds of the houses in the vicinity of the prison and the neighbourhood in which the convict had lived were drawn down, the shutters of the shops were partially kept up, and even the public houses were closed for an hour before the execution. In consequence however of the prevailing excitement, about 1000 of the metropolitan police, some of them mounted, were posted and held in reserve in the immediate neighbourhood of the place of execution, in apprehension of a disturbance, and a rumour was current on Monday night that two troops of Life Guards would be called out if necessary. As the event proved, there never was less occasion for these extraordinary precautions. The crowd was much less numerous than is accustomed to assemble at executions in London, and, upon the whole, behaved with greater decorum, except when the convict appeared upon the scaffold, when there were loud cries of "Shame!" "Judicial murder!" "Where's Townley?" and great yelling and hooting,¶ which lasted some moments. The convict appeared touched by the interest taken in him by the crowd, and repeatedly bowed in acknowledgment. The drop at length fell, amid a roar of indignation, and he soon ceased to live. After hanging the usual time the body was cut down, and buried towards evening within the precincts of the prison. On Sunday and Monday he addressed letters in affectionate terms to his mother, and expressing great solicitude about his two children. He had been from the first resigned to his fate, and died deeply penitent.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that 1798 deaths were registered in London in the week that ended on Saturday, Jan. 9. In the 10 corresponding weeks of the years 1854-63 the average number, corrected for increase of population, was 1519. The present return is therefore 279 above the average. During the week the births of 988 boys and 928 girls, in all 1916 children, were registered in London. In the 10 corresponding weeks of the years 1854-63, the average number was 1995.

Provincial.

DERBY.—On Monday morning George Victor Townley, the murderer of Miss Goodwin, was removed from Derby gaol to the Criminal ward of Bethlehem Hospital in London. He was conveyed in a cab to Spondon station, three miles from Derby, and the noon express train to King's Cross stopped at Spondon to take him up. He was accompanied by two warders. The following letter has been addressed by Sir George Grey to Mr. Evans, M.P., in reply to the memorial of the county magistrates given in our last Number:—

"Whitehall, Jan. 8.

"Sir,—I am directed by Secretary Sir George Grey to acknowledge the receipt of your letter of the 7th inst., transmitting a letter addressed to him by the magistrates of the county of Derby, whose signatures are attached to it. Sir George Grey has read that letter with the attention to which both the importance of the subject it refers to, and the persons from whom it proceeds, justly entitle it. In order to place the magistrates in full possession of the proceedings which have taken place with reference to the case of George Victor Townley, a copy of the correspondence between this office and the Lunacy Commissioners, together with two certificates of Townley's insanity received by the Secretary of State, and of the order for the removal of the prisoner to Bethlem Hospital under the provisions of the statute 3 and 4 Vict., cap. 54, sec. 1, will be transmitted to you as soon as it can be prepared. The magistrates will learn from this correspondence that it was in consequence of information conveyed to the Secretary of State by the learned judge before whom the prisoner was tried, that, in his opinion, a further inquiry as to the sanity of the prisoner was necessary, that the Lunacy Commissioners were requested by the Secretary of State to undertake the inquiry. Sir George Grey feels that it was impossible to refuse an inquiry so recommended by the judge, and he is not aware that, under the circumstances of the case, he could have intrusted the inquiry to more able or responsible persons, or to persons likely to conduct it with greater impartiality and freedom from any preconceived opinion or doubtful theories. The Commissioners' report is among the papers which will be sent you with the least possible delay, but the Secretary of State was not called upon to decide on that report alone whether the sentence of the law ought to be executed or not, because at the same time that he received it he received also a certificate, dated December 27, signed by three justices of the peace (one for the county and two for the borough of Derby) and two medical men, stating, in the terms required by law, that they had examined and inquired into the mental state of the prisoner, and certifying that he was insane. This was followed by a certificate to the same effect, dated the 29th of December, and signed by two justices of the peace for the county of Derby (one of them being the same who had signed the former certificate), and the same two medical men. Copies of these certificates are also among the papers which will be sent to you. Upon these certificates from four justices of the peace and two medical practitioners the prisoner, in accordance with the construction which has been uniformly placed on the section of the Act before mentioned, was ordered to be removed to Bethlem Hospital, the capital sentence being respited, but not commuted. The magistrates in their letter of the 5th inst. say, with reference to the inquiry made by two magistrates, aided by two medical men, that that inquiry did not, like all previous inquiries of the same kind, originate with the gaol authorities, but was promoted and conducted as a matter of professional business by Townley's legal adviser. Sir George Grey had no previous information that this was the case, nor could he be in any way responsible for any irregularity—if irregularity there was in the proceedings. No person other than a magistrate could be admitted to examine the prisoner or to inquire into his mental state without the sanction of the visiting justices or of the Secretary of State, and as the visiting justices must therefore have been aware of the proceeding, and as no communication on the subject was received from them at the time, or has been received from them up to the present time by the Secretary of State, he could only presume that what was done was done with their knowledge and sanction. So far, however, as it concerned the steps to be taken by the Secretary of State, in conformity with the law, on the receipt of such a certificate it was immaterial how the inquiry originated, provided the certificate was in accordance with the provisions of the statute. There is one other passage in the letter from the magistrates to which Sir George Grey thinks it right to refer. They say that the effect of the respite of Townley and of his removal to a lunatic asylum 'has been to cause much dissatisfaction, and to create a feeling, greatly to be lamented, that there is one law for the rich and another for the poor; that justice has been turned aside by the power of money; and if Townley and his friends had been poor he would have been executed.' The magistrates may possess information as to the expenditure of money by Townley's friends of which the Secretary of State has no knowledge: nor is he aware of the manner in which the magistrates believe such money to have been expended. But the most satisfactory proof which can be given that the course taken with regard to Townley is one which it required no expenditure of money to obtain, and which would have been equally taken had Townley and his friends been poor, is a reference to a similar case which occurred at the Spring Assizes held at Newcastle-on-Tyne, in 1862, when a man named Clark, himself a poor man, and with no friends who were not also poor, and in whose defence no counsel even was retained, was convicted of wilful murder and sentenced to death. In that case, as in the case of Townley, the learned judge before whom Clark was tried, in reporting the case to the Secretary of State, expressed his opinion that the verdict was right, but called the attention of the Secretary of State to the evidence as to the unsound state of mind of the prisoner at the time of the trial, as having, to use his own words, 'so intensely important a bearing upon the question whether he ought to be executed.' In consequence of this representation from the judge, an inquiry as to the insanity of the prisoner was directed by the Secretary of State, and the result in that case, as in the present, was his removal to a lunatic asylum. Sir George Grey trusts that this statement will tend to remove the impression which the magistrates say exists, and which they appear to have shared, that a similar course, under similar circumstances, would not be adopted in the case of a poor man as in the case of one whose friends had the power of expending money in his behalf. I am, Sir, your obedient servant, "H. WADDINGTON."

The documents alluded to in this letter, with several others, have since been published. It appears from them that it was Baron Martin, who tried the case, who first called Sir George Grey's attention to the necessity of further inquiry; and that while the Lunacy Commissioners, in consequence of the Judge's representations, were engaged in investigating the case, the local magistrates and surgeons drew up the certificate of insanity which left Sir George Grey no option but to transfer the convict to a lunatic asylum, in accordance with the provisions of the statute.

TAUNTON.—At the Somerset Quarter Sessions, on the 5th inst., Mr. F. H. Dickenson moved that the visiting magistrates for Taunton County Gaol and Shepton Mallet House of Correction be requested to consider whether, in their opinion, it would be desirable to adopt the provisions of the Prison Ministers' Bill. Mr. King seconded the motion, but on a division it was lost by 13 votes to 5.

Ireland.

THE DEANERY OF CORK.—The Rev. Dr. William C. Magee, D.D., rector of Enniskillen, has been appointed to the vacant deanery of Cork.

NATIONAL EDUCATION BOARD.—It is stated that Mr. P. Murphy, Master in Chancery, one of the 10 Roman Catholic Commissioners on National Education, has resigned.

Law.

COURT OF EXCHEQUER.—*The Case of the Alexandra.—Attorney-General v. Sillem.*—The Court of Exchequer on Monday delivered judgment on the conditional rule obtained last term by the Attorney-General for a new trial in this case. The Lord Chief Baron and Baron Bramwell gave their opinion that the rule should be discharged, or in other words, that the verdict found at the trial for the defendants should not be disturbed; whilst Barons Channell and Pigott were in favour of making the rule absolute, that is to say, in favour of a new trial. The Court being thus equally divided, Mr. Baron Pigott, as the junior member of the Court, according to the usual custom withdrew his judgment. The majority being thus in favour of discharging the rule, it was formally discharged. The finding of the jury on the original trial, that the fitting out of the Alexandra was not a violation of the Foreign Enlistment Act, and that the vessel was illegally detained, was therefore allowed to stand. The Attorney General gave notice of appeal.

Obituary.

THE EARL OF CLARE died on Sunday last after a protracted illness, at his residence in Kensington Palace Gardens. The Right Hon. Richard Hobart Fitzgibbon, Earl of Clare, Viscount Fitzgibbon of Limerick, and Baron Fitzgibbon of Lower Connello, county Limerick, in the peerage of Ireland; Baron Fitzgibbon, of Sidbury, county of Devon, in the peerage of Great Britain, was the second son of the first earl, Lord High Chancellor of Ireland, by the second daughter of Mr. Richard Chapel Whaley, of Whaley Abbey, Wicklow. He was born in 1793, and married in 1825 the eldest daughter of Mr. Charles Brydges Woodcock, whose former marriage with Mr. Maurice Crosbie Moore was dissolved in the early part of that year. By this marriage his lordship leaves three daughters—Lady Florence, married to Lord Wodehouse; Lady Louisa, married to the Hon. Gerald Normanby Dillon, and Lady Elinor, married to Mr. Francis Henry Cavendish. His only son, Viscount Fitzgibbon, a lieutenant in the 8th Hussars—born in 1829—was killed in the battle of Balaklava in 1854. The late earl succeeded to the title and estates on the death of his brother in 1851. He was formerly in the Grenadier Guards, served on the staff in the Peninsula, and was present at Oporto, Talavera, and the battle of Busaco, for which he received the war medal and clasp. Lord Clare, previously to his accession to the family honours, represented the county of Limerick in upwards of eight Parliaments. In 1818 he was appointed Colonel of the Royal Limerick Militia, and was Honorary Colonel of that regiment up to his death. He was also Lord Lieutenant of the county, and Lieutenant of the city of Limerick. In default of male issue the title becomes extinct.

THE BISHOP OF ELY (the Right Rev. Thomas Turton, D.D.), died at Ely House, Dover Street, on the 7th inst., in his 84th year. He had been in weak health for some time past, and was taken seriously unwell on Monday last, since which day he continued to sink. In early life he distinguished himself in controversial theology. In 1827 he was appointed one of the prebendaries of Lincoln Cathedral; from thence he rose by various gradations till, in 1845, he was nominated, under the Administration of Sir Robert Peel, to the see of Ely. In political opinions the Bishop was a Conservative, but he took little part in the business of the House of Lords.

BIRTHS.—On the 6th inst, at Louvain, Belgium, the Princess DE VISMES ET DE PONTHIEU, of a son—11th inst, at 35, Dover-Street, the Countess of LICHFIELD, of a son—12th inst, at 8, Carlton House Terrace, the Right Hon Lady OTHO FITZGERALD, of a daughter—11th inst, at 17, Wilton Street, the Lady KATHARINE EUSTACE ROBERTSON, of a daughter—11th inst, at 3, Merrion Square East, Dublin, the Lady KATHERINE HAMILTON RUSSELL, of a son and heir.

MARRIAGES.—On the 23d ult, at Christ Church Cathedral, Montreal, Canada East, the Right Hon. Lord ABINGER, Lieut.-Colonel of the Scots Fusilier Guards, to HELEN, second daughter of Commodore MAGRUDER, late of the United States navy, and niece of Major-General Magruder, commanding the Confederate forces in Texas.—6th inst, at Colesborne, Gloucestershire, Sir MICHAEL HICKS BEACH, Bart., of Williamstrip, in the county of Gloucester, to CAROLINE SUSAN, the eldest daughter of J. H. ELWES, Esq., of Colesborne Park—7th inst, at 31, George Street, Edinburgh, ALEXANDER STEWART, Esq., Bombay, second son of the late Colonel Stewart, of Strathgarry, to ELIZABETH DALYELL, eldest daughter of Lieut.-General Sir JOHN CHEAPE, K.C.B.—7th inst, at Hythe, Kent, Captain ARTHUR REID LEMPRIERE, Royal Engineers, to ELLEN MARION, eldest daughter of Major-General HAY—11th inst, at St. John's Church, Eton, Baron ERNST VON IMHOFF, Chamberlain to the reigning Duke of Saxe-Meiningen, to FANNY HELEN, second daughter of F. SCHÖNERSTEDT, Esq., of Eton College.

DEATHS.—On the 6th inst, at Pau, the Hon. FREDERICK LONGWORTH BROWNE, youngest son of the late lord Kilmaine—7th inst, at 24, Park Street, Grosvenor Square, ELIZABETH STEPHENSON PHILLPOTTS, eldest daughter of the Lord Bishop of Exeter—9th inst, at Waltham Green, Fulham, ELIZABETH LADY OSBORNE, widow of Sir Henry Osborne, Bart., of Beechwood, Tipperary, Ireland—6th inst, at 13, Abercromby Place, Edinburgh, Commander W. FRANCIS TOLLEMACHE, R.N., second son of the late Hon. Charles Tollemache—8th inst, at Tonnay-Charente, in France, Captain EDWARD LAKE, R.N., second son of the late Sir James W. Lake, Bart—7th inst, at Prince's Gate, Hyde Park, MARIA, wife of W. H. GORE LANGTON, Esq., M.P.—At Hampstead Heath, JOHN BUNDLE, Esq., for nine years M.P. for Tavistock, aged 72—9th November, at Shanghae, LOFTUS, L. C. CAPPER, son of the late James Capper, Esq., of Leyton, and nephew of Alderman Copeland, M.P.

Markets.

COVENT GARDEN, Jan. 16.

Pine Apples, considering the time of year, are tolerably plentiful. Hothouse Grapes are now beginning to get scarce. Of foreign Melons there is a good stock. The late

severe frost has almost cut off supplies of out-door vegetables, and prices are advancing. Good Pears have now become very scarce. Good English Apples are getting somewhat scarce. Some good samples of Ribston Pippin and American New Town Pippin may still be obtained. Kent Cobs are good, but in few hands. Oranges are plentiful; the best are realising from 4s. to 7s. per 100. For Potatos the market is still heavy. Cornish Broccoli is arriving in large cratefuls. French Lettuces, Endive, and Radishes begin to make their appearance. Cut flowers chiefly consist of Orchids, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Oranges, per 100, 4s to 7s
Grapes, per lb., 8s to 12s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Kent Cobs, 110s per 100 lbs.
Pears, per ½ sieve, 4s to 10s	Almonds, do., 18s
Melons, each, 2s to 4s	Walnuts, do., 14s to 20s
Lemons, per 100, 5s to 8s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d
Cauliflowers, each, 3d to 6d	Shallots, per lb., 10d
Asparagus, p. bundle, 6s to 8s	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s 6d to 3s	Garlic, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Lettuces, each, 1d to 4d
,, Shaws, do., 50s to 60s	Endive, p. score, 1s to 2s
Turnips, p. bunch, 4d to 6d	Horse Radish, p. bunch 1s to 4s
Carrots, do., 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
Spinach, p. sieve, 1s 6d to 2s	Parsley, p. 12 bunches, 3s to 4s
Cucumbers, each, 1s to 3s	Herbs, per bunch, 5d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Jan. 14.

Prime Meadow Hay	75s to 85s		Clover, old	80s to 115s
Superior do. ..	85	92	Do. second cut ..	80 105
Inferior do. ..	—	—	New Clover ..	— —
New do.	—	—	Straw	26 32
Rowen	—	—		

HARVEY & EASTON.

WHITECHAPEL, THURSDAY, Jan. 14.

Fine Meadow Hay..	84s to 88s		Prime 1st cut Clover	105s to 112s
Inferior do.	78	84	Inferior do. do. ..	100 105
Prime New Hay ..	—	—	New 1st cut do. ..	— —
Inferior	—	—	Prime 2d cut do...	100 105
Straw	27	30	Inferior do.	— —

COAL MARKET.—Jan. 13.

Byass's Bebside West Hartley, 18s. 9d.; Walker Primrose, 17s.; Walls End Heugh Hall, 22s. 6d.; Ships at market, 13.

NEWGATE.—Jan. 15.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 13s. ,,
Pork, 8s. 8d to 4s. 0d. per 8 lbs.

BRITISH WOOLS.—LONDON, Jan. 14.

We are still without material revival, but the business at present transacting is on rather higher terms than a week ago, the paucity of stock being such that any demand raises the price.

METROPOLITAN CATTLE MARKET.

MONDAY, Jan. 11.

The supply of Beasts is good for the season. The weather being changeable, buyers are cautious; prices on the average are lower, and a clearance cannot be effected. There are a few more Sheep, but the number is still small. Trade is very slow, and prices are lower. Choice Calves are scarce and dear. From Germany and Holland there are 360 Beasts, 680 Sheep, and 84 Calves; from Spain, 170 Beasts; from Scotland, 480; Ireland, 120; from Norfolk and Suffolk, 2100; and 500 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	5	0 to 5	2		Best Long-wools.	5	2	— 5	6
Best Short-horns	4	8	— 5	0	Do. Shorn			—	..
2d quality Beasts	3	0	— 4	2	Ewes & 2d quality	4	6	— 5	0
Best Downs and Half-breds ..	5	10	— 6	0	Do. Shorn			—	..
Do. Shorn		—		..	Lambs		..	—	..
					Calves	4	0	— 5	8
					Pigs	3	6	— 5	0

Beasts, 4320; Sheep & Lambs, 17,360; Calves, 89; Pigs, 440.

THURSDAY, Jan. 14.

We have a shorter supply of Beasts than on Thursday last, yet owing to the change of weather and larger supply to the dead markets, our trade is not so good. Monday's quotations are realised for choicest descriptions, but a clearance cannot be effected. The number of Sheep is very small, and the demand is equally so. There is a very slack attendance of purchasers; prices are not much altered from Monday last. Our foreign supply consists of 94 Beasts and 60 Sheep. Milch Cows, 85.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	5	0 to 5	2		Best Long-wools.	5	2	— 5	6
Best Short-horns	4	8	— 5	0	Do. Shorn			—	..
2d quality Beasts	2	8	— 4	0	Ewes & 2d quality	4	6	— 5	0
Best Downs and Half-breds ..	5	8	— 6	0	Do. Shorn			—	..
Do. Shorn		—		..	Lambs		..	—	..
					Calves	4	0	— 5	8
					Pigs	3	6	— 5	0

Beasts, 665; Sheep & Lambs, 2170; Calves, 46; Pigs, 95.

MARK LANE.—MONDAY, Jan. 11.

The supply of Wheat from Essex and Kent to this morning's market was small, and was taken slowly at the rates of this day se'nnight. Foreign was neglected, but on the business transacted late rates were fully realised. Prime malting Barley was sold at last week's prices; other descriptions were rather easier. Beans and Peas brought former quotations. The Oat trade was dull, and to effect sales it was necessary to submit to a decline of 6d. per qr.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk.. White	42	48	Red	40	48
— — fine selected runs..ditto	44	52	Red	40	48
— — Talavera	48	56			
— Norfolk	—		Red	—	
— Foreign	36	54			
BARLEY, grind. & dist., 25s to 27s..Chev.	34	38	Malting ..	29	33
— Foreign..grinding and distilling	22	26	Malting ..	28	32
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish .....Potato	19	22	Feed	—	
— Foreign .....Poland and Brew	17	22	Feed	15	20
RYE	30	32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....28s to 36s...Tick	30	33	Harrow ..	30	33
— Pigeon .... 34s to 40s..Winds.	—		Longpod	—	
— Foreign .....Small	36	42	Egyptian	30	32
PEAS, White, Essex and Kent..Boilers	36	38	Suffolk ..	36	38
— Maple .... 34s to 36s .... Grey	28	30	Foreign ..	32	40
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered..per sack	35	40			
— 2d do ..... ditto	28	34	Country..	28	34
— Foreign ..... per barrel	15	25	Per sack	32	42

FRIDAY, Jan. 15.

Since the 8th inst. we have had fine mild weather until the 12th, when it changed to rain, and has since been damp with fog. The Wheat trade has been unusually inactive, with a downward tendency in prices (Scotland excepted), more particularly for English Wheat. Holders of foreign here have refused to accept a reduction. The former rates have been generally supported for Barley, but business in other descriptions of Spring Corn has been limited, with prices for the most part rather against the sellers. Flour was also barely so good a sale. Since Friday last 42 vessels have been reported off the coast. The floating trade has been quiet this week, only in Barley a good business has been done at late rates. Wheat and Maize are rather cheaper, particularly for spring shipment. Several cargoes of Linseed have been sold at a slight reduction. Paris, Jan. 14.—The Flour trade is very quiet, and prices in general 1s. per sack lower. The six marks for delivery this month, however, have remained at about 32s. 6d. per 280 lbs; the present stock of Flour is estimated at 6500 cwt. There was a large show of Wheat samples yesterday, and a moderate business was done at an abatement of about 9d. per qr.; a further decline would have to be accepted to-day to effect sales. The arrivals of English grain in the Thames this week have been small, of foreign grain and Flour moderate. The attendance at to-day's market was very limited. English Wheat met a slow sale at Monday's prices, and foreign being neglected, that day's quotations were nominal. Business in all descriptions of Spring Corn was very inactive, and Monday's prices were with difficulty maintained.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	630 qrs.	690 qrs.	270 qrs.	740 sk.
Irish	—	—	4310	— ,,
				2510 ,,
Foreign ..	9450 ,,	3800	17,710 ,,	3250 brls

LIVERPOOL, January 12.—With the exception of an active demand for Wheat (chiefly speculative), we have not much business to report during the last three days, and no alteration in prices. With a scanty attendance of country buyers at this day's market, and the disappearance of speculators, Wheat has found only a very dull sale, and may be quoted fully 1d. per cental lower than on Friday last. Flour nominally unchanged in value, but difficult to move. Indian Corn is only saleable in retail quantities, and certainly 6d. per qr. cheaper. Oats and Oatmeal in limited request at about late rates. Beans, Peas, and Barley have each given way 6d. per qr. The market has ruled exceedingly dull throughout.

FRIDAY, Jan. 15.—Market thinly attended. Wheat dull at 2d. decline. Flour very quiet, 6 per barrel and sack easier. Indian Corn quiet; no business reported. Egyptian Beans, Oats, and Oatmeal very dull.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Dec. 5	40s 9d	33s 6d	19s 5d	29s 7d	35s 3d	33s 7d
— 12	41 1	32 10	19 3	29 11	34 11	34 2
— 19	41 2	32 6	19 0	29 4	34 9	33 7
— 26	40 5	32 0	19 0	33 6	34 4	33 8
Jan. 2	39 10	31 8	18 9	30 0	33 8	33 1
— 9	40 2	31 7	18 8	29 7	34 2	33 3
Agg. Aver.	40 7	32 4	19 0	30 4	34 6	33 7

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Dec. 5.	Dec. 12.	Dec. 19.	Dec. 26.	Jan. 2.	Jan. 9.
41s 2d	..	..		..	..	..
41 1	..		..	..	..	..
40 9		..	..	..	..	..
40 5	..	..	..		..	..
40 2	..	..	..	..	..	
39 10	..	..	..	..		..

POTATOS.—SOUTHWARK, Monday, Jan. 11.

During the past week the arrivals coastwise have been very small, partly owing to the sharp frost, but there were quite as many left from former arrivals as required. Towards the end of the week fresh samples made a little more money. Quotations:—Yorkshire Flukes, 80s. to 100s. per ton; do. Regents, 70s. to 80s.; do. Rocks, 55s. to 65s.; Dunbar Regents, 60s. to 70s.; Kent and Essex Regents, 60s. to 80s.: Perth, Forfar, and Fifeshire Regents, 50s. to 60s.; do. do. Rocks, 50s. to 55s.

AGRICULTURAL PUPIL.—A Practical Farmer occupying 300 acres in a South Midland County, has a VACANCY.—Address, A. B. C., Messrs. Howes & Co., 7, Thavie's Inn, Holborn Hill, London, E.C.

TO ESTATE AGENTS, AUCTIONEERS, &c.—The Advertiser wishes to hear of a locality with an Opening for employment as above, or of a Senior desirous of arranging for an Assistant and Successor; or of a Genuine Business to be relinquished now, for which a Premium out of the annual receipts would be paid.

Address reply to Mr. SCOTT, *Gardeners Chronicle* Office, W.C.

WANTED, by a Gentleman in the neighbourhood of London, a HEAD GARDENER, thoroughly and practically acquainted with his profession in all its branches, accustomed to Orchard House culture. A married Man without incumbrance, who could undertake the management of a few Acres of Arable and Pasture Land.—Apply by letter, with real name and full particulars, addressed, D. H., 42, Trinity Square, Tower Hill, E.C.

WANTED, a GARDENER for a Single-handed place in South Wales.—Not under 28 years of age; must be a good Flower and Kitchen Gardener, and active. No Stoves, but a Greenhouse.—Address M. A., Post Office, Llanelly, South Wales, stating character, experience, age, wages, and other particulars.

WANTED, for a London Seed Establishment, as HEAD SHOPMAN and TRAVELLER, a Man of good address and thoroughly qualified to undertake the entire Management of a Shop and Journey. He must be able to produce first-class commendation as to integrity and character generally. A liberal Salary will be given. Also an ASSISTANT SHOPMAN.—Address by letter only, stating age and qualifications, to R. S. H., Messrs. James Dowie & Co., 455, Strand, W.C.

WANTED, a CLERK who has some knowledge of the SEED TRADE, who can write a good hand, and whose character will bear the strictest investigation.—Apply by letter to W., care of Messrs. Jacob Wrench & Sons, Seed Merchants, London Bridge, E.C.

WANTED, a WAREHOUSEMAN for a Wholesale London Seed Trade.—Liberal wages given. Satisfactory references as to character and ability required.—Address, W., 2, Grove Lane, Camberwell, London, S.

WANTED, a COOK in a gentleman's family at Blackheath.—Parlourmaid, Housemaid, and Boy kept. Two years' personal character required.—Address A. B., Mr. Gillbee, 15, New Broad Street, City, E.C.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, Offices, the Superintendence of a Laundry, or any post of trust.—A respectable Widow, age 44, who can be highly recommended.—P. G., Post Office, Turnham Green, W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

To Noblemen, Landed Proprietors, and Others.

MANAGER (ENTIRE) of a Brick and Tile Manufactory.—Married; a practical Man, who has had great practice, and would study the interest of any gentleman requiring his services. The best of references.—X. Y. Z., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Age 38, married, no incumbrance; understands his profession in all its branches, Early and Late Forcing, Flower and Kitchen Garden; also Meadow Land.—J. P., Muskett's Nursery, High St., Clapham.

GARDENER (HEAD).—LAWMAN TEMPLE (married), Gardener to J. V. Machin, Esq., Gateford Hill, Worksop, Notts, is at liberty to engage. Three years' character from present employer, and 10 years previous if required.

GARDENER (HEAD), from London.—Age 30, married; has a thorough practical knowledge of Flower, Fruit, and Kitchen Gardening, Early and Late Forcing, Orchard-houses, &c. Industrious and strictly sober. Also an active BOY (a nephew) to be under him if required. Good character.—R. Q. P., Post Office, Swansea, South Wales.

GARDENER (HEAD).—Middle aged, married, one child; fully competent to undertake the charge of Kitchen and Flower Gardens, Pleasure Ground, and Forcing. Leaving his present situation owing to the death of the proprietor. Can have a good family character.—Messrs. SPARY & CAMPBELL, Brighton.

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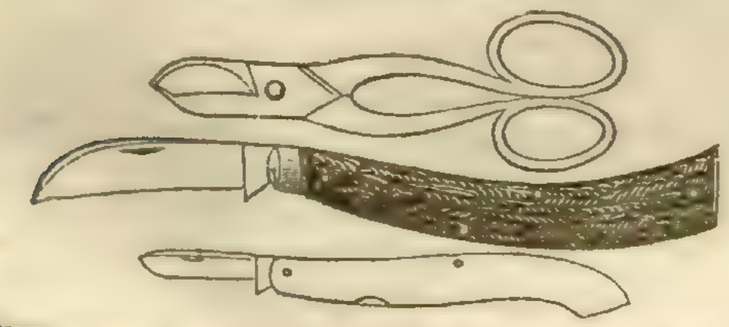

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12 Tea Spoons	0 16 0	1 0 0	1 2 0	1 5 0
6 Egg Spoons, gilt bowls..	0 10 0	0 12 0	0 12 0	0 13 6
2 Sauce Ladles	0 6 0	0 8 0	0 8 0	0 9 0
1 Gravy Spoon	0 6 6	0 9 0	0 10 0	0 11 0
2 Salt Spoons, gilt bowls..	0 3 4	0 4 0	0 4 0	0 4 6
1 Mustard Spoon, gilt bowl	0 1 8	0 2 0	0 2 0	0 2 3
1 Pair of Sugar Tongs ..	0 2 6	0 3 6	0 3 6	0 4 0
1 Pair of Fish Carvers ..	1 4 0	1 10 0	1 10 0	1 10 0
1 Butter Knife	0 2 6	0 4 0	0 5 6	0 6 0
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III. FORSYTH'S LIFE OF CICERO.
IV. GUNS AND PLATES.
V. SPEKE'S TRAVELS ON THE NILE.
VI. EELS.
VII. ROME IN THE MIDDLE AGES.
VIII. THE DANISH DUCHIES.

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News of the Week.

THE Austrian and Prussian Ambassadors at Copenhagen presented an ultimatum to the Danish Government on Saturday, requiring the immediate abrogation of the Constitution in Schleswig, with an intimation that if this demand were not complied with by the 18th inst. the Ambassadors were instructed to quit Denmark, and their respective Governments would immediately take measures to enforce their wishes. It was reported on Tuesday that the Danish Government had peremptorily refused to comply with this demand, but it is now said that the reply did not amount to an absolute refusal, but simply required a longer period than 48 hours for the consideration of so important question. It is also said that the Danish Ministers have since informed the great Powers that they are not competent to suspend or withdraw the Constitution on their own responsibility, but are willing to convene the Rigsraad and to submit the question to the decision of the National Parliament. This concession on the part

of the Government will probably avert hostilities for the time, but its immediate effect has been to place the Government in direct opposition to the Rigsdag, which has unanimously declared its determination to maintain the independence of Denmark, and has assured the KING that any sacrifices will be willingly borne by the people to preserve the inseparable union between Schleswig and the kingdom. Meanwhile the Austrian and Prussian troops are rapidly hastening by railway to the Schleswig frontier, and the Danish troops still occupy positions of great strength for the purpose of opposing the passage of the Eider. The minor German Powers are already denouncing the movements of Austria and Prussia as acts of treason to the Confederation, and are quite aware that if the two Great Powers have determined to uphold the London Treaty of 1852 in spite of the Federal Diet, they will have no scruples in disregarding the wishes of the minor Powers by setting aside the claims of Prince FREDERICK to the sovereignty of the Duchies. In connection with this part of the subject it may be mentioned that the Cabinet of St. Petersburg has declared to several German Courts that in the event of the London Treaty being suspended, Russia will immediately renew her claims to the Gottorp portion of Holstein.

The Spanish Government were defeated in the Senate on Friday on the bill for constitutional reform, and on the following day they tendered their resignation to the QUEEN, which was accepted. A new Administration has since been formed under the presidency of Señor ARRAZOLA, but great doubts are expressed of its stability.

A despatch from Turin states that the *Diritto* has been seized by order of the Italian Government for having published an address from GARIBALDI, announcing the formation of a committee to promote Italian union.

Accounts from the United States inform us that the Confederates are again active in the Shenandoah Valley. They have already captured the Federal garrison at Jonesville, surrounded the Federal garrison at Petersburg, driven the Federals out of Burlington, and were threatening Cumberland, in Maryland. A large force was also said to be moving on Winchester. The payment of bounties to volunteers has been extended to the 1st of March by a resolution of both Houses. The state of Arkansas has sent a deputation to Washington with proposals for re-entering the Union. The Nova Scotian Government has placed the Chesapeake in the Admiralty Court, and the trial of three of the prisoners was proceeding at St. John's. A naval expedition has left New Orleans, it is thought for Mobile. The Secretary of the New York Customs has been sent to Fort Lafayette for complicity with persons sending goods to the South.

A despatch from Shanghae announces that Major GORDON captured Soochow on the 5th December. The Confederate steamer Alabama was at Singapore on the 22d ult.

Home News.

THE COURT.—The Queen and the Princesses continue at Osborne. On Friday morning the Queen went over the Government prison at Parkhurst. Sir George Grey, Secretary of State for the Home Department, was in attendance on the Queen, and Colonel Henderson, Surveyor-General of Prisons, met her Majesty at Parkhurst. On Saturday the Queen and Princess Louisa walked and drove in the grounds. Princess Helena rode on horseback. Dr. Jenner arrived from London. Sir George Grey left Osborne for London. On Sunday the Queen, accompanied by Princess Helena, Princess Louisa, and Prince Leopold, attended Divine Service at Whippingham Church. The Dean of Windsor preached the sermon. On Monday the Queen and Princess Louisa drove out. Princess Helena rode on horseback. On Tuesday the Queen, accompanied by Prince Leopold, walked in the grounds. Prince Leiningen arrived on a visit to her Majesty. On Wednesday the Queen walked and drove in the grounds. Princess Helena and Princess Louisa rode on horseback. Earl De Grey and Ripon arrived from London, and had an audience of her Majesty.

THE PRINCESS OF WALES.—A bulletin was issued on Monday stating that the convalescence of the Princess continues to make steady progress, and that the infant Prince is quite well. Her Royal Highness's recovery is so far advanced that it is considered unnecessary to issue any more bulletins. On Sunday, in all the churches throughout the Kingdom the special thanksgiving prayer, prepared by the Archbishop of Canterbury, was read, and in obedience to a pastoral issued by Cardinal Wiseman the Roman Catholic clergy in his diocese sang the *Te Deum* in all the chapels after High Mass, in thanksgiving for the birth of the Prince.

THE PRINCE OF WALES on Friday went out hunting, and returned to Frogmore to lunch. On Saturday morning his Royal Highness went to Richmond Park and had a day's shooting with the Duke of Cambridge and Earl Russell. On Sunday the Prince attended Divine service at St. George's Chapel. On Monday his Royal Highness had a day's hunting with the harriers. On Wednesday and Thursday the Prince went out shooting, accompanied by the Duke of Cambridge.

PARLIAMENTARY MOVEMENTS.—It is understood that the Address in the House of Commons, in reply to the Speech from the Throne, will be moved by Lord Richard Grosvenor, M.P. for Flintshire, and seconded by Mr. Goschen, M.P. for the city of London.

THE DEANERY OF LINCOLN.—The Rev. Dr. Jeune, Master of Pembroke College, Oxford, and Canon Residentiary of Gloucester Cathedral, has been nominated by Lord Palmerston to the Deanery of Lincoln, vacant by the death of the Very Rev. Dr. Garnier.

Foreign.

FRANCE.—In the sitting of the Corps Legislatif on Friday on the second paragraph of the Address, concerning industrial and commercial reform, speeches were delivered by MM. Peyrer-Quertier, Javal, and Quesné. In the sitting of Monday after speeches by MM. Pagezy, Ancel, Forcade, Ia Roquette, David, Deschamps, and the Duke de Morny, the amendment brought forward by the Opposition was rejected by 182 against 50 votes. The second paragraph was then adopted. On Tuesday the third paragraph relative to the finances was adopted. In the debate on the fourth paragraph MM. Darimon and Jules Simon made speeches explaining the amendment brought forward by the Opposition relative to freedom of public meeting and the modification of the law on coalitions of working men. The Duke de Morny opposed the amendment, which was supported by M. Emile Ollivier. M. Parieu also spoke against it, and enumerated the Government measures in favour of the working classes. The amendment was finally rejected by 195 against 54 votes. In the sitting of Wednesday, 16 members of the Left and the Marquis d'Andelarre brought forward an amendment, proposing that the General Councils should nominate their own presidents and secretaries, that the Mayors and Municipal Councillors should be elected by their fellow-citizens, and, finally, that the Municipal Committees existing in Paris and Lyons be suppressed. The Marquis d'Andelarre and M. Pelletan delivered speeches explaining the amendment. M. Oquin spoke against the first paragraphs of the amendments, which were almost unanimously rejected, 17 members only voting in their favour. That portion of the amendment relative to the nomination of Municipal Councils by election, and the necessity of electing a Mayor from the Municipal Council, was rejected by 182 against 62 votes. M. Jules Favre spoke upon the necessity of abolishing the law limiting the rate of interest, and asked for a modification in a liberal sense of the regulations affecting brokerage. M. Rouher replied on behalf of the Government. The fourth paragraph of the Address was then adopted. In the sitting of Thursday M. Picard attacked the law of public safety and the decree of the 8th of December, 1851, which, he said, violated individual liberty and the principle of separating administrative from judicial powers, and created arbitrary political offences from which it was impossible to exculpate oneself. M. Rouland justified the law in question, and showed that it was dictated not only by necessity and sound judgment, but also by justice and respect for every liberty. He concluded by declaring that the law would be maintained. As regarded the transitory regulations expiring in February, 1865, the Government hoped but could give no promise not to be obliged to ask for their prolongation. M. Jules Favre defended the cause of right and law, for which he said there could be no substitute, and the violation of which weakened and depreciated all power. The amendment was rejected by 203 against 35 votes. The discussion of the amendment concerning the liberty of the Press was then commenced by M. Jules Simon, who made a speech explaining and criticising the law of February, 1852, after which the House adjourned. The President announced that he had received the Budget for 1865. The committee on the Address proposed on Monday to suppress the following words of the Address,—"We should regret our good understanding with Russia becoming less friendly," and to substitute the words,—"We hope that the spirit of conciliation which animates the two Sovereigns will succeed in removing all that can create any obstacle to the satisfactory relations between the two Powers." In the Senate on Friday, Count Casabianca presented a report on the petition of M. Darimon, requesting the printing of the sentences delivered against various journals, and in the name of the committee proposed the rejection of the petition. It is asserted that the Archduke Maximilian will come to Paris in February with the title of Emperor, and will be received with the honours due to that rank. The ratifications of the Treaty of Commerce between France and Italy were exchanged on Tuesday, and Signor Pasolini left Paris on Thursday on his return to Turin. The Constitutionnel of Tuesday publishes an article signed by M. Limayrac regretting the haste with which Prussia and Austria demand concessions from Denmark, thus rendering more imminent the war which Europe desires to avoid," and stating that the new phase of the Anglo-Prussian policy differs so widely from that at first avowed that public opinion is naturally impatient to learn the cause of the sudden change which has taken place at Berlin and Vienna. Admiral Hamelin, one of the most distinguished officers in the French Navy, and the confidant of Admiral Deans Dundas in the Black Sea during the Crimean war, died last week in Paris. He was Minister of Marine from 1855 to 1860, when he was appointed Grand Chancellor of the Legion of Honour. He was buried on Thursday, by the Emperor's command, in the chapel of the Invalides. A letter from Brest of the 16th states that the Confederate corvette Florida has made her trial trips, which were perfectly successful, and that her Captain Maury [illegible] on the [illegible] part to announce his approaching departure and to take leave. The letter adds that Captain Bernard has informed the captain of the Federal ship Kearsarge, which is also waiting off the port, that he is ready, in leaving, to accept a combat with him anywhere out of the coast of the French waters. The people at Brest consequently expect a fight between the two frigates.

SPAIN.—The debate on the constitutional question closed on Friday in the Senate. The Government motion, that the Bill should be voted article by article, was thrown out by 93 against 53 votes. In consequence of this vote the Ministry tendered their resignation, which was accepted by the Queen. A new Ministry has since been constituted as follows:—President of the Council and Minister of State, Señor Lorenzo Arrazola; Minister of Justice, Señor Alvarez; Minister of Finance, Señor Urquijo; Minister of the Interior, Señor Benavides; Minister of War, General Lersundi; Minister of the Colonies, Señor Castro; Minister of Public Works, Señor Moyano. The Cabinet is not considered likely to remain long as at present formed. Extreme agitation prevails among the Deputies.

PORTUGAL.—The Channel Fleet has arrived at Lisbon. A modification of the Ministry has taken place. Viscount de Sa da Bandeira, Minister of War, and Councillor Braamcamp, Minister of the Interior, retire.

SWITZERLAND.—The Federal Council has ordered an inquiry to be made into the facts relative to the intended attempt of Trabuco on the life of the Emperor, as it is feared they may compromise Switzerland.

SWEDEN.—A Royal proclamation has been issued convening an extraordinary Session of the Norwegian Storthing for the 14th March. The threatened invasion of Schleswig has given a great impulse to the movement in favour of Denmark throughout Sweden and Norway. Addresses have been voted, committees formed for collecting subscriptions, volunteers enlisted, and military armaments continued with increased activity in both countries.

THE BALTIC.—It is believed that several German States bordering on the Baltic which did not give their adhesion to the Paris declaration of 1856 on maritime rights will send out privateer steamers. It is asserted that the authorities of Hamburg have already voted the necessary funds.

DENMARK.—On Thursday the 14th the King gave a banquet to the Rigsdag at Copenhagen. The President of the Lower House, in proposing a toast to the King, said:—

"The Danes have determined upon remaining a free and independent people. The army will willingly undertake the hardships of a campaign, because they know they would be fighting for the rights of their King and their fellow-countrymen. The people confide in the King, because convinced that he will respect the laws of the land. They now share the fate of the Royal family on the anniversary of the Princess Alexandra."

The King replied as follows:—

"It affords me extreme pleasure to welcome the Danish Rigsdag from this place, and in this hall, which has seldom witnessed the exchange of proofs of fidelity and devotion between the representatives of the people and the kings of the country. In different times the Danish Rigsdag has been a protection for the right of Denmark and of the Danish Crown. I count upon it, gentlemen, that now, when a storm seems again to threaten, you will afford it to me and to the Crown the same support as to my predecessors. For my part, I promise always to uphold the freedom, independence, and self-dependence of Denmark and the rights of the Crown, and I hope that [illegible] will be successful in protecting [illegible] the young warriors who are ready to fight will preserve it in the time to come. I drink to you as representatives of the people, long live the Danish Rigsdag!"

His Majesty's speech was received with great applause. The Ambassadors of Prussia and Austria on Saturday presented to the Minister for Foreign Affairs an ultimatum calling on the Danish Government to withdraw the November Constitution before the 18th inst. The Danish Government rejected the demand, and the Ambassadors would have left Copenhagen on Monday afternoon in a private steamer, but were detained by the stoppage of steam navigation. The draught of the Address was read on Monday in the Rigsdag. It says:—

"The House has seen with sincere satisfaction the determ-

nation on the part of the King to maintain the liberty and independence of Denmark in face of the demands of foreign Powers for the withdrawal of the November Constitution. The task your Majesty has inherited from your predecessor—viz., to secure for the Danish kingdom an independent position in the whole monarchy—will be fraught with difficulties, and may cost bloody sacrifices; but they will be willingly borne by the people to preserve the inseparable union between Schleswig and the kingdom. We desire that the German and Danish speaking portions of the population of Schleswig may enjoy the liberty which we possess. That liberty and the good understanding between the men elected by the people form the strongest link between Schleswig and the kingdom, and between the country and the King."

The first debate on this address in the Volksthing of the Rigsdag took place on Wednesday. The different parties declared that an unconditional adherence to the Constitution of the 18th of November is a pledge of the independence of Denmark. It was subsequently reported that the Danish Cabinet had communicated to the great Powers that the Government have no power to suspend the Constitution, but are willing to convene the Rigsraad orNational Parliament, and submit the question to its decision. In replying to an Address presented to him by a deputation from the town of Ralster, his Majesty said:—

"In the event of a war for the protection of the indepen dence of Denmark, if all forsake me, I hope for the support of the Danish people."

Among the bills submitted to the Rigsdag is one for the introduction into Denmark of trial by jury on the English system. The *Nation* states that an English squadron will receive orders to go to Heligoland.

THE DANISH DUCHIES.—The report that Prince Carl of Glücksburg, the eldest brother of King Christian, had left the country, after refusing to take the oath of allegiance to his brother, is contradicted on authority. One brigade of Danish infantry was transferred on Wednesday from Schleswig to Flensburg, to which place the military chests of two brigades have been sent. All battalions composed of Schleswigers and Holsteiners will be distributed among the Danish regiments in such a manner that every fifth man will be a German. The Prussian and Austrian troops are marching towards Schleswig, and Field-Marshal von Wrangel is expected to arrive, with his Staff, at the end of this week. It is said that the requisite arrangements have been made for the conveyance of the Austrian and Prussian troops from Altona to Rendsburg, so that 6000 men can be sent on to the north daily. The first Prussian troops were expected to arrive at Hamburg on Tuesday, and to remain there for the night. The Austrians quartered in Hamburg were under orders to leave for Schleswig. The Saxons and Hanoverians are to be withdrawn from their former positions in the duchy of Holstein, in order to allow a free passage for the Austrians and Prussians. The Saxon battalion accordingly left on Thursday for Hohenwestedt, in the north-west of the duchy, where it will be concentrated. The Austrian troops were expected to arrive yesterday. There is great consternation at Kiel, where these movements of the two great German Powers are denounced as treachery to the Confederation. The Federal Commissioners at Altona announce the appointment of Obergerichsrath Henrici, hitherto a member of the Government, to the post of President of the Government of Holstein, and of Count Bandissen as a member of the Government. A battalion of Hanoverian Rifles arrived at Altona on Tuesday from Harburg. The Danish troops are building a bridge near Schrabstedt over the river Treene, which is at that point 100 feet broad and 14 feet deep. This has most probably been done in order to facilitate a retreat from Frederickstadt. The Treene and the Eider have been covered with ice and passable for carts, but the late change of temperature has been favourable to the Danish system of defence by inundation, and the Danes are reported to be busily engaged in breaking up the ice upon the Schlei. Prince Frederick received a deputation of Holstein clergymen at Kiel on Saturday.

HANOVER.—Besides the refusal of Hanover to agree to the latest proposal of the two great German Powers, it said that it was only on the most urgent representations on the part of his Ministers that the King sanctioned the march of Prussian troops through the kingdom.

BAVARIA.—Accounts from Munich state that a note from Earl Russell has been delivered to the Bavarian Minister for Foreign Affairs, formally reproving the middle States of Germany for their partisanship of the Duke of Augustenburg, and couched in a similar tone to that delivered to Baron von Beust, the Saxon Minister, by Mr. Murray, the English Minister at Dresden. The King of Bavaria is stated to have heard of the note with much displeasure; and the absence of Lord Augustus Loftus from the last Court ball, ostensibly through a slight illness, is attributed to the coolness which has arisen between the Bavarian and British Governments.

WURTEMBURG.—The Chamber of Deputies on Tuesday unanimously adopted the following resolution:—

"Considering that according to their latest declaration relative to the Schleswig-Holstein question the great German Powers appear to decline to submit to the decisions passed by a majority of the Federal Diet, the States forming the majority must on their side be prepared to give effect to the claims of Germany on the Duchies, in accordance with the resolutions passed. Since, also, the expected decision of the succession question will be followed by war between Denmark and the German Confederation, and that to defend the rights of Germany and, under the circumstances, to carry out the resolutions of the Diet, demands all the powers of those States, and that, therefore, immediate steps of a military nature must be taken, the undersigned move that the Upper House do present the following urgent request to the Royal Government:—1. That the army of Würtemberg be at once placed on a war footing, and a certain number of troops be placed at the immediate disposition of the Confederation, to preserve the rights of the Duchies. 2. That the loyal German States should be urgently requested by the Confederation to adopt the same measures. 3. To request that the territories of those States, and more especially their railways, should not be made use of for the transport of troops which have not been called out by the Diet."

BADEN.—It is stated that Herr von Rogenbach, Minister for Foreign Affairs in Baden, has addressed a circular to the minor States of Germany, the Grand Duchies, Duchies, Principalities, Free Towns, &c. In this diplomatic document, the Minister, anticipating the realisation of the Emperor Napoleon's project of assembling a Congress or Conference upon general European affairs, adduces various reasons to show that, in case Germany should be present at this great meeting, she should not be represented by the Plenipotentiaries of Prussia, Austria, Hanover, Saxony, Wurtemberg, and Bavaria, and of the Frankfort Diet, but by one single Minister, who alone should be entitled to speak in the name of the whole of Germany, to defend her interests, advocate her policy, and stipulate in favour of her future.

PRUSSIA.—The following is an abstract of the King's reply to the Address of the Upper House:—

"The objects of the demand of the Government were—firstly, the fulfilment of Federal obligations, the means for which could not be refused; secondly, the preservation of the power and honour of Prussia against attack while such fulfilment was taking place. The declaration of the Upper House is agreeable to the King, at a time when resolutions pregnant with serious consequences are required. In view of threatening complications, it is impossible to define beforehand the course of policy; questions of right and international relations cannot be decided by wishes and sympathies, however natural. The Government must be prepared for all eventualities, in order to preserve the rights of Germany equally with the honour and power of Prussia. His Majesty thanks the Upper House for its assurance of aid, and hopes that the devotion of both Houses to the requirements of the country will be powerful enough to cause them to lay aside pending differences and unanimously grant the necessary means."

The reply is countersigned by all the Ministers. Prince Frederick Charles, accompanied by his staff, left Berlin on Wednesday; a Royal order had previously directed Prince Frederick Henry Albert to join the Staff of Field-Marshal Wrangel. That portion of the 3d Army Corps which has not been mobilized will be placed on a war footing. The reserves of the Guards and the 4th Army Corps are being called in. The Artillery of the Guards and one-half of the Artillery of the 4th Army Corps have received orders to hold themselves in readiness to march. The statement that the 6th Army Corps has been placed on a war footing is entirely unfounded. In the sitting of the Chamber of Deputies on Saturday a debate took place on the motion for the release of the Polish deputies arrested in Prussia. The Chamber voted the release of M. Sulerczycki. The result of the division on the proposal for the release of M. Riegolewsky was at first doubtful, but was decided in his favour by 135 to 133 on the members being called over by name. 168 members to 133 voted that M. Szumann should be released. The Chamber also decided in favour of the liberation of M. Lubanski. One of the organs of the Prussian Government, the *Kreutz Zeitung*, publishes a long article in favour of the protocol of London and against the Prince of Augustenburg. The following is an extract:—

"Prussia has a direct interest in the maintenance of the treaty concluded on the 30th December, 1852, between the King of Denmark and the house of Augustenburg, a treaty which was negotiated by Count de Bismark himself. The Duke of Augustenburg is still in possession of the millions which Denmark paid to him in virtue of those treaties for his property in Schleswig and for his renunciation. It is therefore a barefaced usurpation, and an insult to the Germanic Confederation and the Great Powers for the Prince of Augustenburg to have gone into Holstein as a private individual, and there to have caused homage to be paid him as a sovereign."

AUSTRIA.—Since the defeat of Austria and Prussia in the Federal Diet, Count Rechberg has forwarded a despatch to the Austrian Minister in Munich, pointing out that Austria and Prussia could not allow themselves to be outvoted at the Diet, and expressing a hope that the minor States will reunite with the two great Powers. The despatch ends by stating the conviction of the Government that the Schleswig question will be brought to a solution with honour and profit or with disgrace and loss, according as Germany keeps within or oversteps the limits of legality. The troops destined for Schleswig commenced their march on Tuesday. On the previous day they were reviewed by the Emperor, who addressed them as follows:—

"I have assembled you for a farewell greeting. Keep on good terms with your Prussian brethren-in-arms. I know that you will do your duty as if you were at home, and, should it come to blows, will show your courage."

The Finance Committee were engaged until a late hour on Monday night in discussing the demand of the Government for 10,000,000 of florins to cover the expenses of the expedition to Schleswig. Count Rechberg explained to the Committee that the Austrian and Prussian Governments wished to prevent the European war which was likely to follow the adoption of the Hessian motion, and to localise hostilities. Herr von Schmerling defended the steps taken by Count Rechberg, and said that he agreed with his policy. The Ministerial explanation appears to have been so far satisfactory that the conflict apprehended between the Government and the Lower House is not to be expected. A strong intermediate party having been fermed, the credit demanded by the Government is not likely to be refused. The documents laid by Count Rechberg before the Committee included the protocols of the Federal Diet, the instructions of the Diet to the Federal Commissioners in Holstein, and an authentic copy of the stipulations of the Treaties of 1851 and 1852. Count Rechberg further stated that the co-operation of Austria with Prussia was based upon formal State treaties, and in the Schleswig-Holstein question specially upon a military convention. The official *Wiener Zeitung* of Friday published an article on the rejection of the Austro-Prussian motion affecting Schleswig by the Federal Diet. It says:—

"The motion to occupy Schleswig virtually in favour of the Prince of Augustenburg is an overstepping of the territorial jurisdiction of the Germanic Confederation, which is constitutionally bound to preserve a mainly defensive character. The Germanic Confederation, that important element for the preservation of peace, would by this course enter upon the path of aggression and of disregard of territorial limits. In order to meet the consequences of such a proceeding, both the great German Powers, as faithful guardians of the integrity and highest interests of Germany, must now take it into their own hands to regulate the relations of Schleswig towards Denmark."

FRANKFORT.—At an extra sitting of the Federal Diet on Tuesday, the representatives of Austria and Prussia gave explanations of a tranquillising character, and stated that it was not the intention of those Powers either to interfere with the Federal troops or the Federal Commissioners. They merely wished to obtain the sanction of the Diet to march through the Duchy of Holstein. These communications were referred to the Committee on the Affairs of Schleswig-Holstein. The report of Herr von der Pfordten upon the succession question is not yet ready, but will be completed in five days. Of the 17,000,000 thalers voted by the Diet on the 14th ult. to meet the costs of Federal execution, 5,000,000 have been already expended. Another instalment of 4,000,000 thalers is upon the point of being paid.

RUSSIA.—It is asserted that the Cabinet of St. Petersburg has declared to several German Courts that, should the London Protocol be suspended, Russia would immediately renew her claims to the Gottorp portion of Holstein. The *Journal de St. Pétersbourg* has reprinted, without any comment, the text of the Protocol of Warsaw of the 5th of June, 1851, by which the Emperor of Russia renounced, on certain conditions, the rights which he possessed over Holstein in his character of chief of the older branch of the House of Holstein-Gottorp. It results from this protocol that the Emperor's relinquishment of his right was made subordinate to the maintenance of the combination which has placed Prince Christian of Glucksburg at the head of all the states forming the kingdom of Denmark. An imperial ukase has been issued for the organisation of the provincial and district representations of Russia, with the exception of the Western and Baltic provinces, Archangel, Astracan, and Bessarabia.

POLAND.—The Polish noble Titus Dalewski, found guilty by court-martial of having belonged to the revolutionary organisation in Lithuania, was executed at Wilna on the 11th inst. Four insurgents, including a German named Lüdke, were hanged at Wlorlawek on the 4th inst. A fresh convoy of 500 persons, sentenced to transportation to Siberia, left Warsaw on Wedesday. 48 citizens of Warsaw have been induced by the Commissioners of Police to call upon the Governor of the city and request him to intercede with the Emperor for His Majesty's acceptance of an address expressing the loyalty of the citizens of Warsaw. They were very kindly received. A large convoy of arms for the Galician insurgents was attacked on the 3d inst. by a superior Russian force near the small town of Puchazow in the Government of Lublin. The convoy was escorted by the divisions of the insurgent leaders Fwidzinski, Lisowski, and Wroblewski, and commanded by Eitmanowicz, who immediately engaged the Russians. The engagement was warm, and 60 Russians are reported to have fallen. The convoy was saved. Several other engagements have taken place in the government of Lublin between the insurgents, under Kruck and Krysinski, and the Russians near Krasnobrod and Wawlow. In the government of Radom Bosak has succeeded in escaping the Russians, by whom he was surrounded. At a recent sitting of the State Council, General Berg intimated his intention of closing the Warsaw University.

ITALY.—In the Chamber of Deputies on Monday the Keeper of the Seals presented a Bill for the suppression of religious corporations and the abolition of tithes. In the sitting of Tuesday Signor Crispi announced his intention of asking information of the Government relative to the conspirators lately arrested in Paris, and declared that none of them had taken part in the Marsala expedition. The *Diritto* publishes an address from Garibaldi, announcing the formation of a committee to promote Italian union, and inviting the Italians to rally round this centre and to recognise its authority. The *Diritto* has been seized, and the case will be brought before the Courts. A circular has since been addressed by the Minister of the Interior to the Prefects of the Italian provinces. After reminding them of the means adopted by the party of action in 1862 to mislead the people as to the intentions of the

Government, and to create agitation, which led to the affair of Aspromonte, the Minister says:—

"There is ground for apprehension that the same artifices are again being resorted to. The Ministry is, however, determined to unmask all these intrigues. Possessing the confidence of the King and the Parliament, the Ministry will permit nobody to encroach upon its authority, and is resolved to anticipate and frustrate all such attempts."

In conclusion, the Minister requests the Prefects to exercise a vigilant supervision. A despatch has been published from the Minister for Foreign Affairs to Chevalier Nigra, accepting the proposition for a restricted Congress. Several municipal councils have drawn up protests against the intended attempt upon the life of the Emperor Napoleon. The municipality of Macerata has unanimously voted an address in this sense. The Pope has received a deputation of 300 Catholics from different countries, presenting an address of fidelity and devotion to the Holy See, and protesting against usurpations and sacrileges. His Holiness replied that he desired to leave the patrimony of the Church intact to his successors. He would consequently not enter into any arrangement or treaty contrary to that end. He placed his confidence not in the strength of arms, but in a protecting Providence, and justice.

SICILY.—The Spanish ship with the Annamite Ambassadors on board, which was thought to have been wrecked, has put into Messina.

IONIAN ISLANDS.—The Vienna papers publish a telegram from Trieste of the 15th inst., stating that according to advices received from the Russian Embassy in Athens, the neutrality of the Ionian Islands was to be limited to foreign Powers, and that only one of the fortresses in Corfu would be razed. The protocol was to be signed in the course of the month.

TURKEY.—It is reported that Sir H. Bulwer has drawn up a project for the better regulation of Roumania and the relations of the Principality to the Porte. It is also said that Russia has protested against the collections being made for the Circassians in Turkey. The Porte has ordered that M. Ognau, the Captain-General of the Polish naval forces, shall be treated as a pirate if he seized ships in Turkish waters. Rumours were current of an approaching military demonstration by Turkish troops, being concentrated in camp at Schumla.

THE DANUBIAN PRINCIPALITIES.—Notwithstanding the protest of the Porte, made in conjunction with the Cabinets of London, St. Petersburg, Vienna, and Berlin, against the secularisation of the monastic property, the Chamber unanimously maintains its former vote on the subject. At the New Year's receptions a deputation from the Chamber presented an address to the Prince, stating that the Chamber esteemed itself happy to think that in working with devotion for the public good it contributed to the splendour and glory of his Highness's name. Addresses were also presented by the Clergy, the Court of Cassation, the municipality, the chiefs of the corporations, and M. Rosetti, editor of the Opposition journal, the *Romanul*. These addresses all expressed the same ideas, and congratulated the Prince on the secularisation of the convent property. The Prince and Princess were enthusiastically cheered. The Prince, in his reply to the addresses, proposed the adoption of the Gregorian Calendar and the suppression of religious communities, except those devoting themselves to the hospitals and to education.

CHINA.—A despatch from Shanghai of Dec. 8 states that Major Gordon captured Soochow on the 5th Dec. According to intelligence received at Point-de-Galle, the Alabama was at Singapore on the 22d December.

JAPAN.—The latest news says that Kanagawa was still guarded by men from the European fleet. The French were fortifying the heights near the town, awaiting the reinforcements from Hongkong. It was, however, believed that the difficulties between the foreign Governments and the Tycoon would be peaceably settled. Civil war was progressing between the Tycoon and the Daimios. The Tycoon had offered to indemnify the American Government for the attack upon the Pembroke, which offer had been accepted by the Federal Minister.

UNITED STATES.—The Confederates have commenced a northward movement in three columns in the Shenandoah Valley. Petersburg, Virginia, was surrendered on the 8th. Generals Fitzhugh Lee and Rosser are moving upon New Creek. The Federals were driven ont of Burlington on the 8th, and it was feared that Cumberland, in Maryland, would be attacked on the next day. The Confederates have captured a Federal train of 36 waggons. The Confederate General Imboden was attacked at Winchester on the 8th, and his advance checked. A Federal force of 300 men was captured at Joinsville, Virginia, on the 3d, while guarding a district upon which the Federal troops at Cumberland Gap chiefly relied for forage. In addition to the prisoners, the Federals lost 60 men killed and wounded. The Confederates on the 9th were moving on Winchester. The Federals were prepared for the attack, and the latest Washington telegrams report that the Confederates were retreating from the neighbourhood of Petersburg and Winchester. Great excitement prevailed among the inhabitants of London, Virginia, in consequence of extensive depredations being committed by lawless gangs, supposed to be deserters from both armies. Federal accounts from Charleston on the 13th ult. confirm the reported shelling of the city on Christmas Day having caused considerable damage. The Confederates erected a battery on the Stono River, firing upon the gun boat Marble Head, and seriously injuring her. Two gun boats went to her assistance, driving the Confederates from their batteries, which were afterwards captured by an expedition from the gun boats. The Federals have occupied Lavacca and Indianola in Texas. General Magruder has issued a proclamation that Western Texas would be defended. San Antonio and Austin were being fortified, and the Federals would be driven to their ships. A naval and military expedition has left New Orleans, it is supposed for Mobile. The Provincial Government of Nova Scotia placed the Chesapeake in the Admiralty Court on the 7th. The examination of three of the prisoners has been commenced at St. John's. The counsel for the prisoners contended that the case did not come within the province of the extradition treaty, as the offence was committed at sea out of the American jurisdiction. The case was still proceeding. Another of the prisoners is reported to have been arrested at Halifax. In accordance with a recommendation from Mr. Lincoln, the House of Representatives has adopted the joint resolution extending the time for the payment of bounties to Volunteers until March 1. In the Senate a resolution has been offered by Mr. Morrill, of Vermont, requesting the President to notify the British Government the desire of the United States to terminate the Reciprocity Treaty with Canada. In the House of Representatives Mr. Arnold, of Illinois, has urged Mr. Lincoln for the next Presidency, on the ground that his re-appointment would insure emancipation throughout the Union. The Governor of Maryland, in his Message to the Legislature, favours immediate steps for gradual emancipation, and says the natural resources of Maryland are such as cannot be developed by slave labour. A delegation of prominent citizens has left Arkansas for Washington to arrange for the state of Arkansas re-entering the Union. The New Hampshire Republican State Convention has nominated Mr. Lincoln for the next Presidency. The Governor of New York has removed the New York police commissioners on the ground that their reports of the New York riots were sectarian and partisan. The commissioners have refused to vacate their posts until the Governor's power to remove them is legally decided, and the charges against them have been investigated. The New York Legislature assembled on the 5th. The Governor's Message denounces the draft as a failure, and declares that President Lincoln's assumption of power in his capacity of Commander-in-Chief has wrought a revolution in the government, rendering the civil power under the state laws and judicial decisions subordinate to military authority. The country, he says, can only be saved from national ruin by the administration adhering to its pledge to restore constitutional union. Four negroes called at the Executive mansion on New Year's Day, and were presented to Mr. Lincoln. This is the first occurrence of the kind in American history. Further developments of extensive shipments from New York to the South have come to light, and several other merchants of New York have been arrested. Mr. Albert H. Palmer, the secretary of the collector of Customs at New York, has been sent to Fort Lafayette for complicity with these parties. The public funeral of the late Archbishop Hughes took place on the 7th inst. The courts and public offices were closed in respect of the occasion.

MEXICO.—Official advices from Vera Cruz announce that the French had entered and dismantled the port of Champoton, on Campeachy Bay. They also sank the Mexican schooner Raffaela, which had disturbed the trade of the ports submitted to the French authority.

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England rate of discount, which was lowered from 8 to 7 per cent. on the 24th ult., was again raised on Wednesday to 8 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90⅞ to ¾ for Money, and 90¾ to 91 for Account; Three per Cents. Reduced, 90⅞ to ¾; New Three per Cents., 90⅝ to ¾; New Two and a Half per Cents., 73½; Bank Stock, 237; India Five per Cent. Stock, 105 to 104¾; Ditto for Account, 105½; Four per Cent. Enfaced Rupee Paper, 104½; Exchequer Bills, 6*s.* to 14*s.* dis.—FOREIGN: Brazilian, 1852, '58, '60, 87¼; Ditto 1863, 86½ to 87; Dutch Two and a Half per Cents., 64½; Ditto Certificates, 101½; Egyptian, second issue, 100¾; Greek, for Acct., 22¼ to ⅜; Italian, for Acct., 67⅛ to ⅜; Mexican, for Acct., 35⅝ to ½; Portuguese, 1856, &c., 47¼; Russian, 1822, 91½; Ditto 1850, 86¾; Ditto 1862, 88⅜; Sardinian, for Acct., 84½ to 84; Spanish New Deferred, for Acct., 45¾; Ditto Passive, for Acct., 33½ to ⅜; Turkish, 1862, for Acct., 67 to 66¾; Ditto 100*l.* Bonds, 67¼; Venezuela, 1862, for Acct., 54½.

Gazette of the Week.

FRIDAY: *Jan.* 15.—BANKRUPTS.—J. M AARON, Judd Street, Euston Road, Furniture Dealer—B. BAKER, Birkenhead, Cheshire, Surgeon—S. W. BROWN, Brentwood, Essex, Stationer—E. I. THEODORE DE FROISSARD DE BROISSA Grove Cottage, Merton, Surrey, late employé in a Leather Manufactory—J. BRETT, Cruteheldfriars Tavern, Victualler—J. S. BRETT, Balham, Surrey, Baker—[illegible], Gloucester Street, Harrow Road, House Decorator—R. [illegible], Carbeyham, Cornwall, Blacksmith—J. BLYTH, Kingston upon Hull, Weaver—J. PURVIS, late of Exeter, Hair Dresser—C. CHALMAN, Arthur Grove, Gospel Oak Fields, Kentish Town, Sheriff's Officer—J. CARTER, Westbromwich, Staffordshire, Miner—J. CASTLER, Mistley, Essex, Bricklayer—J. COWELL, Cardiff, Glamorganshire, Ship Broker—G. V. DAVIS, Stoke Damerell, Devonshire Butcher—J. W. DAY, Nether Hoyland, Yorkshire, Coal Owner—H. T. DELLER, Exbury, Southampton, Foreman in a Brickyard—M. EWBANK, Appleby, Westmoreland, Shoemaker—W. J. EVERY, Woking, Surrey, Engineer—J. FULLILOVE, Croydon, Printer—M. FOUBISTER, Stoke-upon-Trent, Staffordshire, Potter—R. W. GROVES, Birmingham, Painter—W. R. GROVES, Argyle Terrace, Waterford Road, Fulham, Professor of Music—T. P. [illegible], Mornington Crescent, Hampstead Road, Civil Engineer—F. H. JONES, Leyeensholme, Lancashire, Clerk—J. KIRBY, Garrowby, Yorkshire, Farmer—S. H. KNIGHT, Debenham, Suffolk, Farmer—R. W. LEWIS, Mother, Carmarthenshire, late University Student—E. LAMBERT, Outwood, Burstow, Surrey, Licensed Victualler—R. LANE, Fulham, Norfolk, Cattle Dealer—J. LEE, jun., Burton Leonard, Yorkshire, Farmer—G. H. LAW, Bellevue Terrace, Seven Sisters Road, Holloway, late Accountant—L. LEVEN, Cannon Street, City, General Merchant—J. MORGAN, Watford, Herefordshire, Publican—J. MORRIS, Kendall, Westmoreland, Draper—J. G. MAPPLEBECK, East Lydford, Somersetshire, Auctioneer—G. MACLURE, Manchester, Merchant—E. R. MORGAN, Bridgnorth, Shropshire, Butcher—N. MARSHALL, Caledonian Road, King's Cross, Plumber—R. MORRIS, St John's Street, Clerkenwell, General Dealer—W. PRYTHERCH, Llandydfrydog, Anglesey, Farmer—W. H. PARRY, Kennington Grove, Henry Street, Upper Kennington Lane, Beer Retailer—T. PEARL, Botcheston, Leicestershire, Farmer—J. RANKIN, Bondgate, Durham, Innkeeper—J. SMITH, Whitwick, Leicestershire, Joiner—A. SHAW, Huddersfield, Yorkshire, Woollen Manufacturer—W. L. SHEPHERD, Lowestoft, Suffolk, Plumber—T. SMITH, Apsley Buildings, East Street, Walworth, Boot Manufacturer—V. SPRYMAN, Perranzabuloe, Cornwall, Accountant—H. W. TAYLOR, Derby, Stiker—J. THOMPSON, York Road, Wandsworth, Draper—J. M. TRAN, Bexley Road, Belvidere, Kent, Builder—J. T. TURNER, late of Portsmouth, Insurance Agent—R. VENABLES, Birkenhead, Joiner—T. Walker, late Thames Ditton, Surrey, Butcher—E. WALKER, late of Carlton Chambers, Regent Street, Commission Agent—W. WHITMETT and J. H. WHITMETT, Newport, Monmouthshire, Ship Builders—A. WILSON, Chester, Cattle Dealer—T. WALL and T. JOHNSON, Stratford upon Avon, Warwickshire, Druggists and Grocers—M. WOOD, Holcombe Brooke, Lancashire, Widow—R. WHITNEY, Much Birch, Herefordshire, Innkeeper—W. WARD, Scarborough, Yorkshire, Publican—W. WARREN, Coventry, Warwickshire, China and Earthenware Dealer—F. WARREN, Upper Mitcham, Surrey, late Jeweller—J. YATES, Newcastle-under-Lyme, Staffordshire, Gasfitter.

SCOTCH SEQUESTRATIONS.—J. MACQUEEN, Loch Carron, Kyleakin, Island of Skye.

TUESDAY, *Jan.* 19.—BANKRUPTS.—R. ADAMS, Dover, Boot maker—T. ARMSTRONG, Newcastle upon Tyne, Licensed Victualler—G. BEECROFT, Durham, Grocer—J. [illegible], Bradford, Keeper of Brabourne—F. M. BUTLER, late of Romford, Essex, J. [illegible], Bradford, Yorkshire, Corn Miller—A. T. BYFORD, Epping, Essex, Tailor and Clothier—J. D. CLARK, Keswick, Cumberland, Draper—J. CLIFT, Halesowen, Worcestershire, Coal Dealer—J. CRADWICK, Augustus Street, Regent's Park, Stone Agent—A. COLLIER, New Peckham, Surrey, Accountant—J. CROSSLEY, Mincing Lane, City, Merchant—S. CHAPMAN, Ipswich, Suffolk, Furniture Broker—H. CATES, Brompton, Kent, Tailor and Clothier—A. COLLINSON, Halifax, Yorkshire, Prudence R. CLARKE, Aston, Birmingham, Wire Manufacturer—T. CUTTAR, Liverpool, Licensed Victualler—LEWIS D'ACOSTA, Portland, Dorsetshire, Captain in her Majesty's Army, Unattached—RICHARD DIXON, Battersea Fields, Surrey, Timekeeper and Clerk in the Government Yard, Battersea Fields—J. DAVY, North Street, St John's Wood, Baker—R. DARLING, Stanwell, Middlesex, Licensed Victualler—J. DIXON, Leeds, Architect—T. DAVIS, Swannington, Norfolk, Carter—W. DICKSON, Bucklersbury, City, Surveyor and Land Agent—T. DEWSON, late of Norwich—W. D. ELLIOTT, jun., Brighton, Butcher—W. EMMONS, Chiseldon, Wiltshire, R. FIFIELD, Greenham, Berkshire, Hay Dealer—S. FARROW, Hertford Heath, Hertfordshire, late Lodging House Keeper—J. W. GEORGE, Norwich, Carpenter—J. GRIFFITHS, Oldbury, Worcestershire, Charter Master—J. GRANTHAM, Brecon, Brecknockshire, Vocalist—J. GUTTERIDGE, East Road, City Road, Journeyman Bootmaker—C. GRASSMITH, Birmingham—J. GEE, Hanley, Staffordshire, Hosier—J. HEATON, Blackburn, Lancashire, Reed Maker—T. HEATH, jun., Longton, Staffordshire, Sawyer—R. HARRIS, Knottingley, Yorkshire, Ship Carpenter—H. HYDE, Barrington St., New North Rd., late Greengrocer—R. C. HENRY, Harrington St., Hampstead Rd., late Merchant—J. H. HADFIELD, Horwich and Blackrod, Lancashire, Druggist—L. HOLDGATE, Regent Street, Dealer in Fancy Goods—J. HAY, Bradford, Yorkshire, Carrier's Clerk—L. JONES, Aberystwith, Cardiganshire, Grocer—N. B. JAY, Rickmansworth, Hertfordshire, Assistant to a Stationer—J. JONES, Liverpool, Draper's Assistant—J. JOHNSON, Anstey, Leicestershire, Beerhouse Keeper—D. LEECH, Northampton, Journeyman Cooper—M. LESTER, North Kelsey, Lincolnshire, Coal Dealer—J. LAMBERT, Bradford, Yorkshire, Cloth Manufacturer—H. M'CARTHEY, Bristol, Marine Store Dealer's Assistant—J. MATTINSON, Huddersfield, Yorkshire, Woollen Merchant—W. R. NICHOLAS, Gwinear, Cornwall, Farmer—J. J. NICHOLLS, Milford, Pembrokeshire, Clerk—T. PARRY, Llanelidan, Denbighshire, Farmer—T. PATEY, Alexander Terrace, Victoria Park, late Assistant to a Licensed Victualler—J. C. ROBINSON, Chesterfield, Derbyshire, Licensed Victualler—L. A. RUPER, Milton next-Gravesend, Milliner—H. SOWMAN, Sidney St., Commercial Rd. East, Leatherseller—F. SMITH, jun., Birmingham—H. C. SIBA, Maida Hill, Middlesex, Gentleman—W. SPENCER, Great Woolston, Buckinghamsh., Grocer—W. SNOOK, West Cowes, Isle of Wight, Plumber—J. SMITH, late of Washhurst, Sussex, Farmer—A. STREET, Brighton—J. TRANE, Limekiln Hill, Limehouse, Middlesex, Tobacconist—Z. H. THOMAS, Witton Park, Durham, Mason—J. TRANE, Liverpool, Cotton Waste Dealer—B. THOMAS, Witton Park, Durham, Joiner and Contractor—W. TINDALL, Brownlow Street, Drury Lane, Leather Dresser and Currier—F. UPTON, Charing Cross, Banker's Clerk—T. WARREN, Bristol, Fellmonger—W. WILLIAMS, Conway, Carnarvonshire, Attorney's Clerk—J. WHITWELL, Worcester, Grocer—J. WAREHAM, Corfe Mullen, Dorsetshire, Innkeeper—W. WILLIAMS, Birmingham, Wholesale Haberdasher.

SCOTCH SEQUESTRATIONS.—A. DUNBAR, Huntly, Bookseller—W. MILLER, Glasgow, late Coalmaster—J. N. ROBERTSON, Aberdeen, Innkeeper—D. REID, Paisley, late Bottler—J. STRATHERN, Glasgow, Coal Merchant.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,955,490	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	12,305,490
		Silver Bullion	—
	£26,955,490		£26,955,490

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,077,189
Rest	3,405,225	Other Securities	20,271,671
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,899,074	Notes	6,128,295
Other Deposits	13,879,877	Gold and Silver Coin	668,819
Seven days and other bills	618,398		
	£38,145,774		£38,145,774

Jan. 21, 1864. M. MARSHALL, Chief Cashier.

Metropolis and its Vicinity.

THE POLICE COURTS.—The office of police magistrate, vacant by the election of Mr. Corrie to the City Remembrancership, has been conferred by Sir George Grey on Mr. James Vaughan, of the Oxford Circuit, formerly chairman of the Gloucester and Berwick Election Commissions.

WESLEYAN MISSIONARY JUBILEE.—On Monday the Wesleyans of the London district commenced the celebration of the Jubilee of their Foreign Missionary Society. Large congregations assembled in the metropolitan chapels belonging to the connection, where special sermons were preached by some of the most popular ministers. The services have been continued throughout the week, and have consisted of sermons, lovefeasts addressed by returned missionaries, &c. The sums already given or promised to the jubilee fund before the commencement of the services had reached the sum of 105,000*l.*, and the General Committee are confident that 150,000*l.* will be realised when the whole of the jubilee services throughout the kingdom are concluded. Several objects connected with the missionary work will be aided out of the jubilee fund, such as the provision of an institution for the special training and preparation of candidates for the missionary ministry, the colleges of Richmond and Didsbury having become insufficient to accommodate them, as well as the many who are preparing for the

work of the ministry at home. It is also proposed to appropriate a portion of the fund to the training and employment of a considerable number of native agents in Africa, the difficulties of the African languages having hitherto formed a barrier to the free labour of English missionaries in that continent, and the climate of large portions thereof being very unfavourable to European health and life; to the commencement of institutions for training candidates in theological and biblical knowledge in Germany, France, and Italy; to the building of a chapel to the memory of the late Mr. Wesley's coadjutor, the Rev. John Fletcher, at his native town of Lausanne; to the sending of 50 additional missionaries to India and China, chiefly in the Mysore territory and the valley of the river Yang-tze, and to provide more fully for disabled missionaries and missionaries' widows and orphans.

THE PROPOSED OXFORD STREET RAILWAY.—At the monthly meeting of the Metropolitan Board of Works on Friday, it was unanimously agreed to oppose in Parliament the proposed Bill for the Oxford Street and City Railway.

BEQUEST TO SPANISH CREDITORS.—At the Mansion House on Saturday the Lord Mayor mentioned that he had received a letter from Mr. John Bigelow, United States Consul at Marseilles, stating that Mateo Lopez, a naturalised citizen of the United States, who died at Marseilles on the 11th ult., had left by will a sum of 3867*l.* to the Lord Mayor of London, to be distributed by him among such English families as had suffered in their fortunes by the bankruptcy of the Spanish Government.

THE PUBLIC HEALTH. — The Registrar-General's Weekly Return states that the effect of the late low temperature has now become perceptible to its full extent in the register of deaths, the number registered in the week ending Saturday, 16th January, having been 2427. The average number in the 10 corresponding weeks of the years 1854-63, corrected for increase of population, was 1550. The present return is therefore 877 above the average. The Registrar-General remarks that "these persons were killed almost suddenly by the cold wave of the atmosphere." During the week the births of 1026 boys and 993 girls, in all 2019 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1985.

Provincial.

DERBY. — The magistrates of this county have replied to Sir George Grey's letter vindicating his conduct in sending Townley to Bedlam. In their reply the magistrates express themselves dissatisfied with Sir G. Grey's arguments. They contend that the report of the lunacy commissioners whom he himself appointed to inquire into the case, shows that the commissioners were satisfied of the prisoner's sanity; but they object to the secrecy with which the inquiry was conducted, and complain that Sir George acted upon an irregular certificate of magistrates and medical men, without waiting for the report of his own commissioners. They show that the respite arrived at Derby before the second certificate of the 29th Dec. had been sent off, and that the respite was therefore granted on the first certificate of the 27th Dec., which was invalid, first, because it was made and dated on a Sunday; and secondly, because the borough justices who signed it had no authority to act in the county gaol. They adhere to their former opinion that in some way money had to do with the escape of Townley, and they deny that the case of Clarke, at Newcastle, had any analogy with it. For all these reasons they reiterate their demand for a public inquiry into the whole case; and hint that if the existing machinery be considered inadequate for the purpose, the ensuing session of Parliament may supply the defects. Sir George Grey's reply to this communication was published yesterday. With regard to the request for a public inquiry, Sir George replies that the law has provided no machinery for such a purpose. He admits that the report of the Lunacy Commissioners, if it had stood alone, would not have saved the convict from the gallows; and, as to the objections urged against the validity of the magistrates' certificate, he says that no whisper of the facts stated by the magistrates had reached the Home Office; but he has called on the magistrates who signed that certificate for an explanation of the part they took, and also upon the governor of the gaol for an explanation of his conduct in admitting to an interview with the prisoner borough magistrates who, it is now said, had no authority in the county gaol.

COWES.—The local papers state that the mourning drapery which had been left standing about her Majesty's seat in Whippingham Church, and the seats of the Royal household, during the last two years, has been removed, and the seats and fittings are now covered with rich purple velvet.

HITCHIN.—A murder, with highway robbery, has been committed in the neighbourhood of this town. On Monday week Mr. Edward Foreman, miller, left Charlton to collect a few debts; but not returning at the time expected, and his horse and cart having arrived home without him, apprehensions for his safety were excited. Search was quickly made, and about 11 o'clock the same evening he was found by the roadside about half a mile from Preston, alive, but insensible from loss of blood. He was immediately conveyed to the Hitchin Infirmary, where he died early the following morning. On an examination of the body it was found he had been beaten with a bludgeon, his skull fractured, and then dragged from his cart and robbed. At the inquest on Friday the jury returned a verdict of "Wilful Murder" against some person or persons unknown. Two men have since been apprehended on suspicion of being concerned in the murder.

LEIGH.—In the Court of Queen's Bench on Thursday the Court gave judgment on the well-known Sunday hay-making case. After hearing counsel on both sides the Court unanimously quashed the judgment pronounced by the county magistrates against the hay-makers.

LIVERPOOL.—On Friday evening a fire broke out on board the bark Lottie Sleigh, outward bound, with 940 barrels of powder on board. The fire was caused by the upsetting of a paraffin lamp; and the sailors, knowing the dangerous material that was on board, abandoned the ship in a panic. It was 6 o'clock when she was abandoned by the crew, and at half-past 7 the fire reached the magazine, which exploded with an awful shock, shaking the town beyond the outskirts, extinguishing the gas in the streets, and destroying an immense quantity of glass. Great damage was occasioned on the Cheshire side also. As yet the damage to the shipping in the river, as well as the loss of life, are unknown. In Birkenhead and the neighbourhood the damage has been still more extensive than in Liverpool, most of the houses and all the public buildings having all their windows broken. The covered way from the stage at Woodside Ferry, which was only glazed a short time back, has lost every pane of its glass. No loss of life or other accidents have been reported, although there were several narrow escapes from the bolts, which were thrown a considerable distance.

MANCHESTER.—At the weekly meeting of the Central Executive Committee on Monday, Mr. Commissioner Farnall reported that, on the 9th inst., there was an increase of 5133 in the number of persons receiving relief in the 27 unions of the district, as compared with the number relieved in the previous week. The Hon. Secretary reported that 1777*l.* 8*s.* 9*d.* had been received during the week, and that the balance in the bank was 210,949*l.* 16*s.*

PEMBROKE.—On the 7th inst. an alarming accident occurred to the Earl and Countess of Cawdor at Stackpole Court. His lordship was pushing Lady Cawdor in a chair on the ice on the lake in the park, when the ice suddenly broke at some distance from the shore. In a moment they were both immersed in the water, and, had it not been for the timely assistance rendered by their two youthful sons, both expert swimmers; his lordship's brother, the Hon. Henry Campbell; Sir Robert Brownrigg, who was staying on a visit; and Mr. Dixon, the butler, the earl and countess would inevitably have been drowned. After some minutes her ladyship, who was almost in a state of insensibility when taken out of the water, revived, and is now perfectly recovered.

SALISBURY.—The Bishop of Salisbury has just concluded a series of hospitable entertainments at the Palace. The first consisted of a substantial dinner to about 100 poor men and women selected by the parochial clergy and others from the several parishes in the city. This was followed by invitations to the district visitors and other ladies to spend the evening at the Palace, and on a subsequent day a party of between 200 and 300 of the gentry, clergy, and principal tradesmen of the city and neighbourhood, with their families, were similarly entertained. These hospitable gatherings were brought to a termination by the Bishop entertaining the Mayor and Town Council, together with the magistrates and other gentlemen, at dinner.

SHEERNESS.—A few weeks ago the Lords of the Admiralty ordered an investigation of the circumstances connected with the fitting out and departure from this port of the Confederate privateer Rappahannock, late her Majesty's screw gun vessel Victor, 6, 350-horse power, which until the period of her sale out of the service was attached to the Chatham steam reserve. The inquiry has now been completed. It appears that none of the officials connected with Chatham dockyard were in any degree connected with the illegal proceedings, or implicated with the movements of the vessel after she had ceased to be a Government ship. But certain officials at Sheerness dockyard were found to have committed a gross neglect of duty, and at the same time a violation of the neutrality laws. The Government have accordingly decided on prosecuting the principal offender, Mr. William Rumble, chief engineer and inspector of machinery afloat, on the charge of having violated the Foreign Enlistment Act by hiring, and attempting to hire, certain seamen for the Confederate steamship Rappahannock; and also by assisting and aiding in equipping that vessel. The accused was taken into custody last week, but was afterwards liberated on heavy bail. No proceedings have yet been ordered against the other officials, or the Government pilot who piloted the Rappahannock from the Nore.

TRURO.—A fatal accident happened at Creegbrawse, about half a mile from Chacewater, on the night of Friday week, to a poor girl named Mary Ann Bawden, who fell down a shaft, now unworked. She left the house of a friend on Friday night to go to her lodgings, half a mile distant, her friend accompanying her for about 40 yards along a path leading to the main road. She then recollected that she had left her shawl behind, and they went back. On again getting out, the girl told the woman that she need not trouble herself to come with her, as she could find her way alone. The woman then cut a candle in two and gave the girl half to light her on the way. She then set out, and was not seen alive afterwards. Instead of keeping in the path she appears to have strayed to the left, and walked into an unused mine shaft, which is on that side level with the surrounding ground. The candle probably dazzled her eyes. The night was very dark, and deceased had never been on that road before. The poor girl was not missed until Monday morning, when it was found that she had not reached her lodgings. Grapnels were obtained, and the shaft searched. Portions of deceased's hair and of the lining of her skirt were found adhering to the sides of the shaft, and about half way down the print of one of her hands was seen in the soft clay. On Tuesday the grapnels obtained a hold of the body, but slipped again, and only her bonnet came up. On Wednesday four miners went down, but up to midnight the body had not been brought up. The shaft is 480 feet deep, and contains 50 feet of water. Within a circuit of half a mile from the shaft where the poor girl was killed, 10 or 12 shafts lie open to the roads and paths with which the neighbourhood abounds.

Ireland.

AGRARIAN OUTRAGE IN KING'S COUNTY.—An attempt was recently made to assassinate Captain Byrne, of Sorrel Hill, a Roman Catholic gentleman, agent to Mr. C. T. Warde, of Clopton House, Stratford-on-Avon, who owns some property in the King's County. It seems that, in November last, Captain Byrne was obliged to evict some persons from the estate for non-payment of rent. Soon after these parties not only took forcible possession of the houses from which they had been ejected, but also took possession of the stock seized from them to pay part of the landlord's claim, and actually put it back again on the land. Captain Byrne consequently was obliged to summon them before the petty sessions at Moneygall, and it was on his way to that town that his life was attempted. As he was driving up the hill into the town, accompanied by his bailiff and his little son, three men suddenly ran up to the car and discharged a pistol. The shot missed Captain Byrne, but knocked the cap off his son's head. The men were unknown to Captain Byrne, but a clue has been obtained, which, it is believed will lead to their apprehension. Captain Byrne's life has been repeatedly threatened, and his brother was shot dead many years ago, very near Sorrel Hill, where he resides.

Scotland.

SCOTTISH EPISCOPAL DISABILITIES.—At a meeting of the Scottish Episcopal Church Society held at Edinburgh on the 13th inst., the Duke of Buccleuch, who presided, stated his intention to introduce a Bill into the House of Lords in the ensuing Session, to repeal the clauses of the Act of 1792, which prevent clergymen of the Scottish Episcopal Church being admitted to livings in England.

HOLYROOD PALACE.—Several valuable additions to the collection of Royal pictures at Holyrood are about to be made by command of her Majesty. In the large collection in Hampton Court there are a good many duplicate portraits of Royal personages connected with Scottish history, and on the attention of the Queen being drawn to the circumstance by Mr. Forbes of Medwyn, through Sir G. Grey and the Lord Advocate, with the suggestion that some of these might be spared from Hampton Court Palace for Holyrood, her Majesty at once acquiesced in the propriety of the transfer, and took much personal interest in the selection of the pictures. As the arrangements are not yet completed, the list of the paintings has not yet been published, but both their number and value are said to be considerable.

FREE LIBRARIES AND PUBLIC SCHOOLS AS GLASGOW.—At a recent meeting of the Glasgow Faculty of Procurators it was announced that Mr. George Baillie, late Sheriff-Substitute of the western district of Perthshire, had executed certain deeds, conveying the sum of 18,000*l.* to the Dean and Council of the Faculty, as trustees, for the erection of free libraries and public schools. The sum so conveyed is at present vested in good securities, and the income derivable from the estate is to be accumulated for 21 years. At the end of that period it is expected that the sum conveyed will, at compound interest, amount to fully 40,000*l.* With this sum Mr. Baillie contemplates the erection of one or more free public libraries, as the trustees shall then deem expedient, to be constructed on the principle of the public free library established by Mr. Brown, in Liverpool. Another object which Mr. Baillie has in view, if the funds should admit of its being carried out, is the establishment of public schools for the poorer classes, in which education will be given at such moderate fees as the trustees may think fit to exact. The usual powers are given to the trustees to acquire buildings, either by purchase or lease, and the rules and

regulations are to be prepared by the Council of the Faculty, subject to the revisal of the Faculty itself. The meeting resolved to authorise the Dean and Council to accept the trust conferred on them, and to express to Mr. Baillie their gratification at his munificent gift.

THE ALLEGED CONFEDERATE STEAMER PAMPERO.—The Collector of Customs at Glasgow received instructions from the Lord Advocate of Scotland a short time since to seize the screw steamer Pampero, under the Foreign Enlistment Act, and the gunboat Goldfinch was also sent down to the Clyde, for the purpose of preventing her going to sea. Meanwhile the Procurator-Fiscal of the Sheriff's Court has since seized the vessel, on the suspicion that she was intended for the service of the Confederate States, and the case has now been taken into the Court of Session as an Exchequer cause, and will shortly be debated before Lord Ormidale.

Railways.

OPENING OF THE CHARING-CROSS.—This line is now in full operation so far as the local traffic is concerned. Seventy trains now run daily each way from Charing Cross to Greenwich, from 7.10 A.M. until 25 minutes after midnight. The last up train leaves Greenwich five minutes before midnight, and arrives at Charing Cross at 12.20. Seventeen trains also run from Charing Cross over the Mid Kent to Bickley. On the 1st of next month through trains will be run from Charing Cross to Dartford, Gravesend, Chatham, and Maidstone, but the main line trains from Dover, &c., will not run to Charing Cross before March, the directors being anxious to get the line at all its points and stations into complete working order before the through traffic to the great southern lines is organised. The high price of the fares from London Bridge, the first-class of which are double those of the omnibuses, and six times those of the boats, will probably have some effect in restricting the traffic, except in cases where time is an object. As yet the Strand terminus is a temporary one, the station building requiring at least two months more for its completion, when the hoardings will be removed and disclose a square with a facsimile of old Charing Cross in the centre, backed by a noble pile of edifices worthy of the situation the company has been so fortunate as to secure. It is nearly four years since this line was commenced; and it is expected that another two years more will see it completed to Cannon Street, with subway under the Strand, leading into the cutting which will give access to the Great Northern, the Euston, and the Midland stations.

Law.

POLICE: *Garden Robbery.*—On Thursday, Jan. 14, *Thomas Dean*, a gentleman's gardener, out of place, was taken before Mr. D'Eyncourt, at Clerkenwell Police Court, charged with stealing camellias, daphnes, and other flowers, from Mr. Bird's Nursery, Green Lanes, Stoke Newington, and sentenced to two months' hard labour at the House of Correction.

Obituary.

THE DUKE OF CLEVELAND, K.G., died at Raby Castle on Monday afternoon, in his 76th year. He was the son of the first duke by his first wife, the daughter of the last Duke of Bolton, and was born in London in 1788. He was educated at Oxford, and in 1809 he married the eldest daughter of the fourth Earl Powlett. He represented the county of Durham in Parliament from 1812 to 1818, sitting as the Earl of Darlington. From that period till 1826 he sat for Tregony, in Cornwall; for Totnes up to 1830, for Saltash in the same year, and for South Salop from 1832 to 1842, when he succeeded to the title on the death of his father, who had been created duke in 1833. In politics his Grace was a Conservative, and of course was strongly opposed to the passing of the Reform Bill, which deprived of the franchise several of the boroughs he had represented. His Grace was a lieutenant-colonel in the army, and was for many years Colonel of the Durham Militia, but resigned three years since. In 1842 he was created a Knight of the Garter. As he has died without issue, the title is inherited by his brother, Lord William John Frederick Powlett, born in 1792, and M.P. for Ludlow from 1852 to 1857.

THE DUKE OF ATHOLE, K.T., died on Saturday afternoon, at Blair Castle, Perthshire, in his 50th year. From his protracted illness and the nature of his disease—cancer in the throat—his friends have for some months past been prepared for this event. The Right Hon. George Augustus Frederick John Murray, Duke of Athole, Marquis of Tullibardine and Athole, Earl of Tullibardine, Athole, Strathtay, and Strathardle, Viscount of Balquhidar, Viscount Glenalmond and Glenlyon, Baron Murray of Tullibardine, Balvenie, and Gask, in the peerage of Scotland; Earl Strange, Baron Strange and Murray, and Baron Glenlyon, county Perth, in the peerage of Great Britain, was the elder of the two sons of General Lord Glenlyon, second son of the fourth Duke of Athole, by Lady Emily Percy, fifth daughter of the second Duke of Northumberland. He was born in 1814, so that he was in his 50th year. He married in 1839, the only daughter of Mr. Henry Home Drummond, of Blair Drummond, Perthshire, by whom he leaves an only son, John James Hugh Henry, Marquis of Tullibardine. The late Duke was formerly in the 2d Dragoon Guards, from which he retired in 1840. On the death of his father in 1837, he took his seat in the House of Lords as Baron Glenlyon, and succeeded to the Dukedom on the death of his uncle the fifth Duke of Athole, in 1846. He was Hereditary Sheriff of Perthshire and a Deputy-Lieutenant of the county. In 1853 he was made a Knight of the Order of the Thistle. He had held for many years the office of Grand Master of the Freemasons in Scotland. As Lord Glenlyon he participated as one of the knights at the Eglinton Tournament in August, 1839, attended by a band of upwards of 100 Athole men fully equipped. When her Majesty first visited Scotland in September, 1842, the Duke, as Lord Glenlyon, and heir presumptive to the honours of the family, gave a splendid reception to the Queen and the Prince Consort at Dunkeld on the Royal progress from Scone Palace to Taymouth Castle. The present Duke, born in 1840, is a Lieutenant in the Scots Fusileer Guards, and only returned from serving with his battalion in Canada last autumn. He married in October last the eldest daughter of Sir Thomas and Lady Louisa Moncreiffe, of Moncreiffe, Perthshire.

LORD ARTHUR LENNOX, son of the fourth Duke of Richmond, died on the 15th inst, at his residence, 21, Ovington Square, Brompton, aged 57. The early part of his life was passed in the army, and in 1842 he received the rank of lieutenant-colonel, and afterwards held the same rank in the light infantry battalion of Sussex Militia, of which corps he became lieutenant-commandant in 1860. His lordship also held some posts under Government, having been a lord of the Treasury from May, 1844, to August, 1845, and a clerk of the Ordnance from August, 1845, to July, 1846. He also sat for Chichester from 1831 to 1846, and was returned for Yarmouth in 1847, but was unseated on petition.

SIR JAMES ROBERT GRANT, C.B., K.H., died on the 10th inst, at Basford Vicarage, near Nottingham, where he had been staying for some time. He was born at Forres, in the county of Moray, in 1778, and therefore had attained to the patriarchal age of 91. He served as a medical officer of the army throughout the whole of the war, and was chief of that department at Waterloo. He was one of the few who served in the first and last campaigns of the war—namely, that of 1793 and that of 1815. In 1814, when Earl Bathurst was at the head of the War Department, he was appointed Inspector-General of Army Hospitals. In 1811 he received the order of St. Anne of Russia from the Emperor Alexander, in person, for his services to the Russian army in France under Count Woronzow.

ADMIRAL RICHARD SAUMAREZ died on Saturday last at Clifton. He was a midshipman in the Spartan at the reduction of the Castles of Pesaro and Cesenatico. He also took part in the action with a Neapolitan flotilla in the Bay of Naples. As Lieutenant of the Bacchante he was engaged in the sieges of Trieste and Cattaro. He became a Rear-Admiral in 1853, and recently became Admiral on the retired list.

ADMIRAL LEMPRIERE died at Pelham, Hampshire, on the 16th inst, in his 77th year. He saw much service during the war, and obtained post rank in 1825. He accepted the retirement in 1846, became rear-admiral in 1854, and admiral in 1863.

ADMIRAL MONTGOMERIE died a few days since at Brigend, Skelmorlie. He entered the navy in 1802, and served at the reduction of St. Louis and Tobago. He then accompanied Lord Nelson to the West Indies, in pursuit of the combined fleets of France and Spain, and took part in the operations of 1807 in Egypt, was present at the capture of Alexandria, and saw much boat service on Lake Marcotis. In 1809, he assisted in boats during the operations which led to the reduction of Guadaloupe, and contributed to the destruction of the 40 gun frigates Loire and Seine. In 1811, he served nearly four years in the North Sea, Baltic, and South American stations, and in 1814 was promoted to the rank of commander. He obtained post rank in 1820, and accepted the retirement in 1846; became rear-admiral in 1852, vice-admiral in 1857, and admiral in 1863.

MR. J. P. PLUMPTRE, M.P. for East Kent, from the passing of the Reform Bill in 1832 till 1852, died at his residence, Fredville, near Dover, on the 7th inst., in his 73d year. He belonged to a distinguished Nottinghamshire family, which for several centuries represented that borough in Parliament. He was born in 1791, and on the death of his father in 1827 he succeeded to the family estates in Kent, and became a partner in the Canterbury Bank. His position gave him great influence, and about that time he commenced taking an active part in public affairs. He was at that time an independent Whig, and at the first election after the passing of the Reform Bill he contested East Kent, in conjunction with Sir Richard Cosway, against Sir Edward Knatchbull and Lord Courtenay, Mr. Plumptre and Sir Edward Knatchbull being returned. Three years later, at the general election of 1835, there was no contest; but in 1837, Mr. Plumptre's opinions having undergone a change, the Liberal party put forward Mr. Rider to oppose him. Mr. Plumptre, however, though deserted by his former supporters, polled 3032 votes, and was again returned with Sir Edward Knatchbull. In 1841 and again in 1847 he was re-elected without opposition; in the former year with Sir E. Knatchbull, and in the latter with the late Mr. Deedes. In 1852 he retired from Parliament on account of failing health, but continued until about a year and a half ago to discharge his duties as a magistrate and Deputy-lieutenant of the county. He was appointed by the late Duke of Wellington Deputy Lord Warden of the Cinque Ports, and for many years acted as a commissioner of Dover harbour. He was of an exceedingly benevolent disposition, and his contributions to religious and charitable institutions connected with East Kent were on a scale of princely liberality.

MR. GEORGE BURGES, late of Trinity College, Cambridge, the well-known Greek critic, died on the 11th inst., at the age of 78, at Ramsgate, where he had been residing for the last few years. He was born in Bengal, and was educated at the Charter House under Dr. Raine, previous to his going to Cambridge, where he greatly distinguished himself in classics, and, while still an undergraduate, edited the *Troades*. Mr. Burges was one of the principal writers in Valpy's *Classical Journal*, while Dr. Blomfield, previously to his being raised to the bench, was one of the conductors of the rival review, the *Cambridge Museum Criticum*. Mr. Burges published an edition of the *Eumenides* in 1821, followed by one of the *Supplices* in 1822, in which he sought out of the remaining fragments of each to supply a perfect Greek play. He was on terms of intimacy with most of the great classical scholars of England and the Continent, and his correspondence will probably be given to the world.

BIRTHS.—On Friday, the 15th inst, at Ickworth, the Countess JERMYN, of a daughter—14th inst, at 8, Queen Street, Mayfair, Lady LECHMERE, of a son—12th inst, at 28, Lowndes Square, the Hon. Mrs. G. A. BROWNE, of a son.

MARRIAGES.—21st inst, at Bray Church, near Maidenhead, Captain HENRY ROBERT BRAND, of the Coldstream Guards, son of the Hon. Henry B. W. Brand, M.P., and nephew of Lord Dacre, to Madlle. VICTORIA ALEXANDRINA LEOPOLDINE VAN DE WEYER, daughter of his Excellency the Belgian Minister—14th inst, in Westminster Abbey, the Hon. JOHN MAJOR HENNIKER-MAJOR, eldest son of Lord and Lady Henniker, to the Lady ALICE MARY CUFFE, only daughter of the Earl and Countess of Desart—14th inst, at St. George's, Hanover Square, WILLIAM HENRY, son of the late JAMES RICHARDSON, Esq., of Clifton, York, to LOUISA HENRIETTA, youngest daughter of Commander CHARLES COFFIN, R.N., and niece of the late Viscountess Kilcoursie—12th inst., at St. Bart Hyde, Winchester, the Rev. WILLIAM GEORGE SEARLE, late Fellow of Queen's College, Cambridge, vicar of Hockington, and only son of Frederick Searle, Esq., of Calshot House, Ryde, to HARRIET SUSAN, second daughter of JAMES TUFOBALD, Esq., of Hyde Abbey, Winchester—14th inst, at the parish church, Hove, THOMAS JAMES SMYTH, Esq., of Ballynegal, Westmeath, to ELIZABETH ANKETELL, fourth daughter of the late EDWARD ANKETELL JONES, Esq., of Adelaide Crescent, Brighton—19th inst, at the Roman Catholic Church of St Andrew, Westland Row, Dublin, JOHN CASSIDY, Esq., Barrister-at-law, of Monasterevan, Co. Kildare, to ELLEN, youngest daughter of the late Sir T. O'BRIEN, Bart., and sister of Sir P. O'Brien, Bart., M.P. & D.L., of Merrion Square East, Dublin.

DEATHS.—On the 15th inst. at her residence, 7, Southwick Crescent, Hyde Park, Lady CAROLINE BATHURST, widow of Lieutenant-General Sir JAMES BATHURST, K.C.B., aged 80—15th inst, at Wimbledon, GEOFFRY NIGHTINGALE, Esq., youngest son of the late Sir Edward Nightingale, of Kneesworth Hall, Cambridgeshire, aged 67—17th inst, in Hill Street, MARY ELIZABETH, widow of EDWARD GOODRICH, Esq., of Uffens House, Dorset, and only sister of the late Sir Richard Temple Glyn, Bart., aged 77—20th inst, at Rottingdean, CATHERINE, daughter of the late Sir JAMES HENRY TURNER, aged 18—27th ult. at Cairo, ELIZA ALISON, wife of Charles ALISON, C.B., her Majesty's Envoy Extraordinary and Minister Plenipotentiary at the Court of Persia, and formerly widow of the late Theodore Baltazzi, Esq., of Constantinople, Banker—8th inst, at 4, Lansdowne Terrace, Rosherville, Kent, MATILDA, relict of Major-General KELLY, K.C.—6th inst, Major-General ROBERT HENRY WYNYARD, C.B., Colonel of the 96th Regiment of Foot, of No. 6, Royal Circus, Bath—8th inst, at 29, Gloucester Terrace, Hyde Park, FRANCES MATILDA, daughter of Major General [illegible], C.B.—8th inst, at 15, Craven Hill Gardens, LOUISA ANNA, daughter of the late General PETER DE LA-MOTTE, C.B., aged 41—6th inst, at Brighton, LOUISA, widow of Vice-Admiral GEORGE FALLON, aged 76—6th inst, at Biarritz, France, Captain JOHN CLEMENT WICKHAM, R.N., formerly Government Resident at Brisbane—19th Nov. 1863, killed on outpost duty at the Umbeyla Pass, while serving with the force under General Cumberlam on the Panjaub frontier, ROBERT BARTELOT ALDRIDGE, captain in the 71st Highland Light Infantry, second son of Robert Aldridge, Esq., of St. Leonard's Forest, Sussex, aged 27—21st Oct., killed in a skirmish with the Maori, at the Mauku River, New Zealand, JOHN SPENCER PERCEVAL, lieutenant in the 1st Waikato Regiment of Victoria Volunteers, second son of the late Spencer Perceval, Esq., aged 20—16th inst, at Lulworth Castle, Dorsetshire, the Hon. Mrs. WELD, [illegible] of JOSEPH WELD, Esq., and daughter of the late Lord STOURTON, aged [illegible]—19th inst, at his residence, Goldera Hall, Hampstead, JOHN EVANS, Esq., many years Senior Commissioner of the Court of Bankruptcy, London, aged 82—28th Dec., at Madeira, GOWER WILLIAM RANDOLPH, Esq., Fellow of All Souls' College, Oxford, late an Examiner to the Privy Council Office, and Private Secretary to Earl Granville—17th inst, at Isleworth, JOHN FARNELL, Esq., aged 78—9th inst, at Priory Crescent, Lewes, JOSEPH WOODS, Esq., F.G.S., F.L.S., and F.A.S., aged 87—8th inst, at Christ's Hospital, GEORGE THOMAS, Esq., many years Clerk of that hospital, aged 61—4th inst, at 13, Upper Buckingham Street, Dublin, the Rev. JAMES D. LONG, M.A., incumbent of Drumcondra, diocese of Dublin, aged 76—6th inst, at Hanworth House, near Hounslow, the Rev. THOMAS JEPHSON, B.D., aged 79—9th inst, the Rev. RICHARD WATERFIELD, B.D., rector of Thurcaston-cum-Anstey, Leicestershire, and late fellow and tutor of Emmanuel College, Cambridge, aged 67—10th inst, at Bilton Hall, York, of paralysis, the Rev. THOMAS JESSOP, DD., lately vicar of Wighill, aged 77—14th inst, at Winchester, the Rev. ANDREW QUICKE, fellow of Winchester College, and rector of Biddleston, Wilts, aged 76—12th inst, the Rev. CHAS. M. LEIR, rector of Charlton Musgrove, Somerset, aged 51—13th inst, at 2, Church Row, Hampstead, the Rev. HENRY H. PIPER, formerly of Norton, near Sheffield, aged 82—14th inst, at St. Aidan's College, Birkenhead, MATILDA, the wife of the Rev. DR. BAYLEE, Principal of St. Aidan's College, and daughter of the late Major Collis, of Limerick—15th inst, at Ham Rectory, the Rev. DAVID MORGAN, aged 71.

Markets.

COVENT GARDEN, Jan. 23.

The return of mild weather has had a favourable effect upon the market, which is now well supplied with vegetables. Pine Apples, too, considering the time of year, are tolerably plentiful. Hothouse Grapes are now beginning to get scarce, as are also good Pears. Some good samples of Blenheim Orange and American New Town Pippin Apples may still be obtained. Kent Cobs are good, and Oranges are plentiful; the best are realising from 4s. to 7s. per 100. For Potatos the market is still heavy. Cornish Broccoli is arriving in large cratefuls. French Lettuces, Endive, and Radishes begin to make their appearance. Cut flowers chiefly consist of Orchids, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Oranges, per 100, 4s to 7s
Grapes, per lb., 8s to 12s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Kent Cobs, 110s per 100 lbs.
Pears, per ½ sieve, 4s to 10s	Almonds, do., 18s
Melons, each, 2s to 4s	Walnuts, do., 14s to 20s
Lemons, per 100, 5s to 8s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Cucumbers, each, 1s to 3s
Cauliflowers, each, 3d to 6d	Beet, per doz., 1s 6d
Asparagus, p. bundle, 6s to 8s	Shallots, per lb., 10d
Seakale, per punn., 2s 6d to 3s	Celery, per bundle, 1s 6d to 2s
Rhubarb, p. bundle, 9d to 1s 6d	Garlic, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Lettuces, each, 1d to 4d
" Shaws, do., 50s to 60s	Endive, p. score, 1s to 2s
Turnips, p. bunch, 4d to 6d	Horse Radish, p. bunch, 1s to 4s
Carrots, do., 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
Spinach, p. sieve, 1s 6d to 2s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Jan. 21.

Prime Meadow Hay	75s	to 85s	Clover, old	80s	to 115s
Superior do. ..	85	92	Do. second cut ..	80	105
Inferior do. ..	—	—	New Clover ..	—	—
New do.	—	—	Straw	26	32
Rowen	—	—			

HARVEY & EASTON.

CUMBERLAND MARKET, THURSDAY, Jan. 21.

Sup. Meadow Hay ..	88s	to 95s	Inferior Clover ..	84s	to 92s
Inferior do.	70	80	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover ..	103	110			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Jan. 21.

Fine Meadow Hay ..	80s	to 84s	Prime 1st cut Clover	100s	to 106s
Inferior do.	70	80	Inferior do. do. ..	95	100
Prime New Hay ..	—	—	New 1st cut do. ..	—	—
Inferior	—	—	Prime 2d cut do...	95	100
Straw	25	28	Inferior do.	—	—

BRITISH WOOLS.—LONDON, Jan. 21.

Our market is in a quiet state. Prices continue about the same, stocks being light for the season of the year. Political matters prevent any amount of business from being transacted, and consumers buy only from hand to mouth, and this may be expected as long as money continues at 8 per cent.

South-down Hoggets	1 11	to 2 0	Leicest. Wethers	1 9½	to 1 10½
Half-bred ditto ..	1 11	— 2 0½	Ditto Hoggs ..	1 10½	— 1 11½
Down Ewes ..	1 10	— 1 11½	Combing Skins ..	—	..
Kent Fleeces		— 2 0	Flannel Wool ..	1 4	— 1 9
			Blanket ditto ..	0 9	— 1 0

HOPS.—BOROUGH MARKET, FRIDAY, Jan. 22.

Messrs. Pattenden & Smith report a firm trade doing in all descriptions of last year's growth of Hops, stocks of which are exceedingly limited, and late quotations fully maintained.

COAL MARKET.—Jan. 20.

Cowpen Hartley, 19s.; Lambert's West Hartley, 18s. 9d.; Nettlesworth Primrose, 16s.; Walker Primrose, 17s. 6d.; Walls End Haswell, 23s.; Walls End Tunstall, 21s.; Walls End North Hartlepool, 18s.—Ships at market, 14.

NEWGATE.—Jan. 22.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 13s. "
Pork, 4s. 0d to 4s. 4d. per 8 lbs.

POTATOS.—SOUTHWARK, Monday, Jan. 18.

During the past week the arrivals coastwise have been small, and fresh samples have made more money. Quotations;—Yorkshire Flukes, 90s. to 100s. per ton; do. Regents, 75s. to 85s.; do. Rocks, 60s. to 65s.; Dunbar Regents, 70s. to 80s.; Kent and Essex Regents, 70s. to 80s.; Perth, Forfar, and Fifeshire Regents, 55s. to 65s.; do. do. Rocks, 55s. to 60s.

METROPOLITAN CATTLE MARKET.

MONDAY, Jan. 18.

The supply of Beasts is much shorter, yet trade is dull; our quotations are, however, freely given, and in a few instances, exceeded. The number of Sheep is very small, but quite sufficient for the demand; the dead markets being well supplied and trade heavy. Good Calves are very scarce and rather dearer. From Germany and Holland there are 270 Beasts, 560 Sheep, and 178 Calves; from Scotland, 450 Beasts; from Ireland, 190; from Norfolk and Suffolk, 1860; and 460 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	5	0	to 5	2	Best Long-wools.	5	4	— 5	6
Best Short-horns	4	8	— 5	0	Do. Shorn	—		..	
2d quality Beasts	3	0	— 4	2	Ewes & 2d quality	4	6	— 5	0
Best Downs and Half-breds ..	5	10	— 6	2	Do. Shorn	—		..	
Do. Shorn	—		..		Lambs	—		..	
					Calves	4	4	— 6	0
					Pigs	3	6	— 5	0

Beasts, 3460; Sheep, 14,870; Calves, 192; Pigs, 390.

THURSDAY, Jan. 21.

We have a larger supply of Beasts and a dull trade, consequently Monday's quotations cannot be supported, and several remain unsold. Although the number of Sheep is not very large, it exceeds the demand. Prices on the average are lower. Good Calves are in request at high prices. Our foreign supply consists of 70 Beasts, 270 Sheep, and 72 Calves. Milch Cows, 110.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools.	5	2	— 5	4
Best Short-horns	4	6	— 4	10	Do. Shorn	—		..	
2d quality Beasts	2	8	— 4	0	Ewes & 2d quality	4	4	— 4	10
Best Downs and Half-breds ..	5	8	— 6	0	Do. Shorn	—		..	
Do. Shorn	—		..		Lambs	—		..	
					Calves	4	4	— 6	0
					Pigs	3	6	— 4	8

Beasts, 930; Sheep, 2330; Calves, 111; Pigs, 120.

MARK LANE.—MONDAY, Jan. 18.

The show of English Wheat from the stands was very moderate, but there was a good deal offering by country dealers, and sales could only be effected by submitting to a reduction of 1s. to 2s. per qr. Foreign was neglected, and although in some instances rather less money would have been accepted to sell from ships, little business was transacted. Barley of all descriptions was a slow sale, and rather cheaper. Beans and Peas brought last week's quotations. Oats were d. per qr. lower. lour was steady.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk .. White	42—48	Red	40—48
— — fine selected runs .. ditto	44—52	Red	40—48
— — Talavera	48—56		
— Norfolk	—	Red	—
— Foreign	36—54		
BARLEY, grind. & dist., 25s to 27s .. Chev.	34—38	Malting ..	29—33
— Foreign .. grinding and distilling	22—26	Malting ..	28—32
OATS, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	17—22	Feed	15—20
RYE	30—32	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....28s to 36s...Tick	30—33	Harrow ..	30—33
— Pigeon .... 32s to 40s.. Winds.	—	Longpod	—
— Foreign .....Small	36—42	Egyptian	30—32
PEAS, White, Essex and Kent.. Boilers	36—38	Suffolk ..	36—38
— Maple .... 34s to 36s ..... Grey	28—30	Foreign ..	32—40
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered .. per sack	35—40		
— 2d do ..... ditto	28—34	Country ..	28—3_4
— Foreign ..... per barrel	15—25	Per sack	32—4_2

FRIDAY, Jan. 22

Since the 15th inst. the weather has been very mild, with about an even number of fine and damp or wet days. Although speculative purchases have again taken place in several of the principal ports of the kingdom, the general character of the Wheat trade during the past week has been very inanimate, prices undergoing a decline of about 1s. per qr. The value of all kinds of spring corn has tended downwards with a quiet trade. Since Friday last 67 vessels have been reported off the coast. With the exception of a rather better feeling on Tuesday the floating trade has been very inanimate. Prices for all sorts of grain have a declining tendency; Wheat and Maize are 1s. per qr. cheaper. Paris, Jan. 21.—The Flour trade during the week has been very slow, and prices declined about 1s. per sack, but were rather firmer at the close of to-day's market The six marks for delivery this month are quoted equal to 32s. 3d. per 280 lbs.; the present stock of Flour is estimated at 6280 cwt. Wheat is very difficult of sale, and 6d. per qr. cheaper. The arrivals of foreign Wheat, Barley, and Flour this week are large, of all other grain small. The attendance at to-day's market was very limited. English Wheat met a steady inquiry at Monday's prices, but Foreign was neglected, and our quotations are nominal. Barley, Oats, Beans, and Peas were each a very slow sale, with a downward tendency in value of the two former.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	310 qrs.	340 qrs.	370 qrs.	580 sk.
Irish	—	—	1570	— "
Foreign ..	28,080 ..	16,820	11,130 ..	1930 " 25040 brls

LIVERPOOL, January 19.—We have had quite a speculative market to-day, and a considerable quantity of Wheat has changed hands at an advance of about 2d. per cental on the rates of Friday last Flour is generally held for 6d. per barrel and sack more money, but does not move. Indian Corn has found renewed favour, and must be quoted fully 6d. per qr. dearer. Oats and Oatmeal dull, without alteration. Beans, Peas, and Barley do not find any improvement either in demand or value. It will thus be seen that Wheat and corn have been the favourite articles, and prices for both close very strong, the further development from the north of Europe today being still more serious than yesterday.

FRIDAY, Jan. 22.—Market moderately attended. Wheat, slow demand; to make sales 2d. decline accepted. Flour dull. Indian Corn freely offered at 30s. 6d.; no buyers over 30s. Egyptian Beans, Oats, and Oatmeal slow demand.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Dec. 12	41s 1d	32s 10d	19s 3d	29s 11d	34s 11d	34s 2d
— 19	41 2	32 6	19 0	29 4	34 9	33 7
— 26	40 5	32 0	19 0	33 6	34 4	33 8
Jan. 2	39 10	31 8	18 9	30 0	33 8	33 1
— 9	40 2	31 7	18 8	29 7	34 2	33 3
— 16	40 11	31 10	18 10	28 0	33 7	33 0
Agg. Aver.	40 7	32 1	18 11	30 1	34 3	33 6

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Dec. 12.	Dec. 19.	Dec. 26.	Jan. 2.	Jan. 9.	Jan. 16.
41s 2d	..		..	..	..	..
41 1	—	..	..	..	..	..
40 11	..	..	..	..	..	—
40 5	..	..	..	..	..	..
40 2	..	..	..	..		..
39 10	..	..	..	—	..	..

TO ESTATE AGENTS, AUCTIONEERS, &c.—The Advertiser wishes to hear of a locality with an Opening for employment as above, or of a Senior desirous of arranging for an Assistant and Successor; or of a Genuine Business to be relinquished now, for which a Premium out of the annual receipts would be paid.

Address reply to Mr. SCOTT, *Gardeners' Chronicle* Office, W.C.

WANTED, a WAREHOUSEMAN, one accustomed to the London trade preferred. Must be able to manage Stock carefully, and be correct in Execution of Orders. Character will be strictly inquired into.—Address W. T., *Gardeners' Chronicle* Office, W.C.

WANTED, a NURSERY CLERK and SALESMAN.—One who knows something of the Seed Trade and could take a Journey when required will be preferred. Liberal encouragement will be given to a qualified person.—Address, N. C., *Gardeners' Chronicle* Office, W.C.

WANTED, a Young Man, age 18 to 20, as CARTER, in a Market Nursery Business.—Apply to G. SMITH & Co., Merton Nursery, Merton, Surrey, S.

WANTED IMMEDIATELY, in a gentleman's family, to live in the country, on a farm, a good PLAIN COOK, who understands Baking, Dairy work, and Poultry. Age between 30 and 40. None need apply who are not thoroughly respectable and trustworthy, with a high character.—Address Mrs. P, Moriston Manor, Micheldever, Hants.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, Offices, the Superintendence of a Laundry, or any post of trust.—A respectable Widow, age 44, who can be highly recommended.—P. G., Post Office, Turnham Green, W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS (HEAD).—WM. WOOD & SON have at present on their books several deserving married men, both with and without families, whom they are desirous of recommending to any lady or gentleman requiring really good Gardeners, whose characters will bear strict investigation.—Address, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

GARDENER (HEAD).—Middle-aged, married, no incumbrance; thoroughly understands his profession, and Management of Land if required. Good character.—W. R., 4, Mildmay Terrace, Back Road, Kingsland, London, N.E.

GARDENER (HEAD), where two or three more are kept.—Age 26; understands Pines, Vines, Peaches, Cucumbers, and the general routine of Gardening. No single-handed place accepted. Good testimonials.—WM. DOWNING, 144, Lower Moss Lane, Hulme, Manchester.

GARDENER (HEAD).—No incumbrance; a first-class Grower of Choice Fruit and Flowers in every department; can superintend Land and Stock. Wife a good Dairy Woman on the Devonshire system. Seven years' character.—J. M. B., 6, Robertson Street, Lee, Kent.

GARDENER (HEAD).—Middle-aged, single, Scotch; has a practical knowledge of his Profession in all its branches. First-class testimonials and excellent character. from the gentleman he is just leaving.—R. T., Bradenham Hall, Thetford, Norfolk.

GARDENER (HEAD) to any nobleman or gentleman requiring the services of a first-class Man.—Age 37, married; is a good Grower of Pines, Grapes, Peaches, Stove and Greenhouse Plants, an excellent Flower and Kitchen Gardener. Unexceptionable character from present and late employers.—T. D., T. Emmens, Stationer, 8, Grosvenor Street, Pimlico, S.W.

GARDENER (HEAD), age 40, married.—WILLIAM BURTON is now leaving his present employer, with whom he has lived 14 years. He will be glad to enter into an engagement with any nobleman or gentleman who is desirous of securing the services of a thoroughly experienced Man. Unexceptionable character.—WM. BURTON, Gardens, Langley House, Abbots Langley, Watford, Herts.

GARDENER (HEAD).—JOHN GIFKINS, age 34, single; for eight and a-half years Gardener to the Hon. Charles Annesley, Eydon Hall, Banbury. By the death of this gentleman he is open to another engagement; he thoroughly understands his profession in all its branches, Early and Late Forcing, also the management of Stove and Greenhouse Plants, Pleasure Ground and Flower Garden, and the general Control and Superintendence of a gentleman's Garden He is well known to Mr. Arthur Henderson, of Pine Apple Place, Edgware Road, London, who will see or answer any questions from those gentlemen or ladies who are requiring a thoroughly practical and efficient man. Wages not less than 80*l.* per annum.

GARDENER (HEAD).—Married, no incumbrance; thoroughly understands his profession in all its branches. Good character from last situation.—A. G., 1, Park Cottages, Crown Lane, Twickenham, S.W.

GARDENER (HEAD).—Age 26; has a thorough knowledge of Early and Late Forcing, Stove, Greenhouse, Orchard House, and Flower and Kitchen Gardens. Three years' good character.—W. R., Post Office, Battersea Rise.

GARDENER (HEAD).—Age 32; well understands his profession. Lately left the employ of C. W. Buck, Covent Garden, of whom good testimonials can be had.—G. L., Post Office, Isleworth, Middlesex.

GARDENER (HEAD), age 32, married.—A Lady is anxious to procure a situation for her Gardener, who is leaving in consequence of giving up her country residence. He has had the Management of Meadow Land, Haymaking, Stock, &c., and is thoroughly practical and hard working.—Apply to Messrs. DOWNIE, LAIRD & LAING, Stanstead Park Nursery, Forest Hill, S.E.

GARDENER (HEAD), or FOREMAN to a Forcing Market Gardener.—Age 30, married, one child; has been in the employment of Mr. Davis, late of Oak Hill, East Barnet, 10 years; part of the time at Oak Hill, and the remainder at Mr. Davis's Forcing Garden, Mogden, Isleworth, Middlesex, where he is at present as Foreman.—J. F., as above.

GARDENER (HEAD or SINGLE).—Age 36, married; understands Forcing all kinds of Fruit, and can be highly recommended by present and former employer.—A. C. 6, Union Terrace, Upper Edmonton.

GARDENER, in a gentleman's Garden or in a Nursery.—A respectable Youth. Reference to Mr. Cripps, Nurseryman, Tunbridge Wells.—C. E., 2, Montgomery Place, Tunbridge Wells.

GARDENER (SECOND or SINGLE-HANDED).—Age 22; thoroughly understands Kitchen and Flower Gardening. Three years' excellent character.—A. B., Dubber's, Stationer, Weston Street, Norwood, S.

GARDENER (UNDER), in a large Establishment.—Age 20; has a fair knowledge of Gardening. Would pay a Premium. Good character.—W. B., Oxshott, Leatherhead.

GARDENER (UNDER).—In a gentleman's or nobleman's family. Well recommended.—R. N., Mr. John Simpson's, Saxilby, Lincoln.

GARDENER (UNDER), age 23.—W. FIELDER, The Gardens, Ealing Park, Middlesex, wishes to recommend a young Man in the above capacity who has served with him in the Houses seven years, and whose object in leaving is for further practice.

ESTATE MANAGER, FORESTER, and GARDENER if required.—Age 37, married, no incumbrance; he is at present engaged as above on a large Estate in Scotland, and is well known for information, name, &c.—ESTATE MANAGER, *Gardeners' Chronicle* Office, W.C.

To Nurserymen.

GENERAL PROPAGATOR of HARD and SOFT WOODED PLANTS.—Has had extensive practice in the leading London and country Nurseries, and can be well recommended.—W. H., 18, New Park Road, Brixton Hill, Surrey.

STEWARD and GARDENER, or GARDENER alone in a large Establishment.—No incumbrance; has had the management of a large Estate and Gardens, including Draining, Plantations, Repairs, &c. He is thoroughly acquainted with his profession in all its branches. A good character from the nobleman he has lately left. Testimonials to be seen, with undeniable references.—A. B., Hanover Nursery, Peckham, London, S.E.

Bailiff and Gardener.

BAILIFF, or BAILIFF and GARDENER.—Age 30, married; a native of Scotland, who has been used to Gardening and Farming during the whole of his life. His Wife can manage a Dairy.—E. R., Mr. Langley's, Estate Agent, Stamford.

BAILIFF and GARDENER.—Age 32, no incumbrance; 16 years' service. Unexceptionable character; reference on application.—J. BROWN, Mr. Burdekin, Station, York.

FARM BAILIFF.—Sober; pushing and energetic habits. Understands thoroughly the Management of both Pasture and Arable Land; the Breeding, Feeding, and Marketing of all kinds of Stock, and would be willing to make himself generally useful. The highest references given.—A. B., Post Office, Wareham, Dorset.

To Noblemen and Gentlemen.

GAMEKEEPER.—Age 35, married, one child; has had extensive practice in Rearing Pheasants, Foxes, and all other Game; also Training of Dogs. Testimonials of the highest class on application to his present employer.—GAMEKEEPER, care of Mr. Best, Bishopgate, Windsor.

BOOKKEEPER or CASHIER.—A Young Man with just four years' reference from a Nurseryman and Seedsman, Norwich.—A. B., Leo House, Stalham.

CLERK, SHOPMAN, or TRAVELLER in the SEED BUSINESS.—A highly respectable Young Man, who has had 16 years experience. Testimonials first-class.—Mr. GOLDING, 12, Robertson Street, Hastings.

CONSTIPATION, Nervousness, Debility, Cough, Asthma, Catarrh, Consumption, Diarrhœa, and all Bilious, Liver and Stomach Complaints are only aggravated and accelerated by drugs of every description, but perfectly curable by DU BARRY'S health-restoring

REVALENTA ARABICA FOOD,

As proved by thousands of cases which had been considered hopeless. We quote a few.—Cure No. 46,270. Mr. James Roberts, of Frimley, Surrey, of 30 years' diseased lungs, spitting of blood, liver derangement, and partial deafness.—Cure No. 47,121. Miss Elizabeth Jacobs, of extreme nervousness, indigestion, gatherings, low spirits, and nervous fancies.—Cure No. 54,816. The Rev. James T. Campbell, Fakenham, Norfolk, "of indigestion and torpidity of the liver, which had resisted all medical treatment."—In tins 1 lb., 2s. 9d.; 2 lb., 4s. 6d.; 5 lb., 11s.; 12 lb. 22s.; 24 lb., 40s.

BARRY DU BARRY & Co., No. 77, Regent Street, London, W.; also at FORTNUM & MASON, and at 61, Gracechurch Street, E.C.; 4, Cheapside, E.C.; 63 and 150, Oxford Street, W.; and all Grocers and Chemists in every town of the United Kingdom.

The Gardeners' Chronicle Newspaper.

SATURDAY, JANUARY 30, 1864.

PAXTON GARDEN ENGINE. — Is portable, easily worked, not liable to get out of order; will throw with Jet 40 feet, and with "Rose" will cover 40 feet across. Price 30*s.* and 40*s.* each.

CROGGON & Co., 2, Dowgate Hill, London, E.C.

PATENT ASPHALTE ROOFING FELT. Rail Carriage Paid. One Penny per Square Foot. Also Inodorous Felt, and Dry Hair Felt for covering Boilers and Steam Pipes.

CROGGON & Co., 2, Dowgate Hill, London, E.C.; and 2, Goree Piazzas, Liverpool.

200 CUCUMBER and MELON BOXES and LIGHTS, and from 400 to 500 LIGHTS for PITS of all SIZES kept in STOCK.

Glazed and Painted Complete, ready for immediate use, Packed and sent to all parts of the kingdom.

References to the Nobility, Gentry, and Trade in most of the counties in England.

JAMES WATTS & Co., Hothouse Builders and Hot-Water Apparatus Manufacturers, near the Green Man, 353, Old Kent Road, London, S.E.

THE PATENT IN-DOOR PLANT CASES

(TO WHICH A PRIZE WAS AWARDED AT THE ROYAL HORTICULTURAL SOCIETY'S EXHIBITION).

SOLE MANUFACTURER,

JAMES GRAY, HORTICULTURAL WORKS,

DANVERS STREET, CHELSEA, LONDON, S.W.

The PATENT IN-DOOR PLANT CASE is one of the most useful of the Gardening novelties of the day. It is a handsome ornament for the Drawing Room or Sitting Room, and at all times forms a fresh, pleasant, and interesting object to the mind and eye. It is always under command, and will preserve many of the most tender Exotic Plants through the severest winter with comparatively little of the trouble and annoyance attending the use of Lamps, Gas, and Heating appliances of any other kind.

To all who have a taste for the cultivation of In-door Plants, for raising Seedlings, striking Cuttings, &c. the Plant Cases will be found an inestimable boon.

The Cases are highly approved and recommended by Professor Lindley, and by Messrs. Veitch, of The Royal Exotic Nursery, King's Road, Chelsea.

Sizes and Prices on application.

SHANKS' NEW IMPROVED PATENT

LAWN MOWING, ROLLING, COLLECTING, and DELIVERING MACHINE for 1864.

Important Improvements, combining efficiency with simplicity of construction, have been introduced into Shanks' Lawn Mowers for the ensuing season

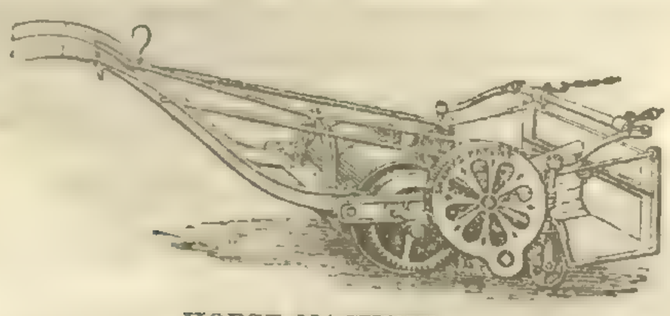

HORSE MACHINE.

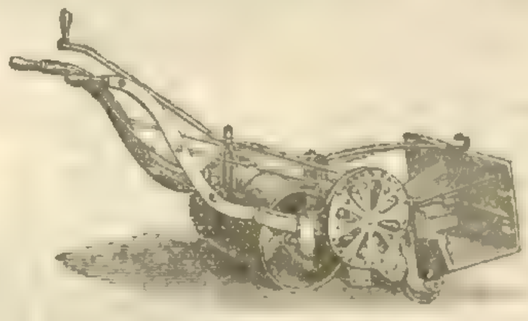

PONY MACHINE.

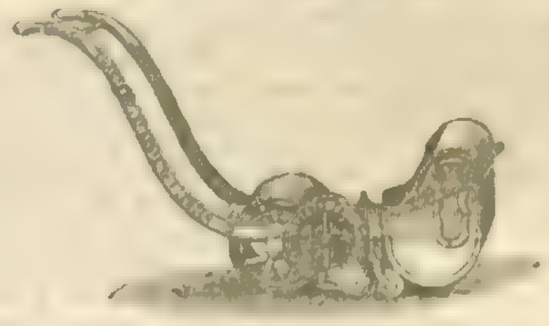

HAND MACHINE.

SHANKS' PATENT LAWN MOWERS are in daily use in the ROYAL GARDENS at KEW, WINDSOR, BUCKINGHAM PALACE, HAMPTON COURT, OSBORNE, and BALMORAL; in the GARDENS of the ROYAL HORTICULTURAL SOCIETY at KENSINGTON; in the GROUNDS of the CRYSTAL PALACE COMPANY at SYDENHAM; and in many hundreds of the principal Gardens in the Kingdom, as well as Abroad, where their merits have been fully proved and their success established.

The First Practical Gardeners of the day who have devoted their attention in examining all the different Lawn Mowers, do not hesitate in recommending SHANKS' MACHINE as the best Mower for general use, their great durability, simplicity of construction, ease in working, and ability to mow (wet or dry) on uneven as well as on level Lawns, give them an immense superiority over all others.

ILLUSTRATED PRICE LISTS FREE ON APPLICATION.

Shanks' Patent Lawn Mowers are free from all useless novelties; they require less power to work them than any other, and are all warranted to give satisfaction.

PATENTEES AND SOLE MANUFACTURERS:

ALEXANDER SHANKS AND SON, DENS IRON WORKS, ARBROATH.

LONDON OFFICE and SHOW ROOMS, 27, LEADENHALL STREET, E.C.

A Stock of Lawn Mowers always kept at the London Depot.

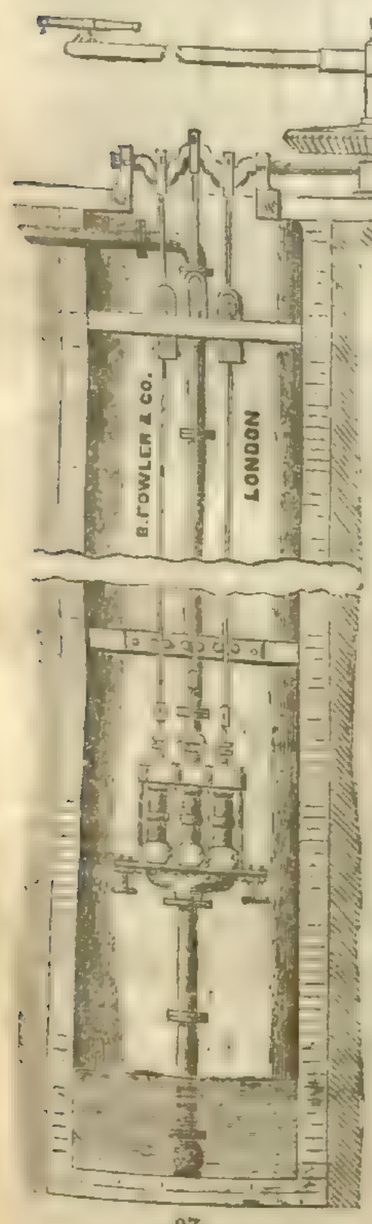

37.

CLINTON & OWENS,

(LATE BENJAMIN FOWLER & CO.),

MANUFACTURERS OF

PUMPS AND HYDRAULIC MACHINERY,

WHITEFRIARS STREET, FLEET STREET, LONDON, E.C.

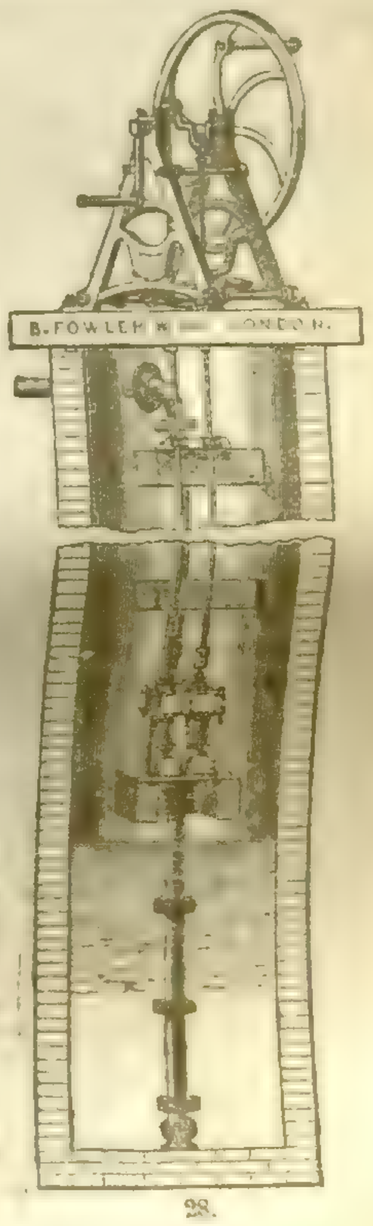

38.

THE Landscape Sketch shows an adaptation of THE IMPROVED HYDRAULIC RAM. This is a simple Self-acting Machine, suited for raising a Supply of Water for use in Public and Private Establishments. Its adoption is not confined to positions as shown, but it is suited for any situation where a Fall can be obtained from a Stream, Brook, or Spring.

Messrs. FOWLER have fixed a great many in various parts of the country for raising from 600 to 6000 or more Gallons per day to elevations varying from 30 to 300 feet, and forcing through main pipes 50 yards to several miles in length.

No. 37. IMPROVED TREBLE BARREL PUMPS with HORSE GEARING for raising water from DEEP WELLS for the supply of MANSIONS and PUBLIC BUILDINGS.

No. 28*a*. DOUBLE BARREL PUMPS for HAND-POWER for similar purposes.

Messrs. FOWLER & Co. Manufacture and Erect every description of Engineer's Work required in Public or Private Establishments, such as Pumps for any purpose on the largest or smallest scale, Steam Engines, Water Wheels, Turbines, Warming and Drying Apparatus, Baths, Gas Works and Fittings. Estimates furnished from Plans or on inspection of position.

Price Lists of Pumps, &c., free on application.

Card.

SAMUEL N. McGERROW,
GENERAL HORTICULTURAL BUILDER,
Knotty Ash, near Liverpool.
Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

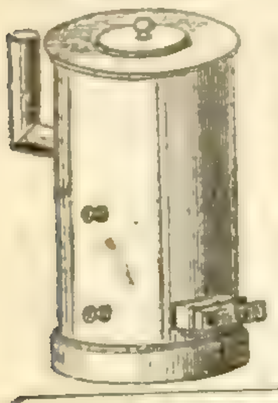

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3d. per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the
Patentee's Warehouse, 155, Cheapside, London, E.C.
Price complete from 3l. 10s.
Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

W. J. HOLLANDS, IRON MERCHANT, 31, Bankside, London, S.E.
HOT WATER PIPES, from Stock, per yard:—2-inch, 1s. 4d.; 3-inch, 2s.; and 4-inch, 2s. 7d. BENDS, from stock, 1s. 7d., 2s. 6d., and 3s. 3d. each. THROTTLE VALVES, 10s. 6d., 13s. 6d., and 15s. each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day.
A discount to the Trade.

SHAW'S TIFFANY.
For samples and prices apply to
J. SHAW & Co., 29, Oxford Street, Manchester.

The Original Seed Bag Manufactory.
ALEXANDER NICOL AND CO.,
MANUFACTURERS of
SEED BAGS, CORN SACKS, &c.
Chalmers Street Works,
Arbroath, N.B.

ANDERSON'S ARCHANGEL MATS are the best for the protection of plants from frost; also DUNNAGE MATS, at low prices. Every size of SEED BAGS and SACKS, manufactured from the best materials, and kept in stock. ROPES, LINES, TWINES, &c. Prices sent free on application.
JAMES T. ANDERSON, 15, Sherborne Lane, King William Street, London, E.C.

ROCKWORK FERNERIES, WATERFALLS, CAVES, BANKS of STREAMS and PONDS, executed in the only way it should be, *i.e.*, to imitate Natural ROCKS. Worked with pockets, for plenty of plants, by JAMES PULHAM, Broxbourne, Herts.
References to works executed in 10 counties, some by the recommendation of W. B. THOMAS, Esq., R. MARNOCK, Esq., and E. MILNER, Esq.

Paxton Works, Sheffield, Established 1738.

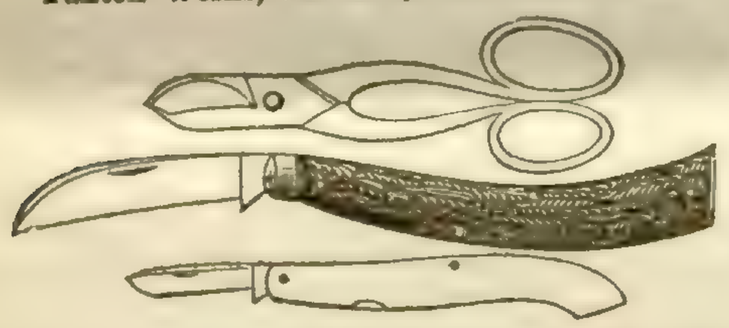

INTERNATIONAL EXHIBITION PRIZE MEDAL WAS AWARDED TO SAYNOR & COOKE FOR SUPERIORITY OF QUALITY IN PRUNING AND BUDDING KNIVES, &c.
SAYNOR AND COOKE'S celebrated English and French Exhibition PRIZE PRUNING KNIVES, &c., can be obtained of any respectable Nurseryman or Seed Merchant in the three kingdoms, all Knives warranted both by the Seller and Maker.
CAUTION.—None are genuine unless marked SAYNOR. Other marks would cause disappointment, as these Knives are tempered by an improved process known only to the Makers.

PATENT WORCESTERSHIRE RANGE.

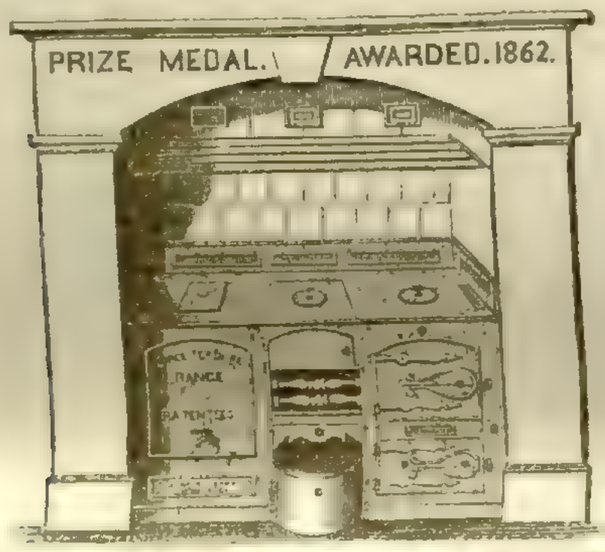

PRIZE MEDAL, 1862, AWARDED for EXCELLENCE.
The above RANGE is most complete, and strongly recommended for its unrivalled ECONOMY, CLEANLINESS, CONVENIENCE, DURABILITY, and is a certain CURE for SMOKY CHIMNEYS.
It is an entirely new invention, and consists of large MEAT ROASTER, PASTRY OVEN, and WROUGHT-IRON BOILER. The top forms a HOT PLATE for BOILING, STEWING, &c. The whole Heated by ONE SMALL FIRE. One 5 feet wide is equal to an ordinary Range 8 feet wide.
Extracted from the *London Daily Telegraph*, May 19, 1862.
"INTERNATIONAL EXHIBITION, Class 31.
"Of the most recent inventions it should be said that Messrs. JONES & ROWE'S Patent Worcestershire Range has attracted very special attention, and has been commended by the best authorities. A valuable peculiarity of their Ranges is the placing of the OVEN and ROASTER one above the other instead of *side* by *side;* and the ROASTER is constantly replenished with fresh air."
Inventors and Manufacturers, JONES & ROWE, Worcester.
Agents for London: BARRON, SON, & WILSON, 436, Strand, W.C.
Illustrated Catalogues, with Testimonials and Prices, forwarded on application.

JAMES PHILLIPS & CO.,
HORTICULTURAL GLASS MERCHANTS,
180, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

REDUCED PRICES OF SHEET GLASS FOR HORTICULTURAL PURPOSES.

ENGLISH SHEET GLASS.
Packed in Crates of about 280 feet.

	16-ounce.	21-ounce.
Best	5½d.	... 7½d.
Seconds	3¾d.	... 5d.
Thirds	2½d.	... 3½d.
Fourths	2¼d.	... 3¼d.

HORTICULTURAL GLASS.
Stock Sizes, 16-ounce. In 100 feet Boxes.
These prices only apply to the sizes stated.

		4ths.	3rds.	4ths.	3rds.
		s. d.	s. d.	s. d.	s. d.
11 by 9	12 by 9	13 by 9	14 by 9				
12 „ 10	13 „ 10	14 „ 10	15 „ 10	10 9	12 3	12 6	14 0
13 „ 11	14 „ 11	..	..				
14 „ 12	15 „ 12	15 „ 11	16 „ 11				
18 „ 12	19 „ 12	16 „ 12	17 „ 12				
16 „ 13	17 „ 13	20 „ 12	21 „ 14	11 6	13 6	13 6	16 0
19 „ 13	20 „ 13	18 „ 13	..				
16 „ 14	17 „ 14	21 „ 13	..				
19 „ 14	20 „ 14	18 „ 14	..				

14 to 15 ozs. 16 to 17 ozs. to the foot.

HARTLEY'S
PATENT ROUGH PLATE GLASS.
Packed in Boxes of 50 feet each.

			s.	d.	
6 by 4	and 6½ by 4½	... ...	10	6	per box.
7 „ 5	„ 7½ „ 5½	... ...	12	0	„
8 „ 6	„ 8 „ 6½	... ...	13	6	„
6 „ 7	„ 9½ „ 7½	and 10 by 8 ...	15	0	„

GLASS for ORCHARD HOUSES.
As supplied by us to Mr. Rivers, to the Royal Horticultural Society, and to most of the Nobility, Clergy and Gentlemen of the United Kingdom.
Packed in 100 feet Boxes.

		14 to 15 ozs.	16 to 17 ozs.	21 ozs.
20 by 12	Fourths ...	11s. 6d.	13s. 6d.	15s. 0d.
20 „ 13	Thirds ...	13s. 6d.	16s. 0d.	19s. 0d.
20 „ 14	Seconds ...	...	English.	English.
20 „ 15	Best ...	...	18s. 0d.	23s. 0d.

The above prices include the Boxes.
We recommend 3rds quality at 16s., or 21-ounce at 19s. (as supplied to Mr. Rivers). Best and Seconds are intended only for pictures or dwelling-houses.

SMALL SHEET SQUARES.
In 100 feet Boxes.

6 by 4	6½ by 4½	7 by 5	7½ by 5½	11s. 6d.
8 „ 6	8½ „ 6⅜	9 „ 7	9½ „ 7½	
		10 „ 8	10½ „ 8½	12 6

Boxes 2s. each, returnable at full price.
All small squares from 6 by 4 to 10½ by 8½ are cut from pieces, consequently there is only one quality.

FOREIGN SHEET GLASS.
In Cases for cutting up, in Sizes as Manufactured.
London Agents for Hartley's Patent Rough Plate.
Perforated Glass for Ventilation.
Glass Shades, Ebony and Gilt Stands, Gas and Lamp Glasses, Chimney and Globes, &c.
Glaziers' Diamonds from 10s. to 21s. each.

Glass Tiles and Slates in Sheet and Rough Plate. Plate Glass, Patent Plate, and Hartley's Improved Rough Plate.

PAINTS, COLOURS, VARNISHES, &c.

GENUINE WHITE LEAD. ANTI-CORROSION PAINT. | LINSEED OIL PUTTY. FINE OAK VARNISH. | FINE OAK CARRIAGE. PATENT DRYERS. | LINSEED OIL. BOILED OIL.
TURPENTINE.

LEAD in SHEETS or CUT to SIZES, LEAD PIPE, LIFT PUMPS, WATER CLOSETS, and PLUMBERS' BRASS WORK of every description.

JOHN WARNER & SONS,
BELL AND BRASS FOUNDERS TO HER MAJESTY,
HYDRAULIC ENGINEERS, BRAZIERS, and MANUFACTURERS of PUMPS, COCKS, and CLOSET APPARATUS OF EVERY DESCRIPTION.

No. 35.

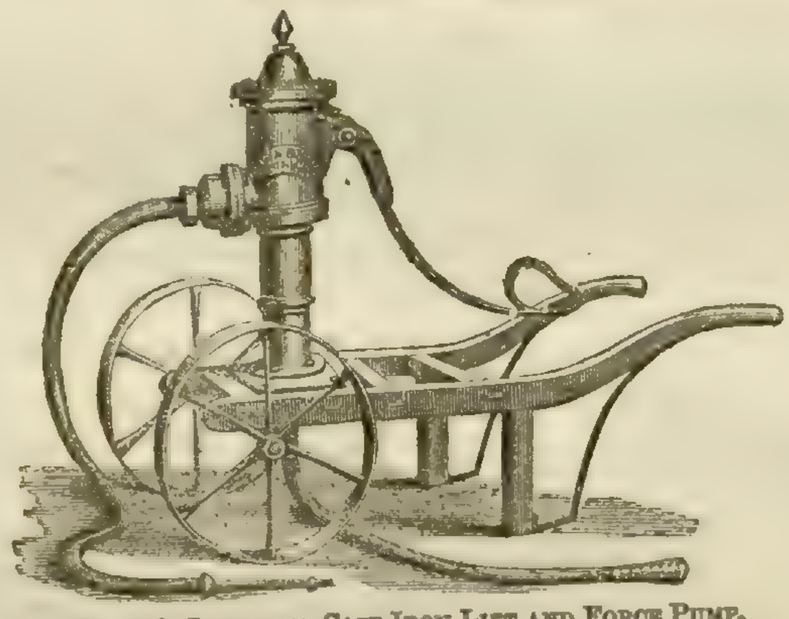

No. 36½. IMPROVED CAST-IRON LIFT AND FORCE PUMP.

No. 42.

No. 35. PATENT CAST-IRON PUMP, fitted with J. W. & SONS' Metal Bucket and Valve, which cannot clog in action, for Wells not exceeding 25 feet.
2¼ inches ... ... 1 foot 7 inches high ... £1 1 0 | 2½ inches ... ... 3 feet 3 inches high ... £1 10 0
2½ inches short, with 15 feet of Lead Pipe attached, ready for fixing £2 0 0
2½ inches long, ditto ditto 2 14 0
No. 36½. WARNER'S IMPROVED 3-INCH CAST-IRON LIFT and FORCE PUMP, mounted on Barrow, with Suction and Delivery Screw, 18-inch Branch Pipe and Spreader, and Suction Rose £5 15 0
1¼-INCH 2-PLY RUBBER and CANVAS HOSE ... ... at per foot 0 1 0
2½-INCH LIFT and FORCE PUMP (Mounted on Plank, 3l. 3s.) 3 0 0
3-INCH LIFT and FORCE PUMP (Mounted on Plank, 3l. 15s.) 3 10 0
Larger sizes of any of the above.

By an improved and new action of the handle, this Pump is so constructed that a great deal of friction is avoided: as the vessel is secured, and by introducing a brass lining into the barrel, with brass bucket and sucker, many of the objections to iron pumps are overcome. By this Pump ONE MAN WILL FORCE THE WATER in a continuous stream TO A HEIGHT OF 50 FEET When mounted on a barrow it forms a cheap, useful, and portable Fire Engine or Garden and Field Irrigator. The simplicity of its construction enables it to be offered to the public at a less price than any other Pump of equal capabilities.

No. 42. IMPROVED LIQUID MANURE or GENERAL PORTABLE PUMP.—These Pumps are fitted with J. W. & SONS' Patent Bucket and Valve, and cannot clog in action.
4½-inch LIQUID MANURE PUMP, with legs, 2l. 15s.; 2-inch Flexible Rubber and Canvas Suction Pipe, 2s. 5d. per foot. The Barrel is 27½ inches long, and the Legs are 5 feet high.

The above may be obtained of any Ironmonger or Plumber in Town or Country, or of the
PATENTEES and MANUFACTURERS,
JOHN WARNER AND SONS, 8, CRESCENT, CRIPPLEGATE, LONDON, E.C.

Wood Labels.

JAMES MAY begs to inform the Trade he can furnish the following:—12,000 for 32*s.*, package included, for a Post Office Order, payable at Bow, viz., 2000 6-inch; 2000 5-inch; 3000 4-inch; 4000 3½ inch; made of the best Memel Timber.

A list of prices to be had on application to JAS. MAY, 1, John's Terrace, Roman Road, Bow, London, E.

F. A HAAGE'S, JUN., PRUSSIAN WOOD GARDEN STICKS and TALLIES, Commended by the Royal Horticultural Society, may be had of all sizes. Wholesale of BETHAM & BLACKITH, Cox's Quay, Lower Thames Street, E.C., and Retail of all the Nurserymen and Seedsmen in London and the Provinces.

GARDEN BORDER-EDGING TILES, in great variety of patterns and material.

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability.

May be obtained at F. & G. ROSHER'S Premises, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; and Kingsland Road, Kingsland, N.E.

Illustrated Price Lists free on application. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

Also WHITE GLAZED TILES, for Lining Walls of Baths, Dairies, Larders, Kitchen Ranges, &c. Grooved Terro metallic and other Stable Paving Bricks of great durability, Clinkers, Red and White Wall Copings, Glazed Drain Pipes, &c.

To be obtained of F. & G. ROSHER, at their Premises as above.

TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from frost, blight, birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

VARNISHED FLOWER STICKS:—1 foot, 3*d.*; 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s.* 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

AGRICULTURAL IMPLEMENTS.—Steam Engines, Threshing Machines, Carts, Waggons, Ploughs, Harrows, Turnip Cutters, Chaff Cutters for hand and power, Lawn Mowers, Prize Churns, Cask Stands, Wire Netting, Garden Tools of all kinds.

Illustrated Catalogues on receipt of 6 stamps. Price Lists free.

BURGESS & KEY, 95, Newgate Street, E.C.

Works: Brentwood, Essex.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, &c.

PROTECTION from the COLD WINDS & MORNING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1*s.* 8*d.* per yard run.
Four yards wide	3*s.* 4*d.* per yard.
An improved make, 2 yards wide,	1*s.* 9*d.* per yard.
An improved make, 3 yards wide,	2*s.* 8*d.* per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.

"It is much cheaper than Mats as a covering.

Oil Paint no longer Necessary.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.

Sold in casks of about 30 gallons each, at 1*s.* 6*d.* per gallon, at the Manufactory, or 1*s.* 8*d.* per gallon paid to any Station in the kingdom.

Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street, E.C., from whom only it can be obtained.

SMITH'S COMBINED CULTIVATOR AND DRILL.

TO THE FARMERS OF ENGLAND.

GENTLEMEN,—The following evidence upon the above subject may be read with interest. Yours truly, WILLIAM SMITH.

Woolston, Bletchley Station, Bucks, Jan. 11, 1864.

Mentmore, January 9, 1864.

DEAR SIR,—I have the pleasure to enclose you a Draft on the London and County Bank for 55*l.* in settlement of the account.

We hope to give your Combined Machine plenty of work next spring in Bean and Oat sowing, for which operations I have every confidence in it proving a most effective and expeditious implement, where, as in our case, the Steam Cultivator has accomplished half a dozen years or so of pioneer work on one of the stiffest clays, over some of the highest backed "lands" in this much beridged and furrowed county of Bucks.

Our present experience with it is eminently satisfactory.

The winter Tares put in by it on a clean Oat stubble last autumn, without any previous operation of ploughing or cultivating, have come up and done well thus far; we do not grow winter Beans, or we should have drilled them also with the Combined Machine.

A 15-acre piece of Hallett's Pedigree Wheat—one bushel per acre—was cultivated and drilled in one operation in two days, in a very satisfactory manner, considering that our men were but experimenting, as it were, with the practical working of the implement for the first time. This breadth of Wheat, after Tares fed off, had in preparing the land received a single furrow by horse power, owing to the hardness of the ground arising from being sheep folded, and from the intense drought of last season, necessitating the operation previously. It is now the best and most regularly planted in a breadth of some 80 acres.

That your Combined Cultivator and Drill will prove a most valuable adjunct to our steam operations I have every confidence from my present comparatively limited experience of it. It steers and turns easily, and is but a "plaything" for a 10-horse engine to pull to and fro, upon even our stiff soil.

I shall be happy to report further progress when our spring work is on; and

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NATIONAL SHAKESPEARE COMMITTEE.
January 25, 1864.

NOTICE is HEREBY GIVEN, that the SITE and MONUMENT COMMITTEES MEET on the 5th FEBRUARY (the day after the Meeting of Parliament). Artists and others willing to submit suggestions are invited to forward the same, addressed to the Honorary Secretaries, 120, Pall Mall, London.

W. HEPWORTH DIXON, J. O. HALLIWELL, } Hon. Secs.

News of the Week.

AUSTRIA and Prussia have rejected the request of Denmark, and have refused either to suspend or to defer the invasion of Schleswig. The KING of DENMARK has applied to France, England, Russia, and Sweden, as the four non-German Powers who signed the Treaty of London, requesting their mediation with Austria and Prussia to suspend the intended invasion, in order to give the KING the opportunity of summoning the Rigsraad, and obtain the sanction of that body to the withdrawal of the Constitution. England and France have acceded to HIS MAJESTY'S request, and it is said that they have been joined by Russia and Sweden in their representations to the Courts of Berlin and Vienna. It was reported in Copenhagen on Thursday that England had promised to despatch an auxiliary force to the assistance of Denmark. The report was received with great enthusiasm on the Danish Bourse, but nothing has transpired in London to confirm its authenticity. Meanwhile the Prussian and Austrian forces are rapidly marching towards the Eider. The Prussian vanguard entered Kiel on Monday morning, and immediately replaced the German flag with that of Prussia at the guardhouse, and demanded the withdrawal of Prince FREDERICK'S citizen guard, threatening force in case of non-compliance. It is generally believed that the PRINCE himself will be requested to withdraw from Holstein, as neither Prussia nor Austria is likely to tolerate his presence in that Duchy. On the other hand, the Danes are strongly fortifying the Dannewerke, and are prepared to defend i

to the last extremity in the event of the German troops making any attempt to cross the frontier.

In the Prussian Parliament on Saturday the Upper House rejected the amendment made by the Chamber of Deputies in the budget, and adopted it entire as proposed by the Government. On Monday the Chamber of Deputies, on the recommendation of the Budget Committee, adopted a resolution declaring the vote of the Upper House to be null and void. The Chamber was almost immediately dissolved with a Speech from the Throne, in which the KING declared that as the Chamber had maintained the ground which led to the dissolution of its predecessor, the Government had no alternative for the present but to renounce the hope of coming to an understanding with the Chamber.

The Finance Committee of the Lower House of the Austrian Reichsrath on Friday, resolved by a large majority to recommend the House to grant only 5,320,000 florins instead of the 10,000,000 demanded by the Government for the expenses of the Federal occupation of Holstein. The debate on this recommendation commenced on Thursday, and is still in progress. In the sitting of Monday the House adopted by a majority of one a resolution censuring the policy of the Government in regard to the question of the Danish Duchies.

The debate on the Address in the French Corps Législatif is still in progress. On Friday the amendment of the Opposition to the paragraph relating to the press, was negatived by a large majority. On Saturday an amendment to the paragraph relating to Algeria, proposing to grant to that colony the institutions of France, was negatived by a majority of 222 to 18. On Monday an amendment to the paragraph relating to Education, requiring education to be gratuitous and obligatory, was negatived by 225 to 16. On Wednesday an amendment to the paragraph relating to Mexico, demanding the recall of the expedition, was negatived by 201 to 47. The debate on the paragraph relating to Poland commenced on Thursday and is still in progress.

By the Bombay mail of the 29th ult., we have a confirmation of the news received by telegram that the war on the north-west frontier is concluded. There are rumours however, that Affghanistan sympathises with the rebels, and that a large Affghan force is assembled at Jellalabad. A despatch from Shanghae announces that Major GORDON captured Soochow from the rebels on the 5th December. It was expected that the fall of Hang-chow would shortly follow, and that, failing other means, the Imperialists would be able to reduce Nankin by famine. The dismissal of Mr. LAY by the Chinese Government from his post of inspector of foreign customs is confirmed. Accounts from Japan state that Prince SATSUMA has refused to pay the indemnity until all foreigners have quitted Yokohama.

By the arrival of the Cape mail we learn that the trial of Bishop COLENSO by the Metropolitan and suffragan bishops of South Africa, has terminated in a verdict of guilty on all the nine counts of heresy with which he was charged. The Metropolitan concurred in the finding, and sentenced Dr. COLENSO to be deprived of his see, but gave him to the 4th of March to sign a full retractation of his errors in the Cape, or till the 16th of April to do the same in London, in which case the sentence would be null. Dr. BLEEK, for the Bishop, protested, and gave notice of appeal. A report had reached the Cape that Dr. LIVINGSTONE had been murdered near Lake Nyassa. He had previously received news of his recall by the Government, and had admitted his expedition to be a failure.

Home News.

THE COURT.—On Saturday afternoon the Queen, accompanied by Princess Louisa and Princess Beatrice, arrived at Windsor from Osborne. Her Majesty was met by the Prince of Wales at the Great Western station, and drove with his Royal Highness to Frogmore House. The Queen was still in mourning, and wore her widow's weeds, though the Princesses were all out of mourning. On Sunday morning the Queen and Princess Louisa attended Divine Service in the private chapel. The Dean of Windsor officiated. Her Majesty passed the afternoon at Frogmore House. On Monday morning the Archbishop of Dublin and Lord Wodehouse had audiences of the Queen. Her Majesty, with the Princess Louisa and Princess Beatrice, afterwards inspected the decorations of the Royal Tomb House in St. George's Chapel, and then went to Frogmore House. At half-past 1 P.M. her Majesty drove to the Great Western Railway Station, where a special train was in readiness to convey her Majesty to Gosport. The Prince of Wales accompanied the Queen to the station. The Royal party arrived at Osborne soon after 5 o'clock. On Tuesday the Queen drove out with the Princesses Louisa and Beatrice. Earl and Countess Russell arrived at Osborne from London, and dined with her Majesty and the Royal family. Earl Russell had an audience of her Majesty. On Wednesday the Queen drove out with Princess Helena. On Thursday morning her Majesty, accompanied by some of the junior branches of the Royal family, paid a visit to Netley Hospital. Lord and Lady Russell left Osborne for London. The Earl and Countess of Derby arrived at Osborne on a visit to the Queen.

THE PRINCE AND PRINCESS OF WALES.—The Princess of Wales is still making the most favourable progress. As soon as the health of her Royal Highness is safely established, it is expected that the Prince and Princess with the infant Prince will leave Frogmore for Marlborough House, where they will reside for a time, and then proceed to Sandringham. On Friday morning the Prince hunted with the harriers. The Duke of Cambridge left Frogmore for London. On Sunday afternoon the Prince of Wales attended Divine service in the Chapel Royal of St. George. His Royal Highness occupied his stall as Knight of the Garter. On Tuesday the Prince went to Richmond, and shot for some hours in the park. The Prince of Leiningen arrived at Frogmore on a visit to his Royal Highness. On Wednesday the Prince of Wales, accompanied by Prince Edward of Saxe-Weimar and the Prince of Leiningen, went out shooting. On Thursday morning the Prince went out shooting.

PRINCE ALFRED, on Friday, left Holyrood for Drumlanrig Castle on a visit to the Duke of Buccleuch. On Saturday the Prince, accompanied by the Duke of Buccleuch and his sons, went out shooting. On Sunday his Royal Highness attended divine service in the parish church of Durrisdeer. On Monday morning the Prince left Drumlanrig for Edinburgh.

THE CABINET.—A Cabinet Council was held on Saturday at the Foreign Office. Another Council was held on Monday, and another yesterday. It was rumoured on Thursday that Earl Russell had gone to Osborne to tender his resignation as Secretary for Foreign Affairs, in consequence of a difference of opinion between him and the majority of the Cabinet on the subject of the Danish and German quarrel. It was also rumoured that the Queen had sent for the Earl of Derby in anticipation of the resignation of the entire Cabinet. The *Morning Post* of yesterday, however, asserts that there is no foundation for these rumours, which seem, it says, to be based upon the two very simple facts, that Lord Russell had returned from Osborne, and that Lord Derby had gone there on a visit to the Queen. "There is," it adds, "no crisis, and the Cabinet is acting in perfect harmony."

PARLIAMENTARY MOVEMENTS.—Lord Palmerston will give a full-dress dinner to his supporters in the House of Commons on Wednesday next, at Cambridge House; on the same day Earl Granville will give a full-dress dinner to the Peers in the Ministerial interest, at his house in Bruton Street; the Earl of Derby will give a full dress dinner to the Opposition Peers, at the family mansion in St. James's Square; and the Right Hon. B. Disraeli will give a Parliamentary dinner to the members of the Opposition in the House of Commons, at his house at Grosvenor Gate. There is a vacancy for Durham, caused by the death of Sir W. Atherton. Mr. Edward James, Q.C., of the northern circuit, and the Hon. Mr. Lambton, cousin of the Earl of Durham, have been mentioned as likely to become candidates for the vacant seat, but the general opinion in the city is in favour of Mr. John Henderson, the extensive carpet manufacturer, who for many years has taken an active part in Liberal politics. There are five candidates in the field for the seat at Brighton about to be vacated by Mr. Coningham, Mr. Dumas, Mr. Otway, Mr. Julian Goldsmid, Professor Fawcett, and Mr. Barker, all in the Liberal interest. Mr. Moor, who had come forward in the Conservative interest, has withdrawn from the contest. Sir J. Buller East, Bart., has announced his intention of resigning his seat for Winchester, and Mr. T W. Fleming has announced himself a candidate in the Conservative interest. A vacancy is about to occur at Rye, by the resignation of Mr. Mackinnon, who will, it is said, be raised to the peerage; his son, Captain Mackinnon, and Mr. W. M. M'Donald, of Rossie, are mentioned as candidates for the vacant seat, the former in the Liberal, the latter in the Conservative interest.

THE BISHOPRIC OF ELY.—Lord Palmerston has conferred the vacant bishopric of Ely on the Rev. Edward Harold Browne, B.D., Norrisian Professor of Divinity in the University of Cambridge, Canon of Exeter, and Principal of the Theological College at Exeter.

THE CHURCH.—Lord Palmerston has appointed the Rev. Frederick Charles Cook, M.A., Prebendary of St. Paul's and Preacher of Lincoln's Inn, to the Canonry of Exeter, vacant by the elevation of the Rev. Harold Browne, to the Bishopric of Ely; and the Rev. Stair Douglas to the Canonry of Chichester, vacant by the death of the Rev. Sir George Shiffner. The Bishop of St. David's has appointed the Rev. George Clark, M.A., Rector of Tenby, to the Archdeaconry of St. David's, vacant by the death of Archdeacon Bevan.

MEETING OF THE BISHOPS.—The Archbishop of Canterbury has invited the whole of the bishops, together with as many of the colonial bishops as are in England, to meet him at Lambeth Palace on Wednesday next, for the purpose of considering the subject of the Burial Service, together with other matters which are likely to occupy the attention of Parliament and Convocation in the forthcoming session.

UNIVERSITY APPOINTMENT.—The Queen has granted to the Rev. Walter Waddington Shirley, M.A., son of the late Bishop of Sodor and Man, the office of Regius Professor in Ecclesiastical History in the University of Oxford, in the room of Dean Stanley, resigned.

THE ARMY.—The colonelcy of the 98th Foot, vacant by the death of General Wynyard, has been conferred on Major-General Sir Robert Percy Douglas, Bart., commanding the forces at the Cape of Good Hope, and the Colonelcy of the 2d West India Regiment, vacant by the death of General Trydell, has been conferred on Major-General Robert Law,

THE NAVY.—Dr. Bryson has been appointed medical director general of the Navy, in the room of Sir John Liddell, retired.

Foreign.

FRANCE.—The debate on the Address in the Corps Législatif was continued on Friday. M. Granier de Cassagnac, in reply to M. Jules Simon, said he considered the Press as a dangerous power, and as an institution to which no strong Government should grant liberty, but only a toleration, regulated by the Administration. "Cowardly Governments," he said, "have alone been able to believe in the liberty of the Press, and this liberty has overthrown them." M. de Cassagnac declared the press law of February, 1852, to be a just, good, and necessary one, and censured the Government for the toleration which it grants to the journals with regard to the reports of the proceedings of the Corps Législatif. He further said it was necessary to maintain and execute the law as it now stood. M. Emile Ollivier stated that he and many of his friends were in favour of the responsibility of the chief of the State. (This declaration caused great sensation in the Chamber.) In continuation M. Ollivier demonstrated that the Press was not the cause of the fall of Governments, and was only fatal when not free. The amendment of the Left was then withdrawn. The amendment brought forward by M. Thiers and others on the same subject was then read, and was explained by M. Martel. M. Rouher declared that at present no modification of the Press law was possible, and said that "the Emperor may at some future time be enabled to modify the law of 1852." The amendment was rejected by a large majority. In the sitting of Saturday a debate took place on the paragraph of the Address relative to Algeria. M. Picard explained the amendment of the Left, proposing to assimilate Algeria to France, and to grant liberal institutions to that country, with the right of electing deputies. General Allart opposed the amendment, and M. Jules Favre made a speech in reply. The amendment was finally lost by 222 against 18 votes. In the sitting of Monday, Paragraph 5 was adopted, after the rejection by 225 to 16 of the amendment of the Opposition, requiring education to be gratuitous and obligatory. Paragraph 6, relating to distant expeditions, was next discussed. Three amendments were brought forward referring to Mexico, all demanding the termination of the expedition and the recall of the troops. M. Guerault spoke upon the amendment of the Left, demanding that the troops should be immediately recalled. M. de Beauverger replied. In the sitting of Tuesday, M. Thiers warmly censured the expedition to Mexico in its present and past condition, as well as with regard to its future consequences. He concluded by demanding that France should treat with Juarez, so as to preserve her honour and the interests formerly guaranteed, else the expedition would only result in an indefinite and ruinous occupation. M. Chaix d'Estange defended the expedition as being just, affirmed that it was impossible to treat with Juarez, and expressed a hope that tranquillity would soon be re-established in Mexico; "then," the speaker said, "our troops will be able to return." M. Berryer, in reply, said that France had been misled. He maintained that the Government was unpopular in Mexico, and ought to retire. The Left then withdrew its amendment. In the sitting of Wednesday, M. Thiers explained the amendment of the Opposition on paragraph 6, referring to the Mexican expedition, and supported the necessity of negotiating with Juarez when vanquished. M. Rouher, in reply, declared that France would neither treat with Juarez nor with Almonte—the one being conquered, and an enemy, the other devoid of any official position—but only with a ruler elected by universal suffrage. After a speech from M. de la Tour, M. Jules Favre dwelt upon the strange and difficult position

in which the Archduke Maximilian would be placed, and compared the Mexican campaign to the campaign in Spain under the First Empire. M. Rouher warmly defended the expedition. He said that the presence of France in the Gulf of Mexico is the safeguard for the prosperity of her maritime commerce, which would be lost if she withdrew. The Government desired to evacuate Mexico as soon as possible, but not until universal suffrage should have spoken. The establishment of a monarchy in Mexico was possible, and the result would be the prosperity of the country. The amendment was rejected by 201 to 47, and the paragraph was adopted. The debate upon Poland commenced on Thursday, when M. David supported the amendment advocating the recognition of the Poles as belligerents. After speeches from MM. Kolb-Bernard and Corneille, the amendment was rejected. M. Pelletan explained the amendment of the Left, proposing a rupture of diplomatic relations with Russia. The Duc de Morny defended Russia against the accusations of M. Pelletan, and declared that Russia was more democratic than the whole of Europe. He explained why the committee desired to reconcile its sympathies for Poland with its respect for Russia, and said that no other solution was possible, for it was necessary, even in the interest of the Poles, not to encourage the insurrection. M. Guerolt demanded that Poland should not be exterminated under Napoleon III., after having been partitioned under Louis XV. On the motion of M. Jules Favre, the debate was adjourned. The following is a summary of the Budget for 1865 which has been laid before the Corps Législatif :—

The expenditure for the ordinary Budget for 1865 is estimated at 1,797,250,000f, or 21,000,000f. in excess of the amount for 1864, and the receipts at 1,799,750,000f., leaving a surplus of 2,500,000f. The Minister's Financial Statement proposes to reduce the amount of Treasury bonds in circulation in 1865 to 150,000,000f. In the event of this sum being insufficient for the wants of the public service, the deficiency will be met by supplementary issues, to be authorised by Imperial decree and submitted to the Corps Législatif in its next Session. The amount of bonds which may be issued by the Treasury of Public Works of the city of Paris during 1865 is not to exceed 80,000,000f.

The subscriptions to the new loan are said to amount to about five milliard francs. The Government has sustained two other defeats at elections. In the Vosges, M. Buffet, the Liberal-Conservative candidate, whose first election was annulled in committee, has been returned by a majority of 3000 votes over M. Bourcier de Villers, the official nominee. At Strasburg, M. Halley-Claparède, the candidate of the Opposition, and supported by the clergy, has defeated M. de Bulach, the Government candidate and Chamberlain to the Emperor. Vice-Admiral Rigault de Génouilly has been promoted to the rank of Admiral, and Rear-Admirals Penaud, Chopart, and Larrieu have been appointed Vice-Admirals.

SWEDEN.—The Swedish officers who have asked permission to take service in Denmark have been refused by the Government on the ground that Sweden herself required them. The Norwegian Minister of War has arrived at Stockholm. The King and Royal Family of Sweden have given a considerable sum of money to the fund for the support of the families of Danish soldiers.

DENMARK. — Prussia and Austria have refused compliance with the request of Denmark for delay, and the troops of the two Powers are consequently on the march to Schleswig. The Danish Cabinet has appealed to the four other Powers who signed the Treaty of London, France, England, Russia, and Sweden, in order that by their mediation Austria and Prussia might be induced to suspend the occupation of Schleswig. Rumours of the despatch of English auxiliary troops to the assistance of Denmark circulated upon the Bourse at Copenhagen on Thursday, and were received with immense enthusiasm. A royal resolution having fixed the electoral districts and their commissioners for Schleswig, for the new Rigsraad, it is inferred that a summons to elect will soon follow, and that all the great Powers are agreed as to that pacific measure. In the sitting of the Landsthing, the Upper Chamber of the Danish Rigsdag, on Friday, Bishop Monrad, the President of the Council, made the following declaration :—

"The Conventions of 1851 and 1852 contain the rights as well as the engagements of Denmark, among which is the point that there does not exist any state of Schleswig-Holstein. What do we struggle for? To prevent an invasion of Schleswig by foreign troops, and to expel them should they, nevertheless, enter it. The fortune of war will decide what will happen afterwards. It would be vain to trace a programme before the war is over, but we are determined not to allow a single German soldier to cross the Eider."

In the sitting of Wednesday, the Landsthing unanimously adopted the Address to the King in its integrity. The President of the Council declared that no Danish Government could accede to the independence of Schleswig, to a State of Schleswig-Holstein, or to a division of Schleswig, unless compelled by force. It is rumoured that the Rigsraad (common assembly for Denmark Proper and Schleswig) will be convoked very shortly. Herr Johansen has accepted the Ministry for Schleswig, offered to him by the King, and is expected daily at Copenhagen. The Prussian and Austrian Ambassadors have not yet left Copenhagen, but intend to do so as soon as the weather permits direct communication by steamer, which may be daily expected, since the weather is like spring. The Secretaries of the Embassies will officiate as Chargés d'Affaires after the departure of the Ambassadors.

THE DANISH DUCHIES.—Four councillors have been suspended in Garding and Tönninggen for having refused to take the oath of allegiance to the King of Denmark. A proclamation has been issued by the Schleswig Ministry, in which it is stated that the landed property north of the Eider hitherto subject to the Holstein authorities legally belongs to Schleswig, and as regards jurisdiction and police is provisionally subordinate to the administration of that Duchy. It is asserted on good authority that the Federal Commissioners are about to convoke the Estates of Holstein to sanction the new Government of the Duchy, recently appointed by the Federal Commissioners. The *Dagbladet* of Tuesday says that such a step would be entirely illegal, as the King only has the right to assemble the Estates of Holstein. The Prussian and Austrian troops are marching towards the Eider canal, under the command of Field-Marshal von Wrangel, who has sent a requisition to Hamburg for about 3000 carts. Austrian columns continue to march through that city. The Federal Commissioners have declined to recognise them as belonging to the Federal reserve, but have ordered the authorities to receive them in a friendly spirit. The harbours of Flensburg, Eckernförde, and Apenrade are free from ice. Three steamers with troops have arrived at Flensburg. The Flensburg and Apenrade Railway will shortly be opened. The Danes continue to fortify the Dannewerk; 6000 soldiers are daily at work, forming intrenchments, in order to command the Haddebyer and Mövenberge Road. Two batteries have been erected in the intrenchments. It is expected the Danes will defend the Dannewerk to the last extremity. In consequence of the thaw, the Danish outposts on the frontier Customs line have received orders to retire on the arrival of the Prussian troops. It is stated that an aide-de-camp of the King of Prussia has gone to Kiel, charged with a delicate mission to Prince Frederick, whose presence in the Duchy will not, it is said, be tolerated by Austria and Prussia. The Prussian vanguard marched into Kiel on Monday morning. They removed the German flag, and placed the Prussian colours on the guard-house. They demanded the withdrawal of Duke Frederick's citizen guard, threatening to employ force in case of non-compliance. The guard then dispersed by desire of the Duke. Two Prussian battalions and one battery arrived on Monday afternoon. They were received without any kind of demonstration. A Prussian military post has since been installed in the Hôtel de Ville. The escutcheons and colours of Prince Frederick have been removed. When the Austrians and Prussians entered Altona, the Schleswig-Holstein banners were enveloped in crape, and the shops closed. Several members of the Diets of Schleswig and Holstein have arrived in Altona by railway. They were received at the terminus with music and great cheering. They proceeded to Hamburg by night, accompanied by immense crowds of people, and alighted at Zingg's Hotel, where they will deliberate upon the course to be taken in the present state of things.

PRUSSIA.—In the sitting of the Chamber of Deputies on the 21st inst., Count von Bismark read a despatch which the Government had addressed to the minor German States, and of which the following is a summary :

"The Prussian Government does not offer any opposition to the Federal Government, but has only in view its position with regard to the other powers who signed the Protocol of London. A possible solution of the Schleswig-Holstein question would be a mere personal union between Denmark and the Duchies, as is the case between Sweden and Norway.

Count von Bismark, in reply to a question from Herr Schulze-Delitsch, said :—

"It is not true that the minor German States are disposed to rely on Prussia. The last 15 years prove, on the contrary, that they seek support in Austria, which course has already caused great embarrassements to Prussia. Our natural mission is to live in harmony with the Scandinavian people. A Prussian Minister, who wished to obtain the confidence of the majority of the Chamber of Deputies, would be obliged to act contrary to the Constitution, against the feelings of the Prussian people, and against historical tradition. The Chamber desires to hold the position of a kind of diplomatic Aulic Court with military powers. It does not understand the Prussian people."

Count Schwerin said he hoped the King would submit to the decision of the Federal Diet on the question of succession. The Ministry were afraid of Democracy and the foreign Powers. Count von Bismark replied that the Government hoped to conquer Democracy, and that it was only a rule of common prudence to look abroad with apprehension. He maintained, as hitherto, that the policy of Prussia was to keep free from any engagement. At the same sitting the loan proposed by the Government was rejected by 275 against 51 votes. A portion of the Catholic members, President Grabow, and Count Schwerin voted with the majority. The following resolution proposed by Herren Schulze-Delitsch and Von Carlowitz, and amended by Herr Grote, was adopted by a considerable majority.

"1. Considering that Prussia, in common with Austria, has made the declaration at the Federal Diet that the two Powers will resist the resolution passed by the latter on the 14th January, and take the affairs of Schleswig Holstein into their own hands, and will carry out the occupation of Schleswig in their quality as great Powers; 2. Considering that by this declaration Prussia separates herself from Germany and commits an abuse of her position as a great Power; 3. Considering that the course of the Austro-Prussian policy can have no other result than that of surrendering the Duchies a second time to Denmark; 4. Considering that the threatened evacuation by force of the purpose of Prussia and Austria challenges the well-justified resistance of the other German States, and may thus produce civil war in Germany,—The Chamber of Deputies declares that it will resist this policy by all legal means in its power."

In the sitting of the Upper House on Saturday, a debate took place on the Budget, as amended by the Chamber of Deputies. The amendment was rejected by a large majority, and the Budget as proposed by the Government adopted by 58 against 17 votes. In the sitting of the Chamber of Deputies on Monday, the Committee on the Budget was ordered by the Chamber to immediately report upon the vote on the Budget given on Saturday by the Upper House. The Committee accordingly made their report, which proposed that the vote of the Upper House should be declared null and void. This proposition was adopted by the House. Count Eulenburg then read a Royal message, stating that the Diet would be closed at 3 P.M. by the President of the Council. Accordingly at that hour the Diet was closed by the President of the Council, who read the Speech from the Throne. The following are the most important passages :—

"The Chamber of Deputies has maintained the ground which led to the dissolution of the previous Chamber. The House has rejected the Bill referring to Article 99 of the Constitution, and has not discussed the Budget of 1863. In the Budget of the current year it has struck out items which are indispensable for the public service. The House has also renewed the resolution of the previous Chamber upon the Military Budget without having discussed the preliminary Bill establishing the obligation to military service. For that reason the Upper House, in the exercise of its Constitutional rights, has rejected the Budget of 1864 as amended by the Chamber of Deputies. The Government has carried out the vote of the Chamber with regard to the Polish members arrested for high treason, but does not consider it conformable to the respect due to public justice and to the dignity of the House. The House has also refused the required loan proposed by the Government to afford the means of carrying out Federal Execution in Holstein, as well as for the maintenance of Prussia's position as a great power and her honour in the further development of the conflict, and likewise for covering the portion of the expenses of the Execution falling to Prussia as member of the German Confederation. The House has rejected this vote, although the King had pledged his word, in his reply of the 17th of December, that the money should only be employed for the protection of the right and honour of the country. The House has passed resolutions by which the majority, in the event of warlike complications, takes part beforehand against the Prussian Fatherland. Renouncing, therefore, for the present, the hope of bringing about an understanding with the Chamber, the Government considers it its duty to act for the maintenance of the State, and relies herein upon the growing support of the country."

AUSTRIA.—In the sitting of the Chamber of Deputies on Friday the first section of the Finance Committee resolved by a large majority to recommend to the Chamber that the credit of 10,000,000 florins demanded by the Government should not be granted, but that the House should only vote the Austrian proportion, amounting to 5,320,000 fl. of the military expenses for the occupation of Holstein, voted by the Federal Diet. In the sitting of Saturday, Count Rechberg, in the name of the Government, entered into an historical explanation of the position of Austria in reference to the Schleswig question. He said that Austria could not act differently in this question than she had done. The view taken by the majority of the Federal Diet could not be accepted by Austria, because it was against international right, and its adoption would be dangerous. He continued :—

"We most carefully distinguish between the London Protocol and the question of the succession in the Duchies. By the London Protocol the Great Powers acknowledged the integrity of the Danish monarchy without prejudice to the question of succession. The Government of the Emperor of Austria never intended to pass over clear legitimate rights, although, on the other hand, the line of Augustenburg in no way appears to possess claims on Schleswig and Gottorp. Nothing would therefore remain but a separation of the Duchies. But it is to be considered that Denmark and Russia would never surrender their right of succession. The stipulations of the Danish law of succession will always be maintained as preliminary conditions of the London Treaty of 1852. Even the declarations of France, England, Russia, and Sweden show that Austria and Prussia are bound by this treaty. The maintenance of peace in Europe makes it necessary for Austria to keep aloof from the agitation now prevailing in Germany, and to only interfere in the Schleswig-Holstein question in her quality as a great Power. Austria would not have interfered at all in this question had not the Federal Diet taken the Danish question within its competency. To yield this question entirely to the middle and minor States would be equivalent to a surrender of the position of Austria as a great Power. It was impossible to communicate at present more details relative to the state of affairs without impeding diplomatic action and endangering the interests of the empire. In conclusion, he expressed a hope that a peaceful solution of the question might be possible. For this there were several ways open, among which was the union of the Duchies with Denmark only by the personal tie of the same ruler, both having the same dynasty."

Several members afterwards spoke for and against the credit demanded by the Government, and the debate was then adjourned on account of the lateness of the hour. In the sitting of Monday the following resolution was moved by a considerable number of the most important members :—

"The Chamber of Deputies cannot consider the measures taken by the Government in reference to Schleswig as in conformity with the interests of Austria, nor as calculated to insure general peace in Europe, and therefore believes itself compelled to decline any responsibility for the consequences which may attend the steps of the Government."

The resolution was agreed to, in spite of the energetic opposition of almost all the Ministers, by 18 to 17 votes. The debate on the recommendation of the Finance Committee that the House should grant only 5,320,000 florins to cover the Austrian proportion of the expenses of Federal Execution, instead of 10,000,000 florins, as asked by the Government, commenced on Thursday, and is likely to last for several days. It is expected that the supporters of the resolution will be in a minority. The Danish Ambassador,

Baron von Bülow, has been withdrawn by his Government, and presented his letters of recall to Count Rechberg on Monday. The Secretary of the Legation will provisionally undertake the affairs of the Embassy. The report that the Bank of France has addressed a communication to the Austrian National Bank, requesting a loan of 50,000,000f. in coined or uncoined silver, is contradicted by the semi-official journals.

FRANKFORT.—In the sitting of the Federal Diet on Friday, Austria and Prussia announced the march of their troops through Holstein towards Schleswig. The Diet was unanimously of opinion that the position of the Federal Commissioners in Holstein, as well as General Hake's command of the Saxon and Hanoverian troops, are in no way affected thereby. The necessary instructions to that effect were given by the Diet to the Commissioners and to General Hake. It was also resolved that as the Austrian and Prussian brigades of the first reserve of the Federal army in Holstein, under the command of General Hake, had been transferred by their respective Governments to the Austro-Prussian army of occupation for Schleswig, fresh reserves of Federal troops should be maintained, and that the acknowledgments of the Diet should be expressed to General Hake for his conduct in reference to the question of the occupation of Schleswig. It is asserted that at the next sitting of the Diet the proposal will again be made to admit the representative of Prince Frederick to take part in the deliberations of that body. It is not considered impossible that the Diet will accept this proposition, notwithstanding the energetic opposition of Austria and Prussia.

POLAND.—The *Dziennik* publishes an order of Gen. Berg, according to which Poland is to be governed in future by martial law. It is said that Gen. Berg has ordered that every insurgent captured shall be shot. Four insurgents, including a German named Lüdke, were hanged at Wlorlawek on the 4th inst. A fresh convoy of 500 political prisoners, sentenced to transportation to Siberia, left Warsaw on the 20th inst. Another convoy of 600 persons has since been sent away into the interior. Letters from Warsaw describe the condition of these persons as deplorable in the extreme. Numerous arrests have recently taken place in Warsaw. On the 16th the insurgents, under Rembailo, defeated three companies of Russian infantry at Daleszyn, near Kielce, in consequence of which all the Russian garrisons in the Cracow district have been sent out to operate against them. Meanwhile, Rembailo is said to have united his force with Wagner's cavalry corps. On the 18th a sanguinary engagement took place between the Russians and a band of insurgents under Colonel Komorowski near Tyszowa, in the government of Lublin. The Polish loss was considerable. Komorowski himself was killed while leading a cavalry charge. On the same day a sanguinary engagement between the insurgents under Bosak and the Russians, took place in the vicinity of Czenstochau. Several waggons filled with dead and wounded Russian soldiers have been brought into the town of Czenstochau. 1500 insurgents, under Bosak, are also said to have been victorious in an engagement with the Russians at Sieuna, in the neighbourhood of Zawichost, in the government of Radom. A fresh cavalry detachment of 300 insurgents has shown itself in the vicinity of the frontier railway station at Sosnowice. The Russians attacked the insurgent chief Danilowicz at Dombrowa, near the Prussian frontier, but were repulsed. On the 19th and 20th inst. unimportant engagements occurred near Maczki and Malkowice. Rembrailo attacked the Russians, who were advancing on all sides to surround the strong position of the St. Croix Mountains. Another engagement has taken place at Silaniec, near the fortress of Zamosc, in which the insurgent leaders Poninski and Wroblewski were victorious. The insurgent corps under these leaders have returned to the government of Lublin, after having supplied arms and ammunition to the detachments in Lithuania, in which province the formation of fresh corps of insurgents is announced.

ITALY.—In the sitting of the Chamber of Deputies on Saturday, the Minister of Justice replied to the question of Signor Crispi, relative to the conspirators in Paris, and stated that a prosecution had been commenced, and was being regularly carried on by the Tribunal of Varese, against Pascal and Grecco. The speech of Signor Crispi gave rise to protests in the Chamber, and was answered indignantly by the President of the Council. The Chamber finally passed, almost unanimously, to the order of the day. The results known up to the present of the elections of the new deputies chosen in the place of those who had tendered their resignation, are very favourable to the Government. It is expected that the Moderate candidates will be almost everywhere successful. The Papal Government have compelled Mr. Home, the spiritualist, to leave Rome, on the ground that it is their rule not to allow the presence of the author of any book placed on the prohibitory index. Before his departure Mr. Home left with the consul a claim for indemnity for the losses inflicted upon him, to the amount of about 150*l*.

GREECE.—Advices from Athens state that a favourable arrangement with regard to the Ionian Islands is expected. Several Greek officers intend to offer their services to the Danish Government in case of war.

DANUBIAN PRINCIPALITIES.—The question of the monastic property which has been secularised by the Government is entirely settled, the Chamber of Representatives having on Wednesday voted an indemnity of 50,000,000 francs to be paid to the religious communities of the Holy Places. This indemnity will be covered by a loan to be issued at 88, and bearing 7 per cent. interest.

CAPE OF GOOD HOPE.—Bishop Colenso's trial was concluded on the 16th December, when the suffragan Bishops found him guilty on all the nine counts of heresy with which he was charged. The Metropolitan agreed in that opinion, and sentenced Bishop Colenso to be deprived of his see and all his rights of office therein. The defendant not being present to hear the judgment pronounced against him, the Metropolitan gave him until the 4th March next to file in London a full, unconditional, and absolute retractation in writing of all the heretical extracts referred to in the counts, or otherwise to the 16th April next to file a like retractation in Cape Town. On Bishop Colenso so complying the sentence becomes null and void. Dr. Bleek protested against the proceedings and the validity of the judgment, and gave notice of appeal. The inquiry into the death at Angra Pequina, of James Gray, mate of the bark Saxon, took place at Cape Town on the 2nd of December. The murder of Gray without provocation by Donoghan, an officer of the Federal steamer Vanderbilt, and the insulting conduct of the Vanderbilt's men to the crew of the Saxon, in addition to seizing her, had been proved. Indignation was felt in the colony at the affair. Messrs. Rowley and Miller had returned from the Zambesi. Dr. Livingstone had received the news of his recall, and had admitted his expedition to be a failure. A rumour had reached the colony of his having been murdered near Lake Nyassa. The new Lieutenant-Governor, Sir Percy Douglas, arrived out in the Golden Fleece on the 2d of December. The electric telegraph was in operation to Mossel Bay. Disturbances still existed in the Transvaal. Mr. Brand had been elected President of the Free State.

INDIA.—The war on the frontier is said to have excited the sympathy of the Affghans, who have assembled a large force at Jellahabad. On the morning of the 5th ult. a party of the enemy on the frontier made a raid on our outpost about 15 miles north of Peshawur. They were driven off by the Irregular Cavalry, but unfortunately Lieutenant St. G. M. Bishop, of the 6th Bengal Cavalry, was killed while charging at the head of his men. Further intelligence from the head-quarters of the Commander-in-Chief, at Rawul Pindee, states that affairs on the frontier had become much more pacific. The villages of Lalloo and Umbeyla were taken without any officer being killed or wounded, the enemy suffering severely. The Bonair tribe seem inclined to adhere to their engagements, and the Bajourles and others who had come to their aid have fled. General Chamberlain has left the camp, and is improving in health. Letters from the North-West frontier contradict the report of the death of Lieutenant W. Battye, of the Guide Corps, and of Lieutenant Inglis, of the 14th Bengal Native Infantry, who were severely wounded when combating the enemy in the Umbeyla Pass. The Shan States have broken out in open revolt against the King of Burmah, to whom they are tributary. Sir Charles Trevelyan has knocked himself up by overwork. He has been advised to leave Calcutta to recruit his strength, and has proceeded to Delhi, where he will spend two months.

CHINA.—The dismissal from the Chinese service of Mr. H. N. Lay, who for several years back has filled the post of inspector-general of foreign customs, is confirmed. Major Gordon attacked Soochow on the 5th December, and entered the place on the same day. Dissension had broken out among the rebels, and a party of them, desirous of surrendering the city, cut off the Mo Wang's head. It was expected that Hang-Chow would soon fall, and, that failing other means, the Imperialists would be able to starve the rebels out of Nanking. It was believed that Major Gordon would retire from the Chinese service, and that an order would be issued prohibiting all British subjects from engaging their services to either party in future.

JAPAN.—The accounts from Japan state that Prince Satsuma has refused to pay the indemnity demanded by Admiral Kuper, except upon condition that every foreigner quits Yokohama. "The British forces in Japan," says the *China Mail*, "are evidently waiting for support, and are not likely to withdraw from the country until something has been done much more decisive than the affair at Kagosima." Some of the powerful Daimios are still in open arms against the Tycoon's Government, and a force is being equipped to coerce them.

UNITED STATES.—General Longstreet has been heavily reinforced from the armies of Generals Lee and Johnston, and has taken up a strong position at the junction of the East Tennessee, Virginia, and Knoxville Railroad, 20 miles from Knoxville. His pickets confront the Federals at Blair Cross Road. It is expected that he will shortly resume the offensive. His entire force now consists of 34,000 infantry and 12,000 cavalry. A heavy cavalry fight occurred on the 10th near Strawberry Plains, eight miles from Knoxville, the Confederates being repulsed with serious loss. General Johnston has been largely reinforced by extra troops, and maintains a bold front at Dalton and Tunnel Hill. General Lee is also being reinforced by conscripts, and is organising his cavalry for the spring campaign. General Stuart, with 5000 Confederate cavalry, is reported to have passed round Gen. Meade, and to have reached Leesburg, Virginia, from which place the Federals retreated to Fairfax. The object of this movement, which is said at Washington to be unimportant, is believed to be to sever either the Alexandra and Orange or the Baltimore and Ohio Railways. The Federal authorities are said to be fully prepared to prevent material damage to either. Gen. Meade has made a speech in Philadelphia, stating that as soon as the weather moderated and the season allowed, active operations in Virginia would recommence. The war would have to be ended by hard fighting, and he trusted peace would be restored by next summer. General Burnside has been appointed to recruit and fill up the 9th Army Corps, of which he is commander, to the number of 50,000 men. Two blocks of buildings and several large warehouses are reported to have been destroyed in Charleston on the 20th by Gillmore's shells. The city was almost deserted by the military. Telegrams from Fortress Monroe of the 13th reported that the Federal gunboat Iron Age ran aground, under the fire of Confederate batteries, at the entrance of Wilmington Harbour, on the 11th. She was subsequently blown up by the Confederates, who captured 24 of her crew. In the Federal Senate Mr. Howe, of Wisconsin, has offered a resolution, which was referred to the Military Committee, requesting the President to call out 1,000,000 men for 90 days, to be led by General Grant against Richmond, for the capture of that city, and the liberation of the Federal prisoners there. An animated debate has taken place in the Senate on a resolution to expel Senator Davis, of Kentucky, for submitting treasonable resolutions. Mr. Davis defended himself, declaring that, if expelled, he would go back to Kentucky, and raise a cry of oppression, usurping tyranny, and revolution against the faithless men having charge of the Government. There were men in the administration recreant to their trust, trying to subvert the Constitution. In the condition of the states he had a right to call a Convention, and do away with the best Government on earth, and he called for such a Convention, that the people might take the war into their own hands, and reconstruct the nation upon the principles of a compromise and of liberty, upon which Washington and his associates acted. It is not believed that the resolution for expulsion will pass. Senator M'Dougall has offered a resolution asserting that the French occupation of Mexico was an act unfriendly to the United States, and that if the French troops were not withdrawn prior to the 15th of March next, it would be the duty of the Federal Government to declare war. The resolution met with no support, and was referred to the Committee on Foreign Relations. The New York Legislation has passed a bill to enable soldiers in the field to vote. The Governor of New Jersey, in his Message to the Legislature, recommends a conciliatory policy to the South, and declares that emancipation, peace, and the reconstitution of the old Union should be the sole object of the war. The Maryland Legislature have voted a resolution in favour of calling a convention to carry out emancipation. Mr. Lincoln has been nominated by both branches of the Pennsylvania Legislature for the next Presidency, and the Republican members of the State Governments of Maine, Illinois, and Indiana will also advocate his nomination in the meetings of their respective bodies on the 22d inst. A meeting of Democratic-Conservative members of Congress has been held at Washington. Resolutions were passed that President Lincoln's amnesty proclamation was unwise, inexpedient, revolutionary, and unconstitutional, and should therefore be disapproved of. It was also resolved to prepare amendments to the Army and Navy Bill, providing for the payment of the army and navy in specie or its equivalent. Extensive frauds in the Custom House of New York, the Treasury Department of Washington, the Navy Yard, Brooklyn, and the public offices, continue to be discovered. In the House of Representatives, Mr. Fernando Wood proposed to appoint a congressional committee to investigate the administration of affairs in all the departments, as well as the charges against General Butler at New Orleans. The proposition was rejected by a vote of 76 to 63. In order that the rejection should not appear in too scandalous a light, Mr. Fenton brought forward a resolution to inquire into frauds in the Custom House, which was adopted. The municipal report on the condition of the barracks on Broadway, near Astor House, has created much indignation. Sixty men, arrested for various military offences, were found confined in a room 15 by 20 feet square. Many had been there for months with no accommodation for sitting or lying down. The report states that they were covered with filth, and treated worse than wild beasts, and that the existence of such a place was an outrage on humanity, bringing disgrace to a nation. An extra brigade of troops, under General Terry, has been sent to Johnson's Island, in Lake Erie, to guard the Confederate prisoners there, who, it has been feared, might take advantage of the ice to make their escape. The Provincial Government of Nova Scotia placed the Chesapeake in the Admiralty Court on the 7th. In the preliminary hearing on the 9th, both Judge Stuart and Advocate-General Johnston expressed their opinion that the capture was piratical, and that the vessel should be returned to the owners. The case was adjourned to the 13th, when the judge declared that he should treat the case throughout as

piracy. The passengers who lately captured the schooner Gerety, from Matamoras, for Havannah, took her into Honduras, and, after selling a portion of her cargo, escaped.

CHILI.—A terrible catastrophe occurred on the 8th December at Santiago, the capital of Chili. While the church of La Campania was crowded with nearly 4000 persons at the celebration of the Immaculate Conception, the drapery of the altar caught fire and soon involved the building in flames. Upwards of 2000 ladies, belonging mostly to the richest families in the capital, were burnt to death, and others had their limbs torn off or were crushed in the crowd. Upwards of 200 cartloads of burned corpses had been removed from the ruins.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90⅛ to ⅜ for Money, and 90½ to ⅝ for Account; Reduced and New Three per Cents., 90⅞ to ¼; India Five per Cent. Stock, 104¼ to 104; Ditto Bonds, par; Exchequer Bills, 4*s.* to 10*s.* dis.—FOREIGN: Brazilian Old Five per Cents., 100⅓; Danish, 1864, 93; Dutch Certificates, 101⅛; Egyptian, 101; Greek, 21; Ditto, for Acct., 21⅜ to ½; Ditto Coupons, 9¼; Italian, for Acct., 67⅛; Mexican, 35⅝; Ditto, for Acct., 36 to 35¾; Peruvian, 1862, for Acct., 84; Portuguese, 1856, &c., 47¼; Ditto, for Acct., 47⅜; Russian, 1862, 88; Spanish Passive, for Acct., 32⅞ to 33¼; Ditto Certificate, for Acct., 13¼; Turkish, 1858, 70½; Ditto, 1862, 67¼; Ditto, for Acct., 67¼; Ditto Guaranteed, 102; Venezuela, 23.

Gazette of the Week.

FRIDAY, *Jan.* 22.—BANKRUPTS.—T. AYLAN, Stockton-upon-Tees, Shipbroker—J. ALLEN, Horbury, Yorkshire, Teadealer—A. ABBITTS, Birmingham, Brass and German Silver Caster—I. BEARDS, Wolverhampton, Cabinet Lock Manufacturer—J. M. BLACKLOCK, Chertsey, Surrey, Clerk in her Majesty's War Office—D. BUCK, Caxton, Cambridgeshire, Shoemaker—J. BURR, St. Mary Leyton, Essex, Assistant to a Licensed Victualler—W. A BURT, Oval Road Regent's Park, Operatic Agent and Manager—A. G BEALE, Winchester Street, Pimlico, Schoolmaster—O. BEAN, Lincoln, Journeyman Tailor—H. BERRY, Leeds, Hay Dealer—W. H BALL, Amelia Street, Walworth, Livery Stable-keeper—J BAMPTON, Whaley Bridge, Cheshire, Painter—W. BRADDON, New Hornsey Road, Holloway, Coal Merchant—S. BRANDFORD, Plumstead, Kent, late Labourer—F. CRUMP, Worcester, Glover—H. CASTELL, Aldermanbury, Fancy Warehouseman—F COLE, late of Gower Street, Commission Merchant—M. P. CRACKNELL, Worlingworth, Suffolk, Grocer—T COLE, Merthyr Tydfil, Licensed Victualler—J W. CHAPMAN, Henley-on-Thames, Artificial Manure Merchant—W CULLYER, Oakley Street, Lambeth, Smith and Tool Maker—T. COLLINGRIDGE, sen., Lower Street, Islington, Watchmaker—F. DANIEL and H D. MAER, Cannon Street West, City, Merchants—R. DIXON, Little Bolton, Lancashire, Provision Dealer—A. DAVIS, Newnham Gloucestersh., Licensed Victualler—I. DIXON, Leeds, Architect—W. DARLYN, Holt, Norfolk, Miller—H ELLIS, Cowper St., City Road, Farrier—J. ELLIS, Minories, Plumber—J. FOX, Barrow-in-Furness, Lancash., Grocer—F. GREENWAY, Worcester, Commercial Clerk—S GIRTON, Caunton, Nottinghamsh., Farm Labourer—A GOSHAWK, Church St., Camberwell, Photographic Artist—J. GARRATT, Garrick Lane, Tooting, Innkeeper—R. GAIGHTLY, Sedgefield, Durham, Publican—H GREEN, Birkenhead, Out of Business—J HELLIWELL, Todmorden, Yorkshire, Cotton Spinner—W. HOPE, Lowesmoor, Worcestershire Butcher—J. HAZZARD, Aspley Guise, Bedfordshire, Baker—L. J HEALY, late of Whiskin Street, Clerkenwell, Working Jeweller—R. HERBERT, Glebe Terrace, Lower Road, Islington, Cheesemonger—W. HARMER, Tabernacle Walk, Finsbury, Grocer—J. HUNT, Loughborough Leicestershire, Joiner—J. HORSFALL and J. SNOWDON, Gildersome, Yorkshire, Contractors—C. H. B. HEWITT, Lichfield, Wine Merchant—H. HEWITT, Liverpool, Licensed Victualler—T. HAYES, Sydenham, Kent, Market Gardener—J. HANKEY, late of Newchapel, Staffordshire, Labourer—W. R IRVING, Rosebank Road, North Bow, Clerk—J. JEFFERY, Plumstead, Kent, Grocer—D JONES, Jewry Street, Aldgate, Dairyman—W. B. JACKSON Great James Street, Bedford Row, Clerk—E. JOWETT, Bradford, Yorkshire, Woolstapler—T. KINGMAN, Cheltenham, Gloucestershire, Milkman—D. KAVANAGH, Basinghall Street, Master Mariner—GEORGE LEVY and CHARLES ROBSON, Great New Street, Fetter Lane, City, Printers and Shippers—CHARLES LLOYD, late of Maindy, Glamorganshire, Gardener—ROBERT LOCKWOOD, Spanby, Lincolnshire, Farmer—R. LEDIARD, Dock Head, Bermondsey, Innkeeper—F LAWRENCE, Birmingham, Out of Business—W. LEACH, Greenwich, Retailer of Wines and Beer—W. MILES, Shirenewton, Monmouthshire, Timber Merchant—G T MARNS, Broad Street, Ratcliffe, Ship Chandler G. T. MALIN, Queen's Terrace, Queen's Road, Haverstock Hill, Coach Painter—J. M'ARTHUR, late of Princes Street, Lisson Grove, Greengrocer—J. MITCHELL, Florence Street, Islington, Builder's Foreman—T. MARSHALL, High Road, Tottenham, Fishmonger—J. MINNS, late of Carbrook, Norfolk, Baker—J. G MAYO, late of Woburn Place, Russell Square, Barrister-at Law—W. MARSDEN, Old Bailey, Manager to a Dealer in a Patent Improved Button Fastener—P. MAISON, St. Martin Street, Leicester Square, Restaurant Keeper—J. MACDONALD West Hartlepool, Comedian—R. MANN, Alfred Mews, Tottenham Court Road, Bedstead Maker—S. NEWMAN, Farnham, Surrey, Basket Maker—J. OSBORN, Brook Row, Bagnigge Wells Road, Timber Dealer—J. PRYOR, Great Hadham, Hertfordshire, Publican—G. PARISH, Shrewsbury, Shropshire, late Cattle Dealer—J. POOLEY, Royal Street, Lambeth, Artificial Manure Merchant—I. PACKMAN, Troy Town, Rochester, late Licensed Victualler T. POOT, Botcheston, Leicestershire, Farmer—R. W. PYNE, Queen's Row, Camberwell Builder and Contractor—A. PIKE, Ramsbury, Wiltshire, Inn Keeper—P. ROGERS, Upper Lisson Street, Paddington, Dairyman—J. ROBINSON, Burton-upon-Trent, Staffordshire, Cooper—MARY ANNE ROE, Westbromwich, Staffordshire, Bayonet Maker—FRANCIS JOHN RICE, Great Portland Street, Attorney at Law—MAURICE SPIEGEL, Walbrook City, Merchant—JOSEPH THOMSON STAFFORD, Bebington, Cheshire, Joiner—B. SCARTH, Pudsey, Yorkshire, Plumber—W. SHAW, Rutland Terrace, Hornsey Road, Holloway, late General Shopkeeper—T. SCANTLEBURY, jun., Falmouth, Boot Maker—T. STOYLES, Sansbury, Fowkes Buildings, Great Tower Street, Hemp Dealer—W. SCATTERGOOD, late of York Road, Lambeth, Builder—H. A. SIMON, Union Crescent, Wandsworth Road, Barrister-at Law—B. STEEL, Sheffield, Earthenware Dealer—W. SMITH, Tottenham Court Road, Coffee House Keeper—S. SMAIL, Darlaston, Staffordshire, Butcher—F. W. SMYTH, Cardiff, Commission Agent—J. S. SNOWDON, Tooley Street, Southwark, Sail Cloth Manufacturer—J. W. SCHLESINGER, Cannon Street West, City, Merchant—W SADDINGTON, Wallingford, Berkshire, Horse Dealer—S. B. SAMSON, Wilderness Row Clerkenwell, Leather Merchant—G. THOMSON Liverpool, Bookseller—J. THOMPSON, Three Lane Ends, Durham, Shoemaker—W. THURNELL, Archer Terrace, East India Road, Meat Salesman—S TIPPINS, Pontymistre, Monmouthshire, Draper—S. WILLIS, Manor Street, Clapham—W. WILLIAMSON & J. WILLIAMSON, Leeds, Glass Bottle Manufacturers—B. WILSON, Caversham, Oxfordshire, Clerk—H. T. WEDLAKE, late of George Street, Euston Road, Organ Builder—G. WETHERINGTON, Coventry, Chemist—J. WHITEWAY, East Leigh, Devonshire, Yeoman—W. WALLIS, Shrewsbury, Writing Clerk.

TUESDAY, *Jan.* 26.—BANKRUPTS—J. ATKINS, Great College Street, Camden Town, Dairyman—W. ASHTON, Wellington, Shropshire, Commercial Clerk—J BROWN, Sheffield, Slater—G. BROCKLEY, Hanley, Staffordsh., Cabinet Maker—H R. BENNETT, late of Denham Yard, Drury Court, Strand, Whitesmith—T S BUTASE Guston, Lancash.—J. F R BRADSHAW, Henry Street, Cotton's Estate, Limehouse, Ship's Smith—C. BUTLER, Carlisle Street, Edgware Road, Carpenter—E BROUET late of Sunderland, Broker—W. BRACEGIRDLE, Bowden, Cheshire, Labourer—J. COTTLE, Grange Road, Bermondsey, Cheesemonger—T CAVENY, Huddersfield, Beerseller—J CROFTS, Walsall, Staffordshire, Builder—R. G CORDEAUX and J B YETT, New Basinghall Street, Wine Merchants—F. CLAXTON, St. Ann's Terrace, Brixton Road, Messenger in the House of Commons—C. CROW, Redditch, Worcestershire, Grocer—H. CUTLER, Christchurch, Hampshire, Publican—W. CLEGG, Bedford, Lancashire, Cotton Power Loom Weaver—F. W DWARRIS sued as F. W. DUNLAS, late of Tyers Street, Lambeth, Out of Business—NATHANIEL W DAY, Water Lane, City, Wine Cooper—T. S. FARNCOMB, Brighton, Sussex, late Tutor—J E FISCH, Great Cambridge Street, Hackney Road, Boot and Shoe Manufacturer—M E FURNESS, Newman Street, Oxford Street, Law Clerk—J A. FARWELL, Melcombe Regis, Dorsetshire Baker—M GORMAN, late of Bath Road, Queen's Road, Peckham, Widow—J GARDNER and L. FOGO, Liverpool, Sail Cloth Manufacturers—R. H GILL, Gateshead, late Timber Dealer—P HENNIS, New Shildon, Durham, Publican—J. E. HALL, Union Street, Islington upon Tyne, Publican—W H GRIFFITHS, Llanbedrog, Carnarvonshire, Engineering Draughtsman—T. HEATLEY, Green Hill, Halliwell, Lancashire, late Clerk to Sessions—D. HOOPER, Brewer—C. G. HARVEY, late of Llanstadwell, Pembrokeshire—D HOOPER, Macclesfield, Silkman—JOSHUA HORSFALL and JOHN HORSFALL, Bradford, Woolstaplers—R. HOLLAND, late of Liverpool, General Merchant—H. HANN, Weymouth, Dorsetshire, Butcher—G. HOYLE, Halifax, Butcher—H. ISSLEY, Sedgley, Staffordshire, Tailor—T. JENKIN, St. Erth, Cornwall, Shopkeeper—JOHN JENKINS, Bridgend, Glamorganshire, Mason—A. A KEMPE, Slough, Buckinghamshire, Clerk in Holy Orders—J LAURENT, late of Great Newport Street, Wine Merchant—G. T LINNARD, late of James Street, Stepney, Beer Retailer—C. MASON, late of Barnard's Inn—R. H. MORTIMORE, Clifton Villas, Camden Town, Attorney-at Law—G. MASON, late of Queen's Road, Peckham, Horse Dealer—WILLIAM ELLIOTT MARSH sued as WILLIAM EDWARD MARSH, Oxford, Gentleman—J M—RHOUSE, Meltham, Yorkshire, Grocer—W W MILLER, late of Warwick Lane, City, Butcher—A MACKAY, Chatham, Kent, Staff Assistant Surgeon—W B NEWMAN, Granville Lodge, Lewisham, Builder—T NORMAN, Stamford Baron, Northamptonshire, Licensed Victualler—C POWELL, late of Green Street, Paddington Green, Biscuit Keeper—F ROGERS, Great College Street, Camden Town, late Photographic Artist—R ROBINSON, Grantham, Lincolnshire, Publican—F STEER, Nichol Square, Hackney Road, General Commission Agent—H SIMMONS, Cuckfield, Sussex, Carpenter—GEORGE SERCOMBE & THOMAS SERCOMBE, Exeter, General Merchants—WALTER SPANSIL, Sandown, Isle of Wight, Carpenter—SAMUEL STACE jun., Hastings, Blacksmith—R. A. STEED, Long Melford, Suffolk, Boot and Shoe Maker—J SHAW, Long Buckby, Northamptonshire, Farmer—E STOKES, Aldridge, Staffordshire, Hay Dealer—J. T. TAYLER, Gillingham Street, Pimlico, Interpreter—T WATTS, Bristol, Sail and Ships' Colour Maker—J. WHITFIELD, Southampton, Publican—M. WILLIAMS, Manchester, Poulterer—C. WINDSOR, Oxford Street, late Beershop Keeper—S. WILSON, Parsley cum-Calverley, Yorkshire, Shopkeeper—W. WATERS, Penmaen, Monmouthshire, Engine Driver—T WELLS, Frensham, Surrey, Glass Stainer—T WOODWARD, Salisbury, Wiltshire, Baker.

SCOTCH SEQUESTRATIONS.—J. WALLACE, Crosshill, Rutherglen, Farmer—W. ADAM, Glasgow, Fleshcr—J. ROBERTSON, Nicoll, Glasgow, late Iron Merchant—W. S. MILLER, Leith, Merchant—GILMER, HENRY, & Co., Leith, Commission Agents—J. HART, jun., Eastwood, Renfrewshire, Farmer—R. STURROCK, Kilmarnock, Spirit Merchant—G. KIDD, Glasgow, Commission Merchant.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,001,010	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	12,351,010
		Silver Bullion	—
	£27,001,010		£27,001,010

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,077,189
Rest	3,419,971	Other Securities	19,863,260
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,337,246	Notes	6,713,935
Other Deposits	13,406,627	Gold and Silver Coin	671,210
Seven days and other bills	588,750		
	£38,305,594		£38,305,594

Jan. 28, 1864. M. MARSHALL, Chief Cashier.

Metropolis and its Vicinity.

METROPOLITAN BOARD OF WORKS.—At the meeting of the Board of Works on Friday a proposition was made to raise the salary of Mr. Thwaites, the Chairman, from 1500*l.* to 2000*l.*, the highest sum allowed by the Act of Parliament, on the ground of the great increase in the duties of the Board, and the business capabilities of the Chairman. The motion was carried by a majority of 27 to 4, three members declining to vote.

THE THAMES EMBANKMENT.—Active measures are in progress for the works of the embankment on the north side of the Thames. Between Westminster and Hungerford Bridges piles of immense size have been driven in, and machinery of a very formidable character introduced, upon which large numbers of men are actively employed. Operations on a somewhat smaller scale are going on immediately behind the Duke of Buccleuch's unfinished mansion in Whitehall Gardens, and at the bottom of Whitehall Stairs, and preparations will shortly be made between Hungerford and Waterloo Bridges. Another contract for that portion of the embankment between Waterloo and Blackfriars Bridges will be proceeded with without delay.

THE TYLNEY LONG FAMILY.—Among recent vicissitudes of families, a brief notice of the passing away of the Tylney Long estates into a new family may be of interest to the public. The Tylney property came into the Long family by the marriage of the last Earl Tylney's sister, Lady Emma Child, to Sir Robert Long, of Draycot Cerne, Wilts. His granddaughter, Catharine Long, the daughter of James Tylney Long, became the heiress of both the families on the death of her brother, and married the Hon. William Wellesley Pole, afterwards Earl of Mornington. Their son, the late earl, inherited all his mother's estates, and, after the death of his brother, his only sister, Lady Victoria Tylney Long Wellesley, became his heiress-at-law; and, though he had joined with his father in cutting off the entail, he had left all his lands to her. A will, however, executed a few weeks before his death, has disinherited her, and caused the lands of the Tylney Longs to pass away from all the heirs of the family, male and female, to Lord Cowley, her Majesty's Ambassador at Paris. The Longs had held the Draycot estates for centuries.

THE MISSION OF SIR MOSES MONTEFIORE TO MOROCCO.—The President of the London Committee of Deputies of the British Jews has received a despatch from Sir Moses Montefiore, stating that he had been unable to effect a landing, as he intended, at Saffi, one of the ports of Western Barbary, but was informed by signal from the shore that the two Jewish prisoners had been released on the 6th inst. Sir Moses left Mogador on the 17th inst. for Morocco, to have an interview with the Sultan. The following circular has been addressed by the Spanish Minister to the Consuls and Vice Consuls of Spain in the ports of Morocco, by order of the Government of Madrid:—

"The government of Her Majesty the Queen has seen with great displeasure the gross calumnies which have been written against Spain, in the belief that the Spanish consuls in Morocco have undertaken a crusade against the Israelites established in this empire. Such calumnies must not in the least influence your feelings, nor ought they to occasion any alteration in the proceedings of the agents of Spain in Morocco, regarding the Israelites, as relates to aiding and protecting them. On the contrary, the best mode of successfully combatting such calumnies is increasing your solicitude for this race which is so sadly circumstanced in this country. Thus you will avail yourselves of every opportunity which may arise, to prevent acts of cruelty on the part of the Moorish authorities against the Israelites, and also in cases of notorious injustice, and when it is the question to inflict the punishment of the lash, in order to extort confession, in any case you will resolutely interpose your influence with the local authorities to prevent the commission of such acts of barbarity."

PROPOSED NEW BRIDGE FROM WANDSWORTH TO FULHAM.—It is intended to remove the old bridge, which has been so long an inconvenience to the navigation, and to build a substantial one for carriages and passengers, with approaches and piers commencing at Wandsworth in the York Road, and terminating near the Peterborough Arms in King's Road, Fulham, with an approach road from the latter point, terminating in Moore Park Road, near to where it is crossed by the Britannia Road. The road on the Wandsworth side will commence in York Road and terminate at the junction of the high road from Wandsworth with the high road from there to the new Wandsworth station of the Crystal Palace and West End Junction Railway. The estimated cost is 40,000*l.*

THE GREAT EASTERN STEAMSHIP.—Messrs. Cunard, Wilson, & Co., of Liverpool, announce that the Great Eastern steamship will be sold on the 17th of February, "peremptorily and without any reserve," unless previously disposed of by private treaty. The Senate of Frankfort have refused to allow the lottery scheme to be carried out in that city.

METROPOLITAN FIRE BRIGADE.—At the last meeting of the Common Council, Mr. Lowman Taylor called attention to a report that the Government was about to establish a fire brigade for London on a scale which would entail considerable expense, and moved that the subject be at once referred to a committee to consider and report. The motion was agreed to.

THE CITY REMEMBRANCERSHIP.—At the last meeting of the Common Council a letter was read from Mr. Tyrrell, the late Remembrancer, stating that he had been in the habit for several years of compiling documents of great interest to the City from the Tower registers and other quarters. If the Common Council had voted him a retiring allowance, it was his intention to present those documents to the City, and he would still do so if they would reconsider their decision; if not, he would present them to the British Museum. The letter was referred to the library committee.

LANCASHIRE RELIEF FUND.—At a meeting of the Mansion House Committee on Friday, grants were voted to various places to the amount of 3835*l.* The subscriptions received in the previous fortnight amounted to 1710*l.*, of which upwards of 1300*l.* had come from places in the colonies.

THE NEW ACT ON TRADE MARKS.—The provisions of the new Act respecting trade marks are about to be put in force in order to protect the public and manufacturers against the frauds inflicted on them by the sale of pianos "by widows in distressed circumstances, and at a great sacrifice." These instruments are represented to be the manufacture of some eminent maker whose name is surreptitiously affixed, while in fact the instruments are of an inferior make and comparatively worthless. Messrs. Collard and Messrs. Rolfe have taken up the matter, and have obtained summonses against tradesmen who have been in the habit of using their names in their bills as well as on their pianos; though in the latter case a close examination of the inscription has brought to light the word "from" in very minute letters preceding the names of Messrs. Collard and Messrs Rolfe.

DEATH OF A COLUMBINE BY FIRE.—On Saturday an inquest was held at the London Hospital on the body of Mary Anne Thorne, known as Madame Marie Charles, aged 32, who, while dancing as Columbine at the Pavilion Theatre on the 6th inst., unfortunately set her dress on fire, and received such injuries that she died after lingering for several days, having never rallied. The evidence showed that, while she was making a "figure," she stepped across a board, behind which was a row of gas jets, and that her dress immediately caught fire. The inquest was adjourned in order that the jury might view the stage, and also have evidence as to the Lord Chamberlain's intructions with regard to the protection of stage lights.

INCUMBENCY OF HAMPSTEAD.—The Rev. Charlton Lane, of Jesus College, Cambridge, incumbent of St. Mark's, Kennington, and formerly rural dean of Southwark, has been appointed by Sir Thomas Maryon Wilson perpetual curate of Hampstead, in the room of the Rev. Thomas Ainger.

MURDEROUS OUTRAGE AT CAMBERWELL.—On Monday night, about a quarter before 9, two men called at the house of Mrs. Kent, 147, Camberwell Road, between the Albany Road and Addington Square, for the purpose of looking at some apartments which were to let. They were shown the apartments and engaged them, stating that they would leave a deposit and furnish substantial references. They had got as far as the street-door, when one of them pretended to be feeling in his pocket for some money to leave as the deposit. Mrs. Kent at the same time opened the street-door, and as she did so noticed that one of the men was attempting to pick her pocket. She seized his hand, and called out loudly for the police. The man whose hand she held then gave her a violent blow with his clenched fist over the eye and nose. The other pulled out a life-preserver from his pocket and inflicted two blows on the side of her head. She fell to the ground insensible, and the two men ran into the street, and managed to escape before the neighbours and the police had come to the spot. Mrs. Kent was found insensible, with blood running from her wounds,

and the injuries have since been ascertained to be so serious that it is extremely doubtful whether she can recover. One of the men in running away let fall his hat, but it is not likely to throw any light upon the affair, as it contains no name beyond that of the maker. It is stated that the man who left his hat was stopped, when he said he was running after a man who had stolen his hat, and was allowed to leave. The men had a foreign appearance, but it is supposed that they were disguised. A short time since a woman was murdered by thieves in Addington Square, and it is suggested that the same men have committed the present assault. Robberies have recently been very frequent in the same neighbourhood.

ACCIDENT WITH THE LIONS AT THE AGRICULTURAL HALL.—A shocking accident took place on Thursday morning to the feeder of the lions now performing at the Agricultural Hall, Islington. It appears that the old keeper of the animals had left his situation, and a new man called John Reeves had been engaged in his place. He had only been employed two or three days, and was engaged on Thursday morning in pushing some straw between the bars, when first one lion and then another sprang upon him, seized him by the hand and arm, and commenced tearing him. The animals were struck repeatedly with heavy iron rods, but it was some time before they could be made to quit their gripe. The man was removed to St. Bartholomew's Hospital, where it was once decided that amputation of the hand was necessary to save his life, but at a late hour on Thursday night he was in too low a state from loss of blood to undergo the operation. The operation was performed yesterday by Mr. Lawrence, and the sufferer remains in a most precarious state.

MURDER BY GAROTTING IN BETHNAL GREEN.—A verdict of wilful murder, under very singular circumstances, was returned by a coroner's jury a few days since. Some time last spring a man went into a small shop in Bethnal Green, kept by a Mrs. Moore, and picked her pocket. She discovered her loss, and grappled with the thief, on which he seized her by the throat, and nearly choked her. By leaving his great coat and muffler in her hands, he finally made his escape. The woman lingered for nine or 10 months, and died about a fortnight since. It was clearly proved that her death was caused by the garotting, on which the jury returned a verdict of Wilful Murder against some person unknown, and recommended that a reward should be offered for his apprehension. In accordance with this recommendation the Government have offered a reward of 50*l*. for the apprehension of the murderer.

THE BRONZE AND COPPER COINAGES.—It is understood that copper coin will shortly be declared an illegal tender, and that the Master of the Mint is desirous of affording ample facilities for its return to the Mint previous to the issue of an official proclamation to that effect. An officer of the Mint is at present employed in making arrangements in Warwickshire and Staffordshire for this purpose, and advertisements will shortly appear, containing full particulars of his arrangements. Already more than 9000*l*., containing three million and a half pieces of the old coin, has been returned to the Mint from Birmingham alone, and it is hoped that the small proportion which now remains in circulation will be speedily cleared out.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week ending Saturday, January 23, were 2180, an amount considerably higher than is usual at this period of the year, but less by 247 than that of the previous week. In the 10 corresponding weeks of the years 1854-63 the average number of deaths, corrected for increase of population, was 1529. The present return is therefore 651 above the average. During the week the births of 1063 boys and 1013 girls, in all 2076 children, were registered in London, being 104 less than the deaths. In the 10 corresponding weeks of the years 1854-63 the average number was 1973.

Provincial.

BIRMINGHAM.—Mr. Bright, M.P., and Mr. Scholefield, M.P., attended a meeting in the Town Hall on Tuesday evening for the purpose of addressing their constituents on public affairs. The hall was crowded in every part. The Mayor occupied the chair, and having briefly opened the proceedings, a resolution was unanimously adopted declaring the opinion of the meeting that the present Parliament had failed in its duty in not having passed a measure which would have admitted a large number of the unenfranchised to a real share in the government of the nation, and that the present period was favourable to the passing of such a measure. Mr. Scholefield then addressed the meeting, after which Mr. Bright spoke at great length on the various questions which have occupied public attention during the recess. The following is a summary of portions of his speech :—

"There are two subjects about which I would just say a few words. The first is the question which now keeps Europe in suspense, which may end in a war or may end in some diplomatic accommodation of a long standing quarrel. I will not go into the history of the Danish and German dispute, but I will say that if there be a possible Government in our day that will plunge this country into war under the pretence of maintaining the balance of power in Europe, and sustaining any kingdom there, be it little or great, that Government not only is not worthy the confidence of the people of England, but deserving of our execration and abhorrence. The other subject to which I referred, is the question between North and South in the United States. My opinion is that the unanimous judgment of the people of England, so far as that is ever shown upon any public occasion, is in favour of the course which her Majesty's Government have publicly declared it to be their intention to pursue. I have seen it stated by authority, North as well as South, and by authority which I may term English, and by authority from France, that in the present condition of the quarrel, recognition by all the usages of nations must necessarily lead to something more; and, therefore, although there were no question of slavery, although it were simply a political revolt, and that there were no special moral question connected with it, I believe that, looking to the past usages of this country with regard to the rebellion of the Greeks against the Turks, and with regard to the revolt of the colonies of South America against Spain, that it can be demonstrated that these cases afford no support whatever to the argument that we are permitted to recognise the South, and that if such recognition did take place now it could only exasperate still more the terrible strife which exists on the North American continent, and would spread that strife over Europe itself. Now, I am myself of opinion, and have been from the first, that the people of America, so numerous, so powerful, so instructed, so capable in every way, would settle the difficulties of that continent without asking the old countries of Europe to take any share in them. I believe that in the providence of the Supreme the slaveholder, untaught and unteachable by fact, or argument, or Christian precept, has been permitted to commit—I will not call it the crime, but the act of suicide upon himself. Whether President Lincoln will be in favour of abolition, whether the North are unanimous against slavery, whatever may be said or thought with regard to the transactions on that continent, he must be deaf and blind, and worse than deaf and blind, who does not perceive that through the instrumentality of this strife that most odious and most indescribable offence against man and against Heaven, the slavery and bondage of four millions of our fellow creatures, is coming to a certain and a rapid end. I will say of this question that I look forward to the time when all will join with me in rejoicing that there does not breathe a slave on the North American continent, that the Union has been completely restored, and not less will he rejoice that England did not in the remotest manner, by a word or a breath, or the raising of a finger, or the settling of a question, do one single thing to promote the atrocious object of the leaders of this accursed insurrection. He then referred at great length to a correspondence which took place some weeks ago between Mr. Cobden and the Editor of the *Times* in reference to a charge which that journal had brought against him (Mr. Bright), that he had proposed at a meeting at Rochdale to divide among the poor the lands of the rich. He said that Mr. Cobden had compelled Mr. Delane to throw off the mask of secresy, and avow himself the Editor of the *Times*, and afterwards to admit that neither Mr. Bright nor Mr. Cobden had recommended agrarian outrage, or proposed that the division should be accomplished by violence. He then proceeded as follows :—Now, what I said to the Rochdale meeting on the subject of the land was this—I should say, if we were fairly represented, that feudalism with regard to the land of England should be abolished, and that the agricultural labourer throughout the United Kingdom should be redeemed from that poverty and serfdom which up to this time has been his lot. It would take a long speech—indeed, it would take a night—to go into the question of the condition of that class; but with laws such as we have, intended to bring large tracts of land into possession of one man, that one man may exercise great political power. That system is a curse to the country, and dooms the agricultural labourer to perpetual poverty and degradation. Is it an unchangeable law of Heaven that the agricultural population of this country shall continue in that condition? They tell you your agriculture is far better than the agriculture of any other country; that you produce a larger quantity of wheat than any other producer from a given surface. We know that there is the greatest market in the world close at our doors, and the means of conveyance to every part of the kingdom. Then, I want to know, why it is that the labouring population on the farms of this country are in the condition in which they are described. It is not so in the most civilised countries in Europe. It is not so in the United States of America. But here it is caused, first by the law of primogeniture, and secondly by the law of entail. After describing the operation of these laws at great length, he said that in case of intestacy landed property ought to go among the next of kin instead of to the eldest son, and that no devise of land should be made to any unborn person. He had been told by a gentleman connected with one of the largest properties in England, that he had no idea of the terror which his speeches created among the landed gentlemen. "I never," he said, "frighten any of my neighbours. I don't know why I should be so alarming to these gentlemen who live in their great houses and their castles; but the fact is that the landed gentlemen are not a wise class. There are brilliant exceptions; there are men among them, many who cannot be surpassed by any of their class or of any class in the world, but as a class, and perhaps one might say it of nearly every class—I believe it is true of the class to which I belong in Lancashire—they are not a wise class. They know something of agriculture. County members have to get it up for agricultural dinners. And they know something about horses, and they know all that can be known on the subject of game. Well, on the principles of law and of government, speaking of them as a whole, and judging of them by their past force, they are as dark as night itself. Would you believe that the landed proprietors never found out till Mr. Cobden and I and a few others told them that the Corn Law was a great injury to them? They did not know that it actually diminished the value of their land, and diminished the security of their rents, and that it loaded them with an inconceivable amount of odium, while, at the same time, it beggared hundreds of thousands of the people, and it menaced this nation with revolution. Mr. Cobden and others who acted with us, chiefly because perhaps we were the most prominent, were slandered then, and by the gentleman in the mask just as we have been now. The *Times* was as foul-mouthed upon us 20 years ago as it is now. They said that we went about the country setting class against class; they said that our views led to the confiscation of landed property; they said, in fact, everything that was spiteful and untrue, as they say now; and yet is there any man in this country who will not admit that property is more secure in consequence of the abolition of that law, which they believed to be the anchor of their safety—that animosities between class and class have been allayed? And who shall tell how much it is owing to that that your Queen at this moment wields an unchallenged sceptre over a tranquil realm? A landowner in the House of Commons, an old member of the House, a representative of a south-western county, a man of excellent character, for whom I have always had the greatest respect, even when he was the most wrong, said to me not long ago, speaking about the corn laws, 'They didn't then know the good we were doing to his class.' I nudged him and said, 'Well, if you would only have faith, I could tell you one or two other things that would do you just as much good if you would let us try them.' But he had not faith. Now, I will just say to the landowners that I never was more their friend than in discussing this question as I am doing to-night, without the least animosity to them, and with a belief as firm as I ever had on the question of the corn laws that their interests are bound up with the interests of the people in the right solution of this question. I would ask to what are they tending under the operation of these laws? They are becoming every year smaller and smaller in numbers. The large ones are rapidly eating up the small ones. The census returns show that the number of landed proprietors is but a handful in the nation, and every day becoming fewer and fewer. Their labourers remain at the old 9*s*. or 10*s*. a week. Somebody will write to the papers to-morrow and say they get 12*s*. but bear in mind that they don't always receive wages on wet days, and I believe that the average money income of the agricultural labourer throughout the United Kingdom will not exceed, and many persons will say it will not reach 10*s*. per week. The smaller in number these landed proprietors become, the more, it may be, these labourers become discontented. There may arise some political accidents, and political accidents come almost as unlooked for as other accidents. You don't hear the tread of the earthquake which topples down your finest architecture, and the country gentlemen don't see the tread of that danger—it may be that catastrophe—which inevitably follows upon prolonged unjust legislation; and there may come a time, and I durst prophecy that it will come if there be an obstinate retention of our present system, when there will be a movement in this country to establish, not what I believe to be the just, moderate, and sufficient plan which I recommend, but a plan which shall be in accordance with that which is established by the *Code Napoléon* in France, and which is spreading rapidly over the whole continent of Europe. I would ask them again—How do they propose to keep their population if this system is to be maintained? During the past year I think 150,000 or 160,000 persons have sailed from this country to New York. Every man who settles in the United States can see what the working man gets, how he is considered, and what he is; and he writes over to his friends in this country, as has been the case for years in Ireland, and the result has been that Ireland has been drained, not of its surplus population, but of the population actually necessary to proper cultivation of the soil. Then, I say that the temptation held out to men here to emigrate, if we knew all the facts, would be irresistible to hundreds and thousands who have now no thought of moving to another country. Well, now, I ask you if I am wrong in saying to the rich and to the great what I believe, if they knew their own interest, it would be worth their while to try to make this country a more desirable one for the poor to live in. If they disregard this great question we, who are of the middle class, or not absolutely powerless class, shall have to decide between the claims of territorial magnates and the just rights of millions of our countrymen. There are some men—I meet them now and then, and I wonder where they were born and why they came into the world—who regard these territorial magnates as idols before whom we are all to bow down in humble submission. I think travellers tell us that there is a tribe in Africa so entirely given up to superstition that they fill their huts and hovels with so many idols that they do not leave room for their families. It may be so in this country—that we build up a system which is detrimental to our political freedom and is destructive of the best interests of the great mass of our producing and working classes. Now am I the enemy of any class if I come forward to state facts like these, and to explain principles such as these? Shall we go groping continually in the dark and making no effort to strengthen our position? Don't suppose because I stand here I love to find fault with the laws of my country rather than to praise them—that I am less English and less patriotic, or that I have less sympathy with my country and my countrymen, than other men have. I want our country to be populous, to be powerful, and to be happy, but this end can only be attained, and never has been attained in any country, but by just laws, justly administered. I plead only for what I believe to be just. I wish to do wrong to no man. For 25 years I have stood before audiences, great meetings of my countrymen, pleading only for justice. During that time, as you know, I have endured measureless insults, and have passed through hurricanes of abuse. I need not tell you that my clients have not generally been the rich and the great, but rather the poor and the lowly; they cannot give me place and dignities and wealth, but their honourable service yields me that which is of far higher and more lasting value—the consciousness that I have been expounding and upholding laws which, though they were not given amid the thunders of Sinai, are not less the commandments of God, and not less intended to promote and secure the happiness of men."

LIVERPOOL.—At the borough police-court on Wednesday, John Jones, principal partner in the firm of Jones & Co., of Chapel Street, Liverpool, ship store dealers and chandlers, and John Wilding, clerk in the service of that firm, were committed for trial at the assizes on a charge of having committed a breach of the Foreign Enlistment Act by aiding in procuring a crew for the Confederate war steamer Georgia. Mr. Highat, another partner in the firm of Jones & Co., had previously been committed for trial on the same charge. All the parties were admitted to bail, the two partners in 500*l*. each, and two sureties of 250*l*.; the clerk in 50*l*., and two sureties of 25*l*.—A shocking case of wife murder took place in this town on Saturday night. A marble mason, named Johnson, who lived in abject poverty in one of the low courts in the town, had been out drinking with his wife in the course of the evening. They came home together and he fell asleep, when the wife took the remainder of his money from his pockets, and it is said went out by herself for more drink. On her return he insisted on her giving back the money, and as she refused he struck and kicked her so severely that when medical assistance arrived she was found to be dead. The man has absconded.

MAIDSTONE.—At the Kent Annual Sessions on the 19th inst., the Earl of Romney in the Chair, Sir E. Dering moved that a Roman Catholic priest be appointed under the Prison Ministers' Act, at such a salary as the visiting justices may think reasonable, to attend the Roman Catholic prisoners in the county gaol, the visiting justices having previously reported that the daily average number of such prisoners during the last half year had been 56. After a long discussion the Court divided, when there were for the motion, 17; against it, 35—majority against it, 18.

Law.

COURT OF PROBATE AND DIVORCE.—*O'Kane* v. *O'Kane, and Palmerston co-respondent.*—On Tuesday this case, which was a suit for a divorce brought by a Mr. O'Kane against his wife

and Lord Palmerston, as co-respondent, came before Sir J. Wilde, on the application of the respondent. The petition was filed on the 19th of October, citation was served on the 21st October, appearance was put in by the co-respondent on 28th October, denying the charge in every particular, and on the 17th November an order was obtained from the Court to oblige the petitioner to furnish the co-respondent with further particulars as to place and time and so forth. Mr. D. Seymour, on behalf of the wife, now applied for a rule to compel the petitioner to show cause why he had not proceeded with his suit, or otherwise why his petition should not be struck off the file. He stated that the application made on the part of Lord Palmerston in November last for particulars of the charges had not been complied with, and that an affidavit had been filed averring the belief that the sole object of the petitioner was extortion. Sir James Wilde said there was certainly just ground for complaint when a petitioner dragged a person into a court, more especially that court, to the sacrifice of reputation, and that the other side had a right to know why all reasonable expedition had not been taken. He therefore granted a rule ordering that on Tuesday next the petitioner should be called on to explain why the suit has not been proceeded with.

Obituary.

ADMIRAL HENDERSON died on Saturday at Middle Deal, Kent, in his 78th year. He was the son of Mr. J. Henderson, who was for many years secretary to Admiral Lord Bridport, and entered the navy in 1794, on board the Royal George, 100, the flagship of Lord Bridport, at that time Sir Alexander Hood. He afterwards served at the capture of Tobago in 1803, and at the reduction of the Dutch colony of Surinam, when he was severely wounded. In 1804 he accompanied Admiral Cochrane in the pursuit of the Rochefort squadron; and in the early part of 1806, while cruising off that port, assisted, in company, in the capture of four heavy French frigates. In this engagement he lost an arm, which, however, did not prevent him from accompanying Lord Gambier's expedition to Copenhagen; and afterwards, on the surrender of Madeira, being at the time first lieutenant of the Centaur, he was entrusted with the conveyance of Sir Samuel Hood's despatches to England, which procured him a commander's commission in 1808. After an interval of half pay he was appointed to the fire-vessel division of the expedition fitting out for Walcheren. During the operations he particularly distinguished himself, and for the third time was honoured with a notice in the *Gazette*. As captain, he assisted in the reduction of the Isle of France. After obtaining post rank he served in various other vessels, the last of which he paid off in 1815. He accepted flag rank in 1846, and was appointed vice-admiral in 1855, and admiral in 1860.

MR. THOMAS FRANCIS STEWARD, who had been for about 30 years the writing and English master of Westminster school, died at his house in Dean's Yard on the 7th inst., in his 68th year. His father, who had been for nearly 40 years the writing master of that school, was the teacher of writing to the present Queen. The late Mr. T. F. Steward was educated at Westminster, and since his connection with his old school in an official capacity he has been the most popular master at Westminster. He retired from his duties scarcely a year ago.

BIRTHS.—On the 27th inst, at 18, Belgrave Square, the MARCHIONESS of BATH, of a daughter—22d inst, at St. James's Palace, Lady EMILY CAVENDISH, of a son, which only lived a short time—19th inst, the Hon. Lady PROCTOR BEAUCHAMP, of a daughter—19th inst., at Hollybrook, Skibbereen, Ireland, the Lady EMILY BECHER, of a daughter—21st inst, at Derry Ormond, Cardiganshire, the Lady ELIZABETH INGLIS JONES, of a son—25th inst, at Cliffville, Stoke-upon-Trent, Lady STAMER, of a son—24th inst, at 23, Chester Square, S.W., the Hon. Mrs. BRODRICK, of a son—22d inst, at Camelford House, the Hon. Mrs. CECIL DUNCOMBE, of a daughter—20th inst., at Teviot Bank, N.B., the wife of EDWARD HERON MAXWELL, Esq., of a daughter.

MARRIAGES.—On the 14th inst., at the Church of S. Antonio dei Portoghesi at Rome, FREDERICK GOULBURN WALPOLE, Esq., to Miss AMALIA HAUGHDON TRAFFORD BINNS, daughter of the Duchess of Saldanha—21st inst, at All Souls', Langham Place, Captain CHARLES HOSKEN FRANCE, late of the 77th Regiment, to MARY HALSTED, youngest daughter of the late Captain WILLIAM HALSTED POOLE, R.A., of Terrick Hall, Shropshire—19th inst, at the Church of St. Andrew, Westland Row, Dublin, JOHN V. CASSIDY, Esq., of Killyon, Parsonstown, to ELLEN, youngest daughter of the late Sir TIMOTHY O'BRIEN, Bart.

DEATHS.—On the 20th inst, at Exeter, the Hon. JOHN JAMES BURY, late Captain Royal Engineers, second son of the second Earl of Charleville, aged 36—19th inst, at Edinburgh, EMILIA, widow of Major POWER, 29th Regt., eldest daughter of Sir George Sinclair, Bart., of Ulbster, Caithness-shire, formerly the wife of Henry Bertie, son of the late Hon. Charles Tollemache, by whom she had an only child, Wilbraham Archibald, lieutenant of the Madras Infantry, who died on the 23d June last—23d inst, at St. Leonard's, near Windsor, Lady BRINCKMAN, of Sundorne Castle, wife of Sir Theodore H. L. Brinckman, Bart.—27th inst, at No. 7, Hyde Park Gardens, Lady KINDERSLEY, wife of the Vice-Chancellor Sir Richard T. Kindersley, aged 67—19th inst, at Great Malvern, FRANCES ELIZA CARTER, wife of MATTHEW P. W. BOULTON, Esq., of Tew Park, and youngest daughter of the late W. R. Cartwright, Esq., of Aynhoe, M.P.—16th inst, Mrs. ANN SKINNER, of Hampton Court Palace, widow of the late Lieut. General John Skinner, aged 90—21st inst, at Southsea, ELIZABETH, widow of Rear-Admiral RENWICK, aged 76—22d inst, at his residence, 15, Grove Terrace, Peckham, DIGBY WALKER HOLT, Esq., son of the late Admiral William Holt—19th inst, at 7, Lothian Road, Edinburgh, JOHN LYALL, Esq., J.P., aged 79—20th inst, at Angel Place, Worcester, JOHN GOODWIN, Esq., J. P., aged 72—16th inst, at the British Consulate, St. Petersburg, CHARLES LLEWELYN DE MICHELE, eldest son of C. Eastland de Michele, H.B.M.'s Consul in that capital, aged 24—20th inst., at 11, York Terrace, Tunbridge Wells, SAMUEL LLOYD, Esq., R.M., late special justice of the Island of Jamaica—24th inst, at Henley Park, Henley-on-Thames, JOHN WILLIAM NEWELL BIRCH, Esq, aged 88—22d inst, at Brighton, of scarlatina, STEWART, second son of DUDLEY COUTTS MARJORIBANKS, aged 11—22d inst, at Peterborough House, Fulham, WILLIAM TERRY, Esq., formerly Captain Royal Horse Guards (Blue), aged 90—18th inst, at Spring Grove, St. Laurens, Jersey, Captain J. B. HOWELL, R.N., aged 77—17th inst, at Richmond, Yorkshire, ANNE ELIZABETH, widow of the Rev. JAMES TATE, late head master of the Richmond Grammar School, aged 61—24th inst, at his residence in Blandford Square, the Rev RICHARD BEWLEY CATON, M.A., Camb., of Binbrook, co. Lincoln, formerly lieutenant in the 12th Lancers, served the campaign in Egypt under Sir Ralph Abercrombie in 1801, was subsequently major in the 3d Royal Lincoln Militia, aged 90—19th inst, the Rev. THOMAS H. GALE, vicar of Godmersham, Kent, aged 75—18th inst, the Rev. JOHN M. COOPER, M.A., of Deeping St. James, Lincolnshire, rector of Peckleton, county of Leicester, aged 76—18th inst, the Rev. S. MASTER, M.A., rector of Croston, Lancashire, aged 97—17th inst, at Surbiton, Surrey, the Rev. M. MACDONALD, late incumbent of Southend, aged 51—25th inst, at Clifton, near Bristol, the Rev. E. WILLIAMS, rector of Pinxton, Derbyshire, aged 72 26th inst, Mr. M. MAY, many years Gardener to the late S. Bosanquet, Esq., East Woodhay, aged 75.

Markets.

COVENT GARDEN, Jan. 30.

Supplies of both Vegetables and Fruit in season have been well kept up. Pine Apples are tolerably plentiful. Hothouse Grapes are now beginning to get scarce, as are also good Pears. Some good samples of Blenheim Orange, Nonpareil, and American New Town Pippin Apples may still be obtained. Kent Cobs are good, and Oranges are plentiful; the best are realising from 4s. to 7s. per 100. For Potatos the market is still heavy. Cornish Broccoli is arriving in large cratefuls, which vary widely in price according to quality. French Lettuces, Endive, Carrots, and Radishes begin to make their appearance. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Oranges, per 100, 4s to 7s
Grapes, per lb., 8s to 12s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Kent Cobs, 110s per 100 lbs.
Pears, per ½ sieve, 4s to 10s	Almonds, do., 18s
Melons, each, 2s to 4s	Walnuts, do., 14s to 20s
Lemons, per 100, 5s to 8s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Cucumbers, each, 1s to 3s
Cauliflowers, each, 3d to 6d	Beet, per doz., 1s 6d
Asparagus, p. bundle, 6s to 8s	Shallots, per lb., 10d
Seakale, per punn., 2s 6d to 3s	Celery, per bundle, 1s 6d to 2s
Rhubarb, p. bundle, 9d to 1s 6d	Garlic, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Lettuces, each, 1d to 4d
,, Shaws, do., 50s to 60s	Endive, p. score, 1s to 2s
Turnips, p. bunch, 4d to 6d	Horse Radish, p. bunch, 1s to 4s
Carrots, do., 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
Spinach, p. sieve, 1s 6d to 4s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Jan. 28.

Prime Meadow Hay	70s	to 80s	Clover, old	90s	to 110s
Superior do. ..	80	90	Do. second cut ..	70	100
Inferior do. ..	—	—	New Clover ..	—	—
New do.	—	—	Straw	24	30
Rowen	—	—			

HARVEY & EASTON.

CUMBERLAND MARKET, THURSDAY, Jan. 28.

Sup. Meadow Hay ..	88s	to 94s	Inferior Clover ..	80s	to 96s
Interior do.	70	78	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover ..	103	114			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Jan. 28.

Fine Meadow Hay ..	84s	to 84s	Prime 1st cut Clover	105s	to 110s
Inferior do.	70	75	Inferior do. do. ..	95	100
Prime New Hay ..	—	—	New 1st cut do. ..	—	—
Inferior	—	—	Prime 2d cut do...	100	105
Straw	25	28	Inferior do.	90	95

BRITISH WOOLS.—LONDON, Jan. 28.

There has been a fair demand for skin combings at late rates; other sorts have only sold in retail to supply the immediate requirements of manufacturers for the completion of any particular orders they may have on hand.

South-down Hoggets	s. 1	d. 11	to	s. 2	d. 0	
Half-bred ditto..	1	11	—	2	0½	
Down Ewes ..	1	10	—	1	10½	
Kent Fleeces			—	2	0	
Leicest. Wethers	1	9½	to	1	10	
Ditto Hoggs ..	1	10½	—	1	11	
Combing Skins ..			—		..	
Flannel Wool ..	1	4	—	1	6	
Blanket ditto ..	0	9	—	1	0	

HOPS.—BOROUGH MARKET, FRIDAY, Jan. 29.

Messrs. Pattenden & Smith report a good demand for both English and foreign, at a further slight advance in prices; olds are also in better demand at 18s. to 25s. per cwt. for sound and well kept samples.

COAL MARKET.—Jan. 29.

Byass's Bebside West Hartley, 15s.; Cowpen Hartley, 15s.; Lambert's West Hartley, 14s. 9d.; Tanfield Moor, 15s. 6d.; Walker Primrose, 14s. 3d.; Walls End Byron, 18s.; Walls End Riddell, 18s.; Eden Main, 18s. 6d.; Walls End Braddyls Hetton, 19s.; Walls End Haswell, 20s.; Walls End Hetton, 20s.; Walls End South Hetton, 20s.; Walls End Tunstall, 17s. 9d.; Walls End Cassop, 19s; Walls End Caradoc, 19s.; Walls End Hartlepool, 19s. 6d.; Walls End Heugh Hall, 18s. 9d.; Walls End Kelloe, 19s.: Walls End East Hartlepool, 19s. 9d.; Walls End South Kelloe, 18s. 9d.; Walls End Trimdon Thornley, 17s. 9d.—Ships at market, 320.

NEWGATE.—Jan. 29.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 13s. ,,
Pork, 4s. 0d to 4s. 4d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, Jan. 25.

The number of Beasts is considerably larger than on Monday last, yet not excessive for the time of year. The demand is good for choice qualities, but generally the trade is not brisk. Prices have recovered from Thursday's reduction. There is scarcely any alteration either in the supply or price of Sheep. The trade is very dull. Calves are scarce, and a few choice ones have realised rather more than our late quotations. From Germany and Holland there are 860 Beasts, 690 Sheep, and 87 Calves; from Spain, 140 Beasts; from Scotland, 355; from Ireland, 195; from Norfolk and Suffolk, 2040; and 360 from the Northern and Midland Counties.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c. ..	5	0	to	5	2	Best Long-wools,	5	2	—	5	6
Best Short-horns	4	8	—	5	0	Do. Shorn			—		..
2d quality Beasts	3	0	—	4	2	Ewes & 2d quality	4	4	—	4	10
Best Downs and Half-breds ..	5	8	—	6	0	Do. Shorn			—		..
Do. Shorn			—		..	Lambs			—		..
						Calves	4	4	—	6	0
						Pigs	3	6	—	4	8

Beasts, 4270; Sheep, 14,030; Calves, 96; Pigs, 330.

THURSDAY, Jan. 28.

The number of Beasts is much larger than we have had for some weeks. Trade is very dull, yet the choicest qualities cannot be quoted lower than on Monday last. We have about a usual supply of Sheep; they are disposed of at fully Monday's quotations. We have several lots of show Sheep on offer, which, owing to the favourable weather, meet with ready purchasers. Choice Calves are still scarce and dear. Our foreign supply consists of 345 Beasts, 530 Sheep, and 32 Calves. Milch Cows, 110.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c. ..	5	0	to	5	2	Best Long-wools.	5	2	—	5	6
Best Short-horns	4	8	—	5	0	Do Shorn			—		..
2d quality Beasts	2	10	—	4	0	Ewes & 2d quality	4	4	—	4	10
Best Downs and Half-breds ..	5	8	—	6	0	Do. Shorn			—		..
Do. Shorn			—		..	Lambs			—		..
						Calves	4	4	—	6	0
						Pigs	3	6	—	4	8

Beasts, 1290; Sheep, 3470: Calves, 66; Pigs, 120.

POTATOS.—SOUTHWARK, Monday, Jan. 25.

During the past week the arrivals coastwise have been moderate, but very plentiful by rail, and towards the end of the week less money had to be submitted to. Quotations:—Yorkshire Flukes, 80s. to 90s. per ton; do. Regents, 65s to 85s.; do. Rocks, 55s. to 60s.; Dunbar Regents, 70s to 75s. Kent and Essex Regents, 60s. to 70s; Perth, Forfar, and Fifeshire Regents, 50s. to 60s.; do. do. Rocks, 50s to 55s.

MARK LANE.—MONDAY, Jan. 25.

The supply of Wheat from Essex and Kent to this morning's market was small, and was taken slowly on the terms of this day se'nnight. The market was moderately attended. Foreign Wheat continues to be neglected, and former rates are nominal. Barley, Beans, and Peas were a slow sale at last week's quotations. The Oat trade was dull, and prices were rather in favour of buyers. There was no alteration in the value of Flour.

PER IMPERIAL QUARTER	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	42	48	Red	40	46
— — fine selected runs .. ditto	44	52	Red	40	48
— — Talavera	48	56			
— Norfolk	—	—	Red		—
— Foreign	36	54			
BARLEY, grind. & dist., 25s to 27s .. Chev	34	38	Malting ..	29	33
— Foreign .. grinding and distilling	22	26	Malting ..	28	32
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish .....Potato	19	22	Feed		—
— Foreign .....Poland and Brew	17	22	Feed	15	20
RYE	30	32	Foreign ..		—
RYE-MEAL, Foreign	—				
BEANS, Mazagan .... 28s to 36s Tick	30	33	Harrow ..	30	33
— Pigeon .... 32s to 40s .. Winds	—		Longpod		—
— Foreign .....Small	36	42	Egyptian	30	32
PEAS, White, Essex and Kent .. Boilers	37	38	Small	34	38
— Maple .... 34s to 36s .... Grey	28	30	Foreign .	32	40
MAIZE .....White	—		Yellow ..		—
FLOUR, best marks delivered .. per sack	35	40			
— 2d do ..... ditto	28	34	Country ..	28	34
— Foreign ..... per barrel	15	25	Per sack	32	42

FRIDAY, Jan. 29.

The weather since the 22d has been very fine and mild, excepting some showers on the 23d and 27th inst. The Wheat plant is represented as wearing a very favourable appearance. The Wheat trade for the past week has continued inanimate, both buyers and sellers in the present state of politics being alike unwilling to make any concession in prices in order to promote business, but their tendency has been towards a decline. The same may be said of all descriptions of Spring Corn and Flour. Since Friday last 14 vessels have been reported off the coast. The floating trade has been dull; there is very little inclination to purchase, and former prices have been barely maintained for all descriptions of grain. Linseed has advanced about 1s per qr. Paris, Jan. 28.—In Flour only a very limited business has been done at late rates. The six marks for delivery this month are quoted equal to 32s. 6d. per 280 lbs.; the present stock of Flour is estimated at 6060 cwt. Wheat: buyers are pressing for a further decline, which holders resist, and very few transactions have taken place. The arrivals of English grain by water are somewhat larger than of late, good of foreign Wheat, of Barley large, and of Oats small. The attendance at market this morning was unusually limited, and the business transacted in Wheat was of quite a minimum extent; Monday's prices remained nominally the same. Spring Corn of all descriptions was quiet at Monday's quotations.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1230 qrs.	2370 qrs.	1980 qrs.	1450 sk.
Irish	—	—	750	— ,,
Foreign ..	14,260 ,,	14,590	10,910 ,,	1840 ,, / — brls

LIVERPOOL, January 26.—With a very few country buyers at this day's market Wheat has met only a poor inquiry, and quotations remain nominally as on Friday last. American Flour is not to be bought cheaper, but we note French down 6d. per sack. A better demand was experienced for Indian Corn, and several parcels were taken both for consumption and to hold over at the rates of last market. Oats and Oatmeal dull. Beans, Peas, and Barley each steady at former prices, but not very saleable. The market closes without animation.

FRIDAY, Jan. 29.—The market rather quiet. Wheat fair demand, at Tuesday's rates. Flour dull. Indian Corn quiet. Egyptian Beans steady. Oats and Oatmeal dull.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Dec. 19	41s 2d	32s 6d	19s 0d	29s 4d	34s 9d	33s 7d
— 26	40 5	32 0	19 0	33 6	34 4	33 8
Jan. 2	39 10	31 8	18 9	30 0	33 8	33 1
— 9	40 2	31 7	18 8	29 7	34 2	33 3
— 16	40 11	31 10	18 10	28 0	33 7	33 0
— 23	41 3	32 5	18 9	28 0	33 8	32 8
Agg. Aver.	40 7	32 0	18 10	29 9	34 0	33 3

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Dec. 19.	Dec. 26.	Jan. 2.	Jan. 9.	Jan. 16.	Jan. 23.
41s 3d	..	..	..	..	..	
41 2						
40 11	..	..	..	..	..	..
40 5	..		..	..		..
40 2	..	..	..	..	..	..
39 10	..	..	..	..	..	..

A GENTLEMAN farming 500 Acres of Arable and Grass Land in Nottinghamshire, is open to receive ONE or TWO FARMING PUPILS on Moderate Terms.—Apply by letter to S. B. B. & Co., 13, Cannon Street, City, London, E.C.

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WANTED, a good WORKING HEAD GARDENER, where another is kept.—He must thoroughly understand his profession, and produce good testimonials as to character and ability. A middle-aged, single man, preferred, or a man without incumbrance.—Address, by letter only, stating all particulars, to M. M., Mr. George Richmond, 3, McLean's Buildings, New Street Square, E.C.

WANTED, a GARDENER where a boy is kept, but no horse.—An industrious Man, who thoroughly understands his Work, can Drive, and would be anxious to be useful in every way.—Apply, stating age, qualifications, wages, and nature of reference, to JOSEPH ASHWELL, Grays Hall, Essex.

WANTED, a GARDENER, married, but not a large family; wages, 1l. a week, with cottage rent free. He must understand the Cultivation of Hard and Soft-wooded Plants, of Vines, Melons, and the Management of Flower and Kitchen Gardens. The greenhouse and hothouse are small-heated with stove and brick flues. A boy kept. He must be steady and industrious, and a member of the Church of England.—Apply to A. Z., Post Office, Spalding.

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Under Gardener.

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The Gardeners' Chronicle Newspaper.

SATURDAY, FEBRUARY 6, 1864.

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I. CHINA.
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III. FORSYTH'S LIFE OF CICERO.
IV. GUNS AND PLATES.
V. SPEKE'S TRAVELS ON THE NILE.
VI. EELS.
VII. ROME IN THE MIDDLE AGES.
VIII. THE DANISH DUCHIES.

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News of the Week.

THE fifth session of the present Parliament was opened on Thursday by commission. The QUEEN'S Speech, after expressing HER MAJESTY'S satisfaction in again recurring to the advice and assistance of her Parliament, referred with gratitude to the birth of a son to the PRINCE OF WALES, and to the renewed demonstrations of devoted loyalty and attachment which the event had called forth. It then referred to the Danish question, and recited the leading stipulations of the Treaty concluded in 1852 between the five Great Powers, and subsequently acceded to by several of the German and other Sovereigns, with the view of preserving the integrity of the Danish Monarchy, and of securing to the present KING the succession to all the dominions then united under the sceptre of Denmark. It stated that HER MAJESTY, actuated by the same desire to preserve the peace of Europe which was one of the declared objects of all the Powers who were parties to that treaty, had been unremitting in her endeavours to bring about a peaceful settlement of the differences which have arisen between Germany and Denmark on the subject, and to avert the dangers which might follow the outbreak of war in the North of Europe; adding that HER MAJESTY will continue her efforts in the interest of peace. The Speech then recalled the late events in Japan, and regretted that, while the measures of coercion rendered necessary by the conduct of the Prince of SATSUMA had brought him to an agreement, they had incidentally led to the destruction of a considerable portion of the town of Kagosima. It regretted the continuance of the native insurrection in New Zealand, and said there was reason to hope that it would before long be put down. It announced the conclusion of a treaty for the surrender of the Protectorate of the Ionian Islands, and the negotiation of a treaty for regulating their annexation to the kingdom of Greece. After the usual reference to the Estimates for the year, the Speech stated that the condition of the country was on the whole satisfactory; that the revenue had fully realised its expected amount; the commerce of the United Kingdom was increasing; and that while the distress in the manufacturing districts had been in some degree lessened, there was reason to look forward to an increased supply of cotton from various countries which had hitherto but scantily furnished this material to our manufacturers. The Speech concluded by announcing that a commission was about to be issued for the purpose of revising the forms of subscription and declaration required to be made by the clergy of the Established Church; and that various measures of public usefulness would be submitted for the consideration of Parliament.

In the Lords, the Address in answer to the Speech from the Throne was moved by the Marquis of SLIGO, and seconded by Lord ABERCROMBY. The Earl of DERBY, in a speech of great length, criticised the foreign policy of the Government, which was defended by Earl RUSSELL and Earl GRANVILLE. The Address was then agreed to.

In the Commons the Address was moved by Lord R. GROSVENOR, and seconded by Mr. GOSCHEN. Mr. DISRAELI, Mr. S. FITZGERALD, and other members, complained of the omissions of the Speech, and condemned the foreign policy of the Government, especially in regard to Denmark and Germany. Lord PALMERSTON and Mr. GLADSTONE defended the policy of the Government, and in the course of his speech Lord PALMERSTON said that within the last few hours the Government had received information from the Governments of Austria and Prussia that they were prepared to abide by the Treaty of 1852, and to maintain the integrity of the Danish monarchy in accordance with its provisions. The Address was then agreed to.

The Austro-Prussian army crossed the Schleswig frontier on Sunday, and on Monday morning the first battle of the war was fought at Missunde, on the Schlei, where the Prussians attempted to force a passage, with the intention of cutting off the Danes from the sea, while the Austrians attacked them in another direction in the centre. The

attack on Missunde was made under the personal direction of Prince Frederick Charles, brother of the King of Prussia, supported by a force of 9000 men and 74 pieces of artillery. After an engagement of six hours the Prussians were repulsed, and compelled to retreat to Eckernforde, with a loss of from 300 to 400 killed and wounded, the Prince himself being among the latter. The Danish loss is said to have been less than half that amount. The result of the battle is said to have convinced Prince Frederick Charles that the Danes will oppose serious resistance to the advance of the allied armies. On Wednesday the Austrians made their first attack, selecting for that purpose two of the outposts of the Dannewerke. After a bombardment of several hours, during which the Austrians stormed two of the works, they were repulsed with heavy loss, and with no other result than the capture of a few prisoners and one gun. During the attack on Missunde, on Monday, an engagement took place between the Prussian artillery and two Danish screw steamers, off Eckernforde in Schleswig. The ships were ultimately obliged to leave the harbour, and the town was taken by the Prussians. The inhabitants subsequently proclaimed Prince Frederick as Duke of Schleswig-Holstein in the presence of the Austro-Prussian army, and in direct violation of the London Treaty. A provisional law has been issued at Copenhagen, for enabling the Government to accelerate the meeting of the Rigsraad.

The Emperor of the French on Monday received the deputation from the Corps Législatif with the Address in answer to the Speech from the Throne. In reply His Majesty said that the prolonged debates on the Address had not been useless, as the result had been to reduce into nothing the accusations which had been skilfully spread. His Majesty said that the policy of the Government was now better appreciated, and that the majority was more compact and more devoted to the institutions of France. For 60 years liberty had been a weapon in the hands of parties to overthrow the Government of the day, thereby causing incessant fluctuations, power succumbing to liberty, and liberty succumbing to anarchy. After the fruitless efforts of so many forms of government, the first want of the country was stability. By the intimate union of the Government with a majority inspired by patriotism and unseduced by vain popularity, they might await, from agreement and from time, such improvements as were possible, and not allow the delusive hope of a chimerical future unceasingly to compromise the present good which they had at heart to consolidate together.

A telegram from India announces that Sir John Lawrence, the new Viceroy, reached Calcutta on the 12th January. The war on the Punjaub frontier was completely ended, and the forces employed against the Hill tribes had been broken up.

Home News.

The Court.—The Queen and Royal family continue at Osborne. On Friday the Queen walked and drove out. On Saturday her Majesty walked and drove. Professor Tyndall had the honour of lecturing on electricity before her Majesty and the Royal family. On Sunday the Queen, Princess Helena, Princess Louisa, Prince Leopold, and Princess Hohenlohe, attended Divine service at Whippingham Church. The Rev. G. Prothero officiated. On Monday the Queen walked and drove, morning and afternoon, accompanied by Princess Helena. On Tuesday the Queen walked and drove, accompanied by Prince Leopold. Sir Charles Wood arrived, and had the honour of dining with her Majesty and Royal family. On Wednesday the Queen held a Privy Council, at which the Sheriffs for 1864 were appointed. Earl Granville had an audience of her Majesty. On Wednesday the Queen drove out, attended by the Marchioness of Ely.

The Prince and Princess of Wales.—On Saturday the Prince went out pheasant shooting. The Duchess of Cambridge, with the Duchess of Mecklenburg Strelitz and Princess Mary, visited the Princess of Wales, and remained to luncheon. Prince Leiningen left for London. Earl Granville arrived on a visit. In the evening the Prince of Wales and Prince Edward of Saxe-Weimar dined with the officers of the Horse Guards Blue at the Cavalry Barracks. On Sunday afternoon the Prince of Wales attended Divine service in St. George's Chapel, occupying the stall of the Prince Consort as Knight of the Garter. On Monday morning his Royal Highness, accompanied by Earl Granville, went out shooting. In the afternoon the Princess drove out in a close carriage. Earl Granville left for London. On Tuesday morning the Princess of Wales went to the chapel in Windsor Castle to return thanks for her recovery. The service was performed by the Dean of Windsor. The Prince, accompanied by Prince Edward of Saxe-Weimar, drove to Claremont on a visit to the ex-royal family of France. On Wednesday morning the Prince hunted with the harriers. The Princess drove out in a close carriage in the grounds and park. On Thursday morning the Prince came to town, and attended the debate in the House of Lords, returning to Frogmore in the evening.

The Royal Family.—The Queen has, by letters patent under the Great Seal, declared her Royal will and pleasure that the children of the sons of any Sovereign of Great Britain and Ireland, shall at all times have the title of "Royal Highness," with their titular dignity of Prince or Princess prefixed to their respective Christian names, or with their other titles of honour.

Intended Visit of the Queen of Denmark.—It is understood that the Queen of Denmark and her eldest daughter will arrive in England in the course of four or five weeks on a visit to the Prince and Princess of Wales, in order to be present at the christening of the infant Prince.

Court Arrangements.—It is announced on authority that levées will be held by the Prince of Wales, for the Queen, before Easter, and probably a Drawing-room, by the Princess of Wales, on behalf of her Majesty. Levées and Drawing-rooms will likewise be held by the Prince and Princess of Wales after Easter. The Queen is still unequal to the performance of State ceremonies, and her Majesty's physicians have declared that any such exertion would be prejudicial to her Majesty's health.

The Cabinet.—A Cabinet Council was held on Saturday at the Foreign Office. Another Council was held on Monday.

Parliamentary Movements.—New writs were issued on Thursday for Durham, Tewkesbury, and Winchester. Mr. Walker having intimated his intention to retire from Beverley, Mr. Christopher Sykes, a younger son of the late Sir Tatton Sykes, has, in compliance with a requisition from the electors, consented to be put in nomination for the vacant seat in the Conservative interest. Mr. Moor, who had announced himself as a candidate for Brighton in the Conservative interest, withdrew last week from the contest, but has since been induced by a deputation of the electors to come forward again and pledge himself to go to the poll. Sir F. Smith has contradicted the report that he intended to retire from Chatham.

Sheriffs for 1864.—The following is a list of the Sheriffs appointed by her Majesty for 1864:—

England (excepting Cornwall and Lancashire).—Bedfordshire: Robert Henry Lindsell, of Biggleswade, Esq. Berkshire: Richard Hall Say, of Oakley Court, near Windsor, Esq. Bucks: The Hon. Percy Barrington, of Westbury Manor. Cambridgeshire and Huntingdonshire: George Onslow Newton, of Croxton Park, Esq. Cheshire: John Ralph Shaw, of Arrowe Park, Birkenhead, Esq. Cumberland: Thomas Brocklebank, of Greenlands, Esq. Derbyshire: Sir Henry Des Vœux, of Drakelow. Devonshire: The Hon. Mark George Kerr Rolle, of Stevenstone. Dorsetshire: Charles Wriothesly Digby, of Studland, Esq. Durham: John Harrison Aylmer, of Walworth Castle, Esq. Essex: Edgar Disney, of The Hyde, Ingatestone, Esq. Gloucestershire: Goodwin Charles Colquitt Craven, of Brockhampton Park, near Cheltenham, Esq. Herefordshire: Colonel Robert Feilden, of Dulas Court. Hertfordshire: Sir Astley Paston Cooper, of Gadebridge, Hemel Hempstead. Kent: George Field, of Ashurst Park, near Tonbridge Wells, Esq. Leicestershire: Edwyn Burnaby, of Baggrave Hall, Leicester, Esq. Lincolnshire: William Parker, of Hanthorpe House, Bowen, Esq. Monmouthshire: Henry Charles Byrde, of Goytrey House, Esq. Norfolk: Henry James Lee Warner, of Little Walsingham, Esq. Northamptonshire: Alfred Rush, of Farthinghoe, Esq. Northumberland: Henry Metcalfe Ames, of Linden, Esq. Nottinghamshire: John Chaworth Musters, of Annesley, Esq. Oxfordshire: George Glen, of Stratton Audley Park, Esq. Rutland: Charles Ormston Eaton, of Tixover, Esq. Shropshire: David Francis Atcherley, of Marton Hall, near Shrewsbury, Esq. Somersetshire: Sir Edward Strachey, of Sutton Court. Southampton (County): James Winter Scott, of Rotherfield Park, Alton, Esq. Staffordshire: George Briscoe, of Elmhurst Hall, Lichfield, Esq. Suffolk: Sir George Nathaniel Broke Middleton, of Nacton. Surrey: Thomas Price, of Heywood, Cobham, Esq. Sussex: William Leyland Woods, of Chilgrove, Chichester, Esq. Warwickshire: James Beech, of Brandon, Esq. Westmoreland: Matthew Thompson, of Kirkby-Stephen, Esq. Wiltshire: John Lewis Phipps, of Leighton House, Westbury, Esq. Worcestershire: Harman Grisewood, of Dalesford House, Esq. Yorkshire: Frederick Charles Trench Gascoigne, of Parlington Park, Aberford, South Milford, Esq. *Wales (North and South).*—Anglesey: William Massey, of Cornelyn, Esq. Breconshire: Sir Joseph Russell Bailey, of Glanusk Park. Cardiganshire: John George Parry Hughes, of Alltlwyd, Esq. Carmarthenshire: Henry Lavallin Puxley, of Llwyndrussy, Esq. Carnarvonshire: Griffith Humphreys Owen, of Ymwlch, Esq. Denbighshire: John Lloyd Wynne of Coed Coch, Abergele, Esq. Flintshire: William Barber Buddicom, of Penbedw Hall, Esq. Glamorganshire: Robert Francis Lascelles Jenner, of Wenvoe Castle, Esq. Merioneth, shire: Lewis Williams, of Vronwnion, Esq. Montgomeryshire: Major-General William George Gold, of Garthmyl Hall. Pembrokeshire: Thomas Harcourt Powell, of Hook, Esq. Radnorshire: George Augustus Haig, of Llanbadarn fynydd, Esq.

Marriages, Births, and Deaths.—The Registrar General's Quarterly Return has just been published. It comprises the births and deaths registered by 2200 registrars in all the districts of England during the autumn quarter that ended on December 31, 1863; and the marriages in 12,628 churches or chapels, about 1913 registered places of worship unconnected with the Established Church, and 641 superintendent registrars' offices, in the quarter that ended on September 30, 1863. The general result of the quarterly returns is favourable. The marriage rate was above the average during the first nine months of the last year for which we have returns; and it is well known that they afford a good indication of the opinions which the people themselves have of their prospects in life. The births are returned for the last quarter of the year, and greatly exceed the average; while the deaths are also above the average, but to a much less extent. The marriage returns of the last quarter are not in; but in spite of some discouragement it is evident that the year of the marriage of the Prince and Princess of Wales will be the anniversary of more than the usual number of such celebrations. The birth rate of the year 1863 is the highest that has been observed in England; and the rate of mortality, owing chiefly to the prevalence of fever and of scarlatina, is also higher than is usual *Marriages.*—83,804 persons were married in the quarter that ended on September 30, 1863. The weddings were 41,902, and exceed by 1317 the weddings in the summer quarter of 1862, and by 2018 the weddings in the summer preceding. The marriage-rate was 1·616 per cent., and this is above the average of 10 preceding quarters. Thus the marriage meter indicates by its rise a steady improvement in the condition and prospects of the great body of the nation. London takes the lead, and is followed by all its surrounding divisions; in the interval between 1861 and 1863 the summer marriages rose from 7322 to 8031 in the metropolis; from 3232 to 3512 in Kent and the other south-eastern counties. A notable increase also appears in the returns of the counties of Hertford, Oxford, Bedford, and Cambridge; in Suffolk and Norfolk; while marriage decreased in Wilts, Devon, and Somerset, but increased in Gloucester, Bristol, Salop, Stafford, and Warwick, which are pervaded in different degrees by prosperous coal and iron works. Leicester, Lincoln, and Derby, show an increase; Nottingham indicates some depression. The marriages of Cheshire and Lancashire fell from 7086 in the summer quarter of 1861 to 6376 in the corresponding quarter of 1862, but in the summer quarter of the year 1863 rose again to 6,999, and thus gave the signal of reaction. Yorkshire sympathised with Lancashire—especially in Huddersfield, Halifax, Bradford, and Hull,—but the reaction in this great county was more complete; and the people of Leeds and Sheffield married in greater numbers than they did in either of the two preceding summer quarters. The marriages increased steadily in the Northern Counties; and the principality of Wales, either animated by loyalty, or by the heat of the iron trade, surpassed the metropolis in the rise of its marriage-rate, which exceeded by 12 per cent. the summer rate of Wales in 1861. *Births.*—180,010 births were registered in the last quarter of the year 1863; and the birth-rate of the quarter was 3·461, which is considerably above the average rate of the autumn quarter. Children are not born in equal numbers throughout the year; and in general births are at the highest in the winter quarter, and at the lowest in the autumn quarter of the year. But the seasons of the last year were exceptional, for the birth-rate was highest in the spring, and lowest in the summer quarter; and in all the quarters the rate was above the average. The account of 1863 makes the registered births in that year 729,399; and the birth-rate is 3·549, or 0·122 above the average (3·427) of the ten preceding years. The births exceeded by 17,708 the births in the year 1862, which was itself more prolific than any year that had gone before it. It is shown in the Census Report that the number of wedded child-bearing women is increasing faster than the general population, and this partly accounts for the increase of the birth-rate. *Increase of Population.*—As the births were 180,010, the deaths 116,299, the ascertained natural increase of population in the last quarter of the year was 63,711. About 15,319 persons of English origin emigrated during the quarter. The emigrants from the United Kingdom of which the Emigration Commission furnishes an account amounted to 43,123, of whom about 2,850 were foreigners. 68,280 emigrants of English origin sailed from ports at which there are emigration agents in the year 1863; and of their number 36,312 sailed to the United States, 2,843 to the North American Colonies, 27,487 to the Australian Colonies, and 1,638 to other places. The emigrants from the United Kingdom in the year were 215,025—124,433 males and 90,592 females—after excluding 8,733 foreigners who sailed from British ports. Allowing for unregistered births, and for emigration, the increase of the population of England was about 215,537 in the year; while the emigration from Ireland reduced the rest of the population, so that the probable increase of the United Kingdom was about 190,428. The Registrar-General of Ireland is now empowered to register births and deaths, and under his able superintendence the country will learn the exact numbers in that part of the United Kingdom during the ensuing year.

Foreign.

France.—In the sitting of the Corps Législatif on Friday, M. Jules Favre spoke on the diplomatic side of

the Polish question. Alluding to the words of the Emperor, he pointed out the ill-success of negotiations, and urged the necessity of breaking off all relations with Russia, in order to assert the rights which she had violated, and to manifest the indignation of the whole of Europe. The project of a Congress was a generous impossibility. Russia was resolved to exterminate Poland. It was not requisite to make war, which would be folly in the state of isolation in which France was at present placed, but it was requisite to break off every kind of relation with a Power which had violated the rights of treaties. M. Rouher opposed the amendments. He defended the Congress project with energy, and showed that, in spite of the profound sympathies of the Government with Poland, it was necessary to await the solution of the question from time and the moral influence of France. The amendment was then rejected and paragraph 7 adopted. M. Guéroult supported the amendment demanding the evacuation of Rome, which was rejected by 218 to 12. The entire draught of the Address was adopted by 234 to 12. On Monday the Emperor received the deputation with the Address, to which his Majesty replied as follows:—

"M. le President,—The address, which expresses to me the approbation of the Corps Législatif, touches me deeply. The debates on the confirmation of the members' elections and on the address have been long and elaborate, and though they have taken nearly three months from the legislative business of the House, they have not been useless. What is, indeed, to an impartial mind, the result of those debates? Accusations which had been skilfully spread have been reduced to nothing; the policy of the Government has been better appreciated; a majority more compact and more devoted to the maintenance of our institutions has been obtained. Those are great advantages; for, after the fruitless efforts of so many different forms of Government, the first want of the country is stability. It is not on an ever shifting base without consistence that anything durable can be founded. What have we seen for the last 60 years? Liberty has become nothing but a weapon in the hands of parties to overthrow the existing Government; thence have resulted incessant fluctuations; power by turns succumbing to liberty, and liberty succumbing to anarchy. This must no longer be. The example of recent years proves the possibility of conciliating what has so long appeared irreconcilable. Really fruitful progress is the fruit of experience. Its advance will not be hastened by systematic and unjust attacks, but by the intimate union of the Government with a majority inspired by patriotism, and never seduced by a vain popularity. Let us await from agreement and from time such ameliorations as are possible. Do not let the delusive hope of a chimerical future unceasingly compromise the present good which we have at heart to consolidate together. Let us each remain in our right sphere, you, gentlemen, enlightening and controlling the progress of the Government, I taking the initiative in all that may promote the greatness and prosperity of France."

His Majesty's reply was received with cries of "Vive l'Empereur." At the sitting of the Corps Législatif on Tuesday an Imperial decree was read, proroguing the Session until the 4th of April. The elections of MM. Buffet, Hallez, and Claparede were declared valid without discussion. On Thursday the Extraordinary Budget for 1865 was laid before the Corps Legislatif, asking for a total credit of 108,650,000 frs. A decree has been issued, fixing the import duty upon coals and coke by French ships and by land, at 12 centimes per 100 kilogrammes, dating from February 4. The official report of the subscriptions to the new loan was issued on Saturday. It appears that 542,061 persons (134,105 of whom reside in Paris) have subscribed for 219,321,536f. of rente. The irreducible subscriptions for 6f. rente amount to 2,409,366f. Persons having subscribed for sums of from 10f. to 120f. will have 6f. rente allotted them. For subscribers for other amounts the allotment will be at the rate of 5f. 21c. for every 100f. subscribed. The report further states that the resources which the loan will provide for the Treasury will more than suffice for the public service, and will enable the Government, dating from Saturday, to suspend the permission granted to subscribers of paying in advance the instalments of the loan not yet paid. The report says in conclusion:—

"The eagerness of the country to respond to the appeal is a fresh proof of its confidence in the Government of the Emperor, and of the security felt by everybody in the credit of France."

The *Mémorial Diplomatique* states that the Archduke Maximilian and Archduchess Charlotte, before coming to Paris, will go to England and to Brussels, and take leave of Queen Victoria and the Belgian Court. The Emperor has conferred upon the Comte de Flahault, lately Ambassador of France at this Court, the high dignity of Chancellor of the Legion of Honour. The Danish question is the subject of general discussion in Paris, and the official journals again assert that France has declined to join the English Cabinet in diplomatic intervention for the protection of the integrity of Denmark. Two contradictory reports were current in Paris on Wednesday, one stating that Missunde had been taken, the other that the attack had been renounced after four ineffectual attempts. Both reports are believed to be unfounded. The *Constitutionnel* publishes an article signed by M. Paulin Limayrac, stating that in commencing hostilities on the Eider, the two great German Powers have taken the initiative in measures pregnant with perilous incidents, considering the pride and courage of the Danish people. The *Opinion Nationale* says that it is almost certain that the war is undertaken for the special advantage of the King of Prussia. The *Patrie* doubts that the Cabinets of Berlin and Vienna have given the assurance that the integrity of the Danish monarchy would be maintained. It considers, also, that this assurance would be irreconcilable with the contrary promises made by the two great German Powers to the other German States. The *France* says:—

"We persist in thinking that France has no motive for assuming an aggressive attitude towards any of the parties in this quarrel; it is her duty to watch the course of events, whilst endeavouring by wise counsels to prevent, if it be yet time, a useless effusion of blood by preaching to all conciliation and peace. If she fails in that generous attempt she must wait, and frame her course solely according to her interests."

Bills have been posted in Paris announcing the sale of the Palace of the Permanent Exhibition at Auteuil. The upshot price is fixed at 2,250,000f. The affairs of the company are about to be wound up.

SPAIN.—The Ministry have required of the Cortes to suspend their Session for a fortnight, to allow time for preparing several Bills. The Cortes have assented unanimously.

PORTUGAL.—The stormy debates respecting the late loan continue. The Opposition is strong, and censures the conduct of the Minister of Finance with respect to the loan. The Minister made a long and able defence, but the bad impression had not been removed. The Viscount Sa da Bandeira and Senhor Anselmo Braacamp have left the Ministry in consequence of the bad reception by the Cortes of their proposed reforms in the army. The Portuguese steam frigate Mindelho has sailed, at the urgent demand of the American Minister, to watch the movements of the Confederate privateers at the Azores. The ironclad frigate Royal Oak has arrived at Lisbon.

SWITZERLAND.—M. Lefebvre, the French Commissioner, and M. Corni, *attaché* of the French embassy at Turin, have arrived at Lugano, and transmitted to the President of the Ticino Government a request for an inquiry concerning Mazzini's residence, and that of the four Italians at Lugano, on account of the conspiracy against the Emperor. It appears from the inquiries made by the Swiss authorities that M. Mazzini left Lugano in the beginning of October, and that the men who have been arrested did not arrive at that place till November.

BELGIUM.—All the public men who have been called upon by the King to form a new Ministry having declined, the resigning Ministers will reassume their portfolios. This fact has not yet been officially announced, but it is generally considered as certain.

SWEDEN.—The Swedish Government has protested at Vienna and Berlin against the decision of the two great German Powers to occupy Schleswig. It is said that an alliance has been concluded between Sweden and Denmark, and that Sweden will place 35,000 auxiliary troops in the field. Mr. Kirkpatrick, the English Secretary of Legation at Copenhagen, has arrived at Stockholm on a mission, the object of which it is said is to prevail upon Sweden to act in the Danish question only in common with England.

DENMARK.—A provisional law was published at Copenhagen on Monday morning, enabling the Government to accelerate the assembly of the Rigsraad. A Royal patent was issued at the same time, ordering the elections to the Rigsraad. The Bill levying a war tax on incomes of about 3½ per cent. was submitted to the Rigsdag (the Assembly for Denmark Proper) on Tuesday. It is expected that it will produce a revenue of from 5 to 6 million rigsdalers. It is also believed that an embargo will be placed on all German shipping in Danish ports. The King and the Crown Prince on Friday inspected the battalions proceeding to join the army. They were greeted with extreme enthusiasm by the troops and the people. His Majesty, accompanied by Bishop Monrad, the President of the Council, left Copenhagen on Sunday at midnight to join the army. Large crowds assembled at the railway station to witness the King's departure. His Majesty was continuously and enthusiastically cheered. The Government has placed a steamer at the disposal of the Prussian and Austrian Ambassadors, by which they left on Sunday evening. The postal and telegraphic communication with Germany is broken off. A Council of War was held on Wednesday night.

THE DANISH DUCHIES.—Marshal Wrangel on Sunday morning sent three Prussian officers, one of whom was of high rank, to the head-quarters of General de Meza, the Danish Commander-in-Chief in Schleswig, summoning him to evacuate Schleswig as a pledge of the fulfilment of the promises of 1851, and of the abrogation of the November Constitution, giving him till 5 o'clock in the afternoon to reply. Marshal Wrangel in this despatch referred to the note presented to the Danish Cabinet on the 16th ult., and informed General de Meza that he had received orders to occupy Schleswig and to carry on the administration until further orders. He requested General de Meza to inform him immediately whether he had orders to evacuate Schleswig. General de Meza, in his reply, stated that the instructions he had received from his Government were entirely opposed to the request of the Prussian Commander. He was, therefore, prepared to meet any act of violence by force of arms. On the receipt of this note the Prussian and Austrian troops were ordered to march, and on Monday morning they crossed the Eider. The movements of the Prussian army were intended to force a passage at Missunde, thus cutting the Danes off from the sea, while the Austrians engaged them in the centre. The Danes destroyed the bridges on their approach, abandoned the Kronenwerk at Rendsburg, and subsequently blew up the Sarg bridge, and destroyed the railway, withdrawing all their war material. Some shots were exchanged during these operations, but no one was wounded. At noon an engagement took place between the Prussian artillery and two Danish screw steamers off Eckernforde. The town was taken by the Prussians, and the ships ultimately left the harbour. On Tuesday morning Prince Charles Frederick of Prussia attacked Missunde with 9000 Prussian troops and 74 pieces of artillery. The Danish force consisted of nine companies of infantry and two squadrons of Dragoons, in all about 2000 men. The Prussians made two attacks, but were repulsed four times, and finally compelled to retreat to Eckernforde after an engagement of six hours, with a loss of from 200 to 300 killed and wounded, including several superior officers. They at first left their dead and wounded on the field, but the greater part were subsequently removed. Prince Frederick Charles is said to have been wounded in the arm. The Danish loss was from 150 to 200, including three officers killed and four wounded. One Prussian regiment is said to have been totally destroyed, and one company alone had 130 men killed and wounded. The Danish Dragoons routed the Prussian Hussars. The town of Missunde was in flames during the engagement. The result is said to have convinced Prince Frederick Charles that the Danes will oppose serious resistance to the Austrian and Prussian advance. The Danes, who during the engagement maintained a heavy cannonade from their forts against the storming parties of German infantry, continued the cannonade on Wednesday and Thursday. The Prussians have brought heavy artillery to the front, and boats are ready for the transport of troops over the Schlei, which is free from ice. On Wednesday afternoon the Austrians attacked the position of the Dannewerk at Bustrup with heavy artillery supported by riflemen. They also sent artillery and columns of infantry against Haddely. They stormed two of the works in the outer line of entrenchments, but towards dark they withdrew, leaving a few prisoners in the hands of the Danes. They captured however 200 prisoners and one rifled gun. Their loss in killed and wounded is admitted by Marshal Wrangel to be "not inconsiderable." The Danish loss in officers and soldiers is described as not important. Later in the evening firing recommenced, but ceased for a time. On the Sunday preparations for throwing a bridge across the Schlei were completed, and the Austrians attacked Jagel, when the brigade Gondercourt lost 400 men, with many superior officers. It appears that two persons offered themselves as guides, but conducted the Prussian troops against the Austrians, and that both parties fired into each other. The King of Denmark, with the Crown Prince, and the President of the Council, inspected the works at Missunde in the forenoon. On his return, His Majesty heard the firing at Bustrup, and witnessed the retreat of the enemy from the extreme point of the Bustrup works. His Majesty was expected to return to Flensburg the same evening. Two Austrian regiments (the Regiment of Hesse and the Regiment of the King of the Belgians) under Marshal von Gablenz crossed the railway bridge on Monday, to take possession of the Kronenwerk. Marshal Wrangel, the Crown Prince, and Prince Albrecht of Prussia are with the army near Rendsburg. Marshal Wrangel has issued a proclamation to the Schleswigers, stating that the German troops have come to protect their rights, and that the Civil Commissioners of Austria and Prussia will assume the administration of the Duchy of Schleswig, and the Schleswigers will follow their orders. In conclusion the proclamation advises the inhabitants to abstain from any party agitation, which would not be suffered by the Commander-in-Chief, in the interests of the Schleswigers themselves. Another proclamation announces that the Prussian and Austrian forces are to bear the name of the Schleswig-Holstein army. Prince Frederick of Augustenburg was proclaimed Duke of Schleswig-Holstein at Eckernforde in the Duchy of Schleswig on Monday, in the presence of the Prussian troops, who are advancing under the pretence of maintaining the London Protocol. The Mayor of Eckernforde was driven away. Count Baudissin, with other landed proprietors and inhabitants, also proclaimed Prince Frederick in Gottorp.

SAXONY.—The Committee of the Chamber of Deputies on the Schleswig-Holstein question has made fresh propositions, to the effect that the Government of Saxony should energetically defend the dignity and authority of the Federal Diet against all measures undertaken in opposition to the resolutions of that body, and should interfere at the Diet for the purpose of obtaining the recognition of Duke Frederick of Augustenburg. In case, however, it should not be possible to obtain an immediate vote of the Diet on the succession question, the Saxon Government should demand the admission of a representative of the Duke of Augustenburg to the Diet, and, in common with other loyal States of the Confederacy, cause an immediate increase of the Federal troops in Holstein; finally, that Schleswig should be occupied by loyal Federal troops.

BAVARIA.—The Bavarian Government has taken preliminary measures for assembling a conference of Ministers of those States having the same views as this Government, in order to come to an understanding relative to the Schleswig-Holstein question. All the replies have not yet been received.

AUSTRIA.—In the sitting of the Lower House of the

Reichsrath on Monday, the recommendation of the Committee that the sum of 5,320,000 florins should be voted for the Austrian proportion of the expenses of Federal execution in Holstein, instead of the 10 millions demanded by the Government, was carried. The resolution brought forward by the Opposition censuring the course pursued by the Government, and stating that Austria has no interest in Schleswig-Holstein, and that her action should be subordinate to the policy of the Federal Diet, was rejected by 103 to 59. During the sitting Count Rechberg acknowledged the respect due to the rights of the members of the Germanic Confederation, but said that consideration should be shown by them for the position of Austria. Herr von Schmerling defended in a long speech the home and foreign policy of the Government. The semi-official *General Correspondenz* of Wednesday says:—

"Disquieting rumours have been current of intended intervention on the part of non-German Powers, especially England, with reference to the action of Austria and Prussia. We may express the hope that the explanations from the Vienna and Berlin Cabinets, and more particularly those sent immediately before the opening of the British Parliament, have been perfectly appreciated, and will avert all further complications."

FRANKFORT.—At the sitting of the Federal Diet on the 28th ult. a motion was brought in by the representative of Electoral Hesse advocating the acceleration of the debate upon the succession to the throne of Schleswig-Holstein. Herr von der Pfordten stated that the report of the committee on the question was ready. The Federal Civil Commissioners in Holstein having asked for instructions whether they are to convoke the Holstein Estates, as demanded by a deputation from the rural portions of the duchy, the matter was referred to the committee on Holstein affairs.

POLAND.—The Russian Government is said to have accidentally discovered some of the archives of the National Government, in consequence of which many domiciliary visits and arrests have been made in Warsaw. It appears that a boy was arrested having in his possession 14 copies of a notice from the Town Captain, advising persons not to be present at the ball of the General Ritkowski. A piece of paper was also found on the boy, on which were written 14 initials, probably of the names of the persons to whom the notices were addressed. After being bastinadoed the boy confessed the full names of these persons, who were thereupon arrested. The Russians have definitively failed in their attempts to surround and destroy Bossak, who has been successful in two more engagements in the government of Radom. Colonel Suchonim has been wounded. Rembailo is dead.

ITALY.—The Bill for the suppression of brigandage in the Neapolitan provinces was passed by the Senate on Saturday. In the Chamber of Deputies the Bill proposing taxation on movable property was agreed to. The result of the elections is generally favourable to the moderate party. Garibaldi has not succeeded at Palermo, where Signor Robandi has been elected. Signor Colonna has withdrawn from his canvass at Naples in favour of Garibaldi, expressing the hope that the electors will choose him, not as the author of the events of Aspromonte, but as the liberator of the South. The *Patrie* of Wednesday evening publishes, under reserve, the news that the Italian Government had protested against fortifications being erected by Austria near Peschiera, in contravention of the treaty of 1859. The *Pays* of Wednesday announces that Austria is making armaments on the Mincio.

IONIAN ISLANDS.—The *Mémorial Diplomatique* states that a protocol was signed at London by the protecting Powers of Greece on the 25th ult. The object of the protocol is to explain the convention of the 14th November last, and to restrict neutralisation to two of the Ionian Islands. At the same sitting the draught of a treaty ceding the Ionian Islands to Greece was discussed. This treaty extends to those Islands the Protectorate accorded to Greece, maintains the commercial arrangements concluded by the islands with foreign Powers while under English rule, confirms their debt, and regulates pensions and indemnities. The treaty will be referred to the consideration of the protecting Powers.

TURKEY.—The Turkish Government is strengthening all the defences of the Danube. Great agitation prevails in the Moldo-Wallachian provinces, and it is rumoured that Turkish troops will be concentrated on that frontier. Keen frost and heavy falls of snow have occurred at Constantinople. The winter is the severest known in Turkey for many years. Thirty thousand sheep have perished in the province of Gallipoli alone.

DANUBIAN PRINCIPALITIES.—In the Chambers on Thursday a debate took place on the reorganisation of the gendarmerie. An amendment demanding the establishment of a national guard in the towns was carried by a majority of six. Several speakers belonging to the coalition declared the establishment of such a force indispensable, to counterbalance the too absolute devotion of the army to the Prince.

INDIA.—Sir John Lawrence, the new Viceroy of India, arrived at Calcutta on the 12th ult. The war on the frontier is at an end, and the force employed against the hill tribes has been broken up.

UNITED STATES.—General Rosecrans has been appointed to command the Department of the Missouri; and General Schofield has superseded Gederal Foster at Knoxville. The Washington correspondent of the *New York Times* asserts that the campaign will be opened by two large armies, each equal to cope with Lee's army. One of these armies will advance by the Rappahannock, and the other by way of the Peninsula. Accounts from Charleston announce four days' bombardment of the city, commencing on the 10th ult.; 471 shells were discharged between 8 o'clock on the 12th and the evening of the 14th. On the 23d the Federals were throwing one shell into the city every five minutes night and day. The statement that four Confederate iron-clad rams are lying in Charleston harbour, nearly ready to make a descent upon Admiral Dahlgren's fleet, which has been several times made, is again repeated. One of the rams carries eight heavy guns, and is said to be very swift; another equally formidable is in course of construction. The secret expedition sent out by Admiral Dahlgren in December has proved a failure. The Maryland Legislature and the Republican members of the New Jersey Legislature have nominated Mr. Lincoln for the next Presidency. The *New York Herald* asserts that a strong movement is making by the Republican party to nominate General Fremont for the Presidency. Vice-President Stephens is seriously ill. Mr. Fernando Wood has made a speech in the House of Representatives in favour of peace, declaring that the administration opposed the restoration of the Union, and favoured the continuance of the war for partisan advantage. He said that the most damnable deeds were perpetrated under the plea of patriotism. Mr. Thomas Francis Meagher has delivered a panegyric on Gen. Corcoran before a large Irish audience at the Cooper Institute. His numerous references to the Fenian Brotherhood were loudly cheered. The diplomatic correspondence between Mr. Seward and Mr. Adams has been published. In one of the letters from Mr. Seward to Mr. Adams, the former states that on the whole the President is disposed to admit that the Cabinet of London has acted with "firmness and fidelity to just principles," notwithstanding the fact of its being surrounded with great difficulties. In another letter Mr. Seward says that such proceedings as a negotiation of a Confederate loan have come to be regarded by the people and the Government in America as tending to complicate the relations of both countries in such a manner as to render it difficult, if not impossible, to maintain and preserve friendship between both countries. In another letter Mr. Seward, referring to the Alexandra decision, writes to Mr. Adams that if British law must be left without amendment and be construed by the Government in accordance with the rulings of the Chief Baron, there will be left for the United States no alternative but to protect themselves and their commerce against armed cruisers proceeding from British ports as against the naval officers of the public enemy. They will also claim and insist upon indemnities for injuries committed by such expeditions. If the Federal naval force is not sufficient for the emergency, the United States must employ a private armed force afforded by the mercantile marine. The United States, he adds, are sufficiently chastened by civil war to seek peace and friendship with all nations through any concession compatible with the interests of the national life and honour. Earl Russell, in his reply, disclaims all responsibility of the British Government in regard to the proceedings of the Alabama or any other Confederate cruiser, and trusts that Mr. Adams will not again be instructed to put forward claims which the British Government cannot admit to be founded on grounds of law or justice. In another letter Earl Russell requests Mr. Adams not to repeat complaints about British subjects entering the Confederate service, unless he can prove that all British subjects in the Federal service have been discharged, and orders given not to enlist more. Despatches from London, Canada, state that companies of Canadian Riflemen have been sent to Windsor to watch the movements of Confederate sympathisers, who are suspected of designs to assist in the liberation of the Johnson Island prisoners. The Alabama left Singapore on the 21th December, and afterwards in the Straits of Malacca, burnt the British ship Martaban, from Moulmein, and the American ships Sonora and Highlander.

BRITISH COLUMBIA.—The *Vancouver Island Express* states that seven men returning from Cariboo—John Walker, John Robson, and James Henderson, natives of Scotland; Thomas Beatty, a native of Northumberland; Bernard Rauton, a native of Ireland; and John Beath and Robert Kelly, Canadians—have been drowned in the Fraser, the boatman having got out of the proper channel into an eddy. In local matters at Vancouver Island the most important event is the defeat of a Bill introduced into the House of Assembly which would have conferred upon aliens, after a certain term of residence, the right, upon taking the oath of allegiance, to sit in either House of the Legislature. The Bill was opposed by the British portion of the community. The fleet upon the station comprises but three vessels—viz., the corvette Cameleon, Captain Hardinge, at Nanaimo; and the gunboats Grappler and Forward, both lying at Esquimalt. The former has returned from her cruise in northern waters. She was several times placed in extremely perilous situations during gales. Her services have principally been directed to the suppression of the illegal sale of spirituous liquors to the Indian tribes. Trade has been altogether brisker in Victoria since the return of the miners at the close of the mining season, and the town exhibits a thriving aspect. The steamers to California are generally crowded with passengers returning home, as a proportion of those engaged in mining pursuits in British Columbia hail from that State. The amounts of treasure exported during November by three steamers, through the banks, exhibit a very satisfactory increase over the shipments for the same month last year. The total is 665,365 dols. 56 c. The amount exported during the corresponding month of 1862 was 436,304 dols. It must be understood that these figures do not represent the real quantity of treasure exported, as a large quantity of gold-dust leaves the colony in private hands, the amount of which the attempt to compute would necessarily prove abortive. It is, nevertheless, a well-ascertained fact that the miners who depart carry with them substantial mementos of their sojourn in the gold regions of British Columbia. With respect to the gold discoveries on Vancouver Island we have nothing of importance to chronicle. No companies have yet got fairly to work, but a number of men remain in the locality, and are actively engaged prospecting and preparing. Nearly all the girls sent out by the steamers Tynemouth and Robert Lowe are now married and settled in life. The disparity between the sexes is greater in these colonies than in any other portion of the British empire, and society much requires an increase of the female element in our population.

MEXICO.—Advices from Mexico to the 2d ult. state that in an attack on Morelia on the 17th December, Juarez was repulsed by the French with the loss of all his artillery, and 2000 prisoners. Three battalions of the army of Juarez passed over to the Imperialists. The forces of Uraga and Beriozabal were also defeated, and San Luis de Potosi was occupied by the French on Christmas-eve. Juarez fled, unattended, to Monterey, but Governor Vidaurri, of that city, would receive Juarez only as a private citizen. The French subsequently occupied La Potolin without opposition, and the Mexican General Negrete was disastrously repulsed in an attempt to retake San Luis de Potosi. Uraga, with 8000 Mexicans, was preparing to make a stand in mountain defiles near Bolima. Juarez was last reported at Zacatecas, where Doblado was concentrating his forces. It was believed, however, that Generals Doblado, Uraga, and Etchegaray, would shortly declare their adhesion to the new empire. A fresh deputation has since left for Europe, commissioned to offer the Archduke the ratification by the Provinces of the vote of the Assembly of Mexican Notables, which was the condition laid down by the Archduke for his acceptance of the crown. The *New York Tribune* deems this news conclusive of the speedy establishment of the new Empire, which it admits will be of the greatest advantage to the Mexican people.

SAN DOMINGO.—Intelligence from San Domingo to the 12th ult. announces a fresh victory of the Spanish troops over the insurgents. The Minister of War at Madrid has ordered the organisation of four battalions, which will be dispatched to San Domingo in March.

Parliament.

HOUSE OF LORDS.

The Session of Parliament was opened on Thursday by Royal Commission. The Commons having been summoned to the bar, the LORD CHANCELLOR read her Majesty's Speech, which was as follows:—

"MY LORDS AND GENTLEMEN,

"We are commanded to assure you that her Majesty has great satisfaction in recurring again to the advice and assistance of her Parliament.

"Her Majesty is confident that you will share her feeling of gratitude to Almighty God on account of the Princess of Wales having given birth to a son; an event which has called forth from her faithful people renewed demonstrations of devoted loyalty and attachment to her person and family.

"The state of affairs on the continent of Europe has been the cause of great anxiety to her Majesty. The death of the late King of Denmark brought into immediate application the stipulations of the treaty of May, 1852, concluded by her Majesty, the Emperor of Austria, the Emperor of the French, the King of Prussia, the Emperor of Russia, the King of Sweden, and afterwards acceded to by the King of Hanover, the King of Saxony, the King of Wurtemburg, the King of the Belgians, the King of the Netherlands, the Queen of Spain, the King of Portugal, and the King of Italy.

"That treaty declared that it is conducive to the preservation of the balance of power, and of the peace of Europe, that the integrity of the Danish Monarchy should be maintained, and that the several territories which have hitherto been under the sway of the King of Denmark should continue so to remain; and for this purpose it was agreed that upon the death of the late King and of his uncle Prince Frederick without issue, his present Majesty King Christian IX. should be acknowledged as succeeding to all the dominions then united under the sceptre of his Majesty the King of Denmark.

"Her Majesty, actuated by the same desire to preserve the peace of Europe, which was one of the declared objects of all the Powers who were parties to that Treaty, has been unremitting in her endeavours to bring about a peaceful settlement of the differences which on this matter have arisen between Germany and Denmark, and to ward off the dangers which might follow from a beginning of warfare in the north of Europe; and her Majesty will continue her efforts in the interest of peace.

"The barbarous murders and cruel assaults committed in Japan upon subjects of her Majesty rendered it necessary that demands should be made upon the Japanese Government, and upon the Daimio by whose retainers some of these outrages were committed.

"The Government of the Tycoon complied with the demand made upon them by her Majesty's Government, and full satisfaction having been made, the friendly relations between the two governments have continued unbroken. But the Daimio

Prince of Satzuma refused to comply with the just and moderate demands which were made upon him.

"His refusal rendered measures of coercion necessary, and her Majesty regrets that while those measures have brought this Daimio to an agreement for compliance, they led incidentally to the destruction of a considerable portion of the town of Kagosima.

"Papers on this subject will be laid before you.

"The insurrection which broke out last year among some portion of the native inhabitants of New Zealand still unfortunately continues, but there is reason to hope that it will, before long, be put down.

"Her Majesty commands us to inform you that she has concluded a treaty with the Emperor of Austria, the Emperor of the French, the King of Prussia, and the Emperor of Russia, by which her Majesty consents to give up the protectorate of the Ionian Islands, and also agrees to the annexation of those Islands to the Kingdom of Greece. This treaty shall be laid before you. Her Majesty is also negotiating a treaty with the King of the Hellenes for regulating the arrangements connected with the union of the Ionian Islands with the kingdom of Greece.

"GENTLEMEN OF THE HOUSE OF COMMONS,

"Her Majesty has desired the estimates for the ensuing year to be laid before you. They have been prepared with every attention to economy, and with a due regard to the efficiency of the public service.

"MY LORDS AND GENTLEMEN,

"Her Majesty commands us to inform you that the condition of the country is, on the whole satisfactory. The Revenue has fully realised its expected amount; the commerce of the United Kingdom is increasing; and while the distress in the manufacturing districts has been in some degree lessened, there is reason to look forward to an increased supply of cotton from various countries which have hitherto but scantily furnished our manufacturers with this material for their industry.

"Her Majesty has directed that a commission shall be issued for the purpose of revising the various forms of subscription and declaration required to be made by the clergy of the Established Church. A copy of that commission will be laid before you.

"Various measures of public usefulness will be submitted for your consideration.

"Her Majesty commits, with confidence, the great interests of the country to your wisdom and care; and she fervently prays that the blessing of Almighty God may attend your deliberation and prosper your councils for the advancement of he welfare and happiness of her loyal and faithful people."

THURSDAY: *The Address.*—On the resumption of business at five o'clock the Marquis of SLIGO moved the Address in reply to the speech from the throne. The motion was seconded by Lord ABERCROMBY. The Earl of DERBY said it was gratifying to find that the country was in a prosperous condition, and that our commerce was steadily increasing, thus affording a reasonable hope for a further remission of taxation. Lancashire was no doubt exempt from that general prosperity, but there was reason to believe that in the course of a few months there would be a sufficiency of cotton, independently of any supply from the Confederate States, to work the mills during five days in each week. In Ireland as in Lancashire distress prevailed to some extent, and he hoped the attention of the Government would be turned to that country. With regard to the other topics of the Speech, he referred to the Commission to be appointed to inquire into the subject of subscription by the clergy of the Church of England. He feared that the result of such an inquiry would not be proportionate to the magnitude of the machinery employed in it. He then called the attention of the House to the portion of the Speech relating to foreign affairs. Her Majesty's Government had for two or three years past mainly rested their claim to public confidence on their foreign policy. They had abandoned the question of Parliamentary reform the moment it had served the purpose of placing them in office. The fulfilment of the promises they had made was defeated by Lord Russell, and when he was transferred to the more serene atmosphere of the House of Lords he pronounced the funeral oration of Reform. He had told them to "rest and be thankful;" and from that time their foreign policy had been the groundwork of the claim of Her Majesty's Government to public confidence. This policy he examined and criticised. Its chief principles were stated to be the maintenance of a good understanding with France, and non-intervention with the internal affairs of other countries. As to non-intervention, it would be difficult to mention a country with whose affairs Lord Russell had not interfered. In fact, his main principle seemed to have been to meddle and to muddle. With great or small States his course was lecturing, blustering, and retreating. Like Bottom, the weaver, he wished to play every part, but, above all, that of the Lion. He could roar that it "would do any man's heart good to hear him," though he also knew how to "aggravate his voice, like any sucking dove!" But, seriously, he believed that England had been lowered and humiliated in the eyes of Europe by the foreign policy of the Government. England had not a single friend on the Continent, and its remonstrances were treated with contempt, both by the larger and smaller States. As to keeping up a good understanding with the Government of France, there was hardly a single question on which her Majesty's Ministers had not thwarted its policy. From the Mexican expedition England had withdrawn, and it had not supported the Emperor's policy in relation to the Confederate States of America. It had also declined the Emperor's proposition of a Congress. He admitted the difficulties that would have been encountered, but if any country was less justified than another in meeting the suggestion with a blunt refusal, it was England. This country had no interests that could have been affected by the Congress. The proper course would have been to recognise the benevolent intentions of the Emperor, and, stating that England had no interest that could prevent her taking part in the Congress, to have expressed a readiness to co-operate in such a laudable design, provided we received assurances that other States would submit to such an arbitration. Then, if the plan failed, the failure would have caused no ill feeling between England and France. It must have been known that the Danish and German question was pending, and if the proposition of holding a Congress could have postponed but for a short time the extreme steps that had been taken, there would be now a better prospect of restoring the peace it was too late to preserve. As to the points in dispute between Germany and Denmark, it ought not to have been difficult to settle them without an appeal to arms. Had England possessed the influence she ought to exercise, she could have played the part of mediator, and the difficulties that threatened the peace of Europe might have been adjusted. But France had been alienated, Russia offended, and they could not look to any European Power for support. He hoped England was not committed to a conflict with Germany on a question on which the Germans felt so strongly. Such a war would be a great disaster, and would give France the opportunity of acting on any ambitious designs with regard to Germany if she entertained them. In every case of Lord Russell's interference he had offended, not one side only, but both. He had offended the Confederates, and from the Federals he had been met by a demand that out-blustered Lord Russell himself. The Federal Government held this country responsible for all the damage the commerce of the North had suffered from the Alabama. He hoped the despatch had been answered in a manner that would put an end to all such demands. In conclusion, he recapitulated the existing differences between Her Majesty's Government and most of the European Powers, and denounced the policy that had produced such embarrassments as a source of national danger.—Earl RUSSELL in reply said he believed that the whole country approved of the policy of non-intervention which the Government had adopted both in reference to Poland and the struggle between the Federal and the Confederate States of America. With regard to the difference between Germany and Denmark, the latter was disposed to yield every reasonable concession, but the former refused to give a delay of six weeks to enable the Rigsraad to assemble and revoke the constitution of 1862 in a constitutional manner. The proposals of England, France, Russia, and Sweden to arrange the difficulty met with no favour from the German Powers. In fact they had peremptorily rejected all overtures in the cause of peace. Within the last few hours, however, he had received a despatch from the Prussian Minister to the effect that the German Powers would merely hold Schleswig as a material guarantee for the revocation of the constitution; but he owned that it was framed in such ambiguous language that he found the greatest difficulty in understanding it. Hitherto no hope of material assistance had been held out to Denmark by England; but it was impossible to say what complexion the question might assume hereafter. In his opinion the better way would be for the Government not to take its policy from Parliament, but, having adopted a policy of its own, to stand or fall by it.—Earl GREY did not think that our foreign relations had been conducted by Earl Russell in a manner which, while maintaining the honour of the country, was as conciliatory as possible to other Powers. He was not satisfied with the policy of the Government in respect of China and Japan, any more than with the style of the despatches of the noble earl on the subject of Schleswig-Holstein. After a few words from Earl GRANVILLE, the Address was agreed to,

FRIDAY.—*Metropolitan Railways.*—In reply to the Earl POWIS, Earl GRANVILLE said that in accordance with the recommendation of the Committee of last session, committees of both houses would be appointed, in order to act together, and take the whole matter into consideration. *Ecclesiastical Commission.*—The Archbishop of YORK moved few copies of two reports of committees of the Ecclesiastical Commissioners.—Lord REDESDALE and Earl POWIS objected to the expenditure of the commissioners.—The Archbishop of CANTERUYRY and the Earl of CHICHESTER defended the commissioners.—The Bishop of LONDON said he was in fauour of a thorough inquiry into all their operations. [Left sitting.]

HOUSE OF COMMONS.

THURSDAY: *Income Tax.*—The CHANCELLOR of the EXCHEQUER gave notice of his intention to introduce a Bill to amend the assessment and collection of the Income-tax.—Sir G. GREY gave notice of a Bill to amend the Act 3rd and 4th William IV., and to make further provision for the confinement and maintenance of *Insane Prisoners*; and to amend the Acts relating to *Penal Servitude.*—Mr. LOCKE KING and Mr. BAINES gave notice of Bills to extend the *Franchise in Counties and Boroughs.*—Mr. DILLWYN renewed his motion on the subject of the *Established Church in Ireland. The Address.*—Lord R. GROSVENOR moved the Address in answer to the Speech from the Throne. The motion was seconded by Mr. GOSCHEN. Mr. DISRAELI said that the Royal Speech was ambiguous, vague, inconsequential, and remarkable for several notable omissions. It contained no reference whatever to the condition of Ireland, which was critical and unsatisfactory, to the affairs of China, to the revolution in Poland, to the civil war in America, or to the proposal of the Emperor of the French for a European Congress. Nor did it contain the usual paragraph to the effect that her Majesty had received from foreign Powers expressions of their amity and good-will. The foreign policy of the Government appeared to him to be in a state of utter confusion, inconsistency, and incoherency. He protested against a Government coming forward year after year without a policy, and expecting the House of Commons to place unlimited confidence in it. What, he asked, were the objects of the Government, and who were their allies? According to all appearances we had no ally but the King of Denmark, whom we were not going to help. In the present aspect of affairs the Government were bound to confide in Parliament, and state what their policy was. If they failed to do so, they did not discharge their duty as Ministers of the Crown. He was aware he might be taunted with the stereotyped phrase, "If you are dissatisfied, why do you not move a vote of want of confidence?" His reply was, that if the Government would lay the proper papers on the table of the House, and give the Opposition the means of arriving at an opinion upon them, they would not hesitate to challenge the decision of Parliament if they were of opinion that the Government was no longer deserving of its confidence.—Lord PALMERSTON said that the objections of Mr. Disraeli were directed not so much to what was in the Royal Speech, but what was not to be found in it. With regard to the civil war in America, her Majesty's Government still deplored its continuance, and were still determined to maintain an attitude of neutrality. With respect to China our relations with that Power were satisfactory, and there was consequently no necessity for making any marked reference to them. As regarded the Congress he denied that the overtures of France had been met in an uncivil or discourteous spirit. The Congress had been declined because her Majesty's Ministers, after communicating with Austria and Russia, had come to the conclusion that it would not have led to the satisfactory results expected of it by the Emperor of the French; but he was happy to say that the relations between the two countries were as cordial at this moment as they were before the Congress was suggested. Referring to the Danish question, he said that the policy of the Government was to bring to a friendly settlement the differences arising out of the protocol of 1852. They thought it right to exhaust all the means of diplomatic persuasion, and to a great degree they had succeeded; and within the last few hours they had received information from Austria and Prussia that they would abide by the treaty, and maintain the integrity of the Danish monarchy in conformity with the Treaty of 1852. Austria and Prussia had certainly put themselves in the wrong by not waiting until the Danish Parliament could assemble, and revoke the constitution of last year. England, France, Russia, and Sweden had combined in urging Denmark to revoke that constitution; but the King, however willing, could not constitutionally do so without the consent of the representatives of his people. The German Powers had declined to wait, but had promised that they would merely hold the Duchy of Schleswig as a material guarantee, a principle which had been scouted when acted on by Russia. This being the condition of affairs, the invasion, however lamentable, was not intended to lead to the dismemberment of the monarchy. In conclusion, he observed that the policy of the Government was a policy of peace, its object being to prevent quarrels and divisions in Europe, and that policy they would continue to pursue as long as it received the approbation of the country.—Mr. S. FITZGERALD contended that the Speech emanated from a divided Cabinet, which was not entitled to the confidence of Parliament.—Mr. G. DUFF entered into the details of the Schleswig-Holstein question, pursuing it at considerable length in all its intricacies and complications. He was of opinion that the Duke of Augustenburg was entitled to rule in Holstein, and probably in Schleswig. England, he considered, had no interest whatever in the quarrel.—Sir H. VERNEY discussed the details of the same question, which, he said, really was whether a Scandinavian race should oppress a German race.—Mr. HENNESSY adverted to a declaration by Earl Russell, that, by the violation of the Treaty of Vienna, Russia had forfeited a title to Poland, and asked why that declaration had been withdrawn from a despatch. He complained of the policy of the Government in relation to Poland, and accused the Emperor of Russia of being the real author of the severities exercised towards the Poles. With regard to the Danish question, he examined the history of the Treaty of London, and denied its validity. The question, he said, was one in which we ought not to have interfered. Denmark was actually dismembered, and Lord Russell was responsible for it.—The CHANCELLOR of the EXCHEQUER denied the suggestion that the Cabinet was divided upon the Danish question, and insisted, in opposition to Mr. Hennessy, that we were bound by the Treaty of London. The sum and substance of the advice which her Majesty's Government had given to Denmark was that she should perform her engagements, and he maintained that, by tendering that advice, they were performing the part of a true friend. He then pointed out what, he said, was a misapprehension of a declaration of Lord Palmerston in July. The case which had arisen was totally different from that contemplated in that declaration. As to the views and policy of the Government, he subscribed to the exposition given by the Premier.—Lord J. MANNERS inquired whether Lord PALMERSTON really believed in the *bona fides* of the declaration made by the two German Powers. If he did, it was more than Earl Russell did, who had declared that very evening, in another place, that he could not even understand it.—Mr. PEACOCKE inveighed against the diplomatic action of Lord Russell in our foreign policy.—Mr. BAILLIE charged the Government with departing from the principle of neutrality, in recognizing a blockade of the coast of Confederate America, which was not effective, but a paper blockade, and showed the disastrous effects upon British commerce of this connivance on the part of the Government.—Sir J. PAKINGTON, referring to the statement of Lord Palmerston as to a despatch he had received within the last few hours, asked Mr. Layard to say whether this despatch did not contain provisions which destroyed the value of the engagement.—Mr. LAYARD read the despatch, which elicited some laughter from the House.—Mr. WHITESIDE and Mr. KINGLAKE made a few remarks, the latter throwing out cautions to Germany as to the possible effects of the movement in that country, and to her Majesty's Government in dealing with the Danish question.—After some remarks by Sir M. FARQUHAR and Mr. NEWDEGATE, the Address was agreed to.

FRIDAY.—*The Address.*—Lord R. GROSVENOR brought up the report on the Address on the Queen's Speech, which was agreed to on the previous night.—Mr. WHITESIDE commented on the state of Ireland, and complained that no notice was taken of that country in the Royal Speech.

[Left speaking.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90⅜ to ⅝ for Money, and 91 to 91⅛ for Account; Three per Cents. Reduced, 90⅜; New Three per Cents., 90½ to ⅝; India Stock, 213; Ditto Five per Cent. Stock, 104¼ to 103¾; Exchequer Bills, 4*s.* to 10*s.* dis.—FOREIGN: Brazilian Old Five per Cents., 100½; Ditto 1852, '58, '60, 85¾ to 86¾; Buenos Ayres, for Acct., 91; Dutch Certificates, 101; Equador, 13½; Egyptian, 101½; Greek, for Acct., 21⅝ to ¾; Italian (Maremmana Railway), 74; Mexican, for Acct., 35⅝ to 36⅛; Moorish, 92½, ex div.; Portuguese, 1856, &c., for Acct., 47½ to ¾; Russian, 1822, 92; Ditto, 1850, 85½; Ditto, 1862, 88 to ⅜; Sardinian, for Acct., 82 to ½; Spanish, for Acct., 32⅜ to ½; Ditto Certificates, for Acct., 13½ to ⅝; Turkish, 1854, for Acct., 89; Ditto 1858, for Acct., 69½; Ditto, 1862, 100*l.* Bonds, 67½ to 67; Ditto Guaranteed, 100, ex div.; Venezuela, for Acct., 23¼.

Gazette of the Week.

FRIDAY, *Jan.* 29.—BANKRUPTS.—G. ANNIS, Great Gonerby, Lincolnshire, Innholder—T. W. AUGER, Barking, Essex, Licensed Victualler—J. ARNOLD, South Molton Street, Professor of Physical Education—H. BOOTH, Bradford, Yorkshire, Commission Agent—J. G. BENSHAM, Durham, Farm Labourer—T. BOWEN, Brentwood, Essex, Fishmonger—J. K. BALDWIN, Birmingham, Steel Toy and Commission Agent—J. BACON, Coton, Warwickshire, Weaver—J. BUNDEY, Mary Street, Hampstead Road—R. BATLEY, Park Village East, Regent's Park, Timber Dealer—J. BLADES, Shiffnal, Shropshire, Provision Dealer—H. A. BOLTON, Scarborough, Yorkshire, Chemist and Druggist—J. BOOTH, Gomershall, Yorkshire, Cotton Spinner—W. CAVE, Nuneaton, Warwickshire, Labourer—W. COX, CLOUGH, Stoke upon-Trent, Staffordshire, Porter—C. CHAPMAN, late of Wetheringsett, Suffolk, Boot and Shoemaker—J. R. CURNOW, Maindee, Monmouthshire, Innkeeper—T. DOWNS, Bishopsgate Street Without, Pipe Maker—A. DIXON, Harborne, Staffordshire, Commercial Traveller—S. A. DAWSON, Blackburn, Lancashire, Surveyor—G. L. DAY, Caledonian Road, King's Cross, Furniture Dealer—W. H. DORRINGTON, Hertford, Seed Merchant—S. EARN, Launton, Oxfordshire, Farmer—E. ETTERY, Newport, Monmouthshire, Innkeeper—R. ELEY, Charlbury, Oxfordshire, Artificial Manure Maker—W. EVANS, Cardiff, Glamorganshire, Lath Manufacturer—T. FEWTRELL, late of Nuneaton, Warwickshire, Shoemaker—R. FORD, Liverpool, Licensed Victualler—R. FORREST, late of Manchester, Publican—J. FOX, Nuneaton, Warwickshire, Baker—W. GODFREY, Bristol, Beerhouse Keeper—J. C. D. GREENLAND, St. Woollos, Monmouthshire, Engine Fitter—A. GOLLAND, Sheffield, Widow—H. HOLLWAY, Gosby, Lincolnshire, J. HART, and J. HART, jun., King's Lynn, Norfolk, Timber and Coal Merchants—H. HAYWARD, Landport, Hampshire, Brewer—W. HUGGINS, East Carleton, Norfolk, Farmer—G. HUGHES, Maidenhead, Berkshire, late Licensed Victualler—CHARLES HARTLAND, Sedgley, Staffordshire, Builder—JOHN HUBAND, late of Aston Manor, Warwickshire, Miller—JAMES HAUGHTON, Heaton Norris, Lancashire, Grocer—THOMAS HART, Great St. Helen's, City, Commission Agent—JOSEPH HEBDEN, Brunswick Street, Blackwall, Lighterman—W. HOLLINGSHEAD, Stoke-upon-Trent, Staffordshire, Wood Carver—H. HOWE, Birmingham, Horse Slaughterer—E. HULSE, Wharton (otherwise Winsford), Cheshire, Smallware Dealer—J. HAINSWORTH, Batley Carr, Yorkshire, Woollen Manufacturer—E. HARVEY, late of Liverpool, Licensed Victualler—T. HICKMAN, Kingston-upon-Hull, Butcher—W. JONES, Wednesbury, Staffordshire, Beerhouse Keeper—E. JONES, Shrewsbury, Ironmonger—R. LAWRENCE, Park Place, Hackney Wick, Builder—H. C. LITTLEWOOD, Sheffield, Grocer—F. LAMBERT, Skirwith, Yorkshire, Butcher—E. A. LANGLEY, Litchfield Row, Bow, late Captain in the East India Company—J. LOWE, sen., Woodshutts, Staffordshire, Grocer—C. MORGAN, Bristol, late Licensed Victualler—J. A. M'LELLAN, Howland Street, Fitzroy Square, Clerk to a Tailor—G. MITCHESON, Durham, Farmer—J. MEDCRAF, Oxford, Grocer—J. MASSEY, Forest Hill, Oxfordshire, Pig Dealer—R. MOSS, King's Norton, Worcestershire, Boot Manufacturer—J. MASON, Walgrave Terrace, Elms' Court, Brompton, late Beershop Keeper—N. MATON, Liverpool, Grocer—R. H. W. MATHIAS, Argyle Street, Oxford Street, Commission Agent—R. MINKS, Polygon, Clarendon Square, Somers Town, Chairmaker—J. MURRELL, Hove, Sussex, Butcher—F. NICHOL, Carlisle, Innkeeper—J. NOY, Leiston, Suffolk, Journeyman Carpenter—J. OATES, Knaresborough, Rent Agent—C. C. OFFER, Dorking, Surrey, Surgeon's Assistant—W. PERTON, Jun., The Mall, Notting Hill, Painter—R. PARKES, New Sleaford, Lincolnshire, Coal Merchant—W. PAWLEY, Hanley, Staffordshire, Broker—J. PORTER and R. PORTER, Witton, Lancashire, Patent Brick and Tile Manufacturers—W. PHILLIPS, late of Birmingham,

Butcher—J. A. QUINN, Liverpool, late Clerk—W. ROBINSON, Ulleskelf, West Riding of Yorkshire, Wheelwright—J. ROBINSON, late of Wakefield, Yorkshire, Coal Proprietor—W. RUSSON, late of Birmingham, General Dealer—BENJAMIN ROSE, Mosborough, Derbyshire, Cordwainer—T. S. RUSSELL, Colsterworth, Lincolnshire, Wood Turner—A. ROBERTS, Bradford, Yorkshire, Journeyman Plumber—W. RIDING, Wakefield, Yorkshire, Butcher—CHARLES READ (trading as RICHARD READ), Triangle, Kennington Cross, Grocer—H. ROYSTON, Upper Lisson Street, Paddington, Iron Merchant—T. ROYLE, late of Salford, Lancashire, Attorney-at-Law—T. ROSS, Great Barlow Street, Manchester Square, Publican—C. RICHARDS, Nottingham, Cordwainer—R. RADMORE, White Horse Yard, Westminster Road, Cab Driver—S. SNOOK, Bristol, Cooper—R. STANILAND, Grantham, Lincolnshire, Butcher—W. H. SHEARS, Moretonhampstead, Devonshire, Carpenter—R. SPEAK, Broadway, Ludgate Hill, Bootmaker—T. SHELL—S. Northampton, Farmer—T. SHORT, Birmingham, Commission Agent—H. SHIPLEY, Manchester, Provision Dealer—T. SHUTTLEWORTH, Manchester, Attorney-at-Law—C. SMART, jun., Epsom, Surrey, Farmer—E. SHENTON, Biggleswade, Bedfordshire, Foreman to a Nurseryman—G. H. SMART, Trent Railway Station, Derbysh.—R. SMITHSON, Grimoldby, Lincolnshire, late Farmer—R. STELLING, Bradford, Yorksh., Tailor—S. SMITH, Erdington, Warwicksh., Commercial Traveller—H. STRIDE, Southampton—S. THOMAS, Lleine, Carmarthensh., Farmer—T. TOMALIN, Birmingham, Watch Hand Maker—J. TATTERSALL, Salford, Lancash., Inn-keeper—E. TURLEY, late of Manchester, Bread and Flour Dealer—J. G. TROWNCE, Cavendish Ter., Carlton Street, Kentish Town, Grocer—G. TRUMAN, Cheltenham, Gloucestershire, Pastrycook—C. H. WINTER, Cheltenham, Coal Mercahnt—W. WOODWARD, Middlesborough, Yorkshire, Butter Dealer—S. WELLS, High Wycombe, Buckinghamshire, Agricultural Machine Merchant.

SCOTCH SEQUESTRATIONS.—J. FINDLAY, Arbroath, Flax Spinner—D. GAIR, Nigg, Ross, Tacksman—W. HAMILTON, Brownside, Paisley, Farmer—R. MACKAY & Co., Glasgow, Wrights—J. N. ROBERTSON, Auchmull, Merchant.

TUESDAY: *Feb.* 2.—BANKRUPTS—S. BROWN, Birmingham, Carpenter—W. B. BAKER, Queen's Terrace, Bayswater, Auctioneer—J. M. BLOOMFIELD, Poole, Dorsetshire, Shipowner—B. BOWEN, Great Ormond Street, Commercial Clerk—J. G. BALES, Liverpool, Inspector of an Omnibus Company—W. BREEZE, Wattlesborough, Shropshire, Shoemaker—J. BRANDIST, Bishopwearmouth, Durham, Blue and Lead Manufacturer—H. BRADSHAW, Accrington, Lancashire, Stonemason—G. COLLIER, Waltham Cross, Hertfordshire, Brewer—W. CHAPPELL, sen., and W. CHAPPELL, jun., Coventry, Silkmen—R. O. CAWOOD, Yorkshire, Medical Student—E. CAREY, Hastings, Sussex, Fruiterer—J. R. CHAVE, Exeter, Schoolmaster—W. COWLURN, Leeds, late Innkeeper—W. CLARK, Willaston, Cheshire, Newsagent—J. DENNIS, King's Lynn, Butcher—J. S. DICK, South Shields, Durham, Publican—J. DOW, Orchard Hill, Lewisham Road, Greenwich, Baker—E. EVANS, Pentonville Road, Metal Trades Agent—J. EMERY, Wednesbury, Staffordshire, Chemist—G. GOSLING, Ardleigh, Essex, Blacksmith—R. GWYNN, Dudley, Worcestershire, Miner—E. GOULD, Oxford, Plasterer—J. GILLINGHAM, Cottage Row, Walworth, Corn Dealer—J. HILL, Arbour Street West, Stepney, Licensed Victualler—G. HATTON, Hastings, Plumber—C. G. HODGSON, Shipley, Yorkshire, Druggist—P. HENDMARCH, Northallerton, Yorkshire, Timber Merchant—J. HOLMES, Windermere, Westmoreland, Joiner—R. HESSLEWOOD, Melbourne, Yorkshire, Jobber—W. HUGHES, Tanymynydd, Carnarvonshire, Seedsman—T. JONES, Brockmoor, Staffordshire, Forge Labourer—G. D. JOHANNSEN, Liverpool, Merchant—J. JENNINGS, Aston, Warwickshire, Beer Retailer—G. JORDAN, Liverpool, Paint Manufacturer—T. JONES, Bedwellty, Monmouthshire, Colliery Overman—J. JOY, Manchester, Machinist—W. JONES, Birmingham, Clerk—W. KER, Bishop's Road, Camberwell New Road, Journeyman Cabinet Maker—C. W. LANGFORD, late of Red Lion Yard, Warner Street, Clerkenwell, Cab Driver—J. LEWIS and L. LEWIS, Pontardawe, Glamorganshire, Manufacturing Chemists—H. G. MARSHALL, Lavender Grove, Dalston, Merchant—T. I. M'CARTHY, late of Manchester, Oil Merchant—T. MARTIN, Guildford, Tailor—J. P. MOIL, Old Broad Street, Silk Broker—H. NORRIS, Wallingford, Berkshire, Boot Maker—M. J. H. O'BRIEN, Duke Street, St. James's—J. PORLEY, Ipswich, Innkeeper—J. H. PARTRIDGE, Lucan Place, Hoxton, Commercial Traveller—G. ROBERTS, Pwllheli, Carnarvonshire, Carrier—R. E. STURGEON, Sible Hedingham, Essex, Farmer—H. STEER, Mill Hill Road, Acton, Builder—J. SMITH, late of East Harling, Norfolk, Baker—CHARLES STEEL, Birmingham, Builder—JOHN JAMES SKELTON, Eton, Buckinghamshire, Carpenter—W. H. SMITH, Stratheden Terrace, Hammersmith, late Secretary to a Hotel Company—J. TOTTER, Heavitree, Devonshire, Shoemaker—W. O. TWYCOCK, Drummond Terrace, Bermondsey, Waterman—J. THOMPSON, York, late Farmer—E. TONGE, Camden Street North, Camden Town, Attorney at Law—G. W. TURNER, New Barnet, Herts—M. TINSLEY, Ifton Heath, Shropshire, Butcher—D. WILSON, Wells Street, Oxford Street, Ale Store Keeper—A. WAITE, Dagenham, Essex, Beer Shop Keeper—W. H. WARBURTON, Grove Street, Holloway, Furniture Dealer—J. W. WILSON, Upper Brunswick Terrace, Islington, Doctor of Medicine—J. WOODWARD, Neston, Cheshire, Teacher—T. YOUNGER, Newcastle-upon-Tyne, Builder.

SCOTCH SEQUESTRATIONS.—D. INGRAM, Glasgow, Builder—J. RUSSELL, Dalcs, Linlithgowshire, Farmer—J. STUART, Glasgow, Lace and Silk Agent—WHITE and INGLIS, Ayr, Brassfounders.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,275,985	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	12,625,985
		Silver Bullion	—
	£27,275,985		£27,275,985

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,124,584
Rest	3,455,103	Other Securities	20,214,750
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,748,867	Notes	6,720 335
		Gold and Silver Coin	677,253
Other Deposits	13,372,981		
Seven days and other bills	606,976		
	£38,736,927		£38,736,927

Feb. 4, 1864. M. MARSHALL, Chief Cashier.

Metropolis and its Vicinity.

DECORATION OF ST. PAUL'S.—A meeting of City bankers and merchants interested in the adornment of the interior of St. Paul's Cathedral was held on Friday at the Mansion House, the Lord Mayor presiding. It was stated that to carry out the decoration of the interior according to the original designs of Sir Christopher Wren would require from 60,000*l.* to 70,000*l.*, and that of this sum only about 15,000*l.* had been raised by the efforts hitherto made. There was an impression abroad that the dean and chapter ought to find the money from their corporate funds; but it was shown that this was quite a mistake, inasmuch as the Ecclesiastical Commissioners had possession of the corporate funds, and the dean and chapter, as such, had no fund whatever at their disposal. It was unanimously resolved to make an appeal to the whole country for a guinea subscription to decorate the cathedral, but without refusing any larger sums that might be offered.

THE CITY BANQUET TO THE PRINCE AND PRINCESS OF WALES.—The committee charged with providing the banquet in the City to the Prince and Princess of Wales have just published an elaborate report of their proceedings. It appears that the cost of the banquet, which lasted six hours altogether, amounted to 16,590*l.*, which was afterwards reduced by about 1500*l.* by the resale of a variety of the articles used on the occasion.

CITY COMMISSION OF SEWERS.—At the last meeting of the Court of Common Council, Mr. Medwyn moved that the existing law, which required that one representative from each ward should be sent to the Commission of Sewers, be altered, so that all the members of Common Council who were eligible might be members of the Commission. Mr. Norris, M.P., moved an amendment defending the composition of the present Commission. A long discussion ensued, which ended in the motion being lost by the narrow majority of three. On Mr. Norris's amendment being put as an original motion, it was found that the numbers were equal, and as the Lord Mayor declined to give the casting vote, the commission remains as it was.

PROPOSED REGENT STREET ARCADE.—A prospectus having been published for the construction of an arcade from Regent Street to Bond Street, a meeting of the inhabitants was held a few days since at the Vestry Hall, Piccadilly, the Rev. Mr. Kempe, rector of St. James's, in the chair, to consider the moral objections to the scheme. There was some opposition manifested to the object of the meeting, but the feeling against the scheme largely preponderated, and it was resolved to oppose it by all the means in their power. A committee was accordingly formed, and subscriptions opened for the purpose. On the other hand upwards of 100 householders, shopkeepers, and other inhabitants of Regent Street, Conduit Street, Bond Street, and Piccadilly, have signed a petition in favour of the scheme. The proposed arcade is intended to run from Messrs. Lewis & Allenby's, in Regent Street, to the corner of New Bond and Clifford Streets; New Bond Street being widened by the promoters at the latter point, which is its narrowest part. The arcade will run as nearly as possible parallel to Conduit Street, and following the boundary line between the parishes of St. James's and St. George, Hanover Square. The length will be 860 feet; the width between the shops 30 feet; and the height of the roof from the subway, which will run under the arcade to afford private access to the shops, will be 60 feet. The roof will be of glass and iron, like that of the Crystal Palace. Over the whole length of the shops on each side it is proposed to construct galleries, lighted from the top, so as to be available for the exhibition of pictures.

CITY OF LONDON SCHOOL.—The Senior Wranglership of the University of Cambridge has this year again been won by a pupil of the City of London School and a citizen of London, Mr. Henry John Purkiss, son of the late Mr. John Purkiss, of Little Distaff Lane. This is the second instance within four years in which the same high University distinction has been gained by a pupil of this school, a circumstance which is said to be unprecedented in the history of any other public school.

MR. PEABODY'S GIFT.—The first of the buildings which have been erected by the trustees of Mr. Peabody's munificent gift to the City of London will be ready for occupation in the course of the present month. The building, which has cost 22,000*l.*, is situate at Bethnal Green. The number of applications for rooms far exceeded those to be disposed of, and some difficulty has been experienced in making a selection of the occupants. Rooms have been constructed of the dimensions of 12 feet by 15 feet 6 inches, a sufficient size for a small family. There are rooms of a smaller size, and some for single men. There are also shops on the basement with suites of rooms adjoining, which, it is believed, can be let at a rental of about 60*l.* a year. The domestic comforts of the inmates have been carefully studied. There are separate lavatories for the men and for the women and children, a plentiful supply of water, and excellent ventilation. The rent however of the rooms (which will be from 2*s.* to 3*s.* and 5*s.* a week) will be above the means of the poor for whom Mr. Peabody mainly intended his gift.

THE GREAT EASTERN.—On Saturday the first portion of the bonded stores of the Great Eastern, which have been recently seized at the suit of Mr. Parry, ship-store merchant, of Leadenhall Street, for a balance of upwards of 5000*l.*, were sold by auction at Liverpool, under a sheriff's warrant, by an order of the Court of Queen's Bench. The articles sold consisted of the exciseable stores only, and realised only nominal sums. —On Thursday Dr. Lushington gave judgment in the Admiralty Court on the claim which the owners of the Jane had brought against the owners of the Great Eastern for the collision which took place between those vessels, by which the former was sunk. His decision was that the Great Eastern was solely to blame for the collision.

THE PAPER DUTIES.—A deputation of paper-makers had an interview with the President of the Board of Trade on Friday, to represent to him the evil consequences of the continuance of the export duty on rags in foreign countries. Mr. Milner Gibson disputed the gloomy view which the paper-makers took of the prospects of their trade, and quoted the increased number of licences that had been taken out for the manufacture last year as compared with the year preceding. He admitted, however, that the continuance of a high export duty on rags by foreign Governments was a fair subject of complaint by our own manufacturers, for which the Government would do its best to procure them redress, and stated that the Italian Government had within the last few days abolished the duties on the exportation of rags.

THE RECENT DEATH OF A COLUMBINE BY FIRE.—At the adjourned sitting on Madame Charles on Friday, the evidence proved that deceased had transgressed the positive orders of the management by stepping over the board which was intended to protect the actors from the gas-jets, and that she admitted in the hospital that her death was caused by that act. The jury returned a verdict of Accidental Death, but recommended farther protection in all cases of lights upon the stage.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return reports a decided improvement in the public health, the deaths in London, which were 2180 in the previous week, having fallen to 1749 in the week that ended Saturday, Jan. 30. The average number in the corresponding weeks of 10 years 1854-63, corrected for increase of population, was 1529. The present return, therefore, although much less than any since the cold weather set in, exceeded the average by 220. During the week the births of 1044 boys and 1063 girls, in all 2107 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 2035.

Provincial.

BIRMINGHAM.—At a meeting of the Town Council on Tuesday, a report respecting the completion of the purchase of Aston Park, was read by the chairman of the Baths and Parks Committee, recommending that the sum of 7000*l.* offered as a donation by the Rev. Dr. Miller's committee be accepted; that the park be purchased for 26,000*l.*, under the powers conferred by the local Act of 1854, and that a sum of 19,000*l.* be voted by the Town Council to complete the sum necessary for this purpose. The chairman moved, and Alderman Manton seconded, the resolution for the adoption of this report; and a discussion ensued which occupied five hours. In the course of it several amendments were moved, but finally, after a strong appeal in favour of purchase by the mayor, the recommendation of the Committee was carried by a majority of 34 to 14. The Park which her Majesty graciously condescended to open in 1858 will therefore now become the property of the people of Birmingham.

COWES.—Her Majesty last week honoured Professor Tyndall with an invitation to Osborne, in order that he might deliver two lectures on electricity, for the instruction of the younger members of the Royal family. The lecture for the 29th ult. was upon static electricity and the phenomena of the Leyden battery; and that on the 30th on dynamic electricity and the effects due to the voltaic current. On Friday week her Majesty spent some considerable time in going over Parkhurst Prison, the greater part of which is occupied by female convicts, and the other part by boy convicts. Attached to the females' prison is a nursery for the children born of convicts since their conviction, and in that department her Majesty remained for some time. On the following Monday the Hon. Mrs. Bruce drove to the prison with a load of toys for the nursery, a present from her Majesty.

GREAT DRIFFIELD.—The London detectives have been successful in tracing some of the fire raisers who have lately done so much damage on the Yorkshire Wolds. On Wednesday week a man named Sterwood was brought up before the magistrates in this town, charged with four distinct cases of fire raising. Two other men were connected with him, but they have for the present evaded apprehension, and it is supposed have left the district, for since the capture of the prisoner there have been no more fires. The magistrates committed the prisoner for trial. A young Irishman named Moran, who had been employed on one of the farms where the fires have occurred, had previously been committed for trial by the magistrates of South Holderness at Patrington.

DERBY.—The magistrates of this county last week replied to Sir George Grey's last letter on the Townley case. After disputing several statements referred to in the Home Secretary's letter, they stated that one of the medical men on whose certificate Townley was spared was not a member of the Royal College of Surgeons, and therefore was not qualified to act. They called on the Home Secretary to apply the latter portion of the Act as he had already applied the former, by calling upon the authorities of Bethlehem Hospital for information as to the present state of Townley's mind, and to act upon their report, whatever it might be. On Tuesday the visiting justices received the following important communication from Sir G. Grey.—

"Whitehall, Feb. 1, 1864.

"Gentlemen,—I am directed by Secretary Sir George Grey, with reference to previous correspondence with you as to the case of George Victor Townley, to inform you that, with the concurrence of the Lord Chancellor, he requested Dr. W. C. Hood and Dr. J. C. Bucknill, visitors of Chancery lunatics, together with Dr. Meyer, the medical superintendent of the Criminal Lunatic Asylum at Broadmoor, and Dr. Helps, the medical superintendent of Bethlehem Hospital, to examine into Townley's state of mind, and to report thereupon. Sir G. Grey has received from these gentlemen a report, a copy of which is herewith transmitted to you. While the letters—copies of which were sent to you on the 23rd and 25th ult.—from the magistrates who signed the certificates of Townley's insanity leave no reason for doubting that they were convinced of his insanity at the time when the certificates were signed by them, the present report from four medical gentlemen of great experience in mental diseases appears to Sir G. Grey conclusive as to Townley being of sound mind. A certificate to that effect, as required by the Act 21 and 4th Victoria, cap. 54, has since been received by the Secretary of State. I am further to inform you that, taking all the circumstances of this case into consideration, Her Majesty's Government are of opinion that it would not be right that the capital sentence should now be carried into effect, but that it ought to be commuted to penal servitude for life. This course has therefore been taken, and the prisoner will be dealt with accordingly. I am to add that it is the intention of Her Majesty's Government to propose an amendment of the Act under which the

certificates of insanity in this case were given.—I am, Gentlemen, your obedient servant, H. WADDINGTON."

"To T. W. Evans, Esq., M.P., and W. Mundy, Esq., M.P."

The following is a copy of the medical report referred to in this letter:—

"Bethlehem Hospital, Jan. 28.

"We, the undersigned, having been requested by Secretary Sir George Grey to examine into the state of mind of George Victor Townley, a prisoner under sentence of death in Bethlehem Hospital, and to report our opinion as to whether he is of unsound mind, report as follows:—'We have carefully considered the copies of papers supplied to us, and on the 26th and 27th days of this month we have had two lengthened interviews with the prisoner, and the conclusion at which we have unanimously arrived is that George Victor Townley is of sound mind. The demeanour of the prisoner during each interview was calm and self-possessed, with the exception that at the commencement of the second interview he displayed and expressed annoyance at the repeated examinations to which he was being subjected. Neither in mode of speech nor in look and conduct was there any sign of insanity observable in him. His prompt apprehension of the purport of our questions, and the manner in which he replied to them, indicated the possession of good intellectual capacity. The opinions which he avows that men, as the creatures of circumstance, are not justly responsible for their actions, are opinions at which he appears to have arrived by ordinary processes of reasoning. That he knows that he is responsible for the commission of crime is made clear by his own words used to us,—'I expected to be hanged because I killed her, and am not such a fool as not to know that the law hangs for murder. I did not think of it at the time, or I should not have done it.' We think that his statement that he killed Miss Goodwin to repossess himself of her as his property was an afterthought adopted to justify his crime. He acknowledged to us that he had come to this opinion after the deed was done. The supposition that he killed Miss Goodwin under the influence of the opinion that in so doing he was repossessing himself of her as his property is inconsistent with his own repeated statement to us that, without forethought of any kind, he killed her under the influence of sudden impulse. He explained to us that by killing Miss Goodwin to repossess himself of her as his property he simply meant that he took her out of the hands of his enemies, and placed her in a position where she would wait, and where he would rejoin her when he died. The prisoner endeavoured to represent the catastrophe to us as due to the influence of sudden impulse, but the details which we elicited from him show that he used threats of murder for some time before he struck the first blow. We think that his clear memory of the events attending the crime, and also the attempts which he has made to misrepresent the state of his mind and memory at the time of these events, are evidence of his sanity. We are of opinion that he does not entertain any delusion on the subject of a conspiracy against him, but that he uses the term conspiracy to express the real opposition which he has met with from the members of Miss Goodwin's family to his engagement with her, and also to express the feeling that they are hostile to him. We have considered the evidence of hereditary predisposition to insanity given in the papers supplied to us, and our opinion of the prisoner's state of mind has not been altered thereby. We examined the apothecary and also the chief attendant of Bethlehem as to the conduct of Townley since he has been in detention at the hospital—both of them have had him under daily and special observation—and they assure us that neither in conduct, manner, or conversation had they been able to observe in him any of the peculiarities which they are in the habit of remarking among the insane. W. CHARLES HOOD, M.D., Visitor of Chancery Lunatics; JOHN CHARLES BUCKNILL, M.D., Visitor of Chancery Lunatics; JOHN MEYER, M.D., Medical Superintendent of the Criminal Lunatic Asylum; W. HELPS, M.D., Medical Superintendent of the Royal Bethlehem Hospital.'"

HAYLE.—The county magistrates of this division have opened an important inquiry in reference to a charge brought against Mr. Richard Oke Miliett, surgeon, of Penpol, of having administered poison to his brother, Mr. Jacob Curnow Millett, with intent to cause his death. The main facts of the case are these:—It appears that Mr. Jacob Curnow Millitt, an elderly man, had been living with his brother (the accused) at Penpol, in the parish of Phillack. For nearly a month prior to his decease he had been suffering from a cold. His brother had recommended him to stay at home, but on one or two evenings he went out to go to chapel. On Christmas eve the servant noticed that his cough was worse than usual, and on the morning of the 30th ult., in answer to her inquiry, he said that he felt very poorly. Those who sat at the table were the deceased, the accused, Miss Davy, a relative of the late Sir Humphry Davy, and her nephew, Master Rawlins, who were on a visit to the house. The deceased is stated to have eaten with unusual heartiness, partaking of beef and vegetables and ale, and also eating a baked apple and four apples uncooked. At the conclusion of the repast the deceased went upstairs to his bedroom. After remaining there about an hour he called the servant to get him his hat and coat, stating that he wanted to go out. The servant supplied him with these things, and had returned to the kitchen, when he again called to her, and told her to bring him a glass of cold water, complaining of thirst, as he had also done in an earlier part of the day. She took him a tumbler of water, immediately, which he drank, and she then continued her work. She afterwards found that the deceased had not left the house, but was standing in the drawing-room, rubbing his forehead with his hand, which was a common practice with him. She asked him what was the matter, and he said that he was not feeling well, and that he had a pain in his stomach. The servant then went to the apple chamber and called her master, and he came into the house. By his advice a glass of brandy was given to the deceased, and the accused returned to the apple chamber. The deceased said he thought he would go out for a walk, but after some persuasion from the servant he remained at home, and asked for a glass of whisky, which he drank. The deceased subsequently became worse, and he was taken up to bed insensible, where he vomited several times. He died on the following morning. Nothing was administered to him for twelve hours before his death. An inquest was held on the body, and the jury returned a verdict that the deceased died from natural causes. Since the body was interred a suspicion has arisen that the deceased had been poisoned. Upon the information of Mr. William Millett, of Hayle, brother of the deceased, and Mr. Frederick Edmonds, surgeon, the Home Secretary, Sir George Grey, gave an order for the exhumation of the body. This was done last week, and certain portions of the body were sent to a surgeon for analysis. The result of this examination was the issue of a warrant by one of the county magistrates, and the same evening the accused was arrested at his residence. Since then the case has proceeded very slowly, and there does not appear to be any prospect of its being brought to a speedy conclusion. The evidence at the last sitting showed the existence of a will made by the deceased gentleman prior to his death, in the presence of the accused and two witnesses, and the provisions of that document will determine the question as to who could have had a motive in hastening his death. The evidence of one of the medical gentlemen who examined the body after its exhumation was gone into at length, and the examination made by them only shows that the body was in a very healthy state. The contents of the stomach, however, had not been examined by them, but sent to Professor Taylor to undergo an analytical examination, and the result of that gentleman's search will either dispose of the charge at once or make it assume a much more serious aspect than at present. This result has not yet been made known, and is looked for with considerable interest in all parts of Cornwall, where the family has been well known for many generations as one of high respectability.

HITCHIN.—A man named Samuel Wabey and a boy named Joseph Hanmer, were brought before the magistrates last week on a charge of having robbed Mr. Edward Foreman under the circumstances already mentioned in our Provincial news. It will be remembered that the body of Foreman was found lying on the road dead, and it was supposed he had been murdered; but it was afterwards ascertained that he had been thrown out of his cart and robbed as he lay on the ground. The evidence of the boy, who was admitted as a witness for the prosecution, left no doubt of the guilt of the prisoner Wabey, who was accordingly committed for trial at the assizes, bail being refused.

IPSWICH.—A jobbing shoemaker, named James Gooding, living in a narrow back street called Albert Street, in the parish of St. Clement, one of the poorest parts of this town, murdered one of his children last week, and then committed suicide by cutting his throat. It appeared from the evidence at the inquest that he had for years been in an indifferent state of health, and since September, when he lost three children in a week from diphtheria, he had been in a very desponding state of mind. Though a sober man previously, he had latterly indulged in drink, but had always spoken in affectionate terms of the deceased child, who was both imbecile and a cripple, and said he only lived for her. The evidence left no doubt that he was labouring at the time under temporary insanity.

LEAMINGTON.—A young man called Hugh Colville Goldsmith has been committed for trial by the magistrates of this town, on the charge of obtaining 30*s.* by means of false pretences, from Sir Morgan George Crofton, Bart., of Leamington. It appeared that the accused, who is the son of the late Commander Goldsmith, R.N., the great nephew of Oliver Goldsmith, wrote to Sir Morgan Crofton from Bilton, near Rugby, representing that he was the son of Major Stuart, an officer in the army, who was well known to Sir Morgan's late son, Colonel Crofton, who was murdered some time since by a soldier at the Preston depot; that he had the chance of a situation as tutor near Lancaster, and begging for 30*s.* to enable him to accept it, as his friends who could assist him were on the Continent; his widowed mother, who resides at Penzance, being utterly unable to do so. Sir Morgan, believing the statements to be true, sent the money; but finding that he had been imposed upon, he gave information to the police, and the prisoner was apprehended on a warrant at Rugby. He admitted having written the letter to Sir Morgan, which he did in the name of Henry Stuart, and also that the statements in it were false.

LEOMINSTER.—A woman called Mary Anne Watkins was murdered last week by her husband in a field near this town. They had been living apart for some time, and the husband had frequently uttered threats against his wife, who was an honest hardworking woman, because she had refused to live with him again. In consequence of his violence deceased had applied to the Board of Guardians, and the prisoner had sworn that she should not say anything more against him. The murder was accompanied with great violence, and the ground on the neighbourhood bore marks of a severe struggle. The man immediately absconded, but was apprehended two days afterwards, when marks of blood were found on his clothes, and the clogs he wore were found to correspond with the impressions on the ground. At the inquest on Friday the jury returned a verdict of Wilful Murder against the prisoner, who was committed for trial.

LINCOLN.—Messrs. Dawes, of the Milton Ironworks, near Barnsley, have taken an extensive track of land on the Lincolnshire side of the river Trent, opposite Keadby, and opened extensive blast furnaces there. They are making about 500 tons of iron per week. The immense mineral wealth of that locality, which was only discovered about two years ago, will give employment to large numbers of men, and when railway communication is opened, as it shortly will be, with the Yorkshire side of the river, the new trade will, it is expected, still further be developed.

SHEERNESS.—At the petty sessions at Sittingbourne on Tuesday week Mr. Rumble, the inspector of machinery at Sheerness Dockyard, was charged with a breach of the Foreign Enlistment Act in having procured men to enter for the Confederate service on board her Majesty's ship Scylla, which had been sold out of her Majesty's service, and when taken out to sea was renamed the Rappahannock of the Confederate States Navy. The prosecution was conducted for the Crown by Mr. Vernon Harcourt. Several witnesses were examined at great length, after which Mr. Hardinge Giffard addressed the Court on behalf of the defendants, and strongly urged that there was not a sufficient amount of evidence to show that the charge had been proved against him. The Bench having consulted, the Chairman said that it was the opinion of the magistrates that the case should be sent for trial by a higher court. Bail was taken for the defendant to the amount of 1000*l.*

STONE.—A good deal of excitement has been produced in this town by a mysterious discovery which was made a few days ago. In a street leading out of the town resides a member of the medical profession, with his wife and family, and in the same house has lived for many years a maiden sister of the wife's. It was known that this lady had lived there, and had not been known to leave, and the neighbours sometimes wondered why she was never about, and she had not been seen out of the house for eleven years. The recent discovery of a concealed lunatic in Cornwall ultimately led to an application to the magistrates for a warrant to investigate the circumstances, and a few days ago two magistrates of the neighbourhood and some police officers entered the house for that purpose. They found the lady in a front upper room, sitting on a straw mattress, her limbs drawn close together, and her body leaning forward on them, with but little covering on her, and looking as if she had been indifferently fed. The room had all the appearance of a room which had not been entered for a dozen years. It was covered with dust, dirt, and cobwebs. Under the bedstead and even on the mattress were piles of dirty plates, altogether about 40, on which the occupant of the room had had her meals served, and on which were bones, some of them yellow with age. She held a bone, which had been polished by licking, tightly gripped in her hand, and was with difficulty induced to let it go. The mattress was dirty, as also were the scanty clothes which covered her, and the equally scanty bed-clothes. Her person was very neglected, and showed that her ablutions had been rare and not recent. Her hair was matted, and a compact mass of it partially covered her face. Her toe-nails had remained uncut so long as to be quite a curiosity in their way. They had grown to a length of about three inches, and were curled something in the form of a corkscrew, with sharp points. It is said that the only way of reducing them to their proper proportions will be by sawing them. The finger-nails were not so bad, the lady, no doubt, having kept them short by biting them. The strangest part of this story is that the lady herself is said to have chosen her retreat, and those who know her peculiarities are disposed to place some amount of credence in the story. She appears to be about 48 years of age, and to have been all her life known by her relations as a person of "queer" disposition, and exceedingly unsociable and reserved, and is said to have been "crossed in love" in her younger days. She has been removed from her prison, cleaned, and comfortably clothed, and is now being carefully attended to. It has been suggested that she is insane, but that does not appear to be the case.

WADEBRIDGE.—On Friday night four burglars paid a visit to Treverna, the residence of Mr. Bernard, near this town. In attempting to force the front door they awoke Mr. Bernard and his niece. The latter, quite a girl, courageously escaped by a back window down the kitchen tiles, and, in her night-dress, went for help to some men at Trenant, about half a mile off, and returned the same way. Meanwhile Mr. Bernard took down his double-barrelled gun, loaded it, made his appearance before the four burglars, and presented the gun at them. The men were completely cowed. Two of them scampered off as fast as possible, but the other two stood still under the threat of being shot if they stirred, while a lad went to the stables, saddled a horse, rode to Wadebridge, a distance of two miles, and gave information to the constabulary, who lost no time in repairing to Treverna and taking the thieves into custody.

Ireland.

THE NEW REGISTRATION ACT.—Archbishop Cullen, the Roman Catholic Primate, has issued a letter of great length to his clergy on the subject of the new Registration of Marriages Act. While not wholly approving the enactment, he enjoins his clergy to comply with its provisions. At the same time he quotes the decrees of the Council of Trent to prove that all persons are excommunicated and living in a state of concubinage who have contracted marriages in

the office of the public registrar. Dr. Walshe, the Roman Catholic Bishop of Ossory, has also issued instructions to the clergy of his diocese in reference to the new Act. He simply says "that the purpose of the new law is obviously highly important, and that the Act seems to have been framed so as to avoid interference with the discipline of his Church, and to entail as little trouble as is compatible with the attainment of the judicious and laudable objects of the law."

INAUGURATION OF THE DARGAN TESTIMONIAL.—The ceremony of uncovering the statue erected in Leinster Lawn, in honour of Mr. William Dargan, and to commemorate his patriotism and munificence, as illustrated upon that site by the Great Exhibition of 1853, took place on Saturday. The Lord Lieutenant officiated, and delivered an address suitable to the occasion.

OPENING OF THE IRISH NATIONAL GALLERY.—The new National Gallery, the first stone of which was laid in 1859 by the late Earl of Eglinton, when Lord Lieutenant, was formally opened by the Earl of Carlisle on Saturday. It stands on the north side of Leinster Lawn, which is now entirely closed in on three sides by magnificent blocks of buildings, having the splendid old mansion on the west side forming a front, and flanked on the north and south by the National Gallery and the Museum of Natural History.

ORDER OF ST. PATRICK.—The ceremony of investing Lord Dufferin and Clancboye, the author of "High Latitudes," as a Knight Companion of the Order of St. Patrick, took place on the 28th ult. at Dublin Castle. The Lord Lieutenant, as Grand Master of the Order, officiated. The Archbishop of Dublin at the same sitting was invested with the dignity of Chancellor of the Order. After the investiture the Lord Lieutenant conferred the honour of Knighthood on Mr. William Wilde, for his important services as Medical Commissioner of the Census.

Law.

COURT OF PROBATE AND DIVORCE: *O'Kane* v. *O'Kane and Palmerston*.—This case again came before the Court on Tuesday, in accordance with the rule granted last week, calling upon the petitioner to explain why the suit had not been proceeded with. Counsel for the petitioner now produced affidavits from his solicitor, stating that the case had been compromised, but insisting that he was in a condition to prove all the charges he had made. He could not say with whom the case was compromised, but was instructed distinctly to state that neither the respondent nor the co-respondent had anything to do with the compromise. He intimated that as the parties had been married by a Roman Catholic priest, it was not improbable that the compromise had been effected by members of that communion, who are well known to be opposed to the law of divorce. The solicitor for the wife made an affidavit on her part, denying that she was any party to the compromise, and the prosecutor's solicitor said that he was informed by the solicitors to Lord Palmerston that they also knew nothing about a compromise. The Queen's Advocate, who appeared for Lord Palmerston, said he had not even seen the affidavits, upon which the judge refused to proceed farther, but adjourned the case till Thursday. On that day the Queen's Advocate said that he was instructed to deny explicitly that Lord Palmerston was in any way a party to the withdrawal of the case; and the counsel for the petitioner again admitted that neither the respondent nor the co-respondent had been a party to the arrangement that the suit should not be prosecuted. After a long discussion on incidental topics raised by the affidavits, the Judge Ordinary said that the suit must be dismissed. The petitioner came into court with his complaint and he now retires from it without any imputation upon either of the other parties to the suit, and without any suggestion of an arrangement between himself and either of them, on grounds best known to himself, and in consequence of what he by his counsel calls an arrangement with his friends. It is no doubt much to be regretted that a man should be able to attack the character of a woman whom he calls his wife, and to hold her up to public censure without cause. Owing to the publicity which happily attends every step in our courts, that evil is unfortunately aggravated, but the remedy is to be found in the same publicity. The chastity of the respondent, who has in vain challenged inquiry into and proof of the charges against her, has received no tarnish from this ordeal, and, as for the petitioner, he retires from the suit with the evil words still on his lips, and will probably meet with the censure of some and with the contempt of many. The Court cannot part with this suit without one word respecting the co-respondent. It is a matter of great satisfaction to the Court that a name never mentioned in England without just pride should have passed from its annals without a stain. His lordship uttered these words with great emphasis, and they were followed by expressions of applause from the persons who crowded the court. Later in the day, Mr. D. Seymour, for the respondent, said he had omitted to ask for costs. The Judge-Ordinary: Certainly. The man who has presented a petition to this Court and has voluntarily abandoned it ought to pay the costs. The petition was accordingly dismissed.

COURT OF CHANCERY: *Broun* v. *Kennedy*.—The Lords Justices on Friday gave judgment in this appeal. The suit was instituted by Mr. and Mrs. Broun against Mr. Charles Rann Kennedy, barrister-at-law, to set aside a deed executed by Mrs. Broun, formerly Mrs. Swinfen, before her marriage with Mr. Broun, in favour of Mr. Kennedy, of the reversion in fee, after Mrs. Broun's death, in the Swinfen Hall estates. The deed was dated the 10th of May, 1859, and was expressed to be made in consideration of the services rendered to Mrs. Swinfen in defending, and finally establishing, her title to the Swinfen estates, and also in consideration of her esteem and friendship for Mr. Kennedy. It will be remembered that the Master of the Rolls some time ago ordered Mr. Kennedy to give up this deed, and the present was an appeal against that decision. Their lordships gave judgment to the effect that the contents of the deed were alone sufficient to condemn it, on the assumption that the recitals contained in it were true; but, with respect to their truth, the defendant, who drew up the instrument, could not certainly complain. They were of opinion that, apart from all considerations of public policy, the lady had a right to complain seriously and effectually that she obtained under that want of sufficient advice, information, and assistance on the subject, before and when she executed the deed, which, in their judgment, was an instrument of great and substantial and manifest impropriety—one from which the lady who executed it, however clever she might be, and probably was, had a plain right to be delivered, and against which relief could not be refused to her, without manifest discredit to the administration of justice. The appeal was therefore dismissed with costs.

COURT OF QUEEN'S BENCH: *Yelverton* v. *Yelverton*.—*The Divorce Marriage Case*.—This was an application to allow Mr. Forbes, a Hull, who obtained a judgment against the Hon. Major Yelverton in the Irish courts for money advanced in support of his wife, to serve notice upon the major otherwise than personally, as it was alleged that he kept out of the way to avoid the service. The Court, however, held that sufficient proof had not been laid before them of all necessary diligence having been used to discover the defendant, and for the present the application was refused. [Major Yelverton has since presented a petition, through his agents, to the House of Lords, and which was served the same day on Mrs Yelverton's agents, stating that on the 10th of February, 1863, he submitted a petition of appeal to their lordship's house, complaining of an interlocutor pronounced by the first division of the Court of Session in Scotland on the 19th December, 1862, in conjoined actions of declarator of marriage at the respondent's instance against the appellant, of putting to silence at the instance of the appellant against her. That the respondent duly entered an appearance on the above petition of appeal, and lodged her answer on the 29th of June, 1863. The petitioner on the said 29th of June, 1863, lodged his printed case with the Clerk of the Parliaments, and the said petition of appeal was on the 2d of June, 1863, set down for hearing before the House of Lords. The petitioner goes on to state that the "only" question for the consideration of their lordships upon this appeal was whether the respondent was the lawful wife of the appellant. The petitioner concludes by asking that their lordships will be pleased to fix an early day for the hearing of the said appeal.]

BAIL COURT: *The Case of Colonel Waugh*.—This was an application to discharge Colonel Waugh from prison, a similar application to the Court of Bankruptcy having been unsuccessful. Justices Crompton and Shee, in giving judgment, said they were sorry for the unpleasant position in which the colonel was placed, but as he could put an end to his hardships by going through the court they declined to make the order for his discharge.

CENTRAL CRIMINAL COURT.—*Libel*.—The *Rev. Thomas Richardson Birch*, chaplain of the Slough Union, was charged with uttering a libel against Mr. Taylor, of Slough, with whom he had formerly lived as tutor to his boys. The jury found him guilty, but recommended him to mercy on account of the excitement under which he was labouring at the time. He was sentenced to six months' imprisonment in Newgate. *Murder and Piracy on the High Seas*.—*John Lyons*, 22; *Francisco Blanco*, 23; *Ambrosio* or *Mariscio Durranno*, 25; *Basilio de Los Santos*, 22; *George Carlos*, 20; *Marcus Portos*, otherwise *Watto*, 23; *Marsolino*, 32; and *Miguel Lopez*, otherwise *Joseph Chuncis*, 22, were arraigned on an indictment charging them with the crime of wilful murder on the high seas, within the jurisdiction of the Admiralty of England, on the 10th of September last. The prisoners are Spaniards, except two—namely, Carlos, who is a Greek, and Watto, who is a Turkish subject. Lyons is a Manilla man, and his real name is said to be Leon, and, like most of the prisoners, he is a mulatto. The prisoners severally pleaded Not Guilty, and elected to be tried by an English in preference to a mixed jury. The Solicitor-General conducted the prosecution for the Crown. The leading facts of the case were fully noticed in our Metropolitan news on the arrival of the prisoners in England. It will be remembered that the captain and chief mate were put to death; that the ship was plundered, and, as soon as she had been brought in sight of land, scuttled and abandoned. The charge was established by the evidence of the second mate, whose life was spared in order that he might take the vessel to the coast of the River Plate, where he made his escape and gave information to the consul, who had all the prisoners arrested and sent home for trial. The jury returned a verdict of *Guilty* against all the prisoners except Carlos. Mr. Baron Bramwell, having assumed the black cap, said, addressing the convicts,—You have been found guilty of the crime of wilful murder, and it is now my duty to pass upon you the sentence of the law. After some experience and very much reflection, I have come to the conclusion that I shall best discharge that duty by adding to the form of words prescribed by law, no observation of mine of any sort or kind. The learned Judge then pronounced the sentence of *Death* in the usual form, and it was afterwards interpreted to them in their own languages. One of the counsel for the Crown then said they intended to proceed with the indictment against Carlos for scuttling the ship.

SURREY SESSIONS: *Embezzlement of Rates*.—*William Henry Manners*, one of the rate collectors at Lambeth, was tried on a charge of having embezzled nearly 200*l*. of the rates which he had collected. He was found *Guilty* and sentenced to four years' penal servitude.

Obituary.

HER ROYAL HIGHNESS THE DUCHESS OF PARMA died at Venice on Monday. The Princess Louise Marie-Therese of Bourbon was the daughter of the late Duke de Berri, and married, in 1845, Prince Ferdinand Charles III of Bourbon, Duke of Parma, who succeeded to the Dukedom of Parma, Piacenza, and the States annexed, on the abdication of his father in 1842. His royal highness did not long reign over his Duchy, his career having been cut short by an assassin, who stabbed him in the abdomen with a dagger in the streets of Parma in March 1854. The late Duchess was immediately proclaimed Regent during the minority of her son, Prince Robert. On the outbreak of the Italian revolution in 1860, the Duchess-Regent found it necessary to quit her States, which were annexed to Piedmont at the end of the year, notwithstanding a protest sent by her from Zurich, and the clauses in her favour inserted in the Treaty of Villafranca. The young Duke, Robert I., the present claimant to the Duchy, who was born in 1848, and was consequently six years old at the death of his father, has been living in retirement with his mother since their withdrawal from Parma in 1860. He has one brother and two sisters, viz., the Princess Marguerite, born in 1847; the Princess Alice, born in 1849; and Prince Henri, born in 1851.

THE DUCHESS OF GORDON died at Huntly Lodge, Aberdeenshire, on the 31st ult., from gout in the stomach, in her 74th year. Her Grace was the daughter of Mr. Brodie, of the Burn, Kincardineshire, and was married to the 5th Duke of Gordon in 1813. The Duke died in 1836, and as he left no issue, the title became extinct. The Duke of Richmond now succeeds to the Aberdeenshire estates. The Duchess of Gordon has for some years past lived in a very retired manner at Huntly Lodge, doing a great deal of good among the poor, promoting education, and otherwise working for the good of the district. She was the main founder and supporter of the out-door religious meetings that have taken place during the last few years in Huntly.

LIEUT.-GENERAL SIR ALEXANDER KENNEDY CALEB KENNEDY, K.C.B., K.H., of Kinkell, Knockbrecht-shire, Colonel of the Scots Greys, died on the 2nd ult. at his residence, Oxford Terrace, Hyde Park, in his 81st year. He entered the army in 1802, and served in the Peninsula with the Royal Dragoons from 1809 to 1813. At the battle of Fuentes d'Onor he had his horse struck down by a shell, and was thanked for his services by Lord Lynedoch during the siege of Badajoz. He served also in the campaign of 1815, and at the battle of Waterloo had two horses killed under him, besides himself receiving two severe wounds. While leading his squadron in a successful charge against General D'Erlon's corps at Waterloo, perceiving, on a flank movement of the enemy to the left, he changed the direction of his squadron, ran the whole through the body who opposed it, and captured the eagle which belonged to the 105th French Regiment of Infantry, and is now in Caledon House.

ADMIRAL JAMES DUNCAN, [illegible] the 4th son of [illegible], Perthshire, was born in [illegible] the Navy in 1787, and after serving [illegible] accompanied Lord Macartney to China. As Lieutenant he served at the Blockade of Brest, took part in Lord Bridport's action in 1798, and afterwards served in the North Sea and in the West Indies. After being promoted to the rank of Commander in 1802, he served in the West Indies, on the coast of North America, the Cape of Good Hope, and Rio de la Plata, where he took charge of the flotilla appointed to co-operate in the unfortunate attack upon Buenos Ayres. He was subsequently engaged in blockading the ports along the coast of France, and in 1808 commanded a division of the fleet during the operations in the Scheldt. He attained [illegible] in 1837, accepted the rank of retired Rear-Admiral in 1841, became Vice-Admiral in 1854, and Admiral in 1857.

MISS ADELAIDE ANNE PROCTER, the eldest daughter of Mr. Bryan Waller Procter, better known under the literary pseudonym of "Barry Cornwall." Miss Procter, who was about 30 years of age, first attracted notice about five years since by the publication of two volumes of poems, entitled "Lyrics and Legends," and has since that time been somewhat prominently before the public as a contributor to the monthly magazines. She was one of the writers in the "Victoria Regia," a volume containing a collection of poems from living authors, issued from the Victoria Press.

Miscellaneous.

THE CENSUS.—A Parliamentary paper giving the general results of the Census of 1861, was published on Monday. After describing the means taken to obtain accurate returns of the population, which are themselves of much interest, the Return proceeds to describe the principal results obtained in the following terms:—1. POPULATION, HOUSES, AND FAMILIES.—1. *Persons Absent from the United Kingdom*.—The people of these islands are more moveable than other nations, and large numbers of them are always abroad, sometimes on distant voyages, sometimes on the Alps, sometimes in the deserts of Africa, or in the strangest places; but generally in ships at sea, in the great commercial entrepôts, in the capitals of Europe, in our colonies, or in the States of America. The measures which were taken to procure the returns of the army and navy and merchant seamen abroad, either on sea or land, have been already described, and they were successful. The numbers exceeded a quarter of a million (250,356), of whom 162,273 belonged by birth to England and Wales. The army and navy of a country are an integral part of its population; and they should, therefore, be counted among its numbers. But the population of travellers and of temporary settlers in other States are less accurately defined; their numbers are not easily ascertained, and they are represented to some extent by exiles and foreign visitors in England. They are therefore excluded from our tables. The number of the British subjects, including the Scotch and the Irish, abroad, of which we have returns, was 67,969. This number does not include the English in America, in India, or in the colonies, neither does it include any of the English in France, except those who were domiciled. Upon the other hand, some of the people born at the Mediterranean stations were inscribed in the Consular registers as British subjects; but as a general rule the Maltese and Ionians are excluded from the list. France is the country to which the English most resort in Europe, and 25,844 are domiciled there; 4092 are returned in Belgium, 827 in Holland, 1124 in Switzerland, 7365 in Germany, 5467 in Italy, including Rome, 2072 in Portugal, and 3879 in Spain, 525 in Greece, 2360 in Turkey, and 931 in Egypt; in Denmark 372, in Norway 242, and in Sweden 411; in Russia 3749. Passing to Asia, 30 of her Majesty's subjects were returned in Persia, 1072 in China, 81 in Japan, and 24 in Siam. The English population in India, according to the returns of the Indian Government (apparently defective), amounted to 125,379, including the English army, 85,008 strong. 340 English people are in the empire of Morocco. Algeria and the rest of Africa make no return. Central America returns 145 English residents, Ecuador 27, Chili 4152, of whom 3265 are males, chiefly miners, and Brazil, 2838. Table 6 shows in detail the particular places in which the English resided, and the notes supply some necessary explanations. The numbers of each of the two sexes returned abroad did not greatly differ, as the males were 36,734, and the females 31,235. In France and Belgium the women exceeded the men in number, and in Germany there was little difference. The girls at school probably affect this result. In China, Japan, Chili, Brazil, and India the men preponderated largely. The natives of England in the United States exceed the numbers in all other countries. Mr. Kennedy, the able superintendent of the census of the United States, has favoured us with an elaborate return of the numbers of the inhabitants of each State in 1860 who were born in this kingdom, amounting in the aggregate to 2,224,743; of whom it was ascertained that 477,455 were born in England and Wales, 108,518 in Scotland, and 1,611,304 in Ireland; 27,466 were described simply as born in the United Kingdom. In addition to these numbers 249,970 were born in British America, and 1419 in Australia. Our information about foreigners in England and Wales is tolerably complete, and we shall refer to the details hereafter. The number was 84,090, or, exclusive of those from the United States, 76,229. This is some

compensation, therefore, for the English abroad, who, as has been already stated, are not included in our numbers. 2. The *population of the United Kingdom* in 1851 was 27,745,949. The increase which had been so great in Ireland up to the era of Catholic Emancipation, ceased after 1841; and the population emigrated in large numbers to new fields of industry, so that the increase in the United Kingdom was found in the 10 years ending in 1851 to be less than it had been in any previous decenniad since the first census was taken. The rate of increase decreased, and only 709,499 people were added to the population in 10 years. In the 10 years following emigration flowed in a still larger stream, for by the returns at least 2,054,578 British emigrants sailed from the ports at which accounts are kept; the country was engaged in a war with one of the European Powers, and it was again visited by the Asiatic epidemic; so that although it was probable that the population had advanced, the extent of the increase remained uncertain. All doubt, however, was suspended by the enumeration, and the census showed an increase of 1,575,339 people; making the aggregate population of the United Kingdom, including its army, navy, and merchant seamen abroad, 29,321,288. The increase was at the rate of 5.68 per cent. in the 10 years, and of 553 per cent. annually. This gives a correct view of the rate at which the population has increased; but to determine the increase of the English race the emigrants must be taken into account. The ascertained excess on the population of 1851, with the emigrants, makes 3,629,917. The increase of emigrants abroad, and the number of persons unregistered who leave the country, probably counterbalance not only the number of emigrants returning, of whom no record is kept, but also the number of immigrants into this country from other States. The population has produced numbers to replace the dead, and on every thousand families an addition of 131, of whom 57 are provided for at home and 74 in America and Australia. The population was thus distributed over the four divisions of the United Kingdom in the year 1861.

TABLE I.

	Total Population.	Population, excluding Army, Navy, and Merchant Seamen Abroad.	Proportion of Population in Four Divisions of the Kingdom.
United Kingdom ..	29,321,288	29,070,932	100.0
England and Wales ..	20,228,497	20,066,224	69.1
Scotland	3,096,808	3,062,294	10.5
Ireland	5,850,309	5,798,967	19 9
Islands in the British Seas	145,674	143,447	.5

The facts respecting Scotland and Ireland are discussed by the Commissioners for those parts of the United Kingdom; and we have now to notice the general results of the Census of England and Wales and of the islands in the British seas. Out of 10 parts of the population of the country, nearly seven belong to England and Wales, two to Ireland, one to Scotland, and a small fraction (1-20th) to the Channel Islands. The population of England and Wales, including the army, navy, and merchant seamen abroad, was 29,228,497. 3. *The increase of the population of England and Wales* since the last census was 2,174,327. The increase was at the rate of 12 per cent. in 10 years; or 1.141 annually. The emigrants of English origin in the last 10 years amounted to 640,316, which makes the numerical increase since the census of 1851 to be 2,814,643. The increase of the emigrants abroad is probably rapid, and it may be taken to represent the emigration reflux. A certain deduction must be made for the Scotch immigrants who crossed the Tweed and never returned, as well as for the Irish emigrants who settled in England. The increase in the 10 years of the numbers of the Scotch and Irish in England was 120,790, which has, however, to be reduced by the increase of the Englishmen in Scotland and Ireland. The number of persons in England born abroad increased by 63,429 in the ten years; but this is counterbalanced again by the increase of Englishmen abroad, exclusive of the recorded emigrants. If the whole of the increase of the 184,219 persons in England, born out of its limits, be struck off, the natural increase recorded becomes 2,630,424; and it is certainly the *minimum* to be arrived at by estimate, the true number being between this and 2,814,643. Taking the natural increase at only 2,630,424, the excess of the registered births over the registered deaths accounts for 2,262,935 of the number, leaving 369,489 children in ten years, or 36,950 annually, who are left unregistered under the Act, which does not enforce by penalty the registration of births on the parents or on the guardians of children. The increase of the population was at the rate of 12.0 per cent. in ten years. If the emigrants are added to the ascertained numbers, the rate of natural increase will be 15.6 per cent.; or, allowing for the Scotch, Irish, and other immigrants, 14.6 per cent. The population of England and Wales has advanced steadily through this century; from 9,156,171 people in 1801 to 20,228,497. In actual numbers, the additions during 10 years of war were 1,298,000; in the 10 years 1811-21, divided between war and peace, the increase was 1718 thousands, and in the next 10 years, 1879 thousands; making the aggregate population at the Reform era, 14,051,986. Since the year 1831 the population, advancing firmly at a composed rate, has grown in each 10 years by 1983 thousands in 1831-41, 2019 in 1841-51, and 2174 in the last 10 years, making the addition to the population since 1831 full 6176 thousands, or exactly 6,176,511. In the same period swarms of emigrants have left these shores. The annual rate of increase of the home population was highest in the years following the peace, before emigration was developed; it was 1·533 in 1811-21, and has fallen successively to 1·141. The annual rate of increase in the 60 years of this century was 1·330, and the actual aggregate increase is 11,072,326, or 121 per cent. The population of 1801 doubled its numbers in the year 1852. At the rate of increase prevailing in the last ten years, the population would double itself in 61 years. The period of doubling, deduced from the annual rates reigning during this century, is 52 years. 4. *Males and Females.*—The boys born in England are in the proportion of 104,811 to 100,000 girls; but they experience a higher rate of mortality, and, according to the new English life table, the rates are so finely adjusted that the numbers are reduced in the end to very nearly an equilibrium, the men and women living, of all ages, being in the proportion of 100,029 to 100,000. Such would be the state of things if there was no emigration, or if the men and women emigrated in pairs. That has not hitherto been the case; and at the census, 10,289,965 females and 9,770,239 males were enumerated. There was an excess of 513,706 women at home; or, deducting 162,273 from their number on account of their husbands and of other men in the army, navy, and merchant service abroad, the difference is reduced to 351,433 women at home; the men of the corresponding ages being on the continent, in the colonies, or in foreign lands, unless their numbers have been reduced by higher rates of mortality than prevail in England. To 100,000 women, of all ages, in England, there are 95,008 men, of all ages, at home; or, including a due proportion (1577) of the army, navy, and merchant seamen abroad, 96,585, leaving 3415 of the absent unaccounted for. The proportion of men to women at home is less than it was in 1851, owing probably to the increase of the army abroad. It will be observed that the disparity in the numbers of the two sexes at home was greatest in 1801 and 1811 during the war. This was due to the men abroad in the several services. To complete this view of the proportions of the two sexes living at home, their ages must be taken into account. There is an excess of boys over girls living under the ages of 15; and by the life table an excess of men is provided all through the middle period of life; but that surplus is overdrawn by emigration, so that the women exceed the men in number to a considerable extent in the early and middle, and still more in the advanced ages, when their longevity comes into play. The excess of the emigration of males over females accounts for the present difference in the proportions of the sexes. 5. *Houses and Public Institutions.*—The nomadic race which once peopled these islands has a certain number of representatives still existing. Fairs and races are their field days, and their irregular battalions are there easily passed in review. But the enumerators had to follow them to their haunts, and succeeded in discovering accounts of 7,130, who, on the night of the 7th of April, were in the open air, in tents or in canvas, and of 4,314 in barns, sheds, and other places of shelter. The numbers living out of houses vary with the seasons; in winter they shrink into dwellings, and in summer they swarm again in the fields, which have irresistible charms for the vagabond race, as well as for their near relatives the hop-pickers and haymakers. Mixed among them are found some of the victims as well as some of the outcasts of society. The ascertained houseless class amounted to 20,348 persons on the 7th of June, 1841; 15,764 on the 31st of March, 1851; and 11,444 on the 8th of April, 1861. In 1861 we found also 11,915 persons living in barges, 6,6 5 in inland vessels in ports, and 55,765 persons in seagoing vessels in the ports of England and Wales. Of the whole class of the population, including those in vessels, out of fixed dwellings, 75,188 were males, and 10,601 were females. Classes of the population, which in uncivilised societies are often without fixed dwellings, are now lodged, voluntarily or involuntarily, in public institutions. Thus 26,096 criminals are in prisons; 24,345 lunatics are in asylums; 10,414 patients are in hospitals; 125,722 of the poor and infirm are in workhouses. There are 23,598 inmates in the principal charitable institutions and asylums. The inmates of colleges and schools have not been distinguished, and a multitude of small institutions of various kinds are treated as houses. There were 63,840 soldiers in barracks. In 1684 public institutions of various kinds were 37,778 officers and servants, with their families, in addition to the special inmates. The inhabited houses in England amounted in 1861 to 3.739,505, showing since the last census an increase of 461,466. The great difference in these houses is shown by their annual value. Thus 519,991 houses are returned at rentals varying from 20*l.* to 20,000*l.* a year; or at 52*l.* ·8 on an average. 3,219,514 householders, or more than six in seven, pay no house duty; and the annual value can only be estimated approximatively, by continuing the series as shown in the Table 31 (p. 92 App.). By this method the average rent of houses at rents under 20*l.* a year is 9*l.* ·5; and the mean annual value of all the houses in England is 15*l.* (15*l.* and 5 florins). The annual value of all the houses at this rate is 58,013,181*l.*, of which 7,159,000*l.* is due to the 461,466 new houses erected in the last 10 years. At 15 years' purchase the dwelling-houses erected in 10 years are worth 107,000,000*l.*; and all the houses standing in 1861 are worth 870,000,000*l.* 1,575,92 houses were inhabited in 1801, and the subsequent additions of new houses, besides replacing houses decayed and destroyed, leave a surplus of 2,163,53 The value of the houses has probably increased in a greater ratio than their numbers. 184,694 houses were uninhabited, and 27,305 were building in 1861. To 1000 houses inhabited there were 49 uninhabited and seven building. The number of "houses building" was 27,305 or in the proportion of one house building to 137 inhabited and to seven uninhabited. The number of inhabited houses was 3,739,505, and on an average there were 537 persons to 100 houses, making the proportion 5.37 to a house, or nearly 16 persons to three houses. If the 397,582 persons in 1684 institutions and ships are excluded, the persons to an inhabited house are reduced to 5.26. The proportion of persons to 10 inhabited houses has gradually decreased from 575 in 1821 to 537 in 1861. This is a satisfactory movement for the isolation of families in separate dwellings is in every way salutary. This average, it is understood, is a mean result, and includes extremes and varieties of the utmost importance. We give illustrations of the variety of distribution in the houses of 14 sub-districts. Thus, of 48,273 houses, institutions excluded,—247 were uninhabited; 1601 houses contained one person each, or 1501 inhabitants; 5361 contained two inhabitants in each house, or 10,722 in the aggregate; 6627 houses contained three inhabitants in each house; 7048 houses (the *maximum*) contained four inhabitants in each house; the numbers then gradually decline. Each of 25,319 houses contained five or more people; 4465 contained 10 or more people; 1389 contained 15 or more; 596 contained 20 or more; and 142 contained 30 or more inhabitants. While more than half of the houses contain five or more inmates, more than half of the inhabitants live in houses containing seven or more inmates. 6. *Families.*—The family in its complete form consists of a householder with his wife and his children; and in the higher classes with his servants. Other relatives and visitors sometimes form a part of the family; and so do lodgers at a common table who pay for their subsistence and lodging. In taking the census the enumerator was directed to leave with each occupier a householder's schedule; the occupier by definition including the owner, or the person who pays the rent, whether (as a tenant) for the whole of the house, or (as a lodger) for any distinct floor or apartment. Thus a lodger alone, or in company with another lodger, occupying common apartments, is an occupier, and as such is classed as a family in the abstracts. The occupiers of separate almshouses, of public buildings, of portes lodges, and of detached dwellings, although nominally paying no rent, are also treated as families; except in the case of servants boarding in their master's house. The number of families was 4,491,524 in 1861; and the proportion of persons to a family was 4·47 persons to 100 families; 4·47 persons to one family; or nearly nine persons to two families. The proportion of persons to a family varied from 4·79 in 1801 to 4·83 in 1851. And the reduction of the proportion to 4·47 in 1861 is fairly referable to the multiplication of families by the recognition of lodgers as constituents of the class. In the 1684 institutions and their inmates and persons out of houses (397,582) are excluded from the calculation, the proportion of persons to a family will be reduced to 4·38. There are 12 families to 10 houses. We have endeavoured to give a more definite view of the constitution of families, by analyzing the constituent parts, in 14 sub-districts, representing the different classes of the community. We distinguish three classes of families,—the first has at its head a husband and wife; the second has a widower or a widow at the head; and the third has a bachelor or spinster at the head. The head of the family was absent in 31[illegible] instances out of 65,031; and of 61,868 families [illegible] had the husband and wife at their head; 11,099 had a widower or widow, and 9243 had a bachelor or spinster at their head. About two-thirds of the existing families consisted of married couples; 6487 were also, and of the rest 31,896 had one or more children. The numbers who had children, relatives, visitors, servants, and apprentices, or trade assistants, in the various combinations, are shown in the Table which also exhibits the corresponding facts for the other classes of families. The number of children residing with their parents was 93,788; and there were 2[illegible] children on an average to each family, or 4.26 children and parents, including the father and mother to each family of this class. Striking off the families consisting of husband and wife, sole, there remain 31,896 families having with them at home 93,788 children—that is 2.94 children to a family, or 4·94 children and parents to a family. A fourth part of the families had four children or more at home; and the families of parents and children consisted of seven persons on an average. The families of which widowers or widows were the heads had children connected with them in 6677 out of 11,099 cases.

BIRTHS.—On the 31st ult, at Orton Longueville, the Marchioness of HUNTLY, of a daughter—At The Stable Yard, St. James's, the Lady ANN ELCHO, of a son—28th ult, at No. 4, Stanhope Place, Hyde Park, the wife of the Hon. SLINGSBY BETHELL, of a son.

MARRIAGES.—On the 30th ult, by special licence, at St. Peter's Chapel, Nether Tabley, BALDWYN LEIGHTON, Esq., son of Sir Baldwin Leighton, Bart., to the Hon. ELEANOR LEICESTER WARREN, daughter of Lord De Tabley—28th ult, at Coln St. Aldwyn's, Gloucestershire, GEORGE P. FULLER, Esq., only son of John B. Fuller, Esq., of Neston Park, Wilts, to EMILY GEORGINA JANE, second daughter of the late Sir MICHAEL HICKS BEACH, Bart., of Williamstrip Park, Gloucestershire—28th ult, at Banwell, Somerset, ROBERT GRAVES, Esq, of Charlton House, Wilts, to EMILY JOSEPHINE, eldest daughter of the Rev. W. H. TURNER, vicar of Banwell, and granddaughter of the late Dean of Norwich—26th ult, at the Church of the Holy Trinity, Stratford-on-Avon, WILLIAM DE WINTON, Esq., of Tymawr, Brecknockshire, to MARY JANE ELEANOR, only daughter of Rear-admiral HARDING.

DEATHS.—On the 27th ult., at Poltimore Park, Exeter, the Hon. AUGUSTA SEYMOURINA WARWICK BAMPFYLDE, infant daughter of Lord and Lady Poltimore—25th ult, at Grosvenor Street, Grosvenor Square, the Dowager Lady MEREDYTH, relict of Sir Joshua C. Meredyth, Bart.—25th ult, at Springfield, Warwickshire, Lady DIXIE, widow of Sir Wolstan Dixie, Bart., of Bosworth Park, Leicestershire—22d ult, at Singapore, THOMAS MONCREIFF, Esq, of Shanghae, son of the late Sir J. Wellwood Moncreiff, Bart.—27th ult, at 19, Montagu Street, Portman Square, MARIA, widow of Major HODGE, 7th Hussars, and youngest daughter of the late Sir Edmund Bacon, premier baronet, Raveningham Hall, Norfolk, aged 79—26th ult, at The Hawthorns, Twyford, Berks, the Hon. Mrs. LAW, widow of the Hon. Charles E. Law, M.P. for Cambridge University, and Recorder of London, aged 74—28th ult, at Woodside Lodge, Amersham, ANNABELLA ADEANE, wife of Major-General WARDE, of the Royal Artillery—28th ult, at Hanger Hill, GEORGE WOOD, Esq., of Hanger Hill, Middlesex, and Culmington, Shropshire, aged 70—24th ult, at San Remo, North Italy, Dr. EDWARD ROBINSON HARVEY, M.D., of 34, Clarges Street, Piccadilly, aged 32—20th ult, at Milford House, Hampstead, LUCY, daughter of the late Dr. AIKIN, M.D., aged 82—2d inst, at Weymouth Street, Portland Place, ADELAIDE ANNE, eldest daughter of BRYAN WALLER PROCTER, Esq. — 2d inst, at Walford Manor, Shropshire, REGINALD AGLIONBY, son of Captain Kenyon Slaney, aged 6—31st ult, at Palgrave Rectory, Suffolk, the Rev. CHARLES MARTYN, M.A., of Oriel College, Oxford, and rector of Palgrave, aged 75—27th ult, at St. Thomas's Parsonage, Preston, FANNY, wife of the Rev. W. P. JONES, aged 75; and on 29th ult, the Rev. WILLIAM PITMAN JONES, M.A., incumbent of St. Thomas's, aged 77—26th ult, at Lyne House, Surrey, the Rev. JOHN BROADWOOD, aged 65—28th ult, at Colwell, Lindfield, the Rev. GEORGE DIXON, incumbent of Wivelsfield, aged 64—1st inst, at 19, Euston Square, the Rev. R. C. MORTON, incumbent of Chipperfield, King's Langley, Herts—2d inst, the Rev. TIMOTHY GIBSON, D.D., Rector of St. Matthew's, Bethnal Green, aged 71.

Markets.

COVENT GARDEN, Feb. 6.

Notwithstanding the changeableness of the weather, supplies of both Vegetables and Fruit in season have been pretty well kept up. Hothouse Grapes are, however, as a matter of course, scarce. Some good samples of Blenheim Orange, Nonpareil, and American New Town Pippin Apples may still be obtained; likewise a few dessert Pears. Oranges are plentiful; the best are realising from 4s. to 7s. per 100. For Potatos the market is still heavy. Cornish Broccoli is also still largely supplied. French Lettuces, Endive, Carrots, and Radishes begin to make their appearance. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 10s to 12s	Nuts, small, per bush., 14s to 18s
Grapes, per lb., 12s to 16s	Kent Cobs, 110s per 100 lbs.
Apples, per ½ sieve, 2s 6d to 4s	Almonds, do., 18s
Pears, per ½ sieve, 6s to 20s	Walnuts, do., 14s to 20s
Lemons, per 100, 5s to 8s	Chesnuts, per bush., 10s to 16s
Oranges, per 100, 4s to 7s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Cucumbers, each, 2s to 5s
Cauliflowers, each, 3d to 6d	Beet, per doz., 1s 6d
Asparagus, p. bundle, 10s to 12s	Shallots, per lb., 10d
French Beans, p. 100, 5s	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s to 2s 6d	Garlic, per lb., 8d
Rhubarb, p. bundle, 9d to 1s 6d	Lettuces, each, 1d to 4d
Potatos, York Regents, p. ton, 60s to 80s	Endive, per score, 1s to 2s
,, Shaws, do., 50s to 60s	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 4d to 6d	Mushrooms, p. pott., 1s to 1s 9d
Carrots, do., 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Feb. 4.

Prime Meadow Hay	70s to 80s		Clover, old	85s to 110s
Superior do.	75	90	Do. second cut	75 100
Inferior do.	—	—	New Clover	— —
New do.	—	—	Straw	24 30
Rowen	—	—		

HARVEY & EASTON.

CUMBERLAND MARKET, THURSDAY, Feb. 4.

Sup. Meadow Hay	84s to	92s	Inferior Clover	78s to 90s
Inferior do.	68	75	New do.	— —
New do.	—	—	Straw	32 36
Superior Clover	100	110		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Feb. 4.

Fine Meadow Hay	80s to 84s		Prime 1st cut Clover	105s to 110s
Inferior do.	70	75	Inferior do. do.	100 105
Prime New Hay	—	—	New 1st cut do.	— —
Inferior	—	—	Prime 2d cut do.	100 105
Straw	27	30	Inferior do.	90 95

BRITISH WOOLS.—LONDON, Feb. 4.

Our transactions are still on a limited scale, in consequence of the smallness of stocks and of arrivals, so that there is no pressure to sell, and consumers are supplied in exact proportion to their immediate demands. At this season of the year, however, there is generally an improvement of demand, which it is presumed will occur as usual for most descriptions of short clothing wool. For combing sorts the disturbance on the Continent may be the means of restricting the usual requirements until more is known of the objects of Prussia and Austria in their present inglorious raid on the territories of a small state.

South-down Hoggets	s. d.	s. d.	Leicest. Wethers	1 9½ to 1 10
	1 11 to	2 0	Ditto Hoggs	1 10½ — 1 11
Half-bred ditto	1 11 —	2 0½	Combing Skins	— ..
Down Ewes	1 10 —	1 10½	Flannel Wool	1 4 — 1 6
Kent Fleeces	—	2 0	Blanket ditto	0 9 — 1 0

HOPS.—BOROUGH MARKET, FRIDAY, Feb. 5.

Messrs. Pattenden & Smith report the trade quiet, but prices are firm.

COAL MARKET.—Feb. 3.

Buddle's West Hartley, 14s. 9d.; Byass's Bebside West Hartley, 14s. 9d.; Carr's Hartley, 14s. 9d.; Cowpen Hartley, 14s. 9d.; Davison's West Hartley, 15s.; Lambert's West Hartley, 14s. 6d.; Walker Primrose, 13s.; West Hartley, 14s. 9d.; Walls End Riddell, 17s. 9d.; Walls End Cassop, 18s. 9d.; Walls End Hartlepool, 19s. 6d.; Walls End Heugh Hall, 19s; Walls End Kelloe, 18s. 9d.; Walls End East Hartlepool, 19s. 9d.; Walls End Trimdon Hartlepool, 19s. 6d.—Ships at market, 97.

METROPOLITAN CATTLE MARKET.

MONDAY, Feb. 1.

We have rather a larger supply of Beasts; trade is not brisk, but late quotations are well supported, with a fair demand for choicest qualities. Sheep are also rather more plentiful; the demand is, however, good, and prices for choicest descriptions are higher. Good Calves are very scarce and very dear. From Germany and Holland there are 760 Beasts, 710 Sheep, and 26 Calves; from Spain, 18 Beasts; from Scotland, 355; from Ireland, 330; from Norfolk and Suffolk, 2530; and 200 from the Northern and Midland Counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 0	to 5 2	Best Long-wools	5 4	— 5 8
Best Short-horns	4 8	— 5 0	Do. Shorn	—	—
2d quality Beasts	3 0	— 4 2	Ewes & 2d quality	4 4	— 4 10
Best Downs and Half-breds	5 10	— 6 2	Do. Shorn	—	—
Do. Shorn	—	—	Lambs	—	—
			Calves	5 0	— 6 4
			Pigs	3 6	— 4 8

Beasts, 4460; Sheep, 15,710; Calves, 51; Pigs, 440.

THURSDAY, Feb. 4.

We have a moderate supply of Beasts: trade is slow, but prices remain about the same as on Monday last. There are very few Sheep on offer, but enough for the demand. Trade is by no means brisk; prices, however, continue high. Good Calves are still scarce and dear. From Germany and Holland there are 110 Beasts, 575 Sheep, 63 Calves, and 156 Beasts from Spain. Milch Cows, 75.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 0	to 5 2	Best Long-wools	5 4	— 5 8
Best Short-horns	4 8	— 5 0	Do. Shorn	—	—
2d quality Beasts	3 0	— 4 2	Ewes & 2d quality	4 4	— 4 10
Best Downs and Half-breds	5 10	— 6 2	Do. Shorn	—	—
Do. Shorn	—	—	Lambs	—	—
			Calves	5 0	— 6 4
			Pigs	3 6	— 4 8

Beasts, 1015; Sheep, 2760; Calves, 134; Pigs, 110.

POTATOS.—SOUTHWARK, Monday, Feb. 1.

During the past week the arrivals both coastwise and by rail have been large, and the trade is very dull at a considerable reduction. The following are this day's quotations:—Yorkshire Flukes, 75s. to 90s. per ton; do. Regents, 60s. to 70s.; do. Rocks, 50s. to 55s.; Dunbar Regents, 70s. to 75s.; Kent and Essex Regents, 60s. to 70s.: Perth, Forfar, and Fifeshire Regents, 45s. to 55s.; do. do. Rocks, 45s. to 50s.

MARK LANE.—MONDAY, Feb. 1.

The supply of Wheat from Essex and Kent to this morning's market was moderate, and taken slowly on the terms of this day se'nnight. The market was tolerably well attended, but foreign Wheat continues to be neglected, and our quotations are unaltered. Barley and Peas were unaltered in value. Beans were rather more inquired after. The Oat trade was steady at last week's prices. The little business done in Flour was at late rates.

PER IMPERIAL QUARTER.		s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk	White	42—48	Red	40—48
— — fine selected runs	ditto	44—52	Red	40—48
— — Talavera		48—56		
— Norfolk		—	Red	—
— Foreign		36—54		
BARLEY, grind. & dist., 25s to 27s	Chev.	34—38	Malting	29—33
— Foreign	grinding and distilling	22—26	Malting	28—32
OATS, Essex and Suffolk		18—22		
— Scotch and Lincolnshire	Potato	20—25	Feed	18—22
— Irish	Potato	19—22	Feed	—
— Foreign	Poland and Brew	17—22	Feed	15—20
RYE		30—32	Foreign	—
RYE-MEAL, Foreign		—		
BEANS, Mazagan 28s to 36s	Tick	30—33	Harrow	30—33
— Pigeon 32s to 40s	Winds.	—	Longpod	—
— Foreign	Small	36—42	Egyptian	30—32
PEAS, White, Essex and Kent	Boilers	36—38	Suffolk	36—38
— Maple 34s to 36s	Grey	28—30	Foreign	32—40
MAIZE	White	—	Yellow	—
FLOUR, best marks delivered	per sack	35—40		
— 2d do	ditto	28—34	Country	28—34
— Foreign	per barrel	15—25	Per sack	32—42

FRIDAY, Feb. 5

The weather since the 29th ult. has been fine with white night frosts, excepting on the 2d and 3d, which days were damp and showery; last night some snow fell. Notwithstanding the commencement of hostilities between the Germans and Danes, the Wheat trade during the week has been inanimate, and former prices were scarcely exceeded, although as a rule, holders are unwilling to realise, and the least sanguine hold for an advance of 2s. to 3s. per qr. In Liverpool, Leith, and Glasgow, some speculative purchases have been effected at an improvement of 1s. to 2s. per qr., and very full rates have been generally obtained in other markets of the kingdom. Little alteration has occurred in the value of Barley, and the tendency of prices is rather towards a decline. Buyers of Oats, Beans, and Peas have had to pay the late extreme rates, and where an alteration has occurred in the quotations of Flour it has been in favour of the sellers. Since Friday last 22 vessels were reported off the coast. The floating trade has not been active during the week. Paris, Feb. 4—The market has become very firm. Flour has advanced about 1s. per 280 lbs. The six marks for delivery this month are quoted equal to 33s. 8d. per 280 lbs.; the stock has increased to about 9140 cwt. Wheat 1s. per qr. higher. The arrivals of English and foreign Wheat and foreign Oats this week have been small, of Barley and English Oats large. The day's market was badly attended. The quantity of English Wheat on offer was small, but nevertheless met a slow sale at Monday's prices. Foreign continues to be neglected, and our quotations nominal. Spring Corn was firm at Monday's prices.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English	770 qrs.	1900 qrs.	5920 qrs.	1220 sk.
Irish	—	—	500	— ,,
				870 ,,
Foreign	2270 ,,	7190 ,,	4180 ,,	— brls

LIVERPOOL, February 2.—To-day's market has been well attended. The advance in Wheat has made further progress, and we have to quote all classes of American red now fully 5d. and white 2d to 3d. per cental dearer than on Friday last. Flour is 6d. per barrel and 1s. per sack higher, but does not move freely. Indian Corn attracts a good share of attention. and we raise our quotations 9d. per qr. Oats and Oatmeal show no alteration. Beans, Peas, and Barley each remain steady at late rates. The market closes very strong for the leading articles of the trade, and speculators seem still disposed to follow up the advance.

FRIDAY, Feb. 6.—The market was moderately attended. Wheat quiet, holders asking Tuesday's advance. Flour unchanged, demand slow. Indian Corn steady. Egyptian Beans steady. Oats firm, at the advance of Wednesday. Oatmeal very quiet.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Dec. 26	40s 5d	32s 0d	19s 0d	33s 6d	34s 4d	33s 6d
Jan. 2	39 10	31 8	18 9	30 0	33 8	33 1
— 9	40 2	31 7	18 8	29 7	34 2	32 3
— 16	40 11	31 10	18 10	28 0	33 7	33 0
— 23	41 8	32 5	18 9	28 0	33 8	32 8
— 30	40 8	32 1	18 11	31 8	33 3	32 10
Agg. Aver.	40 6	31 11	18 10	30 1	33 9	33 1

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Dec. 26.	Jan. 2.	Jan. 9.	Jan. 16.	Jan. 23.	Jan. 30.
41s 3d	..	..	..	..		..
40 11	..	..	..		..	..
40 8	..	..	..	..	..	
40 5		..	..	..	..	
40 2	..	..		..	..	..
39 10	..		..	..	..	..

AGRICULTURAL PUPILS.—A Farmer, near Reading, in Berkshire, wishes for a PUPIL, who will have every facility for learning Practical Farming, with the comforts of a good home. Unexceptionable references given and required.—Y. Z., Mr. Blewett, Chemist, Reading.

THE ADVERTISER, being about to Build a House half an hour's distance from London, requires a GARDENER capable of Superintending the Erection of Vineries, &c, upon the best principles and in the most economical manner. He must thoroughly understand the Culture of Vines, Peaches, Pears, &c, also the kitchen and Flower Gardens. The Grounds are about 8 Acres in extent, and were laid out and planted in October in the best manner. A married Man, to live at the Lodge preferred; the Wife to attend to the Gate and Laundry. Good wages, and every necessary assistance will be given to a really clever, hard-working conscientious Man. The highest references for ability and respectability indispensable. All answers to be by letter, and none will be attended to that do not contain full particulars as to age, capabilities, wages required, length of service in last place, &c., also whether married or single, and if married, what family. A fine collection of Orchids is grown, of which the present grower will retain the entire charge.—A. B., 19, Bedford Place, Russell Square, W.C.

WANTED, at a Market Plant Grower's, a YOUNG MAN, quick at Potting and Tying. Constant employment.—Address, stating wages, &c., R. G., Post Office, Colney Hatch, Middlesex, N.

WANTED, an industrious MAN to attend to Wall Trees and assist in the Garden generally; also a Young Man to assist in the Houses.—R. CLARKE, Twickenham.

WANTED, a PROPAGATOR.—A Man who thoroughly understands Hard and Soft-wooded Plants; one who can Grow Plants for Showing will be preferred. None need apply under 25 years of age.—Apply, J. GRAY, West Derby Nursery, Liverpool.

WANTED, a respectable married MAN, without incumbrance, for a Country Seed and Nursery Business. Wife required to attend to the Shop occasionally. Respectable reference required.—Letters to be addressed to S. M., *Gardeners' Chronicle* Office, W.C.

Gardener and First-class Laundress.

WANTED, a MAN and WIFE.—The Man a good Kitchen Gardener, understanding the care of Cows; his Wife to do the Washing for a large Family.—Apply to C. W. M., Post Office, Newport, Isle of Wight.

Under Gardener.

WANTED, an UNDER GARDENER, whose Wife is accustomed to Dairying, Poultry, and Baking.—Address, A., *Gardeners' Chronicle* Office, W.C.

WANTED, an UNDER GARDENER for the York Lunatic Asylum, Bootham. Salary 20*l.* per annum, with board, lodging, and washing.—Applications to be made and testimonials furnished on or before Thursday the 18th inst., to Mr. WRIGHT, the House Steward.—Bootham, York.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS (HEAD).—WM. WOOD & SON have at present on their books several deserving married men, both with and without families, whom they are desirous of recommending to any lady or gentleman requiring really good Gardeners, whose characters will bear strict investigation.—Address, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

GARDENER (HEAD) or FOREMAN in the Houses.—Age 26. Good character.—R. D., 66, High Street, Lincoln.

GARDENER (HEAD).—Married, no incumbrance; a practical Man, who understands his profession throughout.—Unexceptionable references as to character, &c., on application to X. Y. Z., Mr. Joseph Wilson, The Square, Bakewell, Derbyshire.

GARDENER (HEAD).—Age 41, married, no incumbrance: fully understands Grapes, Pines, and General Forcing, Kitchen and Flower Gardening. Three years with last employer.—A. B., Messrs. Paul & Son, Old Cheshunt Nurseries, N.

GARDENER (HEAD).—Age 32, married; a first-class practical Man in every branch of his profession; has had great experience in the Culture of Orchidaceous, Stove and Greenhouse Plants, Ferns, &c. Character unexceptionable.—X. Y. Z., Mr. Slocombe, Stationer, Ongar, Essex.

GARDENER (HEAD).—Age 30, single; thoroughly understands his profession in all its branches; leaving his present employer on account of his giving up the establishment. Unexceptionable character.—F. M., Bramford Hall, Ipswich.

GARDENER (HEAD).—Age 27, single; thoroughly understands the Forcing of Vines, Pines, Peaches, Melons, Cucumbers, &c.; also a good practical knowledge of all sorts of Plants, Orchard Houses, Flower and Kitchen Gardens. Good character.—S. C., 5, Rochester Place, Upper Holloway, N.

GARDENER (HEAD).—Middle-aged, single, Scotch; has a practical knowledge of his profession in all its branches; was 13 years in his last situation, where he was very successful in growing Grapes and Wall Fruit.—WILLIAM MILLER, Mr. Randell's, High Street, Red Hill, Surrey.

GARDENER (HEAD). — Age 29, single; has a thorough practical knowledge of his profession in all its branches. Two years' good character. — W. JONES, Manor House, India Road, Poplar, London, E.

GARDENER (HEAD).—Middle-aged, married, two children; well versed in all the branches of his profession. Three years' good character.—J. W., 6, St. John's Cottages, Maple Road, Penge, Surrey.

GARDENER (HEAD).—No incumbrance; first-class Grower of Grapes, Pines, Peaches, &c.; Stove and Greenhouse Plants, Laying-out of Grounds; can Superintend Land and Stock if required. Wife a good Dairywoman. Seven years' good character.—L. T., 6, Robertson Street, Lee, Kent.

GARDENER (HEAD).—Age 28, single; thoroughly understands the Growing and Forcing of Pines, Vines, Peaches, Figs, and Stove and Greenhouse Plants; also the Management of Kitchen and Flower Gardens. Good character and testimonials.—A. B., The Gardens, Combermere Abbey, Whitchurch, Salop.

GARDENER (HEAD), age 40, married.—WILLIAM BURTON is now leaving his present employer, with whom he has lived 14 years. He will be glad to enter into an engagement with any nobleman or gentleman who is desirous of securing the services of a thoroughly experienced Man. Unexceptionable character.—WM. BURTON, Gardens, Langley House, Abbots Langley, Watford, Herts.

GARDENER (HEAD).—Age 40, married, without incumbrance; thoroughly acquainted with all branches of his profession, including a skilful knowledge of the cultivation of Orchids, and understands well the Laying-out of Grounds. References from gentlemen of a personal knowledge, and 2½ years' unexceptionable character from late employer.—Y. Z., Mr. Craig, Confectioner, Hornsey Road, Holloway, N.

To Noblemen and Gentlemen.

GARDENER (HEAD)—Age 37, married; is a good grower of Hothouse and Greenhouse Plants; Pines, Grapes, and other choice fruits; good Kitchen and Flower Gardener; Improving and Laying-out of Pleasure Grounds; Erecting and Heating of Houses. Five years' excellent character.—X. X., Mr. Veitch, Royal Exeter Nursery, King's Road, Chelsea, S.W.

GARDENER (HEAD).—A native of Scotland.—Age 33, single; is a first-class Grower of Pines, Vines, Peaches, Greenhouse, Stove and Orchidaceous Plants. Has had good experience in Laying-out of New Gardens, Grounds, &c. Understands Farming, and would not object to Superintend the Labour of a Farm, or make himself otherwise useful. Seven years' unexceptionable character from his present situation. Leaves through the death of his employer and the breaking up of the establishment. At liberty the end of February.—J. M., Ponsonby Hall, Whitehaven, Cumberland.

GARDENER (HEAD or SINGLE). — Married, no incumbrance; practical knowledge of profession. Good character. — G. O. J., 22, North Street, Edgeware Road, London, W.

GARDENER (HEAD, or good SINGLE-HANDED).—Age 23; well experienced in Forcing, Plant Growing, and the general routine of Gardening. Well recommended. A pious family preferred. State wages, &c.—F. B., 9, Ingram Place, Hornsey Road, Holloway, N.

GARDENER (HEAD), or GARDENER and BAILIFF.—Age 33, married, two children; thoroughly understands Forcing Fruits, Flowers, and Vegetables: good Kitchen and Flower Gardener; also Orchard-house, Pyramid, and other Fruit Trees; good Florist and Grower of Ferns, Foliage Plants, &c. Good Agriculturist (native of Norfolk); understand Erecting and Heating of Vineries, &c.; Farm Buildings and Cottages, Draining, Measurement of Land, &c. Wife can take Dairy or Poultry. Four years' good character.—J. R. B., Post Office, Wakefield.

GARDENER (HEAD) and BAILIFF. — Age 38, married; has had 21 years' experience in a nobleman's and gentleman's Gardens, and is thoroughly experienced in Early and Late Forcing of all kinds of Choice Fruits, Flowers, and Vegetables, for which he has obtained several Prizes; also has had the General Management of the Farm, and the Stock. Wife can Manage the Dairy, if required. Can be highly recommended; will be disengaged the 25th of March. Eight years' excellent character.—W. B., Gothic House, Putney Heath, Surrey.

GARDENER (HEAD), or GROOM and GARDENER.—Age 23; has a thorough practical knowledge of his profession in all its branches. Three years' good character.—H. W., Mr. Warning, 53, Upper Conduit Street, Leicester.

GARDENER. — Middle-aged, no incumbrance; active; competent in all branches; understands the Management of Meadow Land and Stock. Good character. Wife good Dairywoman.—J. W., 19, Park Street, Croydon.

GARDENER.—A Gentleman reducing his garden wishes to recommend a first-rate Gardener, experienced in the management of a large garden in all its branches. He can be thoroughly recommended as a trustworthy person, with 19 years good character.—T. SCLATER, Esq., Newick Park, Uckfield, Sussex.

GARDENER (middle-aged, married).—Mr. WM. PAUL, Waltham Cross, N., can recommend with confidence to any gentleman a good practical Gardener, with first-class testimonials as to character and ability.

GARDENER.—G. UZZELL, Gardener to her Grace the Duchess Dowager of Northumberland, Mount Lebanon, Twickenham, S.W., can with confidence recommend his Foreman to any lady or gentleman in want of a good Gardener; has been in his present situation 4½ years, and had previous great practice in first-rate Gardening.—G. UZZELL will be happy to answer any inquiries.

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GARDENER (UNDER, or SINGLE-HANDED).—Has a knowledge of Greenhouse, Vinery, Flower, and Kitchen Garden, &c. Good character.—M. R., General Post Office, Cambridge.

GARDENER (UNDER).—Age 20; three years' good character.—E. C., Post Office, Battersea Rise, Surrey.

GARDENER (UNDER).—Age 17; good reference.—Y. Z., The Gardens, Burton Constable, near Hull.

GARDENER (UNDER).—Age 18; wishes to improve himself; willing to make himself generally useful. Two years' good character.—D. C., Post Office, Donnington, Newbury, Berks.

NURSERY FOREMAN.—R. LOCKE thoroughly understands the Management and Propagation of Hardy Ornamental Trees and Shrubs, Fruit Trees, &c. Can have two years' good character from Mr. Veitch, to whom he has given every satisfaction as Ground Foreman and Propagator.—R. LOCKE, Mr. Veitch's Nursery, Coombe Wood, Kingston Hill, Surrey, S.W.

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To Nurserymen.

BUDDER and GRAFTER.—A Young Man who has had some experience as above; could act as Assistant Foreman if required. Satisfactory references.—J. C., *Gardeners' Chronicle* Office, W.C.

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	Fiddle or Old Silver Pattern.	Bead Pattern.	Thread or Brunswick Pattern.	King's or Lily, &c.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
12 Table Forks	1 13 0	2 0 0	2 4 0	2 10 0
12 Table Spoons	1 13 0	2 0 0	2 4 0	2 10 0
12 Dessert Forks	1 4 0	1 10 0	1 12 0	1 15 0
12 Dessert Spoons ..	1 4 0	1 10 0	1 12 0	1 15 0
12 Tea Spoons	0 16 0	1 0 0	1 2 0	1 5 0
6 Egg Spoons, gilt bowls..	0 10 0	0 12 0	0 12 0	0 13 6
2 Sauce Ladles	0 6 0	0 8 0	0 8 0	0 9 0
1 Gravy Spoon	0 6 6	0 9 0	0 10 0	0 11 0
2 Salt Spoons, gilt bowls..	0 3 4	0 4 0	0 4 0	0 4 6
1 Mustard Spoon, gilt bowl	0 1 8	0 2 0	0 2 0	0 2 6
1 Pair of Sugar Tongs ..	0 2 6	0 3 6	0 3 6	0 4 0
1 Pair of Fish Carvers ..	1 4 0	1 10 0	1 10 0	1 10 0
1 Butter Knife	0 2 6	0 4 0	0 5 6	0 6 0
1 Soup Ladle	0 10 0	0 12 0	0 16 0	0 17 0
1 Sugar Sifter	0 3 3	0 4 6	0 4 6	0 5 0
Total	9 19 9	12 9 0	13 9 6	14 17 0

Any article to be had singly at the same prices. An Oak Chest to contain the above, and a relative number of Knives, &c., 2*l.* 15*s.* Tea and Coffee Sets, Dish Covers and Corner Dishes, Cruet and Liqueur Frames, &c., at proportionate prices. All kinds of re-plating done by the patent process.

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Ivory Handles.	Table Knives, per dozen.	Dessert Knives, per dozen.	Carvers, per pair.
	s. d.	s. d.	s. d.
3½-inch ivory handles..	12 6	10 6	4 6
3½-inch fine ivory handles	15 0	11 6	4 6
4-inch ivory balance handles	18 0	14 0	4 6
4-inch fine ivory handles	24 0	18 0	7 0
4-inch finest African ivory handles ..	32 0	26 0	11 0
Ditto, with silver ferules	40 0	33 0	13 0
Ditto, carved handles, silver ferules ..	50 0	42 0	17 0
Nickel electro-silver handles, any pattern	25 0	19 0	7 6
Silver handles of any pattern	64 0	54 0	21 0
Bone and Horn Handles.—Knives and Forks per dozen.			
White bone handles	11*s.* 0*d.*	8*s.* 6*d.*	2*s.* 6*d.*
Ditto balance handles	21 0	17 0	4 6
Black horn, rimmed shoulders	17 0	14 0	4 6
Ditto very strong riveted handles	12 0	9 0	3 6

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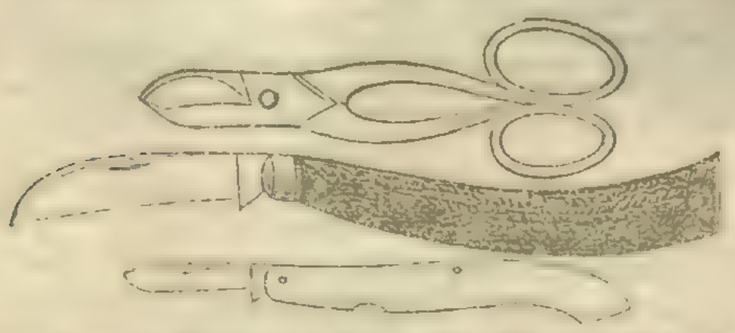

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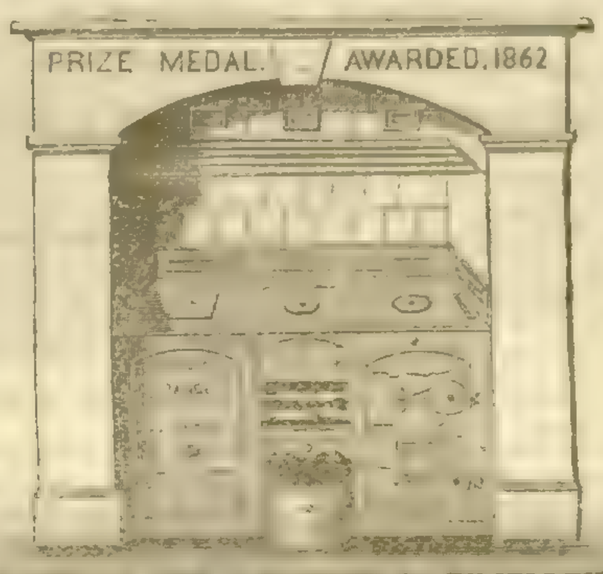

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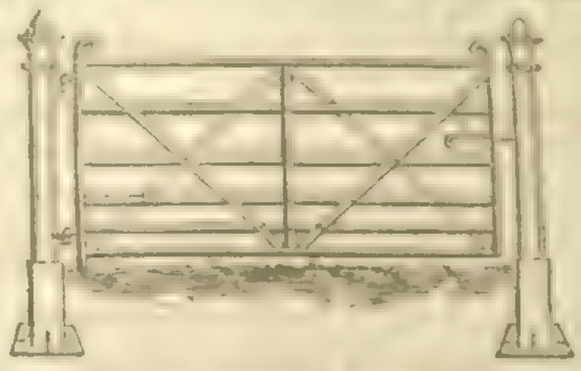

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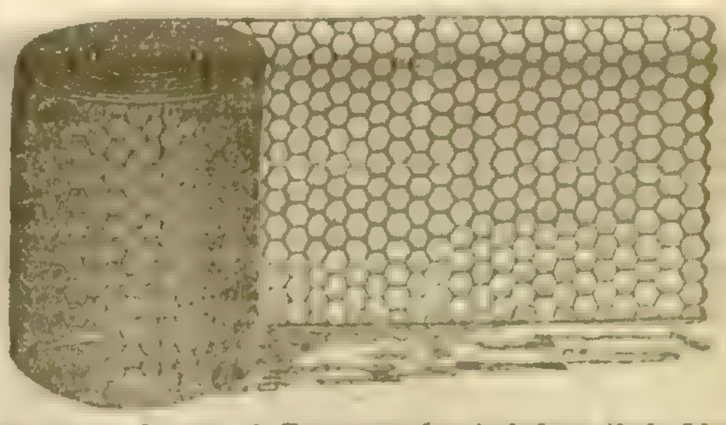

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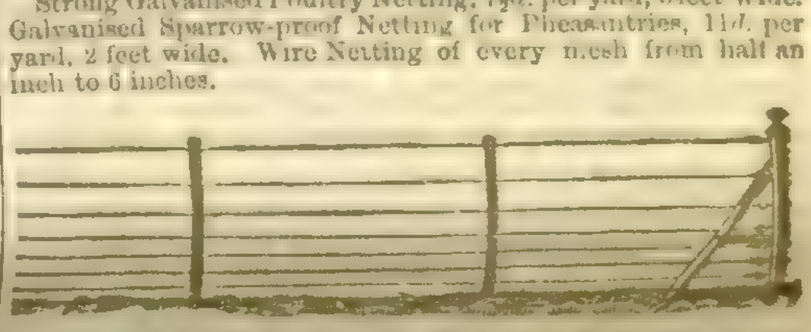

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Although founded by Humboldt and Bonpland early in the present century, it is only of late years that the genus Odontoglossum has received any considerable attention, either from the botanist or the cultivator. Not more than five species were assigned to it by Professor Lindley in 1832 ("*Genera et Species Orchidearum*," Part III.), these however had increased to 65 on the publication of the first Part of the same author's "Folia Orchidacea," in 1852, while they are now known to exceed a hundred, and we may expect to see that number doubled by the time that the favourite homes of the genus in the Mexican and Peruvian Andes shall have been thoroughly explored. In this case, Odontoglossum will become—next to Oncidium—the most extensive genus in the "Vandeous" Section of the great Orchideous family, and might therefore almost seem entitled to a separate Work even if it had no other claims to independent treatment. Such, however, may be readily found; for

(1.) Its species affect exclusively the mountain-chains of Mexico, Central America, New Grenada, and Peru; not a single straggler having yet been discovered either in the West Indian Isles or in the low and sultry latitudes of the South American continent. In this remarkable fact we have clear indications of a distinct group.

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Unfortunately, it was long before this latter peculiarity in their habits—and consequently the secret of their cultivation—came to be fully understood; what wonder, then, if the labours of a Karwinski or a Galeotti, a Linden or a Schlim, a Purdie or a Warscewicz, should have added little to our collections of living plants, and that many of their most brilliant discoveries should at present be only known to us from dried specimens in our herbaria! The principle of *cool treatment* having at length however been fully established, the most strenuous efforts are being made by nurserymen and others to obtain fresh supplies of what we formerly lost, as well to search out new forms, and with this object, not fewer than seven collectors are now (January, 1864) busily engaged in ransacking such portions of the New World as seem to promise the richest harvest of novelty or beauty.

As the various collections arrive, they will doubtless be found to comprise many fine Odontoglossa, the most remarkable of which it is proposed to figure in a Monograph, specially dedicated to the genus; and the Parts of which will appear with greater or less frequency, as the materials for illustration can be had. Not more, however, than Four Parts will ever be published in a single year.

Full descriptions of the plants (in Latin and English), as well as careful directions for their cultivation, will accompany the Plates; and with the concluding Parts an Analysis of the Genus, and Conspectus of all its known Species, will be given.

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News of the Week.

IN the House of Lords on Friday, on the motion of the Archbishop of YORK, returns were ordered relating to the proceedings of the Ecclesiastical Commissioners. On Monday the House sat for a few minutes only, and no business of importance was transacted. On Tuesday Earl RUSSELL, in reply to the Earl of MALMESBURY, stated that her Majesty's Government had not received any guarantee from Austria and Prussia that their troops would evacuate the Duchies as soon as the Common Constitution of November had been revoked, but had been informed by the Prussian and Austrian Governments that their demands upon Denmark were based upon the Treaty of 1852, which recognised the integrity of the Danish monarchy, and that they did not intend to depart from it. His lordship added that it would be too frivolous for any government to maintain that the London Treaty, to which the two great German Powers, in conjunction with Great Britain, France, Russia, and Sweden, were parties, could be abrogated by a war between Denmark on one hand and Austria and Prussia on the other. In answer to the Earl of DERBY, Earl RUSSELL said that Mr. ADAMS, the United States Minister, had not presented to him any despatch from Mr. SEWARD demanding an indemnity for the depredations of the Alabama, although it appeared that a copy of such a despatch had been laid before the Federal Congress. On Thursday, in answer to the Earl of DERBY, Earl RUSSELL said he had no doubt that the rams recently seized at Liverpool were intended for the service of the Confederate States, but he could not produce the papers relating to their seizure, as he had been informed by the law officers of the Crown that their production would embarrass the Government in the legal proceedings now in progress. Earl GRANVILLE moved that a select committee be appointed to act with a committee of the House of Commons in considering the best method of dealing with the railway schemes proposed within the metropolis. After some discussion the motion was agreed to.

In the Commons on Friday the report on the Address was brought up and agreed to, after a discussion on the state of Ireland, in which Mr. WHITESIDE, Sir R. PEEL, Mr. O'HAGAN, and other members took part. On Monday, in answer to Lord R. CECIL, Lord PALMERSTON said that Her Majesty's Ministers had remonstrated with the Austrian and Prussian Government on the steps which had been taken, under the shadow of their troops, to proclaim the Prince of AUGUSTENBURG as Duke of Schleswig-Holstein, as utterly inconsistent with good faith, and the Prussian Government had intimated their disapproval of the proceedings. His lordship denounced the idea which prevailed in Berlin, that war would put an end to treaties. This doctrine, he said, was one which no Government with any respect for itself, or any regard for the principles of good faith, could seriously uphold, inasmuch as, if it were once established, any strong Power having an inconvenient treaty with a small one could free itself from that engagement by making an unprovoked and unjustifiable attack. The House then went into Committee, when the CHANCELLOR of the EXCHEQUER obtained leave to bring in a Bill to allow the making of malt duty-free to be used in feeding cattle, and also to alter and amend the laws relating to the collection of the land tax, assessed taxes, and income tax. Sir G. GREY moved for leave to bring in a Bill for amending the Act for making further provision for the confinement and maintenance of criminal lunatics. After a long discussion on the case of Townley, leave was given to bring in the Bill. Mr. MILNER GIBSON moved for a Select Committee to consider, in conjunction with a Select Committee of the Lords, the best method of dealing with the proposed railway schemes within the limits of the metropolis, and to report their opinion whether any of these schemes should be proceeded with during the present Session. Lord STANLEY, Mr. MASSEY, Lord ENFIELD, and other members expressed their opinion that a Royal Commission would be more effectual than a joint committee, and Sir J. SHELLEY moved, as an amendment, the adjournment of the debate, with the view of enabling the Government to reconsider the matter. After a long discussion the amendment was withdrawn, and the motion agreed to. On Tuesday, in answer to Mr. DISRAELI, Lord PALMERSTON stated that the Treaty of 1852 was binding upon the German Powers, who could not be absolved by war with Denmark from a common engagement into which they had entered in conjunction with other Powers. Mr. BUXTON moved a resolution declaring that the House, while only imputing to Admiral KUPER a misconception of the duty imposed on him, deeply regretted the burning of Kagosima, as contrary to those usages of war which prevail among civilised nations, and to which it is the duty and policy of this country to adhere. Mr. LONGFIELD moved, as an amendment, to omit from the resolution the words relating to Admiral KUPER. After a long debate the amendment was agreed to. Mr. BUXTON then offered to withdraw his resolution; but this course being objected to, Lord PALMERSTON moved the previous question, which was carried on a division by 161 to 85. On Thursday the CHANCELLOR of the EXCHEQUER obtained leave to bring in Bills for replacing the lapsed issue of bank-notes in Scotland, and for amending the law relating to the purchase of Government Annuities through the medium of savings banks. The ATTORNEY-GENERAL for IRELAND obtained leave to bring in a Bill to amend the procedure of the County Courts in Ireland. Last night Lord PALMERSTON stated that the report of an armistice having been proposed to Prussia, Austria, and Denmark by England, France, Russia, and Sweden was correct, but the result of the suggestion was not yet known.

The Danish army, overpowered by the superior numbers of the Austrians and Prussians, has been compelled, after a gallant resistance, to evacuate the Dannewerke with all its artillery, and to abandon the Duchy of Schleswig to the invaders. On Friday night the Prussians, under Prince FREDERICK CHARLES, succeeded in crossing the Schlei, near Arnis, and on Saturday morning the Austrians resumed their advance towards the city of Schleswig. In consequence of these movements, and in order to prevent his entire army from being cut off, the Danish Commander-in-Chief evacuated Schleswig and the Dannewerke, and fell back towards Flensburg, pursued by the Austrians. On Saturday afternoon the Austrians came up with the Danes near Oversee, and completely defeated them, after a desperate resistance. Two other engagements took place on the same day at Jübeck and Jastedt, with the same results. The Danes then retreated to Flensburg, but were compelled by the rapid advance of the Austrians to evacuate it on Tuesday and retreat to their defences on the coast. Meanwhile the Prussians marched upon Düppel, in order to cut off the retreat of the Danes into Jutland. The greater portion of the Danish army succeeded in escaping to the island of Alsen, while the other portion, pursued by the Prussians, marched northwards, with the intention, it is supposed, of retiring to Frederica and the island of Funen. These disasters, and especially the abandonment of the Dannewerke with all its material of war, have aroused indescribable indignation and excitement in Copenhagen, and the Government have felt it necessary to supersede the Commander-in-Chief, and to publish a declaration that the retreat of the army had taken place without their knowledge or authority. A special meeting of the Rigsdag was held on Sunday, at which it was unanimously resolved by both Houses to assure the people that they might rely upon the Rigsdag maintaining the honour and independence of the country by all the legal means at its command, and upon its calling on the Government to take all measures for the most energetic defence. It was announced yesterday that the British Government had proposed an armistice to the belligerents, on the basis of the evacuation of Schleswig by the Danes, with the exception of the Island of Alsen. This proposition has received the support of France, Russia, and Sweden, and is put forward as a preliminary to a Conference of the European Powers.

Accounts from Japan state that Prince SATSUMA had paid the indemnity demanded for the murder

of Mr. RICHARDSON, and has engaged to do his best to discover the murderers and bring them to justice.

A telegram has been received at the Foreign Office, stating that on the 20th November a severe engagement, which lasted 13 hours, took place between our military and naval force under General CAMERON and Sir WILLIAM WISEMAN and the New Zealand Maories, at Rangiriri, on the river Waikato. The Maories were defeated with great loss, and about 200, including nearly all their chiefs, were taken prisoners. Our loss was also very severe, including 15 officers and 117 men killed and wounded.

Home News.

THE COURT.—The Queen and Royal family continue at Osborne. On Thursday, the 4th inst., the Queen opened the new School at Whippingham, which has recently been erected by Her Majesty's command. The Queen was accompanied by the Princesses Helena, Louisa, and Beatrice, Prince Leopold, and the Princess Hohenlohe. The Rev. G. Prothero, rector of Whippingham, received the Queen at the entrance and conducted her Majesty to the school-room, where the children, about 300 in number, were assembled, and where tea was provided for them. Her Majesty remained at the School for some time, and then returned to Osborne. On Friday the Queen and Princess Helena walked and drove. During the week Professor Hofman delivered two lectures on chemistry before her Majesty and the Royal family. On Sunday morning the Queen Princess Helena, Princess Louisa, and Prince Leopold attended Divine service at Osborne. The Rev. G. Prothero officiated. On Monday Viscount Sydney, Lord Chamberlain, and Lord Proby, Controller of the Household, arrived at Osborne, and had audiences of her Majesty to present the Addresses from the two Houses of Parliament, in answer to the Speech at the opening of Parliament. In the afternoon the Queen drove out. On Tuesday the Queen and Princess Helena walked out. On Wednesday the Queen drove out with Prince Leopold and Princess Beatrice. The Right Hon. E. Cardwell arrived from London and had an audience of her Majesty.

THE PRINCE AND PRINCESS OF WALES with the infant Prince, left Frogmore on Thursday for St. Leonard's, where they will remain for about a fortnight, in order that the Princess may enjoy the benefit of sea air. On Friday his Royal Highness was present at the Windsor steeple-chases. On Saturday the Prince went out rabbit shooting. The Princess took a carriage airing. In the evening their Royal Highnesses had a dinner party. On Sunday afternoon the Prince attended Divine service in St. George's Chapel. On Monday morning his Royal Highness came to town, and presided at a meeting of the Council of the Duchy of Cornwall. In the evening the Prince dined with Earl Granville, and afterwards returned to Frogmore. On Tuesday morning his Royal Highness went out hunting. The Princess of Wales drove through the grounds and park of Frogmore. On Wednesday morning the departure of the Prince and Princess for St. Leonard's, which was to have taken place on that day, was postponed at the last moment in consequence of the medical advisers of her Royal Highness having pronounced that the temperature was too cold to allow the infant Prince, to travel with safety. During the morning the Prince of Wales, with Prince Edward of Saxe-Weimar, skated on the ice in the Home Park. On Thursday afternoon the Prince and Princess, with the infant Prince left Frogmore for St. Leonard's. Their Royal Highnesses travelled by a special train on the South-Western line to Waterloo Station, and thence by the Charing Cross and South-Eastern lines through Redhill and Tunbridge Wells, to St. Leonard's. The whole journey was accomplished in less than three hours. The Prince and Princess immediately drove to the Royal Victoria Hotel, where apartments had been prepared for their accommodation. The route from the station to the hotel was thronged with spectators and lined with a double row of carriages containing the chief residents in St. Leonard's and Hastings. The progress of their Royal Highnesses was greeted with enthusiastic cheering. A telegraphic message was immediately forwarded to her Majesty at Osborne announcing that the journey had been safely performed. It is expected that during the stay of their Royal Highnesses at St. Leonard's the Prince will attend the meets of the East Sussex hounds. His Royal Highness's hunters have already arrived at St. Leonard's.

LEVÉES.—The Prince of Wales will hold Levées on behalf of the Queen, at St. James's Palace on Wednesday, March 2, and on Saturday, March 12.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

KEEPER OF THE SIGNET.—The Prince of Wales has conferred upon Colonel the Hon. Sir Charles B. Phipps, K.C.B., the honorary appointment of Secretary, Chamberlain and Receiver-General, and Keeper of the Signet of his Royal Highness as Prince and Steward of Scotland.

LORD LIEUTENANCY.—The Queen has appointed James Hay Erskine Wemyss, Esq., to be Lieutenant and Sheriff Principal of Fifeshire, in the room of the late Earl of Elgin. The Earl of Gosford has been appointed Lord Lieutenant of Armagh, in the room of the Earl of Charlemont, who succeeds his uncle, the late earl, as Lord Lieutenant of Tyrone.

PARLIAMENTARY MOVEMENTS.—Mr. T. W. Fleming has been elected for Winchester, Mr. John Reginald Yorke has been elected for Tewkesbury, and Mr. John Henderson has been elected for Durham, all without opposition.

THE ARMY.—The Colonelcy of the 2nd Dragoons, vacant by the death of Sir Alexander Kennedy, has been conferred on Lieutenant-General J. B. Gough, and the Colonelcy of the 13th Foot, vacant by the death of General M'Pherson, has been conferred on Lieutenant-General Spencer Stanhope.

ECCLESIASTICAL COMMISSION.—The Estates Committee of the Ecclesiastical Commission have published a report recommending the Board to make grants during the current year, which will be represented by a capital sum of 700,000*l*. Among these grants is one to augment to 300*l*. a year all benefices in public patronage where the population amounts to 8000, and to assist in doing as much for all benefices in private patronage, provided half the augmentation be supplied from non-ecclesiastical sources. On the same arrangements they propose to augment the livings of all district churches with a like population to 200*l*. a year.

CONVOCATION.—The Convocation of the Province of Canterbury met on Friday. The report of a committee on the Burial Service was read, from which it appeared that a majority of the committee was opposed to any alteration in the service, but recommended instead that the discipline of the Church should be so far revived as to pass a purely spiritual sentence of excommunication on persons of scandalously immoral lives, which sentence, if not removed by repentance, would disentitle them to have the Burial Service read over their graves. The report of the committee appointed to consider the question of clerical subscription was read. It stated that there was no sufficient evidence to show that as a general rule subscription is burdensome to the clergy, but suggested a modification of the declaration of assent and consent required from beneficed clergymen. The report of the committee on the subject of the "relief of persons in holy orders," was read, stating that no legislation would be satisfactory to the Church which did not fully recognise the indelibility of holy orders. A letter was read from the Dean of Bristol announcing his resignation as Prolocutor.

CONVOCATION OF YORK.—The Convocation of the Province of York has been summoned to meet on Wednesday, the 24th inst. Meanwhile the Archbishop has directed the appointment of a committee of the Lower House to draw up and report on the subject of the burial service to be presented on that day.

THE PROPOSED BISHOPRIC OF CORNWALL.—The Archbishop of Canterbury has received from Sir George Grey an answer to the memorial from the Upper House of Convocation praying the Queen to divide the see of Exeter, and create a separate diocese of Cornwall. The reply of the Home Secretary states that her Majesty's Government decline to recommend such a subdivision, or to entertain the general question of the increase of the episcopate.

CLERICAL SUBSCRIPTION COMMISSION.—The Queen has been pleased by letters patent under the Great Seal to appoint the Archbishop of Canterbury, the Archbishop of York, the Archbishop of Armagh, the Archbishop of Dublin, the Earl Stanhope, the Earl of Harrowby; the Bishops of London, Winchester, St. David's, and Oxford; Lords Lyttelton, Cranworth, and Ebury; the Right Hon. E. P. Bouverie, the Right Hon. Dr. Lushington, the Right Hon. S. H. Walpole, the Right Hon. J. Napier, the Right Hon. Sir John T. Coleridge, Sir W. Heathcote, Bart.; Charles Buxton, Esq.; the Dean of St. Paul's, the Dean of Ely, Archdeacon Sandford, the Rev. Dr. Jacobson, the Rev. Dr. Jeremie, the Rev. H. Venn, B.D.; and the Rev. W. G. Humphry, B.D., to be her Majesty's Commissioners to consider and revise the various forms of Clerical Subscription, and to report their opinion how far they may be altered and simplified consistently with due security for the declared agreement of the clergy with the doctrines of the Church and the conformity to its ritual.

ORDER OF THE BATH.—The Queen has given orders for the appointment of Sir John Liddell, C.B., M.D., late Director-General of the Medical Department of the Navy, to be a Knight Commander of the Bath.

Foreign.

FRANCE.—In the sitting of the Senate on Friday, the petition of M. Darimon, denouncing as unconstitutional several Ministerial decrees relative to the public press, was set aside by the adoption of the previous question. The committee proposed that the House should pass to the order of the day on the petitions demanding that the municipal councils should elect their own mayors and deputy-mayors. MM. Troplong and Lacrosse requested that the House should adopt the previous question on the petitions, in order not to allow the articles on the Constitution to be called into question. The previous question was then adopted by a large majority. The *Constitutionnel* of Thursday, in an article by M. Limayrac, considers that the evacuation of the Dannewerk will be found to have prolonged the war. The writer fears that the difficulties now arising will be of a different kind to those before the war. The basis of negotiation will have been displaced. M. Limayrac sees with regret that many complications and difficulties are possible. At a dinner given on Thursday evening to celebrate the Suez Canal undertaking, Prince Napoleon made a speech, which was loudly cheered. His Imperial Highness retraced the history of the enterprise, dwelt upon its grandeur and utility, and paid a tribute of praise to all who had participated in the undertaking. M. de Lesseps replied. M. Corta, a deputy of the Corps Législatif, has left for Mexico, to collect information requisite for the introduction of financial reforms in that country. The Confederate cruiser Florida, under the command of Captain Maffit, left Brest on Tuesday night, in the midst of a dense fog, on a cruise. The United States war-steamer Kearsage, on being apprised of the Florida's sailing, stood out to sea the same evening, so that there is every possibility of a fight between the two vessels should they chance to fall in with each other. A short time since the Duke of Brunswick, who has resided in Paris for many years, was robbed of diamonds valued at 9,000,000 francs, and a sum of 18,000 francs in gold, which were kept in an iron safe fixed to the wall of his bedroom. The Duke's valet, a man called Schaw, was found to be missing, and the telegraph being immediately set to work by the police, he was arrested in the course of a few hours at Boulogne with the stolen property in his possession. The robbery has since become complicated by a new incident. Since the recovery of the jewels they have remained in the custody of the Correctional Police. The thief has been tried and condemned, but the Duke on applying for the property could not obtain possession of it, in consequence of an opposition having been lodged in the name of the reigning Duke, who claims a great part of the jewels as belonging to the Crown of Brunswick.

SPAIN.—The Queen has formally authorized the marriage of the eldest daughter of the Duc de Montpensier to the Count of Paris. The reply of the Emperor Napoleon to the letter of her Majesty, announcing the marriage, is said to be couched in very affectionate terms.

SWEDEN.—A telegram from Stockholm states that extreme consternation and grief prevailed in that city on the receipt of the news from Denmark. Large numbers of people collected in the streets, and popular demonstrations took place in front of the residence of the Danish Ambassador, in favour of Denmark.

DENMARK.—The news that the Danish army, by order of the Commander-in-Chief, had evacuated the Dannewerk, leaving behind them the *matériel* of war and retreated to Dybbel, has aroused *indescribable* indignation and excitement in Copenhagen. Public feeling is very much depressed, and a proclamation of the King to the army has produced an unfavourable impression. The Danish Commander-in-Chief, General de Meza, and the Chief of the Staff have been recalled, and General de Luttichau has been temporarily intrusted with the command of the army. Notwithstanding its being Sunday, both Chambers of the Rigsdag held an extraordinary sitting on the 7th. At this sitting Bishop Monrad, the President of the Council, said that the King was not instrumental in the retreat of the army, that the proceedings of the Commander-in-Chief were inexplicable, and that he had therefore been recalled. After this communication by Bishop Monrad, the following resolution was proposed in both Houses of the Rigsdag:—

"The Rigsdag, fully recognising the extreme gravity of the time, expects that the nation will perceive the necessity of upholding tranquillity and order. The people may rely upon the Rigsdag maintaining the honour and independence of the country by all the legal means at its command, and on its calling upon the Government to take all measures for the most energetic defence for this purpose."

This resolution was passed by both Houses, together with a second, authorising the preparation of an address to be presented to the King. On Tuesday the Rigsdag passed an address to the army, announcing the energetic prosecution of the war. The address was proposed by the President of the Council. The *Patrie* of Monday published under express reserve a report that a revolution had broken out at Copenhagen, and that the King of Sweden had been proclaimed in that city. The report also stated that King Christian had embarked for England, but both statements are now known to be entirely without foundation. His Majesty returned to Copenhagen on Wednesday from Sonderburg. The latest news states that great excitement is felt at Copenhagen among the maritime population and the workmen at the arsenal, all of whom demand to be led to battle. A powerful squadron is fitting out, and two screw frigates have left Copenhagen for the island of Alsen, to support the movements of the army. On the 5th inst. Denmark proposed to Prussia the assembly of an European Conference, to which the German Federal Diet should be a party for the settlement of the Schleswig-Holstein question. It was announced yesterday that the English Government had proposed an armistice to the belligerents, on the basis of the evacuation of Schleswig by the Danes.

with the exception of the Island of Alsen. This proposition has the support of France, Russia, and Sweden, and has been made as a preliminary to a conference for the settlement of the question of the Duchies. It is stated that Denmark, yielding to the remonstrances of European commerce, has given orders that the German mail steamers running between New York and Bremen should not be molested.

THE DANISH DUCHIES.—On Friday the hilly ground in front of the whole Missunde line was taken by the Prussians. The Austrians advanced to Fahrdorf, and in the course of the afternoon two Danish forts were entirely destroyed and razed to the ground. The battery of an Austrian Brigade posted upon the Kirchberg, near Fahrdorf, subsequently silenced the Danish breastwork at Lollfuss, and occupied Fahrdorf. During the day the Danes evacuated Tönningen and Friedrichstadt. Some 20 soldiers, natives of Schleswig and Holstein, deserted on this occasion from the Danish army, and made off for Holstein. On Friday night Prince Frederick Charles of Prussia threw a pontoon bridge over the Schlei, near Arnis. At 2 o'clock on Saturday morning, during a snow storm, 300 fishing boats conveyed the Prussians across the Schlei, between Arnis and Kappeln. Röder's Brigade, which crossed in the boats, immediately pushed forward and captured four 24-pounders. Kappeln, on the north bank of the Schlei, was afterwards occupied by the Prussian division under Prince Frederick Charles, after having been previously evacuated by the Danes. On Friday night the Danes sent a flag of truce from Oberselk to the Austrian Commander-in-Chief, applying for an armistice of 24 hours. General von Gablenz replied that he could only grant one of two hours. The bearer of the flag of truce had, however, left before this answer had reached him. During the night the Danes having learnt that the Prussians under Prince Frederick Charles had concentrated opposite Arnis and Cappeln, for the purpose of crossing the Schlei, evacuated Schleswig, abandoning the Dannewerk, with 60 heavy pieces of artillery. The Austrians were advancing along the dam of Haddeby, removing barricades and intrenchments, when the inhabitants of Schleswig went to meet them, and announced that the Danes had commenced retreating the previous evening. The Austrians immediately set out in pursuit of the Danes, and overtook them near Oversee, where an engagement took place on Saturday, in which the Austrians, commanded by General Gablenz, completely defeated the Danes, after a desperate resistance. Colonel Prince William of Wurtemberg, Lieut.-Colonel von Francois, and Major von Jena, commander of the 60th Regiment, were severely wounded. Lieut. Count Von der Gröben, of the Ziethen Regiment of Hussars, the personal adjutant of Prince Frederick Charles, while carrying despatches, was killed by a ball in the breast, and several other officers had their horses shot under them. Two hundred prisoners and six guns of heavy calibre, with a portion of the ammunition and baggage trains, were taken by the Austrians. During the engagement the Austrians are said to have lost 500 and the Danes 130 men. Oversee, near which place the battle was fought, is situated between Schleswig and Flensburg, to which town the Danes retreated, pursued by the Austrians. During this retreat the 1st Copenhagen Regiment of Infantry made a splendid and heroic bayonet charge upon a battery of 16 Prussian guns. The regiment was nearly destroyed, but the army was thereby saved. Another engagement, which lasted for several hours, took place on the same day near Jübeck, north-west of Schleswig, between the Nostitz (Austrian) Brigade and the retreating Danes; and another sanguinary engagement took place near Idstedt, in which the Danes were defeated. On Sunday morning the Austrians commenced the pursuit of the Danes in a northerly direction, and the Prussian Guards in a westerly direction. On Monday the Austrians attacked the Danish positions before Flensburg, while the Prussians were cutting off the Danes upon the right. Large quantities of booty and many prisoners fell into the hands of the allies. In the northern part of Flensburg the inhabitants favourable to the Danes erected barricades in the streets and fired on the Austrians, who lost in and before the town 1100 men in killed and wounded. A desperate struggle also took place at Bau and Kupfermühle. On Tuesday the Danes evacuated Flensburg, and the greater portion of their army with their war material escaped to Sonderburg, in the Island of Alsen. The rest marched further north, pursued by the allies. While these operations were being carried out by the Austrians, the Prussians marched upon Düppel from Holnis. They carried the intrenchments before Düppel with a loss of 500 men, and threw forward their main body to Apenrade, in order to cut off the retreat of the Danes into Jutland. The roads were blocked with cannon, which the exhausted horses were unable to drag further. On Sunday morning the corps of General von Gablenz and the Prussian division commanded by General von Mülbe entered Flensburg. They found the town already occupied by the cavalry of Prince Frederick Charles, which had marched from Arnis to Flensburg in one day. Generals von Gablenz and Mülbe having allowed their troops a day's rest, which they urgently required, advanced towards the intrenchments at Duppel, which they intend, it is said, to bombard instead of assaulting them by storm. It has been decided to raze the Dannewerk, and the disarmament has already commenced. The Austrians and Prussians have divided the guns captured. Field-Marshal von Wrangel's head-quarters are at Flensburg, and the Austrian head-quarters are at Frorup and Oversee. By order of Marshal von Wrangel, the German flags have been removed, but the Schleswig-Holstein colours have not been prohibited. Prince Frederick has been proclaimed in Flensburg, and in the Town Hall of Schleswig. In reply to a deputation from the Municipal Council, General von Gablenz declared that it was not his business to interfere either with the proclamation of Duke Frederick or with the removal of the Danish functionaries. The proclamation of Duke Frederick was a question concerning the German Confederacy, and the removal of Danish functionaries one merely concerning the citizens. The inhabitants of Schleswig have sent a deputation to Kiel to render homage to the Duke. The inhabitants of Rendsburg sent a deputation last week to the Crown Prince of Prussia with an address, thanking him for his presence among them, and expressing their confidence that their rights would at last be directed to the only goal that could satisfy them, namely, that they might be permitted to live quietly and contentedly under the government of their legitimate Prince, Duke Frederick VIII. The Crown Prince in reply said—

"I cannot yet join in your qualification of the prince whom you have just mentioned; I have come here solely in the capacity of a soldier, and beg that you will only salute me as such, but also as your countryman. I will with you place my trust in Providence, in whose keeping your cause now lies. You are aware that I have for a long time maintained most friendly and consanguineous relations with my cousin. I will acquaint my Royal father of your having so cordially saluted me. You may feel satisfied that he also possesses a warm heart for your cause."

A proclamation issued by Marshal von Wrangel on Sunday, announces the appointment of Baron von Zedlitz as Prussian Civil Commander of Schleswig; confirms provisionally the civil functionaries in their posts; declares that the German language is henceforth to be used in all branches of the administration; and finally prohibits any political demonstrations not in accordance with the policy pursued by the great German Powers, and attempts to establish any other authority in the duchy of Schleswig. Another proclamation issued by Marshal von Wrangel declares the authority of the King of Denmark to be suspended in Schleswig. It states that the public functionaries will be maintained so long as they obey the Austrian and Prussian Civil Commissioners. All political meetings are prohibited, and tranquillity and obedience are recommended to the inhabitants. According to a telegram received yesterday at Breslau, a body of 3400 Austrian troops, will arrive in that city in a few days, on their way to Schleswig. They will be conveyed by eight special trains, and will be quartered at Breslau for the night. The Amtmann Blauenfeld, of Fleckbye, was brought into Rendsburg last week between two Austrian dragoons, with his arms tied to the saddle. He was one of those who led a Prussian detachment against a column of Austrians, upon pretext that they were Danes, in consequence of which they fired into one another with fatal results. A complete plan of the Austro-Prussian position was found upon him, which led to the supposition that he was in communication with a regular company of spies. He was shot as a traitor on the 5th.

SAXONY.—In the sitting of the Upper House of the Saxon Diet on Friday, Baron von Beust declared that a reconciliation between the majority in the Federal Diet and Austria and Prussia was impossible so long as the latter Powers uphold the London Protocol.

BAVARIA.—The Conference relative to the Schleswig-Holstein question will open towards the end of this week, all obstacles having been removed.

PRUSSIA.—The semi-official *Nora-Deutsche Zeitung* of Sunday contained an article on the declarations made by Earl Russell and Lord Palmerston in the English Parliament. It states that the Austro-Prussian demands for the fulfilment of the London Treaty by Denmark were made before the outbreak of hostilities, and says that, according to international law, war annuls all treaties. In another article on Monday it declared unfounded the statements of Lord Palmerston in Parliament that Prussia and Austria had expressed themselves as intending to uphold the integrity of Denmark, and also that England was ready to guarantee the withdrawal of the November Constitution. In another article on Thursday it said that the note sent by Denmark to the Prussian Government on the 5th inst. proposing a conference on the Schleswig-Holstein question, was handed to the Prussian Cabinet on the 7th, but, "having been written before the outbreak of hostilities, is of purely historical value." The same paper contained a previous article on England, of which the following is a summary:—

"The German Powers will not abandon one hair's breadth of their demands on Denmark. England of the present day is a fallen country, very different from the England of the olden time. Her policy only retains the shadow of the past; the presents of England are 'Danaic gifts,' and all have seen the results of English sympathy for the Hungarians, Poles, Italians, for Greece, Turkey, Portugal, Spain, the small republics in South America, the United States, and Austria, where she prepared in 1854 the isolation of 1859. If the English journals remind Germany of the fate of Russia in the Crimean war, and the fault committed by the Emperor Nicholas in not believing in an alliance between France and England, it was precisely because at St. Petersburg the England of former times was still believed in. But we will not allow ourselves to be deceived, any more than the French Government, as to a policy which in the Crimean war played no other part than that of leaving the French soldiers to pull the chestnuts from the fire, which placed obstacles in the way of French policy in Italy, which is endeavouring to embroil the French Government with America, and is now labouring to form a Scandinavian union to fortify her weakened supremacy at sea by an alliance with the maritime Powers of the North. No, we will not allow ourselves to be deceived. We will not seek a support for Germany in this new England. That time is past. But we will do what German right and German honour command, and then Denmark also will learn what the friendship of England is worth."

AUSTRIA.—It was announced on Tuesday by Reuter's telegrams that at a Council of Ministers held on Sunday at Vienna, under the presidency of the Emperor, resolutions were adopted declaring that the London Treaty could no longer be considered by Austria as a basis of negotiations between the great Powers. Official assurance has since been received from Vienna that this telegram was not authentic, and that the Austrian Government does not intend in any way to depart from the basis laid down in the identical despatch from Austria and Prussia of the 31st January. In their sitting of Friday both Houses of the Reichsrath expressed warm sympathy for the army in Schleswig. The Lower House subsequently granted an extraordinary credit of 4,000,000fl. The session will be closed in state on Monday by a speech from the throne. The Emperor will give a soirée to-day to all the members of the Reichsrath. The Minister of Finance opened a subscription on Saturday for a new lottery loan of 40,000,000fl. (4,000,000*l*.) The loan will not bear interest, but will be redeemable within 55 years by periodical drawings with prizes. The loan was negotiated on Thursday at 96 per cent. The Austrian Credit Mobilier took 15 millions, Messrs. Rothschild's 11½ millions, and Baron Wodianer 13½ millions. All the other competitors for the loan joined these capitalists. Large offers for the loan were made to the Government, both by foreign and home capitalists. Count Revertera has been appointed Austrian Civil Commissioner for Schleswig. Austria has accepted the proposition of Denmark that a delay of eight weeks should be allowed to Danish and Austrian ships with their cargoes, material of war excepted, to leave the harbours of both countries without molestation, and that during a similar period the mails should be regularly conveyed to and from either country. The *Botschafter* of Vienna of Wednesday, says:—

"Denmark, by its anterior conduct, and finally by its armed resistance, has abolished treaties. The London Treaty no longer exists. The great German Powers are masters of their policy towards Denmark. The ulterior events of the war, the circumstances under which peace will be concluded, and the regard due to the condition of Europe, will aid in determining what use they will make of this liberty of action."

FRANKFORT.—The *Kölnische Zeitung* publishes the conclusions of the report of M. Von der Pfordten on the question of the succession to the Duchies. The report comes to the conclusion of the non-validity of the Treaty of London for the Germanic Confederation, and the nullity of the stipulations which it contains relative to the Duchies, and proposes—

1. To recognise Prince Frederick as Duke of Holstein. 2. To recognise M. de Mohl, nominated for that purpose by Prince Frederick, as his representative at the Diet. 3. To reserve the decision in respect to the Duchy of Lauenburg.

At the sitting of the Diet on Thursday the report of the majority of the Holstein Committee upon the London Treaty was read, regarding the Treaty in its bearing upon the succession question. The views of two sections of the minority of the Committee were also submitted. They consisted of an identical opinion of the Austrian and Prussian representatives, and an opinion of the representative of Mecklenburg, arrived at upon different grounds. Both advocated that this report should be discussed on the occasion of the report to be made shortly on the claims of succession of the Duke of Augustenburg. Voting is to take place upon the propositions of the majority and minority of the Committee in a fortnight. The representatives of Austria and Prussia declared that the nature of the present occupation by the two great German Powers of the Schleswig villages allotted to Holstein upon the north of the Eider is without prejudice to the rights of the Confederation and of Holstein. The announcement of the representative of Lübeck, that an embargo had been laid upon shipping, was referred to a committee.

POLAND.—Letters from Warsaw announce the arrest of a person named Fawski, and state that it had led to most important discoveries, in consequence of which 1000 persons had been arrested in Warsaw and the provinces up to Saturday last. The same letters state that the archives of the National Government had fallen into the hands of the Russian authorities, and that important personages in Poland and abroad were thereby seriously compromised. The *Dziennik* announces the discovery of 10 infernal machines, together with bombs and arms, at the vinegar manufactory of M. Eskert. A circular has been addressed by General Berg to the military commanders, ordering that insurgents voluntarily surrendering with their arms shall be permitted to retain their liberty. Those who surrender without arms are to be set free on producing a certificate of legitimation, and their future good behaviour being guaranteed by the authorities of their respective villages. Insurgents failing to comply with either condition are to be transported until the

restoration of order. The report that the Polish insurgent leader Rembailo was killed in the engagement at Itza is unfounded, but Colonel Suchonim, who was wounded on that occasion, is dead. On the 1st of February Rembailo encountered seven companies of Russian troops at Miechow, in the government of Radom, when he dispersed three companies and captured a large quantity of arms. A sharp engagement took place on the 20th ult. at Prochenk, in the government of Lublin, between the combined insurgent corps of Zeglinski, Pogorzelski, Cwiek, Jagmin, and Wagner, and a strong division of Russians under General Manukin. The Poles lost 93 killed and 127 wounded. Epidemic typhus has broken out among the Russian garrisons in the district of Cracow.

IONIAN ISLANDS.—The Turin papers publish advices from Corfu to the 7th, stating that orders have been given to suspend the demolition of the fortifications in that island. The papers believe the order to have been occasioned by the expectation of war.

ITALY.—It is said that riots have occurred at Bellinzona. Several arrests were made, but the people released the prisoners, uttering seditious cries. The *Unita Italiana* of the 2d, publishes an article under the title of "Military Force of Austria in Italy," signed "Giuseppe Mazzini." It endeavours to prove that, in a war against Italy, Austria could not bring into the field more than 150,000 or 170,000 men at the most. Italy could oppose to them, it affirms, a force of 300,000 men. The article terminates with the cry of "To Venice! with purely Italian forces! To Venice! for Italy and for Poland!"

TURKEY.—In consequence of the excitement in the Principalities, Russia and Austria, fearing for Poland and Hungary, are putting a strong pressure upon Turkey to send an army of occupation to the Principalities. The Turkish Government is strengthening all the defences of the Danube, and it is rumoured that Turkish troops will be concentrated on the frontier. It is said that the Porte has obtained possession of documents proving the existence of a secret treaty between Moldo-Wallachia and the Servian Government. Keen frost and heavy falls of snow have occurred at Constantinople. The winter has been the severest known in Turkey for many years, but is now becoming milder. Thirty thousand sheep have perished in the province of Gallipoli alone. The *Levant Herald* says the Turkish Government is going to constitute a new Tribunal of Commercial Arbitration at Constantinople, with three judges, English, French, and German. The Sultan has decreed that, dating from the commencement of the current year, a certain number of youths, fixed for the present at 32, and chosen each year from among the Greek, Bulgarian, Armenian, and Catholic Armenian communities, shall be educated at the Government expense in the Imperial Military Schools of Constantinople and Paris, with a view to their subsequently receiving commissions in the Turkish army; eight out of this number will be brought up for the civil service. These students will likewise be permitted to practise their religion without any restrictions, in the same manner as the Christian students in the Imperial School of Medicine; and, to prevent any undue influence being exercised on them by their Mussulman fellow-students, they are forbidden to embrace Mahomedanism under pain of expulsion.

CHINA.—A despatch from Shanghai of the 26th Dec., says that the Imperialists are gaining ground. Woosi has been captured by Rhode.

JAPAN.—Advices from Japan state that Prince Satsuma has paid the indemnity demanded of him on account of the murder of Mr. Richardson. With this, and the Prince's own assurance that he will do his best to discover the murderers and bring them to justice, Colonel Neale has expressed himself satisfied.

AUSTRALIA.—Great floods had occurred in Australia, destroying the Wheat crops.

NEW ZEALAND.—Advices from New Zealand announce that the Maories have suffered a great defeat. General Cameron, on the 20th Nov., with a force of 1000 men and three guns, aided by the Royal Navy, under Commodore Sir William Wiseman, attacked the Maories, who occupied a strongly entrenched position on the bank of the river Waikato at Rangiriri, and after a severe engagement succeeded in dislodging them from it, and taking 183 prisoners, including most of the chiefs. The fighting commenced at 5 P.M., and did not cease till 6 A.M. next day. Our loss, including that of the Royal Navy, is 4 officers killed, 11 wounded; 37 men killed, 80 wounded. The 50th Regiment had arrived in the Himalaya, which returned to Sydney on the 4th December with the following message from General Cameron:—

"'November 21, 1863.

"We assaulted the enemy's intrenched position at Rangariri at half-past 4 P.M. on the 20th, and carried it after a desperate engagement. I regret to say our loss is severe —Lieutenant Murphy (12th), and Midshipman Watkins, of the Curaçoa, and 35 men killed; 13 officers and 80 men wounded, including Colonel Austin, 14th Regiment, since dead; Captain Mayne, Lieutenants Alexander, Downes, and Hotham, R.N; Captain Mercer, R.A, since dead; Captain Phelps, 14th Regiment, since dead; Captain Gresson, Lieutenant Talbot, Lieutenant Chevalier, Adjutant Lewis, 65th Regiment; Captain Brookes, R.E.; Ensign Dicrow, 40th Regiment—the greater part severely. The enemy fought with the greatest determination, and held the strongest part of their position during the whole night. Being completely surrounded and cut off, they surrendered unconditionally at half-past 5 this day; 183 in number are now prisoners of war, among them several chiefs of note. The enemy's loss has not yet been ascertained, but it is known to be very great. A party of 400, under William Thompson, approached the position from the east with a flag of truce after the surrender. An interpreter was sent, who states that William Thompson appeared inclined to surrender, but his people were opposed to it, and went back, he says, and sent in his *mere* by the interpreter, with what objects I am not aware. The King was present at Rangariri, and escaped during the night by swimming across the swamp, as did several others. The total number of the enemy present at the engagement is not known."

UNITED STATES.—The contradictory reports which have been received during the two past weeks from Knoxville have been reduced to intelligibility. Skirmishing between the forces of Generals Longstreet and Forster commenced on the 15th, and continued until the 20th, when the Federals fell back to Knoxville, with a loss of upwards of 150 men, and 200 prisoners, several caissons blown up, a large quantity of clothing destroyed, 700 cattle, 900 waggons, and two boat loads of provisions and tobacco captured. The entire Federal force had retreated west of the Holston River, and skirmishing was in progress within six miles of the city. General Longstreet, who had been strongly reinforced, had established an impregnable base of operations at Bull's Gap. General Forster is ill, and the Administration at Washington is said to be seriously alarmed at the situation of affairs at Knoxville. The 6th Corps from the Army of the Potomac, under General Sedgwick, has been sent to the assistance of General Forster. Richmond papers of the 28th report the capture by the Confederate General Forrest of Island No. 60, in the Mississippi River, with all the managers, negroes, cattle, &c. The Federals are declared by the same papers to have evacuated Fort Pillow; and Corinth, Mississippi, having first blown up their fortifications. General Forrest has defeated the Federals at Lagrange, Collinsville, and Germantown, Tennessee. A large force in West Tennessee is purposing to join General Forrest. Cairo despatches report that the Confederates, under Generals Marmaduke, Shelby, and Fagan, were advancing upon Pine Bluff, Arkansas, on the 22d. An attack upon Marmaduke by Lieutenant Payst had been repulsed; the other columns were skirmishing with the Federals under Clayton. The same despatches state the guerilla firing upon the Mississippi steamers had been resumed at Miliken's Bend. Despatches recently read in the Confederate Congress relate that the Confederate troops are recruiting by brigades for the war. Charleston telegrams of the 23d, *via* Richmond, announce that the bombardment of the city was almost suspended. The *Courier* of the 26th ult. states that trifling damage has been done by the Federal shells. The Democrats in Huntingdon county, Pennsylvania, in convention on the 12th, unanimously nominated General M'Clellan for the next Presidency. The Senate on the 24th, by a vote of 27 against 11, adopted Mr. Sumner's resolution requiring all senators to subscribe the new oath of allegiance. Senator Bayard, of Delaware, against whom the resolution was aimed, took the oath and announced his intention to resign. The committee of the Senate to whom the question of the expulsion of Senator Davis of Kentucky had been referred, have asked to be discharged from making a decision, and the question is therefore dropped. Mr. Vallandigham has applied to the Supreme Court for a writ of *certiorari* to test the legality of the sentence of imprisonment passed upon him in May last by General Burnside's Military Commission. Mr. Lincoln has directed a State election to be called in Arkansas on the 28th of March. He declares that after that date the original laws of the State shall be considered in force, excepting that slavery is abolished from the Constitution. Mr. Chase, in an order dated the 23rd, has removed the restrictions upon trade in Missouri and Kentucky. Letters from Key West, Florida, of the 22nd, state that a convention of Unionists is to be held at St. Augustin on the 1st of March, to reorganise the State government under the conditions proclaimed by Mr. Lincoln. General Banks, in compliance with a petition presented by the Free States General Committee of New Orleans, on the 16th, has authorised a convention to frame a new Constitution for Louisiana.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Ecclesiastical Commission.*—The Archbishop of YORK's motion for copies of two reports of committees of the Ecclesiastical Commissioners was agreed to after some remarks by Earl GRANVILLE, who said that some of the objections made to the administration of the Board had been answered by the Earl of Chichester, and that as to the other changes suggested, the Government had not yet come to a decision.—The LORD CHANCELLOR gave some details of the manner in which his *Bill for the Sale of Small Crown Livings* had worked. The prices realised by the livings that had been disposed of had exceeded the most sanguine expectations. The returns were then ordered.

MONDAY.—The House sat for a few minutes, but no business of any importance was transacted.

TUESDAY.—*The Address.*—Lord SYDNEY brought up the answer of her Majesty to the Address. *Germany and Denmark.*—The Earl of MALMESBURY, in asking a question on the present position of Austria and Prussia in relation to Denmark, made some observations on the Treaty of 1852, by which the succession of the Danish Crown is settled. He described the negotiations that resulted in the treaty, adding that when in office he had always discouraged every attempt to deal with the subject of Schleswig as a German question only. He had always contended that it was a matter for the consideration of the European Powers. Now, however, it seemed to have become an exclusively German question. He considered that Prince Frederick had no right whatever to dispute the arrangement made with his father for the renunciation of the rights of his family, as he was 24 years of age when it was made, and never protested against it in any way. He asked whether her Majesty's Government had obtained any guarantee from Austria and Prussia that their troops would be withdrawn from the Duchy of Schleswig in the event of the demands on Denmark being conceded, whether the two great German Powers still considered their obligations under the Treaty of 1852 valid; and whether her Majesty's Government still considered Austria and Prussia as so bound by the treaty to maintain the integrity of the Danish Monarchy.—Earl RUSSELL, in reply, said it was an error to suppose that her Majesty's Government had allowed the points in dispute to become exclusively German questions. On the contrary, they had always maintained that they were European and international. The Government had not received any guarantee that the Austrian and Prussian troops would be withdrawn from Schleswig if the Danish constitution were abrogated. As to the second question, it was impossible that a treaty concluded between England, France, Russia, and Sweden could be annulled by a war between Germany and Denmark. As to the third question, he again quoted the despatch of M. von Bismark. At the time the despatch was written, Prussia well knew that the invasion of Schleswig was resolved on; it was impossible therefore to say the treaty was annulled by an act of war that took place on the day after the date of the despatch.—The Earl of DERBY regretted that the Government had no guarantee for the evacuation of Schleswig, even if all the German demands were complied with.—The Earl of CARNARVON thought no discussion on the subject could be satisfactory till all the correspondence had been produced. Everything depended on the promises the Government had made to Denmark. *The American Despatches.*—In answer to a question from the Earl of DERBY, Earl RUSSELL stated he had ascertained that Mr. Seward had written to Mr. Adams the despatch which had appeared among the papers submitted to Congress, referring to the demand of indemnification for the losses sustained by the commerce of the North from the captures made by the Alabama. Mr. Adams had received that despatch, but had not communicated it. *Naval Gunnery.*—The Earl of HARDWICKE, after referring to some recent experiments, asked when the navy would be supplied with a gun and projectile that would be effective against ships plated with 4½ inches of iron.—The Duke of SOMERSET gave a detailed statement of what had been done towards supplying the navy with effective artillery. The Government had obtained 130 and 150-pounders that would pierce iron plating, but the difficulty was to procure an effective broadside gun.—Earl DE GREY explained the causes of the delay in the proceedings of the committee, and disclaimed, on the part of the Government, any wish to favour one competitor for the supply of arms more than another.

THURSDAY.—*The American Despatches.*—The Earl of DERBY, in asking for the production of the correspondence relating to the Alabama, referred to the refusal of the Government to furnish the despatches concerning the seizure of the rams at Liverpool, although they had already been laid before Congress, and been made public in America. What he would like to see was the English as well as the American version, for the impression created by the latter was that her Majesty's Government had been compelled, by the menaces of the Federal authorities, to make concessions which they had declined in the first instance. In addition to the correspondence as to the Alabama and the steam rams, he wished that Parliament should also be supplied with any correspondence that might have taken place in regard to acts of violence committed by Federal cruisers upon English vessels. One of the despatches of Mr. Seward to Mr. Adams contained the threat that such vessels as the Alabama and the Florida should be followed and seized even when they took refuge in British waters, and were under the protection of the flag. It was true that Mr. Adams did not appear to have communicated that document to her Majesty's Government; nevertheless, it had been laid before Congress, and it was expedient that a thorough understanding should be come to with the Federal authorities on the subject.—Earl RUSSELL said there was little reason to doubt that the steams rams built at Liverpool, and which were at first stated to be on French and then on Egyptian account, were really intended for the use of the Confederates; and he agreed with Mr. Adams that the vessels were armed and equipped in this country, and sent forth to attack a Power with which we were at peace, it would be an infringement of the proclamation of neutrality issued by her Majesty, and would be virtually taking part in the war in favour of the Confederate States. Her Majesty's Government were extremely anxious that no act should give countenance to such proceedings. With regard to the publication of the papers, he was informed by the law officers of the Crown that their production would lead to discussion, and that the Government would be prejudiced by having their case either partially stated or altogether forstalled. *Case of Lieut. Tinling.*—Lord CHELMSFORD called attention to the circumstances connected with the death of Lieut. Tinling, of H.M.S. Encounter, at Shoushing, on the 5th of March last, and asked for explanation of a statement made by the Secretary to the Admiralty that when that officer fell he was not engaged in the service of the Queen.—The Duke of SOMERSET praised the gallant conduct of the deceased officer, who was not on duty but acting as a volunteer when he received his fatal wound. Earl GREY said that Lieut. Tinley went to Shoushing in charge of an English gun, and was practically acting under the orders of his superior officer. The question was an illustration of the unwise policy of the Government in China; they ought, in his opinion, to do one of two things—either refrain from all interference in the struggle between the Pekin Government and the Taepings, or, if they did interfere, to do so in a manner worthy of the country.—Earl RUSSELL contended that we had maintained a strict neutrality as long as we could, but that at length it had become absolutely necessary to take steps in defending Shanghae and the other treaty ports from the attacks of barbarians.—The Earl of HARDWICKE, the Earl of ELLENBOROUGH, and Lord CHELMSFORD contended that Lieut. Tinling must be considered to have been acting under orders. *Metropolitan Railway Schemes.*—Earl GRANVILLE moved that a select committee be appointed to consider the best method of dealing with the railway schemes now before Parliament affecting the metropolis; and, in conjunction with a committee of the Commons, to report to the House as to what schemes should not be proceeded with during the present session.—The Earl of DERBY regretted that no combined plan had been laid down for the guidance of the joint committee. For any other district of the country he should not ask this; but in the metropolis the interests involved were so large and so complicated that one good governing plan should be decided on.—Lord REDESDALE approved the joint committee, as the case was an exceptional one.—After some remarks by the Earl of CARNARVON in reference to the protection of private rights where the enormous railway companies that were special features of the present time, the motion was agreed to, and the committee appointed.

FRIDAY.—*Lancashire Distress.*—Lord DENMAN presented a petition from the Guardians of the Bakewell Union against the renewal of the Rate in Aid Act, which they considered to be oppressive.—Earl GRANVILLE thought there was no ground for the alarm of the petitioners. The grievance was not probably great, and he thought they would not probably be called upon to contribute for more than another year.

HOUSE OF COMMONS.

FRIDAY.—*The Address.*—Lord R. GROSVENOR having brought up the report on the Address on the Queen's Speech, Mr. WHITESIDE commented on the state of Ireland, and complained that no notice was taken of that country in the Royal Speech. All the Irish manufactures were in a very depressed condition, in consequence of the legislation of late years. Within the last 13 months upwards of 100,000 men had carried the shores of Ireland to swell the ranks of the Federals in America. He did not see in what way the affairs of the local government of Ireland could be conducted with efficiency so long as differences of political views and opinions existed amongst its members.—Sir ROBERT PEEL denied that any such differences of opinion existed among the members of the local government of Ireland, or that 100,000 fighting men had left the shores of that country within the last year. The total emigration during that period was 120,000, but that included men, women, and children, and it was the natural result of the inability of Ireland to give employment to the vast number of her agricultural labourers. The condition of the lower classes of the people of Ireland was improving yearly, and although the prospects of the harvest had not been realised, he did not hesitate to say that Ireland offered no exception to the internal prosperity of the kingdom. —Mr. BENTINCK regretted the absence from the Speech of all reference to the United States, and said that the Government ought to have stated something as to their intentions with respect to the continuance of the paper blockade, and as to the outrages which had recently been committed by American cruisers on the British flag. — Mr. WHITE regretted that the Government had not accepted the proposal of the Emperor of the French for a European Congress, and condemned the proceedings in Japan.—The ATTORNEY-GENERAL for IRELAND said that the future of Ireland was full of hope and promise. Education was more widely diffused than ever it had been before, and was accompanied by a purity of morals and an earnestness of religious feeling unexampled in the history of the world. There was a growing spirit of self-reliance amongst the people. No country was so free from crime, and the general condition of Ireland was that of peace and order.—After some remarks by Mr. HENNESSY, Sir P. O'BRIEN, and Mr W. E. DUNCOMBE, Sir G. GREY said, in answer to an inquiry by Mr. HADFIELD, that the object of the Commission on the subject of *Clerical Subscription* was not to abolish but to revise the various forms of declaration and subscription. The Report was then agreed to.

MONDAY.—*Germany and Denmark.*—In reply to Lord R. CECIL, Lord PALMERSTON said that her Majesty's Government had remonstrated against the demonstrations which had taken place under the shadow of the protection of the troops of Austria and Prussia in favour of the Prince of Augustenburg as Duke of Schleswig and Holstein. These demonstrations were inconsistent with the good faith of the two German Powers, who were bound to acknowledge the King of Denmark as ruler of those Duchies, and also inconsistent with their declaration of readiness to maintain the integrity of the Danish monarchy. Prussia had expressed her disapproval of the proclamation of the duke, and had given instructions to countermand them. With regard to what had been done in Holstein, Austria and Prussia were not directly responsible, as the occupation had been carried out under direction of the Diet. Prussia had not denied her readiness to abide by the Treaty of 1852, but since the commencement of these warlike measures, had informed her Majesty's Government that she would abide by the Treaty of 1852, and maintain the integrity of the Danish monarchy. To hold, as had been held in Berlin, that the existence of subsequent war put an end to treaties, would be preposterous, for if such a doctrine were for a moment admitted, any powerful State might make an unprovoked attack upon a weak one, and then declare that the outbreak of war had put an end to treaties. Such a doctrine no Government that had any respect for itself, or any regard for the principles of good faith, could seriously uphold. It would be utterly disgraceful for any civilised country to stand on such a position. *Military Establishments.*—On the order of the day for the consideration of the Speech from the Throne, Mr. BENTINCK inquired whether there was any truth in the rumour that it was the intention of Government to reduce military establishments by diminishing the strength of the Artillery, and whether in the opinion of the noble lord at the head of the Government the position of Europe at this moment was such as to justify a reduction of armaments.—Lord PALMERSTON said that no material reduction would take place in the army or navy beyond that consequent upon the transfer of the Ionian Islands. He had no means of predicting what might occur in the future, but should circumstances call forth the energies of England, he was sure that she would, as usual, prove equal to the emergency. *The Viceroy of India.*—On the motion of Sir C. WOOD, seconded by Lord STANLEY, a resolution was passed in committee of the whole House, continuing the annuity granted to Sir John Lawrence, the new Governor-General of India. *Malt for feeding Cattle.*—In committee of the whole House, the CHANCELLOR of the EXCHEQUER moved that leave be given to bring in a Bill to allow the making of malt duty free to be used in feeding cattle. He explained the provisions of the Bill, which was intended to be temporary.—Sir F. KELLY congratulated the right hon. gentleman on a measure which might be described as the first effort of legislation favourable to the agricultural interest which had been brought forward for the last 30 years. — Mr. BENTINCK regarded the measure merely as an instalment of justice, which, however, would not satisfy the agricultural body.—Mr. BASS expressed his apprehension that if the proposed alteration were made, it would be very difficult to protect the revenue.—Mr. NEWDEGATE viewed the proposition with favour, as the existing restriction was calculated to intercept the profits of agriculturists, and to interfere vexatiously with the most important branch of native industry.—After some remarks by Col. BARTTELOT, Sir E. DERING, and Mr. S. BOOTH, leave was given to bring in the Bill. *The Collection of Taxes.*—The CHANCELLOR of the EXCHEQUER moved for leave to bring in a Bill to alter and amend the laws relating to the collection of the land-tax, assessed taxes, and income-tax. He explained the machinery under which the taxes were now collected, observing that the Bill would not touch the Commissioners or the assessors, but would be confined exclusively to the collectors, who, though local officers, were not popularly elected, the taxpayers having no voice in their appointment. He proposed to substitute the system which existed in Ireland and Scotland, where it worked well, and to carry it into effect, under the Department of Inland Revenue, by voluntary operation, the details of which, as well as other provisions of the Bill, he explained. After some remarks by Mr HENLEY, Mr. HUBBARD, Sir B. HALL, and other members, leave was given to bring in the Bill. *Lunatic Criminals.*—Sir G. GREY moved for leave to bring in a Bill to amend the Act 3d and 4th William IV., c. 54, intituled "An Act for making Further Provision for the Confinement and Maintenance of Insane Prisoners." He gave a detailed explanation of the circumstances under which he felt it to be his duty to respite Townley, and said that he proposed to alter the existing law by imposing the duty of giving certificates of the insanity of prisoners on the visiting justices of the gaol, leaving to them the selection of the two medical men who should report on the state of the prisoner. This would remedy the defect of the present law, which allowed the machinery to be set in motion not by impartial persons, but by agents of the prisoner. He also proposed that certificates of insanity should not be final and conclusive. With these amendments he hoped that no similar miscarriage of justice would occur such as that which had lately attracted so much public attention.—Mr. MACDONOGH expressed his opinion that the commutation of Townley's sentence was in violation of all law and precedent, and that the execution ought to have been carried into effect.—Mr. NEATE thought that the better mode of proceeding would be by Royal Commission, rather than by Bill.—Mr. LOCKE thought that Townley should have been executed, and that if Wright had had rich friends, he might have got off in the same way.—Sir G. BOWYER thought that no blame whatever was attached to the Secretary of State for Townley's case, but regretted that the royal clemency had not been extended to Wright.—Sir B. LEIGHTON felt bound to admit that if he had been placed in the same painful position as Sir G. Grey he should have acted as he had done.—Mr. BRIGHT said that the right hon. baronet could not have taken any other course than that which he had adopted. It was certainly unfortunate that the case of Wright had fallen so closely upon that of Townley, but the two cases were widely different, and it by no means followed that because Townley had not been punished by death, the sentence of Wright should have been commuted. He held this opinion, although he was opposed to all capital punishment. —Sir J. PAKINGTON also defended Sir G. Grey, and said that he would not have been open to obloquy if it had not been for the mistrust engendered in the public mind by the course he had pursued in the case of Jessie M'Lachlan, convicted of the Glasgow murder. As for Townley, who had been saved from execution by a juggle and a trick, he was not insane, and deserved to suffer the extreme penalty of the law. Leave was then given to bring in the Bill. *The Irish Bar.*—The ATTORNEY-GENERAL for IRELAND obtained leave to bring in a Bill to amend the laws relating to conveyancing, special pleaders, and draughtsmen in equity practising in Ireland. *The Metropolitan Railways.*—Mr. M. GIBSON moved for a select committee to consider the best method of dealing with the railway schemes proposed to be sanctioned within the limits of the metropolis by Bills to be introduced in the present session, and to report their opinion whether any, and what schemes should not be proceeded with during the present session; also that a message be sent to the Lords, acquainting them that the House had appointed such committee, and requesting their lordships to appoint an equal number of Lords to be joined with the members of the Commons to consider the subject. He thought he was fully justified in inviting the House to appoint the committee when he told them that the estimated expense of the proposed metropolitan schemes amounted to between 34,000,000*l.* and 35,000,000*l.*, and that one quarter of the whole area of the City proper had been scheduled for railway purposes.—Lord STANLEY said that in the present position of the question the most practical step would be to appoint a royal commission for the purpose of investigating not only the best mode of supplying London with railway communication, but with such river and street communication as the necessities of the metropolis might require. — Mr. MASSEY was of opinion that a very little extension of the existing railways would amply meet all the wants of the capital, without cutting up and destroying the town in all directions, as was contemplated by the various projects now before the House. He disapproved of the proposal to inquire by a joint committee of the two Houses.—Lord J. MANNERS also thought the proposal of a joint committee would be insufficient for any useful purpose.—Sir J. SHELLEY advocated a royal commission as preferable to a joint committee. He moved as an amendment the adjournment of the debate, in order that the Government might have an opportunity of reconsidering the subject. The motion was seconded by Lord ENFIELD, who suggested that no civil engineers should be put on the commission.—Sir M. PETO supported the proposition of the Government.—After some remarks by Mr. CRAUFURD, Mr. SELWYN, Mr. SCOURFIELD, Lord FERMOY, and Mr. LOCKE, Sir J. SHELLEY withdrew his amendment, and the motion was agreed to.

TUESDAY.—*The Address.*—Lord PROBY brought up the reply of her Majesty to the Address of the House. *State of Denmark.* —In reply to Mr. PEACOCKE, Lord PALMERSTON said he had seen the report in the papers of a revolutionary outbreak at Copenhagen, but the very latest accounts which had reached the Government led them to believe that although there had been a display of dissatisfaction on the part of the populace of Copenhagen on the retreat of the army from the Dannewirke, there was no truth in the report that the King of Sweden had been proclaimed, and that King Christian had departed from his kingdom. *Germany and Denmark.*—Mr. DISRAELI wished to know whether it was the opinion of the Government that, in consequence of the war which had broken out between the German Powers and Denmark, the former had been relieved from the undertaking which they had entered into with this country and the other signataries under the Treaty of 1852. He also wished to know whether, before the invasion of the Duchies, her Majesty's Government had obtained from the Governments of Austria and Prussia an undertaking that, when they had obtained the revocation of the Constitution, they would restore the Duchies to the King of Denmark?—Lord PALMERSTON replied that he meant to have said on Monday evening that a notion had been broached at Berlin, and in certain places in Germany, to the effect that the existence of war with Denmark would release the German Powers from obligations to respect the Treaty of 1832. That was not, however, the principle upon which Austria and Prussia had taken their stand, as they had already acknowledged the Treaty of 1852 to which they were parties, and had expressed their willingness to maintain the integrity of the Danish monarchy. The despatch from Berlin, which had been read on this subject on the night of the opening of Parliament, was the last which her Majesty's Government had received, and they were of opinion that it was complete as regarded the obligation of Prussia to maintain the Treaty of 1852. Her Majesty's Government had not received any assurance from Austria and Prussia that they would evacuate the Duchies so soon as the Constitution of November had been revoked, but he apprehended that they were bound by every consideration of honour and good faith to fulfil their promise to that effect.—Mr. S. FITZGERALD complained of the delay in producing the papers on the subject. *Ash Wednesday.*—On the motion of Lord PALMERSTON, it was agreed that the House, at its rising, should adjourn until Thursday. *Bombardment of Kagosima.*—Mr. BUXTON moved the following resolution:—"That this House, while only imputing to Admiral Kuper a misconception of the duty imposed on him, deeply regrets the burning of the town of Kagosima, as being contrary to those usages of war which prevail among civilised nations, and to which it is the duty and policy of this country to adhere." He entered at some length into the history of our attempt to establish ourselves in Japan, and, having described the bombardment of Kagosima by Admiral Kuper as an act of wanton cruelty, altogether unworthy of a great and civilised Power, expressed his opinion that if such acts of unmerited aggression against a weak and unoffending Power were allowed to become a precedent, the reputation of England would suffer incalculable injury.—Mr. AYRTON seconded the motion.—Mr. LONGFIELD moved as an amendment the omission of the words—"while only imputing to Admiral Kuper a misconception of the duty imposed on him." He explained that his object was to vindicate the character of a brave and absent officer, who had merely executed the orders which he had received from the immediate representative of her Majesty's Government. Admiral Kuper had made no misconception whatever; on the contrary, when he proceeded to the bombardment of a town of 200,000 inhabitants, he did so with the entire approval of Colonel Neale, the British Plenipotentiary, acting upon instructions from Earl Russell.—Sir J. HAY seconded the amendment, urging that the attempt to make the admiral responsible for the barbarous orders of the Foreign Office was discreditable to the Government.—Admiral WALCOT said that no blame whatever attached to Admiral Kuper, who had no other alternative but to return the fire of the Japanese batteries.—Lord STANLEY could not see any justification whatever for the double claim which had been made—first, upon the Government of the Tycoon, and secondly upon Prince Satsuma. The amount demanded was also exorbitant. He feared that the policy which we were pursuing in Japan would frustrate the object we had in view, and deprive us of all moral influence in that country.—Lord R. MONTAGU contended that the Government had no course open to them but to enforce their demands. —Sir F. CROSSLEY believed that the honour of England might be maintained in the East without resorting to those extreme measures.—Mr. LIDDELL also disapproved of the manner in which we had sought to force ourselves into Japan.—Mr. KINGLAKE acquitted Admiral Kuper of all blame, and reminded the House that when Earl Russell heard of the bombardment of Kagosima, he wrote to Colonel Neale expressing his regret at the circumstance.—Mr. LAYARD, in defending the original treaty with Japan, declared that England had no choice but to follow in the wake of Russia and America in opening up trade with that country. He entered at some length into the history of the disputes between the Tycoon, the Daimios, and the Mikado, which had led to several outrages on foreigners, and as regarded the destruction of Kagosima, he asserted that, however deplorable that occurrence was, Admiral Kuper had acted according to strict precedent, although there was no proof whatever that the city itself was wantonly destroyed. The Government, so far from casting blame on Admiral Kuper, had supported him, and the only reason he had not received distinctions similar to those conferred upon Colonel Neale was that there was a strong feeling in England against the burning of Kagosima, and the Government were desirous of receiving full explanations from the admiral before conferring any special reward upon him.—Sir J. ELPHINSTONE and Mr. W. E. FORSTER supported the amendment.—The ATTORNEY-GENERAL defended the conduct of the Government generally, and expounded the principle of the law of nations in reference to the bombardment of towns.—Mr WHITESIDE attached the entire blame to Earl Russell, by whose specific instructions hostilities had been carried on.—Lord PALMERSTON said it was necessary for the security of British life in Japan, and also for the maintenance of the national honour, that redress should be demanded for the murder of Mr. Richardson and others. Her Majesty's Government had exhausted every expedient before hostilities were commenced to induce the Japanese authorities to bring the perpetrators of that outrage to justice. The Tycoon did all he could to make reparation, but the Prince of Satsuma declined to do so, and the admiral on the station had no option but to use compulsion. The instructions given by Earl Russell had the entire approval of the Government, and they were ready to take the responsibility of them. His noble friend had not directed Admiral Kuper to bombard a defenceless town, but he had instructed him to fire upon the defences of the place and the stronghold of the prince, with the view of compelling him to yield to force what he had withheld from justice. If under such circumstances, the town was burnt, neither the admiral nor the Government was responsible for it. He suggested that the more convenient course would be to withdraw the motion.—The amendment of Mr. LONGFIELD to omit reference to Admiral Kuper was then agreed to.—Mr. BUXTON declared himself satisfied with the general expression of regret which the bombardment of Kagosima had elicited from the House, and intimated his willingness to withdraw the motion. The Opposition, however, objecting to this course, Lord PALMERSTON moved the previous question, which was carried on a division by 164 to 85. The original motion was therefore dropped.—Sir F. KELLY obtained leave to bring in a Bill to provide a further *Appeal in Criminal Cases.* The House then adjourned to Thursday.

THURSDAY.—*The Crawley Court-Martial.*—In reply to Colonel GILPIN, the Marquis of HARTINGTON stated that all the expenses incurred by Colonel Crawley consequent on the recent court-martial which it was usual to allow to a prisoner who had been acquitted of the charges brought against him had been paid by the Government. The only portion of his expenses which had not been paid were those connected with the legal assistance he had received during the trial, and with which the Government had nothing to do. *Germany and Denmark.*—In answer to Sir H. VERNEY, Mr. LAYARD stated that no guarantee had been offered to Austria and Prussia by the British Government that the Danish Rigsraad would repeal the Constitution of November, incorporating Schleswig with the kingdom of Denmark. The House having gone into Committee on the *Bank Acts (Scotland)*, the CHANCELLOR of the EXCHEQUER moved a resolution that it was expedient to make provision for replacing the lapsed issue of bank notes in Scotland. The motion did not involve any new principle, but was founded upon that which was clearly established and declared in England by the Act of 1844. The lapsed issue of bank notes in Scotland amounted to 337,000*l.*, and he proposed to authorise the Scotch banks to issue to that extent upon paying to the State 2*l.* 7*s.* 6*d.* per cent. on the amount, but relieving them from the composition which they now paid in the shape of stamp duty, which was equivalent to 8*s.* 4*d.* per cent. This would be a relief to the Banks and a profit to the State, and would not touch the general principles of the currency or of banking in Scotland. After a short discussion the resolution was agreed to. *Public Expenditure.*—On the report of the resolution that a Supply be granted to her Majesty, Sir H. WILLOUGHBY called attention to the amount of taxes levied for, and expended in supply during the years 1860, 1861, 1862, 1863, and 1864, amounting to nearly 350,000,000*l.* in a time of peace, and urged upon the Government and the House the duty of seeing whether they might not enforce economy without crippling or injuring the naval and military establishments.—The CHANCELLOR of the EXCHEQUER said he should greatly rejoice if the public expenditure could be brought back to the scale of former years, and thought it was the duty of the House to exert an efficient control over the expenditure.—*Savings Banks Annuities.*—The CHANCELLOR of the EXCHEQUER obtained leave to introduce a Bill to amend the law relating to the purchase of Government annuities through the medium of savings banks. *Sir John Lawrence's Salary Bill* was read a second time.—The ATTORNEY-GENERAL for IRELAND obtained leave to bring in a Bill to amend the procedure of the *County Courts in Ireland.*—Mr. FERRAND moved for returns with reference to the Board of *Charity Commissioners.*—Mr. LOWE assented to the motion, with certain amendments to which Mr. FERRAND assented. The motion was then agreed to.

FRIDAY.—*Diseased Cattle.*—In answer to Mr. R. LONG, Sir G. GREY said that a Bill would shortly be introduced in reference to the importations of diseased cattle and sheep. *New Courts of Law.*—In answer to Mr. W. SMITH, Mr. COWPER said that a Bill would be introduced for the erection of new Law Courts between Carey Street and the Strand. *The Condemned Pirates.* —In answer to Sir G. BOWYER, Sir G. GREY said he had

no power to prevent the execution of the seven men at Newgate, and saw no reason to deviate from the usual course. *The American Despatches.*—In answer to Lord R. CECIL, Mr. LAYARD repeated that Mr. Seward's despatch to Mr. Adams had not been communicated to Lord Russell, and that no written or formal communication in the sense of that despatch had been received. *The Schleswig Constitution.*—Lord PALMERSTON stated, in answer to MR. PEACOCKE, that the Government had proposed a protocol to be signed by Denmark in the presence of England, France, Russia, and Sweden, engaging herself to Austria and Prussia to withdraw the Constitution, but Austria and Prussia declined the proposal. He had never offered any other guarantee than this engagement would have been when made in the presence of other Powers. *The Armistice.*—In answer to Lord R. CECIL, Lord PALMERSTON said that the report of an armistice having been proposed by England, France, Russia, and Sweden was correct, but the result was not yet known. *Capture of British Vessels.*—Mr. S. FITZGERALD called attention to the recent capture of British vessels at the Cape by Federal cruisers.

[Left sitting.]

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England on Thursday reduced their rate of discount from 8 per cent., at which it was fixed on the 20th ult., to 7 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90⅞ to 91⅛ for Money, and 91¼ to ⅜ for Account; Reduced and New Three per Cents., 90⅞ to 91⅛; Bank Stock, 238; India Five per Cent. Stock, 104 to 103¾; Ditto for Acct., 104¼; Ditto Bonds, par to 8*s.* dis.; Exchequer Bills, 3*s.* to 9*s.* dis.—FOREIGN: Brazilian, 1839 and 1859, 99; Dutch Two and a Half per Cents., 64⅜; Egyptian, 102⅝ to 103½; Ditto, second issue, 102¾; Greek, 21½; Italian, 66¾; Mexican, 36⅝ to ⅞; Ditto, for Acct., 37; New Granada, 13⅝ to ¾; Portuguese, 1853, 47½; Ditto 1856, &c., 47½; Russian, 1862, 89 to 88⅝; Spanish Passive, 32¼ to ⅜; Ditto, for Acct., 32¼ to ¾; Ditto Certificates, 13⅝; Turkish, 1854, 90; Ditto, 1858, 70⅛; Ditto, 1862, 67¾ to ½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,403,185	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	12,753,185
		Silver Bullion	—
	£27,403,185		£27,403,185

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,124,584
Rest	3,550,767	Other Securities	19,701,933
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,254,682	Notes	7,241,265
Other Deposits	12,983,226	Gold and Silver Coin	719,086
Seven days and other bills	546,193		
	£38,786,868		£38,786 868

Feb. 11, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY, *Feb.* 5.—BANKRUPTS.—W. ALLEN, Yeovil, Somersetshire, Glover—W. AUSTIN, Chippenham, Wiltshire, Farmer—S. ALMOND, J. ALMOND, and E. ALMOND, Gildersome, Yorkshire, Cloth Manufacturers—M. BUCK, Crosby Square, City, Merchant—J. BOWN, Pucklechurch, Gloucestershire, Licensed Victualler—W. H. BARTON, Littlehampton, Sussex, Baker—T. WRIGHT, Biddles, Huddersfield, Journeyman Cloth Dresser—J. BRASLEY, Cross Road, London Road, Clapton New Town, Plumber—C. BICKNELL, Portsmouth, Gas Fitter—J. BULLOCK, Coventry, late Greengrocer—T. S. CAVE, Argyle Square, New Road, St. Pancras—W. CRAWSHAW, Birmingham, Sewing Machine Dealer—J. CULL, Great James Street, Lisson Grove, Assistant to a Chemist—P. CARLISLE, Clarborough, Nottinghamshire, Cordwainer—THOMAS COLLINS, Landport, Hampshire, Tea Dealer—WILLIAM ELIJAH DAY, Whitton, Middlesex, Journeyman Baker—JOHN DAVIS, Tottenham Court Road, Upholsterer—GEORGE E. DUDD, Weston-super-Mare, Grocer—J. EVANS, Slough, Buckinghamshire, Painter—T. EVANS, Swansea, Boot and Shoemaker—S. EDWARDS, Halifax, Yorkshire, Lodging House Keeper—J. FULLJAMES, Southsea, Hampshire, Painter—J. C. GOFFIN, Great Yarmouth, Plumber—H. GRAHAM, Brighton, Carver and Gilder—O. GRIFFITHS, Turnham Green, Draper's Assistant—W. I. GILLIN, St. Swithin's Lane, City, Manufacturer of Steel—C. G. GRIMLEY, Worcestershire, Market Gardener—H. J. HAMLIN, Bedminster, late Licensed Victualler—C. HIGHAM, Kingston-upon-Hull, Tobacconists—E. J. HEATH, Rye, Sussex, Commission Agent—M. JONES, Liverpool, Licensed Victualler—JOHN JONES, Llanfyllin, Montgomeryshire, Coal Merchant—WILLIAM JONES, Houle, Cheshire, Butcher—WILLIAM JOHNSON, Hulme, Lancashire, Book Keeper—WILLIAM KERRISON, Cirencester Street, Harrow Road, Licensed Victualler—J. LUCAS, Wednesbury, Staffordshire, Licensed Victualler—M. M'PARLIN, Liverpool, Milliner—J. MARSHALL, Hendon Middlesex, Flower-pot Maker—W. MORETON, Burslem, Staffordshire, Working Potter—C. MANN, Brighouse, Yorkshire, Butcher—W. SNELL POPE, Exeter, Baker—G. PATTRICK, Mount Radford, Exeter—W. PULLEN, George Street, Portman Square, Coach Builder—T. W. SMITH, Cheltenham, Boot and Shoe Maker—W. C. SELBY, Townhouse, Kent, Farmer—W. SOUTHON, St. Martin's Court, Ludgate Hill, City, Eating House Keeper—J. SULLIVAN, Manchester, Auctioneer—J. SELLARS, Manchester, Drysalter—F. D. SMITHER, Tarlington Place, Edgeware Road, Paperhanger—J. TAYLOR, Northfield, Worcestersh., Farmer—E. TOFHAM, Halifax, Yorkshire, Eating House Keeper—G. TOMKINS, Oxford Street, Chelsea, Dealer in Milk—G. TINGLE, Dewsbury, Yorkshire, Blanket Manufacturer—W. WRIGHT, Wakefield, Tailor—TURNER WARRINER and TAYLOR WARRINER, Oldham, Lancashire, Bobbin Turners—J. B. WALKER, Huddersfield, Woollen Manufacturer—R. WILDING, Warwick Lane, Newgate Market, City, Butcher—C. R. R. WHATMAN, late of Torcross, Devonshire—T. WAITE, Tonbridge, Kent, Saddler—W. WALKER, Brighton, Sussex, Plumber.

SCOTCH SEQUESTRATIONS.—J. FRASER, Edinburgh, Coach Proprietor—R. HAMILTON, North Mosslands, Renfrewshire Farmer—J. D. DEBOLD, Glasgow, Pork Butcher—J. M'LELLAN, Glasgow, Grain and Provision Merchant—J. R. W. ANDERSON, Glasgow, Merchant—A. REA or RAE, Kemphills, Forfarshire, Farmer—T. ANDERSON, Enoch, Ayrshire, Farmer—J. CRAIG, Totts, Ayrshire, Farmer.

TUESDAY *Feb* 9.—BANKRUPTS—J. ATKINS, York Street, Hans Place, Chelsea, Upholsterer—J. ALLEN, Manchester, Publican—J. ATKINSON, Denmark Grove, Barnsbury Road, Islington, Commission Agent—H. ASHFORTH, Sheffield, Forgeman—E. BOWER, Flint, Brickmaker—W. BUTCHER, Bristol, Ironmonger—G. BLOTT, Elm Terrace, Cambridge Heath, late Butcher—J. A BURLISTON, Leeds, Draper—T. BRADSHAW, Louth, Lincolnshire, Corn Dealer—W. BURGESS, late of Sussex Street, Pimlico, Auctioneer—R. BIRD, Ashford, Kent, late Painter—M. BIGGS, Cambridge, Spinster—W. COTTON, Newmarket, Cambridgeshire, Groom—J. W. CHEGWIDDEN, Uxbridge, Middlesex, Hotel Keeper—J. DALLY, Porchester, Hampshire, Timekeeper—H. D DENT, late of Portsea, Hampshire, Licensed Victualler—A DE GRUSSA, Saville Row, Walworth Rd, Fruiterer—J ELLIOTT, Cleveland Terrace, Kensington, late Builder—J ENGISH, Cornwall Road, Lambeth, Baker—J. EDWARDS, Merthyr Tydfil, Glamorganshire, Cabinetmaker—E. FENNELL, Blomfield Terrace, Harrow Road, Surgeon—H. FURNISH, Lincoln, Commission Agent—P GARBETT, Norton in-the-Moors, Staffordshire, Butty Collier—T. GREATOREX, Leicester, Butcher—J. GREEN, Liverpool, Tin-plate Worker—J. GREEN, Church Lane, Edgware, Hay, Straw, and Coal Dealer—H. GOULD, Wrotham Place, Camden New Town, Clerk—J. GERHOLD, William Street, Commercial Road East, Baker—L. F. GARROD, Framsden, Suffolk, Farmer—N. HARTLEY, Brampton, Cumberland, Innkeeper—STEPHEN HASKELL, Goswell Street, St. Luke's, Hair-dresser—ROGER HARRINGTON, Wardour Street, Soho, Tailor's Foreman—R. HOPPING, Seymour Row, Euston Square, Assistant to Coal Dealer—J. L. HOWARD, Tyson street, Clerkenwell, Chemist—H. HARRISON, Aberayron, Cardiganshire, Innkeeper—J. HUSTON, Liverpool, General Provision Dealer—T. HUBBARD, St. George's Place, North Woolwich Road, Boot and Shoemaker—H. JONES, sen., Blakeney, Gloucestershire, late Farmer—W. JOB, Birmingham, Bookseller and Stationer—E. A. LINK, Brecon, Widow—J. LLOYD, jun., Horsham, Sussex, Watchmaker—T. MATTHEWS, Torquay, Devonshire, Waiter—J. MCLLETT, Watford, Hertfordshire, Plumber—T. NEALE, Euston Road, Builder—O. OWENS, Llansadwrn, Anglesey, Farmer—Rev. E. A. PECK, Houghton, Huntingdonshire, Clerk—JOSHUA PENDLEBURY, Manchester, Corn Merchant—HUGH ROBERTS, Llandudno, Carnarvonshire, Labourer—WILLIAM SAWYER, Arundel St., Strand, Steward of Whittington Club—J. SOUTHERN, Witton, Cheshire, Coal Dealer—M. A. SMITH, Maidstone, Pork Butcher—G. STEER, Basingstoke, Corn Dealer—W. THORN, Field Place, St. John Street Road, Clerkenwell, Cab Proprietor—M TAYLOR, Stone, Staffordshire, Flint Grinder—S. WISE, Cowley, Middlesex, Engineer and Plumber—W. WOLFE, Hatfield Broad Oak, Essex, Cattle Dealer—R. WRIGHT, Over Darwen, Lancashire, late Picker Maker—W. WILSON, late of Leamington, Warwickshire, Shoe Maker—J. WILLIAMS, Landport, Hants, Draper—G. WINSPEAR, Stockton-upon-Tees, Corn Miller.

SCOTCH SEQUESTRATIONS.—J. DRIFE, Barr, Dumfries—W. D. K. LAWRIE, Edinburgh—T. PATERSON, Edinburgh, Tailor.

Metropolis and its Vicinity.

THE METROPOLITAN RAILWAY SCHEMES.—The Board of Trade have just published the important report in connection with which the President of the Board on Monday moved for a joint committee of both Houses of Parliament to consider the various railways projected in the metropolis. The report states that in eight out of 39 cases the standing orders have not been complied with, and that in none of the bills is there a provision for securing a month's public notice of the intention to take houses inhabited by the labouring classes. There is no scheme to create a central station, though the erection of several stations is proposed. The report then enumerates the various schemes designed to meet the recommendations of the select committee of the House of Lords, that there should be a railway across the Thames on the eastern side of the metropolis, to connect the lines north and south; and that additional railway communication should be provided in the densely populated parts of the metropolis, and a connection between the main lines, where not already in existence, should be established. But these objects would be in a more complete manner effected by certain schemes designed for giving effect to the recommendation of the committee of an inner and outer circuit of railway within the metropolitan district, communicating with the principal main lines coming into the metropolis for distribution of the passenger traffic, the outer circle in its course intersecting and communicating with the principal lines north of the Thames. The report then describes in detail the lines proposed by these various schemes, and states that it has been strongly pressed upon the Board by the directors of the London and North-Western that the construction of the outer circle might be accomplished by means of the lines already existing or authorised, if the companies had due facilities for the purpose, thereby obviating the unnecessary expenditure of a large amount of capital. After enumerating the schemes which would effect communication between railway termini, the report remarks upon the schemes which would use new embankments or streets, block up those already in existence, or otherwise interrupt, temporarily or permanently, the street traffic. Great inconvenience, it says, would no doubt be caused to the occupants of houses in the streets interfered with. The Board suggest that some provision should be made to compel the removal of abandoned works, and that the deposit money should be applied for that purpose, instead of being forfeited to the Crown.—At the last meeting of the Metropolitan Board of Works an elaborate report from the engineer on the proposed railways was submitted, minutely describing the different lines, and the proposed interference with property in the metropolis. A report from the streets committee was also presented, stating that they had considered the report of the engineer, and ascertained that bills had been deposited for the construction of 417½ miles of railways within the circuit of the metropolis, with a capital of 70 millions for their construction, but many of them were competing lines, and the admission of one would exclude the others. The engineer had reported that Hyde Park, the Green Park, St. James's Park, Kensington Gardens, Newington Park, Hackney Downs, Leyton Grange Park, Trinity Square, Finsbury Circus, Camden Square, Oakley Square, Ampthill Square, Euston Square, and Sloane Square, would be cut through, some of them in two or three places, and the same would be the fate of the following commons:—Stoke Newington, Clapham, Tooting (invaded by seven different lines), Acton Bock, Acton, Wimbledon, Fulham, Deptford, and Turnham Green. The Whitechapel Road would be crossed by thirteen railways, Euston and Marylebone roads by thirteen, Bishopsgate Street by nine, King William Street, City, by four; Palace Yard, Westminster, by four; and other important parts of the metropolis would be crossed in the same manner. St. Stephen's Churchyard and St. Pancras Burial Ground would be invaded, the latter by three different lines. It was therefore by no means unreasonable that some alarm should be felt at so serious an interference with the open spaces and public thoroughfares. The committee had examined the proposals for accommodating the internal traffic, and they felt that no argument was necessary to prove the advantage of completing what had been called the inner circle, of which the Metropolitan Railway formed so important an instalment, by the completion of which the whole of the several metropolitan stations would, either directly or indirectly, be brought into communication, and by which a steady uninterrupted flow of traffic would be maintained throughout the day. The committee could not conceal from themselves that, in whatever way that object might be effected, it was almost inevitable that a part of the work should be constructed in the line of the northern embankment; and, though earnestly deprecating any interference with that improvement, either above ground or below, the committee could not ignore the fact that propositions would be laid before Parliament showing that a portion of the inner circle might be conveniently constructed under the Thames Embankment. The connection of the New Charing Cross station with the stations of the great lines north of London was next in importance to the inner circle. It was therefore desirable to permit a carefully-planned line in that direction, more especially as such a line might be conveniently combined with the construction of a new street, materially facilitating the uninterrupted flow of traffic from north to south. If the engineering difficulties could be overcome, great advantages would result to the public by connecting the eastern and southern lines by means of the Thames Tunnel, much of the heavy goods traffic now encumbering the streets between the docks on each side of the river and London Bridge would be diverted, and greater facilities afforded to trade, without at all interfering with the navigation of the river. The committee were decidedly of opinion that no railway bridge should be permitted to cross over the Pool below London Bridge, as a free and unimpeded access to the wharves on both sides was of primary importance to the trade of the port. No power should be spared to defeat any interference with so necessary a condition. The committee considered that the suggestion they had thrown out, coupled with the accommodation promised by lines now in course of construction, would at present suffice to meet metropolitan requirements. The committee believed that even now the public do not derive all the benefits they might from the existing lines. Excessive tolls and other impediments frequently prevented that free intercommunication between neighbouring railways which the vast and increasing traffic demanded, and the removal of those impediments by the intervention of some external influence was necessary. The execution of one-half of the proposed undertakings, in the opinion of the engineer, would render the drainage of London all but impossible. The sewers would be cut off, blocked up, diverted, and destroyed in all directions. However great the convenience of easy locomotion, the committee conceived that the perfect drainage of a densely peopled area was a yet more primary necessity. In conclusion, the committee thought it was desirable to complete an inner circle by connecting the Metropolitan Railway with the Victoria and City stations, and for minerals and heavy goods, as well as for passenger traffic, additional lines to unite the northern and southern systems. It was also desirable to connect the North-Western, Great Western, Great Northern, and Midland with the Charing Cross, South-Eastern, South-Western, and other lines south of the Thames by a carefully-devised project, and to separate as far as possible local from through and heavy traffic, both for the protection of the public and the regularity of the traffic. On the motion for the adoption of the above report a long discussion took place, and eventually it was referred back to the committee for reconsideration, the question of new railways to be discussed by the board at a future time.—Mr. Haywood, the engineer to the City Commissioners of Sewers, has also presented a report on the projects which affect the City of London. This report states there are 24 schemes, 19 of which are for railways and matters connected with railways, one for the acquisition of property for a site for a public building, one for a high-level roadway and new streets in connection with it, one for laying pipes for the transmission of parcels and letters, and one for the formation of a subway or tunnel beneath the Thames. The total length of the various railways proposed to be made within the jurisdiction of the City is about 20 miles. The area scheduled for projects of all descriptions amounts to about 211 acres, but many parts are under notice by two, three, or four companies, and the actual area scheduled is probably about 160 acres only, which are about one-fourth of the entire City. The various railways of all descriptions which are interfered with is about 300; but in comparatively few cases are the levels to be altered when the works are executed. A very large portion of the sewerage works within the City will be annihilated, and will have to be reconstructed upon an entirely different plan. There probably never was a city, says Mr. Haywood, threatened at once by so many projects as the metropolis. Two companies propose buying up and utilising the Thames Tunnel; two propose crossing the Thames, west of the Tower of London, by bridges with spans of 820 feet and with heights of 100 feet above high water mark; another equally ambitious, is to cross at Limehouse; while to the west of London, four or five bridges, although of less imposing dimensions, are proposed to be built. The Monument, Temple Bar, Drapers' Gardens, Finsbury Circus, and Apothecaries' Hall, are all scheduled, as are various of the City halls, and the Admiralty at Whitehall. The line of the Fleet sewer is to be reconstructed, and property worth many millions sterling is put under notice.

THE HOUSES OF PARLIAMENT.—Sir Goldsworthy Gurney, by whose persevering industry the atmosphere of the Houses of Parliament has been so much improved, has for some months been severely afflicted

by paralysis, augmented by the daily and nightly attention which he has for some years bestowed upon the ventilation of the Houses. Being quite unable to resume his duties, he has received a prolonged leave of absence, and Mr. Alexander Gordon, civil engineer, has been installed in the office, and now carries on its duties. It is announced that Mr. Dyce, R.A., has been compelled by ill health to cease working on the series of frescoes relating to the legends of King Arthur upon which he has been so long engaged in the Queen's Robing Room, and that, having relinquished the hope of ever being able to finish them, he has returned to the Exchequer the sums he had received in advance.

Office of City Architect.—At the Court of Common Council on Tuesday the report of a committee was read, recommending that the office of City architect should be abolished, and that in lieu of it a gentleman should be appointed under the ancient title of clerk of the works and surveyor to the City, at a salary of 1200*l.* per annum. Mr. Rowe moved as an amendment that the title of City architect should be maintained, and that the proposed salary should be 1500*l.* instead of 1200*l.* per annum. Alderman J. C. Lawrence did not believe that any eminent men would accept the office for less than 2000*l.* per annum, and he proposed an amendment to that effect, which was seconded by Mr. G. J. Cockerell. This amendment was lost, and the amendment of Mr. Rowe was eventually carried. The report thus amended was then agreed to.

Launch of the Enterprise.—The iron-clad sloop Enterprise, the smallest of the vessels constructed on Mr. Reed's principle, was launched at Deptford on Tuesday in the presence of Prince Arthur and the Admiralty authorities. She is 990 tons, 160 horse-power, and is to mount four guns. The Enterprise is to be commanded by Commander Charles J. Rowley.

The Victoria Cross Gallery.—It is stated that a gentleman from Leeds has purchased from Mr. Desanges all the pictures forming this gallery, and will keep them together as a collection illustrative of British valour.

The Proposed Regent Street Arcade.—On Friday the subject of this Arcade from Regent Street to Bond Street, was brought before the Metropolitan Board of Works by deputations from the promoters and opponents of the scheme, and was ultimately referred to a committee.

Bethnal Green.—The Bishop of London has conferred the rectory of Bethnal Green, vacant by the death of the Rev. Dr. Gibson, upon the Rev. Septimus Hansard, formerly curate of St. Mary's, Bryanstone Square, and latterly curate in sole charge of the parish of St. George's-in-the-East.

Fire in a Church.—On Sunday afternoon a fire took place in St. Stephen's Church, Pratt Street, Camden Town, before the congregation had assembled. It was caused from the overheating of the stoves, and was not extinguished until some damage had been done.

The Condemned Convicts in Newgate.—The execution of the seven foreign seamen who were convicted last week of the murder and piracy on board the Flowery Land, has been fixed for Monday, the 22d inst. The execution of so many prisoners at one time is an event unprecedented in London for many years, and at the sitting of the Court of Aldermen on Tuesday Mr. Sheriff Nissen stated, in answer to a question by Alderman Sidney, that he and his colleagues had addressed a letter to the Home Secretary requesting him to appoint some other place than Newgate for the execution. It was understood that the Home Secretary had power to fix the locality, and the sheriffs, therefore, hoped that the metropolis would be spared such a spectacle. Sir George Grey has stated in reply that he has no power to make any alteration. All the convicts have severally confessed their participation in the crimes for which they are to suffer.

Prevention of Accidents by Fire in Theatres.—In consequence of the recent death of a columbine by fire, and of the earnest recommendation of the coroner's jury that uninflammable dresses should be rendered compulsory, and that all "ground lights" should be protected, the Lord Chamberlain on Friday convened a meeting of the managers of the metropolitan theatres. About 24 managers attended. His lordship read to them the letter of the coroner's jury, and briefly directed their attention to the question of inefficient egress from public buildings, brought so vividly to the mind by the late catastrophe in Chili. He then called upon them for any suggestions which they might wish to make. Several of the managers in reply stated that the great difficulty was not in protecting the lights but in controlling the movements of the ballet girls. They stated that they have not sufficient power over the ladies of the ballet to ensure obedience to their orders on such matters, and one manager declared that if the Legislature made certain stipulations compulsory, the girls would not accept engagements. With regard to the proposed plan of rendering the dresses non-inflammable, they all stated that there was an insuperable difficulty in compelling the ballet-girls to wear dresses which had been steeped in a solution rendering them incombustible. The efficacy of the solution was evanescent, and could not be applied to the underclothing, which was the chief source of danger. Moreover, both the solution of potass and the tungstate of soda imparted to the muslin a rigidity and stickiness which deprived it of that airy lightness indispensable to a dancer. On the whole they could suggest no other plan than that the Lord Chamberlain should issue strict injunctions to the ballet girls which the managers could see properly enforced. The Lord Chamberlain thanked them for their attendance, and stated that they would probably receive shortly a circular on the subject. On Wednesday, in accordance with this intimation, his lordship issued a circular addressed to the managers accompanied by a series of regulations for the better protection from accidents by fire in theatres. The Lord Chamberlain admits the value of the improvements they have already made, and now directs that all fixed gas lights shall have guards, and all moveable lights shall, whenever practicable, be protected in the same manner. Wet rugs or blankets and water pots are to be constantly ready, and persons are to be appointed to take charge of them, and to be responsible for attending to that duty. No regulation is made respecting non-inflammable dresses, because the opinion of the managers at the recent meeting was so strongly expressed as to the difficulty of issuing a general order, that his lordship has forborne to do so; but he trusts that both the managers and the ballet-dancers will see the advantage of adopting them whenever practicable.

The Public Health.—The Registrar-General's Weekly Return states that the deaths registered in London in the week ending Saturday, February 6, were 1655. The corrected average for the corresponding week of the 10 years, 1854–63, was 1481. The present return is therefore 174 above the average. During the week the births of 1055 boys and 1023 girls, in all 2078, were registered in London. The average number was 2069.

Provincial.

Hayle.—At the adjourned sitting of the magistrates on Friday a report from Professor Taylor in reference to the case of Mr. Millett was read. It stated that there was not the slightest trace of any kind of poison, and that the result of the *post mortem* examination was not consistent with any form of poisoning within his knowledge. In another report Professor Taylor expressed his belief that death was clearly caused by serous apoplexy. The chairman then addressed Mr. Millett, and said that they deeply regretted having had to keep him so long in custody, but they had no alternative after the statements made to them by the prosecutor. They had now only to say that they were extremely happy that he was released from the charge. The prosecutor had not made good his case, and Mr. Millett was accordingly discharged. Mr. Millett was warmly congratulated by numerous friends, and was accompanied to his residence by a large concourse of persons; and the band of the Hayle Foundry, to which establishment he was surgeon, met in the evening in front of his house and performed various pieces of music. This result was also received with considerable interest in all parts of Cornwall, where the family has been well known for many generations as one of high respectability.

Liverpool.—The informations laid in the matter of the seizure of the rams El Tousson and El Monassir, were signed on Saturday by the Attorney-General, and filed in the Court of Exchequer for trial.

Plymouth.—On Saturday morning, about 8 o'clock, a fire, accompanied by a slight explosion, took place at the Blasting Powder Works, near Millbrook, in Hamoaze. Signal was immediately made from the Royal Adelaide flag-ship, and her boats and fire-engines, with those of the Canopus, Cambridge, St. George, Indus, and other men-of-war, in charge of about 500 men, proceeded to South Down, where the sailors in the most courageous manner entered the mills, removed most of the stores to a place of safety, and suppressed the fire. One of the workmen was injured, and an able seaman belonging to the Canopus had his arm burnt, in consequence of a spark falling on two trays of powder which he was endeavouring to save.

Worcester.—On Monday a man named John Ford, living in a court on the western side of the Severn, in this city, was taken before the magistrates at the Town Hall, on a charge of murder. The prisoner had lived for some time with a woman named Elizabeth Hall, who was many years his senior, and on Sunday the woman, going out on an errand for a neighbour, gave offence to Ford, upon which high words took place between them, when the prisoner knocked her down with a fire-shovel. The blow was fatal, the woman dying in the course of an hour. An old pensioner named Bennett was in the house at the time, but did not interfere between them, and his evidence was given with an evident desire to screen the man. A fire-shovel, with stains of blood upon it, was found in the room, and a surgeon deposed that the wound might have been caused by such an instrument. The prisoner was remanded until Tuesday, when it appeared from the result of the *post mortem* examination that there were no injuries to the skull sufficient to cause death, but that an extensive rupture of one of the vessels of the heart had been the cause of death. Such a rupture might have been occasioned by passion, violent emotion, a blow on the chest, or violent exertion. The magistrates, after this evidence, committed the prisoner for trial on the charge of murder, and on the same day the coroner's jury returned a verdict of Wilful Murder against him.

Ireland.

The National System of Education.—Dr. M'Hale, Roman Catholic Archbishop of Tuam, has published a very long pastoral, condemning in violent terms what he calls the anti-national system of education, a system, he says, which maintains "proselytising Bastilles" in this Catholic country. The Roman Catholic Bishop of Galway, Dr. M'Evilly, in an address to his congregation, has also denounced the model school in that town as a standing danger to the faith. He said that the system of mixed education destroyed faith by ideas of false liberty and unmeaning independence. He denied the moral right of parents to send their children to schools which the Bishops condemned, and declared that "the exercise of such a monstrous power was alike repugnant to all the dictates of natural and educated religion." He concluded a long and vehement attack on the model schools by declaring that he deprived every confessor, of whatever grade or position in the diocese, of all jurisdiction to absolve either the parents of the children or the children themselves who resort to such establishments, or to any other parties who actively co-operate in the infliction of such present and prospective spiritual evils. The Roman Catholic Bishop of Limerick, Dr. Butler, has also joined in these denunciations. In an address to his congregation he said that he did not believe that any Catholic who had the slightest pretensions to the name, would take his stand against the Councils of the Church, and obstinately persevere in sending his child to that condemned place—the local model school—which was set up by the English Government to get the education of the country in its own hands, and carry it out on its own plans. He need not remind his hearers of the character and conduct of the British Government towards the people of Ireland in the matter of religion and education, and in every other respect. Education was proscribed; religion was condemned and persecuted. The object of the British Government was to root out the faith and to hunt the teachers. That object the Government cherished to this hour by the manner in which it acted.

Illegal Marriage by a Priest.—An extraordinary case was before the Master of the Rolls on Saturday, involving so audacious a violation of the marriage law of Ireland, that if the guilty parties be allowed to escape with impunity there will be no protection for the honour of any family in the country, Protestant or Catholic, where there is a young girl, entitled to property, on whose affections schemers may be tempted to practise. Susannah Quinton is a minor, who has lived with her uncle, who is also her guardian, near Tempo, in the county Fermanagh. She is entitled to a fortune of 1000*l.* She met at some entertainment a young man named Peterson, an attorney's clerk at Enniskillen, whose mother, a widow, with whom he lives, keeps a small shop in that town. An attachment grew up between them, and they agreed to get married. But her guardian peremptorily refused his consent, because Peterson is a Roman Catholic, and is otherwise unsuitable, being without a penny to support a wife. But as the young lady was resolved to have this person and no other, she was made a ward of Chancery, to prevent her taking the rash step, and to save her fortune. The Master of the Rolls threatened Peterson and his abettors with imprisonment if they proceeded further in the matter. In defiance of this authority, it is alleged, Peterson got a license at the registration office by making a false declaration of the lady's age. A license was then obtained by him from the Roman Catholic Archdeacon, authorising a Roman Catholic curate to celebrate the marriage, provided the young lady was not under age. Before this was obtained she had been brought on a car by Peterson's mother to her house, and kept concealed for several days. The curate declined to marry the parties, dreading the penalties he would incur by marrying a Protestant. A strange priest was sent for to perform the ceremony, on whose face the parties pledged themselves not to look, that they might not be able to identify him in case of a prosecution. The parties were then married, the curate who had procured the strange priest standing outside the door while the ceremony was performed. Miss Quinton was afterwards baptized by the curate as a Roman Catholic. The friends of Peterson then, in order more effectually to secure their prize, saw that they were safely put to bed. The parties were all brought up before the Master of the Rolls on Saturday. He threatened to send the whole of them to gaol; but the attachment was suspended, on an undertaking being given by the minor's solicitor that she should not see Peterson again. She refused, however, to go home to her uncle, and is now at an hotel under the protection of her solicitor. The Master of the Rolls described the case as scandalous and outrageous. He said on a former day that he would lay the papers before the Attorney-General, and the Solicitor-General was present on Saturday to watch the case for the Crown.

Proposed Revival of Agitation.—The *Nation* last week published an address of a column and a half, signed by John Martin, one of the heroes of 1848, on behalf of "the provisional committee of the Irish National League," setting forth that the object of that body "is to obtain the restoration of a separate and independent Irish legislature and government."

Mr. T. F. Meagher, now a general in the Federal army of America, has also delivered an address in New York in which be referred, amidst loud cheers, to the organisation of the Fenian Brotherhood. Mr. Serjeant Howley, in opening the recent quarter sessions for Cashel, made the following remarks on secret associations in his address to the grand jury:—

"I deeply regret to learn that throughout the country, and even in the neighbourhood of the present place, attempts have been made, and to a certain extent successfully, to entrap the young, the impulsive, and the unwary, and to involve them in the meshes of illegal associations. The origin of these associations is folly, or, worse, it has been imported from a country which at this moment presents the most lamentable instances of the horrors ever attendant on civil war. Devastation, bloodshed, and massacre are its concomitant characteristics. In the American strife we have held up to us a picture of its sad and awful results, and it should be a warning to the people against rushing upon a similar misfortune. There are people abroad who are engaged in administering unlawful oaths to the people, and the project that they contemplate is the severance of this empire. No amalgamation of this kind can succeed, there is too much loyalty in the land to permit of it or to warrant the prevalence of fear that any dangerous consequences should result from it. There are too many allied to property and a love of order to think that a reckless band of conspirators can destroy with impunity the lives of men or the security of property. I am glad to say that the Roman Catholic clergy are alive to the danger that is abroad, and have raised their voices against those evil associations. If in the administration of this country there be faults, if remedial measures be imperative for the salvation of her people, it is not by civil commotion or destructive warfare that the one can be altered or the other accomplished. Those societies seek to instil into the minds of those people who join them delusive hopes and ideas which disturb and prevent men from settling down to calm and useful considerations; it prevents them from giving their energy and honest labour to the country by engaging them in the contemplation of events that will never occur; and if they did, it would be most destructive to the best interests of our country, for it would, indeed, be unwise to seek to pluck the remedies we require from the ashes of a civil conflict."

MURDER IN CAVAN.—On Saturday week a shocking murder was committed at a place called Kilnacola, near Grousehall, within seven miles of Cavan. It appears that about 13 years ago a lad named Bernard Cagley lived with a farmer named Peter Reilly, and while in his employment an ass wounded his hand in such a manner that amputation was necessary. Cagley after this accident suddenly disappeared. On Friday a stranger entered Reilly's house, and asked him if he knew him, and upon his being answered in the negative, he reminded him of the accident and stated that he was Cagley. Reilly invited him to remain all night with his family, and, after supper, they all retired to rest, Cagley going to sleep with Reilly's servant boy in a loft over the kitchen. About two o'clock in the morning Mrs. Reilly, hearing a noise in the loft, called to the servant boy to be cautious in coming down, as the entrance was dangerous, whereupon she was answered from the kitchen by Cagley, that he had seen a light outside the house and could not sleep. On Reilly going up to Cagley to see what was the matter, he stabbed him in the kidney with a knife, causing almost immediate death. Upon hearing the shout of her husband Mrs. Reilly ran up, when Cagley also stabbed her in the abdomen, inflicting such severe injuries that she is not expected to survive. She, however, seized a cleaver and made a blow at him, whereupon he walked out of the house, dressed in his shirt and trousers, went to the Virginia Police Station five miles distant, and surrendered himself, when he was immediately recognised as a ticket-of-leave convict. The jury at the inquest returned a verdict of "Wilful Murder" against him.

Railways.

FATAL ACCIDENT ON THE GLASGOW AND GREENOCK.—On Friday morning, while the passenger train from Glasgow was between Bishopton and Langbank, running at a speed of about 27 miles an hour, the tire of a wheel of the last third-class carriage broke in two. The flooring of the carriage was torn up, and one-half of the tire flew into the guard's break, and the other half into the carriage. In the break the guard narrowly escaped; but in the carriage the tire struck a man named Bernard Gechan, aged 24, a labourer belonging to Mount Charles, county Donegal, and, penetrating through his clothing, entered his breast, above the region of the heart, causing almost instant death. A man called William M'Leod, belonging to Argyleshire, was considerably bruised about the body; John M'Allan, of Greenock, had his arm broken; and Mary M'Culloch or Leslie, of Glasgow, was slightly injured about the body. M'Leod received his injury by leaping from the carriage. The breaking of the tire is attributed to the hard frost.

FATAL ACCIDENT ON THE YORK, WHITBY, AND SCARBOROUGH.—A dreadful accident occurred on Wednesday night on the Whitby branch of this railway. The train was as usual drawn up the Grosmont incline by a rope attached to a fixed engine, and when a considerable way up, the rope broke with the strain, and the train rushed down the incline, ran off the rails, and rolled over into a ditch. Two of the passengers, who were said to be commercial travellers, were killed, and several others were severely injured.

Law.

JUDICIAL COMMITTEE OF PRIVY COUNCIL: *Essays and Reviews.*—On Monday the Lord Chancellor delivered judgment in the cases of "The Bishop of Salisbury *v.* the Rev. Dr. Rowland Williams," and "The Rev. J. Fendall *v.* the Rev. H. B. Wilson." The appeal in each case was from the judgment of Dr. Lushington, the Dean of Arches, who had sentenced each of the defendants to suspension from his benefice for a period of 12 months. There were present also the Bishop of London, Lord Chelmsford, Lord Cranworth, and Lord Kingsdown. The Lord Chancellor in his judgment stated that it was not the part of that Court to deal with the general subject-matter, principles, or tendencies of the "Essays and Reviews," nor to consider the whole of the essays by Dr. Williams and Mr. Wilson; but their judgment was necessarily confined to the two meagre and disjointed extracts which had been allowed to remain in the reformed Articles which had been submitted to them. After an anxious consideration of the subject they found themselves unable to say that the passages extracted from the two essays, and which formed the subject of the articles of charge, were contradicted by or plainly inconsistent with, the articles or formularies of the Church to which the charge referred, and which alone they were at liberty to consider. Their lordships, therefore, would humbly recommend to her Majesty that the sentences be reversed, and the reformed articles rejected in like manner as the rest of the original articles were rejected in the Court below—namely, without costs; but inasmuch as the appellants had been obliged to come to that Court, their lordships thought it right that they should have the costs of this appeal. The Lord-Chancellor added that he was desired by the Archbishop of Canterbury and the Archbishop of York to state that they did not concur in those parts of this judgment which related to the seventh article of charge against Dr. Williams and to the eighth article of charge against Mr. Wilson.

COURT OF ERROR.—*The Alexandra Case.*—This case came before the Court on Saturday upon appeal from the decision pronounced by the Court of Exchequer on the 11th ult. when, it will be remembered, the judges were equally divided on the question whether the seizure of the Alexandra was lawful or not, but the judgment was substantially given against the seizure. When the case was called on Saturday, Sir Hugh Cairns, for the part of the owners, took an exception to the jurisdiction of the Court, and contended, in effect, that the Lord Chief Baron having objected to sign a bill of exceptions, the decision already given by a majority of the Court of Exchequer was irrevocable. The Attorney-General opposed this view at great length, and stated his impression that if the objection should prevail the Crown would be left without remedy. The Court said they would consider the question, and give judgment on Monday. On that day, accordingly, their lordships delivered judgment, but being divided in opinion, they delivered their judgments *seriatim*, commencing with the junior member of the bench. Three were of opinion that the Court had jurisdiction, and five sustained the objection of Sir Hugh Cairns, and were of opinion that the Court of Exchequer had exceeded its powers in granting the appeal, and that they had no jurisdiction in the matter. The Lord Chief Justice, who was one of the majority, intimated that the Crown could still carry the question to the House of Lords, where it must in any case have been finally decided.

CENTRAL CRIMINAL COURT: *The Piracy Case.*—On Saturday *George Carlos* was placed upon his trial on another indictment, charging him with feloniously casting away and destroying the Flowery Land. The Jury found him *Guilty*, and he was sentenced to ten years' penal servitude. When the sentence was explained to the prisoner, he became very excited, and exclaimed, in Italian, "I am innocent, I don't like your laws." *Assault in a Railway Carriage.*—*William Whitehead*, described as a labourer, but understood to be a gentleman of good connections, was charged with a gross insult to a married lady, named Richardson, while travelling from Slough to London on the Great Western Railway. The prisoner at first pleaded Not Guilty; but on the lady entering the witness box he said he would spare her the pain of repeating the evidence she had to give, and pleaded Guilty. In accordance with this plea the jury found him *Guilty*, and the Judge sentenced him to be imprisoned in Newgate for two months, to pay a fine of 25*l*., and to find good security, himself in 200*l*., and two sureties of 100*l*. each for his good conduct for 12 months.

Obituary.

LADY LOUISA LYGON, eldest daughter of the first Earl of Beauchamp, and sister of the three last Earls Beauchamp, died on the 5th inst. at her residence in Upper Brook Street. She was sister of the late Countess (Dowager) of Longford, and of Lady Emily Hesketh, and aunt of Lady Raglan.

THE HON. MRS. VESEY FITZGERALD FOSTER died on the 1st inst. at Bellevue, near Bray, Dublin, in her 76th year. She was the daughter of the first Baroness Fitzgerald and Vesci, by the Right Hon. James Fitzgerald, M.P., King's prime serjeant-at-law, who sacrificed all his offices and retired into private life from his indignation at the Union. She married in 1814 the Right Hon. John Leslie Foster, M.P., Speaker of the Irish House of Commons, afterwards a Baron of the Court of Exchequer, who died in 1842.

THE HON. MRS. LAW, mother of the heir presumptive to the Barony of Ellenborough, died on the 25th ult. She was born in 1790, and was the daughter of Sir Edward Nightingale, Bart., of Kneesworth Hall, Cambridgeshire. She married in 1811 the late Hon. Charles Ewan Law, Q.C., son of Lord Chief Justice Ellenborough, next brother to the present Earl of Ellenborough, and well known as Recorder of London, and M.P. for the University of Cambridge. By him the deceased lady leaves issue one son and three daughters. The eldest daughter is married to Lord Kilmaine, and the second is a nun, superior of a Franciscan convent at Gorey, Wexford. Her only son, Charles Edmund, heir presumptive to the Barony, is a Colonel in the army.

THE REV. SIR CHARLES HARDINGE, BART., rector of Tunbridge, died on the 3d inst., at his seat, Great Boundes Park, near Tunbridge Wells, in his 84th year. He was the eldest son of the Rev. Henry Hardinge, rector of Stanhope, Durham, and elder brother of Sir Henry Hardinge, Secretary for Ireland, Governor-General of India, and Commander-in-Chief, created Viscount Hardinge in 1846. He was educated at the Charter House, and University College, Oxford, where he graduated in 1801. He became rector of Crowhurst, near Battle, in 1804, but resigned that living in 1861. In 1809 he became rector of Tunbridge, but for many years past has been only the nominal incumbent. He married, in 1816, the daughter of Mr. Kenneth Callander, of Craigforth, and is succeeded in his title and estate by his eldest son Henry, born in 1830.

MAJOR-GENERAL MACPHERSON, Colonel of the 13th Regiment, died at Clifton, York, on the 2d inst., in his 73d year. He embarked for the Peninsula in 1809 as a volunteer in the 52d Light Infantry, and served in the advance to Talavera and the retreat from thence to Campo Mayor. He served with the Light Division until the end of the war in 1814. He was wounded on the head, in the trenches at Badajoz, by the bursting of a shell; and for his services throughout the war he received the war medal with eight clasps for Busaco, Fuentes d'Onor, Ciudad Rodrigo, Badajoz, Salamanca, Nivelle, Nive, and Toulouse. He served also as aide-de-camp and military secretary to Sir Charles Napier throughout the operations in Scinde, including the destruction of Imaumghur and the battles of Meeance and Hyderabad, and for which he was rewarded with a medal, made a C.B., and was twice mentioned in the official dispatches. He served also in the Crimea in command of the First Brigade of the Fourth Division, from Dec. 1854 to June 1855, when he was obliged to leave from ill health brought on from over-fatigue in the trenches.

MAJOR-GENERAL WYNYARD, C.B., Colonel of the 98th Regiment, died a few days since. He entered the army in 1819, and served with the forces in New Zealand from 184[illegible] until 1847 in command of the 58th Regiment. He commanded the advance division up the Kowa Kowa River, and through the interior to the position before Ruapekapeka, and entered the breach with the stormers in the assault on Kawiti's pah, in January, 1846. He was appointed to the command of the forces in New Zealand in 1851, and held her Majesty's commission as lieutenant governor of New Ulster from 1851 to 1853, and administered the government of the whole colony from December, 1853, to September, 1855. In 1859 he was appointed to the Cape command, and became soon afterwards lieutenant-governor of the colony. In 1859 he was appointed governor-in-chief, and retained that office till 1860, and again from 1861 to 1862. He was appointed colonel of the 98th Regiment in 1863.

ADMIRAL ADDERLEY died at his residence, Hams Lodge, Ryde, Isle of Wight, on the 15th ult. He was third son of the late Ralph Adderley, Esq., of Coton, and uncle of the Right Hon. C. B. Adderley, M.P. He entered the navy in 1796, and after serving with the Channel fleet for two years was employed on the Irish, West India, Home, and Mediterranean stations. As lieutenant, he shared in the action off St. Domingo, and after further service in the Channel, under Earl St. Vincent, became a commander in 1806. In 1809 he served on the north coast of Spain, and in 1811, while employed on the Downs station, he took the French privateer La Confiance, 16—a capture which was considered so important that the merchants at Lloyd's and Liverpool addressed a letter of thanks to him. He took command of the Crocus, 14, in 1811, and in the following year captured the Formica in the Mediterranean. He was posted in 1814 into the Swiftsure, 74, but left her in the following October. He accepted the retirement in 1846; became rear-admiral in 1850; and admiral in 1862.

BIRTHS.—On the 7th inst, at Edinburgh, the Lady MARY SCOTT, of a son—9th inst, at Hanbury Hall, Worcestershire, the Lady GEORGINA VERNON, of a daughter—8th inst, at 43, Rutland Gate, the wife of Lieut.-Colonel ALISON, C.B., of a son—4th inst, the wife of Lieut.-Colonel W. C. MASTER, C.B., of a daughter—6th inst, at Park Hill, Rotherham, the wife of Major ST. LEGER, of a daughter.

MARRIAGES.—On the 8th inst, at the Roman Catholic Church of the Assumption in Warwick Street, and afterwards at St. James's Church, Piccadilly, the Hon. LEOPOLD FREDERICK AGAR-ELLIS, second son of the late Lord and Lady DOVER, and brother of Viscount Clifden, to the Hon. HARRIET STONOR, daughter of Lord and Lady CAMOYS—8th inst, at Thurso, Cumberland, GEORGE HODGSON, youngest son of the late JOHN DIXON, Esq., of Knells, to ELLA, third daughter of Sir R. BRISCO, Bart., of Crofton Hall, Cumberland—4th inst., Major-General HENRY GOODWYN, to EMMELINE WILSON, youngest daughter of the late Mr. JAMES FUGE, of Weymouth—4th inst, at Trinity Church, Paddington, RAYMOND PERCY PELLY, Esq., second son of Raymond Pelly, Esq., of Plashet House, Essex, to ALICE SHAFFALITZKI, second daughter of the late Lieut.-Colonel LARKINS, Bengal Artulery—4th inst, at the parish church, Clapham, ERNEST, youngest son of JOHN ALERS HANKEY, Esq., of 10, Park Crescent, Portland Place, to HENRIETTA MARIA, eldest daughter of THOMAS SOUTHEY, Esq., of Clarence House, Clapham Park—3d inst, at Eling Church, JOHN F. EVANS, Esq., of Aberystwith, South Wales, to CAROLINE, eldest daughter of W. C. SPOONER, Esq., of Eling House, near Southampton.

DEATHS.—On the 28th ult, at Rosiere, Lyndhurst, Hants, HARRIETT, Countess Dowager of ERROLL, aged 77—2d inst, at Florence, the Hon. ROSALIE, Countess D'ALTON, relict of Peter Count D'ALTON, of Grenanstown, Tipperary, and daughter of the late Nicholas, Lord Trimleston—2d inst, at Wold-Newton Rectory, KATHLEEN MARY, infant daughter of the Hon. and Rev. GEORGE WINGFIELD-BOURKE—2d inst, the Dowager Lady CHOLMELEY, relict of Sir Montague Cholmeley, Bart., Easton Hall, aged 79—Jan. 27, at Malta, Major ROBERT DILLON, late 32d Regt., youngest son of the late Sir John Dillon, Bart.—6th inst, in Hill Street, Berkeley Square, AMY LOUISA, youngest daughter of BRAMPTON GURDON, Esq., M.P., aged [illegible]—7th inst, at Hastings, the Rev. W. A. NEWMAN, D.D., F.S.A., formerly Dean of Cape Town, aged 52—4th inst, at Beverley, Lieut.-Col. T. HUTTON, late of the 4th Dragoon Guards, aged [illegible]—2d inst, at the Brunswick Hotel, Jermyn Street, Colonel H. F. M. KENNY—On the last day of the old year, suddenly, in the officers' hospital at Calcutta, Lieutenant WALTER LANDOR DICKENS, of the 26th Native Infantry Regiment, and doing duty with the 42d Highlanders, second son of Charles Dickens, of Gad's Hill, Kent—5th inst, at Sutton Courtney Abbey, near Abingdon, FRANCIS HENRY, eldest surviving son of THEOBALD, Esq., aged 9—2d inst, at Hollywood House, Glenealy, county Wicklow, G. TOMBE, Esq., Q.C., aged 7[illegible]—10th inst, at No. 62, Stanhope Street, Hampstead Road, W. H. HUNT, Esq., Member of the Society of Painters in Water Colours, and of the Royal Academy of Fine Arts, Amsterdam, aged 74—5th inst, at Bromfield House, Camp Hill, Birmingham, the Rev. THOMAS CRICHLEY, M.A., late curate of St. Matthias, Bethnal Green, aged 42—2d inst, at 1, N. Charlotte Street, Edinburgh, the Rev. JAMES CARLILE, D.D., LL.D., late of Woolwich.

Markets.

COVENT GARDEN, Feb. 13.

Notwithstanding the changeableness of the weather, supplies of both Vegetables and Fruit in season continue to be pretty well kept up. Retarded Hothouse Grapes are, however, as a matter of course, scarce, but some good new ones may now be had. Some good Blenheim Orange, Nonpareil, and American New Town Pippin Apples may still be obtained; likewise a few dessert Pears. Oranges are plentiful; the best are realising from 6s. to 10s. per 100. For Potatoes the market is still heavy. Cornish Broccoli is also supplied largely supplied. Continental arrivals are heavy; among them are French Lettuces, Endive, Carrots, and Radishes. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Nuts, small, per bush., 14s to 16s
Grapes, new, per lb., 15s to 20s	Kent Cobs, 120s per 100 lbs.
Apples, per ½ sieve, 2s 6d to 4s	Almonds, do., 13s
Pears, per ½ sieve, 6s to 20s	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 8s	Chesnuts, per bush., 10s to 16s
Oranges, per 100, 2s 6d to 8s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Cucumbers, each, 2d to 5d
Cauliflowers, each, 3d to 6d	Beet, per doz., 1s 6d
Asparagus, p. bundle, 10s to 12s	Shallots, per lb., 10d
French Beans, p. 100, 5s	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s to 2s 6d	Garlic, per lb., 8d
Rhubarb, p. bundle, 9d to 1s 6d	Lettuces, each, 1d to 4d
Potatos, York Regents, p. ton, 60s to 80s	Endive, per score, 1s to 2s
,, Shaws, do., 50s to 60s	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 4d to 6d	Mushrooms, p. pott., 1s to 1s6d
Carrots, do., 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 3d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Feb. 11.

Prime Meadow Hay	70s to 80s		Clover, old	85s to 110s	
Superior do.	.. 75	90	Do. second cut ..	75	100
Inferior do.	.. —	—	New Clover ..	—	—
New do.	.. —	—	Straw	24	30
Rowen	.. —	—			

HARVEY & EASTON.

CUMBERLAND MARKET, THURSDAY, Feb. 11.

Sup. Meadow Hay..	86s to	92s	Inferior Clover ..	80s to	92s
Inferior do.	68	78	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover ..105		112			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Feb. 11.

Fine Meadow Hay..	80s to	84s	Prime 1st cut Clover	105s to	110s
Inferior do.	70	75	Inferior do. do. ..	95	100
Prime New Hay ..	—	—	New 1st cut do. ..	—	—
Inferior	—	—	Prime 2d cut do...	100	105
Straw	27	30	Inferior do.	90	95

BRITISH WOOLS.—LONDON, Feb. 11.

Our market continues in a quiescent state for all descriptions of fleeces and fleece sorts, and until something definite is arrived at on the Continent, will remain so. Skin wool is a dull sale at about late rates.

	s. d.	s. d.		s. d.	s. d.
South-down Hoggets	1 11 to	2 0	Leicest. Wethers	1 9½ —	1 two
Half-bred ditto..	1 11 —	2 0½	Ditto Hoggs ..	1 0½ —	1
Down Ewes ..	1 10 —	1 10½	Combing Skins ..	— —	
Kent Fleeces	—	2 0	Flannel Wool ..	1 4 —	1 6
			Blanket ditto ..	0 9 —	1 0

NEWGATE.—Feb. 12.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 12s. "
Pork, 4s. 0d to 4s. 4d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Feb. 12.

Messrs. Pattenden & Smith report a fair trade doing in both English and foreign, with a very short supply. Prices firm.

Mid and East Kents, p. cwt.	£6 0 to £9 0
Weald Kents	5 12 — 7 10
Sussex	5 5 — 7 0

COAL MARKET.—Feb. 10.

Bowers West Hartley, 14s. 6d.; Byass's Bebside West Hartley, 14s. 9d.; Davison's West Hartley, 15s.; Hastings Hartley, 14s. 9d.; Holywell Main, 17s. 6d.; Lambert's West Hartley, 14s. 6d.; Walker Primrose, 12s. 9d.; West Hartley, 15s; Walls End Riddell, 17s. 6d.; Walls End Wharncliffe, 17s. 6d; Eden Main, 18s. 6d.; Walls End Haswell, 20s.; Walls End Hetton, 20s.; Walls End South Hetton, 20s.; Walls End Tunstall, 17s. 6d.; Walls End Caradoc, 19s. 3d.; Walls End Hartlepool, 19s. 6d.; Walls End Heugh Hall, 19s; Walls End Kelloe, 18s. 9d.; Walls End East Hartlepool, 19s. 9d.; Walls End South Hartlepool, 18s. 6d.; Walls End South Kelloe, 19s.; Walls End Trimdon Hartlepool, 19s. 6d.—Ships at market, 87.

METROPOLITAN CATTLE MARKET.

MONDAY, Feb. 8.

We have a larger supply of Beasts, and trade is slow consequently, as the average prices are rather lower, and it is difficult to effect a clearance. Sheep are also rather more plentiful; there is not much difference in prices, but trade is not quite so good as on Monday last. There are a few more Calves, and prices are lower. From Germany and Holland there are 980 Beasts, 1820 Sheep, and 200 Calves; from Spain, 135 Beasts; from Scotland, 300; from Ireland, 280; from Norfolk and Suffolk, 2400; and 150 from the Northern and Midland Counties.

	s. d.	s. d.		s. d.	s. d.
Best Scots, Herefords, &c. ..	4 10 to	5 0	Best Long-wools.	5 4 —	5 6
Best Short-horns	4 8 —	4 10	Do. Shorn	—	..
2d quality Beasts	3 10 —	4 0	Ewes & 2d quality	4 4 —	4 8
Best Downs and Half-breds ..	5 10 —	6 0	Do. Shorn	—	..
Do. Shorn	—	..	Lambs	—	..
			Calves	4 6 —	6 0
			Pigs	3 6 —	4 8

Beasts, 4530; Sheep, 16,680; Calves, 218; Pigs, 380.

THURSDAY, Feb. 11.

The supply of Beasts is not large, yet fully equal to the demand. Trade is dull, and on the average prices are rather lower. The demand for Sheep is very inconsiderable, and the few on offer cannot be all disposed of. The choicest descriptions meet with purchasers at about Monday's rates. Calves are much more plentiful, and prices are lower. From Germany and Holland there are 170 Beasts, 860 Sheep, and 256 Calves; from Spain, 120 Beasts. Milch Cows, 120.

	s. d.	s. d.		s. d.	s. d.
Best Scots, Herefords, &c. ..	4 8 to	5 0	Best Long-wools.	5 2 —	5 6
Best Short-horns	4 6 —	4 10	Do. Shorn	—	..
2d quality Beasts	2 8 —	4 0	Ewes & 2d quality	4 4 —	4 8
Best Downs and Half-breds ..	5 8 —	6 0	Do. Shorn	—	..
Do. Shorn	—	..	Lambs	—	..
			Calves	4 0 —	5 8
			Pigs	3 6 —	4 8

Beasts, 1010; Sheep, 3580; Calves, 316; Pigs, 120.

MARK LANE.—MONDAY, Feb. 8.

The supply of Wheat from Essex and Kent to this morning's market was moderate, and met a slow sale on the terms of this day se'nnight. The attendance was larger than of late, and the inquiry for foreign Wheat better, but without leading to any increase of business; prices continue to be nominal. Barley barely supported last week's prices. Beans were fully as dear. Peas unaltered in value. The Oat trade was very dull, and late rates scarcely obtainable. Flour was a steady sale.

PER IMPERIAL QUARTER	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	42	48	Red	40	48
— — fine selected runs .. ditto	44	52	Red	40	48
— — Talavera	48	56			
— Norfolk	—	—	Red	—	
— Foreign	36	54			
BARLEY, grind. & dist, 25s to 27s .. Chev.	34	38	Malting ..	29	33
— Foreign .. grinding and distilling	22	26	Malting ..	28	32
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish .....Potato	19	22	Feed	—	
— Foreign .....Poland and Brew	17	22	Feed	15	20
RYE	30	32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....28s to 36s...Tick	30	33	Harrow ..	30	33
— Pigeon .... 32s to 40s.. Winds.	—		Longpod	—	
— Foreign .....Small	36	42	Egyptian	30	32
PEAS, White, Essex and Kent.. Boilers	36	38	Suffolk ..	36	38
— Maple .... 34s to 36s .... Grey	28	30	Foreign ..	32	40
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered.. per sack	35	40			
— 2d do ..... ditto	28	34	Country ..	28	34
— Foreign ..... per barrel	15	25	Per sack	32	42

FRIDAY, Feb. 12.

Since the 6th inst. the frost has continued to be severe, the thermometer on the morning of the 10th having, in the neighbourhood of London, fallen as low as 15 Fahr.; here there has been little snow, but it has fallen heavily along the East coast and in the Midland Counties. The inactivity we have experienced in the Wheat trade since the beginning of the year has if possible increased during the past week, being reported as very dull from all the chief markets of the kingdom, and from several a decline of 1s. per qr. is quoted. The same may be said of Barley, Oats, and Flour, but Beans and Peas have been steadier in price. Since Friday last 10 cargoes have been reported off the coast. The floating trade has been very inanimate during the whole week; only few transactions have taken place without any quotable change in prices. Paris, Feb. 11.—Flour after having been very firm during the last week closes neglected, and a few holders have submitted to a trifling reduction in price. The six marks for delivery this month are quoted equal to 33s. 3d. per 280 lbs; the present stock of Flour is estimated at 10,070 cwt. In Wheat there is only little doing, owing to higher prices being generally asked. The arrivals of English Oats and Barley this week are large, but of all other grain and Flour small. The attendance was unusually limited, and in the absence of buyers we do not alter our quotations for any article.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	930 qrs.	2010 qrs.	4430 qrs.	620 sks.
Irish	—	—	1900	— "
Foreign ..	5710 "	1850	6480 "	900 " 250 brls

LIVERPOOL, February 9.—We have had a poor attendance of both millers and dealers at to-day's market, and all speculative buyers having disappeared, Wheat has remained very dull of sale, and we reduce our quotations 3d. per cental. Flour has given way 6d. per barrel and sack. Indian Corn meets only a retail inquiry, and is practically 6d. per qr. lower. Oats and Oatmeal are scarcely inquired after. Beans, Peas, and Barley each stand nominally at late currencies. The market is stagnant, and prices irregular. Weather very severe.

FRIDAY, Feb. 12.—There was a rather thin attendance. Wheat slow, 1d to 2d. lower. Indian Corn 6d. lower.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Jan. 2	39s 10d	31s 8d	18s 9d	30s 0d	33s 8d	33s 1d
— 9	40 2	31 7	18 8	29 7	34 2	33 3
— 16	40 11	31 10	18 10	28 0	33 7	33 0
— 23	41 3	32 5	18 9	28 0	33 8	32 8
— 30	40 8	32 1	18 11	31 8	33 3	32 10
Feb. 6	40 4	32 0	18 9	29 0	33 8	33 0
Agg. Aver.	40 6	31 11	18 2	29 4	33 8	33 0

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Jan. 2.	Jan. 9.	Jan. 16.	Jan. 23.	Jan. 30.	Feb. 6.
41s 3d	..	..	..		..	..
40 11	..	..		..	..	..
40 8	..	..	..	..		..
40 4	..	..	..	..	..	
40 2	..		..	..	..	..
39 10 —		..	..	..	..	..

POTATOS.—SOUTHWARK, Monday, Feb. 8.

During the past week the arrivals both coastwise and by rail have been very large, and far greater than the demand; second-rate or inferior sorts unsaleable. Quotations as follows:—Yorkshire Flukes, 70s. to 90s. per ton; do. Regents, 50s to 70s.; do. Rocks, 50s. to 55s.; Dunbar Regents, 70s. to 75s.; Kent and Essex Regents, 60s. to 70s.: Perth, Forfar, and Fifeshire Regents, 45s. to 50s.; do. do. Rocks, 40s. to 45s.

AGRICULTURAL PUPILS.—A Farmer, near Reading, in Berkshire, wishes for a PUPIL, who will have every facility for learning Practical Farming, with the comforts of a good home. Unexceptionable references given and required.—Y. Z., Mr. Blewett, Chemist, Reading.

BIRKENHEAD CEMETERY.—The Birkenhead Improvement Commissioners, as the Burial Board for their District, are prepared to receive applications for the appointment of the REGISTRAR and SUPERINTENDENT of the New CEMETERY.

Persons applying must, in addition to the duties of Registrar, be competent to take the general Management of the Cemetery, with the Buildings, Plantations, and Shrubberies, and also to correctly set out the Graves in accordance with the Cemetery plans.

Salary 150l. per annum, with a residence. The agreement to be terminable on three months' notice from either side.

Applications stating age, and whether married and what family, together with testimonials, to be sent in on or before the 17th day of February next, addressed to the CHAIRMAN of the Cemetery Committee, Commissioners Offices, Birkenhead.

By Order. AMBROSE WALN, Clerk of the Commissioners.
Commissioners' Offices, Birkenhead, Feb. 13.

MR. JAMES VEITCH is in want of another thoroughly competent Young Man to act as CORRESPONDING CLERK and SALESMAN. A liberal and increasing Salary will be given to any one making himself useful. The desire is to engage a permanent person, who is anxious to improve himself and rise in his profession. Unexceptionable references required.—Royal Exotic Nursery, King's Road, Chelsea, S.W.

WANTED, a CORRESPONDING CLERK and TRAVELLER.—WILLIAM WOOD & SON are in want of a steady respectable Man in the above capacity, from 25 to 30 years of age; one who has a tolerable knowledge of Plants and who is thoroughly conversant with Agricultural Seeds, but more particularly with Grasses and Clovers, and acquainted with the Seed Trade generally.—Address as above, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

To Out-door Nursery Foremen.

WANTED, as SECOND FOREMAN, in a large Establishment, an active, energetic Man, to take charge of the Budding, Grafting, Layering, &c., and to carry out the general routine of Out-door Nursery work. Ample assistance and a liberal salary will be given to any suitable person.—Address, per letter, F. D., *Gardeners' Chronicle* Office, W.C.

WANTED, a Young Man as PROPAGATOR in the House Department of the Wavertree Nursery.—Address, stating age, where last employed, and wages required, to THOS. DAVIES & Co, Wavertree, near Liverpool.

WANTED, an UNDER GARDENER for the York Lunatic Asylum, Bootham. Salary 20l. per annum, with board, lodging, and washing.—Applications to be made and testimonials furnished on or before Thursday the 18th inst., to Mr. WRIGHT, the House Steward.—Bootham, York.

WANTED, in a gentleman's family, a DAIRY-MAID, who thoroughly understands her work. She would have to Wait in the Housekeeper's room, and Bake. Milking done by a Man. Wages £14.—Address R., Mr. Stedman's, Bookseller, Godalming, Surrey.

WANTED IMMEDIATELY, in a gentleman's family, a strong active GIRL, about 25, who thoroughly understands the Dairy and care of Poultry. Good wages given to a competent person.—Direct, A. L. C., Twyford, Berkshire.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD). — Married, one child; thoroughly practical. Reference to the gentleman he is about to leave.—I. X. L., Post Office, Worksop, Notts.

GARDENER (HEAD).—Young, married, no incumbrance; has had several years' experience in some of the best gardens in England, and can be well recommended.—X. Y. Z., Mr. J. Wilson, The Square, Bakewell, Derbyshire.

GARDENER (HEAD).—Middle-aged, married, two children; well versed in all the branches of his profession. Three years' good character.—J. W., 6, St. John's Cottages, Maple Road, Penge, Surrey.

GARDENER (HEAD).—Single; has a thorough practical knowledge of his profession in all its branches. Good character.—I. X. L., 6, Bloomfield Place, Crouch End, Hornsey, London, N.

GARDENER (HEAD).—Age 30, married; a good Plantsman, Orchid grower, &c. Understands Vines and all kinds of Forcing. No single-handed place accepted.—K. N., Post Office, Arnold, Notts.

GARDENER (HEAD).—Age 28; a thorough practical Man. No objection to the care of Land. Five and a-half years' character.—Address, stating particulars, THE HEAD GARDENER, Granard Lodge, Roehampton, S.W.

GARDENER (HEAD).—Age 35, single; thoroughly understands his profession in all its branches; no single-handed place accepted. Eight years' good character and high testimonials from the gentleman he has just left.—W. S., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Middle aged, two children; has a thorough practical knowledge of his profession in all its various branches. Unexceptionable references from late and previous employers.—W. BURDETT, Walton-upon-Thames, Surrey.

GARDENER (HEAD).—Age 36, single; thoroughly understands his profession in all branches; also the Management of Land if required. Seven years' good character. No single-handed place accepted.—G. G., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD), married, one child.—Mr. KAIL wishes to recommend a thoroughly practical Man, who understands his profession in all its branches. Four years' character. Will be at liberty on the 15th of March.—Mr. KAIL, East Horsely Park, Surrey.

GARDENER (HEAD).—Age 34, one child, aged 6; late Head Gardener to G. P. Bidder, Esq. Eight years' good character and references if required. Wife can take charge of Poultry and Dairy.—W. B., 5, Old Haddon Road, Croydon, Surrey, S.

GARDENER (HEAD).—Age 30; thoroughly understands the Growing of Pines, Vines, Peaches, Melons, &c; Stove and Greenhouse Plants, the Management of Flower and Kitchen Gardens. Character will bear the strictest inquiries.—W. L., Post Office, Bishopstoke, Winchester.

GARDENER (HEAD).—Age 30, single; understands the Forcing of Vines, Pines, Peaches, Cucumbers, Melons, &c. Has a practical knowledge of Kitchen and Flower Gardening. Six years' good character.—X., Post Office, Clyro Hay, Hereford.

GARDENER (HEAD.)—Age 34, married, no incumbrance; thoroughly understands his profession in all its branches. Nearly six years' character. Leaving in consequence of the family giving up the place.—W. TEGG, Gardener, Templeton House, Roehampton, Surrey.

GARDENER (HEAD).—Age 40, married, without incumbrance; has a thorough skilful knowledge of Fruit Culture, is practically acquainted with Plant Growing, and well understands Landscape Work; has also had experience in Horticultural Erections. First-class references, and a satisfactory character can be given.—P. W., Mr. Rogers, Butcher, Hornsey Road, Holloway, N.

GARDENER (HEAD), age 40, married.—WILLIAM BURTON is now leaving his present employer, with whom he has lived 14 years. He will be glad to enter into an engagement with any nobleman or gentleman who is desirous of securing the services of a thoroughly experienced Man. Unexceptionable character.—WM. BURTON, Gardens, Langley House, Abbots Langley, Watford, Herts.

GARDENER (HEAD), no Single-handed place accepted.—Age 33, married; thoroughly understands his profession in all its branches. Has had great experience in Stove and Greenhouse Plants, Ferns, &c.; Laying-out of Flower and Kitchen Gardens. Unexceptionable character. Seven years as Head Gardener with last employer.—M. MEASURES, J. H. Hills, Esq., Newbold Firs, Leamington; or Mr. W. F. Whitfield, Stock Exchange, E.C.

GARDENER (HEAD), married, no incumbrance.—Mr. C. CLARKE, Windmill Nursery, Gravesend, begs to recommend a Man of great professional skill as above. He will shortly be disengaged where he has been Making new Gardens and Pleasure Grounds, has great taste as a Landscape Gardener, a practical knowledge of Erecting Horticultural Buildings, and general knowledge of the Management of an extensive Establishment, including Forcing, Plant Culture, &c., where he would be found a valuable acquisition.

GARDENER (HEAD), age 40, married, with one child.—JAMES THOMPSON is now leaving his present employer, with whom he has lived upwards of 20 years, and will be glad to enter into an engagement with any nobleman or gentleman who is desirous of securing the services of a thoroughly experienced Man. Can produce 170 Testimonials of Prizes for choice Fruits and Flowers from the year 1856, at the Royal Isle of Wight Horticultural Exhibitions. Character unexceptionable.—C. DIMMICK, Nurseryman, High Street, Ryde, Isle of Wight.

GARDENER (HEAD). — JOHN GIFKINS, age 34, single; for eight and a-half years Gardener to the Hon. Charles Annesley, Eydon Hall, Banbury. By the death of this gentleman he is open to another engagement; he thoroughly understands his profession in all its branches. Early and Late Forcing, also the management of Stove and Greenhouse Plants, Pleasure Ground and Flower Garden, and the general Control and Superintendence of a gentleman's Garden. He is well known to Mr. Arthur Henderson, of Pine Apple Place, Edgware Road, London, who will see or answer any questions from those gentlemen or ladies who are requiring a thoroughly practical and efficient man. Liberal wages expected.

GARDENER (HEAD, or good SINGLE-HANDED).—Age 25, single; is well experienced in Forcing, Plant-growing, and the general routine of Gardening. Can have good recommendation from last employer.—N. B., Mr. Aspinall, Stationer, High Street, Penge, S.E.

GARDENER (HEAD, or good SINGLE-HANDED).—Age 23; well experienced in Forcing, Plant Growing, and the general routine of Gardening. Well recommended. A pious family preferred. State wages, &c.—F. B., 9, Ingram Place, Hornsey Road, Holloway, N.

GARDENER.—Age 25; has a thorough practical knowledge of his profession in Forcing, Flower and Kitchen Gardening. Can be highly recommended from late employer.—F. M., Post Office, Haluaker, Chichester.

GARDENER.—Married; well experienced in all branches. Wife good Laundress, if required. Nine years' testimonials.—A. B., Dawson, Florist and Seedsman, Camberwell Road, S.

GARDENER.—A Gentleman reducing his garden wishes to recommend a first-rate Gardener, experienced in the management of a large garden in all its branches. He can be thoroughly recommended as a trustworthy person, with 19 years' good character.—T. SCLATER, Esq., Newick Park, Uckfield, Sussex.

GARDENER.—G. UZZELL, Gardener to her Grace the Duchess Dowager of Northumberland, Mount Lebanon, Twickenham, S.W., can with confidence recommend his Foreman to any lady or gentleman in want of a good Gardener; has been in his present situation 4½ years, and had previous great practice in first-rate Gardening.—G. UZZELL will be happy to answer any inquiries.

GARDENER.—A lady wishes to recommend her Gardener, who has lived with her 13 years, and is leaving because a Gardener is no longer required. He is an active, industrious man, perfectly honest and sober, and thoroughly trustworthy; is married, and has one child at home. He thoroughly understands the Management of Kitchen and Flower Garden, Greenhouse, &c.—H. P., 37, Cumberland Street, Hyde Park, W.

GARDENER (UNDER or SINGLE-HANDED).—Age 21; thoroughly understands Flower and Kitchen Gardens, Greenhouses, and Forcing. Good character.—O. G., Phillips's Library, Crown Hill, Lower Norwood, S.

GARDENER (FOREMAN in a Second-class Establishment, or UNDER in First).—Has previously served as Foreman. Three years' good character.—D. C., Meltham, Huddersfield, Yorkshire.

GARDENER and BAILIFF.—Age 30, single; understands Buying, Selling, Breeding of Stock; a good Flower, Fruit, and Kitchen Gardener, can grow Early Cucumbers and Melons. Six years' character.—W. S., 25, Kinnerton Street, Wilton Place, Belgrave Square, S.W.

FOREMAN, in a large Establishment.—Age 25; with a good knowledge of Gardening in all its branches. Has served five and a half years in the above capacity.—H. L., Hale Hall, near Warrington.

FOREMAN (UNDER), in a large nobleman's Establishment, to take charge of the Glass, &c.—Age 27; can have three' years good recommendation from last employer.—ROBERT DUNCAN, Barming, near Maidstone.

STEWARD and GARDENER, or GARDENER alone in a large Establishment.—No incumbrance; has had the Management of a large Estate and Gardens, including Draining, Plantations, Repairs, &c. He is thoroughly acquainted with his profession in all its branches. A good character from the nobleman he has lately left. Testimonials to be seen, with undeniable references.—A. B., Messrs. Ivery & SON, Nursery, Dorking.

To Nurserymen.

PROPAGATOR (UNDER).—Age 21; several years' experience in one of the largest Provincial Nurseries. Good Budder, Grafter, and general Workman. Good character. State wages given.—H. L., Henwick Side Gate, Henwick, Worcester.

To the Nursery and Seed Trades.

BOOK-KEEPER, CORRESPONDING CLERK, or TRAVELLER; or MANAGER of a RETAIL SEED BUSINESS.—ALFRED W. ELPHICK respectfully announces that he is at liberty to engage in either of the above capacities. Reference as to character and ability permitted to Messrs. WOOD & SON, his present employers, in whose service he has been upwards of eight years.—Woodlands, Maresfield, near Uckfield.

LAND AGENT, &c.—A gentleman well acquainted with Land Surveying and practical Farming, wishes for a situation, either as Principal or Assistant, as Steward, Land Agent, or Manager of an Estate. Unexceptionable testimonials.—E. M. P., Truro, Cornwall.

FARM BAILIFF.—Married; Wife could undertake the Management of a Dairy and Poultry if required. Highest reference as to character and ability.—J. W., Post Office, Rugby, Warwick.

CARE of CHAMBERS, Offices, the Superintendence of a Laundry, or any post of trust.—A respectable Widow, age 44, who can be highly recommended.—P. G., Post Office, Turnham Green, W.

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A New and Important Improvement.

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No. 1 WASHING MACHINE, family size, price 3*l.* 10*s.*, and with India Rubber Wringing Machine attached, price 4*l.* 15*s.*

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To Seed Merchants and Nurserymen.

SAYNOR AND COOKE, PRUNING and BUDDING KNIFE MANUFACTURERS, beg respectfully to say that they WILL NOT BE UNDERSOLD by any House in the Trade. They also warrant one of their Knives to last two of any other make.

Paxton Works, Sheffield.

SMITH, BECK AND BECK'S New MERCURIAL BAROMETER, very sensitive. Scale, 3 to 8 inches for every inch of variation, compensating tube instead of a reservoir. Price from 35*s.* to 42*s.*

Description sent free by post, or to be had on application at 31, Cornhill, E.C.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—

"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles. Your obedient servant, G. GLENNY."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump, Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.

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HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.

Sold in casks of about 30 gallons each, at 1*s.* 6*d.* per gallon, at the Manufactory, or 1*s.* 8*d.* per gallon paid to any Station in the kingdom.

Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street, E.C., from whom only it can be obtained.

THE PERFECT SUBSTITUTE for SILVER.—The REAL NICKEL SILVER, introduced more than 30 years ago by WILLIAM S. BURTON, when PLATED by the patent process of Messrs. Elkington & Co., is beyond all comparison the very best article next to sterling silver that can be employed as such, either usefully or ornamentally, as by no possible test can it be distinguished from real silver. A small useful set, guaranteed of first quality for finish and durability, as follows:—

	Fiddle or Old Silver Pattern.			Bead Pattern.			Thread or Brunswick Pattern.			King's or Lily, &c.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
12 Table Forks	1	13	0	2	0	0	2	4	0	2	10	0
12 Table Spoons	1	13	0	2	0	0	2	4	0	2	10	0
12 Dessert Forks	1	4	0	1	10	0	1	12	0	1	15	0
12 Dessert Spoons ..	1	4	0	1	10	0	1	12	0	1	15	0
12 Tea Spoons	0	16	0	1	0	0	1	2	0	1	5	0
6 Egg Spoons, gilt bowls..	0	10	0	0	12	0	0	12	0	0	13	6
2 Sauce Ladles	0	6	0	0	8	0	0	8	0	0	9	0
1 Gravy Spoon	0	6	6	0	9	0	0	10	0	0	11	0
2 Salt Spoons, gilt bowls..	0	3	4	0	4	0	0	4	0	0	4	6
1 Mustard Spoon, gilt bowl	0	1	8	0	2	0	0	2	0	0	2	3
1 Pair of Sugar Tongs ..	0	2	6	0	3	6	0	3	6	0	4	0
1 Pair of Fish Carvers ..	1	4	0	1	10	0	1	10	0	1	10	0
1 Butter Knife	0	2	6	0	4	0	0	5	6	0	6	0
1 Soup Ladle	0	10	0	0	12	0	0	16	0	0	17	0
1 Sugar Sifter	0	3	3	0	4	6	0	4	6	0	5	0
Total	9	19	9	12	9	0	13	9	6	14	17	3

Any article to be had singly at the same prices. An Oak Chest to contain the above, and a relative number of Knives, &c., 2*l.* 15*s.* Tea and Coffee Sets, Dish Covers and Corner Dishes, Cruet and Liqueur Frames, &c., at proportionate prices. All kinds of re-plating done by the patent process.

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Ivory Handles.	Tablo Knives, per dozen.		Dessert Knives, per dozen.		Carvers, per pair.	
3½-inch ivory handles..	12*s.*	6*d*	10*s.*	0*d*	4*s.*	3*d*
3½-inch fine ivory handles	15	0	11	6	4	3
4-inch ivory balance handles	18	0	14	0	4	9
4-inch fine ivory handles	24	0	18	0	7	3
4-inch finest African ivory handles ..	32	0	26	0	11	0
Ditto, with silver ferules	40	0	33	0	13	6
Ditto, carved handles, silver ferules ..	50	0	43	0	17	6
Nickel electro-silver handles, any pattern	25	0	19	0	7	6
Silver handles of any pattern	64	0	54	0	21	0
Bone and Horn Handles.—Knives and Forks per dozen.						
White bone handles	11*s.*	0*d*	8*s.*	6*d*	2*s.*	6*d*
Ditto balance handles	21	0	17	0	4	6
Black horn, rimmed shoulders	17	0	14	0	4	0
Ditto very strong riveted handles	12	0	9	0	3	0

The largest stock in existence of Plated Dessert Knives and Forks in cases and otherwise, and of the new Plated Fish Carvers.

WILLIAM S. BURTON, GENERAL FURNISHING IRONMONGER by appointment to H.R.H. the Prince of Wales, sends a CATALOGUE gratis and post paid. It contains upwards of 500 Illustrations of his illimited Stock of Sterling Silver and Electro-Plate, Nickel Silver and Britannia Metal Goods, Dish-Covers, Hot-water Dishes, Stoves, Fenders, Marble Chimney-pieces, Kitchen Ranges, Lamps, Gaseliers, Tea-Trays, Urns and Kettles, Clocks, Table Cutlery, Baths, Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding, Bed Room Cabinet Furniture, &c., with Lists of Prices, and Plans of the 20 large Show Rooms, at 39 Oxford Street, W.; 1, 1A, 2, 3, and 4, Newman Street; 4, 5, and 6, Perry's Place; and 1 Newman Yard, London.

Universal Microscope. Price £5 5s.

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PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.

They are more easily trimmed and re-filled than any other Lamp with similar burner.

There is no danger of chimneys breaking, and the chimney cannot become smoked.

For designs of the above, adapted for the DINING-ROOM, DRAWING-ROOM, HALL, or LIBRARY, see Number 2 of this Journal.

A REALLY GOOD LAMP.

The above may be obtained of any Lamp Dealer.

METCALFE, BINGLEY, AND CO'S NEW PATTERN TOOTH BRUSHES, Penetrating Unbleached Hair Brushes, Improved Flesh Brushes, genuine Smyrna Sponges, and every description of Brush and Comb and Perfumery for the Toilet. METCALFE'S celebrated Alkaline Tooth Powder, 2*s.* per box. The FAIRY BOUQUET; the OXFORD and CAMBRIDGE BOUQUET. In bottles, 2*s.*, 3*s.* 6*d.*, and 5*s.* each 130 B, and 131, Oxford Street, W.

THRESHER'S COLORED FLANNEL SHIRTS.—PRIZE MEDAL awarded to THRESHER & GLENNY for very fine and superior FLANNEL SHIRTS, India Tweed Suits, and India Gauze Waistcoats.

Lists of Prices on application to THRESHER & GLENNY, General Outfitters, next door to Somerset House, Strand, W.C.

Glenfield Patent Starch.

MESSRS. WOTHERSPOON AND CO. have been appointed STARCH PURVEYORS to H.R.H. the PRINCESS of WALES. This Starch is used in the Royal Laundry and was awarded a Prize Medal. Sold by all Grocers, Chandlers, &c.

WOTHERSPOON & Co., Glasgow and London.

All good Cooks and careful Housewives use

SYMINGTON'S PATENT PREPARED PEA FLOUR, which is easy of digestion, perfectly wholesome, requires no boiling, rapidly makes a Tureen of rich Soup, and never causes unpleasant feelings after eating. In Packets, 1*d.*, 2*d.*, and 4*d.*; and Tins, 1*s.*, 1*s.* 6*d.*, and 3*s.* each.

GROATS and BARLEY prepared by the same process, in Tins, 6*d.* and 1*s.* each.

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The Gardeners' Chronicle Newspaper.

SATURDAY, FEBRUARY 20, 1864.

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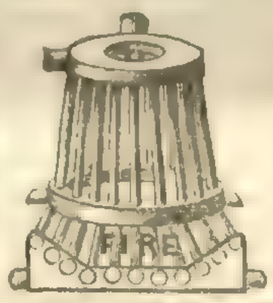

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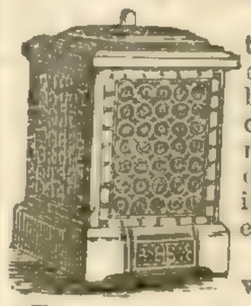

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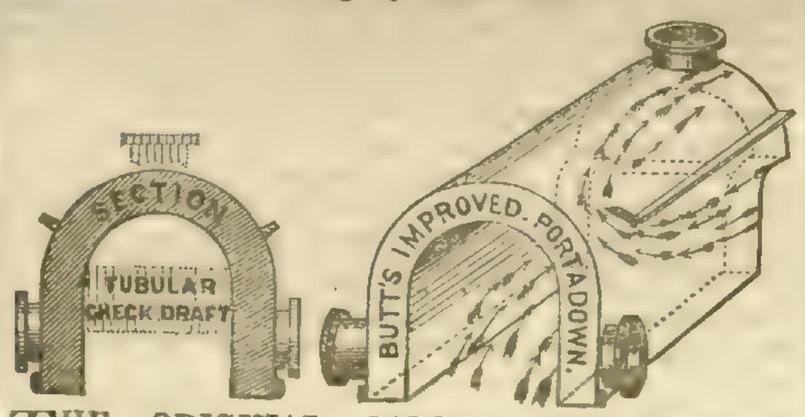

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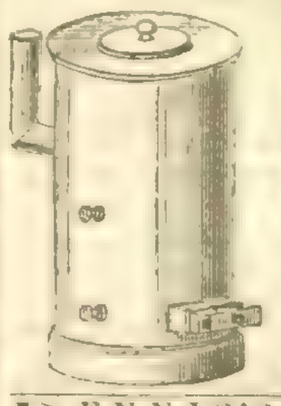

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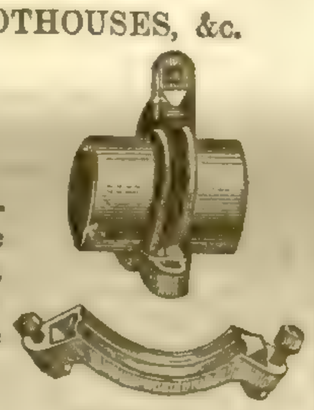

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Author of "The Orchidaceæ of Mexico and Guatemala."

Although founded by Humboldt and Bonpland early in the present century, it is only of late years that the genus Odontoglossum has received any considerable attention, either from the botanist or the cultivator. Not more than five species were assigned to it by Professor Lindley in 1832 ("*Genera et Species Orchidearum*," Part III.), these however had increased to 65 on the publication of the first Part of the same author's "Folia Orchidacea," in 1852, while they are now known to exceed a hundred, and we may expect to see that number doubled by the time that the favourite homes of the genus in the Mexican and Peruvian Andes shall have been thoroughly explored. In this case, Odontoglossum will become—next to Oncidium—the most extensive genus in the "Vandeous" Section of the great Orchideous family, and might therefore almost seem entitled to a separate Work even if it had no other claims to independent treatment. Such, however, may be readily found; for

(1.) Its species affect exclusively the mountain-chains of Mexico, Central America, New Grenada, and Peru; not a single straggler having yet been discovered either in the West Indian Isles or in the low and sultry latitudes of the South American continent. In this remarkable fact we have clear indications of a distinct group.

(2.) A large proportion are eminently beautiful. They are usually of compact growth; their flowers are always exceedingly durable, and often deliciously sweet.

(3.) They do not require—indeed they will not endure—the great heat of most Orchid-houses; but they will thrive, with proper treatment, in a mean temperature of about 60°, which is that of an ordinary greenhouse.

Unfortunately, it was long before this latter peculiarity in their habits—and consequently the secret of their cultivation—came to be fully understood; what wonder, then, if the labours of a Karwinski or a Galeotti, a Linden or a Schlim, a Purdie or a Warscewicz, should have added little to our collections of living plants, and that many of their most brilliant discoveries should at present be only known to us from dried specimens in our herbaria! The principle of *cool treatment* having at length however been fully established, the most strenuous efforts are being made by nurserymen and others to obtain fresh supplies of what we formerly lost, as well to search out new forms, and with this object, not fewer than seven collectors are now (January, 1864) busily engaged in ransacking such portions of the New World as seem to promise the richest harvest of novelty or beauty.

As the various collections arrive, they will doubtless be found to comprise many fine Odontoglossa, the most remarkable of which it is proposed to figure in a Monograph, specially dedicated to the genus; and the Parts of which will appear with greater or less frequency, as the materials for illustration can be had. Not more, however, than Four Parts will ever be published in a single year.

Full descriptions of the plants (in Latin and English), as well as careful directions for their cultivation, will accompany the Plates; and with the concluding Parts an Analysis of the Genus, and Conspectus of all its known Species, will be given.

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AGRICULTURAL EDUCATION.

The EXAMINATION of CANDIDATES for the SOCIETY'S AGRICULTURAL DIPLOMA will take place in the Museum, George IV. Bridge, Edinburgh, on WEDNESDAY, March 23

Candidates must lodge intimation with the Secretary on or before March 16. JN. HALL MAXWELL, Secretary.

6, Albyn Place, Edinburgh, Feb. 12.

News of the Week.

IN the House of Lords on Monday, Earl RUSSELL read extracts from the correspondence with Mr. ADAMS, the United States' Minister, and, by a comparison of dates, proved that the decision of the Government as to detaining the iron-clad rams could not have been influenced by any representations of Mr. ADAMS. Lord CAMPBELL called attention to the treaties and conventions by which the possession of Schleswig had been guaranteed to Denmark by Great Britain, in 1715, 1720, and 1726, and contended that as these guarantees had never been forfeited by any act of Denmark they were still binding on this country. Earl RUSSELL declined to express a positive opinion as to the guarantees, and thought that for the sake of the peace of Europe everything that could be done by conference and negotiation ought to be done before taking any step which might produce hostilities between the Great Powers. His lordship added that the most recent declarations of Prussia and Austria proved that those Powers did not contemplate a dismemberment of Denmark. On Tuesday the Earl of CARNARVON moved for a return of claims by British subjects upon the United States' Government since the secession of the Southern States, and also of the claims made by the United States' Government on that of Great Britain for damages to American ships by the Alabama and other Confederate cruisers. Earl RUSSELL said that her Majesty's Government had from the beginning contended, and did still contend, that it was in no way responsible for the alleged losses by the Alabama. He had held out no hope that the English Government would change its opinion, but he trusted that the Federal Government would, on further consideration, modify its views. He was willing to produce the returns relating to the case of the Saxon, and the motion thus amended was agreed to. On Thursday, in answer to the Earl of POWIS, Earl GRANVILLE said that the establishment of a museum and library for patents was under the consideration of the Government. In answer to the Earl of ROMNEY, the Lord CHANCELLOR said he would consult the Home Secretary in regard to the state of the law affecting the removal of clerks of the peace.

In the Commons on Friday Mr. S. FITZGERALD called attention to the circumstances attending the capture of British vessels by the Federal cruisers, and especially to the murder of the mate of the Saxon by a Federal lieutenant. The ATTORNEY-GENERAL and Lord PALMERSTON stated that representatives had been made to the Cabinet of Washington on the subject, and as the questions were still pending, it would not be consistent with the public service to produce the papers at present. After a long discussion the motion was withdrawn. Mr. HUNT obtained leave to bring in a Bill to amend the law relating to election petitions. Sir R. PEEL obtained leave to bring in a Bill to abolish vestry cess in Ireland: and Mr. DODSON obtained leave to bring in a Bill to abolish certain tests connected with academical degrees in the University of Oxford. On Monday, in answer to Mr. DISRAELI, Mr. LAYARD said that an answer to their proposition for an armistice between the contending forces in Schleswig had been received by the Government, but it was not of a satisfactory nature, and there was no reason to believe that an armistice would be agreed to. The Insane Prisoners' Act Amendment Bill, the Conveyancers, &c. (Ireland), Bill; the Malt for Cattle Bill, the Collection of Taxes Bill, and the Government Annuities Bill, were read a second time. The CHANCELLOR of the EXCHEQUER obtained leave to bring in a Bill to amend the laws relating to the warehousing of British and foreign spirits duty free. On Tuesday Mr. M. GIBSON moved a series of resolutions for regulating the proceedings of committees on railway and canal Bills. One of the resolutions, providing that Committees on Private Bills be ordered to meet at 11 o'clock, met with strong opposition, and was ultimately withdrawn. The resolution relating to the charges for Parliamentary agents was also withdrawn. The other resolutions were agreed to. Mr. MILNER GIBSON obtained leave to bring in Bills to facilitate the obtaining of powers for the construction of railways, and the obtaining of further powers by railway companies. On Wednesday, on the motion of Mr. LAIRD, the Chain Cables and Anchors Bill was read a second time. Mr. T. BERNARD moved for leave to bring in a Bill for a more equitable distribution of the poor's rate, with a view to substitute union rating for parochial rating. After some discussion the motion was withdrawn. On Friday Sir GEORGE GREY moved for leave to bring in a Bill to amend the Penal Servitude Acts. He said that it was founded mainly on the recommendations of the Royal Commissioners, but the Government had determined, in deference to the wishes of the Australian Colonies, to abandon the proposition to send all male convicts to Western Australia, continuing the system at present in force with certain modifications. They had also determined to adopt the term of five years as the minimum of penal servitude, with a remission of punishment in case of good conduct. After some discussion leave was given to bring in the Bill. Mr. EWART obtained leave to bring in a Bill to render permissive the use of the metric system of weights and measures.

From the seat of war in the North we learn that Austria and Prussia have refused to accept the armistice, and that the allied forces in Schleswig are preparing to attack the Danish entrenchments at Düppel. On Thursday a Danish iron-clad attempted to destroy the bridge constructed by the allies before Egensund, but was obliged to retire without accomplishing her object. The recent occupation of Altona by the Prussian troops has given great dissatisfaction to the smaller States of Germany. In the sitting of the Federal Diet on Saturday, various protests were handed in against the proceedings of the Prussian troops, the Saxon Minister especially complaining that they were in direct contradiction to the express promises of Austria and Prussia. It is now announced that the two Great Powers have addressed a note to the minor States, declaring that they do not recognise the necessity of a Federal reserve being stationed in Holstein, and that if such a necessity should arise, they will themselves place at the disposal of the Diet a sufficient reserve for execution purposes.

Home News.

RETURN OF THE QUEEN TO WINDSOR.—Her Majesty the Queen, accompanied by the younger members of the Royal family, was expected to return to Windsor Castle yesterday from Osborne. The Court will probably remain at Windsor Castle for about three months.

THE COURT AT OSBORNE.—On Thursday the 11th, Vice-Admiral Sir Michael Seymour, Commander-in-Chief at Portsmouth, and Major-General Lord William Paulet, commanding the South-Western District, arrived at Osborne, and had an interview with her Majesty to present the reports of their respective commands. On Friday the Queen drove out with the Princess Helena. On Saturday Dr. Jenner arrived from London on a visit. On Sunday morning the Queen, Princess Helena, Princess Louisa, Prince Leopold, and Princess Hohenlohe, attended Divine service at Osborne. The Rev. G. Prothero officiated. On Monday the Queen and Royal family drove out. Dr. Jenner returned to London. On Tuesday the Queen drove out, accompanied by Princess Beatrice. Princess Helena rode on horseback. Captain Sir Leopold M'Clintock, commanding her Majesty's ship Aurora, in Cowes Roads, had an interview with the Queen. On Wednesday Prince Leiningen

arrived on a visit to her Majesty. The Right Hon. W. E. Gladstone arrived from London, and had an audience of her Majesty. In the evening Mr. Gladstone had the honour of dining with the Queen and Royal family.

THE PRINCE AND PRINCESS OF WALES and the infant Prince continue at St. Leonard's. On Saturday the Princess took a drive to Fairlight. The Prince walked to Hastings and visited the ruins of the Castle. On Sunday morning the Prince and Princess attended Divine service at the parish church. In the afternoon the Prince drove the Princess in an open phaeton to Beauport Park, the seat of Mr. T. Brassey, jun., returning by the old London road through Hastings. On Monday morning the Prince hunted with the Bexhill harriers. The Princess went to the Subscription Gardens, and in the afternoon walked on the Parade towards Hastings. Her Royal Highness afterwards drove along the Marina, and went to meet the Prince on his return from hunting. On Tuesday the Prince hunted with the East Sussex foxhounds. The Princess drove to the meet in a ragonette. On Wednesday morning the Prince and Princess visited Battle Abbey and Bodiam Castle. In the evening Mr. Curteis, formerly M.P. for East Sussex, and master of the East Sussex foxhounds, had the honour of dining with their Royal Highnesses. On Thursday morning the Prince and Princess drove to Bexhill, where his Royal Highness again hunted with the harriers; the Princess returned to St. Leonard's after witnessing the start. In the afternoon the Prince walked to the East Hill.

THE APPROACHING VISIT OF THE KING OF THE BELGIANS.—King Leopold has deferred his visit to her Majesty until the christening of the infant Duke of Cornwall.

LEVEES AND DRAWING ROOMS.—In consequence of the inconvenience experienced at the levées and drawing-rooms from the overcrowded state of the apartments, it is announced that ladies or gentlemen will not be expected to attend at Court upon more than one occasion during the season. This does not apply to those who are present in an official capacity.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

PARLIAMENTARY MOVEMENTS.—The nomination for Brighton took place on Saturday, when five candidates were put in nomination—Mr. Henry Moor, Conservative, Mr. Francis Kuper Dumas, Liberal, Mr. Henry Fawcett, Liberal, Mr. Julian Goldsmid, Liberal, and Mr. Edward Harper, Protestant. The show of hands was declared to be in favour of Mr. Fawcett. The other candidates thereupon demanded a poll, which took place on Monday, and terminated in the return of Mr. Moor, the Conservative candidate, by a majority of 195, the numbers being for Mr. Moor, 1663; Mr. Fawcett, 1468; Mr. Goldsmid, 775; Mr. Dumas, 246; Mr. Harper, 82. There is a vacancy for Dorset, caused by the retirement of Mr. Ker Seymer on account of ill health. Mr. Floyer, who formerly represented the county in the Conservative interest, is a candidate for the vacant seat. There is a vacancy for Hertfordshire, caused by the death of Mr. Puller. The Hon. H. F. Cowper, brother of Earl Cowper, is mentioned as a candidate for the vacant seat in the Liberal interest.

THE CHURCH.—Since the refusal of the Government to create a bishopric of Cornwall, the Bishop of Exeter has applied for the appointment of the Rev. F. C. Cook as a suffragan bishop, but the Government have declined to accede to the proposal on the ground that it cannot be done without an Act of Parliament.

Foreign.

FRANCE.—A decree has been issued, convoking the electors of the seventh circumscription of the department du Nord to elect a deputy on the 6th and 7th of March. The Emperor has placed a French man-of-war at the disposal of the Duc de Brabant to convey his Royal Highness from Corsica to Nice. The *Patrie* asserts that Austria was willing to accept the armistice upon condition of the Danes evacuating Düppel and Alsen. Prussia refused, plainly and categorically. The *Nord* contains a *communiqué*, declaring the statement entirely incorrect that a French army of observation was about to be placed upon the Rhine frontier. Notwithstanding this declaration, it is still said that the Imperial Guard has received orders to be in readiness to march towards the Rhine at the shortest notice as a measure of precaution. The legal papers of Tuesday state that an order has been issued by the Chambre de Mises en Accusation sending the case of Mazzini and the four Italians before the Court of Assizes of the Department of the Seine, upon the charge of conspiracy against the life of the Emperor. The case will probably come on for hearing on the 25th inst.

SPAIN.—The Queen was delivered of a Princess on Friday morning. The Queen and the Royal infant are in good health. The baptism of the Infanta took place on Sunday, when her Royal Highness received the names of Maria-Eulalia Francisca-Margarita, &c., the whole number of names being, according to the Madrid journals, above 80. The papers report that the ceremony of the betrothal of Dona Maria, daughter of the Duke and Duchess of Montpensier, to the Count de Paris, will take place in Seville, and that the marriage will afterwards be solemnised in England. The Budget has been presented to Congress. It estimates the revenue at 2,146,000,000 reals, and the expenditure at 2,143,000,000 reals. The extraordinary Budget amounts to 469,000,000 reals. A Bill has been brought into Congress calling out 35,000 men. Another Bill has been introduced authorising credit operations on the guarantee of the bonds given by the purchasers of national property.

PORTUGAL.—The infant Prince Don Carlos has been solemnly recognised as the successor to the Crown in a special Session of the Cortes. A levée was subsequently held at the Palace, and the city was illuminated. A rumour is current at Lisbon that the Duke de Saldanha is about to be transferred as Ambassador from Rome to London. The railway to Beja was successfully opened on Sunday.

HOLLAND.—On Tuesday at 6 A.M. the greatest consternation was caused among the citizens of Rotterdam by the outbreak of a dreadful fire at the museum and picture gallery in the Schieland Palace. The picture gallery formed one of the most interesting exhibitions in the city. No particulars could be obtained as to the cause of the fire. The fire brigade and engines were soon on the spot, but from the first it was seen to be impossible to check the flames. All that now remains of the old palace are the bare blackened walls. The loss is irreparable.

SWEDEN.—The official *Post Tidning* of Stockholm states that Sweden does not support the proposal of an armistice between the Austrians and Prussians and the Danes, and has not recommended the withdrawal of the November Constitution. Count Hamilton, Swedish Minister at Copenhagen, has been summoned to Stockholm to confer with his Government.

DENMARK.—The official journals state that an armistice involving the evacuation of the mainland of Schleswig will not be accepted by the Danish Government, and that such a measure would be inadmissible unless the enemy evacuates Schleswig and re-establishes in that duchy the rule of the King and the *status quo* of the 31st of January. The King of Denmark has addressed the following proclamation to the army:—

"Soldiers!—Not alone by valour on the battle field, but also by enduring with patience want of rest, cold, and all sorts of privations and exertions, the soldier has to prove his fidelity to his King and his love for his country. There are few among you who have not proved in battle against an overwhelming foe that you have not degenerated since Fredericia and Idstedt. You have all had ample opportunity to give brilliant proofs of efficiency and endurance, and you have preserved a cheerful courage under long and severe hardships. 'Soldiers! Receive for this the thanks of your King. The Dannewirke has been abandoned. The guns which were to have curbed the arrogance of the enemy are in their hands. The country lies open to the enemy. I deeply feel with you what we have thereby lost. But, my friends, I have but this one army for the defence of the country, and your military leaders were of opinion that I would no longer have an army if I did not withdraw you. They therefore came to the determination to retreat. Soldiers! I stand alone in the world with my people. Up to the present time no Power has declared that it will support us by acts. But I depend upon you and my fleet. You are ready to shed your blood; but we are few against many, and it must therefore be dearly purchased. May the Almighty grant that the hour of revenge may soon strike for all the violence and injustice which has been done to me and my people."

Official notice has been given by the Danish Government that their ships of war have received orders to capture all vessels belonging to all the States of the German Confederation. This measure contradicts the report that Denmark had decided upon exempting from capture the ships of some of the States. It is rumoured that General de Meza will be reinstated in his command, public opinion being now convinced that if an attempt had been made to defend the Dannewerke, the entire army would have been cut off.

THE DANISH DUCHIES.—Marshal von Wrangel has given the Danes a very short delay to evacuate Düppel and the island of Alsen, with an intimation that in the event of their not evacuating these positions, the Prussian army will immediately occupy Jutland. The attack on Düppel had not commenced on Wednesday, in consequence of the thaw which had occurred, the marshy nature of the country having rendered the movement of heavy artillery difficult. Frost, however, has since set in, and the attack was expected to commence yesterday. The attack is reserved for the Prussian division of Guards, under Prince Frederick Charles of Prussia, while the Austrians will remain at Flensburg and in the Bau as a reserve. The Hamburgh papers publish a despatch from Düppel, stating that the 1st Regiment of Danish Foot had sallied from their intrenchments and attacked two Prussian batteries, and that the Danes were almost destroyed. On the other hand, trustworthy advices received at Hamburg from a private source state that the Danes have made two sorties from Düppel, and inflicted considerable loss on the Prussians. The accounts of the Danish force at Düppel are contradictory. It is stated from Flensburg that it is not considerable, and that it is short of provisions. The French papers on the other hand publish a telegram from Copenhagen, dated the 18th inst., asserting that the position at Düppel is defended by 40,000 men and 200 guns. Three intrenchments on the high road have been strongly palisaded. An Austrian pontoon bridge, the Prussian Guard, and a Hussar regiment passed through Flensburg on Tuesday on the direct road to Düppel. A Prussian battery of heavy artillery has gone to Glücksburg, and is probably destined for Holnis, from which place the harbour of Flensburg and the intrenchments of Düppel can be bombarded. The Danish gunboat Husby has fired upon an unfinished Prussian land battery. Six 12-pounders were, however, placed in position and fired on the gunboat, which subsequently withdrew. The Germans on Wednesday threw a bridge across the Egensund, and occupied the Braagar Peninsula in considerable force. On Thursday the Danish Monitor (iron clad) Hrolf Krake attempted to destroy the bridge. The Monitor could not get near enough owing to the shallow water. She fired 72 shots and the German batteries fired 150. One shot went through her funnel. After an hour's engagement she retired without having obtained her object. The Germans drove the Danish pickets from Stendrup and Nübel woods, killing five and wounding 30. The Danish sallied in force, when the Germans retired without resistance. The position of the Germans in Braagerland is very dangerous. The Germans in Sandbjerg and the Danes in Roehave have fired at each other across the Sound without effect. The Austrians and Prussians have collected a large number of boats, to be used in attempting a landing on the island of Alsen, the fortifications of which are being strengthened. Prussian light cavalry have been despatched along the Pomeranian coasts to watch the sea-board, and give notice of hostile approach. The signal lights in the lighthouses have been extinguished to mislead the Danish ships. One light, only known to natives of the country, is still kept up. The Prussians have occupied Friedericksort, at the entrance to the Bay of Kiel, and two Prussian battalions marched into Kiel on Monday. The Danish cavalry have retired into Jutland. The Danes have captured a Prussian brig in the Sound, and another at Sonderburg. Prussian vessels have been placed under embargo at Copenhagen, and two vessels at Aalborg, one of which is a passenger ship from Hamburg. A detachment of sappers is on the way to the Dannewerk for the purpose of blowing up the fortifications. The Crown Prince of Prussia left Flensburg on Friday for Schleswig, and Marshal von Wrangel has since left Flensburg for Gravenstein, after taking an affectionate farewell of the principal inhabitants, and expressing a hope that Schleswig would soon be free from the evils of war. The Austrian and Prussian Commissioners have left Flensburg for Apenrade. The Austrian Civil Commissioner, in a speech made at Flensburg, said that all the wishes of the Schleswig-Holsteiners would be satisfied, although a personal union of the Duchies with Denmark could not be given up. It is stated that an order to suspend the occupation of the Holstein towns by the Prussian troops was forwarded from Berlin, but arrived too late to be of use. A proclamation of the Federal Commissioners was published on Saturday at Altona. It enters into details of the recent occurrence, and gives the text of the Commissioners' protest against the Prussian occupation of Altona, Neumünster, and Rendsburg in opposition to the declaration of the great German Powers that Holstein should continue to be occupied solely by Federal troops. The Commissioners have also stated in reply to a communication from the committee on the affairs of that Duchy, that they would resign should they have lost the confidence of the Federal Diet. A deputation from a meeting of the members of the Schleswig Estates has since left Schleswig with an address to the King of Prussia and the Emperor of Austria. The Federal Commissioners have strictly prohibited the formation of a Schleswig-Holstein army. Prince Frederick has been proclaimed in Flensburg, Eckenforde, Apenrade, and Tondern, from which place the Danish officials were expelled. The Austrian General von Gablenz has proposed a collection of a fund for the support of the widows and orphans of the fallen, and has opened the subscription by giving one year's stipend of the Maria Theresa Order, conferred upon him by the Emperor. The reported execution of the Amptmann Blauenfeld is contradicted. He is still in prison at Rendsburg.

SAXONY.—Adjutant-General Manteuffel arrived at Dresden from Berlin on Monday night, and was received next morning by the King. He subsequently had a long interview with Baron von Beust. The object of General Manteuffel's visit was to make arrangements with the Saxon Government relative to the position of the Saxon and Prussian troops in Holstein. His mission has however failed, and he has now returned to Berlin. Baron von Beust left on Tuesday evening for Würzburg.

BAVARIA.—The Conference of German Ministers summoned by Bavaria was opened on Thursday at Wurzburg. The kingdoms of Saxony, Hanover, Wurtemburg, and Bavaria, the two Hesses, Saxe-Weimar, Nassau, and Baden, were represented. The programme to be adopted includes decision upon common action in the two following cases:—

1. Provided the reception of the Duke of Augustenburg's representative at the Diet should encounter obstacles from members of the Confederation. 2. Provided the occupation of Schleswig by the great German Powers should not effect the separation of that province from Denmark.

The Bavarian Government further desires, though with no prospect of success, to arrange a mutual obligation to recognise the Duke of Augustenburg.

FRANKFORT.—The *Presse* of Thursday says that the great German Powers have addressed a note to the minor States, declaring that they do not recognise the

necessity of a Federal reserve being stationed in Holstein. Should such a want arise the great Powers would place at the disposal of the Diet a sufficient reserve for execution purposes. At the sitting of the Federal Diet on Saturday the representative of Oldenburg brought in a motion referring to the march of Prussian troops through the principality of Lübeck, in spite of the protest of the authorities. The motion was appointed to be debated at the next sitting of the Diet. Notice was received from General von Hake, commanding the Federal troops in Holstein, and from the Federal Commissioners in that duchy, of the occupation of Altona by two battalions of Prussian troops. Protests were handed in by various members against the occupation of Altona by Prussian troops. The Saxon representative complained that the measures adopted were in direct contradiction to the express promises of Austria and Prussia, and without the consent of the Diet. He moved that these promises should be fulfilled, the authority of the Confederation be secured, and that the reserves (Austria and Prussia) which had left the Army of Execution should be replaced by the Federal troops. The Austrian and Prussian representatives declared that the promises made should in no way be infringed by the Prussian occupation. The explanations of Austria and Prussia upon the subject, the protest referring thereto, and a motion of Saxony on the matter, were referred to the united committees upon the affairs of Holstein. In the sitting of Thursday it was resolved that an embargo should be placed on Danish shipping in German ports, in consequence of the embargo laid by the Danes on German shipping not belonging to Austria and Prussia. The Diet also decided to appoint a committee to examine the complaint made by the Grand Duke of Oldenburg against Prussia for infraction of territory. The members of the committee will be elected at the next sitting.

PRUSSIA.—The *Neue Preussische* (Kreuz) *Zeitung* of Saturday says:—

"The expectation we expressed yesterday that the proposition of England, France, Russia, and Sweden for an armistice, leaving Alsen to the Danes, would not find acceptance here, is confirmed."

Adjutant-General Manteuffel has arrived in Berlin from Dresden, having failed in his mission to the Saxon Government. The King gave audience on Saturday to the Kiel Professors Forchammer and Behn, in the presence of M. von Bismark. It is stated on good authority that the 6th Army Corps is about to be mobilized. It will be quartered in Lausitz.

AUSTRIA. — In the Upper House of the Reichsrath on Saturday a debate took place on the credit demanded by Government to cover the expenses of Federal Execution. Cardinal Rauscher and Count Hartig advocated the maintenance of the London Protocol. They declared that it must be respected similarly to other treaties. Both speakers considered that Germany should be thankful to the great German Powers for undertaking the occupation of Schleswig in the interests of European peace. Count Rechberg asserted that the credit already granted would suffice, as nothing more was to be apprehended in Schleswig from the enemy. The Lower House at its last sitting consented that 40,000,000 florins should be provided by loan towards the expenses of 1864. The session was closed on Monday by the Emperor in person. His Majesty delivered a Speech from the Throne, of which the following is a summary:—

"In these eventful times I was desirous of seeing the representatives of the country before the close of the Session. I have derived particular satisfaction from the presence of the Transylvanian deputies in the Reichsrath. I have also observed with real pleasure the material and intellectual progress made by Austria during the past Session. The distress in some parts of Hungary has filled my heart with grief. I am thankful for the support and sympathy I have received from the whole monarchy. Although the Session has not been remarkable for the work accomplished, it has not been unfruitful, some important Bills having already been sanctioned. Eastern Galicia and the Bukowina will have the advantage of railways, and a line will also be constructed in Transylvania. The Financial Law has been passed, and the increase of taxes and dues for the extraordinary wants of the State has been agreed to by you. Financial reforms are reserved for the next Session. Most serious events have directed our attention to the state of affairs abroad I have neglected nothing in order to maintain the precious blessing of peace. The mission of Austria is to be strong against any attack, but to raise the voice of peace in the council of nations. Our friendly relations with the great Powers of Europe promise the complete attainment of this object. The crisis which for years threatened to occur between Germany and Denmark has resulted in war, notwithstanding the endeavours of my Government to exercise a conciliatory influence. In conformity with the vote of the Federal Diet, I have, as a German Prince, taken part in the Federal execution, and, in concert with the King of Prussia, the Duchy of Schleswig has been occupied as a pledge. The excellent conduct and bravery of the allied armies have achieved brilliant results. My joy on this account does not spring from ambition and love of conquest, but from the attainment of the just objects which are known to Europe. I confidently hope that the results achieved will secure a happy future to countries the rights of which have long been violated, and will not endanger the peace of Europe in a more extended sphere. Austria has shown that in her rejuvenated form she preserves her good old spirit, and that the inheritance of her strength and glory abides with her on the new path of liberty which she has entered."

ITALY.—The King and Ministers have returned to Turin. The stay of the King in Milan was one long prolonged course of festivity. The Italian Parliament resumed its sittings on Monday, and commenced the discussions of the Bill relative to the taxes on landed property. In the Chamber of Deputies on Tuesday, Signor Sineo expressed regret at the condition of the Italians serving in the Federal army who had been taken prisoners by the Confederates, and asked if it were not possible to obtain their release. The Minister of Foreign Affairs replied that he could not employ official means, the Government of the South being unrecognised. He would, however, use other means to obtain their liberty or ameliorate their condition. The reports of armaments and levies being carried on are confirmed. The Minister of the Interior has issued orders to the Prefects to push on the armament of the National Guards. Large quantities of material of war continue to be forwarded to Ancona and Bologna. General Cialdini has had several audiences of the King, and Admiral Persano has been summoned to Turin. It is thought that a squadron will soon receive orders to proceed to the Adriatic.

CAPE OF GOOD HOPE.—The Confederate cruiser Tuscaloosa was seized in Simon's Bay on the 27th Dec. by Admiral Sir Baldwin Walker, in accordance with special instructions from the English Government, the alleged ground for doing so being that she was still an uncondemned prize. She is detained until she is claimed by her owners. Her commander has made a protest against the capture. The Duke of Newcastle's reply to the petition of the inhabitants of Cape Town on the subject of alternate parliaments in the colony had been made public. It approves of the Governor assembling the next Parliament in Graham's Town. The inhabitants were making preparations for securing a full representation during the whole of the session.

NEW ZEALAND.—The victory of the military and naval forces at Rangiriri has been followed by the occupation of the Maori capital. General Cameron has telegraphed to the Governor that the Queen's flag is flying at Ngaruawahia. A division under his command was conveyed up the river in the Pioneer, and landed at Ngaruawahia without opposition or seeing any natives. A salute of 21 guns was fired in Auckland in honour of the event.

UNITED STATES.—Mr. Lincoln, under date of the 1st inst., has ordered a draught for 500,000 men to serve for three years, or during the war, to take place on the 10th of March. From this number are to be deducted all volunteers and draughted men not accredited upon any other call. The proclamation has taken the public by surprise, and is asserted to have been rendered imperatively necessary by recent news received from the South, or by the probability of a war with France and England. The news from East Tennessee continues to be contradictory, but is evidently of a nature to alarm, if not embarrass, the Government. Despatches from Russellville of the 27th ult. to the Richmond journals state that the Federals evacuated Tazewell on the previous day and retreated to Cumberland Gap. The Confederates occupied the town immediately afterwards. General Forster, at his own request, was relieved from the command at Knoxville on the 28th. General Schofield has been ordered to succeed him. Southern advices from Longstreet's army to the 30th state that General Martin attacked the Federals on the 28th, and after a stubborn fight drove them from the field. The Federals retreated in the direction of Sevierville. The Confederates under General Early, in Western Virginia, have resumed activity. On the 30th a Federal commissary train of 80 waggons, proceeding to Petersburg, was captured after a severe fight, lasting four hours. Petersburg was evacuated by the Federals on the night of the 30th, and was occupied by General Early on the following day. Burlington was also occupied by the Confederates on the afternoon of the 1st. The Federal outposts at Batchelor's Creek, North Carolina, were attacked on the same day, and driven back to Newbern with the loss of 100 men and a battery of artillery, besides the destruction of their camps and stores. Simultaneously an attack was made upon the Federals south of the Trent River, but was repulsed. On the 4th the Federal General Early made a stand at Moorfield. Six hours' skirmishing ensued, at the end of which time the Confederates fell back to the south fork of the Potomac, followed by the Federals. The Confederates advanced to Newbern, North Carolina, and took possession of the railway to Moorhead City on the 2d inst. On the same day they captured and destroyed the gunboat Underwriter. They also made a raid along the Baltimore and Ohio Railroad, burning the bridges across the Potomac at the north branch of Patterson's Creek. The Federals drove them off and pursued them with cavalry, and the railroad is again in working order. The Confederates also burnt the steamer Levi, running between Gallipoli, Ohio, and Charlestown, Western Virginia, capturing General Scammor, who was on board. They have since retired from Burlington and Newbern, and both towns are again occupied by the Federals. The *Nashville Union* says that the Federal army has crossed the Tennessee River, near Larkinsville, and surmises that its object may be to attack Rome, Georgia. The steamer Flambeau, from Charleston on the 1st inst., reports the bombardment of the city to be still in progress, but that as yet there is little evidence of its destructiveness. The recent shelling of Fort Sumter was in consequence of the discovery that the Confederates had remounted five guns in the fort, and were opening embrasures through the rubbish for their service. Confederate despatches of the 31st ult. state that no damage of consequence had been done to the fort. The *Tribune* asserts that General W. F. Smith will probably succeed General Meade in the command of the army of the Potomac. The House of Representatives has passed the confiscation resolution by 82 to 74 votes. By this resolution the lands of the Confederates may be confiscated in fee, and not merely for life. The *Boston Advertiser* of the 30th ult. states that the Secretary of the Navy has ordered a court of inquiry to assemble at Boston for the purpose of investigating the charge against the master's mate of the Vanderbilt for shooting Mr. Gray, of the Saxon, after the capture of the vessel. All officers and men who witnessed the occurrence are ordered to attend the trial. The perpetrator says that the affair was accidental. The judge of the Admiralty Court, at Halifax, has decided to restore the Chesapeake and cargo to her owners, subject to conditions respecting the payment of such expenses as the Attorney-General may exact. The Attorney-General demands a surety against latent claims, but the owners of the Chesapeake demur to this. The steamer Rosita has been captured off Tortugas. The A. D. Vance was run ashore off Wilmington to prevent her capture, and has become a total wreck.

Parliament.

HOUSE OF LORDS.

MONDAY.—*The American Despatches.*—Earl RUSSELL, recurring to the seizure of the steam rams at Birkenhead, and the remark of the Earl of Derby on a former evening that the conduct of the Government had been influenced by the remonstrances contained in Mr. Adams's notes of the 4th and 5th of September, said that so far from that being the case, the decision to prevent the departure of the rams was taken on the 3d of that month, and that if Mr. Adams's language had been of an intemperate character, he should not have taken that course. With regard to the threat of Mr. Seward to follow certain vessels into British ports, if ever made, it had not been communicated to him. — The Earl of DERBY wished to know how it was that no steps had been taken to detain the rams until the 8th of September. He also thought that some explanation was due from the American Government of the extraordinary circumstance that a despatch purporting to be addressed to her Majesty's Government had been laid before Congress, although it had never been delivered. — Earl RUSSELL replied that the question of the steam rams was under consideration from the 3d until the 8th of September, and a correspondence ensued with Messrs. Laird respecting it. With reference to the despatch of Mr. Seward, it was a matter that affected the conduct of the Federal Government towards Congress and the people of the Northern States rather than her Majesty's Government. *The Danish Duchies.* — Lord CAMPBELL called attention to the treaties and conventions by which the possession of Schleswig was guaranteed to Denmark in 1715, 1720, 1726, and 1848, and said that if it could be shown that Great Britain was bound by treaties as well as by policy to guarantee the possession of Schleswig to Denmark, it might have some effect in leading to the earlier restoration of peace. He contended that the Treaty of 1852 did not supersede or annul previous treaties, and that the maintenance of the Danish monarchy was essential to the balance of power in Europe. —Earl RUSSELL said it would be rash for the Government to come to any positive judgment upon such important questions without the most careful examination. That examination had been given; but it would be injudicious at the moment to state the opinion at which they had arrived. The relations of Austria and Prussia with Denmark were very differently affected to those of the other German Powers, some of whom, and especially Bavaria, had declared that they thought the Prince of Augustenburg was entitled to be acknowledged as Duke of Schleswig and Holstein; and it followed from that that they would endeavour to put him in possession. On such an attempt being made, however, it would also follow that England must declare whether or not she felt bound by the Treaty of 1720; and if so, it would be her duty at once to go to the support of Denmark. With regard to Austria and Prussia, their identical communication of the 31st of January distinctly asserted that they did not contemplate the dismemberment of Denmark; but, on the contrary, that they had entered Schleswig to maintain the integrity of the Danish monarchy; and that the very cause of their entrance was to obtain the fulfilment of engagements which the King of Denmark had undertaken as Duke of Schleswig, and in no other capacity. In this difficult and complicated state of affairs they had gone to Schleswig to hold it as a material guarantee, and he thought it was desirable to endeavour to settle all these questions by pacific means rather than resort precipitately to anything in the nature of a threat founded on the guarantee of 1720. Austria and Prussia were conscious, as indeed all the principal Powers must be, that the Duchies could not be transferred to any other Power than the King of Denmark without the general concert and assent of all the great Powers. He admitted that the Government must make up their mind with the best advice they could obtain as to the binding nature of the treaty of 1720; but for the sake of the peace of Europe everything that could be done by conference and negotiation ought to be done before any step was taken which might produce an attitude of hostility between any of the great Powers of Europe.

TUESDAY.—The LORD CHANCELLOR, in laying upon the table returns relating to the working of the *Augmentation of Benefices Act*, stated that proposals had been accepted for the sale of 67 livings in his gift, and that of these 37 had been actually sold for £65,300*l*. Negotiations for the sale of 53 more were under consideration. *Seizure of British Ships.*—The Earl of CARNARVON moved for a return of the claims of three British subjects upon the Government of the United States since the secession of the Southern Confederacy. He said that great allowance ought to be made for the position of the American Government, and he had no wish to prejudice any of these cases; still there were many cases in which great hardship had been inflicted upon innocent persons, and it was the duty of her Majesty's Ministers to see that they were fully compensated. There were other cases in which vessels, engaged in legitimate commerce, had been seized in a manner altogether unwarranted by international law. It was, therefore, a mistake to allege that if the positions of the two countries were reversed the United States would be bound by these precedents. He thought that explanations were necessary with regard to the ship Saxon, the circumstances under which her chief mate was killed, the seizure of the Confederate cruiser Tuscaloosa at the Cape, and the several claims which had been made upon this country for damage inflicted on Federal ships by the Alabama and other vessels of that character, the amount of which he calculated at 2,500,000*l*. Unfortunately the Federal States had so identified themselves with these demands that they would be unable to resist the pressure which would be put upon them to insist on their being satisfied.—Earl RUSSELL expressed himself willing to furnish the returns asked for, though if they were printed they might somewhat prejudice the claims.

With regard to the Saxon, she was captured in foreign, not British, waters, on the charge of having received part of her cargo from the Alabama. As to the murder of Mr. Gray, the mate of the Saxon, all the Government could do was to demand that the offender should be brought to trial for murder. That they had done, and the man had since been put on his trial. With reference to the Tuscaloosa, the law officers of the Crown had given their opinion that she ought to be detained on entering a British port, and she had been seized accordingly. He repudiated all responsibility on behalf of the Alabama, and on such a question no Government could consent to arbitration. Considerable irritation not unnaturally prevailed in the Federal States owing to the proceedings of the Alabama, and her Majesty's Government therefore preferred waiting until calmer feelings had come over the public mind. In the meantime the Federal Government said they would continue on terms of friendship with us, and he hoped that on further consideration they would modify their views.—The Earl of CARNARVON having stated he did not want the correspondence, the motion for returns was agreed to.

THURSDAY.—*The Danish Duchies.*—Lord HOUGHTON presented a petition from Manchester against any interference by England in the German and Danish war.—Earl POWIS asked whether any steps would be taken, in the present year, to provide a proper *Museum and Library of Patents.*—Earl GRANVILLE was not, at present, prepared to give an answer to the question, but the subject was under consideration.—The Earl of ROMNEY called attention to the present state of the law with regard to the *Removal of Clerks of the Peace*, and asked whether the Government would consider the subject with a view to amend the law.—The LORD CHANCELLOR admitted, from the manner in which Clerks of the Peace were appointed, that there was a difficulty in removing them for misconduct in private life. The grounds of removal must be misbehaviour in their office. He would confer with the Secretary of State as to the means of remedying the defect of the law.—Lord CRANWORTH suggested that these officers should be removable on an address from the magistrates in Quarter Sessions—a proceeding analogous to an address from the Houses of Parliament in the case of the judges.

FRIDAY.—*The Cranley Court-martial.*—Lord COLVILLE gave notice that on Monday he would ask a question touching the conduct of the Judge Advocate in reference to this Court-martial, *The Irish Church.*—The Archbishop of ARMAGH moved for various returns connected with the Irish Church. The motion was agreed to.

HOUSE OF COMMONS.

FRIDAY.—*Capture of British Vessels.*—Mr. S. FITZGERALD called attention to the recent capture of British vessels by Federal cruisers, viz., the Springbok and the Science, captured at Matamoras; the Margaret and Jessie, and the Saxon, captured within the jurisdiction of the colony of the Cape of Good Hope. He detailed the circumstances under which the vessels were captured, and dwelt especially on the murder of the mate of the Saxon, when unarmed and unresisting, by a Federal lieutenant, declaring that if all Earl Russell had done in the matter was to express an opinion to Mr. Seward that the offending lieutenant ought to be put upon his trial for murder, such conduct was utterly unworthy the Government of Great Britain. In conclusion he moved for papers.—The ATTORNEY-GENERAL stated that the evidence in reference to the Springbok and Science was conflicting, but that the correspondence of the Federal Government showed that they were not insensible of what it was incumbent upon them to do in the event of the evidence being against them. The principle, whether right or wrong, upon which the Federal prize courts had proceeded was precisely similar to those which had governed our own courts during our war with France. With regard to the Saxon, Captain Baldwin, who commanded the Federal cruiser, had expressed his deep regret at the outrage committed by one of his officers on the mate of that vessel, and Lord Lyons had informed Mr. Seward that if the facts, as represented to Her Majesty's Government, were correct, the offender ought to be put on his trial for murder. As all the questions in reference to the seizure of the vessels were still subject of litigation, it would not be consistent with the public service to produce them at present.—Lord R. CECIL expressed his opinion that the statement of the Attorney-General would not give satisfaction to the mercantile community. It appeared to him that the policy of the Government on many recent occasions was humiliating to this country, whose character as a nation was rapidly falling.—Colonel SYKES, Sir J. ELPHINSTONE, and Mr. C. BENTINCK spoke strongly against what they termed the apathy and timidity of the Government in not putting greater pressure upon the Federal Government to prevent a recurrence of outrages upon British shipping.—Mr. CRAWFORD denied that Lord R. CECIL had any claim to represent the opinions of the mercantile classes on this subject. Their views in reference to contraband trade were very different from those of the noble lord.—Lord J. MANNERS questioned very much whether Mr. Crawford himself was the exponent of the mercantile classes. He complained of the want of vigour on the part of the Government in repelling Federal outrages, and said that a feeling was growing up in our colonial dependencies that the Government was not so alert as it ought to be.—Lord PALMERSTON denied the charge that the Government was in the habit of bullying the weak and succumbing to the strong. They were always prepared to assert the rights and the dignity of the country. They had no reason to distrust the equity of the tribunals of the United States, and that Government had invariably received our representations with fairness.—After a few remarks from Lord LOVAINE, Sir J. WALSH, the SOLICITOR-GENERAL, and Mr. MALINS, Mr. FITZGERALD withdrew his motion. The House went *pro formâ* into a Committee of Supply. The report on the *Bank Acts* (*Scotland*) was brought up and agreed to, and leave was given to bring in a Bill. *Sir John Lawrence's Salary Bill* passed through Committee. Mr. HUNT obtained leave to bring in a Bill to amend the law relating to *Election Petitions.* Sir R. PEEL obtained leave to bring in a Bill to abolish *Vestry Cess in Ireland.* In committee of the whole House, Mr. DODSON obtained leave to bring in a Bill to provide for the abolition of *Certain Tests in connection with Academical Degrees* in the University of Oxford.

MONDAY: *Government Measures.*—In answer to questions from Viscount ENFIELD and Mr. CAIRD, Sir G. GREY said it was in the contemplation of the Government to introduce a measure with reference to the *Employment of Children*, another in relation to the *Herring Fishery of Scotland*, and another for the better protection of the *Metropolis from Fire.*—In reply to Mr. W. EWART, the Marquis of HARTINGTON said that three officers had been deputed to investigate the efficiency of all improvements and alterations in the *Artillery in Use in North America*, and report thereon. *The Armistice.*—Mr. DISRAELI asked whether the Government had received any answer from the German Powers as to the proposition of an armistice in Denmark.—Mr. LAYARD replied that an answer had been received, but that it was not of a satisfactory nature; and that her Majesty's Government had no reason to believe that an armistice was likely to be agreed to at present.—On the motion for the second reading of the *Insane Prisoners Act Amendment Bill*, Mr. G. HARDY criticised the measure as in some respects unequal to deal satisfactorily with the state of circumstances to which it was to apply. He suggested that whenever the visiting justices of a gaol expressed an opinion that a prisoner was insane, the Secretary of State should appoint a committee, who should institute an inquiry into the facts, and who should publicly report the result, and that, whatever that result might be, it should be binding upon the Secretary of State.—Mr. MACDONOGH said that the effect of the passing of the Bill would be to assent to the construction put on the existing statute by the Secretary of State; and that consequently the words "it shall be lawful" would be absolutely mandatory.—Sir C. O'LOGHLEN, while prepared to give his assent to the Bill, deprecated patchwork legislation, and recommended that clauses should be introduced in committee to extend the measure to the whole of the United Kingdom.—After some remarks by Mr. SCOURFIELD, Mr. W. D. SEYMOUR, Mr. HUNT, Lord ENFIELD, Mr. M. SMITH, Mr. EVANS, Sir G. BOWYER, Sir F. GOLDSMID, and Sir W. JOLLIFFE, Sir F. KELLY expressed his hope that capital cases would not be included in the Bill at all, and that in any case where insanity was suggested it should be sufficient to report or represent to the Secretary of State or the visiting justices that a prisoner was supposed to be insane in order to secure a proper inquiry.—Sir G. GREY answered the various objections and suggestions which had been made in the course of the debate, and said that in his opinion the inquiry ought not to be by medical men exclusively, but that it would be more advisable to leave the responsibility to the Secretary of State to order an inquiry in cases in which there was fair ground for believing that a prisoner was insane. The law respecting criminal lunatics was not in a satisfactory state in Scotland and Ireland, but at present he thought it inexpedient to extend the Bill to those parts of the United Kingdom. The Bill was then read a second time.—The *Conveyancers (Ireland) Bill* was read a second time.—On the order of the day for the second reading of the *Malt for Cattle Bill*, Sir H. STRACEY thought the Bill a harmless and innocent measure, intended by the Chancellor of the Exchequer as a sop to the agricultural Cerberus.—Mr. BENTINCK contended that the Bill would not allay the agitation against the malt duty, and that as a boon to the landed interest it was simply absurd.—Mr. BRISCOE, on the contrary, was of opinion that the agricultural classes would hail the measure as a valuable concession, and as an admission of the injustice so long inflicted on them.—Mr. PACKE regarded the measure as a mere trifle when compared to the burdens which the landed interest had to bear.—Sir E. DERING considered the Bill a great boon to agriculture.—Mr. MORRITT expressed his opinion that a free-trade Chancellor of the Exchequer might forego two-fifths of the malt tax, and yet not lose any revenue. He believed that the measure, so far from being a step in the right direction, could never be carried out without fraud.—Mr. R. LONG bore testimony to the good faith with which the Chancellor of the Exchequer had redeemed his promise with reference to allowing the use of malt for feeding cattle, but recommended the right hon. gentleman to see whether he could not reduce the malt tax at once.—Lord R. MONTAGU was willing to accept the Bill as a substantial instalment of justice. The only blemish in the measure was the unavoidable interference of the exciseman on the premises of the farmer.—Sir F. CROSSLEY doubted whether the repeal of the malt tax would be really advantageous to the farmer, for the immediate result would be the introduction of inferior qualities of barley to compete with our own produce.—Mr. HENLEY, though admitting that it was ungracious to look a gift-horse in the mouth, could not help giving his opinion that the Bill would not solve the vexed question as to whether malt was beneficial or not for the feeding of cattle.—Mr. DUTTON feared that in practice the measure would become a dead letter.—After a few words from Sir F. KELLY, the CHANCELLOR of the EXCHEQUER said that the report of the experiments made under the superintendence of Government agents would be produced as early as possible. He did not anticipate any magical effects from the measure, nor could he hold it out as an instalment or a step in the direction of the abolition or reduction of the malt tax. The Bill was then read a second time. *The Collection of Taxes Bill* and the *Government Annuities Bill* were read a second time.—In the Committee of the whole House the CHANCELLOR of the EXCHEQUER obtained leave to bring in a Bill to amend the laws relating to the *Warehousing of British and Foreign Spirits Duty free.* Certain other Bills were brought in.

TUESDAY.—The House was occupied for some hours in debating motions for the second reading of opposed *Railway Bills*, which however, were eventually agreed to. *Private Bill Business.*—Mr. M. GIBSON moved a series of resolutions empowering the Committee of Selection and the General Committee on Railway and Canal Bills, after committal of such Bills, to refer them to the chairman of the Committee of Ways and Means, who, together with the Committee on Unopposed Bills, shall hear the parties promoting or opposing such Bills, and report to the House; fixing the scale of fees to be paid by promoters and opponents; authorising the Speaker to revise the list of charges for Parliamentary agents and solicitors; ordering that copies of the minutes of evidence on opposed private Bills be printed at the cost of the parties requiring it, and directing that Private Bill Committees should meet at 11 o'clock in the forenoon.—Lord R. CECIL moved an amendment to the first resolution, that the duty of ascertaining the facts upon which legislation in respect to private Bills was to proceed should be discharged by some tribunal external to the House. He regarded the general scheme of the Government as a step in the right direction, but only at a snail's pace. He complained that the general conduct of private business was tedious, costly, and inefficient, and that Parliament was in the main responsible for the enormous preliminary expenditure incurred by railway companies, together with all the evils consequent upon it. The amendment was seconded by Mr. PAULL.—Mr. GIBSON opposed the amendment, contending that, so far from meeting the evil, it would tend to aggravate it by instituting another tribunal, the decisions of which would not be final. After some discussion, in which Lord H. VANE, Mr. MASSEY, Colonel WILSON PATTEN, Mr. B. CARTER, and other members took part, the amendment was withdrawn, and the first resolution was carried. The subsequent resolutions relating to the fees to be paid by the promoters of private bills, and the charges to be allowed to Parliamentary agents, solicitors, &c., led to a lengthened debate, in the course of which the fees paid to counsel practising at the Parliamentary bar were brought under review.—Mr. M. GIBSON stated that the subject of the excessive fees now payable to counsel for attending committees was under the consideration of the Parliamentary bar, with the view of making them more conformable to those paid in the courts of law and equity, and he hoped that a considerable modification would take place. He then moved a resolution to the effect that committees on private bills be in future ordered to meet at 11 o'clock, instead of 12, as at present.—Lord R. CECIL protested against the proposition, which he described as cruel and inhuman to those members who had private business to attend to in addition to lengthened attendance in Parliament, often protracted until a very late hour of the night.—Colonel W. PATTEN approved of the proposition, but expressed his opinion that it would be most unpopular in the House.—Sir S. NORTHCOTE suggested that the rule should be relaxed which provided that committees should rise at a quarter to 4 o'clock, when the Speaker took the chair. After some further discussion, Mr. M. GIBSON withdrew the motion, in deference to the feeling of the House.—Mr. F. D. FORTESCUE gave notice that he would, on the 15th of March, call attention to the *Court Martial on Colonel Crawley*, and move for papers.—Mr. H. B. SHERIDAN gave notice of his intention to move on an early day for leave to bring in a Bill to reduce the *Duty on Fire Insurances.*—Mr. M. GIBSON obtained leave to bring in a Bill to facilitate, in certain cases, the obtaining of powers for the *Construction of Railways*; and also a bill to facilitate, in certain cases, the obtaining of further powers by railway companies.

WEDNESDAY.—M. LAIRD moved the second reading of the *Chain Cables and Anchors Bill*, the object of which was the protection of the property of shipowners, and of the lives of crews and passengers in merchant and emigrant ships, by making the manufacturers of chain cables and anchors responsible for their efficiency. The Bill had received the approval of Lloyd's committee, of the London Shipowners Society, of the Peninsular and Oriental Company, and of the great shipping firms throughout the country.—Sir J. ELPHINSTONE seconded the motion.—Mr. HUTT said that the Government would not oppose the second reading, but some important alterations would have to be made in committee.—Alderman ROSE, Mr. BENTINCK, and Mr. HORSFALL supported the Bill.—Mr. LINDSAY said that the measure in its present shape would prove destructive to the interests of small manufacturers by throwing the trade into the hands of the large manufacturers in Scotland and in Wales.—After a short discussion, in which Mr. CAVE, Mr. LEFEVRE, and Mr. HASSARD took part, the Bill was read a second time. *Union Rating.*—Mr. BERNARD moved for leave to bring in a Bill for a more equitable distribution of the charge on landed property for the relief of the sick and destitute known by the name of poor's rate. He said that its object was to substitute union rating for parochial rating.—Mr. COX seconded the motion.—After some remarks by Mr. PACKE, Mr. WARNER, and Sir B. LEIGHTON, Mr. VILLIERS said he was not disposed to oppose the introduction of the Bill. It would, however, involve a change in the law of settlement and a revaluation of rateable property.—Mr. HENLEY said that the effect of the Bill on the cottages question would be the very reverse of what was expected; for proprietors of land would be driven not to increase but to lessen the number of cottages on their estates. It would not only make the condition of the poor worse, but, by shifting the burden, persons would take steps to recoup themselves as well as they could, and eventually a cry would be raised, which it would be impossible to resist, for the adoption of a national rate. Such an alteration of the law would, in his opinion, be a great curse to the poor.—Mr. BARROW condemned any attempt to introduce the system of union rating.—Mr. BERNARD withdrew the motion, in the hope that the Government would themselves bring in a measure on the subject.

THURSDAY.—Sir R. PEEL moved the second reading of the *Vestry Cess Abolition (Ireland) Bill*, and stated that the object of the Bill was to take away the power of making assessments from parish vestries. He thought the measure a wise one; that it would promote harmony and good feeling and banish contention in parish vestries. After a short discussion the Bill was read a second time.—Sir G. GREY moved for leave to bring in a Bill to amend the *Penal Servitude Acts.* The Bill, he said, was founded upon certain recommendations of the Commissioners appointed about a year ago to inquire into the operation of the Acts under which sentences of penal servitude were passed, and into the mode in which they were carried into effect. The Commissioners had recommended that sentences of penal servitude should not be for a shorter period than seven years, and that certain of the male convicts should be sent to Australia. This suggestion, however, had awakened so much alarm and opposition in those colonies that her Majesty's Government thought that, under all the circumstances, it would be undesirable, for the sake of a remote advantage (while asserting the undoubted right of the Crown), to enter into a contest with the colonies and to insist on doing what was distasteful to them. The Government had thought it expedient to adopt five years as the *minimum* term of a sentence of penal servitude. Another recommendation in favour of remissions of parts of sentences, as a reward for good conduct, had been dissented from by the Lord Chief Justice, but he thought the preponderance of the evidence was in favour of the principle; the Government, therefore, thought that it would not be expedient to alter the existing practice of granting licences, revocable in cases of misconduct. Another recommendation related to the consequences that should attach to a breach of a licence, and the Bill specified the conditions which they proposed to annex to the grant of licences. He explained, in conclusion, some of the minor details of the Bill.—Mr. ADDERLEY objected to the continuance of tickets of leave.—Mr. NEWDEGATE and Lord NAAS deprecated the abandonment of transportation, at the dictation of the colonists.—Sir J. PAKINGTON, Mr. WALPOLE, and other members gave their cordial approbation to the Bill. After a short reply from Sir G. GREY, leave was given to introduce the Bill.—Mr. W. EWART obtained leave to bring in a Bill to render permissive the use of the *Metric System of Weights and Measures* in this country.

FRIDAY.—*Germany and Denmark.*—In answer to Mr. NEWDEGATE, Lord PALMERSTON said that no doubt the entrance into Jutland by the Austrian and Prussian troops would be an aggravation of that violent outrage which, in the opinion of the British Government, they had committed, involving a great sacrifice of life and shedding of blood, for which those two Governments were responsible. As to the course her Majesty's Government had taken, he was quite sure that he would not be considered guilty of any want of respect if he declined to give an answer pledging the Government to any future course of action. *The Northern Circuit.*—Sir J. HAY moved an address to the Queen, praying her Majesty to nominate the town of Wakefield as the assize town for the West Riding.—Mr. LEATHAM seconded the motion.—Sir G. GREY opposed it on the ground that the matter rested with the Queen in Council.

[Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅜ to ¼ for Money, and 91⅜ to ½ for Account; Three per Cents. Reduced, 91⅜; New Three per Cents., 91¼ to ⅜; Annuities, 1885, 14 15-16; Red Sea Telegraph, 20½; Bank Stock, 237; India Stock, 219; Ditto Five per Cent. Stock, 104¼ to 104; Ditto for Acct., 101⅜; Ditto Bonds, 9*s.* to 2*s.* dis.; Exchequer Bills, 7*s.* to 1*s.* dis.—FOREIGN: Brazilian, 1863, 86⅞ to 87; Ditto Scrip, 1 dis.; Egyptian, 104; Greek, for Acct., 24⅛ to 24⅜; Ditto Coupons, for Acct., 11⅛ to 11; Mexican, for Acct., 42 to ¼; New Granada, 14¼; Ditto Deferred, 9¼; Portuguese, 1856, &c., 47½; Russian, 1859, 56; Ditto 1862, 89 to ½; Sardinian, for Acct., 83½; Spanish, for Acct., 52⅜; Ditto New Deferred, for Acct., 46; Ditto Passive, for Acct., 34⅛ to 33⅞; Ditto Certificates, for Acct., 14⅛ to 13⅞; Turkish 1858, for Acct., 71¼; Ditto 1862, for Acct., 69; Ditto 100*l.* Bonds, 69⅜.

Gazette of the Week.

FRIDAY, *Feb.* 12.—BANKRUPTS.—T. ADAMS, Hanley, Butcher—J. BARTON, Dunham-o'-the-Hill, Cheshire, Builder—J. BARRON, South Killingholme, Lincolnshire, Draper—A. BAINES, Stamford, Lincolnshire.

Dyer—G. BRAYSHAW, Kentish Town Road, Kentish Town, Tailor—G. J. ST. JOHN BASTFORD, Leadenhall Street, City, Ship and Insurance Broker—I. BENN, Bradford, Yorkshire, Packer—J. BROMILEY, Wolstanton, Staffordshire, Publican—J. R. CORKER, Holbeck, Yorkshire, Carriers' Clerk—T. CROSS, Ilkeston, Staffordshire, late Bootmaker—D. CAMPBELL, Liverpool, Master Porter and Stevedore—H. CARTER, J. BENTLEY, and G. [illegible], Sheffield, Yorkshire, Ironfounders—G. CHANDLER, Victoria [illegible], Lambeth, Carman—G. COWARD, Sheffield, Corn Miller—R. COTTON, Acton, Cheshire, Cordwainer—G. CARR, Chamber Street, Whitechapel, Gunmaker—AMBROSE DEAN, Kidsgrave, Staffordshire, Grocer—JOHN THOMAS DIXON, Great St. Helen's, City, Wine Merchant—W. H. DIXON, late Woollendraper—G. DAWES, Knaresborough, Yorkshire, Farmer—B. EVANS, Leeds, Grocer—J. HANCOCK EVANS, Hereford, Architect—J. FORSTER, Carlisle, Butcher—S. GARRATT, Lutchurch, Derbyshire, Butcher—J. H. GOWLETT, Cardiff, Glamorganshire, Attorney-at-Law—G. [illegible], Plumstead, Kent, Bootmaker—J. G. GARRARD, Harlow, Essex, Maltster—J. GIBSON, Halifax, Yorkshire, Butcher—J. HUGHES, [illegible], Kensington Lane, Accountant—G. HEATHCOTE, Devonshire Place, Commercial Road, Builder—T. HARRIS, late of Oxley Villas, Upper Holloway, Builder—J. HALL, Newcastle-upon-Tyne, Joiner—J. P. JOHNSON, Bread Street, Cheapside, Warehouseman and Commission Agent—J. JONES, Hackney Road, Linendraper—M. KERSLEY, Winston, Suffolk, Farmer—R. LEES, Oldham, Lancashire, Cotton Spinner—D. LEWIS, Gallygare, Glamorganshire, Farmer—THOMAS LAMBERT, Liverpool, Licensed Victualler—E. A. LOVER, Portsea, Hampshire, Shopman to a Tailor—M. LLOYD, Bettws, Monmouthshire, Farmer—E. G. LAMER, Warwick Street, Regent Street, Commission Agent—G. V. LLEWELLY, Cardiff, Boots at an [illegible]—H. MOORE, High Street, Marylebone, Carriage and Railway Lamp Manufacturer—W. H. MULLIS, Old Kent Road, Surrey, Marble Mason—C. MEALES, Gillingham, Dorsetshire, Wine and Spirit Merchant—JONATHAN MARRIOTT, Manchester, Commission Agent—J. PRYER, Ryde, Isle of Wight, Licensed Victualler—S. POWELL, St. Asaph, Flintshire, Joiner and Builder—F. G. PLATT, Manchester, late Commission Agent—W. POULTON jun., Pinner, Middlesex, Beershop Keeper—C. PARRS, Manchester, Greengrocer—G. PERCIVAL, Derby, Boot Maker—B. RILEY, Liverpool, Licensed Victualler—JAMES SWALLOW, late of Oakley Street, Lambeth, Beer Retailer—THOMAS SUTTIE, Colville Place, Fitzroy Square, Calico Glazier—JAMES SIDEBOTTOM, Liverpool, Clerk—ROBERT STRONG, late Grove Terrace, Kennington, Clerk—GEORGE STEAD, Walton, Yorkshire, Shoemaker—H. SANDISON, Settle, Yorkshire, Grocer—W. SWANNEL, Lower Marsh, Lambeth, Butcher—J. STOWERS, Norwich, Tobacco Manufacturer—R. THORPE, Salford, Lancashire, Beerhouse Keeper—W. TOMKINS, Long Buckby, Northamptonshire, Tailor—J. T. TAYLOR, Saundwell, Gloucestershire, Indigo Stone Blue Manufacturer—W. THOMAS, Worcester, late Shoeing Smith—R. THORP, Liverpool, Seed Crusher—S. WILD, Leeds, Yorkshire, Builder—J. WRIGHT, Hartlepool, Durham, Boatmaker—W. WINGFIELD, Brodsworth, Yorkshire, Wheelwright—H. W. WINTERTON, Southminster, Essex, Plumber.

SCOTCH SEQUESTRATIONS.—J. DOUGALL, Kinross, Farmer—A. KIRKLAND, Glasgow, Grocer—J. H. PEACOCK, Gerbity, Elginshire, Farmer—J. A. STEWART, Denny, Grocer.

TUESDAY, *Feb.* 16.—BANKRUPTS.—A. ARNAUD, Great Vine Street, Regent Street, Hotel Keeper—T. ATKINS, Rugby, Warwickshire, Baker—T. ADAMS, Stafford, Licensed Victualler—T. E. BUTLER, Gloucester, Oil and Colourman's Traveller—H. BOMFORD, Peckenham, Worcestershire, Grocer—J. BURNELL, Wakefield, Yorkshire, Fish and Game Dealer—J. T. BRYER, Bristol, Carpenter—W. BOOTH, Halifax, Yorkshire, Stone Mason—J. BROWNBRIDGE, Sheffield, Commission Agent—J. W. BROWN, Dockhead, Labourer—W. BRAY, Cinder Hills, Yorkshire, Butcher and Innkeeper—T. BUDWORTH, Leicester, Cork-cutter—S. BURNLEY, Heckmondwike, Yorkshire, Commission Agent—H. BARTRAM, South Street, New North Road, Islington, Carpenter—E. BIRCH, Hanley, Staffordshire, Working Potter—J. B. CLARK, Haymarket, Lamp Manufacturer—J. CLARKE, Chilvers Coton, Warwickshire, Farmer—J. CHESTER, jun., Dulwich, Butcher—J. CANNELLEY, Sheffield, Spring Knife Cutler—E. B. CHEESMAN, Landport, Hants, Journeyman Butcher—R. C. CULLEN, Edmonton, late Auctioneer's Clerk—J. CAIN, Landport, Hants, late Ironmonger—C. CRAWSHAW, Wandsworth, Surrey, Wheelwright and Smith—A. DEARMER, Caddington, Hertfordshire, Baker—W. DALTON, Fulham, Literary Writer—G. DAVIES, Whittlesey, Northamptonshire, Baker—T. FINCH, Hemel Hempstead, Hertfordshire, Broker—T. D. FRY, jun., Back Road, St. George's East, Paper Stainer—J. FOSKETT, Birmingham, Wood Handle Maker—R. P. GRIFFITHS, Took's Court, Chancery Lane, Law Stationer—G. GALER, Caledonian Road, Greengrocer—J. GOODACRE, Bamber Bridge, Lancashire, Licensed Victualler—A. GRAND, Scarborough, Yorkshire, Fisherman—S. GRADDY, Bootlestown, Lancashire, Farmer—W. HUCKLE, Thanet Street, Burton Crescent, Journeyman Carpenter—S. HARVEY, Great Yarmouth, Fisherman—A. HEPWORTH, Batley, Yorkshire, Stonemason—C. HOLMES, Charton Street, Pimlico, Plumber—E. HUBBARD, Sapper in Royal Engineers—M. H. HODGES, Bristol, Teacher of Music—C. R. HIGGS, Sheffield, Commercial Traveller—J. G. HOLLEMBY, New John's Street, Walworth Road, Journeyman Carpenter—T. H. HIGNELL, late of Caerwent, Monmouthshire—F. HARDY, Blackfriars Road, Widow—J. HITCHCOCK, Leith, Kent, Plumber—J. HARRIS, Cheadle, Staffordshire, Blacksmith—J. JENKINS, Saint-y-Nil, Glamorganshire, Farmer and Shopkeeper—E. JONES, Forest Hill, Commercial Traveller—J. KNIGHT, Lubbenham, Leicestershire, Baker—J. LLOYD, jun., Horsham, Sussex, Watchmaker—M. W. LUDSBURY, Staveley, Derbyshire, Hairdresser—J. LOCKYER, Libra Road, Old Ford, Assistant to a Metal Warehouseman—R. LAIDLER, Monkwearmouth Shore, Durham, Fish Curer—M. J. MATTHEWS, Liverpool, Harmonium Manufacturer—F. M. MULCASTER, Putney—H. MATHEWS, Stratford-upon-Avon, Warwickshire, Professor of Music—P. M'LEOY, Greenfield Street, Commercial Road, late Dairyman—P. MOORE, Garnett Place, Old Bethnal Green Road, Journeyman Packing-case Maker—G. MAVIN, of Gilesgate, Durham, Carpenter and Joiner—E. NASSEN, late of the Scandinavian Hotel, Circus, Minories—G. F. NEWCOMBE, late of Westbourne Park Crescent, Harrow Road, Paddington, Attorney's Clerk—G. TRINFIELD and H. NOCK, Birmingham, Cut Nail Manufacturer—G. W. PEMBERY, Anglesea Road, Woolwich, Grocer and Cheesemonger—T. PAVIET, Ilsworth, Essex, Farm Bailiff—I. POPE, Gloucester, Cabinetmaker—J. RAYNER, Lutterham, Kent, Builder—W. REEVES, Cranley, Surrey, Watchmaker—W. STREET, Wirksworth, Derbyshire, Miner—R. SMALES, Stathes, Yorkshire, Common Carrier—R. SAMPSON, Violet Hill, St. John's Wood, Gas Fitter—J. SQUIRRELL, Norwood, Whitesmith—W. TAYLOR, Barton St. Mary, Gloucestershire, Market Gardener—W. DOBSON THURGUR, Wells-next-the-Sea, Norfolk, Brick and Rope Maker—F. WALLIS, Redhill, Surrey, Plumber—G. WALSHAW, Hunslet, Yorkshire, Journeyman Blacksmith—W. H. S. WARD, Queen's Road, Notting Hill—R. WOOLF, Church Row, Houndsditch, Rag Dealer—C. F. WHITE, Durham, Grocer and Provision Dealer—H. WILLIAMS, Holyhead, Anglesea, Shopkeeper and Provision Dealer.

SCOTCH SEQUESTRATIONS.—E. BROOKS, Kelso, Roxburghshire, Writer—J. W. BECKER, Leith, Ship Broker—G. CRUICKSHANK, Pluscarden, Elgin, Farmer—H. M'MILLAN, Crieff, Carrier—D. REID, Kirriemuir—R. ROBSON and A. ROBSON, Upper Mains, Dumfriesshire, Farmers—A. M. WRIGHT, Glasgow, Cattle Salesman.

Metropolis and its Vicinity.

THE SHAKESPEARE FESTIVAL.—A meeting of the Shakespeare National Commemoration Committee was held on Monday, the Duke of Manchester in the chair, when a report from the site and monument committee was presented by the Right Hon. W. Cowper, M.P., who had acted as the chairman. The report recommended that an architectural monument, open at the sides, and affording opportunity for artistic illustrations of Shakespeare's works, should be erected on the high ground of the Green Park, abutting on Piccadilly. The report was unanimously agreed to, and the Duke of Manchester, the Right Hon. W. Cowper, M.P.; Sir J. Paxton, M.P.; Mr. Tite, M.P.; Mr. Beresford Hope, Mr. Machse, and Professor Donaldson, were appointed an executive committee to carry it into effect. Numerous schemes for raising funds were suggested and approved of.

CITY COMMISSION OF SEWERS.—At a recent Court of Common Council the proposition to allow every member of the Court to sit and vote in the Commission of Sewers, which was defeated at a previous meeting, in consequence of the votes on both sides being equal, was again brought up. A long discussion ensued, but the proposition was rejected by 71 to 63 votes.

THE CONDEMNED PIRATES.—After the statement of Sir G. Grey in the House of Commons on Friday evening, it is now beyond all doubt that the seven men now under sentence of death in Newgate, will be executed in the Old Bailey, in conformity with the sentence. The scaffold is being adapted for the occasion by having 6 ft. added to its length, and it is understood that each convict will be pinioned separately and taken to the place of execution alone.

THE GALES.—From Friday night to Monday night gales prevailed in all parts of England and Scotland, and wrecks are reported from every part of the coast. The storm appears to have raged with the greatest violence on Saturday in the north of England and in Scotland, where great damage was done to house property as well as to shipping.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, Feb. 13, were 1647. In the ten corresponding weeks of the years 1854-63, the average number, corrected for increase of population, was 1452. The present return is therefore 195 above the average. During the week the births of 1009 boys and 996 girls, in all 2005 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 2116.

Provincial.

ABERDARE.—A boiler explosion took place on Wednesday at Aberaman Ironworks, the property of Mr. Crawshay Bailey, M.P. Nine persons were killed and about 14 injured. The damage is said to exceed 10,000*l*.

HAYLE.—The Cornish papers state that a writ has been served upon the prosecutors of Mr. Richard Millett, of Hayle, in the late charge of poisoning at Penpol House. The action will be brought at the next assizes at Bodmin, for false imprisonment and malicious libel, the damages being laid at 5000*l*.

SAFFRON WALDEN.—Mr. Sinclair, the engineer of the Great Eastern Railway Company, has decided upon following the wishes of the Archæological Institute by diverting the line which menaced the Bartlow Tumuli with destruction.

Markets.

COVENT GARDEN, Feb. 20.

Vegetables and Fruit in season continue to be pretty well kept up. Retarded Hothouse Grapes are, however, scarce, but some good new ones may now be had. Blenheim Orange, Nonpareil, and American New Town Pippin Apples may still be obtained; likewise a few dessert Pears. Oranges are plentiful; the best are realising from 6s. to 10s. per 100. Cornish Broccoli is still largely supplied. Continental arrivals are heavy; among them are French Lettuces, Endive, Carrots, and Radishes. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Nuts, small, per bush., 14s to 18s
Grapes, new, per lb., 15s to 20s	Kent Cobs, 120s per 100 lbs.
Apples, per ½ sieve, 2s 6d to 4s	Almonds, do., 18s
Pears, per ½ sieve, 6s to 20s	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 8s	Chesnuts, per bush., 10s to 16s
Oranges, per 100, 2s 6d to 8s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Cucumbers, each, 2s to 5s
Cauliflowers, each, 3d to 6d	Beet, per doz., 1s 6d
Asparagus, p. bundle, 10s to 12s	Shallots, per lb., 10d
French Beans, p. 100, 5s	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s to 2s 6d	Garlic, per lb., 8d
Rhubarb, p. bundle, 9d to 1s 6d	Lettuces, each, 1d to 4d
Potatos, York Regents, p. ton, 60s to 80s	Endive, per score, 1s to 2s
,, Shaws, do., 50s to 60s	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 4d to 6d	Mushrooms, p. pott., 1s to 1s 9d
Carrots, do., 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Feb. 18.

Prime Meadow Hay	70s to 80s		Clover, old	85s to 110s
Superior do.	75	90	Do. second cut	75 100
Inferior do.	—	—	New Clover	— —
New do.	—	—	Straw	24 30
Rowen	—	—		

HARVEY & EASTON.

CUMBERLAND MARKET, THURSDAY, Feb. 18

Sup. Meadow Hay	80s to 92s		Inferior Clover	75s to 95s
Interior do.	65	75	New do.	— —
New do.	—	—	Straw	31 36
Superior Clover	105	112		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Feb. 18.

Fine Meadow Hay	80s to 84s		Prime 1st cut Clover	105s to 110s
Inferior do.	70	75	Inferior do. do.	95 100
Prime New Hay	—	—	New 1st cut do.	— —
Inferior	—	—	Prime 2d cut do.	100 105
Straw	25	28	Inferior do.	— —

BRITISH WOOLS.—LONDON, Feb. 18.

Deep combing fleeces are in demand, but short wool, both fleece and skin, is dull of sale. There has been a considerable quantity of first-class Down wool taken for export, at prices on the decline.

South-down Hoggets	s.	d.	s.	d.	s.	d.
	1	9	to 1	10		
Half-bred ditto	1	11	— 2	0½		
Down Ewes	1	8	— 1	9		
Kent Fleeces			— 2	0		
Leicest. Wethers	1	9½	to 1	10		
Ditto Hoggs	1	0	1	1		
Combing Skins						
Flannel Wool	1	4	— 1	6		
Blanket ditto	0	9	— 1	0		

NEWGATE.—Feb. 19.

Best Fresh Butter .. .. 16*s.* per dozen lbs.
Second do. do. .. .. 13*s.* ,,
Pork, 4*s.* 0*d* to 4*s.* 4*d.* per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Feb. 19.

Messrs. Pattenden & Smith report the demand for consumption steady at fair prices. Stocks were never in a more reduced state at this period.

POTATOS.—SOUTHWARK, Monday, Feb. 15.

During the past week the arrivals both coastwise and by rail have been very large, and still much in excess of the demand; and last week's prices could not be maintained. Second-rate and inferior sorts unsaleable except to cow-keepers. Quotations:—Yorkshire Flukes, 70s. to 90s. per ton; do. Regents, 50s. to 70s.; do. Rocks, 45s. to 50s.; Dunbar Regents, 70s. to 75s.; Kent and Essex Regents, 50s. to 70s.; Perth, Forfar, and Fifeshire Regents, 40s. to 50s.; do. do. Rocks, 40s. to 50s.

METROPOLITAN CATTLE MARKET.

MONDAY, Feb. 15.

The number of Beasts is very small, and consequently late prices are well supported, yet trade is not brisk. The supply of Sheep is also smaller, but quite equal to the demand. The dead markets being well supplied makes buyers very cautious here to-day. There is a considerable reduction in the price of Calves. From Germany and Holland there are 760 Beasts, 1040 Sheep, and 196 Calves; from Scotland, 330 Beasts; from Ireland, 170; from Norfolk and Suffolk, 2020; and 100 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	10	to 5	0	Best Long-wools.	5	2	— 5	6
Best Short-horns	4	8	— 4	10	Do. Shorn	..	..	—	..
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	4	4	— 4	8
Best Downs and Half-breds	5	8	— 6	0	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	—	..
					Calves	..	..	3 6 — 5	0
					Pigs	..	..	3 6 — 4	8

Beasts, 3690; Sheep, 14,650; Calves, 212; Pigs, 420.

THURSDAY, Feb. 18.

The number of Beasts is small, so also is the demand. Trade is very dull, and Monday's quotations are barely maintained. The supply of Sheep is about the same as of late. They are with difficulty disposed of at about Monday's prices. Calves are not quite so plentiful as on Thursday last, but trade is not better. Our foreign supply consists of 295 Beasts, 770 Sheep, and 223 Calves.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	8	to 5	0	Best Long-wools.	5	2	— 5	6
Best Short-horns	4	6	— 4	10	Do. Shorn	..	..	—	..
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	4	4	— 4	8
Best Downs and Half-breds	5	8	— 6	0	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	—	..
					Calves	..	..	3 6 — 5	0
					Pigs	..	..	3 4 — 4	8

Beasts, 870; Sheep, 3380; Calves, 240; Pigs, 80.

MARK LANE.—MONDAY, Feb. 15.

The supply of Wheat from Essex and Kent to this morning's market was small, and the condition of some of it affected by the weather; it met a slow sale, and damp samples must be written 1s. per qr. lower. There was a moderate attendance, but foreign Wheat continues to be neglected, and to have forced sales a reduction of price must have been submitted to. Barley sold slowly at last week's quotations. Beans and Peas were unaltered in value. The Oat trade was quiet at late rates. In Flour there was no change.

PER IMPERIAL QUARTER	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk.. White	42	48	Red	40	48
— — fine selected runs..ditto	44	52	Red	40	48
— — Talavera	48	54			
— Norfolk	—		Red	—	
— Foreign	36	54			
BARLEY, grind. & dist., 25s to 27s..Chev.	34	38	Malting ..	29	38
— Foreign..grinding and distilling	22	26	Malting ..	28	32
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish .....Potato	19	22	Feed	—	
— Foreign .....Poland and Brew	17	22	Feed	15	20
RYE	30	32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....28s to 36s...Tick	30	33	Harrow ..	30	33
— Pigeon .... 32s to 40s..Winds.	—		Longpod	—	
— Foreign .....Small	36	42	Egyptian	30	32
PEAS, White, Essex and Kent..Boilers	36	38	Suffolk ..	36	38
— Maple .... 34s to 36s .... Grey	28	30	Foreign ..	32	40
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered..per sack	35	40			
— 2d do ..... ditto	28	34	Country..	28	34
— Foreign ..... per barrel	15	25	Per sack	32	42

FRIDAY, Feb. 19.

The weather from the 12th to the 16th inclusive was damp with heavy showers and S.W. gales, excepting on the 14th, when it was fine. We are unable to report any improvement either in the demand or prices of Wheat, the latter in the majority of markets being written 1s. per qr. lower. The value of Barley, Oats, Beans, and Peas continue to decline, and that of Flour has a similar tendency. Since Friday last 10 vessels have been reported off the coast. The floating trade has been very quiet during the week; Wheat has declined 1s. to 2s. per qr., and prices for all descriptions of Spring Corn are barely maintained. Paris, Feb. 18.—Flour: the trade has been slow, and prices are barely supported. The six marks for delivery this month are quoted equal to 32s. 9d. per 280 lbs; the present stock of Flour is estimated at 10,800 cwt. Wheat is very quiet, and in some instances a decline of 0½. per qr. has been submitted to. The arrivals of Irish Oats and foreign Barley are large, of all other grain and Flour small. The attendance at to-day's market was again very limited, and all articles of the trade were neglected. We do not alter our quotations of last Monday.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	910 qrs.	760 qrs.	540 qrs.	1790 sks.
Irish	—	—	8070	— ,,
				2600 ,,
Foreign ..	7790 ,,	12,310	2830 ,,	930 brls

LIVERPOOL, February 16.—We have had a very full attendance of both town and country millers and dealers at to-day's market, who have evidently come in the expectation of finding a further decline in Wheat; holders, however, insist on the full rates of Friday, and only a very limited amount of business consequently has resulted. Flour remains dull of sale at former prices. Indian Corn must be quoted quite 3d per quarter cheaper, with only a retail inquiry. Oats and Oatmeal are no lower. Beans, Peas, and Barley may each be called the turn in buyers' favour. The market closes very tame.

FRIDAY, Feb. 19.—The market is fairly attended. A moderate business was done in Wheat at Tuesday's rates. Flour in slow demand; quotations quite nominal. Indian Corn steady; mixed 29s. Egyptian Beans, Oats, and Oatmeal dull and unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Jan. 9	40*s* 2*d*	31*s* 7*d*	18*s* 8*d*	29*s* 7*d*	34*s* 2*d*	33*s* 3*d*
— 16	40 11	31 10	18 10	28 0	33 7	33 0
— 23	41 3	32 5	18 9	28 0	33 8	32 8
— 30	40 8	32 1	18 11	31 8	33 3	32 10
Feb. 6	40 4	32 0	18 9	29 0	33 8	33 0
— 13	40 8	31 11	19 1	29 1	33 7	33 7
Agg. Aver.	40 8	32 0	18 10	29 2	33 8	33 3

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Jan. 9.	Jan. 16.	Jan. 23.	Jan. 30.	Feb. 6.	Feb. 13.
41*s* 3*d*	..	..	..	..	..	..
40 11	..	..	..	..	..	..
40 8	..	..	..	..	..	..
40 4	..	..	..	..	..	..
40 2	..	..	..	..	..	..
—	..	..	..	..	..	..

COAL MARKET.—Feb. 17.

Bowers West Hartley, 14s. 9d.; Byass's Bebside West Hartley, 14s. 9d.; Bates's West Hartley, 14s.; Hastings Hartley, 14s. 9d.; Holywell Main, 17s.; Lambert's West Hartley, 14s. 6d.; Walker Primrose, 12s. 3d.; Walls End Harton,

16s. 9d.; Walls End Riddell, 16s. 6d.; Eden Main, 17s. 3d.; Walls End Braddyll's Hetton, 18s.; Walls End Haswell, 19s.; Walls End Hetton, 19s.; Walls End South Hetton, 19s.; Walls End Tunstall, 16s. 6d.; Walls End Cassop, 17s. 9d.; Walls End Hartlepool, 18s. 6d.; Walls End Kelloe, 18s.; Walls End East Hartlepool, 18s. 9d.; Walls End South Hartlepool, 18s.; Walls End Trimdon Hartlepool, 18s. 6d.; Walls End Whitworth, 16s.—Ships at market, 78.

AGRICULTURAL PUPIL.—A Practical Farmer, occupying 300 Acres in a South Midland County, has a VACANCY.—Address A. B. C., G. Howes & Co., 7, Thavies Inn, Holborn Hill, London, E.C.

BIRKENHEAD CEMETERY.—The Birkenhead Improvement Commissioners, as the Burial Board for their District, are prepared to receive applications for the appointment of the REGISTRAR and SUPERINTENDENT of the New CEMETERY.

Persons applying must, in addition to the duties of Registrar, be competent to take the general Management of the Cemetery, with the Buildings, Plantations, and Shrubberies, and also to correctly set out the Graves in accordance with the Cemetery plans.

Salary 150*l.* per annum, with a residence. The agreement to be terminable on three months' notice from either side.

Applications stating age, and whether married and what family, together with testimonials, to be sent in on or before the 17th day of February next, addressed to the CHAIRMAN of the Cemetery Committee, Commissioners Offices, Birkenhead.

By Order. AMBROSE WALN, Clerk of the Commissioners.
Commissioners' Offices, Birkenhead, Feb. 18.

WANTED, a CORRESPONDING CLERK and TRAVELLER.—WILLIAM WOOD & SON are in want of a respectable energetic Man, from 25 to 30 years of age; one who has a tolerable knowledge of Plants, with a slight insight in the Seed Trade, would be preferred.—Address WM. WOOD & SON, Marcsfield, Uckfield, Sussex.

WANTED, a GARDENER.—Married man, without incumbrance; a small Lodge rent free; clergyman's family; one Under Gardener kept; Kitchen Garden 1 acre; Flower Garden small; four or five houses; no Stove or Orchid. He must understand Vines, Melons, Forced Fruit and Vegetables, Peach walls, &c. Wages 18s. per week. The Advertiser is an amateur, and interests himself in the Garden.—Address, C. H., No. 20, Post Office, Birmingham.

WANTED, as UNDER GARDENER, a Young Man from 18 to 20 of age, strong, active, and willing.—Apply, in own hand writing, stating wages expected, height, age, and length of character, to Mr. YOUNG, The Gardens, West Hill House, Highgate, Middlesex, N.

WANTED, in a Midland Counties Nursery, a steady, active Man as JOBBING MAN. A regular place.—Apply, stating age, where last employed, and wages expected, to LEX, Messrs. Carter & Co., 237, High Holborn, London, W.C.

WANTED, a good HAMPER and BUNDLE PACKER; also several good NURSERY LABOURERS, who are well accustomed to out-door work.—Apply to E. P. DIXON & SONS, Exotic Nurseries, Hull.

DAIRY WOMAN.—Wanted, a Person to take charge of a Dairy of Four Cows, look after the Poultry, and Bake.—Address D., The Lodge, Alice Holt, Farnham, Surrey.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

To Noblemen and Gentlemen.

MESSRS. HUGH LOW AND CO. have experienced HEAD and UNDER GARDENERS of various qualifications, whom they can confidently recommend. Ladies and gentlemen requiring such, are respectfully requested to communicate with H. L. & Co., who will only recommend those that are really equal to the duties they will be called upon to perform.—Clapton Nursery, London, N.E.

GARDENER (HEAD).—Middle-aged, single, Scotch; has a practical knowledge of his profession in all its branches; was 13 years in his last situation, where he was very successful in growing Grapes and Wall Fruit.—WILLIAM MILLER, Mr. Randell's, High Street, Red Hill, Surrey.

GARDENER (HEAD), married, one child.—Mr. KAIL wishes to recommend a thoroughly practical Man, who understands his profession in all its branches. Four years' character. Will be at liberty on the 15th of March.—Mr. KAIL, East Horsely Park, Surrey.

GARDENER (HEAD).—JOHN PILBEAM, Gardener upwards of 9 years to the late Commissioner Evans, is now open to an engagement. Has a thorough knowledge of Gardening in all its branches, including the Early and Late Forcing of all kinds of Fruits, Flowers, Vegetables and Plant Growing. Wife first-class Dairywoman, &c.—Golders Hill, Hampstead, near London, N.W.

GARDENER (HEAD).—Age 30, single. Three years' good character.—E. M., John Fraser's, Lea Bridge Road, Leyton, Essex, N.E.

GARDENER (HEAD).—Age 30; thoroughly understands the Growing of Pines, Vines, Peaches, Melons, &c; Stove and Greenhouse Plants, the Management of Flower and Kitchen Gardens. Character will bear the strictest inquiries.—W. L., Post Office, Bishopstoke, Winchester.

GARDENER (HEAD) to any lady or gentleman.—Age 34, single; thoroughly practical. Eight years' good character, and satisfactory reason for leaving last situation. No single-handed place accepted.—G. G., *Gardeners' Chronicle Office*, W.C.

GARDENER (HEAD).—Age 41, married, no incumbrance; of practical experience in Early and Late Forcing, &c; thorough Kitchen and Flower Gardener. Understands the Management of Woods, Plantations, and Meadow Land.—T. T., Mr. Wm. Paul's Nurseries, Waltham Cross, N.

GARDENER (HEAD).—THOS. LEE, many years Head Gardener to John Green, Esq., where he grew Grapes, Pines, Peaches, and all Forced Fruit and Flowers in great perfection. Can keep the Conservatory gay through the year. Good Flower and Kitchen Gardener.—THOS LEE, 6, Robertson Street, Lee, Kent.

GARDENER (HEAD).—Age 35, single; thoroughly understands his profession in all its branches; also a good practical knowledge of Erecting and Heating Horticultural Buildings. Eight years' first class recommendation. No single-handed place accepted.—W. S., *Gardeners' Chronicle Office*, W.C.

To Noblemen and Gentlemen.

GARDENER (HEAD).—J. JOSEPH, Esq., The Laurels, Highfield, Edgbaston, Birmingham, can with confidence recommend his Gardener to any lady or gentleman in want of a first-rate Gardener. Thoroughly understands his profession in all its branches.—Address as above.

GARDENER (HEAD), age 40, married, with one child.—JAMES THOMPSON is now leaving his present employer, with whom he has lived upwards of 20 years, and will be glad to enter into an engagement with any nobleman or gentleman who is desirous of securing the services of a thoroughly experienced Man. Can produce 170 Testimonials of Prizes for choice Fruits and Flowers from the year 1856, at the Royal Isle of Wight Horticultural Exhibitions. Character unexceptionable.—C. DIMMICK, Nurseryman, High Street, Ryde, Isle of Wight.

GARDENER (HEAD), or GENERAL FOREMAN.—Age 34, married, one child, aged 6. Late Head Gardener to G. P. Bidder Esq. Eight years good character, and reference if required.—W. B., 5, Old Waddon Road, Croydon.

GARDENER (HEAD), where one or more are kept.—Age 27; understands the Management of Flower and Kitchen Gardens; also the Growing of Grapes, Cucumbers, Melons, &c. Two years' good character.—A. B., Post Office, Donnington, Newbury, Berks.

GARDENER (HEAD) where one or more are kept.—Age 35, has a young family of four; has a good practical knowledge of his profession. Understands Wood land; would like to get into a Country Village where he might have the privilege of keeping an Evening School—having held one for the last three years—and near to a Church where the Singing wants improvement. Five and a-half years' good character. State wages, &c.—E. S., Post Office, Waltham Cross, Herts.

GARDENER (HEAD, or SINGLE-HANDED).—Married, no incumbrance; understands Kitchen and Flower Garden, and Forcing in general. Good character.—A. B., 22, North Street, Edgware Road, London, W.

GARDENER (HEAD, or good SINGLE-HANDED).—Age 23; well experienced in Forcing, Plant Growing, and the general routine of Gardening. Well recommended. A pious family preferred. State wages, &c.—F. B., 9, Ingram Place, Hornsey Road, Holloway, N.

GARDENER (HEAD), or GARDENER and BAILIFF.—Age 38, married; thoroughly experienced; has had the management of Pines, Grapes, Peaches, Orchard Houses, Stove and Greenhouse Plants, Kitchen and Flower Garden; also the general management of a middle-sized Farm and Stock. Wife could manage the Dairy. Can be highly recommended. Will shortly be disengaged. Eight years' excellent character.—WM. BROWN, Gothic House, Putney Heath, Surrey.

GARDENER (middle-aged, married).—Mr. WM. PAUL, Waltham Cross, N., can recommend with confidence to any gentleman a good practical Gardener, with first-class testimonials as to character and ability.

GARDENER.—Age 30, married; understands Flower and Kitchen Gardens, Stove and Greenhouse Plants, and general routine of Gardening.—L. M., Squibb's Newspaper Office, Hammersmith, W.

GARDENER.—G. UZZELL, Gardener to her Grace the Duchess Dowager of Northumberland, Mount Lebanon, Twickenham, S.W., can with confidence recommend his Foreman to any lady or gentleman in want of a good Gardener; has been in his present situation 4½ years, and had previous great practice in first-rate Gardening.—G. UZZELL will be happy to answer any inquiries.

GARDENER (good SINGLE-HANDED or SECOND).—Age 34, married, no incumbrance; understands his profession in all its branches. Good character from present employer.—X., Mr. Wilson's, Hair Cutter, Bow, E.

GARDENER (SINGLE-HANDED, or where Two or Three are kept).—Age 24; good knowledge of Forcing, Plant-growing, Kitchen and Flower Gardening.—T. P., Shrubland Gardens, near Ipswich, Suffolk.

GARDENER (UNDER or SINGLE-HANDED).—Has a knowledge of Greenhouse, Vinery, Flower, and Kitchen Garden, &c. Three years' good character.—M. R., General Post Office, Cambridge.

GARDENER (UNDER or SINGLE-HANDED).—Age 25, single; good practical knowledge of his profession; 15 months' good character from present employer.—C. M., Langford House, East Dulwich, S.E.

GARDENER (UNDER), in a gentleman's or nobleman's family.—Age 24; good Plant Grower.—R. N., 66, High Street, Lincoln.

GARDENER (UNDER).—Age 24; thoroughly steady; would not mind giving a Premium of 5*l.* for a first-rate place. Four years' good character.—R. C., Post Office, Nazing, Essex.

To Nurserymen and Head Gardeners.

IMPROVER.—Age 21.—A. B., Messrs. Eaton & Son, Booksellers, Worcester.

To Nurserymen.

FOREMAN, in the Propagating Department in the Houses.—An experienced Man.—Letters to A. Z., Mr. Glenny, Horticultural Agent, Fulham, S.W.

FOREMAN.—Age 22, active; has filled a similar situation over two years, and has previously served in two noblemen's gardens in South Devon; the gardeners of whom, with his present employer, will gladly certify to the Advertiser's ability and integrity.—A. B. G., Lophill, near Jump, Devon.

PROPAGATOR (INDOOR).—Thoroughly understands the Propagation of Roses, Rhododendrons, Coniferous Plants, &c. Has had first-class experience both in country and metropolitan nurseries.—E. F. G., John Fraser, Lea Bridge Road Nurseries, Leyton, Essex, N.E.

PROPAGATOR, or PROPAGATOR and FOREMAN.—Age 36, married; of steady business habits and first-class ability; has had considerable experience in the London trade. R. W., 10, Violet Hill, Abbey Road, St. John's Wood, N.W.

NURSERY FOREMAN and PROPAGATOR.—Middle aged; has good practical experience of all the routine of the Nursery and Retail Seed department, and capable of taking entire Management, if required.—ERICA, *Gardeners' Chronicle* Office, W.C.

FARM STEWARD or BAILIFF.—Young, married; has been thoroughly educated in Practical Farming.—GEORGE BAKER, American Nursery, Bagshot, Surrey.

FARM BAILIFF.—Married; Wife could undertake the Management of a Dairy and Poultry if required. Highest reference as to character and ability.—J. W., Post Office, Rugby, Warwick.

BAILIFF.—Has been bred to Farming; of pushing, and energetic habits: and has a thorough practical knowledge of the Breeding, Feeding, and Marketing of all kinds of Stock; and the Management of both Pasture and Arable Lands. Would be willing to make himself generally useful. The highest references can be given.—W. Y., Post Office, Dorchester, Dorset.

BAILIFF (WORKING).—Married, no incumbrance; thoroughly understands Farming in all its branches, and Breeding, Rearing, and Management of all kinds of Stock. A good Accountant. Wife can undertake the Management of a Dairy and Poultry. Good references.—C. W., 7, Prince's Road, Norland Square, Notting Hill, Middlesex, W.

To Noblemen and Gentlemen.

AGENT to the Proprietor of a Large Estate.—A Civil and Mining Engineer, about to retire from the profession, is desirous of meeting with an Engagement in the above capacity. He is well acquainted with Cultivation, both Horticultural and Agricultural, Agricultural Engineering, Cottage and Garden Architecture, and the Laying-out of Gardens and Estates, having spent his earlier days therein. He possesses all the acquirements necessary for the Superintendence and Management of a large Estate, and is desirous of giving up Colliery Management only from the fact of having met with an accident in the Pit nearly costing him his life.—J. W. H., care of Messrs. Glendinning & Sons, Chiswick Nursery, London, W.

LAND AGENT, &c.—A gentleman well acquainted with Land Surveying and practical Farming, wishes for a situation, either as Principal or Assistant, as Steward, Land Agent, or Manager of an Estate. Unexceptionable testimonials.—E. M. P., Truro, Cornwall.

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TO BURN THE HYDRO CARBON OILS.
PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.
They are more easily trimmed and re-filled than any other Lamp with similar burner.
There is no danger of chimneys breaking, and the chimney cannot become smoked.
For designs of the above, adapted for the DINING-ROOM, DRAWING-ROOM, HALL, or LIBRARY, see Number 3 of this Journal.
A REALLY GOOD LAMP.
The above may be obtained of any Lamp Dealer.

THRESHER'S COLORED FLANNEL SHIRTS.—PRIZE MEDAL awarded to THRESHER & GLENNY for very fine and superior FLANNEL SHIRTS, India Tweed Shirts, and India Gauze Waistcoats.
Lists of Prices on application to THRESHER & GLENNY, General Outfitters, next door to Somerset House, Strand, W.

Manufacturers to the Queen and Prince of Wales

FRY'S | HOMŒOPATHIC ICELAND MOSS PEARL | COCOA
FRY'S SOLUBLE CHOCOLATE.
J. S. FRY & SONS were the only English Manufacturers of Cocoa who obtained the Prize Medal, 1862.

CAPTAIN WHITE'S ORIENTAL PICKLE, CURRY or MULLIGATAWNY PASTE, CURRY POWDER and CURRY SAUCE, may be obtained from all Sauce Vendors, and Wholesale of
CROSSE & BLACKWELL, Purveyors to the Queen, Soho Square, London, W.C.

Sauce.—Lea and Perrins'
WORCESTERSHIRE SAUCE.
This delicious Condiment, pronounced by Connoisseurs
"THE ONLY GOOD SAUCE,"
Is prepared solely by LEA & PERRINS.
The public are respectfully cautioned against worthless imitations, and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper.
ASK FOR LEA AND PERRINS' SAUCE.
*** Sold Wholesale and for Export, by the Proprietors, Worcester; Messrs. CROSSE & BLACKWELL; Messrs. BARCLAY & SONS, London, &c.; and by Grocers and Oilmen universally.

DINNEFORD'S PURE FLUID MAGNESIA has been during 25 years emphatically sanctioned by the Medical Profession, and universally accepted by the public as the best remedy for Acidity of the Stomach, Heartburn, Headache, Gout, and Indigestion, and as a mild Aperient for delicate constitutions, more especially for ladies and children. It is prepared in a state of perfect purity and of uniform strength.
DINNEFORD & Co., 172, New Bond Street, London, and sold by all respectable Chemists throughout the world.

CONSTIPATION, Nervousness, Debility, Cough, Asthma, Catarrh, Consumption, Diarrhœa, and all Bilious, Liver and Stomach Complaints are only aggravated and accelerated by drugs of every description, but perfectly curable by DU BARRY'S health-restoring
REVALENTA ARABICA FOOD,
As proved by thousands of cases which had been considered hopeless. We quote a few.—Cure No. 46,270. Mr. James Rogers, of Frimley, Surrey, of 30 years' diseased lungs, spitting of blood, liver derangement, and partial deafness.—Cure No. 47,121. Miss Elizabeth Jacobs, of extreme nervousness, indigestion, gatherings, low spirits, and nervous fancies.—Cure No. 54,816. The Rev. James T. Campbell, Fakenham, Norfolk, "of indigestion and torpidity of the liver, which had resisted all medical treatment."—In tins 1 lb., 2*s.* 9*d.*; 2 lb., 4*s.* 6*d.*; 5 lb., 11*s.*; 10 lb., 22*s.*; 24 lb., 40*s.*
DU BARRY & Co., No. 77, Regent Street, London, W.; also at FORTNUM & MASON, and at 61, Gracechurch Street, E.C.; 4, Cheapside, E.C.; 63 and 150, Oxford Street, W.; and of Grocers and Chemists in every town of the United Kingdom.

A PERFECT STATE of HEALTH may be insured by the occasional use of
PARR'S LIFE PILLS,
which may be bought for a trifle of any Chemist in the Kingdom.

CURES of ASTHMA and COUGHS, by DR. LOCOCK'S PULMONIC WAFERS.—From Mr. Leith, Chemist, 95, Baker Street, Stirling, March 10, 1863. "I can recommend your Wafers give great satisfaction, and I can recommend them with greater faith than ever." They give instant relief and a rapid cure of asthma, consumption, coughs, colds, and all disorders of the throat and lungs. They have a pleasant taste. 1*s.* 1½*d.* and 2*s.* 9*d.* per box, by all druggists.

The Gardeners' Chronicle Newspaper.

SATURDAY, FEBRUARY 27, 1864.

THE LONDON MANURE COMPANY have now ready
PREPARED BONE MANURE for present use on PASTURES.
WHEAT MANURE for AUTUMN SOWING.
BLOOD MANURE for ditto.
SUPERPHOSPHATES of LIME, &c.
All the above being in the finest condition. They also continue to supply
GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, and every Artificial Manure of known value. E. PURSER, Secretary.
116, Fenchurch Street, E.C.

LAWES'S MANURES.
The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per Ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
LAWES'S SUPERPHOSPHATE of LIME from BURNT BONE or MINERAL PHOSPHATES ..	5 5
LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.
Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.
American and other Cakes at market prices.
Address JOHN BENNET LAWES, 1, Adelaide Place, London Bridge, E.C.; and 22, Eden Quay, Dublin.

ODAMS'S BLOOD MANURE for CORN.
ODAMS'S BLOOD MANURE for ROOTS.
ODAMS'S SUPERPHOSPHATE of LIME.
MANUFACTURED BY THE PATENT
NITRO-PHOSPHATE or BLOOD MANURE COMPANY (LIMITED). Consisting of TENANT FARMERS, occupying upwards of 30,000 acres of land.
Chairman: JOHN CLAYDEN, Littlebury, Essex.
Managing Director: JAMES ODAMS.
Particulars of these Standard Manures may be obtained at the Offices.
C. T. MACADAM, Secretary, or of the local Agents.
Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow, Essex.

Manures and Feeding Stuffs.
RAYNBIRD, CALDECOTT, AND BAWTREE, Address 89, Seed Market, Mark Lane; or Basingstoke. Samples and prices on application.

REIGATE SILVER SAND, 7s. 6d. per ton; picked, 16s. per ton; delivered to Reigate Railway Station. PEAT SOIL of various kinds, LOAM, BOG MOULD, &c. N.B.—Loaded trucks can be sent on all the principal Railways, and to Angerstein Wharf, Thames.
W. SHORT, Sand and Peat Depot, Reigate, Surrey.

ROLL TOBACCO CLOTH.—The best and cheapest article for Smoking Greenhouses and Destroying the Fly. Price 1s. 4d. per lb.; over 10 lb., 1s. 1d.
JOSEPH BAKER, 10, Gough Square, Fleet Street, E.C.
Post-office Order payable Fleet Street.

Blight.
BROWN'S PATENT FUMIGATOR.—A Portable Instrument for Fumigating Greenhouses, Stoves, and Frames, or Shrubs and Flowers in the open air, without injuring the most delicate plant; delivering the Smoke cold, in a dense mass, and effecting a great saving of Tobacco. Price 10s. and upwards.
Manufactured and supplied to the Trade by Messrs. BARBER & GROOM, London; and may be had of all Ironmongers, Seedsmen, and Florists.

Red Spider Magnified.

COCOA-NUT REFUSE, delivered within 2½ miles of Charing Cross, at 2s. per bag.
For particulars, and how to use it, see long Advertisement in *Gardeners' Chronicle* of the 21st March, 1863; or apply to the PATENT COCOA FIBRE COMPANY, Kingston-upon-Thames.
Postage Stamps or Post-office Orders payable to J. BARSHAM & Co.
BARSHAM'S BRUSHES and MATS are sold in every town.
CAUTION.—Every Brush is stamped. J. BARSHAM'S Patent

GISHURST COMPOUND, whether used against Insects and Mildew, on Growing Plants, or as Winter Dressing on Trees at rest, should be dissolved 48 hours before use. This gets rid of smell, and if the Solution be decanted, prevents any staining of foliage. A strength of from 1 to 2 oz. to the gallon of water is recommended for growing Plants; one from 4 to 16 oz. for Trees at rest.
Sold Retail by Nurserymen and Seedsmen, in boxes, 1s., 3s., and 10s. 6d. each.
Wholesale by PRICE'S PATENT CANDLE COMPANY (Limited).

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expence, as do "grown" Edgings, consequently being much cheaper.
GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.
F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.
Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.
Also TESSELATED PAVEMENTS of more enriched designs than the above.
WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.
To be obtained of F. & G. ROSHER, at their Premises as above.
Orders forwarded by Railway with despatch.

BEST REIGATE SILVER SAND, 14s. per Ton; or 1s. 3d. per Bushel. For delivery within three miles, 2s. per Ton extra. Quantities of 4 Tons 1s. per Ton less.
GARDEN FLINTS for Grotto Work, 12s. and 14s. per Ton.
Delivery to any London Railway or Wharf.
F. & G. ROSHER. See Addresses above.

Horticultural Agent and Valuer.
MR. A. CHANDLER (of the late Firm of CHANDLER & SONS) continues to undertake all kinds of VALUATIONS connected with Horticulture.
1 Devonshire Terrace, Fulham Road, S.W.

WOODEN FENCING.—The cheapest, lasting, TALLOW STAVES, 6s. per 100, at PRICE'S Patent Candle Company, Limited, Belmont, Vauxhall, London, S.

VERANDAHS, COVERED WAYS, AWNINGS, CONSERVATORIES, and every description of Roofing and Sashes in Wrought and Cast Iron, made to order.

Apply to CORRAM & Co., Manufacturers, (Iron Works, 2, Wimsley Street (opposite the Pantheon), Oxford Street, London, W.

Paxton Works, Sheffield, Established 1788.
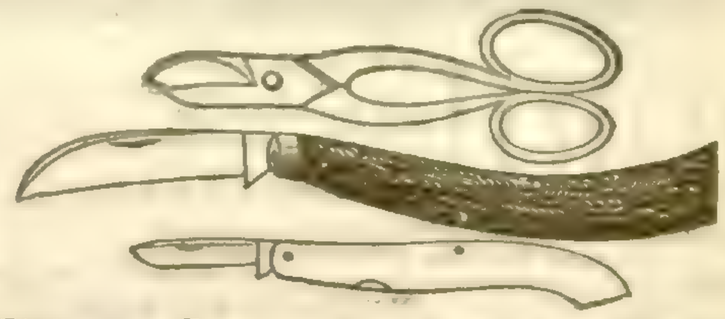
INTERNATIONAL EXHIBITION PRIZE MEDAL WAS AWARDED TO SAYNOR & COOKE FOR SUPERIORITY OF QUALITY IN PRUNING AND BUDDING KNIVES, &c.
SAYNOR AND COOKE'S celebrated English and French Exhibition PRIZE PRUNING KNIVES, &c., can be obtained of any respectable Nurseryman or Seed Merchant in the three kingdoms, all Knives warranted both by the Seller and Maker.
CAUTION.—None are genuine unless marked SAYNOR. Other marks would cause disappointment, as these Knives are tempered by an improved process known only to the Makers.

Patronised by H.R.H. the late Prince Consort.
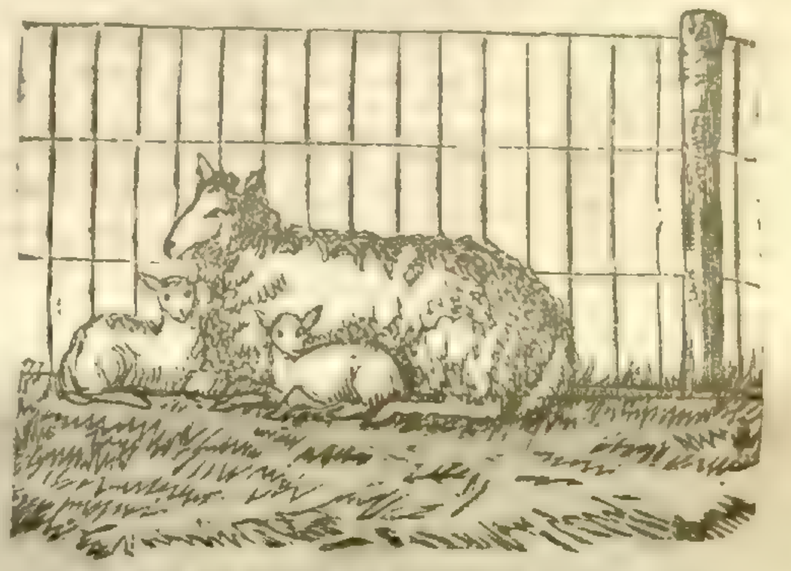
No. 7B variety, 9d per lineal yard.
GREENING AND CO. received the award of another Silver Medal and Commendations at the recent great Birkenhead Cattle Show of the South Lancashire Society.
In 1857 the judges of the Royal Society reported of their Patent Iron Wire Sheep-fold Fence, that it "was cheap and excellent. It can be very easily fixed, and was well coated with a bright and durable-looking varnish."
G. & Co.'s prices remain unadvanced, notwithstanding the rise in the iron market. Their enlarged Catalogue of Fences and Iron Gates post-free on receipt of three stamps. An explanatory circular sent without charge, on application.
Address GREENING & COMPANY, Victoria Works, 81, Oxford Street, Manchester.

37.

CLINTON & OWENS,
(LATE BENJAMIN FOWLER & CO.),
MANUFACTURERS OF
PUMPS AND HYDRAULIC MACHINERY,
WHITEFRIARS STREET, FLEET STREET, LONDON, E.C.

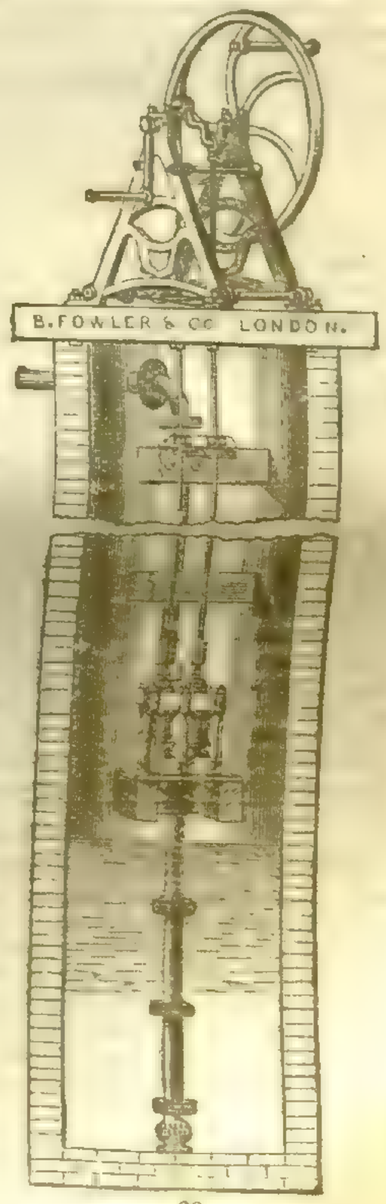

28.

THE Landscape Sketch shows an adaptation of THE IMPROVED HYDRAULIC RAM. This is a simple Self-acting Machine, suited for raising a Supply of Water for use in Public and Private Establishments. Its adoption is not confined to positions as shown, but it is suited for any situation where a Fall can be obtained from a Stream, Brook, or Spring.
Messrs. FOWLER have fixed a great many in various parts of the country for raising from 600 to 6000 or more Gallons per day to elevations varying from 50 to 300 feet, and forcing through main pipes 50 yards to several miles in length.
No. 37. IMPROVED TREBLE BARREL PUMPS with HORSE GEARING for raising water from DEEP WELLS for the supply of MANSIONS and PUBLIC BUILDINGS.
No. 28*a*. DOUBLE BARREL PUMPS for HAND-POWER for similar purposes.
Messrs. FOWLER & Co. Manufacture and Erect every description of Engineer's Work required in Public or Private Establishments, such as Pumps for any purpose on the largest or smallest scale, Steam Engines, Water Wheels, Turbines, Warming and Drying Apparatus, Baths, Gas Works and Fittings. Estimates furnished from Plans or on inspection of position.
Price Lists of Pumps, &c., free on application.

Exhibition Prize Medal, 1862.

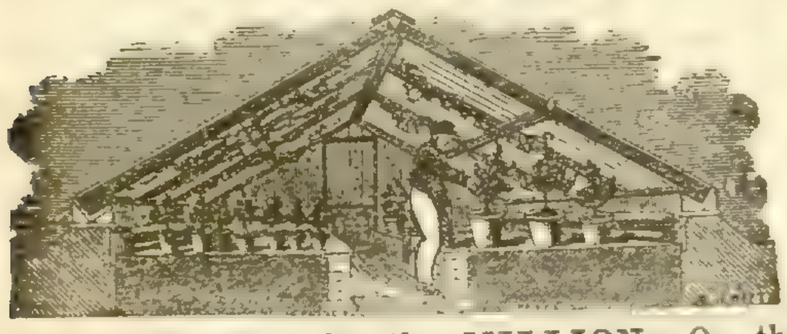

HOTHOUSES for the MILLION.—On the principle invented and patented by Sir Joseph Paxton, M.P., combining simplicity, cheapness, excellence, and durability. Span-roof Houses, painted three coats, and glazed with English Sheet Glass, ready for fixing, 21 ft. by 13 ft., 24*l.*; 43 ft. by 19 ft., 73*l.* 5*s.*; 64 ft. by 25 ft., 161*l.*

Illustrated Circulars, with Prices, can be had on application to SAMUEL HEREMAN, 7, Pall Mall East, London, S.W.

Also, A HANDBOOK on VINE and FRUIT TREE CULTIVATION, 2d Edition, price 1*s.*; post free, 1*s.* 1*d.*

West of England, Ireland, and Wales.

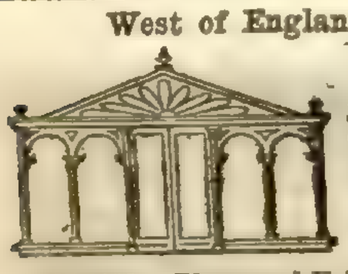

VINCENT SKINNER (*late Partner with* J. WEEKS & Co.), HORTICULTURAL BUILDER and HOT-WATER APPARATUS MANUFACTURER, HEATING on the ONE-BOILER SYSTEM. Plans and Estimates on application.
VINCENT SKINNER, Bridewell Street, Bristol.

Heating by Hot Water.

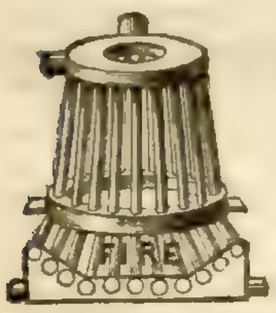

JOHN TOOLEY, late 21 years with J. WEEKS & Co.
TUBULAR BOILERS,
All Sizes on the most Improved Principles, Valves, &c.
References in England, Ireland, and Wales.
JOHN TOOLEY, 9, Radnor Street, King's Road, Chelsea, S.W.

RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

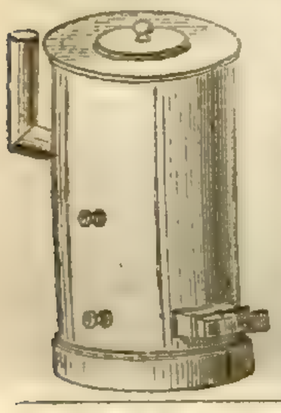

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the
Patentee's Warehouse, 155, Cheapside, London, E.C.
Price complete from 3*l.* 10*s.*
Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the

best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water-tight Roof insured.

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

For Prospectus, &c., address T. H. P. DENNIS, Horticultural Builder, Hot-Water Engineer, &c., High St. Chelmsford, Essex

Heating by Hot-water.

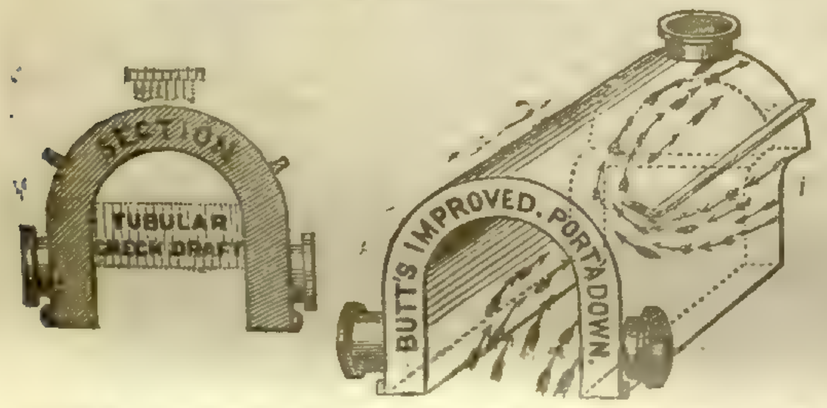

THE ORIGINAL SADDLE BOILER, with Improved Tubular Check Draft, Flued Ends, and Ribbed Sides, for Heating Greenhouses, Vineries, Forcing Pits, Public Buildings, &c. These Boilers possess increased heating surface capacity, power, economy in fuel, and are the only class of Boilers, all points considered, when properly fixed, that can be relied upon with safety for Heating Greenhouses, &c., of any extent by hot-water, and at a moderate price.

Gardeners interested in such work should write for LIST of TESTIMONIALS, sent Post Free on application to FREDERICK WILLIAM BUTT (late of London), Portadown, Ireland.

Greenhouses.

JOSEPH SMITH, HORTICULTURAL BUILDER, New Road, Hammersmith, has for Sale:—SPAN-ROOF HOUSE, 27 ft. by 16 ft. 6 in., price 44*l.*; do., 17 ft. by 10 ft., 25*l.*; do. with Shelves and Hot-water Fittings, 17 ft. by 12 ft., 35*l.*; LEAN-TO. 45 ft. 6 in. by 14 ft., 60*l.*; do., 23 ft. by 12 ft., 33*l.* Twenty-five LIGHTS, 2½ thick, 14 ft. by 5 ft., glazed with 21 oz. glass, at 9*d.* per foot, or the lot for 60*l.*; also Ten, 11 ft. 2 in. by 5 ft., 23*l.*; do. Twenty-five, 7 ft. by 4 ft. 3 in., 22*l.* 10*s.*
CUCUMBER and MELON FRAMES, of an improved make, to take apart.
The above are constructed in the best manner as regards ventilation and strength; warranted of good materials. Glass 21 oz. to the square foot.

THE PATENT IN-DOOR PLANT CASES

(TO WHICH A PRIZE WAS AWARDED AT THE ROYAL HORTICULTURAL SOCIETY'S EXHIBITION).

SOLE MANUFACTURER,

JAMES GRAY, HORTICULTURAL WORKS,

DANVERS STREET, CHELSEA, LONDON, S.W.

The PATENT IN-DOOR PLANT CASE is one of the most useful of the Gardening novelties of the day. It is a handsome ornament for the Drawing Room or Sitting Room, and at all times forms a fresh, pleasant, and interesting object to the mind and eye. It is always under command, and will preserve many of the most tender Exotic Plants through the severest winter with comparatively little of the trouble and annoyance attending the use of Lamps, Gas, and Heating appliances of any other kind.

To all who have a taste for the cultivation of In-door Plants, for raising Seedlings, striking Cuttings, &c the Plant Cases will be found an inestimable boon.

The Cases are highly approved and recommended by Professor Lindley, and by Messrs. Veitch, of The Royal Exotic Nursery, King's Road, Chelsea.

Sizes and Prices on application.

PORTABLE HOT-WATER APPARATUS,

WITH TRUSS'S PATENT JOINTS FOR HEATING CONSERVATORIES, HOTHOUSES, &c.

T. S. TRUSS

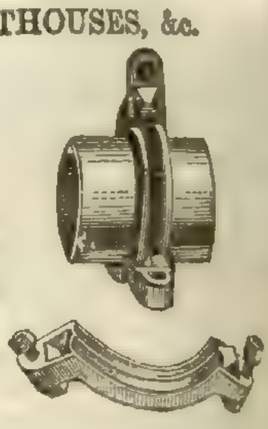

Begs to offer complete HOT-WATER APPARATUS for GREENHOUSES (consisting of 4-inch Pipes and Joints, Saddle Boiler, Fire Doors, Bars, Soot Doors, Damper, Supply Cistern, Feed and Air Pipes, Pipe Stands, &c., of the best quality), delivered to any Railway Station in England, and to erect the same within 25 miles of London, at the following prices:—

TWO 4-INCH PIPES ALONG ONE SIDE AND ONE END OF HOUSE.

Size of House.	Apparatus complete.	Erection.	Size of House.	Apparatus complete.	Erection.
16 feet by 8 feet ...	£8 10 0	£2 0 0	30 feet by 12 feet ...	£11 15 0	£2 10 0
20 feet by 10 feet ...	8 17 6	2 0 0	40 feet by 15 feet ...	15 0 0	2 15 0
25 feet by 12 feet ...	10 5 0	2 5 0	50 feet by 15 feet ...	18 0 0	3 0 0

Erections beyond 25 miles of London, Railway Fare for one Man charged extra.

By the use of these Joints the Apparatus is easily altered or removed without injury to either Pipes or Joints.

Estimates and Plans orwarded on application to
T. S. TRUSS, C.E., 53, GRACECHURCH STREET, LONDON, E.C.

JAMES PHILLIPS & CO.,

HORTICULTURAL GLASS MERCHANTS,

180, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

REDUCED PRICES OF SHEET GLASS FOR HORTICULTURAL PURPOSES.

ENGLISH SHEET GLASS.

Packed in Crates of about 280 feet.

	16-ounce.	21-ounce.
Best	5½*d.* ...	7¼*d.*
Seconds	3¾*d.* ...	5*d.*
Thirds	2½*d.* ...	3½*d.*
Fourths	2¼*d.* ...	3¼*d.*

HORTICULTURAL GLASS.

Stock Sizes, 16-ounce. In 100 feet Boxes.

These prices only apply to the sizes stated.

								4ths.		3rds.		4ths.		3rds	
								s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
11 by 9	12 by 9	13 by 9	14 by 9												
12 „ 10	13 „ 10	14 „ 10	15 „ 10					10	9	12	3	12	6	14	0
13 „ 11	14 „ 11	..	..												
14 „ 12	15 „ 12	15 „ 11	16 „ 11												
18 „ 12	19 „ 12	16 „ 12	17 „ 12												
16 „ 13	17 „ 13	20 „ 12	21 „ 14					11	6	13	6	13	6	16	0
19 „ 13	20 „ 13	18 „ 13	..												
16 „ 14	17 „ 14	21 „ 13	..					14 to 15 ozs. to the foot.				16 to 17 ozs. to the foot.			
19 „ 14	20 „ 14	18 „ 14	..												

HARTLEY'S

PATENT ROUGH PLATE GLASS.

Packed in Boxes of 50 feet each.

								s.	*d.*	
6 by 4	and	6½	by	4½	...	...		10	6	per box.
7 „ 5	„	7½	„	5½	...	...		12	0	„
8 „ 6	„	8	„	6½	...	...		13	6	„
6 „ 7	„	9½	„	7½	and 10	by	8 ...	15	0	„

GLASS for ORCHARD HOUSES.

As supplied by us to Mr. Rivers, to the Royal Horticultural Society, and to most of the Nobility, Clergy and Gentlemen of the United Kingdom.

Packed in 100 feet Boxes.

		14 to 15 ozs.	16 to 17 ozs.	21 ozs.
20 by 12 }	Fourths ...	11*s.* 6*d.*	13*s.* 6*d.*	15*s.* 0*d.*
20 „ 13 }	Thirds ...	13*s.* 6*d.*	16*s.* 0*d.*	19*s.* 0*d.*
20 „ 14 }	Seconds ...	...	English.	English.
20 „ 15 }	Best ...	...	18*s.* 0*d.*	23*s.* 0*d.*

The above prices include the Boxes.

We recommend 3rds quality at 16*s.*, or 21-ounce at 19*s.* (as supplied to Mr. Rivers). Best and Seconds are intended only for pictures or dwelling-houses.

SMALL SHEET SQUARES.

In 100 feet Boxes.

6 by 4	6½ by 4½	7 by 5	7½ by 5½ }	11*s.* 6*d.*
8 „ 6	8½ „ 6½	9 „ 7	9½ „ 7½ }	
		10 „ 8	10½ „ 8½	12 6

Boxes 2*s.* each, returnable at full price.

All small squares from 6 by 4 to 10½ by 8½ are cut from pieces, consequently there is only one quality.

FOREIGN SHEET GLASS.

In Cases for cutting up, in Sizes as Manufactured.

London Agents for Hartley's Patent Rough Plate.

Perforated Glass for Ventilation.

Glass Shades, Ebony and Gilt Stands, Gas and Lamp Glasses, Chimney and Globes, &c.

Glaziers' Diamonds from 10*s.* to 21*s.* each.

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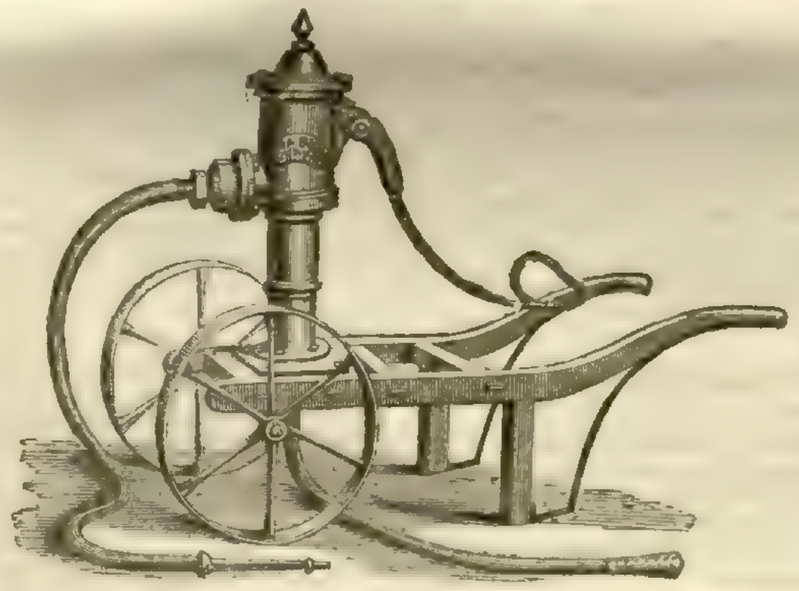

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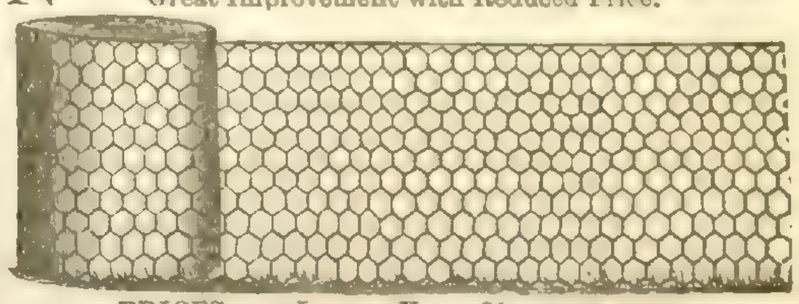

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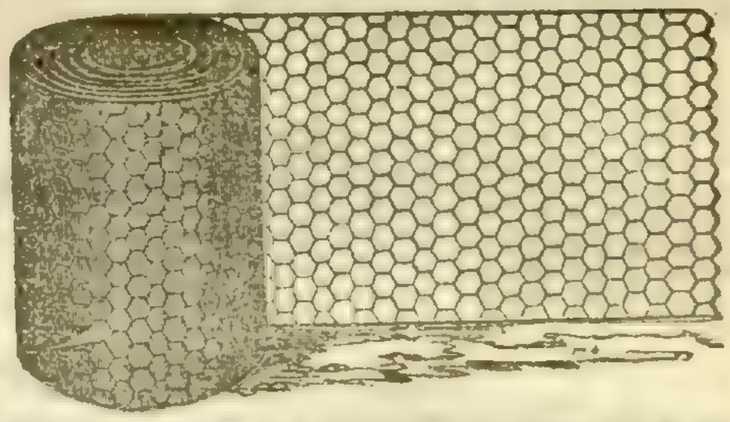

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Landowners having limited interests, such as Tenants for Life, Tenants in Tail, Mortgagors, and others, can Drain and improve their Lands without any expense to themselves personally,—as the Company's Act does not require Proprietors to liquidate the cost, the amount may remain permanently charged on the property, at interest, or be paid off when convenient, or be made redeemable over any term of years.

The works are undertaken by the Company, who keep in constant employ a very extensive and experienced staff of Engineers, Surveyors, and workmen; or Proprietors may avail themselves of the powers of the Act only, and get the works executed under their own superintendence, or by Agents appointed by themselves.

Outfalls through adjoining lands are obtainable under the Company's Act.

Works are also executed by the Company for Parties advancing their own capital, or not wishing to borrow the money.

Every information may be obtained on application to

FREDERICK BRODIE, Secretary.
Castle Street, Exeter.

Offices: Castle Street, Exeter; and
30, Parliament Street, Westminster.

DRAINAGE LOANS are made by the GENERAL LAND DRAINAGE and IMPROVEMENT COMPANY to the Owners of Freehold Estates, Life Tenants, Trustees, Incumbents, Bodies Corporate, &c., for all works of Agricultural Drainage as well as Irrigation, Enclosing, Road Making, Wood Grubbing, and Farm Buildings, sanctioned by the Inclosure Commissioners.

The advances are repaid by way of Rent Charge on the Estate created for such a term of years as the Landowner shall determine will best adapt the annual charge to the circumstances of the Tenants.

No investigation of title being required, or notices given to Remaindermen or Mortgagees, no legal expenses are incurred.

The Company either supply the money expended by landowners in works designed and executed by their own Agents, or they undertake the entire improvement by their experienced staff, supply the weekly advances required, and charge on the estate the actual outlay in the works, and their commission thereon.

Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, London, S.W.

PROF. TYNDALL, F.R.S., will COMMENCE a COURSE of THIRTY-TWO LECTURES on MAGNETISM, ELECTRICITY, SOUND, LIGHT, and HEAT, on MONDAY NEXT, February 29, at half-past 10 A.M., at the Royal School of Mines, Jermyn Street, W.; to be continued on every WEEK DAY but Saturday at the same hour. Fee for the course, 3*l*. TRENHAM REEKS, Registrar.

News of the Week.

In the House of Lords on Monday, on the motion for the second reading of the Royal Arcade Bill, for making an arcade from Regent Street to Bond Street, the Earl of DERBY moved, as an amendment, that the Bill be read a second time that day six months. The amendment was carried without a division, and the Bill was consequently lost. On Tuesday the Marquis of SALISBURY moved for returns of the number of convicts under sentence of penal servitude. After a discussion, in which Earl GRANVILLE, the Earl of CARNARVON, Lord WODEHOUSE, and Earl GREY took part, the motion was agreed to. On Thursday the Earl of DERBY complained that in the House of Commons on Tuesday the ATTORNEY-GENERAL had consented to produce a portion of the correspondence with the United States Government, which Earl RUSSELL had declined to lay before the House of Lords. Earl RUSSELL, in reply, said that in declining to produce these papers in the first instance, he had acted upon the opinion expressed by the law officers of the Crown that their production would be injurious to the public interests, but on subsequent consideration the ATTORNEY-GENERAL had come to the conclusion that some of the papers might be produced without risk.

In the Commons on Friday, Sir J. HAY's motion for an address to the QUEEN, praying that Wakefield might be nominated as the assize town for the West Riding of Yorkshire, was negatived by 138 to 113. The Insane Prisoners Act Amendment Bill passed through committee. On Monday, on the order for going into Committee of Supply, Mr. DISRAELI complained of the delay in the production of the papers on the Danish question, and charged the Government with not acting fairly towards the House. The CHANCELLOR of the EXCHEQUER said that the papers would be produced as soon as possible. Mr. OSBORNE moved that in the absence of the papers the navy estimates should be postponed for three weeks. The CHANCELLOR of the EXCHEQUER accepted the interpretation put on the motion by Mr. ROEBUCK, that if carried it would be a vote of censure on the Government. Mr. DISRAELI and Mr. HENLEY recommended Mr. OSBORNE to withdraw the motion, on the ground that it was not desirable that so important a decision on the foreign policy of the Government should be taken without notice, and in the absence of the Prime Minister from illness. The motion, however, went to a division, and was negatived by 220 to 47. On Tuesday Mr. LOCKE KING obtained leave to bring in a Bill to extend the franchise to 10*l*. occupiers in the counties of England and Wales. Mr. HIBBERT called attention to the demoralising effects of public executions, and moved for papers to show the advantages of private over public executions. Sir G. GREY said he was not prepared to consent to any alteration of the law, and after a short discussion the motion was withdrawn. Mr. S. FITZGERALD moved for papers and correspondence relating to the seizure of the steam rams at Birkenhead, for the purpose of showing whether before the seizure took place the conduct of the Government was consistent with the law or not. The ATTORNEY-GENERAL said that the Government did not object to furnish those papers which were of a diplomatic character, but were not prepared to publish those which contained the evidence to be produced at the approaching trial. He stated that the Government had good grounds for what they had done, and had acted upon their own responsibility, in order that the law should not be violated and injury done to a friendly Power. Sir HUGH CAIRNS charged the Government with having done, on their own confession, what was illegal and without excuse, as well as without law or constitutional practice. After a long discussion, the House divided, when the motion was negatived by 178 to 153. Mr. BLACK obtained leave to bring in a Bill for the consolidation of the Acts relating to copyright in works of literature and the fine arts. On Wednesday, on the motion for going into committee on the Malt for Cattle Bill, Mr. BASS, Mr. DUCANE, Mr. NEWDEGATE, Sir F. KELLY, Mr. HENLEY, and other members urged objections to the Bill, and recommended a reduction of the malt tax as a measure more likely to be acceptable to a large portion of the people. The CHANCELLOR of the EXCHEQUER said that appeals for the remission of taxes had already been made to him involving a total loss of nineteen and a half millions, while his surplus would probably not exceed one or two millions. After answering various objections he suggested that the best course would be to go into committee *pro formâ*, and at once report progress. This suggestion was agreed to, and the Committee was adjourned to Friday. The Insane Prisoners Act Amendment Bill was read a third time and passed. On Thursday in answer to Mr. D. GRIFFITHS, Lord PALMERSTON said that HER MAJESTY'S Government having failed in obtaining an armistice between Germany and Denmark as the foundation of a Conference, had proposed a Conference without an armistice. Austria and Prussia had agreed to the proposal, and he believed that France and Russia would do the same, but no answer had yet been received from Sweden, Denmark, and the German Confederation. In answer to Lord J. MANNERS, Lord PALMERSTON added that the Cabinet of Berlin had informed HER MAJESTY'S Government that the invasion of Jutland was not only not according to orders, but against positive instructions, and that the commander of the invading force would be reprimanded. The Prussian Government, however, added that the occupation of Kolding, in Jutland, being of great strategical value, would nevertheless be continued. The House then went into committee of supply, and Lord C. PAGET moved the Navy Estimates for the ensuing year. A long discussion ensued, and the Chairman was ultimately ordered to report progress before any vote was agreed to.

From the seat of war in the North we learn that the Prussian troops have received orders from Berlin not to advance further into Jutland, but still continue to occupy Kolding. The Prussians commenced their attack on the Danish outposts at Düppel on the 18th, and after several hours' fighting succeeded in driving the Danes to their entrenchments. The Danes, however, subsequently recovered all their former positions. On Monday three brigades of Prussians, with artillery, again attacked and drove in the Danish outposts, and took possession of the village of Düppel. After maintaining their ground for four hours they were dislodged by the cannonade from the fortifications at Düppel, and compelled to retire with heavy loss. The CROWN PRINCE and PRINCE FREDERICK CHARLES OF PRUSSIA were on the field.

It is announced that England has proposed a Conference on the basis of the integrity of the Danish monarchy, and that Austria and Prussia have consented to take part in it on the understanding that there is to be no suspension of hostilities. France also has officially accepted the proposal, and it is believed that Russia will do so likewise, but no reply has yet been received from Sweden or Denmark, though it was reported yesterday that Denmark will accede to the proposal.

The differences between the two great German Powers and the smaller States are rapidly becoming more serious. The Wurzburg Conference has agreed to the proposition of Saxony, recommending that the minor States should combine to prevent the two great German Powers disposing of Holstein without the assent of the Federal Diet; and has also resolved that the Diet alone can decide on the succession question. To give effect to these resolutions the Conference decided on sending more Federal troops into Holstein, and on making preparations for the mobilisation of the armies of the minor States.

Home News.

THE COURT.—The Queen, accompanied by the Princesses Helena, Louisa, and Beatrice, Prince Leopold and Princess Holenlohe, arrived at Windsor Castle on Saturday afternoon from Osborne. Prince Arthur arrived from Greenwich Park. Sir George Grey also arrived and had an audience of the Queen. On Sunday morning the Queen, Princess Helena, Princess Louisa, Princess Beatrice, Prince Arthur, Prince Leopold, and Princess Holenlohe attended Divine service in the private chapel. The Dean of Windsor officiated. On Monday morning the Queen walked in the grounds, accompanied by Princess Helena. Prince Arthur left the Castle for Greenwich Park. Sir George Grey left the Castle for London. On Tuesday morning the Queen came to London and honoured the Countess of Elgin with a visit. Her Majesty afterwards returned to Windsor. Prince Edward of Saxe Weimar dined with Her Majesty. On Wednesday morning the Queen walked and drove in the grounds, accompanied by Princess Helena. On Thursday morning the Queen walked in the grounds. In the evening Earl de Grey and Ripon arrived at the Castle, and had an audience of the Queen.

THE PRINCE AND PRINCESS OF WALES arrived at Marlborough House on Tuesday afternoon, from St. Leonard's. On Friday morning the Prince had made arrangements to hunt with the East Sussex foxhounds, but the sharp frost and frequent falls of snow rendered it necessary to postpone the hunt. The Princess took a drive along the coast in a close carriage. The Prince took walking exercise to the eastern part of Hastings, both morning and afternoon. In the evening the volunteer rifles and artillery assembled in front of the hotel, and went through various movements in the presence of their Royal Highnesses. On Saturday the Princess took a drive along the sea front of the town; the Prince walked to the Priory. On Sunday morning their Royal Highnesses attended Divine service at the parish church. The Prince afterwards walked on the esplanade to Carlisle parade. In the afternoon the Princess drove out for a short time, and the Prince promenaded the parade and went into the older portion of the town. On Monday morning the Prince walked into Hastings, and honoured Messrs. Ayles by sitting for his portrait at their photographic establishment. In the afternoon the Prince drove the Princess to the Caves. On Tuesday morning their Royal Highnesses with the infant Prince and suite left St. Leonard's for Marlborough House, travelling by the South-Eastern Railway to the Charing Cross terminus. On Wednesday morning the Prince rode out on horseback. The Duke of Cambridge visited His Royal Highness at Marlborough House. In the afternoon the Princess drove out. In the evening the Prince honoured the performance at the Princess's Theatre with his presence. On Monday morning the Prince rode on horseback. Prince Gustav of Saxe Weimar visited his Royal Highness. In the afternoon the Prince visited Prince Gustav, the Duke of Cambridge, and the Duchess of Inverness. The Princess took a carriage drive. The Duchess of Cambridge, the Duchess of Mecklenburg Strelitz, and the Princess Mary, visited the Princess at Marlborough House. In the evening the Prince, accompanied by the Duke of Cambridge, went to Christ's Hospital, to witness the public supper of the boys.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury, in Downing Street. Another Council was held on Wednesday, at Cambridge-house, the private residence of Lord Palmerston.

THE CHANNEL FLEET.—Orders were sent to Lisbon last week for the Channel fleet to return to Portland Roads, there to await further orders. The fleet will accordingly leave the Tagus to-day for Portland.

Foreign.

FRANCE.—The King and Queen of Portugal are shortly expected to arrive in Paris. The Treaty of Commerce and Navigation between France and Italy has been promulgated. According to an imperial decree issued on Sunday, Belgian ships coming from British possessions in Europe are to be treated as French, English, and Italian ships coming from

the same possessions. The ports of Toulon and Cette are declared open for the importation and clearing of pure and mixed fabrics taxed *ad valorem*. The stipulations of the Treaty of Commerce between France and Italy are also applicable to England and Belgium. An Imperial decree was issued on Friday appointing a Committee to draw up the regulations in connexion with the Sugar Bill, which has been submitted to the Corps Législatif. M. Corta, member of the Corps Législatif, embarked on Thursday for Mexico. He has been intrusted with a mission, and will be invested with authority over all financial functionaries and agents. A decree has been issued, convoking the electors of the seventh circumscription of the department du Nord to elect a deputy on the 6th and 7th of March. The invasion of Jutland by the Austro-Prussian armies has excited great interest in Paris, and the Ministerial papers state that the Ambassadors of Austria and Prussia at Paris and London have given explanations tending to show that the invasion was necessary for strategic purposes, and had no political significance. The *Nord* of Thursday announces that the proposition made by England for a Conference has been officially accepted by France. It fears, however, that this Conference, which will shortly assemble in London, offers few chances of bringing about a pacific solution of the conflict. The *Patrie* of Thursday says:—

"France, in spite of her sympathy for Denmark, ought not to hesitate in recognizing the wishes of the German populations of Holstein and Schleswig to be incorporated with the German nation. Our policy on the Elbe ought not to be different to that we have on the Vistula and the Mincio. Should Germany obtain this satisfaction, the other Danish provinces would be united to Sweden, for the purpose of guarding the entrance to the Baltic. The principle of nationalities being thus established, Germany would have no reason not to apply it to Poland and Italy."

SPAIN.—A royal decree of amnesty for political offences was issued on Sunday at Madrid, in commemoration of her Majesty's happy delivery and return to the direction of public affairs. The British steamer Princess, which touched at Malaga to take in coal, has been seized by the authorities of that port. It was discovered that she carried in her hold several rifled cannon, muskets, ammunition, and other warlike effects. The vessel was from London and bound to Ancona.

DENMARK.—It is officially announced that England has invited the German Confederation and the Powers which signed the Treaty of 1852 to a Conference in London, for the settlement of the Dano-German question. The political bases of the proposed Conference are as follow:—"1. The European Powers guarantee the the autonomy as well as the indivisibility of the Duchies. 2. The territorial arrangements hitherto existing are to undergo no change." Prussia and Austria have accepted the principle of the proposal, provided, however, that the German Diet and France also assent, and that the negociations should not interfere with the prosecution of hostilities. It was announced in Paris on Thursday, that France has given her adhesion to the proposal, and there is reason to believe that Russia will likewise consent, but from Denmark and Sweden no reply has as yet been received; though it was reported yesterday at Weimar that Denmark has also consented. The resolution of the Federal Diet will be taken as soon as possible. The Secretaries of the Danish Legations at Berlin and Vienna have been re-called. The Secretary of the Austrian Legation at Copenhagen has already left.

THE DANISH DUCHIES.—The Prussian troops on Friday occupied Kolding, in Jutland. A cavalry engagement subsequently took place at Gudsoe, without result. The Prussian Guards on Sunday received orders from Berlin not to advance further into Jutland, but to occupy Kolding as a strategical position. Danish outposts are now stationed opposite the Prussian Guards at Gudsoe. Unimportant skirmishes are continually taking place. The Danish force occupying Fredericia numbers 6000 men, many of whom are said to be Schleswigers. On Monday morning at 7 o'clock the Prussians drove in the Danish outposts and occupied the village of Düppel. Marshal Wrangel, the Crown Prince of Prussia and Prince Frederick Charles were on the field. They were dislodged by a cannonade from the bastions. The action lasted four hours. Two Danish regiments were engaged, 200 men were killed and wounded, with many officers on the side of the Danes. The Prussians left many dead and wounded on the field. The Danish army is in high spirits. The Prussian account on the other hand says that their loss was only three killed and 20 wounded; and that they took several officers and 200 rank and file of the Danes prisoners with several flags. The Prussians have arrested at Braager the rector Schleppegrel, the parish warden Bülow, and the parish clerk Hausen. The Mayor of Hadersleben has also been arrested by the Prussian officer commanding the forces in that town. The Germans in Sandbjerg and the Danes in Roehave have fired at each other across the Sound without effect. The fortifications of the island of Alsen are being strengthened. A Prussian battalion has arrived at Kiel. The Prussians are fortifying the Bay of Kiel. A panic prevails at Stralsund on account of the appearance of five Danish ships near Rugen. Several Danish ironclads, among which were the Esbern-Snare and Absalon, appeared on the 18th inst. in the Flensburg Fiord, and exchanged shots with the allied artillery. A Prussian garrison has prevented a landing of the Danes to the north of Friederichsort which had been attempted in the boats of the Esbern, Snare and Thor. A blockade will be declared by Denmark of all ports on the eastern coast of Holstein and Schleswig, except Neudstadt, from the 25th inst. 100 sappers have commenced the razing of the Dannewerk. 400 labourers are assisting in the work of demolition. A monster deputation from the whole of Schleswig is expected at Kiel to do homage to the Duke of Augustenburg. Marshal von Wrangel has issued an order, stating that persons committing hostile acts towards the allied troops, or refusing to render them assistance, will be subject to martial law. On the 17th inst. the Civil Commissioners issued a decree abrogating the Constitution of the 18th of November, and another on the 19th inst., annulling the ordinance of the late King of Denmark relative to the use of the Danish language. On the 19th the Civil Commissioners issued an order, announcing that the language to be used in the schools and places of public worship in Schleswig will be German, with the exception of the parish of Wieshard, where inquiries respecting the language are being made. In certain religious ceremonies the language may be Danish, if desired by the parties concerned. From the 1st of April next the currency in Holstein will consist of courant-marks, instead of rigsmünze. Prince Frederick Charles in reply to a deputation of citizens from Flensburg, said that it was of course understood that all the Danish officers in Schleswig would be dismissed. The object in temporarily maintaining them in office was to avoid anarchy.

HAMBURG.—The authorities of Hamburg have seized the money in the Danish post-office in that city. According to an announcement of the Danish Consul-General, Holstein and Schleswig ships carrying the Danish flag and Danish papers and signals will retain the rights of Danish ships.

BAVARIA.—The conference of the Ministers of Foreign Affairs of the minor German States met at Wurtzburg last week, and was attended by the Ministers of Bavaria, Saxony, Wurtemburg, Baden, Hesse-Darmstadt, Brunswick, Nassau, Weimar, Saxe-Gotha, and Saxe-Meiningen. The Conference unanimously agreed to the proposition of Saxony that the minor States should be united in their attitude in the event of the Great German Powers endeavouring to withdraw forcibly from the Federal Diet the right of disposing of Holstein. It was also resolved not to sanction any convention affecting the rights of the Duchies, and that the Federal Diet alone has to decide on the succession question. The Conference further resolved that more Federal troops should be sent to secure Holstein, and that preparations be made for the mobilisation of the armies of the minor States. It was also decided that the resolutions passed at the Conference should not be communicated to the press.

FRANKFORT.—At the sitting of the Federal Diet on Thursday, Austria and Prussia proposed that the commander-in-chief of the army in Holstein should be transferred to Prussia They also moved that two new civil commissioners should be appointed by the two great German Powers. The propositions were referred to the committee, and are to be put to the vote within eight days. The report of the committee upon the succession question then came on for debate. Articles 1 and 2, declaring that the Treaty of London is not binding on the Confederation, and that the Diet cannot take the treaty as the basis of its resolutions, were rejected. Article 3, refusing to accept the proxy of King Christian, and Article 4 requesting the committee on the succession question to present their report with all possible celerity without taking as its basis the Treaty of 1852, were adopted. The Governments which have taken part in the Würzburg Conference proposed that the Diet should convoke the Holstein Estates. The Hanse Towns requested that measures of reprisal should be taken for the capture of German shipping by Denmark.

AUSTRIA.—The *General Correspondenz* of Wednesday, confirming the statement that the two great German Powers have accepted in theory the Conference proposed by England, says:—

"Both Powers thereby prove their readiness at any moment to take whatever steps may be compatible with their just demands towards a peaceful solution of the difficulty."

Count Degenfeld, Minister of War, has at his repeated request, been relieved of his functions, and Lieut. Field-Marshal Chevalier von Frank has been appointed to the vacant Ministry. Orders have been sent by telegraph to Pola to get ready the Austrian line-of-battle ship Kaiser and the screw corvette, Freidrich, to proceed to the German Ocean to protect merchantmen against Danish cruisers. Another squadron of 12 Austrian men-of-war has received orders to put to sea for the protection of German merchantmen against Danish cruisers. Part of the fleet has already sailed. The Austrian Government has addressed a circular despatch, under date of the 13th inst., to all the members of the German Confederation. The following is a summary of this document:—

"It is admitted that the London Treaty is not binding upon the Federal Diet. A vote on that treaty taken by the Diet in conformity with the propositions of the Committee would not be decisive with regard to that question, but might possibly induce the non-German Powers to make counter-declarations in favour of the treaty, thereby aggravating the critical state of affairs. Austria, therefore, requests the German Governments not to assent to the different propositions of the Committee, but to instruct that body to make a fresh report which should treat solely of the succession question."

PRUSSIA.—A rumour is current that 60,000 Prussian troops will be concentrated on the frontier of the kingdom of Poland. The Government journals explain the entry of the allied armies into Jutland by stating that the invasion had a military reason, which was to prevent the Danes from concentrating all their troops behind the fortifications of Düppel and in the Island of Alsen, and that the province will continue to be occupied as a guarantee for the payment by Denmark of the expenses of the war.

POLAND.—Advices from Warsaw state that from the 22d of March next all persons of either sex above the age of 14 must, on leaving their houses, be provided with a passport, and any one unable to produce such a document will be punished. The Government officials have been ordered to present an address protesting against the insurrection. Great excitement has been created in Warsaw by the forcible abduction of Miss Neumann, the sister of the surgeon Neumann by two Russian officers, under pretence of a domiciliary visit. On the 18th the insurgents blew up a goods train near Wloclawek, destroying 16 waggons. A passenger train met with an accident on the following day near Lazy, in consequence of some of the rails having been taken up. The municipal treasury of Czersk has been seized by the insurgents. The Russian Major Butkiewicz, who marched with three infantry companies against the insurgents under Dombrowski, had been utterly routed at Kurzewo, in the government of Radom. Only 80 Russians escaped. A report was current that several Russian soldiers had deserted to the insurgents.

TURKEY.—A convention between the English and Turkish Governments relative to the portion of the new Indian telegraph line which is to pass through the Ottoman dominions was signed on the 17th inst. The *Levant Herald* reports the arrival of a quantity of arms from England and Vienna. It states that they have been distributed by the Sultan to the Imperial Guard and other troops, and remarks upon this activity in keeping the defences of Turkey in good order.

CAPE OF GOOD HOPE.—The Governor was to leave Table Bay on the 21st inst. in the Narcissus, for Algoa Bay, on his way to Graham's Town, where his visit was to be celebrated by triumphal arches, bonfires, and illuminations. It was not known what measures the Governor intended to bring before the Parliament. A batch of new taxation Bills was expected, but on what interest the imposts were to be laid had not been announced. The Governor had ordered the stoppage of all public works, the insufficient supplies provided by Parliament last year being exhausted. The condition of colonial finances was beginning to attract attention. It was expected that, notwithstanding every possible curtailment of the current expenditure, the temporary loans necessary to eke out the Treasurer's resources would be increased by June next to at least 100,000*l*. The Commander of the Forces was to accompany the Governor and make a tour of inspection of the various military stations and outposts. It was expected that the head-quarters would again be established at Graham's Town. Telegraphic intelligence received at Graham's Town on the 8th of January states that all was quiet on the frontier, but that another Caffre prophet had arisen, advising the Caffres to sow plentifully for three years, and not dispose of the crops, but to store them up, as after three years no corn would grow. This was thought to be a design to provide food for campaigning purposes. Fresh disturbances had occurred in the Transvaal province, in which Pretorius was said to have had a share. An attempt had been made to oust Van Reusbung from the Presidency in favour of Pretorius, but was expected to fail. There is no news of Dr. Livingstone. Dr. Meller, of the Zambezi exploring expedition, has returned to England by this mail.

INDIA.—Sir John Lawrence held his first levee on the 16th ult., and it was most numerously and brilliantly attended. On the 18th his excellency opened the Calcutta Agricultural Exhibition. The natives of high rank, the Mysore princes, some talookdars from Oude, and many of the Baboos and gentlemen of Calcutta attended the ceremony. The Viceroy will remain in Calcutta till the next cold season. There are serious disturbances in Cabool among the contending factions. The brothers Azim Khan and Afzul Khan are in arms against Sher Ali Khan, whom our government during the Sittana war recognised as the legitimate ruler of Affghanistan. Captain Sherard Osborn, with the Anglo-Chinese squadron, arrived in Bombay on the 13th ult. The squadron has been entirely disbanded, and all the ships with the exception of the Keangsoo and the Keang tung, both of which are lying in the harbour of Bombay, are on their way home. The Bombay government has consented to relieve Captain Osborn of the charge of these two steamers, until he learns the views of the English government. The first ships with the Persian Gulf Telegraph cable have left Bombay. On the 21st of December the Confederate steamer Alabama steamed out of New Harbour, Singapore, towards the Straits of Malacca; on the same day she burned the Martaban, formerly the Texan Star, laden with rice from Moulmein to Singapore. On the 26th she burned the Sonora and the Highlander, and the 14th ult. she burned the Emma Jane at Anjengo.

JAPAN.—Tranquillity prevails in Japan.

UNITED STATES.—The Army of the Potomac under General Sedgwick, who has temporarily taken the command in consequence of the illness of General Meade, made a reconnaissance in force on the 6th inst.

to the south side of the Rapidan. General Lee was found in full force in the Federal front. After heavy skirmishing, in which the Federals are reported to have lost from 200 to 300 men, they returned to their old quarters. The Federal communication between Knoxville and Cumberland Gap was cut off by the Confederates on the 10th. An express train has been captured eight miles from Harper's Ferry, and the passengers robbed. It is not known whether the attack was made by the Confederates or by gangs of Federal deserters. Knoxville despatches of the 31st report that the Federal cavalry was defeated in an engagement near Marysville, and was retreating upon Knoxville, with the Confederates in pursuit. Seven Federal officers were killed. No other particulars are given. The Confederates had occupied Liverville, and are again threatening Newbern and Washington, North Carolina. The Confederate ironclad gunboat at Kingstown is completed, and will co-operate with the land forces. The *Nashville Union* says that the Federal army has crossed the Tennessee River, near Larkinsville, and surmises that its object may be to attack Rome, Georgia, to which General Johnstone's main army has retired. Telegrams from Mobile of the 6th report that Gen. Sherman's Federal force—infantry, cavalry, and artillery, 30,000 strong—crossed the Big Black River on the previous day, and was expected to advance to Meridan, and unite with a cavalry force moving along the line of the Mississippi and an infantry force advancing from Natchez. Sherman's movement is said to be made in order to flank Johnston and Hardee in Alabama and Georgia, rather than to attack Mobile. Despatches from Fortress Monroe report the complete failure of a secret expedition, organised by General Butler and commanded by General Wistar, on the 6th and 7th, for the liberation of the Federal prisoners at Richmond. Information of the design was conveyed to Richmond by Federal deserters, and the Confederates were enabled to provide against the intended surprise. The siege of Charleston has been raised, and Admiral Dahlgren has left Charleston in the flag-ship for St. John's, Florida. A large Federal expedition, with three gun boats, left Port Royal on the 5th inst., and landed at Jacksonville, Florida, on the 8th, from which place it was reported they would proceed to Tallahassee. General Gillmore left Port Royal on the 7th to join this expedition. Admiral Porter is fitting out a formidable fleet on the Mississippi. The British gun boat Petrel arrived at Charleston on the 5th, wishing to communicate with the British consul at Savannah. Admiral Dahlgren refused permission, and the Petrel put to sea. It is said that the Petrel brought dispatches for the Confederate Secretary Benjamin. On the night of the 2d a large steamer entered Charleston Harbour, unobserved by the Federal fleet, and was not discovered until the morning of the 3d, when she had run aground, and was landing her cargo under the guns of Fort Moultrie. The Federal batteries opened on her, and shortly afterwards she sank. The Conscription Bill has passed Congress, Slaves between the ages of 14 and 45 are liable to be drafted; loyal owners to be compensated. General Meade has made a speech at Philadelphia, stating that since March, 1861, 100,000 men of the Potomac army have been killed and wounded. The German Republicans of New Jersey have declared in favour of Butler, Fremont, or any other Radical candidate for the Presidency who will guarantee an emancipation and confiscation policy. The Halifax Admiralty Court has restored the Chesapeake and her cargo to the owners on the payment of the legal expenses.

Parliament.

HOUSE OF LORDS.

MONDAY.—*Metropolitan Railways.*—In reply to the Earl of DONOUGHMORE, Earl GRANVILLE said that the Select Committee on Metropolitan Railways had not yet agreed to any report, and that a statement to that effect which had appeared in one of the journals was incorrect. On the motion for the second reading of the *Royal Arcade Bill*, the Earl of DERBY opposed the measure, on the ground that it was a purely commercial speculation, got up by architects and builders, and that, instead of being an ornament to the metropolis, it was likely to do a great injury to the neighbouring property, and to become a rendezvous for the most objectionable characters. He moved as an amendment that the Bill be read a second time that day six months. — Earl GRANVILLE said that as the Bill was opposed so generally by the owners of property in the neighbourhood, he thought it might be better to agree to the amendment.—After a few words from Earl GREY and the Earl of MALMESBURY, the amendment was agreed to without a division, and the Bill was consequently thrown out. *The American Armies.*—In reply to Lord CAMPBELL, Earl DE GREY and RIPON said that it was not the intention of the Government to send military commissioners to report on the operations of the Federal and Confederate armies; but that three officers, an engineer, an artillery officer, and an army officer had been deputed to report on the artillery and iron-clads. For obvious reasons no officers had been sent to the Confederate States.

TUESDAY.—*Penal Servitude.* — The Marquis of SALISBURY moved for returns of the number of convicts under sentence of penal servitude confined in gaols other than Government prisons in 1862 and 1863, and in doing so criticised at some length the Bill of the Government introduced into the House of Commons on the subject.—Earl GRANVILLE said that the Bill referred to would speedily come before the House, and until then he trusted their lordships would withhold any expression of opinion respecting it. The Government had carefully considered the report of the commissioners, and their measure was based on its recommendations, so far as it was thought expedient to carry them out.—The Earl of CARNARVON was of opinion that the whole system of penal servitude rested on a wrong basis, and the result was that, as a punishment for heinous crimes, it was practically lighter than imprisonment for minor offences. He believed it was possible to ensure a certainty of punishment with remissions of the sentence, which would be most useful as holding out a reward for good conduct; but it was essential to exercise a supervision over such convicts as might have their sentences remitted.—Lord WODEHOUSE thought that the want of certainty of punishment deprived the existing system of any deterring influence, but the reformation of the criminal ought to be a secondary consideration to that.—Earl GREY doubted whether a strict supervision by the police of a convict on ticket of leave was incompatible with the slightest chance of his ever obtaining employment. They could not go back to the system of a fixed and certain punishment, for that system had been condemned, and it was impossible under it to put the prisoner to any useful labour, or turn him to any good purpose, without resorting to a most degrading, demoralising, and futile coercion. The motion for returns was then agreed to.

THURSDAY.—*The Seizure of the Steam Rams.*—The Earl of DERBY complained that in answer to an application for the papers relating to the steam rams in the Mersey, the Alabama and Saxon, the Foreign Secretary had given him a refusal, on the ground that their production whilst legal proceedings were pending would be prejudicial to the public interests. He now found, from a debate which took place in the House of Commons on Tuesday, that the Attorney-General promised to furnish some of the papers, and intimated that there never had been any objection to their production. He wished to know whether it was intended to lay the papers upon the table now. —Earl RUSSELL said there was no objection to produce a portion of the papers referred to. In declining to furnish them in the first instance he had acted upon the opinion expressed by the Attorney-General, that their production would be injurious to the public interests; but on subsequent consideration the Attorney-General came to the conclusion that some of the papers might be produced without risk.—Lord CHELMSFORD inquired when the Attorney-General changed his opinion.—Earl RUSSELL replied that the communication of the Attorney-General was a privileged one. He should, therefore, decline to state when it was made.—The Earl of MALMESBURY asked the noble earl to include amongst the Danish papers about to be supplied to Parliament a copy of the correspondence which had led to the Treaty of 1852.—Earl RUSSELL said there would be no difficulty in including those papers in the next instalment to be laid upon the table. *Case of Captain Whyte.*—In answer to the Marquis of CLANRICARDE, Earl RUSSELL said that the claim of Captain Melville Whyte on the Government of Peru had been referred to the Senate of Hamburg for arbitration.

FRIDAY.—The *Invasion of Jutland.*—In answer to the Earl of MALMESBURY, Earl RUSSELL said that he had gathered from a conversation with the Prussian Minister that the invasion of Jutland took place without the sanction of the Prussian Commander-in-Chief, and that as Denmark had made the war general by ordering the seizure of German ships, the Prussian Government might be obliged to demand compensation, not for the general expenses of the war, but for the value of the cargoes of those ships, and retain "the material guarantee" until their claim was satisfied.—In reply to the Earl of ELLENBOROUGH, Earl RUSSELL said that he had reason to believe that the Austrian Government would endeavour to moderate the actions of their generals.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Northern Circuit.*—Sir J. HAY moved an address to the Queen, praying her Majesty to nominate the town of Wakefield as the assize town for the West Riding.—Mr. LEATHAM seconded the motion.—Sir G. GREY opposed it on the ground that the matter rested with the Queen in Council.—After some discussion, in which the claims of Leeds were advocated by Mr. BEECROFT, Mr. ROEBUCK, Mr. BAINES, and Mr. HADFIELD, and those of Wakefield by Colonel SMYTH and Sir J. PAKINGTON, the House divided, when the motion was negatived by 138 to 119. *Colonelcy of the 2nd Dragoons* —Colonel BARTTELOT asked on what principle Lieut.-General Gough, C.B., had been appointed to the 2nd Dragoons, stating his opinion that the command of a regiment of cavalry should not have been conferred upon an officer, however high his services and character, who had never done a day's duty with a dragoon regiment. —Colonel DICKSON remarked that this constant interference with military matters struck a heavy blow at discipline —Mr. OSBORNE vindicated the appointment, which, he thought did equal credit to the Horse Guards and to General Gough.—Mr. DAWSON also spoke in favour of the appointment.—The Marquis of HARTINGTON said that the appointment was justified not only by the distinguished services of the gallant officer, but by the strictest rule of precedent. The subject them dropped. *Capture of British Ships.*—Mr. HALIBURTON called attention to the capture of a ship under the Confederate flag, by a Federal vessel of war, within the harbour of Pankbar, in Nova Scotia, and under the guns of the fort; and asked whether complaint had been made of this outrage to the Government of the United States; and, if so, what answer had been given thereto.—Mr. LAYARD replied that as soon as information was received by her Majesty's Government of what had taken place, instructions were forwarded to Lord Lyons, directing him to ask for immediate explanation and redress from the American Government. He was happy to state that, long before those instructions were received, Mr. Seward, having heard of the seizure of the vessel, communicated with Lord Lyons on the subject, expressing his regret, making a full apology, and offering reparation. *Denmark and Russia* —Mr. KINGLAKE called attention to the way in which the operation of the Treaty of London of May 8, 1852, was affected by a note addressed on the same day by Baron Brunnow to the Danish Minister at the Court of St. James's, and which appeared to him equivalent to a secret article to that treaty in the interest of the Russian pretensions to the throne of Denmark.—Mr. LAYARD said that the note in question had been laid on the table of the House several years ago, and no correspondence had taken place on the subject.—Mr. ROEBUCK observed that Mr. Kinglake had evidently discovered a "mare's nest." The House then went into committee of supply *pro formâ*, and immediately resumed, when The *Banks Act (Scotland) Bill* was read a second time. The House then went into committee on the *Insane Prisoners Act Amendment Bill*.—Mr. G. HARDY moved an amendment to the second clause, to the effect that in the case of prisoners under sentence of death, and certified by two or more visiting justices to have become insane since conviction, the truth of such certificate should be inquired into by three commissioners to be appointed for the purpose. The amendment was supported by Mr. MACDONOGH, and opposed by Sir GEORGE GREY. After considerable discussion the House divided, when the amendment was negatived by 32 to 26. The clauses of the Bill were then agreed to, and the Chairman was ordered to report the Bill to the House. The *Warehousing of British Spirits Bill* was read a second time.—Mr. H. BRUCE obtained leave to bring in a Bill for the amendment of the law relating to the *Importation of Diseased Cattle*; a Bill to confirm certain provisional orders under the *Land Drainage Act*, and a Bill to authorise the *Enclosure of Certain Lands*, in pursuance of a report of the Enclosure Commissioners. *Poor-law Board.*—Mr VILLIERS moved for a Select Committee to inquire into the administration of the relief of the poor under the orders, rules, and regulations issued by the Poor-law Commissioners and the Poor-law Board, pursuant to the provisions of the Poor-law Amendment Act, and into the operation of the laws relating to the relief of the poor. The motion was agreed to.

MONDAY.—*The Danish Papers.*—On the motion for going into Committee of Supply, Mr. DISRAELI complained that the Government were not acting fairly by the House in delaying to furnish the Danish papers. He failed to perceive in his place the chief of the Treasury bench, who was to be congratulated on having established a name that bore terror to no country save his own. Only the previous day it was reported that the Prussians had repented of their proceedings, and had withdrawn from Jutland. It did not appear, however, that they had heard of the language used by the noble lord on Friday, as, if so they would probably have altered their minds, and remained in the province. The House naturally enough wished to know if there were any truth in the announcement, but the Premier was absent, and the House was left in the dark. But this was not the only matter on which the House had been treated scurvily by the Government. What, he asked, were the grounds on which they had rested their hope that their late offer of mediation would be accepted by the contending Powers, and which of the contending parties had refused it? To the members of the Government it might be matter of indifference that they were the objects of derision by every Court in Europe. The advisers of her Majesty might not object to be in that undignified position, but the House of Commons did not wish to be made the laughing-stock of its own constituents. Some means must therefore be devised to obtain the Danish papers and to extract explanations from the Government.—The CHANCELLOR of the EXCHEQUER said that he would not follow the right hon. gentleman's brilliant periods, which were intended to catch the cheers of those behind him, but would refer to the real point at issue, the non-production of the Danish papers and the circumstance that they were not ready at the opening of Parliament. An explanation on the subject was given on the first night of the session by the noble earl at the head of the Foreign Office when describing the uniform rules of the department with regard to negotiations still pending. A promise had been given that the papers would be produced as soon as possible, and that promise would be kept. With regard to the Government not having given the House information as to the evacuation of Jutland by Austria and Prussia, the only reason they had not done so was that they were still in ignorance of the circumstance.—Lord R. CECIL complained that the House was kept in the dark as to how far the honour of England had been pledged to Denmark.—Mr. B. OSBORNE maintained that the Government were not justified in asking for a vote for the number of men and boys to serve in the navy until they knew what were the precise relations of the country in reference to Denmark and the German Powers. In order to test the sense of the House on this point, he would move that, instead of going into committee of supply that evening, the consideration of the navy estimates should be postponed for three weeks.—Sir F. SMITH thought that the navy estimates ought to be postponed —Mr. ROEBUCK said that the real question before the House was simply this—whether they had confidence in the Government as regards its foreign policy. In his opinion the Government was not entitled to that confidence —The CHANCELLOR of the EXCHEQUER said that the proposition of Mr. Osborne was not consistent with the rules or proceedings of Parliament. So far as her Majesty's Government were concerned they were quite ready, on due notice given, to take the sense of the House on their foreign policy.—Mr. DISRAELI condemned any proposal to divide the House on the foreign policy of the Government without giving them notice, and in the absence of the noble lord at the head of the Government. Supposing the majority were against the Government, it would not be satisfactory for the House to find that it was gained by a surprise.—Sir G. GREY said there was nothing which the Government would welcome with greater pleasure than a challenge to take the sense of the House on their foreign policy.—Mr. CLAY (on behalf of Mr. Osborne) disclaimed any intention by his motion to censure the foreign policy of the Government.—Mr. KINGLAKE repudiated altogether the construction put by Mr. Roebuck upon Mr. Osborne's motion. — Mr. DARBY GRIFFITH and Lord R. MONTAGU recommended the withdrawal of the motion. — Lord DUNKELLIN considered it but reasonable that before the House was asked to vote the men for the navy it should know what that navy might have to do. — Lord INGESTRE was willing to take a division on the narrow issue as to whether it was desirable to postpone the estimates. — Mr. WALTER and Mr. NEATE deprecated a division —Mr. LAIRD was in favour of postponement.—Mr. HENLEY recommended the withdrawal of the motion, in the hope that the other business on the paper would be protracted to so late an hour that the navy estimates could not come on until Thursday, and thus give time for the production of the Danish papers. On a division, the motion for postponement was negatived by 220 to 47. *Malta Docks.*—Captain TALBOT moved a resolution that the project of constructing a dock at the head of the Marsa at Malta be abandoned, and that the site at the head of the French Creek, recommended by Admirals Martin and Codrington, be selected for that purpose.—Lord C. PAGET said that it would be a breach of faith towards the Maltese Government to make any alteration in the arrangement contemplated and which had received the sanction of the most eminent engineers.—Sir J. PAKINGTON and Captain JERVIS supported the motion, and Mr. WHITBREAD defended the Admiralty. The motion was withdrawn. *Naval Yards.*—Mr. LINDSAY called attention to the report of the commissioners appointed by her Majesty in 1860 to inquire into the control and management of her Majesty's naval yards, and insisted that the recommendations of the commissioners ought to be carried into effect.—Mr. BENTINCK said that the greatest recommendation would be the reconstitution of the Board of Admiralty. After some remarks by Sir F. SMITH, Mr. FERRAND, and Mr. DALGLISH, the House went into committee of supply *pro formâ*. *Scottish Law Courts.*—The LORD ADVOCATE obtained leave to bring in a Bill to make provision for uniformity of process in summary criminal prosecutions, and prosecutions for penalties in the inferior courts in Scotland; also a Bill to provide for the alteration of the circuits of the Court of Justiciary in Scotland, and for holding additional circuit courts.

TUESDAY.—*The Franchise.*—Mr. LOCKE KING moved for leave to bring in a Bill to extend the franchise in counties in England and Wales. He gave a history of the various measures which had been introduced from time to time to reduce the county franchise from 50*l.* to 10*l.*, and repeated the arguments he had used in his annual efforts to accomplish that object. Connected as he was himself with land, he entirely repudiated the idea that an enlargement of the county franchise would tend to render property less secure than at present.—Mr. HASTINGS RUSSELL seconded the motion.—Sir G. GREY would not oppose the introduction of the Bill, but would reserve his opinion upon it until the second reading. Leave was given to bring in the Bill.—Mr. HIBBERT called attention to the demoralising effects of *Public Executions*, and moved for papers in relation thereto. He read extracts from descriptions of various public executions to show that they had no deterring influence on the public, but the contrary, and that it would be far more desirable that capital punishment should in future be carried out within the gaol.—Mr. HADFIELD seconded the motion.—Sir G. GREY was not disposed to come to the conclusion that capital punishment

the same possessions. The ports of Toulon and Cette are declared open for the importation and clearing of pure and mixed fabrics taxed *ad valorem*. The stipulations of the Treaty of Commerce between France and Italy are also applicable to England and Belgium. An Imperial decree was issued on Friday appointing a Committee to draw up the regulations in connexion with the Sugar Bill, which has been submitted to the Corps Législatif. M. Corta, member of the Corps Législatif, embarked on Thursday for Mexico. He has been intrusted with a mission, and will be invested with authority over all financial functionaries and agents. A decree has been issued, convoking the electors of the seventh circumscription of the department du Nord to elect a deputy on the 6th and 7th of March. The invasion of Jutland by the Austro-Prussian armies has excited great interest in Paris, and the Ministerial papers state that the Ambassadors of Austria and Prussia at Paris and London have given explanations tending to show that the invasion was necessary for strategic purposes, and had no political significance. The *Nord* of Thursday announces that the proposition made by England for a Conference has been officially accepted by France. It fears, however, that this Conference, which will shortly assemble in London, offers few chances of bringing about a pacific solution of the conflict. The *Patrie* of Thursday says:—

"France, in spite of her sympathy for Denmark, ought not to hesitate in recognizing the wishes of the German populations of Holstein and Schleswig to be incorporated with the German nation. Our policy on the Elbe ought not to be different to that we have on the Vistula and the Mincio. Should Germany obtain this satisfaction, the other Danish provinces would be united to Sweden, for the purpose of guarding the entrance to the Baltic. The principle of nationalities being thus established, Germany would have no reason not to apply it to Poland and Italy."

SPAIN.—A royal decree of amnesty for political offences was issued on Sunday at Madrid, in commemoration of her Majesty's happy delivery and return to the direction of public affairs. The British steamer Princess, which touched at Malaga to take in coal, has been seized by the authorities of that port. It was discovered that she carried in her hold several rifled cannon, muskets, ammunition, and other warlike effects. The vessel was from London and bound to Ancona.

DENMARK.—It is officially announced that England has invited the German Confederation and the Powers which signed the Treaty of 1852 to a Conference in London, for the settlement of the Dano-German question. The political bases of the proposed Conference are as follow:—"1. The European Powers guarantee the the autonomy as well as the indivisibility of the Duchies. 2. The territorial arrangements hitherto existing are to undergo no change." Prussia and Austria have accepted the principle of the proposal, provided, however, that the German Diet and France also assent, and that the negociations should not interfere with the prosecution of hostilities. It was announced in Paris on Thursday, that France has given her adhesion to the proposal, and there is reason to believe that Russia will likewise consent, but from Denmark and Sweden no reply has as yet been received; though it was reported yesterday at Weimar that Denmark has also consented. The resolution of the Federal Diet will be taken as soon as possible. The Secretaries of the Danish Legations at Berlin and Vienna have been re-called. The Secretary of the Austrian Legation at Copenhagen has already left.

THE DANISH DUCHIES.—The Prussian troops on Friday occupied Kolding, in Jutland. A cavalry engagement subsequently took place at Gudsoe, without result. The Prussian Guards on Sunday received orders from Berlin not to advance further into Jutland, but to occupy Kolding as a strategical position. Danish outposts are now stationed opposite the Prussian Guards at Gudsoe. Unimportant skirmishes are continually taking place. The Danish force occupying Fredericia numbers 6000 men, many of whom are said to be Schleswigers. On Monday morning at 7 o'clock the Prussians drove in the Danish outposts and occupied the village of Düppel. Marshal Wrangel, the Crown Prince of Prussia and Prince Frederick Charles were on the field. They were dislodged by a cannonade from the bastions. The action lasted four hours. Two Danish regiments were engaged, 200 men were killed and wounded, with many officers on the side of the Danes. The Prussians left many dead and wounded on the field. The Danish army is in high spirits. The Prussian account on the other hand says that their loss was only three killed and 20 wounded; and that they took several officers and 200 rank and file of the Danes prisoners with several flags. The Prussians have arrested at Braager the rector Schleppegrel, the parish warden Bülow, and the parish clerk Hansen. The Mayor of Hadersleben has also been arrested by the Prussian officer commanding the forces in that town. The Germans in Sandbjerg and the Danes in Roehave have fired at each other across the Sound without effect. The fortifications of the island of Alsen are being strengthened. A Prussian battalion has arrived at Kiel. The Prussians are fortifying the Bay of Kiel. A panic prevails at Stralsund on account of the appearance of five Danish ships near Rugen. Several Danish ironclads, among which were the Esbern-Snare and Absalon, appeared on the 18th inst. in the Flensburg Fiord, and exchanged shots with the allied artillery. A Prussian garrison has prevented a landing of the Danes to the north of Friederichsort which had been attempted in the boats of the Esbern, Snare and Thor. A blockade will be declared by Denmark of all ports on the eastern coast of Holstein and Schleswig, except Neudstadt, from the 25th inst. 100 sappers have commenced the razing of the Dannewerk. 400 labourers are assisting in the work of demolition. A monster deputation from the whole of Schleswig is expected at Kiel to do homage to the Duke of Augustenburg. Marshal von Wrangel has issued an order, stating that persons committing hostile acts towards the allied troops, or refusing to render them assistance, will be subject to martial law. On the 17th inst. the Civil Commissioners issued a decree abrogating the Constitution of the 18th of November, and another on the 19th inst., annulling the ordinance of the late King of Denmark relative to the use of the Danish language. On the 19th the Civil Commissioners issued an order, announcing that the language to be used in the schools and places of public worship in Schleswig will be German, with the exception of the parish of Wieshard, where inquiries respecting the language are being made. In certain religious ceremonies the language may be Danish, if desired by the parties concerned. From the 1st of April next the currency in Holstein will consist of courant-marks, instead of rigsmünze. Prince Frederick Charles in reply to a deputation of citizens from Flensburg, said that it was of course understood that all the Danish officers in Schleswig would be dismissed. The object in temporarily maintaining them in office was to avoid anarchy.

HAMBURG.—The authorities of Hamburg have seized the money in the Danish post-office in that city. According to an announcement of the Danish Consul-General, Holstein and Schleswig ships carrying the Danish flag and Danish papers and signals will retain the rights of Danish ships.

BAVARIA.—The conference of the Ministers of Foreign Affairs of the minor German States met at Wurtzburg last week, and was attended by the Ministers of Bavaria, Saxony, Wurtemburg, Baden, Hesse-Darmstadt, Brunswick, Nassau, Weimar, Saxe-Gotha, and Saxe-Meiningen. The Conference unanimously agreed to the proposition of Saxony that the minor States should be united in their attitude in the event of the Great German Powers endeavouring to withdraw forcibly from the Federal Diet the right of disposing of Holstein. It was also resolved not to sanction any convention affecting the rights of the Duchies, and that the Federal Diet alone has to decide on the succession question. The Conference further resolved that more Federal troops should be sent to secure Holstein, and that preparations be made for the mobilisation of the armies of the minor States. It was also decided that the resolutions passed at the Conference should not be communicated to the press.

FRANKFORT.—At the sitting of the Federal Diet on Thursday, Austria and Prussia proposed that the commander-in-chief of the army in Holstein should be transferred to Prussia They also moved that two new civil commissioners should be appointed by the two great German Powers. The propositions were referred to the committee, and are to be put to the vote within eight days. The report of the committee upon the succession question then came on for debate. Articles 1 and 2, declaring that the Treaty of London is not binding on the Confederation, and that the Diet cannot take the treaty as the basis of its resolutions, were rejected. Article 3, refusing to accept the proxy of King Christian, and Article 4 requesting the committee on the succession question to present their report with all possible celerity without taking as its basis the Treaty of 1852, were adopted. The Governments which have taken part in the Würzburg Conference proposed that the Diet should convoke the Holstein Estates. The Hanse Towns requested that measures of reprisal should be taken for the capture of German shipping by Denmark.

AUSTRIA.—The *General Correspondenz* of Wednesday, confirming the statement that the two great German Powers have accepted in theory the Conference proposed by England, says:—

"Both Powers thereby prove their readiness at any moment to take whatever steps may be compatible with their just demands towards a peaceful solution of the difficulty."

Count Degenfeld, Minister of War, has at his repeated request, been relieved of his functions, and Lieut. Field-Marshal Chevalier von Frank has been appointed to the vacant Ministry. Orders have been sent by telegraph to Pola to get ready the Austrian line-of-battle ship Kaiser and the screw corvette, Freidrich, to proceed to the German Ocean to protect merchantmen against Danish cruisers. Another squadron of 12 Austrian men-of-war has received orders to put to sea for the protection of German merchantmen against Danish cruisers. Part of the fleet has already sailed. The Austrian Government has addressed a circular despatch, under date of the 13th inst., to all the members of the German Confederation. The following is a summary of this document:—

"It is admitted that the London Treaty is not binding upon the Federal Diet. A vote on that treaty taken by the Diet in conformity with the propositions of the Committee would not be decisive with regard to that question, but might possibly induce the non German Powers to make counter declarations in favour of the treaty, thereby aggravating the critical state of affairs. Austria, therefore, requests the German Governments not to assent to the different propositions of the Committee, but to instruct that body to make a fresh report which should treat solely of the succession question."

PRUSSIA.—A rumour is current that 60,000 Prussian troops will be concentrated on the frontier of the kingdom of Poland. The Government journals explain the entry of the allied armies into Jutland by stating that the invasion had a military reason, which was to prevent the Danes from concentrating all their troops behind the fortifications of Düppel and in the Island of Alsen, and that the province will continue to be occupied as a guarantee for the payment by Denmark of the expenses of the war.

POLAND.—Advices from Warsaw state that from the 22d of March next all persons of either sex above the age of 14 must, on leaving their houses, be provided with a passport, and any one unable to produce such a document will be punished. The Government officials have been ordered to present an address protesting against the insurrection. Great excitement has been created in Warsaw by the forcible abduction of Miss Neumann, the sister of the surgeon Neumann by two Russian officers, under pretence of a domiciliary visit. On the 18th the insurgents blew up a goods train near Wloclawek, destroying 16 waggons. A passenger train met with an accident on the following day near Lazy, in consequence of some of the rails having been taken up. The municipal treasury of Czersk has been seized by the insurgents. The Russian Major Butkiewicz, who marched with three infantry companies against the insurgents under Dombrowski, had been utterly routed at Kurzewo, in the government of Radom. Only 80 Russians escaped. A report was current that several Russian soldiers had deserted to the insurgents.

TURKEY.—A convention between the English and Turkish Governments relative to the portion of the new Indian telegraph line which is to pass through the Ottoman dominions was signed on the 17th inst. The *Levant Herald* reports the arrival of a quantity of arms from England and Vienna. It states that they have been distributed by the Sultan to the Imperial Guard and other troops, and remarks upon this activity as keeping the defences of Turkey in good order.

CAPE OF GOOD HOPE.—The Governor was to leave Table Bay on the 21st inst. in the Narcissus, for Algoa Bay, on his way to Graham's Town, where his visit was to be celebrated by triumphal arches, bonfires, and illuminations. It was not known what measures the Governor intended to bring before the Parliament. A batch of new taxation Bills was expected, but on what interest the imposts were to be laid had not been announced. The Governor had ordered the stoppage of all public works, the insufficient supplies provided by Parliament last year being exhausted. The condition of colonial finances was beginning to attract attention. It was expected that, notwithstanding every possible curtailment of the current expenditure, the temporary loans necessary to eke out the Treasurer's resources would be increased by June next to at least 100,000*l*. The Commander of the Forces was to accompany the Governor and make a tour of inspection of the various military stations and outposts. It was expected that the head-quarters would again be established at Graham's Town. Telegraphic intelligence received at Graham's Town on the 8th of January states that all was quiet on the frontier, but that another Caffre prophet had arisen, advising the Caffres to sow plentifully for three years, and not dispose of the crops, but to store them up, as after three years no corn would grow. This was thought to be a design to provide food for campaigning purposes. Fresh disturbances had occurred in the Transvaal province, in which Pretorius was said to have had a share. An attempt had been made to oust Van Reusbung from the Presidency in favour of Pretorius, but was expected to fail. There was no news of Dr. Livingstone. Dr. Meller, of the Zambezi exploring expedition, has returned to England by this mail.

INDIA.—Sir John Lawrence held his first levee on the 16th ult., and it was most numerously and brilliantly attended. On the 18th his excellency opened the Calcutta Agricultural Exhibition. The natives of high rank, the Mysore princes, some talookdars from Oude, and many of the Baboos and gentlemen of Calcutta attended the ceremony. The Viceroy will remain in Calcutta during the next cold season. There are serious disturbances at Cabool among the contending factions. The brothers Azim Khan and Afzul Khan are in arms against Sher Ali Khan, whom our government during the Sittana war recognised as the legitimate ruler of Affghanistan. Captain Sherard Osborn, with the Anglo-Chinese squadron, arrived in Bombay on the 13th ult. The squadron has been entirely disbanded, and all the ships with the exception of the Keangsoo and the Keangtung, both of which are lying in the harbour of Bombay, are on their way home. The Bombay government has consented to relieve Captain Osborn of the charge of these two steamers, until he learns the views of the English government. The first ships with the Persian Gulf Telegraph cable have left Bombay. On the 21st December the Confederate steamer Alabama steamed out of New Harbour, Singapore, towards the Straits of Malacca; on the same day she burned the Martaban, formerly the Texan Star, laden with rice from Moulmein to Singapore. On the 26th she burned the Sonora and the Highlander, and the 14th ult. she burned the Emma Jane at Anjengo.

JAPAN.—Tranquillity prevails in Japan.

UNITED STATES.—The Army of the Potomac under General Sedgwick, who has temporarily taken the command in consequence of the illness of General Meade, made a reconnaissance in force on the 6th inst.

to the south side of the Rapidan. General Lee was found in full force in the Federal front. After heavy skirmishing, in which the Federals are reported to have lost from 200 to 300 men, they returned to their old quarters. The Federal communication between Knoxville and Cumberland Gap was cut off by the Confederates on the 10th. An express train has been captured eight miles from Harper's Ferry, and the passengers robbed. It is not known whether the attack was made by the Confederates or by gangs of Federal deserters. Knoxville despatches of the 31st report that the Federal cavalry was defeated in an engagement near Marysville, and was retreating upon Knoxville, with the Confederates in pursuit. Seven Federal officers were killed. No other particulars are given. **The Confederates had occupied Liverville, and are again threatening Newbern and Washington, North Carolina. The Confederate ironclad gunboat at Kingstown is completed, and will co-operate with the land forces. The *Nashville Union* says that the Federal army has crossed the Tennessee River, near Larkinsville, and surmises that its object may be to attack Rome, Georgia, to which General Johnstone's main army has retired. Telegrams from Mobile of the 6th report that Gen. Sherman's Federal force—infantry, cavalry, and artillery, 30,000 strong—crossed the Big Black River on the previous day, and was expected to advance to Meridan, and unite with a cavalry force moving along the line of the Mississippi and an infantry force advancing from Natchez. Sherman's movement is said to be made in order to flank Johnston and Hardee in Alabama and Georgia, rather than to attack Mobile. Despatches from Fortress Monroe report the complete failure of a secret expedition, organised by General Butler and commanded by General Wistar, on the 6th and 7th, for the liberation of the Federal prisoners at Richmond. Information of the design was conveyed to Richmond by Federal deserters, and the Confederates were enabled to provide against the intended surprise.** The siege of Charleston has been raised, and Admiral Dahlgren has left Charleston in the flag-ship for St. John's, Florida. A large Federal expedition, with three gun boats, left Port Royal on the 5th inst., and landed at Jacksonville, Florida, on the 8th, from which place it was reported they would proceed to Tallahassee. General Gillmore left Port Royal on the 7th to join this expedition. Admiral Porter is fitting out a formidable fleet on the Mississippi. The British gun boat Petrel arrived at Charleston on the 5th, wishing to communicate with the British consul at Savannah. Admiral Dahlgren refused permission, and the Petrel put to sea. It is said that the Petrel brought dispatches for the Confederate Secretary Benjamin. On the night of the 2d a large steamer entered Charleston Harbour, unobserved by the Federal fleet, and was not discovered until the morning of the 3d, when she had run aground, and was landing her cargo under the guns of Fort Moultrie. The Federal batteries opened on her, and shortly afterwards she sank. The Conscription Bill has passed Congress, Slaves between the ages of 14 and 45 are liable to be drafted; loyal owners to be compensated. General Meade has made a speech at Philadelphia, stating that since March, 1861, 100,000 men of the Potomac army have been killed and wounded. The German Republicans of New Jersey have declared in favour of Butler, Fremont, or any other Radical candidate for the Presidency who will guarantee an emancipation and confiscation policy. The Halifax Admiralty Court has restored the Chesapeake and her cargo to the owners on the payment of the legal expenses.

Parliament.

HOUSE OF LORDS.

MONDAY.—*Metropolitan Railways.*—In reply to the Earl of DONOUGHMORE, Earl GRANVILLE said that the Select Committee on Metropolitan Railways had not yet agreed to any report, and that a statement to that effect which had appeared in one of the journals was incorrect. On the motion for the second reading of the *Royal Arcade Bill*, the Earl of DERBY opposed the measure, on the ground that it was a purely commercial speculation, got up by architects and builders, and that, instead of being an ornament to the metropolis, it was likely to do a great injury to the neighbouring property, and to become a rendezvous for the most objectionable characters. He moved as an amendment that the Bill be read a second time that day six months. — Earl GRANVILLE said that as the Bill was opposed so generally by the owners of property in the neighbourhood, he thought it might be better to agree to the amendment.—After a few words from Earl GREY and the Earl of MALMESBURY, the amendment was agreed to without a division, and the Bill was consequently thrown out. *The American Armies.*—In reply to Lord CAMPBELL, Earl DE GREY and RIPON said that it was not the intention of the Government to send military commissioners to report on the operations of the Federal and Confederate armies; but that three officers, an engineer, an artillery officer, and an army officer had been deputed to report on the artillery and iron-clads. For obvious reasons no officers had been sent to the Confederate States.

TUESDAY.—*Penal Servitude.* — The Marquis of SALISBURY moved for returns of the number of convicts under sentence of penal servitude confined in gaols other than Government prisons in 1862 and 1863, and in doing so criticised at some length the Bill of the Government introduced into the House of Commons on the subject.—Earl GRANVILLE said that the Bill referred to would speedily come before the House, and until then he trusted their lordships would withhold any expression of opinion respecting it. The Government had carefully considered the report of the commissioners, and their measure was based on its recommendations, so far as it was thought expedient to carry them out.—The Earl of CARNARVON was of opinion that the whole system of penal servitude rested on a wrong basis, and the result was that, as a punishment for heinous crimes, it was practically lighter than imprisonment for minor offences. He believed it was possible to ensure a certainty of punishment with remissions of the sentence, which would be most useful as holding out a reward for good conduct; but it was essential to exercise a supervision over such convicts as might have their sentences remitted.—Lord WODEHOUSE thought that the want of certainty of punishment deprived the existing system of any deterring influence, but the reformation of the criminal ought to be a secondary consideration to that.—Earl GREY doubted whether a strict supervision by the police of a convict on ticket of leave was incompatible with the slightest chance of his ever obtaining employment. They could not go back to the system of a fixed and certain punishment, for that system had been condemned, and it was impossible under it to put the prisoner to any useful labour, or turn him to any good purpose, without resorting to a most degrading, demoralising, and futile coercion. The motion for returns was then agreed to.

THURSDAY.—*The Seizure of the Steam Rams.*—The Earl of DERBY complained that in answer to an application for the papers relating to the steam rams in the Mersey, the Alabama and Saxon, the Foreign Secretary had given him a refusal, on the ground that their production whilst legal proceedings were pending would be prejudicial to the public interests. He now found, from a debate which took place in the House of Commons on Tuesday, that the Attorney-General promised to furnish some of the papers, and intimated that there never had been any objection to their production. He wished to know whether it was intended to lay the papers upon the table now. —Earl RUSSELL said there was no objection to produce a portion of the papers referred to. In declining to furnish them in the first instance he had acted upon the opinion expressed by the Attorney-General, that their production would be injurious to the public interests; but on subsequent consideration the Attorney-General came to the conclusion that some of the papers might be produced without risk.—Lord CHELMSFORD inquired when the Attorney-General changed his opinion.—Earl RUSSELL replied that the communication of the Attorney-General was a privileged one. He should, therefore, decline to state when it was made.—The Earl of MALMESBURY asked the noble earl to include amongst the Danish papers about to be supplied to Parliament a copy of the correspondence which had led to the Treaty of 1852.—Earl RUSSELL said there would be no difficulty in including those papers in the next instalment to be laid upon the table. *Case of Captain Whyte.*—In answer to the Marquis of CLANRICARDE, Earl RUSSELL said that the claim of Captain Melville Whyte on the Government of Peru had been referred to the Senate of Hamburg for arbitration.

FRIDAY.—*The Invasion of Jutland.*—In answer to the Earl of MALMESBURY, Earl RUSSELL said that he had gathered from a conversation with the Prussian Minister that the invasion of Jutland took place without the sanction of the Prussian Commander-in-Chief, and that as Denmark had made the war general by ordering the seizure of German ships, the Prussian Government might be obliged to demand compensation, not for the general expenses of the war, but for the value of the cargoes of those ships, and retain "the material guarantee" until their claim was satisfied.—In reply to the Earl of ELLENBOROUGH, Earl RUSSELL said that he had reason to believe that the Austrian Government would endeavour to moderate the actions of their generals.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Northern Circuit.*—Sir J. HAY moved an address to the Queen, praying her Majesty to nominate the town of Wakefield as the assize town for the West Riding.—Mr. LEATHAM seconded the motion.—Sir G. GREY opposed it on the ground that the matter rested with the Queen in Council.—After some discussion, in which the claims of Leeds were advocated by Mr. BEECROFT, Mr. ROEBUCK, Mr. BAINES, and Mr. HADFIELD, and those of Wakefield by Colonel SMYTH and Sir J. PAKINGTON, the House divided, when the motion was negatived by 138 to 119. *Colonelcy of the 2nd Dragoons.*—Colonel BARTTELOT asked on what principle Lieut.-General Gough, C.B., had been appointed to the 2nd Dragoons, stating his opinion that the command of a regiment of cavalry should not have been conferred upon an officer, however high his services and character, who had never done a day's duty with a dragoon regiment.—Colonel DICKSON remarked that this constant interference with military matters struck a heavy blow at discipline.—Mr. OSBORNE vindicated the appointment, which, he thought did equal credit to the Horse Guards and to General Gough.—Mr. DAWSON also spoke in favour of the appointment.—The Marquis of HARTINGTON said that the appointment was justified not only by the distinguished services of the gallant officer, but by the strictest rule of precedent. The subject then dropped. *Capture of British Ships.*—Mr. HALIBURTON called attention to the capture of a ship under the Confederate flag, by a Federal vessel of war, within the harbour of Pankbar, in Nova Scotia, and under the guns of the fort; and asked whether complaint had been made of this outrage to the Government of the United States; and, if so, what answer had been given thereto.—Mr. LAYARD replied that as soon as information was received by her Majesty's Government of what had taken place, instructions were forwarded to Lord Lyons, directing him to ask for immediate explanation and redress from the American Government. He was happy to state that, long before those instructions were received, Mr. Seward, having heard of the seizure of the vessel, communicated with Lord Lyons on the subject, expressing his regret, making a full apology, and offering reparation. *Denmark and Russia.*—Mr. KINGLAKE called attention to the way in which the operation of the Treaty of London of May 8, 1852, was affected by a note addressed on the same day by Baron Brunnow to the Danish Minister at the Court of St. James's, and which appeared to him equivalent to a secret article to that treaty in the interest of the Russian pretensions to the throne of Denmark.—Mr. LAYARD said that the note in question had been laid on the table of the House several years ago, and no correspondence had taken place on the subject.—Mr. ROEBUCK observed that Mr. Kinglake had evidently discovered a "mare's nest." The House then went into committee of supply *pro formâ*, and immediately resumed, when The *Banks Act (Scotland) Bill* was read a second time. The House then went into committee on the *Insane Prisoners Act Amendment Bill.*—Mr. G. HARDY moved an amendment to the second clause, to the effect that in the case of prisoners under sentence of death, and certified by two or more visiting justices to have become insane since conviction, the truth of such certificate should be inquired into by three commissioners to be appointed for the purpose. The amendment was supported by Mr. MACDONOGH, and opposed by Sir GEORGE GREY. After considerable discussion the House divided, when the amendment was negatived by 32 to 26. The clauses of the Bill were then agreed to, and the Chairman was ordered to report the Bill to the House. The *Warehousing of British Spirits Bill* was read a second time.—Mr. H. BRUCE obtained leave to bring in a Bill for the amendment of the law relating to the *Importation of Diseased Cattle*; a Bill to confirm certain provisional orders under the *Land Drainage Act*, and a Bill to authorise the *Enclosure of Certain Lands*, in pursuance of a report of the Enclosure Commissioners. *Poor-law Board.*—Mr VILLIERS moved for a Select Committee to inquire into the administration of the relief of the poor under the orders, rules, and regulations issued by the Poor-law Commissioners and the Poor-law Board, pursuant to the provisions of the Poor-law Amendment Act, and into the operation of the laws relating to the relief of the poor. The motion was agreed to.

MONDAY.—*The Danish Papers.*—On the motion for going into Committee of Supply, Mr. DISRAELI complained that the Government were not acting fairly by the House in delaying to furnish the Danish papers. He failed to perceive in his place the chief of the Treasury bench, who was to be congratulated on having established a name that bore terror to no country save his own. Only the previous day it was reported that the Prussians had repented of their proceedings, and had withdrawn from Jutland. It did not appear, however, that they had heard of the language used by the noble lord on Friday, as, if so they would probably have altered their minds, and remained in the province. The House naturally enough wished to know if there were any truth in the announcement, but the Premier was absent, and the House was left in the dark. But this was not the only matter on which the House had been treated scurvily by the Government. What, he asked, were the grounds on which they had rested their hope that their late offer of mediation would be accepted by the contending Powers, and which of the contending parties had refused it? To the members of the Government it might be matter of indifference that they were the objects of derision by every Court in Europe. The advisers of her Majesty might not object to be in that undignified position, but the House of Commons did not wish to be made the laughing stock of its own constituents. Some means must therefore be devised to obtain the Danish papers and to extract explanations from the Government.—The CHANCELLOR of the EXCHEQUER said that he would not follow the right hon. gentleman's brilliant periods, which were intended to catch the cheers of those behind him, but would refer to the real point at issue, the non-production of the Danish papers and the circumstance that they were not ready at the opening of Parliament. An explanation on the subject was given on the first night of the session by the noble earl at the head of the Foreign Office when describing the uniform rules of the department with regard to negotiations still pending. A promise had been given that the papers would be produced as soon as possible, and that promise would be kept. With regard to the Government not having given the House information as to the evacuation of Jutland by Austria and Prussia, the only reason they had not done so was that they were still in ignorance of the circumstance.—Lord R. CECIL complained that the House was kept in the dark as to how far the honour of England had been pledged to Denmark.—Mr. B. OSBORNE maintained that the Government were not justified in asking for a vote for the number of men and boys to serve in the navy until they knew what were the precise relations of the country in reference to Denmark and the German Powers. In order to test the sense of the House on this point, he would move that, instead of going into committee of supply that evening, the consideration of the navy estimates should be postponed for three weeks.—Sir F. SMITH thought that the navy estimates ought to be postponed.—Mr. ROEBUCK said that the real question before the House was simply this—whether they had confidence in the Government as regards its foreign policy. In his opinion the Government was not entitled to that confidence.—The CHANCELLOR of the EXCHEQUER said that the proposition of Mr. Osborne was not consistent with the rules or proceedings of Parliament. So far as her Majesty's Government were concerned they were quite ready, on due notice given, to take the sense of the House on their foreign policy.—Mr. DISRAELI condemned any proposal to divide the House on the foreign policy of the Government without giving them notice, and in the absence of the noble lord at the head of the Government. Supposing the majority were against the Government, it would not be satisfactory for the House to find that it was gained by a surprise.—Sir G. GREY said there was nothing which the Government would welcome with greater pleasure than a challenge to take the sense of the House on their foreign policy.—Mr. CLAY (on behalf of Mr. Osborne) disclaimed any intention by his motion to censure the foreign policy of the Government.—Mr. KINGLAKE repudiated altogether the construction put by Mr. Roebuck upon Mr. Osborne's motion.—Mr. DARBY GRIFFITH and Lord R. MONTAGU recommended the withdrawal of the motion.—Lord DUNKELLIN considered it but reasonable that before the House was asked to vote the men for the navy it should know what that navy might have to do.—Lord INGESTRE was willing to take a division on the narrow issue as to whether it was desirable to postpone the estimates.—Mr. WALTER and Mr. NEATE deprecated a division.—Mr. LAIRD was in favour of postponement.—Mr. HENLEY recommended the withdrawal of the motion, in the hope that the other business on the paper would be protracted to so late an hour that the navy estimates could not come on until Thursday, and thus give time for the production of the Danish papers. On a division, the motion for postponement was negatived by 220 to 47. *Malta Docks.*—Captain TALBOT moved a resolution that the project of constructing a dock at the head of the Marsa at Malta be abandoned, and that the site at the head of the French Creek, recommended by Admirals Martin and Codrington, be selected for that purpose.—Lord C. PAGET said that it would be a breach of faith towards the Maltese Government to make any alteration in the arrangement contemplated and which had received the sanction of the most eminent engineers.—Sir J. PAKINGTON and Captain JERVIS supported the motion, and Mr. WHITBREAD defended the Admiralty. The motion was withdrawn. *Naval Yards.*—Mr. LINDSAY called attention to the report of the commissioners appointed by her Majesty in 1860 to inquire into the control and management of her Majesty's naval yards, and insisted that the recommendations of the commissioners ought to be carried into effect.—Mr. BENTINCK said that the greatest recommendation would be the reconstitution of the Board of Admiralty. After some remarks by Sir F. SMITH, Mr. FERRAND, and Mr. DALGLISH, the House went into committee of supply *pro formâ*. *Scottish Law Courts.*—The LORD ADVOCATE obtained leave to bring in a Bill to make provision for uniformity of process in summary criminal prosecutions, and prosecutions for penalties in the inferior courts in Scotland; also a Bill to provide for the alteration of the circuits of the Court of Justiciary in Scotland, and for holding additional circuit courts.

TUESDAY.—*The Franchise.*—Mr. LOCKE KING moved for leave to bring in a Bill to extend the franchise in counties in England and Wales. He gave a history of the various measures which had been introduced from time to time to reduce the county franchise from 50*l.* to 10*l.*, and repeated the arguments he had used in his annual efforts to accomplish that object. Connected as he was himself with land, he entirely repudiated the idea that an enlargement of the county franchise would tend to render property less secure than at present.—Mr. HASTINGS RUSSELL seconded the motion.—Sir G. GREY would not oppose the introduction of the Bill, but would reserve his opinion upon it until the second reading. Leave was given to bring in the Bill.—Mr. HIBBERT called attention to the demoralising effects of *Public Executions*, and moved for papers in relation thereto. He read extracts from descriptions of various public executions to show that they had no deterring influence on the public, but the contrary, and that it would be far more desirable that capital punishment should in future be carried out within the gaol.—Mr. HADFIELD seconded the motion.—Sir G. GREY was not disposed to come to the conclusion that capital punishment

hould be inflicted in private. He believed that publicity alone would satisfy the public, and that, however revolting the scene was, it inspired the beholder with the salutary impression that punishment was sure to overtake the evil-doer.—Lord H. LENNOX admitted that he had been a witness of the execution on Monday morning, and that a more disgraceful scene of obscenity and blasphemy could not be imagined. He hoped that the Home Secretary would in future direct that executions in the metropolis might be fixed for any day but Monday, as the selection of that day led to a needless desecration of the Sabbath. He also suggested that as in the case of executions in the provinces, the day and hour should not be published beforehand.—After some remarks by Mr. B. CARTER and Lord GREY DE WILTON, the motion was withdrawn. *The Birkenhead Rams.*—Mr. SEYMOUR FITZGERALD moved an address for copies of all correspondence between the various departments of her Majesty's Government, or officers in her Majesty's service, and Messrs. Laird of Birkenhead relating to the two iron-clad vessels, the El Tousson and El Monassir, building by that firm, and seized by order of her Majesty's Government; and of any papers or correspondence that have passed between her Majesty's Government and the Government of the United States, or their representative, Mr. Adams, relating to the said vessels. He asked under what law the seizure had been sanctioned, and said that the Government having no legal authority to do so, had seized the vessels in consequence of Mr. Adams having used language so forcible as almost to be menacing.—The ATTORNEY-GENERAL, without entering into a legal argument, contended that it was the duty of Great Britain, as a friendly Power, to interfere to prevent the building of vessels of war to be used against the Federal Government. Her Majesty's Government had not seized the rams in the Mersey without what they believed to be good information as to their destination. They had acted on their own responsibility, and as the question was still the subject of judicial investigation, the premature publication of the papers might defeat the ends of justice. He considered the Government would have been grossly wanting in their duty if, after the experience of the Alabama, they had not done towards a foreign country what we ourselves would have wished had been done towards ourselves.—Mr. HORSFALL thought the entire proceedings of the Government in reference to the Alexandra, and of the Messrs. Laird, was a cruel injustice to our commercial interests.—Lord R. CECIL said that if the House of Commons allowed the Government to act in this way it would deserve what had been said of it—namely, that it was the most subservient and sneaking Parliament in the world.—Mr. W. E. FORSTER challenged the Opposition, if they disapproved the policy of the Government, to test the matter by a vote of censure.—Sir HUGH CAIRNS denied that the production of the papers moved for by Mr. Fitzgerald would prejudice the case that was now *sub judice*. The Government had by their own admission violated the law in order to vindicate the law. He demanded to know what was the authority under which the Government had acted when they detained the steam-rams on the 9th of September. With a full conviction of the gravity of the accusation which he made, he charged the Government with doing that which was illegal and unconstitutional, without justification, without law, and without excuse.—The SOLICITOR-GENERAL said it was absurd to deny that there was not a general belief that the steam-rams were for the Confederates. The Government had in their possession what they believed to be proofs of the fact, but the House could not expect him to explain what they were. He was not presumptuous enough to state that the Government were always right, but they had endeavoured to act in accordance with what they believed to be the law of the land without sympathy for the weak or fear of the strong.—Mr. WALPOLE contended that the law-officers of the Crown were not justified in endeavouring to draw a distinction between the principles of municipal and international law. The rights of neutrals were not to be compromised by the existence of war between two belligerents, and the commercial citizens of a neutral Power were authorised in supplying contraband of war so long as they took the risk of its being confiscated. The greatest American jurists had themselves laid this down as law. When he found the Government inviting evidence against the builders of the rams, detaining them illegally, and keeping them several months without bringing the question to an issue, he asked whether the great merchants in the House would allow themselves to be trifled with by such arguments as those adduced by the law advisers of the Crown.—Mr. T. BARING took exception to the arguments of Mr. Walpole, and urged that the steam-rams were in themselves armed vessels, and that no one could deny that they were intended for the Confederate Government. Speaking as one of the community of merchants whose interests were bound up in peace, he thanked the Government for the vigour which they had shown in seizing vessels which were clearly intended to prey upon the commerce of a friendly Power.—Mr. S. FITZGERALD, in reply, disclaimed that the party with which he acted were desirous of fanning the flame of war. On the contrary, they were anxious to avoid giving the slightest excuse for it by enforcing a policy in conformity with the strictest principles of international law.—Sir G. GREY said that the Government had no objection to produce the papers mentioned in the latter portion of the motion. The Opposition, however, declined to accept this compromise, and the House divided, when the motion was negatived by 178 to 153. *The Copyright Acts.*—Mr. BLACK obtained leave to bring in a Bill for the consolidation of the acts relating to copyright in works of literature and the fine arts. The *Insane Prisoners Act Amendment Bill* was considered as amended. The *Warehousing of British Spirits Bill* was read a second time.

WEDNESDAY.—The *Rents (Ireland) Bill* was withdrawn. On the order for going into Committee on the *Malt for Cattle Bill*, Mr. BASS said that the farmers were very ill-satisfied with the measure; they wanted more, and he thought they were entitled to more. He believed that the whole of the malt-tax could not be spared, but that it could be reduced one-half without losing a quarter of the revenue.—Mr. DU CANE said that the more his constituents looked at this measure the less they liked it. As to the value of malt as a fattening matter for cattle, considerable difference of opinion existed; and the measure was so fettered by restrictions that he believed it would be a dead letter. A reduction of the malt-tax by one-half or two-fifths would so increase consumption as considerably to diminish the loss of revenue, and the farmers would regard it as a guarantee that they were on the road to a total repeal of the tax.—Mr. PACKE suggested the addition in the Bill of cotton cake, or rape cake, to linseed meal.—Mr. BAGWELL, Mr STANHOPE, Colonel DICKSON, Mr. HENLEY, Lord J. MANNERS, and other members opposed the Bill; while Mr. COBBETT, Mr. NEWDEGATE, Sir F. KELLY, Mr. P. URQUHART, Mr. DODSON, Mr. WALTER, and Lord R. MONTAGU gave it a qualified support.—The CHANCELLOR of the EXCHEQUER said a reduction of the malt duty by 50 per cent., would entail a loss of three millions, and that the claims already made upon them affected no less than 20,000,000*l.* of revenue. He then proceeded to discuss and reply to the objections made to the measure—namely, that it would be inefficient, demoralising, an obstacle to the repeal of the Malt Tax, and dangerous to the revenue. With regard to the restrictions in the Bill, the Government were bound, he said, to take every security for guarding the revenue, and, though some of these restrictions might be inconvenient to the farmer, they would not be to the maltster. Whether this experiment were successful or not, he showed that it could not operate as an obstacle to a reduction or repeal of the Malt Duty.—The House then went into Committee *pro formâ*, and the Chairman was immediately ordered to report progress. The Committee was then adjourned to Friday. The *Insane Prisoners Act Amendment Bill* was read a third time and passed. The *Committee on the Poor Laws* was nominated.

THURSDAY.—*The Archway and Kentish Town Junction Road Bill*, the object of which was to obtain a further term of twenty-one years to levy tolls on certain roads, and additional powers, was negatived without a division. *Seizure of the Tuscaloosa.*—In answer to Mr. PEACOCKE, Lord PALMERSTON said that the Confederate cruiser Tuscaloosa had been seized at the Cape in conformity with instructions sent to the Government of that colony some time since on a supposed former condition of things, but that instructions had since been forwarded to set her free. *The Danish Treaties.*—In answer to Mr. M'EVOY, Mr. LAYARD said that the Danish Government had no ground under the Treaty of London for calling upon her Majesty's Government for active assistance, and that as no case had arisen under the guarantee of 1720 her Majesty's Government had not considered it necessary to give an opinion upon the subject. *The Proposed Conference.*—In answer to Mr. DARBY GRIFFITH, Lord PALMERSTON said that her Majesty's Government, in order to bring about a friendly settlement between Germany and Denmark, had proposed an armistice as a foundation for a conference, but conditions were required by both parties which rendered it impossible. Her Majesty's Government had now proposed a conference without an armistice, in the hope that, if all the parties interested could be brought together, some solution of the difficulty might be arrived at. Austria and Prussia had agreed to the conference without an armistice, and he believed that France and Russia would also be willing to join it. With regard to Sweden, he was not quite sure, and no answer had yet been received from Denmark. *Invasion of Jutland.*—In answer to Lord J. MANNERS, Lord PALMERSTON said it was true that some light troops had passed the frontier between Schleswig and Jutland, and had taken up a position in the latter. Upon a representation made to the Court of Berlin on the subject, her Majesty's Government had been informed that the movement had been not only without orders, but against positive instructions, and that the commander of the force would be reprimanded for his conduct. At the same time her Majesty's Government were informed that as the place in Jutland occupied by the allied armies was of great strategical importance, the occupation would nevertheless be continued. He might also remark, in connection with this subject, that Austria and Prussia still affirmed that they acknowledged the Treaty of 1852, and the maintenance of the integrity of the Danish monarchy; and therefore, even if it were desirable to raise the question of the guarantee of 1720, it did not apply to the present state of things. With regard to the German Diet, he apprehended that they had nothing to do with the armistice; they had, however, been asked to send a representative to the conference proposed, but he was unable to state what reply they had made. *The Dockyards.*—On the order for going into committee of supply, Mr. LINDSAY called attention to the report of the Dockyard commissioners appointed in 1860, and moved that the recommendations of the commissioners ought to be carried into effect.—Sir J. WALSH moved that the great changes in naval warfare, and the critical state of our foreign relations, required the most vigorous and immediate national efforts on a scale calculated to maintain our maritime supremacy. After a short discussion both motions were withdrawn. The House then went into committee on the *Navy Estimates*. Lord C. PAGET, in moving the vote of men and boys for the year 1864-5, described the alterations which had been made in the preparation of the estimates in consequence of the recommendation of the Committee on Public Accounts. The total sum required to be voted by Parliament for the navy for the year 1864-5 was 10,433,610*l.* against 10,736,032*l.* in the year 1863-4, being a reduction of 303,422*l.* The total number of men and boys was 71,050, against 76,000 in the current year, being a reduction of 4050. Of seamen there would be 500 less than last year; of coastguard men 1550; and of boys 2000. The marines would remain as at present at 18,000. The money reduction would be brought about by a saving in the number of men and of materials used, modified, however, by an increase of expenditure under the head of workmanship and wages. Experience showed that as we increased our armour-plated fleet, we should be able to diminish the number of seamen. It was proposed to build six gunboats on the twin screw principle, at a cost of 120,000*l.* With regard to iron-clads, we had now seven of those vessels in commission, six more would be ready by the middle of this year, six more by the end of the year, and six more in the course of next year; making a total of 25. It was also intended to build a vessel of extraordinary speed on the principle of the Alabama, to be iron-plated, and to take the place of some of our small cruisers. The full force of the fleet this year would be 243 vessels, as against 236 last year. With reference to the question of the gun to be used in the navy, experiments had been made as to the best ship gun, and that the Government had arrived at the conclusion that guns of six or six tons and a half were quite as heavy as a vessel could carry on a broadside. In this belief they had ordered a smooth-bore gun of about the weight he had mentioned, which he was persuaded was the most serviceable for general use in the large ships in the navy. There would be some increase of charge on account of improved pay of various classes of officers, including petty officers, amounting to about 15,000*l.*, and this he hoped would meet the approbation of the committee.—Sir J. PAKINGTON expressed his astonishment that in the present state of the Continent and America the Government should have thought it desirable to propose a reduction of 4050 men and boys. Any diminution of force was calculated to impress on the Great Powers the belief, already too general, that the louder we talked the less disposed were we to act; and no mistake could be greater than that of reducing the boys, who were likely to become the most valuable class of seamen in the navy.—A long discussion on the various items of naval and dockyard management ensued, and at one o'clock Mr. LINDSAY moved that the Chairman report progress.—The motion was opposed by Lord PALMERSTON, but was carried on a division by 31 to 28. Progress was then reported.—On the motion of Lord C. PAGET a select Committee was appointed on royal dockyards in the United Kingdom, with reference especially to the proposed extension of that at Portsmouth.—Mr. BLAKE obtained leave to bring in a Bill to amend the *Grand Jury Laws of Ireland.*—Mr. ADDERLEY obtained leave to bring in a Bill to consolidate the *Penal Servitude Acts for England and Scotland.*

FRIDAY.—*Townley's Case.*—In answer to Mr. MORRITT, Sir G. GREY said, that persons under sentence of death would not be entitled to any remission of that sentence. *The Conference.*—Mr. S. FITZGERALD asked what were the bases of the Conference suggested by the Government.—Lord PALMERSTON said that no arrangements had been completed. *The Slave Trade.*—Mr. CAVE asked whether it was intended to carry out the treaty with the United States for the suppression of the slave trade by stationing cruisers off Cuba.—Lord PALMERSTON said that no doubt the provisions of the treaty had been colourably evaded, so far as related to the French interest in the matter, but he really thought it was without design. Great progress had been made in the suppression of the traffic, and it might be depended upon that no inactivity would be exhibited. *Taxation in Ireland.*—Colonel DUNNE called attention to the subject of taxation in Ireland.

[Left sitting.]

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England on Thursday reduced their rate of discount from 7 per cent., to which it was lowered on the 11th inst, to 6 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅜ to ⅝ for Money, and 91⅜ for Account; Three per Cents. Reduced, 91⅜ to ½; New Three per Cents., 91¼; Annuities, 1885, 14 13-16; Bank Stock, 237; India Five per Cent. Stock, 101½ to ¼; Ditto Four per Cent., 100⅜; Ditto Four per Cent. Debentures, 1866, 99¾; Ditto Bonds, 7*s.* to 9*s.* dis.; Exchequer Bills, 4*s.* to 5*s.* dis., par.—FOREIGN: Brazilian Old Five per Cents., 101 to 102; Ditto 1863, 87½; Ditto Scrip, 1 dis.; Belgian Four and a Half per Cents., 99½; Dutch Two and a Half per Cents., 63⅞; Greek, 22⅝ to ½; Italian, 66⅛; Mexican, 43¼; Ditto for Acct., 43½ to ¾; New Granada, 91: Portuguese, 1856, &c., for Acct., 48; Sardinian, for Acct., 83½; Spanish, for Acct., 52½; Ditto Passive, 34⅛; Ditto, for Acct., 34¼ to ½; Ditto Certificates, for Acct., 13⅞; Turkish, 1858, 71¼; Ditto 1862, 69¼ to 68⅞; Ditto 100*l.* Bonds, 69⅛ to ¾; Venezuela, 24¾; Ditto 1862, 58⅞; Ditto for Acct., 59⅜.

Bank of England.

ISSUE DEPARTMENT.

Notes Issued	£27,703,080	Government Debt	£11,015,100
		Other Securities	3,634,980
		Gold Coin and Bullion	13,053,000
		Silver Bullion	—
	£27,703,080		£27,703,080

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,174,094
Rest	3,636,094	Other Securities	19,008,263
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	8,153,691	Notes	8,028,195
Other Deposits	12,426,673	Gold and Silver Coin	766,339
Seven days and other bills	832,866		
	£39,202,324		£39,202,324

Feb. 23, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY, *Feb.* 19.—BANKRUPTS.—E. ADCOCK, Leicester, Pork Pie Maker—M. ELLEN, Lichfield, Professor of Music—W. H. ABBOTT, Newark upon-Trent, Nottinghamshire, Tobacconist—W. APTHEYARD, Sheffield, Fishmonger—W. BOND, Nuneaton, Warwickshire, Licensed Victualler—J. BOX, Marsh Gate Lane, Stratford, Brickmaker—J. BROWN, Yarmouth, Isle of Wight, Stone Merchant—H. BRADSHAW, Burnley Wood, Lancashire, Cotton Manufacturer—S. BENNETT, Sydney Street, Brompton, Tailor—J. BRITTON, King Street, Camden Town, Tea Dealer—M. BURTON, South Witham, Lincolnshire, Baker—J. M. BURGESS, Liverpool, Draper—H. J. BALDWIN, Sutton Coldfield, Warwickshire, Commercial Traveller—A. BALL, Nottingham, Railway Assistant—G. BARTLETT, Landport, Hants, late Gardener—W. T. COLEMAN, Winchester, Hants, Clerk—R. CONNELL, Driffield Road, Old Ford Road, Bow, Dealer in Timber—A. CURTIS, late of Old Kent Road, late Commercial Clerk—W. CRAGG, Stockport, Cheshire, Beerhouse Keeper—R. CALESS, late of Wimbledon, late Plumber—H. CHAMBERS, late of Birmingham, Fire Iron Maker—J. H. CROSS, Nottingham, Clerk—J. CHARLESWORTH, Barnsley, Yorkshire, Grocer—W. COVERDALE, Wellingore, Lincolnshire, Blacksmith—F. DAVIS, Alcester, Worcestershire, Needlescourer—W. DUTSON, Birmingham, Baker—MANUEL DE GIL D'OLIVARES, Claremont Square, Pentonville, late Wine Commission Agent—T. DU TERREAUX, Devonshire Place, Edgware Road, Schoolmaster—J. DIGGLE, Basford, Nottinghamshire, Tinman—C. DENNER, Shipston on Stour, Worcestershire, Builder—J. DRYDEN, Norton, Durham, Farmer—W. EDNEY, Ludgate Street, City, Boot and Shoemaker—D. EVANS, Brecon, Draper—G. FARMER, Milton-next Gravesend, Trinity Pilot—T. FOX, Bootle, Lancashire, Licensed Victualler—T. FLETCHER, late of Birmingham, Butcher—R. FELLOWS, Dudley, Warwickshire, Grocer—W. GRIFFITHS, Birmingham, Boot Manufacturer—R. GRIME, Little Bolton, Lancashire, Rag Dealer—T. GREEN, Osbournby, Lincolnshire, Tailor—R. GIBBON, Merthyr Tydfil, Glamorganshire, Miner—E. GRANVILL, Bensington, Oxfordshire, Licensed Victualler—R. HORWOOD, Ruabon, Denbighshire, Collier—J. R. HOOKER, Northfleet, Kent, late General Dealer—W. S. HULL, Whitnash, Warwickshire, Surveyor—H. HARWOOD, Sheffield, Greengrocer—W. HEELIS, Salford, late Grocer—J. HOLMAN, West Cowes, Isle of Wight, Tailor—W. HALES, Scawby, Lincolnshire, Gardener—W. A. HOWLETT, late of Birmingham, Picture Frame Maker—J. KNIGHT, late of Birmingham, Draper—N. LEVY and J. KACKRAN, Artillery Street, Bishopsgate, Wholesale Clothiers—S. LINAY, jun., Norwich, Accountant—B. M. LINDWALL, Trinity Road, Rotherhithe, Shipbuilder—C. S. LARGE, Pomona Place, Parson's Green, Coachmaker's Foreman—R. S. LEE, known as R. LEE, Lancashire, Journeyman Joiner—H. LEES, Leek, Staffordshire, Silk Manufacturer—M. LOW, Basinghall Street, Merchant—D. LESSER, Birmingham, Boot Dealer—W. G. LEIGHTON, North Shields, Shipowner—E. MILLS, Stretford, Manchester, Paper Dealer—W. P. MULLARKY, Droylsden, Lancashire, Silk Dyer—J. MATTHEWS, late of Brynmaur, Brecknockshire, Innkeeper—T. MAWDSLEY, Wigan, Lancashire, Dealer in Iron—RICHARD MASTERS (sued as ROBERT MASTERS), late of Birmingham, Commission Agent—J. MOLYNEUX, Salford, Wool Extractor—W. MILLER, jun., Bishopwearmouth, Durham, late Ironmonger—E. MOORES, Newton, Manchester, Beerseller—J. W. MASON, Marrick, Yorkshire, Clerk in Holy Orders—J. ORCHARD, Regent Street, Draper—J. T. L. POOL, Botcheston, Leicestershire, Spinster-shire, Farm Bailiff—S. J. POOL, Botcheston, Leicestershire, Spinster—JACOB PACIFICO (sued as M. A. POOL, Botcheston, Leicestershire, Spinster—JACOB PACIFICO sued as JOSEPH PACIFICO), Cannon Street, St George's-in the East, Photographic Artist—T. PERCIVAL, Latchford, Cheshire, Cowkeeper—J. POLES, late of Adswood, Cheshire, Brickmaker—E. PROUDLY, Cheltenham, Innkeeper—J. PRICE, Carlton upon Trent, Nottinghamshire, Boot and Shoe Maker—J. PERRY, Ashbrittle, Somersetshire, Grocer—M. PARR, Blackpool, Lancashire, Fishmonger—J. ROOKE, Birmingham, late Licensed Victualler—J. C. RAMSDEN, Bradford, Yorkshire, Reed and Heald Maker—J. RODGERS, Wath upon Dearne, Yorkshire, Blacksmith—J. RAWAY Maltby, Yorkshire, Mason—A. STEBBINGS (sued and committed as A. STEBBINGS), St. Oswald's Place, Miller's Lane, Vauxhall, Cab Driver—WILLIAM WALL STERLING, Amwell Street, Clerkenwell, Jeweller—G. STEEPLES, Stapleford, Nottinghamshire, Butcher—S. SALISBURY, Farmer, Shilton, Leicestershire, Saddler—I. STEWARD, Margate, Gardener—I. SMITH, Southsea, Hants, Baker—R. SMITH, Southward Mews, Padmanton, Cattle Dealer—J. SIMCO, late of Birmingham, Chemist—J. SIMPSON, Hulme, Lancashire, Dealer in Milk—G. A. SIMLICK, Chandos Road, Stratford New Town, late Vesuvian Manufacturer—J. SPREADBURY, Cheltenham, Dealer in Wines—W. THORP, West Hartlepool, Fishmonger—J. THOMPSON, late of Birmingham, Blacksmith—H. TAYLOR, Barking, Essex, Shipbuilder—W. WISE, Northallerton, Yorkshire, Auctioneer—J. WINFIELD, late of Serattage, Middlesex, late Carpenter and Joiner—N. WALKER, Warren, Bromell's Road, Clapham, Hat Manufacturer—J. WESTON, Plymouth, Retired Civil Officer of the Royal Engineers—J. WHITTAKER, Horsely Woodhouse, Derbyshire, Nail Manufacturer—G. WHITTAKER, Blackburn, Lancashire, Weaver—L. C. WILLIS, Salford, late Butcher—S. WHITE, Neath, Glamorganshire, Grocer—H. B. WOOD, Clyde Terrace, Cotton Street, Limehouse, Chandler's Shopkeeper—J. C. WEBB, Prince of Wales Road, Kentish Town, Clerk.

SCOTCH SEQUESTRATIONS.—H. ARENDROTH & Co. and H. F. C. ARENDROTH, Glasgow, Merchants—W. COLLIE, Aberdeen, Engineer—A. BOATHWICK, Aberdeen, Dyer—J. M'KILLOP, Ayr, Cook—R. SELLER, Burnfield, Aberdeenshire.

TUESDAY: *Feb.* 23.—BANKRUPTS.—C. ADAMS, Eastbourne, Hastings, Riding Master—J. BIRCH, Bloxwich, Staffordshire, Publican—R. BAIN, Birmingham, Assistant Warehouseman—G. BROWN, Westbromwich, Staffordshire, Retail Brewer—T. BROOKES, Oldbury, Worcestershire, Machinist—J. BUMFORD, Birmingham, Tailor—A. S. BURNE, Mount Street, Grosvenor Square, Clerk—R. BRIMACOMBE, Frithelstock, Devonshire, Yeoman—W. BLAGBROUGH, Halifax, Yorkshire, Sewing Machine Maker—

J. BELLION, Prebend Street, Islington, Journeyman Watchmaker—J. BOWDEN, late of Manchester, Wood Turner—H. BAINTON, late of Handsworth, Staffordshire, Provision Dealer—J. BAGGOTT, late of Moxley, Staffordshire—W. BUCKLER, Leicester, Journeyman Mechanic—H. BRISLAND, Coleshill, Warwickshire, late Pearl Button Maker—M. COE, [illegible] Court Old Jewry, City, General Shop Keeper S. COMBES, [illegible]ingham, Draper—C. G. COLLYER, Aston New Town, Warwickshire, Carpenter—J. CASH, late of Headstone Drive, Harrow, Builder—JOHN EDWARD CREEVY (sued also as JAMES EDWARD CREEVY), Victoria Grove Stoke Newington, Dealer in Boots and Shoes—W. CARR, late of Carlisle Lancashire, Butcher—J. DIXON, Morley, Yorkshire, Cloth Manufacturer—G. F. C. DILLY, late of Pancras Square, Somers Town, Journeyman, Plate Printer—A. C. DILLY, Dyers Buildings, Holborn, Schoolmistress—R. A. DENNY, late of Cheltenham, Gentleman—A. DOWNTON, Pentonville Road, Cheesemonger—E. ELLIS, Garth, Carnarvonshire, Slate Builder—F. W. EDMONDS, Everton, Liverpool, Cooper—J. ELLIOT, J. [illegible]OTT, Peter Street, Islington, Painter and House Decorator—J. ELLIS and I. HAYHAM, Haicholme, Lancashire, Millwrights—H. FRANCIS, late of Llanfihangel Abercowen, Carmarthenshire, Commission Agent—G. FALCONER, Sophia Terrace, Basing Rd., Peckham, Nurseryman—D. FAULKNER, Abingdon, Berkshire, Butcher—J. FEW, Queen Street, Charles Street, Hackney Road, Beer Shop Keeper—T. FOWLER, Salford, Lancashire, Brewer—J. FREEMAN, Danbury, Essex, Common Carrier—J. FOX, Beverley, Yorkshire, Wheelwright—G. GRAHAM, Durham, General Smith—J. GOFFIN, Lowestoft, Suffolk, Wheelwright—J. GASKELL, Thornhaugh, Northamptonshire, Farmer—H. HEAP, Matley, Cheshire, Common Brewer—T. HOLMES, Aston juxta-Birmingham, Pork Butcher—C. HUNT, Bernard Street, Primrose Hill, Commission Agent—A. HEYMESON, Oxford Market, Oxford Street, Tailor—W. HASTINGS, late of Old Kent Road, Carpenter—S. HANDFORD, Greenville Street, Somers Town, Marine Store Dealer—G. HART, late of Oxford Street, Auctioneer—E. HUBBARD, late of Weymouth, Dorsetshire, Sapper—W. H. HAMLYN, Manchester, Commission Agent—W. HARRIS, High Street, Shoreditch, Baker—E. HOYLE, Oldham, Lancash., Carrier—J. W. ISHERWOOD, Salford, Lancash—T. INGLIS, late of Manchester, Commission Agent—J. JENKS, Ellesmere, Shropshire, Veterinary Surgeon—WILLIAM JORDAN (sued as W. JORDAN), late of Cannon Street West City, Coal Merchant—D. JONES, Llangwicke, Glamorgansh., Boot and Shoe Maker—W. J. JENKINS, Bonchurch, Isle of Wight, Baker—A. D. KIDD, Wood Street, City, Straw Bonnet Manufacturer—J. KNIGHT, Fortuneswell, Island of Portland, Dorsetshire, Tailor—T. KITCHEN, sen., Willow Walk, Curtain Road, Shoreditch, late Naphtha Distiller—W. KENWORTHY, Manchester, Warehouseman—F. KATZENSTEIN, Queen Street, Soho, Licensed Victualler—N. LEVY and J. THACKRAH, Artillery Street, Bishopsgate, Wholesale Clothiers—J. LEWIS, late of Carmarthen—L. LEIGH, Yarmouth, Isle of Wight, late Coal Merchant—W. LAMB, late of Brighton—C. S. LARGE, Parsons Green, Middlesex, Coachmaker's Foreman—L. LANGMEAD, South Street, Rye Lane, Peckham, Bootmaker—BENJAMIN JAMES LADD (sued as BENJAMIN JOHN LADD), Queen's Road, Bermondsey, Baker—The Rev. J. M. MAXFIELD, Norwell, Nottinghamshire, Clerk—F. MYCOCK, Ipstones, Staffordshire, Grocer—M. MURROW, Bootle, Liverpool, Milliner—P. M'EVINNEY, Liverpool, Wheelwright—E. MORRIS, Chester—N. MURPHY, Whitehaven, Cumberland, Labourer—J. MEIHLEY, Hoyland, Yorkshire, Licensed Victualler—J. MORRIS, Crickhowell, Breconshire, Innkeeper—HENRY LISTER MAW, Liverpool Landed Proprietor—HENRY NORTON NORTH (sued as HENRY NORTH), late of Hare Court, Leather Lane, Retailer of Beer—J. NIGHTINGALE, Macclesfield, Silk Manufacturer—E. POWELL, Mold, Flintshire, Mason and Builder—J. PEDLEY, Newcastle-under Lyme, Coachmaker—DAVID PICKEN, Newmarket, Cambridgeshire, Coal Agent—HENRY PASK, late of Aldenham Terrace, Old St. Pancras Road, Painter—T. C. PUDDEPHATT, Luton, Bedfordshire, Baker—ISAIAH REYNOLDS, Llantwit, Glamorganshire, Farmer—H. SMITH, Swelling, Suffolk, Farrier—C. SULLIVAN, late of King Street, Poplar—T. W. SAWYER, Kenton Road, South Hackney, Baker—F. J. SLEAT, Hornsey Road, Holloway, Builder—J. W. SEEX, Leader St., Chelsea China and Glass Dealer—S. SWANN, Oldham, Lancashire, Grocer's Assistant—J. STANDING, late of Kent Street, Southwark, Wood Dealer—C. THOMAS, Portsea, Hampshire, Builder and Carpenter—M. W. TILSBURY, Staveley, Derbyshire, Hair Dresser—W. THOMPSON, Bishopwearmouth Grocer—R. VIVIAN, St. Brocck, Cornwall, Mine Agent—W. WARE, Tunstall, Staffordshire, Fruit Dealer—G. A. WALKER, Liverpool, Cart Owner—J. WILKES, Wolverhampton, Grocer—T. WALTERS, jun., late of Liverpool, Cattle Dealer—B. WEALL, Paddington Green, Farmer and Cattle Salesman—R. WALKER, Bolton by-Bolland, Yorkshire, Farmer—W. WOOD, Lofthouse, Yorkshire, Saddler—C. WIBLIN, jun., Oxford, Butcher.

SCOTCH SEQUESTRATIONS.—J. CHALMERS, Boharm, Banffshire, Farmer—W. HERON, Edinburgh, Wholesale Woollen Merchant—J. R. IRVINE and W. BRUCE, Glasgow, Manufacturing Chemists—D. M'CONNELL, Kirkoswald, Ayrshire, Farmer—W. M'CONNELL, Girvan, Ayrshire, Farmer—R. M'CONNELL, Girvan, Ayrshire, Farmer.

Metropolis and its Vicinity.

EXECUTION OF THE CONDEMNED PIRATES.—Five of these men, namely Lyons, Blanco, Duranno, Watto, and Lopez, were executed on Monday morning at the Old Bailey, in conformity with the sentence; the two others, Marsalino and Los Santos, having been reprieved during her Majesty's pleasure. The numbers assembled to witness the spectacle were great beyond all precedent, and extraordinary precautions were taken to prevent accidents. The crowd began to assemble at an early hour on Sunday. Throughout the day the street was all but impassable, and at 10 o'clock on Sunday night as great a crowd had assembled in front of the gaol as at an ordinary execution. The excitement was not confined to the lower classes; the windows of a small house opposite the scaffold having been let for 75*l.*, and a single window in another house for 25*l.* All the culprits were Manilla men except Watto, who was a Levantine Greek. On the arrival of the Sheriffs and other officials at the condemned cells, the first who was called forth to be pinioned by the hangman was Watto, a slight, fair, and good looking young man of 21 or 22, of mild appearance and meek bearing; who was, however, proved at the trial to have been one of the most ruthless of all the set—the foremost among the plotters, and the most merciless of the assassins. After the pinioning had been completed he seemed resigned and wished to kiss the turnkey, but was shocked at being refused until the Greek priest told him that such salutes were not customary in England among men. The next to step forth from his cell was Lopez—the adviser of all the murders, and the determined perpetrator of at least one of them—the worst-looking in countenance, and to the very moment of his death the most defiant in gesture and in bearing of them all, but in spite of his assumed carelessness his lips trembled, and he tried almost incessantly to wet them with his parched tongue, but in vain. Duranno, who so cruelly assassinated the mate, was the next to come out, and was the first who showed signs of fear. His face seemed blanched by his fear to a dull clayey hue that was worse to look upon than the pallor of death itself. Still, though his lips kept shivering, and his eyes reeled, he bore up till the hangman removed the sailor's necktie and undid the collar of his shirt. Then the nearness of death seemed to come upon him in all its bitterness, and he crept together with his limbs, and spoke a few words, in almost piteous tones, to the Roman Catholic clergyman who was with him. Blanco was the next called out. He was larger than all the rest in stature, an overmatch for almost all of them in mere brute strength. He was also the most conspicuous and relentless in all the murders, the one who struck down the mate, and boasted of having thrown him while praying for mercy into the sea, stabbed the captain in his sleep, and beat the captain's brother till his very corpse was shapeless. He came out from his cell as if the very agony of death was on him, so strongly did he show his fear. He seemed helpless as he was being pinioned, and sighed heavily. He, like Duranno, shuddered as his necktie was removed, but seemed gratified that two little copper crucifixes, which he wore round his neck, were allowed to remain, and then, speaking to the priest, asked to be permitted to carry with him two little "holy pictures," as they are called on the Continent, one of the Crucifixion, the other of the Ascension. Both were of course at once placed in his hands, but though he asked for them he seemed not to heed them when he had them, but kept trying to wet his lips with his tongue and rolling his eyes on every side, looking apparently for the scaffold. Leone, or Lyons, as he was called, was the last called out. Without any show of fear, but with much sorrow, he stepped into the corridor and was pinioned, looking, as he showed himself throughout, a resigned and apparently repentant man. He spoke English tolerably well, and when his hands and elbows were closely fastened to his side he leant forward and in a few broken words said to the Sheriff that he quite admitted the justice of his punishment, but until then he had never seen how wicked his crime had been or how deserving it was of death. This was the only approach to a public confession made by any of the men. The hangman then left, and in a minute afterwards a signal was given, and one after another the five men were brought out, each between two warders, towards the front of the gaol, over the walls of which could be heard reverberating the dismal tolling of St. Sepulchre's bell, and, worse than all, the impatient, clamorous, roaring hum of the crowd outside. Within a heavy iron grate they were thus led to a form, and there, for the first time since their trial, they sat down side by side, and almost as they did so the bell of Newgate, with a loud discordant boom, began to toll above their heads. Beyond where they were sitting was a narrow passage, which led to the scaffold. But it needed nothing to tell the men that within a few feet of where they sat they were to die a violent death, for with the first boom of the bell came in the hoarse murmur that a multitude makes when talking, mingled with an indescribable tramng sound, and cries of "hats offpli, hats off," "they are coming," amid all which, and the noise and sway of a great crowd, the bell above went tolling rapidly on. Duranno and Blanco leant back faint, and the others seemed to listen with dreadful faces, now looking up to where the clang of the bell came down upon them, then glancing with quivering lips through the passage which just let in the daylight and the noise of the crowd, but allowed nothing to be seen beyond. The hangman now left to take a glimpse at the scaffold and see that all was ready, and one or two officials followed, furtively glancing at the mass of human beings which swarmed through Newgate Street into Smithfield, which thronged the house tops and windows far and near, all looking with white up-turned faces to where the gibbet with its five short links of chain stood in front of the Debtors' Door. Scarcely a minute was thus passed when the hangman returned and hurried out with young Watto, at the sight of whom there was a renewed cry from the multitude outside. Perhaps at the sight of his comrade thus borne away, perhaps at the sound of the mob without, Duranno turned pale and faint, and asked for water, Water and brandy both were brought, and Duranno and Blanco both drank a little of the spirit raw, and were then hurried off. Lopez was called next, but as he rose there was a half shout, half scream from the crowd outside, for Blanco, the most powerful of all the murderers, and supposed to have been the most hardened, had fainted with the rope round his neck, and was, in fact, hanging till the warders ran back to fetch a chair, in which he was propped up till the drop fell. Lopez and Leone now remained alone on the bench, Lopez careless as usual, though quiet; Leone resigned, and apparently absorbed in thought and prayer. Again Lopez was told to rise, but again there was a delay, of which he took advantage to ask for something to drink. Water was put to his mouth, but he spat it out and turned away his head, though the feverish eagerness with which he swallowed some brandy was awful to behold. Then he rose, and as he stood hearing the bell toll, his desperate spirit at last gave way, and his eyes filled with tears, which he tried in vain to raise his pinioned hands to wipe away. Then he, too, went out with a light, jaunty step, and was almost immediately followed by Leone. There was deep silence now within and without the gaol, and none of the officials compelled to be present looked out, for the hangman had left the men standing in a row and was busy beneath the scaffold. In another instant there was a heavy sound, and all turned away, while the gibbet creaked audibly, for the five murderers hung dying side by side. At 9 o'clock the Sheriffs were again summoned to witness the cutting down of the bodies, and to receive the surgeon's certificate that they were dead. The cutting down of the corpses was almost more repulsive than the hanging. The noises from the crowd which accompanied the severance of each rope, the heavy lump with which the corpses fell into its shell, the speed with which it was borne in, unpinioned, cast loose from its halter, and pronounced dead, made this a painful, though fortunately a very quick business. The countenance only of Watto was slightly changed; the rest lay tumbled in their shells as the hangman had left them, precisely as though they slept. At 2 P.M. their clothes were cut off them to the last fragment, and burnt. The shells were then filled up with quicklime, and at 3 o'clock they were buried in one of the passages of the prison, without form or ceremony of any kind. The excellence of the arrangements for preserving order during the execution may be estimated from the fact that 330 men, 7 inspectors, and 37 sergeants of the City force were stationed in the immediate proximity of the scaffold, while 300 men belonging to the Metropolitan force, kept the great thoroughfares leading to Newgate. There were only two slight accidents, scarcely worthy of notice.

THE PUBLIC HEALTH.—The Registrar-General's weekly return states that the deaths in London in the week that ended Saturday, Feb. 19, were 1586, the lowest return since the commencement of the year. The average number in corresponding weeks of 10 years—1854-63, corrected for increase of population, was 1409. The present return is therefore 177 above the average. During the week the births of 1086 boys and 1036 girls, in all 2122 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 2044.

Provincial.

COWES.—During the recent stay of the Court at Osborne the Queen superintended the placing of a monument in the chancel of Whippingham Church to the memory of the Prince Consort, the design for which was previously submitted to and highly approved of by her Majesty. The upper portion of the design, executed in white marble, consists of a medallion of the Prince encircled in a wreath of laurel. The lower portion is divided into three panels, enclosed in arches of alabaster, supported on small columns of red Portuguese marble, and surmounted by a cornice of alabaster richly carved. In the side panels are the arms of the Queen and Prince, and in the centre an inscription commemorative of his Royal Highness. The monument, the joint production of Mr. Theed and Mr. Humbert, the architect of the church, which was rebuilt by order and under the superintendence of the Prince Consort, corresponds in style with the architecture of the building, which is about the commencement of the 13th century.

RHYL.—On Friday night Pengwern Castle, the family seat of the late Lord Mostyn, and the recent residence of the Hon. T. P. Lloyd and the Misses Lloyd, was totally destroyed by fire. Since the time when Kimmel Hall, the seat of Lord Dinorben, met with a similar fate some years ago, no event has caused such general excitement throughout the Vale of Clwyd. The fire was discovered in the early part of the evening, and from that time until a late hour at night every attempt was made by the neighbours, as well as by many of the inhabitants of Rhyl, St. Asaph, and Rhuddlan, to suppress the flames, but all to no avail. Most of the furniture was saved; but, in addition to costly ornaments and family paintings, including some of the choicest productions of the Dutch, Italian, and English schools, most, if not all of the rare and valuable library of Welsh records and manuscripts known as the "Mostyn Collection," were seriously damaged.

Ireland.

ACCIDENT TO THE EARL OF ROSSE.—On Saturday Lord Rosse, accompanied by Lord Oxmantown and his two younger sons, was superintending the cutting down of some trees at Parsonstown. Three trees were being cut down simultaneously, when one of them struck against another as they fell, and rebounding in an opposite direction, struck his lordship violently on the side of the head, and along the back. He fell to the ground, and remained insensible 10 or 15 minutes. His son Randal ran to the castle for assistance, and on returning, the horse took fright, upset the carriage, and threw him out on his head, where he also remained insensible, suffering from severe contusion. Lord Rosse, after some little time, gradually recovered his senses, and was conveyed to the castle. Fortunately no bones were broken, and no symptoms of internal injuries have appeared. His lordship is now progressing favourably.

THE DUBLIN MEMORIAL TO THE PRINCE CONSORT.—On Monday the 15th a discussion took place in the town council respecting the site of the statue to the Prince Consort. The sculptor, Mr. Foley, had recommended a spot on College Green, fronting the University and the Bank of Ireland and commanding four of the leading thoroughfares in the city; and the Memorial Committee, acting on the suggestion of Mr. Foley, had applied for the ground to the corporation through their chairman, the Lord Chancellor. The application was referred to the Committee having charge of such matters, and they agreed by a majority to recommend that the ground should be granted, and on the 15th the matter was brought before the council for their final decision. The Hon. Mr. Vereker, the late Lord Mayor, in a complimentary speech, moved that the site asked for should be granted. The motion was seconded by Alderman Moylan, another ex-Lord Mayor. Mr. Sullivan, of the *Nation*, moved an amendment that

the letter of the Lord Chancellor, with other documents of a similar nature, including a letter from himself asking the site for a statue to Henry Grattan, be referred back to the committee. In the course of a violent speech he said that the inhabitants of Dublin would hate the statue and hiss at it as they passed, because his Royal Highness had said that "Irishmen were no more deserving of sympathy than Poles." Mr. Devitt seconded the amendment, but disclaimed any disrespect to her Majesty. An animated discussion ensued, in the course of which the attacks on the memory of the Prince were indignantly repelled by Sir John Gray, Alderman Reynolds, Mr. Martin, and Mr. Byrne. The amendment was ultimately rejected, and the resolution for placing the statue in College Green was then carried by 32 to 14. On Monday last an immense meeting was convened in the Rotunda by The O'Donoghue and Mr. Sullivan, to protest against the decision for the erection of the statue in College Green. Mr. Gill opened the proceedings by saying that they were assembled to repudiate the insult offered by the Corporation in preferring the Prince Consort to Henry Grattan. He called upon them to express their feelings like men, and to be like brothers banded for fatherland under their gifted leader The O'Donoghue. He concluded by moving that Mr. Crotty should take the chair. The O'Donoghue then came forward to move the first resolution. He said he had never seen such a glorious, magnificent meeting in that room. The moment he read the proceedings in the City Hall about the statue he wrote to Mr. Sullivan that he would attend this meeting. Here the speaker was cut short by a burst of cheers for Sullivan, with a counter torrent of groans. A person on the platform, alluding to an informer named Goulah, and to some former controversy between Mr. Sullivan and the Fenian men, cried out "Goulah!" This was evidently a preconcerted signal, as Goulah was one of the Fenian Brotherhood. There was an attempt to put him down; he resisted, and a regular fight commenced on the platform and in several parts of the house. The whole mass on the platform were instantly engaged in a terrific struggle, flourishing shillelahs, boxing, throttling, tumbling over the chairs and forms, sprawling on the boards, kicking and yelling. The Fenian men being well drilled and commanded pressed on in such overwhelming force that they carried the platform in about ten minutes. The O'Donoghue, Mr. Sullivan, and some priests fled; the chairs and tables were broken up and converted into weapons; the reporters were knocked about and quickly lost in the agitated mass. The victors seized a piece of green cloth that covered the table and waved it as a flag of triumph. This put an end to the fighting throughout the room. The Fenians kept waving their flag, amid all sorts of noise and uproar, for about an hour. The speaking altogether did not occupy more than 15 minutes, but it was two hours before the multitude dispersed. Many of these "fighting men" have been soldiers in the United States, and wore the American uniform, and it is understood that they are busy drilling their brethren at home.

Scotland.

THE PAMPERO CASE.—On Tuesday Lord Ormidale issued an interlocutor appointing Tuesday, the 5th of April, within the Parliament-house, Edinburgh, for trying the matters put in issue by the information, at the instance of the Crown, against the owners and builders of the Pampero, lately seized in the Clyde.

Obituary.

THE DOWAGER VISCOUNTESS HEREFORD, died on the 20th inst., at her residence at Hampton Court Palace, in her 81st year. She was the third daughter of Sir George Cornewell, Bart., and married in 1805, the 14th Viscount Hereford, grandather of the present peer.

SIR WILLIAM WINDHAM DALLING, Bart., died on the 16th inst., at Earsham House, Norfolk, in his 90th year. He succeeded to the baronetcy in 1798, on the death of his father, who had been created a baronet in 1783 for his civil services in Jamaica. As he has died a bachelor, and his two younger brothers also died without male issue, the title becomes extinct.

BIRTHS.—On the 16th inst, at Kedleston, Derbyshire, the Lady SCARSDALE of a daughter—15th inst, at Leeson Street, Dublin, the Lady HARRIET LYNCH BLOSSE, of a son—18th inst, at The Rectory, Corfe Castle, the Lady CHARLOTTE BANKES, of a daughter—15th inst, at Newark House, Leamington, Lady LUCY MASSY, of a son—11th inst, at 39, Princess Gate, London, Lady LOUISA FEILDING, of a daughter—14th inst, at 26, Charles Street, Berkeley Square, the Lady FRANCIS TREMAYNE, of a son—20th inst, at 1, Hill Street, Berkeley Square, Lady RAWLINSON, of a son—21st inst, Lady HULSE, of a son—At Upper Rathmines, near Dublin, the wife of Captain the Hon. EVERARD STOURTON, of a daughter—14th inst, at 38, Charles Street, Berkeley Square, the Hon. Mrs. MAYNARD, of a daughter—8th inst, at Munich, the wife of EDWARD WILBERFORCE, Esq., of a son.

MARRIAGES.—On the 18th inst, at Nuneham Park, Oxon, Capt. EDWARD BRIDGES RICE, R.N., eldest son of Edward Rice, Esq, of Dane Court, Kent, to CECILIA CAROLINE, second daughter of the Rev. WM. VERNON HARCOURT, of Nuneham Park, Oxon—4th inst, at Naples, in the Chapel of the Prussian Legation, GEORGE HERMANN SIEGFRIED LEUPOLD, Esq., youngest son of Heinrich Leupold, Esq, of Bremen, to ADELINE MOLYNEUX, youngest daughter of the late DAVID AUGUSTUS BERTHOUD, Esq., of Neuchâtel—8th inst, at the Roman Catholic Church, Dover, Capt. LYNCH KEOGH, Military Train, son of Wm. M. Keogh, Esq, Clerk of the Crown for the county and city of Kilkenny, to CHARLOTTE MARY, relict of the late COLQUHOUN SMITH, Esq., of Bocage Park, Middlesex—16th inst, at St. Matthias' Church, Richmond Hill, AUGUSTUS KINGSTON MAYBURY, Esq., M.D., of Richmond, Surrey, to JULIA, youngest daughter of the late RICHARD CRAWSHAY, Esq., of Ottershaw Park.

DEATHS.—On the 15th inst, at No. 4, Seamore Place, Mayfair, the Hon. PHILIP SYDNEY PIERREPONT, aged 77—13th inst, at 40, Manchester Street, the Hon. ROBERT PETRE, aged 61—23d inst, at 19, Chesham Place, CAROLINE, second surviving daughter of the late Sir GEORGE WOMBWELL, Bart., of Wombwell, Yorkshire—21st inst, at Maybole, Ayrshire, WILLIAM RICHARD PATERSON, Esq., late of Manilla and Singapore, and son of the late Lieut.-General Sir William Paterson, K.C.H., of Exeter—17th ult, at Lahore, MARIA ADELAIDE, wife of ROBERT NEEDHAM CUST, Esq., Commissioner Umritzer Division, second daughter of the late Hon. and Very Rev. Henry Lewis Hobart, Dean of Windsor, aged 30—17th inst, at Rochester House, Little Ealing, ALFRED LENNOX, the infant son of Mr. and the Hon. Mrs. CHARLES LENNOX PEEL, aged three months—21st inst, at 24, Grosvenor Place, the Hon. Mrs. CARLETON, aged 74—17th ult, at Bombay, Lady GORDON, wife of Lieut.-Colonel Sir William Gordon, Bart., of Earlston, Berwickshire—15th inst, at No. 11, Princes Gardens, Lady KEATING, wife of the Hon. Mr. Justice Keating, aged 42—13th inst, at Kempsey, near Worcester, SARAH, eldest daughter of the late Sir ANTHONY LECHMERE, Bart., of The Rhyd—14th inst, at Stanford, Worcestershire, JOANNA, daughter of the late Sir THOMAS WINNINGTON, Bart., M.P.—9th inst, at Trellillon Park, Monmouthshire, MELVILLE GORE TURTON, youngest son of the late Sir Thomas Turton, Bart., aged 26—13th inst, at Cotham Park, near Bristol, the Venerable JOHN WHITTY, for 40 years Archdeacon of Kilfenora, county Clare, and upwards of 60 years rector of Killaloe, aged 84—18th inst, at Craven Hill, Hyde Park, CATHARINE JANE, wife of Lieut.-Gen. DUNCAN SIM, Royal Engineers—9th inst, at Trafalgar Lawn, near Barnstaple, MARY, wife of Admiral HOLE, aged 81—15th inst, at Yeovilton House, near Lymington, Hants, LUCINDE, wife of Admiral THOMAS EDWARD SYMONDS—15th inst, at Pennsylvania Park, Exeter, Colonel JOHN M. LEY, late Madras Horse Artillery, aged 69—8th inst, at Hethersett, Norfolk, Lieutenant-Colonel CHARLES NORGATE, late of the 18th Bengal N.I., aged 58—7th Dec., at the Queen's Redoubt, New Zealand, Lieutenant-Colonel AUSTEN, 2d Batt. 14th Regiment, of a wound received in the action of Nov. 20—17th inst, at 1, Brunswick Gardens, Kensington, Lieut.-Colonel R. CARRUTHERS, C.B., late 2d Queen's Royal Regiment, aged 63—20th, at 7, Old Burlington Street, Lieut.-Colonel WILLIAM RABAN, aged 72—15th inst, at 15, Clifton Gardens, Maida Hill, Captain C. E. MAINWARING, R.A., professor of artillery, Staff College, Sandhurst, eldest son of Rear-Admiral Mainwaring, aged 35—8th inst, at Plastirrion, JOHN ROWLANDS, Esq., a magistrate and deputy-lieutenant of the county of Carnarvon, aged 71.

Markets.

COVENT GARDEN, Feb. 27.

Vegetables and Fruit in season continue to be pretty well kept up. Retarded Hothouse Grapes are, however, scarce, but some good new ones may now be had. Blenheim Orange, Nonpareil, and American New Town Pippin Apples may still be obtained; likewise a few dessert Pears. Oranges are plentiful; the best are realising from 6s. to 10s. per 100. Cornish Broccoli is still largely supplied. Continental arrivals are heavy; among them are French Lettuces, Endive, Carrots, and Radishes. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Nuts, small, per bush., 14s to 18s
Grapes, new, per lb., 15s to 20s	Kent Cobs, 140s per 100 lbs.
Apples, per ½ sieve, 2s 6d to 4s	Almonds, do., 18s
Pears, per doz., 6s to 12s	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 8s	Chesnuts, per bush., 10s to 16s
Oranges, per 100, 2s 6d to 8s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Cucumbers, each, 2s to 5s
Cauliflowers, each, 3d to 6d	Beet, per doz., 1s 6d
Asparagus, p. bundle, 10s to 18s	Shallots, per lb., 10d
French Beans, p. 100, 3s to 3s6d	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s to 2s 6d	Garlic, per lb., 8d
Rhubarb, p. bundle, 9d to 1s 6d	Lettuces, each, 1d to 4d
Potatos, York Regents, p. ton, 60s to 80s	Endive, per score, 1s to 2s
,, Shaws, do., 50s to 60s	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 4d to 6d	Mushrooms, p. pott., 1s to 1s9d
Carrots, do., 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Feb. 25.

Prime Meadow Hay	70s to 80s		Clover, old	85s to 110s
Superior do. ..	75	90	Do. second cut ..	75 100
Inferior do. ..	—	—	New Clover ..	— —
New do.	—	—	Straw	24 30
Rowen	—	—	HARVEY & EASTON.	

CUMBERLAND MARKET, THURSDAY, Feb. 25.

Sup. Meadow Hay ..	86s to 92s		Inferior Clover ..	78s to 92s
Inferior do.	65	78	New do.	— —
New do.	—	—	Straw	32 36
Superior Clover ..	100	110	JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, Feb. 25.

Fine Meadow Hay ..	80s to 84s		Prime 1st cut Clover	105s to 108s
Inferior do.	70	75	Inferior do. do. ..	95 100
Prime New Hay ..	—	—	New 1st cut do. ..	— —
Inferior	—	—	Prime 2d cut do...	100 105
Straw	27	30	Inferior do.	— —

BRITISH WOOLS.—LONDON, Feb. 25.

Deep grown wool continues in request, but other sorts remain about the same, viz., merely on sale to meet present demands.

South-down Hoggets	s. d.	s. d.	Leicest. Wethers	1 9½ to 1 10
	1 9	to 1 10	Ditto Hoggs ..	1 10½ — 1 11½
Half-bred ditto ..	1 11	— 2 0	Combing Skins	1 4 — 1 8
Down Ewes ..	1 8	— 1 9	Flannel Wool ..	1 4 — 1 6
Kent Fleeces ..	1 11	— ..	Blanket ditto ..	0 9 — 1 0

NEWGATE.—Feb. 26.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 13s. ,,
Pork, 4s. 0d to 4s. 4d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Feb. 26.

Messrs. Pattenden & Smith report an improved demand for the few remaining descriptions of last year's growth; late prices are fully maintained.

METROPOLITAN CATTLE MARKET.

MONDAY, Feb. 22.

We have a few more Beasts than on Monday last, but the demand is good, and prices are well maintained. In a few instances our top quotations have been exceeded. Sheep are more plentiful, and trade for them is slow; on the average prices are scarcely as good as of late. Good Calves are rather dearer. From Germany and Holland there are 730 Beasts, 1520 Sheep, and 102 Calves; from Spain, 71 Beasts; from Scotland, 320; from Ireland, 140; from Norfolk and Suffolk 2310; and 60 from the Northern and Midland Counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 10	to 5 0	Best Long-wools.	5 2	— 5
Best Short-horns	4 8	— 4 10	Do. Shorn ..	..	.. —
2d quality Beasts	3 0	— 4 0	Ewes & 2d quality	4 4	— 4
Best Downs and Half-breds ..	5 8	— 6 0	Do. Shorn ..	..	.. —
Do. Shorn ..	..	— ..	Lambs	..	.. —
			Calves	3 6	— 5
			Pigs	3 6	— 4

Beasts, 8970; Sheep, 18,760; Calves, 108; Pigs, 380.

THURSDAY, Feb. 25.

We have a larger supply of Beasts than on Thursday last, and trade is slow for them. The weather is, however, favourable, and prices are not much altered from Monday last. The number of Sheep is not large, but quite equal to the demand. A clearance can scarcely be effected at Monday's quotations. Calves are selling about the same as on Monday. From Germany and Holland there are 375 Beasts, 940 Sheep, and 229 Calves; from Spain, 82 Beasts. Milch Cows, 90.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 10	to 5 0	Best Long-wools.	5 2	— 5
Best Short-horns	4 6	— 4 10	Do. Shorn ..	..	.. —
2d quality Beasts	3 0	— 4 0	Ewes & 2d quality	4 4	— 4
Best Downs and Half-breds ..	5 8	— 6 0	Do. Shorn ..	..	.. —
Do. Shorn ..	..	— ..	Lambs	..	.. —
			Calves	3 6	— 5 4
			Pigs	3 6	— 4 8

Beasts, 1170; Sheep, 3860; Calves, 266; Pigs, 60.

MARK LANE.—MONDAY, Feb. 22.

The supply of Wheat from Essex to this morning's market was small, from Kent fair, but being held for a slight advance no progress could be made with the sale, and the bulk remained unsold towards the close of the market. The attendance was very limited, and foreign Wheat was neglected. Prices unaltered. Barley was a slow sale at last week's rates. Beans and Peas were 1s. per qr. cheaper. The Oat trade was dull, but we do not alter our quotations. Flour was neglected.

PER IMPERIAL QUARTER	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk .. White	42—48	Red	40—46
— — fine selected runs .. ditto	44—52	Red	40—46
— — Talavera	48—54		
— Norfolk	—	Red	—
— Foreign	36—54		
BARLEY, grind. & dist, 25s to 27s .. Chev.	34—38	Malting ..	39—42
— Foreign .. grinding and distilling	22—26	Malting ..	28—32
OATS, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	17—22	Feed	15—20
RYE	30—32	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....28s to 36s...Tick	30—33	Harrow ..	30—32
— Pigeon .... 32s to 40s .. Winds.	—	Longpod ..	—
— Foreign .....Small	36—42	Egyptian	30—32
PEAS, White, Essex and Kent .. Boilers	33—36	Suffolk ..	34—35
— Maple .... 30s to 34s .... Grey	28—30	Foreign ..	32—34
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered .. per sack	35—40		
— 2d do ..... ditto	28—34	Country ..	28—32
— Foreign ..... per barrel	15—25	Per sack	32—34

FRIDAY, Feb. 26.

Since the 19th inst. the weather has been extremely wintery, with frost and daily snow storms, and an occasional thaw; since yesterday it has been damp and raw. During the above period the same want of activity which has been the predominant characteristic of the Wheat trade during the present year has continued to prevail, and prices are nominally unaltered, but to force sales lower rates must have been accepted. The same may be said of Barley, Oats, Beans, Peas and Flour. Since Friday last no further arrivals have been reported off the coast, and only 6 cargoes remained on sale yesterday. The floating trade has remained exceedingly quiet during the week; there was no inclination at all to buy Wheat or Spring Corn, and with very little offering, no alteration in prices has to be quoted. Paris, Feb. 25.—Business has been inactive, and Wheat as well as Flour has remained unchanged in value. The present stock of Flour is estimated at 12,450 cwt. The six marks for delivery this month are quoted equal to 33s. per 280 lbs. The arrivals of English and foreign Wheat and Barley and foreign Oats during the week have been small, of English and Irish Oats large. A portion of the English Wheat left over from Monday remained unsold towards the close of the market, factors holding for the prices of that day. In foreign Wheat and all descriptions of Spring Corn scarcely any business was transacted, and our quotations remain nominally unaltered.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	720 qrs.	690 qrs.	2720 qrs.	450 sacks
Irish	—	—	3410	— ,,
				460 ,,
Foreign ..	8330 ,,	1030	12,060 ,,	— brls.

LIVERPOOL, February 23.—At our market to-day there was rather more disposition to buy Wheat, and a very fair business was effected in red American, at about the currency of this day week. Flour was very dull, and prices tended in favour of buyers. Oats unchanged. Barley, Beans, and Peas unsaleable in retail at last quotations. Indian Corn was pressed, and a moderate business was done in American, at 29s. per 480 lbs. Oatmeal the turn cheaper.

FRIDAY, Feb. 26.—The market continues in the same dull state as of late, and prices of most articles are slightly easier. Wheat 1d. lower. Indian Corn 3d. lower. Flour unchanged; prices nominal.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas
Jan. 16	40s 11d	31s 10d	18s 10d	28s 0d	33s 7d	33s
— 23	41 3	32 5	18 9	28 0	33 8	33
— 30	40 8	32 1	18 11	31 8	33 3	33
Feb. 6	40 4	32 0	18 9	29 0	33 8	33
— 13	40 8	31 11	19 1	29 1	33 7	33
— 20	41 1	32 0	19 8	29 19	33 2	33
Agg. Aver.	40 10	32 0	19 0	29 1	33 6	33

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Jan. 16.	Jan. 23.	Jan. 30.	Feb. 6.	Feb. 13.	Feb. ..
41s 3d	..		..	..	..	..
41 1	..	..	..	..	..	..
40 11 —		..	..	..		..
40 8	..	..		..	..	..
40 4	..	..	..		..	..
—	..	..	..	..	..	

POTATOS.—SOUTHWARK, Monday, Feb. 22.

During the past week the arrivals coastwise and by rail have been more than equal to the demand, and trade continues much in the same state. The following are the quotations:—Yorkshire Flukes, 70s. to 90s. per ton; do. Regents, 55s. to 70s.; do. Rocks, 45s. to 50s.; Dunbar Regents, 70s. to 75s.; Kent and Essex Regents, 50s. to 70s.; North Berwick

Regents, 50s. to 60s.; Perth, Forfar, and Fifeshire Regents, 40s. to 50s.; do. do. Rocks, 40s. to 50s.

COAL MARKET.—Feb. 24.

Bowers West Hartley, 14s. 9d.; Byass's Bebside West Hartley, 14s. 9d.; Bates's West Hartley, 14s.; Davison's West Hartley, 15s.; Holywell Main, 17s.; Lambert's West Hartley, 14s. 6d.; West Hartley, 15s.; Walls End Gosforth, 16s. 6d.; Walls End Riddell, 16s. 6d.; Eden Main, 17s. 3d.; Walls End Bell, 16s. 6d.; Walls End Haswell, 19s.; Walls End Hetton, 19s.; Walls End South Hetton, 19s.; Walls End Tunstall, 16s. 6d.; Walls End Hartlepool, 18s. 6d.; Walls End Heugh Hall, 18s. 3d.; Walls End Kelloe, 18s.; Walls End East Hartlepool, 18s. 9d.; Walls End South Hartlepool, 17s. 9d.; Walls End South Kelloe, 18s 3d.; Walls End Trimdon Hartlepool, 18s. 6d.; Walls End Trimdon Thornley, 16s. 3d.—Ships at market, 53.

NURSERYMEN and SEEDSMEN who may be desirous of taking an ACTIVE PARTNER, or may be inclined to DISPOSE of their INTEREST in the same, either at the present time or next autumn, can address a line with a few particulars to G. W., *Gardeners' Chronicle* Office, W.C.

WANTED, a CORRESPONDING CLERK and TRAVELLER.—WILLIAM WOOD & SON are in want of a respectable energetic Man, from 25 to 30 years of age; one who has a tolerable knowledge of Plants, with a slight insight in the Seed Trade, would be preferred.—Address WM. WOOD & SON, Maresfield, Uckfield, Sussex.

WANTED, as GROUND FOREMAN, an energetic active young Man, who has a thorough knowledge of his profession.—Apply, by letter only, stating terms, age, &c., to S. GLENDINNING & SONS, Chiswick Nursery, London, W.

WANTED a Young Man of first-class abilities as a NURSERYMAN, with a good knowledge of Ground Work.—Apply by letter, giving reference as to character, &c., to J. D., Post Office, Loughton, Essex.

To Fern Growers.

WANTED a thoroughly competent PERSON to take charge of a large collection of Ferns. A young man who has previously cultivated this class of plants, and is well acquainted with their Propagation and raising them from seed would be preferred.—Applications stating references, &c., to C. E., care of James Veitch, Royal Exotic Nursery, King's Road, Chelsea, S.W.

WANTED, a GARDENER, early in March, who thoroughly understands the cultivation of Vines, Hothouse, Greenhouse, and Outdoor Plants. A middle-aged married Man without children is preferred. None need apply who have not occupied a similar situation during the last three years at least, with a good character.—Apply personally or by letter, stating wages, &c., to G. NEUMANN, Esq., Tracey House, Honiton, Devon.

WANTED, as UNDER GARDENER, a Young Man from 16 to 20 years of age, strong, active, and willing.—Apply, in own handwriting, stating wages expected and length of character, to Mr. KAYESS, West Ham Abbey, near London, E.

WANTED, as UNDER GARDENER in Warwickshire, a Married Man without incumbrances, accustomed to Garden Labour. Wages 12s. a week, with Cottage and Coals.—Apply by post to H. T., 61, King William Street, City, London.

WANTED, for three years, a Youth from 17 to 18 years of age, as UNDER GARDENER in a gentleman's place, where he will have a good opportunity of learning the general routine of Gardening. Wages 10s. per week the first year, 12s. the second, and 14s. the third. One who has not been out before not objected to. A small premium required.—Mr. J. COOK, Glass House, Great Warley, Brentwood, Essex.

WANTED, a MAN and WIFE, to live in the house; Man must be a thorough Gardener, and willing to be useful in-doors. Wife a very good Cook and general servant. Both must have filled similar situations.—M. F., Post Office, Twickenham Common.

WANTED, a good GLAZIER and PAINTER, for a Country Nursery. He must also have a knowledge of Soft-wooded Plants.—Apply by letter, stating age, wages expected, and all particulars to Mr. CATLEAGH, Hans Street, Chelsea, S.W.

To Packers in the Seed Trade.

BUTLER AND MCCULLOCH are in want of a steady MAN in the above capacity. One accustomed to Packing Plants preferred.—Covent Garden Market, London.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

To Noblemen and Gentlemen.

MESSRS. HUGH LOW AND CO. have experienced HEAD and UNDER GARDENERS of various qualifications, whom they can confidently recommend. Ladies and gentlemen requiring such, are respectfully requested to communicate with H. L. & Co., who will only recommend those that are really equal to the duties they will be called upon to perform.—Clapton Nursery, London, N.E.

GARDENER (HEAD), age 40, married, with one child.—JAMES THOMPSON is now leaving his present employer, with whom he has lived upwards of 20 years, and will be glad to enter into an engagement with any nobleman or gentleman who is desirous of securing the services of a thoroughly experienced Man. Can produce 170 Testimonials of Prizes for choice Fruits and Flowers from the year 1856, at the Royal Isle of Wight Horticultural Exhibitions. Character unexceptionable.—C. DIMMICK, Nurseryman, High Street, Ryde, Isle of Wight.

To Noblemen and Gentlemen.

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To Noblemen and Gentlemen.

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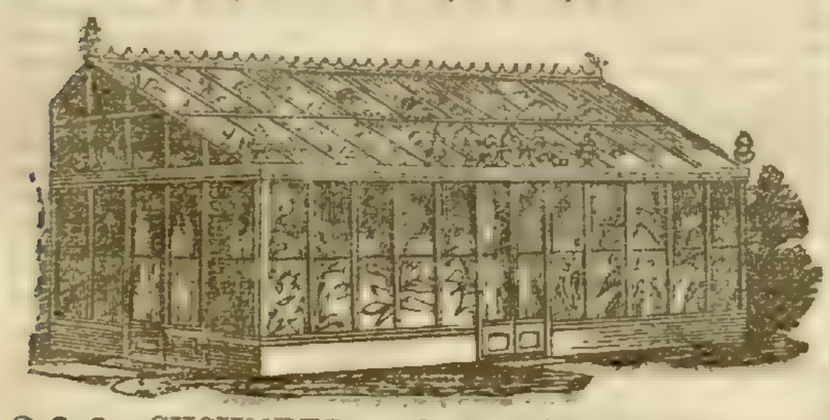

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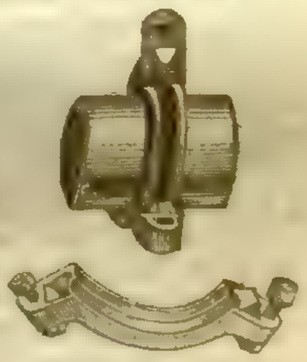

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News of the Week.

IN the House of Lords on Friday, Lord COLVILLE called attention to the proceedings of the CRAWLEY court-martial, and complained that the DEPUTY JUDGE ADVOCATE had prepared the articles of the prosecution, acted as legal adviser to the prosecutor, and drawn up the reply to the defence. Earl DE GREY said that the proceedings were conducted in accordance with precedents, but the question was now under the consideration of the Government whether the existing practice might not be improved. On Monday, in reply to the Marquis of WESTMEATH, Earl RUSSELL said that he had no reason to suppose that M. MAZZINI or any other person living in this country was guilty of plotting against the life of the EMPEROR of the FRENCH, and that, therefore, the Government were not prepared to take any steps in the matter. Earl GRANVILLE laid on the table the report of the joint committee on metropolitan railways, and stated that all the recommendations it contained, except one, had been agreed to unanimously. The

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LONDON: BRADBURY AND EVANS, 11, BOUVERIE STREET, E.C.

Insane Prisoners Act Amendment Bill was read a second time. On Tuesday, the Marquis of Clanricarde moved for papers relating to recruiting in Ireland for the army of the United States, and asked whether any remonstrances against such proceedings had been addressed to the Federal Government. Earl Russell, in reply, said that any attempt on the part of the Federals to enlist recruits for their army in Ireland would be a breach of neutrality and an offence against our own municipal laws, which, if detected, would subject the offenders to punishment, and justify strong complaints to the Government of the United States. On more than one occasion he had complained to the American Minister that such practices were going on in Ireland, but Mr. Adams had indignantly denied the truth of the allegations; and having received that denial, he felt obliged to wait until some case had occurred in which proof was forthcoming. In reply to a question by the Earl of Derby as to the reported movements of the Fenian Brotherhood, Earl Granville stated that their proceedings were watched, but he believed, on investigation, they would prove to be of the most contemptible character. Lord Clanricarde withdrew his motion. On Thursday the Chief Rents (Ireland) Bill was read a second time.

In the Commons on Friday, on the motion of Colonel Dunne, a select committee on Irish taxation was agreed to. The Malt Tax Bill passed through committee after some debate on the motion of Sir E. Dering for the addition of a clause permitting agriculturists to malt barley for the consumption of their own stock without taking out a maltster's licence, the clause being ultimately withdrawn. The Conveyancers (Ireland) Bill passed through committee. The Land Drainage (Provisional Orders) Bill, the Inclosure Bill, and the County Courts (Ireland) Bill were read a second time. On Monday Mr. Cox called attention to the statement made by the Procureur Imperial at the late trial of the conspirators in Paris, that a letter written by Greco to a M. Flowers, was addressed to 35, Thurloe Square, the residence of a member of the British Parliament. Mr. Stansfeld indignantly denied that there was any particle of truth in the statement, and also pledged his personal knowledge of M. Mazzini for the conviction that he was incapable of having had any concern in the base conspiracy. Mr. Disraeli asked for information respecting the state of our relations with the Continent, and the success of their new proposition of a Conference. Lord Palmerston, in reply, said that the papers which would shortly be laid before the House would show that the object of the Government in receiving proposals and answering proposals had been to conciliate differences, to mollify exasperation, and to bring about, if possible, a peaceable settlement of a dispute which threatened to bring on a European war. The House then went into committee of supply on the Navy Estimates, and agreed to several of the votes. On Tuesday Mr. Marsh moved a resolution that the civil service and miscellaneous estimates have been for many years rapidly increasing, and ought to be reduced. Mr. F. Peel admitted that the increase in these estimates was very large, but argued that it was due to causes over which the Government had no control, and which the House itself could not check unless it resorted to a policy totally different to that which had been pursued for many years past. If they reduced the education vote and the grants for the reformation of criminals, and swept away the vote for putting down the slave trade, they might be able to reduce taxation, and possibly dispense with the necessity for the income tax; but to the adoption of this course he believed the House of Commons would be the first to object. After some discussion the motion was withdrawn. The Court of Justiciary (Scotland) Bill was read a second time. The Malt for Cattle Bill, and the Conveyancers, &c. (Ireland) Bill, were read a third time and passed. On Wednesday, on the order for going into committee on the Chain Cable and Anchors Bill, Mr. Milner Gibson moved that it be referred to a select committee. After a short discussion, Mr. Lindsay assented to the motion, and the Bill was referred to a select committee. On Thursday Colonel Edwards moved a resolution that the proposed discontinuance in the present year of the usual six days' training of the Yeomanry Cavalry was detrimental to the efficiency of the force. The motion was opposed by Lord Palmerston, and was only lost on a division by a majority of one, the numbers being 158 to 157. Mr. Ferrand called attention to the alleged interference of the Admiralty officials in the Devonport election of 1859. After an animated discussion the subject dropped. The House went into committee of supply, when the Marquis of Hartington moved the Army Estimates, the first vote of which was agreed to. Sir John Lawrence's Salary Bill was read a third time and passed. The Bills of Exchange and Promissory Notes (Ireland) Bill was read a second time.

The Danish Rigsdag on Saturday presented an address to the King expressing their confidence that his Majesty would uphold the liberty and independence of the country, and would not permit it to be dismembered. The King in reply personally thanked the members for the expression of their fidelity, and assured them that he would firmly adhere to his policy, hold out to the utmost of his power, and admit of no abolition of the political connection between the kingdom and Schleswig.

The Federal Diet on Thursday came to a vote on the Austro-Prussian proposition that the command in chief of the forces in Holstein should be transferred to Prussia. Only six votes were given in its favour. Three Powers moved counter resolutions, and seven voted for referring the proposition to a committee. This latter course was adopted.

A despatch from Vienna announces that in consequence of an apprehended rising of the Poles in Galicia, an Imperial manifesto has been published in Cracow, declaring the whole province to be in a state of siege.

The trial of the four Italians charged with conspiring against the life of the Emperor terminated on Friday in the conviction of all the conspirators. Greco and Trabuco were sentenced to transportation for life, and Imperatori and Scaglioni to twenty years' imprisonment.

Home News.

The Court.—The Queen and Royal family continue at Windsor Castle. On Friday morning the Queen drove out. The Princesses Helena and Louisa came to London. The Grand Duchess of Mecklenburg Strelitz and Prince Edward and Prince Gustav of Saxe Weimar visited the Queen, and remained to luncheon. On Saturday morning Sir George Grey arrived at the Castle and had an audience of her Majesty. The Queen received deputations from the Corporation of the City of London, the Court of Lieutenancy, the city of Edinburgh, the city of Dublin, and the English Presbyterian Ministers of London and Westminster, who presented addresses of congratulation on the birth of a Prince to the Prince and Princess of Wales, to all of which her Majesty returned gracious answers. Luncheon was afterwards served for the deputations in the dining room. In the evening Prince Arthur arrived from Greenwich Park. The Hon. Alice Jocelyn and the Hon. Edith Jocelyn arrived on a visit. On Sunday morning the Queen, Princess Helena, Princess Louisa, Prince Arthur and Prince Leopold attended Divine service in the private chapel. The Dean of Windsor officiated. On Monday morning the Queen, accompanied by Princess Helena and Princess Hohenlohe, came to London by a special train on the Great Western Railway, and visited the Prince and Princess of Wales at Marlborough House. Her Majesty afterwards visited the Duchess of Cambridge and the Grand Duchess of Mecklenburg at St. James's Palace. Her Majesty then drove to Buckingham Palace, and returned to Windsor in the afternoon. Prince Arthur returned to Greenwich Park. The Dean of Westminster and Lady Augusta Stanley arrived at the Castle, and had the honour of dining with the Queen. On Tuesday morning the Queen walked and drove in the grounds. In the afternoon the Queen held a Council, at which some alterations were made in the Roll of Sheriffs. Earl Granville and the Duke of Somerset had audiences of the Queen. The Marquis of Tweeddale had an audience, and received from her Majesty the Gold Stick, as Colonel of the 2d Regiment of Life Guards. Prince Leopold took a carriage drive. On Wednesday morning the Princess Helena returned from Marlborough House. The Queen, accompanied by Princess Helena, walked in the grounds. The Princess Augustus of Saxe Coburg, with Princess Clotilde and Princess Amelie, visited the Queen and remained to luncheon. The Mayor and Town Clerk of Windsor had an interview with the Queen, and presented an Address congratulating her Majesty on the birth of the infant Prince. On Thursday the King of the Belgians arrived at Windsor Castle on a visit to the Queen. The Prince of Wales met the King at the Waterloo station in London, and accompanied his Majesty to Windsor. The Queen, with the Princess Helena, drove down to the station at Windsor to receive the King, who immediately got into one of her Majesty's carriages, with the Queen, the Prince of Wales, and Princess Helena, and proceeded to the Castle. In the afternoon the Prince of Wales returned to London.

The Prince and Princess of Wales continue at Marlborough House. On Friday morning the Prince rode out. The Princess drove out. The Princesses Helena and Louisa visited the Prince and Princess at Marlborough House. In the afternoon the Prince visited the exhibition of Carl Werner's drawings of Jerusalem, Bethlehem, and the Holy Places. His Royal Highness afterwards attended the debate in the House of Lords. In the evening the Prince and Princess dined with the Duchess of Cambridge at St. James's Palace. On Saturday afternoon the Prince and Princess of Wales took a carriage drive. In the evening their Royal Highnesses, accompanied by Prince Arthur and Prince Leopold, went to the Princess's Theatre. On Sunday morning the Prince and Princess attended Divine Service at the Chapel Royal, St. James's. The Bishop of Bath and Wells preached the sermon. In the afternoon their Royal Highnesses took a carriage drive. On Monday morning the Queen, accompanied by the Princess Helena and the Princess Hohenlohe, visited the Prince and Princess and remained till noon. In the afternoon the Lord Mayor of London, the Sheriffs, and a deputation from the Courts of Aldermen and Common Council, with a deputation from the Court of Lieutenancy, the Lord Mayor of Dublin with a deputation; the Lord Provost of the City of Edinburgh with a deputation, and the Lord Mayor of York, with a deputation, had an audience of the Prince and Princess at Marlborough House, and presented addresses of congratulation to their Royal Highnesses on the birth of the infant Prince. The Prince afterwards rode out on horseback. On Tuesday morning the Princess Helena arrived on a visit to the Prince and Princess. The Duke de Nemours and the Princess Marguerite visited their Royal Highnesses. The Jewelled National Token from South Wales to the Princess was presented to her Royal Highness by the Countess Dowager of Dunraven, accompanied by the Lady Llanover, Lady Frances Pratt, Lady Jane Walsh, and Mrs. Saunders Davis. The jewels consist of a badge in emeralds and diamonds, with the leek, surmounted by a bouquet composed of the trefoil, oak, wheat, and mistletoe, the bardic emblems of the four seasons, and a motto in Welsh, "From South Wales to their Princess." A bracelet with fine emeralds and diamond centre, the leek in pearls, emeralds and diamonds composing the band, with a motto in Welsh, "God Preserve our own Princess." The casket containing the jewels is richly mounted in gold, and bears a suitable inscription in the Welsh language. An offering to her Royal Highness from the Province of North Jutland was presented by M. de Bille, the Danish Minister. An offering of a richly sculptured vase in silver, from the Danish inhabitants of London, was presented by a committee of Danish gentlemen. Lord Harris presented to her Royal Highness three offerings from South Australia, transmitted through the Secretary of State for the Colonies. 1. A flower stand, composed of five emu's eggs set in pure gold, and supported by a pedestal of pure gold, from Lady Berkly and the ladies of Victoria. 2. A casket richly wrought in pure silver, from Sir James F. Palmer, President of the Legislative Council of Victoria. 3. A casket formed of a large emu's egg set in pure gold, supported by a pedestal of pure gold, from Lady Daly and the ladies of South Australia. The Princess afterwards took a carriage drive. In the evening the Prince and Princess had a dinner party. On Wednesday the Prince held a Levée on behalf of her Majesty at St. James's Palace. The Prince afterwards took a ride. The Princess drove out In the evening their Royal Highnesses honoured the Haymarket Theatre with their presence. On Thursday the Prince went to the Waterloo Station to meet the King of the Belgians, and accompanied his Majesty to Windsor. His Royal Highness returned to London in the afternoon.

The King of the Belgians arrived at Dover on Wednesday evening, in a Belgian Government steamer, from Ostend. His Majesty passed the night at Birmingham's Lord Warden Hotel, and left Dover on Thursday morning for Windsor, on a visit to the Queen.

The Royal Christening.—The baptism of the infant son of the Prince and Princess of Wales is fixed for the 10th inst. at the Royal Chapel, Buckingham Palace. Invitations to attend the solemnity were issued on Wednesday to all the Cabinet Ministers and great Officers of State.

Prince Alfred left Edinburgh on Friday for the Hirsel, near Coldstream, on a visit to the Earl and Countess of Home. His Royal Highness is expected to visit the Earl of Dunmore, at Dunmore Park, in a few days.

Drawing Room.—The Queen has commanded that

a Drawing-room shall be held on Saturday, the 19th of March, by the Princess of Wales, on behalf of her Majesty. All presentations will be considered as being made to her Majesty. It is not expected that gentlemen will go to the Drawing-room, except in attendance on the ladies of their families.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury.

PARLIAMENTARY MOVEMENTS.—Mr. John Floyer was elected for Dorsetshire on Saturday in the room of Mr. Ker Seymer, without opposition. The election for Hertfordshire takes place on Tuesday, March 8. Mr. Surtees has announced himself a candidate in the Conservative interest in opposition to Mr. H. Cowper.

THE SHERIFFS.—At the Privy Council on Tuesday, the Queen was pleased to appoint Thomas Thorneycroft, Esq., of Tottenhall Wood, Wolverhampton, to be Sheriff of Staffordshire, in the room of George Briscoe, Esq., of Elmhurst Hall, Lichfield; and Boscawen Trevor Griffith, Esq., of Trevalyn Hall, Wrexham, to be Sheriff of Denbighshire, in the room of John Lloyd Wynne, Esq., of Coedcoch, Abergele. The Queen has appointed Sir James Phillips Kay-Shuttleworth, of Gawthorpe Hall, Bart., to be Sheriff of the County Palatine of Lancaster; and the Prince of Wales has appointed Day Perry Le Grice, of Trereife, Penzance, Esq., to be Sheriff of Cornwall for the year ensuing.

CONVOCATION OF YORK.—Both Houses of Convocation for the province of York met on the 23d ult. The Archbishop, as president, formally opened the proceedings, and stated the questions which had to be considered, one being a suggestion that the houses should sit together and hold their deliberations in common, which was afterwards agreed to. A series of resolutions, in reference to the disabilities of the Scottish Episcopal clergy, were agreed to. The report of a committee appointed to consider whether any alteration should take place in the Burial Service having been read, the two Houses proceeded to consider it, but were unable to come to any satisfactory understanding on the subject. In the Lower House a resolution against any alteration in the service was adopted by a large majority, but a similar resolution was rejected by two to one in the Upper House—the Bishops of Durham and Carlisle voting against the Archbishop.

GENERAL POST OFFICE.—Sir Rowland Hill has resigned his post as Secretary to the Post Office, on account of his continued ill health.

THE CHANNEL FLEET left the Tagus on Saturday for Portland.

Foreign.

FRANCE.—The *Moniteur* of Thursday publishes a Ministerial report and a decree appointing a committee for the organisation of a scientific expedition to Mexico. The Cherbourg papers assert that the Minister of Marine has sent orders for filling up the crews of the iron-clad vessels before the 15th of March, and the arming of those vessels within the shortest possible time. The *France* of Tuesday says that this statement is entirely incorrect, and that several of the iron-clads are in dock. The *Constitutionnel*, in an article signed by M. Limayrac, says that France could not accept the proposition for a Conference, which has not yet been made to her. It also points out, in another article, the difference between the attitude and interests of Prussia and Austria in the Dano-German question. *La France* says that the consent of Denmark and the German Diet is daily becoming less probable. The *Constitutionnel*, in quoting these words, adds:—

"France will offer no obstacles. Though deeply regretting that England should have to encounter so many difficulties, and rejoiced as we should be to assist her in overcoming them, yet we cannot give way to false hopes. Truth is, after all, the best policy."

The *Mémorial Diplomatique* of Sunday, in an article referring to the Conference on the Dano-German question, says:—

"Count Rechberg proposes the following combination:—The German portion of Schleswig should, with Holstein, be incorporated with the German Confederation, having only a personal union with Denmark, while the Danish portion of Schleswig should be incorporated with the Danish monarchy. The districts where the inhabitants are mixed should be called upon to elect whether they prefer entering the German Confederation or being annexed with Denmark."

The same journal states that the Italian Government had offered England and Sweden the co-operation of its army and its fleet in the event of these Powers making up their mind to assist Denmark; and that the offer was refused with thanks. The *Charivari* has a caricature of John Bull in convulsions of grief by the side of the British lion, crouching like a cur, with a tin kettle, labelled "Schleswig-Holstein," fastened to his tail. Mr. Bull is exclaiming that the poor lion is "*bien malade*." The visit of the Archduke Maximilian to Paris has been delayed by a severe attack of influenza caught by his Imperial Highness on his journey to Brussels. He is expected to arrive in Paris in the course of a few days, accompanied by the Archduchess, but it is doubtful whether his intended visit to London to be present at the christening of the infant Prince will be carried out, the importance of the affairs to be discussed with the Emperor, and the necessity of starting for Mexico before the setting in of the unhealthy season, scarcely leaving sufficient time for an excursion to England. Marshal M'Mahon will have the command of the camp at Châlons this year. A few days ago the papers published a letter from Cardinal de Bonald, Archbishop of Lyons, giving an account of the Pope's reception of a deputation of *curés* of his diocese who had some request to prefer regarding their liturgy. In the course of his reply the Pope is reported by the Cardinal to have said that he was profoundly afflicted on reading in the newspapers that the civil authorities had been applied to to alter their breviary; and that the Minister had written to the Ambassador, "as if the civil authorities had any concern in the matter." The *Moniteur* says that "these terms" appeared to the Government very extraordinary, and that the Ambassador had been instructed to inform Cardinal Antonelli that they had excited in the Imperial Government a feeling of painful astonishment. The following was the reply of his Eminence:

"His Holiness was astonished when he saw Cardinal de Bonald's letter in print; he considered its publication deplorable—that an indiscretion which did not even respect what took place within the four walls of the Pontiff's Cabinet was calculated to deprive him of all freedom of mind in conversing with the faithful, and that, moreover, his Holiness had requested the Cardinal Secretary of State to convey to Cardinal de Bonald the expression of his dissatisfaction."

The trial of Greco, Imperatori, Trabuco, and Scaglioni, the four Italians arrested about six weeks ago on the charge of conspiring against the Emperor's life, commenced on Thursday week. The court was filled to overflowing, although no admission could be obtained except by ticket. The "*acte d'accusation*" described with great minuteness the movements of the prisoners, who had been watched by the secret police day and night, from the time of their arrival in Paris down to their arrest; and also strongly dwelt on the facts which were considered to establish the complicity of Mazzini. The prisoners were examined by the judge at great length, and admitted their guilt. Greco confessed that he had been engaged in the conspiracy by Mazzini, and the letters found upon him were sworn to be in Mazzini's handwriting. The other prisoners said that they had been induced by Greco to join in the plot. The hand grenades and other instruments with which they were provided, were proved to be of the most deadly character. The trial terminated on Friday evening in a verdict of Guilty against all the conspirators. Greco and Trabuco were sentenced to transportation; Imperatori and Scaglioni to 20 years' imprisonment each. The Procureur Imperial in the course of his concluding address to the jury said that when Greco was in want of money he was ordered to write to M. Flowers, 35, Thurloe Square, London, and on looking in the London Directory he recognised with great pain, as living at that residence, the name of a member of Parliament, who had in 1857 been appointed by Mazzini to be the banker of the Tebaldi conspiracy against the Emperor's life. (The member referred to is Mr. Stansfeld, member for Halifax, and Junior Lord of the Admiralty.) In the Senate on Saturday, during a discussion on a petition against "vivisection," reference was made to the proceedings of the London Society for the Protection of Animals. M. Le Verrier, the astronomer, moved the order of the day, and said that he was tired of always hearing people praise England and English institutions, and that he was still more so when London Societies permitted themselves to give Frenchmen lessons on humanity. "I remind England," continued M. Le Verrier, "of a situation much more grave, and which would be sought for in vain elsewhere. It is only there (in England) that members of Parliament are found who can be accused, documents in hand, of hiring assassins." The Marquis de Boissy thought there was no reason for rejecting a measure, if it were good, though it came from England. He agreed that, in general, what came from that country was bad; and though it was the refuge of assassins, "who were kept as ferrets are kept in a cask by sportsmen for the chase," if by chance a sensible proposal came from London, he thought they should not reject it on that ground. M. de Verrier's motion was then adopted. M. Pietri, Senator and former Prefect of Police, one of the most zealous supporters of the Empire, died in Paris on Sunday afternoon; he was born in Corsica in 1810. The Federal war steamer Kearsage is at anchor off Boulogne, and has taken a supply of coals on board. The fact of the Confederate vessel Rappahannock, now lying at Calais, being nearly ready for sea, will probably explain the Kearsage's presence in these waters. M. Coquerel, jun., the Protestant clergyman of the French Church, has been deposed from his office on the charge of heresy by the Presbyteral Council. This removal has excited deep regret, not only among persons of his own persuasion, but among his friends of every belief. The interest excited by Prince Napoleon's speech at the Suez Canal banquet, which we noticed in a previous Number, has not yet subsided. It has now been published at length in the daily papers, of which it fills about ten columns, and the delay in its publication is accounted for by a report that it was submitted to the Emperor before its appearance in print. The following extracts contain the Prince's remarks on England:—

"The opponents of the Canal rely on England. Well, let us speak about England, though the subject be a delicate one, and by no means agreeable to touch upon—but I think that, with great prudence and frankness, I may succeed in conveying my meaning. In the first place, and I say so though my frankness may be objectionable to some few amongst the present company, I do not intend to say a single word against the English nation, and I always make a great difference between that great country and its Government. There is something in that country which has attractions for me. Yes! there is a mirage on the other side of the Channel that greatly fascinates me—the mirage of liberty, to which I am so deeply attached. Yes! it is the mirage of liberty. I love liberty, among all those who enjoy it. But by the side of the English nation and of public opinion in England I find the British Government. Do not let us be too severe, gentlemen, even for the British Government. It is unfavourable to your undertaking. I will not say that I think it quite natural that it should be so; I do not approve, but I can understand it. The British Government does not attack you openly. It likes in this case to use indirect means. Never fear an opposition from it. It has never put forth a diplomatic note against you. It has always put the Porte forward. *Mon Dieu!* I think it was quite right in doing so. But there is an explanation to be found for the policy of England. That explanation, do you know where I find it? It is not in the blue book, but in the 'Peerage,' which as you know, tells us the ages of all the lords in England. When you open the 'Peerage' and see that the lords in power are 70, 75, 80 years old, you can easily understand that with their old experience their hearts should be rather cold—you can understand how calm their feelings are for the most generous causes. You can understand how it happens that England should announce she will not give a man or a shilling for the greatest and justest of causes, for Italy or for Poland! Do not believe, however, that that Government will go as far as the *ultima ratio* to oppose a perfectly just cause. Do not imagine that England will fight against the Isthmus of Suez! *Allons donc!* The British Government, which has abandoned rights founded on treaties and history; the British Government, which may one day feel remorse at having deserted the two great causes I have just mentioned; the British Government, which has abandoned Poland, would go to war about the Isthmus of Suez! Absurd! Shall I tell you what I think? If it dared to do so (and it will never dare), we should not have to fight against it, but it would have to protect itself against the English people. It would succumb beneath its burden of contempt. The supposition is not serious. You have right on your side. As for that bugbear of England, do not trouble yourselves about it. I defy the Government of that great country to involve it in serious hostilities against the Suez Canal."

The French Academy of Moral and Political Sciences have elected Mr. Grote, of London, as a foreign associate, in the room of the late Lord Macaulay; and Mr. Edwin Chadwick, of London, as corresponding member, in the room of the late Archbishop Whately. The great Cuvier prize, founded in honour of the illustrious naturalist, and triennially given by the French Institute, was recently awarded to Sir Roderick Murchison, author of "The Silurian System of Rocks." M. Guizot has read to the French Academy an interesting fragment from the volume of his "Memoirs," which is to be published shortly. This extract contains an account of M. Guizot's entry into the Ministry in 1840, and a relation of the conveyance of the remains of the Emperor Napoleon I. to Paris. M. Guizot, in referring to the profound security which Louis Philippe appeared to enjoy at that period, admits the imprudent confidence which governments often place in themselves. Telegrams received in Paris announce that enormous quantities of snow have fallen in the departments of Herault, Aude, Ardèche, Rhone, and Drôme, and that the railway traffic is interrupted in consequence.

PORTUGAL.—It is stated that Senhor Antonio José d'Avila, lately elevated to the peerage under the title of Count d'Avila, will be sent to Paris as Minister Plenipotentiary, the Viscount de Paiva being transferred to Madrid. Senhor Soveral, the Minister at Madrid, is to remain for the present out of office. It is also added that the Duke de Saldanha, at present Ambassador at Rome, will be transferred to London. Senhor Carlos Ramiro Continho has been created Baron de Barcellinhos. It is said that other nominations are about to be made. The *Diario* publishes the decree giving the concession to the Portugal Iron and Coal Company.

SPAIN.—Señor Mon and the Marquis of Novaliches have been charged by the Queen to form a new Ministry, the members of which are all to be chosen from the Liberal and Conservative fractions of the Cortes. The following is a list of the new Cabinet:—Señor Mon, President of the Council without portfolio; Señor Pacheco, Minister of State; Señor Mayans, Minister of Justice; Señor Marahesi, Minister of War; Señor Salaverria, Minister of Finance; Señor Canovas, Minister of Interior; Señor Pareja, Minister of Marine; Señor Ballesteros, Minister of Public Works; Señor Ulloa, Minister of Colonies. The Cabinet will have the support of Marshal O'Donnell and other principal personages belonging to the different parties in both Chambers. In the sitting of the Cortes on Thursday Senor Mon declared that he would govern with the co-operation of the Cortes, settle the constitutional question, and abolish the measures introduced in 1858.

SWEDEN.—*La France* asserts that several Swedish Ministers, on hearing of the entry of the Prussians into Jutland, demanded that a Swedish squadron should be sent to Gothenburg in the event of the Austro-Prussian army occupying Fredericia. Count Hamilton, the Swedish Ambassador at Copenhagen, has asked to be recalled. His request has been complied with by his Government, and Count Bjoerstjerna, who was formerly Minister at Constantinople, is to be appointed his successor. The appointment of a new Minister of War is expected. A large popular meeting is to take place at Stockholm to-morrow in favour of an alliance with Denmark. Numbers of Swedish volunteers for the Danish army have left Stockholm for Copenhagen. Most of them are immediately despatched to the quarters on the island of Alsen, and as many of them have before served in the Swedish army they at once enter the ranks, either as privates or non-commissioned officers.

DENMARK.—An Address to the King was adopted

on Friday night almost unanimously by both Houses of the Rigsdag. It concludes as follows:—

"Our consolation in this most serious time is that the King will uphold our liberty and independence, and not allow Denmark to be weakened by dissolving our union with Schleswig. The people reckon on the declaration of the Government that the war should be energetically prosecuted, and they trust that the King will convince the nations of Europe that the Danes are willing to make any sacrifice to preserve their nationality and their right to govern themselves."

The Address was presented to the King on Saturday. His Majesty desired the presence of all the members on that occasion. In reply to the Address his Majesty said:—

"I thank you for the expression of your fidelity. Relying upon you and upon the loyalty of the Danish people, I shall firmly adhere to my policy, and hold out to the utmost of my power. I shall make every effort to obtain such conditions of peace as may be beneficial to Denmark. I will admit of no abolition of the existing political connection between the Kingdom and Schleswig. I wish to be a free King over a free people. A King is only free when his country is independent and when the constitutional condition is maintained and developed. God grant that at my death this epitaph may deservedly be inscribed upon my tomb,—'A truer heart never beat for Denmark.'"

The *Berlingske Tidende* of Monday semi-officially contradicts the announcement that Denmark has accepted the proposal for a Conference, and says that if the basis of a Conference should be a political union between Schleswig and Holstein, or a personal union of the Duchies with Denmark, the Government will not accept the proposal. The *Dagbladet* of Sunday publishes an article in which it says:—

"The English Government opposes by empty demonstrations the violent acts of Germany. It accepts the sophisms of Germany in order to avoid war. A Conference on the basis of a personal union between Denmark and Schleswig and Holstein would be the destruction of Denmark's freedom and independence. Under such circumstances, the integrity of Denmark is worthless. The Danish people must before all look for deliverance from their own exertions, and prosecute the war with the greatest energy. The fall of Denmark must be bought with blood. Diplomatic strokes of the pen shall not wipe out a nation of a thousand years' standing."

General Gerlach has been intrusted with the command-in-chief of the army, in place of General de Meza, who has been definitively dismissed. Major Stjernholm has been appointed chief of his Staff.

The Danish Duchies.—Kolding has been rendered defensible by the vanguard of the combined division of the infantry of the Guard, and the Prussian outposts have been placed in a more northerly direction. Prince Frederick Charles has arrived at Field Marshal von Wrangel's head-quarters. A decision was expected from Berlin on Monday whether the troops are to be quartered in scattered cantonments, upon Denmark giving a guarantee to respect the frontier, or whether they will be marched forward into Jutland. On the 29th ult. a squadron of Danish Dragoons encountered two squadrons of the Prussian Hussars between Varde and Fredericia. The Danish loss in the engagement amounted to nine men wounded and missing. The Danes captured one officer, a surgeon, and 28 Hussars. On the 1st inst. the Danes burned down all the farms on the line of their outposts. On the following day the allies made a reconnaissance towards Düppel. The Military Attaché of the French Embassy at Berlin has arrived at the Prussian head-quarters. Danish troops have been brought by a Danish steamer from Seeland to Fehmern. A Danish gunboat is stationed in Fehmern Sound, which enables the Danes to take up a similar flank position towards Holstein as they occupy upon Alsen towards Schleswig. Hanoverian sappers have been ordered to proceed from Rendsburg to erect batteries at Gluckstadt, there being reason to suppose that the Niels Juel will blockade the Elbe. Neustadt, in Holstein, is now blockaded. The making of uniforms for the proposed Schleswig-Holstein army was stopped on Monday, but on whose authority is not known. The working establishment has been removed from Kiel and transferred to some other place. On Friday Duke Frederick of Augustenburg received an address presented by a deputation from all parts of Schleswig. The Address stated that the people of Schleswig would accept no other Prince as their Sovereign than the Duke. In reply the Prince declared his intention of never surrendering his rights. The deputation consisted of 1600 members, some of whom were elected (on the principle of one member representing about 400 inhabitants of the province), while the rest had joined voluntarily. The *Flensburger Zeitung* publishes its Copenhagen news under the head of "Foreign Intelligence."

Oldenburg.—A treaty was signed on the 15th ult. between Prussia and Oldenburg, granting to Prussia the right of forming new commercial and military establishments in the Bay of Jahde. This treaty, which has long been opposed by the Duke of Oldenburg, is regarded as a sign of new combinations of great importance.

Hesse Darmstadt.—In the sitting of the Lower House on the 14th ult., the Government was called upon to press for the settlement in the Federal Diet of the Schleswig-Holstein succession question, which had been unaccountably delayed. It was also demanded that the Government should in any case at once recognise Duke Frederick of Augustenburg on its own behalf, and, in concert with the other Governments faithful to the Confederation, maintain the rights of the Diet and those of the Duchies and their Prince even by the adoption of extreme measures. The Chamber further desired that the Federal force occupying Holstein should be increased, and that the Diet should send troops to occupy Schleswig in common with the two great German Powers.

Wurtemberg.—In the sitting of the Second Chamber on Saturday the Minister, Herr von Hügel, said:—

"According to the most reliable intelligence a speedy termination of the war in Schleswig is not to be expected. Denmark is firmly resolved to oppose the most determined resistance to the claims both of Austria and Prussia and the Federal Diet."

Herr Hölder proposed:—

"That every facility be offered to the Government to enable it by the strongest measures, and especially by a union of the middle States, to bring the national cause to a successful issue." He also proposed that the discussion of the extraordinary military credit of 680,000 florins be postponed until the middle States really determine to take active proceedings.

The military credit was granted by a majority of 65 to 15.

Frankfort.—The Austro-Prussian proposition, that the command-in-chief of the army in Holstein should be transferred to Prussia, and that two new Civil Commissioners should be appointed by the two great German Powers, was put to the vote in the sitting of the Federal Diet on Thursday. Six votes only were given in its favour. Three votes, among which was Bavaria, proposed counter propositions, and seven were in favour of the proposition being referred to a committee. The latter course was adopted by the Diet.

Prussia.—The semi-official *Nord-Deutsche Allgemeine Zeitung* says:—

"The despatch of England inviting Prussia to a Conference was dated the 20th of January. The Prussian Cabinet replied in a Note dated the 31st ult., not rejecting in principle the propositions of England, but stipulating, as a preliminary condition to sending a representative to the Conference, the complete evacuation of Schleswig by the Danes."

The same journal of Monday says that there is a complete understanding between the two great German Powers on the Danish question, and that the Emperor of Austria has expressed to General Manteuffel his approval of the policy of Prussia, and his satisfaction that the friendly relations between the Cabinets of Vienna and Berlin are so fully re-established. It adds:—

"This understanding guarantees the energetic continuation of the policy which the two great Powers consider it right to pursue towards Denmark. It is, therefore, of minor importance whether the Conference takes place or not."

The *Cross Journal* publishes some remarks on the attitude of the French Cabinet, which it believes to be less peaceable and unbiassed than it was a short time ago. Observing the sudden change in the French press, which has occurred as by word of command, it expresses an opinion that it is necessary for Prussia to be on her guard:—

"The French papers speak of a pretended obscurity as to the aim of the war; of a survey of Kiel harbour and of the works of fortification there carried on; of ambitious tendencies of Prussia with respect to the German States, and of the traditional policy of France with respect to German freedom! At the same time Austria is manifestly spared and Prussia attacked. Whoever is acquainted with the circumstances of the French press knows what these indications mean; also at the French Court a disposition is said to have been lately shown to distinguish the Austrian Ambassador and treat the Prussian coolly."

Austria.—The Emperor received the popular deputation from Schleswig on Sunday. His Majesty, in reply to their Address, said:—

"I rejoice with you at the successes attained by the valour of the allied armies, whereby an end has been put to your and your compatriots' sufferings. The greatness of the sacrifices made in the interest of your cause affords you a fresh guarantee that not merely passing alleviation, but also lasting satisfaction, will be given to the just claims of your country. Providence has imposed duties upon me which I cannot permit desires threatening the general peace to override. I confidently hope that an honourable and assured future may be attained, in every way corresponding to the principles of right and the conditions of your welfare."

Galicia.—A telegram from Cracow, dated on Monday, states that Galicia and Cracow have been placed in a state of siege, and the laws for the protection of personal liberty and inviolability of domicile have been suspended. The reasons assigned for this measure are the existence of treasonable societies within the Austrian frontier, and the enlistments made for and assistance given to the Polish insurrection. An ordinance issued by the Governor on Monday orders all persons not entitled to wear arms to deliver them, together with all ammunition, to the public authorities within a fortnight, under penalty of fine or imprisonment. All persons not belonging to Cracow are ordered to obtain permission for their stay from the police within 48 hours.

Venetia.—A letter from Venice of the 25th ult., states that a proclamation from Kossuth is circulating among the Hungarians who form part of the Austrian army in Venetia. The ex-Dictator prays his countrymen to desert the Austrian flag, declaring that the Hungarians are about to be freed by an alliance with Italy. The proclamation adds that the King of Italy, who has merited the title of "gallant man" from his people, is preparing to lead his brave army against Austria, and that all Hungarians who desire the emancipation of their country from Austrian tyranny should rally round his flag. Kossuth tells them in conclusion, that there is a Hungarian Legion forming in Italy, and that is of pressing necessity to fill its ranks with devoted patriots. Some copies of this proclamation have fallen into the hands of the Austrian authorities, and are said to have spread so much alarm among them, that the Austrian Government has determined to increase the army corps in Venetia to 160,000 men. The semi-official *General Correspondenz* of Thursday, however, denies this statement, and positively declares that Austria has not the remotest intention of assuming the offensive.

The Adriatic.—The Austrian gunboat Vilenich has captured a Danish merchantman laden with coffee, and left her at the island of Cephalonia.

Italy.—In the Chamber of Deputies on the 25th ult., the Minister for Foreign Affairs, in reply to a question, said that Denmark had adhered to the maritime rights agreed upon by the Treaty of Paris. The Italtan Government had been informed that Denmark had blockaded the ports of Schleswig and Holstein. The Minister assured the Chamber that nothing would be neglected for the protection of Italian subjects. In the sitting of Saturday the Minister of Finance brought in a bill providing for 1,500,000 lire of the debt incurred by the Bourbon Government in the Neapolitan provinces.

Greece.—The Greek National Assembly has empowered the Finance Minister to issue credit bonds for 3,000,000 drachmas, which will have a forced currency. Riots have taken place in Athens, owing to the editor of one of the papers having been insulted by the son of Chamberlain Sontzo. The Chamberlain has been dismissed from his post as implicated in the affair. Instructions have been sent to the Greek Ambassador in London to procure a modification of the treaty for the cession of the Ionian Islands.

Poland.—Fifteen hundred insurgents, under the command of Bossak, having occupied the town at Opatow, in the government of Radom, were attacked on the morning of the 22d ult. by a considerable Russian force. The engagement lasted the whole day. The Poles, who had barricaded themselves in the houses, inflicted a heavy loss upon the Russians. The latter received considerable reinforcements towards the evening, when the Poles retreated in good order under cover of the night to the forest of St. Croix. 40 houses in the town were reduced to ashes.

China.—Sir Harry Parkes has arrived at Point de Galle, on his way to Shanghai. Major Gordon's forces are inactive. Major Gordon has published his account of the capitulation of Soochow, and of a gross act of perfidy subsequently committed by the Footai. It states that just before the capitulation the Chung Wong, who may be called the Taiping Commander-in-Chief, held a council of war at Soochow, at which all the Taiping chiefs (or Wongs) were present. He suggested that as it was useless to fight against the English, both Soochow and Nanking should be evacuated, and that they should retire to the fastnesses of Kwangsi. This all agreed to except the Mo Wong, who had charge of the defence of Soochow, and who was determined to defend the city to the death. The Chung Wong then withdrew with all his men, and the other Wongs, excepting the Mo Wong, made overtures of surrender, promising to deliver the Mo Wong a prisoner. At a council of war, however, they came to a different conclusion, and slew the Mo Wong on his presidential seat. They then made terms, which were distinctly understood and agreed to by the Footai, General Ching, and Major Gordon. These terms embraced a full pardon for the Taiping chiefs and their followers. The city being entered under this capitulation, the Footai decapitated all the Wongs and gave the city over to plunder, which, to a certain extent, was indiscriminate massacre. It is thought that the treachery of the Imperialists will make the Taipings desperate, and encourage them in their resistance.

Brazils.—A change of Ministry has taken place at Rio. Senhor Zacarias, President of the Chamber, has been intrusted with the formation of a new Cabinet, which is composed as follows:—Zacarias, President of the Council and Minister of Justice; Carvalho, Minister of War; José Bonifacio, Minister of Interior; Paco Barreto, Minister of Foreign Affairs; Dias Viera, Minister of Marine; José Mariano de Mattos, Minister of War; Domiciano Leito Ribeiro, Minister of Agriculture and Public Works.

San Domingo.—Advices from St. Domingo represent the insurgents to be much discouraged. Fresh reinforcements were constantly arriving, and great hopes were entertained of reducing the insurgents to subjection.

Japan.—Advices from Japan to the 7th January state that the Tycoon's Palace at Jeddo had been burnt. It was set on fire on Christmas day. A large portion of the town was destroyed by another fire on the 1st January.

United States.—General Meade left Washington on the 15th ult. to resume the permanent command of the army of the Potomac. It is said that all idea of change during the campaign has been abandoned. It is feared at Washington that General Lee meditates another movement against that city and Pennsylvania. Refugees assert that the Confederates in Western Virginia threaten a raid into Ohio. After slight skirmishing, General Sherman occupied Jackson, Mississippi, on the 5th, and has since advanced beyond Meridian, between Bishop Polk's army and Montgomery and Marietta, and destroyed the bridges on the Mobile and Ohio railroad, severing the connection between Polk's forces. A severe engagement occurred on the 13th at Enterprise, the result of which is unknown. The Federal cavalry has defeated the Confederates between Jackson and Meridian. Johnston has concentrated his forces at Dalton, and advanced his pickets to

Ringold. The Confederates have been twice repulsed in an attack upon the Federals opposite Natchez. Polk, however, is believed to have received reinforcements from Dalton. General Longstreet is reported to be retreating beyond Frenchbroad River. The Governor of Georgia has ordered the citizens to move with their property to the east side of Chattahonga River. General Gilmore has returned from Florida to Port Royal. The Florida expedition was successful. The Federals advanced into the interior, capturing 8 guns, 100 prisoners, and a large amount of cotton property. General Banks, in an order dated the 3d ult., re-establishes a system of compulsory negro labour in Louisiana, under specified conditions. He also declares that in the approaching State elections all persons in his department must vote for the Union candidates; that indifference will be treated as crime, and faction as treason. President Davis has issued an address to the army thanking the troops for their alacrity. He said that "The spring campaign opens under auspices well calculated to sustain their hopes. Assured success awaits their struggle for liberty and independence, and for the preservation of all that renders life desirable to honourable men." President Davis has signed a bill prohibiting the export of tobacco, rice, sugar, and molasses, except by special permit; also a bill prohibiting the import of luxuries after the present month, and fixing the maximum price at which articles of silk, wool, flax, and cotton may be imported. 110 Federal officers who had escaped from Richmond Prison have arrived at Fort Monroe. The House of Representatives had passed, by a majority of 21, a resolution favouring an amendment to the constitution by abolishing slavery wherever it now exists in the United States, and prohibiting its extension in any part thereof for ever. The *New York Herald* asserts that President Lincoln will issue a proclamation of universal emancipation, including the Border States, on the 22d inst. The Supreme Court has decided against Mr. Vallandigham's application to annul the sentence passed upon him by the military court. Several Republican members of Congress have denounced President Lincoln's policy of establishing State Governments under the amnesty proclamation as illegal. The committee of ways and means has reported against the bill authorising the Secretary of the Treasury to sell gold, provided he retains a sufficient amount to pay the interest of the public debt. The steam-blockade runners Nutfield, Spunkie, Dee, Fanny and Jennie, Wild Dayrell, and Denbigh, have been run ashore and destroyed, and the City of Petersburg, Emily, and Cumberland, have been captured off Wilmington. A brig, with 700 slaves on board, was captured on the 9th off North Side, Cuba. It is reported that the Federal Government has received information that Confederate vessels have left Asia for the Pacific. An attack on San Francisco is feared. President Lincoln has declared Brownsville, Texas, open to trade; the entry of spirits and articles contraband of war are forbidden. American consuls will grant licences to foreign vessels for Brownsville.

MEXICO.—Advices from Vera Cruz to the 1st of February state that the insurrection in favour of French intervention had triumphed at all points in Yucatan, and General Bazaine was returning to the city of Mexico. The adherents of Juarez had almost everywhere been dispersed. Campeachy has capitulated, and the ruin of the Juarez party, which had its last resource in that city, has been the consequence. Letters from Matamoras give accounts of another revolution in that city on the 13th of January, which had placed Cortinas in power. Ruiz and his followers fled to Texas. During the contest the Federal General Herron, at Brownsville, sent three regiments of soldiers and a battery of artillery to Matamoras to protect American citizens there.

HAWAII.—The King of Hawaii, who had been in ill health for some months, died unexpectedly from the exhaustion produced by diarrhœa on November 30. He was the mainstay of the English mission, which went out a year ago at his request, and which he regarded as the great means of their regeneration. Prince Lot Kamehameha, the brother of the late King, has succeeded under the title of Kamehameha V. He has confirmed the Prime Minister, Mr. Wylhe, in his office, and given assurances to the bishop of his support of the mission.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*The Crawley Court Martial.*—Lord COLVILLE called attention to the proceedings of the Deputy Judge-Advocate at the late court martial, and complained that he had not only prepared the articles of the prosecution, but had acted as legal adviser to the prosecutor, and drawn up the reply to the defence.—Earl DE GREY and RIPON said that the proceedings were conducted in accordance with precedent, and that both Mr. Denison and Sir A. Horsford had discharged a painful and difficult duty in an honourable and impartial manner. In 1860 the Judge Advocate-General advised a change of the system, and the question was now under the consideration of the Government whether the practice might not be improved.—The Duke of CAMBRIDGE said that officially the Deputy Judge-Advocate was counsel to the military prosecutor, and he thought that the trial had been fairly and ably conducted. He took the opportunity of disclaiming any intention of reflecting upon Sir Hugh Rose or Sir William Mansfield, and expressed his regret that they should have put any other construction upon his orders.—Lord CHELMSFORD was of opinion that an assessor who ought to have been perfectly impartial had been converted into a vehement prosecutor.—The Earl of LONGFORD thought that Colonel Crawley was entitled to generous sympathy for the obloquy which had been cast upon him.—The Earl of SHAFTESBURY did not regret the course he had taken in insisting on the trial, especially as the result had been so satisfactory, and the humblest soldier must now feel that any wrong done to him would be rigidly inquired into. *West Hartlepool Railway.*—In answer to the Earl of DONOUGHMORE, the LORD CHANCELLOR said that the Attorney-General was of opinion that, under all the circumstances of the case against the late directors of the West Hartlepool Railway Company, no conviction could be expected on a trial, and as the parties had in some respects condoned the offence by the compromise of last session, he had not thought it advisable to institute a Government prosecution.

MONDAY.—*Sale of Benefices Act.*—The Earl of DERBY called the attention of the Lord Chancellor to a short statement in reference to the Sale of Benefices Act, in order to counteract an erroneous impression on the subject which appeared to prevail out of doors. A portion of the money realised from the sale of small benefices was, he understood, paid over to the Ecclesiastical Commissioners, and there was an impression that the commissioners could dispose of it as they pleased. This, however, was not the fact, as they were required to apply the whole of it to the augmentation of the livings sold under the Act, and could not apply it to the augmentation of small benefices generally.—The LORD CHANCELLOR said that Lord Derby had correctly stated the facts with regard to the provisions of the Act. The Ecclesiastical Commissioners were merely trustees for the money paid into their hands. *The Paris Conspiracy.*—The Marquis of WESTMEATH called attention to the case of the four prisoners charged with an intention to assassinate the Emperor of the French, and inquired whether, if the Government were morally convinced that Mazzini or any other person in this country had aided the conspirators in that detestable crime, they had such a power under the Alien Act as would enable them to deal with the matter.—Earl RUSSELL said that he was not justified in stating that Mazzini, or any other person living in this country, was guilty of the detestable crime of plotting against the life of the Emperor of the French. Knowing nothing whatever of the existence of any plot in this country, and having no such powers under the Alien Act as the noble marquis supposed, the only answer he could give him was that he had no intention of taking any steps in the matter.—Earl GRANVILLE laid upon the table the report of the Committee on *Metropolitan Railways*, and in doing so stated that all the recommendations contained in the document, save one, were unanimous. He also bore testimony to the satisfactory manner in which the Committee had co-operated to attain the object in view.—On the motion for the second reading of the *Insane Prisoners Bill*, Lord ST. LEONARDS referred to the case of Townley at some length, contending that he was perfectly sane when he committed the murder, and had never been otherwise.—Lord WODEHOUSE objected to the visiting justices being required to put the machinery of the Bill in action, and thought it would be better for the Secretary of State to issue a special commission to ascertain the condition of an insane criminal. The Bill was then read a second time.

TUESDAY.—*Federal Recruiting in Ireland.*—The Marquis of CLANRICARDE, in moving for copies of any papers that might have been received by the Government relative to recruiting in Ireland for the army of the Federal States, inquired whether any remonstrance against such a proceeding had been addressed to the authorities at Washington. It was, he said, notorious that American agents had been enlisting recruits in Ireland, and as it was in violation of the principle of neutrality and a breach of international law, he urged that it was the duty of the Government to put a stop to it.—Earl RUSSELL said he had no doubt that any attempt on the part of the Federals to enlist recruits for their army in Ireland would be a breach of the principle of neutrality, and that it was an offence against our own municipal laws, which, if detected, would subject the offender to punishment, and justify strong complaints to the Government of the United States. On more than one occasion he had already complained that such practices were going on on behalf of the Federal Government in Ireland, and he had opened a correspondence with the United States Minister on the subject. Mr. Adams had, however, indignantly denied the truth of such allegations; and having received that denial, he felt obliged to wait until some case occurred in which proof was forthcoming.—The Earl of DONOUGHMORE said that the conduct of the Foreign Office in this matter contrasted most unfavourably with the course they had adopted in reference to the steam rams.—*The Fenian Brotherhood.*—The Earl of DERBY inquired whether the Government had received any information from the authorities at Cork and Dublin that persons were in the habit of assembling in those places for the purpose of going through military drill and exercise; and if so, whether they had taken any measures to put down such illegal proceedings.—Earl GRANVILLE replied that the Dublin authorities had directed the attention of the police to the proceedings of the Fenian Brotherhood, and there was reason to believe that it was a perfectly contemptible organisation. The motion for papers was then withdrawn.

THURSDAY.—The *Danish Question.*—The Earl of ELLENBOROUGH postponed till Monday the question he had placed on the paper on the Danish question. The *Chief Rents (Ireland) Bill* was read a second time.

FRIDAY.—*The Rolls' Court.*—The LORD CHANCELLOR brought in a Bill to amend a Bill passed in 1861 for appointing an additional chief clerk to the Master of the Rolls. The gentleman appointed by the Act of 1861 had been promoted, and it was necessary to appoint a successor. The Bill was read a first time. *Sir John Lawrence's Salary Bill* was read a first time.

HOUSE OF COMMONS.

FRIDAY.—*Taxation in Ireland.*—Colonel DUNNE called attention to the subject of taxation in Ireland, and moved for a select committee to consider how far it is in accordance with the provisions of the treaty of union or just in reference to the resources of the country. The motion was seconded by Mr. HENNESSY, and supported by Sir E. GROGAN and Mr. LONGFIELD.—After a short discussion, the CHANCELLOR of the EXCHEQUER said that the Government would not oppose an inquiry demanded by so many Irish members, but the committee would have to inquire not only into the taxation borne by Ireland, but into that from which she is exempt, the amount of which was considerable. The motion was then agreed to. The House went into committee on the *Malt for Cattle Bill*, the clauses of which were agreed to with amendments, a clause moved by Sir E. DERING, allowing persons engaged in agriculture to malt barley for the consumption of their own stock, without taking out a maltster's license, being, after a long discussion, withdrawn. The *Land Drainage (Provisional Orders) Bill* was read a second time. The *Conveyancers (Ireland) Bill* passed through committee; and the *Inclosure Bill* and the *County Court (Ireland) Bill* were read a second time. *Kertch Prize Money.*—Sir JOHN HAY moved for a return of the names of the flag officers to whom the Kertch grant had been distributed, with the proportions in which it was divided.—Lord CLARENCE PAGET consented to produce the papers, and said that the Duke of Somerset could not, with regard to precedent, have acted in any manner other than that which he had done. The return was ordered. The select committee on *Dockyards* was nominated.

MONDAY.—*The Duty on Malt.*—Mr. MORRITT gave notice that on Tuesday week he would move that the duty on malt ought to be reduced, and that the subject had an imperative claim on the attention of the Government. *The Paris Conspiracy.*—Mr. COX called attention to a statement made by the Procureur-Imperial in the late trial of the conspirators against the life of the Emperor of the French, from which it appeared that a letter written by Greco, one of the accused, to a M. Flowers was addressed to that person at a house in Thurloe Square, which was the private residence of Mr. Stansfeld, the member for Halifax. Some explanation was, he thought, due to the House in reference to this subject.—Mr. STANSFELD said he was surprised and indignant at the speech which had been delivered by the Procureur-Imperial, and by which it appeared that the Crown prosecutor of a friendly Power had insinuated that a member of the British Parliament, and a Minister of the Crown, could have any knowledge of, much less participation in, the atrocious crime with which the prisoners were charged. It was quite true that he lived at Number 34, Thurloe Square, but he knew nothing whatever of the prisoner Greco, or of the M. Flowers whose letters were addressed to his house. He had, however, been on intimate terms with M. Mazzini for 18 years, and he was persuaded that no man had ever been more cruelly or wrongfully maligned than he was. As regarded the allegation that Mazzini had incited to assassination, he was satisfied that no baser libel could be pronounced.—Mr. HENNESSY, Mr. BENTINCK, and Mr. Alderman ROSE asked for further information with reference to the friendly relations between Mr. Stansfeld and M. Mazzini, but Mr. STANSFELD declined to make any further statement. *The Danish Question.*—Mr. DISRAELI called attention to the position of the country in reference to the Dano-German question. He severely censured the conduct of Earl Russell at the Conference at Vienna in 1853, and argued that from the experience of the past, under circumstances of an analogous character, it was not to be expected that he would appear in a very favourable character in reference to the present question. So much inconsistency and contrariety was to be found in the policy of the noble lord, that the country was naturally anxious to know what was its real position with regard to the affairs of Europe. The papers on the table threw no light whatever on the engagements into which it was rumoured the Government had entered with Denmark, or with France. What did her Majesty's Government mean to do, for at present there was nothing to guide, enlighten, or animate the country. The Government appeared to be in the position of drivers who had lost the road—the reins had fallen from their hands and the horses were wild.—Lord PALMERSTON said that Mr. Disraeli never was so great, and, in his own opinion, so successful as when he had an opportunity of attacking an absent man. What had happened at Vienna in 1853 had redounded to the credit of Earl Russell, and did not furnish any material for the hostile criticisms passed upon it. Mr. Disraeli appeared to think that if he and his friends had been in office, instead of her Majesty's present advisers, things would be very different. This was perfectly true, for a state of war would probably have been substituted for the peace and prosperity which now prevailed throughout the country. Further papers in reference to the Danish question would be laid upon the table next day, and Mr. Disraeli might derive from them some information of a nature calculated to modify his hastily-conceived opinions. All he could say was that the object of the Government from first to last had been to conciliate differences, modify exasperations, and, if possible, bring about the peaceable settlement of a question which threatened to end in a European war.—Mr. S. FITZGERALD complained that Lord Palmerston, while professing to reply to Mr. Disraeli, had in fact refused to give the House that information which the right hon. gentleman had invited him to give, and which Parliament wished to ascertain. He denied that the Opposition wanted war. But they mistrusted a Government which had brought the country to the edge of war, and whose alternate bragging and subserviency had placed it in a position of unparalleled humiliation. *The Budget.*—The CHANCELLOR of the EXCHEQUER said that as the accounts of the financial year would not terminate until the 5th of April, it would be impossible to fix an earlier day for the budget than Thursday, the 7th of April. *Navy Estimates.*—The House then went into committee of supply and resumed the consideration of the navy estimates. The votes for 71,950 seamen and marines, and for their wages, victuals, and clothing, were agreed to after considerable discussion, involving the chief points in reference to naval administration which formed the topic of debate on Friday evening. On the motion that 168,605*l.* be granted to defray the salaries of the officers and contingent expenses of the Board of Admiralty, Mr. LINDSAY moved to reduce the vote by 5800*l.* the salaries of the five junior Lords, but after some discussion the proposition was negatived by 109 to 10. On the vote of 71,276*l.* for the scientific branch of the navy, Mr. A. SMITH moved to reduce the amount by 2300*l.* for the School of Naval Architecture. The amendment was negatived on a division by 100 to 15. Several other votes were agreed to, and the Chairman reported progress and obtained leave to sit again. The *Vestry Cess Abolition (Ireland) Bill* passed through committee with amendments.—Sir R. PEEL obtained leave to bring in a Bill to amend the law relating to *Bills of Exchange and Promissory Notes in Ireland.*

TUESDAY.—*Civil Service Estimates.*—Mr. MARSH moved a resolution, "That the Civil Service and Miscellaneous Estimates have been for many years rapidly increasing and ought to be reduced." He observed that between the years 1835 and 1863 the Estimates had acquired an augmentation of 5,412,000*l.*, a sum that would furnish the means of a very sensible reduction of the taxation of the country. He considered that the nation did not get a full equivalent for the increase, and that nothing but necessity would warrant it. He analysed the Estimates, and suggested instances in which that rule was not observed, as in the matter of compensations for loss of offices, and in some cases of superannuations. He objected to the large sum paid out of the Imperial Exchequer for the Irish police, and to the increasing expenditure for Science and Art, which in his opinion would thrive better without Government encouragement. Too much, he thought, was expended by the Government upon education, the vote having risen from 65,000*l.* in 1835 to 1,110,000*l.* in 1863. Under the present system, although the material condition of the people had been greatly ameliorated, their moral condition had not improved so much as it ought to have done. A needless expenditure too, he believed, was incurred for the suppression of the slave trade.—Mr. PEEL said he was not surprised at the desire of Mr. Marsh to see the amount of these Estimates reduced, and no doubt if his views could be carried out, the Civil Service Estimates might be very greatly reduced indeed. But he could not think that the House would adopt those views without considerable hesitation. Much of the increase in the Civil Service Estimates was more apparent than real, and so far from its being a matter of regret, it should be viewed with satisfaction, since it arose from the carrying out the principle of bringing as much as possible of the expenditure of the country under the eye of Parliament. He explained in detail the transfers of charge which had been made from other branches of the revenue accounts to the Civil Service Estimates, and other arrangements in the public accounts, which, while they relieved other heads of the expenditure, enhanced the apparent produce of the revenue, augmented the

Civil Service charges, showing, as he proceeded, the actual sum of each transfer, or that thrown by each new financial arrangement upon the Civil Service, the aggregate amount leaving only 600,000*l.* as the debateable increase of these Estimates, part of which arose from exceptional charges.—Mr. Torrens adverted to the heavy judicial charges at the Cape of Good Hope connected with the suppression of the slave trade.—After some remarks by Mr. Newdegate and Mr. W. Ewart, Mr. Marsh said he was satisfied with the discussion, and withdrew his motion.—Lord C. Paget obtained leave to bring in a Bill to amend the law relating to *Naval Prize*; a Bill to provide for agency and distribution of Naval Prize; and a Bill to repeal certain Naval Prize Acts.—The *Court of Judiciary (Scotland) Bill* was read a second time. The report of the *Committee of Supply* was brought up and agreed to. The *Malt for Cattle Bill* and the *Conveyancers, &c. (Ireland) Bill* were read a third time and passed.

Wednesday.—On the order for going into committee on the *Chain Cables and Anchors Bill*, moved by Mr. Laird, Mr. M. Gibson moved that the Bill be referred to a Select Committee.—Mr. Crawford seconded the motion. After some remarks by Mr Jackson, Mr. Laird assented, and, after a short conversation, the Bill was referred to a Select Committee.

Thursday. *Military Force.*—On the order for going into a Committee of Supply, Mr. Baillie called attention to the reduction of our military forces, contending that the army was not at the present time large enough to permit of the ordinary relief to troops serving abroad; and that its reduction impaired the influence of the country, which ought to be prepared for war, while it crippled the foreign policy of the Government.—Colonel Edwards moved a resolution that the discontinuance in the present year of the assembling of the Yeomanry Cavalry for the accustomed period of six days' training on permanent duty, would be detrimental to the efficiency of the force, and contrary to the recommendation of the Committee appointed by Lord Herbert in 1861, and is inexpedient. He complained of the injustice done to the gallant Yeomanry force of 14,000 men, and appealed to both sides of the House to support the resolution.—Sir M. W. Ridley seconded the motion, which was opposed by the Marquis of Hartington and supported by General Peel and Sir W. Miles.—Lord Palmerston said the Government were fully sensible of the value of the Yeomanry force, and the determination not to call them out this year did not imply any want of consideration for their services. He hoped the House would not forbid this saving of 46,000*l.* On a division the resolution was negatived by a single vote, the numbers being 158 to 157. *Police Espionage.*—Mr. Roebuck called attention to the report of the inspectors of constabulary, ordered to be printed on the 9th ult., stating that the police in the country were employed by the conductors of those modern nuisances styled private inquiry offices and trade protection societies, to investigate the private affairs of individuals. He asked if the Home Office had taken any steps to prevent this scandalous system of espionage.—Sir G. Grey said the practice was a most objectionable one, and he read the circular he had issued on the subject. *Admiralty Interference with Elections.*—Mr. Ferrand called attention to the presence of the present Controller of the Navy in the uniform of his rank, when Captain of the Steam Reserve, at the Devonport election in 1859, and to his having taken an active part in its proceedings. He also referred to what he considered the persecution of the late Mr A. Stafford, to a placard issued by Sir Baldwin Walker in 1859, and to other topics connected with election matters at Devonport, commenting at great length on those topics, and especially upon the appearance in uniform of Admiral Robinson at the election of 1859.—Sir J. Hay read a letter from Admiral Robinson stating that there was not a word of truth in the allegation.—Lord C. Paget, after giving explanations respecting promotions in the dockyards, defended Admiral Robinson and Sir B. Walker from the attacks of Mr. Ferrand, declaring that his charges were unfounded and slanderous, and he would rather believe the word of Sir Baldwin Walker than the oath of Mr. Ferrand.—Mr. Ferrand moved that the words "unfounded and slanderous" be taken down by the clerk of the table as unparliamentary.—At the suggestion of Sir J. Pakington, however, Lord C. Paget withdrew the obnoxious words, and the discussion was continued.—After some remarks by Sir A. Buller, Sir J. Pakington, Lord J. Manners, and Mr. Osborne, the subject dropped. *Army Estimates.*—The House having at length gone into Committee, the Marquis of Hartington moved that a number of land forces, not exceeding 146,766 (including 9347 of all ranks to be employed in the United Kingdom with the depôts of regiments serving in India, but exclusive of the numbers actually serving within her Majesty's Indian possessions), be maintained during the year ending the 31st of March, 1865. He observed that the estimate professed to be a peace estimate, and was not framed upon the expectation of any immediate prospect of the country going to war. The Government had therefore felt themselves at liberty to reduce the force where it was possible without impairing its efficiency, or the power of increasing its numbers if necessary; and he was happy to say that that reduction had been accomplished, not by diminishing the battalions of infantry or diminishing the infantry force at all, for, on the contrary, that branch of the service would be increased by 1000 men. The number of battalions at home would be 41; in the colonies 45; and in India, 55. At present there were only 34 battalions at home, but four more were on their way from the Ionian Islands, and three from India. He detailed at some length the steps which had been taken to improve the condition of the soldier, and to make the service generally as efficient as possible, regard being had to the judicious distribution of the army, and the economical administration of the department.—General Peel criticised the estimates, and after some remarks by Mr. Bentinck, Mr. Williams, Colonel Sykes, Colonel North, Mr. Childers, and other members, the vote for the number of men for the service of the year was agreed to. The House having resumed, *Sir John Lawrence's Salary Bill* was read a third time and passed. The *Bills of Exchange (Ireland) Bill* was read a second time.

Friday.—*Captain Speke's Discoveries.*—In answer to Sir W. Mills, Lord Palmerston said that her Majesty's Government while doing every justice to Captain Speke, did not think that he had accomplished more than other successful travellers, so as to warrant the Government in conferring on him any special mark of favour. *Railways.*—In answer to Mr. Hassard, Mr. M. Gibson said that he should next week call the attention of the House to the report of the joint Committee, and move that certain Railway Bills should not be proceeded with during the present session. *Public Business.*—In answer to Sir J. Pakington, the Chancellor of the Exchequer said that he proposed to take the contested part of the *Annuities Bill* on Monday. *China.*—Colonel Sykes rose to move a resolution on China.

[Left sitting.]

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 91 to 91¼ for Money, and 91⅛ to ¼ for Account; Three per Cents. Reduced, 89¼ to ⅜; New Three per Cents., 89¼ to ⅜; Five per Cent. Enfaced Rupee Paper, 106; Ditto Five and a Half per Cents., 113½ to 115; Exchequer Bills, 5*s.* dis.—Foreign: Brazilian, 1863, 86¾; Ditto Scrip, ¾ dis.; Chilian Four and a Half per Cents., 84; Egyptian, 99⅜ to 100, ex div.; Greek, for Acct., 22¾; Italian, 65⅛; Ditto for Acct., 66 to ½; Ditto Maremmana Railway, 73 to ⅛; Mexican, for Acct., 43¼ to ½; Portuguese, 1853, 47⅜; Russian, 1850, 87½; Ditto 1862, 88¾; Sardinian, for Acct., 83; Spanish New Deferred, for Acct., 46; Ditto Passive, for Acct., 35⅛ to 35¼; Ditto Certificates, for Acct., 13⅛; Turkish, 1862, 69; Ditto, 100*l.* Bonds., 69⅛; Ditto Guaranteed, 101; Venezuela, 1862, for Acct., 59⅜.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,914,365	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	13,264,365
		Silver Bullion	—
	£27,914,365		£27,914,365

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£11,174,581
Rest	3,778,873	Other Securities	20,708,852
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,993,633	Notes	7,570,965
Other Deposits	13,841,278	Gold and Silver Coin ..	769,857
Seven days and other bills	557,474		
	£40,324,258		£40,324,258

March 3, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY, *Feb.* 26.—BANKRUPTS.—T. Abell and R. T. Smith, Battersea Square, Battersea, Coal Merchants—J. Allen, Whitchurch, Shropshire, Draper—B. Blundell, late of York Road, Lambeth—W. H. Beare, Holdenhurst, Southampton, Professor of Music—R. Bench, Birmingham, Baker—W. Blagg, Wharton, Cheshire, Grocer—J. Busmer, Radnor Street, Chelsea, Baker—J. Baldwin, Bethnal Green Road, Stone Mason—C. P. Butterfield, Brentwood, Essex, Butcher—R. Branwood, Platt Bridge, Lancashire, Publican—E. Baker, Montpelier Place, Brompton, Journeyman Milkman—J. Birdsall, late of Castleford, Yorkshire, Basket Maker—R. Burgess, late of Jamaica Road, Bermondsey, Fringe Manufacturer—W. Brown, Sheffield, Beer House Keeper—J. Bryson, Canterbury, Kent, Pork Butcher—W. Brown, Upper Hyde Park Gardens, Butler—W. A. Bowditch, late Frederick Street, Regent's Park, Grocer—W. H. Bill, Wolverhampton, Commission Agent—G. B. Boosey, Camberwell Green, part Proprietor of Turkish Baths—G. W. Brooks, Lower Whitecross Street, City, Iron and Brass Founder—J. Bowles, Wilson Street, Long Acre, Harness Maker—W. Courtness, Brighton, late Licensed Victualler—J. Caine, Manchester, Joiner and Builder—R. Carter, Nottingham, Bricklayer—D. Corfield, Thrawl Street, Spitalfields, Manufacturing Chemist—F. T. Cowley, Lower Thames Street, City, Merchant—C. R. Crouch, Prince of Wales' Crescent, Kentish Town, Clerk to an Attorney—J. Cross, Bristol, Timber Dealer—E. Cowin, late of Lower Broughton, Lancashire, Joiner—G. Durrell, Romford, Grocer—J. Dawson, Maidstone, Kent, Boot and Shoemaker—C. Eaton, jun., Halliford Street, Islington, Leather Dealer—W. Ellis, Selby, Yorkshire, late Innkeeper—E. Edwards, Liverpool, Ironfounder—J. Ford, Swansea, Glamorganshire, Licensed Victualler—W. A. Freston, Priory Rd., Kilburn, late Attorney—W. Fisher, Carlisle, Innkeeper—G. Fox, Waddinton, Lincolnsh., Labourer—H. Goodwin, Twyning, Gloucestershire, Clerk in Holy Orders—T. C. Gurden, New North Road, Time Keeper—C. B. Goring, Crosby Row, Walworth Road, Wine Merchant—H. Gray, Astbury, Cheshire, Labourer—G. Garside, Manchester, Baker—S. Green, Hadleigh, Suffolk, Grocer—J. Holmshaw and W. Woolley, Barnsley, Yorkshire, Masons—J. H. W Heck, late of Wenlock Road, City Road, Fancy Bag Maker—A. Hovell' St. John's Street, Clerkenwell, late Cowkeeper—J. Hinks, Baldwin, Gardens, Gray's Inn Road, Greengrocer—T. Hatch and G. W. Hatch, Great Ilford, Essex, Farmers—S. Hudson, Liverpool, Plumber—T. Hardiman, Hackney Road, Plumber—R. Hanson, late of Swallows Kaye, Yorkshire, Farmer—W. Hall, Stockport, Lancashire, Tripe Dresser—T. Hamilton, Little Bolton, Lancashire, Furniture Broker—E. B. Harris, Stamford, Lincolnshire, Grocer—J. Harrison, Hanley, Staffordshire, Cratemaker—C. Holehouse, Chesterfield, Derbyshire, Bootmaker—J. Heap, Stamford Street, Blackfriars Road, Private Boarding House Keeper—M. A. King, Oxford Street, Widow—J. Kirby, late of Tadcaster, Yorkshire, Farmer—J. W. Kerin, Queen's Road, Dalston—G. Law, Darlington, Durham, Farmer—T. Lakin, Hanley, Staffordshire, Grocer—M. A. Montin, Ufton Road, Kingsland, Clerk to a Ship Broker—J. M'Kerrow, Pontypool, Monmouthshire, late Farmer—W. Mabe, Swansea, Glamorganshire, Butcher—E. Morris, Oxford, Innkeeper—J. Marson, late of Princess Road, Kennington, Harness Maker—J. McMillan, Canon Street, Islington, Warehouseman—J. Morgan, Swansea, Glamorganshire, Shoemaker—J. Nixon, Newcastle-upon-Tyne, Photographer—H. E. Ogilvie, late of Greenwich, Servant—R. C. Preston, Cumberland Street, Pimlico—J. Pope, Devizes, Wiltshire, Draper—J. Powell, Manchester—J. Postlethwaite, Dalton, Lancashire, Farmer—S. Poletti, Doris Street, Lambeth, Superintendent of Steamboats—T. Powell, Liverpool, Druggist—E. Quick, Kingston, Somerset, Dairyman—W. Roberts, Liverpool, Coal Dealer—F. Richardson, Charlwood Street, Belgrave Road, Pimlico, Clerk—L. Ranby, jun., Moulton, Lincolnshire, Farmer—J. Rayner, late of Hyde, Cheshire, Licensed Victualler—J. Simpson, Navenby, Lincolnshire, Tailor—F. P. F. Strousberg, late of Jermyn Street, St. James's—A. Stansfield, York, Publican—G. A. Smith, Devonshire Road, Wandsworth Road, Artist—T. Slater, Scarborough and Hunmanby, Yorkshire, Linen Draper—G. Scown, Oxford, late Innkeeper—A. Starling, Stowmarket, Suffolk, Corn and Coal Merchant—J. Solomons, Well Street, St. George's-in-the East, Lodging house Keeper—S. Stevens, Newtown, Montgomeryshire, Grocer—A. Soar, late of Bromley, Kent, Upholsterer—H. S. Taylor and G. Parkinson, Blackley, Lancashire, Washing and Wringing Machine Makers—D. Turner, late of Manchester, Warehouseman—W. W. Tann, jun., Norwich, Bricklayer—D. Thomas, Tonyrefeil, Glamorganshire, Colliery Agent—P. Taylor, Allostock, Cheshire, Farmer—W. Toward, Sunderland, Marine Draughtsman—M. Thompstone, Manchester, late Milliner—J. F. Ward, Birmingham, Clerk—J. Wordsworth, Nether Hoyland, Yorkshire, Boiler Maker—J. Woods, late of Little Winchester Street, Southwark, Dealer in Vegetables—A. Wilkinson, Rotherham, Yorkshire, Beerhouse Keeper—M. Ward, Grove Terrace, Hammersmith, Schoolmistress—T. Walker, Sheffield, Cutler—R. Wright, Whittlesea White Fen, Cambridgeshire, Farmer.

SCOTCH SEQUESTRATIONS.—T. Blair, Aberdeen, Boot and Shoemaker—T. Cassels, Gallahill, Lanarkshire, Contractor—R. Duncan, Leith, Provision Merchant—J. Geddes, Edinburgh, Restaurateur and Confectioner—T. M'Millan, Leith, Flesher—W. Macdonald, Glasgow, Commission Merchant.

TUESDAY: *March* 1.—BANKRUPTS.—W. Anderson, Packington Street, Islington, Pianoforte Maker—J. L. Armstrong, Mount Street, Grosvenor Square, Fishmonger—R. Ayeson, Harrogate, Yorkshire—J. Bland, The Reservoir, Durham, Gardener—J. Brooks, Oldswinford, Worcestershire, Anvil Manufacturer—G. Bagley, Beestrey, Flintshire, Apothecary—A. M. Barker, and A. Barker, Birmingham, Metal Dealers—W. N. Brewer, Bodmin, Cornwall, Butcher—T. B. Bartlett, Middle Row North, Knightsbridge, Tailor—J. Bowker late of Over Darwen, Lancashire, Gardener—G. Barnes, Bollington, Cheshire, Corn Dealer—J. Brookes, Kingswinford, Staffordshire, Lime Burner—G. Bidgood, Glastonbury, Somersetshire, Builder—T. Bate, Birmingham, Hatter—J. Cornish, Stithians, Cornwall, Miller—W. Cornish, Liverpool, Grocer—J. Carpenter, Aldershot, Hampshire, Wheelwright—J. Cullen, Lincoln, Dealer in Flour—S. Cullum, jun., Great Yarmouth, Norfolk, Butcher—I. Davey, John Street, Marylebone Road, Dealer in Building Materials—J. Davison, Stokesley, Yorkshire, Stonemason—R. Dreit, Milk Street, Cheapside, Commission Agent—Thomas Eagle, jun., Huddersfield, Milliner—Joseph Stafford Frearson, Upper Street, Islington, Butcher—F. Finney, Tichborne Street, Regent Street, Cook and Confectioner—S. Fuszard, Hampstead Road, House Agent—G. A. Gill, Portland, Dorsetshire, Cordwainer—H. W. Glover, Adelaide Road, Haverstock Hill, Musical Composer—J. Gommersal, Gilesgate Moor, Durham, Grocer—T. W. Green, Kingston-upon-Hull, Ironmonger—R. Griffiths, Llanfair Caereinion, Montgomeryshire, Draper and Grocer—J. Hester, Wooburn, Buckinghamshire, Millwright—J. Hurlbut, Leicester, Miller—W. J. Hughes, Cardiff, Glamorganshire, Provision Dealer—J. T. Hear, Hulme, Lancashire, Traveller—J. Hamlin, late of High Street, Shoreditch, Cab Proprietor—W. Hurlis, Salford, Lancashire, Grocer—W. Harrison, Burslem, Staffordshire, Bookseller—G. Hawkes, Wyre Piddle, Worcestershire, Cattle Dealer—G. Jackson, Plas yn-Cwm, Flintshire, Farmer—Kedenton, jun., Norwich, Journeyman Boot and Shoe Maker—J. Langford, Trafalgar Road, Greenwich, Grocer—L. Limes, Stoke-upon-Trent Staffordshire, Beerseller—R. Lundy, Newton, Yorkshire, Farmer—T. Lowndes, Shrewsbury, Dentist—W. R. Lawes, Wycombe Marsh, Buckinghamshire, Carpenter—J. Meager, Leighton Buzzard, Bedfordshire, Wheelwright—A. M'Lauchlan, Newcastle upon-Tyne, late Draper—M. Markwald, Hull, Jeweller—C. G. Muggeridge, late of Charter House Square, Aldersgate Street, Licensed Victualler—J. E. Morris, late of Oakley Place, Victoria Park, Cheesemonger—G. Messenger, Roman Road, Islington, Corn Dealer—J. S. Matthews, late of Newington Green, Coal Merchant—J. T. Milner, Sheffield, Painter—T. Nash, Stourbridge, Worcestershire, Builder—H. M. Owen, Wellington Street, Strand—G. Paine, Stratford-upon-Avon, Beerhouse Keeper and Cooper—J. Peters, Exeter, Lath Render—A. Prase, Leeds Grocer—S. Packer, Sydenham Terrace, Notting Hill, Journeyman Carpenter—T. R. Pescher, Leicester Place, Leicester Square, Chemist's Assistant—M. Phelps, Fivehead, Somersetshire, Shopkeeper—T. Rowntree, Stockton, Durham, Journeyman Miller—F. E. Rotenberg, Nichol Square, Hackney Road, late Licensed Victualler—W. Robinson, Ambleside, Westmoreland, Joiner—W. H. Robinson, Liverpool, Leather Dealer—E. Reichardt, Albany Street, Regent's Park, Chemist's Assistant—T. Springett, Gordon Road, Stoke Newington, Licensed Victualler—R. Salmon, Clarendon Terrace, St. John's Wood, Belsize Road, Brush Manufacturer—W. Sharp and S. Sharp Mold, Flintshire, Iron and Brass Founders—J. Steels, Burslem, Stafford, shire, Crate Maker—C. Smith, New North Road, Butcher—J. Stevens, Chipping Wycombe, Buckinghamshire, Bricklayer and Plasterer—J. Thornton, Bradford, Yorkshire, Greengrocer—G. Trotter, Bolt Court, Fleet Street, Printer—E. Toman, St Ives, Cornwall, Fisherman—S. Vyvyan, Tipton, Staffordshire, Widow—W. Vann, Great Wigston, Leicestershire, Innkeeper—J. Warren, Church Gresley, Derbyshire, Blacksmith—J. Wheatcroft, Fenton, Stoke upon-Trent, Staffordshire, Surgeon—P. Whitaker, Habergham Eaves, Lancashire, late Innkeeper—T. Winder, Liverpool, Fringe Manufacturer—T. Whitehead, Bridgham, Norfolk, Journeyman Miller—P. White, Dover, Carrier and Dealer in Coals—R. Williams, Flint, Agent—J. L. Wilson, Rochester, Kent, late Ward room Steward of her Majesty's ship Trident—F. Wood, Warrington, Lancashire, Bookseller—A. Watton, Tamworth, Staffordshire, Post Office Clerk—J. Williams, Liverpool, Grocer and Provision Dealer—J. Yates, Whitechapel Road, Bootmaker.

SCOTCH SEQUESTRATIONS.—H. Bilsland & T. Bilsland, Edinburgh, Grocers—M. Fernandes, late of Glasgow, Commission Agent—Donald Ferguson & Duncan Ferguson, Greenock, General Merchants—J. Macnay, Glasgow, Photographer—J. Macdonald & A. Macdonald Glasgow, Calenderers—J. Templeton & R. Templeton, Kilmarnock Printers.

Metropolis and its Vicinity.

The Metropolitan Railway Schemes.—The joint committee of both Houses of Parliament appointed to consider the best method of dealing with the railway schemes proposed to be sanctioned within the limits of the metropolis have presented their report, from which the following are extracts:—

"The railway schemes that have been referred for the consideration of the joint committee are of extraordinary magnitude for so limited an area as the metropolitan railway district, extending over a length of 174 miles in the aggregate, involving the raising a capital of nearly 33,000,000*l.* in shares and of 11,000,000*l.* by loan, creating alarm among the holders of a vast amount of property, and interfering during the construction of the proposed works, with many important public thoroughfares. They include the construction of not less than four new railway bridges across the Thames, two of them of gigantic size, below London Bridge. It is stated by the surveyor to the Commissioners of Sewers of the city of London that the lands and buildings scheduled in the city of London for the proposed railway schemes comprise about one-fourth of the entire area of the city. The committee are of opinion that the following Bills or parts of Bills should not be proceeded with during the present Session:—Victoria Station and Thames Embankment, Oxford Street and City, London Main Trunk, Underground Metropolitan Grand Union (the portion south of Thames Street), Charing Cross (Northern), Charing Cross (Western), London Union, Metropolitan District (a portion forming the outer circuit), Tottenham and Farringdon Street. The committee recommend that the fees which have been incurred in respect of the said Bills be remitted. The two first-named of these lines are proposed to be worked on the pneumatic principle—a principle hitherto untried as applied to railway passenger carriages, and it seems undesirable that the experiment should first be made in an important public thoroughfare. They are passenger railways, and are intended to relieve the streets of omnibuses and cab traffic. The necessity for any such lines has been to some extent lessened, supposing the railways forming the inner circuit scheme, referred to in a subsequent part of this report, be sanctioned. The London Main Trunk Underground Railway proposes to provide a more central station for the Great Eastern, an object which is also sought to be accomplished by the Great Eastern itself by the Great Eastern Metropolitan Station and Railway Bill. The Select Committee of the House of Lords on metropolitan railway communication of last Session recommended that the Great Eastern should be allowed to establish a more central station than it has at present. The portion of the Metropolitan Grand Union south of Thames Street which the committee recommend should not be proceeded with involves a high-level bridge over the river below London Bridge. The connexion between the railways north and south of the river at the end of the metropolis might, it appears to the committee, be better effected by the East London through the Thames Tunnel and the proposed abandonment approved by the promoters, and the committee recommend that they should be allowed to amend their estimate, and be permitted to withdraw a portion of their deposit. Three schemes on this list, the Charing Cross (Western), the London Union, and the portions of the metropolitan district railways proposed to be postponed, in addition to other objections, require the construction of bridges across the Thames, one of them being a high level bridge below London Bridge. It is further to be observed with reference to these schemes that railway communication between the lines north and south of the Thames already exists on the Westminster side of the metropolis by means of the West London and West London extension railways, and another line is in course of construction through the centre of London by the London, Chatham, and Dover Railway, which when completed will unite their south London system with the Metropolitan Railway at the Farringdon Street Station, thereby giving them a communication with the Great Northern line, and thus of necessity connecting the Charing Cross and South Eastern Railways at Charing Cross with any of the main lines to the north, as proposed by any of the last-mentioned schemes, is not urgent. The Tottenham and Farringdon Street Railway, by which it is proposed to connect the Cambridge line of the Great Eastern with the station at Farringdon Street, is open to the same objection urged against the Charing Cross (Northern), and the Tottenham and Hampstead (extension to Charing Cross) in that it tends to create a great central station, inasmuch as the Great Northern, the Midland, and the London, Chatham and Dover Railway, are already brought in direct station communication with the Metropolitan Railway at Farringdon Street. As the Great Eastern Railway is another scheme for an approved station, which the committee recommend should proceed, it appears desirable that this Bill should be postponed, at all events until it can be known by experience whether any inconvenient amount of traffic will be concentrated at Farringdon Street by the lines already to meet there. The estimated capital required for the construction of the schemes above proposed to be postponed amounts to 18,500,000*l.* in the aggregate, exclusive of what was proposed to be raised by loan for the purpose of the undertaking. The remainder of the sum of estimated expenditure above referred to may be expected to be reduced by the rejection of some of the schemes allowed to proceed.

Without expressing any opinion as to the merits of the following Bills, the committee recommend that they should be proceeded with in the ordinary course, being only improvements of existing lines or works connecting links of a very limited extent, for enlargement of stations in no way conflicting with any comprehensive system of metropolitan railways, viz.:—Great Northern and Victoria Station, London and Blackwall (Extension); London, Brighton, and South Coast (new lines in Battersea); Great Northern (No. 1 Barnet Branch); London and North-Western (additional powers); London and South-Western (additional works); North London (additional powers); London, Chatham, and Dover (No. 1); London, Chatham, and Dover (No. 2); Great Eastern (junctions, except junction No. 8); Midland and St. Pancras branch; Metropolitan (additional powers). The committee also recommend that the Metropolitan and St. John's Wood should be allowed to proceed, as it is a line that passes through a not very populous but increasing district without interfering with much property, and in no way competing with any other scheme. The committee might here remark that it is proposed to be constructed as a single line only. The committee also recommend that the Hammersmith, Midland, and North-Western, and Charing Cross Junction shall be allowed to proceed. This scheme is in some degree open to an objection already referred to, that it tends to create a central station at Charing Cross. It, however, proposes an addition to the railway, which is to be constructed wholly in tunnel, to form three new streets, one of them of a very important character, in continuation of Tottenham Court Road from Oxford Street, in a direct line to St. Martin's Lane, near Aldridge's Repository, and from thence to the Thames Embankment, near the Charing Cross Railway Station. This new line of thoroughfare would be a substitute for the present objectionable road through Seven Dials and High Street, St. Giles, and be a great public improvement. The combination of new streets in crowded parts of the metropolis, with the construction of new railways, was recommended in the report of the Lords' Committee last Session. The committee are of opinion that if the Select Committee to which the Bill for these schemes may be referred should see fit to sanction the scheme, they should do so only on condition that the new streets above referred to should be constructed contemporaneously with the railway, and that provision should be made in the Bill for insuring its completion. The Committee concur in the opinion expressed by the Select Committee of the House of Lords on metropolitan railway communication last Session in their third report, that, with a view to the distribution of passenger traffic arriving by the main lines of railway coming within the metropolis, and also the relieving the crowded streets by the absorption of a large portion of the omnibus and cab traffic, the completion of the inner circuit of railways is desirable. It was estimated by the evidence before the committee that great additional accommodation, especially for the labouring classes, is daily becoming more necessary, while there is no prospect of the present ordinary means of conveyance being at all adequate to future wants, and they are of opinion that the following schemes which contribute towards the formation of such a circuit may properly be proceeded with. Metropolitan District Railways (the portion forming the inner circuit 32, 33, 34, and junctions 7, 8, and 9). Metropolitan Railway (Trinity Square, Extension). Metropolitan Railway (Notting Hill and Brompton Extension) Metropolitan Grand Union (portion North of the Thames). The committee are also of opinion that the following schemes—viz., the East London, Great Eastern (Metropolitan stations and railways) Great Eastern (junction No. 8), North London (Kingsland and Tottenham line), Walthamstow, Clapton, and City may be properly proceeded with, and as the schemes more or less enter into communication with, or compete or conflict in levels with these schemes above referred to, as designed to form the inner circuit, and with each other, the committee are of opinion that all the above schemes may with advantage be grouped together, and be referred to the same select committee. In making the recommendations the committee are of opinion that the greatest accommodation to the public will not be secured by treating the two schemes which pursue almost the same line from Kensington to Brompton to the City merely as competing schemes, one of which is to be preferred to the exclusion of the other. The Committee are of opinion that the promoters of these schemes should be recommended to communicate together and with the surveyors of the City and Metropolitan Board of Works, and devise the most perfect line which their several plans will admit of. By a relaxation of the standing orders such revised plan may be embodied in one Bill. The Metropolitan Railway (Trinity Square Extension), and the Western branches of the East London Railway should also be part of the proposed consultation. By such a course much useless expenditure would be saved, and the interests of the Metropolis far better secured than by taking the chance of selection of one among the competing lines. The committee observe with regret that two of the schemes which they have recommended should be allowed to proceed through Finsbury Circus in open cutting. They are, however, informed that the promoters of both are willing to substitute a covered way for the open cutting. In the event of the select committee finding it desirable to adopt either of these lines in preference to those which do not interfere with the Circus, the committee recommend that effectual provision shall be made by which the time to elapse between the breaking up of any part of the garden and the completion of the works there and the proper restoration of the enclosure shall be as short as possible. Although the committee have recommended that those portions of the metropolitan district railways scheme which are designed to form the outer circuit shall not be proceeded with, they concur with the House of Lords' Committee of last Session in thinking an outer circuit desirable, and they are of opinion that this object might be accomplished by uniting the existing railways on the eastern side of the metropolis with one another, and connecting those of them which are situate on the north side of the Thames with the railways on the south side, making use for this purpose of the Thames Tunnel. For this purpose it would be necessary for the East London to be in connection with the North London, the Great Eastern, and London and Blackwall Railways. This combination, taken in connection with the existing lines on the west and south of the metropolis, as suggested by the secretary of the London and North-Western Railway Company in his evidence before the committee, would complete the outer circuit, but it would be further necessary that mutual facilities to be secured by legislative enactment should be afforded by the several companies for interchange of traffic. In order to give the public the full extent of the system of intercommunication such as that which has been suggested, it would be desirable that the select committee to whom the metropolitan schemes in question may be referred should require that such modifications may be made in the schemes that may be sanctioned as may be necessary for effecting the proposed combination, and also that a clause should be inserted in the Bills of all railway companies having termini within the metropolitan district, for securing a mutual interchange of facilities for working the traffic upon railways in that district on equitable terms among themselves, and without any undue preference, the terms to be settled in case of difference by the Board of Trade, or an arbitrator to be appointed by that department. A clause should also, they think, be inserted in each of the Bills providing that railways having their termini within the metropolis shall be subject to the provisions of any Act to be passed in the present or any future Session for the regulation of railways within the metropolis. The committee are of opinion that some of the provisions of the Railway Clauses Consolidation Act, 1845, require provisions in relation to the metropolitan arrangements, and they recommend the introduction of a Bill for that purpose. They desire also to direct attention to a suggestion of Colonel Yolland's report to the Board of Trade as to the expediency of requiring all plans for railways within the Metropolitan Railway district being drawn to the same *datum* line. The committee are of opinion that in the present Session such of the Bills proposing to sanction railway communication within the limits of the metropolis as are to be proceeded with should commence in the House of Commons." The report concludes by stating that a map, showing the existing and proposed railways in the metropolis, accompanies the report, and that the Committee have directed the minutes of evidence taken before them, together with the appendix, to be reported.

THE MISSION OF SIR MOSES MONTEFIORE TO MOROCCO.—Sir Moses Montefiore returned to Gibraltar from the coast of Barbary in her Majesty's ship Magicienne on the 17th ult. His efforts on behalf of the Jews in the Sultan's dominions have been fully successful. He has obtained an Imperial edict, the effect of which cannot fail to improve the position of the Jews of the interior, and otherwise to advance the cause of civilisation.

ELECTION OF CITY ARCHITECT.—A Court of Common Council was held on Friday, to elect an architect as successor to the late Mr. Bunning. There were 12 candidates, but in consequence of resignation or ineligibility the number was reduced to six, and eventually the contest lay between Mr. Horace Jones and Mr. Richard Bell. The final result of the poll was a majority of 13 for Mr. Jones, who was declared duly elected. The salary of the office is 1500*l.* a-year.

ST. THOMAS'S HOSPITAL.—The selection of Stangate and the conditional contract for the purchase of the new ground to be gained by the Southern Embankment of the Thames as a site for the new Hospital, received the sanction of Vice Chancellor Page Wood on Saturday. By the act of Parliament which authorised the sale of the old hospital to the Charing Cross Railway the governors of the hospital were empowered to select a site for another, subject to the approval of the Court of Chancery. They accordingly selected, with the sanction of their medical officers, the land to be recovered from the river at Stangate, abutting on the south end of Westminster Bridge, and nearly opposite the Houses of Parliament. Against this selection the corporation of the City of London appealed to the Court of Chancery, alleging that by ancient charter they had the control over the hospital, and objecting to the proposed site as unhealthy. The Vice-Chancellor held that the rights of the City were, so far as the selection of site was concerned, set aside by the terms of the Act of Parliament authorising the sale of the old hospital; and that no such presumption of unhealthiness in the site had been made out as to warrant the interference of the Court on that score. One great hospital of Europe, the Hôtel Dieu at Paris, was on the banks of a river, and that was confessedly healthier than many which seemed to have greater advantages. The result would be that the choice of site already made would be approved, and the contract confirmed.

NATIONAL RIFLE ASSOCIATION.—The annual meeting of this Association was held on Saturday at Willis's Rooms, the Duke of Cambridge, as president of the Association, in the chair. There was an unusually large attendance of members, and great interest appeared to be taken in the proceedings. His Royal Highness congratulated the members on their position and prospects. Though their income was small they had always contrived to keep their expenditure within it, and he was happy to say it continued to expand yearly. The prizes for shooting had also been increased last year, and he found that the number of competitors for those prizes had also considerably increased. Altogether he thought the association was in an excellent position. The meeting was afterwards addressed by several volunteer officers, and various practical suggestions were made and favourably received by the meeting.

SALE OF THE GREAT EASTERN AND HER STORES.—The sale of the stores of the Great Ship terminated on Tuesday. All the articles realised high prices, and it is estimated that the proceeds of the sale will amount to nearly 4000*l.* The ship herself had previously been sold by auction to Mr. Yates on behalf of the Great Eastern Steam-ship Company (Limited). Mr. John Rae had first bid the same amount, but as he declined to make a deposit of 10 per cent., the ship was knocked down to Mr. Yates. Mr. Rae has since tendered the money to the auctioneer, on the ground that he was the first bidder; and if his claim be refused, which is almost certain, the Great Eastern will no doubt again be the subject of an action in a court of law.

THE SUBWAYS IN THE NEW STREETS.—At a recent meeting of the Metropolitan Board of Works, a deputation from the gas companies presented a memorial against laying the gas pipes in subways. They stated that gas was always escaping, and would fill these subways so that if men ever entered them with lights, which they must do, an explosion would ensue, which would blow up the street. The Chairman, in reply, said, that at an early period in the existence of the Board their attention had been called to the evil of the streets being so frequently broken up, causing not only damage to the roads, but interruption to the traffic. Their attention was also drawn to another, but not less evil, which was that the escaped gas became mixed with the subsoil, and which was thus rendered dangerous to public health. The Board had not rushed into this subject without the fullest inquiry, for they offered premiums for the best designs for a subway, and those designs were referred to a committee, among whom were the late Mr. Robert Stephenson, Mr. Hawkshaw, Mr. Wyatt, Mr. W. Cubitt, the late Mr. Alexander Wright, Mr. Bazalgette, and Mr. Marrable, who all gave the fullest consideration to the subject. They believed that they should be able to prevent the escape of gas, as the pipes would be painted and the joints could be frequently examined. They also considered that there would be the additional advantage in an economical point of view, of enabling gas companies to lay down their pipes without disturbing the roadway, and thus save the expense of relaying the road. The Board, however, would take every precaution to prevent the evils which had been referred to.

THE ROYAL ENTERTAINMENT AT GUILDHALL.—At a special Court of Common Council on Friday week, the proceedings of the Royal Entertainment Committee were again brought under discussion. It will be remembered that at former meetings of the council, the members appointed to superintend the ball and banquet to the Prince and Princess of Wales were charged with having spent large sums of money on luncheons and wine for themselves during the progress of the arrangements, and with having divided valuable articles among themselves at its close. At the meeting on Friday, on the motion that the report of the Entertainment Committee be received and agreed to, Deputy Burnell moved, as an amendment, that the committee be dissolved, and that the Court regretted to find that several articles, the property of the Corporation, had been appropriated by certain members of the committee in contravention of the standing orders of the Court, and impairing the dignity of its members. The amendment having been negatived, Deputy Elliott moved another amendment to the effect that the subject be referred to a special committee to consider and report how far the Entertainment Committee was justified by ancient usages and customs in appropriating to their own use various costly goods the property of the corporation; and also by what means the expenditure of special committees may in future be under the same control as that to which all other committees are subject. On a division, the amendment was negatived by 67 to 52. The original motion, that the report of the committee be received and agreed to, was then put and carried unanimously.

NEW SOUTHWARK STREET.—The foot pavement of the new street was completed last week. Since its opening both passenger and carriage traffic from the south-east to the south-west has been very great, proving the new route to be a great success and public convenience. The numerous plots of land along the line have been let this week on building leases by the Metropolitan Board of Works. The great bulk of the traffic from the London Bridge railways to the West-end now takes the new route.

LOSS OF TWO LONDON PACKETS.—The well-known London and Leith steamship Caledonia, one of the fleet of the General Steam Navigation Company, was driven ashore in a gale of wind off Flamborough Head, on Sunday afternoon. The crew and passengers were saved in the boats, but all efforts failed in getting the ship off, and the latest telegram announces that the steamer had gone to pieces, and the shore was strewn with portions of wreck and cargo. The ship Golden Age, belonging to the Black Ball line of packets, was driven ashore on the 19th ult. in the neighbourhood of Dungeness. She was on her voyage home from Madras with a cargo valued at 200,000*l.*, and insured at various offices for that sum. It seems that she had reached as far as the North Foreland in tow of a tug, which was not powerful enough to contend against the storm, and the ship drifted down channel and finally went ashore. The crew were saved with some difficulty, but the vessel has gone to pieces on the beach.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, Feb. 27, were 1677, being a higher rate than has occurred since January. The average number in the corresponding week of the ten years, 1854-63, corrected for increase of population, was 1467. The present return is therefore 210 above the average. During the week the births of 1019 boys and 981 girls, in all 2000 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 2057.

Provincial.

ABERAMAN.—Three of the men injured by the recent boiler explosion have died since the accident, making 12 fatal cases. The majority of them were married, and had large families depending upon them for support. Mr. Crawshaw Bailey, M.P., the proprietor of the works, has however expressed his intention to provide for the injured men and the bereaved families, and, consequently, there will be no necessity for making an appeal to the public. It is expected that a competent engineer will be directed by the Home Office to report to the coroner's jury as to the cause of the accident.

CLAYDON.—The Rev. G. Drury, rector of Claydon, whose extraordinary clerical proceedings have lately

attracted so much attention, has given an affirmative issue to each of the charges alleged against him, and in consideration of the Bishop of Norwich consenting to waive the further prosecution of the suit, he has engaged to discontinue all the processions, ceremonies, and observances complained of, and to submit to the judgment of his lordship in the arrangements, ornaments, and furniture of his church, and in all matters connected with the services. The defendant has also undertaken to pay costs. In consequence of this submission, the Bishop has withdrawn from the suit instituted against Mr. Drury.

Keighley.—A horrible murder took place at Greenhouse farm on the 12th ult., a woman named Sarah Terry, 35 years of age, having been murdered by her husband. For ten months he has been in a low and desponding state of mind, and at times his wife has been so alarmed lest he might do something serious that she has frequently expressed a desire that he should be removed to an asylum. On Tuesday night the family had occasion to remain up later than usual in consequence of a cow calving. A neighbour, Mrs. Milner, not knowing the cause why they remained up so late, and beginning to feel afraid that something was amiss, went to the door and found it fast, but deceased answered her that all was right, and that her husband was much better. Mrs. Milner went in a second time before she retired to bed, being anxious on account of Mrs. Terry being near her confinement, but finding that all was quiet she returned to bed. On the following afternoon Mrs. Terry called to her to say she would leave a child with her whilst she went to serve the calf. Her husband followed her, and after waiting for some time without either of them returning, Mrs. Milner went out to look for them, but finding no trace of them she went in another direction to give an alarm. She then learnt from one of Terry's children who was returning from school that he had seen his father going across the field with a spade on his shoulder. Shortly afterwards on entering the house the neighbours found the poor woman lying dead with her head almost severed from her body; the blow, which appeared to have been given with a sharp spade, had been dealt with such force that the cut extended from above the ear down to her breast. The husband absconded, but was apprehended on the same night, and has since been committed for trial on the charge of Wilful Murder.

Leicester.—A very shocking crime has been discovered in this town. The body of a lad 16 years of age, named William Upton, was found in the canal, stripped of its clothing, with the exception of the trousers, which were turned back over the knees, as if some person had been in the act of dragging them off. At first it was thought that the injuries had been caused by boats, but a closer examination proved that the youth had been murdered in a most brutal manner, and then thrown into the canal. The deceased had been in the service of a chemist, and had disappeared about three weeks. The police have arrested the boy's father, who lived at the time of the boy's disappearance near to the canal, but had since removed. The evidence at the inquest clearly proved that deceased had been murdered, and the inquiry has been adjourned. The accused is a framework-knitter, about 40 years of age.

Lincoln.—The renovation and repair of Lincoln Cathedral is steadily proceeding. Nearly the whole of the south side has now been restored, and the noble west front, with the niches containing eleven figures of early English kings over the entrance, will be thoroughly reinstated.

Liverpool.—A shocking murder was committed in this town on the 19th ult. Two men, one a sailor named Early, and the other a man called James Robinson, of no settled occupation, bore each other a grudge, on account of a dissolute woman, with whom they were both acquainted. They met on the night of the 19th, and had a quarrel, when the sailor was stabbed by Robinson in the region of the heart, and died almost immediately. The jury at the inquest returned a verdict of Wilful Murder against the prisoner, who has also been committed for trial by the magistrates.—Two sailors were charged at the Borough Police Court last week with piracy. It appears that they, with others, were passengers on board the United States schooner L. Genity, from Matamoras to New York, and when the vessel was at sea they overpowered the captain and crew and sent them adrift in a boat, while they hoisted Confederate colours, but ultimately ran into Belise under the British flag, where they sold the ship and cargo. The captain of the ship, who had found his way to the shore, came to England, where he traced the two men and gave information to the police, who took the prisoners into custody. The case is still under investigation.

Lynn.—A discovery has been made of a valuable stratum of ironstone on the Sandringham estate, recently purchased by the Prince of Wales. The discovery has been effected by Mr. J. Wright, of Lynn, who has sent samples of the ore obtained to some analytical chemists in the north of England. These gentlemen state that the ironstone found contains nearly 41 per cent. of metallic iron, so that the ore appears to be even richer than that of the Cleveland district. It is believed that the deposit covers at least 500 acres, commencing at Wolferton church and extending inland past the Lynn and Hunstanton road. Mr. Wright has communicated his discovery to the Prince through General Knollys, and has applied for permission to work the ore on payment of a royalty. His Royal Highness has appointed a duly qualified gentleman to visit the estate, in company with Mr. Wight, and draw up a report upon the subject. If the hopes entertained with regard to the discovery should prove well-founded, the matter will prove one of much importance to the whole surrounding district, and especially to the town and port of Lynn; but many persons in the county who are said to have been aware of the existence of the ironstone, believe that it will not pay to work it.

Oxford.—In a Convocation held in the Sheldonian Theatre on the 25th ult. the new Examination Statute was submitted to a very full House. A scrutiny having been demanded, the votes were taken by the two proctors at the two side doors of the theatre, and, after a short pause, were announced by the senior proctor to be in favour of the Statute. 524 members of Convocation voted, of whom 281 voted for and 243 against the Statute, giving a majority in its favour of 38.

Preston.—A most extraordinary system of dog poisoning has recently prevailed in this town. For some weeks past scores of dogs, some very valuable, have been poisoned in the town and neighbourhood. The dogs, while out in the streets and in the public walks with their owners, are in most cases taken ill suddenly and mysteriously, and frequently in a few minutes they die in the greatest apparent agony. Sundays, when most of them are out, are the most fatal days. No one seems to know by whom, or by what means, the animals are destroyed. In a few instances animals found dead have been analysed, and in their stomachs arsenic and strychnine have been discovered. It is supposed that the poisoning is carried on by a gang of burglars, who destroy as many house-dogs as possible, in order that they may follow their robberies unmolested. It is also conjectured that small pieces of meat, strongly flavoured with something tempting to the dogs, and containing poison, are dropped at night-time in the principal thoroughfares. The police have offered a reward for the discovery of the poisoners, but hitherto not the least clue has been obtained. A similar system of dog poisoning, which completely baffled every one anxious to fathom it, prevailed in Preston last year. Several parties have muzzled their dogs with wire netting as the only means of preventing the animals from being destroyed by the baits set for them.

Plymouth.—Two Danish men-of-war have been cruising for the last fortnight in this part of the Channel for the purpose of intercepting and capturing German merchantmen homeward bound. The first of these cruisers which made her appearance at this port was the steam frigate Niels Juel, of 46 guns, which landed the crew of the Irene, Prussian barque, from Memel, with timber for London, which she had captured in the Channel. The Niels Juel, after filling up with coal, began cruising for German vessels between the Start and the Lizard, and was sometimes seen off the harbour under canvas, and at others under steam and canvas, in the fairway track of all merchant vessels going up and down Channel. Two Austrian brigs, two Bremen barques, and one Prussian barque were lying at this time in the harbour and the captain candidly announced his intention to capture them, if he caught them three miles outside the English coast. While she was cruising off the Eddystone one of the Bremen barques left the Sound for Rotterdam, but on getting outside she observed the Danish frigate, and returned immediately. The frigate was observed to bring to and overhaul 10 or 12 merchant ships, including an American barque bound to London, while two of her boats were also sent out to cruise, each containing 30 men, well armed. She then ran westward and commenced cruising off Falmouth, where 14 Prussian vessels had taken refuge, and during her absence the Bremen barque managed to escape to the eastward, and get away for Rotterdam. The frigate ultimately returned without having made any prizes, and in consequence of orders from home, sailed on Friday morning for Copenhagen. The second cruiser, which made her appearance off the port on Monday, is a steam corvette, which is now watching the track of merchant vessels going up Channel, and is supposed to be the same which has cruised recently between Dungeness and the Isle of Wight. The Hamburg bark Venezuela from Macao, with a general cargo for Hamburg, took shelter in the Sound on Monday evening. During the morning she met an Antwerp steamer, commanded by a native of Hamburg, who gave her captain the first intelligence of the war. During the stay of the Niels Juel the Danish sailors composed an appeal to the English public to help their country, and forwarded it for publication to the *Western Morning News*. In this appeal they stated that the British Government knew in what way it should interfere, but was afraid to do so until ordered by England. In conclusion, they called upon the English nation to give that order.

Salisbury.—By direction of the Dean and Chapter the Cathedral of this city has been carefully surveyed by Mr. George Gilbert Scott, with the view to its entire restoration, both internally and externally. Certain substantial repairs essential to the security of the edifice are now in progress, towards which the Ecclesiastical Commissioners have given 10,000*l*., but the general state of disrepair, and more particularly the safety of the tower and lofty spire, have induced the Cathedral authorities to take active measures to carry out Mr. Scott's recommendations. It is estimated that an outlay of between 35,000*l*. and 40,000*l*., exclusive of the 10,000*l*. voted by the Commissioners, will be required, and it has therefore been determined shortly to hold a public meeting in the city of Salisbury, to be presided over by the Marquis of Aylesbury as Lord-Lieutenant, and to appeal to the diocess for the requisite funds.

Shipton-on-Stour.—The village of Brailes, four miles from this town, was thrown into a state of consternation a few days since by the news that a man had been shot by one of Mr. Sheldon's keepers. The deceased, named Clifton, was returning from field work by a path which Mr. Sheldon had instructed the gamekeeper to prohibit. As soon as the latter saw him he tried to turn him back. There appears to have been some ill-feeling between the parties, as the keeper, whose name was Ditton, had deceased before the magistrates for an assault about a month ago, when the latter was fined 1*l*. Having refused to go back, deceased was collared by the keeper, whom he struck some severe blows across the shoulders with a formidable stick between 4 and 5 feet long, and as thick as an ordinary man's wrist. This brought the keeper to the ground, but, recovering himself, he deliberately levelled his gun at his assailant, and shot him in the left side. Clifton fell mortally wounded, and expired in about five minutes. There were four witnesses to the transaction, and another witness deposed to the keeper having said to him on the occasion of the former difference that if he had only had his pistol then he would certainly have shot deceased. The jury at the inquest returned a verdict of Wilful Murder against Ditton, who was committed for trial at the assizes.

St. David's.—There is every probability that the proposed restoration of St. David's Cathedral will be eventually carried out, as subscriptions amounting to about 10,000*l*. have already been promised. Several local meetings have been held on the subject, and the proposal to restore the old cathedral, where so many of Britain's kings and eminent men are lying, has been received with universal favour throughout the principality. Mr. Gilbert Scott is the architect, and the work will be carried out under his supervision. The estimated cost is 30,000*l*.

Thrapstone.—On Thursday, the 4th ult., while a labourer was engaged in cleaning out a dyke, at the side of a lane leading from Denford to Keystone, in Northamptonshire, his spade came in contact with a skeleton. The remains were found to be those of a full-grown woman, of middle height, and have since been identified by the villagers as those of Lydia Astley, who mysteriously disappeared some 13 years since, and who had been in the habit of cohabiting with a married man named Weekly Ball, upon whom suspicion fell at the time; but, though a reward of 200*l*. was offered, nothing could be discovered, and Ball, who had been apprehended, was discharged. At the time the girl was missed a letter was received by one of the local magistrates stating that the writer had seen deceased in company with a strange man in Gold Street, Northampton; but this statement was not generally credited, in consequence of the condition in which the girl was. A witness has now voluntarily come forward for the purpose of declaring that this letter was written by him at the dictation of Weekly Ball himself. At the time of the girl's disappearing cries of "Murder" were heard in an orchard at the back of Ball's house, and there was abundant proof of his having been up all the night. The magistrates last week issued a warrant for the arrest of Ball, who was apprehended at Ramsay, where he has been living since the occurrence, and after hearing the evidence have committed the prisoner for trial on the charge of Wilful Murder.

Yarmouth.—A Danish gunboat and corvette are reported to be cruising in the offing on the look-out for Prussian vessels. No captures have yet taken place.

Ireland.

Lord Lieutenancy.—Lord Dufferin has been appointed lord-lieutenant of Downshire in the room of the Marquis of Londonderry, resigned. The Earl of Charlemont attended last week at the Court of Chancery, and took the oaths as lord-lieutenant of Tyrone.

The Prince Consort Memorial.—On Monday afternoon a meeting convened by The O'Donoghue and the *Nation* party, who were routed by the Phœnixites and Fenians a few evenings since in their attempt to get up a protest against the grant of a site in College Green to the Prince Consort Memorial, held a meeting at the Rotunda to carry out the object of the former meeting. There was an immense crowd outside, but none were admitted who did not satisfy the appointed scrutineers that they would support the resolutions to be proposed. About 500 persons passed this ordeal, and as there was no opposition, the proceedings were conducted with some degree of order. The chair was taken by Mr. Matthew O'Farrell. The first resolution, declaring that Ireland was not entitled to erect a memorial to the Prince Consort, was moved by The O'Donoghue, M.P., who assailed the majority of the Corporation for granting the site for the statue, and disparaged the public character of the Prince Consort, who never, he said, did anything for Ireland, and had no right to a national statue. He declared, "in the name of that great meeting, which

was a faithful representation of the true Irish feeling of the country, that no man was entitled to a statue in College Green who had not proved his fidelity to the sacred cause of Irish independence." He reprobated those who would erect a statue to the late Prince because he had expressed his admiration of the character of William of Orange, and called him the greatest monarch that ever sat on the English throne—the model of an English King. Dr. Moran seconded the motion. Mr. Ryan then moved that a memorial be drawn up, and signed by the chairman of the meeting, requesting that the vote of the Corporation of Monday, 15th February, be rescinded, and that College Green be the spot worthy of a national statue to Henry Grattan. The resolution was seconded by Mr. Sullivan, who maintained that College Green should be reserved for a statue of Grattan, the "patriot of humanity;" and that one to the late Prince Consort, who held the Poles and the Irish in equal contempt, should be the last to be raised upon a spot hallowed in Irish recollection by many events that minister to the pride and claim the gratitude of Irishmen. The resolutions were adopted unanimously, and the meeting terminated without any breach of the peace.

ABDUCTION OF PROTESTANT GIRLS.—The Rev. Mr. M'Loughlin, of Enniskillen, has been arrested and lodged in the county gaol in that town, on the charge of celebrating the illegal marriage between a young man named Peterson, a Roman Catholic, and Susanna Quinton, a Protestant, a minor, and a ward in Chancery. The case has since been removed by *certiorari* into the Court of Queen's Bench, on the ground that the accused believed he could not have an impartial trial in Fermanagh. A somewhat similar case is reported from Wexford. Susanna Bolton, a minor, daughter of a wealthy farmer at Ballycarnew, in that county, a Protestant, eloped with a Roman Catholic named Kavanagh, a carpenter, and went to Dublin for the purpose of getting married. Not being able to find a clergyman to perform the ceremony, they got a person named Collins to personate the girl's father in the Consistory Court, and they were subsequently married. Kavanagh then insisted that his wife should go to mass, which she refused to do; and the quarrel between them brought to light the fraud and perjury connected with the license. All the parties have been arrested. At the Rathdowney Sessions, Queen's County, the magistrates have committed for trial a young man named Nolan, a Roman Catholic, for the abduction of Miss Howard, a Protestant minor, the daughter of a farmer of respectability and ample means. The magistrates refused to accept bail, and Nolan was sent to prison.

MURDER IN LEITRIM.—At the Assizes at Carrick-on-Shannon, Mr. Justice Christian presiding, a man named Edward Stanford has been found guilty of murdering Michael M'Dermot at Mohill on the 14th of January, and sentenced to be hanged on the 24th of March.

Scotland.

THE PRECEDENCE QUESTION BETWEEN EDINBURGH AND DUBLIN.—The Committee of the Privy Council to whom her Majesty referred the consideration of the relative claims of the corporations of Edinburgh and Dublin for precedence in presenting addresses to the Sovereign, have decided that neither of the two corporations has established a claim to precedence. The first which arrives is to have right of pre-audience.

Law.

MIDLAND CIRCUIT, WARWICK.—*The Birmingham Murder.*—*George Hall*, 22, by trade a stamper and piercer of jewellery, was indicted for the wilful murder of Sarah Ann Hall, his wife, by shooting her, at Birmingham, on the 16th ult. The jury returned a verdict of Guilty, and Mr. Justice Byles passed sentence of *Death* in the usual form. *The Leamington Murder.*—*Ann Heatwell*, aged 20, was indicted for the wilful murder of her child, at Leamington, on the 29th of December. The jury returned a verdict of Guilty, with a recommendation to mercy. The judge passed sentence of *Death*, remarking that he was glad the jury had had the courage to do their duty.

Obituary.

THE RIGHT HON. BARONESS RUTHVEN died on the 13th ult. at Freeland, Perthshire. Mary Elizabeth Thornton Ruthven, of Freeland, in the county of Perth, in the peerage of Scotland, was daughter of the fourth baron, by the daughter of the sixth Earl of Leven. On the extinction of the male line by the death of her brother, fifth Lord Ruthven, the barony devolved on his only sister, the deceased lady. She married, in 1806, Mr. Walter Hore, of Harperstown, county Wexford, by whom she had a numerous issue. The barony devolves on her eldest son, an officer in the Rifle Brigade.

LADY LOUISA STUART died on the 14th ult., at her residence in Park Street, Grosvenor Square, in her 51st year. She was the youngest daughter of the tenth Earl of Moray, by his second marriage with the daughter of Sir Philip Ainslie, of Pilton.

THE HON. MRS. CARLETON, wife of the Hon. and Rev. Richard Carleton, died on the 21st ult. at the family residence in Grosvenor Place. She was the second daughter and co-heir of Eusebius Horton, Esq., of Catton Hall, county Derby, and was the mother of Colonel Dudley Carleton, of the Coldstream Guards, who is married to a daughter of Lord Broughton

LADY CHARLOTTE BANKES died on the 22d ult. at the rectory, Corfe Castle, in her 29th year. She had given birth to a daughter four days previously, and was thought to be progressing favourably, when she was taken seriously ill, and died suddenly. Her ladyship was the eldest daughter of the second Earl of Eldon, and married, in 1856, the Rev. Edward Eldon Surtees Bankes, rector of Corfe Castle, and son of the Rev. Edward Bankes, Prebendary of Gloucester and Bristol, by his first wife, Lady Jane Scott, youngest daughter of Lord-Chancellor Eldon.

LADY ANNE WILBRAHAM died on the 28th ult., at Delamere House, Cheshire. She was the daughter of the first Earl Fortescue, and the widow of George Wilbraham, Esq., of Delamere, formerly M.P. for South Cheshire.

THE RIGHT REV. BISHOP GILLIS, virtually though not titularly the Roman Catholic Bishop of Edinburgh and the East of Scotland, died on the 24th ult., in his 62d year. He was ordained priest in 1827, consecrated Bishop of Limyra in 1838, acted for several years as coadjutor of the late Bishop Carruthers, and since that prelate's death has acted as Vicar Apostolic of the Eastern District of Scotland. His father was a native of the Scottish Highlands, his mother a French Canadian; and doubtless his lineage on the mother's side, along with his early training, contributed largely to make him so much of a Frenchman as he was in appearance and manner. He was eminent as an orator and preacher, not only in the English but in the French language. So highly was he esteemed as a French pulpit orator that he was lately selected by the French bishops to preach before the Emperor the sermon at the Commemoration of Joan of Arc.

SIR WILLIAM BROWN, BART., died on Thursday at his seat, Richmond Hill, near Liverpool, in his 80th year. He was of humble origin, notwithstanding which he became, through his aptitude for mercantile pursuits, great industry, and careful economy, a leading British merchant and one of the largest capitalists of the day. He was a Liberal in politics, and represented South Lancashire during the Corn Law struggle, but retired from Parliament owing to his advanced age. Last year he was High Sheriff of Lancashire. In 1857 he gave between 30,000*l.* and 40,000*l.* for the erection of a free library and museum, which are now largely attended by the working classes of Liverpool; and at different times he has given large sums for the promotion of benevolent objects. He had survived his wife and children, but is succeeded in the baronetcy by his grandson, Lieut.-Colonel Brown, of the 1st Lancashire Artillery Volunteers.

MR. GILES PULLER, M.P. for Hertfordshire, died at Youngsbury, his seat near Ware, on the 16th ult, after a short illness, in his 57th year. He was the son of Sir Christopher Giles-Puller, Chief Justice of Calcutta, by the daughter of Mr. Joseph King, of Taplow. He was educated at Eton, and took a double first class at Oxford, as a member of Christ Church, in 1828. In 1832 he was called to the bar, and practised in the Court of Chancery till 1841. He was elected for Hertfordshire in 1857, having been an unsuccessful candidate at the preceding election of 1852. He was a Whig in politics, but on several questions, especially on those connected with the Church, he voted with the Conservatives. He married, in 1831, the youngest daughter of Mr. William Blake, of Danesbury, Hertfordshire, by whom he had a large family.

GENERAL DOUGLAS, R.E., died on the 10th ult. at Hastings, aged 77. He retired from the Royal Engineers on full-pay, with the rank of lieutenant-colonel, some years back. He entered the service in 1801, and attained the rank of lieutenant-general in 1858.

MAJOR-GENERAL SUTTON, C.B., Commanding the troops at Dover, died on the 20th ult. after a long illness. He entered the army in 1827, and was only 56 years of age at his death. He served throughout the Kaffir wars of 1834 and 1835, 1846, 1847, 1851 and 1852. At the commencement of the latter war he defeated a large force which made an attack on Fort Beaufort, a very important success at the time. In 1860 he served as a brigadier-general throughout the operations in the north of China, and was present in the action of Sinho, storming of Tangko, advance on Tien-tsin and Pekin, and the battles of Sept. 18 and 21. He received the war medal for the Kaffir war, and a medal and clasps, with the Companionship of the Bath for his services in China. Previously to his obtaining the rank of major-general, he was in command of a brigade at Shorncliffe.

MAJOR-GENERAL PORTLOCK, R.E., LL.D., F.R.S., died on the 14th ult., at Black Rock, near Dublin. He was a distinguished officer of the Royal Engineers, and by his works on geology and other subjects, contributed greatly to the advancement of science. In early life he was for many years on active military service in Canada, and on coming home in 1824 he was attached to the Ordnance Trigonometrical Survey, and was chief assistant of the director, Col. Colby. In 1856 and 1857 he was President of the Geological Society, and, until his health began to give way, he was actively employed as a member of the Council of Military Education, having previously acted as Inspector of Studies of the Military Academy of Woolwich.

MAJOR-GENERAL VICTOR, of the Royal Engineers, died on the 4th ult., at Edinburgh, in his 72d year. He obtained his first commission in 1810, and was two years afterwards sent to the Continent to take part in the war in the Peninsula. He served from 1812 to the end of the war, and was present at the battles of the Nive, Orthes, and Toulouse, for which he had received the war medal and three clasps. He became an honorary major-general in 1854.

REAR-ADMIRAL CORY died on the 13th ult. at Plymouth, in his 68th year. He entered the service in 1806, and for some years served in the West Indies, North Sea, Mediterranean, East Indies, and on the coast of France. He was subsequently Lieutenant of the Royal George yacht, where he obtained the rank of Commander. In 1836 he served on board the North Star, bearing the broad pendant of Commodore Lord John Hay, on the coast of Portugal. After paying off that vessel, in 1840, he was promoted to the rank of Captain, and in 1858, obtained flag rank, but not having served the necessary time as Captain to qualify him for active service, he was placed on the reserved list.

REAR-ADMIRAL WILLIAM ALLEN died recently at his residence, Bank House, Weymouth, in his 72d year. He entered the navy in 1805, and served on the Mediterranean and Baltic stations till 1810. While acting as midshipman he was present at the passage of the Dardanelles in 1807, and in the following year assisted in the capture of the Italian brig-of-war Friedland in the Adriatic. He afterwards co-operated in the reduction of Java, in 1811, and took part in a successful attack on the piratical settlement of Sambas, in Borneo, in 1813. He became a lieutenant in 1815, and in 1834 he was appointed to the William and Mary yacht, and served in that vessel till he was promoted to the rank of commander in 1836. He subsequently took part in the disastrous expedition to the Niger, whence he returned towards the end of 1842. His post rank was obtained in the same year, and in 1862 he became a retired rear-admiral.

MR. DYCE, R.A., died at Streatham on the 14th ult., in his 58th year. He was a native of Scotland, and was born in 1806. After passing through the usual curriculum in the University of Aberdeen, he proceeded in 1825 to Italy, where he devoted himself to the study of art. In 1828 he returned to Scotland, and for some time obtained his livelihood by portrait painting. In the interval of his business, however, he pursued the higher branches of art, and in 1828 made his first appearance on the walls of the Royal Academy in his picture entitled, "Bacchus Nursed by the Nymphs of Nysa." Between that period and 1838 he exhibited two pictures at the Academy, "The Descent of Venus," and a "Madonna and Child." In 1839 he was nominated Principal of the newly-constituted School of Design at Somerset House, and for some years devoted himself almost exclusively to the duties of his office; but in 1842 he resigned the post in consequence of some disagreement. Almost immediately afterwards he exhibited at the Royal Academy "King Joash Shooting the Arrow of Deliverance," a performance which secured for him the honour of being elected an associate of the Royal Academy. In 1844 he sent to Westminster Hall as examples of fresco—"The Heads," and part of a larger composition, "The Consecration of Archbishop Parker in Lambeth Palace, A.D. 1559." In the following year he received from the Prince Consort a commission to paint a series of frescoes for him in the summer house of Buckingham Palace. Subsequently he was similarly employed at Osborne. He was one of the first artists engaged in the New Palace of Westminster, and his "Baptism of Ethelbert" in the House of Lords is considered one of the best paintings in the chamber. In 1845 he was elected a Royal Academician, and he was also an honorary academician of the Royal Scottish Academy, and member of the Academy of Fine Arts of Philadelphia. Among his many works may be mentioned as best known—"St. Dunstan separating Edwy and Elgiva," "Titian and Irena da Spilemburgo," "Omnia Vanitas," "The Meeting of Jacob and Rachel," and "Lear in the Storm." Mr. Dyce was an author as well as artist. In 1844 he published an edition of the Common Prayer with its ancient Canto Fermo, accompanied by a disputation on the kind of music and its applicability to English words; and in 1851 a theological pamphlet entitled "Notes on Shepherds and Sheep," in reply to Mr. Ruskin's "Notes on the Construction of Sheepfolds." He was an extensive contributor to periodical literature, chiefly on subjects relating to ecclesiastical antiquities; and was the author of pamphlets on the subject of the future management of the National Gallery.

MR. WILLIAM HUNT, the well-known painter in water colours, died recently at his residence, Stanhope Street, Hampstead Road, at the age of 74. He has for 35 years exhibited in the gallery of the Society of Painters in Water Colours since 1824, where his works have lately formed one of the chief attractions of the annual exhibitions.

WILLS AND BEQUESTS.—The will of the Duke of Hamilton has been sworn under 140,000*l.* personalty in England; the Marquis of Huntley, 14,000*l.*; Lord Chesham, 40,000*l.*; Sir Henry Martin, Bart., of Tunbridge Wells, 35,000*l.*; Lady Rodd, 35,000*l.*; Lady Caroline Bathurst, 18,000*l.*; Mr. Farnell, of Isleworth, 250,000*l.*; Mr. Henry Raikes, of Chester, 100,000*l.*; Rev. Canon Maltby, 40,000*l.*; Mr. George Hitchcock, silk mercer, of St. Paul's Churchyard, 60,000*l.*; Mr. Richard Marshall, head of the publishing firm of Simpkin & Marshall, 70,000*l.*; Mr. William Crake, of Stanhope Street, Hyde Park, 140,000*l.*; Mr. James Willis Goodwin, of Leicester, brewer, 20,000*l.*; Mr. John George Waite, of High Holborn, seedsman, 50,000*l.* It is stated that the late Duke of Cleveland has left Mr. Morgan Vane, a distant relative, residuary legatee, which is in effect a bequest to him of about half a million of money. Lord William Powlett, as heir to the late Duke of Cleveland, is also stated to have given up the Powlett estates, worth, it is believed, about 25,000*l.* a year, to his younger brother, Lord Harry Vane, M.P. for Hastings.

BIRTHS.—On the 28th ult, at Croxton Park, Cambs., the Lady VAUGHAN, of a daughter—25th ult, at the Embassy, Paris, Lady ROYSTON, of a daughter—29th ult, at 40, Queen's Gate Terrace, the Lady AUGUSTA FIENNES, of a son—22d ult, at 66, Westbourne Terrace, the Hon. Mrs. HENRY PETRE, of a daughter—24th ult, at Craigdarroch, Dumfriesshire, the Hon. Mrs. JAMES DORMER, of a son—24th ult, at Albury, Guildford, the Hon. Mrs. NEWDIGATE BURNE, of a daughter—28th ult, at Gowran Grange, Naas, the Baroness DE ROBECK, of a son—2d inst, at 43, Portland Place, Lady DUKE, wife of Sir JAMES DUKE, Bart., M.P., of a daughter.

MARRIAGES.—On the 24th inst, at Leixlip Castle, county Kildare, ARTHUR CANE, Esq., of Collinstown, county Dublin, to Miss STEVENSON, eldest daughter of the Rev. J. Stevenson, rector of Clonfeacle, and niece to the Marquis of Headfort—27th ult, at St. George's, Hanover Square, HENRY STRENHAM SINGLETON, Esq., of Mell, county of Louth, and Hazeley Heath, Hants, to MARY MONTGOMERIE, eldest daughter of the late CHARLES LAMB, Esq., and sister of Sir Archibald Lamb, Bart., of Beauport, county of Sussex—25th ult, at St. Luke's, Cheltenham, Captain Wm. ADOLPHUS FRANKLAND, R.E., eldest son of Sir Frederick W. Frankland, Bart., to LUCY DUCAREL, eldest daughter of FRANCIS ADAMS, Esq., of Clifton and Cotswold Grange, Gloucestershire.

DEATHS.—On the 23d ult., at Bognor, Sussex, LOUISA ELIZABETH, second daughter of the late Most Rev. JOHN B. SUMNER, Archbishop of Canterbury, aged 57—16th ult, at the Palazzo Santa Croce, Rome, CATHERINE, wife of the Prince SANTA CROCE, eldest daughter of the late Denys Scully, Esq., and sister of Vincent Scully, Esq., M.P.—25th ult, THOMAS BOWES, eldest son of the late Hon. THOMAS HOWARD, aged —23d ult, at Cantley, FRANCIS, infant son of the Hon. W. EDEN—27th ult, at Ketton Grange, Rutland, the Hon. Mrs. GRACE GRANTHAM, relict of Charles Grantham, Esq.—23d ult, at Brighton, Sir CHARLES WAKE, Bart., aged 72—1st inst., at Burlington Road, St. Stephen's Square, Sir THOMAS D. ROBERTS, Bart., aged 59—1st inst, at 8, Queen Street, Mayfair, REGINALD HUNGERFORD, infant son of Sir EDMUND LECHMERE —22d ult, at 19, Chesham Place, CAROLINE, second daughter of the late Sir GEORGE WOMBWELL, Bart.—26th ult, at Cavendish Hall, HARRY SPENCER WADDINGTON, Esq., late M.P. for West Suffolk, aged 82—20th ult., at Rome, AGNES, widow of Major-General JOHN FREMANTLE, C.B.—29th ult., of apoplexy, at his lodgings, Quadrant, Regent Street, Colonel HUGH BROWN, late H.E.I.C. service, aged 66—21st ult, at Portsquay, Lieutenant-Colonel H. S. OLIVIER, of Potterne, Wilts, aged 68—29th ult, at Castle Connell, county Limerick, NICHOLAS HENRY CORNWALLIS VANSITTART, second son of Captain Spencer Vansittart—24th ult, at Pau, WILLIAM TAYLER, Esq., her Majesty's Vice-Consul at that place—9th ult, at Ilford Manor, near Bradford-on-Avon, WM. W. ROUS, Esq., J.P. for the county of Wilts, and formerly captain of Her Majesty's 47th Regiment, aged 48—28th ult, at 31, Bury Place, after a very short illness, ROBERT BIDDULPH, Esq., banker of Charing Cross and Ledbury, Herefordshire—24th ult, at Christ's College Lodge, Cambridge, FRANCES ELIZA, wife of the Rev. Dr. CARTMELL, aged 29—25th ult, the Rev. CHARLES KENDAL, rector of Brindle, Lancashire, aged 67—3d ult, at the Rectory, Spanish Town, the Rev. GEORGE JOHNSTONE HOPEFIELD, M.A., rector of St. Catherine's, and acting archdeacon of Middlesex, Jamaica, fourth son of the late Captain Hopefield, R.N.—20th ult, suddenly, at Croydon Rectory, Cambridgeshire, the Rev. RICHARD S. B. SANDILANDS, M.A., Christ Church, Oxford, rector of Croydon, aged 73—29th ult, the Rev. JOSEPH ARKWRIGHT, of Mark Hall, Essex.

Markets.

POTATOS.—SOUTHWARK, Monday, Feb. 29.

During the past week the arrivals coastwise have been more moderate, and about an average by rail. The trade for best fresh samples has been a shade better, but stale or secondrate stuff is still a drug. The following are the quotations:—Yorkshire Flukes, 70s. to 90s. per ton; do. Regents, 50s. to 70s.; do. Rocks, 45s. to 50s.; Dunbar Regents, 70s. to 75s.; North Berwick Kent and Essex Regents, 50s. to 70s.; North Berwick Regents, 50s. to 60s.; Perth, Forfar, and Fifeshire Regents, 45s. to 50s.; do. do. Rocks, 40s. to 45s.

COAL MARKET.—March 2.

Cowpen Hartley, 14s. 9d.; Davison's West Hartley, 14s. 6d.; Lambert's West Hartley, 14s. 6d.; Wylam, 17s.; Walls End Riddell, 16s.; Walls End Wharncliffe, 16s.; Eden Main, 17s.

Walls End Braddylls Hetton, 17s. 3d.; Walls End Haswell 18s. 6d.; Walls End Hetton, 18s. 6d.; Walls End South Hetton, 18s. 6d.; Walls End Stewarts, 18s.; Walls End Tunstall, 16s. 6d.; Walls End Hartlepool, 18s. 3d.; Walls End Heugh Hall, 17s. 9d.; Walls End Kelloe, 17s. 6d.; Walls End East Hartlepool, 18s. 6d.; Walls End South Hartlepool, 17s. 3d.; Walls End South Kelloe, 17s 9d.; Walls End Trimdon Hartlepool, 18s. 3d.—Ships at market, 62.

COVENT GARDEN, March 5.

Vegetables and Fruit in season continue to be pretty well kept up. Retarded Hothouse Grapes are, however, scarce, but some good new ones may now be had. Blenheim Orange, Nonpareil, and American New Town Pippin Apples may still be obtained; likewise a few dessert Pears. Oranges are plentiful; the best are realising from 6s. to 10s. per 100. Cornish Broccoli is still largely supplied. Continental arrivals are heavy; among them are French Lettuces, Endive, Carrots, and Radishes. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Oranges, per 100, 2s 6d to 8s
Grapes, new, per lb., 15s to 20s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Kent Cobs, 140s per 100 lbs.
Pears, per doz., 6s to 12s	Almonds, do., 18s
Strawberries, p. oz., 2s 6d to 4s	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 8s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Cucumbers, each, 2s to 5s
Cauliflowers, each, 3d to 6d	Beet, per doz., 1s 6d
Asparagus, p. bundle, 10s to 18s	Shallots, per lb., 10d
French Beans, p. 100, 3s to 3s 6d	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s to 2s 6d	Garlic, per lb., 8d
Rhubarb, p. bundle, 9d to 1s 6d	Lettuces, each, 1d to 4d
Potatos, York Regents, p. ton, 60s to 80s	Endive, per score, 1s to 2s
,, Shaws, do., 50s to 60s	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 4d to 6d	Mushrooms, p. pott., 1s to 1s 9d
Carrots, do., 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, March 3.

Prime Meadow Hay	75s	to 80s	Clover, old	90s	to 110s
Superior do. ..	84	87	Do. second cut ..	—	—
Inferior do. ..	60	70	New Clover ..	—	—
New do.	—	—	Straw	24	30
Rowen	—	—			

HARVEY & EASTON.

CUMBERLAND MARKET, THURSDAY, March 3.

Sup. Meadow Hay ..	84s	to 92s	Inferior Clover ..	80s	to 92s
Interior do.	65	76	New do.	—	—
New do.	—	—	Straw	82	36
Superior Clover ..	100	110			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, March 3.

Fine Meadow Hay ..	80s	to 84s	Prime 1st cut Clover	105s	to 108s
Inferior do.	75	80	Inferior do. do. ..	90	100
Prime New Hay ..	—	—	New 1st cut do. ..	—	—
Inferior	—	—	Prime 2d cut do...	95	100
Straw	27	30	Inferior do.	90	95

BRITISH WOOLS.—LONDON, March 4.

The state of the trade remains the same. Deep-grown wool commands full rates, but Down and short wool continue neglected, except for immediate requirements.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	9	to	1	10	Leicest. Wethers	1	9½	to	1	10
Half-bred ditto..	1	11	—	2	0	Ditto Hoggs ..	1	10½	—	1	11½
Down Ewes ..	1	8	—	1	9	Combing Skins	1	4	—	1	8
Kent Fleeces ..	1	11	—	..		Flannel Wool ..	1	4	—	1	6
						Blanket ditto ..	0	9	—	1	0

NEWGATE.—March 4.

Best Fresh Butter .. .. 15s. per dozen lbs.
Second do. do. .. .. 13s. ,,
Pork, 4s. 4d to 4s. 8d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, March 4.

Messrs. Pattenden & Smith report the demand for consumption continues steady, without any alteration in prices.

METROPOLITAN CATTLE MARKET.

MONDAY, Feb. 29.

The supply of Beasts has considerably increased, and the weather is very unsettled; buyers are consequently very cautious. Prices are lower, and a clearance cannot be effected. The number of Sheep is not quite so large as on Monday last, but the demand is considerably smaller. Trade is very slow, and on the average prices are lower. There are a few more Calves, but there is very little alteration in the trade. From Germany and Holland there are 980 Beasts, 2340 Sheep, 155 Calves, and 90 Pigs; from Scotland, 320 Beasts; from Ireland, 195; and 2610 from Norfolk and Suffolk.,

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 5	0	Best Long-wools.	5	0	— 5	4
Best Short-horns	4	6	— 4	8	Do. Shorn	—		—	..
2d quality Beasts	3	0	— 3	10	Ewes & 2d quality	4	0	— 4	6
Best Downs and Half-breds ..	5	6	— 5	10	Do. Shorn	—		—	..
Do. Shorn	—		—	..	Lambs	—		—	..
					Calves	3	6	— 5	2
					Pigs	3	6	— 4	8

Beasts, 4430; Sheep, 17,840; Calves, 163; Pigs, 440.

THURSDAY, March 3.

The number of Beasts is rather smaller than on Thursday last; the demand is very limited, and Monday's quotations are barely maintained. The supply of Sheep is about the same as of late. A large proportion of the better descriptions are shorn, and the weather is very unfavourable for them. Trade generally is dull at our quotations. Calves are selling as on Monday. Our foreign supply consists of 370 Beasts, 1280 Sheep, and 204 Calves. Milch Cows, 90.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 4	10	Best Long-wools.	5	2	— 5	6
Best Short-horns	4	4	— 4	8	Do. Shorn ..	4	4	— 4	8
2d quality Beasts	3	0	— 3	8	Ewes & 2d quality	4	4	— 4	8
Best Downs and Half-breds ..	5	6	— 5	10	Do. Shorn ..	3	8	— 4	0
Do. Shorn ..	4	8	— 5	0	Lambs	—		—	..
					Calves	3	6	— 5	2
					Pigs	3	6	— 4	8

Beasts, 1020; Sheep, 3750; Calves, 253; Pigs, 110.

MARK LANE.—MONDAY, Feb. 29.

The supply of Wheat from Essex and Kent to this morning's market was small, and the condition generally affected by the weather. It met a slow sale at the prices of this day se'nnight. The market was only moderately attended, and business during the greater part of the day was interrupted by a dense fog. With the exception of a purchase or two of foreign Wheat on speculation, transactions were not general, and we do not alter our quotations. The quantity of Barley offering was large and the demand very limited; last week's prices were unobtainable. Beans and Peas were 1s. per qr. cheaper. The Oat trade was very heavy, and to effect sales it was necessary to submit to a decline of 6d. per qr. Flour met but little inquiry.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	42	—48	Red	40	—48
— — fine selected runs .. ditto	44	—52	Red	40	—48
— — Talavera	48	—54			
— Norfolk	—		Red	—	
— Foreign	36	—54			
BARLEY, grind. & dist., 25s to 27s .. Chev.	34	—38	Malting ..	29	—33
— Foreign .. grinding and distilling	22	—26	Malting ..	28	—32
OATS, Essex and Suffolk	18	—22			
— Scotch and Lincolnshire—Potato	20	—25	Feed	18	—22
— Irish .....Potato	19	—22	Feed	—	
— Foreign .....Poland and Brew	17	—22	Feed	15	—20
RYE	30	—32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....27s to 36s...Tick	30	—33	Harrow ..	30	—33
— Pigeon .... 32s to 40s.. Winds.	—		Longpod	—	
— Foreign .....Small	36	—42	Egyptian	30	—32
PEAS, White, Essex and Kent.. Boilers	32	—34	Suffolk ..	33	—35
— Maple .... 30s to 34s .... Grey	28	—30	Foreign ..	32	—35
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered .. per sack	35	—40			
— 2d do ..... ditto	28	—34	Country ..	28	—34
— Foreign ..... per barrel	15	—25	Per sack	32	—42

FRIDAY, March 4

The weather since the 26th ult., with the exception of a few hours of sunshine on two or three days, has been raw and damp or rainy with easterly winds, changing from N. to S., and back again to-day to S.W. During the above period speculative purchases to a considerable extent have been made of Wheat from the Black and Azov Seas, and also of Maize for shipment in June, July, and August; but the general trade to consumers has remained uninterruptedly dull throughout the kingdom, with a downward tendency in the prices of all grain and Flour. Since Friday last 8 vessels have been reported off the coast. There has been no inclination to purchase cargoes off the coast or near at hand, but Wheat for forward shipment is inquired after, and has been bought largely at improving rates; also in Maize some extensive transactions have taken place for future shipment at firm prices. Paris, March 3.—Flour: notwithstanding holders are willing to accept about 1s. per sack less money, very little business has been done. The six marks for delivery this month are quoted equal to 32s. 6d. per 280 lbs. The present stock is estimated at 14,610 cwt. Wheat is slow at 9d. to 1s. per 480 lbs. decline. The arrivals of British Oats during the week have been good, of all other grain small. The attendance at to-day's market was very limited, and the business transacted in all articles was insignificant, and at Monday's prices.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	770 qrs.	1860 qrs.	1550 qrs.	2060 sks.
Irish	—	—	2500	— ,,
				1920 ,,
Foreign ..	2880 ,,	2370	7230 ,,	— brls

LIVERPOOL, March 1.—At our market to-day the Wheat trade was dull, with only a limited business at a decline of 1d. per cental on the week. Oats unchanged. Barley and Peas only saleable in retail. Egyptian Beans 3d. per qr. cheaper. Indian Corn met a slow retail sale at 3d. per qr. decline. Oatmeal neglected and rather lower. Flour inactive, and prices inclined in favour of buyers.

FRIDAY, March 4.—The market was moderately attended. Wheat inactive, at 1d. to 2d. decline per cental. Flour dull at easier rates. Indian Corn 3d. lower. Egyptian Beans steady. Oats and Oatmeal dull.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Jan. 23	41s 3d	32s 5d	18s 9d	28s 0d	33s 8d	32s 8d
— 30	40 8	32 1	18 11	31 8	33 3	32 10
Feb. 6	40 4	32 0	18 9	29 0	33 8	33 0
— 13	40 8	31 11	19 1	29 1	33 7	33 7
— 20	41 1	32 0	19 8	28 19	33 2	33 5
— 27	40 6	32 0	19 4	29 0	33 1	32 9
Agg. Aver.	40 9	32 1	19 1	30 11	33 5	33 0

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Jan. 23.	Jan. 30.	Feb. 6.	Feb. 13.	Feb. 20	Feb. 27.
41s 3d—		..	..	..	..	..
41 1	..	..	..	..	..	..
40 8	..	..	..	..	..	..
40 6	..	..	..	..	..	
40 4	..	..	..	..	..	..
—	..	..	..	..	..	..

JAMES KAYESS, of West Ham Abbey, near London, in answer to the numerous Applicants for the VACANCY of an UNDER GARDENER, informs them that he has CHOSEN one of the number.

To Drainage Surveyors.

THE WEST of ENGLAND DRAINAGE COMPANY is desirous of engaging the services of a GENTLEMAN fully competent to Plan, give Instructions for, and Superintend the Execution of Works of Drainage and Land Improvements. Applications, stating age, qualifications, and salary expected, to be made on or before Saturday, March 19, by letter addressed to the Secretary, FREDERICK BRODIE, Castle Street, Exeter.

B. S. WILLIAMS, Paradise Nursery, Holloway, is in WANT of a competent PACKER.

WANTED, as GROUND FOREMAN, an energetic active young Man, who has a thorough knowledge of his profession.—Apply, by letter only, stating terms, age, &c., to S. GLENDINNING & SONS, Chiswick Nursery, London, W.

WANTED, a GARDENER, early in March, who thoroughly understands the cultivation of Vines, Hothouse, Greenhouse, and Outdoor Plants. A middle-aged married Man without children is preferred. None need apply who have not occupied a similar situation during the last three years at least, with a good character.—Apply personally or by letter, stating wages, &c., to G. NEUMANN, Esq., Tracey House, Honiton, Devon.

WANTED IMMEDIATELY, as BOOK-KEEPER and ASSISTANT SALESMAN, a thoroughly steady man, having a knowledge of the Garden and Agricultural Seed Trade. None need apply whose character will not bear scrutiny. A married man preferred.—Address M., care of Messrs. Hurst & Son, Leadenhall Street, London, E.C.

To Nurserymen.

WANTED, a YOUNG MAN to assist in the General Work of a Nursery; must be quick at Potting and Tying.—Apply to Mr. THOS. TOWNSEND, St. Mary's Nursery, Hornsey, N.

WANTED, as UNDER CLERK or SHOPMAN, a young Man from 18 to 20; one who has a good knowledge of Book-keeping, is a good Penman, and who would make himself generally useful.—Application to BRIDGWATER AGE, Seed Merchant, Southampton.

WANTED, as SECOND SHOPMAN, an active, persevering Young Man for the Seed Trade. Must be a good Salesman, and of good address.—H. BROWN, 4, Commutation Row, Liverpool.

WANTED, an APPRENTICE in a Seed and Corn Warehouse, about 16 or 17 years of age; to live with employer on the premises.—Apply for further particulars to F. P. B., *Gardeners' Chronicle* Office, W.C.

WANTED, a YOUNG MAN, not under 16 years of age, to assist in the Houses; one who is quick in Tying, Potting, Watering, &c.; none need apply who has not been accustomed to the same.—Address, JAMES OVER, Florist, Mitcham Common, Surrey.

WANTED, a strong, active Youth as PORTER, and to make himself generally useful, to assist occasionally in a Seed Shop and Nursery near London.—Apply by letter to H. C., care of Mr. Sherman, Seedsman, &c., Newington Butts, London, S.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Thoroughly competent in all the various branches of Gardening, with the charge of men, &c.—G. H., Mr. Webb, Mapledurham, Oxon.

GARDENER (HEAD).—Age 35, married, no incumbrance; thoroughly practical. Character unexceptionable. A. B., Post Office, Gravelly Hill, Birmingham.

GARDENER (HEAD).—Age 30, single; thoroughly understands his profession in all its branches; left his last employer on account of his giving up the establishment. Unexceptionable character.—K. N., Post Office, Ipswich.

GARDENER (HEAD).—Middle-aged, single; understands Pines, Vines, Hothouse and Greenhouse Plants; a good Kitchen Gardener, Five years' character.—T. E., 7, Queen's Road West, Chelsea, S.W.

GARDENER (HEAD).—Age 39, married; a thorough practical and trustworthy Man. Three and a half years' good character.—D. D., 4, Catherine Street, Caledonian Road, Islington, N.

GARDENER (HEAD).—Age 40, married, no incumbrance; understands the Treatment of Orchard House, Greenhouse, Vinery, Cucumbers, Melons, Kitchen and Flower Gardens, Pines, &c.—JOHN HARRIS, Maesmawr Hall, Welshpool.

GARDENER (HEAD).—Age 32, married; thoroughly practical, hardworking, active, and energetic. Satisfactory testimonials as to character and abilities.—DOWNIE, LAIRD, & LAING, Stanstead Park, Forest Hill, S.E.

GARDENER (HEAD).—Age 35, native of Scotland; competent.—First-class testimonials can be given; his Wife can assist in the Dairy, if required.—W. E., Mr. Langley's, Estate Agent, Stamford.

GARDENER (HEAD), where one or two more are kept.—Age 30, single; understands the Management of Cattle and Land, a good Flower, Fruit, and Kitchen Gardener, can grow Early Cucumbers and Melons. Six years' character.—G. L., 10, Park Side, Knightsbridge.

GARDENER (HEAD) to any lady or gentleman.—Age 34, single; thoroughly practical. Eight years' good character, and satisfactory reason for leaving last situation. No single-handed place accepted.—G. G., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD), to any lady or gentleman in want of a thorough practical working man.—Age 30; has lived three years in his present situation, as Foreman, and can refer to former places.—W. LUDMAN, The Gardens, Bishopstoke, Winchester.

GARDENER (HEAD). — Thoroughly understands growing Pines, Vines, Stove and Greenhouse Plants, the Management of Flower and Kitchen Gardens. A good knowledge of Land and Stock. Character will bear the strictest inquiries. — Y. Z., Thurlow Cottage, Thurlow Park, Lower Norwood, S.

To Noblemen and Gentlemen.

GARDENER (HEAD).—Age 35, married; good experience in Forcing Fruits, Flowers, and Vegetables, Stove and Greenhouse Plants, and Kitchen and Flower Gardening, &c. Five and a half years' good character from his present employer.—J. GILBY, Weston, Shifnal, Salop.

GARDENER (HEAD).—Age 35, single; thoroughly understands his profession in all its branches; also a good practical knowledge of Erecting and Heating Horticultural Buildings. Eight years' first class recommendation. No single-handed place accepted.—W. S., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Age 35, unmarried, with family; a first-class Pine and Vine Grower; also Orchideous Stove, and Greenhouse Plants, and a good Kitchen and Flower Gardener, having lived as Head Gardener 14 years in the last two situations. Eight years' good character.—H. S., E. Handcock, 10, Albion Place, High Road, Lee, Kent.

GARDENER (HEAD).—Age 30, unmarried; Mr. GEORGE GORDON will be disengaged at Mayday next; he thoroughly understands the Management of Orchids and other Rare Plants, the Growing of Pines, Grapes, Peaches, and everything belonging to a first-class Establishment. To save trouble, no Single-handed place will be accepted.—Messrs. JACKSON & Co., Bedale, Yorkshire.

GARDENER (HEAD).—Age 30, married; is at liberty to engage with any nobleman or gentleman requiring a thorough practical Gardener. Understands the Early and Late Forcing of all kinds of Fruits, Flowers, and Vegetables; is a good Grower of Stove and Greenhouse plants; also an excellent Flower and Kitchen Gardener. Good reference for character and ability.—S. M., 3, Fort Place, Highbury Vale, N.

GARDENER (HEAD).—Middle-aged, married, no incumbrance; thoroughly understands the management of Pines, Vines, Peaches, Melons, Stove and Greenhouse Plants, Flower and Kitchen Gardens, and Early Forcing of Fruit and Vegetables. Of great practical experience. Character will bear the strictest investigation. No single-handed place accepted.—J. B., Messrs. James Carter & Co., 237, High Holborn, London, W.C.

GARDENER (HEAD).—Age 32, married, no incumbrance.—WM. WOOD & SON have now the opportunity of recommending to any Lady or Gentleman requiring a really first-class Gardener, as above, a person who is in every way eligible to take a first-rate situation. He possesses a thorough knowledge of his profession in all its branches, an excellent Forcer of Early Fruits, &c. Can be highly recommended by the gentleman he is about leaving.—WM. WOOD & SON, Maresfield, Uckfield, Sussex.

GARDENER (HEAD), middle-aged, married, two children.—WM. WOOD & SON are particularly desirous of recommending to the notice of any lady or gentleman in want of a really first-class Gardener, a man of great experience in every branch of his profession, having served with great credit for the space of 18 years the late father of his present employer, who will have great pleasure in giving him a most exemplary character.—Address WM. WOOD & SON, Maresfield, Uckfield, Sussex.

GARDENER (HEAD), or FOREMAN, in a nobleman's large Establishment.—Age 25, single; thoroughly understands his profession; has had several years' experience in noblemen's gardens; also passed two years as pupil at Mr. Van Houtte's Royal Horticultural College, Ghent, Belgium. Unexceptionable character.—C. H., Gardens, Bridge Castle, Tunbridge Wells, Kent.

GARDENER (HEAD, or good SINGLE-HANDED).—Age 23, married, no incumbrance; thoroughly experienced in all its branches. Character will bear the strictest inquiries.—O. M., 38, Novill Terrace, Hornsey Road, Holloway, N.

GARDENER.—Mr. H. MAY, Gardener to the Viscount Barrington, Beckett, Shrivenham, can with confidence recommend his Foreman to any lady or gentleman in want of a competent Gardener. Has had 11 years' experience. Two years' character from present situation.—Direct as above.

GARDENER (or SECOND), where four or five are kept.—Age 22, single; thoroughly understands his profession in all its branches; can have three years' good character.—G. W., Post Office, Cobham Terrace, Greenhithe.

GARDENER (UNDER), or as FOREMAN.—Age 22, single; well experienced in all branches of Forcing, likewise the Cropping of Kitchen Garden, and the Management of Flower Gardens. Five years and a half good character from his last employer.—JAMES TRIMMER, Mr. Standish, Royal Nursery, Ascot, Berks.

GARDENER (UNDER).—Age 25, has had good practical experience in all branches of the profession.—W. R., 53, Upper Conduit Street, Leicester.

GARDENER (UNDER).—Age 21; has a knowledge of Greenhouse, Flower and Kitchen Garden. Two years' character.—Y. Z., Park Street, Hungerford, Berks.

GARDENER (UNDER).—Age 22; has a good knowledge of his profession; no objection to give a small Premium.—Y. Z., 15, Charles Street, St. John's Wood, N.W.

GARDENER (UNDER), where there are three or more kept, to gain improvement.—Age 21. Good character from present employer.—P. C., Warley Place, Brentwood, Essex.

GARDENER (UNDER).—Age 20; has a good general knowledge of Gardening, and would be willing to make himself generally useful. Can have 15 months' good character from last employer.—A. B., Post Office, Hanwell, Middlesex, W.

FOREMAN, to any gentleman's Gardener..—Age 23; can have three years' character from present employer.—M. M., Moor Park Gardens, Rickmansworth, Herts.

To Market Gardeners, Farmers, and Others.

FOREMAN, or CONFIDENTIAL MAN, where perfect knowledge in all branches of the above is required.—Age 38; highly connected with some of the leading firms. First-class references can be given.—G. BROWN, near Phillibrook, Low Leyton, Essex, N.E.

FOREMAN OR GARDENER (SECOND).—Has had excellent practice, and the highest testimonials from Gardeners he has left.—J. B., Downie, Laird & Laing, Stanstead Park, Forest Hill, S.E.

To Nurserymen and Market Growers.

PLANTSMAN (GOOD) and PROPAGATOR, or PROPAGATOR and FOREMAN.—Age 30. Good reference.—N., Herridge's, Nurseryman, Fulham Road, Hammersmith, S.W.

To Nurserymen and Market Growers.

PLANTSMAN (THOROUGH), or PLANTSMAN and PROPAGATOR, Hard and Soft-Wooded.—Mr. QUARTERMAN, Mr. Burtt's, Linkfield Lane, Isleworth.

To Nurserymen.

PROPAGATOR (HARD or SOFT-WOODED).—Age 25; understands London and Provincial trade. Good reference.—A. Z., 137, Esmond Road, Grove Road, Victoria Park, London, N.E.

To Seedsmen and Florists.

A YOUNG LADY, who has just left her situation, where she kept the Books and attended to the Wholesale and Retail Seed and Flower Department, is desirous of an engagement.—W. E., Post Office, Essex Street, Islington, N.

A YOUTH, age 20, wishes for Employment in a nobleman's or gentleman's Garden in any capacity; or in any department of a London Nursery. Has been an Under Gardener for 18 months. Character unexceptionable.—J. MASON, 33, Boone Street, High Road, Lee.

A YOUTH wishes for a situation in a gentleman's Garden, where a first-class Gardener is kept, and where his services would be principally required in the Fruit and Plant Houses. Age 19; can write a very good hand, and can have unexceptionable references and character.—J. D., 17, New Ormond Street, Lambs Conduit Street, London, W.C.

IMPROVER.—10*l.* will be given for about 12 months in a good Garden. Experienced in Forcing.—E. N., 7, Edward Street, Berwick Street, London, W.

BAILIFF, or BAILIFF and GARDENER.—Middle-aged, married, active and energetic; with extensive knowledge in the Breeding and Valuation of Cattle as Farm Stock, including the Management of Horses; would be willing to take the entire Management of a nobleman's or gentleman's Home Estate at a valuation per annum for labour, &c. Unexceptionable references given.—E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

To the Nursery and Seed Trade.

SHOPMAN (UNDER), or SHOPMAN and PLANT SALESMAN.—A respectable Young Man.—T. B., Pridham & Sanders, Sion Nursery, Croydon.

CARPENTER in a Nursery, or on a gentleman's Estate.—Age 20. No objection to Painting and Glazing.—H. F., 4, Ross Villas, Sheen Dale, New Richmond, S.W.

To Noblemen and Gentlemen.

PLUMBER, PAINTER, GLAZIER, &c., on an Estate.—Age 30, married; thoroughly useful and understands his business. Good character.—Z., Mr. Stratton's, 24, Upper Park Place, Dorset Square, St. Marylebone, W.

COWMAN, &c.—Can take charge of Cows, and kill Sheep or Pigs. Wife can take charge of Dairy, with or without Baking; can make Rolls and Butter, Hampshire or Devonshire, or Clotted Cream. Two years' good character.—G. B., Bantley Sottan, Southampton.

DAIRY MAID.—Single; is leaving a first-class situation. Can be highly recommended.—For particulars, stating terms, apply to the HOUSEKEEPER, Cliveden, Maidenhead, Berks.

DAIRY MAID in a small Family.—Age 18; has served as Under Dairy Maid for three years in a nobleman's Dairy, and is quite competent to undertake the charge of one.—Mr. SWANSTON, Cassiobury Park, Watford.

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SEWELL AND CO. have an unequalled display of this elegant Curtain material in the old Indian, the Renaissance, the Louis Quatorze, the Watteauesque, and other designs of grotesque and bizarre character, just received from Paris and Mulhouse.
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DEANE'S—Celebrated Table Cutlery, manufactured in every variety of style and finish.
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CONSTIPATION, Nervousness, Debility, Cough, Asthma, Catarrh, Consumption, Diarrhœa, and all Bilious, Liver and Stomach Complaints are only aggravated and accelerated by drugs of every description, but perfectly curable by DU BARRY'S health-restoring
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There is no danger of chimneys breaking, and the chimney cannot become smoked.
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A REALLY GOOD LAMP.
The above may be obtained of any Lamp Dealer.

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Extra hard S 12 CHAMBER CANDLES, sold in boxes 1*s.* each. Thicker Candles, intended for those who will not have thin.
SHERWOOD ECONOMIC BED-LIGHTS, in packets of Candles for 1*s.*, intended for use where cheapness is a great object, will be found an improvement on the ordinary Candles as they gutter less.
Special CANDLESTICKS to fit thin candles, 1*s.* and 2*s.* each; reducing Sockets, making them fit any candlestick, 2*d.* each.
PRICE'S Patent Candle Company, Limited, London.

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WORCESTERSHIRE SAUCE
This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE,"
Is prepared solely by LEA & PERRINS.
The public are respectfully cautioned against worthless imitations, and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper.
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Forward address on a stamped envelope to W. GOSS, Esq., Epsom, Surrey.

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"Mr. Hunt has transferred these diseases from the incurable class to the curable."—*Lancet.*
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ANOTHER TESTIMONIAL THIS WEEK of CURE of ASTHMA by DR. LOCOCK'S PULMONIC WAFERS.—"21, Silchester Villas, Clarendon Road, Notting Hill, March 1, 1864. Having suffered from asthma and tightness of breath, for the last five years, after trying all kinds of medicine and advice without benefit, one box of Dr. Locock's Wafers gave me immediate relief.—I am, &c. VINE. Witness, T. C. FIELD, 6, Talbot Terrace, Notting Hill."
DR. LOCOCK'S PULMONIC WAFERS give instant relief, and rapid cure of asthma, consumption, coughs, colds, and disorders of the breath and lungs. Price 1*s.* 1½*d.*, 2*s.* 9*d.*, and 11*s.* per box. Sold by all druggists.

The Gardeners' Chronicle Newspaper.

SATURDAY, MARCH 12, 1864,

Exhibition Prize Medal, 1862.

HOTHOUSES for the MILLION.—On the principle invented and patented by Sir Joseph Paxton, M.P., combining simplicity, cheapness, excellence, and durability. Span-roof Houses, painted three coats, and glazed with English Sheet Glass, ready for fixing, 21 ft. by 13 ft., 24*l.*; 43 ft. by 19 ft., 73*l.* 5*s.*; 64 ft. by 25 ft., 161*l.*

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Also, A HANDBOOK on VINE and FRUIT TREE CULTIVATION, 2d Edition, price 1*s.*; post free, 1*s.* 1*d.*

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200 CUCUMBER and MELON BOXES and LIGHTS.

Glazed and Painted Complete, ready for immediate use, Packed and sent to all parts of the kingdom.

LIGHTS for PITS of all SIZES ready for use, kept in STOCK.

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DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water-tight Roof insured.

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For Prospectus, &c., address T. H. P. DENNIS, Horticultural Builder, Hot-Water Engineer, &c., High St. Chelmsford, Essex

Heating by Hot-water.

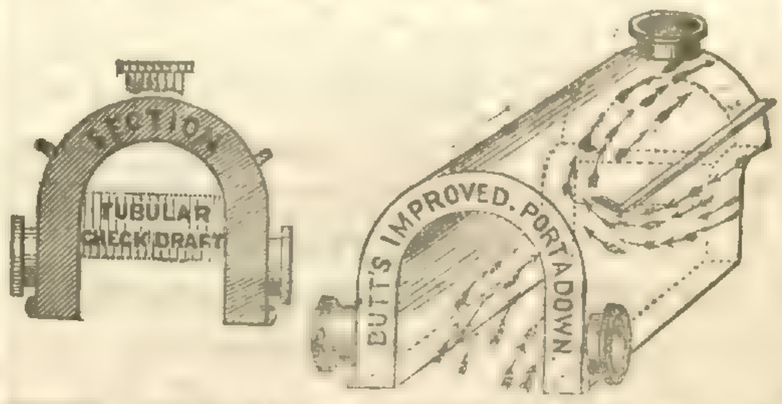

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Gardeners interested in such work should write for LIST of TESTIMONIALS, sent Post Free on application to FREDERICK WILLIAM BUTT (late of London), Portadown, Ireland.

West of England, Ireland, and Wales.

VINCENT SKINNER (*late Partner with* J. WEEKS & Co.), HORTICULTURAL BUILDER and HOT-WATER APPARATUS MANUFACTURER, HEATING on the ONE-BOILER

SYSTEM. Plans and Estimates on application.

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TUBULAR BOILERS,

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RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

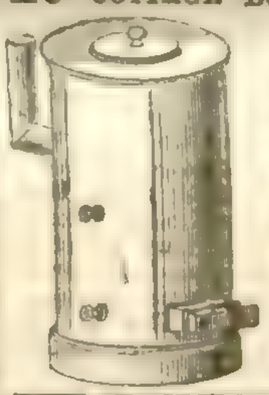

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the

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WARM your CONSERVATORIES, Greenhouses, Pits, Frames, Fern Cases, and Churches, Chapels, &c.—MUSSETT'S PATENT PORTABLE HOT-WATER APPARATUS surpasses everything of the kind, heated and worked with the greatest ease and safety, with a Lamp or Gas, (no Glasses required). Price 2*l.* 10*s.*, complete. An Illustrated List to be had on application, (enclose a stamp).

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HOT WATER PIPES, from Stock, per yard:—2-inch, 1*s.* 4*d.*; 3-inch, 2*s.*; and 4-inch, 2*s.* 7*d.* BENDS, from stock, 1*s.* 7*d.*, 2*s.* 6*d.*, and 3*s.* 3*d.* each. THROTTLE VALVES, 10*s.* 6*d.*, 13*s.* 6*d.*, and 15*s.* each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day.

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LAWN MOWING, ROLLING, and COLLECTING MACHINES.

THE CUTTERS of SHAW'S NEW PATENT LAWN MOWER follow all inequalities of the ground, however uneven it may be, independent of the Pushing Handles, which latter may be raised or lowered to suit the convenience of the workman, without stopping the cutting action or altering its height.

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It occupies less than half the space of any other Mower of equal cutting width, when stowed away, and is therefore safer from accident.

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EVERY MACHINE WARRANTED.

PRICES OF MANUAL POWER MACHINES.

To Cut 12 inches, suitable for a Lady	£4	12	0
To Cut 16 inches, suitable for One Boy	6	10	0
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To Cut 22 inches, suitable for Two Men	8	0	0
To Cut 25 inches, suitable for Two Men	11	10	0

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To Cut 22 inches	8	15	0
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These Prices include Free Delivery to any Railway Station in Great Britain.

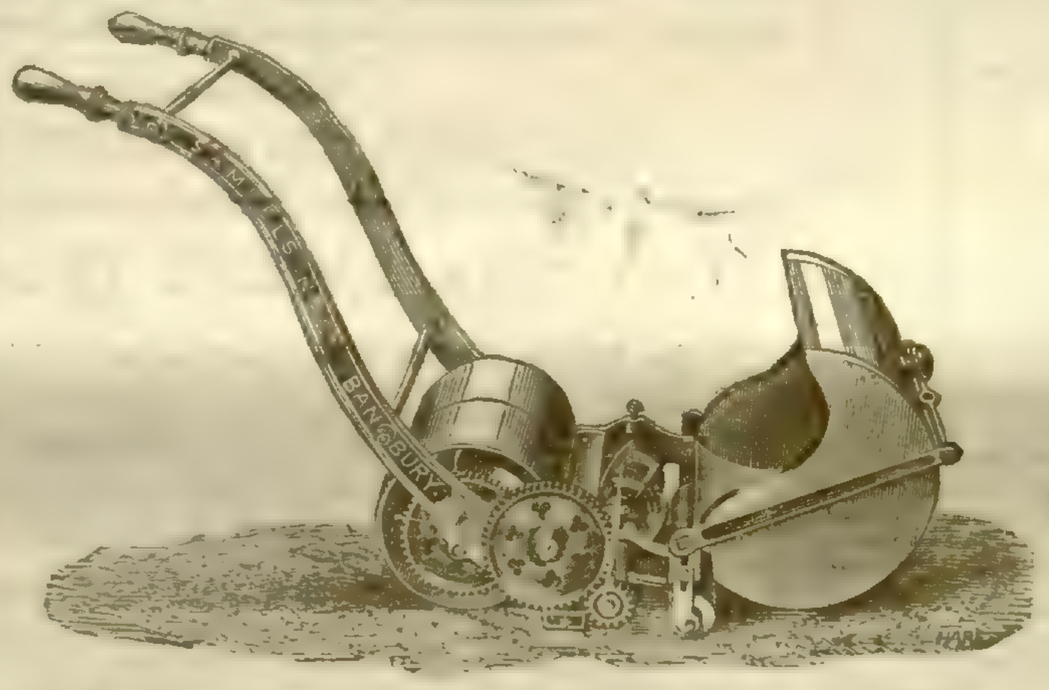

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HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, TUBULAR, and Elliptic, from 24*s.* each. Improved Boilers and Iron Stands to use without brickwork, 56*s.* each. Valves from 10*s.* 6*d.* each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at

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JOSEPH SMITH, HORTICULTURAL BUILDER, New Road, Hammersmith, has for Sale:—SPAN-ROOF HOUSE, 27 ft. by 16 ft. 6 in., price 44*l.*; do., 17 ft. by 10 ft., 25*l.*; do. with Shelves and Hot-water Fittings, 17 ft. by 12 ft., 35*l.*; LEAN-TO, 45 ft. 6 in. by 14 ft., 60*l.*; do., 28 ft. by 12 ft., 33*l.* Twenty-five LIGHTS, 2½ thick, 14 ft. by 5 ft., glazed with 21 oz. glass, at 9*d.* per foot, or the lot for 60*l.*; also Ten, 11 ft. 2 in. by 5 ft., 23*l.*; do. Twenty-five, 7 ft. by 4 ft. 3 in., 22*l.* 10*s.*

CUCUMBER and MELON FRAMES, of an improved make, to take apart.

The above are constructed in the best manner as regards ventilation and strength; warranted of good materials. Glass 21 oz. to the square foot.

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ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

Also TESSELATED PAVEMENTS of more enriched designs than the above.

WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.

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GARDEN FLINTS for Grotto Work, 12*s.* and 14*s.* per Ton.

Paxton Works, Sheffield, Established 1738.

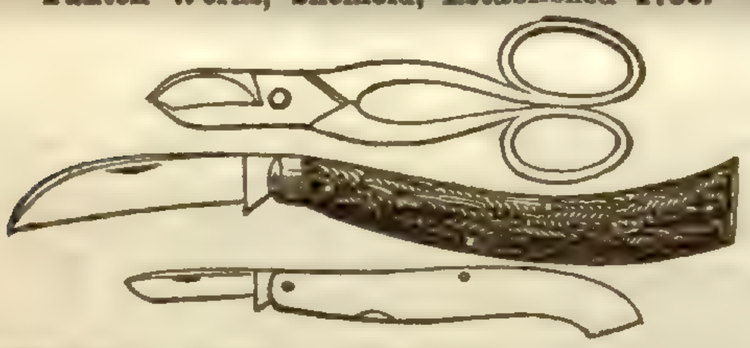

INTERNATIONAL EXHIBITION PRIZE MEDAL WAS AWARDED TO SAYNOR & COOKE FOR SUPERIORITY OF QUALITY IN PRUNING AND BUDDING KNIVES, &c.

SAYNOR AND COOKE'S celebrated English and French Exhibition PRIZE PRUNING KNIVES, &c., can be obtained of any respectable Nurseryman or Seed Merchant in the three kingdoms, all Knives warranted both by the Seller and Maker.

CAUTION.—None are genuine unless marked SAYNOR. Other marks would cause disappointment, as these Knives are tempered by an improved process known only to the Makers.

PATENT WORCESTERSHIRE RANGE.

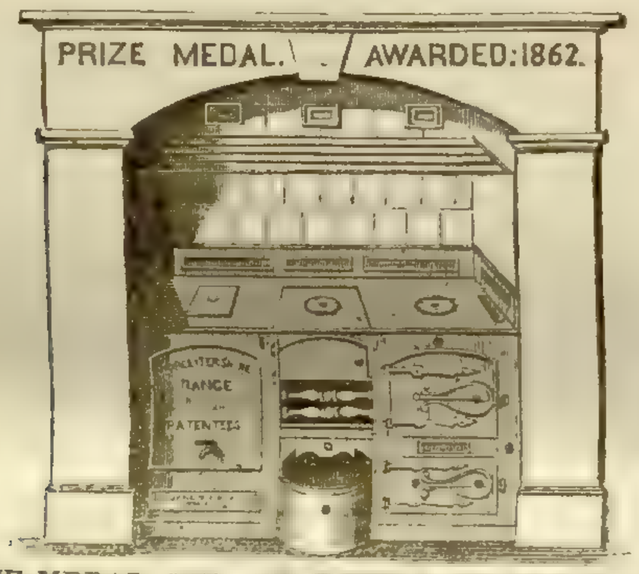

PRIZE MEDAL, 1862, AWARDED for EXCELLENCE.

The above RANGE is most complete, and strongly recommended for its unrivalled ECONOMY, CLEANLINESS, CONVENIENCE, DURABILITY, and is a certain CURE for SMOKY CHIMNEYS.

It is an entirely new invention, and consists of large MEAT ROASTER, PASTRY OVEN, and WROUGHT-IRON BOILER. The top forms a HOT PLATE for BOILING, STEWING, &c. The whole Heated by ONE SMALL FIRE. One 5 feet wide is equal to an ordinary Range 8 feet wide.

Extracted from the *London Daily Telegraph*, May 19, 1862.

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"Of the most recent inventions it should be said that Messrs. JONES & ROWE'S Patent Worcestershire Range has attracted very special attention, and has been commended by the best authorities. A valuable peculiarity of their Ranges is the placing of the OVEN and ROASTER one above the other instead of *side* by *side*; and the ROASTER is constantly replenished with fresh air."

Inventors and Manufacturers, JONES & ROWE, Worcester.

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HORTICULTURAL GLASS MERCHANTS,

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REDUCED PRICES OF SHEET GLASS FOR HORTICULTURAL PURPOSES.

ENGLISH SHEET GLASS.

Packed in Crates of about 280 feet.

	16-ounce.	21-ounce.
Best	5½*d.* ...	7¼*d.*
Seconds	3¾*d.* ...	5*d.*
Thirds	2½*d.* ...	3½*d.*
Fourths	2¼*d.* ...	3¼*d.*

HORTICULTURAL GLASS.

Stock Sizes, 16-ounce. In 100 feet Boxes.

These prices only apply to the sizes stated.

				4ths.	3rds.	4ths.	3rds
				s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
11 by 9	12 by 9	13 by 9	14 by 9				
12 „ 10	13 „ 10	14 „ 10	15 „ 10	10 9	12 3	12 6	14 0
13 „ 11	14 „ 11	..	..				
14 „ 12	15 „ 12	15 „ 11	16 „ 11				
18 „ 12	19 „ 12	16 „ 12	17 „ 12				
16 „ 13	17 „ 13	20 „ 12	21 „ 14	11 6	13 6	13 6	16 0
19 „ 13	20 „ 13	18 „ 13	..				
16 „ 14	17 „ 14	21 „ 13	..	14 to 15 ozs. to the foot.		16 to 17 ozs.	
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HARTLEY'S PATENT ROUGH PLATE GLASS.

Packed in Boxes of 50 feet each.

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6 by 4	and 6⅓ by 4½	...	...	10	6	per box.
7 „ 5	„ 7½ „ 5½	...	...	12	0	„
8 „ 6	„ 8 „ 6⅞	...	...	13	6	„
6 „ 7	„ 9½ „ 7½	and 10 by 8	...	15	0	„

GLASS for ORCHARD HOUSES.

As supplied by us to Mr. Rivers, to the Royal Horticultural Society, and to most of the Nobility, Clergy and Gentlemen of the United Kingdom.

Packed in 100 feet Boxes.

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20 „ 14	Seconds ...	...	English.	English.
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The above prices include the Boxes.

We recommend 3rds quality at 16*s.*, or 21-ounce at 19*s.* (as supplied to Mr. Rivers). Best and Seconds are intended only for pictures or dwelling-houses.

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In 100 feet Boxes.

6 by 4	6½ by 4½	7 by 5	7½ by 5½
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Boxes 2*s.* each, returnable at full price.

All small squares from 6 by 4 to 10½ by 8½ are cut from pieces, consequently there is only one quality.

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In Cases for cutting up, in Sizes as Manufactured.

London Agents for Hartley's Patent Rough Plate.

Perforated Glass for Ventilation.

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Glaziers' Diamonds from 10*s.* to 21*s.* each.

Glass Tiles and Slates in Sheet and Rough Plate. Plate Glass, Patent Plate, and Hartley's Improved Rough Plate.

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GENUINE WHITE LEAD. | ANTI-CORROSION PAINT. | LINSEED OIL PUTTY. | FINE OAK VARNISH. | FINE OAK CARRIAGE. | PATENT DRYERS. | LINSEED OIL. | BOILED OIL.

TURPENTINE.

LEAD in SHEETS or CUT to SIZES, LEAD PIPE, LIFT PUMPS, WATER CLOSETS, and PLUMBERS' BRASS WORK of every description.

PORTABLE HOT-WATER APPARATUS,

WITH TRUSS'S PATENT JOINTS FOR HEATING CONSERVATORIES, HOTHOUSES, &c.

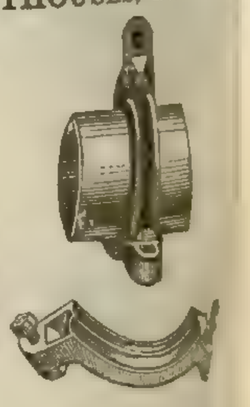

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Begs to offer complete HOT-WATER APPARATUS for GREENHOUSES (consisting of 4-inch Pipes and Joints, Saddle Boiler, Fire Doors, Bars, Soot Doors, Damper, Supply Cistern, Feed and Air Pipes, Pipe Stands, &c., of the best quality), delivered to any Railway Station in England, and to erect the same within 25 miles of London, at the following prices:—

TWO 4-INCH PIPES ALONG ONE SIDE AND ONE END OF HOUSE.

Size of House.	Apparatus complete.	Erection.	Size of House.	Apparatus complete.	Erection
16 feet by 8 feet ...	£8 10 0	£2 0 0	30 feet by 12 feet ...	£11 15 0	£2 10
20 feet by 10 feet ...	8 17 6	2 0 0	40 feet by 15 feet ...	15 0 0	2 15
25 feet by 12 feet ...	10 5 0	2 5 0	50 feet by 15 feet ...	18 0 0	3 0

Erections beyond 25 miles of London, Railway Fare for one Man charged extra.

By the use of these Joints the Apparatus is easily altered or removed without injury to either Pipes or Joints.

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THE PATENT IN-DOOR PLANT CASES

(TO WHICH A PRIZE WAS AWARDED AT THE ROYAL HORTICULTURAL SOCIETY'S EXHIBITION).

SOLE MANUFACTURER,

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The PATENT IN-DOOR PLANT CASE is one of the most useful of the Gardening novelties of the day. It is a handsome ornament for the Drawing Room or Sitting Room, and at all times forms a fresh, pleasant, and interesting object to the mind and eye. It is always under command, and will preserve many of the most tender Exotic Plants through the severest winter with comparatively little of the trouble and annoyance attending the use of Lamps, Gas, and Heating appliances of any other kind.

To all who have a taste for the cultivation of In-door Plants, for raising Seedlings, striking Cuttings, &c., the Plant Cases will be found an inestimable boon.

The Cases are highly approved and recommended by Professor Lindley, and by Messrs. Veitch, of The Royal Exotic Nursery, King's Road, Chelsea.

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T. MILLINGTON'S NEW LIST on application.
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SHAW'S TIFFANY.
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TREES COMING into BLOOM will be protected from Frost, Hail, &c., by using HAYTHORN'S HEXAGON and CHISWICK GARDEN NETS. These Nets will secure the Fruit from Wasps, Flies, Birds, &c. They are recommended by most Gardeners.

For patterns, prices, and testimonials, free by post, please direct Mr. HAYTHORN, Nottingham.

TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from frost, blight, birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

VARNISHED FLOWER STICKS:—1 foot, 3*d.*: 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s.* 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

VISIT to R. S. YATES'S NURSERY.
See *Journal of Horticulture*, Jan. 17, 1862.

"The blooms were protected by a covering of BRITTAIN'S THREE-FOLD NETTING, which shaded them from the sun, kept the bees out, and sheltered them from heavy rains and strong winds. Mr. Yates remarked that this Netting was better than any other covering he had tried, the wind having less hold of it than either canvas or tiffany.

NETTING: No. 1, 5*d.*; 2, 6*d.*; 3, 7*d.* the Square Yard.
PIECES, 30 Yards long, 1½ wide.

To Seed Merchants and Nurserymen.

SAYNOR AND COOKE, PRUNING and BUDDING KNIFE MANUFACTURERS, beg respectfully to say that they WILL NOT BE UNDERSOLD by any House in the Trade. They also warrant one of their Knives to last two of any other make.

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Apply early to BENJAMIN EDGINGTON, 2, Duke Street, London Bridge, S.E. No other Establishment.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, &c.

PROTECTION from the COLD WINDS & MORNING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide .. .. .. 1*s.* 8*d.* per yard run.
Four yards wide .. .. .. 3*s.* 4*d.* per yard.
An improved make, 2 yards wide, 1*s.* 9*d.* per yard.
An improved make, 3 yards wide, 2*s.* 8*d.* per yard run.
Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.

"It is much cheaper than Mats as a covering.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—

"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles. Your obedient servant, G. GLENNY."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump, Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.

The GUTTA PERCHA COMPANY, Patentees, 18, Wharf Road, City Road, London, E.C.

Oil Paint no longer Necessary.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.

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News of the Week.

THE christening of the infant PRINCE of the PRINCE and PRINCESS of WALES took place on Thursday, in the private chapel of Buckingham Palace. HER MAJESTY the QUEEN, the KING of the BELGIANS, and other Royal personages, officiated as sponsors, and the ceremony was performed by the Archbishop of CANTERBURY, assisted by the Bishops of LONDON, OXFORD, and CHESTER, the Deans of Westminster and Windsor, and by the Rector of St. George's, Hanover Square. The QUEEN held the infant PRINCE at the font, and gave his Royal Highness the names of ALBERT VICTOR CHRISTIAN EDWARD.

In the House of Lords on Monday Earl GRANVILLE called attention to the report of the Joint Committee on Metropolitan Railway Schemes, and, in accordance with their recommendation, moved that eight of the Bills introduced in the present session should not be proceeded with. The motion was agreed to. On Tuesday, in answer to the Earl of DERBY, Earl RUSSELL said that, in entering Schleswig at a time when Denmark was ready to concede their demands, Austria and Prussia had commenced a most unjustifiable war. By way of retaliation Denmark had captured German ships, and Austria and Prussia, regarding this as generalising the war, had extended their operations into Jutland. If Denmark acquiesced in the Congress, fresh negotiations would be entered upon; but if she should decline, the war would be continued on a new footing. The Earl of ELLENBOROUGH and Lord STRATFORD DE REDCLIFFE expressed a hope that before the Easter recess the Government would state what was the final decision they had arrived at. Earl GREY said he had read that portion of the papers already delivered with feelings of deep humiliation. Earl RUSSELL said that if Earl GREY thought the Government ought to have acted differently he could move a vote of censure; while, if he thought they ought to rush at once into war, he had only to propose a resolution to that effect. Her MAJESTY's Ministers would not make a war when the safety, interest, integrity, and independence of Denmark could be secured otherwise, and would neglect no means by which that security and independence could be maintained. On Thursday Sir J. LAWRENCE's Salary Bill was read a third time and passed. The Chief Rents (Ireland) Bill passed through committee. The Turnpike Roads Bill was read a second time.

In the Commons on Friday, on the order for the second reading of the Penal Servitude Acts Amendment Bill, Mr. ADDERLEY moved as an amendment that it be read a second time that day six months. After a long discussion the amendment was withdrawn, and the Bill was read a second time. On Monday the adjourned debate on the order for going into committee on the Government Annuities Bill was resumed by the CHANCELLOR of the EXCHEQUER, who in a speech of great length answered the objections urged against the measure by persons connected with assurance offices, friendly societies, loan offices, and similar institutions. He hoped the House would receive the measure with favour, as he was confident

going into Supply, Mr. Hennessy moved a resolution to the effect that it is just and expedient to extend to Ireland the beneficial provisions of the English Poor Law.

[Left sitting.]

City Entelligence.

Money Market, Friday.—British Funds: Consols closed at 91¼ for Money, and 91⅜ for Account; Three per Cents. Reduced, 89⅜ to ⅝; New Three per Cents., 89⅜ to ⅝; Bank Stock, 238½ to ¾; India Five per Cent. Stock, 104½ to ⅝; Ditto for Acct., 104⅝; Ditto Four per Cent. Debentures, 1866, 99; Ditto Bonds, 4s. dis.; Four per Cent. Enfaced Rupee Paper, 93½; Ditto Five and a Half per Cent., 113; Exchequer Bills, 5s. dis. to par.—Foreign: Brazilian, 1852, '58, '60, 87½ to ½; Egyptian, 100 to ½, ex div.; Ditto, second issue, 100 to ½, ex div.; Greek Coupons, for Acct., 10¼; Mexican, for Acct., 42⅛ to 42¼; Portuguese, 1856, &c., for Acct., 48½ to 48; Russian, 1862, 88⅜ to 89½; Spanish New Deferred, for Acct., 46⅛; Ditto Passive, for Acct., 35¾ to ⅞; Ditto Certificates, for Acct., 13⅞ to 13¾; Turkish, 1858, 100*l.* Bonds, 70¼ to 71, ex div.; Ditto 1862, for Acct., 69 to ½; Ditto 100*l.* Bonds, 69½; Venezuela, 1862, for Acct., 59¼ to 60.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,765,310	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	13,115,310
		Silver Bullion	—
	£27,765,310		£27,765,310

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£11,174,584
Rest	3,791,536	Other Securities	20,197,727
Public Deposits including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	8,863,364	Notes	7,738,170
		Gold and Silver Coin ..	769,079
Other Deposits	12,434 975		
Seven days and other bills	536,685		
	£40,179,560		£40,179,560

March 10, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY: *March* 4.—BANKRUPTS.—D. Avison, Pickering, Yorkshire Jobber—T. Abell, sen., Worcester Journeyman Blacksmith—E. Ackroyd, Gildersome, Yorkshire, Colliery Owner—H. Adams, Pond Place, Fulham Road, Chelsea, Mason—M. Archard, Jewry Street, Aldgate, Carman—J. Ashworth, Edwards, Muscovy Court, Tower Hill, City, Commission Merchant—W. Bacon, Duke Street, Lincoln's Inn Fields—W. F. Butcher, Lower Symonds Street, Chelsea, late Photographic Artist—M. Blundell, Brighton, Professor of Music—J. Bussens, Coltishall, Norfolk, Blacksmith—J. Brookstone, Gloucester, Baker—J. L. Bath, Walcot, Bath, Watchmaker—M. Ford, Battersea Square, Battersea, Manager to a Tailor—J. Clifford, Broad Place, Walworth, Cook—R. C. Carrington, Talbot Villas, New Road, Hammersmith, Admiralty Clerk—T. M. Campbell, Mason Street, Old Kent Road, Saddler—M. L. Childe, Wright's Lane, Kensington, Schoolmistress—J. Clarke, Manchester, Butcher—J. Cole, Russell Street, Coventry Street, Carver and Gilder—W. Day, Canterbury, Publican—J. Dewsbury, Lockwood, Yorkshire, Shopkeeper—M. Dawkins, Aylesham, Gentleman, Yorkshire, Grocer—J. Dawson, Middlesborough, Yorkshire, Journeyman Painter—A. Donald, Bury, Lancashire, Bleacher—J. Dones, Baron Street, Pentonville, Plumber—G. M. Eddy, Topsham, Devonshire, Licensed Victualler—Edward Thomas Goldfinch, Freemantle, Southampton, Chemist—George Godbolt, Brockdish, Norfolk, Builder—Thomas William Gidner, Upper Norwood, Baker—J. Hollands and I. Burgess, Leicester, Bootmakers—G. Hare, Thornton Curtis, Lincolnshire, Blacksmith—A. W. Hutchinson, Manchester, Crinoline Manufacturer—J. Hall, Almondbury, Yorkshire, Commission Agent—I. Hepworth, Charles Street, Paddington, Agent and Shipowner—C. Hinson, Euston Road, Builder—J. M. Harrison, Huddersfield, Innkeeper—W. Hewitt, Weston super-Mare, Victualler—G. H. Holding, Manchester, Beer Retailer—I. Ingall, Newark-upon-Trent, Fishmonger—J. Ince, Bromsgrove, Worcestershire, Butcher—E. I. Jenkins, Swansea, Grocer—L. C. Jenkins, Birmingham, Factor—J. C. L. Jarvis, Farnham Surrey—J. W. Knibb, Liverpool, Auctioneer—J. Kelly, St. Helen's, Lancashire, Collector—J. Lewis, Shrewsbury, late Farmer—J. M'Kenzie, Devonshire Street, Bishopsgate Street, City, General Merchant—P. D. Maximos, Great Tower Street, City, Commission Agent—F. E. Moate and P. M'Kinnon, St. George's Street East, Outfitters—G. Meagher, Chatham, Blacksmith—E. P. Middleham, Birkby, Yorkshire, Farmer—W. Mayhew, Oakley Street, Chelsea, Surgeon's Assistant—J. Mawdsley, Castle Northwich, Cheshire, Schoolmaster—J. M'Millian, Epsom, Painter—R. M. Newton, Rugby, Warwickshire, Inn keeper—Richard T. Nash, Deverell Street, Dover Road, Fish Salesman—John Poland, late of Brecknock Crescent, Camden Town, Dealer in Fancy Goods—Mary Ann Payne, Hove, Sussex, late Beer Retailer—Isaac Sudbury Parkins, Blackburn, Lancashire, Commission Agent—J. L. Percy, Roehampton Place, Vauxhall Bridge Road, Builder—A. Russell, Gateshead, Durham, Lodging House Keeper—J. J. Rust, Goswell Road, Clerkenwell, Tailor—A. G. Rowbotham, Milton Terrace, Wandsworth Road—J. Slater, Draycott, Derbyshire, Journeyman Machine Smith—W. Snelson, Liverpool, Joiner—A. M. Stanier, late of the Minories, City, Merchant—J. Smith, Southsea, Hants, Caulker—T. Smith, Sheepshed, Leicestershire, Saddler—W. Snelson, Crewe, Cheshire, Dealer in Game—T. Shaw, Staley, Cheshire, Farmer—G. Terrett, Droitwich, Worcestershire, Seedsmen—J. H. Thornton, New Church Street, Lisson Grove, Jeweller—C. Williamson, Paddock, Yorkshire, Chemist—T. Webb, Wolverhampton, Licensed Victualler—W. Williams, Carmarthen, Shoemaker—H. Ward, Sheffield, Potato Dealer—S. Wibberly, Calverton, Nottinghamshire, Butcher—W. A. Wilson, Liverpool, Engineer—H. Whittington, Egmonton, Nottinghamshire, Farmer—C. Woodhead, Manchester, Draper—John Westlake Wainwright (sued as John Wainwright), Marylebone Road, Marylebone, Clerk of the Works of the Hampden Gurneys School.

TUESDAY: *March* 8.—BANKRUPTS.—W. Attaill, Sandown, Isle of Wight, Builder—A. Aird, late of Hamilton Mews, Queen's Road, Bayswater, Labourer—J. Akrill, Horncastle, Lincolnshire, Boot and Shoe Maker—W. Ashford, Kingston-upon-Hull, Fisherman—W. Atkins, Ironmonger Row, Old Street, St. Luke's, Carpenter—W. Bull, Ripley, Surrey, Inn and Draper—W. H. Bretton, Steeple Aston, Oxfordshire, Victualler—J. Beavis, Park Terrace, Regent's Park, Cabinet Maker—A. Bowden, Hanover Street, Glass Merchant—J. Bettle, Berkhampstead, Hertfordshire, Schoolmaster—H. J. Beauchamp, Warner Place, Hackney Road, Paper Stainer—J. E. Bramley, Coronation Place, High Street, Stoke Newington, House Decorator—C. Bower, Bakewell, Derbyshire, Licensed Victualler—W. Butler, Birmingham, Sword Scabbard Maker—J. Booth, Rawtenstall, Lancashire, Cabinet Maker—J. L. Barker, Hanley, Staffordshire, Beerhouse Keeper—W. Blakeway, Harborne, Staffordshire—M. A. Borfield, Llangattock, Brecon, Widow—D. Brooks, High Street, Poplar, Beer Retailer—J. E. Bryan, Daventry, Northamptonshire, late Inn-keeper—E. Cottam, Shrewsbury, Grocer—R. Cole, Hulme, Manchester, Boot and Shoe Maker—E. T. de la Cournerve, Cardiff, Glamorganshire, Ship Broker—E. B. Cork, Stratford, Essex, Journeyman Baker—J. F. Chandler, Brixton, Florist—J. Crixson, Raglan, Monmouthshire, Keeper of Raglan Castle—G. Clarke, Alton, Hampshire, Licensed Victualler—J. Costar, late of Shepherd Street Tenter Ground, Spitalfields, Licensed Victualler—J. H. Dawson, Birmingham, Baker—W. Darby, Rotherfield, Sussex, Dealer in Cattle—W. B. Davies, Union Court, Old Broad Street, Attorney—H. Day, Weston super Mare, Somersetshire, Cabinet Maker—E. Davies, Bagillt, Flintshire, Licensed Victualler—J. Ellis, late of Leicester Square, Refreshment House Keeper—T. Errett, Hexham, Northumberland, Farmer—William Joseph Mortimer Foxcroft (sued as William Foxcroft), late of St. John's Road, Clerkenwell, Cabinet Maker—B. Farren, Colchester, Essex, Plumber—M. H. Ford, Bradford, Yorkshire, Linen Draper and Milliner—G. R. Ertaat & T. J. Gatehouse, Mark Lane, City, Engineers—A. Grand, Scarborough Yorkshire, Fisherman—J. Grainger, City Road, Carpenter—W. H. Griffiths, Chipping Camden, Gloucestershire, Attorney—H. Gore, Hereford, Rope Maker—A. Harrison, Birch Vale, Derbyshire, late Cook—J. Heath, Peterborough, Sussex, Farmer—J. Ham, New Union Street, Cripplegate, Workin' Cabinet Maker—J. Jacobs, Norwich, Butcher—J. Jennings, Birmingham, Mark Setter—J. Lett, late of Nicholas Lane, City, Solicitor—M. Levy, Birmingham, late Tailor—H. Matthews, Sunderland, Haberdasher—J. Morgan, St. Helen's, Lancashire, Beerhouse Keeper—E. Melling, Farnworth, Lancashire, Belt Manufacturer—M. Myers, Dale End, Birmingham, Tobacconist—John Nixon, Newcastle-upon-Tyne, Photographer and Lath Render—Allaklehia Perrmohamed, King William Street, City, Merchant—James Pilchell, Speen, Berkshire, Farmer—Thomas Lockhart Reid, Coventry, late Seedsman—Richard Roberts, Bangor, Carnarvonshire, Writing Slate Manufacturer—J. Roberts, Upnor, Kent, Manufacturer of Terra Cotta—A. Rayford, Cambridge, Butcher—W. Sexton, Colchester, Essex, Pork Dealer—J. Shelley, Birmingham, Draper's Manager—W. Stenseby, Aldermanbury Walk, New Broad Street, Silk Broker—J. Symmonds, Wilnecote, Warwickshire, late Beerhouse Keeper—J. Shepherd, Upton-upon-Severn, Worcestershire, Coal Merchant—W. Shapcott, Bolton Road, Kensington, Boot and Shoe maker—J. Soares, Bishopsgate Within, City, Wine Merchant—T. J. S. Smith, late of Park Walk, Fulham, China Dealer—J. Stanton, Mold, Flintshire, Publican and Iron founder—T. Stanton, Birmingham, Boot and Shoe Dealer—J. K. Turner, F. W. Marriott, and J. Jepson, Sheffield, Manufacturers—J. C. Turner, Edgbaston, Birmingham, late Farmer—J. Underwood, Wilderness Lane, City, late Gasfitter—J. Willis and W. Smith, Pentonville Road, Shell Fishmongers—G. Westrip, Peter Street, Walworth, Cab Proprietor—R. Warker, Askrigg, Yorkshire, Butcher—T. Williams, Withington, Salop, Beerseller—J. Williams, Stoke-upon-Trent, Staffordshire, Beerseller.

SCOTCH SEQUESTRATIONS—M. Anderson, Anstruther, Fifeshire, Flesher—T. Finlay, jun., St. Leonards, Fifeshire, Farmer—R. Stewart, Paisley, Bookbinder—W. Swanson, Thurso, Draper. Urquhart, Anderson, and Co., Leith, Wholesale Druggists.

Metropolis and its Vicinity.

The Government Annuities Scheme.—A public meeting of the working classes, chiefly connected with benefit and friendly societies, was held on Saturday night in Exeter Hall, to protest against the clause in the Government Annuities Bill authorising the Government to take assurances for sums payable at death to any amount under 100*l.* Mr. Potter, of the Joiners' Association, was in the chair, and after several speakers had addressed the meeting, a resolution was moved condemning the proposal, as involving the imputation that the working classes were unable to manage their own affairs. An amendment was moved approving of the scheme, and several speakers addressed the meeting in its support, but the original resolution was carried by a large majority.

Metropolitan Railway Schemes.—A meeting of the leading merchants in the City was held a few days since at the London Tavern to take measures for preventing the City from being inundated with the many railway schemes with which they were threatened; Mr. Crawford, M.P. in the chair. Several gentlemen addressed the meeting, and a general opinion was expressed that though the joint report of the Parliamentary committee, published in our last Number, was satisfactory as far as it went, it was too limited in the scope of its inquiries to be all that was required. A resolution was unanimously carried that in a space so limited and with such rapidly expanding business as the City of London, no railway ought to be constructed that was not absolutely necessary. A committee was appointed to carry out the objects of the meeting. At a meeting of the Court of Common Council on Thursday there was a unanimous expression of opinion against the railway invasion with which the City is threatened. The recent report of the joint parliamentary committee was not considered by them to go far enough, and it was remitted to a special committee to use every exertion to obtain the postponement of all the schemes for another year. In connection with this subject we may mention that an important report by Mr. Bazalgette, the engineer of the Metropolitan Board of Works, on all the metropolitan railway schemes going before Parliament this year, has been presented to the Board. As their engineer, Mr. Bazalgette was instructed to state fully wherever these proposed works, whether above or underground, interfere with streets, divert their routes, alter their levels, or trench upon the special works of the Board in sewers or subways. The report says that the schemes proposed for the metropolis this Session are more numerous, bolder, and more complicated than on any previous occasion. They involve the construction of 258 new lines of railway and branches, of 417½ miles in length; with 11 bridges over the Thames, and two lines passing through the Thames Tunnel; and the total capital proposed to be raised is about 70,000,000*l.* Hyde Park, the Green Park, St. James's Park, Kensington Gardens, Newington Park, Hackney Downs, Leyton Grange Park, Trinity Square, Finsbury Circus, Camden Square, Oakley Square, Ampthill Square, Euston Square, and Sloane Square, would all be cut through, and some of them in two or three places, and the same would be the fate of the following open commons:—Stoke Newington, Clapham, Tooting (invaded by seven different lines), Acton Back, Acton, Wimbledon, Fulham, Deptford, and Turnham Green. Bishopsgate Street would be crossed by railways 9 times; Whitechapel Road, 13 times; King William Street, City, 4 times; Strand, 4 times; Whitehall, twice; Palace Yard, Westminster, 4 times; Belgrave Road, 4 times; Uxbridge Road, Notting Hill, 5 times; Kensington Road, 3 times; Edgware Road, Kilburn, 4 times; Euston Road and Marylebone Road, 13 times; Deptford, Lower Road, 3 times; Acre Lane, Brixton, 5 times. St. Stephen's Churchyard and St. Pancras Burial Ground would also be invaded, the latter by no less than three different lines. There are no less than six competitors for constructing railways along the line of the Thames Embankment, and underneath a portion of the new street to the Mansion House; and in executing all these "improvements" it is proposed to divert the present course of no less than 37 streets, to lower the level of 18, to raise the level of 34, and to stop up 69; while 52 sewers are returned as partially destroyed by these works, and no less than 526 as entirely destroyed. The report contains a complete analysis of the mischief and destruction of property which would be caused by some of these lines.

The Holborn Valley Improvements.—At the last meeting of the Court of Common Council, the chairman of the Holborn Valley Improvement Committee brought up a report inviting the sanction of the Court to the plan agreed upon by the committee in connexion with the Bill in Parliament. The plan provides that the line of improvement from east to west shall commence at or near the Old Bailey, and terminate at a point 55 feet beyond the western side of Hatton Garden. The whole of the property on both sides is to be pulled down, and a high-level roadway formed 80 feet wide, and with an almost imperceptible gradient. Farringdon Street is to be crossed by a bridge with a minimum central headway of 21 feet. Two new streets are to be laid down, both starting from Farringdon Road, to afford communication for vehicles between the upper and lower levels; the western street to be 60 feet wide, and to start opposite New Market Street, now in course of formation by the corporation, joining the upper level at Hatton Garden, the gradient being 1 in 45; the eastern street to be 50 feet wide, to start a little north of the bridge over Farringdon Street, to join the upper level at St. Sepulchre's Church, with a gradient of 1 in 45. Farringdon Road is to be widened as far as West Street to the present width of Farringdon Street. To increase the convenience of access on the southern side of the improvement between the high and low levels, it is also proposed that Shoe Lane be carried on to the viaduct. The gradients will be improved in various places. Having consulted the Chamberlain of the corporation as to the sum which the extended coal duty is expected to produce, the committee feel that the foregoing works are all for which the corporation can safely make themselves liable under the London Wine and Coal Duty Continuance Act of the last Session. Deputy Fry moved the adoption of the report, and that it be referred back to the committee for execution. In reply to Deputy De Jersey and Mr. Hartridge he said the total estimate of the proposed improvement was about 500,000*l.*, and that the cost of carrying Shoe Lane on to the viaduct instead of under it, which was a deviation from the plan originally contemplated by the committee, would amount to about 75,000*l.* After some discussion, the report of the committee was agreed to, and referred back to them for execution, on the understanding that seven years instead of 10 should be the interval allowed for the completion of the whole work.

The Bishop of London's Fund.—A very numerous meeting of the clergy of London, convened by circular from the Bishop, was held on Friday at Willis's Rooms, to consider the religious condition of the metropolis. The Bishop took the chair. An elaborate report was first read, pointing out the deficiencies in the diocese with regard to clergymen, church room, lay agents, parsonages and endowments, and schools, with the remedies proposed to be applied by the fund. The Bishop of London then addressed the meeting at great length, and stated, as the result of the inquiries set on foot, that it had been considered desirable that every 2000 persons should have a clergymen to attend to them. If the present spiritual wants of the population were not cared for, and the evils at present existing remedied, he feared they would go on increasing till in this the centre of the Christian world such a moral wilderness would exist, and such a confusion of the political condition of society arise, as it would take years upon years to remedy. He was quite aware that to do all that was proposed would require an enormous sum, but he believed there would not be any difficulty in raising one-half at least, and he was sanguine in being able, by God's help, to obtain the whole. The lay members of the committee, however, felt that they were powerless, unless they had the assistance of the clergy. The Rev. Mr. Patterson moved a resolution that the committee should report what had already been done in the great work towards which the public had already provided a sum of 90,000*l.* The Rev. Mr. McCaul seconded the resolution, and wished not only to know what had been done, but what was intended to be done in the future. The Rev. Mr. Davies, of Christ Church, Marylebone, thought it was not desirable to increase the proportion of curates and incumbents. There were already too many curates, and it was more necessary to augment the stipends of the present curates than to make large additions to their numbers. He also deprecated the great extension of the lay teachers, and thought that the system, if carried out, would be attended with some inconvenience, and would be liable to produce unpleasant feelings by intruding themselves too frequently among the poor. The Bishop in reply said that of the sum already subscribed, 32,205*l.* 17*s.* 3*d.* had been received, and 62,056*l.* 6*s.* 2*d.* had been promised, making a total of 94,262*l.* 3*s.* 5*d.* Of this sum 14,030*l.* had been voted or promised in the shape of grants for additional curates, missionary clergy, scripture readers, parochial mission women, schools, school churches or mission chapels, and churches, exclusive of 45,000*l.* voted for other objects during the next nine years. After some further business, a vote of thanks to the right rev. prelate for presiding was moved by Archdeacon Hale and seconded by Archdeacon Sinclair.

Fish Culture for the Thames.—To those who are interested in the artificial propagation of fish, a visit to the Thames Angling Preservation Society's apparatus at Hampton will well repay them. Under the management of Mr. F. Buckland and Mr. Stephen Ponder, in the greenhouse of the latter gentleman,

where the hatching-boxes are placed, the process is going on most satisfactorily, and a keeper is always in attendance to exhibit them to those who are desirous of seeing them. The ova of salmon, salmon trout, char, rout, &c., are just now in their most interesting stages of development. In one trough there are 8000 young salmon recently hatched; in others the ova are in a vivifying state, and in others there are the simple eggs. Mr. F. Buckland has succeeded in bringing a live salmon from Worcester, and placing it in the pond with the sturgeon in the Zoological Gardens, and is now engaged in experimenting on salmon eggs with live trout from the Wandle, in the hope of producing a hybrid between the salmon and the trout, in which the non-migratory will predominate over the migratory instinct, so that the new fish will live in the Thames above bridge without the desire of paying an annual visit to the sea.

RESTORATION OF CHARING CROSS.—A monument as nearly as possible the same in size and feature as the original Eleanor Cross which stood in the village of Charing, is about to be erected in the Strand by the Charing Cross Railway Company, whose architect, Mr. Barry, has found a most convenient site in the open space in front of the terminus, very near the exact spot on which the ancient cross stood. The height of the edifice will be nearly 70 ft. Of the 10 crosses which marked the halting-places of the coffin of Queen Eleanor on the road from Grantham to Westminster Abbey only three are now in existence, the finest being that at Waltham.

FALL OF A HOUSE IN THE CITY.—In consequence, it is supposed, of the heavy rains which have lately fallen, the gable end of the Fountain Tavern in Castle Court, Cheapside, fell to the ground on Monday night. Some of the inmates, warned by the crackling of the timbers, escaped; others were left in the upper part of the house, but they were all rescued without injury.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week ending Saturday, March 5, were 1766. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1420. The present return is therefore 346 above the average. During the week the births of 1120 boys and 1019 girls, in all 2139 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 2071.

Provincial.

BIRMINGHAM.—A memorial was transmitted to Sir George Grey on Monday, praying for the commutation of the sentence of death passed at the recent assizes on George Hall for the murder of his wife, on the ground of his previous good character and the great provocation he had received. The memorial had 50,366 signatures attached to it.—On Tuesday a barrel of ammunition stored in the magazine of the Dragoon barracks in this town, exploded, causing considerable damage to the roof and other parts of the building. The quartermaster of the depot was found on the premises stunned by the explosion, but without injuries of a serious character.

BURNLEY.—Mr. Samuel Howard, of Stanley, near Perth, formerly an inhabitant of this town, has placed in the hands of trustees, for the use of the town, 16 acres of land whereon to erect an infirmary, to be called "The Howard Institution." The land is situate behind the Habergham Eaves parsonage, and represents a value of 16,000*l*. The land not necessarily required for the Institution is to be let for building sites, the proceeds of which are to go towards its endowment.

HANLEY.—A colliery explosion took place a few days since in the neighbourhood of this town, but was not so fatal as those accidents generally are. Two lives were lost, and three men were seriously injured.

LIVERPOOL.—A decision of importance was given by Vice-Chancellor Wood a few days since, in connection with damages to houses in this town by the recent explosion of gunpowder on board the ship Lotty Sleigh. It appears that the Royal Insurance Company decided to reimburse the sufferers insured with them the entire amount of their losses. A shareholder having a small stake in the company contested the power of the directors to take this liberal step, and applied to the Court of Chancery to restrain them, on the ground of their policies exempting them from liability for damage by explosion. The Vice-Chancellor overruled this application, and sustained the directors in their proposed arrangement with the sufferers, making the shareholder pay the costs of the application.

MOLD.—A terrific explosion, causing the death of one man and the serious injury of several others, has occurred at the Coppa Colliery. Several men had descended into the pit, which is about 130 yards deep, when, after working awhile, they saw some water forced up a boring hole, down which it ran to an old level not now in use. A loud explosion followed, causing almost instantaneous death to one of the men. Two others had their thigh broken, and a third had his arm broken by the falling timber.

OXFORD.—In a Convocation held on Tuesday in the Sheldonian Theatre, the statute for assigning duties to Mr. Jowett, the Regius Professor of Greek, and at the same time increasing his stipend, was put to the House. Archdeacon Denison endeavoured to make a Latin address against the statute, but owing to the impatience of the House and the disapproval of the Undergraduates, who had occupied their gallery in some force, he could not be heard. The votes were then taken by the two Proctors and the Registrar. When the numbers were added up, the Senior Proctor, amid dead silence, pronounced the words,—"*Majori parti placet.*" As the party in favour of the statute had not expected to be in a majority, a perfect tumult of applause followed, the Masters vieing with the Undergraduates in shouts and wavings of caps. Soon, however, it became apparent that something was wrong. The Vice-Chancellor made a signal for silence, which was with difficulty procured; whispers arose that there had been "a mistake"—and the shouts having subsided the Senior Proctor again got up and announced —"*Majori parti non placet.*" It was now the turn for the opponents of the statute to cheer; which they did the more lustily on account of their previous disappointment. The numbers were understood to be—Non-placet, 467; Placet, 395. Majority against the statute, 72.

PORTSMOUTH. — The Royal Sovereign converted cupola ship was successfully floated out of her dock at Portsmouth on Tuesday, in the presence of Vice-Admiral Sir M. Seymour, Rear Admiral Elliott, Major-General Lord W Paulet, Sir James Elphinstone, Captain Cowper Coles, and a number of naval and military officers. The operation was attended with every success. The tide was very high, and the turret ship was taken alongside the sheer jetty in capital order. It will be remembered that the Royal Sovereign was a new three-decker; but has been cut down and converted into a cupola ship, with three turrets, on Captain Coles's principle. She is a powerful vessel, and will be most valuable for coast defence, floating much lighter than was expected.

ROTHERHAM.—A few days since a young man named Lyon, in revenge for some quarrel between a woman he lived with and a neighbour, went to the house and flung a quantity of cinders mixed with an arsenical compound into the room where the children were playing, in the absence of their mother. All of them suffered from the noxious fumes, and one, an infant, died. The jury at the inquest returned a verdict of Manslaughter against Lyon, who was committed for trial. Two other persons against whom suspicions were entertained were acquitted by the jury, but are detained in prison to await an examination by the magistrates.

TENBY.—For some time past a subscription list has been opened in this town for the purpose of erecting a memorial to the Prince Consort. Various propositions had been made as to the form the memorial should assume, some suggesting a fellowship at Lampeter, others a cairn, but the general feeling being in favour of a statue; it has now been decided to erect a statue in Sicilian marble, 7 feet high, exclusive of the plinth, subject to the approval of the Prince of Wales. The Prince Consort will appear in Royal costume, and the execution of the design has been given to Mr. J. E. Thomas, the Welsh sculptor. The pedestal will be of polished mountain limestone.

WARWICK.—On Wednesday the High Sheriff received from Sir George Grey a respite for Ann Eatwell, who had been engaged by her mistress at a statute fair, after being seduced by a man who refused to marry her, and who was sentenced to death last week for murdering their child at Leamington immediately after its birth. The Secretary of State had been memorialised to give effect to the recommendation of the jury to mercy on the ground that there were "grave doubts as to the consciousness of the prisoner at the time she committed the offence."

WEST BROMWICH.—A fatal boiler explosion took place on the 1st inst. at the iron works of a Mr. Johnson, while 40 men were at work round it. The ends of the boiler were blown in contrary directions; the centre piece blew up through the roof and fell again near the spot where it had before stood, and several men and boys were suddenly buried in a confused mass of iron, wood, and brick work. When the rubbish was cleared away and the men picked up, it was found that 9 were killed and 13 others were shockingly injured.

Ireland.

ARCHDEACONRY OF DUBLIN.—The Archdeaconry of Dublin has been conferred on the Rev. Dr. William Lee, Lecturer of Divinity, and formerly Professor of Ecclesiastical History in the University of Dublin, author of a work upon the Inspiration of the Scriptures, an Essay on Miracles, and other works.

IRISH BRIGADE FOR DENMARK.—A Cork gentleman has proposed to raise an Irish brigade for the Danish service, and applications for sanction and acceptance have been addressed to the King of Denmark. The reply is expected to be favourable. Meanwhile it is said that congratulations and offers of co-operation are daily pouring in on the projector from all parts of the kingdom.

THE FENIAN BROTHERHOOD.—Dr. Duggan, Roman Catholic Bishop of Chicago, in the United States, has issued a pastoral, solemnly denouncing the Brotherhood as practising delusion and fraud, refusing to give any of the members the sacraments till they abandon the confederation, and warning his people against it. After bearing testimony to the character of the combination and the evils it would bring upon Ireland if by any possibility it could succeed, the bishop states that he has consulted the Irish Roman Catholic bishops as well as the American, and speaking in the name of the Church, he condemns the brotherhood as a secret society, illegal and fraudulent. They have, he says, an inner secret, which he cannot learn, but he understands the object of the confederacy to be to wrest Ireland from England by violence, force of arms, and bloodshed. The Bishop says he cannot help recording his solemn conviction that the success of those men in their wild attempt would be the greatest misfortune that ever befell Ireland. He quotes the testimony of an Irish gentleman who has lost his estates and exposed his life for his country, and declares that he would do so again (evidently alluding to Mr. Smith O'Brien), who states of the leaders of the American organisation "that many of them are interested merely on acquiring salaries, and that men of no note make a handsome income by this traffic in the sympathies of their countrymen." He may, he adds, perhaps, say the same of the society, "existing under a milder form in Ireland, and known under the name of the 'National Brotherhood,' or the 'Brotherhood of St. Patrick.'" But with regard to the American Fenians, who have been threatening Ireland with an invasion when the war in America is over, he says that the whole thing is a delusion and a fraud, and that these men have no thought of being able to reach Ireland, but in the meantime appeal to the kindly sympathies of their countrymen, in order to induce them to open their purses.

Scotland.

PICTURES FOR HOLYROOD.—It is stated that her Majesty has approved 12 pictures connected with Scottish history, now in Hampton Court Palace, being removed to Holyrood, where they will be placed in such of the public apartments as may be judged most advantageous for their exhibition.

DANISH CRUISERS IN THE FRITH OF FORTH.—Two Danish steam cruisers have been off Dunbar for several days, watching the mouth of the Forth, and overhauling suspicious looking craft. One of them last week captured a schooner, supposed to be a Prussian vessel, and after taking her in tow, stood out to sea. On Friday last, as a large foreign vessel was entering the Forth between the Bass and the May, one of the cruisers gave chase, but a breeze springing up the ship spread every inch of canvas, and succeeded in getting into neutral water. The man of war fired a parting shot after the fugitive, and then stood off to the northward. Large numbers of the inhabitants assembled in the Castle Park to witness the chase.

Law.

JUDGES' CHAMBERS.—*The Steam Rams.—Attorney-General v. Laird and Others.*—Mr. Turner, for the Attorney-General, stated that these were informations against the defendants for equipping and fitting out two iron-clad steam rams for the Confederate Government, and he applied for a commission to Cairo and other places to examine the Pasha of Egypt and others whose evidence was material for the Crown. Mr. W. Williams for the defendants, stated that they courted the fullest investigation, as they had a complete answer to the case, but contended that this was a vexatious application adopted to delay the proceedings, and nothing else. The vessels were seized early in November, and no information was filed till February. The vessels had been detained all this time to the great loss of the defendants, and now this commission would seriously add to the delay, to their great loss and prejudice. Mr. Justice Mellor said it was sworn that the evidence was essential, and he could hardly refuse the application. Mr. W. Williams said, if so, the Attorney-General ought to give the names of the witnesses, as giving that of the Pasha of Egypt was merely illusory; they would scarcely examine him personally, but some Ministers or other persons. The facts also intended to be proved ought to be stated, and the commission returned in time to try the case at the sittings after Easter Term. Mr. Turner said they intended to bring on the case for trial at that time. Mr. Justice Mellor said he should make the order, both the names of witnesses, so far as practicable, should be given to the defendants, and also a statement of the matters of fact intended to be proved; the commission also to be returned into Court by the 10th May next.

Obituary.

THE HON. MRS. GRANTHAM died on the 27th ult. She was the widow of Captain Charles Grantham, R.N., of Kesteven Grange, Rutland, and was the second daughter of the Right Hon. James Fortescue, younger brother of the first Viscount Clermont, and brother of the second and last viscount, who died in 1829.

THE HON. THOMAS HATTON GEORGE FERMOR died on the 4th inst. suddenly, in his 31st year. He was the second son of the fourth Earl of Pomfret, by the eldest daughter of Sir Richard Borough, Bart. He was born in 1832, and was for some years in the 2d Life Guards. He was heir-presumptive to his brother, the Earl of Pomfret.

REAR-ADMIRAL MANLEY HALL DIXON died on the 3d inst. at his residence, Stoke, Devonport, in his 78th year. He was the son of the late Admiral Sir Manley Dixon, K.C.B., and entered the navy in June, 1794. After becoming a lieutenant he served in various ships on the Channel, North Sea, Irish, and Mediterranean stations. In 1798 he took part in the action off Carthagena, between the Lion and four Spanish frigates of 42 guns each, which terminated in the surrender of one of the latter. He assisted in the capture of the French 80-gun ship Guillaume Tell in 1800; and in August in the same year witnessed the capture of La Diane, of 42 guns, and in September following the surrender of the Island of Malta. In 1809, being first lieutenant of the Horatio frigate, he was badly wounded by a musket ball, while sharing in a long and severe action, which terminated in the capture of the French 40-gun frigate La Junon

For his gallantry on this occasion he was promoted to the rank of commander, received a gratuity from the Patriotic Fund and a pension of 250*l.* for his wounds. He attained post rank in 1811, and served under his father in the Baltic and South America. He subsequently commanded the Caledonia, 120, at Devonport, and shortly after attaining the rank of rear-admiral, was appointed to the command in chief at Cork, which was his last employment.

Sir Thomas Howland Roberts, Bart., died on the 1st inst. at his house in Burlington Road, St. Stephen's Square. He was the eldest son of Sir Walter Roberts, of Brightfieldstown, Cork, by the daughter of the Rev. Edmond Gilbert, of Bodmin, and was born in 1805. In 1831 he succeeded to the title, and in 1834 married the daughter of Mr. John Maitland, of Eccles, Dumfriesshire. In 1842 he married, secondly, the daughter of Mr. William Langdon, of Inwood Lodge, Somersetshire. He is succeeded by his only son by the first marriage, Randal Howland, born in 1837, formerly lieutenant in the 33d Foot, who married in 1861 the daughter of Colonel Turnbull, of the Bombay Artillery.

BIRTHS.—On the 9th inst, at 4, Belgrave Square, the Lady Boston, of a daughter—2d inst, at Charlton Park, Malmesbury, Lady Isabel Atherley, prematurely, of a daughter, stillborn—5th inst, at Onslow Square, S.W., Lady Anstruther, of a son—5th inst, at Farnham, Surrey, the wife of Lieut.-Colonel Patrick L. C. Paget, late Scots Fusilier Guards, of a daughter—22d ult, the wife of General Tom Thumb of a son and heir.

MARRIAGES.—On the 8th inst, at St. George's, Hanover Square, Reginald Dykes Marshall, Esq., of Cookridge Hall, Leeds, to Mary, eldest daughter of Rear-Admiral the Hon. Keith Stewart, C.B.—24th ult, at Chateau Babenwohl, near Bregenz Vorarlberg, John Sholto, eldest son of John Douglass, Esq., of Tilquhillie, Kincardineshire, to Vanda, Baronne de Poellnitz, eldest daughter of Baron Ernest de Poellnitz, and the Hon. Isabella Drummond—3d inst, at Mary's Abbey Church, Dublin, Samuel Gibson, Esq., Gordon Square, London, to Jane, third daughter of the late George McBride, Esq., of Leeson Street, Dublin.

DEATHS.—On the 5th inst, at Loton Park, Shropshire, Mary, wife of Sir Baldwin Leighton, Bart., M.P.—5th inst, suddenly, under premature confinement (the child stillborn), at Bodelwyddan Castle, the seat of her uncle, Sir Hugh Williams, Bart, Caroline, wife of Major Lane, of the 21st Hussars, and daughter of the late George Lucy, Esq., of Charlcote Park—6th inst, at Denmark Hill, Ann Spencer, widow of Vice-Admiral William Young, aged 94.—3d inst, at St. Leonard's-on-Sea, Lieut.-Colonel John C. Roberts, late deputy-inspector-general of constabulary, Ireland—5th inst, at Winchester, Gertrude Maria, wife of Lieut.-Colonel Ward, 60th Royal Rifles, aged 28—9th inst, at 61, Rutland Gate, Mary, wife of William Forsyth, Esq., Q.C.—3d inst, at Knowle, Salcombe Regis, Devon, John Marwood Wolcott, Esq., justice of the peace for the county of Devon, aged 49—23d ult, at Charterhouse, Dr. Jonathan Green, late of Great Marlborough Street, aged 76—27th ult, at the Charterhouse, Mr. William A. Chatto, Author of the History of Wood Engraving, aged 64.

Markets.

COVENT GARDEN, March 12.

Vegetables and Fruit in season continue to be pretty well kept up. Retarded Hothouse Grapes are, however, scarce, but some good new ones may now be had. Blenheim Orange, Nonpareil, and American New Town Pippin Apples may still be obtained; likewise a few dessert Pears. Oranges are plentiful; the best are realising from 6s. to 10s. per 100. Cornish Broccoli is getting scarcer. Continental arrivals are heavy; among them are French Lettuces, Endive, Carrots, and Radishes. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Oranges, per 100, 2s 6d to 8s
Grapes, new, per lb., 20s to 30s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Kent Cobs, 140s per 100 lbs.
Pears, per doz., 6s to 12s	Almonds, do., 18s
Strawberries, p. oz., 2s 6d to 4s	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 8s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Cucumbers, each, 2s to 5s
Cauliflowers, each, 4d to 8d	Beet, per doz., 1s 6d
Asparagus, p. bundle, 8s to 14s	Shallots, per lb., 10d
French Beans, p. 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s to 3s	Garlic, per lb., 8d
Rhubarb, p. bundle, 9d to 1s 6d	Lettuces, each, 1d to 4d
Potatos, York Regents, p. ton, 60s to 80s	Endive, per score, 1s to 2s
,, Shaws, do., 50s to 60s	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 4d to 6d	Mushrooms, p. pott., 1s to 1s 9d
Carrots, do., 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, March 10.

Prime Meadow Hay	75s to 80s		Clover, old	90s to 110s
Superior do. ..	84 87		Do. second cut ..	— —
Inferior do. ..	60 70		New Clover ..	— —
New do.	— —		Straw	24 30
Rowen	— —			

HARVEY & EASTON.

CUMBERLAND MARKET, THURSDAY, March 10.

Sup. Meadow Hay ..	86s to 94s		Inferior Clover ..	84s to 96s
Inferior do.	70 78		New do.	— —
New do.	— —		Straw	32 36
Superior Clover ..	105 112			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, March 10.

Fine Meadow Hay ..	80s to 84s		Prime 1st cut Clover	105s to 108s
Inferior do.	75 80		Inferior do. do. ..	90 100
Prime New Hay ..	— —		New 1st cut do. ..	— —
Inferior	— —		Prime 2d cut do...	95 100
Straw	27 30		Inferior do.	90 95

POTATOS.—Southwark, Monday, March 7.

During the past week the arrivals coastwise have been moderate, but larger by rail, and the demand is a shade better for best samples. The following are the quotations:—Yorkshire Flukes, 70s. to 90s. per ton; do. Regents, 50s. to 70s.; do. Rocks, 45s. to 50s.; Dunbar Regents, 70s. to 75s.; Kent and Essex Regents, 50s. to 70s.: North Berwick Regents, 50s. to 60s.; Perth, Forfar, and Fifeshire Regents, 45s. to 50s.; do. do. Rocks, 40s. to 45s.

BRITISH WOOLS.—London, March 10.

There has been a more general demand the last week for most descriptions of wool, and full rates have been made for combing fleeces and sorts, with an upward tendency for half-bred and long-wool. Flannel and blanket wool are unchanged in price.

	s. d.	s. d.		s. d.	s. d.
South-down Hoggets	1 9	to 1 10	Leicest. Wethers	1 9½	to 1 10½
Half-bred ditto ..	1 11	— 2 0	Ditto Hoggs ..	1 10½	— 1 11
Down Ewes ..	1 8	— 1 9	Combing Skins	1 4	— 1 8
Kent Fleeces ..	1 11	— ..	Flannel Wool ..	1 4	— 1 6
			Blanket ditto ..	0 9	— 1 0

NEWGATE.—March 11.

Best Fresh Butter .. .. 16*s.* per dozen lbs.
Second do. do. .. .. 18*s.* ,,
Pork, 4*s.* 4*d* to 4*s.* 8*d.* per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, March 7.

The supply of Beasts is not quite so large as on Monday last, yet trade is not better, indeed on the average prices are scarcely as good. There are not quite so many Sheep; we have a demand for choicest descriptions at late prices, but other kinds are lower. Calves are selling the same as on Thursday. From Germany and Holland there are 760 Beasts, 1870 Sheep, and 133 Calves; from Spain, 542 Beasts; from Scotland, 330; from Ireland, 270; and 2260 from Norfolk and Suffolk.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 8	to 4 10	Best Long-wools.	5 2	— 5 6
Best Short-horns	4 4	— 4 8	Do. Shorn ..	4 4	— 4 8
2d quality Beasts	3 0	— 3 8	Ewes & 2d quality	4 4	— 4 8
Best Downs and Half-breds ..	5 6	— 5 10	Do. Shorn ..	3 8	— 4 0
Do. Shorn ..	4 8	— 5 0	Lambs	—	—
			Calves	3 6	— 5 2
			Pigs	3 6	— 4 8

Beasts, 4210; Sheep, 16,890; Calves, 138; Pigs, 290.

THURSDAY, March 10.

The number of Beasts is about the same as on Thursday last. Trade is very dull; Monday's quotations are pretty well maintained, but a clearance cannot be effected. There are a few more Sheep, and the demand is smaller, consequently prices on the average are scarcely as good. Choice Calves are scarce and rather dearer. Our foreign supply consists of 425 Beasts, 1260 Sheep, and 145 Calves. Milch Cows, 80.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 8	to 4 10	Best Long-wools.	5 2	— 5 6
Best Short-horns	4 4	— 4 8	Do. Shorn ..	4 4	— 4 6
2d quality Beasts	3 0	— 3 8	Ewes & 2d quality	4 4	— 4 6
Best Downs and Half-breds ..	5 6	— 5 8	Do. Shorn ..	3 6	— 4 0
Do. Shorn ..	4 8	— 4 10	Lambs	—	—
			Calves	3 8	— 5 4
			Pigs	3 6	— 4 8

Beasts, 1020; Sheep, 4480; Calves, 173; Pigs, 150.

MARK LANE.—Monday, March 7.

The supply of Wheat from Essex and Kent to this morning's market was small, and for the most part in bad condition; a few samples were disposed of at a decline of about 1s. per qr., but the bulk remained on hand towards the close. Foreign Wheat continues to be neglected, and on the few sales that could be effected rather lower prices had to be submitted to. Spring Corn of all descriptions was a very dull sale, and we must reduce our quotations 1s. per qr. on Barley, Beans, and Peas, and 6d. upon Oats. Flour was little inquired for and rather cheaper.

Per Imperial Quarter	s. s.		s. s.
Wheat, Essex, Kent, & Suffolk .. White	42—48	Red	40—48
— — — fine selected runs .. ditto	44—52	Red	40—48
— — — Talavera	48—54		
— Norfolk	—	Red	—
— Foreign	36—54		
Barley, grind. & dist., 25s to 27s .. Chev.	34—38	Malting ..	29—33
— Foreign .. grinding and distilling	22—26	Malting ..	27—31
Oats, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	17—22	Feed	15—20
Rye	30—32	Foreign ..	—
Rye-meal, Foreign	—		
Beans, Mazagan....27s to 36s...Tick	30—33	Harrow ..	30—33
— Pigeon .... 32s to 40s .. Winds.	—	Longpod	—
— Foreign .....Small	36—42	Egyptian	30—32
Peas, White, Essex and Kent .. Boilers	32—33	Suffolk ..	33—34
— Maple .... 30s to 34s .... Grey	28—30	Foreign ..	32—33
Maize .....White	—	Yellow ..	—
Flour, best marks delivered .. per sack	35—40		
— 2d do ..... ditto	28—34	Country ..	28—34
— Foreign ..... per barrel	15—25	Per sack	32—40

FRIDAY, March 11

Since the 4th inst. the weather has been very wet, with sleet and snow on the 9th, and sharp frost during that night. We are unable to report any marked amelioration of the dullness which has so long prevailed in the Wheat trade; in a few markets rather more disposition has been evinced to make purchases at reduced prices, which have been complied with. The sale of all kinds of Spring Corn continues to be very limited, and generally on easier terms, and the same remarks apply to Flour. Since Friday last 5 vessels have been reported off the coast. The floating trade is exceedingly quiet; and with the few new arrivals prices have remained nominally unaltered, only in Cottonseed and Linseed some good transactions have been done at fully late rates. Paris, March 10.—The Flour trade has been very slow, and prices are declining. The six marks for delivery this month are quoted equal to 32s. 6d. per 280 lbs; the present stock is estimated at 16,000 cwt. Buyers of Wheat generally press for a decline of 1s. per qr., and a few transactions only have taken place at about 6d. per qr. under last week's prices. The arrivals of English and foreign Wheat this week have been limited, of English Barley and English and foreign Oats good, and foreign Barley very large. The attendance at to-day's market was very limited, and both English and foreign Wheat met a dull sale at Monday's quotations. Barley was a little more inquired for without alteration in price. Beans and Peas were unaltered in value. Oats were 6d. per qr. cheaper.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	340 qrs.	1420 qrs.	1540 qrs.	670 sks.
Irish	—	—	2230	— ,,
				1040 ,,
Foreign ..	7380 ,,	10,150	20,710 ,,	6490 brls

Liverpool, March 8.—At our market to-day there was rather more doing in red American Wheat at Friday's decline of 2d. per cental. Oats unsaleable. Barley and Peas dull. Egyptian Beans 6d. to 9d. per qr. dearer. Indian Corn 3d. per qr. cheaper. Oatmeal neglected. Flour was offered at Friday's decline, but holders showed no disposition to submit to any further abatement.

Friday, March 11.—The market was moderately attended. Wheat in better demand at rather improving rates. Flour improving, chiefly western canals. Indian Corn closes firm at 28s. 6d. for mixed. Egyptian Beans scarce and rather dearer. Oats and Oatmeal unaltered.

Averages	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Jan. 30	40s 8d	32s 1d	18s 11d	31s 8d	33s 3d	32s 10d
Feb. 6	40 4	32 0	18 9	29 0	33 8	33 0
— 13	40 8	31 11	19 1	29 1	33 7	33 7
— 20	41 1	32 0	19 8	28 10	33 2	33 5
— 27	40 6	32 0	19 4	29 0	33 1	32 9
March 5	40 2	31 6	19 10	28 6	33 5	32 10
Agg. Aver.	40 7	31 11	19 3	31 0	33 4	33 1

Fluctuations in the Last Six Weeks' Averages.

Prices.	Jan. 30.	Feb. 6.	Feb. 13.	Feb. 20.	Feb. 27.	March 5
41s 1d	..	..	..	..	..	..
40 8	—	..	..	..	..	..
40 6	..	..	..	..	..	..
40 4	..	—	..	..	..	..
40 2	..	..	..	..	..	—
—	..	..	..	..	..	..

HOPS.—Borough Market, Friday, March 11.

Messrs. Pattenden & Smith report a steady demand for consumption for both English and foreign at full prices, choice descriptions being very scarce. Currency:—

Mid and East Kents, p. cwt.	£6 0	to £9	0
Weald Kents	6 0	— 7	7
Sussex	5 10	— 6	15

COAL MARKET.—March 9.

Byass's Bebside West Hartley, 15s. 3d.; Hastings Hartley, 15s. 3d.; Holywell Main, 17s.; Lambert's West Hartley, 15s.; West Hartley, 15s. 3d.; Wylam, 17s.; Walls End Braddylls Hetton, 18s.; Walls End Haswell, 18s. 6d.; Walls End South Hetton, 18s. 9d.; Walls End Stewarts, 18s. 6d.; Walls End Cassop, 18s.; Walls End Hartlepool, 18s. 6d.; Walls End East Hartlepool, 18s. 9d.; Walls End Trimdon Hartlepool, 18s. 6d. —Ships at market, 24.

LEADENHALL POULTRY MARKET.—March 11.

We have this week a fair demand for Poultry, with an average supply.

	Each—s. d.	s. d.		Each—s. d.	s. d.
Large Surrey Fowls ..	4 0	to 5 0	Turkeys (hen)	5 6	to 8 0
Farm-house do. ..	3 0	— 4 0	Guinea Fowls	2 6	— 3 0
Best Surrey Chickens	3 0	— 4 0	Wild Ducks	2 0	— 2 8
Country Chickens ..	2 0	— 3 0	Teal	1 0	— 1 3
Goslings	6 0	— 7 6	Hares	2 6	— 3 0
Aylesbury Ducklings	4 0	— 4 6	Tame Rabbits	1 4	— 1 6
Country do.	3 0	— 4 0		Per doz.	
Pigeons	0 7	— 0 9	Wild do.	8 0	— 10 0

Snipes and Woodcocks in good numbers, but in bad condition.

WANTED, a good practical DRAUGHTSMAN, one accustomed to Agricultural Work preferred.—Apply by letter to X. Y. Z., Post Office, Leeds.

WANTED, a HEAD GAME and PARK KEEPER, for an Estate, near London, thoroughly competent to Rearing Game by hand, breaking dogs, and trapping, and who can have a good personal character from his last situation. Apply, by letter only, to T. W., Norfolk Lodge, near Barnet, Herts, stating age, height, family, who last employed by, and where the extent of Manor had charge of, and why he left, also if he understands Management of Deer.

WANTED IMMEDIATELY, a NURSERY FOREMAN and PROPAGATOR, who thoroughly understands the Propagation of Ornamental Trees and Shrubs, Conifers, Rhododendrons, Roses, Fruit Trees, &c. He must be an expert Budder and Grafter, and well acquainted with the routine of a general nursery.—Apply to L. T. Davis, Ogle's Grove Nursery, Hillsborough, Co. Down, Ireland.

WANTED, as GROUND FOREMAN, an energetic active young Man, who has a thorough knowledge of his profession.—Apply, by letter only, stating terms, age, &c., to S. Glendinning & Sons, Chiswick Nursery, London, W.

WANTED, an active, industrious Young Man as GARDENER.—He must understand Greenhouse and Frames, besides Kitchen and Flower Gardens; and, for the present, attend to Stock if required.—Address, post paid, O. K., Miss Gray, St. John's Hill, Battersea, S.

WANTED, in a London Establishment, a GROWER and PROPAGATOR in the Soft-wooded Department. Applicants must state the situations they have previously filled, and the kind of Plants they are most conversant with. —Address H. W., *Gardeners' Chronicle* Office.

WANTED, a respectable YOUTH, to receive instruction on Gardening and in the general work and Management of a large Estate.—For particulars address A. Z., Post Office, Micheldever Station, Hants.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. Henderson & Son, Wellington Nursery, St. John's Wood, London, N.W.

To Noblemen and Gentlemen.

MESSRS. HUGH LOW and Co. have experienced HEAD and UNDER GARDENERS of various qualifications, whom they can confidently recommend. Ladies and gentlemen requiring such, are respectfully requested to communicate with H. L. & Co., who will only recommend those that are really equal to the duties they may be called upon to perform.—Clapton Nursery, London, N.E.

LANDSCAPE GARDENER.—Mr. A. Clarke, Gravesend Nursery, has great pleasure in recommending a practical man with great experience, taste, and judgment in Laying-out or Improving Gardens, Parks, Erecting Horticultural Buildings, Rockeries, &c.—109, Wellington Street, Gravesend.

GARDENER (Head).—Age 36, married, no incumbrance; understands his profession in all its various branches. Can be highly recommended. Will be disengaged on the 8th of April.—Gardener, Stawell House, Richmond, Surrey, S.

GARDENER (Head).—Age 32, married, no incumbrance.—Wm. Wood & Son have now the opportunity of recommending to any Lady or Gentleman requiring a really first-class Gardener, as above, a person who is in every way eligible to take a first-rate situation. He possesses a thorough knowledge of his profession in all its branches, an excellent Forcer of Early Fruits, &c. Can be highly recommended by the gentleman he is about leaving.—Wm. Wood & Son, Maresfield, Uckfield, Sussex.

GARDENER (Head), middle-aged, married, two children.—Wm. Wood & Son are particularly desirous of recommending to the notice of any lady or gentleman in want of a really first-class Gardener, a man of great experience in every branch of his profession, having served with great credit for the space of 18 years the late father of his present employer, who will have great pleasure in giving him a most exemplary character.—Address Wm. Wood & Son, Maresfield, Uckfield, Sussex.

To Noblemen and Gentlemen.

GARDENER (Head), age 29.—Mr. Sage, Gardener to Earl Howe, can with confidence recommend a young Man in the above capacity, who is in want of a married man's situation. He has had good practical experience in every department of gardening, including Early and Late Forcing, the Management of Stove and Greenhouse Plants, and Flower and Kitchen Gardens; also in the Improvement of Pleasure Grounds, and the Erection and Heating of Glass Structures. Four years' good character from present employer; also five and three years from previous ones if required.—Mr. Sage, Gopsall Hall, Atherstone, Warwickshire.

GARDENER (HEAD).—Middle-aged, single, Scotch; has a practical knowledge of his profession in all its branches; was 13 years in his last situation, where he was very successful in growing Grapes and Wall Fruit.—WILLIAM MILLER, Mr. Randell's, High Street, Red Hill, Surrey.

GARDENER (HEAD).—Age 35, married, no incumbrance; thoroughly practical. Character unexceptionable.—A. B., Post Office, Gravelly Hill, Birmingham.

GARDENER (HEAD).—Middle-aged, married; well versed in every branch of his profession, with the most satisfactory reference as to character and abilities.—A, Z., Mr. Rowley, Baker, Lyham Road, Brixton Hill, London, S.

GARDENER (HEAD).—Middle-aged, married, no incumbrance. Twenty-four years' experience in all its branches. Wife a thorough Cook. Good testimonials.—A. B., 32, Brighton Terrace, Brixton Road, Brix ton, Surrey, S.

GARDENER (HEAD).—Married; has a thorough knowledge of his profession in all its branches, also the Management of Land and Stock. Good references as to character.—Y. Z., 14, Latchmore Grove, Battersea, Surrey, S.

GARDENER (HEAD), age 42, married, 9 years' good character.—Mr. ARTHUR HENDERSON, of Pine Apple Nursery, Edgware Road, W., wishes to recommend a thorough experienced Gardener, Forester, and Steward. A. H. will be happy to answer any nquiries.—A. B. as above.

GARDENER (HEAD), to any lady or gentleman in want of a thorough practical working man.—Age 30; has lived three years in his present situation, as Foreman, and can refer to former places.—W. LUDMAN, The Gardens, Bishopstoke, Winchester.

GARDENER (HEAD).—Age 28, married, one child; understands Forcing Vines, Pines, Melons, &c., has a good practical knowledge of Hard and Soft-wooded Plants, also Flower and Kitchen Gardens. The neighbourhood of London preferred. Good character.—R. W., 4, New Wharf, Tunbridge, Kent.

GARDENER (HEAD).—Age 35, married, with family; a first-class Pine and Vine Grower; also Orchideous, Stove and Greenhouse Plants, and a good Kitchen and Flower Gardener, having lived as Head Gardener 14 years in the last two situations. Eight years' good character.—H. S., E. Handcock, 10, Albion Place, High Road, Lee, Kent.

GARDENER (HEAD), age 40, married, no incumbrance.—GEO. S. DODS, of Epsom Nursery, Surrey, wishes to recommend a thoroughly practical man, who understands his profession in all its various branches. Will be at liberty the beginning of April. Three and a-half years' good character.—Direct as above.

GARDENER (HEAD), age 30, unmarried.—Mr. GEORGE GORDON will be disengaged at Mayday next; he thoroughly understands the Management of Orchids and other Rare Plants, the Growing of Pines, Grapes, Peaches, and everything belonging to a first-class Establishment. To save trouble, no Single-handed place will be accepted.—Messrs. JACKSON & Co., Bedale, Yorkshire.

GARDENER (HEAD).—Age 30, married; of thorough steady, active, and industrious habits, has a competent knowledge of Early and Late Forcing of all kinds of Fruit, Flowers, and Vegetables; is a good Cultivator of Stove and Greenhouse Plants, Ferns and Orchids, also an excellent Flower and Kitchen Gardener. Good references for character and ability.—A. B., Goshawk, Nurseryman, Balls Pond Road, Islington, N.

GARDENER (HEAD), age 45, married, no incumbrance.—HENRY BAILEY, who has been Head Gardener upwards of 22 years to the late Lord Bishop of Ely, and leaves because the Bishop (elect) intends to bring his own gardener, will be glad to enter into an engagement with any nobleman or gentleman who may be desirous of obtaining the services of so thoroughly competent and experienced a man. References of the strictest integrity.—The Palace Gardens, Ely, Cambridgeshire.

GARDENER (HEAD), where two or three are kept, or would not object to a good Single-handed place.—Age 29, single; has a thorough practical knowledge of the profession, also of the Management of Stock. Satisfactory references given as to character, &c.—R. R., Post Office, Bromley, Kent, S.E.

GARDENER (HEAD or FOREMAN).—Age 26; has had 14 years experience in the Gardens of several of the nobility and gentry, and understands his profession in all its various branches.—T. G. H., The Lady Rodney, Old Alresford, Hants.

GARDENER (HEAD or SINGLE-HANDED).—Age 24, single; thoroughly understands all branches of his profession. Has had the Management of Meadow Land. Two years' goodcharacter.—T. P., Mrs. Carter, 14, Rosslyn Hill, Hampstead.

GARDENER (HEAD), or GARDENER and BAILIFF.—Age 38, married; has had 21 years' experience in noblemen's and gentlemen's Gardens, and is thoroughly experienced in Early and Late Forcing of all kinds of Fruit, Flowers, and Vegetables, the Management of Kitchen and Flower Gardens; also of Land and Stock, and Keeping Accounts, &c. Wife can Manage the Dairy. Eight years' excellent character.—WM. BROWN, Gothic House, Putney Heath, Surrey, S.W.

GARDENER.—Thoroughly understands the management of Stove and Greenhouse Plants, Early Forcing of Fruits and Vegetables; also a good Flower and Kitchen Gardener. A good character given.—A. Z., Mr. S. Scott's, Victoria Road, Surbiton, Kingston, Surrey.

To Noblemen and Gentlemen.

GARDENER.—A first-class Man. To any lady or gentleman residing in the country, who may wish to secure the services of a thoroughly trustworthy, energetic, and permanent man, this is an excellent opportunity.—W. W., Mr. Laing, Stanstead Park, Forest Hill, Sydenham, S.E.

GARDENER (SECOND) or FOREMAN.—Age 22, single; has had six years' experience in large Gardens, Forcing Early and Late Fruits, and the Management of Stove and Greenhouse Plants, Kitchen and Flower Gardens. Good character.—T. H., Mr. Cripps, Nurseryman, Tunbridge Wells

GARDENER (SECOND, or SINGLE-HANDED).—Age 21, single; understands the Growth of Grapes, Greenhouse and Bedding Plants; Forcing, and the general routine of Gardening. Two years' good character. Can be well recommended from present employer.—L. M., Post Office, Caterham, Surrey.

GARDENER (UNDER or SECOND).—Age 21; has been used to Stove and Greenhouse Plants generally. Two years' good character.—E. W., Mitton's Library, Leighton Buzzard.

GARDENER (UNDER).—The Advertiser will give 5*l.* for a good situation for 12 months.—J. C., Post Office, Compstall, near Stockport.

GARDENER (UNDER).—Age 18; will give a percentage where he can improve himself. Good character. State particulars.—C. B., Scarlett's, 2, New Quebec Street, Portman Square, W.

GARDENER, or GARDENER and GROOM.—Age 36, married; 20 years' experience in the Management of Greenhouse, Flower, and Kitchen Gardening; also acquainted with the Culture of Roses. Very highly recommended by the lady he is about leaving.—W. LILLEY, Mrs. Wm. Randall, Dunmow, Essex.

To Nurserymen.

FOREMAN, in the Propagating Department in the Houses.—An experienced Man.—Letters to A. Z., Mr. Glenny, Horticultural Agent, Fulham, S.W.

NURSERY FOREMAN and PROPAGATOR.—Middle-aged; has a good practical experience of the routine of the Nursery and Retail Seed Department. Capable of taking entire Management if required.—ERICA, *Gardeners' Chronicle* Office, W.C.

NURSERY FOREMAN.—R. LOCKE thoroughly understands the Management and Propagation of Hardy Ornamental Trees and Shrubs, Fruit Trees, &c. Can have two years' good character as to ability and integrity from Mr. Veitch, to whom he has given every satisfaction as Ground Foreman and Propagator.—R. LOCKE, Mr. Veitch's Nursery, Coombe Wood, Kingston Hill, Surrey, S.W.

IMPROVER.—Age 24; would not object to paying a Premium where he would have a good opportunity of improving himself. Good recommendations.—N. I. P., Post Office, Leyton, Essex, N.E.

FARM BAILIFF (WORKING).—Age 33, married.—J. C., Cassio Bridge, near Watford, Herts.

STEWARD or BAILIFF.—Middle-aged, married; a gentleman wishes to recommend the above. He has had great experience in different counties; well understands the Cultivation of all kinds of Soil, Breeding and Rearing of all kinds of first-class Stock, likewise their Treatment in Disease. He has also had great experience in Draining, Improving Waste Lands, Timber, &c.; thoroughly understands all kinds of Agricultural Machinery. To any gentleman requiringa practical man to superintend Property, the advertiser can with confidence recommend him. Wife good Dairy and Poultry-woman if required.—G. H., Messrs. Lamoureux, Clark & Co., Seed Merchants, Plymouth.

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To Nurserymen.

CLERK and ASSISTANT SALESMAN.—A young Man, who has been accustomed to Book-keeping, Despatching Orders, &c.; has a good knowledge of Plants, and if required would fill up his time in the Seed-shop, or with the practical part of the Nursery Business.—E. R., *Gardeners' Chronicle* Office, W.C.

To Short-horn Breeders.

COWMAN.—Age 37, married, no incumbrance; the Cowman of the late Stewart Majoribanks, Esq., Bushy Grove, Watford, thoroughly understands the Management of Cattle. Fifteen years' good character from late employers. References permitted to Mr. WETHERELL, Aldborough, Darlington; and Mr. TALLANT, Elmsted, Ashford, Kent.—THOMAS KEEN, Bushy Grove Farm, Watford, Herts.

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Sauce.—Lea and Perrins'

WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs

"THE ONLY GOOD SAUCE,"

Is prepared solely by LEA & PERRINS.

The public are respectfully cautioned against worthless imitations, and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper.

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CONSTIPATION, Nervousness, Debility, Cough, Asthma, Catarrh, Consumption, Diarrhœa, and all Bilious, Liver and Stomach Complaints are only aggravated and accelerated by drugs of every description, but perfectly curable by DU BARRY'S health-restoring

REVALENTA ARABICA FOOD,

As proved by thousands of cases which had been considered hopeless. We quote a few.—Cure No. 46,270. Mr. James Roberts, of Frimley, Surrey, of 30 years' diseased lungs, spitting of blood, liver derangement, and partial deafness.—Cure No. 47,121. Miss Elizabeth Jacobs, of extreme nervousness, indigestion, gatherings, low spirits, and nervous fancies.—Cure No. 54,816. The Rev. James T. Campbell, Fakenham, Norfolk, "of indigestion and torpidity of the liver, which had resisted all medical treatment."—In tins 1 lb., 2*s.* 9*d.*; 2 lb., 4*s.* 6*d.*; 5 lb., 11*s.*; 12 lb., 22*s.*; 24 lb., 40*s.*

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They are more easily trimmed and re-filled than any other Lamp with similar burner.

There is no danger of chimneys breaking, and the chimneys cannot become smoked.

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The above may be obtained of any Lamp Dealer.

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Extra hard S 12 CHAMBER CANDLES, sold in boxes 2*s.* each. Thicker Candles, intended for those who will not burn thin.

SHERWOOD ECONOMIC BED-LIGHTS, in packets of 5 Candles for 1*s.*, intended for use where cheapness is a great object, will be found an improvement on the ordinary Candles, as they gutter less.

Special CANDLESTICKS to fit thin candles, 1*s.* and 2*s.* 6*d.* each; reducing Sockets, making them fit any candlesticks, 2*d.* each.

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MESSRS. WOTHERSPOON AND CO. have been appointed STARCH PURVEYORS to H. R. H. the PRINCESS of WALES. This Starch is used in the Royal Laundry and was awarded a Prize Medal. Sold by all Grocers, Chandlers, &c.

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DINNEFORD'S PURE FLUID MAGNESIA has been during 25 years emphatically sanctioned by the Medical Profession, and universally accepted by the public, as the best remedy for Acidity of the Stomach, Heartburn, Headache, Gout, and Indigestion, and as a mild Aperient for delicate constitutions, more especially for ladies and children. It is prepared in a state of perfect purity and of uniform strength by DINNEFORD & Co., 172, New Bond Street, London, and sold by all respectable Chemists throughout the world.

The Best Cough Medicine in Existence is

DR. LOCOCK'S PULMONIC WAFERS, in proof of which read the following from Mr. Loder, 224, Steep Row, Lincoln, Nov. 8, 1862.—"From my own experience as a large dealer in medicines, I can safely say that your Wafers never fail to effect a speedy cure of the most distressing cough; they are truly an invaluable medicine." They have a pleasant taste. Price 1*s.* 1½*d.*, 2*s.* 9*d.*, and 11*s.* Sold by all Chemists.

CORNS and BUNIONS.—A Gentleman, many years tormented with Corns, will be happy to afford others the information by which he obtained their complete removal in a short period, without pain or any inconvenience.

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The Gardeners' Chronicle Newspaper.

SATURDAY, MARCH 19, 1864.

Exhibition Prize Medal, 1862.

HOTHOUSES for the MILLION.—On the principle invented and patented by Sir Joseph Paxton, M.P., combining simplicity, cheapness, excellence, and durability. Span-roof Houses, painted three coats, and glazed with English Sheet Glass, ready for fixing, 21 ft. by 13 ft., 24*l.*; 43 ft. by 19 ft., 73*l.* 5*s.*; 64 ft. by 25 ft., 161*l.*

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Also, A HANDBOOK on VINE and FRUIT TREE CULTIVATION, 2d Edition, price 1*s.*; post free, 1*s.* 1*d.*

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TUBULAR BOILERS,

All Sizes on the most Improved Principles, Valves, &c.

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T. G. M.'s PATENTED BUILDINGS combine all the modern improvements, are most effectually ventilated by means of his unequalled Apparatus, can be made either plain (and which are at the same time elegant in appearance), or of the most elaborate design. They can be fixed as permanent buildings, or made to be portable.

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ILLUSTRATED CATALOGUES of the above, Glazing without Putty, Garden Engines, &c., sent upon application.

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MUSGRAVE'S PATENT SLOW COMBUSTION STOVE.

This Stove is the nearest approach to Warming by Hot Water.

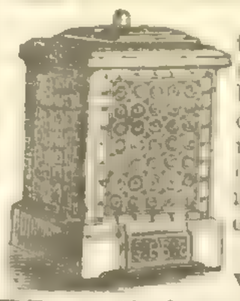

It will burn in Churches from Saturday till Sunday evening, without attention during the hours of worship. In Halls will burn day and night for weeks, with little care. Capable of Warming a large Apartment for 24 hours, at a cost of 3*d.*; and deserving of special attention, because of its safety, healthfulness, durability, and extreme simplicity.

It is also made for small Conservatories with a vapour chamber.

For particulars of the above, and of MUSGRAVE'S PATENT STABLE and COW HOUSE FITTINGS, which attracted so much attention at the Exhibition, address,

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RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the

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Price complete from 3*l.* 10*s.*

Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

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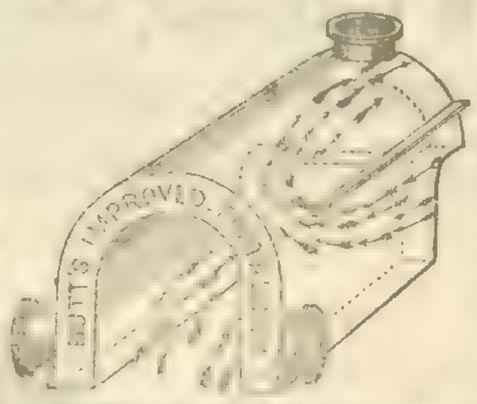

THE ORIGINAL SADDLE BOILER, with Improved Tubular Check Draft, Flued Ends, and Ribbed Sides, for Heating Greenhouses, Vineries, Forcing Pits, Public Buildings, &c. These Boilers possess increased heating surface capacity, power, economy in fuel, and are the only class of Boilers, all points considered, when properly fixed, that can be relied upon with safety for Heating Greenhouses, &c., of any extent by hot-water, and at a moderate price.

Gardeners interested in such work should write for LIST of TESTIMONIALS, sent Post Free on application to FREDERICK WILLIAM BUTT (late of London), Portadown, Ireland.

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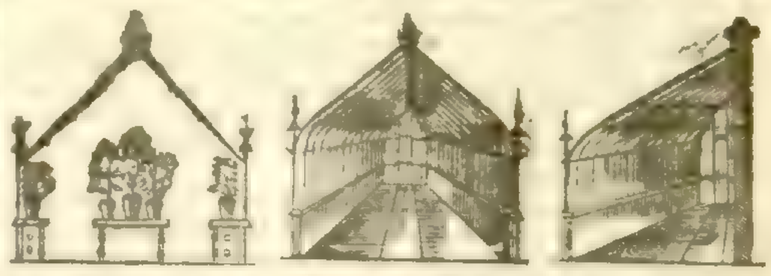

best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water-tight Roof insured.

The leading practical advantages are extreme smallness o Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

For Prospectus, &c., address T. H. P DENNIS, Horticultural Builder, Hot-Water Engineer, &c., High St. Chelmsford, Essex

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200 CUCUMBER and MELON BOXES and LIGHTS.

Glazed and Painted Complete, ready for immediate use, Packed and sent to all parts of the kingdom.

LIGHTS for PITS of all SIZES ready for use, kept in STOCK.

STRONG ZINC HAND GLASSES all sizes.

References to the Nobility, Gentry, and Trade in most of the counties in England.

Greenhouses.

JOSEPH SMITH, HORTICULTURAL BUILDER, New Road, Hammersmith, has for Sale:—SPAN-ROOF HOUSE, 27 ft. by 16 ft. 6 in., price 44*l.*; do., 17 ft. by 10 ft., 25*l.*; do. with Shelves and Hot-water Fittings, 17 ft. by 12 ft., 35*l.*; LEAN-TO, 45 ft 6 in. by 11 ft., 60*l.*; do., 28 ft. by 12 ft., 33*l.* Twenty-five LIGHTS, 2½ thick, 14 ft. by 5 ft., glazed with 21 oz. glass, at 9*d.* per foot, or the lot for 60*l.*; also Ten, 11 ft. 2 in. by 5 ft., 23*l.*; do. Twenty-five, 7 ft. by 4 ft. 8 in., 22*l.* 10*s.*

CUCUMBER and MELON FRAMES, of an improved make, to take apart.

The above are constructed in the best manner as regards ventilation and strength; warranted of good materials. Glass 21 oz. to the square foot.

STRAWBERRIES FOR THE MILLION.

NOTICE.

ON SATURDAY NEXT WILL APPEAR IN THE "GARDENERS' CHRONICLE" AN ILLUSTRATION OF

INGRAM'S IMPROVED STRAWBERRY HOUSE.

THE WANT of a HOUSE or PIT specially adapted to the purpose of FORCING STRAWBERRIES has long been felt both by Professional Gardeners and Amateurs. Unprovided with really suitable Places, the Gardener is often obliged to introduce his Strawberry Plants into his Vinery, Peach House, or Plant House, at a period when the temperature is not in every respect congenial.

There are also serious objections to such practices when it is considered how particularly subject the Strawberry Plant is to those insect pests, Red Spider and Green Fly.

It is for the remedy of these and many other disadvantages of the present system, and to supply a light structure in every respect adapted to the cultivation of Strawberries, that this superior invention is most strongly recommended.

Every information as to Construction, Price, &c., can be obtained of

J. WEEKS AND COMPANY,

HORTICULTURAL BUILDERS and HOT WATER APPARATUS MANUFACTURERS,

KING'S ROAD, CHELSEA.

Plans, Estimates, and Illustrated Catalogues on application.

Heating by Hot Water.

HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, TUBULAR, and Elliptic, from 24*s.* each. Improved Boilers and Iron Stands to use without brickwork, 56*s.* each. Valves from 10*s.* 6*d.* each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at

Mr. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S. Price List on application.

A New Boiler.

THE PATENT UPRIGHT-CELLED BOILER, combining efficiency, economy, durability, and the possibility of cleaning every part.

The Patentee begs to bring to the notice of the public this Boiler, which is new in principle, and is constructed to give the greatest possible amount of heating surface in a given space. It has been in use for some years by amateurs and professional gardeners, as well as for heating large public buildings, and has never failed to give entire satisfaction.

The *cost* (which is less than that of any patent Boiler of equal power yet out) together with the great *saving* it effects, in *fuel*, bring it within the reach of all classes.

Testimonials and particulars as to price, the various sizes, &c. to be had on application to Messrs. CLARKE & HOPE, Horticultural Engineers, Lionel Street, Birmingham.

GRAY'S OVAL TUBULAR BOILER.

INTERNATIONAL EXHIBITION, Class IX., No. 2119.

Mr. GRAY begs to call the attention of the Nobility, Gentry, Nurserymen, Gardeners, &c., to his

NEW OVAL TUBULAR BOILER,

acknowledged by practical judges to be a great improvement on every form of Tubular Boiler yet introduced. It has proved itself superior to all other Boilers for quickness of action and economy of Fuel, doing its work with one-third less the amount required by any other.

Extract from Report in Gardeners' Chronicle *of International Exhibition, May* 24, *page* 476.

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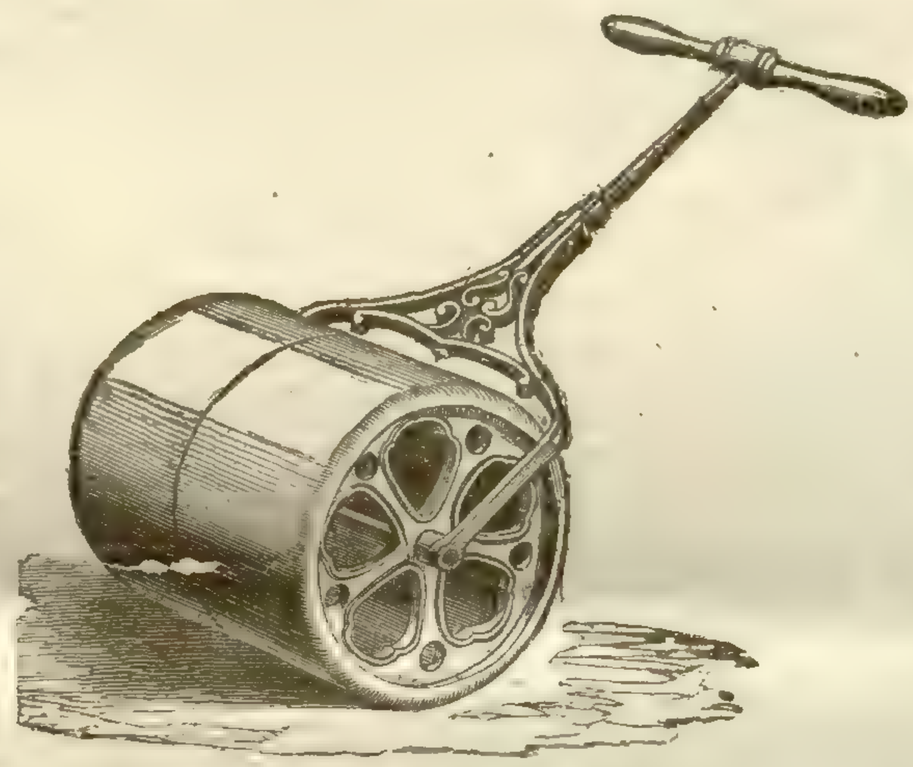

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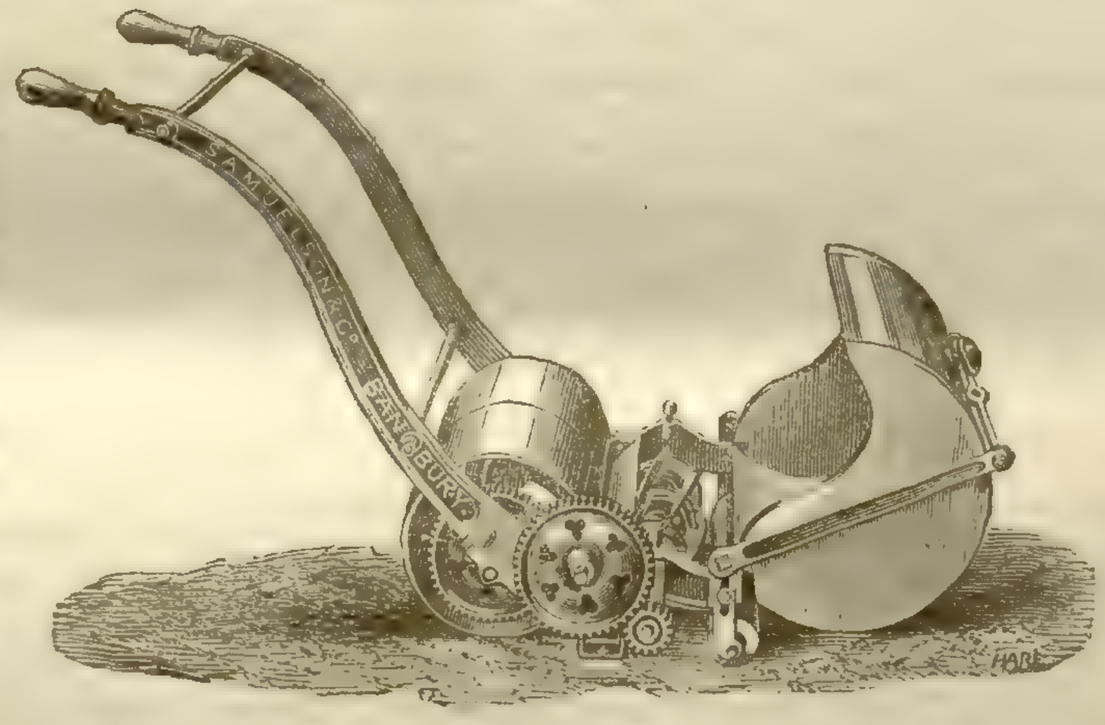

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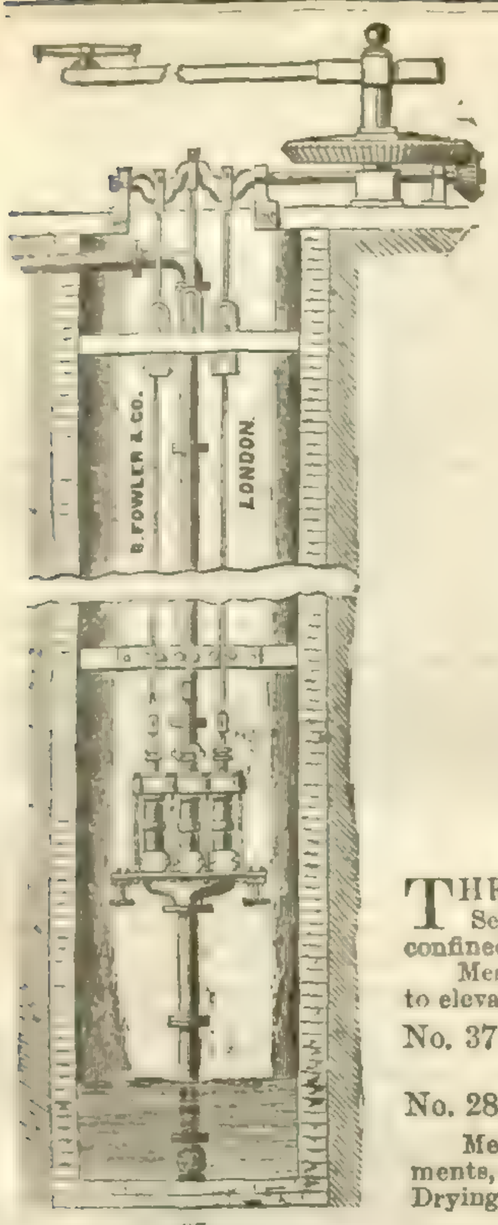

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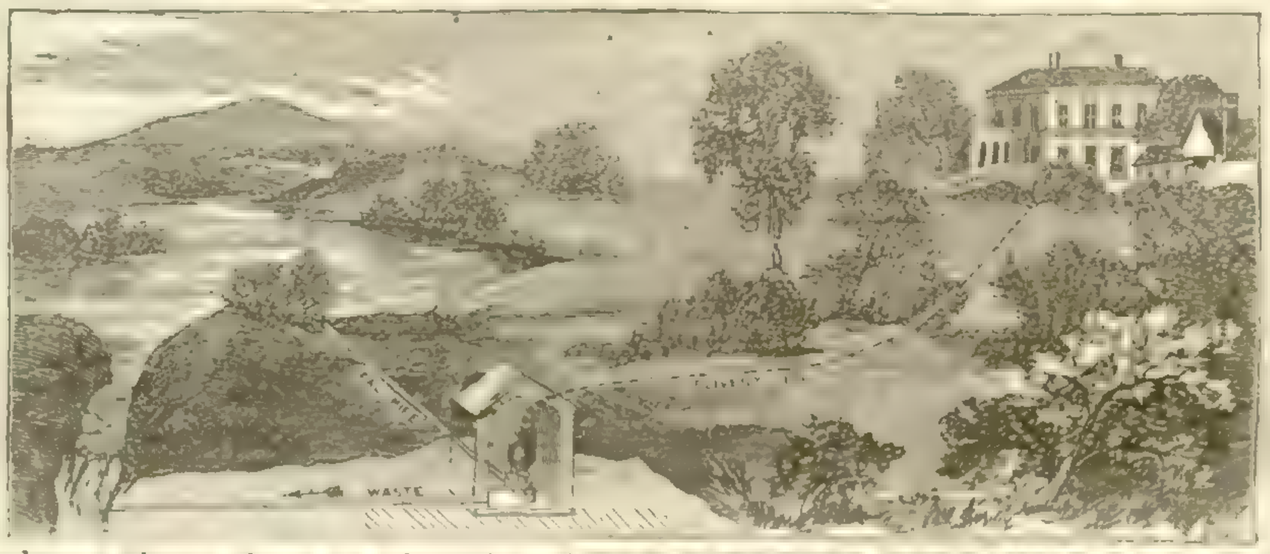

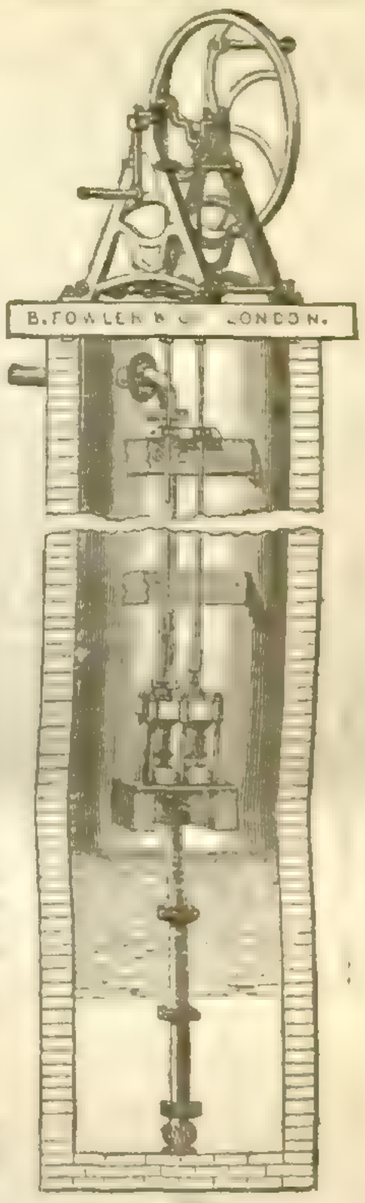

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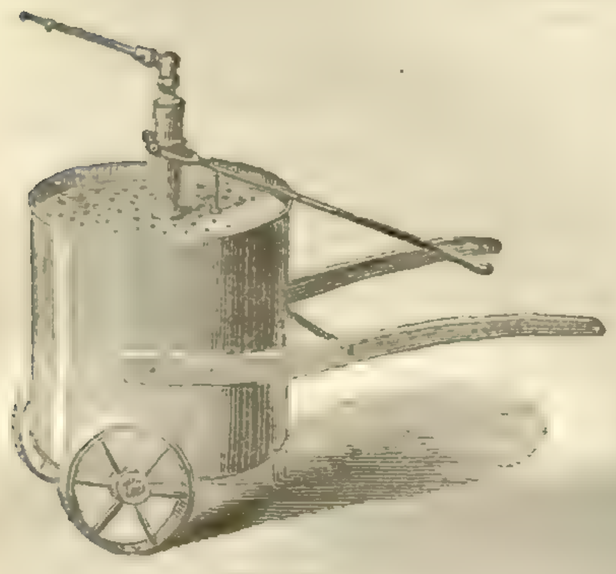

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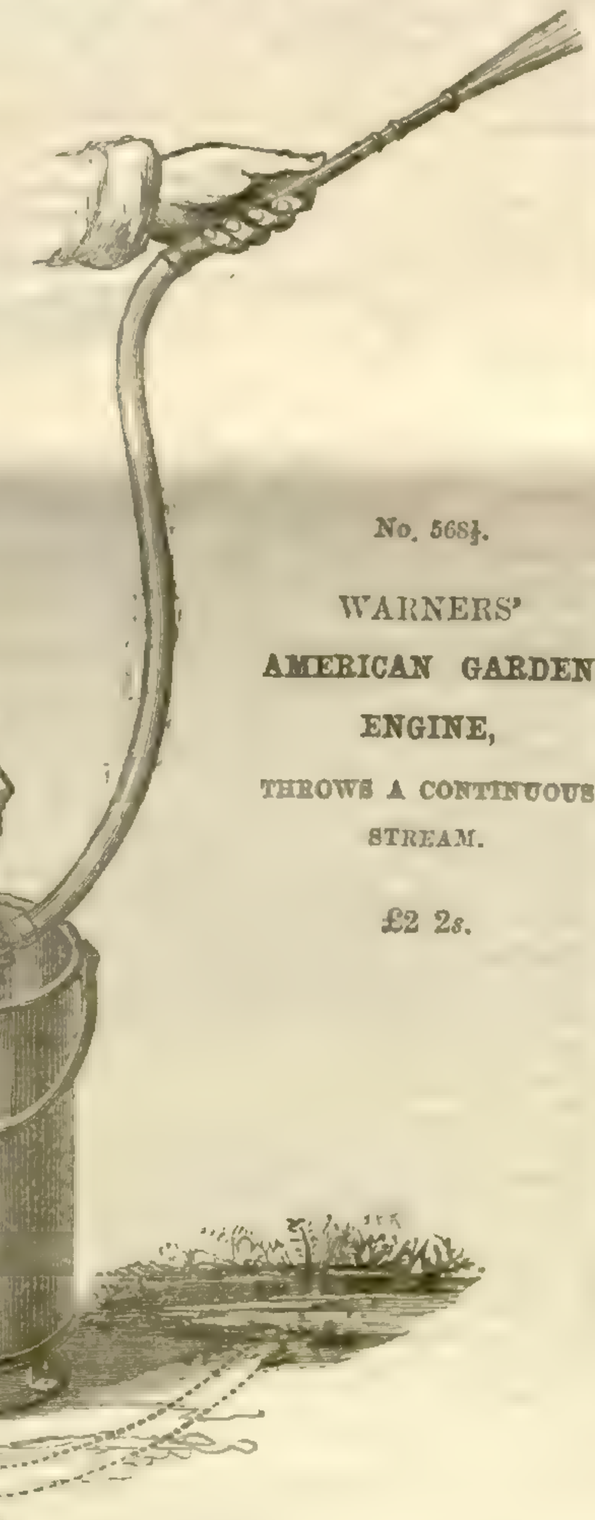

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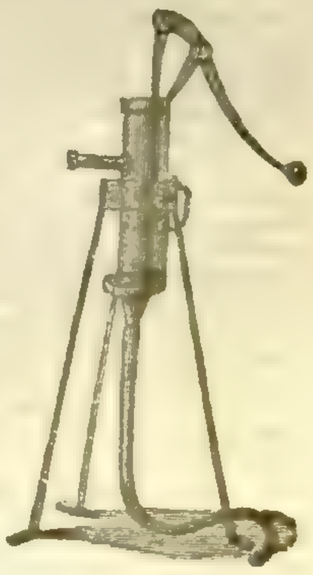

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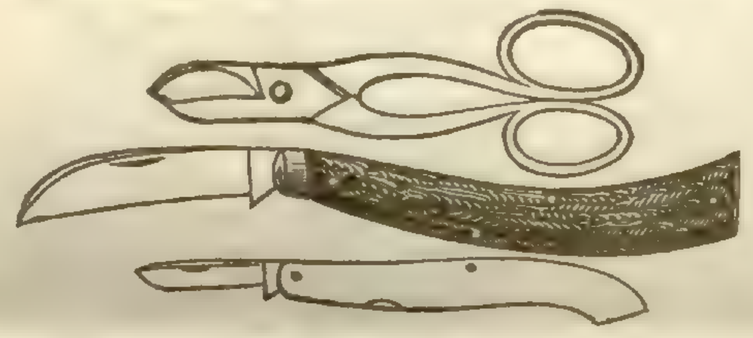

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News of the Week.

IN the House of Lords on Monday, in answer to the Earl of DERBY, Lord WODEHOUSE explained that in his recent conversation with M. HALL, the late Prime Minister of Denmark, his remark that no measures of the Danish Government would avert Federal execution applied solely to the Duchy of Holstein, for the simple reason that he did not then know the intentions of the German Powers with respect to Schleswig. Earl GRANVILLE, in answer to Lord CAMPBELL, said that the statement of Prince GORTSCHAKOFF as to Russia, Austria, Great Britain, and Prussia, acting in harmony on a question more important than that of Schleswig Holstein, must have referred to a supposed agreement to decline the suggestion for a general European Congress. It could not have meant that her Majesty's Government had entered into a combination against France, for they were most anxious to act in concert with the French Government on all European questions. On Tuesday the Earl of ELLENBOROUGH asked whether the identical note from Austria and Prussia to the Danish Government, which had appeared in the daily papers, containing an amended proposal for an armistice, was genuine. The Duke of SOMERSET said that the document was substantially correct. The Malt for Cattle Bill and the Marine Mutiny Bill were read a second time. The Insane Prisoners' Act Amendment Bill was referred to a Select Committee. The Vestry Cess Abolition (Ireland) Bill passed through committee, after a division on clause 4, which was thrown out by a majority of 7, the numbers being 34 to 27. On Wednesday the Mutiny Bill was read a second time. The Inclosure Bill was read a third time and passed. The Marine Mutiny Bill passed through committee. The Consolidated Fund Bills were brought up from the Commons and read a first time. On Thursday, in answer to the Earl of DESART, Earl DE GREY gave explanations as to the probable operation of the Ten Years' Enlistment Act, by the provisions of which a large number of men will be entitled to their discharge from the army next year. In answer to a question from the Earl of DONOUGHMORE respecting the Irish constabulary,

Earl GRANVILLE said that the Government were engaged in consulting the public officials in Ireland with the view of improving the character of that body as a detective force.

In the Commons on Friday, on the order for going into Committee of Supply, Mr. HENNESSY moved a resolution to the effect that it was just and expedient to extend to Ireland the beneficial provisions of the English poor law. The motion led to a long debate, but was ultimately withdrawn. On Monday Mr. ROEBUCK asked whether the Government intended to remonstrate with the Government of the Federal States on their employment of agents in Ireland for the purpose of enlisting HER MAJESTY'S subjects, and accompanied the question with a severe censure on the foreign policy of Earl RUSSELL. Lord PALMERSTON defended Earl RUSSELL, and said that the Government had not yet obtained any evidence against Federal recruiting agents in Ireland, but if any such evidence could be procured, immediate steps would be taken to vindicate the law. Sir L. PALK called attention to the statement made by the late PROCUREUR-GENERAL in Paris with regard to the alleged connection of M. MAZZINI with Mr. STANSFELD, and asked if any communications had passed between the French and English Governments on the subject. Mr. LAYARD replied that no communication had been received from the French Government, and that her Majesty's Government had no intention whatever to take any notice of the statement. The House then went into Committee of Supply, and Mr. STANSFELD moved the votes for wages of artificers and workmen in the dockyards, and entered into a long explanation of the state of those establishments. Mr. LINDSAY moved to reduce the vote by 244,979*l.*, being the excess in the estimate over that of last year. On a division the motion was negatived by 110 to 29. The vote was then agreed to, as was a vote for 69,105*l.* for wages of artificers in the dockyards abroad. The Mutiny Bill was read a third time and passed. The Consolidated Fund (4,500,000*l.*) Bill and the Consolidated Fund Bill (584,650*l.*) were read a second time. On Tuesday Mr. DUDLEY FORTESCUE moved for various papers connected with the late court-martial on Colonel CRAWLEY, and entered into a long justification of the course he had taken on the subject. General PEEL moved as an amendment, that the production of any further papers was inexpedient. After a long debate the amendment was agreed to without a division. Mr. BAINES obtained leave to bring in a Bill to extend the franchise to 6*l.* occupiers in boroughs. On Wednesday the Judgments, &c., Law Amendment Bill was read a second time and referred to a select committee. Mr. DODSON moved the second reading of the Tests Abolition (Oxford) Bill, the object of which is to abolish the subscription now required for University degrees. Sir W. HEATHCOTE moved as an amendment that the Bill be read a second time that day six months. On a division, the second reading was carried by 211 to 189. The Election Petitions Bill and the Metropolitan Subways Bill were read a second time, the latter being referred to a Select Committee. On Thursday, in answer to Lord R. MONTAGU, Lord PALMERSTON said that her Majesty's Government had obtained the consent of Austria and Prussia to a Conference, and that they had good reason to hope that the Danish Government would also consent to it. On the order for resuming the adjourned debate on the motion for going into Committee on the Government Annuities Bill, an animated discussion took place between the CHANCELLOR of the EXCHEQUER and Mr. H. B. SHERIDAN, with regard to the representations made by the right hon. gentleman relative to the British Provident Institution and its management. The adjourned debate was then resumed by Sir M. FARQUHAR, who moved as an amendment that the Bill be referred to a select committee. After a long discussion, the CHANCELLOR of the EXCHEQUER said he had no objection to refer the Bill to a select committee, provided the committee confined itself to the consideration of the clauses. Lord STANLEY suggested that the compromise should be accepted. The debate was then adjourned. On the order for going into committee of supply, Sir H. STRACEY moved that the statement made by the PROCUREUR-GENERAL on the recent trial of GRECO for conspiracy against the EMPEROR OF THE FRENCH, respecting the connection of M. MAZZINI with Mr. STANSFELD, deserved the serious consideration of the House. Mr. STANSFELD defended himself at some length and gave a direct denial to every part of GRECO's statement, though he admitted that letters had been addressed to M. MAZZINI at his house under the name of "M. FLOWER." After a long debate the House divided, when the motion was negatived by a majority of 10, the numbers being 171 to 161.

Home News.

THE COURT.—The Queen and Royal family continue at Windsor Castle. On Friday Prince Alfred, Princess Helena, and Princess Louisa left London for Windsor. On Saturday the Queen, accompanied by the Princess Helena, walked and drove in the grounds. Prince Alfred came to London, and was present at the Levée at St. James's Palace. His Royal Highness afterwards returned to the Castle. In the afternoon, the Queen, accompanied by Princess Helena, drove out. On Sunday morning the Queen, Prince Alfred, Princess Helena, Princess Louisa, Prince Leopold, and Princess Beatrice attended Divine service in the private chapel. The Dean of Windsor officiated. On Monday morning the Queen, accompanied by Prince Alfred and Princess Helena, came to London. Her Majesty drove to South Kensington, and inspected the Mulready collection of pictures. Her Majesty then visited the Prince and Princess of Wales at Marlborough House, and remained to luncheon. After luncheon her Majesty returned to Buckingham Palace and there received the Archduke Maximilian of Austria and the Archduchess Charlotte. The Queen, accompanied by Princess Helena, afterwards returned to Windsor Castle. Prince Alfred remained in London, and left at night for Edinburgh. In the evening Count Furstentein, Chamberlain to the Crown Princess of Prussia, arrived at Windsor Castle, and had the honour of dining with her Majesty and the Royal family. On Tuesday morning the Queen, accompanied by the Princess Helena, drove in the grounds. In the afternoon the Queen drove out. Lady Fanny Howard arrived at the Castle on a visit. On Wednesday, being the anniversary of the death of the Duchess of Kent, the Queen and Royal family, attended by Lady Augusta Stanley and Lady Fanny Howard, formerly Ladies-in-Waiting to her Royal Highness, visited the Mausoleum of the Duchess at Frogmore, where Mr. Theed's statue of her Royal Highness, modelled under the superintendence of the Prince Consort, was uncovered. The statue, which represents the Duchess standing, is placed on a pedestal of red Portuguese marble, in a temple designed by the Prince Consort. On Thursday morning the Queen, accompanied by Princess Helena, walked and drove in the grounds. Princess Beatrice took a carriage drive. The Right Hon. C. P. Villiers arrived from London and had an audience of her Majesty. In the evening the King of the Belgians, accompanied by the Duke of Cambridge, arrived at the Castle from Buckingham Palace. His Majesty and his Royal Highness travelled from Paddington by a special train on the Great Western Railway.

THE PRINCE AND PRINCESS OF WALES continue at Marlborough House. On Friday morning the Prince rode on horseback, and paid the King of the Belgians a visit at Buckingham Palace. The Princess took a carriage drive. The King of the Belgians visited their Royal Highnesses at Marlborough House. The Prince afterwards drove to the Zoological Gardens, accompanied by Prince John of Glücksburg. A deputation of gentlemen, headed by the Earl of Dalhousie, the Earl of Shaftesbury, Lord H. Cholmondeley, Lord Berners, Lord Calthorpe, and several Members of Parliament, waited upon the Prince and Princess and presented a Bible, Prayer-book, and Lectern, from 3928 gentlemen of the United Kingdom. A deputation from Kidderminster, headed by the Mayor, had an audience, and presented to their Royal Highnesses the offering from that town. On Saturday morning the Prince rode out. In the afternoon his Royal Highness held a levée at St. James's Palace, on behalf of her Majesty. After the levée the Prince and Princess took a drive, accompanied by Prince John of Glücksburg, and visited the Duchess of Inverness at Kensington Palace. In the evening their Royal Highnesses had a dinner party to meet the King of the Belgians. On Sunday morning the Prince and Princess, accompanied by the King of the Belgians and Prince John of Glücksburg, attended Divine service at the Chapel Royal, St. James's. The Bishop of Ripon preached the sermon. In the evening the Archduke and Archduchess Maximilian dined with their Royal Highnesses. On Monday morning the Archduke and Archduchess Maximilian of Austria visited the Prince and Princess. The Queen, accompanied by Princess Helena and Prince Alfred, arrived from Windsor, and took luncheon with their Royal Highnesses. The King of the Belgians joined the Royal party at lunch. In the afternoon the Duchess of Cambridge and Princess Mary visited the Prince and Princess. The Princess afterwards took a carriage drive. The Prince rode on horseback, accompanied by Prince Alfred, and visited the Archduke and Archduchess Maximilian, at the Clarendon Hotel. In the evening the Prince and Princess, accompanied by Prince John of Glücksburg, went to the Princess's Theatre. On Tuesday the Prince and Princess, accompanied by Prince John of Glücksburg, drove to Woolwich, and took a cruise down the river in the Sultan's new yacht. Their Royal Highnesses took luncheon on board, and returned to Woolwich soon after 4 p.m., arriving at Marlborough House shortly before 6. On Wednesday morning the Prince rode on horseback, and visited the King of the Belgians at Buckingham Palace. The Princess took a carriage drive. Prince John of Glucksburg visited the Duke of Cambridge at Gloucester House. On Thursday morning the Prince rode on horseback and visited the King of the Belgians at Buckingham Palace. The Princess took a carriage drive, and also visited the King of the Belgians. His Majesty afterwards visited their Royal Highnesses at Marlborough House. In the afternoon the Prince, accompanied by Prince John of Glücksburg, visited Mr. Leighton's studio. In the evening the Prince and Princess, and Prince John of Glücksburg dined with the Duchess of Inverness at Kensington Palace. It is understood that the Prince and Princess of Wales will leave Marlborough House on Tuesday to pass a week with Her Majesty at Windsor Castle, after which their Royal Highnesses will go to Sandringham for a few weeks.

ARRIVAL OF THE ARCHDUKE AND ARCHDUCHESS MAXIMILIAN.—His Imperial Highness the Archduke Maximilian of Austria, the future Emperor of Mexico, accompanied by the Archduchess and a numerous suite, landed at Dover on Sunday morning and after taking breakfast at the Ship Hotel left for London by a special train on the London, Chatham, and Dover Railway. On their arrival at Victoria Station, the Imperial party proceeded at once to the Clarendon Hotel, where apartments had been engaged for them. The Archduke has been travelling in strict *incognito*, under the title of the Count Lacroma; and consequently, all the usual receptions and salutes were dispensed with. At an early hour on Sunday their Imperial Highnesses went to Marlborough House to visit the King of the Belgians, the father of the Archduchess. Later in the day the Princess of Wales drove out with the Archduchess. In the evening their Imperial Highnesses dined with the Prince and Princess of Wales at Marlborough House to meet the King of the Belgians. On Monday morning the Archduke and Archduchess paid a visit to the Prince and Princess of Wales and the King of the Belgians, at Marlborough House, and afterwards took a drive in the Parks, returning to the Clarendon to luncheon. In the afternoon their Imperial Highnesses went to Buckingham Palace, and visited the Queen, who had arrived from Windsor for the purpose of receiving them. On their return to the Clarendon the Princess of Wales, the Duchess of Cambridge and the Princess Mary and the Grand Duchess of Mecklenburg-Strelitz visited their Imperial Highnesses. At a later hour the Prince of Wales and Prince Alfred called on the Archduke and Archduchess. In consequence of the interest excited by the presence of the Imperial Highnesses at the Clarendon, and the great crowd assembled in the hope of obtaining a glimpse of the future Emperor and Empress of Mexico, the Prince of Wales and Prince Alfred left the hotel by the private entrance in Albemarle Street. During the day the Orleans Princes, several of the foreign ambassadors, Cabinet ministers, and great officers of State, and other distinguished personages, paid their respects to the Archduke and Archduchess. On Tuesday morning at 9 o'clock their Imperial Highnesses left London for Dover by a special train on the London, Chatham, and Dover Railway. On their arrival at Dover the Archduke and Archduchess took luncheon at the Royal Shakespeare Hotel, and embarked immediately afterwards for Ostend on their way to Brussels.

PRINCE JOHN OF GLUCKSBURG is expected to leave Marlborough House on Tuesday, on his return to Copenhagen.

COURT MOURNING.—Orders were issued from the Lord Chamberlain's Office on Tuesday for the Court to go into mourning for three weeks, commencing to-morrow, the 20th inst., for the late King of Bavaria.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street.

PARLIAMENTARY MOVEMENTS.—The official declaration of the poll for Hertfordshire was published on Monday, when the High Sheriff announced the exact majority of Mr. Surtees to be 248, the numbers being 2274 for Mr. Surtees, and 2026 for Mr. Cowper. The Berwick election committee has reported that Mr. Cargill was duly elected. A new writ has been issued for the county of Armagh, vacant by the resignation of Mr. Close.

SECRETARYSHIP OF THE POST OFFICE.—The Postmaster-General has appointed Mr. John Tilley to be Secretary of the Post Office, in the room of Sir Rowland Hill, resigned.

THE PRIVY COUNCIL JUDGMENT ON ESSAYS AND

it would be of incalculable advantage to the working classes. Lord Stanley concurred in the principle of the Bill, but suggested that further time should be allowed for its consideration. After some discussion the Chancellor of the Exchequer agreed to adjourn the debate to Thursday week. On Tuesday Mr. M. Gibson called attention to the report of the Joint Committee on Metropolitan Railway Schemes, and moved that the Bills therein recommended to be abandoned should not be proceeded with. After some discussion and a division the motion was agreed to. Mr. Adderley moved a resolution that grants made from the Treasury to schools for the working classes should not in every case be reduced by the whole amount of the endowments. After a long debate, during which several members spoke in favour of the motion, Mr. Lowe said that in deference to the prevailing feeling of the House the Government would accept the resolution. The motion was then agreed to. On the motion of Mr. G. Clive, a Select Committee was appointed to inquire into the expediency and practicability of abolishing turnpike trusts. On the motion of Sir S. Northcote, a Select Committee was appointed to inquire into the constitution and working of Government schools of art. The Inclosure Bill, and the Bills of Exchange and Promissory Notes (Ireland) Bill, were read a third time and passed. On Wednesday the Trespass (Ireland) Bill was read a second time. The Watching of Towns (Ireland) Bill was withdrawn. Mr. Ewart moved the second reading of the Weights and Measures Bill, the object of which is to permit the use of the metric system in mercantile transactions. Mr. M. Gibson said he would not oppose the second reading of the Bill, but could not consent to some of the clauses. Mr. Walter moved that the Bill be read a second time that day six months. On a division, the amendment was negatived by 90 to 52, and the Bill was read a second time. The Cattle Diseases Prevention Bill and the Cattle Importation Bill were read a second time and referred to a select committee. On Thursday the House went into Committee of Supply on the Naval Estimates, and agreed to the vote for 1,275,316*l.* for the wages of artificers in the dockyards. The other votes were postponed in order to give the House an opportunity of discussing the details. The House went into committee on the Mutiny Bill, when Mr. Cox moved the omission of the clause authorising the punishment of flogging. The motion was negatived on a division by a majority of 3, the numbers being 45 to 42. Mr. Cox then moved the omission of the clause relating to the branding of deserters. On a division, the motion was negatived by 80 to 50. The Bill then passed through committee. The Marine Mutiny Bill also passed through committee. Mr. Lawson moved for leave to bring in a Bill to enable owners and occupiers of property to prevent the common sale of intoxicating liquors in certain districts. On a division, leave was given by 70 to 36.

A despatch from Vienna announces the important intelligence that Austria has assented to the policy proposed to her by Prussia, and that the allied armies have received orders to advance immediately into Jutland and surround the city of Fredericia. In accordance with these orders a Prussian division, accompanied by the Crown Prince and General Wrangel, advanced on Sonderskoogl on Tuesday, attacked the Danish outposts, and drove them back to Fredericia; while the Austrians advanced on Veile, to the north of Fredericia, and dislodged the Danes from that position.

A telegram from Copenhagen states that the elections to the Folksthing took place on Saturday, when all the candidates favourable to the prosecution of the war were returned. The President of the Council, in a speech delivered to his constituents, said that he should continue to struggle persistently for the independence of the monarchy, and the maintenance of the union between Denmark and Schleswig, and would never consent to a dissolution of this union. A great meeting was held at Stockholm on Sunday, at which resolutions in favour of the Danes were unanimously adopted. A popular demonstration for Denmark was subsequently made before the house of the Danish Minister.

The King of Bavaria died on Thursday morning, after an illness of less than 24 hours. His Majesty is succeeded by his eldest son, now in his 19th year, who has been proclaimed King by the title of Ludwig II.

Since the announcement of the state of siege in Galicia the whole of the Russian army has been placed on a war footing. The Imperial Guard has been ordered to the Prussian frontier, and the 6th Corps d'Armée has been ordered from the extreme provinces of Russia to Poland. An Imperial proclamation emancipating the peasants throughout Poland was solemnly proclaimed in Warsaw on Sunday.

Home News.

The Court.—The Queen and Royal family continue at Windsor. On Friday morning Princess Hohenlohe left the Castle for the Continent. Princess Helena accompanied the Princess to the station, and General Seymour attended the Princess to Folkestone. The Queen, accompanied by Princess Helena, walked and drove in the grounds. In the afternoon the Queen took a carriage drive, accompanied by Princess Helena. On Saturday morning her Majesty walked in the grounds. Princess Louisa came to London, and attended the performance at Covent Garden Theatre. Her Royal Highness returned to Windsor Castle at night. Prince Arthur arrived at the Castle from Greenwich Park. Earl Granville arrived on a visit and had an audience of her Majesty. On Sunday morning the Queen, the King of the Belgians, Princess Helena, Princess Louisa, and Prince Arthur attended Divine service in the private chapel. The Dean of Windsor officiated. On Monday morning the Queen drove in the grounds, accompanied by Princess Helena. Her Majesty received the Countess Wachtmeister, wife of the Swedish and Norwegian Minister, Madame Comyn, wife of the Spanish Minister, and Baroness de Blome, wife of the Hanoverian Chargé d'Affaires, who were presented to her Majesty by Countess Russell. Prince Arthur left the Castle for Greenwich Park. Earl Granville left the Castle for London. The Prince and Princess of Wales arrived from London. The Duchess of Wellington, the Belgian Minister, and Madame Van der Weyer, and the Earl of St. Germans also arrived. In the evening the Queen had a dinner party. On Tuesday morning the Prince and Princess of Wales left the Castle for Marlborough House. The King of the Belgians went to Claremont to visit the Queen Marie Amelie. The Queen, accompanied by Princess Helena, drove in the grounds. Princess Helena came to London, and attended the performance at the Lyceum Theatre. On Wednesday morning the Duke and Duchess d'Aumale visited the King of the Belgians, and took luncheon with her Majesty. The Ambassadors from the Queen of Madagascar were presented to the Queen by Earl Russell. They were accompanied by Mr. John Duffus, their interpreter. Earl Russell had an audience of her Majesty. On Thursday morning, the Queen, accompanied by the King of the Belgians, Princess Helena and Princess Louisa, left Windsor for Buckingham Palace, to attend the christening of the Prince of Wales. The Princess Beatrice and Prince Leopold left the Castle for London an hour previously. Prince Alfred had arrived at Buckingham Palace on the previous night from Edinburgh. Prince Arthur also arrived from Greenwich Park. After the christening, the Queen, accompanied by Princess Beatrice, went to Marlborough House to visit the Prince and Princess of Wales. Her Majesty afterwards drove to the Paddington station of the Great Western Railway, and returned to Windsor. The King of the Belgians, Prince Alfred, Princess Helena, and Princess Louisa, remained at Buckingham Palace, and in the evening dined with the Prince and Princess of Wales at Marlborough House.

The Prince and Princess of Wales.—On Friday afternoon the Prince and Princess received deputations from the University of Oxford, the University of Cambridge, and the body of Presbyterian ministers of London and Westminster, who presented addresses on the birth of the infant Prince. The Princess of Wales afterwards took a carriage drive. The Duke and Duchess d'Aumale visited the Prince and Princess of Wales. In the evening their Royal Highnesses had a dinner party. On Saturday morning the Prince took a ride on horseback. The Princess drove out in an open carriage. In the evening the Prince attended the performance at the Haymarket Theatre. On Sunday morning the Prince and Princess attended Divine service at the Chapel Royal, St. James's. The Bishop of Sodor and Man preached the sermon. In the afternoon their Royal Highnesses took a drive in an open carriage to Kew Gardens. On Monday morning the Duchess of Cambridge and Princess Mary visited the Prince and Princess. In the afternoon their Royal Highnesses left Marlborough House for Windsor, on a visit to the Queen. On Tuesday morning the Prince and Princess returned to Marlborough House. In the afternoon the Prince drove to the Victoria Station to meet Prince John of Glücksburg, who arrived on a visit to their Royal Highnesses. The Princess took a carriage drive. Prince John of Glücksburg visited the Duke of Cambridge, the Duchess of Cambridge and Princess Mary. In the evening the Prince and Princess, accompanied by Prince John of Glücksburg, went to the Lyceum Theatre. On Wednesday the Princess took a carriage drive. The Duke of Cambridge visited Prince John of Glücksburg at Marlborough House. On Thursday, after the christening of the infant Prince, the Prince and Princess of Wales gave a State dinner at Marlborough House to the King of the Belgians, the members of the Royal family, the Royal guests invited to the christening, and the principal Officers of State and the Royal Household.

Christening of the Infant Prince.—The baptism of the infant son of the Prince and Princess of Wales took place on Thursday, the first anniversary of the marriage of his Royal parents. The ceremony took place at 1 o'clock in the private chapel of Buckingham Palace, in the presence of the Queen, the King of the Belgians, the Princes and Princesses of the Royal family, Prince John of Glücksburg, brother of the King of Denmark the Princess Augusta of Saxe-Coburg, Prince Philip of Saxe-Coburg, Princess Clotilde of Saxe-Coburg, Prince Edward and Prince Gustav of Saxe-Weimar, several of the Foreign Ambassadors, her Majesty's Ministers, the Great Officers of State, the members of the Queen's and Prince of Wales's Households, and a large number of invited guests. The Archbishop of Canterbury officiated, assisted by the Bishop of London, the Bishop of Oxford, the Bishop of Chester, the Rector of St. George's, Hanover-square, the Dean of Windsor, and the Dean of Westminster. The Sponsors were the Queen, the King of the Belgians, Prince John of Schleswig-Holstein-Sönderburg-Glücksburg, representing the King of Denmark; the Princess Helena, representing the Crown Princess of Prussia; Prince Alfred; the Grand Duchess of Mecklenburg-Strelitz, representing the Duchess of Saxe-Coburg and Gotha; the Duchess of Cambridge, representing the Dowager Duchess of Schleswig-Holstein-Sönderburg-Glücksburg; and the Duke of Cambridge, representing the Landgrave of Hesse. The Royal personages having been conducted to their seats, the service commenced with the performance of a chorale, composed by the Prince Consort, and a hymn. When the music ceased, the Lord Chamberlain, accompanied by the Groom of the Stole to the Prince of Wales, and the Chamberlain to the Princess, conducted the infant Prince into the Chapel, his Royal Highness being carried by Mrs. Clark, the head nurse, and attended by the Countess of Macclesfield, one of the Ladies of the Bedchamber to the Princess. The Royal infant was attired in a robe of Honiton lace—the same that was worn by the Prince of Wales at his christening, with a cap of Honiton lace, a cloak of crimson velvet lined with ermine, and a mantle of white satin edged with Honiton lace. When the Archbishop of Canterbury commenced the prayer of the baptismal service, the Countess of Macclesfield gave the infant Prince to the Queen, who handed his Royal Highness to the Archbishop. On reaching the portion of the service for the naming of the child, the Archbishop demanded of the Sponsors how it should be named. The Queen answered "Albert Victor Christian Edward," and the Archbishop baptized it in those names. The infant Prince was then restored to the arms of the Queen. The Countess of Macclesfield afterwards took the Prince, who was reconducted from the Chapel in the same way as on entering. The exhortation and blessing having been given by the Archbishop, the ceremonial concluded with the performance of Haydn's grand chorus from the "Creation." As soon as the ceremony was concluded, the Queen was conducted by the Lord Chamberlain to the White Drawing Room, where the Sponsors joined her Majesty. The Royal personages, with their attendants, and all others forming the Royal procession, also retired from the Chapel and proceeded to the State apartments. The Queen wore a black silk dress covered with deep black crape, and edged with jet gimp; a cap of white crape lisse, in the style of the cap of Mary Queen of Scots, with diamonds round it, and a long white crape lisse veil attached to it. Her Majesty wore the riband, star, and badge of the Garter, a diamond necklace, and large cross containing the Prince Consort's miniature, and a brooch composed of a large sapphire set in 12 large diamonds. The Princess of Wales wore a white satin dress with ruches of tulle and two flounces of rich Brussels lace decked with flowers, water lilies, ferns, and grasses; a tiara of diamonds, necklace, brooch, and earrings of pearls and diamonds, a corsage of the City diamonds round the top of the dress; the Portuguese Order of Isabella, and the Victoria and Albert badge. The King of the Belgians wore the uniform of a Field-Marshal. The Prince of Wales wore a General's uniform, with the collar of the Garter. Prince Alfred wore a naval uniform. Prince Arthur and Prince Leopold wore the Highland costume. The Duke of

Cambridge wore the uniform of a Field-Marshal. The Ministers of State and the officers of the Royal Household all wore their full-dress uniforms, and the members of the orders of knighthood wore the collars of their respective orders. The ceremonial having concluded, the visitors proceeded to the Green Drawing-room and Picture Gallery, and shortly afterwards partook of a collation with the Royal family in the supper-room, which had been beautifully prepared for the occasion. Much of the most curious and costly plate belonging to the Palace was displayed on the tables and the buffet, and conspicuous among the viands was a superb christening cake. During the collation the Lord Steward gave the following toasts:—"The Prince Albert Victor of Wales." "The King of the Belgians." "The King of Denmark." "The Queen." "The Prince and Princess of Wales." After the collation the guests took their departure, and the Queen, after paying a visit to the Prince and Princess of Wales at Marlborough House, returned to Windsor.

ARRIVAL OF PRINCE JOHN OF GLÜCKSBURG.—His Royal Highness Prince John, youngest brother to the King of Denmark, arrived in London on Tuesday, to represent the King and Queen of Denmark at the christening of the infant Prince. His Royal Highness landed at Dover at 3 A.M. on Tuesday morning, and slept at the Ship Hotel. The Prince left Dover at noon by the express train on the London, Chatham, and Dover Railway, and was met at the station by the Prince of Wales, who conducted him to Marlborough House, where he remains on a visit to the Prince and Princess.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street.

THE CHANNEL FLEET passed Plymouth on Saturday on their way to Portland.

THE VOLUNTEER REVIEW.—The Secretary of State for War has sanctioned a review of Volunteers being held on Blackheath, near Guildford, on Easter Monday, the 28th inst. Applications from corps desirous of attending this review are to be made upon the prescribed form and transmitted to the War Office through the proper channel not later than the 23d inst.

THE CRAWLEY COURT-MARTIAL.—A return from the War Office has been published, showing the expenses of the court-martial, distinguishing the proportions to be defrayed from Imperial and Indian revenues respectively. The account is as follows:—Cost of transport for witnesses, &c., from India to England, 5324*l.* 10*s.*; travelling expenses for witnesses, &c., in England, 456*l.* 4*s.* 7*d.*; pay and allowances of witnesses, &c., 9283*l.* 1*s.* 7*d.*; estimated cost of transport back to India, 2901*l.* 11*s.* 10*d.*; expenses of Deputy-Judge-Advocate-General, and of certain witnesses, telegrams, cabs, &c., 127*l.* 17*s.* 3*d.*; Messrs. Gurney & Sons, for transcripts of evidence, &c., 212*l.* 17*s.* 3*d.*; fitting up club at Aldershott, fuel, light, and repairs of furniture, 54*l.* 18*s.* 8*d.*; incidental expenses, 17*l.* 16*s.* 4*d.*; total, 18,378*l.* 17*s.* 6*d.* The whole of the above expenditure will be defrayed from Imperial revenues.

PARLIAMENTARY MOVEMENTS.—The election for Hertfordshire took place yesterday, and terminated in the return of Mr. Surtees by a large majority. The numbers at 3 o'clock, as given by the Liberal return, were—for Mr. Surtees, 2117; Mr. Cowper, 1887.

Foreign.

FRANCE.—The Archduke and Archduchess Maximilian arrived in Paris on Saturday, escorted from the Belgian frontier by Prince Metternich. Their Imperial Highnesses were received on their arrival at the Tuileries by the Emperor and Empress. It is understood that they will leave Paris to-day or to-morrow for Windsor Castle, and there take leave of Queen Victoria and King Leopold, and that they will embark at Trieste on the 25th inst. for Mexico. The *Patrie* of Friday states that the foreign legion will be reorganised, with a total effective strength of 6000 men, and be period of 8 or 10 years. The French army would then be placed at the service of the Archduke Maximilian for a able to embark for France at the end of the present year. The *Presse* asserts that Count Bernstorff has announced to Earl Russell that the Prussians intend shortly to attack Fredericia. The *Constitutionnel* of Saturday, in an article signed by M. Paulin Limayrac, says:—

"The proclamation of a state of siege in Galicia is a serious and lamentable fact, but the English press draws exaggerated consequences therefrom in concluding that a political combination exists between the Cabinets of Vienna and St. Petersburg. As we are in the habit of commenting on precise information only, we will say no more on the subject now, but confine ourselves to pointing out the contradiction between Austria making war in Denmark in the name of the principle of nationalities, and her conduct towards the Poles in Galicia."

The same journal of Tuesday, in another article signed by M. Limayrac, considers the assertions of the English journals respecting the establishment of the Holy Alliance to be at least exaggerated. It says:—

"We cannot believe in the resurrection of a policy which was justifiable when we had to fight it, and when it led to a gigantic struggle, but which at the present time would be the most absurd of anachronisms. On what principle was the Holy Alliance founded, and what was its object? Its principle was absolutism, its object was to crush the French Revolution and its consequences. In a word, it was the struggle of old against modern society, of feudal against modern Europe, of absolutism against 1789. The First Empire, which was the Revolution reduced to order, had accepted the dangers together with the advantages of the political and social transformation which had just taken place, and the old world, rising against it, was making its last effort."

La Patrie of Sunday publishes the following in a postscript:—

"Just as we were going to press two grave facts have been communicated to us by private telegraphic despatches, and confirmed by private information. Austria having consented to associate herself in the execution of all the strategic plans of Marshal Wrangel, the continuation of hostilities in Jutland is said to have been decided upon at Berlin. These facts are incontestably connected with the execution of the engagements entered into between the Courts of Vienna, St. Petersburg, and Berlin, the first realisation of which is the declaration of a state of siege in Galicia."

The *Temps* describes the anxiety with which the future is expected. It says:—

"No Government in its senses would prefer war to peace, but treaties are everywhere looked upon as so much waste paper, and the 'nationality movement' is upheaving Italy and other nationalities which are or fancy themselves oppressed. No reflecting mind can any longer conceal from itself the gravity of the situation of Europe. History records no concourse of circumstances at once so tragic and so strange. Never has Europe felt so clearly the presentiment of a formidable crisis, never has she been less desirous of one, and never has she felt herself less able to avert it."

The Emperor has consented to arbitrate in certain questions pending with the Suez Canal Company, referred to him for settlement by the Viceroy of Egypt. His Majesty has appointed a Committee of five members to examine the questions at issue. The supplementary election at Cambrai to the Corps Législatif took place on Tuesday, when M. Stievenand, the Opposition candidate, obtained 16,159 votes, and M. Boitelle, the Government candidate, 13,425 votes. It was recently mentioned that the second daughter of Count de Montalembert had become a nun in the Convent of the Sacré Cœur. The youngest sister of the Countess has just entered the same establishment in a similar capacity.

SPAIN.—In the sitting of the Cortes on the 3d inst., Senor Mon, President of the Council, who has provisionally assumed the direction of the Ministry of Marine, declared that he would govern with the co-operation of the Cortes, settle the constitutional question, and abolish the measures introduced in 1858. In the sitting of the Senate on Tuesday the President of the Council brought in a Bill abolishing the Constitutional Reform Law of 1858. The Minister of the Interior laid three Bills before the Chamber; the first for the suppression of electoral offences; the second regulating the Parliamentary disabilities of public functionaries, and the third proposing the appointment of Mayors of towns by Royal decree. In the sitting of the Cortes on Wednesday, Senor Balmasedo moved that the sinking fund for the Passive Debt should be ncreased. The Minister of Finance replied favourably to the proposition, which was then referred to the Committees.

SWEDEN.—A public meeting, convened for the purpose of summoning the Government to aid Denmark, was held at Stockholm on Sunday, and was very numerously attended. Thousands of people, being unable to obtain admittance to the hall, which was quite full, were waiting in the streets. The following resolutions were unanimously adopted:—

"1. This meeting expresses its strongest sympathy for Denmark, whose resistance it considers to be just. It further considers the war as a struggle for the independence and free development of the whole North. 2. This meeting believes that the honour and the real interests of Sweden render an energetic policy on the part of that country necessary."

The people are ready to bear the sacrifice which such a policy may necessitate. In the course of the evening a popular demonstration was made before the house of the Danish Minister, when cheers were given for Denmark. The *Snalposten* of Thursday asserts that Russia has undertaken to form a corps of 150,000 men to operate against Sweden in the event of the latter State becoming an ally of England and France.

DENMARK.—The elections to the Folksthing of the Rigsraad took place on Saturday. All the National and Liberal candidates in Copenhagen favourable to an energetic prosecution of the war were elected. M. Hall, the ex-Prime Minister, made an electioneering speech, in which he stated that, after the arrival of Lord Wodehouse from Berlin, he had asked his lordship whether the revocation of the November Constitution would prevent the entry of the Austro-Prussian troops into Schleswig. The reply was that it decidedly would not. He further said:—

"The alliance with Sweden was not an agreement made only between the Sovereigns, but also between the Governments of Sweden and Denmark. A personal union between Denmark and Schleswig-Holstein would lead to the loss of those Duchies, or to Denmark being Germanised and ruined. The German Powers never stated their demands before they occupied the Duchies."

Bishop Monrad, the President of the Council, in a speech delivered before his electors, said he should continue to struggle persistently for the independence of the Monarchy and the maintenance of the union between Denmark and Schleswig. He would never consent to a dissolution of this union. All the other candidates demanded the energetic prosecution of the war, and declared the abrogation of the November Constitution to be impossible after war had commenced. These speeches were received with applause by the people. All the districts of Schleswig not occupied by the Austro-Prussian troops have elected members to the Rigsraad. Letters from Copenhagen state that the Guards having left the capital, the civic artillerymen serve the guns of the forts which protect the town on the sea side, and the outer fort of the citadel, which commands the Sound in a northerly direction as far as Charlotten. An official notification states that from the 15th inst. the towns of Comin, Schwinemunde, Wolgast, Ereifswald, Stralsund, and Barth will be blockaded.

THE DANISH DUCHIES.—Three Austrian brigades received orders from Marshal von Wrangel on Sunday to advance into Jutland rapidly and surround the town of Fredericia. On Tuesday, at 6 A.M. the Austrians crossed the Kolding-au in two columns. After a very exhausting march of one German mile and a quarter they encountered the Danish cavalry to the south of Veile. The Austrians forced back the Danes to Veile, where three Danish infantry regiments, three batteries, and two cavalry regiments, took up a position to the north of the Veile river. The Nostiz Brigade, under the command of General von Gablenz, a portion of the Gondrecourt Brigade, and the artillery reserve, succeeded in dislodging the Danes, in spite of the great strength of their position, and in driving them back towards Horsens. The Danish loss was considerable, and the Austrians took many prisoners. General Wilster, the Danish Commander-in-Chief there, Hoffmann, his head of the Staff, and three other officers were wounded. The Austrians subsequently occupied Erritsö and Staunstrup before Fredericia, but have made a retrograde movement between Eritsoe and Borderup, and evacuated Snoghöe. While these operations were in progress on the Austrian side, the Prussian division of the Guards, accompanied by the Crown Prince and Field-Marshal von Wrangel, advanced to Sonderskoogl, driving the Danes back to Fredericia and capturing 180 prisoners. The Prussian loss was two killed and 20 wounded. A portion of the Royal Danish Foot Guard made a descent, for reconnoitring purposes, on Sunday on the eastern coast of Holstein. They marched to the village of Putlos, and were received in a friendly manner by the inhabitants. An ordinance of the Austrian and Prussian Civil Commissioners was promulgated on Tuesday at Flensburg, stating that from the 1st of April next the Danish currency and the notes of the Bank of Copenhagen will no longer be accepted in payments made to the public Treasury. The same ordinance declares that the Schleswig-Holstein currency and silver thalers of all the German States will be a legal tender.

HAMBURG.—A Prussian siege train, consisting of 50 mortars and 3000 projectiles, of a calibre varying from 25 lb. to 65 lb., passed through Hamburg on Wednesday.

BAVARIA.—King Maximilian was taken ill on Wednesday afternoon with an attack of erysipelas of the left breast. His Majesty rapidly became worse, and received extreme unction at 5 o'clock on Thursday morning. About six hours afterwards the King died. The last act of his Majesty previous to his illness was to sign the instructions to his representative at the Federal Diet to urge forward the vote on the succession question in the Duchies. On Thursday afternoon the Royal herald proclaimed in all the streets and public places the accession of the eldest son of his late Majesty, under the title of King Ludwig II. The new King was born in 1845, and is consequently in the 19th year of his age.

FRANKFORT.—In the sitting of the Federal Diet on Saturday, the representative of Bavaria proposed that the Diet should notify to the Federal commander in Holstein the conclusion of an understanding between that body and the two great German Powers in reference to the occupation of the military route in that Duchy by the allied troops. Bavaria also proposed that the Federal troops in Holstein should be reinforced by the 7th corps and by another corps made up of troops from different States. An official communication to the Frankfort newspapers states that the Federal Diet has recently received no invitation from any quarter to be represented at an European Conference.

PRUSSIA.—The *Pays* states that three Prussian war ships have received orders to leave Brest, where they are at present stationed, and proceed immediately to the North Sea.

AUSTRIA.—The Prussian General Manteuffel left Vienna on Saturday evening, after having arrived at a definitive understanding with the Austrian Cabinet in relation to the advance of the allied troops into Jutland. An agreement has also been concluded between the two great German Powers in regard to united action in the Federal Diet—both engaging to issue instructions to their representatives in the sense of their last motion. Strategic proceedings are to leave the authority of the civil commissioners intact. An Imperial ordinance, dated the 3d inst., was promulgated on Saturday, containing regulations for the capture and stoppage of hostile and suspected ships by Austrian vessels. The ordinance purports to be issued on account of the hostile measures adopted by Denmark against German ships. Four Austrian frigates passed Messina on Thursday, sailing westward, on the look-out for Danish vessels.

THE ADRIATIC.—A letter from Trieste of the 27th ult. says that Rear-Admiral Wullersdorf had passed through that city on his way to Pola, to hoist his flag on board the Kaiser steam ship of war. He will assume the command of the Austrian squadron charged to protect German vessels against Danish cruisers. The same correspondence says that the Novara, which has been selected to convey the Archduke Maximilian to

Mexico, has been ordered not to complete her armament till further orders. The Austrian gunboat Vilenich has captured a Danish merchantman laden with coffee, and left her at the island of Cephalonia.

VENETIA.—The *Pays* of Tuesday asserts that a strong body of Austrian troops has been despatched to Italy. Letters from Venice also announce important military preparations on the part of Austria in the district of Verona, in which will be included those of Carintia, Trieste, and Istria. There are at present 100,000 men in the district; but the supply of war material is sufficient for an army of 300,000 men. A reinforcement of 30,000 men is expected. It is intended to concentrate large quantities of artillery in Polesina.

ITALY.—The Emperor Napoleon has sent a reply to an address of the National Italian Society, forwarded to his Majesty on the occasion of the late conspiracy. The Emperor's letter concludes as follows:—

"Such attempts cannot change my sentiments towards your country. I shall always prize the honour of having contributed to its independence."

RUSSIA.—It is stated that the whole Russian army has been placed on a war footing. The Imperial Guard has been ordered to the Prussian frontier, and the 6th Corps d'Armée has been ordered to Poland from the interior of Russia. A letter from St. Petersburg of the 2d inst. states that the despatch announcing that the Austrian Government had declared the province of Galicia in a state of siege had produced an explosion of joy in the Russian capital. In military circles they speak of the reconstitution of the Holy Alliance between Austria, Prussia, and Russia against France and the principle of nationalities. The Russian papers accuse the Italians of fomenting insurrection, and the *Journal de la Bourse* states in plain terms that it is fomented by a certain person who supports a cosmopolitan revolution. The *Journal de St. Pétersbourg* of Sunday publishes several Imperial decrees, one of which regulates the conditions for the emancipation of the peasants in Poland. Another decree treats of the organisation of the communal administrations on the principle of self-government in Poland, by which all connection between the nobility and the peasantry is entirely severed. Count Blondoff, President of the Council of the Empire, died last week.

POLAND.—At noon on Sunday an Imperial manifesto, announcing the emancipation of the peasants, was solemnly proclaimed in the public squares of Warsaw.

THE IONIAN ISLANDS.—Fort Vido is now half demolished. The Citadel is still untouched, and may probably remain so. The new Fort and Fort Abram are partly dismantled. Turkey is constructing fortifications opposite Corfu and Paxos. It is intended to entrust the administration of the Islands to a military governor.

GREECE.—A Ministerial crisis has taken place at Athens. M. Tringhetta has been appointed Minister of War; M. Petrinos, Minister of Justice; and M. Rondiris, Minister of Marine. The construction of the railway from Athens to the Piræus has commenced.

TURKEY.—At the invitation of the Porte a conference of Ambassadors will shortly take place for the discussion of various questions. Forty-eight battalions of Rediffs have been called out for active service. The Porte has promulgated a new Press law.

INDIA.—The Bombay mail has arrived with news from that Presidency to the 14th ult. Sir John Lawrence, the Viceroy, is still in Calcutta. His Excellency, on a morning walk last month, was pursued by a wild buffalo that had broken loose from the cattle-show, and escaped from its attack by his fleetness as a runner. The Viceroy is summoning to his counsels those who formerly were co-workers with him in the Punjaub. He has also invited Sir Hugh Rose to Calcutta to confer on military matters of importance. General Lawrence, agent for the Rajpootana States, has been summoned to Calcutta to confer with the Viceroy on important matters connected with the affairs of Rajpootana. Great changes are in contemplation with regard to the political jurisdiction over that part of the country. The Rajah of Vizianagram, and Rajah Sahib Dyal Bahadoor, of Kishenkote and Umritsur, have been gazetted as additional members of the Governor General's legislative council. Gen. Lawrence, Sir Herbert Edwardes, and Colonel Durand are spoken of as candidates for the Lieutenant Governorship of the Punjaub. The Bombay, Baroda, and Central India Railway is completed. Colonel J. Pitt Kennedy, the engineer in chief of the line, travelled from Bombay to Ahmedabad, on the 9th ult. It was expected to be opened for traffic on the 1st inst. A great fire at Nagpore has reduced to ashes the splendid Palace of the Bhonslas, that covered 200 square yards. The city, containing nearly 100,000 inhabitants, had a narrow escape from conflagration. General Sir Neville Chamberlain has had the bullet extracted from his arm, and is now doing well. The Maharajah of Jheend died on the 26th January. The three great Cis-Sutlej States have thus each lost its chief within the last few months. Two more of the ringleaders in the mutiny have been brought to justice. Hunnoomaun, who carried fire and sword into Allahabad, has been sentenced to transportation for life; and Soonunder Sai, who plotted against the Government in the Central Provinces, is in custody. Dr. Haug, professor of Sanskrit in Poona College, is meeting with unexpected success in his researches for ancient Zend MSS. in Guzerat. A census of the city of Bombay was taken on the 2d ult. The Secretary of State for India has in contemplation a simultaneous census of the whole of British India. The first section of the Persian Gulf telegraph cable, 359 miles in length, from Gwadur in Beloochistan to Cape Mussendom on the Arabian coast, has been successfully laid.

CHINA.—A despatch from Shanghai of Jan. 26, states that China is tranquil.

JAPAN.—The news from Japan is unsatisfactory. The Princes were endeavouring to exclude foreign trade at Yokohama.

NEW ZEALAND.—There is no important news from New Zealand, the war being virtually at an end.

UNITED STATES.—No important events are reported from the army of the Potomac. General Meade had left for the front. He has had long consultations with the President and military authorities at Washington, and will proceed at once, it is said, to reorganise his army. Confederate guerillas are becoming more daring and numerous, and keep the outposts on the alert. It is rumoured that General Lee is preparing to advance against General Meade, with a view of driving him back to the defences of Washington, or forcing a battle on the old Bull Run ground. It is said that the Richmond authorities demand this movement to be made in order to relieve the despondency existing at the capital. Confederate deserters state that so great is the scarcity of forage within General Lee's lines, that Fitzhugh Lee's cavalry has been disbanded until grass time, in the middle of March. Refugees assert that the Confederates in Western Virginia threaten a raid into Ohio. General Sherman, with from 25,000 to 30,000 Federals, reached Quitman on the Mobile and Ohio Railroad without opposition, and has since occupied Selma after a severe battle. It was stated that he would next attack Montgomery, but would not be allowed to capture Mobile without a desperate battle. A rumour has been telegraphed from Alabama that Sherman had also defeated Polk near Brandon, capturing 12,000 prisoners, but the reported battle has since proved to be a fiction, and Polk has been reinforced by two divisions of Johnstone's army. The Federal cavalry which left Memphis to co-operate with Sherman are reported to have had a severe engagement with the Confederates at West Point, Mississippi, and to have been forced back with considerable loss. The *Richmond Inquirer* of the 18th ult. states that the War Department had received despatches announcing that the Federals had been repulsed with great loss at Grant's Pass, 35 miles from Mobile. Despatches from that city to the 15th ult. announce that Admiral Farragut's fleet had passed eastward through the Sound in the direction of Grant's Pass. Despatches to the 19th state that Admiral Farragut had not renewed the attack on Grant's Pass, the weather being too bad for action. The Governor of Alabama issued a proclamation on the 16th ult., stating that Mobile was about to be attacked, and ordered all non-combatants to leave the city. It is reported that the Confederates have 20,000 men and two iron-clads at Mobile. It is reported that the guerilla General Morgan has crossed the Tennessee River, and that the Confederates were blockading the river below Chattanooga. A Knoxville despatch, of Feb. 21, states that General Longstreet has broken up winter quarters, and retreated from before Knoxville, and that his army has appeared in force upon Strawberry Plains. They have completed a pontoon bridge, over which two brigades had already crossed. It is said that Longstreet had previously been heavily reinforced with artillery by General Buckner. The Confederates surprised and captured a battalion of Federal cavalry on the 22d ult., and drove in the outposts five miles east and south of Cumberland Gap. General Gilmore officially reports the capture of Baldwin, Florida, on the 9th. He also reports that on the march to that place he captured 8 guns, 100 prisoners, and a large amount of cotton property. General Beauregard reports that news had been received at Charleston that the Federal advance in Florida was repulsed at Lake City. There seems to be no doubt that the Federals have been seriously repulsed in Florida, but the Government has withheld details. An unofficial report states that the engagement took place on the 20th ult., beyond Jacksonville, with the Confederates 15,000 strong, and that the Federals were defeated with a loss of 500 to 1300 men and 5 guns. Gen. Butler, in an order dated the 11th, directed the Provost-Marshals in Portsmouth and Norfolk, Virginia, to assume control of the churches, and to replace the present clergymen by those of known loyalty. Soldiers, both white and coloured, are to have free access to the churches, and any expressions of distaste or insult are to be promptly suppressed. The Committee of Ways and Means have reported on the resolution authorising Mr. Chase to issue, during the present year, a five or forty years' six per cent. loan of 200 millions. The National executive committee, of which Senator Pomeroy is the chairman, have issued an address nominating Mr. Chase for the Presidency. It is rumoured that Mr. Chase will retire from the Cabinet, and that Mr. Robert J. Walker will replace him. The Maryland Union State Convention has nominated Mr. Lincoln for the Presidency. The Halifax police magistrates have committed the Chesapeake pirates to gaol for delivery to the United States. Efforts are making to transfer the case to the Supreme Court. The Canadian steamer Bohemian was totally wrecked on the night of the 22d ult. on Alden's Rock, six miles from Portland. She lies in four fathoms of water. Nineteen of the crew and steerage passengers were lost.

Parliament.

HOUSE OF LORDS.

MONDAY.—The Marquis of WESTMEATH laid on the table a Bill to amend the law for the punishment of the crime of *Rape*, the object of the measure being to include a public whipping where it had been proved that more than one person was concerned in the commission of the offence. The Bill was read a first time.—Lord CHELMSFORD complained that in the distribution of the *Kertch and Yenikale Prize Money*, Sir M. Stopford, Admiral Boxer, and Sir F. Grey, who were not present at the capture of those places, were allowed to participate, and inquired if the Government had acted on the advice of the law officers of the Crown.—The Duke of SOMERSET said the prize money in question had been distributed in accordance with the proclamation of March, 1854. The law officers of the Crown had not been consulted, but the distribution had taken place in strict accordance with the precedents regulating such matters. *Sir John Lawrence's Annuity Bill* was read a second time. *Metropolitan Railways.*—Earl GRANVILLE called attention to the report of the select committee on railway schemes within the limits of the metropolis, and moved that the Victoria Station and Thames Embankment Railway, Oxford Street and City Railway, London Main Trunk Underground Railway, Charing Cross (Northern) Railway, Charing Cross (Western) Railway, Tottenham and Hampstead Junction Railway (Extension to Charing Cross), London Union Railways, and Tottenham and Farringdon Street Railway Bills be not proceeded with this session. He also moved that the fees incurred in respect of those Bills be remitted; and that the report be referred to all select committees to which any railway Bills within the limits of the metropolis may be referred in the present session. The motion was agreed to without discussion.

TUESDAY.—*Invasion of Jutland.*—The Earl of DERBY referred to the incidents of the war in Schleswig that have occurred since the dates of the correspondence last published, the dismantling the forts of the Dennewerk by the German forces, the removal of Danish officials, the prohibition of the use of the Danish language, and finally the invasion of Jutland. These acts went beyond an occupation of the territory, and changed the character of the war. Under these altered circumstances he wished to know whether the Government would consent to the production of the correspondence on Danish and German affairs down to the latest dates.—Earl RUSSELL repeated the different reasons that had been given by the German Powers for the advance of their troops into Jutland, and described the negotiations entered into by Her Majesty's Government for an armistice and a Conference between the Powers who signed the Treaty of London. An answer from the Danish Government to the proposal of a Conference was expected during the present week, but as negotiations were still pending he was not now prepared to produce all the correspondence.—Lord STRATFORD DE REDCLIFFE hoped that before Parliament separated for the Easter recess the Government would redeem the pledge they had given to the House of Commons, and state what was the final decision they had arrived at.—In reply to a question from the Earl of ELLENBOROUGH, Earl RUSSELL said the subject was complicated in every possible manner, and gave some explanations of the conditions of 1851. Austria and Prussia still declared they did not intend to go beyond those conditions, and were prepared to maintain the integrity of Denmark.—The Earl of SHAFTESBURY asked the FOREIGN SECRETARY whether he could give any information respecting the movements of the Austrian fleet towards the Baltic. Whether that force were large or small, he hoped it would be watched by a British squadron, and every means taken to maintain the integrity of Denmark.—Earl RUSSELL believed it was not intended that the Austrian ships should enter the Baltic, but that they should protect German merchant vessels entering the Channel and the mouth of the Elbe.—The Earl of ELLENBOROUGH, notwithstanding any assurances that might have been given, believed that the Austrian ships of war were intended to form a junction with the Prussian fleet in the Baltic, and thus establish a naval in addition to the military superiority of the Germans over the Danes. In such a case the islands of Alsen and Funen might be taken, and not only the integrity but the very existence of Denmark would be destroyed. Would England stand by and see this wrong perpetrated? Was there no point at which the honour and interest of England required it to protect the weak against the strong? Parliament ought not to rise for the holidays without stating its readiness to support any measures her Majesty might think necessary to secure the independence of Denmark. Without such a declaration the Government was powerless.—Earl GREY concurred with the Earl of Ellenborough, and said that a perusal of the Danish and German correspondence left a painful impression that this country had been humiliated.—The Earl of HARROWBY thought the Government required support in this question from some expression of the opinion of the country.—Earl RUSSELL, in reply, contended that the papers Earl Grey had read with humiliation described proceedings approved and supported by the general opinion of the nation. If Lord Grey thought otherwise, he could at once move a vote of censure on the Government; or if he thought the Government ought now to act differently, and rush into a war without the co-operation of other Powers, he might propose a resolution to that effect. But her Majesty's Government would not enter on a war when the interests, the integrity, and the independence of Denmark could be secured in another manner, nor would the Government neglect any means by which those objects could be attained. As to the supposed junction of the German fleets, the Channel squadron had been ordered home so as to be within reach if necessary, and he did not expect that any fleet of Austria or Prussia would venture to encounter it. *Sir J. Lawrences's Salary Bill* passed through committee.

THURSDAY.—*Sir John Lawrence's Salary Bill* was read a third time and passed. The *Chief Rents (Ireland) Bill* passed through committee. The *Turnpike Roads Bill* was read a second time.

FRIDAY. — *Enclosure of Hampstead Heath.* — The Earl of MALMESBURY laid upon the table a Bill entitled "The Leases and Sales of Settled Estates' Act Amendment Bill," which was read a first time. *America.*—The Earl of CORK gave notice that the Marquis of Clanricarde would, on Friday the 18th inst., move for the production of any correspondence between her Majesty's Government and the Government of the Confederate States, relative to the removal of the British Consuls from their ports. The *Chief Rents (Ireland) Bill* was read a third time and passed. The *Turnpike Roads Bill* was read a second time.

HOUSE OF COMMONS.

FRIDAY.—*China.*—Colonel SYKES called attention to the recent treacherous conduct of the Footai at the capture of Soo-chow, and the wholesale murders perpetrated there, and inquired whether, with this renewed instance of perfidy in Chinese officials, it was intended by her Majesty's Government to pass unnoticed any further violation of the instructions of the Foreign Office to British authorities in China to be strictly neutral in the civil war now raging in that

country.—Lord PALMERSTON said that it was most desirable that order and peace should be restored in China, and for that purpose a commission had been given to Captain Osborn and Mr. Lay to organise a naval force, and British subjects had been permitted to enter the service of China. The purpose had, however, not been answered, and as the conduct of the Chinese officials had been most disgraceful, the Order in Council had been repealed. Nothing could be more worthy of condemnation than the conduct of the Footai, which had been represented to the Court of Pekin, and it was hoped that adequate punishment would be inflicted upon him. After a few remarks by Mr. WHITE and Mr. KINNAIRD the subject dropped. *Confederate Cruisers.*—Mr. LEFEVRE called attention to the course pursued by the agents of the Confederate States in fitting out vessels of war and enlisting seamen in the ports of this country in violation of the laws of neutrality. He dwelt upon the escape of the Alabama and upon the annoyance which that vessel had caused to the United States, and adverted to certain facts in relation to Mr. Laird's iron rams, and other vessels supposed to be intended for the Confederate service. He thought there was evidence that there had been an organised scheme to obtain war vessels in this country. He admitted that there had been an honest endeavour on the part of our Government to enforce the Foreign Enlistment Act, but if that law was ineffectual for the purpose, it was not only our right, but our interest, that more should be done. He concluded by moving for papers.—After some remarks by Lord R. MONTAGU, Mr. BAXTER, and Mr. TAYLOR, the SOLICITOR-GENERAL observed that Mr. Lefevre, although he acknowledged that the Government had endeavoured honestly to carry out the law, seemed to have found fault with them; and he proceeded to vindicate their course of proceeding in the cases referred to by Mr. Lefevre. Their answer to all the complaints of the United States' Government was, he said, that they had fairly and honestly enforced the Foreign Enlistment Act, and had observed a strict neutrality. He discussed the suggestions offered by Mr. Lefevre, and, with regard to one of them, he said measures had been taken to remonstrate with the Confederate Government. After some observations by Sir E. COLEBROOKE and Mr. J. EWART, the motion was withdrawn, and the House went into Committee *pro formâ*.—On the order for the second reading of the *Penal Servitude Acts Amendment Bill*, Mr. ADDERLEY moved as an amendment that it be read a second time that day six months. He regarded the present law as neither clear nor precise, but believed that further mystery and doubt would be introduced by the measure of the Government. The punishment of crime should be sharp and certain, and, if remission were allowed, it should be limited solely to an alteration of the treatment of convicts and a system of classification. If tickets of leave were granted they should be given unconditionally, and he therefore objected to the proposal to subject convicts to the supervision of the police, which he regarded as an un-English system.—Mr. BEACH seconded the amendment, but expressed himself in favour of police supervision, which, he said, had worked well in Ireland.—Mr. HARDY supported the principle of the Bill, the details of which could, he thought, be considerably improved in committee.—After some observations from The O'CONNOR DON and Sir W. MILES, Sir G. GREY replied; and ultimately the amendment was withdrawn, and the Bill read a second time. The *Inclosure Bill* passed through committee. On the order for going into Committee on the *Government Annuities Bill* a discussion arose as to whether the Committee should be postponed, which extended to the merits of the Bill. Ultimately the debate was adjourned.

MONDAY.—*Invasion of Jutland.*—Mr. DISRAELI inquired whether the Government had any authentic information in reference to the invasion of Jutland by the German Powers.—Lord PALMERSTON replied that the accounts received by the Government were extremely contradictory. He believed that as matters now stood the Germans wanted Friedericia, a town which commanded the Sound, between Jutland and the Island of Funen. The invasion of Jutland, which had first been repudiated as having taken place without orders, for contrary to orders, was now sought to be justified on strategic grounds. The view which the Government took of the matter was that the whole of the military operations beyond the Eider was an attack upon the independence of Denmark, and an act of violence not justified by the existing state of things. *The Conference.*—In reply to Mr. S. FITZGERALD, Lord PALMERSTON said that the German Diet had been informed that a Conference without an armistice was likely to take place, and that they would be invited to send a representative to it, but that he believed some difficulty had arisen as to who should be that representative.—On the order for resuming the adjourned debate on going into committee on the *Government Annuities Bill*, the CHANCELLOR of the EXCHEQUER proceeded to answer some of the objections which had been urged against the measure out of doors by those chiefly interested in friendly societies, assurance companies, loan offices, and similar institutions. He said that the Bill of the Government enjoined nothing and prohibited nothing; all it did was to give facilities to the public for self-help, and it might be for self-protection. The Government had been moved to bring in the measure from representations from all parts of the country, complaining of the irregularities, frauds, and swindlings of what were termed friendly societies. The two questions to be considered in reference to the project of the Government were its safety and its justice. With regard to its safety, it would be put in all respects upon the same footing as the Post Office savings banks; and with regard to its justice, if it were desirable that such business should be undertaken by private bodies, there could be no injustice in the Government action in the matter. The three things to be ascertained were age, employment, and mode of life as regarded habits. On all these points the Government could get information by means of existing local machinery. The annuitants would have perfect safety for the custody of their deposits, and facilities would be afforded not only for the payment of premiums but for the migratory habits of working people, which no private office could offer. The right hon. gentleman referred at considerable length to the failure and collapse of an enormous number of friendly societies, and minor insurance companies, in order to show the loss, disappointment, and ruin entailed upon individuals, and concluded by expressing a sanguine hope that the measure, when passed into law, would be of incalculable advantage to that class of the community which was least able to help itself. — Mr. SHERIDAN denied that the large assurance offices were unwilling to grant policies for sums under 100*l.*, and charged the Chancellor of the Exchequer with having suppressed information in his possession on that subject. He opposed the present Bill because he believed it would break up and destroy some 20,000 existing friendly societies, while it would entail an enormous loss upon the country, which would infallibly have to make up the deficiency which would result from so unwise an interference with private enterprise.—Lord STANLEY cordially approved of the principle of the Bill, but hoped that further time would be given to consider its provisions. It was a great experiment, and its effect might be to diminish pauperism materially; but, as he desired to see a perfect measure on the subject, he objected to see it marred by too great precipitancy. — Mr. HUNTER admitted that the Chancellor of the Exchequer had made out a very strong case, but opposed the Bill as an injudicious interference with the private affairs of the people, and as tending towards a principle of centralisation.—Mr. ROEBUCK also objected to the Bill, and asked whether there were not better modes of curing an admitted evil than Government control. He warned the Chancellor of the Exchequer against converting a constitutional Government into that intolerable nuisance described as "a paternal Government."—Mr. NEWDEGATE thanked the Chancellor of the Exchequer for having unfolded to the House a state of things which certainly went far to prove the necessity of Government interference.—Alderman SIDNEY recommended the adjournment of the committee on the Bill until after Easter.—Mr. W. E. FORSTER agreed in thinking that a state of things had been revealed by the Chancellor of the Exchequer which called for inquiry. He thought that time should also be given to the managers of friendly societies to put in an answer to the very serious allegations made against them.—Mr. BOVILL supported the Bill, contending that the Chancellor of the Exchequer had understated the facts with reference to the shortcomings of assurance offices, as proved in courts of law.—Mr. P. URQUHART approved of the Bill generally, but recommended postponement for a few weeks.—Mr. HENLEY expressed his apprehension that the speech of the Chancellor of the Exchequer would cause a panic among the friendly societies throughout the country. Nevertheless, if his statements were well founded, the remedy which he proposed to apply would be sanctioned by Parliament.—Mr. BAINES and Mr. H. LEWIS questioned the policy of a measure which, by sweeping away existing benefit societies, would destroy all feeling of self-reliance on the part of the working classes.—Sir M. FARQUHAR moved the adjournment of the debate, the CHANCELLOR of the EXCHEQUER acceded, and the debate was adjourned accordingly to Thursday week—on the understanding, however, that the Committee would not be taken until after Easter.—The *Land Drainage (Provisional Orders) Bill*, and the *Bills of Exchange and Promissory Notes (Ireland) Bill*, passed through Committee. The *Mutiny Bill* and the *Marine Mutiny Bill* were read a second time.

TUESDAY.—*Metropolitan Railways.*—Mr. M. GIBSON called attention to the report of the Select Committee of both Houses on Railway Schemes within the limits of the Metropolis, and moved that the following Bills be not proceeded with in the present Session, viz.:—The Victoria Station and Thames Embankment Railway, the Oxford Street and City Railway, the London Main Trunk Underground Railway, the Charing Cross (Northern) Railway, the Charing Cross (Western) Railway, the Tottenham and Hampstead Junction Railway (Extension to Charing Cross), the London Union Railways, and the Tottenham and Farringdon Street Railway.—Mr. CRAWFORD moved as an amendment, after "Tottenham and Farringdon Street Railway," to add, "and so much of the Metropolitan District Railways Bill No. 33 as refers to the proposed works situated to the eastward of Blackfriars Bridge, together with the Metropolitan District Railways Bill No. 34." The amendment was negatived, on a division, by 277 to 76.—Sir J. PAXTON moved that the Charing Cross (Western) Bill be omitted from the list. The amendment was negatived without a division. *The Easter Holidays.*—Lord PALMERSTON gave notice that on Friday he should move that the House, at its rising, should adjourn to the following Monday fortnight for the Easter holidays. *The Danish Papers.*—Mr. DISRAELI complained that the papers on Denmark were only brought down to the end of January, and that they contained no record whatever of the invasion of Jutland or of the negotiations for a Conference. He wished to know whether there was any intention on the part of the Government to submit further papers to the House.—Lord PALMERSTON said that the only cause of the delay was that the negotiations with regard to the Congress had not been brought to a close, but that when they were concluded one way or the other, the papers would be produced down to the latest date. *The Education Minute.*—Mr. ADDERLEY moved the following resolution:—"That grants made from the Treasury to schools for the working classes should not, in every case, be reduced by the whole amount of all endowments." He said that endowments had always been looked upon as local contributions, and proceeded to examine the reasons assigned by the Treasury for adopting the principle of excluding endowments, under the minute of 1863, insisting upon the injustice of the principle. He adduced facts to show that the theory of the Treasury broke down in practice, and indicated the results and consequence of the minute as far as it could be carried out, contending that it was in direct contravention of the original minute.—Mr. F. POWELL seconded the motion, which was supported by Lord HENLEY, Mr. MITFORD, Colonel SYKES, Mr. C. BRUCE, and Lord R. CECIL, and opposed by Mr. BAINES and Mr. HADFIELD.—Mr. LOWE reminded the House of the original object of these grants—namely, to aid voluntary local exertions. The question raised by Mr. Adderley was, whether endowments should not be regarded as voluntary local contributions. The rule complained of was not adopted by the Committee of Council without great consideration or without reason. They came to the conclusion that endowments were not to be considered as local voluntary contributions. They were not local in their nature; they might be in Stock or in the Funds. The Government was bound to look to the interests of the taxpayers. He must say, for himself, that he did not desire to see money devoted by will or deed to the foundation of schools for the working poor. Having replied to various objections, he concluded by saying that in deference to the strong feeling which appeared to pervade the House he was willing to accept the motion, and he suggested modes in which it might be carried into effect.—After some remarks by Mr. G. HARDY the motion was agreed to.—Mr. G. CLIVE moved for the appointment of a select committee to inquire into the expediency and practicability of *Abolishing Turnpike Trusts.*—After a few words from Mr. SCOURFIELD and Mr. W. MARTIN, the motion was agreed to.—On the motion of Sir S. NORTHCOTE a Select Committee was appointed to inquire into the constitution and working, and into the success, of the *Schools of Art* wholly or partially supported by Government grants, or otherwise assisted by the Government, and into the system upon which the sums granted by Parliament for the promotion of national education in art are distributed and administered. On the order for going into Committee upon the *Court of Justiciary (Scotland) Bill*, Mr. W. LESLIE opposed the motion, which, after a short discussion, was carried, upon a division, by 84 to 49, and the House went into Committee, when the Chairman was ordered to report progress. The *Inclosure Bill*, the *Bills of Exchange* and the *Promissory Notes (Ireland) Bill*, were read a third time and passed.

WEDNESDAY.—The *Trespass (Ireland) Bill*, the object of which is to assimilate the law of trespass in Ireland to that of England, was read a second time, on the motion of Mr. W. O. GORE.—The *Watching of Towns (Ireland) Bill*, after some discussion, was withdrawn by Sir H. BRUCE, on Sir R. PEEL giving an assurance that he would consider the suggestions thrown out by the Irish members, with the view of making the constabulary force more efficient for the purpose aimed at by the measure.—Mr. W. EWART moved the second reading of the *Weights and Measures Bill*, and explained that its object was to introduce the metric system now in operation in most continental nations. The Bill was of a permissive character, and would render the system lawful of adoption by numerous trades and manufactures that were willing to have recourse to it.—Mr. LOCKE seconded the motion.—Mr. M. GIBSON said the real effect of the measure would be to alter the unit or decimalise the standard of weights and measures by the introduction of the metre, the ten-millionth part of the arc from the equator to the Pole. If it were thought necessary to introduce decimal weights and measures, that might be done by an order in Council, and there would no doubt great facilities for decimalising the coinage. The Bill proposed to furnish 700 different places with copies of the new weights and measures founded upon the metric system, and he could not say that it would be right to commence the system by establishing in the country a new standard of weights and measures. He should not oppose the second reading of the Bill, but could not consent to some of its clauses.—Mr. HENLEY thought that the Bill would set up two licensed modes of buying and selling in all retail shops, and would open the door to frauds upon the poor. If there were to be any change it ought to be made on the responsibility of the Government.—Mr. ADDERLEY considered that the Bill would be of great importance to international commerce, and that, in order to familiarise the public with its operations, it should be introduced into the national schools and the Government offices.—Mr. HANKEY supported the Bill, which he thought was of much importance that the Government should take it up.—Mr. WALTER objected strongly to the Bill because it was permissive and also because it was revolutionary in its tendency. If it were adopted at all, it ought to be made compulsory; but, for his own part, he held that we had already an excellent standard of weights and measures, to which he was prepared to adhere.—It was moved that the Bill be read a second time that day six months.—Mr. J. B. SMITH and Colonel SYKES spoke in favour of the Bill.—Mr. BUXTON and Colonel BARTTELOT were of opinion that, as the Government did not vote against the second reading, they were bound to take up the Bill and adopt it.—Mr. BAXTER thought that, as the metric system was spreading all over the world, England should not be the last in the march of improvement. On a division the amendment of Mr. Walter was negatived by 90 to 52, and the Bill was read a second time.—Mr. H. A. BRUCE moved the second reading of the *Cattle Diseases' Prevention Bill*. He showed the extent of the evil which the measure proposed to remedy, and the enormous loss resulting from cattle disease, and indicated the probable causes of its propagation and the quantity of diseased meat actually consumed in the great towns of the United Kingdom and its effects upon the human system. He then explained what had hitherto been done to deal with the evil by providing against the importation of diseased cattle, and stated the provisions of the Bill, which consolidated and extended the existing law. He proposed that the Bill should be referred to a Select Committee.—A short discussion followed, in which Mr. PAKINGTON, Mr. CAIRD, Mr. NEWDEGATE, Mr. HOLLAND, and other members took part. After some discussion the Bill and the *Cattle, &c. Importation Bill* were read a second time, and referred to a Select Committee. The *Land Drainage (Ireland) Bill* was read a third time and passed.

THURSDAY.—Mr. H. B. SHERIDAN made a personal explanation with reference to certain statements of the Chancellor of the Exchequer respecting the British Provident Assurance Company in the debate on the *Government Annuities Amendment Bill*.—The CHANCELLOR of the EXCHEQUER deferred his reply until he could look into the documents upon which he had founded his statements.—On the order for going into Committee of Supply, Mr. H. BERKELEY called attention to the defective state of the *Armament of the Royal Navy*. After spending three millions of money and six years of experiments the country had to fall back on the old 68-pounders. He complained of the practical monopoly accorded to Sir W. ARMSTRONG, which shut out competition, and, he thought, ought not to exist.—Lord C. PAGET said that Mr. BERKELEY was mistaken in supposing that, while the Americans had steel guns in their ships, we had only the old round shot: our ships had shell-guns, and the Admiralty was intent upon providing the navy with the most effective armament. He honestly believed that in respect to guns we were more advanced than the French. A discussion on naval matters followed, in which Sir J. PAKINGTON, Sir J. ELPHINSTONE, General PEEL, Lord LOVAINE, Sir F. BARING, and Sir F. SMITH took part.—In reply to Mr. H. SEYMOUR, Sir G. GREY said the Lord Chancellor hoped to be able to propose a Bill during the present Session for the reform of the *Ecclesiastical Courts and Registries* in England. The House then went into Committee of Supply upon the *Navy Estimates*. The first vote of 1,275,316*l.*, for wages to artificers, labourers, and others employed in the establishments at home, was agreed to, on the understanding that the remaining votes should not be proceeded with that evening.—Mr. PEEL moved a supplementary vote of 175,000*l.* for the redemption of the *Scheldt Toll*, explaining the nature and effect of the arrangements for the extinction of the toll. After some discussion the vote was agreed to.—The Marquis of HARTINGTON moved a supplemental vote of 400,000*l.* for *Army Services*, explaining that the expenditure was caused chiefly by the war in New Zealand. This vote was likewise agreed to after a short discussion. In Committee of *Ways and Means*, Mr. PEEL moved that the sums of 54,[illegible] and of 1,500,000*l.* be granted to Her Majesty out of the Consolidated Fund. The motion was agreed to. The House having gone into Committee on the *Mutiny Bill*, Mr. [illegible] moved the omission of clause 22, relating to *Flogging*, which he denounced as disgusting and demoralising.—Mr. W. [illegible] seconded the motion.—The Marquis of HARTINGTON said it was the opinion of the most experienced officers that men who were in the British army men of a certain class who were insensible to any other punishment than the lash, which was inflicted only in aggravated cases of misconduct, until a man was degraded for offences to the second class. The punishments in the armies of other nations were more severe, and cases of flogging were diminishing in number in our own army. After much discussion the Committee divided, when the amendment was negatived by a narrow majority, the numbers being 45 for the clause and 42 against it.—Mr. COX then moved the omission of clause 26, relating to *Branding*.—Mr. HEADLAM said it was essential that the practice of branding, the pain of which inflicted no pain, should be kept up. Men of bad character, who deserted, or were dismissed from the army, enlisted in other regiments, receiving the bounty, and there was no other effectual mode of identifying them. After another animated debate the Committee again divided, when the amendment was negatived by 80 to 50, and the clause was agreed to. The other clauses were likewise agreed to. The *Marine Mutiny Bill* passed through Committee.—Mr LAWSON moved for leave to bring in a Bill to enable owners and occupiers of property in certain districts to prevent the *Sale of Intoxicating Liquors* within such districts. On a division the motion was carried by 70 to 36.

FRIDAY.—*The Proposed Conference.*—In answer to Mr. FITZGERALD, Lord PALMERSTON repeated what he had said on a former occasion, that after her Majesty's Government had vainly attempted to obtain the consent of the belligerents to an armistice as preliminary to a conference, they deemed it important that negotiations should begin, that they proposed a conference without an armistice. To that proposal Austria and Prussia had agreed, but Denmark up to the present time had given no answer. He had good reason to believe that France, Russia, and Sweden would concur in such a Conference, but no positive communication would be made to them on the subject until the belligerents had agreed. England, France, Austria, Russia, and Sweden, all concurred in admitting the validity of the Treaty of 1852, and the obligation it imposed of maintaining the integrity of Denmark. But no other basis had been proposed. At present her Majesty's Government had no knowledge that the belligerent parties would agree to a Conference. When the Conference met it would be for the parties to agree to a basis. *Ireland.*—On the order

Reviews.—The Archbishop of Canterbury has addressed the following letter to the Rev Rev. W. H. Trendell, of Tan y Bwlch, Carnarvon, in reference to the recent judgment of the Privy Council :—

"Lambeth Palace, S., March 4.

"Dear Sir,—I wish it to be generally understood that, in assenting to the reversal of the judgment of Dr. Lushington on the subject of eternal punishment in the case of Mr. Wilson, I did so solely on technical grounds, inasmuch as the charge against him on this point was so worded that I did not think it could be borne out by the facts. The eternity of punishment rests, according to my mind, exactly on the same ground as the eternity of blessedness; they must both stand or fall together; and the Church of England, as I maintain, holds both doctrines clearly and decidedly.

"Believe me yours faithfully, C. T. Cantuar."

A committee appointed at a meeting held in Oxford on the 25th February, consisting of Archdeacon Clerke, Rev. Dr. Cotton, Provost of Worcester; Archdeacon Denison, Rev. W. R. Fremantle, Rev. Dr. Leighton, Warden of All Souls; Rev. Dr. Miller, of Birmingham; and the Rev. Dr. Pusey, have drawn up the following Declaration, which is in course of circulation among the clergy for the purpose of obtaining their signatures :—

"We, the undersigned Presbyters and deacons, in Holy Orders of the Church of England and Ireland, hold it to be our bounden duty to the Church of England and Ireland, and to the souls of men, to declare our firm belief that the Church of England and Ireland, in common with the whole Catholic Church, maintains without reserve or qualification the inspiration and Divine authority of the whole canonical Scriptures, as not only containing but being the Word of God, and further teaches, in the words of our blessed Lord, that the 'punishment' of the 'cursed,' equally with the 'life' of the 'righteous,' is 'everlasting.'"

The Yeomanry Cavalry.—A numerous deputation of Yeomanry Cavalry officers had an interview with Lord Palmerston on Wednesday, for the purpose of urging the desirability of calling out that force for active service during the present year. Lord Palmerston, in reply, said that since the late vote in the House of Commons, advices had been received from New Zealand which would enable the Government to effect a saving on the Estimates and incur the expense of training of the Yeomanry without any addition to the gross amount. He had great pleasure, therefore, in informing the deputation that the force would be called out as usual this year. His lordship also complimented the Yeomanry Cavalry upon their high state of efficiency and on the value of their services, and expressed an unqualified opinion that they were a necessary auxiliary to the new Rifle Volunteer force.

Foreign.

France.—The Duke of Saxe-Coburg-Gotha arrived in Paris on Friday, and had an interview with the Emperor. It is currently reported that the object of the Duke's visit to Paris was to explain to the Emperor the position of Germany, to induce him to encourage the claims of the Duke of Augustenberg, and to propose to his Majesty the aid of a league, composed of the petty German States, against Austria and Prussia. On all these points the Duke is said to have altogether failed to attain his object. The Emperor, it is said, refused to encourage the claim of the Duke of Augustenberg to the Duchies, and professed the most pacific intentions towards Germany. The Duke has since left Paris, greatly disappointed at the failure of his mission. The following note was addressed, on the 27th ult. to the diplomatic agents of the Emperor by the French Minister for Foreign Affairs :—

"Monsieur,—You have of course been informed that the English Government has made the proposition of a Conference to Vienna and Berlin, which should immediately meet to deliberate upon the arrangements calculated to bring about peace between the two great German Powers and Denmark. Similar proposals have been forwarded to Copenhagen. In the opinion of the British Cabinet the Conference might sit without hostilities being suspended. If the belligerents adhere to this proposition the Government of the Queen would invite France, Russia, and Sweden, as well as the Germanic Confederation, to nominate plenipotentiaries immediately. We have reason to believe that the Cabinets of Vienna and Berlin are disposed to give their assent to the idea of this deliberation. We think we may say, further, that the Court of Austria continues to consider the Treaty of 1852 as suitable to serve as the basis of new arrangements. The principle of the integrity of the Danish monarchy has been affirmed in the identical declarations of the two German Courts, dated January 31, and after the formal assurances of the Austrian Cabinet this principle remains placed under the safeguard of Europe. Hostilities have not invalidated the stipulations which bind Austria and Prussia, not only with Denmark, but with several other Powers. Austria only claims liberty of action in respect to the arrangement concluded in 1851-52 between Germany and Denmark relatively to the position of the Duchies in the monarchy and to the relations formerly existing between Holstein and Schleswig. We have no reason to suppose that the point of view of the Prussian Cabinet is different; but it remains to be ascertained what reception the English proposition would meet with from the Danish Government and the Germanic Confederation. Denmark would appear, according to what may be judged of her intentions, to desire to claim the conclusion of an armistice prior to all negotiation, and it is to be feared that she would only regard the refusal of a truce as proving the intention of the German Powers to pursue the destruction of her army in order to aggravate the conditions of peace. On the other hand, the Germanic Confederation has adopted a point of view which differs from that of Austria and Prussia. The Diet has not concurred in the Treaty of London, and has not recognised its validity. It is at this very time occupied with a report from its committees, which lays down conclusions contrary to the integrity of the Danish Monarchy. It is therefore difficult to foresee at present whether the proposition of the English Government will be agreed to at Copenhagen and Frankfort. As regards ourselves, monsieur, we have not hitherto been under the necessity of expressing our opinion. The English Government will not address itself to neutral Powers until after having obtained the acquiescence of the belligerents. We have not therefore had to associate ourselves with its measures, as has been reported; but we have seen this war break out with regret, and, faithful to the principles which guide us, we shall be happy to second all the efforts which may be made to hasten its termination. If the adhesions sought by her Britannic Majesty's Government permit it to acquaint us with the proposition of which we have received notice, we shall be found ready to participate in every serious effort at pacification.—Receive, &c.,

"Drouyn de Lhuys."

La France, alluding to the rumours of a Conference, says :—

"England and Russia are endeavouring to induce Denmark to accept an armistice on the basis of *uti possidetis*. The two armies would remain during the Conference in the same positions they now occupy. England and Russia point to the reiterated declarations by Prussia and Austria of their intention to respect the integrity of Denmark. Prussia and Austria are acting upon the Confederation to bring about its acceptance of the Conference upon the bases above-mentioned."

The *Mémorial Diplomatique* of Sunday states that the draught of a treaty was agreed upon at the Tuileries, to be ratified so soon as the Emperor Maximilian I. shall have ascended the Mexican throne, and announced his accession to the Court of the Tuileries. The *Mémorial* further says :—

"If we are rightly informed, the treaty definitely settles two important questions,—firstly, the French occupation; and secondly, the claims of the French Treasury on the Mexican Government. It is already known that the pay and maintenance of the troops engaged in the expedition have since the 1st of January, 1864, been borne by Mexico. This will continue until their recall, which will gradually be effected as the regimental lists of the Mexican army are completed."

The Archduke and the Archduchess have made a most favourable impression on all who have had any intercourse with them during their brief stay in Paris, and it is said that all the Mexican prisoners of war in France submitted in writing their adhesion to the Government of his Imperial Highness previous to his departure for London. M. Garnier Pagés, one of the candidates at the forthcoming election for Paris, invited a number of his political friends to meet at his house on Sunday night. They responded to his invitation, and were quietly discussing his prospects of success, when two commissaries of police made their way into the drawing-room, and commanded those present to disperse. The *Moniteur* of Wednesday, in reference to this occurrence, says :—

"For several days past public meetings have been held in the populous quarters of Paris, under pretext of canvassing for the elections, at which the Government was violently attacked. The meetings have been dissolved, and a judicial investigation has been instituted. No public meeting can take place without authorisation, and the Government will continue to make the law respected."

The *Moniteur* of Tuesday says that the Emperor having charged the Duke de Morny to make a report upon the questions at issue relative to the Suez Canal, the Duke has reported on the basis of a compromise which appeared equitable to the Emperor, and its conclusions were communicated to the Viceroy, who requested the Emperor to settle the difficulties between the two parties. The Emperor, accepting the arbitration, has formed a committee to examine the questions at issue. An Imperial decree published on Friday fixes the amount to be paid for exemption from military service for the year 1864 at 2300 francs. The case of the journalists prosecuted for forwarding identical correspondences to provincial newspapers, such conduct being considered as publishing a newspaper without authority, came on for judgment on Thursday. The accused were found guilty on all the counts of the indictment. MM. St. Chéron, Clerbois, and Lavedan were each condemned to one month's imprisonment and 100f. fine for the publication without authority of writings treating of political matters. It was also ordered that their correspondences shall cease to appear.

Spain.—Some Madrid journals ask what would be the course of the Government if a European war were to break out in Italy.

Portugal.—The Government Bill abolishing the tobacco monopoly has been brought forward in the Cortes. It is doubtful whether the Ministers will obtain a majority; as the opposition to the bill is increasing. The Florida Confederate steamer from Brest arrived a Madeira on the 28th of February, and was allowed to receive 20 tons of coals, with water and provisions, but was required to leave the port on the following day. The Danish brig Prethe, from Leith to Barcelona, has been brought into Lisbon by the Austrian war steamer Schwarzenburg and the gunboat Seehund.

Belgium.—The Archduke Maximilian and Archduchess Charlotte arrived at Brussels on Tuesday night. Their Imperial Highnesses dined with the Royal family on Wednesday, and left in the evening for Vienna.

Sweden.—Advices from Stockholm state that after the recent monster meeting in favour of Denmark, popular riots took place at Stockholm, and the mob broke the windows of the Foreign Minister. Some of the ringleaders were arrested. The Swedish Minister for Foreign Affairs has stated that the English Parliamentary blue book relative to the Dano-German conflict was not complete, inasmuch as it omits all mention of the fact that Sweden had asked the Western Powers in February last to support Denmark, and was herself prepared for all eventualities. The King set out for Christiania on the 9th inst. with four Ministers, and Prince Oscar has been intrusted with the Regency during the King's absence. A letter from Helsingborg states that on the 10th inst. an order was issued to the troops in Schonen to be ready to march within four days after receiving orders to that effect.

Norway.—The Norwegian Storthing was opened on Tuesday. The King, in his speech from the throne, announced that a Bill would be laid before the Chamber, granting an extraordinary credit of 1,500,000 rigsdalers to the Government, in order to enable it to give active aid to Denmark in certain emergencies. The King also expressed a desire that the Government should have liberty of action for all eventualities, and should be authorised to employ the regular army and navy in aid of Denmark if found necessary.

Denmark.—The *Oesterreichische Zeitung* of Wednesday publishes a telegram from Berlin, asserted to be derived from an authentic source, stating that Denmark is disposed to accept the armistice and Conference propositions in their essential points, but will only accept part of the conditions attached to the armistice. The semi-official *General Correspondenz* also announces that Denmark has accepted the propositions for an armistice and Conference on the basis of the *status quo*, stipulating for the suspension of any further advance of the Allies in Jutland, and promising not to further molest German shipping. The elections to the Lower House of the Rigsraad are concluded. All the members elected belong to the National party, which wishes for the continuation of the war. M. Hall, the ex-Premier, was elected unanimously. Bishop Monrad, the President of the Council, who expressed himself favourable to pursuing the war, was elected by a large majority, four votes only being given against him. The Upper House will probably meet upon the 25th. The portion of Schleswig not occupied by the Austro-Prussian troops will be represented by three members. It is not expected that the Session will last longer than 10 days. The citizens of Copenhagen have presented an address of loyalty to King Christian at the Castle of Christiansborg. His Majesty in his reply said :—

"I also fully comprehend the necessity of unity and perfect concord between the King and the people at such a momentous time as the present. The deputation presenting the address may therefore feel assured that I shall never be untrue to my people, and that I thoroughly appreciate their devotion. No one has been more painfully affected by the evacuation of the Danewirke than I. I can also very well understand the general feeling of deep sorrow which seized the metropolis at this unexpected news, and am, consequently, quite willing to forget all that afterwards happened in connection with that event. (The King alluded to the riots.) How gladly I receive the present expression of devotion I will prove by showing the citizens of Copenhagen the confidence I place in them. As I am about to send my Guards to take part in the defence of the country, I shall ask the civic guard of Copenhagen to take their place in the charge of the royal castles."

In accordance with an order of the day from the King, the Prince Royal has proceeded to the army, and joined the staff of General Hegermann-Lindenkrone, which forms part of the fourth division. Five Danish steamers, one of them carrying 40 guns, are cruising off Stralsund, where the Prussian flotilla is still ice bound.

The Danish Duchies.—The vanguard of the 6th Austrian Army Corps has entered Horsens. On Friday they pursued General Hegermann's army corps with 21 battalions of infantry, cavalry, and artillery, as far as Fredericia. On Saturday evening they entered Aarhus, after the Danish infantry had embarked for Fredericia and Alsen. An unimportant engagement took place on Sunday at Sundewitt. On the 9th inst. the eastern defiles of Randsau were occupied by the Prussian advanced corps of the Division of the Guard, in order to watch the fortress of Fredericia. The rest of the division took up a position in a westerly direction. On Sunday a detachment of Danish troops was driven from Lillemölle by two companies of the 15th and 55th Regiments. Several battalions of Röder's Prussian brigade subsequently took Nübel after a slight engagement. Rackebüll was also occupied after sharp contest. Lieut. Troschel and three men of the 24th Regiment were killed, and Capt. Ballhorn, of the 24th Regiment, and about 10 men were wounded. All the superior officials and mayors of that portion of Jutland now occupied by the allied troops have since been taken to the Prussian head-quarters. Eleven of them, among whom were MM. Dahl and Bretton, have arrived at Flensburg as prisoners of war, and been conveyed to a Prussian fortress. This measure is connected with the delivery of the requisitions for supplies intended to be enforced upon the inhabitants. The Austrians have made a requisition for 5000 oxen and 2500 horses. On Saturday night the Prussians completed the erection and armament of their batteries at Gammelmark, on the Vemmingbund. The Danes immediately opened fire from the intrenchments at Düppel. The Prussian batteries replied in the course of Sunday. On Thursday a vigorous bombardment of Duppel was carried on by the Prussians from Broager. The bombardment was continued all day, but without result. A very strong artillery force opened fire against the right wing of the Danish position, but was soon withdrawn. It is reported that the Prussians intend to deliver the assault upon the 22d, the birthday of the King of Prussia. At half-past 5 on Tuesday morning the island of Femeren was occupied by the Prussians, who were ferried across from Heiligenhafen during the stormy weather. The whole Danish force in the island, consisting of 100 men, together with the commander of a gunboat, were taken prisoners. On Thursday afternoon a sharp naval engagement took place off Pugard,

between five Danish steamers and two Prussian men-of-war and several gunboats. At 4 o'clock the action was continued in the rear of Granitz, on the eastern side of the island. The engagement resulted in the withdrawal of the Prussian ships, closely pursued by the Danes, whose force had been increased to seven vessels. The Prussian gunboats have safely reached Ruden, and the two corvettes put into Schwinemunde. The Nymphe lost two, and the Arcona three killed. The Summa had nine men wounded, among whom is Lieut. Berger seriously. Great enthusiasm prevails among the seamen. Yesterday morning the Danish fleet sailed for Moen. 600 Jutland peasants, comprising both old and young men, have been compelled by the Germans to assist in the erection of the trenches before Fredericia. Marshal von Wrangel has issued a proclamation prohibiting the export of horses, cattle, and grain from Jutland, under penalty of confiscation. It is asserted that a tax of 1 thaler per ton of hard corn will be imposed by the allies upon the landed proprietors in Jutland. The use of the Danish stamped paper with the King's initials has been prohibited in Schleswig, as has also been the use of the prayer for the King of Denmark in the churches. The salaries of dismissed officials have not been paid. A German office for the supervision of the Schleswig postal arrangements has been established in Flensburg, at the head of which is an official from the Prussian Post Office. The Prussians have arrested Herr Stockfleth, the amtmann of Hadersleben. A letter from Veile states that on Thursday and Friday week four civilians were executed in that town for attempting to assassinate German soldiers; and General Gablenz has ordered that all munitions and arms in the possession of civilians shall be delivered up to the military authorities within 24 hours. Mr. Crowe, son of the English Consul-General at Christiania, has fled to Copenhagen from Veile, where he has been ill-treated by the Austrians. The rumour current in Hamburg on Thursday of the death of Duke Frederick of Augustenburg was a pure invention. The duke is in the enjoyment of perfect health.

HAMBURG.—A Prussian siege train, consisting of 50 mortars and 3000 projectiles, of a calibre varying from 25 lb. to 65 lb., passed through Hamburg on the 9th inst. Colonel Bess, the commandant of the garrison of Hamburg, left on Friday for Cuxhaven, to hasten the construction of the fortifications erected to defend the entrance of the Elbe.

BAVARIA.—The young King Ludwig II. has summoned the Council of State, and taken the constitutional oath. In his address to the Council his Majesty promised that he would govern in accordance with the Constitution and for the welfare of the country. His Majesty, who was born in 1845, and is consequently in his 19th year, has since issued the following proclamation on his accession:—

"We, Ludwig II., by God's grace King of Bavaria, &c., to our beloved subjects greeting. Almighty God, in his impenetrable decrees and will, having thought fit to call to himself our well-beloved and highly-honoured father, the most illustrious King Maximilian II. of Bavaria, and the entire kingdom of Bavaria, with all its ancient and modern possessions, having by this decase fallen to us, according to the constitution, the political and dynastic treaties, and in pursuance of our right as next lineal and first-born successor, we have taken full possession of the same, and assumed the government of the kingdom. We, therefore, call upon all the inhabitants of our hereditary states to recognise us henceforth as their legitimate and only sovereign, to pay us inviolable fidelity and obedience, and to fulfil all duties towards us as towards their sovereign sent by God. We announce to them that we have already taken the oath prescribed by the constitution. In order that the progress of public business should not be interrupted, we order that all the authorities of the kingdom should continue to discharge their duties until fresh orders upon our part are received; that, wherever necessary, official acts shall be done in our name, but that the former signets shall be made use of until new ones are prepared. We especially remind all functionaries of their oath to the crown and the constitution, and trust that all our subjects, as in duty bound, will obey the orders of their legitimate sovereign, for which we bestow upon them our Royal grace and good will."

FRANKFORT.—In the sitting of the Federal Diet on Saturday the motion of Bavaria for the recognition of the Duke of Augustenburg was brought forward. The representatives of Austria and Prussia proposed the adjournment of the motion until the committee should have reported on the succession question, declaring that they would very shortly state their views on the subject. On account of this declaration the Bavarian representative stated that he would not insist upon his right, as mover of the proposition, to put the question to the vote within a week. The debate was therefore adjourned. The motion of Saxony and Wurtemburg to convoke the Holstein Diet, and that of Hanover to summon Denmark to surrender the captured German shipping, was referred to a committee.

PRUSSIA.—The Government has contracted a loan of 6,000,000 thalers, bearing 4½ per cent. interest, at the rate of 99, with the Royal Bank, the Seehandlung, and the house of Raphael Erlanger. This loan was previously voted by the Chambers for the construction of railways. A Ministerial decree published on Friday directs that no person shall be allowed to visit the district of Jahde without a special passport. Prince Adalbert of Prussia, in his official capacity as Prussian Admiral, has been summoned to Berlin by telegraph. He left for that city on Tuesday night. It is stated that the three Prussian men-of-war which have been at anchor in the harbour of Brest since the commencement of hostilities have been placed under the command of the Austrian Admiral in order to operate in concert with the Austrian squadron. The Minister of War has issued the regulations to be observed by commanders of Prussian ships of war in reference to the capture of Danish and suspicious shipping. Holstein and Schleswig ships will not be regarded as hostile vessels. The flag protects the cargo. Neutral cargoes under the enemy's flag will not be confiscated. In both cases contraband of war is excepted. Subjects of the enemy on board captured vessels are to be treated as prisoners of war.

AUSTRIA.—The following identical note has been sent by Austria and Prussia to the signataries of the London Treaty, in explanation of their advance into Jutland:—

"March 7, 1864.

"The Prussian (Austrian) Government had hoped that the Danish Government would have displayed a more conciliatory disposition. In this case the two great German powers would have hastened to interrupt their military action, and to enter into negotiations. We are, however, compelled to state with regret that our expectations have been deceived. The attitude of the Copenhagen Court, and its refusal to take part in the Conferences proposed by England, impose upon us the duty of persisting in the measures of compulsion to which we have resorted. Important strategic considerations have occasioned the order which has been given to the commander-in-chief of the Austro-Prussian forces to advance into Jutland, in order to secure the position of his troops, and hold the Danes concentrated at Fredericia in check, as he prevents their threatening the flanks of the army, or devoting all their strength to the defence of the line of Düppel. The two Powers have had the less hesitation in permitting this strategic movement, as they were justified in adopting measures of reprisal against the regulations of the Danish Government, ordering the seizure of ships upon the high seas, belonging not only to the Powers waging war, but also to the other States of the Germanic Confederation. The extension hereby given to the military operations in other respects alters nothing in the former declarations of the Prussian (Austrian) Government regarding its position in the present disagreement. The better to prove that its personal sentiments are sincere and its intentions unaltered, the Prussian (Austrian) Government declares itself ready to conclude an armistice with Denmark at once, either upon the basis of mutual evacuation of the positions at Duppel and upon Alsen by the Danish troops and by the Austro-Prussian army in Jutland, or upon that of the military *uti possidetis*. But in the one case as in the other the Prussian (Austrian) Government stipulates as conditions that the cessation of hostilities by sea shall be included in the armistice, that the prizes made upon both sides shall be given up, and that the embargo laid upon ships in harbour shall be withdrawn. The Prussian (Austrian) Government declares itself equally ready to enter into a Conference with the Powers concerned as to the means best fitted to restore peace."

HUNGARY.—Arrests have been made in Pesth on account of some political intrigues.

VENETIA.—News from the Venetian frontier announces that a great popular demonstration was made at Verona on Monday in honour of the birthday anniversary of the King of Italy. Bonfires were lighted and fireworks displayed. Political inscriptions were exhibited in the public squares and most frequented streets of the city.

ITALY.—Letters from Turin speak of an approaching change in the Ministry. The new Cabinet would comprise Baron Ricasoli, Signor Rattazzi, and General La Marmora. General Cialdini would have the command in chief of the Italian troops. This Ministerial combination would be connected with important financial and political interests. Sentence has been passed by the Court of Assize at Santa Maria, in the province of Terra di Lavoro, on the brigand chiefs. Cipriano, Giona, and Lazalo have been condemned to death, Papa to hard labour for life, and Davango to hard labour for 20 years. The brigand Ninco Nanca has been killed by the National Guard of Avigliano Accounts from Rome state that the Pope has been attacked by serious illness, which commenced on Friday last with one of his usual fainting fits, and has confined him to his bed ever since. The disease appears to be a fresh attack of erysipelas, accompanied by a derangement of the digestion, brought on by the Pope's strict observance of Lent. The latest news says that the illness of his Holiness has become more serious. The *Official Gazette* publishes a Royal decree, nominating 23 new senators. Fresh conflicts continue to take place at Rome between the French and the Papal soldiery. Detachments of soldiers patrol the streets night and day to preserve order. The populace participate in the conflicts by siding with the Papal soldiers. The Duke of Modena, who spent so much of his large fortune in maintaining a little army after his flight, is on his way to Jerusalem.

THE IONIAN ISLANDS.—The demolition of the fortifications have been suspended, according to the French papers, by order received from London.

RUSSIA.—The *Journal de St. Petersbourg* of Tuesday refutes the rumour of a revival of the Holy Alliance, having either the character of a league of sovereigns to destroy the liberties of peoples or of a coalition of Europe against one great Power. It says:—

"The only Holy Alliance possible is that of peace, progress, and general prosperity. Russia has need of rest to carry out reforms. Nevertheless she would not be the last to join a Holy Alliance the objects of which would neither threaten the interests of nor exclude any Power, always excepting those wishing to intrigue, and who are in reality enemies both to the liberties and prosperity of nations."

POLAND.—The despatch of Russian troops towards the Prussian frontier continues. From the 15th of March the Russian head-quarters were to be established at Kalisch. Bossak's insurgent corps is hemmed in between the Vistula and Pilica, and is surrounded by superior forces. Sixty thousand Russian troops are stationed on the Bessarabian frontier.

THE DANUBIAN PRINCIPALITIES.—A telegram from Constantinople, dated the 13th inst., states that Prince Couza adheres to his former declarations upon the secularisation of convent property. Mehemet A... has been appointed Minister without portfolio.

UNITED STATES.—General Meade's army crossed the Rapidan on the 27th ult. in the direction of Richmond. Their movement was a feint to cover a cavalry raid upon General Lee's communication with Richmond. General Custer, with 1500 men, made a demonstration upon the Confederate left at Charlottesville, while General Kilpatrick, with a much larger force crossed the Rapidan at Germania and Ely's Ford. Custer found the Confederates in force, and was compelled to retreat precipitately, narrowly escaping capture. Kilpatrick has returned to Butler's lines on the peninsula, after having lost in skirmishes along his route, 150 men, of whom three colonels are missing. He destroyed a large portion of the Virginia Central Railroad, and penetrated to the outer suburbs of Richmond. The Federal cavalry expedition which left Memphis early in February to co-operate with General Sherman has been defeated in a series of severe engagements in Mississippi, and driven back to Memphis. The Confederates captured three cannon and many prisoners. General Sherman is reported to be retreating to Vicksburg, and fears are entertained that his position is jeopardised by the closing in upon his rear of the victorious Confederate cavalry. It is reported from Washington that the real object of the campaign in the South-West was the overthrow of General Joseph Johnston's army; that the demonstration of Grierson, Sherman, and Farragut were feints to induce a division of Johnston's army for the support of the points they threatened, and that the late advance by General Thomas towards Dalton was made with 35,000 troops, which was intended to be followed by that of his whole force. The vigilance of the Confederates frustrated the Federal plan, and General Thomas's advance upon Dalton and Atlanta was effectually checked by Joseph Johnston. It is generally admitted that the spring campaign, both in Virginia and the South-West, has been an utter failure, and General Meade has been summoned to Washington for consultation with the President and the War Department. Confederate telegrams from Greenville, East Tennessee, report that General Longstreet had withdrawn from before Knoxville, but declared it imprudent to mention in what direction he had gone. It is reported, however, that he has arrived at Richmond. Details of the late battle in Florida confirm the reported extent of the Federal disaster. The battle commenced at 2 P.M. on the 20th, and lasted until 7 P.M. The Federal loss was 1200 killed and wounded. Hamilton's battery, of five cannon, 88 men, and 80 horses, lost in 20 minutes 44 men, 40 horses, and two pieces. The loss to other Federal divisions was proportionately great. The Federals retreated in a shattered condition to Jacksonville, closely pursued by the Confederates. It was considered highly probable that they must re-embark on board their transports and return to Hilton Head. General Seymour, who commanded the expedition, has been placed under arrest by General Gilmore, and replaced by General Voages, or Hodges. In the Senate, on the 21st inst., Mr. Thompson, of Maryland, threw the whole blame of the Florida disaster upon Mr. Lincoln. Mr. Lincoln's nomination of General Grant for the Lieutenant-Generalship has been confirmed by the Senate. The Louisiana Unionists elected their Free State candidates on the 22d ult., under the dictation of General Banks. The Confederate General Pickett, commanding in North Carolina, in a correspondence with the Federal General Peck, at Newbern, declares it his intention to execute every negro he catches who is proved to have killed a Confederate, and that should retaliation be adopted he will hang 10 Yankees for every Confederate executed. General Bragg is appointed General-in-Chief of the Confederate armies. General Sigel has been assigned to the command of Western Virginia. The Confederate Congress has adjourned. An address to the people, prepared by a Committee from both Houses, states that throughout the war the South has desired peace, and that as all her overtures have been rejected, no further negotiations will be attempted until the Federal Government gives assurance that they will be received. The address asserts that the Confederate States will rather consent to a European Protectorate than to unite on any terms with Yankees, and concludes by declaring that the continued unity of purpose of the Southern people is alone necessary to insure the independency of the Confederacy. The Federal sloop of war Housatonic was destroyed off Charleston on the 18th ult. by a Confederate propellor Torpedo. The crew, with the exception of two officers and three men, were rescued by boats from other blockading vessels.

Parliament.

HOUSE OF LORDS.

MONDAY.—*The Easter Recess.*—Earl GRANVILLE announced that the House would adjourn on Friday to the 5th of April for the Easter recess.—Lord CHELMSFORD asked whether the Government intended to propose any changes in the office of the *Judge-Advocate-General*. It had been stated that a measure was under consideration, but recently the Judge-Advocate himself had announced in the House of Commons that no change would be proposed during the present year. Earl DE GREY explained that certain modifications in the duties of the Judge-Advocate were under consideration, but were delayed by the necessity of consulting several...

ments of the Government in reference to them. No change could be effected this year, as it was necessary that the *Mutiny Act* giving effect to the Articles of War, should be passed by a certain day. The *Danish Question.*—The Earl of Derby asked Lord Wodehouse whether anything passed at the interview between him and M. Hall, the chief of the late Danish Government, beyond the conversation described in the report sent by the noble Lord from Copenhagen.—Earl Granville thought it inconvenient such a question should be put in the absence of the Foreign Secretary.—The Earl of Derby said that he had given Lord Wodehouse private notice of the question, and he had expressed his readiness to answer it.—Lord Wodehouse explained that when he stated to M. Hall his belief that nothing the Danish Government could do would arrest the course taken by the German Powers, he alluded to the execution in Holstein ordered by the Diet. It was impossible he could have given any opinion as to the invasion of Schleswig, for the intentions of the German Powers were not then known. *England and France.*—Lord Campbell asked what construction the Government put on a declaration by Prince Gortschakoff, contained in a despatch from St. Petersburg, published in the Danish and German correspondence, to the effect that Austria, Prussia, Russia, and England "were now thinking and acting in harmony on a question still more important than that of Schleswig and Holstein."—Earl Granville thought the allusion was to an agreement supposed to exist between the four Governments not to take part in the plan of a general European Congress. But, as to England, he stated that no agreement or combination of any kind had been entered into that could be considered as displaying the slightest hostile feeling towards France, for the Government were most anxious to act in concert with France on all European questions.—In reply to the Earl of Ellenborough, the Duke of Somerset said that some Austrian vessels of war had left Malta for Gibraltar, but he had not heard they were to proceed beyond that point or enter the Baltic.

Tuesday.—*Germany and Denmark.*—The Earl of Ellenborough gave notice that on Friday he intended to call attention to the differences between Germany and Denmark. He asked whether the statement in the morning papers that Austria and Prussia had presented an identical note, containing an amended proposal for an armistice, and a Conference on terms of mutual concessions, was authentic. If it were so, then he hoped the two Governments had sent orders to Marshal Wrangel to stop the needless effusion of blood, and that Denmark would accept the proposal; for it was certain that although the latter Power might have at first a superiority at sea, she must in the end be overpowered.—The Duke of Somerset believed that the statement referred to was substantially correct. The *Insane Prisoners Bill* was referred to a Select Committee. On the order for reading the *Malt for Cattle Bill*, Earl Grey, adverting to the question of the repeal of the malt tax, observed that the tax was not paid by the farmer or producer, but by the consumer, and that its abolition would be most injurious to the landed interest by creating a demand for foreign malt. The agitation for the repeal of the malt tax was, in his opinion, equivalent to an agitation for an increase of taxation so far as the landed interest was concerned.—The Duke of Argyll said that in certain parts of Scotland, where inferior barley was grown, the Bill before the House would be extensively acted upon.—Lord Redesdale trusted there would be a surplus of revenue, sufficient, at all events, to admit of a partial reduction of the malt tax, which, theoretically and practically, was the most objectionable fiscal charge in existence, now that all other home manufactures had been relieved from taxation with the exception of spirits.—The Earl of Hardwicke was of opinion that the Bill would be inoperative. After a few words from Lord Wodehouse, the Bill was read a second time. The *Lunatics (Ireland) Acts Bill* passed through Committee after a division, on clause 4, which was thrown out by 34 to 27. The *Inclosure Bill* passed through Committee. The *Marine Mutiny Bill* was read a second time.

Wednesday.—The House held a brief sitting to read the *Mutiny Bill* a second time. The *Marine Mutiny Bill* was also forwarded a stage.

Thursday.—*Army Enlistment.*—The Earl of Desart inquired whether the Government were prepared to take any steps to meet the reduction that must be occasioned in the army by the expiration, next year of the ten years' enlistment term.—Earl De Grey and Ripon said that there could be no doubt that a larger number of men than usual would be entitled to their discharge next year, but judging from experience, it was anticipated that about one half would re-enlist. The Government were considering whether it could not hold out greater inducements than at present existed to retain the men in the service.—The Earl of Donoughmore asked whether the Government contemplated any steps to reform the *Irish Constabulary*, with a view to increasing its efficiency and usefulness.—Earl Granville referred to the peculiar circumstances of Ireland as a reason for maintaining the constabulary on its present basis, and said he could adduce testimony from all quarters to its patriotism, good conduct, and efficiency; but, with a view to improving its character as a detective force, the Government were consulting the public officials in Ireland. After some remarks from the Earl of Desart, the Marquis of Clanricarde, and the Earl of Leitrim, the subject dropped.

Friday.—The *Royal Assent* was given by commission to the *Consolidated Fund* (£84,6*s*.) *Bill*, *Consolidated Fund* (£4,500,000*l*.) *Bill*, *Sir John Lawrence's Salary Bill*, the *Inclosure Bill*, the *Mutiny Bill*, and the *Marine Mutiny Bill*. *The Danish Question.*—The Earl of Ellenborough withdrew his notice respecting the affairs of Germany and Denmark, in compliance with a request from Earl Russell, who stated that negotiations were still pending, and that on public grounds it would be most impolitic to discuss the question at present. The *Malt for Cattle Bill* passed through committee, with the addition of a new clause. The *Court of Chancery* (*Despatch of Business*) *Bill*, was read a second time. The *Conveyancers &c.* (*Ireland*) *Bill*, was read a second time. The *Bills of Exchange and Promissory Notes* (*Ireland*) *Bill*, passed through committee. *Fairs Amendment (Ireland).*—In answer to Lord Clanricarde, Earl Russell said that the papers relating to the enlistment of seamen at Cork by the Federal cruiser Kearsage, should be produced. His lordship added that the Government had done everything possible to prevent any similar infringement of the Foreign Enlistment Act, by publishing her Majesty's proclamation in all parts of Ireland. The House then adjourned to Tuesday, the 5th of April.

HOUSE OF COMMONS.

Friday.—*Retirement of Sir Rowland Hill.*—Lord Palmerston gave notice that shortly he would move that the House resolve itself into a committee to consider the grant (of a pension to Lady Hill, for her life, in the event of her surviving her husband. *Ireland.*—On the order for going into Supply, Mr. Hennessy moved a resolution to the effect that it is just and expedient to extend to Ireland the beneficial provisions of the English Poor Law. He dwelt upon the decline of the population, and urged that a remedy of the evil would be to give to Ireland the English Poor Law, which would not only benefit the poor, but lower the rates. He described the system of relief under the Irish Poor Law and its effects upon the pauper population, and compared them with those under the Poor Law in England and Scotland, where it was the practice to grant outdoor relief, which he showed by examples to be economical.—Mr. Blake seconded the motion.—Mr. Vance said that the introduction into Ireland of the English Poor Law in all its integrity would cause an extensive confiscation of property in Ireland.—Sir F. Heygate argued that the effect of outdoor relief upon the rates would press severely on the landed property of Ireland.—Mr. P. Urquhart thought that a greater degree of outdoor relief might be beneficially administered.—Mr. O'Reilly, admitting that there were imperfections in the Irish Poor Law, considered it in many respects preferable to the English. After some remarks by Sir H. Bruce, Mr. Dunlop, Sir P. O'Brien, and Mr. Herbert, in opposition to the motion, Sir R. Peel said that Mr. Hennessy was not correct in his facts in relation to the administration of outdoor relief, and contended that if that system were carried out in Ireland as in England and Scotland it would enormously burden the ratepayers, and not meet the wishes of the people, while it might create grave social evils. Even in Scotland the effects of outdoor relief in certain districts had been demoralising and had changed the character of the labouring classes. The system of the Irish Poor Law did not need to be supplemented by the English law; it had ample power of its own to afford adequate indoor and outdoor relief. Emigration was not the fault of the Poor Law, but the effect of natural causes that would continue to work. The difference of wages would naturally entice labourers to cross the Atlantic, and if they bettered themselves by the change, they would improve the condition of those they left behind by rendering labour more scarce and raising wages. Emigration to America was not confined to Ireland; the movement was in extensive operation in Germany and all the countries of Western Europe. In describing the prosperous condition of Ireland he referred to the Fenians, and said that they were the ancient national militia of Ireland, and he greatly amused the House by giving, from sources he described as authentic, an historical sketch of the character, manner, and extraordinary institutions of the early Feni. In conclusion, he opposed the motion in the interest of the ratepayers of Ireland, as well as in that of the honest and industrious labourer.—Mr. Bright was in favour of extending to Ireland those wise and beneficent laws under which England had attained unparalleled happiness and prosperity. The condition of Ireland was anomalous among the Christian States of Europe, and it was a deplorable reflection that her position as regarded England was not dissimilar to that of Venetia towards Austria, or of Poland towards Russia. So depressed, indeed, was it that the English Viceroy had publicly expressed a hope that emigration would go on until the people who remained would be enabled to earn the magnificent sum of 10*s*. per week. It was admitted by the common consent of Catholics and Protestants that the country was now more disloyal and disaffected than at any previous period in its history. As an illustration of the exasperated feeling of the people, he had been assured by a considerable landed proprietor in the south of Ireland (a Protestant) that if the French were to land in Bantry Bay to-morrow they would be received with open arms.—Sir J. Walsh charged Mr. Bright with having imported into the debate the language of an inflammatory demagogue.—Mr. Maguire recommended Mr. Hennessy to withdraw his motion, and bring in a Bill to improve the existing law.—Major Knox rebuked Mr. Bright for using intemperate and offensive language, and said that if the French were to land in Bantry Bay the men of Ulster would rise as one man to protect their liberties and to maintain their connection with England.—After a few words from Lord Naas, deprecatory of the tone adopted by Mr. Bright, Mr. Hennessy withdrew his motion. The House went into Committee of Supply *pro formâ*, and, having immediately resumed, the *Summary Procedure* (*Scotland*) *Bill* was read a second time. The *Mutiny Bill*, as amended was considered. The *Marine Mutiny Bill* was read a third time and passed. Leave was given to the Lord Advocate to bring in a Bill to provide for the commutation of *Vicarage Teinds on Fish in Scotland*.

Monday.—*The Sheffield Inundation.*—In reply to Mr. Roebuck, Sir G. Grey stated that in consequence of representations made by the Mayor and coroner of Sheffield, the Government had deputed Mr. Rawlinson, civil engineer, to visit Bradfield, and report upon the causes which had led to the recent deplorable inundation. *Bombardment of Kagosima.*—Mr. Layard read a despatch from Lieut.-Colonel Neale, British Plenipotentiary in Japan, and also a letter from Admiral Kuper, stating the circumstances under which Kagosima had been bombarded. The substance of the correspondence was that Kagosima contained a population of 40,000 only (not 180,000); that all the inhabitants quitted their houses before the fire was opened on the palace of Prince Satsuma; that the British attack had been characterised by great caution and moderation; and that the town would very soon be restored to its original proportions. *The American War.*—Mr. Roebuck asked whether the Government, while remonstrating with the Confederate States on their employment of agents for illegal purposes, intended also to remonstrate with the Government of the Federal States upon the employment by them of agents in Ireland for the purpose of enlisting as soldiers the subjects of her Majesty. In explaining the reasons which had led him to make this inquiry, he denounced the Federal Government as base, cowardly, and corrupt, and severely censured the conduct of our foreign policy, stating that the honour of England was at stake, and in his opinion, the character of England had not been upheld as it ought to be upheld, and that he had therefore a right to inquire whether the strict neutrality professed by the Government had been maintained.—Lord Palmerston said it was vain for Mr. Roebuck to attempt to select a single member of the Government and hold him up to public obloquy. Earl Russell was the organ of the Government in all its communications with foreign Powers, but he took no step without concert with his colleagues, and he (Lord Palmerston) was equally responsible with him for every step he had taken. The Government had declared their intention to observe a strict neutrality in the contest going on in America, and they had done so; but there was a difference in the position of the two belligerent parties, and a difficulty in dealing with the enlistment of men which did not exist in the same degree in respect to ships. There might be agents in the employ of the Federal Government endeavouring to enlist men to go to America; but the difficulty was to obtain evidence. Her Majesty's Government had remonstrated on the subject, as would appear in the papers laid before the House, and prosecutions had been instituted, and there would be no backwardness on their part in vindicating the honour of the country.—Mr. Bright said that he had never heard in that House language so unworthy of it as that he had heard from Mr. Roebuck; there was no necessity for the Government of America to invite Irishmen to go to America; he only marvelled that any Irishman, not the owner of land, would remain in that blighted and unhappy country.—Mr. Kinglake declared that the language applied by Mr. Roebuck to the Government of Washington did not represent the opinion of any party, or any fraction of a party in the House; they represented his own opinion alone.—*Mr. Stansfeld and Mazzini.*—Sir L. Palk asked whether the French Government had made any representations on the subject of the revelation made by the Paris conspirators respecting Mazzini's alleged relations with Mr. Stansfeld.—Mr. Layard said that no communications whatever had been made on the subject.—Mr. Hennessy read various documents respecting M. Mazzini and his alleged complicity with the recent conspiracy in France.—Mr. W. Forster and Mr. G. Duff defended Mazzini, and Mr. Disraeli expressed his opinion that further explanations were due to the House and the country.

Navy Estimates.—The House then went into Committee, when, on the recommittal of Vote 8, the labour vote, Mr. Stansfeld explained the causes of the very considerable increase of this vote, for wages to artificers, labourers, and others employed in the establishments at home, the amount being 1,277,316*l*., that of last year being 1,112,878*l*. After showing that the condition of the Navy as regarded men was eminently satisfactory, he insisted upon the policy of a rapid construction of the newest and most powerful vessels, consumption of time and slowness of construction being incompatible with the rapidity of changes at the present day. It was necessary, he said, to have a little courage in dealing with these matters; like a manufacturer, who hastened to adopt the newest and best machinery. Relying upon science and theory, the Admiralty endeavoured not to be left behind in the design and construction of vessels. They had purchased iron enough to complete all the iron-plated vessels in the next financial year, and they now proposed to devote their energies to the construction of new and powerful vessels. He then explained the system under which the increased expenditure would be administered, and the new and improved scheme of dockyard accounts. Men conversant with large mercantile and manufacturing operations were aware that they could not be profitably or safely conducted for any length of time, unless they were based upon an accurate and simplified system of accounts and stock taking; and if this were true of private undertakings, how much more was it required in a great department like the Admiralty! In conclusion, he described the changes introduced, or to be introduced, into the organisation of the dockyards, especially in the Controller's Department, from which he anticipated much advantage.—Mr. Lindsay said it had not been shown that vessels could be built as economically and efficiently in her Majesty's dockyards as in private yards. He moved to reduce the vote by 244,979*l*., the sum set down in the Estimate as the wages of 3712 additional artificers and labourers.—After a long discussion Mr. Lindsay withdrew his amendment, and moved to reduce the vote by 162,438*l*., the difference between this year's vote and that of last year.—After further discussion the Committee divided, when the amendment was negatived by 110 to 29, and the vote was agreed to. The vote of 69,205*l*. for wages of artificers, &c., in the establishments abroad was likewise agreed to.—The Chairman was then ordered to report progress. The *Mutiny Bill* was read a third time, and passed. The *Consolidated Fund Bills* were read a second time.

Tuesday.—*Fire Insurance Duty.*—In reply to Mr. Hubbard, Mr. Sheridan said that he intended to postpone his motion for the reduction of the fire insurance duty until after the financial statement of the Chancellor of the Exchequer.—*The Crawley Court Martial.*—Mr. D. Fortescue called attention to the late court-martial at Aldershott, and moved for copies of a letter from Colonel Crawley, announcing, for the information of Sir W. Mansfield, the arrest of Sergeant-Majors Lilley, Duval, and Wakefield, on a charge of conspiracy, together with any documents in support of such charge; of the last half-yearly confidential inspection report on the 6th Dragoons, prior to Colonel Shute's resigning the command; and of the first half-yearly confidential inspection report subsequent to Colonel Crawley's assuming the command of that regiment. In explaining his reasons for bringing the subject again before the House, he said that in consequence of his statement last year, he was placed in some measure upon his own defence, but he did not call in question the verdict of the court-martial, whatever his individual opinion might be. Having stated the facts as they had come to his knowledge, in the first instance, he expressed his regret if, through any defective information, he had been led to overstate the case and make it darker than it really was. He then reviewed the circumstances of the Mhow court-martial, and the arrest and confinement of the sergeant-majors, the feelings engendered by the incidents connected therewith in the non-commissioned officers of the army, and deplored the scandal and mischievous effects resulting from this unhappy business.—Mr. H. Grenfell seconded the motion, and urged the importance of taking into consideration the unsatisfactory framework of courts-martial, and remedying the defects of these tribunals.—Lord Lovaine said that Colonel Crawley had been persecuted with unrelenting virulence and animosity, but he objected to make that House a court of appeal from military tribunals.—General Peel moved as an amendment a resolution that the production of any further papers is inexpedient. He did not want to debar the House from the proper control of the army, but he deprecated its interference with the administration and government of the army, and the constituting itself a court of appeal. The case of Colonel Crawley had already done much to weaken the discipline of the army, and he condemned the manner in which the Government had acted in the matter, and especially the unfair trial to which Colonel Crawley had been subjected, and the attempts made and defeated to obtain a verdict against him.—The Marquis of Hartington said the course which the Government intended to take was to give a cordial assent to the amendment moved by General Peel, believing that the time had at last come when this controversy should be brought to an end. He defended the Government against the charge of having yielded to popular clamour, explaining and justifying the part he had himself taken in the case.—Lord Hotham said that this was an exceptional case, and was only to be met by an exceptional remedy, and when such things were done as had been done in this case there was more to fear from mystery and secrecy than in letting the whole truth be given to the country.—Mr. O'Reilly suggested that in the proceedings in India there had been violations of military law.—Sir J. Fergusson said that Colonel Crawley had suffered grievous injustice, and that Mr. Fortescue had only two courses open to him—either to apologise to the House for having been made the vehicle of gross falsehood, or to take exception to the finding of the court-martial.—Mr. Headlam, after explaining the course he had taken as Judge-Advocate-General, with reference to the Mhow Court-martial, replied to the objections offered to the proceedings which had been taken against Colonel Crawley, justifying the bringing that officer to a court-martial, and the having the trial in England. He defended the manner in which the trial had been conducted, and all the steps he had taken in a case in which unusual difficulties had presented themselves.—Mr. Mowbray complained that Mr. Headlam had not fully explained his course of action in reference to the Mhow Court-martial and to Paymaster Smales. As to the mode of conducting the late Court-martial at Aldershot, he suggested certain points in which that mode was, in his opinion, erroneous, and that the fault lay with the Judge-Advocate-General.—Mr. Smollett thought, with Sir J. Fergusson, that the statement made by Mr. Fortescue last year ought to have been retracted, and that an apology was due to the House and the country. After some remarks by Mr. Dutton, Colonel Gilpin, Mr. Bouverie, Mr. Neate, Captain Archdall, Colonel Dickson, Sir P. O'Brien, Sir W. Fraser, and Mr. Fortescue, in reply, the original motion was negatived, and General Peel's amendment agreed to without a division.—Mr. Baines obtained leave to bring in a Bill to extend the *Franchise in Boroughs* to *Occupiers*.—Mr. Locke obtained leave to bring in a Bill to amend the constitution, practice, and procedure of the *Court of the Island of Jersey*.—Mr. Villiers obtained leave to bring in a Bill to continue for a further time certain provisions of the *Union Relief Aid Acts*.

Wednesday.—The two *Consolidated Fund Bills* were read a third time and passed.—Mr. Hadfield moved the second

reading of the *Judgments, &c., Law Amendment Bill.*—Sir G. GREY said the Attorney-General had no objection to the second reading, with the understanding that the Bill should be referred to a Select Committee.—After a few words from Mr. SCULLY, the Bill was read a second time, and ordered to be referred to a Select Committee.—Mr. DODSON moved the second reading of the *Tests Abolition (Oxford) Bill*, stating that its object was to abolish subscription in the University of Oxford, and to throw open degrees without any religious test whatever. He said that the age of tests had passed away, and that the University should invite rather than repel men of other religious opinions besides Churchmen, so as to bring all within the sphere of its influence and under the power of its religious teaching. The principle of the Bill was recognised, though imperfectly carried out, in the Act of 1854, and he urged the House not to retain in the University fences and barriers which had ceased to be safeguards.—Mr. NEATE seconded the motion, and said that young men were driven from the University by these tests.—Sir W. HEATHCOTE moved as an amendment that the Bill be read a second time that day six months. He contended that the principle of the Bill was to dissociate the governing body of the University of Oxford from the Church of England. Assuming this principle, there was no need of argument; everything was clear. He assumed, however, that the University was a Church institution, and all attempts to amend a Bill the principle of which went so far would be impracticable.—Mr. G. DUFF denied that the University was a Church institution, in the sense of its being specially attached to the Church of England.—Mr. NEWDEGATE said that the Bill aimed indirectly at disorganising the University, and was, on the face of it, unsound, deceptive, and dangerous.—The CHANCELLOR of the EXCHEQUER said he regretted his inability to assent to the amendment of his colleague; but, in consenting to the second reading, he was not prepared to adopt the Bill as it stood. He suggested changes which might be made in the system at the University of Oxford, corresponding with the system adopted for Cambridge—suggestions that might be considered in committee. The dangers which menaced religion would not be averted or mitigated by the University declining to make concessions which were, in his view, of vital interest to the faith committed to her charge.—Mr. SELWYN insisted that Mr. Gladstone had not grappled with the principle of the Bill, but had led the House away into details not in the Bill, and which had nothing to do with its principle. He denied that the design of the Bill was to assimilate the practice of the University of Oxford to that of Cambridge; its real object was to throw open the governing body without requiring any religious test. If the University were thus rudely severed from the Church of England, the inevitable result would be to induce parents to look out for some other place of education.—Mr. SCULLY supported the Bill.—Lord R. MONTAGU suggested that it might enact a certain test for the governing body alone at Oxford, as at Cambridge.—Mr. BUXTON said that the present system laid a strain upon the consciences of young men, from which it was the object of the Bill to relieve them.—Sir S. NORTHCOTE said that the opponents of the Bill had been accused of indiscriminate resistance to a measure of this kind; he retorted a charge of indiscriminate attack. He recalled the attention of the House to the real issue, which was whether the union of the University and the Church should be maintained.—Mr. WALTER could not support the Bill in its present state, and suggested that it would be better to withdraw it.—Mr. WALPOLE noticed the antagonism of opinion among the supporters of the Bill.—Sir G. GREY said, in voting for the second reading, he did not assent to the principle of a severance between the governing body of the University and the Church of England. The House divided, when the amendment was negatived by 211 to 189, and the Bill was then read a second time. The *Election Petitions Bill* and the *Metropolitan Subways Bill* were read a second time, the latter being referred to a Select Committee.—Sir J. HAY obtained leave to bring in a Bill to authorise and regulate the issue of *Bank Notes in Scotland* by banking companies.

THURSDAY.—*The Tuscaloosa.*—In reply to Mr. PEACOCKE Lord PALMERSTON said that it would not be consistent with the interests of the public service to lay upon the table of the House the opinion of the law officers of the Crown upon the subject of the seizure of the Tuscaloosa. *The Conference.*—In answer to Lord R. MONTAGU, Lord PALMERSTON said that the consent of Austria and Prussia to the Conference had been obtained, and that her Majesty's Government had reason to believe that Denmark would also consent, though they had no official information on the subject.—On the motion for resuming the adjourned debate on going into committee on the *Government Annuities Bill*, the CHANCELLOR of the EXCHEQUER, referring to his former statements with respect to the defunct British Provident Institution, said, that upon a minute examination of the documentary and other evidence on which he had made those statements, he was persuaded of their substantial accuracy, and had nothing to withdraw, and no apology to make either to the House or to the member for Dudley. He read the report of the trial, in which the jury had found that certain words had been interpolated in a deed prepared by the British Provident Institution after the execution of the instrument, and he repeated his allegations with regard to the manner in which that society had conducted its business.—Mr. H. B. SHERIDAN denied *seriatim* all the charges of the right hon. gentleman, and inquired why he alone had been singled out for attack when there were many other members, some of whom were occupants of the Treasury bench, who were connected with assurance offices, equally open to censure. He complained that his name had been paraded before the public in connection with transactions described as grossly fraudulent, and he challenged the Chancellor of the Exchequer to abandon his privilege as a member of Parliament, and repeat out of doors charges which could be made the subject of a civil action in a court of justice.—The CHANCELLOR of the EXCHEQUER, in reply, said that Mr. Sheridan, without meeting the allegations against the British Provident Institution, had, by widening the issue, avoided the real point in dispute. The adjourned debate on the Bill was resumed by Sir M. FARQUHAR, who moved that the measure be referred to a select committee. He argued that it was but fair that societies represented as fraudulent and bankrupt, should be heard before a committee prior to the State depriving them of the greater portion of their business.—Mr. HORSFALL seconded the amendment.—Mr. HODGKINSON, Mr. SALT, and Mr. GOSCHEN supported the Bill, as likely to confer a great boon upon the working classes.—After some remarks by Sir F. GOLDSMID and Mr. GREGSON, Mr. SOTHERON ESTCOURT said that if he were to consult his own feelings he would support the Bill, but there were many portions of it which he thought the mature judgment of the House could not approve, and he hoped the Chancellor of the Exchequer would consent to refer it to a Select Committee.—Mr. AYRTON moved the adjournment of the debate.—The CHANCELLOR of the EXCHEQUER said he could not consent to a Select Committee, who would consider the whole question of friendly societies, but he had no objection to a Committee to consider the clauses in the usual way.—Lord STANLEY approved of the compromise offered by the Chancellor of the Exchequer. The debate was then adjourned. *Mr. Stansfeld and Mazzini.*—On the motion for going into Committee of Supply, Sir H. STRACEY moved—"That the statement of the Procureur-Général on the trial of Greco, implicating a member of this House and of her Majesty's Government in the plot for the assassination of our ally the Emperor of the French, deserves the serious consideration of this House." He said that he was not influenced by any personal feeling against Mr. Stansfeld, but his antecedents in connection with the Tibaldi and Orsini schemes of 1857 and 1858 were not such as to justify him in treating the allegation of the Procureur-Général with indignant defiance. He did not believe that the conduct of the Government in reference to this matter was either English-like or straightforward.—Mr. STANSFELD said that he now for the first time learned that his name had been associated with the revolutionary designs of Tibaldi or Orsini. He denied that he had ever acted as treasurer with reference to these designs, as no fund whatever had been collected. He admitted that he had allowed his name to be inscribed on bank notes, which he believed would have been used, not in the interests of assassins, but to aid in the establishment of a free and united Italy; but, acting on the advice of friends, he had withdrawn his name from those documents. He also admitted that, in common with other English friends of M. Mazzini, he had allowed that gentleman to have his letters directed to his private residence under the designation of "M. Fuori." M. Mazzini had, however, taken steps to prevent any more of such letters coming to his house.—Lord H. VANE considered that the statement of Mr. Stansfeld was scarcely as satisfactory as it might have been, and that his conduct had been very indiscreet.—Lord H. LENNOX said that nothing but the strong hand of the Emperor had prevented an ebullition in France on this subject, which might endanger the friendly relations of the two countries.—Mr. P. TAYLOR owned that he, too, had placed his address at the disposal of Signor Mazzini, and expressed his regret that the House of Commons had been made the vehicle of the miserable calumnies of a reactionary party.—Sir J. PAKINGTON thought some explanation was due to the Government of France, and asked Lord Palmerston whether he had already offered any, or intended to offer any.—Lord PALMERSTON expressed his opinion that the explanation of Mr. Stansfeld was perfectly satisfactory, and said the Government had not made any communication on the subject to the Government of France, because they considered it would be humiliating for them to take cognisance of what had passed in a court of justice in that country. Mr. Stansfeld had utterly denied all knowledge of the revolutionary schemes of Italian refugees, and he considered the House of Commons ought to be satisfied with his disclaimer.—Mr. DISRAELI denounced the reply of Lord Palmerston as unworthy of the Minister of a great country towards a friendly Power, and called upon the House to vindicate its own honour by passing the resolution of Sir H. Stracey.—Mr. BRIGHT protested against the conduct of the Opposition as unworthy of a great party in trying to make their way to office over the character, happiness, and future of the youngest member of the Government.—Lord R. CECIL was of opinion that the House ought to express its sense of the culpable imprudence of Mr. Stansfeld.—The CHANCELLOR of the EXCHEQUER appealed to the candour of the House to place confidence in the unimpeached honour and integrity of one of its own members. After a few words from Lord CLAUD HAMILTON and Mr. COX the House divided, when the motion was negatived by 171 to 161.—At the instance of Lord PALMERSTON, Mr. B. OSBORNE consented to postpone his motion on the affairs of *Denmark* until after Easter.

FRIDAY.—*The Danish Duchies.*—In answer to Mr. OSBORNE, Lord PALMERSTON said he had no certain knowledge that the Estates of the Duchies would be assembled. At present it was doubtful whether there was any authority to assemble them. *The Chancellor of the Exchequer and Mr. Sheridan.*—Sir J. HAY moved a resolution, expressing the regret of the House that the Chancellor of the Exchequer had not considered it his duty, after the explanation given on the previous night, to withdraw the imputations he had cast upon the member for Dudley.—The CHANCELLOR of the EXCHEQUER said he was prepared to reaffirm the whole of his statements. He was also willing to have the whole matter referred to a select committee, and if that committee reported against him, he should be willing that his voice should never be heard again in that House.—Mr. SHERIDAN disclaimed any fraudulent practices in connection with the companies referred to, and denied altogether being responsible for them.—The CHANCELLOR of the EXCHEQUER said that if he had unjustly attacked the hon. member for Dudley, and had given him pain, he was sorry for it.—Sir J. HAY said that he had only brought on the question on public grounds, and withdrew his motion. *The Easter Holidays.*—Lord PALMERSTON moved that the House at its rising do adjourn to Monday, April 4th.—Mr. FERRAND called attention to the *Accidents from Reservoirs.*

[Left speaking.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS Consols closed at 91⅛ to ¼ for Money, and 91⅛ for Account; Three per Cents. Reduced, 89⅞; New Three per Cents., 89⅞ to ⅝; India Stock, 218; India Five per Cents., 104⅜ to ½; India Bonds, 4*s.* to 10*s.* dis.; Exchequer Bills, 6*s.* dis.—FOREIGN: Brazilian, 1852, '58, '60, 88¾; Dutch Two and a Half per Cents., 64¼; Egyptian, 101½ ex. div.; Greek, 21⅛ to 24; Ditto Coupons, 11⅜; Italian, 67⅜ to ⅞; Ditto, Maremmana Railway, 74 to ½; Mexican, 45½ to ¼; New Granada, 14½; Ditto, Two per Cents., 30½; Peruvian, 1862, 86¾ to ¼; Portuguese, 1853, 48½ to ¾; Ditto, 1856, &c., 48¾; Russian, 1850, 87¾; Ditto, 1862, 90½; Sardinian, 84; Spanish Passive, 36¼ to 35¾; Ditto, Certificates, 13½.

Metropolis and its Vicinity.

THE BISHOP OF LONDON'S FUND.—The following letter has been written to the Bishop of London by command of her Majesty the Queen:—

"Windsor Castle, March 7, 1864.

"My dear Bishop of London.—I have had the honour to lay before her Majesty the Queen your letter of the 5th inst., together with the accompanying papers. I have received the commands of her Majesty to assure you, in reply, of the deep interest which the Queen takes in the good work which you have undertaken. Under any circumstances her Majesty would have felt it to be her duty to give her support and assistance to a plan for remedying the evils which your Lordship has described, but the Queen feels a double satisfaction in contributing towards measures which, under your Lordship's control, her Majesty feels sure will be carried out with efficiency and with discretion. Her Majesty has commanded me to inform you that it is her Majesty's intention to contribute to the Fund called 'The Bishop of London's Fund,' for its general purposes, one thousand pounds annually for the next three years, making a sum total of three thousand pounds. Believe me, my dear Bishop of London, very faithfully yours, C. B. PHIPPS."

The Prince of Wales has also intimated his intention to contribute one thousand pounds to the general purposes of the Fund.

FATAL BOILER EXPLOSION IN SPITALFIELDS.—On Friday a fatal boiler explosion took place at the saw mills of Mr. W. Saunders, in Slater Street, Ka... Street. Mr. Robert Saunders, brother of the proprietor, was killed on the spot, and several of the workmen were so dangerously wounded that it was necessary to remove them to the hospital. The boiler itself, which was connected with an engine for driving a saw and turning mill, was lifted up on one end with the... blown out; but all around it, as well as the houses in the neighbourhood, were reduced to ruins. The body of Mr. Robert Saunders was found under some rubbish near the boiler. The wounded men can give no account of the accident.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended on Saturday, March... were 1664. The average number for the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1449. The present return is therefore 215 above the average. During the week the births were 1013 boys and 949 girls, in all 1962 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 1878.

Provincial.

SHEFFIELD.—At a little before midnight on Friday this town was the scene of one of those terrific disasters to which nearly all the great towns in the north of England are more or less exposed, resembling in many of its details the fatal accident which occurred a few years ago at Holmfirth, though far surpassing it in the extent of its destruction. The great reservoir of the Sheffield Water Company at Bradfield, covering an area of 76 acres, and containing 114 million cubic feet of water, the estimated pressure of which was not less than 80,000 tons, suddenly burst its embankment, which was 85 feet high, 40 feet thick, and 300 yards long, and swept with the fury of some Deluge down the narrow gorge formed by the Loxley and Stannington Hills into Sheffield itself. Almost before warning could be given the volume of water began rushing headlong down the valley, sweeping farms and houses, forges and factories, like chaff before it. Never, probably, before has an accident of the same kind occurred so ruinous in its wholesale destruction of property, so lamentably fatal in the loss of human life. Whatever the sudden and tremendous flood may reach it seems to have destroyed, and, calculating by the number of houses swept away, and those reported missing who were known to have been in them on the fatal night, there is every reason to fear that the lives sacrificed by this awful calamity will exceed 250. As to the damage done to property it is impossible at this early date to form an accurate estimate, but it is conjectured the amount will exceed half a million. The devastation in this respect is unparalleled. A large, populous, and thriving district has been almost obliterated from the earth, scarcely more than traces of the houses and factories that once stood there now remaining. Between Malin Bridge and Hillsborough, a distance of four miles, the greatest loss of life occurred. Within that tract whole rows of houses were swept entirely away with all the inhabitants, and scarcely any of their bodies have been discovered. The flood seeems to have swept off everything before it for nearly 14 miles, from the confluence of the Loxley and the Revilin to the Don. Between Wardsend and Sheffield, the bodies were seen lying in the mills and the mud and rubbish. At Neepsend 900 acres of gardens were devastated, and whole families swept away. The latest official report states that 258 persons were missing, of whom the bodies of 178 had been recovered and identified. Large numbers therefore are not yet found. Bodies have been discovered as far down the river as Rotherham and Doncaster. Along the banks of the river, between that town and Sheffield, the scene of the inundation was visited by vast crowds on Sunday, and it was necessary to call out the police and a strong military guard for the maintenance of order and the security of property. The inhabitants of the submerged districts have lost everything, and hundreds have nothing left of their property but their night-dresses. The inquests were opened on Saturday night, and then adjourned for 10 days. There were then 90 bodies in the workhouse. A public meeting for the purpose of affording immediate relief to the sufferers was held on Tuesday under the presidency of the Mayor, at which Earl Fitzwilliam and Lord Wharncliffe were present. A subscription was immediately opened, to which Lord Fitzwilliam contributed 1000*l.*; the trustees of the Duke of Norfolk, 1000*l.*; the Town trustees, 500*l.*; Mr. Hadfield, M.P., 500*l.*; Lord Wharncliffe, 200*l.*; the Mayor, Mr. Jessop, 200*l.*; his firm, 200*l.*; eight other firms, 100*l.* each; three other firms, 100*l.* each; the Sheffield Railway Company, 250*l.*; Mr. Joseph Gillott, Birmingham, 100*l.*; Earl de Grey and Ripon, 50*l.*; the Archbishop of York, 50*l.*; the Right Hon. J. Stuart Wortley, 25*l.*, and other amounts raising the total to over 16,000*l.* During the meeting Mr. Roebuck telegraphed that the Prince of Wales will head the

subscription, and the Corporation of the City of London have since voted 500*l.* in aid of the fund. Cartloads of provisions have been sent into the town during the week for the relief of the sufferers from all quarters of Hallamshire. A meeting of the owners of property damaged by the flood was held on Tuesday, at which it was resolved to take united action against the water company. A clause in the Company's Act, passed the year after the Holmfirth flood, specifically fixes upon them the damage caused by the failure or giving way of embankments or reservoirs on any of their works. If the damage should amount to the estimated sum of half a million, as stated above, the amount will be more than the capital of the company. On Monday Sir G. Grey sent down Mr. Rawlinson, C.E., to assist the authorities professionally in investigating the cause of the catastrophe. The embankment is said to have shown signs of cracking for some days previously, and the workmen had made such representations of its insecurity that Mr. Gunson, the resident engineer, and Mr. Craven, the contractor, had been sent for, and measures had actually been taken to let off the water, and so reduce the pressure when the embankment gave way.

Markets.

COVENT GARDEN, March 19.

Vegetables and Fruit in season continue to be pretty well kept up. New Hothouse Grapes may now be obtained, and Apples, though scarce, may still be had; there are likewise a few dessert Pears. Oranges are very plentiful; the best are realising from 6s. to 10s. per 100. Cornish Broccoli is getting scarcer. Continental arrivals are heavy; among them are French Lettuces, Endive, Carrots, and Radishes. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Oranges, per 100, 2s 6d to 8s
Grapes, new, per lb., 20s to 30s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Kent Cobs, 140s per 100 lbs.
Pears, per doz., 6s to 12s	Almonds, do., 18s
Strawberries, p. oz., 2s 6d to 4s	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 8s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Cucumbers, each, 2s to 5s
Cauliflowers, each, 4d to 8d	Beet, per doz., 1s 6d
Asparagus, p. bundle, 8s to 14s	Shallots, per lb., 10d
French Beans, p. 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s to 3s	Garlic, per lb., 8d
Rhubarb, p. bundle, 9d to 1s 6d	Lettuces, each, 1d to 4d
Potatos, York Regents, p. ton, 60s to 80s	Endive, per score, 1s to 2s
,, Shaws, do., 50s to 60s	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 4d to 6d	Mushrooms, p. pott., 1s to 1s 9d
Carrots, do., 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, March 17.

Prime Meadow Hay	75s	to 80s	Clover, old	90s	to 110s
Superior do. ..	84	87	Do. second cut ..	—	—
Inferior do. ..	60	70	New Clover ..	—	—
New do.	—	—	Straw	24	30
Rowen	—	—			

HARVEY & EASTON.

WHITECHAPEL, THURSDAY, March 17.

Fine Meadow Hay ..	80s	to 86s	Prime 1st cut Clover	108s	to 112s
Inferior do.	75	80	Inferior do. do. ..	100	105
Prime New Hay ..	—	—	New 1st cut do. ..	—	—
Inferior	—	—	Prime 2d cut do...	100	105
Straw	27	30	Inferior do.	90	95

POTATOS.—SOUTHWARK, Monday, March 14.

During the past week the arrivals coastwise have been moderate, but about an average by rail. Best fresh samples are in better demand at a little more money. Quotations:—Yorkshire Flukes, 70s. to 90s. per ton; do. Regents, 50s. to 70s.; do. Rocks, 45s. to 50s.; Dunbar Regents, 70s. to 75s.; Kent and Essex Regents, 50s. to 70s.; North Berwick Regents, 50s. to 60s.; Perth, Forfar, and Fifeshire Regents, 45s. to 50s.; do. do. Rocks, 45s.

BRITISH WOOLS.—LONDON, March 17.

The demand for deep-grown long-stapled wool still continues, and full prices are realised. Our trade continues in a satisfactory state in all its departments.

NEWGATE.—March 18.

Best Fresh Butter .. .. 15*s.* per dozen lbs.
Second do. do. .. .. 13*s.* ,,
Pork, 4*s.* 4*d* to 4*s.* 8*d.* per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, March 14.

The supply of Beasts is about the same as of late; trade is slow, but there is no alteration in prices. Sheep are rather more plentiful, and the demand moderate. Trade is consequently very dull, and prices on the average are lower, but there is scarcely a quotable reduction. Calves are very scarce to-day, and a large advance in price is realised. From Germany and Holland there are 760 Beasts, 740 Sheep, and 68 Calves; from Scotland, 280 Beasts; from Ireland, 130; and 2730 from Norfolk and Suffolk.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8 to	4	10	Best Long-wools.	5	2 —	5	6
Best Short-horns	4	4 —	4	8	Do. Shorn ..	4	4 —	4	8
2d quality Beasts	3	0 —	3	8	Ewes & 2d quality	4	4 —	4	8
Best Downs and Half-breds ..	5	6 —	5	10	Do. Shorn ..	3	8 —	4	0
Do. Shorn ..	4	8 —	5	0	Lambs	..	—	..	
					Calves	4	0 —	6	0
					Pigs ..	3	8 —	5	0

Beasts, 4250; Sheep, 18,170; Calves, 82; Pigs, 260.

THURSDAY, March 17.

The supply of Beasts is larger than on Thursday last. The weather is favourable, yet trade is dull, and prices are no better than on Monday. Good Sheep are by no means plentiful; there is a demand for them at fully late rates, but inferior qualities meet with a very dull sale. Choice Lambs are in request, at about 7s. per 8 lbs. Good Calves are scarce and dear. Our foreign supply consists of 440 Beasts, 530 Sheep, and 205 Calves. Milch Cows, 95.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8 to	4	10	Best Long-wools.	5	2 —	5	6
Best Short-horns	4	4 —	4	8	Do. Shorn ..	4	4 —	4	8
2d quality Beasts	3	0 —	3	8	Ewes & 2d quality	4	4 —	4	8
Best Downs and Half-breds ..	5	6 —	5	10	Do. Shorn ..	3	8 —	4	0
Do. Shorn ..	4	8 —	5	0	Lambs	..	—	..	
					Calves	4	0 —	6	0
					Pigs ..	3	8 —	5	0

Beasts, 1225; Sheep, 4010; Calves, 254; Pigs, 140.

MARK LANE.—MONDAY, March 14.

The supply of Wheat from Essex and Kent to this morning's market was small, and taken slowly at last week's prices; business in foreign from the stands continues to be of a very retail character, and prices remain nominally the same. Barley brings last week's quotations. Beans and Peas sell slowly at late rates. The Oat trade is very heavy, and to effect sales it is necessary to submit to a decline of 6d. to 1s. per qr. Flour is unaltered in value.

PER IMPERIAL QUARTER.

			s.	d.		s.	d.
WHEAT, Essex, Kent, & Suffolk ..	White		42	48	Red	40	48
— —	fine selected runs ..	ditto	44	52	Red	40	48
— —	Talavera		48	54			
— Norfolk			—		Red	—	
— Foreign			36	54			
BARLEY, grind. & dist., 25s to 27s ..	Chev.		34	38	Malting ..	29	33
— Foreign ..	grinding and distilling		22	26	Malting ..	27	31
OATS, Essex and Suffolk			18	22			
— Scotch and Lincolnshire—	Potato		20	25	Feed	18	22
— Irish	Potato		19	22	Feed	—	
— Foreign	Poland and Brew		17	22	Feed	15	20
RYE			30	32	Foreign ..	—	
RYE-MEAL, Foreign			—				
BEANS, Mazagan .... 27s to 36s ..	Tick		30	33	Harrow ..	30	33
— Pigeon .... 32s to 40s ..	Winds.		—		Longpod	—	
— Foreign	Small		36	42	Egyptian	30	32
PEAS, White, Essex and Kent ..	Boilers		32	33	Suffolk ..	33	34
— Maple .... 30s to 34s	Grey		28	30	Foreign ..	32	33
MAIZE	White		—		Yellow ..	—	
FLOUR, best marks delivered ..	per sack		35	40			
— 2d do	ditto		28	34	Country ..	28	34
— Foreign	per barrel		15	25	Per sack	32	40

FRIDAY, March 18

The weather since the 11th inst. has been fine, with the exception of some showers on the 14th and 15th, the latter and last nights were frosty. The Wheat trade during the above period has continued to be very inanimate, but the quotations in the several markets of the kingdom remain unaltered. Business in Barley has been limited, and in some markets it is written rather cheaper. Beans and Peas have been a slow sale, but prices have not changed. Oats have been sold here at a decline of 6d. and 1s. per qr. Flour has met with little attention, and former prices are nominally unaltered. Since Friday last 15 vessels have been reported off the coast. The floating trade has remained quiet; Wheat cargoes off the coast are held for fully late rates, which buyers decline to pay; for future shipment, however, a good business has been done at previous prices. Maize is dull, and 1s. per qr. lower. Paris, March 17.—Business is very slow as well for Wheat as for Flour, but no further decline in prices has been submitted to. The present stock of Flour has increased to about 17,800 cwt. The six marks for delivery this month are quoted equal to 32s. 6d. per 280 lbs. The arrivals of English and foreign Wheat and foreign Barley this week have been small, of foreign Oats moderate, of English and Irish very large. The attendance at to-day's market was small. English Wheat was difficult of sale at Monday's prices, and a portion remained unsold at the close; Foreign met with very little attention, and we do not alter our quotations. Barley, Beans, and Peas were unaltered in value. With large arrivals of Oats the trade was very heavy, and to effect sales it was necessary to submit to a decline of 6d. per qr.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	930 qrs.	1310 qrs.	7320 qrs.	1140 sks.
Irish	—	—	5320	— ,,
				50 ,,
Foreign ..	1330 ,,	750	17,260 ,,	2240 brls

LIVERPOOL, March 15.—At our market to-day there was only a moderate business in Wheat, and prices closed without any material change. Oats difficult to sell. Egyptian Beans scarce, and 1s. per qr. advance. Indian Corn 3d. per qr. cheaper. Flour a little more inquired after, and full prices obtained.

FRIDAY, March 18.—The market for Wheat rather moderate, rates materially unchanged. Flour quiet. Indian Corn steady, and 28s. 6d. for mixed. Egyptian Beans unchanged. Oats and Oatmeal quiet.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Feb. 6	40*s* 4*d*	32*s* 0*d*	18*s* 9*d*	29*s* 0*d*	33*s* 8*d*	33*s* 0*d*
— 13	40 8	31 11	19 1	29 1	33 7	33 7
— 20	41 1	32 0	19 8	28 10	33 2	33 5
— 27	40 6	32 0	19 4	29 0	33 1	32 9
March 5	40 2	31 6	19 10	28 6	33 5	32 10
— 12	40 1	31 5	19 8	29 2	32 7	33 0
Agg. Aver.	40 6	31 10	19 5	30 7	33 3	32 11

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Feb. 6.	Feb. 13.	Feb. 20.	Feb. 27.	March 5.	Mar. 12.
41*s* 1*d*	..	..		..	..	..
40 8	..		..	..	..	..
40 6	..	..	..		..	..
40 4		..	..	..	..	..
40 2	..	..	..	..		..
40 1	..	..	..	..	..	

WANTED, a good practical DRAUGHTSMAN, one accustomed to Agricultural Work preferred.—Apply by letter to X. Y. Z., Post Office, Leeds.

WANTED, a HEAD GAME and PARK KEEPER, for an Estate, near London, thoroughly competent to Rearing Game by hand, Breaking Dogs, and Trapping, and who can have a good personal character from his last situation.—Apply, by letter only, to T. W., Norfolk Lodge, near Barnet, Herts, stating age, height, family, who last employed by, and where the extent of Manor had charge of, and why he left, also if he understands Management of Deer.

WANTED, in a London Nursery, a good GENERAL FOREMAN or MANAGER; must thoroughly understand Budding, Grafting, &c.—Apply, stating age, experience, salary, &c., to W. C., *Gardeners' Chronicle* Office.

WANTED, as GARDEN FOREMAN, an active, steady, sober, and industrious single young Man, who thoroughly understands the cultivation of Hothouse and Greenhouse Plants, Forcing, Fruits and Vegetables, and the Management of Flower and Kitchen Gardens. Wages, 15*s.* per week, with a room on the premises.—J. NICKSON, Hale Hall, Warrington.

WANTED, for a Country Establishment in Devonshire, a thorough HEAD GARDENER. One whose Wife is a good Laundress would be best suited. A Cottage provided, Rent-free. Children objected to. Applicants to state their qualifications, ages, previous employment, references, and the wages expected.—Apply by letter to S. W., No. 10, Strand, Torquay.

WANTED, an active, industrious, practical GARDENER, with a good knowledge of Greenhouse and Frames, besides Kitchen and Flower Gardens; married, without incumbrance. Unexceptionable references required from last situation—a Teetotaller preferred. Wages 25*s.* a week and Cottage.—Apply, by letter, M. M., C. Barker & Son, 8, Birchin Lane, E.C.

Peckham House, Peckham.

WANTED, a GARDENER; must be single; to live in the house. One who understands the Cultivation of Vegetables.—Apply personally.

WANTED, as GARDENER, a married Man without incumbrance.—Must be a thorough practical Gardener, competent to take charge of a good garden, and take pride in it. The Wife as Laundress, able to get up fine linen.—Apply by letter to A. B., Mr. Baxter, Surveyor, Bromley, Kent.

WANTED, a thoroughly practical KNIFESMAN.—Must be of considerable experience, particularly amongst Fruit Trees and Hardy Plants. A first-rate character indispensable.—Apply, in own handwriting, stating wages, &c., to JAMES DICKSON & SONS, The Newton Nurseries, Chester.

WANTED, Three YOUNG MEN, accustomed to Soft-wooded Plants and Garden Work.—Apply at LITTLE'S Nursery, King's Road, Chelsea, S.W.

WANTED, as BAILIFF, in Devonshire, a thoroughly respectable and active Man, of great experience in Draining and Cultivating all kinds of Soils; also in Breeding and Rearing First-class Stock, Improving Waste Lands, the Management of Timber, &c. Applicants must state their ages, previous employment for the last ten years, the salary expected, and references. A married Man whose Wife is a good Dairy and Poultry Woman would be most suitable. Security will be required.—Apply by letter to S. W., No. 10, Strand, Torquay.

WANTED, a CORRESPONDING CLERK and TRAVELLER.—WILLIAM WOOD & SON are in want of a respectable energetic Man, from 25 to 30 years of age; one who has a tolerable knowledge of Plants, with a slight insight in the Seed Trade, would be preferred.—Address WM. WOOD & SON, Maresfield, Uckfield, Sussex.

WANTED, an OFFICE CLERK, able to Keep Books correctly, and Manage a portion of the Correspondence.—Apply, in own hand-writing, stating salary expected, with references to F. & A. SMITH, The Nursery, Dulwich, S.

WANTED, NURSERY LABOURERS.—Mr. JAMES VEITCH is in IMMEDIATE want of FIVE or SIX good active respectable young Men for his Coombe Wood Nursery, who have been accustomed to Nursery work. Competent and respectable men will have CONSTANT employment, with from 15*s.* to 18*s.* per week, according to desert.—Apply personally or by letter, with references, &c., to Mr. VEITCH, Royal Exotic Nursery, King's Road, Chelsea, S.W.

WANTED, as COWMAN, a person who thoroughly understands the Management of Cows, Pigs, and Poultry, and can clean Knives, Boots, &c., and will make himself generally useful. A good personal character necessary. Wages from 16*s.* to 18*s.* a week, according to qualification.—Address, A.B., Post Office, Eltham, Kent.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

HEAD GARDENERS.—WM. CUTBUSH & SON have at the present time several GARDENERS on their books, whom they can confidently recommend to noblemen or gentlemen requiring trustworthy and intelligent men.—Highgate Nurseries, London, N.

LANDSCAPE GARDENER.—The Subscriber offers his services to any Proprietor intending to Remodel Existing or to Construct New Gardens and Pleasure Grounds. He has had a very complete experience in such undertakings; is competent to make Surveys, Plans, and Estimates; is practically acquainted with Horticultural and Farming matters; has carefully studied the principles of those combinations in Natural Scenery producing the beautiful and picturesque; and he has given much attention to Architectural subjects for the purpose of securing correct and artistic results in his designs for the Parterre, for the Terrace, and for the Carriage approach.—Terms, references, &c., furnished in reply to communications addressed T. Z., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Age 28, married, no incumbrance; has a practical knowledge of his profession. Good character. Wife good Laundress if required.—G. W., Mr. Jas. Bennett, The Gardens, J. C. im Thurn, Esq., Champion Hill, Camberwell, S.

GARDENER (HEAD).—Age 30, married; 15 years' experience in first-class situations in Scotland and North of England, and can be well recommended by his present employer, whom he has served nearly five years. No single-handed place accepted.—J. E., Post Office, Rothbury, Morpeth.

GARDENER (HEAD).—Age 28, married, one child; understands Forcing Vines, Pines, Melons, &c., has a good practical knowledge of Hard and Soft-wooded Plants, also Flower and Kitchen Gardens. The neighbourhood of London preferred. Good character.—R. W., 4, New Wharf, Tunbridge, Kent.

GARDENER (HEAD).—Age 30, married, no incumbrance; understands the Management of Flower and Kitchen Gardens, Greenhouse, &c. No objection to a Pony. Wife an experienced Laundress. Four and a half years' excellent character.—R. G., Mr. E. Hollamby, Tunbridge Wells, Kent.

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To Noblemen and Gentlemen.

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GARDENER (HEAD).—Age 34, married, no incumbrance; thoroughly understands Early and Late Forcing of all kinds of Fruits, Stove and Greenhouse Plants, Kitchen and Flower Gardens, and the Management of Land and Stock. Nearly six years' character from his late employer, whom he left in consequence of the establishment being given up.—W. TEGG, 3, Elysium Cottage, Fulham Park Road, Fulham, S.W.

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GARDENER (HEAD, or SINGLE-HANDED).—Age 36, married, one child, aged 9; understands the Management of Pines, Vines, Greenhouse, Flower and Kitchen Garden. Wife can Manage Poultry, Dairy, or Lodge. Two years' good character from last situation.—W. S., Post Office, Dorking.

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To Noblemen and Gentlemen.

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GARDENER (UNDER).—Age 22, single; would not object to pay a small Premium for a good second place. Two years' excellent character.—J. G., Beddington Park, S.

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GARDENER (UNDER) in a nobleman's or any large Establishment.—Age 20; brought up to gardening from his infancy; has received 2½ years' practical instruction in one of the largest gardens in the county of Hants, where there are six hothouses, two Pineries, &c. First-class character.—A. P., Hackwood Park Gardens, Basingstoke, Hants.

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To Nurserymen.

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To Noblemen and Gentlemen.

FARM BAILIFF.—Middle-aged, married, without incumbrance; competent to take the entire management of a Farm; to plant Trees, Lay out Grounds, &c. Fifteen years' reference and testimonials.—T. B., Willey's Royal News Office, Birmingham.

FARM BAILIFF.—Age 39, married, a Scotchman; has had great experience in different counties; well understands the Cultivation of all kinds of Soil, the Breeding and Rearing of all kinds of Stock; has also had much experience in Draining, the improving Waste Lands, Timber, &c. Also thoroughly understands all kinds of Agricultural Machinery. Good references for character and ability.—For further particulars apply to K., Messrs. James Dickson & Sons, 102, Eastgate Street, Chester.

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TESTIMONIALS of CUPISS'S CONSTITUTION BALLS, for HORSES and NEAT CATTLE.

Hawking Down House, Wiltshire,
To Mr. F. CUPISS, May 4, 1860.

SIR,—In answer to yours of the 1st, I beg to say you are quite at liberty to publish my opinion of your Constitution Balls, which I very much approve of for getting Horses into fine condition. They are also good for Sheep, especially Lambs when they are in a pining state, by making them into pills about the size of a nut, and giving two or three occasionally; the animal soon becomes strong and healthy.—I remain, yours respectfully, MORALITY RAWLINGS.

Mains of Arisay, Fortwilliam, N.B., Oct. 26, 1860.

SIR,—I have given your Constitution Balls to Horses and Cattle for the last four years, and have always been satisfied with their effect. I consider it a boon to any one keeping Stock to be able to get Balls so good and so sure in their effect.—I remain, yours obediently, JOHN CARTER.

From Capt. H. BURTON, *Grange Farm, Rock Ferry, Cheshire.*

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The Balls are prepared by FRANCIS CUPISS, Diss, Norfolk, Author of the Prize Essay of the Diseases of the Liver of the Horse. And may be had of all Patent Medicine Vendors, in Packets of 3 Balls, 1*s.* 9*d.*; and 6 Balls, 3*s.* 6*d.*: or 4 small Packets, 10*s.* 6*d.*; or 7 large Packets, 21*s.*; with full directions.

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Lists of Prices on application to THRESHER & GLENNY, General Outfitters, next door to Somerset House, Strand, W.C.

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They are mose easily trimmed and re-filled than any other Lamp with similar burner.

There is no danger of chimneys breaking, and the chimney cannot become smoked.

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Special CANDLESTICKS to fit thin candles, 1*s.* and 2*s.* 6*d.* each; reducing Sockets, making them fit any candlesticks 2*d.* each.

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FENDERS, STOVES, FIRE-IRONS, and CHIMNEY PIECES.—Buyers of the above are requested, before finally deciding, to visit WILLIAM S. BURTON'S SHOW-ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, CHIMNEY-PIECES, FIRE-IRONS, and GENERAL IRONMONGERY as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright Stoves, with ormolu ornaments, 3*l.* 15*s.* to 33*l.* 10*s.*; Bronzed Fenders, with standards, 7*s.* to 5*l.* 12*s.*; Steel Fenders, 3*l.* 3*s.* to 11*l.*; ditto, with rich ormolu ornaments, from 3*l.* 3*s.* to 18*l.*; Chimney-pieces, from 1*l.* 5*s.* to 100*l.*; Fire Irons, from 2*s.* 3*d.* the set to 4*l.* 4*s.* The BURTON and all other PATENT STOVES, with radiating hearth-plates.

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Sauce.—Lea and Perrins'

WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE,"
Is prepared solely by LEA & PERRINS.

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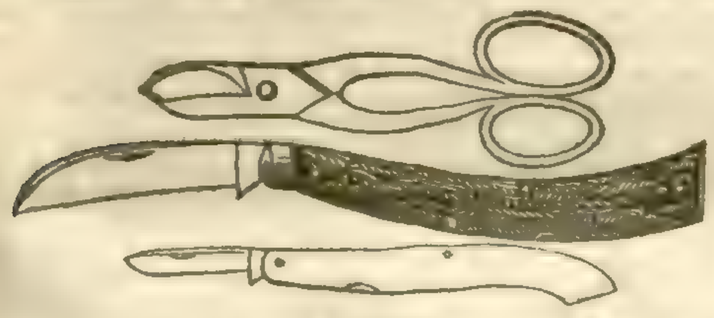

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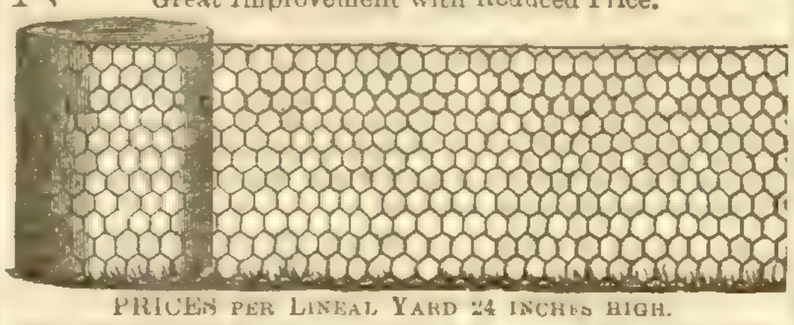

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2½ in.	Hares, Dogs, Poultry ..	0 3	0 4	0 3¾	0 5	0 4½	0 6	0 5½	0 7
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1⅝ in.	Small Rabbits, Hares, &c. ..	0 4	0 4¾	0 4¾	0 6	0 5½	0 7	0 7	0 9
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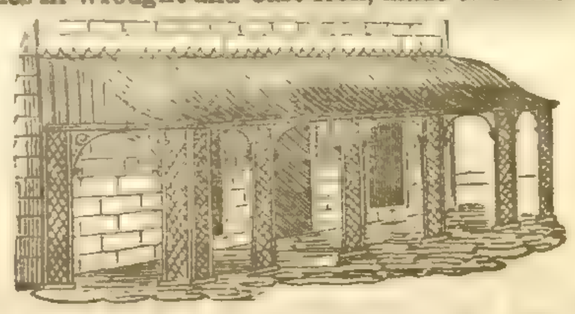

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2½ inch, with short barrel	...	...	1 1*s.*

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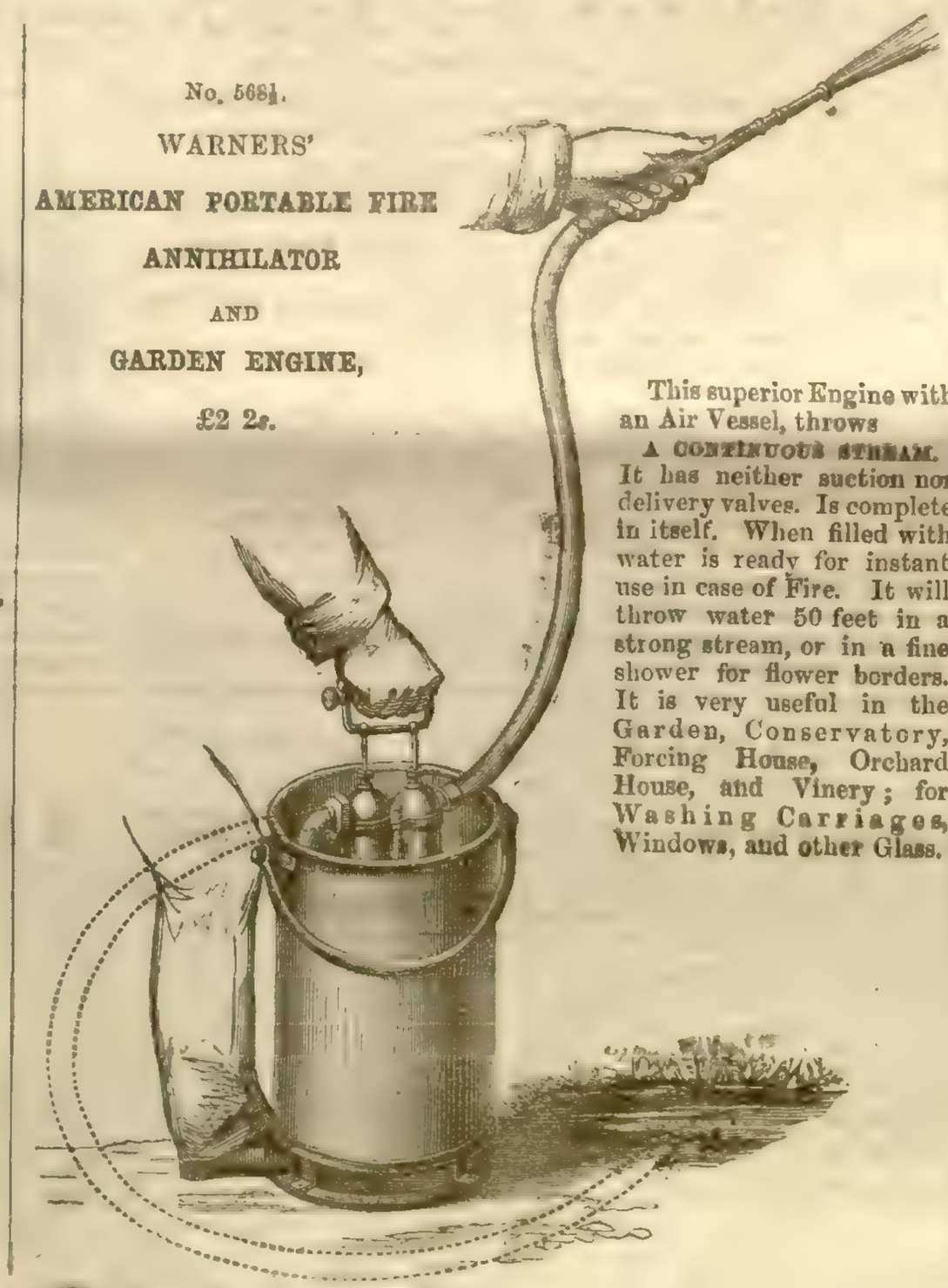

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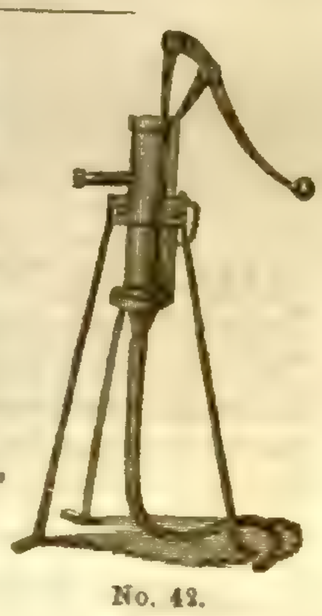

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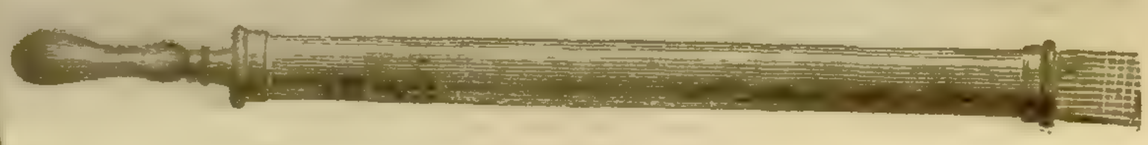

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11 by 9	12 by 9	13 by 9	14 by 9								
12 „ 10	13 „ 10	14 „ 10	15 „ 10	10	9	12	3	12	6	14	0
13 „ 11	14 „ 11	..	..								
14 „ 12	15 „ 12	15 „ 11	16 „ 11								
18 „ 12	19 „ 12	16 „ 12	17 „ 12								
16 „ 13	17 „ 13	20 „ 12	21 „ 14	11	6	13	6	13	6	16	0
19 „ 13	20 „ 13	18 „ 13	..								
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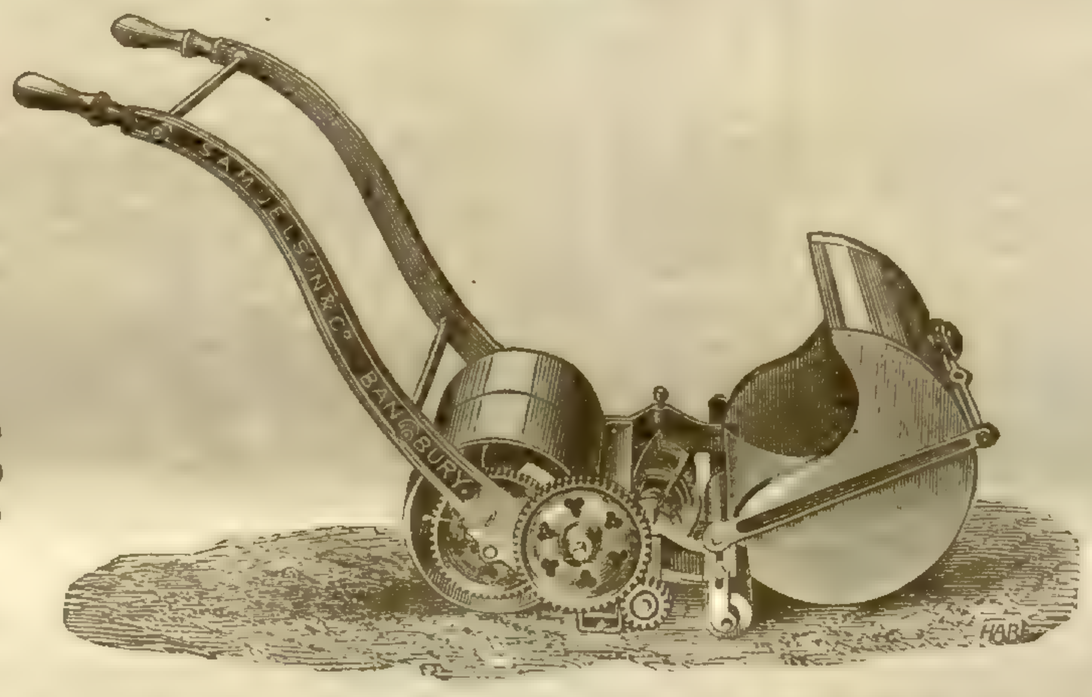

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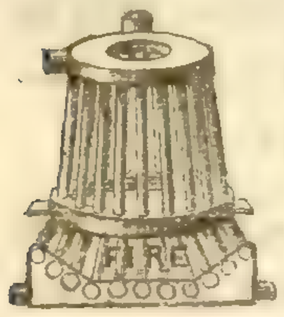

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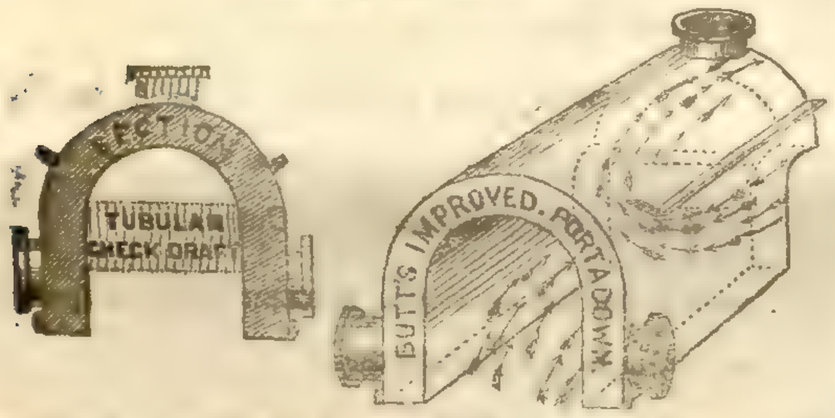

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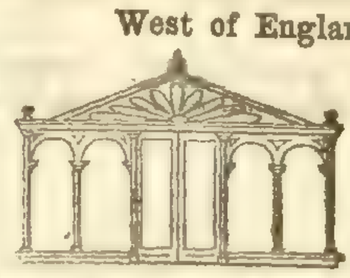

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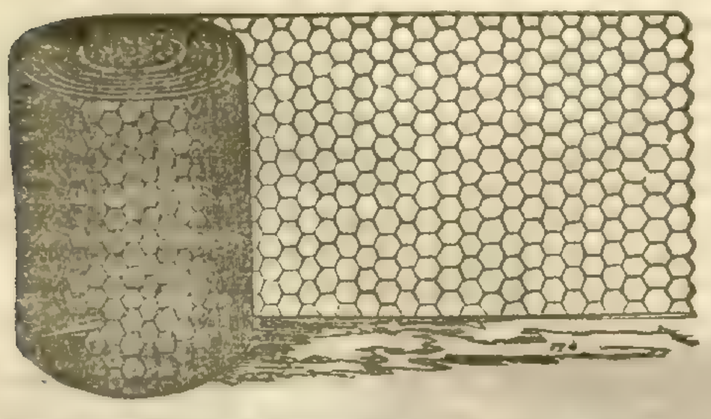

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News of the Week.

BOTH Houses of Parliament adjourned on Friday for the Easter holidays; the Lords to the 5th, and the Commons to the 4th of April.

From the seat of war in the North we learn that the bombardment of Fredericia commenced at an early hour on Sunday morning, and was continued without intermission until Monday. The town was set on fire in several places, and some of the Danish guns were dismounted; but when summoned to surrender the commandant of the fortress refused, and the Germans have since withdrawn out of range, abandoning their positions before the town. The siege of Düppel, which has been going on simultaneously with that of Fredericia, was renewed on Saturday with great vigour. Some of the Danish positions were taken after a desperate resistance, but no effect has yet been produced on the fortress itself. The Danish Rigsdag was closed on Tuesday by a speech from the Throne. HIS MAJESTY said that he was still alone, and did not know how long Europe would look on with indifference upon the acts of violence perpetrated against Denmark; but he would tell her enemies that while he was ready to do anything that might serve to obtain peace, the period was still distant when he would submit to a humiliating peace. HIS MAJESTY afterwards left Copenhagen, accompanied by the Minister of War, to join the army.

A despatch from Vienna states that the Conference has been accepted by Austria and Prussia without any detailed basis or an armistice, and that the two Powers have agreed to maintain the territorial integrity of the Danish monarchy under the present dynasty.

The Italian papers announce that GARIBALDI embarked from Caprera on Monday on his way to England. He is expected to arrive at Southampton on Tuesday next, and after a short stay in the Isle of Wight will come to London, where the working classes intend to give him a public reception.

By the India Mail we learn that Sir HUGH ROSE has tendered his resignation as Commander-in-Chief, and will probably be succeeded by Sir ROBERT NAPIER. The affairs of Cabul are in a very unsettled state; and some of the frontier chiefs are preparing for renewed hostilities in the spring.

The news from the United States, after a long interval of inaction, has again assumed an exciting character. The army of the Potomac, under General MEADE, has failed in an attempt to interrupt General LEE's communications with Richmond and to release the Federal prisoners in that city; while the army under General SHERMAN has been driven back to Vicksburg, under circumstances which leave no doubt that he has suffered heavy loss, and has been severely harassed by the Confederate cavalry during his retreat. The Florida expedition has also failed, and it is thought that the defences of Mobile will be found too strong for Admiral FARRAGUT'S force. General GRANT has been invested with the supreme direction of military affairs, with the rank of Lieutenant-General, and after visiting the army of the Potomac has suddenly left Washington for Vicksburg, to ascertain, it is supposed, the exact position of General SHERMAN'S forces. The House of Representatives has passed the Loan Bill, and the Senate has amended the Gold Bill authorising Secretary CHASE to sell the surplus gold in the Treasury. The Judge of the Court of Appeals at St. John's has delivered judgment, releasing the Chesapeake pirates.

Home News.

THE COURT.—The Queen, with the King of the Belgians, and the Royal family, continue at Windsor Castle. On Friday, being the 16th birthday of the Princess Louisa, the event was celebrated in the customary manner at Windsor and London. The Queen, accompanied by Princess Louisa, walked and drove in the grounds. Princess Amelia and Princess Clotilde of Saxe Coburg and Prince John of Glücksburg visited the Queen and remained to luncheon. In the evening the Princess Louisa came to town and attended the performance at the Princess's Theatre, returning afterwards to Windsor. On Saturday morning Prince Arthur left the Castle for Greenwich Park. Prince Leopold accompanied his Royal Highness, and will remain with him on a visit for a few days. The Queen, accompanied by the Princess Louisa, walked and drove in the grounds. Princess Beatrice took a carriage drive. Princess Helena came to London, and was present at the Drawing Room held by the Princess of Wales. The Judge-Advocate-General had an audience of the Queen. The Duke of Somerset and the Bishop of London arrived at the Castle. The Duke of Somerset had an audience of the Queen. On Sunday morning the Queen, the King of the Belgians, Princess Helena, Princess Louisa, and Princess Beatrice, attended Divine service in the Private Chapel. The Bishop of London preached the sermon, and dined with her Majesty in the evening. On Monday morning the Queen, accompanied by Princess Louisa, walked and drove in the grounds. In the afternoon the Queen drove out in a carriage-and-four. Her Majesty visited the Windsor Union Poor-house, and inspected the establishment. The Grand Duchess of Mecklenburg-Strelitz and Viscount Sydney arrived on a visit to her Majesty. On Tuesday morning the Grand Duchess of Mecklenburg-Strelitz left the Castle for London. Viscount and Viscountess Palmerston arrived on a visit. Lord Palmerston had an audience of the Queen. On Wednesday morning the Queen, accompanied by the Princess Helena, walked and drove in the grounds. Prince Arthur and Prince Leopold arrived from Greenwich Park. In the afternoon the Prince and Princess of Wales arrived from London. In the evening the Queen had a dinner party. On Thursday morning the Queen, accompanied by the Princess of Wales, drove in the grounds. In the afternoon the Royal charities associated with Maunday Thursday were distributed to 45 aged men and 45 aged women in Whitehall Chapel, with the customary ceremonials, the number of each sex corresponding with the age of her Majesty. According to present arrangements her Majesty and the Royal family will remain at Windsor till about the 21st of April, when the Queen will remove to Osborne for about three weeks, and afterwards return to Windsor for a short period. Her Majesty will then proceed to Balmoral.

THE PRINCE AND PRINCESS OF WALES.—On Friday morning the Prince rode on horseback. The Princess drove out and visited Westminster Abbey. In the afternoon the Prince and Princess went to the South Kensington Museum and visited the Mulready collection. In the evening the Prince, with Prince John of Glücksburg, went to the Royal Institution to hear a lecture by Professor Tyndall. On Saturday morning the Prince of Wales, accompanied by Prince John of Glücksburg, and their suite, embarked in a steamer at Pimlico, and witnessed the Oxford and Cambridge boat race. In the afternoon the Princess held a Drawing Room on behalf of Her Majesty, at St. James's Palace. The Prince afterwards went out riding. The Princess took a drive. In the evening their Royal Highnesses, with Prince John of Glücksburg, dined with the Duke of Cambridge at Gloucester House. On Sunday morning the Prince and Princess of Wales, and Prince John of Glücksburg, attended Divine service at the Chapel Royal, St. James. The Archbishop of Canterbury preached the sermon. In the afternoon the Prince and Princess, accompanied by Prince John of Glücksburg, drove to Richmond Park. On Monday morning the Prince rode on horseback, and visited the Duchess of Hamilton. In the afternoon the Prince and Princess, accompanied by Prince John of Glücksburg, took a carriage drive. In the evening their Royal Highnesses had a dinner party. On Tuesday morning the Prince rode on horseback. In the afternoon the Princess took a carriage drive. In the evening Prince John of Glücksburg took leave of their Royal Highnesses, and left Marlborough House for the Continent by the South-Eastern Railway. The Prince of Wales accompanied his Highness to the Railway station. On Wednesday morning the Prince rode out. The Princess of Wales took a carriage drive. In the afternoon their Royal Highnesses, accompanied by Prince Albert Victor, left Marlborough House, and proceeded by the Great Western Railway to Windsor Castle on a visit to the Queen.

DEPARTURE OF PRINCE JOHN OF GLÜCKSBURG.—Prince John, the youngest brother of the King of Denmark, who arrived in London on the 8th inst. to act as sponsor for the King of Denmark at the christening of Prince Albert Victor, left Marlborough House on Tuesday evening for the London Bridge Station, and travelled by the South Eastern mail train to Dover, where he embarked on Wednesday for Calais, on his way to Brussels.

PRINCE ALFRED is expected to take his departure from Holyrood on or about the 9th of April. On Friday his Royal Highness paid a visit to the Earl of Dunmore at Dunmore Park, Stirlingshire, where a large company was invited to meet him, and a grand ball was given in the evening. The Prince returned to Holyrood on Monday. On Wednesday his Royal Highness visited the General Register Office. On Thursday the Prince left Edinburgh for Floors Castle to pay another visit to the Duke and Duchess of Roxburgh. During his residence in Holyrood his Royal Highness has received invitations from nearly all the leading nobility and gentry in the south of Scotland, and has been present at several balls in the Edinburgh Assembly Rooms. He has also visited nearly all the literary and scientific

societies of the Scottish metropolis, and shown great interest in its exhibitions of art.

The Cabinet.—A Cabinet Council was held on Saturday afternoon at the private residence of Earl Russell, in Chesham Place.

Illness of the Duke of Newcastle.—The Duke of Newcastle was taken suddenly ill on Saturday morning, but his Grace was rather better on Sunday, and is said to be in a fair way towards recovery.

Parliamentary Movements.—Colonel Stronge was elected for the county of Armagh on Wednesday without opposition, in the room of Mr. Close, retired.

Confirmation of the Bishop of Ely.—The ceremony of confirming the election of Dr. Harold Browne to the Bishopric of Ely took place on Saturday in the church of St. Mary-le-Bow, Cheapside. The consecration will take place in Westminster Abbey on Tuesday next.

The Late Judgment on Essays and Reviews.—The Archbishop of Canterbury has addressed a pastoral letter to the clergy of his diocese, setting forth at great length his views of the late decision of the Privy Council. His Grace states that he dissented from the judgment of his colleagues in the Council on the doctrine of inspiration, and that while he will not undertake to define inspiration, he accepts the testimony of the Church that the "Bible is God's Word written," and that therefore Dr. Williams must be wrong in saying that it is only the voice of devout reason in the congregation. As to his acquiescence in the judgment on the point of eternal punishment, he says it arose from no doubt in his own mind that the Church teaches the eternity both of reward and punishment, but that from the obscure terms in which Mr. Wilson had expressed his views he doubted whether they have the meaning which the prosecutors attached to them. Some doubts having arisen as to the legality of the Oxford declaration as impugning the Queen's supremacy, the Committee have submitted a case to the Attorney-General and Sir Hugh Cairns, who have given a joint opinion on this subject. They state that the judgment of the Queen is confined to a reversal of the decision of the Court below, and that the reasons given for that reversal are only the reasons of the members of the Privy Council, which neither law nor constitution has rendered exempt from criticism.

The Volunteer Review.—The arrangements for the Volunteer Review at Farley Heath, near Guildford, on Easter Monday, are now completed. Lieut.-General Sir J. L. Pennefather will command in chief, and Major-General Russell, C.B., and Major-General Rumley will each have charge of a division. There are to be eight brigades, under the following brigadiers:—Lord Colville, Lord Ranelagh, Lord Elcho, Earl Grosvenor, Lord Radstock, Lord Bury, Lieut.-Colonel Bigge, and Lieut.-Colonel Loyd Lindsay. One division of the artillery force will be commanded by Colonel Gambier, C.B., and the other by Colonel Buchanan. It is calculated that at least 15,000 men will take part in the proceedings, and that the evolutions of the troops will be supported by 24 pieces of artillery, and by two squadrons of cavalry. The Chilworth station of the South-Eastern is nearest to Farley Heath, being only about 10 minutes' walk from the spot where the review is to take place. Shalford Station, also on the South-Eastern line, is about a mile and a half from the Heath. The Guildford station, which can be reached by the South-Western line from Waterloo as well as by the South-Eastern, is about three miles from the Heath. The Volunteers leaving London by the South-Eastern will be conveyed from London Bridge station, and the general public will be conveyed from the new station at Charing Cross, as well as from London Bridge

Foreign.

France.—The Paris correspondent of the *Times* states that he has "reason to know that the Emperor has been greatly touched by the manifestation of public feeling in England, both in the press and the Parliament, on the Mazzini affair. He has read with much interest the whole of the debates, as well as the articles in the leading journals, on the painful question lately before the House, and feels gratified that his sentiments and his conduct towards England have been so cordially acknowledged." A rumour was current on Saturday at the Bourse that another plot had been discovered against the Emperor's life among the servants at the Tuileries, and that 50 of them had been arrested. Several foreign papers having given "all the particulars" of this absurd story, the *Moniteur* of Monday officially states that the rumour is entirely unfounded. The election of a deputy in the first circonscription of Paris has terminated in the return of M. Carnot, the Opposition candidate, who obtained 13,554 votes, while M. Pinard obtained 5979, and M. Laboulay 704. In the fifth circonscription M. Garnier Pagés, the Opposition candidate, was also elected, having obtained 13,185 votes, while M. Levi obtained 5381, M. Bac 350, and M. Tolain 380. A debate took place in the Senate last week of no ordinary interest both in and out of France. A petition had been presented praying the Legislature to prevent the publication of works calculated to affect the faith of Christians, such as M. Renan's "Vie de Jésus." This petition, which was an endeavour to establish a sort of Roman "Index" in France, was referred to a committee, and their report was the subject of debate on Friday and Saturday. The Church party, represented by Cardinal de Bonnechose, called for the interference of the Government to prevent the deplorable effects of cheap books of a frivolous, mischievous, or irreligious character; while M. Langlais, the Government Commissioner, though censuring the publications referred to, recommended that the Chamber should adopt the proposal of the Committee to pass to the order of the day. This course was finally adopted by a large majority. The *Moniteur* of Tuesday, again referring to the affair of Cardinal Bonald, says:—

"Upon the 11th of March Cardinal Bonald addressed a letter to the clergy of his diocese, stating that the *Moniteur* had been misled by false information, and that he had only learnt the pretended dissatisfaction of the Pope from that journal. We reply that the information in the *Moniteur* was official. Explanations were requested by the French Ambassador on the 23d of February, and were given the same day by Cardinal Antonelli. It was not, however, until the 9th of March that the latter conveyed the expression of His Holiness's censure of the indiscreet publication by Cardinal Bonald."

A great trial has been pending for some days at Aix, in Provence, in which M. Armand-Maurice Roux was charged with having attempted to murder his manservant. The Procureur-Général, during the trial, reduced the charge to blows given and wounds inflicted with premeditation, but without intent to kill. M. Lachaud defended the prisoner with great effect. The jury yesterday acquitted M. Armand, and the plaintiff has in consequence commenced a civil action against him for 50,000fr. damages.

Spain.—The Madrid journals of Tuesday state that it is calculated that the Ministry will obtain a majority of 100 votes for their Bill to abolish the reforms of the Constitution of 1845, introduced in 1857. The adoption of the Ministerial proposition would involve the abolition of an hereditary Senate. In the Senate on Wednesday the Bill abolishing constitutional reform was passed by a vote of 90 to 7. The Spanish journals deny the rumour that the question of a recognition of the kingdom of Italy by Spain had been discussed at a Cabinet Council. The *Epoca* states that some foreign capitalists had an audience with the Minister of Finance on Tuesday for the purpose of negotiating an advance to the Spanish Treasury.

Portugal.—The Government has forwarded a notification to the Austrian Minister that Austrian vessels of war with Danish prizes must sail immediately, their remaining in port being illegal. The Ministers experience great opposition respecting the sale of the Vendas Novas Railway to an English company.

Sweden.—Advices from Stockholm to the 15th state that fresh disturbances have taken place in that city. The police-office was attacked, and the windows in the residence of the chief of the police were destroyed. The military were called out to quell the riot, and 11 persons were arrested. The *Dagblad* insists upon more energetic measures being taken by the Government in favour of Denmark. The French Ambassador has left for Christiania.

Denmark.—The Rigsdag was closed on Tuesday. The principal passages of the Speech from the Throne were the following:—

"We are still alone, and do not know how long Europe will look with indifference upon the acts of violence perpetrated against us. We are ready to do everything that may serve to obtain peace; but the enemy must know that the period is still distant when we shall be compelled to submit to a humiliating peace. This is the King's farewell to you."

His Majesty, accompanied by the Minister of War, left Copenhagen for the army on the same day. On his arrival at Sönderborg in the evening his Majesty immediately visited the troops stationed there, and returned at night to Hörup. The *Dagblad* violently attacks the Ministry on account of its accession to the proposed Conference. The *Berlingske Tidende* in a semi-official article, says:—

"The Government has not acceded to an armistice, since the surrender of Düppel could not be entertained; and to make the present position of affairs the basis for a suspension of hostilities is equally impossible."

The Danish Government has directed the release of the Hanoverian ships under embargo in Danish ports.

The Danish Duchies.—On Saturday a reconnaissance was made against Fredericia. The Crown Prince, Prince Albrecht, and the Prince of Hohenzollern were on the field. The Danish outposts of the intrenched encampment were driven into the fortress. During the reconnaissance sites were selected for the erection of batteries. A sharp fire was kept up by the Danes from the fortress and gunboats. Captains Studnitz and Bülow were wounded, the latter only slightly. The other casualties were two killed and 10 wounded. The Austrian loss was small. The batteries before Fredericia were finished and armed during the night between the 19th and 20th inst. The Danes made a sortie during the night, which was repulsed. On that occasion Lieutenant von Schaper, three Guards, and one soldier of the line were killed. The bombardment of the town was commenced at half-past 5 on Sunday morning from several directions, in the presence of the Crown Prince, Prince Albrecht, and the Prince of Hohenzollern. A cannonade was also kept up against the Danish encampment. The shots told well, and the town was set on fire in several places. Several of the Danish guns were dismounted, and their fire was moderate and ineffectual. The bombardment continued all Sunday night, and the town caught fire in several places. According to the statements of deserters, about 200 men were killed and wounded in the fortress on Sunday. The fire on both sides was almost entirely suspended on Monday. Part of the town was still on fire on that day. When summoned to surrender the commandant of the fortress refused. On Wednesday the Prussians had withdrawn out of range, abandoning their positions before the town. The bombardment of Düppel, which has been proceeding simultaneously with that of Fredericia, was continued on Friday, and there was heavy cannonading and fighting all along the lines. During the day the Roeder and Canstein Brigades and the 3d Jäger Battalion took Oster, near West Düppel. The loss of the Prussians is estimated at less than 100 men. They took 300 prisoners. The Danes displayed great bravery. Duppel village and Tonbjerg position were taken by the Prussians, after a heroic resistance by the Danes, who were outnumbered by four to one. The Prussian artillery has a range of three miles. A Danish Colonel was killed, and 70 wounded were brought in. During the afternoon the Prussians obtained a few hours' armistice for the burial of the dead. On Saturday the Prussians re-opened their cannonade from Broagerland without result. On Sunday morning they opened a cannonade against the southern front of the position. The Danes have not made any attempt to re-take the village of Düppel and the position of Tonbjerg. After the late naval engagement the Danish fleet sailed for Moen, and on the same day Danish men-of-war arrived off Eckenfiorde. A landing is feared at that place, and German troops have been despatched to prevent it. The British barque Renown, which has arrived at Swinemunde, states that between Moen and Rugen she was brought to by the Danish man-of-war Skiold. The Renown received despatches for the Danish Consul at Stettin referring to the announcement of the blockade. In the late naval engagement the Skiold lost 20 men killed, and her captain's cabin was shattered. The Prussian flotilla is expected at Kiel; pilots have already been engaged. Ten Prefects of Jutland have been sent off to Prussia. The Flensburg Chamber of Commerce has resolved upon continuing to make the settlements in Danish currency, notwithstanding the loss by the discount.

Hamburg.—The Hamburg Senate is arming and fitting at its own expense a steam flotilla, which is to be placed under the command of the Austrian Rear-Admiral Wüllersdorf.

Prussia.—The Ministers for Foreign Affairs, of Marine, and of Commerce issued a notification on Tuesday informing the public that the blockade of Swinemünde, announced by Denmark, has up to the present time not been carried out. The official journal also says that as by the proclamation of the 15th ult. the Danish Government promised that up to the 1st of April all vessels under embargo in Danish ports should be liberated, provided they belonged to States acting similarly towards Denmark, arrangements have been made to release Prussian vessels in Danish ports, and *vice versâ*.

Bavaria.—A telegram from Munich announces that the King of Bavaria has officially received the representative of the Duke of Augustenburg.

Austria.—The Conference proposed by England, without detailed bases or armistice, has been accepted by Austria and Prussia. The territorial integrity of the Danish Monarchy under the present dynasty will be maintained. The Conference is to meet at once. It is stated that the Emperor will in a few days proceed to Venice, where he will meet the Grand Duke Constantine of Russia. After reviewing the troops at Verona his Majesty will proceed to Miramar on a visit to the Archduke Maximilian and and the Archduchess Charlotte. The Archduke has definitively fixed to-morrow (Easter day) for the official reception of the Mexican deputation at Miramar. Their Imperial Highnesses will embark for Mexico on the 30th inst. They intend to pay a visit to the Pope on their way, and also to touch at Valencia, where they will have an interview with the King and Queen of Spain. A contract of marriage between the Archduke Joseph and the Princess Clotilde of Saxe-Coburg-Gotha, daughter of Duke Augustus of Saxe and Princess Clementine, the daughter of Louis Philippe, has been signed at the palace of the Prince of Lichtenstein, Grand Master to the Emperor of Austria.

Hungary.—In consequence of popular demonstrations in the theatres and the streets in favour of Kossuth and Garibaldi, about 40 persons of distinction, including M. Paul von Almasy, President of the Diet of Debrecsin in 1849, were arrested last week at Pesth, and it is said that the Austrian Government has decided to reinforce the principal garrisons of Hungary.

Venetia.—Troops continue to arrive from Austria, especially cavalry. A body of Viennese volunteers has arrived at Cadore. The armaments continue, particularly in Borgoforte and Polesina. A new military route is constructing between Vicenza and Bolzano.

Russia.—An Imperial decree was published at St. Petersburg yesterday, reforming the law affecting foreigners in Russia. The decree abolishes the compulsory sale of landed property belonging to Russian ladies on their marriage with foreigners. The consent of the Emperor to such marriages, and the payment of three years' taxation in advance by foreigners on becoming naturalised Russian subjects, are no longer necessary.

POLAND.—On the 19th inst. 500 more exiles were conveyed from Warsaw to Russia. The total number of those transported from the kingdom of Poland, exclusive of those from the Government of Augustowa, is stated to be 23,400 In the latter Government, which is under the administration of General Mouravieff, the number of exiles is comparatively greater. The Russian General Prince Czerkaski has replaced Count Ostrowski, the director of the Department of the Interior of Poland. The Commission to regulate the emancipation of the peasantry, under the presidency of the Secretary of State, M. Milutin, has arrived at Warsaw, from St. Petersburg, and commenced its sittings. On the 11th inst. two Poles, Kozelski and Wilkozki, the former a nobleman and the latter a peasant, were hanged at Segny, in the Government of Augustowa. Songaylo, a nobleman, and Pronaylis, a peasant, have been hanged at Szawle, and Leibmann, a Jew, at Suiwalki. An appeal to the European nations has been issued by the Polish National Government.

GREECE.—Accounts from Athens state that the Ministry had resigned in consequence of a popular demonstration in that city. A new Cabinet had been formed, composed as follows:—M. Zaimis, President of the Council and Minister for Foreign Affairs; M. Comsinduros, Minister of Finance; M. Diligiannis, Minister of Public Instruction; M. Delligiargis, Minister of Justice; M. Cristides, Minister of the Interior; M. Coroneos, Minister of War. The King was making preparations for a journey through the provinces.

TURKEY.—The Turkish Government is taking measures for the more stringent surveillance of the Polish refugees in Turkey, on the Russo-Turkish frontier, and has offered those Poles who have held meetings the alternative of either being sent into the interior or expelled the country.

THE DANUBIAN PRINCIPALITIES.—An insurrectionary movement has been organised by Polish emissaries in the Principalities, under Generals Klapka and Türr, which it is believed may break out at any moment.

EGYPT.—The *Levant Herald* announces that the delay of six months granted to M. de Lesseps to enable him to alter his arrangement with regard to procuring labour for carrying on the works of the Suez Canal having expired, the Porte will shortly call upon the Viceroy of Egypt to order the suspension of the works.

INDIA.—By the arrival of the Bombay mail we have news from India to Feb. 29. Sir John Lawrence has been suffering from indisposition, and has placed himself under the treatment of Dr. Tonnerre, a homœopathist. His Excellency gave his first public ball on the 15th of February, to which no natives of India were invited. This exclusion is said to have been caused by an insult lately offered by the leaders of the native community of Calcutta to the Governor of Bengal by sending improper women to the Agricultural Exhibition on a day set apart for the reception of native ladies by the most distinguished Englishwomen of the presidency. It is stated that Sir Hugh Rose has tendered his resignation, and Sir Robert Napier is to succeed him as Commander-in-Chief of the Indian Army. Sir Neville Chamberlain has been compelled by the state of his health to leave India for a time. General Sir G. Lawrence and Sir Barnes Peacock are also on their way home. The affairs of Cabul are in a very unsettled state, and Major James, Commissioner of Peshawur, has proceeded there on a friendly mission. The Ameer of Cabul has sent information to Government that the Judoon tribes are likely to renew hostilities. Mahomed Ali Khan, son of the Ameer, has returned from a successful expedition against the Mohmunds, whose chief, Saadut Khan, he has made a prisoner. The Akhoond of Swat has directed all his people to arm, as he fears an attack from us in the spring. He is said to be fortifying the Mullakund Pass. Prince Feroze Shah, Grandson of Tippoo Saib, is travelling about in Arabia, lecturing on religious subjects. Coal or lignite has been discovered in the Punjab. It has been tried on the Punjab railways and pronounced excellent fuel. The quantity is said to be inexhaustible. The Bhore Ghaut Railway was to be opened for regular passenger traffic on the 3d of March. The north-eastern branch of the Great Indian Peninsular Railway is blocked up, its single line and small rolling stock being unequal to the conveyance of the largely increased cotton traffic.

JAPAN.—Accounts from Shanghai of the 9th February state that the Japanese Government will send a new Embassy to Europe, by the next French mail steamer, for the purpose of determining the Powers to modify the treaties.

UNITED STATES.—In the absence of official information from General Sherman, most unfavourable reports continue to circulate. One account, *viâ* New Orleans, states that on the 16th ult. he was defeated by Bishop Polk near Meridian, with the loss of 15,000 men, and that, with the remnant of his army, he was retreating to Vicksburg, pursued and harassed by a large force of Confederate cavalry. Travellers who left Vicksburg on the 3d inst. assert that he had arrived in that city, but do not state whether with the whole or a part of his army. In order to allay the public disappointment at the failure of his movement, very exaggerated reports of the destruction of railways and stores which he committed in Mississippi are published in the Ministerial papers. General Johnson was pressing the Federal lines in Tennessee. The Federals have withdrawn from Tunnelhill to Ringold. General Longstreet's cavalry hold Bull's Gap, 56 miles from Knoxville. His army is at Greenville. The Federals occupy Morristown, 42 miles from Knoxville. The Confederate Generals Magruder and Taylor, with 20,000 men, are reported to be advancing into Eastern Louisiana, from Berwick's Bay. The Confederates, under General Pickett, are again threatening Newbern, Plymouth, and Washington, North Carolina. Four Confederate rams, plated with 10 inches of iron, and carrying four guns each, will co-operate with the land forces. The Federals are sending reinforcements to hold Jacksonville, Florida, but have abandoned further expeditions into the interior. Admiral Farragut opened fire upon Fort Powell, on Dauphin Island, commanding Grant's Pass Channel to Mobile, at daylight on the 23d ult. One Federal gunboat was sunk. The bombardment still continued on the 25th. Refugees from Mobile state that the fort is bomb-proof, but that even if it should be reduced, a narrow channel fortified upon both sides for nine miles will have to be traversed to reach the city. They also state that the Confederate ram Tennessee is plated with six inches of iron, and carries seven 100-pounder Parrotts. Confederate telegrams from Charleston of the 4th report that 1250 Federal shells had been fired at the city during the previous fortnight, but without doing any damage. Blockade running had been actively resumed, and an average of two or three steamers weekly had succeeded in reaching the city. Three steamers plying on Chesapeake Bay were captured by the Confederates on the 5th inst., and taken up the Rappahannock. One of the four Federal colonels killed in Kilpatrick's recent raid upon General Lee's communications was a son of Admiral Dahlgren. On his dead body were found an address and instructions to the soldiers under his command, telling them that when once they were in Richmond the city must be burnt, and Jefferson Davis and his Cabinet killed. The Richmond press is strongly incensed at these instructions, and urges that the severest treatment should be exercised towards the prisoners of Kilpatrick's command. The Northern press declares that the orders said to have been found upon Dahlgren were forgeries. There is a doubtful report from North Carolina that 23 North Carolinians captured from the Federal army, were hung by the Confederate General Pickett. General Meade has been summoned before the War Investigation Committee, in consequence of statements by Generals Sickles and Doubleday that he ordered a retreat of the Federal forces on the first day's battle at Gettysburg, and again on the second, which orders only failed to be executed through General Sickles engaging the enemy. General Meade is also accused of having expressed the opinion that the Confederates could not be conquered. Admiral Wilkes is also to be subjected to a court-martial for disobedience of orders and insubordination. General Grant has arrived at Washington to assume the general direction of the new campaign, and has been received by the President, who presented him with the commission of Lieutenant-General, stating that "with it he presented the nation's appreciation of his past services, and its dependence upon him to accomplish what remained to be done in the present struggle." General Grant made a short and modest reply, and subsequently left Washington on a visit of inspection to the Army of the Potomac. On the following day he suddenly took his departure for Nashville, which was considered to indicate that the military situation in the South-West is of a critical nature. General Halleck will not be removed from his present position, but will be retained at Washington by Mr. Lincoln for military consultation and advice. In Congress Senator Pomeroy has advocated the claims of Secretary Chase for nomination to the Presidency, stating his platform to be emancipation, confiscation, and the maintenance of the Monroe doctrine. Mr. Chase has since written a letter withdrawing his name as a candidate for the Presidency. Gen. Fremont's friends are more active in advocating his claims. The Bill authorising Mr. Chase to sell the surplus gold in the Treasury, which was rejected by the Committee of Ways and Means, has been revived and amended by Mr. Sherman, and adopted by the Senate by a vote of 30 against 8. It has yet to be returned to the Lower House, which has already passed the bill authorising Mr. Chase to anticipate the payment of interest on the public debt, but not to sell gold. The Republican ticket has been elected by a large majority in New Hampshire. An Amendment of the Constitution of the State of New York, permitting soldiers to vote in camp, has been carried throughout the State by a large Republican majority. The Confederate General Preston has left for Mexico, for the purpose of concluding a commercial treaty, based upon the mutual recognition of the Confederate and Mexican Governments. Mr. Justice Ritchie, of the Court of Appeals, of St. John's, New Brunswick, has released the Chesapeake prisoners, on the grounds that no proper requisition has been made by the Federal Government; that there is no treaty existing which would justify their being delivered up; that Mr. Magistrate Gilbert had no jurisdiction in the case, and that the warrant issued for their arrest was insufficient.

MEXICO.—The Paris papers announce that a Mexican loan for 200,000,000f. has been concluded with the firm of Messrs. Glyn, Mills, & Co., of London. The loan is to bear interest at 6 per cent., and will be issued at 63.

Parliament.

HOUSE OF COMMONS.

FRIDAY.—Mr. FERRAND called attention to the recent *Accidents from Reservoirs*, and especially to the dangerous state of the Doe Park and other reservoirs belonging to the Bradford Corporation Waterworks.—Sir G. GREY gave a brief explanation upon the subject. *Mr. Stansfeld and M. Mazzini.*—Lord ELCHO inquired whether, after the public scandal caused by the culpable indiscretion of Mr. Stansfeld with reference to the Mazzini affair, he had tendered the resignation of his office to her Majesty's Government, and whether they had declined to receive it.—Lord PALMERSTON replied that Mr. Stansfeld had, through a friend, placed his office at the disposal of the Government; and had informed him that on the slightest intimation a formal resignation would be tendered. The answer which he had sent was that he did not wish him to take that step; and if any responsibility attached to that decision he was perfectly willing to accept it.—Mr. W. E. FORSTER vindicated the character of M. Mazzini as a single-hearted and devoted patriot, and hinted that hon. gentlemen opposite were hostile to him because he had been one of the chief agents in the resurrection of Italy.—Sir J. WALSH invited Mr. Stansfeld to make a peace-offering of himself by resigning his appointment.—Mr. HALIBURTON thought that no man who boasted of M. Mazzini's acquaintance ought to accept office.—Mr. HENLEY regretted that Mr. Stansfeld had allowed his house to be used as a *poste-restante* by M. Mazzini, and still more that he had not at once fully and frankly owned his indiscretion in that respect.—Alderman ROSE regretted that the Government had not accepted Mr. Stansfeld's resignation.—Major KNOX wished to know if it was true that Mr. Stansfeld voted with the majority on Thursday night.—Mr. OSBORNE denounced as puerile and undignified the attack which had been made upon a clever man holding a minor office in the Government. That which everybody called a painful subject had been converted into a painful persecution. It was unworthy of the House of Commons to be night after night baiting a junior Lord of the Admiralty.—Mr. S. FITZGERALD said that Lord Palmerston's refusal to accept Mr. Stansfeld's resignation had compromised the Government and the country.—Mr. DENMAN said that the miserable scrap of paper found upon Greco was no proof against Mr. Stansfeld.—Sir J. FERGUSSON said that Mr. Stansfeld had allowed himself to be made the medium between the authors of the moral and immoral theories of the dagger. He had a feeling approaching to disgust when he saw so indiscreet a gentleman seated next to the First Minister of the Crown. The motion for the adjournment was then agreed to.—On the motion for going into a committee of supply, Mr. GREGORY called attention to the demolition of the *Fortifications of Corfu* and the neutralisation of the Ionian Islands, and moved an address for papers.—Captain JERVIS seconded the motion.—Mr. SMOLLETT protested against the proceedings of the Government in reference to the cession of the Islands.—Mr. LAYARD said the cession had been made in perfect good faith and loyalty on the part of her Majesty's Government. He entered at considerable length into the circumstances which had led to the cession, and justified the destruction of the fortifications as an act of policy necessary to the maintenance of our position in the Mediterranean. The King of Greece and his Ministers were perfectly aware from the first that the destruction of the fortresses was intended to be effected under the treaty for the surrender of the islands. He had no objection to give the papers.—Captain JERVIS asked whether any steps had been taken to protect the interests of British subjects who had held office in the islands, and whose appointments necessarily ceased with the cession.—Mr. C. FORTESCUE said that the pensions already earned would be punctually paid by the Greek Government to the English Consul at Corfu, and the compensations for loss of office to our Minister at Athens.—Mr. S. FITZGERALD said this was another instance in which the Government had committed a mistake in their foreign policy. They had meddled unnecessarily, and had done no good to those in whose behalf they had interfered.—The CHANCELLOR of the EXCHEQUER justified the policy of the Government, and contended that the cession of the Islands was a step calculated to promote the interests not only of the inhabitants of those islands but of the whole kingdom of Greece.—Lord J. MANNERS said that the question was not the policy of surrendering the protectorate, but the manner in which the cession was made, which had unsatisfied everybody.—Mr. CHILDERS read an extract from a speech of Lord Derby in June last which showed that he had suggested the neutralisation of the islands, and the demolition of the fortifications.—Mr. CAVE defended Sir H. Storks, and after some remarks by Mr. D. GRIFFITH, the motion was withdrawn and the House went into Committee *pro formâ*.—The *Report of the Committee of Supply* was brought up and agreed to.—The *Collection of Taxes Bill* passed through Committee with amendments introduced by the CHANCELLOR of the EXCHEQUER, granting to the present collectors fair considerations for their vested interests, compensations to collectors whose services would not be continued, and enabling persons resident in country districts to pay their taxes by means of money-orders instead of being required to visit the market town. Some further business was disposed of, and the House adjourned to the 4th of April.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,352,130	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	13,702,130
		Silver Bullion	—
	£28,352,130		£28,352,130

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,273,355
Rest	3,873,562		20,742,629
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	9,841,323	Other Securities	8,436,218
		Notes	745,000
Other Deposits	12,480,154	Gold and Silver Coin	—
Seven days and other bills	309,765		
	£41,257,804		£41,257,804

March 24, 1864. M. MARSHALL, Chief Cashier.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Yesterday, being Good Friday, the Stock Exchange was closed in every department. The closing prices on Thursday were:—Consols, 91½ for Money, and 91¾ ⅝ for Account; Reduced and New Three per Cents. 89⅝ to ¾; India Stock, 218 to 220; India Five per Cents., 104½ to ¾; Rupee Paper, 103 to 105, and 11[illegible] to 115; India Bonds, 8*s.* to 2*s.* dis.; Exchequer Bills, 8*s.* to 3*s.* dis.—FOREIGN: Brazilian, 1859, &c., 101; Ditto, 1863, 89¾ to 90; Egyptian, 100½ to 100 ex div.; Greek, 23¾ to ½; Mexican, 44¼ to 45¼; Portuguese, 1853, 48⅝; Ditto, 1863, &c., 48½ to ⅝; Russian, 1862, 90⅞ to 1; Spanish Passive, 35⅝; Ditto Certificates, 13½;

Turkish, 1854, 93½; Ditto, 1858, 70⅜ to ¼; Ditto Small, 74½ ex div.; Ditto, 1862, 71⅜ to ¼; Ditto Small, 71¼; Ditto, 1863, 68¼; Venezuela Six per Cents.. 60⅜ to ¾; Belgian Four and a Half per Cents., 99¾; Dutch Certificates, 102¼; Italian, 67¼.

Gazette of the Week.

FRIDAY: *March* 18.—BANKRUPTS.—J. ARROW, Church Road, Barking, Journeyman Carpenter—C. ARGENT, Loughborough Road, Brixton, Retailer of Beer—J. BUGGINS, Oxford, Decorator—A BOUTLE, Barnet, Hertfordshire—H. BERKS, Hanley, Staffordshire, Confectioner—C COOMBS, Aldersgate Street, City, Fancy Box Manufacturer—W. CRACKNELL, Kenninghall, Norfolk, Plumber—E. D. COTTON, Wolverhampton, Cooper—T. CLAYTON, Birmingham, Fruiterer—T. H. CLAPTON, Worcester, Linendraper—G. ELLIS, Llanfyllin, Montgomery, Carpenter and Joiner—D. EVANS, Rhydygwern, Glamorganshire, Farmer—J. FARRER, Skircoat, Yorkshire, Builder—J S. GROVES, Bristol, Plumber—W. GRINDALL, Egremont, Cumberland, Ironmonger—R. S. GODDARD, Albion Road Hackney, Flag Maker—S. GILES, Swansea, Ironmonger—T. HEATH, Birmingham, Linendraper—JOHN HOOK, Newnham, Gloucestershire, Cabinetmaker—CHARLES HOLMES, Churton Street, Pimlico, Plumber—J HORTON, Pickmere, Cheshire, Farmer—E. H. HOLFORD, Liverpool, Oil and Colour Merchant—A. N. HAYES, Torquay, Baker—J. HARE, Aslackby, Lincolnshire, Publican—J HOLCROFT, Hatton Garden, London, Boot Merchant—W HARDING, Penton Street Pentonville, Biscuit Baker—W. H. HILL, King's Lynn, Norfolk, late Licensed Victualler—G. W. HAINES, Blockhouse, Worcestershire, Licensed Victualler—A I. HANLEY, Staffordshire, Tailor—H. HAWKINS, Eastington, Gloucestershire, late Butcher—W HARRIS, Newbold, Worcester, Victualler—R IBBOTSON, sen., Penrith Cumberland, late Innkeeper—W. JOHNSON, Barton St. Michael, Gloucestershire, Grocer—W. AP PRICHARD JOHN, Bridgend, Glamorganshire, Tobacconist—R G. KENT, Old Compton Street, Soho Tool Dealer—P. KENWAY Park Place, Camden Town, Drysaltery Commission Agent—J KENYON, Sheffield, Saw Maker—T. R LOBB, Little Guildford Street, Russell Square, Painter—J. LEECH, Whitehaven, Cumberland, Builder and Contractor—WILLIAM GREY LEA, Huntley Street, Gower Street, Commission Agent—ARCHIBALD MACKINLEY, Bensham, Gateshead, Durham, Iron and Metal Merchant—R. MOXHAM, Preston, Lancashire, Licensed Victualler—J. MARTIN, Swanley, Kent, Baker—P. MACKENNAL, late of Lawrence Pountney Lane, Merchant—W. MARSHALL, Buxton Street, Newcastle upon-Tyne, Shoemaker—H. MANNS, Radstock, Somersetshire, Boot and Shoe Maker—J MILTON, Gravesend, Butcher—E NORRIS, Hutton, Lancashire, Farmer—S. OXLEY, Holmes, Yorkshire, Beerhouse Keeper—T POTTS Wilmslow, Cheshire, Brickmaker—E. PAINE Buckingham Terrace, Colville Road, Westbourne Grove, Notting Hill, Carpenter—F. J C. POPHAM, Bedford Street Hornsey Road, Solicitor's Clerk—E PEARSON, Hetton-le-Hole, Durham, Miner—J. PALMER, Bridgwater, Somersetshire, Corn Dealer—W. H. PENNY Bream, Gloucestershire Colliery Proprietor—A. PEARCE, Saint John in Bedwardine, Worcestershire, Publican—L ROBINSON, Bingley, Yorkshire, Farmer—A. ROBINSON, Salford, Lancashire, late Distiller—S. RELF, Brighton, late Licensed Victualler—HENRY RUST, Brentwood, Essex, Flour Factor—THOMAS RAMSDALE, Gainsborough, Lincolnshire, Cooper—THOMAS REYNOLDS, King's Lynn, Norfolk, Licensed Victualler—W. SPRIGG, Perry Barr, Staffordshire, late Retail Brewer—H. SOMER, Tawstock, Devonshire, Auctioneer—J. SOLOMON, Birmingham, Tailor—F. SCARTH, Caroline Street, Pimlico, Attorney—W. T. STEPHENS, Park Street, Grosvenor Square, Licensed Victualler—J. SMITH, Little Tower Street, City, Disinfecting Cleansing Powder Manufacturer—R SIMPSON, jun., Ampleforth, Yorkshire, Cattle Dealer—J. TAYLOR, Kingston upon Hull, Draper—R VINCE, Kersey, Suffolk, Blacksmith J. VILL, Worcester, Grocer—T WEST, Milton next Gravesend, Pilot—H R. WAITS, Trigon Road Clapham, Commission Agent—J. WILSON, Sheffield, Hair Seating and Augur Manufacturer—W. WIGHT, Birmingham, late Gunmaker

SCOTCH SEQUESTRATIONS.—R BELL, Ruthvenfield, Perth Calico Printer—P. HAMILTON, jun., Glasgow, Iron Manufacturer—E M'CALLUM, Campbelltown Grocer—A. M'LAREN, Glasgow, Spirit Dealer—J. SIBBALD, Glasgow, Plumber.

TUESDAY: *March* 22.—BANKRUPTS.—P. ADAMS, Handcroft Road, Croydon, Carpenter—R. BATTSON, Central Street St. Luke's Porter—J. D. BRAILEY, Barnstaple, Devonshire, late Shopkeeper—J. BLACKSHAW, Green Street Betonal Green Gardener—J. BELL, Seacombe, Cheshire, Cutter to a Tailor—E. BLYTON, jun. Thornton le-Moor, Lincolnshire, Journeyman Nurseryman—T. BURDEN, Brighton, late Dealer in China and Glass—C CRANE, Leicester, Dealer in Fish—G. J CALUTA, Manchester, Commission Agent—W. COSSAR, late of Bishop's Waltham, Hampshire—W. B CORNWELL, Leigh Street, Burton Crescent, St. Pancras, Butcher—A COOPER, Liverpool, Commission Agent—C. DAVIES, Milk Street, Cheapside, Hair Net Manufacturer—A. DANGER, Bridgwater, Somersetshire, late General Dealer—R. DAVIES, late of Clydach, Brecknockshire—W. DODDRIDGE, Bridgwater, Somersetshire, Master Mariner—T. EVANS, Pembrey, Carmarthenshire, Licensed Victualler—W. EVANS, late of Cheltenham, Auctioneer—E FINCH, Aldershot, Hampshire, Builder—D. FYFE, Keppel Row, Stoke Newington, late Woollen and Shawl Warehouseman—G. GANNON, Walton-on-the Hill, Lancashire, Builder—J. GAUNTLETT, Lymington, Hampshire, Bootmaker—F A GUTHMAN, Bush Lane, Cannon Street, Paper Merchant—J. GODWIN, Tutbury, Staffordshire, Tailor—W. GRUNDY, Bagthorpe Nottinghamshire, Labourer—C. GRUNDY Birchwood, Alfreton, Derbyshire, Labourer—J HORRIGAN, Vernon Mews, Notting Hill, Carman—W HUNT, Sturton by-Stow, Lincolnshire, Farmer—T HOLLINS and G TUNNICLIFFE, Stoke-upon-Trent, Staffordshire China Dealers—J. HEATHWELL, Sheffield, Druggist—J. HETHERINGTON, late of Dalston Terr, Dalston, Commission Agent—J HINE, Lorton, Cumberland, Miller—J. B. HICKS, Guildford, Surrey, Baker—H. HARRIS late of Hackney Road, Tobacconist—R HASLAM, Little Bolton, Lancashire, Boot Shoe, and Clog Maker—J. JONES, Liverpool, Joiner—T. JENKINSON, Guisborough, Yorkshire Tailor—J. JENNINGS, late of Dale Side, near Hawnby, Yorkshire—L. JOSEPH, late of Hutchinson Avenue, Houndsditch, Tailor—A L. KENRICK, Wem, Shropshire Spinster—H. C. LAZARUS, Leadenhall St, Wine Merchant—E. LIPTROT, Wigan, Lancashire Widow—J. LOCKWOOD & R. LOCKWOOD, Berwood Place, Edgware Road, Surveyors—W. LORD, Bacup, Lancashire, Commission Agent—A LAWIS, Brighton, late Beer Retailer—J L. MUIR, Basinghall Street, Commission Agent—J MORTIMORE, Exeter, Brush Manufacturer—L. MENKE, Manchester, Merchant—H. P. M. MONTEIRO, late of Golden Square, Regent Street—M. MEDD, Hunmanby, Yorkshire, Cattle Dealer—J MARRIOTT, Lymington, Hampshire, Watchmaker—J. MATTHIAS, Swansea, Glamorganshire, Draper—W MOSELEY, Birmingham, Shoe Manufacturer—G E NOONE late of Chigwell—R. C NEWBERY, President Street West, Manufacturing Stationer—J T. NEWTH, Emma Place Commercial Road, Commission Agent—H PERKES, Brading, Isle of Wight, Licensed Victualler—T PARSONS, Holwell, Dorsetshire, Farmer's Assistant—J PHILLIPSON, Liverpool, Licensed Victualler—W R. PHILP, Sydney Street Brompton, Attorney at-Law—G. PULFORD, jun. late of Yarmouth—T RAWLINGS, Garibaldi Terrace, Bermondsey, Cheesemonger—JOHN REA (sued as JAMES REAS), Wood Street, St Luke's, late Baker—J. RENTON, Scarcroft, Yorkshire, Farm Servant—J. ROOKE late of Cirencester, Watchmaker—D REES late of Raven Hill, Glamorganshire, Shoemaker—R SMITH, St. Helen's, Lancashire, Flour Dealer—M. SCOTT, Bradford, Stuff Manufacturer—M. J. SCOTT, Ipswich, Haircutter—I. M SMITH, Redcar, Yorkshire, Innkeeper—M. A. STEVENS, Windsor, Berkshire, Dressmaker—G SHEPHERD, Church Street, Chelsea, Greengrocer—E M WATSON, Tottenham Court Road, Mantle and Stay Maker—N. WILLCOX, Madeley, Shropshire—T. WEBB, Great Amwell, Hertfordshire, Hay Dealer—J WALTERS, Abergavenny, Seedsman—T. WHITSED, Crowland, Lincolnshire—M H. WRIGHT, Halifax, Yorkshire, Grocer—W. WARD, Southampton, Salesman in a Furniture Warehouse—J. WILKINSON, late of Everton, near Liverpool, Builder.

SCOTCH SEQUESTRATIONS—J. ANDERSON, late of Forfar, Auctioneer—A. and J. ANDERSON, Aberdeen, Painters—G. M'LERIE, Glasgow, Cook—J. RENNIE and A. GREIG, Edinburgh, Grocers—W. SHAW, Glasgow, Cooper.

Metropolis and its Vicinity.

COURT OF ALDERMEN.—Mr. David Henry Stone, nephew of the late Alderman Farncomb and a member of the Haberdashers' Company, was on Tuesday elected Alderman of the ward of Bassishaw, in the room of Alderman Conder, who had resigned his gown on account of ill-health and advanced age.

COURT OF COMMON COUNCIL.—At the last meeting of the Common Council it was resolved unanimously to subscribe 500*l.* in aid of the fund for the relief of the sufferers by the inundation at Sheffield. It was also referred to a committee to consider whether any and what improvements can be made in Farringdon Market, so as to bring that now desolate area into some purpose of public utility.

BLACKFRIARS BRIDGE.—The construction of the temporary wooden bridge across the Thames at Blackfriars has now so far advanced towards completion that it is confidently expected to be opened in the first week of April.

DANISH RELIEF FUND.—A Committee was recently formed in the metropolis, at the suggestion of the Marquis of Clanricarde, for the purpose of raising a fund for the relief of the Danish soldiers and sailors who may be wounded in the present war, and of the widows and orphans of those who may have fallen in battle. A Ladies' Committee was also formed to assist the Committee in this object, in connection with a central Relief Committee at Copenhagen; and a separate Committee was established at the Mansion House under the presidency of the Lord Mayor. It is now announced that the sum of 4600*l.* has been transmitted to Denmark by the Ladies' Committee, and the sum of 1500*l.* by the Mansion House Committee. A Committee has also been formed at Liverpool, by which a first remittance of 600*l.* has been transmitted to Copenhagen.

EXPERIMENTS AT SHOEBURYNESS.—Another series of experiments took place on the 10th and another on the 17th inst. at Shoeburyness. In the experiments on the 10th Sir William Armstrong's 600-pounder was fired with a solid steel spherical shot and a charge of 90 lb. of powder against an iron plate 11 inches thick, at a distance of 200 yards. It only succeeded in penetrating the plate to a depth of about 4½ inches. The result disappointed the expectations of Sir W. Armstrong and his friends, who anticipated that it would have gone through not only the 11-inch plate but the wood and iron backing behind, and they attributed the failure to the mode in which the target was set up. In the experiments on the 17th it was resolved to test the plan which is said to have had so much success in America of employing compressed cotton or wool to resist shot. A quantity of wool was tightly rammed into an iron tube, 11 feet in length; and exposed to the fire both of the 68-pounder and of Sir William Armstrong's 110-pounder. The shot from both guns passed through this mass from end to end of the 11 feet, and then through the bottom of the iron tube and 12 feet of the earth embankment. Shells, plugged with Colonel Boxer's new wood fusees, were then fired, both against an earthern embankment and a solid mass of timber, when it was found that the shells loaded with this fuse burst satisfactorily in each case, blowing up the earthwork and destroying the wood target in a manner which would have scattered death and destruction through any ship which had been exposed to them.

VISIT OF GARIBALDI TO ENGLAND.—It is announced that General Garibaldi is on his way to England, and is expected to arrive at Southampton on Monday, April 3. He will stay at Brook, Isle of Wight, for 10 or 12 days, and is expected to come to London on Saturday, April 16. The working classes of the metropolis intend to give him a public reception, consisting of a public entry into London, and a banquet, probably at the Crystal Palace. The report that the 3rd London Rifle Volunteers had through their commandant, Major Richards, offered to act as a guard of honour on the occasion, is contradicted.

MURDER IN MARYLEBONE.—On Friday the 11th a man was found by the police lying wounded and insensible in Little Chesterfield Street, and was immediately removed to the Marylebone workhouse, where he died on the same evening. He was ascertained to be Mr. Joseph Duck, a scaffold builder, who some years ago had amassed a considerable fortune. He had not been attending to his business for the last four months, and for some time past had been drinking daily at various public-houses in the neighbourhood. On the day before his death a neighbour who met him, told him to put his chain and seals, which were hanging loose, into his pocket. Later in the day he was in a publichouse in Great Chesterfield Street, tipsy. He was standing in front of the bar, when three cabmen came in and began to banter him. He took out two sovereigns, and said he could buy up the whole lot of them. He was not seen after this till he was picked up by the police. His watch, money, and silk neckerchief were gone, and his watch fob was cut at the bottom. At the adjourned inquest Mr. Thompson, who performed the operation of trepanning previous to his death, stated his opinion that deceased had been struck severely from behind. On the following day a man named John Devine was taken before the magistrate at Marylebone police court, charged on suspicion of being the murderer. The evidence clearly proved that the prisoner was seen in company with the deceased at a public house shortly before the murder, and that the prisoner, who had previously complained that he was in such a state of destitution that he had no means of getting a bed that night, was suddenly found in possession of money and had been liberally treating his companions. The magistrate remanded him until Tuesday last, when it was proved by the prisoner's companions that he had employed them to dispose of a watch, chain, and seal, and also of a black neckerchief, all of which were identified as having belonged to the murdered man. The magistrate fully committed him for trial on the capital charge.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London, which rose to 1766 in the first week of the present month, and declined to 1664 in the subsequent week, further declined to 1508 in the week that ended Saturday, the 19th March. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1464. The present return is therefore 44 above the average. During the week the births of 1117 boys and 1060 girls, in all 2177 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 2070.

Provincial.

BIRMINGHAM.—The respite granted by Sir George Grey to the convict Hall, for whom such great exertions were made by all classes in Birmingham, has given great satisfaction in the town, as well as in Warwick and the neighbouring towns. Hall himself had given up all hope, and was so overcome by the sudden revulsion of feeling that he could scarcely gasp his acknowledgments.

CAMBRIDGE.—On Friday evening an old lady named Hunt died in this town from the effects of a murderous outrage perpetrated upon her on Sunday the 28th of February. The deceased and another aged lady, named Walker, both widows, lived together at Prospect Cottage, having some small income. On the Sunday evening a man, wearing a mask and armed with a bludgeon and a knife, entered the house, forced his way into Mrs. Hunt's room, pushing the servant who was waiting upon her on one side, and then attacked the defenceless lady with the knife, inflicting some serious wounds on her head and face, beside breaking her arm with the bludgeon. The servant girl screamed "Murder!" and made her escape from the house to give an alarm. Mrs. Walker, who was up stairs, hearing the cries, put her head out of the window and called for help, when the man ran up stairs and struck her several violent blows on the back of the head, leaving her almost insensible. He then made off, but threw away the mask, which he left behind, with his hat, cloak, and knife, in the house. The bludgeon was found outside. On the following Tuesday William Morley Wallis, a young plumber, was arrested by the police. He had been seen in the neighbourhood, and some of the articles left behind were traced to his possession. He had been on friendly terms with Mrs. Hunt, and only a few days before the outrage had been reading to her an account of the highway robbery and murder at Hitchen. He was examined by the mayor and deputy-mayor in the presence of the two ladies, but Mrs. Hunt, who was in bed, said she was unable to identify him, and seemed reluctant to avow any previous knowledge of the prisoner for some private reason. Mrs. Walker also stated that she could not speak to his identity. The depositions of both ladies, however, were taken. The prisoner, who displayed throughout the greatest coolness, denied the charge, but was recognised by a boy as having been seen loitering about the place previous to the assault. The magistrates committed him for trial at the assizes.

CHESTERFIELD.—On Tuesday the 15th the pump at the Spitlewell Ironstone Pits, the property of Mr. Barrow, broke. There were about 71 men and boys employed in the pit; and the water rose so rapidly, that it was feared that the greater part of them were drowned. The excitement at the pit's mouth was very great until the following Thursday, when the water in the mine was reduced to two feet below the arch, and on an exploring party wading through the water all the men were found and brought out alive, having taken refuge in the upper levels, which were free from gas or water.

MANCHESTER.—At the meeting of the Central Relief Committee on Monday, Mr. Commissioner Farnall reported that on the 12th inst. there was a decrease of 6739 in the number of persons receiving parochial relief in the 27 unions of the cotton districts, as compared with the number relieved for the week ending the 27th ult. The Hon. Secretary reported that 400*l.* 7*s.* 4*d.* had been received during the fortnight; and that the balance in the bank was 143,103*l.* 10*s.* 1*d.* Several gentlemen addressed the meeting on the gratifying diminution of the distress, and at the same time referred to the success which had attended the operations of the executive committee, and to the manner in which the people had been borne through a great national calamity without disturbance or loss of life, mainly by the judicious action of the committee. Grants were then made to various places, amounting to about 13,000*l.*

SHEFFIELD.—The work of clearing away the mud and filth left by the flood is being rapidly pushed forward, and the streets of the town are now beginning to assume much of their ordinary appearance, except that fence walls and fallen houses are not rebuilt. Disinfectants have been freely used, and with the best effect. The search for bodies continues, and two or three are found daily, but there are yet more than 30 missing. The subscriptions in aid of the sufferers by the recent catastrophe now exceed 20,000*l.*, including 200*l.* from the Queen, 200*l.* from the Prince of Wales, 50*l.* from the Princess of Wales, and 50*l.* from the Duke of Cambridge. The following letter, announcing her Majesty's contribution, has been addressed to Mr. Roebuck, and forwarded by him to the Mayor:—

"Windsor Castle, March 16.

"Sir,—I have had the honour to submit to her Majesty the Queen your letter received last night. Her Majesty had already directed me to make inquiry whether any subscription had been commenced for the relief of the sufferers by the fearful calamity which has occurred near Sheffield. The Queen has commanded me to inform you that it is her Majesty's intention to contribute 200*l.* towards the objects advocated in your letter. Her Majesty has commanded me to add the expression of her deep sympathy for the poor persons thus

suddenly overwhelmed with grief and exposed to suffering of every description in consequence of this unexpected and dire calamity. As I am not aware of the name of the treasurer, I shall be very much obliged to you if you will take the trouble to forward the enclosed check to the proper quarter.—I have, &c., "C. B. PHIPPS."

The inquest was opened on Wednesday in the presence of Mr. Rawlinson, the Government engineer; Mr. Beardmore, an engineer sent down by the Government to assist him; and M. Mille, engineer-in-chief of bridges and causeways to the French Government, who has been sent over to examine and inspect the dam. After examining the engineer of the works and the resident engineer at great length, the inquiry was adjourned to Thursday, when Mr. Rawlinson and Mr. Beardmore were examined. The jury, after hearing their evidence, returned a verdict of Accidental Death, with an expression of their opinion that there had not been that engineering skill and that attention to the construction of the works which their magnitude and importance demanded, and that there ought to be a frequent, regular, and sufficient Government inspection of all works of such a character.

Ireland.

SUSPENSION OF THE GALWAY CONTRACT.—Notice was issued on Friday from the General Post Office, that the mail service between Galway and America has been suspended until further notice.

THE FEDERAL ENLISTMENTS.—At the Cork Assizes last week the Attorney-General prosecuted the six men charged with violating the Foreign Enlistment Act, in having on the 4th November, at Queenstown, without licence from her Majesty, agreed to enlist and enter service as sailors on board the American ship of war Kearsage, contrary to the provisions of the Act. It appeared from the depositions that Captain Winslow of the Kearsage had stated in explanation that a party of men, "either by the connivance of the crew, or otherwise, were concealed on board the vessel when she left Queenstown, in the expectation of being enlisted in the naval service of the United States, and that he did not send them ashore at Brest, because he would then have exposed them to the temptation of taking service under the Confederate flag in the Florida, but determined to land them again in Ireland. On the other hand the first lieutenant of the Kearsage stated that several men came on board from Queenstown as applicants for enlistment, but, as the captain was absent, and he had no definite instructions in regard to such applications, he told them that if they were physically qualified to serve they might remain until the captain returned, and that when he did return they "were sent out of the ship." It appeared also that when the men were landed at Queenstown they were all wearing the uniform of the Federal navy. Mr. Justice Keogh, in charging the grand jury, said:—

"Here we have had these young men entering the service of the United States—a Power at peace with Great Britain—at Queenstown, in the grossest violation of all amicable relations which ought to exist between friendly Powers. The subjects of this realm were taken by officers of that navy. They well knew that they were violating the municipal laws of this country in taking the subjects of these realms on board that ship. He regretted exceedingly that, instead of trying these young men, who, he could well believe, were ignorant of the Act, he was not trying the guilty persons, who had induced them to violate the law."

The prisoners all pleaded "Guilty," and the Court accepted their own securities to appear for judgment when called on.

ILLEGAL DRILLING.—Ten young men, one of them a pensioner in the army who had served at the siege of Delhi and the relief of Lucknow, were indicted at the Cork Assizes for military drilling in violation of the Act of 1819. Mr. Justice Keogh, in his charge to the jury, said that he was perfectly convinced that the leaders of such movements acted only with lucre as their object, and always took care to get out of the way when any danger arose. While duping their unfortunate victims, they were handing in to the Executive informations against them. That had happened in Ireland 60 years ago, it also happened 15 years ago, and would happen again. There had not been a law officer ever intrusted with her Majesty's commission in that country who had not experienced what he stated. He also referred to another class of persons—"foolish, silly, vain, self-conceited persons, impotent in intellect and warped in reason, who pretend to direct the movements and the fortunes of a country"—who must be kept from running into further mischief by lessons from the bench and the jury-box. He would only say that as sure as to-morrow's sun rose, no matter how carefully their secrets were kept, no matter how close their doors were shut, their secret would be divulged, and by members of their own body. There was not a club or society which met in 1848, but within five minutes after it separated there were two or three reports of the proceedings forwarded to the Castle in Dublin. Let people take that lesson, and be cautious and tremble when they went into the room of an illegal society. The jury had merely to say whether the men in the dock had practised military exercises, movements, or evolutions. If they had done so, they should be convicted; and, if not, they were entitled to an acquittal. After an hour's deliberation the jury brought in a verdict of *Guilty* against all the prisoners, but strongly recommended them to mercy, on the ground that they were ignorant of the law. The announcement of the verdict outside caused loud shouting and yelling in the streets, and Mr. Justice Keogh was hissed and groaned at by a crowd of sympathisers on leaving the court. On the following day, in passing sentence, the Judge delivered the following important address:—

"It is manifest that in no other country of Europe could such a thing have been tolerated for a tenth portion of the time. In other countries, the very moment that any persons meet together for an illegal purpose, there is none of the long process of our laws—no swearing of informations, no summonses before magistrates, no sending of bills before grand juries, or trials at assizes or sessions. There the strong hand of power immediately seizes the parties, and deals with them on the most summary process known. Really it is only through the extraordinary liberality of our laws—one of the fines, as it were, that we pay for constitutional Government—that such things go on; and the very men who are complaining of the Government and institutions under which they live absolutely could not act as they do but that they live under these liberal institutions. The very men who complain thus, who abuse our laws, who misrepersent our laws, who seek to breed disaffection against our laws, know in their own hearts that the language they use, the words they write, could not be spoken or published in any other country in Europe, except under the very laws which they assail. I have no doubt in the world that there are men there in that dock who are the miserable dupes of other parties. Perhaps even now, while I am addressing you, there are in this court persons who by their writings and speeches have egged you into these proceedings, they well knowing that sooner or later you would come to be in the position in which you now stand; but they themselves very wisely, very cunningly, and very cowardly, in my opinion, keep themselves always out of difficulty. Supposing you imagined that a time might come when you might appear, not with green sticks or white sticks, but in arms—for drilling in military evolutions is a preparation for arms—do you know what an enterprise you would be entering upon? Suppose even that an army—I care not of what numbers or from what part of the world—were to land on these shores, do you think that you could enter into an encounter with an empire which stood alone against every nation in the world combined against her, and triumphed over them all? There was a time, and no remote time either, when the Government of these countries stood alone in arms against every nation in Europe—ay, and America besides. She triumphed over them all, and I don't entertain the shadow of a doubt that if the contingency again arose she would arise as triumphant from the contest as she did before. And do wretched men imagine that they could enter into an enterprise with the hope of overthrowing the Government of this country? I think the Crown would have acted with great pusillanimity if it had allowed you to walk out of that dock. A great deal too much forbearance has been shown in these transactions—forbearance calculated to lead you into the opinion that the law was afraid of you, That is as wild a delusion as ever entered into the brain of man. The law is all-powerful and will prevail. One of your number is a pensioner, discharged from the army, and receiving the pay of the Sovereign for services which have already been honoured by a medal. There are a number of pensioners through the country, and they must be taught a lesson not to train or encourage to sedition. All government would be at an end if the men who are receiving the pay of the Sovereign, raised in taxes from the people, and given into the hands of the Executive for distribution, were allowed to engage in movements which attack the institutions under which we live. And if pensioners and discharged soldiers, and persons employed in several capacities under the Commissioners of Education in the country, national schoolmasters, engage in the commission of offences of this nature, they must all be taught by an efficacious lesson that they will lose in substance as well as be punished in their persons for any violation of the law. The sentence of the Court is that you, Patrick Neale, be imprisoned for 15 calendar months, and as to the rest of the prisoners, whom I regard as having been led astray, I will impose upon them the lesser punishment of 12 months' imprisonment each."

THE WATERFORD MURDER.—At the Waterford assizes on the 16th, Thomas Walsh was tried for the murder of Thomas Connolly, on the 29th September last. The crime was marked by circumstances of peculiar atrocity. He and his daughter lived in the same house with deceased, who was the grandfather of his son-in-law. Differences arose between them, and during the absence of the grandson the crime was perpetrated. The scene was a lonely cottage, and during the temporary absence of his daughter on some errand, Walsh struck Connolly on the back of the head with a hatchet, fracturing the skull and causing instant death. When the daughter returned she saw the old man lying dead. Her father then compelled her by threats of murder to assist him in carrying the corpse into a turf-house, where he shut himself in and cut up the body in fragments. She heard the chopping as she stood outside in the yard. Walsh then took the fragments in a sack and hid them in a bog, the remains forming three loads. He told the daughter where he had thrown them. This story, when reported to the police, seemed too horrible to be credited. But the remains were found, the woman's evidence was fully corroborated, and the jury at once found the prisoner guilty. Baron Deasy passed sentence of death, and ordered the convict to be executed on the 14th April.

THE LISBURN BRIBERY CASE.—This celebrated case came on for trial at the assizes for Belfast on Friday. It will be remembered that Mr. John D. Barbour, who was returned as M.P. for Lisburn in February, 1863, was unseated by a decision of a Committee of the House of Commons, and a prosecution directed against him and his brother Robert, for bribery and treating. Mr. Robert Barbour was indicted on Friday for these offences, and after a lengthened hearing the jury returned a verdict of Not Guilty, which was received in court with great applause.

QUEEN'S COLLEGE, CORK.—On Wednesday night another fire broke out in the western wing of Queen's College—the same building previously burned. It is stated that the fire originated from embers left by workmen; but great excitement and doubt exist as to the cause. The fire was got under before any great damage was done. In consequence of certain charges brought by Dr. Bullen against Sir Robert Kane in connection with the previous fire at the College, and of the counter charges brought by Sir R. Kane against Dr. Bullen, the Lord Lieutenant has ordered the visitors of the College to hold an inquiry into the matters at issue.

THE IRISH CENT GARDES.—The King of Denmark has politely declined the services of the Irish "Cent Gardes," but has instructed the Grand Marshal of the Court to express to Mr. O'Leary the thanks of his Majesty for his "chivalrous offer."

THE CONSTABULARY AND THE PRIESTS.—The Lord-Lieutenant has just given his decision in a matter which has been looked upon as of a very serious character in Ireland. It appears that a police-constable was lying at the point of death in the constabulary barracks at Dundrum. Although previously a Protestant, he expressed a wish to receive the ministrations of a Roman Catholic priest, and one was sent for. The sub-inspector, Mr. Boyes, refused the priest admission at first; but, having thought better of the matter, allowed him to visit the dying man on the following day. Under all the circumstances, the Lord-Lieutenant has decided that the reprimanding of the sub-inspector, and his removal to another station, would meet the justice of the case.

THE O'CONNELL MONUMENT.—The O'Connell National Monument Committee have published an appeal to the people of Ireland, stating that after two years of begging through the columns of the press, at chapel doors, and in every other way they could imagine, the funds at their disposal up to the present time are miserably insufficient.

Scotland.

THE PAMPERO SEIZURE CASE.—On Friday the judges of the First Division of the Court of Session repelled the defenders' objections to the information, and refused a motion for leave to appeal at the present stage. The Lord Advocate withdrew the third count and 23 others on the same model, and also the 98th count. The 5th of May is named for the trial.

Sporting.

THE UNIVERSITY BOAT RACE.—The Oxford and Cambridge boat race took place on Saturday, and was won easily by the Oxford crew by about 20 boats' length. This is the 21st contest which has taken place between the two Universities. The former 20 were equally divided between them, so that the present race was regarded as their deciding contest, and the numbers who flocked to the banks of the river or crowded the Thames in boats and steamers were greater than was ever before known. Conspicuous among the latter was the Prince of Wales and his suite, who were on board the George Peabody, chartered by the Thames Subscription Club. His Royal Highness was warmly welcomed by the assembled multitude.

Obituary.

THE EARL OF ABERDEEN died at his seat, Haddo House, Aberdeenshire, on the 22d inst. in his 48th year. For a long time before the death of his father—the Prime Minister at the outbreak of the Crimean war—he had been a confirmed invalid, and was obliged to resort to a more genial climate every autumn for the benefit of his health. His lordship, George John James Hamilton Gordon, was born in 1816. He married, in 1840, the second daughter of Mr. George Baillie, of Jerviswoode, and sister of the Earl of Haddington, the Countess of Ashburnham, and the late Marchioness of Breadalbane. By that lady, who survives him, his lordship leaves three sons and three daughters, his eldest son, Gordon, Lord Haddo, born in 1841, and now on a visit to his uncle, the Governor of New Brunswick, succeeding to the family honours. Lady Mary, the eldest and only married daughter, is wife of the Master of Polwarth. The deceased peer was a Liberal Conservative in politics, and for seven years represented the county of Aberdeen in the House of Commons.

LORD ASHBURTON died suddenly on the 23d inst., in his 65th year, at the Grange, Alresford. He had almost entirely recovered from the dangerous pulmonary attacks under which he had recently suffered, but expired suddenly from heart disease, to which he had been subject from his youth. His Lordship, William Bingham Baring, was the son of the first baron, and was born in 1799. He married first, in 1823, the eldest daughter of the Earl of Sandwich, and secondly, in 1858, the youngest daughter of the Right Hon. J. A. Stewart Mackenzie. He formerly represented Thetford, Callington, Winchester, and North Staffordshire in Parliament; was Secretary to the Board of Control from 1841 to 1845; and Paymaster-General from 1845 to 1846. As he has left no male issue by either marriage, he is succeeded in the title by his brother, the Hon. Francis Baring, born in 1800, and married in 1833 to the daughter of the late Duc de Bassano.

Law.

HOUSE OF LORDS.—*Attorney-General* v. *Sillem and Others.—The Alexandra Case.*—This case came before their lordships before the recess on appeal from the Court of Exchequer Chamber for the purpose of their considering whether the question raised as to the proper construction to be placed upon the Foreign Enlistment Act is to be determined, or whether all the expense incurred and the labour expended on the matter are to be thrown away in consequence of a technical difficulty. The technical point is however one of considerable importance, being whether the Judges of the Court of Exchequer have power under the 26th section of the Queen's Remembrancer's Act to make such rules as would give the advisers of the Crown in this instance a right of appeal which they did not possess at the time the verdict of the jury at the trial was delivered in favour of the defendants. In consequence of the Lord Chief Baron and the Attorney-General being unable to agree as to the effect of the Chief Baron's direction to the jury at the trial, it was found impracticable to present a bill of exceptions, and the alternative of moving for a new trial on the ground of misdirection was adopted. This rule the Court of Exchequer granted, but discharged upon argument. The Attorney-General had previously applied to the Court of Exchequer to exercise a power it was assumed the Barons possessed under the 26th section of the Act referred to to make rules giving him a power of appeal to the Court of Exchequer Chamber. In accordance with that application the Court of Exchequer drew up a series of rules on the day before

the rule for a new trial was moved for. Under the power of appeal given by these rules the Attorney-General brought the case before the Court of Exchequer Chamber, which Court, however, by a majority of 4 to 3, rejected the appeal, on the ground that the Barons had not power to make the rules. This appeal was then brought to reverse the judgment of the Court of Exchequer Chamber. The Attorney-General and the Solicitor-General addressed their lordships on behalf of the Crown on Friday; and on Monday Sir Hugh Cairns commenced his address for the respondents. He contended that the new rule by which the appeal was rendered possible had been made for this special purpose—a proceeding unprecedented in the legal annals; that the rules were not in accordance with the Act by the authority of which they were said to be framed, and that on these grounds the appeal ought not to be entertained. Mr. Mellish followed on the same side. On Tuesday the Attorney-General replied on the whole case, and contended that the Legislature had left a power to the Barons of the Exchequer to regulate the proceedings in error analogous to that now claimed for them respecting appeals, showing the confidence the Legislature had in the discretion of those Judges. He showed that the proceeding to error was well known to be matters of procedure in the Court below, and that the case never left the jurisdiction of the Court in which the cause originated, even when taken into a higher Court upon appeal. With regard to the question as to the retrospective action of the rules, he contended that the new rules would justly apply to all proceedings in any cause subsequent to the passing of such rules. Now, the rules did not apply to the verdict, but they did most undoubtedly apply to the motion for a new trial, which was made after the rules were issued. At the conclusion of the arguments, the Lord Chancellor said the House would take time to consider their judgment. His lordship subsequently announced that judgment will be delivered on an early day after the Easter recess.

OXFORD CIRCUIT: HEREFORD.—*The Hennor Murder.*—*Thomas Watkins* was convicted on Wednesday of the wilful murder of Mary Ann Watkins, his wife, at Hennor, near Leominster, on the 18th of January, under circumstances which were fully noticed at the time. Baron Pigott passed sentence of *Death* in the usual manner, holding out no hope of mercy.

NORTHERN CIRCUIT: LIVERPOOL.—*The St. Helen's Murder.*—*James Clitheroe*, a married man, employed in the St. Helen's Brewery, was convicted on Tuesday of the wilful murder of Mary Woods, a cripple, who kept a small school in the town, where the prisoner had carried on an illicit intimacy with her. It will be remembered that the young woman was found dead in her bed with her throat cut, and the prisoner lying by her side with his throat cut also in a shocking manner. Mr. Justice Willes passed sentence of *Death* in the usual manner.

BIRTHS.—On the 9th inst, at 4, Belgrave Square, the Lady BOSTON, of a daughter—16th inst, at 25, Chapel Street, Park Lane, Lady HILL, of a daughter, stillborn—9th inst, at 5, Leinster Street, Dublin, Lady MOLYNEUX, of a daughter—9th inst, at Croston Hall, Lancashire, the Lady ADELAIDE DE TRAFFORD, of a daughter—14th inst, at 38, Upper Brook Street, the Lady SELINA BIDWELL, of a daughter—15th inst, at East Barsham, Norfolk, the Hon. Mrs. DELAVAL ASTLEY, of a daughter—20th inst, at Tredegar Park, Monmouthshire, the Hon. Mrs. FREDERIC MORGAN, prematurely, of a son, who survived its birth but a few hours—16th inst, at Wollaton Rectory, near Nottingham, the Hon. Mrs. CHARLES WILLOUGHBY, of a daughter—20th inst, at 33, Leinster Gardens, Hyde Park, Lady SCOTT, wife of Sir Sibbald David Scott, Bart., of a daughter—16th inst, at Darcy Lever Hall, near Bolton, the wife of Captain W. GRAY, M.P., of a son.

MARRIAGES.—10th inst, at St. John's Church, Kensington, Lieut.-Colonel W. T. RICH, 71st Highland Light Infantry, eldest son of the late Sir George Rich, to ADELAIDE, daughter of General the Hon. Sir CHARLES GORE, G.C.B., of Kensington Park Gardens—19th inst, at Trinity Church, Brompton, RICHARD RYDER, Esq., of the Inner Temple, to LIBYLLA SOPHIA, daughter of the late Right Hon. Sir Robert Grant—8th inst, at St. George's, Hanover Square, REGINALD DYKES MARSHALL, Esq., of Cookridge Hall, Leeds, to MARY JANE, eldest daughter of Rear-Admiral the Hon. K. STEWART, C.B.—10th inst, at St. Marylebone Church, FREDERICK WILLIAM, second son of H. R. CROZIER, Esq., of 25, Upper Gloucester Place, Dorset Square, to ELEANOR ROBERTA, second daughter of Major-General CHARLES E. GOLD—14th inst, at St. Nicholas Church, Brighton, CARTERET HOUSTON KEMPSON, Esq., formerly Royal Fusiliers, eldest son of the late Carteret John Kempson, Esq., of 16, Rutland Gate, Hyde Park, to MARY HAY, second daughter of the late ROBERT FRANCIS WALKER, Esq., R.N.

DEATHS.—On the 17th inst, at Windsor, of congestion of the lungs, arising from measles, CHARLOTTE AUGUSTA, widow of the late HERBERT COMENEALE, Esq., of Delbury Hall, Shropshire, and daughter of the late Lord Charles Somerset, aged 64—10th inst, at Park Lodge, Greenwich, ANNA MARIA, eldest daughter of the late Right Hon. GEORGE TIERNEY—13th inst, at 18, Cadogan Place, WM. THOMAS GREY, eldest son of the late Hon. Colonel William Grey, aged 56—14th inst, at Southampton, F. J. S. SAVAGE, Esq., youngest son of the late Major-General Sir John B. Savage, K.C.B., K.C.H., aged 64—18th inst, at Crutherland, ROBERT HARINGTON, fourth son of the late Sir John Edward Harington, Bart.—9th inst, SIDNEY GURNEY, Esq., Clerk of Assize of the Western Circuit, youngest son of the late Sir John Gurney, one of the Barons of the Court of Exchequer, aged 56—5th inst, suddenly, at Bodelwyddan, the seat of her uncle, Sir Hugh Williams, CAROLINE, the wife of Major POWLETT LANE, of Badgemore, Henley-on-Thames—9th inst, at Newton, near Middlewich, MARY, wife of the Ven. T. WOOD, Archdeacon of Chester, and third daughter of the late John Nugent, Esq., Clay Hill, Epsom—8th inst, at 11, Dorset Place, Dorset Square, SOPHIA F. CHICHELEY PLOWDEN, eldest daughter of the late Richard Chicheley Plowden, of Devonshire Place, and many years a director of the East India Company—16th inst, at Brighton, ROBERT SMITH SURTEES, Esq., of Hamsterly Hall, in the county of Durham, aged 60—21st inst, at Bruce Grove, Tottenham, LUKE HOWARD, F.R.S., of Ackworth Villa, Yorkshire, aged 91—15th inst, at Tunbridge Wells, Colonel JOHN JAMES UNDERWOOD, late of the Corps of Madras Engineers, aged 67—12th inst, at Hastings, FRANCES SUSAN, daughter of Lieut.-Colonel REEVE, of Bulby House, Lincolnshire, aged 5—3d inst, at St. Leonard's on-Sea, Lieut.-Col. JOHN CRAMER ROBERTS—9th inst, at Cambridge Park, Guernsey, Captain THOS. E. TUCKER, of Cleddy Lodge, Pembrokeshire, late 23d Royal Welsh Fusiliers, and aide-de-camp to the late Sir Thomas Picton, aged 75—6th inst, at Plymouth, Captain CHARLES B. STOCKDALE, R.N.—9th inst, at 7, Donegal Terrace, Stoke, Devon, Captain JAMES NEVILLE, R.N., aged 85—15th inst, at Fivehead Cottage, near Langport, Somerset, Commander JAMES TILLEY, R.N., aged 83—18th inst, at 38, Gibson Square, Islington, G. KING, Esq., M.D., Inspector-General of Hospitals and Fleets, R.N., aged 73—9th inst, in Dublin, Dr. BRADY, Professor of Medical Jurisprudence in Trinity College, elder brother of Sir Francis Brady, Chief Justice of Newfoundland—20th inst, at his residence, 51, Stockwell Park Road, North Brixton, JOSIAH CONDER, Esq., aged 41—19th Jan, at St. Kilda, Victoria, Australia, JOHN M'LACHLAN, Esq., fourth son of the late Captain Donald M'Lachlan, 75th Regiment, and formerly manager of the Bank of Victoria, Geelong, aged 40—8th inst, the Rev. GEORGE MALLORY, M.A., eldest son of the Rev. George Mallory, rector of Mobberley, Cheshire, aged 31—10th inst, the Rev. CHARLES STOPFORD, rector of Barton Seagrave, Northamptonshire, aged 59.—17th inst, at the Glebe, Holywood, County Down, the Rev. HARRY EDWARD CRUTWELL, M.A., aged 47—20th inst, at Halesworth, Suffolk, the Rev. LOMBE ATTHILL, late perpetual curate of Rumburgh and St. Michael's—22d inst, at Clifton Hampden, Oxon, the Rev. JOSEPH GIBBS, aged 63—17th inst, the Rev. HENRY DAVIES, of 16, Regency Square, Brighton, aged 76—12th inst, at The Lodge, Beechwood, Tunbridge Wells, JOHN DRUMMOND, the much respected Gardener of James Scott Smith, Esq., aged 55.

Markets.

COVENT GARDEN, March 26.

Early Vegetables and Fruit continue to be well supplied. New English Grapes may now be obtained, and Apples, though scarce, may still be had; there are likewise a few dessert Pears. Oranges are getting scarce: the best are realising from 6s. to 10s. per 100. Continental arrivals continue heavy; among them are Lettuces, Endive, Carrots, and Radishes. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Oranges, per 100, 4s to 10s
Grapes, new, per lb., 20s to 30s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Kent Cobs, 140s per 100 lbs.
Pears, per doz., 6s to 12s	Almonds, do., 18s
Strawberries, p. oz., 2s 6d to 4s	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 10s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Cucumbers, each, 2s to 5s
Cauliflowers, each, 4d to 8d	Beet, per doz., 1s 6d
Asparagus, p. bundle, 8s to 14s	Shallots, per lb., 10d
French Beans, p. 100, 2s to 3s	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s to 3s	Garlic, per lb., 8d
Rhubarb, p. bundle, 9d to 1s 6d	Lettuces, each, 1d to 4d
Potatos, York Regents, p. ton, 60s to 80s	Endive, per score, 1s to 2s
,, Shaws, do., 50s to 60s	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 4d to 6d	Mushrooms, p. pott., 1s to 1s 9d
Carrots, do., 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, March 24.

Prime Meadow Hay	75s	to 80s	Clover, old	90s	to 110s
Superior do. ..	84	90	Do. second cut ..	80	105
Inferior do. ..	50	60	New Clover ..	—	—
New do.	—	—	Straw	25	30
Rowen	—	—			

HARVEY & EASTON.

CUMBERLAND MARKET, THURSDAY, March 24.

Sup. Meadow Hay ..	90s	to 96s	Inferior Clover ..	80s	to 92s
Inferior do.	70	80	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover ..	105	112			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, March 24.

Fine Meadow Hay ..	80s	to 86s	Prime 1st cut Clover	108s	to 112s
Inferior do.	75	80	Inferior do. do. ..	100	105
Prime New Hay ..	—	—	New 1st cut do. ..	—	—
Inferior	—	—	Prime 2d cut do...	100	105
Straw	27	30	Inferior do.	90	95

BRITISH WOOLS.—LONDON, March 24.

Our trade continues active, and full rates are realised for all descriptions of fleece wool, and present pull of combing skins. The market is now very thinly supplied with long wool.

	s.	d.		s.	d.
South-down Hog-gets	1	9	to 1	10	
Half-bred ditto ..	1	11	— 2	0	
Down Ewes ..	1	8	— 1	9	
Kent Fleeces ..	1	11	— ..		
Leicest. Wethers	1	9½	to 1	10½	
Ditto Hoggs ..	1	10½	— 1	11	
Combing Skins	1	4	— 1	8	
Flannel Wool ..	1	4	— 1	6	
Blanket ditto ..	0	9	— 1	0	

NEWGATE.—March 24.

Best Fresh Butter .. .. 15*s.* per dozen lbs.
Second do. do. .. .. 12*s.* ,,
Pork, 4*s.* 0*d.* to 4*s.* 4*d.* per 8 lbs.

LEADENHALL POULTRY MARKET.—March 24.

The demand and supply are about the same as last week.

Per couple	s.	d.	s.	d.	Each	s.	d.	s.	d.
Large Surrey Fowls	8	0	to 11	0	Guinea Fowls	—	3	0	
Farm-house do.	6	0	— 8	0	Turkeys	6	0	to 9	0
Best Surrey Chickens	7	0	— 8	0	Pigeons	0	7	— 0	8
Country Chickens ..	5	0	— 6	0	Wild Ducks	2	0	— 2	8
Each					Hares	2	6	— 3	0
Goslings	7	0	— 8	0	Tame Rabbits	1	3	— 1	6
Aylesbury Ducklings	3	6	— 4	6	Per doz.				
Country do... ..	2	6	— 3	6	Wild do.	8	0	— 10	0

METROPOLITAN CATTLE MARKET.

MONDAY, March 21.

We have a few more Beasts than on Monday last. Trade is slow, but there is scarcely a quotable reduction in price. A clearance cannot be quite effected. There is a considerable increase in the supply of Sheep, and the demand is very limited, consequently prices are lower, and several remain unsold. Choice Lambs and Calves are in request at full rates. From Germany and Holland there are 880 Beasts, 2330 Sheep, and 123 Calves; from Spain, 122 Beasts; from Scotland, 300; from Ireland, 190; and 2960 from Norfolk and Suffolk.

	s.	d.	s.	d.		s.	d.	s.	d.
Best Scots, Herefords, &c. ..	4	8	to 4	10	Best Long-wools,	5	0	— 5	4
Best Short-horns	4	4	— 4	8	Do. Shorn ..	4	2	— 4	6
2d quality Beasts	3	0	— 3	8	Ewes & 2d quality	4	4	— 4	6
Best Downs and Half-breds ..	5	6	— 5	8	Do. Shorn ..	3	6	— 3	10
Do. Shorn ..	4	8	— 4	10	Lambs	7	0	— 7	8
					Calves	4	0	— 6	0
					Pigs	3	8	— 5	0

Beasts, 4750; Sheep, 22,070; Calves, 133; Pigs, 480.

THURSDAY, March 24.

The number of Beasts is about the same as on Thursday last. Trade is very dull, and although we retain that day's quotations, the amount of business transacted is small. We have a larger supply of Sheep. There are now so few in the wool that we cease to quote them. Trade is very heavy, and prices on the average lower. Lamb is the principal feature of this day's market. They are not so plentiful as on the corresponding day last year, and are sold at high prices. Calves are rather higher. Our foreign supply consists of 470 Beasts, 650 Sheep, and 278 Calves. Milch Cows, 80.

	s.	d.	s.	d.		s.	d.	s.	d.
Best Scots, Herefords, &c. ..	4	8	to 4	10	Best Long-wools. ..	—	..		
Best Short-horns	4	4	— 4	8	Do. Shorn ..	4	2	— 4	4
2d quality Beasts	3	0	— 3	8	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..	—	..		Do. Shorn ..	3	6	— 3	10
Do. Shorn ..	4	6	— 4	8	Lambs	7	0	— 8	0
					Calves	3	10	— 5	8
					Pigs	3	8	— 5	0

Beasts, 1250; Sheep and Lambs, 7080; Calves, 410; Pigs, 140.

MARK LANE.—MONDAY, March 21.

The supply of Wheat from Essex and Kent to this morning's market was small, and met a slow sale on the terms of this day se'nnight. The attendance was limited, very little business was done in foreign Wheat, and prices are nominally as last week. Fine Malting Barley brought last week's prices; other descriptions were a slow sale. Beans and Peas were unaltered in value. The Oat trade was dull, and prices were 6d. lower than this day se'nnight. Flour was neglected.

PER IMPERIAL QUARTER	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	42	—48	Red	40	—48
— — fine selected runs .. ditto	44	—52	Red	40	—48
— — Talavera	48	—56			
— Norfolk	—		Red	—	
— Foreign	36	—54			
BARLEY, grind. & dist, 25s to 27s .. Chev.	34	—38	Malting ..	29	—33
— Foreign .. grinding and distilling	22	—26	Malting ..	27	—31
OATS, Essex and Suffolk	18	—22			
— Scotch and Lincolnshire—Potato	20	—25	Feed	18	—22
— Irish .....Potato	19	—22	Feed	—	
— Foreign .....Poland and Brew	17	—22	Feed	15	—20
RYE	30	—32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....27s to 36s...Tick	30	—33	Harrow ..	30	—33
— Pigeon .... 32s to 40s.. Winds.	—		Longpod	—	
— Foreign .....Small	36	—42	Egyptian	30	—32
PEAS, White, Essex and Kent .. Boilers	32	—33	Suffolk ..	33	—34
— Maple .... 30s to 34s .... Grey	28	—30	Foreign ..	31	—33
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered .. per sack	35	—40			
— 2d do ..... ditto	28	—34	Country ..	28	—34
— Foreign ..... per barrel	15	—25	Per sack	32	—40

WEDNESDAY, March 23

There was a very moderate supply of English Wheat on sale at to-day's market, but its general quality was good. Selected samples were taken somewhat steadily, at full quotations, but all other kinds moved off heavily, at about previous rates. The show of foreign Wheat was tolerably extensive. Millers purchased cautiously, at prices about equal to Monday. Floating cargoes of grain were inactive, but there was some inquiry for Wheat for forward shipment from the Black Sea ports at previous rates. Malting Barley moved off steadily, and the currencies were well supported. In grinding and distilling sorts very little was passing at last week's quotations. Malt, the supply of which was good, moved off slowly; nevertheless prices were supported. Good dry Oats were in price; but heated samples were somewhat heavy, at Monday's decline in value. In Beans the transactions were on a limited scale, on former terms. Peas were held at full quotations, but the inquiry for them was inactive. Both English and foreign Flour moved off slowly, but no change took place in prices. The seed market was very quiet, at previous currencies. Bombay Linseed realised 62s. per qr. on the spot. In cakes very little was passing.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	240 qrs.	210 qrs.	680 qrs.	370 sks.
Irish	—	—	—	— ,,
Foreign ..	1320 ,,	1360	11,520 ,,	120 ,, / — brls

LIVERPOOL, March 22.—Our market has been very well attended this morning, both by local and distant buyers, and with a fair consumptive demand for red Wheats sellers have in most instances been able to maintain the quotations of Friday last; white Wheat is not asked for. Flour is altogether neglected, and importers must take less money to effect sales. Indian Corn remains steady at previous rates. Oats and Oatmeal still very dull. Beans less active at the recent improvement. Peas and Barley as before.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Feb. 13	40*s* 8*d*	31*s* 11*d*	19*s* 1*d*	29*s* 1*d*	33*s* 7*d*	33*s* 7*d*
— 20	41 1	32 0	19 8	23 10	33 2	33 5
— 27	40 6	32 0	19 4	29 0	33 1	32 9
March 5	40 2	31 6	19 10	28 6	33 5	32 10
— 12	40 1	31 5	19 8	29 2	32 7	33 0
— 19	39 9	31 4	19 2	32 4	32 10	32 10
Agg. Aver.	40 5	31 8	19 6	31 2	33 1	32 11

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Feb. 13.	Feb. 20.	Feb. 27.	March 5.	Mar. 12.	Mar. 19.
41*s* 1*d*	..	..	..	..	..	..
40 8	..	..	..	..	..	..
40 6	..	..	..	..	..	..
40 2	..	..	..	..	..	..
40 1	..	..	..	..	..	..
39 9	..	..	..	..	..	..

POTATOS.—SOUTHWARK, Monday, March 21.

During the past week the arrivals coastwise have been more liberal; trade and prices remain much the same as formerly. The following are this day's quotations:—Yorkshire Flukes, 70s. to 90s. per ton; do. Regents, 50s. to 70s.; do. Rocks, 45s. to 50s.; Dunbar Regents, 65s. to 75s.; Kent and Essex Regents, 50s. to 70s.: North Berwick Regents, 50s. to 60s.; Perth, Forfar, and Fifeshire Regents, 45s. to 50s.; do. do. Rocks, 45s.

WANTED, a good practical DRAUGHTSMAN, one accustomed to Agricultural Work preferred.—Apply by letter to X. Y. Z., Post Office, Leeds.

WANTED IMMEDIATELY, a NURSERY FOREMAN and PROPAGATOR, who thoroughly understands the Propagation of Ornamental Trees and Shrubs, Conifers, Rhododendrons, Roses, Fruit Trees, &c. He must be an expert Budder and Grafter, and well acquainted with the routine of a general Nursery. Liberal wages will be given to a competent man.—Apply to L. T. DAVIS, Ogle's Grove Nursery, Hillsborough, Co. Down, Ireland.

WANTED, a PROPAGATOR and PLANT GROWER.—One who has been accustomed to grow Plants for Market preferred.—Apply in the first place by letter only, stating qualifications and wages required, to A. G., Grove Nursery, Coleman Street, Camberwell, near St. George's Church.

WANTED, a PROPAGATOR and GROWER of the Geranium and Pelargonium in a Nursery near London. Wages for the first year, 30*s.* per week; to be raised if satisfaction is given.—Apply by letter, with statement of previous experience, to A. B. C., *Gardeners' Chronicle* Office, W.C.

WANTED, a GENERAL PROPAGATOR in a London Nursery.—Must thoroughly understand Hard Woods, Heaths in particular.—Address, stating full particulars, to F. HOPGOOD & Co., Exotic Nursery, Shepherd's Bush, W

WANTED, a GARDENER (SINGLE-HANDED).—Married, no incumbrance; a good worker, to look after an Acre of Flower and Kitchen Garden, Small Greenhouse and Pony; Good Cottage on the Premises.—Apply, by letter only, stating wages required, and full particulars, to H., 17, Down Street, Piccadilly, W.

WANTED, a hard-working GARDENER, for Kitchen and Flower Gardens, Stove, Vinery, Greenhouse, Pits.—A boy helps. Unexceptionable character required. Wages, 52*l.* per year, and very good House. State age and all particulars.—Direct P. I. W., Post Office, Warwick.

WANTED, as UNDER GARDENER, a steady, active young Man for a new Garden, where it is intended to cultivate Pines, Grapes, Orchard House Fruits, &c. One who has had some experience in attending to Forcing Houses preferred. Wages, 16*s.* per week.—Apply, stating age and where employed, to W. KEMP, Gardener, Heybridge, Maldon, Essex.

WANTED, Two or Three steady active men as JOBBERS. Constant employment. Wages, 18*s.* per week.—T. W DARWOOD, Queen's Road Nursery, Peckham, S.E.

WANTED, two or three JOBBING HANDS, constant employment; steady Men indispensable. Wages 16*s.* per week.—Apply to W. HOLMES, Frampton Park Nursery, Hackney, N.E.

WANTED, a good JOBBING GARDENER. Wages 15*s.* per week.—Apply personally or by letter, with reference, &c., to Mr. GEO. J. WOOLLETT, Nurseryman, Caterham, Surrey.

C. GRIMBLY, of the Albion Nursery, Stoke Newington, London, N., is in want of TWO experienced JOBBING GARDENERS, age from 30 to 40; they must have good characters from last situation. None need apply who do not require a constant place. Must be good Mowers.

WANTED, NURSERY LABOURERS.—Mr. JAMES VEITCH is in IMMEDIATE want of FIVE or SIX good active respectable young Men for his Coombe Wood Nursery, who have been accustomed to Nursery work. Competent and respectable men will have CONSTANT employment, with from 15*s.* to 18*s.* per week, according to desert.—Apply personally or by letter, with references, &c., to Mr. VEITCH, Royal Exotic Nursery, King's Road, Chelsea, S.W.

WANTED, a DAIRY MAID, in a gentleman's family, who thoroughly understands her business, and is competent to take the entire charge of a Dairy, and to give assistance in house work.—Address P. P., to Captain Trotter, 13, Connaught Place, London, W.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

HEAD GARDENERS.—WM. CUTBUSH & SON have at the present time several GARDENERS on their books, whom they can confidently recommend to noblemen or gentlemen requiring trustworthy and intelligent men.—Highgate Nurseries, London, N.

To Noblemen and Gentlemen.

MESSRS. HUGH LOW AND CO. have experienced HEAD and UNDER GARDENERS of various qualifications, whom they can confidently recommend. Ladies and gentlemen requiring such are respectfully requested to communicate with H. L. & Co., who will only recommend those that are really equal to the duties they may be called upon to perform.—Clapton Nursery, London, N.E.

GARDENER (HEAD).—Age 40, married; thoroughly *practical and trustworthy. Three years and six months'* good character *from the gentleman he last lived with.*—B. B., Mr. Pain's Nursery, Uxbridge.

GARDENER (HEAD).—Age 26, single; understands Early and Late Forcing, and general routine of the Kitchen Garden. Two years' good character.—L. C., Mrs. Norris, High Street, Fulham, S.W.

GARDENER (HEAD).—Age 30, single; understands Fruit, Flower, and Kitchen Gardens, Early and Late Forcing, Greenhouses, &c. Most excellent character.—S. W., Mr. Smith's 20 A, London Street, Paddington, W.

GARDENER (HEAD).—Age 36, married, no incumbrance; understands the Management of Greenhouse, Vines, Kitchen and Flower Gardens. Good character.—A. B., Post Office, Ealing Common, W.

GARDENER (HEAD).—Middle-aged, single, Scotch; has a practical knowledge of his profession in all its branches; was 13 years in his last situation, where he was very successful in growing Grapes and Wall Fruit.—WILLIAM MILLER, Mr Randell's, High Street, Red Hill, Surrey.

GARDENER (HEAD).—Age 31, married, no incumbrance; thoroughly understands the Growing of Pines, Grapes, Peaches, Stove and Greenhouse Plants; the Management of Flower and Kitchen Gardens. Good character.—W. M., Post Office, Winchester, Hants.

GARDENER (HEAD), to a nobleman or gentleman.—Age 28, single; thoroughly understands the Growing and Forcing of Pines, Vines, Peaches, Figs, &c.; also the Management of Kitchen and Flower Gardens. Good character and testimonials.—G. L., 13, Union Square, Islington, London.

GARDENER (HEAD).—Married, no incumbrance; leaving his present situation through the death of his employer. Wife can manage Dairy or Poultry. Nine years' good character.—THE GARDENER, Holmwood, Henley-on-Thames, Oxon.

GARDENER (HEAD), age 27, married, one child.—WM. WOOD & SON have much pleasure in recommending to any lady or gentleman in want of an excellent Gardener a young Man as above, well qualified to take a first-rate situation, having a good knowledge of his profession in all its various branches.—Woodlands, Maresfield, Uckfield, Sussex.

GARDENER (HEAD), age 40, married, no incumbrance.—GEO. S. DODS, of Epsom Nursery, Surrey, wishes to recommend a thoroughly practical man, who understands his profession in all its various branches. Will be at liberty the beginning of April. Three and a-half years' good character.—Direct as above.

GARDENER (HEAD) to any nobleman of gentleman.—Middle aged; native of Holland. Practical in all branches; has had great experience in Early Forcing of Vegetables of all kinds, according to the Dutch style. Good wages required. Upwards of 20 years' good character.—H. N., Post Office, Hodnet, Market Drayton.

GARDENER (HEAD).—Age 28, single; has served in some of the best places in the north, where Gardening is carried on extensively—Early and Late Forcing. A good Plant grower. Can superintend any alteration, also the Erection of Horticultural Buildings. Twelve years' character, five as above.—J. M., the Post Office, Feltham, near Hounslow, Middlesex.

GARDENER (HEAD), where three or more are kept. Age 27, single; thoroughly understands the Management of Pines, Vines, Peaches, Melons, Stove and Greenhouse Plants, Flower and Kitchen Gardens; also has a good knowledge of Early and Late Forcing in all its branches. Three years' good character.—H. B., Mr. Neal, Nurseryman, Wandsworth Common.

GARDENER (HEAD, or good SINGLE-HANDED).—Age 28, married, one child; thoroughly understands his profession in all its branches. Five years' first-class character.—C. H., Post Office, Henley-on-Thames.

GARDENER.—Age 28, married; thoroughly understands his profession. No objection to take charge of a Cow. One year and 9 months' good character.—J. B., Mr. Pearson's Nursery, Hampstead Road, Camden Town, N.W.

To Noblemen and Gentlemen.

GARDENER.—A first-class Man. To any lady or gentleman residing in the country, who may wish to secure the services of a thoroughly trustworthy, energetic, and permanent man, this is an excellent opportunity.—W. W., Mr. Laing, Stanstead Park, Forest Hill, Sydenham, S.E.

GARDENER, (where one or more are kept).—Age 37, married; in full practice. Good character.—Z. Z., Mr. W. Paul's Nurseries, Waltham Cross, N.

To Noblemen and Gentlemen.

GARDENER, where two or three or more are kept.—Age 30; understands Forcing Fruits and Flowers, and the general routine of Kitchen and Flower Gardening. Can be well recommended by his present employer.—S. W., Brandon Lodge, near Coventry, Warwickshire.

GARDENER (UNDER or SECOND).—Age 21, active and persevering; has had six years thorough good practice. Can be highly recommended by present and previous employers.—A. B. C., Mr. Hewitt, Post Office, Coventry.

GARDENER and STEWARD.—Age 45; is open to engage with any nobleman or gentleman requiring a person of considerable experience, having left the situation where he has been living 17 years.—J. E., T. Gunyon, Esq., Hollyville, Finchley.

GARDENER (SECOND), or FOREMAN, where Gardening is carried out with energy.—Age 24; steady; has had good experience in Forcing and Growing of all kinds of Fruits, including Pines, Figs, &c, Tropical ditto; also in the Management of Ferns, Conservatory, Flower and Kitchen Gardens. Two years good reference from his present and previous employers.—J. M., Post Office, Erdington, near Birmingham.

FOREMAN or GARDENER (UNDER), in a large Establishment, in the South of England.—Age 24; of very steady and industrious habits; has a good knowledge of his profession. Can be highly recommended by present and previous employers.—J. G., The Gardens, Ribston Hall, Wetherby, Yorkshire.

FOREMAN, in a gentleman's Garden.—Has been used to all the branches of the business.—C. LAMBERT, J. Josselyns, Esq., Bury St. Edmund's, Suffolk.

To Nurserymen.

PROPAGATOR and FOREMAN, in the houses.—Good practical experience.—D. A., Clapton Nursery, London, N.E.

GERANIUM GROWER.—A young Man. Can also take care of other plants.—A. N., 5, Craddock Street, Prince of Wales Road, Haverstock Hill, N.W.

BAILIFF.—Age 40, married, no incumbrance; understands Farming, both Light and Heavy Soils; Breeding, Rearing, and the Management of all kinds of Stock. A good Accountant. Wife can undertake the Management of a Dairy and Poultry. Good references.—E. C., Post Office, Ladbroke Grove, Notting Hill, W.

FARM BAILIFF.—Age 28; sober, industrious, bred to Farming. Has had considerable practical experience in the Management of Stock, Dairy, and Arable Farms, and has some knowledge of Draining. Willing to make himself generally useful. No objection to Ireland. Can be very highly recommended.—W. Y., Post Office, Dorchester.

CARPENTER on a gentleman's Estate.—Four and a half years' character.—G. R., 48, Hartland Road, Kentish Town, N.W.

COWMAN.—Thoroughly understands the Management of Cows, Pigs, and Poultry. Would assist in the Garden, &c, and can be highly recommended by present employer. Three years' character.—A. B., Post Office, Althorne, Essex.

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REVALENTA ARABICA FOOD,
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CORNS and BUNIONS.—A Gentleman, many years tormented with Corns, will be happy to afford others the information by which he obtained their complete removal in a short period, without pain or any inconvenience.
Forward address on a stamped envelope to W. GOODALL, Esq., Epsom, Surrey.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—
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Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump, Buckets, Fire Buckets, Beds, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Tobacco Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Collotype trays, &c., manufactured by the Gutta Percha Company, and sold by their wholesale dealers in town or country.
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PROTECTION from the COLD WINDS & MORNING FROST.
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide	1*s.* 8*d.* per yard run.
Four yards wide	3*s* 4*d.* per yard.
An improved make, 2 yards wide,	1*s.* 9*d.* per yard.
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Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.
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"It is much cheaper than Mats as a covering.

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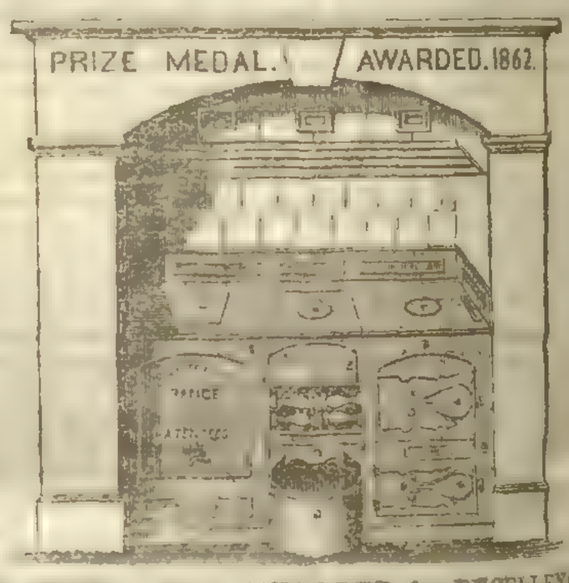

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It is an entirely new invention, and consists of large MEAT ROASTER, PASTRY OVEN, and WROUGHT-IRON BOILER. The top forms a HOT PLATE for BOILING, STEWING, &c. The whole Heated by ONE SMALL FIRE. One 5 feet wide equal to an ordinary Range 8 feet wide.
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METCALFE, BINGLEY, AND CO'S NEW PATTERN TOOTH BRUSHES, Penetrating Unbleached Hair Brushes, Improved Flesh Brushes, genuine Smyrna Sponges, and every description of Brush and Comb used in Perfumery for the Toilet. METCALFE'S celebrated Alkaline Tooth Powder, 2*s.* per box. The FAIRY BOUQUET; the OXFORD and CAMBRIDGE BOUQUET. In bottles, 2*s.*, 3*s.* 6*d.*, and 5*s.* each. 130 B, and 131, Oxford Street, W.

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The Gardeners' Chronicle Newspaper.

SATURDAY, APRIL 2, 1864.

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DISSOLVED BONES,
SUPERPHOSPHATES of LIME,
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BLOOD MANURE for Barley and Roots.
URATE,
MANGOLD MANURE, &c., &c.

They also continue to supply GIBBS'S PERUVIAN GUANO, NITRATE of SODA, SULPHATE of AMMONIA, FISHERY SALT, and all FERTILISERS of known value.

Works, Plough Wharf, Isle of Dogs.
Offices, 116, Fenchurch Street, E.C. H. PURSER, Secretary.

LAWES'S MANURES.
The Manures manufactured by J. B. LAWES for the present season of 1864 are now ready for delivery at his Factories, at the following prices:—

	Per Ton.
LAWES'S PATENT TURNIP MANURE, and BONE SUPERPHOSPHATE of LIME	£6 6
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LAWES'S BARLEY, GRASS, and MANGEL MANURES	8 0

These Manures can be obtained of Mr. LAWES, or through his appointed Agents, in all parts of the United Kingdom, at prices varying according to cost of carriage.

Genuine Peruvian Guano direct from the Importers; Nitrate of Soda, Sulphate of Ammonia, and other Chemical Manures.

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Manures and Feeding Stuffs.
RAYNBIRD, CALDECOTT, AND BAWTREE, Address 89, Seed Market, Mark Lane; or Basingstoke.
Samples and prices on application.

ODAMS'S BLOOD MANURE for CORN.
ODAMS'S BLOOD MANURE for ROOTS.
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MANUFACTURED BY THE PATENT
NITRO-PHOSPHATE or BLOOD MANURE COMPANY (LIMITED). Consisting of TENANT FARMERS, occupying upwards of 30,000 acres of land.
Chairman: JOHN CLAYDEN, Littlebury, Essex.
Managing Director: JAMES ODAMS.
Particulars of these Standard Manures may be obtained at the Offices.
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Offices: 109, Fenchurch Street, London, E.C. Manufactory: Plaistow, Essex.

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MR. A. CHANDLER (of the late Firm of CHANDLER & SONS) continues to undertake all kinds of VALUATIONS connected with Horticulture.
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Apply early to BENJAMIN EDGINGTON, Marquee, Tent, Rick Cloth, and Flag Manufacturer, by special appointment to Her Majesty, 2, Duke Street, London Bridge, S.E.
N.B. No other Establishment.

SMITH, BECK AND BECK'S New MERCURIAL BAROMETER, very sensitive. Scale, 3 to 8 inches for every inch of variation, compensating tube instead of a reservoir. Price from 35s. to 42s.
Description sent free by post, or to be had on application at 31, Cornhill, E.C.

WOOD STICKS and TALLIES, Commended by the Royal Horticultural Society, can now be had of all sizes, Wholesale, of
BETHAM & BLACKITH, Cox's Quay, Lower Thames Street, London, E.C., and Retail of any Seedsman in London or the Provinces.

Paxton Works, Sheffield, Established 1738.

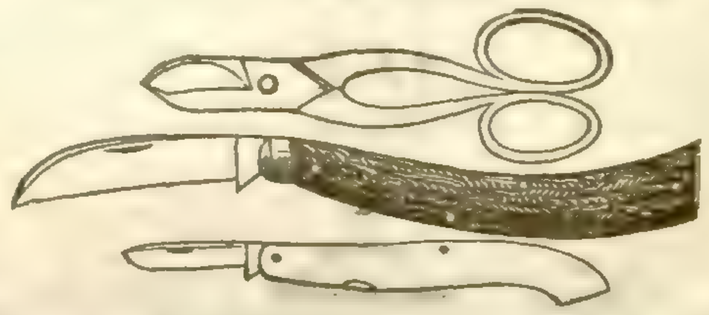

INTERNATIONAL EXHIBITION PRIZE MEDAL WAS AWARDED TO SAYNOR & COOKE FOR SUPERIORITY OF QUALITY IN PRUNING AND BUDDING KNIVES, &c.
SAYNOR AND COOKE'S celebrated English and French Exhibition PRIZE PRUNING KNIVES, &c., can be obtained of any respectable Nurseryman or Seed Merchant in the three kingdoms, all Knives warranted both by the Seller and Maker.
CAUTION.—None are genuine unless marked SAYNOR. Other marks would cause disappointment, as these Knives are tempered by an improved process known only to the Makers.

PHOSPHO GUANO.

PHOSPHO GUANO COMPANY LIVERPOOL
Company's Trade Mark.

EDINBURGH AND LONDON
Contractors' Trade Mark.

THE PHOSPHO GUANO, in its natural state, is found on trap-rock islets within the tropics. It was discovered in 1854; and its existence was made known in August, 1856, by Dr. VOELCKER, who read a paper at the Cheltenham meeting of the British Association for the Advancement of Science, "On the Remarkable Composition of a New Variety of Guano, called Columbian or Maracaibo Guano," pointing out its peculiar fitness as the base of a highly concentrated phosphatic manure.

Its valuable and peculiar qualities immediately attracted the attention of the leading Agricultural Chemists, who pronounced it at once to be greatly superior to all other Guanos as a manurial agent. The result of careful experiments in the field having fully established this superiority, the consumption has increased year by year; and at the close of the seventh season, 1863, it has attained a position second only in consumption to that of Peruvian Guano.

The Baron LIEBIG, in the course of his investigations, discovered potash in the raw Guano, a discovery since confirmed by Dr. VOELCKER and other Chemists. To the presence of this substance (which is not found in any mineral phosphate) is attributable, in some degree, the great superiority of the PHOSPHO GUANO when compared with other phosphatic manures made from coprolites, apatite, Sombrero Guano, &c.

PHOSPHO GUANO contains in its natural state nearly double the quantity of phosphoric acid found in bones and other substances from which Superphosphates are prepared; and LIEBIG states that by using PHOSPHO GUANO, the farmer conveys to his field 26 per cent. more phosphoric acid than by a mixture of equal parts of Peruvian Guano and Superphosphate of Lime; while "the advantage for the improved quality of the soil appears still more in favour of the PHOSPHO GUANO, if the quantity of soluble phosphoric acid is taken into consideration."

One of the most important advantages of the PHOSPHO GUANO is its uniform composition, and in this particular it is equalled by no other manure; for with scarcely an exception, they all vary greatly in different samples, even when drawn from a comparatively small bulk.

All Chemists of standing have ceased to place a money value on manures submitted by them to analysis, as tending to lead to erroneous conclusions, owing to the disingenuous manner in which such values are paraded before the public eye by dealers; but for the information of those farmers who still have faith in this test, the money value of the PHOSPHO GUANO, calculated by the data hitherto in use, is, according to the mean average of Dr. VOELCKER'S analyses, 13*l.* 18*s.* 2*d.* per ton; and of Baron LIEBIG'S analyses, 14*l.* 18*s.* 4*d.* per ton.

Peruvian Guano and PHOSPHO GUANO are respectively the representatives, in the highest degree, of the two most important manurial substances, ammonia and phosphoric acid. In Peruvian Guano there is 13.61 per cent. of nitrogen, yielding 7.0 of actual ammonia and 10.0 latent—and the latent, in the opinion of Dr. VOELCKER, is as available or nearly so as the actual ammonia—together with 3.0 per cent. phosphoric acid in soluble state. In PHOSPHO GUANO there are 18.027 per cent. of phosphoric acid in soluble state, and 3.50 per cent. actual ammonia.

As Peruvian Guano is acknowledged to be a cheap source of ammonia, so likewise PHOSPHO GUANO must be considered as a cheap source of phosphoric acid—much to be preferred to bones, superphosphates, coprolites, apatite, Sombrero and other inferior Guanos; while the proportion of 3.50 per cent. of actual ammonia constitutes it the best-balanced manure in the market.

If the results of practical experience were required to recommend the PHOSPHO GUANO, testimonials from many of the most eminent Agriculturists in the kingdom could be adduced; but the reader of this advertisement is particularly referred to the most recent of these, published in the last number of the *Quarterly Journal of Agriculture* (Jan. 1864), by Mr. HENRY STEPHENS, author of the "Book of the Farm," detailing the experiments made by the MARQUIS OF TWEEDDALE, with their successful results.

Pamphlets, containing a full description of the PHOSPHO GUANO, its History, Nature, Properties, &c., may be obtained on application.

PRICES AND TERMS.

The Cash Prices, including the cost of bags, Carriage Free at any railway station or shipping port in the kingdom, are as follows:—

For 10 tons and upwards, £11 10s. per ton. | For smaller quantities, £11 15s. per ton.

For full cargoes, direct to any port, special rates will be quoted.

CREDIT RATES.—Should the Consumer require credit, the price is increased at the rate of 2*s.* per ton per month.

To prevent fraud, all casks and bags are branded with the PHOSPHO GUANO COMPANY'S Trade Mark, as well as that of the Contractors, copies of which appear at the head of this advertisement.

There are Authorized Agents appointed for the sale of PHOSPHO GUANO in all the principal towns and villages in the United Kingdom; but where any difficulty exists in procuring supplies, orders may be sent direct to

PETER LAWSON & SON,
GEORGE IV. BRIDGE, EDINBURGH; or, 28, KING ST., CHEAPSIDE, LONDON, E.C.

PETER LAWSON AND SON, *Contractors.*
WILLIAM DIXON AND CO., *General Agents.*
GEORGE SEAGRAVE AND CO., *Brokers.*

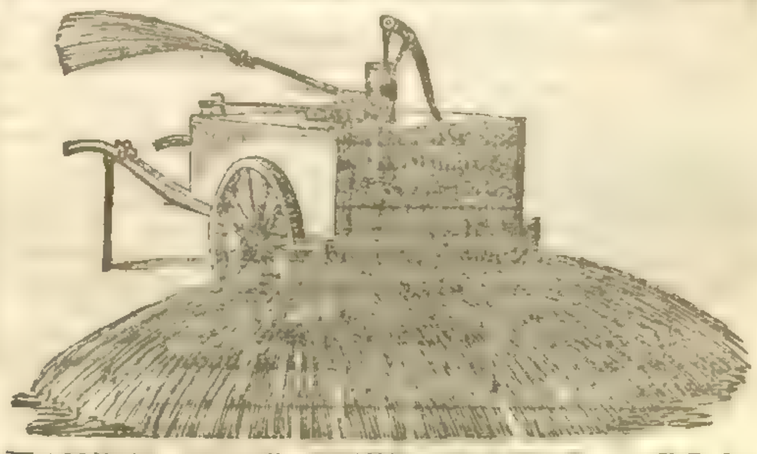

JAMES'S FIRST PRIZE MANURE CART has been Awarded 23 PRIZES. Is now fitted up to answer for LIQUID MANURE, for Supplying the STEAM PLOUGH, for WATERING STREETS, or for a FIRE ENGINE. Nearly 300 already sold.

Washing.
The last great improvement in Washing Machines is in JAMES'S new Patent PRIZE WASHING, WRINGING, and MANGLING MACHINES, awarded several FIRST PRIZES. Will Wash 20 Shirts in 20 Minutes, with much less injury than with the hand. More than 300 Sold.
Address, I. JAMES, Tivoli Works, Cheltenham.

JOHN GEDDES, late
H. J. MORTON AND CO.'S, CORRUGATED GALVANISED IRON ROOFING,
for Farm Buildings and other Roofs; the cheapest, most durable, and neatest roofing in use; also Spouting at 10½*d.* per yard.
GALVANISED WIRE STRAND CABLE FENCING.

(Formed of twisted wires like a rope or cable), the strongest, cheapest, and neatest fence in use; will resist the largest cattle, and will not bend or get out of form by trespassing upon or over. Five lines of Galvanised Strand, Iron Main Posts, and Pronged Standards. 2000 miles supplied.
Price 1*s.* per yard.
This Fence is far cheaper than posts and rails, or any kind of iron fencing, and possesses four times the strength of solid bars.
(Will not rust nor corrode.)
IMPROVED GALVANISED WIRE NETTING.

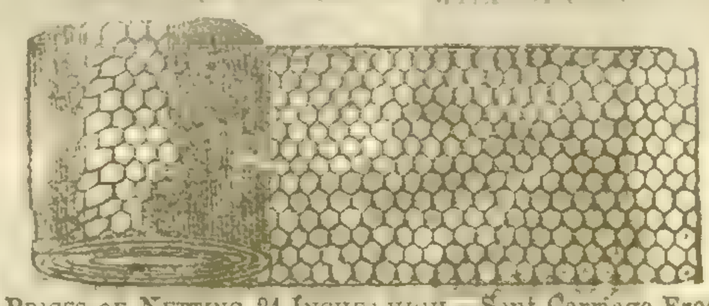

PRICES OF NETTING 24 INCHES HIGH—Sent Carriage Free.

Size of Mesh	Proof against	Light. Per Yard.	Medium Per Yard.	Strong Per Yard.	Very Strong. Per Yard.
2½ in.	Hares, Dogs, Poultry, &c. ..	4*d.*	5*d.*	6*d.*	7*d.*
2 in.	All kinds of Game ..	4½*d.*	5*d.*	6½*d.*	8*d.*
1⅝ in.	Small Rabbits, Hares, &c. ..	4¾*d.*	6*d.*	7*d.*	9*d.*
1½ in.	Ditto ditto ..	6*d.*	7*d.*	9*d.*	11*d.*

NETTING supplied at considerably less prices. Made any width up to 6 feet at proportionate prices. For other sizes see Illustrated Catalogue.
VINERIES and GREENHOUSES WIRED.
HURDLES, GATES, and IRON and WIRE FENCING of all kinds.
GALVANISED IRON WATER CISTERNS for Cottage Houses, &c., to contain about 50 gallons, 26*s.*; 80 gallons, 31*s.*; and 140 gallons, 37*s.*, with Lid and Brass Tap; will not rust nor corrode.
GALVANISED IRON PUMPS for Liquid Manure or Domestic Use, 3 inches diameter, 25*s.* and 30*s.* each. Tail Pipe for same at from 10*d.* per foot.
GALVANISED IRON SWING WATER BARROWS for Garden or Farm use, to hold about 20 gallons. 35*s.* and 40*s.* each.
BUCKETS, CORN SKIPS, BATHS, HAND BOWLS, &c.
PATENT LAWN MOWING MACHINES, from 70*s.* each.
ASPHALTE ROOFING FELT, 1*d.* per square foot.
Illustrated Catalogues and Estimates sent on application.
12, Great George Street; and 2, Basinghall Buildings, Leeds.

Glass for Garden Purposes.

JAMES PHILLIPS AND CO.
beg to submit their prices as follows:—

PROPAGATING GLASSES.

	Each—s.	d.		Each—s.	d.
2 inches in diameter ..	0	3½	12 inches in diameter ..	1	9
3 „ „ ..	0	4½	13 „ „ ..	2	0
4 „ „ ..	0	5½	14 „ „ ..	2	6
5 „ „ ..	0	6½	15 „ „ ..	3	0
6 „ „ ..	0	8	16 „ „ ..	3	6
7 „ „ ..	0	10	17 „ „ ..	4	0
8 „ „ ..	1	0	18 „ „ ..	5	0
9 „ „ ..	1	2	19 „ „ ..	6	0
10 „ „ ..	1	4	20 „ „ ..	7	0
11 „ „ ..	1	6			

HAND GLASSES, WITH OPEN TOPS.

	Each—s.	d.		Each—s.	d.
12 inches	6	6	18 inches	9	6
14 „	7	6	20 „	10	6
16 „	8	6	22 „	11	6
			24 „	12	6

Painted and Glazed with 16 oz. Sheet Glass.

HYACINTH and FLOWER DISHES.

6 inches diameter, 1s.; 9 inches, 1s. 6d.; 12 inches, 2s. 6d.
Hyacinth Dishes are intended to contain a number of roots bedded in sand and covered with moss, instead of the common Hyacinth Glass.

HYACINTH GLASSES.

Common shape, p. doz., 2s. 6d. | Improved shape, p. doz., 4s. 6d.
Patent shape, per dozen, 6s. 6d.

London Agents for Hartley's Improved Patent Rough Plate. Linseed Oil, Genuine White Lead, Carson's Paints, Paints of various colours ground ready for use.
180, Bishopsgate Street Without, London, E.C.

BROWN'S FLORAL SHADING, sold by most respectable Nurserymen and Seedsmen, in pieces:—
No. 1, 20 yards long, 38 inches wide, at 7s. 8d. per piece.
2, do. do. 8s 0d. do.
3, extra stout, 18 yards long, 39 inches wide, at 10s.
Samples on application to CHARLES BROWN, Greenheys, Manchester.

To Seed Merchants and Nurserymen.

SAYNOR AND COOKE, PRUNING and BUDDING KNIFE MANUFACTURERS, beg respectfully to say that they WILL NOT BE UNDERSOLD by any House in the Trade. They also warrant one of their Knives to last two of any other make.
Paxton Works, Sheffield.

FOR SALE, a BARGAIN, a 30-inch HORSE MOWING MACHINE, by SHANKS, in good repair.
Price on application, A. B., Post Office, Fulham, S.W.

LAWN MOWERS, on the most liberal terms, from all the best Makers, with this season's improvements. Every Machine carefully adjusted before being sent out, and guaranteed to give satisfaction. Price Lists of all the different Makers sent together, on application.
GRIMMOND LAIRD, & Co., 15, Cannon Street West, London, E.C.

LAWN MOWERS, from £3 3s.—Price Lists of all the best Makers, with largest Discount in the Trade, and the right Machine for the right Lawn recommended on application to
W. G. PRINGLE & Co., Engineers, 1 and 2, Fish Street Hill, London, E.C.

GRAY'S OVAL TUBULAR BOILER.

INTERNATIONAL EXHIBITION, Class IX., No. 2119.

Mr. GRAY begs to call the attention of the Nobility, Gentry, Nurserymen, Gardeners, &c., to his

NEW OVAL TUBULAR BOILER,

acknowledged by practical judges to be a great improvement on every form of Tubular Boiler yet introduced. It has proved itself superior to all other Boilers for quickness of action and economy of Fuel, doing its work with one-third less the amount required by any other.

Extract from Report in Gardeners' Chronicle *of International Exhibition, May 24, page 476.*

"The upright form of Boiler is usually made on a circular plan, but the oval form given to Mr. GRAY's variety of it is said to be preferable in consequence of its bringing the tubes in closer contact with the fire. The usual form of a furnace being a parallelogram rather than a square, it seems feasible that the Boilers on the oval plan should bring the tubes more completely within range of the burning fuel; and this being so, the change, though a slight one, is no doubt an improvement."

They are made of all sizes, which, with prices, may be had on application.

JAMES GRAY, HORTICULTURAL WORKS,
DANVERS STREET, PAULTON'S SQUARE, KING'S ROAD, CHELSEA, S.W.

ST. PANCRAS IRON WORK COMPANY,

OLD ST. PANCRAS ROAD, LONDON, N.W.

BY ROYAL LETTERS PATENT.

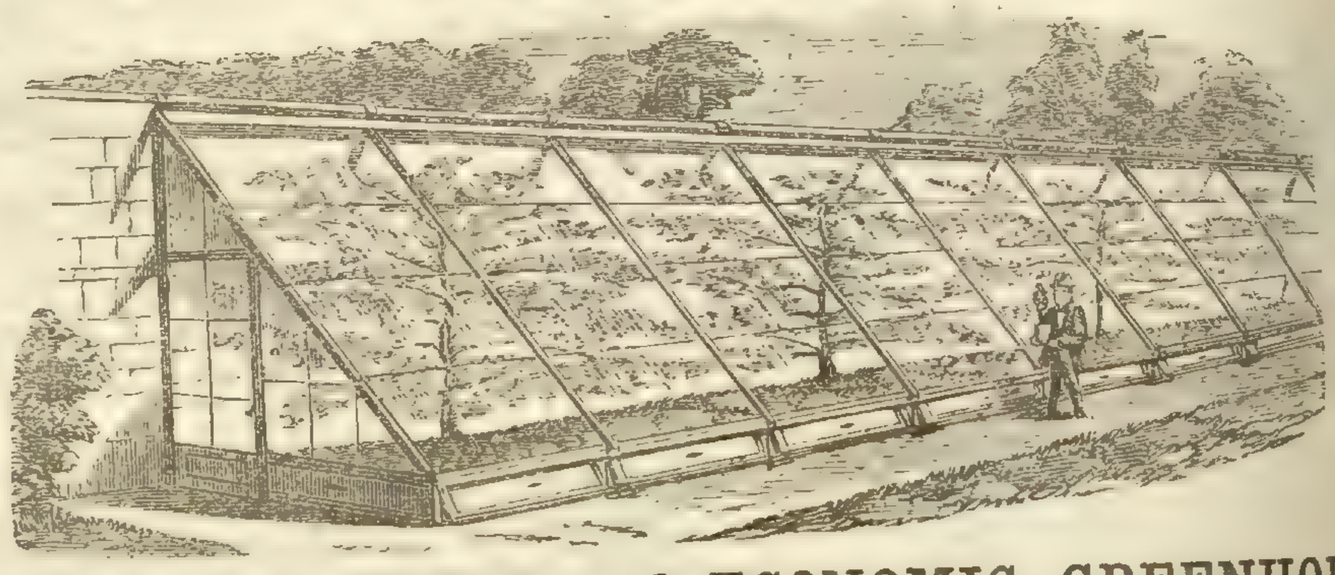

SCOTT'S GLASS WALLS and ECONOMIC GREENHOUSES.

Designed to meet the suggestions of JAMES SCOTT, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES	PINE and MELON PITS	BALCONIES	GATES
GREENHOUSES	VASES	IRON SASHES	TANKS
HOTHOUSES	VERANDAHS	IRON HURDLES	HOT-WATER WORKS.

PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. *Lists Free.*

ST. PANCRAS IRON WORK COMPANY, OLD ST. PANCRAS ROAD, LONDON, N.W.

LATEST IMPROVEMENTS IN LAWN MACHINES.

LAWN MACHINE AS AT WORK, MOWING, ETC.

SHAW'S PATENT FLEXIBLE LAWN MACHINE, for MOWING, ROLLING, and COLLECTING at the same time. With BOYD'S Patent Self-cleaning and Sharpening Brush.

IS THE ONLY ONE of which the Cutters are SELF-REGULATING, and free to follow all inequalities of ground, with the certainty of leaving a perfectly uniform length of Grass.

IS THE ONLY ONE in which the Pushing Handles are SELF-ADAPTING to any height and convenience of workman without varying the height of Cutters.

IS THE ONLY ONE which can be used as A ROLLER ONLY, without risk of injury to the Cutters.

Is fitted with BOYD'S well-known Patent SELF-CLEANING and SHARPENING BRUSH, which keeps the Cutters effective, whether the Grass be wet or dry.

Packs away, when done with, in less than ONE HALF THE SPACE of any other Mower, and is therefore safer from injury.

Full particulars, Drawings, Prices, &c., Post Free, on application to the PATENTEE and MANUFACTURER,

JOHN SHAW, JUNCTION WORKS, LEEDS.

Who was Principal Manager for many years of one of the largest Lawn Machine Manufactories in England.

J. JONES'S HOT-WATER APPARATUS for GREENHOUSES.
Plans and Estimates Post Free.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS for CONSERVATORIES.
Plans and Estimates Post Free.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS for FORCING-HOUSES and PITS.
Plans and Estimates gratis.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS for ORCHARD HOUSES.
Plans and Estimates on application.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS for BATHS and DRYING-CLOSETS.
Estimates gratis.
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Estimates on application.
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J. JONES'S HOT-WATER APPARATUS for OFFICES, WAREHOUSES, and WORKSHOPS.
Plans and Estimates gratis.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS for CHURCHES, CHAPELS, and SCHOOLS.
Estimates gratis.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS for LECTURE-HALLS, READING-ROOMS, &c.
Estimates on application.
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J. JONES'S HOT-WATER APPARATUS for COACH-HOUSES and HARNESS-ROOMS.
Estimates free.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS. Best Materials, Moderate Charges, and, when fixed by J. Jones's men, the Effectual Working Guaranteed.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS being Always in Stock can, at a very short notice, be Sent to any Part, and men to fix the same if required.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS for EVERY PURPOSE, delivered Free to any Station in England, or Fixed Complete in any Part of the World.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS. Prices and ILLUSTRATED CATALOGUES, or Plans and Estimates Gratis and Post Free.
6, Bankside, Southwark, London, S.E.

Exhibition Prize Medal, 1862.

MUSGRAVE'S PATENT SLOW COMBUSTION STOVE.

This Stove is the nearest approach to Warming by Hot Water.

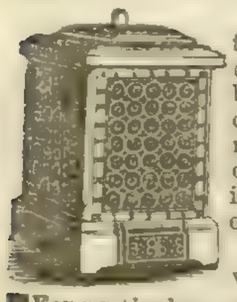

It will burn in Churches from Saturday till Sunday evening, without attention during the hours of worship. In Halls will burn day and night for weeks, with little care. Capable of Warming a large Apartment for 24 hours, at a cost of 3*d.*; and deserving of special attention, because of its safety, healthfulness, durability, and extreme simplicity.

It is also made for small Conservatories with a vapour chamber.

For particulars of the above, and of MUSGRAVE'S PATENT STABLE and COW HOUSE FITTINGS, which attracted so much attention at the Exhibition, address,

MUSGRAVE BROTHERS, Ann Street Iron Works, Belfast.

Card.

SAMUEL N. McGERROW,
GENERAL HORTICULTURAL BUILDER,
Knotty Ash, near Liverpool.

Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

Heating by Hot Water.

HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, TUBULAR, and Elliptic, from 24*s.* each. Improved Boilers and Iron Stands to use without brickwork, 56*s* each. Valves from 10. 6*d.* each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at

MR. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S. Price List on application.

W. J. HOLLANDS, IRON MERCHANT,
31, Bankside, London, S.E.

HOT WATER PIPES, from Stock, per yard:—2 inch, 1*s.* 4*d.*; 3-inch, 2*s.*; and 4-inch, 2*s* 7*d.* BENDS, from stock, 1*s.* 7*d.*, 2*s.* 6*d*, and 3*s.* 3*d.* each. THROTTLE VALVES, 10*s.* 6*d.*, 13*s.* 6*d.*, and 15*s.* each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day.
A discount to the Trade.

A New Boiler.

THE PATENT UPRIGHT-CELLED BOILER, combining efficiency, economy, durability, and the possibility of cleaning every part.

The Patentee begs to bring to the notice of the public this Boiler, which is new in principle, and is constructed to give the greatest possible amount of heating surface in a given space. It has been in use for some years by amateurs and professional gardeners, as well as for heating large public buildings, and has never failed to give entire satisfaction.

The *cost* (which is less than that of any patent Boiler of equal power yet out) together with the great *saving* it effects, in *fuel*, bring it within the reach of all classes.

Testimonials and particulars as to price, the various sizes, &c. to be had on application to Messrs. CLARKE & HOPE, Horticultural Engineers, Lionel Street, Birmingham.

Exhibition Prize Medal, 1862.

HOTHOUSES for the MILLION.—On the principle invented and patented by Sir Joseph Paxton, M.P., combining simplicity, cheapness, excellence, and durability. Span-roof Houses, painted three coats, and glazed with English Sheet Glass, ready for fixing, 21 ft. by 13 ft., 24*l.*; 43 ft. by 19 ft., 73*l.* 5*s.*; 64 ft. by 25 ft., 161*l.*

Illustrated Circulars, with Prices, can be had on application to SAMUEL HEREMAN, 7, Pall Mall East, London, S.W.

Also, A HANDBOOK on VINE and FRUIT TREE CULTIVATION, 2d Edition, price 1*s.*; post free, 1*s.* 1*d.*

Heating by Hot Water.

JOHN TOOLEY, late 21 years with J. WEEKS & Co.

TUBULAR BOILERS,

All Sizes on the most Improved Principles, Valves, &c.

References in England, Ireland, and Wales.

JOHN TOOLEY, 9, Radnor Street, King's Road, Chelsea, S.W.

RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

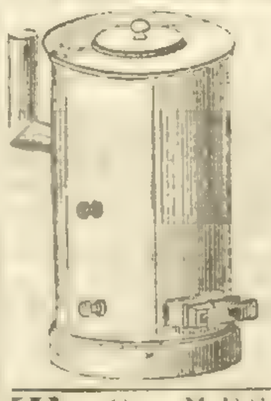

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 8*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the

Patentee's Warehouse, 155, Cheapside, London, E.C.

Price complete from 3*l.* 10*s.*

Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

T. G. MESSENGER, HORTICULTURAL BUILDER and ENGINEER, Loughborough.

T. G. M.'s PATENTED BUILDINGS combine all the modern improvements, are most effectually ventilated by means of his unequalled Apparatus, can be made either plain (and which are at the same time elegant in appearance), or of the most elaborate design. They can be fixed as permanent buildings, or made to be portable.

T. G. M.'s HEATING APPARATUS continues to give the greatest satisfaction for its heating qualities and small consumption of fuel.

ILLUSTRATED CATALOGUES of the above, Glazing without Putty, Garden Engines, &c, sent upon application.

Heating by Hot-water.

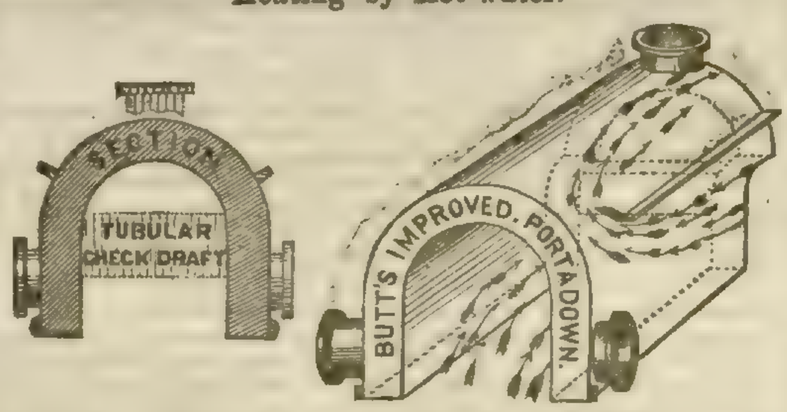

THE ORIGINAL SADDLE BOILER, with Improved Tubular Check Draft, Flued Ends, and Ribbed Sides, for Heating Greenhouses, Vineries, Forcing Pits, Public Buildings, &c. These Boilers possess increased heating surface capacity, power, economy in fuel, and are the only class of Boilers, all points considered, when properly fixed, that can be relied upon with safety for Heating Greenhouses, &c., of any extent by hot-water, and at a moderate price.

Gardeners interested in such work should write for LIST of TESTIMONIALS, sent Post Free on application to FREDERICK WILLIAM BUTT (late of London), Portadown, Ireland.

DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water tight Roof insured.

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

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No. 1. The works may be designed and executed entirely by the landowner's agent, and the Company employed only to supply the loan and conduct the matter through all the official forms for charging the outlay on the estate.

No. 2. The Company will supply plans, specifications, and estimates for any improvements to be executed by the landowner's agent as under No. 1. In each of these cases the landowner will be solely under the control of the Enclosure Commissioners.

No. 3. The Company will undertake the entire resposibility of the improvements, prepare the plans, execute the works, and finally charge on the estate the actual amount expended, with their commission thereon, approved by the Enclosure Commissioners.

Landowners may thus obtain what assistance they require from the Company, and no more, in effecting the objects in view.

Works of Drainage and other improvements are also executed on commission for landowners, who merely require the skill and experience of the Company's officers and a staff in constant practice.

Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Office of the Company, 52, Parliament Street, S.W.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c. IN ENGLAND AND WALES AND IN SCOTLAND.

The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission, in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster S.W.

ROYAL AGRICULTURAL COLLEGE,
CIRENCESTER.
SPRING SESSION, 1864.
President—The Right Hon the EARL BATHURST.
Council.
Rt. Hon. the EARL BATHURST. | Rt. Hon. T. H. SOTHERON ESTCOURT, M.P.
Rt. Hon. the EARL DUCIE. | EDWARD HOLLAND, Esq., M.P.
Hon. WILLIAM BATHURST.
Principal—The Rev. JOHN CONSTABLE, M.A., Trin. Coll. Camb.
Farm Manager.—J. L. FLETCHER.
Resident Professors.
Chemistry.—ARTHUR H. CHURCH, M.A., Lincoln Coll., Oxon., F.C.S.
Assistant to Chemical Professor.—R. WARINGTON, Jun., F.C.S.
Botany.—JOHN BAYLDON, M.B., Lond. B. Sc.
Veterinary Surgery.—A. J. MURRAY, M.R.C.V.S.
Mathematics and Surveying.—The Rev. W. MEREDITH LANE, B.A Scholar of Trin. Coll. Camb.
Drawing.—JAMES MILLER.
SPECIAL LECTURERS.
J. BAILEY DENTON, M. Inst. C.E.—On DRAINAGE.
Professor J. MORRIS, F.G.S., of University College, London—On GEOLOGY.
JOHN GAMGEE, Professor in the New Veterinary College, Edinburgh—On the CONTAGIOUS DISEASES of ANIMALS and their PREVENTION.
WILLOUGHBY WOOD, of Holly Bank, Burton-on-Trent—On the HISTORY of the SHORT-HORN BREED.
JOHN ALGERNON CLARKE, of Long Sutton, Lincolnshire—On CATTLE, SHEEP, PIGS, and POULTRY.
JOHN THORNHILL HARRISON, of Frocester Court, near Stroud—On DAIRY HUSBANDRY.
THOMAS BALDWIN, Professor of Agriculture at Glasnevin, Dublin—On FARM LABOUR in connection with the GENERAL ECONOMY and PROFITS of FARMING.
ROBERT RUSSELL, Editor of the "Highland and Agricultural Society's Transactions"—On ROTATION of CROPS.
RICHARD GRIFFITHS WELFORD, Barrister-at-Law—On LEASES and the LAWS of REAL PROPERTY as affecting Agriculture.
Applications for Admission and for further particulars may be made to the Principal.

MESSRS. WAY AND EVANS, ANALYTICAL and CONSULTING CHEMISTS, receive PUPILS for the study of AGRICULTURAL and GENERAL ANALYTICAL CHEMISTRY.
106, Leadenhall Street, E.C.

Land Drainage, and other Agricultural Improvements.
MR. BAILEY DENTON, C.E., maintains a large Staff for the execution of Land Improvements by a commission of 5s. per acre for Under Drainage, and a fixed charge for Outfall and other works.
For particulars apply to him, at 52, Parliament Street, Westminster, S.W.

Drainage of Land.
MR. C. F. HUMBERT, F.G.S., of Watford, Herts, and formerly Senior Surveyor to the Tithe Commission, a Land Surveyor and Land Agent, more than 20 years established in practice, undertakes Works of Drainage either at a contract price, or to lay out and overlook the same at a commission of 5s. per acre; and he has at his command a staff of experienced workmen. His custom is to charge merely the expenses out of pocket in making the preliminary Survey and Estimate where the works are not carried out.

Drainage, &c.
MR. J. BEAUMONT, LAND AGENT, SURVEYOR, and DRAINAGE ENGINEER (for several years Assistant to Mr. Josiah Parkes), undertakes the Planning and Execution of Works of Drainage, and Estate Improvements generally; including Embankments, and River Works; Reclamation of Marshes and Waste Lands; Irrigation and Warping; the Erection of Farm Buildings, Labourers' Cottages, &c., either at the private cost of the Landowner, or through the medium of the various Land Improvement Acts.
Estates Surveyed and Mapped, or Inspected and Reported upon for contemplated Improvements.
22 Parliament Street, Westminster, S.W.

THE LIVERPOOL and LONDON FIRE and LIFE INSURANCE COMPANY.
Established in 1836.
Offices—1, Dale Street, Liverpool; 20 and 21, Poultry, London.
PROGRESS OF THE COMPANY SINCE 1850.

Year.	Fire Premiums.	Life Premiums.	Invested Funds.
1851	£54,305	£27,157	£502,824
1856	£222,279	£72,781	£821,061
1861	£300,130	£125,974	£1,311,905
1863	£522,107	£143,940	£1,566,434

Fire Policies falling due on Lady-day must be renewed on or before the 9th April.
SWINTON BOULT, Secretary to the Company.
JOHN ATKINS, Resident Secretary, London.

PRACTICAL GEOLOGY.—KING'S COLLEGE, London.—Professor TENNANT, F.G.S., will commence a COURSE of LECTURES, on WEDNESDAY, April 6, at 9 A.M., having especial reference to the application of GEOLOGY to ENGINEERING, MINING, ARCHITECTURE, and AGRICULTURE. The Lectures will be continued on each succeeding Friday and Wednesday, at the same hour. Fee, 1*l*. 11*s*. 6*d*.
R. W. JELF, D.D., Principal.

News of the Week.

A DESPATCH from Vienna states that the English proposal for a Conference on the Danish question has been accepted by Austria, Prussia, Denmark, France, and Russia; and that the first meeting will be held in London on the 12th inst. The French papers confirm this statement so far as it relates to the Great Powers, but assert that Denmark and Sweden have not yet replied. The Federal Diet on Saturday referred the proposal to a committee, and it is believed in diplomatic circles that it will be accepted by a large majority.

The ineffectual bombardment of Fredericia has been followed by the repulse of the allies before Düppel. On Monday morning, at 3 o'clock, the Prussians made an attack on the whole of the Düppel lines, and succeeded in penetrating between the trenches. The Danes, however, soon dislodged them, and though the Prussians returned three times to the charge they were as often repulsed by the Danes; and after seven hours' fighting the Prussian soldiers at last refused to obey the command of their officers to advance. The Prussian force was consequently compelled to retreat. One of the Danish iron-clads, the Rolf Krake, took an effective part in the contest, and seriously damaged the Prussian right. The loss on both sides was considerable. The deputies of the Holstein Estates have been convened by Professor BEHN, Count RANTZAU, Herr REINCKE, and Pastors VERSMANN and SCHRADER, to meet at Kiel on Tuesday next.

The committee of the Norwegian Storthing has unanimously agreed to the proposals of the Government relative to war armaments in favour of Denmark; and in the sitting of the Storthing on Wednesday a sum of 800,000 specie thalers was voted for armaments. The Government was also authorised to employ the army and navy in aid of Denmark should they deem it necessary. 6,000 troops of the line will immediately be placed on a war footing, and the whole fleet is to be fitted out for active service.

The negotiations between the Archduke MAXIMILIAN and the Emperor of AUSTRIA in reference to his rights as the heir presumptive to the Austrian Throne were brought to a favourable issue on Thursday, and the ARCHDUKE'S acceptance of the Crown of Mexico is expected to be announced shortly.

From the United States we learn that General HALLECK at his own request has been relieved of his duty as General-in-chief, and that General GRANT has assumed the command of the Federal armies. The new Commander-in-chief has announced that his head-quarters will be with the army of the Potomac, and it is said that he will concentrate a large force to attack Richmond. It is believed, however, that the Confederates are making extensive preparations to assume the offensive. President LINCOLN has called for 200,000 men, and if that number be not raised by the 5th of April the deficiency will be made up by a draft. General M'CLELLAN and General FREMONT have both been nominated for the Presidency by great meetings in New York. A conspiracy has been discovered in Kentucky, having for its object the annexation of that State to the Southern Confederacy. The new Italian steam frigate Ré Galantuomo is said to have foundered at sea. The fate of the crew is not yet known.

By the Calcutta and China mails we learn that the VICEROY will leave Calcutta for Simla during the present month, to return to it no more as the seat of Government. The position of the new capital, however, is not yet determined on. In China the position of affairs remains unaltered; and the latest news from Japan is pacific.

The Revenue Returns for the year and quarter ending the 31st ult., show a decrease of 224,657*l*. on the quarter, and of 394,598*l*. on the year. This decrease is explained by the late reductions of the tea duties and the income tax, and in both cases is much less than was expected. In all the other branches of revenue there is a steady increase.

Home News.

THE COURT.—The Queen and Royal family continue at Windsor Castle. On Good Friday morning the Queen, the King of the Belgians, the Prince and Princess of Wales, Princess Helena, Princess Louisa, Prince Arthur, and Princess Beatrice, attended Divine service in the private chapel. The Dean of Windsor officiated, and administered the sacrament. The Rev. H. Ellison preached the sermon. On Saturday morning the Queen drove in the grounds, accompanied by Princess Helena. The Portuguese Minister and the Right Hon. E. and Mrs. Cardwell arrived at the Castle on a visit. In the evening the Queen had a dinner party. On Sunday morning the Queen, the King of the Belgians, the Prince and Princess of Wales, Princess Helena, Princess Louisa, Prince Arthur, and Princess Beatrice, attended Divine service in the private chapel. The Dean of Windsor officiated, and administered the sacrament. On Monday morning the Queen walked and drove in the grounds, accompanied by the Princess

Helena. The Portuguese Minister and the Right Hon. E. and Mrs. Cardwell left the Castle for London. Prince Philip of Würtemburg arrived on a visit. In the evening the Queen had a dinner party. In consequence of the death of the Landgravine of Hesse, grandmother of the Princess of Wales, her Royal Highness did not join the dinner party. On Tuesday morning the Queen, accompanied by Prince Arthur, walked in the grounds. Professor Owen had the honour of delivering before the Queen and Royal family the first of a course of four lectures on Natural History. The King of the Belgians and the Prince of Wales inspected Mr. Whitworth's one-pounder mountain gun, his large bore rifle, and his new hollow projectile. On Wednesday morning the Queen, accompanied by Princess Helena, came to London by a special train of the Great Western Railway. Her Majesty proceeded from Paddington to South Kensington, and visited the exhibition at the Horticultural Gardens. Her Majesty afterwards honoured the Countess of Elgin with a visit, and then returned to Windsor. The Prince and Princess of Wales and the infant Prince Albert Victor left the Castle for Marlborough House. Prince Arthur left the Castle for Greenwich Park. On Thursday morning the Queen walked and drove in the grounds, accompanied by Princess Louisa.

THE PRINCE AND PRINCESS OF WALES, with the infant Prince, returned to Marlborough House on Wednesday from a visit to the Queen at Windsor Castle. The Prince afterwards visited Prince Philip of Wurtemburg at the Clarendon Hotel. The Duchess of Cambridge and Princess Mary visited the Prince and Princess at Marlborough House. On Thursday morning the Prince rode on horseback. In the afternoon the Prince and Princess drove to Kew, and visited the Duchess of Cambridge. Yesterday morning their Royal Highnesses, with the infant Prince, left Marlborough House for Sandringham, where they are expected to remain in comparative retirement until the third week in this month.

PRINCE ALBERT VICTOR, the infant child of the Prince and Princess of Wales, was vaccinated on the 17th ult. The desired effect was produced, and the Royal infant has passed through the various stages of the process in the most satisfactory manner.

PRINCE ALFRED went on Saturday with the Duke of Roxburgh and the Marquis of Bowmont, and fished in the upper streams of Floors Water, where he landed during the day 17 salmon. On Sunday the Prince attended divine service in the parish church of Floors. On Monday morning his Royal Highness returned to Edinburgh, and had a dinner party at Holyrood Palace in the evening. On Tuesday evening the Prince dined with the Lord Advocate, in Great Stuart Street. On Thursday his Royal Highness left for Wishaw House, to spend a few days with Lord and Lady Belhaven. The Prince is expected to go to Hamilton Palace, Cadzow, and other places of interest around Hamilton to-day.

COURT ARRANGEMENTS. — The Queen has been graciously pleased to announce her intention of holding a Court at Buckingham Palace on Wednesday next, the 6th inst., at which her Majesty will receive the principal members of the Corps Diplomatique, and at a second Court, to be held on Wednesday, the 13th, a limited number of distinguished persons will be invited to attend in order to have an opportunity of paying their respects to her Majesty. Drawing-rooms will be held on the 3rd and 14th of May, and the 14th of June, by the Princess of Wales, and Levées will be held on the 7th of May, and on the 1st and 22nd of June by the Prince of Wales, on behalf of the Queen. In the months of May and June two State concerts and two State balls will, by command of the Queen, take place at Buckingham Palace, and her Majesty's birthday will be celebrated on the 24th of May.

THE CABINET.—Summonses were issued on Tuesday for a Cabinet Council to be held this afternoon at the official residence of the First Lord of the Treasury in Downing Street.

PARLIAMENTARY MOVEMENTS.—Sir F. T. Baring has announced his intention to retire from the representation of Portsmouth at the next general election. There is a vacancy at Devizes, caused by the succession of the Hon. W. W. Addington to the peerage. Sir T. Bateson, Bart., is a candidate for the vacant seat, in the Conservative interest. There are three candidates for Lancaster, vacant by the retirement of Mr. Garrett, Mr. W. A. F. Saunders, of Wennington Hall, Ingleton, in the Conservative interest; Mr. E. M. Fenwick, of Burrow Hall, in the Liberal interest; and Mr. F. Somerville Head, son of Sir Francis Head, Bart, as an independent supporter of the present Government. Sir Morton Peto has announced his intention to retire from Finsbury at the close of the present parliament, on the ground that the amount of local business and the extent of correspondence it entails is too onerous for his health. He intimates, however, his readiness to enter Parliament again for a borough that will only require him to attend to public questions.

CONSECRATION OF THE BISHOP OF ELY.—The consecration of Dr. Harold Browne as Bishop of Ely took place on Tuesday in Westminster Abbey. The Archbishop of Canterbury and the Bishops of Worcester and St. David's officiated, assisted by the Dean of Westminster.

SURRENDER OF THE IONIAN ISLANDS.—The protocol putting an end to the English protectorate of the Ionian Islands was signed at the Foreign Office on Tuesday. Immediately afterwards Earl Russell and Mr. Tricoupi, chargé d'affaires for Greece, signed another document, stipulating pensions in favour of Ionian and other subjects whose services to the Ionian Islands had entitled them to that recognition.

THE REVENUE.—The Revenue Returns for the year and quarter ending the 31st March, show a decrease of 394 598*l.* on the year, and a decrease of 224,657*l.* on the quarter. The Year's Account shows an increase in the Excise of 1,052,000*l.*; Stamps, 323,000*l.*; Taxes, 68,000*l.*; Post Office, 160,000*l.*; Crown Lands, 5000*l.*; Miscellaneous, 282,402*l.*; and a decrease in the Customs of 802,000*l.*; Property Tax, 1,483,000*l.* The Quarter's Account shows an increase in the Excise of 462,000*l.*; Stamps, 65,000*l.*; Taxes, 10,000*l.*; Post Office, 10,000*l.*; Crown Lands, 2500*l.*; Miscellaneous, 136,843*l.*; and a decrease in the Customs of 189,000*l.*; Property Tax, 722,000*l.*

THE VOLUNTEER REVIEW.—The annual Easter Review of the Volunteers took place on Monday at Blackheath, a wide plateau of undulating ground lying about four miles in a south-easterly direction from the town of Guildford. Extraordinary preparations were made by the South-Eastern and South-Western Railway Companies for the conveyance of the troops, who numbered about 18,000, with 24 guns; and Guildford and the neighbouring villages had become so crowded with visitors for two days before that the General commanding at Aldershott was unable to send over the promised contingent of cavalry, from the impossibility of obtaining quarters for them. The distribution of the metropolitan Volunteers being as far as possible equalised between the two railways, arrangements were made for running about 12 trains with troops from London on each line, irrespective of trains required for the general public, for country Volunteers, trains with horses, &c. The Volunteers from London and the suburbs arrived at an early hour at their appointed termini, and the successive trains were despatched as fast as possible by the companies; but considerable delay occurred in getting the regiments safely landed and in motion towards the ground. The approaches to the Heath also were few and narrow, and the lanes were so steep and sandy that it was a difficult task to get the artillery upon the ground, even with the aid of the powerful teams supplied by the farmers of the neighbourhood. In consequence of these delays it was impossible to get the different corps in their places on the ground by 12 o'clock, but soon after that hour nearly all the attacking and defending forces began moving across the Heath in great masses to the positions assigned to them. At this time there was a great concourse of spectators on the ground which fringed the woods, and it was noticed with satisfaction that the Volunteers formed upon this broken and difficult ground with as much precision as if they had been on the turf of Hyde Park. About 1 o'clock the whole force was stationed at their allotted points of attack and defence, and almost precisely as the last disposition was made, the weather broke in cold, sharp showers, which fell with disagreeable frequency almost throughout the remainder of the day. The defending force, which was commanded by General Russell, was composed as follows:—

1st Sussex Artillery, six 18-pounders; 1st Middlesex Artillery, four 18-pounders; 1st Hants Artillery, 1st Cinque Ports Artillery, 2d Middlesex Artillery, 2d Surrey Artillery, 1st City of London Artillery, 1st Tower Hamlets Artillery, 1st Middlesex Engineers, 1st City of London Engineers, 1st Hants Engineers, 7th Battalion Middlesex, 36th Middlesex, 2d Middlesex (South), 4th Middlesex, 9th Middlesex (West), 11th Middlesex (St. George's), 32d Middlesex, 15th Middlesex (London Scottish), 19th Middlesex, 21st Middlesex (Civil Service), 38th Middlesex (Artists), 22d Middlesex (Queen's) 1st Battalion; 22d Middlesex (Queen's); 2d Battalion; 29th North Middlesex, 46th Middlesex, 2d City of London, 2d Battalion Surrey; 12th Surrey, 1st Battalion Surrey; 3d Battalion Surrey; 1st and 7th Surrey, 10th, 19th, and 23d Surrey, 2d Battalion Hants; 1st and 2d Hants, 3d Battalion Hants; 13th, 15th, 16th, and 18th Hants; making a total of about 9750 men.

The attacking force, commanded by General Rumley, was thus composed:—

Hon. Artillery Company, Horse Artillery, two 6-pounder guns; Field Battery, four 6-pounder guns. Light Cavalry. 3d Middlesex Artillery, four 18-pounders and four 24-pounders, Hon. Artillery Company, 2d Battalion Middlesex, 26th Middlesex, 37th Middlesex, 20th Middlesex, 28th Middlesex (London Irish), 39th Middlesex, 40th Middlesex, 48th Middlesex (Havelock), 4th City of London, 1st Battalion Sussex, 2d Battalion Sussex, 1st Sussex, 2d Battalion Essex, 3d Battalion Essex, 1st Battalion Kent, 6th Kent, 2d Cinque Ports, 1st City of London, 3d City of London, 1st Battalion Tower Hamlets, 9th Tower Hamlets, 2d and 8th Tower Hamlets, 4th and 6th Tower Hamlets, 1st Battalion Berks; making in all a total of about 8500 men.

Lieutenant-General Pennefather, K.C.B., commanded in chief, assisted by a numerous staff. The actual details of the evolutions of which the battle consisted may be summed up briefly, for though the mock contest lasted at least two hours, its most striking feature was the sustained and tremendous fire kept up on both sides, as the peculiar nature and limited space of ground forbad any attempt at complicated or extended manœuvres. General Russell, with the defending force, occupied the ridge of hills stretching across the Common, facing rather to the south, where the main attack was anticipated from Farley Woods. The assailants, under General Rumley, may be said to have been divided into two bodies—one of about 4000 men, with eight guns, while the main body, of 5000 men, with two pieces of horse artillery and four field-guns, made a flank march under cover of the woods, and delivered the real attack on General Russell's extreme left, compelling the whole body to fall back, the guns covering the retreat. It was this feint and real attack, and the necessity which General Russell was under to bring his troops from his left to meet the flank attack on his right, which constituted the evolutions of the day, in which, from the absence of cavalry, there was a sameness almost amounting to monotony, as far as the spectators were concerned. The Volunteers, however, did their best by the rapidity of their movements to make up for the want of cavalry. At a little before 4 o'clock the manœuvres were brought to a close, and the troops were formed up in columns of companies for marching past. The ground over which they had to step was little less uneven, and quite as thickly overgrown with heather as any other part of the common. Under all the circumstances, and after such an exhausting day, this was rather a trying ordeal, but, nevertheless, all went through it with great credit, and some in such a manner as to elicit deserved applause. Thus ended one of the most fatiguing reviews the Volunteers have ever gone through, the great majority of them having been 10 hours in the ranks before they started to return to London. We regret to say that the day did not pass over without one fatal and two serious accidents. Many got heavy falls over the stumps of broom and gorse which lurked among the heather, and in two cases these unfortunately resulted in broken legs. The fatal accident happened to a clergyman, the Rev. Cuthbert Earle, Minister of the Catholic and Apostolic Church at Albury, who was shot in the abdomen by a ramrod, and so badly injured that he died on Wednesday morning. In all cases the sufferers were immediately removed to the hospital-marquee, erected in rear of the grand stand, and specially sent over for this duty from Aldershot. Beyond these unfortunate mishaps no other casualty took place.

Foreign.

FRANCE.—The Paris papers announce that France has agreed to the project of a Conference, that Sweden and Denmark have not yet replied, and that the Federal Diet has referred the invitation of England to the Committees on the Schleswig-Holstein question, and will give its decision about the 1st of April. They add that Russia desires that the Treaties of 1851 and 1852 should form the basis of the Conference. The *Weimar Gazette* of Wednesday says:—

"According to reliable information, France has declared to the English Government that it would not be advisable to maintain the Treaty of London as the basis of negotiations, and that she considers universal suffrage to be the only means of arriving at a solution. France would express this view at the Conference."

The same paper asserts that some other Governments have made a similar declaration. The *Constitutionnel* of Tuesday publishes an article, signed by M. Limayrac, on the Danish Circular referring to the conduct of the Austrian and Prussian troops towards the inhabitants of Schleswig. The article points out the anomalous nature of their acts, and concludes thus:—

"Modern diplomacy should seek for a new code of international law, conciliating the liberty and dignity of nations and guaranteeing the preservation of the European balance of power."

The same paper of yesterday publishes another article, signed by M. Limayrac, pointing out the difficulties to be resolved in the question of the Duchies, and stating that the only equitable mode of settling it is universal suffrage. Another article by M. Limayrac appears in the same paper, maintaining that the enthusiastic reception which Garibaldi will meet with in London will be equally embarrassing to two of England's allies—Italy and Austria. The writer observes that while England is preparing to welcome Garibaldi, a soldier who has fought bravely for the independence of his country, she manifests scorn and indignation at Mazzini, the instigator of infamous conspiracies and the associate of assassins. The Court of Assize of the Seine, sitting without a jury, on Wednesday condemned Mazzini, by contumacy, to transportation for participating in the conspiracy against the life of the Emperor. Admiral Pénaud died at Toulon on the 25th ult. of acute inflammation of the liver. The statutes of the company established by Messrs. Pinard, Schmeider, and Talabot, on the same system as that of the Crédit Mobilier, were approved on Wednesday by the Council of State.

SPAIN.—The official *Gazette* publishes a Royal decree, dated the 22d ult., creating Christian IX. King of Denmark, Knight of the Order of the Golden Fleece. The *Epoca* of Wednesday advocates the recognition of the Kingdom of Italy by Spain. Banquets continue to be given in honour of the chiefs of the Progressista party, Senor Olozaga and General Prim. The latest have taken place at Saragossa, Valencia, and Alicante. The espousal of the Infanta Donna Maria Isabel of Orleans and Bourbon with her cousin, the Count of Paris, took place on the 19th ult. in the Palace of San Telme, with great solemnity. The ceremony was performed by the Cardinal Archbishop of Seville, and was followed by the ratification of the marriage articles. The President of the Audiencia of Seville acted as Chief Notary of the Kingdom, representing the Minister of Grace and Justice.

PORTUGAL.—The Ministerial measure for the abolition of the tobacco monopoly has passed in the Cortes

by a majority of 24 votes. The American corvette St. Louis has arrived at Lisbon.

Switzerland.—Dr. Kern, the Swiss Minister at Paris, has informed the Federal Council that the negociations for a Franco-Swiss treaty of commerce have been renewed, but without much expectation of a successful issue. M. Humbert, the Swiss Envoy to Japan, has informed the Federal Council that the draught of a commercial treaty between Switzerland and Japan had been prepared, but was not yet signed.

Norway.—The Committee appointed by the Storthing to examine the Government Bills, and to report thereon, has unanimously recommended that Assembly to accept the proposals relative to war armaments in favour of Denmark. The report said:—

"Although the Norwegian people does not wish for any further intimate political connection with Denmark, the ruin of that State would, nevertheless, arouse the strongest sympathy in Norway. The Committee, therefore, recommend the adoption of the Government Bill, upon condition that Sweden and Norway should also have allies."

In the sitting of the Storthing on Tuesday a sum of 800,000 dols. specie was voted for armaments. The Government was also authorised to employ the army and fleet in aid of Denmark should they deem it necessary. Six thousand troops of the line will be placed on a war footing, and the whole fleet is to be fitted out for active service. The Royal Life Guards and one battalion of each regiment have already received orders to hold themselves in readiness to march. It is rumoured there that the appearance of the Austrian squadron in the Baltic will be considered by the Swedish and Norwegian Governments as a *casus belli*.

Denmark.—The Danish Government has addressed to its diplomatic representatives at the various European Courts a voluminous and elaborately compiled protest against the mode in which the German Powers have carried into execution their intervention in the Duchy of Schleswig. The protest shows that, in taking the step which necessitated war, the allies were actuated by different motives than those which ostensibly induced them to invade the Danish territory. It adduces the sworn informations of persons resident in Schleswig at the time of the entry of the allied armies, to prove that the royal authority was superseded, and the officials dismissed irrespective of their birth, whether German or Danish, and in violation of the terms of a proclamation declaring that on fulfilment of certain conditions they should be permitted to retain office under the Provisional Government. It further charges the allies with offering no opposition to the insurrectionary movement organised in favour of the Prince of Augustenburg, but, on the contrary, with having endeavoured by every means in their power to overthrow the subsisting order of things. It therefore urges upon neutral States the inconsistency of the conduct pursued by the allied Powers with the language which they have hitherto held. Since this protest was published two circumstances have occurred which confirm the charges brought against the German Powers. It appears that the Marshals in command of the allied armies have allowed their troops to destroy a monument which had been erected at Flensburg to the Danes who fell in the rebellion of 1848, and to carry away the armorial bearings of Denmark and Schleswig, the medallion portraits of the principal officers who died in that struggle and a couching lion which surmounted the monument as a symbol both of the kingdom and the Duchy, and also to efface the boundaries of the churchyard around it. They have also permitted the troops at Haderslad to cut away the slabs which had been fixed in the wall of the Town Hall bearing the initials of the late King Frederick VII., and to carry them away as trophies.

The Danish Duchies.—At 3 o'clock on Monday morning the Prussians attempted to surprise the Danish position at Dybböl. They penetrated between two of the trenches, and afterwards made an attack on the whole Dybböl lines. The fighting became hand-to-hand, the troops engaged using the butt ends of their muskets as well as the bayonet. The Prussians were thrice repulsed, and at last the Prussian soldiers refused to obey their officers' command to advance. The Danish iron-clad Rolf Krake took an effective part in the contest, and fired on the Prussian right from Wemmingbund. The engagement lasted seven hours. The Danes had 100 killed or wounded, but took 27 Prussian prisoners. The Prussian loss was 136 killed wounded, and missing. They took 53 Danish prisoners. On Tuesday the Austrians left Horsens, marching southwards, and in the course of the day the town was reoccupied by the Danes. The Austrians had previously informed the commander of the Danish man-of-war stationed off the town that on the first shot fired from the ship the place would be given up to pillage and destroyed. At Assenderup, where on Wednesday the Danes took twenty-three Hussars prisoners, the Prussian troops burned several farms out of revenge. Ten Hussars were taken prisoners on Thursday. It is reported that a portion of the Prussian division of the Guard has gone to Fredericia to co-operate with the Austrians in continuing the siege of that place. Several engineer officers of high rank have arrived at Rendsburg, in order to survey and select ground for the erection of a new line of fortifications. The King of Denmark arrived at Aarhuus on Tuesday, and at once proceeded to Randers. Five Danish steamers, two transports, and one sailing vessel have made their appearance off the north of Arcona (Rugen Island). The Deputies of the Holstein Estates will meet at Kiel on Tuesday next. They have been convened by Professor Behn, Count Rantzau, Herr Reincke, and Pastors Versmann and Schrader.

Wurtemburg.—The King has determined that during his illness the prerogatives of the Crown shall be more absolutely transferred to the Council of Ministers, and that the Crown Prince shall preside at the Council and sign documents in His Majesty's name.

Frankfort.—At the extraordinary sitting of the Federal Diet on Saturday a communication from England was submitted in reference to the Conference between Austria, Prussia, England, and Denmark, as well as an invitation to the Diet to take part in the proposed Congress. The matter was referred to the committees, with instructions to report upon them with the least possible delay. The Diet, however, will not vote on the question until the representatives of the minor States receive instructions from their respective Governments, who are expecting to be made acquainted by Austria and Prussia with the bases which the latter intend to lay down for the conclusion of peace with Denmark. In diplomatic circles it is generally believed that the Diet will accept the Conference by a large majority.

Prussia.—The King, on the anniversary of his birthday on the 22d ult., in a most cordial manner expressed to the Ministry his approval of the policy adopted both at home and abroad. An official notification of the Ministers for Foreign Affairs, Marine, and Commerce, published on Tuesday, announces that the blockade of the ports of Stralsund, Wolgast, Barth, Griefswalde, and Cummin, as well as Swinemunde, has not yet been carried out; and the Prussian cruisers have been ordered to inform all the trading vessels of neutral States they may meet on the high seas, that no Prussian port of the Baltic has been placed in a state of blockade by Denmark. Count Bernstorff, the Prussian Minister in London, has contradicted a report which has been current, that at the banquet at Buckingham Palace after the baptism of the son of the Prince and Princess of Wales, he refused to drink the toast of "The King of Denmark."

Austria.—A despatch from Vienna states that the Conferences for the settlement of the Danish question will begin in London on the 12th of April. The official journals say that the Conference, without bases for negotiations and without armistice, has been accepted by Austria, Prussia, Denmark, France, and Russia; and that Austria desires that the Federal Diet should send a special representative. Difficulties have arisen in regard to the Archduke Maximilian's departure for Mexico, caused it is said by the necessity of coming to an understanding as to the rights of the Archduke, as heir presumptive to the Austrian throne. The *Oesterreichische Zeitung* of Thursday says that the negotiations between the Archduke and the Emperor on this subject were brought to a favourable issue on that day, and that the Archduke's acceptance of the Crown of Mexico is expected very shortly.

The Adriatic.—The line-of-battle ship Kaiser and the flagship Elizabeth passed the island of Lissa on Sunday. They were coming from Pola, and steering in a south-westerly direction.

Hungary.—The military organisation of Hungary by the revolutionary party is being proceeded with on the basis of the former regimental lists of National Guards (Honveds). The greater part of the former colonels and majors of the Honved Corps of 1848 have been arrested.

Venetia.—Letters from Venetia to the 22d ult. report that demonstrations have occurred in all the cities of that province to celebrate the anniversary of the revolution of 1848. Several arrests were made in Venice. It was believed that the visit of the Emperor of Austria to Venetia would be postponed until the first fortnight in April.

Italy.—Letters from Rome state that the Pope officiated in St. Peter's on Easter day. On account of the rain His Holiness bestowed the public benediction inside St. Peter's, instead of, as is usual, from an exterior balcony. His Holiness had previously undergone an operation for a tumour on his leg, and has since been in better health. The alarming rumours which have been current respecting him are said by the French papers to be without foundation. The *Military Gazette* of Turin denies that a camp of observation is to be formed at Bologna. Advices from Rome confirm the intelligence that fresh enlistments of brigands are taking place.

Ionian Islands.—The demolition of Fort Vido was completed on Tuesday.

Russia.—On Thursday, being the 50th anniversary of the entry of the allies into Paris, a review of the Guard took place in front of the Monument of Alexander I. The *Invalide Russe*, in an article on the subject, says:—

"Every nation has its own way of perpetuating glorious reminiscences. In France and England the monuments, streets, and bridges bear the names of victories. In Russia the exploits of our forefathers live in the hearts of the people, and the anniversaries are celebrated by reviews.

Poland.—Intelligence from Warsaw states that the entire general staff of the Russian army has been transferred from Warsaw to the camp near Kalisch. General Borg is shortly to follow. On the Polish frontier near Inowraslaw the Prussian troops have discovered numerous bands of insurgent volunteers. 50 Russians were captured, and the remainder succeeded in escaping to Poland. A detachment of insurgents under Corea, coming from Galicia, crossed the frontier of the palatinate of Lublin, after an engagement near Radsyn, which lasted 12 hours. Another more important engagement occurred near Wonchock, in the palatinate of Radom, between the insurgent corps under Bossak and the Russians, which is said to have resulted favourably to the former.

Turkey.—Mustapha Pasha has retired on account of ill health from the Ministry of Finance, and has been replaced by Kiamil Pasha, but remains in the Cabinet without a portfolio. The Grand Vizier retains the superintendence of the Finance.

Danubian Principalities.—It is said that Prince Couza, under pressure of the menaces of Austria, has consented to take measures against the Polish and Hungarian refugees. A motion expressing censure and want of confidence in the Ministry has been rejected by a large majority in the Chambers.

India.—The Calcutta mail of Feb. 22 states that the Viceroy and Council will leave Calcutta for Simla in the course of the present month to return to it no more as a seat of Government. Although Calcutta will cease to be the seat of the civil administration of India, it will continue the head quarters of the commander-in-chief. All was quiet on the frontier up to the 14th ult. The arrangements for opening the Bombay, Baroda, and Central India Railway to Surat will be completed by the 1st of April.

China.—From Pekin we have no news, the cold weather having closed up the usual access to the capital. In Shanghae the prevalence of crime is arousing the serious attention of those in authority, and it is stated that arrangements are in progress for the punishment of native criminals by foreign authorities. From Fuhchau we learn that the district mandarin is about to be degraded for his inefficiency in quelling the recent anti-missionary riots.

Japan.—A great fire which lately took place at Osaca has completely destroyed a portion of the city about five miles in circumference. Fires have also occurred at Kanagawa, and in the neighbourhood of Yokohama. The Prussian treaty has been ratified. The Swiss have made a treaty, which was to take effect from the 3rd February, on which day it was to have been signed at Yeddo. The French and American ministers have succeeded in obtaining a reduction of the duty upon various articles.

United States.—An order from the War Department announces that General Halleck, at his own request, has been relieved from the position of General-in-Chief; that General Grant has been appointed to succeed at head-quarters, both at Washington and in the field; and that Gen. Halleck has been assigned to the duty as Chief of the Staff of the Army, under the direction of the Secretary of War and the General-in-Chief. The same order confers upon General Sherman the command in the South-West, vacant by the promotion of General Grant. Gen. McPherson is to command the army in Tennessee. General Grant officially assumed the command of the Federal armies on the 18th ult., and announced that his head-quarters in the field would be with the army of the Potomac. General Sherman has also assumed his new command, with his head-quarters at Nashville. His official despatches confirm the failure of his Mississippi expedition. The Confederate General Bishop Polk, at Demopolis, Alabama, in congratulating the troops on the retreat of General Sherman, said, "Never did so grand a campaign, inaugurated with so much pretension, terminate more ingloriously." The Confederates are apparently about to assume the offensive. General Johnston has advanced a large force of cavalry, infantry, and artillery to Taylor's Ridge, near Ringgold. Stuart, with 5000 cavalry, is reported across the Rappahannock, at Fredericksburg, menacing Meade's communications; the Confederates are also moving upon Barboursville, in West Virginia. Troops are embarking at Vicksburg for a campaign, in conjunction with General Banks, against the Confederates in Louisiana, and General Sherman has impressed all the steamers at Vicksburg to convey the troops up the Red and Washita rivers. Through revenge for Colonel Dahlgren's death, Kilpatrick's cavalry, at Norfolk, Virginia, made an incursion into King's and Queen's County, laid in ashes the town and county seat of that name, and destroyed a large amount of private Confederate property. The inhabitants were driven from their homes, and many pursued and killed. Mills, granaries, and houses were included in the general destruction. The Federal loss in the battle at Olustee, Florida, is now shown to be upwards of 2500 killed and wounded. The actual number of Federals captured is not yet made known. The Confederates have captured one white and two coloured Federal regiments which recently occupied Yazoo City. Admiral Farragut has abandoned the attack on Mobile. General Longstreet has mounted his forces, and it is reported that he will proceed to North Carolina. The Free State Government has been publicly inaugurated at New Orleans with imposing ceremonies. The wife of General Beauregard has died in that city. At the funeral a great public demonstration of sympathy was made. In Kentucky the Governor has protested against the enlistment of slaves, declaring that he will carry out the state laws against persons taking slaves without the consent of their owners. President Lincoln, on the 15th, issued a call for 200,000 additional troops, allowing until

the 15th April for filling up the quotas by volunteering. The present high bounties will be continued until the 1st. Both Houses of Congress have passed the Bill authorising Secretary Chase to sell the surplus of gold in the Treasury, with the amendment that the obligation to create a sinking fund, according to the Act of February, 1862, shall not be impaired. The Congressional Committee has reported upon the resolution requiring the President to inform England of the intention of the Federal Government to terminate the Canadian Reciprocity Treaty in September, 1865, unless the treaty be, meanwhile, modified by agreement of both Governments. A great meeting of Democrats, who advocate General M'Clellan for the Presidency, was held at the Cooper Institute on the 17th ult. The speeches and resolutions denounced the Administration and Abolitionists, and declared General M'Clellan to be the only man capable of rescuing the nation from disintegration and ruin. On the following day General Fremont was nominated for the Presidency by a great meeting. The platform was entirely Abolitionist. It proclaimed equality of all men before the law, without distinction of race or colour, and denounced the initiation of serfdom by attaching the person of the labourer to the soil. The United States District Court has ordered the restoration of the barque Saxon and cargo to the owners. President Davis has appointed the 8th of April for fasting and prayer. A conspiracy is reported to have been discovered in Kentucky, extending through several towns and counties, having for its object the annexation of that State to the Southern Confederacy. Numerous arrests have been made of persons organising companies to join the Southern armies. The prize steamer Peterhoff was recently sunk off Cape Fear by coming in collision with a United States transport. The British ship Star of the West, which has arrived at New York, reports meeting an Italian frigate in a sinking condition on the 7th ult. The Star of the West consented to lay by her all night. After 11 o'clock the frigate ceased replying to the signals, and in the morning she had disappeared. She is supposed to have been the Rè Galantuomo, the new war steamship constructed for the Italian Government. One British, one French, one Russian, and two American war vessels have sailed from Halifax and New York in search of the frigate and her crew, who numbered 406 persons.

MEXICO. — Juarez has published a letter denying that he had resigned the Presidency. He had attempted to establish his seat of Government at Monterey, but had been expelled from that city by the Governor of the State, Vidaurri, who had abandoned the Juarez cause. Gonzales Ortega is also reported to have joined the Imperialists. The capture of Zacatecas by the French, with the occupation of numerous other towns, is confirmed. The French corvette Cordellière has captured the Mexican vessel San Francisco with despatches for Juarez. Four French war steamers were blockading the port of Acapulco.

SAN DOMINGO.—The Spanish are reported to be making no progress in San Domingo.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅜ to ½ for Money, and 91⅜ for Account; Three per Cents. Reduced, 89½ to ⅝; New Three per Cents., 89⅝ to ½; Bank Stock, 236¾ to ¼; India Five per Cent. Stock, 104½ to ⅝; Five per Cent. Enfaced Rupee Paper, 103; Ditto Five and a Half per Cent., 112; Exchequer Bills, 3*s.* dis.—FOREIGN: Brazilian Old Five per Cents., 100½ ex div.; Ditto 1863, 88½ to ¾ ex div.; Buenos Ayres, 95½; Chilian Six per Cents, 101 ex div.; Colombian Six per Cents., 79½ ex div.; Equador New Consolidated, 13⅞; Egyptian, 99⅛ to 100¾; Ditto, second issue, 100½; Greek, 23⅝ to ⅛; Italian, 67¼; Ditto Maremmana Railway, 74½; Mexican, 45⅛ to ½; New Granada Deferred, 9; Peruvian, 1862, 85⅛ to 86; Portuguese, 1853, 49; Ditto 1863, scrip, ⅞ pm.; Russian, 1850, 88; Ditto, 1862, 91¼; Spanish, 52⅞; Ditto Passive, 36; Ditto Certificates, 13¼ to ¼; Turkish, 1854, 94; Ditto 1858, 70⅝; Ditto 1862, 71⅞ to 72¼; Ditto 1863, 68; Venezuela, 24; Ditto 1862, 60¾ to ½; Ditto One and a Half per Cents., 12¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued..	£28,060,055	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	13,410,055
		Silver Bullion	—
	£28,060,055		£28,060,055

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£11,273,114
Rest	3,884,915	Other Securities	22,199,370
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	10,280,458	Notes	7 650,530
Other Deposits	12,656,986	Gold and Silver Coin ..	753,464
Seven days and other bills	499,119		
	£41,876,479		£41,876,478

March 31, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY: *March* 25.—BANKRUPTS.—R. ALLEN, Newbold Verdon, Leicestershire, Collier's Labourer—W. ANDERSON, Shaftesbury Terrace, New North Road, Working Engineer—W. ALLEN, late of Cowley, Oxford, Cigar Dealer—J. ANGLESE, Kingston-upon-Thames, Shoemaker—J. BROWN, Portsea, Beer Retailer—W. BOLTON, Norwich, Canvasser for a Friendly Society—T. BYRNE, Rugeley, Staffordshire, Innkeeper—G. BICKERTON, Tunstall, Staffordshire, Grocer—P. S. BARNES, late of Kentish Town Road, Jeweller—J. BIRD, Hirwain, Glamorganshire, Coal Merchant—JOSEPH BEDELLS, and JAMES BEDELLS, Leicester, Haberdashers—F. G BULGIN, late of Judd Street, Euston Road, Paymaster in the Royal Navy—H BRENNAND, Dalton, Lancashire, Farmer—JOHN JOSEPH BUTLER, Norwich, Dentist's Assistant—S BENTLEY, late of Aston, Warwickshire, Lamp Maker—J. BUSTARD, Hulme, Lancashire Journeyman Bricklayer—G. CULLWICK, Bilston, Staffordshire, Baker—A. CLEGG, Hawley Road, Camden Town, Commission Agent—J. CAYFORD, late of Victoria Mews, St. John's Wood, Blacksmith—C. COLLIER, Lowestoft, Suffolk, Confectioner—T B DENHAM, Salford, Commercial Traveller—T. DUNN, late of Great Carter Lane, Doctor's Commons, Boot and Shoemaker—E. T DETHIER, late of Upper Fitzroy Street, Fitzroy Square, Cabinet Maker—J. EDWARDS, Shrewsbury, Ironmonger—W H. FAUIN, Ramsgate, Grocer—S. GREENWOOD, late of Hanging Heaton, Yorkshire, Woollen Manufacturer—J. GRUBB, late of Pleasant Row, Islington, Printer—W GREASLEY, Alfreton, Derbyshire, Labourer—F. A. GUTHMAN, Bush Lane, Cannon Street, City, Paper Merchant—T. HIGHAM, Manchester, Dealer in Musical Instruments—E. F. HUNNEMAN, Cranmer Road, Brixton, Banker's Clerk—T. P. HICKMAN, late of King Street, Camden Town, Licensed Victualler—J. HUBERT, late of Greenwich Road, Greenwich, Lighterman—T. HERDMAN, Stockton on Tees, Durham, Gardener—L. HARTLEY, Barnoldswick, Yorkshire, Butcher—H. E. HOOPER, late of Crosby Hall Chambers, Bishopsgate Street, British Wine and Beer Merchant—C. HANSON, Swansea, Glamorganshire, Grocer—P. ISEMONGER, Chryssell Road, North Brixton, Coal Merchant—T. JONES, Perthihyde, Carmarthenshire, Shopkeeper—T. F. JOYCE, Birmingham, Commission Agent—H JONES, Cefn Coch, Carnarvonshire—E. M JONES, Hoole, Cheshire, late Surgeon Dentist—G JARRATT, late of Birmingham, Butcher—R. JAMESON, Ulverstone, Lancashire, Joiner—E. JACOBS, Paul Street, Finsbury, Fancy Cane Manufacturer—E JOHNSON, High Street, Shoreditch, Oil and Colourman—E. H LUEBBERS, Liverpool Merchant—E. H. LAMBERT, Northampton, Currier—J R. MARTIN, Cambridge, Tailor—G. MELLARD, Sheffield, Publican—J. M'KAY, Dalston, Cumberland, Quarry Proprietor—F. MENZIES, Carlisle, Innkeeper—D. MOOR, Kingston-upon-Hull, Merchant—C. MILLS, Park Street, Camden Town, Hardwood Turner—J. MOWAT, Cornwall Villa, Dalston, Commission Agent—G. MILLWOOD, Beavour Grove, Hammersmith, Bricklayer—T. NIPLIN, Buckland Brewer, Devonshire, Retired Farmer—J. NOBLE, Leicester, Licensed Victualler—J. NICHOL, Kingstown, Cumberland, Farmer—H. NEWETT, Liverpool, Butcher—J. NIBLETT, late of Birmingham Journeyman Chaser—G. NEEDHAM, Nottingham, Silk Merchant—W. POPE, late of Laverstock, Dorsetshire, Farmer—R. PRICE, Newton, Lancashire, Dealer in Cattle Food—E. PEAKE, Hereford, Saddler—H. R. POOLEY, Grove Place, Brompton, Commercial Traveller—C. POCOCK, Greenham Common, Berkshire, Hay Dealer—M. ROBERTS, late of Boston Spa, Yorkshire, Schoolmistress—T. REYNOLDS, Newbold Verdon, Leicestershire, Labourer—J. RODGERS, Brighouse, Yorkshire, Cardnailer—F. ROBERTS, Wrexham, Denbighshire, Provision Dealer—E C. RAMSDEN, Fenchurch Street, City, Merchant—R. SMITH, Clayhidon, Devonshire, Farmer—C. SMITH, Llandudno, Carnarvonshire, Dealer in Fancy Ware—G. SHAYLER, Cumberland Place, Westbourne Grove West, Plasterer—T. C SMALL, Birmingham, Veterinary Surgeon—T. SAWBRIDGE, Willenhall, Staffordshire, Locksmith—H. T. THWAITES, Coleman Street, City, Accountant—B. WILLIAMS, Landport, Hampshire, Photographer—W. WORRALL, jun., Euston Road, St. Pancras, Painter on Glass—J. WAREHAM, Corfe Mullen, Dorsetshire, Innkeeper—T WARD, Lemthall Starkes, Herefordshire, Haulier—G. B. WILLIAMS, late of Brecknock Crescent, Camden Town, Jeweller.

TUESDAY: *March* 29.—BANKRUPTS.—J. ARMSTRONG, Hobbies-burn Cumberland, Farmer—J. ARTHUR, St. Catherine, Somersetshire, Paper Manufacturer—W. ADAMS, Uffington, Berkshire, Labourer—C. BILHAM, Hickling, Norfolk, Grocer—W. BROOKS, Norwich, Currier E. BRISCOE Tilston, Cheshire, Farrier—W. BUTLER, Birmingham, Coal Agent—THOMAS RICHARD RUDD BANNOCK, Bury St Edmunds, Suffolk, Corn Dealer—CHARLES BILLINGHAM, Evelyn Street, Deptford, Builder—HIPPOLYTE CHATEL, Agar Street, Strand, Coffee house Keeper—ISABELLA CANTELANE, Eldon Road, Kensington, Spinster—WILLIAM EVANS, Madeley Shropshire, Sinker—T. GRATTON, Liverpool, Pork Butcher—T. GOODALL, Bromshall, Staffordshire, Farmer—J. GARRETT, Birmingham, late Corn Dealer—B. HAYWOOD, Walsall, Staffordshire, Journeyman Plumber—W. JACKSON, late of Ogley Hay, Staffordshire, Licensed Victualler—T JONES, Oldbury, Worcestershire, Shopkeeper—H. JONES, Liverpool, Plasterer—S. T. LAMB, Norwich—J. LANE, Upper Sapey, Herefordshire, Blacksmith—J. LITTLE, Baldock, Hertfordsh., Innkeeper—S. MILES Reading, Berkshire, Rope Manufacturer—C. W. MEREST, late of Soham, Cambridgeshire—M. MARNELL, Hurley Road, Lower Kennington Lane, Widow, Dressmaker—G. MORLEY, Leeds, late Coal Merchant J. I. NEWTON, Norway Wharf, Hackney Road, Government Contractor—J. PENNEY, Portsea, Hampshire, Collector—ELIZABETH ROBERTS ELIZA ROBERTS, and ELLEN ROBERTS, Llandudno, Carnarvonshire, Lodging House Keepers—J. STANTON, jun., Swayfield, Lincolnshire, Butcher—J. SMITH, Medomsley, Durham, Builder—G. STONES, Smethwick, Staffordshire, Iron Refiner—RICHARD STAMP STEPHENSON, late of York, Joiner—W. TUCKER, Euston Mews, Euston Square, Coach Builder—A. B. WELSH, late of Borstal, near Rochester, Kent, Labourer—G. WOODWARD, Cranage, Cheshire, Labourer—H. WOOD, Beeston, Nottinghamshire, Bookseller.

SCOTCH SEQUESTRATIONS.—G. COULL & SONS, Rathven, Banff, Merchants—H FLETCHER, Greenock, Wine and Spirit Dealer—J. FRANKENSTEIN, Linlithgow—J. HAMILTON, Glasgow, Flesher—A. HUTCHISON, Glasgow, Grocer—A. MACPHERSON, Bothwell, Lanarkshire, Teacher—W. NISBET, Glasgow, Baker.

Metropolis and its Vicinity.

THE APPROACHING VISIT OF GARIBALDI.—The mail steamship Ripon, with Garibaldi and suite on board, touched at Gibraltar on Tuesday and proceeded to Southampton. After staying for a few days at the country seat of Mr. Seely, M.P., in the Isle of Wight, he will come to London and be the guest of that gentleman at his town residence at Rutland Gate. Meetings have been held in London for the purpose of arranging the details of his reception, and a general feeling has been expressed that it would be more acceptable to Garibaldi himself to place at his disposal a sum of money for the purpose of being applied to any future enterprise he may undertake than to waste it on entertainments or personal offerings which he is not likely to accept. Mr. Richardson, a member of the Court of Common Council, has given notice of his intention to move, at their next meeting, that the freedom of the Corporation of the City of London be presented to General Garibaldi, in a casket of the value of 100 guineas.

THE PROPOSED NEW COURTS OF JUSTICE.—The number of houses intended to be taken for the construction of the new courts of justice is 162, situated in that colony of courts in St. Clement Danes, between Yeate's Court and Lower Serle's Place, including Clement's Lane, Plough Court, New Court, Old Boswell Court, Robinhood Court, Cromwell Court, and other dilapidated and closely confined localities, the houses varying from two to twenty rooms, and being generally badly drained. The estimated number of families to be displaced is 210, and the promoters state that no provision has been made to remedy the inconvenience, if any, likely to arise from such displacement.

THE THAMES EMBANKMENT.—For some days past hundreds of cartloads of earth, sand, and chalk have been thrown into the Thames for the purpose of forming a foundation for the Thames Embankment at the bottom of Norfolk Street, Arundel Street, and the adjacent streets which run down to the river. At this spot and eastward to the Temple Gardens the works for the embankment are going on rapidly. In the course of a few days the ship Royalist, which was one of those which went out in the search for Sir John Franklin, but which has of late years served the purpose of a Thames Police Station, will have to leave her old quarters at the bottom of Norfolk Street and find a position in some other part of the river. The works between Westminster Bridge and Hungerford are going on with great rapidity, vast numbers of men being employed day and night in carrying out the plans.

HOLBORN VALLEY IMPROVEMENT.—The number of houses proposed to be taken and pulled down for the purposes of this improvement amount to 154, containing from four to twelve and two to ten rooms each, situate in Shoe Lane, Plum Tree Court, and other adjacent courts in the parish of St. Andrew, Holborn, on the south side, and in Great Saffron Hill, Field Lane, Cock Court, Green Dragon Court, Fox and Knot Court, Hosier Lane, Turn Again Lane, and other localities in the parish of St. Sepulchre. The number of persons to be displaced by the demolition of these localities, as far as can be estimated, is 2216, but provision is proposed to be made by the Corporation of London to remedy the inconvenience of such displacement by building in some suitable spot in the neighbourhood model lodging houses for the classes ejected.

MILITARY FRAUDS AT WOOLWICH.—A reward of 30*l.* has been offered by the authorities of the War Department for the apprehension of a recruiting sergeant named James Saunders, who has been employed in Woolwich garrison for many years, and who appears to have succeeded in realising some thousands of pounds, by means of perjury and false attestations. It was his duty to enlist and receive recruits from other depôts, and to carry out the preliminaries for their being sworn in. On the production of the attestation papers bearing the signatures of the local magistrate, the majority of which were forged he was entitled to a bounty of 15*s.* Considerable sums of money were likewise paid over to him, under a claim for rations and pay due to recruits not in existence. Colonel Wodehouse, who has recently succeeded to the command of the Royal Artillery Depôt Brigade, having received information which induced him to suspect the sergeant's probity, he was placed under arrest in charge of Sergeant Harvey, who was recently reduced from the grade of sergeant-major for insubordination and breach of discipline. At roll call he managed to make his escape from the custody of the guard, and has not since been heard of. The circumstances of his escape are suspicious, and Sergeant Harvey has now taken his place under arrest for complicity with his escape. It is feared that other persons in authority in the garrison are implicated.

A STURGEON AT ROTHERHITHE.—On Saturday morning, as the foreman of the labourers at Acorn Wharf, Rotherhithe, was at work on one of the barges, his attention was drawn to the dorsal fin of a large fish just above the surface of the water. With a boat-hook and a rope, together with the crane on the wharf, he succeeded in landing what turned out to be a very fine sturgeon. It measured 7 feet 2 inches, and weighed 1 cwt. 1¼ lbs. In the course of the day it was taken to the Mansion House and presented to the Lord Mayor.

THE MARYLEBONE MURDER.—At the adjourned inquest on Tuesday the jury returned a verdict of Wilful Murder against Arthur John Devine, who had previously been committed by the magistrates for trial for the murder of Mr. Duck. They accompanied their verdict with an expression of dissatisfaction at the conduct of the Home Secretary in not allowing the prisoner to be brought before them.

GREAT FIRE IN THE CITY.—On Tuesday morning a fire broke out in the warehouse of Messrs. Pewtress, the extensive paper manufacturers in Gracechurch Street. The premises were stored with paper, and fears were entertained for the banks in Lombard Street, which the warehouse closely adjoins. The flames were not subdued until the greater part of Messrs. Pewtress's premises were destroyed, and great damage done to the chapel of the Society of Friends, White Hart Court, now temporarily occupied as the banking-house of Messrs. Barclay, Bevan, & Co., during the building of their new establishment, as well as the shops of Messrs. Frodsham, the chronometer makers, and Messrs. Blanch, the gunmakers.

MURDER AT AGAR TOWN.—On Monday week the adjourned inquest was resumed in the King's Road, Camden Town, on the body of a woman unknown, discovered floating in the Regent's Canal on the 16th ult., with her clothes torn off and her skull fractured in such a manner as to leave no doubt that a fearful struggle had taken place, in which she was cruelly murdered. The body when found was much decomposed, having apparently been about three weeks in the water. Every endeavour has been made by the police to get the body identified, but without effect, and with a view of enabling the police to make further inquiry, the inquest has been adjourned to the 11th inst.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, March 26, were 1397. The average number in the corresponding week of the ten years 1854-63, corrected for increase of population, was 1419; the present return is therefore 52 below the average. During the week the births were 974 boys and 923 girls, in all 1897 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 2068.

Provincial.

BUCKINGHAM.—A shocking case of murder and attempted suicide occurred a few days since in the

town. For some time a man called William Stevens, aged 27, a tailor, had been paying his addresses to a young female called Anne Leeson, 18 years of age. The latter, however, had been constantly in dread of him, in consequence of his having stated that if she would not marry him he would take good care no one else should, for he would blow her brains out. He carried a razor in his pocket for several days, with which he threatened to murder his sweetheart, and he appears to have shown it to deceased herself a few days before her death, when they were walking together a short distance from the town. On their return home the girl told her sister that he had behaved improperly to her, and that she would never walk with him again alone. Two days afterwards, while the girl was on her way to get some water from a pump, Stevens, who had been lurking in an adjoining passage, rushed after her in the street, and deliberately drew the razor across her throat. The wound severed the windpipe and larger vessels in the neck, causing almost instant death. The murderer then inflicted a frightful wound in his own throat, from which he is now suffering, with very little prospect of recovery. The jury at the inquest returned a verdict of Wilful Murder against him, but he is still so ill that it was impossible to bring him up for trial at the present assizes, and the case has consequently been ordered to stand over to the next assizes.

BURSLEM.—At the Borough Police Court on the 8th ult., six informations, lodged under the Coal Mines Inspection Act, were heard against Messrs. Fox and Ward, proprietors of the Booden Colliery, near this town. The defendants were charged with not having an adequate break attached to the engine, not having the flywheel of the engine securely fenced, using a single-link chain for lowering and raising the men employed in the pit, not having a proper indicator showing the position of the load in the shaft, not having a proper steam gauge to the boiler, and not securely fencing the shaft of a pit out of use. The defendants were convicted and fined 40*s.* in each case, with costs, making altogether 15*l.* 12*s.* 6*d.*

CANTERBURY.—On Sunday evening a man named Horton, about 25 years of age, a labourer, attempted to take the life of Esther Cullen, a servant in the employ of Mr. Rigden, in Castle Street, in this city. He had for some years been keeping company with the young woman, but she had on several occasions slighted him, and about two years ago he was bound over by the magistrates to keep the peace towards her. On Sunday evening, while the family were at church, he went to the house, and on finding from the girl's sister that she was at home he rushed into the kitchen where she was sitting, and drawing a new pistol from his coat pocket fired it close to the right side of her head. Fortunately, the ball had fallen from it into his pocket, and she was consequently only scorched by the discharge. The man then drew another pistol, and placing the muzzle to his own head discharged it. The ball tore up the flesh across the forehead and fractured the skull, but did not cause death. He then drew a pocketknife, and thrust it into his neck, and died almost immediately afterwards. The jury at the inquest returned a verdict of *felo de se.*

FALMOUTH.—The War Office authorities have liberally offered to grant a lease of the lands surrounding Pendennis Castle, for the use of the public, on condition of their being converted into recreation grounds, by the construction of carriage roads, promenades, &c. A committee has been already formed, and 200*l.* have been subscribed towards the 1000*l.* required to effect the object.

FAVERSHAM.—On Saturday night the 19th ult. the 2d Kent Artillery, two batteries, two of the Sheerness Dockyard Volunteers, and the Gillingham Volunteers, one battery, were exercised in a sham attack and defence at Faversham. By permission of the naval authorities three gunboats from Sheerness were brought into requisition to aid in the operations. The manœuvres extended over an hour, in which the various corps acquitted themselves in a very satisfactory manner.

LIVERPOOL.—A Board of Trade Inquiry has been held in this town respecting the abandonment of the ship John Linn, while on her voyage home from Madras to Liverpool, with a cargo of cotton, valued at 150,000*l.* Captain Browning, the master, in his account of the matter, stated that the ship was sinking, and no effort of himself or the crew could save her. But the captain of a foreign vessel, the Deogaum, now at Flushing had reported that he fell in with the abandoned vessel; that there was little water in her hold; and that he could easily have taken her into port if he could only have spared men from his own ship. Finding that he could not accomplish this, he set fire to the ship and cargo. The Court found that little reliance could be placed upon the assertions of the foreign captain that he could have saved the ship, and that on the other hand Captain Browning and his crew used every exertion to get her into a port of safety, and only abandoned her in extremity, and to save life, after 24 days of unremitting exertion. The Court, therefore, restored Captain Browning his certificate, and at the same time expressed their opinion that the captain of the Deogaum had no business to set fire to the abandoned ship on his own responsibility.—At the borough police court on the 19th ult., three men who had previously been charged with having piratically seized the American schooner the Joseph L. Gerrity while on a voyage from Matamoras to New York, were brought up for final examination. The magistrate said he was inclined to consider the case as one of piracy, but in a matter of such consequence to the prisoners he wished to give them the opportunity of applying to the superior courts. He would, therefore, remand the prisoners, to afford them that opportunity.

LYNN.—The leakage which occurred recently in the great dam of the Middle Level has been stopped. It has been ascertained that there was not any defect in the syphons, as had been also supposed, but only in the flange of the tube connecting the air-exhausting pipe with one of the syphons. This defective flange has since been removed. The syphons continue to act satisfactorily, so far as it has been found necessary to use them, but the amount of rainfall still continues below the average, and the efficiency and capacity of the syphons to pass the waters of the level in a time of heavy and continuous rain still remains to be tested.

MANCHESTER.—A few days since a woman called Ann Leslie was taken before the magistrates on a charge of shooting at a gentleman whose name was then unknown. She was remanded for further inquiry, and the police have since made some discoveries respecting her antecedents, and the person at whom she fired. They have ascertained that she came to Manchester, from London, about 10 years ago, and for some time she kept the London Pie House, in Oxford Road. She afterwards lived in Bath Street and Embden Street. The person at whom she discharged the revolver is a Manchester merchant, carrying on business in one of the principal streets in the city. It is a singular circumstance that all the information which the police have obtained is traceable to a scrap of paper which she was observed to tear in pieces after she was taken to the police station. Another circumstance has also been discovered which shows the determined character of the attack. After discharging one barrel of the revolver, she attempted to fire the remaining four, but one of the bullets fortunately slipped to the mouth of the chamber, and so prevented the barrels revolving.

NEWARK.—A shocking tragedy occurred at a village called Fiskerton, near this town, on Tuesday. A young man named Parker had a quarrel with his father about his misconduct in absenting himself from home, and going about drinking. After threatening his father with blows, the son took down a double-barrelled gun, and as his father and mother ran out of the house he shot them one after the other through the window. Both are still alive, but are not expected to survive. The prisoner is in custody.

NEWCASTLE-ON-TYNE.—Messrs. Morrison, of this town, have just forged the largest and most powerful steam hammer in the world for the Russian Government. The piston rod to which the hammer is attached is a ponderous piece of metal, weighing no less than 42 tons in its rough state, and now, when dressed down to the required dimensions, it has only been reduced to 35 tons. Its length is 38 ft., its diameter 2 ft. 4 in., having a stroke of 14 ft. 6 in., the piston being 6 ft. 8 in. The forging of this mass of metal occupied 44 days. The cylinder for the hammer was cast at the Elswick Works. Its diameter inside is 6 ft. 8 in., its weight upwards of 40 tons. The two standards weigh nearly 40 tons each. The united weights of the hammer bar, the cylinders, and standards amount to over 150 tons.

SHEFFIELD.—Mr. Rawlinson, the Government inspector, has reported to Sir George Grey that having visited the works in progress at the Agden embankment now in course of construction near the site of the late catastrophe, he found that everything objectionable at the Bradfield embankment which has failed, is now in course of repetition at the Agden embankment. Sir George Grey immediately warned the Directors of the Sheffield Waterworks of the very serious responsibility they would incur if, after the failure of the Bradfield Reservoir, and with a knowledge of the opinion expressed by eminent engineers, as well as by the coroner's jury, they should continue to construct the Agden embankment on the same plan. The Directors have consequently given orders for the stoppage of the works at Agden, until they have obtained the best possible advice as to the future construction of the reservoir. Mr. Rawlinson is now engaged in making an official inspection of the Doe Park and other reservoirs belonging to the Bradford corporation.

STRATFORD-UPON-AVON.—The local committee of the Tercentenary Festival in honour of Shakespeare having determined to place the responsibility of selecting a site for the monumental memorial to Shakspeare in the hands of gentlemen of recognised taste and judgment, have transferred their powers to a committee, consisting of the Earl of Carlisle, Earl Somers, Sir Robert N. C. Hamilton, Sir Coutts Lindsay, Mr. Charles Buxton, M.P.; Mr. Robert Bell, Mr. Layard, M.P.; Mr. Stirling, M.P.; Mr. Beresford Hope, Mr. Theodore Martin, Mr. Gruneisen, Mr. Gambier Parry, Mr. Tom Taylor, Mr. John Ruskin, and Mr. Alfred Tennyson. A sub-committee of these gentlemen having recently visited Stratford and inspected the various sites proposed, have arrived at an unanimous conclusion as to the principle of choice and the site which is most available. Their report, which has just appeared, states the grounds of their selection of the Bridge Street site as uniting all the conditions required:—

"It is eminently central, being situate at the intersection of four of the principal streets of the town. It is the most accessible point in Stratford-on-Avon. A memorial placed there would satisfy all the conditions of effect, being approached in front by a gradual ascent, along the broad space of Bridge Street, with side views from both east and west, while at the back it might be combined with the Market House, which would have to be substituted for the present one, should this site be appropriated to the Memorial. On the space thus cleared might be erected an elegant and effective loggia in the Elizabethan style, with terra cotta ornamentation of from 50 to 60 feet long, by 25 to 30 feet wide. In its rear there would be room for a new market-house, which might be made to harmonise in design with the Memorial. Into the details of the design your sub-committee do not consider it within their present province to enter; they would only submit that there is nothing irreverent or appropriate in placing the memorial of Shakespeare in the midst of the bustle of Stratford market. Indeed, such a place seems singularly suitable to such a purpose. Not only is the art of Shakspeare eminent for its healthy humanity and its intense sympathy with the realities of life, but the man himself was content to retire from the capital to his quiet native town; to set himself down among his schoolfellows, early acquaintance, and neighbours; to cultivate his own land, sell his own beeves and sheep, wool, wheat, and malt in this very market; to be a commonplace burgess of Stratford-on-Avon, while he was giving every year some immortal play to the world. A Stratford-on-Avon Memorial, we think, may well symbolize both sides of this double existence. The poet's statue might be set up here, surrounded, on the one hand, with illustrations of the marvellous creations of his mind, on the other with the everyday life and business of the town at its busiest."

The town itself would thus gain an object of additional attraction to the many associations connected with Shakspeare which draw thither the travellers from all lands: and the name of Shakspeare would be appropriately honoured in the place of his birth by the best combination of the fine arts which our century can devise. In addition to this monumental memorial, various plans have been arranged for celebrating the Festival in the town. These include a banquet, performances of the Poet's plays, a concert, a ball, readings, and exhibitions, for all of which the first talent of the day has been gratuitously enlisted, while the future interests of the locality are not to be overlooked, as the surplus of the proceeds is to be applied to the improvement of Stratford Grammar School.

WHITEHAVEN.—The Archbishop of York last week paid a visit to this town, of which he is a native. As this was the first visit of his Grace since his elevation to the episcopal bench, the inhabitants turned out to do him honour. The Volunteers were drawn up as a guard of honour when he went to church, and the clergy and churchwardens presented an address of congratulation. The Archbishop, in reply, expressed his appreciation of the goodwill evinced by the people, which he said was no common support to a person in his position. The office and duties of a bishop in these times were not free from difficulties, and looking at the future, he could not see that those difficulties were likely to be diminished.

Ireland.

WRECK OF THE CITY OF NEW YORK STEAMER.—The Inman steam-ship City of New York, which left New York on the 19th ult., struck on Daunt's Rock on entering Queenstown harbour on Tuesday morning. The rock penetrated her bottom under the starboard bunker, opposite the mainmast, and the ship speedily filled with water to her main deck. The specie, mails, the passengers, 153 in number, and the crew were saved, and it is expected that her cargo, which is chiefly cotton, will be saved if weather continues fine, but in a damaged state. The Port Admiral at Cork immediately sent down to the wreck two gunboats with a large number of seamen, and several tug boats to assist in lightening the vessel and striking the rigging. All the Cunard tenders at Queenstown also went down to render assistance. The position of the vessel on Thursday was very precarious, and it was feared that she would soon break up. Yesterday however divers were able to go down, and they report that, with the exception of one hole near the forward bunker, the vessel has sustained no injury, and sits firm and upright upon the rock. This is the first serious accident which has befallen the American steamers running to and from Queenstown.

THE ATTACK ON MR. GORE JONES.—At the Tipperary Assizes at Nenagh, the man Hayes was convicted on his own confession of firing at Mr. Gore Jones, R.M., with intent to murder him. Mr. Justice O'Brien commented at length upon the heinous nature of the crime, and sentenced the prisoner to penal servitude for 20 years.

AGRARIAN OUTRAGE IN WESTMEATH.—A murderous attack was made a few days since upon a young farmer called Walsh, in consequence of his family taking a farm from which some persons had been ejected. The attacking party were seen to enter the field where Walsh was working by six or eight persons—among whom was his own brother—but they all distinctly affirmed that they were totally unacquainted with any of the party, and even asserted that they were unable to give a description of their personal appearance. For the last month the house in which Walsh resided had been closely watched by the police, and finding this to be the case, the party took the opportunity of attacking him when engaged on his farm, which is so situated as to afford many facilities for their escape, being distant one mile and a half from the nearest constabulary barrack. In spite of the difficulty of obtaining evidence from the witnesses of the outrage, the constabulary have succeeded in arresting seven persons belonging to the

county of Kilkenny. Walsh has died of the injuries he received, but before his death, he recognised four of the men who are in custody.

THE MAYO MURDER.—At the Mayo Assizes, a woman called Bridget O'Neill, about 40 years of age, has been convicted of murder and sentenced by Baron Hughes to be hanged on Wednesday the 5th inst. Her victim was a poor dressmaker, whom she accused of setting fire to her turf. The prisoner met deceased in a field, and there murdered her with a reaping-hook. No one saw the blow struck, but the circumstantial evidence, given by 18 witnesses, left no doubt of her guilt. The body of her victim was found lying on her face in a hole, the head covered with blood, with three cuts on the forehead and a hole behind the ear, made by a stone which was lying near the corpse. The prisoner seemed quite insensible to her position, and angrily rebuked her husband for taking it to heart.

Scotland.

MURDER NEAR ALLOA.—On Tuesday the 15th ult. a lad, about 12 years of age, named James Paton, was found lying on the Stirling and Alloa road, near Tullibody Bridge, frightfully wounded and speechless, and on the following day he died of his injuries, which had clearly been the result of personal violence. Thomas Arnot, a surfaceman employed on the road, was apprehended on the same day, and on being examined before the Sheriff made a full acknowledgment of his guilt. He said that he was at work on the road, paring the footpath and cleaning the run-channel, when the boy came up leading a horse by the head, and brought his cart over the place which he had just finished. He felt so enraged at this that, without speaking a word, he raised his shovel and knocked the boy down with a blow on the back. He then with the edge of the shovel struck him two or three times on the head, and leaving him lying on the roadside, gathered up his tools and went home. He said he had no recollection of having seen the boy before, but added that he was so enraged at the time, that if the boy had been a giant he believes he would have served him in the same way. The prisoner, who is said to be eccentric, if not imbecile, and who was usually thought an inoffensive person, told his wife and others about the affair when he went home, expressing some remorse of conscience for the deed. On being apprehended he quoted to the officers the proverb "that those who were born to be hanged would never be drowned." He is a native of Perthshire, is 56 years of age, and has three daughters grown up.

Law.

WESTERN CIRCUIT: EXETER.—*The Attempted Murder at Plymouth.—William Stone* was indicted for having cut and wounded Elizabeth Ann Stone, his wife, with intent to murder her, at Plymouth, on the 16th January. It appeared that the prisoner and his wife had been married about 12 years. On the night in question they went to bed, being on the most amicable terms. About four o'clock the woman awoke and found a candle burning, and her husband lying by her side. She asked him what made him light the candle; he said it was time to get up. She told him it was not, and having put out the candle she went to sleep again. She awoke about seven in the morning and found her throat was cut; and that her husband's throat was cut also. In cross-examination she stated that her husband had been a petty officer in the navy; his mother was now in a lunatic asylum, and the prisoner's manner in the autumn became so strange that in October he was put into the lunatic asylum at Yarmouth; he came out of the asylum in December, but his manner was still strange, and she was afraid of him, and spoke to the people in the house about him, asking them to come to her if they heard any noise. He was an excellent husband and a good man, and she had no complaint to make against him. When the people went into the room they found the prisoner lying over his wife with his throat bleeding. He was asked what he had done it for, and he said his soul was gone to eternity for a long time. He then asked a soldier who was present to go to a drawer and get a razor, and let him finish it; and wanted the soldier to do it for him. The prisoner then said the job was badly done. A surgeon was immediately sent for, and his opinion was that the prisoner was a lunatic. The jury Acquitted the prisoner on the ground of insanity.——TAUNTON.—*The Taunton Murder.—James Howell*, a costermonger at Bath, who in 1856 was convicted of manslaughter for killing his wife, and sentenced to six years' penal servitude, was charged with the murder of a woman named Susan Cleverley, with whom he had lived since the expiration of his previous sentence. The evidence showed that he had constantly treated her in the most brutal manner, and that a few days before her death the persons living in the same house, and also in the adjoining houses, were awoke by cries of murder and noises as of a person jumping upon some substance. On entering the room they found the woman upon the floor, bleeding profusely from the face, and the prisoner jumping upon her body. A policeman was called in, but the woman refused to give him into custody, saying that if she did so he would be sure to kill her afterwards. She died a few days afterwards from the effects of the injuries. Her body was frightfully bruised, and the medical evidence clearly showed that death was caused by injury to the brain, resulting from the prisoner's blows. The jury returned a verdict of Guilty of Manslaughter. Baron Martin told the prisoner he had been found guilty upon the clearest evidence, and that his crime approached as near to murder as it was possible. For a man to knock a woman down, as he had no doubt he did, for the mere tearing of a shirt, then to jump on her, strike her, and blacken both her eyes, was an act as scandalous and unmanly as it was unlawful. He had before killed another woman, for which he had suffered penal servitude, and he would now be sentenced to be kept in penal servitude for life.

NORFOLK CIRCUIT: NORTHAMPTON.—*The Ringstead Murder.—William Weekly Ball*, a man 47 years of age, and described as a butcher, was charged with the Wilful Murder of a girl called Lydia Arley, 14 years ago. The case has for some time excited great interest in the county, and was fully noticed in our Provincial news when the supposed skeleton of the deceased girl was found in a ditch near the orchard in which she was last seen alive in the company of the prisoner. Similar skeletons have since been discovered in the same spot, and it appears that gipsies have been in the habit of burying there. When the case was called on, the counsel for the prosecution stated that the evidence, though grave, was too imperfect to go to trial. He proposed, therefore, to abandon the case for the present, and if further evidence appeared—and some additional evidence had already appeared—the prisoner could be again apprehended. The counsel for the prisoner objected to this course, but the Judge intimated that it would be best for the prisoner's own interests. The case was then formally abandoned for the present.

Miscellaneous.

DIARY OF THE JAPANESE AMBASSADORS.—The Japanese Ambassadors who visited this country last year have published their diary through the bookseller Fou-yah, at Yeddo. Among other things it is therein said that the people of the West are very little different from each other; the dresses are the same as well as the weapons, though one nation manages them better than another; the French, above all, appear to excel therein. Ceremonies and honours are very easy, and the honours to be paid to a sovereign are very nearly the same as to a person of inferior rank—one takes his hat off, makes a small reverence, and therewith the thing is finished. At our audiences with the Princes they were not separated from us by a curtain; even the Princess was not veiled, and sits as high as the Prince. The Lords were very civil, even too civil, for they allowed us to eat and drink more than was in accordance with our ceremonies. The lower classes were less civil, and unequivocally demonstrated that they thought us ugly. Among the women there are many handsome ones, among others the Empress of the French. They run like a man. In order to appear taller they wear a high bonnet. Even fashionable women dance very much; they hang on the arm of the men, and one sees the men frequently run along the street in the arms of women. We believe them to be their own wives. Women in general enjoy too much liberty, and the fashionable ones wear the same dresses as those of the lower class. The dress of the women, especially at night, is not always decent. Excepting the Dutch women, all other European women stand below the French. The men are stiff, rough, and a little proud; they wear no weapons, and very seldom the distinctions of their rank. It appears that everybody, and even the fashionable people, frequent the *cafés*. High officers even frequent the theatres. We were sorry we could not understand everything there. Almost everybody had a spying-glass, which, perhaps from distraction, was always directed at us. The merchants are proud, and the shopkeepers do not like one to turn their articles too much about. It annoyed us very much to see raw meat exhibited in the towns. Eating meat is often very healthy, but why exhibit it to every one? In Paris and London they run (walk) very fast, just as they do in our country when there is a fire. The houses are so high that they must be destroyed at the first earthquake. They appear, however, to stand against fire.

BIRTH OF A CAMEL IN MANCHESTER.—A double-humped Bactrian camel, in the collection of Messrs. Sanger, at the circus, in Manchester, gave birth to a fine male calf on the 23d ult. This is believed to be only the second instance of the birth of a camel of this species in this country. The first occurred at the London Zoological Gardens; but the dam did not take kindly to her offspring, which could not be reared in consequence. In the present case the dam at first took little or no notice of the calf, except to make an attempt to bite it. A little kindness and attention, however, altered her temper; and then she took kindly to the young camel and suckled it, having an abundant supply of milk. Both are now doing quite well. Soon after its birth, the calf measured 3 feet 6 inches in height and weighed 58 lb. Like the mother, it is brown in colour except the humps, which are black. In the calf, however, the humps are unformed; the parts where they will grow are only indicated by small patches of thin, loose skin, resembling oil-skin, and in size bearing no proportion to the bulk attained by the humps in the full-grown camel.

Obituary.

HER ROYAL HIGHNESS THE LANDGRAVINE OF HESSE, aunt of the late King of Denmark and grandmother of the Princess of Wales, died on Monday last. Her Royal Highness the Princess Louisa Charlotte of Denmark was daughter of Frederick, Prince Hereditary of Denmark, and sister of the late King Christian VIII. She was born in 1789, and married in 1810 William Landgrave of Hesse, by whom she had issue the Princess Marie, married to Prince Frederick of Anhault Dessau; Princess Louisa, the present Queen of Denmark; Prince Frederick William George, married to a daughter of Prince Charles of Prussia; and Princess Augusta, married to Baron Blixen-Fineke, Hereditary Seigneur of Dalland. The Princess of Wales and several members of the royal houses of Germany will be placed in mourning by the death of her royal highness.

THE PRINCESS VICTORIA GAUROMMA OF COORG, god-daughter of the Queen, died prematurely on Wednesday at the house of her husband, Colonel John Campbell, in George Street, Portman Square. She was the daughter of the late Rajah of Coorg, at whose request she was baptised into the Church of England, in the private chapel of Buckingham Palace, in 1852, her Majesty, Viscountess Hardinge, and Mrs. Robert Drummond officiating as godmothers, and Sir James Weir Hogg, Bart., Chairman of the East India Company, as the god-father, the ceremony being performed by the Archbishop of Canterbury, to whom the Rajah had written a touching appeal on behalf of his daughter's Christian education, although he himself remained a strict Brahmin of the Sudra caste. The Princess was subsequently confirmed, under the auspices of the Queen, and a few years ago she married Colonel John Campbell.

VISCOUNT SIDMOUTH died at Albury, near Guildford, on the 25th ult., in his 70th year. His lordship, William Leonard Addington, Viscount Sidmouth, of Sidmouth, county Devon, in the peerage of the United Kingdom, was in holy orders, and had been in declining health for some months past. He was the only surviving son of the first viscount, who was for 12 years Speaker of the House of Commons, and successively Mr. Pitt as Prime Minister in 1801. He was born in 17[illegible], and married, in 1820, the eldest daughter of the late Rev. [illegible] Young, by whom he had a numerous family, three sons and five daughters being still alive. He succeeded to the title on the death of his father, who died at a great age, in 184[illegible], and is now succeeded by his eldest surviving son, the Hon. William Wells Addington, M.P. for Devizes, born in 184[illegible], and married, in 1848, to his cousin, the eldest daughter of the Hon. and Very Rev. Dr. Pellew, Dean of Norwich, by whom lady he has a youthful family. His lordship was formerly in the navy, and obtained his commission of lieutenant in [illegible].

SIR ANDRIES STOCKENSTROM, Bart., late Lieutenant-Governor of the Cape of Good Hope, died on the 15th ult., at his residence, Talbot Terrace, Bayswater, in his 72d year. He was the eldest son of Mr. Andries Stockenstrom, of Stockenstrom, afterwards chief magistrate of Graaff Reinet, by the daughter of Mr. John Broeders, a resident at the Cape. He acted for some time as landdrost of Graaff Reinet, and was appointed lieutenant-governor of the eastern division of the Colony in 1834. He was also a captain in the Corsican Rangers. On his retirement in 1840, on a pension, he was rewarded for his services with a baronetcy. He married in 1828 the daughter of Mr. Gysbert Henry Maasdrop, and is succeeded in the baronetcy by his son, Gysbert Henry, born in 1841.

SIR FRANCIS HAMILTON LOFTUS, Bart., died a few days since, at his seat, Mount Loftus, Kilkenny, in his 87th year, after a protracted illness of many years.

MAJOR-GENERAL HARVEY died on the 11th ult. at his residence at Chester. He entered the army in 1825, served in the Syrian campaign of 1840-41 as assistant-adjutant-general, and was present with the Turkish forces at the affair with the garrison of Gaza, near Ascalon. For his services in Syria he was promoted to the rank of brevet lieutenant-colonel, decorated with the gold medal from the Sultan, and received the Syrian war medal from his own Government. In 1843 he rejoined the 14th Light Dragoons, then in India, and was present in 1844 at the bombardment and capture of the Mahratta fortresses of Panulla and Powunghur. For his services on that occasion he received the thanks of the Bombay Government in general orders. He attained the rank of major-general in 1858.

ADMIRAL PATTON died at his chambers, 20, Cockspur Street, on the 18th ult, in his 73d year. He entered the navy in 1804, and served in the Bellerophon as a midshipman at the battle of Trafalgar. He afterwards served in the West Indies on the Irish station, and at Portsmouth; and, while lieutenant of the Astedor, took part in a yard-arm-and-yard arm conflict of upwards of an hour, with the French frigate Etoile, which terminated in a drawn battle. He obtained post rank in 1819, and subsequently commanded the Rattlesnake and the Isis, in the West Indies. He accepted the retirement in 1846, and attained the rank of admiral only a few years since. He was son of Colonel Patton, formerly governor of the Island of St. Helena; and brother-in-law of the late Major-General Sir Henry Torrens.

ADMIRAL NEEDHAM TAYLER, C.B., died at his residence at Brixton, on the 19th ult., in his 81st year. He was born at Devizes, and entered the navy in 1796, on board the Royal George, 100, bearing the flag of Lord Bridport, and the following year was present at the mutiny at the Nore. He served as a lieutenant in the bombardments at Copenhagen, in 1807; and subsequently at Walcheren. He became a commander in 1810, and while commanding the Sparrow, 19, was actively engaged in the defence of Castro and in the breaching batteries at St. Sebastian, where he was dreadfully wounded. For these services he was twice gazetted advanced to post rank, and granted a pension of 200*l*., which, in 1815, was increased to 250*l* per annum, with the rank of C.B. He accepted retirement in 1846, became vice admiral in 1855, and admiral in 1861. Admiral Taylor was well-known for the improvements he introduced in gunnery, floating breakwaters, [illegible].

ADMIRAL SIR EDWARD TUCKER, G.C.B., died at his residence in Dover Street, on the 26th ult. He entered the navy in 1791, and, after seeing service in the Mediterranean, North America, and Cape of Good Hope, he obtained his commission as lieutenant in 1799. He was present in 1796 at the surrender of the Dutch squadron in Saldanha Bay. After being employed in several ships on the home station he served as commander in the West Indies. On obtaining post rank in 1807, he was sent to the East Indies, and commanded an expedition against the Moluccas, Amboyna, and other Dutch settlements, in 1810 and 1811. He afterwards commanded several ships on the home station. For his Indian services he was made a Knight of the Bath in 1815, and a Grand Cross of the order in 1862. In 1858 he was awarded a distinguished "service pension." He attained the rank of admiral in 1857. He married in 1817 the sister of Vice-Admiral Sir Byam Leeke, K.C.B.

PROFESSOR PILLANS, LL.D., of Edinburgh, died in that city on the 27th ult., in his 86th year. Since June last he had felt the weakness of old age; but his active habits enabled him to bear up almost to the last, and even within eight or ten days before his death, he was able to walk out-of-doors. On Thursday week however a slight cold passed into fever, and he became insensible and never afterwards recovered consciousness. He was born at Edinburgh (where his father carried on business as a letter-press printer) in 1788. In his youth he was for many years a private tutor at Eton; was then for nearly ten years rector of Edinburgh High School; and in 1820 was appointed Professor of Humanity in the University of Edinburgh, which office he filled for the long period of 43 years, ceasing to perform the duties only last year.

MR. JAMES HAY ERSKINE WEMYSS, M.P. for Fifeshire, died on the 29th ult. at his house at Buckingham Gate. He was the eldest son of the late Rear-Admiral Wemyss by the daughter of the 16th Earl of Erroll, and was born in 1820, so that he was only in his 35th year. He married in 1855 the [illegible] humous daughter of the late Hon. John Kennedy Erskine, by Lady Augusta Fitzclarence, who subsequently remarried Lord Frederick Gordon Hallyburton. He was elected for Fifeshire in 1859 in the Whig interest, and was recently appointed Lord-Lieutenant of Fifeshire, in the room of the late Earl of Elgin. He was Major-Commandant of the Fife Artillery Volunteers, and as a collateral branch of the family of Wemyss, inherited large estates in the county, including Wemyss Castle and Torrie House.

MR WILLIAM ROTHERY, late legal adviser to the Treasury in all matters connected with the slave trade, died on the 27th ult., in his 89th year. He was born in April, 1775, and only before the outbreak of the American War, as he remembered being taken by his father to see the [illegible] in the chapel in Lincoln's Inn Fields by the Lord [illegible] rioters. In early life he entered the office of [illegible] Proctor in Doctors' Commons, and soon rose to the

that establishment. In 1821 he was appointed by the Treasury to be their Lordships' referee on slave trade matters, and held that appointment up to the year 1860, when at the advanced age of 85, owing to increasing infirmities, he was compelled to resign it. He was afterwards frequently employed by the Government on matters not immediately connected with his regular official duties. In 1836-7 he was engaged with some eminent lawyers and civilians in framing rules for the guidance of the Vice Admiralty Courts in our colonies. In 1840 he was associated with Sir Henry Bulwer for the purpose of settling, in conjunction with two Commissioners nominated by the French Government, the amount of compensation proper to be paid to British subjects for the forcible interruption of their trade by the French at Portendic, on the coast of Africa; and in 1844 he was appointed in conjunction with the present Judge of the Court of Admiralty, Admiral Denman, and the late Mr. Bandinel, was appointed to prepare a code of instructions for the guidance of naval officers employed in the suppression of the slave trade.

MR. LEONARD HORNER, F.R.S., died on the 7th ult. in his 80th year. Mr. Horner, who from an early age was attached to scientific pursuits, was in 1827 appointed Warden of the London Institution, and did much to organise it. In 1833 and 1834 he published several papers on the mineral kingdom in the "Penny Magazine," a periodical published by the Society for the Diffusion of Useful Knowledge, of which Lord Brougham was the president. In 1833 he became one of the principal inspectors under the Factory Act, and has done much towards the physical improvement of factory workers and the prevention of accidents. On these subjects he has written many works. He was a brother of the celebrated Francis Horner, M.P., whose works he edited in 1843, and was the father of Lady Lyell, wife of Sir Charles Lyell, the geologist.

WILLS.—The will of the Duke of Cleveland has been sworn under 800,000*l.*; the Earl of Clare, 90,000*l.*; Viscount Midleton, 180,000*l.*; the Right Rev. Dr. Turton, Bishop of Ely, 40,000*l.*; Sir Richard Plumptre Glyn, Bart., of Lombard Street, banker, 500,000*l*; Mr. Frederick Huth, a merchant of the city of London, 500,000*l.*; Mr. John Moritz Oppenheim, of New Cannon Street, and of Hamburg, Leipsic, and New York, merchant, 250,000*l* personalty in Great Britain; Mr. Arthur Saltmarshe, of Bilhill, Berks, 300,000*l.*; Mr. John Malebysse Beckwith, formerly of the Mint, 60,000*l.*; Mr. W. M. Thackeray, the novelist, 20,000*l.*

BIRTHS—On the 30th ult, the Countess of DALKEITH, of a son—22d ult, at Baldovan House, Dundee, the Hon. Mrs. OGILVY, of a daughter—30th ult, at 20, Grosvenor Square, the Hon. Mrs. DUNCOMBE, of a daughter—23d ult, at 39, Upper Mount Street, Dublin, the wife of DENIS WM. PACK BERESFORD, Esq., M.P., of a son and heir.

MARRIAGES.—On the 29th ult, at St. George's, Hanover Square, Captain JOHN G. C. HAMILTON, of Dalzell, Lanarkshire, N.B., late 2d Life Guards, to the Lady EMILY E. LESLIE MELVILLE, youngest daughter of the late Earl of Leven and Melville—29th ult, at St. George's, Hanover Square, Captain AUGUSTUS PHILLIMORE, of H.M.S. Defence, youngest surviving son of the late J. Phillimore, Esq., D.C.L., to HARRIET ELEANOR, second daughter of the Hon. GEORGE and the Lady LOUISA FORTESCUE—29th ult. at All Soul's Church, Marylebone, HENRY WOODS, Esq., M.P. for Wigan, to HENRIETTA EMMA, fifth daughter of the Lord Bishop of Chichester—31st ult., at St. Thomas, Portman Square, JOHN MARTINEAU, Esq., to LOUISA AMABEL, fifth surviving daughter of the late HENRY JOHN ADLAM, Esq., of Barnham, Cambridgeshire — 29th ult, at the parish church, Mirfield, WILLIAM CHARLES WARD JACKSON, Esq., eldest and only surviving son of Ralph Ward Jackson, Esq., of Greatham Hall, co. Durham, to EMILY, daughter of JOSHUA INGHAM, Esq., of Blake Hall, Mirfield, Yorkshire—28th ult, at the parish church of St. Peter, Bayswater, the Rev. JOHN ROBBINS, M.A., incumbent of St. Peter's, to ANNIE DUNBAR, youngest daughter of JOHN SAMUEL ABBOTT, Esq., of 7, Pembridge Square, and niece of the late Duncan Dunbar, Esq., of Blackwall.

DEATHS.—25th ult, at Boulogne, after a short illness, on his way from Italy, CECIL H. PAULET, Esq., Ensign in the 60th Rifles, second surviving son of the Rev. Lord Charles Paulet, aged 22—26th ult, at Meanwood Hall, near Leeds, ELIZABETH, daughter of the first Sir JOHN BECKETT, Bart., aged 83—24th ult, at Windsor, WM. GALLOWAY, Esq., Bengal Civil Service, son of the late Major-General Sir Archibald Galloway, K.C.B. —9th ult., at Halifax, Nova Scotia, ELIZA LUCY, youngest daughter of the Right Rev. H. BINNEY, aged 3—30th ult, at 46, Baker Street, Portman Square, M. A. GOLDSMID, Esq., of the Faubourg St. Honoré, Paris, youngest and last surviving brother of the late Sir Isaac L. Goldsmid, Bart., aged 75 —24th ult, at Hythe, Kent, Major-General Wm. JAMES KING, late Royal Staff Corps, aged 80—8th ult, at Thornton, near Douglas, Isle of Man, Colonel HENRY MURRAY, R.A., only surviving son of the late Colonel Murray, aged 48—25th ult, at Arlington, Devon, Captain F. H. CHICHESTER, 6th Walmoden Austrian Cuirassiers, son of the Rev. J. H. Chichester, rector of Arlington—23d ult, at Worthing, Capt. FRANCIS WILLIAM STEIFLIN, late of H.M.'s 13th Light Infantry, aged 69—24th ult, at Highgate Parsonage, EDWARD CHARLES, eldest son of the Rev. C. B. DALTON, a scholar on the Foundation of Charterhouse School, aged 17—21st ult, at Nettleham, the Rev. WILLIAM F. HOOD, M.A., eldest surviving son of John Hood, Esq., of Nettleham, aged 39.

Markets.

POTATOS.—SOUTHWARK, Monday, March 28.

During the past week the arrivals coastwise have been good, and very large by rail, and the prices of the former week were barely maintained. The following are the quotations:—Yorkshire Flukes, 70s. to 90s. per ton; do. Regents, 50s. to 70s.; do. Rocks, 45s. to 50s.; Dunbar Regents, 65s. to 75s; Kent and Essex Regents, 50s. to 70s.; North Berwick Regents, 50s. to 60s.; Perth, Forfar, and Fifeshire Regents, 45s. to 50s.; do. do. Rocks, 45s.

COAL MARKET.—March 30.

Hastings Hartley, 16s. 9d.; Holywell Main, 17s.; North Pelton Gas, 13s. 6d.; Fanfield Moor, 14s. 6d; Wylam, 17s.; Walls End Gosforth, 17s. 5d; Eden Main, 17s. 6d.; Walls End Braddyls Hetton, 18s 3d.; Walls End Framwellgate, 17s 3d.; Walls End Haswell, 19s. 6d.; Walls End Hetton, 19s. 6d.; Walls End South Hetton, 19s. 6d.; Walls End Stewarts, 19s.; Walls End Cassop, 18s. 3d.; Walls End Caradoc, 18s. 6d.; Walls End Hartlepool, 18s. 9d.; Walls End Heugh Hall, 18s. 3d.; Walls End Kelloe, 17s 9d.; Walls End East Hartlepool, 18s. 9d.; Walls End South Hartlepool, 17s. 9d.; Walls End South Kelloe, 18s. 3d; Walls End Trimdon Hartlepool, 18s. 9d. —Ships at market, 67.

COVENT GARDEN, April 2.

Vegetables and Fruit in season continue to be well supplied. New English Grapes may now be obtained, and Apples, though scarce, may still be had; there are likewise a few dessert Pears. Oranges are getting scarce: the best are realising from 6s to 10s. per 100. Continental arrivals continue heavy; among them are Lettuces, Endive, Carrots, Artichokes, and Radishes. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Oranges, per 100, 4s to 10s
Grapes, new, per lb., 20s to 30s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Kent Cobs, 140s per 100 lbs.
Pears, per doz., 6s to 12s	Almonds, do., 18s
Strawberries, p. oz., 1s to 2s	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 10s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 4d to 6d
Cauliflowers, each, 4d to 8d	Cucumbers, each, 1s to 3s
Asparagus, p. bundle, 8s to 14s	Beet, per doz, 1s 6d
French Beans, p. 100, 2s to 3s	Shallots, per lb., 10d
Green Peas, p. ½ sieve, 20s	Celery, per bundle, 1s 6d to 2s
Seakale, per punn., 2s to 3s	Garlic, per lb., 8d
Rhubarb, p. bundle, 9d to 1s 6d	Lettuces, each, 1d to 4d
Potatos, York Regents, p. ton, 60s to 80s	Endive, per score, 1s to 2s
,, Shaws, do, 50s to 60s	Horse Radish, p. bunch, 1s to 4s
— new, per lb, 2s to 3s	Mushrooms, p. pott., 1s to 1s 9d
Carrots, do., 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
— young, p. bunch, 3s	Herbs, per bunch, 3d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, March 31.

Prime Meadow Hay	75s	to	80s	Clover, old	90s to 110s
Superior do. ..	84		90	Do. second cut ..	80 105
Inferior do. ..	50		60	New Clover ..	— —
New do.	—		—	Straw	25 30
Rowen	—		—	HARVEY & EASTON.	

CUMBERLAND MARKET, THURSDAY, March 31.

Sup. Meadow Hay ..	88s	to	95s	Inferior Clover ..	84s to 98s
Inferior do.	70		80	New do.	— —
New do.	—		—	Straw	32 36
Superior Clover ..	105		112	JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, March 31.

Fine Meadow Hay ..	82s	to	86s	Prime 1st cut Clover	105s to 110s
Inferior do.	75		80	Inferior do. do. ..	100 105
Prime New Hay ..	—		—	New 1st cut do. ..	— —
Inferior	—		—	Prime 2d cut do...	105 108
Straw	28		32	Inferior do.	100 105

BRITISH WOOLS.—LONDON, March 31.

The demand continues for extra long Hoggs and Wethers, and deep grown wool of all descriptions, and advances are paid for good qualities.

South-down Hoggets	s. 1	d. 9	to	s. 1	d. 10	Leicest. Wethers	1	11 to 2 0
Half-bred ditto ..	2	0	—	2	2	Ditto Hoggs ..	2	0 — 2 1
Down Ewes ..	1	8	—	1	9	Combing Skins	1	4 — 1 8
Kent Fleeces ..	2	0	—	..		Flannel Wool ..	1	4 — 1 6
						Blanket ditto ..	0	9 — 1 0

HOPS.—BOROUGH MARKET, FRIDAY, April 1.

Messrs. Pattenden & Smith report rather an improved demand. Stocks of all descriptions gradually diminishing.

NEWGATE.—April 1.

Best Fresh Butter .. .. 15*s.* per dozen lbs.
Second do. do. .. .. 13*s.* ,,
Pork, 4*s.* 4*d.* to 4*s.* 8*d.* per 8 lbs.

LEADENHALL POULTRY MARKET.—April 1.

The Easter holidays affect the Poultry market, both in supply and demand, lessening both considerably.

	Each—s.	d.	s.	d.		Each—s.	d.	s.	d.
Large Surrey Fowls	3	6	to 4	6	Ducklings ..	3	0	to 4	0
Farm-house do. ..	2	6	— 3	6	Guinea Fowls ..	2	6	— 3	0
Best Surrey Chickens	3	0	— 4	0	Pigeons	0	8	— 0	9
Country Chickens ..	2	0	— 3	0	Tame Rabbits ..	1	3	— 1	9
Goslings	6	0	— 7	0	Wild do.	0	6	— 0	10

METROPOLITAN CATTLE MARKET.

MONDAY, March 28.

The supply of Beasts is much smaller than for some months past; it being holiday week, however, the demand is smaller. Trade is by no means brisk, but prices on the average are decidedly better. The number of Sheep is also smaller, but quite equal to the demand, and prices cannot be quoted higher. Lambs are not quite so dear as on Thursday, and Calves are rather dearer. From Germany and Holland there are 580 Beasts, 1770 Sheep, and 93 Calves; from Scotland, 270 Beasts; from Ireland, 78; and 1760 from Norfolk and Suffolk.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 5	0	Best Long-wools. ..	..	—	..	
Best Short-horns	4	6	— 4	10	Do. Shorn ..	4	4	— 4	6
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..		—	..	Do. Shorn ..	3	6	— 3	10
Do. Shorn ..	4	6	— 4	10	Lambs	7	0	— 7	8
					Calves	4	0	— 5	10
					Pigs	3	8	— 5	0

Beasts, 3020; Sheep and Lambs, 17,590; Calves, 98; Pigs, 420.

THURSDAY, March 31.

We are well supplied with Beasts, and trade is slow, consequently prices are not so good as on Monday. Sheep are not quite so plentiful as on Thursday last, yet there are more than can be sold. Prices on the average are rather lower. Good Lambs and Calves are scarce, and full prices are realised.

Our foreign supply consists of 415 Beasts, 570 Sheep, and 128 Calves. Milch Cows, 75.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 4	10	Best Long-wools. ..	..	—	..	
Best Short-horns	4	6	— 4	8	Do. Shorn ..	4	2	— 4	
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	..	—	..	6
Best Downs and Half-breds	..		—	..	Do. Shorn ..	3	4	— 3	0
Do. Shorn ..	4	6	— 4	8	Lambs	7	0	— 8	0
					Calves	4	0	— 6	8
					Pigs	3	8	— 5	0

Beasts, 1115; Sheep and Lambs, 5100; Calves, 177; Pigs, 130

MARK LANE.—MONDAY, March 28.

The supply of Wheat from Essex and Kent to this morning's market was small, and the condition somewhat improved; it was cleared at the prices of this day se'nnight. The attendance was moderate, and foreign Wheat taken in retail only at last week's quotations; the demand was chiefly confined to Russian and American red. Prime Malting Barley sells freely at late prices; other sorts are neglected. There is no alteration in the value of Beans or Peas. The Oat trade is quiet, but previous rates are maintained. In Flour there is but little doing.

PER IMPERIAL QUARTER	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	42	48	Red	40	48
— — fine selected runs .. ditto	44	52	Red	40	48
— — Talavera	48	56			
— Norfolk	—		Red	—	
— Foreign	36	54			
BARLEY, grind. & dist, 25s to 27s .. Chev	34	38	Malting ..	29	33
— Foreign grinding and distilling	22	26	Malting .	27	31
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish .....Potato	19	22	Feed	—	
— Foreign .....Poland and Brew	17	22	Feed	15	20
RYE	30	32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....27s to 36s...Tick	30	33	Harrow ..	30	33
— Pigeon .... 32s to 40s.. Winds.	—		Longpod	—	
— Foreign .....Small	36	42	Egyptian	30	32
PEAS, White, Essex and Kent.. Boilers	32	33	Suffolk ..	33	34
— Maple .... 30s to 34s .... Grey	28	30	Foreign ..	31	33
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered .. per sack	35	40			
— 2d do ..... ditto	28	34	Country ..	28	34
— Foreign ..... per barrel	15	25	Per sack	32	40

FRIDAY, April 1.

The weather since Monday was unsettled and rough, with snow, hail, and rain storms. No interruption to the long prevailing dulness of the Wheat trade has occurred, and with the exception of Liverpool and Manchester, where a decline is noted of 6d. to 1s per qr. on Wheat, and a similar reduction in the value of Flour, prices have remained about the same throughout the kingdom. Fine Malting Barley has commanded full prices; in other descriptions of Spring Corn and Flour we observe no alteration of value. During the last fortnight 37 vessels have been reported off the coast. The floating trade has been very inactive; Maize has declined 1s. per qr., but no alteration has to be noted for any other description of grain. Linseed continues in good demand at rising prices. Paris, March 31.—Flour: Prices have improved a little, but the transactions have remained limited. The six marks for delivery this month are quoted equal to 33s. 3d per 280 lbs. The present stock of Flour is estimated at 15,870 cwt. In Wheat a few sales have been made at an advance of 6d. to 9d. per quarter, but a large improvement, is mostly demanded. The arrivals of English Wheat and Barley, of foreign Wheat, Barley, and Flour this week are good, of English Oats large, and foreign moderate. The attendance at to-day's market was small, and the business in Wheat, both English and foreign, was very restricted; prices must be considered nominally the same as on Monday. For Barley there was rather more inquiry, and Oats were 6d. per qr. dearer.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1380 qrs.	1420 qrs.	4510 qrs.	1210 sks.
Irish	—	—	4060	— ,,
Foreign ..	18,320 ,,	1850	15,240 ,,	320 ,, / 12590 brls

LIVERPOOL, March 29.—Although to-day's market has been very well attended, we have had only a very moderate demand, and compared with the rates of Tuesday last Wheat must be quoted 1d. to 2d. per cental lower ex ship, whilst flour remains very unsaleable at a reduction of 6d. per barrel and sack. Indian Corn is neglected, and all descriptions are the turn cheaper. Oats and Oatmeal very dull and rather lower. Beans steady at late rates. Market closes flat.

FRIDAY, April 1.—There was a fair attendance at market. Wheat in moderate demand at rather easier rates. Flour quite nominal. Indian Corn steady. Egyptian Beans unaltered. Oats and Oatmeal dull, a dragging sale.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Feb. 20	41*s* 1*d*	32*s* 0*d*	19*s* 8*d*	28*s* 10*d*	33*s* 2*d*	32*s* 5*d*
— 27	40 6	32 0	19 4	29 0	33 1	32 9
March 5	40 2	31 6	19 10	28 6	33 5	32 10
— 12	40 1	31 5	19 8	29 2	32 7	33 0
— 19	39 9	31 4	19 2	32 4	32 10	32 10
— 26	39 11	30 10	19 0	28 0	32 8	33 3
Agg. Aver.	40 3	31 6	19 5	31 0	32 11	32 10

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

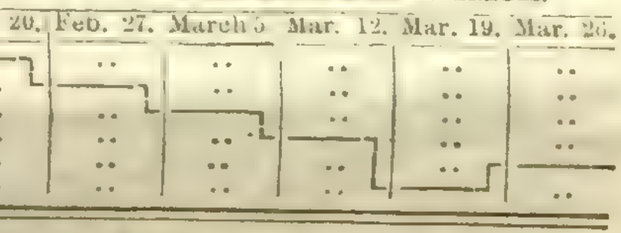

To Gardeners.

WANTED, an energetic Scotch GARDENER, about 30 years of age, for a Tea Plantation in India. Must be qualified to conduct the work of 500 or 600 men, and have good sense, and powers of drawing accurate conclusions and making calculations. Salary 200*l* per annum, and progressive increase, with House, and passage paid out. Testimonials as to general good character and temperance indispensable. This offers a good opportunity for a deserving person wishing to gain a good position, and to a thoroughly efficient man the most liberal encouragement is certain.—Address, enclosing copies of testimonials, to THOMAS MCMEEKIN, Glenorchard, Campsie, Glasgow.

Propagator and Salesman.

WANTED, a middle-aged, steady, industrious Man, who has a thorough knowledge of the Nursery Business —Address, T. & G. SWAILES, Nurserymen, Beverley, Yorkshire.

WANTED, a good practical DRAUGHTSMAN, one accustomed to Agricultural Work preferred.—Apply by letter to X. Y. Z., Post Office, Leeds.

WANTED, some respectable active GARDENERS; also, a strong active LAD (to take the Fires, &c.), under the Propagator.—Apply to THOS. BAYNTON & Co., Penge Cottage Nursery, Penge, Surrey, S.E.

WANTED, a GARDENER, to take charge of small Ornamental Grounds, with Conservatory and Greenhouse. He must be a good Florist. Wages (to commence) 1*l.* 1*s.* per week, without rooms.—Letters stating previous service, age, and if married or single, to be addressed G. S., Mr. Cunningham, Newsvendor, Kingston-on-Thames.

WANTED, a GARDENER (SINGLE-HANDED), married, who understands a Vinery, Forcing, Pruning Fruit Trees, and the Management of Kitchen and Flower Gardens generally. Capable of Waiting at Table occasionally if required. Satisfactory references as to character and ability indispensable.—Apply, stating wages, to A. Z., Post Office, Sittingbourne, Kent.

WANTED IMMEDIATELY, for a permanency, a steady YOUNG MAN, who can Mow well, to assist in the Nursery, and attend to Fires, and work out. Wages at first 16*s.*—Apply personally, or by own letter, to MICHELL & Co., Nurserymen, &c., William Street, New North Road, Islington, London, N.

C. GRIMBLY, of the Albion Nursery, Stoke Newington, London, N., is in want of FOUR experienced JOBBING GARDENERS, age from 30 to 40; they must have good characters from last situation. None need apply who do not require a constant place. Must be good Mowers.

WANTED, a Youth as an APPRENTICE or IMPROVER, from 18 years of age and upwards, in a nobleman's garden, where he can thoroughly learn his profession. A Premium required. For further particulars apply to Mr. SPARROW, Moor Park Gardens, Rickmansworth, Herts.

WANTED, a DAIRYMAID in a gentleman's Family in Kent.—She would be required to Milk 6 Cows, attend to the Poultry, and fill up her time in the House. Must be a good Butter Maker. Only 6 cows are Intended to be kept.—Address, stating wages &c., to Mr. G. CHADWIN, Sandling Park, near Hythe, Kent.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

HEAD GARDENERS.—WM. CUTBUSH & SON have at the present time several GARDENERS on their books, whom they can confidently recommend to noblemen or gentlemen requiring trustworthy and intelligent men.—Highgate Nurseries, London, N.

GARDENER (HEAD).—Age 38, married, two children, youngest seven years; well experienced in all branches of his profession. Three years' good character.—J. W., 6, St. John's Cottages, Maple Road, Penge, Surrey.

GARDENER (HEAD) no Single-handed place accepted.—Married, no incumbrance; understands the Greenhouse, Vines, Pines, Orchard-house, Kitchen Garden, &c. Two years' good character.—S. HARRIS, Post Office, Shrewsbury.

GARDENER (HEAD).—Age 29, single; has a thorough practical knowledge of his profession in all its branches. Five years' good character.—W. JONES, Cokethorpe Park, Witney, Oxon.

GARDENER (HEAD).—Age 30, single; understands the Management of Pines, Vines, Peaches, Cucumbers, Melons, Flower and Kitchen Gardens. Six and a-half years' good character.—C. D., Post Office, Hay, Hereford.

GARDENER (HEAD).—Age 26; thoroughly understands his profession in all its branches. Two years' good character. Can be well recommended.—G. C., Shrivenham, Berks

GARDENER (HEAD), to any nobleman or gentleman, who wishes to engage a thorough practical Gardener.—Age 31, one child. Three years' good character.—F. H., Leigh Post Office, near Reigate, Surrey.

GARDENER (HEAD).—Age 28; understands the Management of Pines, Vines, Peaches, and Melons; also the Flower and Kitchen Gardens. Four and a half years' good character from present and late employer.—R. I., The Gardens, Highnam Court, Gloucester.

GARDENER (HEAD).—Age 34, single; understands practically Early and Late Forcing of Flowers, Fruits, and Vegetables, Orchard Houses, Kitchen and Flower Gardens, &c. Good character from former employers.—E. W., Mr Smith's, Grocer, Park Road, Tottenham.

GARDENER (HEAD), to a nobleman or gentleman.—Age 28, single; thoroughly understands the Growing and Forcing of Pines, Vines, Peaches, Figs, &c.; also the Management of Kitchen and Flower Gardens Good character and testimonials.—G. L., 13, Union Square, Islington, London.

GARDENER (HEAD), age 40, married, no incumbrance.—GEO. S. DODS, of Epsom Nursery, Surrey, wishes to recommend a thoroughly practical man, who understands his profession in all its various branches. Will be at liberty the beginning of April. Three and a-half years' good character.—Direct as above.

GARDENER (HEAD).—Age 30, married, no incumbrance; thoroughly understands the Growing of Vines, Peaches, Melons, &c.; the Management of Kitchen and Flower Gardens, Stove and Greenhouse Plants. One year and eight months good character.—A. B., Mr. Page, Stationer, Lower Tooting, Surrey.

GARDENER (HEAD) to any nobleman or gentleman.—Middle aged; native of Holland. Practical in all branches; has had great experience in Early Forcing of Vegetables of all kinds, according to the Dutch style. Good wages required. Upwards of 20 years' good character.—H. N., Post Office, Hodnet, Market Drayton.

GARDENER (HEAD).—Age 40, married, no family; a thoroughly practical energetic Man, willing to take an active part in his business; well acquainted with Fruit Growing, and has a good knowledge of plants generally. Can undertake the Management of Meadow land if required. High reference and satisfactory character.—W. B., 10, Andover Terrace, Hornsey Road, Holloway, N.

GARDENER (HEAD).—Age 38, married; thoroughly practical in Vines, Pines, and Orchids, Forcing Flowers; good Kitchen Gardener; Land and Stock.—C. S., 47, Park Crescent, Park Road, Clapham.

GARDENER (HEAD, or SINGLE-HANDED).—Age 36, married, one child, aged 9; understands the Management of Pines, Vines, Greenhouse, Flower and Kitchen Garden. Wife can Manage Poultry, Dairy, or Lodge. Two years' good character from last situation.—W. S., Post Office, Dorking.

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GARDENER.—Married, no incumbrance; thoroughly understands his profession; Stock if required. Undeniable character. Wife for Dairy and Poultry if required.—J. K., Post Office, Acton, W.

GARDENER.—Age 30, married; has been three years Foreman in the Gardens of the Earl of Lichfield at Shugborough; is thoroughly acquainted with the Cultivation of Fruits and Plants, and the general routine of Gardening. Inquiries as to ability, honesty, and sobriety, will be satisfactorily answered.—W. WILSON, Messrs. Lee's Nursery, Hammersmith, London.

GARDENER, where one or more are kept.—Understands Meadow Land and Cows. Wife can manage Dairy and Poultry. Two years' good character.—W. E., Sudbury Station, Middlesex.

To Noblemen and Gentlemen.

GARDENER, where two or three or more are kept.—Age 30; understands Forcing Fruits and Flowers, and the general routine of Kitchen and Flower Gardening. Can be well recommended by his present employer.—S. W., Brandon Lodge, near Coventry, Warwickshire.

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The Gardeners' Chronicle Newspaper.

SATURDAY, APRIL 9, 1864.

Exhibition Prize Medal, 1862.

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PORTABLE HOT-WATER APPARATUS,

WITH TRUSS'S PATENT JOINTS FOR HEATING CONSERVATORIES, HOTHOUSES, &c.

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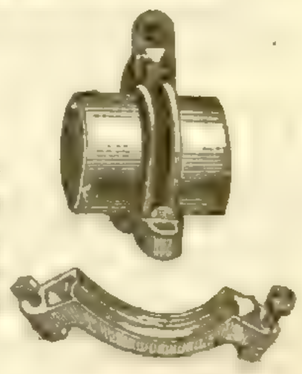

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TWO 4-INCH PIPES ALONG ONE SIDE AND ONE END HOUSE.

Size of House.	Apparatus complete.	Erection.	Size of House.	Apparatus complete.	Erection.
16 feet by 8 feet ...	£8 10 0	£2 0 0	30 feet by 12 feet ...	£11 15 0	£2 10 0
20 feet by 10 feet ...	8 17 6	2 0 0	40 feet by 15 feet ...	15 0 0	2 15 0
25 feet by 12 feet ...	10 5 0	2 5 0	50 feet by 15 feet ...	18 0 0	3 0 0

Erections beyond 25 miles of London, Railway Fare for one Man charged extra.

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HAND ROLLERS.

Diameter 30 inches;	length 32 inches	£7	10	0
„ 24 „	„ 26 „	4	10	0
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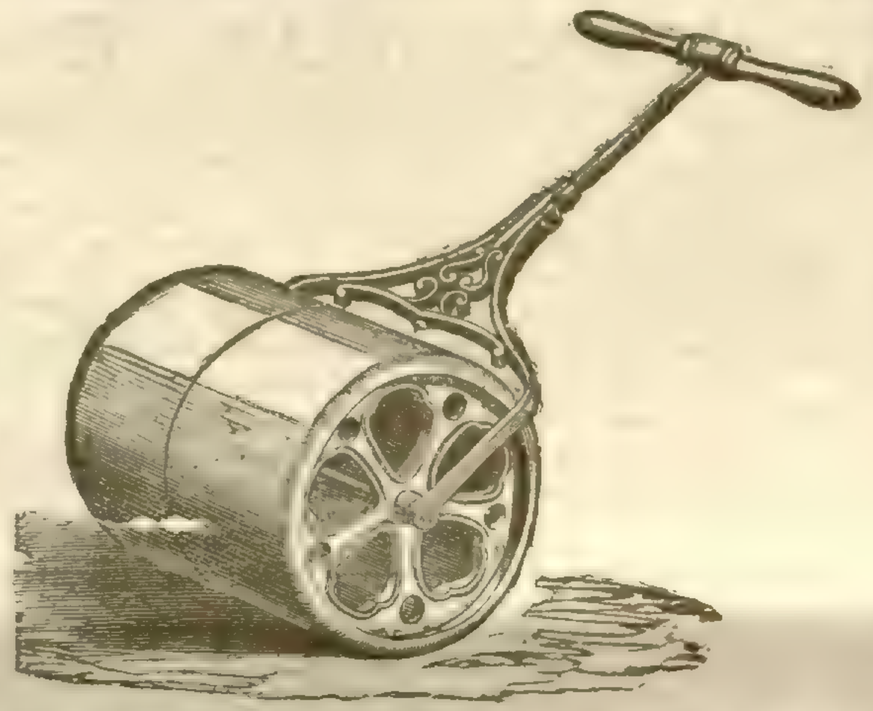

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„ 30 „	„ 42 „	11	15	0
„ 30 „	„ 48 „	13	10	0
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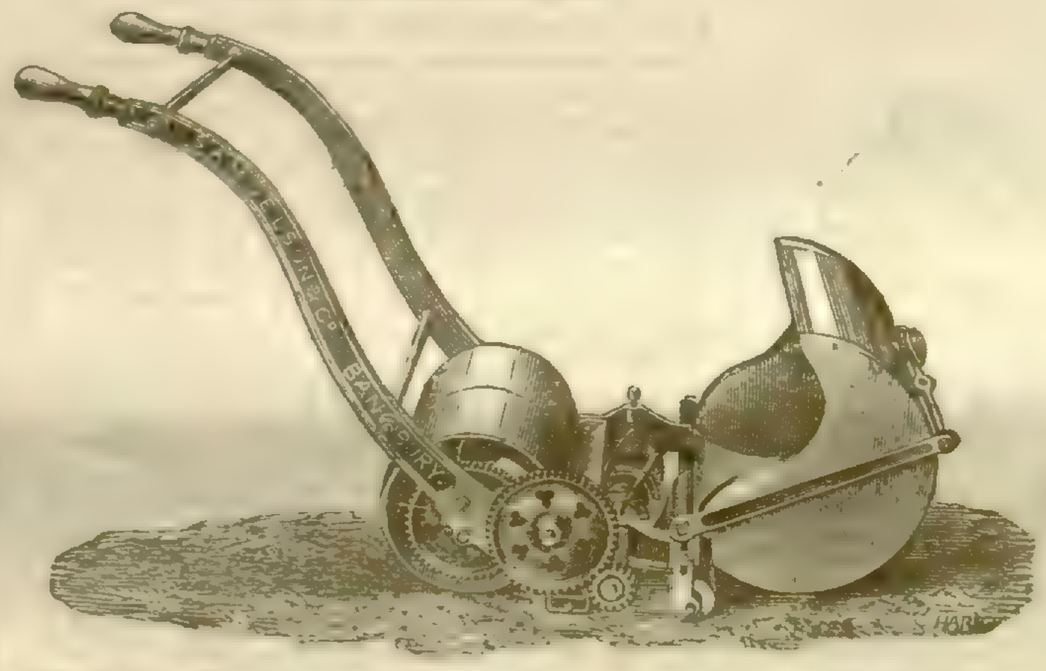

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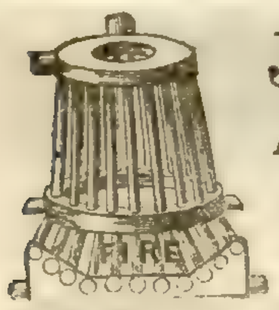

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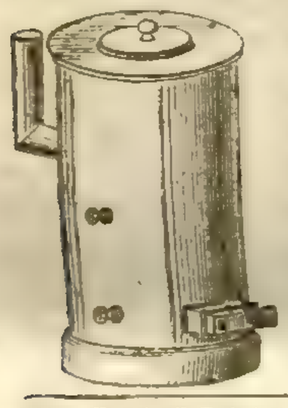

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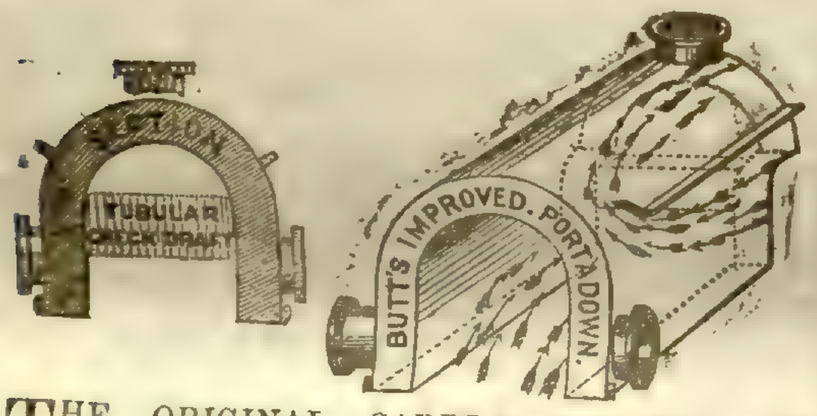

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PROTECTION from the COLD WINDS & MORNING FROST.
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

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"Sir,—I have much pleasure in offering my testimony to the efficiency of your Black Varnish as a substitute for paint. I have used it for out-door purposes on wood and iron, and found it economical, easily applied, and giving an excellent brilliant black. The use of the Varnish is rendered much more expeditious and convenient by the assistance of the Heating Barrow, which I strongly recommend from experience.

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THE PATENT IN-DOOR PLANT CASES

(TO WHICH A PRIZE WAS AWARDED AT THE ROYAL HORTICULTURAL SOCIETY'S EXHIBITION).

SOLE MANUFACTURER,

JAMES GRAY, HORTICULTURAL WORKS,

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The PATENT IN-DOOR PLANT CASE is one of the most useful of the Gardening novelties of the day. It is a handsome ornament for the Drawing Room or Sitting Room, and at all times forms a fresh, pleasant, and interesting object to the mind and eye. It is always under command, and will preserve many of the most tender Exotic Plants through the severest winter with comparatively little of the trouble and annoyance attending the use of Lamps, Gas, and Heating appliances of any other kind.

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	16-ounce.	21-ounce.
Best	5½*d.* ...	7½*d.*
Seconds	3½*d.* ...	5*d.*
Thirds	2½*d.* ...	3½*d.*
Fourths	2¼*d.* ...	3¼*d.*

HORTICULTURAL GLASS.

Stock Sizes, 16-ounce. In 100 feet Boxes.
These prices only apply to the sizes stated.

				4ths.		3rds.	
				s.	*d.*	*s.*	*d.*
11 by 9	12 b 9	13 by 9	14 by 9				
12 „ 10	13 „ 10	14 „ 10	15 „ 10	10	9	12	3
13 „ 11	14 „ 11	..	..				
14 „ 12	15 „ 12	15 „ 11	16 „ 11				
18 „ 12	19 „ 12	16 „ 12	17 „ 12				
16 „ 13	17 „ 13	20 „ 12	21 „ 14	11	6	13	6
19 „ 13	20 „ 13	18 „ 13	..				
16 „ 14	17 „ 14	21 „ 13	..				
19 „ 14	20 „ 14	18 „ 14	..				

	4ths.		3rds	
	s.	*d.*	*s.*	*d.*
	12	6	14	0
	13	6	16	0

14 to 15 ozs. 16 to 17 ozs. to the foot.

HARTLEY'S PATENT ROUGH PLATE GLASS.

Packed in Boxes of 50 feet each.

				s.	*d.*	
6 by 4	and 6½ by 4½	...	...	10	6	per box.
7 „ 5	„ 7½ „ 5½	...	...	12	0	„
6 „ 6	„ 8 „ 6½	...	...	13	6	„
8 „ 7	„ 9½ „ 7½	and 10 by 8	...	15	0	„

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20 by 12 }	Fourths ...	11*s.* 6*d.*	13*s.* 6*d.*	15*s.* 0*d.*
20 „ 13 }	Thirds ...	13*s.* 6*d.*	16*s.* 0*d.*	19*s.* 0*d.*
20 „ 14 }	Seconds ...	...	English.	English.
20 „ 15 }	Best ...	...	18*s.* 0*d.*	23*s.* 0*d.*

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8 „ 6	8½ „ 6⅜	9 „ 7	9½ „ 7½ }	
		10 „ 8	10½ „ 8½	12 6

Boxes 2*s.* each, returnable at full price.

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FURTHER REDUCTION in the PRICE of WIRE NETTING.

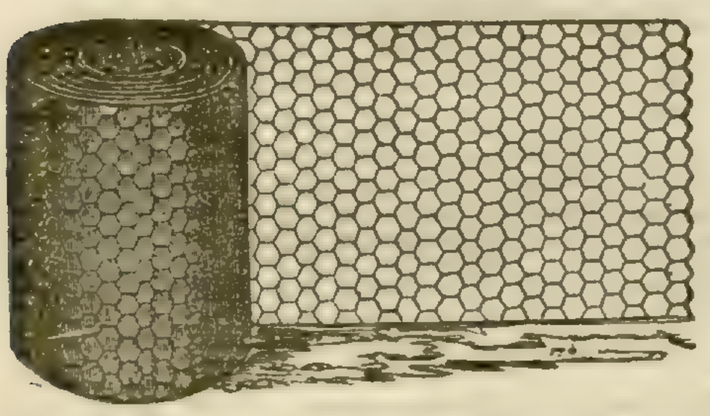

BARNARD, BISHOP, & BARNARDS beg to inform their friends and the public that they have made a further reduction in the prices of Machine-made Wire Netting, and also that all their Nettings are now Galvanised after being made, which adds much to their appearance, strength, and durability.

		Galvanised.	Japanned Iron.
	Gauge.	per yard.	per yard
2-inch mesh, 24 inches wide ..	No. 19	.. 4¼d.	.. 3¼d.
2-inch " " " .. "	18	.. 5	.. 4
2-inch " " " .. "	17	.. 6½	.. 5
2-inch " " " .. "	16	.. 8	.. 6½
1⅝-inch " " " .. "	19	.. 4¾	.. 4
1⅝-inch " " " .. "	18	.. 6	.. 4¾
1½-inch " " " .. "	17	.. 7	.. 5½
1½-inch " " " .. "	16	.. 9	.. 7

All the above kinds can be made any width (under 6 feet) at proportionate prices.

Strong Galvanised Poultry Netting, 7½d. per yard, 3 feet Wide. Galvanised Sparrow-proof Netting for Pheasantries, 11d. per yard, 2 feet wide. Wire Netting of every mesh from half an inch to 6 inches.

Price of WIRE FENCING, and GALVANISED WIRE ROPE FENCING, suitable for the home trade or the colonies.

Five wires, 3 feet 6 inches high, pronged Standards, 8 feet apart, one wrought iron straining post and straining screws to each 100 yards of Fencing, 1s. per yard.

The same with Galvanised Wire Rope, 1s 2d. per yard.

Illustrated Catalogues, with prices of every variety of Wire Fencing and Wire Netting, forwarded free on application.

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TREES COMING into BLOOM will be protected from Frost, Hail, &c., by using HAYTHORN'S HEXAGON and CHISWICK GARDEN NETS. These Nets will secure the Fruit from Wasps, Flies, Birds, &c. They are recommended by most Gardeners.

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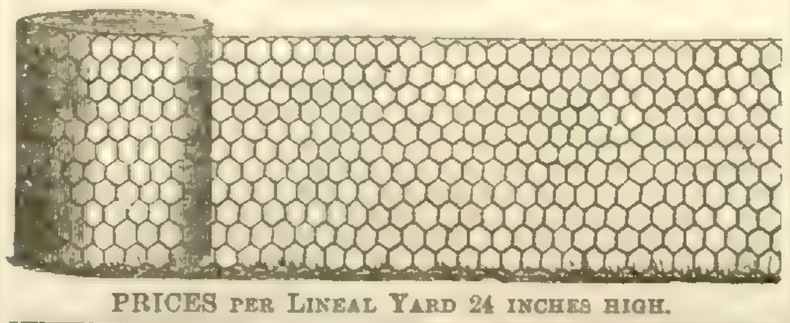

PRICES PER LINEAL YARD 24 INCHES HIGH.

Size of Mesh.	Mostly used for.	Light. Jap	Light. Gal	Medium Jap	Medium Gal.	Strong. Jap	Strong. Gal.	Extra Strong Jap	Extra Strong Gal.
		s. d	s. d	s. d.	s. d.	s. d	s. d	s. d	s. d.
2½ in.	Hares, Dogs, Poultry ..	0 3	0 4	0 3½	0 5	0 4½	0 6	0 5½	0 7
2 in.	Game or Poultry Netting ..	0 3½	0 4½	0 4	0 5	0 5	0 6½	0 6½	0 8
1⅝ in.	Small Rabbits, Hares, &c. ..	0 4	0 4½	0 4½	0 6	0 5½	0 7	0 7	0 9
1½ in	Smallest Rabbits	0 5	0 6	0 5½	0 7	0 7	0 9	0 9	0 11
1 in.	Pheasantries, &c.	0 9	0 11	10½	1 1½	1 3	1 6	1 9	2 0
¾ in.	Aviaries, &c. ..	1 0	1 3	1 3	1 6	1 6	1 9	..	..

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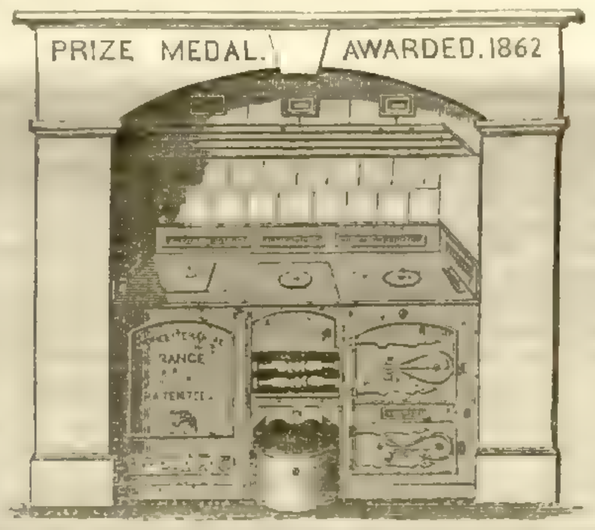

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The above RANGE is most complete, and strongly recommended for its unrivalled ECONOMY, CLEANLINESS, CONVENIENCE, DURABILITY, and is a certain CURE for SMOKY CHIMNEYS.

It is an entirely new invention, and consists of large MEAT ROASTER, PASTRY OVEN, and WROUGHT-IRON BOILER. The top forms a HOT PLATE for BOILING, STEWING, &c. The whole Heated by ONE SMALL FIRE. One 5 feet wide is equal to an ordinary Range 8 feet wide.

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Shower Baths, from ..	8s. 0d. to £6 0s. "
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(All other kinds at the same rate).	
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LAWN MOWERS made in a superior manner, and at reduced prices.
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Universal Microscope. Price £5 5s.

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PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.

They are more easily trimmed and re-filled than any other Lamp with similar burner.

There is no danger of chimneys breaking, and the chimney cannot become smoked.

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A REALLY GOOD LAMP.
The above may be obtained of any Lamp Dealer.

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SHERWOOD ECONOMIC BED-LIGHTS, in packets of 36 Candles for 1s., intended for use where cheapness is a great object, will be found an improvement on the ordinary Candles, as they gutter less.

Special CANDLESTICKS to fit thin candles, 1s. and 2s. 6d. each; reducing Sockets, making them fit any candlesticks, 2d. each.

PRICE'S Patent Candle Company, Limited, London.

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The public are respectfully cautioned against worthless imitations, and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper.

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SIMPSON'S FARINACEOUS FOOD for CATTLE.—The Goodwill of the Business of ALEXANDER SIMPSON, and of SIMPSON & BLUNDELL, has been sold to me by their Assignees, with the sanction of the Commissioner of the Birmingham Court of Bankruptcy, and I shall continue, as heretofore, to Manufacture and Sell the Farinaceous Food; but to prevent imposition or mistake, I shall henceforth call it "BEACH'S FARINACEOUS FOOD," and every bag will be so marked. JOSEPH BEACH.

Steam Mills, Dudley.

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The above FARINACEOUS FOOD for CATTLE, and BEACH'S CONDIMENT for HORSES, 25s. per cwt., delivered carriage paid to any Railway Station.

Cash required from unknown Corr spondents.

One first-class Agent wanted in each Town where not already appointed.

TESTIMONIALS of CUPISS'S CONSTITUTION BALLS, for HORSES and NEAT CATTLE.

Hawking Down House, Wiltshire,
To Mr. F. CUPISS, May 4, 1860.

SIR,—In answer to yours of the 1st, I beg to say you are quite at liberty to publish my opinion of your Constitution Balls, which I very much approve of for getting Horses into fine condition. They are also good for Sheep, especially Lambs when they are in a pining state, by making them into pills about the size of a nut, and giving two or three occasionally; the animal soon becomes strong and healthy.—I remain, yours respectfully, MORALITY RAWLINGS.

Mains of Arisay, Fortwilliam, N.B, Oct. 26, 1860.

SIR,—I have given your Constitution Balls to Horses and Cattle for the last four years, and have always been satisfied with their effect. I consider it a boon to any one keeping Stock to be able to get Balls so good and so sure in their effect.—I remain, yours obediently, JOHN CARTER.

From Capt. H. BURTON, *Grange Farm, Rock Ferry, Cheshire.*

"No Grazier or Horsekeeper ought ever to be without Cupiss's Constitution Balls."

From Mr. PRATT, *King's Arms Hotel, Lancaster.*

"I have found the Constitutional Balls most valuable for horses when taken up from Grass, and very beneficial to give them occasionally to Horses when turned out."

The Balls are prepared by FRANCIS CUPISS, Diss, Norfolk, Author of the Prize Essay of the Diseases of the Liver of the Horse. And may be had of all Patent Medicine Vendors, in Packets of 3 Balls, 1s. 9d.; and 6 Balls, 3s. 6d.; or 4 small Packets, 10s. 6d.; or 7 large Packets, 21s.; with full directions.

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THE EDINBURGH REVIEW, No. CCXLIV.
Will be published on TUESDAY NEXT.

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IV. HUMAN SACRIFICES AND INFANTICIDE IN INDIA.
V. CHARLES-VICTOR DE BONSTETTEN.
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News of the Week.

BOTH Houses of Parliament have reassembled this week after the Easter Recess. In the Lords on Tuesday, in reply to a question from the Earl of DONOUGHMORE respecting the enlistments for the Federal navy at Cork, Earl RUSSELL expressed his opinion that the men were on board the Kearsage without the knowledge of the captain, and said that Mr. ADAMS, the United States Minister, had authority from his Government to dismiss at once any officer who might be instrumental in violating the Foreign Enlistment Act. The Leases and Sales of Settled Estates Act Amendment Bill was read a second time. The Marquis of CLANRICARDE moved for the correspondence with the Government of the Confederate States relative to the removal of British consuls from their territory. Earl RUSSELL said he had no objection to the motion, but suggested an alteration in its terms. The motion as amended, was agreed to. On Thursday the Earl of SHAFTESBURY called attention to the telegraphic announcement of the bombardment of Sonderborg and the destruction of its inhabitants without notice, and expressed a hope that, if the intelligence were true, the Government would send the Channel fleet to prevent the repetition of such atrocities. Earl RUSSELL said that he had telegraphed to Sir A. BUCHANAN, our Minister at Berlin, to ascertain the actual facts, and when he received an answer he would communicate it to the House. The Settled Estates Act Amendment Bill was read a second time. The Malt for Animals Bill and the Conveyancers (Ireland) Bill were read a third time and passed. Last night the Settled Estates Act Amendment Bill, and the Court of Chancery Dispatch of Business Bill were read a third time.

In the Commons, on Monday, Lord PALMERSTON stated that all the Powers who had signed the Treaty of London had consented to send representatives to the Conference on the Danish question, but that no answer had yet been received from the German Diet. The basis of the Conference would be an endeavour to restore peace to the North of Europe without an armistice. Mr. STANSFELD announced that since the House last met he had felt it his duty to tender his resignation, which had been accepted. At the same time he indignantly repudiated any cognisance of the criminal designs or proceedings of the Italian revolutionists, and reiterated his former declarations of disbelief in the complicity of M. MAZZINI in the late conspiracy against the EMPEROR OF THE FRENCH. Lord PALMERSTON expressed his regret at the loss of Mr. STANSFELD's services, and said that he had tendered his resignation in such terms as to leave him no option but to accept it. On the order for going into Committee of Supply, Mr. R. LONG moved for a select committee on the Post Office, with a special view to the improvement of the mails in provincial districts. The motion was opposed by Mr. PEEL and the CHANCELLOR of the EXCHEQUER, and was negatived without a division. The House then went into a Committee of Supply on the Navy Estimates, and agreed to several votes after a long discussion on naval and dockyard affairs. The Union Relief Aid Acts Continuance Bill passed through Committee. On Tuesday Alderman SALOMONS called attention to the exemption from local taxation now claimed on account of property in the occupation of Government departments, and moved that all lands and buildings used and occupied for public purposes should be assessed to local rates, and pay rates accordingly. The motion was opposed by Mr. F. PEEL and the CHANCELLOR of the EXCHEQUER, and was negatived on a division by 52 to 30. The Select Committee on Turnpike Trusts was nominated. The Report of the Committee of Supply was brought up and agreed to. On Wednesday Mr. BLACK withdrew the Copyright Bill, and obtained leave to introduce in its stead another Bill to consolidate and amend the statutes relating to copyright. The Chain Cables and Anchors Bill passed through Committee with amendments. The Jersey Court Bill and the Registration of County Voters (Ireland) Bill were read a second time. The Union Relief Aid Acts Continuance Bill was read a third time and passed. Mr. ADAIR brought up a report from the Lisburn Election Committee, stating that they had come to the conclusion that they were no longer legally empowered as a committee to proceed further in the matter. On Thursday, in a speech of three hours, the CHANCELLOR of the EXCHEQUER submitted his annual budget to the House. He said that the surplus for the past year, after all deductions, was 2,352,000*l.*, and that the accounts for the current year, at the present rate of taxation, would leave a surplus of 2,570,000*l.* over the estimated expenditure. He proposed to dispose of this surplus by altering the duty on corn and lentils from 1*s.* a quarter to 3*d.* a cwt.; to reduce the licence duty on the sale of tea from 11*s.* 6*d.* to 2*s.* 6*d.*, where the sale took place in small houses in country districts; to equalise the duties now payable on ecclesiastical benefices of a certain amount; to reduce the stamp duty on proxy voting papers from 6*d.* to 1*d.*; to reduce the duties on powers of attorney for receipt of dividends, and make a change in the stamp duties on settlements; to legalise the practice of marine re-insurance on paying a shilling stamp, and to extend the licences of beersellers by giving them the privileges now enjoyed by publicans. These minor changes would reduce his surplus by about 10,000*l.* With regard to the reduction of more important taxes, he said that he did not propose to deal with the malt tax in any way, because the abolition of that tax, so long as many other taxes remained unrepealed, would be to confer a boon on England at the expense of Ireland and Scotland. He proposed however to reduce the duties on sugars by about 5*s.* per cwt. on the higher classes, and by about 2*s.* per cwt. on the lowest; to take off one penny in the pound from the income-tax; and to reduce by one half the fire insurance duty on stock in trade. These reductions would absorb 2,332,000*l.*, leaving a margin of 238,000*l.*, which he did not think it prudent to reduce further. After a short discussion on the leading features of the Budget, which was received favourably by the House, the first resolution altering the duty on corn and lentils was agreed to, and the CHAIRMAN was ordered to report progress.

A telegraphic despatch from Düppel states that the Prussians, having failed to reduce that fortress by bombardment, have shelled the town of Sonderborg for three days without notice, destroying nearly a third of the town by fire, and killing and wounding about 80 men, women, and children, who were unable to escape. The town is now deserted, but the Danish position at Düppel, in spite of the continuance of the bombardment, is still uninjured.

The Norwegian Storthing was closed on Saturday. The KING in his speech said that Sweden and Norway will endeavour to obtain peace, but must be prepared to render assistance to Denmark against overpowering force.

The latest news from the United States informs us that the Confederates are making extensive preparations for a combined invasion of Kentucky from various points. General LEE was reported to have broken up his encampment on the Rapidan, and to be moving on the Shenandoah Valley, for the purpose, it was supposed, of making an early attack on the army of the Potomac. The New York District Court, after ordering the restoration of the Saxon and her cargo to her owners, have recommended that Lieut. DONOVAN who shot Mr. GREY, the mate, at the Cape of Good Hope, should be tried by court-martial for the murder.

Home News.

THE COURT.—The Queen and Royal family continue at Windsor. In the afternoon of Thursday, the 31st, her Majesty, accompanied by Princess Helena, drove to Cliveden, and honoured the Dowager Duchess of Sutherland with a visit. On Friday morning the Queen drove out, accompanied by Princess Helena. On Saturday morning the Queen walked and drove in the grounds. The Bishop of Worcester and Sir Charles and Lady Mary Wood arrived at the Castle on a visit. In the evening the Princess Helena came to London, and attended the performance at Covent Garden Theatre. On Sunday morning the Queen, the King of the Belgians, Princess Helena, Princess Louisa, Prince Leopold, and Princess Beatrice attended Divine service in the private chapel. The Bishop of Worcester preached the sermon. On Monday morning the Bishop of Worcester and Sir Charles and Lady Mary Wood left the Castle. The Queen, accompanied by Princess Helena, walked and drove in the grounds. Princess Augusta of Saxe-Coburg, the Princess Clotilde, Princess Amélie, and Prince Ferdinand, arrived at the Castle on a visit to the Queen. Professor Owen had the honour of delivering his third lecture before her Majesty, the King of the Belgians, and the Royal family. In the afternoon Earl Russell had an audience of the Queen. On Tuesday the Queen, accompanied by the Princess Augusta of Saxe-Coburg, drove out. The Princess Helena and Princess Louisa, and Princess Clotilde and Princess Amélie of Saxe-Coburg, accompanied her Majesty in a second carriage. Earl Granville arrived at the Castle on a visit. In the evening the Queen had a dinner party. On Wednesday the King of the Belgians left the Castle for Buckingham Palace. Princess Augusta of Saxe Coburg, Princess Clotilde, Princess Amélie, and Prince Ferdinand, left the Castle for Claremont. Prince Arthur arrived from Greenwich Park. On Thursday, being the 11th birthday of Prince Leopold, the event was celebrated with the customary honours. In the morning the Queen, accompanied by Princess Helena, walked and drove in the grounds. In the afternoon the Queen held a Privy Council. Previously to the Council the Bishop of Ely was introduced to her Majesty by Sir George Grey, and did homage on his appointment. The Earl of Clarendon had an audience and took the oaths on being appointed Chancellor of the Duchy of Lancaster. The Right Hon. Edward Cardwell received the Seals of the Colonial Office and took the usual oaths. Mr. Chichester Fortescue was introduced and took the oaths on being appointed a Privy Councillor.

THE PRINCE AND PRINCESS OF WALES continue at Sandringham. On Saturday morning the Prince walked over the estate, and in the afternoon the Prince and Princess rode on horseback. On Sunday morning their Royal Highnesses attended Divine service at Sandringham Church. The Rev. G. B. Moxon, rector, officiated and preached. On Monday morning the Prince went out shooting on the Wolferton part of the estate, and in the afternoon went out coursing on the Hall Farm. In the afternoon the Princess rode on horseback. On Tuesday their Royal Highnesses walked over the grounds. It is said that his Royal Highness will probably hunt a day or two with the West Norfolk, as, though the regular season has terminated, some bye days are talked of. The Vice-Chancellor of Cambridge has received an official intimation that the Prince and Princess will visit the University of Cambridge in the week ending the 18th of June.

PRINCE ALFRED on Friday paid a visit to Lord Belhaven, at Wishaw House. On Saturday his Royal Highness visited Hamilton Palace, Bothwell Castle, and Blantyre Priory, and returned to Wishaw in the evening. On Sunday the Prince, accompanied by Lord and Lady Belhaven, attended Divine service in the parish church. On Monday morning his Royal Highness returned to Edinburgh. On Wednesday afternoon the Prince rode to Newbattle Abbey, and took luncheon with the Marquis of Lothian.

THE QUEEN'S COURT.—On Tuesday the Queen postponed the Court appointed to be held at Buckingham Palace on Wednesday last until to-day (Saturday) at 3 o'clock.

THE CABINET.—A Cabinet Council was held on Saturday afternoon at the official residence of the First Lord of the Treasury in Downing Street.

MINISTERIAL CHANGES.—The Duke of Newcastle has been compelled by increasing ill-health to resign the seals of the Colonial Department. Mr. Cardwell has succeeded his Grace as Secretary of State for the Colonies, and the Earl of Clarendon has succeeded Mr. Cardwell as Chancellor of the Duchy of Lancaster.

PARLIAMENTARY MOVEMENTS.—The appointment of Mr. Cardwell to the Secretaryship for the Colonies, has caused a vacancy for Oxford. It is expected that Mr. Cardwell will be re-elected without opposition. Mr. Garnett has resigned his seat for Lancaster. It is rumoured that Mr. Somerville Head will retire before the nomination, and leave the electors to choose between Mr. Fenwick and Mr. Saunders. There are three candidates for Fifeshire, Sir Robert Anstruther and Mr. Boyd Kinnear, Jun., in the Liberal interest, and Mr. Anstruther Thomson in the Conservative interest. It is announced that the Hon. Thomas Bruce, brother to Lord Elgin, will become a candidate for Portsmouth in the Conservative interest. The Liberal electors of Finsbury have invited Mr. Donald Nicoll, late sheriff of London and Middlesex, to offer himself as a candidate for that borough. Mr. Motteram and Mr. Huddleston, Q.C., both of the Oxford Circuit, intending offering themselves in the Conservative interest for Stafford.

THE BISHOPRIC OF TASMANIA.—One of the last acts of the Duke of Newcastle, as Secretary of the Colonies, was to offer the vacant see to the Rev. C. H. Bromby, Incumbent of St. Paul's and Principal of the Normal College, Cheltenham. Mr. Bromby belongs to the moderate party in the Church.

THE CHANNEL SQUADRON.—Oorders have been sent to Rear-Admiral Dacres to complete his squadron for sea forthwith.

Foreign.

FRANCE.—The Corps Législatif sat on Monday, when an Imperial decree was read prolonging the sittings until the 4th May. The report upon the Budget was brought in and ordered to be printed. *La France* of Monday states that all the Powers interested have agreed to take part in the London Conference on the Dano-German question, with the exception of the Germanic Diet. The first meeting of the Conference remains fixed for the 12th of April, but it is still uncertain whether the Germanic Diet will have appointed its Plenipotentiary by that date. The following note on the subject has been addressed by M. Drouyn de Lhuys to Prince La Tour d'Auvergne, the French Ambassador in London:—

"Paris, March 20.

"PRINCE,—The Britannic Government is taking new steps at this moment to bring about the meeting of a Conference, and the belligerents do not appear as much opposed as previously to the opening of negotiations. You are aware that we have no objection to take part therein if they are accepted by all the other Courts, and I conveyed the intentions of the Emperor's Government upon this subject to you in my despatch of the 14th of this month. But before taking our seat at the Conference, I wish you to acquaint the Cabinet of London with the ideas and sentiments we should bring with us. This perfectly friendly communication will, perhaps, explain better than we have hitherto had occasion to do the line of conduct followed by the Imperial Government in the Dano-German difference. It will also contribute, I hope, to put an end to the suppositions of ulterior objects, which have been so gratuitously attributed to us. In associating ourselves with the effort at pacification, we shall find that we are in presence of two chief interests. Upon the one hand we have to take into account stipulations concluded with a view to the European balance of power, and furnished with the signature of France; upon the other, it is impossible to misconceive the sentiments of repulsion which have arisen against the work of the Plenipotentiaries of 1852. We are far from disputing the wisdom of the combination which the Treaty of London was intended to place under the safeguard of the public law of Europe, and if, apart from the opposition of Germany and the manifestations of the Duchies, we were free to obey the inspiration of our traditional sympathies for Denmark alone, all our efforts would be devoted to upholding this agreement. But it is impossible for us not to recognise the obstacles which are opposed to the exact and precise execution of the Treaty of 1852. If in the eyes of some Powers the Treaty of London possesses a separate existence and a peculiar authority, independently of the engagements concluded at the same period between Germany and Denmark, in the opinion of others, upon the contrary, it is subordinated to those engagements, and cannot be separated from them. Among the German States some have refused their adhesion, or have only given it in a restricted form; others, after having formerly adhered to it, now declare themselves free. Finally, the Germanic Confederation appears to dispute the value of an act in which it has not concurred. In presence of this diversity of opinions, which will give rise to insurmountable difficulties, it appears to me indispensable to examine the interests concerned in the existing war, without pre-occupying ourselves exclusively with the letter of the treaty. The cause as well as the distinctive character of this struggle is evidently the rivalry of the populations which compose the Danish monarchy. A national sentiment exists among each, the force of which cannot be placed in doubt. What then would be more natural, in default of a course unanimously accepted, than to take as a basis the wish of the populations? This method, conformable to the veritable interests of two parties, appears to us the best fitted to bring about an equitable arrangement and as offering guarantees of stability. In asking the application of a fundamental principle of our public law, and in claiming the advantages of this principle for Denmark as for Germany, we believe we propose the most just and facile solution of this question, which excites such lively uneasiness throughout the whole of Europe. Accept the assurances, &c.

"DROUYN DE LHUYS."

La France of Thursday evening says, that in consequence of the explanations contained in M. Drouyn de Lhuys's despatch, the British Cabinet is evidently more inclined towards the views of France, and think the labours of the Conference will be facilitated by the understanding which appears to exist between the two Western Powers. The *Pays* says that France would only ask that the inhabitants of the Duchies should declare themselves relative to the government they wish to have in the event of the greater part of the Powers abandoning the basis of the treaties of 1851. *La France* of Monday evening believes itself able to state that the Courts of London, Rome, Vienna, Berlin, St. Petersburg, Spain, and France have agreed to recognise the Emperor of Mexico so soon as his accession shall have been notified to them. In another article on Wednesday, it says that it has reason to believe that the existing difficulties respecting the acceptance of the Mexican Crown will be solved by a compromise between the Emperor of Austria and the Archduke Maximilian, and that the latter will very shortly proceed to Mexico. The subscription for the new Mexican loan of 200,000,000f. will be opened on the 15th or 16th of April, and will be issued simultaneously at London, Paris, Frankfort, Brussels, and Amsterdam. Prince Napoleon arrived at Antwerp on Saturday evening in his yacht the Prince Jérome. His Imperial Highness, who is stated to be on a scientific trip to Holland, travelled *incognito* under the title of Count de Meudon, and, accordingly, no public reception awaited him. On Sunday morning the Prince landed and visited the museums, zoological gardens, and other places, and then proceeded to Holland by railway. His yacht will remain at Antwerp until he returns. The report that he will go to Sweden is contradicted. The Bishop of Oxford has arrived in Paris, and will proceed thence in a few days to Brussels and Antwerp to take some confirmations for the Bishop of London. Mr. Pope Hennessy, M.P., had an audience of the Emperor Napoleon on Monday, and another on Tuesday. The Emperor and Empress gave a ball at the Tuileries on Tuesday night, which was attended by the English Ambassador, the Bishop of Oxford, the Duchess of Somerset, Lord H. Lennox, Mr. S. Fitzgerald, and Mr. Pope Hennessy. The Emperor had a long conference with the English Ambassador, and the resignation of Mr. Stansfeld, being known by telegraph, was the general topic of conversation. In consequence of the alarming accounts of the Pope's health, the French Government is said to have sent instructions to the French Ambassador at Rome to concert with the General commanding the army of occupation as to the precautions to be adopted in case of the death of his Holiness. It is believed that that event would be the signal of a rising in Rome, or at least of an attempt to create disturbances; and both the Ambassador and General are enjoined to maintain, at all hazard, the tranquillity of the city while the Conclave are choosing the new Pope. The *Moniteur* of Tuesday says:—

"*La France* is badly informed in stating that the anniversary of the battle of Waterloo was celebrated in England last year. For several years past this anniversary has not been kept in England."

SPAIN.—The Government will shortly ask the Cortes for the necessary credits to purchase 100,000 rifles and other war material. The news of an intended meeting of the Democrats in Madrid has been denied by the Democratic party. All the Madrid journals except four support the policy of the Government.

PORTUGAL.—The Cortes have been prorogued until the 14th of May. The King is said to be desirous of asking the Cortes to pass a bill allowing him to travel in France and Italy. The proposed tour, however, is very unpopular, and the Ministry are doing their best to dissuade the King from his intentions. The Ministerial bill for the abolition of the tobacco contract, which recently passed the Chamber of Deputies by a majority of 23 votes, is expected to meet with great opposition in the House of Peers. Two Austrian frigates and a gunboat have sailed from the Tagus for the Baltic.

CAPE DE VERDES.—Accounts from the Cape Verde Islands describe the population as being decimated by famine. In the island of St. Jago the inhabitants are actually dying daily in numbers in the streets of starvation. Great exertions have been made in Rio Janeiro and Lisbon in behalf of the sufferers, but unless further assistance be given, thousands of the islanders must inevitably perish. The cause of the famine is the failure of the rains in the sowing season, and the consequent loss of the crops of Indian corn and beans, which are the staple articles of subsistence in the islands.

GIBRALTAR.—The *Epoca* of Madrid of Thursday says that a number of Mazzinians have left the principal towns of Italy to excite revolutions in Spain and Portugal. Their rendezvous is Gibraltar.

SWEDEN.—The Storthing was closed on Friday. The King in his speech said that Sweden, jointly with other Powers, would endeavour to obtain peace; but that she must, at the same time, be prepared to render assistance to Denmark against overpowering force.

DENMARK.—The official journals announce that Denmark has now officially notified her acceptance of the Conference without armistice and without basis. M. Bille, the Danish Minister in London, M. de Quaade, the Minister for Foreign Affairs, and Councillor Krieger, of the High Court, have been appointed Plenipotentiaries at the Conference. The two latter left Copenhagen for London on Thursday. The portfolio for Foreign Affairs, during the absence of M. de Quaade, will be assumed by Bishop Monrad, the President of the Council.

THE DANISH DUCHIES.—A terrific cannonade was opened on Saturday at 3 P.M. between the Düppel batteries and the Prussian advanced batteries at Broager, which commenced bombarding Sonderborg without giving warning to the inhabitants. The cannonade continued at half-past 11 at night. On Sunday afternoon the Prussians opened another terrific cannonade from various points in front of the Düppel bastions. Sonderborg was shelled from Broagerland, and was set on fire in several places. The cannonade and bombardment continued till a late hour, and the Danish outposts on the right of the Düppel position were attacked several times during the night. Eighty townspeople, women and children, were killed or wounded by the bombardment; 50 houses in the centre of Sonderborg were burnt, and 1500 shells were thrown into the town, which is deserted. The bombardment lasted 48 hours, but suddenly ceased on Monday morning. It was however recommenced in the afternoon. The Düppel works however sustained no injury whatever, and on Tuesday the bombardment again ceased. During the night several divisions of the 4th Regiment of the Guards drove in the Danish outposts, and took up a position 250 paces beyond the first parallel, when an infantry engagement ensued. In this engagement 16 of the Prussian infantry and two pioneers were wounded, but none were killed. 28 Danes were captured. At daybreak on Wednesday the Danish troops re-occupied their former position. During the night the Prussians extended the parallel already commenced. On Wednesday afternoon Sonderborg was again bombarded. The results were inconsiderable. The firing from the Prussian batteries, and also from the Düppel entrenchments, was very severe. The Prussians have erected batteries in Stegswig for the purpose of bombarding men-of-war and a pontoon train has been seen near Ballesgaard. It is said that the Austro-Prussian troops intend to turn the position of Düppel by crossing over to the Island of Alsen very shortly, by means of Austrian pontoons. Everything is said to be prepared for an important action. The *Hamburger Nachrichten* announces that 6000 Danes have beaten the Prussians near Veile, in the positions lately abandoned by the Austrians. An official telegram from Count Rechberg to the Austrian Ambassador in London contradicts the report from Jutland that the siege of Fredericia was raised because the Hungarian and Venetian troops under General Gablenz, officers as well as men, had agreed to pass over to the Danes. The Chief President, Roosen, and the whole municipality of Flensburg have been dismissed. An extraordinary war tax has been imposed on the town of Flensburg, and will most likely also be levied upon some other places in Schleswig. The Assembly of the Deputies to the Schleswig-Holstein Estates was held on Tuesday. A protest was signed against any decision of the Powers impairing the rights of the Duchies. Three members were ordered to transmit this protest to the Federal Diet, and to the European Powers. An assembly of Holstein clergymen took place at Neumünster on Thursday, consisting of 60 members. The assembly assented without reserve to the resolutions adopted by the Holstein Estates. The municipality and the College of Deputies at Kiel have summoned the other communal representatives of Holstein to assemble at Neumünster, to pass common resolutions in reference to the condition of the country. The Holstein Government, in a circular to the police authorities, has enjoined a strict surveillance of the traffic with Denmark.

HANOVER.—The Minister of Finance has published a notification announcing that the Austrian squadron for the protection of the German merchantmen has received orders to extend its operations to the North Sea.

FRANKFORT.—If the Diet accepts the invitation to the Conference, it is believed that Baron von Bensc or Herr von der Pfordten will represent it. A disagreement exists between Prussia and Austria relative to

the representation of the Federal Diet at the Conference. Prussia, it is affirmed, wishes to be furnished by the Diet with full powers, while Austria supports the choice of a representative from among the minor States. It is believed that the Diet will support the Austrian suggestion. Another despatch says that Austria and Prussia have addressed circular despatches to the States of the German Confederation, which are identical in their essential points. These communications request the German Governments to use their influence for the despatch to the Conference of a common representative for all the minor States. An independent representation of the Diet at the Conference is most important, and does not prejudice the question of the Duchies, since the Conference is to be held without any bases being previously fixed, and since there has been no question of the decision of the majority being conclusive.

Prussia.—The semi-official *Nord-Deutsche Allgemeine Zeitung* of Wednesday says:—

"The alleged identical circular Note of Prussia and Austria, published by the *Vienna Presse* of the 2d inst., said to be addressed to the German Federal States on the subject of the Conference, is in form and contents a complete invention."

The same journal recommends that the question whether they will be German or Danish should be submitted to the Duchies.

Austria.—The semi-official *Wiener Abendpost* of Tuesday says:—

"The allied Powers will demand at the Conference ample security for the complete independence of the Duchies, as well as for an unconditional equality with the remainder of Denmark. They will further demand the political union of Schleswig and Holstein with Germany, by which they are permanently to be protected."

The Emperor and the Archduke Maximilian have not yet come to an understanding, difficulties having arisen at the last moment touching the Archduke's definitive acceptance of the conditions relative to his eventual rights of succession to the Austrian throne. The Archduke consented to renounce his rights, but the Archduchess Charlotte is said to have offered serious objections to that step. Fresh negotiations have consequently commenced. The journey of the Archduchess to Vienna is said to have some reference to this circumstance. The French papers however assert that the Archduke will receive the Mexican deputation to-day, and will leave for Mexico to-morrow. The Archduchess Hildegarde, daughter of King Louis I. of Bavaria, and consort of the Archduke Albert, died last week in Vienna in her 38th year, after a few days' illness.

The Tyrol.—Precautionary measures continue to be taken in Southern Tyrol. The fortified places, especially Kufstein, are receiving strong garrisons. The mountain defiles and gorges are carefully watched.

Transylvania.—Accounts from the Rouman frontier give reason to apprehend a rising in that quarter. The military governor of Transylvania, in accordance with orders from Vienna, is taking precautions to protect the provinces against any *coup de main*. Strong bodies of troops are concentrating on the Wallachian frontier.

Venetia.—The German papers state that Austria appears decided to place Venetia in a state of siege.

Italy.—Advices from Rome confirm the apprehensions entertained concerning the health of the Pope, and state that there can, unfortunately, be no doubt that the illness of his Highness must be regarded with serious alarm by the whole Catholic world. On Monday, in spite of his illness, the Pope went to the Church of Santa Maria Sopra Minerva, and assisted in the religious ceremonies performed at the Feast of the Annunciation. His Holiness was enthusiastically received by the people, who thronged the streets through which he passed. A Pontifical rescript has been published, authorising a loan of 40,000,000 lire to defray the expenses of the public administration. Accounts from Turin state that the sum of money seized by order of the Turin tribunal at Lemmi's, and alleged to be the proceeds of a subscription towards a fund for an association objected to by the Government, has been restored to Garibaldi's bankers, it having been proved that the money in question had no connexion with that fund.

Ionian Islands.—The first number of a revolutionary journal has appeared at Corfu. The inhabitants have attacked the house of the English director of public schools. Fears are entertained lest fresh disorders should take place. King George is expected at Corfu to open the Ionian Chamber in person.

Poland.—The National Government has published a proclamation relative to the late Imperial ukases, in which it recommends the peasants not to pay the Russian authorities for the acquisition of land, which they have possessed for a year past by virtue of the decree of the National Government. This decree maintained the indemnification of the landed proprietors by the State.

Danubian Principalities.—It is said that the movements of the Austrian, Russian, and Turkish troops on the frontier continue on a large scale. It is asserted that a corps of 60,000 Turks has been concentrated between Shumla and Widdin. In presence of these demonstrations, Prince Couza has ordered Colonel Douka to send 300 Poles, who were to have joined the insurrection, into the interior of the country.

Cape of Good Hope.—Accounts from the Cape to the 20th Feb. state that the Governor, Sir Philip Wodehouse, was at Graham's Town; his progress through the Eastern Provinces had been very successful, and great enthusiasm prevailed in the various towns through which he passed. Admiral Sir Baldwin Walker was expected to leave for England about May. The Ariel sailed January 25 for the Zambesi, to bring down Dr. Livingstone and the mission party, all of whom were alive and well at Murchison Falls. The mission party intended to return to England. Bishop Tozer and one of his clergymen, however, intended to visit the Governor of Mozambique.

India.—The British Government has applied to the Indian for as much of its garrison strength as can be spared, to the extent of six regiments. The Indian Government has determined that only two regiments can be spared. It is finally decided that the Maharajah of Mysore is not to get the administration of his country back again. The decision has been communicated to him. Men are being enlisted in Calcutta for the American navy. Disturbances are reported in the Nizam's territories; particulars not received. Rumours are rife of an intended attack of the Hindostanees in Bhowanee, Shekhawattee territory. The Nawab of Rampoor has resigned his seat in the Imperial Council, on the plea of ill-health. The Chevalier Romolo Bonhomme, Envoy of the King of Italy, with two other Italian gentlemen, has arrived in Bombay en route to Bokhara to effect the liberation of three Italian subjects imprisoned in that city by the Ameer. The Lieutenant-Governor of the Punjab, with Colonel Maclogan and Professor Oldham, has gone to Pind Dadun Khan to investigate the quality and quantity of the coal recently discovered in the Salt Range. The Rajah of Muneepoor has signally punished the murderers of the French planter in the forests of Muneepoor. He attacked their village, killed 50 men, and burned down the village. It has been discovered that those who sent from Patna men and money to aid the frontier war were the sect of the Wahabees, whose chief seat is Patna, where they have a large Kafila. The Guicowar, on his return from Bombay to Baroda, lost his wife, and from 600 to 700 of his followers, by cholera. The capital of the Bank of Bengal is to be doubled.

China.—A despatch from Shanghai, of Feb. 23, states that Major Gordon has returned to active service.

Australia.—The Parliament of Victoria was opened on the 26th of January, when the Chief Secretary laid on the table the despatch of the Duke of Newcastle, stating that there was no intention of sending convicts to any part of Australia, excepting only that colony situate at a great distance from all the others to which convicts have already been sent for several years past. The Post Office revenue was said to be deficient for the year of 35,000*l.*, and it was stated the reduction of the postal rate to 2*d.* would occasion a further loss of 26,000*l.*, and that to frank newspapers to Great Britain would cost the colony 12,000*l.* per annum. At Adelaide orders had been received to stop any further enrolment of Volunteers for New Zealand; 40 men had previously enlisted.

New Zealand.—The war in New Zealand is still proceeding. The natives have concentrated at Pikopiko, where they are surrounded by General Cameron's forces. The General is said to intend compelling their surrender by starvation.

United States.—General Grant officially assumed the command of the Federal armies on the 18th ult., and has since passed through Philadelphia, *en route* for Washington and the Army of the Potomac. It is asserted that he will immediately advance upon Richmond. The Confederates are apparently about to assume the offensive, and it is reported that they are preparing for a combined invasion of Kentucky from various points. General Lee is said to have broken up his encampment on the Rapidan, and to be moving in the direction of the Shenandoah Valley, with the intention of attacking the army of the Potomac. Stuart is reported as concentrating his cavalry at Fredericksburg and Charlottesville, preparatory to making a raid. Longstreet's forces are reported to be concentrated at Bull's Gap for a raid in Kentucky; while other accounts represent him moving to join Lee. General Beauregard has been appointed to the command of the Army of the South-West, and is succeeded by General D. H. Hill at Charleston. Advices from that city to the 19th ult. state that the Confederates have mounted six rifled guns in casemates on Fort Sumter, bearing on the channel, and they have completed another ironclad in the harbour. The *New York Tribune* asserts that an attack on Norfolk by land and with iron-clads from Richmond is expected. Admiral Porter, with a large fleet of gunboats and transports, left Vicksburg on the 12th ult. for operations on Red River. The Confederates have returned Colonel Dahlgren's body to his father. According to a statement just issued by the Provost-Marshal-General at Washington, the total deficiency of troops in all the States under the several calls of the President is 311,724. Illinois is the only State which has completed its quota; New York is deficient by 59,230, and Pennsylvania by 74,127. The decree of the Court which ordered the restoration of the Saxon and cargo to her owners also recommended that Lieut. Donovan, who shot Mr. Grey, should be tried by court-martial for the murder. The questions of compensation to the widow and to the owners of the vessel have been reserved. Mr. Beecher has publicly declared that slavery is not dead; that the proclamations of the President cannot kill it; and that the only means of abolishing it is by a revision and amendment of the Constitution. He has also declared that the Southern people fight better in a bad cause than the Northern in a good one. The British war steamer Styx has returned to Halifax, stating that during her cruise she spoke the British ship Howard, which reported having seen on the 10th ult., in lat. 49, long. 60 west, a vessel answering the description of the Ré Galantuomo, steering a south-easterly course, but making no signal of distress. It is therefore hoped that she is safe.

Parliament.

HOUSE OF LORDS.

Tuesday.—*Metropolitan Railways.*—The Earl of Derby presented a petition from the parish of St. George, Southwark, complaining of the inconvenience and hardships caused by the destruction of dwelling-houses, the sites of which had been required by railroad works. He called the attention of the Government to the state of things thus produced, and suggested that a clause should be inserted in all the Metropolitan Railroad Bills compelling the companies to run two trains in and out of London, morning and evening, to convey the working population to and from their place of labour, at the rate of 1*s.* per week for each person for any distance not exceeding 10 miles.—Earl Granville thought the suggestion a good one, which should receive the consideration of the Government. *Federal Enlistments.*—The Earl of Donoughmore referred to the enlistment of British sailors on board the Federal cruiser Kearsage, and described some of the facts of the case as inconsistent with the statement given by the commander of the ship.—Earl Russell said that since the matter was last mentioned in the House he had directed the attention of Mr. Adams, the American Minister, to the subject, and in reply that gentleman had informed him that in November last he received instructions from his Government to dismiss at once any officer in the service of the United States who was instrumental in violating the Foreign Enlistment Act. He also said that he would refer the case of the Kearsage to the authorities at Washington; but he did not himself think that either the American consul or the captain of the Kearsage was to blame.—The Earl of Derby said that it had been incontestably proved that the men were examined on board the Kearsage, and attested and clothed in the Federal States uniform. It was impossible, therefore, that the officers of that vessel could have been ignorant of those facts.—The Marquis of Clanricarde said that the Kearsage was now repairing in one of her Majesty's dockyards, and he thought it was not right to extend such courtesy to her after all that had taken place.—The *Leases and Sales of Settled Estates Act Amendment Bill* was, on the motion of the Earl of Malmesbury, read a second time. The *Court of Chancery* (*Despatch of Business*) *Bill* and the *Conveyancers* (*Ireland*) *Bill* passed through Committee. The *Bills of Exchange and Promissory Notes* (*Ireland*) *Bill* was read a third time and passed.—The Marquis of Clanricarde, in moving for correspondence relating to the *Removal of British Consuls from the Confederate States*, described and defended the proceedings for which these officers had been dismissed. The Consuls were accredited to the Federal Government, and the charge against them, in one case, was forwarding, under an official certificate, letters to the Northern States containing bills of exchange for the payment of debts due in England; in another, that the Consul had been instrumental in shipping specie on board an English vessel of war, for transmission to England, to pay the dividends on a public debt. He contended that these acts were not illegal, as the state of war did not cancel private or public obligations.—Earl Russell admitted that in the case of Mr. Bunch his *exequatur* had been unjustly taken from him by the Federal Government; but in the case of Mr. Magee it was considered, as English ships of war had been permitted to enter the blockaded ports, it was an abuse of that permission to employ those vessels for the transmission of specie that might be used to obtain the means of carrying on hostilities. In a third case the Consul had advised men who had been compelled to serve in the Southern army to desert on the field of battle. Had any complaint of such language been made by the Confederate Government he should certainly have reprimanded, and probably dismissed, the Consul who had used it. But without making any such complaint, the President of the Confederacy informed these officers they could no longer be allowed to exercise their functions. As the interests of British subjects could not be adequately protected when they had no authority to apply to, he should not think it wrong to establish a means of communication with the Government of the Southern States, as that might be done without acknowledging their independence. He had no objection to the motion if the words were so altered as to prevent any misunderstanding on this point. The motion as amended was agreed to.

Thursday.—*Bombardment of Sonderburg.*—The Earl of Shaftesbury read the recent telegrams from Sonderburg, announcing the bombardment of that town by the Prussian artillery. If the details were correct, he thought it one of the most cruel acts recorded in the history of civilized or uncivilized warfare. An undefended place had been bombarded without notice for 48 hours, and 80 women and children were said to have been killed. He asked, should the account be confirmed, what steps the Government would take in the matter. He hoped the British fleet would be sent into the Baltic to prevent the recurrence of such cowardly atrocities.—Earl Russell said he had telegraphed to Sir A. Buchanan for further intelligence of the bombardment, and as all the details must be known in a few days, he deferred expressing any opinion till more complete information had been received.—Earl Grey asked whether Lord Russell would have the same objections to a discussion of the Danish and German question, of which notice had been given for Monday next, as he had expressed on a former occasion.—Earl Russell said those objections no longer existed, but it would be for the House to consider whether such a discussion at the present time would be of any public advantage. The *Settled Estates Act Amendment Bill* was read a second time. The *Malt for Animals Bill*, and the *Conveyancers* (*Ireland*) *Bill* were read a third time and passed.

Friday.—*The Settled Estates Act Amendment Bill* passed through committee. *The Court of Chancery Despatch of Business Bill*, as amended, was read a third time and passed.

HOUSE OF COMMONS.

Monday.—*The Conference.*—In reply to questions by Mr. Osborne, Lord Palmerston said that all the Powers that had signed the Treaty of 1852 had consented to send representatives to the Conference; that no answer had been received

from the Germanic Diet; that the basis of the Conference would be an endeavour to restore peace; and that no armistice would take place. *Mr. Stansfeld's Resignation.*—Mr. STANSFELD, in announcing to the House that he had felt it to be his duty to send in his resignation of the office he had held, stated the reasons which had led him to take this step. He had become convinced, he said, from what he had seen, heard, and read, that he would be a source of difficulty and a cause of embarrassment to the Government while he continued to be a member of it, and, after the renewal of the attack made upon him, he preferred to meet it not upon the Treasury bench, under the *ægis* of Lord Palmerston. He proceeded to explain the nature of his connexion with M. Mazzini, denying in the most positive terms the truth of the charges which had been insinuated against him, disclaiming all knowledge of Greco or Tibaldi, and insisting that there was nothing in the extracts of the letters produced by the Procureur-General which criminated or compromised him. In conclusion, he submitted that the explanation he had made must be satisfactory to the House; but adding that he was ready to give any further explanations that might be required. —Lord PALMERSTON said he was convinced that the motives which had induced Mr. Stansfeld to take the course he had adopted were highly honourable to him, but he must express his own great regret and that of his colleagues at having lost the official assistance of a gentleman of great ability, whose untiring industry and unswerving integrity had made him a most valuable member of the Government. With regard to the insinuations and aspersions referred to, he repudiated them with disdain, being perfectly convinced that they were as abhorrent to the feelings and character of Mr. Stansfeld as to those of any member of that House. — On the order for going into a Committee of Supply, Mr. R. LONG moved, as an amendment, the appointment of a *Select Committee on the Post Office*, with an especial view to the improvement of existing arrangements for the transmission of mails in the provincial districts. The motion was seconded by Mr. G. CLIVE, and supported by several members.—Mr. PEEL, after stating the rules observed by the Post Office in relation to the acceleration of mails, observed that he was far from saying that there was not room for improvement; but this was the province of the Post Office department, which had facilities for obtaining local knowledge, and he should not be justified in agreeing to the motion.—After some further discussion, the CHANCELLOR of the EXCHEQUER suggested that, as the Post Office department was not represented in that House, the motion was premature until the Treasury (according to the general principle observed by the House) had had an opportunity of examining the subject in conjunction with the Post Office. The motion was then negatived without a division, and the House resumed in Committee of Supply the consideration of the *Navy Estimates*. On the vote for 1,164,100*l.* for naval stores for the building, repair, and outfit of the fleet, steam machinery, and ships built by contract, a desultory debate ensued, in the course of which Lord C. PAGET, in reply to an invitation from Mr. BENTINCK to explain what was the policy of the Government with reference to the future of the navy of England, explained that their intention was to continue building armour plated ships, and to forego the building of large wooden ships. The propriety of building ships in private yards as compared with the Government establishments was subsequently brought under notice; and Mr. LAIRD expressed his opinion that the building of ships by contract had never been fairly tested, inasmuch as the plans for the ships ordered to be constructed for the Admiralty were made by the Comptroller of the Navy and his assistants, whose hands were so bound that no opportunity was afforded them for the exercise of their talent or experience. In his opinion it would be better to abandon contracts altogether than to tie up the hands of contractors as at present. The vote was ultimately agreed to, as were the following:—662,212*l.* for naval stores in the department of the Comptroller of the Navy; 64,350*l.* for medicines and medical stores; 102,320*l.* for miscellaneous services; 697,790*l.* for half-pay, reserved half-pay, and retired pay of the navy and Royal Marines; 490,201*l.* for military pensions and allowances; 193,983*l.* for civil pensions and allowances; and 314,320*l.* for the conveyance of troops. The resolutions were ordered to be reported. The *Union Relief Aid Acts Continuance Bill* passed through committee.

TUESDAY.—*Lisburn Election Committee.*— Mr. ADAIR moved that Mr. Sterling, the member for Perthshire, be excused for not attending the Lisburn Election Committee on account of illness, on the 22d of March. After a long discussion the motion was carried without a division; but the question whether the circumstance of the committee having adjourned to the day after the meeting of the House instead of the day of meeting, as required by the Act of Parliament, destroys the existence of the committee, was left undecided. *Rating of Government Buildings.*—Alderman SOLOMONS called attention to the exemption from local taxation now claimed on account of property in the occupation of Government departments, and moved that all lands and buildings used and occupied for public purposes should be assessed to local rates, and pay rates accordingly.—Mr. MORRISON seconded the motion.—Mr. F. PEEL, in opposing the motion, explained the principle upon which the Government had hitherto acted, and said they were quite willing to contribute to the rates where the value of their property exceeded one-seventh of the entire value of the property of the parish, and to indemnify any parish from loss in cases where they had acquired new properties which had previously contributed to the local rates.—Mr. S. BOOTH, Mr. W. MARTIN, Sir J. ELPHINSTONE, and Mr. LOCKE supported the motion.—Mr. HANBURY opposed it.—The CHANCELLOR of the EXCHEQUER admitted that the present system of assessment might be unsatisfactory, but urged that the consequence of agreeing to the motion would be that in parishes where one half of the property had for 200 years belonged to the Government, the whole of the rest of the property would be relieved from a charge which it had borne for a period practically immemorial, an operation tantamount to the endowment of the ratepayers of that particular parish out of the national exchequer. It was, in short, a proposal to throw upon the rural parishes and those places which did not possess Government establishments a new and gratuitous burden for the purpose of affording a gratuitous relief, not founded upon justice, to the few parishes that happened to have such establishments. —Sir F. BARING opposed the motion.—After some remarks by Mr. DUTTON, Mr. B. CARTER, and Mr. ANGERSTEIN, the House divided, when the motion was negatived by 52 to 30. The select committee on *Turnpike Trusts* was appointed. The report of the *Committee of Supply* was brought up and agreed to.

WEDNESDAY.—The *Copyright Bill* was withdrawn by Mr. BLACK, who obtained leave to bring in a Bill in its stead to consolidate and amend the existing statutes in copyright. The *Chain Cables and Anchors Bill* passed through committee, with some amendments. — Mr. LOCKE moved the second reading of the *Jersey Court Bill*, stating that it was founded mainly on the recommendation of the Royal Commissioners of 1846 and 1859.—Sir G. GREY said he had no objection to the principle of the Bill so far as it went to improve the administration of the court by substituting paid judges, and separating the political from the judicial functions of the court. There were, however, some minor points which would require alteration, and he recommended that the further progress of the measure be delayed until the select committee appointed by the States of the Island had reported. The Bill was then read a second time. The *Registration of County Voters (Ireland) Bill* was read a second time. The *Union Aid Acts Continuance Bill* was read a third time and passed.—Mr. ADAIR, the chairman of the *Lisburn Election Committee*, reported that they had met that morning, and had arrived at the conclusion that under the circumstances they were not justified in continuing their proceedings.

THURSDAY.—*The Budget.*—The House having resolved itself into a Committee of Ways and Means, the CHANCELLOR of the EXCHEQUER in a very full house made the financial statement of the year. Having compared the expenditure and revenue of the last three or four years, and referred to the peculiar circumstances of the country, including the successive bad harvests in Ireland, and the distress in the manufacturing districts of England, he proceeded to observe that the estimated expenditure of the year 1863-64 was 67,479,000*l.*, but that owing to the war in New Zealand, and the payments on account of the extinction of the Scheldt dues, the estimate rose to 68,283,000*l.* The actual expenditure, however, was 67,056,000*l.*, or about one million and a quarter less than the departments were authorised to expend. Last year he estimated the revenue at 68,171,000*l.*, whereas the actual receipt was 70,208,000*l.*, showing a surplus over the estimate of 2,037,000*l.* The taxes reduced or abolished during the last three years amounted to 6,608,000*l.*, while the increase of the revenue was 5,011,000*l.* The present amount of the national debt was 791,574,000*l.*, or about sixteen and a half millions less than during the Crimean war, while the annual charge was reduced to 26,211,000*l.* The trade of the country during the last few years had received an enormous development, the imports and exports now representing one million and a half sterling per diem. The aggregate amount in 1861 was 377,000,000*l.*; in 1862, 391,000,000*l.*; and in 1863, 444,000,000*l.* These figures, he said, were remarkable as showing the effect of our commercial legislation; but they showed, likewise, that England was becoming more and more the champion of peace and justice in the world. Selecting those years, from 1852, in which Parliament had addressed itself to the liberation of our trade, he showed that its legislation had been immediately followed by striking augmentations of our commerce, its growth keeping pace with liberal measures. He then discussed the effects of our late fiscal legislation upon particular articles, including paper, spirits, wine, tobacco, and tea, and the results of the treaty with France. He was happy to state that although the paper trade was not in a satisfactory state, still the number of manufacturers was not declining, as was the case during the maintenance of the duty, while the public had largely benefited by the fall in the price of the commodity. The spirit duties had not realised as much as had been expected, but he was prepared to prove, if necessary, that the falling off in consumption was not to be traced to smuggling, but rather to the limited means of expenditure possessed by the working classes. Proceeding next to consider the financial prospects for 1864-65, he estimated the total amount of the expenditure at 66,890,000*l.*, and that of the revenue at 69,460,000*l.*, leaving a surplus of 2,570,000*l.* In considering the disposal of this surplus he enumerated a variety of minor changes and modifications which he thought desirable. He proposed to do away with the duty of 1*s.* per quarter on foreign corn, lentils, &c., and to substitute a duty of 8*d.* per cwt., to reduce the license to sell tea in rural places in houses of less value than 10*l.* per annum from 11*s.* 6*d.* to 2*s.* 6*d.*; to reduce the duty on proxy stamps used at joint-stock companies meetings from 6*d.* to 1*d.*; to equalise the duties on ecclesiastical benefices of a certain amount; to reduce the stamp duties on settlements and on powers of attorney for the receipt of dividends; to legalise the practice of marine reassurances on payment of 1*s.* stamp; and to extend to refreshment house keepers the permission to take out occasional licenses in the same manner as publicans were now permitted to do. These alterations would cause a total loss of revenue of 10.000*l.*, reducing the surplus to 2,560,000*l.* In considering the claims made for the application of this surplus in the reduction of taxation, the first claim, he thought, was preferred on behalf of sugar, an article which was next in importance, in an economical point of view, to corn, and the Government proposed to make a considerable reduction in the sugar duties. The question whether there should be a uniform or a classified duty was a very difficult one. At present we had a classified scale of duties, approved by many, and a scandal and offence to others. He was not prepared to say that a classified duty was condemned by experience; it was not condemned by authority. A committee of that House had reported in favour of a system of classified duties. The intricacy of the question had become enormous. On the one hand, a system of classified duties was stigmatized as "protection;" on the other, a uniform duty had been branded with that name. The present duty consisted of four classes, and the Government proposed to adhere to the dividing points as now established, reducing the rates of duty to 12s. 10d., 11s. 8d., 10s. 6d., and 9s. 4d., with a new class for inferior sugars, chargeable with 8s. 2d. The loss of revenue from these reductions, taking credit for increased consumption, he took at 1,330,000*l.*, which would bring down the surplus to 1,240,000*l.* With reference to the malt tax, he did not believe that the loss by its reduction would, as some contended, be repaired by increased consumption, which had not followed the taking off the beer duty, which was practically a reduction of the malt tax. When comparative claims were looked to, comparative grievances should be regarded; and he insisted that the grower of barley had no ground of complaint. Parliament was, moreover, bound to see how the reduction of the malt duty would bear upon the interests of Scotland and Ireland as well as England, and he showed that the giving up of the malt duty would be a boon almost exclusively to England. The Government, therefore, had come to the conclusion that they would betray their duty to the country if they applied any part of the surplus to the reduction of the malt tax. With regard to the income tax, it was beyond dispute, he said, that Parliament ought to consider and decide upon the whole policy of this tax, when it was not desirable to renew from twelvemonth to twelvemonth without reference to the question of policy. After reviewing the history of the tax, and acknowledging the objections inseparable from the ordinary operation of such an impost, the Government proposed, he said, to take a new step in its further reduction by taking off one penny, reducing the tax to 6*d.* in the pound. The immediate loss of revenue caused thereby would be 800,000*l.*, still leaving a surplus of 430,000*l.* Here the Government would fain stop; but, in order to meet what appeared to be the general desire of the House, they were prepared to make an experiment in reference to the fire insurance duty. They proposed, therefore, to reduce the duty on stock in trade from 3*s.* to 1*s.* 6*d.* per cent., to take effect from the 1st of July. The ultimate loss entailed by this experiment would be 192,000*l.*, and the immediate loss 213,000*l.* The result after these deductions and alterations, would be a total financial loss of 2,332,000*l.*, reducing the surplus to 238,000*l.* He believed that if the House would agree to those propositions it would assist still further in extending that wise and beneficent policy which had already done so much to strengthen and secure the country, and promote the happiness and welfare of the people The right hon. gentleman concluded a speech of three hours duration, by placing in the hands of the chairman a resolution to give effect to the alteration proposed with reference to the duty on foreign corn, lentils, &c.—Mr. HUBBARD expressed his regret that the Chancellor of the Exchequer, while admitting the claims of those who urged the reduction of the fire-insurance duty, had not dealt more liberally with that subject.—Mr. WHITESIDE and Lord CLAUD HAMILTON protested against maintenance of the duty on Irish spirits at 10*s.* per gallon, advocated a return to the scale of duties charged in [illegible] Mr. MORRITT announced that, notwithstanding the statement of the Chancellor of the Exchequer in reference to the [illegible] tax, he intended to proceed with the motion of which he had given notice condemnatory of that impost.—Mr. [illegible] criticised the Budget in a hostile spirit, and, while [illegible] the general principle of free trade, expressed his [illegible] that the first strong Government that might [illegible] power would reimpose the paper duty. — Mr. [illegible] considered the Budget would give general satisfaction [illegible] the country. He suggested, however, whether it would not be better to reduce the fire insurance by 6*d.* per cent. [illegible] round, than to take off 1*s.* 6*d.* from the duty payable [illegible] in trade only.—After some remarks of Mr. CAVE, Mr. [illegible] FORD, Mr. HENLEY, Mr. BASS, and others, the resolution was agreed to, and the chairman reported progress. On the motion for going into committee of supply on the *Army Estimates*, Col. SYKES called attention to the employment of *British troops in Japan*, and inquired whether any provision had been made in the estimates for the charge of certain troops transferred from the Indian establishment for service in China or Japan. Mr. H. BERKELEY called attention to the inferior armament of the *Volunteer Artillery*, and inquired whether any steps were likely to be taken to arm them in the same manner as the Royal Artillery.—Sir H. VERNEY moved that it was expedient that the recommendations of the committee on the instruction and employment of soldiers and their children in trades be carried into effect, with due regard to the duties and discipline of the army.—The Marquis of HARTINGTON stated, in reply to Colonel Sykes, that the charge for troops in Japan was included in the estimates, that the whole force in that country did not exceed 120 men, and there was no intention to increase it. In answer to Mr. Berkeley, he said that the Volunteer Artillery was chiefly intended for garrison duty, and that provision had been made in the estimate for better guns than those now in use. With regard to the subject which Sir H. Verney had brought under notice, it was proposed to make an experiment in conformity with the report of the committee. The resolution was then withdrawn, as was also the motion for going into Committee of Supply. The remaining business was then disposed of.

FRIDAY.—*The Conference.*—In answer to a question, Lord PALMERSTON said that the King of Denmark would be represented at the Conference about to be held in London and would, no doubt, have at heart the interests of his subjects. *Monastic Establishments.*—On the order for going into Committee of Supply, Mr. NEWDEGATE moved for a Select Committee to inquire into the allegations contained in the petition of Mr. Alfred Smee, relative to conventual and monastic establishments in this country, and proceeded to state the circumstances which have occurred in the cemetery of the Oratorians at Sydenham. [Left speaking]

City Intelligence.

AMALGAMATION OF CITY BANKS.—It was announced on Friday that Messrs. Jones Loyd & Co., the eminent private bankers, have transferred their business to the London and Westminster Joint Stock Bank.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅛ to ½ for Money, and 92 for Account. Three per Cents. Reduced, 89⅝ to ½; New Three per Cents., 89¾ to ½; Bank Stock, 238½ to 238; Ind. Stock, 220; Ditto Five per Cent. Stock, 105 to; Ditto Four per Cent., 99⅜ to ½; Ditto Four per Cent. Debentures, 1866, 99⅜ to ⅝; Ditto Bonds, 3*s.* dis. Exchequer Bills, 7*s.* to 2*s.* dis.—FOREIGN: Brazilian, 1862, 88½ to ¾ ex div.; Dutch Two and a Half per Cents., 64¼; Egyptian, second issue, 100¾; Greek, 1 to ½; Italian (Maremmana Railway), 74; Mexican, 30 to 45¾; New Granada Two per Cents., 30¼; Portuguese, 1853. 49¼ to ⅛; Russian, 1822, 91; Ditto 1862, 88½; Ditto 1859. 56¾; Ditto 1862, 91⅜ to ½; Spanish, 53½; Ditto New Deferred, 46½; Ditto Passive, 12 to ½; Turkish, 1854, 93¼ to 94; Ditto 1858, 93; Ditto 1862, 71¾ to 72; Ditto 100*l.* Bonds, 72 to ¼.

Gazette of the Week.

FRIDAY: *April* 1.—BANKRUPTS.—J. ARMITAGE, Hope Cottage, Kennington Road, Traveller—T. ASHLEY, East Lane, Bermondsey, Skin Dyer—J. ANNING, Colyton, Devonshire, Mason—S. BOWEN, Staffordshire, Innkeeper—C. BAKER, Star Corner, Bermondsey, J. BARNETT and A. BARNETT, late of High Street, Southwark, Victualler—E. BROWN, Albert Terrace, Royal Oak, Paddington, Victualler—E. BRAY, Wood A. BEATY, Brighton, late Licensed Victualler—E. [illegible], Carpenter—J. CONNING, Queen Street, Grosvenor Square, Carpenter—C. CROOKES, Normanton Springs, Yorkshire, Sickle Grinder R. CAILESS, Manthorpe-cum-Little Gonerby, Lincolnshire, Coal Dealer J. B. GRAHAM, Woolwich, late Licensed Victualler—N. G. [illegible], Bradford, Yorkshire, Card Maker—A. GARRATT, Gunnow Green, Leicestershire, Farmer—J. HERMON, Salisbury Street, Bermondsey, man—G. R. HILL, Leipsic Road, Camberwell, Commercial Traveller Holland, Horfield, Gloucestershire, Baker—C. HANSEN, Glamorgan, Grocer—M. KAHN, Seething Lane, Wine Merchant—[illegible], Cliftonville, Sussex, Fly Master—J. LEECH, St. Bees, Cumberland, Joiner — WILLIAM LOEB, Enfield Wash, Middlesex, Gold [illegible] keeper — ROBERT LEWTHWAITE, Bury, Lancashire, Joiner—Timber Merchant LAFARLEY and PETER JOSEPH MORRES, Liverpool, Timber Merchants J. MASSAM, Barlby, Yorkshire, Potato Dealer—M. MASKREY, Jeweller—J. MASON, Middleton Place, Kingsland, Butcher—R. MASON, Liskeard, Cornwall, Watch and Clock Maker—R. MASON, Wine Music Seller—W. MITCHELL, Huddersfield, Journeyman Cloth Finisher S. MASTERS, Kingston upon Hull, Fisherman—J. MARSHALL, Wine Northumberlandshire Boot and Shoemaker—J. PARKER, Hatter Street, Camden Town, Wheelwright—H. POOK, Cumberland Solicitor—J. RAWLINGS, Chapel Street, Somers Town, Painter RAY, Crewe, Cheshire, Plumber—J. STONES and J. MOSSHAYE, Yorkshire, Cloth Manufacturers—H. SPAIN, Wellington Street, Chandler's Shopkeeper—S. SUNDERLAND, Hipperholme, Yorkshire, —S. SIMMS, late of Bristol, Beer Retailer—S. SLINGSBY, late of Kent, Licensed Victualler—J. G. WILSON, Kidderminster, Worcester Baker — T. W. WHITTAKER, Manchester, Cabinet Maker—J. Ellesmere, Shropshire, Draper—T. WAREHOUSE, Salford, Lancashire Baker—J. WARREN, Rickinghall Superior, Suffolk, Beerhouse Keeper M. WILD, late of Birmingham, Butcher—P. WALSHAM, Ipswich, Victualler Grocer—W. WALKER, Heaton Norris, Lancashire, late Licensed

TUESDAY. *April* 5.—BANKRUPTS.—J. C. ARNOLD, Ipswich, shire, Horse Dealer—W. ALEXANDER, Brightlingsea, Essex, Ship ABRAHAMS, late of Lamb's Conduit Street, Theobald's Road, Investment —J. ALEXANDER, Park Terrace, South Street, Kennington, Labourer—G. BOOTH, Sydenham, Kent, Brickmaker—I. BROOKS, Folly, Old Gravel Lane, St. George-in-the-East, late Licensed W. BRAITHWAITE, Stockton-on-the-Forest, Yorkshire, Innkeeper BAYLIS, Stafford, Grocer—C. BIGG, Luton, Bedfordshire, Grocer—J. Maker—M. BATES, Huddersfield, Commission Agent—J. Seymour Street, Euston Square, late Licensed Victualler—[illegible] Winterbourne, Gloucestershire, Bootmaker—T. CRAWLEY, York, Yorkshire, Cattle Dealer—W. H. CONSOLD, York, Wine CROFTS, Redmile, Leicestershire, Shopkeeper—I. CHARLTON, Provision Dealer—G. A. COOK, Bath St., City Rd., Boarding T. C. DAVIES, Swansea, Glamorganshire, Licensed Victualler—G. Drake Street, Red Lion Square, Printer's Compositor—G. DARWIN, of Kingston-upon-Hull, Innkeeper—J. DURBIN, Nailsea, Somerset J. EDWARDS, St. Swithin's Lane, Solicitor—J. FLEMING, [illegible]

Stepney Green, Builder—J. Furness, Bakewell, Derbyshire, Shoemaker—F. Freeman Southampton, Grocer—C. Green, Dunkeston, Somersetshire, Smith—I. Greenhalgh, Norwich, Bricklayer—L. Green, Birmingham, Tailor—S. S. Grigson, Beckford Row, Walworth Road, Lincendraper—G. Grimms, Greenwich, Assistant to an Eating house Keeper—W. Herring and T. A. Bradley, Handsworth, Woodhouse, Yorkshire, Colliery Owners—W. C. Harris, Dilwyn, Herefordshire, late Farm Bailiff — John Harrison, Birkenhead, Cheshire, Foreman Mason —John Hale, Carlton Street, Kentish Town, Builder—John Isaac Israel, late of Rowland Row, Stepney Green, Dealer in Tongues—R. Ivett, Bedford, Brickmaker—H. Jones, Gors, Anglesea, Farmer—W. H. Jobson, Newcastle upon-Tyne, Accountant's Clerk—W. Jackson, Butcher-up Ramford, Lancashire, Innkeeper—C. Jonsson, Colchester, Essex, Cattle and General Dealer—M. Jones, Bristol, Schoolmistress—J. Lewis, John Street, Woodfield Road, Harrow Road, Tailor—W. Lesher, Cambridge, Tea Dealer—H. Manly, Boscastle, Cornwall, Innkeeper—Saint Andrew Mercer, Charlwood Street, Westminster, Commission Agent—J. A. Mason, Clifton Street, Finsbury, Cheesemonger—F. Nettleton, Leeds, Lodging house Keeper—J. Otter, Bardney, Lincolnshire, Licensed Victualler—C. Peakes, Maidstone, Kent, Grocer—L. Prosat, Denmark Street, Bloomsbury, Importer of Foreign Goods—W. Rust, late of Pall and Mount Street, St. Martin's le Grand, Licensed Victualler—H. R. Harding, Brighton, late Dealer in Marine Stores—C. Rose, Wells Street, Wellclose Square, late Licensed Victualler—S. Rogers, Plymouth, Devonshire, Grocer—R. Robinson, Roberindale, Lancashire, Farmer—S. Spencer, Upper Kennington Lane, Widow, Lodging House Keeper—F. J. Smith, Bromley, Kent, Wine Merchant—A. Silvester, New Bond Street, Photographic Artist—S. S. Short, City Road, Barman—W. H. Spring, Swansea, late Licensed Victualler—W. H. Swift, York Road, City Road, Beer House Keeper—H. Shearman, Colchester, Bookseller—J. B. Terrell, Manchester Print Salesman—G. S. Thompson, Chester, Seedsman—J. Wood, Worcester, Gunmaker—T. Ward, Leechill, Staffordshire, Farmer — D. Wadley, Broadway, Worcestershire, Grocer—C. Warts, Spalding, Lincolnshire, Coachbuilder—J. Wood, Newton, Cheshire, Innkeeper.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,586,875	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	12,936,875
		Silver Bullion	—
	£27,586,875		£27,586,875

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£11,273,056
Rest	3,144,179	Other Securities	22,853,453
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	9,818,880	Notes	6,583,656
Other Deposits	13,348,299	Gold and Silver Coin ..	679,888
Seven days and other bills	625,694		
	£41,390,052		£41,390 052

April 7, 1864. M. MARSHALL, Chief Cashier.

Metropolis and its Vicinity.

Arrival of Garibaldi.—The mail steamship Ripon, with Garibaldi and suite on board, arrived at Southampton on Sunday afternoon. About 4 o'clock Garibaldi landed, and, in spite of the cold rain which fell throughout the day, was received with immense enthusiasm by great crowds of spectators. Among them were the Duke of Sutherland, Mr. Seely, M.P., deputations from Bristol, London, Newcastle-on-Tyne, Worcester, and other parts of England, with gentlemen accredited to represent the Poles, Hungarians, and Italians on the occasion. The General was dressed in the plain uniform of the Italian Legion, and after a long discussion as to the persons to whom his first visit should be paid, he finally decided, at the urgent request of Mr. Seely, on accepting the invitation of the Mayor. Mr. Brinton, the Mayor, then went on board, and, addressing the General, said he was proud to welcome him to Southampton, and to feel sure that the welcome which he gave him officially was one which would be heartily repeated by not only his fellow-townsmen, but by all the people of England. Garibaldi replied by shaking the mayor warmly by the hand, and saying, "I am grateful to you for your kind reception, and thankfully accept your hospitality." The General then left the Ripon, and proceeded in an open carriage through the town to the Mayor's residence at East Park. Everywhere he was received in the streets with the most hearty enthusiasm, and, notwithstanding that it was Sunday, flags were hoisted in all directions. Before leaving the Ripon, Garibaldi gave to Mr. Negretti, a countryman of his, and an old friend, a small scrap of paper, on which he wrote in Italian, to the following effect:—

"Dear Friends,—I do not desire any political demonstration; above all, not to excite any agitation." "G. Garibaldi."

On the evening before arriving at Southampton the General was entertained by all the passengers on board the steamer at a banquet, and in replying to the toast of his health said that he owed his life to England, the country he regarded as the home of freedom and the hope of the slave in every part of the world. On Monday the people and corporation of Southampton presented him with an address of congratulation on his arrival in this country. At 11 o'clock Garibaldi left the Mayor's house in an open carriage and four, accompanied by the Mayor, and his son, Ricciotto. The other members of the corporation followed in their carriages, the whole *cortége* being preceded by the band of the 1st Hants Engineers playing the Garibaldi Hymn. The windows and even the housetops all along the route to the old Bar Gate Town Hall were thronged; the footways were densely crowded, and from all alike came one continuous cheer, which quite drowned the music of the band; while all the house fronts seemed rippled over with the flutter of waving handkerchiefs. Garibaldi, who wore the uniform of the Italian Legion, which he raised and commanded in Montevideo, seemed quite moved at the warmth of his welcome, and must have been thoroughly tired by the courteous efforts which he made to acknowledge the salutations he received on all sides. The old Town Hall was, of course, thronged in every part, and was made to hold on this occasion about double the number it was built to accommodate. Garibaldi's reception on entering it was almost overwhelming, as, leaning on his stick, he limped slowly along the narrow way kept clear for him to his seat on the right of the Mayor. When the enthusiasm had in some degree subsided, after repeated outbreaks, Mr. Brinton, the Mayor, addressed him in an appropriate speech, in which he assured him that the town of Southampton considered itself highly honoured in having been the first to welcome the noblest and most disinterested patriot of our age, whose name was a household word throughout all England; in the cottage, as in the mansion and the palace, the record of his noble deed was preserved, and his gallant conduct and heroic self-sacrifice was the theme of universal admiration. He concluded by saying amidst great applause, "I look upon you as a King among men—a King uncrowned; and when the day comes—and may it be long distant!—when your great mission on this earth is fulfilled, we trust and believe that hereafter you will wear a crown that is imperishable and one that will never fade." When quiet was restored, Garibaldi rose, and Mr. Deacon, the town clerk, read to him an address expressing the warmest admiration for his public and private character, and the earnest hope that his health would speedily be restored, and that, under the protection of that Divine Power who had preserved him through so many dangers and vicissitudes, his valuable life might long be spared to aid in the promotion of the great end to which it had hitherto been devoted. General Garibaldi then bent forward, and remained for some minutes bowing, in answer to the tumultuous applause with which he was greeted. He at last spoke a few words with evident deep feeling, but with so strong a foreign accent and symptoms of effort to overcome the difficulties of pronunciation that his delivery was remarkably slow, though at all times clear and distinct. He said:—

"It is not the first time that I have received proof of the sympathy of the English nation, and I have received those proofs not only in words, but deeds. I have seen that sympathy shown to me in many *circonstances* of my life, and very particularly in '60, when without the help of the English nation it would have been impossible to complete the deeds we did in Southern Italy. The English people provided for us in men and in arms and in money—they help all the needs and wants of the human family in their work for freedom. What they did and what they talked of us is worthy the eternal gratitude of the Italian people. To answer some of the words, noble and generous, of the Mayor, I will say to you that I did not sacrifice any part of my life; but I think I did something, and a very few part it was of my duty, and (placing his hand on his heart) of the duty of every man. I finish by giving my thanks to you for your generous sympathy and for your very kind and good welcome to me here to-day."

It is almost impossible to describe the enthusiasm with which these few remarks were greeted, though, unfortunately, the shouts of applause led so many to attempt to force their way into the hall that considerable confusion ensued, and it was some time before the business of the day could be continued. The thanks of the meeting were then given to the Mayor, and the proceedings terminated with cheers for Garibaldi's son, cheers for united Italy, for the late Mayor and the present, for Mr. Seely, and, in short, for all in any way connected with the reception or entertainment of the General. As Garibaldi left the hall there was a rush made to shake hands with him on the part of the visitors, which he at once good-humouredly responded to by stretching out his hand, and then at once there were so many claimants for this honour that his further progress was completely barred. It was some time before this rather tumultuous ceremony was over, and then the whole party re-entered their carriages and proceeded to the pier, where the Sapphire was waiting to convey the General to Cowes. Immense crowds thronged all parts of the pier and its approaches, and Garibaldi went on board the vessel with Mr. Seely amid such demonstrations of affection and respect as are seldom seen even in England. A salute of 15 guns was fired from the platform battery as the Sapphire moved down the Solent, but even this noise was almost drowned by the deafening cheers, which continued as long as Garibaldi could be distinguished standing at the stern of the vessel and waving his cap in reply. In the evening Mr. Grant Duff, M.P., joined the dinner party at Mr. Seely's. On Tuesday the Poet Laureate and Mrs. Tennyson arrived at Brooke House from Farringford. On Thursday Signor Mazzini, at the General's own request, arrived at Brooke House and had a long interview with Garibaldi. Guezzoni and Basso accompanied M. Mazzini. In the afternoon Garibaldi was entertained at a *déjeûner* by the Mayor and Corporation of Newport, who also presented him with an address. Garibaldi has declined the honour of a public banquet in Southampton, and will remain the guest of Mr. Seely till Monday morning, when he will start for London, reaching the metropolis at 2 in the afternoon. He will leave the train at the goods station at Nine Elms, and proceed thence by the Kennington and Westminster roads over Westminster Bridge to Stafford House, where he will remain for a week at least the guest of the Duke of Sutherland. At Nine Elms station a temporary platform will be erected, on which Garibaldi will receive the addresses of the working men of London, and arrangements have been made by which a large number of operatives selected from the various trades' unions will keep the line of route for the procession which will escort him to Stafford House. Among the organised bodies who will take part in the procession are most of the metropolitan trade societies, the Foresters, Odd Fellows, Old Friends, the temperance societies, Band of Hope Union, Sons of the Phœnix, the Working Men's Clubs, &c., in full regalia, accompanied by their bands and flags. The Freemasons have also expressed their intention to send a strong deputation. The bands of the Foresters, the 48th Middlesex Rifles (Havelocks), &c., will attend gratuitously. At a meeting of the Common Council on Thursday, it was resolved by an all but unanimous vote to present Garibaldi with the honorary freedom of the city in a casket of the value of 100 guineas. Some opposition had been announced on the ground that the General's visit to this country was for a political object, and that a subscription had been proposed to provide him with a million of muskets. On its being explained, however, that Garibaldi had no such object, and that the suggestion about the muskets was wholly repudiated by him, the opposition was withdrawn; and the only discussion that remained was as to the form in which the Corporation should do him honour. The presentation of the freedom will take place on as early a day as possible. The members of the Reform Club have resolved to invite General Garibaldi to a banquet at their club-house in Pall Mall during his stay in London. Upwards of 40 members of Parliament and other members of the Club, have already subscribed their names. The precise day is left for the General to appoint, in order that it may not interfere with any other arrangement.

Return of the Anglo-Chinese Squadron.—The Pekin gun boat, one of Captain Sherard Osborn's Chinese Squadron, arrived at Falmouth on Friday, in 54 days from the Cape. The Scout, China, and Tientsin, had left previously.

Experiments at Shoeburyness.—The long expected contest between the Whitworth and Armstrong systems of artillery commenced on Monday afternoon at Shoeburyness, in the presence of a special committee of military and scientific men, and a large number of noblemen and gentlemen interested in the subject. Sir William Armstrong is represented by three 12-pounder breech-loaders and three muzzle-loading shunt guns of the same calibre, and Mr. Whitworth by three muzzle-loaders of the same size. These nine guns are already on the ground, and three 70 pounder Armstrong breech-loaders, three 70-pounder Armstrong muzzle-loaders, and three 70-pounder Whitworth muzzle-loaders are on their way from Woolwich to Shoebury. The details of the trial are kept secret at present; but it is pretty well known that a *minimum* of 3000 rounds will be fired from each gun. The contest will be necessarily very tedious, and will extend over a period of two or three months, if not more. At first sight this seems to be an unnecessary expenditure of time and money, but the committee are desirous of testing these arms to their very utmost capacity, at every range, with every variety of projectile and against every kind of defence. They will also be tested with reference to the quickness with which they can be charged and fired. After the 3000 rounds have been fired, it is believed that the guns will be subjected to a series of proofs with gradually increasing charges of powder. The trial commenced on Monday with one each of the three descriptions of 12-pounders. Seven rounds of solid shot, three of dead segmental shells, and five of dead common shells were fired point blank, to test the exact range of each gun. Six rounds of solid shell were then fired at 1 degree of elevation, and the contest was prematurely stopped by a violent storm of rain and wind, which swept across the marshes from the south-west. On Tuesday the guns were tried at ranges successively of 200, 300, and 400 yards. In the nearer ranges the Whitworth gun appeared to the by-standers to have an advantage, which was recovered by the Armstrong muzzle-loading gun in the more distant firing. On Wednesday and Thursday the results obtained did not greatly differ from those of the day before. The practice of yesterday was expected to be attended by the Commander-in-Chief and the First Lord of the Admiralty.

Railways in the City.—A meeting of some of the leading bankers, merchants, and other principal citizens, was held on Monday at the house of Messrs. Rothschild, in New Court, St. Swithin's Lane, to confer as to the best mode of giving effect in the House of Commons to the objections entertained by the great mass of the citizens to the railway projects in contemplation, which are calculated seriously to affect their interests. Baron Rothschild was called to the chair, and Mr. Samuel Morley, Mr. Crawford, M.P., Mr. Tite, M.P., Sir M. Peto, M.P., Mr. John Abel Smith, M.P., Alderman Salomons, M.P., Mr. Gassiott and Major Snell, were present, with others. After some discussion it was resolved to support the petition adopted at the public meeting held at the London Tavern on the 4th ult., praying that legislation with respect to all railway schemes which propose entering the City of London shall be postponed until some of the large public works already sanctioned shall be further advanced, and time thus obtained for more mature consideration. It was also resolved to take advantage of the forms of the House in such a way as was likely to give the most practical effect to the views of the petitioners, and to obtain an interview with Lord Palmerston and interest him in their case previously to the petition being presented.

The Government Annuities Bill.—It is stated that Mr. Tidd Pratt, the Registrar-General of Friendly

Societies, will be appointed general manager of the insurance department of the office about to be created by Mr. Gladstone's Bill, and that the salary will be 5000*l.*, with the option of retaining his present appointment of registrar. Dr. Farr will be the actuary, at a salary of 2500*l.*, with power to retain his present office in the Registrar-General's department.

SIR MOSES MONTEFIORE'S MISSION.—At the Court of Common Council on Thursday, on the motion of Alderman Phillips, the thanks of the Court were tendered to Sir Moses Montefiore for the signal services rendered by him to the cause of humanity by the missions he had undertaken to various countries for the relief of persons oppressed for their religious convictions, and more especially by his journey to Morocco to solicit the Emperor to relieve his Jewish and Christian subjects from all civil and religious disabilities.

THE COLENSO FUND.—The fund for the defence of the Bishop of Natal now amounts to 2000*l.* The time has nearly elapsed at which the Bishop of Cape Town will formally declare the see vacant and apply to the colonial authorities at home to appoint Dr. Colenso's successor. Meanwhile measures are taking by the Bishop of Natal, acting under legal advice, to bring the proceedings of the Bishop of Cape Town before an English tribunal with as little delay as possible.

LOSS OF A CONFEDERATE STEAMER IN THE BRISTOL CHANNEL. — On Monday night the new steamer Matilda was totally wrecked on Lundy Island. She had left Cardiff in the afternoon with a cargo of steel, iron, and coal, which was currently reported to be intended for the Confederates, and is said to have been reported by the American Consul to his Government. About 11 o'clock the same night she struck upon Lundy Island, a thick fog being prevalent at the time, and the ship's compass 8° out. The crew only escaped with a few things, and the vessel now lies many feet under water. Among the persons who were on board, and have since arrived at Cardiff, is Major Pearson, who states that he belongs to the Confederate Artillery. The Matilda was built at Glasgow, at a cost of nearly 60,000*l.*, and her trial trip had been made from that port to Cardiff.

THE WRECK OF THE CITY OF NEW YORK.—For some days past nearly 300 men have been engaged on this vessel, but up to Thursday evening all attempts to raise her proved ineffective. They were to be renewed yesterday at high water.

THE GREAT EASTERN.—Messrs. Glass, Elliot, & Co., the contractors for the Atlantic cable, have engaged the great ship for the purpose of laying the cable between England and America. The ship will be handed over to the contractors on the 1st of May, and from that date they will pay all her expenses, including wages, victualling, insurance, &c.; and when the cable is laid, her proprietors are to receive 50,000*l.* in paid-up shares of the Atlantic Telegraph Company. Although Messrs. Glass, Elliot, & Co. take possession of the steamer on the 1st of May, it is not their intention to lay the cable across the Atlantic till next spring.

THE MERSEY RAMS.—It is understood that Mr. Hamel, of the Common Law Bar, has proceeded to Egypt to examine the Pasha on behalf of the Crown, and that Mr. John Fletcher, late of the firm of Messrs. Fletcher and Hull, accompanies him to act on behalf of the owners of the rams.

LODGING-HOUSES FOR THE LABOURING CLASSES.—The Court of Common Council, on the recommendation of their Committee for Improvements, have just authorised the expenditure of nearly 30,000*l.* in the erection of a number of improved dwellings for the labouring poor in Clerkenwell on the plan already successfully carried out by Mr. Alderman Waterlow in Finsbury. Acting under a power conferred upon them by the Clerkenwell Improvement Act, they contemplate the erection on a plot of vacant ground on the west side of Farringdon Road of three separate blocks of buildings, fronting Farringdon Road and Ray Street, at an estimated cost of 28,600*l.* Accommodation will thus be provided for 160 families, 80 of them having three rooms, and 80 having two rooms each, with all suitable conveniences. In the general arrangements every care will be taken to insure the domestic and family comfort of the occupants, and by having a direct access from the street to each set of rooms the privacy of distinct dwellings will be secured. The basements of the various blocks will be used for warehousing purposes, and the ground floors as shops. They are of opinion, however, that dwellings of this class should under no circumstances bear an appearance of exclusiveness, but should harmonise to some extent with the general character of the surrounding property. A design for the buildings has been approved by the Common Council, and the erection of them will be commenced forthwith.

BALLOON ASCENT FROM THE ROYAL ARSENAL.—Mr. Coxwell's large balloon having been fully inflated at the Royal Arsenal Gasworks, made another ascent from the establishment on Wednesday afternoon for scientific purposes. Mr. Glaisher, F.R.S., and Mr. Norris, who has accompanied him in some of his recent ascents with Mr. Coxwell, and a little goat, for experimental tests, were the only occupants of the car. It was intended to take a couple of pigeons to have been set loose on attaining the higher atmosphere, but they were not procured until after the departure of the balloon. The height ascended did not much exceed two miles. The balloon passed through a cloud a mile in thickness into brilliant sunshine, the atmosphere below being somewhat foggy. The aëronauts did not go beyond the reach of sounds from the ground. The goat did not manifest any symptoms of alarm, but remained quiet as if under a sense of perfect security. The balloon descended safely a little before dusk in the grounds of the Marquis of Camden, near Sevenoaks.

THE PUBLIC HEALTH. — The Registrar-General's Weekly Return states that the number of deaths registered in the week that ended Saturday, April 2, was 1679. The average number for the corresponding week of the ten years 1854-63, corrected for increase of population, was 1547. The present return is therefore 132 above the average. During the week the births of 1072 boys and 1081 girls, in all 2153 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 2161.

Provincial.

BANBURY.—Mr. Henley, M.P., in reply to the request of the Banbury Association to support the movement for the Repeal of the Malt Tax, has written as follows:—"Six millions is a difficulty not easily surmounted, and I much doubt whether in the present state of foreign affairs there will be any chance of reducing our expenses; and, if not, I also much doubt, however the reduction of the malt tax duty may and would benefit us all as consumers, it it would be a gain to the landed interest to have a direct tax, which would mainly fall on them, substituted for so large an indirect tax. But whether I am right or wrong in this, the time is not, in my judgment, favourable for making a move at so large a branch of revenue."

CAMBRIDGE.—Mrs. Hunt, one of the old ladies who were so brutally attacked on the 28th February by a man, masked and armed with a formidable carving knife and a bludgeon, died on the 18th ult. A young man named George Morley Wallis, a distant connection of one of the ladies, was previously apprehended on suspicion, the evidence against him being of a strong circumstantial character. Eventually he was committed for trial on the charge of assault with intent to murder. In consequence of Mrs. Hunt's death, the magistrates on Monday re-opened the case, and, after sifting a voluminous mass of evidence, committed the prisoner on the capital charge of "Wilful Murder." The life of the second lady, Mrs. Walker, is still in danger.

DEWSBURY.—On Saturday night Joseph Broadhead, of Barnsley, a youth 17 years of age, under sentence of detention at the Calder Vale Reformatory, at Mirfield, made an attempt to murder Mrs. Johnson, the schoolmaster's wife, and her sister-in-law. It appears that he obtained access to the room where they were sitting, and having fastened the door, attacked them with a knife he held in his hand. Mrs. Johnson escaped by running upstairs, but Miss Johnson was severely stabbed in the side and shoulder before assistance could arrive. The lad is in custody, but there seems to be some doubt of his sanity.

DRIFFIELD.—A county meeting was held in this town on the 31st ult. to consider what steps should be taken to secure a lasting memorial to the late Sir Tatton Sykes, of Sledmere Castle. Lord Hotham, M.P., presided, and the meeting was addressed by Lord Middleton, Lord Londesborough, Lord Muncaster, the Hon. Admiral Duncombe and other gentlemen. Resolutions were unanimously adopted in favour of the proposed memorial, and a committee was appointed to collect the necessary subscriptions. The general feeling of the meeting was that either an obelisk or an hospital should be erected as the most suitable memorial.—The last of the men suspected of being the cause of the destructive Yorkshire fires during last winter, who is known as Lurcher Slenderman, has just been set at liberty by the magistrates, after various remands, for want of sufficient corroborative evidence of the implications made against him by John Sherwood, who is now under sentence of 15 years penal servitude. Another of the incendiaries is sentenced to 10 years penal servitude. Slenderman was bound over in his own recognisances of 50*l.* to appear when called on. In his address to the grand jury on Tuesday, the chairman of the East Riding Sessions congratulated them that the crime of incendiarism had been effectually suppressed, and the whole expense of detectives and prosecution had not cost the Riding more than 170*l.*

HEREFORD.—The execution of Thomas Watkins, who was found guilty at the recent assizes, of the murder of his wife at Hennor, near Leominster, took place on Tuesday in front of the county gaol. The prisoner made a full confession of his guilt, and expressed great contrition. The morning was very wet, and there was by no means a large number of spectators, all of whom behaved in a very orderly manner.

HULL.—Mr. Roebuck delivered a lecture in this town last week on the science of politics. He said he had been all his life in favour of an extension of the suffrage, but he owned that things had lately happened in America that frightened him. He was convinced, however, that the extension of the suffrage was only a question of time; and therefore he wanted to know how that extension was to be made safe and beneficial. The answer was, educate the people in the science of politics—teach them what government can and what it cannot do.

KILLINGWORTH.—A destructive accident occurred at Killingworth Colliery last week, while 100 men and boys were in the pit, and others were about to descend. The connecting rod between the engine and the fly-wheel employed in hauling the coals and men out of the pit broke, causing the fly-wheel to spin round with fearful velocity, and ultimately to break into ponderous fragments. The engine ran amain, and the cage, which was near the surface at the time, rushed down the shaft at a terrific rate, and, coming in contact with the other tub near the bottom of the pit, was smashed to atoms, the wire rope attached to them snapping like thread. In consequence of the accident in the engine-house the balance chain was drawn up over the sheaves, and fell crashing through the roof of the engine-house, causing a serious amount of damage. Considerable alarm was created with regard to the safety of the men and lads below, but they escaped without injury, and, as the pit is double-shafted, there was little difficulty in getting them out, and in six hours they were all at bank. If the pit had been, like that at Hartley, with but one exit, it might have been different. It will be some time before the pit is got to work again.

LIVERPOOL.—On Saturday night a murderous attack was made upon Mr. Rowe, a young surgeon residing in Pembroke Place, by Mr. Brice, a wine merchant, and an Irish farmer named Scott. It appears that Mr. Rowe and Mr. Brice had been paying their addresses to the same lady, a Miss Beatty of Bootle, who was engaged to marry Mr. Rowe, but in November last eloped with Mr. Brice, to whom she was married on the same day. On Saturday night Mr. Brice, as the lady's husband, proceeded with the Irishman to Mr. Rowe's house, and demanded back her letters. Mr. Rowe refused to give them up, on which Mr. Brice and the Irishman fastened the door and attacked him in his own parlour with such violence that the other inmates, hearing the cries for help, got a policeman to break open the door, when Mr. Rowe was found nearly strangled, and with one of his legs broken. The two men were taken into custody, but in the course of the night obtained bail upon application to the stipendiary magistrate. It was however, subsequently ascertained that the life of Mr. Rowe was in such imminent danger that it was necessary to take his depositions, upon which another magisterial order was issued authorising the apprehension of his assailants, which was effected a short time afterwards. Mr. Rowe is still in a precarious state, and it is said that if he survives his injuries he will remain an invalid for life.

MAIDSTONE.—An attempt is making to enclose Barming Heath, in the immediate neighbourhood of this town. As the heath has long been a favourite place for the recreation of the inhabitants, they are naturally unwilling to be shut out from what they have been accustomed to consider their own property, and a memorial is being extensively signed in the town to have the enclosure prevented.

SHIELDS.—Considerable excitement was caused in this port on Saturday by the receipt of a letter from the master of the brig Mountaineer, stating that his ship had been fired into by the Spaniards, and that one of his crew was killed. The brig, it appears, was passing down the Straits of Gibraltar, laden with Spanish grass from Malaga, and when opposite the Fort of Tarifla the Spaniards fired into her. The shot passed through her shrouds, knocked off both pump-heads, and, going through the port covering board, killed a seaman, who was painting on the port side. It is the custom of vessels passing down the Straits to salute this port by dropping their flags, and it has been no unusual thing where this has been neglected for vessels to be fired into by the fort, but this is the first instance of loss of life.

Ireland.

ORDER OF ST. PATRICK.—Lord Dufferin and Lord Lurgan were last week invested by the Lord-Lieutenant, in the Throne Room of Dublin Castle, with the insignia of the Order of St. Patrick, in the room of Lord Massareene and the Earl of Charlemont. The Dean of St. Patrick's was at the same time invested with the insignia of Registrar of the Order.

COUNTY CHAIRMANSHIPS.—The Earl of Carlisle has conferred the county chairmanships of Limerick and Kerry, the former vacant by the retirement of Mr. Tighe, Q.C., and the latter by the death of Mr. Crosbie, upon Mr. Charles Hare Hemphill, Q.C., and Mr. John O'Hagan, the first a Protestant and the second a Roman Catholic. Both appointments have given great satisfaction to the country.

THE PRINCE CONSORT MEMORIAL.—At the meeting of the Town Council on Monday a memorial was read from the stormy meeting lately held in the Rotunda, requesting the Council to reconsider its decision respecting the erection of the statue of the Prince Consort in College Green. The memorial was referred to a committee by a majority of 19 to 14.

EXECUTION AT CAVAN.—Bernard Caughey, a young man aged 27 was executed at Cavan on Monday, for the murder of his old master Peter Reilly. Only about 200 or 300 people, mostly young persons, witnessed the execution.

A GUNBOAT ASHORE.—On Sunday morning her Majesty's gunboat Magpie went ashore on Crab Island during a fog. She was immediately stripped of every thing moveable to lighten her, and was expected to

got afloat with slight damage; but a heavy sea arising just as the preparations were completed, she was lifted further upon the rock, and at the latest dates was in great danger of breaking up.

Scotland.

Settlement of the Pampero Case.—It is understood that the case of the Pampero will not now go to jury trial, an arrangement having been made for its settlement. By this arrangement the owners have consented to a verdict being entered for the Crown, forfeiting the vessel on some one count of the information, to be selected by the owners; they making such explanatory statement on the subject as they may think desirable. It is provided, on the other hand, that the owners are to retain and trade with the vessel, but are not to sell it for two years except with the consent of the Crown; and that alterations are to be made in her structure. It is stated that the builders are no parties to the compromise, which provides for settling their claim and having it withdrawn from the proceedings.

The Church of St. Mary the Virgin, at Aberdeen.—The "solemn blessing and opening" of this church took place last week. The church was well filled during the services, in which a great number of clergymen from various places (many of them from England) took part. It was at first announced that St. Mary's would be opened by the Bishop of the diocese; but a few days previously Bishop Suther intimated that unless the crucifix and other things that had been put up in the church were taken down, and the use of strange vestments dispensed with, he would not officiate at the opening. This request not being complied with, the Bishop did not officiate at the ceremony. The Rev. Mr. Lee, through whose exertions mainly the church has been built, intended to join the Episcopal Church of Scotland; but from the refusal of the Bishop to sanction what he has done, this junction cannot take place, and the matter will again be taken into the Church Courts.

Law.

House of Lords Appeals.—*The Alexandra Case.*—On Wednesday the House gave judgment in the case of the Alexandra. The judgment turned not on the great international questions involved in the appeal, but upon the simple technical point as to the proper meaning of the word "practice" as used in certain sections of the Queen's Remembrancer's Act, in other words on the preliminary question as to the power of the Court of Exchequer to make the rules under which the case was taken before the Exchequer Chamber and then to the House of Lords. There were six lords present, four of whom, the Lord Chancellor, Lords St. Leonards, Chelmsford and Kingsdown, upheld the judgment of the Exchequer Chamber, which dismissed the appeal from the Court below, and two, Lords Cranworth and Wensleydale, were for reversing that judgment. The result is that the decision of the Court of Exchequer stands. The appeal was therefore dismissed with costs, and the owners of the Alexandra are now at liberty to proceed with the construction of the vessel, or to dispose of her in her present state.

The Yelverton Case.—The appeal in this case was brought before the House of Lords on Thursday in the form of a petition by Mrs. Yelverton praying for an order on Major Yelverton to pay her 500*l.* to enable her to defend her interests in the appeal. The Lord Chancellor was of opinion that for the present Mrs. Yelverton was entitled to the status and rights of Major Yelverton's wife. The report of the committee would therefore be that Major Yelverton should pay her 150*l.*, and that her case should be lodged in three weeks, which would insure the cause being disposed of this session.

Obituary.

Admiral Clowes died on the 31st ult., at Upton, near Slough. He was born at Wingham, Kent, in 1787, and entered the navy in 1801. After serving in several actions with the Boulogne flotilla, he was present at the capture of the Cape and Monte Video in 1806, and the operations against Copenhagen. He commended a gunboat in the Walcheren expedition in 1809, and after becoming a lieutenant he served on the North American and Irish stations. He next served as a commander in the Mediterranean, and after attaining post rank in 1823, he served in the Levant during the hostilities between the Turks and the Greeks. He became a retired rear admiral in 1853; vice admiral in 1858; and admiral in 1863.

Alderman Neild, of Manchester, died suddenly on Monday in one of the committee-rooms of the corporation, at the Town Hall of that city, in his 74th year. He had attended to take part in a meeting of the Watch Committee, of which he was the chairman, and was standing before the fire, about 12 o'clock, waiting for business to commence, when he suddenly dropped upon the floor, and died almost immediately. An inquest was held in the afternoon, when it was stated that the cause of death was the rupture of a blood-vessel either of the heart or brain. Mr. Neild had been connected with the corporation from its origin, and was associated with Mr. Cobden, about 26 years ago, in the movement which led to the granting of a charter to Manchester, the first charter of incorporation granted under the Municipal Corporations Act.

Colonel Charles Bingham, Deputy Adjutant-General, died on Wednesday evening at Brighton, after a short illness. He had particularly applied himself to Staff duties, and his industry and knowledge of the details of his arm of the service rendered him so valuable a public servant, that his premature death is considered to be a great loss at headquarters. For six years he held the post of Brigade-Major at Woolwich, and was afterwards appointed Assistant Adjutant-General of the Royal Artillery. He was appointed Deputy Adjutant-General in 1858.

Mr. T. P. Cooke, the well-known actor, died on the 4th inst. at the house of his son-in-law, Mr. Hugh Cumming, in Thurloe Square, in his 78th year. He was one of the last representatives of the old school of British actors, and was born in Marylebone in 1786. Entering the navy he served under Nelson at the bombardment of Copenhagen, for which he received a medal. His first appearance on the stage took place at the Royalty Theatre, in January, 1804, and for many years he was recognised as the best theatrical type of a British seaman.

Mr. Joseph Kirke, late of Brompton Park Lane, Old Brompton, Middlesex, died on the 26th ult, in the 96th year of his age. He was much respected, and well known years and years ago as a nurseryman who possessed excellent collections of the best kinds of fruit trees. We remember him in Norfolk in 1817, with his new fruits, seeking for orders. He kept the different sorts as dwarfs, in a bearing state, in order that persons might see the fruit on the trees; and he was a frequent exhibitor of specimens of Apples and Pears at the Meetings held at the Rooms of the Horticultural Society, from the year 1816 till he gave up his nursery some 20 years ago. He had then arrived at a great age; and having been little heard of since, most people who knew him did not suppose till very recently that he was still alive. Loudon noted his nursery for its antiquity, the ground being in part surrounded by the walls of Cromwell's garden; but of this, as of all the other nurseries once so extensive in that neighbourhood, scarcely a trace remains.

Wills.—The will of Mr. Adrian Hope has been sworn under 140,000*l.* personalty in this country; Mr. John Key, of Eaton Square, Pimlico, and James Street, Haymarket, 120,000*l.*

BIRTHS.—On the 31st ult, at Castle Coole, Ireland, the Countess of Belmore, of a daughter—5th inst, Lady Raglan, of a son—6th inst, at 23, St. James Square, the Lady Emma Talbot, of a daughter—6th inst, at 144, Piccadilly Terrace, the Lady Margaret Beaumont, of a son—6th inst, Lady Jane Taylor, of a daughter—1st inst, at Acton Place, Suffolk, the Lady Florence Barnardiston, of a daughter—25th ult, at Corfu, Lady Wolff, of a son—4th inst, at 44, Charles Street, Berkeley Square, the Hon. Mrs. Henry Campbell, of a daughter—3d inst, at Bellevue House, Woolwich Common, the wife of Lieutenant-Colonel the Hon. David Fraser, Royal Horse Artillery, of a daughter—31st ult, at East Sheen, Surrey, the wife of Major Leycester Penrhyn, of a son.

MARRIAGES.—On the 4th inst, at the parish church, Brighton, the Right Hon. Lord Forbes, to Louisa, second daughter of the late James Ormond, Esq., of Abingdon, Berkshire—5th inst, at the Roman Catholic Chapel, Islington, and afterwards at St. Paul's Church, Knightsbridge, Captain Count M. Gurowski de Wezell, K.J., to Diana, daughter of Captain and Hon. Mrs. Richard Beaumont—31st ult, at St Paul's, Knightsbridge, Brevet Major Horace Parker Newton, Royal Horse Artillery, third son of the late W. Newton, Esq., of Elvedon Hall, Suffolk, to Alice, daughter of E. A. Knox, Esq., and Lady Jane Knox, of Trotton, Sussex—30th ult., at St. Luke's Church, Cheltenham, R. K. A. Dick Cunyngham, Esq., eldest son of Sir W. H. Dick Cunyngham, Bart, of Prestonfield, Edinburgh, to Sarah Mary, only daughter of the late Wm. Hetherington, Esq., of Birkenhead—31st ult, at St. George's, Hanover Square, Major-General Trollope, C.B., son of the late Sir John Trollope, Bart., to Cordelia Maria, daughter of the late Major-General J P. Murray, C.B.—31st ult, at St Peter's Church, Dublin, Gerald FitzGibbon, Esq., jun., barrister-at-law, to Margaret Anne, second daughter of Mr. Baron Fitzgerald—5th inst, at St. Mary's, Leyton, Alfred James, third son of William Taylor Copeland, Esq., alderman, M.P., of Russell Farm, Watford, Herts, to Selina Marianne Copeland, youngest daughter of the late Samuel James Capper, Esq., of Leyton, Essex.

DEATHS—March 28, at Torquay, Georgiana, youngest daughter of Lieut.-Colonel Ferrier Hamilton, of Cairnhill, and grand-daughter of Charles, second Viscount Gort—30th ult, at Frankfort-on-the-Main, Agnes Elizabeth, the beloved and only surviving daughter of Sir Charles Douglas, M.P.—27th ult, Lieut.-Colonel E. D'Alton, late of the 83d Regiment—2d inst, at Lymington, Lieut.-Colonel G. Burer, aged 85—28th ult, in Sackville Street, Captain Wm. Lonsdale, formerly in the 4th Regiment, and colonial treasurer in Melbourne, Victoria, Australia, aged 63—3d inst, at Maida Hill West, Commander W. E. Amiel, R.N., aged 72—7th Feb., at Peshawur, Northern India, of injuries caused by the falling of his horse, Lieut. Robert Bland Hewson, Royal Artillery, eldest son of the Rev. Frank Hewson, Killarney, aged 20—31st ult, at 5, Belgrave Terrace, Lee, James Henderson, R.N., Deputy Inspector General of Hospitals and Fleets, and late Surgeon of her Majesty's Dockyard at Portsmouth, aged 79—3d inst, at Bonchurch, Isle of Wight, Struan Robertson, chief of Clan Donnachy, aged 47—30th ult, at Leamington, William Hulton, Esq., of Hulton Park, Lancashire, aged 76—30th ult, at The Grove, Stoke Newington, George Daniel, Esq., of 18, Canonbury Square, aged 74—31st ult, at Quendon Rectory, the Rev. Joseph Brackenbury, M.A., rector of Quendon, Essex, aged 76—29th ult, at Albury, the Rev. F. C. B. Earle, late incumbent of Leiston-cum-Sizewell, Suffolk—1st inst, at Bath, the Rev. T. Brocklebank, of 7, Saville Place, Clifton, Bristol, aged 76.

Markets.

COVENT GARDEN, April 9.

Outdoor produce, considering the season, is well supplied. New English Grapes are now sufficient for the demand. Apples, though scarce, may still be had; and there are likewise a few dessert Pears. Oranges are getting scarce; as are also good Pine Apples Continental arrivals continue heavy; among them are Lettuces, Endive, Carrots, Artichokes, and Radishes. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Oranges, per 100, 4s to 10s
Grapes, new, per lb., 15s to 25s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Kent Cobs, 140s per 100 lbs.
Pears, per doz., 6s to 12s	Almonds, do., 18s
Strawberries, p. oz., 9d to 1s 6d	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 10s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Rhubarb, p. bundle, 9d to 1s 6d
Cauliflowers, each, 4d to 8d	Turnips, p. bunch, 4d to 6d
Asparagus, p. bundle, 8s to 14s	Cucumbers, each, 1s to 3s
French Beans, p. 100, 2s to 3s	Beet, per doz., 1s 6d
Green Peas, p. ½ sieve, 20s	Shallots, per lb., 10d
Seakale, per punn., 2s to 3s	Celery, per bundle, 1s 6d to 2s
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 4d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 2s to 3s	Horse Radish, p. bunch, 1s to 4s
Carrots, do., 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
— young, p. bunch, 3s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HOPS.—Borough Market, Friday, April 8.

Messrs. Pattenden & Smith report the demand gradually improving. Stocks in a very reduced state. Prices unaltered.

COAL MARKET.—April 6.

Holywell Main, 17s.; Tanfield Moor Butes, 14s. 9d.; Wylam, 17s. 6d.; Walls End Gosforth, 18s. 3d.; Walls End Harton, 18s. 3d.; Eden Main, 18s. 9d.; Walls End Braddylls Hetton, 19s.; Walls End Haswell, 20s. 6d.; Walls End Hetton, 20s. 6d.; Walls End Kepier Grange, 19s.; Walls End South Hetton, 20s.; Walls End Tunstall, 18s. 3d.; Walls End Caradoc, 19s. 9d.; Walls End Heugh Hall, 19s. 3d.; Walls End Kelloe, 19s; Walls End East Hartlepool, 20s.; Walls End South Hartlepool, 19s.; Walls End South Kelloe, 19s. 3d.; Walls End Trimdon Hartlepool, 19s. 6d.; Walls End Whitworth, 16s. 6d.—Ships at market, 54.

HAY.—Per Load of 36 Trusses.

Smithfield, Thursday, April 7.

Prime Meadow Hay	75s to 80s		Clover, old	90s to 110s
Superior do.	84 90		New Clover	— —
Inferior do.	50 60		Do. second cut	80 105
New do.	— —		Straw	25 30
Rowen	— —			

Harvey & Easton.

Whitechapel, Thursday, April 7.

Fine Meadow Hay	84s to 88s	Prime 1st cut Clover	108s to 112s
Inferior do.	78 84	Inferior do. do.	100 105
Prime New Hay	— —	New 1st cut do.	— —
Inferior	— —	Prime 2d cut do.	105 110
Straw	27 30	Inferior do.	95 100

BRITISH WOOLS.—London, April 7.

Our demand still continues for long wool, and the supply is only meagre; a few weeks will, however, alter this state of things, as the clip in the north country districts will be general in a month or so should the weather prove favourable.

	s. d.	s. d.		s. d.	s. d.
South-down Hoggets	1 9	to 1 10	Leicest. Wethers	2 0	to ..
Half-bred ditto	2 2	— 2 4	Ditto Hoggs	2 1	—2 3
Down Ewes	1 8	— 1 9	Combing Skins	1 6	—1 11
Kent Fleeces	2 0	— 2 1	Flannel Wool	1 4	—1 6
			Blanket ditto	0 9	—1 0

POTATOS.—Southwark, Monday, April 4.

During the past week the arrivals both coastwise and by rail have been large, and the prices of all sorts have been much the same, but rather lower than the former week, owing to the excess of supply. The following are the quotations:—Yorkshire Flukes, 70s. to 90s. per ton; do. Regents, 50s. to 70s.; do. Rocks, 45s. to 50s.; Dunbar Regents, 65s. to 75s; Kent and Essex Regents, 50s. to 70s.; North Berwick Regents, 50s. to 60s.

NEWGATE.—April 8.

Best Fresh Butter .. .. 15*s.* per dozen lbs.
Second do. do. .. .. 13*s.* ,,
Pork, 4*s.* 4*d.* to 4*s.* 8*d.* per 8 lbs.

LEADENHALL POULTRY MARKET.—April 8.

A dull trade all the week has reduced prices. Fowls remain scarce; small chickens are more plentiful.

	Each—s. d.	s. d.		Each—s. d.	s. d.
Large Surrey Fowls	4 0	to 5 0	Guinea Fowls	2 9	—3 3
Farm-house do.	3 0	— 3 6	Leverets	2 6	—3 6
Best Surrey Chickens	3 0	— 4 0	Pigeons	0 9	—0 10
Country Chickens	2 0	— 3 0	Tame Rabbits	1 3	—1 9
Goslings	6 0	— 7 0	Wild do.	0 7	—0 9
Ducklings	3 0	— 4 0	Plovers' eggs, p. doz.	3 0	—4 0

METROPOLITAN CATTLE MARKET.

Monday, April 4.

We have a larger number of Beasts than on Monday last, but it is not excessive for the season, the falling off last week being on account of the holidays. Trade is dull, but prices are about the same as of late. The supply of Sheep is good, we have also a fair demand, but cannot quote higher. Good Lambs and Calves are still selling dear. From Germany and Holland there are 725 Beasts, 1340 Sheep, and 124 Calves; from Scotland, 230 Beasts; from Ireland, 90; and 2970 from Norfolk and Suffolk.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	4 8	to 4 10	Best Long-wools.	.. —	..
Best Short-horns	4 6	— 4 8	Do. Shorn	4 2	— 4 6
2d quality Beasts	3 0	— 4 0	Ewes & 2d quality	.. —	..
Best Downs and Half-breds	.. ..	— ..	Do. Shorn	3 8	— 3 8
Do. Shorn	4 6	— 4 8	Lambs	7 0	— 8 0
			Calves	4 0	— 6 0
			Pigs	3 8	— 5 0

Beasts, 4310; Sheep and Lambs, 22,870; Calves, 137; Pigs, 410

Thursday, April 7.

We have a fair average supply of Beasts; the demand is pretty good at late rates. Sheep are rather more plentiful, and trade for them very dull. Prices are lower, and several remain unsold. Lambs and Calves meet with a dull sale, at lower prices. From Germany and Holland there are 460 Beasts, 790 Sheep, and 278 Calves; and from Spain, 56 Beasts. Milch Cows, 70.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	4 8	to 4 10	Best Long-wools.	.. —	..
Best Short-horns	4 6	— 4 8	Do. Shorn	4 0	— 4 6
2d quality Beasts	3 0	— 4 0	Ewes & 2d quality	.. —	..
Best Downs and Half-breds	.. ..	— ..	Do. Shorn	3 4	— 3 8
Do. Shorn	4 4	— 4 8	Lambs	6 8	— 7 6
			Calves	3 4	— 5 4
			Pigs	3 4	— 4 8

Beasts, 1100; Sheep and Lambs, 5720; Calves, 359; Pigs, 110.

MARK LANE.—Monday, April 4.

The supply of Wheat from Essex and Kent to this morning's market was very small, and disposed of at the terms of this day se'nnight; excepting a small retail demand for Russian, foreign Wheat was neglected, and very unsaleable even at some reduction in price. For Barley of all descriptions and Beans there was more inquiry at last week's rates. Peas were unaltered in value. The Oat trade was firm at an advance of 6d., and in some instances 1s. per qr. upon the finest qualities. For Flour there was but little inquiry.

Per Imperial Quarter.	s. s.		s. s.
Wheat, Essex, Kent, & Suffolk..White	42—48	Red	40—48
— — fine selected runs..ditto	44—52	Red	40—48
— — Talavera	48—56		
— Norfolk	—	Red	—
— Foreign	36—52		
Barley, grind. & dist., 25s to 27s..Chev.	34—38	Malting ..	29—33
— Foreign..grinding and distilling	22—26	Malting ..	27—31
Oats, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	17—22	Feed	15—20
Rye	30—32	Foreign ..	—
Rye-meal, Foreign	—		
Beans, Mazagan....27s to 36s...Tick	30—33	Harrow ..	30—33
— Pigeon .... 32s to 40s..Winds.	—	Longpod	—
— Foreign .....Small	36—42	Egyptian	30—32
Peas, White, Essex and Kent..Boilers	32—33	Suffolk ..	33—34
— Maple .... 30s to 34s .... Grey	28—30	Foreign ..	31—33
Maize .....White	—	Yellow ..	—
Flour, best marks delivered..per sack	35—40		
— 2d do .....ditto	28—34	Country..	28—34
— Foreign ..... per barrel	15—25	Per sack	32—40

Friday, April 8

The weather since Monday has been unsettled and rough, and on the 5th rain and sleet fell during the day. The great dulness of the Wheat trade remains undisturbed, and prices continue to tend downwards. Barley and Oats have been in better request, and the latter have somewhat recovered the late decline. No noticeable difference has occurred in the value of Beans and Peas. Flour continues to be neglected, and in some markets is again quoted lower. Since Friday last 14

vessels have been reported off the coast. Only a limited number of floating cargoes have changed hands, there is very little demand for any description of grain, and no change in prices has to be quoted. Linseed and Cottonseed, however, continue in request and advancing. Paris, April 7.—Flour: Prices have remained unaltered; there is very little inquiry for Flour on the spot, but a little better demand for future delivery. The six marks for delivery this month are quoted equal to 33s. per 280 lbs. The present stock of Flour is estimated at 15,400 cwt. Holders of Wheat, after asking higher rates gave way at the end of yesterday's market, and prices close about the same as last week; the transactions have not been extensive. The arrivals of foreign Oats and Barley this week are good, of all other grain and Flour small. The attendance was very limited, and Wheat of all kinds a restricted retail sale at Monday's prices. Barley, Beans, and Peas are steady in value. The Oat trade is heavy, and prices rather lower.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	710 qrs.	1160 qrs.	90 qrs.	530 sks.
Irish	—	—	700	— ,,
				75 ,,
Foreign ..	3510 ,,	2530	30,710 ,,	2840 brls

LIVERPOOL, April 5.—We have had a fair attendance of both millers and dealers at this morning's Corn Exchange, and Wheat attracting rather a better inquiry than of late, sellers were enabled to support the quotations of last market day; fine ambers at from 8s. 2d. to 8s. 3d. are the qualities most saleable. Flour neglected and rather lower to sell. A fair amount of business resulted in Indian Corn at a shade under previous rates. Oats and Oatmeal are again the turn cheaper. Beans fully as dear. Peas and Barley nominally as last quoted. The market closes with a tendency to firmness.

FRIDAY, April 8.—There was a fair attendance at market. The Wheat trade was quiet, and prices rather easier. Flour unchanged. Indian Corn dull. Beans, Oats and Oatmeal unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Feb. 27	40s 6d	32s 0d	19s 4d	29s 0d	33s 1d	32s 9d
March 5	40 2	31 6	19 10	28 6	33 5	32 10
— 12	40 1	31 5	19 8	29 2	32 7	33 0
— 19	39 9	31 4	19 2	32 4	32 10	32 10
— 26	39 11	30 10	19 0	28 0	32 8	33 3
April 2	40 2	31 0	19 2	28 5	32 6	32 11
Agg. Aver.	40 1	31 4	19 4	30 11	32 10	32 11

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Feb. 27.	March 5.	Mar. 12.	Mar. 19.	Mar. 26.	April 2.
40s 6d	—	..	..	..	..	..
40 2	..	..	..	..	..	—
40 1	..	..	..	..	..	..
39 11	..	..	..	..	—	..
39 9	..	..	..	—	..	..
..	..	..	..	..	..	..

Partner Wanted.

WANTED, a PARTNER (to supply the place of one who has recently died) in an old established, extensive and increasing Nursery and Seed business in the North of England.—Apply to Mr. E. HOUGH, Solicitor, Carlisle.
Carlisle, March 30, 1864.

WANTED, a good practical DRAUGHTSMAN, one accustomed to Agricultural Work preferred.—Apply by letter to X. Y. Z., Post Office, Leeds.

To Gardeners.

WANTED, an energetic Scotch GARDENER, about 30 years of age, for a Tea Plantation in India. Must be qualified to conduct the work of 500 or 600 men, and have good sense, and powers of drawing accurate conclusions and making calculations. Salary 200*l.* per annum, and progressive increase, with House, and passage paid out. Testimonials as to general good character and temperance indispensable. This offers a good opportunity for a deserving person wishing to gain a good position, and to a thoroughly efficient man the most liberal encouragement is certain.—Address, enclosing copies of testimonials, to THOMAS MCMEEKIN, Glenorchard, Campsie, Glasgow.

Rustic Work.

WANTED, a thoroughly competent MAN to undertake the formation of ROCK and ROOT-WORK, either on a large or small scale; the fitting up of Ferneries, either in the open air or in hot or greenhouses, or cases for rooms; making Ponds, &c. A practical Gardener with the requisite taste, and who can make plain drawings of his work, would be preferred, and to such an one the situation would be permanent and the remuneration good. Apply in writing, with references and terms, to Mr. JAMES VEITCH, Exotic Nursery, King's Road, Chelsea, S.W.

Propagator and Salesman.

WANTED, a middle-aged, steady, industrious Man, who has a thorough knowledge of the Nursery Business.—Address, T. & G. SWAILES, Nurserymen, Beverley, Yorkshire.

WANTED, a married MAN with good address, to attend Customers, to put up Seeds, and when not engaged as above to make himself useful in the Cultivation of Plants, &c. House and firing found.—Apply by letter to Messrs. PAMPLIN & SON, Lea Bridge Nursery, Leyton, N.E.

WANTED, an active YOUNG MAN for the House and Potting Department at Mr. WOODROFFE'S, "The Westbourne Nursery," Harrow Road, W. Wages, 16s. per week, with the option of making overtime. Constant employment.

GARDENER (SECOND), in a good Establishment.—Age 22. Two years' good character from last employer.—R T., James Carter & Co., Crystal Palace Nursery, Forest Hill, Sydenham, S.

WANTED, as SECOND GARDENER, a trustworthy, active Young Man, experienced among hard-wooded plants, willing to assist in other departments in a small but first-class establishment. Wages 12*s*., Lodging and Vegetables.—Apply to Mr. KINGSTON, The Gardens, Brantingham, Brough, East York.

WANTED, a DAIRY-MAID who thoroughly understands her business, with Cows and Poultry, and how to Milk.—Apply, stating wages, to F. B., 5, Milton Street, Dorset Square, London, W.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

HEAD GARDENERS.—WM. CUTBUSH & SON have at the present time several GARDENERS on their books, whom they can confidently recommend to noblemen or gentlemen requiring trustworthy and intelligent men.—Highgate Nurseries, London, N.

GARDENER (HEAD).—Age 36, married; understands his profession in every deparment. Three years' character.—J. J., 34, Wells Lane, Streatham, Surrey.

GARDENER (HEAD).—Age 39, married; thoroughly practical in all branches of his profession. No single-handed place accepted.—T. C., 8, Gloster Terrace, Park Walk, Brompton, W.

GARDENER (HEAD).—Age 30, single; has a thorough practical knowledge of his profession in all its branches. Four years' unexceptionable character.—H. B., Downie, Laird & Laing, Stanstead Park, Forest Hill, S.E.

GARDENER (HEAD), where one or two more are kept.—Fully competent to undertake the Management of Hothouses, Forcing, and Greenhouses. Two years' character. Satisfactory reason for leaving present situation.—J. B., Collett's Library, Sunbury, S.W.

GARDENER (HEAD).—Age 30, single; thoroughly understands the Growing of Pines, Grapes, Peaches, Orchids, and Stove and Greenhouse Plants; and is a first-rate Fruit, Flower, and Kitchen Gardener. Character unexceptionable.—THE GARDENER, Scruton House, Bedale, Yorkshire.

GARDENER (HEAD).—Age 28, single; thoroughly understands Kitchen and Flower Gardening, Early and Late Forcing, and the Growing of Stove and Greenhouse Plants. Satisfactory references. Please state terms.—W. W., Gardener, 17, Blandford Street, Portman Square, W.

GARDENER (HEAD).—Age 31, single; practically understands his profession in all its branches. Four years' good character. No single-handed place accepted.—A. B. C., Messrs. A. Henderson, &c., Pine-Apple Place, Edgware Road, London.

GARDENER (HEAD).—Age 31, married, no incumbrance; good experience in forcing Fruit, Flowers, and Vegetables, Stove and Greenhouse Plants, Kitchen and Flower Gardening, &c. No objection to a good single-handed place. Wife can attend to a Dairy if required. Can have four years' good character.—R S., Holmwood Post Office, Dorking, Surrey.

GARDENER (HEAD).—Age 28, single; has served in some of the best places in the North, where Gardening is carried on extensively, Early and Late Forcing, good Plant Grower; can superintend any alterations, and the Erection of Horticultural Buildings. Twelve years' character, five as above.—J. M., 2, Argyle Street, Regent Street, S.W.

GARDENER (HEAD), single, age 27.—WM. WOOD & SON have now the opportunity of recommending to any Lady or Gentleman in want of a really good Gardener, a first-rate man, who understands his profession in all its departments; an excellent Forcer of Early Fruits, &c., a good Plant Grower—in short, a man who is highly recommended by his late employer, and would give the greatest satisfaction.—Address as above, Maresfield, near Uckfield, Sussex

GARDENER (HEAD, WORKING).—Age 43, married, one child aged 7; has a thorough knowledge of his profession in all its branches; is leaving his present situation on his own account. Well understands Land and Stock. Wife can Manage Dairy and Poultry, if required. Six years' good character.—E. P., Mrs. Lewis, The Rookery, Roehampton, Surrey, S.W.

GARDENER (HEAD WORKING).—Married, two children; has a thorough knowledge of Gardening in all its branches; also thoroughly understands the Growing of Pines, Vines, Stove and Greenhouse Plants, the Peach house, Cucumbers, Melons, &c., Flower and Kitchen Gordens. Wife good Dairywoman or Laundress.—F. H., 3, Torquay Terrac Seven Sisters Road, Holloway, London, N.

GARDENER (HEAD), or GENERAL FOREMAN.—Age 34, married, one child aged six; thoroughly understands his profession in all branches. Eight years' unexceptionable character and references if required, as to ability in the management of a good Garden, &c.—H. M., 106, High Street, Croydon, S.

GARDENER (HEAD), or GARDENER and BAILIFF.—Middle-aged, married, no incumbrance; thoroughly understands the Management of Pines, Vines, Peaches, Melons, Stove and Greenhouse Plants, Flower and Kitchen Gardens, and Early Forcing of Fruits and Vegetables; the Erection of Greenhouses, &c. Wife can Manage the Dairy and Poultry. Character will bear the strictest investigation.—B. M., Messrs. J. Carter & Co., Crystal Palace Nursery, Forest Hill, Sydenham, S.

GARDENER.—Age 30, married, no incumbrance; has a thorough practical knowledge of his profession in all its branches.—A. B., 2, Hope Cottages, Child's Hill, Hendon, N.W.

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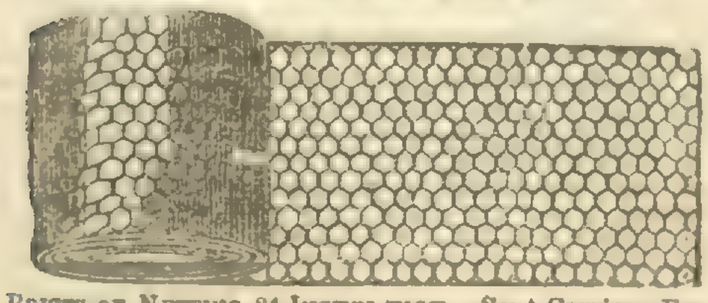

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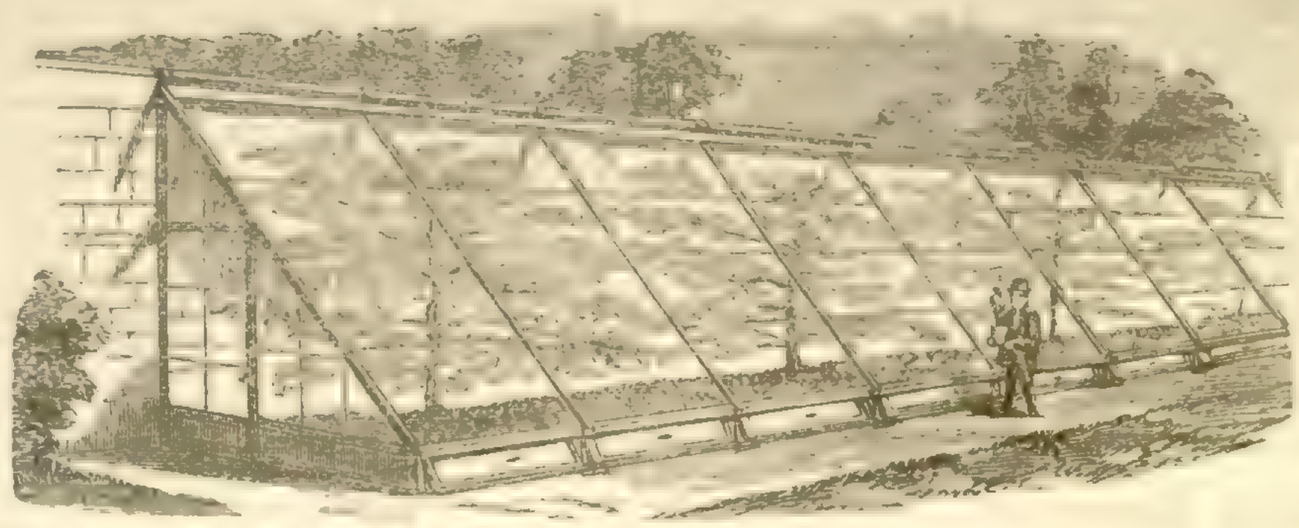

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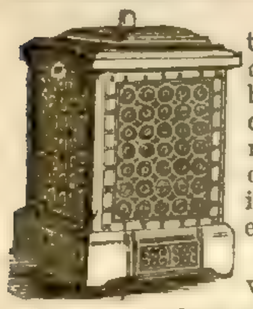

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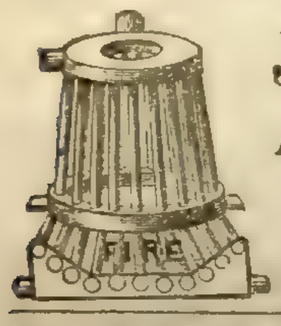

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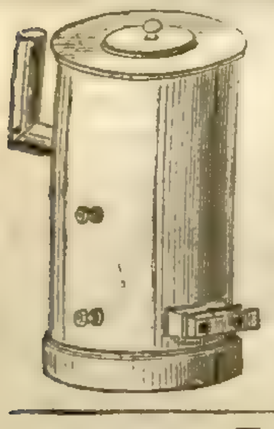

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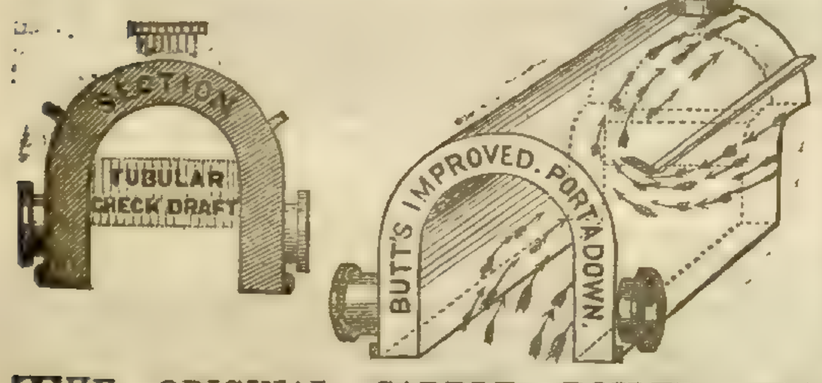

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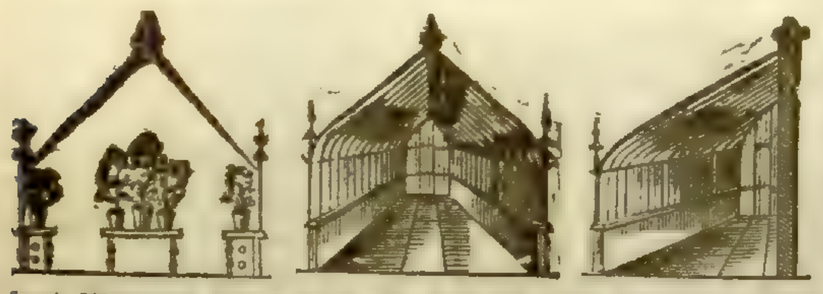

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News of the Week.

In the House of Lords on Monday Lord Stratheden moved resolutions to the effect that if Denmark had been more decidedly supported by her Majesty's Government, the bloodshed and other evils occasioned by the war in Denmark might have been prevented; and that a Conference, in order to lead to a practical result, ought to be accompanied by such steps as might convince the Powers of Europe that her Majesty's Government adhered to the Treaties in which the Duchy of Schleswig had been guaranteed to Denmark by Great Britain. After a long discussion, in which the Duke of Argyll, Earl Grey, Earl Russell, the Earl of Derby, Lord Wodehouse, and Earl Granville took part, the motion was withdrawn. On Tuesday the Punishment of Rape Bill was read a second time, and the Charitable Assurance Bill passed through Committee. The Earl of Carnarvon called attention to the capricious administration of the Home Office in matters connected with the punishment of death, and moved for papers on the subject. The Lord Chancellor said it was impossible to administer the laws relating to capital punishments in a manner differently from that which had been adopted, and if their lordships wanted a change they should direct their attention to the condition of the law upon the subject, with a view of applying a remedy. After a short discussion the motion was withdrawn. On Thursday the Punishment of Rape Bill passed through committee, with an amendment moved by Lord Wensleydale, rendering the measure compulsory instead of optional. Earl Granville, in reply to Lord Redesdale, said that the Government did not intend to propose any amendment to the Highway Act during the present session.

In the Commons on Friday, Mr. Newdegate moved for a Select Committee to inquire into the allegations contained in the petition of Mr. Alfred Smee relative to the Burial Ground of the Oratorians at Sydenham, and into the existence, increase, and nature of the conventual and monastic institutions in England, Wales, and Scotland. Sir G. Grey opposed the motion, which was negatived on a division by 113 to 80. Mr. Moffatt obtained a Select Committee to inquire into the working

of the new Bankruptcy Act. Mr. DILLWYN asked if the Government had received any authentic information respecting the bombardment of Sonderborg, and suggested that the Channel fleet should be sent to the Baltic in aid of Denmark if the bombardment of that town without notice should be confirmed. Mr. OSBORNE asked for information respecting the Conference, and expressed his opinion that it would be as futile as the attempt of the Government to preserve the peace of Northern Europe. Lord PALMERSTON in reply said that the object of the Conference, the meeting of which had been postponed to the 20th inst., was to restore peace and uphold the integrity of Denmark. With regard to the bombardment of Sonderborg, the Government had not yet received an answer from Berlin, but he feared that the facts were as stated in the telegram. The Warehousing of British Spirits Bill passed through committee. The Life Annuities and Life Assurances Bill was read a second time. On Monday on the order for resuming the adjourned debate on the Government Annuities Bill, it was agreed after some discussion to send the Bill to a Select Committee, on the understanding that its form, and not its principle, should be inquired into. The House then went into Committee of Supply on the Army Estimates, and agreed to several of the votes. On Tuesday Captain JERVIS moved that the House, having, by Acts of Parliament, guaranteed to the officers of the late East India Company's Service that their pay, pensions, allowances, promotions, &c., should be secured to them, had learnt with regret, from the report of the Royal Commission, that in certain cases this guarantee had been departed from, and was of opinion that full and speedy reparation should be made. Sir C. WOOD said that the Government were considering a scheme, founded upon the report of the commission, the recommendations of which would be carried out in their integrity. Captain JERVIS expressed himself satisfied with this assurance, and withdrew the motion. Lord R. CECIL moved, that the mutilation of the reports of the Inspectors of Schools, and the exclusion from them of statements and opinions adverse to the educational views entertained by the Committee of Council, while matter favourable to them was admitted, were violations of the understanding under which the appointment of the inspectors was originally sanctioned by Parliament, and tended to destroy the value of their reports. Mr. LOWE defended the course which had been pursued by the Department of Education, and said that the facts relied upon for the motion were untrue, and the opinion pronounced upon them absurd. After a short debate the House divided, when the motion was carried against the Government by a majority of eight, the numbers being 101 to 93. Mr. D. GRIFFITH obtained leave to bring in a Bill to afford shareholders in Joint-Stock Companies facilities for voting by means of voting papers. Mr. DILLWYN called attention to the insufficiency and inconvenience of the temporary Museum for Inventions at South Kensington, when the House was counted out. On Wednesday Mr. LOCKE KING moved the second reading of the County Franchise Bill, the object of which was to extend the right of voting in counties to 10*l*. occupiers. Mr. A. SMITH moved as an amendment the previous question. On a division there were for the second reading, 227; for the previous question, 254. The Bill was therefore lost by a majority of 27. On the order for going into committee on the Trespass (Ireland) Bill, Mr. BAGWELL moved as an amendment that the Bill be committed that day six months. On a division the amendment was negatived by 158 to 45. The House then went into committee *pro formâ*, and immediately resumed. The Registration of County Voters (Ireland) Bill passed through committee. On Thursday, on the order for going into Committee of Ways and Means, Colonel BARTTELOT moved that the consideration of the duties on sugar be postponed until the House had the opportunity of considering the expediency of the reduction of the duty on malt. After a long discussion the motion was negatived by a majority of 248, the numbers being 347 to 99. The House then went into Committee of Ways and Means, and agreed to all the resolutions of the CHANCELLOR of the EXCHEQUER founded upon the Budget, except that relating to the Fire Insurance Duty.

From the seat of war in the North we learn that the bombardment of Düppel and Sönderborg by the Prussians is still continued with great energy, and that a general assault is expected to be made in a few days. The Danish position however at present remains intact, and it is announced that it will be defended to the last extremity.

On Thursday, at the sitting of the Federal Diet, the report of the Committee recommending that the Diet should send a representative to the London Conference, was agreed to by a large majority, and Baron VON BEUST was almost unanimously elected Plenipotentiary to the Conference.

The Mexican question is at length settled. The Archduke MAXIMILIAN has formally accepted the crown of Mexico, and left Miramar for his new Empire on Thursday. A telegram from Vienna states that the renunciation by the Emperor MAXIMILIAN of the right of the succession to the Austrian Throne is unconditional, and does not depend upon the stability of the Government in Mexico.

Accounts from the United States inform us that the Confederate cavalry, under General FORREST, estimated at 5000 strong, has captured, burned, and sacked Paducah and Union City, in Kentucky, but was subsequently repulsed at Fort Blow, and compelled to retreat towards Columbus. Admiral PORTER's Federal expedition from Vicksburg has captured Fort de Russy, on the Red River, and has since occupied Alexandria without opposition. It is reported that General MEADE will be removed from the command of the Army of the Potomac, and that General GRANT will appoint Generals M'CLELLAN and FREMONT to active service.

Home News.

THE COURT.—The Queen and Royal family continue at Windsor Castle. On Thursday evening, the 7th inst., Prince Arthur, Prince Leopold, and Princess Beatrice came to London, and attended the performance at the Lyceum Theatre. Prince Arthur returned to Greenwich Park. Lieut.-General E. Bouverie arrived at the Castle. Professor Owen delivered his fourth lecture before her Majesty and the Royal family. On Friday morning the Queen, accompanied by Princess Helena, walked and drove in the grounds. On Saturday morning the Queen, accompanied by Princess Helena and Princess Louisa, came to London, and in the afternoon her Majesty held a Court at Buckingham Palace for the reception of the Corps Diplomatique and the wives of the Ambassadors and Ministers and Ministers who had been invited. Her Majesty was accompanied by the King of the Belgians and by the Princess Helena, Princess Louisa, and Prince Arthur, and was attended by the Earl and Countess Russell, and the principal members of her Majesty's Household. The Queen wore a black silk dress, covered with deep black crape, and edged with jet gimp; a cap of white crape lisse in the style of the cap of Mary Queen of Scots, with diamonds, and a long white crape lisse veil attached to it. Her Majesty also wore the Riband, Star, and Badge of the Garter, a diamond necklace and large cross, containing the Prince Consort's miniature, and an opal brooch set in diamonds. The Court being in mourning, the ladies who attended the Reception were attired in full-dress mourning costume without trains. The gentlemen were in full dress, with crape on the left arm. The Queen, accompanied by the King of the Belgians and Princess Helena, left Buckingham Palace soon after 5 o'clock and returned to Windsor. Princess Louisa remained in town, and attended the performance at the Adelphi Theatre, returning to the Castle at night. Prince Alfred arrived at the Castle at night from Holyrood Palace. On Sunday morning the King of the Belgians, Prince Alfred, Princess Helena, Princess Louisa, Prince Leopold, and Princess Beatrice attended Divine service in the private chapel. The Dean of Westminster preached the sermon. In the afternoon the Princesses Helena and Louisa went to the parish church of St. John's, Windsor, and attended the confirmation by the Bishop of Oxford of a large number of young persons of both sexes. On Monday morning the Queen walked in the grounds. The King of the Belgians went to Claremont and visited the Queen Marie Amélie. In the afternoon the Duchess of Cambridge and Princess Mary arrived at the Castle on a visit to Her Majesty. On Tuesday morning the Queen, accompanied by Princess Helena, walked and drove in the grounds. In the afternoon the Duchess of Cambridge, Prince Alfred, Princess Louisa, and Princess Mary of Cambridge drove out in a carriage and four. The Duke of Devonshire, the Belgian Minister, Viscount and Viscountess Castlerosse, and Rear-Admiral the Hon. J. Denman arrived at the Castle on a visit. In the evening the Queen had a dinner party. On Wednesday morning the Queen, accompanied by Prince Alfred, walked and drove in the grounds. The Duchess of Cambridge and Princess Mary left the Castle for Kew. In the afternoon the King of the Belgians left the Castle for Buckingham Palace. Prince Arthur arrived from Greenwich Park. In the evening Prince Alfred, the Princess Helena, and Princess Louisa came to town and attended the performance at Drury Lane Theatre. On Thursday, being the seventh birthday of the Princess Beatrice, the youngest member of her Majesty's family, the event was celebrated in Windsor with the usual honours. In the morning the Queen, accompanied by Princess Helena, walked and drove in the grounds. In the evening Prince Alfred, Princess Helena, and Princess Louisa came to town and attended the performance at Drury Lane Theatre.

THE QUEEN'S NEXT COURT.—The Court announced to take place at Buckingham Palace on Wednesday last, at 3 o'clock, was postponed on Monday to this day (Saturday) at the same hour.

THE PRINCE AND PRINCESS OF WALES continue at Sandringham. On Wednesday the 6th inst., their Royal Highnesses rode on horseback. Mr. Wood and Dr. Sieveking, physician to her Royal Highness, arrived on a visit. On Thursday the Prince rode out on horseback, and the Princess took a carriage drive to West Newton. On Friday their Royal Highnesses went out with Mr. Bircham's hariers. The meet was at Flitcham Abbey. The Prince and Princess rode well after the hounds, and the Princess especially excited the admiration of the field by the daring way in which she took the line. On Saturday their Royal Highnesses walked in the grounds, and afterwards rode out. On Sunday morning the Prince and Princess attended Divine service at Sandringham Church. The Rev. G. B. Moxon officiated. On Monday the Prince and Princess again joined Mr. Bircham's hariers, the meet being at Ashiorcken. It is believed that their Royal Highnesses will return to town during the last week in April. The Vice-Chancellor of Cambridge has received an official intimation that the Prince and Princess will visit the University of Cambridge in the week ending the 18th of June.

PRINCE ALFRED.—On Thursday the 7th the Prince paid a visit to Mr. Fletcher of Saltoun, and dined with the Solicitor General in the evening. On Friday his Royal Highness attended the performance of the "Messiah" in the Music Hall, and on Saturday morning left Edinburgh for Windsor, where he arrived on the same night.

THE DUKE AUGUST OF SAXE-COBURG GOTHA arrived at Dover on Sunday morning from Calais, and left by the afternoon mail train for London and Esher.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street.

MINISTERIAL MOVEMENTS.—Mr. Lowe, the Vice-President of the Committee of Council on Education, is reported to have tendered his resignation in consequence of the vote of Tuesday night.

THE ADMIRALTY.—The Lordship of the Admiralty vacant by the resignation of Mr. Stansfeld, has been offered to Mr. Baxter, M.P. for Montrose, but declined on account of his business engagements not enabling him to undertake the duties. The office has now been offered to Mr. Childers, M.P. for Pontefract, and accepted.

DIPLOMATIC MISSION.—The Earl of Clarendon has left London this week for Paris on a private mission to the Imperial Court.

ORDER OF THE GARTER.—The vacant Garter will, it is believed, be bestowed upon the Duke of Sutherland.

PARLIAMENTARY MOVEMENTS.—Mr. Cardwell was re-elected for Oxford on Saturday without opposition. The Lancaster election terminated on Wednesday in the return of Mr. Fenwick, the Liberal candidate, by a majority of 157 over Mr. Saunders, the numbers being 682 to 525. At a meeting of the electors of Dunfermline on Wednesday, Captain Thomson, the Conservative candidate, announced his retirement from the contest. Mr. Osman Ricardo has announced his intention to retire from Worcester at the end of the present Parliament, and Mr. Sherriff, mayor of the city, and late manager of the West Midland Railway, has accepted an invitation to become a candidate. The Barnstaple election committee met on Thursday. After the case had been opened, Mr. Coleridge, Q.C., stated that Mr. Lloyd, the sitting member, had only lately become acquainted with the fact that bribery by his agents, or those for whom he was responsible, had taken place. Mr. Lloyd felt he could not justify what had been done, and tendered himself for examination. The committee after hearing Mr. Lloyd's evidence, declared that he was not duly elected, and the Committee then proceeded with the scrutiny, which occupied the remainder of the day. At their meeting yesterday the committee resumed the scrutiny, and struck off a sufficient

number of votes to place Mr. Bremridge, the petitioner, in a majority. Mr. Motteram and Mr. Huddleston, Q.C., both of the Oxford Circuit, intend offering themselves in the Conservative interest for Stafford. General Buckley has announced his intention to retire from Salisbury at the next general election. There are two candidates in the field, Mr. Edward Hamilton, brother of the Bishop, and Mr. John Chapman, chairman of the Salisbury and Yeovil Railway Company, the former in the Liberal, the latter in the Conservative interest.

The Army.—Major-General Sir William Brereton, K.C.B, has been appointed colonel-commandant of the Royal Artillery by augmentation.

The Ecclesiastical Commission.—The sixteenth report from the Ecclesiastical Commissioners was issued on the 7th inst. It details the amount of work already accomplished in the augmentation of benefices, and includes a statement addressed to the Home Secretary in answer to the report of the select committee. The appendix, besides an abstract of the accounts for the year, contains a minute of the estates committee in reference to the alleged ill-management of the estates of the commission; a report by a committee of the Treasury, made in 1859, explaining the duties and establishment of the office of the commissioners; and a report of a select committee of the commissioners themselves, appointed to examine into the accounts. The commissioners begin with a short account of what they have done, and what they have a prospect of doing. The existence of a common fund for the augmentation and endowment of benefices having cure of souls dates from 1840, and during the first 16 years from that date—that is, down to 1856—the commissioners appropriated for its purposes a capital value of more than three millions. During the subsequent seven years they have appropriated from their own resources about a million and a half, and the public have met them with benefactions to the amount of another million. So that on the whole five millions and a half of money have been applied for the augmentation of benefices, four millions and a half of which have been derived from "the redistribution and improvement of ecclesiastical property previously enjoyed by the holders of cathedral dignities and sinecure preferments." The commissioners then calculate, as a sort of estimate of the work that remains to be done, that in order to raise to 300*l.* a year all benefices in public patronage with a population of about 500 persons, and to provide half the amount necessary to raise to a like amount benefices in private patronage with a like population, they would require 330,000*l.* a year in perpetuity, or a capital sum of 10,000,000*l.*—an amount of which they only say that "the funds at present at their disposal would be insufficient to provide it," but they think that the continuous increase of the permanent income of the common fund will enable them to provide a considerable portion of it by a system of appropriating such income instead of capital. By this means, within the next five years, they expect to raise to 300*l.* a year the income of every benefice now existing with a population of 4000 persons, and also to appropriate to the endowment of new churches 15,000*l.* a year in perpetuity; every such church to be endowed by the commissioners alone, or by them and private persons, with 200*l.* a year. Accordingly, within the next year they are prepared to raise to 300*l.* the income of all benefices with a population over 8000 persons; to appropriate 3000*l.* a year in perpetuity to the endowment with 200*l.* a year of new churches with a population of 8000 persons: to make further appropriations in capital sums to the extent of 100,000*l.*, and, in short, on the whole, to make grants of the capital value of 700,000*l.*

Illness of the Bishop of Peterborough.—The daily papers announce the sudden and serious illness of the Bishop of Peterborough. His lordship was out of doors on Tuesday, but on the following day he was prostrated by a severe attack of bronchitis. The physicians in attendance scarcely expected that the Bishop would last through the night, and the absent members of his family were at once sent for. On Thursday the report was a little more favourable, the Bishop having passed a good night and slightly rallied. His Lordship's condition, however, still causes grave uneasiness to his friends. He is in his 84th year, and was advanced to the see in 1839.

Foreign.

France.—The Prince de la Tour d'Auvergne, the French Ambassador in London, will be the only plenipotentiary of France at the Conference. The Emperor received Lord Clarendon in a private audience on Thursday. His Lordship subsequently had an interview with M. Drouyn de Lhuys. The *Pays* asserts that the object of Lord Clarendon's journey is to endeavour to establish a perfect understanding between the English and French Governments on the Dano-German question. The report of the Committee on the Budget in the Corps Législatif has been distributed among the members. It states that the Budget, after the different modifications which it has undergone, shows an increase in the revenue of 1,500,000 f. The committee express their confidence that the Budget will be balanced without increasing the existing amount of deficit. They then proceed to say:—

"But our hopes would be fatally deceived if rash impatience or the event which now occupies the political world should lead to an European conflict. France, who earnestly desires the maintenance of peace, assuredly does not fear war. If to uphold her honour or her interests, threatened in any quarter, the Government should ask fresh sacrifices from France, her patriotism would accept them without a murmur; but, happily, the views of the Government in the present state of affairs do not point to any necessity of this kind. Confiding both in its strength and in the high wisdom of the Sovereign to whom it has intrusted its destinies, the country may therefore regard the future without uneasiness."

The Budget stipulates that the stamp duty levied in accordance with the law of the 13th May, 1863, on Rentes, loans, and public securities of foreign Governments, shall be raised from 50c. to 1f. This measure is to take effect from the 1st July, 1864. *La France* of Tuesday says that great excitement has been caused in Lyons by the introduction of the Roman Liturgy, and that the Government has decided upon applying to the Papal brief addressed to Cardinal Bonald the article of the organic law prohibiting the reception, publication, printing, and putting into execution of any bull, brief, rescript, decree, or other missive of the Court of Rome. In another article it says that it has reason to believe that the French army of occupation will be gradually withdrawn from Mexico. The Paris evening papers announce that the subscription to the Mexican Loan will be opened in France on the 18th inst., at the offices of the Crédit Mobilier and its provincial agencies. The private mission of Lord Clarendon to the Tuileries is regarded in Paris as an event of peculiar significance from the fact of its coinciding with the publication of a pamphlet, attributed to the pen of Count Walewski, in which the Anglo-French alliance is put forward as a means of rescuing oppressed nationalities. This pamphlet, which is entitled *L'Alliance Anglaise, le Danemark, et la Pologne*, advocates the alliance of France with England, and suggests the advisability of a joint crusade of both countries to protect Denmark, to enfranchise Poland, and to emancipate Venetia. It concludes as follows:—

"England was the first to point out the dangers of a renewal of a Holy Alliance negative as regards Poland, and active as regards Denmark, until it showed itself strong enough to take revenge against Italy as well as England and France. But newspaper articles and speeches in Parliament are not sufficient—it is requisite to do something. Is England willing? Let this be borne in mind—progress must be accomplished, whether in a storm or with fair weather. Would it not be wise to come to an understanding to dissect events and to keep passions down!"

The triumphant reception of Garibaldi in England is causing great excitement in Paris, and it is gravely asserted that "Lord Palmerston received Garibaldi on his arrival," and that all this popular enthusiasm conceals a deep political meaning.

Spain.—Messrs. Chanviteau and Salaverria, supported by the principal bankers, have agreed to offer 140 millions to negotiate the bonds given by the purchasers of national property. The ministry have stated, in reply to a question in the Cortes, that they will energetically carry on the war until the submission of San Domingo be obtained.

Belgium.—It is stated that Garibaldi has been invited to visit Brussels.

Sweden.—Count Wachtmeister, the Swedish Ambassador in London, will represent Sweden at the Conference. His Excellency has received instructions from his Government.

The Danish Duchies.—On Thursday, the 7th, the bombardment of Düppel was kept up vigorously, but the fire on the town of Sönderborg was weaker. The conflagration of the town was subdued during the day. On Friday the Prussians recommenced the bombardment of Sönderborg and of the Danish intrenchments with extraordinary violence. The batteries at Broager, having received fresh guns, fired 1150 shots, principally from the centre batteries. On Saturday the bombardment of the Düppel works and Sönderborg was feeble. Bombs from the Prussian mortars fell on the ground beyond the Danish position. On Sunday morning the bombardment began at 10 o'clock all along the line, with mortars from the second parallel and numerous rifled and siege guns, consisting altogether of nearly 100 pieces. The Danish fire was slack, and there were no sorties. The Prussians, under cover of a fog, extended their trenches in front of the Düppel position, and approached within 500 paces of the Danish left wing. Notwithstanding the Danish cannonade, the new works were occupied by a force 1000 strong. A violent fire was uninterruptedly kept up until 7 P.M., and the windmill on Düppel Hill, which served the Danes as a powder magazine and an observatory, was burnt down. During the night another parallel was traced, and a Danish sortie was repulsed, in which the Prussians lost one man killed and two wounded. The 4th Regiment of the Grenadiers of the Guard reconnoitered in front of the trenches and captured nine prisoners. They had four men wounded. The outposts of the Gröben Brigade were advanced. Three prisoners were taken, without any loss on their side. On Monday the bombardment of Düppel was continued and was quite as violent as on the previous day. At an early hour the Prussians attempted an assault upon both wings of the Danish position without success, and being met by a cannonade from the Danish batteries and approaches, they retreated. On Tuesday the Prussian fire was as vigorous during the night as it was on the previous day, and their batteries discharged at the rate of 500 shots per hour. Sönderborg was again in flames. The parallel on the left wing of the Düppel position was advanced nearer to the works. On Wednesday firing began from the batteries in the third parallel. During the night a battalion of the Prussians attacked the Danish outposts in the trenches. They took 100 men prisoners, and intrenched themselves in the works. The attempt on the part of the Danes to dislodge them was unsuccessful. Brisk musketry firing, supported by a discharge of grenades and shells, took place on this occasion. Major Jena of the Prussian army was wounded in the shoulder, and Lieutenant Seydlitz killed. The Prussian loss was about 2 men. The Düppel position holds out bravely, and the Danes are determined to resist to the last extremity. Fresh bodies of troops are continually being despatched to the seat of war. The German newspapers assert that an intimation was given by the Prussians before the bombardment of Sönderborg. The *Berlingske Tidende* however publishes a semi-official article, confirming the statement of the telegram that the bombardment took place without warning and without a simultaneous assault upon the Düppel position. The arsenal and depôt of arms had been removed from Sönderborg long before the bombardment took place. A small body of Danish troops has landed between Hadersleben and Apenrade. A sharp cannonade took place before Fredericia on the 8th. The Danes made a sortie and attacked the allied troops, whose reserves were brought forward in their support. The Prussians in Jutland have since advanced northwards. They drove the Danes out of Horsens after a short engagement, and subsequently advanced by way of Hansted. An official notification announces that the Prussian ports of Dantsic and Pillau will be blockaded from the 19th inst. On Wednesday the Danes captured off Heligoland a brig and schooner, the nationality of which is unknown. All homeward and outward bound ships are brought to by the Danish cruisers. Several Danish war vessels are cruising at the mouth of the Elbe. It is said that two frigates and two corvettes have captured three vessels and some small craft. A rescript of the Civil Commissioners prohibits all public officers in Schleswig, under penalty of immediate dismissal, from affixing their signatures to any resolutions or addresses having reference to the London Conference. An assembly of Holstein Notables which was to have taken place on Friday has been prohibited by order of the Austro-Prussian Civil Commissioners.

The Hanse Towns.—The Government of Bremen has requested the Swiss Federal Council to allow ships belonging to that port to sail under Swiss colours during the Dano-German war. This request has been refused by the Federal Council.

Frankfort.—At an extraordinary sitting of the Federal Diet held on Monday, the united committees brought in their report upon England's invitation to the Conference. The committee proposed that the Diet should send a representative. The vote on this proposition was taken on Thursday, when the propositions of the Committees were agreed to by a large majority. Baron von Beust was almost unanimously elected Plenipotentiary of the Diet to the Conference.

Prussia.—It is announced that Prussia will be represented at the Conference by Count Bernstorff, Ambassador in London, and Herr von Balan, formerly Minister Plenipotentiary at Copenhagen. The official journal of Friday publishes an article on what it terms the "insinuations" of the English press that Sönderborg, being an open town, had been bombarded by the Prussians. The article draws attention to the fact that Sönderborg has been employed by the Danes themselves as a fortified place, and has been treated accordingly.

Austria.—Count Apponyi, the Austrian Ambassador in London, has been appointed first, and Baron Biegleben second, Plenipotentiary of Austria at the Conference. The negotiations between the Emperor of Austria and the Archduke Maximilian have at length been brought to a satisfactory conclusion. The Emperor of the French is said to have hastened the decision by addressing two letters to the Emperor of Austria, pointing out the serious consequences of the delay. As everything has now been arranged, the Emperor of Austria left Vienna for Miramar on Friday evening, accompanied by Count Rechberg, Herr von Schmerling, and the representatives of the Hungarian, Transylvanian, and Croatian Aulic Chancellery. The agreement entered into between the Emperor of Austria and the Archduke Maximilian will be communicated to both Houses of the Reichsrath. The Archduke's renunciation for himself and his heirs of the right of succession to the Austrian Throne does not depend upon the stability of the Government in Mexico, but is unconditional. The Archduke Maximilian received the Mexican deputation on Sunday and formally accepted the Imperial Crown. The Archduke, in reply to the deputation, spoke as follows:—

"After a mature examination of the act of acceptance of the Mexican Crown, which you have submitted to me, I have come to the conviction that the resolution of the Mexican notables has been confirmed by an over-ruling majority of the inhabitants of that country. Such being the case, the first of the conditions for which I stipulated on the 3d of October has been fulfilled. The second condition, that a guarantee of the independence and welfare of the country should be placed on a firm basis, has been secured by the Emperor Napoleon, who throughout has been animated by a spirit of sincerity and kindness which I shall never forget. The illustrious head of my family has also given his consent. I now solemnly declare my acceptance of the Crown you have offered to me. Mexico is entitled

to select a Government corresponding to her wishes and her requirements. This confidence shall not be misplaced. I assume the constitutional power intrusted to me by the nation. I will retain it so long as it may be necessary to establish a state of legal order, and completely to organise liberal institutions. I shall hasten to place the Monarchy under the authority of constitutional laws so soon as the pacification of the country shall be accomplished. Executive power strictly defined is better secured than when a matter of uncertainty; and I will define it in such a manner as shall be a guarantee of the stability of the Government. I hope to be enabled to prove that well-regulated liberty is compatible with order. I will also uphold with equal energy the flag of independence. I desire the assistance of every Mexican to support me in accomplishing my splendid task. Union will make us strong. My Government, I repeat it, will not forget the gratitude due to the illustrious Prince by whom alone the regeneration of Mexico has been rendered possible. On my journey to Mexico I shall visit Rome to receive the blessing of the Holy Father, which to me is doubly important."

The speech was replied to by the president of the Mexican deputation. The Emperor Maximilian was to have taken his departure for Mexico on Monday afternoon, visiting Rome on his way, but he was unable to carry out his intention until Thursday, being confined to his bed by a slight attack of fever. On Thursday the Emperor and Empress of Mexico left Miramar, at 2 o'clock, amid enthusiastic cheers. A salute was fired by all the batteries on their departure. Ambassadors, have been sent to Vienna, Rome, and Paris, and the new Emperor has made the following appointments:—M. Velasquez, Minister of the Household; Count Woll, Adjutant-General and Private Secretary; M. Schergenbechner, Councillor of State; Marquis Corio, Master of the Ceremonies; M. Aranjuez, Ambassador at Brussels; M. Aguilar, Ambassador at Rome; Count Bombelles, Captain of the Body Guard; Naval Captain Radonetz, Captain of the Palace; Naval Captain Herzfeld, Consul-General in Vienna. A Volunteer Corps for service in Mexico is being organised in Trieste.

DALMATIA.—The Dalmatian Diet was dissolved on Friday by an Imperial resolution, on account of party intrigues and attacks on the Government which have occurred.

POLAND.—The official seal was on Wednesday fixed to the offices of the Credit Institution of the landed proprietors. Three of the higher officials were arrested. A special commission, under the presidency of General Getzewitsch, has been appointed to examine the assets, accounts, and management of the institution, as well as the payments due from the landed proprietors.

ITALY.—The *Perseveranza* of Friday denies the rumour that the Italian Minister for Foreign Affairs has resigned. On Tuesday the Pope paid a visit to the extramural Church of St. Agnese fuori le Mure. His Holiness was much cheered by the people. Rome was illuminated in the evening. The *Opinione* of Monday says:—

"The Pontifical Government is about to contract a loan for 40 millions. We will not discuss the amount of confidence to be reposed in the Pontifical credit. That is for capitalists to decide. But it is our duty to discuss whether the Italian Government ought to recognise loans contracted by the Roman Government prior to its dissolution. It would be incorrect of the Papal Government to suppose that Italy will recognise these loans. The Italian Government being acquainted with the amount of the Pontifical debt in June, 1859, and September, 1860, is thus enabled to calculate exactly the increase which has taken place since that date."

GREECE.—Accounts from Athens announce that the Ministry had tendered, but subsequently withdrawn, their resignation. Disturbances had taken place between the Catholics and Greeks in Syra, but they were not of a political character. One company of a regiment had mutinied at Patras.

TURKEY.—Advices from Constantinople deny that the Ottoman Government had consented to deliver up to Russia a Pole who had escaped from Odessa. The fugitive is still at liberty.

EGYPT.—The fresh-water canal from Ismaüla is completed to Port Said. It is an entire success.

INDIA.—A despatch from Bombay, of March 29, says that the laying down of the telegraph cable has been completed to the head of the Persian Gulf. The telegraphic communication with Bombay is now perfect. The Governor-General would not leave Calcutta for Simla until after the publication of the budget. The Patna conspiracy had ended by the capture of all the ringleaders, and the latest advices from that district pronounce everything to be quiet. Some excitement had been caused at Calcutta by a prohibitory order of the Lieutenant-Governor of Bengal against bodies being thrown into the Hooghly or burned on its banks. The order was a most necessary one for the health of the community, but a sect of the Hindoos was endeavouring to raise a cry that the new Governor-General was attempting to tamper with their religion.

CHINA.—The chief event announced by the present Mail is the return of Major Gordon to active service. The direction in which he has moved is to the south-west of the Tae-hoo Lake, against a town named Yih-shing-hsien, not far from Chang-chow-foo. The plan of the campaign includes a combined advance upon Nankin, which, being at present very closely pressed, will, in all likelihood, surrender on mild conditions. The city of Kia-shing-fu has surrendered to the Imperialists. The siege of Hangchau is progressing favourably; six or seven stockades are in the hands of the Franco-Chinese force, and the city is likely to fall soon. Should this expectation be realised the rebellion may be considered at an end. The English officers of the Franco-Chinese contingent have been dismissed owing to an ebullition of ill-temper on the part of General d'Aigabelle, second in command. The troops have expressed disgust at the event.

JAPAN.—The Ambassadors to Europe are at present on their way to France. A rumour is current that they are men of low extraction put forward under false pretences.

AUSTRALIA.—The new Land Bill, framed with the view of "encouraging agricultural and pastoral enterprise," has been introduced into the Victoria Parliament by the President of the Board of Land and Works. It was read a second time on the 17th February without opposition, and is now in committee.

NEW ZEALAND.—The Maoris have formed a regular Maori Quadrilateral, of a strength great in itself at every point, but rendered infinitely greater by the ready support which one part can supply to another. Each of the four positions is strongly fortified with earthworks and flanking angles of stockaded work, while the ground on all sides is honeycombed with a network of rifle pits. There are between 3000 and 4000 men inside, nearly all of whom are available at any point exposed to an attack. General Cameron has surrounded the position with about 2700 men, and is preparing to storm it on the southern side, where the 50th or 70th Regiments, with the colonial force, cavalry, and a company of the Bush Rangers are stationed. The next mail may therefore be expected to bring news of a great fight.

UNITED STATES.—The Confederate General Forrest attacked Union City, Western Tennessee, on the 24th March, and captured the town and 500 Federals. Immediately afterwards he entered Kentucky, and on the 25th occupied Paducah, on the Ohio River, from which he removed many valuable spoils. He also attacked the fort, but for want of heavy cannon was compelled to desist. Two Federal gunboats from Cairo opened fire to dislodge his forces, during which a large portion of the city was destroyed. General Forrest then retired, and at the latest dates was within eight miles of Columbus. The Confederates have also made a reconnaissance from Alexandria up the Red River to Natchitooches, capturing 200 prisoners and four cannon. Admiral Porter's official despatches announce the capture of Fort De Russey, which was surprised and captured while the greater portion of the garrison were upon scouting expeditions. The Federal captures were 250 prisoners and eight cannon. The reported surrender of Alexandria is mentioned. Deserters report that General Polk has joined forces with General Johnston at Dalton; and that the Confederates are moving their artillery to the front, indicating an early advance upon General Thomas at Ringgold. An order from the War Department has been promulgated by General Meade consolidating the troops of the Potomac Army into three corps—namely, second, fifth, and sixth. In consequence, three majors and three brigadier-generals have been relieved of command and ordered to report themselves at Washington. The President, Generals Grant and Halleck, and Mr. Stanton held a consultation at Washington on the 27th ult., and Generals Grant and Meade have since left Washington for Fortress Monroe. It is reported that General Meade is to be removed, and that active commauds will be offered to Generals M'Clellan and Fremont. President Lincoln on the 26th issued a proclamation defining and restricting his previous amnesty proclamation. The proclamation does not apply to persons in military, naval, or civil custody, or on parole. Commissioned civil, naval, and military officers can administer oaths. Serious riots have taken place at Charleston, Illinois, caused by disputes between the Copperhead and Republican politicians. The Copperhead rioters, 1500 strong, are entrenched near Charleston. A large number of troops have been sent to quell the riot.

MEXICO.—Brownsville, Texas, accounts report that a French fleet is off the mouth of Rio Grande, and that an attack upon Matamoras is imminent. There was also a doubtful report that Juarez had captured Guadalajara.

Parliament.

HOUSE OF LORDS.

MONDAY.—The LORD CHANCELLOR laid upon the table a Bill to provide for the endowment of the *Regius Professorship of Greek at Oxford*. At present that office had only a value of 40*l.* attached to it under the statute of Henry VIII., while other professorships which were founded at the same time had canonries or other ecclesiastical preferments. By his Bill he proposed that the Lord Chancellor, who had a number of canonries in his gift, should confer the first of these that became vacant upon the Regius Professor of Greek. In the meantime he had only to express a hope that the University would be influenced by a sense of justice to make adequate provision for the holder of that office. *The Danish Question.*—Lord STRATHEDEN moved that in the opinion of the House, if the demand made by Denmark for mediation according to the principle laid down in the protocol of Paris in 1856 had been more decidedly supported by her Majesty's Government, the bloodshed and other evils already occasioned by the war in Denmark might have been prevented, and there would have been less danger than there now was of a more extensive disturbance of the peace of Europe; and that a Conference upon the Danish question in order to lead to a practical result ought to be accompanied by such steps as might convince the Powers of Europe that her Majesty's Government adhered to the treaties in which the Duchy of Schleswig had been guaranteed to Denmark by Great Britain. He believed that the Conference about to be held abounded in the elements of failure, and if it separated without any satisfactory result, the peace and security of Europe would be placed in imminent danger. He thought that a British fleet might be usefully employed in the Little Belt, for the purpose of guarding the Island of Funen from aggression.—The Duke of ARGYLL was at a loss to know how the Government could have prevented war by threatening to take part in it. If they had taken that course, instead of preventing they might have increased the bloodshed. It was true that Great Britain held a high position, and had vast influence in Europe, but she was not the arbitrator in all the quarrels of the continent. Our obligations towards Denmark were contained in the Treaty of 1852, which was not a treaty of guarantee, but of recognition, and had not been signed by England alone. He regarded the blood shed in the present war as altogether unjustifiable, inasmuch as every object could have been attained by negotiation. We should go into the Conference in the first place, to restore peace to Europe; secondly, to secure as far as possible, the local liberties of the two Duchies; and, thirdly, to re-conciliate with that the integrity and independence of Denmark. He admitted that all the obligations of Denmark towards the Duchies had not been adhered to; still, on the other hand, the promises made by Germany to Denmark had also been disregarded.—Earl GREY was not prepared to say that Denmark was not wholly to blame. If since 1852, she had governed the Duchies in a wiser and more conciliatory spirit, the present crisis would never have arisen. As, however, there were probably faults upon both sides, a Conference might be desirable. At the same time, he was convinced that there would have been no war had the English Government pursued a firmer line of policy. He also deprecated the manner in which the war had been conducted by Austria and Prussia, and characterised it as a barbarous, savage, most wanton, and gratuitous outrage upon the feelings of the Danish people.—Earl RUSSELL was of opinion that the arrangement of 1852 between Denmark and Germany was most complicated and unfortunate, and that all the diffitulties which had sprung up within the last 10 years were traceable to it. Denmark had not strictly fulfilled her engagement to Schleswig. On the other hand, Germany had on several occasions made propositions which it was impossible for Denmark to entertain, and which, if acceded to, would have interfered not only with the independence but the integrity of Denmark. This unfortunate state of affairs went on, neither party being altogether right, until the 1st of October, when Germany resolved on enforcing federal execution, and her Majesty's Government had endeavoured so to counsel both parties that a mutually satisfactory result might be arrived at. Their efforts, however, were unsuccessful. He denied that there was anything humiliating in their policy, and said it would have been most unwise, and would perhaps have entailed enormous expense on the country, had her Majesty's Government committed it to hostilities without having the assistance of the other Powers who were signataries to the treaty of 1852. By the firmness and moderation of their language they had extracted from the German Powers a declaration that, notwithstanding the war, the treaty of 1852 would be adhered to, and the independence and integrity of Denmark maintained.—The Earl of DERBY concurred with Earl Russell in thinking that the true policy of this country was essentially a policy of peace; but, unlike the noble earl, he did not regard the matter from an economical point of view. In his opinion, the course adopted by Ministers was more calculated to produce serious complications than if they had adopted a more straightforward and independent policy in the first instance. As he viewed the matter, the great element of danger to the peace of Europe was to be found in the power of the revolutionary party in Germany acting upon the minor States, and that of the latter acting in its turn upon the national jealousies of Austria and Prussia, as to which should obtain the lead in Germany. He joined Earl Grey in condemning the mode in which these two Powers were prosecuting the war, and denounced the bombardment of Sonderborg as an atrocity unexampled in the history of nations claiming to be considered civilised. As to the Conference, he doubted whether it would lead to a satisfactory solution of the difficulty, for he thought its bases should be the engagements entered into in 1852, and that it should not be confounded with the treaty of the following year, the sole object of which was to settle the succession to the Danish Crown.—Lord WODEHOUSE said that when he represented this country at Copenhagen he constantly endeavoured to press upon the Danes that they were not likely to receive material aid from England. He believed it would have been far better for Denmark to have made timely concessions than to have provoked war, but unfortunately all her concessions came too late.—Earl GRANVILLE said with regard to the Conference that most of the great Powers who had consented to send representatives to it, including Austria, were agreed that the first act of the assembly must be the immediate establishment of an armistice.—In reply to Earl Grey, Earl RUSSELL said he understood that the Prussian commander had given a general notice that Sönderborg would be considered part of the fortified position of Düppel. But he thought the inhabitants should have had a special notice 24 hours. The motion was then withdrawn.

TUESDAY.—The MARQUIS of WESTMEATH moved the second reading of the *Punishment of Rape Bill* empowering the Judge to add flogging to the punishment awarded by the law in the case of persons acting as accomplices in criminal assaults on women.—Lord RAVENSWORTH opposed the Bill. The crime specified was generally committed without premeditation, differing in this respect from the offence of wilfully placing obstructions on a railway with the intention to upset a train, for which the punishment of flogging could be inflicted.—Earl GRANVILLE, on the part of the Government, would not oppose the second reading.—Earl GREY thought the law as it at present stood was not fully administered in these cases. Some Judges had passed scandalously insufficient sentences for such outrages, and those who did so he considered unworthy of their high office.—Lord WENSLEYDALE agreed with Lord Grey as to the disproportion of some recent sentences to the crime committed. It would be desirable if some general understanding could be come to between the Judges as to the punishment they would award for certain classes of crimes.—The Lord CHANCELLOR thought if any general rule of the kind could be fixed it would be better to embody it in an act of the Legislature.—Lord CRANWORTH feared the measure would introduce a new penalty for the offence, and would rather increase the difference between the sentences of different Judges. The Bill was then read a second time. *The Charitable Assurance Bill* passed through committee. *The Prerogative of Mercy Bill* passed through committee.—The Earl of CARNARVON moved for copies of the correspondence relative to the case of George Hall, convicted at the Warwick assizes of murder, and subsequently respited by the Crown. He also called attention to the cases of Samuel Wright, George Victor Townley, and Jessie M'Lachlan, and complained of the capricious administration of the Home Office in connection with the infliction of capital punishment.—The Lord CHANCELLOR defended the Secretary of State, especially with reference to the case of Townley, who had not been respited until after it had been found that no case had occurred in which, under similar circumstances, the convict had subsequently been executed. As to the convict Hall, Sir G. Grey had respited him, as he thought, wisely and judiciously, on receiving information which led him to believe that the execution of the criminal would have shocked the moral sense of the community. It was impossible to administer the law in relation to capital punishments differently from the mode that had been adopted; and, if their lordships wanted a change, they should direct their attention to the condition of the law and the subject with a view of applying a remedy. After some

observations from the Duke of Marlborough and Earl Grey, the motion was withdrawn.

Thursday.—The *Punishment of Rape Bill* passed through Committee after an amendment moved by Lord Wensleydale, rendering the measure compulsory instead of optional, had been agreed to.—The *Improvement of Land Act* (1864) *Bill* was read a second time.—Lord Redesdale inquired if Government intended to propose any amendment of the Highway Act during the present session.—Earl Granville replied in the negative. *Iron Plates for Ships of War.*—The Earl of Hardwicke presented a petition from Mr. J. Chalmers, complaining of the conduct of the Admiralty with regard to his invention of a new mode of constructing ships of war. His lordship read the several allegations of the petition, but could not undertake to express any opinion of his own on the merits of the plan.—The Duke of Somerset explained that Mr. Chalmers offered to construct a target that would be lighter, stronger, and less costly than a section of the side of the Warrior. The Iron-plate Committee reported unfavourably of the plan, but Mr. Chalmers provided the target for trial at his own expense, and, when tested, it proved defective in each of the points specified.

Friday.—*The Reserve Force.*—The Earl of Lucan moved for returns of the strength of the reserve force. If, as he understood, it consisted of only 300 or 400 men, it would be better that they should disband, and join the militia. As to the Limited Enlistment Act, he considered it unadulterated mischief.—Earl De Grey and Ripon said that 10,000 men would take their discharge this year. Those who were entitled to their discharge this year numbered 10,400. From statistics embracing three and a quarter years of experience of the Act of 1847, 7335 men completed their service. Of that number 3845 re-engaged at once, and consequently 3490 were discharged. Of these latter 650 re-enlisted within six months, leaving a total of 2800 men. There was no record of men who had enlisted after six months. Taking statistics as a guide, it was probable that the loss to the army this year, according to the provisions of the Act, would amount to 4000 men.

[Left speaking.]

HOUSE OF COMMONS.

Friday.—*Enlistments of Irishmen in America.*—Mr. Layard, in reply to Sir A. Agnew, said that her Majesty's Government had received reports from the consuls at Boston, New York, and Portland, stating that a considerable number of Irishmen had been induced to emigrate to the Federal States upon various pleas, had been confined in prison on their arrival there, and when in a state of intoxication had been drafted into the Federal army. Lord Lyons had in consequence received instructions to take steps to prevent a recurrence of these violations of international law, and to demand redress. *Monastic Establishments.*—On the order for going into Committee of Supply, Mr. Newdegate moved for a Select Committee to inquire into the allegations contained in the petition of Mr. Alfred Smee, relative to conventual and monastic establishments in this country, and proceeded to state the circumstances which have occurred in the cemetery of the Oratorians at Sydenham. He complained that there was no certificate of burial, no register, and no evidence to identify deceased persons but that which appeared on the tombstones, and even this was vitiated by the interpolation of religious names. He also called attention to the proceedings of the Oratory at Brompton, and to the growth of monastic and conventual establishments, which he declared to be dangerous to the peace of the country and contrary to the provisions of the Roman Catholic Relief Act.—Sir G. Grey, while fully sympathising with the natural feelings of Mr. Smee, opposed the motion on the ground that the allegations contained in his petition did not afford sufficient reasons for the appointment of a committee of inquiry. So far as the Sydenham burial-ground was concerned, it was wrong to suppose that the certificate authorising its use had been obtained by the exercise of any improper influence or any other than sanitary grounds. The application was made in the usual way, and there was nothing on the face of it to show that the Brothers of the Oratory were an institution not authorised by law.—Lord E. Howard complained of the tone of Mr. Newdegate's speech, and of the calumnious attacks made upon his own family in the petition. With regard to the Oratory, any acts of that society supposed to be illegal were cognizable by the ordinary tribunals of the country. As to the increase of conventual establishments, most of them were merely educational.—Mr. Neate thought that Mr. Newdegate deserved the thanks of the House for calling its attention to the character of the institution at Brompton.—The Attorney-General for Ireland defended the Oratory, and said that it had been grossly slandered. Its members were not bound together by vows, as they were a voluntary community, who had no property in common, and who could bequeath their substance to any one they pleased.—After a few words from Sir G. Bowyer and Sir P. O'Brien against the motion, Mr. R. Long denied that Mr. Newdegate's motion was directed against the Norfolk family, or against individuals, but simply against monastic institutions. On a division the motion was negatived by 113 to 80.—Mr. Gregory called attention to the condition of the *Scientific Institutions of Dublin*, which are assisted by Government, and urged the advisability of appointing a select committee to inquire into the subject.—Sir R. Peel admitted that inquiry might be advisable, and expressed his willingness to agree to the appointment of a committee. After some remarks by Sir E. Grogan, Mr. Vance, Mr. Whiteside, and Mr. Adderley the subject dropped.—Mr. Moffatt brought under notice the working of the new *Bankruptcy Act*, contending that it was a lamentable failure, encouraged gross frauds upon the commercial classes, and demoralised the trading portion of the community. He moved for a Select Committee to inquire into and report upon the operation of the Act.—Mr. Murray seconded the motion.—The Attorney-General said he would be glad to see a committee appointed, as experience had proved that the working of the act was not as satisfactory as could be desired. The collection of assets by creditors' assignees had not produced larger dividends, nor had it diminished expenses. The costs of the court were intolerably great, and an inquiry by a committee of the House into these and other defects of the system might lead to useful results. The motion was then agreed to. *The Birkenhead Rams.*—Sir L. Palk called attention to a rule obtained for a commission to examine the Pasha of Egypt and other witnesses at Cairo to obtain evidence against the steam rams at Birkenhead, and asked how long the investigation was likely to take, and the probable expense of it; also whether the trial of the Birkenhead iron-clads would be postponed from May next until this information be obtained; and why the rule was not applied for when the vessels were first seized.—The Attorney-General replied that the commission was returnable on the 10th of May, which was an earlier period than that at which the trial could take place. The Crown would proceed with the case with all possible despatch, whether the commission had returned or not. With regard to the expense, all he could say was, that the Crown had adopted the least costly process. The rule had not been applied for when the vessels were seized, because the Crown was not prepared to go to trial.—Mr. Dillwyn called attention to the telegraphic despatch announcing the *Bombardment of Sonderborg* by the Prussians without previous notice, and asked whether her Majesty's Government had received information whether the despatch was substantially correct; and, if so, what steps had been taken to recall the Prussian Government to a sense of the necessity of carrying on war in accordance with the usages of civilised nations. If the facts were as described, a more dastardly outrage had never been recorded in the annals of history. He suggested that some strong measures should be resorted to on our part, short, he said, of an act of war—such as sending a fleet to the Baltic—in behalf of Denmark.—Mr. Osborne reviewed the negotiations which had taken place between the Western Powers with reference to the Dano-German question, and said that the proposed Conference was nothing more nor less than a political pic-nic got up by the Premier, to which every signatary to the Treaty of 1852 was to be at liberty to bring a basket of suggestions, but at which there would be no *pièce de resistance* in the shape of a basis. The Government appeared to be ready to enter the Conference without any definite object, and without any intelligible policy. He feared the whole affair would turn out a Parliamentary hoax; and he suggested that it should be put off until the 1st of April in next year. As matters now stood our efforts to preserve the peace of Northern Europe had been utterly futile, and he feared that all the Government had done was to irritate Germany, to cajole Denmark, and to humiliate England.—Lord Palmerston said that the policy of the Government was plain and simple. Its object had been to prevent war; but as hostilities had unfortunately broken out, it was now desirous to restore peace. They were prepared to adhere to the Treaty of 1852, and all the signataries to that treaty were also willing to abide by it. What the Conference might do he could not take upon himself to say, but the basis would be the recognition of King Christian and the independence of his kingdom. The meeting of the Conference would be postponed from the 12th to the 20th inst., in order to give the Diet time to send a representative, and, in default of any such appearing, the Conference would go on without him. France was prepared to maintain the Treaty of 1852, and he hoped the other signataries to the treaty would do the same. With regard to the bombardment of Sonderborg, he feared the facts were as stated, and that many non-combatants had lost their lives. The Government had directed inquiries to be made into the circumstances, but had not as yet received an answer from Berlin.—Mr. Kinglake predicted that great differences would arise at the Conference, as, instead of there being no basis, there would be two, each conflicting with the other. The German Powers would not agree to adhere to the Treaty of 1852, and Denmark would not be satisfied with less.—General Peel deprecated raising an incidental debate on so grave and important a subject on the motion for going into Committee of Supply. He thought the time was not far distant when it would become necessary to discuss the whole question.—After some remarks by Sir H. Verney and Mr. S. Beaumont, Mr. Peacocke said he was prepared to advocate a policy of non-intervention, because, in his opinion, Denmark was originally in the wrong, and had never put herself right. The House then went into Committee of Supply *pro formâ*. The *Warehousing of British Spirits Bill* passed through Committee. The *Life Annuities and Life Assurances Bill* was read a second time.

Monday.—*The Conference.*—Mr. Horsman asked, if it should be a result of the Conference that England would undertake new engagements with reference to Denmark and the Duchies, her Majesty's Ministers would be prepared to submit those engagements to the consideration of Parliament before they advised their ratification by the Crown.—Lord Palmerston replied that the function of negotiating and making treaties with foreign Powers rested with the Crown, acting on the advice and responsibility of its Ministers, and that if the case contemplated by Mr. Horsman should arise, her Majesty's Ministers would adhere to the spirit and practice of the constitution.—The adjourned debate on going into committee on the *Government Annuities Bill* was resumed by Mr. Ayrton, who criticised the measure at great length, and condemned it as an unnecessary and inquisitorial interference with private enterprise.—Mr. Hubbard supported the amendment for referring the Bill to a select committee, and Mr. Hankey opposed both the Bill and the amendment.—After some remarks by the Chancellor of the Exchequer in defence of the measure generally, the Bill was referred to a select committee, on the understanding that the form and not the principle of the measure should be inquired into. The House then went into Committee of Supply on the *Army Estimates*. On the vote for 5,708,938*l.* for general staff and regimental pay allowances and charges, Mr. O'Reilly compared the cost of the French and English services, contending that, whereas the soldier in France cost the country 47*l.* 18*s.* 10*d.* per man per annum, the cost in England was 91*l.* 17*s.* 2*d.*—Sir H. Willoughby, General Peel, Colonel North, Mr. Williams, and Colonel Dickson also criticised the vote, objecting to the policy of reducing trained artillerymen and cavalry soldiers who had already cost the country a considerable sum, and who could not be replaced so soon as soldiers in other branches of the service.—The Marquis of Hartington defended the vote, which was ultimately agreed to without a division.—A vote of 1,319,047*l.* for commissariat establishment services and movement of troops; of 596,694*l.* for clothing establishments, services, and supplies; of 611,165*l.* for barrack establishments; and of 45,433*l.* for divine service, were also agreed to.—On the vote of 40,549*l.* for martial law, Lord Hotham, at some length, called attention to the Crawley court-martial, and commented on the manner in which it was conducted as affecting discipline in the army.—The Marquis of Hartington objected to reopen the question, and after some remarks by Sir W. Fraser, Mr. Hunt, Lord Lovaine, Colonel Dickson, and Mr. Headlam, the vote was agreed to, and the Chairman reported progress. The *Warehousing of British Spirits Bill* was read a third time and passed. The *Cost Security Bill* was read a second time.—Mr. Hutt obtained leave to bring in a Bill to amend the laws relating to the *Conservancy of the Thames* and for other purposes relating thereto.—The Attorney-General obtained leave to introduce a Bill to consolidate and amend the *Church Building and New Parishes Acts*.

Tuesday.—Mr. Dillwyn postponed his motion relating to *Religious Endowments in Ireland* until the 12th of May.—In answer to Mr. Griffith, Lord Palmerston said that the parties engaged in the construction of the *Suez Canal* had applied to the Government of the Pasha for an extension of the time during which they were to be permitted to use forced labour on the works, and he believed some short extension had been granted. He thought it was to be regretted both by England and France that, at a period when both countries were so much in want of cotton, thirty or forty thousand men, who might be usefully employed in cultivating it, should devote their lives to the construction of a canal through a sandy desert, and two harbours in deep mud and shallow water.—In reply to Mr. Newdegate, Sir G. Grey said that it was not the intention of Government to introduce any measure respecting the *Registration of Burials* in private burial grounds.—Captain Jervis called attention to the report of the Royal Commission on Memorials of *Indian Officers*, and moved that the House, having by certain acts guaranteed to the officers of the late East India Company's service that their advantages as to pay, pensions, allowances, privileges, promotions, and otherwise, should be secured to them, had learnt with regret from the above report that in certain cases this assurance had been departed from, and was of opinion that full and speedy reparation should be made to those who had suffered by such departure.—Sir M. Farquhar seconded the motion, which was supported by General Evans.—Sir C. Wood admitted that these officers were entitled to liberal and handsome treatment, but said that the entire subject had been dealt with in accordance with the sanction of the highest authorities, including the Indian Council, whose sympathies were altogether with the officers. The question had also been submitted to the law officers of the Crown, who had given it as their opinion that what had been done might have been done by the old East India Company, and that consequently the Government were justified in the course they had adopted. The Government had, however, a scheme before them, founded upon the report of the Royal Commission, the recommendations of which would be carried out in their integrity.—Captain Jervis expressed himself satisfied with this explanation, and withdrew his motion.—Lord Robert Cecil moved, "That in the opinion of this House the *Mutilation of the Reports of the Inspectors of Schools*, and the exclusion from them of statements and opinions adverse to the educational views entertained by the Committee of Council, while matter favourable to them is admitted, are violations of the understanding under which the appointment of the inspectors was originally sanctioned by Parliament, and tend entirely to destroy the value of their reports." He contended that the reports of the inspectors were mutilated, garbled, or partially suppressed, so as to chime in with the peculiar views of the Vice-President of the Committee of Council, and that, in consequence, the House of Commons was practically deprived of the means of information which it ought to possess.—Mr. Walter seconded the motion.—Mr. Lowe denied emphatically that he had mutilated, garbled, or suppressed the reports of the inspectors. Those reports were not made direct to the House of Commons, but to the Privy Council Office, and, in cases in which they were not made in accordance with instructions laid down for the guidance of the inspectors, they were sent back to the authors, who were thus made to revise their own work. If, however, the House wished to have all the reports of all the inspectors laid before it precisely as they were written, though they often contained much controversial and irrelevant matter, he had no objection whatever, but he warned the House that the expense would be more than was supposed.—Mr. W. E. Forster thought that the House ought to interfere in the matter, and inquired how it came to pass, if it were necessary for discipline that the reports should be dealt with as represented by Mr. Lowe, that the predecessors of that right hon. gentleman had never adopted a similar course.—Mr. Liddell supported the motion.—Sir G. Grey bore testimony to the necessity for the head of a department to exercise some control over the inspectors employed by it. On a division the motion was carried by 101 to 93.—Mr. Darby Griffith obtained leave to bring in a Bill to afford shareholders in joint-stock companies facilities for voting by means of *Voting Papers*.—Mr. Dillwyn called attention to the inconvenience of the *Museum of Inventions* at South Kensington, and was proceeding with his address when the House was counted out.

Wednesday.—Mr. L. King moved the second reading of the *County Franchise Bill*, which would, he said, admit to the franchise a class quite as anxious to maintain the Constitution as the classes already admitted to it. The principle of the Bill was not novel. An occupation franchise in counties as in boroughs had been adopted in 1832, so that the question was solely as to the limit. He urged various arguments in support of a reduced county occupation franchise and in reply to objections to a 10*l.* franchise, which some considered to be too low. He appealed to the Government to accept, under the circumstances, reform in fragments, and hoped that the House would remove a very great and crying injustice.—Mr. Augustus Smith moved as an amendment the previous question, insisting upon the unreasonableness, the impolicy, and the danger of the measure.—Mr. Knightley seconded the amendment.—Lord Enfield said that if the Bill passed the second reading, it had little chance of becoming law. He was not prepared to extend the county franchise to so low an amount as 10*l.*; he was ready to consent to its reduction to 20*l.*, and he should vote for the second reading with the intention of moving in committee an amendment to that effect.—Lord R. Montagu opposed the Bill, which Lord Henley supported as a step in the direction of reform.—Mr. Newdegate, considered the Bill objectionable and insufficient, and as calculated inevitably to swamp the 40*s.* freeholders.—Mr. Warner thought there were reasons why the Bill should be allowed to be discussed in Committee.—Mr. Bentinck said that the effect of the Bill would be to destroy the influence of the rural constituencies.—Mr. Neate intimated his preference of a 20*l.* to a 10*l.* qualification.—Mr. Treherne opposed the Bill as a party, one-sided measure.—Mr. Pease and Mr. Hibbert supported the Bill.—Sir J. Walsh and Mr. Collins opposed it.—Lord Palmerston said he could not vote against the second reading of the Bill, for that would imply that he was adverse to any change in the county franchise; but he could not vote for a 10*l.* franchise. He thought that Mr. King might have done better by abstaining from introducing this measure. There did not exist at present the same anxiety as heretofore for organic changes, which were means to ends, many of which had been accomplished. In voting, therefore, for the second reading, he did not vote for the particular franchise contained in it. On a division, the previous question was carried by 254 to 227. The Bill was therefore lost by a majority of 27.—On the order for going into committee on the *Trespass (Ireland) Bill*, Mr. Bagwell moved to defer the committee for six months.—After a discussion, in which Mr. W. O. Gore, Mr. Dawson, Mr. M'Mahon, Mr. Bright, Mr. Whiteside, Sir R. Peel, and other members took part, the amendment was negatived on a division by 158 to 45. The House then went into committee on the Bill, when the Chairman was ordered to report progress. The House afterwards went into committee upon the *Registration of County Voters (Ireland) Bill*, the clauses of which were agreed to. A sum was voted in a *Committee of Ways and Means*. The report of the *Committee of Supply* was brought up and agreed to.

Thursday.—*Income Tax.*—The Chancellor of the Exchequer stated that it was not the intention to propose any material change in the income tax as it stood at the close of 1863. *The Danish Question.*—In answer to Mr. Osborne, Mr. Layard said that the French despatches, suggesting that the opinion of the inhabitants of Schleswig and Holstein upon the Dano-German question should be taken by universal suffrage, had not been officially communicated to her Majesty's Government; and that it was not intended to lay any further papers relating to the Danish difficulty upon the table at present. *Reduction of the Malt Duty.*—On the order for going into a Committee of Ways and Means, Colonel Barttelot moved a resolution,—"That the consideration of the Duties upon Sugar be postponed until the House shall have had the opportunity of considering the expediency of the reduction of the Duty upon Malt." He said that this was no party question; but was one which concerned the interests of the public,—the interests of consumers as well as agriculturists. The question was—which would benefit the community most, the reduction of the Malt Tax, or that of the Duties upon Sugar? The latter would chiefly benefit certain classes, but he contended that those taxes should be first taken off which most pressed upon the whole community, and the reduction of the Malt Tax, besides cheapening and improving the quality of beer, would benefit not only the landowner, but the tenant farmer and the labourer. The Malt Tax was, moreover, an expensive tax to collect—a fact which was an

important element in the question. It was an impost which had been condemned on all hands, and could be supported only on fiscal grounds.—Mr. COBBETT seconded the motion, and said that he did so in the interest of the labouring man, to whom the price of malt and of beer, one of the necessaries of life to the labouring man, was doubled by the Malt Tax. Many cases had occurred within his own knowledge in which the health of labouring men had suffered through being debarred from wholesome beer.—Mr. SURTEES supported the motion, and said that this tax was not only burdensome in its nature but unjust in principle, and tended to establish a monopoly. —Mr. J. PEEL likewise supported the motion, pointing out the injurious effect of the Malt Tax upon the agriculture of the country.—Mr. STANHOPE contended that, balancing the claims of malt and sugar to the proportion of the surplus proposed to be applied to the reduction of the Sugar Duties malt had a prior claim. The consumption of sugar had largely increased, proving that the duties were not burdensome, and the argument that a reduction of the Malt Tax would be a greater boon to England than to Scotland and Ireland was neutralised by connecting that tax with the spirit duties, which operated in a contrary direction.—Sir E. DERING said it was much to be regretted that a question of so much importance as the Malt Tax should be presented in a shape which rendered it impossible to arrive at a satisfactory conclusion - namely, as a question of malt *versus* sugar, which brought into the field the great sugar interest. He supported the motion, but should have been better pleased if the issue had been raised simply upon the tax itself — Mr. BEACH, in supporting the motion, argued that the reduction of the Malt Tax would benefit both producer and consumer, and that its history showed that the increase of consumption had been checked by the oppressive character of the tax.—Mr. ALCOCK advocated the entire repeal of the Malt Tax.—Lord R. MONTAGU said that the reduction of the Malt Tax would not make the difference of a farthing in the price of a pot of beer, and that, in considering the labourer, his wife and family should not be forgotten, who had an interest in the cheapening of tea and sugar. He opposed the motion not only upon economical but upon moral grounds. He was no advocate of the Malt Tax, and if he saw his way to its repeal, he would vote for it; but when it was known that it could not be taken off, such a motion was not a fair one.—Mr. P. URQUHART defended the reduction of the sugar duties as a relief to a suffering interest. —Colonel NORTH supported the motion.—Mr. PUGH and Mr. WESTERN opposed it, the latter believing that a reduction of one-fourth of the Malt Tax would be of no advantage to the agricultural interest. —Lord INGESTRE cordially supported the motion. He thought the reduction of the Malt Tax would tend to improve the quality of beer, and lessen the temptation to indulge in ardent spirits, the incentive to vice and crime.—Sir B. BRIDGES likewise supported the motion.—Sir F. CROSSLEY disputed the assertion of Mr. Cobbett, that beer was a necessary of life to a labouring man.—Mr. PACKE spoke shortly in favour of the motion.—Mr. DU CANE did not quarrel with the principles of the Budget; but the rule which should guide the House in the reduction of taxation was justice and fair play, and, if that principle were fairly carried out, the Malt Tax had a priority of claim for a reduction of duty over sugar. It was originally a war tax, and its reduction had been regarded as a complement of the repeal of the Corn Laws, and an essential part of the free trade movement. He disputed the inference drawn by the Chancellor of the Exchequer from the price of barley, which he had assumed from that of the best barley; but those who asked for a repeal or reduction of the Malt Tax were the growers of inferior barley. The benefit to the farmer by the reduction of the tax would be great; but it would be as nothing to that conferred upon the consumer. He enumerated the ingredients infused into the "villanous decoction" sold to labouring men in country beershops under the name of beer. He pointed out a fallacy in the argument of the Chancellor of the Exchequer, that the Malt Tax was only an English grievance, observing that all that was asked was that the Malt Tax might be put on the same footing as other branches of the Revenue.—Mr. COBDEN said that there was no rule more deserving of attention by those who took charge of questions in that House than that one question should not be brought into collision with another with which it has no connexion. Colonel Barttelot had not observed this rule, having blended together the two questions of the Malt Tax and the Sugar Duties. He should prefer abolishing the Sugar Duties. Sugar appealed to the sympathies of all,—of working men, their wives, and children. He acknowledged his objections to the Malt Tax, which appealed to the Legislature in the interest of producer and consumer, and he thought there was good ground for asking a repeal of the tax as a complement of the free-trade policy. If the tax was repealed, it did not follow that the consumption of malt would largely increase; but other sources of revenue would become more productive without any greater consumption of intoxicating liquors. The expenditure might also be greatly reduced. He recommended Colonel Barttelot not to take the sense of the House on his motion, which would oblige him and others, favourable to a reduction of the Malt Tax, to vote against it.—After a few remarks by Mr. BARROW in support of the motion, Mr. M. GIBSON complained that the resolution was vague and indefinite. He was no friend of the Malt Tax; but when the House was asked to assent to the proposal to reduce the tax by one-quarter it should seriously consider whether the Malt Tax could be so dealt with advantageously. The loss of revenue by the proposed reduction of the Sugar Duties would be 1,330,000*l.*; but a reduction of one-quarter of the Malt Tax would cause a loss of revenue in the present year of 1,880,000*l.* Such a reduction in the tax would not cheapen beer, nor would it benefit the farmer. Sugar was more extensively used than beer; it entered into the consumption of every family, and no article in our tariff was of greater commercial importance. He had no doubt that the House would support the proposal of the Government. — Mr. BASS believed that the proposal to take off the war duties on sugar was generally approved. He suggested certain practical objections to a reduction instead of a repeal of the Malt Tax.—Mr. BENTINCK suggested the difficulties with which this question was complicated. He considered that the repeal of the Malt Tax was impossible without an entire revision of the whole system of our taxation, and especially of the unfair and onerous portion borne by the rural districts.—The CHANCELLOR of the EXCHEQUER adverted to the bearing of the taxation of beer and ardent spirits upon the three kingdoms. If the Malt Tax was to be approached, it ought not to be by fractions, or without considering its relations to the whole system of taxation upon beverages. The question before the House was a comparison between malt and sugar, and he believed that, had the Government given priority to malt, an outcry would have been raised upon the opposite benches. The proposal they had made was dictated by sound policy; and he believed the House would support that proposal, which reduced the duties upon an article so intimately connected with the welfare and comfort of the people.—Mr. DISRAELI said that the question had branched out into three distinct subjects — the expediency of a total repeal of the Malt Tax, the remission of a part of the tax, and the engagement which Parliament had entered into with the country as to the remission of taxation generally. After briefly discussing the first two subjects, he addressed himself to the last, which, he said, was the most important point that ought to govern the consideration of the House in this matter. He reviewed the circumstances under which the engagement had been entered into, and though he had now changed his opinion on the Malt Tax, insisted upon the duty of fulfilling that engagement with the country entered into at the period of the Crimean struggle, that the war duties should be remitted.—Mr. MORRITT said, though he deprecated the manner in which the motion had been brought forward, he would nevertheless back it. On a division, Colonel BARTTELOT'S resolution was negatived by 347 to 99. The House then went into a Committee of Ways and Means, when the resolutions for giving effect to the propositions of the Budget relating to the sugar duties, continuing the duty on tea, altering the duty on corn, continuing the income tax at 6*d.*, and those relating to the stamp duties and licences to sell tea were agreed to, after discussion. The resolution on the Fire Insurance Duty was postponed. The Report of the Committee of *Ways and Means* was brought up and agreed to.

FRIDAY.—*National Gallery.*—Mr. COWPER said that in a few days he should propose a scheme for erecting the National Gallery in the yard of Burlington House. *Poland.*—Mr. HENNESSY gave notice that, on going into committee of supply, he would move that the negotiations relative to Poland had not given satisfaction, and that the conditions on which the dominion of Russia over Poland was agreed to had not been complied with. *Foreign Trade.*—Mr. FORSTER rose to move for a select committee on this subject.

[Left speaking.]

City Intelligence.

AMALGAMATION OF CITY BANKS.—The amalgamation of the old-established banking-house of Messrs. Masterman, Peters, Mildred, & Co. with the Agra and United Service Bank was announced on Wednesday. The two banks will henceforth be carried on under the title of the "Agra and Masterman's Bank, Limited." Mr. Edward Masterman, Mr. William Peters, and Mr. Frederic Mildred, members of the old firm, will become directors of the united bank, and the business will be conducted in Nicholas Lane, and in Cannon Street, as heretofore.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91¾ to ⅝ for Money, and 91⅞ for Account; Reduced and New Three per Cents., 89¼ to ⅝; Ditto Two and a Half per Cents., 73¾; Annuities, 1885, 14⅜ to ½; Bank Stock, 238; India Five per Cent. Stock, 105⅝ to 105; Ditto Four per Cent., 99⅜ to ¾; Ditto Bonds, 4*s.* dis.; Five per Cent. Enfaced Rupee Paper, 104¾; Ditto Five and a Half per Cent., 113¼; Exchequer Bills, 3*s.* to 10*s.* dis.—FOREIGN: Brazilian Old Five per Cents., 101½ ex div.; Ditto 1863, 88¼ ex div.; Equador, 14¾; Egyptian, 100¾; Ditto second issue, 100⅜ to 101⅛; French Three per Cent. Rentes, 66f. 75c.; Greek, 26 to 25½; Italian, 68⅛; Ditto Maremmana Railway, 75; Mexican, 48¼ to 47¾; Portuguese, 1856, &c., 49¼; Ditto for Acct., 49¼ to ½; Russian, 1862, 91½ to ⅝; Spanish Passive, 35½; Turkish, 1854, 90⅜ ex div.; Ditto, 1858, 69½; Ditto, 1862, 72 to 71⅜; Venezuela, 23½; Ditto 1862, 59¼ to ⅜.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,026,945	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	12,376,945
		Silver Bullion	—
	£27,026,945		£27,026,945

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,022,267
Rest	3,164,157	Other Securities	20,266,088
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,929,922	Notes	5,770,725
Other Deposits	13,586,029	Gold and Silver Coin	703,455
Seven days and other bills	529,277		
	£37,762,485		£37,762,485

April 14, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY: *April* 8.—BANKRUPTS.—J. W. ALLWOOD, Sheffield, Professor of Music—J. K. ASPDEN, Lancaster, Clogger—W. H. BUCKTON, late of Kingston upon-Hull, Corn Factor—E. S. BENT, late of Hulme, Manchester, Attorney—J. BAILES, North Shields, Leather Seller—H. WILLIAMS, Bangor, Carnarvonshire, Builder—T. H. CARTER, late of Liverpool, Wholesale Ironmonger—E. CROZIER, late of Albany Street, Regent's Park, Baker—G. CAPPER, Middlewich, Cheshire, Publican—T. CALLAGHAN, late of Liverpool, Cattle Dealer—E. DAWSON, Stoke upon Trent, Staffordshire, Commission Agent—R. DUNDALE, Bury, Lancashire Joiner—J. ALDERSEY DAVENPORT, Swanlow, Cheshire, Salt Merchant—W. ELSTONE, Arundel, Sussex, Foreman to a Tailor—T. EMETT, Fulwood, Lancashire, late Drysalter—S. EVANS, Wentnor, Salop, Farmer—G. FARDELL, Frederick Street, Islington, Clerk—T. H. FLEMMING, Freshford, Somersetshire, Doctor of Medicine—T. FARNBOROUGH, Clerkenwell Close, Licensed Victualler—J. FREEBOROUGH, Clarborough, Nottinghamshire, Gardener—J. FARMER, Taunton, Somersetshire, Boot and Shoe Maker—W. A. Goss, Torquay, Devonshire, late Builder—T. GAVED, St. Austell, Cornwall, Clay Agent—G. GOLDBERG, Manchester, Travelling Jeweller—C. GARRATT, Lancaster, Commercial Clerk — THOMAS GOODISON, Sheffield, Chemist and Druggist—JOSEPH GRUMMITT, Kingston-upon-Hull, Commission Agent—ALFRED EDWARD HUBBARD, Pennyfields, Poplar, Bottled Beer Merchant—R. HEY, Pilling, Lancashire, Dealer in Potatos and Fruit—J. HEATH-Walesby, Nottinghamshire, Cordwainer—G. HALL, Waimersley-cum-Shuttleworth, Lancashire, Quarryman—J. H. HARTLEY and R. HINCHLIFFE, Leeds, Cloth Finishers-R. HAINSWORTH, late of Rawtenstall, Lancashire, late Cotton Waste Dealer—E. HAIN, Birmingham, Tobacconist—G. HAMPTON, Coopersale, Essex, Farm Bailiff—J. JARVIS, Surbiton, Surrey, Decorative Painter—A. JACOBSON, Houndsditch, Clothier—H. JACKSON, Liverpool, Master Mariner—J. P. KING, Birmingham, Grocer—R. B. LANE, Norwich, Stonemason—J. LONGLEY, Rainham, Kent, Grocer—E. LAWRENCE, Bourne, Lincolnshire, Commission Agent—H. T. LOW, North Shields, Northumberland, Steamboat Owner—S. MILLS, Kingston-upon-Hull, Innkeeper—W. A. MERCER, Child's Hill, Hendon, Carpenter—C. MINCHEW, Birmingham, Journeyman Packing Case Manufacturer—S. T. MAPPLETHORPE Great Portland Street, Tailor — T. G. MOSS, Bermondsey Square, Bermondsey, Iron Plate Worker—R. K. MEADEN, Bridge Avenue, Hammersmith Commercial Traveller—T. MILLS Marylebone Road, Glass Stainer—B OLIVER, late of Kingston-upon Hull, Bricklayer—W. PAINE, Compton Street, Goswell Road, Journeyman Baker—J. PIGGOTT, Wore Hall, Shropshire, Farmer—W. PORTEOUS, College Street, Camden Town, Assistant to a Travelling Draper—P PRESTON, late of Liverpool, Boot and Shoe Dealer—W. PARKER, Newcastle-upon-Tyne Commercial Traveller—U. PARKIN, Ecclesfield, Yorkshire, Coal Miner—W. PARKINSON, Liverpool, Journeymen Cabinet Maker—E. RILEY, late of Accrington, Lancashire, Organist—G. RILEY, E. RILEY, and R. RILEY, Fellmongers—A F. ROBERTS, Liverpool, Lodging House Keeper—J. ROBERTS, Everton, Lancashire, Builder—G. STUBBINS, Newport, Shropshire, Painter—T SHARP, Southampton Row, Russell Square, Lodging House Keeper—J. SIDEBOTTOM, Rochdale, Lancashire, Hard Waste Spinner—NATHAN SHAW, late of Bolton, Lancashire, Cotton Waste Dealer—J. SEARLE, March, Cambridge, Confectioner—S. SIMMS, Bristol, Beer Retailer—F. T. SMITH, Hereford, Herbalist—J. SCHOFIELD, late of Liverpool—W. T. STOTT, late of Manchester, Assistant to a Commission Agent—S. THORLEY, Cheadle, Staffordshire, Beer House Keeper—J TRITTREE, Yeovil, Somersetshire, Glove Manufacturer—T TAYLOR, Middleton, Lancashire, Farm Labourer—J. R. UNSWORTH, Bradshaw, Lancashire—E. UPJOHN, Lower Belgrave Street, Eaton Square, Dairyman—D. F. Wise, St. Peter Street, Islington, Publican—J WALTON, jun., Normanton, Yorkshire, Corn Miller—A. WEBB, Tewkesbury, Gloucestershire, Beer House Keeper—W. WILLIAMS, Dunning's Alley, City, Cabinet Maker—WILKINSON, Bury, Lancashire, Licensed Victualler.

SCOTCH SEQUESTRATIONS.—T. BRYDEN, Berclees, Dumfriesshire, Farmer—A. M'ALPINE or MILLER, Saint Ninians, Stirlingshire—OSBOURNE, Mary Hill, near Glasgow, Baker—THOMSON and SON, Dundee, Perfumers.

TUESDAY: *April* 12.—BANKRUPTS.—J. H. ANDREWS, Bedford Square, Middlesex, General Merchant—G. AUSTEN, Faversham, Kent, Maltster—G. ALTON, Basford, Nottinghamshire, Collier—S. ALDRIDGE, Three Crown Square, Southwark, Fruit Dealer—S. BARRETT, Blendon Row, Surrey, Walworth, Fish Curer—B BARNETT, Burlington Gardens, Old Bond Street, Picture Dealer—W. H. T. BRIDLE, Exeter, Stationer—W. R. BROWN, Manchester, Draper—J. BRUCE, H.M.S. Alacrity, Sheerness, Engineer—E. BARLING, Ledbury, Herefordshire, Veterinary Surgeon—S. C. BROWN, Burnham, Westgate, Norfolk, Schoolmaster—C. F. BOCKETT, Sculcoates, Yorkshire, Innkeeper—WILLIAM COLEMAN, St. David, Exeter Railway Clerk—WILLIAM CHANDLER, Guilton Ash, Kent, Potato Dealer—THOMAS CORBETT, Berkeley Street, Lambeth Walk, Carpenter—THOMAS CLEAVER, East Harrietsham, Kent, Bricklayer—W. COCHILL, Edgware Road, Cheesemonger—M. DEW, Gamlingay, Cambridgeshire, Farmer—E. DARWEN, Birmingham, Merchant—C. N. DEW, Myatt Street, Camberwell New Road—E. EVANS, St. Helen's Lancashire, Draper—C. EDMONDS, Westbourne Cottage, Great Western Road, Paddington, Contractor—W. J. ELKINS, Newport, Isle of Wight, Stone Mason—EVANS, King William's Place, High Street, Hammersmith, late Publican—J. GREENWOOD, Leeds, Publican—G. W. HAY, Worcester, Seed Merchant—JOHN HUDSON, East Stockwith, Lincolnshire, Labourer—F. LINNETT, Newbold on Avon, Warwickshire, Innkeeper—DANIEL Landport, Hampshire, Boatswain,—JOHN M'LELLAN, Stoke, Staffordshire, Draper — CHARLES MILLS, Worcester, Machinist — W. MASSINGHAM, Boston, Lincolnshire, Brewer—M. MALLIARAKI, Goulston Square, Minories, Master Mariner—A. OLDEN, Hulme, Lancashire, Furniture Broker—J. PEITY, jun., Thornton in Lonsdale, Yorkshire, late Farm Servant—J. PAYNE, Uxbridge, Linen Draper's Assistant—J. PARKER, Sheffield, Corndealer—W. PAUL and G PAUL, Hoylake, Tailors—JAMES POTTER, Samford Courtney, Devonshire, Miller—J. RIDGWAY, Manchester, Warehouseman—W RIDLEY, Brook Road, Stockwell, late Licensed Victualler—A. RIPLEY, Brook Street, Lambeth, Engineer—F. SMITH, Liverpool, Butcher—H. & J. BANNINGTON, Hampshire, Carpenter—F. K. STEVENS, late of London Street, Fitzroy Sq., Upholsterer—G. THOMPSON, Maidstone, Kent, Bootmaker—L. TONELLI, Kingston upon-Hull, late Proprietor of a Music Hall—B. C. TIPPER, Birmingham—W. J. TREMBLEN, St. Brook, Cornwall, Journeyman Smith—J. TUDGAY, Benvil, Dorsetshire, late Dairyman—J. W. TURNER, Lower Phillimore Place, Kensington, Surgeon—G. J. TRUMAN, St. James's Road, Blue Anchor Road, Bermondsey, late Manager to a Licensed Victualler—H. F. TAYLOR, De Beauvoir Crescent, Kingsland, Ship Owner—M. TIERNEY, New North Road, Islington, Wire Worker—C. WOOLDRIDGE, Worksop, Nottinghamshire, Mason—D WILLIS, Kingston-upon-Hull, Fisherman—G. H. R. YOUNG, Newcastle-upon-Tyne, Sculptor.

SCOTCH SEQUESTRATIONS.—J. ROBERTSON, Edinburgh, Boot and Shoe Manufacturer—A. BOWIE, Collinslie, near Paisley, Grain and Potato Dealer—W. G. DIVERALL, Peterhead, Merchant—T. HUGHS, Glasgow, Wright.

Metropolis and its Vicinity.

GENERAL GARIBALDI IN THE ISLE OF WIGHT.—On Friday afternoon Garibaldi visited the Poet Laureate at Freshwater, and at the request of Mrs. Tennyson planted a Wellingtonia gigantea in the grounds. During the day he had a long conference with Mr. Negretti, and definite arrangements were made to receive addresses on Monday, the 18th, as well as on Saturday, the 16th, at the Crystal Palace, in order to afford greater facility to working men. On Saturday he visited Portsmouth dockyard and the Excellent, where he witnessed with great interest some target practice, and was afterwards entertained at luncheon by Sir Michael Seymour, the Port Admiral. He then went to Portsea and visited an old friend, Mrs. White, the mother of his youngest son's former governess, and returned to Cowes amidst the enthusiastic cheers of the inhabitants. On Monday he left Brooke House and crossed to Southampton on his way to London, the enthusiasm at Cowes and Southampton being quite as great as it was on his arrival at the latter port. At Winchester and all the other places on the line of the South-Western where the train stopped on its way to London, vast crowds of people were assembled, and his reception everywhere was of the most cordial and enthusiastic character. It has since been announced that the tree planted by Garibaldi in the garden of the Poet Laureate had two of its branches torn off during the night of Saturday. It was carefully watched by Mr. Tennyson's gardener until after dark, but between bedtime on Saturday and Sunday morning was so mutilated that the beauty of its foliage is permanently marred. The tree thus possessed previous interest of association and was valued for the circumstances under which it had been procured and presented to Mr. Tennyson, who has had the mortification of feeling that its crowning honour—that of being re-set by Garibaldi—has been its bane.

ENTRY OF GARIBALDI INTO LONDON.—On Monday General Garibaldi was welcomed by the people of London. It was most emphatically a people's welcome, and was given with such an earnestness and goodwill as has seldom been equalled, and probably never exceeded even in our long history of demonstrations in honour of distinguished visitors from all quarters of the globe. At the entry of the Princess of Wales, the number of spectators may have been greater, because the route was longer, but this made the only difference, for it would have been impossible to have had a crowd more dense along the streets through which the procession passed. From roof to basement every house was thronged — in windows, balconies, and along the parapets; while the streets were so impassable, even for the limited number of carriages which formed the procession, that upwards of four hours were consumed in passing from Nine Elms station to Stafford House, a distance of less than three miles. The General and his sons arrived at Vauxhall station soon after 2 o'clock, and was received by Sir Robert Clifton, M.P.; Colonel Sykes, M.P., Mr. Ewart, M.P.; Mr. Ayrton, M.P.; Mr. Locke, M.P.; Mr. Dunlop, M.P.; Mr. Forster, M.P.; Mr. Gurney, Onslow, M.P.; the Hon. Arthur Kinnaird, M.P.; Alderman Mechi, Mr. Scott, the City Chamberlain, Mr. Chambers, Q.C.; Mr. Richardson, and a number of the Court of Common Council. As soon as he appeared at the entrance to the station, walking between his two sons, Ricciotti and Menotti, a perfect tumult of enthusiasm broke out, that can always be remembered, but never described. The shouts were

deafening, and for once the ladies' voices could be distinguished cheering and cheering heartily. The General wore the uniform of the Montevidean Italian legion, a plain gray capote and Garibaldi hat and red tunic. He appeared in better health than when he landed at Southampton, but his lameness seemed to distress him, and without the aid of his stick it was evident that walking would be a slow and most laborious effort. As he advanced up the platform to where he was to receive the addresses, the ladies sometimes offered their hands to him over the barriers, when his usually sad expression of countenance at once changed, as with the most winning courtesy he turned to press their hands, and to say to each a word or two of English to thank them for the honour they did him. A little child was put forward to present him with a bouquet, but he scarcely looked at the flowers, as with the most perfectly natural and fatherly manner he took the child in his arms, kissed it, patted its curls, and tried as well as he was able to speak to it in English. Little as this incident was, it was so unexpected, and, above all, so perfectly simple and natural, that it did more than elicit applause—it seemed to establish familiar and domestic relations between Garibaldi and all the ladies present. For the rest of the way down the platform he seemed almost bewildered by the intense enthusiasm of his welcome, but once on the daïs he turned with the simple dignity that is natural to him, and with his calm, melancholy look, remained to receive the addresses. The first presented and read to him was from the City, which welcomed him as the great apostle of liberty, the heroic and chivalrous soldier whose sword had never been drawn but in a just cause; as the conqueror of a kingdom, that he might deliver its people from oppression; as poor himself, while making others rich; as the self-devoted, self-denying citizen, loving the rights and welfare of his own country and of the whole human race better than his own life; and as the truly good, pure hearted, and upright man whose private worth was only surpassed by his public virtues and more than Spartan and Roman magnanimity. To this address he replied slowly, but with much emphasis and evident feeling:—

"I am very happy to be enabled to-day to have to give my thanks to this noble nation for its generous sympathy for the cause of my country and the cause of all mankind. Long ago I wished well for this day to come, and I am very happy to-day to express to you all my gratitude."

When the cheers which these few words excited had died away, the address from the working-men was read. It told him that his name was to the sons and daughters of toil a household word, the symbol of liberty, associated with lofty daring, bold enterprise, and unselfish devotion to the cause of human progress. It said that they thanked, loved and welcomed him for his noble deeds; and in the name of that liberty for which he had fought, bled, and won for the oppressed peoples, they gave him the first place in their hearts; and while doing so could not forget that there were many who had been associated with him in his glorious enterprises also deserving of admiration and esteem, especially the illustrious Joseph Mazzini, who had done so much for Italy, freedom, and humanity. Almost all the passages in this address called forth loud cheers, especially that which applied to Mazzini, which were welcomed with marked enthusiasm, though almost chiefly, if not entirely, by the Italians who were present. In reply to this, Garibaldi said:—

"I like to see working-men particularly. I am very grateful, and will forget not in all my life this welcome of the class I have the honour to belong to. They like to call me the brother of the working-man of every part of the world!"

The cheering which hailed this simple answer was, if possible, even greater than before, amid which, and as if carried away by the enthusiasm and impulse of the moment, an Italian lady suddenly addressed Garibaldi, saying:—

"General,—You cannot but rejoice at the great demonstration which you have here witnessed to-day—coming from the heart of the most powerful nation in the world. This nation has proved herself to be the friend of our country, and I am overpowered with joy at witnessing this moving scene—the more so as I am a countrywoman of the hero whom we so heartily greet. I wish to raise my voice to the English people to thank them for the honours heaped upon General Garibaldi for his defence of Italian liberty against despotism. General, may at last your noble example kindle all hearts to support you, and enable you to establish that civilisation in Italy which will unite all humanity like a happy family.'

This impromptu address took the audience by surprise, and was received with hearty cheers, amidst which the General with his sons and friends began to move out of the station, at the entrance to which the whole of the long procession intended to precede him was marshalled up the Wandsworth Road. After he had entered the Duke of Sutherland's carriage, which was waiting for him, a small bodyguard of those who had served with him in the campaign which led to the conquest of Southern Italy immediately formed round it. Thus accompanied, he drove out of the station, and emerged from the yard into the vast crowd, which received him with almost boundless enthusiasm and delight. Far and near, the trees, the walls, and housetops were covered with spectators, while up the road, from unseen thousands, came long rolling cheers, and the house-fronts were rippled over with handkerchiefs waving in all directions. The instant the General appeared, the procession, which had been patiently waiting for a long time, began moving past his carriage, and then it was seen at a glance that its utter dissolution as a procession was near at hand. The long waiting outside the station had been fatal to its integrity as a pageant. Its elements of display, always, at the best, of the most slender kind, were now still further marred by intervals of light carts and chaises filled with spectators. As many women as men, too, were in the ranks, and as the public soon found out that they could walk with the procession much more easily than in the crowd, and availed themselves most liberally of the permission so to do, the whole of the walking *cortége* gradually began to wear the aspect of a crowd in motion. As each of the societies, Trades, Temperance, Friendly, and Foresters, passed the General's carriage they stopped, took off their hats, and cheered him; and this process, which always lasted some few minutes, gave ample opportunities to the crowd to fill up the gaps thus made in the ranks of the procession. The procession first took its way by narrow and winding thoroughfares into Kennington Lane, and ultimately into Kennington Road, from which point its path was, or might have been, tolerably clear. A good deal of time was lost in these narrow gorges, where carriages in front checked their pace under a belief that they might be running away from those on foot, and others behind waited patiently, imagining that a "block" had occurred somewhere in front; but it was nevertheless in the wider thoroughfares, where space permitted crowds to gather more densely, that the difficulty of locomotion was mainly experienced. It was nearly sunset before the procession reached Westminster Bridge, and as the police had received orders not to interfere with the arrangements except to prevent a breach of the peace or to prevent accidents, the dense crowds which had assembled on the bridge effectually broke the little remaining order of the procession, and the Foresters had actually passed Charing Cross before the remainder of the *cortége* had entered Westminster. On emerging into Parliament Street and Whitehall, where every window and roof which commanded a view, even those of the Government offices, was crowded with spectators, the people collected on Westminster Bridge rushed along after the General's carriage with a frontage of 60 or 70 persons, crushing down platforms, stands, and whatever came in their way. At Charing Cross there was a body of spectators almost formidable in point of numbers, and the windows along Pall Mall were not less crowded than at other portions of the route. The cheering all along this line was equally cordial as on the southern side, but the progress of the carriage was so slow that when they reached Stafford House night had already fallen. The Duke and Duchess of Sutherland warmly welcomed Garibaldi at the entrance of the mansion, and the Earl of Shaftesbury and other members of the nobility were in waiting to offer their congratulations. On Tuesday morning the Polish Revolutionary Committee and a deputation from the vestry of St. Pancras had an interview and presented an address. In returning thanks to the latter the General said that he had a happy recollection of St. Pancras, as it was at the gate of "St. Pancrazio" at Rome, that he fought at the head of the Roman people against the attack of the French army on that city. In the afternoon, accompanied by the Duke of Sutherland, he went to Cambridge House and paid a visit of an hour to Lord Palmerston. He then drove with the Duke to the villa of the Duchess Dowager at Chiswick, where a distinguished party was assembled to meet him at a *déjeûner*. The road was lined with a considerable body of persons, who saluted him as he passed. The scene was quite a contrast to the vociferous demonstration of Monday, though the recognitions were quite as cordial. After the *déjeûner* he promenaded the grounds with his noble hostess, the Duchess of Norfolk, and several other ladies and gentlemen, and at the invitation of the Duchess Dowager planted a Cedrus Deodara on the lawn as a memorial of his visit. He returned to London at five o'clock, when he drove to Thurloe Square, and paid a visit to Mr. Stansfeld. In the evening the Duke and Duchess of Sutherland had a family dinner party at Stafford House to meet him. On Wednesday morning he paid a visit to Mr. Seely, M.P., at Princes Gate, and afterwards drove to Chesham Place, where he visited Earl Russell. He then proceeded with the Duke of Sutherland to Woolwich, where he spent a considerable time in an inspection of the resources of the Arsenal. In the evening a large and brilliant party, consisting of public men of all shades of English politics, met him at a dinner and evening party given by the Duke and Duchess of Sutherland. On Thursday morning he received at Stafford House a deputation from the city of Manchester, consisting of the Mayor and corporate authorities, who waited upon him to present an address voted by the Corporation. He next received a deputation from the Fire Brigade, consisting of more than 50 officers, headed by Captain Shaw, and expressed his great pleasure at seeing the brigade, which he considered to be a very fine institution, and composed of a noble body of men. The General was loudly cheered as as he retired to his room. At 11 o'clock Garibaldi left Stafford House, and paid visits to Mr. P. A. Taylor, M.P., at Notting Hill, to Signor Campanella, in Clifton Gardens, Maida Hill, and to Mr. Crawford, M.P., in Grafton Street, where he took luncheon. He then visited M. Gaetano Lemenzo, in Brompton Crescent; Mrs. Neal, in Alexander Square, Brompton; Mr. James France, in Onslow Terrace, and some other friends. He returned to Stafford House about half-past 6 o'clock, and dined with the Duke and Duchess of Sutherland and a select family party, including the Earl of Carlisle, who had just come over from Dublin. At 8 o'clock, accompanied by the Duke of Sutherland, he proceeded to the Royal Italian Opera House, to witness the performance of the operas of *Norma* and *Massaniello*. The event excited more than ordinary interest among the patrons and frequenters of the theatre, and possibly a more brilliant and distinguished audience never assembled within its walls. He arrived there in good time, and was received by the fashionable company with demonstrations of respect carried to such an extent that they became personally inconvenient, and Mr. Gye had some difficulty in making a way for him through the dense crowd of ladies who thronged the Floral Hall, through which he had to pass. In the house itself he was received with the greatest possible enthusiasm, the whole audience rising to receive him, and he was evidently delighted with his reception and with the performance, which he applauded loudly. Between the acts of the opera he paid a visit to Admiral Sir R. Mundy, who commanded the Mediterranean fleet during his operations in Sicily and Naples. He remained until the very close of the performance, and the moment he rose to leave his box the whole audience cheered and cheered again, many waving hats or handkerchiefs, while ladies in the boxes immediately above that which was the "State Box" for the occasion broke their bouquets into pieces, dropping the scattered flowers over the head of the popular chieftain as he bent forward in his well known grey capote to acknowledge the hearty salutations of the house. He was conducted by Mr. Gye to his carriage through the Floral Hall, which this time being kept private, he was free from those well-meant importunities which at the beginning of the evening had so inconveniently retarded his arrival. Yesterday morning a deputation from the Reform Club, consisting of Mr. Guildford Onslow, M.P., Mr. Otway, and Mr. Adams Smith waited upon him at Stafford House, in order to invite him to a banquet at the club. The General accepted the invitation for Thursday next. At 10 o'clock the General left town, accompanied by the Duke of Sutherland, for Bedford, where he witnessed the process of ploughing by steam. He returned to town early in the afternoon, and in the evening dined with Signor Panizzi, the Principal Librarian of the British Museum. It was his intention afterwards to visit the House of Commons. To-day he will go to the Crystal Palace. He will leave town privately, and arrive at the Palace about 2 o'clock, when a concert by Italian *artistes* will be given. Immediately after this swords will be presented to him and his son Menotti, with an address from the Italian Committee. The General will leave the Palace on his return about 5 o'clock. On Monday he will again go to the Palace to receive addresses from the City and Working Men's Committees. Since his arrival in London the General has been visited by Mr. Fergusson, the celebrated surgeon, under whose care he has much improved in health. The General's simple habits have been in no wise departed from since his sojourn at Stafford House. He rises at five, and breakfasts at six, the meal consisting of bread, grapes, cheese, and a glass of wine, and then smokes a cigar while walking in the grounds attached to the mansion.

School for Daughters of Military Officers.—A public meeting was held a few days since at Willis's Rooms for the purpose of establishing a school for the daughters of officers in the army. The Duke of Cambridge took the chair, and the meeting was addressed by General Sir W. Gomm, General the Hon. Sir Edward Cust, General Dacres, General Sir R. Airey, the Hon. General Ashburnham, the Chaplain-General; Sir J. Fergusson, M.P., and Mr. Colquhoun; and resolutions were adopted in favour of establishing a school in which the daughters of officers of limited means shall receive, at the lowest possible expense, a good, practical and religious education in accordance with the doctrines of the Church of England, but open to children of any religious persuasion. It was stated during the meeting that the Lansdowne College at Bath has been purchased for the proposed schools by means of a fund already in existence, raised soon after the Crimean war, for the benefit of the families of officers in the army. The building stands on about 8 acres of ground, which cost originally 16,000*l*., has been purchased for 6000*l*., and is well suited for the purpose. It admits of ready adaptation, and about 5000*l*. is required to fit up and furnish it for the accommodation of 100 girls, while not less than 2000*l*. per annum will be required to maintain the girls, with the necessary teachers and attendants.

The Shoeburyness Experiments.—On Thursday week the practice was attended by the Commander-in-Chief and the Secretary at War. The guns were laid for firing by the competitors themselves and not by the Shoeburyness officers, and if one elevation was not found to answer, the competitor was allowed to try another. At the close of the day's experiments Sir William Armstrong's 600-pounder was fired at a distance of 200 yards against a box-target, having an outer plate of 6½ inches of solid iron, backed up by 24 inches of teak, lined with an inner skin of iron 1 inch thick, making 7½ inches of iron and 24 inches of teak in all. With a charge of only 70 lb. of powder, a conical steel shot of 612 lb. weight, was sent clean through the target, from which the massive

splinters flew like chips. On Friday the experiments were continued with a view to test the range rather than the accuracy of the different guns. On Monday the firing commenced at a stockade, and at increased ranges, and on Wednesday, after some discussions as to the proper mode of laying and sighting the guns, a competition for length of range took place, followed by some interesting experiments with shell fired against abattis. In a few days the real and most important trial of all, the question of endurance—the effort to break down the guns by rapid and continuous firing—will be made. In other matters it is said that the guns are equal, as far as the trials have yet gone; and that it is almost impossible to say which is the best, the Armstrong shunt gun or the Whitworth.

THE PUBLIC-HOUSES OF LONDON.—Few persons, says the "Cornhill Magazine," are aware of the immense sums spent in these places by the London workmen. An advertisement some time since appeared in the *Despatch* newspaper for the sale of a large public-house in Edgware Road, the returns of which were 240*l.* a week. This is an amount equal to the whole expenditure for wine, beer, and spirits of the Athenæum, Reform, and Conservative Clubs put together, with a balance of more than 1000*l.* a year to spare. The returns of the Trevor Hall, Knightsbridge, are said to exceed the expenditure in alcoholic liquors of the four largest clubs in St. James's put together, and yet there are 17 other public-houses, all doing a flourishing trade, within a radius of 300 yards of the building. Give every public-house or beershop in London an average frontage of 21 feet, and we shall find, if placed side by side, they would make a row of houses 39 miles in length. To find the amount of money spent annually in these establishments would require more time and space than we could bestow upon the question, but we will take one portion of it alone—the rent, taxes, gas, and establishment charges, all of which the customer has, indirectly, to pay for before he obtains the commodity he requires. Let us assume, then, that the average rent, taxes, and establishment charges of the London public-house to be 125*l.* per annum. This sum is far below the real amount, but we like always to work on *minimum data*.

MYSTERIOUS AFFAIR AT KENTISH TOWN.—On Saturday much excitement was created in Kentish and Camden Towns by the discovery of the body of Mrs. Esther Thomas, who had evidently been dead some days, in her house, No. 25, Hawley Road. Mr. Edward Thomas, deceased's husband, who is a musician, had left London for Liverpool about ten days before to fulfil an engagement there. On Thursday he wrote his wife a letter stating that he should be home on the following day about 5 o'clock P.M. On Mr. Thomas's arrival on Friday he found his house completely closed and locked up, and being unable to gain admission he consulted Mr. Jones, a butcher, in the neighbourhood, who said he had not seen Mrs. Thomas for some days. They then went to the house, and by removing a pane of glass, succeeded in gaining an entrance. The first thing that attracted attention was the parrot in its cage, with its head in its food box, dead. The doors were all fastened, and they were broken open with a cleaver. On entering the kitchen it is stated there was a leg of mutton which had been partially roasted, hanging in front of the fireplace, and had evidently been so for some days. On going upstairs to the bedroom Mrs. Thomas was found lying in her bed dead and nearly black from decomposition. The only living creature in the house was the dog, who, although he barked feebly, refused food when offered him. A little girl who attended daily to act as servant, states that on the morning after Mr. Thomas left she went to the house as usual, and after knocking for a long while, and being unable to get in, she returned home to her parents, who, finding the house locked up, thought Mrs. Thomas might have left town to join her husband, and therefore no notice was taken of the matter. Dr. Lankester has ordered a *post mortem* examination, preparatory to holding an inquest on the body.

GREAT ROBBERY OF GOLD BARS.—It will be remembered that in February last a vessel called the Golden Age, sank near San Francisco, laden with gold bars of great value. It appears that bars to the amount of about 50,000*l.* were subsequently recovered from the sea, and that the finder afterwards decamped with them. It is supposed that some of these bars have been brought to London, and a reward of 3000*l.* has been offered for the detention and apprehension of the thieves. One of the party has already been arrested.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, April 9th, were 1501. In the corresponding week of the 10 years 1854-63 the average number, corrected for increase of population, was 1383. The present return is therefore 118 above the average. During the week the births of 1018 boys and 995 girls, in all 2013 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1966.

Provincial.

EXMOUTH.—A Prussian merchant vessel put into this port on Monday to avoid capture by a Danish cruiser, which had given her chase. The cruiser afterwards sailed for Torbay.

GUILDFORD.—The adjourned inquest on the Rev. Frederick Cuthbert Beresford Erle, who was killed by being shot by a ramrod at the recent Volunteer Review, at Blackheath, was resumed on Monday. The evidence proved that the accident, which was traced to a private in the Queen's Westminsters, was really due to the dangerous way in which the crowd was mixed up with the Volunteers, there being no adequate force to keep the ground clear. The jury, by Lord Lovaine, their foreman, returned a verdict of Accidental Death.

MACCLESFIELD.—The London mail bag was stolen a few nights since from the Chelford railway station, and although the most searching investigation has been made by officers of the General Post Office, aided by a London detective, and a reward of 50 guineas has been offered by Government for the conviction of the thieves, no clue has yet been obtained of the guilty parties. The success with which the robbery was carried out leaves no room to doubt that it was well matured by skilled hands. It appears that the mail bags from Macclesfield and Knutsford are conveyed to Chelford by the usual mail carts, a Post Office guard accompanying the former. At Chelford they hung on three posts, a hundred yards apart, a man being stationed with a lamp at the two outside ones. The mail train from Manchester at 10 55 stops at Alderley for passenger accommodation, but does not stop at Chelford, the Post Office van of the train catching up the bags as they hang suspended from the posts. On the night of the robbery the bags were hung up as usual about 10 minutes before the passing of the mail, the men with lights watching the two outside posts as usual. As there are only two men to the three posts, the centre one was without a watcher, and it was from this post that the bags in question were stolen, during the short interval between their being hung up and the passing of the mail. Two hours and a half afterwards the guard, on his return by the down mail from Crewe, gave information that the London mail-bags on the centre of the three posts were not caught up. It was at first supposed to be an accident, but an hour's search made it apparent that a robbery had been committed. No tidings of the missing bags were heard till three days afterwards, when they were found in a plantation about three-quarters of a mile from the Chelford station, the strings cut, seals broken, and every letter and document cut open carefully as with a knife or some sharp instrument. It has since been ascertained by the letters that have been returned through the dead-letter office that the valuables stolen are postage stamps and banknotes, cheques, drafts, &c. Some of the money, however, was in half banknotes only; but in one or two instances the halves of 20*l.* notes were enclosed in separate envelopes, but sent by the same post. These, of course, are missing. The supposition is that the robbery was committed by some person hidden behind the low and recently cut fence that separates the railway from a field adjoining to and easily accessible from the high road. The detective officer found that he could get over the hedge, cross the line, take down the bags from the post, and return in the space of 40 seconds, thus showing the facility for committing the robbery unobserved on a dark night. The Macclesfield Corporation, in a special meeting, have made urgent representations to the Postmaster-General with reference to the uncertainty attending the present method of transmitting the bags, and a reply has been received that the matter is undergoing a rigid investigation.

ROTHERHAM.—A shocking murder was committed on Saturday evening near this town, resembling in its details the murder of Mr. Whittaker, a farmer, which was accompanied by the robbery from his person of 200*l.* The victim in this instance is John Cooper, of Handsworth, near Sheffield, a young man 27 years of age. It appears that on Saturday night last he left the nursery of Messrs. Fisher & Holmes, at Handsworth, where he was employed, to visit his father at Stone. On his way he called at Mottram's beerhouse at Brookhouse, where he had two glasses of ale, and sat talking until about 10 o'clock, when he left for his father's. Nothing more was heard of him until Sunday morning, when he was found by the roadside weltering in his blood, about midway between Slade Hooton and Roche Abbey. His skull was fractured, his eyes blackened, and his lower jaw broken. Near him was lying a hedge stake, which had been broken out of the hedge 50 yards from where he was found. His pockets were turned out, and everything he had was gone. The spot is a mile from any house, and is a most unfrequented spot, and from the appearance of the grass a deadly struggle seemed to have taken place. Deceased was a powerfully-built man, standing 6 ft. 1 in. high, and would be a fair match in a question of life and death for any two men. The affair is in the hands of the police, but as yet they have no clue to the perpetrators of the deed.

WINDSOR.—A few days since one of Her Majesty's keepers was making his customary inspection of the Royal deer in Windsor Great Park, and on passing the deer pen by Bears Rails observed his dog to remain for some distance behind him, and to leave the place reluctantly. The keeper returned to the spot and found the dog had scratched a large hole in the earth. The dog continued tearing up the earth until at last he came to a handkerchief, which contained a large number of valuable gold and silver watches, also a quantity of gold and silver chains. The property had evidently been stolen and placed there during the night, as many of the watches were still going with the right time of the morning indicated. It is expected that these articles may prove to be a portion of the plunder from a house at Henley-on-Thames, which had been broken into and robbed the night previous.

WORCESTER.—A young man, named Walter W. Jones, employed in the Engineer's office at the Great Western Railway Works, and son of a most respectable surgeon of this city, made an attempt on the lives of two persons on Tuesday. It appears that he had gone to the shop of a gunsmith in Worcester, and taken from the shop a six-barrel revolver pistol. Having by some means also obtained possession of powder and ball, he went down to the racecourse, where the Militia recruits were at drill, and there saw a young girl, named Emma Bell. He accosted her, and on her refusing to accompany him for a walk he presented the pistol at her. The girl raised her hand, Jones fired, and the ball passed through her hand. The girl cried out and ran away, on which Jones was followed by a number of persons. He contrived, however, to elude them for some time. Police-sergeant Drew, of the Worcester force, was among those who followed, and overtook him in a passage on the Moors, near the racecourse, when Jones again presented the pistol, and placing it against Drew's cheek fired. The ball carried away a portion of the officer's jaw and some teeth, and then entered a wall. Eventually Jones was captured and taken before the magistrates, by whom he was remanded for a week. On Wednesday the officer, who had been in a dangerous state, was pronounced better. No possible cause for the outrage can be assigned.

Ireland.

THE LATE FIRE AT QUEEN'S COLLEGE, CORK.—It may be remembered that Queen's College, Cork, has twice narrowly escaped total destruction by fire, and that there was a strong suspicion these fires were wilful. A strange scandal arose out of the first of these conflagrations, which happened in 1862. In the course of last year one of the professors, Dr. Bullen, wrote a letter to the Irish Government charging Sir Robert Kane, the Principal of the College, with having come to him and attempted to persuade him to sign a report implicating certain parties in the incendiary acts. The Lord Chancellor of Ireland and other visitors of the College were requested to inquire into the charges, and on their assembling in the College on Tuesday for that purpose, the affair came to an extraordinary and most unexpected conclusion. When the visitation was opened, counsel for Sir Robert Kane read a letter from Dr. Bullen, withdrawing in the most unqualified manner the serious charges he had brought against him, and tendering an ample apology. Mental excitement was the principal ground on which he excused his conduct. The Lord Chancellor said he would lay the letter before the Lord Lieutenant.

Law.

CENTRAL CRIMINAL COURT.—*The Marylebone Murder.—Devine*, 18, a very young-looking man, was charged with the wilful murder of Joseph Duck, a retired tradesman in Marylebone. The facts of the case have been recently given in our Metropolitan News, and the evidence against the prisoner, though of a circumstantial character, left no doubt of his guilt. The jury returned a verdict of *Guilty*, accompanied by a strong recommendation to mercy. In answer to the Court as to the grounds on which the recommendation was made, the foreman said the jury were of opinion that the prisoner inflicted the injuries on deceased while in the act of robbing him, but at the same time they thought he did not intend to murder him. The prisoner was then called upon in the usual form to say whether he had any reason to urge why sentence of death should not be passed upon him according to law. He made no reply, but covered his face with his hands and burst into tears. Mr. Justice Willes having put on the black cap, addressed the prisoner, and said that the recommendation of the jury should be forwarded to the advisers of her Majesty, whose prerogative alone it was to act upon it; but it was to warn him that the offence for which he had been convicted was one of such a terrible and alarming character, that a highway robbery accompanied by such violence as to cause death, that he should not be discharging his duty if he held out the slightest hope that the recommendation would be acted upon. His lordship then passed sentence of *Death* in the usual manner. The prisoner, who continued sobbing the whole time the judge was addressing him, when the sentence was passed burst into a fresh fit of weeping, and at the conclusion was so overcome, that he had to be assisted downstairs by the gaoler, murmuring that he was not guilty.

Obituary.

THE VEN. ARCHDEACON FRANCE, Fellow and President of St. John's College, Cambridge, and Archdeacon of Ely, died suddenly on Thursday morning in his 48th year. He was in all appearance in his usual health on Wednesday, the previous day, but on Thursday morning he was discovered by his attendant in bed in a strong fit. Medical aid was immediately summoned, but the Archdeacon never rallied, but gradually sank, and expired in the afternoon. Archdeacon France took a degree in 1840 as first classic, and during his long and distinguished university career he commanded the respect and esteem of all with whom he came in contact.

THE HON. AND REV. FITZROY H. R. STANHOPE died on Monday morning. He was fifth son of the third Earl of Harrington, and brother of the late Duchess of Bedford and the Duchess of Leinster. He was born in 1787, and married in 1808, the daughter of the Hon. Charles Wyndham. He was dean and rector of St. Buryan, Cornwall, rector of Cattistock, and vicar of Wressell, Yorkshire.

LIEUT.-GENERAL MANSEL, K.H., Colonel of the 65th Regiment, died on Friday last, after a long illness, at Sandgate.

76th year. He was the youngest son of the late Sir William Mansel, Bart., of Iscoed, Carmarthenshire, and after entering the army served with the 10th Regiment in the Mediterranean, and subsequently with the 59d in the Peninsula. He was present at the battle of Toulouse, where he was severely wounded. On attaining the rank of lieut.-colonel in 1826 he went on half-pay. He became a major-general in 1851, and in 1857 was appointed colonel of the 60th Regiment. In 1832 he was made a knight of the Guelphic Order, and had received the war medal and one clasp for Toulouse.

Vice Admiral Richardson died at 7, Stockwell Crescent, Clapham Road, on the 8th inst., in his 80th year. He was midshipman of the Alfred, 74, in Lord Howe's action of the 1st of June, and in 1797 he took part in Admiral William Parker's action off Cape St. Vincent. He was next engaged off Cadiz, in the Channel, West Indies, and Mediterranean; and served as lieutenant at the siege of Copenhagen in 1807, and was subsequently employed in the Mediterranean, where he came into frequent contact with the French squadron and batteries in the neighbourhood of Toulon. In 1812 he commanded the boats of the America, Leviathan, and Eclair, at the capture of a convoy and destruction of the batteries of Languilla, on which occasion he was gazetted. He commanded the Clio, on the north coast of Spain, during the civil war, from 1835 to 1838. He became retired rear admiral in 1857; and vice admiral in 1864.

BIRTHS.—On the 12th inst, at 27, Eaton Place, the wife of the Marquis d'Antigné, Military Attaché to the French Embassy, of a daughter—6th inst, at West Harling Rectory, Norfolk, the wife of the Hon and Rev. John Harbord, of a daughter—6th inst, at Niddrie House, N.B., the Hon. Mrs. de Moleyns, of a son—9th inst, at 77, Eaton Place, the wife of Lieutenant-Colonel the Hon. Luke White, M.P., of a son, still-born—12th inst, at 6, Buckingham Gate, S.W., the widow of J Hay Erskine Wemyss, Esq, M.P., of Wemyss and Torrie, N.B, of a son—11th inst, at 19, Eaton Place, the wife of Lieut.-General Windham, of a son—10th inst, at Hampton Court, the wife of W. P. Adam, Esq., of Blair Adam, M.P., of a son.

MARRIAGES.—On the 7th inst., at Malahide near Dublin, Cecil R. S. Ives, Esq., of the Royal Horse Guards, second son of J. Robert Ives, Esq., of Bentworth Hall, Hampshire, to the Hon. Susan Anne, eldest daughter of Lord Talbot de Malahide, of Malahide Castle—13th inst., at Trinity Church, Marylebone, the Right Hon. Lord Muskerry, to Lucy, widow of Colonel Aldrich, Royal Engineers—5th int., at St. John's Episcopal Church, Perth, Charles John Forbes, eldest son of Sir Charles Forbes, Bart., of Newe, to Helen, second daughter of Sir Thomas and Lady Louisa Moncrieffe—7th inst, at Eton College Chapel, the Rev. F. Clayton, rector of Astbury, Cheshire, to Mary Georgina, eldest daughter of the Right Rev. Bishop Chapman, late of Colombo, Ceylon—7th inst, at St. Matthias, Richmond, the Rev. George S. Barrow, M A., incumbent of Northam, Hants, second son of Sir G. Barrow, Bart, to Florence Mary, eldest daughter of John Nicholles, Esq., late of Bruton Street—5th inst, at All Souls' Church, Langham Place, Captain Henry Hamilton Beamish, R.N., third son of the Rev. Henry Hamilton Beamish, vicar of Old Cleeve, Somerset, to Louisa M. A. Forman, widow of Captain E. Rowland Forman, Rifle Brigade, and daughter of John Slater Harrison, Esq., and Lady Louisa Slater Harrison, of Shelswell Park, Oxon—7th inst, at St James's, Piccadilly, Captain Sir Frederick Hughes, late 7th Madras Light Cavalry, Ely House, Wexford, to Emily, eldest daughter of the late W. Kräutler, Esq., Cornwall Terrace, Regent's Park—7th inst, at St. James's, Piccadilly, Lieut.-Colonel Bramston, Grenadier Guards, eldest son of T. H. Bramston, Esq., M.P. for South Essex, to Honoria Louisa, daughter of the late T. Thornhill, Esq., of Fixby Hall, Yorkshire, and Riddlesworth, Norfolk.

DEATHS—On the 10th inst, at Linden Lodge, Bayswater, Lady Melvill, widow of Sir James C. Melvill, K.C.B.—11th inst, at Emma Place, Stonehouse, Devon, Lady Owen, widow of Lieut.-General Sir John Owen, K.C.B, K.H., aged 77—9th inst, at Reading, Lady Conroy, widow of Sir John Conroy, Bart.—13th inst, at Edinburgh, after a long illness, Mrs. Edward Ellice, wife of Edward Ellice, Esq., M.P., and daughter of General Balfour—9th inst, at the Vicarage, Lamberhurst, Kent, Frances Julia, wife of the Rev. Robert Hawkins, and daughter of the late Sir Jasper Nicholls, K.C.B.—11th inst, at Brighton, Frances Elizabeth, wife of Major-General Cooke, retired list Royal Artillery—8th inst, at 37, Oxford Terrace, Hyde Park, Sarah, widow of Rear-Admiral W. Skipsey, aged 59—7th inst, at Edinburgh, Major Charles Maximilian St. Paul, Count of the Holy Roman Empire, of Ewart Park, Northumberland, aged 79—3d inst, at Fort Gomer, near Gosport, Major R. W. Clerke, 26th Cameronians, third son of the late Sir W. H. Clerke, Bart, aged 37—7th inst, at Woodside, Windsor Forest, Winkfield, Major G. D. Scott, 1st Royal Surrey Militia, and late Captain 1st (King's) Dragoon Guards, aged 58—6th inst, at Plympton, Devon, Mary Anne, wife of Lieut.-Colonel George Smith, of the Bombay Army—9th inst, at East Sheen, Surrey, Ralph Leycester, the infant child of Major Leycester Penrhyn—11th inst, Henry Haynes, Esq., of Grove House, Whittlesey, deputy-lieutenant for the Isle of Ely, aged 81—7th inst, at Houghton Hall, Bedfordshire, H. Brandreth, Esq., J.P., aged 56—6th inst, at West House, Edgbaston, Warwickshire, Georgiana Frances, wife of George W. Sanders, Esq., her Majesty's Commissioner for the District Court of Bankruptcy at Birmingham—9th inst, at East Sheen, Surrey, the Rev. J. H. Pinckey, D.D., aged 86.

Markets.

COVENT GARDEN, April 16.

Outdoor produce, considering the season, continues to be well supplied. English Grapes of this year's growth are sufficient for the demand. Apples, though scarce, may still be had; and there are likewise a few dessert Pears. Oranges are getting scarce: as are also good Pine Apples. Continental arrivals continue heavy; among them are Lettuces, Endive, Carrots, Artichokes, and Radishes. Out-door grown Asparagus realises 15s. a bundle. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Oranges, per 100, 4s to 10s
Grapes, new, per lb., 12s to 25s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Almonds, do., 18s
Pears, per doz., 6s to 12s	Walnuts, do., 14s to 20s
Strawberries, p. oz., 9d to 1s 6d	Chesnuts, per bush., 10s to 16s
Lemons, per 100, 4s to 10s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Rhubarb, p. bundle, 6d to 1s 3d
Cauliflowers, each, 4d to 8d	Turnips, p. bunch, 4d to 6d
Asparagus, p. bundle, 8s to 14s	Cucumbers, each, 1s to 3s
French Beans, p. 100, 2s to 3s	Beet, per doz., 1s 6d
Green Peas, p. ½ sieve, 20s	Shallots, per lb., 10d
Seakale, per punn., 2s to 3s	Celery, per bundle, 1s 6d to 2s
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 4d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 1s to 2s	Horse Radish, p. bunch, 1s to 4s
Carrots, do., 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
— young, p. bunch, 3s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

HOPS.—Borough Market, Friday, April 15.

Messrs. Pattenden & Smith report the demand steady for the few Hops remaining of last year's growth, at firm prices.

COAL MARKET.—April 15.

Walls End Hetton, 20s. 6d.; Walls End Haswell, 20s. 6d.; Walls End Tees, 20s. 6d.; Walls End Hartlepool, 20s.; Walls End South Kelloe, 19s. 6d.; Walls End Heugh Hall, 19s. 6d.; Walls End Cassop, 19s. 6d.; Walls End Kelloe, 19s 6d.; Walls End Gosforth, 18s. 6d.; Walls End Riddells, 18s. 6d.; Walls End Harton, 18s. 6d.; Walls End Hetton Lyons, 18s. 9d.; Walls End Tunstall, 18s. 9d.; West Hartley, 16s. 6d.; Bebside Hartley, 16s. 6d.; Davison's Hartley, 16s. 6d.; Hastings Hartley, 16s. 6d.; —Ships at market, 81.

HAY.—Per Load of 36 Trusses.

Smithfield, Thursday, April 14

Prime Meadow Hay	75s	80s	Clover, old	90s	110s
Superior do. ..	84	90	New Clover ..	—	—
Inferior do. ..	50	60	Do. second cut ..	80	105
New do.	—	—	Straw	25	30
Rowen	—	—			

Harvey & Easton.

Cumberland Market, Thursday, April 14

Sup. Meadow Hay ..	90s	97s	Inferior Clover ..	80s	96s
Inferior do.	70	84	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover ..	108	114			

Joshua Baker.

Whitechapel, Thursday, April 14.

Fine Meadow Hay ..	84s	88s	Prime 1st cut Clover	108s	112s
Inferior do.	80	84	Inferior do. do. ..	100	105
Prime New Hay ..	—	—	New 1st cut do. ..	—	—
Inferior	—	—	Prime 2d cut do. ..	105	110
Straw	28	32	Inferior do.	100	105

BRITISH WOOLS.—London, April 14.

The demand for long wool still continues unabated, and prices still preserve an upward tendency. Other descriptions are about the same.

	s.	d.		s.	d.
South-down Hog-gets	1	9 to 1	Leicest. Wethers	2	0 to ..
Half-bred ditto ..	2	2 — 2	Ditto Hoggs ..	2	1 — 2 3
Down Ewes ..	1	8 — 1	Combing Skins	1	6 — 1 11
Kent Fleeces ..	2	0 — 2	Flannel Wool ..	1	4 — 1 6
			Blanket ditto ..	0	9 — 1 0

POTATOS.—Southwark, Monday, April 11.

During the past week the arrivals both coastwise and by rail have been very heavy, and far in excess of the demand, and the weather having set in mild the prices of all sorts have been lower. The following are the quotations:—Yorkshire Flukes, 65s. to 85s. per ton; do. Regents, 50s. to 70s.; do. Rocks, 45s. to 50s.; Dunbar Regents, 60s. to 70s.; Kent and Essex Regents, 50s. to 70s.; North Berwick Regents, 50s. to 60s.; Perth, Forfar, and Fife Regents, 40s. to 45s.; do. do. Rocks, 40s. to 45s.; do. do. Reds, 40s. to 45s.

METROPOLITAN CATTLE MARKET.

Monday, April 11.

We have a few more Beasts than on Monday last; there is, however, a demand for them, and prices remain about the same as on that day. The number of Sheep is not quite so large, but the trade for them is worse, and a clearance cannot be effected, although lower prices are taken. Trade is slow for Calves and Lambs at Thursday's quotations. From Germany and Holland there are 1140 Beasts, 1360 Sheep, and 119 Calves; from Spain, 92 Beasts; from Ireland, 130; and 2920 from Norfolk and Suffolk.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 4	10	Best Long-wools. ..	—		..	
Best Short-horns	4	4	— 4	8	Do. Shorn ..	4	0	— 4	4
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality ..	—		..	
Best Downs and Half-breds	—		..		Do. Shorn ..	3	4	— 3	8
Do. Shorn ..	4	4	— 4	8	Lambs	6	8	— 7	6
					Calves	3	4	— 5	4
					Pigs	3	4	— 4	6

Beasts, 4540; Sheep and Lambs, 21,190; Calves, 123; Pigs, 600

Thursday, April 14.

The supply of Beasts is about the same as on Thursday last; the demand is not quite so good, and prices generally are lower. The number of Sheep exceeds the demand; Monday's quotations are realised for business done, but several remain unsold. There is more inquiry for choice Lambs, at rather higher rates. Trade is dull for Calves at Monday's quotations. Our foreign supply consists of 510 Beasts, 820 Sheep, and 370 Calves. Milch Cows, 70.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	6	to 4	8	Best Long-wools. ..	—		..	
Best Short-horns	4	4	— 4	6	Do. Shorn ..	4	0	— 4	4
2d quality Beasts	3	0	— 3	10	Ewes & 2d quality ..	—		..	
Best Downs and Half-breds	—		..		Do. Shorn ..	3	4	— 3	8
Do. Shorn ..	4	4	— 4	8	Lambs	6	8	— 7	8
					Calves	3	4	— 5	4
					Pigs	3	4	— 4	8

Beasts, 1090; Sheep and Lambs, 5920; Calves, 444; Pigs, 120.

MARK LANE.—Monday, April 11.

The supply of Wheat from Essex and Kent to this morning's market was small, and factors not being inclined to accept lower prices, only a small portion of it was disposed of towards the close of the market. The sale of Foreign was of the smallest possible extent, at barely former prices. Barley sold slowly at last week's rates. Beans and Peas were unaltered in value. The Oat trade was very dull, and sales were made at a reduction of 6d. per qr. In Flour there was but little business done.

Per Imperial Quarter	s.	s.		s.	s.
Wheat, Essex, Kent, & Suffolk .. White	42	—48	Red	40	—48
— — fine selected runs .. ditto	44	—52	Red	40	—48
— — Talavera	48	—54			
— Norfolk	—		Red	—	
— Foreign	36	—52			
Barley, grind. & dist, 25s to 27s .. Chev.	34	—38	Malting ..	29	—33
— Foreign .. grinding and distilling	22	—26	Malting ..	27	—31
Oats, Essex and Suffolk	18	—22			
— Scotch and Lincolnshire—Potato	20	—25	Feed	18	—22
— Irish .....Potato	19	—22	Feed	—	
— Foreign .....Poland and Brew	17	—22	Feed	15	—20
Rye	30	—32	Foreign ..	—	
Rye-meal, Foreign	—				
Beans, Mazagan....27s to 36s...Tick	30	—33	Harrow ..	30	—33
— Pigeon .... 32s to 40s .. Winds.	—		Longpod	—	
— Foreign .....Small	36	—42	Egyptian	30	—32
Peas, White, Essex and Kent .. Boilers	32	—33	Suffolk ..	33	—34
— Maple .... 30s to 34s .... Grey	28	—30	Foreign ..	31	—33
Maize .....White	—		Yellow ..	—	
Flour, best marks delivered .. per sack	35	—40			
— 2d do ..... ditto	28	—34	Country ..	28	—34
— Foreign ..... per barrel	15	—25	Per sack	32	—40

Friday, April 15.

The weather since the 8th has been fine, with a higher temperature, although the last three nights have been frosty. We are unable to report any amelioration in the dulness which has so long characterised the Wheat and Flour trades, and the tendency of prices throughout the kingdom continues to be downwards. The value of all kinds of Spring Corn remains generally unaltered, excepting perhaps Beans, which in a few instances have slightly improved. Since Friday last only one cargo of Wheat has been reported off the coast, and only two cargoes were left on sale yesterday. The floating trade has been inactive. Linseed and Cottonseed have been in good demand at rather higher prices; all sorts of grain, however, are dull, and Wheat has been sold about 1s. under late rates. Paris, April 14.—Flour is rather high. The six marks for delivery this month are quoted equal to 33s. 6d. per 280 lbs. The present stock of Flour is estimated at about 15,870 cwt. Wheat has remained unaltered in value, but is a little firmer. The arrivals of grain and Flour of all kinds during the week have been small. The attendance at this morning's market was very limited, as was also the sale of Wheat, Monday's prices for English being obtained with difficulty. The sale of Foreign was limited, but on the little business done extreme rates were insisted upon for Dantzic and Konisberg, owing to the notification of the blockade of those ports on the 19th instant; the value of other qualities was unaltered. Spring Corn was quiet without alteration in value.

Arrivals this Week.

	Wheat.	Barley.	Oats.	Flour.
English ..	590 qrs.	410 qrs.	1540 qrs.	660 sks.
Irish	—	—	2610	— ,,
				100 ,,
Foreign ..	4200 ,,	1267	9490 ,,	— brls

Liverpool, April 12.—We have had a fair attendance of both town and country millers and dealers at market, but the inquiry for Wheat was found to be only of a most restricted character, at about the rates of Friday last. Flour irregular, both in demand and value Indian Corn was only saleable in retail, and prices must be quoted the turn in buyers' favour. Oats and Oatmeal depressed. Beans steady, at full prices.

Friday, April 15.—Wheat in moderate demand, at full rates for amber; other qualities 1d. lower. Flour unaltered. Indian Corn steady; mixed, 28s; Egyptian Beans without change in rates; Saidi, 31s. to 31s. 6d. Oats and Oatmeal unaltered.

Averages	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
March 5	40s 2d	31s 6d	19s 10d	28s 6d	33s 5d	32s 10d
— 12	40 1	31 5	19 8	29 2	32 7	33 0
— 19	39 9	31 4	19 2	32 4	32 10	32 10
— 26	39 11	30 10	19 0	28 0	32 8	33 3
April 2	40 2	31 0	19 2	28 5	32 6	32 11
— 9	40 1	30 9	18 11	29 0	32 8	32 8
Agg. Aver.	40 0	31 2	19 4	29 3	32 9	32 11

Fluctuations in the Last Six Weeks' Averages.

Prices.	March 5	Mar. 12.	Mar. 19.	Mar. 26.	April 2.	April 9.
40s 2d—		..	..	..		..
40 1	..		..	..	..	
39 11	..	..	..		..	..
39 9	..	..		..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..

NEWGATE.—April 15.

Best Fresh Butter .. .. 15s. per dozen lbs.
Second do. do. .. .. 13s. ,,
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

LEADENHALL POULTRY MARKET.—April 15.

The market has been well supplied with chickens during the past week, but fowls of first quality are very scarce.

Per couple—s. d. s. d.			Each—s. d. s. d.		
Large Surrey Fowls	9 0	to 12 0	Goslings	6 0	—7 0
Farm-house do. ..	6 0	— 8 0	Guinea Fowls	—	..
Best Surrey Chickens	6 0	— 8 0	Leverets	3 0	—4 0
Country Chickens ..	4 0	— 6 0	Pigeons	0 8	—0 9
Each			Tame Rabbits	1 3	—2 0
Ducklings	4 0	— 5 0	Wild do.	0 6	—0 9
Farm-house do. ..	3 0	— 4 0	Plovers' eggs, p. doz.	3 0	—3 6

Trade dull.

WANTED, a good practical DRAUGHTSMAN, one accustomed to Agricultural Work preferred.—Apply by letter to X. Y. Z., Post Office, Leeds.

To Gardeners.

WANTED, an energetic Scotch GARDENER, about 30 years of age, for a Tea Plantation in India. Must be qualified to conduct the work of 500 or 600 men, and have good sense, and powers of drawing accurate conclusions and making calculations. Salary 200*l* per annum, and progressive increase, with House, and passage paid out. Testimonials as to general good character and temperance indispensable. This offers a good opportunity for a deserving person wishing to gain a good position, and to a thoroughly efficient man the most liberal encouragement is certain.—Address, enclosing copies of testimonials, to Thomas McMeekin, Glenorchard, Campsie, Glasgow.

WANTED, by Messrs. Pamplin & Son, at their Whips Cross Nursery, a married Man, with good address, who has been accustomed to the Nursery Business, to Attend Customers, to put up Seed Orders, and when not engaged as above to make himself useful in the Cultivation of Plants. House and firing found.—Apply by letter to their Lea Bridge Nursery, Leyton, Essex, N.E.

Propagator.

WANTED, an experienced PROPAGATOR—a practical energetic Man, having a thorough knowledge of Roses, Coniferæ, Camellias, Azaleas, Soft and Hard-wooded Plants, &c. None need apply unless thoroughly acquainted with Roses, and has had considerable experience in Propagating extensively for Sale, as well as Growing for Exhibition. Full particulars as to age, previous situations, and the time served in each, must accompany all applications.—John Cranston, King's Acre Nurseries, near Hereford.

WANTED, as GARDENER, a respectable married Man, who thoroughly understands the routine of Garden and Greenhouse Work, and can make himself useful. He would have to attend to a Pony and Chaise. Any one who has had experience in the raising of Seedlings preferred. Good character indispensable. Wages 20s. a week—Apply in the first instance by letter to J. M., 33, Paternoster Row, E.C.

WANTED, a GARDENER and WIFE.—A gentleman in the neighbourhood of London requires the services of a married couple, the Man to act as Gardener, with one man under him; and the Wife as Laundress. Unexceptionable references as to character, &c., will be required. One or two grown up Children not objected to. Wages for two 33s. 6d. per week. A good House, Coals, Candles, and Soap; and Vegetables when to spare.—Apply by letter only to J. B. W., Mr. Veitch, Royal Exotic Nursery, Chelsea, S.W.

WANTED, a good BUDDER and GRAFTER, to be under the Ground Foreman.—Apply to OSBORN & SONS, Fulham, London, S.W.

WANTED, a PERSON who understands Growing for the London Markets Hard and Soft-wooded Plants. Wages 21*s.* per week. Testimonials to character and ability required.—Address WARREN's Gardens, Isleworth, W.

WANTED, an UNDER GARDENER, who can Nail Wall Trees and make himself useful in Houses as well as a Garden, and who Mows well. Wages, 15*s.* per week.—Address to M. BEGEARY, Southend, Eltham, Kent.

WANTED, as UNDER GARDENER, a married Man, without incumbrance, one that has been accustomed to Vineries, Flower, and Kitchen Gardens. Wages 15*s.* per week, with Cottage.—Address A. B., Post Office, Totteridge, Herts.

WANTED, a YOUNG MAN, to assist in the Houses where Fruit and Flowers are grown for market.—R. CLARKE, Twickenham, S.W.

WANTED, from 10 to 15 good GARDEN LABOURERS, for the Royal Horticultural Society's Gardens. Wages, from 15*s.* to 18*s.* per week.—Apply to Mr. GEORGE EYLES, Royal Horticultural Society's Gardens, South Kensington, W.—April 16.

WANTED, in a few days, a married Man, as GROOM and GARDENER.—Must understand Flower and Kitchen Gardens. Greenhouse and Vines, and be able to Drive.—Apply to G. S., The Mount, Northfleet, Kent.

WANTED, by a gentleman, a WHEELWRIGHT who thoroughly understand his business. Wages One Guinea a week. Good reference required.—Address M. BEGEARY, Southend, Eltham, Kent.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

SURVEYOR, LAND, and HOUSE AGENT.—Ladies and gentlemen desirous of obtaining the services of a Person in either of the above capacities may apply to Mr. JAMES DICK, High Beech, Essex, who begs to assure them that he will endeavour to merit their approval by his utmost exertions.

GARDENER (HEAD).—Single; understands his profession in all its various branches. Good character and references.—A. B., 59, Durham Road, Holloway, N.

GARDENER (HEAD).—Age 30, married, no incumbrance; has a thorough practical knowledge of his profession in all its branches. Good character from last situation.—L. B. M., 12, Park Cottages, Twickenham, S.W.

GARDENER (HEAD).—Aged 29; understands Early and Late Forcing of Fruit, Flowers, and Vegetables; Flower and Kitchen Garden. Six years' good character.—D. W., B. Marfleet, Grocer, High Street, Carshalton.

GARDENER (HEAD).—Age 37, married, no incumbrance; understands the Management of Greenhouses, Vines, Kitchen and Flower Gardens. Good character.—A. B., 4, Prospect Place, Ealing.

GARDENER (HEAD).—Age 32, married; understands the Management of Greenhouses, Hothouses, and Flower and Kitchen Gardens. Will be at liberty the 1st of May. Three years and 9 months' character.—W. B., Post Office, West Wickham, Kent.

GARDENER (HEAD).—Age 39, married, no incumbrance; understands the Management of Greenhouse, Hothouse, Forcing, &c., Kitchen and Flower Gardens. Ten years' good character. Wife can Manage Dairy or Poultry if required.—A. B., Messrs. Sutton & Sons, Reading.

GARDENER (HEAD).—Age 40, married; understands the Management of Orchard-house, Greenhouse, and Flower and Kitchen Gardens. Twenty-four years' practice. Two years' good character from last situation.—J. HARRIS MOORHOUSE, Westerham, Kent.

To Noblemen and Gentlemen.

GARDENER (HEAD).—Married, English; thoroughly understands his profession, having had the Management of Pines, Vines, Flower, Fruit, and Vegetable Gardens, with 10 men under him, and has lived in some of the principal places in England. His employer will give him the highest character.—J. G. A., Esq., Monastereven, Ireland.

GARDENER (HEAD), to any nobleman or gentleman.—Age 34, married, no incumbrance; thoroughly understands his profession in all its branches. Can superintend Land and Stock, if required. Six years' character from the gentleman he has just left in consequence of the place being given up.—W. T., Osborn & Sons, Nursery, Fulham, near London.

GARDENER (HEAD).—Age 30, single; has a thorough knowledge of Early and Late Forcing of Fruits, Flowers, and Vegetables; also the Management of Stove and Greenhouse Plants, together with Flower and Kitchen Garden. Has for the last 12 years lived in three of the largest places in England and Wales, and 4 years in the largest Forcing Establishment in Scotland. Can be highly recommended from either.—J. DELL, The Gardens, Stoke Rochford, Grantham.

GARDENER (HEAD), or GENERAL FOREMAN.—Age 40, married; thoroughly understands his profession in all its branches. Fourteen years' unexceptionable character, and other references if required as to ability in the Management of a good Garden, &c.—WM. BURTON, Abbots Langley, Watford, Herts.

GARDENER (HEAD, or SINGLE-HANDED).—Age 26, married; has had 10 years' experience in first-class places.—H. SALTMER, Manor House, Sheffield.

GARDENER (HEAD or SINGLE-HANDED).—Has had 20 years' experience in the Cultivation of Plants in all classes, also the Management of Flower and Kitchen Gardens, and Early and Late Forcing. No objection to any part of England. Can have two and a half years' good character from last employer, whom he is leaving in consequence of that gentleman having given up his Garden. Wages not so great an object as a comfortable situation.—A. Z., Whittington Nursery, Highgate Hill, Middlesex, N.

GARDENER (HEAD, WORKING).—Age 43, married, one child aged 7; has a thorough knowledge of his profession in all its branches; is leaving his present situation on his own account. Well understands Land and Stock. Wife can Manage Dairy and Poultry, if required. Six years' good character.—E. P., Mrs. Lewis, The Rookery, Roehampton, Surrey, S.W.

GARDENER.—JOHN CLARK, Gardener to Rt. Hon. the Earl de Grey and Ripon, wishes to recommend to any nobleman or gentleman a good Gardener, and trustworthy servant, his late Foreman, Edwin Hillier, who has had much experience in every department of Gardening, including Laying Out Ground, Erection and Heating of Hothouses, &c.—Address, EDWIN HILLIER, Messrs. Osborne & Sons, Fulham, S.W.; or JOHN CLARK, Studley Royal, Ripon.

GARDENER (GOOD).—A gentleman wishes to get a good place for a Young Man who has been Head Foreman in a large garden for seven years. He is competent to Manage a moderate Garden Establishment, and can be well recommended for character and general competency.—T. G. P., Esq., 41, Portman Square, London, W.

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GARDENER (UNDER), or PLANT GROWER—Has had six years in the principal Nursery of England, and two years in a gentleman's Garden. Reference first-class.—J. P. D., Post Office, Exeter, until called for.

GARDENER (UNDER or SINGLE-HANDED).—Age 21; thoroughly understands his profession. Good character.—O. G., Mr. Bedford's, Chase Side, Southgate, N.

GARDENER (UNDER).—Age 20; 18 months' good character.—R. B., Englefield Green, Egham, Surrey.

GARDENER (UNDER).—Age 25; has had good experience in all branches of the profession.—R. V., 53, Upper Conduit Street, Leicester.

GARDENER (UNDER)—Age 20; would not object to a situation under a Foreman in a large Establishment. Has been in present situation six years.—B. C., Lower Beeding, near Horsham, Sussex.

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SEWELL AND CO. have the largest Selection in Spitalfields MOIRES ANTIQUES, in White, Black, and all the new colours, at 4½ guineas the full dress.

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PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.

They are more easily trimmed and re-filled than any other Lamp with similar burner.

There is no danger of chimneys breaking, and the chimney cannot become smoked.

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A REALLY GOOD LAMP.

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Special CANDLESTICKS to fit thin candles, 1*s.* and 1*s.* 6*d.* each; reducing Sockets, making them fit any candlestick, 2*d.* each.

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Bedsteads, from	.. ..	12*s.* 6*d.* to £20 0*s.* 0*d.*
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Lamps (Moderateur), from		6*s.* 6*d.* to £3 10*s.* 0*d.*

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Pure Colza Oil .. .. 4*s.* per gallon.

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METCALFE, BINGLEY, AND CO.'S NEW PATTERN TOOTH BRUSHES, Penetrating Cuticle Hair Brushes, Improved Flesh Brushes, genuine Sponges, and every description of Brush and Comb and Perfumery for the Toilet. METCALFE'S celebrated Alkaline Tooth Powder, 2*s.* per box. The FAIRY BOUQUET; the OXFORD and CAMBRIDGE BOUQUET. In bottles, 2*s.*, 3*s.* 6*d.*, and 5*s.* each. 130 B, and 131, Oxford Street, W.

CULTIVATION of the HAIR.—This is admitted on all hands to be a department of the toilet of paramount importance in reference to personal appearance. OLDRIDGE'S BALM of COLUMBIA produces Eyebrows, prevents the Hair from turning Grey, and the first application causes it to grow beautifully, frees it from Scurf, and stops it from falling off. Price 3*s.* 6*d.*, 6*s.*, and 11*s.* per bottle.—OLDRIDGE'S Balm of Columbia (Wholesale and Retail), 22, Wellington Street, Strand.

CORNS and BUNIONS.—A Gentleman, many years tormented with Corns, will be happy to afford others the information by which he obtained their complete removal in a short period, without pain or any inconvenience.

Forward address on a stamped envelope to W. GOODALL, Esq., Epsom, Surrey.

THE CORN SUFFERER'S FRIEND. Under distinguished patronage both at Home and Abroad. Proprietors: R. HOWLETT, Mellis, near Scole, and J. PARR, Gardener, Thornham Hall, Eye. Price per Bottle, 1*s.* 1½*d.* Printed instructions are enclosed with each bottle. Testimonials sent gratis on application. Observe: none is genuine without HOWLETT & PERKINS's signature on the Government stamp.

Wholesale Agents: Messrs. BARCLAY & SONS, 95, Farringdon Street, London; and Retail by all Chemists and Druggists.

Valuable Remedies for the Afflicted.

DR. ROBERTS'S CELEBRATED OINTMENT, called "The Poor Man's Friend," is confidently recommended to the Public as an unfailing remedy for Wounds of every description, a certain cure for Ulcerated Sore Legs of 20 years' standing; Cuts, Burns, Scalds, Chilblains, Sore Eruptions and Pimples on the Face, Sore and Inflamed Eyes, Sore Heads, Sore Breasts, Piles, Fistula, and Chronic Humours, &c. Sold in pots, 1*s.* 1½*d.*, 2*s.* 9*d.*, 11*s.*, and 22*s.*—Also his PILULÆ ANTISCROPHULÆ, confirmed by 60 years' experience to be, without exception, one of the best alterative medicines ever compounded for purifying the blood and assisting Nature in all her operations. Hence they are used in Scrofulas, Scorbutic Complaints, Glandular Swellings, particularly those of the Neck, &c. They form a mild but superior Family Aperient, that may be taken at all times without confinement or change of diet. Sold in boxes at 1*s.* 1½*d.*, 2*s.* 9*d.*, 4*s.* 6*d.*, 11*s.*, and 22*s.*—Sold Wholesale by the Proprietors, BEACH & BARNICOTT, at their Dispensary, Bridport, and by the London Houses. Retail by all respectable Medicine Vendors in the United Kingdom and Colonies. Observe: no Medicine sold under the above name can possibly be genuine unless "BEACH & BARNICOTT, late Dr. ROBERTS, Bridport," is engraved on the Government Stamp affixed to each package.

The Gardeners' Chronicle Newspaper.

SATURDAY, APRIL 23, 1864.

SHAKESPEARE TERCENTENARY. — FLAGS, BANNERS, and DECORATIONS of all kinds ON HIRE for the above occasion. Flags of all Nations, in Silk or Bunting, New and Secondhand.

Apply early to BENJAMIN EDGINGTON, Marquee, Tent, Rick Cloth and Flag Manufacturer, by special appointment to Her Majesty, 2, Duke Street, London Bridge, S.E.

N.B. No other Establishment.

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS.—Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.

Stamp End Works, Lincoln, and 78, Lombard Street, London; also at LOWENGASSE, No. 44, Landstrasse, Vienna; and GEGENUBER DEM BAHNHOF, Pesth.

Descriptive, Illustrated, and Priced Catalogues, Free per Post. Special Drawings when required.

[*The best Steam Threshing Machinery made*]

LAWN MOWERS made in a superior manner, and at reduced prices.

S. SMITH, Engineer, 204, High Holborn.

HORTICULTURAL TOOLS.—Lawn Mowers, Garden Rollers, Garden Engines, Syringes, and Tools of all kinds, Wire Netting, Prize Churns, &c., delivered Carriage free. Price List free.

BURGESS & KEY, 95, Newgate Street, E.C. Works, Brentwood, Essex.

SMITH, BECK, AND BECK'S New MERCURIAL BAROMETER, very sensitive. Scale, 3 to 8 inches for every inch of variation, compensating tube instead of a reservoir. Price from 35s. to 42s.

Description sent free by post, or to be had on application at 31, Cornhill, E.C.

Universal Microscope. Price £5 5s.

SMITH, BECK, AND BECK, 31, Cornhill, E.C.; late 6, Coleman Street.

*** Catalogues sent on receipt of 6 postage stamps.

LAWN MOWING MACHINES FOR 1864.

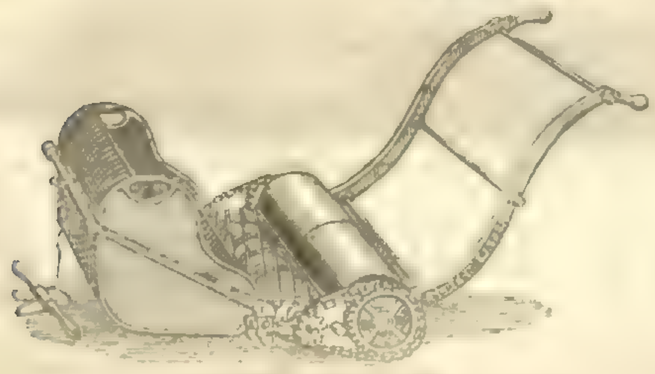

GREEN'S MACHINE.

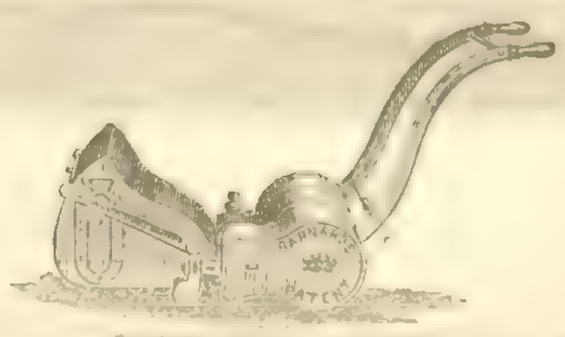

BARNARDS' MACHINE.

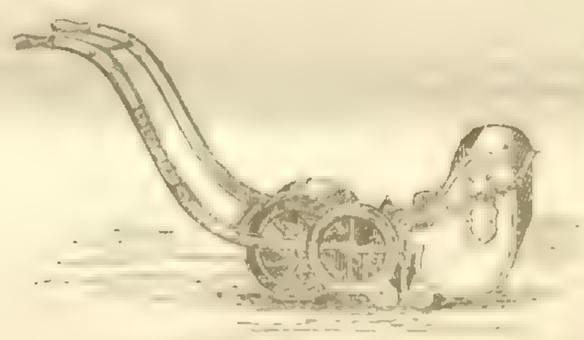

SHANKS' MACHINE.

THE MOWING MACHINE IS NOW SO INDISPENSABLE, THAT NO ONE WHO DESIRES TO HAVE A WELL-KEPT LAWN (AND FEW THERE ARE WHO DO NOT), WOULD FOR ONE SEASON BE WITHOUT ONE.

These Machines Mow the Grass, Wet or Dry, on Lawns uneven or otherwise, in a much neater manner than the Scythe, and at Half the Expense.

Orders entrusted to J. B. BROWN & Co. for the Machines of any particular Maker, will have most careful attention in every respect.

GREEN'S HAND MACHINE.

Size.	Easily Worked	Price.	Size.	Easily Worked.	Price.
10-inch, 12-inch, 14-inch	*By a Boy* ...	£3 10 0; 5 0 0; 5 10 0	18-inch ...	*By a Man* ...	£7 10 0
16-inch ...	*By a Man* ...	6 10 0	20-inch, 22-inch, 24-inch	*By two Men*	8 0 0; 8 10 0; 9 0 0

BARNARD'S MACHINE.

Size.	Easily Worked.	Price.	Size.	Easily Worked.	Price.
8-inch ...	*By a Child* ...	£2 10 0	16 inch, 18 inch	*By a Man* ...	£6 0 0; 6 10 0
10-inch ...	*By a Lady* ...	3 5 0	20-inch ..	*Man and Boy* ...	7 0 0
12-inch, 14-inch	*By a Boy* ...	4 10 0; 5 0 0	22-inch ...	*Two Men* ...	7 10 0

SHANKS' HAND MACHINE.

Size.	Easily Worked.	Price.	Size.	Easily Worked.	Price.
10-inch, 12-inch	*By a Lady* ...	£3 10 0; 4 10 0	19-inch ...	*Man and Boy* ...	£7 12 6
14-inch ...	*By a Boy* ...	5 10 0	22-inch, 24-inch	*By Two Men*	8 7 6; 8 17 6
16-inch ...	*By a Man* ...	6 12 6			

Silent Movement, 4s. to 7s. 6d. extra.

Tool Boxes, 5s. extra.

PRICED LISTS of HORSE, PONY, and DONKEY MACHINES, on application.

A specimen of each of the above described Machines which have been brought out for the season will always be on view at their Offices, 18, Cannon Street, and their Warehouse, 16, Laurence Pountney Lane, quite close to the Offices, for the inspection of those who may wish to select for themselves in preference to leaving the selection to J. B. B. AND Co. A stock of Machines will also be kept on hand, from which orders can be at once executed.

*** *Every Machine sent out is Warranted to give ample satisfaction, and, if not approved of, may be exchanged for any other size of Machine, or for the Machine of any other Maker, or may be at once returned unconditionally.*

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NEARLY OPPOSITE ST. SWITHIN'S LANE and "LONDON STONE," and near LONDON BRIDGE.

LATEST IMPROVEMENTS IN LAWN MACHINES.

SHAW'S PATENT FLEXIBLE LAWN MACHINE, for MOWING, ROLLING, and COLLECTING at the same time. With BOYD'S Patent Self-cleaning and Sharpening Brush.

IS THE ONLY ONE of which the Cutters are SELF-REGULATING, and free to follow all inequalities of ground, with the certainty of leaving a perfectly uniform length of Grass.

IS THE ONLY ONE in which the Pushing Handles are SELF-ADAPTING to any height and convenience of workman, without varying the height of Cutters.

IS THE ONLY ONE which can be used as A ROLLER ONLY, without risk of injury to the Cutters.

Is fitted with BOYD'S well-known Patent SELF-CLEANING and SHARPENING BRUSH, which keeps the Cutters effective, whether the Grass be wet or dry.

Packs away, when done with, in less than ONE HALF THE SPACE of any other Mower, and is therefore safer from injury.

Full particulars, Drawings, Prices, &c., Post Free, on application to the PATENTEE and MANUFACTURER,

JOHN SHAW, JUNCTION WORKS, LEEDS.

Who was Principal Manager for many years of one of the largest Lawn Machine Manufactories in England.

LONDON AGENTS:

MESSRS. JOHN BOYD AND CO., 76, CANNON STREET WEST

LAWN MACHINE AS AT WORK, MOWING, ETC.

SHAW'S TIFFANY.
For samples and prices apply to
J. SHAW & Co., 29, Oxford Street, Manchester.

PATENT GUTTA PERCHA SOLES.—IMPORTANT TO GARDENERS.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. GLENNY, Esq., the celebrated Florist:—

"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles. Your obedient servant, G. GLENNY."

Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump, Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype trays, &c., manufactured by the Gutta Percha Company and sold by their wholesale dealers in town or country.

The GUTTA PERCHA COMPANY, Patentees, 18, Wharf Road, City Road, London, E.C.

THE PATENT IN-DOOR PLANT CASES

(TO WHICH A PRIZE WAS AWARDED AT THE ROYAL HORTICULTURAL SOCIETY'S EXHIBITION).

SOLE MANUFACTURER,

JAMES GRAY, HORTICULTURAL WORKS,
DANVERS STREET, CHELSEA, LONDON, S.W.

The PATENT IN-DOOR PLANT CASE is one of the most useful of the Gardening novelties of the day. It is a handsome ornament for the Drawing Room or Sitting Room, and at all times forms a free, pleasant, and interesting object to the mind and eye. It is always under command, and will preserve many of the most tender Exotic Plants through the severest winter with comparatively little of the trouble and annoyance attending the use of Lamps, Gas, and Heating appliances of any other kind.

To all who have a taste for the cultivation of In-door Plants, for raising Seedlings, striking Cuttings, &c. the Plant Cases will be found an inestimable boon.

The Cases are highly approved and recommended by Professor Lindley, and by Messrs. Veitch, of The Royal Exotic Nursery, King's Road, Chelsea.

Sizes and Prices on application.

GREEN'S IMPROVED NEW PATENT ROLLER,

FOR

LAWNS, DRIVES, BOWLING GREENS, CRICKET FIELDS, and GRAVEL PATHS,

SUITABLE FOR HAND OR HORSE POWER.

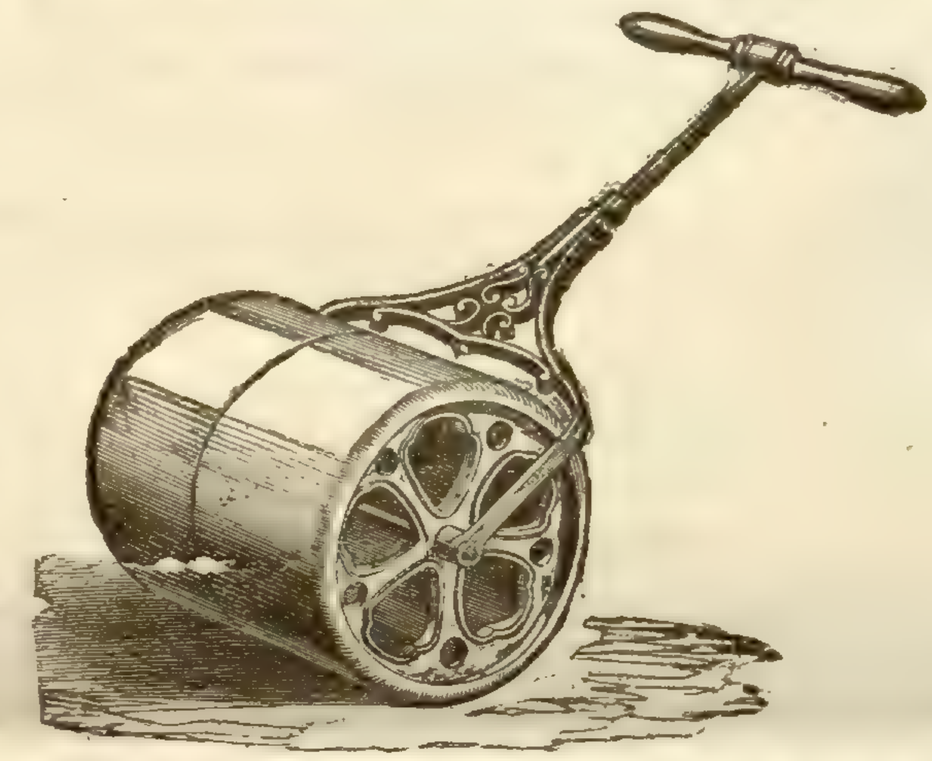

PRICES OF

HAND ROLLERS.

Diameter 30 inches;	length 32 inches	£7	10	0
„ 24 „	„ 26 „	4	10	0
„ 20 „	„ 22 „	3	10	0
„ 17 „	„ 16 „	2	15	0

Delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

PRICES OF

ROLLERS FITTED with SHAFTS,

SUITABLE FOR PONY OR HORSE POWER.

Diameter 30 inches;	length 32 inches	£10	0	0
„ 30 „	„ 36 „	10	15	0
„ 30 „	„ 42 „	11	15	0
„ 30 „	„ 48 „	13	10	0
„ 30 „	„ 60 „	15	10	0
„ 30 „	„ 72 „	17	10	0
„ 30 „	„ 84 „	19	10	0

Delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

The above ROLLERS possess many advantages over all others; they are made in two parts, and are free to revolve on the axis, affording greater facility for turning, and the outer edges are rounded off, or turned inwards, thus avoiding the unsightly marks left by other Rollers. They are manufactured of the best materials, and are got up in a manner surpassing any ever yet brought out.

THOMAS GREEN AND SON, SMITHFIELD IRON WORKS, LEEDS;
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SAMUELSON & CO.'S

LAWN MOWING AND ROLLING MACHINES.

EVERY MACHINE WARRANTED.

PRICES OF MANUAL POWER MACHINES.

To Cut 12 inches, suitable for a Lady ...	£4	12	0
To Cut 16 inches, suitable for One Boy ...	6	10	0
To Cut 19 inches, suitable for One Man & Boy	7	0	0
To Cut 22 inches, suitable for Two Men ...	8	0	0
To Cut 25 inches, suitable for Two Men ...	11	10	0

PRICES OF PONY POWER MACHINES.

To Cut 22 inches	£8	15	0
To Cut 25 inches	11	10	0
To Cut 30 inches	14	14	0

These Prices include Free Delivery to any Railway Station in Great Britain.

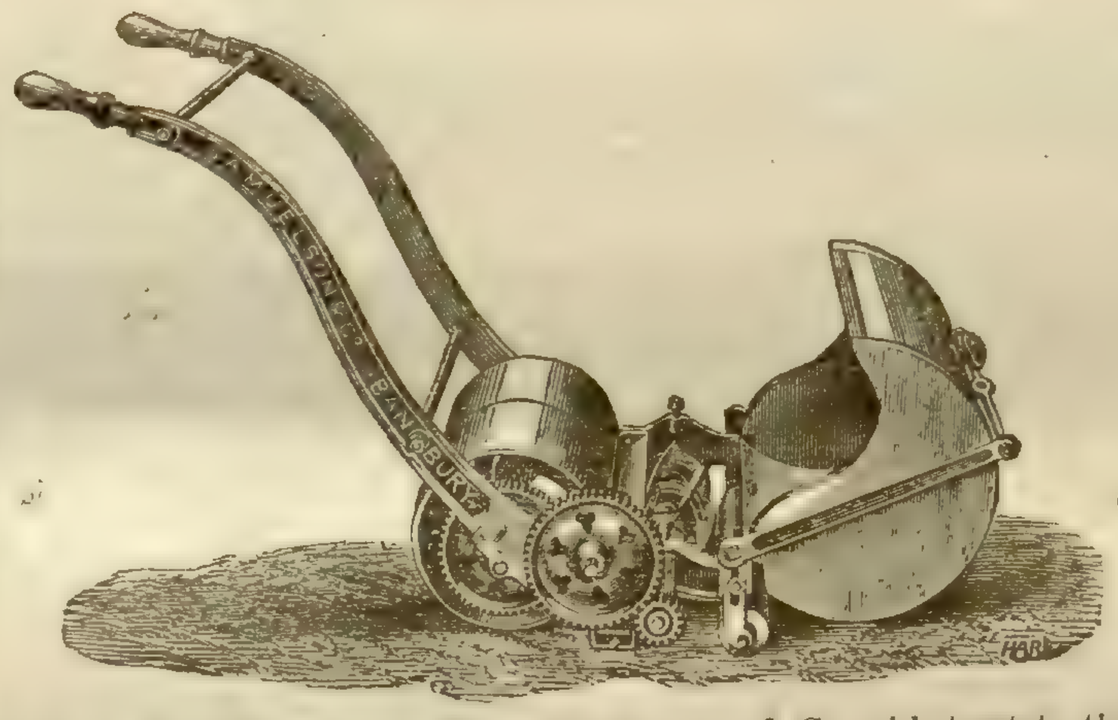

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MACHINES

ARE IN DAILY USE

AT THE

ROYAL GARDENS,

CRYSTAL PALACE GARDENS, &c.

In again submitting their LAWN MOWERS to the notice of purchasers, Messrs. SAMUELSON & Co. wish to state that they do not make annual changes in the principle of their LAWN MOWERS. Experience has fully proved that the general design on which their MACHINES have been built for many years past is the best, and their attention has been given therefore rather to substantial improvements in manufacture, reduction of the draught, and increase of durability by the use of malleable iron in place of cast metal, than to the production of ephemeral novelties. Their MACHINES are superior to all others in lightness of draught, elegance, and efficiency under all circumstances of ground and weather, being self-cleaning, and not liable to derangement in the gearing. Selections from several thousand Testimonials free on application.

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AND OF ALL SEEDSMEN AND IRONMONGERS.

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MR. A. CHANDLER (of the late Firm of CHANDLER & SONS) continues to undertake all kinds of VALUATIONS connected with Horticulture.

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F. A. HAAGE'S, JUN., PRUSSIAN WOOD GARDEN STICKS and TALLIES, Commended by the Royal Horticultural Society, may be had of all sizes, Wholesale of BETHAM & BLACKITH, Cox's Quay, Lower Thames Street, E.C., and Retail of all the Nurserymen and Seedsmen in London and the Provinces.

TANNED NETTING, for the Protection of Fruit Trees from Frost, Blight, and Birds, also for the security of fresh-sown Seeds, at 1*d.* per square yard; 200 yards, 14*s.*; 500 yards, 30*s.*; 1000 yards, 50*s.* WOOL NETTING, COTTON NETTING, SCRIM CANVAS, GARDEN MATS, TULIP COVERS, GREENHOUSE SHADES, &c.

JOHN EDGINGTON & Co., 48, Long Lane, Smithfield, E.C.; and 18, Piccadilly, W. Manufactory, 108, Old Kent Road, S.E.

NETTING for FRUIT TREES, SEED BEDS, RIPE STRAWBERRIES, &c.—TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3*d.* per yard; or 100 yards, 20*s.*; 4 yards wide, 6*d.* per yard; or 50 yards, 20*s.* NEW TANNED NETTING, suited for any of the above purposes or as a Fence for Fowls, 2 yards wide, 1*s.* per yard; ½-inch mesh,

Quantity of EATON & DELLER, 6 and 7, South Bridge, E.C.

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EDGINGTON'S GARDEN NETTING, the cheapest and most durable; 200 square yards, 14*s.*; 500 yards, 30*s.*; 1000 yards, 50*s.*

EDGINGTON'S RICK CLOTHS for 59 years have maintained their celebrity as the best.

EDGINGTON'S MARQUEES and TENTS are the prettiest.

EDGINGTON'S MARQUEES for hire are the most elegant and capacious.

Samples of material free on application. Be particular—FREDERICK EDGINGTON & Co., Thomas Street, Old Kent Road, London, S.E.

A liberal Discount to the Trade.

INTERNATIONAL EXHIBITION, 1862, Class XIX.

Honourable Mention.

TREES COMING into BLOOM will be protected from Frost, Hail, &c., by using HAYTHORN'S HEXAGON and CHISWICK GARDEN NETS. These Nets will secure the Fruit from Wasps, Flies, Birds, &c. They are recommended by most Gardeners.

For patterns, prices, and testimonials, free by post, please direct Mr. HAYTHORN, Nottingham.

SEED BAGS, CORN and FLOUR SACKS, and every description of Bags in use supplied at the lowest prices; also ARCHANGEL and DUNNAGE MATS, CHINA GRASS for tying up Plants, Ropes and Twines, Roofing and Boiler Felts. Prices sent free on application.

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To Nurserymen, Market Gardeners, &c.

TO BE SOLD, 20,000 NEW ARCHANGEL CARGO MATS. Price for 100 to 300, 90*s.*; from 300 to 1000, 87*s.* 6*d.*; 1000, upwards, 85*s.*, less 2½ per cent. for cash. As they are a bargain, buyers are respectfully solicited to purchase at once, as after these are disposed of there will be no more under 97*s.* 6*d.* Thick edged Mats for covering, 65*s.*, 75*s.*, and 77*s.* 6*d.*, best. Other Mats for packing, from 30*s.* up to 50*s.*

Address to the Russia Mat Stores, 133, Minories, E.C.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society, &c.

PROTECTION from the COLD WINDS & MORNING FROST.

"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide .. .. .. 1*s.* 8*d.* per yard run.
Four yards wide .. .. .. 3*s.* 4*d.* per yard.
An improved make, 2 yards wide, 1*s.* 9*d.* per yard.
An improved make, 3 yards wide, 2*s.* 8*d.* per yard run.

Also "Frigi Domo" Netting, 2 yards wide, 1*s.* 6*d.* per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.

"It is much cheaper than Mats as a covering."

Oil Paint no longer Necessary.

HILL AND SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which HILL & SMITH will forward on application.

Sold in casks of about 30 gallons each, at 1*s.* 6*d.* per gallon, at the Manufactory, or 1*s.* 8*d.* per gallon paid to any Station in the kingdom.

Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street West, E.C. from whom only it can be obtained.

HOWARD'S NEW CHAIN or FLEXIBLE HARROW.—This Patent Harrow is much more effective and durable than the ordinary Chain Harrows. It is composed of a series of steel links connecting tripod-shaped tines, which have case hardened points on each side, and its construction is so simple that a new link can be put into the Harrow in the field.

J. & F. HOWARD, having had the above Harrows at work on their own farms for the past year, can with great confidence recommend them.

	£	*s.*	*d.*
Price, for one horse, to cover 6½ feet, marked F 1 ..	2	15	0
Price, for two horses, to cover 8 feet, marked F 2 ..	4	0	0

Full particulars may be had of their Agents throughout the kingdom, or will be sent free on application to JAMES & FREDERICK HOWARD, Britannia Iron Works, Bedford.

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.

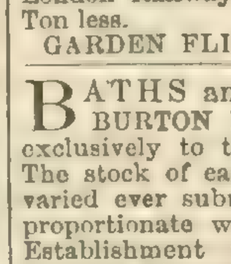

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.

F. & G. ROSHER, Manufacturers, Upper Ground Street, Blackfriars, S.; Queen's Road West, Chelsea, S.W.; Kingsland Road, Kingsland, N.E.

Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

Also TESSELATED PAVEMENTS of more enriched designs than the above.

WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.

To be obtained of F. & G. ROSHER, at their Premises as above. Orders forwarded by Railway with despatch.

SILVER SAND (Best Quality) of F. & G. ROSHER, at the Addresses above—14*s.* per Ton, or 1*s.* 3*d.* per Bushel. 2*s.* per ton extra for delivery within three miles, and to any London Railway or Wharf. Quantities of 4 Tons, 1*s.* per Ton less.

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News of the Week.

IN the House of Lords on Friday the Settled Estates Amendment Bill and the Charitable Assurances Enrolment Bill were read a third time and passed. On Monday Earl GRANVILLE informed the House that in consequence of the recent vote in the House of Commons, Mr. LOWE had resigned the office of Vice President of the Committee of Council on Education, and took the opportunity of eulogising the abilities of Mr. LOWE, and of contradicting the statement that he had unduly interfered with the reports of the inspectors. The Vestry Cess Abolition (Ireland) Bill was read a third time and passed. On Tuesday, in answer to the Earl of MALMESBURY, Earl RUSSELL said that no answer had been received to the question he had instructed the English Minister at Berlin to ask of the Prussian Government respecting the bombardment of Sonderborg, except a remark that it was not usual for a neutral power to inquire into the conduct of belligerents. The Earl of CLARENDON referred to the report that the approaching departure of General GARIBALDI from this country had been hastened by her Majesty's Government, at the dictation of the EMPEROR OF THE FRENCH, and said that his Imperial Majesty was too high-minded to make such a communication, and that if it had been made, her Majesty's Government would not have condescended to listen to it. During his recent visit to Paris the reasons for GARIBALDI'S visit to this country were never alluded to in his presence and the EMPEROR had observed to him that he perfectly understood how the character and qualities of GARIBALDI were likely to excite the enthusiasm of the English people. The Landed Securities Company Bill, and the Bill amending the Improvement of Land Act, were read a second time. On Thursday, in reply to the Earl of CARNARVON, Earl RUSSELL stated that the reason why the Conference on the Dano-German question had been postponed until Monday next was that the Austrian and Prussian representatives had received instructions not to take part in it until Baron BEUST, the representative of the Germanic Confederation, was present. The Earl of MALMESBURY and Lord STRATFORD DE REDCLIFFE warned the Government to be on their guard against a repetition of these postponements.

In the Commons on Friday Mr. W. FORSTER called attention to the arrangements of the Foreign Office and the Board of Trade in reference to trade with foreign nations, and moved for a Select Committee on the subject. Mr. LAYARD and Mr. GIBSON assented to the motion, which was agreed to. On the report of the Committee of Ways and Means on the Sugar Duties, Mr. CRAWFORD moved a resolution in favour of a uniform duty, instead of a graduated scale of duties on sugars. Mr. CARDWELL opposed the motion, which was negatived on a division by 133 to 17. The resolution

imposing an excise duty of 3*s.* 4*d.* per cwt. on sugar used in brewing for sale was then agreed to. On Monday Mr. Lowe announced that, in consequence of the vote of the House on the previous Tuesday, he had felt it his duty to resign the office of Vice President of the Council on Education. He complained that the House had arrived at a decision suddenly and in the absence of all evidence, and denied in the most direct terms the implied charge that the reports of the inspectors had been mutilated in the office. Lord Palmerston expressed his regret at Mr. Lowe's resignation, and said that the House must now be of opinion that its vote of Tuesday had been hastily adopted. It would not be respectful to the House to ask it to rescind its decision; but he should move on a future day the appointment of a committee to inquire into the subject. Mr. Disraeli called attention to the distribution of the Government Offices, by which not less than five Under Secretaries of State had seats in the House of Commons, and moved a resolution declaring that the provisions of the law, whereby four Chief Secretaries and four Under Secretaries, and no more were allowed to have seats in the House, had been violated, and that the seat of the fifth Under Secretary had been thereby vacated. Lord Palmerston admitted that the Government had unintentionally and by an oversight done what the law did not authorise, but the House and the Opposition must share the blame. Sir G. Grey assented to the first part of the resolution, but moved to amend the latter part by adding that a Select Committee should be appointed to inquire whether the Under Secretary last appointed had vacated his seat. With this amendment the motion of Mr. Disraeli was agreed to. The House then went into Committee on the Penal Servitude Acts Amendment Bill when Mr. Hunt moved to add to the 4th clause, words declaring that any holder of a license, who shall fail to report himself to the police at stated times, or change his locality without notice, shall be liable to summary conviction of a misdemeanor, and forfeit his licence. Sir G. Grey opposed the amendment, which was carried on a division by 148 to 120. The remaining clauses were agreed to with amendments. On Tuesday Lord Palmerston stated, in reply to Mr. D. Griffith, that the report of the sudden termination of General Garibaldi's visit to this country having been the result of some suggestion made by her Majesty's Government, at the dictation of the Emperor of the French, was entirely without foundation, and those who had spread or believed such a report did great injustice both to the Emperor and to her Majesty's Government. Mr. Osborne moved a resolution, declaring that it was both unjust and inexpedient to insist on the provisions of the Treaty of London, 1862, so far as they related to the order of succession in the Duchies of Schleswig and Holstein, as a basis for the settlement of the Dano-German dispute. Mr. Peacocke moved as an amendment a resolution approving the avowed policy of Her Majesty's Government to maintain at the Conference the Treaty of 1852. After a long debate, Mr. Osborne said that he was satisfied with the discussion, and would withdraw his motion, but this course being objected to, Mr. Peacocke withdrew his amendment, and Mr. Disraeli moved the previous question, which was carried. On Wednesday Mr. Blake moved the second reading of the Grand Juries (Ireland) Bill. Mr. P. Dawson moved as an amendment, that the Bill be read a second time that day six months. On a division, the amendment was carried by 150 to 27. The Bill was therefore lost. The Chief Rents (Ireland) Bill and the Joint-Stock Companies (Voting Papers) Bill, were read a second time. On Thursday, in reply to Mr. Kinnaird, the Chancellor of the Exchequer explained the proceedings which had given rise to what he termed "the absurd rumours" as to the reasons of General Garibaldi's departure from England, and declared that the "ridiculous stories" which had been circulated on the subject were entirely destitute of any shadow of foundation. On the order for going into Committee of Ways and Means, Mr. Sheridan moved as an amendment, that such a reduction of the Fire Insurance Duty as that contemplated by the resolution of the House, passed last session, would be best effected by an uniform reduction of 1*s.* per cent. on all descriptions of property liable to the duty. On a division, the motion for going into committee was carried by 170 to 117. The amendment was therefore lost. The House then went into Committee of Ways and Means, and agreed to the resolution of the Chancellor of the Exchequer reducing the duty on stock in trade to 1*s.* 6*d.* per cent. The Court of Justiciary (Scotland) Bill, the Fish Teinds (Scotland) Bill and the Summary Procedure (Scotland) Bill passed through committee. The Charitable Assurances Enrolments Bill was read a second time. The Bridges (Ireland) Bill was lost in committee on a division. The Select Committee on the Government Annuities Bill having been nominated, Sir M. Farquhar moved that the Committee have power to send for persons, papers, and records. On a division the motion was negatived by 127 to 104.

The fortress of Düppel, after a gallant defence of two months, was taken on Monday morning by assault, and the Danish army has lost its last hold on the mainland of Schleswig. The latest news says that the Danes have passed over to the Isle of Alsen, and that the greater part of the Prussian army with their artillery have been ordered to march into Jutland, to occupy the whole of that province and besiege Fredericia.

The *France* of Saturday states that France and England are agreed on the principal points of the Conference: and *La Presse* says, under reserve, that the interviews between the Emperor and Lord Clarendon have been of so reassuring a character for the peace of Europe that it is not impossible that considerable reductions may be made in the naval estimates of both countries.

From the United States we learn that the House of Representatives has unanimously passed a resolution declaring its intention not to recognise the new monarchy of Mexico.

Home News.

The Court.—The Queen and Royal family left Windsor on Wednesday for Osborne. On Friday the Queen went out twice for a short drive in the grounds of Windsor Castle. Prince Alfred came to London, and returned in the afternoon. Prince Arthur left the Castle for Greenwich Park. The Princesses Helena and Louisa went to Claremont and visited the Queen Marie Amélie. The Duke and Duchess of Argyll arrived at the Castle on a visit. On Saturday it was announced that her Majesty was obliged to postpone the Reception on that day, in consequence of neuralgia in the face, from which her Majesty had been suffering acutely during the week. Prince Alfred, Princess Helena, and Princess Louisa came to London. Princess Helena and Princess Louisa visited the Exhibition of the Society of Painters in Water Colours, and the French Fine Art Gallery. Prince Alfred met the Princesses at the French Gallery, and drove thence to Buckingham Palace. In the afternoon Princess Louisa returned to Windsor. In the evening Prince Alfred and Princess Helena attended the performance at Covent Garden Theatre, returning to Windsor at night. The King of the Belgians arrived at the Castle from London. Prince Arthur arrived from Greenwich Park. On Sunday morning the Queen, the King of the Belgians, Prince Alfred, Princess Helena, Princess Louisa, Prince Arthur, Prince Leopold, and Princess Beatrice, attended Divine service in the Private Chapel. The Rev. F. C. Cook preached the sermon. On Monday morning the Queen, accompanied by the Princess Helena, drove in the grounds of the Castle. Prince Alfred rode on horseback. The King of the Belgians went to Claremont, and visited the Queen Marie Amélie. Earl Russell had an audience of the Queen. Baron de Cetto, Bavarian Minister; M. de Bille, Danish Minister; M. Quaade, and M. Krieger, were presented at an audience by Earl Russell. In the afternoon the Queen drove out. Prince Arthur left the Castle for Greenwich Park. The Princesses Helena and Louisa came to London, and were present at the Philharmonic Concert, in Hanover Square. The Duchess of Wellington arrived at the Castle on a visit. On Tuesday morning the Queen, accompanied by Princess Helena, walked and drove in the grounds. The King of the Belgians took leave of her Majesty and left Windsor for Dover, on his return to Brussels. Prince Alfred accompanied the King to London. The Princesses Helena and Louisa accompanied his Majesty to the railway station in Windsor. Prince Alfred afterwards left town for Sandringham Hall on a visit to the Prince of Wales. In the afternoon the Queen drove out. On Wednesday morning her Majesty drove in the grounds, accompanied by Princess Helena. In the afternoon the Queen, Princess Helena, Princess Louisa, Prince Leopold, and Princess Beatrice left Windsor for Osborne, where they arrived at half past 7 o'clock. Her Majesty's health, though still requiring care, has not suffered from the fatigue of the journey. It is understood that the Queen will remain at Osborne for about three weeks, and will then return to Windsor for a few days, after which her Majesty and the Royal family will go to Balmoral.

Departure of the King of the Belgians.—The King of the Belgians took leave of her Majesty and the Royal family on Tuesday, and proceeded to Dover on his return to Brussels. His Majesty slept at the Lord Warden Hotel, and embarked on Wednesday morning for Ostend, on his way to Brussels.

The Prince and Princess of Wales have spent the last week at Sandringham very quietly. The weather having been very favourable, their Royal Highnesses have made frequent equestrian excursions in the neighbourhood. On Sunday the Prince and Princess attended Divine service at Sandringham Church. The Rev. G. B. Moxon, rector, officiated. On Tuesday evening Prince Alfred arrived at Sandringham on a visit to their Royal Highnesses. On Wednesday the Prince and Princess with Prince Alfred drove to Hunstanton, and spent the day at the sea-side. On Thursday morning the Prince came to town and had an interview with General Garibaldi at Stafford House. The Prince and Princess, according to present arrangements, will leave Sandringham for London, about the latter end of next week.

Prince Alfred.—It is understood that Prince Alfred is about to proceed on a tour of several months duration. He will leave for Germany on the 26th, and after paying some visits there, will proceed to the Mediterranean, where he will cruise for about three months.

The Cabinet.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Tuesday.

The Conference.—Some of the members of the Conference met at the official residence of the First Lord of the Treasury, in Downing Street, on Wednesday; but owing to the absence of the representatives of Prussia, Austria, and the Federal Diet, the next meeting was adjourned to Monday.

Ministerial Movements.—Mr. Lowe has resigned his office as Vice-President of the Committee of Council on Education, in consequence of the vote of Tuesday week. Mr. H. A. Bruce has vacated the Under Secretaryship of the Home Office, and will succeed Mr. Lowe in the Privy Council Office. Mr. Chichester Fortescue, who had resigned the Under-Secretaryship of the Colonies, in order to reduce the number of Under Secretaries in the House of Commons to that fixed by the Act under which the Indian Secretaryship was constituted, has been induced to withdraw his resignation, and will remain at the Colonial Office. The vacancy occasioned by Mr. Bruce's advance to the Vice-Presidency of the Education Committee will be filled by Mr. Thomas George Baring, now in the India Office; and the future Under-Secretary for India will be a peer, leaving only the usual complement of the four Under Secretaries in the House of Commons.

Parliamentary Movements.—Mr. Childers, the new Lord of the Admiralty, was re-elected for Pontefract on Wednesday without opposition. Sir Robert Anstruther was elected for Fifeshire on Tuesday without opposition. Sir Robert Bateson was elected for Devizes on Monday without opposition. A new writ has issued for Merthyr, vacant by Mr. Bruce's acceptance of the Vice-Presidency of the Committee of Council on Education. Mr. More O'Ferrall has announced his intention to retire from the representation of Kildare at the close of the present Parliament.

The Army.—The colonelcy of the 68th Regiment, vacant by the death of General Mansel, has been conferred on Major-General Lord William Paulet; and the colonelcy of the 88th Regiment, vacated by this appointment, has been conferred on Lieut.-General T. H. Johnston.

Convocation of the Province of Canterbury.—On Tuesday morning both houses assembled for the first time this year, at Westminster, for the despatch of business. In the Upper House the Bishop of London brought up the report of a committee appointed to inquire whether it would be desirable to license lay teachers to assist incumbents of parishes, and what should be the qualifications of such teachers. The report recommended that every incumbent of a parish should be empowered to recommend one or two of his parishioners, being communicants, to be lay teachers to help him; that the bishop should issue, by authority, his licence to those persons, to extend to the 31st of December, those licences being necessarily terminable, if not asked to be renewed in three months. It recommended that it should be left to the discretion of the bishop to test the qualifications of these teachers by examination, and that their duties should be, in addition to those usually performed by district visitors, to visit and pray with the sick and infirm, to conduct cottage and school-room lectures, and to hold short religious services in hamlets, and that they should be

entrusted with the management of parochial charities. The report further stated that the committee thought it would be right that the incumbent should have the power of assigning a stipend to the new lay teachers where necessary, but they did not consider it necessary to give any specific name to the new order. His lordship concluded by moving the adoption of the report. The Bishop of Lincoln seconded the motion. The Bishop of St. David's doubted the power of their lordships to do what would clearly make a new order of preachers in the Church. After some discussion, ending in some verbal alterations, the report was received, and referred to the Lower House for its consideration. The Venerable Archdeacon Bickersteth, who had been elected prolocutor of the Lower House, was introduced in a Latin speech by the Rev. Canon Wordsworth. The Archbishop of Canterbury accepted the election in a Latin reply. The Bishop of Oxford gave notice that at the next session he would move a resolution affirming the necessity of a more satisfactory court of appeal in ecclesiastical causes. In the Lower House, the members proceeded to the election of a prolocutor in the room of Dr. Elliot, Dean of Bristol, who had resigned. Archdeacon Bickersteth was unanimously elected. The house then proceeded to discuss the question of diocesan synods. The debate was ultimately adjourned. In the Upper House on Wednesday, a deputation from the Lower House brought up a *gravamen*, signed by 40 members of the house, calling attention to the grave question involved in the publication of the book called "Essays and Reviews," and praying their lordships to take some action on the matter, with a view to the condemnation of that work. The Bishop of Oxford, in a speech of great length, moved the appointment of a committee to consider and report upon the subject. The House rose before the motion was disposed of. In the Lower House the adjourned debate on diocesan synods was resumed at great length, and after an amendment for a committee to consider the subject had been withdrawn, it was resolved without a division to present an address to the Upper House, stating their opinion that it is desirable to hold diocesan synods annually for consultation, and that, to render such an assembly as useful as possible, the bishop should invite to the synod any laymen in his diocese whose attendance he may deem desirable. On Thursday, in the Upper House, the adjourned debate on the Bishop of Oxford's motion, for a committee on the subject of Essays and Reviews, was resumed, when the motion was strongly opposed by the Bishops of London and St. David's. On a division the Bishops of Oxford, Llandaff, Salisbury, Glocester and Bristol, and Bangor, voted in favour of the motion, and the Bishops of London, St. David's, Lichfield, Lincoln, and Ely, against it. The numbers being thus equal, 5 to 5, the Archbishop of Canterbury gave his casting vote in favour of the motion, and a committee consisting of all the bishops of the province was appointed. In the Lower House a petition signed by several scientific men was presented, expressing their regret that researches into scientific truth were perverted into occasion for casting doubt upon the truth and authenticity of the Holy Scriptures, and praying Convocation to do all in their power to maintain a harmonious alliance between physical science and revealed religion. Dr. Jelf moved the adoption of the report of the committee on the burial service, recommending a revival of the discipline of the Church, instead of any alteration in the language of the service. The Dean of Norwich moved as an amendment that the recommendations of the report in favour of the restoration of discipline do not meet the alleged difficulties, which would be better remedied by modifying the expressions against which exception has been taken. The debate was ultimately adjourned.

Foreign.

FRANCE.—The Emperor has addressed the following letter to the Minister of Finance :—

"The happy solution of the Mexican affair creates in me a desire to see the country profit by the first repayment of the expenses of the war by diminishing the taxes on landed property. Be good enough, therefore, to see if it be not possible to effect the immediate suppression of the second decime registration fee, only preserving of the general law prepared by the Council of State, those arrangements which may be strictly necessary for balancing the Budget. This measure, together with the hopes of peace, which every day become more certain, will contribute, I trust, to the development of public prosperity."

In accordance with this letter, M. Rouher, the Minister of State, announced on Saturday, amidst loud cheers, in the Corps Législatif, the suppression of the *seconde décime* duty on registration, to commence from the 1st of July next, with a modification in the system of registration itself. These measures have been received with the greatest satisfaction by the public. The amount obtained by the second decime duty is estimated at 26,000,000f., and the modification in the system of registration will produce a further saving of 12,000,000f.; and to make up for the deficiency the Mexican indemnity will be applied. *La France* of Wednesday says:—

"It is asserted that it is impossible sufficiently to examine the Bill rearranging the registration fees. The Government will therefore confine itself this year to decreeing the suppression of half a decime upon the registration fee, and will bring the subject for debate before the Corps Législatif in its next Session."

On Friday the Corps Législatif voted the Conscription Bill, fixing the contingent of 1864 at 100,000 men. M. Picard moved an amendment to reduce the number to 80,000, which was rejected. The debate on the Budget is not expected to commence before next Monday. The convention between France and Mexico was published on Sunday. It states that the French troops are to be reduced as soon as possible to 25,000 men, including the foreign legion. The French troops will gradually evacuate Mexico, as the organisation of the Mexican troops proceeds. The foreign legion, composed of 8000 men, will remain in Mexico six years after the recall of all other troops. Wherever the garrison of a place may not be exclusively Mexican the commandant will be a Frenchman. The French commanders will not be able to intervene in the Mexican administration. The expense of the French expedition until July, 1864, is fixed at 270,000,000f. After July, 1864, Mexico will pay an annual indemnity of 1000f. for each French soldier. The Mexican Government will pay annually 25,000,000f. in cash, in liquidation of the sums due to France. The Convention further states that a committee will examine the claims of French subjects and the indemnities due to them. Señor Hidalgo had a private audience of the Emperor on Sunday, and remitted to his Majesty his credentials as Minister in Paris of the Emperor of Mexico, whose accession to the throne he officially notified. The *Moniteur* of Saturday publishes a decree of the Emperor Maximilian creating a committee at Paris deputed to form "a great book" of the foreign public debt of Mexico. Relative to the Mexican loan of 200,000,000f., 6,600,000f. in six per cent. Rente will be inscribed in the book to the credit of the French Government, who will give in exchange a receipt for 66,000,000f. applicable to the diplomatic convention of the 10th of April. Another decree of the Emperor of Mexico orders that 20 half-yearly coupons due to the Mexican bondholders are to be consolidated into New Three per Cent. Stock at an issuing price of 60 stock for each 100*l.* coupons. The Earl of Clarendon dined on Friday at the Tuileries, and on Sunday with M. Drouyn de Lhuys. On Monday night his lordship left Paris on his return to London. The *Moniteur* contains an article stating that there is no foundation for the assertion of two of the London newspapers, that the British Government had abridged the sojourn of Garibaldi in England to please the Emperor of the French. *La France* of Saturday evening states that France and England are agreed upon the principal points of the Conference, and that the two Powers will propose an armistice at the opening of the sittings. The *Constitutionnel* of Wednesday says:

"France intends to maintain the Treaty of 1852; but should the Conference find that convention no longer harmonises with the present state of affairs, and wish to replace it by a fresh combination, the French Government, in conformity with its principles, would not consider itself entitled to dispose of the population of the Duchies before they had been consulted. The statements of certain foreign journals, that it has been decided to take the vote of the Duchies by universal suffrage, are incorrect. France is aware that in such questions the usages of a country should serve as a guide."

La Presse of Saturday evening says, under reserve :—

"It is asserted that the interview between the Emperor and Lord Clarendon was of an essentially reassuring character for the peace of Europe, and that it is not impossible that considerable reductions may be made in the naval estimates of the Budgets of both countries. The debate on the Budget in the Corps Législatif has been postponed to the 25th inst., it having been supposed that an event might happen which would enable M. Fould to modify his financial plans."

The Government have prohibited an intended banquet and theatrical performance in honour of the tercentenary of Shakspeare. They were both got up by French literary men, and it is said that at the banquet a manifestation would have been made in favour of Victor Hugo. The English banquet announced for to-day has not been interfered with.

SPAIN.—The bill annulling the constitutional reform has been adopted in the Cortes by 187 against 17 votes. The bill on the press was brought forward on Friday. The Queen will leave for Aranjuez on the 22d inst., accompanied by Señor Mon. The Ministry is strong, notwithstanding the current rumours of agitation and uneasiness existing among political parties.

SWITZERLAND.—The Swiss Federal Council have resolved to put in force the decree of expulsion against Mazzini, on the ground that he has lately several times abused the right of hospitality. Orders have consequently been despatched to the different cantons to that effect.

THE DANISH DUCHIES.—The fortress of Düppel was captured by the Prussians on Monday by assault. This event had been anticipated for several days, extraordinary efforts having been made by the besiegers for the attack by the construction of new parallels, and batteries, and by keeping up the bombardment day and night almost without intermission. The assault was delivered at 10 o'clock on Monday morning. A terrible fire from the Prussian artillery destroyed three redoubts, which were immediately occupied by the besiegers. The left wing of the position was consequently given up, and the Danish troops were compelled to fall back, with great loss. The evacuation of the right wing took place under more favourable conditions, but also with considerable loss, the greater part of four Danish regiments being annihilated. The *tête-de-pont* and the bridges were demolished by the Prussian artillery, but were defended by the Danes until the army had crossed to the Island of Alsen. The Rolf Krake arrived too late to take part in the defence of the works; she was struck by some shells and retired. 2600 Danish soldiers, 40 officers, 90 guns, and many Dannebrogs, fell into the hands of the Prussians. The Danes lost in killed and wounded between 80 and 100 officers, and 4000 men; General Duplat and two commanders of brigade were among the killed. The Prussian loss in killed and wounded amounted to two generals, 60 officers, and upwards of 1000 men. Immediately after the storming of the *tête de-pont* the greater part of the troops and the artillery were ordered to march into Jutland, to occupy the whole of that province and to besiege Fredericia. On Tuesday hostilities were suspended from 10 A.M. until 6 P.M. to allow the Danes to evacuate Sönderborg. If the place was not evacuated by that time the bombardment was to re-commence. During this suspension of hostilities a flag of truce was sent to the Prussian army, to obtain intelligence of the Danish officers wounded and prisoners. 811 Prussians, many of whom were severely wounded, and 21 Danish officers and 580 men, were then in the hospital at Gravenstein. On Friday General Mouster made an expedition to Julsminde, and carried off a considerable amount of military stores. On Sunday afternoon Captain Hoffmüller and Lieut. Hassel, of the 15th Regiment of Infantry, landed with 16 men on the island of Alsen. They drove away some Danish soldiers, and spiked the two guns of a Danish battery. Large masses of Danes being then observed issuing from the adjoining wood, the Prussians withdrew to their positions without loss, carrying away with them all the war material and ammunition. On Thursday morning the King of Prussia, accompanied by the Minister of War, Herr von Roon, arrived at Rendsburg. His Majesty was enthusiastically received at the railway station. Herr Wiggers addressed the King, who replied as follows:—

"The cause of the Duchies is sacred to me. The work which we have commenced with such earnestness shall be completed in like manner. The people may be assured that the blood of my children has not been shed in vain."

Young girls dressed in the national colours strewed flowers before the King. The band played the Prussian National Hymn and the song of Schleswig-Holstein, amid the cheers of the people. Salutes were fired from the Carlshütte (an iron foundry near Rendsburg). The magistracy and town council of Kiel have since sent a deputation to Flensburg to pay their respects to the King. They requested all the Holstein communes, by telegraph, to join them. A Bremen ship and three Hamburg vessels were captured on Tuesday by Danish frigates off the Weser. The report that the Hamburg and New York steamer Bavaria was among these captures was unfounded. The Danish line-of-battle ship Skiold, with 22 other vessels, was in sight near Horup Hav on Tuesday. Two hundred and fifty officials of the various Governmental departments, who have taken the oath of allegiance to King Christian, held a meeting at Neumunster on Sunday, when it was resolved to retract the oath, and to send intelligence of the same to Copenhagen.

FRANKFORT.—The Federal Diet having obtained the sanction of the King of Saxony for the nomination of Baron von Beust as their representative at the Conference, the latter has declared himself ready to accept the nomination, and expressed his thanks to the Federal Diet for its choice. On Monday morning the Baron left Dresden for London to attend the Conference as representative of the Federal Diet, visiting Gotha on his way by the invitation of the Duke of Saxe-Coburg. On Saturday he had a long conference at Dresden with a deputation from the Holstein Estates, which had arrived in that capital for the purpose.

PRUSSIA.—A despatch from Berlin of Wednesday says, that as the British Cabinet had fixed the 20th inst. as the date of the meeting of the Conference without the consent of the great German Powers, and without considering that Baron von Beust could not arrive in London for a few days, the Prussian representatives in London had received instructions not to be present at the opening of the Conference as fixed by England. It is asserted that the Austrian representatives had received similar instructions. The victory before Duppel was announced by salutes on Monday evening. Great crowds of people surrounded the Royal Palace, cheering the King and Queen, and singing the Prussian National Hymn. Their Majesties appeared on the balcony, and thanked the people. Hearty cheers were given also for the army, and many houses were magnificently illuminated. The King immediately sent the following telegraphic message to Prince Frederick Charles, and on Wednesday left Berlin for the seat of war :—

"Next to the Lord of Hosts I have to thank my splendid army and thy leadership for the glorious victory of this day. Express to the troops my highest acknowledgment and my Royal thanks for their performances." "WILHELM."

The *Nord-Deutsche Allgemeine Zeitung* of Tuesday says that the occupation of the whole of Jutland has been resolved upon, as a pledge for the indemnification of those Prussian and German subjects who have suffered losses by "Danish piracy." It is also announced that the Prussians will energetically contend at the Conference for the rights of neutrals.

AUSTRIA.—The official *Wiener Zietung* of Saturday says :—

"The two great German Powers consider substantial and permanent guarantees as an indispensable condition for the welfare of the Duchies, and as the basis of any resolutions to be taken by the Conference. The leading points of these

guarantees can only be—'The inseparability of the Duchies, their occupying towards Germany the position of protected States, and finally their administrative and political independence. The representatives of the German Powers will not deviate from these points.'"

Hungary.—Count Forgach, the Hungarian Aulic Chancellor, has resigned at the request of the Minister President. He will be succeeded by Count Herman Zichy.

Italy.—The Emperor and Empress of Mexico arrived in Rome on Monday and took up their residence at the Mareschotti Palace. Their reception was brilliant. An immense crowd had assembled at the railway station, and the French regimental bands performed as they passed through the streets. On Tuesday the Emperor and Empress had an audience of the Pope. They also visited the Basilica of the Vatican, the ex-King of Naples, the Neapolitan Royal family, and Cardinal Antonelli. In the evening their Majesties gave a dinner party, followed by a reception, which was attended by the Cardinals, the Pontifical Ministers, the diplomatic body, and the Roman nobility. On Wednesday the Emperor and Empress attended mass at the Vatican, and the Pope afterwards returned the visit of their Majesties. In the afternoon the Emperor and Empress left Rome for Civita Vecchia, where they embarked on the same evening for Mexico.

Poland.—The investigation into the affairs of the Credit Institution of Landed Proprietors was made on the 14th, when the books and assets were declared to be perfectly in order. An Imperial decree has since been published ordering the issue by the Institution of duplicates of the bonds which have been purloined from the public treasury in Warsaw. An Imperial ukase has been issued withdrawing the administration of the diocess of Warsaw from Monsignore Felinski. It is asserted that the Russian Government is making preparations for the secularisation of the convents, and intends taking measures against the Catholic clergy.

The Danubian Principalities.—The *Wanderer* publishes news from Jassy announcing that General Kotzebue, the Commandant of Odessa, had received orders from St. Petersburg to enter Moldavia under certain circumstances. A Russian officer communicated these orders to the Roumain Commandant. Great excitement was caused by the intelligence.

India.—Advices have been received from Sir Charles Bright announcing the entire completion of the Persian Gulf cable on the 27th of March. The line was working excellently through its whole length. The land line between the head of the gulf and Bagdad is not yet completed.

China.—Major Gordon has attacked Eshing, which was subsequently evacuated by the garrison. Frightful destitution prevails in Northern China. Sir Harry Parkes has arrived at Shanghai and taken charge of the Consulate.

United States. — The Federals at Somerville, Tennessee, were defeated by the Confederates under General M'Cullough on the 30th ult., with a loss of three officers and 75 men killed and wounded. General Forrest is moving out of Kentucky, and it is rumoured that he intends attacking Memphis. A slight engagement, lasting three hours, occurred on the 28th ult., 35 miles above Alexandria, Louisiana, between 8000 Federals and the Confederates, who were estimated 12,000 strong. The Federals are reported to have captured 500 prisoners, and then continued advancing, endeavouring to bring on a general engagement. The Confederate ram Tennessee is reported to have sunk at Grant's Pass, Mobile, during a gale. St. Louis telegrams of the 5th state that the Confederates in Mississippi are re-occupying their old lines on Big Black and Yazoo Rivers. They are also constructing strong fortifications at the Orange and Alexandria Railway crossing of the Rapidan. On the 5th General Grant returned to the Army of the Potomac. It is reported that General Meade is to be removed, and that active commands will be offered to Generals M'Clellan and Fremont. Mr. Seward has sent to the Congressional Committee on Immigration the outline of a Bill which provides for the advance of passage money to emigrants to America as a loan, to be afterwards repaid by their labour. The Bill authorises the naturalisation of foreigners after one year's residence. The House of Representatives on the 4th unanimously adopted a resolution by Mr. Winter Davis, declaring that the United States would never recognise or tolerate a monarchy in Mexico. The Senate has passed a resolution amending the constitution so as to abolish slavery. The resolution has yet to pass the House of Representatives and the State legislatures. In Louisiana the election for delegates to the State Constitutional Convention has resulted in the success of the Free State party. An enormous mass meeting of working men has been held at New York, protesting against legislative interference with strikes.

Mexico.—Accounts from Vera Cruz to March 19 state that there is no military news. The army of Juarez no longer exists, Juarez himself being a fugitive, and his whereabouts unknown. There are only some bands of plunderers wandering about the country.

San Domingo.—Advices from San Domingo state that the town of Palama and the insurgent garrison, with the stores of provisions and ammunition, had fallen into the hands of the Spaniards. The Government is now preparing for a decisive campaign, and General Gandara is on the point of setting out for Manilla with all the available troops.

Parliament.

HOUSE OF LORDS.

Friday.—*The Reserve Force.*—In answer to a motion by the Earl of Lucan for returns of the strength of the reserve force, Earl De Grey and Ripon said that it was probable that the loss to the army this year, according to the provisions of the Limited Enlistment Act, would amount to 4000 men. To give an additional inducement to the men to re-enlist, he proposed to give an additional bounty of 1*l.* The Government were convinced that the act had carried out the object for which it was passed, and that they had no intention of altering it, whilst they were ready to listen to any suggestions for improvement.—The Earl of Dalhousie was glad to find that the Act had worked satisfactorily. He would never have introduced it if it had not had the sanction of the Duke of Wellington, who supported it in every step. The *Settled Estates Act Amendment Bill*, and the *Charitable Assurances Enrolment Bill*, were read a third time and passed.

Monday.—*The New Gun.*—The Earl of Derby called attention to the favourable trials of the piece of ordnance invented by Mr. Mackay, of Liverpool, which, he said, bids fair to become a formidable rival to the guns of Mr. Whitworth and Sir W. Armstrong.—Earl De Grey and Ripon said that the reports in the newspapers as to the merits of the gun in question were confirmed by the officer deputed by Government to be present at the trial; but that at the distance at which the gun was tried equally satisfactory results had been attained by other guns, which subsequent trials at other ranges had not realised. At present, therefore, a decisive opinion could not be formed as to the ultimate value of Mr. Mackay's invention. The Earl of Hardwicke denounced the Armstrong gun as unsuitable to the navy.—The Duke of Somerset said that he had obtained from Sir W. Armstrong a muzzle-loading wrought iron gun for present use, which had been satisfactorily tried; but that, with respect to rifled guns generally, there was so much difference of opinion among the highest authorities that he could not take upon himself the responsibility of ordering any large number of rifled ordnance for the navy.—After some remarks from the Earls of Malmesbury and Ellenborough, the subject dropped. *The Steam Rams.*—The Earl of Derby gave notice that on Tuesday, the 26th inst., he should call attention to the correspondence between her Majesty's Government and Messrs. Laird, of Birkenhead, in reference to the steam rams in the Mersey. *Committee of Council on Education.*—Earl Granville announced that, in consequence of the vote of the House of Commons on Tuesday last, Mr. Lowe had resigned the office of Vice-President of the Committee of Council for Education. He paid a high compliment to the ability and energy of the right hon. gentleman, under whose auspices, he said, the Education Department of the Government had advanced immensely in efficiency, and asserted that Mr. Lowe had not been guilty of interfering in any improper way with the reports of the inspectors of schools.—The Earl of Derby admitted that a certain discretion ought to be allowed to the chief of every department to strike out from the reports it received the irrelevant matter that might lead to much controversy; otherwise official reports might become pamphlets advocating individual opinions. He felt confident that Lord Granville would never allow any report to be laid before Parliament so altered as to convey a meaning not intended by the writer, or giving undue favour to the particular views of the Government itself. He understood that a committee of the House of Commons was to be appointed to inquire into the subject. This appeared to him the most expedient course to be adopted. The *Union Relief Aid Acts Continuance Bill* and the *Land Drainage (Provisional Orders) Bill* were read a second time. The *Vestry Cess Abolition (Ireland) Bill* was read a third time and passed.

Tuesday. — *The Departure of Garibaldi.* — The Earl of Clarendon, in referring to a rumour that the departure of General Garibaldi was to be traced to suggestions from the Government at the dictation of the Emperor of the French, denied that there was the slightest truth in the report. During his recent visit to Paris no allusion was made either directly or indirectly by the Emperor of the French or by any member of his Government with respect to the cause of his arrival in this country or as to the probable time of his departure. He would not say that the subject was not alluded to, for it was adverted to by himself, and he said that the enthusiasm with which General Garibaldi was received on his entrance into London was caused by the circumstance of his having risen from the ranks of the people by the services he rendered to his country, and because he was brave and honest, and that similar scenes of enthusiam would await him in different parts of England. Nobody was more convinced than himself of the inconvenience and impropriety of alluding to any communication with which he was honoured by the Emperor of the French; but he thought he was not betraying any confidence when he stated that the Emperor said he fully understood and entirely believed how such qualities as those went home to the hearts of the English and commanded their admiration. As to the pending Conference, no concessions had been asked from the English Government, the Emperor wishing that on all questions that might arise a cordial understanding should exist between the two countries. *Bombardment of Sonderborg.*—The Earl of Malmesbury asked whether any reply had been received to the inquiries which the Government had made at Berlin with respect to the bombardment of Sönderborg without notice, and the destruction of unarmed and inoffensive inhabitants. He denounced that proceeding in strong terms, and said that every private letter confirmed the original account of that great outrage upon humanity. — Earl Russell said that no reply had been received from Berlin, and he believed that the silence of Prussia was to be attributed to the opinion held by that Power that England, being a neutral Power, had no right to make such an inquiry. He agreed with the Earl of Malmesbury that the bombardment of Sonderborg was repugnant to the feelings of humanity, and inconsistent with the practice of civilised nations. The *Landed Securities Company Bill* was read a second time on the understanding that it was to be referred to a select committee.—The Lord Chancellor moved the second reading of the *Land Improvement Act* (1864) *Bill*, the object of which is to grant facilities for the improvement of estates. He anticipated very beneficial effects from the operation of the measure.—After a few words from Lord Berners the Bill was read a second time, and referred to a select committee. The *Union Relief Aid Act Continuance Bill* passed through committee.

Thursday.—The *Joint-Stock Companies (Foreign Countries) Bill* was read a second time. The *Union Relief Aid Acts Continuance Bill* and the *Land Drainage (Provisional Orders) Bill* were read a third time and passed.—Lord Chelmsford called attention to the returns made to the House under the *Land Transfer Act*, and argued that the results which were anticipated from the passing of the Act had not been realised. Only 65 applications for registration had yet been made, and only 11 estates had been registered. He therefore regarded the Act as a complete failure.—The Lord Chancellor denied that the Act had been a failure, and experience proved that all such changes were very slowly adopted. The Act only came into operation in October, 1862. From that time until March last property to the amount of 2,000,000*l.* had been registered, and numerous applications for registration had since been made.—After some observations from Lord Cranworth, the Duke of Montrose, and Lord Overstone, the subject dropped.—In reply to the Earl of Carnarvon, Earl Russell stated that the reason why the Conference on the affairs of Denmark and Germany had been postponed until Monday next was that the Austrian and Prussian representatives had received instructions not to take part in the Conference until M. Beust, the representative of the Germanic Confederation, was present.—The Earl of Malmesbury hoped the Government would be on their guard against a repetition of these postponements.—Lord Stratford de Redcliffe thought the proceedings of Austria and Prussia ought to be closely observed, as the hostilities were not only continued in a cruel and murderous spirit, but there was an apparent intention to extend them to the whole of Jutland.

Friday.—*Sentence of Death.* — The Earl of Ellenborough introduced a Bill to relieve the Home Secretary from the sole responsibility of deciding whether the sentence of death should be carried out, by providing that the subject should be considered by the whole Cabinet, and that the result arrived at should be embodied in an order of the Queen in Council. The Bill was read a first time. *The Metropolitan Railways.*—The Earl of Derby moved that it shall be an instruction to the committee on every bill for the construction of a new railway within the metropolis, to insert provisions securing to the labouring classes a cheap transit by a morning and evening train, with such modifications as may appear required by the circumstances of each case.—Lord Stanley of Alderley, Earl Grey, the Earl of Ellenborough, and the Earl of Shaftesbury entirely concurred in the motion, which was agreed to. [Left sitting.]

HOUSE OF COMMONS.

Friday.—*Under Secretaries of State.*—Mr. Disraeli called attention to the fact that at the present moment not less than five Under Secretaries of State occupied seats in the House of Commons, being one more than was authorised by statute.—Lord Palmerston said that no change had recently taken place, and that these officers were precisely in the same position as they had been for some years past.—On the order for going into Committee of Supply, Mr. W. Forster called attention to the arrangement between the *Foreign Office and the Board of Trade* in reference to trade with foreign nations; and, after representing the inconveniences suffered by the commercial community by having to deal with the two offices, by the difficulty of getting them together, and the want of responsibility under such a system, moved for a Select Committee to inquire whether means could not be devised to put the trading interests in direct communication with the Foreign Office. In the course of his speech, he adverted to the success of the French Treaty, which he said was wonderful, and taught a lesson to the nations of Europe.—Mr. Layard explained that there was not any divided responsibility between the Foreign Office and the Board of Trade, and that the present system of conducting business in those departments was as good as any that could be devised. Any attempt to bring the machinery of the Board of Trade into the Foreign Office would be impracticable. The inconvenience referred to was caused by the difficulty in making and carrying out commercial treaties with foreign nations, for which neither the Foreign Office nor the Board of Trade were responsible. With regard to a Committee of Inquiry, he had no objection whatever to its appointment, as his desire was to make our commercial relations with foreign countries as satisfactory as possible.—Lord Stanley thought a fair *primâ facie* case for inquiry had been made out.—Mr. Barnes and Mr. Bass supported the motion.—Mr. Henley also approved of the motion, although he could not exactly see his way to remedy the evil complained of.—Mr. Newdegate expressed his obligations to Lord Palmerston for the facilities given for obtaining returns through our consuls. He considered, however, that the duties of consuls ought to be limited to commercial functions, and should not be mixed up with politics.—Mr. M. Gibson was not prepared to say that the Board of Trade was absolutely perfect in its machinery, and was therefore willing to agree to inquiry; but he denied that there existed that divided responsibility which Mr. Forster had complained of.—Mr. Cobden commented upon the vast progress which had been made of late years in our commercial relations, and contended that the Board of Trade had always been in advance of the Foreign Office in opening up new markets for the absorption of our manufactures.—After a few words from Mr. Bazley, the motion for a committee was agreed to. *Crime in Ireland.*—Mr. Whiteside moved for returns of indictable offences tried before the judges at the late assizes for the counties of Roscommon, Cavan, Longford, Limerick, and Westmeath.—Sir Robert Peel assented to the motion, and gave explanations with regard to the state of crime in those districts, and the measures adopted by the Irish Executive for its repression. The discussion was continued by Mr. M'Mahon, The O'Connor Don, Lord C Hamilton, and other members.—The Attorney-General for Ireland reviewed the moral condition of the country, and the organisation of the police force, claiming for the former a high place among the nations of Europe, and for the latter the reputation of being thoroughly efficient in the discharge of their duties. The motion was withdrawn. *The Sugar Duties.*—On the report of the resolution of the Committee of Ways and Means relating to the sugar duties, Mr. Crawford moved a resolution, that it is not possible for the officers of the Customs to ascertain by inspection the quantity of crystallisable saccharine matter contained in any sample of sugar, and that a law which seeks to effect such an object is unjust to the producer, while it excludes large quantities of fine sugars from the market, and thereby injures both consumers and the revenue by limiting the supply.—Mr. Potter seconded the motion.—Mr. Cardwell opposed it, urging that the propositions contained in it were based on a misconception of facts, and admitted of a clear refutation. On a division, the motion was negatived by 133 to 17, and the report of the Committee of Ways and Means was agreed to. The House then went into Committee, and agreed to the resolution for carrying out the proposition in the budget relating to excise duty on sugar used in brewing. The remaining business was then disposed.

Monday.—*Resignation of Mr. Lowe.*—Mr. Lowe made a personal explanation with reference to the resignation of his office as Vice-President of the Committee of Council for Education. Adverting to the resolution passed by the House on Tuesday last which condemned the practice of mutilating the reports of the inspectors of schools, he declared emphatically that he had never either marked or mutilated any of the reports in question, but that a practice had originated in the department, when it was under the control of Mr. Adderley, for a clerk to mark certain passages, in order to attract the notice of the President or Vice-President. Mr. Adderley had struck out certain passages thus distinguished, but when the practice of marking passages came to his (Mr. Lowe's) knowledge two years since, he issued peremptory instructions for its discontinuance. The fact that he himself had not seen the marks set against the paragraphs was to be attributed to the circumstance that he was physically unable to read lengthy manuscripts, and that in consequence they were read to him by his secretary or by a clerk. He submitted that the House had arrived at a hasty and unjust decision, and that it had condemned and censured him without affording him an opportunity to answer the evidence brought against him.—Lord R Cecil expressed his regret that Mr. Lowe had taken up the matter in a personal sense, as the resolution which had led to

his retirement had been directed against the Committee of Council, and not against the right hon. gentleman himself. If the latter had on Tuesday night made the frank explanation which he had now offered to the House, the resolution might not have been pressed to a division, or the result of the division might have been different.—Lord PALMERSTON, having paid a high compliment to the administrative capacity of Mr. Lowe, said that he had endeavoured, but to no purpose, to prevent him from resigning his office, as he did not consider that the resolution of Tuesday last amounted to a vote of censure upon him personally. He would not ask the House to reverse its decision, but he intended on Thursday to move the appointment of a select committee to ascertain the manner in which the Committee of the Privy Council for Education conducts its business in reference to the reports of her Majesty's inspectors of schools.—Mr. DISRAELI, on the part of the Opposition, declared that they accepted the statement of Mr. LOWE, so far as his personal honour was concerned, as perfectly satisfactory. He regretted, in common with the noble lord at the head of the Government, that the country had lost so competent a public servant as Mr. Lowe had proved himself to be, but contended that the misfortune was to be attributed to the circumstance that the right hon. gentleman had not been supported by his colleagues. —After a few words from Mr. WALTER and Mr. W. E. FORSTER, disavowing any personal feeling against Mr. LOWE, the subject dropped. *Under Secretaries of State.*—Mr. DISRAELI brought under notice, as a question of privilege, the circumstance that throughout the present session of Parliament five Under Secretaries of State had been sitting in the House instead of four, which was a violation of the statute. He submitted a resolution to the effect that notice having been taken by a member of the House that more than four Under Secretaries of State had been sitting and voting in the House at the same time during the present session, resolved that the provision of the law had been violated, and that the seat of the fifth Under Secretary of State had been thereby vacated.—Lord PALMERSTON was ready to admit that the Government had unfortunately and by oversight done that which the law did not allow. He was, however, prepared to take the whole of the blame upon himself, although he held that the Opposition, and indeed the House generally, were likewise to blame, because the peculiar function of the Opposition was to watch the conduct of the Government and to pick them up even before they fell. Looking at the subject from this point of view, the Government were justified in complaining that the Opposition had allowed them to go on so long breaking the law. He suggested that the better course would be to bring in a bill of indemnity.—The ATTORNEY-GENERAL explained the provisions of the statute, and pointed out an objection to the latter part of the resolution.—Mr. WALPOLE expressed a doubt whether, by the 29th section of the statute of Anne, the last appointed Under Secretary of State had not made himself liable to a penalty of 500*l*.—Sir G. GREY thought the more advisable course would be to appoint a select committee to consider the whole subject in connection with the proposed bill of indemnity. He suggested that the House should agree to the first portion of Mr. Disraeli's motion, and omit the second, substituting for it the words, "and that a Select Committee be appointed to consider whether the Under Secretary of State who was last appointed to that office had thereby vacated his seat."—After a few words from Sir F. KELLY, the motion of Mr. Disraeli, with the amendment suggested by Sir G. GREY, was agreed to. A new writ was then ordered to issue for Merthyr Tydvil, in the room of Mr. H. A. Bruce, who has accepted the office in the Education Department, vacant by the resignation of Mr. Lowe.—The House then went into Committee on the *Penal Servitude Acts Amendment Bill*.—Mr. ADDERLEY moved a resolution to the effect that the ticket-of-leave system without police supervision should no longer be continued. After a brief discussion the motion was withdrawn. Clauses 1 to 3 inclusive were agreed to.—On clause 4, Mr. HUNT moved to add the following words:—"If any holder of a license who shall be at large, shall fail to report himself to the chief police station of the borough or district where he shall be on his arrival therein, and subsequently on the first day of each month, or shall change his locality without having previously notified the same to the police station to which he last reported himself, he shall be deemed guilty of a misdemeanour, and may be summarily convicted thereof, and his license shall be forthwith forfeited by virtue of such conviction."—The amendment was opposed by Sir G. GREY, Mr. WHITBREAD, and Mr. HENLEY, and supported by Mr. BEACH, Mr. MARSH, Mr MOOR, and Mr. H. SEYMOUR. On a division, it was carried against the Government by 148 to 120. The remaining clauses were agreed to, and the Bill passed through Committee. The *High Court of Bombay Bill* and the *Court of Chancery (Despatch of Business) Bill* were read a second time. The *Common Law Procedure (Ireland) Amendment Bill* was read a third time and passed.

TUESDAY.—*Departure of Garibaldi.*—In reply to Mr. D. GRIFFITH, Lord PALMERSTON stated that he had heard the report that the sudden termination of General Garibaldi's visit to this country was the result of some suggestion made by her Majesty's Government, and that that suggestion had been dictated by a communication received from the Emperor of the French. All he could say was that those who had either spread or believed such a report did great injustice both to the Emperor of the French and to her Majesty's Government. The Emperor of the French was too high-minded and generous to have made any such an application to the Government; and if any foreign sovereign were to make any communication of the kind it would be civilly but firmly resisted and repelled. He had reason to believe that the Emperor of the French regarded the reception which Garibaldi had met with in this country as extremely creditable to the national feeling. With regard to her Majesty's Government, they had nothing to do with shaping General Garibaldi's arrangements; and he was told that the visit was to be brought to an earlier termination than was at first intended purely and entirely by a regard to his health. *The Danish Question.*—Mr. OSBORNE moved "That it is both unjust and inexpedient to insist on the provisions of the Treaty of London, 1852, so far as they relate to the order of succession in the Duchies of Schleswig and Holstein, as a basis for the settlement of the Dano-German dispute." He contended that Denmark had not performed her part of the Treaty of 1852 as regards Schleswig and Holstein, and urged that the policy pursued by Earl Russell, while extremely injurious to the prestige of England at foreign Courts, and calculated to plunge the country into war, was of such a nature as to lead Denmark to believe that if she resisted the demands of the German Powers she would receive material assistance from Great Britain. He severely criticised the despatches of Earl Russell in reference to the Duchies; and, referring to the notice given by Mr. Disraeli to move the previous question, hinted that it would be desirable for the Opposition to declare what their foreign policy was, as he was persuaded that the noble lord at the head of the Government was too good a tactician to allow an opponent to usurp his place without extorting from him a confession of his political faith.—Mr. PEACOCKE moved, as an amendment, that the House, without expressing any opinion as to how it had been carried out, approved the avowed policy of the Government in maintaining the Treaty of London of 1852, and in calling on the Danish Government to fulfil the promises which it made to the two great German Powers in 1851-2.—Mr. A. F. EGERTON seconded the amendment.—After some remarks by Mr. GRANT DUFF, Mr. C. BENTINCK, Mr. B. COCHRANE, Mr. NEWDEGATE, Sir H. VERNEY, Lord R. MONTAGUE, and Mr. LIDDELL, Mr. LAYARD deprecated as extraordinary a debate in Parliament on a subject which, within 24 hours, was to be submitted to the solemn consideration of a Conference. He charged Mr. Osborne with having misrepresented the actions and policy of the Government, and vindicated the conduct of Earl Russell, who had not, he said, given Denmark any promise of material support against Germany. On the contrary, the Danish Minister himself had admitted that all her Majesty's Government had promised was their sympathy. War having unfortunately broken out, her Majesty's Government had turned their attention to localising it as much as possible, and he believed that, had it not been for their exertions and their influence in Europe, a general war would have broken out.—Mr. DISRAELI said that he was not prepared to move the previous question as an amendment to the motion of Mr. Osborne because he had any confidence in the foreign policy of the Government. He had no confidence in—nay he had more than suspicion of—that policy; but he held that this was not the proper moment to raise the issue. He was of opinion that the foreign policy of the Government, especially during the last twelve months, was such as justly to occasion great anxiety and apprehension in the country. The climax of mismanagement was reached when the noble earl at the head of the Foreign Office entered into diplomatic communications with France and Russia on the subject of the Polish insurrection. The Opposition had not heretofore challenged the foreign policy of the Government by proposing a vote of want of confidence, because they found it impossible to obtain the necessary information, and also because they would not incur the responsibility of raising such a question while the Government was in communication with the German Powers. The Opposition, however, reserved to themselves the right to invite the House to express an opinion upon the policy of the Government, and he assured the latter that he would take the first fitting opportunity of doing so.—Lord PALMERSTON assured Mr. Disraeli that there was no necessity whatever for the disclaimer which he had made of confidence in her Majesty's Government. The right hon. gentleman had blamed the Government for what they had done in reference to Poland and to Denmark, but he had omitted to point out what ought to have been their policy. He maintained that the Government had been influenced in their conduct by a sincere desire to obtain favourable terms for Poland, and to maintain the independence of Denmark. With regard to the Conference which was to meet within a few hours, he believed that the signatories to the treaty of 1852 were bound in honour to maintain it, and he hoped that one of the first results of the Conference would be an armistice. He recommended the House to accept the "previous question," as suggested by Mr. Disraeli; and he would give that right hon. gentleman a confidence which he had declined to place in the Government, by following him into the lobby in support of that proposition. —After a few words from Mr. KINGLAKE, Mr. OSBORNE expressed his willingness to withdraw his motion.—Mr. PEACOCKE then withdrew his amendment; but the House objecting to the withdrawal of the original motion, Mr. DISRAELI formally moved the previous question, which was carried. The *Court of Chancery (Despatch of Business)* Bill was read a second time. The *Consolidated Fund* (15,000,000*l*.) *Bill* was read a third time and passed.

WEDNESDAY.—Mr. BLAKE moved the second reading of the *Grand Juries (Ireland) Bill*, the object of which was to separate the criminal from the fiscal business, and to vest the latter in elective boards. He adverted to previous attempts to reform the Grand Jury system, and said that his Bill contained nothing more than was to be found in Bills which had been already before the House.—Mr. DAWSON moved that the Bill be read a second time that day six months.—A long discussion followed, in which Mr. BAGWELL, Mr. P. URQUHART, Mr. MAGUIRE, Lord J. BROWNE, Lord NAAS, Mr. HERBERT, and Mr. M'MAHON took part.—Sir R. PEEL, on the part of the Government, said it was impossible to affirm the principle of this Bill, which, though described as a Bill to "amend" the law of Grand Juries in Ireland, by one of its provisions abolished Grand Juries altogether. The attention of the Government had been directed to the subject, and they would introduce a Bill early next Session.—After further debate the motion for the second reading was negatived on a division by 150 to 27.—Mr. LONGFIELD moved the second reading of the *Chief Rents (Ireland) Bill*, sent down from the Lords, explaining briefly the object of the Bill, which was a purely permissive and enabling measure.—Mr. WHITESIDE said that the principle of the Bill was novel, and pointed out what appeared to him to be objectionable in some of its provisions.—After a short discussion, Sir E. GROGAN moved to defer the second reading for six months. Ultimately the amendment was withdrawn, and the Bill was read a second time. The *Joint-Stock Companies (Voting Papers) Bill* was likewise read a second time. The House went into committee on the *Bridges (Ireland) Bill*, when the CHAIRMAN was ordered to report progress.—Mr. M'MAHON obtained leave to bring in a Bill to amend the law as to *Oyster Fisheries in Ireland*.

THURSDAY.—*Departure of General Garibaldi.*—In reply to Mr. KINNAIRD, the CHANCELLOR of the EXCHEQUER referred to what he termed the "incorrect and absurd rumour," that he had conveyed to General Garibaldi an intimation that his continued presence in England was a cause of embarrassment to her Majesty's Government. All that he had done was to consult with the friends of the General assembled at Stafford House on Sunday evening, when the question was raised as to whether the General's constitution would be able to stand the excitement and exhaustion incidental to the demonstrations in which he was asked to play so conspicuous a part. Invitations had been sent to him to visit no fewer than 30 towns, and his friends were of opinion that if he went to the provinces at all he ought to contract the circle of his engagements and adjust his programme, so that there should be no departure from it hereafter. On the whole, however, the General's friends were opposed to his being any longer exposed to the physical wear and tear to which he was at present subjected. Having been requested to tell the General what he thought on the subject, the latter observed that there was great force and propriety in the view taken by his friends, and he was quite willing to adopt it, as he considered that the purpose of his visit had already been attained. That object he said was to express his acknowledgments and thanks to the Government and people of England for what they had done for his country. He also added that he hoped upon some future occasion again to visit England, when perhaps it might be in his power to see his friends in the provinces.—Mr. V. SCULLY, amid general laughter, inquired whether the right hon. gentleman had led Garibaldi to believe that the feelings of the metropolis represented those of the people of Ireland.—The CHANCELLOR of the EXCHEQUER replied that he had not referred in any way to the people of Ireland. On the order for taking into consideration the petitions of Messrs. Kennedy, Pelan, and Richardson, in the matter of the *Lisburn Election*, Mr. BUTT moved that a select committee be appointed to inquire and report upon the matter of the petitions, supporting the motion by a dry legal argument, citing authorities and precedents.—After a few remarks by Mr. HUNT and the ATTORNEY-GENERAL, the motion was negatived. *Fire Insurance Duty.*—On the order for going into committee of Ways and Means, the CHANCELLOR of the EXCHEQUER made a short statement in reference to the fire insurance duty, contending that if the proposition to reduce the duty in differently upon all insurances, instead of on those on stock in trade only, as recommended by the Government, was adopted, it would exhaust the whole of his surplus and leave a deficit.—Mr. H. B. SHERIDAN then moved, in a speech of great length, an amendment to the effect that such a reduction of the fire insurance duty as that contemplated by the resolution of the House passed last session would be best effected by a uniform reduction of 1*s* per cent. on all descriptions of property now liable to the duty.—Mr. HADFIELD seconded the amendment.—Mr. DISRAELI said that the principle of the amendment was the right one, and he should therefore support it, but if it became a substantive proposition he should move to strike out the words "one shilling," so that the House would commit itself only to a uniform reduction of duty. On a division the motion for going into Committee was carried by 170 to 117. The amendment of Mr. Sheridan was therefore lost, and the House immediately went into Committee of Ways and Means.—The CHANCELLOR of the EXCHEQUER having moved his resolution to reduce the duty on insurances on stock in trade by 1*s*. 3*d*. per cent., Sir H. WILLOUGHBY moved an amendment to reduce the duty on houses and buildings instead of on stock in trade. After a short discussion, the amendment was negatived without a division, and the motion of the Chancellor of the Exchequer was agreed to.—On the motion for going into Committee of Supply on the Navy Estimates, Colonel DICKSON moved for a Select Committee to inquire into the *Claims of Mr. John Cox, jun.*, for compensation for designs supplied to the Admiralty in connection with iron shipbuilding and the construction of gun-boats.—Lord C. PAGET opposed the motion, on the ground that the case of Mr. Clare had already undergone a patient and impartial trial before the Lord Chief Justice, and that the result was unfavourable to him.—The SOLICITOR-GENERAL also opposed the motion, urging that Mr. Clare had no claim whatever for compensation. The motion was ultimately negatived without a division. *The Iron Clad Fleet.*—In answer to Sir J. PAKINGTON, Lord C. PAGET stated that the first-class steam reserve consisted of three iron-plated ships, two line-of-battle ships, two frigates, three corvettes, and three sloops—making 13 in all; and all quite as ready as the same fleet organised by the right hon. baronet when he was First Lord of the Admiralty. The House then went into Committee of Supply *pro formâ*, when Lord C. PAGET said he would take the Navy Estimates on Monday.—The *High Court of Bombay Bill* was read a third time and passed.—The *Court of Justiciary (Scotland) Bill*, the *Fish Teinds (Scotland) Bill*, and the *Summary Procedure (Scotland) Bill* passed through committee. The *Bridges (Ireland) Bill* was lost in committee by 128 to 85.—The CHANCELLOR of the EXCHEQUER moved the nomination of the select committee on the *Government Annuities Bill*.—Sir M. FARQUHAR moved that the committee have power to send for persons, papers, and records.—Mr. S. ESTCOURT, the CHANCELLOR of the EXCHEQUER, Lord PALMERSTON, and Mr. VIVIAN opposed the motion, as unusual, and urged that if it were carried the effect would be to throw over the Bill to another Session.—Lord J. MANNERS, Mr. HANBURY, and Mr. AYRTON, on the other hand, supported the motion, which was negatived on a division by 127 to 104. The committee was then agreed to.

FRIDAY.—*Fortifications at Spithead.*—Mr. OSBORNE asked whether it was intended to continue the fortifications at Spithead on the original plan, or at Surbridge and the Horse-shoe Sands.—Lord PALMERSTON said that at Surbridge the foundation was bad. The other arrangements would be continued where there was a foundation. *Case of Captain Melville Wood.*—In answer to Colonel FRENCH, Mr. LAYARD said he had seen the award, and it was not favourable to Captain White. *China.*—On the Order for going into Supply, Mr. LINDSAY moved "That in the opinion of the House further interference on the part of this country in the civil war in China is impolitic and unnecessary." [Left speaking.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91½ to ⅝ for Money, and 91⅝ to ¾ for Account; Three per Cents. Reduced, 89⅞ to ½; New Three per Cents., 89½ to ⅝; Bank Stock, 238 to 240; India Stock, 218; Ditto Five per Cent. Stock, 105⅛; Ditto Four per Cent. Debentures, 1866, 99⅜; Ditto Bonds, 7 dis.; Five and a Half per Cent. Enfaced Rupee Paper, 112½; Exchequer Bills, 4*s*. dis.—FOREIGN: Brazilian, 1858, '60, 90½; Ditto, 1863, 87½, ex div.; Egyptian, 101; Ditto, second issue, 100¾; Greek, 25⅛; Italian, 68¼; Mexican, 45⅞ to 46; Portuguese, 1856, &c., 48 to 49; Russian, 1862, 87¾ to ½; Spanish Passive, 35 to ⅜; Turkish, 1854, 89¼ ex div.; Ditto 1858, 69 to 68⅞; Ditto 1862, 71½ to ¾; Ditto 100*l*. Bonds, 7¼ to ¾; Ditto Guaranteed, 100½; Venezuela, 22¼; Ditto 1862, 57¾ to ⅝.

Gazette of the Week.

FRIDAY: *April* 15.—BANKRUPTS.—H. ANTHONY, Bridlington Quay, Yorkshire, Fishmonger—H. ASHWORTH, Newton, near Hyde, Cheshire, Machine Broker—B. ABRAHAMS, Norwich, Watchmaker—A. BLACKWELL, Chesterfield, Derbyshire, Tailor—W. BROWNE, Stone, Staffordshire, Jeweller-Keeper—C. BOWMAN, Wynyatt Street, St. John Street Road, Jeweller—R. BLACKLOCK, Cranmer Road, North Brixton, Clerk in the War Office—S. BURTON, Old Kent Road, Coach Builder—B. BARTON and J. BARTON, Bradford, Yorkshire, Stuff Manufacturers—S. W. BURGESS, Upper Gower Street, Bryanston Square, Poulterer—T. CASWELL, Birmingham, Pen-Maker—D. C. COTTRELL, Kenton Road, Well Street, South Hackney, Plumber—G. COSHEN, King Street East, Hammersmith, Builder—W. DICKER and J. CLAY, Astbury, Cheshire, Ribbon Manufacturer—W. DYKES, St. unbridge Wells, Onions, Birmingham, Bellows Makers—J. M. DYKES, Stourbridge, Worcestershire, Hatter—J. DENNE, Winslow, Buckinghamshire, Surgeon—G. ELSTON, Crediton, Devonshire, Bootmaker—J. ELLERINGTON, Stockton, Durham, Licensed Victualler—R. G. FIARMER, Willow Walk, Bermondsey, Merchant's Clerk—A. FIRTH, Halifax, Yorkshire, Beer Seller—T. FREEMAN, Spa Road, Bermondsey, Timber Merchant—E. FRYER, Waltham Green, Fulham, Bricklayer—E. J. GRIMSHAW, St. Helen's, Lancashire, Land Surveyor—HENRY SHELDON GODDARD, Stoke Prior, Cornwall, Millwright—VALENTINE SAYER HARRIS, Lupus Street, Pimlico, Cheesemonger—WILLIAM HOBSON, Lower Reading, Sussex, Farmer—C. HODGETTS, Birmingham, Metal-Worker—W. P. HUDSON, Stanley Street, Pimlico, Railway Clerk—P. HOLME, Sheffield, late Chemist—G. IVES, of Clifton, Farmer—T. JONES, Stettesdon, Shropshire, Beer Retailer—W. JESSON Gumley, Leicestershire, Tailor—W. LOVELL, Birmingham, Boot Dealer—H. LEIGH, Ashton-under-Lyne, Commission Agent—H. P. LYON, Late of Gloucester Street, Pimlico, Baker—W. MARKS, West Leyton, Essex, Warwickshire—W. H. MOORHOUSE, Kingston-upon-Hull, Licensed Victualler—D. MARKES, Birmingham, Bootmaker—J. MOORE, Tiverton, Devonshire, Butcher—J. PAULGER, Marsh Chapel, Lincolnshire, Grazier—G. H. PARMINTER, Heavitree, Devonshire, Clerk in Holy Orders—H. PEARCE, Bristol, Newsvendor—S. PURSEY, Gate Fulford, Yorkshire, Late Farmer—G. B. PARRETT, King's Cross Road, Ham and Beef Dealer—J. PAYNE, Northampton, Licensed Victualler—J. PICKERING, 39 and 40, Mecklenburgh Square, Glass Bender—C. PHILLIPS, Old Cavendish Street, C. W. PRICE, Clerkenwell Green, Glass Bender—C. PHILLIPS, Old Cavendish Street, hampton, Staffordshire, Tinplate Worker—C. ROTHSCHILD, Bridge Street, Wine Merchant—J. RADFORD, New Weston Street, Bermondsey, Leather Merchant—JOHN RICKETTS, Exeter, Lancashire, Boot-Maker—WILLIAM STOKES, Brighton, Glover—WILLIAM SAXON, Bow Street, Builder—JOSEPH SHARPLEY, Macclesfield, Cheshire, Watch Jeweller—W. SEAGMAN, Eynsford, Kent, late Baker—J. SMANE, Manchester, Cheshire, Tailor—J. SHUCKFORD, Trafalgar Place, Clapham Road, Builder—C. R. TEMPLETON, Birmingham, Licensed Victualler—R. SLAMP, Bristol, Builder—C. R. TEMPLETON, Birmingham, Yorkshire, and Varnish Manufacturer—C. J. TARBO, Sherburn, Yorkshire, Schoolmaster—G. C. B. TAYLOR, late of Canterbury, Lieutenant in the Royal F. TREPESS, Warwick, Surveyor—T. E. TRUMP, jun., Exeter, Boot-Maker—T. WOOD, Great Tower Street, Licensed Victualler—J. WASHINGTON Hungerford, Berkshire, Corn Dealer—M. L. WOLFSOHN, Oxford Street,

mbrella Manufacturer—F. Webb, late of Shedley, Warwickshire, Needle Maker—C. Woodcock, Bradford, Yorkshire, Railway Porter—R. Wa[illegible] late of Frederick Street, Gray's inn Road, Wine Merchant—J. C. D. Yate, Bradford, Devonshire, Clerk in Holy Orders.

SCOTCH SEQUESTRATIONS—J. Rangie, Aberdeen, Tinsmith—D. Morrison, Glasgow, House Painter—J. Young, Glasgow, Cutler—A. Mackay, Edinburgh, Dairyman—J. Rombach Brothers & Company, Edinburgh, Watchmakers—A. Campbell, Glasgow, Painter—W. C. Henderson and J. Fergie, Glasgow, General Merchants—W. Jardine, Applegarth, Dumfriesshire, Farmer—J. Swan, Smallholm Mains, Roxburghshire—J. Breckenridge, Glasgow, Shoemaker—W. Matheson, Elgin, Cowfeeder.

TUESDAY, April 19—BANKRUPTS.—R. T. T. Alty, Warwick Place, Kensington, late Journeyman Baker—E. Burghardt, Manchester, Merchant—J. Bayley, Crewe, Cheshire, Boot and Shoemaker—M. Dalgleish, Wilson, Yorkshire, Tailor—A. G. Bidden, Clevedon, Somersetshire, Baker—A. Baker, Brunswick Street, Hackney Road, Bonnet Shape Maker—J. Brooks, Swansea, Glamorganshire, Baker—C. Baisley, Grove Street, South Hackney, Cabinet Maker—E. Bristow, Portsea, Hampshire, Clerk—J. Crosbie, late of Liverpool, Joiner—B. Cleworth Hulme, Lancashire, Printer—A. Clarke, Ledbury, Herefordshire, Butcher—J. Dixon, Liverpool, Joiner—W. Dearlove, Portsea, Hampshire late Dealer in China and Glass—John Ely, Leeds Yorkshire, Commission Agent—John Griffin, Walsall, Staffordshire, Provision Dealer—Henry Greatorex, Danvers Street, Chelsea, Zinc Worker—Gloucester Gale sued and known as William Gloucester Bryant, Winchester Street, Pimlico, Commercial Traveller—C. Gaisi, Chiswell Street, Glass Merchant—J. Gretton, Northwood, Staffordshire, Colliery Manager—R. Gardner, Wombourn, Staffordshire, Engineer—W. T. Harris Quechbithe, Wholesale Stationer—J. Hardacre, late of Hulme, Lancashire, Tailor and Draper—W. How, Marshall Street, London Road, Southwark, late Grocer—A. D. Hughes, Penn Road Villas, Holloway, Commission Agent—W. C. Harris, Clent, Worcestershire, late Cattle Dealer—G. Hatcher, Poole, Dorsetshire, Pork Butcher—J. Hine, Churchstanton, Devonshire, Farmer—G. W. Hay, Worcester, Seed Merchant—J. Jones, Llanwenarth, Monmouthshire, Miller—J. Jenkinson, Otley, Yorkshire Cloth Manufacturer—A. Jones, Pontlanfraith, Monmouthshire, Miller—J. James, Wednesbury, Northamptonshire, Butcher—J. Johnson, Liverpool, Provision Dealer—H. Johnson, Birmingham, Coal Agent—J. Johnson, New Church Street, Bermondsey, Leatherseller—J. Lax, Bromsgrove, Worcestershire, Miller—G. M'Neil, Liverpool, Poultry Dealer—W. H. B. Martin, Brazenose Street, Bermondsey, Cutler to Cap Manufacturer—G. Mason, Gloucester, Baker—H. Mason, Bourn, Lincolnshire, Farmer—R. Mitchell, Leicester, Manufacturer of Hosiery—W. Newton, Stoke-upon-Trent, Staffordshire, Builder—A. Nathan, Woolwich, Clothier—J. Pearce, Newbury, Berkshire, General Dealer—S. Perfect, Doris Street, Lambeth, Superintendent of Steam Boats—Ralph Ramsdale, Leigh, Lancashire, Beerseller—Henry Richardson, New Shoreham, Sussex, Builder—John Shawcross, Openshaw, Lancashire, Tobacco Manufacturer—John Stokes, Spittlegate, Lincolnshire, Butcher—George Sutton, Holloway Place, Holloway Road, Licensed Victualler—Thomas Smales, Clapton Square, Hackney, Paymaster on Half pay in Her Majesty's Army—J. Symonds, Kidderminster, Game Keeper and Grocer—C. W. Sanders, Cross Passage, Leadenhall Market, Meat Salesman—W. T. Tait, Bridgwater, Somersetshire, Draper—S. Vincent, Charlstanton, Devonshire, Miller—J. B. Wilkinson, Bristol, Common Carrier—G. Woon, Manchester, Butcher—J. Winfield, late of Wellington, Shropshire, Licensed Victualler.

SCOTCH SEQUESTRATIONS—W. Cuikey, Glasgow, Iron Merchant—D. Hamilton, Glasgow, Ship Broker—J. Jack, Edinburgh, Baker—A. M'Gaw, Glasgow, Builder—P. Thomson (Dean), late of Buckhaven, Fisherman—R. Whyte, Milnathort, Kinross-shire, Meal Dealer.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,706,520	Government Debt	£11,015,100
		Other Securities	3,631,900
		Gold Coin and Bullion	12,056,520
		Silver Bullion	—
	£26,706,520		£26,706,520

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,022,267
Rest	3,125,300	Other Securities	20,476,912
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,787,329	Notes	5,564,845
Other Deposits	13,681,069	Gold and Silver Coin	686,782
Seven days and other bills	831,108		
	£37,750,806		£37,750,806

April 21, 1864. M. MARSHALL, Chief Cashier.

Metropolis and its Vicinity.

General Garibaldi's Visit.—On Saturday morning General Garibaldi received the Mayor and a deputation from Salford, inviting him to visit that borough while at Manchester. The invitation was cordially accepted. He then visited the brewery of Messrs. Barclay, Perkins, and Co., in Southwark. The workpeople employed at that establishment determined to make his reception in every respect a contrast to that which they gave to the Austrian General Haynau some years ago. As the General went over the works he was everywhere received with enthusiastic cheers by groups of the workmen and their families, who were permitted to be present. In honour of his visit Mr. Perkins gave the name of Garibaldi to the finest horse in the establishment, the animal having particularly attracted Garibaldi's attention. In the afternoon the General went to the Crystal Palace, accompanied by the Duke of Sutherland and the Earl of Shaftesbury, to receive an address from his Italian countrymen now in London. There was an immense attendance of the wealthier classes, and the road from London to Sydenham bore some resemblance to a Derby day. Garibaldi was received at the entrance to the Palace by the members of the Italian Committee in London, who presented him with a flag of the Italian colours, bearing upon it the words "Rome and Venice." Garibaldi received it with evident gratification, and addressed his countryman in Italian, and with an animation and eloquence which contrasted in a remarkable manner with the few simple phrases with which he has hitherto acknowledged in English the compliments paid to him. He spoke as follows, and was frequently interrupted with loud cheers:—

"I thank you, Italian fellow countrymen, for the manner in which you have received me. You share with me, I know, the feeling of gratitude to the noble and glorious English nation for the help which they have given to us, and the magnificent manner in which they have received me. England has helped us in evil times as well as in good times. The English people assisted us in our war with Southern Italy, and even now the hospitals of Naples are supplied from the abundance sent to us from this country. I speak from what I know, that the Queen and the Government of England, represented by Lord Palmerston, Lord Russell, and Mr. Gladstone, have done a wonderful deal for our native Italy. If it had not been for this country we should still have been under the yoke of the Bourbons at Naples. If it had not been for the English Government I should never have been permitted to pass the Straits of Messina. Countrymen, our landing at Naples would have been prevented, if possible, by those despots who are now trying to crush poor little Denmark. It is said when two nations are contrying to put down a little country that has no assistance from any one, and has only its native strength to resist the invaders. Countrymen, I am not a soldier by profession; I do not like the profession of a soldier. I only took up the trade of a soldier when I found robbers in my house, and I turned soldier to expel them. I became a soldier to fight against the oppressors of my country. Countrymen, I admire this noble nation, which stands so proudly at the head of the civilisation of the world. I have seen since I have been in this country a great deal—more, perhaps, than you are aware of; I have seen one great thing—half a million of people kept in order by a dozen policemen—plain, simple policemen; and when I speak of English policemen I take off my hat (suiting the action to the word), for there are no gendarmes, no *mouchards* in this country. They cannot live in its free air. Do you know how this great fact is brought about? I will tell you. It is because the English people love their dear Queen. [At the mention of the name of her Majesty, whom the General called 'Cara Regina,' the cheering was very great for some time.] The English people, he proceeded to say, have a respect for the laws, which they know are good and just, and they love their free and glorious nation. The English people have not only pity and sympathy for others, they have something here. (Garibaldi accompanied the word with laying his hand energetically upon his heart) Let the conduct of Englishmen be a lesson to us. Let us imitate them, and admire their noble and splendid institutions and their imperishable love of liberty. England is envied by every country. Although she has got what we all know to be the bravest army in the world, she also has 170,000 citizens called volunteers, and if ever the occasion should arise—if ever their country should be invaded, the volunteers would have the support of millions of brave and gallant men. Or supposing—but this is not likely—that their united strength should not be sufficient to resist the invader, then, if our poor feeble efforts, our arms and our lives could be of any service, we should always be ready to come and assist them as they have helped us."

He was then conducted to luncheon, and afterwards occupied a place in the central transept, when loud and prolonged cheering burst forth from the assembled thousands. The addresses and swords to him and his son Menotti were then presented, after which there was a concert of Italian music, including Garibaldi's Hymn. On his return to town he called on the Duke of Somerset at the Admiralty, and in the evening dined with Lord and Lady Palmerston at Cambridge House. On Sunday morning he drove to Teddington, and took luncheon at the house of M. Herzen, where he met Signor Mazzini, Signor Saffi, and other Italian gentlemen. On his return to town in the afternoon he paid a visit to Miss Florence Nightingale. In the evening he dined with M. Fabricoli, at Clapham. On Monday morning he received deputations with addresses from the parish of Marylebone, from the Danish residents in London, and from a body of Poles, members of a national lodge. He then drove to St. John's Wood, and paid visits to Mrs. Karl Blind, M. Ledru Rollin, and M. Louis Blanc. At half-past 12 o'clock he left Stafford House for the Crystal Palace. He drove there in Mr. Seely's carriage, and on his way visited Mr. Anderson, Chairman of the Peninsular and Oriental Company at the Grove, Norwood, to thank him for the free passage which the Company had given him from Caprera. After remaining there to luncheon he proceeded to the Crystal Palace, where about 25,000 persons had assembled to receive him, most of whom had been brought up during the morning from all parts of the country by excursion trains on the Great Western, North-Western, South-Eastern, London, Chatham and Dover, Brighton, North London, and Great Eastern lines of railway, all converging and discharging their traffic upon the Crystal Palace. As soon as the General made his appearance on the platform he was received with a perfect tumult of applause. Two little girls, in dresses exhibiting the Garibaldian colours, were then led forward to present the General with bouquets. He received their offering with evident pleasure, and excited a fresh burst of enthusiasm when, with the utmost tenderness, he took the children in his arms and kissed them with fatherly fondness. The deputations were then introduced in the following order:—

Corporate Bodies.—The Mayors and Corporations of Dover, Brighton, and Woolwich. *Deputations from Public Meetings.*—Norfolk, Marylebone, Lambeth, Southwark, and Brighton. *Societies of Various Kinds.*—Friends of Fatherland, Norwood Working Men's Institute, St. Margaret's (Brighton), Working Men's Club (Hastings), Working Men of Brentford, Working Men of Brighton, Brighton Young Men's Christian Association, Maidstone Reform Association, Streatham Temperance Society, Popular Ratepayers' Association, Clapham Temperance Societies, Central Horticultural Society, Marylebone Vestry, Shoreditch Working Men's Association, Local Orange Institution, London Unity of Odd Fellows, Welsh Congregational Dissenters, Universal League, T. W. Cave, Collegiate School, and London Mechanics' Institute. *Bodies with Foreign Relations.*—The Memphis Lodge of Freemasons (Grand Orient Lodge), Garibaldi Italian Unity Committee, Garibaldi Reception and Testimonial, Hoxton Friends of Italian Liberty, French Residents in London, Polish Residents in London, Swiss Residents in London, and the Garibaldi Volunteers.

The addresses of these 36 bodies were not read, but the General sat in his chair and shook hands with each person who desired such a favour. In the deputation from the Norwood Working Men's Institute were two of the Surrey Volunteers. On observing them Garibaldi exclaimed with delight, "Brave volunteers!" and seemed much pleased at their appearance. The Central Horticultural Society had sent with their deputies a little girl dressed in white, and a boy of about 10 years of age, attired in a red woollen shirt and white trousers, one bearing a basket of fruit and the other a basket of flowers. On presenting their offerings to the General, he kissed them fondly amidst the renewed cheers of the vast assemblage. The first infraction of the rule as to reading addresses, was made by the French deputation, and much impatience was manifested during the reading of their addresses in French. At its conclusion, Garibaldi said in French:—"Tell your countrymen that in the name of Italy an humble individual like myself thanks them for their sympathy." A small procession then made its appearance, at the sight of which the enthusiam of foreigners present, and eventually of the English section of the assembly, was fully roused. It advanced with a slow step, as if its mission should rather be to assist at funeral obsequies than to share in demonstrations of joy or triumph. It carried a banner the very tinge of which was significant, having upon it the one word "Poland." At sight of this Garibaldi for the first time rose from his seat, and received the members of the deputation standing and with every demonstration of respect. When they had passed to the other side of the platform Garibaldi walked to its extremity nearest the public, and twice exclaimed, with as distinct and emphatic pronunciation as he could attain—"Generous English nation, abandon not Poland!" The enthusiasm evoked by this appeal was only second to that which greeted the General upon his first entrance. His mind was evidently full of the subject, for in response to the address from the Swiss residents in London, which was next presented, he said—"And you also, I beg that you will not allow poor Poland to die." At this point the band suddenly burst into the "Garibaldian Hymn," and the Garibaldi Volunteers, forming on the platform under command of Captain Styles, Lieutenant Byrne, and Colour-sergeant Jaques, read and presented an address to their old chief. The General briefly, but feelingly expressed the pride with which he again saw himself surrounded by his brothers in arms; and the proceedings at this stage terminated with the presentation of an address from the Garibaldi Reception and Testimonial Committee. So far nothing could have been more orderly than the conduct of the assembly, but when the General and his party quitted the platform with the object of reaching a point overlooking the grounds, a sudden rush was made to seize the opportunity of shaking hands with him. So vigorous was the onset, and such imminent peril did it threaten to his weakened limb, that the utmost exertions of friends, followers, police, and all the officials at the moment on the spot were required to cover his retreat. Some 20 minutes later, when the crowd had in a great measure forsaken the building for the grounds, Garibaldi re-appeared in one of the galleries overlooking the gardens, and was received with a fresh outburst of enthusiasm. He was evidently delighted with the scene, which presented a bright and striking contrast to its appearance on Saturday, when it was weighed down with a murky atmosphere. On his return to town he drove through Peckham, where he received an address from the boys of the Upper School. He drove thence direct to the residence of Mr. Seely, M.P., at Prince's Gate, whose guest he will remain for the next few days. In the evening he dined with the Marquis and Marchioness of Clanricarde in Stratton Street. On Tuesday morning the General made some early calls, and at a later hour proceeded to the residence of Mr. Ashurst, in Norfolk Crescent, where he had luncheon. He then called on Colonel Armstrong Roberts, in Arlington Street, and the Duke and Duchess of Sutherland, at Stafford House. In the afternoon Garibaldi "received" at Mr. Seely's house, which was literally thronged with company from two until six o'clock, upwards of 1000 persons attending the reception. In the evening he went to Her Majesty's Theatre to witness the performance of the opera of "Lucrezia Borgia." During the day a private meeting of noblemen and gentlemen was held at Stafford House, to consider the propriety of presenting the General with some substantial mark of admiration. It was unanimously resolved that a subscription should be raised for the purpose, and nearly 2000*l.* was subscribed by those present at the meeting. It subsequently transpired that the General had determined to leave England immediately for Caprera, abandoning all his engagements in the North. Great excitement was caused throughout the metropolis by this announcement, especially as it was associated with a rumour that the Government had requested him to leave, at the suggestion of the Emperor of the French. This report was authoritatively contradicted on the same night in both Houses of Parliament, and on Wednesday a correspondence was published, showing that the General's departure had been urged upon his friends by Mr. Fergusson, the surgeon, who was alarmed at the effect produced on his constitution by the events of the previous 10 days, and imperatively urged the necessity of retirement and rest. After a consultation of his friends, including Mr. Seely, the Duke of Sutherland, Lord Shaftesbury, Mr. Gladstone, Mr. Stansfeld, Signor Negretti, General Eber, and Signor Saffi, the General declined to act upon their suggestion that he should adopt a restricted programme and confine his provincial visits to a few of the principal towns, and said that if he could not carry out all his promises he would at once return to Caprera. On Wednesday morning the General went to the Duke of Argyll's residence at Campden Hill, Kensington, and breakfasted with the duke and duchess. He returned to Mr. Seely's at 10 o'clock, and received visits from a few friends. About 12 o'clock he left Mr. Seely's house in a procession, consisting of about a dozen private carriages, for Guildhall, to receive the honorary freedom of the City of London. His reception in his progress from Prince's Gate to the Hall was as flattering to him as any of his former welcomes, and

showed that the enthusiasm for him is still unabated. There was a brilliant assemblage of carriages along the line of the park to see him pass; and the streets all along the route were filled with a crowd, which, though less dense, was as cordial and enthusiastic as that which greeted his first entrance into London. The Lord Mayor, Aldermen, and Common Council received him in their full official costume, and with the state and ceremonies usual on such occasions, and the presentation of the freedom in a gold box of the value of 100 guineas was made by the Chamberlain, in a complimentary address which was received with great applause by the members of the Corporation present. General Garibaldi replied in English as follows:—

"It is certainly impossible for me to express the gratitude I feel towards you, Mr. Mayor, and to the representatives of the glorious and great city of London, for the honour you have conferred on me to-day. I am prouder of that honour than of any that the false glare of war has reflected upon me. The greatest compliment for me is to be a freeman of this renowned city—this focus of the civilisation of the world. I think I do not exaggerate when I say that this is the very centre o liberty. Here there are no foreigners, because every man is at home in England. I repeat (placing his hand upon his heart) that it is impossible for me to express my gratitude to you and the city of London. I have to thank you, not for my proper self alone, but in the name of all my countrymen, who can certainly never feel grateful enough to the English people for the sympathy, succour, and material aid given to them, as to oppressed people in almost every clime and under many circumstances. This is not the only occasion by many on which I have had the happiness to meet English people. I have been happy with you in many parts of the world, and at many times. In America particularly I was saved by the protection afforded me by the English flag; in China I received favours at the hands of English people so great that I can never forget them; and therefore my gratitude and my love towards England are imperishable. I am grateful for my country, too, for the sympathy shown it by the English people, and on their behalf and my own I thank you."

At the conclusion of this speech, which was repeatedly interrupted with cheers, the General was presented to the Lady Mayoress, and afterwards received the congratulations of the Lord Mayor and the rest of the Aldermen. In the midst of the enthusiasm which his presence and bearing had called forth, he stepped forward to the front of the platform and said with great emphasis, "I am proud to belong to you all my life." After having signed the Roll of Honorary Citizenship, which he did immediately after the name of the Prince of Wales, he was escorted to the Mansion House, where he was entertained by the Lord Mayor at luncheon, which was served in the Egyptian Hall in a style of great splendour to about 250 persons. On leaving the Mansion House he returned to Prince's Gate by Moorgate Street, City Road, Portland Place, and Oxford Street. In the evening he dined with the Chancellor of the Exchequer and Mrs. Gladstone, who had a brilliant reception in the evening in his honour. On his return to Mr. Seely's about midnight a deputation from the City Reception Committee, in conjunction with a deputation from the Working Men's Reception Committee, who were waiting his return, had an interview for the purpose of representing to him the great disappointment that would be felt should he leave London as at present intended. After hearing the several speakers the General replied:—

"I feel deeply grateful to the people of England for the honour they have conferred upon me, an honour of which I feel myself unworthy. The reception I have received from all classes, but especially from the working classes, will never be forgotten by me. I much desire to visit my old friends in Newcastle and the North. I will consider if I can, consistent with my promise, alter my determination, and will write a note, expressing my intentions, to my friend, Mr. Beales, to-morrow morning."

On Thursday morning the deputation received the following letter, announcing his final determination to leave England:—

"Prince's Gate. Kensington, April 21.

"Dear Friends,—Pray accept my heartfelt thanks for your sympathy and affection. I shall be happy to see you again on a better occasion, when it will be possible for me to enjoy at leisure the hospitality of your noble country. For the present I feel obliged to leave England. Again, and again, my gratitude to you all." "G. GARIBALDI."

At 7 A.M. the General went to Chiswick Cemetery, and visited the tomb of the distinguished Italian writer and patriot, Ugo Foscolo, upon which he deposited a laurel crown in bronze, with an appropriate inscription. He was afterwards entertained at a breakfast in the Reform Club under the presidency of Lord Ebury. In the afternoon he went to Richmond, and paid a visit to the Earl and Countess Russell at Pembroke Lodge, Richmond Park. On his return to town he visited the Houses of Lords and Commons during the debates, and in the evening dined at Fishmongers' Hall. Yesterday morning, having expressed a desire to meet the American residents in London before his departure, he accepted an invitation to breakfast with the Consul General of the United States at Kensington Gate, where he met several of the principal Americans now in London. He expressed himself warmly in favour of the United States in the struggle with the slave power, and said he would go there at once and tender his services if they were needed, but happily they were not. He also said he was proud to acknowledge himself a citizen of the United States, and that he could claim them as his adopted country. They were the great bulwark of human liberty, and England and America, united in sentiment, would keep the peace of the world. He then paid visits to some private friends, and then proceeded with Mr. Seely and Lord Shattesbury, to Stafford House, where a meeting took place between him and the Prince of Wales, who arrived in town at an early hour yesterday morning for the purpose. The Prince remained at Stafford House for upwards of an hour. After the departure of the Prince, General Garibaldi left Stafford House in an open carriage and four, accompanied by the Duke and Duchess of Sutherland, for Cliefden, the residence of the Duchess Dowager of Sutherland, where he was to remain last night, proceeding to-day to Cornwall on a visit to Colonel Peard, "Garibaldi's Englishman." After staying with him for two days, he will embark at Looe or Fowey for Caprera in the Duke of Sutherland's yacht, the Duke and Duchess accompanying him to his destination. A special meeting of the Working Men's Committee was held on Thursday night, at which a resolution was unanimously adopted expressing the opinion that the cause of the General's departure was not illness, but pressure exercised on him by members and adherents of the Government, and especially by Mr. Gladstone, and a deputation was appointed to carry a copy of the resolution to Mr. Gladstone, Mr. Seely, and to Garibaldi himself. We may add to these details that the Lord Mayor has received during the week telegrams from Florence, Milan, Genoa, Palermo, Messina, and other places, expressing the delight of the inhabitants at the enthusiastic reception of General Garibaldi by the English people.

THE SHOEBURYNESS EXPERIMENTS.—An official report has been published, giving the results of the experiments up to this time, but stating that it is given as only substantially accurate. From this report it appears that the two rival muzzle-loading guns are about equal, the Armstrong breech-loader being inferior to both, which is partly accounted for by the fact that the charge of powder is less. In firing shell, however, both the Armstrong guns have an advantage over the Whitworth.

MURDER AND SUICIDE.—On Monday morning a shocking case of murder and suicide occurred at No. 5, Leighton Street, Burton Crescent. It appears that Mr. Ashley, tailor, the householder, had engaged a man named Pierce, employed at the St. Katharine's Docks, to look after the house. On Monday morning, on going down to his shop a little after 8 o'clock, he was surprised to find it still closed, and that his breakfast was not ready. He went to the door of the back parlour occupied by Pierce and his wife, but found it closed, and on knocking could gain no admittance. Suspecting that something was wrong, he then sent for the police, who made an entry into the room by breaking the window. The bodies of Pierce and his wife were then found quite dead with their throats cut, and blood running from the wounds. Near the man was a large sheath knife covered with blood. It seemed to have been recently sharpened. The surgeon of the division on examining the bodies gave it as his opinion that death had taken place within a couple of hours. He found on the head of the woman an immense cut from the front of the neck down to the spine, her head only hanging by the back bone. Above that wound was another cut, which had severed the windpipe, and which was sufficient to have caused death; but the cut below it was so serious that death must have taken place instantaneously. The man's throat was cut half-way across the windpipe, and there is no doubt that death in his case also was instantaneous. The surgeon stated that the man must first have stabbed his wife and then cut her throat, for it was impossible for her to have inflicted such a wound on herself. Although the deceased were fully dressed, it was evident that they had been in bed, for there were evident traces that the bed had been occupied by two persons. It is stated that a few days ago Mrs. Pierce had informed the landlord that her husband had stated his intention to murder her through jealousy, but she at the same time stated that there was not the least foundation for his suspicions. The evidence at the inquest showed that the husband was subject to hereditary insanity, and the jury returned a verdict, in the case of the woman, of "Wilful Murder against John Thomas Pearce," and in that of the man 'Suicide while in an unsound state of mind."

Provincial.

HALIFAX.—On Thursday the 14th a double murder was committed in the quiet village of Rastrick, near this town, by a respectable Irishwoman, the wife of William Dyson, a mason, upon her two children, one aged 2½ years, and the other 5 months. For some time she has given signs of great depression of spirits, and a short time ago said to her husband that she would make away with herself. She was passionately fond of her children, and during the four years of her married life has lived on the best terms with her husband. About 6 o'clock on Thursday morning her husband left her in bed with the children, and about 9 she took a razor from the mantel-piece, placed the eldest child on the floor, and cut its throat almost from ear to ear, the child at the time having a piece of bread in its hand. Whilst the little girl was dying she laid her infant on the floor also, and almost cut its head off, placing the razor behind the head. She then ran out of her house and screamed out that she had murdered her children. She then went to the house of a constable shrieking and tearing her hair, and told him that she had "killed her poor innocent children." Subsequently, on being told by the officer that she must go with him, she washed and dressed herself with the greatest composure, and did not make the least resistance to being taken to prison. At the inquest on Friday the jury returned a verdict of Wilful Murder against her, and she was committed for trial at the Assizes. The unfortunate woman bears an excellent character for cleanliness and industry. She is a good looking woman, only 23 years of age, and has had a superior education for a person in her position.

LIVERPOOL.—It is stated that the Alexandra has been handed over to her owners by the Government. —The execution of James Clitheroe, who was found guilty of the murder of his paramour at St. Helen's at the last Lancashire assizes, took place on Saturday in front of the county gaol. He persisted to the last in his story that both he and the woman agreed to commit suicide, which was successful in her case, but he was saved by the people coming to the house.

NEWCASTLE.—A very serious accident occurred a few days since in the Peggy Pit, Newbottle, the property of the Earl of Durham, which threatened to be of very serious consequence. A number of men had been driving a drift in the western part of the pit, in order to reach some whole coal in that direction. It is usual to use bore rods when employed in the neighbourhood of old workings, and a man thus employed unfortunately "holed" into some old workings of a pit, which exploded 65 years ago, and killed several men, and has not been worked since. The gas rushed out of the old working with such force that the man ran away, forgetting, unfortunately, his Davy lamp. The consequence was that the gas so accumulated around the Davy lamp that it became red-hot and burst the lamp. The explosion that thus occurred ignited the gas, which set the coal on fire. The horses and everything of value were taken out of the pit, and a number of men were sent down with fire-engines to attempt to put the fire out, but they were quite unsuccessful. More active measures were subsequently adopted. A six-inch pipe was laid on from Harrington Mill-burn, and workmen were employed pumping into the pit, but nothing was effectual until it was determined to stop up the entrances to the pit, and prevent all ingress of air. This measure has proved successful, and the fire is now said to be entirely extinguished.

SOUTHWELL.—On Saturday Richard Thomas Parker, who is charged with shooting his father and mother at Fiskerton, was brought before the bench of magistrates in this town, for further examination. The depositions having been read over, he was committed for trial at the next assizes, on the charge of attempting to murder, and on the same evening he was lodged in the county gaol. No hopes whatever are entertained of the old lady's ultimate recovery. On Friday an attempt was made to take her depositions, but she was not in a condition to give evidence.

STRATFORD ON AVON.—The Festival that is to celebrate the 300th anniversary of Shakspeare's birthday in the town where he was born and died, commences this morning, and will be continued for a week at least. The programme includes for to-day a public dinner under the presidency of the Earl of Carlisle, followed by a display of fireworks; on Monday the performance of the Messiah in the morning, and a Grand Concert of Music from Shakespeare in the evening; on Tuesday an Excursion to Charlecote in the morning, and a performance of "Twelfth Night" in the evening by the Haymarket Company, followed by "Lord Dundreary" in a new farce. On Wednesday 'A Shakespearean Reading' in the morning, and in the evening, in consequence of the withdrawal of Mr. Fechter, the performance of "Romeo and Juliet," under the direction of Mr. Vining, the character of Juliet by Mademoiselle Stella Colas, and the "Comedy of Errors;" the two Dromios by the Brothers Webb. On Thursday a concert of instrumental music and glees from the plays of Shakespeare in the morning, and the performance of "As You Like It" in the evening. On Friday evening a Grand Fancy Dress Ball. During the Festival there will be an exhibition, in the Town Hall, of many of the well-known portraits of Shakespeare and eminent actors of his plays, and a popular pageant of Shakespearian characters is announced for the 2d and 3d of May, the expenses of which will be entirely defrayed by the middle and lower classes.

SOUTHAMPTON.—In consequence of the reported capture of the steamship Bavaria by the Danish cruisers, the company's steamer Germania, which arrived in this harbour on Tuesday from New York, did not continue her voyage to Hamburg, but landed her passengers, who proceeded to their destination through London. The Germania has since gone into dock, where her cargo will be transhipped into an English vessel for Hamburg, and the Germania will return to New York direct. The report of the Bavaria's capture was subsequently found to be erroneous, and she has since arrived here on her outward voyage. On Wednesday, when a few miles from the entrance of the harbour she ran into the Channel Islands passenger steamer Normanby, which was seriously injured, but was able to get back into the port. The Bavaria was scarcely at all injured by the collision.

TRURO.—The largest block of granite ever cut in Cornwall, weighing more than 40 tons, was drawn by 50 horses to the Penrhyn railway station on the 13th, for conveyance to Strathfieldsaye, where it will form part of a monument to be erected to the memory of the late Duke of Wellington by the present duke.

WARWICK.—George Ditton, late head gamekeeper to Mr. Sheldon, of Brailes, died on Sunday week in the County Gaol, where he was awaiting his trial, charged with the murder of Henry Clifton, at Brailes, on the 21st of February last. It will be remembered that Clifton was passing along a footpath leading across one of Mr. Sheldon's farms when deceased attempted to prevent him. A struggle ensued, and Clifton struck the gamekeeper with a stick. The latter then levelled his gun and shot Clifton dead. At the recent assizes the trial was postponed, on the ground that deceased had not had time to prepare his defence. During his incarceration he had suffered greatly from mental anxiety, and his health had for some time past been in a precarious state, as, though not suffering from any disease, he was upwards of 60 years of age. On Sunday morning he became suddenly worse, and died shortly afterwards.

Obituary.

THE BISHOP OF PETERBOROUGH died on Monday afternoon at the Palace, Peterborough. The last hours of the venerable prelate were peaceful in the extreme, and he died almost without a struggle. Though his illness was somewhat sudden, his great age, 84, and his increasing infirmities had prepared the public for the result. The Right Rev. Dr. George Davys, Bishop of Peterborough, graduated at Christ's College, Cambridge, in 1803, as tenth wrangler, and gained a Fellowship. He subsequently became curate of Littlebury, and in 1814 of Chesterford: the latter curacy he held until Dr. Blomfield, the late Bishop of London, was presented to that living, when Mr. Davys became curate of Swaffham Prior. He afterwards removed to Kensington, and was appointed tutor to the Princess Victoria. He was advanced to the see of Peterborough in 1839. In theology his lordship belonged to the Evangelical party in the Church. He took no active part, however, in theological controversy, and was liberal towards all religious creeds. Of late years he seldom occupied his seat in the House of Lords; and, in fact, his ambition through life was rather to be good than great. In the affectionate regard of his former pupil, our present gracious Queen, the Bishop held a high place. For many years portraits of the Royal family were annually sent to the Bishop, and costly tokens of her Majesty's grateful affection were frequently bestowed upon him. Throughout his diocese the Bishop was universally loved and respected, and his loss will be deeply regretted.

BIRTHS.—On the 18th inst, at Wentworth Castle, Yorkshire, Lady HARRIET WENTWORTH, of a daughter—16th inst. at 22, Upper Grosvenor Street, Lady MARIA PONSONBY, of a daughter—15th inst, at 48, Thurloe Square, the Lady HENRIETTA RIDDELL, of a daughter—13th inst, at Smytham, Little Torrington, the wife of Major the Hon. E. T. ERSKINE, of a son—15th inst, at 28, Dorset Place, Dorset Place, Dorset Square, the wife of Lieut.-Colonel BOURCHIER, C.B., Royal Horse Artillery, of a son—19th inst, at 3 A, Upper Westbourne Terrace, the wife of FREDERICK WILLIAM WYNDHAM, Esq., late of Fellbrigg Hall, Norfolk, of a son and heir.

MARRIAGES.—On the 20th inst, at St. Mary Abbotts, Kensington, Major CLAGETT, late H.M.'s Indian Army, to the Countess of HARBOROUGH, widow of the sixth and last Earl.—19th inst, at Haseley, Oxon, the Rev. ARTHUR BRINCKMAN, youngest son of Sir Theodore Brinckman, Bart, to LOUISA GEORGINA EDITH, eldest daughter of the late Rev. HENRY HUTCHINSON SWINNY, vicar of Cuddesdon, and Principal of the Theological College—9th inst, at St. James's, Piccadilly, W. W. SMYTH, Esq., eldest son of Admiral Smyth, K.S.F., D.C.L., &c., of St. John's Lodge, Aylesbury, to ANNA MARIA ANTONIA, third daughter of A. M. S. MASKELYNE, Esq., of Basset Down House, Wilts—14th inst, at St. Paul's, Knightsbridge, ARCHIBALD BALFOUR, Esq., fourth son of Charles Balfour, Esq, of 66, Eccleston Square, to SOPHY CHARLOTTE, eldest daughter of T. M. WEGUELIN, Esq., M.P., of 23, Eaton Square—12th inst, at Twickenham, the Rev. CHARLES HARRINGTON, second son of the late Principal of Brasenose, Oxford, to ALICE, youngest daughter of the late ALEXANDER COTTON, Esq., of Landwade, Cambridgeshire—16th inst, at St. John's Church, Hyde Park Square, S. B. SAUNDERSON, Esq., 11th Hussars, A.D.C., eldest surviving son of the late Colonel A. Saunderson, of Castle Saunderson, county Cavan, to EMILY MARY, daughter of the late E. D. COLE, Esq., of Stoke Lyne, Oxon.

DEATHS.—On the 17th inst, at 1, Cambridge Villas, Twickenham, AUGUSTUS T. GERVIS, Esq., third and youngest son of the late Sir George W. T. Gervis, Bart, of Hinton Admiral, Hants, aged 33—15th inst, at Edmonstone House, Liberton, near Edinburgh, HARRIET CECILIA MARY, only daughter of Sir JAMES GARDINER BAIRD, Bart, of Laughton Hall, Midlothian, aged 16—18th inst, at Teddington, S.W., after two years acute suffering, SOPHIA, the wife of JAMES J. KINLOCH, Esq., of Kair, Kincardineshire, fourth daughter of the late General Sir George Anson, G.C.B., aged 51—13th inst, at The Vicarage, Sawbridgeworth. Lady PIERSON, widow of Admiral Sir W. H. Pierson, of Langeton, Hants—18th inst, at 11, Upper Wimpole Street, Lieutenant-General WILLIAM MONTEITH, of the Madras Engineers, K.L.S., F.R.S., F.R.G.S., aged 73—12th inst, at 31, Great Cumberland Place, Portman Square, Lieutenant-Colonel WM WATSON—17th inst, at Folkestone, deeply regretted, GEORGE BROCKMAN, Esq., Colonel of the East Kent Militia, eighth son of the late James Drake Brockman, Esq., of Beachborough, Kent, aged 56.

Markets.

HAY.—Per Load of 36 Trusses.
SMITHFIELD, Thursday, April 21.

Prime Meadow Hay	80s to 85s		Clover, old	95s to 115s
Superior do. ..	90	95	New Clover ..	— —
Inferior do. ..	60	70	Do. second cut ..	90 105
New do.	—	—	Straw	26 32
Rowen	—	—	HARVEY & EASTON.	

WHITECHAPEL, THURSDAY, April 21.

Fine Meadow Hay ..	84s to 88s		Prime 1st cut Clover	108s to 112s
Inferior do.	80	84	Inferior do. do. ..	100 105
Prime New Hay ..	—	—	New 1st cut do. ..	— —
Inferior	—	—	Prime 2d cut do...	105 110
Straw	28	32	Inferior do.	100 105

HOPS.—BOROUGH MARKET, FRIDAY, April 22.
Messrs. Pattenden & Smith report that the demand for consumption continues steady, without any alteration in prices. Stocks of last year's growth are nearly exhausted.

COVENT GARDEN, April 23.
Outdoor produce continues to be well supplied. English Grapes of this year's growth are sufficient for the demand. Apples, though scarce, may still be obtained; and there are likewise a few dessert Pears. Oranges are getting scarce; as are also good Pine Apples. Continental arrivals continue heavy; among them are Lettuces, Endive, Carrots, Artichokes, and Radishes. Out-door grown Asparagus realises 15s. a bundle. Flowers chiefly consist of Tulips, Hyacinths, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Oranges, per 100, 4s to 10s
Grapes, new, per lb., 12s to 25s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Almonds, do., 18s
Pears, per doz., 6s to 12s	Walnuts, do., 14s to 20s
Strawberries, p. oz., 9d to 1s 6d	Chesnuts, per bush., 10s to 16s
Lemons, per 100, 4s to 10s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Rhubarb, p. bundle, 6d to 1s 3d
Cauliflowers, each, 4d to 8d	Turnips, p. bunch, 4d to 6d
Asparagus, p. bundle, 8s to 14s	Cucumbers, each, 1s to 3s
French Beans, p. 100, 2s to 3s	Beet, per doz, 1s 6d
Green Peas, p. ½ sieve, 20s	Shallots, per lb., 10d
Seakale, per punn., 2s to 3s	Celery, per bundle, 1s 6d to 2s
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 4d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 1s to 2s	Horse Radish, p. bunch, 1s to 4s
Carrots, do., 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
— young, p. bunch, 3s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

COAL MARKET.—April 20.
Holywell Main, 17s. 6d.; Lambert's West Hartley, 16s. 9d.; Walls End Braddylls Hetton, 19s. 3d.; Walls End Hough Hall, 19s.; Walls End South Kelloe, 19s.—Ships at market, 29.

BRITISH WOOLS.—LONDON, April 21.
We have a fair demand for all descriptions of wool at full rates.

POTATOS.—SOUTHWARK, Monday, April 18.
During the past week the arrivals both coastwise and by rail have been large, and the weather being bright, with powerful sunshine, has diminished the consumption, and the trade is in a very depressed condition. The quotations are:——Yorkshire Flukes, 60s. to 80s. per ton; do. Regents, 50s. to 70s.; do. Rocks, 45s. to 50s.; Dunbar Regents, 60s. to 70s; Kent and Essex Regents, 50s. to 70s.; North Berwick Regents, 50s. to 60s.; Perth, Forfar, and Fife Regents, 40s. to 45s.; do. do. Rocks, 40s. to 45s.; do. do. Reds, 40s. to 45s.

NEWGATE.—April 22.
Best Fresh Butter .. .. 15s. per dozen lbs.
Second do. do. .. .. 13s. "
Pork, 4s. 4d. to 4s. 8d. per 8 lbs.

LEADENHALL POULTRY MARKET.—April 22.
The market has been well supplied with chickens during the week, but fowls of first quality are very scarce.

METROPOLITAN CATTLE MARKET.
MONDAY, April 18.
Although the number of Beasts is smaller than on Monday last, it is quite equal to the demand, and prices are not better; indeed, to effect a clearance, a reduction has in some instances been submitted to. The supply of Sheep is shorter, and the trade is more cheerful, but it is very difficult to obtain higher prices. Choice Lambs and Calves are in request, but middling qualities meet with a dull sale. From Germany and Holland there are 980 Beasts, 1630 Sheep, 130 Calves, and 60 Pigs; from Scotland, 350 Beasts; from Ireland, 70; and 2670 from Norfolk and Suffolk.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 6	to 4 8	Best Long-wools. ..	—	..
Best Short-horns	4 4	— 4 6	Do. Shorn ..	4 2	— 4 6
2d quality Beasts	3 0	— 3 10	Ewes & 2d quality ..	—	..
Best Downs and Half-breds	—	..	Do. Shorn ..	3 4	— 3 8
Do. Shorn ..	4 6	— 4 8	Lambs ..	6 8	— 7 8
			Calves	3 4	— 5 4
			Pigs ..	3 4	— 4 8

Beasts, 4290; Sheep and Lambs, 19,020; Calves, 149; Pigs, 490.

THURSDAY, April 21.
The number of Beasts is not quite so large as on Thursday last; the demand is, however, very limited, and except for some choicest kinds prices are not better. There are a few more sheep; trade is slow for them at Monday's quotations. Choice Lambs and Calves are in request at higher rates. From Germany and Holland there are 295 Beasts, 680 Sheep, and 127 Calves; and from Spain, 32 Beasts. Milch Cows, 85.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 6	to 4 8	Best Long-wools. ..	—	..
Best Short-horns	4 4	— 4 6	Do. Shorn ..	4 2	— 4 6
2d quality Beasts	3 0	— 3 10	Ewes & 2d quality ..	—	..
Best Downs and Half-breds	—	..	Do. Shorn ..	3 4	— 3 8
Do. Shorn ..	4 6	— 4 8	Lambs	7 0	— 8 0
			Calves	3 8	— 5 8
			Pigs ..	3 8	— 4 8

Beasts, 1025; Sheep and Lambs, 6110; Calves, 218; Pigs, 160.

MARK LANE.—MONDAY, April 18.
The supply of Wheat from Essex and Kent to this morning's market was moderate, and taken slowly at a decline of 1s. per qr. on the prices of this day se'nnight. Foreign Wheat met but little inquiry, and to have forced sales Friday's rates could scarcely have been maintained. Barley was a dull sale at barely last week's quotations. Beans and Peas brought late rates. The Oat trade was heavy, and in some instances rather less money was accepted. Flour was neglected.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk .. White	42—48	Red	40—48
— — fine selected runs .. ditto	44—52	Red	40—48
— — Talavera	48—56		
— Norfolk	—	Red	—
— Foreign	36—52		
BARLEY, grind. & dist, 25s to 27s .. Chev.	34—38	Malting ..	29—33
— Foreign .. grinding and distilling	22—26	Malting ..	27—31
OATS, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	17—22	Feed	15—20
RYE	30—32	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....27s to 36s..Tick	30—33	Harrow ..	30—33
— Pigeon .... 32s to 40s .. Winds.	—	Longpod	—
— Foreign .....Small	36—42	Egyptian	30—32
PEAS, White, Essex and Kent .. Boilers	32—33	Suffolk ..	33—34
— Maple .... 30s to 34s .... Grey	28—30	Foreign ..	31—33
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered .. per sack	35—40		
— 2d do ..... ditto	28—34	Country ..	28—34
— Foreign ..... per barrel	15—25	Per sack	32—40

FRIDAY, April 22
The weather on Saturday was wet, with N.W. and N.E. wind; it has since been warm and bright, and, with the exception of one or two slight frosts at night, quite resembling summer. The Wheat trade continues to be inanimate, and millers generally being well stocked with Dantzic Wheat, the blockade of that port and Konigsberg exercises no influence upon them. Prices of all kinds of Wheat continue to have a declining tendency, and in the majority of markets are quoted about 1s. lower. The late value of Beans continues to be well supported, the quotations for all other kinds of spring corn have not undergone any material change. Flour continues to be neglected, and is quoted rather lower in several important markets. Since Friday last three vessels have been reported off the coast. The floating trade has been extremely quiet; there is a little demand for Barley at late rates, but all other descriptions of grain are entirely neglected. In the absence of business Wheat must be quoted about 1s. per qr. lower, and spring corn unaltered in value. Linseed and Cottonseed, after having been in good demand, close quiet. Paris, April 21.—The prices of Wheat and Flour have remained unaltered, but both articles are difficult of sale. The present stock of Flour is estimated at 17,550 cwt. The six marks for delivery this month are quoted equal to 33s. 6d. per 280 lbs. The arrivals of foreign Barley during the week have been large, but of all other grain moderate. To-day's market was very thinly attended, and business in Wheat, both English and foreign, was exceedingly limited; Monday's prices must be considered nominal. Spring corn of all descriptions was a very dull sale at about Monday's quotations.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1140 qrs.	470 qrs.	320 qrs.	2090 sks.
Irish	—	—	2300	— "
				270 "
Foreign ..	11,260 "	6560	17,690 "	3090 brls

LIVERPOOL, April 19.—Our market has been rather poorly attended to-day, and Wheat has attracted only a retail inquiry at about the rates current on Friday, or a shade less. Flour quite unsaleable. Indian Corn neglected, but held firmly. Oats and Oatmeal no lower. Beans, Peas, and Barley move slowly at our quotations. We have a fine bright sunny day and a very flat market.

FRIDAY, April 22.—There was a thin attendance at market. Wheat a slow sale, and nominally unaltered. Nothing doing in Flour. Indian Corn dull; mixed, 28s. Egyptian Beans steady. Oats and Oatmeal dull.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
March 12	40s 1d	31s 5d	19s 8d	29s 2d	32s 7d	33s 0d
— 19	39 9	31 4	19 2	32 4	32 10	32 10
— 26	39 11	30 10	19 0	28 0	32 8	33 3
April 2	40 2	31 0	19 2	28 5	32 6	32 11
— 9	40 1	30 9	18 11	29 0	32 8	32 8
— 16	40 1	30 10	19 3	27 8	33 0	31 11
Agg. Aver.	40 0	31 0	19 2	29 1	32 9	32 9

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Mar. 12.	Mar. 19.	Mar. 26.	April 2.	April 9.	April 16.
40s 2d	..	..	..		..	..
40 1		..	..			
39 11	..	..		..		
39 9	..			..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..

WANTED, an active, industrious MAN as ROAD SURVEYOR, and to take the Superintendence of Workmen employed on the highways. He must be able to write well, and to keep ordinary Accounts. Wages from 30s. to 35s. per Week. Apply by letter in own handwriting, stating age, references, and past and present occupations to Mr. P. C. LOCKWOOD, Borough Surveyor, Brighton. The Advertiser does not undertake to reply to any communications unless approved.

WANTED, a NURSERY FOREMAN, who has had experience, and thoroughly understands the Routine and Management of a Scotch Nursery. Only a strictly sober Man will be treated with.—Apply, in own handwriting, to Messrs. BEN. REID & Co., Aberdeen, N.B.

WANTED, by Messrs. PAMPLIN & SON, at their Whips Cross Nursery, a married MAN, with good address, who has been accustomed to the Nursery Business, to Attend Customers, to put up Seed Orders, and when not engaged as above to make himself useful in the Cultivation of Plants. House and firing found.—Apply by letter to their Lea Bridge Nursery, Leyton, Essex, N.E.

WANTED, a Man to act as GARDENER and General Man, and attend to a Cow. Garden small, but little Forcing. Wages 16s. per week, Bed on the premises, and Fire and Candle Light.—Apply to F. M., Grove Lodge, West Moulsey, Surrey.

Propagator.

WANTED, an experienced PROPAGATOR—a practical energetic Man, having a thorough knowledge of Roses, Coniferæ, Camellias, Azaleas, Soft and Hard-wooded Plants, &c. None need apply unless thoroughly acquainted with Roses, and has had considerable experience in Propagating extensively for Sale, as well as Growing for Exhibition. Full particulars as to age, previous situations, and the time served in each, must accompany all applications.—JOHN CRANSTON, King's Acre Nurseries, near Hereford.

WANTED, a YOUTH about 14, for Kitchen Gardening, and to assist in a house of business.—Apply by letter to Mr. HUMPHRYS, 25, Apollo Buildings, East Street, Old Kent Road, S.E.

WANTED, an active respectable young Man, as an IMPROVER in the Florist line. He will have to take a part in the Stoking. Also a good JOBBING MAN wanted, who must be a good Mower, a clean workman, and understand well the Pruning and Nailing of Wall Trees, Shrubs, &c.—Apply at STEELE'S Nurseries, Richmond, Surrey, S.W.

Witney Union.

WANTED, a GARDENER.—The Board of Guardians of the Witney Union Hereby give Notice that at their Meeting to be held at the Board Room of the Workhouse, near Witney, on Thursday, April 28, they will at 12 o'clock at noon proceed to the Election of a Single Man or a Widower to fill the Office of Industrial Teacher at the Workhouse of the said Union. He will have to instruct the Boys in Gardening, and to perform such other duties applicable to his Office as may be directed by the Board of Guardians or the Master of the Workhouse. Further particulars as to the nature of the duties may be ascertained on application to the Master. Salary £25 per annum, with Board, Lodging, and Washing in the Workhouse. Candidates must have had experience in the Art of Gardening.—Applications in the handwriting of the Candidates, stating age, present or last occupation, accompanied with testimonials as to character and competency, must be sent to me at my Office at Witney, not later than the 27th inst. Candidates must attend at the time and place of Election. They will have to do so at their own expense.—By Order. R. H. BULLEN, Clerk.
Witney, April 23.

WANTED, a PRACTICAL GARDENER.—Single. WM. CLARK, Seedsman, 25, Bishopsgate, E.C.

WANTED, in a Market Nursery, a Young Man as SOFT-WOODED GROWER, quick at Potting and Tying.—Apply by letter, stating last situation and wages, to F. R., *Gardeners' Chronicle* Office, W.C.

WANTED, a good BUDDER and GRAFTER, to be under the Ground Foreman.—Apply to OSBORN & SONS, Fulham, London, S.W.

WANTED, a YOUNG MAN, experienced in the use of a Mowing Machine, and Jobbing generally.—WOOD & SONS, 172, Old Kent Road, S.E.

WANTED, a GROOM and GARDENER, age about 30, single or married, without family, occasionally to wait at table and make himself generally useful. One accustomed to Hothouses and Grapes preferred.—Apply by letter to T. G., Witham, Essex.

Dairymaid.

WANTED, in a gentleman's family in Kent, a good DAIRYMAID, who would be required to Milk six Cows, attend the Poultry, and fill up her time in the House. A respectable young Woman out of a Farmhouse, who is a thorough good Butter Maker, not objected to; six to eight Cows only are kept.—Address, stating wages, &c., to Mrs. DEEDES, Sandling Park, Hythe, Kent.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

SURVEYOR, LAND, and HOUSE AGENT.—Ladies and gentlemen desirous of obtaining the services of a Person in either of the above capacities may apply to Mr. JAMES DICK, High Beech, Essex, who begs to assure them that he will endeavour to merit their approval by his utmost exertions.

GARDENER (HEAD).—Age 34; is very successful in the leading branches, good Kitchen and Flower Gardener. Wife a good Laundress, if required. First-class character.—GARDENER, The Firs, Frimley, Surrey.

GARDENER (HEAD).—Age 40, married; understands the Management of Orchard-house, Greenhouse, &c. Twenty-four years' practice. Two years' good character.—J. HARRIS MOORHOUSE, Westerham, Kent.

GARDENER (HEAD), to any nobleman or gentleman.—Age 33, married, two children; good practical working Man. Character and abilities unexceptionable.—HENRY GILBERT, the Gardens, Shrubbs Hill, Sunningdale, Surrey.

GARDENER (HEAD).—Scotch, age 30, married; has a thorough practical knowledge of his profession. No Single-handed place accepted. Five years' good character from present employer.—J. E., Post Office, Rothbury, Morpeth.

GARDENER (HEAD).—Age 31, married, no incumbrance; thoroughly understands his profession in all its branches. No objection to a single-handed place. Four years' character. Wife can attend to a Dairy if required.—A. B., Holmwood Post Office, Dorking, Surrey.

GARDENER (HEAD).—Age 40, no incumbrance; thoroughly experienced in Fruit Culture, is a first-class Plant Grower, also has a good knowledge of Orchids; competent in the Laying Out and Planting of Ground Work, understands the Erection and Management of Horticultural Buildings. Character will bear the strictest investigation. No single-handed place accepted.—I. Y., Craigh, Confectioner, Hornsey Road, N.

GARDENER (HEAD), age 32, married, without incumbrance.—WM. WOOD & SON have now the opportunity of recommending to any lady or gentleman requiring the services of a really first-class Gardener as above, a Man of great ability, and one who has an extensive knowledge of his profession in all its branches, having served with great credit in some very excellent situations. The Wife is competent to undertake the Management of a Dairy if required.—Apply as above, Woodlands, Maresfield, Uckfield, Sussex.

GARDENER (HEAD).—Age 32, married; has had great experience in the Cultivation of Orchids, Stove and Greenhouse Plants, Ferns, &c., the Forcing of all kinds of Fruits and Vegetables, including Mushrooms and the Management of large Gardens generally. Any gentleman in want of a first-rate practical Gardener, the Advertiser can be highly recommended to.—A. B., Mr. Slocombe, Stationer, Ongar, Essex.

GARDENER (HEAD).—Married, English; thoroughly understands his profession, having had the Management of Pines, Vines, Flower, Fruit, and Vegetable Gardens, with 10 men under him; and has lived in some of the principal places in England. His employer will give him the highest character.—W. W., Bellegrove, Monastereven, Ireland.

To Noblemen and Gentlemen.

GARDENER (HEAD), married, no incumbrance; experienced in Growing Pines, Grapes, Peaches, &c. Gardening in every branch, and a good Grower of Stove and Greenhouse Plants. Character will bear the strictest investigation. Liberal wages expected.—L. M., Park Cottage, Dulwich Road, Dulwich, S.W.

GARDENER (HEAD or SINGLE).—Married, no incumbrance; understands Kitchen and Flower Gardens, and Forcing in general. Good character.—A. B., 22, North Street, Edgware Road, London, W.

GARDENER (HEAD or SINGLE-HANDED).—Age 26, married; ten years' experience in first-class places.—H. SALTMER, Manor House, Sheffield.

GARDENER (HEAD or SINGLE-HANDED).—Age 34, married; understands Flower, Fruit, and Kitchen Gardening. Good character from his present master.—A. B., Halstead, Essex.

GARDENER (HEAD), where one or more are kept.—Age 30, married, one child; thoroughly understands his profession in all its branches. Character will bear the strictest investigation.—A. Z., 3, White Bear Green, Hampstead, N.W.

GARDENER (HEAD) and BAILIFF.—Age 38, married; is thoroughly experienced in Early and Late Forcing of all kinds of choice Fruit, Flowers, and Vegetables; also the Management of Land and Stock; Buying and Selling; Keeping Accounts, &c. Eight years' unexceptionable character. Wife an experienced Dairywoman.—A. F., Mr. A. Henderson, Pine Apple Nursery, Edgware Road, London, W.

GARDENER (FOREMAN or SECOND) in a gentleman's Establishment.—Has had good experience in Orchids, Stove and Greenhouse Plants, Flower and Kitchen Gardens.—W. B., Parter's, Kingston-on-Thames, Surrey, S.W.

GARDENER.—Middle-aged, married, one child; is thoroughly experienced in all departments. Wife no objection to attend to a small Dairy.—W. L., Mr. Cattell's Nursery, Westerham, Kent.

GARDENER (SECOND).—Age 21; has a general knowledge of Gardening. Two years' good character.—R. M., Brown's, News Agent, 1, Sussex Road, Brixton, S.

GARDENER (UNDER), in a gentleman's Garden.—Age 19; has had experience in Fruits and Flowers.—H. S., St. Margaret's Gardens, Twickenham, S.W.

GARDENER and BAILIFF, especially where Improvements are required, a native of Wiltshire.—Age 43; understands the Measurement and Cultivation of Timber Planting, Draining, and Road Making.—E. S. R., Post Office, Ross, Herefordshire.

To the Nursery and Seed Trade.

FOREMAN, PROPAGATOR, or SALESMAN.—Age 28, married; energetic; thoroughly understands his business. First-class character.—C. H., Post Office, Henley, Oxon.

FOREMAN (or UNDER), in a large Establishment, age 24.—T. JONES will be glad to recommend his Foreman to any gentleman's Gardener requiring the services of a steady, active, and industrious young Man, who wishes for a change for further improvement.—Ribston Park, Wetherby, Yorkshire.

To Noblemen and Gentlemen.

STEWARD and GARDENER, or GARDENER (HEAD).—Age 44, married, without incumbrance; is at liberty to engage with any nobleman or gentleman in the above capacity. Has had great practical experience in every department of Gardening; Early and Late Forcing of Fruits and Vegetables, including Vines, Pines, &c.; Stove and Greenhouse Plants, Flower and Kitchen Gardens. Also much experience in Laying Out and Improving Flower and Pleasure Gardens, and in the Erection and Heating of Glass Structures. Highest testimonials as to character and ability from former employers, and can be highly recommended by the lady he is leaving. Seven years' character from present situation.—T. H., Post Office, Cobham, Surrey.

IMPROVER, in any nobleman's or gentleman's Garden, under a first-class Gardener, where his services would be principally required in the Fruit and Plant Houses.—Age 19; no objection to give a Premium.—J. B., Lytchett House, Poole.

FARM BAILIFF, or BAILIFF and GAMEKEEPER.—Age 37, married; 12 years in last situation. Wife can take charge of a Dairy and Poultry.—C. MAY, Pheasantry, Beaufort Street, Chelsea, S.W.

To Landed Proprietors and Agriculturists.

BAILIFF or LAND STEWARD, or both.—A person of great experience in the Management of Stock and Land, most energetic, and of steady habits, has had the charge of extensive Farms, where great improvements have been carried out.—CHIVAS & WEAVER, Chester.

STEWARD (UNDER), or FARM MANAGER.—Age 30; has had some little experience in Agricultural pursuits both in Australia and England. Was for three years and a half a Pupil of the Royal Agricultural College at Cirencester. Understands Book-keeping, having been educated for a Merchant.—B. H. W., John Sandford, Esq., Mounton, Chepstow.

GAMEKEEPER.—Age 40, married, no incumbrance; well understands Rearing Pheasants, Training Dogs, and Trapping. Lived nine years with his late master, whose death was the cause of his leaving.—W. G., Eastmeon, near Petersfield, Hants.

To Farmers.

COMPANION or ASSISTANT.—Age 28; of good standing and some knowledge of Farming. A small Premium would be paid if required, but a moderate salary expected.—A. B., 42, Lamb's Conduit Street, London, W.C.

DAIRY MANAGEMENT, in a nobleman's or gentleman's family, by a Man and Wife.—Competent to Manage a Dairy of from 15 to 20 Cows; the Rearing of all kinds of Stock; no objection to Poultry, or to Manage a little Land if required; can also kill Sheep or Pigs. Good reference as to character can be given.—C. H., A. Pryor, Esq., Hylands Park, Chelmsford, Essex.

PACKER and GLAZIER in a Nursery, or to Glaze and fill up time in the houses of a gentleman's Establishment.—L. M., European Coffee House, 53, Long Acre, W.C.

COWMAN, &c.—A gentleman having just given up his farm would be glad to recommend his Cowman to any gentleman requiring one; he is a married man, and can have five years' character for honesty and sobriety.—Mr. PANTER, Golder's Green, Hendon, N.W.

WHAT WILL THIS COST TO PRINT? is a thought often occurring to literary men, public characters, and persons of benevolent intentions. An immediate answer to the inquiry may be obtained. A SPECIMEN BOOK of TYPES, and information for Authors, sent on application by RICHARD BARRETT, 13, Mark Lane, London, E.C.

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Six SLIDES of different Houses, Post free for 50 Stamps.
Single SLIDES, 12 Stamps each.
DESCRIPTIVE BOOK, fully illustrated (Second Thousand), Post free for 20 Stamps, from the Author and Patentee, JAMES CRANSTON, Architect, 1, Temple Row West, Birmingham.

METCALFE, BINGLEY, AND CO.'S NEW PATTERN TOOTH BRUSHES, Penetrating Unbleached Hair Brushes, Improved Flesh Brushes, genuine Smyrna Sponges, and every description of Brush and Comb and Perfumery for the Toilet. METCALFE'S celebrated Alkaline Tooth Powder, 2s. per box. The FAIRY BOUQUET; the OXFORD and CAMBRIDGE BOUQUET. In bottles, 2s., 3s. 6d., and 5s. each. 130 B, and 131, Oxford Street, W.

DINNEFORD'S PURE FLUID MAGNESIA has been during 25 years emphatically sanctioned by the Medical Profession, and universally accepted by the public, as the best remedy for Acidity of the Stomach, Heartburn, Headache, Gout, and Indigestion, and as a mild Aperient for delicate constitutions, more especially for ladies and children. It is prepared in a state of perfect purity and of uniform strength by DINNEFORD & Co., 172, New Bond Street, London, and sold by all respectable Chemists throughout the world.

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SEWELL AND CO. have the largest Selection of Spitalfields MOIRES ANTIQUES, in White, Black, and all the new colours, at 4½ guineas the full dress.
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Organdie Muslins, 1s. per yard.

SEWELL AND CO., having been fortunate in the purchase of several hundred pieces of these Classic MUSLINS, are now offering them at the above price.
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Lists of Prices on application to THRESHER & GLENNY, General Outfitters, next door to Somerset House, Strand, W.C.

Glenfield Patent Starch.

MESSRS. WOTHERSPOON AND CO. have been appointed STARCH PURVEYORS to H.R.H. the PRINCESS of WALES. This Starch is used in the Royal Laundry and was awarded a Prize Medal. Sold by all Grocers, Chandlers, &c.
WOTHERSPOON & Co., Glasgow and London.

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PRICE'S CANDLES, WHICH WILL NOT DROP GREASE WHEN CARRIED.—Thin, very hard Candles, sold in boxes 1s. and 3s. each, are recommended as the best Carriers.
Extra hard S 12 CHAMBER CANDLES, sold in boxes 2s. each. Thicker Candles, intended for those who will not burn thin.
SHERWOOD ECONOMIC BED-LIGHTS, in packets of 36 Candles for 1s., intended for use where cheapness is a great object, will be found an improvement on the ordinary Candles, as they gutter less.
Special CANDLESTICKS to fit thin candles, 1s. and 2s. 6d. each; reducing Sockets, making them fit any candlestick, 2d. each.
PRICE'S Patent Candle Company, Limited, London.

PURE PICKLES, SAUCES, JAMS, &c., and Table Delicacies of the highest quality, pure and wholesome. See *Lancet* and Dr. Hassall's Report.—CROSSE & BLACKWELL, Purveyors to the Queen, Soho Square, London. May be obtained from all Grocers and Oilmen.

Sauce.—Lea and Perrins'

WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE,"
Is prepared solely by LEA & PERRINS.
The public are respectfully cautioned against worthless Imitations, and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper.
ASK FOR LEA AND PERRINS' SAUCE.
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TAYLOR BROTHERS' GENUINE MUSTARD. Dr. HASSALL having subjected this Mustard to a rigorous microscopical examination and chemical analysis, reports that it contains the three essential properties of good Mustard, viz., Purity, Pungency, and Delicate Flavour. See that each Package bears their Trade Mark the "Prize Ox," and Dr. Hassall's Report. Sold by all Grocers, &c., throughout the kingdom.
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Manufacturers to the Queen and Prince of Wales.

FRY'S HOMŒOPATHIC ICELAND MOSS PEARL COCOA
FRY'S SOLUBLE CHOCOLATE.
J. S. FRY & SONS were the only English Manufacturers of Cocoa who obtained the Prize Medal, 1862.

CONSTIPATION, Nervousness, Debility, Cough, Asthma, Catarrh, Consumption, Diarrhœa, and all Bilious, Liver and Stomach Complaints are only aggravated and accelerated by drugs of every description, but perfectly curable by DU BARRY'S health-restoring
REVALENTA ARABICA FOOD,
As proved by thousands of cases which had been considered hopeless. We quote a few.—Cure No. 46,270. Mr. James Roberts, of Frimley, Surrey, of 30 years' diseased lungs, spitting of blood, liver derangement, and partial deafness.—Cure No. 47,121. Miss Elizabeth Jacobs, of extreme nervousness, indigestion, gatherings, low spirits, and nervous fancies.—Cure No. 54,816. The Rev. James T. Campbell, Fakenham, Norfolk, "of indigestion and torpidity of the liver, which had resisted all medical treatment."—In tins 1 lb., 2s. 9d.; 2 lb., 4s. 6d.; 5 lb., 11s.; 12 lb., 22s.; 24 lb., 40s.
BARRY DU BARRY & Co., No. 77, Regent Street, London, W.; also at FORTNUM & MASON, and at 61, Gracechurch Street, E.C.; 4, Cheapside, E.C.; 63 and 150, Oxford Street, W.; and all Grocers and Chemists in every town of the United Kingdom.

PARR'S LIFE PILLS clear from the Body all hurtful Impurities, restore a healthy action of the Liver, Bowels, and Kidneys, without the least pain or inconvenience. May be had for a trifle of any Chemist.

CORNS and BUNIONS.—A Gentleman, many years tormented with Corns, will be happy to afford others the information by which he obtained their complete removal in a short period, without pain or any inconvenience.
Forward address on a stamped envelope to W. GOODALL, Esq., Epsom, Surrey.

Valuable Remedies for the Afflicted.

DR. ROBERTS'S CELEBRATED OINTMENT, called "The Poor Man's Friend," is confidently recommended to the Public as an unfailing remedy for Wounds of every description, a certain cure for Ulcerated Sore Legs, if of 20 years' standing; Cuts, Burns, Scalds, Chilblains, Scorbutic Eruptions and Pimples on the face, Sore and Inflamed Eyes, Sore Heads, Sore Breasts, Piles, Fistula, and Cancerous Humours, &c. Sold in pots, 1s. 1½d., 2s. 9d., 11s., and 22s. each.—Also his PILULE ANTISCROPHULE, confirmed by 60 years' experience to be, without exception, one of the best alterative medicines ever compounded for purifying the blood and assisting Nature in all her operations. Hence they are used in Scrofulas, Scorbutic Complaints, Glandular Swellings, particularly those of the Neck, &c. They form a mild and superior Family Aperient, that may be taken at all times without confinement or change of diet. Sold in boxes, at 1s. 1½d., 2s. 9d., 4s. 6d., 11s., and 22s.—Sold Wholesale by the Proprietors, BEACH & BARNICOTT, at their Dispensary, Bridport, by the London Houses. Retail by all respectable Medicine Vendors in the United Kingdom and Colonies. Observe: No Medicine sold under the above name can possibly be genuine unless "BEACH & BARNICOTT, late Dr. ROBERTS, Bridport," is engraved on the Government Stamp affixed to each package.

The Gardeners' Chronicle Newspaper.

SATURDAY, APRIL 30, 1864.

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For samples and prices apply to
J. SHAW & Co., 29, Oxford Street, Manchester.

SMITH, BECK, AND BECK'S New MERCURIAL BAROMETER, very sensitive. Scale, 3 to 8 inches for every inch of variation, compensating tube instead of a reservoir. Price from 35*s.* to 42*s.*
Description sent free by post, or to be had on application at 31, Cornhill, E.C.

RICK CLOTHS, with Poles, Pulleys, and Lines complete. A large quantity of SECOND-HAND RICK CLOTHS, left over from fêtes last season, to be sold at reasonable prices.
NETTING and SCRIMS for the Protection of Fruit Trees.
Apply early to BENJAMIN EDGINGTON, Marquee, Tent, Rick Cloth, and Flag Manufacturer, by special appointment to Her Majesty, 2, Duke Street, London Bridge, S.E.
No other Establishment.

PORTABLE HOT-WATER APPARATUS,

WITH TRUSS'S PATENT JOINTS FOR HEATING CONSERVATORIES, HOTHOUSES, &c.

T. S. TRUSS

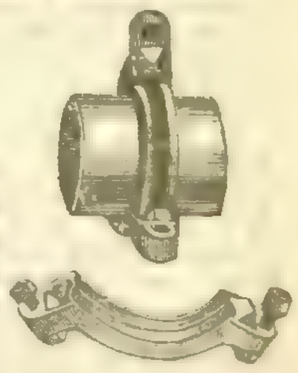

Begs to offer complete HOT-WATER APPARATUS for GREEN-HOUSES (consisting of 4-inch Pipes and Joints, Saddle Boiler, Fire Doors, Bars, Soot Doors, Damper, Supply Cistern, Feed and Air Pipes, Pipe Stands, &c., of the best quality), delivered to any Railway Station in England, and to erect the same within 25 miles of London, at the following prices:—

TWO 4-INCH PIPES ALONG ONE SIDE AND ONE END HOUSE.

Size of House.	Apparatus complete.	Erection.	Size of House.	Apparatus complete.	Erection.
16 feet by 8 feet ...	£8 10 0	£2 0 0	30 feet by 12 feet ...	£11 15 0	£2 10 0
20 feet by 10 feet ...	8 17 6	2 0 0	40 feet by 15 feet ...	15 0 0	2 15 0
25 feet by 12 feet ...	10 5 0	2 5 0	50 feet by 15 feet ...	18 0 0	3 0 0

Erections beyond 25 miles of London, Railway Fare for one Man charged extra.

By the use of these Joints the Apparatus is easily altered or removed without injury to either Pipes or Joints.

Estimates and Plans forwarded on application to

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LATEST IMPROVEMENTS IN LAWN MACHINES.

SHAW'S PATENT FLEXIBLE LAWN MACHINE, for MOWING, ROLLING, and COLLECTING at the same time.
With BOYD'S Patent Self-cleaning and Sharpening Brush.

IS THE ONLY ONE of which the Cutters are SELF-REGULATING, and free to follow all inequalities of ground, with the certainty of leaving a perfectly uniform length of Grass.

IS THE ONLY ONE in which the Pushing Handles are SELF-ADAPTING to any height and convenience of workman, without varying the height of Cutters.

IS THE ONLY ONE which can be used as A ROLLER ONLY, without risk of injury to the Cutters.

Is fitted with BOYD'S well-known Patent SELF-CLEANING and SHARPENING BRUSH, which keeps the Cutters effective, whether the Grass be wet or dry.

Packs away, when done with, in less than ONE HALF THE SPACE of any other Mower, and is therefore safer from injury.

Full particulars, Drawings, Prices, &c., Post Free, on application to the PATENTEE and MANUFACTUREE,

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Who was Principal Manager for many years of one of the largest Lawn Machine Manufactories in England.

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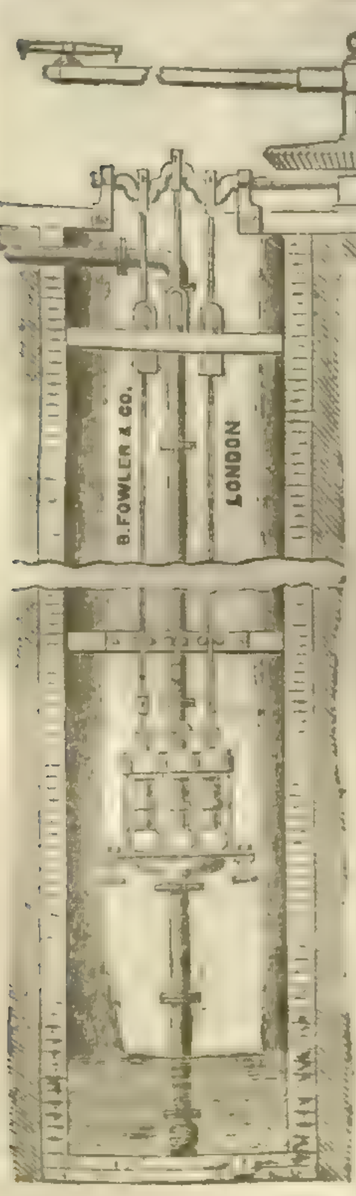

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MANUFACTURERS OF
PUMPS AND HYDRAULIC MACHINERY,
WHITEFRIARS STREET, FLEET STREET, LONDON, E.C.

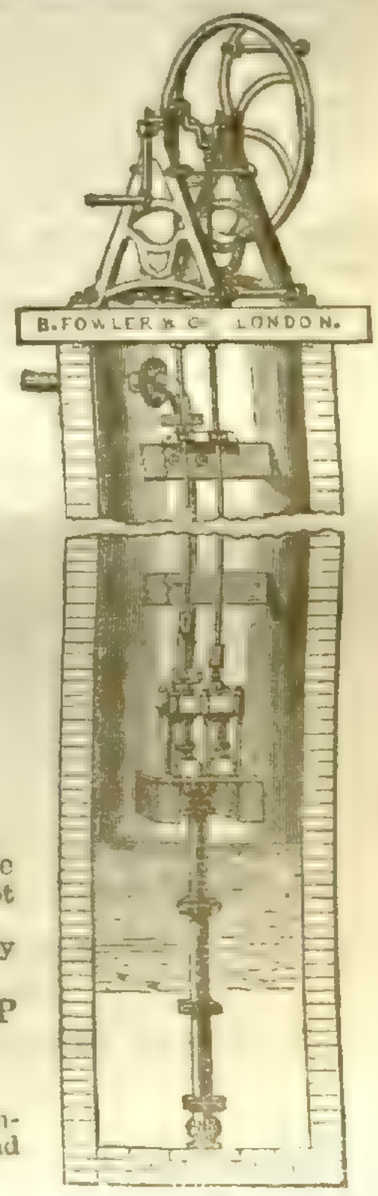

28.

THE Landscape Sketch shows an adaptation of THE IMPROVED HYDRAULIC RAM. This is a simple Self-acting Machine, suited for raising a Supply of Water for use in Public and Private Establishments. Its adoption is not confined to positions as shown, but it is suited for any situation where a Fall can be obtained from a Stream, Brook, or Spring.
Messrs. FOWLER have fixed a great many in various parts of the country for raising from 600 to 6000 or more Gallons per day to elevations varying from 30 to 300 feet, and forcing through main pipes 50 yards to several miles in length.

No. 37. IMPROVED TREBLE BARREL PUMPS with HORSE GEARING for raising water from DEEP WELLS for the supply of MANSIONS and PUBLIC BUILDINGS.

No. 28*a*. DOUBLE BARREL PUMPS for HAND-POWER for similar purposes.

Messrs. FOWLER & Co. Manufacture and Erect every description of Engineer's Work required in Public or Private Establishments, such as Pumps for any purpose on the largest or smallest scale, Steam Engines, Water Wheels, Turbines, Warming and Drying Apparatus, Baths, Gas Works and Fittings. Estimates furnished from Plans or on inspection of position.

Price Lists of Pumps, &c., free on application.

Heating by Hot Water.

HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, TUBULAR, and Elliptic, from 24*s.* each. Improved Boilers and Iron Stands to use without brickwork, 56*s.* each. Valves from 10*s.* 6*d.* each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at

Mr. LYNCH WHITE'S Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S. Price List on application.

W. J. HOLLANDS, IRON MERCHANT, 31, Bankside, London, S.E.

HOT WATER PIPES, from Stock, per yard:—2-inch, 1*s.* 4*d.*; 3-inch, 2*s.*; and 4-inch, 2*s.* 7*d.* BENDS, from stock, 1*s.* 7*d.*, 2*s.* 6*d.*, and 3*s.* 3*d.* each. THROTTLE VALVES, 10*s.* 6*d.*, 13*s.* 6*d.*, and 15*s.* each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day. A discount to the Trade.

Greenhouses and Conservatories.

H. FREEMAN, Horticultural Works, Triangle, Hackney, N.E.—Good substantially-made GREENHOUSES, glazed, ready for fixing, 42 feet by 13 feet, 50*l.*; 21 feet by 13 feet, 28*l.*; 12½ feet by 10 feet, 15*l.* A handsome CONSERVATORY, 46 feet by 19 feet, for Sale, price 130*l.* A large assortment kept. Estimates given for any branch in Wood or Iron.

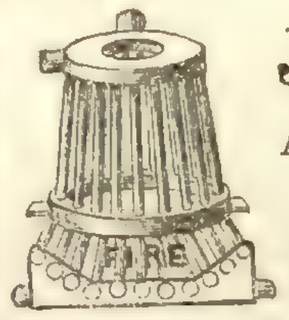

Heating by Hot Water.

JOHN TOOLEY, late 21 years with J. WEEKS & Co.

TUBULAR BOILERS,

All Sizes on the most Improved Principles, Valves, &c.

References in England, Ireland, and Wales.

JOHN TOOLEY, 9, Radnor Street, King's Road, Chelsea, S.W.

ST. PANCRAS IRON WORK COMPANY,

OLD ST. PANCRAS ROAD, LONDON, N.W.

BY ROYAL LETTERS PATENT.

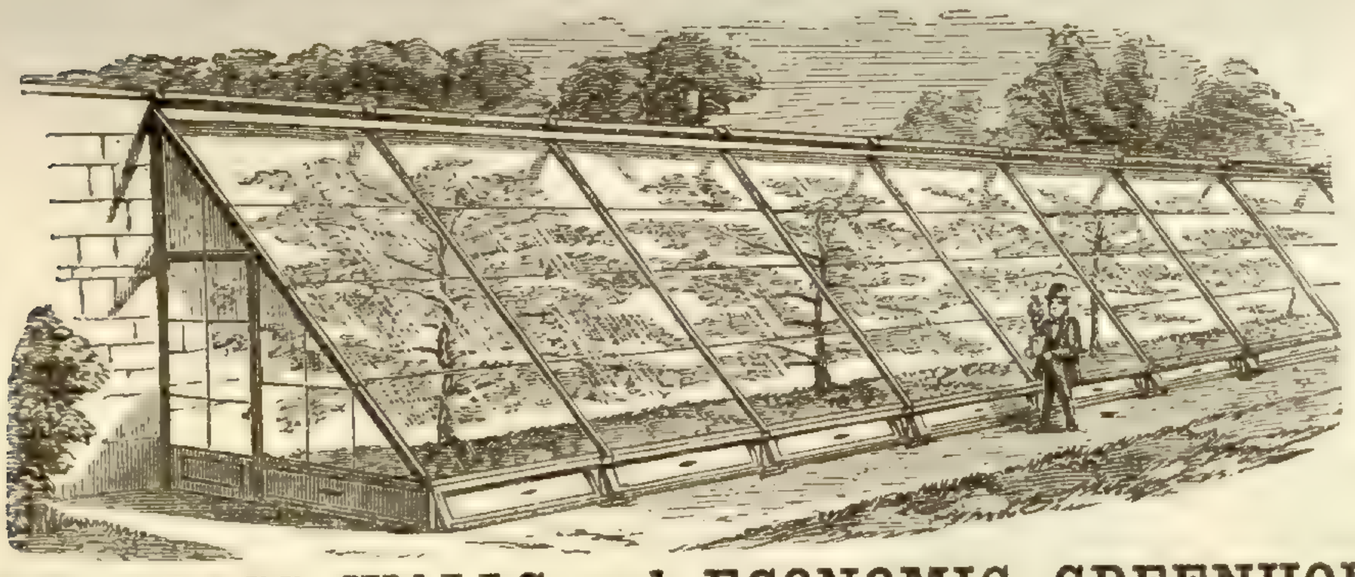

SCOTT'S GLASS WALLS and ECONOMIC GREENHOUSES.

Designed to meet the suggestions of JAMES SCOTT, Esq., of Hornsey, as being the desiderata of such structures. They are devoid of shadow, durable, portable, and a tenant's fixture, with the strength and durability of a permanent structure. Further particulars and prices by post or on application.

CONSERVATORIES	PINE and MELON PITS	BALCONIES	GATES
GREENHOUSES	VASES	IRON SASHES	TANKS
HOTHOUSES	VERANDAHS	IRON HURDLES	HOT-WATER WORKS.

PATENT WROUGHT-IRON STABLE FITTINGS AND ENAMELLED MANGERS.

Every description of IRONWORK. *Lists Free.*

ST. PANCRAS IRON WORK COMPANY, OLD ST. PANCRAS ROAD, LONDON, N.W.

BARNARD'S

NOISELESS LAWN MOWER.

This MACHINE differs from all other Lawn Mowers, in being constructed without either Gear-wheels, Chains, or Levers, the power being transmitted to the Cutters by a loose intermediate wheel, with an India-rubber tyre, which is placed between a plain-faced driving wheel and pinion; it is very certain in action, and at the same time so simple that it cannot be deranged.

When the MACHINE is drawn back, the intermediate wheel throws itself out of work, and the Cutters cease to rotate. The Cutters have steel on both sides, and when blunt can be reversed, bringing the sharp edges forward. It is perfectly noiseless, both in its forward and backward action, and works with considerably less power than any other Machine for the purpose yet introduced.

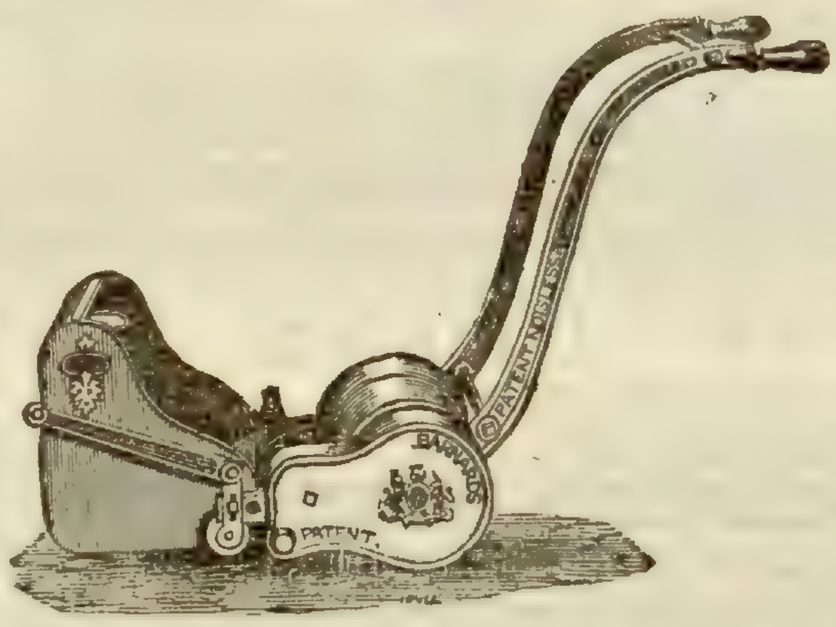

BY HER MAJESTY'S ROYAL LETTERS PATENT.

The India-rubber tyre will last from one to two seasons, and can be replaced at a cost of a few pence. An extra tyre is sent with each Machine

The iron work of Grass-box is Galvanized, which prevents its being destroyed by rust, to which this part is so liable from its contact with damp Grass.

	£	*s.*	*d.*
The Miniature Lawn Mower, Cuts 8 inches ... ... Suitable for the very smallest grass plots or edgings.	2	10	0
To Cut 10 inches. This can be worked by a Lady	3	5	0
To Cut 12 inches. Suitable for one person ... ... The 12 inch and all larger sizes have the drum or roller divided in two parts for the convenience of turning.	4	10	0
To Cut 14 inches. Suitable for One Man	5	0	0
To Cut 16 inches. Suitable for One Man	6	0	0
To Cut 18 inches. Suitable for Man and Boy	6	10	0
To Cut 20 inches. Suitable for Man and Boy	7	0	0
To Cut 22 inches. Suitable for Two Men	7	10	0

Packed and Delivered Carriage Free to the principal Railway Stations in England.

Guaranteed to give satisfaction, and if not approved, can be returned.

The above are kept in Stock and can be forwarded immediately. Also, CAST-IRON VASES, CHAIRS, SEATS, TABLES, ROLLERS, WIRE NETTING, &c.

J. JONES, IRON MERCHANT and HORTICULTURAL ENGINEER, 6, BANKSIDE, SOUTHWARK, LONDON, S.E.

Exhibition Prize Medal, 1862.

HOTHOUSES for the MILLION.—On the principle invented and patented by Sir Joseph Paxton, M.P., combining simplicity, cheapness, excellence, and durability. Span-roof Houses, painted three coats, and glazed with English Sheet Glass, ready for fixing, 21 ft. by 13 ft., 24*l.*; 43 ft. by 19 ft., 73*l.* 5*s.*; 64 ft. by 25 ft., 161*l.*

Illustrated Circulars, with Prices, can be had on application to SAMUEL HEREMAN, 7, Pall Mall East, London, S.W.

Also, A HANDBOOK on VINE and FRUIT TREE CULTIVATION, 2d Edition, price 1*s.*; post free, 1*s.* 1*d.*

Exhibition Prize Medal, 1862.

MUSGRAVE'S PATENT SLOW COMBUSTION STOVE.

This Stove is the nearest approach to Warming by Hot Water

It will burn in Churches from Saturday till Sunday evening, without attention during the hours of worship. In Halls will burn day and night for weeks, with little care. Capable of Warming a large Apartment for 24 hours, at a cost of 3*d.*; and deserving of special attention, because of its safety, healthfulness, durability, and extreme simplicity.

It is also made for small Conservatories, with a vapour chamber.

For particulars of the above, and of MUSGRAVE'S PATENT STABLE and COW HOUSE FITTINGS, which attracted so much attention at the Exhibition, address,

MUSGRAVE BROTHERS, Ann Street Iron Works, Belfast.

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T. G. M.'s PATENTED BUILDINGS combine all the modern improvements, are most effectually ventilated by means of his unequalled Apparatus, can be made either plain (and which are at the same time elegant in appearance), or of the most elaborate design. They can be fixed as permanent buildings, or made to be portable.

T. G. M.'s HEATING APPARATUS continues to give the greatest satisfaction for its heating qualities and small consumption of fuel.

ILLUSTRATED CATALOGUES of the above, Glazing without Putty, Garden Engines, &c., sent upon application.

RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

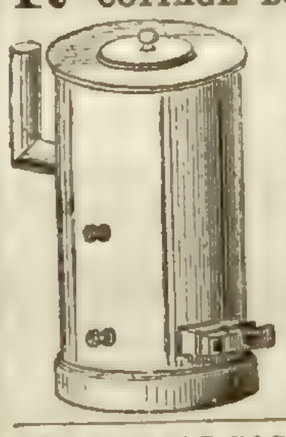

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the

Patentee's Warehouse, 155, Cheapside, London, E.C.

Price complete from 3*l.* 10*s.*

Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the

best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect, the possibility of fracture is prevented, and a permanently Water-tight Roof insured.

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

For Prospectus, &c., address T. H. P DENNIS, Horticultural Builder, Hot-Water Engineer, &c., High St. Chelmsford, Essex.

Heating by Hot-water.

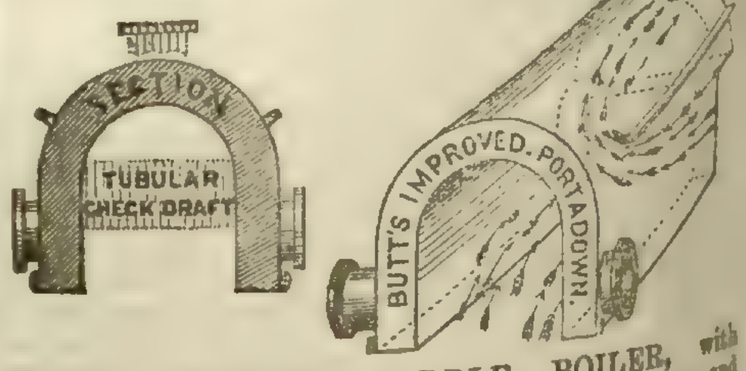

THE ORIGINAL SADDLE BOILER, with Improved Tubular Check Draft, Flued Ends, and Ribbed Sides, for Heating Greenhouses, Vineries, Forcing Pits, Public Buildings, &c. These Boilers possess increased heating surface capacity, power, economy in fuel, and are the only class of Boilers, all points considered, when properly fixed, that can be relied upon with safety for Heating Greenhouses, &c., of any extent by hot-water, and at a moderate price.

Gardeners interested in such work should write for LIST of TESTIMONIALS, sent Post Free on application to FREDERICK WILLIAM BUTT (late of London), Portadown, Ireland.

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for GREENHOUSES.
Plans and Estimates Post Free.
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J. JONES'S HOT-WATER APPARATUS
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Plans and Estimates gratis.
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for COACH-HOUSES and HARNESS-ROOMS.
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Best Materials, Moderate Charges, and, when fixed by J. Jones's men, the Effectual Working Guaranteed.
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being Always in Stock can, at a very short notice, be Sent to any Part, and men to fix the same if required.
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J. JONES'S HOT-WATER APPARATUS
for EVERY PURPOSE, delivered Free to any Station in England, or Fixed Complete in any Part of the World.
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Prices and ILLUSTRATED CATALOGUES, or Plans and Estimates Gratis and Post Free.
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SAMUEL N. McGERROW,
General Horticultural Builder,
Knotty Ash, near Liverpool.
Reference permitted to the Nobility and Gentry throughout Great Britain and Ireland.

TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at Chas. Wright's, 376, Strand, W.C.
VARNISHED FLOWER STICKS:—1 foot, 3*d.*; 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s.* 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

TANNED NETTING, for the Protection of Fruit Trees from Frost, Blight, and Birds, also for the security of fresh-sown Seeds, at 1*d.* per square yard; 200 yards, 14*s.*; 500 yards, 30*s.*; 1000 yards, 50*s.* WOOL NETTING, COTTON NETTING, SCRIM CANVAS, GARDEN MATS, TULIP COVERS, GREENHOUSE SHADES, &c.
John Edgington & Co., 48, Long Lane, Smithfield, E.C.; and 18, Piccadilly, W. Manufactory, 108, Old Kent Road, S.E.

NETTING for FRUIT TREES, SEED BEDS, RIPE STRAWBERRIES, &c.—TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 2*d.* per yard; or 100 yards, 20*s.*; 4 yards wide, 6*d.* per yard; or 50 yards, 20*s.* NEW TANNED NETTING, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 6*d.* per yard; 4 yards wide, 1*s.* per yard; ½-inch mesh, 4 yards wide, 1*s.* 6*d.* per yard.
Can be had in any quantity of Eaton & Deller, 6 and 7, Crooked Lane, London Bridge, E.C.

To Seed Merchants and Nurserymen.

SAYNOR and COOKE, Pruning and Budding Knife Manufacturers, beg respectfully to say that they will not be undersold by any House in the Trade. They also warrant one of their Knives to last two of any other make.
Paxton Works, Sheffield.

PATENT GUTTA PERCHA SOLES.—Important to Gardeners.—The Gutta Percha Company have the pleasure to acknowledge the receipt of the following letter from G. Glenny, Esq., the celebrated Florist:—
"Gentlemen,—I have worn Gutta Percha Soles and Heels these two years, and being so much in a garden as I necessarily am in all weathers, and with the ground in all states, I would on no account be without them. As a matter of economy I would recommend Gardeners to use them, for they may repair the worn part at all times by warming the material at the fire, and pressing it from the thick parts to the worn parts, as easily as if it were so much dough. I think it the duty of all persons who must occasionally wet their feet to adopt a material that completely defies damp. Many a gardener would escape colds and rheumatism by the use of Gutta Percha Soles. Your obedient servant, G. Glenny."
Every variety of Gutta Percha articles, such as Mill Bands, Tubing, Soles, Sheet, Pump, Buckets, Fire Buckets, Bosses, Union Joints, Flasks, Bottles, Bowls, Chamber Vessels, Toilet Trays, Sponge Bags, Curtain Rings, Galvanic Batteries, Calbotype trays, &c, manufactured by the Gutta Percha Company and sold by their wholesale dealers in town or country
The Gutta Percha Company, Patentees, 18, Wharf Road, City Road, London, E.C.

HORTICULTURAL TOOLS.—Lawn Mowers, Garden Rollers, Garden Engines, Syringes, and Tools of all kinds, Wire Netting, Prize Churns, &c., delivered Carriage free. Price List free.
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Works, Brentwood, Essex.

Oil Paint no longer Necessary.

HILL and SMITH'S PATENT BLACK VARNISH for preserving Iron Work, Wood, or Stone. This Varnish is an excellent substitute for oil paint on all out-door work, and is fully two-thirds cheaper. It may be applied by an ordinary labourer, requires no mixing or thinning, and is used cold. It is used in the grounds at Windsor Castle, Kew Gardens, and at the seats of many hundreds of the nobility and gentry, from whom the most flattering testimonials have been received, which Hill & Smith will forward on application.
Sold in casks of about 30 gallons each, at 1*s.* 6*d.* per gallon, at the Manufactory, or 1*s.* 8*d.* per gallon paid to any Station in the kingdom.
Apply to Hill & Smith, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street West, E.C. from whom only it can be obtained.

WARNERS' KOH-I-NOOR LAMPS, TO BURN THE HYDRO CARBON OILS.
PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.
They are more easily trimmed and re-filled than any other Lamp with similar burner.
There is no danger of chimneys breaking, and the chimney cannot become smoked.
For designs of the above, adapted for the DINING-ROOM, DRAWING-ROOM, HALL, or LIBRARY, see Number 2 of this Journal.
A REALLY GOOD LAMP.
The above may be obtained of any Lamp Dealer

Bedroom Candles.

PRICE'S CANDLES, WHICH WILL NOT DROP GREASE WHEN CARRIED.—Thin, very hard Candles, sold in boxes 1*s.* and 3*s.* each, are recommended as the best Carriers.
Extra hard S 12 CHAMBER CANDLES, sold in boxes. Thicker Candles, intended for those who will not burn thin Candles.
SHERWOOD ECONOMIC BED-LIGHTS, in packets of 36 Candles for 1*s.*, intended for use where cheapness is a great object, will be found an improvement on the ordinary Candles, as they gutter less.
Special CANDLESTICKS to fit thin candles, 1*s.* and 2*s.* 6*d.* each; reducing Sockets, making them fit any candlesticks, 2*d.* each.
Price's Patent Candle Company, Limited, London.

BATHS and TOILET WARE.—WILLIAM S. BURTON has ONE LARGE SHOW ROOM devoted exclusively to the display of BATHS and TOILET WARE. The stock of each is at once the largest, newest, and most varied ever submitted to the public, and marked at prices proportionate with those that have tended to make his Establishment the most distinguished in this country. Portable Showers, 7*s.* 6*d.*; Pillar Showers, 3*l.* to 5*l.* 12*s.*; Nursery, 15*s.* to 32*s.*; Sponging, 9*s.* 6*d.* to 32*s.*; Hip, 13*s.* 3*d.* to 31*s.* 6*d.* A large assortment of Gas Furnace, Hot and Cold, Plunge, Vapour, and Camp Shower Baths. Toilet Ware in great variety, from 15*s.* 6*d.* to 45*s.* the set of three.

THE BEST SHOW of IRON BEDSTEADS in the KINGDOM is WILLIAM S. BURTON'S.—He has FOUR LARGE ROOMS devoted to the exclusive show of Iron and Brass Bedsteads and Children's Cots, with appropriate Bedding and Bed Hangings. Portable Folding Bedsteads, from 11*s.*; Patent Iron Bedsteads, fitted with dovetail joints and patent sacking, from 14*s.* 6*d.*; and Cots, from 15*s.* 6*d.* each; handsome Ornamental Iron and Brass Bedsteads, in great variety, from 2*l.* 13*s.* 6*d.* to 20*l.*

WILLIAM S. BURTON, GENERAL FURNISHING IRONMONGER by appointment to H.R.H. the Prince of Wales, sends a CATALOGUE gratis and post paid. It contains upwards of 500 Illustrations of his illimited Stock of Sterling Silver and Electro-Plate, Nickel Silver and Britannia Metal Goods, Dish-Covers, Hot-water Dishes, Stoves, Fenders, Marble Chimney-pieces, Kitchen Ranges, Lamps, Gaseliers, Tea-Trays, Urns and Kettles, Clocks, Table Cutlery, Baths, Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding. Red Room Cabinet Furniture, &c., with Lists of Prices, and Plans of the 20 large Show Rooms, at 39 Oxford Street, W.; 1, 1a, 2, 3, and 4, Newman Street; 4, 5, and 6, Perry's Place; and 1, Newman Yard, London.

The Furnishing of Bed Rooms.

HEAL and SON have observed for some time that it would be advantageous to their Customers to see a much larger selection of BED-ROOM FURNITURE than is usually displayed, and that to judge properly of the style and effect of the different descriptions of Furniture, it is necessary that each description should be placed in separate rooms. They have therefore erected large and additional Show Rooms, by which they are enabled not only to extend their show of Iron, Brass and Wood Bedsteads, and Bed Room Furniture, beyond what they believe has ever been attempted, but also to provide several small rooms for the purpose of keeping complete suites of Bed Room Furniture in the different styles.
Japanned Deal Goods may be seen in complete suites of five or six different colours, some of them light and ornamental, and others of a plainer description. Suites of Stained Deal Gothic Furniture, Polished Deal, Oak, and Walnut, are also set apart in separate rooms, so that customers are able to see the effect as it would appear in their own rooms. A Suite of very superior Gothic Oak Furniture will generally be kept in stock, and from time to time new and select Furniture in various woods will be added.
Bed Furnitures are fitted to the Bedsteads in large numbers, so that a complete assortment may be seen, and the effect of any particular pattern ascertained as it would appear on the Bedstead.
A very large stock of Bedding (Heal & Son's original trade) is placed on the Bedsteads.
The stock of Mahogany Goods for the better Bed Rooms, and Japanned Goods for plain and Servants use, is very greatly increased. The entire Stock is arranged in eight rooms, six galleries (each 120 feet long), and two large ground floors, the whole forming as complete an assortment of Bed Room Furniture as they think can possibly be desired.
Every attention is paid to the manufacture of the Cabinet work, and they have just erected large Workshops on the premises for this purpose, that the manufacture may be under their own immediate care.
Their Bedding trade receives their constant and personal attention, every article being made on the premises.
They particularly call attention to their Patent Spring Mattress, the Sommier Elastique Portatif. It is portable, durable, and elastic, and lower in price than the old Spring Mattress.
Heal & Son's ILLUSTRATED CATALOGUE of Bedsteads, Bedding, and Bed Room Furniture sent free by Post.
196, 197, 198, Tottenham Court Road, London, W.C.

THE QUARTERLY REVIEW, No. CCXXX., is published THIS DAY. Contents:
I. Prospects of the Confederates.
II. Pompeii: Past and Present.
III. Empire of Mexico.
IV. Sir William Napier.
V. Shakspeare and his Sonnets.
VI. Privy Council Judgment.
VII. Foreign Policy of England.
John Murray, Albemarle Street, W.

FRASER'S MAGAZINE for MAY. Price 2*s.* 6*d.*
Contents.
The Privy Council and the Church of England.
The Knight's Tomb. By Joseph Verey.
Carlyle's Frederick the Great.
Gilbert Rugge: a Tale. By the Author of "A First Friendship." Chapters I. and II.
From Thaw to Frost.
Early Days of George I.—Lady Cowper's Diary.
French Life. II.
Children of this World.
A Campaigner at Home. V. Politics: the Old World and the New.
The Infant Bridal and other Poems.
The Pleasures of Difficulty.
To Garibaldi. By J. Kingston James. Written in October, 1860.
A Reminiscence of the Old Time: being some Thoughts on Going Away. By A. K. H. B.
Mr. Whitworth and Sir Emerson Tennent.
London: Longman, Green, & Co., Paternoster Row, E.C.

Portrait of Mr. Charles Turner.
The May Number of the
MIDLAND and NORTHERN FLORISTS GUIDE, price 6*d.*, will contain a beautifully executed portrait of this eminent Florist, with Biographical Sketch. Can be obtained direct from the Publisher.
Mr. J. Hunt, Long Row, Nottingham.

Annual Circulation, 15,000.

MURRAY'S HANDBOOK ADVERTISER.
Published Annually in May.
Printed for the convenience of those who are desirous of communicating information to Travellers, and inserted in Murray's Foreign and English Handbooks issued during the Season.
This medium of Advertising presents unusual advantages to Insurance Offices,—Steam,—Railway, and other Public Companies, Landlords of Inns, Owners of Baths and Mineral Springs, Teachers, Tradesmen, and others, by enabling them to bring under the immediate notice of the great mass of Travellers, who resort to Continental Europe and other parts of the world every Season, in the most direct way, the various merits of their Railways, Associations, Steamers, Hotels, Articles of Merchandise, Works of Art, and such other information as they may desire to make known; while, instead of being limited to the casual publicity of a Daily, Weekly, or Monthly Periodical, it has the additional merit of being displayed in a work of permanent interest and perpetual reference.
As only a limited space is allowed for Advertisements, preference is given to those which are more immediately addressed to Tourists.
Advertisements for insertion during the Season 1864, must be forwarded to the Publisher by the 2nd of May, accompanied by a remittance.
John Murray, Albemarle Street, W.

Just Published, the Third Edition of
LAYING DOWN LAND to PERMANENT PASTURE. By Martin H. Sutton, F.R.H.S., of Reading, from the "Journal of the Royal Agricultural Society of England," Vol. XXII, Part 2, and may be had post free for 6 stamps, on application to
Sutton & Sons, Royal Berkshire Seed Establishment, Reading.

Just Published, price 6*d.*
PORTABLE FARM RAILWAYS, a Substitute for FIELD CARTING.
REPORT of a DISCUSSION at the Maidstone Farmers' Club, January 21, 1864.
Maidstone: J. Grundy, 83, Bank Street. London: Simpkin, Marshall, & Co.

A Valuable Work for every Agriculturist.
Now ready, in demy 8vo, price 10*s.* 6*d.*, half-bound, 640 pp.
THE FARMER'S CALENDAR. By J. Chalmers Morton, Author of "The Prince Consort's Farms," "The Cyclopædia of Agriculture," "The Farmer's Almanac," &c. Fully Illustrated with Wood Engravings of Buildings, Land Drainage, Machinery, and Plants.
This systematic work on Farm Practice has been highly approved of by all the Agricultural Press, and particularly recommended as a safe book of reference and instruction by many of the most practical agriculturists in the United Kingdom.
**** A Prospectus, with Notices, Specimen Page, and General Index, can be had gratis on application to the Publishers, or any bookseller.
London: Routledge, Warne, & Routledge, Broadway, Ludgate Hill, E.C.

The Prize Essay on
"THE REARING of CALVES."
By Thomas Bowick, Britannia Farms, Bedford (late Stoneleigh Abbey Farm).
By special permission of the Royal Agricultural Society of England, a reprint from their Journal of the above Essay is now before the public, by Messrs. Day, Son, & Hewitt, 22, Dorset Street, Baker Street, London. Price, by post, Three Stamps, or Five Copies for Twelve Stamps. This celebrated Essay should be in the hands of all Breeders, from the large Dairy Farmer down to the Cottager with his One Cow.
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News of the Week.

IN the House of Lords on Friday the Earl of ELLENBOROUGH introduced a Bill to amend the present practice with regard to the remission of capital sentences. The Bill was read a first time. The Earl of DERBY moved that it be an instruction to all committees on metropolitan railway Bills to insert provisions to secure a cheap train morning and evening for the labouring classes. Lord STANLEY of ALDERLEY and other Peers expressed their cordial concurrence in the proposal, which was agreed to. On Monday Earl STANHOPE gave notice for the 23d of May, of his intention to bring under their lordships' notice the report of the Public Schools Commission. The Consolidated Fund (15,000,000*l.*) Bill was read a third time and passed. On Tuesday Lord CHELMSFORD called attention to the mode in which the Government proposed to deal with prizes brought by the belligerent Powers of America into ports within her Majesty's dominions, as described in the correspondence presented to Parliament with respect to the Tuscaloosa. Earl RUSSELL stated that the Government had observed perfect neutrality, and had no intention of showing any partiality on the one ide or the other. The LORD CHANCELLOR said that the most serious consideration had been given to this question, and that the result would be embodied in clear and definite instructions, which would be generally circulated throughout all our colonial possessions. The Duke of ARGYLL introduced the Vagrancy (Scotland) Bill, which was read a first time. The Mortgage Debentures Bill was read a second time and referred to a Select Committee. The Warehousing of British Spirits Bill was read a third time and passed. On Thursday the Marquis of WESTMEATH moved the third reading of the Punishment of Rape Bill. Lord WODEHOUSE moved as an amendment that the infliction of the punishment of whipping provided by the Bill should be discretionary and not compulsory. On a division the amendment was agreed to by 55 to 20. The Bill was then read a third time and passed. The Regius Professorship of Greek (Oxford) Bill, after a long discussion, was read a second time. The Joint Stock Companies (Foreign Countries) Bill was read a third time and passed. The Registration of County Voters (Ireland) Bill was read a second time.

In the Commons on Friday, Mr. LIDDELL moved a resolution that further interference on the part of this country in the civil war in China is impolitic and unnecessary. Mr. LAYARD opposed the motion, which was supported by Mr. W. E. FORSTER and Mr. FERRAND. While the latter was speaking the House was counted out. On Monday the report of the Committee of Ways and Means on the Fire Insurance Duty was brought up and agreed to. Mr. SCHOLEFIELD moved the second reading of the Partnerships Bill, the object of which was to remove restrictions from unlimited liability, so as to enable capitalists to invest money in mercantile firms without making themselves responsible for the liabilities of the concern. Mr. HUBBARD moved as an amendment that the Bill be read a second time that day six months. The amendment was negatived without a division, and the Bill was read a second time. The Customs and Inland Revenue Bill was read a second time. The Civil Bill Courts (Ireland) Bill, the Court of Chancery (Despatch of Business) Bill, and the Charitable Assurances Enrolments Bill passed through committee. The Thames Conservancy Bill was read a second time and referred to a select committtee. Mr. O'HAGAN obtained leave to bring in a Bill to alter the constitution and amend the practice and course of proceeding in the High Court of Chancery in Ireland. On Tuesday Mr. MILLS called attention to the war in New Zealand, and moved for all correspondence between the GOVERNOR and the Colonial Office relating to the policy of confiscation which had been adopted by the New Zealand Legislature. Mr. CARDWELL assented to the motion, and explained the views of Government for the restoration of peace and order in the colony. He said that the new Act of Confiscation had not been reserved for the sanction of the Crown, but was in legal and actual operation at this moment, and that to have disallowed it would have created fresh difficulties, and led to renewed anarchy. But while he deemed it impolitic to disallow the Act under the circumstances, instructions had been sent out to Sir G. GREY to limit and restrain its operation, which he trusted would result in the restoration of peace and the permanent settlement of the colony. Lord R. CECIL, Sir J. PAKINGTON, and other members expressed their satisfaction at the policy sketched out by the Colonial Secretary, and the motion was agreed to. Mr. LINDSAY moved a resolution that her Majesty's Government should adopt measures for the construction of harbours of refuge on the coasts of Great Britain and Ireland. Sir S. NORTHCOTE moved as an amendment the addition of words making provision for the expense of such harbours by means of tolls upon shipping. After a long debate the House divided on Sir S. NORTHCOTE's amendment, which was negatived by 191 to 39. The original motion was then negatived by 142 to 84. On Wednesday Mr. NEWDEGATE moved the second reading of the Church Rates Commutation Bill; the object of which was to substitute for church rates an annual church charge of 2*d.* in the pound, to be deducted by the tenant on paying his rent unless there was an agreement to the contrary. Sir C. DOUGLAS moved, as an amendment, that the Bill be read a second time that day six months. On a division the amendment was carried by 160 to 60. The Bill was consequently lost. Sir J. HAY moved the second reading of the Bank Notes (Scotland) Bill, the object of which was to give increased facilities to banking in Scotland by allowing new banks to issue notes against gold. Mr. BLACK moved, as an amendment, that the Bill be read a second time that day six months. After a long discussion the original motion and the amendment were both withdrawn. The House went into committee on the Trespass (Ireland) Bill, but no progress was made. The Court of Chancery (Despatch of Business) Bill was read a third time and passed. On Thursday Mr. PEACOCKE called attention to the case of the Confederate vessel Tuscaloosa, and moved, that the instructions contained in the despatch of the Duke of NEWCASTLE to Sir P. WODEHOUSE, dated the 4th November last, and which remained still unrevoked, were at variance with the principles of international law. The SOLICITOR-GENERAL opposed the motion, which was negatived on a division by 219 to 185. The Customs and Inland Revenue Bill passed through committee.

The Conference on the Danish question met at the Foreign Office on Monday. The representatives of the German Powers are said to have declined the proposal of an armistice on the ground that they had no instructions on the subject. The Conference was consequently adjourned to enable them to refer to their respective Governments.

From the United States we learn that both armies are making active preparations for the new campaign, which the Confederates have commenced by capturing Fort Pillow on the Mississippi. The Senate has declined for the present to endorse the resolution of the House refusing to recognise the empire of Mexico. The House of Representatives has been occupied with the discussion of a motion for the expulsion of two of its members who had expressed opinions adverse to the war, and in favour of the recognition of the Southern Confederacy. The motion for expulsion was negatived, but votes of censure were agreed to in both cases.

Home News.

THE COURT.—The Queen and Royal family continue at Osborne. On Thursday week the Queen walked and drove in the grounds, morning and afternoon. Princess Helena rode on horseback. On Friday the Queen and Princess Helena drove out. Princess Louisa rode on horseback. In the evening Prince Alfred arrived from Sandringham Hall. On Saturday the Judge-Advocate-General had an audience of the Queen. The Earl of Clarendon arrived from London on a visit. On Sunday morning the Queen, Prince Alfred, Princess Helena, and Princess Louisa attended Divine service at Osborne. The Rev. George Prothero officiated. On Monday morning the Queen walked and drove in the grounds. The Earl of Clarendon returned to London. In the afternoon the Queen drove out. Prince Alfred and Princess Louisa rode on horseback. On Tuesday Prince Alfred left Osborne for Dover on his way to the Continent. In the afternoon the Queen held a Privy Council, which was attended by the Duke of Somerset, Earl de Grey and Ripon, and Lord Stanley of Alderley. Sir James Wilde and Mr. Henry Austin Bruce, M.P., were sworn in as Privy Councillors. The Queen, Prince Alfred, Princess Helena, and Princess Louisa walked out. Prince Leopold took a drive. On Wednesday Prince Augustus of Saxe-Coburg, Prince Philip, and Princess Amélie arrived on a visit to her Majesty. On Thursday morning their Royal Highnesses left Osborne on their return to Claremont.

Prince Leiningen dined with her Majesty and the Royal family.

The Prince of Wales on Friday presided at a meeting of the Council of the Duchy of Cornwall, and afterwards returned to Sandringham. Prince Alfred left Sandringham for Osborne. On Saturday the Prince of Wales drove out. In the afternoon the Duke of Cambridge arrived on a visit, and was met by the Prince at the Wolferton station. Their Royal Highnesses afterwards rode out. On Sunday the Prince and Princess and the Duke of Cambridge attended Divine service at Sandringham. The Bishop of Oxford preached the sermon. On Monday the Prince and Princess, the Duke of Cambridge, the Bishop of Oxford, and the suite, drove from Sandringham to Hunstanton, returning about 5 o'clock in the afternoon. On Tuesday morning the Prince of Wales and the Duke of Cambridge left Sandringham for Newmarket. The Bishop of Oxford left for Ely. On Wednesday the Prince of Wales walked over the estate, and inspected the improvements that are in progress. The Princess walked in the grounds. In the afternoon Baron de Bertouch arrived at Sandringham from Denmark. Their Royal Highnesses, according to the latest arrangements, were to leave for town by special train yesterday, and during their absence from Norfolk the Prince of Wales's new residence will be commenced.

Prince Alfred arrived in town on Tuesday afternoon from Osborne, and proceeded in the evening from the Charing Cross Terminus to the London Bridge station, and thence by the night train to Dover, on his way to the Continent. The Prince will make short visits to Brussels, Hanover, Berlin, Coburg, and Darmstadt, and will then proceed to Marseilles, to join Her Majesty's ship Racoon. Lieut. Haigh, of the Royal Engineers, has been appointed by Her Majesty to be in attendance on the Prince.

The Cabinet.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street.

The Conference.—The Plenipotentiaries accredited by the several European Powers to the Conference, with a view to the restoration of peace in the north of Europe, met on Monday at 1 o'clock, in the room prepared for them at the official residence of the First Lord of the Treasury, in Downing Street. All the members appointed to the Conference were present. They were as follows: —Austria: Count Apponyi and Privy-Councillor Biegeleben. France: Prince de la Tour d'Auvergne. England: Earl Russell and the Earl of Clarendon. Prussia: Count Bernstorff and Privy-Councillor Balan, formerly Ambassador at Copenhagen. Russia: Baron Brunnow. Denmark: Baron de Bille, M. Quaade (the Minister), and Councillor Krieger. The German Confederation: Baron von Beust, Saxon Minister. Sweden: General Count Wachtmeister. It is understood that after having exchanged their credentials, Lord Clarendon brought forward the question of an immediate armistice, with the maintenance of the existing blockade. The proposal was supported by the Plenipotentiaries of France, Russia, and Sweden, but the Austrian and Prussian plenipotentiaries asked for time to refer to their Governments for instructions. The Conference has been adjourned until these instructions have been received.

Order of the Garter.—It is said that the vacant Garter will be conferred on the Marquis of Ailesbury.

The Peerage.—The Queen has directed letters patent to be passed under the Great Seal of the United Kingdom, granting the dignity of a Baroness to the Countess De La Warr, by the title of Baroness Buckhurst, of Buckhurst, in the county of Sussex, during her life, with remainder of the Barony to the Hon. Reginald Windsor Sackville West, her second surviving son, and the heirs male of his body lawfully begotten, with other remainders over. The House of Lords has admitted the claim of Lord Ockham, son of the Earl of Lovelace, to the Barony of Wentworth.

Parliamentary Movements.—The Select Committee of the House of Commons have reported that the Marquis of Hartington, the fifth Under Secretary of State in the House of Commons, did not, in accepting that appointment, lose his seat. Mr. H. A. Bruce was re-elected for Merthyr on Monday without opposition. The death of Mr. Kershaw has caused a vacancy at Stockport. Sir Joshua Walmsley is said to be the Liberal candidate, and Mr. Romaine Callender, jun., one of the largest manufacturers in Manchester, is mentioned as likely to come forward in the Conservative interest. Sir Hugh Owen has announced his intention of retiring from Pembroke at the next general election. It is reported that Sir Morton Peto will be invited by the Liberals to become a candidate for the seat, and Mr. R. Potter, Chairman of the Great Western Railway, is named as a probable candidate in the Liberal-Conservative interest. Alderman Lusk is a candidate for Finsbury in the Liberal interest. Alderman Copeland is about to retire from Stoke-upon-Trent; and Mr. Beresford Hope is a candidate for the vacant seat. The Conservatives have determined to bring forward a candidate for Rochdale in opposition to Mr. Cobden at the next election.

The Episcopal Bench.—The bishopric of Peterborough, which is now vacant, is the 13th nomination which has fallen to Lord Palmerston in seven years among the 28 English and Welsh bishoprics. They include the sees of Canterbury, York, London, Durham, Carlisle, Ely, Gloucester and Bristol, Norwich, Peterborough, Ripon, Rochester, and Worcester. Such a circumstance, or anything like it, of one Minister nominating nearly half the English episcopate was never before known in the Church of England.

Foreign.

France.—The Paris papers give the following as the basis for deliberation which Austria, Prussia, and the German Confederation propose to bring forward at the Conference now sitting:—"Integrity of the Danish Monarchy; Political and administrative autonomy of the Duchies; Maintenance of their union in one single State (*nexus socialis*); Rendsburg to be made a German Federal fortress, as a guarantee of the autonomy and indivisibility of the Duchies." The *Mémorial Diplomatique*, in an article on the Conference, says:—

"Lord Clarendon has returned to London, having in the name of his Government formally engaged to support energetically the demand for an armistice which the Prince de la Tour d'Auvergne has been instructed to make at the first sitting of the Conference. In other words, France and England have mutually bound themselves to declare war against that Power which should refuse to agree to a truce. We believe ourselves able to state that no mention of an armistice was made at the first sitting of the Conference, since so important a question could only be negatively discussed by the representatives of Germany. We believe that the armistice will be based upon the *uti possidetis* principle, unless Denmark should refuse to evacuate the island of Alsen. Austria and Prussia will then on either side evacuate the territory of Jutland."

La France of Thursday says:—

"At the meeting of the Conference on Monday the first question mooted was that of an armistice. The demand was made conjointly by France and England. We are assured that the Plenipotentiaries of the German Powers had come without any instructions on the subject, and that they have been obliged to refer to their respective Governments."

La Patrie of Thursday says:—

"We have received from various sources accounts of the sitting of the Conference on the 25th inst. The proposition of an armistice was formally brought forward, with the condition that the suspension of hostilities should not imply that of the existing blockade. The Plenipotentiaries of Austria and Prussia at once declared that they had no instructions on that point, but accepted the proposition *ad referendum*—that is to say, that they must first consult their respective Governments."

The *Journal des Débats* of Thursday says:—

"We do not pretend to know everything that passed at the Conference on the 25th inst.; but what results can we expect from a Conference which finds itself paralysed in its action at the very onset by such strange proceedings as those of Austria and Prussia, who are already rolling heavy stones into the path to obstruct the action of diplomacy?"

On and after the 1st of May next the *Moniteur* will publish an evening edition. The French Army in Algeria has sustained another disaster from the treachery of the Arabs. Colonels Beaupretre, at the head of 250 Turcos, Spahis and auxiliary horsemen, started from Tiaret on March 24, in pursuit of Sid Seliman, the son of a leading chief of the south, who died suddenly three years ago, during a sea voyage from Oran to Algiers. During his march, he was surprised by the Arabs of Sid Seliman, who suddenly fell upon his troops at daybreak and destroyed them all, not leaving one survivor. The Arabs subsequently decapitated the bodies. It is feared that this surprise marks the commencement of another insurrection of the nomad tribes in Algeria.

Spain.—The banquet of the Progressist party is fixed for the 3d of May. The question of inviting Espartero is being discussed. M. Alexandre Laya has published a project for cutting a canal on a vast scale through the Spanish territory, to supersede the Strait of Gibraltar, and render useless the possession of the Rock by England. M. Laya states that his plan could be executed without serious difficulty, at a cost of four or five millions sterling. It is said that his plans have been examined by engineers and financiers in France, Belgium, Holland, Italy, and Spain.

Portugal.—An Austrian screw liner, two steam frigates, and one iron-clad frigate have arrived at Lisbon.

Switzerland.—M. Kern has received fresh instructions to enter into negotiations for a treaty of commerce with France, which it is hoped will have a favourable result.

Sweden.—The *Nord Deutsche Zeitung* publishes news from Malmo, stating that the great concentration of Swedish troops has again been entirely countermanded.

Denmark.—The King has issued the following proclamation to the army:—

"Brave soldiers! Undaunted and heroic comrades! The army occupying the Düppel position has been forced to retreat to Alsen, after a defence which will be memorable to remotest posterity, not only on account of the inequality of the contest, but also for the heroism with which it was fought. Heavy, indeed, have been the sufferings the development of the contest has entailed upon you; nor will the great and painful losses of the last few days ever be forgotten. But by God's help neither the sufferings nor the losses of the last few days will have been in vain: they will bear fruits in the struggle we are now waging against violence and injustice—a struggle the aim of which is the existence and independence of our beloved country. I return you the fervent thanks of myself and my people for the perseverance and self-sacrificing heroism you have displayed, and I am convinced that you will still be inspired by the same spirit. God preserve my brave Danish army! May it receive the reward of its persevering bravery, and may He confer everlasting peace upon our fallen heroes! "Christian R."

The Minister of War has published a report of the fall of Düppel. The Danish army has lost in killed, wounded, and missing nearly 5000. The defenders of the works of Düppel did not exceed 8000. The Danish forces of all arms now amount to 36,000 men. The following despatch has been addressed by Bishop Monrad, the Danish Premier, to the Danish diplomatic agents at foreign Courts:—

"Copenhagen, April 9, 1864.

"Sir,—The acts and proceedings of the allied commissioners in Schleswig have unfortunately given us too frequent occasion to communicate with you upon the character the German Cabinets have impressed upon the invasion, in spite of their former declarations, and notwithstanding the assurances they appear to have given to neutral Courts upon the subject of their intentions. I find myself now compelled to call your attention to another series of still graver facts, in which, not content with setting aside the rights of the King, our enemies have gone so far as to violate the precepts of the right of nations and the first principles of humanity. The commander-in-chief of the Prussian army has recently, without any previous warning, proceeded to bombard the open and inoffensive town of Sönderborg. Peaceable inhabitants, women and children, have been buried beneath the ruins or slaughtered by the bursting of shells, and hospitals filled with wounded have had to be evacuated under a hail of bullets. Some Prussian Hussars had been surprised during the night by a small Danish detachment near the village of Assendrup. To revenge themselves for this occurrence, which was owing to the heedlessness of their officers, the Prussians have set fire to the farms at which the Hussars were lodged, and not content with reducing poor peasants to indigence, surrounded the burning buildings with a guard to prevent furniture and even animals being saved from the flames. In Jutland the allied armies have overwhelmed the inhabitants with contributions of all kinds, and to so exorbitant an extent, that certain localities have found it absolutely impossible to fulfil these requirements. The allied generals wished the Danish authorities to afford them assistance in these extortions, and when they refused to co-operate in the work of pillage, 10 prefects and burgomasters were arrested as prisoners and transported to the fortress of Rendsburg, where they have already been detained upwards of a month. Though tormented in various ways, and exposed to every species of humiliation and privation, these honourable officials do not for a moment regret having done their duty, but fears are entertained lest this unjustifiable treatment may not soon cost at least one of their number his life. I could swell the list of these atrocities by many more examples, but limit myself to again recalling to recollection that even churchyards and national monuments have not been secure from the Vandalism of the invaders. The Government of the King has unquestionably a right to make reprisals against this barbarous manner of waging war. If it has nevertheless decided upon not availing itself of the right of retaliation, it is from a belief that whatever the excuses capable of being put forward for such a course, the nation would not be slow bitterly to repent an offence against laws never violated with impunity. The reprobation of the present age, and the condemnation of history, in fact, are punishments so rigorous that we cannot add to their weight. We restrict ourselves, therefore, to notifying the facts. Europe and entire humanit will judge. I have the honour, &c., "D. G. Monrad."

The Danish Duchies.—Accounts from Veile state that on the 20th a body of Prussian troops arrived there, and proceeded after a few hours' rest to Horsens, where 8000 Danes had fortified themselves. The latest news says that the Prussians have occupied Horsens, and that on Saturday they were a mile and a half south of Aarhuus. On Monday they marched, 10,000 strong, to Wiborg. Only a few Danish troops have been left in the towns of Southern Jutland. The semi-official Prussian organ of Wednesday says that the Danish General Hegermann, commanding the troops in Jutland, has retreated across the Limfjord without accepting battle. Among the Danish dead lying in Ulkeböl after the storming of Düppel were three colonels, five captains, eight lieutenants, three cadets, and one chief surgeon. Of the Danish officers captured unhurt, or only slightly wounded, the following are at present known:—One major, two captains, and 28 lieutenants. The Prussians have erected a battery near Bastion No. 10 of the Düppel intrenchments, and are erecting another opposite the Danish work at Suurslokke. On Thursday they continued to throw a few shells, but none reached Alsen. They are now at work in the Düppel intrenchments, and are strengthening their batteries on the shore of the Alsen Sound as well as at the *tête-de-pont*, and between Rägebol and the Sound. The two Danish ironclad men-of-war are in position to defend the passage to the Island of Alsen. On the 24th an engagement took place off the coast of Rügen Island, within view of the Post-house of Wittow, between a Prussian gunboat and the Danish ironclad frigate Tordenskiold. The Danish frigate sailed off, pursued by nine slow-sailing Prussian boats, which failed to overtake her. The Tordenskiold was, however, subsequently overtaken by the Grille and set on fire, but the Danes succeeded in extinguishing the flames. In the afternoon of the 21st the King of Prussia arrived at the castle of Gravenstein, and after a short stay proceeded to Atzbüll, where he saluted the regiments which had been engaged in storming the Düppel redoubts. His Majesty praised and thanked several of the officers and soldiers, and the whole of the troops defiled before the King; after this he took his leave, and at 4·30 p.m. went on to the trenches. On Friday his Majesty visited Flensburg, and on Saturday took his departure for Berlin. Herr von Bismark, accompanied by Herr Kendell, Councillor of Legation, joined the King of Prussia at Flensburg. It is said that the object of his Majesty's visit to the Duchies was to sound the population, and to pave the way for a vote in conformity with the views of the Prussian Government. It is also said that the Emperor of Austria is expected in the Duchies. Prince Carl of Prussia, father of Prince Friedrich Carl, arrived at Hamburgh on Sunday evening with a large suite, and alighted at the Hotel de l'Europe, where it is said that he will await the arrival of the Emperor of Austria, and accompany his Majesty to the theatre of war. Convoys of ammunition and supplies continue to pass through Hamburgh for

the North. A proclamation of the Federal Commissioners, dated the 25th inst., says;—

"The King of Prussia on his departure declared that he felt himself most deeply moved by the gratifying reception he had met with from the clergy and all classes of the people. His Majesty has likewise expressed his sincere thanks for the cordial reception given to those Prussian troops on their return from Schleswig to Holstein after a severe engagement The Commissioners bring these expressions of thanks to the knowledge of all concerned."

The Supreme Court of Holstein has passed a resolution stating that it will fully concur in the declaration of national rights which has been adopted by the members of the Holstein Diet, and it has sent a declaration to that effect to London.

SAXONY.—The Chamber of Deputies on Tuesday unanimously resolved upon an address to be presented to Baron von Beust. The address contains a vote of confidence in the Minister, and also a protest to be handed in at the Conference to the following effect:—The separation of the Duchies from Denmark and the recognition of the hereditary succession of the Augustenburg family to the inseparably-united Duchies is demanded both by right and the will of the people. If the question of right be disputed, the decision appertains not to a Conference of the Powers, but only to the people and its representatives. A protest is also raised against any resolution upon the future disposition of the Duchies which may be made without their consent, and contrary to their wishes. In conclusion the protest reserves the rights of Germany and of the Schleswig-Holstein people.

FRANKFORT.—The following are the resolutions of the Frankfort Diet on the subject of the Conference:—

"1. To accept the invitation to the Conference proposed by the British Cabinet; and, consequently, to request the President to send a reply to the Notes of the Plenipotentiary of Great Britain, under the dates of the 23d and 26th ult., conformable to the project proposed by the united Committees. 2. To send the Conference a representative of the Confederation, and to select for that purpose a statesman who does not belong to the German States already represented at the Conference. 3. To proceed immediately to the election of the said Plenipotentiary by ballot. 4. To request the President of the Diet to take all such measures as might ulteriorly appear necessary.

The Plenipotentiary of the Confederation to receive the following instructions:—

"1. To exert all his efforts to assure the recognition of the rights of the Germanic Confederation and of the Duchies of Holstein, of Schleswig, and of Lauenburg, and especially to obtain the greatest possible independence for these latter. 2. To avoid as much as possible all dissension between the German Plenipotentiaries at the Conference, to concert preliminarily with the representatives of Austria and of Prussia whenever any important deliberation is to be brought forward, the representatives of the said Powers being equally invited to follow the same example under analogous circumstances."

The Bavarian representative proposed to substitute the following, instead of the words "to obtain the greatest possible independence for the Duchies:"—

"To endeavour to obtain the recognition of the rights of the hereditary Prince of Augustenburg as Duke of Schleswig-Holstein, and, consequently, the complete separation of the Duchies from Denmark."

The Bavarian amendment was rejected by the Diet.

PRUSSIA.—The King returned to Berlin from his visit to the Duchies on Sunday morning, accompanied by Herr von Bismark and General von Manteuffel. Herr von Roon, who remained with his wounded son, was expected to return on the following day. The Minister of Public Worship has sent Privy Councillor Stiehl to Schleswig to inquire into the condition and wants of the school system in that duchy.

AUSTRIA.—A despatch from Vienna of yesterday says that the Emperor and the Empress of Russia are expected on the 15th of May at Kissengen. His Majesty will remain a fortnight. The Emperor and Empress of Austria are also about to visit Kissengen, and a meeting of the sovereigns will probably take place. The evening edition of the official *Vienna Gazette* of Tuesday says:—

"Although it is scarcely to be expected that Austria and Prussia will agree to the proposal made in yesterday's sitting of the Conference for the maintenance of the blockade of the German ports during the armistice, yet the negotiations between the Cabinets need not be broken off, nor the friendly relations between the German and Western Powers be subject to any interruption."

According to the *Oesterreichische Zeitung* of Thursday, the Cabinets of Vienna and Berlin have declined as inadmissible the proposal made at the Conference on Monday for an armistice, with a maintenance of the blockade of German ports. The Emperor of Austria has adjourned the International Exhibition, which was to have taken place in 1866, at Vienna. The reasons given for this step are—firstly, because the political state of affairs in every quarter has prevented industrial development; secondly, because Austria is in a transitory state as regards her general commercial policy, and in her position towards the Zollverein; and, lastly, on account of the International Exhibition in Paris, which is to be held about the same time. The *General Correspondenz* declares the statements which have appeared in several journals of the probability of an intervention of Russia and Austria in the Danubian Principalities to be wholly unfounded. The Emperor Maximilian before his departure for Mexico charged M. Auber, the composer, to compose the music of a Mexican national hymn, the words of which have been written by M. Aguilar, ex-Minister of State in Mexico, and now Envoy at the Court of Rome.

ITALY.—The Italian frigate Rê Galantuomo, which was supposed to have been lost on the coast of America, arrived on Monday morning at Gibraltar, and proceeded to Naples on the next day. The Italian Parliament recommenced its sittings on the 18th. In the Chamber of Deputies on the 20th Signori La Porta and Miceri, wishing to put a question on Roman affairs and the general policy of the Government, requested that papers in reference to those subjects should be laid upon the table. In reply the Minister for Foreign Affairs stated that he had no fresh papers, but that the explanations demanded would be given. The Minister of Finance presented his Budget for 1865, and an account of the state of the Treasury up to the 1st of January, 1864. Several Bills, including one for the reform of the laws on public registration, were also brought forward. The Minister of Marine introduced a Bill to raise a credit of 7,000,000f., to be applied to the construction of iron-plated ships. A Bill to retain in force several of the articles of the law relating to brigandage was brought forward by the Minister of the Interior. A popular meeting has been held at Naples, when an address of thanks to the English people for the reception given to General Garibaldi was voted, and also an address of sympathy with Hungary. The address was presented to the English Consul at Naples.

GREECE.—Advices from Athens state that the Canaris Ministry had resigned. It was stated that a new Ministry would be formed by M. Balbes.

RUSSIA.—Advices from St. Petersburg state that it is not likely that Russia will send a second Plenipotentiary to the London Conference. Should however the Conference be changed to a general Congress, Prince Gortschakoff, the Minister for Foreign Affairs, would proceed to London. The Russian Minister at Turin, Count Stackelberg, has obtained leave of absence for two months. It is said that the merchants of St. Petersburgh intend to propose to the Government the abolition of export dues, on the ground that they impede the development of commerce, while the revenue derived from that source is comparatively unimportant.

POLAND.—Advices from Warsaw to the 25th inst. state that on the previous day a letter from Archbishop Felinski was read to the various congregations, abolishing mourning in the churches. In consequence of this the bells and organs are again used. It is reported that two engagements have taken place between the Poles, under Bossak, and the Russian troops. The official *Warsaw Gazette* acknowledges that fresh bands of insurgents have made their appearance.

DANUBIAN PRINCIPALITIES.—The Chamber of Deputies has passed a resolution that in future the Ministers are to take the oath of allegiance to the people, and not to the Prince. An important public manifestation was commenced at Bucharest on Wednesday. The corporations and professors, with a large concourse of people, assembled with a view of thanking the Prince for the new electoral law. The assembly, however, dispersed at the invitation of the authorities.

CIRCASSIA.—Advices from Constantinople state that a battle was fought between the Circassians and the Russians on the 1st inst., in which the former lost 2000 and the latter 1500 men. The Circassians are now negotiating with the Turkish Government for permission to settle in Turkey. All the foreign officers who assisted the Circassians escaped safely to Trebizonde. The Porte has sent five steamers to convey them to Sinope, Samsoun, and Varna.

TUNIS.—Disturbances of a serious character have broken out in Tunis. The tribes are all in a state of insurrection and refuse to pay the taxes. The city of Tunis is, however, still tranquil, and the Bey still occupies that city with the necessary force for resistance. The Governments of France, England, and Italy have each despatched a naval force to that quarter. The English, French, and Italian Admirals have disembarked troops, who will act in concert and protect the subjects of their respective countries if necessary.

CAPE OF GOOD HOPE.—News from the Cape to the 21st March states that the Governor on leaving Graham's Town made excursions to the Kowie, and then to Fort Beaufort, where he met Sir Percy Douglas, the Commander of the Forces. His Excellency then visited Queen's Town, where he was enthusiastically received by 2500 Tambookies. At the last accounts he was journeying through Albert to Aliwal, to visit the new President, Mr. Brand, and the aged chief Moshesh, and to determine the boundary line between Basutoland and Winburg. The Session of Parliament was summoned for the 27th of April at Graham's Town. It is rumoured at Graham's Town that Sir Percy Douglas was expecting by the next mail his commission as Lieutenant-Governor of Kaffraria. The Imperial Government has purchased Cape Castle from the colonists for 50,000*l.*, which is to be expended in the erection of barracks at King William's Town. The Confederate war steamer Alabama put into Table Bay, March 20th, for coal.

INDIA.—The Bombay mail of the 28th March has arrived. Colonel Stewart reported to the Governor of Bombay on the 22d March, by telegram direct from Bushire through Kurrachee, that the whole length of submarine cable on board the Tweed (373 miles) had been paid out from that vessel in the most perfect order. Since the 23rd March passenger trains have commenced running direct from Bombay to Poona and Sholapore over the Bhore Ghaut incline. The transit from Bombay to Poona now occupies eight hours. The through line from Bombay to Ahmedabad will not be opened for public traffic until after the next monsoon. The entire line of railway, from Mooltan to Umritsir, will be open for traffic in November. The preliminary examination by Captain Tighe, Deputy Commissioner, into the charges brought against the Umballah and Patna conspirators, for aiding Sittana and Mulka fanatics with men and money, commenced on the 14th March. Cholera has made its appearance in the Bombay Presidency, and is committing fearful ravages in several districts. It has been ordered by the Governor-General that any persons who may have committed crimes on foreign territory, and who have sought refuge in the dominions of British India, shall be returned to their own Government, and that an agreement be made with the native governments for this rule to be reciprocal. The Governor-General has appointed a committee, of which Mr. H. H. Roberts, C.B., is president, for the purpose of reporting on the present state of gaol discipline in India, and on the management and treatment of prisoners. The government of Bombay has appointed a commission, of which Sir Alexander Grant, Bart., is President, to inquire into the healthful education of the children of European soldiers and others, with a view to the removal of the children from the schools at Byculiah to Poona or Poorundhur. Fresh difficulties have occurred in Cabul between the Ameer, Shere Ali Khan, and his brothers Auzim Khan and Afzul Khan, who are in arms against him.

UNITED STATES.—General Grant has issued orders to revoke all furloughs, to direct baggage to the rear, and sutlers to leave the army, in view of the resumption of active operations. The roads in Virginia are rapidly drying after the late heavy rains, and an immediate advance is expected. Letters from Washington state that a threefold advance on Richmond—namely, by Grant across the Rapidan, Smith up the Peninsula, and Burnside viâ Goldsborough, North Carolina—has been determined upon. The Confederates under Generals Forrest and Buford attacked Fort Halleck, near Columbus, Kentucky, and Fort Pillow, near Memphis, Tennessee, simultaneously, on the 12th. On the following day General Buford carried Fort Pillow by storm. Out of the garrison of 600 men, 400 are said to have been killed, and the telegrams assert that the Confederates bayoneted all the negroes, and many of the white survivors after the capture. They then removed all the ordnance from the fort, and set out to attack Memphis. On the same day they occupied the town of Paducah in Kentucky, but were subsequently shelled out of their position. On the 15th they demanded the surrender of the fort, which was refused, the Federals marching out to attack them. The Confederates ultimately left Paducah, after removing large numbers of horses and other spoils. The reoccupation of Pillow by the Confederates again closes the Mississippi. It is believed that Memphis has no adequate force to defend itself. Unfavourable rumours are current in New Orleans concerning the Federal situation on the Red River. A Federal reconnoitring force encountered the Confederates under Imboden, near Winchester, Virginia, on the 8th, and were defeated, with the loss of upwards of 100 men. After the main body of the Federals had left Alexandria, Louisiana, a slight engagement, lasting three hours, occurred on the 28th ult., 35 miles above Alexandria, Louisiana, between 8000 Federals and the Confederates, who were estimated at 12,000 strong. The Federals are reported to have captured 500 prisoners and then continued advancing, endeavouring to bring on a general engagement. The Confederates on the other hand are said to have captured 200 Federals. The Federal cavalry have occupied Eagle Pass, Texas, 400 miles above Brownsville. General Johnstone is being largely reinforced from Polk's and Beauregard's armies. The Confederates have made an unsuccessful attempt to blow up the flag ship Minnesota off Newport. The Minnesota was seriously damaged. The Federal transport steamer Maple Leaf was sunk by a torpedo in St. John's River, Florida, on the 30th ult. Four of her crew were lost. The sinking of the Confederate ram Tennessee off Mobile is denied. The Senate Committee on Foreign Affairs, with the approval of the President and the Cabinet, have decided not to support the recent resolution of the House of Representatives relative to French operations in Mexico. The Senate has passed a resolution amending the Constitution so as to abolish slavery. The resolution has yet to pass the House of Representatives and the State Legislatures. An exciting debate has taken place in the House of Representatives on a resolution for expelling Mr. Long, of Ohio, and Mr. Harris, of Maryland—the former for expressing a disbelief in the practicability of quelling the rebellion, and urging the recognition of the South; the latter for expressing a hope that the Federal armies would be unsuccessful in their efforts to conquer the South; 81 votes were in favour of the expulsion and 58 against, but there not being a majority of two-thirds the motion was lost. A vote of censure on Mr. Harris was immediately afterwards carried. The motion for Mr. Long's expulsion has since been withdrawn, and a vote of censure passed by 80 against 70. The draught has been again postponed until further orders. An enormous mass meeting of working men has been held at New York, protesting against Legislative interference with strikes. In Louisiana the election for delegates to the State Constitutional Convention has resulted in the success of the Free State party. The steamers Sumter and Hatterbrook have been captured.

MEXICO.—It is reported from New Orleans that the French were marching to attack Matamoras. A preliminary encounter with the Mexicans had resulted favourably to the French. Three French frigates were about to ascend the Rio Grande to co-operate with the land forces. The Mexican Governor Cortinas had ordered all his troops to concentrate at Matamoras. The Imperial cause is rapidly gaining in popularity. Rumours of the occupation of Matamoras reached New Orleans on the 5th inst.

Parliament.

HOUSE OF LORDS.

FRIDAY.—In reply to the Marquis of CLANRICARDE, Earl GRANVILLE stated that a Bill had been prepared, founded on the recommendations in the report of the Commission on *English and Irish Courts of Chancery and Common Law*, and would be shortly introduced in the House of Commons. *Naval Promotion.*—Lord CHELMSFORD called attention to the unjust effect of the Order in Council of the 1st of August, 1860, on those naval officers who did not apply for their retirement under the conditions offered by the previous orders of 1846 and 1851. Those officers who preferred to remain on the active list had been deprived of a vested right by the order of 1860, which made retirement compulsory.—The Duke of SOMERSET contended that no injustice had been done by the new regulations. The condition of the Navy List must be taken into account. Fifty years had passed without a naval war, and there were no less than 337 Admirals in the list, though 20 would be enough for the efficiency of the service. The number could not be constantly increased, even in the interest of the navy itself, as it might produce a reaction against the whole system.—The Earl of HARDWICKE said that the uncertainty created by these successive orders was the great hardship of the Navy, and that the officers had had gross injustice done them.—The Earls of DERBY and HARROWBY concurred in this opinion.

MONDAY.—Earl STANHOPE gave notice that on Monday, the 23d of May, he should call attention to the report of the *Public School Commissioners*. The *Warehousing of British Spirits Bill*) was read a second time. The *Consolidated Fund Bill* (15,000,000*l.* was read a third time and passed.

TUESDAY.—The *Vagrancy* (*Scotland*) *Bill*, on the motion of the Duke of ARGYLL, was read a first time. The *Mortgage Debentures Bill* was read a second time and referred to a select committee; the *Joint Stock Companies* (*Foreign Countries Bill*) passed through committee; and the *Warehousing of British Spirits Bill* was read a third time and passed. *American Prizes.*—Lord CHELMSFORD brought under notice the manner in which the Government proposed to deal with prizes brought by the belligerent States of America into ports within her Majesty's dominions, as declared in the correspondence presented to Parliament with respect to the Tuscaloosa. The course of procedure contemplated was so objectionable, so opposed to the comity of nations, and so dangerous, that he felt bound to bring it under their lordships' notice. After stating the facts connected with the seizure of the Tuscaloosa, he said that, in eventually releasing her, the Government were perfectly right, but that at least they might have admitted their error and offered some apology. He also condemned the instructions issued to the governors of colonies in November last, as inconsistent with international law, and demanded an explanation of the reasons for issuing them and of the manner in which the remonstrances of the Confederate officer in charge of the vessel had been met, and which was so different from that in which the menaces and threats of the Federal agents had been received and acceded to.—Earl RUSSELL said that the law of nations required that prizes captured at sea should be legally condemned in the prize courts of the captors; but the Confederates had no power to take prizes into their own ports on account of the Federal blockade—a circumstance which rendered the present war altogether anomalous. He contended that the captain of a belligerent cruiser had no right to put guns on board her, and claim to have her treated as a commissioned ship of war. If that could be done, the Confederate cruisers might dispose of every one of their prizes in her Majesty's ports, and this would have the effect of at once violating the royal proclamation and the neutrality of the country. In his opinion the Government were bound to regard the Tuscaloosa as an uncondemned prize: but the law officers of the Crown felt that under all the circumstances of the case it would have been sufficient to have warned her off. He indignantly denied that the Government had truckled to Federal menaces and threats, and asserted that whatever demands Ministers had made upon the Federal Government had been promptly and fairly attended to.—Lord KINGSDOWN argued that a captor was not bound to take a prize before a prize court, but according to the law of nations might burn and destroy her. In fact, he was bound to do so in justice to his own Government if he were unable to take her into port. With regard to the Tuscaloosa the Government had no right to seize her, although she had come into port in violation of the Queen's proclamation. All they ought to have done was to have warned her off, and it was absurd to say that they were in any way bound to restore her to her original owners.—The LORD CHANCELLOR objected to these discussions, on the ground that he and his noble friends might have to deal with the questions to which they referred in their judicial capacity. By the universal usage of nations a captor was bound to have a prize adjudicated before a court to ascertain whether she was enemy's property, and to prevent mistakes being made in the too eager pursuit of booty. This was no doubt a qualification of the old rule, but it was now perfectly established by the general consent of nations. After a few words from the Earl of HARDWICKE the subject dropped.

THURSDAY.—The *Royal Assent* was given by commission to several Bills. *Seat of Government in India.*—In answer to the Earl of ELLENBOROUGH, Lord WODEHOUSE said the Secretary for India had come to no decision as to the removal of the seat of the Indian Government from Calcutta to the Upper Provinces, but the subject was still under consideration. *Burning of the Dead in India.*—The Earl of ELLENBOROUGH asked if the order issued by the Governor of Bengal as to the native mode of disposing of the dead in Calcutta had been communicated to the Governor-General before it was promulgated.—Lord WODEHOUSE believed the prohibition of the native practice of throwing dead bodies into the river was communicated to the Governor-General before it was issued; but that the order as to the removal of the customary burning places was given without his previous sanction.—The Earl of ELLENBOROUGH regretted that a subordinate authority should have given an order that might endanger the peace of the country, without previous reference to the Governor General, residing in the same city. On the order for the third reading of the *Punishment of Rape Bill*, Lord WODEHOUSE moved an amendment, making the addition of flogging to the sentence discretionary on the part of the judges, instead of compulsory.—Lord WENSLEYDALE thought the increased severity of the punishment, if enacted at all, ought not to be left to the discretion of the judges.—The LORD CHANCELLOR read a letter from the Lord Chief Justice of the Queen's Bench, containing the opinion of the judges that the addition to the punishment would tend to increase the reluctance of juries to convict, but that, if adopted, the infliction ought certainly to be left discretionary.—The Earl of WESTMEATH assented to the amendment.—Earl GREY objected to any alteration of the Bill; he believed the objection made by the Judges was founded chiefly on their unwillingness to give up any of their power. Their Lordships then divided on the amendment; which was carried by 55 to 20. The Bill was then read a third time and passed.—On the order for the second reading of the *Regius Professorship of Greek* (*Oxford*) *Bill*, the Earl of DERBY said he did not intend to oppose the Bill, as he understood the university desired that it should pass. At the same time, he entertained considerable objections to some of its provisions, especially to that which required the professorship to be held by a clergyman. If such a limitation had existed in bygone times, Professor Porson could never have held the appointment, and he thought that the professorship of Greek was not one that could at all times be advantageously held by a clergyman.—The Earl of ELLENBOROUGH opposed the Bill on the ground that it took away from the hard working clergy one of the few rewards which had hitherto been allotted to them, and applied it to a purely secular object.—The LORD CHANCELLOR said that the measure was regarded as satisfactory by the university, which had accepted it as the best remedy for the painful scenes that had recently occurred. He had, however, no objection to insert a proviso to the effect that, in the event of the university endowing the Greek professorship to the amount of 600*l.* a year, the canonry he proposed to attach to the chair should be placed at the disposal of the university.—The Earl of HARROWBY thought this endowment a very graceful act on the part of the Government.—Earl GREY concurred with the Earl of Ellenborough that it was unwise to withdraw a valuable piece of Church preferment from the position it had hitherto occupied of being a reward for purely clerical services.—After a few words from the Earl of CARNARVON, the Bishop of LONDON remarked that he had no doubt that the clerical body would be always able to supply a gentleman fit to undertake the duties of the professorship, and he could only express a hope that all the canonries might be as well disposed of as in being conferred upon a man who must necessarily be one of the most eminent Greek scholars of the day. The Bill was read a second time. The *Joint Stock Companies* (*Foreign Countries*) *Bill* was read a third time and passed. The Registration of *County Voters* (*Ireland*) *Bill* was read a second time.

FRIDAY.—*The Steam Rams in the Mersey.*—The Earl of DERBY called attention to the correspondence between her Majesty's Government and Mr. Laird respecting the steam rams. The question as to whether the papers should be produced had been ably discussed in the House of Commons, and had been negatived in favour of the Government by a majority of 34. In reviewing the circumstances under which the correspondence had arisen, he characterised the conduct of the Messrs. Laird as everything that was commendable, seeing that they had withheld nothing from the Government; and the conduct of the Government, on the other hand, he considered highly censurable, seeing that it had been most unfair, ungenerous, and he feared illegal.

[Left speaking.]

HOUSE OF COMMONS.

FRIDAY.—On the Order for going into Supply, Mr. LIDDELL moved "That in the opinion of the House further interference on the part of this country in the civil war in China is impolitic and unnecessary." He reviewed the policy adopted of late years with reference to China, urging that our attempts to uphold the Mantchu dynasty as against the Taepings were most baneful in their effect, and tended to injure our character in the East. He also commented upon the employment of Captain Sherard Osborn, Major Gordon, and other British officers, who did not, he said, hold commissions under the Emperor of China direct, but only under Futai, a provincial governor, in whose hands they were powerless to prevent the most deplorable cruelties and excesses, such as those perpetrated at the capture of Soochow. He attributed the failure of Captain Osborn, who had, he said, behaved as a man of honour, to the amateur diplomacy of Mr. Lay. He contended that there was no ground for this interference in the internal affairs of China, as our trade with the country had not fallen off, but had rather increased. He did not ask the House to censure the Government, although he considered their policy had been erroneous in many respects, but he asked them simply to join with him in dissuading the administration from continuing in a course of policy which he believed was unprecedented in the past, and which he hoped would find no favour in the future.—Mr. LAYARD defended the policy of the Government, urging that, had it not been for their exertions to support law and order in China, our trade with that country, amounting to 60 millions sterling per annum, would have been sacrificed, the treaty ports destroyed, and British interests irreparably injured. So far from a reversal of that policy being desirable, he contended that the tidings of such a course would be received with horror and indignation by every British merchant in China.—Mr. W. E. FORSTER said that Mr. Layard had not answered the question on which the House wanted information—namely, whether we were to go on interfering in the civil war for the purpose of putting down the rebellion? He condemned our policy in China as an open and flagrant violation of the laws of neutrality.—Mr. FERRAND declared that, horrible as were the atrocities committed by the Russians in Poland, and by the Prussians in Denmark, they were thrown into the shade by the iniquities committed by British troops in China, acting under the instructions of Whig Governments in England. While he was enlarging upon this topic, the House was counted out.

MONDAY.—Mr. H. LEWIS inquired whether the *Garibaldi Meeting* on Primrose Hill had been suppressed by the police with the authority of the Home Office.—Sir G. GREY replied that neither he himself, nor any member of the Government, nor the Commissioners of Police, had issued any instructions to the police to interfere. The facts were that the Chief Commissioner of Works had given his sanction to the planting of a tree on Primrose Hill, in commemoration of Shakspere, and for the purpose of preserving order had secured the attendance of a certain number of police. After the proceedings connected with this ceremonial had terminated, another meeting was held, over which a chairman was appointed, to discuss the cause of the departure of General Garibaldi, when the inspector of police intimated to the parties that the meeting came within the category of those which had been prohibited by a notice issued by the Commissioners of Works during the Hyde Park riots. The meeting was not accompanied by any tumult, and perhaps, under the circumstances, the police might have exercised a discretion, and allowed the proceedings to go on. The report of the Committee of Ways and Means on the *Fire Insurance Duty* was brought up and agreed to. On the order for the second reading of the *Customs and Inland Revenue Bill*, a short discussion took place on some of the details of the Bill, which was ultimately read a second time. The House then went into committee on the *Civil Bill Courts* (*Ireland*) *Bill*, on its recommittal, and the clauses underwent a long discussion.—On the order for the second reading of the *Thames Conservancy Bill*, Mr. LOCKE suggested that, as the Bill affected the rights of the Watermen's Company and the privileges of the Thames watermen, it should be referred to a Select Committee.—Mr. HUTT said, this being a hybrid Bill, the usual course was, after the second reading, to refer it to a Select Committee, where all parties aggrieved might be heard by counsel and produce witnesses.—After a few remarks by Alderman ROSE, the Bill was read a second time. The House then went into committee on the *Court of Chancery* (*Despatch of Business*) *Bill*, the clauses of which were agreed to. The *Penal Servitude Acts Consolidation Bill* was withdrawn.—Mr. SCHOLEFIELD moved the second reading of the *Partnership Law Amendment Bill*, explaining the objects and nature of the measure.—Mr. HUBBARD moved as an amendment that the Bill be read a second time that day six months. He condemned the Bill as inconsistent with commercial morality, and as a mischievous interference with our mercantile legislation.—Mr. MALINS said that the principle of limited liability was now largely and beneficially acted upon, and that it was the object of the Bill to extend it.—Mr. K. HODGSON likewise defended the Bill, which would give freedom to contracts, and so far from causing commercial immorality, it would, in his opinion, raise the tone of commercial morality.—Sir G. BOWYER, Mr. GREGSON, Alderman SALOMONS, and Mr. BUCHANAN, also supported the Bill, the latter expressing a hope that it would be extended to Scotland. The amendment was negatived without a division, and the Bill was read a second time. The *Charitable Assurances Enrolments Bill* passed through committee. The remaining members of the select committee on the *Bankruptcy Act* were nominated, notice being given that Mr. Roebuck and Mr. Verner should be added.—The ATTORNEY GENERAL for IRELAND moved for leave to bring in a Bill to alter the constitution and amend the practice and course of proceeding in the *High Court of Chancery in Ireland*. He explained the principal provisions of the measure, which included the abolition of the present offices of taxing masters and the creation in their stead of a vice-chancellor, who, with the Lord Chancellor and the Master of the Rolls, would be sufficient to do the whole work. The Chancery Regulation Act of 1854 would also be repealed, and the practice of procedure of the Court of Chancery would in all respects be assimilated to that in operation in England. A large annual saving would be the result of these arrangements.—Mr. WHITESIDE contended that the work was now well done for 12,000*l.* a year, but that it would cost 27,000*l.* if the proposed reforms were carried out. He complained that many of the recommendations of the Commissioners had been altogether overlooked by the framers of the Bill. In his opinion all the improvements contemplated by the Bill might be effected by a new code of rules adapted to the existing machinery of the Court of Chancery.—After some discussion, in which Sir P. O'BRIEN, Mr. SCULLY, Mr. VANCE, Colonel DUNNE, and others took part, leave was given to bring in the Bill. *Under Secretaryships of State.*—Mr. MASSEY moved that the Marquis of Hartington be at liberty to appear, by his counsel and agents, before the Select Committee appointed to inquire whether the Under Secretary of State who was last appointed to that office thereby vacated his seat. The motion was agreed to.

TUESDAY.—*The War in New Zealand.*—Mr. A. MILLS called attention to the war now going in New Zealand, and moved for all correspondence between the Governor and the Colonial Office relating to the policy of confiscation which had been adopted by the New Zealand Legislature. Besides the enormous cost of this war, there were other considerations which called for the interference of the Imperial Parliament. By the last news it appeared that the Legislature of New Zealand had passed certain laws, one of which confiscated 9,000,000 acres of native lands: and another invested the Colonial Government with arbitrary power, to an extent almost unparalleled, of suspending the law and of imprisonment. These Acts were now in operation in the colony, and he thought the subject called for the attention of Parliament. He discussed the transactions between the Colonial Government and the natives of New Zealand in relation to the title to land, and the grounds which the natives had for believing they had not experienced just treatment; and he expressed his conviction that the policy of the Colonial Government towards the Maori race had been inconsistent, fluctuating, and imbecile, affording extenuating circumstances in favour of the natives.—Mr. BUXTON seconded the motion.—Mr. CARDWELL said he had no objection to the motion. The question was one of great difficulty. The natives were a most remarkable people. We had established a colony among them with a local Government, in which the natives had no voice, and hence the problem to be solved. The war had not been caused by the King movement, nor was it commenced in order to put down that movement. The cause of the war, as distinctly stated by Sir G. Grey, was the existence of a combination among the natives in the northern island for the total expulsion of the white race. It was necessary, then, to consider what were the measures to be adopted on the conclusion of the war, in order to secure permanent peace: and Sir G. Grey had proposed to locate bodies of European settlers upon lands taken from the tribes guilty of the outrages which occasioned the war. He was not going to defend the laws referred to by Mr. Mills, or to justify their language; but he asked what course was it incumbent upon the Imperial Government to take on receiving these Acts? To disallow them would lead to serious evils; but it was within the power of the Crown, by its instructions, to limit and restrain the operation of the Acts; and that course had been taken. No confiscation would take place without the knowledge and approval of the Governor, and other instructions had been sent out for the guidance of the Colonial Government in the arrangements for the pacification and settlement of the colony.—Lord R. CECIL considered the speech of Mr Cardwell satisfactory, and hoped the New Zealand Assembly would accept the rebuke he had administered.—Sir J. TRELAWNY accepted Mr. Cardwell's policy as an earnest of good intentions for the future.—Lord A. CHURCHILL vindicated the colonists from the charge of having brought on the war by rapacious dealings with the natives in the purchase of lands.—Mr. C. FORTESCUE said that the question in the present war was totally different from that in the old quarrel about Wirimu Kingi and the Treaty of Waitangi. The present war had been wantonly provoked by the natives. He defended the New Zealand Government, and said that there was nothing in the acts referred to to show that the Government meant to make an unjust and tyrannical use of the powers they conferred.—Sir J. PAKINGTON remarked that the recent state of affairs in New Zealand, which had caused great anxiety, were the first fruits of that policy by which the Legislature of the colony was enabled to deal with native affairs. He considered the statement of Mr. Cardwell to be most satisfactory.—Mr. SELWYN observed that his satisfaction at that statement had been much lessened by the speech of Mr. Fortescue. He reviewed and censured the policy of the Government in reference to the colony, to which he traced the origin of the present war.—Mr. MILLS having replied, the motion was agreed to. *Harbour of Refuge.*—Mr. LINDSAY moved a resolution that her Majesty's Government should now adopt measures for the construction of harbours of refuge on the coasts of Great Britain and Ireland, recommended by a committee of this House in 1858, by a Royal Commission in 1859, and by a resolution of this House in 1860. The necessity of the works had been demonstrated by the facts proved in the inquiries referred to. With regard to the cost, he was of opinion that the harbours might be constructed by convict labour at less than the estimate of the Royal Commissioners, and they would be available not only as harbours of refuge, but as rendezvous for ships of war. On the last point he showed the prodigious annual loss of lives and of property on the coasts of this country, observing that if one-half or even one-sixth of these losses could have

been prevented by having harbours of refuge, the object was one of great national importance.—Mr. CAVE seconded the motion.—Sir S. NORTHCOTE moved as an amendment, the addition of the following words at the end of the resolution :—"And make provision for wholly or in part defraying the expense of such harbours as it may be thought right to construct by means of tolls upon shipping, as recommended by the Committee of this House." He proposed this amendment on behalf of the tax-payer; but he also suggested whether a constitutional principle was not involved in the matter. The Committee of 1858, upon the main question, as to the policy of a further grant of public money for this purpose, came to the conclusion that any such advance should be repaid by a charge upon shipping, and they left the adjustment of the charge to her Majesty's Government.—Mr. BLAKE, Mr. PEASE, and Sir J. PAKINGTON supported the motion; Mr. BAXTER opposed it.—Mr. M. GIBSON opposed both the motion and the amendment, contending that the House would not be justified in passing a resolution which would pledge it to an indefinite and enormous expenditure without indicating the means by which that expenditure was to be met. The shipping interest was decidedly opposed to the payment of passing tolls for the support of harbours which they never used. The idea of getting large pecuniary assistance from the districts to be served by those harbours was perfectly fallacious, and therefore the only alternative was to vote four millions of money for the purpose. Moreover, he contended that it would be unwise to tax the public or the shipping interest to build harbours of refuge to receive unseaworthy ships. He explained the steps taken towards saving life on the coasts of the United Kingdom, and urged that it was the wish of the Government to do all that was right in policy and just to the ratepayers in that respect. They could not, however, recommend that beneficent legislation should be carried too far.—Mr. HENLEY said he would support the amendment of Sir S. Northcote, as it would make that clear which was not now apparent, namely, the source from which the money was to come.—After some remarks by Sir F. SMITH, Sir J. ELPHINSTONE, Mr. MAGUIRE, and Mr. SOMES, Mr. LINDSAY replied, when the amendment was negatived on a division, by 191 to 39 On a further division, the original motion was also negatived by 142 to 84.—Lord R. MONTAGU moved for a Select Committee to inquire into any plans for dealing with the *Sewage of the Metropolis* and other large towns, with a view to its utilisation for agricultural purposes —Sir J. PAXTON was of opinion that the inquiry would be of no use.—After a few remarks by Mr. J. MILLER and Mr. CAIRD, the motion was agreed to.

WEDNESDAY.—*Church Rates.*—On the order for the second reading of the *Church Rates Commutation Bill*, Mr. HADFIELD raised an objection to the Bill upon a point of order with reference to the rules of the House.—The SPEAKER overrruled the objection.—Mr. NEWDEGATE then moved the second reading of the Bill, and stated that its object was to remove all personal liability in respect to Church-rates, and make them a charge upon real property, to be paid by the owner through the occupier. After explaining the machinery he proposed for the collection and administration of the fund, he entered very fully into the reasons which had induced him, notwithstanding the present position of the Church-rate question, to persevere in this measure. If the Bill was read a second time, he proposed to refer it to a Select Committee, in order that its provisions, to which he was not wedded, mightbe carefully examined and adapted to carry out the settlement of the question.—Sir C. DOUGLAS moved as an amendment that the Bill be read a second time that day six months. He declined to discuss the Bill. The only course to be taken by the opponents of Church-rates was to accept the position in which they stood with reference to this question, and leave it to be discussed on the hustings at a general election.—Mr. SALT said he should vote for the second reading, though he objected to certain parts of the Bill.—Alderman ROSE and Mr. R. LONG supported the Bill, which was opposed by Lord FERMOY and Mr. LOCKE.—Lord J. MANNERS, giving full credit to Mr. NEWDEGATE for the great pains he had taken in the preparation of the Bill, suggested to him whether he had the least hope of its settling the question, and counselling him to rest satisfied with having directed the attention of the country to its principle and main provisions, and to withdraw the Bill.—Sir C. WOOD concurred in this advice; but, after a few remarks by Sir J. FERGUSSON, the House divided, when the original motion was negatived by 169 to 60. The amendment was then agreed to. The Bill was therefore lost —Sir J. HAY, in moving the second reading of the *Bank Notes (Scotland) Bill*, explained that its object was to enable all persons carrying on the business of bankers in Scotland to issue their own notes against the bullion in their coffers.—Mr. BLACK moved that the Bill be read a second time that day six months. He said that the measure was uncalled for, that it would disturb the existing system, and that the change, if made, should extend to the whole kingdom.—Mr. FINLAY supported the Bill, approving its principle, though not all its details.—The CHANCELLOR of the EXCHEQUER, in supporting the amendment, said he did so not from an inveterate hostility to its principle, namely, the extension of the issue of paper against gold, in which there was nothing dangerous or unsound. But the Bill would involve a very extensive question. The system of banking and currency in Scotland could not be considered apart from that in England, and he thought the matter was not yet ripe for general legislation.—After some remarks by Mr DUNLOP, Sir T. COLEBROOKE, Mr. K. HODGSON, Mr. C. EWING, Mr. BUCHANAN, and other members, the Bill was withdrawn. The House then went into Committee upon the *Trespass (Ireland) Bill*; but the first clause was still under discussion when the time arrived for closing debate. The *Court of Chancery Despatch of Business Bill*, and the *Fish Trends (Scotland) Bill* were read a third time and passed.—Mr. DUNLOP obtained leave to bring in a Bill to amend the Act for the *Valuation of Lands and Heritages in Scotland*.—Mr. MASSEY brought up the report from the Select Committee on privileges, stating that the seat of the *Under-Secretary of State* last appointed (Lord Wartington) was not vacated.

THURSDAY.—*American Affairs.*—Sir G. GREY, in answer to Mr. HOPWOOD, said that it was not the intention of the Government to propose a Conference of European Powers on American affairs, as they felt persuaded that the Government of the Federal States would not listen to such a proposal. In reply to Mr. HEYGATE, Mr. COWPER said that the Government had determined upon the erection of a new *National Gallery* at the rear of Burlington House, and that the plans and estimates would shortly be laid on the table. *Seizure of the Tuscaloosa.*—On the order for going into committee of supply, Mr. PEACOCKE called attention to the case of the Confederate vessel Tuscaloosa, and to the instruction to seize her contained in the despatch of the Colonial Office to the Governor of the Cape of Good Hope, dated the 4th of November last, and which he held was a weak and illegal concession to the menaces and demands of the Federal Government. He argued, on the authority of Lord Stowell, Wheaton and other authorities on questions of international law, that the Tuscaloosa was sufficiently clothed with the character of a vessel of war to exempt her from seizure under the Queen's proclamation of neutrality, and that the commander of the Alabama, who had captured her and converted her into a Confederate cruiser, had as much right to commission her in that capacity as a commodore. In conclusion, he moved that the instructions contained in the despatch of the Duke of Newcastle to Sir P. WODEHOUSE, dated the 4th of Nov., 1863, and which remains still unrevoked, are at variance with the principles of international law.—The SOLICITOR-GENERAL, in opposing the motion, admitted that the instructions sent to the Cape were not as full and explicit as they might have been, but still that they were not opposed to international law. He held that a neutral Power had the right to exhibit its neutrality by detaining a vessel with the view of restoring her to her original owners, and that as the Tuscaloosa had clearly entered Simon's Bay in violation of the Queen's proclamation, the colonial authorities were justified in detaining her. The question at issue was whether the Tuscaloosa was a prize of war when she entered the Bay, or whether she had lost that character and assumed the new character of a vessel of war. There was, in his opinion, no doubt that she was a prize of war, and that her supposed conversion into a Confederate cruisor was a mere plan and pretence.—Mr. WHITESIDE argued that we had shamefully violated our alleged neutrality, as there could be no doubt whatever that the Tuscaloosa was lawfully converted into a tender to the Alabama, that her commander had a legal commission, and that we had no right whatever to detain her. If the Tuscaloosa had been a prize of the Alabama, instead of her tender, she ought to have been warned off, but under no circumstance was her seizure to be justified.—Mr. J. J. POWELL argued that all the evidence went to show that the Tuscaloosa was a prize of war, and not a tender to the Alabama, as represented by the commander of the latter vessel.—Sir J. ELPHINSTONE held a contrary opinion, while Mr. LEFEVRE contended that the Tuscaloosa came into Simon's Bay as a prize of war, and not as a vessel of war.—Mr. NEATE and Mr. DENMAN opposed the motion, which was supported by Sir J. HAY, Mr. M. SMITH, and Mr. BOVILL.—The ATTORNEY-GENERAL said he was prepared to maintain that the despatch to Governor Wodehouse contained no principle at variance with international law. At the same time he was ready to admit that the Acting Attorney-General at the Cape had put an erroneous interpretation upon the meaning of the Duke of Newcastle. He asked the House not to affirm a resolution which would be derogatory to the supremacy of the Sovereign and the honour and dignity of the country.—Sir H. CAIRNS contended that a mistake had been made, and that the Government, in returning the Tuscaloosa to the Confederates without a word of apology or any offer of reparation or indemnity, had acted as they would not have dared to do towards a strong Power. On a division the motion was negatived by 219 to 185. The House then went into Committee of Supply *pro formâ* on the *Customs and Inland Revenue Bill.*

FRIDAY.—*Agricultural Statistics.*—Mr. CAIRD gave notice that on that day week he should propose a motion on the subject of agricultural statistics. *The Conference.*—In answer to Mr. DISRAELI, Sir G. GREY said he was not able to say on what day the Conference would re-assemble. He did not believe any particular day was fixed, but it had not been adjourned *sine die.*—Mr. HORSMAN inquired what was the cause of the adjournment.—Sir G. GREY was not prepared to state. *Case of Mr. Bewicke.*—Mr. H. BERKELEY moved that the House should on Monday resolve itself into a Committee, to consider an address to her Majesty, praying that compensation might be made to Mr. William Bewicke, of Threepwood Hall, Northumberland, for the degradation and loss he had suffered in being imprisoned for 12 months as a felon, on a charge since proved to be false; and for the heavy expenses he had incurred in prosecuting the persons who had conspired against him.—Sir G. GREY opposed the motion, but said that he would not object to refer the question of Mr. Bewicke's loss of property to a select committee.

[Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅛ to ¼ for Money, and 91½ to ⅜ for Account; Three per Cents. Reduced, 89⅜; New Three per Cents., 89⅛ to ¼; Red Sea Telegraph, 20⅜; Bank Stock, 238 to 239; India Five per Cent. Stock, 105 to 105½; Five per Cent. Enfaced Rupee Paper, 104½; Exchequer Bills, March, 6*s.* dis.; Ditto June, 9*s.* to 4*s.* dis.—FOREIGN: Brazilian, 1852, '58, '60, 90½ to 89½; Colombian Six per Cents., 80; Greek, 24¾ to ⅝; Ditto Coupons, 11¼; Italian (Maremmana Railway), 71½; Mexican, 44½; Ditto, Acct., 45 to 45¼; Russian, 1850, 85½; Ditto 1862, 88¾; Spanish Passive, 35⅞ to ⅝; Turkish, 1858, 68¾; Ditto 1862, 71⅛ to ⅞; Ditto, Acct. 72; Ditto 100*l.* Bonds, 72 to 71¾; Venezuela, 1862, 57¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,476,535	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	11,826,535
		Silver Bullion	—
	£26,476,535		£26,476,535

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,022,267
Rest	3,206,808	Other Securities	19,842,368
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,217,365	Notes	5,520,300
Other Deposits	12,620,036	Gold and Silver Coin	741,241
Seven days and other bills	528,267		
	£37,126,176		£37,126,176

April 28, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY: *April* 22.—BANKRUPTS.—J. W. ANNIS, Little Titchfield Street, Marylebone, Plumber—W. ACOCK, Maidenhead, Berksh., Grocer—R. ANDERSON, Goulston Square, Whitechapel, Proprietor of Saw Mills—F. BOURNE, Kent, Tobacconist—F. BIRCH, Everton, Liverpool, Commission Agent—M. BECKETT, Preston, Lancashire, Ironmonger—J. W. BEASLEY, Stamford Road, Kingsland Road, Plumber—G. BLAKE, Smethwick, Staffordshire, Engineer—H. BROADHURST, West Derby Road, Lancashire, Chemist—M. BROTHERSTON, E. I. BROTHERSTON, and O. BROTHERSTON, Toxteth Park, Liverpool, Teachers—J. W. CHRISTMAS, St Mary's Terrace, Park Road, Peckham, Commission Agent—T. CASTON, jun., Bridge House Place, Southwark, Ironmonger—J CATHCART, Manchester, Provision Dealer—W. T. CHAMBERS, Goding Street, Vauxhall, Engineer—J. DRAMFIELD, Cheshire, Poor Rate Collector—G. F. DEAKIN, Sheffield, Commercial Traveller—T. M. DAVIES, Llanelly, Carmarthenshire, Manure Manufacturer—J. G. ELY, Church Street, Kensington, Clerk in the Court of Probate—G. EGLINGTON, Norwich, Corn Chandler—M ELLYARD, Kingston-upon-Hull, Butcher—A. FORREST, King Street, Baker Street, Portman Square, Shoemaker's Assistant—G. FOWLES, Ledbury Road, Bayswater, Provision Merchant—J. FREEBODY, Kingsgate Street, Holborn, Butcher—W. T. FRANKLIN, Concord Buildings, Islington, Jewel Case Maker—J. FARRER, Pooley Bridge, Westmoreland, Farmer—J. GILBERT, Fetford, Lincolnshire, Schoolmistress—W. H. GRIMWADE, Blackfriars Road, Copperplate Printer—E. GUNSTON, Commercial Terrace, Edgware Road, Poulterer—T. W. GURNEY, Old Ford, Bow, Acetic Acid Maker—G. GREAVES, Salford, Lancashire, Chemical Manufacturer—J. M. GREENWELL, Wimbourne, Leeds, Joiner—F. J. GRAY, Kidderminster, Surgeon—W. H. GREEN, late of Congleton, Birkenhead, Cheshire Student—J. GALLOWAY, Birkenhead, Cheshire, Carrier—A. C. HARRISON, Ashburton Grove, Holloway, Commission Agent—P. HALL, late of Hoxton, Cheesemonger—R. HALL, Hazel Grove, Cheshire, Victualler—R. C. HUDSON, Macclesfield, Cheshire, Licensed Victualler—T. HIGGS, late of the Coal Exchange, Thames Street, City, Waiter—E. F. HEWITT, Cumberland Grove, Torriano Avenue, Kentish Town, Commission Agent—P. HARWOOD, Liverpool, Dealer in [illegible]—T. HUGHES, Llanbedrog, Carnarvonshire, Seedsman—R. JAMES, [illegible]ham, Suffolk, Watch and Clock Maker—J. B. JONES, Wroxeter, Shropshire, Railway Clerk—T. JACKSON, Lancaster, Porter [illegible]—J. JACKSON, Manchester, Leather Dealer—R. KIDWELL, Bermondsey, Retail Brewer—R. R. KEMP, Bridlington Quay, Yorkshire, Tea [illegible]—Low, Maldon Road, Haverstock Hill, Hairdresser—J LEIGH, Brixton Road, Barrister at law—W. MUSGRAVE, Liverpool, Dealer in Leather—W. MAPLETON, Clare Market, Broker—T. MARTIN, Nottingham, Maker—W. T. MACEY, California, Gloucestershire, Merchant's Porter—R. MEGGISON, Newcastle-upon-Tyne, Millwright—J. M'KERROW, Yorkshire, Carpet Weaver—J. NIXON, Raughton Head, [illegible]—Farmer—J. H. NORMAN, Alderminster Road, Bermondsey last, [illegible]—OWEN, Gros Nevin, Carnarvonshire—F. S. PATMAN, Manchester, King's Cross Surveyor—HENRY PHILIP, Brook Place, Old Kent Road, late Licensed Victualler—THOMAS PERKINS, Cain Place, Kent, General Dealer—THOMAS PRYNN, Stonehouse, Devonshire, [illegible]—W. POOK, Copenhagen Street, Caledonian Road, Head Beer Manager—J. PAY, Ellesmere, Shropshire, Draper—W. PATERSON, Canterbury, Draper—J. ROBERTS, Gloucester Street, Camden Town, Builder—ROBERTS, Codsall Wood, Staffordshire, Licensed Victualler—[illegible]—Grimstone, Norfolk, Bricklayer—J. REVIS, Nottingham, Baker—REDFEARN, Dewsbury, Yorkshire, Builder—J. RIDGWAY, Manchester, Cheshire, Silk Warehouseman—C. R. RICHARDSON, Stoke-upon-[illegible], Staffordshire, Hotel Keeper—T. RODGERS, Morton, Lincolnshire, Farmer—W. ROBINSON, King's Bromley, Staffordshire, Tailor—J. R[illegible], Lichfield, Staffordshire, Coach Builder—W. SAUNDERS, Brighton, Coach Maker—W. SAVAGE, Rood End, Worcestershire, Licensed Victualler—SATCHWELL, late of Harborne, Staffordshire, Butcher—P. T[illegible], Lemon Street, Whitechapel, Tarpaulin Manufacturer—R [illegible], Wolstanton, Staffordshire, Collier—W. TEW, Rugby, Warwickshire, Licensed Victualler—G. TILLETT, Stamford Street, Blackfriars, Ironmonger—W. W. UNDERHILL, Glamorganshire, Nurseryman—J. VERNELL, King Street, Stepney, Tea Dealer—E. W. WILLEY and C. WILLEY, Hereford, Coal Dealers—F. WEBB, late of Studley, Warwickshire, Needle Maker—W. WATSON, Boland, Northumberland, Farmer—WILSON, North Mimms, Hertfordshire, Carpenter—A. WEBB, [illegible], Yorkshire, Joiner—J. LUKE and T. WILLS, Camborne, Cornwall, Boot and Shoe Maker.

SCOTCH SEQUESTRATIONS.—J. BARR, Lesmahagow, Lanarkshire, Grocer—C. BORD, Prestwick, Ayrshire, Farmer—T. CRISSELL, Inverness-shire, General Merchant.

TUESDAY: *April* 26.—BANKRUPTS.—W. ASTWOOD, Shoe Stationer—H. ANDERSON, Barmston, near Sunderland, Farmer—T. BENNETT, East Stonehouse, Devonshire, Grocer—R. BEAL, Gun Shop, Bishopsgate Street—R. BUSHELL, Derby, Weaver—F. BURGESS, Tailor, Molton, Devonshire, Carpenter—H. BROADHURST, Liverpool, Chemist—J. BOTE, Windsor Street, Shepherdess Walk, City Road, Journeyman Confectioner—D. BURWOOD, Park Road, Clapham, Cabinetmaker—T. BAILEY, Hanley, Staffordshire, Journeyman Colour Maker—G. ROWE, late of Rochester, Kent, Coal Dealer—W. BROCK, Charles Terrace, Cassland Road, South Hackney, Carpenter—R. BOYD, jun., [illegible], Lancashire, Brass Founder—H. BURNS, Liverpool, Boot and Shoe Maker—C. B. BENNETT, Brixton, Builder—W. CRIBB, Hatcham, New [illegible], Surrey, General Shop Keeper—G. COPPEN, Lewisham, Kent, Grocer—F. CLARK, Rye, Sussex, Carpenter and Undertaker—T. COOKE, 22, Sutherland Place, Bayswater—M. A. CARLOW, late of Manchester, Assistant to a Fruiturer—W. N. DINGLEY, Liverpool, Coal Merchant—T. DODSON, Derby, Commission Agent—T. DODD and T. JOHNSON, Cheshire, Salt Merchants—EDWARD EDWARDS, Manchester, Barrister—J. EDWARDS, Stoke-upon Trent, Staffordshire, Grocer—J. FOOT, Rickmansham, Brewery Traveller—C. FISH, Peterborough, Northamptonshire, Grocer—B. FOSTER, Wakefield, Yorkshire, late Carrier—J. FELL, Minster, Kent, Farm Bailiff—J. GREENWOOD, Great Chapel Street, Westminster, Assistant to a Cheesemonger—J. F. S. GOODAY, Sudbury, Suffolk, Attorney—I. GREENFIELD, Wragby, Yorkshire, Journeyman Stonemason—S. L. GIBSON, Aveley, Essex, Carpenter—R. HIRST, Huddersfield, Yorkshire, Commission Agent—T. HALSTEAD, High Street, Shoreditch, Licensed Victualler—A. JOHNSON, Sevenoaks, Kent, Draper—W. JOHNSON, Orchard Crescent, Holloway, Wine Merchant—W. JOHNSON, Smethwick, Staffordshire, Soap Manufacturer—R. KAY, Todmorden, Yorkshire, Cotton Manufacturer—A. L. KENRICK, Wem, Shropshire, Spinster—J. LAY, Bexley Heath, Kent, Widow—W. S. LUDLOW, Aldermanbury, Warehouseman—G. LINSTEAD, Norwich, Coal Dealer—A. LEE, Kirkby-in-Ashfield, Nottinghamshire, Wheelwright—W. B. LEE, late of Kingston-upon-Hull, Hosier—W. LOBB, Saint Neot, Cornwall—J. T. M. MORRIS, Stanley, late Fruit Salesman—E. MARTIN, Bromley, Middlesex, Boiler Maker—W. W. MARTIN, The Terrace, Kilburn, Gentleman—T. MARSHALL, Hoxton, Whitechapel, Cheesemonger—J. MEAKIN, Macclesfield, Tea Dealer—MILNER, Heanor, Derbyshire, Manufacturer—R. NEEDHAM, Ripley, Derbyshire, Horse Dealer—W. F. NORMAN, Broad Street Buildings, Merchant—G. E. OLDHAM, London Wall, City, Shirt Manufacturer—W. OLIVE, Falmouth, Cornwall, Watchmaker—J PINFOLD, late of Banbury, Oxfordshire, Inn-keeper—N. PRIOR, Fetter Lane, Collector to a Publisher—M. G. RICHARDS, Queen's Terrace, Camden Town, Stationer—R. RICHARDSON, Kingston-upon-Hull, Lighter Owner—T. RIDMAN, Acton Blank, Gloucestershire, Surveyor of Roads—W. F. SLIPPER, Maida Road, Bayswater, Butcher—D. A. SINGER, Poland Street, Oxford Street, Tailor—B. SANDERSON, Pudsey, Yorkshire, Cordwainer—[illegible], Liverpool, Tea Dealer—J. SHAW, Northwich, Cheshire, Provision [illegible]—STACEY, jun., late of Great Marlow, Buckinghamshire—J. S[illegible], bridge, Tailor—GEORGE SEWELL, jun, Prior Place, Walworth, Farmer—W. H. SHEPPARD, Cross Street, Hackney, Draper—J. H. STEVENS, Street Hill, City, Commission Merchant—J. B. SMITH and T. [illegible], Great Tower Street, Wine and Spirit Merchants—J. TOWNEND, Yorkshire, Worsted Spinner—J. THORP, Repton, Derbyshire, Grocer—T. P. WILCOX, Bristol, Builder—W. WELLER, Water Lane, City, Wine Spirit Merchant—J. WRIGHILL, late of Manchester, Plumber—C. WEST, Everton, Lancashire, Musician—J. WILLIAMS, Aberdare, Glamorganshire, Carpenter—L. WALKER, Wolverhampton, Grocer—T. WARD, [illegible], Staffordshire, Journeyman Plumber—A. R. WILKIE, Landport, Hampshire, Baker—J. WORTON, Tooley Street, Borough, Licensed Victualler—J. WHORE, late of Manchester, Poulterer—W. F. WINDHAM, Upper Westbourne Terrace, Paddington, late Stage Coach Proprietor—H. [illegible], E. YEADON, J. YEADON, and S. YEADON, jun., Leeds, Patent Hemp Manufacturers.

SCOTCH SEQUESTRATIONS.—G. BURGESS, Grantown, Inverness-shire, Flesher—T. C. BARLOW, Glasgow, Wine Merchant—R. FRASER, W. MORRISON, Alva, Stirlingshire, Wool Spinners—J. GOUDIE, Colmonell, Ayrshire, Blacksmith—W. LOGAN, Ayr, Bookseller—D MACLEOD, Inverness, Painter—M. M'COY, Milton, Dumbartonshire, Grocer.

Metropolis and its Vicinity.

GENERAL GARIBALDI'S VISIT.—On Saturday General Garibaldi was up with the dawn, strolling about the beautiful grounds of Cliefden. At 11 o'clock he left the house in a carriage and four, accompanied by the Duchess Dowager of Sutherland and the Duchess of Argyll, and proceeded by way of Slough to inspect the Royal model farm at Windsor. In the course of his drive he was everywhere enthusiastically received. Upon reaching the farm he was received by Mr. Tait, the bailiff of the Home Farm, who showed the visitors over the buildings. He then visited the Royal dairy and the Royal gardens at Frogmore, where they were received by Mr. Ingram, who explained the arrangements as the General was driven slowly through the grounds. Garibaldi then paid a visit to the Flemish Farm, where Mr. Brebner was in attendance and showed him among the cattle a young bull two years old, which was named "Garibaldi" two years ago. Before the visit had concluded a number of farmers and others arrived on the field, and if the General had prolonged his stay for an hour or more the whole town of Windsor and the adjacent villages would have flocked to the scene. A number of the farmers offered to present him with a steel plough as a token of their recognition of his great merit. The General, while thanking them for their offer, said that his farm only consisted of about 25 acres, and that the rest of the island of Caprera was nothing better than barren rock and unproductive mountain, so that a steam-plough, much as he admired its operations, would be of little or no value to him. He, therefore, courteously refused the donation, and expressed his thanks with the warmest feeling of gratitude. He reached Cliefden on his return about half-past 2 o'clock. A luncheon was then served, at which 30 visitors were

present. In the afternoon Garibaldi and a party of gentlemen went out in boats on the Thames, where they spent a considerable time. The General expressed himself delighted with the surrounding scenery, and especially with the picturesque appearance of Cliefden from the river. In the evening the visitors were entertained at dinner by the Duchess Dowager. On Monday morning at an early hour the General, accompanied by the Duke and Duchess of Sutherland, and the Dowager Duchess, left Cliefden in a carriage and four, and drove over to Eton College. He arrived at Eton shortly before nine o'clock, and on driving into the quadrangle, was received by the Provost, the head and other masters, and the scholars, many of whom wore the costume of the College Rifle Corps, and who received him with enthusiastic cheers. On leaving Eton, he drove to the Slough station, where the Marchioness of Kildare, the Earl of Shaftesbury, Lord and Lady Taunton, the Earl of Harrowby, and other distinguished persons were waiting to take leave of him. On the arrival of the 9.15 express from Paddington, the General, accompanied by his two sons, his suite, and the Duke of Sutherland, took their places in the saloon carriage prepared for the occasion, and left Slough amid the cheers of the spectators. The train stopped a few minutes at Didcot Junction, at which a large number of persons received the General with loud cheers. At Reading the Mayor was introduced to General Garibaldi, and presented an address from the working men of that town. The General shook hands with them, and begged them to give his thanks to the people of Reading. The train then started for Swindon, and as it approached the station a salute of detonating signals was fired by the train, and announced his approach. When the train stopped the people cheered loudly, and at the request of the committee the General alighted and proceeded to the refreshment room. When he reached the entrance the Rev. Mr. Campbell, the incumbent of St. Mark's, held up a daughter of Mr. Benskin's, of the Queen's Hotel, who presented Garibaldi with a beautiful bouquet from the Conservatory of the Goddard Arms, Old Swindon. The General kissed the child. Whilst partaking of refreshment, many of the crowd took up positions behind his chair, and interrupted him whilst eating. When the bell rung for the train to start, the General, escorted by the committee, Mr. Gooch, of the Great Western, and Superintendent Haynes of the constabulary, went towards his carriage, situated at the further end of the platform. The crush was tremendous, and in spite of the exertions of the committee there was the greatest difficulty in reaching the carriage. The cheering was most enthusiastic, and the working men rushed forward to shake hands. When the crush was at its height a girl nearly fainted, when Garibaldi put forward his arm to save her, and gave her a kiss. He repeatedly expressed his thanks and acknowledgments, and after a stay of nearly 20 minutes, the train once more moved forward amid the cheers of the assembled multitude. On arriving at Bristol, a deputation of citizens, headed by the Mayor, and accompanied by Mr. Gore Langton, M.P., were in attendance, to present two addresses to the General; but as soon as the train arrived the mob broke down the barricades, thronged the platform, and overpowered the police, and at last the carriage which conveyed Garibaldi and his party was detached and sent off as a special train. On arriving at Durston the train left the Bristol and Exeter line and proceeded through Yeovil to Weymouth, greatly to the disappointment of the Exeter people, who had been waiting his arrival at the station for two hours before they heard of the change of route. At Weymouth, where he received quite an ovation, he embarked and paid a visit to the Channel fleet. He dined with Admiral Dacres on board the Edgar, and afterwards witnessed quarter firing on board the Warrior. He then relanded at Weymouth and proceeded to Taunton, where he arrived at 9.40 P.M. The railway station was illuminated, and an immense crowd received the General with great cheers. He passed through Exeter about 11 o'clock, and reached Plymouth shortly before 1 A.M. on Tuesday morning. Great preparations had been made at Plymouth, and it was calculated that on the Devon and Cornwall lines at least 100,000 spectators were in attendance on the previous afternoon before the *detour* to Weymouth was announced. As it was, crowds of people remained about the station during the afternoon and evening, and when he at length arrived he was received by the mayor and a deputation in the presence of upwards of 3000 persons. From the crowd and the lateness of the hour no attempt was made to present the address which had been prepared, nor could the General make a speech to the multitude present on account of the noise and confusion. He left at 1.5 A.M. for Cornwall on a visit to Colonel Peard, "Garibaldi's Englishman," at Penquite, where he arrived at 3 o'clock on Tuesday morning. In the afternoon the Mayors of Plymouth, Devonport, and Bodmin, and the Plymouth branch of the Polish league, arrived at Penquite, and presented addresses to the General, who received them most cordially, warmly shaking their hands. In his replies he said all the nationalities of Europe were friendly to England because she had no wish to take the property of other nations, as shown in the cession of the Ionian Islands. He also intimated the possibility of his paying another visit to England shortly. On Wednesday morning at an early hour he left Penquite for Fowey, a distance of 3½ miles, and arrived there about 9 o'clock. He was received by Mr. Treffry, and on descending from the carriage walked to the Albert quay, his path being strewn with flowers by several young ladies selected for the purpose. The General embarked under a salute of 15 guns from the battery, given by the Volunteer artillerymen. He was received on board the Ondine, in Fowey harbour, by the Duke of Sutherland and the Earl of Sefton, who with young Ricciotti, Dr. Basile, Signors Basso and Pietro, have gone with him to Caprera. On reaching the deck the General was affected to tears, and earnestly begged Colonel Peard to assure the British nation how deeply he felt his reception in England. He said that the impression made by the visit could never be effaced from his memory; and he hoped to return and see his friends again. The yacht left under steam and staysails, and shaped a course for Ushant, but her lower rigging having become loose, she bore up for St. Mawes, in Falmouth Harbour, where she remained until Thursday morning, when she started with a fair wind and fine weather for Caprera. Before leaving London General Garibaldi issued the following farewell address to the English nation:—

"I offer my heartfelt gratitude and thanks to the English nation and their Government for the reception I have met with in this free land. I came here with the primitive object of thanking them for their sympathy for me and for my country, and this my first object is accomplished. I have desired to be altogether at the disposition of my English friends, and to go to every place where I might be wished to go, but I find that I cannot now fulfil all these engagements of my heart. If I have caused some trouble and disappointment to many friends, I ask their pardon, but I cannot draw the line between where I could and where I could not go, and therefore for the present these are my thanks and my farewell. Still, I hope, perhaps at no distant time, to return to see my friends in the domestic life of England, and to redeem some of my engagements with the generous people of this country, which, with deep regret, I feel that I cannot now fulfil. G. Garibaldi.

"26, Prince's Gate, London, April 22."

Before leaving Penquite the General addressed the following communication "to the English Newspapers," with the accompanying address to the nation at large: "I cannot leave England without offering a public homage to the power of the British press, and a special tribute of gratitude to all those journals which were the sincere and faithful organs of public opinion towards me, and the benevolent interpreters of my admiration and feelings towards the nation who gave me hospitality. I send, therefore, a hearty greeting to all the representatives of the press. G. Garibaldi.

"Illustrious cities, highly reputed corporations, representative bodies from every class of citizens, have honoured me with countless addresses, to which my heart would have desired, but time is wanting me to answer worthily. I hope, nevertheless, to be allowed to fulfil in part my debt, by this special farewell of affection and gratitude to all. On this occasion I cannot, however, speak of myself alone, because I must not interpret the many eloquent and generous words that have been addressed to me as a mere personal honour—which is of little importance beside the greatness of the cause for which in these days the heart of the English people and mine have throbbed in unison—but as a fresh proof of that sympathising solicitude that the richest, the most prosperous, and the freest nation in the world nourishes towards another nation, which has been twice recognised as the mother of civilisation, and has through martyrdom, through persevering struggles, carried on with daring and with wisdom, become worthy of reassuming her place in the world, and proclaiming, I am risen. For this reason I believe I can reveal the thought of Italy to England, as I believe I may hold up England as an example and a hope to Italy. The two nations are already sisters: they may speak together in sincerity and confidence. In England, the institutions of the country, the respect for the laws, all that prodigious contexture of autonomous and yet organised forces, of order true and lawful, not vulgar or violent, combined with absolute individual freedom, freedom of conscience, freedom of domicile, freedom of the press, of speech, and of association; the right of national defence, not the privilege of a special body, but recognized to all; an army bright in glory, yet untainted with that disease of modern times known under the sinister name of militarism; the Rifle Volunteers, England's pride and my dream, the strength, the decorum, the activity, the perseverance—the perseverance, above all, by which when once a position or an institution is conquered retreat is never known,—all these things, which form the admiration of civilised peoples from afar and excite an intense desire to emulate, I would almost say to envy on a nearer view, may and should be proposed as an example to Italy. For myself it was impossible to spend a few days in this land without doing homage to these many truths, and still more without freely recording them to my fellow countrymen, not so much in testimony of the deep impression England has left on my own mind as for a lesson and incitement to them. To the English people I have nothing to recall which they do not know. They know what Italy desires. Italy has made up her mind to exist; she has the right to do so, and, if any should doubt it, I would add that she already exists in fact, and that nothing will prevent her completing herself. Italy desires but to break the yoke of the two adverse Powers that oppress her, and—let the world hear it—she can never rest until she shall have accomplished this aim, which is for her a question of life or death. The English people,—who would rather disappear under their ocean than allow the sacred soil of their country to be violated by the foreigner—will comprehend how legitimate are the aspirations and how immovable the resolves of my country. England knows that in disinterestedly co-operating in favour of the destinies of Italy in 1859 she contributed to further order and peace in Europe,—that peace and that order which alone are durable and beneficent, because founded on justice and on progress. England will, I am convinced, be ever more and more confirmed in this view—that if it is for Italy to show herself strong and really to be strong and independent of servile alliances, in order to induce confidence from her true friends (among whom the first place is due to England), England herself will see in how much the alliance of a young, civilised, and free nation like Italy is preferable to the heterogeneous and insecure connubium with despotic Powers. Yet I cannot hope, I say it with grief, that Italy will be able to accomplish her destiny without again encountering the direful proof of arms. England's voice is listened to and respected; she is in a great degree arbitress of the fate of Europe, but let her be fully pursuaded that she can never solve the Italian question, or that of the other nationalities, by any contrivance of compensation and diplomatic exchanges. But, in face of the great principle of the solidarity of peoples, proclaimed and sanctioned by universal conscience, I cannot speak of Italy alone, still less at a time when the omen and promise of this true holy alliance has been irrevocably confirmed, when lately I pressed the hands of proscribed men from every part of Europe. On quitting this hospitable shore, I can no longer conceal the secret wish of my heart in recommending the cause of oppressed peoples to the most generous and sagacious of nations. Sure that their aims are certain and their triumph fated, England will know how to spread over them the powerful shield of her name, and to sustain them, if need be, with her strong arm. England knows that she will not be alone in this great mission. Across the Straits there lives another gigantic people that has been oft times impelled by the arts of despotism to be the rival and the enemy of this country, but which freedom will be the means of turning into peaceful competitor and friend. Freedom! this is the sun that would fructify the sincere and formidable alliance of the two peoples—of civilisation against savagery—and by which, without unsheathing the sword, the great work of the peace of the world would be installed. "G. Garibaldi."

"Penquite Park, Cornwall, April 26."

Garibaldi Meeting.—After the conclusion of the Shakspeare ceremony on Saturday an indignation meeting was attempted to be held on Primrose Hill, to protest against the suspected action of the Government in inducing Garibaldi to leave the country; Mr. Beales, who had been appointed to take the chair, had hardly commenced his speech when Inspector Stokes, at the head of a strong body of police, interfered and stopped the proceedings. The prohibition occasioned some surprise and a good deal of irritation, and at one time there was some apprehension of a riot. The meeting however peaceably dispersed, after appointing a deputation to wait upon Sir G. Grey, and ask whether this interference was by his orders. On Wednesday the deputation had an interview with Sir G. Grey, who told them, as he had already stated in the House of Commons, that neither he nor Sir R. Mayne had given orders to interfere with the demonstration, but the police themselves had done so under an old order issued at the time of the Hyde Park riots. The Working Men's Committee met on the same evening and resolved to hold another meeting on the 7th of May, and to raise a subscription for the purpose of testing the legality of the order referred to, in the event of the meeting being again interfered with.

The Shakspeare Celebration. — Saturday being the tercentenary of Shakspeare's birth was observed as a memorial day all over England. In the metropolis the actors commenced the celebration with a midnight supper on the previous night, Mr. Webster, of the Adelphi, in the chair, at which the most noticeable incidents were the graces said on the occasion; that before the meal being, "May good digestion wait on appetite and health on both," and that after the meal being, "For what we have received may the Spirit of Shakspeare bless the meeting." In the course of the morning a large crowd, chiefly of working people, assembled on Primrose Hill, where Mr. Phelps, the tragedian, at the request of the committee, planted a young oak, the gift of her Majesty, which was watered by water brought from the river Avon. Mr. Phelps delivered a short address on the occasion, but the other part of the ceremonial, including the procession of working men, was a failure. In the evening there was a musical and dramatic *fête* at the Agricultural Hall, Islington. — The Lord Mayor presided last week at a meeting at the Mansion House, when Mr. Cowper and Mr. Tite, M.P., appeared as a deputation from the Shakspeare Committee to urge upon the citizens the proposition of erecting a monument to Shakspeare in the Green Park, Piccadilly, which should be worthy of the great dramatist as well as of the metropolis, and the art of the 19th century. Nearly 3000*l.* has already been subscribed for the work, and a committee of citizens was appointed to assist in raising the remainder of the sum required for the purpose.

Revision of the Liturgy.—The annual meeting of the Association for the Revision of the Liturgy was held on Thursday at Willis's Rooms, when the chairman, Lord Ebury, who is also a member of the Royal Commission recently appointed on this subject, made the important statement that, though he was not at liberty to divulge what was doing in that Commission, he might state that the days, and even the hours, of the Act of Uniformity were numbered. This statement was received by the meeting with loud cheers.

The Fire Brigade.—The Metropolitan Board of Works met on Wednesday in committee, to consider a proposal of Sir George Grey, that the London Fire Establishment should be put under their management. The terms were, that the present supply of fire engines should be handed over to them free of charge, that the Government would contribute a certain sum, and that the fire insurance companies had offered to bear 30 per cent. of the expense, provided that the aggregate sum demanded from them did not exceed 10,000*l.* An amendment was proposed and carried, that the contributions of the insurance companies should not be limited by any maximum sum, and with this modification the proposal of the Home Office was unanimously agreed to.

The Convict Devine.—The Sheriffs have received a communication from the Home Office, acquainting them that there does not appear any sufficient cause for interference with the execution of the capital sentence, the death of the murdered man having been the direct result of deadly violence committed in cold blood for

the purpose of robbery. He has made a full confession of his guilt.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, April 23, were 1384. The average number in the corresponding weeks of 10 years, 1854-63, corrected for increase of population, was 1311. The present return is therefore 73 above the average. During the week the births of 1033 boys and 967 girls, in all 2000 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 2032.

Provincial.

LIVERPOOL.—On Monday Messrs. Fletcher, Hull, & Stone, the solicitors for the defendants in the celebrated Alexandra case, formally received the Alexandra from her Majesty's collector of Customs at Liverpool, who received orders on Friday last to restore the ship to her owners. —An adjourned inquest was held in this town a few days since, on Mr. John Lingard, a Liverpool tradesman who had been poisoned by a mistake in making up a prescription. It appeared that on the 11th inst., having a cold in the eye, he obtained a prescription from Dr. Nottingham, which was made up at the shop of Messrs. Clay and Abraham, Bold Street. The medicine was a lotion and powder, and half-an-hour after taking the latter, Mr. Lingard expired in great agony, displaying all the symptoms of poisoning by strychnine. By the direction of the coroner, the contents of the stomach were analysed by Dr. Edwards, analytical chemist, who deposed that he found sufficient strychnine in the stomach to cause the death of a healthy adult. Mr. Whitton, assistant to Messrs. Clay and Abraham, stated that the prescription was made up by a young man named Poole. The greatest possible care was exercised in this branch of the business, the medicines which were poisonous and dangerous being kept in coloured bottles, and on different shelves. Mr. Poole had been two years in the employ, and had made up in that time between 50,000 and 60,000 prescriptions. The evidence, however, showed that the strychnine bottle was kept on the same shelf as the James's Powder, the medicine prescribed by Dr. Nottingham. The Jury returned a verdict that Mr. Lingard came to his death through the culpable negligence of Richard Poole in making up the medicine. In answer to the Coroner, the Foreman stated that they intended the verdict to be one of Manslaughter. They also made a presentment that there might be a better arrangement of the bottles than that at present adopted by Clay and Abraham. A few days afterwards the Coroner again sat for the purpose of accepting bail for Mr. Poole. He exhibited to the jury a number of Thouger's patent bottles, which had been constructed with the object of preventing accidental poisoning, and had been approved by Dr. Lankester. The ordinary dispensing label is surrounded by sandpaper, and a portion of the bottle is covered by the same material, which being felt by the dispenser or patient in handling the bottle at once shows that it contains some dangerous preparation. Mr. Bird, a chemist in this town, also exhibited his safety poison bottles and stoppers, which would seem to be still more effective than that of Mr. Thouger. The stopper has sharp, angular points, which cannot be removed without inflicting considerable pain upon the hand, unless the dispenser puts down both the dispensing glass and the medicine bottle. By this contrivance any one using the bottle would be so distinctly reminded that it contained poison that a mistake could not occur even in the dark.

STRATFORD ON AVON.—At the Shakspeare dinner on Saturday evening about 700 persons were present, and speeches were delivered by the Earl of Carlisle, who presided, the Archbishop of Dublin, the Earl of Shrewsbury, Lord Leigh, Lord Houghton, Lord Wrottesley, and other gentlemen. Addresses were presented to the Mayor from the German Hochstift, and telegrams of sympathy were received from Moscow, Kharkov, and other places. One peculiarity of the banquet was that the bill of fare was printed with Shakspearian mottos for the bread, the potatos, the ducks, the eels, the beer, and the champagne. On Sunday morning the Archbishop of Dublin preached a sermon on Shakspeare in the parish church to a congregation larger, perhaps, than was ever before assembled within its walls. The archbishop took as his text the first verse of the Epistle of the day—"Every good gift and every perfect gift is from above, and cometh down from the Father of Light." In the afternoon Dr. Wordsworth, the Bishop of St. Andrews, preached also on Shakspeare, taking for his text the 145th Psalm, 10th verse, "All Thy works praise Thee, O Lord, and Thy saints give thanks unto Thee." On Monday the musical performance, as arranged in the programme we published last week, took place with complete success, and on Tuesday the company paid a visit to Charlecote, the scene of the deer stealing, and the seat of Mr. Spencer Lucy, the descendant of Sir Thomas whom the dramatist has immortalised as Justice Shallow in "The Merry Wives of Windsor." On the subsequent days the entertainments were carried out in accordance with the programme already published.

WESTERHAM.—A woman, named Goodsall, was found dead in a lane near this town on Sunday fortnight under circumstances which leave no doubt that she had been criminally assaulted and then murdered. Two labourers, with whom she had been drinking late on the previous night, were apprehended on suspicion of being concerned in the murder, and on Tuesday they were fully committed by the magistrates for trial at the Assizes. The woman was a widow, and since her husband's death, which occurred a few months ago, she is said to have lead a dissipated life.

WINDSOR.—In the course of last summer, Herne's Oak, understood to be the tree referred to by Shakespeare in the "Merry Wives of Windsor," was still one of the chief objects of interest in Windsor Park. It had ceased to put out leaves for more than half a century, and its sapless trunk was hollowed out by gradual decay to a height of 10 or 12 feet from the ground. On a quiet evening in August last the crumbling support gave way, and the heavy upper branches fell with a crash to the ground. Her Majesty gave directions that all the solid timber they contained should be preserved, and of it various articles have since been made as relics of the venerable tree, famous even in the time of Queen Elizabeth for its age and size. Among the most interesting of the objects formed of the wood are two busts of Shakespeare, recently carved by Mr. Perry, of North Audley Street; one for the Queen and the other for the Prince of Wales. The artist has adopted the costume of the Stratford bust, but has also made use of the portraits, so as to represent what Shakespeare might have been when from 40 to 45 years of age.

YORK.—A fatal gun accident occurred at the village of Acomb, near this city, on Friday week. Charles Ireland, an assistant at the private lunatic asylum of Mr. S. Nelson, had left a loaded gun in one of the passages of the house, and Harriet Suter, a young woman, the cook at the establishment, took up the gun, and as she was carrying it into the kitchen let it fall with the butt-end on the floor. The gun immediately went off and shot Nelson in the face, causing almost immediate death. The girl was not aware that the gun was loaded.

Ireland.

EXECUTION AT WATERFORD.—The execution of Thomas Walsh for the murder of Thomas Conolly took place on the 14th inst. at Waterford, in the presence of a great crowd of persons, consisting mostly of women, girls, and boys, few men being present. There was little sympathy for the prisoner, whose crime was of a revolting character. He had chopped the body of his victim into small pieces and thrown them into a bog, and the circumstances were rendered more shocking by the fact that the only direct evidence against the culprit was that of his own daughter, who had been an unwilling witness of the whole proceeding, and believing herself to be in danger, saw no means of escape except by giving evidence against her father. The condemned man on being led to the scaffold looked pale and worn, trembled violently, and could scarcely stand. The executioner did his business expeditiously, and was evidently no young hand, but his face was blackened, so that it was impossible to recognise him.

Scotland.

TRIALS FOR MURDER AT GLASGOW.—On Saturday, at the Glasgow Circuit Court, Lord Deas presiding, an Irishman, named John Riley, was charged with murder. It appeared that on the night of the 17th December, on the Biggar Road, in the parish of Bothwell, the prisoner assaulted Nancy Stevens, or Laffy, wife of Thomas Laffy, collier, residing at Legbrannock, in the parish of Bothwell, and with a stake or stone struck her on the head, &c., threw her to the ground, and kicked her with his feet. He then thrust a piece of wood several times into her person. She died in consequence of her injuries. The prisoner in a firm voice pleaded Not Guilty. After a trial which lasted from 10 in the forenoon till about 10 minutes past 1 on Sunday morning, the jury by a majority returned a verdict of Guilty. Lord Deas sentenced him to *Death*, the execution to take place on the 16th May.—At the same court on Saturday, Lord Neaves presiding, a joiner named Peter Blair was charged with murder. On the 23d February, in Maitland Street, Cowcaddens, he assaulted Jessie Noble, or Gordon, or Blair, then residing with him in Dobbie's Loan, and with a knife stabbed her on the left side of her neck and on the right shoulder; she was mortally wounded, and soon after died. After a long trial the jury returned a verdict unanimously finding the prisoner guilty of culpable homicide, and he was sentenced to 15 years' penal servitude.

Law.

COURT OF ERROR: *The Falmouth Lunacy Case.*—It may be remembered that a man called Porter, of Hayle, near Falmouth, was convicted at the last assizes of cruel neglect of his lunatic brother, and put in a plea that the statute under which he was convicted applied only to those who were paid for keeping lunatics, and not to persons like him who kept their near relations without fee or reward. The case came before the Court of Error on Saturday, when the Court decided that this was exactly a case to which the statute applied, and they confirmed the judgment accordingly.

COURT OF COMMON PLEAS.—*Destruction of a Slaver.*—Chief Justice Erle gave judgment on a case which was argued in Hilary Term on a petition of right against the Crown for the destruction of a vessel on the African coast by Captain Scott Douglas, of her Majesty's ship Espoir, on the ground (which was denied) of the vessel being a slaver. The Court held that the Crown was not liable, because the suppression of the slave trade was not imposed by the Crown, but by Act of Parliament; because, if Captain Douglas had made a mistake, the responsibility lay with him and not with the Crown that appointed him to his ship; and because, though there were many instances of a petition of right being issued in cases of property wrongfully taken and withheld by the Crown, there was no precedent for such a proceeding in the case of a supposed wrong done by the Crown.

COURT OF PROBATE: *The Oratory.*—The dispute between Mr. Smee and the Fathers of the Oratory, respecting the property of the late Mr. Hutchinson, which has already engaged the attention of the House of Commons, has been brought before the Court of Probate. Mr. Hutchinson, who was Mr. Smee's brother-in-law, became a Roman Catholic some years ago, joining the Fathers of the Oratory, and passing over his family, bequeathed his property to the Rev. Mr. Knox, a trustee for the Oratory. Mr. Smee, for the family, disputes the will, as having been obtained by undue influence. On Saturday several witnesses were examined, and the case of the Fathers of the Oratory was closed. The Court defers judgment.

COURT OF QUEEN'S BENCH: *Seizure of Confederate Steamer.*—A few weeks ago three men, who represented themselves to be in the Confederate Service, were taken into custody at Liverpool on a charge of piratically seizing a United States ship, in which they took passage as peaceable voyagers. Their arrest was effected at the instance of the American Minister for the purpose of their being given up and sent to America for trial, under the provisions of the Extradition Treaty. On Monday Mr. Edward James moved the Court for a writ of *habeas corpus* to bring the men into Court. A rule *nisi* for a writ was granted, Mr. Justice Willes at the same time saying that, as the case appeared in the papers before the Court, it looked very like a case of piracy. *The Rappahannock.*—On the same day Mr. Justice Crompton charged the Middlesex Grand Jury in the case of *The Queen* v. *Rumball*, who was charged with having taken an active part in the equipment, &c. of the Vixen, otherwise the Scylla, and afterwards the Rappahannock, at Sheerness. This vessel, having been sold off by the Admiralty, is alleged to have been illegally refitted on behalf of the Confederate Government by the defendant and some others of our dockyard officials. Mr. Justice Crompton, in his charge to the grand jury, which has now to try the case, said that although he was among those members of the Exchequer Chamber who disclaimed any appellate jurisdiction, yet had he been free to review the judgment of the Court below, he should have been bound to reverse it. On the great question of equipment he sided with Mr. Baron Channell, and held that any additions to the structure of a ship which makes her more available for warlike purposes is within the provisions of the Foreign Enlistment Act. On the other hand, he directed the jury that the provisions against engaging persons to enlist in the service of a foreign Power would not be violated unless the offences were committed within the United Kingdom, and that, therefore, Mr. Rumball would not be guilty under the first section merely because he might have assisted in manning the Rappahannock at Calais. The grand jury were then conducted to their room to arrange upon what day they would sit and hear the evidence.

Railways.

ACCIDENT ON THE HULL AND SCARBOROUGH.—A serious accident occurred a few days since to a train near Driffield on this line. The carriage next the engine, in which were about 40 passengers, got off the rails, and the jolting was so excessive and the apprehension of a crash so imminent, that it was difficult to restrain the passengers from jumping out. Some of them indeed did so, and were seriously injured. Fortunately the attention of the driver was called to the circumstance, and the train was stopped before worse happened.

Sporting.

NEWMARKET FIRST SPRING MEETING.

MONDAY.—*Sweeps.*—Mr. Savile's Privateer beat Isca. *Hopcap Plate.*—Captain Christie's Gordian Knot beat Redcap, Principal, Algarsife, and 9 others. *Sweeps.*—Mr. Southby's beat Puritan and Rialto. *Match.*—Lord Glasgow's f. Kromeski. *Maiden Plate.*—Baron Rothschild's Zephyr Mr. Joseph Dawson's bl f, Siberia, Auditor, and 8 others. The *Prince of Wales's Stakes.*—Captain Machell's Bacchus Suburban, Vivid, and 21 others. *Plate.*—Mr. Naylor's Fa beat Dispute, The Hare, and Wee Aggie. *Free Handicap Sw* —Mr. Watt's Miss Armstrong walked over. *Free Ha Sweeps.*—Lord Stamford's Revolver beat The Knave and boro.

TUESDAY.—The meeting of to-day was honoured by presence of the Prince of Wales and the Duke of bridge, and the company was in all respects the brilliant and the largest ever congregated on the He *Sweeps.*—Mr. Hughes's The Lord in Waiting beat Fe and Lord Ailesbury's c. *Handicap Sweeps.*—Baron child's Breeze beat Stockowner, Poetess, and 3 oth *Sweeps.*—Count F. de Lagrange's Saute Rosseau beat tionist, Cripplegate, Vesta, Mountain Maid, and Mr W g. The *Two Thousand Guinea Stakes.*—Lord Glasgow's Peel beat Paris, Historian, Hollyfox, and 9 others *Coffee Room Stakes.*—Mr. Bowes's Hark Forward beat *Handicap Plate.*—Count Batthyany's Actæon beat Baron child's f, Waveney, Lord of Linne, and Ramrod. Lord Westmoreland's Cœur de Lion beat Royston, Atlas Musk. *Plate.*—Mr. Gilby's Yamuna walked over.

WEDNESDAY.—The *Prince of Wales's Stakes.*—Baron child's King of the Vale beat Reserve, Lady Superb Cistercian, and Trojanus. *Handicap Plate.*—Mr. W. E. Atlas beat Disappointment, Moulsey, and 11 others. Captain Christie's The Warrior beat Procella, Isca, and the Old Block. *Sweeps.*—Mr. Bowes's War Dance beat The *Newmarket Two-year-old Plate.*—Mr. Saville's beat Shrapnell, Indigestion, and 16 others. *Plate.*—Mr field's Caroline beat Algarsife. *Sweeps.*—Mr. Gilby's beat Saute Ruisseau, The Knout, and 4 others. Longfield's Blarney beat Argonaut. *Match.*—Duke Albans' Trapeze beat Star. *Renewal of the Sweepstake.*—Mr Bowes's Baragah walked over.

THURSDAY.—*Handicap Sweeps.*—Mr. Savile's beat Evelina and Coimbra. *Plate of* 100.—Count F. Lagrange's Vivid beat Wingrave, Bathilde, and 6 *Handicap Sweeps.*—Mr. H. Joice's Antoinette beat Evelina, and 6 others. The *One Thousand Guinea Stakes.*—Rothschild's Tomato beat Breeze, Toi-toi, and 12 *Match.*—Marquis of Hastings's Attraction beat Cœur de *Sweeps.*—Lord Westmoreland's Usher beat Lady Practitioner, and 2 others. *Handicap Plate.*—Lord

Despair beat Jessie, Roseneath, and 4 others. *Plate.*—Mr. Jos. Dawson's f. beat Medicis, and brother to Guerilla.

FRIDAY (by Electric Telegraph).—*Sweeps* of 100 sovs.—Wingrave beat Stradella, and Isoline. *Newmarket Stakes.*—Claremont beat The Comet, and 2 others. *Match.*—Young Rapid received forfeit from Birkenhead. *Free Handicap.*—Actæon beat Touch-and-go. 100*l*. *Handicap Plate.*—Principal beat Oberon, Redcap, and 4 others. *Sweeps* of 10 sovs.—Le Mexicain beat Whiskey and 2 others. *Handicap* 10 sovs.—Quarantine beat Dolphin and 3 others. *Sweeps* 10 sovs.—Cœur de Lion beat Royston.

Miscellaneous.

A NEW GUN.—The Earl of Derby referred last week in the House of Lords to a new principle of gunnery, recently invented by Mr. James Mackay, timber merchant of Liverpool, which promises to be a dangerous rival to all systems extant. The principle in all rifled cannon appears to have been to allow as little windage as possible, and to make the shot fit the grooves of the piece, taking from them a rotation in its flight. Mr. Mackay, on the other hand, has conceived the plan of having the grooves so arranged that, while the shot fits closely to their outer edge, the grooves are left open for windage. By this arrangement the gas has to travel some feet further than the shot, and in doing this imparts a rapid and perfect "spin" to it. The shots are of cylindrical form, perfectly smooth, with conical heads, and cupped at the other end in proportion, so that each shot is perfectly balanced from the centre of its length. Mr. Mackay in his patent also claims a peculiarity in the wadding, which is of sawdust, by which at the movement of the first ignition of the powder the elasticity of the wadding moves forward the shot slightly; the effect is that the whole of the powder is burnt, and the shock on the breech of the gun considerably lessened. Mr. Mackay has had a gun made upon this principle by the Mersey Steel and Iron Works Company. It is of wrought iron, weighs 9 tons, has a bore of 8.12 inches, and in other respects corresponds with the general features of the ordinary 68-pounder. There are 12 grooves, and as the shot do not enter these groves, it allows of a much sharper twist than in ordinary rifled guns. The velocity has been found to be 1610 feet a second; the utmost range has not yet been tested. Messrs. Laird & Company, of Birkenhead, are now building an armour-plated vessel called the Agincourt, for the Government, and it was agreed to test the gun against a section of the side of that vessel. It was intended to make the trial last Saturday, but unfavourable weather prevented its being proceeded with. On Tuesday morning, however, the weather was fine and clear, and the gun was fired against the target, resulting in a complete triumph of the gun. The target consisted of an outer plate, 7 feet square and 5½ inches thick, of rolled iron; next came 9 inches of teak, then an inner plate or skin three-fourths of an inch thick, then angle iron and ribbing, and finally a backing up with timber balks and supports 18 inches thick. The plates were stated on competent authority to be the best that can be made of rolled iron. Messrs. Laird supplied the whole, and expressed confidence in the strength of the target. The gun was fired in the presence of Mr. James Mackay, Mr. D. Mackay, Mr. Bouck, and other gentlemen, shortly after 8 o'clock in the morning. The gun was charged with 30lb. of powder and a cast steel shot weighing 167 lb., made by Messrs. Thomas Firth and Son, of Sheffield. The range was 200 yards. The shot struck the target with a dull thud a little below the bull's eye on the right, and in the very strongest part, where it was backed up by the rib of the ship's side, the angle iron and the timber balk. At the point of impact a perfectly circular hole was cut. The shot then powdered the teak, passed through the inner skin and the angle-iron, shattered the timber balk into fragments, and was picked up 82 yards beyond the target, together with a circular piece of the iron armour, about 80 lb. weight, it had carried with it through the back supports. The sand showed that it had spun to the last. About 70 fragments of iron, bolts, and fragments of the inner skin and angle-iron were picked up 100 yards from the target. The shot when found was reduced from 13 inches to 11 inches in length, and increased about an inch and a half in diameter at the end which struck the target. The other end was uninjured. The whole target was forced back about six inches, and so much deranged that more shots were not fired. Sir John Jones, Captain Fisher, R.N.; Captain White, R.N.; Mr. Nicholson (civil engineer), Captain Inman, and many other gentlemen, inspected the gun and targets during the morning; and all expressed the greatest astonishment at the performances of the gun. The shot fired and the portions of the target torn away have since been exhibited at the Liverpool Exchange.

Obituary.

LIEUT.-COLONEL BURRE died a few days since at Lymington, in his 85th year. In early life he had seen some hard service. He was employed in 1800 with an Austrian *corps d'armée*, and was frequently engaged before the enemy, especially at Kloster Eberach. In 1801 he served in the Egyptian campaign, and was engaged on the 17th and 21st August in driving the enemy into Alexandria. In 1807 he was appointed aide-de-camp to General Sir Harry Burrard, whom he accompanied on the expedition to the Baltic, and was frequently engaged before Copenhagen on outpost duties, and was present at its siege and capture. In the following year he served in Portugal, and was present with the 71st Regiment at the battles of Roleia and Vimiera. In 1809 he was employed as Deputy-Assistant Adjutant-General with the Walcheren expedition, and was present at the siege and taking of Flushing and Ter Vere. In 1811 he embarked with the 71st for Portugal, and remained with the regiment in the Peninsula until 1813. During this period he was with the covering division before Badajoz in 1811 and 1812; at Arroyo de Moline and Almaraz. He received the war medal with three clasps for Egypt, Roleia, and Vimiera.

MR. KERSHAW, M.P. for Stockport, died on Wednesday at Streatham, in his 60th year. He was the head of the firm of Kershaw, Sidebottom, and Co., cotton spinners, manufacturers, and calico printers in Portland Street, Manchester. He was born in 1795, and was one of the successful men of the day. He started in life as a warehouse lad, but showed such eminent business qualities that at an early age he was made a partner in the mercantile firm of Lees, Millington, and Cullender, of which ultimately he became the leading partner. It was not till some years after that he became a spinner and manufacturer. As a Liberal politician he took part in most of the stirring events in Manchester since 1830, including the Reform and the Anti-Corn Law League agitations, and was elected Mayor of that city in 1843, holding the office for two years. He became a candidate for Stockport with Mr. Cobden in July, 1847, but was defeated. In December of the same year, however, on Mr. Cobden vacating his seat for that of the West Riding, he stood a second contest, and was elected. He continued to hold the seat till his death. He was held in high respect both in Stockport and Manchester. He lost his only son some years ago, but several daughters survive him.

MR. FREDERICK DOVETON ORME, C.B., Chargé d'Affaires and Consul-General to the Republic of Venezuela, died on Sunday last at his lodgings in town. He had been in the diplomatic service upwards of 20 years, his first appointment as attaché at Munich taking place in 1841. He was subsequently attaché at Frankfort, and acted there several times as Chargé d'Affaires in the temporary absence of the Minister; was afterwards appointed Secretary of Legation at Copenhagen in 1852, and was Chargé d'Affaires at the Danish Court for several months in 1855 and 1856. In 1858 he was appointed Chargé d'Affaires and Consul-General to the Republic of Bolivia, and in the following year was accredited as such to the Republic of Venezuela in place of the Hon. Richard Bingham. In recognition of his civil services he was made a Companion of the Order of the Bath in 1859.

MR. THOMAS MAUDSLAY, head of the well-known firm of Maudslay, Sons, and Field, engineers, died a few days since, in his 72d year. Like many other eminent men, he was the architect of his own fortune; beginning life in an humble capacity, he died the wealthy owner of Banstead Park, the head of a firm almost as much identified with the banks of the Neva as with the banks of the Thames, a firm employing more than 1000 hands. Mr. Maudslay was chiefly, though not exclusively, a naval engineer. For the last quarter of a century and more he has constructed the engines for some of the largest and some of the smallest vessels in her Majesty's navy—from line-of-battle ships to gun-boats. His firm supplied the iron-cased Royal Oak (800 horse-power), the Marlborough (800), the Revenge (800), the Gibraltar (800), the Edgar (600), the Trafalgar (500), the Majestic (400), the screw-frigate Ariadne (800), the Immortalité and Topaz (600 each), the Aurora (400), &c.; besides corvettes, screw-sloops, gun boats, paddle-sloops, gun-vessels, and troop-ships innumerable.

BIRTHS.—On the 24th inst, at Coleorton Hall, Lady BEAUMONT, of a son—22d inst, at Blithfield, Staffordshire, the Lady BAGOT, of a son—20th inst, at Combe, Woodstock, Lady LOUISA SPENCER, of a son—23d inst, at Hamilton Lodge, Kensington Gore, the Hon. Lady WILLIAMSON, of a daughter—18th inst, at Wentworth Castle, Yorkshire, Lady HARRIET WENTWORTH, of a daughter—19th inst, at Dawson Street, Dublin, the Hon. Mrs. HANDCOCK, of a son.

MARRIAGES.—On the 26th inst, at St. George's, Hanover Square, Viscount POWERSCOURT, to the Lady JULIA COKE, eldest daughter of the Earl and Countess of LEICESTER—21st inst, at Morley Church, near Derby, the Hon. WILLIAM MONK JERVIS, brother of Viscount St. Vincent, to HARRIET WILMOT, daughter of R. S. SITWELL, Esq. of Morley House, near Derby—21st inst. at Stratton, JOHN BONHAM-CARTER, Esq., M.P., to MARY, eldest daughter of the Right Hon. Sir FRANCIS BARING, Bart, M.P.—21st inst, at St. James's Church, Paddington, the Hon. Captain WILLIAM LE POER TRENCH, third son of the Earl of Clancarty, to HARRIET MARIA GEORGINA, only child of Sir WILLIAM and Lady MARTINS—15th ult. at the Cathedral, Calcutta, HENRY R. MADOCKS, Esq., B.C.S., to ANNE AMELIA, second daughter of Major-General Sir ROBERT NAPIER, K.C.B.—21st inst, at the parish church, Tor Motram, Devon, THOMAS HOLDSWORTH, second surviving son of the late Sir R. W. NEWMAN, Bart., of Mamhead, to ELIZABETH LAURA, the eldest daughter of MARTIN TUCKER SMITH, Esq., M.P.—21st inst, at St. Paul's, Knightsbridge, ERNEST CLAY, Esq., Second Secretary of her Majesty's Embassy at Paris, and eldest son of James Clay, Esq, M.P., to GERTRUDE, only child of HENRY KER SEYMER, Esq.—21st inst, at St. George's, Hanover Square, THOMAS LONGTON LEFROY, Esq, son of Captain Lefroy, of Cardington, Kildare, and nephew of the Lord Chief Justice of the Queen's Bench in Ireland, to ELIZABETH, eldest daughter of JAMES COTTINGHAM, Esq, of Dublin, and relict of Charles Gordon Ashley, Esq., of Butcombe Court, Somerset—26th inst, at Melbury, Sampford, the Rev. CHRISTIAN FREDERICK NEWELL, incumbent of Broadstairs, Kent, to SOPHIA MARIA, only child of the late Brigadier-General THOMAS FOX STRANGWAYS, R.H.A., and Lady Fox Strangways.

DEATHS.—On the 25th inst, 2, Mansfield Street, Portland Place, the Lady JULIA BROWNE, the only child of the Marquis of Sligo—24th inst, very suddenly, at Martyr Worthy rectory, Hants, LUCY SARAH ANN, wife of the Rev. ALFRED BISHOP, only daughter of the late Sir James and the Right Hon. the Lady Frances Wedderburn—26th inst, in Holles Street, Cavendish Square, MARY, relict of JOHN BOURNE, Esq., of Dalby, Lincolnshire, and sister of the late Right Hon. Charles Tennyson d'Eyncourt, of Bayons Manor, aged 86—21st, at Park Cottage, East Sheen, WALTER BARTRAM, second son of the Hon. ADOLPHUS LIDDELD, aged 7—18th inst, at 25, Green Park, Bath, MARY ANNE, only daughter of the late Colonel Sir PATRICK DOHERTY, C.B, K.C.H., aged 78—18th inst, at 6, Wimpole Street, Lady SCUDAMORE, aged 80—24th inst, at 19, Upper Seymour Street, Portman Square, FREDERICK DOVETON ORME, Esq, C.B., her Majesty's Chargé d'Affaires and Consul-General to the Republic of Venezuela, aged 53—21st inst, at 7, Devonshire Terrace, Hyde Park, CHARLES W. RICHARDSON, Esq., late Deputy Commissioner in Scinde, aged 57—22d inst, at Bayswater, Lieut.-Col. JOHN HANCOCK, retired Bombay Army, aged 81—24th inst., at Bromley Hill, Kent, EMILY, wife of Colonel LONG—24th inst, at the Rectory, Eaton Bishop, Hereford, MARY, widow of Lieut.-Colonel JOHN CARROLL, aged 84.

Markets.

COVENT GARDEN, April 30.

Outdoor produce continues to be well supplied. English Grapes of this year's growth and forced Strawberries are sufficient for the demand. Of Pine Apples there is also a better supply. Apples, though scarce, may still be obtained; Oranges are getting scarce. Continental arrivals continue heavy; among them are Lettuces, Endive, Carrots, Artichokes, Radishes, Asparagus, Kidney Potatos, and Peas. Out-door grown Asparagus realises from 3s. to 6s. a bundle. Flowers chiefly consist of Tulips, Cinerarias, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Oranges, per 100, 4s to 10s
Grapes, new, per lb., 10s to 15s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Almonds, do., 18s
Strawberries, per. oz., 9d to 1s 6d	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 10s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Rhubarb, p. bundle, 4d to 1s
Cauliflowers, each, 4d to 8d	Turnips, p. bunch, 4d to 6d
Asparagus, p. bundle, 3s to 6s	Cucumbers, each, 1s to 2s
French Beans, p. 100, 2s to 3s	Beet, per doz., 1s 6d to 2s
Green Peas, p. ½ sieve, 20s	Shallots, per lb., 10d
Soakale, per punn., 2s to 3s	Celery, per bundle, 1s 6d to 2s
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 4d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 1s to 2s 6d	Horse Radish, p. bunch, 1s to 4s
Carrots, do., 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
— young, p. bunch, 3s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

COAL MARKET.—April 27.

Hastings Hartley, 17s. 3d.; Holywell Main, 17s. 9d.; North Pelton Gas, 12s. 9d.; Walls End Harton, 16s. 9d.; Eden Main, 17s. 6d.; Walls End Braddylls Hetton, 18s.; Walls End Haswell, 19s.; Walls End Hetton, 19s.; Walls End South Hetton, 19s.; Walls End Cassop, 18s.; Walls End Caradoc, 18s. 6d.; Walls End Hartlepool, 18s. 9d.; Walls End Heugh Hall, 18s.; Walls End Kelloe, 17s 9d.; Walls End South Hartlepool, 17s. 6d.; Walls End South Kelloe, 18s.; Anthracite, 22s.—Ships at market, 77.

BRITISH WOOLS.—LONDON, April 28.

Our demand is becoming more general than it has been for some time, and nearly all descriptions of long and short wool have been in request at full quotations; long wool, however, still keeping its proud pre-eminence over all other qualities.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	9	to	1	10	Leicest. Wethers	2	0	to	..	
Half-bred ditto	2	2	—	2	4	Ditto Hoggs	2	1	—	2	3
Down Ewes	1	8	—	1	9	Combing Skins	1	6	—	1	11
Kent Fleeces	2	0	—	2	1	Flannel Wool	1	4	—	1	6
						Blanket ditto	0	9	—	1	0

POTATOS.—SOUTHWARK, Monday, April 25.

During the past week the arrivals both coastwise and by rail have been far in excess of the demand, which has fallen very much in consequence of very hot bright sunshine. The trade is in a very languid state. The quotations are:—Yorkshire Flukes, 50s. to 60s. per ton; do. Regents, 40s. to 60s.; Seedlings, 40s. to 50s.; do. Rocks, 40s. to 50s.; Dunbar Regents, 50s. to 60s; Kent and Essex Regents, 50s. to 60s.; North Berwick Regents, 45s. to 50s.; Perth, Forfar, and Fife Regents, 35s. to 45s.; do. do. Rocks, 30s. to 40s.; do. do. Reds, 30s. to 40s.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, April 28.

Prime Meadow Hay	80s	to 85s	Clover, old	95s to 115s
Superior do.	90	95	New Clover	— —
Inferior do.	60	70	Do. second cut	90 105
New do.	—	—	Straw	26 32
Rowen	—	—	HARVEY & RASTON.	

WHITECHAPEL, THURSDAY, April 28.

Fine Meadow Hay	84s	to 88s	Prime 1st cut Clover	110s to 114s
Inferior do.	75	80	Inferior do. do.	100 105
Prime New Hay	—	—	New 1st cut do.	— —
Inferior	—	—	Prime 2d cut do.	105 110
Straw	27	30	Inferior do.	— —

HOPS.—BOROUGH MARKET, FRIDAY, April 29.

Messrs. Pattenden & Smith report a better demand for both English and foreign, with a great scarcity of fine descriptions, which command rather higher prices.

NEWGATE.—April 29.

Best Fresh Butter .. .. 15s. per dozen lbs.
Second do. do. .. .. 13s. "
Pork, 4s. 4d. to 4s. 8d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, April 25.

We have a few more Beasts than on Monday last. The demand is scarcely as good, and there is difficulty in realising that day's quotations throughout. Sheep are more plentiful, but there is an active trade for them; late prices are fully maintained, and in some instances exceeded. Trade is rather better for choicest Calves. Lambs are selling about the same as on Thursday. From Germany and Holland there are 880 Beasts, 2650 Sheep, and 142 Calves; from Scotland, 400 Beasts; from Ireland, 80; and 2710 from Norfolk and Suffolk.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	6	to 4	8	Best Long-wools	..	—	..	
Best Short-horns	4	4	— 4	6	Do. Shorn	4	4	— 4	8
2d quality Beasts	3	0	— 3	10	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	3	6	— 4	0
Do. Shorn	4	8	— 4	10	Lambs	7	0	— 8	0
					Calves	4	0	— 5	10
					Pigs	3	4	— 4	8

Beasts, 4360; Sheep and Lambs, 22,140; Calves, 157; Pigs, 470

THURSDAY, April 28.

The supply of Beasts is nearly the same as on Thursday last, but we have a more active trade, and prices for best quality are fully 2d. per stone better. The number of sheep is about the same, for which the trade is much more cheerful at higher prices. Trade for Veal and Lambs remains about the same. From Germany and Holland there are 360 Beasts, 530 Sheep, and 352 Calves; Milch Cows, 80.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	8	to 4	10	Best Long-wools	..	—	..	
Best Short-horns	4	6	— 4	8	Do. Shorn	4	6	— 4	10
2d quality Beasts	3	0	— 3	10	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	3	6	— 4	0
Do. Shorn	4	10	— 5	0	Lambs	7	0	— 8	0
					Calves	4	0	— 5	10
					Pigs	3	4	— 4	8

Beasts, 990; Sheep and Lambs, 6340; Calves, 440; Pigs, 190.

MARK LANE.—MONDAY, April 25.

The supply of Wheat from Essex to this morning's market was small, from Kent fair, and the greater part was cleared at the prices of this day se'nnight. The attendance was better than of late; nevertheless business in foreign Wheat was quite of a retail character at our quotations. Barley was a slow sale. Beans were firm, and Peas unaltered in value

The Oat trade was steady at last week's rates. For Flour there was scarcely any demand, and prices were unaltered.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	42—48	Red	40—48
— — fine selected runs..ditto	44—52	Red	40—48
— — Talavera	48—56		
— Norfolk	—	Red	—
— Foreign	36—52		
BARLEY, grind. & dist., 25s to 27s..Chev.	34—38	Malting ..	29—33
— Foreign..grinding and distilling	22—26	Malting ..	27—31
OATS, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	17—22	Feed	15—20
RYE	30—32	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....27s to 36s...Tick	30—33	Harrow ..	30—33
— Pigeon .... 32s to 40s..Winds.	—	Longpod	—
— Foreign .....Small	36—42	Egyptian	30—32
PEAS, White, Essex and Kent..Boilers	32—33	Suffolk ..	33—34
— Maple .... 30s to 34s .... Grey	28—30	Foreign ..	31—33
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered..per sack	35—40		
— 2d do ..... ditto	28—34	Country..	28—34
— Foreign ..... per barrel	15—25	Per sack	32—40

FRIDAY, April 29

The weather on the 23d was very fine and warm, but has since been cold, the last few days dull. Holders both of English and Foreign Wheat having refused to submit to any further concession in prices, the trade has been firmer during the week, and although business, particularly in foreign Wheat, is still limited, fully former rates have been generally realised. The continuance of cold dry weather is beginning to affect the value of Spring Corn, and previous prices have been fully supported. Flour continues to be neglected, excepting some particular brands which are inquired after for exportation. Since Friday last 17 vessels have been reported off the coast. The floating trade has continued very quiet; prices of all descriptions of grain must be quoted nominally unaltered; Linseed is firm, and Cottonseed and Rapeseed are in good demand at extreme rates. Paris, April 28.—Flour: Holders ask extreme rates, but business has been restricted. The six marks for delivery this month are quoted equal to 34s. per 280 lbs. The present stock of Flour is estimated at 16,270 cwt. Wheat is a slow sale, and prices unaltered. The arrivals of English grain and foreign Barley during the week have been small, of foreign Wheat moderate, of Oats fair. The market was but thinly attended, and very little business transacted; quotations of all descriptions of grain remain nominally the same as on Monday.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	720 qrs.	530 qrs.	810 qrs.	1540 sks.
Irish	—	—	1160	— ,,
				20 ,,
Foreign ..	9010 ,,	550	27,030 ,,	— brls

LIVERPOOL, April 26.—Notwithstanding there was only a small attendance of millers and dealers at this day's market, Wheat has exhibited great firmness on the part of holders, but we cannot notice any improvement in demand as yet. Flour is still very unsaleable, and prices irregular. Indian Corn in fair consumptive request at steady rates. Oats have advanced ½d. to 1d. per bushel, and Oatmeal is also the turn dearer. Beans are held for 6d. per qr. more money. Peas and Barley unchanged. Market on the whole firm, but lacking activity.

FRIDAY, April 29.—The market was moderately attended. Wheat a slow sale, and nominally unaltered. Nothing doing in Flour. Indian Corn dull; mixed, 28s. Egyptian Beans steady. Oats and Oatmeal dull.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
March 19	39s 9d	31s 4d	19s 2d	32s 4d	32s 10d	32s 10d
— 26	39 11	30 10	19 0	28 0	32 8	33 3
April 2	40 2	31 0	19 2	28 5	32 6	32 11
— 9	40 1	30 9	19 11	29 0	32 8	32 8
— 16	40 1	30 10	18 3	27 8	33 0	31 11
— 23	39 7	31 1	19 9	29 0	32 7	32 1
Agg. Aver.	39 11	31 0	19 2	29 1	32 8	32 7

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Mar. 19.	Mar. 26.	April 2.	April 9.	April 16.	April 23.
40s 2d	..	..		..	..	..
40 1	..	..	..			..
39 11	..		..	..	..	..
39 9		..	..	..	..	..
39 7	..	..	..	..	..	
..	..	..	..	..	..	..

WANTED, by a gentleman, within 30 miles of London, a thoroughly competent and experienced person as STEWARD and BAILIFF. He must have lived in that capacity before, and have the highest testimonials for integrity, zeal, and abilities. A practical knowledge of the Measurement of Timber, Management of Underwood, Building, Repairs, indispensable. —Address, stating full particulars, with amount of salary required, to A. B., Portland Club, Oxford Street, W.C.

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The Gardeners' Chronicle Newspaper.

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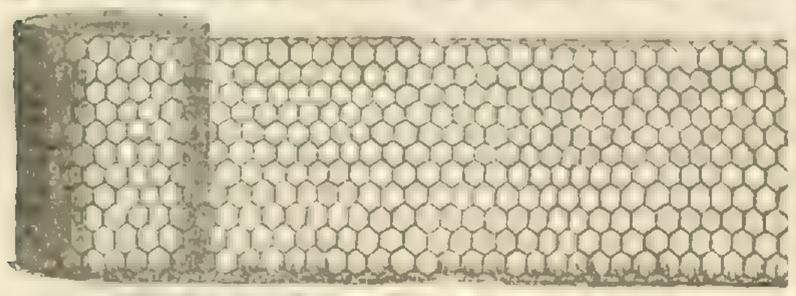

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		s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
2½ in.	Hares, Dogs, Poultry ..	0 3	0 4	0 3½	0 5	0 4½	0 6	0 5½	0 7
2 in.	Game or Poultry Netting ..	0 3½	0 4¼	0 4	0 5	0 5	0 6½	0 6½	0 8
1½ in.	Small Rabbits, Hares, &c ..	0 4	0 4¾	0 4¾	0 6	0 5½	0 7	0 7	0 9
1½ in.	Smallest Rabbits	0 5	0 6	0 5¾	0 7	0 7	0 9	0 9	0 11
1 in.	Pheasantries, &c	0 9	0 11	10½	1 1½	1 8	1 6	1 9	2 0
¾ in.	Aviaries, &c. ..	1 0	1 3	1 3	1 6	1 6	1 9	..	..

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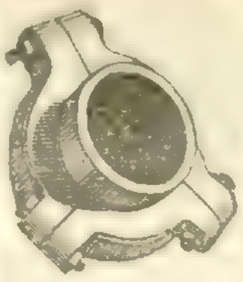

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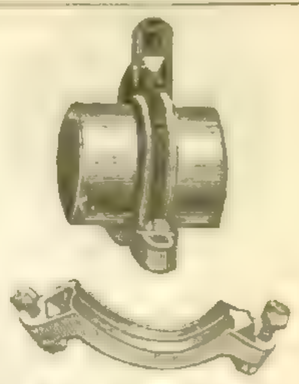

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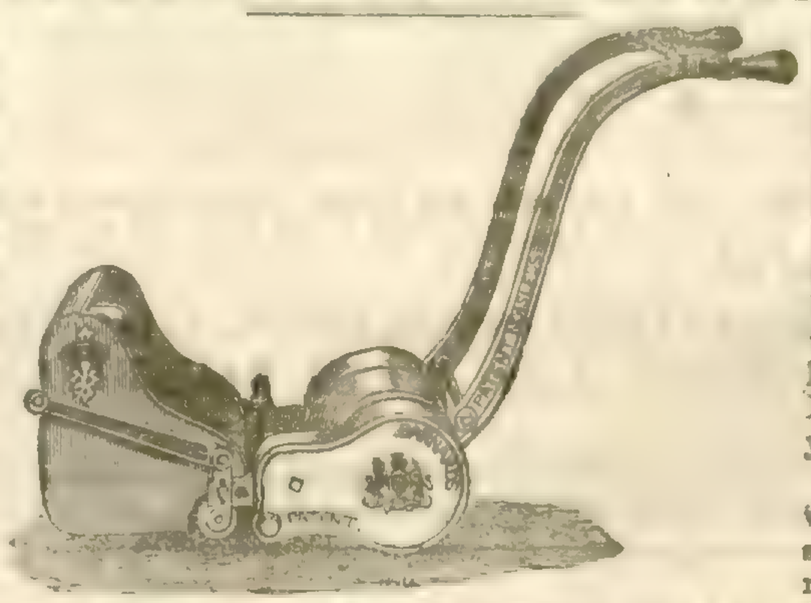

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To Cut 22 inches.	Suitable for Two Men	7	10	0

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To Cut 22 inches	£8	15	0
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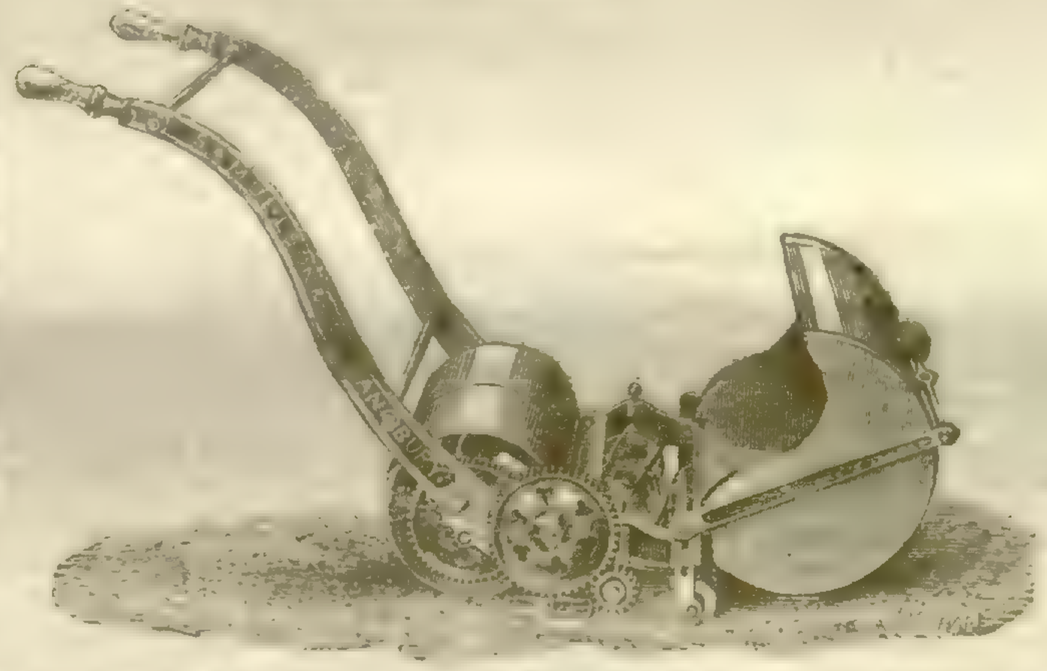

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V. Shakspeare and his Sonnets.
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News of the Week.

In the House of Lords on Friday the Earl of Derby moved for the official correspondence between the Government and Messrs. Laird in reference to the steam rams, contending that Messrs. Laird had behaved throughout with the utmost candour and frankness, whilst the conduct of the Government had been arbitrary, vexatious, and illegal. Earl Russell said that it was his belief that Messrs. Laird had done all in their power to embroil this country in war with the Federal States; and that, but for the vigilance of the Government, they would have succeeded. He justified the seizure of the rams upon this ground, and said that after the information he had received he could not hesitate to assume the responsibility of taking steps to have the case legally investigated; for if vessels were to go forth to raise the blockade, or destroy Federal commerce, no one would deny that the object of the Foreign Enlistment Act would be defeated, and the neutrality of England altogether forfeited. After some remarks by Lord Chelmsford the motion was withdrawn. On Monday the High Court of Bombay Bill passed through Committee. On Tuesday the House met for a few minutes only, but no business of public interest was transacted. On Thursday, being Ascension Day, the House did not sit.

In the Commons on Friday, on the order for going into Committee of Supply, Mr. H. Berkeley moved a resolution that the House should on Monday resolve itself into a committee to consider an address to the Queen, praying that adequate compensation might be made to Mr. William Bewicke, of Threepwood Hall, Northumberland, for the sufferings he had undergone during an imprisonment for 12 months as a felon on a charge afterwards proved to be false, for the confiscation of his property, and for the loss he had incurred in prosecuting the persons who had conspired against him. Sir G. Grey opposed the resolution. On a division the motion for going into Committee of Supply was negatived by 120 to 118. The resolution of Mr. Berkeley having thus become the original motion, Sir G. Grey moved, as an amendment, that a Select Committee be appointed to consider the petition of Mr. Bewicke, and to report whether he was entitled to compensation. On a division the amendment was carried by 148 to 100. The Penal Servitude Acts Amendment Bill and the Civil Bill Courts (Ireland) Bill, as amended in committee, were considered and agreed to, with some further amendments. On Monday, in answer to Sir J. Pakington, Lord C. Paget said that the Channel squadron was in the Downs, and perfectly ready to proceed to any part of the world in 24 hours. On the report of the Customs and Inland Revenue Bill, as amended, Mr. Malins moved an amendment to exempt life assurance policies passing under settlement from the duty levied upon them by the Bill. After some discussion the amendment was negatived by 161 to 124. Mr. J. B. Smith moved, as an amendment, that the duties on sugar be continued in force for one year only. After some discussion the amendment was negatived by 97 to 14. The House then went into Committee of Supply on the Navy Estimates, and agreed to several of the votes. The Penal Servitude Acts Amendment Bill, and the Civil Bill Courts (Ireland) Bill were read a third time and passed. On Tuesday Mr. Ewart moved the appointment of a select committee to inquire into the expediency of maintaining the punishment of death. Lord H. Lennox moved, as an amendment, that a select committee be appointed to inquire into the operations of the law relating to capital punishments. Sir G. Grey objected both to the motion and amendment, but intimated his readiness to assent to the appointment of a commission to consider the whole subject. After a long debate, the motion and amendment were both withdrawn; and on the motion of Mr. Neate a resolution for an address to Her Majesty, praying her to issue a Royal commission, was agreed to. Mr. Bass obtained leave to bring in a Bill for the better regulation of street music within the Metropolitan Police District. The Insolvent Debtors' Bill, the object of which is to relieve insolvent debtors owing under 20*l*., was read a second time. The House went into committee upon the Partnership Law Amendment Bill, and agreed to some of the clauses. On Wednesday the House went into Committee on the Weights and Measures (Metric System) Bill. On the second clause, Mr. M. Gibson suggested that as there was at present no knowledge of what the standard of weights and measures was, it would be well to appoint a Royal commission to inquire into and settle that point before proceeding further with the Bill. After some discussion it was agreed that Mr. Gibson, as President of the Board of Trade, should take charge of the Bill in its future stages. Further progress was therefore postponed. The House then went into Committee on the Chief Rents (Ireland) Bill, the clauses of which underwent amendments, and the Chairman was ultimately ordered to report progress. The Admiralty Lands and Works Bill was read a second time, and the Promissory Notes and Bills of Exchange (Ireland) Bill was read a third time and passed.

On Thursday, in answer to Colonel FRENCH, Sir G. GREY said that there was no truth in the report that the Aurora frigate had been ordered to the Baltic. Mr. DISRAELI said he should be sorry to embarrass the Government in the present critical position of affairs, but it appeared to him that the House ought to be kept supplied with some general knowledge of the progress of the Conference. He wished to know, therefore, whether it was true that the Conference had been adjourned, why it had been adjourned, and when it would re-assemble. Sir G. GREY replied that the Conference met on the previous day and adjourned to Monday next, when it would re-assemble. But it was the opinion of the members of the Conference that it was essential to the success of the Conference itself that its proceedings should be private. It was not in his power, therefore, to state why it had adjourned to Monday. The House them went into Committee of Supply on the army estimates, and agreed to several votes. The Under-Secretaries' Indemnity Bill, the Union Assessment Committee Act Amendment Bill, and the Joint-Stock Companies Bill were read a second time. The Local Government Supplemental Bill passed through Committee.

The Conference met again on Wednesday, and again adjourned for a week without agreeing to an armistice. A despatch from Copenhagen dated yesterday says that the Danish Government has declined to accept the armistice on the condition of raising the blockade as proposed by the German Powers. In consequence of the movements of the Austrian fleet, the Channel squadron is now assembled in the Downs, and ready to sail on the shortest notice.

The latest news from the seat of war states that the Danish garrison of Fredericia has been withdrawn to the Island of Funen, leaving the whole of Jutland in the possession of the Prussians. It was reported yesterday that the Austrians are about to cross into Fünen. Marshal WRANGEL has sent 11 citizens to Prussia as hostages for the payment of the war contribution he has demanded.

A telegram from Calcutta informs us that Sir CHARLES TREVELYAN has introduced the Indian Budget in the Legislative Council. It exhibits a surplus for the present year of 30,000*l*., and an estimated surplus for next year of 820,000*l*. In consequence of this favourable state of the revenue, the 10 per cent. import duties are reduced to 7½ per cent., and the tobacco duty to 10 per cent.

From New Zealand we have the important intelligence that General CAMERON has completely defeated the rebellious Maories. By a flank march he first succeeded in turning their strongholds at Piko Piko and Paterargi, and then advanced to a strong position to which the rebels had fallen back, in front of Rangiawahia, which he gallantly carried by assault. The result is that General CAMERON is now in possession of all the country between the Waipa and Waikato Rivers, from which the natives have retired.

Accounts from the United States inform us that the advance of General BANKS's army having moved from Natchitochis, Louisiana, towards Pleasant Hill, the Confederates, who had been retreating, suddenly turned round and assaulted the Federals with superior forces, and after a severe conflict routed them with great loss of men and artillery. It is said, however, that the engagement was renewed on the following day, and that the Confederates sustained a serious defeat. The Confederates have made an unsuccessful land attack on Fort Gray, Plymouth, North Carolina, but they subsequently sunk three of the Federal gunboats at Plymouth, and obtained such complete possession of the river below the town, that they have cut off communication with the garrison. The Confederates have also defeated the Federals and driven them from Big Black River in Mississippi. The capture and destruction of Fort Pillow, on the Mississippi, is confirmed, and General FORREST's head-quarters are at Jackson, Tennessee. General LEE has crossed the Rapidan, and it is supposed that he will at once open the spring campaign by an offensive movement. General GRANT has left for the Federal front, and there is so much alarm in New York, that the Governor has tendered the services of the State militia for the defence of the forts.

Home News.

THE COURT.—The Queen and Royal family continue at Osborne. On Friday the Queen, Princess Helena, and Prince Leopold drove to Ryde. On Saturday the Queen and Princess Helena drove out. Lord Stanley of Alderley had an audience of the Queen, and M. Quaade, the Danish Minister to the Conference, was received by her Majesty. M. Quaade and Lord Stanley of Alderley had the honour of joining her Majesty and the Royal family after dinner. Prince Arthur arrived from Greenwich Park to spend his birthday yesterday with the Queen. On Sunday morning her Majesty, Princess Helena, Princess Louisa, Prince Arthur, and Prince Leopold, attended Divine service at Osborne. The Rev. G. Prothero officiated. On Monday the Queen and Royal family walked in the grounds. In the afternoon the Queen and Princess Helena drove out. Prince Löwenstein arrived on a visit to her Majesty. On Tuesday Prince Arthur left Osborne for Greenwich Park. Prince Löwenstein returned to London. The Queen and Princess Louisa walked and drove out. On Wednesday her Majesty held a Council, which was attended by Earl Granville, the Duke of Somerset, and Sir Charles Wood. Earl Granville had an audience of the Queen, and remained at Osborne. The Duke of Somerset had an audience of the Queen. In the afternoon Baron de Beust arrived, and was presented to her Majesty by Earl Granville. Dr. Jenner also arrived from London. Earl Granville and Baron de Beust had the honour of joining her Majesty and the Royal family in the evening after dinner. On Thursday Dr. Jenner left for London. Her Majesty and the Royal family are expected to leave Osborne on Monday next for Windsor Castle, where they will remain a few days, when the Court will go to Scotland. It is understood that her Majesty will pass the summer months at Balmoral.

THE PRINCE AND PRINCESS OF WALES.—On Saturday morning the Prince and Princess visited the Exhibition of the Royal Academy. In the afternoon the Princess took a carriage drive. The Prince rode on horseback. The Grand Duke of Mecklenburg-Strelitz visited their Royal Highnesses. On Sunday morning the Prince and Princess attended Divine service at the Chapel Royal, St. James's. In the afternoon the Prince and Princess drove to Kew, and visited the Duchess of Cambridge. On Monday morning the Prince of Wales rode on horseback. In the afternoon the Prince and Princess took a carriage drive, and visited the Duchess of Inverness at Kensington Palace. The Count de Paris visited the Prince at Marlborough House. In the evening the Prince honoured the Haymarket Theatre with his presence. On Tuesday the Princess held a Drawing-room at St. James's Palace on behalf of her Majesty. In the afternoon the Prince rode out. The Princess drove out. In the evening their Royal Highnesses honoured the Royal Italian Opera with their presence. On Wednesday the Prince rode on horseback. The Princess took a carriage drive. In the evening their Royal Highnesses had a dinner party. On Thursday afternoon the Prince rode on horseback. In the evening his Royal Highness went to the concert at the Hanover Square Rooms, given by the Guards in aid of the Guards' Industrial Home.

PRINCE ALFRED left Berlin early on Wednesday morning for Weimar, whence his Royal Highness will proceed to Coburg and Darmstadt. On Sunday the King of Prussia conferred the Order of the Black Eagle on his Royal Highness.

COURT ARRANGEMENTS.—The Princess of Wales will hold a Drawing Room at St. James's Palace, on behalf of her Majesty, on Saturday afternoon, the 14th inst., and another Drawing Room on Tuesday the 14th of June. There will be State Concerts at Buckingham Palace on the 11th and 23d inst., when their Royal Highnesses the Prince and Princess of Wales will officiate in the absence of her Majesty. The Lord Chamberlain has issued cards for a full dress reception at Buckingham Palace on Monday, the 23d inst.

THE CABINET.—A Cabinet Council was held on Saturday at Cambridge House. Another Council was held on Monday.

THE DUKE OF NEWCASTLE had a relapse last week, and was taken with alarming symptoms. His Grace passed a bad night, and was no better on Friday. He passed a more favourable night on Saturday, and has been somewhat better during the last few days.

THE CONFERENCE.—On Saturday evening, shortly after the breaking up of the Cabinet Council, Earl Russell had circulars sent to all the Plenipotentiaries attending the Conference, announcing that the next meeting would be held on Wednesday afternoon at the First Lord of the Treasury's official residence in Downing Street. The Plenipotentiaries accordingly met in Downing Street on Wednesday, and sat an hour. All the members of the Conference were present. The Conference was then adjourned for a week.

THE BISHOPRIC OF PETERBOROUGH has been conferred on the Very Rev. Dr. Jeune, Dean of Lincoln, formerly Head Master of King Edward's School Birmingham, and subsequently Master of Pembroke College, Oxford.

THE BISHOPRIC OF NIGER.—The Rev. Samuel Crowther, an African missionary, is to be consecrated by the Archbishop of Canterbury in the course of a few weeks Bishop of the native churches in parts of Western Africa beyond the dominions of the British Crown. The episcopate is to be formed on the model of the Jerusalem and Central African bishopries, under what is called the Jerusalem Bishopric Act. The Bishop nominate, whois a black man, was once a slave boy, and being rescued by a British cruiser became a missionary teacher in Sierra Leone.

PARLIAMENTARY MOVEMENTS.—Mr. Henry Allsopp, of Burton-on-Trent, in compliance with a requisition, has become a candidate for Worcester in the Conservative interest. Mr. E. W. Watkin has accepted the invitation of the Stockport Reform Association to become a candidate for the seat vacated by the death of Mr. Kershaw. It is rumoured that Lord F. Fitzroy is about to resign his seat for Thetford, and to offer himself for Portsmouth.

THE CHANNEL FLEET, under Admiral Sir C. Dacres, has received orders to proceed to the Downs, and officers on leave of absence have been requested by telegram to join their ships with as little delay as possible. The fleet consists of one screw ship, four iron screw ships, one iron-case screw ship, one screw frigate, and one screw steam gunboat. The French fleet are expected to join in the Downs, and the probable destination of the combined fleets is reported to be the Baltic.

Foreign.

FRANCE.—The Emperor received the Japanese Ambassadors on Tuesday, and in reply to their speech, said:—

"I am grateful to the Tycoon for having felt the necessity of giving explanations as to the difficulties attending the execution of the treaty, and also as regards the attack upon a French officer. I sincerely desire to see an extension of our relations. For this end the Japanese Government must, before all, cause international laws to be respected, and be convinced of the understanding between the European Powers to defend their honour and interests in distant countries."

The *Moniteur* of Monday evening says:—

"The English Cabinet having requested an explanation of the Austrian Government respecting the despatch of ships to the Baltic, the latter replied that no such intention existed. Her Majesty's Government in consequence renounced its plan of sending an English fleet to the Baltic. Austria and Prussia insist on the cessation of the blockade as one of the conditions for an armistice. Prussia is said to offer as an equivalent the renunciation of the war contribution in Jutland, and is also reported to propose to evacuate Jutland should the Danes retire from Alsen, suspend the blockade, and restore the captured ships."

All the Paris papers of yesterday treat of a war between Germany and England as by no means an improbable event. The *Débats* says:—

"Prussia evidently contemplates breaking up the Conference if the English fleet enters the Baltic, and the English fleet only waits for a signal which Lord Palmerston can now give without English commerce accusing him of precipitation and foolish impatience. The English Cabinet has certainly shown throughout this unhappy affair as much prudence, moderation, and impartiality as can be expected of a great Power in such a case. It has astonished the world by its forbearance. We will not attempt to give advice to the Prussian nation. We see by reading the journals of Berlin that Prussia, altogether infatuated by the victories in Schleswig, and by the long and irritating repose in which it has been kept by its situation, while other peoples of Europe have from time to time encountered warlike adventures and occasions of glory—we see Prussia persuading herself that the English fleet will find the end of its renown in the Baltic, and that it will receive a terrible lesson from the invincible walnut shells with which the grace of God has deigned to provide King Frederick William. When a great people is a prey to such illusions it is useless to attempt to influence it by judicious counsels; it must become wise at its own expense. But let Austria, which during 15 years, has gone over too many fields of battle to allow the fumes of powder to ascend to its brain and intoxicate it, calmly consider whether it can lose or over the English alliance, and if she will gain much by establishing the Prussians in Kiel at the risk of bringing before Venice the flag which has just floated over the triumphs of Garibaldi. Let the Cabinets of the secondary States remember the annexationist doctrines upon which M. de Bismark piqued himself two years ago, and let them ask themselves if it is not the keys of Dresden, Hanover, Cassel, and Darmstadt that Prussia has sought at Rendsburg, Duppel and Fredericia. Let the German people themselves—a people healthy in heart and mind;—who must not be judged by the sickly metaphysicians of the National Verein—reflect in what a situation they would be placed by a war with England; Russia being able to bring only an alliance virtually useless, and France not having yet told her secret. The war of Germany with England! it is to the German coasts ravaged without possible reprisals, or it is general war, that is to say, a war which may have in reserve infinite evils for the whole world, but which would have for its certain and inevitable result, whatever might happen elsewhere, the dismemberment of Germany."

The *Moniteur*, in its edition of Sunday evening, says:—

"No official confirmation has been received of the despatch of a French squadron to the Baltic. In any case this measure, should it be taken, could have no other character than that of a demonstration destined to support the request made by the belligerents for a suspension of hostilities."

The *Moniteur* also contains the following:—

"The Government of the Emperor has received from that of the United States satisfactory explanations relative to the sense and bearing of the resolution passed by the House of Representatives at Washington with regard to Mexico. It is known that the Washington Senate has indefinitely adjourned the examination of the resolution, which, in any case, could not have been sanctioned by the Executive power."

A despatch of Gen. Deligny of the 29th ult. announces

that General Martineau on the 26th ult. encountered the enemy at Ain-Legta, on the road to Saida and Geryville. The defile which the Arab forces intended to defend was cleared by the French troops, and the Arabs were in full retreat along their whole line. General Martineau was expected to arrive at Geryville on the 27th. News from the province of Constantine continues to be satisfactory. In the sitting of the Corps Législatif on Monday, the Bill on working men's coalitions was passed by 222 to 36. Prince Napoleon has addressed a letter to the Venetian Committee, congratulating them upon the publication of the pamphlet under the title of "Urgency." The Prince believes that the Venetian question demands a speedy solution, and expresses an ardent wish that Italy should be free from the Alps to the Adriatic, in accordance with the words of the Emperor. The *France* says:—

"We have reason to believe that at the next elections of the third of the members of the General Councils the Government will not maintain absolutely the principle of official candidates. The Prefects will, it is stated, be invited to remain neutral when the contest is between men equally honourable and devoted to the principle of which the Empire is the expression."

The Marquis de Boissy has delivered another speech against England in the Senate, in the present instance directing his attack against the Prince of Wales for his visit to Garibaldi, and asserting that the Prince has now "shaken hands with the revolution." The President subsequently erased from the official report some of the most offensive expressions in the Marquis's speech, and on a discussion arising at the next sitting in reference to these omissions, the Senate unanimously expressed their disapprobation of the language used by the Marquis, by agreeing to the President's proposal that it should be inserted on the minutes of the day that the Marquis de Boissy had been called to order. The death of M. Clapeyron having left a vacancy in the Academy of Sciences, in the section of mechanics, it is said that the present members, viz., Baron Dupin, Generals Poncelet, Piobert, and Morin, and M. Combes, Director of the School of Mines, intend to offer the candidateship to the Emperor, on the ground of his works and discoveries connected with artillery. One of the members of the Japanese embassy has just died at Marseilles. The ambassadors, on receiving information of this incident, sent instructions that the hair of deceased should be cut off and brought to Paris; that no priest should accompany the funeral, and an ordinary coffin should be used, and be enveloped in white linen before inhumation. They also ordered the ground for the tomb to be purchased in perpetuity, and announce their intention of shortly forwarding the model of a mausoleum to be erected. The Bengal has spoken the Messageries Impériales steamship Impératrice, 760 miles from Aden. Her shaft had broken down, but had been repaired. She was making six knots per hour, and expected to arrive at Aden on the 30th of April. Her mails have been transhipped in the Bengal. The Impératrice brings 214 passengers.

SPAIN.—The great banquet of the Progressist party took place on Tuesday. The Provincial Committees were represented at the banquet in great numbers. There was no crowd nor any police force outside the banqueting hall, and everything passed off quietly. The *Epoca* says:—

"The Government has no wish to put down political banquets, but it will energetically suppress all excesses contrary to the laws."

PORTUGAL.—The Bill abolishing the tobacco contract has been passed by the Chamber of Peers, with few modifications. The Cortes closes on the 27th inst. Prince de Joinville has placed his son in the Portuguese navy. An ironclad gunboat is being built at the Arsenal. The old scheme of the Cintra Docks and Railway is said to have been taken up by an English company. The repairs of Lisbon Cathedral, for several years closed, are now completed. An accident has occurred at the Lisbon Railway station, causing the loss of several lives. An Austrian screw liner, two steam frigates, and one iron-clad frigate have arrived at Lisbon, and were to sail for Brest to meet the screw frigates Schwartzenburg and Radetsky.

SWITZERLAND.—The Société Politique Helvetio-Genevoise has addressed a protest to the Federal Council against the decree expelling Mazzini from Switzerland. The Federal Council, on this protest being brought forward, passed to the order of the day. The Federal Council has ordered the immediate establishment of a depôt for the concentration of war material, in order to increase the means of defence at the disposal of the Confederation.

DENMARK.—The *Dagbladet* of Saturday says:—

"The negotiations at the Conference on the question of an armistice furnish us with a measure by which to judge of the results of the Conference itself. England, under Earl Russell, has shown how far she has lost all feeling of honour, and, consequently, it can scarcely be expected that she will protect international rights. [illegible] that other Powers act in a similar spirit. Denmark has not entered into direct negotiations with the enemy, as more favourable results may be obtained in Berlin than from London. The principal thing is to preserve a small but independent Danish country, and a free Danish people."

A despatch from Copenhagen of yesterday says that the conditions proposed by the great German Powers as indispensable to their acceptance of an armistice have been declined by the Danish Government, which refuses to raise the blockade of the German ports.

THE DANISH DUCHIES.—In pursuance of orders issued by the Government, Fredericia has been entirely evacuated by the Danish troops, who withdrew to the island of Fuuen, taking away with them the most valuable material of war and the stores of gunpowder. The guns left behind were spiked. General von Gablenz has announced to his troops that the fortifications of Fredericia will be blown up. The *Dagbladet* of Wednesday however says that the Prussians are placing Fredericia in a state of defence, and that the town is being strongly garrisoned. The Prussians occupy Kalö and Abeltoft. The division of Major-General Münster has advanced to Lym Fiord. The whole of Jutland, except that part north of Lym Fiord, is now in the possession of the allies. It is reported that the Austrians purpose crossing into Funen. In addition to their requisitions in kind, the Prussians have imposed a war contribution upon Jutland to the amount of 96,000*l.* sterling, to be paid within 48 hours. Marshal von Wrangel has designated this contribution as a first instalment. The municipality of Horsens having refused to pay the war contribution imposed upon the town by Marshal von Wrangel, have been taken to Rendsburg. The Marshal has also dispatched 11 citizens to Berlin, to be detained as hostages until the payment of the war contribution of 100,000 Prussian thalers. This the inhabitants refuse to pay, preferring rather to be plundered. The arrival of Austrian men-of-war in the Elbe has been telegraphed from Neuwerk. A squadron of five vessels, supposed to be that of the German great Powers, has been sighted off Helgoland. A Danish despatch boat is lying in the roads of that port, but there is no news of any other Danish vessels in that part. A despatch from Hamburg of Wednesday says that the Austrian squadron has appeared at the mouth of the Elbe. It has joined the Prussian ships. The Danish vessels have withdrawn without giving battle.

PRUSSIA.—Prince Alfred arrived at Berlin on Friday, on a visit to the Crown Princess. His Royal Highness was received by the King of Prussia on Saturday at 1 o'clock. A State dinner was given in the evening. The Prince remained in Berlin until Wednesday morning, when he left for Weimar, on his way to Cobourg and Darmstadt. The proposal of an armistice without a cessation of the blockade has caused great excitement in Berlin. The semi-official *Nord-Deutsche Allgemeine Zeitung* of Tuesday, in answer to the statements of the *Moniteur* of Monday evening, says:—

"The German great Powers have hitherto not offered to relinquish the possession of Jutland, either on the suspension of the blockade or the evacuation of Alsen. They have declared themselves ready to make concessions respecting the possession of Jutland should an armistice, comprising the suspension of the blockade, the surrender of the captured vessels, and the evacuation of the Schleswig Islands, be concluded."

The semi-official *Nord-Deutsche Allgemeine Zeitung* of Wednesday evening says:—"The signal for the departure of the English fleet, with a hostile intent, would also be the signal for the departure from London of our representatives at the Conference.

AUSTRIA.—The Vienna papers express great indignation at the proposals of the Western Powers at the Conference for an armistice without the cessation of the blockade, and describe it as an unexampled humiliation to Germany. The semi-official *General Correspondenz* of Monday says:—

"The mission of the Austrian and Prussian representatives at the Conference is to obtain from Denmark a satisfactory indemnity for the damage done to German shipping and commerce, and likewise a full guarantee against any future recurrence of the same."

The *Austrian Gazette* and the *Botschafter* profess to believe that there is no agreement between England and France. "The attitude of France," says the former journal, "has been so full of reserve, that we do not think it is likely to depart from it, now that Denmark is at the end of its resources." It is stated that there is no intention to despatch the Austrian fleet to the Baltic, and that no resolution to that effect has been adopted by the Cabinet Council. The evening edition of the official *Zeitung* of Tuesday says:—

"Prussia and Austria have made the cessation of hostilities conditional on the complete suspension of the blockade. They would then desist from the further occupation of Jutland. Both Powers also propose to evacuate Jutland during the armistice should Denmark surrender to them Alsen, and give up all the captured vessels."

The Minister of Finance has issued a Five per Cent. Loan for 70,000,000 florins, payable in silver and redeemable within 35 years.

ITALY.—An allocution was delivered by the Pope in the Consistory recently held at the Vatican. His Holiness spoke of the grievances of the Church and its trials in the great Northern Empire. He brought forward accusations against the Emperor of Russia, who he said, after having driven his subjects to insurrection, now endeavours, under the pretext of suppressing the rebellion, to extirpate the Roman Catholic religion, and transports whole populations into frozen countries, exiles bishops, and deprives them of their functions. His Holiness thus continued:—

"Nobody will venture to say that I wish to maintain revolution by these necessary protests. I protest in order to satisfy my conscience, and that I may not one day hear the Sovereign Judge ask—'Why didst thou remain silent?'"

The allocution of the Pope has made a great impression in Rome, and the Russian Chargé d'Affaires has asked the Government for an explanation. In reply, Cardinal Antonelli defended the right and necessity of speaking as the Pope had done. The Chargé d'Affaires acknowledged the virtue of Monsignor Felinski, but said that he was a rebellious subject, having invited the Czar to renounce his possession of Poland. Prince Ladislas Czartoriski has arrived in Rome to see his wife, who is dangerously ill. Cardinal Morichini, Bishop of Iesi, near Ancona, has been arrested on a charge of having, under the pretext of confession, instigated the cantonal judge of that town to retract his oath of fidelity to the King, and swear allegiance to the Pope, while retaining his post, in order to administer justice in the interest of the Court of Rome. One of his canons, named Pianetti, was arrested with him. Cardinal Antonelli has since demanded from the Italian Government, through the mediation of a neutral Power, the liberation of Cardinal Morichini. In the Chamber of Deputies on Tuesday the Home Budget came on for discussion. Signor Bargoni put a question respecting the seizure of the money at Signor Lemmi's, and of arms destined for the national cause. He spoke of General Garibaldi's journey and of his patriotism, and asked whether and how the Government intended to avail itself of the services of General Garibaldi and his party. In the sitting of Wednesday the Minister of the Interior, in reply to speeches from several members of the Opposition, stated that it was not for the Government to declare its intentions respecting General Garibaldi and his party, but that it was above all necessary to know how the General and his party intended to act. The Minister defended the policy of the Government, and proved the necessity of seizing the arms and money in order to prevent painful occurrences. After the journey of Garibaldi to London, after the eulogy bestowed by Garibaldi on English institutions, and the respect paid by the English nation to the Queen and the laws, the Minister hoped that nobody, appreciating the King and the Government, would speak in the name of the country, or pursue a policy different from that of the Government, and in opposition to the Statute. He then explained that the policy of the Government was based upon an alliance with the Western Powers. He demanded a vote of confidence in the Ministry—a vote confirming their policy, and reserving the initiative in accomplishing the Italian empire at Rome and Venice to the King and the Parliament.

RUSSIA.—Several of the continental journals state that the visit to Copenhagen of the Grand Duke Nicholas of Russia, eldest son of the Emperor Alexander, is generally considered in Denmark as connected with a project of marriage between the Prince and Princess Dagmar, one of the daughters of King Christian IX.

GREECE.—Advices from Athens state that the Canaris Ministry had resigned. A new Ministry has been formed by M. Balbi, who belongs to the Moderate Party. Public opinion is generally opposed to the National Assembly; and great opposition is manifested against Count Sponneck. The question of the Ionian elections has been settled satisfactorily by the Assembly. The Budget has been adopted. A subsequent telegram from Corfu asserts that fresh disturbances have broken out at Athens. It was expected that the English and French men-of-war would land troops to protect the National Bank.

TURKEY.—Advices from Constantinople to the 28th ult., announce that 60,000 Russians, under command of General Kotzebue, are said to have encamped at the mouth of the Danube, and that another body of 20,000 men was expected to follow. Austria has stationed a force of 25,000 men on the Servian frontier. The Porte has resolved that the army in Roumelia should be increased to 150,000 men. A special commission has left Constantinople to superintend the completion of the armaments of the fortresses on the Black Sea and Dardanelles. A portion of the Circassian immigrants are to be incorporated with the army under General Kotzebue.

TUNIS.—The tribes are all in a state of insurrection and refuse to pay the taxes. The insurgent army has encamped at a distance of one day's march from Tunis, and the latest advices state that the insurrection is becoming general. Twenty thousand Bedouins have interrupted the communication between Tunis and the provinces, occupied Kirvan, and are threatening Susa and Monastir. The Bey has conceded a reduction of the taxes and the abolition of the constitution, but hesitates to dismiss two of his Ministers, the objects of public animadversion. A popular conspiracy, organised for the purpose of pillage, has been discovered at Tunis and vigorously repressed. The Portuguese and Turkish Governments have sent ships to Tunis, to cooperate with the English, French and Italian squadrons.

INDIA.—A telegram from Calcutta of the 14th April states that Sir Charles Trevelyan has introduced his Budget in the Legislative Council. The surplus for the year 1863-64 amounted to 30,000*l.* The surplus for the year 1864-65 is estimated at 820,000*l.* The 10 per cent. import duties are reduced to 7½ per cent. The valuation of piece goods and yarns is adjusted to the market rates, thus doubling the duty. The tobacco duty is reduced to 10 per cent. The following telegram was received at the India Office on Monday:—

"Colonel Stewart requests me to inform Sir Charles Wood that the cable was landed at Fao on the 29th of March. Its junction with the Turkish line was effected on the 8th of April. Telegraphic line between Bussorah and India is now complete; works nicely. Communication between Bussorah and Kurrachee takes place in five minutes. Two English steamers ply on the Tigris, a third one expected from Kurrachee to convey correspondence till completion of the Irak line. Persian line will be completed in July."

CHINA.—The rebel cause is losing ground. Major

Gordon has captured Eshing, and is marching on Nankin. Two other cities have surrendered.

JAPAN.—Advices from Japan state that another Englishman has been nearly assassinated at Nagasaki. Sir Rutherford Alcock has arrived at Yokohama.

NEW ZEALAND.—The following telegram, addressed to the Secretary of State for War, was received early on Thursday morning from her Majesty's Consul at Alexandria:—"The following despatch has this day been received from Lieutenant-General Cameron, dated Headquarters, Te Awamuta, Feb. 25. A force under command of Lieutenant-General Cameron, made a flank march on the night of the 20th of February, by which the whole of the native strongholds, constructed with immense labour to oppose his advance, were successfully turned; they were immediately evacuated by the natives, who fell back on a strong position in front of Rangiawahia, their principal source of supply. On the 22d General Cameron attacked this position, which was most gallantly assaulted and carried by the 50th Regiment. We are now in possession of the rich country between the Waipa and Waikato Rivers, as far as Rangiawahia, from which the natives have retired. There were three officers severely wounded—viz., Lieutenant-Colonel Nixon, Colonial Defence Force; Lieutenant Pagan, 65th Regiment; and Ensign Doveton, 50th Regiment; and four men killed and 24 wounded.'"

UNITED STATES.—The Government has stopped the transmission of news from Virginia. It is rumoured in Washington that the armies of both Lee and Grant were in motion and manœuvring for advantageous positions preparatory to a general engagement. Deserters from Longstreet to be moving down the Shenandoah again, and state that Lee's army has received 10 days' rations, for a forward movement. General Grant has left for the front, and Burnside has gone to Fort Monroe. General Forrest has completely destroyed Fort Pillow, and his head quarters are now at Jackson, Tennessee. It is said that he is retiring into Mississippi. On the 8th ult. the advance of General Banks's Federal army, under Generals Stone and Ransom, advanced from Natchitoches, Louisiana, to Shreveport. The Confederates fell back, skirmishing, for five miles, when they suddenly assaulted the Federals with superior forces, and after a desperate conflict routed their cavalry, and compelled a demoralised retreat, with the loss of 2000 men, their artillery, and nearly all their train. Confederate despatches state the Federal loss at 14,000. The engagement was renewed the following day, when the Confederates were routed with heavy loss. The Confederate Generals Morton, Pearson, and Green were reported killed. General Banks has countermanded the order to retreat to Alexandria. The Federal fleet, which had advanced to within 80 miles of Shreveport, has been ordered to return. While on its way down the Red River, it was fiercely assailed, and the transports barely escaped capture. The Confederate General Wirt Adams is reported to have defeated the Federals on Big Black River, in Mississippi, capturing several hundred prisoners on the 11th. On the 17th the Confederates, under General Ransom, attacked Fort Gray, near Plymouth, North Carolina, and were repulsed. The attack was renewed on the following day with the co-operation of a Confederate ram, which sank three out of five of the Federal gunboats in the river. On the 22d the Confederates had surrounded Plymouth, and their ram had complete possession of Roanoake River. General Butler has despatched a fleet of gunboats to the assistance of the Federals. It was expected that they would be compelled to evacuate Plymouth, but would be able to hold Newbern. The Federals have evacuated Pilatka, Florida. Another Federal transport has been sunk by torpedoes in St. John's River, Florida. Guerillas have burnt the greater portion of Hickman, Kentucky. The Governor of New York has tendered the services of the State militia for the defence of the forts around New York and the frontier, and has urged the Legislature to reconsider its resolution to pay the interest of the State Debt in currency. The Governors of Ohio, Wisconsin, Indiana, Illinois, and Pennsylvania urge Mr. Lincoln to call out 200,000 additional troops for the exclusive defence of their States. Mr. Lincoln has declared, in a speech made at Baltimore, that if negro troops had been murdered at Fort Pillow, as reported, he would inflict retribution. General Kilpatrick has been relieved from his command in the Army of the Potomac, and ordered to report to Sherman at Nashville. It is reported that General Grant will give General M'Clellan an active command. The *New York Herald* asserts that Grant has relieved General Butler from military duty, and appointed him to the civil supervision of the Peninsular department. A naval court-martial is in session in New York for the trial of Lieutenant Donohoo, who shot the mate of the barque Saxon. Both Houses of the New York State Legislature have passed a resolution to pay the interest of the state debts to all creditors in greenbacks.

MEXICO.—The occupation of Monterey by the Imperialists is announced, *viâ* New Orleans. Arrivals at San Francisco confirm the reported capture of Colima by the French.

SAN DOMINGO.—The Spanish Government has received information of fresh victories of the Spanish troops in San Domingo.

BRAZILS.—Senhor Baraeto, minister for foreign affairs, is dead, and has been succeeded by Senhor Dias Vieira. Senhor Brusque has been appointed minister of marine.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*The Steam Rams in the Mersey.*—The Earl of DERBY called attention to the correspondence between her Majesty's Government and Mr. Laird respecting the steam rams. The question as to whether the papers should be produced had been ably discussed in the House of Commons, and had been negatived in favour of the Government by a majority of 34. In reviewing the circumstances under which the correspondence had arisen, he characterised the conduct of the Messrs. Laird as everything that was commendable, seeing that they had withheld nothing from the Government; and the conduct of the Government, on the other hand, he considered highly censurable, seeing that it had been most unfair, ungenerous, and he feared illegal. He contended that the final step of seizing the vessels was illegal, and the precautions taken by the Government, on hearing some rumour that an attempt would be made to capture the rams in the port of Liverpool, he described as at once unnecessary and ridiculous. The rumour itself was absurd, and was originated by the Consul of the United States; but it had the desired effect of frightening the Government. It took possession of the rams, took them out of Messrs. Laird's dock, and removed them into the estuary of the Mersey, where they were in much more danger of capture than in their original position. To justify the conduct of the Government it had, he contended, relied too implicitly on what proved afterwards to have been a forgery of a report of the Secretary of the Navy of the Confederate States. He did not wish to screen any one who had violated the law of England. Those who were guilty of such violation ought to be punished. He wished to preserve a strict neutrality between this country and the United States, and maintain peace; but at the same time he did not wish to see British subjects deprived of that protection from the law to which they were justly entitled. In conclusion he moved for the production of the whole correspondence.—Earl RUSSELL said the Government had been guided in all these transactions by one principle. It was their duty to this country to maintain peace with the United States, with which they had lived in amity for nearly 80 years. The proceedings of Messrs. Laird, he asserted, tended to involve this country in war, and this the interposition of the Government had prevented. There could be no doubt the Confederate States had agents in this country and France provided with the means of building vessels of war. That this should be the case, considering the struggle in which they were engaged, gave him no surprise; but he was surprised that British subjects, in defiance of her Majesty's proclamation, should do anything calculated to plunge this country into war. He admitted he had felt some apprehension of such proceedings giving the United States just cause for hostilities. It was evident from the very construction of these vessels that they were to be used as war ships. It required no legal acuteness to define their character, and he felt no regret that they had been detained. Indeed, he was convinced that the course taken was necessary to the preservation of peace. In that course he felt quite justified, as he had good reason to believe that had not the Government interfered the vessels would have passed into the possession of the Southern States, and been employed against the commerce of the Federation.—Lord CHELMSFORD reviewed various points of the correspondence, and argued, from the facts and dates, that the Government had seized and detained the vessels without sufficient evidence, and therefore illegally.—The Duke of ARGYLL regretted that Lord Chelmsford should have prejudged a case that might yet come before the House in another form, and which he might have to decide in a judicial capacity. The question was not one of mere administration, but of international policy, in which the Government had to defend the neutrality of the country. After a few words in explanation, the Earl of DERBY said he would not press for the production of the papers.

MONDAY.—The *High Court of Bombay Bill* passed through committee.

TUESDAY.—The House sat for a few minutes, but no public business of any importance was transacted.

THURSDAY.—To-day being Ascension Day, the House did not meet.

FRIDAY.—*The Dano-German War.*—The Earl of CARNARVON gave notice that on Monday next he would call attention to the present position of the Danish question. *County Court Debtors.*—The LORD CHANCELLOR brought in a Bill to limit actions and process for small debts, to amend the Acts relating to the County Courts, and to confer on such courts a limited jurisdiction in equity. He stated that 17,979 persons had been committed to prison by the county court judges, same for the non-payment of such sums as 1*s.* 1*d.*, 3*s.* 10*d.*, and 2*s.* 9*d.*, while one person was actually committed for 9*d.* The total sum for which these committals had been made did not amount to more than 62,438*l.*, and most of the debts had been contracted with tallymen. The present Bill would give power to the judge to take into consideration all the circumstances of the debt. For fraud, false pretences, and breach of trust, the debtor was to be liable to criminal punishment, but the imprisonment would not be a farce, but a reality.

[Left speaking.]

HOUSE OF COMMONS.

FRIDAY.—*Case of Mr. Bewicke.*—Mr. H. BERKELEY moved that the House should on Monday resolve itself into a Committee, to consider an address to her Majesty, praying that compensation might be made to Mr. William Bewicke, of Threepwood Hall, Northumberland, for the degradation and loss he had suffered in being imprisoned for 12 months as a felon, on a charge since proved to be false; and for the heavy expenses he had incurred in prosecuting the persons who had conspired against him.—Sir G. GREY opposed the motion, but said that he would not object to refer the question of Mr. Bewicke's loss of property to a select committee.—Lord J. MANNERS supported the motion.—The ATTORNEY-GENERAL opposed it, on the ground that it would create a very inconvenient precedent.—Mr. G. HARDY was in favour of a committee of inquiry.—Mr. DISRAELI recommended the House to affirm the resolution rather than refer the subject to a select committee. After some discussion the House divided, and the motion that the Speaker leave the chair was negatived by 120 to 118. Mr. BERKELEY'S resolution having then been put as a substantive motion, Sir GEORGE GREY moved as an amendment that a select committee be appointed to consider the petition of Mr. Bewicke, and report whether he was entitled to any and what compensation.—Mr. DISRAELI, Mr. HORSMAN, and Mr. WHITESIDE protested against this course as unusual and unparliamentary, but on a division the amendment was carried by 148 to 100.—Mr. D. SEYMOUR called attention to the extensive employment of *Climbing Boys* in sweeping chimneys, and to the systematic violation of the Act for the regulation of chimney sweepers and chimneys, and asked the Home Secretary if it was the intention of the Government to introduce any Bill during the present session founded on the recommendations of the Children's Employment Commission.—Sir G. GREY admitted that the Act was violated in many instances, but the Government were about to deal with the subject by an amendment Bill, which he hoped would do away with the evil complained of. *Pensions to Colonial Governors.*—Mr. B. COCHRANE called attention to the subject of granting retiring pensions to those Governors who at present are not entitled to pensions under the Superannuation Act, and strongly urged the policy as well as justice of granting such pensions.—Mr. CARDWELL said the question had already received the careful consideration of the Colonial Department and the Treasury, and, though he was not prepared to announce the decision of the Government, he hoped to be able shortly to do so.—Sir J. PAKINGTON, Mr. MALINS, and Lord J. MANNERS pressed upon the Government the inexpediency on public grounds of allowing a person in the important position of Governor of a colony to retire into private life unrewarded for past services.—Mr. DILLWYN called attention to the insufficiency and inconvenience of the temporary *Museum for Inventions at South Kensington*, and the Patent Library in Southampton Buildings, and to the expediency of uniting the Museum for Inventions and the Patent Library under one building, and at a convenient distance from the law courts.—Mr. COWPER admitted the importance of the subject, and said that it was under the consideration of the Government.—After some remarks by Colonel BARTTELOT, Mr. AUGUSTUS SMITH, and Mr. AYRTON the SPEAKER put the question that he do leave the chair, declaring that the "ayes" had it, and while Sir H. VERNEY, who had risen to ask a question, was on his legs, he left the chair.—Mr. OSBORNE protested against the Chairman taking the chair under these circumstances, and moved that he report progress. This motion having been agreed to, on the SPEAKER having resumed the chair, Mr. OSBORNE renewed his protest, and a discussion arose upon the point of order whether Sir H. VERNEY had risen before the SPEAKER declared the question carried.—The SPEAKER maintained that the course he had pursued was in strict conformity with order, and after a short conversation the House acquiesced in this view, and proceeded to the next order of the day, the consideration of the *Penal Servitude Acts Amendment Bill*, as amended in the Committee. Various amendments, verbal and otherwise, of which notice had been given, underwent much discussion, some being adopted and others rejected. The *Civil Bill Court (Ireland) Bill* likewise received certain amendments on the report.

MONDAY.—*Landlord and Tenant in Ireland.*—Sir R. PEEL stated, in reply to Mr. Maguire, that it was not the intention of the Government to introduce any Bill in the present session to establish more equitable relations between landlord and tenant in Ireland.—The CHANCELLOR of the EXCHEQUER announced that, after the opinion expressed on Wednesday last by the Scotch members on Sir John Hay's Bank Notes (Scotland) Bill, he did not intend to proceed with the *Bank Acts Bill for Scotland*. *The Channel Fleet.*—In reply to Sir J. PAKINGTON, Lord C. PAGET stated, amid the cheers of the House, that the Channel squadron was in the Downs, that the stores were nearly completed, and that the ships would be ready to proceed to any part of the world at 24 hours' notice. His lordship added that none of the iron ships had been docked since their winter cruise, but that the Warrior was docked on the 12th November, the Black Prince on the 22d October, the Prince Consort on the 11th November, the Hector on the 14th January, and the Defence on the 16th January. *Under Secretaries of State.*—Sir G. GREY stated, in answer to Mr. WALPOLE, that as great doubt existed with regard to the construction of the Act of 1858 relating to the sitting and voting of Under Secretaries of State in the House of Commons, it was the intention of Government to bring in a Bill to amend it. On the consideration of the *Inland Revenue Bill* as amended, Mr. MALINS moved an amendment, to exempt life assurance policies contained in settlements from the duty proposed to be levied upon them by the Bill.—After some discussion the House divided, and the amendment was negatived by 161 to 124, Mr. DISRAELI voting in the majority, and Sir J. PAKINGTON and Mr. HENLEY in the minority.—On the question that the schedule be agreed to, Mr. J. B. SMITH moved that the *Duties on Sugar* be continued in force for one year only. He contended that the Chancellor of the Exchequer, in adopting an *ad valorem* scale of duties, had thrown over the great principle of free trade, and was endeavouring to legislate in the interests of the sugar refiner as against the sugar consumer.—Mr. LEATHAM seconded the motion.—Mr. CAVE opposed, and Mr. LINDSAY supported the motion, the latter contending that the tendency of the measure was to legislate for a class only.—Mr. CRAWFORD supported the motion, and said that the Chancellor of the Exchequer appeared to have more regard for the refiner than the consumer.—Mr. C. EWING, as a large producer of sugar, said he would most consult his own interest; but he were to vote for a uniform duty; but as such system, if unaccompanied with the privilege of refining in bond, would be to raise the price on the consumer, he felt himself bound to support the proposition of the Chancellor of the Exchequer.—Mr. MOFFATT recommended a return of the old plan of allowing the sugar duties to be imposed for a year only.—Mr. AYRTON denounced the proposition of Mr. Smith as impracticable, and unfair to the producer and refiner of sugar.—Mr. BATHURST supported the motion.—Mr. BUCHANAN opposed it.—The CHANCELLOR of the EXCHEQUER denied that the question at issue was one between the refiner and the consumer. It was true the refiner said he could not compete if there was a uniform rate of duty; but so far from asking for protection, he complained bitterly of the *ad valorem* scale as now proposed. The refiner complained that the duty between refined and unrefined sugar was too small to enable him to compete with the foreigner; but he did not ask for protection—all he wanted was equality. With regard to the charge that he had become an apostate to the great principle of free trade, he repudiated it with indignation; and he contended that if the House were to agree to the motion it would indeed reverse that enlightened and progressive policy. On a division, the motion was negatived by 91 to 71. The report was then agreed to.—On the motion for going into Committee of Supply, Mr. PEEL, in reply to a question from Mr. Cox, stated to that gentleman that 50 acres of land would be reserved under the *Inclosure Act* of last Session as a recreation ground in the parish of Chigwell, in Essex.—The House then went into Committee of Supply on the *Navy Estimates*. On the question that 449,298*l.* be voted for new works in various dockyards at home and abroad, Mr. P. W. MARTIN moved to reduce the vote by 1549*l.* for additional accommodation for spinning machinery at Chatham. After some discussion, the motion was withdrawn.—Lord C. PAGET moved that the item of 15,900*l.* for deepening the north-west basin and constructing a first-class dock at Malta be reduced by the sum of 5000*l.*, with a view to submitting the question of the dock to a Select Committee.—Captain TALBOT moved as an amendment the omission of the whole item, on the ground that the most preferable site for the new dock was at Pembroke Creek, instead of Marsa, as proposed by the Admiralty.—Mr. WHITBREAD said that the responsibility rested altogether with the late Government.—Sir J. PAKINGTON argued that it was of the greatest importance to British naval power that a proper dock should be constructed at French Creek as soon as possible.—Sir J. ELPHINSTONE said it would be impossible to imagine a more unseamanlike proposition than to construct a dock at the Marsa. After some discussion the committee divided, and the amendment was rejected by 111 to 41. The vote as amended by the Government was then agreed to. The *Penal Servitude Acts Amendment Bill*, and the *Civil Bill Court (Ireland) Bill* were read a third time, and passed.

TUESDAY.—*The Channel Fleet.*—Mr. D. GRIFFITH asked whether an Austrian squadron had not arrived in the Downs and other of our harbours; and whether the Channel fleet had not been ordered round to the Downs; and, if so, wherefore

was the intention of her Majesty's Government to allow the Austrian ships of war to proceed to the Baltic or the North Sea without being accompanied by the Channel fleet.—Sir G. GREY replied that three or four Austrian ships had arrived in the Downs, and there was reason to believe that a few more were on their way from the Mediterranean; but that the Austrian Government had explicitly stated that the only instructions which they had given their admiral was, that he was to protect German commerce in the North Sea, and prevent the blockade of the Elbe and Weser. The admiral in command of the Channel fleet was fully aware of the Austrian movements; but her Majesty's Government declined to state what instructions they had given to him in the event of instructions of a different nature being sent to the Austrian squadron—especially as they had reason to believe that the Austrian squadron would not enter the Baltic. *Punishment of Death.*—MR. EWART moved the appointment of a Select Committee to inquire into the expediency of maintaining the punishment of death. As the great object of punishment was to deter, that object could not be realised when, as under our present system, a large proportion of the persons condemned to death had their sentences commuted.—Mr. DENMAN seconded the motion. He commented on the inconsistency of maintaining one punishment for all descriptions of murder, and contending that in many instances the guilty escaped punishment altogether, from the reluctance of juries to convict in cases where, in their opinion, the crime, although a heinous one, was still short of murder.—Lord H. LENNOX moved, as an amendment, that a Select Committee be appointed to inquire into the operation of the laws relating to capital punishment. He referred to the cases of Jessie M'Lachlan, Wright, and Hall, to show that while one of the most flagrant criminals of the day had escaped the full punishment of her offence, Wright had been executed for taking the life of a woman in a drunken brawl, and Hall had very properly been respited.—Mr. MITFORD seconded the amendment. He denied that public executions had a salutary effect upon the spectators, as it had been proved that they often improved the occasion to pick pockets and indulge in ribald jests.—Alderman ROSE said that from his experience as one of the commissioners of the Central Criminal Court, he could state that juries for the most part discharged their functions conscientiously, and that public executions were useful in a moral point of view. In his opinion the man who, with his senses about him, took away the life of another, ought, in justice to society, to be hanged.—Mr. NEATE was in favour of a commission to inquire into the provisions and operation of the laws under which capital punishments are now inflicted, although he feared that the first effect of abolishing capital punishment would be to increase the number of murders.—Sir G. GREY reminded the House that since the measure of 1861 for the amendment and consolidation of the law, capital punishment was restricted to cases of wilful murder only. Believing that it was necessary for the preservation of human life that this exception should be maintained, he could not consent to refer the subject to a select committee. If, however, Mr. Ewart would withdraw his motion, and Lord H. Lennox his amendment, he would have no objection to an address to the Crown for a commission to consider the law under which the penalty of death was now exacted, and to report whether it was desirable to make any alteration in it.—Mr. BRIGHT was willing to accept the compromise offered by the Home Secretary as the first step to a great and beneficial change in our criminal code. He reminded the House that every amelioration of that code had been carried against the opinion of the judges of the land, and that, if their recommendations had not been overruled, men would still be executed for sheep stealing and highway robbery. In his opinion, the security of human life depended upon inculcating in the minds of the people a veneration for that which God alone could give, and not on the barbarous contrivance of putting ten or a dozen men to a violent death every year.—Mr. NEWDEGATE replied at some length to the arguments of Mr. Bright, and vindicated the character of the judges for sagacity and humanity.—Mr. GILPIN expressed himself in unqualified terms in favour of the abolition of capital punishment.—Mr. ROEBUCK would minimise the punishment as much as possible, but could not consent to spare the life of the deliberate murderer.—Sir J. WALSH warned the House how it abolished the most deterrent of all punishments. He feared that life would not be safe if the extreme penalty of the law were not carried out in the case of wilful murder.—Mr. HIBBERT and Mr. MAGUIRE spoke in favour of the original motion. The motion and the amendment having been withdrawn, Mr. NEATE moved an address to her Majesty, praying her to issue a royal commission to inquire into the provisions and operation of the laws under which the punishment of death is now inflicted in the United Kingdom, and the manner in which it is inflicted, and to report whether it is desirable to make any alteration therein. The motion was agreed to.—Sir G. GREY obtained leave to bring in a Bill for further regulating the closing of *Public Houses and Refreshment Houses* within the metropolitan police district.—Mr. BASS obtained leave to bring in a Bill to abate the nuisance of *Street Music*. The *Customs and Inland Revenue Bill* was read a third time and passed. The *Insolvent Debtors (Ireland) Bill*, after a short debate, was read a second time. The *Partnership Law Amendment Bill* was considered in committee. On a division on the third clause it was ascertained that there were only 32 members present; the Chairman therefore left the chair, and the House adjourned.

WEDNESDAY.—*The Austrian Fleet.*—Mr. D. GRIFFITH gave notice that on the 13th inst., on the motion for the adjournment of the House for the Whitsuntide holidays, he should call attention to the permission which has been given to the Austrian squadron to leave these shores and take up a position favourable for the further prosecution of the war against Denmark, without any practical check or supervision by means of the presence of a British naval force. The House then went into Committee on the *Weights and Measures (Metric System) Bill.*—On the second clause, Mr. M. GIBSON suggested that as there was at present no knowledge of what the standard of weights and measures was, it would be well to appoint a royal commission to inquire into and settle that point before proceeding further with the Bill.—Mr. AYRTON was of opinion that steps ought to be taken for defining the metrical system and distributing the exact standards throughout the country, the understanding of which was necessary to the ultimate compulsory adoption of the system. Some discussion ensued, in the course of which Mr. M. GIBSON proposed the introduction of a clause legalising contracts made under the metric system; and finally it was agreed that the right hon. gentleman should take charge of the Bill in its future stages. Further progress was therefore postponed. The *Chief Rents (Ireland) Bill* was considered in committee, and some progress was made. The *Admiralty Lands and Works Bill* was read a second time. The *Promissory Notes and Bills of Exchange (Ireland) Bill* was read a third time and passed.—Mr. M. GIBSON obtained leave to bring in a Bill for confirming certain provisional Orders made by the Board of Trade under the *General Pier and Harbour Act* (1861).

THURSDAY.—*The Brazilian Question.*—MR LAYARD stated, in reply to Mr. MACAULAY, that no official communication had yet been received announcing the acceptance by the Brazilian Government of the proffered mediation of the King of Portugal in reference to the questions at issue between Brazil and this country. *The Case of Mr. Bewicke.*—Sir G. GREY said, in reply to Mr. H. BERKELEY, that the convict Hutchinson, sentenced to four years' penal servitude for perjury in the case of Mr. Bewicke, of Threepwood Hall, Northumberland, had been released on a ticket of leave after 18 months' imprisonment upon the recommendation of the judge who had tried him. *The Channel Fleet.*—In answer to Colonel FRENCH, Sir G. GREY said it was not true that the Aurora frigate had been ordered to the Baltic. *The Conference.*—Mr. DISRAELI invited the Government to give some information to the House with reference to the Conference.—Sir G. GREY replied that the Conference met on the previous day, and adjourned to Monday, when it would reassemble. He added that as it was the opinion of the members of the Conference that it was essential to the success of the Conference itself that its proceedings should be private, it was not in his power to inform the House why it had adjourned to Monday. *The Army.*—On the motion for going into committee of supply, Mr. ANGERSTEIN called attention to the difference between the number of soldiers' wives now permitted to embark with a regiment for foreign service and the number permitted to reside in barracks at home.—Lord LOVAINE called attention to the undue advantage given to civilians over officers of the army by the scale of travelling expenses allowed by the War Office.—Colonel NORTH brought under notice the hardship imposed upon the officers of Chelsea Hospital by having to pay rates and taxes for houses occupied by them in that establishment in the performance of their duties.—The Marquis of HARTINGTON offered some explanations in relation to these subjects. The House then went into committee of supply on the *Army Estimates*. Votes of 264,216*l.* for medical establishments, services, and supplies; 783,783*l.* for the disembodied militia, and 47,886*l.* for yeomanry cavalry, were agreed to. On the question that 39,200*l.* be granted for training and exercising the *Yeomanry Cavalry* during the present year, Mr. LAWSON moved the rejection of the vote, on the ground that a sufficient sum had already been provided for the defence of the country without expending a large amount on the yeomanry.—Mr. NEATE, Mr. W. WILLIAMS, and Mr. H. BERKELEY opposed the vote, which was defended by Colonel KNOX, the Marquis of HARTINGTON, and Colonel EDWARDS. On a division, the motion was rejected by 119 to 29. The vote was then agreed to.—The vote of 328,260*l.* for the *Volunteers* led to some discussion, in the course of which Mr. D. GRIFFITH inquired what the Government proposed doing for giving assistance or facilities for the clothing of the volunteers.—Lord ELCHO expressed his satisfaction at the liberal manner in which the Government had treated the volunteers, and said that with good management the capitation allowance was sufficient to maintain the corps in an efficient state.—The Marquis of HARTINGTON stated that it was not the intention of the Government to take any further steps to assist the volunteer force either by an increased capitation allowance or by supplying them with clothing. The vote was agreed to, as also a vote for 40,580*l.* for enrolled pensioners and army reserve force. On the vote of 973,631*l.* for stores in the manufacturing department, Lord ELCHO called attention to the arming of the troops, and advocated the adoption of a breech-loading arm, on the ground that as a small army like ours was likely to contend with a superior force, it was absolutely necessary that it should be furnished with the most efficient weapon. He was informed that the breech-loading principle might be applied to the Enfield rifle at a cost of 10*s.* each, and he urged upon the Government the desirability of trying the experiment.—The Marquis of HARTINGTON said that the narrow bore rifle of Mr. Whitworth had been proved to be a better weapon than any other nation possessed, but that the Government were not indisposed to try the large bore rifle, and also the breech-loader, 2000 of which had already been ordered, and would be reported upon.—Sir H. WILLOUGHBY complained that there was no means of knowing the stock in hand, or of supplying information with reference to the enormous branch of expenditure connected with stores and the manufacturing departments. He proposed to reduce the vote by 6000*l.*, which would bring the charge for the small arms department down to that at which it stood in 1862-3.—Mr. COBDEN censured the wasteful system pursued in the Government factories, and intimated that he should bring the whole question before the House in the course of the session. The motion having been withdrawn, Lord ELCHO charged the Government with having ignored the report of the small arms committee, and with the view of extracting some pledge from them, moved the reduction of the vote by the amount of the item for small arms establishments.—The Marquis of HARTINGTON defended the vote, and denied that the report of the small arms committee had been ignored. On the contrary, the War Department had acted upon several of its recommendations. In the discussion that ensued, Sir F. SMITH, Colonel BARTTELOT, Captain JERVIS, Lord C. PAGET, and others took part, and ultimately the motion to reduce the item was negatived by 80 to 35. The vote was then agreed to, as was also a vote for 572,519*l.* for warlike stores. The vote of 750,870*l.* for works and buildings was under discussion when the chairman reported progress.—The *Under Secretaries Indemnity Bill* was read a second time. The *Local Government Supplemental Bill* passed through Committee. The *Union Assessment Committee Act Amendment Bill* and the *Joint-Stock Companies (Foreign Countries) Bill* were read a second time.

FRIDAY.—*Denmark and Germany.*—Mr. NEWDEGATE asked whether the Government intended to adopt measures likely to be more effectual in relieving the Danes from oppression.—Sir G. GREY hoped that the result of the Conference would be the declaration of an armistice. Her Majesty's Government had been in communication with the other Powers in reference to the measures most proper to be adopted with regard to the termination of the war and a satisfactory termination of existing differences. *The German Squadron.*—Sir G. GREY repeated, in answer to a question from Mr. GRIFFITHS, that assurances had been received that the object of the Austrian squadron was merely to protect German trade in the Elbe and the Weser. *Public Schools Commission.*—On the order for going into Committee of Supply, Mr. G. DUFF called attention to the Public Schools Commission. [Left sitting.]

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank directors on Monday raised the minimum rate of discount from 7 to 8 per cent., and on Thursday they still further raised it from 8 per cent. to 9 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90⅞ to ⅝ for Money, and 89¾ to 90 for Account; Three per Cents. Reduced, 88½ to ⅝; New Three per Cents., 88⅝ to ½; Annuities, 1885, 14 7-16 to ½; India Stock, 219; Ditto Five per Cent. Stock, 104⅝ to ¾; Ditto Bonds, 15*s.* dis.; Exchequer Bills, March, 8*s.* to 15*s.* dis.; Ditto June, 8*s.* to 9*s.* dis.—FOREIGN: Brazilian, 1863, 85; Dutch Certificates, 99½; Egyptian, 100¼ to 100; Greek, 22¼ to 22; Italian, 66¼; Mexican, 12½ to ¼; Peruvian, 1862, 85 to 84½; Portuguese, 1856, &c., 47½; Russian, 1822, 86; Sardinian, 85; Spanish Passive, 33¼ to 34⅛; Ditto Certificates, 11¼ to ⅜; Turkish, 1858, 68½ to 68; Ditto 1862, 70⅜ to ½; Ditto 100*l.* Bonds, 70½; Ditto Guaranteed, 99⅛; Venezuela, 1862, 54½ ex div.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,428,430	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	11,778,430
		Silver Bullion	—
	£26,428,430		£26,428,430

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,073,267
Rest	3,218,644	Other Securities	20,901,160
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,981,132	Notes	4,944,180
Other Deposits	12,278,903	Gold and Silver Coin	676,814
Seven days and other bills	561,542		
	£37,593,421		£37,593,421

May 5, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY: *April* 29.—BANKRUPTS.—C. ANDREWS, Bampton, Oxfordshire, Butcher—W. ANDERSON, Broad Street, Ratcliffe, House and Ship Plumber—J. BARKER, Howden, Yorkshire, Coach Builder—W. BRITTAIN, Monkwearmouth Shore, Durham, Grocer—J. BASTIN, Plymouth, Devonshire, late Provision Merchant—J. BOWEN, Little King Street, Camden Town, Calico Glazier—J. BAUGH, Malins Lee, Salop, Forge Roller—J. T. BOWER, Stockwell, Surrey, Accountant—W. BROWN, Sheffield Road, Barnsley, York, Watchmaker—C. BURTWELL, Old Kent Road, Plumber and Builder—L. BOWDEN, Orchard Street, Kentish Town, late Licensed Victualler—J. BOTTOMLEY, Saddleworth, Yorkshire, Woollen Manufacturer—J. BLACKSHAW, Doncaster, Yorkshire, Grocer—E. BEBB, Kerry, Montgomeryshire, Wheelwright—W. J. BOWES, Stainsbury Street, Stamford Green, Builder—W. BRADBURY, Bicester, Oxfordshire, Baker—M. COOPER, St David, Exeter, Accountant—T. CHUBB, Shrewsbury, Timber Merchant—J. COOKSON, Hoylake, Cheshire, Publican—J. CLARK, Thorverton, Devonshire, Licensed Victualler—M. CLARK, Sussex Terrace, Camden New Town, Amanuensis—G. C. DONON, Chelmsford Terrace, Harrow Road, Business Transfer Agent—M. DOYLE, Birkenhead, Coal Dealer—W. DRAKE, Heely, Yorkshire, Mineral Merchant—G. S. DAVIES, Stockwell, Surrey, Railway Station Master—H. DENEELEY, Liverpool, Grocer—R. EVANS, Abergavenny, Monmouthshire, Innkeeper—I. FROSSOMER, Grocer—HENRY FLETCHER, Wood Street, Cheapside, Coal Merchant—JAMES FOREMAN, Prowse Street, Prowse Mulgate, Norwich, Builder—T. FITTON, Evesham, Worcestershire, Miller—T. B. FOX, Weymouth Street, Portland Road, Marylebone, Assistant to a Mineral Water Manufacturer—J. GRAINGER, late of Tower Street, Westminster Road, Grocer—F. GIBSON, Mary Ann Place, Old Ford, Baker—E. T. GOURLEY, Esq., Shipowner, London and Sunderland—C. B. HERMISWAY, Derby, Painter—J. HERRING, Handsworth Woodhouse, Yorkshire, Tailor—T. HOLLOWAY, Cross Lane, St. Giles's, Licensed Victualler—W. HOLLIS sued and known as W. MATTHEWS, Middle Row, Goswell Street, Beer Shopkeeper—R. H. HOTHAM, late of Thames Ditton, Surrey, Surgeon—W. HIGINBOTTOM, Hyde, Cheshire, Bobbin Manufacturer—G. HARTLEY, Bradford, Yorkshire, Milliner—C. E. HINSLEY, Wellington, Shropshire, Grocer—J. HASLER, Upper Thames Street, Lighterman—L. HEMMERTON, Nottingham, Agent and Warehouseman—H. M. JACKSON, late of Coventry, Silk Throwster—W. LAMB, Newark, Nottinghamshire, Cattle Dealer—R. LEES, Liverpool, Wood Hoop Maker—R. J. LEEDS, Armstrong Terrace, Woolwich Road, New Charlton, Saw Mill Proprietor—J. LONG, Watchet, Somersetshire, Butcher and Cattle Dealer—J. LOCKE, Lassada Street, Bethnal Green, Mason and Builder—R. MICHAEL, Drum Yard, Whitechapel, General Dealer.—J. E. METCALF, Liverpool, Butcher—A. M'KENZIE, Esq., Merchant, Old Broad Street, Director of the Oriental Commercial Company—J. M'MASTER, Esq., Merchant, Eastcheap, Director of the National Financial Company—W. NASH, Merton, Surrey, Baker—H. C. NAYLOR, Hoyland, Yorkshire, Butcher—J. OATES, Dewsbury, Yorkshire, Broker—N. O'DONNELL (sued as T. Fox), Wellington, Salop, Dealer in Boots and Shoes—HUMPHREY PEARSON, Golcar, Yorkshire, Cloth Manufacturer—JOHN MORRIS PROTHEROE, the Square, Beaufort, Coal Agent—J. C. RIDGWAY, late of Upper Park Street, Islington, Commission Agent—J. RUMNEY, Upper Clapton, Tailor—W. ROWLAND, Swallow Street, Piccadilly, Tailor—J. SCARBOROUGH, Birkenhead, Gasfitter—W. SEMMENCE, Town Green, Wymondham, Norfolk, Bowl Turner—W. STANTON, sued as W. STANTON, Birmingham, Journeyman Machinist—C. SOUTHAN, Bewdley, Worcestershire, Coal Dealer—B. M. STEAD, Kingston upon-Hull, Merchant—W. SCARLETT, Hanley, Staffordshire, Chemist and Druggist—H. STEEL, Devonshire Place, Commercial Road, Packing Case Maker—D. SMITH, Worcester Street, Wolverhampton, Fishmonger—T. STANHOPE, late of Grove Villas, Homerton, Stationer—W. SUTTON, Bartlett's Passage, Fetter Lane, Printer—G. SMITH, Brandeston, Suffolk, Farmer—W. VOLANS, Peter Gate, Yorkshire, Drapers' Assistant—L. F. VOGEL, Union Street, Southwark, Commission Agent—W. P. WAY, Andover Road, Hornsey, Builder—J. WATKINS, Hereford, Builder—T. F. WRIGHT, Hanover Street, Pimlico, Sub-editor of a Newspaper—W. WORTHINGTON, jun., Winsford, Cheshire, Salt Manufacturer—R. WARDLE, Bishopwearmouth, Durham, Engine Fitter—J. WESTON, Quarrybank, Staffordshire, Puddler—H. WHITEHOUSE, Shut End, Kingswinford, Staffordshire, Engine Fitter—L. WALKER and G. F. LYDE, Leeds, Cloth Merchants.

SCOTCH SEQUESTRATIONS.—A. MACFARLANE, jun., Thornhill, near Falkirk—A. M. BUCHANAN, Glasgow, Warehouseman—A. RENNIE, Aberdeen, Slater—R. RITCHIE, Glasgow, Baker—THE ROUGHRIGG COAL COMPANY, New Monkland.

TUESDAY: *May* 3.—BANKRUPTS.—H. ABERY, Chitterne All Saints, Wiltshire, Carpenter—J. BURY, sen., Manchester, Joiner—E. F. BIRD, East Greenwich, Grocer—J. BOOTH, Warrington, Lancashire, Flagger—W. COLYER, late of Lucas Terrace, Rosswell Row, Limehouse, Grocer—R. COLLEDGE, Aston, Warwickshire, Collector to an Insurance Company—R. CAMPBELL, Birmingham, Stone Mason—M. CRANSHAW, Great Bolton, Lancashire, Journeyman Draper—T. CLARKE, Morcott, Rutlandshire, Lime Burner—W. H. DEAN, Farringdon Road, Auctioneer—T. DENT, Wolverhampton, late Provision Dealer—W. DENMARK, late of Blackburn, Salt Dealer—H. J. LIVERY, Stratford, Essex, Book-keeper—WILLIAM ELLIOTT, Gateshead, Durham, Joiner—J. EWELL, Sandwich, Kent, Clerk—W. J. GARRARD, late of Halstead, Essex, Commercial Traveller—T. GILLIAM, Mitcham, Surrey, Innkeeper—W. HURD, Radnor Street, Chelsea, Hot Water Apparatus Manufacturer—F. HICKMAN, Kinfare, Staffordshire, Farmer—H. HEWLAND, Kingston upon Hull, Butcher—E. S. HILLS, London Road, Clapton, Schoolmistress—J. F. HOGG, Kingston-upon-Hull, late Commission Agent—J. HARRISON, late of Stockport, Cheshire, Innkeeper—W. HORNE, New Brompton, Kent, leading Man in Metal Mills at her Majesty's Dockyard at Chatham—W. HOLDER, Portsea, Beer Retailer—S. HOWE, Great Portland Street, Marylebone, Bricklayer and Builder—T. HOWARTH, late of Heybergham Lanes, Lancashire, Farmer—JOHN HARDING HOPKINS, Avening, Gloucestershire, Innkeeper—JOSEPH IVINS, Rugby, Warwickshire, late Carpenter—WILLIAM JACKSON, Tranmere, Cheshire, Joiner—THOMAS JONES, Llandaiog, Carmarthenshire, Shopkeeper—THOMAS JONES JENKS, Liverpool, Attorney's Clerk—R. KAY, Todmorden Yorkshire, Cotton Manufacturer—C. KILPIN, Paddington Street, Marylebone, Watchmaker—C. KNOTT, Holloway Road, Holloway, Hair Dresser—J. LEWIS, Birmingham, late General Dealer—R. LEGG, Farnham, Surrey, Coal Merchant—R. MARTINS, West Green, Tottenham, Cattle Salesman—A. J. MULLAR, Marylebone Road—H. M'ROBIE, Boston, Lincolnshire, Blacksmith—I. MITCHELL, Vincent Terrace, Islington, Bank Clerk—T. MONCK, Portsmouth, Fishmonger—C. NEWITT, Thame, Oxfordshire, Furniture Broker—J. PARIS, Portsea, Builder—J. PHILLIPS, High Street, Poplar, Tailor—ANDREW FARR PHILLIPS, late of John Street, Edgware Road, Publican—JAMES PRIESTLY, Ramsbottom, Lancashire, Provision Dealer—JACOB RIDLEY, Dacre, Cumberland, Butcher—W. RICHARDSON, Woking, Surrey, Publican—J. RABN, Wimborne Street, New North Road, Auctioneer's Clerk—R. STORY, Newcastle-upon-Tyne, House Carpenter—R. SMITH, Chichester, late Plumber—J. E. SHAW, Fleet Street, City, Tailor—W. STEVENS, Rufford's Buildings, Islington, Carpenter—J. S. SKELTON, Norwich, Tailor—J. SMITH, Birmingham, Coppersmith—J. TAYLOR, Arlecdon, Cumberland, Stonemason—J. TOOLEY, jun., Downham Market, Norfolk, Currier—G. TAYLOR, Brandon, Norfolk, Miller—GEORGE VAN HARE (sued as GUILLAUME VAN HARE), Stafford Place, Pimlico, Circus Proprietor—R. WHEATLY, jun., Norwood New Town, Baker—C. H. WOOD, late of Heaton Norris, Lancashire, Licensed Victualler.

SCOTCH SEQUESTRATIONS.—W. G. HAIG, Glasgow, Merchant—J. R. HUNTER, Inverness, China and Stoneware Merchant.

Metropolis and its Vicinity.

GENERAL GARIBALDI.—A telegram was received at Stafford House from the Duke of Sutherland on Wednesday morning, stating that the yacht Undine arrived safely at Gibraltar on Tuesday with General Garibaldi on board, and would leave again last night for Caprera. All were well on board. The Lord Mayor continues to receive letters and telegrams from various parts of Italy expressive of profound gratitude for the enthusiastic reception of General Garibaldi by the English people. The latest are from the municipalities of

Avellino, Chiavari and Santa Maria di Capua, and the Society of Operatives and Artists in the city of Varese.

THE ROOF OF GUILDHALL.—At a special Court of Common Council on Monday a report from the improvement committee was read in reference to the new roof for Guildhall now in course of construction. It appeared that the Court, on the recommendation of the committee some time ago, authorised the construction of a new roof, after a design by their late architect, and at a cost of upwards of 17,000*l.*, and that the contract was undertaken by Messrs. Myers. The work was unavoidably interrupted by the entertainment given by the corporation last year in honour of the marriage of the Prince and Princess of Wales, and has since been resumed. The Committee have recently discovered, since the resumption of the work, that the roof in course of construction is neither an oak nor an open one, as they had been led to suppose it would be; nor is it in harmony with the character of the building itself. They therefore, on the advice of Mr. Digby Wyatt and Mr. Roberts, brought up a report recommending the adoption of a design for a roof wholly of oak, and open, and similar to the original roof, which, with the building itself, dated from the 15th century. They also recommended the opening of 16 Gothic windows as they originally stood, but which have for many years been filled up and thereby rendered unsightly. The contemplated alterations in the design and material of the roof, would increase the existing contract by about 2500*l.*, and the windows might be opened as proposed at a cost of from 75*l.* to 250*l.* each. Mr. Kelday moved the adoption of the Report. Mr. Rowe argued that the wiser course would again for the Corporation to build a new hall altogether rather than expend 18,000*l.* or 20,000*l.* in patching up the old one. The report of the committee was unanimously adopted and referred back to them for execution. It was stated, in the course of the discussion, that the new roof would be completed by Lord Mayor's Day.

PROPOSED GALLERIES AT SOUTH KENSINGTON.—The Commissioners appointed to award the premiums for the designs submitted in competition for the Galleries, comprising Lord Elcho, in the chair, Mr. Tite, Mr. Roberts, Mr. Fergusson, and Mr. Pennethorne, on Friday awarded the first premium to the design distinguished by the motto, "*Ad ogni uccello*"; the second to that marked "To build well"; and the third to that inscribed "*Pro Rege et Lege*." This report having been forwarded to the Right Hon. W. Cowper, Chief Commissioner of Works, and the letters opened, it was ascertained that the first premium of 400*l.* had been awarded to Captain Fowke; the second, of 250*l.*, to Professor Kerr; and the third, 150*l.*, to Mr. Borthwick. The decisions are said to have been unanimous.

BLACKFRIARS BRIDGE.—The temporary bridge at Blackfriars is now nearly completed, and is adapted by its solidity, and the mechanical principles of its construction, to last quite as long and bear as heavy a traffic as the old bridge. It is constructed of wood in two floors or stories, the necessary accommodation for carriages and foot passengers being thereby secured at the least expenditure of space and material. It is 990 feet in length, the upper story being 16 feet above that designed for carriages, and accommodating foot passengers by means of two footways, each 9 feet in width; the footways of old Blackfriars being only 7 feet wide. The lower floor is 26 feet in width, which is the same width as the roadway of the old bridge. The piles on which the bridge rests are only 18 feet apart, and are driven 10 feet into the bed of the river; and the transverse piles which carry the roadway are only 7 feet apart from centre to centre. These parts are braced together with great firmness, so that the vibration common to wooden bridges will be reduced to a minimum. The openings for the river are each 70 feet span, formed of iron girders 6 feet in depth. The incline of the old bridge was 1 in 24, but for the roadway of the wooden bridge the same gradient as that of the new Blackfriars Bridge has been adopted, namely, 1 in 40; but, as the footway for passengers is carried 16 feet above the roadway, pedestrians have to ascend gradients of 1 in 10 at the approaches, the remainder of the journey being almost a dead level. The first pile of the bridge was driven on the 11th August last, and the bridge was finished in a period of less than eight months. The number of piles which support the bridge is 300, and the depth of the timber below high water mark is 40 feet.

THE STEAM RAMS.—On Friday Messrs. Fletcher, Hull, and Stone, the solicitors of Messrs. Laird in the case of the steam rams, received a telegram stating that the commission has been executed in Egypt, and that the commissioners will reach London on the 7th of May. The trial will take place in the Exchequer Court on Friday the 27th. The trial will be "at bar," that is to say, by a special jury where all the judges will preside, and where each judge may sum up, making such observations on the law of the case as may occur to him. It is the privilege of the Crown to demand a trial in this form, but it has not been exercised for many years.

NEW FREEMASONS HALL.—The Earl of Zetland, as Grand Master of the Freemasons in England, accompanied by Earl de Grey and Ripon, Deputy Grand Master, and the Duke of Leinster, as Irish Grand Master, last week laid the foundation-stone of a new hall about to be erected, at an estimated cost of 50,000*l.* near to the old hall of the order in Great Queen Street, Lincoln's Inn Fields. The ceremony furnished occasion for a grand muster of the body generally, as well those resident in the provinces as in the metropolis, and for a display of the pomp and pageantry customary on high festivals. Among the members who took a leading part in the proceedings were the Persian Ambassador, the Minister of Hayti, Lord Sherborne, Lord De Tabley, Lord Otho Fitzgerald, the Hon. George Handcock, Admiral Sir Lucius Curtis, Sir Watkin Wynn, M.P.; Mr. Cornwall Legh, M.P.; Mr. F. Dundas, M.P.; Mr. A. Smith, M.P.; Mr. Greenall, M.P.; Sir F. Gore Ouseley, Professor of Music in the University of Oxford; the Rev. Sir J. W. Hayes, Mr. Fenwick, M.P.; Mr. Havers, chairman of the Building Committee; Mr. A. Dobie, &c. The object of the proposed building is to supply in a manner more complete and convenient in all respects than the old hall and offices were capable of providing, a great central gathering place for the body of Freemasons, and one wholly separate from the arrangements of a tavern. It will be erected after a design by Mr. F. P. Cockerell, the architect, and built of Portland Stone, with a handsome façade towards Great Queen Street, supported by polished granite columns. It will run parallel with the present hall, with which it will be connected by a handsome corridor, and it will be approached by a noble flight of stairs leading from the portico. The Masonic portion of the building will comprise a spacious coffee-room, a library, and all other suitable accommodation; and the old hall will be re-embellished in a style corresponding with the decorations of the new one, thus furnishing a suite of rooms of stately dimensions. This work has been undertaken from a regard to the constantly increasing number of the fraternity, especially of late, as many as 2000 new members having, it is said, been admitted within the three months of the present year into the Grand Lodge of England. In the whole of England there are about 1000 lodges, each averaging 40 members, or containing in all 40,000 in round numbers. The Grand Lodge possesses a large amount of funded wealth, besides freehold property of considerable value, and there are several noble charities connected with it. Of these one is a boys' school at Wood Green, Tottenham, now being rebuilt at a cost of about 18,000*l.*; a school at Wandsworth, where from 80 to 100 girls are maintained and educated; an asylum for aged and decayed masons at Croydon; and an annuity fund for aged men and widows, supported by voluntary contributions, the Grand Lodge giving 800*l.* a year. After the foundation stone had been formally laid, the Rev. A. F. Woodford, Grand Chaplain, delivered an address in the presence of the Earl of Zetland, Earl de Grey and Ripon, the Duke of Leinster, and the rest of the fraternity present. At the conclusion of the ceremony the members dined together at the Freemasons' Tavern.

DESTRUCTIVE FIRES, AND ACCIDENT TO THE BRIGADE.—Yesterday morning, at an early hour, a fire occurred at Norton-Folgate, Bishopsgate Street, which nearly proved fatal to several of the Fire Brigade, It originated on the premises, occupied as a beershop by Mr. J. Parr, a three-storey building. On the alarm being raised the fire was found to be raging at the back, and was making rapid progress up the staircase to the upper rooms. As soon as the information reached the Brigade station in Bishopsgate Street, the fact was telegraphed to Captain Shaw, who called out all the engines from half-a-dozen stations for service. By the time the earlier force reached the spot the fire had possession of the whole of the back portion of the premises, from the basement to the roof, and there seemed little probability of any part being saved. The firemen led their hose into the burning premises, and followed the fire up. Having scoured it out from the basement they went up the staircase and eventually into all the rooms in the house, and succeeded by those measures in getting the fire subdued. Captain Shaw, Mr. Bridges, and several other officers and men (about 12 in number), also some of the Duke of Sutherland's amateur firemen, were in various parts of the premises, extinguishing the burning embers, when a loud cracking was suddenly heard, and the next instant the back of the house fell with a heavy crash, burying several of the men. Some escaped from the front windows by a fire escape, which was placed against the front of the house. Captain Shaw, Mr. Bridges, and four or five others who were in the shop, were partially covered in dust, but sustained no injury. Two or three of the men who were in the upper floors fell with them to the bottom, and it was almost a miracle they were not killed. One officer named Flinn, attached to Whitecross Street, was buried underneath the ruins or nearly half an hour before he could be extricated, but was found not to be so much injured as at first feared. Some of the adjoining houses sustained a great deal of damage. About an hour after this outbreak another fire broke out in Castle Court, Lower Whitecross Street, in a house let out in tenements. Each floor was occupied by a family, and their excitement and terror when the place underneath them was found to be on fire was very painful. By the prompt attendance of the fire escapes all the people were saved, though everything they possessed was destroyed, for the flames extended throughout every room in the house, and subsequently part of the premises fell in. One young married woman, living with her husband and two young children in an adjoining house, died from fright at the outbreak of the fire. She was in bed at the time, and was awoke by the cries in the next house. Seeing the flames issuing from the window, she gave a scream, and fell back dead.

EXECUTION AT NEWGATE.—The execution of J. Devine, the Marylebone murderer, took place on Monday morning at Newgate. He had previously made a full confession of his guilt. The number assembled to witness the execution was very small, and bore no proportion to the crowds that usually collect on such occasions.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended on Saturday, April 30, were 1307. No deaths from small-pox were registered in the week, a circumstance which has not occurred before since the prevalence of that disease in the metropolis. The average number in the corresponding week of the ten years 1854-63, corrected for increase of population, was 1321. The present return is therefore 14 below the average. During the week the births of 1006 boys and 940 girls, in all 1946 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 1971.

Provincial.

BIRKENHEAD.—The police a few days since discovered a "den of thieves" in this borough in a very singular manner. A policeman had taken a man and woman who were found begging in Oxton, and on making a descent on the house where they resided, the officers found it filled with known thieves, most of whom were helplessly drunk. They also found sets of burglars' tools, loaded pistols, bullet moulds, pistol balls and a very formidable kind of weapon, which might be used for housebreaking or defence.

BRADFORD.—Lord Palmerston has accepted the invitation to visit this town to lay the foundation stone of the new Exchange. The ceremony is to take place at the end of the present Session of Parliament, and there will, no doubt, be a general holiday in the district on the occasion. His lordship, during his visit, is to be the guest of Mr. Henry W. Ripley, of Lightcliffe, President of the Bradford Chamber of Commerce.

BRISTOL.—John Goodenough, the promoter of several very large robberies in the south of England, and whose booty it was that was recently found in Windsor Forest, has been captured by the police of this city. He has assumed various *aliases* from time to time, and when arrested by the detective police, acting upon information received from the Hants county constabulary at Gosport, he was known by the name of "Captain Smith," and the furniture of his house was packed up in readiness for removal to another part of the country. Although somewhat below the middle stature he is a powerful and determined man, and three of the officers who aided in capturing him were wounded. Upon him was found a six-barrelled revolver loaded with ball and capped, which there is no doubt he would have used had he not been adroitly seized when not aware that he was in the company of a detective officer. On a previous occasion, however, when an attempt was made to capture him in another part of the country, he held his assailants at bay by the production of his revolver, and managed to escape. He was removed to Gosport, and has been committed for trial at the assizes on three separate charges of burglary. It appears that some years ago he was transported for burglary, and his re-appearance created considerable surprise. It has not, however, been ascertained whether he obtained a ticket of leave or made his escape.

CAMBRIDGE.—The Council of the Senate have issued a report in which they state that they have understood that it would be more agreeable to the Prince and Princess of Wales to fix an earlier period than the 10th of June for their visit—viz., from the 2d to the 4th of June, so that they may be present in the University before the members have separated for the long vacation. The Council therefore recommend that the honorary degrees be conferred on the 3d of June, and that the Vice-Chancellor be authorised to fix the day and time for reciting the prize exercises.

CANTERBURY.—A flattened bullet has been extracted from the neck of the girl Esther Cullen, who was shot by her sweetheart, a man named Horton, at the house of Mr. Bigden, in whose service she was living as domestic servant, in this city, on the 27th March, the man afterwards committing suicide by shooting himself and cutting his throat. It will be remembered that at the inquest the superintendent of police gave evidence that, in his opinion, no ball had been discharged from either of the pistols, but that the bullets had dropped out, and that the injuries merely resulted from the discharge of the powder. This, however, turns out to be incorrect. The girl is slowly recovering from the effects of the shock.

DONCASTER.—On Saturday, at the West Riding police-court, William Wingfield was charged with attempting to murder his housekeeper, Mary Brad-shaw, on the previous night at Brodsworth, a village about six miles from this town. The prisoner is a man respectably connected, and for a number of years has carried on the business of wheelwright and joiner. At present it is not known what led to the disagreement with his housekeeper, but a quarrel arose, which resulted in her leaving his house, and she proceeded to her father's, only a short distance. The prisoner

followed her, armed with a double-barrelled pistol, which he deliberately fired at her, but the woman seeing her danger fortunately struck his arm upwards, and it is supposed the ball missed her, although this at present cannot be accurately ascertained. The prisoner attempted to discharge the other barrel, but it missed fire. He then savagely attacked her with a poker, and beat her dreadfully upon the head. Her screams brought Mr. Wilson, a neighbour, to the house, and he courageously assisted her, and prevented Wingfield from discharging the pistol at her again. Wingfield then pointed the pistol at Wilson, but it missed fire. He followed his housekeeper into the house, and there again attacked her with the poker, but Wilson held him and prevented him from doing further mischief. Other assistance arriving, the prisoner was given into custody. The poor woman was found to be dreadfully bruised upon the head by the blows from the poker and on Saturday was in a very critical state. The prisoner was remanded, the magistrates refusing to accept bail. No motive is assigned for the outrage.

Dover.—While some workmen were excavating in the neighbourhood of this town a few days since, they came upon some very interesting Roman remains, buried at a depth of 10½ ft. from the surface. The articles discovered comprised a *dolium* 22 in. high and 18½ in. in diameter, in which was a remarkably beautiful long-necked glass *ampulla*, 7 in. high, in perfect preservation, marked with some letters not yet satisfactorily deciphered; another *dolium* of similar character, containing a broken *patera*, 7½ in. in diameter, of Samian ware; a roughly-glazed vessel of black ware, 14 in. high and 13 in. in diameter; a gracefully-formed vessel, 10 in. high, nearly perfect. At the bottom of the vases calcined human bones were found, which is somewhat remarkable, as they are such vessels as were used for domestic purposes, and quite unlike proper cinerary urns. These relics have been carefully preserved, and extensive excavations will shortly be made at the spot, when it is believed that further discoveries will be made of much interest to the antiquarian.

Halifax.—On Sunday afternoon a woman named Ellen Bottomley, 46 years of age, and wife of Mr. Joseph Bottomley, mason of Clifton, near this town, was accidentally shot by her daughter, under very shocking circumstances. Her husband had just loaded his gun for the purpose of shooting a rat which he had seen in his garden, but had laid the gun down again without using it. About the same time deceased had been remarking to a friend in the house how well her daughter could handle a gun with caps on. Shortly after this the daughter went into the room where the gun was placed, brought it into the kitchen where her mother was seated, and thinking it was not loaded, but had a cap on merely, said something to her mother in a jocular strain as to the way in which she used the gun, and drew the trigger. The contents of the gun entered Mrs. Bottomley's head, killing her on the spot. The horror of the unhappy girl was great, and she continued in a very depressed state of mind through the remainder of the day and the following night. An inquest on the body was held on Monday afternoon, when the jury returned a verdict of Accidentally Shot.

Hartlepool.—Another north-country brig has been fired into by the Spanish fort of Tarifa, in the Strait of Gibraltar. The Safeguard, belonging to this port, in ballast from Barcelona, in passing this port, about two miles from the shore, was fired into, when the ball, a 28-pounder, passed through the ship's side, and lodged in the ballast. None of the crew were hurt, and fortunately the vessel was struck above the water line, or she might have sunk. The Mountaineer, which was shot into a short time ago and had a man killed, had not her flag up, and did not salute the fort, and it is thought that this vessel had also neglected to do so.

Harwich.—On Thursday William Norton, aged 18, the son of a labourer, was charged before the bench of magistrates sitting at Thorpe, with an aggravated assault upon a maiden lady named Nunn. It appeared that the prosecutrix is staying at Walton-on the-Naze, with an invalid sister, for the benefit of the sea air. On the morning of the 23d ult. she was walking along the beach near Walton Low, towards this town, when she was stopped by the prisoner, who told her she could not go any further unless she paid him a toll of 2*l*. She informed him that she had no money then with her, when he took hold of her and threw her down on the beach. She struggled with him, and after great efforts recovered her feet, when he threw her again twice, and she continued to struggle with him for more than 300 yards, when she succeeded in getting away. She gave an alarm, and the prisoner was pursued and apprehended. On the part of the prosecution, the magistrates were asked to deal summarily with the case, in order that the presence of Miss Nunn, who was in a delicate state of health, might not be required. It was accordingly arranged to take this course, and the prisoner, who pleaded Guilty to the charge, was sentenced to six months' hard labour.

Hereford.—At the Guildhall on Monday, the first prosecution under the provisions of the Poisoned Grain Act was taken. Mr. Day, builder, summoned William Hardman, under the 31 section of the 26th and 27th Vict., cap. 113, known as the Poisoned Grain Act. Mr. Day deposed that he resided in White Horse Road, and kept pigeons for his amusement. Defendent was in the habit of visiting an adjoining garden belonging to his employer. The prosecutor having been informed that some of his pigeons had been destroyed, on the following morning went into his garden, and kept watch. He saw defendant come from a greenhouse, and strew something on the ground, and when he had left complainant sent one of his workmen over to pick it up, It proved to be grain, and, having since been subjected to chemical tests by the manager of the Herefordshire Manure Company's works, had been found to have been impregnated with strychnine. The solicitor for the defendant at once admitted the offence, but relied upon the fact that the Act only passed in July last year, and was therefore not generally known. As it was the first case that had been brought under the Act he hoped the bench would only inflict a slight penalty. The bench commented upon the dangerous nature of the offence, and, hoping that this would be the means of making the public acquainted with the provisions of the Act, they fined defendant in the nominal penalty of 5*s*. and costs.

Liverpool.—There appears to be good reason for anticipating that Liverpool will present a yacht to General Garibaldi. A gentleman in this town is in possession of a screw steam yacht which was built on the Clyde for a nobleman, and he is willing to sell her for 1800*l*., or somewhat less than half the original cost. She is fully equipped, and can be sent to sea within 24 hours; and gentlemen who have inspected her state that she is in every respect well suited to Garibaldi, her size and machinery being such that the General and his own family, after a few hours' instruction, would be quite competent to manage her. A large yacht, requiring six or eight men to sail her, would be beyond the requirements, and probably beyond the means of Garibaldi; and a sailing yacht, however good a craft she might be, might, owing to the frequent calms in the Mediterranean, become useless to her owner at the very time that he wished to leave or return to his island home. This screw steam yacht is therefore pronounced to be the very thing that would suit Garibaldi. The working classes of Liverpool are to have the first opportunity of purchasing this gift, and 250*l*. has been already subscribed; but if they fail to take up the matter promptly, there are 30 or 40 gentlemen in town who would readily undertake to subscribe or rafse the requisite sum for the purchase of the yacht, her owner being prepared to head the list of subscriptions.—On Monday morning the Confederate war steamer Georgia, Capt. Evans, arrived in the Mersey and anchored opposite the landing stages. She has a black hull and funnel, mounts six guns, and is manned by 60 men. She is understood to be under the actual command of Lieutenant Maury, a well-known officer in the Confederate service. She was last at Bordeaux, but has captured no prizes. During the early part of the day she was an object of considerable interest, and there was no lack of speculation as to her object in visiting Liverpool, hints being even thrown out that it had something to do with Mr. Laird's steam rams, or with the transfer of her crew to the Alexandra. Later in the day it was learnt, on satisfactory authority, that she had been brought to Liverpool to be sold, the reason being that her performances as a cruiser are not satisfactory. Her powder and shell were removed according to the harbour regulations, and in the afternoon she was taken into one of the Birkenhead docks.

Lynn.—A few weeks since the papers announced the discovery of a rich vein of iron ore on the estate of the Prince of Wales at Sandringham, which the reported discoverer, Mr. James Wright, of this town, estimated as worth at least a million of money. A few days ago Mr. Wright received an official intimation that his Royal Highness had decided not to have the iron stone worked, as its working would entirely destroy the retirement afforded by the estate, and for which the amount of money that might be realised would not be an equivalent, that being one of the principal objects sought in purchasing Sandringham.

Maresfield.—On Saturday night last two slight shocks of earthquake were experienced in different parts of this parish. The first shock was distinctly felt between 11 and 12 o'clock, after most of the inhabitants had gone to bed, and it lasted for fully 12 or 15 seconds. The shock, which was accompanied by a peculiar kind of vibratory motion, and by the violent shaking of doors, windows, &c., was distinctly experienced in several houses in different parts of the parish. It appears to have been most perceptible at Forest Lodge, the residence of Captain Noble, where the inmates were thrown into a state of great alarm by the occurrence. At Sheffield Park, the seat of the Earl of Sheffield, the earthquake was felt by all the members of the family and household. The time recorded here is 6 minutes past 11. Among other indications the butler heard the mortar fall behind the wainscot, and a loose bar attached to the window shutter oscillated and struck the shutter. Lord Pevensey and Mr. Douglas Holroyd, who were at Lord Sheffield's, experienced the phenomenon. At Scaynes Hill the bells at the public-house distinctly vibrated, while at Fletching the family of Mr. Jones were disturbed by a rumbling noise. Similar sensations were experienced at Buckham Hill and at Chailey—more especially at two cottages at the latter place, where the shock seems to have been more severely felt. In the town of Lewes the shock was also distinctly felt. One lady while speaking to her servant in the kitchen, a few minutes after 11 o'clock, heard a sudden shaking of the front door and windows, the unusual violence of which greatly alarmed the servant girl. Thinking the shaking noise was occasioned by the return of her husband, who had been out upon some business, the servant went to look, and was surprised to find that no one had entered. As the house stands in close proximity to the railway, and is frequently shaken by the motion of passing trains, this violent agitation of the door and windows was at the time attributed to this cause. Shortly after midnight, when this lady had retired to rest, she states that she heard a peculiar and rushing sound, as if of hail or rain being forcibly driven against the windows, and was quite astonished the next morning to find that there was no appearance whatever of rain or hail having fallen during the night. In the parish of Fletching the shock was so distinctly felt that many persons supposed there must have been a serious explosion of gunpowder somewhere, and one gentleman says, "I was sitting reading on the ground-floor at the time, and my chair quite shook under me." The second shock, which was not so marked as the first, took place shortly after midnight. Neither of the shocks appears to have been attended with serious consequences of any kind.

Northampton.—This town was last week the scene of a Roman Catholic ceremony of considerable interest. Cardinal Wiseman and seven other bishops, assisted by a large number of priests from different parts of England, officiated at the opening of the new church erected from the designs of Mr. Pugin, in the Gothic style. Mass was celebrated by Bishop Amherst, and the sermon was preached by Cardinal Wiseman. There was a large attendance of the laity. In the procession in the church many members of the Dominican, Benedictine, and Franciscan orders, in their robes, took part. There was a *déjeûner* afterwards at the George Hotel, which was well attended. At the evening service the sermon was preached by Bishop Ullathorne, of Birmingham.

Norwich.—The following motion was submitted to the Board of Guardians of this city on the 14th inst.:—"That the Rev. E. A. Hillyard having identified himself with certain persons calling themselves monks, whom he has allowed to participate in the services of his church, no longer holds the confidence of this Board, and is called upon to resign his situation as chaplain to the Norwich Workhouse." It was stated by the Chairman of the Board that the Bishop of Norwich, as soon as he learnt what had been going on in the church of St. Lawrence, in which Mr. Hillyard officiates, had required from him an explanation of his conduct. Mr. Hillyard had asked for time to give an explanation. On the motion of Canon Heaviside, the further consideration of the question was, under the circumstances, adjourned. In the meantime the pauper children attending St. Lawrence schools are no longer to be permitted to attend the services conducted by Mr. Hillyard.

Radnor.—A discovery of considerable interest to antiquarians has been made in digging for the foundation of the memorial to the late Sir George Lewis, which is to be erected in this town. Soon after the workmen had commenced operations, solid walls of great thickness were discovered, and on going down to the depth of 12 feet the floors of rooms, dungeons, court-yards, and dark passages of various kinds were seen. In fact, much of the remains of Radnor Castle was thus unexpectedly brought to light, many of the moulded windows and arched doorways being apparently but little injured. Some of the windows, indeed, contain their original iron gratings. The moulded details of the remains date back as far as the 13th century, and are good specimens of the style of that period. On these discoveries being made, the Committee consulted the architect of the memorial, Mr. John Gibbs, of Oxford, and the unanimous opinion was that the remains should be preserved and a fresh site selected. The memorial will now therefore be erected near the foot of the Castle Hill, and at a point where the road diverges from the Kington Road, a spot similar to that on which stands the Martyrs' Memorial at Oxford. Altogether the change may be considered advantageous, as the traveller on either road will now be able to examine the details of the memorial without the trouble of ascending the hill. It is expected that the memorial will be inaugurated in October next.

Worcester.—The young man Walter Jones, who, as already stated in our Provincial news, had been apprehended on the charge of shooting a policeman named Drew and a young girl named Bull, was taken before the mayor and a full bench of magistrates a few days since, and examined on the charge of shooting with intent, and also of stealing the pistol with which he made the murderous attack. It appeared from the evidence that as early as half-past 8 o'clock on the morning of the outrage the prisoner entered the shop of Mr. Perrins, gunsmith, and stole a case containing a six-barrelled revolver, with which he got clear off, without being seen by any of the people in the house. He then repaired to the racecourse, where he met the girl Bull, and asked her to walk with him, which she refused to do, when he pointed the pistol at her side and fired. The girl escaped instant death by a miracle. It seems she had just stolen a piece of an iron ploughshare, and was resting it against her side, when the ball from the pistol passed through her hand, struck the iron, and then glanced off without doing further injury. An alarm was given, as already reported, and Policeman Drew, of the Worcester force, having captured the

prisoner, was conveying him to the station, when he suddenly presented the pistol at the officer's head, and, pulling the trigger, the charge passed through his cheek. For several days he was in a precarious condition, but is now progressing favourably. The inquiry lasted a long time, and the court was crowded to the doors during the hearing. The magistrates committed him for trial. He was heavily handcuffed, having made more than one attempt to escape. Great sympathy is felt for the prisoner's family, who are highly respected in this city, where his father is one of the oldest medical practitioners.

YARMOUTH.—On the morning of the 27th inst., the bodies of a married woman named Elizabeth Grudgefield, aged 29, and her daughter, aged six years, were found in the Yare, near the icehouses of Messrs. Hewett, the fish merchants of this town. The bodies were lashed together by a rope, and it was evident that the woman had first tied the child to herself and had then jumped into the river. Her husband is a painter, and deceased led a very unhappy life through his neglect and cruelty. Her body was much bruised, and it was stated that on the previous evening she was beaten by women of bad character with whom her husband associated. At the inquest the evidence proved who the parties were that assaulted her, and proceedings were at once instituted against them. The jury found "That the deceased had destroyed her own life and that of her child while in an unsound state of mind;" and the Coroner addressed the husband in strong terms upon his cruel conduct. He was then taken into custody with two women and a man, all of whom were charged before the magistrates with assaulting the deceased. It was shown that the husband and the man held her clothes while the assault was committed. The magistrates sentenced one of the women to four months' imprisonment, with hard labour, the other to two months', the husband to three months and the man to one month.

YORK.—On the 31st of March a small farmer, named Bryan Terry, residing near Keighley, was tried at the Assizes, before Mr. Justice Byles, on the charge of having murdered his wife, by cutting her throat. He was found not guilty on the ground of insanity, and ordered to be confined during her Majesty's pleasure. He has since been in York Castle, the governor of which selected two other prisoners to be constantly with him. On Thursday forenoon Terry had seen some of his friends relative to signing a deed for the purpose of securing his property for the benefit of his children. Those friends were to see him again at 2 o'clock, but when they arrived at that hour he was dead. It appears that shortly before 12 o'clock, the deceased went into the day-room, where the cook brought the three men their dinners. The prisoner's companions lost sight of him for about a minute, and then found him hanging by the neck to the iron bar of the window, suspended by a pair of leather garters, which were buckled together. On being cut down he groaned once, and expired. The jury at the inquest found that deceased hung himself while in an unsound state of mind.

Ireland.

ARCHBISHOP CULLEN ON GARIBALDI AND IRELAND.—The month of May was ushered in by a pastoral from Dr. Cullen, which was read from all the altars in the diocess on Sunday morning. The reception given to Garibaldi in England was the first thing that occupied his attention, as a manifestation of the intense hatred which heresy and infidelity bear to the Pope. The Archbishop said:—

"An Italian adventurer, a man of no military genius, a man who was successful only when his opponents were bribed to submit to him, and whose career of rapine, perfidy, violence, and revolution was put an end to as soon as he encountered a handful of men faithful to their trust. Yet because this adventurer had proclaimed himself an enemy of the Pope, and had assailed the Catholic priesthood, and blasphemed the doctrines of the Catholic Church, and had apostatised from the faith of his baptism, hundreds of thousands of men and women went out to greet him as a hero, and the nobles and rulers of the land disgraced themselves by paying him honours almost divine. When the man who is the personification of every evil principle, and of everything dangerous to the Church and society, is thus treated in the empire under which we live, we have reason to apprehend great calamities and scourges, which can be averted only by prayer."

The Archbishop then proceeded to describe the oppressions and miseries endured by the Irish Roman Catholics. Nearly 3,000,000 have been forced to leave the land of their birth; trade and commerce are at the lowest ebb; great poverty prevails. "The Church Establishment, the greatest nuisance that ever afflicted or disgraced any nation, is still upheld." The tenants have no security for their improvements. The poor suffer greater hardships in the workhouse than convicts do in prison, so that poverty is punished as a crime. But as Moses defeated the Amalekites by prayer, so will the enemies of the Irish Roman Catholics be defeated by the same means—not by seditious societies or revolution. He concluded with a strong censure on the Fenians and other brotherhoods of that kind.

LOSS OF THE CITY OF NEW YORK.—The official inquiry into the loss of this vessel on Daunt's Rock, commenced in Cork on Friday and terminated on Monday. It resulted in the suspension of Captain Kennedy's certificate for eight months. Notice of appeal has been given.

LOSS OF THE GUNBOAT MAGPIE.—A court-martial was held last week on board the Hastings at Queenstown upon Lieut. Bell, the officer in command of the gunboat Magpie, when she went ashore on the coast of Clare. It appeared that the Magpie was going under steam and sail at about 11 knots an hour. Lieut. Bell left her in charge of the Quartermaster, with orders to call him if it came on thick, or if he did not feel confident of himself in sighting the Innisheen light. It afterwards did come on thick, but the Lieutenant was not called up until the boat struck. His defence was that the Quartermaster had disobeyed his orders. The Quartermaster on the other hand stated that he did not remember having received the orders in question. The highest testimony as to Lieut. Bell's character as a careful and skilful officer was adduced. The Court, after considerable deliberation, sentenced Lieut. Bell to be severely reprimanded; Quartermaster Harris to be reprimanded and deprived of his good conduct badges, and acquitted the other officers and men from all blame.

SUICIDE OF SIR THOMAS FITZGERALD.—On Wednesday last Sir Thomas Fitzgerald, Bart., of Golden Hills Tipperary, committed suicide by drowning in the river, Suir. He held a high position in the county, and was in the prime of life. He has left a widow and several children. At the inquest on Friday, the evidence showed that deceased had been in Dublin the greater part of the previous week, it is supposed with the object of making an arrangement with his creditors. He made a last effort to raise the amount of 300*l.*, for which an execution was in his house, but his solicitor failed to accomplish it, owing to the heavy liabilities under which he laboured. He went home by the train on Tuesday afternoon, having left a letter with his solicitor stating that he should shortly be no more, and indicating where his body would be found. He sent similar letters to other friends, requesting one of them to get his wife to break the sad news of his death to Lady Fitzgerald, and stating that his body would be found in the Suir at Pig Hole, where all the salmon are taken, near the whitethorn stump that was lately cut, concluding by saying, "The Lord have mercy on me and my poor family." His coachman said he drove the car himself on Tuesday from the station to his house. He drove carefully, but seemed angry, as if disappointed about something. The butler said his master reached his house at about half-past 12, and went up to Lady Fitzgerald's room. Ten minutes afterwards he returned and took some tea. When he had finished, and while the butler was removing the tea things, he went into his study, and afterwards went upstairs again. Shortly afterwards he unbarred the hall door and went out. He had taken no wine or spirits, and used never to take any. The servant, taking no notice of his going out, as he sometimes had occasion to do so, went to bed. After about an hour Lady Fitzgerald tapped at his door, and begged him to get up, as Sir Thomas had gone out and had not returned. The butler then went to the shrubbery, and not finding his master, Lady Fitzgerald became alarmed, and a second search with a lantern was made about the grounds in vain. At daylight the coachman was called, and when the search was about to be renewed, Lady Fitzgerald found a letter on a stand at the side of the bed from which it was evident that it was all over. The butler and coachman then went again to make a search, and found their master's hat and coat on the bank of the river, and 200 yards further down his body was found. The jury returned a verdict that deceased wilfully committed suicide by drowning, while labouring under temporary insanity. As a mark of respect and sympathy towards the family, all the shop windows in Golden have been closed since the sad occurrence. Sir Thomas Judkin Fitzgerald, Bart., was born in 1820; succeeded his father, who was lost on board the Nimrod steamer from Liverpool to Cork, in 1860; and married in 1845 Emma Maunsell, youngest daughter of the late Henry White, Esq., of Golden Hills, and New Ross, Tipperary.

MURDER IN LIMERICK.—Another murder has been perpetrated in the county of Limerick, the victim being John Bradshaw, a special bailiff. It appears that John Burke, of Kildaff, a man belonging to a very unpopular class of dealers in Ireland, retails flour and meal, giving credit to his customers, and charging very high prices. Among his debtors was a farmer, named Edward Dwyer, who owed 10*l.* for goods, and for this sum his brother Lawrence Dwyer was security. Burke proceeded against the latter for the recovery of the money, and obtained a decree for the amount at the Limerick Quarter Sessions. Bradshaw went on Monday to execute this decree, and seized a cow, which he was prevented from taking away. He returned again at 5 o'clock P.M., accompanied by the creditor and six other men. Believing that the cow was shut up in an out office, Bradshaw attempted to open the door, and while in the act he was shot through the keyhole, and fell dead without uttering a word. Information was immediately conveyed to the police, whose barrack was at New Pallas, about a quarter of a mile distant, whither the body of the murdered man was removed. A man named Patrick Dwyer, who was discovered on the premises, and another named Patrick Sexton, who was seen coming out of the house in which the shot was fired, and where a gun recently discharged was found, were both arrested on suspicion. They belong to the class of farm servants.

ATTEMPTED MURDER IN WESTMEATH.—An attempt was made on Saturday night to assassinate Mr. Torrens of Crooked Wood, within a few miles of Mullingar, county Westmeath. He was entering his house at 9 o'clock, when two shots were fired at him, but both missed. A pistol newly discharged was found behind a hedge near the door.

Law.

COURT OF COMMON PLEAS: *The Yelverton Case.—Thelwall v. the Hon. Major Yelverton.*—This was an appeal on behalf of the Hon. Major Yelverton for a rule to set aside the writ, summons and subsequent proceedings in this case. The plaintiff was a gentleman living at Hull, who sued to recover a sum of money for necessaries supplied to Mrs. Longworth-Yelverton. It had been decided in the Court of Probate, where the lady sued for a restitution of conjugal rights, that the major was not a domiciled Englishman, and upon this point it has been held that the Court had no jurisdiction. The writ in the action now before the Court was issued under the 18th section of the Common Law Procedure Act, 1852, a section which allowed a writ to be issued against a British subject residing out of the jurisdiction of the Court. There was an affidavit by a clerk to a firm of solicitors in Paris, that Major Yelverton was served with the writ of summons in Paris on the 2d January; but the present motion was made upon the grounds—that no cause of action arose within the jurisdiction of this Court, and that the affidavit of service of the writ was untrue. The Court granted the application for a rule.

COURT OF PROBATE.—*The Oratory.*—Sir J. Wilde on Saturday gave judgment in the suit brought by Mr. Smee to try the validity of a will made by his brother-in-law, Mr. Hutchins, who, having become a Roman Catholic, left his property to the Brompton Oratory. The judgment affirmed the validity of the will, and condemned Mr. Smee in the costs of the suit.

Miscellaneous.

DOCTORS AND PATIENTS.—Among the curious calculations that may be founded upon the Census returns there is one made by Dr. Farr. It is reckoned that for every day in a year there are constantly two persons ill in the year; and, so reckoning, the Census returns of 1851 and 1861 and the mortality returns of the intervening years give the following results:—In all England and Wales 47 persons constantly sick to one medical man, including under this last term not only physicians and general practitioners, but also their assistants and medical students as are above 20 years of age. In London the proportion is only 24 resident sick to one doctor; in the South-eastern counties 37, South-western 45, South-midland 49, West midland 54, Eastern 57, Northern 58, North-midland 59, Yorkshire, Monmouthshire and Wales 75, and in the North-western counties (Lancashire and Cheshire) as many as 80. The calculation shows one medical man to every 1,071 persons in England and Wales; but the numbers differ greatly in different parts of the kingdom that in London the medical men are one to every 514 persons, and in Monmouthshire and Wales only one to every 1,769. The profession does not appear to be increasing in number. The number in England under 40 years of age was 11,1[illegible] in 1851, and only 9,910 in 1861. With regard to the fortunes of this profession, the calendar of wills and administrations for 1858, which has been analysed, shows that 300 medical men died, leaving personal property in that year to the amount to survivors; and therefore the number who left [illegible] personal property cannot have been considerable. The average amount left by these 300 gentlemen was 8[illegible] 35 left less than 100*l.*; 127 left above 1000*l.*; [illegible] these left above 10,000*l.*—namely, 15 between 10,000 and 20,000*l.*, two between 20,000*l.* and 30,000*l.*, three between 50,000*l.* and 100,000*l.*

THE FOSSIL ELEPHANT OF MALTA.—More remains of this animal have been discovered by Dr. Leith Adams, F.G.S., in extensive excavations lately made by that gentleman among the cavern deposits and breccias near Crendi. One of the chief points of reference to the fossil elephant found in Malta is the small size of its teeth, which, coupled with other characteristics, leaves no doubt that it was not only distinct from any living or extinct species, but was, as regards dimensions, a pigmy compared with them. It is supposed not to have been larger than a lion. Such remains together with the bones and teeth of hippopotami, which of late years have been met with in great abundance in different parts of Malta and Gozo, seem to show that these islands are but fragments of what may at one time have been an extensive continent in all probability connected with either Europe or Africa or both. At all events, the physical geography of this portion of the Mediterranean must have changed much since the above-mentioned animals wandered over our islands. To those who take an interest in the wonderful discoveries made by geologists of late years, it is worthy of notice that teeth and bones of a living elephant of Africa, and another larger fossil species together with the hippopotamus, have been discovered by Baron Anca in the Palermo caves, thus showing that in all probability no less than three distinct descriptions of elephants and two species of hippopotami frequented an area embraced within the southern point of Sicily and Malta, and during the post-pliocene period, when we find the earliest traces of man's existence. None of the latter have yet been met with in Malta. But there is every probability that flint implements and such will turn up, as they have done in the Sicilian caves, more especially now that the attention of scientific inquirers has been earnestly directed to this interesting subject. Without the invaluable testimony afforded by the remains of the quadrupeds above mentioned, there are downcast fragments of the strata and faults along the shores of Malta, which testify to

submergence of the land. Besides the subaqueous plateau, named Adventure Bank, uniting Sicily to Africa by a succession of ridges not more than 40 to 50 fathoms under water, point to the former contiguity of that island and the continent of Africa. So marked is the latter that Sir C. Lyell has asserted that Sicily might be re-united to Africa by movements of upheaval not greater than those which are already known to have taken place within the human period in Sardinia, where the bed of the sea has been elevated 300 feet since man inhabited that sland. *Malta Times.*

Obituary.

THE COUNTESS OF FALMOUTH died at her residence in Whitehall Gardens, on Sunday morning. She was the daughter of Mr. Henry Bankes, of Kingston Lacy, Dorset. She married, in 1810, the first Earl of Falmouth, by whom she had an only son, George Henry, who died in 1852.

THE DOWAGER LADY DUNSANY died on Saturday at her residence, 6, Chester Square, in her 84th year. She was eldest daughter of the 7th Lord Kinnaird by the daughter and heir of the late Mr. Griffin Ransom, the banker, and married, in 182?, the 14th Lord Dunsany, who died in 1848.

LIEUT.-GENERAL GEDDES, K.H., Colonel of the 27th Regiment, died on the 28th ult., at Edinburgh. He had been 60 years in the army, and for nearly 20 years had seen much active service. He served with the 27th Regiment in Calabria in 1806, at the capture of the Island of Procida in 1809, and in Sicily in 1810. He subsequently proceeded with his regiment to the Peninsula, and was present at the battles of the Nivelle, the Nive, Orthes, and Toulouse, where he received a severe wound, which broke the left thighbone near the hip joint. He afterwards served with the army of occupation in France. He received the war medal and four clasps for his services in the Peninsula, and in 1836 was made a knight of the Hanoverian Order. He went on half-pay in November, 1831, and was appointed colonel of the 27th (Inniskilling) Regiment of Foot in 1860.

CAPTAIN J. E. GORDON, R.N., died a few days since. He was one of the most determined of Mr. O'Connell's opponents in the House of Commons. He travelled through Ireland on the missionary principle of evangelising that country by aggressive movements; and during that tour attacked with great vigour O'Connell and the priests. His exertions in this direction attracted the notice of the Government, and Lord Liverpool, shortly before his death, sent for Captain Gordon for the purpose of consulting him as to the best mode of dealing with the Irish difficulty. In 1830, through the instrumentality of the Earl of Roden, he was returned to the House of Commons for the borough of Dundalk, and during the whole of that Parliament he devoted himself to the expos ures of O'Connell and his Roman Catholic supporters. He was a prominent speaker at polemical meetings, and was the originator of the Reformation Society and the Protestant Association. He was married to a daughter of the late Mr. Abel Smith, M.P. for Hertfordshire, and has left two sons, one an officer in the Artillery, now serving in Canada, the other a clergyman in the Church of England, now curate of Dr. Marsh, rector of Beddington.

M. MEYERBERR, the great composer, died in Paris on Sunday last, in his 70th year. His death was caused by a malady of the intestines, the first symptoms of which did not give rise to anticipations of a fatal result. Only a week since he was in sufficiently good health to make arrangements for a journey which he proposed to undertake. During nearly the whole period of his illness he preserved consciousness, but towards the end he became very weak, though free from pain. His daughters arrived from Baden in time to be with him at his death. In pursuance of the detailed instructions left by him as to the arrangements for his funeral, the body will remain exposed three days at Paris, and then will be conveyed to Berlin, his native city, by a route which he has prescribed. As a child M. Meyerbeer was extremely precocious, and his musical talent came to him so early, that when only seven years old he was celebrated; and at nine a German critic spoke of him as one of the best pianists of Berlin. Under less favourable circumstances he would doubtless have been prematurely brought before the public as a prodigy, to contradict, perhaps, in manhood the promises of his youth. But his father, James Beer, a Jewish banker, was very wealthy, and Giacomo Meyerbeer, as the composer afterwards called himself, Italianising his name, only appeared occasionally, principally at amateur concerts, and had plenty of opportunities afforded him for study. With what result he availed himself of them is known throughout the world. He did not, however, at once obtain a high position in music. His first opera, "Jephtha's Daughter," was represented at Munich in 1812, with but indifferent success, but the numerous works he afterwards produced, and which extended over nearly the whole range of musical composition, secured for him a wide reputation, and proved that his talents were of no common order. Of these productions the "Crociato in Egitto," produced in Venice in 1825, may be said to have laid the foundation of his European fame. In 1831 he produced his grand work, "Robert the Devil," and henceforth Meyerbeer was recognised as a master. The "Huguenots" followed in 1836, and the "Prophète," in 1849, both operas at once taking that commanding position on the lyric stage which they have ever since maintained. "L'Etoile du Nord," a work in a different style, but distinguished by the same charm of genius, followed in 1854, and the "Pardon de Ploermel" still more recently. It has long been known that the deceased composer had finished another work, "L'Africaine," and that his scrupulous, and perhaps fastidious anxiety to secure for it a satisfactory interpretation has alone kept it from the public. Its production may now, it is to be presumed, be looked for at no distant date.

MR. FRANK E. SMEDLEY died on Sunday afternoon at Grove Lodge, Regent's Park. He was the author of three novels—"Frank Fairleigh, or the Adventures of a Private Pupil," "Lewis Arundel," and "Harry Coverdale's Courtship," all of which had a wide popularity. His last work was a volume of humorous poetry, called "Mirth and Metre," written in conjunction with Mr. Edmund Yates. Mr. Smedley was in his 50th year, and died of apoplexy.

BIRTHS.—On the 28th ult, at 32, Cleveland Square, W., the Lady FRANCES MICHELL, of a son—29th ult, at 23, Wilton Crescent, the Hon. Mrs. EGERTON, of a son—22d ult, at l'Hermitage, Saint Cyr, Touraine, the wife of Lieutenant-General CANNON, of a son.

MARRIAGES.—On the 2d inst, at St. Peter's, Eaton Square, Captain ARTHUR ELLIS, Grenadier Guards, son of the late Hon. AUGUSTUS ELLIS, to the Hon. MINA LABOUCHERE, second daughter of Lord Taunton—28th ult, by special license, at Tralee Church, Sir AUGUSTUS RIVERSDALE WARREN, Bart., late major 20th Regt., Warren's Court, co. Cork, to GEORGINA, eldest daughter of the Rev. JOHN BLENNERHASSETT, rector of Ryme Intrinseca, Dorset, and niece of the late Arthur Blennerhassett, M.P. for the county of Kerry—28th ult, at St. Thomas of Canterbury, Fulham, THOMAS BAKER, of Brunswick Gardens, Kensington, Esq., to MARGARET CHANDOS, youngest daughter of Sir PETER VAN NOTTEN POLE, of Todenham, Gloucestershire, Bart., and the Lady Louisa Pole, and grand-daughter of the late Earl of Limerick.—28th ult, at Christ Church, Harrow-on-the-Hill, Colonel CHARLES FRANCIS FORDYCE, C.B., to MARY HERON MAXWELL, fourth daughter of the late Sir JAMES DALRYMPLE HAY, Bart, of Park Place, Wigtownshire—27th ult, at Barton-under-Needwood, in the county of Stafford, the Rev. NIGEL GRESLEY, rector of Seale, in the county of Leicester, second son of the late Rev. Sir W. Nigel Gresley, Bart, to JOANNA BEATRICE, youngest daughter of the late JOHN WILSON, Esq.—23d ult, at Holy Trinity Church, Brompton, GEORGE DALHOUSIE RAMSAY, Esq., son of the late Sir Alexander Ramsay, Bart, of Balmain, in the county of Kincardine, to ELEANOR, youngest daughter of JOHN CRAWFURD, Esq., of 4, Elvaston Place, Queen's Gate.

DEATHS.—On the 28th ult, in Eaton Place, the Lady EMILY MARGARET LOWRY CORRY, youngest daughter of ARMAR, late Earl of Belmore, aged 20—27th ult, suddenly at Weybridge, Mrs. CONYBEARE, widow of the late Dean of Llandaff, aged 73—2d inst, at Bath, Lady CROSS, relict of the Hon. Sir John Cross, chief judge of the Court of Review in Bankruptcy, aged 82—28th ult, at 29, Belgrave Square, BARBARA ANNE, eldest daughter of the late THOMAS TYRWHITT DRAKE, Esq., of Shardeloes, Bucks, aged 47—28th ult, HENRIETTA CATHERINE, the beloved wife of VALENTINE D. H. CARY ELWES, Esq., of Desborough House, Northamptonshire, and second daughter of Charles Lane, Esq., of Badgemore, Oxfordshire—12th Feb., at Brisbane, WM. A. BROWN, Esq., sheriff of the colony of Queensland, and police magistrate at Brisbane, aged 40—28th ult, at Brighton, Lieut.-Colonel CHARLES HENRY KNOX—26th ult, at Mountjoy Square, Dublin, GERTRUDE ISABELLA, relict of the late JAMES ALEXANDER, Esq., of Seamount, aged 83—2d inst, at The Cloisters, Windsor Castle, AGNES ISABELLA, daughter of the Rev. FREDERICK ANSON, aged 14 months—30th ult, at Plaxtol, Kent, the Rev. R. MAYO, M.A., aged 64.

Markets.

COVENT GARDEN, May 7.

Outdoor produce is now well supplied. English Grapes and forced Strawberries are sufficient for the demand. Of Pine Apples there is also a better supply. Apples, though scarce, may still be obtained; Oranges are getting scarce. Continental arrivals continue heavy; among them are Lettuces, Endive, Carrots, Artichokes, Radishes, Asparagus, and Peas. Potatos from Lisbon, of which considerable quantities have been imported, realise from 3s. to 6s. per dozen lbs. Out-door grown Asparagus fetches from 3s. to 6s. a bundle. Flowers chiefly consist of Tulips, Cinerarias, Orchids, Heaths, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Oranges, per 100, 4s to 10s
Grapes, new, per lb., 6s to 15s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Almonds, do., 18s
Strawberries, per. oz., 9d to 1s 6d	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 10s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Rhubarb, p. bundle, 4d to 1s
Cauliflowers, each, 4d to 8d	Turnips, p. bunch, 4d to 6d
Asparagus, p. bundle, 3s to 6s	Cucumbers, each, 1s to 2s
French Beans, p. 100, 2s to 3s	Beet, per doz., 1s 6d to 2s
Green Peas, p. ½ sieve, 20s	Shallots, per lb., 10d
Seakale, per punn., 2s to 3s	Celery, per bundle, 1s 6d to 2s
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 4d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 1s to 2s 6d	Horse Radish, p. bunch, 1s to 4s
Carrots, do., 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
— young, p. bunch, 3s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

COAL MARKET.—May 4.

North Pelton Gas, 12s. 9d.; Walls End Gosforth, 16s.; Eden Main, 16s. 9d.; Walls End Braddylls Hetton, 17s. 3d.; Walls End Haswell, 18s. 3d.; Walls End Hetton, 18s.; Walls End South Hetton, 18s.; Walls End Stewarts, 17s. 6d.; Walls End Tunstall, 16s. 3d; Walls End Caradoc, 17s. 6d.; Walls End Hartlepool, 18s.; Walls End Heugh Hall, 17s 6d.; Walls End East Hartlepool, 18s.; Walls End South Kelloe, 17s. 6d.—Ships at market, 61.

BRITISH WOOLS.—LONDON, May 6.

Caution is the motto to be acted on. The increase of the Bank rate has produced a quietness at late rates in all descriptions of wool.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	9	to	1	10	Leicest. Wethers	2	0	to	..	
Half-bred ditto	2	2	—	2	4	Ditto Hoggs	2	1	—	2	3
Down Ewes	1	8	—	1	9	Combing Skins	1	6	—	1	11
Kent Fleeces	2	0	—	2	1	Flannel Wool	1	4	—	1	6
						Blanket ditto	0	9	—	1	0

POTATOS.—SOUTHWARK, Monday, May 2.

During the past week the arrivals both coastwise and by rail have been large for the season, and a further decline in prices has been the consequence. The quotations are:—Yorkshire Flukes, 45s. to 55s. per ton; do. Regents, 40s. to 50s.; Seedlings, 40s. to 45s.; do. Rocks, 40s. to 45s.; Dunbar Regents, 50s. to 60s.; Kent and Essex Regents, 50s. to 60s.; North Berwick Regents, 45s. to 50s.; Perth, Forfar, and Fife Regents, 30s. to 40s.; do. do. Rocks, 30s. to 35s.; do. do. Reds, 30s. to 35s.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, May 5.

Prime Meadow Hay	75s	80s	Clover, old	90s	112s
Superior do.	84	90	New Clover	—	—
Inferior do.	60	70	Do. second cut	—	—
New do.	—	—	Straw	25	32
Rowen	—	—			

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, May 5.

Sup. Meadow Hay	86s	93s	Inferior Clover	78s	97s
Inferior do.	65	78	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover	108	115			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, May 5.

Fine Meadow Hay	84s	88s	Prime 1st cut Clover	110s	114s
Inferior do.	70	80	Inferior do. do.	100	105
Prime New Hay	—	—	New 1st cut do.	—	—
Inferior	—	—	Prime 2d cut do.	105	110
Straw	27	30	Inferior do.	90	95

HOPS.—BOROUGH MARKET, FRIDAY, May 6.

Messrs. Pattenden & Smith report a fair trade doing in both English and foreign, with a scarcity of good samples.

Mid and East Kents, p. cwt.	£6	0 to	£9 0
Weald Kents	5	15 —	7 0
Sussex	5	5 —	6 10

NEWGATE.—May 6.

Best Fresh Butter .. .. 14s. per dozen lbs.
Second do. do. .. .. 12s. "
Pork, 4s. 4d. to 4s. 8d. per 8 lbs.

LEADENHALL POULTRY MARKET.—May 6.

A comparatively limited supply of Poultry of all kinds, especially of that of the first quality, has given an upward tendency to our week's market. Now is the best time for those who have really young poultry fit to kill to send it to market.

Per couple	s.	d.		s.	d.	Each	s.	d.		s.	d.
Large Surrey Fowls	11	0	to	14	0	Goslings	6	0	—	7	0
Farmhouse do. (best)	8	0	—	10	0	Aylesbury Ducklings	4	0	—	5	0
Do. do. (rough)	6	0	—	8	0	Guinea Fowls	3	6	—	4	0
Best Surrey Chickens	7	0	—	9	0	Tame Rabbits	1	4	—	2	0
Farmhouse do.	6	0	—	7	0	Pigeons (young)	0	8	—	0	10
Irish do.	4	0	—	6	0	Leverets	3	0	—	4	0
						Plovers' eggs, p. doz.	2	0	—	3	0

METROPOLITAN CATTLE MARKET.

MONDAY, May 2.

The number of Beasts is considerably larger than on Monday last, there is however a demand for them. The choicest descriptions realise late prices, but it is difficult to effect a clearance of second-rate qualities. Sheep are also more plentiful. Prices are not quite equal to those of Thursday, but about as on Monday last. Choice Lambs and Calves are selling about the same as of late. From Germany and Holland there are 1210 Beasts, 1980 Sheep, 208 Calves, and 70 Pigs; from Spain, 98 Beasts; from Scotland, 410; from Ireland, 90; and 3130 from Norfolk and Suffolk.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	6	to 4	10	Best Long-wools	..	—	..	
Best Short-horns	4	4	— 4	8	Do. Shorn	4	4	— 4	8
2d quality Beasts	2	8	— 3	8	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	3	6	— 3	10
Do. Shorn	4	8	— 4	10	Lambs	7	0	— 8	0
					Calves	4	0	— 5	10
					Pigs	3	4	— 4	8

Beasts, 5270; Sheep and Lambs, 25,820; Calves, 209; Pigs, 510.

THURSDAY, May 5.

The supply of Beasts is large, and the demand by no means good. Monday's quotations are with difficulty realised, and a clearance cannot be effected. Sheep are also rather more plentiful, and trade very dull. Several remain unsold, although there is a disposition to take lower prices. Calves and Lambs are not selling quite so well as of late. From Germany and Holland there are 610 Beasts, 1590 Sheep, and 345 Calves; Milch Cows, 85.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	6	to 4	8	Best Long-wools	..	—	..	
Best Short-horns	4	4	— 4	6	Do. Shorn	4	4	— 4	8
2d quality Beasts	2	5	— 3	8	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	3	6	— 3	10
Do. Shorn	4	8	— 4	10	Lambs	6	8	— 7	8
					Calves	3	8	— 5	8
					Pigs	3	4	— 4	8

Beasts, 1555; Sheep and Lambs, 7230; Calves, 444; Pigs, 170.

MARK LANE.—MONDAY, May 2.

The supply of Wheat from Essex and Kent to this morning's market was small, and the greater part of the white Wheat was disposed of at an advance of 1s per qr. on the prices of this day se'nnight. The attendance was moderate, low qualities of Danube and Black Sea Wheat, and also American, must be quoted 1s. dearer, but no improvement could be realised on other descriptions, and only a limited amount of business was transacted. Barley being scarce brings last week's prices. Beans 1s. per qr. dearer. Peas unaltered in value. With a large arrival of Oats the trade was heavy, and to effect sales it was necessary to submit to a decline of 6d. per qr. For Flour there was a moderate inquiry at late rates.

PER IMPERIAL QUARTER	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	42	48	Red	40	48
— — fine selected runs .. ditto	44	52	Red	40	48
— — Talavera	48	54			
— Norfolk	—	—	Red	—	
— Foreign	36	52			
BARLEY, grind. & dist., 25s to 27s .. Chev.	34	38	Malting	29	33
— Foreign .. grinding and distilling	22	26	Malting	27	31
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish .. Potato	19	22	Feed	—	
— Foreign .. Poland and Brew	17	22	Feed	15	20
RYE	30	32	Foreign	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan .. 27s to 36s .. Tick	30	33	Harrow	30	33
— Pigeon .. 32s to 40s .. Winds.	—		Longpod	—	
— Foreign .. Small	36	42	Egyptian	30	32
PEAS, White, Essex and Kent .. Boilers	32	33	Suffolk	33	34
— Maple .. 30s to 34s .. Grey	28	30	Foreign	31	33
MAIZE .. White	—		Yellow	—	
FLOUR, best marks delivered .. per sack	35	40			
— 2d do .. ditto	28	34	Country	28	34
— Foreign .. per barrel	15	25	Per sack	32	40

FRIDAY, May 6

The Wheat trade this week has been firm, and in the majority of markets an improvement of 1s. per qr. has been exacted, more particularly in English Wheat. The business transacted however continued to be on quite a limited scale. It is deserving of attention that the importations of Wheat and Flour into the United Kingdom during the month of March last exceed those for the same month of 1863, notwithstanding our low and unremunerative prices. Business in Spring Corn has been steady without any quotable alteration in prices. Flour has been in moderate request, and in some markets a slight improvement in value has been established. Since Friday last 19 vessels have been reported off the coast. The floating trade has been firm but quiet; for Wheat higher prices are asked, which checked business until yesterday; then, however, several transactions took place, showing an improvement of 1s. to 1s. 6d. per qr.; Barley is in demand for the continent. Paris, May 5.—The Flour trade had improved a little, but closes quiet rather above the rates of this day week. The six marks for delivery this month are quoted equal to 34s. 3d. per 280 lbs. The present stock of Flour is estimated at 17,000 cwt. Wheat is difficult of sale, but unaltered in value. The arrivals of English Wheat and foreign Barley this week have been moderate, of all other grain small, but of barrel Flour good. The attendance was limited, as was also the demand for Wheat, and Monday's quotations, both of English and foreign, must remain unaltered. Barley, Beans, and Peas were unaltered in value. Oats were firm at Monday's prices.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English	1450 qrs.	490 qrs.	1230 qrs.	830 sks.
Irish	—	—	980	— "
Foreign	6020 "	1690	7830 "	100 " / 10800 brls

LIVERPOOL, May 3.—At this day's market buyers have found a difficulty in supplying their wants even at the advanced rates of last Friday; but still we cannot quote Wheat any higher. Flour sells readily at full prices, and is offered

sparingly. Indian Corn quite 3d. per qr. dearer. but scarcely so active. firmly at extreme rates. tendency.

meets decidedly more favour, and is Oats and Oatmeal steady in value, Beans, Peas, and Barley are held Market closes with rather an upward

FRIDAY, May 6.—The market was moderately attended. Very little choice Wheat on offer, and a slight advance over Tuesday's rates is made. Flour steady. Indian Corn 6d. dearer, good demand; mixed 29s. Egyptian Beans scarce and dearer. Oats and Oatmeal in moderate request, no change in value.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
March 26	39s 11d	30s 10d	19s 6d	28s 0d	32s 8d	33s 3d
April 2	40 2	31 0	19 2	28 5	32 6	32 11
— 9	40 1	30 9	19 11	29 0	32 8	32 8
— 16	40 1	30 10	18 3	27 8	33 0	31 11
— 23	39 7	31 1	19 9	29 0	32 7	32 1
— 30	39 2	30 6	19 4	28 7	33 9	32 1
Agg. Aver.	39 10	30 10	19 3	28 5	32 10	32 7

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Mar. 26.	April 2.	April 9.	April 16.	April 23.	April 30.
40s 2d	..		..	..	..	..
40 1	..	..			..	..
39 11		..	..	..	..	..
39 7	..	..	..	..		..
39 2	..	..	..	..	..	
..	..	..	..	..	..	..

WANTED, a GROUND FOREMAN.—Messrs. J. & C. LEE require the services of a thoroughly sober industrious Working Foreman to cultivate Fruit Trees in one of their Country Nurseries under the direction of their Manager. He must be a good Knifeman, and practically acquainted with Budding, Grafting, and Training. He will also be required to keep plain Accounts.—Application to be made at the Royal Vineyard Nursery, Hammersmith, W.

WANTED, as FOREMAN, a Man thoroughly competent to undertake Growing Plants for Market; also a Young Man as IMPROVER under the above.—Apply, stating wages expected and full particulars of previous servitude, &c., to R. BOWIE, Clapham Rise Nursery, Clapham, S.

WANTED, a GARDENER.—Married, no young children; experienced in Greenhouse, Hothouse, &c. Wages, 25s. a week, another Gardener kept; situation near Blackheath.—W. P., at Clarke's, 51, Threadneedle Street, E.C.

TO BUDDERS, GRAFTERS, &c.—Mr. VEITCH want immediately, for his Coombe Wood Nursery, an active industrious young Man to assist in the Budding, Grafting and other out-door Propagation.—Apply by letter, stating terms and references, &c., Royal Exotic Nursery, King's Road, Chelsea, London, S.W.

WANTED, an IMPROVER, one who has some knowledge of Plants.—A respectable persevering young Man from the country preferred. Wages 10s. per week.—Address A. G., 4, Cambridge Terrace, College Street, Camberwell Grove, S.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD). — Middle-aged, married; understands his profession. Four years' character from the gentleman he is about leaving.—M.T., Gardener, Hatcham Park, New Cross, London.

GARDENER (HEAD).—Age 32, married; understands Greenhouses, Hothouses, Forcing Flowers, and Kitchen Gardens. Three years and nine months' good character.—W. B., Beckenham, Kent, S.E.

GARDENER (HEAD), or to gentlemen about Laying out or Improving their Gardens.—Age 31, married, no incumbrance; thoroughly understands his profession.—J. J., Post Office, East End, Finchley, N.

GARDENER (HEAD).—Age 30, single; understands the Forcing of Vines, Peaches, Cucumbers, Melons, &c.; the Management of Kitchen and Flower Gardens. Six years' good character.—Y. Z., 55, Queen Street, Edgware Road, W.

GARDENER (HEAD). — Age 30, married, no incumbrance; has a thorough practical knowledge of his profession in all its branches. Six years' good character.—R. W., 31, River Street, York Road, London,

GARDENER (HEAD).—Married, no incumbrance, of high standing and respectability, seeks a situation where skill is required. Is a successful Grower of Orchard-house Fruits, and can take Forcing to any extent. Highly recommended.—ALPHA, Post Office, Mill Hill, Hendon, Middlesex.

GARDENER (HEAD).—Age 35, married; has had 15 years experience in Fruit and Planthouses, Flower and Kitchen Gardens; also in the Laying Out of Pleasure Ground. Was eight years in last situation.—J. K., Mr. Richard Smith, St. John's Nursery, Worcester.

GARDENER (HEAD).—Middle-aged, married, without incumbrance; has a thorough practical knowledge of his profession; is a good Grape Grower, understands the Management of Pyramidal Fruit Trees, and Fruit Trees generally; can take charge of Land and Stock if required. Eight years' good character.—A. A., Downie, Laird & Laing, Stanstead Park, Forest Hill, S.E.

To Noblemen and Gentlemen.

GARDENER (HEAD).—Married, no incumbrance; a Man of trust and experience; a good Grower of Pines, Grapes, Peaches, &c.; also all choice Flowers for decorating the Conservatory; with Flower and Kitchen Gardens. Good character from last and former situations.—H. I., Park Cottage, Dulwich Road, Dulwich, S.

GARDENER (HEAD).—Age 40, married; has had 25 years' experience in Early Forcing of Vines, Pines, Peaches, Melons and Cucumbers; thoroughly understands Orchids, Foliage, Stove and Greenhouse Plants, the Orchard House, Flower and Kitchen Garden; can take charge of Meadow Land. Wife understands Dairy. Character unexceptionable.—T. H., Mr. Protheroe, Chigwell, Essex.

GARDENER (HEAD).—Age 41, single; is desirous of effecting an engagement with any nobleman or gentleman who may require the services of a thoroughly practical Head Gardener or Gardener and Bailiff. References will be given to families of rank and distinction for qualifications and uprightness in the terms of the treaty.—A. B., James Carter & Co., Crystal Palace Nursery, Sydenham, London.

GARDENER (HEAD).—Age 32, married; has had great experience in every branch of his profession, including the Cultivation of Orchidaceous, Stove and Greenhouse Plants, Ferns, &c.; the Forcing of all kinds of Fruits and Vegetables, including Mushrooms, and the Management of large Gardens generally. Any gentleman in want of a first-class practical Gardener, the Advertiser can be highly recommended to.—A. B., Mr. Slocombe's, Stationer, Ongar, Essex.

GARDENER (HEAD).—Age 33, married, one child; thoroughly understands Growing and Training Plants, Early and Late Forcing, with Fruit, Flower, and Kitchen Gardens. Two years' good character.—A. B., 3, Claremont Terrace, Jenny Lind Road, Sutton, Surrey.

GARDENER (HEAD) to any nobleman or gentleman.—Married, in the prime of life, a native of Scotland; thoroughly practical without exception; has been with his present employer for 7½ years, and is now leaving on account of the establishment being given up; has had the entire Management of 6 acres of Pleasure Grounds, large Flower Garden, Kitchen Garden, Grapery, Greenhouse, and General Forcing, &c. Moral character and ability unexceptionable.—S. Z., Mr. J. Mann, Nurseryman, Brentwood, Essex.

GARDENER (HEAD).—JOHN PEARSON, who has been for upwards of two years Head Gardener to the Right Hon. Lord Foley, at Worksop Manor, Notts, will be at liberty on 1st July next, to dispose of his services in a similar capacity. He is experienced in every department of Gardening, and can Lay Out Grounds; is thoroughly competent to undertake the Management of a first-class establishment. J. P. has been several years in the first gardens in England and Scotland. Can give unexceptionable references.

GARDENER (HEAD, or SINGLE-HANDED).—Middle-aged, married, no incumbrance; thorough practical knowledge of his profession. Good character.—P. R. BUTLER, 1, Emma Terrace, Brunswick Road, Camberwell, S.

GARDENER (HEAD) or SINGLE-HANDED).—Age 34, married, one child; well understands Flower, Fruit, and Kitchen Gardening, and Forcing. Good character.—A. B., Halstead, Essex.

To Noblemen and Gentlemen.

GARDENER (HEAD) or GARDENER and BAILIFF.—Age 45, married, no incumbrance. Wife capable of taking charge in the absence of the family of the Mansion or otherwise. Can give references to three first-rate families as to character and abilities for the last 14 years.—G. W. D., Post Office, Bury St. Edmund's, Suffolk.

GARDENER, or GARDENER and BAILIFF.—Middle-aged (single); has a thorough knowledge of his profession in all its branches. Can have 14 years reference from his late employer. No objection to Ireland.—B. C., Dodd's Nursery, Epsom, Surrey.

GARDENER, where one or more are kept, and where Forcing is done.—Young, and steady. Good references given. State wages and requirements to D. N., Post Office, Much Woolton, Lancashire.

GARDENER (SINGLE-HANDED), or to look after a Horse.—Age 25, single: has been accustomed to all branches of Gardening, in and out of doors. Good character.—B. H., Post Office, Lower Edmonton, N.

GARDENER (SECOND) in a gentleman's Garden.—Can have two years' character from a Nursery, also five and half from a private Establishment.—A. B., Messrs. Fraser's Nursery, Lea Bridge Road, Leyton, Essex, N. E.

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PRICE'S CANDLES, WHICH WILL NOT DROP GREASE WHEN CARRIED.—Thin, very hard Candles, in boxes 1s. and 3s. each, are recommended as the best Carriage Extra hard S 12 CHAMBER CANDLES, sold in boxes Thicker Candles, intended for those who will not have Candles.

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Special CANDLESTICKS to fit thin candles, 1s. and 1s. 6d. each; reducing Sockets, making them fit any candlestick 2d. each.

PRICE'S Patent Candle Company, Limited, London.

WARNERS' KOH-I-NOOR LAMP TO BURN THE HYDRO CARBON OILS. PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL. They are more easily trimmed and re-filled than any other Lamp with similar burner.

There is no danger of chimneys breaking, and the chimneys cannot become smoked.

For designs of the above, adapted for the DINING-ROOM, DRAWING-ROOM, HALL, or LIBRARY, see Number of this Journal.

A REALLY GOOD LAMP.

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WORCESTERSHIRE SAUCE. This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE," Is prepared solely by LEA & PERRINS.

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ASK FOR LEA AND PERRINS' SAUCE.

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DYSPEPSIA (Indigestion).—Constipation, Nervousness, Debility, Cough, Asthma, Catarrh, Consumption, Diarrhœa, and all Bilious, Liver and Stomach Complaints, only aggravated and accelerated by drugs of every description, but perfectly curable by DU BARRY'S health-restoring

REVALENTA ARABICA FOOD,

As proved by thousands of cases which had been considered hopeless. We quote a few.—Cure No. 46,270. Mr. James Rose, of Frimley, Surrey, of 30 years' diseased lungs, spitting of blood, liver derangement, and partial deafness.—Cure No. 47,121. Miss Elizabeth Jacobs, of extreme nervousness, indigestion, sleeplessness, low spirits, and nervous fancies.—Cure No. 54,816. Rev. James T. Campbell, Fakenham, Norfolk, "of indigestion and torpidity of the liver, which had resisted all medicine."—In tins 1 lb., 2s. 9d.; 2 lb., 4s. 6d.; 5 lb., 11s.; 10 lb., 22s.; 24 lb., 40s.

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Valuable Remedies for the Afflicted.

DR. ROBERTS'S CELEBRATED OINTMENT, called "The Poor Man's Friend," is confidently recommended to the Public as an unfailing remedy for Wounds of every description, a certain cure for Ulcerated Sore Legs of 20 years' standing: Cuts, Burns, Scalds, Chilblains, Sore Eruptions and Pimples on the face, Sore and Inflamed Eyes, Sore Heads, Sore Breasts, Piles, Fistula, and all Skin Humours, &c. Sold in pots, 1s. 1½d., 2s. 9d., 11s., and 22s.—Also his PILULÆ ANTISCROPHULÆ or Strengthening Pills, 60 years' experience to be, without exception, one of the best alterative medicines ever compounded for purifying the blood and assisting Nature in all her operations. Highly recommended in Scrofulas, Scorbutic Complaints, Glandular Swellings, particularly those of the Neck, &c. They form a superior Family Aperient, that may be taken at all times without confinement or change of diet. Sold in boxes, 1s. 1½d., 2s. 9d., 4s. 6d., 11s., and 22s.—Sold Wholesale by the Proprietors, BEACH & BARNICOTT, at their Repository, Worcester; and Retail by all respectable Vendors in the United Kingdom and Colonies. Observe that no Medicine sold under the above name can possibly be genuine unless "BEACH & BARNICOTT, late Dr. ROBERTS," is engraved on the Government Stamp affixed to each pot.

The Gardeners' Chronicle Newspaper.

SATURDAY, MAY 14, 1864.

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MR. A. CHANDLER (of the late Firm of CHANDLER & SONS) continues to undertake all kinds of VALUATIONS connected with Horticulture.

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RICK CLOTHS, with Poles, Pulleys, and Lines complete. A large quantity of SECOND-HAND RICK CLOTHS, left over from fêtes last season, to be sold at reasonable prices.

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Apply early to BENJAMIN EDGINGTON, Marquee, Tent, Rick Cloth, and Flag Manufacturer, by special appointment to Her Majesty, 2, Duke Street, London Bridge, S.E.

No other Establishment.

GARDEN BORDER EDGING TILES, in great variety of patterns and material, the plainer sorts being especially suited for KITCHEN GARDENS, as they harbour no Slugs and Insects, take up little room, and once put down incur no further labour and expense, as do "grown" Edgings, consequently being much cheaper.

GARDEN VASES, FOUNTAINS, &c., in Artificial Stone, of great durability, and in great variety of design.

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Illustrated Price Lists free by post. The Trade supplied.

ORNAMENTAL PAVING TILES for Conservatories, Halls, Corridors, Balconies, &c., as cheap and durable as Stone, in blue, red, and buff colours, and capable of forming a variety of designs.

Also TESSELATED PAVEMENTS of more enriched designs than the above.

WHITE GLAZED TILES, for Lining Walls of Dairies, Larders, Kitchen Ranges, Baths, &c. Grooved and other Stable Paving Bricks of great durability, Dutch and Adamantine Clinkers, Wall Copings, Red and Stoneware Drain Pipes, &c.

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GARDEN FLINTS for Grotto Work, 12*s.* and 14*s.* per Ton.

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EDWARD TAYLOR, Malton, Yorkshire, offers the above, of good quality, at the prices named below:—

DEAL WOOD LABELS,	3½	inches in length,	2*s.*	per 1000.
,, ,, ,,	4½	,, ,,	3*s.*	,,
,, ,, ,,	6½	,, ,,	4*s.*	,,
ASH WOOD LABELS,	4½	,, ,,	2*s.* 6*d.*	,,
SYCAMORE LABELS,	4½	,, ,,	4*s.*	,,
,, ,,	6½	,, ,,	6*s.*	,,

Samples, if required, on application.

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Special Drawings when required.

[*The best Steam Threshing Machinery made*]

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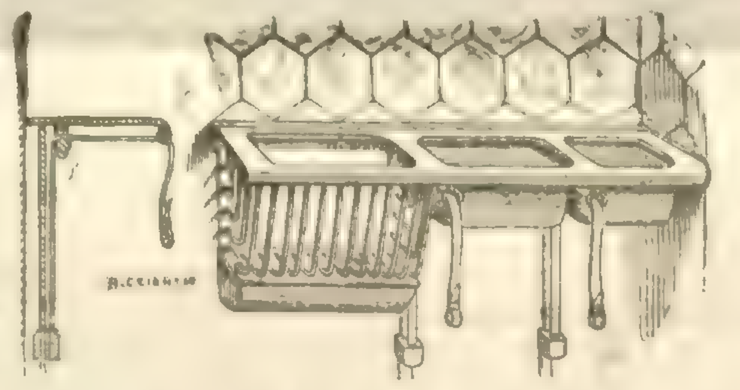

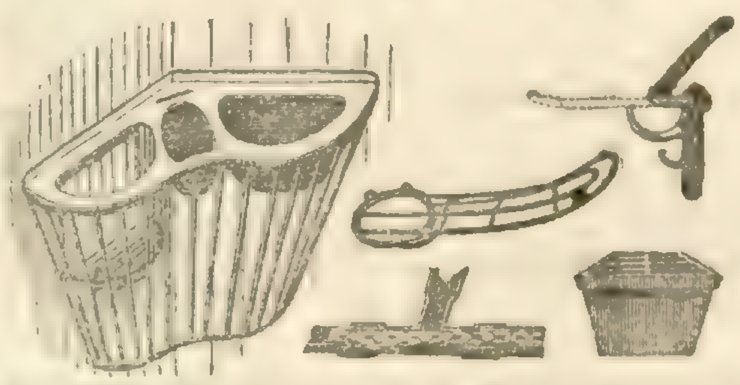

These Fittings, now so generally specified by Architects in their specifications, may be seen at the Manufactory, 2, Winsley Street, Oxford Street, W., where a large supply is always on hand and regular sizes kept in stock, and where full-size Stalls and loose Boxes (variously arranged, with a view to the economy of space) can be examined.

COTTAM & COMPANY, Manufacturers and Patentees, hold the Prizes of 1851, 1855 (Paris) and 1862, for these Fittings.

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Pretty Flowers—Pretty Flowers.

INDIA RUBBER HOSE and all necessary Fittings for Watering Gardens.

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TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

VARNISHED FLOWER STICKS:—1 foot, 3*d.*; 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s.* 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

NETTING for FRUIT TREES, SEED BEDS, RIPE STRAWBERRIES, &c.—TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3*d.* per yard; or 100 yards, 20*s.*; 4 yards wide, 6*d.* per yard; or 50 yards, 20*s.* NEW TANNED NETTING, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 6*d.* per yard; 4 yards wide, 1*s.* per yard; ¾-inch mesh, 4 yards wide, 1*s.* 6*d.* per yard.

Can be had in any quantity of EATON & DELLER, 6 and 7, Crooked Lane, London Bridge, E.C.

TANNED NETTING, for the Protection of Fruit Trees from Frost, Blight, and Birds, also for the security of fresh-sown Seeds, at 1*d.* per square yard; 200 yards, 14*s.*; 500 yards, 30*s.*; 1000 yards, 50*s.* WOOL NETTING, COTTON NETTING, SCRIM CANVAS, GARDEN MATS, TULIP COVERS, GREENHOUSE SHADES, &c.

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Sold in casks of about 30 gallons each, at 1*s.* 6*d.* per gallon, at the Manufactory, or 1*s.* 8*d.* per gallon paid to any Station in the kingdom.

Apply to HILL & SMITH, Brierley Hill Iron Works, near Dudley, and 22, Cannon Street West, E.C. from whom only it can be obtained.

Glass for Garden Purposes.

JAMES PHILLIPS AND CO. beg to submit their prices as follows:—

PROPAGATING GLASSES.

Each—	*s.*	*d.*	Each—	*s.*	*d.*
2 inches in diameter..	0	3½	12 inches in diameter ..	1	9
3 ,, ,, ..	0	4½	13 ,, ,, ..	2	0
4 ,, ,, ..	0	5½	14 ,, ,, ..	2	6
5 ,, ,, ..	0	6½	15 ,, ,, ..	3	0
6 ,, ,, ..	0	8	16 ,, ,, ..	3	6
7 ,, ,, ..	0	10	17 ,, ,, ..	4	0
8 ,, ,, ..	1	0	18 ,, ,, ..	5	0
9 ,, ,, ..	1	2	19 ,, ,, ..	6	0
10 ,, ,, ..	1	4	20 ,, ,, ..	7	0
11 ,, ,, ..	1	6			

BEE GLASSES.

Each.—	*s.*	*d.*	Each.—	*s.*	*d.*
4 inches in diameter ..	0	6	9 inches in diameter ..	1	8
5 ,, ,, ..	0	8	10 ,, ,, ..	2	0
6 ,, ,, ..	0	10	11 ,, ,, ..	2	6
7 ,, ,, ..	1	1	12 ,, ,, ..	3	0
8 ,, ,, ..	1	4			

Not made above 12 inches.

CUCUMBER GLASSES.

Each.—	*s.*	*d.*	Each.—	*s.*	*d.*
24 inches long	2	0	16 inches long	1	4
22 ,, ,, ...	1	10	14 ,, ,, ...	1	2
20 ,, ,, ...	1	8	12 ,, ,, ...	1	0
18 ,, ,, ...	1	6	Made to any length.		

HAND GLASSES,

WITH OPEN TOPS.

Each—*s.*	*d.*	Each—*s.*	*d.*
12 inches	6 6	18 inches	9 6
14 ,, ...	7 6	20 ,, ...	10 6
16 ,, ...	8 6	22 ,, ...	11 6
		24 ,, ...	12 6

Painted and Glazed with 16 oz. Sheet Glass.

London Agents for Hartley's Improved Patent Rough Plate.

Linseed Oil, Genuine White Lead, Carson's Paints, Paints of various colours ground ready for use.

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"RECONNOIT'RER" GLASS, 10*s.* 10*d.* post free, shows distinctly windows and doors of houses 10 miles off; JUPITER'S MOONS, &c. For Landscape is valuable for 25 miles, is guaranteed equal to others at 3*l.* 3*s.*, the enormous sales allowing division of labour to an extent hitherto quite unknown. "The Reconnoit'rer is very good."—*Marquis of Carmarthen.* "It gives me complete satisfaction, and is wonderfully good."—*Sir Digby Cayley.* "I never met an article so completely answering its maker's recommendation."—*F. H. Fawkes, of Farnley, Esq.* "An indispensable companion to a pleasure trip."—*Notes and Queries.* "We have found it fully equal to others more than four times its price."—*Field.* "I have found it effective on the 1000 yards range." *Capt. Sendey, Royal Small Arms Factory, Enfield.*—The "Hythe" Glass shows bullet marks at 1000 yards, and men at three miles; 31*s.* 6*d.* Only to be had direct from SALOM & Co., 98, Princes Street, Edinburgh. No Agents.

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ORIGINAL ANTI-CORROSION PAINT.

WHITE	Per cwt. 30*s.*	BRIGHT RED	Per cwt. 26*s.*
LIGHT STONE ...		DARK DO. (BRICK COLOUR)	
BATH DO.		CHOCOLATE COLOUR ...	
CREAM COLOUR		BLACK	
LIGHT PORTLAND STONE ...		BRONZE GREEN	
DRAB or PORTLAND DO. ...		BRIGHT GREEN	42*s.*
OAK COLOUR	26*s.*	DEEP GREEN	
LEAD COLOUR		BLUE	

PATRONISED BY

THE BRITISH GOVERNMENT
THE RUSSIAN GOVERNMENT
THE LAMENTED PRINCE CONSORT
MOST OF THE NOBILITY & GENTRY
RAILWAY AND CANAL COMPANIES
COLLIERIES, IRON MASTERS, &c.

It is extensively used at home and abroad for all kinds of

OUT-DOOR WORK,

and has been proved, after a practical test of 70 years, to surpass any other Paint. It is applicable to WOODEN HOUSES, FARM and other OUT-BUILDINGS, PARK FENCING, GATES, &c.; also IRON ROOFING, BRIDGES, HURDLING, and every description of Iron Work, while for

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and every kind of BRICK, STONE, COMPO, &c., it is unrivalled, presenting the appearance of fine cut stone.

It is undoubtedly the only Paint that will stand on

CONSERVATORIES, GREENHOUSES, FRAMES, &c.

and is in consequence largely used by the Nobility and Gentry, also many eminent Horticulturists, for such purposes. The ANTI-CORROSION is LOWER IN PRICE, and LASTS TWICE AS LONG as the Best White Lead; at the same time is economical in application, as

ANY PERSON CAN LAY IT ON.

The Anti-Corrosion is a Powder, and will keep any length of time.

Three Cwt. and upwards Carriage Free to any Station in England and Wales, or by Water to any Port in the United Kingdom, where there is a direct communication from London, as Leith, Dublin, Belfast, Glasgow, Aberdeen, &c.

OIL, TURPENTINE, AND BRUSHES.

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(Where all Letters, Empties, &c., are to be sent.)

WEST END OFFICE: 31, SAINT JAMES'S STREET, S.W.

CAUTION.—All Casks bear the Trade Mark, without which none are genuine. No AGENTS.

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THOMAS MILLINGTON,

GLASS AND COLOUR MERCHANT,

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REDUCED TARIFF FOR SHEET GLASS AND HORTICULTURAL GOODS.

THE AGRICULTURAL HALL, ISLINGTON, CONTAINING AN ACRE OF GLASS, WAS SUPPLIED BY ME.

Mr. RIVERS and the leading men in the Horticultural Profession, as well as the Nobility, Gentry, and Merchants, have favoured me with Orders for Home and for Exportation.

SHEET GLASS.

In Cases for Cutting up in sizes, as Manufactured.

AVERAGE THICKNESS, 15 TO 16 OZ.

4ths quality	..	..	..	per 300 feet	32*s.*	6*d.*	or about	1½*d.* per foot.
3ds ,,	..	..	..	,,	41	0	,,	1¾ ,,
2ds ,,	..	..	..	,,	60	0	,,	2½ ,,
Best ,,	..	..	..	,,	92	0	,,	3¾ ,,

AVERAGE THICKNESS, 21 OZ.

4ths quality	..	..	..	per 200 feet	33*s.*	6*d.*	or about	2*d.* per foot.
3ds ,,	..	..	..	,,	42	0	,,	2½ ,,
2ds ,,	..	..	..	,,	63	0	,,	3¾ ,,
Best ,,	..	..	..	,,	89	0	,,	5½ ,,

AVERAGE THICKNESS, 26 OZ.

4ths quality	..	..	..	per 200 feet	44*s.*	6*d.*	or about	2¾*d.* per foot.
3ds ,,	..	..	..	,,	56	0	,,	3½ ,,
2ds ,,	..	..	..	,,	84	0	,,	5 ,,
Best ,,	..	..	..	,,	116	0	,,	7 ,,

EXTRA WHITE or CRYSTAL SHEET GLASS, very superior for Pictures and best Glazing.

SHEET SQUARES, Cut to Order.

AVERAGE THICKNESS, 15 TO 16 OZ.

Under 1 foot super.	Under 2 feet super.	Under 3 feet super.	Under 4 feet super.	Under 5 feet super.	Under 6 feet super.
1¼*d.*	1¾*d.*	2 *d.*	2¼*d.*	2½*d.*	3¼*d.*
1¾	2	2¼	2¾	3	3¾
2	2½	2¾	3	3½	4
2½	3	3½	4	4½	5

AVERAGE THICKNESS, 21 OZ.

2¼	2¾	3	3¼	3½	3¾
2½	3	3¼	3¾	4	4¼
3	3½	3¾	4¼	4½	4¾
4	4¼	5	5½	6	7

AVERAGE THICKNESS, 26 OZ.

3	3½	3¾	4	4¼	4¾
3¾	4	4¼	4¾	5	5¼
4¼	5	5½	5¾	6	6¼
5¼	6¼	7	7¼	8	8¼

Supplied also in 32 oz., 36 oz., and 42 oz. per Superficial Foot.

RUBY, GREEN, BLUE, YELLOW, COLOURED GLASS, ENAMELLED GROUND, and FLUTED GLASS.

Squares usually kept in Stock packed in 100 ft. and 200 ft. Boxes.

Small Squares, per 100 feet.	4ths.	3rds.	2nds.	Best.
6 by 4, 6½ by 4½ | 7 by 5, 7½ by 5½ | 8 by 6, 8½ by 6½ | 9 by 7, 9½ by 7½	9*s.* 6*d.*	10*s.* 9*d.*	12*s.* 6*d.*	14*s.* 8*d.*
Per 100 feet.				
10 by 8, 10½ by 8½, 11 by 9, 11½ by 9½ | 12 by 9, 12½ by 9¼, 13 by 9, 12 by 10 | 12½ by 10½, 13 by 10, 13½ by 10½, 14 by 10 | 14½ by 10½, 15 by 10, 13 by 11, 14 by 11	10*s.* 6*d.*	12*s.* 0*d.*	14*s.* 8*d.*	17*s.* 8*d.*

Per 100 feet.	4ths.	3rds.	2nds.	Best.
15½ by 10½, 16 by 10, 14½ by 11½, 15 by 11, 15½ by 11½, 16 by 11, 13 by 12, 13½ by 12½ | 14 by 12, 14½ by 12½, 15 by 12, 15½ by 12½, 16 by 12, 16½ by 12½, 17 by 12, 18 by 12 | 17 by 13, 18 by 13, 18 by 14, 22 by 14, 24 by 14, 22 by 15, 24 by 15, 22 by 16 | 24 by 16, 20 by 17, 22 by 17, 24 by 17, 20 by 18, 22 by 18, 24 by 18	11*s.* 6*d.*	13*s.* 6*d.*	16*s.*	18*s.*

ORCHARD HOUSE SIZES,

As recommended by and supplied to Mr. Rivers, and the leading Horticulturists of the day.

AVERAGE THICKNESS, 15 TO 16 OZ.

	4ths.	3rds.	2nds.	Best.
20 Inches by 12 Inches. 20 ,, ,, 13 ,, 20 ,, ,, 14 ,, 20 ,, ,, 15 ,, 20 ,, ,, 16 ,, per 100 feet ..	11*s.* 6*d.*	13*s.* 6*d.*	16*s.*	18*s.*

	4ths.	3rds.	2nds.	Best.
20 inches by 12 Inches. 20 ,, ,, 13 ,, 20 ,, ,, 14 ,, 20 ,, ,, 15 ,, 20 ,, ,, 16 ,, ...	14*s.* 6*d.*	18*s.* 6*d.*	24*s.*	27*s.* 6*d.*

The above prices are only for the sizes stated, but if a quantity of any other size is required, they can be supplied at about 5 per cent. additional, provided time allowed to manufacture them.

PROPAGATING GLASSES.

3 inches diam.	0*s.*	4*d.*	each.
4 ,, ..	0	5	,,
5 ,, ..	0	6	,,
6 ,, ..	0	7	,,
8 ,, ..	0	10½	,,
10 ,, ..	1	2	,,
12 ,, ..	1	6	,,
14 ,, ..	2	3	,,
16 ,, ..	3	0	,,
18 ,, ..	4	6	,,
20 ,, ..	6	0	,,

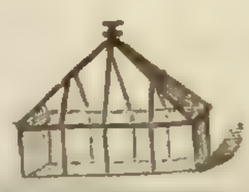

HAND GLASSES.

12 inches diam.	5*s.*	6*d.*	each.
14 ,, ..	6	6	,,
16 ,, ..	7	6	,,
18 ,, ..	8	6	,,
20 ,, ..	9	6	,,
22 ,, ..	10	6	,,
24 ,, ..	11	6	,,

If removable tops, 1*s.* extra.

Painted and Glazed with Sheet Glass.

PRESERVE JARS.

In. diam.	Without Lids.		With Lids.	
3 ..	0*s.* 4*d.*	..	0*s.* 6*d.*	each.
4 ..	0 5½	..	0 8	,,
5 ..	0 7	..	0 10	,,
6 ..	0 9	..	1 1	,,
7 ..	0 10½	..	1 2	,,
8 ..	1 2	..	1 6	,,
9 ..	1 6	..	2 0	,,
10 ..	1 10	..	2 4	,,

These will be found preferable to any other kind of Jar.

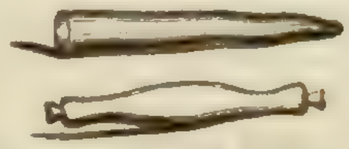

CUCUMBER TUBES.

Ins. long.			
12 ..	0*s.* 10*d.*	each	
13 ..	0 11	,,	
14 ..	1 0	,,	
15 ..	1 1	,,	
16 ..	1 2	,,	
17 ..	1 3	,,	
18 ..	1 4	,,	
19 ..	1 5	,,	
20 ..	1 6	,,	
22 ..	1 7	,,	
24 ..	1 9	,,	

ROLLING PINS.

1*s.*	3*d.*	each
1	4	,,
1	6	,,
1	8	,,
1	9	,,
1	10	,,
2	0	,,
2	2	,,
2	3	,,
2	4	,,
2	8	,,

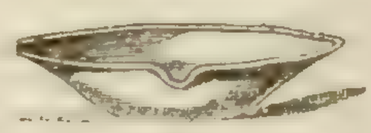

MILK PANS.

6 inches diameter	0*s.*	5*d.*	each
8 ,,	0	8	,,
10 ,,	0	10½	,,
12 ,,	1	1	,,
14 ,,	1	6	,,
16 ,,	2	0	,,
18 ,,	2	5	,,
20 ,,	2	10	,,
22 ,,	3	4	,,
24 ,,	4	0	,,

Intermediate sizes in proportion.

FISH GLOBES.

Without feet.	
8 inches diam.	Per 7*d.*
9 ,,	
10 ,,	
11 ,,	
12 ,,	
13 ,,	
14 ,,	
15 ,,	
16 ,,	

GLASS TILES, in SHEET and ROUGH PLATE. PLATE GLASS, PATENT PLATE, and HARTLEY'S IMPROVED ROUGH PLATE.

PAINTS, COLOURS, VARNISHES, &c.

GENUINE WHITE LEAD ..	.. ..	30*s.*
ANTI-CORROSION PAINT ..	..	28*s.* to 34*s.* per cwt.
LINSEED OIL PUTTY ..	.. ..	9*s.*

FINE OAK VARNISH ..	..	10*s.* to 12*s.*
,, CARRIAGE ..	..	12*s.* to 14*s.* per gallon.
PATENT DRYERS ..	..	28*s.* to 42*s.* per cwt.

LINSEED OIL ..	.. ..	3*s.* 9*d.*
BOILED OIL ..	.. ..	4*s.* 2*d.* per gallon
TURPENTINE ..	.. ..	7*s.* 0*d.*

MILLED LEAD in Sheet and Pipe of all sizes. OLD LEAD bought or taken in Exchange. LIFT PUMPS, WATER CLOSETS, and PLUMBERS' BRASS WORK of all kinds.

NETT CASH.

B

J. JONES'S HOT-WATER APPARATUS
for GREENHOUSES.
Plans and Estimates Post Free.
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J. JONES'S HOT-WATER APPARATUS
for CONSERVATORIES.
Plans and Estimates Post Free.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS
for FORCING-HOUSES and PITS.
Plans and Estimates gratis.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS
for ORCHARD HOUSES.
Plans and Estimates on application.
6, Bankside, Southwark, London, S.E.

J. JONES'S HOT-WATER APPARATUS
for BATHS and DRYING-CLOSETS.
Estimates gratis.
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for HALLS and BILLIARD-ROOMS.
Estimates on application.
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for OFFICES, WAREHOUSES, and WORKSHOPS.
Plans and Estimates gratis.
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for CHURCHES, CHAPELS, and SCHOOLS.
Estimates gratis.
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Estimates on application.
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for COACH-HOUSES and HARNESS-ROOMS.
Estimates free.
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Best Materials, Moderate Charges, and, when fixed by J. Jones's men, the Effectual Working Guaranteed.
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J. JONES'S HOT-WATER APPARATUS
being Always in Stock can, at a very short notice, be Sent to any Part, and men to fix the same if required.
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J. JONES'S HOT-WATER APPARATUS
for EVERY PURPOSE, delivered Free to any Station in England, or Fixed Complete in any Part of the World.
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Prices and ILLUSTRATED CATALOGUES, or Plans and Estimates Gratis and Post Free.
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Heating by Hot Water.

HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, Tubular, and Elliptic, from 24*s.* each. Improved Boilers and Iron Stands to use without brickwork, 56*s.* each. Valves from 10*s.* 6*d.* each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at

Mr. Lynch White's Iron Wharf, Upper Ground Street, Blackfriars Bridge, London, S. Price List on application.

Heating by Hot Water.

GEORGE COWELL, Crescent, Salford, Manchester (late Partner with J. Weeks & Co, Chelsea, London), will be happy to forward Plans, Estimates, and Specifications for the Erection of the above (free of cost) on receipt of dimensions and particulars.

Apparatus fixed complete, and warranted to answer throughout England, Ireland, and Scotland, at the lowest remunerative prices consistent with the best class of materials and workmanship. Upright Tubular Boilers, with all recent improvements, capable of efficiently and economically Heating from 100 to 20,000 feet of 4-inch pipe.

References permitted throughout the Country.
Descriptive Price List and full particulars on application.

Greenhouses.

JOSEPH SMITH, New Road, Hammersmith, W., undertakes to supply GREENHOUSES, VINERIES, and ORCHARD HOUSES, constructed on the best approved plan, of good Yellow Deal, 21-oz. glass, and four times painted, at 1*s.* 3*d.* per square foot; with 15-oz. glass, 1*s.* 1*d.* per foot.

J. S. begs to offer, ready made, a SPAN ROOF, 27 by 16, for 45*l.*; ditto Span, 17 by 12, 25*l.*; Lean-to, 25 by 14, 35*l.*; 23.6 by 12, 30*l.*; 45 by 14, 65*l.*; 100 by 14.6, 120*l.* Also several thousand feet various sizes, all strongly made, glazed; with 21-oz. glass, 9*d.* per foot.

Two-inch Lights made to order, 15-oz. glass, 8*d.* per foot.
Estimates for effectually Heating with hot water.
N.B. Second-hand, equal to new, a SPAN HOUSE, 17 by 12, complete with shelves (no brickwork required) and hot water pipes, 35*l.*

Under the Patronage of Her Majesty.

CLARK and HOPE (late Clark), 55, Lionel Street, Birmingham, Manufacturers of Metallic and Wooden Hothouses, Conservatories, Verandahs, &c., Copper and Wrought Iron Sashes, Skylights, &c., and Hot Water Apparatus for Horticultural and Domestic purposes.

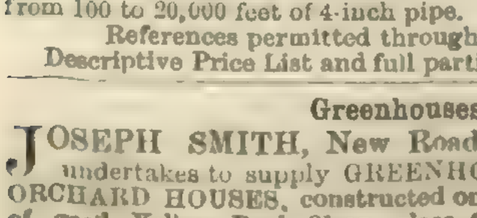

C. & H. beg to call attention to their NEW TREE COVER, or Continuous Glass Covering for Garden Walls; which is constructed of Cast and Wrought Iron, glazed with or without putty, and fitted together with bolts and nuts, constituting a Tenant's Fixture. It can be made 6, 7, or 8 feet wide, and 10, 12, or 14 feet high; the Lights being opened together, by means of simple and durable machinery, in lengths of about 50 feet; and the cost does not exceed that of a wooden structure.

Further particulars, with prices, forwarded upon application; also Lithographed Designs for Horticultural Buildings, &c.

RIDDELL'S PATENT SLOW-COMBUSTION COTTAGE BOILER for HEATING CONSERVATORIES, ENTRANCE HALLS, BATHS, &c., by the Circulation of Hot Water.

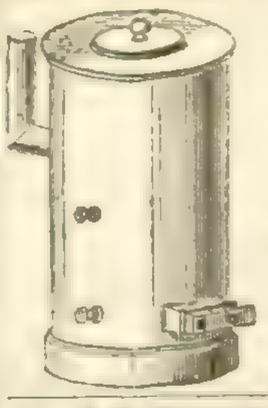

Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, requires no additional building, and may be seen in operation daily at the

Patentee's Warehouse, 155, Cheapside, London, E.C.

Price complete from 3*l.* 10*s.*

Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the

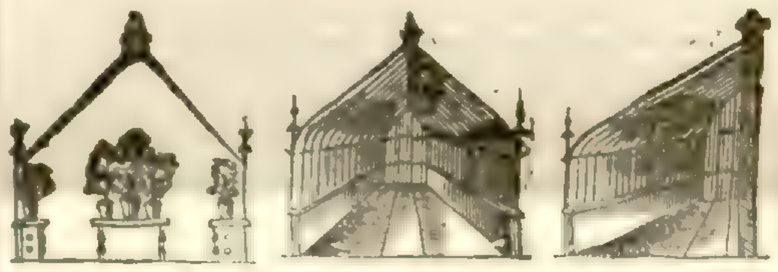

best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect; the possibility of fracture is prevented, and a permanently Water-tight Roof insured.

The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.

For Prospectus, &c., address T. H. P Dennis, Horticultural Builder, Hot-Water Engineer, &c., High St. Chelmsford, Essex.

Hot-Water Pipes, with Elbows and Connections,
Supplied by
BURY AND POLLARD.
Contracts and Estimates given for
WARMING PUBLIC BUILDINGS.

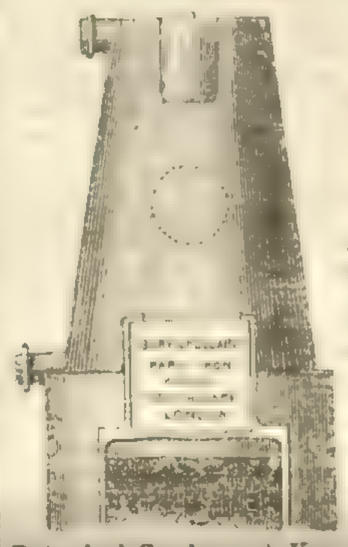

Latest Improvements in Heating by Hot Water.
The Improved
CONICAL BOILERS,
For Heating Pineries, Conservatories, Greenhouses, Mansions, Halls, Warehouses, &c.,
Solely Manufactured by
Bury & Pollard (Successors to John R. Peill, late Stephenson & Peill).

Annexed Sketch shows Bury & Pollard's improved arrangement, requiring
NO BRICKWORK SETTING.

These Boilers have for their durability and economy attained a celebrity far surpassing any other Boilers ever invented. They have been for many years past in use at many Public Establishments, Royal Botanical Gardens at Kew, at the Regent's Park, the Crystal Palace, and at most of the Nobility's and Gentry's Seats throughout the United Kingdom. References where they have been 20 years in constant use.

Price Lists on application to Bury & Pollard, Park Iron Works, New Park Street, Southwark, London, S.

SEWELL and CO.'S MOIRE ANTIQUES, Spitalfields manufacture, celebrated throughout the kingdom, 4½ guineas the full dress.

Compton House, Frith Street, and Old Compton Street, Soho, W.

Fashions in Mantles for May and June.

SEWELL and CO. have now in their Cloak Rooms all the Novelties for the Summer in DRAP DE LYON, TAFFETAS, GROS-GRAINS, and Light Textures of every description, from One Guinea to Ten Guineas.

Compton House, Frith Street, Soho Square, W.

The Furnishing of Bed Rooms.

HEAL and SON have observed for some time that it would be advantageous to their Customers to see a much larger selection of BED-ROOM FURNITURE than is usually displayed, and that to judge properly of the style and effect of the different descriptions of Furniture, it is necessary that each description should be placed in separate rooms. They have therefore erected large and additional Show Rooms, by which they are enabled not only to extend their show of Iron, Brass and Wood Bedsteads, and Bed Room Furniture, beyond what they believe has ever been attempted, but also to provide several small rooms for the purpose of keeping complete suites of Bed Room Furniture in the different styles.

Japanned Deal Goods may be seen in complete suites of five or six different colours, some of them light and ornamental, and others of a plainer description. Suites of Stained Deal Gothic Furniture, Polished Deal, Oak, and Walnut, are also set apart in separate rooms, so that customers are able to see the effect as it would appear in their own rooms. A Suite of very superior Gothic Oak Furniture will generally be kept in stock, and from time to time new and select Furniture in various woods will be added.

Bed Furnitures are fitted to the Bedsteads in large numbers, so that a complete assortment may be seen, and the effect of any particular pattern ascertained as it would appear on the Bedstead.

A very large stock of Bedding (Heal & Son's original trade) is placed on the Bedsteads.

The stock of Mahogany Goods for the better Bed Rooms, and Japanned Goods for plain and Servants' use, is very greatly increased. The entire Stock is arranged in eight rooms, six galleries (each 120 feet long), and two large ground floors, the whole forming as complete an assortment of Bed Room Furniture as they think can possibly be desired.

Every attention is paid to the manufacture of the Cabinet work, and they have just erected large Workshops on the premises for this purpose, that the manufacture may be under their own immediate care.

Their Bedding trade receives their constant and personal attention, every article being made on the premises.

They particularly call attention to their Patent Spring Mattress, the Sommier Elastique Portatif. It is portable, durable, and elastic, and lower in price than the old Spring Mattress.

Heal & Son's ILLUSTRATED CATALOGUE of Bedsteads, Bedding, and Bed Room Furniture sent free by Post.
196, 197, 198, Tottenham Court Road, London, W.C.

SMITH, BECK, and BECK'S New MERCURIAL BAROMETER, very sensitive. Scale, 3 to 8 inches for every inch of variation, compensating tube instead of a reservoir. Price from 35*s.* to 42*s.*

Description sent free by post, or to be had on application at 31, Cornhill, E.C.

Bedroom Candles.

PRICE'S CANDLES, which will not Drop Grease when carried.—Thin, very hard Candles, sold in boxes 1*s.* and 3*s.* each, are recommended as the best Carriers.

Extra hard 8 12 CHAMBER CANDLES, sold in boxes. Thicker Candles, intended for those who will not burn thin Candles.

SHERWOOD ECONOMIC BED-LIGHTS, in packets of 36 Candles for 1*s.*, intended for use where cheapness is a great object, will be found an improvement on the ordinary Candles, as they gutter less.

Special CANDLESTICKS to fit thin candles, 1*s.* and 2*s.* 6*d.* each; reducing Sockets, making them fit any candlesticks, 2*d.* each.

Price's Patent Candle Company, Limited, London.

WARNERS' KOH-I-NOOR LAMPS, TO BURN THE HYDRO CARBON OILS.
PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.

They are more easily trimmed and re-filled than any other Lamp with similar burner.

There is no danger of chimneys breaking, and the chimney cannot become smoked.

For designs of the above, adapted for the DINING-ROOM, DRAWING-ROOM, HALL, or LIBRARY, see Number 2 of this Journal.

A REALLY GOOD LAMP.
The above may be obtained of any Lamp Dealer.

BATHS and TOILET WARE.—WILLIAM S. BURTON has ONE LARGE SHOW ROOM devoted exclusively to the display of BATHS and TOILET WARE. The stock of each is at once the largest, newest, and most varied ever submitted to the public, and marked at prices proportionate with those that have tended to make his Establishment the most distinguished in this country. Portable Showers, 7*s.* 6*d.*; Pillar Showers, 3*l.* to 5*l.* 12*s.*; Nursery, 15*s.* to 32*s.*; Sponging, 9*s.* 6*d.* to 22*s.*; Hip, 13*s.* 3*d.* to 31*s.* 6*d.* A large assortment of Gas Furnace, Hot and Cold, Plunge, Vapour, and Camp Shower Baths. Toilet Ware in great variety, from 15*s.* 6*d.* to 45*s.* the set of three.

THE BEST SHOW of IRON BEDSTEADS in the KINGDOM is WILLIAM S. BURTON'S.—He has FOUR LARGE ROOMS devoted to the exclusive show of Iron and Brass Bedsteads and Children's Cots, with appropriate Bedding and Bed Hangings. Portable Folding Bedsteads, from 11*s.*; Patent Iron Bedsteads, fitted with dovetail joints and patent sacking, from 14*s.* 6*d.*; and Cots, from 15*s.* 6*d.* each; handsome Ornamental Iron and Brass Bedsteads, in great variety, from 2*l.* 13*s.* 6*d.* to 20*l.*

WILLIAM S. BURTON, GENERAL FURNISHING IRONMONGER by appointment to H.R.H. the Prince of Wales, sends a CATALOGUE gratis and post paid. It contains upwards of 500 Illustrations of his illimited Stock of Sterling Silver and Electro-Plate, Nickel Silver and Britannia Metal Goods, Dish-Covers, Hot-water Dishes, Stoves, Fenders, Marble Chimney-pieces, Kitchen Ranges, Lamps, Gaseliers, Tea-Trays, Urns and Kettles, Clocks, Table Cutlery, Baths, Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding, Bed Room Cabinet Furniture, &c. with Lists of Prices, and Plans of the 20 large Show Rooms, at 39 Oxford Street, W.; 1, 1a, 2, 3, and 4, Newman Street; 4, 5, and 6, Perry's Place; and 1, Newman Yard, London.

THRESHER'S COLORED FLANNEL SHIRTS.—Prize Medal awarded to Thresher & Glenny for very fine and superior FLANNEL SHIRTS, India Tweed Suits, and India Gauze Waistcoats.

Lists of prices on application to Thresher & Glenny, General Outfitters, next door to Somerset House, Strand, W.C.

CULTIVATION of the HAIR.—This is admitted on all hands to be a department of the toilet of peculiar importance in reference to personal appearance. OLDRIDGE'S BALM of COLUMBIA produces Eyebrows, prevents the Hair from turning Grey, and the first application causes it to Curl beautifully, frees it from Scurf, and stops it from falling off.—Price 3*s.* 6*d.*, 6*s.*, and 11*s.* per bottle.—Oldridge's Balm (sold Wholesale and Retail), 22, Wellington Street, Strand.

METCALFE, BINGLEY, and CO.'S NEW PATTERN TOOTH BRUSHES, Penetrating Unbleached Hair Brushes, Improved Flesh Brushes, genuine Smyrna Sponges, and every description of Brush and Comb and Perfumery for the Toilet. Metcalfe's celebrated Alkaline Tooth Powder, 2*s.* per box. The FAIRY BOUQUET; the OXFORD and CAMBRIDGE BOUQUET. In bottles, 2*s.*, 3*s.* 6*d.*, and 5*s.* each. 130 B, and 131, Oxford Street, W.

Manufacturers to the Queen and Prince of Wales.

FRY'S | HOMŒOPATHIC ICELAND MOSS PEARL | COCOA.
FRY'S SOLUBLE CHOCOLATE.

J. S. Fry & Sons were the only English Manufacturers of Cocoa who obtained the Prize Medal, 1862.

TAYLOR BROTHERS' GENUINE MUSTARD.
Dr. Hassall having subjected this Mustard to a rigorous microscopical examination and chemical analysis, reports that it contains the three essential properties of good Mustard, viz., Purity, Pungency, and Delicate Flavour. See that each Package bears their Trade Mark the "Prize Ox," and Dr. Hassall's Report. Sold by all Grocers, &c., throughout the kingdom.

Taylor Brothers, Brick Lane, and Wentworth Street, London, N.E.

Sauce.—Lea and Perrins'

WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs
"THE ONLY GOOD SAUCE,"
Is prepared solely by Lea & Perrins.

The public are respectfully cautioned against worthless imitations, and should see that Lea & Perrins' Names are on Wrapper, Label, Bottle, and Stopper.

Ask for Lea and Perrins' Sauce.

*** Sold Wholesale and for Export, by the Proprietors, Worcester; Messrs. Crosse & Blackwell; Messrs. Barclay & Sons, London, &c.; and by Grocers and Oilmen universally.

DINNEFORD'S PURE FLUID MAGNESIA has been during 25 years emphatically sanctioned by the Medical Profession, and universally accepted by the public, as the best remedy for Acidity of the Stomach, Heartburn, Headache, Gout, and Indigestion, and as a mild Aperient for delicate constitutions, more especially for ladies and children. It is prepared in a state of perfect purity and of uniform strength by Dinneford & Co., 172, New Bond Street, London, and sold by all respectable Chemists throughout the world.

THE QUARTERLY REVIEW, No. CCXXX., is published THIS DAY. Contents:

I. PROSPECTS OF THE CONFEDERATES.
II. POMPEII: PAST AND PRESENT.
III. EMPIRE OF MEXICO.
IV. SIR WILLIAM NAPIER.
V. SHAKSPEARE AND HIS SONNETS.
VI. PRIVY COUNCIL JUDGMENT.
VII. FOREIGN POLICY OF ENGLAND.

JOHN MURRAY, Albemarle Street, W.

Just published, price 6s.,

JOURNAL of the ROYAL AGRICULTURAL SOCIETY of ENGLAND, Vol. XXV., Part I., No. LII., containing:—

Statistics: Meteorology—Public Health—Price of Provisions—Weekly Average of Wheat.
Agricultural Progress and the Royal Agricultural Society. By H. S. THOMPSON, M.P.
Hop Cultivation. By JOHN P. SMITH.
On Education as connected with Agriculture. By the Rev. J. L. BRERETON.
Essay upon the Manufacture and Preservation of Cider and Perry. By CLEMENT CADLE.
Report of Experiments on the Growth of Wheat for 20 years in succession on the same Land. By J. B. LAWES, F.R.S., F.C.S., and J. H. GILBERT, Ph.D., F.R.S., F.C.S.
On Peruvian Guano, and the Means of Increasing its Efficacy as a Manure. By Dr. AUGUSTUS VOELCKER.
Report on International Agricultural Meeting at Lille.
Report on International Agricultural Exhibition at Hamburg. By Professor JOHN WILSON.
Professor VOELCKER'S Annual Report.
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News of the Week.

IN the House of Lords on Friday the LORD CHANCELLOR introduced a Bill to abolish the power of the County Court Judge to commit to prison in the event of his being satisfied of the inability of the debtor to pay, retaining however the power of imprisonment, in cases of fraud, false pretences, or breach of trust. On Monday, in answer to the Earl of CARNARVON, Earl RUSSELL stated that a suspension of arms for one month from the 12th of May had been agreed to, on condition that the blockade of the German ports should be raised. The Government of Denmark had preferred a simple suspension of arms to an armistice on the conditions demanded by Austria and Prussia. The Earl of CARNARVON, under these circumstances, withdrew the motion of which he had given notice, in reference to the Danish question. Lord CAMPBELL moved two resolutions to the effect that the correspondence with Russia on the affairs of Poland had not yet arrived at any satisfactory conclusion; and that the EMPEROR OF RUSSIA, having failed to comply with the conditions of the Treaty of Vienna, on which he acquired the sovereignty of Poland, the English Government was no longer bound by that Treaty. Earl RUSSELL opposed the resolutions, which were ultimately withdrawn. On Tuesday the Earl of ELLENBOROUGH moved the second reading of the Sentences of Death Bill. Earl GRANVILLE suggested the expediency of postponing legislation on the subject until the Royal Commission to be appointed on the address of the House of Commons had made their report. After a short discussion the Bill was withdrawn. On Thursday the Earl of ELLENBOROUGH called attention to several well authenticated cases of kidnapping of foreigners, which had taken place at New York for the purpose of filling the ranks of the Federal army, and asked whether any steps had been taken to obtain the release of those British subjects who had been entrapped into that service. Earl RUSSELL said he had no doubt that the high bounties offered by the Federal Government for recruits had induced unprincipled persons to practise a species of kidnapping. Lord LYONS had made repeated complaints on the subject to the Government at Washington, but no satisfactory answer had been given to his remonstrances. The Marquis of WESTMEATH moved for papers relating to the release of three persons who had been confined in the county gaol of Westmeath for agrarian offences, and who had been liberated after having undergone two-thirds only of their sentences. Earl GRANVILLE opposed the motion, but on the remonstrance of the Earl of DERBY agreed to produce the papers, on the understanding that it was not to be made a precedent.

In the Commons on Friday, in answer to Mr. D. GRIFFITH, Lord C. PAGET said that the Aurora frigate had been sent to the North Sea, and was now at Heligoland watching the movements of the Austrian squadron. Sir G. GREY explained, in answer to further questions, that his denial on Thursday night in regard to the departure of the Aurora, applied only to the Baltic. Mr. GRANT DUFF called attention to the report of the Public Schools Commission, and moved that the state of the higher school education in England was not satisfactory, and required the early attention of Her Majesty's Government. The CHANCELLOR of the EXCHEQUER opposed the motion, which was ultimately withdrawn. The Under-Secretaries Indemnity Bill passed through committee. The Local Government Supplemental Bill was read a third time and passed. Mr. SOMES moved for leave to bring in a Bill for restrictions on the sale of intoxicating liquors between the hours of 11 o'clock on Saturday night, and 6 o'clock on Monday morning. After some discussion, the motion was negatived on a division, by 123 to 87. On Monday Sir G. GREY informed the House that the Conference had that day agreed upon an armistice for a month, and that the Secretary for the Colonies had received a telegram from Heligoland, stating that an engagement had that day taken place between two Austrian frigates and three gunboats, and two Danish frigates and one corvette, and that the Austrian squadron had been defeated. These announcements were received with loud and protracted cheers. On the Order for going into Committee of Supply, Colonel NORTH moved an Address to the Queen, praying her to relieve the officers of Chelsea Hospital from the payment of rates and taxes charged upon them by a recent regulation for houses in that establishment occupied by them in the performance of their duties. The motion was opposed by Mr. PEEL, and was negatived on a division by 184 to 102. The House then went into Committee of Supply on the Army Estimates, and agreed to several votes. The Under Secretaries Indemnity Bill was read a third time and passed. The Naval Prize Acts Repeal Bill and the Naval Prize Bill were read a third time and passed. The Admiralty Lands and Works Bill and the Joint-Stock Companies (Foreign Countries) Bill passed through committee. The Partnership Law Amendment Bill was considered in Committee. On Tuesday Mr. WHITE moved the appointment of a select committee to inquire into the operation and incidence of our present fiscal system, with a view to secure a more equitable adjustment of the burden of Imperial taxation. The CHANCELLOR of the EXCHEQUER opposed the motion, which was ultimately withdrawn. Sir G. BOWYER obtained leave to bring in a Bill to appoint judicial committees in certain cases with the necessary powers. Sir J. JERVOISE moved an address to the Queen relative to treasure trove, and was speaking in support of his motion, when the House was counted out. On Wednesday, Mr. BAINES moved the second reading of the Borough Franchise Bill, the

object of which was to reduce the qualification to 6*l*. Mr. CAVE moved the previous question. The CHANCELLOR of the EXCHEQUER supported the Bill, and laid it down as a principle that every man not incapacitated by certain disqualifications was morally entitled to come within the pale of the Constitution. He spoke in terms of the highest eulogium of the working classes, and said that Parliament ought to consider the claims put forward on their behalf to the possession of the franchise; and such consideration might be better entered upon at a moment like this, when there was an absence of all agitation, than when the doors of the House were besieged and its table groaning under petitions. Mr. WHITESIDE regretted the temporary absence of Lord PALMERSTON, who would certainly have opposed the Bill, and have replied effectively to the arguments of his own CHANCELLOR of the EXCHEQUER. He opposed the Bill on the ground that the influx of 700,000 men, of whom they could know nothing, into the different borough constituencies, would be a dangerous experiment, and that any measures on the subject ought to be propounded by the responsible Ministers of the Crown, acting through their chief. After some discussion the House divided, and the previous question was carried by 272 to 216. Mr. HEYGATE moved the second reading of the County Bridges Bill. Mr. HENLEY moved to defer the second reading for six months. After a short discussion, the motion for the second reading was withdrawn. On Thursday Sir G. GREY moved a resolution that a Select Committee be appointed to inquire into the practice of the Committee of Council on Education with respect to the Reports of her Majesty's Inspectors of Schools. Sir J. PAKINGTON moved as an amendment to add to the motion, "and further to inquire into the constitution of that Committee, and how far their mode of conducting the business of the department is consistent with the due control of Parliament over the annual education grants." On a division the amendment was negatived by 142 to 93. The resolution was then agreed to. The House then went into a Committee of Supply on the Civil Service Estimates, and agreed to several of the votes. Sir G. GREY obtained leave to bring in a Bill for amending the law relating to seats in the House of Commons by persons holding certain public offices.

At the meeting of the Conference on Monday, the Plenipotentiaries of the German Powers and Denmark consented to a suspension of hostilities for one month. While the Plenipotentiaries were employed in arranging the terms on which hostilities should be suspended, a naval engagement between the Austrian and Danish fleets was in progress at the mouth of the Elbe. In this engagement the Danes, although over-matched, were victorious. One of the Austrian frigates was set on fire, and the other, with the gun-boats, was compelled to retire to Heligoland, and seek the protection of British waters. Some of the Danish Ministers have since resigned on account of their dissatisfaction with the suspension of the blockade.

From the United States we learn that General BANKS lost in the late battles in Louisiana, besides killed and wounded, 4000 prisoners, 30 cannon, a great number of small arms, their train, and 1,000,000 dollars in greenbacks. The Federal ironclad Eastport, the most valuable in Admiral Porter's fleet, was also lost. The latest news from Vicksburg states that the Confederates will speedily attack General BANKS at Grand Ecore. No active operations by either of the armies in Virginia are likely to commence for some days. The Confederates are strengthening and extending their works on the Rapidan. The Confederate General FORREST is said to be moving towards Alabama, and Bishop POLK is marching to join him. President LINCOLN has accepted the offer made by the Governors of Wisconsin, Illinois, Indiana, Ohio, and Iowa, of the services of 100,000 volunteers for 100 days for fortification and frontier duty. The House of Representatives has passed a resolution increasing import duties 50 per cent. for 60 days.

Home News.

THE COURT.—The Queen and Royal family left Osborne on Monday afternoon for Windsor Castle. The Royal party travelled from Gosport by a special train on the South Western Railway, and arrived at Windsor at 6 o'clock. On Tuesday the Queen, accompanied by Princess Helena, walked and drove in the grounds. The Grand Duke and Duchess of Mecklenburg-Strelitz visited her Majesty, and remained to luncheon. The Marquis and Marchioness of Abercorn arrived at the Castle, and dined with the Queen and Royal family. On Wednesday morning the Queen came to London, and held a second Court at Buckingham Palace. Earl Russell had an audience of her Majesty. MM. de Biegeleben and de Balan (the Plenipotentiaries from Austria and Prussia) were presented to the Queen by Earl Russell, as Secretary for Foreign Affairs. In the afternoon her Majesty honoured Baron Marochetti with a visit to his studio, to see the colossal statue of the Prince Consort, in progress for Glasgow, as well as his other works. Sir Edwin Landseer had, at the same time, the honour of submitting his model of the colossal lion on which he is engaged for Trafalgar Square. The Queen then returned to Windsor, and arrived at the Castle at seven o'clock. The Princess Leiningen and the infant Princess Alberta arrived on a visit to her Majesty. On Thursday morning the Queen, accompanied by Princess Louisa, walked and drove in the grounds. The Judge Advocate-General had an audience of the Queen.

THE PRINCE AND PRINCESS OF WALES.—On Friday morning the Prince rode on horseback. In the afternoon the Princess took a carriage drive. The Prince of Wales went to the House of Lords. In the evening His Royal Highness attended the performance at the Strand Theatre. On Saturday the Prince held a Levee at St. James's Palace, on behalf of her Majesty. In the afternoon his Royal Highness rode out. The Princess drove out. In the evening their Royal Highnesses gave a dinner party. On Sunday morning the Prince and Princess of Wales attended Divine service at the Chapel Royal, St. James's. The Rev. C. F. Tarver, chaplain to his Royal Highness, preached the sermon. In the afternoon the Prince and Princess drove to Kew. On Monday the Princess took a carriage drive. In the afternoon the Prince went to the House of Lords. In the evening his Royal Highness attended the performance of Shakspere's "Henry the Fourth" at Drury Lane Theatre. On Tuesday the Prince rode out. The Princess took a carriage drive. The Duke of Cambridge visited the Prince at Marlborough House. In the evening their Royal Highnesses went to the Italian Opera, Covent Garden. On Wednesday the Prince and Princess attended the Queen's reception at Buckingham Palace, and in the afternoon took a carriage drive. His Royal Highness visited the Grand Duchess of Mecklenburg-Strelitz at St. James's Palace. On Thursday the Prince rode on horseback. The Princess took a carriage drive. Princess Helena and Princess Louisa visited her Royal Highness. In the evening the Prince and Princess honoured Earl Granville with their presence at the evening party given at the South Kensington Museum.

THE CABINET.—A Cabinet Council was held on Saturday at Cambridge House. Another Council was held yesterday.

THE CONFERENCE.—The Plenipotentiaries accredited by the European Powers to the Conference met on Monday at the official residence of the First Lord of the Treasury, and sat three hours and a quarter. All the members of the Conference were present. The Conference met again on Thursday, at the official residence of the First Lord of the Treasury, and sat three hours. All the members of the Conference were present.

PARLIAMENTARY MOVEMENTS.—The election of a member for Stockport, in place of the late Mr. Kershaw, took place on Wednesday, when Mr. E. W. Watkin was returned without opposition.

THE PACIFIC COMMAND.—Rear-Admiral the Hon. Joseph Denman has been appointed Commander-in-Chief in the Pacific, in the room of Vice-Admiral Kingcome, who has been superseded, having attained the rank of Vice-Admiral.

THE HON. ARTILLERY COMPANY.—The Prince of Wales has expressed his intention of inspecting the Hon. Artillery Company (of which his Royal Highness is Captain-General and Colonel) on Wednesday, June 29, at the Artillery Ground.

PRESENTATION OF THE OXFORD DECLARATION.—On Thursday a large number of the clergy attended at Lambeth Palace to present to the Archbishop the declaration prepared by the committee appointed at the meeting held at Oxford, and which has since received the signatures of upwards of 11,000 of the clergy of England and Ireland. His Grace received the deputation in the library of the Palace. About 300 of the clergy were present. With his Grace there were the Bishops of St. Asaph, Bangor, Rochester, Gloucester, Carlisle, Moray and Ross; the chaplains to the Archbishop; the librarian; and the secretary. Archdeacon Clarke read the following address:—

"MOST REV. AND RIGHT REV. FATHERS IN GOD,

"We, the members of the committee appointed at a meeting held in Oxford to draw up a statement setting forth the clear and consistent teaching of the Church of England and Ireland on matters upon which such clearness and consistency of teaching have been gravely questioned, have now the honour to present to your lordships a declaration of firm belief that the Church maintains without reserve or qualification the Inspiration and Divine Authority of the whole Canonical Scriptures as not only containing but being the Word of God, and also teaches the eternal punishment of the wicked. My lords, we undertook the work entrusted to us under a sense of many and deep responsibilities; we were called upon to act with decision in matters of difficulty and importance which were heavily oppressing the minds of Churchmen, and did not issue the declaration till we had obtained the consent and sanction of a large number of the clergy of England and Ireland. We cannot draw our labours to a close without first of all expressing before your lordships and the clergy here assembled that we are heartily thankful to Almighty God because the task imposed upon us has been carried through to the end with perfect unanimity on our part, and because the weight of it has been greatly relieved by expressions of cordial assent and by hearty co-operation on the part of a large number of the clergy who have affixed to it their signatures. We can assure your lordships that, large as this number is, it by no means represents the whole of those who unswervingly hold the several articles of faith, the truth of which this declaration seeks to affirm. Beyond the public means of communication, we know through a large correspondence that there are, besides the number of names appended to the declaration, some thousands of the clergy whose faith it equally expresses. They assure us they were deterred from signing it, not by any doubt as to the faith of the Church of England on their own part, but by what is natural and legitimate consideration. Indeed, when we consider the novelty of the course which the necessity of the case suggested in order to reassure the lay members of our Church of the faith of their clergy, we have reason to be thankful to Almighty God for the great success with which He has been pleased to bless it. We trust that the declaration has had some force in removing the misgivings of many as to the authoritative teaching of the Church on matters of such vital moment to men's souls as the accepting or denying the inspiration of the Holy Scriptures, and also the eternity of the punishment pronounced upon the cursed. We further trust, that, as expressing the opinions of so large a body of the clergy, it will strengthen your lordships' hands in any future measure which you may devise for guarding the faith of the Church. As we commenced our work with humble prayer for Divine guidance, so we close it with fervent joy that we have been allowed to promote the glory of our Lord, and with thankfulness that the acceptance which this document has met with, affords an assurance that the Church of England can give to all her members throughout the length and breadth of the land a witness that the true faith of Christ, which is her life, is upheld in her by her Divine Lord, and that her clergy who bind themselves to it evince their obligation by a faithful, open, and unreserved acceptance of the doctrine of the Church as set forth in her creeds, articles, and other formularies

"(Signed) C. C. Clerke, D.D., Archdeacon of Oxford, chairman; R. L. Cotton, D.D., Provost of Worcester College; G. A. Denison, M.A., Archdeacon of Taunton; W. R. Fremantle, M.A., Rector of Claydon, secretary; F. K. Leighton, D.D., Warden of All Souls' College; J. C. Miller, D.D., St. Martin's, Birmingham; and E. B. Pusey, D.D., Regius Professor of Hebrew."

The declaration, of which the following is a copy, was next read:—

"We, the undersigned presbyters and deacons in holy orders of the Church of England and Ireland, hold it to be our bounden duty to the Church and to the souls of men to declare our firm belief that the Church of England and Ireland, in common with the whole Catholic Church, maintains, without reserve or qualification, the inspiration and Divine authority of the whole Canonical Scriptures as not only containing but being the Word of God; and further teaches, in the words of our blessed Lord, that the 'punishment' of the 'cursed,' equally with the 'life' of the 'righteous,' is everlasting."

The declaration and address were handed to his Grace by the Archdeacon, who stated that a more complete list of the signatures would shortly be presented. The Archbishop of Canterbury, in reply, said—Reverend and dear brethren: we, the bishops of the United Church of England and Ireland here present, accept this declaration as a renewed expression of your belief in those doctrines of the Church to which it refers. It is satisfactory to receive your assurance that there are some thousands of the clergy who, agreeing with you in the substance of the declaration, hesitated to sign it only by reason of its form or circumstances. This assurance strengthens our conviction that the clergy of our Church will never be disposed to propagate opinions which tend to subvert the fundamental doctrines of Christianity. We, for our parts, shall ever feel it to be our duty to maintain the authoritative teaching of the Church, humbly trusting that we may receive guidance from above, and be endowed with strength and wisdom to promote the glory of God and the welfare of His Church, through Jesus Christ our Lord. The proceedings were closed by the benediction of the Archbishop.

Foreign.

FRANCE.—The debate on the Budget was opened on Friday by M. Thiers, with a speech which his friends declare to have been one of the most brilliant ever delivered by him in the course of his long political career. The following is an abstract of his speech:—

"When the finances were in question, the representatives of the people were called upon to exercise the most important of their duties and the most incontestable of their privileges. They would, indeed, commit a grievous fault if, when such a duty was before them, they neglected to exercise a right which was undoubtedly theirs, and which no one thought for a moment of refusing them. He had applied himself to the study of the financial condition of the country, and he would treat it in a spirit of perfect sincerity, without favour or malice. In order to explain so difficult and complicated a subject, he had need of all the strength remaining to him, and also of all the attention of his colleagues. He would endeavour not to trespass on their patience, but it was absolutely necessary that they should be informed of the state of the finances. Previous to engaging in that dry but not sterile region of figures, he would present some general reflections necessarily connected with the subject. At all times a good direction of the finances was of the greatest importance. At present the spirit of order had made so much progress throughout the world that disorder, whenever it occurred,

became intolerable. It was said formerly that war should provide the supplies for war; but if anybody at present practised that maxim he would raise the world against him. If anybody gave up the country in which the made war to the army, he would have not only that country against him, but the countries that were mere spectators of the contest. Neutral States were like seconds in a duel, who require as much generosity as courage from the combatants. At present these armies must be fed, if discipline and the submission of the countries occupied were to be maintained. This explained why the late wars in the Crimea and in Italy were so costly—indeed, more costly than any of the wars under the Empire. He desired that his country should be distinguished for its humanity as well as for its courage. In the present day it was peace which should maintain war. For that reason good management of the finances was the foundation of a good direction of war. No great respect was felt for Powers whose finances were involved, but the alliance of those whose finances were in good condition was sought for, and sometimes others became dependent on them. For that reason people asked how the coalition of 1814 lasted four years; it was regarded as a marvel, but the marvel was easily explained. There was a man in the camp of the coalesced Powers who had nothing in him of the magician, for he was the most sagacious of men—Lord Castlereagh. He dispelled all difficulties with one word. He opened or closed English subsidies. Indeed, it might be said that it was he who led the coalition to the gates of Paris. He would not speak of the close relation between the finances and a good public administration. Formerly people did not perceive the bad management of their finances until they fell under the weight. In modern times well-being and distress were felt more rapidly. The prudence and skill of Government were set up to auction on those great public markets called the Stock Exchange. Confidence rose or fell, and the prosperity of the public increased or diminished. It might, then, be asserted that, in treating the subject of finance, military power, political ascendancy, and the public prosperity of France were discussed. He would quit those generalities to enter into the subject, and he would forthwith explain his plan. He would first endeavour to state precisely the present state of the French budgets; he would seek their starting point and trace the course they had followed. He would examine the increase of those budgets, and afterwards explain by what means a condition might be attained which reason might avow without alarming the prudent. He would ask what was the true state of the budgets? Even that was difficult to ascertain, thanks to the care taken in somewhat disguising their amount. For example—a distinction had been made between the ordinary and extraordinary budget. He was never satisfied, however time-honoured the plan was, that a budget which was called extraordinary for 25 years should finish by being called an ordinary budget, and that by favour of this term 'extraordinary' certain expenses which might be contested and certain receipts of a very doubtful kind were allowed to pass. Cochin-Chinese and Mexican securities could not be so boldly presented in a budget not extraordinary. He would, nevertheless, admit the distinction, thanks to which the budget was cleared of from 100,000,000f. to 120,000,000f. But another distinction had been imagined, by which from 220 to 230 millions were placed under a particular head. A special budget had been imagined, composed of departmental expenses, which at all periods were annexed to the Ministry of the Interior, and communal expenses, which figured in the Department of Finance. He then went over the financial condition of France in periods anterior to the present, examined in all their parts the budgets of the present Government, and described the enormous increase they had undergone. He observed that all mystery as to the cause of that increase would disappear when the details were examined. If it were assented to that every three or four years France should embark in a great war, and if, after having carried on a great war of undoubted public interest, and before the country had time to breathe, or to recover a part of what it had spent, it again entered on another war less easily understood than that of the Crimea, and less national, but only for an idea, as a war for Poland would be, and certainly such as that of Italy, then, indeed, all was explained. If every four or five years a great war were entered upon, and at the same time little wars—little as to the number of men engaged, but considerable from the distance to which they were sent or the sums they cost,—then, indeed, yearly deficits and 300 millions added to the public debt were explained. If while those great and little wars were going on it was desired to add to what was called the splendour of Government increased salaries—not the small ones, but all—and at the same time to demolish cities, in order to rebuild them, then. indeed, all was explained. If when constituting the army, and having to choose between a costly organisation and a less costly one, the former was always preferred, then, indeed, all was explained. If to the indispensable expenses of the navy, such as those incurred in the transformation of ships, were added distant expeditions, and if France aspired to the honour of founding empires in remote countries and bestowing crowns. then, indeed, all was explained. If France resolved to incur necessary expenses, and at the same time expenses that were merely those of luxury, doubtful, or sometimes absolutely useless—urgent expenses as well as those which might be postponed—then, indeed, all was explained,—the 2300 millions, the 2500 millions, and all. Pursuing this train of argument he arrived at the army. He declared that when he heard the word 'disarm' it greatly afflicted him. To talk about disarming was to give Europe to understand that France was armed. He declared that France was the only Power in Europe on a peace footing with an army of 400,000 men. It was an unfortunate thing to say that France was in arms, for it was to inspire fear, and to expose her to be every day called upon to disarm. He could tell them who were in arms in Europe. It was Italy, with a view to Venetia—which was quite natural. It was Austria, on account of Venetia—quite natural also. Russia was in arms not only on account of Poland, but on account of the diplomacy directed against her for the last two years. Prussia was half armed. England was not armed, but in great works of fortification. France, and France only, was on a real peace footing, and he could prove it in ten minutes. It was constantly said that France had an army of 400,000 men. Now these 400,000 were certainly a peace establishment. There were 100,000 out of the territory. There would be as many even after the troops returned from Mexico; for Africa, although it has made great progress towards assimilating itself to France, would always require 70,000 men. France had troops in Italy, and must always have troops in her distant possessions; in a word she would always have 100,000 men out of her territory. At home they had 50,000, such as the gendarmes, veterans, &c. Deduct these from 300,000, and there remain only 250,000 troops of the line in the country. These 250,000 men were exhausted in the service of peace, and those 400,000 men, composing the total of their effective strength, were necessary to fill up the *cadres*. It may be said that there were too many of these; but with those they had, they could at most muster from 600,000 to 700,000 men, and before renouncing the possibility of such a war footing, a complete moral revolution should take place in Europe. That moral revolution was that Italy should no longer wish for Venice, and that Austria would be good enough to surrender it; that Russia should give up Poland, and that Poland should no longer think of rising in revolt; that nobody should long to dismember the Turkish empire, and that Prussia should not desire to annex to her territory, already so large, some States belonging to her dear confederates around her. Until that revolution came to pass, France would not renounce her filling up her *cadres*, if necessary, to the amount of from 600,000 to 700,000 men. The expenses of the army, therefore, could not soon be reduced; and, as for those of the navy, they must return from distant countries, the transformation of their *matériel* must be completed, before they could hope for a reduction in the expenses of that department." In conclusion he said—"I have heard many sincere and reasonable men say, 'What will you have? The country possesses such great activity that it must be constantly supplied both at home and abroad. When we have not Sebastopol or Milan to enter we must go to Pekin or Mexico.' That is very true. I admit that France has a genius of powerful activity, and that a strong aliment must be given to it. And when I look back two centuries and see what aliments Providence supplied, I am not surprised at the desire to procure more. Under Louis XIV. what sublime aliments were given to the national genius! Rocroy, Nerwinde, Almanza; at the same time as the *Cid*, *Athalie*, the *Misanthrope*, and Bossuet's sublime orations. In the 18th century there was not the same glory. France allowed the Great Frederick to fill the north of Europe with his victories, and consoled herself with musing over the regeneration of human society. She laboured to that end by her writers, and exulted in the glory of Buffon, Montesquieu, Voltaire, and Rousseau. Then came the Revolution, when France no longer pursued the work of regeneration by the pen, but by the swords of her generals. She herself was regenerated. Blood flowed where she passed, but civilisation followed her; and the world, while it detested our glory, was obliged to acknowledge our benefits. At last came peace. What aliment was then offered to our devouring genius? Liberty. (Loud approbation.) Here for 30 and odd years, at this tribune, and before I ascended it myself, I respectfully listened to the great minds of our age discussing the affairs of France and of the whole world. Men were impassioned for grand ideas and noble causes—for Greece and for Italy. In these passions and struggles there were illusions, but they were based on noble motives. The genius of France was ardently occupied. In 1851, in the interest of order, it was necessary to drop the curtain on the scene; it was requisite to occupy the country otherwise, and our Budget may tell you how much it costs to occupy the country otherwise than by liberty. But I hope that if the Emperor persists, as I have no doubt he will, in his noble policy of gradually restoring liberty, the issue will prove that liberty does not deserve all the evil said of it. And, even if it should, there is one reflection, which you have doubtless made—namely, that if liberty has all the demerits laid to its charge, there is no denying the great cost of finding a substitute for it." Loud cheers.) The debate was then adjourned.

In the sitting of Tuesday, M. Berryer reproached the members who had defended the policy of the Government for their retrospective strictures upon the Parliamentary system, and said that Revolution never cost so dear as the omnipotence of a single man. Among other services, the Restoration rendered that of relieving them of the latter system. M. Rouher here interrupted M. Berryer by saying that the Restoration was brought about by the foreigner, and fell under the contempt of the people. The President of the Chamber observed, that both systems had their faults and misfortunes, and that it was best to confine oneself to the present state of things. M. Berryer then continued his speech, and principally censured the want of good measures for the reduction of the public debt and the Mexican expedition. He spoke in favour of a peace policy, and demanded the reduction of the effective home force to 250,000 men, which would allow of order being restored to the finances, and would insure peace and liberty. M. Rouher replied, first, to M. Thiers, by showing the greatness of France at home and abroad. He proved to M. Thiers that he had committed the error of exaggeration, that there were errors in his figures, and that he was behind his age and unjust towards his Sovereign, "to whom," said M. Rouher, "we owe so many noble initiatives and so many benefits. Roads, ports, canals, and cities have been improved, military glory has been satisfied, public wealth has been increased, as well as the salaries of the working class, and all this, taken together, forms the statement of the present condition of France." He contended that peace was especially the work of Imperial France, and he hoped that upon that point MM. Thiers and Berryer would convince one another. He said:—

"Peace at present rests upon serious guarantees. I have pleasure in repeating, with M. Berryer, that peace is in the hand of France; but France will only open this hand when compelled to defend her honour or the inviolability of her frontiers. As regards the sad conflict in the north of Europe, we may now hope that a pacific solution will be effected. I cannot believe that the great Powers have met in London to obtain no result. I prefer to believe that M. Berryer has allowed himself to be carried away by the anticipations of a gloomy pessimism."

The peroration of the Minister's speech treated of the Mexican question, which he considered had a very reassuring aspect, and was fruitful in results. The case of M. Armand was heard by the Court of Appeal on Saturday. The Advocate-General proposed that the appeal should be rejected. After a deliberation, lasting 2½ hours, the decision of the Court of Aix was set aside. A commission has been appointed to discuss the question as to a union between the management of telegraphic lines and the Post-office. The Commission will also take into consideration the question of the results to which such an union might give rise. Official despatches from Algiers to the 6th inst. confirm the success obtained by General Martineau, and state that it produced unhoped-for results. The losses of the enemy were enormous. The steamer Florida has arrived at St. Nazaire from Vera Cruz.

SPAIN.—The estimates were voted on Tuesday night at an extraordinary sitting of the Cortes. The Council of Ministers on the same day approved the Bill regulating the right of public meeting introduced by the Minister of the Interior. In the sitting of the Cortes on Saturday, Signor Gobierno defended the system of censorship applied to the press. A prosecution has been instituted against the *Novedades* and *Iberia* for reporting the speeches made at the banquet. No decision has been come to by the Commission appointed to deliberate upon the Passive Debt. A total difference of opinion on the principal political questions exists between Senor Olozaga, Marshal Espartero, and General Prim. The different companies who had separately applied for concessions to enable them to establish credit institutions, based upon landed property, have effected a fusion.

PORTUGAL.—The Coimbra students, among whom some tumults lately occurred in consequence of the introduction of a new Ministerial decree, have left for Minho, the soldiers having refused to make common cause with them. The students are returning to Coimbra without further disturbances. The proposed railway to Algarves has been approved by the Cortes.

SWEDEN.—Fifteen Swedish and Norwegian men-of-war are to assemble off Gothenburg, on the 15th of May, under the command of Prince Oscar.

DENMARK.—On Monday the Austro-Prussian fleet, consisting of two frigates, the Schwarzenberg, of 50 guns, and the Radetzky, of 44 guns, and three gunboats, was proceeding to anchor in the river Elbe, when the Danish squadron, consisting of three frigates, viz., the Niels Juel, of 40 guns, and the Dagmar and Heimdal, of 16 guns each, was seen two miles east of Heligoland. The Austrian commander attacked the Danish fleet, but was thoroughly disabled. The Schwarzenberg was set on fire, her foremast and bowsprit shot away, all her boats destroyed, and her hull filled with cannon holes. There were 170 killed and wounded on the German side. The Danes had 53 wounded and only one killed, and their ships are uninjured. The Danes fought with much tactics. The Austrian squadron took refuge in the British port of Heligoland, and is now in Cuxhaven, and the Danes have left for Norway. The following details of the battle are given in the *Times* of yesterday:—

"On Saturday last, May 7, the Austrian frigates Schwarzenberg and Radetsky, in company of the Prussian gunboats Adler and Blitz, left their anchorage off Cuxhaven for a cruise in search of the Danish fleet. Captain Teggetoff, under whose orders the combined German flotilla is placed, is described by the English pilot who brought him up channel as a very smart fellow, and the crews as bent upon fighting. However, the Danish fleet was not to be found, and on Monday morning the flotilla returned to its anchorage at the mouth of the Elbe after a cruise of 48 hours. They had scarcely dropped anchor when a telegram reached the Austrian Consul at Cuxhaven, informing him that three Danish frigates were bearing down towards Heligoland. This intelligence was instantly forwarded to Captain Teggetoff, who gave orders to get up steam and put out to sea at once. The Schwarzenberg is a screw steam frigate, carrying 50 guns. Her crew amounted to 540 men on the morning of the engagement. Between decks she is fitted with heavy guns, mostly 60-pounders, her upper-deck guns being 24-pounders. Of these last, two fore and two aft are rifled, the rest smooth-bored. The Radetsky is also a screw steam frigate, carrying 30 guns, and is likewise fitted with two rifled 24-pounders on her upper deck, fore and aft. Her crew numbered 310 men. The Prussian gunboats Adler and Blitz, both cased with iron plates 2½ inches thick, carry four rifled guns each on the upper deck. A little before 2 P.M., the German flotilla came in sight of the Danish frigates, which showed every willingness to accept the offered battle. The Schwarzenberg opened the proceedings by firing three blank shots, which were unanswered by the Danes After this warning, Captain Teggetoff, taking the Schwarzenberg well in between the Danish frigates the Niels Juel and the Dagmar, handling his ship as Admiral Lyons was wont to do the Agamemnon, fired a double broadside against the enemy's ships on either side of him. Although somewhat taken aback by this daring bit of seamanship, the Danish frigates lost no time in returning the fire, and the engagement soon became general. One of the first shots fired by the Niels Juel struck the officer second in command of the Schwarzenberg full in the breast, and of course killed him on the spot. He was buried yesterday in the cemetery at Cuxhaven, a large concourse of persons attending. Shortly after, two shells struck the Schwarzenberg near the same spot, by one of the heavy guns which was served by 16 men. Out of the 16, five were killed on the spot, and nine wounded, only two getting off unscathed. This episode was shortly followed by a disaster which threatened the destruction of the ship. The sails were, of course furled, and, as ill-luck would have it, a shell forced its way into the canvas, and, bursting, set the whole rigging of the foremast in a blaze. The ship having her head to the wind, it became necessary to put her about, to prevent the flames communicating themselves to the mainmast. In this manner the Schwarzenberg was temporarily reduced to the use of her two aft rifled guns. While the foremast was still burning, a shell burst in the outer chamber of the powder-magazine, setting the timbers on fire, and creating a momentary panic among the crew. The flames, however, were at once extinguished, and the danger averted. To complete the discomfiture of the Schwarzenberg, her bowsprit was carried away by a round shot. During the course of the engagement the Schwarzenberg was struck 70 times by shot and shell, and once by chain shot, which is preserved on board. Her foremast is burnt down to a stump, and the side of the mainmast turned towards the flames is blistered all over from the heat. The actual loss on board the Schwarzenberg amounted to 31 killed, 44 severely wounded, and between 30 and 40 slightly wounded. Although nothing is known for certain of the Danish loss, it must have been considerable, as the Schwarzenberg in her disabled condition must have fallen into the enemy's hands. It seems the general opinion that officers and men behaved with great bravery and coolness, and the Emperor of Austria has already shown his sense of Captain Teggetoff's services by promoting him to the rank of admiral. While it fared in this manner with the Swarzenberg, the Radetzky did her best to draw off the attention of the Danish frigates, which showed considerable unwillingness to attend to other business, until they should have succeeded in completely disabling the Schwarzenberg. However, before the conclusion of the engagement, the Radetzky was struck by twenty-eight shot, mostly on her port side. A young naval cadet, who directed the fire of her two rifled cannon, on the quarter-deck, was severely wounded in the early part of the engagement, and died of his wounds yesterday morning at eleven. The shell which fractured the thigh of the young officer passed clean between the legs of a seaman, who was hauling back his gun to recharge it. In spite of his desperate wound, the brave young fellow cheered on his men, while he lay himself in agony on the deck. The gunners of the Radetzky showed great coolness throughout, and more than once recharged their guns with Danish balls, which fell on the deck. One shot entered an after chamber leading to the captain's cabin, and, curiously enough, mashed to atoms a portrait of Field-Marshal Radetsky, which

was hanging on the walls. A second shot made great havoc with the furniture in the captain's cabin. A shell burst in the chamber where the ship's papers were kept, setting fire to them, and doing much irreparable mischief. The total loss of the Radetsky amounted to five killed and 31 wounded. The Adler and the Blitz, owing to the long range of their guns, sustained no loss, all the Danish shot falling short of their mark. The engagement, which commenced a few minutes before 2 P.M., was over by 4 P.M.

The assent of the Danish Plenipotentiaries to the raising of the blockade has caused a ministerial crisis at Copenhagen. The Ministers of Justice and of the Interior have resigned, and it is asserted that the Minister of War has also tendered his resignation. The Government has concluded a truce for one month, commencing from the 12th inst. The belligerents are to give notice of their intention to renew hostilities one week before its expiration. The allies will remain in possession of Jutland, and the Danes of Alsen. The allied forces are not to impose any further contributions in Jutland, nor to interfere in the civil government of that province. The Minister of Marine has published a notification raising the blockade of Prussian, Holstein, and Schleswig ports from the 12th inst.

The Danish Duchies.—A despatch from Copenhagen says that the fortified camp near Fredericia is being demolished by the allies. 2000 inhabitants of the environs of Kolding and Fredericia have been compelled by the enemy to assist in demolishing the fortifications. On the 5th inst. the Prussians commenced firing on the opposite shore of the Fiord. Trenches are being thrown to the east of the town. Independent of the war contribution imposed upon the towns of Jutland, Field-Marshal von Wrangel has imposed a requisition of 5¾ millions of rigsdalers upon landed property. The shops of the tradespeople at Horsens have been sacked, and the contents carried southwards. Similar proceedings have also taken place at Randers, where, in consequence of the refusal of the inhabitants to pay the imposed war contribution of 100,000 thalers, the horses, cattle, as well as some of the inhabitants, were carried off. At Viborg 50,000 thalers have been demanded of the inhabitants. Throughout the country the citizens are exhorting one another to show their patriotism by persevering in their system of refusals to pay the imposed war contributions. Most of the citizens seized as hostages in Jutland have been set at liberty, the war contribution having been paid. It is thought that the Jutland officials will be also liberated. The popular meeting summoned from all parts of the country took place at Rendsburg on Sunday. It was resolved that the people of Schleswig-Holstein shall firmly maintain their right to be separated from Denmark, and to establish a free Schleswig-Holstein under the rule of the legitimate Duke Frederick VIII. The meeting demanded that an opportunity should be granted to the lawful representatives of the country solemnly to demonstrate the rights of the people. "The people of Holstein," it was stated, "are determined to uphold their rights to the uttermost." A vote of thanks to the allied armies was passed by the meeting, and the wish was expressed that all persons capable of bearing arms should take part in any further struggle for liberty.

Hanover.—In the sitting of the Upper House on Tuesday a debate took place on the resolution of the Chamber of Deputies relative to the policy of Count Platen. The Minister of the Interior declined to give any explanations on the subject. The one-sided action of Hanover in the succession question in the Duchies was disapproved of by the House. The Ministry then read the explanation of Count Platen, which asserts that the reports of the British Envoy to Earl Russell were incomplete. The Minister stated that the reports in question did not contain Count Platen's defence of German rights and the expression of his conviction that the separation of the Duchies from Denmark was necessary. The debate was adjourned.

Frankfort.—A telegram from Vienna says that the Powers represented at the Conference have agreed to commence negotiations on Thursday for the conclusion of peace. The prospects are not unfavourable.

Prussia.—The Crown Princess of Prussia, on the invitation of the Crown Prince, left Potsdam on Wednesday night for Flensburg. Their Royal Highnesses will return to Berlin in a few days. Prince Alfred remained in Berlin until Wednesday morning, when he left for Weimar, on his way to Coburg and Darmstadt. The decision of the London Conference relative to the truce between the German and Danish belligerents has received the Royal sanction. A Royal decree has just been issued, based upon Article 63 of the Constitution, suspending for six months the extra navigation dues payable by foreign ships upon a higher scale than Prussian vessels. The semi-official journal of Saturday says:—

"The war contribution imposed by Field-Marshal Wrangel upon Jutland as compensation for German ships captured by the Danes, having been paid, the Conference will meet at their next sitting under more favourable circumstances. It now depends upon Denmark whether an armistice shall be concluded. At present the German great Powers can be satisfied with the proposals made by the neutral Powers, they having proposed a suspension of the blockade and the evacuation of Alsen by the Danes, as an equivalent for which the allied armies will withdraw from Jutland."

An invitation has been issued by a number of deputies, belonging chiefly to the extreme Conservative party headed by Count Arnim Boytzemburg, to sign an address to the King relative to the affairs of Schleswig and Holstein. The draught of the address to be signed contains the following passage:—

"We deem the separation of the German portion of Schleswig and the whole of Holstein from Denmark, and their union as a separate State either under their own Sovereign, efficaciously protected by a powerful German State, or else annexed as a province to the latter, to be the only solution which offers a corresponding return for the sacrifices already made, and at the same time promises to secure a lasting peace and the welfare of those concerned."

Austria.—Post-Captain Tegetthof, who commanded the Austrian squadron, has been appointed Vice-Admiral by the Emperor, in recognition of his brave exploit of Heligoland. Twenty-three millions of the new loan have been taken by the Anglo-Austrian Bank, Messrs. Baring Brothers, Wodianer and Sina, at 77 10. A second offer for 10 millions, at 76, made by the Crédit Anstalt, was declined. No other part of the loan has been taken.

Hungary.—All the deputies belonging to the party advocating a political union between Hungary and Transylvania who did not take part in the sittings of the last Transylvanian Diet have been re-elected.

Italy.—A Pontifical resolution authorises the issue of 2,500,000f. Consols, bearing interest at 5 per cent. The indisposition of the Pope has ceased. In the sitting of the Italian Chamber of Deputies on Saturday the debate on the question put by Signor Bargoni was renewed. Several deputies called upon the Government to prevent the public subscriptions of Peter's pence. This subject however was dropped; and the discussion on Signor Bargoni's question was closed by the Chamber declaring itself satisfied with the Ministerial statements. In the sitting of Wednesday a general debate took place on the state of foreign politics. Signori Laporta and Miceli questioned the Government relative to their foreign policy, and accused the Ministry of timidity. They also requested information respecting the relations between Italy and France and other Powers. It was impossible, they said, to develop the institutions and organize the finances of the country while the Pope, who protects brigandage, occupied Rome. The Abbé Passaglia, who spoke in the same sense, said that the Papacy would never yield, but would always be the active enemy of Italy as long as it was protected by a foreign force. Signor Macchi asked what had been the course taken by the Government in the matter of the Tunis insurrection. In the sitting of Wednesday, the Minister for Foreign Affairs stated that the principle of non-intervention formed the basis of the negotiations upon the Roman question. The Minister said that to the implacable warfare waged by Rome the Italian Government had always opposed moderation. The measures taken in concert with the French Government for the repression of brigandage had obtained real results, and after a period of diplomatic reserve the Italian Government had resumed negotiations, which are now being carried on. The Minister expressed his desire not to excite premature hopes or indiscreet impatience, but assured the House that there was nothing to justify the discouragement expressed by some members. He also protested against the accusation brought against the Government of vassalage towards France, and said, in conclusion, "Italy is upon excellent terms with France and England. She has entered the European bond, and must take into account the general condition of Europe."

Russia.—The *Moniteur* of Monday evening announces that General Kotzebue has gone on a tour of inspection to the Bessarabian frontier, where the Russian army is echelloned. The army, which is estimated at 100,000 men, is known to have lately received considerable reinforcements. The Russian Government has prohibited the exportation of horses from the southern provinces of the empire.

Poland.—Intelligence from Opatow states that six innocent young Poles, who were walking in the streets of that town, were arrested and hanged on the same gallows without trial.

The Principalities.—Prince Couza has returned to Bucharest. Popular manifestations took place in his honour on Monday evening.

Circassia.—The whole of the independent Circassian nation have been driven from their country by the Russians, and are taking refuge in multitudes on the Turkish shores of the Black Sea. They are suffering so dreadfully from disease and privations that out of 600 during a voyage of four days only 370 arrived at their destination. Women in childbirth are exposed to the inclemencies of a Black Sea voyage, without assistance or the bare necessaries of life, and the decks of the vessels are swarming with wounded and dying men.

Tunis.—Advices from Tunis to the 1st inst. announce that on that day the Bey withdrew the Constitution. The rebels insist upon the Ministers being brought to justice, and that guarantees be given to them against exaction. The Arab Bey who has been elected by the rebels is at Testour, 20 miles from Tunis, with an army estimated at 40,000 men. The attitude taken up by the insurrectionists is not hostile to foreigners. The French, English, and Italian squadrons, however, have detached ships to guard the coast. A rumour is current that the Italian Government intends to despatch a frigate with troops to Tunis to allay the fears of the numerous Italian inhabitants of that place. It is believed that similar steps will be taken by France and England.

Coast of Africa.—The King of Dahomey's troops have been repulsed by the Egbas, with a loss of 1000 killed, 1000 wounded, and 2000 prisoners, including many of his Amazons.

India.—The Bombay mail has arrived with further particulars of the Indian budget. That document exhibits a very favourable state of the finances and prospects of the country; but the proposed advance in the tariff valuations of cotton piece goods, &c., is strongly condemned by the Bombay press. The successful completion of the Persian Gulf telegraph was the cause of much satisfaction. The Viceroy was expected to leave Calcutta on the 15th ult. and proceed to Delhi, and from thence go to Simla. There had been a very large increase in the quantity of land under cotton cultivation. Bala Rao, brother of the Nana Sahib, is dead. The Bheels are very troublesome in Indore; and on the Peshwar frontier the hill tribes are said to be intriguing and plotting. An American missionary has been murdered in the Punjaub.

United States.—No movement is expected to be made by General Grant for several days. General Burnside has visited Grant's head-quarters. The Confederates are withdrawing troops from all quarters to reinforce General Lee. Both armies are ready for a conflict, but their plans of campaign are still kept secret. Letters from Admiral Porter represent Banks's expedition as a disastrous failure. He lost 4000 prisoners, 30 guns, 1 first-class gun-boat, and 1,000,000 dollars in greenbacks, in a severe battle on the 8th at Sabine Cross roads with the whole of the Confederate army under Kirby Smith. General Banks retreated on the night of the 8th, joining the remainder of the army at Pleasant Hill. The Confederates renewed the attack on the 9th upon the whole of Banks's army at Pleasant Hill, but were repulsed with the loss of several guns. Banks continued his retreat on the 10th, 35 miles, to Natchitoches and Grand Ecore, where he is reorganising his army and fortifying the banks of the river. The latest advices state that the Confederates are marching to attack Grand Ecore, where Banks is strongly entrenched. Advices from New Orleans state that the Federal gun-boats have since succeeded in returning to Graud Ecore, furnishing Banks with ammunition, and that Banks has again advanced towards Shreveport. The Confederate General Hoke assaulted and captured Plymouth, North Carolina, on the 20th instant, with 1500 prisoners and 30 guns. It is reported that the Confederates killed 150 negro troops after they were captured. Hoke is supposed to be moving on Little Washington and Newbern. Two rams co-operate in Hoke's movement. Mobile despatches state that the Red River had fallen, leaving 40 gunboats and transports unable to move until the water rises. The Federals have ordered two French frigates to return from the James River. They obtained no tobacco. Commodore Parker, who has returned from a gunboat reconnaissance up the Rappahannock, states that the Confederates have replaced the torpedoes in that river and all the branches of the Chesapeake. General Forrest is reported to be moving towards Alabama, and Bishop Polk is marching to join him. General Longstreet is reported to have taken up a position on the left of Lee's army. The First Auditor of the Treasury has been ordered to leave Richmond for Montgomery. President Lincoln reviewed Burnside's army at Washington on the 25th ult. President Lincoln has accepted the offer made by the Governors of Wisconsin, Illinois, Indiana, Ohio, and Iowa of the services of 100,000 volunteers for 100 days, for fortification and frontier duty. The House of Representatives has passed a resolution increasing the import duties 50 per cent. for 60 days. It is reported that the Senate will modify this resolution by increasing the tariff temporarily 33 per cent., and exempting bonded goods. In the Senate the New York Legislature have laid on the table the Governor's recommendation that the interest of the State debt be paid in coin. Lieut. Danenhower (not Donahon) has been acquitted of the murder of Mr. Gray, of the British ship Saxon. Charges of personal corruption against Mr. Chase were renewed in the House of Representatives on the 29th amid much violence and recrimination. An investigation will be demanded by the Democratic leaders.

Mexico.—Advices from Mexico to the 1st ult. state that Governor Vidaurris has left Monterey with 2000 men and 27 guns. Juarez forces occupied Monterey. Almonte has gone to Vera Cruz to receive the Emperor Maximilian upon his arrival.

Parliament.

HOUSE OF LORDS.

Friday.—*County Court Debtors.*—The Lord Chancellor in introducing his Bill to limit actions and process for small debts, to amend the Acts relating to the County Courts, and to confer on such courts a limited jurisdiction in equity, stated that it would attempt to assimilate the case of the small debtor to that of the insolvent with greater liabilities by giving the judge power to call the creditors of a working man together to prove their debts. An order would then be made for the amount to be set apart by the debtor for their payment, the money to be paid into court and distributed by it. A debt contracted with the keeper of an alehouse for intoxicating liquors consumed on the premises would not be recoverable by process under this Act. The second part of the Bill invested the County Courts with a limited equitable jurisdiction in cases involving sums too small to bear the expense of an application to the Court of Chancery.—Lord Cranworth reserved his opinion of the Bill as a whole, but admitted it was most desirable to get rid of the system of imprisonment for debt by

these Courts. The difficulty was that imprisonment was often the only means of compelling the payment. To abolish the power entirely they might have to make debts of very small amount debts of honour, not recoverable by legal process at all. The Bill was read a first time.

MONDAY.—*The Danish Question.*—The Earl of CARNARVON, in calling attention to his notice of motion on the state of Danish affairs, said he had given that notice in the belief that the Conference was practically at an end. He now understood that that body was still sitting, and that an armistice had been agreed upon by all parties. If that report were true he would trouble the House no further than to ask the Foreign Secretary what the facts really were, and the terms upon which the armistice was based.—Earl RUSSELL had great satisfaction in stating that the Conference had, at their meeting that day, agreed to a suspension of hostilities between Austria and Prussia on the one hand and Denmark on the other. The terms on which this arrangement was based were the *uti possidetis*—each Power to retain its own position both by sea and land and the blockade to be raised. The suspension of hostilities would be for one month, and the Conference would re-assemble on Thursday.—The Earl of DONOUGHMORE inquired if Jutland were to be evacuated.—Earl RUSSELL said that a proposition had been made in the Conference that Jutland should be evacuated by the Germans, and the Island of Alsen by the Danes, but the Danish Government appeared to prefer the simple suspension of arms.—The Earl of CARNARVON had not heard with any great satisfaction the terms which had been agreed to. The arrangement appeared to be a most one-sided one, for Germany gained more from it than could by any possibility accrue to Denmark, which had entitled herself to the sympathy of Europe, as much by her moderation as by the heroism and gallantry she had displayed throughout the contest.—Earl RUSSELL could only repeat that on one side an armistice was proposed, and on the other a suspension of hostilities. The latter was preferred by the Danes themselves.—In reply to the Earl of ELLENBOROUGH, Earl RUSSELL stated that the suspension of hostilities was to commence on the 12th inst. *The Polish Question.*—Lord CAMPBELL moved that in the opinion of the House the correspondence of the Government with the Cabinet of St. Petersburg on the Polish question had not yet reached a satisfactory conclusion, and that the Czar having failed to comply with the condition upon which, according to the Treaty of Vienna, he acquired his sovereignty in Poland, it was no longer binding upon the English Government to acknowledge it.—Earl RUSSELL opposed the motion, on the ground that, instead of increasing, it would tend to impair the authority of the House. The conditions of the Treaty of Vienna would not satisfy the Polish insurgents, who declared that nothing would satisfy them short of the restoration of their country to the position which it formerly held as a kingdom. He vindicated the course taken by Ministers on the Polish question, and said they would have been justly blameable if they had involved this country in a war with Russia on behalf of Poland. At the same time he was strongly of opinion that, if at a period of tranquillity the Emperor of Russia disregarded the conditions of the Treaty of Vienna, he could not continue to claim the right of sovereignty over Poland.—Earl GREY concurred with Lord Campbell in thinking that the correspondence had come to an unsatisfactory conclusion, and expressed his regret that the Foreign Secretary, if he were not prepared to take up arms in defence of Poland, should have entered into a correspondence which could not lead to any useful result. His interference, in fact, had only encouraged the Poles in a useless and hopeless resistance to overwhelming numbers. The motion was then withdrawn. The *Customs and Inland Revenue Bill* was read a second time; and the *Naval and Victualling Stores Bill* was read a third time and passed.

TUESDAY.—The Earl of ELLENBOROUGH, in moving the second reading of the *Sentence of Death Bill*, said that the present system threw too great a responsibility on one individual, and had recently caused great want of confidence on the part of the public. His object by the Bill was therefore to surround the Home Secretary with every security in the discharge of this serious part of his duty, and to revise, with a slight alteration affecting the personal share of the Sovereign, the practice which had prevailed up to the present reign; and he proposed that the issue of the warrant for carrying out a sentence of death should be decided upon by the Home Secretary, the Lord Chancellor, the Chief Justice, the First Lord of the Treasury, the President of the Council, and other members of the Cabinet whom it might be desirable to summon.—Earl GRANVILLE said he fully recognised the object which the noble earl had in view, but that he thought it desirable to postpone legislation on the subject until the Royal Commission to be appointed on the address of the House of Commons had made their report. It would be difficult to get the proposed committee of the Privy Council together at all times of the year, and it ought to have power to order a new trial in case it saw fit. The noble earl might himself be one of the commissioners; and he was sure that the Bill would receive their careful consideration. He trusted, therefore, that he would not press the measure further at present.—The Duke of ARGYLL thought the law itself required improvement. The dissatisfaction in the public mind would continue till some distinction was drawn between homicide of different degrees of guilt that were at present all classed alike as murder.—Lord REDESDALE apprehended that admitting these distinctions would lead to the French practice of requiring the jury to decide what were "extenuating circumstances."—The Earl of ELLENBOROUGH then withdrew the Bill.—The *Common Law Procedure (Ireland) Act Amendment Bill* was read a second time. The *Naval and Victualling Stores Bill* was read a third time and passed.—The Duke of BUCCLEUCH laid upon the table a Bill to remove certain disabilities under which *Scottish Episcopalian Clergymen* laboured in England.

THURSDAY.—*Kidnapping in America.*—Lord ELLENBOROUGH asked what steps would be taken to obtain the release of British subjects kidnapped in New York and other American cities, and compelled to serve as soldiers in the armies of the Federal States on false allegations that they had enlisted. He also asked what measures would be adopted to protect English subjects from the illegal practices by which men were reported to have been entrapped by the Federal recruiting agents. He read a letter from General Wistar, a Federal officer, confirming the public accounts of these proceedings. General Wistar distinctly stated that in many cases the men entrapped were drugged, brought to the regimental depots, and put in uniform before they recovered their consciousness.—Earl RUSSELL stated he had received reports of other cases of the same kind, in some of which Lord Lyons had interfered and obtained the release of the men. The manner in which these recruits were obtained was very discreditable to the Federal Government, and if they were not checked it would be necessary to make strong remonstrances on the subject.—The *Registration of County Voters (Ireland) Bill*, and the *Common Law Procedure (Ireland) Act* (1853) *Amendment Bill* passed through committee. The *Local Government Supplemental Bill* and the *Under Secretaries Indemnity Bill* were read a second time. The *Promissory Notes and Bills of Exchange (Ireland) Bill* and the *Customs and Inland Revenue Bill* were read a third time and passed. *Release of Prisoners in Westmeath.*—The Marquis of WESTMEATH moved an address for a copy of any memorial received by the Lord Lieutenant of Ireland or the Irish Government, praying for the release of three persons confined in the county gaol of Westmeath for agrarian offences. He complained that the prisoners had been released after they had undergone two thirds of their sentences only.—Earl GRANVILLE, in opposing the motion, said he believed that all the proceedings which were usual on such occasions were taken by the Lord Lieutenant, and that the judge who tried the case was consulted before the prisoners were set at liberty.—The Earl of DONOUGHMORE thought the public had a right to know the grounds which had induced the Lord Lieutenant to release the men. It was asserted that political influence had been brought to bear upon the Irish Government in the matter.—Earl GRANVILLE remarked that, if it was thought that the Government were blameable, a resolution to that effect should be submitted to the House.—The Earl of DERBY denied that any charge was made against the Government; but the House had a right to be made acquainted with the grounds upon which they had acted, especially when it was known that in this case the prisoners had been released without the local magistrates having been consulted, and, indeed, in opposition to their wishes.—Earl GRANVILLE said he had no objection to give the memorial and correspondence if it was understood that the case would not be made a precedent. The motion was then agreed to.

FRIDAY.—The *Royal Assent* was given by commission to several public and private Bills. The *Danish War.*—In answer to the Earl of ELLENBOROUGH, Earl RUSSELL said that the Conference have agreed that during the suspension of arms there should not be levied by the allied troops in Jutland or elsewhere, any contributions of war; and that, on the contrary, they will pay for the articles they require for the troops. The Conference did not lay down any rules with regard to the contributions previously imposed, but he believed the spirit of the article would be that the allied troops should cease to levy contributions of war. The Conference was anxious to stop an effusion of blood, but was also as anxious to stop those contributions of war; but having decided on the main points, they had left it to the naval and military commanders, and others interested, to settle the details between each other. He was not authorised to say more. *The Regius Professorship of Greek (Oxford) Bill.*—On the order of the day for going into Committee on this Bill, Lord LYTTELTON presented a petition from the Archdeacon of Bristol against the Bill. [Left speaking.]

HOUSE OF COMMONS.

FRIDAY.—*The Channel Fleet and the Austrian Squadron.*—Mr. D. GRIFFITH asked whether the Aurora frigate, under the command of Sir Leopold M'Clintock, had been sent to the North Sea in the direction of the Austrian squadron, and, if so, why a force more adequate to cope with any possible contingency that might arise had not been despatched at the same time.—Lord C. PAGET said that the Aurora had been sent to the North Sea in accordance with the uniform practice of this country, that, where a foreign squadron was cruising off a coast with which we had considerable commercial relations, we should despatch a vessel of war to look after British interests. For this purpose the Aurora was particularly adapted, and consequently she had been sent.—Sir J. PAKINGTON inquired whether the Austrian squadron had left the Downs, and what was its destination.—Lord C. PAGET said that the fleet had left the Downs, but that he was unable to state what was its destination.—Sir G. GREY repeated the statement he had made on a former evening, namely, that the Austrian Government had given the most distinct assurance that their only instructions to their admiral was that he should protect German shipping and prevent the blockade of the Elbe and the Weser.—Mr. GRIFFITH asked for some explanation of the circumstance that on the previous evening the Home Secretary had denied that the Aurora had sailed.—Sir G. GREY replied that he had stated the previous evening that there was no foundation for the announcement that the Aurora had gone to the Baltic.—Sir J. ELPHINSTONE invited Lord C. Paget to favour the House with some information as to the present whereabouts of the Aurora.—Lord C. PAGET said that the last news they had of the vessel was that she was at Heligoland, probably to ascertain the proceedings of the Austrian fleet.—Sir G. GREY announced that the House would adjourn on Friday next for the *Whitsuntide Holidays*, and reassemble on Thursday the 19th inst. *Public Schools Commission.*—On the order for going into Committee of Supply, Mr. G. DUFF called attention to the Public Schools Commission. He analysed the Report with reference to the descriptions it gave of the present state of things, which were very unsatisfactory, and to the recommendations of the Commissioners, which he discussed, adding suggestions of his own, with estimates of the relative value and importance of different branches of study. He noticed the subjects of discipline, of which the Commissioners reported more favourably than of the intellectual attainments of the scholars; of the buildings; of recreations in relation to health, and remarked the omission in the Report of any mention of the importance of some system of training masters. He concluded by moving that the state of the higher school education in England is not satisfactory, and calls for the early attention of Her Majesty's Government.—The CHANCELLOR of the EXCHEQUER, after remarking that the discussion of this subject so soon after the publication of the Report might be thought premature, paid a warm tribute to the laborious and valuable services of the Commissioners, to whom, he said, the Government were deeply indebted. With regard to the motion, he said that it was premature, at least, to ask the concurrence of the House in a resolution which really amounted to a condemnation of the Commissioners. He defended the teachers of our public schools, and took a comprehensive view of the instruction received in the Universities and public schools of England and Scotland, combining training power and teaching power, claiming for those institutions a debt of gratitude from the country. In noticing the improvements suggested in the branches of learning to be taught there, he dwelt upon the danger of overloading the mind so as to prevent its faculties from growing and thriving. It was the intention of the Government to take the Report into consideration, with a view to legislate upon the subject, and he pointed out the objects to which Parliamentary legislation should be directed.—Mr. WALPOLE approved of the suggestion of the Chancellor of the Exchequer, and said that the authorities of the schools were considering in what manner they could give effect to the recommendations of the Commissioners.—Sir S. NORTHCOTE, one of the Commissioners, stated, on behalf of his colleagues, that they had conducted the inquiry in a fair, friendly, and candid spirit, and that, while suggesting reforms, they had carefully avoided condemning the public school system of this country. He recommended that the subject should be referred to a Parliamentary committee, as he believed the House of Commons was incompetent to deal with it.—Sir H. BRUCE moved a resolution that it was not just to charge the *Poor Rate in Ireland* with the expenses connected with the registry of votors and births and deaths.—Sir R. PEEL opposed the motion, which was eventually withdrawn.—Sir J. HAY moved a resolution that the House would view with satisfaction the distribution of the full sum awarded by the Order in Council of 1854 for the retired officers in the *Royal Marines*, as it would tend to expedite the necessary promotion in that valuable corps.—Mr. W. WILLIAMS opposed the motion upon economical principles, and Lord C. PAGET upon the facts and merits of the case. The motion was withdrawn.—Mr. MACEVOY moved a resolution, pledging the House to adopt the recommendation of the select committee of 1858, respecting the claims of Ireland to a grant of the half cost of *Medical Officers in Poor-Law Unions*, as was now the practice in England and Scotland.—The motion was opposed by Sir R. PEEL, and negatived on a division by 73 to 58.—Sir H. VERNEY put a question respecting the *Duchies of Schleswig and Holstein*, and moved for copies of the answers received from the Governments to whom invitations were addressed to attend the Conference.—Mr. LAYARD declined to produce the papers.—Lord R. CECIL deprecated interpolating the ordinary business of the House with Danish discussions; and referring to the supposed German sympathies of Sir H. Verney, observed, amid the cheers of the House, that those members in it who wished the country to believe that there was a German party in Parliament, might be numbered on one's fingers.—Sir H. VERNEY said he did not sympathise with the Austrians and Prussians, but that he did sympathise with the German inhabitants of the Duchies.—Mr. NEWDEGATE expressed a hope that England which once claimed to be a great maritime Power, would not tamely allow the gallant Danish people to be eliminated from the map of nations. The motion was withdrawn, and the House went into committee of supply *pro formâ*. The *Under Secretaries Indemnity Bill* passed through committee. The *Local Government Supplemental Bill* was read a third time and passed.—Mr. SOMES moved for leave to bring in a Bill to restrict the *Sale of Intoxicating Liquors* between 11 o'clock on Saturday night and 6 o'clock on Monday morning. He stated that he proposed to allow the working classes from 1 to 2 o'clock for obtaining their "dinner beer," and from 8 to 9 o'clock for their "supper beer."—The motion was seconded by Mr. PEASE, and opposed by Mr. ROEBUCK, Sir W. JOLIFFE, Sir G. GREY, and Mr. PACKE.—Mr. CLAY and Mr. HORSFALL supported it.—On a division the motion was rejected by 123 to 87.

MONDAY.—*The Conference.*—Mr. HOPWOOD asked whether the Government would state what course they intended to take with regard to the Danish question before the Whitsuntide recess.—Sir G. GREY replied that he had already stated, in answer to questions of a similar nature, that a Conference was sitting, and that her Majesty's Government hoped it would succeed in carrying out the object for which it was convened. He had now, however, the gratification to add that an armistice for a month had been agreed to. (This announcement was received with general cheering).—Mr. D. GRIFFITH inquired whether the right hon. gentleman would state what were the terms of the armistice.—Sir G. GREY said he was unable to do so at that moment, but that there would be no difficulty in giving the House the fullest information on an early occasion. *The Naval Battle in the North Sea.*—Mr. B. OSBORNE inquired whether the Government had received any information of a collision having occurred in the North Sea off Heligoland, between the Austrian and Danish ships of war, and that the Austrians had got the worst of it.—Sir G. GREY said that the Secretary for the Colonies had received a telegram from the Governor of Heligoland to the effect that an engagement was then going on between two Austrian frigates and three gunboats and two Danish frigates and one corvette; and, since the House had met, an additional telegram had been received from the same source to the effect that the Danes had defeated the Austrian squadron, that one of the frigates of the latter was in flames, and that the remainder of the Austrian ships were making for Heligoland. (This announcement was received by both sides of the House with applause, in which the strangers in the galleries exhibited their satisfaction by clapping their hands.)—Mr. DISRAELI complained that the House had not been treated by the Government with the respect to which it was entitled, as the terms of the Conference had just been communicated to the other House of Parliament, although Sir George Grey had declared himself unable to impart any information on the subject.—Sir G. GREY observed that he had stated to the House all the information of which he was in possession.—*Chelsea Hospital.*—On the motion for going into committee of supply, Colonel NORTH moved an address to her Majesty, praying that she would be pleased to relieve the out-pensioners of Chelsea Hospital from the payment of all rates and taxes which had been charged upon them by a recent regulation, and the houses in that hospital occupied by them in the performance of their duties.—The motion was opposed by Mr. PEEL and the CHANCELLOR of the EXCHEQUER, and, on a division, was negatived by 184 to 102. The House then went into committee of supply on the *Army Estimates*. The vote of 750,870*l.* for works, buildings, and repairs at home and abroad, which formed the subject of discussion on the last supply night, was agreed to.—On the vote of 173,883*l.* for military education, Mr. MAGUIRE called attention to the constitution of the Royal Hibernian Military School, and protested against the manner in which a fair proportion of Roman Catholic children were excluded, and against the narrow and proselytising system adopted by the authorities of the establishment.—Mr. VANCE warned the House against giving way to the representations of Mr. Maguire without first consulting the governors of the school.—Colonel NORTH expressed his amazement at the statement made by Mr. Maguire, and, as an old commanding officer, bore testimony to the good conduct and unwavering gallantry of the Roman Catholic regiments in her Majesty's service.—The Marquis of HARTINGTON said that the school was under the control of governors appointed by the charter, and that the War Department had very little power in the matter. At the same time the House, which voted 12,000*l.* a year to the institution, had a perfect right to interfere, and motives of public policy dictated that the institution should not be conducted on an exclusive principle. He hoped, however, that the governors would see the necessity of remedying the evils complained of without Parliamentary interference. The vote was ultimately agreed to, as were the following:—88,345*l.* for surveys of the United Kingdom; and 223,344*l.* for 128,103*l.* for miscellaneous services; and 2,100,[illegible] administration of the army. Votes amounting to [illegible] for the non-effective services were likewise agreed to. The resolutions were ordered to be reported. The *Under Secretaries Indemnity Bill* was read a third time and passed. The *Summary Procedure (Scotland) Bill* passed the Committee on recommittal. The *Pier and Harbour Orders Confirmation Bill* was read a second time. On the order for going into committee upon the *Collection of Taxes Bill*, the CHANCELLOR of the EXCHEQUER explained certain alterations he proposed to introduce into the Bill, which was committed *pro formâ*. Other Bills were forwarded a stage.—The House having gone into Committee on the *Partnership Law Amendment Bill*, after a division upon the fourth clause, Mr. SCHOLEFIELD, who introduced the Bill, declared he should withdraw it. He was, however, prevailed upon to take time for consideration, and the Chairman was ordered to report progress.—Mr. PEEL moved for a Select Committee to inquire as to the most desirable arrangements to be made respecting the *Patent Library and Museum*.—Mr. COWPER opposed the motion, which, after a short discussion, it was carried on a division by 91 to [illegible].—Mr. PEEL obtained leave to bring in a Bill to explain certain provisions contained in the *Drainage and Improvement of Land (Ireland) Act*, 1863; a Bill to amend the Acts for the extension and promotion of *Public Works in Ireland*; a Bill to indemnify such persons in the United Kingdom as have omitted to qualify themselves for *Offices and Employments*, and to extend the time limited for those purposes respectively; and a Bill to enable her Majesty to grant a lease for 999 years of the building known as the *College of Physicians*, in Pall Mall East, and a Bill for amending and extending the *Railways (Ireland) Act*, 1851, and the *Railways (Ireland) Act*, 1860.—Mr. [illegible]

obtained leave to bring in a Bill to amend the laws relating to the valuation of *Rateable Property in Ireland*

TUESDAY.—*Hostilities in Ashantee.*—Mr. CARDWELL stated, in reply to Sir J. HAY, that the operations against the King of Ashantee were in continuation of the hostilities of last year, and that every precaution had been adopted to supply the British force with everything necessary for the preservation of life during a campaign in such a country.—In reply to Mr. C. BERINCK, Mr. COWPER said that it was not his intention to lay any estimate on the table for the erection of a new *National Gallery* until the House should have decided whether it should or should not be built on the site of Burlington House. *American Debt.*—Mr. LAYARD, in reply to a question from Mr. B. COCHRANE, said that the Government were not in possession of any official information that the State of New York had resolved that the interest due to foreign bondholders should in future be paid in paper instead of bullion. *Public Taxation.*—Mr. WHITE moved for a select committee to inquire into the operation and incidence of our present fiscal system, and to consider and report, if any, and what, measures could be devised to secure a more equitable adjustment of the burden of imperial taxation. In bringing forward the subject he disavowed any party feeling, as he believed that a Committee indifferently chosen from hon. members at both sides of the House, to be presided over by Lord Stanley, might be able to indicate some plan by which the burdens of the people, more especially the working classes, might be diminished without reducing the efficiency of the public service.—The motion was seconded by Mr POLLARD URQUHART.—The CHANCELLOR of the EXCHEQUER objected to the motion chiefly upon three grounds: first, that an inquiry such as the hon. member invited the House to undertake would raise fallacious hopes of relief from taxation which could not be realised; secondly, because he was opposed to propositions which aimed at fundamental changes in our system of taxation incompatible with the ends of justice; and thirdly, because he believed that any such change would be met on the threshold with difficulties which would render it impracticable. He was not, however, prepared to hold to the doctrine of finality in matters of finance; but he recommended his hon. friend to withdraw his motion for the present, and, should he revive it hereafter, to narrow his field of inquiry so as to make it one with which a Select Committee of the House could deal.—Mr. O'REILLY supported the motion, urging that inquiry would at all events dispel many of the fallacies that now existed on the subject of finance, and would inspire the public with confidence in the present system of taxation.—Mr. W. EWART expressed himself in favour of a wider system of direct taxation. The motion was then by leave withdrawn.—Sir GEORGE BOWYER obtained leave to bring in a Bill to enable the Benchers of the *Inns of Court* to appoint judicial committees in certain cases, and to give the necessary powers to such committees.—Sir J. C. JERVOISE moved an address to her Majesty, praying that she would cause full information to be given to the House on the subject of *Treasure Trove*; and further, that she would cause such measures to be taken as might tend to make the enforcement of the rights of the Crown more uniform and more consistent with the legitimate claims of owners of property where objects of interest and value were discovered for which no owner could be found. He was speaking in support of the motion when the House was counted out at half-past 7 o'clock.

WEDNESDAY.—Mr. BAINES moved the second reading of the *Borough Franchise Bill*, the object of which was to extend the right of representation among the working classes, the great bulk of whom were wholly unrepresented in that House. He observed that the present time, a period of calm, was favourable for the introduction of such a measure, and though it was objected that it was not called for, he contended that there had been no real change in public opinion upon the subject, and that members who had given distinct pledges in favour of such an extension of the franchise were bound to redeem them. He urged on various grounds the claim of the working classes to an admission into the constituency, for which their progress in education and the improvement in their social habits, moral character, and material condition, showed they were qualified, and which might, therefore, be safely conceded to the most provident among them. He showed that there was nothing alarming in the effect of adopting a 6*l.* rental franchise as proposed by the Bill.—Mr. CAVE moved the previous question. He had no hostility to the principle that the working classes should have a share in the representation, but he assigned various reasons why the present was not a convenient period for bringing forward such a measure. He discussed its object at some length, suggesting the danger of giving so large an influence to one class as would overbalance that of others. He repeated what he had said in 1861, when a similar Bill was introduced—that certain objects belonged to certain periods, and that it was true policy not to meddle with our institutions except upon an emergency. He objected to a bit-by-bit reform, which might lead to a domestic revolution; to a measure not initiated by the Government, and for which, he believed, the House and the country were indisposed.—Mr. MARSH seconded the amendment.—The CHANCELLOR of the EXCHEQUER said he could not go the length of Mr. Baines with respect to the pledges given by Parliament on this subject of reform, but he was willing to admit that the question since 1851 had not been in a satisfactory condition, and that it was to the interest of the country that it should be speedily entertained and settled. He deprecated the language held by Mr Cave with reference to tampering with the constitution, because he did not believe that the institutions of the country would be endangered by such an extension of the franchise as that which Mr. Baines had indicated. He granted that if they were to reverse that proposition, and give a monopoly of power to the working classes, it might have the effect of setting class against class; but the experience of the past showed that the working classes were not disposed to act together as a class. On the contrary, their inclination was to follow their superiors in the social scale, and to put their confidence in those whose character and antecedents indicated that they were worthy of the trust. In his opinion every man not incapacitated by crime, or otherwise unfitted, was morally entitled to come within the pale of the constitution. To violent, sudden, and inconsiderate changes, however, he was opposed; but, as he considered that the Bill now under discussion would not transfer any unsafe measure of power to the unrepresented classes he would vote in favour of it.—Mr. WHITESIDE charged the Chancellor of the Exchequer with having made a speech of which the Premier would not have approved, and the object of which was to make political capital out of doors. The working classes had no substantial grievances to complain of, and although the Chancellor of the Exchequer had insinuated that agitation might bring political concessions, he believed the people themselves were too sensible to follow counsel which, if adopted, would tend to metropolise the country and Americanise the constitution.—Mr. W. E. FORSTER reminded the House that there was hardly a measure which had promoted the prosperity or elevated the condition of the working classes, which had not been opposed by the party to which Mr. Whiteside belonged. These classes knew too well what was due to their own self respect to get up riots in favour of reform; but they had not forgotten their constitutional rights, and he told hon gentlemen opposite that they were resolved, by all legitimate means, to obtain their fair share of political power.—Mr. NEWDEGATE objected to the measure, because it was theoretical, because it would increase the power of the cities and the boroughs, and because it would not remove the inferiority of representation which pressed upon the majority of those who resided beyond municipal limits.—Mr. BASS and Lord FERMOY supported the Bill.—Mr. S. BEAUMONT opposed it, and expressed his amazement that the most prominent member of the Government should have declared himself in favour of so crude and ill-timed a proposition.—Lord H. SCOTT opposed the Bill, which was supported by Mr. WATKIS, the new member for Stockport.—Mr. GREENAL opposed the Bill, because it would not settle the question, and because he considered it was unfair and unequal, and calculated to do more harm than good.—After a few words from Sir J. ELPHINSTONE, amid impatient calls for a division, the House divided, when the "previous question" was carried by 272 to 216. The Bill was therefore lost. The announcement of the numbers was hailed with loud cheers by the Opposition.—The *County Bridges Bill* was withdrawn. The *Court of Justiciary (Scotland) Bill* was read a third time and passed, as was the *Naval Agency and Distribution Bill*. Leave was given to bring in certain Bills.

THURSDAY.—*Kertch Prize Money.*—In reply to Mr. J. EWART, Mr. HUTT stated that he hoped that the Parliamentary grant to the troops concerned in the Kertch expedition would be distributed by the 1st of next month.—In answer to Mr. H. TRACY, Lord C. PAGET said that the "Iron Plate Committee" would cease to exist in a few days, but that it was his intention to place copies of their report in the library of the House, but not to put the country to the expense of printing it, unless it should be considered necessary for the public service.—Sir G. GREY, replying to a question from Mr. WHALLEY, observed that the orders to the police to prevent the holding of Public Meetings in the Parks were general, and extended to week days as well as Sundays, as it was the opinion of the Government that the holding of tumultuous meetings in places intended for the amusement and recreation of the public would defeat the object for which the parks were reserved. In reply to a question by Mr. NEWDEGATE on the subject of the revival of *Diplomatic Relations with Brazil*, and the claim of a Mr. Reeves, a British subject, to compensation in respect of an unjust law suit, Mr. LAYARD said, that the King of Portugal had undertaken to mediate between the Emperor of Brazil and her Majesty's Government. *Inspectors of Schools.*—Sir G. GREY moved that the orders of the day be postponed until after the notice of motion relative to reports of her Majesty's inspectors of schools had been disposed of, and also moved that the resolution of the House, agreed to on the 12th of April, condemnatory of the mutilation of the inspector's reports, be read. He then submitted a motion, "That a select committee be appointed to inquire into the practice of the Committee of Council on Education with respect to the reports of her Majesty's Inspectors of Schools." In bringing this motion forward he observed that he could not refrain from expressing his opinion that the House had acted upon a misapprehension in coming to its vote of the 12th of April. The late Vice-President of the Council of Education had offered explanations upon the subject, which shewed that he had only discharged the legitimate duties of his office, and it appeared to be the unanimous opinion of the House that no reflection rested on the right hon. gentleman. But it was the earnest and the very natural desire of the noble earl at the head of the Council, and of the officers of the department, that their conduct should undergo the most thorough investigation; hence the resolution which he had placed in the hands of the Speaker.—Sir J. PAKINGTON moved an addendum to the resolution of Sir George Grey—"and further to inquire into the constitution of that committee, and how far their mode of conducting the business of the department is consistent with the due control of Parliament over the annual education grants." He denied that his object was to embarrass or impute blame to the Government. His only motive was, by enlarging the terms of reference, to make the Educational Department more efficient and more useful.—Mr. H. A. BRUCE defended the Committee of Council, and contended that the amendment of Sir J. Pakington was altogether unnecessary, as the President and Vice-President of the Department were already responsible to Parliament for the discharge of their duties.—Lord R CECIL supported the addendum on the ground that it was desirable that the committee should undertake the inquiry untrammelled by the order of reference to which the Government purposed to confine them. He also read a statement from Mr. Morrell, late an inspector of schools, declaring that portions of his report had been struck out, not by his own hand, as alleged by the late Vice-President of the Council, but by that of the permanent secretary to the Council.—Mr. B. OSBORNE commented upon what he termed the false and calumnious charges of Lord R. Cecil on a previous occasion, and characterised both the motion and the addendum as unnecessary and ill-timed. For his own part, he would rather have seen a motion to rescind the resolution of the 12th of April in deference to which the Vice-President of the Council had resigned.—Mr. ADDERLEY saw no reason why the Government should not accept the addition as suggested by Sir J. Pakington, although he was quite ready to admit that the Committee of Council were not bound to print the pamphlets of every inspector of schools who might desire to see his particular opinions in print. On a division, the addendum of Sir John Pakington was negatived by 142 to 93. The original motion was then agreed to.—On the motion for going into committee of supply, Mr. A. SMITH made a long speech against the inordinate, and, in his opinion, unnecessary expenditure on account of the Civil Service, and complained that Sir J. Paxton, by counting out the House on Tuesday night, had prevented him from making the speech which he had prepared for the occasion.—Sir J PAXTON justified the "count," and referred, in vindication of his conduct, to the circumstance that, during the speech which Mr. Smith had just delivered, there were not more than 12 or 13 members in the House.—The House then went into committee of supply on the Civil Service Estimates: and among the subjects discussed was the propriety of erecting some shelter similar to that in the Bois de Boulogne, near Paris, for the use of female equestrians in Rotten-row.—The CHIEF COMMISSIONER of WORKS admitted that it would be desirable to afford the shelter suggested, and promised that if it could be supplied without disfiguring the park he would endeavour to provide it.—The frescoes in the Houses of Parliament were also brought under review by Mr. GREGORY, who suggested that Mr. Herbert and Mr. Maclise should receive some additional remuneration for their exertions in adorning the walls of the building.—Mr. B. OOCHRANE, Mr. BRIGHT, and other members, warmly advocated the claims of Mr Herbert, who, it was stated, had neglected the whole of his private practice in order that he might devote himself to his great picture in the House of Lords.—The CHANCELLOR of the EXCHEQUER said that it was necessary to consider not only the claims of particular painters, but the position in which the Government was placed with reference to works already executed, and all subsisting contracts. What they proposed was to endeavour to form a small Commission, which should go carefully into the whole question of contracts and performance, and advise the Government on the whole case. After a rather long discussion, the vote was agreed to.—The CHAIRMAN then was ordered to report progress.—Certain Bills were forwarded a stage.

FRIDAY.—The *Danish Question.*—In answer to Mr. R. LONG, Sir G. GREY said that Earl Russell had not thought it right on account of the exactions and oppressions which had taken place, to cease to maintain the Conference. He would have done very unwisely, he thought, if he had taken such a course. *The Georgia.*—Mr. T. BAINES called attention to the fact that an armed steamer was now in the port of Liverpool which, having been originally manned and equipped from British ports, had preyed upon the commerce of a friendly nation, and has never been in any port of the belligerent under whose flag she sails. He entered at considerable length into questions of international law.

[Left speaking.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅜ to ¼ for Money, and 90⅞ for Acct.; Reduced and New Three per Cents., 89 to 88⅞; Five per Cent. Annuities, 107⅛; Bank Stock, 239 to 237; India Stock, 217 to 218½; Ditto Five per Cent. Stock, 105; Five per Cent. Enfaced Rupee Paper, 103; Exchequer Bills, March, 10*s.* pm.; Ditto June, 4*s.* pm.—FOREIGN: Brazilian, 1852, '58, '60, 89¼; Ditto 1863, 86¼: Ditto 1864, scrip to ½ pm.; Egyptian, second issue, 100½; Greek, 22¼ to ⅝; Ditto Coupons, 10; Italian, 67¼; Mexican, 43⅜ to 43½; Portuguese, 1856, &c., 47⅞ to 48¼; Russian 1862, 85⅞ to ⅞ ex div.; Ditto, 1864, scrip, 1⅝ pm.; Spanish, New Deferred, 45½; Ditto Passive, 34¼ to 34; Turkish, 1854, 88¼; Ditto 1862, 71¼ to 70⅞; Ditto 100*l.* Bonds, 71¼; Venezuela, 1862, 55¼, ex div.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,706,560	Government Debt	£11,015,100
		Other Securities	4,654,300
		Gold Coin and Bullion	12,055,560
		Silver Bullion	—
	£26,706,560		£26,706,560

BANKING DEPARTMENT

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,785,267
Rest	3,264,820	Other Securities	21,356,913
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,299,434	Notes	5,749,710
Other Deposits	12,901,160	Gold and Silver Coin	646,691
Seven days and other bills	830,137		
	£38,848,611		£38,848,611

May 12, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY: *May* 6.—BANKRUPTS.—F. ARMSTRONG, Lower Sussex Place, Old Kent Road, Clerk in her Majesty's Dockyard—S. ALDRIDGE, Church Street, Stoke Newington, Widow—J. ATKINSON, Newcastle upon-Tyne, Tobacconist—J. ANSELL, Tottenham, Clerk in the Queen's Remembrancer Office—J. ARMITAGE, Bradford, Yorkshire, Merchant—H. BLINKHORN, Southampton, Grocer—J. W. BROOKE, Kentish Town, Reporter—C. J. BRIDGFORD, Plumstead Common, Kent, Government Clerk—W. W. BROWN, Hulme, Manchester, Hawker—W. BOULTER, Lucan Place, Hoxton, Plumber—J. BACON, Leeds, Wholesale Boot and Shoe Manufacturer—T. BRETT, Tollesbury, Essex, Doctor—J. BIRD, Avenue Terrace, Camberwell, Baker—G. BUZEN, Hanley, Staffordshire, late Beerseller—A. J. P. BROWN, Arlington Street, Camden Town, Licensed Hawker—W. CARTER, Popehill, Pembrokeshire, Out of Business—M. CASSELY, Liverpool, Salt Provision Dealer—J. CANNON, Larkhall Lane, Surrey, Lieutenant on Half pay—J. CATHERICK, South Shields, Durham, Ship Broker—F. COLLIS, Herne Bay, Kent, Commander R.N.—T. COLLIER, Deptford, Kent, Superannuated Revenue Officer—M. DEW, Gamlingay, Cambridge, Farmer—WILLIAM EDWARD DAY, Thornton Terrace, Camberwell, Compositor—JAMES EGLINTON, King's Lynn, Norfolk, Shoemaker—M. EMERY, Southampton—J. EDWARDS, Coventry, Warwickshire, Baker—T. FARRELL, Warwick Yard, Henry Street, Hampstead Road, Cotton Dealer—J. EDWARDS, Mecklenburg Terrace, Gray's Inn Road, Grocer—H. EDWARDS, Milford, Pembrokeshire, Joiner—T. FENTON, Wednesfield, Staffordshire, Farmer—H. FIELD, Luton, Bedfordshire, Straw Bonnet Manufacturer—A. GILLOTT, Sheffield, Brush Manufacturer—J. GOODWIN, Southampton, Beer Retailer—J. GOLDWIN, Tutbury, Staffordshire, Tailor—R. GOLDS, Hanham, Gloucestershire, Commission Agent—G. GOOCH, Norton, Suffolk, Innkeeper—G. HALSEY, Hemel Hempstead, Hertfordshire, Licensed Victualler—J. HUTCHINSON, Liverpool, Lancashire, Bookbinder—W. HUMPHRIES, Denbigh, Farmer—L. HYATT, St Alban's Terrace, Vauxhall Bridge Road, Linen Draper—J. HOLLINGHAM, Brighton, Sussex, Baker—G. HEATHWELL, Spinninghead, Lancashire, Beer Retailer—T. HOLLIS, Dudley, Worcester—A. H. H. JEWELL, Gillingham, Kent, Clerk in her Majesty's Dockyard—G. D. JOHANNSEN, Lagos, Africa, Merchant—J. KNIGHT, Tabenham, Leicestershire, Baker—W. KNOWLES and I. DUNNE, Blenheim Terrace, St. John's Wood, Builders—J. LOWE, Malpas, Cheshire, Farmer—G. P. LANZ, Rutland Terrace, St. John's Wood, Out of Business—V. W. LANGLEY, Fakenham, Norfolk, Bricklayer—W. LAURENCE, St. Paul's Road, Ball's Pond, Glove Factor—C. LOVELL, Charlwood Street West—J. LEWIS, Birmingham—J. LEWIS, Narberth, Pembrokeshire, Attorney at Law—H. P. C. MANSELL, Cromwell Road, Brixton, Clerk—M. MITCHELL, Pembridge Gardens, Bayswater, Boarding House Keeper—J. MORGAN, Llantrissant, Glamorganshire, Boot Maker—D. MASSEY, Capesthorne, Cheshire, Farmer—C. NICHOLSON, late of Nottingham, General Dealer—W. NORTH, Brighton, Dry Driver—W. OSBORNE, Wickham Market, Suffolk, Coach Builder—A. PAGET, Tooke's Court, Castle Street, Law Stationer—J. PARFITT, Sussex Road, Brixton, Boot and Shoe Maker—E. PHILLIPS, Albion Place, Ball's Pond, Chandler's Shop Keeper—R. T. ROBERTS, West Derby, Lancashire, Architect—H. R. ROBERTS, Duke Street, Spitalfields—W. ROSE, Westbromwich, Staffordshire, Commission Agent—C. H. REID, Clarendon Terrace, Hampstead, Supernumerary Clerk—R. R. REES, Broughton, Glamorganshire, Gentleman—W. LEWIS, Lupus Street, Pimlico, Greengrocer—F. RAIMENT, Melville Terrace, Caledonian Road—J. C. SHARMAN, Great Yarmouth, Norfolk, Journeyman Baker—G. SMITH, Adam's Row, Hampstead Road, Boot and Shoe Seller—J. SUTTON, Brinkworth, Wiltshire, Farmer—J. H. STRIGHT, Wakefield, Yorkshire, Builder—W. H. STOCKETT, Rickmansworth, Hertfordshire—Rev. W. M. STRACEY, Sampford Spiney, Devonshire, Clerk in Holy Orders—S. W. SHUTTY, Nottingham, Boarding House Keeper—J. SLYMORE, East Garston, Berkshire, Baker—J. B. STEWART, Everton, Lancashire, Clerk—W. SCOTT, Oxford Cottages, Battersea, Gardener—W. TOMES, Leamington, Warwickshire—W. THOMAS, Cambridge, Glamorganshire, Grocer—W. S. WINN, Harrogate, Yorkshire, Farmer—D. WILLIAMS, Liverpool, Joiner—W. WILSON, Bradford, Yorkshire, Blacksmith—J. A. WHITE, Chelsea, Clerk in the Audit Office—M. WALKER, Queenhithe, Widow—W. F. WINDHAM, Upper Westbourne Terrace, Marylebone, Gentleman—T. WORTHILL, Harewood's End, Herefordshire, Blacksmith—R. WALLACE, Buntingford, Hertfordshire, Travelling Draper.

TUESDAY: *May* 10.—BANKRUPTS.—J. ALCOCK, Southampton, Dealer in Coals—R. BOLTON, Goosnargh, Lancashire, Farmer—T. BANKS, Kingswinford, Staffordshire, late Chartermaster—J. BULMER, Marsden, Yorkshire, Hay Dealer—R. BALDWIN, Ipswich, Fishmonger—S. BOWKER, Manchester, Salesman—W. CHAPMAN, Lovett Terrace, Burdett Road, Limehouse, Builder—T. COPE, Manchester, Boot Maker—J. CROSSLEY, Burnley, Lancashire, Painter—SAMUEL CHARLTON, Hulme, Lancashire, Butcher—AARON CARTER, Idle, Yorkshire, Innkeeper—JAMES DUTTON, Thomas Street, Notting Dale, Labourer—GEORGE DAY, jun., Bradford, Yorkshire, Journeyman Joiner—T. DREW, Bedwardine, Worcestershire, Journeyman Tailor—S. DYER, Marketon, Derbyshire, Farm Bailiff—S. DRIVER, New Brompton, Kent, Builder—J. EDWARDS, Salford, Lancashire, Tarpaulin Manufacturer—J. FRAYER, Wincanton, Somersetshire, Brewer—J. FIRTH, Sheffield, Provision Dealer—J. GOODWIN, Ramsbottom, Lancashire, Commercial Clerk—C. H. HASELDEN, Gower's Walk, Whitechapel, Licensed Victualler—T. HAYES, Little Green Street, Brunswick Square, and N. EVERETT, Dudley Street, Soho—A. HOLMES, Aylesbury, Harness Maker—J. HEPPLE, Leeds, Cloth Manufacturer—A. HOLDEN, Birmingham, Cab Driver—J. HOLMES, Chester Street, Green Street, Bethnal Green, late Chandler's Shop Keeper—F. HOWARD, Sloane Street, Chelsea, Merchant—A. HICKEY and E. MANNION, Liverpool, Leather Dealers—H. ISRAEL, Birmingham, Shoe Manufacturer—J. JENNINGS, late of James Street, Notting Dale, Assistant to a Cowkeeper—MARY ANN JOHNSON, Gravesend, Spinster—JOHN JOLLY, Liverpool, Clothier—JOHN LUKE and THOMAS WILLS, Camborne, Cornwall, Boot and Shoemakers—W. LEE, Manchester, Hosier—E. LEAK, Longton, Staffordshire, Lathe Maker—J. LEATHER, Bacup, Lancashire, Veterinary Surgeon—J. G. LANE, Sheffield, Beerhouse Keeper—J. MURRAY, Manchester, late Joiner and Builder—J. W. MILLS, Stalybridge, Cheshire, Bobbin Turner—H. NORRIS, Diss, Norfolk, Licensed Victualler—J. OWENS, Birmingham, Tailor—I. PARKER, Eardisley, Herefordshire, Blacksmith—T. PEARSON, Parade, Central Sydenham, Kent, Ironmonger—A. RICHMOND, Blunderston, Suffolk, Carpenter—J. ROBINSON, Bradway, Derbyshire, Edge Tool Maker—T.

REYNOLDS, Ventnor, Isle of Wight, Baker—G. SLATER Cambridge Road, Bethnal Green, Baker—J. SLACK, Sheffield, Publican—R. W. THOMERSON, Goldsmith's Row, Hackney Road, Furniture Dealer—B. TISSOT, Lower Thames Street, City, General Merchant—J. TAYLOR, The Grove, Camberwell, late Mathematical Instrument Manufacturer—R. VOKINS, Waterloo Place, Regent Street, Wine Merchant—J. C. WAUDBY and R. B. WAUDBY, Leeds, Wholesale Druggists—T. WHITLOW, Altrincham, Cheshire, Scrivener—M. WADE, Calverley, Yorkshire, Journeyman Joiner—J. WAKELING, Buckhurst Hill, Chigwell, Farm Labourer—F. WOODBURN, Lindale-in Cartmel, Lancashire, Hooper.]

Metropolis and its Vicinity.

THE SOUTH KENSINGTON MUSEUM.—On Thursday evening Lord Granville had the honour of entertaining their Royal Highnesses the Prince and Princess of Wales and the Duchess and Princess Mary of Cambridge at a *soirée* held in the new courts of the South Kensington Museum, which were brilliantly lighted up for the occasion. The whole fête, in its general features, resembled those great Assemblies which were given with such success at South Kensington during the time of the Exhibition, though, as might be expected, last evening the invitations were confined to a smaller number of visitors, and not more than about a thousand had the honour of receiving them. This, in courts of such extent as those which were thrown open to receive the company, seemed, and was, in fact, a small number, but the freedom of circulation afforded to all the guests, and the perfectly even atmosphere, neither too warm nor too cool, which prevailed throughout the evening, made the assembly contrast most favourably in point of comfort with the somewhat crowded gatherings which were held there in 1862. The guests began to arrive soon after nine, and, in compliance with the etiquette usual when invitations are issued to meet Royalty, had almost all assembled before the arrival of the Prince and Princess. Their Royal Highnesses came soon after 10 o'clock, and were received by Lord Granville, and conducted to the private room which had been fitted up for the use of the Royal party during the evening. In this, however, only a stay of a few minutes was made, and the Prince conducting the Princess Mary, while Lord Granville accompanied the Princess of Wales, went through the courts among the rest of the guests, either examining the exquisite collection of works of mediæval Italian art or conversing with those who had the honour of being intimately known to them. There was certainly a charming scene before the Royal party, for the lighting up of the new Italian courts brought the simple and beautiful manner in which decoration has been applied to develope as it were their principles of construction into full relief, and anything better toned or in more quiet good taste than their general effect it would be very difficult to design. Some of the courts were grouped about with stands of flowers, so that between the music, the lights, flowers, works of art, and, above all, the ever-moving groups of guests, the scene was most animated and attractive. Soon after midnight the Royal party retired to partake of supper, which was served in their private room, laid only for the guests who had previously received special invitations. Soon after 1 o'clock the Prince and Princess of Wales took their leave. Almost immediately after, the visitors, who included the leading members of both Houses, and some of the most distinguished names in science, literature, and art, hastened to follow the Royal example, and the assembly soon broke up.

GENERAL GARIBALDI.—A telegram received at Stafford House on Tuesday morning from the Duke of Sutherland states that General Garibaldi landed at Caprera at 2 o'clock on Monday. The Garibaldi subscription originated at Stafford House, is at an end. Mr. Seely has written to the daily papers to say that an intimation has been made from good authority that Garibaldi will decline to receive it. The idea is therefore dropped, and the money already paid is to be returned.

THE GARIBALDI MEETING ON PRIMROSE HILL.—A meeting to protest against the sudden departure of Garibaldi was held on Saturday night on Primrose Hill, and was attended by from 1000 to 1500 persons. Mr. E. Beales presided, and in his opening speech vindicated the right of the people to meet in the open air for the discussion of public matters. The question of Garibaldi's departure from England was then discussed, and Mr. Shaen made a statement of the reasons which had induced the General to give up his provincial engagements. He asserted that at a meeting of Lord Shaftesbury, Mr. Gladstone, Mr. Kinnaird, and Mr. Seely at Stafford House on Sunday, the 17th ult., Mr. Gladstone told Garibaldi that the Government was certainly desirous that he should leave. Resolutions were unanimously passed declaring the right of the people to meet in the parks, and protesting against the improper pressure which had been brought to bear upon Garibaldi to induce him to leave England. The meeting, which had been very orderly throughout, then quietly dispersed. On Tuesday the Chancellor of the Exchequer received a deputation from the Garibaldi Working Men's Committee, and entered fully into a discussion of the discrepancies that appeared between his version of what passed between him and Garibaldi as he gave it to the House of Commons, and as Mr. Shaen declared it at the meeting on Saturday. Mr. Shaen said that the authority for his statement was Mr. Cowen, of Newcastle, who told him he had it from Garibaldi himself. Mr. Gladstone denied in the most emphatic manner that he had used any language to Garibaldi that could by possibility be construed into a meaning that the Government wished Garibaldi to leave for political or for any reasons. He said that he was perfectly ignorant of all the circumstances under which Mr. Fergusson's letter was written. He only acted upon it in good faith, and as it was in accordance with his own feeling on the matter. Some further remarks having been made by Messrs. Taylor, Hartwell, and Beales as to the words "obliged to leave" in Garibaldi's letter to the City Committee, Mr. Gladstone said that he could not agree in their conclusions. He assured the deputation he had stated all he knew; he had nothing to conceal, and was happy to have had the opportunity of making this explanation. The deputation then retired, the interview having lasted one hour and a quarter.

BOILER EXPLOSION ON THE METROPOLITAN RAILWAY.—On Monday morning a boiler explosion occurred at the Bishop's Road Station of the Underground Railway. A train was on the point of starting for the city when the boiler burst, throwing the dome of the boiler, weighing 6 cwt., almost perpendicularly to a great height, whence it fell near the Dudley Arms, at the foot of the Harrow Road Bridge, a distance of about 200 yards from the station. A large portion of the roof of the station was blown away, and one of the approaches to the bridge which crosses from one platform to the other was entirely demolished. The plate-glass windows (half an inch thick) on both sides of the station were smashed to atoms, and the engine was reduced to a wreck. The driver, who was on the engine at the time, escaped without any injury, and the stoker received only a slight wound on the top of his head. In the carriage compartment next to the engine the shock was felt very slightly, but in the next compartment both the windows were blown in, and four passengers were so severely cut about the head and face with the glass that they were removed to the hospital, where, with one exception, they are doing well. At the moment when the explosion occurred the down train from Farringdon Street was just entering the station, and the concussion was so great as to smash some of the windows in the carriages of that train, and to burst the gas-holders on the roofs of the carriages—increasing the noise and confusion. The shock of the explosion was heard for a considerable distance. It is considered fortunate the explosion took place in the station; had it occurred in the tunnel the damage and loss of life must have been frightful.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the number of deaths registered in London in the week that ended Saturday, May 7, were 1317. In the corresponding week of the 10 years 1854-63, the average number, corrected for increase of population, was 1311. The present return is therefore 6 above the average. During the week the births of 967 boys and 912 girls, in all 1879 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 2025.

Provincial.

HAYLE.—On the 3rd inst. seven gipsies, a mother and her six children—were charged before the Rev. Uriah Tonkin in this town, with having slept under tents, and were all committed to 21 days' imprisonment in the county gaol.

HUDDERSFIELD.—A frightful tragedy was enacted at the village of Bradley, within this township, on Saturday. Joseph Pogson, a clothworker, 64 years of age, who had retired upon a small sum of money which he had accumulated from his earnings, lived with his niece, to whom he had been attached from childhood, at the house of her husband, a man named Joseph Haigh, who was also a workman at the mill at which Pogson had formerly been employed. Haigh was regarded as a steady, religiously disposed man, but latterly he has become morose, and has indulged in fits of violence towards his wife. On Saturday morning he awoke his wife about 4 o'clock with the strange request that she would pray with him, and she complied with his request. While repeating the Lord's Prayer, however, he suddenly struck her a violent blow upon the face with his fist, and accused her of mocking him. She pacified him for the time being, but in about an hour his paroxysm of violence returned, and she fled from the house in her night-dress. Her intention was to alarm the neighbours, but instead of doing so she returned to the house. Immediately on her entering it her husband seized her, and her screams and those of the children in an adjoining room roused the house. The old man, Pogson, went to his room door in his night clothes to ascertain what was the matter. Haigh no sooner saw him on the landing than he relinquished his grasp of his wife, who again fled for safety into the street, and vented his violence upon Pogson. He threw him down, jumped and trampled upon his body, especially upon his head, causing his right jaw to protrude from his cheek, and fracturing his skull in a frightful manner. The old man never spoke or manifested consciousness afterwards, and did not survive his injuries three hours. Haigh was taken before the Huddersfield magistrates on Monday, and remanded to await the result of the inquest. It is said that he is insane.

LIVERPOOL.—A fatal accident occurred to the steamer Leinster Lass, of Drogheda, on Wednesday week. While on the voyage to this port the piston-rod got detached, and fell through the bottom of the vessel. The sea rushed in through the hole and filled the compartment. The passengers, in a panic, rushed to the boats, one of which, full of people, broke from the tackle and was swamped, and it is said that five emigrants were lost. The screw steamer Torch, on her way to Dublin, fortunately came up in time to tow the vessel into Holyhead.

THORNBURY.—The village of Rudgway, near this town, has been the scene of a brutal murder. The victim is a poor blind woman named Mary Carthey, but better known as Mary Curtis, whose husband has been dead for some time, and who, since her widowhood, has supported herself by basket-making. It was known to have been her custom every night to walk down the garden path leading from her cottage to shut the wicket, and her murderer must have availed himself of this opportunity to effect his purpose. On Tuesday morning the poor woman was found lying dead outside her house, there being marks of blows about her head, and her throat being cut. A stone hammer, a razor-case, and a stick were found near the spot, and have been identified as the property of a labourer named Gough, who has absconded, and who had previously threatened the deceased.

Ireland.

THE FUNERAL OF SIR THOMAS FITZGERALD.—The affliction of Lady Fitzgerald and her family has been aggravated by a barbarous outrage on the part of the peasantry. The popular feeling, it seems, did not go with the verdict of the jury, and the impression that prevailed among the lower classes was that the suicide of Sir Thomas Fitzgerald was deliberate and of *malice prepense*, with the avowed purpose of defrauding his creditors. Consequently, they thought that the verdict should have been simply that he was guilty of self-murder, and as such unworthy of Christian burial. This view is ascribed chiefly to an hereditary animosity to the family, dating from 1798, when the grandfather of the late baronet, by his atrocious cruelties to the insurgents, acquired the *sobriquet* of "the Flogger," by which he was long remembered in Tipperary. The Irish peasantry firmly believe in providential retribution in cases of oppression, and, if the wrongdoer escapes in this life, they have no doubt that his descendants will be punished in his stead. The history of this family seems to have confirmed the popular belief, for it has suffered several heavy calamities, and all have been regarded as divine judgments. The son of "the Flogger," who inherited his titles and estates, was drowned coming from Liverpool in the Nimrod. A young son of the suicide hanged himself some years ago from a nail stuck *in the wall*, to which he fastened a cord. According to the popular story, the boy was showing to his little sister and brother how his grandfather used to hang the rebels. Believing, however, that the verdict should have been *felo-de-se*, a mob of strangers assembled in the churchyard of Ballygriffin on the evening before the funeral, and filled the grave with stones. The funeral procession was as private as possible, the remains being followed only by a few relatives and friends. They were met by the mob at the gate, expressing in such menacing terms their determination that the corpse of the suicide should not enter consecrated ground that all remonstrances and entreaties were unavailing; and the coffin had to be borne back to the house. The Rev. Mr. Ryan, P.P., exerted himself to calm the excitement of the people; and next day he addressed them from the altar, strongly condemning their conduct. On Monday morning the interment took place, under the protection of a strong body of constabulary 150 in number. A guard remains upon the grave day and night. The funeral service was read by the rector of the parish. The Roman Catholic clergyman and his curate were present, and exhorted the people not to disturb the remains just committed to the ground.

Scotland.

THE CONFEDERATE VESSEL PAMPERO.—A final judgment was given last week in this case by Lord Ormidale at Edinburgh, in terms of a compromise agreed upon between the parties for a nominal conviction without penalty. Minutes were lodged by the builders, withdrawing from the suit, and by the owners, stating that they adhered to the statement that, so far as they were concerned, the counts in the information were unfounded in fact, having ascertained that Mr. G. T. Sinclair, one of the defenders, did attempt and endeavour to furnish the vessel with the intent stated in the third count; and being advised that the said vessel might thereupon be legally liable to seizure, even though her owners had not themselves infringed the statute, they had entered into the agreement set forth in the joint minute with the Crown. The joint minute for the Crown and the owners set forth — first, that the defenders, John Fleming and others, consent to a verdict being entered for the Crown without the intervention of a jury, on the 37th count of the information, but this on the footing that no liability is incurred by the said defenders to her Majesty's Advocate or to any of the officers of the Crown acting in their capacity of informers; and, second, that in the application of the said verdict no expenses shall be found due by either party in the suit. The Lord-Ordinary pronounced interlocutors — first allowing Messrs. Thomson, the builders, to withdraw

from the case; second, allowing the minute for the defenders, Fleming and others; and, third, finding for the Crown on the 37th count in terms of the joint minute, the count in question being to the effect that the defenders attempted and endeavoured to furnish the said ship or vessel with intent and in order that such ship or vessel should be employed in the service of the Confederate States, with intent to cruise and commit hostilities against a certain foreign State with which her Majesty was not then at war—to wit, the republic of the United States; the third interlocutor further declaring that no penalty had been incurred by the defenders, and that no expenses were due by either party.

Law.

Court of Queen's Bench.—(Sittings in Banco, before the Lord Chief Justice, Justices Blackburn, Mellor, and Shee.)—*The Case of the Confederates charged as Pirates: Ex parte Ternan and Others.*—This was the case of the prisoners now in gaol at Liverpool charged with piracy, and arrested and detained by order of the Secretary of State, at the instance of the American Minister, for the purpose of being delivered up to the United States under the Act for enforcing our Extradition Treaty with that country. In November last an American schooner, the Gerity, lay at Matamoras, laden with a cargo of cotton, bound for New York. Six or more men—including the prisoners—took passages on board, and embarked on board as passengers. It was admitted that they went on board armed for the very purpose of seizing the vessel, and under the command of one Hogg, who assumed to be in the Confederate service, and professed to have papers from the Confederate Government, and under whose orders they acted. The vessel left Matamoras on the 16th November, and at half-past 12 on the night of the 17th the men thus embarked under his orders rose upon the master and crew and seized the ship, cast the master adrift in the Gulf of Mexico, and took the ship to Belize, in British Honduras, where it would appear they abandoned the ship and sold the cargo, part of which had found its way to Liverpool. In January last three of the men (two of whom were British subjects) were found to be at Liverpool, and on the information of the master of the schooner, who also happened to be there, Mr. Adams, the American Minister, made a requisition to Sir George Grey under the Extradition Act. Sir G. Grey thereupon issued his warrant to the magistrates of Liverpool, under which they issued their warrant to arrest the men, and they were accordingly so arrested, and were then charged with piracy, on the evidence mainly of the master of the ship seized, who distinctly stated that Hogg told him he had papers to justify what he did, and that he was a Major in the Confederate service, and that he (the master) believed him to be so, and he also stated that the other men acted under his orders, and that when they seized the ship they said they did so for the Confederates; and that Hogg spoke about Jefferson Davis. The statements of the prisoners were likewise given in evidence, and were to the effect that they were engaged by Major Hogg, of the Confederate service, for the purpose of seizing the ship, and that he showed them documents signed by a General Bee, and stating that they were authorised by Jefferson Davis to do so. Upon the evidence adduced before the magistrate it was submitted, on the part of the prisoners, that the act was not piracy, and not within the treaty. The magistrate (at the suggestion of Mr. Justice Willes, at the assizes) remanded the men from time to time, in order to allow of their making an application to this Court, the warrant for their committal distinctly stating that they were committed, not for the purpose of trial in this country, but of delivering up under the treaty. A rule *nisi* had been obtained, on behalf of the prisoners, for a *habeas corpus*, directed to the gaoler at Liverpool, for the purpose of bringing them up with a view to their discharge, and it was now moved to make that rule absolute. Cause was now shown against the rule on behalf of the American Minister. After a long discussion the judges retired to consider their decision, and on their return the Lord Chief Justice said—We are of opinion that the rule should be made absolute. We do not desire, at the present stage of the case, to express any decision as to the construction of the statute; but we think that in a matter of so much importance in an international point of view it is desirable that we should have before us all the materials on which to form our judgment on authoritative grounds. We therefore think it better that the rule for a *habeas corpus* should be made absolute. Mr. Adams, the American Minister, was present during the arguments. The rule will be argued next Term, which begins on the 23d inst. *In Re Pater—The Bench and the Bar.*—In this case Mr. Pater, a member of the bar, was defending a prisoner indicted for felony at the Middlesex Quarter Sessions before the deputy-assistant judge, Mr. Payne. In the course of the trial he was objecting to the course taken by the prosecuting counsel, when he was interrupted by the foreman of the jury, who said, "We know what all this is for: we know the object." On another occasion he was objecting to the course taken by the prosecuting counsel in pressing one of his own witnesses and examining him as if he was cross-examining him, pointing out that such pressure might induce the witness to carry his evidence further than the strict truth would warrant, when he was again interrupted by the foreman, who said he had no right to insinuate that a witness was not speaking the truth. After this, in addressing the jury on behalf of his client, Mr. Pater said, adverting to the previous interruptions, "I thank God there is more than one juryman to try the case, for if it rested with one, and that one the foreman, there could be no doubt what the result would be." The deputy judge upon that said it was an improper observation, and desired it to be retracted. Mr. Pater refused to do so, contending that he had a right to use the expression he had, and upon that the assistant-judge was appealed to, and he inflicted a fine of 10*l.* upon Mr. Pater for contempt of court. An order was subsequently drawn up imposing the fine, and Mr. Pater received an intimation from the Sheriff of Middlesex that it would be levied. The fine had not been estreated into the Court of Exchequer, or that court would have had an exclusive jurisdiction; but this was a fine imposed by a court of quarter sessions, which it appears is leviable under the statutes on the subject without being estreated into the Exchequer; and it was conceived that this court by virtue of its general superintendence over inferior courts had jurisdiction in the matter. It is a general rule that all courts of record can commit or impose fines for contempt, and adjudicate upon what is a contempt, without setting out the words deemed to be a contempt; and in the present instance, although it was understood that the words would be set out in the order with a view to raise the question, it was merely stated that Mr. Pater had uttered words which were a contempt of court, and had been fined for such contempt. A rule had been obtained on behalf of Mr. Pater for a certiorari to bring up any orders of the Court of Quarter Sessions at Middlesex imposing any fine upon, or affecting the applicant in the matter in question, in order that they might be quashed. Cause was shown on Monday against the rule. After a long argument the Lord Chief Justice delivered judgment that the rule for a *certiorari* to quash the order should be discharged, and that consequently the fine should stand. He said it was beyond a doubt that the Court of Quarter Sessions had inherent in it the power to punish contempt of Court, as being a court of record. No man could have a higher sense than he had of the importance of the rights and privileges of counsel in the discharge of their arduous and important duties. He quite agreed that they had not those privileges for themselves, but for the whole community, and he should be the last man in the world to limit or to restrain them. But, on the other hand, the Court was bound to protect the jurymen in the discharge of their duties, and if, looking to the whole of the circumstances, they saw evidence from which it might fairly be concluded that there was an intention to insult, they could not interpose to prevent the consequences from a desire to uphold the privileges of the Bar. Deeply, therefore, as he regretted the result, he was bound to say that the Court would not be justified in making the rule absolute to quash the order. Mr. Justice Blackburn, Mr. Justice Mellor, and Mr. Justice Shee concurred. The rule was consequently discharged. The result is that the fine will be levied. *The House of Keys.*—The authorities of the Isle of Man lately committed Mr. Browne, the editor of a newspaper in the Island, to prison for some contempt of their orders. Mr. Browne applied to the Court of Queen's Bench for a writ of *habeas corpus*, which was resisted on the technical ground that the Isle of Man was one of the foreign possessions of the Queen, and that, therefore, the Court of Queen's Bench had no jurisdiction in the island. The question was argued on Saturday, when the Court unanimously held that, though the island was not within the realm of England, it was not so much a foreign possession but that the Court had jurisdiction, and so the rule to bring up Mr. Browne before them was made absolute. At the same time the Lord Chief Justice expressed his opinion that Mr. Browne was illegally detained.

Court of Exchequer; *The Steam Rams.*—Sir G. Honyman applied to postpone the trial at bar, fixed in this case for the 27th inst, until the 6th of June, on the ground that a M. Bravay, who had intervened and claimed the rams, and was, of course, a party to the information filed by Her Majesty's Attorney-General, was a necessary witness for the defence, and could not possibly be in this country on the day appointed for the trial. M. Bravay had stood as a candidate during the recent elections in France, and had been elected, but for some cause or another his election had been annulled, and he was again a candidate for re-election, and, as the 27th would find him busily employed for that purpose in France, it was hoped the Court would grant the application.—The Attorney-General, after perusing the affidavit upon which the application was provided, said that as M. Bravay's absence might prove an impediment to his success he saw no objection to the 6th of June being fixed for the trial of the case.—Sir Hugh Cairns said he appeared for the other defendant, and offered no opposition to the application.—The Lord Chief Baron said that, as all seemed agreed upon the 6th of June, let that be the day.

BIRTHS.—On the 11th inst, at 39, Lowndes Street, the Lady Elizabeth St. Aubyn, of a daughter—6th inst, Lady Charles P. Clinton, of a son, stillborn—7th inst, at 7, St. Stephen's Green, Dublin, the Hon. Mrs. Robert Handcock, of a daughter—10th inst. at 46, Charles Street, the Hon. Mrs. Curzon, of a daughter—11th inst, at 45, Rutland Gate, the wife of Edward Heaton-Ellis, of a son.

MARRIAGES.—On the 7th inst, at St. George's Hanover Square, Henry J. Widenham Smyth, of Castle Widenham, Co. Cork, to Emily Mary, daughter of the late Abraham Widley Robarts, Esq.—5th inst, at Vienna, Henry Worms, Esq., of Park Crescent, Portland Place, to Fanny, eldest daughter of the Chevalier Eduard De Todesco, of Vienna—10th inst, at St Mark's Church, Reigate, the Rev. Edward J. Hubbard, M.A., chaplain to H.M in Bengal, to Georgina, third daughter of Major-General Walter Nugent T. Smee, of Oakfield House, Reigate.

DEATHS.—On the 25th ult, at Grangemuir House, the Lady William Douglas, widow of the Right Hon. W. R. K. Douglas, of Grangemuir, &c.—5th inst, at 11, Euston Place, Georgiana Anne, daughter of the Right Hon. John and Lady Georgiana Smyth, of Heath Hall, in the county of York, aged 83—29th ult, at Eaton Terrace, S.W, the Dowager Lady Boyd, aged 71—2d inst, at Weymouth Street, Portland Place, Clara Jane, fifth daughter of the late Sir Philip Macgregor, Bart.—4th inst, at Oxford Terrace, Hyde Park, Major G. F. S. Browne, Madras Staff Corps, Commissioner of Saugor, Central India, aged 37—10th inst, at Barleythorpe, Constantia, the wife of Major-General R. B. Wood, C.B., aged 32.—3d inst, at Southport, Lancashire, the Rev. Almeric John Churchill Spencer, incumbent of Erle Sterndale-cum-Burbage, only surviving son of the Right Rev. Bishop Spencer, late Lord Bishop of Madras, and nephew of Lord Broughton, aged 21—8th inst, at Paris, A. G. F. De Burgh, Esq., of West Drayton, aged 21—3th inst, at Richmond, Yorkshire, Henry Michell, Esq., last surviving son of the late Charles Michell, Esq., of Forcett Park, North Riding of Yorkshire, aged 86—10th inst, at Odin Lodge, Clapham Park, Dr. Normandy, aged 54.

Markets.

COVENT GARDEN, May 14

Outdoor produce is now well supplied. English Grapes and forced Strawberries are sufficient for the demand. Of Pine Apples there is also a better supply. Apples, though scarce, may still be obtained; Oranges are nearly over. Continental arrivals continue heavy; among them are Lettuces, Endive, Carrots, Artichokes, Radishes, Asparagus, and Peas. Potatos from Lisbon, of which considerable quantities have been imported, realise from 3s. to 6s. per dozen lbs. Asparagus fetches from 3s. to 6s. a bundle. Flowers chiefly consist of Tulips, Cinerarias, Orchids, Heaths, Pansies, Pelargoniums, Primroses, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Oranges, per 100, 4s to 10s
Grapes, new, per lb., 6s to 15s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	Almonds, do., 18s
Strawberries, per. oz., 9d to 1s 6d	Walnuts, do., 14s to 20s
Lemons, per 100, 4s to 10s	Chesnuts, per bush., 10s to 16s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Rhubarb, p. bundle, 4d to 1s
Cauliflowers, each, 4d to 8d	Turnips, p. bunch, 4d to 6d
Asparagus, p. bundle, 3s to 6s	Cucumbers, each, 1s to 2s
French Beans, p. 100, 2s to 3s	Beet, per doz, 1s 6d to 2s
Green Peas, p. ½ sieve, 20s	Shallots, per lb., 10d
Soakale, per punn., 2s to 3s	Celery, per bundle, 1s 6d to 2s
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb, 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 4d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 1s to 2s 6d	Horse Radish, p. bunch, 1s to 4s
Carrots, do., 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
— young, p. bunch, 3s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

COAL MARKET.—May 11.

Byass's Bebside West Hartley, 17s.; Cowpen Hartley, 17s.; Hastings Hartley, 17s.; West Hartley, 17s.; Walls End Gosforth, 16s. 6d.; Eden Main, 16s. 6d.; Walls End Braddylls Hetton, 17s. 3d.; Walls End Haswell, 18s.; Walls End Hetton, 18s.; Walls End Tunstall, 16s. 6d.; Walls End Hartlepool, 18s.—Ships at market, 16.

POTATOS.—Southwark, Monday, May 9.

During the past week the arrivals both coastwise and by rail have been more than equal to the demand; the trade is in a most depressed state, and prices nominal. Quotations:—Yorkshire Flukes, 45s. to 50s. per ton; do. Regents, 40s. to 50s.; Seedlings, 40s. to 45s.; do. Rocks, 40s. to 45s.; Dunbar Regents, 50s. to 60s; Kent and Essex Regents, 50s. to 60s.; North Berwick Regents, 40s. to 45s.; Perth, Forfar, and Fife Regents, 30s. to 35s.; do. do. Rocks, 30s. to 35s.; do. do. Reds, 30s. to 35s.

HOPS.—Borough Market, Friday, May 13.

Messrs. Pattenden & Smith report an improved demand for the very few Hops on offer, late prices being fully maintained.

NEWGATE.—May 13.

Best Fresh Butter .. .. 18s. per dozen lbs.
Second do. do. .. .. 12s. "
Pork, 4s. 4d. to 4s. 8d. per 8 lbs.

LEADENHALL POULTRY MARKET.—May 13.

Trade is very quiet for the month of May. The supply is a full average. The good prices of the last fortnight have had their effect in bringing into market everything that had either youth or condition to recommend it. Plovers' eggs are this year sent in much smaller numbers, and it would seem that improved farming and draining is doing for these birds what it already has for many others. Leverets are scarce and in good demand. The supply of Dotterel is not up to the average.

Per couple—s. d. s. d.		Each—s. d. s. d.	
Large Surrey Fowls	11 0 to 14 0	Guinea Fowls	—4 0
Do. do. seconds	9 0—11 0	Tame Rabbits	1 3—2 3
Farmhouse do.	8 0—10 0		per doz
Best Surrey Chickens	7 0— 9 0	Wild do.	7 0— 9 0
Farmhouse do.	6 0— 7 0	Pigeons, French	9 0—10 0
Irish do.	5 6— 6 6	Do., English	7 0— 9 0
Goslings ..each	—7 0	Plovers' eggs	3 0— 3 6
Ducklings ,,	3 0—4 6		

METROPOLITAN CATTLE MARKET.

Monday, May 9.

The number of Beasts is much smaller than on Monday last; however, trade is not very brisk, and prices are not much higher than last week. The supply of Sheep is smaller, but quite equal to the demand. Trade is more active than on Thursday last, but prices are about the same as on Monday. Choice Lambs and Calves are in request. From Germany and Holland there are 1190 Beasts, 3010 Sheep, 142 Calves, and 80 Pigs; from Scotland, 520 Beasts; from Ireland, 110; and 2640 from Norfolk and Suffolk.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	4	6 to 4 10	Best Long-wools.	—	—
Best Short-horns	4	4 — 4 8	Do. Shorn	4	6 — 4 8
2d quality Beasts	2	8 — 3 8	Ewes & 2d quality	—	—
Best Downs and Half-breds	—	—	Do. Shorn	3	6 — 4 0
Do. Shorn	4	8 — 5 0	Lambs	6	8 — 7 8
			Calves	4	0 — 5 8
			Pigs	3	4 — 4 8

Beasts, 4780; Sheep and Lambs, 22,640; Calves, 158; Pigs, 480

Thursday, May 12.

Although the number of Beasts is not quite so large as on Thursday last, it is quite equal to the demand, and that day's quotations are not on the average exceeded. Sheep are rather more plentiful; at the commencement trade was brisk, but dull towards the close of the market, prices ranging about the same as on Monday last. Choice Calves and Lambs are in request at full rates. Our foreign supply consists of 660 Beasts, 1270 Sheep, and 576 Calves. Milch Cows, 75.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	4	6 to 4 8	Best Long-wools.	—	—
Best Short-horns	4	4 — 4 6	Do. Shorn	4	6 — 4 6
2d quality Beasts	2	8 — 3 8	Ewes & 2d quality	—	—
Best Downs and Half-breds	—	—	Do. Shorn	3	8 — 4 2
Do. Shorn	4	8 — 5 0	Lambs	7	0 — 8 8
			Calves	3	8 — 5 0
			Pigs	3	4 — 4 8

Beasts, 1335; Sheep and Lambs, 8740; Calves, 691; Pigs, 160.

MARK LANE.—Monday, May 9.

The supply of Wheat from Essex and Kent to this morning's market was small, and disposed of at the extreme rates of last Monday. Foreign was rather more inquired after, but very full prices being insisted upon, only a limited business resulted. Barley and Beans brought last week's quotations. Peas were 1s. per qr. dearer. The Oat trade was steady at about the prices of this day se'nnight. For Flour there was a fair demand at fully late rates.

Per Imperial Quarter	s. s.		s. s.
Wheat, Essex, Kent, & Suffolk..White	42—48	Red	40—48
— — fine selected runs..ditto	44—52	Red	40—48
— — Talavera	48—54		
— Norfolk	—	Red	—
— Foreign	36—52		
Barley, grind. & dist, 25s to 27s..Chev.	34—38	Malting	29—33
— Foreign..grinding and distilling	22—26	Malting	27—31
Oats, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish ..... Potato	19—22	Feed	—
— Foreign ..... Poland and Brew	17—22	Feed	15—20
Rye	30—32	Foreign	—
Rye-meal, Foreign	—		—
Beans, Mazagan....27s to 36s..Tick	30—33	Harrow	30 33
— Pigeon .... 33s to 40s..Winds.	—	Longpod	—
— Foreign ..... Small	36—42	Egyptian	30—32
Peas, White, Essex and Kent..Boilers	32—33	Suffolk	33—34
— Maple .... 30s to 34s .... Grey	28—30	Foreign	31—33
Maize ..... White	—	Yellow	—
Flour, best marks delivered..per sack	35—40		
— 2d do ..... ditto	28—34	Country	28—34
— Foreign ..... per barrel	15—25	Per sack	32—40

Friday, May 13

The weather since the 9th has been showery and unsettled. The suspension of hostilities agreed upon at the Conference on Monday, and consequent raising of the blockade in the Baltic, has had a depressing influence on the Wheat trade throughout

the kingdom, and in the majority of markets the improvement established last week has been lost. No quotable alteration has taken place in the value of spring corn, but the prices of Barley rather inclined downwards, whilst those of Beans and Peas tended to improvement. Flour quotations remain without alteration. Since Friday last only 4 vessels have been reported off the coast. The floating trade has been quiet; Wheat buyers keep back, and no material alteration has taken place in the value of any kind of grain. Paris, May 12.—Flour is very difficult of sale, but holders continue to ask extreme rates. The six marks for delivery this month are quoted equal to 34s. 6d. per 280 lbs. The present stock in Flour is estimated at 15,700 cwt. Business in Wheat was limited, and in a few transactions rather lower prices have been accepted. The arrivals of English grain and foreign Wheat during the week have been small, of foreign Barley and Oats to a fair extent. The attendance at to-day's market was very limited, the business transacted in all descriptions of corn was small. Monday's quotations are nominally supported, but the tendency in the value of Wheat and Oats is downwards.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	640 qrs.	100 qrs.	1390 qrs.	1710 sks.
Irish	—	—	1440	— ,,
				250 ,,
Foreign ..	8780 ,,	3170	24,930 ,,	— brls

LIVERPOOL, May 10.—The announcement of a suspension of hostilities between the Danes and Germans has caused business to be very dull at our market to-day, and the advance of 2d. per cental on Wheat, and 6d. per barrel and sack on Flour, established on Friday last, has quite disappeared. Indian corn also has lost the recent improvement, and 28s. 6d. is again the best obtainable for prime mixed. Oats and Oatmeal are little inquired after. Peas and Beans are offered more freely, and must be quoted the turn lower A fine warm day, and the reaction consequent on the change in political affairs, both combine to depress our market, and it closes at its worst point.

FRIDAY, May 13.—The market was thinly attended. Wheat more in retail demand, at 2d. per cental decline. Flour 6d. lower and slow. Indian Corn dull. Beans, Oats, and Oatmeal unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
April 2	40s 2d	31s 0d	19s 2d	28s 5d	32s 6d	32s 11d
— 9	40 1	30 9	19 11	29 0	32 8	32 8
— 16	40 1	30 10	19 3	27 8	33 0	31 11
— 23	39 7	31 1	18 9	29 0	32 7	32 1
— 30	39 2	30 6	19 4	28 7	33 9	32 1
May 7	38 9	30 3	19 5	32 3	34 0	32 1
Agg. Aver.	39 8	30 9	19 4	29 2	33 1	32 5

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

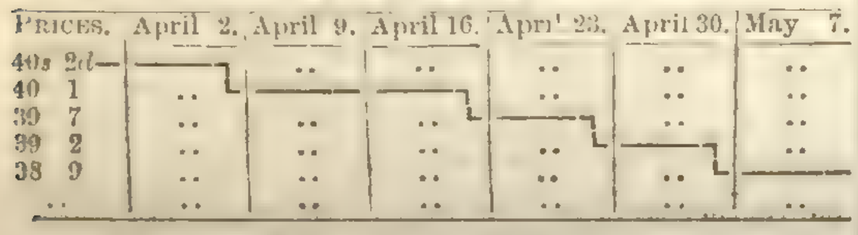

HAY.—Per Load of 36 Trusses.
SMITHFIELD, Thursday, May 12.

Prime Meadow Hay	75s to 80s	Clover, old	90s to 112s	
Superior do. ..	84 90	New Clover ..	— —	
Inferior do. ..	60 70	Do. second cut ..	— —	
New do.	— —	Straw	25 32	
Rowen	— —	HARVEY & EASTON.		

CUMBERLAND MARKET, Thursday, May 12.

Sup. Meadow Hay..	86s to 92s	Inferior Clover ..	80s to 98s
Inferior do.	65 — 77	New do.	— —
New do.	— —	Straw	30 34
Superior Clover ..	108 — 110	JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, May 12.

Fine Meadow Hay..	80s to 84s	Prime 1st cut Clover	100s to 114s
Inferior do.	75 80	Inferior do. do. ..	100 105
Prime New Hay ..	— —	New 1st cut do. ..	— —
Inferior	— —	Prime 2d cut do...	105 110
Straw	26 30	Inferior do.	— —

Leatherhead, Surrey.

BOARD and LODGING in a cheerful family, occupying a pretty Villa Residence in this favourite locality, is offered to a Single Lady, or Two Sisters, requiring a comfortable home. The Residence is beautifully situated on a slight eminence overlooking the Valley of the Mole.—Letters of inquiry may be addressed to M. E., Messrs. Beman & Son, 13, Down Street, Piccadilly, W.

B. S. WILLIAMS has a VACANCY in the Office for a respectable YOUTH. He must write a good hand, and be quick at Accounts.—Paradise Nursery, Seven Sisters' Road, Holloway, N.

WANTED, a Good FOREMAN, for a gentleman's Garden, where six or seven hands are employed.—Age from 26 to 36; a married Man preferred. He must be thoroughly well up in every branch of Gardening, and quite competent to conduct and carry out the Management of a good Garden under the instructions and advice of the Superintendent, who has duties which daily call him from home. It is particularly requested that no person will apply for the above situation who cannot be very highly recommended for sobriety, activity, industry, and ability. He must also be confident in his own power and determination to perform all the requirements mentioned above, or it will lead to mutual disappointment. Wages, 1*l.* per week, with Cottage, Milk, and Vegetables. — Apply to Mr. HARLAND, the Steward, Brookman's Park, Hatfield, Herts.

WANTED, a GARDENER who understands Sample Ground Work; employment during the Winter Months in Shop.—HENRY CLARKE & SONS, 39, King Street, Covent Garden, W.C.

WANTED IMMEDIATELY, at Twickenham, a GARDENER. — Must understand Grapes. Cottage, Milk, and Vegetables found. Preferred if Wife undertakes Laundry.—Particulars of Mr. COURT, Station Master, Twickenham, S.W.

WANTED, a Married GARDENER, to live in the Lodge, at a nice place, near London. Two Greenhouses, Vinery, Pits, &c.; two men and one lad. Wife to be fully competent to take charge of the Dairy. Wages for both, with Lodge, 70*l*, Vegetables, Coals, Milk, &c.—Apply to J. C., care of Mr. James Veitch, Royal Exotic Nursery, King's Road, Chelsea, S.W.

WANTED, a respectable married MAN, from 30 to 40 years of age, without incumbrance, as JOBBER. Situation permanent. Reference as to proficiency and general character important. Cottage found in the Nursery.—For particulars, wages expected, &c., address Mr. G. FRY, Manor Nursery, Manor Lane, Lee, Kent.

WANTED, as WOODMAN on an Estate in the County of Buckingham, a Man who thoroughly understands the Thinning of Beech Woods, the Measuring and Setting out for Sale not only that but all other kinds of Timber. He must be generally competent to attend to Woodlands. Full particulars, with age, whether married, and if so what number of children; what have been his recent situations, and length of time in them. Wages, &c., must be stated.—Address P. S., 50, Clifton Road, St. John's Wood, London, N.

WANTED, at Midsummer, a BAILIFF and Wife, without incumbrance, to Manage a Home Farm of about 250 acres. He must understand Farming well, and the general duties of a Bailiff, and his Wife the Management of the Dairy and Poultry.—Apply to G. WESTBURY, Esq., Land Agent, 44, Lincoln's Inn Fields, W.C.; and Andover.

WANTED, a DAIRY-MAID, who perfectly understands the Dairy and Baking. An experienced person about 35 would be preferred.—Apply, stating wages, to A. W., Mr. Jupp, Stationer, Hand Cross, Crawley, Sussex.

WANT PLACES.—Letters to be Post Paid.

GARDENER (HEAD).—Age 28, no incumbrance; thoroughly understands his profession. Good character.—J. T. C., Messrs. Downie, Laird, & Laing's Nursery, Stanstead Park, Forest Hill, S.E.

GARDENER (HEAD).—Age 44, married; has had 26 years' practice in the various branches of his profession.—M. A., Frederick Cottage, Shakespeare Road, Stoke Newington, N.

GARDENER (HEAD).—Age 32, unmarried; a Lady wishes to recommend a respectable Man, thoroughly competent, who has lived in her service two years.—E. G., 50, Belsize Park, Hampstead, N.W.

GARDENER (HEAD).—Age 40, married; understands the Greenhouse, Vinery, Orchard House, Flower and Kitchen Garden. Two years' good character.—J. HARRIS, Moorhouse, Westerham, Kent.

GARDENER (HEAD).—Married, no incumbrance; has a thorough practical knowledge of his profession in all its various branches. Can produce satisfactory characters from last and previous employers.—A. B., Post Office, Dorking, Surrey.

GARDENER (HEAD).—Age 35, married; has had 15 years' experience in Fruit and Planthouses, Flower and Kitchen Gardens; also in the Laying Out of Pleasure Ground. Was eight years in last situation.—J. K., Mr. Richard Smith, St. John's Nursery, Worcester.

GARDENER (HEAD).—Middle-aged, married; well versed in every branch of his profession, including a practical knowledge of Botany, the Growth of Pines, Grapes, &c. Unexceptionable character.—A. Z., Mr. Rowley, Baker, Lyham Road, Brixton Hill, London, S.

To Noblemen and Gentlemen.

GARDENER (HEAD).—Age 41, married, without incumbrance; has a thorough knowledge of his profession; also Land and Stock if required. Good reference as to character and abilities from the situation he is about leaving.—A. B., Mr. Musket's, High Street, Clapham, S.

GARDENER (HEAD).—A gentleman not having employment for his Gardener, is desirous to recommend him to any nobleman or gentleman requiring the services of a sober, honest, industrious, and trustworthy servant.—H. G., A. Henderson & Co., Pine Apple Place, Edgeware Road, London, W.

GARDENER (HEAD).—Age 42, married, two children, youngest nine years; has had 18 years' practice as Head Manager. Well understands his profession; has also had considerable experience in Laying-out and Improving Gardens and Pleasure Grounds; the General Management of Woods and Plantations; Erecting and Heating Hothouses, &c. Has been three and a half years in the situation he is now leaving. Good character and references.—J. TAYLOR, Blackmore Park, Upton-on-Severn.

GARDENER (HEAD).—JOHN PEARSON, who has been for upwards of two years Head Gardener to the Right Hon. Lord Foley, at Worksop Manor, Notts, will be at liberty on 1st July next, to dispose of his services in a similar capacity. He is experienced in every department of Gardening, and can Lay Out Grounds; is thoroughly competent to undertake the Management of a first-class establishment. J. P. has been several years in the first gardens in England and Scotland. Can give unexceptionable references.

To Noblemen and Gentlemen.

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GARDENER (HEAD) or GARDENER and BAILIFF.—Age 45, married, no incumbrance. Wife capable of taking charge in the absence of the family of the Mansion or otherwise. Can give references to three first-rate families as to character and abilities for the last 14 years.—G. W. D., Post Office, Bury St. Edmund's, Suffolk.

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REVALENTA ARABICA FOOD,
As proved by thousands of cases which had been considered hopeless. We quote a few.—Cure No. 46,270. Mr James Roberts, of Frimley, Surrey, of 30 years' diseased lungs, spitting of blood, liver derangement, and partial deafness.—Cure No. 47,121. Miss Elizabeth Jacobs, of extreme nervousness, indigestion, sinkings, low spirits, and nervous fancies.—Cure No. 54,816. The Rev. James T. Campbell, Fakenham, Norfolk, "of indigestion and torpidity of the liver, which had resisted all medical treatment."—In tins at 1*s.* 1½*d.*; 1 lb., 2*s.* 9*d.*; 2 lb., 4*s.* 6*d.*; 5 lb., 11*s.*; 12 lb., 22*s.*; 24 lb., 40*s.*
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The Gardeners' Chronicle Newspaper.

SATURDAY, MAY 21, 1864.

Horticultural Agent and Valuer.

MR. A. CHANDLER (of the late Firm of CHANDLER & SONS) continues to undertake all kinds of VALUATIONS connected with Horticulture.
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For samples and prices apply to
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LAWN MOWERS, 10 per cent. cheaper than any house in London. Reduced Price List on application at
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At Reduced Prices, Cheapest and Best

LAWN MOWERS of the Season.—Reduced Price Lists on application to GRIMSDON, LAIRD, & Co., 15, Cannon Street West, London, E.C.

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS, Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.
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Descriptive, Illustrated, and Priced Catalogues, Free per Post.
Special Drawings when required.
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J. S. begs to offer, ready made, a SPAN ROOF, 27 by 16, for 45*l.*; ditto Span, 17 by 12, 25*l.*; LEAN-TO, 25 by 14, 35*l.*; 23.6 by 12, 30*l.*; 15 by 14, 65*l.*; 100 by 14.6, 120*l.* Also several thousand feet, various sizes, all strongly made, glazed with 21-oz. glass, 9*d.* per foot.
Two-inch Lights made to order, 15-oz. glass, 8*d.* per foot.
Estimates for effectually Heating with hot water
N.B. Second-hand, equal to new, a SPAN HOUSE, 17 by 12, complete with shelves (no brickwork required) and hot water pipes, 35*l.*

Heating by Hot Water.

GEORGE COWELL, Crescent, Salford, Manchester (late Partner with J. WEEKS & Co., Chelsea, London), will be happy to forward Plans, Estimates, and Specifications for the Erection of the above (free of cost) on receipt of dimensions and particulars.
Apparatus fixed complete, and warranted to answer throughout England, Ireland, and Scotland, at the lowest remunerative prices consistent with the best class of materials and workmanship. Upright Tubular Boilers, with all recent improvements, capable of efficiently and economically Heating from 100 to 20,000 feet of 4-inch pipe.
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HOT WATER PIPES, from Stock, per yard:—2-inch, 1*s.* 4*d.*; 3-inch, 2*s.*; and 4-inch, 2*s.* 7*d.* BENDS, from Stock, 1*s.* 7*d.*, 2*s.* 6*d.*, and 3*s.* 3*d.* each. THROTTLE VALVES, 10*s.* 6*d.*, 13*s.* 6*d.*, and 15*s.* each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day. A discount to the Trade.

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HEATING by HOT WATER.—Public and Private Buildings, Manufactories, Conservatories, &c., heated on the most improved system, combined with perfect Ventilation. Baths fitted upon economical principles connected with Kitchen Ranges, ready for use night or day without extra fire. Success in all cases guaranteed. Estimates free. References to hundreds of the Nobility's Seats, Botanical Societies, Public Buildings, Banks, Manufactories, &c.

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N.B. Patent WINDMILLS for Pumping and Driving Farm Machinery, from half Horse Power upwards. To be seen daily at work as above. BERRY & POLLARD are now making a powerful Windmill for the India Board, with Pumps for Cotton Irrigation.

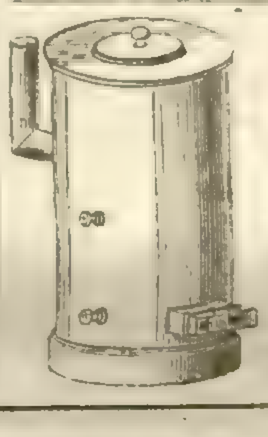

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Requires no brickwork setting; will keep in action from 12 to 18 hours without attention, at an expense of about 3*d.* per day. Is perfectly safe, and is free to additional building, and may be seen in operation daily at the Patentee's Warehouse, 155, Cheapside, London, E.C.
Price complete from 3*l.* 10*s.*
Illustrated Prospectus free, and Estimates prepared for Erecting Hot-Water Apparatus of any magnitude.

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DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the

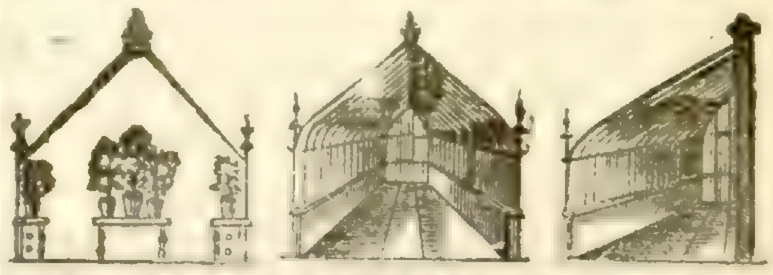

best Wrought Iron, upon an entirely new principle. The combination of Iron and Glass under this patent is perfect: the possibility of fracture is prevented, and a permanently Water-tight Roof insured.
The leading practical advantages are extreme smallness of Framing, admitting a maximum of light and heat, great strength, durability, and perfect ventilation. They are speedily erected, partake of more desirable outline, and do not exceed the cost of a perishable wooden structure.
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PATENT WORCESTERSHIRE RANGE.

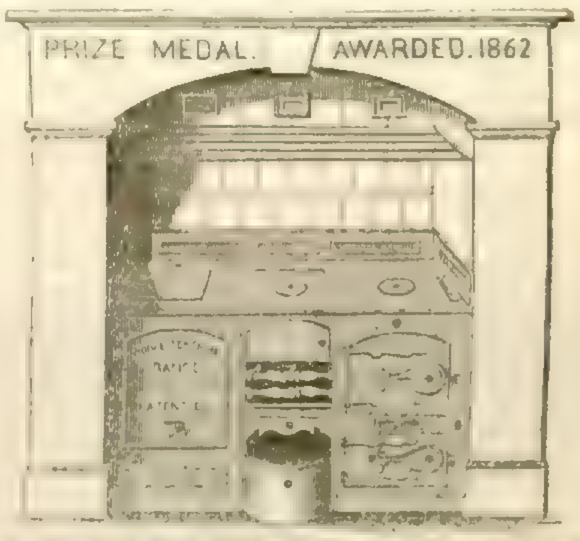

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The above RANGE is most complete, and strongly recommended for its marvellous ECONOMY, CLEANLINESS, CONVENIENCE, DURABILITY, and is a certain CURE for SMOKY CHIMNEYS.
It is an entirely new invention, and consists of large MEAT ROASTER, PASTRY OVEN, and WROUGHT-IRON BOILER. The top forms a HOT PLATE for BOILING, STEWING, &c. The whole Heated by ONE SMALL FIRE. One 5 feet wide is equal to an ordinary Range 8 feet wide.
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JAMES PHILLIPS AND CO. beg to submit their prices as follows:—

REDUCED PRICES OF PROPAGATING GLASSES

	Each.—*s.*	*d.*		Each.—*s.*	*d.*
3 inches in diameter	0	4	12 inches in diameter	1	6
4 " "	0	5	13 " "	1	10
5 " "	0	6	14 " "	2	3
6 " "	0	7	15 " "	2	9
7 " "	0	9	16 " "	3	0
8 " "	0	10½	17 " "	4	0
9 " "	1	1	18 " "	4	6
10 " "	1	2	19 " "	5	6
11 " "	1	4	20 " "	6	0

BEE GLASSES.

	Each.—*s.*	*d.*		Each.—*s.*	*d.*
4 inches in diameter	0	6	9 inches in diameter	1	8
5 " "	0	8	10 " "	2	0
6 " "	0	10	11 " "	2	6
7 " "	1	1	12 " "	3	0
8 " "	1	4			

Not made above 12 inches.

CUCUMBER GLASSES.

	Each.—*s.*	*d.*		Each.—*s.*	*d.*
24 inches long	1	9	16 inches long	1	2
22 " "	1	7	14 " "	1	0
20 " "	1	6	12 " "	0	10
18 " "	1	4	Made to any length.		

HAND GLASSES, WITH OPEN TOPS.

	Each.—*s.*	*d.*		Each.—*s.*	*d.*
12 inches	6	6	18 inches	9	6
14 "	7	6	20 "	10	6
16 "	8	6	22 "	11	6
			24 "	12	6

Painted and Glazed with 16 oz. Sheet Glass.

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LINSEED OIL, Genuine WHITE LEAD, CARSON'S PAINTS, PAINTS of various colours ground ready for use.
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No AGENTS.

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WITH TRUSS'S PATENT PIPE JOINTS.

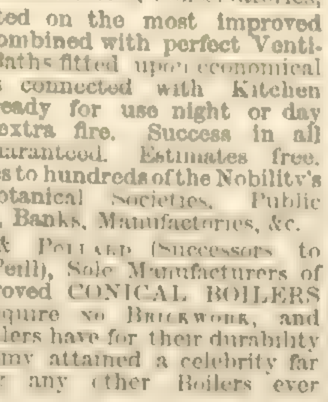

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By means of these Joints the work is executed in less than half the time required for Socket Joints, and alterations can at any time be made, or the entire Apparatus removed and erected elsewhere with the greatest facility. **A considerable saving in cost is also effected.**

These Joints have been used for several years, giving entire satisfaction, and may be seen in use at the **Royal Horticultural Society's Gardens, Chiswick, and many other places in Horticultural and Public Buildings. They are also exhibited at the Society's Gardens, South Kensington.**

For a few prices, see last week's advertisement.

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THE PATENT IN-DOOR PLANT CASES
(TO WHICH A PRIZE WAS AWARDED AT THE ROYAL HORTICULTURAL SOCIETY'S EXHIBITION).

SOLE MANUFACTURER,

JAMES GRAY, HORTICULTURAL WORKS,

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The PATENT IN-DOOR PLANT CASE is one of the most useful of the Gardening novelties of the day. It is a handsome ornament for the Drawing Room or Sitting Room, and at all times forms a fresh, pleasant, and interesting object to the mind and eye. It is always under command, and will preserve many of the most tender Exotic Plants through the severest winter with comparatively little of the trouble and annoyance attending **the use of Lamps, Gas, and Heating appliances of any other kind.**

To all who have a taste for the cultivation of In-door Plants, for raising Seedlings, striking Cuttings, &c., **the Plant Cases will be found an inestimable boon.**

The Cases are highly approved and recommended by Professor Lindley, and by Messrs. Veitch, of the Royal Exotic Nursery, King's Road, Chelsea.

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NEW TARIFF OF GLASS AND HORTICULTURAL GOODS.

THOMAS MILLINGTON,

GLASS AND COLOUR MERCHANT,

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REDUCED TARIFF FOR SHEET GLASS AND HORTICULTURAL GOODS.

THE AGRICULTURAL HALL, ISLINGTON, CONTAINING AN ACRE OF GLASS, WAS SUPPLIED BY ME.

Mr. RIVERS and the leading men in the Horticultural profession, as well as the Nobility, Gentry, and Merchants, have favoured me with Orders for Home use and for Exportation.

SHEET GLASS.

In Cases for Cutting up, averaging from 6 to 9 feet super.

AVERAGE THICKNESS, 15 TO 16 oz.

4ths quality	per 300 feet case	32s. 6d.	or about 1¼d. per foot.
3ds ,,	,,	41 0	,, 1⅜ ,,
2ds ,,	,,	60 0	,, 2 ,,
Best ,,	,,	92 0	,, 3¼ ,,

AVERAGE THICKNESS, 21 oz.

4ths quality	per 200 feet case	33s. 6d.	or about 2d. per foot.
3ds ,,	,,	42 0	,, 2½ ,,
2ds ,,	,,	63 0	,, 3¾ ,,
Best ,,	,,	89 0	,, 5½ ,,

AVERAGE THICKNESS, 26 oz.

4ths quality	per 200 feet case	44s. 6d.	or about 2¾d. per foot.
3ds ,,	,,	56 0	,, 3½ ,,
2ds ,,	,,	84 0	,, 5 ,,
Best ,,	,,	116 0	,, 7 ,,

SHEET SQUARES, Cut to Order.

AVERAGE THICKNESS, 15 to 16 oz.

	Under 1 foot super.	Under 2 feet super.	Under 3 feet super.	Under 4 feet super.	Under 5 feet super.	Under 6 feet super.
4ths quality	1½d.	1¾d.	2 d.	2¼d.	2½d.	2¾d.
3ds ,,	1¼	2	2¼	2½	3	3¼
2ds ,,	2	2½	2¾	3	3½	4
Best ,,	2½	3	3½	4	4½	5
AVERAGE THICKNESS, 21 oz.						
4ths quality	2¼d.	2¾d.	3 d.	3¼d.	3½d.	3¾d.
3ds ,,	2½	3	3¼	3½	4	4¼
2ds ,,	3	3½	3¾	4¼	4½	4¾
Best ,,	4	4½	5	5½	6	7
AVERAGE THICKNESS, 26 oz.						
4ths quality	3d.	3½d.	3¾d.	4 d.	4¼d.	4½d.
3ds ,,	3¾	4	4¼	4½	5	5¼
2ds ,,	4¼	5	5½	5¾	6	6½
Best ,,	5¼	6½	7	7½	8	8½

32 oz., 36 oz., and 42 oz. are also supplied in various quantities.

EXTRA WHITE or CRYSTAL SHEET GLASS, very superior for Pictures and best Glazing.

RUBY, GREEN, BLUE, YELLOW, COLOURED, ENAMELLED, GROUND, and FLUTED GLASS.

Squares usually kept in Stock, packed in 100 ft. and 100 ft. Boxes.

Small Stock Squares.

				Per 100 feet. 4ths.	3rds.	2nds.	Best.
6 by 4	7 by 5	8 by 6	9 by 7	9s. 6d.	10s. 9d.	12s. 6d.	14s. 8d.
6½ by 4½	7½ by 5½	8½ by 6½	9½ by 7½				
10 by 8	12 by 9	12½ by 10½	14½ by 10½	10s. 6d.	12s. 0d.	14s. 8d.	17s. 3d.
10½ by 8½	12½ by 9½	13 by 10	15 by 10				
11 by 9	13 by 9	13½ by 10½	13 by 11				
11½ by 9½	12 by 10	14 by 10	14 by 11				

Large Stock Squares.

				Per 100 feet. 4ths.	3rds.	2nds.	Best.
15½ by 10½	14 by 12	17 by 13	22 by 16	11s. 6d.	13s. 6d.	16s.	18s.
16 by 10	14½ by 12½	18 by 13	24 by 16				
14½ by 11½	15 by 12	23 by 13	20 by 17				
15 by 11	15½ by 12½	18 by 14	22 by 17				
15½ by 11½	16 by 12	22 by 14	24 by 17				
16 by 11	16½ by 12½	24 by 14	20 by 18				
21 by 11	17 by 12	22 by 15	22 by 18				
13 by 12	18 by 12	24 by 15	24 by 18				
13½ by 12½	22 by 12						

ORCHARD HOUSE SIZES,

As recommended by and supplied to Mr. Rivers, and the leading Horticulturists of the day.

AVERAGE THICKNESS, 15 TO 16 oz.

		4ths.	3rds.	2nds.	Best.
16½ Inches by 12½ Inches.					
20 ,, 12 ,,					
20 ,, 13 ,,					
20 ,, 14 ,,	Per 100 feet ..	11s. 6d.	13s. 6d.	16s.	18s.
20 ,, 15 ,,					
20 ,, 16 ,,					
20 ,, 17 ,,					

AVERAGE THICKNESS, 21 oz.

		4ths.	3rds.	2nds.	Best.
20 Inches by 12 Inches.					
20 ,, 13 ,,					
20 ,, 14 ,,	.. .. ..	14s. 6d.	18s. 6d.	24s.	27s. 6
20 ,, 15 ,,					
20 ,, 16 ,,					
20 ,, 17 ,,					

The above prices are only for the sizes stated, but if a quantity of any other size is required, they can be supplied at about 5 per cent. additional, provided time is allowed to manufacture them.

I have also a GREEN TINTED GLASS, which I can strongly recommend. In Summer it gives a cool appearance and in Winter a warm one.

PROPAGATING GLASSES.

3 inches diam.	0s.	4d.	each.
4 ,, ..	0	5	,,
5 ,, ..	0	6	,,
6 ,, ..	0	7	,,
8 ,, ..	0	10½	,,
10 ,, ..	1	2	,,
12 ,, ..	1	6	,,
14 ,, ..	2	3	,,
16 ,, ..	3	0	,,
18 ,, ..	4	6	,,
20 ,, ..	6	0	,,

HAND GLASSES.

12 inches diam.	5s.	6d.	each.
14 ,, ..	6	6	,,
16 ,, ..	7	6	,,
18 ,, ..	8	6	,,
20 ,, ..	9	6	,,
22 ,, ..	10	6	,,
24 ,, ..	11	6	,,

If removable tops, 1s. extra.

Painted and Glazed with Sheet Glass.

PRESERVE JARS.

In. diam.	Without Lids.		With Lids.	
3 ..	0s.	4d.	0	6 each.
4 ..	0	5½	0	8 ,,
5 ..	0	7	0	10 ,,
6 ..	0	9	1	1 ,,
7 ..	0	10½	1	2 ,,
8 ..	1	2	1	6 ,,
9 ..	1	6	2	0 ,,
10 ..	1	10	2	4 ,,

These will be found preferable to any other kind of Jar.

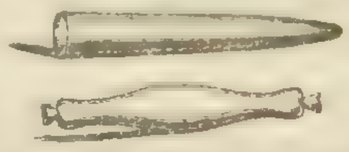

CUCUMBER TUBES.			ROLLING PINS.
Ins. long.		each.	
12 ..	0s.	10d.	1s. 3d. each
13 ..	0	11	1 4 ,,
14 ..	1	0	1 6 ,,
15 ..	1	1	1 8 ,,
16 ..	1	2	1 9 ,,
17 ..	1	3	1 10 ,,
18 ..	1	4	2 0 ,,
19 ..	1	5	2 2 ,,
20 ..	1	6	2 3 ,,
22 ..	1	7	2 4 ,,
24 ..	1	9	2 8 ,,

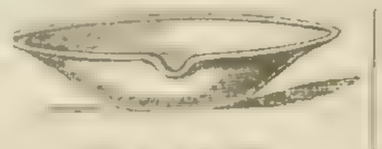

MILK PANS.

6 inches diam.	0s.	5d.	each.
8 ,,	0	8	,,
10 ,,	0	10½	,,
12 ,,	1	1	,,
14 ,,	1	6	,,
16 ,,	2	0	,,
18 ,,	2	5	,,
20 ,,	2	10	,,
22 ,,	3	4	,,
24 ,,	4	0	,,

Intermediate sizes in proportion.

FISH GLOBES.

In. diam.		Qts.
8	¾ filled,	3
9	,,	4
10	,,	6
11	,,	8
12	,,	9
13	At same average according to weight.	7 per
14		
15		
16		

If on feet, 9d. per lb.

GLASS TILES, in SHEET and ROUGH PLATE. PLATE GLASS, PATENT PLATE, and HARTLEY'S IMPROVED ROUGH PLATE.

PAINTS, COLOURS, VARNISHES, &c.

GENUINE WHITE LEAD, 30s. per Cwt.
SECONDS ditto, 28s. per Cwt.
LINSEED OIL PUTTY, 9s. per Cwt.
PINE OAK VARNISH, 10s. to 12s. per Gallon.
,, CARRIAGE ditto, 12s to 14s. per Gallon.
,, CRYSTAL or PAPER, 10s. to 12s. per Gallon.

WHITE ZINC PAINT, 34s. per Cwt.

One hundred weight of pure Zinc Paint, with 3 gallons of Linseed Oil, will cover as much as one hundred weight and a half of White Lead and 6 gallons of Linseed Oil.

Special Dryers for this paint.

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,, OXFORD OCHRE, 3d. to 4½d. per lb.
,, RAW UMBER, 4½d. to 6d. per lb.
,, BURNT Ditto, 6d. to 9d.
GREEN PAINT, all shades, 28s. to 60s. per cwt.
BLACK PAINT, 24s. to 36s. per cwt.

STUCCO PAINT, 24s. per cwt.

This paint adheres firmly to the walls, resists the weather, and is free from the glossy appearance of oil paint, resembling a stone surface, and can be made any required shade. It is mixed with rain or pure river water.

LINSEED OIL, 3s. 9d. per gallon
BOILED OIL, 4s. 3d. per gallon.
TURPENTINE, 7s. per gallon.
MINERAL Ditto, 3s. 6d. per gallon.
PREPARED OIL for ANTICORROSION, 4s. 6d. p[er gallon]
BRUSHES for Ditto.

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NETT CASH.

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I. Prospects of the Confederates.
II. Pompeii: Past and Present.
III. Empire of Mexico.
IV. Sir William Napier.
V. Shakspeare and his Sonnets.
VI. Privy Council Judgment.
VII. Foreign Policy of England.

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H. T. Stainton, F.L.S., F.G.S., Secretary.

Mountsfield, Lewisham, S.E., May 10, 1864.

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News of the Week.

In the House of Lords on Friday, in answer to the Earl of Ellenborough, Earl Russell said that the Conference had agreed that during the suspension of arms no contributions of war should be levied either in Jutland or elsewhere, and that all articles taken should be paid for. On the order for going into committee on the Regius Professorship of Greek (Oxford) Bill, the Earl of Derby said that the University did not object to endow the professorship because it was in the patronage of the Crown, but because they conscientiously objected to the opinions and doctrines of the person who now held it. He therefore suggested that the measure should be postponed to give more time for its consideration. The Lord Chancellor admitted that his proposal was not the best method of endowing the professorship, but it was the only one left open to him for remedying the injustice of the University. Under the circumstances he felt that the Crown was bound to endow the professorship as it was in its patronage. After some discussion the previous question was moved by Lord Redesdale, and carried upon a division by 55 to 25. Their lordships then adjourned until Monday, the 23d inst.

In the Commons on Friday, on the motion that the House at its rising should adjourn until Thursday for the Whitsuntide holidays, Mr. T. Baring called attention to the fact that an armed steamer was now in the port of Liverpool, which having been originally manned and equipped from British ports, had preyed upon the commerce of a friendly nation, and had never been in any port of the belligerent under whose flag she sailed; and asked if the admission of such vessels to British harbours was consistent with our international obligations, our professions of neutrality, and the preservation of British interests. The Attorney-General said, whether successfully or otherwise, her Majesty's Government had endeavoured to the best of their power at once to vindicate the laws of the country, and fulfil our obligations of a sincere and impartial neutrality. The motion for the adjournment to Thursday was then agreed to, and shortly afterwards the House was counted out. On Thursday, on the re-assembling of the House after the Whitsun recess, Mr. Layard stated, in answer to Mr. Whiteside, that one of the conditions of the suspension of hostilities was that forced contributions should be discontinued, and that the Austrian and Prussian troops should pay for whatever they required. He feared, however, that such contributions were still levied, though her Majesty's Government were in possession of no official information on the subject. The Union Assessment Committee Act Amendment Bill, the Railway Companies' Powers Bill and the Railways Construction Facilities Bill, passed through committee. The Summary Procedure (Scotland) Bill and the Admiralty Lands and Works Bill were read a third time and passed. Mr. Dodson obtained leave to bring in a Bill to amend the Registration of County Voters in England and Wales; and Sir G. Grey obtained leave to bring in a Bill to amend the Act for the better management of Highways in England and Wales.

Despatches from Copenhagen state that the Prussians have violated the conditions of the armistice by imposing and exacting contributions in Jutland after the 12th inst. They have also refused to pay for the necessaries of life during the armistice, and have put an embargo on Danish ships in the port of Veile. The Danish papers demand the resumption of the blockade as a reprisal for this breach of the armistice. In connection with these proceedings, we may mention that Count Manderstrom, the Swedish Minister for Foreign Affairs, has announced that his despatches containing secret instructions to General Wachtmeister, the Swedish Minister in London, were opened in their transmission through Germany.

A telegram from Vienna of Wednesday stated that in the sitting of the Conference on Thursday week, Austria and Prussia demanded a complete autonomy of the Duchies, their personal union with Denmark, material guarantees, and especially the maintenance of the point of view held by the Federal Diet on the succession question. This statement has since been contradicted by the official organ of the Saxon Government, which asserts that the Federal representative declared himself altogether averse to any connection between the Duchies and Denmark, and that Denmark rejected even the proposal of a personal union. The Austrian official journal of Monday proposes that the sittings of the Conference should be transferred to Brussels on account of the insults offered to Germany by the English Parliament and the press of London, which city it considers not to be neutral.

A great trial for poisoning, for the purpose of defrauding the insurance companies, has been in progress for some days in Paris. On Tuesday the prisoner, Count de la Pommerais, was found guilty, and condemned to death. He has since appealed to the Court of Cassation, and it is said that the jury have also asked for a commutation of the sentence.

From the United States we learn that the new campaign was opened on the 4th inst. On that day General Meade's army crossed the Rappahannock without opposition. He advanced on the 5th to Chancellorsville and Wilderness, where, after heavy skirmishing, in which both parties suffered severely, General Lee was found in force in the Federal front. It was understood that General Meade would make a general attack on the following morning. Heavy firing was heard on the morning of the 6th; but no details of the battle have yet been received.

By a telegram from Shanghae we learn that in the war between the Chinese Government and the Taepings the Imperialist troops have sustained a severe repulse at Kintang. Major Gordon was wounded in the engagement, and several of his officers were killed or taken prisoners.

Home News.

Departure of the Queen for Scotland.—The Queen and Royal family left Osborne on Monday for Windsor Castle, where they remained until Friday, when her Majesty took her departure for Balmoral, accompanied by Princesses Helena, Louisa, Beatrice, and Prince Leopold. The Royal party travelled from the Windsor Station on the Great Western Railway by a special train of 15 carriages, four of which were state saloons provided by the London and North-Western Railway Company. Her Majesty and Princess Helena occupied the Royal saloon. The Royal party arrived at the Perth station exactly at the appointed hour, 20 minutes before 9. The Royal party were received on the platform by the Lord Provost and magistrates of Perth, the Earl of Mansfield, the Earl of Wemyss, and other gentlemen. Breakfast was prepared in the boardroom of the Scottish Central directors, after partaking of which the Royal party resumed their journey about 17 minutes before 10. At Aboyne the train arrived at 1.32 p.m., the whole journey of nearly 600 miles by rail being performed in about 18 hours. On leaving Aboyne station, the Queen and party posted by road to Balmoral, where they arrived at 20 minutes past 3 on Saturday afternoon. At Aberdeen and Aboyne the public were admitted to the stations. Her Majesty graciously acknowledged the salutations of the spectators. The weather was very fine. On Sunday Lord Stanley of Alderley had the honour of dining with her Majesty and the Royal family. On Monday morning the Queen drove with the Princess Louisa. In the afternoon her Majesty went to the Forest with the Prince and Princess Leiningen. The Princess Helena went out riding. On Tuesday morning the Queen drove with the Princess Helena. Her Majesty, accompanied by the Princess Louisa, afterwards drove round by the Lynn of Muich and Birkhall.

The Court at Windsor.—On Thursday week the Princess Louisa went to London, and visited the Prince and Princess of Wales at Marlborough House, where the Princess Helena met her. Their Royal Highnesses went thence to Grosvenor Square, and honoured Earl and Countess Fitzwilliam with their company at a concert given in aid of the subscription for the relief of the sufferers by the inundation at Sheffield, returning to Windsor Castle at a quarter before six o'clock. In the afternoon the Queen, accompanied by Princess Leiningen, drove out in an open carriage and four. Sir Augustus and Lady Paget arrived at the Castle, and had the honour of dining with her Majesty. On Friday morning Prince Leiningen arrived at the Castle. The Earl of Clarendon had an audience of Her Majesty. The Princess of Wales arrived at the Castle at half-past 1, and took luncheon with her Majesty. The Prince of Wales arrived at half-past 5. At 7 o'clock the Queen, accompanied by their Royal Highnesses Princess Helena, Princess Louisa, Prince Leopold, and Princess Beatrice, the Prince and Princess of Leiningen, and the infant Princess Alberta, left Windsor for Balmoral. Lord Stanley of Alderley attended her Majesty as Secretary of State. The Prince and Princess of Wales accompanied the Queen to the station on her Majesty's departure, after which they returned to London.

The Prince and Princess of Wales.—On Friday morning the Princess went to Windsor to visit the Queen. The Prince rode on horseback. In the afternoon his Royal Highness presided at a lecture given at the United Service Institution, and afterwards went to Windsor to visit the Queen. The Prince and Princess returned to Marlborough House in the evening. On Saturday morning Prince Adolphus of Mecklenburg-Strelitz visited the Prince and Princess. In the afternoon the Princess held a Drawing-room at St. James's Palace on behalf of her Majesty. The Prince

of Wales rode out afterwards. The Princess of Wales took a drive. The Prince visited the Grand Duke of Mecklenburg-Strelitz at St. James's Palace. In the evening the Prince and Princess of Wales and Prince Arthur honoured the Royal Italian Opera at Covent Garden with their presence. On Sunday morning the Prince and Princess attended Divine service at the Chapel Royal, St. James's. In the afternoon the Prince and Princess drove to Kew. On Monday morning their Royal Highnesses went to see Mr. Holman Hunt's picture in Hanover Street. The Prince rode on horseback. The Princess took a carriage drive. In the evening the Prince and Princess went to the concert given by the Philharmonic Society at the Hanover Square Rooms. On Tuesday morning the Prince rode on horseback. In the afternoon the Prince and Princess took a carriage drive. On Wednesday morning the Prince rode on horseback. The Princess took a carriage drive. In the evening the Prince went to St. James's Hall and presided at the dinner of the Royal Literary Fund. The Princess honoured Her Majesty's Theatre with her presence. On Thursday morning the Prince rode on horseback. The Prince and Princess afterwards went to the bazaar in St. James's Hall, in aid of the French Protestant Free Schools. In the afternoon their Royal Highnesses took a carriage drive. In the evening the Prince and Princess had a dinner party.

THE PRINCE AND PRINCESS LOUIS OF HESSE are shortly expected to visit the Queen at Balmoral. The Fairy is ordered to be in readiness at Dordrecht to convey their Royal Highnesses to Flushing, where the Victoria and Albert, Royal steam yacht, is to be in waiting to convey them to England.

THE EX-ROYAL FAMILY OF FRANCE. — The whole of the Orleans family have assembled at Claremont, for the approaching marriage of the Count de Paris to his cousin the Infanta Marie Isabella, eldest daughter of the Duke and Duchess de Montpensier. The ex-Queen Marie Amelie returned to Claremont on Saturday, from a short residence at St. Leonard's, in order to meet the Duke and Duchess de Montpensier and family, who arrived at Claremont on Monday evening, from Spain. The Duke de Nemours and the Prince and Princess de Joinville have returned to Claremont from a visit to Belgium on family affairs. The betrothal of the Count de Paris and the Infanta took place at the Palace of St. Telmo, in the early part of last month, and the marriage is fixed to take place at the Roman Catholic Chapel at Kingston, on the 31st inst., the anniversary of the marriage of the late Duke of Orleans with the Princess Helena of Mecklenburg-Schwerin. The Duke and Duchess d'Aumale, the Duke Augustus and the Duchess Clementina, and the Duke and Duchess de Chartres, will be present at the marriage. The marriage of the Princess Adelaide and the Archduke Joseph, brother-in-law of the Duchess of Brabant, has just been celebrated at Coburg, and was attended by many members of the Orleans family. The Princess is the eldest of the two daughters, and the third of the five children of Prince Augustus of Saxe-Coburg Gotha, and the Princess Mary Clementine, daughter of the late King Louis Philippe.

THE CONFERENCE.—It is asserted that at the sitting of the Conference on Thursday week, Prussia and Austria declared that, in consequence of the events of the war, they considered themselves released from the engagements of the Treaties of 1851 and 1852. Russia and England maintain the principle of those treaties. On Tuesday the Plenipotentiaries met again at the official residence of the First Lord of the Treasury, and sat three hours, when it adjourned to Saturday, the 28th inst. All the members of the Conference were present.

THE CABINET.—A Cabinet Council was held on Saturday at Cambridge House. Summonses have been issued for another Council to be held to-day at Lord Palmerston's official residence in Downing Street.

THE CHANNEL SQUADRON. — Five of the ships belonging to the Channel squadron arrived in Plymouth Sound from the Downs on Friday afternoon. The Edgar, 71, bearing the flag of Rear-Admiral Dacres, took her station westward of the centre of the Admiralty anchorage, and there exchanged salutes with the Royal Adelaide, 26, flag of Port Admiral Sir C. H. Fremantle, K.C.B., the second in command; the Black Prince, 41, passed the flag, and anchored well to the eastward. She was followed by the Warrior, 40; Defence, 16; and the Prince Consort, 35. The ammunition and shell were discharged immediately from the iron ships Warrior and Defence, and they were to be docked on Saturday—the Warrior at Keyham, and the Defence at Devonport. The Black Prince will be placed in the dock at Devonport in which she was repaired last October, and the Prince Consort will be placed in dock at Keyham. The officers of the squadron do not expect to stay longer than eight or ten days at Plymouth. The screw steam frigate Galatea, 26, left Plymouth on Friday for Portland.

Foreign.

FRANCE.—In the sitting of the Corps Legislatif on Thursday, M. Rouher, replying to a previous speech of M. Favre, spoke at great length on the Danish question. He said:—

"He saw with grief the invasion of the Duchies. He could not discuss certain questions, because the Conference had met. He confined himself, therefore, to refuting the observations of M. Favre upon the conduct of France until the meeting of the Conference, and pointed out that the Treaty of 1852 did not oblige France to make war to defend the resolution of the Conference and the integrity of the Danish Monarchy. To uphold the treaty, England would have easy victories at sea, but France would be obliged to march upon the Rhine and traverse Germany to reach Denmark. If France could embark her treasure in such an enterprise, it is not to Denmark that we should have gone: we should rather have moved armies for other misfortunes and other sorrows. But the policy of the Government is not a policy of sentiment. When such questions present themselves, a Government devoted to the country does not engage in war before having everywhere exhausted all the combinations which might secure and maintain peace. We have respected the Treaty of 1852. We have accepted every means for re-establishing peace. We hope that the Conference will give peace. With regard to Poland, the question is a European one. We have suffered deeply by the events in Poland and Galicia, but we did not wish to disturb the peace of Europe. We understood that collective steps on the part of the Powers being no longer capable of realisation, France should no longer make vain protests at St. Petersburg, but should leave to God and to time the care of judging on which side lay the great iniquity and on which side legitimate grievances. With regard to the Congress, the Powers who had refused the Congress had inflicted upon themselves the greatest injury. France was not less glorious and powerful after the refusal of the Congress."

In the sitting on Saturday a discussion took place on the propriety and the legality of the publication of the *Evening Moniteur*. The publication was warmly condemned by M. Gueroult, and defended by M. Forçade la Roquette. A debate then took place on the law of public safety. M. Pelletan, the author of "La Nouvelle Babylone," attacked the law with so much power as to draw down the censures of the President of the Council of State, and when M. Pelletan persisted in his strictures on the Government he was interrupted by tremendous uproar, and a scene of great excitement ensued. The Corps Legislatif has since passed the navy estimates unanimously, although they reach the high figure of 126 millions, owing to the general desire to have France raised to the rank of a first-rate naval power. On Wednesday the Session was prolonged until May 25. A *cause celèbre*, which has created quite as much sensation as the great Lafarge case, commenced last week before the Court of Assizes of the Seine. The prisoner was a gentleman bearing one of the most honoured names in the French *noblesse*—Count de la Pommerais, who has for some time practised as a physician. He was arraigned on a double charge—First, for the murder by poison of Mdme. Pauw, a lady whom he attended professionally in appearance, but with whom he is alleged to have kept up a *liaison*; secondly, for the murder of his mother-in-law, Mdme. Dubizy. The cause assigned for the first murder was that he had insured Mdme. Pauw's life for a sum of 20,000*l.*; the motive of the poisoning of the mother-in-law was to appropriate her fortune. The facts, as stated in the indictment, as usual in a French *acte d'accusation*, partook of the character of a sensation novel. Madame Pauw was six years ago left a widow with three small children in a state of destitution. Count de la Pommerais had known and attended her husband. He called after his death, and was kind to the widow, and in a short time she became his mistress. This intrigue continued for two years. At the expiration of that time La Pommerais married a Mdlle. Dubizy, and broke off his intercourse with Madame Pauw. In June last he called upon her, and made a proposal for making her fortune and that of her children, by organising a fraud on six French and two English insurance companies. He proposed to insure her life, and then told her that he would give her some drug to cause temporary illness, and thus induce the companies to annul the life policies, and grant in exchange an annuity of 6000 francs a year, which she would share with him. Madame Pauw eagerly accepted the proposal. An insurance on her life was effected for the sum of 550,000 francs, payable at her death. The policies were transferable by endorsement. Madame Pauw was unable to pay the premium. Count de la Pommerais did so, taking care to have the policies transferred to himself, and having used his influence with the widow to make her sign deeds and make a will in his favour, so as to protect him from any action on the part of the next of kin, he induced her to feign illness, under pretence of facilitating the obtaining of an annuity, and in November last he administered to her digitalis to "deceive the physicians of the insurance companies." She suffered severely; Count de la Pommerais attended her; Dr. Gaudinot was also called in, but he received with implicit confidence the story told him by Madame Pauw, that she had fallen down stairs, and when he found that his prescriptions were not attended to he withdrew. Left to the Count de la Pommerais, Madame Pauw, who seems to the last to have believed she was only practising a trick to defraud the insurance companies, died. An inquiry was set on foot, and Count de la Pommerais was arrested. The *acte d'accusation* proceeded to state that he was well aware that the poison he administered (digitalis, or foxglove), leaves no trace behind it, and to detect the poison in the body most curious experiments were resorted to. The expectorations of the deceased and the residue of the contents of the digestive tube, were administered to animals, and they died with the same symptoms as she had manifested. It was then ascertained that Count de la Pommerais had purchased digitalis, and some of that poison was found in his possession when he was arrested. The case as regards the death of the mother-in-law, Mdme. Dubizy, was not so circumstantial. It seemed, however, that she died under circumstances very similar to those of Mdme. Pauw's decease; that her son-in-law had a great interest that she should die, in order to gain possession of her small fortune. However, more than two years having elapsed since her death, the analysis of her remains led to no conclusive results. The Procureur-General therefore abandoned the charge as regarded the poisoning of the mother-in-law, but so far as that of Madame de Pauw was concerned, he laid down that there was no doubt of her having been destroyed by the prisoner, and called on the jury not to be deterred by considerations of his social status from doing their duty to society. The trial concluded on Tuesday, when the jury found the prisoner guilty of poisoning Madame de Pauw. No mention of extenuating circumstances having been made, he was condemned to death. Count de la Pommerais has since appealed to the Court of Cassation against the sentence of death, and the jury have also asked for a commutation of the sentence. The *Moniteur* of Thursday says:—

"The journals, in circulating a rumour of an intended modification of the Ministry, comment upon a letter alleged to have been written by M. Rouher to the Emperor, pointing out the necessity of a reorganisation of the Government. Such a letter does not exist, and there is no question of any change in the Ministry."

M. Von Beust was expected to arrive in Paris yesterday. The Princess Clotilde has entered the seventh month of her pregnancy. Advices from Oran announce the defection of the greater part of Flittas, in the subdivision of Mostaganem. On the 14th inst. Colonel Lipasset, on his return from Tiaret, was attacked by a body of 2500 men. After a long combat the enemy was repulsed with heavy loss. The French had one killed and four wounded. The body of the officer of the Japanese Embassy who died at Marseilles was embalmed, and afterwards buried in the cemetery of St. Pierre, several of the members of the Embassy having gone from Paris to be present at the ceremony. After the coffin was placed in the grave and covered with earth, a small brazier half filled with burning charcoal was placed on the ground, and each of the mourners, after kneeling and saying a short prayer, threw a small quantity of incense on the fire. This was all the ceremony. The Ambassadors have sent 300f. to the Prince Imperial Asylum. A story is going the round of the papers that some days since, when making purchases at a jeweller's in the Rue de la Paix, the shopkeeper was so struck by a parasol carried by one of the Japanese that he proposed to accept it in payment for a certain quantity of coral ornaments selected for purchase by his visitors; the proposal was readily accepted, and it is said that half the parasols of the Embassy have since passed into the hands of the speculative jeweller.

SPAIN.—It is asserted that the Queen will this summer make a journey into the Basque Provinces. The Congress discussed the questions of Italy and Peru in its sitting on Thursday. The *Epoca* of Saturday says:—

"The Government is not indifferent to the complications which may arise from the Roman question. It is preparing the ground for common diplomatic action with Catholic Europe in the eventualities of the future."

A difference of opinion on the principal political questions exist between Senor Olozaga, Marshal Espartero, and General Prim. The different companies who had separately applied for concessions to enable them to establish credit institutions, based upon landed property, have effected a fusion. The *Epoca* of Wednesday states that Spain will appoint a representative to Mexico so soon as the Emperor Maximilian shall have notified to the Spanish Government his accession to the throne.

SWITZERLAND. — The Federal Diet will formally request from the Austrian Government the extradition of Langiewicz, now a prisoner at Josephstadt, as a Swiss citizen. The Japanese Embassy will arrive at Berne in August next.

SWEDEN.—Count Manderström, Minister for Foreign Affairs, has stated that on the 18th of April he sent secret instructions from Stockholm to General Wachtmeister, the Swedish Minister in London, and that those despatches were opened in Germany.

DENMARK.—The North Sea squadron arrived at Copenhagen on Sunday at noon, in an undamaged state, and was greatly cheered by the assembled spectators. The King went on board the ships, and was received with great enthusiasm by the sailors. The Danish loss in the engagement is officially announced to be 14 killed, and 54 wounded. A communication from the Austrian Rear-Admiral Tegetthoff denies the statement published in several journals that Her Majesty's ship Aurora manœuvred to separate the Austrian frigate Schwarzenberg from the allied squadron. The Aurora was at anchor off Heligoland until the close of the engagement.

THE DANISH DUCHIES.—The Prussian Commander at Veile has prohibited the departure of any ships from that port. The *Dagbladet* of Saturday says that notwithstanding the armistice, the Prussians continued pillaging on the 12th and 13th inst. in Aarhuus, and on the 12th inst. in Randers. On the 14th they continued their confiscation of goods and horses. Large quantities of the wire from the Government telegraph lines were also carried away. On the 13th the Prussian General Bomstedt, at Wiborg, imposed a contribution in kind. On the refusal of the

local authorities to give the articles demanded without payment, he threatened to take them by armed force, and to throw the Committee of Provisions into prison. The Prussians have refused to pay for the necessaries of life during the armistice. The *Dagblad* demands the resumption of the blockade as a reprisal for the breach of the armistice. The whole of the magistracy of Flensburg have been removed. Herr Bremer, an advocate, who had been expelled from the country by the Danes, has been appointed burgomaster. The Duke of Augustenburg entered Altona on Sunday evening, and met with a most enthusiastic reception. It is stated that, in order to prevent his reception at places in Holstein having an official character, the Federal commissioners have instructed the authorities not to receive him. The Crown Princess of Prussia arrived at Hamburg on Friday morning. The Crown Prince arrived during the day. Their Royal Highnesses arrived at Lubeck on Sunday evening. On Monday they visited the most remarkable places in the town, and were expected to leave on Tuesday. The Federal Commissioners in Holstein also arrived at Lubeck on Sunday.

FRANKFORT.—The *Ober Postamts Zeitung* of Wednesday publishes a telegram from Vienna, stating that in the sitting of the Conference on the previous day, Austria and Prussia demanded a complete autonomy of the Duchies, their personal union with Denmark, material guarantees, and especially the maintenance of the point of view held by the Federal Diet on the succession question. It adds that this latter point induced Baron von Beust to give in his adhesion to the proposal of the German Plenipotentiaries, and that Russia was not averse to this proposition. The official *Dresden Journal* of Thursday, however, denies the truth of the Vienna telegram, and says:—

"According to authentic intelligence, the Federal representative declared himself altogether averse to any connection between the Duchies and Denmark. The latter, however, has rejected even the proposal of a personal union."

PRUSSIA.—The Crown Prince of Prussia has been appointed to the command of the Second Army Corps. Marshal von Wrangel has been raised to the rank of a Count. It is asserted, upon good authority, that Prince Frederick Charles of Prussia has been appointed Commander-in-Chief in the Duchies. A committee, under the presidency of Herr von der Heydt, met at Berlin on Wednesday for the purpose of establishing a company to construct a Schleswig-Holstein canal to connect the North Sea with the Baltic. An offer of the Government to defray the expenses of the preparatory works from the Exchequer was accepted. Privy Councillor Lentze has been intrusted with the execution of the undertaking. In a note addressed by Count von Bismark on the 14th inst. to Count Bernstorff, the Prussian Minister in London, the Prime Minister declares the Prussian Government to be completely free from all obligations that might be deduced from the Treaty of 1852, and to be justified in discussing any other combination that may be entirely independent of that treaty. He says:—

"It is a natural consequence of political relations that the solution of the question is of European importance, and that endeavours should be made to effect this conjointly with the other great Powers. This position was the only one recognised by the Government in the concluding sentence of its declaration of the 31st of January. The sole task of the Conference is conjointly to search for and deliberate upon the means whereby a solution of the question may be arrived at."

AUSTRIA.—The *Oesterreichische Zeitung* of Wednesday proposes that the sittings of the Conference should be transferred to Brussels, on account of the insults offered to Germany by the English Parliament and the press of London, which city it considers not to be neutral. The *Nord* denies the statement that the Emperors of Austria and Russia are about to meet. The Anglo-Austrian Bank has since agreed to take the remainder of the Austrian loan of 46½ millions for disposal on commission, and will make partial advances in the meantime to the Minister of Finance. Austria continues to concentrate troops in Transylvania. A detachment 30,000 strong has been assembled on the Moldavian frontier.

HUNGARY.—The Pesth *Hirnok* professes to have learned from reliable sources that the recent hard frosts have destroyed nine-tenths of the rape and four-tenths of the wheat sown in Hungary. The loss sustained is estimated at 40,000,000fl., but the accuracy of the estimate is questionable.

ITALY.—Letters from Rome to the 16th inst. state that the illness of the Pope has increased in an alarming degree. A secret Pontifical bull is said to have been issued, ordering a conclave composed only of the Cardinals present in Rome, for the election of a successor to Pius IX. before the death of the latter is known to the public. In the sitting of the Italian Chamber of Deputies on Friday Signor Alfieri and the Abbé Passaglia urged the Government to depart from their reserve and take resolute steps. Signor Laporta and Miceli demanded that the Chamber should declare the necessity for occupying Rome. Signor Musolino proposed to call upon the Romans to deliberate on their own destiny. Signor Chiaves desired the introduction of a law establishing electoral districts in the Pontifical territory, and deputing the Italian authorities on the frontier to carry out the electoral operations. He proclaimed the right of the Romans to elect deputies, and said that France could not oppose this action, since it was not contrary to the principle proclaimed by her of the defence of the Head of the Church. The Minister declared that the Government could not accept the various proposals, and the debate was adjourned. In the sitting of Saturday the President of the Council opposed the proposition of Signor Chiaves, which he stated did not bear a practical aspect. He also condemned the proposals of other members, and said that the Government could treat with France on the bases of the consent of the populations and the principle of non-intervention. The President enumerated the difficulties surrounding the Roman question, which required a gradual solution, and declared his readiness to accept passing to the order of the day pure and simple, as an expression of the Chamber's approbation of the Government policy. The House then passed to the order of the day by a large majority. The *Opinione* of Wednesday denies the rumours that the negotiations for the sale of the Government railways have been broken off. On the contrary, the negotiations are almost terminated, and a convention will shortly be laid before the Italian Parliament, together with other railway Bills. At a meeting of the working-men of Turin held on Sunday, thanks were voted to the working-men of England for the reception they had given to Garibaldi. The *Journal de Bruxelles* of Thursday, refuting some statements of Russian papers, says:—

"Russia declared to Prussia and Austria prior to the capture of Düppel that she would not oppose the annexation of the Duchies to Germany, provided that Austria and Prussia would promise to prevent the realisation of the establishment of a Scandinavian union."

POLAND.—The *Ojezajzna* of Friday announces that ten Poles have recently been hanged and five shot in the government of Augustowo by order of General Bolaklanof. The Landed Property Credit Association held a sitting on Friday, in which it was resolved to send a deputation of three of the most prominent members of the association to St. Petersburgh with an address expressing their loyalty and devotion to the Czar.

THE PRINCIPALITIES.—Prince Couza has returned to Bucharest. Popular manifestations took place in his honour on Monday evening. The first sitting of the Conference on the question of the Principalities was held on Monday week. The Plenipotentiaries of the five great Powers and Italy were present. On the 14th the Conference decided on the nomination of a special commission to examine the titles to property of the secularised convents. It is stated that the Conference has been adjourned to await the arrival of Prince Couza, who has been invited, on the proposal of France, to take part in the Conference. A palace is preparing for his reception. The Chambers have been dissolved in consequence of their having refused to discuss the electoral law, which was the sole object of the recent Session. The Electoral Law and an additional article to the Constitution have since been proclaimed by Prince Couza. The nation has been invited to vote a simple affirmative or negative on these questions. Tranquillity prevails, and public opinion is favourable to the Prince. No opposition is manifested against the steps recently taken by Prince Couza, and no popular assemblage has taken place relative thereto. The Prince walked out on the 15th alone, and was enthusiastically greeted by the people.

TURKEY.—Advices from Constantinople announce that the negotiations between England, the Porte, and the Viceroy of Egypt respecting the transport of troops to India have been satisfactorily concluded. It is asserted that Turkey will request explanations at St. Petersburg relative to the concentration of Russian troops in Bessarabia.

TUNIS.—Advices from Tunis to the 11th inst. assert that the Bey declined to allow the French Admiral to land troops at that place. The French squadron in the Mediterranean has received orders to hold itself in readiness to go to Tunis, its presence being necessary to solve these difficulties.

ABYSSINIA.—Advices from Abyssinia state that complete anarchy reigned there. The Emperor Theodore is hemmed in by his revolted subjects. All the troops are concentrated at Gondar.

PERSIA.—Advices from the East state that difficulties have arisen between Persia and England with regard to the island of Barhein, in the Persian Gulf.

INDIA.—Mr. Ashley Eden, British Envoy to Bhootan, has been insulted by the chiefs of that State in public Durbar. He was subsequently imprisoned, and compelled to sign a treaty ceding British Assam to Bhootan. The Candia, which left Aden for Calcutta on the 27th April, met with a fearful cyclone on the 29th, and put back to Aden on the 3d inst., having lost all her sails, mizenmast, maintopmast, five boats, and deck gear. She was to leave again on the 8th for Calcutta.

CHINA.—A telegram from Shanghai of April 9, says that the Imperialists have been repulsed at Kintang. Major Gordon was wounded, and several of his officers were killed or taken prisoners. The Imperialists are recovering from this reverse, and are again moving to attack Kintang. They are receiving large reinforcements. The rebels are believed to be hemmed in.

UNITED STATES.—The Army of the Potomac crossed the Rapidan at Ely's and Germania Fords without opposition at midnight on the 3d and the morning of the 4th. On the morning of the 5th an engagement took place at Wilderness between General Grant's cavalry and the divisions of Generals Ewell and A. P. Hill, in which both sides lost heavily in killed and wounded. The Confederates lost 300 prisoners, but captured two cannon. About the same time Generals Hancock and Getty were attacked by General Longstreet near Chancellorsville, and fought for two and a-half hours, also suffering severe loss. No decisive advantage appears to have been gained by either side, and at nightfall General Grant's troops rested in line of battle between Germania Ford and Chancellorsville with their centre at Wilderness. A general attack was ordered for the 6th, and at 5 o'clock heavy firing announced that the battle had commenced. General Lee had retired to Mine Run, which General Meade found impregnable last December. A report was current for a whole day that General Burnside, who with a force of 40,000 men formed the Federal reserve, had been defeated by General Longstreet at Thoroughfare Gap, with the loss of from 2000 to 4000 men, but the rumour was contradicted before the departure of the mail, and the encounter with Longstreet is now said to have been unimportant. General Burnside has since joined General Meade. General Baldy Smith has marched on the line of James River to Fort Darling, while a third column, under Generals Couch and Sigel, is advancing through the Shenandoah Valley. General Sherman's forces are in motion in Tennessee, and are said to be advancing on Rome, Georgia. Official information has been received at Washington of the arrival at City Point, on James River, of the forces of Generals Butler and Smith. General Beauregard, with 30,000 men, is reported at Petersburg, 10 miles distant. General Butler is severely censured for the evacuation of Washington, North Carolina, which it is declared was threatened by only seven companies of Confederates, and by which the Federals lost all their heavy ordnance and several million dollars' worth of stores, which were burnt to prevent capture. The town itself is totally destroyed. Cairo telegrams to the 3d state that the Confederates attacked General Banks during his retreat to Alexandria, and were repulsed with the loss of 1000 men and nine cannon. The same despatches report that the Confederate General Marmaduke had attacked General Steele near Camden, Arkansas, and captured 1000 prisoners, 7 cannon, and 240 waggons. Despatches of the 6th state that General Steele had returned to Little Rock. Vicksburg advices of the 25th ult. state that the banks of the Red River swarmed with Confederate sharpshooters, accompanied by artillery, who attacked every passing vessel. During Admiral Porter's retreat to Alexandria he was obliged to destroy 13 of his gunboats and transports to prevent capture. Forrest has been defeated at Bolivar, Tennessee, by Sturges, who pursued him into Mississippi. The Confederates have also appeared in force on both banks of the Mississippi at Vicksburg, and threatened to attack that city. Provost-Marshal General Fry has ordered draughting to commence in New York on the 9th. The *Herald* urges that if the order be enforced, there will be riots much more formidable than those of last year. The court-martial on Admiral Wilkes has found him guilty of all the charges against him, and he has been sentenced to be publicly reprimanded, and suspended from service for three years. The House of Representatives has appointed a committee to investigate the charges of fraud and immorality in the Treasury Department. Congress has passed a resolution equalising the pay of coloured and white troops.

SAN DOMINGO.—The steamer Puerto Rico has left Cuba with 1000 men for San Domingo. An insurrection has broken out at Hayti, but has been suppressed by President Geffrard.

BRAZILS.—In consequence of the plunder of some subjects of Brazil, and of the cruelties committed on them, the Brazilian Government has ordered a naval demonstration to be made against Montevideo.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*The Regius Professorship of Greek (Oxford) Bill.*—On the order of the day for going into Committee on this Bill, Lord LYTTELTON presented two petitions against the Bill, observing, however, that he could not express agreement in their prayer.—Lord CHELMSF. objected to the Bill, and suggested that the professorship should be transferred to the university, which would then be willing to endow the chair from its own funds.—Lord TAUNTON said he felt that Professor Jowett had been treated very unjustly by the university; at the same time, he had great objection to the Bill on the ground that it would exclude laymen from the chair. In fact, to remedy a temporary evil it was proposed to inflict a permanent one.—The Earl of DERBY said he had on a previous occasion stated his reasons for objecting to the Bill, but at the same time he did not feel authorised to move its rejection. The university did not object to endow the professorship because it was in the patronage of the Crown, but because it conscientiously objected to the doctrines of the person who now held it. He suggested that the further consideration of the measure should be postponed.—The LORD CHANCELLOR admitted that this was not the best way to endow the professorship, but it was the only one left open to him to remedy the injustice of the university. Under all the circumstances, he felt that the Crown was bound to endow the professorship, as it was in its own patronage.—The Earl of CARNARVON moved that the Committee be postponed for three weeks.—Earl GREY greatly regretted that the Lord Chancellor had not acceded to the proposal of Lord Derby to withdraw the Bill for the present year.—The Bishop of ST DAVID'S was of opinion that the Bill, if carried, would have the effect of applying a permanent remedy of a most unsatisfactory kind to an evil merely temporary.—The Archbishop of CANTERBURY desired to see the Bill postponed to next Session.—Lord REDESDALE moved the previous question, in order to afford the House a better opportunity of deciding whether they wished to proceed at once with the Bill or postpone it indefinitely.—On a division this motion was carried by 55 to 25. The Bill is therefore postponed for the present.

HOUSE OF COMMONS.

FRIDAY.—Mr. LOWE made a personal explanation with reference to a document which had been introduced, without notice, into the debate of the preceding day on the subject of the reports of *Inspectors of Schools*, and upon which document (of which he had then, he said, no knowledge) a statement had been founded implying that he had unintentionally stated that which was not true in fact. He gave an explanation of the document and repelled the charge.—Lord R. CECIL thought that, as the matter had been referred to a select committee, the more regular course would be to summon Mr. Morrell, and hear what explanation he had to give on the subject. *The Georgia.*—On the motion that the House at its rising should adjourn for the Whitsuntide holidays until Thursday next, Mr. T. BARING called attention to the fact that an armed steamer was now in the port of Liverpool, which, having been originally manned and equipped from British ports, had preyed upon the commerce of a friendly nation, and has never been in any port of the belligerent under whose flag she sails. He entered at considerable length into questions of international law, and asked the Attorney-General whether he thought the admission of such vessels to British harbours consistent with our international obligations, our professions of neutrality. and the preservation of British interests.—The ATTORNEY-GENERAL said that her Majesty's Government had endeavoured to the best of their power to vindicate the law and to fulfil the obligations of a sincere and impartial neutrality. The measures which they had already taken had tended materially to diminish the equipping of armaments in our ports, and he hoped that the legal proceedings still pending would have the effect of clearing up and declaring the law to be sufficient for the purpose. If, on the other hand, it should be ascertained that it was not strong enough to cope with the evil, he hoped that Parliament would reconsider the subject. At present, however, the Government were not prepared to recommend any amendment of the law, as they were not satisfied that it was inefficient. With regard to the ship Georgia, she was a commissioned vessel of war, and there was no evidence to show that she was the property of a British subject. She came into the port of Liverpool lawfully for repairs; but it was subsequently stated that she would probably be dismantled and offered for sale. If it should turn out that she was not to be deprived of her character of a man of war, she would be ordered away as soon as possible.—Mr. W. E. FORSTER asked whether Federal vessels would be allowed to pay off their crews in British ports as the Confederates had done, and whether similar facilities would not be afforded to them in this respect, as otherwise we might find the effect of our policy injurious to ourselves in the event of our becoming belligerents.—Mr. COBDEN expressed his apprehension lest the personal suffering and wrong which were inflicted by the depredations committed upon Federal commerce by Confederate cruisers armed and equipped in British ports would not permanently alienate the good feeling of the North from this country.—Lord R. CECIL did not believe that any breach of international law had been committed in the case of the Georgia, but, if any had been committed at all, he was disposed to think it had been committed on the part of the North, seeing that the great house of Baring & Co., represented by the hon. member who had introduced the subject that night, was constantly engaged in the shipment of large quantities of ammunition to the Federal States.—After some observations from Mr. LEFEVRE, Lord R. MONTAGU, and Alderman ROSE, the motion for the adjournment was agreed to.—On the motion for going into committee of supply, Mr. MORRITT rose to call attention to the expediency of reducing the *Duty on Malt*, and was commenting upon the empty benches around him, when the SPEAKER counted the House, and 24 members only being present, an adjournment took place at 5 minutes to 9 o'clock.

THURSDAY.—The House re-assembled after the Whitsun recess. *German Exactions in Jutland.*—In reply to a question from Mr. WHITESIDE, Mr. LAYARD stated that forced contributions continued to be levied by the Prussians and Austrians in Jutland, contrary to the agreement arrived at, but that her Majesty's Government had not received any official information on the subject.—Sir J. PAKINGTON inquired whether it was true that another *Austrian Squadron* had proceeded to the Baltic?—Mr. LAYARD replied that he believed the portion of the Austrian squadron which had been left at Lisbon had followed their consorts to the North Sea.—Mr. HENNESSY asked whether the Government had received any information from their agents abroad relating to the conduct of the Russian Government in *Circassia.*—Mr. LAYARD said that according to communications from the British Ambassador at Constantinople, and our agents on the shores of the Baltic Sea, a very considerable immigration had taken place of Circassians, who had found it impossible to remain under Russian rule, and had therefore taken refuge in Turkey, where the Government of the Sultan had made the best arrangements possible for their reception, though he regretted to say that great mortality existed amongst the unfortunate refugees.—Lord J. MANNERS gave notice that, in Committee of Supply on the miscellaneous estimates, he should move the omission of the vote for the new *National Gallery* at the rear of Burlington House, with a view of retaining the Gallery in its present position. The Report of the *Committee of Supply* was brought up and agreed to. The *Union Assessment Bill*, and the *Railway Companies' Powers Bill*, passed through Committee. The *Summary Procedure (Scotland) Bill* and the *Admiralty Lands and Works Bill* were read a third time and passed. The *Rivers Pollution (Scotland) Bill* was read a second time.—Mr. DODSON obtained leave to bring in a Bill to amend the *Registration of County Voters* in England and Wales.—Sir G. GREY obtained leave to bring in a Bill to amend the Act for the better management of *Highways in England.*

FRIDAY.—*Prussian Exactions in Jutland.*—In answer to Mr. WHITESIDE, Lord PALMERSTON, who was loudly cheered on his reappearance after his recent illness, said that the conditions of the armistice were quite clear that no fresh contributions should be levied. There was some ambiguity as to whether contributions before the armistice should be levied. His noble friend at the head of the Foreign Office was in communication with the Prussian authorities on the subject.—In answer to Sir M. FARQUHAR, his lordship added that it was clearly understood that provisions should be paid for. *Case of Captain Grant.*—Colonel NORTH moved an address to her Majesty, praying for a suitable reward to Captain Grant for his services in improving the system of cooking in the army.—The Marquis of HARTINGTON resisted the motion, which was negatived on a division by 104 to 70. *China.*—Mr. BAXTER called attention to the state of affairs in China, and asked for explanations as to the policy of the Government in regard to that country.—Lord PALMERSTON in reply said that it was not the intention of the Government to direct interference with military or naval services in China beyond the protection to be afforded to the treaty ports

[Left sitting.]

City Intelligence.

BANK RATE OF DISCOUNT.—The Directors of the Bank of England on Thursday reduced their rate of discount from 9 per cent., at which it had stood during the past fortnight, to 8 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅝ to ½ for Money, and 90¼ to ½ for Account; Three per Cents. Reduced, 89⅛ to ¼; New Three per Cents., 89⅝ to 89; Bank Stock, 239; India Stock, 219 to 217; Ditto Five per Cent. Stock, 105½.—FOREIGN: Chilian Four and a Half per Cents., 84; Colombian Six per Cents., 78⅛; Egyptian, 101½; Greek, 22¾ to 23; Italian, Maremmana Railway, 75; Mexican, 43⅛; Ditto Acct., 44 to 43⅞; Peruvian, 1862, 88; Portuguese, 1856, &c., 48⅝; Russian, 1822, 88½; Ditto, 1862, 86½ to 87 ex div.; Spanish Passive, 34¼; Ditto Certificates, 11⅝ to ⅜; Turkish, 1854, 68½ to ⅝; Ditto 1862, 71⅛; Ditto 100*l.* Bonds, 71⅛; Venezuela, 1862, 56 ex div.

Bank of England.

ISSUE DEPARTMENT.

Notes Issued	£27,251,165	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	12,601,165
		Silver Bullion	—
	£27,251,165		£27,251,165

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,785,267
Rest	3,280,727	Other Securities	20,973,423
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,666,661	Notes	6,431,630
Other Deposits	12,962,402	Gold and Silver Coin	666,281
Seven days and other bills	493,817		
	£38,856,607		£38,856,607

May 19, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY: *May* 13.—BANKRUPTS.—D. ANDERSON, Cardigan Street Hampstead Road, Railway Clerk—H. ADCOCK, Corby, Lincolnshire, Butcher—J. ASHFIELD, Nash, Monmouthshire, Butcher—J. ALLEN, Southampton, Confectioner—B. J. C ANNEGARN, Leadenhall Street, Merchant—H. J. BAUERMAN, Cloak Lane, Cannon Street, Merchant—W. R BARNES, Norwich, Cabinet Maker—E. BIRD, Watt's Buildings, Kingsland Road, Gasfitter—J. BASTIN, Plymouth, Devonshire, late Assistant to a Provision Merchant—G. BRYANT, Forton, Hampshire, Oilman—S. BECKWITH, Liverpool, Hide and Tallow Broker—W. BROWN, Oystermouth, Glamorganshire, Contractor—G. BODELL, Derby, Shopkeeper—W. COLLINGE, Burnley, Lancashire, Watchmaker—A. CARSON, Castle Church, Staffordshire, Tea Dealer—H. COLLINGE, Manchester, Goods Porter—J. COCKAYNE, Sheffield, Butcher—D. W. COX, Porteus Road, Paddington, late Omnibus Driver—J. CROOK, Lamb Street, Spitalfields, Wholesale China Dealer—E CURTIS, jun., Pier Hotel, Herne Bay, Licensed Victualler—J. COOPER, Hampstead—W. DAVIES, Hereford, Timber Dealer—B. DENNES, Longdown, Hampshire, Baker—J. M. DAVIES, Swansea, Glamorganshire, Boot Maker—T. D. DAVISON, Monkseaton, Northumberlandshire, Brewer—W. DELBRIDGE, Truro, Cornwall, Mason—F. H DEAN, Euston Road, Compositor—E. DOWELL, Birmingham, late Assistant to a Beer-house Keeper—S. EASTWOOD, Birkenhead, Labourer—W. EASY, Victoria Grove, Brompton, late Stationer—H FOALE, Kingston-upon-Hull, Gasfitter—A. FERRARI, Dewsbury, Yorkshire, Rag Merchant—E. F. GATLEY, Edward Square, Islington, Mill Sawyer—A. HILL, Birmingham, Gunmaker—R. W. HOUGHTON, Downham Road, Kingsland, Commission Agent—H. HICKMAN, Tipton, Staffordshire, Timber Dealer—W. HILL, Lancaster, Licensed Victualler—R. HARDY, Hickling, Nottinghamshire, Bailiff—J. HUTCHINSON, Liverpool, Bookbinder—W. HULL, Ormskirk, Lancashire, Miller—J. HACCHE, Swansea, Cabinetmaker—T JONES, Liverpool, Assistant to a Provision Dealer—T. JONES, Hoylake, Cheshire, Fisherman—B. LONG, Guildford, Surrey, Cutler—G. S. LILL, Kingston-upon Hull, Draper—J. MORRAN, Plumstead, Kent, Tailor—E MILLWARD, Birmingham, Gun Stocker—T. MIDDLETON, Leeds, Warehouseman—J. W. MASON, Birkenhead—L. MADDEN, Liverpool, Wholesale Butcher—H. MARTIN, Hanley, Staffordshire, Potter—C. T. MILES, Guildford, Surrey, Grocer—C. J. MASON, Cruttenden Cottage, Camberwell New Road, Commission Agent—HUGH M'VEY, Kirkdale, Lancashire, Bootmaker—WILLIAM NORVILL, Weston-super-Mare, Tailor—FLETCHER NORMAN, Great Broughton, Cumberland—WILLIAM PEGG, Ipswich, Suffolk, Grocer—T. PARKIN, Kingston-upon-Hull, Merchant's Clerk—J. PAYNE, Liverpool, Bootmaker—B. PARKER, Weybridge Surrey, Coal Merchant—J. LE PLA, Wisbeach, Cambridgeshire, Tailor—A. A. PULLAN, Priory Road, Wandsworth Road, Assistant to a Tailor—R. ROBERTSON, Liverpool, Block and Mast Maker—J. ROBINSON, Brandesburton, Yorkshire, Joiner—R RANDALL, Norwich, Grocer—G. W. SMEDLEY, Liverpool—M. STEIN, Birmingham, Merchant—J. SWIFT, Shiffnall, Shropshire, Puddler—T. SCARLETT, Southport, Lancashire, Dealer in Staffordshire Tiles—F. TAYNER, Cambridge, Dealer in Fish—C. F. WELHAM, Shenfield, Essex, late Miller—J. WILLIAMS, Kent Street, Borough, Tobacco Pipe Maker—E. WILLIAMS, Caebricks, Glamorganshire, Builder—P F. WALKER Bedford Place, Kensington, Law Student—G. WARD, Tryons Place Hackney, Fishmonger.

TUESDAY: *May* 17.—BANKRUPTS.—A. ALLDIS Hackney Road, Draper—W BOLLIS, jun., Queen's Road, Bayswater, Plumber—A. BOOS, Sheffield, Commercial Traveller—R. BAILEY, Beverley, Yorkshire, Boot and Shoe Maker—C. BLYGHTON, Williams Place, Rochester Row, Westminster, Carcass Butcher—A. BREARCLIFFE, Harrogate, Yorkshire, Hotel Keeper—M. BAMFORD, Small Bridge, Lancashire, Grocer—A. BEDFORD, Great Bath Street, Clerkenwell, Chandler's Shop Keeper—S. BARNES, Oakenshaw, Lancashire Licensed Victualler—H COLE, Standish, Gloucestershire, Bootmaker—J. H. CLARKE, Kew Green, Kew, Accountant—J. CASELY, Belbroughton, Worcestershire, Labourer—G. CHINERY, Walter Belchamp, Essex, Dealer—J. COOKE, Hornsey Road, Lodging House Keeper—B. D. DALE, late of Macclesfield, Cheshire, Silk Manufacturer—E. W. EVANS, Dorset Mews, Clapham Road, Builder—J. EVANS, late of Cardiff, Glamorganshire, Block Maker—G. FARR, Bridport Place, Hoxton, Tinman—G. FOLKARD, Norwich, Grocer—J. GREEN, Manchester, and W. GREEN, Wigan, Lancashire, Common Carriers—G. GREEN, Oldham, Lancashire, Cotton Waste Dealer—THOMAS MORRIS HUGHES, Shrewsbury, Gentleman—WILLIAM HALL, Llanelly, Carmarthenshire, Flour Merchant—W. HESSON, Barrowby, Lincolnshire, Grocer—D HUDSON, London Street, Paddington, Assistant Warehouseman—M HUDDLESTON, Parsley, Yorkshire, Grocer—C. J HUNT, Frederick's Place, Upper Kennington Lane, Commercial Clerk—J LUCAS, Cardiff, Licensed Victualler—M. LONGDEN, Rushton Spencer, Staffordshire, Journeyman Carpenter—T. LANNING, Southsea, Hampshire, Baker—G. LIDDELL, Cardewlees, Cumberland—W. LLOYD, Liverpool, late Hotel Keeper—W. MARSHALL, Brabourne, Kent, Wheelwright—A. R. MOSS, late of Martin's Lane, Cannon Street, Attorney-at-Law—F MOORS, Horseferry Road, Westminster, Harness Maker—E. MORRIS, Almeley, Herefordshire, Carpenter—W. J. MILLER, Mount Pleasant, Lewisham Road, Greenwich, Builder—J. G. PALMER, late of Wednesbury, Staffordshire, Architect—D. PHILLIPS, Trevethin, Monmouthshire, Innkeeper—T. PARKER, Eardisley, Herefordshire, Blacksmith—J. J. PERRIN, Wigan, Lancashire, Ironmonger—J. PHILLIPS, Worcester, Greengrocer—W. PATE, Bray Mills, near Maidenhead, Berkshire, Miller—J. RAYNER, Englefield Road, De Beauvoir Town, late Linen Draper—T. F. ROBINSON, Manchester, Cotton Waste Dealer—ALFRED RUTLAND, Gerrard Street, Islington, Clerk—ABRAHAM SOLOMON, Bushey, Hertfordshire, Cattle Dealer—C. J. T. SHOVEL, Plymouth, Carpenter—T. J. S. SMITH, Bridge Street, Kennington Lane, late Dealer in Glass—S. SOUTHGATE, Wells-next-the-Sea, Norfolk, Commission Agent—W. SYKES, Brierley Hill, Staffordshire, Check Clerk—J. SAYNER, Hedon, Yorkshire, Keelman—O. N. SPONG, Silver Street, Greenwich, late Paymaster in the Navy—S. SELLERS and G. H. FERLEY, Dudley Hill, Yorkshire, Cardmakers—F. TAYLOR, Corston, Somersetshire—J. VOLLER, Rogate, Sussex, Innkeeper—J. E. WEEKS, Devonport, Coach Builder—F. J. WELCH, Waltham Cross, Hertfordshire, Farm Bailiff—J. E. WEEKS, Devonport, Coach Builder—S. WYATT, Trevethin, Monmouthshire, Painter—T. YARWOOD, Witton, Cheshire, Bootmaker—J. YORK, Winford, Somersetshire, Farmer.

Metropolis and its Vicinity.

THE ALBERT MEMORIAL.—The works in connection with this national Memorial have been commenced in Hyde Park, nearly opposite the entrance to the Horticultural Gardens. From the great height (160 feet) and the immense solidity and massiveness of the Memorial, the foundations have to be taken unusually deep, considering the excellent nature of the soil, which is all gravel. Under the centre part they are to be formed of 16 feet of concrete, and nowhere are they to be less than 10 feet. The base of the Memorial is to consist of broad flights of steps 130 feet square. The steps of grey granite are to be laid in a double flight, with a broad landing between the lower and upper tier. From this upper landing the Memorial will rise, the basement being formed of a frieze in marble, the figures on which will be in high relief, and of life size. The columns which support the spire are to consist of groups of four red granite pillars, each 2 feet in diameter. Their capitals are exceedingly rich, and will be surmounted with statues of heroic size. The spire is one of the most elaborate of Mr. Scott's designs. It will be built of red and grey granite, and the rich white stone known as Dane Dale. The terminal cross will be of wrought copper gilt, executed by the Skidmore Art Company, who the rood screen in the transept of the last Exhibition excited general admiration for its exquisite finish. Beneath the groined arch will be placed the statue of the late Prince Consort. His Royal Highness is represented in robes of State, seated on a chair of state. The proportions of the figure are on a scale which, if the statue was represented standing, would give it a height of 30 feet. The whole work is expected to take four years in completion, and by the terms of the contract Mr. Kelk has bound himself to complete it for the sum in hand—120,000*l.* The laying of the foundation stone will be marked by a public ceremonial at which the members of the Royal family will be present. No date is fixed for this event, which is not likely to take place till late in autumn.

NEW NATIONAL GALLERY.—An estimate has been presented to Parliament proposing a vote of 10,000 the first instalment of 152,000*l.*, which is the estimated cost of building a new National Gallery at Burlington House, including finishings and decoration. In submitting the estimate, the First Commissioner of Works makes the following statement:—"The accompanying estimate is for the erection of the National Gallery on the site purchased by the Government in Piccadilly. The site consists of about three and a half acres, of which one-half is occupied by Burlington House, with its two wings and its colonnade, and by the courtyard which they surround. These buildings are occupied by the Royal Society, the University of London, the Linnean Society, and the Chemical Society; and the large hall is used for the meetings of the Geographical and other learned societies. These buildings need not be disturbed at present, since the garden, which occupies half of the site, will furnish ample accommodation for the pictures, ancient and modern, belonging to the trustees of the National Gallery, and also for the additions to the collections which may be expected by gift and purchase for many years to come. Whenever, however, a large increase of space may be required, Burlington House and its wings will be pulled down to make room for an extension of the National Gallery, and in the meantime the courtyard will make a handsome and convenient approach to the main entrance of the new building, which will be through the central hall of Burlington House. The proposed building will be 300 ft. long and 218 ft. wide. That part of it which will be devoted to the exhibition of pictures will be of one story, lit from the ceiling, and will provide 3000 lineal feet of wall-space in a horizontal line, exclusive of doorways, and 36,200 superficial feet of floor space. The larger galleries will be 40 ft. wide and 40 ft. high, and the rooms for small pictures will be 21 ft. wide, with a proportionate height. The only external elevation that will be visible will be at the northern side in Burlington Gardens, where the ingress room and offices of the trustees and the residence of the keeper will be placed in two stories, and where there will be a public entrance. On the southern side, where the level of the ground is lower, there will be a useful basement story, and the whole building will be of fireproof construction."

METROPOLITAN BOARD OF WORKS.—At the meeting of this Board Mr. Bazalgette, the engineer, reported that, at the present time, about one-sixth of the metropolitan sewage was intercepted by the Northern Outfall Sewer works, and discharged into the Thames at ebb tide at Barking, whence it was carried to the sea. This sewage, about 14,000,000 gallons in quantity, was formerly discharged into the river within the metropolis at low water. The progress made with the main drainage works was thus stated:—On the Main Drainage Middle Level Sewer, work to the amount of 306,000*l.* had been done; on the West Sewers, 3¾ miles of sewer had been constructed at a cost of 51,000*l.*; at the Northern Outfall Reservoir works had been executed to the estimated cost of 163,000*l.*: at the Southern Low Level Sewer, 3¾ miles of work had been completed at the cost of 110,000*l.*; the Southern Outfall works at Crossness, work to the amount of 213,000*l.* had been finished. With regard to the Northern Thames Embankment, the engineer reported that the works of the first contract (from Westminster Bridge to the east side of Cannon Street) had been much delayed by the difficulty in obtaining possession of the wharves on the side of the river, and by the necessity there was for making experiments as to the best form of iron caissons for excluding the water. Work had been done on this contract to the amount of 30,000*l.*, and on the second contract (between Westminster Bridge and the eastern side of Temple Gardens) to the value of 12,000*l.* The report was ordered to be entered on the minutes.

DRAMATIC SCHOOL.—On Friday, Mr. Charles Dickens presided at a meeting held in the Adelphi Theatre, for the purpose of establishing a Shakspeare Foundation School in connection with the Dramatic

College. It is intended to establish a first-class school for children of both sexes, open to all ranks and professions, with a certain number of foundation scholars, according to the funds subscribed, to which the children of actors, actresses, and dramatic authors shall alone be eligible. Considerable progress has already been made in the subscriptions.

The Whitsun Holidays.—On Monday last the holiday-makers were more favoured by the weather than they usually are. From morning to night there was scarcely a cloud in the sky; and a very large portion of the population was out of doors and out of town. The steam boats and railway trains were alike crowded, Greenwich, Woolwich, the Crystal Palace, Richmond Park, Epping Forest, and Hampton Court, being the principal attractions. In the evening the theatres and principal places of entertainment were crowded.

The Islington Roads.—At a recent meeting of the Metropolitan Board of Works the names of various thoroughfares were altered, and the villas, terraces, crescents, places, rows, cottages, and other subsidiary names in the old thoroughfare known as the Lower Road or Lower Street, Islington, were ordered to be abolished, and the whole thoroughfare was renamed Essex Road.

Gambling in Government Offices.—For some time past the clerks in a particular branch of the Accountant-General's office have been employing themselves during office hours in gambling. The time supposed to be given to a careful revision of the voluminous accounts from all parts of the world relating to stores, pay, and allowances, forming the greater part of the 15 millions which the country has to pay annually for its military establishments, was devoted to chicken hazard, and it appears that the two chief officers who were responsible to the Accountant General for the efficiency and conduct of their branch, were not only cognisant of this, but active participators in the play. When these facts were established, Earl De Grey at once dismissed the two seniors, who had been from 20 to 30 years in the service, reduced the clerk standing next in point of responsibility to the bottom of his class, and stopped the promotion of others who acquiesced in the practices of their seniors. The report that loaded dice were employed is entirely without foundation.

Murder in Lambeth.—On Sunday a murder was committed in Johanna Street, New Cut. A woman named Weston, in a state of drunken frenzy attacked her husband, a vendor of cat's meat, and, before assistance could be rendered, beat him so fearfully that he died almost immediately. It is said that she has been for long known as an abandoned woman, and that a short time ago she stabbed her husband so severely that he was not expected to survive. She was taken into custody, and on Monday last was brought before the magistrate at the Southwark Police Court, when the case was remanded till after the coroner's inquest.

The Public Health.—The Registrar-General's Weekly Return states that the deaths in London in the week ending Saturday, May 14, were 1306. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1283. The present return is therefore 23 above the average. During the week the births of 963 boys and 973 girls, in all 1936 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1964.

Provincial.

Lewes.—The 600th anniversary of the battle of Lewes was celebrated on Monday by the residents in that town and the neighbourhood. The battle, which was fought on the 14th May, 1264, on that portion of the Southdowns now known as the Race Hill, between Henry III. and the barons, is memorable in English history as having resulted in the triumph of constitutional liberty and the permanent establishment of constitutional government. The anniversary properly fell on Saturday last, but for the convenience of the tradespeople, and in order that the day might be observed as a general holiday, the celebration was postponed till Monday. As it was Whit Monday, and the weather was delightfully fine, a large number of pleasure-seekers were attracted to the town from different parts of the surrounding district, so that the county town of Sussex presented an unusually animated appearance. The castle, with the museum of the Sussex Archæological Society, the De Warren chapel in Southover Church, and the Mechanics' Museum—were thrown open to all comers, and inspected by large numbers of visitors in the course of the day. The annual custom of treading the boundaries of the borough was observed about noon, with the usual formalities, and at 1 o'clock the large town-bell, familiarly known as "Old Gabriel," which is only tolled on particular occasions, was rung as a signal for closing the shops and working establishments in the town. In the afternoon the local rifle corps had a sham fight on the battle-field, after which a public dinner took place in the County Hall, to which the Volunteers were invited. In the evening there was a torch-light procession through the town, followed by a display of fireworks from the castle keep. The proceedings were wound up by a ball in the Corn Exchange.

Ripon.—The Ven. Charles Dodgson, Archdeacon of Richmond, has been preaching, in his turn, in the cathedral of this city, and in a sermon on the efficacy of the sacraments made remarks which Dr. Goode, the Dean, construed into a personal affront. The dean "presented" the archdeacon to the bishop for teaching unsound doctrine, but the bishop declined to interfere, and informed the dean that if he desired to proceed he must do so through the Ecclesiastical Courts, by setting the Church Discipline Act in motion.

Rochdale.—Mr. Cobden has succeeded in obtaining a promise from the Secretary of the Home Department, that at the earliest opportunity a Government surveyor shall be sent down to inspect and report upon the state of the Rochdale reservoirs, including also the reservoir of the Oldham Corporation at Piethorn, which is believed to be in a very unsatisfactory condition.

Rotherham.—On Monday last, after an investigation lasting for three days, James Sargisson and Richard Denton were committed by the magistrates for trial on the charge of murdering and robbing John Cooper, near Roche Abbey, on the night of the 9th April. The main evidence against Sargisson resulted from his own confession. A few days after the Government offered a reward of 100*l.* for information of the murder, and a free pardon to an accomplice who did not strike the fatal blow, Sargisson, who had previously been suspected, began to talk unguardedly, and was then apprehended. He immediately confessed to having been present at the murder, but said that Denton was the man who induced him to go, and that they both murdered Cooper and robbed him. In proof of this he told the police that the watch and keys of the murdered man were hid in his pigstye, having been secreted there by Denton's directions. He also said that the clothes he wore at the time of the murder would be found hid between his bed and mattress. These articles were found in the places indicated, and Sargisson accounted for blood being on his clothes by saying that he accidentally fell upon the pool of blood where Cooper had lain. The police declined to make Sargisson a witness, the case against him being conclusive. Beyond Sargisson's statements the evidence against Denton consisted in proofs that he was in the neighbourhood at the time; that two pocket-handkerchiefs found in his possession are identified, though not very positively, as those of Cooper; that there were slight marks of blood upon his clothes, which, however, he says were made in assisting to kill a pig a month ago; and that he has associated much with Sargisson—a fact which he denied when apprehended. He appears to be dreadfully alarmed at his position, and swooned several times during the course of the inquiry. Sargisson, on the other hand, appears quite cool and unconcerned. The two prisoners have frequently exchanged bitter recriminations during the course of the inquiry. A third man, named Taylor, had been apprehended, but he was acquitted on the first day, there being, in fact, no evidence against him. Sargisson repeated in the dock, after the usual caution, the confession which he originally made to the police.

Saddleworth.—On Tuesday week a shocking accident took place at a village near this town. The large chimney of a factory fell and crushed three cottages, the inmates of which were asleep in their beds. The nearest cottage was levelled, and its occupants escaped with severe bruises. The second was levelled to the ground, and eight out of 10 of its inmates were killed on the spot. In the third cottage, which was also partially destroyed, one life was lost. The disaster caused great consternation in the neighbourhood. The inquest has been adjourned to obtain some professional opinion as to the security of the mode of building. The evidence already taken showed great apathy on the part of the workmen. It was shown that the inmates of the cottages which were crushed were aware of the danger. The private watchman amused himself in the early part of the night of the accident by measuring the rapidly increasing crack in the structure, but never thought of warning those who were so soon to become the victims of the accident.

Salisbury.—The subscriptions towards the restoration of the cathedral amount up to the present time to upwards of 10,000*l.* The estimated cost of the proposed works is 40,000*l.*

Sheffield.—A public meeting was held on Wednesday evening in the hall of the Mechanics' Institution in this town, at which the Duke of Argyll and Mr. Roebuck addressed a numerous audience on the occasion of the assembling of delegates of the Yorkshire Mechanics' Institutes. The Duke of Argyll, in a long speech, which was loudly applauded during its delivery, treated mainly of the advantages of the Union in supplying the working classes with advantages hitherto associated with the great public schools, and hinted at the probable introduction of a larger measure of governmental agency towards the education of the working class. Mr. Roebuck declared his opinion that state aid ought to be, and before long would be, more extensively introduced for the purpose of facilitating the education of the working poor. He referred to the introduction of the Factory Act, which he and others at the time regarded with disapprobation, considering it an interference of the State between the employer and the employed, but observation and experience had taught him his error. As soon as he had seen reason to change his mind upon that important question he got up and delivered his recantation in the House of Commons, and when he had done so, the late Sir James Graham laid his hand upon his shoulder, and said, "I am glad that you have read your recantation, and I will read mine to-morrow." Before concluding his address he remarked in severe terms upon the apathy of the master class of Sheffield and its neighbourhood, with respect to the many admirable organisations for introducing intellectual pleasures to their work-people.

Scotland.

Riot in Edinburgh.—A strange outbreak took place a few days since in the streets of Edinburgh. The stipends of the established clergy used to be levied as a direct tax on the inhabitants, which the more extreme dissenters refused to pay. Within the last year or two the amount of the tax was considerably reduced, and the lower charge was amalgamated with the police tax—the corporation taking upon itself the payment of the ministers. But this arrangement has proved as little satisfactory to the extreme party of the other, and one of them having refused to pay his goods were distrained. A riot ensued, in the course of which the goods seized were taken into the street, smashed to pieces, and burned by the mob, who sympathised with the owner's resistance to the law.

Execution at Glasgow.—On Monday morning John Reilly, who was charged with the murder of Nancy Laffy, near Glasgow, was executed in front of the gaol of that city. The evidence against him was altogether circumstantial, and as there was a feeling that it was not conclusive, great efforts were made to obtain a remission of his sentence. But Sir G. Grey, after consulting the judge who tried the case, declined to interfere with the course of law. The prisoner asserted his innocence to the last. There were above 20,000 persons present at the execution.

Law.

Court of Common Pleas: *Collingwood* v. *Berkeley, M.P.*—The plaintiff in this case some time since obtained damages against Mr. Henry Berkeley, M.P., as one of the directors of a company which undertook to convey passengers across the American Continent to British Columbia, and failed in its engagements. Distress was levied on Mr. Berkeley's furniture, but a friend of Mr Berkeley's came forward and pleaded a bill of sale, which led to the present trial in the form of an interpleader issue. The point was whether the bill of sale was sufficient to bar the claim which Mr. Collingwood had against Mr. Berkeley. The judge told the jury that a great many legal points had been raised which would be settled in another court. Their business was to decide whether, in their opinion, the bill of sale was a genuine or only a colourable transaction. The jury found for the genuineness of the sale and for the plaintiff.

Court of Error.—*Attorney-General* v. *Partington.*—A case of considerable importance came before the Court on Saturday. As far back as 1819 a widow lady named Shood died without a will, leaving property to the extent of 20,000*l.* Her next-of-kin was in America, but neither she nor her husband, nor her husband's son, made any formal claim till 1855, when he took out letters of administration to the property. He obtained the whole sum, with the accumulations of interest, which in that time had nearly doubled the value of the original property. The Crown, which up to this time had held the property, then put forth its claim for legacy duty upon the two devolutions of the property, insisting that the present claimant should pay the legacy duty for the two previous parties, without the admission of whose right it could never have come to him, and also that the legacy duty should be paid not only on the principal sum, but also on the accumulations of interest at the date of each separate devolution of the property. The Court of Exchequer, before whom the case came, decided that only one legacy duty should be paid, but that it should be charged on the property at the time the letters of administration were first taken out. Both sides appealed against this decision, and the case was argued at great length. The Court, after taking time to consider its judgment, on Monday decided for the Crown on both these points.

Obituary.

Admiral Hercules Robinson died at Southsea on the 15th inst., in his 75th year. He entered the navy in 1800, and was present in the Euryalus, at the battle of Trafalgar in 1805. He was confirmed a lieutenant in 1807, and in 1810 was promoted to the command of the Prometheus, 18, and captured three privateers and drove on shore and burnt a fourth in the face of a body of troops. He was advanced to post rank in 1814, and from 1817 to 1820 commanded the Favourite at St. Helena, in the Rio de la Plata, and Newfoundland. He accepted the retirement in 1846; became rear admiral in 1849, vice admiral in 1856, and admiral in 1862.

Mr. George F. Heneage, formerly M.P. for Louth, died on Wednesday week at Hainton Hall, near that town, in his 64th year. He was a member of the House of Commons for a long series of years, having represented Great Grimsby, from 1826 to 1830, in the Conservative interest. He was first elected for Lincoln in 1831, and represented that city up to 1835. At the general election in 1852 he was returned in conjunction with the late Colonel Sibthorp, and continued to represent the city up to October, 1861. He was the eldest son of George Robert Heneage by the second daughter of Lieut.-General Anstie. He married in 1823 the daughter of Mr. Michael Tasburgh, of Burgwallis, Yorkshire.

Wills.—The will of Dowager Lady Chadmeley, relict of the late Sir Montague Chadmeley, Bart., of Easton Hall, Grantham, has been proved in London under 14,000*l.* personalty.—Mr. Thomas Smith, of Chilton Lodge, Wilts, 120,000*l.*—Mr. William Lyddon, of Carey Street, Lincoln's-inn, 35,000*l.*—Mr Thomas F. Maples, of Frederick Place, Old Jewry, and Hornsey, 25,000*l.*—Lieut.-Colonel Burer, of Lymington, 20,000*l.*

BIRTHS.—On the 18th inst, at Norfolk House, London, Lady Victoria Hope Scott, of a daughter—13th inst, at Merrion Square, Dublin, the wife of the Right Hon. J. D. Fitzgerald, of a son—15th inst, at 37, Montague Square, the Hon. Mrs. Gowran Vernon, of a daughter—15th inst, at Warnham Court, Horsham, the wife of Sir J. Henry Tilly, Bart., of a son—14th inst, at Cefn-Mably, Glamorganshire, the wife of Colonel Chas. Kemys-Tynte, of a son—15th inst, at Aldeburgh, Suffolk, the wife of Lieut.-Colonel Thellusson, of

a daughter—17th inst, at Oakley Hall, Hants, the wife of W. W. BEACH, Esq., M.P., prematurely, of a daughter—17th inst, at Woodside, Harrow-on-the-Hill, the wife of Lieut.-Colonel F. J. GOLDSMID, Madras Staff Corps, of a daughter—7th inst, at Riseholme Rectory, the wife of Archdeacon KAYE, of a son.

MARRIAGES.—On the 17th inst, at the Cathedral, Peterborough, WILLIAM THOMAS, eldest son of JONATHAN RIGG, Esq., of Chester Place, Hyde Park Square, and Wrotham Hill Park, Kent, to MARY SELINA DAVYS, only child of the Ven. the Archdeacon of Northampton, and niece of the late Bishop of Peterborough—18th inst, at Kensington parish church, JAMES JOHNES BOURCHIER, Esq., to HARRIETT ANNE, second daughter of the Hon. EDWARD CURZON, of Scarsdale House, Kensington.

DEATHS.—On the 14th inst, at Richmond, Surrey, ANNA, the widow of Field-Marshal THOMAS GROSVENOR, aged 74—16th inst, CHARLES HENRY OAKES, Esq., youngest son of the late Lieutenant-General Sir Henry Oakes, Bart., aged 53—16th inst, at Huntley, Gloucestershire, HERBERT INGLIS, the infant son of Mr and the Lady ELIZABETH INGLIS JONES—16th ult, at Dominica, of dysentery, THOMAS MACNAMARA ROSE, eldest son of Lieutenant-Governor PRICE, and grandson of the late Sir Rose Price, Bart., aged 17—12th inst, at Riversdale, Fermanagh, EDWARD ARCHDALL, Esq., of Riversdale and Castle Archdall, third son of Colonel Mervyn Archdall, formerly M.P. for Fermanagh in the Irish Parliament, and father of Mervyn Archdall, Esq., the present M.P. for the county, aged 89—13th inst, at 2, Pembridge Gardens, Nottinghill, the Hon. JOHN AUDAIN, of Richmond Hill Estate, in the Island of St. Vincent, aged 56—15th inst, at Southwick Street, London, the late Colonel RICHARD WILLIAM ASTELL, Grenadier Guards, aged 60 — 13th inst, at Broomhill, Belfast, JANE DOUGLAS, wife of Colonel CAMPBELL, retired, 20th Regiment — 17th inst, at St. Quintin's, near Cowbridge, GEORGIANA, widow of Lieut.-Colonel ROYDS, aged 73.

Markets.

COVENT GARDEN, May 21.

Outdoor produce is now abundant. English Grapes and forced Strawberries are sufficient for the demand. Of Pine Apples there is also a fair supply. Continental arrivals continue heavy; among them are Lettuces, Endive, Carrots, Artichokes, Radishes, Asparagus, Cherries, Tomatos, and Peas. Potatos from Lisbon, of which considerable quantities have been imported, realise from 3s. to 6s. per dozen lbs. Asparagus fetches from 3s. to 6s. a bundle. Flowers chiefly consist of Tulips, Cinerarias, Orchids, Heaths, Pansies, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Nuts, small, per bush., 14s to 18s
Grapes, per lb., 6s to 15s	— Barcelona, do., 16s
Apples, per ½ sieve, 2s 6d to 4s	— New Brazil, do., 20s.
Strawberries, per oz., 6d to 1s	— Old do., do., 14s
Lemons, per 100, 6s to 10s	Almonds, do., 20s
Oranges, per 100, 6s to 10s	Walnuts, do., 12s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 4d to 6d
Cauliflowers, each, 4d to 8d	Cucumbers, each, 1s to 2s
Asparagus, p. bundle, 3s to 6s	Beet, per doz., 1s 6d to 2s
French Beans, p. 100, 2s to 3s	Shallots, per lb., 10d
Green Peas, p. ½ sieve, 15s	Celery, per bundle, 1s 6d to 2s
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 4d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 1s to 2s 6d	Horse Radish, p. bunch, 1s to 4s
Carrots, young, per bunch, 2s 6d	Mushrooms, p. pott., 1s to 1s 9d
Rhubarb, p. bundle, 4d to 1s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

POTATOS.—SOUTHWARK, Monday, May 16.

During the past week the arrivals coastwise have been moderate, but more plentiful by rail, and still more than equal to the demand; the weather being very hot for the season, the consumption diminishes. The quotations are as follow:—Yorkshire Flukes, 45s. to 50s. per ton; do. Regents, 40s. to 50s.; Seedlings, 40s. to 45s.; do. Rocks, 40s. to 45s.; Dunbar Regents, 50s. to 60s.; North Berwick Regents, 40s. to 45s.; Perth, Forfar, and Fife Regents, 30s. to 35s.; do. do. Rocks, 30s. to 35s.; do. do. Reds, 30s. to 35s.

BRITISH WOOLS.—LONDON, May 20.

We are now in a state of transition. The fat wool is mostly sold, and the stock wool not yet clipped. The market is supplied for the present, and the consumers are indisposed to speculate at the present high prices, so that a lull is taking place; at the same time there is a good prospect of remunerating rates for some time to come.

HOPS.—BOROUGH MARKET, FRIDAY, May 20.

Messrs. Pattenden & Smith report a small but steady demand for the few new Hops still left unsold.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, May 19

Prime Meadow Hay	75s	80s	Clover, old	90s	110s
Superior do.	84	90	New Clover	—	—
Inferior do.	50	60	Do. second cut	80	105
New do.	—	—	Straw	25	30
Rowen	—	—			

HARVEY & EASTON.

WHITECHAPEL, THURSDAY, May 19.

Fine Meadow Hay	80s	84s	Prime 1st cut Clover	105s	112s
Inferior do.	70	75	Inferior do. do.	100	105
Prime New Hay	—	—	New 1st cut do.	—	—
Inferior	—	—	Prime 2d cut do.	100	108
Straw	27	30	Inferior do.	90	95

NEWGATE.—May 20.

Best Fresh Butter .. .. 13s. per dozen lbs.
Second do. do. .. .. 11s. "
Pork, 4s. 0d. to 4s. 4d. per 8 lbs.

LEADENHALL POULTRY MARKET.—May 20.

The very hot weather and the very small demand have had great influence on the prices of Poultry.

Per couple—s. d. s. d.		Each—s. d. s. d.	
Large Surrey Fowls	10 0 to 12 0	Ducks	3 0—3 6
Farmhouse do.	7 0—9 0	Tame Rabbits	1 3—2 0
Best Surrey Chickens	6 0—8 0		per doz.
Farmhouse do.	4 6—6 0	Wild do.	5 0—7 0
	each	Pigeons, French	8 0—10 0
Goslings	5 0—7 0	Do., English	6 0—8 0
Ducklings	4 0—4 6	Plovers' eggs	3 0—4 0

METROPOLITAN CATTLE MARKET.

MONDAY, May 16.

The number of Beasts is rather larger, but the weight of beef smaller, as it includes about 600 stores and Milch Cows. The hot weather makes buyers cautious; prices are, however as good as on Monday last for best qualities. We have a larger and better supply of Sheep; the demand is smaller, this being holiday week, and trade is worse, especially for heavy fat Sheep. Lambs and Calves are selling about the same as on Monday last. From Germany and Holland there are 1360 Beasts, 4579 Sheep, and 174 Calves from Scotland, 450 Beasts; from Ireland, 50; and 2510 from the Northern, Eastern, and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	6	to 4	10	Best Long-wools.	..	—	..	
Best Short-horns	4	4	— 4	8	Do. Shorn	4	4	— 4	6
2d quality Beasts	2	8	— 3	8	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	3	6	— 4	0
Do. Shorn	4	8	— 5	0	Lambs	6	8	— 7	8
					Calves	4	0	— 5	8
					Pigs	3	4	— 4	6

Beasts, 4670; Sheep and Lambs, 25,520; Calves, 192; Pigs, 530

THURSDAY, May 19.

We have a fair supply of Beasts, and the demand very limited. Prices are not quite so good as on Monday, and a clearance cannot be effected. The number of Sheep and Lambs is large; several remain unsold, although there is a disposition to take lower prices. There is no alteration in the trade for Calves. Our foreign supply consists of 580 Beasts, 1790 Sheep, and 373 Calves. Milch Cows, 75.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	6	to 4	8	Best Long-wools.	..	—	..	
Best Short-horns	4	4	— 4	6	Do. Shorn	4	4	— 4	6
2d quality Beasts	2	8	— 3	8	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	3	6	— 4	0
Do. Shorn	4	8	— 4	10	Lambs	6	8	— 7	8
					Calves	4	0	— 5	8
					Pigs	3	4	— 4	4

Beasts, 1245; Sheep and Lambs, 8690; Calves, 485; Pigs, 220.

MARK LANE.—MONDAY, May 16.

The supply of English Wheat was short this morning, and that of spring corn moderate. The splendid weather checked the general demand for Wheat, and last week's prices declined 1s. per qr. for the best, and 2s. on other sorts. Flour sold slowly at about former rates. Grinding Barley was steady in value. Beans and Peas were fully as dear. Oats were purchased to a moderate extent at about last Monday's rates.

PER IMPERIAL QUARTER	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	42	48	Red	40	48
— — fine selected runs .. ditto	44	52	Red	40	48
— — Talavera	48	54			
— Norfolk	—		Red	—	
— Foreign	36	52			
BARLEY, grind. & dist., 25s to 27s .. Chev.	34	38	Malting	29	33
— Foreign .. grinding and distilling	22	26	Malting	27	31
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish .. Potato	19	22	Feed	—	
— Foreign .. Poland and Brew	17	22	Feed	15	20
RYE	30	32	Foreign	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan .. 27s to 36s .. Tick	30	33	Harrow	30	33
— Pigeon .. 32s to 40s .. Winds.	—		Longpod	—	
— Foreign .. Small	36	42	Egyptian	30	32
PEAS, White, Essex and Kent .. Boilers	32	33	Suffolk	33	34
— Maple .. 30s to 34s .. Grey	28	30	Foreign	31	33
MAIZE .. White	—		Yellow	—	
FLOUR, best marks delivered .. per sack	35	40			
— 2d do .. ditto	28	34	Country	28	34
— Foreign .. per barrel	15	25	Per sack	32	40

FRIDAY, May 20

Since the 13th inst the weather has been unusually fine, and the temperature as high and probably higher than any recorded at this period of the year. The Wheat trade has been very inactive and depressed; a decline of 1s. per qr. is reported from various markets throughout the kingdom. The value of Spring Corn was maintained, except in Scotland, where Barley and Oats are somewhat cheaper. Flour continues to be neglected, and may be noted 1s. per sack and 6d. per barrel cheaper. Since Friday last 72 vessels have been reported off the coast. With the numerous arrivals off the coast holders have become inclined to accept 1s. to 2s. per qr. lower prices for Wheat, but buyers pressing for a greater reduction only a few sales have been made. Barley is inquired after at 6d. to 1s. per qr. lower rates. Paris, May 19.—Flour is held for late rates, but business has remained very limited. The six marks for delivery this month are offered at 34s. 9d. per 280 lbs. The present stock of Flour is estimated at 16,720 cwt. Wheat is very difficult to dispose of, and nominally unaltered in value. The arrivals of English Oats are large, of foreign Barley good, of all other English and foreign grain small. The attendance at to-day's market was very limited, and business in Wheat from the stands almost suspended, some of the Essex left over from Monday being unsaleable, except at a reduction of several shillings per qr. Foreign not being pressed for sale prices were nominal. A few sales made of Barley, Beans, and Peas were at late quotations, but Oats were difficult of sale and rather cheaper.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	210 qrs.	— qrs.	4020 qrs.	330 sks.
Irish	—	—	2260	— ,,
				50 ,,
Foreign ..	2200 ,,	3080	12,320 ,,	— brls

LIVERPOOL, May 17.—To-day's market has had a very slender attendance of buyers, and the business done in both Wheat and Flour have been of the merest retail character, at a further slight reduction on the rates current last market day, say fully 1d. per cental and 6d. per barrel and sack. Indian Corn was in fair request at 3d. per qr. less money. Oats and Oatmeal very dull, and both the turn in buyers' favour. Beans, Peas, and Barley each remain stationary at late rates.

FRIDAY, May 20.—The attendance and business at market is so very limited that the value of all articles is quite nominal.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
April 9	40s 1d	30s 9d	18s 11d	29s 0d	32s 8d	32s 3d
— 16	40 1	30 10	19 3	27 8	33 0	31 11
— 23	39 7	31 1	18 9	29 0	32 7	32 1
— 30	39 2	30 6	19 4	28 7	33 9	32 1
May 7	38 9	30 3	19 5	32 8	34 0	32 1
— 14	39 3	29 9	19 8	28 5	34 3	32 6
Agg. Aver.	39 6	30 6	19 5	29 2	33 5	32 4

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	April 9.	April 16.	April 23	April 30.	May 7.	May 14.
40s 1d—	——	——	..	..	..	..
39 7	..	..	——	..	..	..
39 3	..	..	..	..	..	
39 2	..	..	..	——	..	..
38 9	..	..	..	..	——	..
..	..	..	..	..	..	..

WANTED, a practical, energetic MAN, having a good knowledge of PROPAGATING and GROWING HARD and SOFT-WOODED PLANTS; also Rose and Fruit Budding, Grafting, and General Nursery Work.—Full particulars as to age, previous situations and wages expected, &c., to Mr. W. B. JEFFERIES, Arboretum Nurseries, Ipswich.

To Propagators.

WANTED IMMEDIATELY, in an extensive Metropolitan Nursery Establishment, a First-class PROPAGATOR under Glass, principally of Hard-wooded Plants. Salary to a thoroughly competent Man, 2*l.* per week.—Apply, with particulars, to A. B. C., *Gardeners' Chronicle* Office, W.C.

WANTED, a PROPAGATOR and SALESMAN.—J. T. HODSON, Edgbaston Nursery, near Birmingham, is in want of a steady industrious Man, who has a thorough knowledge of the profession; must be a good hand at Bouquet Making.—Apply stating salary required, with references, as above.

WANTED, as GARDENER for a small Flower Garden and Conservatory, a married man, without incumbrance, to reside on the premises.—Address by letter only, A. Z., 15, Duke Street, Bond Street, London, W.

WANTED, an unmarried, Single-handed GARDENER in a Clergyman's small Establishment, where Vines and Melons, &c. are forced. Wages, 30*l.* per annum, indoors. Age not less than 25. Unexceptionable references expected.—N. B., Care of Postman, Fenny Compton Station, Leamington.

WANTED, a GROWER for Market.—Must have filled a similar situation.—Apply to Messrs. ELWIS & CO., Clifton Nursery, Clifton Villas, Maida Hill, W.

WANTED, at Midsummer, a BAILIFF and WIFE without incumbrance, to Manage a Home Farm of about 250 acres. He must understand Farming well and the general duties of a Bailiff, and the Wife the Management of the Dairy and Poultry.—Apply to G. WESTBURY, Esq., Land Agent, 44, Lincoln's-inn Fields, and Andover.

Dairy.

WANTED, a MAN and his WIFE, without incumbrance, to Manage a Dairy of 15 or 20 Cows; the Man to understand and Manage the Stock on the Property, the Woman Butter Making and Poultry. Both must be good Milkers.—Apply at GREGORY'S Advertising Office, 73, Newgate Street, E.C.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended by gentlemen.—Further particulars given on application to Messrs. E. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 30, married, no incumbrance; has a thoroughly practical knowledge of his profession in all its branches. Six years' good character.—R. WALKER, Brookman's Park, Hatfield, Herts.

GARDENER (HEAD).—Age 40, married; thoroughly understands his profession in all its branches. Good reference as to abilities, and good character.—A. B., C. F. Humbert, Esq., Surveyor and Land Agent, Watford, Herts.

GARDENER (HEAD).—Age 35, married; has had 15 years' experience in Fruit and Planthouses, Flower and Kitchen Gardens; also in the Laying Out of Pleasure Ground. Was eight years in last situation.—J. K., Mr. Richard Smith, St. John's Nursery, Worcester.

GARDENER (HEAD).—Age 31, married; competent in all kinds of Forcing, also Plant, Vine, and Orchard-houses. Designing, Renovating, &c., and Fruit and Kitchen Garden. Character will be found satisfactory. Low country preferred.—THE GARDENER, F. Harbottles, Esq., Morley Lodge, Old Charlton, Kent.

GARDENER (HEAD).—Age 30, married, no incumbrance; thoroughly understands Early and Late Forcing of Vines, Pines, Peaches, Cucumbers, and Melons, Stove and Greenhouse Plants, Flower, Fruit, and Kitchen Gardens, can take Charge of Land if required; 14 years' experience; unexceptionable character. Wife a good Dairywoman.—X. Y. Z., Post Office, Dulwich, S.

GARDENER (HEAD).—Age 32, married; has had great experience in every branch of his profession, including the Cultivation of Orchids, Stove and Greenhouse Plants, Ferns, &c.; the Forcing of all kinds of Fruits and Vegetables, including Mushrooms; and the management of large gardens generally. The advertiser can be highly recommended to any gentleman in want of a first-rate practical gardener.—A. B., Mr. Slocombe's, Stationer, Ongar, Essex.

GARDENER (HEAD).—Middle-aged, married, no incumbrance; thoroughly understands the Management of Pines, Vines, Peaches, Melons, Stove and Greenhouse Plants, Flower and Kitchen Gardens, Early Forcing of Fruit and Vegetables, and competent to carry out Alterations or Lay-out New Grounds of great practical experience. Character will bear the strictest investigation. No Single-handed place accepted.—J. B., Messrs. James Carter & Co., Crystal Palace Nursery, Forest Hill, Sydenham, S.E.

GARDENER (HEAD).—JOHN PEARSON, who has been for upwards of two years Head Gardener to the Right Hon. Lord Foley, at Worksop Manor, Notts, will be at liberty on 1st June next, to dispose of his services in a similar capacity. He is experienced in every department of Gardening, and can Lay out Grounds; thoroughly competent to undertake the Management of a first-class establishment. J. P. has been several years in the first gardens in England and Scotland. Can give unexceptionable references.

To Noblemen and Gentlemen.

GARDENER (HEAD).—Age 32, single; has a thorough practical knowledge of his profession. Is especially qualified for the Forcing and Production of first-class Grapes, Pines, Peaches, Strawberries, Cherries, &c. Is well versed in the Management of a Kitchen Garden, has a general knowledge of Plant Growing, is well acquainted with the Laying Out and Management of Flower Gardens, &c., and would like to serve a Gentleman who wishes a garden conducted with spirit and order. Unexceptionable references for abilities, honesty, sobriety, &c.—J. W., Mr. Veitch, Royal Exotic Nursery, King's Road, Chelsea, London, S.W.

GARDENER.—Age 33, single, steady; understands the Management of Vines, Greenhouse, Flower, and Kitchen Gardens, Pits, &c., Land and Stock. Good character.—A. B., Mitchell's Place, Vineyard, Richmond, S.

GARDENER, or GARDENER and BAILIFF.—Married, two daughters, 9 and 12 years of age: understands the profession in all its branches; Wife a good Dairy and Poultry Woman if required. Good references.—H. G., Fletcher's, Milton Farm, near Dorking, Surrey.

GARDENER, where one Man is kept, or good SINGLE-HANDED.—Age 28, married, no incumbrance.—A. B., Messrs. Osborne & Son, Branch Nursery, Sunbury.

GARDENER (UNDER).—Age 23; active, of good experience. Good character from last three places.—MARSHALL, Hykeham, Lincoln.

FOREMAN and PROPAGATOR in a Provincial Nursery.—Age 21; good references.—X. Y., *Gardeners' Chronicle* Office, W.C.

GENERAL PROPAGATOR, or PROPAGATOR and HOUSE FOREMAN.—Age 36; is open to an engagement with any respectable Firm requiring a really competent Man. First-class testimonials.—A. B., 5, Alfred Terrace, Britannia Road, Fulham, London, S.W.

To Nurserymen.

TRAVELLER or FOREMAN.—Has had 18 years' thorough practical experience in the largest London and Provincial Establishments. A London Establishment preferred. Unexceptionable references.—A. Z., *Gardeners' Chronicle* Office, W.C.

IMPROVER in a gentleman's Garden.—Age 19; would have no objection to pay a small Premium. Twelve months' good character from last situation.—B. H., Broome Hall Gardens, Caple, near Dorking, Surrey.

IMPROVER.—A Young Man, married, wishes to learn the Forcing Department in a gentleman's Garden. Would go to a first-rate Gardener. Has had two years' experience in a Vinery.—Apply, stating full particulars, to E. MARTIN, St. Osyth, near Colchester, Essex.

To Noblemen and Gentlemen.

CARPENTER, on a gentleman's Estate.—Age 25, married; a good Workman. Good references as to character and ability.—H. H., Post Office, Beckington, Bath.

The Gardeners' Chronicle Newspaper.

SATURDAY, MAY 28, 1864.

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Third Edition; at all Libraries, in Three Vols., post 8vo.
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By the Author of "Lady Audley's Secret," &c.
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PORTABLE FARM RAILWAYS, a Substitute for FIELD CARTING. Report of a Discussion at the Maidstone Farmers' Club, January 21, 1864.
Maidstone: J. GRUNDY, 83, Bank Street. London: SIMPKIN, MARSHALL, & Co.

Just Published,
CULTURAL DIRECTIONS for the ROSE; with select Lists of Sorts adapted to various circumstances and situations; and a Calendar of Operations to be performed during each month throughout the year. By JOHN CRANSTON, Nurseries, King's Acre, near Hereford. Second Edition, enlarged and improved.
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All Persons who effect Policies on the Participating Scale before June 30th, 1864, will be entitled at the NEXT BONUS to one year's additional Share of Profits over later Assurers.
Tables of Rates and Forms of Proposal, and the last Report showing the financial position of the Society, can be obtained from any of the Society's Agents, or of
GEORGE CUTCLIFFE, Actuary and Secretary.
13, St. James's Square, London, S.W.

VICTORIA and LEGAL and COMMERCIAL LIFE ASSURANCE COMPANY, 18, King William Street, City.
FOURTH DIVISION OF PROFITS.
At the Annual General Meeting, held on the 12th May last, a Reversionary Bonus of over £62,000 was appropriated to the Assured, equal to 42 per cent. on the Premiums paid.

The Accumulated Funds exceed	£410,000
The Annual Income is over	£70,000
The Claims by Death paid exceed	£310,000
Bonuses declared	£145,000

Every description of Life Assurance business is transacted.
Advances are made on Mortgage of Freehold Property, Life and Reversionary Interests, &c., and also to Assurers on Personal Security.
WILLIAM RATRAY, Actuary.

Bonus 1865.
GENERAL HAIL STORM INSURANCE SOCIETY.
ESTABLISHED 1843.
Head Offices, St. Giles's Street, Norwich.
WHEAT and other Growing Crops INSURED at SIXPENCE per ACRE, without Limit as to Quantity Grown. Glass in Greenhouses, &c., from 20s. per cent. Immediate Payment in case of loss.
BONUS TO INSURERS EVERY THREE YEARS.
Parties renewing their Insurances this year will participate in the next division, which will take place in 1865.
AGENTS WANTED.—Apply to CHAS. S. GILMAN, Secretary.

News of the Week.

THE House of Lords re-assembled on Monday after the Whitsuntide recess. On the motion for the second reading of the County Courts Amendment Bill, Lord ST. LEONARD'S and Lord CHELMSFORD objected to the Bill that it would take away the credit of the working classes, which in reality was their capital. The LORD CHANCELLOR defended the Bill, which was ultimately read a second time. On Tuesday, being the QUEEN'S birthday, the House did not sit. On Thursday, the Earl of ELLENBOROUGH called attention to the exactions of the Prussians in Jutland in spite of their obligations under the recent armistice, and expressed his opinion that the QUEEN'S natural sympathies with Germany had diminished the influence of England, and prevented the Government from vindicating their views by force. Earl RUSSELL in reply said that Marshal VON WRANGEL was directed on the 28th of April to levy contributions to the extent of 90,000*l.*, being the estimated amount of German shipping captured and destroyed by the Danes, and that subsequently the Prussian Government had issued orders to stop any further contributions, and to pay for all provisions required by their troops. With regard to this country embarking in a war with the great German Powers, no good result could ensue from the adoption of such a course; and with regard to the QUEEN'S views his lordship added, that in all the steps which had been taken with respect both to Denmark and Poland, HER MAJESTY had readily acceded to the advice tendered to her by her responsible advisers. The Duke of BUCCLEUCH moved the second reading of the Scotch Episcopal Disabilities Removal Bill, the object of which was to repeal the laws which prevent persons ordained in the Scotch Episcopal Church from holding benefices or officiating in England. After a long discussion the bill was read a second time and referred to a select committee.

In the Commons on Friday Lord PALMERSTON stated, in answer to Mr. BAXTER, that her Majesty's Government had interfered in the contest between the Imperialists and Taepings in China simply for the purpose of protecting our treaty rights and national interests. In answer to Sir J. PAKINGTON, Mr. CARDWELL said that it had been determined to put a stop at once to the Ashantee war, and that transports would immediately be sent to the Gold Coast to bring away all the troops except those which are ordinarily employed there. The House then went into committee of supply on the Civil Service Estimates, and was shortly afterwards counted out. On Monday, in answer to Mr. WHITESIDE, Mr. LAYARD, and afterwards Lord PALMERSTON, said that it was distinctly provided by the armistice, that no contributions should be levied in Jutland after the date of its signature, and that whatever was required for the Allied troops should be paid for; and Count BISMARK had assured her Majesty's Government that this engagement would be fulfilled. The Vacating of Seats (House of Commons) Bill. The Army Prize (Shares of Deceased Persons) Bill and the Beer House (Ireland) Bill were read a second time. The Limited Penalties Bill, the Chain Cables and Anchors Bill, and the Chief Rents (Ireland) Bill, passed through committee. The Piers and Harbours Orders Confirmation Bill was referred to a select committee. Sir JOHN HAY obtained leave to bring in a bill to authorise the Bank of England to issue their notes in Scotland, and to make such notes a legal tender there. Sir H. BRUCE obtained leave to bring in a Bill to assimilate the law for shooting game in Ireland to that in force in England and Scotland. The House then adjourned over the QUEEN'S birthday and the Derby Day to Thursday. On that day Mr. HENNESSY moved resolutions to the effect that the negotiations of her Majesty's Government respecting Poland had not terminated in a satisfactory manner; that it appeared from the papers laid before Parliament that the conditions on which the British Government agreed to acknowledge the dominion of Russia in Poland had not been fulfilled by Russia; and that her Majesty's Government was no longer bound to recognise the sovereignty of Russia in Poland. Lord PALMERSTON opposed the motion, and after a long debate the resolutions were negatived without a division. The House then went into committee of supply on the Supplementary Navy Estimate, which was agreed to after considerable discussion. The report on Banks Acts was brought up and agreed to. The Union Assesment Committee Act Amendment Bill was considered, and some new clauses added. The Highways Act Amendment Bill was read a second time and referred to a select committee. The Vacating of Seats (House of Commons) Bill, and the Army Prize (Shares of Deceased) Bill passed through committee.

The Prussian Prime Minister has declared that the Prussian Government considers itself free from the obligations of the Treaty of 1852; and it is reported in Paris that England, Sweden, Prussia, Germany, and France are agreed as to the necessity of establishing a natural and definite frontier line between Germany and Denmark, all the territory on one side to be exclusively Danish, and all on the other side exclusively German. This frontier is to be the Dannewerk. The whole of Holstein and the southern part of Schleswig, according to this arrangement, would be detached from Denmark altogether, and either become part of Prussia, or be constituted a separate State under the Duke of AUGUSTENBERG. It is also reported that the Conference at their next meeting will determine whether this question is to be decided by the votes of the inhabitants, as suggested by the EMPEROR OF THE FRENCH; by the Conference itself, as suggested by Earl RUSSELL; or by the German Diet, as proposed by Baron von BEUST.

A despatch from Copenhagen informs us that a strong warlike feeling is openly expressed in that capital, and that the Government is determined to recall its plenipotentiaries from London if the German Powers do not modify their claims. A deputation from the town of Kolding arrived at Copenhagen on Monday, to request the KING to uphold the rights of Denmark at the conclusion of peace, and not to prolong the armistice. Similar addresses are expected from several other towns in Jutland.

By the Bombay mail of the 29th ult., we learn that the VICEROY has left Calcutta for Simla, at which place the Viceregal Council is to meet until further orders. The Hon. ASHLEY EDEN has returned to Darjeeling from Bhootan, where, as is already known, he was grossly insulted in public Durbar by the chiefs, and compelled to sign a treaty surrendering to them the whole of Assam. The KING of BOKHARA has released the four Italian gentlemen whom he had imprisoned. The Imperial Council has passed a new Marriage Law for India. Fresh troubles have broken out in Cabool. The Sirdars have entered into a conspiracy against the AMEER, and have written to UFZUL KHAN, urging him to march on Cabool. The AMEER has solicited the aid of the British Government. The Bombay, Baroda, and Central India Railway has been brought to a successful termination, and is to be opened shortly.

From the United States we have further details of the series of sanguinary battles with which the new campaign in Virginia has been opened. The first of these battles was fought at Wilderness on the 5th inst. It lasted all day, and terminated in the capture of two entire Federal brigades. On the 6th General GRANT renewed the battle along his whole line, but was repulsed with dreadful slaughter. General HANCOCK, on the left, was first driven back, and General SEDGWICK'S corps, on the right, was then thrown into confusion and compelled to fall back on BURNSIDE'S reserves. Later in the day General LEE assumed the aggressive, turned the right of the Federal army, and drove it back upon the centre with a loss to the Federals of nearly 7000 men. On the night of the 6th General LEE retired to another line of defence, near Spottsylvania. To that point General GRANT immediately followed, and, after some sharp skirmishing on the 7th, again attacked the Confederates on the following morning. The battle raged throughout the 8th, 9th, and 10th with little intermission, except during the darkness of night. The losses on both sides in these engagements were enormous, those of the Federals, as the attacking force, being said to have amounted in killed, wounded, and missing, to 40,000 men. On the 12th another desperate battle was fought in front of General LEE'S new position. It was commenced early in the morning by a vigorous charge of General HANCOCK on the Confederate rifle-pits in his front, in which he is said to have made 4000 prisoners, including Generals JOHNSON and STEWART, and captured several guns. The battle was continued with great fury throughout the day, but every effort to penetrate General LEE'S line was unsuccessful, and at nightfall the Confederates maintained their position in front of Spottsylvania Court House. No engagement has since taken place, and both armies now confront each other at Spottsylvania, General LEE holding a strong position north of the Court House. Heavy rains have

prevented further military operations on either side. The carnage of the 12th is described as awful, and the men on both sides are said to have fallen like grain. No returns of killed and wounded are given, but the total loss of the Federals in the eight battles is estimated at 45,000 men, including among the killed Generals SEDGWICK, HAYS, WADSWORTH, RICE, OWENS, STEVENSON, and CRAWFORD. General LEE also lost many Generals, and both himself and General LONGSTREET were wounded, the latter, it is said, severely. The Confederates have attacked General BUTLER before Drury's Bluff, in front and in rear, inflicting considerable loss and compelling him to retire to his lines. The Confederates have also defeated General SIGEL at Newmarket, capturing five guns. He retreated however across the Shenandoah in good order to Strasburg, with the loss of 650 men. General SHERMAN, after two days' fighting, has occupied Dalton and Resaca, General JOHNSTONE retreating towards Atlanta, pursued by the Federals. A portion of General BANKS's army has been compelled to march overland to the Mississippi river, fighting its way out. His retreat from Alexandria by the Red River had been previously cut off by Confederate batteries. A fleet of steamers, with supplies and reinforcements for his army, has been sunk or captured, and Admiral PORTER'S gunboats above the falls of the Red River have been stranded by a diversion of the waters, and are expected to fall into the hands of the Confederates. The House of Representatives has adopted a resolution to drop from the army rolls all unemployed general officers, including Generals M'CLELLAN and FREMONT, and has passed a bill giving to soldiers and sailors, both white and coloured, homesteads from confiscated Confederate estates. A forged proclamation was issued in New York on the 18th, announcing a call by President LINCOLN for 400,000 men, and declaring General GRANT'S campaign closed. The publication of the document caused intense excitement until the forgery was discovered.

Home News.

THE QUEEN IN SCOTLAND.—On Wednesday the 18th instant the Queen drove with the Princess Leiningen and the Princess Beatrice. On Thursday the Queen walked in the grounds and went out in the afternoon, accompanied by the Princess Louisa and Princess Beatrice. The Princess Helena, with the Prince and Princess Leiningen, drove to the Linn of Dee. On Friday morning the Queen went out in the grounds, and drove in the afternoon with the Princess Leiningen. On Saturday morning the Queen and the Princess Louisa drove to the Balloch Buie. In the afternoon her Majesty, with the Princess Leiningen and the Princess Helena, drove by the Bridge of Dee round by Aberarder. Prince Leopold and Princess Beatrice went to the Falls of Garthalt. On Sunday morning the Princess Helena attended divine service in the parish church of Crathie. In the afternoon the Queen went out with the Princess Leiningen and Princess Helena. On Monday morning the Queen, with the Princess Leiningen and Princess Louisa, went out. In the afternoon Her Majesty, with the Princess Leiningen and the Princess Helena, drove through Castleton and round by the Lion's Fall. The Princess Louisa went out riding. Prince Arthur arrived at the Castle from Greenwich Park. On Tuesday morning the Queen, who on that day completed her 45th year, went out with the Princess of Leiningen and the Princess Helena. In the afternoon Her Majesty, with the Princess Leiningen, Princess Helena, Princess Beatrice, and Prince Leopold, drove to Birkhall, and home by Ballater. Princess Louisa and Prince Arthur accompanied the Queen on horseback. Lord Stanley of Alderley left the Castle. The Duke of Argyll arrived on a visit to the Queen.

THE PRINCE AND PRINCESS OF WALES.—On Friday morning the Prince rode on horseback. In the afternoon the Prince and Princess of Wales took a carriage drive. A deputation of ladies from Ireland attended at Marlborough House to present some lace to the Princess of Wales. The deputation consisted of the Marchioness of Waterford, the Marchioness of Drogheda, the Marchioness of Clanricarde, the Marchioness of Kildare, the Countess of Cork, the Countess of Erne, the Viscountess Gort, the Lady Annaly, the Lady Clermont, and Mrs. Taylor. The Marquis of Kildare accompanied the ladies and presented an oak casket. A deputation of ladies from Worcester attended to present to the Princess of Wales three vases of Limoges enamel, manufactured at the Royal Porcelain Works, and presented by the ladies of Worcestershire. The deputation consisted of Lady Georgina Vernon, Lady Raglan, Lady Blount, Lady Pakington, and Mrs. Holland. A deputation of gentlemen from the city of Worcester, headed by the Mayor, attended to present a breakfast service. In the evening their Royal Highnesses dined with the Duke of Cambridge at Gloucester House. On Saturday the Prince and Princess drove to Hampton Court. In the evening their Royal Highnesses went to the Italian Opera, Covent Garden. On Sunday morning the Prince and Princess attended Divine service at the Chapel Royal, St. James's. On Monday morning the Prince rode on horseback. The Princess took a carriage drive. The Prince visited the Grand Duke of Mecklenburg Strelitz at St. James's Palace. In the afternoon his Royal Highness went to the House of Lords. In the evening, by command of the Queen, a State Concert was given at Buckingham Palace, to which a party of nearly 800 was invited. On Tuesday morning the Prince and Princess, accompanied by the Princess Mary of Cambridge and Prince Adolphus of Mecklenburg Strelitz, were present at the parade of the troops at the Horse Guards, in honour of the Queen's birthday. The Prince rode on horseback. In the afternoon the Prince and Princess took a carriage drive. The Duke and Duchess of Montpensier, the Princess Marie Isabella of Orleans, and the Duke of Cambridge visited the Prince and Princess at Marlborough House. In the evening the Prince and Princess, accompanied by the Grand Duke of Mecklenburg-Strelitz and Prince Adolphus, went to the Princess's Theatre. On Wednesday the Prince went to Epsom. The Princess took a carriage drive. On Thursday morning the Prince went to the railway station at Charing Cross to meet the Prince and Princess Louis of Hesse, who arrived on a visit to their Royal Highnesses. The Prince afterwards rode out on horseback. In the afternoon the Prince and Princess attended Divine service in Westminster Abbey. Their Royal Highnesses, with the Prince and Princess Louis of Hesse, afterwards visited the Grand Duke and Grand Duchess of Mecklenburg-Strelitz at St. James's Palace. In the evening the Prince and Princess, accompanied by the Prince and Princess Louis of Hesse, went to the Italian Opera, Covent Garden. The Prince and Princess, with the Prince and Princess of Hesse, will take up their residence at Frogmore Lodge during the Ascot race week, from which place they will proceed to the course in State. Their Royal Highnesses will return to town on Friday, the last day of the races, to be present at the State ball to be given at Buckingham Palace on the 10th, at which all the Princes and Princesses will be present.

PRINCE ALFRED was present at the marriage of his cousin, Princess Clotilde of Saxe Coburg and Gotha, with the Archduke Joseph, which was solemnised at Coburg on the 12th inst. His Royal Highness proceeded thence on a visit to his sister, the Princess Louis of Hesse, and on Saturday night arrived at Friburg on his way to Geneva and Marseilles, where he joined the Racoon on the 22d inst.

THE PRINCE AND PRINCESS OF HESSE arrived at Gravesend on Thursday in the Victoria and Albert, Royal steam yacht, from Flushing. Their Royal Highnesses travelled by a special train on the North Kent line to Charing Cross, where they were met by the Prince of Wales, and then proceeded to Marlborough House, where they will remain, on a visit to the Prince and Princess of Wales, until her Majesty's return to Windsor on the 10th June. The Prince and Princess of Hesse will then go to Windsor, on a visit to her Majesty.

THE PRINCESS HELENA.—The 18th anniversary of the birth of the Princess Helena occurred on Wednesday, her Royal Highness having been born on May 25, 1846. The day was celebrated in the metropolis and at Windsor in the usual manner.

THE ORLEANS FAMILY.—The marriage of the Count de Paris to the Infanta of Spain, daughter of the Duke and Duchess of Montpensier, will take place on Monday next. The Duke and Duchess de Chartres will give a grand ball in the evening at their residence at Ham to celebrate the event. The Count de Paris has taken York House, adjoining the church at Twickenham (formerly rented by the late Earl of Lonsdale), for a term of years.

ORDER OF THE GARTER.—The *Gazette* of Tuesday announces that the Queen, as Sovereign of the Order of the Garter, has, by letters patent under the Sign Manual and the Great Seal of the Order, dispensed with all the statutes in regard to Installation, and has granted to the Duke of Sutherland and the Marquis of Ailesbury, Knights of the Order, full authority to exercise all rights and privileges belonging to a Knight of the Garter, in as full and ample a manner as if they had been formally installed.

ORDER OF THE THISTLE.—The vacant star of the Order of the Thistle has been conferred on the Earl of Glasgow.

LORD LIEUTENANCY.—The Earl of Minto has been appointed Lord-Lieutenant of Fifeshire.

THE BISHOPRIC OF PETERBOROUGH.—The *Gazette* of Tuesday announces that a *congé d'élire* has been issued for the appointment of Dr. Jeune to be Bishop of Peterborough.

INDIAN JUDGESHIP.—The vacant seat in the Supreme Court, Calcutta, caused by the death of Mr. Henry Mills, has been filled by the appointment of Mr. John Budd Phear, M.A., of the Norfolk Circuit.

OFFICIAL APPOINTMENT.—The Queen has been pleased to appoint the Right Hon. Henry Austin Bruce, Vice-President of the Committee of Council on Education, to be the Fourth Charity Commissioner for England and Wales.

DIPLOMATIC APPOINTMENT.—The Queen has appointed the Hon. Edward Morris Erskine, now Secretary of Embassy at Constantinople, to be Minister Plenipotentiary to the King of the Hellenes.

COLONIAL APPOINTMENTS.—The Queen has appointed Lieut.-Col. Henry Fitzharding Berkeley Maxse to be Governor and Commander-in-Chief of the Island of Heligoland; Lieut.-Governor Eyre to be Lieutenant-General, Governor-in-Chief, and Vice-Admiral of Jamaica; The Hon. Manners Sutton, formerly Lieut.-Governor of New Brunswick, to be Governor of Trinidad; Sir Richard Graves M'Donnell, late Governor of South Australia, to be Lieut.-Governor of Nova Scotia; Mr. Anthony Musgrave, Governor of St. Vincent, to be Governor of Newfoundland; Mr. R. Rawson, C.B., Colonial Secretary at the Cape, to be Governor of the Bahamas; Lieut.-Governor Colonel Maclean to be Governor of Natal; Mr. George Berkeley, Colonial Secretary of British Honduras, to be Lieut.-Governor of St. Vincent, in the room of Mr. Musgrave, appointed to Newfoundland; and Commander John Hawley Glover, R.N., to be Colonial Secretary of Lagos.

GOVERNORSHIP OF GUERNSEY.—The Queen has appointed Major-General Charles Rochfort Scott to be Lieutenant-Governor of Guernsey.

THE CHURCH OF SCOTLAND.—The Queen has appointed Lord Belhaven, K.T., to be her Majesty's High Commissioner to the General Assembly of the Church of Scotland.

THE CHATHAM COMMAND.—Major-General Sir Robert Walpole, K.C.B., now commanding the garrison at Gibraltar, has been appointed to the command at Chatham, shortly to be vacated by General Eyre.

THE NAVY.—Rear-Admiral Hon. Charles G. J. R. Elliot, C.B., has been appointed commander-in-chief on the south-east coast of America, vice Rear-Admiral Warren, whose period of service has expired. Rear-Admiral Sir James Hope, K.C.B., has succeeded Sir Alexander Milne, as commander-in-chief of the North American station, with the local rank of a Vice-Admiral. Rear-Admiral George St. Vincent King has been appointed to succeed Sir Baldwin Walker, Bart., as commander-in-chief of the Cape of Good Hope station; and Rear-Admiral the Hon. J. R. Drummond, junior naval Lord of the Admiralty, has been appointed to succeed Rear-Admiral Kingcome as commander-in-chief in the Pacific.

PARLIAMENTARY MOVEMENTS.—Mr. J. J. Powell, Q.C., who vacated his seat for Gloucester on being appointed to the office of Recorder of Wolverhampton, was re-elected on Wednesday without opposition. Mr. W. H. Gore Langton has signified his intention, owing to failing health, of retiring from Bristol at the close of the present parliament. Sir S. M. Peto and Mr. Fremantle are mentioned as candidates for the vacant seat, the former in the Liberal, the latter in the Conservative interest.

ARMOUR PLATED VESSELS.—A return from the Admiralty has been presented to Parliament, giving an account of our iron-plated ships and batteries built or building, their armament, horse-power, draught of water, and other particulars concerning them. The return comprises the 16 vessels already afloat and the seven floating batteries; and it includes 11 vessels now building and to be either wholly or partially armour-clad, to be completed at various dates within the next 12 months. Of the ships in the list, the first—the Warrior—was launched in December, 1860; the floating batteries are all of the date of 1855 and 1856. The Black Prince is the most costly ship in the list, the first cost, including engines and fittings, amounting to 363,813*l*.. The ships entered as "building" are the Agincourt, described as ready for launching, but completing before undocking; the Prince Albert (launched last week), and the Favourite, marked for launching this month; the Royal Alfred, for October; the Pallas, for December; the Bellerophon, Lord Clyde, Lord Warden, Viper, and Vixen, March, 1865; and the Northumberland, April, 1865.

OCCUPATIONS OF THE PEOPLE.—The recent census of England shows this list of occupations followed by various classes whose numbers exceed 100,000 persons:—Agricultural labourers and farm servants (without including members of the farmer's family), 1,188,789; domestic servants, 1,106,974; engaged on the cotton and calico manufacture, 456,646 persons; on the woollen cloth manufacture, 130,034; on the iron manufacture, 125,771; on the satin and silk manufacture, 101,670; coal miners, 246,613; dressmakers and milliners, 287,101; laundry people, 167,607; shoemakers, 250,581; tailors, 136,390; carpenters and joiners, 177,969; blacksmiths, 108,165. There are 309,883 persons described generally as "labourers."

ENDOWED SCHOOLS.—A Parliamentary return relating to endowed schools receiving grants from the Government in the years 1862 and 1863 shows that in England and Wales more than 1250 of the schools receiving Government grants stated in their return of income that they had an endowment; so also did 74 of the British and Wesleyan, and 43 of the Roman Catholic schools.

THE VOLUNTEER REVIEW.—A meeting of the commanding officers of Volunteer Corps in and about the metropolis was held on Friday, at which it was

agreed to request the employers of labour to allow all volunteers in their employment a half-holiday in order that they may take part in the review which is to take place in Hyde Park this afternoon under the inspection of the Prince of Wales. It is officially announced that no one will be allowed to enter the inclosure that will be railed off in Hyde Park, except officers in uniform and persons provided with tickets. Officers in uniform will not have the privilege of bringing with them friends who are not provided with tickets. Tickets will be distributed by the officers commanding the Volunteer corps which are to be reviewed, and will also be sent to members of both Houses of Parliament and to public departments. The permission given in a General order dated the 25th inst. to Her Majesty's Lieutenants of counties to enter the inclosure does not extend to Deputy-Lieutenants.

Foreign.

France.—The Session of the Corps Législatif has been prolonged until the 28th inst. Baron von Beust was received by the Emperor on Saturday in private audience. His Excellency paid a visit to M. Drouyn de Lhuys on the same day, and left Paris for London on Tuesday morning. Councillor Krieger, one of the representatives of Denmark at the Conference, was received on Tuesday by M. Drouyn de Lhuys, and returned to London on Wednesday evening. The *Constitutionnel* of Thursday, in an article on the Danish question, says:—

"The Dano-German conflict is, above all, a question of Nationalities. The aspirations and interests of the nationalities which gave rise to the conflict should therefore be satisfied by a definitive solution. Holstein is German, and half of Schleswig is German. It is therefore not astonishing that a project exists to unite the German portion of Schleswig with Holstein. Inconveniences would arise from the system of a personal union between that new State and Denmark, and it appears difficult to understand why the population should not be summoned to decide upon a Government, and it is probable that they would then choose a German Sovereign. France has done nothing to bring about this solution, but it is evident that it is not in opposition to her policy."

The *Pays* says that England, France, Sweden, Prussia, and the German Diet have agreed to divide the Duchies at the Dannewirke, the southern part, inhabited by Germans, to be either united to Prussia or made a separate State under Prince Frederick, and the northern part to remain connected with Denmark. It adds, that Prussia, France, and Sweden are in favour of submitting this question to the votes of the inhabitants, that England is in favour of having it settled by the Conference, while the Diet claims the decision as its own privilege. The views of Austria, it says, are not yet known. On Wednesday, being Queen Victoria's birthday, there was a dinner at the British Embassy, at which the Emperor's Ministers were present. M. Drouyn de Lhuys proposed the health of the Queen. Earl Cowley replied, and proposed the health of the Emperor. The Corps Legislatif last week rescinded its vote in favour of restoring to the heirs of Lesurques the patrimony forfeited by the unjust execution of their parent, on the ground that it is too late to repair the injustice. The Duke of Malakoff (Marshal Pelissier), Commander-in-Chief in Algeria, died on Monday after a few days illness. He was born in November, 1794, at Maromme, in the Department of the Lower Seine, where his father was a powder manufacturer. He saw a good deal of service as a subaltern in 1823 and 1827, in the campaigns of Spain and the Morea; but first became known in Europe by his exploits in Algeria, and especially by his destruction of the Khabyl tribe of the Ouled Riahs, whom he smoked to death in a cave. When the Russian war broke out he was placed in command of the 1st corps of the Crimean army; and in May, 1855, he succeeded Marshal Canrobert as Commander-in-Chief of the French army. In August of that year the Russians attacked the French position on the Tchernaya, and were completely repulsed by General Pélissier. In the following month he captured the Malakoff tower of Sebastopol and the Redan of Careening Bay, for which he was made Marshal of France. He was created Duke of Malakoff, and a senator of France, in the following year. From 1858 to 1859 he held the appointment of French Ambassador in London, but as he did not find diplomacy at all to his taste, he retired, and in 1860 was again sent to Algeria as Governor-General. In 1857 a pension of 100,000 fr. was settled on Marshal Pelissier and his children; and he was nominated Vice-President of the Senate. In the following year he was appointed a member of the Privy Council; and in 1859 was created Chancellor of the Legion of Honour. The *Moniteur*, in announcing his death, says that France and the Emperor have sustained a heavy loss. The Algerian papers give the details of a victory gained by General Deligny, in which 3600 Arabs were repulsed. After the engagement of the 13th inst. the Flittas sacked the houses of Zammorais, burning the supplies and pillaging the warehouses. Colonel La Passet arrived during the night of the 15th and revictualled Zammorals. He subsequently covered the plain of Belizanne with reinforcements. General Deligny obtained a fresh success over the insurgents on the 16th inst. This insurrection is said to be intimately connected with the Tunis outbreak, which extends over almost the entire seaboard from La Calle to Tripoli, and is said to be connected with religious views. Many of the native chiefs thought that France would be engaged in a general war in 1864. They are very well informed respecting events in Europe. Several of their number receive the Arabic journal published at Constantinople, which contains the debates in the French Chamber and the English Parliament. Four steam frigates are preparing for the conveyance of troops to Algeria. The 12th Regiment of the Line and a detachment of military artisans have already been despatched to Algeria. The ship Ville de Paris, having on board Vice-Admiral Bouet-Willaumez, left Toulon for Tunis on Sunday morning, accompanied by six men-of-war, carrying in all 510 guns. Orders were sent on Thursday to Cherbourg for the departure of the ironclad frigate Invincible for the same destination. The French Derby was run on Sunday. The race was won by Bois Roussel, beating Affidavit and Civility by a bare length. Flatman, the jockey, who rode the winning horse, has now won the French Derby four times—in 1837 for Lord Seymour, with Lydia; in 1846, for Baron de Rothschild, with Meudon; in 1856, for the Prince de Beauvau, with Lion; and now, for M. Delamarre, with Bois-Roussel.

Spain.—The Minister for Foreign Affairs has taken into serious consideration the differences that have arisen between Spain and Peru. Fresh instructions have been despatched to the Spanish representative in that quarter, and to the Admiral in command of the fleet in the Pacific. A committee of the Senate has proposed to authorise the Government to treat with the Bank of Spain in order to make arrangements for liquidating all the deficits of the Treasury. The Bank would issue hypothecated notes amounting to 342 million francs, bearing 6 per cent. interest from the 1st July, 1864.

Belgium.—The Duchess of Brabant gave birth to a Princess on Saturday morning. Her Royal Highness and the infant Princess are both doing well. The Ministerial crisis has terminated, all the Ministers having withdrawn their resignations. The Chamber of Deputies has been convoked for the 31st inst.

Denmark.—The general elections to the Folksthing (Lower House) of the Rigsdag, the special Assembly for the kingdom, which were to have taken place upon the 14th June, are now ordered, by public letter of the King, to be held upon the 7th. It is considered of importance that Jutland should send its representatives to the Legislative Body, and as the armistice expires upon the 12th, it is doubtful whether the elections could take place at the date originally intended. The King has forwarded the following rescript to the Minister of Finance:—

"Some years ago an institution was founded in the vicinity of Copenhagen, the object of which was to secure a "home" for sick persons whom the troubles of life had deprived of that refuge which the word so beautifully designates. I am of opinion that a similar home might be established for the soldier wounded in war—be he officer, sub-officer, or private—who has no friends with whom he can reside, and would therefore desire to spend his life among comrades. It has seemed to me that the castle built and surrounded with splendidly laid out grounds in a lofty and healthy situation, close to Copenhagen, by King Frederick IV—that King who first created the 'Danish Militiaman,' and upheld Denmark's right to the possession of Schleswig—would form a voluntary home for the brave men of the army and fleet who have bled for Dybbol, and wherever else this fateful war may demand sacrifices. I request your Excellency to examine this idea of mine, in conjunction with the Ministers of War and of the Marine, and to lay before me the necessary plans. CHRISTIAN R."

A committee has been appointed, in consequence of this rescript, to examine his Majesty's proposition. Public opinion in Copenhagen has lately taken a more warlike tone. Perseverance in a persistent policy is approved. It is asserted that the Danish Government has determined to recall its Plenipotentaries should the German Powers not modify their demands. A deputation from the town of Kölding arrived at Copenhagen on Monday to request the King not to prolong the armistice, and in concluding peace to uphold the rights of Denmark. Several similar addresses are expected from other towns in Jutland. It appears that after the arrival of a Danish Government Commissioner at the Prussian head-quarters in Horsens, the commander of that place retired from Jutland, leaving nobody behind with whom negotiations could be carried on. The Prussian officers in command at the different places act everywhere arbitrarily. In Aarhuus they arrested the superintendent of the Custom-house for demanding the duty from Prussian contractors. The recruits called in before the armistice on the 12th of May were arrested on the route to join the Danish army, and threatened with deportation southwards. The Minister of War, Colonel Lundbye, has resigned, and Lieut.-Colonel Reich, commander of the Copenhagen sea fort, has been appointed in his stead. Several important posts in the War Ministry are being reorganised. The Danish Government steamer Freya arrived at Travemunde on Wednesday morning, with the mails from Copenhagen, and returned immediately.

The Danish Duchies.—The Lauenburg Association has sent a declaration, through the Federal Commissioners, to the German Diet and Baron von Beust, demanding separation from Denmark equally with the two Duchies of Schleswig and Holstein. The declaration further states that the Association wishes that the law of succession should be considered as not binding upon Lauenburg. The inheritance to the throne being granted by the treaties in the same line as the landed property, the Federal Diet alone has the power to decide the question of succession. In his reply, Baron von Beust hopes that the result of the Conference will show that the wishes of the Association have received the fullest consideration.

Frankfort.—The *Europe* of Wednesday, in an article on the Conference, says:—

"Information relative to the Conference, the accuracy of which we can guarantee, announces that the representatives o the Powers would now choose between a war threatening to overstep the limits of the Duchies and the adoption of a system giving satisfaction to Danes and Germans alike. This system would be the constitution of Holstein and the German portion of Schleswig in a single State. The people would decide by universal suffrage upon the interior government they would prefer. The remainder of Schleswig would be united to the Danish Monarchy."

Austria.—The *National Zeitung* of Wednesday publishes a letter from its Vienna correspondent, stating that a decided alteration has taken place in the policy of Austria on the Schleswig-Holstein question. That Power now inclines decisively to the point of view adopted by the Federal Diet, and to the substance of the legal opinion expressed in the resolution brought in by Herr von der Pfordten, the Bavarian representative. It adds that "Austria will take up the position required by her interest, and, in especial, by her old traditional relations to the middle States." The semi-official *Abendpost* of Wednesday evening says:—

"Even in the most recent phase of the Dano-German question there is a perfect understanding between the two great German Powers upon every detail."

The same paper states that the prospects of the Duke of Augustenburg have greatly improved. The *Spenersche Zeitung* of Tuesday publishes a telegram from Vienna, asserting that the representatives of England and France have made declarations to Count Rechberg abandoning the Treaty of 1852, agreeing to the union of South Schleswig with Holstein as a separate State independent of Denmark, and absolutely rejecting a personal union with that State.

Prussia.—The Crown Prince of Prussia has left for Stettin to assume the commannd of the Second Army Corps. His Royal Highness was expected to return on Monday evening. A banquet was given on Tuesday in the new Palace in Potsdam in celebration of the birthday of Queen Victoria. A deputation of 17 members presented to the King on Monday the address proposed by Count Arnim-Boytzenburg, and bearing 30,000 signatures, requesting that Schleswig-Holstein might be made an independent State. The address was read by Count Arnim. The King replied as follows:—

"I have received with pleasure the address in which you assure me of the willingness of the Prussian people to assist in solving the Schleswig Holstein question, thereby granting me a worthy return for the beloved blood of so many children of the country. This return will be mine, should I attain the end for which, together with the Emperor of Austria, I have taken up arms. In conjunction with my illustrious ally, I will take measures, so far as God has placed it in our power, that full security be obtained against a return of the oppression of our countrymen in the Duchies by Danish rule, and that effectual and lasting guarantees be secured to prevent further disturbances on the northern frontier of Germany. To gain this object the allies have fought, and for this they are now striving at the Conference, reserving the entire freedom of action to which they are entitled both by the conduct of the Danes and the course of events. During the pending negotiations I cannot, of course, be expected to give any explanation as to the nature of the solution. But even, as you may rest assured, that under all circumstances the honour of Prussia will be preserved, so also you may be assured that the sacrifice we have offered for the cause of Germany will also conduce to the interests of our own more immediate fatherland. In this confidence I am strengthened by the words you have addressed to me, for which I thank you from my heart, since in them I perceive a new proof of the warm and unanimous devotion of the Prussian people, on which, in all cases concerning the greatness and wellbeing of our common fatherland, I may rely.

The Emperor and Empress of Russia will arrive at the Prussian Court on the 9th of June. Their Majesties will remain at Potsdam two days. The following is the official text of the despatch addressed to the Prussian Ambassador in London by Herr Von Bismarck on the 15th inst.:—

"Berlin, May 15.

"As it is to be foreseen that the question of the position of the two German Powers with regard to the London Treaty of 1852 will be brought forward at the approaching sittings of the Conference, I find it requisite to make the following remarks upon the subject:—Up to the death of King Frederick VII. the German Powers were able to expect that the Crown of Denmark would fulfil the obligations it had undertaken towards them, and that by this means, and by a presentatation of the succession law to the Estates of the Duchies—which has not even yet taken place—the order of succession aimed at by the London Treaty would be placed in a perfectly legal position before the anticipated lease of the demise of the Crown actually occurred. These expectations were not only frustrated by the death of the King, but his successor upon the Danish throne immediately proclaimed his intention, by the act of the 18th November, not to comply with those obligations. The Government of the King immediately called attention to the connection of those obligations with the intended order of succession, with regard to which I need only refer to my despatch No. 467, of the 23d November, and repeatedly declared that it should therefore consider itself justified in regarding the Treaty of 1852 as no longer binding upon Prussia. That she did not instantly proclaim her withdrawal from that arrangement was owing solely to regard for the remaining Powers, and to the hope that Denmark's yielding, by receding from the open breach of her obligations, would re-establish the preliminary conditions and afford the possibility of the maintenance of peace. Even when this hope was deceived, when the constitution for Schleswig, opposed to the treaty, not only remained unretracted upon the 1st Jan., but then came into operation, the two German Powers were unwilling to make any immediate use of their rights. Even at the moment when they were forced to adopt warlike measures against Denmark, they declared in the despatch of the 31st January of the present year that they did not intend to attack the principle of the integrity of the Danish monarchy. But they at the same time expressly stated that Denmark's further persistence in the course she had adopted would compel them to sacrifices which would render it their duty to give up the combinations of 1852, and to endeavour to come to an understanding upon some other arrangement with the signataries of the London Treaty. This case has completely

occurred. The Danish Government has carried its persistence in denial to the utmost, and has continued armed resistance to the last. After all these occurrences the Government of the King cannot consider itself in any way longer bound by the obligations as contracted on the 8th May, 1852, under other circumstances. Prussia concluded this treaty with Denmark, and not with the other Powers; the ratifications were only exchanged between Copenhagen and Berlin, not between Berlin and London, or St. Petersburg. Even if, which we do not admit, the London Treaty had been intended to create obligations between us and the neutral Powers, these would become void together with the treaty as soon as the latter lapsed through non-fulfilment of its preliminary conditions. The Government of the King therefore considers itself, in accordance with the declaration of January 31, entirely free from all obligations which could be deduced from the London Treaty of 1852, and justified in discussing any other combination quite independent of that treaty. It results from the nature of political relations that the solution of a question, the European bearing of which the Government of the King has never undervalued, should be attempted in common with the other great Powers, and this natural consequence is recognised by the Government in the concluding sentence of the declaration of January 31. By accepting the English invitation to the Conference the Government of the King has given proof of its readiness to seek for and discuss in common the means for this purpose; and this and nothing else can be the task of the Conference."

VON BISMARCK

The Ministerial *Provincial Correspondenz* of Thursday concludes an article on the negotiations for peace as follows:—

"The clearer Denmark's conduct makes it appear that the political independence of the Duchies cannot be assured under any connection with that country, so much the more is the solution of the question only to be sought in complete separation from Denmark. It appears that the Prussian and Austrian Governments have already entered into negotiations in order to come to some resolution in accordance with these views."

The *Norddeutsche Allgemeine Zeitung* of Thursday publishes an article on the alleged policy of England that Schleswig should be divided, and on the views of Denmark that the Danewirke should in that case form the national frontier. It says:—

"It is a fact that until 1848 the boundary line dividing the districts in which the German language was used in the churches, from those where it was Danish, ran northerly from Flensburg to Tondern. If a boundary on the basis of language were possible, it must be drawn in this direction. But there would be other matters to be taken into consideration besides the question of boundary based on the difference of language, in order to guard against Danish oppression. It is, of course, understood that the wishes of the population should in justice be consulted, especially where the nationalities are mixed."

The *Spenersche Zeitung* of yesterday says:—"We are informed that the Prussian Government will exert its utmost influence to support the candidature of the Prince of Augustenburg to the throne of Schleswig-Holstein, and the complete separation of the Duchies from Denmark.

ITALY.—The intelligence relative to the health of the Pope is unfavourable; but his Holiness nevertheless took part in the customary procession on Thursday in honour of the festival of Corpus Christi. The collections for St. Peter's pence since 1859 have produced 36,500,000 lire. The commercial treaty between Holland and Italy, and the treaty of commerce with Belgium to redeem the Scheldt dues, have been approved by the Italian Senate. In the Chamber of Deputies on Saturday the estimates for the various departments of the Ministry of Public Works came on for discussion. Signor Mordini called the attention of the House to the current rumours of bribery laid to the charge of several of the deputies in reference to the South Italian Railway Company. He proposed that a Parliamentary inquiry should be instituted to determine whether the dignity of the National Representation had thereby been impaired. After some further observations the proposal was unanimously approved by the Chamber, and the President was instructed to appoint a committee of seven members for that purpose. In the sitting of Wednesday the Minister for War, replying to the questions of Signor Mordini, stated that the active army consisted of 380,000 infantry, 80 batteries of artillery, and 19 regiments of cavalry. This army was capable of defending the kingdom from any attack whatever, but the Minister could not say whether it was sufficient for Italy to make an attack alone and without allies. The state of the fortifications, he said, was excellent, and the mobilisation of the National Guard was nearly completed. The Budgets of War and Marine were subsequently approved by the Chamber. An official account of the state of the Treasury up to the end of December, 1863, reviewing the final results of the Budget of 1863 and the preceding years, was distributed on Wednesday among the members of the Chamber of Deputies. In this account the revenue is stated at 2,433,000,000 lire, and the expenditure at 2,668,000,000 lire, leaving a deficit of 235,000,000 lire. Part of this deficit is covered by a balance of 103,000,000 lire remaining in the Public Treasury on the 31st of December, and the remainder will be met out of the last loan of 200,000,000 lire. The evening journals publish details respecting a great number of documents seized at the house of Baron Conuza, in Rome.

POLAND.—According to the Russian registers the number of Poles transported to Siberia up to February last was 87,500. General Berg, alarmed at the effect of the Emancipation Committees in the provinces, intends recalling them to Warsaw.

RUSSIA.—The Russian Budget for 1864, which was published on Wednesday, shows an equilibrium. The public revenue is estimated at 401,000,000 roubles, of which 355,000,000 are from ordinary sources, 18,000,000 from Treasury Bonds, and 28,000,000 from the Anglo-Dutch Loan. The expenditure is estimated at 364,000,000 roubles, to which there are to be added 37,000,000 for extraordinary military expenses. The *Journal de Bruxelles* of Thursday, refuting some statements of Russian papers, says:—

"Russia declared to Prussia and Austria prior to the capture of Düppel that she would not oppose the annexation of the Duchies to Germany, provided that Austria and Prussia would promise to prevent the realisation of the establishment of a Scandinavian union."

CIRCASSIA.—Letters from St. Petersburg announce that, according to the *Invalide Russe*, the Grand Duke Michael had gone to Anauna, in order to facilitate another great emigration of Circassians, exceeding 100,000 persons of that nationality.

DANUBIAN PRINCIPALITIES.—A conspiracy to overthrow the Government of Prince Couza and effect the separation of the Principalities, with a return to the former regime, was discovered at Bucharest last week. The papers seized on the person of Dr. Lamberti, who had just arrived from Constantinople, showed the connivance of foreign enemies of the Prince. Dr. Lamberti was arrested with Prince Soutzo, formerly minister under Stirbey. He confessed his guilt, and acknowledged the authenticity of the documents signed by himself and by the other persons compromised in the affair. This news, which was published on the morning fixed for the plebiscite under the new electoral law, caused a profound sensation. Another reactionary conspiracy has since been discovered at Jassy. Deputy Balsch has been arrested. The papers of a so-called national committee have been seized. General indignation has been excited by this discovery. The result of the popular voting is almost everywhere unanimous in favour of Prince Couza.

SERVIA.—The Turkish Lieutenant, Ismail Bey, has been killed by the population of the Servian village of Vichimiz.

TURKEY.—Advices from Constantinople announce that the negotiations between England, the Porte, and the Viceroy of Egypt respecting the transport of troops to India have been satisfactorily concluded.

TUNIS.—In consequence of the spread of the insurrection, the French fleet has arrived at Tunis from Toulon. It is said that the instructions given to the Commissioner of the Porte at Tunis forbid him to take any steps without previous consultation with the French Consul-General. The English Consul-General has received orders to come to an understanding with the Consul-General of France to watch over the safety of French and English subjects.

MOROCCO.—The *Pays* of Thursday evening says that the French, English, and Italian Consuls in Morocco have addressed a note to the Government of that State demanding the withdrawal within a month of the orders prohibiting the Moors from trading with Europeans.

EGYPT.—At the request of the Sultan the Viceroy has ordered 3500 men to be despatched against the revolted Bedouins in Yemen. A telegram from Trieste states that England has concluded a convention with the Viceroy of Egypt for the passage of English troops.

INDIA.—By the Bombay mail we have news from that Presidency to April 29. The Viceroy left Calcutta on the 15th for the North-West. His Excellency was to halt especially at Bhagulpore, Benares, Allahabad, and Umballa, and proceed direct to Simla. The viceregal council were to assemble at Simla after the 1st of May, till further orders. The Hon. Ashley Eden has returned to Darjeeling from his mission to Bhootan, where he was grossly insulted in public Durbar by the Chief, and dismissed with great indignity, after having been compelled to sign a treaty making over to them the whole of Assam, including the tea estates held by Europeans, which are to be taken over at a valuation. Disturbances have broken out in Bhootan, in the Dhurm Raj territory. The Deb Raja has been dismissed, and a number of interior landholders and officers have sought refuge in British territory. A conspiracy on the part of the sirdars in Cabool has been discovered by intercepted letters, which they had written to Utzul Khan, urging him to march on the city. Sirdars Auzeem Khan and Ufzul Khan, the elder brothers of the Ameer by a different mother, were collecting their respective forces, with the intention of attacking Cabool. The Ameer has besought the aid of the British Government in money and troops. Colonel Eden, the Political Agent at Oodeypoor, in Central India, was mobbed on the 31st of March by 300 or 400 persons, who rushed into the Residency, shouting and violently gesticulating and throwing stones. Colonel Eden has rendered himself unpopular with certain evil-disposed persons, who feel aggrieved by his prohibition of the custom of human sacrifices. The State prisoners of the Royal house of Delhi, now confined at Rangoon, having, on the death of the ex-King, applied for leave to return to Delhi or some part of the North-Western Provinces, Sir Charles Wood has refused their application. The four Italian gentlemen who had been imprisoned by the King of Bokhara, have been released at the solicitation of Sirdar Mahomed Ufzul Khan. The Bill providing for the solemnisation of marriages in India of persons professing the Christian religion has been passed and received the confirmation of the Viceroy. It is currently reported that Sir Charles Trevelyan proceeds to England in December next, and that his successor will be Mr. Forster, one of Her Majesty's Finance Commissioners. It has been decided to open the Bombay, Baroda, and Central India line of railway from Bombay through to Ahmedabad on the 1st of June next for passenger traffic, and immediately after the monsoon for goods traffic.

UNITED STATES.—Further details of the great battles in Virginia have been received this week. It appears that after the Federal army had crossed the Rapidan, the first battle was fought at Wilderness on the 5th. General Sedgwick advanced on the right, General Hancock on the left, and General Warren on the centre. Strong resistence was offered by the Confederates, under Generals Hill, Longstreet, and Ewell, and fighting continued along the whole Federal line until nightfall. In this day's battle the Confederates are reported to have captured nearly the whole of two Federal brigades, together with their commanders—Seymour and Shaler. On the 6th the engagement was renewed, and continued throughout the day with little abatement, the fighting being the most desperate that has been known in modern times. In the forenoon Hancock was driven back, the Confederates repossessing themselves of some of the ground lost on the previous day. Sedgwick, on the right, was thrown into confusion, but reformed, supported by Burnside's reserves. Late in the day the Confederates pierced the Federal centre, pushing the Federals so far back as nearly to detach their right wing. At the close of the evening the advantage appeared to be on the side of the Confederates. A large number of prisoners were both lost and captured on both sides. Nearly the whole of the 7th Pennsylvania Regiment was taken by the Confederates, and Generals Wadsworth and Hays were killed, and Getty wounded. The Confederate Generals Longstreet and Pegram were severely wounded, and General Jenkins was killed. After the battle General Lee commenced a retreat during the night in good order by the direct road to take up another line of defence, and on the 7th General Grant, who had consolidated his lines, began the pursuit. General Hancock passed through Spottsylvania Court House on the 8th, and on the same day Grant's headquarters were 20 miles south of the battle field of the 6th. During these movements the firing was of a desultory nature, both armies manœuvring. Before night, however, the 5th Federal Army Corps were engaged three miles north of Spottsylvania Court House with General Ewell and part of Longstreet's corps, which had reached Spottsylvania by an inner road. The Federals held their position, but suffered heavily in killed and wounded. Grant was then reported to be two miles north of Spottsylvania Court House, with Lee in his front, Ewell holding the heights north of that place. Grant's losses up to that time were estimated at 27,000 men. On the 9th Lee made a stand at Spottsylvania Court House. Hard fighting occurred, but no general engagement ensued. General Sedgwick was killed by sharpshooters. Grant showed no signs of renewing the attack, being engaged in replenishing his stores from the supply train, in order to be able to advance without that incumbrance. Generals Getty, Talbot, Morris, Robinson, and Baxter were wounded. On the 10th General Grant fought another sanguinary battle with Lee, which lasted from the afternoon until dark. Grant's lines extended six miles along the north-east bank of the river Po, the Confederates occupying the south-east bank and the village of Spottsylvania. The attack was commenced by the artillery of Gen. Grant. Towards dark Burnside was ordered to charge the Confederate right flank, when it was discovered that Lee had advanced round the Federal right flank, and was moving down to break through Grant's lines, and had captured all his supply trains in the Fredericksburg plank-road. This checked Burnside's intended movement, but he held his ground, threatening the Confederate right, while the Sixth Corps charged the Confederate centre, driving the Confederates from their first line of rifle pits, and capturing 2000 prisoners. Meanwhile General Sheridan, chief of Grant's cavalry, destroyed eight miles of railway in Lee's rear, and effected the recapture of 500 Federal prisoners. In consequence of Lee's movement Grant placed his troops about, and having moved his trains to the rear, secured a new position for his artillery; but Lee did not follow up the movement. During the night he was reported to be moving. Grant's losses were then estimated to have reached 40,000 in killed, wounded, and missing, and General Warren was reported to be among the killed. Johnston's position at Resaca was found too strong for attack. There was no fighting on the 11th, but Gen. Grant reports that during the night General Hancock changed his position from the right to the left centre of the Federal line, and at half-past 4 o'clock on the morning of the 12th assaulted Lee's right, which he turned, capturing 25 cannon and 3000 prisoners, among whom were Generals Edward Johnson, Robert Johnson, and George Stewart. Subsequent official and other despatches show that Hancock's achievement was less decisive than at first represented; but two Generals, Edward Johnson and George Stewart, were taken prisoners. Of the cannon reported captured many remained on disputed ground on the night of the 18th, while it is not perfectly clear that a number of them were not recaptured by the Confederates. No success whatever attended the Federals at other points of the line, their assaults against Lee's centre and left being invariably repulsed with great slaughter, and at nightfall the Confederates maintained their position in front of Spottsylvania Court House. The carnage during the day is described as awful, and

the men on both sides are said to have fallen like grain. No estimate of the losses on either side is given; but General Grant's losses are known to have been terrible in the eight days' fighting; and are now estimated at 45,000. The 9th New York Regiment has but 15 men left, and the 73d lost 620 out of 700. Robinson's division was almost annihilated, and many other organisations have suffered dreadfully. In addition to the Federal Generals Sedgwick, Wadsworth, and Hays, previously mentioned, Generals Rice, Owens, Stevenson, and Crawford, are among the killed. It is also said that General Lee was wounded in the last battle. On the 13th it was reported that during the night General Lee had withdrawn across the River Po, to occupy a stronger position on the North and South Anna rivers. This report, however, was untrue. General Lee's centre and left still maintain their positions in front of Spottsylvania Court-house. On the 13th inst. Meade announced to the Federal troops that they had captured 18 cannon, 22 colours, and 8,000 prisoners; but that their work was not yet over, and exhorted them to renewed courage and fortitude. No general engagement has occurred since the 12th. Heavy rains have prevented Grant from advancing; but it is believed that, in reality, he has been compelled to await the arrival of reinforcements. 50,000 are asserted to have been sent. An impression gains ground that General Grant's losses are larger, and the present condition of his army less favourable than was previously supposed. Southern papers state that all the damage done by the Federals to Lee's communications has been repaired. General Sheridan penetrated to the outer line of the Richmond defences, where he was attacked by Stuart's cavalry, and driven into Butler's lines at Turkey Island Bend, on James River, with the loss of upwards of 1000 men killed, wounded, and missing. He reports, under date the 9th, having destroyed portions of the Fredericksburg and the Virginia Central Railways, and a large quantity of rolling stock and stores. Confederate despatches of the 11th, however announce that the Virginia Central Railway had been restored to running order. Official despatches from General Butler state that on the 16th, during a thick fog, the Confederates surprised Baldy Smith's forces, and drove them from their position in great confusion and with heavy loss. The Federals subsequently rallied, and the Confederates returned to their defences. General Butler was also attacked at the same time, and forced to retire to his intrenchments, near James River. The Federal General Sigel has been attacked at Newmarket, in Shenandoah Valley, by Breckinridge, and driven to Strasburg, with a loss of nearly 1000 men and five cannon. General Beauregard, on the 11th, made a detour to the west of the Petersburg and Richmond Railway, marching in the direction of Richmond, and is believed to have joined Lee. Despatches from General Sherman state that, by a flank movement against Resaca, he has compelled Johntson to evacuate Dalton. An engagement between the armies of those Generals ensued on the following day, which was continued on the 15th. Sherman admits a loss of 3000 killed and wounded. At midnight Johnston's forces evacuated Resaca, retiring towards Rome. Sherman is reported to be pursuing. Letters from New Orleans of the 7th announce that General Banks is endeavouring to reach Brashear city with his army, his retreat from Alexandria *via* the Red River being cut off by the erection of Confederate batteries on the banks of that stream. A portion of his army has been compelled to march overland to the Mississippi River, fighting its way out. The steamers Ohio, Belli, Laurel Hill, Bella Donna, and Mittie Stephens, with supplies and reinforcements for Banks, have been sunk or captured below Alexandria. All Admiral Porter's gunboats are above the falls of the Red River, and, as the Confederates have turned the waters of the river into other channels, their capture is considered inevitable. The steamer Fulton, from Port Royal, reports a general engagement in progress between Admiral Dahlgren's fleet and Confederate batteries in Charleston, including Sumter, on the 15th. General M'Dowell has been appointed to the command of the military department of the Pacific, and will leave for California immediately. This step is supposed to have been taken in view of the possibility of a rupture with France on the Mexican question. The House of Representatives on the 11th adopted a resolution to drop from the army rolls all unemployed General officers, including Generals M'Clellan and Fremont, and has since passed the Bill giving to soldiers and sailors, both white and coloured, homesteads from confiscated Confederate estates. President Lincoln has issued a proclamation stating that sufficient was known of the Federal operations to give cause for special gratitude to God, and recommending all patriots to return thanks to Him. Congratulatory visits were paid by the Washington citizens to the President, when he made a speech, in which he said that, although Grant had met with stubborn resistance, he was not forced back from the line of operations on which he had started, but was advancing on the line he had marked out before the movement commenced. On the other hand General Lee has issued a report in which he thanks God that every advance of Grant had been repulsed. Some of the New York papers of the 18th publish a proclamation, purporting to be issued by President Lincoln on the previous day, which, after presenting the military situation in a most gloomy light, and appointing the 26th for fasting and prayer, concluded by calling for 400,000 fresh troops, for whom a peremptory draught was to be made immediately after the 15th proximo, if not furnished by that time by volunteering. It was ascertained in the course of the morning that the document was a forgery. The Governor of Kentucky has issued a call for 10,000 troops, to serve for six months, to come to the rescue of the country, finish the war, and save the Government. Newberg despatches of the 7th state that, in an attack upon the Confederate ram Albemarle, in Albemarle Sound, by seven Federal gunboats, the boiler of the Sacres was exploded by a shot from the Albemarle. One man was killed and several others injured by scalding. A number of men on the other gunboats were killed or wounded. The Albemarle was uninjured. The *Richmond Whig* of the 9th publishes despatches to Secretary Mallory, of the Confederate Navy Department, announcing the destruction by the Florida, in the West Indies, of the Huntsville and another Federal gunboat. The New York Chamber of Commerce has appointed a committee to receive subscriptions to pay the interest of the State debt to foreigners in coin. The *Richmond Examiner* of the 2d reports the death of the second son of the Confederate President Davis, aged 4 years. He fell from the portico of the house, a distance of 15 feet, fracturing his hip and injuring his head so severely that he died after lingering a day or two. The Message of President Davis to the Confederate Congress has been published. As so short a time has elapsed since the adjournment of the last Congress, the document is not very long. The following is a summary:—

"We see no prospect of an early change in the course heretofore pursued by the European Governments. It is enough to know that every avenue of negotiation is closed against us; that our enemy is making renewed and strenuous efforts for our destruction, and that the sole resource for us, as a people secure in the justice of our cause, and holding our liberties to be more precious than all other earthly possessions, is to combine and apply every available element of power for their defence and preservation." On the subject of the currency, the Secretary of the Treasury will ask Congress to relieve him of the power, which he supposes to be conferred by the existing law, of issuing currency to the full amount of all received into the Treasury, either by funding or exchange. The currency circulation, say 230,000,000 dollars, on the 1st July, is ample for the business requirements of the country, and the addition of 200,000,000 dollars would be attended by disastrous effects, and would "produce the speedy recurrence of the evils from which the funding law has rescued the country." The efficiency of our armies in the field is all that can be desired, and "the discipline and instruction of the troops have kept pace with their improvement in material and equipment." Various recommendations, contained in the report of the Secretary of War, are recapitulated by the President. Among the subjects referred to are an amendment of the law depriving officers in the field of the privilege of purchasing rations; an increase in the allowance of officers travelling under orders; provision for invalid officers resigned in consequence of wounds or sickness; the tenure of office of general officers of the provisional army; the organisation of the general staff of the army. The recent events of the war are highly creditable to our troops, exhibiting energy and vigilance combined with the habitual gallantry which they have taught us to expect on all occasions. We have been cheered by important and valuable successes in Florida, Northern Mississippi, Western Tennessee, and Kentucky, Western Louisiana, and Eastern North Carolina, reflecting the highest honour on the skill and conduct of our commanders, and on the incomparable soldiers whom it is their privilege to lead. A naval attack on Mobile was so successfully repulsed at the outer works that the attempt was abandoned, and the nine months' siege of Charleston has been practically suspended, leaving the noble city and its fortresses imperishable monuments to the skill and fortitude of its defenders. The armies in Northern Georgia and Northern Virginia still oppose with unshaken front a formidable barrier to the progress of the invader; and our generals, armies, and people are animated by cheerful confidence. The Message calls attention to the fact that the Congress, under the Provisional Government, held four sessions, and the first Congress of the permanent Government also held four sessions, and now the second Congress under the permanent Government is assembled at the time and place appointed by law: 'All these events have passed into history, notwithstanding the threat of our prompt subjugation made three years ago, by a people that presume to assert a title to govern States whose separate and independent sovereignty was recognised by treaty with France and Great Britain in the last century, and remained unquestioned for nearly three generations. Yet these very Governments, in disregard of duty and treaty obligations which bind them to recognise, as independent, Virginia and other Confederate States, persist in countenancing by moral influence, if not in aiding by unfair and partial action, the claim set up by the executive of a foreign government to exercise despotic sway over the States thus recognised, and treat the invasion of them by their former limited and special agent as though it were the attempt of a sovereign to suppress a rebellion against lawful authority."

Peru.—Advices from the Pacific report that in consequence of outrages on Spanish subjects the Spanish Admiral has commenced offensive operations against Peru. He has seized the Chincha Islands, and attempted the capture of the Peruvian fleet at Callao

Parliament.

HOUSE OF LORDS.

Monday.—The House met for the first time since the Whitsuntide recess. The Earl of Derby, referring to a speech of the Lord Chancellor upon the *Greek Professorship Bill* on a former night, in which the noble and learned lord charged the University of Oxford with a breach of faith in having failed to endow the professorship, contended that the university had strictly and honourably fulfilled all the engagements into which it had entered.—The Lord Chancellor readily exonerated the university from having committed a breach of any distinct undertaking, but censured it for having failed to discharge its obligations to make adequate provision for the Greek professor.—Earl Granville also condemned the course pursued by the university; after which the subject dropped.—The Lord Chancellor moved the second reading of the *County Courts Acts Amendment Bill*.—Lord Brougham was of opinion that the Bill required amendment in committee.—Lord St. Leonards said that this was a question of great social importance. By the existing law a debt was recoverable for a period of six years from the time of its contract, acknowledgment, or part payment, but the present Bill declared that no debt under 20*l*. should be recoverable after the expiration of a year from the time of its being due. He saw no reason for this reduction of the term of six years to one year, and he was certainly of opinion that the period within which small debts might be recoverable ought not to be less than three years. In his opinion, the Bill was one which would have as wide an operation as it was possible to conceive, and, if passed into law, it might fairly be called a Bill for stopping the credit of the labouring classes. He strongly objected to County Courts being turned into Courts of Equity.—Lord Chelmsford looked upon the Bill as involving a social question of the highest importance; it was a question which required the most cautious deliberation. He should not offer any opposition to the second reading of the Bill, but its future progress required to be watched very narrowly.—Lord Lyveden supported the Bill.—Lord Cranworth approved the material features of the Bill, and gave his cordial assent to the second reading. The Bill was read a second time. The *Under-Secretaries Indemnity Bill* and *Common Law Procedure (Ireland) Act (1853) Amendment Bill* were read a third time and passed. Their lordships then adjourned to Thursday.

Thursday.—*Prussian Exactions in Jutland*.—The Earl of Ellenborough called attention to the recent accounts of the state of Jutland, and said that the Prussians engaged, by the terms of the armistice, not to interfere with the commerce of the country, or to levy any war contributions. It could scarcely be said that either of these conditions had been complied with. He attributed the conduct of Germany to the decrease of the influence of England on the Continent, and protested against the principle that the wealth and power of this country were never to be employed in the defence of right against might. He suggested that our policy had been in some measure controlled by the natural prejudices of the Queen in favour of Germany, and urged the Government, whatever difficulties it might experience, to pursue a real English policy, and concluded by asking whether the recent proceedings in Jutland had been in conformity with the engagements of the armistice.—Earl Russell said the whole facts of the case had not been ascertained with sufficient certainty for any final decision to be formed on them. He understood the Prussian Government, having received evidence that the captures of German ships and cargoes amounted in value to 90,000*l*., ordered Marshal Wrangel to make a levy of an equal sum in the Danish province of Jutland. The noble lord also gave some details as to the contributions demanded in provisions. He defended the policy of the Government in declining to plunge England into war either for Poland or Denmark, quoting the useless sacrifices made in past wars as a warning against engaging in hostilities except in direct defence of the honour or interests of the nation. Whatever measures the Government had taken had been freely sanctioned by her Majesty. For anything, therefore, that had been done her Majesty's Ministers alone were responsible, and his share of that responsibility he was quite ready to meet.—Lord Brougham bore testimony to the unanimity of opinion, both in France and England, against the conduct of Prussia and Austria to Denmark. Earl Grey regretted that having determined not to go to war in behalf of Poland, the Government should have entered into an irritating and scolding correspondence with Russia. The subject then dropped.—The Duke of Buccleuch moved the second reading of the *Scottish Episcopal Clergy Disabilities Removal Bill*, the object of which was to repeal the present laws, which prevent persons ordained in the Scottish Episcopal Church from holding benefices or officiating in England.—Earl Granville doubted whether there was sufficient information before the House to warrant it in proceeding with the Bill. He would not, however, oppose the second reading, on the understanding that the measure would be referred to a Select Committee.—The Archbishop of Canterbury expressed his concurrence with this suggestion.—The Bishop of Durham moved that the Bill be read a second time that day six months. He opposed it on the ground that the doctrines of the Scottish Episcopal Church differed from those of the Church of England, and that it would tend to reduce the educational status of the clergy.—The Bishop of London and the Bishop of Oxford supported the Bill. After a short conversation the amendment was withdrawn, and the Bill was read a second time and referred to a select committee.—The *Divorce and Matrimonial Causes Amendment Bill*, and the *Penal Servitude Act Amendment Bill*, were read a second time. The *Fish Tonds (Scotland) Bill* passed through committee.

Friday.—*School Inspectors*.—Lord Brougham inquired if her Majesty's Government intended to appoint inspectors of middle-class schools.—Earl Granville replied that the subject had been under the consideration of the Committee of Council on Education, but they did not see their way clear to appoint inspectors of schools that did not receive support from the Government, but were simply private speculations.—Earl Stanhope called attention to the report of the *Public Schools Commission*, and especially to the course of inspection which is therein discussed, and inquired as to the intention of her Majesty's Government. He also moved for copies of any minute of the Treasury Board, or resolution of the Committee of the Privy Council respecting the recent report of the Commission. [Left speaking]

HOUSE OF COMMONS.

Friday.—*China*.—Mr. Baxter called attention to the state of affairs in China, and asked for explanations as to the policy of the Government in regard to that country.—Lord Palmerston, in reply, said that it was not the intention of the Government to direct interference with military or naval services in China beyond the protection to be afforded to the treaty ports. He defended the policy of the Government in reference to China, contending that it was in accordance with the wishes of the people and of the commercial classes especially. He also urged that we were bound to maintain our treaty rights for the protection of our own interests, and said that even if the Taepings were to obtain the upper hand to-morrow, they would be unable to form a Government, as their success would be but the prelude to widespread revolution and ruin. He hoped that the House would not extend its sympathy to a horde of ragamuffins who had perpetrated the greatest cruelties, and who had shown how utterly unworthy they were to accede to power by laying waste every district over which they had obtained temporary possession.—Mr. Liddell considered the answer of the noble lord to be most unsatisfactory, as it indicated that he was altogether unacquainted with the facts of the case. He warned the House how it proceeded in a line of policy which must eventually prove disastrous to British interests. After some observations from Lord Naas and Colonel Sykes and the other members, the subject dropped. *The War with Ashantee*.—Sir J. Pakington asked what causes had led to the war with the King of Ashantee; whether there was any prospect of her Majesty's troops being relieved from the destructive effects of that climate by a peaceful solution of the question; and whether the papers would be laid on the table.—Mr. Cardwell, having stated the origin of the war, and disavowed any ideas of territorial conquest, said that transports would be sent to the Gold Coast to remove all the troops who could not be accom-

modated by the ordinary means; that the troops would be withdrawn from the interior; that the stockades would be given up to the native chiefs to protect the River Prah; and that any stores which could not be conveniently removed would also be handed over to friendly natives. The House then went into committee of supply on the *Miscellaneous Estimates*, and the vote on account of ambassadors' residences abroad and one or two others were agreed to. At half-past 7 a member moved that the House be counted, and the Speaker having ascertained that 40 members were not present, an adjournment took place to Monday.

MONDAY.—*Prussian Exactions in Jutland.*—On the motion for the adjournment of the House over the Queen's birthday and the Derby-day, Mr. WHITESIDE again called attention to the forced contributions raised by the Prussians in Jutland three days after the news of the armistice had reached that place, and inquired whether it was not one of the terms of the armistice that these outrages should be discontinued.—Mr. LAYARD said that on Friday evening he had received from the Prussian Ambassador a communication to the effect that Count Bismarck had assured him that instructions had been given to the military authorities not to make any forced contributions after the 11th inst., and that if such had been made they would be restored. The terms of the armistice were clearly that all such exactions should be abandoned. In reply to Mr. D. GRIFFITH, Lord PALMERSTON said that, under the terms of the armistice, it was arranged that, from the day on which it was signed, the German troops were to pay for all the provisions they required from the subjects of the King of Denmark. *The Iron Clads.*—Lord C. PAGET stated, in answer to Sir J. HAY, that it was not true that the arrangements contrived by Mr. Reed for carrying heavy ordnance, as recently tried on board the Research, had reduced the vessel to a state of wreck; on the contrary, all the damage done on board the vessel was confined to the demolition of some crockery and bulk-heads. The motion for the adjournment of the House was then agreed to. On the order for the second reading of the *Vacating of Seats (House of Commons) Bill*, a brief discussion arose, and explanations were given by Sir G. GREY and the ATTORNEY GENERAL. The Bill was read a second time. The *Pier and Harbour Orders Confirmation Bill*, which stood for committal, was ordered to be referred to a Select Committee, as regarded certain objects of the Bill. The *Army Prize (Shares of Deceased) Bill* was read a second time. On the order for the second reading of the *Beerhouses (Ireland) Bill*,—Sir R. PEEL explained the objects of the measure, observing that it did not involve a question of revenue, but of morals and public policy.—After some remarks by Lord J. MANNERS, Mr. BAGWELL, Mr. SCLATER-BOOTH, and Sir G. GREY, Colonel DICKSON suggested that the Bill should be withdrawn, and another introduced of a wider scope. —Mr. HENLEY thought, if the object of the Bill was simply to prevent adulteration and check drunkenness, it should not be confined to Ireland. After some further discussion, the Bill was read a second time. The *Limited Penalties Bill* passed the Committee. The *Chain Cables and Anchors Bill* was recommitted, and received amendments. The *Chief Rents (Ireland) Bill* passed through Committee. *Bank Notes in Scotland.*—In a Committee of the whole House, Sir J. HAY moved for leave to bring in a Bill to authorise the Governor and Company of the Bank of England to issue their notes in Scotland, and to make such notes a legal tender there. After a short discussion the motion was agreed to. —Sir H. BRUCE obtained leave to bring in a Bill to alter the days for shooting *Game in Ireland.*—On the motion of Mr. DILLWYN, the Select Committee on the *Patent-office Library and Museum* was nominated.—Colonel FRENCH moved for copy of the award made by the Senate of Hamburg in the case of *Captain Melville White*, explaining the nature of the case.—Mr. LAYARD did not object, and the motion was agreed to.—The CHANCELLOR of the EXCHEQUER, after explaining the object he had in view, moved, in a Committee of the whole House, a resolution that it is expedient to enable certain *Banking Co partnerships* which shall discontinue the issue of their own bank-notes to sue and be sued by their public officer. The resolution was agreed to.

THURSDAY.—*The Ionian Islands.*—Mr. CARDWELL stated, in reply to Mr. SMOLLETT, that Thursday, the 2d June, was fixed for transferring the Ionian Islands from the protectorate of Queen Victoria to the sovereignty of the King of the Hellenes, and that Sir Henry Storks, the Lord High Commissioner, had not published any constitution for the islands. *Poland.*—On the motion for going into Committee of Supply, Mr. HENNESSY moved the following resolutions:—"That the negotiations of her Majesty's Government respecting Poland have not terminated in a satisfactory manner; that it appears from the papers laid before Parliament that the conditions on which the British Government agreed to acknowledge the dominion of Russia in Poland have not been fulfilled by Russia; and that this House is of opinion that Her Majesty's Government is no longer bound to recognise the sovereignty of Russia in Poland." After giving a history of the circumstances which led to the subjugation of Poland, he argued at great length that the conduct of Russia had disentitled her to any sovereign rights over that country, and that her violation of the stipulations of the Treaty of Vienna deprived her of the sympathy or countenance of European nations.—Lord PALMERSTON, although concurring in much that had fallen from Mr. Hennessy, was not prepared to give his assent to the resolutions. He agreed with the hon. gentleman in condemning that great European crime—the partition of Poland, and he was prepared to go with him in stigmatising the conduct of Russia. This was not, however, the question which the House had to decide. Her Majesty's Government had, during the last two years, made repeated representations to Russia in reference to her treatment of Poland, and the only alternative left them was to go to war, which would have been an act of insanity. If he were asked whether, in his opinion, Russia had not forfeited her sovereign claims on Poland, he would be inclined to agree with Mr. Hennessy that she had; but he contended that it would not be to the dignity of the House of Commons, nay more, that it would be ridiculous to agree to the resolutions unless it was also prepared to agree to an address to the Crown to follow up the sentence of forfeiture by execution. Some advantage had been gained for the Poles by the diplomatic admissions of Russia that she held Poland, not by the right of conquest, but by treaty obligations, and that when the revolution was quelled she intended to observe them. To pass the resolutions now proposed would have the effect of depriving the Poles of this diplomatic protection. He hoped, therefore, that the House would not agree to them, but would proceed with the committee of supply. After a few words from Mr. GRANT DUFF and Sir F. GOLDSMID, Mr. V. SCULLY expressed his intention to support the resolutions, which appeared to him to be couched in temperate language, and the substance of which the noble lord at the head of the Government had himself admitted to be true.—Mr. S. FITZGERALD was surprised at the language held by Lord Palmerston, who had, he said, merely thrown dust in the eyes of the House by contending that her Majesty's Government had done all in their power on behalf of Poland, whereas the correspondence proved that when Austria and France were ready to follow up diplomacy by other means, their action had been paralysed by her Majesty's Government. The noble lord had stated that it would be undignified and ridiculous to use strong language unless we were prepared to go to war, but this declaration came with a bad grace from the authors of the recent extraordinary correspondence on the subject of Denmark.—Mr. LAYARD taunted Mr. FITZGERALD with using strong language without the sense of official responsibility, and contended that public opinion had pronounced against plunging the country into war on account of Poland.—Mr. HENESSY expressed his intention to withdraw the motion, but some members objecting, it was ultimately negatived without a division.—Mr. A. SMITH moved that the Miscellaneous Civil Service Estimates, Class 2, be referred to a Select Committee to examine the same in reference to the past *Expenditure for the Civil Services*, and to report to the House any reductions, better arrangement, or other particulars, which in their opinion deserve the attention of the House when the said Estimates are under their consideration.—The motion was seconded by Sir J. SHELLEY, but the SPEAKER ruled that, after the result of the last motion, this question could not be put.—After a few remarks and explanations by Mr. F. PEEL in reply to Mr. SMITH, and an objection urged by Mr. W. WILLIAMS to voting money on account, Mr. FERRAND put a question regarding *Superannuations in the Dockyards*, which was answered by Lord C. PAGET.—The House then went into a Committee of Supply, when Lord C. PAGET entered into a very long and detailed explanation of the several heads of the *Supplementary Navy Estimate*, embracing the proposals of the Government for increasing the active pay, and a scheme of improving the retired allowances of various grades of officers of the Royal Navy, in consequence of the report and recommendations of the Select Committee of last year. He ended by moving the first vote of 55,266*l*. After a protracted discussion, this and the other votes were agreed to and ordered to be reported. The report on the *Bank Acts* was brought up and agreed to, and a Bill was ordered to be brought in. On the report of the *Union Assessment Committee Act Amendment Bill*, some new clauses were added. The *Highways Act Amendment Bill* was read a second time, and ordered to be referred to a Select Committee. The *Vacating of Seats (House of Commons) Bill*, and the *Army Prize (Shares of Deceased) Bill* passed through Committee. Other Bills were forwarded a stage.

FRIDAY.—*The Prussians in Jutland.*—In answer to Mr. D. GRIFFITH, Lord PALMERSTON said that the last accounts he had received stated that the Germans in Schleswig and Jutland were supplied not by the contributions of the people of the country, but by contracts made at Hamburg. Orders had been issued that all contributions, either in money or kind, from and after the date of the armistice, should be restored and refunded to the persons from whom they had been taken. *The Banda and Kirwee Booty.*—Sir S. NORTHCOTE moved an address to her Majesty praying the distribution of this booty. The motion raised the whole question of army prizes, the distribution of which was in a most unsatisfactory state. The commission on the subject fully justified the complaints that had been made as to the existing system.—Lord PALMERSTON admitted the necessity of an inquiry into this subject, but considered that it should be referred to the High Court of Admiralty as a more proper tribunal to deal with the question than that House. [Left sitting.]

City Intelligence.

BANK RATE OF DISCOUNT.—The directors of the Bank of England on Thursday reduced the minimum rate of discount from 8 to 7 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅞ to ⅝ for Money, and 90⅜ for Account; Three per Cents. Reduced, 89¼ to ½; New Three per Cents., 89⅜ to ⅝; Bank Stock, 239 to 237; India Five per Cent. Stock, 105⅞ to 106; Ditto Four per Cent., 100; Ditto Four per Cent. Debentures, 1866, 98½; Ditto Bonds, 18*s*. dis.: Exchequer Bills, March, 8*s*. to 12*s*. dis.; Ditto June, 3*s*. to 7*s*. dis.—FOREIGN: Brazilian, 1863, 87¾; Belgian Four and a Half per Cents., 97½ ex div.; Egyptian, 100¼; Greek, 24⅜ to 24; Italian, 68¼; Mexican, 44⅝ to ⅞; Ditto Anglo-French scrip, ⅜ pm.; New Granada, 13⅜; Portuguese, 1853, 49 to 48¾; Ditto 1856, &c., 45⅝; Russian, 1859, 54¼ ex div.; Ditto 1862, 87¼ to ½ ex div.: Turkish, 1854, 90; Ditto, 1858, 69¼; Ditto, 1862, 70¾; Ditto, for Acct., 70¾; Ditto 100*l*. Bonds, 71¼ to 71½; Ditto Guaranteed, 100; Venezuela, 23½ to ¼; Ditto 1862, 55¾ to 56⅛ ex div.; Ditto 1864, scrip, 5 dis., ex div.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,691,305	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	13,041,305
		Silver Bullion	—
	£27,691,305		£27,691,305

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,785,267
Rest	3,290,033	Other Securities	20,414,915
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,971,903	Notes	7,274,500
Other Deposits	12,882,042	Gold and Silver Coin	672,638
Seven days and other bills	451,242		
	£39,147,320		£39,147,320

May 26, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY: *May* 20.—BANKRUPTS.—The Rev. C. ALLEN, Bushley, Worcestershire, Clerk in Holy Orders—J. ADAMS, West Haddon, Northamptonshire, Carpenter—W. B. T. ADAMS, Smith Street, Northampton Square, Clerkenwell, Pianoforte Tuner—J. P. AKERMAN, Upavon, Wiltshire, Relieving Officer—J. BOWERS & D. GREENWOOD, Romiley, Cheshire, Hat Manufacturers—J. CUTTS, Bilston, Staffordshire, Haberdasher—J. COOPER, Stoke-upon-Trent, Staffordshire, Cattle Dealer—A. COOKE, late of Alstone, Gloucestershire, Market Gardener—S. CRIDDLE, Taunton, Somersetshire, Grocer—A. CRABB, High Street, Poole, Surgeon—T. COXON, late of Greasley, Nottinghamshire, Farmer—J. CLARK, Portsea, Hampshire, Engineer—G. CRUDLEY, Crediton, Devonshire, Miller—J. COCKERILL, Kingston-upon-Hull, Hair Dresser—THOMAS DAVISON, Wolsingham, Durham, Colliery Viewer—STEPHEN ESCUDIER, The Terrace, Kensington, Surveyor—HENRY EDWARDS, Sunderland, Fish Dealer—A. GIRAUD, Little Somerset Street, Aldgate, Wine Merchant—H. HUSSEY, London Road, Southwark, Beer Retailer—J. HARPER, Wolverhampton, Butcher—J. H. HAYES, Liverpool, Broker—J. HEATHWAITE, Grundy Street, Poplar New Town, Cheesemonger—H. HARWICK, Wolverhampton, Provision Dealer—S. HITCHMOUGH, Garston, Lancashire, Boot and Shoemaker—J. HATTON, John Street, Lamb's Conduit Street, Licensed Victualler—W. P. HICKS, Hampstead Road, Clerk in her Majesty's Customs Bill of Entry Office—J. IVENS, Rugby, Warwickshire, Carpenter—E. KEENE, Liverpool—R. JONES, Brecon, Saddler—B. KERRIDGE, Hove, Brighton, Lodging House Keeper—RICHARD LITTLETON, Waterloo, Lancashire, Joiner—ALPHONZO LAMBERT, Red Lion Square, Holborn, General Agent—H. MALCOLM, Long Acre, Window Glass Merchant—T. MENZIES, Jamaica Terrace, West India Road, Poplar, Ship Chandler—W. MUNT, Aston, Hertfordshire, Licensed Victualler—J. T. M'CANDLISH, Liverpool, Commercial Agent—G. MORRISON, Liverpool, Paper Cedar Manufacturer—R. METCALFE, Malton, Yorkshire, Wine and Spirit Merchant—D. M'DONALD, Melton Place, Euston Square, Glass Stainer—T. B. MARTIN, Portsmouth, Engineer in the Royal Navy—J. NORMANTON, Kingston-upon-Hull, Hat Manufacturer—T. PEARY, Bitterne, Southampton, Coachman—W. PRIEST, Tuxford, Nottinghamshire, Excise Officer—T. PENROSE, late of Welton, Yorkshire, Potato Dealer—R. POULTER, Claremont Terrace, Fentiman's Road, South Lambeth, Clerk—T. B. RICHARDS, Bernard Street, Regent's Park Road, Gentleman—J. RICHARDSON, Woolton, Lancashire, Grocer—JAMES SMITH, Boston, Lincolnshire, Draper—T. SAPHIN, Birmingham, Watchmaker—J. SUMMERTON, Broughton Hackett, Worcestershire, Baker—R. P. SPOONER, Birmingham, Journeyman Saddler—S. P. SCARAMANGA late of Bloomfield Street, City, Bill Broker—T. STUART, Cloudesley Street, Islington, Builder—H. SURCOMBE, Cheltenham, Innkeeper—H. STALLARD, Cheltenham, Window Blind Manufacturer—A. TAYLOR, Astley Abbotts, Shropshire, Innkeeper—P. TUCKER, Uffculme Devonshire, Cowkeeper—J. THOMPSON Leeds Yorkshire, Provision Dealer—J. R. WOOD, Cumberworth, Yorkshire Butcher—M. WATKINS, Queen's Crescent West, Haverstock Hill, Lodging House Keeper—J. WARNE, Littlehampton, Sussex, Painter—F. E. WEEKS, Portland Place, Croydon, Journeyman Painter—R. WINWARD Little Bolton, Lancashire, Operative Cotton Spinner—S. YOUNG, Isle of Wight, Tailor

TUESDAY: *May* 24.—BANKRUPTS.—J. M. ANDREWS, Earl Street, Westminster, Publican—W. ADCOCK, Peerless Place, Shoreditch, Fruit Dealer—S. AMBRY, Durham Terrace, North Peckham, Builder—R. BURNS, Forest Road, Dalston, Shirt and Mantle Manufacturer—W. BLOWER, jun., Alderton House, Kilburn, Builder—F. BROWN, jun., Great Yarmouth, Dealer in Fish—J. BURNETT, Handsworth, Staffordshire, Civil Engineer—T. BILLSEALD, jun., Ratcliffe, Nottinghamshire, late Lace Manufacturer—G. H. BURRELL, King's Lynn, Norfolk, Currier—W. C. BURDEN, Leicester, Dealer in Musical Instruments—T. COLLINS, Sheerness, Kent, Clerk—J. B. COOPER, Talbot Terrace, Westbourne Park, Bayswater, late Clerk—J. C. CRAGG, Marylebone Road, General Commission Agent—J. W. CHAPPELL, Connaught Terrace, Edgware Road, Solicitor—A. COLLETT, Niton, Isle of Wight, Carpenter—G. CARRICK, New North Road, Islington, Hair Manufacturer—J. CLOWES, late of Rudgway, Gloucestershire—F. DICKENS, Chipping Ongar, Essex, Organist—D. DYER, Llandovery, Carmarthenshire, Shoemaker—H. DENTON, Chase Side, Southgate, Carman—E. ELLIOT, Richmond Terrace, Westbourne Grove, Bayswater, late Cutler—S. ESCUDIER, The Terrace, Kensington, Gentleman—R. FAIER, jun., Walthamstow, late Contractor—J. A. FOSTER, Old Ford Road, Bow Beer Retailer—H. FARMAN, Wintown Place, Blackheath Road, Fruiterer—A. GRAINGER, late of Frederick Crescent, Camberwell, Grocer—T. GLASS, Cardiff, Glamorganshire—RICHARD HOPTON, Hereford, Architect—T. HUSSELL, Ilfracombe, Devonshire, Builder—H. J. HORDERN, late of Williamson's Hotel, Bow Lane, City, Salesman—G. HALSTEAD, Bentham, Yorkshire, Hind—H. HOBBA, St. Blazey, Cornwall—J. JOHNSON Manchester Street, Manchester Square, Cab Proprietor—P. JACOB, Birmingham—J. KENNEDY, Newark-upon-Trent, Nottinghamshire, Tea Dealer—JOHN KING and JOSEPH KING, Burnley, Lancashire, Manufacturers—T. LUDLOW, Birmingham, Journeyman Butcher—J. W. LAING, Lewisham, Kent, Attorney's Clerk—J. LUFF, Northchapel, Sussex, Blacksmith—S. W. LANE, Wolverhampton, Factor—J. H. LANE, East Lane, East Greenwich, Licensed Victualler—WILLIAM MOODY, late of Greenwich, Basket maker—S. MOOREY, late of Strood, Gloucestershire, Ironmonger—J. MULDOON, Newcastle-upon-Tyne, Fruiterer—J. MACKAY, Bristol, Confectioner—H. I. MAYES, Cleveland Street, Mile End, Tailor—J. M'KINLAY, Manchester, Provision Dealer—W. MURPHY, Oakley Crescent South, Chelsea, Comb Manufacturer—R. NEALE, Pigott Street, East India Road, Limehouse, Accountant—J. PORTER, Liverpool, Licensed Victualler—C. S. PIGGINS, Church Lane, Whitechapel, Saw and Tool Maker—G. PARNELL, Wardour Street, Soho, Engineer—F. POWLING, Hornchurch, Essex, Baker—D. RAY, King Street, Portman Square, Cheesemonger's Assistant—T. RYNMAN, Bolton, Lincolnshire, late Licensed Victualler—C. ROEBUCK, Great Lumber, Lincolnshire, Blacksmith—J. RENDALL and D. BRAKE, Henstridge, Somersetshire, Coal Merchant—E. SHERWIN, Croxton Kenial, Leicestershire, Tailor—J. SANDERS, jun., Hemlington, Yorkshire, Farmer—W. STRADLING, Bristol, Baker—R. SLAGG, Romford, late Draper—T. SURRIDGE, Coventry Street, Licensed Victualler—J. STEEPLE, Barnsley, Yorkshire, Colliery Underviewer—S. SELWYN, Westbury upon-Severn, Gloucestershire, Cattle Dealer—J. SCOTT Bath, Somersetshire, Boot Maker—H. THURLOW, Thetford, Norfolk, Tailor—T. J. TRIGGS, Richmond Grove, Islington, Journeyman Printer—E. THOMAS, Fowey, Cornwall, Rope Maker—L. WELLS, Great Peter Street, Westminster, Bootmaker—J. F. WICKENS, Coupland Terrace, Plumstead, Carpenter—H. S. WITHERS, Chipping Norton, Oxfordshire, Clothier—J. WRIGHT, late of Stockton-on-the-Forest, Yorkshire, Farmer—W. WORTH, Torquay, Devonshire, Carter—R. A. WEBB, Gloucester, Pork Butcher—S. WRIGHT, Sheffield, Publican—C. WOODROFF, Chesterfield, Derbyshire, Tailor—W. M'KENZIE WILLIE WEMYSS, Old Street, St. Luke's, Draper—J. WALKER, Birmingham, Journeyman Baker—E. YEOMAN, Penketh Lancashire, Farmer.

Metropolis and its Vicinity.

THE QUEEN'S BIRTHDAY.—On Tuesday her Majesty's birthday was kept with all the old demonstrations of state and rejoicing, which have not been observed since the last public celebration of the day before the death of the Prince Consort in 1861. As usual, it was a strict holiday in all Government offices, and in many of the leading firms also. The usual salutes were fired from the Tower and the Park, flags were displayed on all public buildings and down the long tiers of shipping in the river, while from the steeples of the churches of the three Royal parishes of Westminster, Kensington, and St. Martin-in-the-Fields came peals of joy bells, both morning and evening. This revival of the old usages of the day was associated with another which has not now been observed for four years—the customary inspection of the Household troops on the Parade behind the Horse Guards. The Princess of Wales, accompanied by the Princess Mary of Cambridge and Prince Arthur, drove from Marlborough House to the Horse Guards soon after 10 o'clock, and took her seat in the centre window of the Horse Guards overlooking the Parade. The instant the Princess was recognised she was enthusiastically cheered by the crowds that had assembled to witness the ceremony. The Prince rode from Marlborough House with the Duke of Cambridge. His Royal Highness wore his uniform as colonel of the 10th Hussars, the Duke his uniform as colonel of the Grenadiers. Their Royal Highnesses were attended by a brilliant staff. The troops were drawn up in saluting line to receive the two Princes; every window which commanded a view of the ceremony was thronged with ladies, and the whole scene was, on a small scale, as brilliant and effective a military spectacle as is ever likely to be seen in London. The troops received their Royal Highnesses with the Royal salute, presenting arms and lowering colours with an instantaneousness of sound and movement which was marvellous in its precision. The usual inspection of the line was then gone through, with the trooping of the colours, and while this was done the combined bands were brigaded and played a well-chosen selection of marches. Indeed, throughout the whole ceremony the music never slackened, so that on the whole it may be said to have been quite as much a musical fête as a military display. The ceremony of inspection concluded with the marching past of the Guards at slow and quick time. After the marching past their Royal Highnesses returned as they had come upon the ground, everywhere receiving ardent proofs of the most affectionate respect. The Foot Guards, according to ancient custom, marched back to the Court of St. James's Palace, when the bands were again brigaded and gave an exquisite concert of military music, which lasted throughout the forenoon. In the evening the customary State banquets were given by the principal Ministers and great Officers of State, and at night the Ministers' houses, the Clubs, the Theatres, and Government Offices, with the shops of the leading

royal tradesmen, were brilliantly illuminated, and the streets of the West End were crowded as usual on such occasions.

Launch of the Prince Albert.—On Monday another important addition was made to our iron-clad fleet by the successful launch of this fine vessel from Messrs. Samuda's yard at Poplar. The Prince Albert has a double claim to defensive strength, inasmuch as she is not only ironcased, but has her battery in cupolas, or circular iron turrets also. Her general principle of construction is almost precisely similar to that of the Warrior, Black Prince, and others of our armour ships. Extra strength is given by longitudinal bracings; there are wing passages along the broadside, which virtually make her a double ship, and instead of an external keel she has two bilge plates at each side, which are supposed to answer the same purpose in giving her stability. The plating, too, is the same as on the Warrior, 4½ inches of iron and 18 inches of teak, but is extended from end to end, instead of only over the broadside. At the extreme end of the bows and stern, however, the thickness of the armour is diminished gradually to 3 inches, and instead of going 5 feet below the water-line, as in other armour clads, it is only taken down 4 feet. Her upper deck is of pine, with a three-quarter inch iron deck beneath it to keep out shells. She is to be furnished with furnaces for heating shot and melting iron, and is to be driven by engines of 500-horse power nominal. Her tonnage is 2529, her length 240 feet, and her breadth 48 feet. The screw is to be four-bladed, and not to lift. On deck are to be four turrets or shields, as they are indifferently called, with an iron-plated pilot-house in the bows. Three of the turrets are 22 feet diameter and one of 20 feet. The pilot-house is a mere oval about 6 feet wide by 12 feet long, but plated, like the turrets, with 5½ inches of armour over 7 inches of diagonal planking. All these turrets, of course, are moveable, and are revolved on turn-tables worked from the main deck below. Two of the turrets, it is understood, are to carry two guns each, and two are to carry one each of the heaviest calibre that can be got. Her total armament is intended to throw a weight of metal of 1120 lb., against the Warrior's 884 lb., though the crew of the Prince Albert will be only 150, against the 700 men of the Warrior. All the turrets being placed amidships the bulwarks round the upper deck have to be moveable, and are accordingly made of light iron fastened by hinges to the deck, so as to be capable of being lowered at a moment's notice, leaving the guns free to fire anywhere. The ship was launched with the lower streak of armour on from end to end, and with the midship portion of her broadside entirely plated. The rest of her fitting and equipment will be proceeded with at Woolwich, but nearly, if not quite, a year is likely to elapse before she is commissioned and afloat an effective member of the Channel squadron.

A Royal Present from Australia.—The Customs' authorities at Southampton received an order from the Commissioners of the Treasury on Saturday to deliver duty free a magnificent gold casket, brought home last week by the Delhi, as a bridal gift from the ladies of New South Wales to the Princess of Wales. It measures about 8 in. in width by 4 in. in depth and across, and is lined with rich velvet. The casket is ornamented with wreaths of flowers, and the key represents an opossum on a tree, the whole being of solid gold. The workmanship is most beautiful, and the chasing very elaborate, the casket being altogether one of surpassing richness and beauty. It is valued at 700*l.*, and the duty upon it, at 17*s.* per ounce, would amount to quite 100*l.*

Westminster Abbey.—On Thursday afternoon the Prince and Princess of Wales attended divine service in Westminster Abbey, the Archbishop of Canterbury having undertaken to plead the cause of the Clergy Orphan Asylum. The service was held in the nave, and admission was by ticket. Long before the service began every part of the nave was crowded, and many persons remained standing for between two and three hours. The Prince and Princess arrived at the Poet's Corner at 3 o'clock, and were received by the Dean, who conducted them to seats on the Dean's left hand, the Archbishop of Canterbury and the Canons being on the right. Nearly all the Abbey clergy were present, and among the congregation in the reserved seats were the Bishops of Lichfield, Ripon, and Rochester, Bishop Chapman, of Eton College, the Dean of Windsor, Archdeacon Hale, Earl Cathcart, the Countess of Zetland, Lord and Lady Dynevor, the Earl and Countess of Longford, &c. Prayers were chanted by the Rev. S. F. Jones, and the lessons were read by the Dean. The music performed was as follows:—Responses (Tallis); Chant (J. Forster); Service (Turle, in D); Anthem, "Blessed be Thou" (Kent). Before the sermon, Psalm cxix., v. 9, "Wherewithal shall a young man cleanse his way?" Mr. Turle presided at the organ, and in the voluntary, which he played before service, introduced some unmistakable *soupçons* of "God Save the Queen." The Archbishop of Canterbury preached the sermon from Jeremiah, c. xlix., v. 11.—"Leave thy fatherless children; I will preserve them alive, and let thy widows trust in me." His Grace spoke of a special Providence watching over all poor children, of the unseen influences surrounding every one, of God's promise never to forsake His people, and then made a practical application of the subject by a touching appeal on behalf of the widows and orphans of clergymen. The collection amounted to 164*l.* After the service the Dean accompanied their Royal Highnesses to the Deanery, where refreshments were served to a select party of about 20 persons. The Prince and Princess Louis of Hesse joined the illustrious party at the Deanery. About half-past 5 o'clock the Royal carriages drove up to the Deanery, and much interest was shown as the Prince and Princess of Wales made their appearance, accompanied by the Dean and Lady Augusta Stanley. Their Royal Highnesses drove off amid the respectful salutations of the people.

National Rifle Association.—The May general meeting of this Association was held on Thursday afternoon at Willis's Rooms, the Duke of Cambridge, President of the Association, in the chair, supported by Lord Grosvenor, Lord Ducie, Lord Tankerville, the Marquis of Donegal, Lord Radstock, Lord Bolton, Lord West, Lord Elcho, M.P.; Lord Bury, M.P.; Hon. Arthur Kinnaird, M.P.; and numerous military and volunteer officers. Lord Elcho read a report stating that the Association was very prosperous. They were receiving additional favourable support, and two new county Associations, Cornwall and Northumberland, had joined them. They had 3673*l.* 4*s.* 5*d.* invested in good securities, a balance at the bankers of 744*l.* 18*s.* 7*d.*, and a sum of 222*l.* 13*s.* 5*d.* in the hands of the Secretary. The prize list showed a considerable increase. In 1863 the number of prizes competed for was 316, amounting in value to 4128*l.*, while this year they had 626 prizes to be shot for, of the aggregate value of 5173*l.* Altogether there were 1070 more prizes to be competed for by Volunteers this year than last year. The entrance fee for the Queen's prize had been increased to 20*s.*, giving corps more representatives to shoot for it. The change had already proved advantageous as there were 1675 entries as against 1145 last year. That gave a certain income to the Association of 1675*l.* to face the Wimbledon expenses. With regard to the prizes, he had the gratification of stating that the Earl of Derby and the Duke of Devonshire, as Chancellors of the Universities of Cambridge and Oxford, had presented a challenge plate. The Marquis of Tweeddale had given a prize to be shot for by gunmakers. Lord de Grey and Ripon had also given a 50*l.* prize. The Wimbledon Cup was also a new prize, it would only be second to the Queen's, and was intended for those who had distinguished themselves on former occasions. Then there was the Enfield Association Cup, Mr. Bass's, M.P., prize of 50*l.*, Mr. Dillwyn's, M.P., prize, value 25*l.* The City prizes would also be a feature; 520*l.* had already been collected through the exertions of Mr. Martin Smith, of the Victorias, and Major Oxley. They would be shot for by Volunteers in two classes. Among the donors were the Lord Mayor, the Bank of England, &c. Out of the 30,000 Volunteer artillerymen only 14 shot at Wimbledon last year, and to induce a greater number to compete, prizes this year would be given for their weapon—the carbine. The targets would be the same as those hitherto used. Last year it would be remembered that Mr. Hill's system of marking was adopted, but with considerable departures from his plan, resulting in accidents. Cardboard targets on the Swiss principle had been introduced to them, but would entail 500*l.* additional expenditure. They had seen Mr. Hill's system on his ground, and considered it safe, and therefore resolved, if possible, to use it. With a view of ascertaining if it was safe they had communicated with Lord Paulet, who sent down Captain Wigram, of the Coldstream Guards, to see the system in operation. That officer, in his report said that it was impossible for any accident to happen, and that the markers were safe. They would, therefore, adopt Mr. Hill's system of marking in its integrity. They would have a tramway laid down, horsed by the military train, which would be a great improvement and save competitors the fatigue of walking from one firing point to another. It would cost from 200*l.* to 300*l.*, but would soon repay itself. There would be a great many men in camp; four corps had arranged to pitch tents. Corps could have tents, provided that they had not more than 50 men on the ground, and not less than 20 men, two-fifths of whom must, however, be members of the Association. The distribution of prizes would take place at Wimbledon, and not at the Crystal Palace as heretofore. Lord Elcho concluded by announcing that the Duke of Cambridge had consented to review the Volunteers on the last day of the meeting. Captain Templer complained that a sufficient number of prizes was not given for competition by the breech-loader. A trial had taken place on Saturday at Harrow between the Prussian needle-gun and the long Enfield, which gave the palm to our weapon. Lieutenant Goodliffe, London Rifle Brigade, did not approve paper targets, and considered that "any position" should be allowed for the second stage of the Queen's Prize. Mr. Luxmoore said that the Volunteers were taught to fire kneeling, and that it would be unfair to have "any position" for the second stage of the "Queen's." After some further discussion, in which Captain Osgood, 3d City, recommended prizes for unknown distances at Wimbledon, the Duke of Cambridge said, as the owner of woods in rear of the butts, he must protest against prizes for unknown distances, as already, with known distances and good shooting, bullets found their way into his woods. After some further discussion, in which General Boileau, Colonel Bower, Captain Williams, Mr. Hemming, Mr. Martin Smith, Captain MacGregor, Lord Bury, Lieutenant Marriner, and others took part, the Speaker of the House of Commons was unanimously elected one of the trustees of the Association. The Duke of Cambridge then said that he hoped they would not be led away by the Prussian needle-gun. He hoped they would encourage breech-loaders. He had seen the needle-guns in the hands of troops, and there was a great escape of gas from them. He must remind them that in the question of ammunition they must bear in mind the replenishing the supplies and the difficulties in the way of so doing. He did not say that they would or would not come into use. As regarded the rules, everybody had his fear and fancy. He was sure the council were anxious to meet the views of everybody, but it was impossible to please all parties. Last year he had asked them not to overlook the claim of the national weapon, and he still had to do the same. As regarded the position for shooting, "any position" would give an undue advantage to one man over another. On the motion of General Boileau a vote of thanks was passed to the Chairman.

Pastoral by Cardinal Wiseman.—On Sunday the Trinity Sunday Pastoral of Cardinal Wiseman was read in all the Roman Catholic places of worship within the "Archdiocess of Westminster." In this Pastoral, after the usual greetings, the Cardinal exhorts his flock to contribute towards the fund for erecting Roman Catholic churches and schools in the archdiocess, and then proceeds to notice the recent scientific discussions on the antiquity of man, the "Essays and Reviews," Bishop Colenso's work on the Pentateuch, and the reception given to Garibaldi. He says:—

"We cannot shut our eyes to the aim or tendency of modern science, which is to demand, not equality, but supremacy; not a fair balance but a loaded scale, whenever it seems to come into competition with the claims of revelation. The moment the two seem to contend, in disagreement, for the belief of man, science at once exacts that all else should give way; and unfortunately too many yield at once and surrender at discretion. The stump of a fossil tree, the bones of an extinct animal, a broken skull found in some inexplicable place, but requiring a solution equally from our assailants; nay, a potsherd, a sea-shell, the piles of a lake village, the rudiments of stone instruments, all things—anything is heavy enough to turn the scale in favour of what is called reason. And we are ridiculed as fearing or opposed to science, as narrow-minded and hoodwinked bigots, for not at once adopting this confused mass of immature *prognosy*, and sacrificing, in honour of our acceptance, whatsoever has been to us venerable, whatsoever holy, whatsoever lovely, whatsoever of good fame, whatsoever true and just, whatsoever has been hitherto to us the light of our eyes or the joy of our hearts, what has made us and kept us virtuous, hopeful, consoled, happy through our dark or rugged way on earth, and has sustained our heads above the billows, and our souls above the troubles, the anxieties, and the anguishes of life. We pause in vain. We are calmly and composedly placing in the opposite scale many and dear considerations. We have before us a prescriptive authority in records of several thousand years ago, discussed, disputed, and always victorious, running down a channel that seems scooped out for it through primæval rivers, lined with monuments, beyond which man has left no articulate memorial—cuneiform or hieroglyphic; all marvellously attesting, by consenting and concurrent testimony, the accuracy of those sacred volumes; then interwoven with what the West considered ancient and the East modern, the annals of the Ptolemies and the Seleucidæ, till the stream of primitive history, with its evidence of prophecy, still in course of verification, drops silently into that deeper, nobler, and more magnificent reservoir, where it mingles with the pure and living waters of a new dispensation, whence it issues with all the new qualities—evidences, proofs, and applications which are concentrated here. Here we meet with such a strange superhuman overweight of proof as seems to master every possible objection, and to leave no alternative for a second solution. For, in addition to all that miraculous works and prophetic sayings, and new moral precepts, a fresh philosophy, theology, and social code issuing from illiterate men, in the midst of a most brilliant age,—and accepted; we have to throw into the balance the vastest empire ever known, subdued when at its greatest might; the entire world reformed, transformed into a new condition by a new legislature, promulgated by ignorant men, propagated by poor men; proved and pressed on acceptance by men in prison and in the stocks, under the scourge and the knife, on the rack and the gridiron; till the whole empire and the entire globe rolled spontaneously to the feet of a Galilean crucified on the Janiculum. Have we not a right to put all these grave and solemn considerations against a solitary cranium, an antiquated fish-bone, or a fragment of pottery? Yet while we are doing so, comes in the sarcasm and the jeer that we are unscientific, anti-progressist, superstitious, and behind the age; and sharper than a two-edged sword, and heavy like that of Camillus, it is thrown into the opposite scale, as sufficient to make ours kick the beam. But no: eternal truth will still prevail, when temporal science shall have revised its wisdom, and brought it into harmony with the moral evidences which surround and support revelation. Your strongest support and your sublimest aspirations were centred in this belief and hope that you were made to the image of God in Trinity. Science pretends to overthrow this belief, and so deprive you of your most ennobling and consoling principle of life and action. No, if science, as now read by too many, says true, there was no time when God could have created man; no moment in which he could have impressed on him His own Divine image. The human race, according to this version, springs from some scarcely organised rudiment of matter, which gradually went on, through millions of ages, unfolding means and powers of life; till having passed through the various brutish improvements, it reached the stage of existence which immediately preceded the human, providing for our inheritance—for the man and matured intelligence, for the woman the ripened graces, of the ape, or the baboon. God help us! that many should have allowed themselves to accept such an origin; while a whole host of proofs assigns to us that of revelation; makes man the bonding link between unthinking matter and the breath of God which made him sentient, reasoning, moral, and imperishable. Nay, which made him Godlike, and almost God. 'I have said, ye are Gods.' And now, perhaps, a second question awaits us. Has anything occurred to make these warnings especially requisite at this time, beyond the increasing tendency to liberalism in religion, and the ease with which are adopted conclusions of rationalism, that have been of late years spreading? Most certainly, dearly beloved children, there have been growing in the last few months alarming symptoms not merely of religious indifference, but of betrayals of the Faith, by those to whom the public will of this country had entrusted its guardianship, at least in what is broadly designated Christianity. Seldom, indeed, when addressing you in pastoral epistles, do we travel beyond the limits of our own

Catholic interests and duties. But as we have already observed, a strong necessity compels us to raise our voice aloud, in solemn protest, and ecclesiastical self-guardianship. You all heard, that within a comparatively recent period, in the very body constituted by law, to preach and defend the doctrines of revelation, there has been slowly generated, but at last outwardly manifested, a canker of rationalism; which, if it spread must eat out vitality, and so extinguish life. Learned men, in high dignity, have lifted up, if they have not thrown off the cloak, which wrapped up in decent concealment the hideous sore. The inspiration of Holy Scripture, the eternity of torments for the wicked, are among the more prominent doctrines which these writings have been held most prominently to impugn, to the scandal of many. To their aid has advanced a scholar of peculiar learning and skill, of whom the people might naturally say, 'one that is a priest of the seed of Aaron is come, he will not deceive us.' In volume after volume he has denied, not without much apparent research, the truth of the Books of Moses, and consequently his account of the creation of the world and of man. Need we say, that, without our specifying other doctrines, there was enough in what we have mentioned, to evoke from long torpor, and bring into fearless activity, any power, preservative or curative, antidote or medicine, which lay in the hands of that body to which the bulk of the people look for religious teaching or for guidance in their own more humble inquiries? Answers, totally inadequate, have indeed appeared, from other contending scholars. But from those who hold, by law, the office which St. Paul describes as so full of corrective energy, there has been no active demonstration of consciousness of its possession; no 'being instant in season, and out of season;' no efficacious 'reproving, entreating, rebuking, in all patience and doctrine.' No Synod has been convoked to condemn doctrines more false and fatal than those of Arius; no sword of the Spirit drawn, if not to smite the blasphemers, to cut out his infecting sore; no combined assertion of 'It hath seemed good to the Holy Ghost and to us,' in fine no decisive, irrevocable, authoritative declaration or re-assertion of doctrine, on the two vital doctrines of Scriptural inspiration, and the eternity of punishment. May we not, therefore, conclude, that this supposed teaching body feels within itself that want of power to act outwardly, which instinct makes us feel, when in the presence of a wide chasm, that our frame would refuse to obey our will, if this impelled us forward over it; and that our attempt to leap it must end in an ignominious fall? In fact, so unreliant has it shown itself, now as ever before, on its own inborn, or Heaven granted, authority and success, that this most solemn and purely religious controversy has passed into the hands of laymen, from the hall of the priests to the tribunal of Cæsar. Now, this has given judgment, with the minute discrimination, the careful sifting, and the cold impartiality, which would have marked a decision on a conveyance of property, or the transmission of a legacy. And what is remarkable indeed, is that the judgment has gone forth, as valid, and inconcussible, in spite of assessors impugning it, who belong to the highest order of religious teachers recognised by the State. What is the consequence? Why, practically that henceforth the inspiration of any proposed portion of Holy Scripture may be safely denied, within the pale of the national religious Establishment; and thus falls what has been considered 'the pillar and groundwork' of its doctrine. 'And so may any one, securely, deny that eternal fire of the Judgment to come, which is more effectual for converting sinners than the reading of God's word, which terrified Felix in his powerful wickedness, and Simon Magus in his cunning impiety. And in this way, the great moral ground of divine fear is cut from under the feet of the unrepenting, who may now go on in their way rejoicing. When we see the foundations of revealed truth thus sapped and abandoned, after a short and ineffectual struggle, by those placed on its walls to defend them, must we not be anxious, and even weep? Must we not feel dismayed at contemplating the gulph of infidelity towards which the bark, abandoned by its steersmen, is evidently drifting? But still more, must we not speak out, believing as we do, and proclaim that to us is entrusted a true and terrible responsibility to uphold revealed doctrine? Must we not lift up our voice and protest, in the name of the Catholic Church, against any weak surrender of our sacred deposit, or any attempt to lessen it, by whomsoever made and by whomsoever coincided in! 'For Sion's sake I will not hold my peace, and for the sake of Jerusalem I will not rest.' And now, a more recent occurrence leaves us no alternative but to express our feelings,—an occurrence which cannot but afflict us, as most humiliating to Christianity itself. For, although we may not allow any spiritual power or ecclesiastical claims to those who took part in it, yet we must fully recognise their high civil position and the influence of their example, and the force of deductions from it on the bulk of the nation, which recognises in them a still more exalted and sacred position. Within these few weeks, a man of celebrity in his own country, only connected with this country by admiration on his side, and helpful co-operation with all his schemes here, paid England a visit. He was welcomed by many nobles with magnificence, and by multitudes with enthusiasm. With all this, we have nought to do. We are often warned not to presume to give an opinion on public matters, as beyond the sphere or above the capacities of churchmen. We leave, therefore, the deserts of this man to more competent authorities. We leave the military character of one who was made prisoner in battle against his own sovereign's troops, and who was wounded by a missile from his armoury, to those gallant men, who never paid such homage to a Napier or a Clyde, but who have ever considered that a soldier's loyalty and honour should be as spotless and as highly burnished as his sword. We leave to our statesmen of every party to pronounce on the place to be accorded in their ranks, to one who to-day advocates and perpetrates the destruction of thrones, and gives public rewards for the attempted assassination of kings, and to-morrow exhorts his fellow subjects to reject the constitutional government of his country, and centre all authority in a despotic dictatorship. But one thing, at least, there is on which we have a right to judge, to feel, and to speak. Touch religious matters with scorn and blasphemy, speak contumaciously of what we most reverence and love; and you touch the very apple of our eye, and we have a right to cry aloud, with pain, perhaps with shame. Some months before his visit, this soldier and statesman, assuming the highest possible position, addressed a letter 'To the English nation,' dated September 28, 1862. From it we extract the following passage:—'The initiative that to-day belongs to you, might not be yours tomorrow. May God avert this! Who more bravely took the initiative than France in '89? She, who in that solemn moment gave to the world the Goddess Reason, levelled tyranny to the dust, and consecrated free brotherhood between nations. After almost a century, she is reduced to combat the liberty of nations, to protect tyranny, and to direct her only efforts to steady on the ruins of the Temple of Reason, that hideous immoral monstrosity, the Papacy.' Many of you doubtless know what France, drunk with the spirit of irreligion and disloyalty, did to inaugurate the Goddess of Reason, and give her solemnly to the world. To those who do not, it may suffice to say, that whatever the Prophet and our Lord meant by the 'abomination of desolation, standing in the holy place,' this expression was verified most literally. The triumph of rationalism over Christianity was symbolised by 'a hideous, immoral monstrosity,' too detestable to be described. This representation by an act of sacrilegious solemnity of the victory by reason over revelation was thus eulogised in an address to the British nation, by the man to whom it is said English ladies knelt. Be it so. The French nation was extolled for that obscene worship, and is reprobated for having repented of its foolish wickedness. And in conformity with this praise and this blame must the religion of its utterer be considered to stand. Not in the common crowd, not mingled with Dissenting ministers in the general levées, but standing apart, elaborately separated, were the leaders, we will not say the representatives, of the Anglican clergy. Three and three from each highest class of the national hierarchy came forward, not as statesmen, not as soldiers, not as worldlings—but therefore as priests and bishops—to greet the man who has preached to them doctrines, and applauded to them practices, far beyond those in wickedness, to the proclaimers of which the Word of God forbids us to say, 'God speed you.' With one hand grasping the right hand of him who had called on them, indirectly at least, to install the Goddess of Reason on the altars of their ministers—for this was what France did—with the other feebly condemning the doctrines of that Goddess. Oh, pity, pity! at least, if not worse, that such a spectacle should have been exhibited to England, at the time, the moment, when every energy of every hand should be put forth, not to dally with, but to crush, the spirit, however embodied, of infidelity as well as disloyalty! And now, dearly beloved, must not we who value consistent truth—revealed truth, apostolic truth, the truth that rests on the teaching of the Church—boldly assert our rights to teach it, however others may either vacillate or shrink in its plain delivery? We stand on our own ground here, within our own holy place. And we ask you to co-operate with us in our effort this day to multiply the number of those churches and schools into which the spirit of irreligion will never creep, nor any tampering be allowed with the faith of our fathers."

STATISTICS OF ROMAN CATHOLICS IN ENGLAND.—At a recent meeting of the Statistical Society a paper on this subject was read by Mr. G. W. Lumley. The document first referred to the statement of Cardinal Wiseman at the Catholic Congress at Malines, that Catholicism in England was daily gaining ground; and to his comparison of the year 1830 with 1861, in order to show the large increase of both priests and churches in this country. It then proceeded by means of numerous tables, extracts from parliamentary papers, reports of the census committee, the Registrar-General, &c., to show that the statements of the Cardinal were not substantially correct, and that there was only a shifting of the members of this church from one place to another. All the tables tended to show that the Roman Catholic churches and chapels were found in the greatest numbers in the metropolis and in certain counties where there were large populations massed together; and that there were also found the greatest number of Roman Catholic poor schools, paupers and offenders. In conclusion, the author stated that there was not the smallest ground for any real alarm as to the progress of the Roman Catholic faith among the English people, or that the English nation was about to return to the control from which their ancestors released themselves centuries ago.

POLISH SICK FUND.—On Friday and Saturday a brilliant *fête* was given at the villa of the Duchess Dowager of Sutherland, at Chiswick, for the purpose of disposing of the various articles of jewellery which have been contributed by the Polish ladies of all ranks for the benefit of the sick and wounded of their fellow-countrymen. The collection included articles of jewellery of almost every kind—watches, bracelets, brooches, and rings, some of considerable value, and some of very modest worth, proving how extensively the Polish ladies of all ranks had sent in their mites in aid of a cause so holy as the relief of those who had suffered in their gallant struggle to achieve the independence of their country. The *fête* took place under the most distinguished patronage, and this, apart from its own peculiar claims to support, would of itself have sufficed to make the effort successful. All the saloons of the villa were thrown open on the occasion, and though the excessive heat kept the grounds empty till the close of the day, they then filled with a brilliant assemblage, which gave fresh animation to the scene. A large number of sales were effected among the articles of jewellery, at prices which must have fully realised the expectations of the promoters of the *fête*.

THE MACKAY GUN.—This gun was again tested on the Crosby Sands, near Liverpool, last week, with great success. The shots passed twice through a section of the side of the iron-plated ram Agincourt; and on being tested for range with a charge of 30 lb. of powder, made the first graze at a distance of 4500 yards. The second round was fired with only 21 lb. of powder, which propelled the 118 lb. shot a distance of 1095 yards.

THE OVERLAND ROUTE.—For some time past communications have been going on between the Treasury, the India Office, and Admiralty, respecting the transport of Indian reliefs by the overland route, for which the consent of the Sultan and the Pasha of Egypt has now been obtained. It is intended for this especial purpose to build five troop ships, two to be stationed on the other side of the Isthmus of Suez, and three at Aden, to convey the troops to their destination in India. The plan also embraces the return of invalid soldiers and those on furlough to their native country. The five troop ships are to be built by contract, and be ready by the end of the year. The expense will fall on the Indian Government. It is not intended to abandon the line round the Cape.

MR. SPURGEON.—A report has been extensively circulated that Mr. Spurgeon will shortly leave his church and congregation for several months, in order to visit the Holy Land and other places. On Sunday evening he contradicted the rumour in the most unqualified manner. He said that the time would come, perhaps, when he should require two or three months' relaxation, but certainly not this year. His object in thus publicly alluding to the subject just now was that as there were many visitors to London at this season of the year who came to worship with his people, his announcement would set aside all doubt. He intended to be absent not more than one Sabbath at a time at some period to come.

REGULATION OF GAOLS BILL.—At a meeting of the Court of Aldermen on Tuesday, strong opposition was expressed against the Bill introduced by Government to amend the laws relating to prisons, giving the Home Secretary power to override the authority of the magistrates in the arrangement and discipline of gaols, and, as it was stated, enabling him to introduce Roman Catholic chaplains into every prison, whether the magistrates liked it or not. It was agreed without a dissentient voice to oppose the Bill.

METEOROLOGIC OFFICE OF THE BOARD OF TRADE.—Admiral Fitzroy's blue book, containing his annual report, has just been issued, with an appendix of diagrams. With regard to the forecasts of weather it states that more confidence is now felt in drawing conclusions, and that demands have increased for cautionary notices of strong winds, especially from foreign Governments. It states that the other duties of the office have not been neglected; and shows what has been done as to naval logs, and fishery barometers on the coast. It states that it has now been proved experimentally that winds and weather may be foretold with general accuracy for two days at least in advance, and that persons will examine the daily newspaper reports occasionally, for some days together, they will be surprised at the close approximation to accuracy now to be found in them—even to the way winds are likely to veer or shift, often as they do so, in changeable weather during even one day and night. The negative evidence or the security against storm during a certain time which these two day tables show, will be highly appreciated in due time. It states also that one ready diagram is mentioned as being extremely useful practically, for either isolated or combined use—for the farmer, gardener, sailor, or any other observer. The form in the appendix shows that it is simply a sheet of paper, ruled, or printed, in small squares of about 10th of an inch—on the long side having dates; at one end a barometer scale, and on the other a range of numbers for temperature, two to each division. Daily observations—only once a day—between 8 and 9 o'clock in the morning, marked by dots, and lines drawn between them, are found to give a degree of insight into coming local weather that must be tried to be fully appreciated as it deserves. The character of the preceding traces, their angles with the square line, their approaches to almost vertical fall, or equally steep rise, their horizontal, gradual, or irregular tendency, in immediately preceding days, "say directly and plainly to the eye and mind what may next be expected."

THE NEW STREET FROM OXFORD STREET TO CHARING CROSS.—At a meeting of the Metropolitan Board of Works on Friday a discussion took place on the formation of a new line of street from Oxford Street to Charing Cross. The Hampstead and Charing Cross Railway has offered in consideration of their Bill being unopposed to make a street 40 feet wide. The committee of the Board insisted on a width of 60 feet. The company objected to the expense, but offered to carry out the plan if the Board would give them a site on the Thames embankment and a contribution of 75,000*l.* in money. This proposal, when referred to the Board, was rejected, and the committee was instructed to insist upon the 60 feet of roadway untrammelled by conditions.

THUNDERSTORMS.—A heavy thunderstorm burst over London on Friday night. The storm was at its height at 11 o'clock, and the rain fell in torrents. A second storm broke out at midnight, which, however, lasted only a few minutes. The lightning affected the telegraphic wires connecting the Houses of Parliament with various offices. The bells attached to the wires rung violently at the very moment when the most vivid flashes of lightning were seen. At 1 o'clock the storm had ceased, and at 2 the moon was shining in a cloudless sky. Liverpool, Birmingham, Manchester, and other provincial towns were also visited by heavy thunderstorms during the day.

THE LATE FRAUD ON THE CITY BANKS.—It will be remembered that some months ago a German named Dietrichstein absconded with upwards of 10,000*l.* in Bank of England notes which he had fraudulently obtained. He was traced to Pesth in Hungary, but the Austrian Government refused to deliver him up on the ground that his case did not come under the Extradition Treaty. Within the last few days the whole sum he took with him from London has been refunded, and the charges against him, are, therefore, abandoned.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week ending Saturday, May 21, were 1421. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1243. The present return is therefore 178 above the average. During the week the births of 918 boys and 896 girls, in all 1814 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1915.

Provincial.

ABERGELE.—During the thunderstorm on Friday, the electric fluid entered the church of Llanelian, and

top of two of the arches of a three-light window in the north chancel, having burnt two holes through the lead at the apex of the arches. It knocked out some of the oak panelling of the chancel, scattering it about the church; it then passed to the roof, scorching and blackening the gilding of the chancel arch, and passed out at the top of the gable, shattering the wall, here about a yard thick, and raising some of the coping. The lightning struck the outer wall in several places about the window, and forced a passage for itself through a small hole in the leads, but at the same time divided and separated the strong stone mullioned arch at the top, and some strong stonework inside, above the glass, without breaking a single pane of the window. The hail which fell at the time was very large and mixed with triangular pieces of solid ice about an inch in diameter. The thunder cloud was very near, and the sound had a peculiar crashing, cracking effect. The noise of the falling hail was like the bursting of an immense water dam. St. Elian's Church is very high and in a most exposed situation. A man, a horse, and several pigs were killed in some neighbouring parishes. The storm occurred about noon.

Birkenhead.—In the Court of Exchequer on Thursday the Solicitor-General announced that the trial of the Attorney-General *v.* Laird and others, in the case of the Confederate Rams, had been withdrawn, and that the judgment of the Court would therefore pass for the Crown. It is understood that the rams have been sold to the British Government. This transaction has extinguished the hopes of those who expected that the trial at bar before the full Court of Exchequer would have the effect of furnishing the shipowners of this country with an authoritative exposition of the Foreign Enlistment Act which might serve as a guide for the future. On the other hand, the law officers of the Crown may congratulate themselves that they have got rid of the difficulty and anxiety which seemed destined to attend their efforts to overcome the devices of the Confederate agents to elude the law. The purchase money is 225,000*l*. The El Tousson and Monassir, will doubtless, under Christian names and the British pennant, do good service to the navy. The opinion of competent authorities has pronounced them the finest iron-clads afloat, and much satisfaction is expressed in naval circles that neither M. Bravay nor the Pacha of Egypt has carried off such important vessels.

Cambridge.—The arrangements for the approaching demonstration in honour of the visit of the Prince and Princess of Wales are now nearly matured. On Wednesday, June 1, there is to be a subscription concert at the town hall, under the conductorship of Professor Bennett. In the course of the day the Duke of Devonshire, Chancellor of the University, will arrive. On Thursday at noon the Prince and Princess will reach Cambridge, and will receive addresses from the town council and University. On leaving the railway station their Royal Highnesses will proceed down the Hill's Road, Downing Terrace, Trumpington Street, King's Parade, Trinity Street, to the gate in front of Trinity College. The presentation of the University address will take place in Trinity College, after which will follow the distribution of prizes to the University Volunteers. At 3 P.M. a Congregation will be held in the Senate house; in the evening there will be a private dinner at the Vice-Chancellor's, and later a ball at the Fitzwilliam Museum, at which the Prince and Princess will be present. On Thursday evening there will be an amateur dramatic performance. On Friday a Congregation will be held in the Senate house, a luncheon at King's College at 2 P.M., a boat procession, a horticultural fête at St. John's, an amateur dramatic performance, a private dinner at Trinity College lodge, and a ball at Trinity College. The following is a list of those upon whom the honorary degree of Doctor of Law will be conferred during the Royal visit:—The Prince of Wales, the Duke of Cambridge, Prince Louis of Hesse, Earl Granville, The Duke of Manchester, Earl Stanhope, Earl Spencer, Earl of Carnarvon, Viscount Palmerston, Viscount Eversley, Lord Alfred Hervey, Lord Leigh, Lord Harris, Sir Edward Lytton Bulwer Lytton, Sir William Page Wood, Sir Charles Eastlake, General Knollys, The Dean of Westminster, A. J. Beresford Hope, Esq., Dr. Watson, President of the College of Physicians, Monsieur Charles Gabriel Cobet, Dr. Hoffman, and Professor Wheatstone.

Clifton.—The main chains of the suspension bridge were completed last week, and the work of attaching the rods and girders and laying the roadway has been commenced. The scaffolding which has surrounded the piers is in course of removal. The bridge has now become of considerable weight, and its oscillation in windy weather has greatly diminished. The progress hitherto made is very satisfactory, and the completion of the bridge during the present year is confidently anticipated.

Derby.—The extraordinary will case which was decided a few months ago by the Lord Chief Justice and a jury refusing to believe that a Mr. Else could have found three different wills of his employer, Mr. Nuttall, in succession, each giving him more of the deceased's property, while by the last the relatives were ousted altogether, is once more before the public. More papers have been found, all tending to confirm the wills and codicils which the jury declared to be spurious. The papers were not found by Mr. Else, but by a man to whom he sold old Mr. Nuttall's bed, within some recess of which the papers were curiously concealed. This bed has been in Mr. Else's possession, and at his disposal, from the death of Mr. Nuttall till now. It is almost needless to say that the discovery has excited great speculation in the neighbourhood, and all kinds of exaggerated rumours are current. In the meantime the house and cellar have been locked up. It is said that the documents are written in a style closely resembling the running hand so often referred to at the trial as Mr. Nuttall's ordinary writing.

Grimsby.—According to statements made by the directors of the Trent, Ancholme, and Grimsby Railway, opened a few days since, the new line will bring this town nine miles nearer Manchester, 14 nearer the South Yorkshire coalfields, and 23 or 24 nearer the most densely populated portion of the West Riding, while the quantity of iron ore contained in the newly-found iron district is not less than 3,500,000,000 tons. Comparisons have been instituted between the new ironfield in Cleveland and the new one in Lincolnshire, to show that the northern one is insignificant in comparison with the one on the banks of the Trent, the total of the Cleveland being stated at only 500,000,000 tons.

Helston.—Mr. James Clarke, mayor of this town, was killed instantaneously on the evening of the 19th inst., by an accident on horseback. He was the Purser of Great Work Mine, and left Helston in the morning for Penzance on business. Returning homeward between 7 and 8 o'clock in the evening, he reached a point four miles on his way where two roads meet—one leading to Goldsithney, and the other to Helston. The horse turned suddenly towards Goldsithney, the place of its birth; Mr. Clarke checked it. It reared, planted its fore feet on the hedge, and the rider lost his balance. The horse then continued its course for 15 or 20 yards towards Goldsithney, Mr. Clarke gradually falling until he lost his hold of rein and stirrups, and, the back of his head dropping on the ground, his neck was dislocated. The horse stopped of its own accord within a very short distance, and Mr. Clarke was at once removed to the adjacent farm of Henfor. Medical aid was promptly on the spot, but it was of no avail. The deceased, who was 62 years of age, was much respected.

Liverpool.—Messrs. Curry, Kellock, & Co., shipbrokers, have been instructed to offer the Confederate screw steamer Georgia for sale by private treaty. Her crew has been paid off, and her stores were sold by auction on Tuesday at Birkenhead. There seems to be little doubt, therefore, that the Georgia's career as a cruiser is really at an end. She is simply an iron vessel, without armour or backing.

Manchester.—At a meeting of the Central Executive Committee on Monday, the hon. secretary reported that 1096*l*. 12*s*. 5*d*. had been received during the past three weeks, and that the balance in the bank was 113,565*l*. 4*s*. 5*d*. Mr. Commissioner Farnall reported that the number of persons receiving relief from the Boards of Guardians in 47 unions, showed a decrease on the 14th inst. of 13,916, as compared with the 23d ult.

Newark.—On Saturday an inquest was held on the body of Elizabeth Parker, who was shot by her son, Richard Thomas Parker, on the 29th of March, in the village of Fiskerton. The son had come home drunk, and had a quarrel with his father on account of his late hours, when he threatened his father with blows, and ultimately chased him round the house. The father took refuge in the stable, and the mother, seeing the son take a loaded double-barrel gun from the shelf, ran out of the house and called in alarm to the old gentleman to keep out of the way. The same instant Richard deliberately levelled the gun at his mother's head, firing through a pane of glass in the window as she stood in the room. The mother fell frightfully wounded, and the father ran to the stable door to see what was the matter. The son then took aim at him also, and lodged the greater part of the contents of the second barrel in his face and chest. The second shot passed through the adjoining pane of glass. Assistance being at hand, the unfortunate couple were taken into the house and surgical assistance was sent for. The father recovered, but the mother after lingering for some days died on Monday week. The father, who was examined at the inquest, tried hard to screen his son. He denied ever having seen his son shoot, and maintained that nobody could swear to the fact except himself. When questioned as to his own wounds, he said they might have been done by the scratch of a cat. He blamed himself very much for quarrelling with his son. The jury returned a verdict of Wilful Murder against the son, Richard Thomas Parker, who was committed for trial at the next Assizes.

Oxford.—A fatal accident has befallen a young gentleman named Edward John Templer, aged 16, a pupil at the Cowley Diocesan school, near this city. Contrary to the expressed wish of the Rev. Mr. Haveman, the master, who has 100 scholars under his care, several of them proceeded to bathe at a part of the Isis known as the Sandford Lasher, a dangerous spot from the great fall and velocity of the stream, where stands the obelisk erected to the memory of the son of the late Dr. Gaisford, Dean of Christ Church, and another gentleman, who were there drowned. John Ward, aged 16, fell over some sheeting into 20 feet of water, and being unable to swim, there seemed to be scarcely any hopes of his escape from a watery grave. The deceased, however, who was an expert swimmer, attracted by the cries of his school-fellow, gallantly rushed to his assistance, and landed him safely in a very exhausted condition, but the effort cost him his life. Immediately he parted with Ward he fell back powerless, and was carried away by the force of the stream, a considerable time having elapsed before his lifeless body was recovered. At the inquest a verdict of "Accidental Death" was returned, and the coroner delivered an appropriate admonition to the survivors who accompanied deceased to the water contrary to the cautions given.

Pontefract.—On the 16th inst. according to previous announcement, Lord Houghton was presented by his late constituents of this town with an elegant silver salver, bearing the arms of the noble lord and of the borough of Pontefract, in appreciation of the manner in which, for 25 successive years, he represented the borough in Parliament. Lord and Lady Houghton were invited to meet the Mayor of Pontefract, and some of the principal inhabitants, at the residence of the chief magistrate, and at about 11 o'clock a procession was formed there, and proceeded to the Town Hall, where the presentation was made.

Lord Houghton, in acknowledging the honour, spoke of the favourable auspices secured to him on entering public life by his connection with the borough. He said:—I am unfitted to represent a large constituency. I might have gone into Parliament with a much larger constituency, but I do not think I should have been likely to have retained it for anything like the period during which I have retained your representation. At the same time I am conscious of an inability—(it may be a matter of praise in some people's minds, and of dispraise in others)—which I think would have very much injured me if I had represented a large constituency—I mean the difficulty I have always had in believing my own side to be entirely in the right, and other people entirely in the wrong. It has been said of some lawyers, of Lord Denman and Lord Truro, that for a fee of 2*l*. or 5*l*. they really did bring them to think that their side was absolutely right and the other side absolutely wrong. I never had that faculty, and whatever may be the advantage to myself or my friends, I have never been able to throw myself into that full party spirit which in a country like ours is perhaps almost necessary for the prominent success of any public man. I remember Sir Thomas Fremantle, our whipper in in the House of Commons, coming to me and saying, 'Do try for once and make a speech in which you are not going to be candid.' I am not sure whether I succeeded, but at any rate I am perfectly conscious that this peculiarity of my mind, the inability to throw myself utterly and completely into any cause, would have unfitted me for representing any constituency moved by large waves of popular passion and excited into a condition of absolute confidence in themselves and absolute hatred of any one else. I am very thankful that the condition of this borough has been such as to enable me to preserve your confidence so long and also to enable me to act with so much independence." After contrasting the present with the time at which he entered Parliament, the noble lord noticed that "Country gentlemen are not so willing as they were 50 or even 100 years ago to come forward as members of Parliament. In large towns, commercial men, who are engaged in active business, and making a good deal of money, think twice (and very often abandon altogether the thought) before they give up their profitable occupations and business for the honour of a seat in the House of Commons, where, at least, they can make no money, and very often lose any reputation they have got. Country gentlemen, who are accustomed to be treated with some reverence by the people around them, shrink from going into an assembly in which, when they get up to speak, some very rough member immediately calls out 'Oh, oh,' and where, if he attempt any kind of joke which would be very well at his own home, he would very probably be coughed at and even hooted down. You see, therefore, that constituencies such as these have political uses, and though I call myself, and I still do call myself in the strongest sense, a Liberal statesman, nevertheless I have always felt that the existence of such boroughs as Pontefract is not only not injurious to the working of the constitution, but most beneficial to it, and most useful for our social welfare. After some other remarks, his lordship spoke of the present state of political affairs:—'The two political parties in the House of Commons,' he said, 'are placed in a position in which neither can say one word against the other upon this matter. Each of them has introduced a Reform Bill, and each of these Reform Bills has entirely failed. Upon that subject, therefore, they are on a par, and in the future, whatever is to happen, must be upon a clear, a new, and a positive basis. I shall hold, in the assembly of which I am now a part, the language which I have always held in this room, viz., that, without determining precisely how any change in the representation of this country shall take place, I nevertheless do think it would be most dangerous for any portion of the people of this country to think that they were absolutely and positively excluded for ever from any participation in the working of the constitution. The great point is, to keep the doors of the constitution open to the people. The regulations—how far they are to enter it, what circumstances are to debar them from doing so—are matters of judgment on one side, and of will on the other. Let it be clearly understood that it is neither the interest nor the desire of any class in this country to prevent the admission within the pale of the working of the constitution of any body of men who combine an earnest desire to possess that privilege with a determination to exercise that privilege honestly and independently—let that be once clearly understood and there is an end of all danger upon the question of reform. Let us have no positive exclusion; let us not say, 'These men shall not come within the pale of the constitution,' but this we may say, and we do say, that the suffrage is not a natural right to which every man is born; that the suffrage is not a privilege which is to be conferred arbitrarily and accidentally; that it is a solemn duty which the men of this country are called upon to perform, and that if their fellow-citizens believe they are qualified to perform those duties faithfully, honestly, and independently, then, and then only have they a right to demand and receive it. His lordship concluded by references to the punishment of death, the treatment of criminals, and other social questions, and promised in the House of Lords to pursue the course he had hitherto done, among other things, to pay attention to the local interests of the borough with which he was connected.'

Portsmouth.—The Select Committee of the House of Commons on the Royal Dockyards have made their first report. They have hitherto directed their special attention to the proposed extension of Portsmouth Dockyard, and they report on this subject as follows:—The present capabilities of the dockyard for repairing and fitting out ships consists of 11 docks (two only of which are of sufficient length and breadth, and one only of sufficient depth, to dock a first-class ship, with her weights on board), and of two basins—one the ship basin, containing 2 acres 12 roods 30 perches, with a

depth of water at ordinary spring tides of 24 feet 6 inches over the entrance; the other, the steam basin of 7 acres, with 25 feet 6 inches depth of water. The evidence is unanimous that this accommodation is inadequate for the ordinary requirements of the navy, even in time of peace. Various opinions have been given as to the number of additional first-class docks required. Some witnesses consider that four, others that as many as eight are required. As to the extent of the additional repairing basins required, the evidence shows that from 20 to 30 acres are necessary; and it was urged by some of the witnesses that, instead of mooring the ships in ordinary in the harbour, economy and safety would be best secured by placing these ships in a basin devoted to that purpose. The factory establishment is stated to be capable (or nearly so) of effecting the repairs and refitting of the fleet. A site, the property of the Crown, but subject to certain rights of way, comprising about 93 acres, bounded by Fountain Lake, and covered at high water, immediately contiguous to the north end of the dockyard, is stated by unanimous evidence to be an excellent site for the proposed works. The subsoil is said to be of stiff clay, rendering piling foundations unnecessary, and of good quality for making bricks. A large convict establishment being contiguous, the Committee are informed that much of the work can be accomplished by convict labour, as is the case in similar works at Chatham Dockyard. The Committee have thought it right to ascertain whether the water on the bar of Portsmouth harbour can be maintained at a sufficient depth for the largest ships; and they have received conclusive evidence on this important matter, showing that no apprehension need be entertained of future inconvenience. From the foregoing evidence the Committee have come to the conclusion—1. That additional basin and dock accommodation at Portsmouth is required. 2. That the site recommended is well adapted for the purpose. The Committee proceed to report at once their opinion upon that branch of their inquiry which relates to Portsmouth Dockyard in order to enable the Government to bring in a Bill to authorise the diversion, stopping up, and appropriation of certain streets, roads, and landing places, preparatory to the extension of the yard.

SOUTHAMPTON.—It is in contemplation to pull down the only piece of the ballium wall of the ancient citadel of Southampton now remaining. It was built in the reign of King Stephen. The document in which the citadel was entrusted to a knight by Edward the Black Prince, while he went to fight the battle of Cressy, is in existence. The remains of the citadel belonged to the second Marquis of Lansdowne, who included it in a castle which he built. While he resided in it, Pether, the famous moonlight painter, and the Margravine of Anspach were his neighbours. The owner of the ballium wall has offered to let it stand for 100*l*., and an attempt is now making to raise the money by subscription. Mr. Pettigrew, of the Archæological Association, has writen to the Corporation, imploring them to save the relic. The Lansdowne Castle was sold and pulled down at the marquis's death.

SHEFFIELD,—All the pressing claims arising out of the destitution caused by the inundation in this town have been satisfied; and the local committee, which has received altogether some 48,000*l*., announces that no further subscriptions are required. Fever has broken out at Owlerton, a village which suffered greatly from the flood, and where large deposits of mud and filth have been allowed to lie ever since the disaster.

ST. LEONARDS.—Mrs. Seaton Kerr, widow of the late Mr. Andrew Seaton Kerr, for some time resident at 8, West Hill, in this town, has recently been residing in Geneva with her family, for the purpose of her sons acquiring the French language. On the 14th ult., the two sons and tutor went out for the purpose of fishing in a tank or reservoir, a short distance from Geneva, with a depth of eight feet of water. The eldest boy, Andrew, with a net having a handle, and whilst in the act of fishing, fell into the tank. The tutor, Mr. Jeanes, immediately plunged into the tank and lifted the boy to the top, the younger boy taking hold of the handle of the fishing net, and by this means was held up for more than half an hour. The tutor being seized by cramp or injured, sank to rise no more, although a good swimmer. The boy Andrew retained the most perfect consciousness during the whole time, imploring help; and at last, finding he could hold no longer, told the little boy to run for help, and to give his love to his mamma, and went to the bottom. The body arrived last week from Geneva, to be buried in the Hastings Cemetery, and has since been followed to the grave by his schoolfellows at the Rev. Mr. Tottenham's school, where he was to have returned in June.

YORK.—The Archbishop of York has addressed a pastoral letter to the clergy and laity of his province. His Grace remarks that the result of the proceedings before the Privy Council in the case of "Essays and Reviews" has brought him numerous letters and addresses, inviting an expression of opinion upon the great questions supposed to be involved, and which seem to compel him to some public and general reply, in order to remove misapprehensions, and to reassure the minds of some who have admitted in their first alarm the notion that the Church of England is falling away from the true faith. He states that his position as a member of the Privy Council necessarily limits him in discussing what is inaccurately called the judgment. He does not admit the doctrine which has been advanced that the clergy in general are forbidden by the oath of supremacy to discuss the reasons of the Committee of Privy Council for the advice it has tendered to the Crown. Those who took that view were perhaps unaware that the judgment (so called) which has excited so much discussion is an entirely different document from the report to the Crown upon which the real judgment is founded; that the so-called judgment is a statement for the guidance of the suitors and the public, upon which the advice to the Crown will be based, which statement never reaches the Crown at all; and that the report to the Crown happily omits the grounds of the advice, and confines itself to advising briefly what the judgment should be. His Grace then proceeds to speak on the theological topics involved, and to point out what is the effect of the judgment upon the position of the Church. He says—

"It is important to observe that a much wider scope is attributed to the judgment than it deserves for itself. The course of proceeding in the Court of Arches recognised a two-fold right of appeal. Either party may appeal, either on the admission of the articles of charge, or on the judgment being pronounced. An appeal at the former of these two stages would have raised the question, what passages in the essays impugned are heretical? An appeal at the latter stage is confined to the much narrower question, Do certain quoted passages deserve, as heretical, the penalty decreed by the Court below? Now, the appeal to the Privy Council was in this narrower form; it was an appeal against the judgment of the Court of Arches, and not against its order for the reformation of the articles of charge. It was an appeal against the penalty, and not an appeal upon the whole merits of the cases. If the judge of the Court of Arches was wrong in admitting or rejecting any passages as heretical, either party could have appealed, and so the opinion of the Privy Council would have been obtained as to the whole case, as to what passages in the whole essay were and what were not at variance with our articles and formularies. If the promoter thought that after the large changes directed by the judge to be made in the articles of charge the quotations still admitted would give a wrong idea of the unsound teaching of the defendant, he might have his remedy with the Court above, and might have there resisted the omissions and alterations ordered by the judge of the Arches. But in each case the promoter waived that right of appeal, and neither case came to the Court above, on appeal against the punishment. I purposely refrain from expressing any opinion as to the judgment of the Court below, because this is beyond the limit I have imposed on myself. I only say that whatever may be thought of that judgment upon the admission of the articles the promoter rested content with it, and thus narrowed the ground which the Committee of Council were permitted to travel over. And it follows that the Committee of Council has pronounced no opinion whatever upon the essays of the two defendants, but only upon some detached fragments of them. Nor can it be regarded as an injury to the faith of the Church that the Committee of Council has imposed on itself the strictest bounds in dealing with these fragments. The accuser is, for the purpose of the charge, confined to the passages which are included and set out in the articles as the matter of the accusation; but it is competent to the accused party to explain from the rest of his work the sense or meaning of any passage or word that is challenged by the accuser. We may infer from these words that the Court will not have regard to any other portion of the work in which the passages occur; but that if the accused resorts to other parts of his work to explain away the accusation, the accuser may follow him into the same ground to refute the explanation; that if after the parties have been heard, without having travelled beyond the passage, a doubt shall exist in the mind of the Court whether the passage in question be heretical, or be devoid of all sense and meaning, the Court is not to cast even a glance into the rest of the work, in order to clothe it with meaning, but is bound, if it be not clearly heretical in itself, rather to consider it as unmeaning altogether. This strict rule may narrow the functions of the Court unduly, and may be at variance with the practice of other Courts in the analogous case of a libel; but there is no peril to the faith of the Church where a passage escapes censure because the Court cannot see its meaning, and declines to seek assistance elsewhere. These remarks seem necessary, because, in spite of the explicit disclaimer in the judgment, many persons persist in treating it as an examination and acquittal of the whole work called "Essays and Reviews." There are only two points in the judgment to which these remarks do not apply, and about which, after all these limitations, the mind of the Church is unreasonably disquieted—I mean the inspiration and authority of Holy Scripture, and the eternity of the punishment of the wicked. Upon the former of these points, the authority of Scripture, I must not shrink from saying that a doctrine as to Holy Scripture has found some countenance from the judgment which no article or formulary of any church whatever has before adopted—namely, that the Bible is called the Word of God, not because it is, but because it contains the Word of God. One of the appellants maintains that the title, Word of God, cannot properly be applied to the whole Bible by Protestants, because it is not so applied in the Bible itself, and Protestants own no other authority than the Bible. He thinks that the doctrine of the Church on this subject is to be sought for in the sixth article, which he terms the 'pivot article,' and this doctrine he thus expresses, 'The Word of God is contained in Scripture, whence it does not follow that it is co-extensive with it.' The other appellant maintains in two passages that are certainly not free from obscurity that the Bible is the production of devout human beings, which other devout human beings are entitled to criticise freely—that seeing the Prayer Book speaks of the Church as inspired we ought not to shrink from attributing inspiration to 'true hearts' in all ages merely because they are fallible, but we ought rather to reduce our theory of the inspiration of prophets and apostles to the same level, and confess that those Israelites of old might be fallible also; and that the inspiration which guided the writers of the Bible is the same in kind as that which Luther and Milton, and other good men, have at different times enjoyed. Obscure as the words of this writer are I assume that they have a meaning, and this is the only meaning which I am able to attach to them. His Grace having compared the statements of the writers with the articles of the Church, adds, he had no doubt that both appellants were clearly shown, even under the narrow rule laid down by the Committee of Council, to have broken the law of the Church, and to have advisedly taught what was contrary to the doctrines of the Church in her articles and formularies. Being unable to concur in the advice to be given to the Crown, the two primates recorded their dissent from that portion of the judgment. The archbishop concludes his letter in the following terms:—"I have now touched upon the two great questions which have troubled men's minds—the authority of the Bible and the punishment of the unpenitent sinner. It would be vain to deny that this trouble of the Church has a real foundation. And yet, my brethren, there is no reason for immoderate fear. The Church of England depends for her teaching, not upon prosecutions and decisions of courts, but upon the solemn undertaking, freely made by her ministers, that they will teach the people, according to her articles and formularies. In her articles the paramount authority of Holy Writ is, to my mind, sufficiently established. The clergy will not subscribe the articles and teach out of the Prayer Book without explaining and declaring to the people that the Bible is for us the law of the Church, and the voice of God. From our northern province not one single case of doctrine has gone up to the Court of Appeal since the Court received its present constitution. It may be that many now fear that the assent given to the Queen might not in some future case be in harmony with the conclusions of the great mass of the clergy. Still it is not to be thought that our teachers have up to this time been kept straight by the fear of a tribunal which, in fact, we have never used. If one of us should be tempted to err from the faith, more powerful than such a fear will be the common sense of his people, who, with the Bible in their hands, and the Prayer Book that acknowledges the Bible, will refuse to be led off from its plain statements. More powerful will be the voice of his own conscience that tells him what he has freely undertaken to teach, and how far he may depart from it without ceasing to be a teacher in a Church that is founded on the Bible. The Church of England knows nothing of courts and prosecutions, and her stability and soundness in the faith rest upon a different and a far surer guarantee than our present perplexity make the ministers more zealous in teaching the pure word of God, and the people more ready to hear and obey the same Word. Already great zeal for the precious heritage of the Church has been called forth, and though clouds and darkness are round us, they do not wholly obscure the wider horizon, and we know that he who has brought the pure Gospel to us in safety through past ages of trouble is able to preserve it to us for the time to come."

Ireland.

THE ALBERT MEMORIAL.—The site of the Prince Albert Statue has been again the occasion of much discussion in the corporation of Dublin. During the absence of the Lord Mayor and the leading members of the council, a motion was carried which virtually rescinded the resolution granting the site in College Green, and referred the matter to a special committee for further consideration. At that time it was not known whether Her Majesty was pleased with the site or not, as no communication on the subject had been received by the Lord Mayor. At the last meeting of the council, however, the Lord-Lieutenant transmitted a letter which the Queen addressed to him on the subject so far back as February 24, in which Her Majesty approved of the site in College Green. It was then moved that this expression of the Queen's wishes should settle the question, but an amendment was carried by a small majority for sending the letter for the guidance of the committee to whom the matter had previously been referred.

THE DUBLIN EXHIBITION.—This Exhibition was opened on Wednesday by the Lord Mayor, in the absence of the Earl of Carlisle, who is indisposed, and was unable to attend the banquet in the evening. The Exhibition promises to be very successful.

THREATENING LETTERS IN COUNTY MEATH.—Two gentlemen near Slane, in the county Meath, have received threatening letters—Mr. Bolton, of Cullen House, and Mr. Finlay, steward to the Marquis of Conyngham. With reference to this matter the Marquis has published a letter in the *Drogheda Argus* stating that as Mr. Slane has received an anonymous letter, threatening his life if he did not take on two labourers, and as he has for years employed on his estate at Slane the same number of men, whether present there or not, he is prepared to shut up the house, and turn off every labourer on his estate, if the notices are repeated. His lordship asks how a country can prosper when men are base enough to anonymously threaten the life of an individual, and cowardly enough to be ever ready to hoot a man behind his back?

Scotland.

THE GENERAL ASSEMBLIES.—The annual sitting of the General Assembly of the Church of Scotland was opened on the 19th instant by Lord Belhaven, Lord High Commissioner, with the usual ceremonies. The retiring Moderator, Dr. Craik, of Glasgow, preached the sermon in St. Giles's Church, after which Dr. Forbes of Aberdeen, was unanimously appointed Moderator for the year ensuing. The General Assembly of the Free Church was opened on the same day, when the nomination of Principal Fairbairn, of Glasgow, as Moderator for the ensuing year, was carried by acclamation.

THE EDINBURGH MINISTERS' TAX.—A great meeting for the purpose of petitioning parliament against what is called the Clerico-Police Tax was held in Edinburgh on the 19th instant. Councillor Ford occupied the chair, and many well-known citizens, lay and clerical, were present on the platform. Resolutions were passed condemning the principles of the tax, the manner in which the bill had been passed, protesting against its enforcement, and pledging the meeting to demand its repeal from parliament.

A VESSEL SUCKED INTO A WHIRLPOOL.—About three weeks ago a sloop bound from Stornoway to Hull with a cargo of dried fish, while passing down the Sound of Jura, was drawn into the whirlpool of Corrywreckan. The crew, on finding that she was wholly under the power of the current, abandoned her in the boat, and reached Easdale islands, whence they proceeded to Oban on their way back to Lewis. About a week afterwards a steamer while on her way to the North observed the sloop, with all sail set, on shore in a small bay at

at the entrance to the Gulf of Corryvreckan, and on her arrival at Oban reported the matter, and the crew of the smack, who were there waiting for the steamer to take them home, immediately returned to the vessel, got her off, and proceeded on the voyage. It was said that she was sucked in by the whirlpool, and, after being thrown out, drifted with the eddy tide and went ashore at the spot where she was found.

Law.

COURT OF CHANCERY: *Corporation of London* v. *The Governors of St. Thomas's Hospital.*—Vice-Chancellor Page Wood gave judgment on Thursday in a suit arising out of a controversy between the corporation of the City of London and the governors of St. Thomas's Hospital. The common seal of the hospital is by law in the keeping of the City Chamberlain, and the corporation assumed and acted on the assumption that this custody gave them the right to set the seal to documents affecting the interests of the hospital without asking leave of the governors. The governors, on the other hand, contended that the corporation could only use the seal at the direction and under the control of the hospital governors, and the Vice Chancellor adopting this view, granted an injunction restraining the corporation from their claim to use the seal at their own discretion, and ordered them to pay the costs of the suit.—*Thornton* v. *Sir John William Ramsden*—*Tenant right in Huddersfield.*—*Judgment.*—Vice-Chancellor Sir John Stuart gave judgment on Wednesday in the long-pending action between Sir John Ramsden, Bart., and one of his tenants in the neighbourhood of Huddersfield. The late Sir John Ramsden was in the habit of granting verbal leases, renewable in perpetuity, and the present baronet soon after he came of age proposed to put the leases on a new footing, and to raise the rents, which led to a dispute that finally issued in Sir John bringing an action of ejectment. The action was tried in the case of one of these tenants; and the Vice-Chancellor decided that the tenant had acquired a right to the land of which the owner could not dispossess him, but that the ground-rent ought to be doubled. Sir John Ramsden to pay the costs of the suit. This will decide several other cases that were pending.

COURT OF QUEEN'S BENCH: *The Confederate Pirates.*—The three men who were apprehended at Liverpool on the charge of being pirates in the Confederate service, for seizing a Federal ship bound from Matamoras to New York, were brought up on Monday on a writ of *habeas corpus* before this Court. Mr. Edward James, who appeared for the Confederate authorities, was heard against their being delivered up to the Federal Government; and Mr. Lush addressed the Court for the United States Government. The case on both sides was argued at great length, and on Wednesday the Court gave judgment. The Lord Chief Justice said that if the piracy was an act of piracy by the law of nations, it was within the treaty and the statute: and if there was a sufficient *primâ facie* case, the magistrate ought to commit them, with a view to their being delivered up to the Federal government. He could not say there was not evidence *primâ facie* upon which he ought not to commit them for the purpose of their being delivered up. His judgment therefore was in favour of the Federal government. Mr. Justice Crompton, Mr. Justice Blackburn, and Mr. Justice Shee differed from the Lord Chief Justice. They were of opinion that this was piracy *jure gentium*, and that the treaty had referred to a peculiar and restricted jurisdiction, and that therefore the prisoners were entitled to their discharge. The Lord Chief Justice said the prisoners would have to be discharged, and he added that the effect of the decision was, that a British subject who committed murder in America for which he might be tried in this country, could not be given up. He thought the legislature never intended to consent to anything so mischievous. The prisoners were immediately discharged, and in less than half an hour were seen walking up the Strand, showing less concern than might have been imagined in those who might be said to have just slipped from the hands of the executioner. *Coe* v. *Wise.*—*The Middle Level Inundation.*—Their Lordships delivered judgment in this action, brought by the occupier of certain land in the fen district, to recover compensation from the Middle Level Commissioners for damage sustained owing to the bursting of a sluice. The action was tried before Lord Chief Justice Erle at the Norfolk spring assizes in 1863, when the defendants contended that the commissioners were not liable for the negligence of their engineers or servants, and that even if they were, they were not liable officially, so as to charge the funds of the commissioners, which latter question was reserved for the opinion of the Court. The jury found that the commissioners' servants had been guilty of negligence in the maintenance of the sluice. Subsequently a rule was obtained to set aside the verdict on the ground of misdirection, and the point of law above reserved. Cause was shown against the rule, on the ground that the commissioners were liable for the damage sustained. The arguments, which occupied several days, were concluded last term, and the Court took time to consider its judgment. The written judgments were very lengthy, but being exclusively of a legal character the result need only be given for the information of the general reader. Mr. Justice Mellor observed that the commissioners were trustees for a public purpose, acting without reward, and deriving no tolls from the works, and they had no means of raising funds, except for the specific performance of the objects of their private act. After reviewing the facts, the law, and the cases cited during the arguments, he said he was of opinion that they were not liable, and that the rule must be made absolute. Mr. Justice Blackburn was of a contrary opinion. He thought the plaintiff had a right to his verdict, and that the rule should be discharged. The Lord Chief Justice said the commissioners were not charged with neglect with regard to the original construction of the sluice, but in the maintaining, &c., the sluice in a perfect state, and in providing remedies after the sluice had been washed away. The question was whether the commissioners were entitled to immunity from the rule of law laid down in such cases. It being admitted that public trustees or commissioners could not be made liable in their individual character, the fact that the legislature had appropriated the funds to a specific object, and not left any out of which to pay damages, it led to the belief that they could not be made liable in their aggregate or quasi-corporate character. The case appeared to him in all respects to fall within the decisions by which they were bound, and he was of opinion the defendants were not liable, and the rule must be made absolute. The Court then gave the plaintiff leave to appeal to the Court of Error without giving the usual bail for costs. There are 66 other actions to be tried on the same subject.

COURT OF COMMON PLEAS: *Thelwall* v. *Yelverton—Major Yelverton's Case.*—The plaintiff in this case was a merchant at Hull, and the defendant was the Hon. Major Yelverton. The plaintiff having furnished Mrs. Yelverton with board and lodging, subsequently sued Major Yelverton in Ireland, and recovered a verdict for 250*l*., and a judgment was signed for the debt and costs, making in all 730*l*. The plaintiff then issued a writ in the English Court of Common Pleas upon the Irish judgment against Major Yelverton; and on the production of an affidavit, that this writ had been served upon the major in Paris, in accordance with the Common Law Procedure Act of 1852, Mr. Justice Keating made the usual order that the proceedings should be continued. Last term, however, the Court granted a rule calling upon the plaintiff to show cause why the order of Mr. Justice Keating, and also the writ and service thereof, should not be set aside, on the grounds that the writ had not been issued to enforce a cause of action arising in England, and that, in fact, the writ had never been served upon Major Yelverton. The Major swore that the writ had never been served upon him, and that at the date when it was said to have been served in Paris he was some 200 miles from that city. The Court on Monday gave judgment to the effect that the writ was issued upon the Irish judgment, and not to enforce a cause of action or a breach of contract within the jurisdiction of the English courts. Rule absolute to set aside the order of Mr. Justice Keating.

Sporting.

EPSOM RACES.

TUESDAY.—*Craven Stakes.*—Mr. Cartwright's Fairwater beat Cutaway, Blarney, Melbourne, and Isoline. *Brighton Stakes.*—Lord Coventry's Umpire beat Jane Shore, Reindeer, Vivid, and 14 others. *Horton Stakes.*—Mr. Hodgman's Corinthian Tom beat T. P. Cooke. *Woodcote Stakes.*—Mr. R. Sutton's Gardevisure beat La Fortune, Puritan, and 10 others. *Rous Stakes (Free Handicap).*—Count Lagrange's Jarnicoton beat Lucky Star, Lytham, and 10 others. *Heathcote Plate.*—Captain Christie's Lady Clifden beat La Méchante, Attraction, and 10 others.

WEDNESDAY (THE DERBY DAY).—Never since Diomed won the first Derby, or the day when the Earl of Derby's famous mare Bridget carried off the honours of the first Oaks race, has there been such a gathering as assembled to-day at Epsom to celebrate the great national holiday. The rail and road were as crowded as ever, the latter with the old motley grouping of vehicles, and the course presented the old vast and surging crowd. The fineness of the day added much to the enjoyment of the scene. The sport commenced with the *Epsom Town Plate.*—Mr. Whittaker's Pixie beat Vabalathus, Nucleus, Alea, Humphrey, and Merry Bird. *85th Derby Stakes.*—Mr. W. I'Anson's Blair Athol beat General Peel, Scottish Chief, Knight of Snowdon, and 26 others. The favourite had the lead at Tattenham Corner, closely pressed by Scottish Chief, Cambuscan, Birch Broom, Historian, and Blair Athol, the latter biding his time until they crossed the road, when he ran past his horses and joined the General on the upper ground, followed by Scottish Chief to the distance, where the pair beat the latter, and gradually drew away to the enclosure; Blair Athol then, without the slightest effort, quitted his opponent, and won with ease by a couple of lengths, the General defeating Scottish Chief by three lengths for the second money, the latter being three-quarters of a length in advance of Knight of Snowdon, who was half that distance before Cambuscan, Birch Broom, Ely, and Historian finishing next, within a length of Cambuscan, close up with whom were Coastguard, Baragah, Paris, and Apennine. The others, who were pulling up as they trotted past the post, were widely distributed, the last of which were Warrior, Privateer, Surat, Master Richard, and Major, and a long way in their rear walked in among a dense crowd Dormouse. The race was run in 2 minutes 44 seconds, being within a second of the time in which it was run by Kettledrum, the fastest horse ever known on the Epsom course. The net value of the stakes was 6675*l*. — *Manor Plate.*—Colonel Martyn's Oberon beat Diomed, Loafer, and 5 others. *Bentinck Plate.*—Lord Westmoreland's Cœur de Lion beat Hawkshaw, Antidote, and 5 others. *Burgh Stakes.*—Mr. H. Goater's Poland beat Duke of Cambridge, Virginia, and 7 others.

THURSDAY.—*Grand Stand Stakes.*—Lord Uxbridge's Welbeck beat Double First, Turn of Luck, Tourist, and 6 others. *South Western Stakes.*—Colonel Towneley's Castle Hill beat Nebuchadnezzar, Quarantine, and 5 others. *Walton Stakes.*—Mr. T. Hughes's Powderham beat Corinthian Tom, Loafer, and Cœur de Lion. *Epsom Cup.*—Lord St. Vincent's Little Stag beat The Clown, Granboro, Caroline, Fairwater, and 2 others. *Two Year Old Stakes.*—Mr. Hodgman's Victorious beat Anti-Macassar, Le Bearnais, and 11 others. *Her Majesty's Plate.*—Mr. I'Anson's Caller Ou beat the Stranger and 3 others. *Epsom Four-Year-Old Stakes.*—Captain D. Lane's Blue Mantle beat Jarnicoton.

FRIDAY.—*Ewell Plate.*—Nucleus beat Belle of the Vale, Moulsey, and 5 others. *Durdans Stakes.*—Bandarilla beat Nucleus, Fletton, and 3 others. *The Oaks.*—Fille de l'Air beat Breeze, Tomato, and 16 others. *Headley Stakes.*—Kildare walked over. *Surrey Foal Stakes.*—Solon beat Lady Hylda, Myrtillus, and 2 others. *Glasgow Plate.*—Deception beat Coronet, Clairvoyante, and 11 others.

Obituary.

THE COUNTESS DE SEPTEUIL, eldest sister of the Earl of Essex, died on Sunday at Cashiobury Park, from an accident by fire on the previous night. It appeared that she had arrived on the previous Monday on a visit to her brother, and that on Saturday evening she was engaged at her toilet when her light dress took fire from a candle, and she was instantly enveloped in flames. She tried to extinguish the fire by rolling on the bed, but finding this to be ineffectual, she rushed down the stairs to obtain help. Lord and Lady Sydney, and other friends who were staying in the house at the time, alarmed by her cries, went into the cloisters to ascertain the cause, when they saw her approaching them enveloped in a pillar of fire. Help was instantly rendered and the fire was extinguished. The Countess, though enduring great anguish, calmly told them to take care of the house, and it would seem that her warning was not given in vain, for on going to the room which she had left it was found to be on fire. The flames were however soon subdued. After great suffering the unfortunate lady died on Sunday morning. The burns were of the most severe nature, only the face and feet having escaped the ravages of the fire. The body has since been removed to France for interment. The Countess, who was in her 59th year, was the daughter of the fourth Earl of Essex, and in 1851 married a French nobleman, Colonel the Count Achille de Septeuil, who died a few years since.

MAJOR GENERAL LAKE, C.B., died on the 19th inst., at Wellesley House, Shooter's Hill, in his 65th year, Kent. He commanded the Royal Horse Artillery of the Light Division in the Eastern campaign of 1854 and 1855, including the affairs of Bulganac and M'Kenzie's farm, the battles of Alma, Balaklava, and Inkermann, and the siege of Sebastopol. He received the war medal and four clasps for his services; was made a Companion of the Bath; an officer of the Legion of Honour, decorated with the Order of the Medjideh, and the Turkish medal. He attained the rank of major-general in 1863.

SIR ALEXANDER MURRAY TULLOCH, K.C.B., died on the 16th inst., after a short illness. He only left town a few days previously to see a newly-purchased property in Dorsetshire. He was educated at Edinburgh, and afterwards at the Military College of Sandhurst, where he obtained the highest honours. He entered the army as ensign in the 45th Regiment in 1826, and subsequently filled several important administrative offices in the War Department. For some time he was in charge of the statistical branch of the War Office, and was latterly assistant military superintendent of pensioners. He obtained the honour of a K.C.B. for his services, in conjunction with Sir John M'Neill, in the Commission sent out to the Crimea in 1855, on the management of the British army during the campaign in the East.

WILLS.—The will of Sir William Brown, Bart., of Richmond Hill, Liverpool, has been sworn under 900,000*l*. personalty.—Daniel Burges, Esq., Town Clerk of Bristol, 40,000*l*.—Sir Charles Wake, Bart., of Courteen Hall, Northamptonshire, 18,000*l*.—Thomas Langton, Esq., of West Hill, Wandsworth, 50,000*l*.—William Kingsbury Jameson, Esq., of Champion Hill, Surrey, 50,000*l*.—John Marshall, Esq., of Eden Lodge, Beckenham, 30,000*l*.—Mr. John Jones Vaughan, silversmithe of the Strand, 60,000*l*.

BIRTHS—On the 18th inst, at Norfolk House, London, Lady VICTORIA HOPE SCOTT, of a daughter—21st inst. at Trafford Park, Manchester, the Lady ANNETTE DE TRAFFORD, of a son—22d inst., at 32, Priory Road, Kilburn, Lady PARKES, the wife of Sir Harry Parkes, K.C.B., British Consul at Shanghai, of a daughter—25th inst, at 21, Queen's Gate Terrace, the Hon Mrs. CHARLES DU CANE, of a son and heir—21st inst, at 35, Charles Street, Berkeley Square, the wife of Lieut.-Colonel GEORGE GRANT GORDON, Scots Fusilier Guards, of a son—25th inst, at 59, Chester Square, the wife of JAMES R. WALKER, Esq., M.P., of a daughter.

MARRIAGES.—On the 16th inst, at Florence, the Count ENRICO VITTORIO FOSSOMBRONI, of Florence and of Arezzo, to MARIA ISABELLA LOCKHART, daughter of James Lockhart, Esq., of Sherfield English, in the county of Southampton, and grandniece of the late John Ingram Lockhart, Esq., formerly M.P. for the city of Oxford—18th inst, at Rolleston Church, in the county of Stafford, JOHN FIELD WRIGHT, Esq., youngest son of the late Rev. Godfrey Wright, of Bilham House, Doncaster, to LETITIA, youngest daughter of Sir Oswald Mosley, Bart.—17th inst, at the parish church of Stevenage, the Rev. R. M. FREEMAN, incumbent of High Leigh Chapelry, Cheshire, to FRANCES HARRIET, third daughter of the Rev. Canon BLOMFIELD, rector of Stevenage, Herts—24th inst, at St. Leonard's Church, St. Leonard's-on-Sea, the Rev. W. M. WOLLASTON, vicar of Merton, Oxon, fellow and late tutor of Exeter College, Oxford, to CONSTANCE SOPHIA, daughter of the late JAMES MACGREGOR, Esq., formerly M.P.

DEATHS.—On the 22d inst at Weston House, Thames Ditton, Lady LAMBERT widow of the late General Sir John Lambert, G.C.B., aged 75—24th inst, at Gadebridge, Hemel Hempstead, Herts, the Rev. NAUNTON REDE ASTLEY COOPER fourth surviving and much-beloved son of Sir Astley Paston Cooper, Bart.—22d inst, at St. Helier's, Jersey, WILLIAM COTTERILL, eldest son of WILLIAM SCHOLEFIELD, Esq., M.P., aged 34—22d inst, at Lulworth, Dorset, Major-General B. CRISPIN, aged 58—21st inst, at Lansdown Place, Brighton, JESSY, youngest daughter of Major-General E. ARMSTRONG, commanding Northern Division Madras Presidency, in her 16th year—20th inst, at Bath, FRANCIS MOORE, only son of the late General F. Moore, aged 53—17th inst, at Cheltenham, DAVID RICARDO, Esq., of Gatscombe Park, in the county of Gloucester, aged 61—19th inst, at Glencairn Villa, Clifton, Captain HOLMAN, R.N., aged 83—16th inst, at Aberdeen, Commander C. C. A. KANE, R.N., inspecting commander Coastguard—18th inst, at Birkenhead, Commander D. SARSFIELD, R.N.—21st inst, at Frian House, Bridgwater, EDWARD SEALY, Esq., J.P. for the county of Somerset, aged 85—24th inst, at The Grove, Norwood, MARY ANN, wife of ARTHUR ANDERSON, Esq., chairman of the Peninsular and Oriental Steam Navigation Company, aged 62—17th inst, at his residence, 24, Gloucester Square, Hyde Park, JOHN HAYNE, Esq., formerly of Lima, South America, aged 64—21st inst, at 16, Westbourne Park, WILLIAM PARISH ROBERTSON, Esq., late of Valparaiso, aged 40—17th inst, at West Monkton, Somerset, CHAS. TOMKINS, M.D., of Weston-super-Mare, Somerset, and Abingdon, Berks, aged 68—18th inst, at Eton, the Rev. JOHN FRANCIS PLUMTRE, M.A., Fellow of Eton College, and formerly one of the assistant masters in the school, aged 82—21st inst, at Loughton, Stony Stratford, the Rev. JOHN ATHAWES, rector, aged 68—May 21, at Nailsworth, Gloucestershire, JANE CHALMERS, wife of Mr. JOHN MORTON, of Morningside, Nailsworth, aged 75.

Markets.

COVENT GARDEN, May 28.

Outdoor produce is now abundant. English Grapes and forced Strawberries are sufficient for the demand. Of Pine Apples there is also a fair supply. Continental arrivals continue heavy; among them are Endive, Carrots, Artichokes, Cherries, Tomatos, and Peas. English Peas are also now tolerably plentiful; they fetch from 4s. to 6s. per sieve. Potatos from Lisbon, of which considerable quantities have been imported, realise from 3s. to 6s. per dozen lbs. Asparagus fetches from 3s. to 6s. a bundle. Flowers chiefly consist of Tulips, Cinerarias, Orchids, Heaths, Pansies, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 8s to 12s	Nuts, small, per bush., 14s to 18s
Grapes, per lb., 4s to 12s	— Barcelona, do., 16s
Apples, per ½ sieve, 2s 6d to 4s	— New Brazil, do., 20s.
Strawberries, per oz., 6d to 1s	— Old do., do., 14s
Lemons, per 100, 6s to 10s	Almonds, do., 20s
Oranges, per 100, 10s to 14s	Walnuts, do., 12s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 4d to 6d
Cauliflowers, each, 9d to 1s	— new, do., 1s 6d to 2s
Asparagus, p. bundle, 3s to 6s	Cucumbers, each, 1s to 2s
French Beans, p. 100, 2s to 3s	Beet, per doz., 1s 6d to 2s
Green Peas, p. ½ sieve, 5s	Shallots, per lb., 10d
Potatos, York Regents, p. ton, 60s to 80s	Celery, per bundle, 1s 6d to 2s
— Rocks, do., 45s to 55s	Garlic, per lb., 8d
— Flukes, 60s to 90s	Lettuces, each, 1d to 4d
— new, per lb., 1s to 2s 6d	Endive, per score, 1s to 2s
Carrots, young, per bunch, 1s to 2s	Horse Radish, p. bunch, 1s to 4s
Rhubarb, p. bundle, 4d to 1s	Mushrooms, p. pott., 1s to 1s 9d
	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

POTATOS.—SOUTHWARK, Monday, May 23.

During the past week the arrivals coastwise and by rail have been considerable for the season of the year, and owing to the extreme heat of the weather, only a very few found buyers at any price, and all inferior or stale lots unsaleable. The following are the quotations, which are merely nominal:—Yorkshire Flukes, 30s. to 50s. per ton; do. Regents, 20s. to 30s.; Seedlings, 20s. to 30s.; do. Rocks, 20s. to 30s.; Dunbar Regents, 35s. to 40s.; Perth, Forfar, and Fife Regents, 20s. to 30s.; do. do. Rocks, 20s. to 30s.; do. do. Reds, 25s. to 30s.

BRITISH WOOLS.—LONDON, May 27.

There is rather more demand at previous prices.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	9	to	1	10	Leicest. Wethers	2	0	to	..	
Half-bred ditto	2	2	—	2	4	Ditto Hoggs	2	1	—	2	3
Down Ewes	1	8	—	1	9	Combing Skins	1	6	—	1	11
Kent Fleeces	2	0	—	2	1	Flannel Wool	1	4	—	1	6
						Blanket ditto	0	9	—	1	0

HOPS.—BOROUGH MARKET, FRIDAY, May 27.

Messrs. Pattenden & Smith report the demand limited to the immediate wants of consumers; the small stocks of last year's growth are nearly exhausted, consequently prices rule firm. Currency:—

Mid and East Kents, p. cwt.	£5 10	to	£9 0
Weald Kents	5 10	—	7 0
Sussex	5 5	—	6 6

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, May 26.

Prime Meadow Hay	75s	to 80s	Clover, old	90s to 110s
Superior do. ..	84	90	New Clover ..	— —
Inferior do. ..	50	60	Do. second cut ..	80 105
New do.	—	—	Straw	25 30
Rowen	—	—		

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, May 26.

Sup. Meadow Hay..	84s	to 92s	Inferior Clover ..	80s to 94s
Inferior do.	65	— 75	New do.	— —
New do.	—	—	Straw	32 36
Superior Clover ..	105	—112		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, May 26.

Fine Meadow Hay..	80s	to 84s	Prime 1st cut Clover	108s to 112s
Inferior do.	70	75	Inferior do. do. ..	95 100
Prime New Hay ..	—	—	New 1st cut do. ..	— —
Inferior	—	—	Prime 2d cut do. ..	105 108
Straw	26	30	Inferior do.	95 100

NEWGATE.—May 27.

Best Fresh Butter .. .. 13s. per dozen lbs.
Second do. do. .. .. 11s. "
Pork, 4s. 0d. to 4s. 4d. per 8 lbs.

LEADENHALL POULTRY MARKET.—May 27.

The warm weather and a small demand continue to influence the prices of Poultry.

Per couple—s. d. s. d.		Each—s. d. s. d.	
Large Surrey Fowls	10 0 to 12 0	Ducks	3 0— 3 6
Farmhouse do. .	7 0— 9 0	Tame Rabbits ..	1 3— 2 0
Best Surrey Chickens	6 0— 8 0		per doz.
Farmhouse do. ..	4 6— 6 0	Wild do...	5 0— 7 0
	each	Pigeons, French ..	8 0—10 0
Goslings	5 0—7 0	Do., English	6 0— 8 0
Ducklings	4 0—4 6	Plovers' eggs.. ..	3 0— 4 0

COAL MARKET.—May 27.

Walls End Hetton, 16s. 6d.; Walls End Lambton, 16s. 3d.; Walls End Haswell, 16s. 6d.; Walls End Stewarts, 16s. 3d.; Walls End South Hetton, 16s. 6d.; Walls End Tees, 16s. 3d.; Walls End Hartlepool, 16s. 3d.; Walls End Braddylls Hetton, 15s. 6d.; Walls End South Kelloe, 16s.; Walls End Heugh Hall, 16s.; Walls End Eden Main, 15s.; Walls End Gosforth, 14s. 3d.; Walls End Riddells, 14s. 6d.; Walls End Harton, 14s 3d.; Walls End Framwellgate, 14s. 3d.; Tanfield Noor, 14s.; Hastings Hartley, 15s. 9d.—Ships at market, 150.

METROPOLITAN CATTLE MARKET.

MONDAY, May 23.

The number of Beasts is smaller and the demand has improved, consequently prices are better for all kinds. The supply of Sheep is also smaller. The great change in the weather has caused a much better demand for big fen Sheep. All descriptions are dearer. Good Lambs and Calves are in request at higher rates. From Germany and Holland there are 1180 Beasts, 5380 Sheep, 140 Calves, and 80 Pigs; from Spain 122 Beasts; from Scotland, 470; from Ireland, 40; and 2320 from Norfolk and Suffolk.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 8	to 5 0	Best Long-wools. ..	—	..
Best Short-horns	4 6	— 4 10	Do. Shorn ..	4 8	— 5 0
2d quality Beasts	3 0	— 4 0	Ewes & 2d quality	..	— ..
Best Downs and Half-breds	—	..	Do. Shorn ..	4 0	— 4 4
Do. Shorn ..	5 0	— 5 4	Lambs	7 0	— 8 0
			Calves	4 0	— 6 0
			Pigs ..	3 4	— 4 8

Beasts, 4420; Sheep and Lambs, 24,124; Calves, 163; Pigs, 450.

THURSDAY, May 26.

We have a few more Beasts than on Thursday last. The weather being good there is a fair demand, and prices are about the same as on Monday. Sheep are also rather more plentiful. They are, however, all sold at fully late rates. Choice Lambs and Calves are in request, but inferior qualities meet with a dull sale at lower rates. Our foreign supply consists of 520 Beasts, 1430 Sheep, and 403 Calves. Milch Cows, 85.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 8	to 5 0	Best Long-wools. ..	—	..
Best Short-horns	4 6	— 4 10	Do. Shorn ..	4 8	— 5 0
2d quality Beasts	3 0	— 4 0	Ewes & 2d quality	..	— ..
Best Downs and Half-breds	—	..	Do. Shorn ..	4 0	— 4 6
Do. Shorn ..	5 0	— 5 4	Lambs	6 8	— 7 8
			Calves	3 8	— 5 8
			Pigs	3 4	— 4 8

Beasts, 1425; Sheep and Lambs, 10,090; Calves, 544; Pigs, 180.

MARK LANE.—MONDAY, May 23.

The supply of English Wheat was short this morning, that of Barley, Beans, and Peas limited, with moderate arrivals of British Oats. English Wheat met a slow sale at about the rates of last Monday for best qualities; foreign was in limited demand, without any material change in prices. Town Flour was unaltered, and country marks sold on about former terms. Barley realised previous rates, with a steady demand for grinding samples Malt was taken slowly at late rates. Beans brought fully as much money. Peas unaltered in price. Oats met a moderate demand at the currency of last week for all sorts. Linseed was firm and saleable. Rapeseed steady.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	42—48	Red	40—48
— — fine selected runs..ditto	44—52	Red	40—48
— — Talavera	48—54		
— Norfolk	—	Red	—
— Foreign	36—52		
BARLEY, grind. & dist, 25s to 27s..Chev.	34—38	Malting ..	29—33
— Foreign..grinding and distilling	22—26	Malting ..	27—31
OATS, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	17—22	Feed	15—20
RYE	30—32	Foreign ..	—
RYE-MEAL, Foreign	—		—
BEANS, Mazagan....27s to 36s...Tick	30—33	Harrow ..	20 33
— Pigeon .... 32s to 40s..Winds.	—	Longpod	—
— Foreign .....Small	36—42	Egyptian	30—32
PEAS, White, Essex and Kent..Boilers	32—33	Suffolk ..	33—34
— Maple .... 30s to 34s .... Grey	28—30	Foreign ..	31—33
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered..per sack	35—40		
— 2d do .....ditto	28—34	Country..	28—34
— Foreign ..... per barrel	15—25	Per sack	32—40

FRIDAY, May 27.

A very limited supply of English Wheat was on sale in to-day's market, coastwise and by land carriage, but the general quality of the samples was fine. For both red and white parcels there was a fair inquiry, but compared with Monday no change took place in the quotations. We were tolerably well, but not to say heavily, supplied with foreign Wheat. Good and fine qualities sold to a moderate extent, at late currencies. All other kinds were very inactive, on former terms. Floating cargoes of grain realised previous quotations There was a fair sale for Barley, at late rates; for the time of year the supply was tolerably good. Malt, the supply of which was good, changed hands slowly. Factors, however, were firm in their demands. Good sound Oats commanded full prices, but low and heated parcels were very dull. We had less business doing in Beans, although the supply was very moderate. Peas moved off slowly on former terms. The show of samples was small. The Flour trade was steady at previous rates.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	580 qrs.	90 qrs.	30 qrs.	2090 sks.
Irish	—	—	3850	— "
				110 "
Foreign ..	13,140 "	5560	14,180 "	4350 brls

LIVERPOOL, May 24.—We have had a very fair attendance of millers and dealers at our Corn Exchange this morning. We have to report a more general demand for Wheat than of late, at full prices, and in many instances 1d. per cental advance was made on last Friday's quotations. Flour was saleable at a slight reduction, but anything choice brought previous rates. Indian Corn neglected, and must be called 3d. per qr. lower. Oats and Oatmeal dull. In Beans, Peas, and Barley no alteration. The market shows much firmness at the close.

FRIDAY, May 27.—There was a moderate attendance at market. Wheat a fair sale, and winter red 2d. to 3d. per cental dearer; other qualities unchanged. Flour steady at late rates. Indian Corn unchanged. Egyptian Beans, Oats, and Oatmeal unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
April 16	40s 1d	30s 10d	19s 3d	27s 8d	33s 0d	31s 11d
— 23	39 7	31 1	18 9	29 0	32 7	32 1
— 30	39 2	30 6	19 4	28 7	33 9	32 1
May 7	38 9	30 3	19 5	32 3	34 0	32 1
— 14	39 3	29 9	19 8	28 5	34 3	32 6
— 21	39 8	29 6	20 0	31 5	34 2	32 9
Agg. Aver.	39 5	30 4	19 7	29 7	33 8	32 4

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	April 16.	April 23.	April 30.	May 7.	May 14.	May 21.
40s 1d—		..	..	..	..	..
39 8	..	..	..	..	..	
39 7	..		..	..	..	..
39 3	..	..	..	..		..
39 2	..	..		..	..	..
38 9	..	..	..		..	..

Working Gardener and Groom.

WANTED, in Yorkshire, an obliging, steady MAN, to take charge of a Garden, with small Greenhouse and Vinery. He would also have charge of two horses, two cows, and everything out of doors at a moderate-sized gentleman's residence. Assistance allowed both in garden and stables. A cottage on the spot rent free. State wages and two last situations. No one need apply whose character will not bear strict investigation. The man who has held this situation, for the last twelve years, is now leaving to go into business on his own account.—Apply to H. J. TURNER, Land Agent, Richmond, Yorkshire.

WANTED, a HEAD SHOPMAN.—The undersigned are in want of a thoroughly experienced person to take the entire charge and responsibility of the SEED BUSINESS, under the direction of one of the principals. No one need apply who has not had ample experience in every department of the Seed Business in first-class houses.—Apply in own handwriting, stating age, and if married, also naming former situations, and salary expected, to FRANCIS & ARTHUR DICKSON & SONS, Seed Merchants and Nurserymen, 106, Eastgate Street, Chester.

WANTED, a SHOPMAN, in the course of a Month or two, for a Seed Shop in Edinburgh; must be thoroughly acquainted with the different branches of the Seed Business.—Apply by letter to M. A. S., 9, Paternoster Row, London, E.C.

WANTED, an energetic steady young Man as SECOND SHOPMAN. Unexceptionable references required.—H. BROWN, 4, Commutation Row, Liverpool.

IMPROVER.—A Young Man, married, wishes to learn the Forcing Department in a gentleman's Garden. Will give 10*l.* to a first-rate Gardener. Has had two years' experience in a Nursery.—Apply, stating full particulars, to E. MARTIN, St. Osyth, near Colchester, Essex.

WANTED, a respectable, steady, and industrious BOY, about 15 years of age, to assist in looking after a Horse and Chaise, and to Milk a Cow; his leisure time would be occupied in the Garden, under a good practical Gardener.—Apply to W. BELL, Wine Merchant, 15, Oxford Street, W.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 40, married, one girl aged 11; good practical experience. Eighteen years' testimonials.—A. B., Mr. Casey's, Chatham Road, Wandsworth Common, Surrey.

GARDENER (HEAD).—Age 32, married; understands Greenhouse, Vinery, Flower, and Kitchen Gardens. Three years and nine months' good character.—D. D., Beckenham, Kent.

GARDENER (HEAD).—Age 30, married, no incumbrance; has a thorough practical knowledge of his profession in all its branches. Six years' good character.—R. WALKLING, Brookman's Park, Hatfield, Herts.

GARDENER (HEAD), in a nobleman's or gentleman's family.—Age 40, married, without incumbrance; has a thorough knowledge of his business in all its branches. Good references as to character and ability.—GARDENER, C. Webbs, Esq., Clapham Common, S.

GARDENER (HEAD).—Age 38, married, no incumbrance; understands Hothouse, Greenhouse, Kitchen Garden. Eight years' good character. Wife could take care of the House if required.—H., Mr. Robinson, News Agent, High Street, Putney, Surrey.

GARDENER (HEAD).—Age 36, married, no incumbrance; has a thorough practical knowledge of his profession, is especially qualified for the Forcing and production of first-class Grapes, Pines, Peaches, &c, and has had much experience in Orchard Houses and the Cultivation of Choice Fruits; is well versed in the Management of Kitchen Gardens, and possesses a thorough knowledge of Plant-Growing; is well acquainted with the Laying Out and Management of Ornamental Flower Gardens. Five years' character from a nobleman he has served as Head Gardener.—HORTUS, Royal Botanic Gardens, Regent's Park, London.

GARDENER (HEAD).—Age 31, married; thoroughly experienced in Flower, Fruit, and Kitchen Gardens; and Late Forcing, &c. No objection to Meadow Land required. Good character.—W. H. G., Drayton Green, Uxbridge Road, Ealing.

GARDENER (HEAD).—Married, no incumbrance. Man of trust and experience, good Grower of Pines, Peaches, and Stove and Greenhouse Plants, and also Kitchen Gardens. Wife a good Dairywoman. Seven years' character, and ten from a former master.—T. L., 6, Roberts Lee, Kent.

GARDENER (HEAD).—Age 32, married, no incumbrance; has had a first-class practice in Fruit Forcing, in Kitchen and Flower Gardening, accustomed to making New Gardens and Pleasure Grounds, and can be recommended.—Further particulars of terms, &c., given on application, addressed to WM. WOOD & SON, Woodlands Nursery, Mayfield, Uckfield.

GARDENER (HEAD).—Age 37, married, one child aged 12; has lived nine years as Head Gardener; where he had the Management of a great extent of Glass, Fruit, Flower, Kitchen Gardens, making Improvements; has also had the Management of Meadow Land, Farming, Stock, Measurement, and Timber. Can be highly recommended.—T. BURNETT, Mr. Wm. Ironmonger, Roehampton, S.W.

GARDENER (HEAD).—The Advertiser, 32 (married, one child), possessing a thorough practical knowledge of the Growth and Culture of Flowers, Fruit, and Vegetables in branch, Hothouse or otherwise, desires an engagement with a man or gentleman. Has been upwards of two years Foreman in a first-class Forcing establishment, near Manchester. Leaving on June 25. Good references and testimonials.—G. W., Stretford, near Manchester.

GARDENER (HEAD).—JOHN PEARSON, who has been for upwards of two years Head Gardener to the Right Hon. Lord Foley, at Worksop Manor, Notts, will be at liberty on 1st next, to dispose of his services in a similar capacity. He is experienced in every department of Gardening, and can Lay out Grounds; is thoroughly competent to undertake the Management of a large establishment. J. P. has been several years in the first situations in England and Scotland. Can give unexceptionable references.

GARDENER (HEAD), where one or two are kept.—Age 30, single; can be highly recommended from present employer. Four years and nine months' character.—A. B., 2, Rose House, Abbey Wood, Erith, Kent, S.E.

GARDENER (HEAD), where three or four are kept, or SECOND, in a large Establishment.—Age 27. First-class references as to ability and character.—A. B., Post Office, Great Marlow, Bucks.

GARDENER (HEAD or SINGLE-HANDED).—Age 30, a thoroughly practical Man in every branch of his profession, and can be highly recommended.—A. B., Post Office, Stoke Poges Cross, Bucks.

GARDENER (HEAD or SINGLE-HANDED).—Age 30, single; understands Vinery, Greenhouse, Forcing, and Kitchen and Flower Gardens. Three years' good character.—A. B., 1, Eltham, near Eltham, Kent, S.E.

GARDENER (SINGLE-HANDED), or where two or three are kept.—Age 25, single; thoroughly understands Stove, Greenhouse Plants, Forcing, and Flower and Kitchen Gardens. Two years' character.—J. W., 6, Albert Cottages, Queen's Road, King's Road, W.C.

GARDENER (SECOND).—Age 23, single; has had considerable experience in the Propagation and Cultivation of Vines, Melons, Cucumbers, Plants, &c. Good character for sobriety.—H. C., Valentine's, Ilford, Essex.

GARDENER (UNDER).—Age 23; active, of some experience. Good character from last three places.—MARSHALL, Hykeham, Lincoln.

GARDENER or IMPROVER.—Has been accustomed to work chiefly in the houses. Can have good character from the places he has left.—Y. Z., 17, St. John's Square, Clerkenwell, London, E.C.

FOREMAN (OUT-DOOR), in a Nursery where Roses and Fruit Trees are grown extensively.—Has had 5 years' experience, and possesses an excellent character.—C. A., 61, High Street, Worcester.

FOREMAN or JOBBING MAN, or to commence BUSINESS of a small NURSERY.—Middle-aged, single; 30 years' practice. Understands Budding, Grafting, Training, Irrigation of Roses, &c. Wages 1*l.* 1*s.* per week.—G. D. T., 35, Pembroke Road, Notting Hill, W.

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GROUND FOREMAN.—Middle age, married; a thorough practical Man, of 25 years' experience, capable of Managing a Nursery of any extent, and thoroughly acquainted with the Trade in Nursery Stock. Good reference.—J. P., London Road Nursery, Newbury, Berks.

PROPAGATOR and GROWER of Geraniums, Fuchsias, Calceolarias, and Soft-wooded plants generally.—Married, no incumbrance; has had great experience in growing for exhibition and general purposes in some of the best nurseries near London.—41, Grafton Road, Kentish Town, N.W.

TRAVELLER, SALESMAN, or CORRESPONDENT.—Age 31; of thorough business habits. Commands a good address, and possesses a first-rate practical knowledge of the Nursery business in all departments. Has a good knowledge of the Value of Nursery Stock, and is well acquainted with the principal routes through the Three Kingdoms, which he has travelled. Unexceptionable references.—L. M. N., Messrs. Sutton & Sons, Nurserymen & Seedsmen, Reading.

To the Nursery and Seed Trade.

SALESMAN or SHOPMAN.—Has a practical knowledge of both the Seed and Plant Business.—S. B., Post Office, Wakefield.

HOUSE CARPENTER and GENERAL FOREMAN. Used to Farm Houses, Farm Buildings, Labourers' Cottages, &c. Recommended by a nobleman from his last situation.—3, Prince's Terrace, Alma Road, Wandsworth, S.W.

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The Gardeners' Chronicle Newspaper.

SATURDAY, JUNE 4, 1864.

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No other Establishment.

FLOORING, MATCH BOARDS, DEALS, &c., as low as advertised. White Batten, 9*l.* per 120. 12 feet; Yellow ditto, 10*l.* ditto ditto; ¾ Floor Boards, well prepared, from 11*s* 6*d* per square; Matched Lining, from 12*s.*; Venetian Blind Laths from 8*s.* 6*d.* per 100 feet super.—CHARLES CATLIN, Surrey Sawing and Planing Mills, Church Street, Kennington.

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GALVANISED IRON GARDEN ENGINE,

WITH REGISTERED SPREADER.

10 gallons	..	..	..	£2 15*s.*
16 „	..	..	..	3 15*s.*
24 „	..	..	..	5 0*s.*

No 35

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PATENT IRON PUMPS.

2½ inch	..	..	£1 10*s.*
3 „	..	..	2 4*s.*
3½ „	..	..	2 9*s.*
4 „	..	..	2 18*s.*
2½ inch, with short barrel	..	..	1 1*s.*

No. 568½.

WARNERS'

AMERICAN PORTABLE FIRE ANNIHILATOR

AND

GARDEN ENGINE,

£2 2*s.*

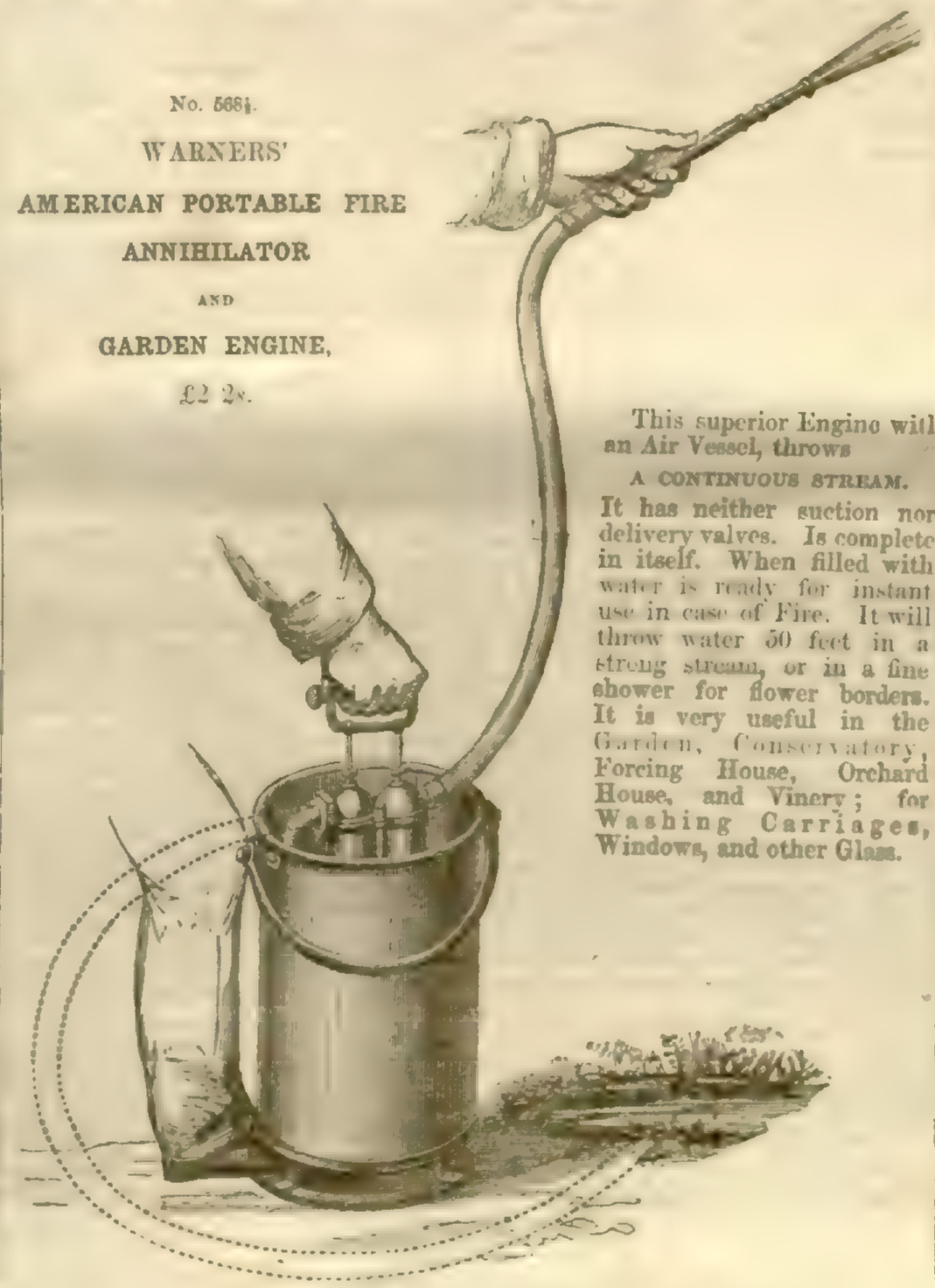

This superior Engine with an Air Vessel, throws

A CONTINUOUS STREAM.

It has neither suction nor delivery valves. Is complete in itself. When filled with water is ready for instant use in case of Fire. It will throw water 50 feet in a strong stream, or in a fine shower for flower borders. It is very useful in the Garden, Conservatory, Forcing House, Orchard House, and Vinery; for Washing Carriages, Windows, and other Glass.

No 5, 4.

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SWING WATER BARROW.

20 gallons	..	..	..	£2 0*s.*
35 „	..	..	..	2 10*s.*

Saves a gardener's time when used with the water pot.

WARNERS'

PORTABLE LIQUID MANURE PUMP,

WITH LEGS,

£2 15*s.*

Ditto for fixing to cart, £2 5*s.*

Suction Pipe for Pump, 2*s.* 5*d.* per foot.

No. 42.

No. 557*a*

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IMPROVED PATENT DOUBLE ACTION SYRINGE,

with 5 feet of flexible Suction Pipe, 21*s.*

Is much improved since last season

It economises a gardener's time

To draw from a water-pot, pail, or other vessel.

No. 500.

BARKER'S MILL, Large, 25*s.*; Small, 8*s.* 6*d.*

Fountain Designs in great variety. Can be supplied from a Cistern or Main.

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REGISTERED DISC-VALVE SYRINGE. 9*s.*

FILLS QUICKLY AND EASILY.

It is well adapted for the Gardener or Amateur.

May be obtained of any Ironmonger, Plumber, or Seedsman in the United Kingdom, or of

JOHN WARNER AND SONS, 8, CRESCENT, CRIPPLEGATE, LONDON, E.C.

SHAW'S TIFFANY.

For samples and prices apply to
J. SHAW & Co., 29, Oxford Street, Manchester.

TANNED GARDEN NETTING for preserving Seed Beds, Fruits, Strawberries, from Frost, Blight, Birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 3 yards, 4½*d*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WRIGHT'S, 376, Strand, W.C.

VARNISHED FLOWER STICKS:—1 foot, 3*d.*; 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 10*d.*; 4, 1*s.* 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1*s.* 6*d.*; 4, 2*s.* 3*d.*; 5, 3*s.*; 6, 3*s.* 6*d.* An allowance to Nurserymen.

NETTING for FRUIT TREES, SEED BEDS, RIPE STRAWBERRIES, &c.—TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3*d.* per yard; or 100 yards, 20*s.*; 4 yards wide, 6*d.* per yard; or 50 yards, 20*s.* NEW TANNED NETTING, suited for any of the above purposes, or as a Fence for Fowls, 2 yards wide, 6*d.* per yard; 4 yards wide, 1*s.* per yard; ¾-inch mesh, 4 yards wide, 1*s.* 6*d.* per yard.

Can be had in any quantity of EATON & DELLER, 6 and 7, Crooked Lane, London Bridge, E.C.

EDGINGTON'S GARDEN NETTING, the cheapest and most durable; 200 square yards, 14*s.*; 500 yards, 30*s.*; 1000 yards, 50*s.*

EDGINGTON'S RICK CLOTHS for 59 years have maintained their celebrity as the best.

EDGINGTON'S MARQUEES and TENTS are the prettiest.

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Samples of material free on application. Be particular—FREDERICK EDGINGTON & Co., Thomas Street, Old Kent Road, London, S.E.

A liberal Discount to the Trade.

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Warranted the strongest and most durable Fence ever offered at corresponding prices. It is easily repaired if broken from accidents; can be rolled up most compactly when not in use, is admirably adapted for exportation, and can be had of any height and mesh required, at prices from 4*d.* to 1*s.* 6*d.* per yard and upwards.

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NEW IMPROVED PREMIUM WIRE NETTING.
Great Improvement with Reduced Price.

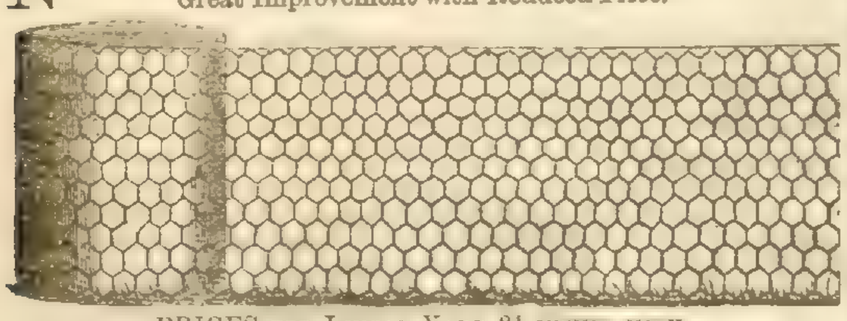

PRICES PER LINEAL YARD 24 INCHES HIGH.

Size of Mesh.	Mostly used for	Light. Jap	Light. Gal	Medium Jap	Medium Gal	Strong. Jap	Strong. Gal	Extra Strong. Jap	Extra Strong. Gal
		s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
2½ in.	Hares, Dogs, Poultry	0 3	0 4	0 3½	0 5	0 4½	0 6	0 5½	0 7
2 in.	Game or Poultry Netting	0 3½	0 4½	0 4	0 5	0 5	0 6½	0 6½	0 8
1⅝ in.	Small Rabbits, Hares, &c.	0 4	0 4½	0 4½	0 6	0 5½	0 7	0 7	0 9
1½ in.	Smallest Rabbits ..	0 5	0 6	0 5½	0 7	0 7	0 9	0 9	0 11
1 in.	Pheasantries, &c. ..	0 9	0 11	10½	1 1½	1 3	1 6	1 9	2 0
½ in.	Aviaries, &c.	1 0	1 3	1 3	1 6	1 6	1 9	..	..

Quantities of 100 yards or upwards delivered free to nearly all the principal Railway Stations and Shipping Ports in England; and 200 yards or upwards delivered free to most parts of Scotland and Ireland.

*** Every description of Netting warranted to give satisfaction, and if not approved will be exchanged, or may be returned unconditionally.

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FURTHER REDUCTION in the PRICE of WIRE NETTING.

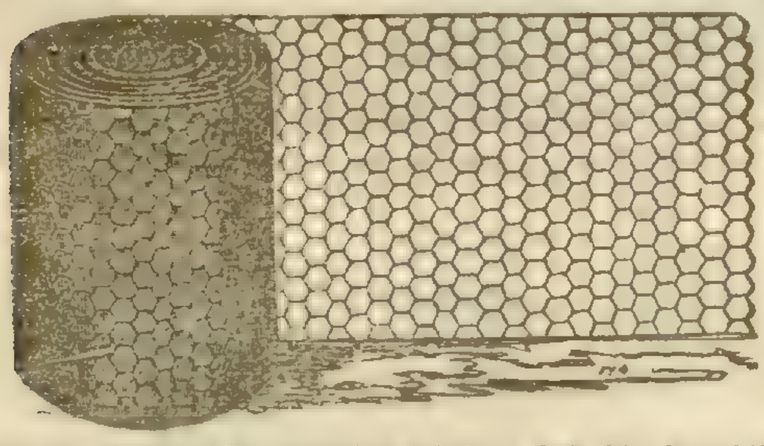

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	Gauge.	Galvanised.	Japanned Iron.
2-inch mesh, 24 inches wide	No. 19 ..	4½*d.* per yd.	3½*d.* per yd.
2-inch ,, ,, ,, .. ,,	18 ..	5 ,,	4 ,,
2-inch ,, ,, ,, .. ,,	17 ..	6½ ,,	5 ,,
2-inch ,, ,, ,, .. ,,	16 ..	8 ,,	6½ ,,
1½-inch ,, ,, ,, .. ,,	19 ..	4½ ,,	4 ,,
1½-inch ,, ,, ,, .. ,,	18 ..	6 ,,	4½ ,,
1½-inch ,, ,, ,, .. ,,	17 ..	7 ,,	5½ ,,
1½-inch ,, ,, ,, .. ,,	16 ..	9 ,,	7 ,,

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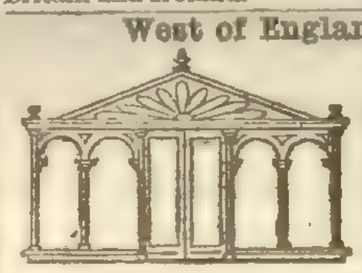

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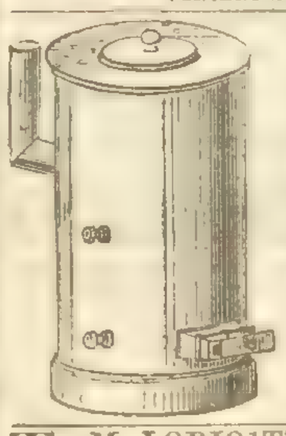

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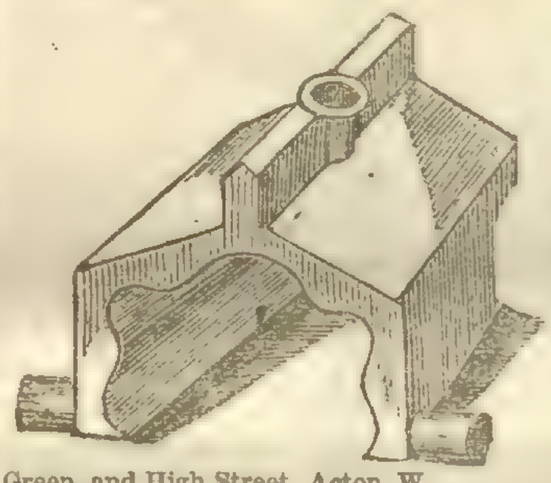

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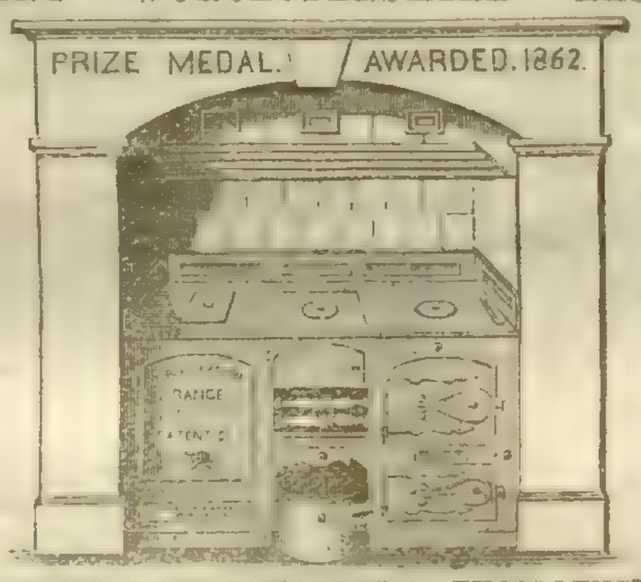

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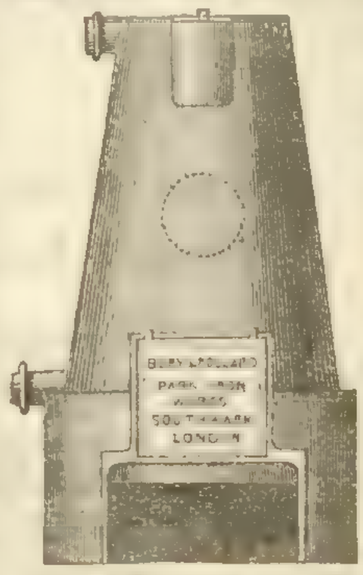

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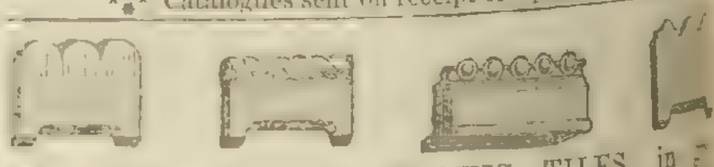

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H. M. Kemshed, Esq. — G. Ramsay, Esq., Manager of the Company.
John Kingston, Esq.

Secretary—F. G. Smith, Esq.
Medical Officer—E. W. Duffin, Esq., M.D.
Solicitors—Messrs. Oliverson, Lavie, and Peachey.

The Annual Report and Proposal Forms may be had on application at the Offices of the Company.

F. G. SMITH, Secretary.

37, Cornhill, London, E.C.

News of the Week.

IN the House of Lords on Friday, in answer to Earl STANHOPE, the Earl of CLARENDON said that the Government did not propose to introduce any measure on the subject of Public Schools in the present Session. On Monday, in answer to Lord LYTTELTON, Earl GRANVILLE said that the Home Government had assented to the Suppression of the Rebellion Act and to the Confiscation Act, passed by the New Zealand Legislature. The Local Government Supplemental Bill and the Divorce and Matrimonial Causes Bill passed through Committee. On Tuesday, after a long discussion, the Penal Servitude Acts Amendment Bill was read a second time. On Thursday the Mortgage Debentures Bill passed through committee with amendments. The Ecclesiastical Courts and Registries (Ireland) Bill, and the Summary Procedure (Scotland) Bill were read a second time. A Bill for the protection and regulation of the Oyster Fisheries was read a first time.

In the Commons on Friday, in answer to Sir S. NORTHCOTE, Lord PALMERSTON said that the Government had determined to refer the question of the Banda and Kirwee booty to the Court of Admiralty. The Public and Refreshment Houses (Metropolis) Bill was read a second time. The Union Assessment Committee Act Amendment Bill, the Army Prize Bill, and the Chain Cables and Anchors Bill were read a third time and passed. On Monday, on the order for going into committee of supply, Mr. WHITESIDE moved a resolution that it was expedient to reduce the existing duties on spirits. The CHANCELLOR of the EXCHEQUER opposed the motion, and after a short discussion it was withdrawn. Mr. ROEBUCK called attention to the expulsion of Mr. HOME, the spiritualist, from Rome, and asked if any steps had been taken to obtain compensation for the losses he had sustained. Mr. LAYARD said that as Mr. HOME had infringed the law of the country, to which he was bound to conform, there was no ground for calling upon the Papal Government for redress. The House then went into a Committee of Supply on the Civil Service Estimates, and agreed to several votes, after much discussion. The proposed vote of 4000*l.* for a Lunatic Asylum in the Isle of Man was negatived on a division by 95 to 73. On the motion for the second reading of the Writs Registration (Scotland) Bill, Major HAMILTON moved as an amendment that the debate be adjourned. The amendment was ultimately agreed to. The Vacating of Seats (House of Commons) Bill was read a third time and passed. On Tuesday Mr. COBDEN moved a resolution that the policy of non-intervention by force of arms in the internal political affairs of foreign countries, which we professed to observe in our relations with the states of Europe and America, should be observed in our intercourse with the empire of China. The motion was opposed by the Government, and was ultimately withdrawn. Alderman SALOMONS obtained leave to bring in a Bill to facilitate the traffic of the metropolis by improving the communication across the river Thames. Mr. HANKEY obtained leave to bring in a Bill for defraying out of fees a portion of the expenses of carrying into effect the Charitable Trusts Act of 1853. Lord PALMERSTON moved the nomination of the Select Committee on Education (Inspectors' Reports), to consist of 15 members. Mr. CLAY moved, as an amendment, that it be referred to the General Committee of Elections to nominate a Select Committee of five members. After a long discussion, in which Lord PALMERSTON expressed his readiness to adopt the amendment, Mr. HENNESSY moved that the debate be adjourned. On a division, this motion was negatived by 64 to 30. Colonel DICKSON then moved the adjournment of the House, which was negatived on a division, by 62 to 32. The adjournment of the debate was then moved, and ultimately agreed to. On Wednesday, on the motion for going into committee on the Tests Abolition (Oxford) Bill, Mr. TREFUSIS moved as an amendment that the Bill be committed that day six months. After a long debate, the amendment was negatived on a division by 236 to 226. On Thursday Mr. ADDERLEY moved a resolution to the effect that the minute of Council of the 11th March last, on endowed schools, did not meet the objections made to the minute of the 19th May, 1863. The motion was opposed by the Government, and negatived on a division by 119 to 111. The adjourned debate on the nomination of the Select Committee on Education (Inspector's Reports) was resumed, and after a long discussion, Mr. CLAY'S amendment that the Committee consist of five members, to be nominated by the General Committee of Selection, was agreed to. The Court of Chancery (Ireland) Bill and the Court of Queen's Bench (Ireland) Bill were read a second time.

The Plenipotentiaries accredited to the Conference met on Saturday and again on Thursday, when it was resolved to prolong the armistice for 15 days, on the condition that no further extension shall take place unless the basis of a peace be agreed to. It is understood that the German plenipotentiaries demand the cession of Flensburg and Düppel, while the neutral Powers adhere to the line of the Dannewerke as the Danish frontier. It is reported from Copenhagen that public opinion in that capital is decidedly opposed to the division of Schleswig, and that a continuance of the war is considered preferable to such a settlement of the question.

From the United States we learn that General GRANT again attacked General LEE on the 18th ult., and after a desperate conflict was obliged to retreat, with a loss of 1200 killed and wounded. On the following day General EWELL gained the Federal rear, and attempted to capture General GRANT'S supply train. After an hour's fighting, in which the Federals lost more than 1000 men, the Confederates returned to their entrenchments. The Confederate surprise of General BUTLER on the 16th was completely successful, the Federals losing a whole brigade and several cannon. General BEAUREGARD, on the 20th, was in General BUTLER'S front, and preparing to assault his intrenchments at Bermuda. Mr. STANTON has announced that General GRANT has been reinforced by 25,000 veteran troops. The forger of the proclamation has been discovered and lodged in Fort Lafayette.

Home News.

THE QUEEN IN SCOTLAND.—On Tuesday week Lord Stanley of Alderley left the Castle. The Duke of Argyll arrived on a visit to the Queen. On Wednesday the Queen, with the Princess Leiningen and Princess Helena, went out. Her Majesty, with the Princess Leiningen and Princess Helena, afterwards drove by Castleton, Corriemulzie, and Mar Lodge, and returned through Invercauld. On Thursday the Queen, with the Princess Beatrice, drove to the falls of Garwalt and through Glen Beg. Prince Arthur and Prince Leopold went to Invercauld to fish. On Friday morning the Queen went out with the Princess Leiningen. In the afternoon her Majesty drove with the Princess Leiningen and Prince Arthur. On Saturday morning the Queen went out with the Princess Louisa. On Sunday the Queen, the Princess Helena, Princess Louisa, the Princess Leiningen, the Princes Arthur and Leopold, attended Divine service in the Castle. The Rev. Dr. R. Lee, one of her Majesty's Chaplains, officiated. The Princess Helena and the Princess Leiningen after-

wards attended Divine service at the parish church of Craithie, where Dr. Lee officiated. In the evening the Duke of Argyll and Dr. Lee had the honour of dining with her Majesty and the Royal family. On Monday the Queen went out in the grounds. The Earl of Dalhousie arrived at the Castle, and had the honour of dining with the Queen and Royal family. The Rev. Dr. Lee left the Castle. On Tuesday morning the Queen went out with the Princess Louisa, and in the afternoon drove with the Princess Leiningen.

THE PRINCE AND PRINCESS OF WALES.—On Saturday afternoon the Prince, accompanied by Prince Louis of Hesse, went on horseback to the review of volunteers in Hyde Park. The Princess, accompanied by Princess Louis of Hesse and Princess Mary of Cambridge, also attended the review in an open carriage and four. The Royal party was escorted to the park by a detachment of the Horse Guards. In the evening the Princess, with the Princess Louis of Hesse, went to the Princess's Theatre. The Prince dined at the annual dinner of the officers of the 10th Hussars, at Willis's Rooms. On Sunday morning the Prince and Princess attended Divine service at the Chapel Royal, Whitehall, when the Dean of Westminster preached on behalf of the Additional Curates Aid Society. The Prince and Princess Louis of Hesse attended Divine service at the German Chapel, St. James's. In the afternoon the Prince and Princess, accompanied by Prince and Princess Louis of Hesse, went to the White Lodge, Richmond Park. On Monday the Prince and Princess, with the Prince and Princess Louis of Hesse, went to Claremont, and were present at the *déjeûner* and ball in honour of the marriage of the Count de Paris. On Tuesday afternoon their Royal Highnesses returned to Marlborough House from the White Lodge. In the evening the Prince and Princess had a dinner party. On Wednesday morning the Prince visited the Duke of Newcastle, at his residence in Carlton House Terrace. The Princess, accompanied by the Princess Louis of Hesse, went to the Flower Show at the Horticultural Gardens. The Prince, accompanied by Prince Louis of Hesse, went to the London Fencing Club to witness an assault of arms. In the afternoon the Prince held a Levée at St. James's Palace on behalf of the Queen. The Prince and Princess, accompanied by the Prince and Princess Louis of Hesse, afterwards went to the French Exhibition of Paintings in Pall Mall. In the evening the Prince and Princess, accompanied by the Prince and Princess Louis of Hesse, and Prince Philip of Wurtemburg, went to the Haymarket Theatre. On Thursday morning the Prince and Princess left Marlborough House on a visit to Cambridge. In the afternoon the Prince and Princess Louis of Hesse took a carriage drive. In the evening their Royal Highnesses went to the Lyceum Theatre, accompanied by Prince Hermann, of Solms-Lich.

PRINCE ALFRED arrived at Lisbon on Sunday in the Racoon, and landed at the Arsenal on Monday. The King arrived from Cintra to receive him, and went off in the Royal barge to convey his Royal Highness ashore. The Racoon, with the Prince on board, will sail for Ireland when the weather moderates, calling at Spithead.

MARRIAGE OF THE COUNT DE PARIS.—On Monday Louis Philippe Albert d'Orleans, Comte de Paris, the eldest hope of the Orleans family, was married to his first cousin, the Princess Isabelle of Spain, in the presence of a most illustrious company, including not only English nobility and foreign Ambassadors, but many of the representatives of the old historic names of France who still adhere in loyalty and hope to the fallen fortunes of the Orleans dynasty. The marriage was celebrated in the Roman Catholic chapel at Kingston, The event caused no little excitement at Kingston, Claremont, and Esher, and was made a gala day for all the country round. Dr. Grant, Roman Catholic Bishop of Southwark, officiated on the occasion, and among those present were the ex-Queen Marie Amelie, the Duke and Duchess de Montpensier, the Prince and Princess de Joinville, the Duke d'Aumale, the Duke and Duchess de Chartres, the Duke de Nemours, the Count d'En, the Duke d'Alençon, the Prince de Condé, the Princess Christine of Spain, the Spanish Minister and Madame Comyn, the Belgian Minister and Madame Van de Weyer, the Italian Minister, the Austrian Ambassador and Madame Apponyi, the Prussian Ambassador and the Countess Bernstorff, the Bavarian Minister, the Portuguese Minister and the Countess Lavradio, the Saxon Minister, Prince Edward of Saxe-Weimar, the Marquis and Marchioness of Clanricarde, the Earl and Countess Russell, Prince Ferdinand of Coburg, Prince Philip of Wurtemberg, the Princess Amélie of Coburg, the Prince Auguste of Saxe-Coburg, Lord and Lady Stanley of Alderley, General and Lady Alice Peel, Lord Houghton, Lord and Lady Foley, Earl St. Germans, Baron Marochetti, the Countess of Waldegrave, Sir Robert Peel, Sir Roderick Murchison, Mr. Chichester Fortescue, and numerous members of the French and Spanish aristocracy. After the service the bride and bridegroom, with the Queen-Mother, the Duke and Duchess de Montpensier and the leading members of the family, returned to Claremont. The road was lined with the inhabitants for nearly the entire distance, and at the road leading to Esher station there was a triumphal arch with flags and banners, on one of which was inscribed "Long life to the Count and Countess de Paris." Esher village itself was decorated in a very tasteful manner, for there were two handsome arches, the bases of which were adorned with the choicest flowers, while aloft were shields bearing the fleur de lis and the Orleans arms. At Claremont House the Count de Paris and his bride were received with salvoes of artillery, and the music of several volunteer bands; but, as last year, on the occasion of the marriage of the Duke and Duchess de Chartres, the prettiest feature was the assemblage of gaily-dressed ladies and children, who covered the broad flight of steps leading to the mansion, and heartily welcomed the bride and bridegroom on their arrival. Shortly afterwards the Prince and Princess of Wales, the Prince and Princess Louis of Hesse, the Duchess of Cambridge, the Princess Mary of Cambridge, the Duke of Cambridge, and the Grand Duke and Duchess of Mecklenburg Strelitz arrived and were very cordially received by the French Princes. After the company had assembled, the Count de Paris appeared on the steps of the portico, and amidst enthusiastic cheers said in excellent English—

"Ladies and Gentlemen,—I thank you, in my wife's name and my own, for your sympathy. Nothing can be more gratifying to me than to see this happy day celebrated by those amongst whom I have spent many years of my youth. The feelings towards us that have grown up during those years to be at last so kindly expressed to-day are the more valuable because I may conceive that they are quite spontaneous. They have been to my family a great comfort during the trials of exile. Therefore you are welcome on the day of a great domestic joy, and I trust that your good wishes will prove for us both a happy omen."

This address was greeted with renewed applause, amidst which the Count retired to a *déjéuner* which had been prepared in an immense marquee erected at the rear of the house. The Prince of Wales led the ex-Queen Marie Amélie to her seat, while the Grand Duke of Mecklenburg conducted the Princess of Wales. At the conclusion of the *déjéuner* the ex-Queen rose and proposed a toast to the health of the newly-married prince and princess, which was most enthusiastically responded to. The Prince and Princess of Wales, the Duchess of Cambridge, the Princess Mary, and the Duke of Cambridge soon after took leave, and were loudly cheered on their return. The Count and Countess de Paris departed in the afternoon for Woodnorton, Worcestershire, the seat of the Duke d'Aumale, where they will pass the honeymoon. In the evening a grand ball was given by the Duke and Duchess de Chartres, at their residence, Morgan House, Ham Common, to about 300 guests, including the Prince and Princess of Wales, the Prince and Princess Louis of Hesse, the Duke of Cambridge, the Grand Duchess of Mecklenburg-Strelitz, and the Princess Mary of Cambridge.

STATE BALL.—The Lord Chamberlain, by her Majesty's command, has issued cards for a full dress ball at Buckingham Palace on the 27th inst.

THE CONFERENCE.—The Plenipotentiaries accredited to the London Conference met on Saturday at the official residence of the First Lord of the Treasury, in Downing Street, and sat two hours and a half. All the members of the Conference were present. The Conference met again on Thursday, and sat for nearly four hours, when it adjourned to Monday.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street.

BRITISH MUSEUM.—The Right Hon. Robert Lowe, M.P., has been elected a trustee of the British Museum, in the room of the late Sir George Cornewall Lewis.

Foreign.

FRANCE.—The Session of the Corps Législatif was closed on the 28th. The President, the Duke de Morny, delivered the customary speech, of which the following is an abstract:—"I have always comprehended my duty as a duty of conciliation, and have invited all parties to observe conciliation one towards another. How greatly should we serve the interests of our country by uniting all our forces without distrust and without irritation; and how much better should we serve the cause of liberty if we rendered it more attractive by moderation and justice in the expression of our opinions." This speech was received with great applause. The deputies then separated with cries of "Vive l'Empereur!" The *Moniteur* gives the following particulars respecting the meeting of the Conference on Saturday:—

"Before separating, the Plenipotentiaries of the belligerents were invited by the neutral Powers, in the interest of humanity, and to further the negotiations now in progress, to solicit without delay instructions from their respective Governments for a prolongation of the suspension of hostilities, in order to be able to discuss that question at their next meeting."

The *Constitutionnel*, in a short article signed by M. Paulin Limayrac, gives the following summary of the proceedings:—

"The German Powers formally proposed the union of Schleswig and Holstein, to be connected with Denmark solely by the personal union. That proposal was registered. A counter proposition was made for the separation from Denmark of Holstein and the German portion of Schleswig, under the sanction of the populations, to be consulted by a vote. The Danish representatives stated that they must refer to their Government, but the German Plenipotentiaries expressed their willingness to entertain this scheme under certain reserves."

Another account states that the German Plenipotentiaries claimed the whole of Schleswig as well as Holstein; that the Danish Plenipotentiaries absolutely refused to entertain the proposal; and that England made an offer of mediation, which was accepted only *ad referendum*. It is also understood in Paris that the Prussians refused to allow the armistice to be prolonged unless the Isle of Alsen were given up to them. The *Mémorial Diplomatique* says that this dismemberment of the Danish monarchy will only be sanctioned by the neutral Powers in the event of the Danish plenipotentiaries rendering any arrangement impossible on the base of personal union, but that the definitive separation of the German from the Danish population of the Duchies appears certain to be the result of the deliberations of the Conference. Several evening papers assert also that England, Russia, and Sweden intend to propose to the Conference to stipulate that Kiel should not become a Federal port, nor Rendsburg a Federal fortress. M. Duruy, Minister of Public Instruction, has presented a report to the Emperor pointing out the abnormal position occupied by M. Renan, who by a measure of public order has been incapacitated for the last two years from fulfilling the duties of his Professorship at the College of France. The Minister says:—

"It is as contrary to the good administration of the public funds as to the dignity of a distinguished scholar that he should be compelled to submit to the anomaly of receiving salary without fulfilling his functions. Not being able to restore M. Renan to the chair, which he occupied on a single occasion, it is expedient loyally to terminate the present abnormal state of things by appointing M. Renan to other functions."

In consequence of M. Duruy's report an Imperial decree has been issued appointing M. Renan Assistant Curator of the Imperial Library.

SPAIN.—The Ministry have received news from Peru announcing that the Government of Peru was disposed to satisfy the demands of Spain. A Cabinet Council was held on Monday at Aranjuez, to discuss this question. Two Spanish frigates are about to start for the Pacific. The Progressist Committee, disregarding the differences prevailing between Señores Espartero and Olozaga, has resolved upon reorganising the party. It is asserted that Espartero has openly assumed the direction of a sub-division of the party, and that a modification of the Ministry will take place after the close of the session.

PORTUGAL.—The King arrived from Cintra on the 30th ult. to receive Prince Alfred, who had arrived on the previous day in the Racoon. A Bill to establish free trade in corn has been introduced to the Cortes. It is rumoured that the Portuguese Government is about to bring forward a new loan for 50 millions. Heavy gales were raging in the Tagus on Tuesday night, during which the British ship Freak and the Russian ship Arthur were capsized in the harbour.

DENMARK.—The *Fädrelandet* of the 29th ult. says:—

"We learn that it is extremely improbable that the Government will prolong the truce, unless a basis for peace should be submitted. In that case the truce would be replaced by an armistice upon different conditions from those on which the former has been concluded."

It is also asserted that public opinion at Copenhagen energetically demands a resumption of hostilities, the present season of the year being especially favourable to the Danes. In case of fresh delays arising, their naval strength could but be neutralised by the approach of the bad season. The *Dagbladet* of the 31st, in an article on the Danish question, says:—

"Should the London Treaty be annulled, and the German inhabitants of the monarchy themselves decide upon their destiny, the settlement of the succession will become void. The Danish inhabitants will then demand an equal right of choosing for themselves a monarchical or a Republican Government, and also decide whether they join Germany or Sweden."

The same paper of Wednesday expresses itself violently against England's proposal at the Conference for the division of Schleswig, and demands that the Government should meet it with a decided resistance. The *Flyneposten*, the organ of the Conservative party, likewise prefers war to the acceptance of this proposal. The latest advices from Jutland state that the Prussians continue to arrest Danish officials, and have subjected the local press to censorship. It is semi-officially denied that the contributions and confiscations ordered prior to the 12th of May, which were to be cancelled in consequence of the armistice, have been withdrawn by the Prussians. Intelligence from Aalborg announces that the Prussians are constructing entrenchments at that place.

THE DANISH DUCHIES.—The Duke of Augustenburg left Kiel on Tuesday evening for Berlin, and intends, it is said, to proceed thence to Vienna.

FRANKFORT.—In the sitting of the Federal Diet on Thursday, on the proposition of the United Committees, the Federal Governments were summoned to prohibit the export by sea of gunpowder and arms from North Germany.

PRUSSIA.—The semi-official *Nord-Deutsche Allgemeine Zeitung* of Saturday says:—

"It is incorrect that proposals for the division of Schleswig have been officially made by the British Cabinet. To the extent of our knowledge such a division has only been confidentially alluded to by the British Cabinet."

The same Journal of Monday says that England has given notice of her intention to propose that Kiel under no circumstances should become a Federal port. This presumption it says has been decisively rejected by the representatives of Prussia, Austria, and the Federal

Diet. The same paper of Tuesday says that even if the neutral Powers had no objection to see the Holstein succession treated as a German question, they would nevertheless regard the succession in Schleswig as a question subject to international decision.

AUSTRIA.—The *Presse* of Vienna says that Count Apponyi, the Austrian Ambassador in London, has been instructed to propose at the Conference the candidature of the Duke of Augustenburg, and the complete separation of the Duchies from Denmark. The *Ost-Deutsche Post* of Monday publishes the following as having passed at the last sitting of the London Conference:—

"At the sitting of the 28th, Count Apponyi explained the principles upon the bases of which the allied Powers are disposed to make peace. These principles are complete separation of the Duchies from Denmark, and their constitution as an independent German State, under the government of the hereditary Prince Frederick of Augustenburg. The representatives of France presented a conciliatory project tending to incorporate Holstein and Lauenburg, with part of Schleswig, in the Germanic Confederation, and the other part of Schleswig with Denmark. The Earl of Clarendon supported this proposition, and stated at the same time what would be the line of division. The Plenipotentiaries of Austria, Prussia, and the Germanic Confederation pronounced against a partition of Schleswig, and declared the views of Denmark inadmissible. All the propositions made were accepted *ad referendum* to the respective Governments. The question of the armistice was not discussed. The Danish Plenipotentiaries presented no counter proposition."

ITALY.—The Pope resumed his receptions on Monday. The health of his Holiness is said to be completely re-established. Signor Minghetti, Minister of Finance, announced in the Chamber of Deputies on Monday that the 200 millions of the last loan have been issued upon conditions which he hoped would be found advantageous.

IONIAN ISLANDS.—Greek troops were landed at Corfu on Wednesday. On the following day the Greek flag was hoisted on the forts amid great enthusiasm. The protocol ceding the Ionian Islands to Greece was signed on the 28th ult., whereupon the Lord High Commissioner published a proclamation announcing the fact. His Lordship then received a vote of thanks from the Senate. The British Consulates have been informed that, in compliance with the wish of Greece, England will extend her protection over the Ionian inhabitants in their relations with the Turkish authorities for another year.

DANUBIAN PRINCIPALITIES.—The result of the general plebiscite in the Principalities is 713,285 votes for, and 57 against, the new constitution proposed by Prince Couza. There were 766,905 persons entitled to vote, out of which number 53,563 were either absent, ill, or abstained from voting.

TUNIS.—Intelligence from Tunis to the 25th ult. states that the Arabs having discovered that the Caid of the tribe of Medjees had betrayed the Bey set up by the insurgents, put him to death, together with 60 of his relations and servants. Eighteen vessels were in the roads of Tunis ready to take on board those Europeans who might desire to embark. As the Bey persisted in refusing to dismiss his Ministers, and as the Europeans on the coast were still compelled to remain on board the ships, the admirals had decided on disembarking troops for the protection of their countrymen against pillage and anarchy. The Italians were to occupy the principal ports of the Regency.

INDIA.—A telegram from Bombay, of May 14th, states that the Rev. Izambart Lowenthal, missionary to the Affghans, has been murdered at Pesbawur. The Viceroy has arrived at Simla.

CHINA.—The chief subject of interest in China is the Taeping rebellion. The *China Mail* has some details of the two disasters which Colonel Gordon's forces had experienced, in one of which the colonel was wounded. Capt. Gibbon was wounded and taken prisoner; Capt. Schinkoff, the same—since seen dead and cut open; Lieutenant Pratt, seen to have been speared by the rebels, supposed to have been killed; Lieutenants Polkson, Hughes, and Graves, and Captain Dowling, also wounded and made prisoners, besides from 150 to 200 men with their arms. Notwithstanding their temporary success, the rebels were, on the whole, losing ground, though they still had a force of 40,000 men in the field. Colonel Gordon was recovering from his wound, and was expected to be shortly able to resume active service.

UNITED STATES.—At daybreak on the 18th ult. General Grant again unsuccessfully assaulted General Lee's centre and left. After a desperate conflict, lasting throughout the forenoon, the Federals were forced to retreat, with the loss of 1200 killed and wounded. An attack by General Lee is stated to have been subsequently made upon Grant's front, and repulsed. On the 19th General Ewell gained Grant's rear, and attempted the capture of the Federal supply trains. The result is unknown; but after an hour's fighting, in which the Federals lost upwards of 1000 men, the Confederates returned to their intrenchments. Gen. Johnstone continues to draw Gen. Sherman away from his base. Official despatches from the latter announce his arrival at Kingston, 70 miles south of Chattanooga, and that he was still advancing and Johnston retiring. It has since been announced that he has reached Casseville, and that a great battle is imminent at Atlanta. The Federals have occupied Rome. The surprise of General Butler appears to have been completely successful. The Confederates under General Ransom captured General Hickman, with nearly his whole brigade and eight or ten cannon, and drove the whole Federal force to their intrenchments at Bermuda. The Federal loss in killed and wounded is admitted to be 2500. The latest news states that General Beauregard is in General Butler's immediate front, preparing to assault his intrenchments. Mr. Stanton, Secretary of War, announces that 25,000 veteran troops have been sent to reinforce General Grant. The Confederate steamer Florida left Bermuda on the 14th ult., it is believed for the track of the New York and Liverpool steamers. Mr. Howard, of the *Brooklyn Daily Eagle*, has been arrested as the author of the forged proclamation of President Lincoln, and sent to Fort Lafayette. He has confessed his guilt and implicated others, stating that it was concocted for speculating purposes. The Government had previously suppressed the *World* and *Journal of Commerce* for publishing the forged proclamation, and had handed over their printing offices to the possession of the military, but since the arrest of the author both journals have been released. The Secretary of the War Department has announced that it is the intention of the Government to maintain the national forces until the rebellion is overthrown; and to provide against inopportune reduction when the services of the 100 days' men expire, a draft to fill their places and all other reductions will be ordered on July 1st.

PERU.—The West Indian mail brings the following intelligence respecting the rupture between Spain and Peru:—On the 14th April, the Spanish squadron took possession of the Chincha Islands, hoisted the Spanish flag, made prisoners of the Governor and officers of the islands, and captured the Peruvian transport Iquique, with her officers. Thence the Spanish squadron proceeded to Callao, for the purpose of surprising the Peruvian squadron in that port. This was frustrated by the fleet getting up steam and moving under the protection of the guns of the castle. On the 16th the Spanish squadron again made their appearance in the Bay of Callao, with hostile intentions, but sailed again in the evening for the Chincha Islands. When the mail left the greatest excitement prevailed at Callao; and a large body of foreigners had placed themselves at the disposal of the Government to fight for the independence of Peru. Active preparations were making by the authorities to resist attack. The batteries in the forts were placed in fighting order, and boats equipped for service. The British, American, and Bolivian Ministers held a meeting at Lima and passed a vote of sympathy with the Peruvian Government, and resolutions to petition their respective Governments for intermediate intervention to secure an adjustment of the difficulties. Masters of foreign vessels applied to their respective Ministers for instructions how to act. The Spanish residents in Callao embarked on board Spanish vessels. The latest news announces that the loading at the Chincha Islands was not interrupted, and that the contracts were respected. Great excitement prevailed at Lima respecting the Spanish difficulty, there being no prospect of a settlement. The Government had been authorised to raise a loan of 50,000,000 dollars, to augment the army to 30,000 men, and the navy to 20 vessels.

Parliament.

HOUSE OF LORDS.

FRIDAY.—Earl STANHOPE called attention to the report of the *Public Schools Commission*, and especially to the course of inspection which is therein discussed, and inquired as to the intention of her Majesty's Government. He bore testimony to the care and labour with which the report had been drawn up, and especially approved of that portion which maintained the superiority of classics and mathematics as the foundation of a really liberal and comprehensive system of education; but he expressed his regret that at most of the schools, and especially at Eton, there was still a determination not to encourage English composition, or music, or drawing. At the same time he agreed with the most eminent schoolmasters that instruction in natural science, although in itself a most delightful and important study, was not compatible with the other courses of instruction, and with the leisure essential for recreation and athletic exercises. He was, however, of opinion that too much time and labour were wasted upon composition, more especially upon Greek prose and verse. He also objected to the proposal of the commissioners to appoint a council to advise the head masters of the great public schools, which he was certain would destroy the influence and responsibility of the head masters, and in other respects be productive of great evil.—The Earl of CLARENDON said that the commissioners had devoted the greatest attention, not merely to the system of instruction pursued in public schools, but to the manner in which the raw material of English intellect was formed, and the character of an educated and Christian gentleman developed in them. He was highly gratified at the concurrence of the noble earl in the necessity of classical education as the substructure of all learning, without which an intimate knowledge of English literature was impossible, but the commissioners did object to classics or mathematics monopolising the whole system of education, especially in the case of boys who had no chance of excelling in those studies, but who had developed an aptitude for other branches of learning. The great excellence of the system was that it turned out young men at eighteen not only high spirited and honourable, but well grounded, well disciplined, and, if not superior in any one branch, capable of directing their attention with advantage to any profession or pursuit. Still, it was objected that many of the boys did not devote their time to study, and consequently left school grossly ignorant. This was to be deplored, as also the circumstance that the head-masters showed a disposition to resist innovations in favour of modern languages. He believed the commission would have done great good if, in these days of increased intercourse with other countries, they had demonstrated the necessity of more attention being paid to modern languages, without which in the present day a man was really only half educated. With respect to natural sciences, he contended that they were most useful in developing certain kinds of intellect, and that they ought not to be excluded. The subject then dropped. The Bills on the table were advanced a stage.

MONDAY.—*Public Schools.*—The Earl of CLARENDON laid on the table a Bill to provide that any persons acquiring rights in reference to the governing bodies of public schools should hold those rights subject to any decision on the question of public schools which might hereafter be arrived at by Parliament.—Lord LYTTELTON called attention to the present state of the native population of *New Zealand*. He feared it had not improved in the last few years, and he described some of the causes of the deterioration. Among these causes was the destruction of all the old native authorities, without establishing anything else in their place. He made several suggestions for the better future government of the colony, and hoped, above all, that the Home Government would discourage the local wars by refusing to contribute from the Imperial Treasury to their expense.—Earl GRANVILLE adverted to the difficulty of the problem to be solved in New Zealand, and paid a high tribute to the manner in which the war had been conducted by our military and naval forces. He thought it was expedient to call upon our colonies to bear a considerable share of the expense of wars undertaken for their defence, and he believed it would be desirable to take measures for bringing the natives more immediately under the control of the Government, but how it should be done was a subject which required great consideration. The first thing, however, to do was to establish our authority over the natives. The Home Government had assented to the Suppression of the Rebellion Act and to the Confiscation Act passed by the local Legislature of New Zealand.—Lord LYVEDEN said the natives had been alienated from the Europeans, and did not believe their promises. The question was how the confidence that once existed could be restored. He believed the colony would never be at peace as long as the settlers could draw on the purse of Great Britain for the cost of wars of which the local expenditure was so profitable.—The Earl of CLANCARTY condemned in strong terms the act of the New Zealand Legislature for the suppression of the rebellion.—Earl GREY traced the difficulties which had arisen in New Zealand to the evils of self-government. The war, however, was now practically at an end, and it was necessary that the Government should consider what policy they would pursue. He regretted that they had not disallowed the Confiscation Act, and he censured them for not having taken steps to bring the whole question under the notice of the House. The *Local Government Supplemental Bill* and the *Divorce and Matrimonial Causes Amendment Bill* passed through committee.

TUESDAY.—Earl GRANVILLE moved the second reading of the *Penal Servitude Acts Amendment Bill*, which had come up from the Commons. He said that the Government had not deemed it expedient to carry out the recommendations of the Royal Commissioners for the revival of the system of transportation to Australia in the face of the excitement which that suggestion had occasioned in those thriving and populous colonies; at the same time they had not complied with the unreasonable demands of the wealthy eastern settlements that transportation should cease to Western Australia.—Lord HOUGHTON regarded the necessity of abandoning transportation as one of the greatest social misfortunates that had ever happened to this country. He approved of a penal system which would hold out inducements to reformation, but those inducements must not be such as to introduce an element of uncertainty into the execution of the sentence. He also deprecated any undue interference by the police with the holders of tickets of leave.—Lord CRANWORTH also regretted the abandonment of transportation, alike on account of the mother country, the convict, and the colonies. In his opinion transportation opened the only certain means of reformation. Penal servitude being a necessity, a remission of the sentence as the reward of good conduct was the only way in which to engender industrious and useful habits.—Lord TAUNTON was not surprised at the intense feeling with which the colonies had protested against the revival of transportation, and was glad that the Government had abstained from attempting to revive it. He wished they had also resolved to abandon it in the case of Western Australia.—The Earl of CARNARVON was in favour of short, sharp, and certain punishments; but, under the present system, they were neither sharp nor certain, though undoubtedly they were short. He entirely approved of the Bill, and considered that it was based upon sound principles.—Earl GREY feared that the measure did not make a sufficient change in the system of shortening the sentences passed by the Judges. The return of criminals to their old haunts, after a term of imprisonment much shorter than their sentence, was a great encouragement to crime. He denied the right of the other Australian colonies to object to transportation to Western Australia. The grievance they alleged was wholly imaginary, as the escape of convicts from Western Australia was impossible. The inhabitants of New South Wales did not object to the establishment of a penal colony by France in New Caledonia, though the passage from that island to the eastern coast of Australia was not so difficult as from the Swan River. He thought the Bill was marked by the same indecision that marked the policy of the Government in other respects. He would support an amendment, if moved, making seven years the *minimum* of a penal sentence instead of five.—The Earl of LICHFIELD concurred with Lord Grey as to the necessity of a longer term of imprisonment as the shortest sentence. The Bill was then read a second time.

THURSDAY.—*Bristol Channel Defences.*—Earl DE GREY and RIPON stated, in reply to Lord PORTMAN, that steps were being taken for the erection of defences in the Bristol Channel.—Lord STRATFORD DE REDCLIFFE called attention to the state of *Circassia*, and the excesses perpetrated by the Russians, and asked whether the Government would lay upon the table any information on the subject.—Earl RUSSELL said he would supply all the information in his power. The details were of a most painful character, and he feared that very great barbarities had been committed. The House went into committed on the *Mortgage Debentures Bill*, when Lord PORTMAN moved the omission of the 32d clause, which empowered trustees to invest trust moneys in the debentures while public companies would be authorised to issue under the Bill.—The Marquis of Bath seconded the motion.—The LORD CHANCELLOR suggested that the objection might be met by inserting words rendering the operation of the clause prospective only. The clause was struck out on the understanding that a new one should be brought up on a subsequent stage of the Bill, which was then passed through committee.—The Archbishop of ARMAGH moved the second reading of the *Ecclesiastical Courts and Registries (Ireland) Bill*, the objects of which are to reduce the number of these institutions from 26 to 12, to simplify the procedure in the Diocesan and Ecclesiastical Courts, reduce the number of vicars-general to 12, and remove appeals in the Irish Ecclesiastical Courts from the Court of Delegates to the Queen in Council. The Bill was read a second time. The *Summary Procedure (Scotland) Bill* was read a second time. The *Local Government Supplemental Bill* was read a third time and passed. The Marquis of CLANRICARDE brought in a Bill for the protection and regulation of *Oyster Fisheries*. The Bill was read a first time.

FRIDAY.—*Jamaica.*—Lord DUNSANY moved an address for a copy of all correspondence between the Colonial Secretary and the late Governor and Lieutenant-Governor of Jamaica, respecting the establishment of party Government or responsible Government in that island, and of various other papers relating to the island.—Lord STANLEY of ALDERLEY, on the part of the Government, assented to the motion.

[Left sitting.

HOUSE OF COMMONS.

FRIDAY.—*The Banda and Kirwee Booty.*—Sir S. NORTHCOTE moved an address to her Majesty praying the distribution of this booty.—Lord PALMERSTON said he was willing to refer the question to the High Court of Admiralty. On this understanding the motion was withdrawn.—Mr. SCULLY moved an address to her Majesty for a commission to inquire and report as to the best system for *Registering Titles to Land in Ireland*, and to frame a measure for that purpose; also to consider and report as to the creation of transferable debentures upon land in Ireland.—The ATTORNEY-GENERAL for IRELAND said that the subject had not escaped the attention of the Government, and that a measure was in preparation which they hoped to introduce either this session or early in the next. After some discussion the motion was withdrawn.—Mr. LONGFIELD called attention to the purchase, by the *Law Life Assurance Company*, of large estates in Ireland, and the results attending this acquisition of property, and moved an address to the Crown on the subject. He argued that all the evils of absenteeism were inflicted upon the extensive territory possessed by the company that evictions were numerous, that no encouragement was given to tenants, and that the accession of the estate by theCompany, was, in fact, a curse to that part of the country.—Lord J. BROWNE said that if the Company had not interposed at the sale of the estate in the Incumbered Estates Court during the famine year, the property would not have realised more than one-fourth of their claim upon it, and that since it had come into their possession it was managed better than the majority of estates owned by absentee landlords.—Mr. MURRAY defended the policy of that Company in the management of their Irish property, and said that they were willing to sell the estates at the valuation of any two respectable land surveyors.—Mr. GREGORY said he had received letters from most respectable gentlemen living in the counties of Galway and Mayo, corroborating all the charges which Mr. Longfield had made against the Company.—Sir. R. PEEL deprecated the discussion, as calculated to create unjust and angry feelings against the Law Life Assurance Company, who held the estates against their own will, in consequence of advances made by them to a man who had been unable to repay them. At first he was disposed to agree to the opinion expressed by Mr. Gregory, but upon a full and fair investigation of the whole case he honestly believed that the Company had not otherwise administered the property than in a manner conducive to the interests of the tenants.—After some remarks by Sir T. BURKE, Mr. MAGUIRE, and Mr. SCULLY, the motion was withdrawn.—Mr. WHALLEY brought under notice the instructions issued by the police commissioners as to the suppression of *Public Meetings in the Parks*, and to the power assumed by subordinate officers of the police force, pursuant to those instructions, in suppressing a recent meeting at Primrose Hill.—Mr. AYRTON thought it very desirable that the Government should state what in their opinion were the rights of the public in reference to the parks.—Sir G. GREY said that the parks were the property of the Crown, and were dedicated to the public use, subject to certain conditions and restrictions which were essential to the object for which they were given over to the public. With regard to the suppressed meeting at Primrose Hill, he regretted that the police had exceeded their duty by interfering, and the inspector had been reprimanded for his conduct on that occasion.—The House then went into *Committee of Supply pro formâ*, but progress was immediately reported. The *Public and Refreshment Houses (Metropolis) Bill* was read a second time. The *Union Assessment Committee Act Amendment Bill*, the *Army Prize Bill*, and the *Chain Cables and Anchors Bill* were read a third time and passed.—Sir C. O'LOGHLEN obtained leave to bring in a Bill to regulate and amend the law in relation to the keeping together and discharge of *Juries in Criminal Cases*.—The other business on the paper was then disposed of.

MONDAY.—*The Steam Rams.*—In answer to Mr. HODGKINSON, the ATTORNEY-GENERAL explained the terms on which the steam rams in the Mersey had been purchased by her Majesty's Government. He said that before the seizure of the vessels the Government made an overture for their purchase, which was declined, but subsequently M. Bravey, the French gentleman who claimed to be the owner, offered them at a price which, being regarded as in excess of the value, was declined. Subsequently an application came from the same quarter, and the Government having ascertained the value of the vessels, made an offer of 220,000*l.* (including the cost of completing the vessels), and this having been accepted they had passed into the possession of the Crown, thereby preventing the possibility of their being used by either of the belligerents. No condonation of the alleged misdemeanour formed any part of the arrangement, but it was quite impossible that any claim could be made by the defendants for compensation. In conclusion, he expressed a hope that it would not be found necessary to propose any new legislation on the subject, and added that the Government were as determined as ever to maintain the law, should any future infractions of it be attempted. *The Spirit Duties*.—On the order for going into committee of supply, Mr. WHITESIDE moved that it was expedient to reduce the existing duties on spirits. He urged that the increase of duty imposed in 1860 had resulted in a gradual and steady diminution of the manufacture and consumption of spirits in Scotland and Ireland, and in the enormous growth of illicit distillation. He therefore put it to the Government whether it was politic to continue a system of taxation which demoralised the people, while it affected their health by the substitution of a poisonous for a comparatively harmless stimulant.—The CHANCELLOR of the EXCHEQUER, in opposing the motion, contended that the equalisation of the spirit duties was the chief object which had influenced him in recommending that the duty be raised to 10*s.* in all parts of the United Kingdom. The reduction in the consumption was to be traced to several causes, including the large consumption of tea and beer, the condition of the country, and the decrease of population; while the increase of illicit distillation was to be traced to the low price of oats, which formed the raw material of whisky, and to the extraordinary vigilance of the constabulary as compared with that of the revenue police.—Sir S. NORTHCOTE recommended that the motion should not be pressed, as the select committee on the subject of the taxation of Ireland was now sitting, and would no doubt take into its consideration the effect of the recent financial legislation affecting that country.—Lord C. HAMILTON recommended the Chancellor of the Exchequer to retrace his policy, and reduce the duty on Irish spirits as soon as possible.—Mr. MONSELL maintained that there had been no general increase of illicit distillation in Ireland.—After a few words from Lord NAAS, the motion was withdrawn. *The Case of Mr. Home, the Spiritualist.*—Mr. ROEBUCK asked the Under Secretary of State for Foreign Affairs whether any steps had been taken to obtain compensation for Mr. Home, the spiritualist, who had been directed by the Papal Government to leave Rome within 48 hours, on the ground that he was in communication with spirits. This sudden dismissal had entailed considerable loss upon him, as he had just taken a studio in Rome, and was about to commence the profession of a sculptor.—Mr. LAYARD said that no substantial grievance of which the Government could take cognisance had been inflicted upon Mr. Home, who had not been imprisoned or deprived of his property. He had made himself obnoxious to the Papal Government, and they had exercised their undoubted right to order him to leave Rome.—Mr. HENNESSY and Mr. V. SCULLY defended the Papal Government, contending that persons who professed to read the past or the future, either by the medium of spirits or otherwise, were amenable to the laws of England as well as that of Rome. The House then went into Committee of Supply on the *Miscellaneous Estimates*. The following were among the votes agreed to:—26,000*l.* for the Public Record Repository, 20,000*l.* for Westminster Bridge approaches, 10,930*l.* for New Westminster Bridge, 3260*l.* for architectural designs, 4000*l.* for the Nelson monument in Trafalgar Square, 96,000*l.* for harbours of refuge, 57,875*l.* for Holyhead and Portpatrick harbours, 97,000*l.* for public buildings in Ireland, 18,000*l.* for new Record buildings (Dublin), 13,703*l.* for lighthouses abroad, and 17,000*l.* for Sheriffs' Court House, Scotland. On the motion that 4000*l.* be granted for an asylum for criminal and other lunatics in the Isle of Man, Colonel STUART moved the rejection of the vote, on the ground that the inhabitants of the Isle of Man, who were not represented in that House, had ample powers to tax themselves for local institutions. On a division, the vote was rejected by 95 to 73.—A vote of 53,000*l.* was agreed to for land, &c., at Kensington Gore; and at half-past 12 o'clock the chairman reported progress.—The LORD ADVOCATE moved the second reading of the *Writs Registration (Scotland) Bill*, explaining the object of the measure and the ground upon which it was proposed.—Major HAMILTON moved that the debate be adjourned. This amendment was seconded by Mr. SMOLLETT, and ultimately agreed to.—The *Vacating of Seats (House of Commons) Bill* was read a third time and passed. Other Bills were advanced a stage.

TUESDAY.—*Spain and Peru.*—Mr. LAYARD stated, in answer to Mr. NEWDEGATE, that the Government had received despatches from the British Minister in Peru, giving an account of the seizure of the Chincha Islands by a Spanish squadron. It appeared that the Spanish Minister had made a demand upon the Peruvian Government, which was not complied with; and thereupon, without further notice, the squadron took possession of the islands. He understood that the loading of guano for British subjects would not be interrupted; but he had not yet received any statement from the Spanish Government of the reasons which had led to these proceedings.—Mr. LINDSAY postponed his motion in favour of recognising the independence of the *Confederate States* until the 17th of June. *Mr. Herbert's Picture.*—In reply to Mr. GREGORY, Mr. COWPER stated that so soon as Mr. Herbert had completed the process by which he intended to cover his great picture in the robing-room of the House of Lords with a varnish of silicate of potass, measures would be taken to admit the public to view it. *China.*—Mr. COBDEN moved a resolution that the policy of non-intervention by force of arms in the internal political affairs of foreign countries, which we professed to observe in our relacions with the States of Europe and America, should be observed in our intercourse with the empire of China. He said that the state of our relations with China was of the most unsatisfactory character, especially so far as our commerce was concerned. China was the only foreign country where we had systematically endeavoured to force a trade by violence and war, and curiously enough it was the only country which formed an exception to the general progress which was apparent everywhere else. In the course of about 20 years we had had three wars with China, the object of which was to open up trade with that country, but the result had been that wherever there had been a war, our merchants, stimulated by the anticipation of extended markets, sent out large quantities of produce to China, and the result had been invariably disappointment, collapse, and reaction. The moral of all was that we could not extend our commerce by means of war and violence, and he recommended as the best method of getting out of our difficulties in China the establishment of a certain number of free ports on the coast, as we had already done at Singapore, where the population had increased in 40 years from 200 to 100,000. He objected to our persistence in a policy that was most costly alike to our national character and our material interests, and urged that the Government ought to restrain their representatives at the antipodes, revert to the policy enunciated by the Duke of Wellington, and terminate our direct relations with China; for it was the opinion of the Duke that we had no right to force our political connections or system on that country. He also recommended that early next session a select committee should be appointed to inquire into our commercial relations with China and Japan, and that we should endeavour to impress upon the commercial community that it was equally their duty and their interest to show to pagan nations the superior brightness of our Christianity and civilisation.—Mr. LAYARD in reply contended that our trade with China, so far from having fallen off, had increased to an enormous extent in the course of the last few years. With regard to the establishment of free ports, he reminded the House that Shanghai and Hong Kong were already free.—Mr. GREGSON defended the policy of the Government, and maintained the absolute necessity of defending the treaty ports.—Sir J. ELPHINSTONE warned the House against exhibiting any sympathy for the Taepings, who were the greatest ruffians on the face of the earth, and spread havoc and desolation wherever they went.—After some remarks by Mr. WHITE and Colonel SYKES, Lord PALMERSTON said the House ought not so much to consider the relations between the Anglo-Chinese force and the Taepings, as the large results which had followed the opening of diplomatic intercourse with the country. The expeditions under Capt. Osborn and Major Gordon had failed on account of the jealousy of the Chinese themselves; but her Majesty's Government would not have sanctioned their employment had it not been considered absolutely necessary to assist in putting down a state of civil war which threatened to compromise the commercial interests of this country. The object of England in establishing herself at the treaty ports was not to obtain territory; all she wanted was a basis for her commerce, and this could not be obtained so long as a revolutionary horde was in their neighbourhood. The attempt to obtain friendly and direct relations with the Government of China had been eminently successful, and had met with the approval of the country. The trade of the empire with China had increased enormously, and the Government were bound by all legitimate means to open up what appeared to be an inexhaustible field for British enterprise.—Mr. BRIGHT said that the policy of the Government had shattered the whole political and social system of an empire containing nearly one-third or one-fourth of the population of the globe. The noble lord at the head of the Government had laid much stress upon the importance of maintaining our commercial intercourse with China, but that trade was very small compared with the population to be served, and the cost of protecting it had far exceeded the profit obtained from it, because to maintain an export trade of only four millions per annum 40 or 50 ships of war had to be kept on the Chinese station. He recommended the noble lord religiously to abstain from all interference in the civil war in China, and to reverse the policy of the last 30 years, which has brought shame and discredit upon the name and fame of England. The motion was then withdrawn.—Alderman SALOMONS obtained leave to bring in a Bill to facilitate the purchase of *Southwark and Waterloo Bridges* by a rate on metropolitan property of one penny in the pound.—Mr. HANKEY obtained leave to introduce a Bill for defraying a portion of the cost of carrying out the *Charitable Trusts' Act* by means of fees.—Lord PALMERSTON moved the nomination of a select committee of 15 on the *Education Inspectors' Reports*.—Mr. CLAY moved as an amendment, that it be referred to the general committee of elections to nominate a select committee of five members.—After some discussion, Lord PALMERSTON intimated his readiness to accede to the amendment, but Mr. HENNESSY having moved the adjournment of the debate, the motion for the adjournment was negatived on a division by 61 to 30.—Colonel DICKSON then moved the adjournment of the House, which was rejected on a division by 62 to 32.—Major S. KNOX then moved the adjournment of the debate. After some further discussion this motion was agreed to.

WEDNESDAY.—*The Steam Rams.*—The ATTORNEY-GENERAL in reply to Mr. Tollemache, said that the proposal to purchase the iron-clads in the Mersey came from Messrs. Bravay, the owners of the vessels, and not from her Majesty's Government.—On the order for going into Committee upon the *Test Abolition (Oxford) Bill* moved by Mr. DODSON, Mr. TREFUSIS moved as an amendment that the Committee be deferred for six months. He urged that the Bill would introduce an entirely new principle into the University; that there was no demand for the measure, nor any strong sympathy outside the House in its favour.—Mr. LEATHAM ridiculed the objections to the Bill, founded upon a supposed danger to the Church of England, as obsolete and refuted by time and experience. The hostility to the Bill grew out of bigotry and intolerance, which represented what was regarded as a concession to Nonconformity.—Mr. C. CLIFFORD likewise supported the Bill, believing it to be impossible to check the growth of opinion. All our legislation of late had been in the direction of civil and religious liberty, and he was prepared to go further if need be.—Mr. MORRIS said that the principle of the Bill, which was now again discussed, had been already affirmed on the second reading. He was of opinion that the true policy of the Church of England was concession.—Sir S. NORTHCOTE denied that the principle of the Bill had been affirmed on the second reading; it was not determined what its principle really was, and he thought the House should not go into committee upon the Bill until it was presented in such a form that its principle and extent could be fully understood.—Mr. ROEBUCK said he objected to all tests which let the large flies through (such as Gibbon and Hume) and excluded the small ones.—Sir W. HEATHCOTE said that this argument was founded upon a transparent fallacy. Men must have some credit for honour and honesty. Tests were imposed to maintain in the University a certain tone of religious education.—Mr. SCULLY thought the proper course was to refer the Bill to a Select Committee.—Mr. MOWBRAY said he had voted for the second reading of the Bill; but he did not think it right that Nonconformists should have a voice in the governing body of the University, and, seeing no restriction of this kind proposed, he must vote against going into committee.—Mr. NEATE was in favour of going into committee upon the Bill, which he thought a very moderate measure.—Lord R. CECIL said that the Bill, instead of being a liberal measure, was one of a very exclusive kind. It substituted for the existing tests one of the most vague and indefinite character.—Mr. GÖSCHEN defended the Bill, the principle of which was, he said, to abolish the existing theological tests for academical degrees, providing another test.—Mr. C. FORTESCUE, as a churchman, objected to the bondage of subscription in the University.—Mr. HENLEY said that the doctrines propounded in that discussion made it plain that the supporters of the Bill regarded it as only an instalment. He should therefore vote for the amendment.—Sir G. GREY said as he had voted for the second reading of the Bill, he felt bound to vote for going into committee; but he thought it would be wise in those who had charge of the Bill, in order to relieve apprehensions, to amend it by providing that the governing body of the University should be connected with the Church.—After some observations by Mr. NEWDEGATE and Mr. BOUVERIE, the House divided, when the amendment was negatived by 236 to 226.—The House then went into committee upon the Bill, but the CHAIRMAN was ordered to report progress. On the order for going into committee upon the *Election Petitions Bill*, moved by Mr. HUNT, Mr. AYRTON said that this was a repetition of an effort made last Session to amend the law of election petitions, and moved, as an amendment, that a Select Committee be appointed to inquire into the expediency of amending the Election Petitions Act (1848), and the Act for the better discovery and prevention of Bribery and Treating at Elections.—Mr. COLLINS seconded this amendment. The debate was adjourned. The *Servants Hiring (Scotland) Bill* was read a second time.

THURSDAY.—*The Education Minutes.*—Mr. ADDERLEY moved a resolution that the House having considered the minute of Council of the 11th of March, 1864, on endowed schools, was of opinion that it did not meet the objections made to the minute of the 19th of May, 1863. The principal of these objections was that the latter minute would have swept the endowments of all schools into the Treasury, and that this proposal, being contrary to the feelings of the House, Mr. Lowe issued a new minute proposing to exempt from general and indiscriminate confiscation the small rural schools of the country, defined as schools of 1200 square feet; but with a proviso that even in the case of these small institutions, though they were not to have their endowments wholly confiscated, they should be so far taken from them that the Government grant and endowments together should not exceed 15*s.* a-head for the pupils. He submitted that this proposition was opposed to the former decision of the House, and set at naught its authority.—Mr. WALTER opposed the motion on the ground that these endowments ought not to be respected in the distribution of the Government grant, whether the amount was small or large.—Mr. H. BRUCE defended the minute, and urged that, as the contribution of the State was given to supply a need where it existed, the grant ought not to be made where such need did not exist. He did not deny that there might be abuses under the present system, and that some schools received money that were not entitled to it, and this was a matter to which the committee of council were directing their attention. On a division, the motion was negatived by 119 to 111.—The adjourned debate on the nomination of a select committee on the reports of the *Inspectors of School's* was then resumed, the point at issue being whether the committee should consist of 15 members, which was the original proposition of the Government, or of five members, to be nominated by the General Committee of Elections, as proposed by Mr. Clay, and in favour of which ministers had abandoned their own proposal.—The CHANCELLOR of the EXCHEQUER, Mr. BOUVERIE, Sir F. BARING, and Mr. BRIGHT supported the amendment of Mr. CLAY, which was opposed by Mr. DISRAELI, but was ultimately agreed to without a division.—On the motion for the second reading of the *Court of Chancery (Ireland) Bill*, Mr. LONGFIELD moved as an amendment that the Bill be read a second time that day three months. He argued at great length that Chancery reform had been introduced into Ireland many years before the courts of equity in England had been brought under its influence, and that it would be altogether premature to deal with the subject at the present time.—Mr. VANCE seconded the amendment.—The ATTORNEY-GENERAL for IRELAND defended the Bill, and reminded the House that it was the result of the deliberations of two Royal Commissions, who had reported in favour of its principal provisions.—Mr. WHITESIDE characterised the Bill as an unreasonable attempt to force the recommendations of the commissioners upon the profession and the public, and as one that ignored the official existence of the Lord Chancellor.—The ATTORNEY-GENERAL, Mr. SCULLY, and Mr. MONSELL supported the Bill; Mr. FITZGERALD opposed it. The amend-

ment was finally withdrawn, and the Bill was read a second time. The *Court of Queen's Bench (Ireland) Bill* was also read a second time. The report of the *Committee of Supply* was brought up and agreed to.

FRIDAY.—*Railway Companies.*—Lord STANLEY moved that so much of the Standing Order as prohibited railway companies owning or using steam vessels, harbours, and docks be repealed. The motion was opposed by Mr. BARROW and Mr. CLAY, and supported by Mr. HORSMAN and Mr. M. GIBSON; and was ultimately negatived without a division. *Abyssinia.*—In reply to Mr. H. SEYMOUR, Mr. LAYARD said the Government had received indirect information that the King of Abyssinia had imprisoned her Majesty's consul and several missionaries. The French consul had also been imprisoned, but had been released. The question was under the serious consideration of the Foreign Office. [Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅛ to 90 for Money; Three per Cents. Reduced, 89⅛ to 89; New Three per Cents., 89 to ⅛; Red Sea Telegraph, 20⅛; Bank Stock, 239; India Stock, 217; Ditto Five per Cent. Stock, 103⅞ to ¾; Four per Cent. Enfaced Rupee Paper, 94; Exchequer Bills, March, 7*s.* pm.—FOREIGN: Brazilian, 1863, 88⅛ to 87½; Egyptian, 101⅛; Ditto second issue, 101; Greek, 24½ to 25½; Ditto Coupons, 11; Mexican, 44⅝; Ditto Six per Cents., French scrip, 3½ to ¾ dis.; Peruvian, 1862, 86½; Portuguese, 1856, &c., 49; Ditto for Acct., 49 to 48⅞; Russian, 1859, 54½; Spanish, 53; Ditto Passive, 33⅜ to ½; Ditto Certificates, 10½; Swedish, 1864, scrip, 2⅞ pm.; Turkish, 1858, 69½; Ditto 1862, 71; Ditto 100*l.* Bonds, 71⅜ to ½; Venezuela, 1864, scrip, 4¾ to 5¼ dis.

Metropolis and its Vicinity.

THE VOLUNTEER REVIEW.—On Saturday the Volunteers were reviewed by the Prince of Wales in Hyde Park in the presence of the Princess, the Prince and Princess Louis of Hesse, and such a concourse of spectators as has seldom before assembled within its precincts. As a military demonstration it was, of its kind, one of the most important; as a pageant it was one of the most brilliant it is possible to imagine. The Volunteers on the ground numbered 21,743, or 3000 more than they did in 1860, when they were reviewed by her Majesty. It is estimated there were about 50,000 persons present to witness the review, and all passed off without accident.

METROPOLITAN POLICE COURTS.—Mr. Cuthbert Ellison, formerly of the Home Circuit, now stipendiary magistrate at Manchester, has been appointed a magistrate of Worship Street Police Court, in place of Mr. Leigh, who has resigned.

GENERAL GARIBALDI'S DEPARTURE.—The Turin journals publish a letter from Garibaldi, in which he says:—

"I pray my friends to partake with me the deep gratitude I owe to all Englishmen whom I have known in their noble country. My friends know that I resolved to visit England to pay a sacred debt of gratitude, and I withdrew when I thought fit to do so, without ceding to any instigation. With regard to those from whom I received hospitality, I can never sufficiently acknowledge their immense courtesy, so splendidly lavished."

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, May 28, were 1234. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1233. The present return is therefore only 1 above the average. During the week the births of 1030 boys and 936 girls, in all 1966 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1938.

Provincial.

CAMBRIDGE.—The Prince and Princess of Wales paid their promised visit to this University on Thursday. Their Royal Highnesses travelled from London by a special train of the Great Northern Railway, accompanied by the Duke of Cambridge, Lord and Lady Palmerston, and other distinguished personages. Great preparations had been made for their reception, and "town and gown" turned out in mass to meet them, and to escort them in triumphal procession to Trinity College. The University Volunteer corps did duty at the station, and the escort was formed by the Duke of Manchester's regiment of Light Horse Volunteers. The Mayor and Corporation presented an address to their Royal Highnesses on passing through the town, and on their arrival at Trinity, the Duke of Devonshire as Chancellor of the University, the Vice-Chancellor, the Heads of Houses, Professors and Members of the Senate, presented an address of congratulation, to which the Prince made a suitable reply. A procession of the Colleges in order of seniority followed, after which the Princess delivered the prizes to the Volunteers, all of whom wore rosettes of the Danish colours in honour of her Royal Highness. The Royal party then proceeded to the Senate House, when the Honorary Degree of LL.D. was conferred on the Prince of Wales, the Duke of Cambridge, Lord Spencer, Lord A. Harvey, Lord Harris, and General Knollys. The presentation of medals to the successful competitors in the recent examination then took place, followed by the recitation of the prize poems. In the evening the Vice-Chancellor entertained the Royal party and a distinguished company at dinner in the hall of Peterhouse. Their Royal Highnesses were afterwards present at a grand ball at the Fitzwilliam Museum. Yesterday, the honorary degree of LL.D. was conferred on the Duke of Manchester, Earl Stanhope, the Earl of Carnarvon, Viscount Palmerston, Viscount Eversley, Lord Leigh, Sir Bulwer Lytton, Vice Chancellor Wood, Sir Charles Eastlake, the Dean of Westminster, Mr. Beresford Hope, Dr. Watson, M. Charles Gabriel Cobet, Dr. Hoffman, and Professor Wheatstone.

PLYMOUTH.—A fatal accident occurred in the Sound on Monday in consequence of the artillery practice. Two watermen were proceeding from Hamoaze to the Channel squadron in the Sound, when an eight-inch hollow shot fired from the citadel struck their boat, hit one of them, George M'Coy, and caused a compound fracture of the pelvis. He lingered in a shocking condition for six hours, and died the same night. This is not the first accident of the kind which has happened, numerous boats crossing the Sound having been struck in a similar manner, some of them even having been sunk. Such frequent remonstrances have been made in vain to the military authorities, that great excitement has been occasioned in the town by the present accident.

Law.

COURT OF ARCHES: *The Tamworth Church Rate.*—This great church-rate dispute was further heard on the 23d ult., in this Court, and decided on the question of costs. The case had been pending some time. The rate was three-halfpence, and the inhabitants moved that it might be quashed, on the ground of its inequality. The church-wardens of the parish instituted a suit against a householder, to try the question affecting the whole parish, and after voluminous proceedings and considerable costs, Dr. Lushington decided that the rate was bad, and ordered it to be quashed, expressing an opinion that the law on church-rates was in a most unsatisfactory state, and that church-wardens had an arduous duty to discharge. His lordship, on the question of costs as to prebendal lands, reserved the point for the present occasion, and the same was discussed at some length, on the part of the parish and for the inhabitants. The Court refused to give the defendant costs on the prebendal land inquiry, but awarded them on the other point against the parish. No notice of appeal has been given in this long contested suit decided against the parish, and it is anticipated that the costs on both sides will not be much under 1000*l.*

Markets.

COVENT GARDEN, June 4.

Outdoor produce of nearly every description is now abundant. Grapes and forced Strawberries are sufficient for the demand. Of Pine Apples there is also a fair supply. Arrivals of foreign goods continue heavy; among them are Endive, Carrots, Artichokes, Cherries, Tomatos, and Peas. English Peas are also now plentiful; they fetch from 4*s.* to 6*s.* per sieve. Lisbon Potatos realise from 1*s.* 6*d.* to 2*s.* 6*d.* per dozen lbs. Asparagus fetches from 3*s.* to 6*s.* a bundle. Flowers chiefly consist of Cinerarias, Orchids, Heaths, Pansies, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 8*s* to 12*s*	Lemons, per 100, 6*s* to 10*s*
Grapes, per lb., 4*s* to 12*s*	Nuts, small, per bush., 14*s* to 18*s*
Apples, per ½ sieve, 2*s* 6*d* to 4*s*	— Barcelona, do., 16*s*
Strawberries, per oz., 6*d* to 1*s*	— New Brazil, do., 20*s.*
Cherries, per lb., 6*d* to 9*d*	— Old do., do., 14*s*
Gooseberries, p. qt., 3*d* to 6*d*	Almonds, do., 20*s*
Oranges, per 100, 10*s* to 14*s*	Walnuts, do., 12*s*

VEGETABLES.

Cabbages, per doz., 1*s* to 2*s*	Turnips, p. bunch, 4*d* to 6*d*
Asparagus, per bundle, 3*s* to 6*s*	— new, do., 1*s* to 2*s*
French Beans, p. 100, 2*s* to 3*s*	Cucumbers, each, 1*s* to 2*s*
Green Peas, p. ½ sieve, 5*s*	Beet, per doz., 1*s* 6*d* to 2*s*
Potatos, York Regents, p. ton, 60*s* to 80*s*	Shallots, per lb., 10*d*
— Rocks, do., 45*s* to 55*s*	Garlic, per lb., 8*d*
— Flukes, 60*s* to 90*s*	Lettuces, each, 1*d* to 4*d*
— new, per lb., 1*s* to 2*s*	Endive, per score, 1*s* to 2*s*
Carrots, young, per bunch, 1*s* to 2*s*	Horse Radish, p. bunch, 1*s* to 4*s*
Rhubarb, p. bundle, 2*d* to 8*d*	Mushrooms, p. pott., 1*s* to 1*s* 9*d*
	Parsley, p. 12 bunches, 3*s* to 4*s*
	Herbs, per bunch, 3*d*

POTATOS.—SOUTHWARK, Monday, May 30.

During the past week the arrivals both coastwise and by rail have been far greater than the demand; the trade is in a very bad state, and many cargoes have been stored to save demurrage. The following are this day's quotations:—Yorkshire Flukes, 30*s.* to 50*s.* per ton; do. Regents, 20*s.* to 30*s.*; Seedlings, 20*s.* to 30*s.*; do. Rocks, 20*s.* to 30*s.*; Dunbar Regents, 30*s.* to 40*s*; Perth, Forfar, and Fife Regents, 20*s.* to 30*s.*; do. do. Rocks, 20*s.* to 25*s.*; do. do. Reds, 20*s.* to 25*s.*

BRITISH WOOLS.—LONDON, June 2.

We have very little doing, and the prices for long wool especially are at a considerable reduction.

	s.	*d.*		*s.*	*d.*
South-down Hoggets	2	0			
Half-bred ditto	2	0	to 2	2	
Down Ewes	1	9	—		
Kent Fleeces	2	0	—		
Leicest. Wethers	2	6	—		
Ditto Hoggs	2	0	to 2	2	
Combing Skins	1	8	— 2	0	
Flannel Wool	1	6	— 1	9	
Blanket ditto	0	9	— 1	0	

HOPS.—BOROUGH MARKET, FRIDAY, June 3.

Messrs. Pattenden & Smith report a steady consumptive demand for fine samples of last year's growth, at firm rates.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, June 2.

Prime Meadow Hay	72*s* to 75*s*		Clover, old	90*s* to 110*s*
Superior do.	80	86	New Clover	— —
Inferior do.	55	60	Do. second cut	80 105
New do.	—	—	Straw	25 30
Rowen	—	—		

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, June 2.

Sup. Meadow Hay	84*s* to 92*s*		Inferior Clover	84*s* to 95*s*
Inferior do.	65	76	New do.	— —
New do.	65	80	Straw	32 36
Superior Clover	105	112		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, June 2

Fine Meadow Hay	80*s* to 84*s*		Prime 1st cut Clover	108*s* to 112*s*
Inferior do.	70	75	Inferior do. do.	95 100
Prime New Hay	—	—	New 1st cut do.	— —
Inferior do.	—	—	Prime 2d cut do.	105 108
Straw	26	30	Inferior do.	95 100

NEWGATE.—June 3.

Best Fresh Butter .. .. 12*s* per dozen lbs.
Second do. do. .. .. 10*s.* "
Pork, 4*s.* 4*d.* to 4*s.* 8*d.* per 8 lbs.

COAL MARKET.—June 1.

Hastings Hartley, 15*s.* 9*d.*; Holywell Main, 16*s.* 6*d.*; Tanfield Moor, 14*s*; Walker Primrose, 13*s*; West Hartley, 15*s.* 9*d.*; Eden Main, 14*s.* 9*d.*; Walls End Braddyls Hetton, 16*s.* 3*d*; Walls End Haswell, 17*s.*; Walls End Hetton, 17*s.*; Walls End Russel's Hetton, 16*s.* 3*d.*; Walls End South Hetton, 17*s.*; Walls End Stewarts, 16*s.* 6*d.*; Walls End Tunstal, 15*s* 6*d.*; Walls End Cassop, 16*s.* 3*d.*; Walls End Caradoc, 16*s.* 9*d.*; Wans End Hartlepool, 16*s.* 9*d.*; Wans End Heugh Hall, 16*s* 3*d.*; Walls End Kelloe 16*s.* 3*d.*; Walls End East Hartlepool, 16*s.* 9*d.*; Walls End South Kelloe, 16*s.* 3*d.*; Ships at market, 48.

METROPOLITAN CATTLE MARKET.

MONDAY, May 30.

We have a few more Beasts than on Monday last, but the demand has also increased, and prices are not lower. There are not quite so many Sheep, with a brisk demand, consequently prices on the average are better. Good Lambs are in demand at fully late rates. Calves are not quite so dear as they have been. From Germany and Holland there are 940 Beasts, 1860 Sheep, and 201 Calves; from Scotland, 550 Beasts; from Ireland, 60; and 2840 from Norfolk and Suffolk.

	s	*d*	*s*	*d*		*s*	*d*	*s*	*d*
Best Scots, Herefords, &c.	4	8	to 5	0	Best Long-wools.	—	..	..	
Best Short horns	4	6	— 4	10	Do. Shorn	4	10	— 5	2
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	—	..	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	4	4	— 4	6
Do. Shorn	5	4	— 5	6	Lambs	6	8	— 7	8
					Calves	3	8	— 5	8
					Pigs	3	4	— 4	8

Beasts, 4750; Sheep and Lambs, 23,720; Calves, 224; Pigs, 360.

THURSDAY, June 2.

We have a large supply of Beasts and trade is dull; prices on the average are consequently lower, but there is not much reduction in choice descriptions. There are a few more Sheep; trade is not so brisk as on Monday; prices, however, are about the same. Choice Lambs are in demand. Calves are plentiful and rather cheaper. Our foreign supply consists of 620 Beasts, 2160 Sheep, and 586 Calves. Milch Cows, 90.

	s	*d*	*s*	*d*		*s*	*d*	*s*	*d*
Best Scots, Herefords, &c.	4	8	to 5	0	Best Long-wools.	—	..	..	
Best Short-horns	4	6	— 4	8	Do Shorn	4	10	— 5	2
2d quality Beasts	2	8	— 4	0	Ewes & 2d quality	—	..	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	4	4	— 4	6
Do. Shorn	5	4	— 5	6	Lambs	6	8	— 7	8
					Calves	3	4	— 5	6
					Pigs	3	4	— 4	8

Beasts, 1580; Sheep and Lambs, 11,860; Calves, 785; Pigs, 270.

MARK LANE.—MONDAY, May 30.

The supply of English Wheat to this morning's market was short, that of Barley, Beans, and Peas limited, and the arrivals of British Oats were moderate. Of foreign grain the imports were tolerably good. English Wheat sold steadily at the full prices of last week for the best qualities; there was scarcely any demand for foreign Wheat, and materially prices were unchanged; 16,248 qrs. were imported. Town-made Flour was unaltered, and country marks were steady in price. Barley was in fair request, with a demand for grinding samples. Malt was unaltered in price. Beans were quite as dear. Peas supported prices. Oats were in good request at last week's full currency for all sorts. Imports, 16,382 qrs. Linseed was quite as dear. Rapeseed brought full prices. Floating cargoes were held with firmness, but there was no activity in the demand.

PER IMPERIAL QUARTER	*s.*	*s.*		*s.*	*s.*
WHEAT, Essex, Kent, & Suffolk	White	42—48	Red	40	48
— — fine selected runs	ditto	44—52	Red	40	48
— — Talavera		48—54			
— Norfolk		—	Red	—	
— Foreign		36—52			
BARLEY, grind. & dist., 25*s* to 27*s*	Chev	34—38	Malting	29	33
— Foreign	grinding and distilling	22—26	Malting	27	31
OATS, Essex and Suffolk		18—22			
— Scotch and Lincolnshire	Potato	20—25	Feed	18	22
— Irish	Potato	19—22	Feed	—	
— Foreign	Poland and Brew	17—22	Feed	15	20
RYE		30—32	Foreign	—	
RYE-MEAL, Foreign		—		—	
BEANS, Mazagan 27*s* to 36*s*	Tick	30—33	Harrow	30	33
— Pigeon 34*s* to 40*s*	Winds	—	Longpod	—	
— Foreign	Small	36—42	Egyptian	30	32
PEAS, White, Essex and Kent	Boilers	32—34	Suffolk	33	34
— Maple 36*s* to 38*s*	Grey	28—30	Foreign	31	33
MAIZE	White	—	Yellow	—	
FLOUR, best marks delivered	per sack	35—40			
— 2d do	ditto	30—34	Country	28	34
— Foreign	per barrel	15—25	Per sack	32	40

FRIDAY, June 3.

Our market was very scantily supplied with home-grown Wheat, but the quality of the arrivals was good. Both red and white samples were in moderate request, at prices equal to Monday, and at which a clearance was effected. The show of foreign Wheat was only moderate for the time of year. Selected parcels changed hands to a fair extent on former terms; otherwise the trade was heavy at late currencies. Scarcely any change took place in the value of floating cargoes. The demand was somewhat restricted. The supplies of both English and foreign Barley were by no means extensive. Malting samples were very dull, but other kinds were tolerably firm in price. Malt was in fair average supply and sluggish request, on former terms. We were but moderately supplied with Oats, which changed hands to a fair extent, at last week's prices. Beans were quite as dear as on Monday, with a steady inquiry. The show of samples was trifling. Peas moved off freely at late rates. The Flour trade was firm. In prices no change took place. The inquiry for all agricultural seeds was heavy. In cakes very little was doing.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English	450 qrs.	80 qrs.	3430 qrs.	1180 sks.
Irish	—	—	2160	— ,,
				— ,,
Foreign	5570 ,,	590	7110 ,,	— brls

LIVERPOOL, May 31.—We have had a very fair attendance of buyers at to-day's market; Wheat has obtained an advance of fully 1d. per cental on the quotations of last Friday, and we notice a more general inquiry. Flour is held with firmness, and if anything is more saleable. Indian Corn is offered sparingly, and must be quoted 5d. per qr. dearer. Oats and Oatmeal are still very difficult to move, the latter article especially. Beans, Peas, and Barley steady at previous rates. The market closes a degree more cheerful than of late.

FRIDAY, June 3.—There was a moderate attendance at market. Wheat met an improved demand, at 1d. to 2d per cental advance since Tuesday. Flour: French is more in request, and holders ask 6d. to 1*s* per sack advance; barrels

are also 6d. dearer. Indian Corn steady at late rates. Egyptian Beans, Oats, and Oatmeal in steady demand; value unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
April 23	39s 7d	31s 1d	19s 9d	29s 0d	32s 7d	32s 1d
— 30	39 2	30 6	19 4	28 7	33 9	32 1
May 7	38 9	30 3	19 5	32 3	34 0	32 1
— 14	39 3	29 9	19 8	28 5	34 3	32 6
— 21	39 8	29 6	20 0	31 5	34 2	32 9
— 28	39 5	29 0	19 10	27 7	34 6	31 9
Agg. Aver.	39 4	30 0	19 8	29 7	33 11	32 4

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

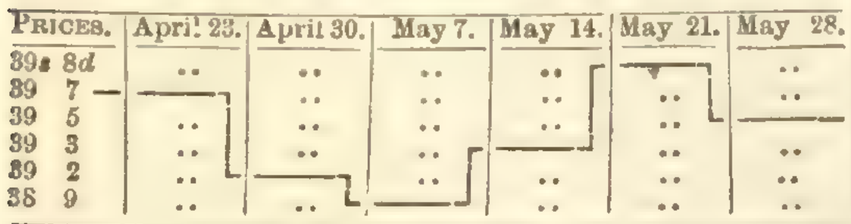

WANTED, in a gentleman's Garden, a FOREMAN, who understands Vineries, Stove Plants and Forcing.—P. A., Post Office, East Sheen, Surrey.

WANTED, a respectable middle-aged Man, as *PROPAGATOR* and *FOREMAN*, with good address, and to assist in waiting on Visitors; he must have a good knowledge of Roses.—For particulars, apply to Mr. MITCHELL, Pilt Down Nurseries, Maresfield, Uckfield, Sussex.

WANTED, a PROPAGATOR and GREENHOUSE FOREMAN.—The Undersigned require, about the end of July, an experienced and successful Propagator of Stove, Greenhouse, and Soft-wooded Plants; must also be a good Cultivator of Specimen Plants. Unexceptionable references required.—Apply, stating age, where, and how long previously employed in same capacity, and wages expected, to Messrs. FRANCIS & ARTHUR DICKSON & SONS, The "Upton" Nurseries, Chester.

WANTED, an experienced middle-aged Man as WOODWARD to undertake the Sub-management of extensive Woods and Plantations. A married Man without incumbrance or a small family preferred. Unexceptionable references required.—Applications by post, stating salary expected, to be made to H. B. FESTING, Esq., Maiden Bradley, Frome, Somerset.

WANTED, a HEAD SHOPMAN.—The undersigned are in want of a thoroughly experienced person to take the entire charge and responsibility of the SEED BUSINESS, under the direction of one of the principals. No one need apply who has not had ample experience in every department of the Seed Business in first-class houses.—Apply in own handwriting, stating age, and if married, also naming former situations, and salary expected, to FRANCIS & ARTHUR DICKSON & SONS, Seed Merchants and Nurserymen, 106, Eastgate Street, Chester.

WANTED, an energetic steady Young Man as SECOND SHOPMAN. Unexceptionable references required.—H. BROWN, 4, Commutation Row, Liverpool.

WANTED, an APPRENTICE or an IMPROVER in a leading Floral Nursery in a fashionable Watering-place on the South Coast. He will be placed under one of the first Propagators of the day.—C. B. A., Mr. Cuthill's, Camberwell, S.

Working Gardener and Groom.

WANTED, in Yorkshire, an obliging, steady MAN, to take charge of a Garden, with small Greenhouse and Vinery. He would also have charge of two horses, two cows, and everything out of doors at a moderate-sized gentleman's residence. Assistance allowed both in garden and stables. A cottage on the spot rent free. State wages and two last situations. No one need apply whose character will not bear strict investigation. The man who has held this situation, for the last twelve years, is now leaving to go into business on his own account.—Apply to H. J. TURNER, Land Agent, Richmond, Yorkshire.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

To Noblemen and Gentlemen.

GARDENER (FIRST-CLASS).—HENRY MAY, of The Hope Nurseries, Bedale, Yorkshire, can confidently recommend a valuable Man, age 40, Wife, and one Boy aged 13 years. Has had the superintendence of large places as Head Gardener; is a superior Plantsman and good Pine and Grape grower, and has been used to superintend a quantity of men. Character will bear the strictest investigation for good conduct in every respect

GARDENER (HEAD).—Disengaged; is a successful Grower of Pine Apples, Grapes, and Stove and Greenhouse Plants. First-class references.—HENRY GILL, Jun., Scotforth, Lancaster.

GARDENER (HEAD).—Middle-aged, married, one child; has a thorough practical knowledge of his profession in all its branches. Good references.—G. J., Fredk. Gill & Co., Dorset Nurseries, Blandford.

GARDENER (HEAD).—Age 30, married; has a good practical knowledge of his profession; Wife would undertake Laundry if required. Good testimonials.—G. R., Stanstead Park Nursery, Forest Hill, S.E.

GARDENER (HEAD).—Age 35, married; has a good practical knowledge of his profession; can produce testimonials from his employers for the last 16 years, including eight in last situation.—J. K., Mr. Richard Smith, St. John's Nursery, Worcester.

GARDENER (HEAD) to any nobleman or gentleman.—Age 40, married, without incumbrance; has a thorough knowledge of his profession in all its branches. Wife can take charge of the Dairy and Poultry if required. Two years' character.—A. B., Musketts, Seedsman, High Street, Clapham.

GARDENER (HEAD).—No incumbrance; understand. his profession in all its branches, including Early and Late Forcing, also Flower and Kitchen Gardens. No objection to superintend Land and Stock. Wife good Dairywoman if required.—S. E., Mr. Cutbush's, Highgate Nurseries, London, N.

GARDENER (HEAD), to any nobleman or gentleman.—WILLIAM WRIGHT (age 34, married), is a first-class industrious Gardener, fully competent in every branch of his profession, and has had great experience in some of the first establishments in England. Testimonials and character unexceptionable.—Hardwick, near Heath, Chesterfield.

GARDENER (HEAD).—Age 37, married, one child, aged 12; has lived nine years as Head Gardener; where he has had the Management of a great extent of Glass, Fruit, Flower and Kitchen Gardens, making Improvements; has also had the Management of Meadow Land, Farming, Stock, Measurement, and Selling of Timber. Can be highly recommended.—T. BURNETT, Mr. Windsor's, Ironmonger, Roehampton, S.W.

GARDENER (HEAD).—Age 32, married, without incumbrance; has had a first-class practice in Flower and Fruit Forcing, in Kitchen and Flower Gardening, accustomed also to making New Gardens and Pleasure Grounds, and can be well recommended.—Further particulars of terms, &c., given on application, addressed to WM. WOOD & SON, Woodlands Nursery, Maresfield, Uckfield.

GARDENER (HEAD).—JOHN PEARSON, who has been for upwards of two years Head Gardener to the Right Hon. Lord Foley, at Worksop Manor, Notts, will be at liberty on 1st July next, to dispose of his services in a similar capacity. He is experienced in every department of Gardening, and can Lay out Grounds; is thoroughly competent to undertake the Management of a first-class establishment. J. P. has been several years in the first gardens in England and Scotland. Can give unexceptionable references.

GARDENER (HEAD WORKING).—Age 40, married; has a thorough knowledge of his profession. Wife can Manage Dairy and Poultry. Two years' good character.—J. H. MOORHOUSE, Bank, Westerham, Kent.

GARDENER (HEAD WORKING).—Age 35, single; understands Greenhouse, Flower, Fruit, and Kitchen Gardens, Pits, &c.; Land and Stock. To live in the house or out. Good character from two last employers.—W. S., 10, Park Side, Wilton Place, Knightsbridge, S.W.

GARDENER (HEAD), where three or four men are kept, or SECOND, in a large Establishment.—Age 27, single. First-class references as to ability and character.—A. B., Post Office, Great Marlow, Bucks.

GARDENER (HEAD), where two or three are kept.—Age 24; practical knowledge of the Kitchen and Flower Garden, Early and Late Forcing, Greenhouses and Conservatory, and Cucumbers and Melons. Good reference from last place.—J. P., Cant's Nursery, Colchester, Essex.

GARDENER (HEAD), or GARDENER and BAILIFF to a nobleman or gentleman.—Age 41, single, thoroughly practical. References for uprightness and qualifications will be given to families of rank and distinction in the terms of the treaty.—A. B., James Carter & Co., Crystal Palace Nursery, Sydenham, London.

GARDENER (HEAD), and BAILIFF.—Age 38, married; thoroughly experienced in the Management of Hothouses, Greenhouses, Conservatory, Orchard Houses, Kitchen and Flower Gardens, the Management of Land and Stock, Keeping Accounts, &c. Wife could manage the Dairy. Good reference. Eight years' excellent character.—A. B., 35, Woodchester Street, Harrow Road, Paddington, W.

GARDENER.—Age 40, married, no incumbrance; practically understands his profession in all its branches. No objection to a Lodge. Good reference will be given.—C. B., Post Office, Dulwich, Surrey, S.

GARDENER.—Age 35, married; thorough knowledge of his profession in all its branches. Five years' excellent character.—T. L. H. BYSOUTH, Nurseryman and Florist, New Bromley, Kent.

GARDENER (UNDER).—Age 23; active, of good experience. Good character from last three places.—J. MARSHALL, Hykeham, Lincoln.

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News of the Week.

IN the House of Lords on Friday the Chimney Sweepers and Chimney Regulation Bill, the Naval Prize Acts Repeal Bill, and the Naval Prize Bill passed through Committee. On Monday the Earl of CLARENDON moved the second reading of the Public Schools Bill, the object of which is to render any new appointments to the governing bodies of public schools subject to future legislation upon the question. After a long discussion the Bill was read a second time. The Divorce and Matrimonial Causes Act Amendment Bill was read a third time and passed. On Tuesday the Union Assessment Continuance Act Amendment Bill was read a second time. In committee on the Penal Servitude Acts Amendment Bill, Lord HOUGHTON moved as an amendment the omission of the words requiring the holders of tickets of leave to report themselves once a month, but still leaving the obligation to report themselves on change of residence. On a division the amendment was negatived by 49 to 41. The Bill then passed through committee. On Thursday, in answer to the Earl of SHAFTESBURY and the Marquis of CLANRICARDE, Earl RUSSELL stated that at the sitting of the Conference on that day, it was agreed by all the Powers, on the proposition of Denmark, to prolong the armistice for a fortnight from the 12th inst. The Marquis of CLANRICARDE moved for papers relative to the enlistment of Irish emigrants and Canadians in the armies of the United States, and suggested that if the remonstrances of the Government against this system of recruiting were not attended to, it would be a question whether a declaration of war would not be justifiable. Earl RUSSELL in reply said that the Foreign Office and Lord LYONS had frequently remonstrated with the United States Government on the subject, and he thought it highly discreditable to the civil and military authorities of the United States that they had not fully investigated the representations that had been made to them. He admitted that the case was one of that class which did frequently lead to war; but we had just as much reason to complain of the conduct of the Confederates as of that of the Federals. The Government would continue their remonstrances, and he hoped they would be attended with success. In answer to the Earl of DERBY, the LORD CHANCELLOR said that he was prepared to agree to the amendment in the County Courts Act Amendment Bill reducing the period for the limitation of debts under 20*l.* in the first instance to three years, and to make the measure prospective, and not retrospective.

In the Commons on Friday Mr. CHILDERS, in answer to Sir JOHN HAY, described the reforms which the Government intended to introduce in the management of Greenwich Hospital. He said that in accordance with the recommendations of the commissioners, it was intended to abolish the double government of the Hospital, to appoint a chief officer to preside over its affairs, and to do away with the residential civil and military appointments at the end of five years, giving fair compensation to those who might then hold them. It was also proposed to increase the out-pensions of men who had reached a certain age, and to limit the admissions to the Hospital to those who were incapable, in consequence of age, infirmity, or loss of friends, of maintaining themselves outside its walls. These changes would effect a great saving of expense, and would be matured during the recess, in order that a measure on the subject might be brought before the House early in the next Session. Sir J. HAY, Sir J. PAKINGTON, and other members expressed their satisfaction at this statement. The Banking Copartnership Bill was read a third time and passed. On Monday, in answer to Mr. OSBORNE and other members, Lord PALMERSTON said that no arrangement had yet been come to with regard to the continuance of the armistice, and that the suspension of hostilities would expire on the 12th, if not previously renewed. No day had been fixed for the next Conference, as the members were waiting for instructions from their respective Courts; but there was no reason to doubt that the Conference would meet again before the expiration of the armistice. In reply to further questions, his lordship declined to state what had been the proceedings of the Conference, and said that to divulge from day to day what was taking place would be to endanger the results and absolutely imperil the peace of Europe. Lord PALMERSTON brought up two messages from the QUEEN, one recommending a grant of 20,000*l.* to Sir ROWLAND HILL, and the other a pension of 1000*l.* a year to the Countess of ELGIN. The House having gone into Committee of Supply on the Civil Service Estimates, Mr. COWPER moved a supplementary estimate of 10,000*l.* on account of a new National Gallery to be erected in the gardens of Burlington House, at a cost of 152,000*l.* Lord J. MANNERS moved the rejection of the vote, on the ground that the proper site for a National Gallery was in Trafalgar Square. After a long discussion the vote was rejected, on a division, by 174 to 122. The Government Annuities, &c., Bill was recommitted. On Tuesday, Mr. LINDSAY moved for copies of correspondence between her Majesty's Government and the Governments of France, Spain, and Portugal, relating to the abrogation of the discriminating duties still levied upon British vessels and their cargoes trading with those countries. Mr. M. GIBSON assented to the motion, which was agreed to. Mr. CAIRD moved a resolution that the collection and early publication of agricultural statistics of Great Britain would be advantageous to the public interest. He suggested that the necessary information might be collected by the persons engaged in the ordnance survey, at a cost not exceeding 3000*l.* per annum. Mr. M. GIBSON moved the previous question. On a division, the resolution was carried by 74 to 62. On Wednesday Mr. LAWSON moved the second reading of the Intoxicating Liquors Bill, the object of which was to provide that no licences to public-houses and beer-shops should be either granted or renewed in case two-thirds of the inhabitants of a parish were opposed to it. Captain JERVIS moved as an amendment that the Bill be read a second time that day three months. On a division, the amendment was carried by 292 to 35. A debate ensued on the motion for the second reading of the Valuation of Land and Heritages (Scotland) Bill, which was not concluded when the hour for adjournment arrived. On Thursday Lord PALMERSTON announced that the Conference had that day agreed to prolong the armistice for a fortnight. Lord PALMERSTON then moved that, in accordance with the recommendation of HER MAJESTY, the House should confer a pension of 1000*l.* a year upon the widow of the late Earl of ELGIN, in acknowledgment of his great public services. The motion was seconded by Lord STANLEY, and unanimously agreed to. On the order for going into committee on the Collection of Taxes Bill, Sir H. WILLOUGHBY moved that it was not expedient that the land, assessed, and income tax should be collected by officers of the Inland Revenue. The CHANCELLOR of the EXCHEQUER defended the Bill, and the motion was negatived on a division by 137 to 103. The House then went into committee on the Bill, and agreed to the different clauses. The LORD ADVOCATE withdrew the Writs Registration (Scotland) Bill, and the ATTORNEY-GENERAL withdrew the Church Building and New Parishes Acts Amendment Bill. On the order for the second reading of the Street Music (Metropolis) Bill, Mr. HANKEY moved that the Bill be read a second time that day three months. After some discussion, and a division on the question of the adjournment of the debate, which was negatived by 56 to 19, the Bill was read a second time.

Advices from New Zealand announce that two severe engagements had occurred at Maungatawhiri and Tarachi. The natives were defeated at the former place, which they abandoned, while at the latter our troops suffered a reverse. Our loss in killed and wounded in both engage-

ments amounted to 80, including Captain RING 18th Regiment, killed; Captain FISHER, 40th Regiment, and Ensign CHAYTER, 65th Regiment, severely wounded. The probability of the close of the campaign is said to be still distant.

The latest news from the United States informs us that on the 20th ult. General GRANT again advanced, when General LEE, finding his right flank turned by General HANCOCK, abandoned his position at Spottsylvania, and took up another strong position between the North and South Anna rivers. It was reported in New York, at the departure of the mail, that General GRANT was moving towards the peninsula. General BUTLER is still besieged by the Confederates in his entrenchments. General BANKS has succeeded in reaching New Orleans, and General SHERMAN is advancing in Georgia, but without being able to come up with Gen. JOHNSTON, who is said to avoid a battle in order that he may transfer his troops to reinforce Gen. LEE.

Home News.

THE QUEEN'S RETURN FROM SCOTLAND.—The Queen, accompanied by Princess Helena, Princess Louisa, Prince Leopold, and Princess Beatrice, Princess Leiningen, and the Princess Alberta of Leiningen, left Balmoral on Tuesday night at half-past 12 P.M., and arrived at Windsor Castle on Wednesday morning at 9. The Prince of Wales was on the platform at Windsor to receive the Queen, and accompanied her Majesty and the Royal family to the Castle. In the afternoon the Queen drove to Frogmore House with the Princess Louis of Hesse, who with Prince Louis and Prince Arthur, had arrived at the Castle on the previous day. Her Majesty and her Royal Highness afterwards drove out in a carriage and four. Princess Helena, Princess Louisa, and Princess Leiningen also drove out in a carriage and four. In the evening Prince Leiningen arrived at the Castle on a visit. On Thursday morning the Queen and Princess Louis of Hesse walked and drove in the grounds. Princess Helena and Princess Louisa, with Prince Alfred, Prince Louis of Hesse, and Prince Leiningen, went to Frogmore House and accompanied the Prince and Princess of Wales to Ascot Races.

THE COURT IN SCOTLAND.—On Wednesday morning, the 1st inst., the Queen went out with the Princess Helena and Princess Leiningen, and drove out in the afternoon with Princess Leiningen and Princess Beatrice, round the Lynn of Muick, and by Birk Hall. On Thursday morning the Queen went out driving with the Princess Louisa, and went out in the afternoon with the Princess Helena. Prince Leopold went to Invercauld to fish. On Friday morning the Queen went out with the Princess Leiningen and Princess Louisa, and drove in the afternoon with the Princess Helena and Princess Leiningen to Alt na Guithasach. On Saturday the Queen went out with the Princess Leiningen and Princess Helena, and in the afternoon with the Princess Louisa. The Duke of Argyll dined with the Queen and Royal family. On Sunday the Queen and Royal family attended Divine Service in the castle. The Rev. Dr. M'Leod, her Majesty's chaplain, officiated. The Princess Helena and Princess Leiningen afterwards went to the parish church of Crathie, where Dr. M'Leod officiated. The Duke of Argyll and Dr. M'Leod dined with the Queen and Royal family. On Monday morning the Queen went out with the Princess Helena and Princess Beatrice, and drove in the afternoon with the Princess Leiningen and Princess Louisa to the Lynn of Dee.

THE PRINCE AND PRINCESS OF WALES.—On Saturday afternoon the Prince and Princess of Wales returned to Marlborough House from Cambridge. On Sunday morning their Royal Highnesses, with the Prince and Princess Louis of Hesse, attended Divine service at the Chapel Royal, St. James's. The Dean of Chichester preached the sermon. In the afternoon the Prince and Princess of Wales, accompanied by the Prince and Princess Louis of Hesse, drove to Kew. On Monday morning the Prince of Wales, accompanied by Prince Louis of Hesse, rode on horseback. In the afternoon the Prince and Princess, accompanied by Prince and Princess Louis of Hesse, took a carriage drive. In the evening the Prince and Princess of Wales had a dinner party. After dinner their Royal Highnesses had an evening party and music. On Tuesday morning the Prince and Princess left Marlborough House for Frogmore. The Prince and Princess Louis of Hesse left Marlborough House for Windsor Castle. In the afternoon the Prince Albert Victor and the Princess Victoria, daughter of the Prince and Princess Louis of Hesse, arrived at Windsor. On Wednesday the Prince and Princess of Wales went to Ascot Races, accompanied by the Duke of Cambridge and the Princess Mary. On Thursday their Royal Highnesses again went to Ascot, accompanied by Prince Alfred, Prince Louis of Hesse, Princess Helena, Princess Louisa, the Duke of Cambridge, the Duchess of Cambridge, Princess Mary, and Prince Leiningen.

PRINCE ALFRED arrived at Spithead on Monday in the Racoon, screw corvette, from the Mediterranean. In the afternoon his Royal Highness landed at Portsmouth on leave, and, after visiting the Royal Sovereign, turret ship, proceeded by ordinary train on the South-Western Railway to Windsor, to meet Her Majesty on her return from Balmoral.

THE CONFERENCE.—The Plenipotentiaries accredited to the London Conference met on Monday at the official residence of the First Lord of the Treasury in Downing Street, and sat nearly 3 hours. They met again on Thursday, and sat 3 hours and a half. All the members were present on both occasions. The Conference will meet again on Wednesday.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

DIPLOMATIC MISSION FROM FRANCE.—The Duke de Morny has left Paris for London, and is said to be entrusted with a confidential mission from the Emperor, connected with the present state of affairs on the Continent.

ORDER OF THE BATH.—The Queen has appointed Major-General William Marcus Coghlan, R.A., some time Political Resident and Commandant at Aden, to be Knight Commander of the Bath.

COURT APPOINTMENT.—The Queen has appointed Miss Florence Catherine Seymour to be one of the Maids of Honour in Ordinary to her Majesty, in the room of the Hon. Lucy Caroline Lyttelton, resigned.

DIPLOMATIC APPOINTMENTS. — The Queen has appointed Joseph Hume Burnley, Esq., now Secretary of Legation at Berne, to be Secretary of Legation at Copenhagen; Horace Rumbold, Esq., now Secretary of Legation at Athens, to be Secretary of Legation at Berne; Edward Robert Lytton, Esq., now Secretary of Legation at Copenhagen, to be Secretary of Legation at Athens; the Hon. William Stuart, now Secretary of Legation at Washington, to be Secretary of Embassy at Constantinople; and the Hon. Richard Edwardes, Secretary of Legation at Madrid, to be Chargé d'Affaires and Consul-General in Venezuela.

Foreign.

FRANCE.—An Imperial decree was issued on Friday, permitting rice in grain and in straw to be henceforward imported into France from all countries and under any flag free of duty. The *Pays*, which is considered to be the organ of the Foreign Office, gives the following details of the proceedings of the Conference, "from its personal information:"—

"The German Plenipotentiaries announced that they had modified their claims on one point, and no longer required that the whole of Schleswig should be united to Lauenburg and Holstein, and formed into an independent State; but agreed that Schleswig should be divided, and that Denmark should retain possession of the Danish part, on the condition that a frontier line should be drawn from Flensburg, which would deprive Denmark of two-thirds of that province. The Cabinet of Copenhagen could not accept such conditions, and the German Powers, if really animated with a desire of restoring peace, should not persevere in pretensions which would render it impossible, but should accept a more equitable frontier. It will be for England, which has taken the initiative and is alone responsible for this proposal, to make such representations to the Germans as will induce them to accept her plan. When it has overcome the stubbornness of the Germans, her Majesty's Government will then have to obtain the assent of Denmark, which has hitherto refused to entertain the principle of its dismemberment. If the matter be not arranged it will be hard for England to avoid going to war, and we congratulate the Cabinet of the Tuileries on its caution, because if the war were to recommence it will not be bound to interfere in the struggle after the breakdown of the Conference, any more than it was before its meetings."

The *Constitutionnel* of Tuesday, in an article signed by M. Paulin Limayrac, says:—

"The Conference will reassemble before the 12th inst. There is reason to believe that the friends of a policy of moderation at any price will not be deceived in their hopes, and that we shall not see that war recommence which has already caused so many disasters."

The same journal of Thursday says:—"The replies of Austria and Prussia have arrived. These Powers are stated to consent to the prolongation of the armistice for a fortnight." The Court of Cassation last week rejected the appeal of La Pommerais, in accordance with the suggestion of the Procureur-Général. The jury subsequently petitioned the Emperor for a commutation of the sentence, and the father of the prisoner had an interview with his Majesty to entreat his compliance with their prayer. The Emperor however rejected the appeal, and La Pommerais was guillotined on Thursday morning at 6 o'clock, in the presence of 30,000 spectators. Imperatori and Scaglioni, who were sentenced to imprisonment for 20 years for having conspired to assassinate the Emperor of the French, are about to be removed from the prison of Mazas to a fortress where they are to undergo their punishment. Greco and Trabucco, who were sentenced to transportation, are shortly to be removed from Paris to the place of their destination, which is not yet announced. M. Renan has published a letter declining the post of Assistant Librarian, conferred upon him by the Government. He declares that it is his wish to retain the title of Professor of the Hebrew and Syriac languages, which he holds upon the double presentation of the College of France and as a member of the Institute. He says that he will continue to fulfil without salary the duties which this title confers upon him by lectures at his own house, and labour for the development of studies intrusted to his charge. The *Moniteur* of Sunday says:—

"The professors of the College of France have been requested to propose two candidates for the Professorship of Comparative Grammar. At a future period measures will be taken to fill the chair of the Hebrew, Chaldaic, and Syriac languages, vacant by the decree of the 1st of June."

The race for the Grand Prix de Paris, for 3-year-olds, 100,000f. and a work of art presented by his Majesty the Emperor, was run on Sunday, when Vermuth beat Blair Athol and Fille de l'Air, the winners of the Derby and Oaks, and won easily by two lengths. This result, as the victory of a French horse over an English one, has caused more excitement and delight in Paris than any event which has occurred for years. Official despatches from Algeria announce that the Marabout Si-el-Azerey had attacked General Lapasset, at Gueld-Bouzid, but was vigorously repulsed. General Rose arrived at Zamorah on the 3d without having experienced the least resistance. The province of Constantine has remained tranquil. General Jusuf has defeated the contingents of Djebel Amour, and the manœuvres of the troops daily render it more difficult for the Arabs to keep up the insurrection. It is said that General Deligny foresees the time approaching when the insurrectionists will be forced to disperse. The Emperor has sent the Count d'Espeuilles, one of his orderly officers, to Algeria, to send him an account of the military operations. The 12th battalion of Foot Chasseurs, now in garrison at Strasburg, has received orders to leave for Algeria.

SPAIN.—The Peruvian Consul in Madrid has announced to the Spanish Government that he is empowered to arrange all the differences between the two Governments. He has also written to the *Epoca* stating that he can prove by documents that Señor Mazaredo, the resident Spanish Minister in Peru, did not send an *ultimatum* to the Peruvian Government before acting. Admiral Piry will replace Admiral Pinzon on the Pacific station. The latter will proceed to San Domingo. A deputation from Cuba has arrived at Madrid to solicit the right of nominating deputies to the Spanish Cortes. It is asserted that General Serrano is about to visit France. The Queen returned to Madrid from Aranjuez on the 10th inst. General Espartero will be in the new Progressista Committee. Senor Olozaga has set out for France. General Prim is about to proceed to Vichy. The Bill regulating political meetings has been passed by the Cortes.

NORWAY.—On the 17th ult., the 50th anniversary of the proclamation of the Constitution was celebrated with great solemnity at Christiania. Several speeches were delivered, expressing warm sympathy towards Denmark, and regret that the Government should, under existing circumstances, have confined itself to a barren demonstration on behalf of a sister country.

DENMARK. — A despatch from Copenhagen states that, since there is a possibility of a renewal of hostilities, it was resolved at the Privy Council of State held on Saturday to convoke the Rigsraad (representative of Denmark and Schleswig). The celebration of the Constitutional fête took place on Sunday. In the afternoon there was a grand procession to the king. From Aarhuus, Randers, and Viborg, and from every place in Jutland, addresses have been sent to his Majesty in which the inhabitants state that war is preferable to the loss of Schleswig.

THE DANISH DUCHIES.—A meeting of 6000 North Schleswigers was held on the hills of Boeghoeved, near Hadersleben, on Monday, at which the following declaration was adopted:—

"The proposal of the French and English Plenipotentiaries at the London Conference to divide Schleswig is contrary to the most important vital interests of the country. We consider it the greatest misfortune that can befall us. We will never be cut off from Schleswig and never be incorporated with Denmark."

HANOVER.—In the sitting of the Chamber of Deputies on Monday, the Minister of Justice, in a speech on the Schleswig-Holstein question, said:—

"The Plenipotentiaries of Austria, Prussia, and the Federal Diet at the Conference are endeavouring to obtain the separation of the Duchies from the Danish Crown, and their indivisible union as an independent State, to be incorporated with the German Confederation under the hereditary sovereignty of the Prince of Augustenburg. Hanover concurs in these views, and confides in the strength of united Germany and in the sense of justice of the neutral Powers." The Minister concluded by expressing a hope that this object might be peacefully attained under acceptable conditions.

FRANKFORT. — A despatch from Frankfort says that according to reliable information, in the sitting of the Conference on Thursday the neutral Powers insisted upon the river Schlei being laid down as the demarcation line in Schleswig, and that no new fortifications should be constructed in the German portion of that province. That the frontier line should run through the town of Apenrade, as proposed by the German Powers, was rejected by the neutral Powers, and a proposition from the same source that under certain circumstances the inhabitants of the Duchies should be consulted was also rejected. On the question of the prolongation of the armistice, the Danish Plenipotentiaries said that they could only declare the intentions of their Government on Monday, should it appear probable that on that day a basis for the future conclusion of peace would be secured.

PRUSSIA.—The Emperor and Empress of Russia arrived at Potsdam on Thursday evening. They were received at the railway station by the King of Prussia. Their Majesties were welcomed at the Castle of Potsdam by the members of the Royal family and the Grand Duke and Duchess of Mecklenburg. A grand review was held yesterday morning in the Tempelhof field. In the evening a dinner was given in the

Orangery House to the Imperial guests. Their Majesties will leave for Darmstadt this morning at 9 o'clock. Prince Frederick Charles has succeeded Marshal Wrangel as Commander-in-Chief of the Prussian army in Schleswig. The Duke of Augustenburg arrived at Berlin on Tuesday and took up his residence at the palace of the Crown Prince. He had previously visited Dresden and had an interview with the King of Saxony. The Duke has for the present given up his journey to Vienna. The semi-official *Nord Deutsche Zeitung* of Wednesday confirms the statement that the Czar has transferred to the House of Oldenburg all the claims of the Imperial family of Russia to the Holstein succession. The same journal says:—

"The great German Powers have not unconditionally rejected the eventual prolongation of the armistice for a fortnight, and the resumption of hostilities is, therefore, postponed for a short period.

The official *Staatsanzeiger* of Thursday, in announcing that Prussia has accepted the fortnight's prolongation of the armistice which was proposed at the Conference on Monday, adds:—

"It is possible that hostilities may be resumed on the 26th inst."

Austria.—The Vienna journals state that in the sitting of the Conference on Monday the German plenipotentiaries agreed to accept *ad referendum* the proposal for a fortnight's prolongation of the armistice, under the condition that should the line of demarcation not be settled within that period, hostilities would be recommenced at its expiration. It is asserted that Austria and Prussia will not insist upon the frontier line of Apenrade. The *Oesterreichische Zeitung* of Wednesday is of opinion that the allied Powers ought to accept the 14 days' prolongation of the armistice, but should make peremptory demands, and if the latter are not complied with by the 12th inst. they should attack the island of Fünen. Several of the Austrian men-of-war at Trieste have received orders to be in readiness for war, in order to join the squadron of the North if necessary. It is asserted that Baron von Poche, Governor of Mähren, will be appointed Minister of Commerce.

Venetia.—On Saturday the Austrians in Venetia commemorated the anniversary of their alleged victory at Magenta; 18,000 men were reviewed by General Benedek at Verona.

Italy.—A grand review was held at Turin on Sunday to celebrate the anniversary of the establishment of the Constitution. The anniversary was celebrated on Monday in every town of Italy. Similar demonstrations took place in Venetia and the Roman provinces, and the Austrian and Pontifical police were unable to prevent them. In the Chamber of Deputies on Monday the Minister of Public Works, in reply to a question respecting the rumour of the sale of the State railways, said that nothing had been settled up to the present. The Chamber would be consulted prior to any decision being taken. In the sitting of Thursday the Minister of Finance communicated the probable estimates of the revenue and expenditure for 1865. The ordinary expenses are estimated at 747,359,368 lire, and the ordinary revenue at 564,063,107 lire; the extraordinary expenditure at 106,470,266 lire, and the revenue from extraordinary sources at 61,437,611 lire. The deficit is less by 24 000,000 lire than that of 1864. A Bill against duels has been brought forward in the Senate. The Pope has received M. de Sartiges, the French Ambassador, who offered his congratulations upon his Holiness's restoration to health. The Prefect of the Congregation of the Propaganda has expressed to M. de Sartiges his satisfaction and gratitude for the constant marks of solicitude given by the Emperor's Government for the interests of the Catholic Church in the East.

Greece.—Intelligence from Athens states that the merchants have requested the Government to increase the garrison of that city, on account of the insecurity of the streets.

Ionian Islands.—King George I. arrived at Corfu on Monday, and was received with immense enthusiasm by the people. A Te Deum was chanted at the Cathedral.

Russia.—In anticipation of the events which are now taking place in the Danish Duchies, the Emperor of Russia has made over to his agnate, the Grand Duke of Oldenburg, the eventual rights of his Majesty, as head of the House of Holstein-Gottorp, over a part of Schleswig-Holstein. Baron de Meyendorff, the Russian Chargé d'Affaires at Rome, has been instructed to deliver to Cardinal Antonelli M. de Kisseleff's letters of recall, by which the mission of the latter as Russian Minister at Rome will be terminated. Besides this rupture of diplomatic relations with Rome, it is said that the Russian Government will reply to the last Papal allocution by the formation of Roman Catholic synods in Russia and Poland for the regulation of the affairs of the Roman Catholic Church, and that the Archbishops and Bishops will henceforth be nominated by the Emperor. The Government has sanctioned the free transit of goods through the Caucasus to Persia. An Imperial decree has been issued abolishing the duty upon goods exported from Russia and Poland for purposes of European commerce. The following articles are excepted:—Wood, potash, mats, leeches, rags, silkworms' eggs, and all kinds of bones, except burnt and ground ones. An imperial Ukase decrees the issue of three new series of paper money, to the extent of 3,000,000 roubles. It is asserted that a contract has been definitively concluded by Mr. Hope, the manager of the International Financial Company of London, with the Russian Government for the construction of the Moscow and Sebastopol Railway. The works are to be commenced in the course of this year.

Poland.—The official *Wilna Courier* announces the execution of Leon Szamkow, at Suwalki, and Y. Grigoraszozenko, at Kowno; and also of M. Michael Oskierko, at Mohilew, the latter for "having been in constant relation with the members of the Lithuanian Revolutionary Committee, and afterwards become chief of the palatinate of Minsk."

The Caucasus.—A despatch from the Grand Duke Michael announces that the war in the Caucasus is now terminated, and that no more tribes remain to be conquered.

The Principalities.—Great festivities took place at Bucharest on the presentation to Prince Couza of the result of the *plébiscite*. A *Te Deum* was chanted in the churches, and a review was held amid the enthusiastic cheers of the people. The Polish residents in the Principalities also presented warm congratulatory addresses to the Prince, who left on Sunday for Constantinople. The Sultan had sent a frigate to Kustenjee with his general Aide-de-Camp on board to receive him.

Turkey.—A despatch from Constantinople announces that Prince Couza has arrived in that city and received complimentary visits from the Secretaries of the English, French, Russian, Austrian, Prussian, and Italian Legations. It is said that the Porte has notified to the Prince that it considers his late measures as null and void, and has further expressed a hope that his presence in Constantinople would afford him an opportunity of explaining his reasons for violating the stipulations of the Paris Convention of 1856. The Porte has prohibited the export of cattle from Turkey. Five steamers have been ordered to be built for the Turkish Government in Germany.

Tripoli.—A powder magazine exploded last week near Tripoli Station. Fifty houses, including the hospital, a fort, the Custom House, and the adjoining factories have been destroyed. Ninety soldiers have been killed, 30 wounded, and 28 are missing. Of the inhabitants 47 are dead and 200 wounded. Great excitement prevailed.

Tunis.—News from Tunis announces the extension of the insurrection. The Europeans and Jews are leaving the place.

Cape of Good Hope.—The Colonial Secretary, Treasurer-General, Auditor-General, and a large number of members of Parliament left Cape Town on April 18 for Port Elizabeth, on their way to Graham's Town, for the opening of Parliament, which, as already announced, is to be held this session in the Eastern Province. H.M.S. Valorous arrived in Simon's Bay April 15, from the Mozambique, with Dr. Livingstone's little steamer, the Pioneer, in tow. She also brought down the Rev. Mr. Waller, and several of the native members of the Church mission. Mr. Waller was to return to England by the next steamer, and though he agreed that Dr. Livingstone was thoroughly justified four years ago in recommending the establishment of a mission on the Zambesi or the Shire, so great has been the depopulation since then, amounting to more than 90 per cent., that he thinks it would be a mere waste of effort to continue the occupancy of the field any longer. Bishop Tozer, with the Rev. Messrs. Allington and Steere, still remained at Mozambique, making inquiry as to what new fields for mission operations should be opened on the east coast. It was not improbable that ultimately they might be attracted to Captain Speke's urgent appeal in favour of the densely-populated countries visited by himself in the neighbourhood of Victoria Nyanza. Dr. Livingstone had left the Mozambique for Bombay with the Lady Nyassa, from whence he is probably now on his way overland to England. Dr. Duff's health had been greatly benefited by his sojourn in South Africa. The Bishop of Cape Town, in his capacity as Metropolitan, has gone up to Natal to take possession and make all the necessary arrangements for the diocese there, which he now considers to be vacant in virtue of the sentence of deposition passed upon Dr. Colenso. This it was expected would lead to fresh legal complications. The Narcissus, with Sir Baldwin Walker, was expected to leave for England before next mail.

China.—A despatch from Shanghai of April 22 says that Major Gordon has defeated the rebels at Waisoo, and expected that Nankin and Soochusuf would surrender shortly.

United States.—On the 26th ult. General Grant commenced moving his army to compel Lee to abandon his position at Spottsylvania. During the night Hancock's corps moved to Guinea's Station, on the Fredericksburg Railroad, advancing along the railway to Bowling Green. Another corps subsequently followed on the same line. Immediately after Hancock's movement Generals Longstreet and Ewell started south. General Grant reports that two of his Corps had reached North Anna River, and crossed at Jericho Ford with but slight opposition. Shortly afterwards they were furiously attacked, but repulsed the enemy. Hancock, with the 2d Corps, attacked the Confederates intrenched at another point on the North Anna. After a severe fight the Confederates withdrew across the river. The latest despatches from General Grant state that Lee has concentrated his army in a strong position between the North and South Anna Rivers. The latest accounts are contradictory. Some assert that the whole Federal army was three miles south of the North Anna River, and in possession of the Virginia Central Railway, and that Lee was within one mile of the South Anna; others as positively declare that Hancock was still north of the North Anna, prevented from crossing by Lee, who held a strong position between the river and the railway; and that Grant was moving towards the Peninsula. Secretary Stanton has published a statement that there were important movements in progress which could not be made public. Grant's base of supplies has been transferred to Tappahannock, on the Rappahannock. His wounded are conveyed to Port Royal, on the same river. The Federals evacuated Fredericksburg and Acquia Creek on the 26th. General Beauregard is closely besieging Butler at Bermuda Hundred, and in every attempt to extend his works or advance Butler has been driven back. A sanguinary engagement for the possession of some rifle pits has taken place, in which the Federals were defeated. The Confederates have commenced firing from the banks of the James River on General Butler's supply boats, and his position is considered extremely critical. Admiral Porter, by damming the Red River, has been enabled to float his remaining gunboats over the falls. General Banks has effected his retreat *viâ* the Atachafalaya River, and has arrived at New Orleans with the remnant of his army. The Federals are evacuating Texas. General Sherman has flanked General Johnston's position at Allatoona, on the Ettowah River. It is reported that Johnston will not fight, but will transfer his troops to reinforce General Lee. Pope is marching from the south-west with 6000 men to operate in the Shenandoah Valley. The blockade runners Tristram Shandy, Greyhound, Granite, City and Wave, have been captured by the Federals. The delegates to the Union State Conventions of New York, Ohio, and Illinois, have unanimously resolved to renominate Mr. Lincoln at the Baltimore Convention. Governor Seymour of New York has ordered the indictment of every person engaged in the seizure of the offices of the *World* and *Journal of Commerce*. The New York grand jury has indicted for kidnapping the officers who arrested Col. Arguelles, for the purpose of delivering him to the Cuban authorities, and Mr. Seward has consented to stay his surrender. President Lincoln on the 24th submitted to the House of Representatives the correspondence between Secretary Seward and Minister Dayton in regard to the resolutions of the House relative to the French in Mexico. Mr. Seward disclaims any intention on the part of the Senate or Administration to support the resolutions.

New Zealand.—Brigadier-General Carey attacked the Maori position at Araban, seven miles from le Aramuse, on the 31st of March. The enemy defended it for two days, when they retreated, with a loss of 101 killed and 33 prisoners. Our loss was 16, and 42 wounded. Captain Ring, 18th Regiment, was killed; Captain Fisher, 40th Regiment, and Ensign Chayter, 65th Regiment, were severely wounded. Colonel Warre subsequently drove the rebels from the formidable position at Kai Lake, near New Plymouth, without loss. General Cameron then commenced operations against a strongly intrenched position of the rebels at Mangatantan, on the Upper Waikato. The latest advices announce that two severe engagements had occurred at Maungatawhiri and Tarachi. The natives were defeated at the former place, which they abandoned, while at the latter the English troops suffered a reverse. The English loss in both engagements amounted to 80 killed and wounded. The probability of the close of the campaign is still distant.

San Domingo.—Advices from Havannah to the 21st of May announce that the Spaniards have taken Montecristi.

Parliament.

HOUSE OF LORDS.

Friday.—The *Chimney Sweepers and Chimney Regulation Bill* the *Naval Prize Acts Repeal Bill*, and the *Naval Prize Bill* passed through committee.

Monday.—*Sir Rowland Hill and Lady Elgin.*—The Lord Chancellor read a message from her Majesty, recommending their lordships to concur in enabling her Majesty to grant to Sir Rowland Hill the sum of 20,000*l*. The message also made a similar recommendation in respect of a grant of 1000*l* per annum, as a pension, to the Countess of Elgin, in consideration of the distinguished services of the late Earl. *Case of Mr. Anderson.*—Lord Campbell moved for copies of correspondence between the Government and the Cabinet of St. Petersburg relative to the imprisonment at Grodno of the Rev. Fortescue Anderson, a British subject, during the autumn of 1863, on suspicion of being in league with the Polish insurgents.—Earl Russell said that the question had been referred to the Queen's Advocate, who was of opinion that the case was not one that could be taken up by the Government. As soon however as they heard of Mr. Anderson's arrest they applied for his liberation, and found that he had been discharged before the application was made. The motion for papers was agreed to. *Park Lane.*—The Earl of Lucan called attention to the inconvenience of Park Lane in its present condition as a thoroughfare. A discussion ensued in which several suggestions were made as remedies for the evil complained of, but it was disputed whether the duty of carrying them into effect belonged to the Government, the Metropolitan Board of Works, or the parish of St. George.—Earl Granville said the matter was under consideration by the Metropolitan Board.—The Earl of Clarendon moved the second reading of the *Public Schools*

Bill, and said that the object of the measure was to provide that any person accepting office in a public school shall do so subject to any future legislation by Parliament. — Lord LYTTELTON, referring to the remarks of Earl Stanhope in the former debate, defended the recommendations of the Commissioners, asserting that on the evidence adduced they could scarcely have done less. After what has been done with the Universities it was quite impossible the public schools should escape inquiry, or be left to their own action to make the reforms required.—Lord DE ROS denied several of the allegations made as to defects in the system pursued at Eton, and contended that it would be dangerous to interfere too much with what had given satisfaction for so long a period. —The Earl of CARNARVON would not oppose the Bill, but thought some alterations would be required in committee. Injustice might be done in certain cases if the Bill were made operative from the date of its introduction. He also pointed out several objections to the changes proposed by the Commissioners in the course of studies.—Lord WODEHOUSE admitted that the Eton system had many good points, but agreed with the Commissioners that it required some alteration. He hoped the good sense of the masters would induce them to adopt voluntarily such of the recommendations as would remedy evils of which the existence had been proved. —The Earl of CLARENDON explained why the Bill had been made operative from the date of its introduction; but if this should be an objection he would propose it should take effect only from the date of its passing.—Lord BROUGHAM thought all the friends of education were deeply indebted to the Commissioners for the suggestions they had made.—The Earl of HARROWBY approved most of the changes proposed, and anticipated great benefit from them.—The Bishop of LONDON said there was every disposition on the part of the masters of the public schools to accept the suggested improvements. It would be necessary to do away with some of the present restrictions in the choice of masters, and give those appointed to the office more liberty of action. The best methods of instruction would then be adopted. — The Earl of DERBY thought many of the defects charged against public schools were really due to the very imperfect instruction given in private schools and by private teachers. Unless this evil were remedied all the subsequent labour in the public school must be thrown away.—The Earl of CLARENDON explained that this defect had been met by the suggestion of an examination before admission to a public school.—The Archbishop of CANTERBURY said the Commissioners had drawn up a most valuable report, and approved their recommendation of the study of foreign languages as a part of the regular course of instruction. Hitherto this had not been the case, and the attempt to teach French and German had therefore failed. The public schools were very valuable institutions, but they were capable of improvement. After some further discussion on points of detail, the Bill was read a second time. The *Divorce and Matrimonial Causes Bill* was read a third time and passed.

TUESDAY.—The *Union Assessment Committee Act Amendment Bill* was read a second time.—In committee on the *Penal Servitude Acts Amendment Bill*, Earl GREY proposed to amend the second clause by providing that criminals previously convicted twice, or oftener, shall receive a minimum sentence of seven years' penal servitude. The motion, after a brief discussion, was agreed to. On the fourth clause requiring a convict liberated on a ticket of leave to report himself once a month to the police of the district in which he resides, Lord HOUGHTON and Lord CRANWORTH opposed the clause on the ground that it gave no security to the public, and would be a great difficulty in the way of a man endeavouring to obtain employment.—The Earl of CARNARVON supported the clause, contending that some system of supervision was indispensable.—The LORD CHANCELLOR suggested that the words requiring the monthly report to the police should be struck out, and the clause so altered that the convict should report himself only when required to do so. It was agreed that this amendment should be printed and reserved for consideration.—Lord HOUGHTON then moved an amendment striking out the words "once a month," but it was negatived on a division by a majority of 8, the numbers being—for the amendment, 41; against, 49. The remaining clauses were then agreed to.

THURSDAY.—*Attorneys and Solicitors.*—The LORD CHANCELLOR laid on the table a Bill to amend the law relating to the Remuneration of Attorneys and Solicitors. *The Armistice.* — In answer to the Earl of SHAFTESBURY, Earl RUSSELL announced that the armistice between the Danes and the Germans had been prolonged for 14 days, and that the proposition had in the first instance come from the Danes. The *Court of Justiciary (Scotland) Bill*, which assimilates the law in Scotland relating to the alteration of the judges' circuits to that which now prevails in England, was read a second time on the motion of the LORD CHANCELLOR, and with the approval of Lord BROUGHAM. *Federal Enlistments.* — The Marquis of CLANRICARDE, in moving for correspondence and papers relative to the enlistment of Irish emigrants and Canadians in the Federal States of America, said that for the last two years the Government of Mr. Lincoln had displayed a deliberate intention to recruit its army from foreigners, and especially from her Majesty's subjects. He complained that while Ministers had permitted the Federals to obtain arms and munitions of war from this country without question, they had put the Foreign Enlistment Act in force the moment the Confederates evinced a desire to obtain ships of war from the same source. He understood that at this moment there was a regular depot in this country for the enlistment of Germans for the service of the United States, a proceeding which the Foreign Enlistment Act was directly intended to prevent. He had no wish to declare war against the United States, but he did wish the Government to make vigorous remonstrances on the subject; and if those remonstrances were not attended to, then it would be a question whether a declaration of war would not be justifiable. — Lord BROUGHAM regretted to say that he had reason to believe the Federal Government were inveigling poor Irish emigrants into a breach of our neutrality which would subject them in this country to punishment as criminals.—Earl RUSSELL replied that Lord Lyons had repeatedly remonstrated with the Federal States Government, and the Foreign Office had done all in its power to second those representations. There was no law that prevented the sale of arms and munitions of war to the Northern States, but all articles thus exported were liable to capture by the Confederates. The fitting out of ships of war for a belligerent Power stood upon a different footing, and was in direct breach of the Foreign Enlistment Act. He denied that Ministers were blameable for what had taken place in reference to Irish emigrants. He believed that the Irish peasantry had been led away by their own credulity, and had only themselves to blame. At the same time, it was highly discreditable to the civil and military authorities of the Federal States that they had not fully investigated the representations made to them by Lord Lyons. The noble marquis had suggested that if our remonstrances failed, the case was one for a declaration of war. Without going to that extent, he was bound to admit that the case was one of that class which did frequently lead to war; but we had just as much reason to complain of the Confederates as the Federals. Remonstrances would be continued, and he hoped they would be attended with success.—The motion for papers was agreed to.—In reply to the Earl of DERBY, the Lord CHANCELLOR said he had no objection to make the period for the recovery of small debts under the *County Courts Bill* three years instead of one, and that the Bill should not be retrospective in its operation. It was, therefore, intended that the period of limitation should be reckoned from the date of the last item supplied, or of the last part payment, or of any subsequent acknowledgment in writing of the debt after delivery.—Lord CHELMSFORD believed there would now be agreement among their Lordships on this subject.

FRIDAY.—*The Chain Cables and Anchors Bill* was read a second time. The report of amendments to the *Insane Prisoners' Act Amendment Bill* was brought up and received. *The Chimney-sweepers and Chimneys Regulation Bill* was read a third time and passed. *The Court of Justiciary (Scotland) Bill* passed through committee. *Greenwich Hospital.*—The Earl of HARDWICKE called attention to the state of Greenwich Hospital. He said that the income of the hospital amounted to 4,560,000*l.*, but the charity was sick, and the character of its sickness was that of a house divided against itself. He asked what had been done to improve the management of the institution, and to settle the differences which had occurred among the members of the board.—The Duke of SOMERSET said he shared in the desire that the funds of the hospital should be properly distributed. [Left speaking.]

HOUSE OF COMMONS.

FRIDAY.—*Greenwich Hospital.*—On the order for going into committee of supply, Sir J. HAY moved a resolution that it was desirable that the Admiralty adopt the recommendation of the Royal Commission of 1860, confirmed by the report of Sir Richard Bromley, one of the present commissioners, and by the letter of Admiral Sir James Gordon, the Governor of Greenwich Hospital, that the present system of double government be abolished, as a remedy for the abuses which had crept into the institution.—The motion was seconded by Mr. LIDDELL, who believed that the abolition of the double government would bring the affairs of the institution into harmonious working, and effect a considerable saving of expenditure. —Mr. ADAM supported the motion, urging that it was necessary either to get rid of the double (or rather treble) government, or to alter the character of the institution and make it more of an infirmary than an asylum.—Mr. CHILDERS said the income of the hospital amounted to 154,000*l.* a year, and the cost to 107,700*l.*, being at the rate of 70*l.* per head. The recommendations of the commissioners as to the comforts of the pensioners had been already carried out, and it was now intended by the Government to propose to limit admissions to the hospital to those who were incapable, in consequence of age or infirmity, of maintaining themselves outside its walls. Thus the institution would be an infirmary for the sick, and a receptacle for those whose out-pensions were insufficient for their subsistence. It was also proposed to add to the out-pensions of men who had reached a certain age, to abolish the double government and appoint a chief officer to preside over the affairs of the hospital, and to do away with the civil and military appointments at the end of five years, but not to do so without giving fair compensation. He indicated the probable effect of these changes in a financial point of view, and said that the plan would be matured in the recess and a measure brought before the House early in the next session.—Sir J. PAKINGTON expressed his satisfaction with the arrangements as shadowed out by the Government, but hoped that due regard would be paid to the interests of the officers of the navy.—In answer to Mr. CORRY Lord C. PAGET said that the hospital would in future be conducted in all respects like Haslar or any other naval hospital. The present governor of the hospital would be provided for, and the other persons occupying houses in the building would either be allowed to occupy them during life or would receive compensation for giving them up.—Sir J. HAY said that he was satisfied with these explanations, and withdrew the motion.—Sir J. FERGUSSON moved for a select committee to inquire how far the number of the members of the Administration charged with the conduct of the *Affairs of Scotland*, and having seats in Parliament, is commensurate with the requirements of that part of the United Kingdom.—Mr. CAIRD seconded the motion. — Mr. BOUVERIE opposed the motion, on the ground that there was no dissatisfaction either in Scotland or in the House of Commons at the present arrangement, and that no change was necessary.—The Lord ADVOCATE said that the hon. baronet had not proved the existence of any grievance, and it was not true that it was the custom of the Lord Advocate to devote the time which should be given to the public to his private practice. He described the various Scottish measures which had been carried through Parliament, and which, he said, amounted to 100 within the last ten years, all of which appeared to have given satisfaction to the people.—After some remarks by Mr. SMOLLETT, Mr. CARNEGIE, Mr. MUIR, and Sir W. DUNBAR, the motion was withdrawn. *Epping Forest.*—In answer to Mr. TORRENS, Mr. PEEL explained the nature of the rights of the Crown in Epping Forest and the encroachments still going on there.—Mr. P. WATLINGTON expressed his hope that the Government would take measures to preserve portion of the land for the recreation of the public; and advised the immediate issue of a royal commission.—Mr. PEACOCKE and Mr. Cox strongly deprecated the absorption of the few vacant spaces still left for the enjoyment of the inhabitants of the metropolis. *Masters in the Navy.*—Sir L. PALK moved that the House should upon Tuesday resolve itself into a committee to consider an address to her Majesty, to give directions for putting the staff captains, commanders, and masters of the royal navy upon an equality in pay, rank, and eligibility for receiving marks of distinction with any other class of officers in that service.—The motion was opposed by Lord C. PAGET and the CHANCELLOR of the EXCHEQUER, who warned the House of the necessity of resisting the claims which were being made by all class of officers in the public service.—Mr. CORRY hoped that if a Royal Commission were not appointed to inquire into the subject the Admiralty would undertake to re-consider it. After some discussion the motion was withdrawn. The motion that the Speaker leave the chair was carried at a quarter to 2 o'clock, but progress was immediately reported. The *Banking Co-partnership Bill* was read a third time and passed.

MONDAY.—*New Zealand.*—In reply to a question from Mr. AYTOUN, Mr. CARDWELL said that it was the intention of the Government to submit a proposal for a loan on account of New Zealand in the course of the present session. *The Conference.*—Mr. OSBORNE inquired whether the Conference had arrived at any decision respecting the maintenance of the Treaty of London, and if the suspension of arms between Denmark and the conflicting Powers had been prolonged.—Lord PALMERSTON replied that he could not with propriety state what had been the proceedings of the Conference. No arrangement had yet been come to with regard to the continuance of the armistice, but he hoped at the next meeting of the Conference that some arrangement would be made.—In reply to Mr. GRIFFITH, Sir L. PALK, and Mr. H. SEYMOUR, Lord PALMERSTON also stated that the suspension of hostilities would expire on the 12th if it were not previously renewed, and no day had yet been fixed for the next Conference, the representatives of the various countries awaiting further instructions from their respective Governments.—Lord PALMERSTON brought up two messages from the Queen, one recommending a grant of 20,000*l.* to *Sir Rowland Hill*, in recognition of his distinguished services at the Post Office; and the other a pension of 1000*l.* a year to the *Countess of Elgin*, widow of the late Governor-General of India. On the order for committee of supply, Colonel SYKES moved that the recent appointment or employment, except in urgent cases, of officers of the *Indian Armies* with regiments to which they do not belong, in suspension of the regimental right of the officers, or usages of those regiments, is contrary to the spirit of the Act of Parliament.—Mr. VANSITTART seconded the motion.—Sir C. WOOD defended the measure, and said that it had been carefully considered.—After some remarks by Mr. TORRENS, Captain JERVIS, and Sir W. FARQUHAR, the subject dropped. *The Conference.*—Lord H. LENNOX, referring to the question put by Mr. OSBORNE in an earlier part of the evening, on the subject of the Conference, inquired if he was satisfied with the answer he had received, and whether he would give an assurance to the House that he would call its attention to the subject.—Mr. OSBORNE confessed he was not satisfied with the answer. He was surprised, he said, at the reticence of the House on this subject. It was placed, he thought, in a most humiliating position if it submitted, day after day, to be put off by evasive answers.—Mr. DISRAELI said he was disappointed by the answer given by Lord Palmerston; he thought it would have been wise and politic to show more candour. The House and the country were not satisfied that the condition of Parliamentary reticence any longer existed. There were rumours calculated to disturb the House, and it would be satisfactory that to be informed by Lord Palmerston that the principles of policy which he had announced to the country as those on which the Government entered into the Conference had or had not a fair prospect of success. If that policy, which was to uphold the Treaty of 1852, and to maintain the integrity and independence of Denmark, had been changed, Parliament had a right to be informed.—Lord PALMERSTON said Mr. Disraeli had made a magnificent display of virtuous indignation, and an attack upon him to which he knew he could not reply; he knew that he was at that moment tongue-tied. Mr. Disraeli professed to have a policy. He challenged him to say what it was, and what he wanted the Government to do, and let him propose a vote to give effect to his policy. In spite of taunts he should not be induced to violate his duty and throw impediments in the way of the negotiation. Further observations were made by Mr. S. FITZGERALD, Lord R. CECIL, Mr. KINGLAKE, and Sir H. VERNEY, when the subject was allowed to drop. In answer to Mr. H SEYMOUR, Sir G. GREY said that the promised *Ecclesiastical Registry Bill* would be introduced by the Lord Chancellor in the present session. No opposition had been raised to the Bill by the bishops. The House then went into committee of supply on the *Miscellaneous Estimates*. On the question that 10,000*l.* be granted towards the expense of a *New National Gallery* at Burlington House, Mr. COWPER explained that it was proposed to expend 152,000*l.* in the construction of a gallery within the gardens of Burlington House, to consist of three spacious galleries, three hundred feet long by forty wide, all on one floor, to be intersected by three other galleries of similar dimensions, lighted from the top. Those apartments would give sufficient space for all the pictures now in the possession of the nation, and for any bequests that were likely to be made for the next 10 years.—Lord J. MANNERS opposed the vote. The advantages of Trafalgar Square as the site of a national gallery had been acknowledged by the highest authorities, and it was the best in every point of view. There was room enough there for the pictures at present, and would be for some years to come and additional space might be obtained when necessary. Not a word had been said by Mr. Cowper in regard to any stipulation with the Royal Academy, and he could not help thinking that the building in Trafalgar Square was to be handed over to the Academy without any engagement whatever. He urged the Committee to come to a clear and decisive resolution upon the question.—Mr. GREGORY supported most cordially the proposal of the Government.—Mr. A. SMITH opposed it.—Mr. COWPER said it was proposed, if the site of Burlington House was adopted for the National Gallery, to hand over the building in Trafalgar Square to the Royal Academy, but no arrangement had yet been made as to the terms.—Mr. S. BOOTH, Mr AYRTON, Mr. FERRAND, and Mr. H. SEYMOUR spoke against the vote; Lord ELCHO and Mr. WALTER in its favour.—Lord PALMERSTON explained the grounds upon which he had altered his views as to the site of a National Gallery, and argued that, considering the large expense which would attend the necessary alteration in Trafalgar Square, on the ground of economy there could be no question that the Government proposal was the preferable one.—Mr. OSBORNE reminded the House that in 1860 it had voted 17,000*l.* on the express ground that the building in Trafalgar Square was to be a permanent gallery for the reception of the national pictures. On a division, the vote was negatived by 174 to 122,—a majority of 52 against the Government.—Various votes having been agreed to, the CHAIRMAN was ordered to report progress. The *Government Annuities Bill* was recommitted, and received certain amendments. The *Public and Refreshment Houses (Metropolis) Bill* was committed *pro formâ*. Other Bills were forwarded a stage.

TUESDAY.—*Navigation Laws.*—Mr. LINDSAY moved for copies of any correspondence between the Government and the Governments of France, Spain, and Portugal, from 1850 to 1860 inclusive, relating to the abrogation of the discriminating duties still levied upon British vessels and their cargoes trading with those countries. He showed the success which had attended our free trade policy, from which our shipowners must have been large gainers, and said that all nations except France, Spain, Portugal, Holland, and the United States, had reciprocated our policy, while those he had named had adhered to that of restriction and discriminating duties. He pointed out the loss which France, in particular, suffered by persisting in the maintenance of her navigation laws, which inflicted injury upon her population as well as her shipowners. He thought, if these facts were brought by the Board of Trade or the Foreign Office prominently before those nations, they would abandon or relax their restrictive policy. Mr. M. GIBSON had no objection to the motion. He entirely agreed, he said, in the general sentiment expressed by Mr. Lindsay, who, however, had not made due allowance for the difficulties encountered by the Government of France from the interests connected with a protective policy, and the prejudices which it would require time to remove. Her Majesty's Government had lost no opportunity in pressing upon foreign Governments the advantage of relaxing their navigation laws, and in inviting them to reciprocate our policy.—After a few words from Mr. W. FORSTER, the motion was agreed to. Mr. CAIRD moved a resolution, that the collection and publication of the *Agricultural Statistics of Great Britain* would be advantageous to the public interest. He said that the interest of the public was concerned in our knowing, as speedily as possible, what supply of corn we should receive from foreign countries, and he urged the advantage which returns of agricultural results would be to our farmers and our shipping and commercial interests. He proposed that the returns might be obtained by the persons engaged in the ordnance survey at a cost not exceeding 3000*l.* per annum.—Colonel BARTTELOT believed that the returns could not be accurate, or nearly so, they would be inaccurate, and if not accurate, or nearly so, they would be worse than useless. The feeling among the farmers was decidedly adverse to the collection of agricultural statistics, which they believed would do them no good, and he hoped the House would not agree to the resolution.—Mr. PACKE likewise opposed the motion, which was supported by Mr. PAGET.—Lord HOTHAM retained the opinion he had before expressed, that, without more forcible means than the House would sanction, it would not be possible to procure returns with sufficient correctness, and unless correct the

would produce an effect different from that desired, and do more harm than good.—Mr. DENT, Mr. HUBBARD, Mr THOMPSON, and Lord NAAS spoke in favour of the motion.—Mr. M. GIBSON said that there was no difference of opinion upon this point—that, if accurate agricultural statistics could be obtained, the returns would be of advantage, not only to the agricultural, but to the mercantile interest. It was, therefore, unnecessary to express any general opinion in the form of a resolution; the whole difficulty was how to do it. He pointed out the obstacles to the collection of accurate returns, and examined the plans suggested for making the collections; he agreed that correct returns were most desirable, but, unless the House was prepared to sanction some particular plan, there was not the slightest necessity for passing the resolution. He moved the previous question.—Sir G. GREY suggested that, as the whole question turned upon the means of effecting the object in view, the better course would be to bring in a Bill. On a division, Mr. Caird's motion was carried by 74 to 62. In a committee of the whole House leave was given to Mr. E. P. BOUVERIE to bring in a Bill to repeal certain clauses of the *Act of Uniformity* relating to fellowships.—Sir C. O'LOGHLEN obtained leave to bring in a Bill to compel *Railway Companies in Ireland* to run at least one train each way over their lines on Sundays.—Mr M'MAHON obtained leave to bring in a Bill to assimilate the law of Ireland to that of England as to the *Qualification of Burgesses* in municipal corporations; Mr. PAULL obtained leave to bring in a Bill to consolidate and amend the acts regulating procedure before *Justices of the Peace* out of quarter sessions in England; and Mr. VILLIERS obtained leave to bring in a Bill to provide superannuation allowances to *Officers of Unions*. The House was counted out at a quarter to 5 o'clock on the motion for going into committee on the *Valuation of Rateable Property (Ireland) Bill*.

WEDNESDAY.—Mr LAWSON moved the second reading of the *Intoxicating Liquors Bill*. He referred to the vast number of petitions, signed by upwards of 300,000 persons, in favour of the Bill, and replied to the objections urged against it, especially the suggestion that it was impossible to make people sober by Act of Parliament, which, he said, had not been suffered to obstruct other attempts at social and moral reforms. He described the grievance of which the advocates of the measure complained and said that it was acknowledged by persons of all classes.—Captain JERVIS moved that the Bill be read a second time that day three months. He said that the Bill would put an arbitrary power into the hands of two-thirds of the ratepayers of a parish. He was acquainted with the habits of the working classes, and he believed that drunkenness had diminished throughout the country, and not by penal enactment, but by education.—Mr. BRIGHT said every one must agree that the evil in question was a very grievous one, and that if any measure could be taken that would not violate the recognised principles upon which the House acted, some further help would be afforded to the efforts of those who were making great exertions in the cause of sobriety. The question then was as to the remedy. There were two modes; one, the improvement and instruction of the people; the other, special legislation. He looked to the first for a permanent remedy; but something might be done by special legislation. He disapproved, however, the machinery proposed by this Bill, which might excite a resistance to its honest and good object.—Mr. ROEBUCK opposed the Bill as a mischievous and unjust measure, and said that the House, by passing it, would abdicate its functions. It was mainly directed against the poor, and was, therefore, a cruel Bill.—Mr. W. MARTIN, Mr. HENLEY, Mr. W. E. FORSTER, and Mr. SCOURFIELD likewise opposed the Bill.—Sir G. GREY was decidedly of opinion that the remedy proposed by the Bill would be an intolerable tyranny over minorities and those who had no voice in the matter. Sympathising with the object of Mr. Lawson, he hoped that after the opinions which had been expressed in the House, he would not persevere in the measure. After some further discussion, the second reading of the Bill was negatived, on a division, by 292 to 35.—Mr. DUNLOP, in moving the second reading of the *Valuation of Lands and Heritages (Scotland) Act Amendment Bill*, explained its object, which was, he said, to remedy a great and grievous injustice. After some observations by Lord G. CAVENDISH, Mr. MACKIE objected that there was no necessity for the change in the system of assessment proposed by the Bill, and moved to defer the second reading for three months.—The discussion, in which Colonel PENNANT, Sir E. COLEBROOKE, Lord ELCHO, Mr. C. BRUCE, Sir J. FERGUSSON, the LORD ADVOCATE, and Mr. CARNEGIE took part, continued till the hour fixed for the close of the debate expired. The *Railway Companies Powers Bill* was read a third time and passed. The *Chief Rents (Ireland) Bill* was also read a third time and passed. The *Sale of Gas (Scotland) Bill* was read a second time.

THURSDAY.—The *Egham Railway Accident*.—In reply to Sir R. J. CLIFTON, Sir G. GREY stated that an officer from the Board of Trade had been directed to attend the inquest on the bodies of the persons killed by the late accident on the South-Western Railway at Egham.—Lord C. PAGET brought up the supplemental estimate for the purchase of the *Steam Rams in the Mersey*.—Mr. DARBY GRIFFITH inquired what had been done at the *Conference* that day.—Lord PALMERSTON said he was happy to be able to report that a prolongation of the armistice for a fortnight from the 12th inst. had been agreed to. *Pension to Lady Elgin*.—The House having gone into committee, Lord PALMERSTON moved, in accordance with the message of the Queen, that the House should confer a pension of 1000*l*. a year upon the widow of the late Earl of Elgin, in acknowledgment of his public services. He said that the Indian Department had resolved upon settling a similar annuity upon the countess. Having enumerated in eulogistic terms the services of the late earl in Canada, in China, Japan and India, his lordship expressed his confident hope that the House would honour the memory of the deceased nobleman, and acknowledge his services by cordially concurring in the vote.—Lord STANLEY, in seconding the motion, said the proposal met the entire concurrence of his side of the House, which also thoroughly agreed in the estimate which the noble lord had expressed of the public character and services of Lord Elgin. Those services had been rendered, not to a party, but to the State, and, consequently, it was the duty of all parties to unite in their recognition. The motion was then agreed to unanimously. On the order for going into committee on the *Collection of Taxes Bill*, Sir H. WILLOUGHBY stated his objections to the measure, and moved that it was not expedient that the land, assessed, and income taxes should be collected by officers of the Inland Revenue. The motion was seconded by Mr. PACKE and supported by Mr. HUNT, who protested against throwing upon the Commissioners of Taxes the odious task of deciding whether the Bill should be put in operation in their several districts or not.—After some further discussion, the CHANCELLOR of the EXCHEQUER said that if the Bill were not agreeable to the views of the community and its representatives, it was right that it should not pass, but the system it proposed was in operation in Scotland where it worked economically and to the general satisfaction. Constant complaints were now made of the existing system, the incivility, officiousness, defalcations, and irregularities of collectors, but over these officers the executive Government had no control whatever, inasmuch as they were appointed by independent parties, to whom alone recourse for a remedy could be had. He explained that the reason for omitting the metropolis from the provisions of the Bill was that there were no stamp distributors employed there; consequently, as it was meant to combine the duties of collector of taxes with those of stamp distributors, the appointment of a new and expensive staff of officers for this special purpose would become necessary. With regard to the objection founded on the permissive character of the Bill, he considered that the permissive principle was absolutely essential, and that no other was likely to receive the assent of the House.—Mr. HENLEY felt persuaded that the measure would not work any good, and was consequently prepared to vote for the amendment.—Lord J. MANNERS also supported the amendment. On a division, the amendment was negatived by 137 to 103. The House then went into committee upon the Bill, and the several clauses were agreed to. The adjourned debate on the second reading of the *Writs Registration (Scotland) Bill* was then resumed.—Sir J. FERGUSSON contended that a case had not been made out for the introduction of the Bill at that period of the Session, and moved that it be read a second time that day three months. The amendment was seconded by Mr. BAXTER, who denounced the Bill as a centralising measure for the benefit of lawyers.—Colonel SYKES, Mr. AYTOUN, Mr. DUNLOP, Mr. CARNEGIE, Sir F. COLEBROOKE, Mr. CRAUFURD, Mr. KINNAIRD, and Mr. BOUVERIE likewise opposed the Bill.—Mr. MURE and Mr. BLACK supported it.—The LORD-ADVOCATE said that the Bill was a most important reform for the landed interest of Scotland, and he expected it would have received a more vigorous support. Under the circumstances, however, he thought he was bound to give more time for the consideration of the measure. The amendment having been withdrawn, the order for the second reading of the Bill was discharged, and the Bill withdrawn.—On the order for the second reading of the *Church Building and New Parishes Acts Amendment Bill*, the ATTORNEY GENERAL said that the object of the Bill was to consolidate and simplify the law, and would not affect any controversial subject, more especially church-rates. As, however, the measure had been misinterpreted, and, if pressed, was likely to give rise to a good deal of opposition, he deemed it more desirable to move that the order for the second reading be discharged.—Mr. WARD HUNT expressed his regret that the Attorney-General should have yielded to the pressure of a small section of Government supporters who were opposed to the Bill. It was a weak, unworthy, and dishonourable concession to the clamour of a minority who entertained extreme views on ecclesiastical questions. The *Greek Loan*.—On the motion of the CHANCELLOR of the EXCHEQUER, a resolution was agreed to authorising the Queen to relinquish in favour of the King of the Hellenes, during his reign, the sum of 4000*l*. a year, and to that extent to release the Greek Treasury from the arrangements concluded at Athens in 1860 in reference to the Greek Loan. Leave was then given to bring in the Bill. The *Railway Construction Facilities Bill* was recommitted, but little progress was made when the House resumed. On the order for the second reading of the *Street Music Bill*, moved by Mr. BASS, Mr. HANKEY moved as an amendment that the Bill be read a second time that day three months. He contended that the invasion of German bands is rather an attraction than a nuisance.—Mr. HUNT, Sir R. PEEL, and Sir G. GREY spoke in favour of the necessity of some legislation to abate the nuisance of mendicant musicians.—The CHANCELLOR of the EXCHEQUER, Mr C. BENTINCK, and Mr. BUTT, on the other hand, defended the nuisance. Ultimately the House divided on a motion for adjourning the debate, which was negatived by 56 to 19. The Bill was then read a second time.

FRIDAY.—The *Belfast Improvement Bill* was read a third time and passed. The *Dublin Improvement Bill*, after two divisions, was considered and ordered to be read a third time. *The Conference*.—In answer to Mr. DISRAELI, Lord PALMERSTON said that the period to which the suspension of hostilities applied had not been agreed to upon any condition, and was the limit of the extension which the Danish Government were willing to agree to. *Private Bills*.—On the order for going into Committee of Supply, Lord R. CECIL moved that the duty of ascertaining the facts upon which legislation in respect to Private Bills was to proceed should be discharged by some tribunal external to the House. There was the strongest necessity for such an alteration. [Left speaking.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90⅜ to ¼ for Money, and 90⅜ for Acct.; Reduced and New Three per Cents., 89½ to ⅝; Bank Stock, 237 to 239; India Stock, 216; Ditto Five per Cent. Stock, 104⅛ to ¼; Ditto Bonds, 10*s*. dis.; Exchequer Bills, June, 5*s*. dis.—FOREIGN: Dutch Certificates, 99½; Egyptian, 101¾; Greek, 24½; Ditto Coupons, 10⅞; Italian, 69⅜; Mexican, 44⅞ to 45; Portuguese, 1856, &c., 49 to 48⅜; Russian, 1862, 88; Spanish, 53¼; Ditto Passive, 32⅜ to ⅝; Ditto Certificates, 10⅜; Turkish, 1858, 70; Ditto 1862, 71¾ to ⅛; Ditto 100*l*. Bonds, 71⅛ to ¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,034,720	Government Debt .. .	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	13,384,720
		Silver Bullion	—
	£28,034,720		£28,034,720

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£11,072,267
Rest	3,273,750	Other Securities	19,542,473
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	8,748,510	Notes	7,762,610
Other Deposits	11,966,204	Gold and Silver Coin ..	858,399
Seven days and other bills	494,285		
	£39,035,749		£39,035,749

June 9, 1864. M. MARSHALL, Chief Cashier.

Gazette of the Week.

FRIDAY: *June 3*.—BANKRUPTS.—A. BROWN, Great Tower Street, General Merchant.—W. BOOTH, Barstal, Yorkshire, Blacksmith.—T. BOCKETT, Gibbsrange, Shropshire, late Innkeeper.—J. CROSS, Wymondham, Norfolk, Butcher.—G. T. [illegible], Harwardshed, Gloucestershire, Brick Maker.—S. CARTER, Leamington, Horticulturist, Corn Merchant.—J. CORROT, Salisbury, Builder.—M. CROSS and R. CROSS, Batley, Yorkshire, Rag Dealers.—E. [illegible], jun., Westbromwich, Staffordshire, Ale and Porter Dealer.—L. [illegible], Bowers Lees, Staffordshire, Grocer.—C. DAVADE, late of Sheffield, Yorkshire, Boot and Shoe Dealer.—N. DUTTON, Gerrard Street, Soho, Assistant to a Painter.—M. A. DAVIES, Frederick's Place, Westminster Road.—C. B. [illegible], Kingsgate Street, Holborn, House Decorator.—J. [illegible], Lower Broughton, Lancashire, Clerk.—C. FOSBROKE, sen., [illegible], Suffolk, Coach Builder.—W. [illegible], Woodhouse Eaves, Leicestershire, Shoemaker.—J. J. [illegible], Sutterton, Middlesex, Schoolmistress.—J. [illegible], Dudley, Worcestershire, Coal Miner.—J. HARRIS, Old Lane, Cheapside, Envelope Manufacturer.—W. HARRIS, jun., Bristol, Boot and Shoe Manufacturer.—S. [illegible], Broad's Cottages, Kensal New Town, Boot and Shoemaker.—J. HOBBINS, Oddington, Gloucestershire, Innkeeper.—J. A. HOPKINS, Myrtle Cottages, South Hackney, Colonial Brokers Clerk.—J. HULL, Twickenham Common, Grocer.—W. HARRIS, Southampton, Butcher.—B. S. HEAP, Leeds, Yorkshire, Waste Dealer.—J. HANSON, Metheringham, Lincolnshire, Dealer in Boots.—C. HEATON, Sheffield, Beerhouse Keeper.—I. ISAACS, Albany Road, Camberwell, Barman.—W. R. JENKINS, King's Cottage, Hornsey Road, Plumber.—R. W. JONES, Llec, Flintshire, Grocer.—I. JOHNSON, late of Haxby, Yorkshire, Corn Dealer.—M. JACOBS, Birmingham, Pawnbroker.—J. B. JACKSON, Leicester, Druggist.—C. KENDALL, High Street, Bromley-by-Bow, Commercial Traveller.—M. KALISHER, City Road, Clothier.—G. KERN, Eaden Place, Old Kent Road, Journeyman Baker.—W. LISTER, Oxford, Agent to a Brewer.—H. W. LOVE, Tonbridge Wells, Kent, Photographer.—F. MUNCH, Norbiton, Surrey, Grocer and General Dealer.—W. C. MOORE, Halifax, Yorkshire, Innkeeper.—S. MANN, Brunswick Street, Trinity Street, Southwark, Commission Agent.—W. MAYCOCK, Birmingham, Shoe Manufacturer.—G. NORTH, Collier Street, Pentonville, late Greengrocer.—J. NUTT, late of Cowley, Oxfordshire, Painter.—D. NESBITT, Basingstoke, Boot and Shoemaker.—T. S. OSBORNE, Linton Street, New North Road, Islington, Wholesale Milliner.—T. PROCTER, St Helen's, Lancashire, Currier.—F. PARR, Bethnal Green Road, Beer Retailer.—R. E. PRICE, Summer Hill, Flintshire, Farmer.—WILLIAM ROBERTS, Bedford, Bricklayer.—HENRY RICHARDS, Birmingham, Manager to a Retail Brewer.—HERBERT RUSHTON, Uttoxeter, Staffordshire, Horse Breaker.—JAMES ROBINSON, Stanwix, Cumberland, Cattle Dealer.—JAMES SEDGWICK, Chesterfield, Derbyshire, Tinman.—D. SHAW, Oxton, Cheshire.—G. F. B. ST JOHN, Bath, late Major in the 52d Regiment of Foot.—W. STANNARD, Ipswich, Baker.—J. TAYLOR, sen., Bolingbroke, Lincolnshire, Bricklayer.—S. TUBB, Uxbridge Gardens, Bayswater Road, Spinster.—W. THOMPSON, Coventry, Watchmaker.—A. TINMAN, Aston, Warwickshire, Railway Parcels Clerk.—F. TODD, Sheffield, Licensed Victualler.—J. VERNON, Nuneaton, Warwickshire, Cordwainer.—R. WHEELER, Stow-on-the-Wold, Gloucestershire, Beerhouse Keeper.—J. H. WRIGHT, Eastbourne Terrace, Hyde Park, Accountant.—G. E. WARNER, North Street, Cambridge Heath, Crinoline Manufacturer.—J. J. WACOSNE, Darley Road, Hackney, Commercial Clerk.—T. WILKINSON, Jump, Yorkshire, Wheelwright.—J. G. WISDEN, Earl's Colne, Essex, Tailor.

SCOTCH SEQUESTRATIONS.—R. M'CRACKEN, Glasgow, Messenger-at-Arms.—J. NICHOLL, Glasgow, Spirit Merchant.

TUESDAY: *June 7*.—BANKRUPTS.—E. AMES, Norwich, Hatter.—F. J. AUBERTIN, Canton, Glamorganshire, Wine Merchant.—C. AYLAND, Maisemore, Gloucestershire, Fisherman.—W. H. BULMER, Manchester, Shirt and Crinoline Manufacturer.—T. BOOTH, Halifax, Yorkshire, Builder.—W. BENNETT, Chadderton, Lancashire, Beer House Keeper.—T. CASS, Lund, Yorkshire, Builder.—J. CLAYTON, Windmill Street, Lambeth, Dealer in Iron.—A. H. CHISNALL, Ewerholme, Railway Clerk.—M. A. CLUTTERBUCK, Westcott Widow.—J. CROSWELL, Uckfield, Sussex, late Lodging House Keeper.—DANIEL [illegible], Rainhill, Cheshire, Nailmaker.—EDWARD RICHARD DEANE, Carey Street, Lincoln's Inn, General Publisher.—JOHN DARTNELL, Nottingham, Grocer.—[illegible], Birmingham, Bootmaker.—C. ESTALL, King's Cliffe, Northamptonshire, Veterinary Surgeon.—S. EVANS, Troedyrhiew, Glamorganshire, Grocer.—J. GOODWIN, Seward Street, Goswell Street, late Hearth Rug Manufacturer.—J. M. GETHING, Oldswinford, Staffordshire, Architect.—T. J. GIFFORD, Globe Road, General Dealer.—W. GRINDY, Derby, Cattle Dealer.—J. GUYER, British Street, Bow Road, Master Mariner.—T. GITTINS, Overton, Flintshire, Tailor.—T. GIBBINS, Rugby, Warwickshire, Bootmaker.—JAMES HOLLINGS, BENJAMIN HOLLINGS, and ALFRED HOLLINGS, Leeds, Cloth Manufacturers.—EDWIN HIPSON, Boughton Monchelsea, Kent, Grocer.—ISAAC HODGSON, Gallowbarrow, Lancashire, Blacksmith.—JAMES JACKSON, Holderness, Yorkshire, Miller.—J. JONES, Llangollen, Denbighshire, Skinner.—G. KING, Rickmansworth, Hertfordshire, Butcher.—W. KENDALL, Windhill, Yorkshire, Furniture Broker.—S. LEATHER & J. A. KAYE, Huddersfield, Yorkshire, Manufacturers.—J. LIVETT & W. C. STIVENS, Cheapside, City, Auctioneers.—J. LOWE, Branston, Leicestershire, Gamekeeper.—T. MORRIS & J. JONES, Birkenhead, Cheshire, Builders.—J. C. MALLETT, Dover, Trinity Cinque Ports Pilot.—A. MICHELL, High Street, Bow, Corn and Coal Agent.—W. NAIL, jun., Burbage, Derbyshire, Innkeeper.—JOSEPH PAINE, Stoulton, Worcestershire, Blacksmith.—R. REES, Penteynon, Pembrokeshire, Husbandman.—H. O. ROW, Plymouth, Shipchandler.—N. G. SPENCER, Dale, Pembrokeshire, Lieutenant R.N.—S. SMELT, Beverley, Yorkshire, Beerhouse Keeper.—R. SIMMONDS, Newport, Isle of Wight, Greengrocer.—J. STEEL, Torver, Lancashire, Shoemaker.—W. SETTLE, Batley Carr, Yorkshire, Mason.—D. WRAITH, Yeadon, Yorkshire, Cloth Manufacturer.—A. WILSON, Liverpool, Schoolmaster.—J. WEST, Wollaston, Northamptonshire, Carpenter.—J. WOODYATT, Upper Arley, Staffordshire, Miller.

SCOTCH SEQUESTRATIONS.—STEVENSON & PEARSON, Stewarton, Bonnet Manufacturers.—J. PEARSON, Glasgow, Commission Merchant.

Metropolis and its Vicinity.

MR. GLADSTONE ON REFORM.—The Chancellor of the Exchequer has published as a pamphlet his recent speech on the Bill for the Extension of the Suffrage, with the following preface:—

"In this speech will be found the expression of an opinion that the Legislature should exclude from the franchise on two grounds only. First, it should exclude those who are presumably in themselves unfitted to exercise it with intelligence and integrity. Secondly, it should exclude those with respect to whom it might appear that, though no personal unfitness can be alleged against them, yet political danger might arise from their admission; as, for example, through the disturbance of the equilibrium of the constituent body, or through virtual monopoly of power in a single class. General statements of principle, advanced in debate, if they are such as, in the view of candid minds, to require explanation, ought to find it in the context of the speech which contains them. Objection has been taken, and even alarm expressed, with respect to the breadth of the particular statement now in question. I cannot make any other reply than to publish it, as it was delivered, together with its context, and to leave it, subject only to equitable allowance for faults of hasty expression, to the discerning consideration of the reader. Another objection I could more readily have conceived—namely this, that a proposition, apparently of wide scope, is reduced by large and scarcely definable exceptions within rather narrow limits. Still, the exceptions appeared along with the proposition, and formed part of it. If, indeed, I am asked whether it was a deliberate and studied announcement, I reply that it was not; it was drawn forth on the moment by a course of argument from the opponents of the measure, which appeared to assume that the present limitations of the franchise, disavowed as they have been by such an accumulation of authority, required no defence from their newly-risen advocates, and were to be accepted without inquiry, as in themselves, at least presumptively, good and normal. But I am aware that this circumstance, if the opinion be blameable, will afford no apology. Further, I spoke with reference to the present, or rather, indeed, with a view to retrieving arrears of the past, and neither time, nor, as I think, reason, permitted me to attempt the solution of problems of real intricacy which belong wholly to the future, and which are little likely to become practical except for another generation. If I regret the manner in which my declaration has been interpreted, it is chiefly because of its tendency to produce in other quarters an exaggerated estimate, likely, when brought down to the dimensions of fact, to cause disappointment. The question is whether the statement be a gratuitous and startling novelty, or whether it is rather the practical revival of a strain which, five years ago, was usual and familiar; which had then derived abundant countenance from the very highest organs of political articulation, and which now only sounds strange because within that period it has fallen into desuetude. As the opinion of an individual, the whole matter is of trifling consequence. But the consistency of parties and of Parliaments is a subject of weight and moment, for upon this depends that store of public confidence which is of such inexorable necessity and of such inestimable value for the maintenance of our free and happy Government."

BLACKFRIARS BRIDGE.—On Tuesday evening the approaches to old Blackfriars Bridge were intercepted on both sides of the river by barricades, and the pavement for a short distance was taken up, with a view to prevent the passage of traffic over the bridge, preparatory to its destruction, which commenced on Wednesday morning.

SOUTHWARK BRIDGE.—The Chairman of the Southwark Bridge Company has addressed a letter to the Lord Mayor, stating that the directors are prepared to propose to the corporation and to conclude a negotiation for opening the bridge to the public for a limited period on terms to be agreed upon, or to effect a sale

for the sum of 200,000*l*. The proposal has since been submitted to the consideration of the Court of Common Council, who have referred it to the Bridge House Estates committee for consideration and report.

SITE OF THE FLEET PRISON.—The Court of Common Council have entered into an agreement with the London, Chatham, and Dover Railway Company to sell them the site of the late Fleet Prison for 60,000*l*.; and upon that large piece of ground, which has lain waste for the last 20 years or more, and been wholly unproductive to the corporation, the company intend forthwith to erect the London terminus of their line with convenient approaches.

MURDER AT THE NEW CATTLE MARKET.—On Thursday morning Frederick Charles Bricknell, aged 23, under waiter at the Lion Tavern, Islington, murdered his fellow servant, Jane Jeary, by stabbing her in the breast with a knife. It appears that he had been paying his addresses to her, and that his jealousy had been excited by finding that she had been visited by her cousin, and that an attachment existed between them. A quarrel took place between them on the subject, when the man, having a large carving-knife in his hand, plunged it into the body of the girl, stabbing her through the lungs to the heart, causing immediate death. The murderer was taken before the magistrate at Clerkenwell Police Court, and at once confessed his guilt. After some evidence had been taken he was remanded. At the inquest, which was held yesterday, the jury returned a verdict of Wilful Murder against the prisoner, who was committed to Newgate to take his trial.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Report states that the deaths in London in the week that ended Saturday, June 4, were 1213. The average number for the corresponding week of the 10 years, 1855-63, corrected for increase of population, was 1169. The present return is therefore 44 above the average. During the week the births of 919 boys and 974 girls, in all 1893 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1·30.

Provincial.

BANGOR.—The Archbishop of Canterbury has decided the appeal under the Church Services in Wales Bill, by confirming the Bishop of Bangor's nomination of a minister to perform English services at Caerdeon Chapel. The practical effect of this decision will be that the Rev. W. E. Jelf's private services will henceforth be open to the public, so that the English in the neighbourhood will have the enjoyment of the service, of which they have been deprived for 16 months.

CAMBRIDGE.—On Friday their Royal Highnesses began the day by attending Divine service at King's College Chapel, and afterwards went to the Senate House, where the honorary degree of LL.D. was conferred on the Duke of Manchester, Earl Stanhope, the Earl of Carnarvon, Viscount Palmerston, Viscount Eversley, Lord Leigh, Sir Bulwer Lytton, Vice-Chancellor Wood, Sir Charles Eastlake, the Dean of Westminster, Mr. Beresford Hope, Dr. Watson, Dr. Hoffman, and Professor Wheatstone, all of whom on being presented for the degree were loudly cheered, except Dean Stanley, who was received with a storm of mingled hisses and cheering, which lasted some time. The Prince and Princess afterwards witnessed the procession of boats on the river, and attended a horticultural fête in St. John's College, at which the prizes were distributed to the successful students of the School of Art. In the evening their Royal Highnesses dined with Dr. Whewell at Trinity Lodge, and afterwards went to a ball given by the members of Trinity. On Saturday they visited Madingley Hall, where the Prince reviewed the Duke of Manchester's cavalry. They returned to Cambridge about 3 in the afternoon, and taking luncheon with the Master and Fellows of Magdalene College, returned to London by the Great Eastern and Great Northern to King's Cross.

ETON.—At a special meeting of the Provost, Vice-Provost, and Fellows of Eton College, on Monday last, the Rev. Francis Edward Durnford was unanimously elected Lower Master, in the room of the Rev. W. A. Carter, recently elected Fellow of the College. The Rev. Mr. Durnford's appointment has given universal satisfaction to the school, and the announcement of his election was loudly cheered by the students.

LEICESTER.—About 180 lads are now confined in St. Bernard's Reformatory, Whitwick, and their conduct for a long time past has been such as to cause great uneasiness to those entrusted with their management. On the 22d ult. four criminals made their escape by cutting up the sheets belonging to their beds and letting themselves down from the dormitory windows. They afterwards broke open the tailor's shop, and having each selected a suit of clothes and dressed, they made off, but were ultimately apprehended at Derby, brought back to Ashby-de-la-Zouch, and committed to take their trial at the Assizes. On the 24th, a general meeting took place; the inmates, to the number of 180, refusing to obey the officers of the establishment. In the afternoon about 50 of them went off towards Bardon, a neighbouring village, armed with knives, sticks, and stones. Some bricklayers and labourers who were at work—knowing something of the occurrence, attempted to capture the lads. The latter, however, drew their knives, and showered stones upon them. One of the men, essaying to arrest some of the boys, was severely injured. Out of the band seven were captured, and taken back at once to the reformatory. In the evening some of the party who had returned went out from the institution on a pleasure trip: a number of them took it into their heads to return and to taunt and defy the officers, became dominant, and even ordered and were supplied with what they required. They then went to bed. During the afternoon of the 25th, a farmer, who had rendered some assistance the previous day, was seen by the lads to pass a field where they were at work. Eighty of the lads determined to punish him for his trouble, left their employment, and pursued the man to Forest Rock Inn, and insisted upon the landlord turning him out of doors. Their demand was refused by the host. The whole band without at once opened an assault upon the house and smashed the windows, the damage in glass being 1*l*. 5*s*. The son of the landlord managed to escape and run to Whitwick, and secured the services of some police constables. Two of the boys were found in a wood, and four others straggling in different directions. They were conveyed to Ashby, and on the 26th were tried and committed by the magistrates to Leicester house of correction, for 14 days with hard labour. On the 27th there was a general revolt. The inmates refused again to obey any orders, and the assistance of the police was again brought into requisition. After a struggle 30 of the offenders were got out by 11 o'clock and locked up. It became evident that more policemen would be needed, as there were signs of a general and formidable uprising. A messenger was despatched to the head-quarters at Leicester for seven constables, and Inspector Ward hurried off during the night to obtain additional men from his own division. There was an available anti-riot force of police of 19 officers and constables at the reformatory by daylight next morning. Ten of the worst boys were taken to Ashby; 22 of the offenders were also brought out of the cells, tied up to the triangles, and severely flogged in the presence of their mates, who were drawn up in the form of an open square to witness the proceedings, the police being of course in attendance. On the 28th other offenders were taken to Ashby, and they were severally sentenced to terms of imprisonment from 14 days to two months. On the same day 41 more boys were "birched" by the discipline master, and ordered to be kept on bread and water for a week. It may be remembered that Lord Berners brought the condition of this reformatory under the notice of the House of Lords, and a promise was made that the matter should be investigated on behalf of the Government.

LEIGH.—At the petty sessions, held on the 23d ult., Bridget Hughes, a married woman, with an infant at her breast, was summoned for having sworn several profane oaths at Westleigh, on the 17th ult. The complainant was next-door neighbour to defendant, and the offence was alleged to be committed during a quarrel between the two women. A witness was called, but did not corroborate the complainant's statement as to the profanity. Defendant denied using the language imputed to her, but the magistrates convicted her in the penalty of one shilling and costs, or in default 10 days' imprisonment. The woman and her infant are now lodged in Kirkdale House of Correction. The chief penalty in such cases is the costs, which are comparatively heavy, often as much as twelve or sixteen shillings; in a recent case they amounted to twenty-two shillings.

OXFORD.—The Encœnia, or Commemoration of Founders and Benefactors to the University, took place on Wednesday in the Sheldonian Theatre, with the usual ceremonies and the customary demonstrations on the part of the undergraduates. Convocation having been formally opened, the Vice-Chancellor submitted in Latin the names of the distinguished personages on whom the University proposed to confer honorary degrees. Dr. Travers Twiss then, in appropriate Latin addresses, presented them in the following order:—1. The Most Rev. Dr. Beresford, Archbishop of Armagh, Primate of all Ireland, and Prelate of the Order of St. Patrick. 2. The Earl of Bandon, M.A., Oriel College. 3. Lord Overstone, M.A., Trinity College, Cambridge. 4. M. Amédeé Thierry, Member of the Imperial Senate and of the Institute. 5. Sir Rowland Hill, K.C.B. 6. Arthur Helps, Esq., M.A., Trinity College, Cambridge, Clerk of the Privy Council. 7. Arthur Cayley, Esq., M.A., F.R.S., F.R.AS., Sadlerian Professor of Mathematics in the University of Cambridge. The reception of Sir Rowland Hill was of a more enthusiastic character than usual, and loud and prolonged cheering greeted him as he took his seat on the left of the Vice-Chancellor. On the conclusion of the ceremony, Captain and Adjutant Foxcroft Jones, of the Oxford University Rifles, was presented by the Public Orator for the honorary degree of Master of Arts, and was received with enthusiastic applause. The Creweian Oration and the Prize Essays and Poems were then delivered, and the business of the day terminated with a musical *fête* in the gardens of St. John's College and a masonic ball in the Corn Exchange.

WILLENHALL.—A young policeman named Lyons, in the Staffordshire force stationed at this town, died a few days since from the effects of injuries sustained at the hands of six men. He was attacked at midnight, while upon his beat in a low part of the township, by four of the prisoners, whom he had ordered home because they were riotous. He arrested two or three of his assailants, but their comrades rescued them. After he had been beaten to the ground and kicked by his assailants, he was dragged along the road by his staff which was attached to his wrist. Whilst being jolted along with his head striking upon the stones, he slipped the thong, and was thus deprived of his only weapon. During the struggle one of the prisoners was wielding a large open clasp knife, and a civilian who attempted to take it from him had his hand cut. Towards the end of the struggle another of the prisoners dashed a broken brick upon the left side of the officer's head as he lay upon the ground. He then became insensible, and was carried bleeding into the residence of a gentleman living near. He was afterwards conveyed to the police barracks, where he lingered in great pain until his death. On account of the large number of prisoners and of the great efforts that were made to save deceased's life, the event occasioned a large amount of painful interest throughout South Staffordshire. The inquest was adjourned, to enable the medical men to make a *post mortem* examination, and after hearing the results of the examination the jury returned a verdict of Wilful Murder against five of the prisoners.

YORK.—A few days since St. Wilfred's, new Roman Catholic Church, which has been erected under the "shadow" of York Minster, was opened by Cardinal Wiseman. It has cost about 10,000*l*., and has been built on the site of a chapel which had been used for many years by the Roman Catholics. The new church will afford accommodation to about 700 persons, and as it is so near the Minster that Cardinal Wiseman some months ago spoke of the growing church as a fresh shoot from the old roots of the parent tree, the Cathedral. Cardinal Wiseman in his sermon referred to what had been done in York through the piety and liberality of our forefathers in the erection of the noble Cathedral, asking those present not to be sorrowful or dejected when they compared the one church with the other, but to consider for whom their forefathers built that church of St. Peter. In Heaven they had only one thought, on earth only one blessing. That blessing was that the truth which they did their very best to spread might progress on every side, and that they might return to Peter, who ruled over the whole of the flock which Christ had raised. After the service a *déjeûner* was served in the concert-room to about 300 persons, including the Cardinal, bishops, priests, and laity. Lord Herries presided. The chairman, in proposing "The Health of the Pope," alluded to what he termed the recent visit of a revolutionist, stating that it would have been better if the members of the Government and others who had taken a part in his triumph had shown more respect to the feelings of five or six millions of Catholics. The chairman then proposed "The Health of the Queen," which was drunk with all the honours. The healths of Cardinal Wiseman, the chairman, and others were also drunk.

Railways.

FATAL ACCIDENT TO AN ASCOT TRAIN.—On Tuesday evening a fearful accident occurred on the South Western Railway. One of the long trains returning from Ascot races, heavily laden with holyday-makers and such as are only seen at race times—ran into another train at the Egham station, destroying two carriages, killing five passengers almost on the spot and more or less seriously injuring between 20 and 25 others. The accident occurred at about a quarter to 8 o'clock to the train which had left the races a little after 7, and which was followed soon afterwards by another train equally long and heavy. The first train arrived at Egham shortly before 8 o'clock. Tickets were collected there, and while this was going on a complaint was made to the station master of some card-sharpers being in a carriage. An altercation arose about their removal, which delayed the train two or three minutes more. During this interval the next train from Ascot came up, just as the first was moving off. The inevitable collision was so clearly seen that those in the station called to the passengers in the last carriages to jump from them. The guard was in the break-van, the last of all, and an experienced eye needed no warning as he looked out and saw the next train coming on. He jumped out at once, though not a moment too soon, as the crushed fragments of his van caught his coat skirts and tore them off. The collision was very violent, owing to the immense weight of the second train. It crushed the guard's-van to splinters, crushed a second-class carriage next to it, and partly crushed another beyond. The usual scene of confusion and dismay succeeded. Assistance was at once telegraphed for from London and Ascot, and the work of succouring those injured instantly began. There was a horrible scene beneath the ruins of the broken-up second-class carriage. From out of the wreck the bodies of four passengers were removed. A fifth died as he was carried to the bank, and a sixth was so injured as to leave little hope of recovery. About 20 other passengers sustained concussions, dislocations, or broken bones. But even the most serious of these it is hoped will not be likely to prove fatal, as, with the exception of the one mentioned as believed to be mortally injured, all were in the course of the night enabled to come up to town and either proceed to their own homes or were taken to the hospitals. Among

26 passengers thus came to Waterloo, all more or less alarmed and shaken, many weak and faint, and with their clothes covered with blood. At 12 at night the person who sustained the most serious injuries was brought up on a stretcher-bed in a guard's van, attended by a surgeon, and was removed to Charing Cross Hospital. His name is Mr. E. Trigg, publican, of Market Street, Brighton, who had his leg and ribs broken, and sustained some severe internal injuries. **The line was cleared in the course of about an hour, and passengers went on as usual; but up to Wednesday** morning the inquiries were anxious and incessant at **Waterloo from those who had friends and relatives** missing to know the names of those killed and wounded. All the bodies have been identified. Their names are Mr. Clegg, landlord of the Harp, Jermyn Street; Mr. John Coppard, the confidential agent of Mr. Padwick, the well-known racing man; Mr. William Winfield, gardener to Mr. Bracebridge, Sherbourne, Warwickshire; Mr. Edwin Hall, corn-chandler, Duke Street, Manchester Square; and Mr. Robert Wilkie, publican, Globe Inn, King's Road, Chelsea. The bodies were all removed to the Railway Inn, close to the station at Egham. They were not much mutilated, death apparently having arisen from concussion. Another person **was conveyed to the Railway Inn in a very dreadful state, having had both his legs so much shattered that amputation of both feet was performed by Mr. Fergusson on Wednesday. He is a young man called Louis Ray, an apprentice to M. Francatelli, the chef de cuisine in the establishment of the Prince of Wales.** The inquest was opened on Thursday, and after some formal evidence was adjourned to Tuesday next.

OPENING OF THE BLACKFRIARS RAILWAY STATION.—**The new terminus of the London, Dover, and** Chatham Railway on the south side of Blackfriars Bridge was opened last week for traffic. Very little **progress has yet been made with the waiting rooms,** and the workmen are still employed on the roof and other parts, but the station, when finished, will be **replete with every convenience, and will afford ample** accommodation. The line runs from Blackfriars to the old station at the Elephant and Castle, and so through to the coast. The suburban passengers are conveyed to the Elephant and Castle in 3 minutes, and to Herne **Hill in 15. Throughout the day the West End Branch** and Metropolitan Extension line was well patronised; and altogether this addition to our means of railway **travelling seems to be popular. The terminus is** approached by the new temporary bridge across the Thames, which was also opened on the same day. The new railway bridge, which will place this line in direct communication with those running north of the Thames, **is fast approaching completion: the last spans are almost half completed, and the arches across Earl** Street into Ludgate Hill are ready for turning. When this length is finished, a station will be opened in Bridge Street, to and from which **trains will run from** 6 A.M. till 12.30 at night, at rather less than half the **fares of the cheapest omnibuses. The Ludgate Hill viaduct will be in its place in another month. The design for this bridge has been made by Mr. Cubitt himself, and it is said that it will be the handsomest in London.**

OPENING OF A NEW RAILWAY.—**On Wednesday week a short but important branch line from Liverpool to** Garston, opening up a new route of communication with London and Manchester, by the Manchester, Sheffield, and Lincolnshire and Great Northern Railways, was formally opened for traffic. It is 3¾ miles long, and has a tunnel of considerable length.

Sporting.

ASCOT RACES.

TUESDAY.—The *Trial Stakes.*—Lord Westmorland's Auditor beat Catch-'em Alive, Menace, and 9 others. The *Gold Vase.*—Mr. Craven's Young Rapid beat Fairwater, Wingrave, and 9 others. *Sweeps.*—Duke of Beaufort's Siberia beat Reinfrid *Maiden Plate.*—Count Batthyany's King Charming beat Shrapnell, Cordelia, and 2 others. The *Queen's Stand Plate.*—Count F. de Lagrange's Le Béarnais beat Lady Clifden, Zambesi, and 12 others. The *Ascot Stakes.*—Baron Rothschild's Hippolyta beat Black Deer, Lady Hylda, and 12 others. The *Prince of Wales's Stakes.*—Mr W Cartwright's Ely beat Fille de l'Air, Knight of Snowdon, and 10 others. The *First Year of the Seventh Ascot Biennial Stakes.*—Mr. Merry's Liddington beat Wild Boy, Gardevisure, and 6 others.

WEDNESDAY.—The *Visitors' Plate.*—Mr. Joyce's Jessie beat Oldminster, Privateer, and 7 others. The *Coronation Stakes.*—Baron Rothschild's Breeze beat Auricula, Rouge Cross, and 3 others. The *Ascot Derby Stakes.*—Mr. Alexander's Peon beat Rothschild's c., Alpheus, and Myrtilus. The *Royal Hunt Cup.*—**Mr. Longfield's Gem of the Sea beat Crisis, Evelina, Balham,** and 20 others. Evelina was first favourite, Beverley and Orwell being the only others at all in demand. There was the **usual large field, but not the usual amount of false starts, the whole 34 being despatched at the first attempt.** Won by a neck, Crisis being three lengths before the favourite, who finished a head in front of Balham fourth, Cadiz sixth, Exchequer sixth, Gardevisure seventh, Bernfinder eighth, with Amelia, Odine, and Orwell next, close up, a wide interval separating these from the pulling up horses, the last of whom were Lytham, Cadiz Sequence, Sacharometer, Beverley, and Judex. On returning to scale an objection was made by Mr. Merry to the winner, on the ground of the bad riding of the jockey of the winner, the fact being that both he and Crisis repeatedly "cannoned" against each other from sheer distress, and in that light the Stewards viewed it, for the race was awarded to Mr Longfield's horse. The *Fern Hill Stakes.*—Marquis of Hastings' Attraction beat Le Méchante, Mr Merry's f., and 6 others. The *First Year of the Twelfth Ascot Triennial Stakes.*—Lord Coventry's Tennyson beat Kœnig, Baron Rothschild's b. f., Reginella, and 8 others. *Sweeps.*—Mr. W. Nelson's Gamecock beat Deception, Hawksbaw, Cœur de Lion, Lapidist, and Divertissement. The *Second Year of the Sixth Ascot Biennial Stakes.*—Mr. Bowes's Baragah beat Hollyfox, Tomato, Guerilla, Historian, and Outlaw. *Plate of 100 Sovs.*—Mr. Johnson's Antidote beat Wild Thyme, Columbine, and 8 others.

THURSDAY.—*Second Year of the First New Biennial Stakes.*—Mr. Merry's Scottish Chief beat Knight of Snowdon, Blue Mantle, and 6 others. *The St. James's Palace Stakes.*—Mr. Payne's The Beadle beat Alpheus and Myrtilus. *A Plate.*—Mr Payne's Lemonade beat Mr. Clark's c, Auditor, and 19 others. *The First Year of the Second New Biennial Stakes.*—Mr. Merry's Zambesi beat Koenig, La Fortune, and 10 others. *A Sweep.*—Mr Bowes's Harkforward beat Knight of Snowdon and Outlaw. *The Gold Cup.*—Mr. Merry's Scottish Chief beat Little Stag, Lord Zetland, and 6 others. **Betting—7 to 4 agst Scottish Chief, 3 to 1 agst Lord Clifden, 5 to 1 each agst Little** Stag and Wingrave, and 6 to 1 agst The Ranger. Won easily in a canter by six lengths; Lord Zetland, three lengths behind Little Stag, was third; and 50 yards in the rear of the Duke of Beaufort's horse came Wingrave, The Ranger, and Lord Clifden, the latter of whom trotted in. Arabama, Molly Carew, and Gibraltar walked past the stand. *New Stakes.*—Mr. Merry's Liddington beat Grinder, Advance, and 15 others. *A Plate.*—**Marquis of Hastings's Redcap beat Bosh, Tool Tool,** and 5 others.

FRIDAY (*by Electric Telegraph*).—*A Plate.*—Stanton beat Lord Linne and The Drone. *First Class Wokingham.*—Durham beat Oliva, Clairvoyante, and 13 others. *Second Class Wokingham.*—Walloon beat Castle Espie, St Alexis, and 8 others. *Eleventh Triennial Stakes.*—Blair Athol beat Ely and Hopper. *Racing Stakes.*—Manrico beat Weatherspy, Bradamante, and 15 others. *Associated Plate.*—Anglo-Saxon beat Crisis, Exchequer, and 20 others. *Queen's Plate.*—Caller Ou beat Gibraltar and Guerilla. *Sea Plate.*—Dolphin beat Wild Thyme, Hawksbaw, and 5 others. *Last Plate.*—Jessie beat Gamecock and Punkeld.

Obituary.

SIR EDMUND BACON, BART., died on the 30th ult., at Ravenin**gham Park, Norfolk, in his 84th year. He was the premier baronet** of England, and was in possession of two baronetcies—being representative of the 9th baronet of Redgrave (created in 1611) **and 10th baronet of Mildenhall. He was eldest son of Sir** Edmund Bacon, by the daughter of the late Sir William **Beauchamp Procter, Bart., and was born in 1779.** He married in 1801 his cousin, Mary Anne Elizabeth, daughter of Mr Dashwood Bacon, of Ottery St Mary, and in 1820 succeeded to the baronetcy. He is succeeded in the family honours and estates by his nephew, Henry Hinckman Bacon, who was formerly in the 2d Dragoon Guards, born in 1820, and married in 1853 the third daughter of Sir Thomas Beckett, Bart.

SIR JOHN WATSON GORDON, R.A., President of the Royal Scottish Academy, died on the 1st inst. at Catherine Bank House, Edinburgh. He was born in Edinburgh about 74 years ago, and studied at the Academy of Trustees for **the Encouragement of Manufacture in Edinburgh. He** first exhibited in the Royal Academy in 1827, and continued to do so up to the present exhibition. In 1841 he was elected associate, and in 1851 became an Academician. **He has filled the chair of President of the Royal Scottish** Academy since the death of Sir W. Allan in 1850. In that year also he was appointed Limner to her Majesty for Scotland, **on which occasion he received the honour of knighthood.**

MR. H. KER SEYMER, late M.P. for Dorsetshire, died on the 27th ult. at Ranston, Dorset, the seat of Sir Edward Baker, aged 57. He was much respected in the House, and though never in office, would have been, in the estimation of his friends, a most efficient servant of the Crown, if he had not preferred to maintain his independence in a private station.

MR. W. J. FOX, formerly M.P. for Oldham, died on the 3d inst. at 3, Sussex Place, Regent's Park, after a short illness, in his 78th year. He was born in Suffolk in 1786. His father, who was in the first instance a small farmer, afterwards became a weaver at Norwich. In early life Mr. Fox entered the Congregational ministry, but afterwards became a Unitarian preacher in Finsbury Place. He was one of the lecturers of the Anti Corn Law League. He was elected M.P. for Oldham in 1847, and represented that Borough, with the exception of two brief intervals, until his retirement from public life. He published several volumes in his earlier life, including a series of lectures to working men. The first of his writings which attracted notice were signed "A Norwich Weaver Boy."

LIEUT. COLONEL TORRENS, F.R.S., died on the 27th ult. at his residence at Craven Hill, in his 84th year. He was well known many years ago for his works on political economy and similar subjects, and for his exertions in connection with the newspaper press.

MAJOR COCHRANE, one of the Military Knights of Windsor, died a few days since at his lodgings in Windsor Castle. He entered the army in 1809, and in 1811 proceeded to the Peninsula, where he continued with his regiment, the Rifle Brigade, until the close of the war, being present at the defence of Cadiz, the actions of Aranjuez, San Minos, San Milan, the Bridge of Vera, and at the Battle of Vittoria. He subsequently went through the campaign of 1815, and was at the Battle of Waterloo and the capture of Paris; and, commanding the advanced guard of his corps, was its first officer to enter that capital. He was severely wounded in the left arm at Vera, and slightly in the breast at Waterloo. He had received the war medal and one clasp for the Peninsula, and the Waterloo medal.

MR. ANDREW MORTIMER DRUMMOND, the principal partner of the old established banking house of Messrs. Drummond, of Charing Cross, died on the 31st ult. at The House, Denham. He was a collateral member of the noble Scottish family of Strathallan, was born in 1785, and married in 1808 Lady Emily Charlotte Percy, fourth daughter of the first Earl of Beverley, and sister of the present peer.

MR. NATHANIEL HAWTHORNE, the distinguished American writer, died at Plymouth, N.H., on the 19th May. He was travelling in search of health, in company with Mr. Franklin Pierce, and was found dead in his bed. His writings, including "The Scarlet Letter" and "The House of the Seven Gables," are well known in both Europe and America. Mr. Hawthorne formerly filled the office of United States Consul at Liverpool, but resigned it in 1857.

BIRTHS.—On the 27th ult, at 38, Dover Street, the Countess of MEXBOROUGH, of a daughter—4th ult, at 24, Wilton Crescent, **the Lady BURGHLEY, of a daughter—4th inst, at 5, St.** George's Place, Hyde Park Corner, Lady SOUTHAMPTON, of a daughter.—20th May, at Beech Wood, Dublin, the Hon Mrs. FARRELL, of a son.—4th inst, at 44, Bryanstone Street, Portman Square, the Hon Mrs J. R. FITZGERALD of a daughter—27th ult, the Hon. Mrs Frederick Fitzgerald, of a daughter **—27th ult, at Dolforgan, the wife of R. P. LORD, Esq., M.P., of a daughter.**

MARRIAGES.—On the 31st ult, at St Paul's, Knightsbridge, Captain the Hon FREDERICK ARTHUR STANLEY, of the Grenadier Guards, youngest son of the Earl of Derby, to the Lady CONSTANCE VILLIERS, eldest daughter of the Earl of Clarendon—7th inst, in Westminster Abbey, Lord FREDERICK CAVENDISH, second son of his Grace the Duke of Devonshire, K.G., to the Hon LUCY LYTTELTON, daughter of Lord Lyttelton, and Maid of Honour to the Queen—3rd inst, in the Chapel Royal, Dublin, by special licence, his Serene Highness the Prince ALBRIGHT of WALDECK & PYRMONT, to LORA, youngest daughter of the late Rev. ROBERT GAGE, of Rathlin, county of Antrim—2d inst, at St George's, Hanover Square, CUTHBERT LARKING, Esq., late of the 15th Hussars eldest son of John Wingfield Larking, of The Firs, Lee, Kent, to the Lady ADELA HARE daughter of the Countess, and sister to the present Earl, of Listowel—9th inst, at St George's, Hanover Square, EDWARD HENEAGE, Esq., late 1st Life Guards, of Hainton Hall, Lincolnshire, eldest son of the late George Fieschi Heneage, Esq., to the Lady ELEANOR HARE, daughter of the Countess, and sister to the present Earl, of Listowel—8th inst, at Trinity Church, Paddington, CHARLES DENNIS O'ROURKE, Esq., J.P., of Clonbern, county of Galway, to HARRIETTE MARY, daughter of the late Admiral the Hon. WM LE POER TRENCH, son of William, 1st Earl of Clancarty.—31st ult, at St. Paul's Knightsbridge, Capt. JAMES GRAHAM GOODENOUGH, R.N., to VICTORIA HENRIETTA, eldest daughter of WILLIAM JOHN HAMILTON, Esq., of Chesham **Place, Belgrave Square—26th ult, at St. Oswald's Church,** Chester Cathedral, the Rev F. C. HOPE GRANT, B.A., youngest son of Francis Grant, Esq., R.A., to FRANCES MALIA, youngest daughter of the Rev. T. EATON, canon residentiary of Chester, and rector of West Kirby—24th ult, at St. George's, Hanover Square, THOMAS GEORGE SYMONS, Esq., of Myndd Park, Herefordshire, to MARY HAYLEY, only surviving child of the late Rev. THOMAS EDWARD ALLEN, Chaplain H.E.I.C.S. Bengal —26th ult, at the parish church, Eccles, W. A. FAIRBAIRN, **Esq., of Summer Hill, Pendleton, to HELEN, eldest daughter of** RICHARD BIRLEY, Esq., of Manchester—2d inst, at Chigwell Church, Mr. G. C. ROGERS, Miller's Farm, Chigwell, to ELIZABETH JANE, eldest daughter of Mr. JOSEPH PROTHEROE, Nurseryman, of the same place.

DEATHS.—On the 26th ult, at her residence, 15, Cavendish Place, Cavendish Square, ELIZA BARONESS DE ROUEN, third daughter of John Petrie, Esq., formerly of Gatton Park, Surrey, aged 73—18th ult, at Hilsea, Lady DOWNMAN, widow of Lieutenant-General Sir Thomas Downman, K.C.B., K.C.H., aged 78—7th inst, at Berry Hill, Mansfield, Lady WALKER, wife of Sir Edward S. Walker, aged 50—1st inst, at Skendleby Hall, Lincolnshire, Sir EDWARD BRACKENBURY, K.T.S., K.P., K.C.B.A., aged 79—6th inst, at Montagu Grove, **Hampstead, ELIZABETH, the wife of R. BURDON SANDERSON,** Esq., of West Jesmond, Northumberland, and only daughter of the late Sir James Sanderson, Bart, aged 67—30th March, killed in action in China while serving under Major Gordon, Lieutenant BASIL XAVIER CLIFFORD LETHBRIDGE PRATT, son of Henry F. A. Pratt, M.D., and grandson of Sir John Hesketh Lethbridge, Bart., of Sandhill Park, Somerset—29th ult, at Kennington, WILLIAM PLOMER, Esq., only son of the late Sir William Plomer—7th inst, at Buckingham House, **Tunbridge Wells, HASTINGS DENT, Esq., late of the Coldstream Guards, and of 42, Thurloe Square, London, fourth son of the late John Dent, Esq., M.P., of Hertford Street, Mayfair**—4th inst, at Walton, SOPHIA BROADLEY, sister of the late Henry Broadley, Esq., M.P., aged 75—27th ult, at 9, Thurloe Square, Major-General T. ANDERSON, Colonel 31 Madras Cavalry —13th ult, at Montreal, Canada, HARRIET, wife of Colonel DANIEL LYSONS, C.B., aged 41—21st ult, at Lyons, DOROTHY, widow of Major A. K AGNEW, formerly of the **6th Regt. of Bengal N.I., aged** 54—24th ult, at Great Malvern, FRANCES, second daughter of the late SAMUEL FYLER, Esq., of Twickenham, **Middlesex, and Hanover Square,** London, barrister-at-law—31st ult, at the Mansion House, FREDERICK LAWRENCE, Esq., son of the late Alderman Lawrence, and brother of the Lord Mayor and Lady Mayoress, aged 36—21st ult, at Ravensbourne Park, Lewisham, MARY MARINDA, daughter of the late William Rea Esq., of Blackheath, and widow of the late Commander WILLIAM MUDGE, Royal Navy—25th ult, at Oak Shade, near Penge, WILSON HETHERINGTON, Esq., barrister at law, aged 59—28th ult, in the Avenue de la Porte Maillot, Paris, Dr. THOMAS DAVISON, M.D., aged 65—26th ult, at Llwynegrin Hall, Flintshire, CHARLES EDWARD, fourth son of the late HENRY RAIKES, Esq., aged 16—28th ult, ANNE WRIGHT, wife of the Rev. W. GRESLEY, **prebendary of Lichfield, aged 59—21st ult, at Beaumont, county Dublin, the Rev. W. S. G. GUINNESS, aged 69—18th ult, the Rev. JOHN WOOD, incumbent of Grinshill and Broughton,** Salop—27th ult, the Rev. HENRY BARTON, B.A., of Exeter College, Oxford, curate of Pitton and Farley, Wilts, aged 24—5th inst, the Rev. HENRY GRAY, vicar of Almondsbury, Gloucestershire, aged 56.

Markets.

COVENT GARDEN, June 11.

Outdoor produce of nearly every description is now abundant. Grapes and Strawberries are sufficient for the demand. Of Pine Apples there is also a fair supply. Arrivals of foreign goods continue heavy; among them are Endive, Carrots, Artichokes, Cherries, Tomatos, Apricots, and Plums. English Peas are also now plentiful; they fetch from 4s. to 6s. per sieve. Lisbon Potatos realise from 1s. 6d. to 2s. 6d. per dozen lbs. Asparagus fetches from 3s. to 6s. a bundle. Flowers chiefly **consist of Cinerarias, Orchids, Heaths, Pansies, Pelargoniums, Mignonette, and Roses.**

FRUIT.

Pine Apples, per lb., 6s to 10s	Lemons, per 100, 6s to 10s
Grapes, per lb., 4s to 12s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	— Barcelona, do., 16s
Strawberries, p. punn., 2s to 6s	— New Brazil, do., 20s.
Cherries, per lb., 6d to 9d	— Old do., do., 14s
Gooseberries, green, p. qt. 3d to 6d	Almonds, do., 20s
Oranges, per 100, 10s to 14s	**Walnuts, do., 12s**

VEGETABLES.

Cabbages, per doz., 1s to 2s	**Turnips, p. bunch, 1s to 1s 3d**
Asparagus, per bundle, 3s to 6s	**Cucumbers, each, 1s to 2s**
French Beans, p. 100, 2s to 3s	Beet, per doz., 1s 6d to 2s
Peas, p. ½ sieve, 5s	Shallots, per lb., 10d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 1s to 2s	Horse Radish, p. bunch, 1s to 1s
Carrots, per bunch, 1s to 2s	Mushrooms, p. pott., 1s to 1s 6d
Rhubarb, p. bundle, 2d to 8d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

POTATOS.—SOUTHWARK, Monday, June 6.

During the past week the arrivals both coastwise and by rail are still in excess of the demand; the trade is very heavy, and prices nominal. The following are this day's quotations:——Yorkshire Flukes, 80s. to 90s. per ton; do. Regents, 20s. to 30s.; Seedlings, 20s. to 30s.; do. Rocks, 20s. to 30s.: Dunbar Regents, 30s. to 40s; Perth, Forfar, and Fife Regents, 20s. to 30s.; do. do. Rocks, 20s. to 25s.; do. do. Reds, 20s to 25s.

BRITISH WOOLS.—LONDON, June 9.

Prices are nominally receding, but not much business is as yet transacted.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	11				Leicest. Hoggs	2	0	—2	1	
Half-bred ditto	2	0	to 2	2		Ditto Wethers	1	10	to 1	11	
Down Ewes	1	9	—			Combing Skins	1	6	—2	0	
Kent Fleeces	2	0	—			Flannel Wool	1	6	—1	9	
						Blanket ditto	0	6	—1	0	

for the sum of 200,000*l*. The proposal has since been submitted to the consideration of the Court of Common Council, who have referred it to the Bridge House Estates committee for consideration and report.

SITE OF THE FLEET PRISON.—The Court of Common Council have entered into an agreement with the London, Chatham, and Dover Railway Company to sell them the site of the late Fleet Prison for 60,000*l*.; and upon that large piece of ground, which has lain waste for the last 20 years or more, and been wholly unproductive to the corporation, the company intend forthwith to erect the London terminus of their line with convenient approaches.

MURDER AT THE NEW CATTLE MARKET. — On Thursday morning Frederick Charles Bricknell, aged 23, under waiter at the Lion Tavern, Islington, murdered his fellow servant, Jane Jeary, by stabbing her in the breast with a knife. It appears that he had been paying his addresses to her, and that his jealousy had been excited by finding that she had been visited by her cousin, and that an attachment existed between them. A quarrel took place between them on the subject, when the man, having a large carving-knife in his hand, plunged it into the body of the girl, stabbing her through the lungs to the heart, causing immediate death. The murderer was taken before the magistrate at Clerkenwell Police Court, and at once confessed his guilt. After some evidence had been taken he was remanded. At the inquest, which was held yesterday, the jury returned a verdict of Wilful Murder against the prisoner, who was committed to Newgate to take his trial.

THE PUBLIC HEALTH. — The Registrar-General's Weekly Report states that the deaths in London in the week that ended Saturday, June 4, were 1213. The average number for the corresponding week of the 10 years, 1855-63, corrected for increase of population, was 1169. The present return is therefore 44 above the average. During the week the births of 919 boys and 974 girls, in all 1893 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1·80.

Provincial.

BANGOR.—The Archbishop of Canterbury has decided the appeal under the Church Services in Wales Bill, by confirming the Bishop of Bangor's nomination of a minister to perform English services at Caerdeon Chapel. The practical effect of this decision will be that the Rev. W. E. Jelf's private services will henceforth be open to the public, so that the English in the neighbourhood will have the enjoyment of the service, of which they have been deprived for 16 months.

CAMBRIDGE.—On Friday their Royal Highnesses began the day by attending Divine service at King's College Chapel, and afterwards went to the Senate House, where the honorary degree of LL.D. was conferred on the Duke of Manchester, Earl Stanhope, the Earl of Carnarvon, Viscount Palmerston, Viscount Eversley, Lord Leigh, Sir Bulwer Lytton, Vice-Chancellor Wood, Sir Charles Eastlake, the Dean of Westminster, Mr. Beresford Hope, Dr. Watson, Dr. Hoffman, and Professor Wheatstone, all of whom on being presented for the degree were loudly cheered, except Dean Stanley, who was received with a storm of mingled hisses and cheering, which lasted some time. The Prince and Princess afterwards witnessed the procession of boats on the river, and attended a horticultural fête in St. John's College, at which the prizes were distributed to the successful students of the School of Art. In the evening their Royal Highnesses dined with Dr. Whewell at Trinity Lodge, and afterwards went to a ball given by the members of Trinity. On Saturday they visited Madingley Hall, where the Prince reviewed the Duke of Manchester's cavalry. They returned to Cambridge about 3 in the afternoon, and taking luncheon with the Master and Fellows of Magdalene College, returned to London by the Great Eastern and Great Northern to King's Cross.

ETON.—At a special meeting of the Provost, Vice-Provost, and Fellows of Eton College, on Monday last, the Rev. Francis Edward Durnford was unanimously elected Lower Master, in the room of the Rev. W. A. Carter, recently elected Fellow of the College. The Rev. Mr. Durnford's appointment has given universal satisfaction to the school, and the announcement of his election was loudly cheered by the students.

LEICESTER.—About 180 lads are now confined in St. Bernard's Reformatory, Whitwick, and their conduct for a long time past has been such as to cause great uneasiness to those entrusted with their management. On the 22d ult. four criminals made their escape by cutting up the sheets belonging to their beds and letting themselves down from the dormitory windows. They afterwards broke open the tailor's shop, and having each selected a suit of clothes and dressed, they made off, but were ultimately apprehended at Derby, brought back to Ashby-de-la-Zouch, and committed to take their trial at the Assizes. On the 24th, a general meeting took place; the inmates, to the number of 180, refusing to obey the officers of the establishment. In the afternoon about 50 of them went off towards Bardon, a neighbouring village, armed with knives, sticks, and stones. Some bricklayers and labourers who were at work—knowing something of the occurrence, attempted to capture the lads. The latter, however, drew their knives, and showered stones upon them. One of the men, essaying to arrest some of the boys, was severely injured. Out of the band seven were captured, and taken back at once to the reformatory. In the evening some of the party who had returned went out from the institution on a pleasure trip: a number of them took it into their heads to return and to taunt and defy the officers, became dominant, and even ordered and were supplied with what they required. They then went to bed. During the afternoon of the 25th, a farmer, who had rendered some assistance the previous day, was seen by the lads to pass a field where they were at work. Eighty of the lads determined to punish him for his trouble, left their employment, and pursued the man to Forest Rock Inn, and insisted upon the landlord turning him out of doors. Their demand was refused by the host. The whole band without at once opened an assault upon the house and smashed the windows, the damage in glass being 1*l*. 5*s*. The son of the landlord managed to escape and run to Whitwick, and secured the services of some police constables. Two of the boys were found in a wood, and four others straggling in different directions. They were conveyed to Ashby, and on the 26th were tried and committed by the magistrates to Leicester house of correction, for 14 days with hard labour. On the 27th there was a general revolt. The inmates refused again to obey any orders, and the assistance of the police was again brought into requisition. After a struggle 30 of the offenders were got out by 11 o'clock and locked up. It became evident that more policemen would be needed, as there were signs of a general and formidable uprising. A messenger was despatched to the head-quarters at Leicester for seven constables, and Inspector Ward hurried off during the night to obtain additional men from his own division. There was an available anti-riot force of police of 19 officers and constables at the reformatory by daylight next morning. Ten of the worst boys were taken to Ashby; 22 of the offenders were also brought out of the cells, tied up to the triangles, and severely flogged in the presence of their mates, who were drawn up in the form of an open square to witness the proceedings, the police being of course in attendance. On the 28th other offenders were taken to Ashby, and they were severally sentenced to terms of imprisonment from 14 days to two months. On the same day 41 more boys were "birched" by the discipline master, and ordered to be kept on bread and water for a week. It may be remembered that Lord Berners brought the condition of this reformatory under the notice of the House of Lords, and a promise was made that the matter should be investigated on behalf of the Government.

LEIGH.—At the petty sessions, held on the 23d ult., Bridget Hughes, a married woman, with an infant at her breast, was summoned for having sworn several profane oaths at Westleigh, on the 17th ult. The complainant was next-door neighbour to defendant, and the offence was alleged to be committed during a quarrel between the two women. A witness was called, but did not corroborate the complainant's statement as to the profanity. Defendant denied using the language imputed to her, but the magistrates convicted her in the penalty of one shilling and costs, or in default 10 days' imprisonment. The woman and her infant are now lodged in Kirkdale House of Correction. The chief penalty in such cases is the costs, which are comparatively heavy, often as much as twelve or sixteen shillings; in a recent case they amounted to twenty-two shillings.

OXFORD.—The Encœnia, or Commemoration of Founders and Benefactors to the University, took place on Wednesday in the Sheldonian Theatre, with the usual ceremonies and the customary demonstrations on the part of the undergraduates. Convocation having been formally opened, the Vice-Chancellor submitted in Latin the names of the distinguished personages on whom the University proposed to confer honorary degrees. Dr. Travers Twiss then, in appropriate Latin addresses, presented them in the following order:—1. The Most Rev. Dr. Beresford, Archbishop of Armagh, Primate of all Ireland, and Prelate of the Order of St. Patrick. 2. The Earl of Bandon, M.A., Oriel College. 3. Lord Overstone, M.A., Trinity College, Cambridge. 4. M. Amédeé Thierry, Member of the Imperial Senate and of the Institute. 5. Sir Rowland Hill, K.C.B. 6. Arthur Helps, Esq., M.A., Trinity College, Cambridge, Clerk of the Privy Council. 7. Arthur Cayley, Esq., M.A., F.R.S., F.R.AS., Sadlerian Professor of Mathematics in the University of Cambridge. The reception of Sir Rowland Hill was of a more enthusiastic character than usual, and loud and prolonged cheering greeted him as he took his seat on the left of the Vice-Chancellor. On the conclusion of the ceremony, Captain and Adjutant Foxcroft Jones, of the Oxford University Rifles, was presented by the Public Orator for the honorary degree of Master of Arts, and was received with enthusiastic applause. The Crewean Oration and the Prize Essays and Poems were then delivered, and the business of the day terminated with a musical *fête* in the gardens of St. John's College and a masonic ball in the Corn Exchange.

WILLENHALL.—A young policeman named Lyons, in the Staffordshire force stationed at this town, died a few days since from the effects of injuries sustained at the hands of six men. He was attacked at midnight, while upon his beat in a low part of the township, by four of the prisoners, whom he had ordered home because they were riotous. He arrested two or three of the assailants, but their comrades rescued them. After he had been beaten to the ground and kicked by the assailants, he was dragged along the road by his own which was attached to his wrist. Whilst being [illegible] along with his head striking upon the stones, he slipped the thong, and was thus deprived of his only weapon. During the struggle one of the prisoners was seen with a large open clasp knife, and a civilian who attempted to take it from him had his hand cut. Towards the end of the struggle another of the prisoners dashed a broken brick upon the left side of the officer's head as he lay upon the ground. He then became insensible, and was carried bleeding into the residence of a gentleman living near. He was afterwards conveyed to the police barracks, where he lingered in great pain until his death. On account of the large number of prisoners and of the great efforts that were made to save deceased's life, the event occasioned a large amount of painful interest throughout South Staffordshire. The inquest was adjourned, to enable the medical men to make a *post mortem* examination, and after hearing the results of the examination the jury returned a verdict of Wilful Murder against five of the prisoners.

YORK.—A few days since St. Wilfred's, new Roman Catholic Church, which has been erected under the "shadow" of York Minster, was opened by Cardinal Wiseman. It has cost about 10,000*l*., and has been built on the site of a chapel which had been used for many years by the Roman Catholics. The new church will afford accommodation to about 700 persons, and as it is so near the Minster that Cardinal Wiseman a few months ago spoke of the growing church as a new shoot from the old roots of the parent tree, the Cathedral. Cardinal Wiseman in his sermon referred to what had been done in York through the piety and liberality of our forefathers in the erection of the noble Cathedral, asking those present not to be sorrowful or dejected when they compared the one church with the other, but to consider for whom their forefathers built that church of St. Peter. In Heaven they had but one thought, on earth only one blessing. That blessing was that the truth which they did their very best to spread might progress on every side, and that souls might return to Peter, who ruled over the whole of the flock which Christ had raised. After the service a *déjeûner* was served in the concert-room to about 300 persons, including the Cardinal, bishops, priests and laity. Lord Herries presided. The chairman, in proposing "The Health of the Pope," alluded to what he termed the recent visit of a revolutionist, stating that it would have been better if the members of the Government and others who had taken a part in the triumph had shown more respect to the feelings of five or six millions of Catholics. The chairman then proposed "The Health of the Queen," which was drunk with all the honours. The healths of Cardinal Wiseman, the chairman, and others were also drunk.

Railways.

FATAL ACCIDENT TO AN ASCOT TRAIN.—On Tuesday evening a fearful accident occurred on the South Western Railway. One of the long trains returning from Ascot races, heavily laden with holiday-makers and such as are only seen at race times—ran into another train at the Egham station, destroying the carriages, killing five passengers almost on the spot, and more or less seriously injuring between 20 and 25 others. The accident occurred at about a quarter to 8 o'clock to the train which had left the race-course a little after 7, and which was followed soon after by another train equally long and heavy. The latter train arrived at Egham shortly before 8 o'clock. Tickets were collected there, and while this was being done on a complaint was made to the station master of some card-sharpers being in a carriage. An altercation arose about their removal which delayed the train two or three minutes more. During this interval the next train from Ascot came up, just as the first was moving off. The inevitable collision was so clearly seen that those in the station called to the passengers in the last carriages to jump from the train. The guard was in the break-van, the last of all, and his experienced eye needed no warning as he looked back and saw the next train coming on. He jumped out at once, though not a moment too soon, as the crash and fragments of his van caught his coat skirts and threw him off. The collision was very violent, owing to the immense weight of the second train. It crushed the guard's-van to splinters, crushed a second carriage next to it, and partly crushed some beyond. The usual scene of confusion and alarm succeeded. Assistance was at once telegraphed for from London and Ascot, and the work of succouring those injured instantly began. There was a horrible scene beneath the ruins of the broken second-class carriage. From out of the wreck the bodies of four passengers were removed. A fifth died as he was carried to the bank, and a sixth was so injured as to leave little hope of recovery. About other passengers sustained concussions, dislocations, broken bones. But even the most serious of these are hoped will not be likely to prove fatal, as with the exception of the one mentioned as believed to be mortally injured, all were in the course of the evening enabled to come up to town and either proceed to their own homes or were taken to the hospitals.

26 passengers thus came to Waterloo, all more or less alarmed and shaken, many weak and faint, and with their clothes covered with blood. At 12 at night the person who sustained the most serious injuries was brought up on a stretcher-bed in a guard's van, attended by a surgeon, and was removed to Charing Cross Hospital. His name is Mr. E. Trigg, publican, of Market Street, Brighton, who had his leg and ribs broken, and sustained some severe internal injuries. The line was cleared in the course of about an hour, and passengers went on as usual; but up to Wednesday morning the inquiries were anxious and incessant at Waterloo from those who had friends and relatives missing to know the names of those killed and wounded. All the bodies have been identified. Their names are Mr. Clegg, landlord of the Harp, Jermyn Street; Mr. John Coppard, the confidential agent of Mr. Padwick, the well-known racing man; Mr. William Winfield, gardener to Mr. Bracebridge, Sherbourne, Warwickshire; Mr. Edwin Hall, corn-chandler, Duke Street, Manchester Square; and Mr. Robert Wilkie, publican, Globe Inn, King's Road, Chelsea. The bodies were all removed to the Railway Inn, close to the station at Egham. They were not much mutilated, death apparently having arisen from concussion. Another person was conveyed to the Railway Inn in a very dreadful state, having had both his legs so much shattered that amputation of both feet was performed by Mr. Fergusson on Wednesday. He is a young man called Louis Ray, an apprentice to M. Francatelli, the chef de cuisine in the establishment of the Prince of Wales. The inquest was opened on Thursday, and after some formal evidence was adjourned to Tuesday next.

OPENING OF THE BLACKFRIARS RAILWAY STATION.—The new terminus of the London, Dover, and Chatham Railway on the south side of Blackfriars Bridge was opened last week for traffic. Very little progress has yet been made with the waiting rooms, and the workmen are still employed on the roof and other parts, but the station, when finished, will be replete with every convenience, and will afford ample accommodation. The line runs from Blackfriars to the old station at the Elephant and Castle, and so through to the coast. The suburban passengers are conveyed to the Elephant and Castle in 3 minutes, and to Herne Hill in 15. Throughout the day the West End Branch and Metropolitan Extension line was well patronised; and altogether this addition to our means of railway travelling seems to be popular. The terminus is approached by the new temporary bridge across the Thames, which was also opened on the same day. The new railway bridge, which will place this line in direct communication with those running north of the Thames, is fast approaching completion: the last spans are almost half completed, and the arches across Earl Street into Ludgate Hill are ready for turning. When this length is finished, a station will be opened in Bridge Street, to and from which trains will run from 6 A.M. till 12.30 at night, at rather less than half the fares of the cheapest omnibuses. The Ludgate Hill viaduct will be in its place in another month. The design for this bridge has been made by Mr. Cubitt himself, and it is said that it will be the handsomest in London.

OPENING OF A NEW RAILWAY.—On Wednesday week a short but important branch line from Liverpool to Garston, opening up a new route of communication with London and Manchester, by the Manchester, Sheffield, and Lincolnshire and Great Northern Railways, was formally opened for traffic. It is 3¾ miles long, and has a tunnel of considerable length.

Sporting.

ASCOT RACES.

TUESDAY.—The *Trial Stakes.*—Lord Westmoreland's Auditor beat Catch-'em Alive, Menace, and 9 others. The *Gold Vase.*—Mr Craven's Young Rapid beat Fairwater, Wingrave, and 9 others. *Sweeps.*—Duke of Beaufort's Siberia beat Reinfrid. *Maiden Plate.*—Count Batthyany's King Charming beat Shrapnell, Cordelia, and 2 others. The *Queen's Stand Plate.*—Count F. de Lagrange's Le Béarnais beat Lady Clifden, Zambesi, and 12 others. The *Ascot Stakes.*—Baron Rothschild's Hippolyta beat Black Deer, Lady Hylda, and 12 others. The *Prince of Wales's Stakes.*—Mr W. Cartwright's Fly beat Fille de l'Air, Knight of Snowdon, and 10 others. The *First Year of the Seventh Ascot Biennial Stakes.*—Mr. Merry's Liddington beat Will Boy, Gardevisure, and 6 others.

WEDNESDAY.—The *Visitors' Plate.*—Mr. Joyce's Jessie beat Oldminster, Privateer, and 7 others. The *Coronation Stakes.*—Baron Rothschild's Breeze beat Auricula, Rouge Cross, and 3 others. The *Ascot Derby Stakes.*—Mr. Alexander's Peon beat Rothschild's c., Alpheus, and Myrtilus. The *Royal Hunt Cup.*—Mr. Longfield's Gem of the Sea beat Crisis, Evelina, Balham, and 29 others. Evelina was first favourite, Beverley and Crisis being the only others at all in demand. There was the usual large field, but not the usual amount of false starts, the whole 34 being despatched at the first attempt. Won by a neck, Crisis being three lengths before the favourite, who finished a head in front of Balham fourth, Carnival fifth, Exchequer sixth, Gardevisure seventh, Bradford eighth, with Amelia, Odine, and Gavia next, close up, a wide interval separating these from the jostling up horses, the last of whom were Lytham, Cadiz Sequence, Sackbarometer, Beverley, and Jockey. On returning to scale an objection was made by Mr. Merry to the winner, on the ground of the foul riding of the jockey of the winner, the fact being that both he and Crisis repeatedly "cannoned" against each other from sheer distress, and in that light the Stewards viewed it, for the race was awarded to Mr Longfield's horse. The *Fern Hill Stakes.*—Marquis of Hastings' Attraction beat Le Mélange, Mr Merry's f., and 6 others. The *Forty Year of the Twelfth Ascot Triennial Stakes.*—Lord Coventry's Tennyson beat Koenig, Baron Rothschild's b. f., Reginella, and 8 others. *Sweeps.*—Mr. W. Nelson's Gamecock beat Deception, Hawksbaw, Cœur de Lion, Lapidist, and Divertissement. The *Second Year of the Sixth Ascot Biennial Stakes.*—Mr. Bowes's Baragah beat Hollyfox, Tomato, Guerilla, Historian, and Outlaw. *Plate of 100 Sovs.*—Mr Johnson's Antidote beat Wild Thyme, Columbine, and 8 others.

THURSDAY.—*Second Year of the First New Biennial Stakes.*—Mr. Merry's Scottish Chief beat Knight of Snowdon, Blue Mantle, and 6 others. *The St. James's Palace Stakes.*—Mr. Payne's The Beadle beat Alpheus and Myrtilus. *A Plate.*—Mr Payne's Lemonade beat Mr. Clark's c. Auditor, and 19 others. *The First Year of the Second New Biennial Stakes.*—Mr. Merry's Zambesi beat Koenig, La Fortune, and 10 others. *A Sweep.*—Mr Bowes's Harkaforward beat Knight of Snowdon and Outlaw. *The Gold Cup.*—Mr. Merry's Scottish Chief beat Little Stag, Lord Zetland, and 6 others. Betting—7 to 4 agst Scottish Chief, 3 to 1 agst Lord Clifden, 5 to 1 each agst Little Stag and Wingrave, and 6 to 1 agst The Ranger. Won easily in a canter by six lengths; Lord Zetland, three lengths behind Little Stag, was third; and 50 yards in the rear of the Duke of Beaufort's horse came Wingrave, The Ranger, and Lord Clifden, the latter of whom trotted in. Alabama, Molly Carew, and Gibraltar walked past the stand. *New Stakes.*—Mr. Merry's Liddington beat Grinder, Advance, and 15 others. *A Plate.*—Marquis of Hastings's Redcap beat Bosh, Tooi Tooi, and 5 others.

FRIDAY (*Our Electric Telegraph*).—*A Plate.*—Stanton beat Lord Linne and The Drone. *First Class Wokingham.*—Durham beat Oliva, Clairvoyante, and 13 others. *Second Class Wokingham.*—Walloon beat Castle Espie, St Alexis, and 8 others. *Eleventh Triennial Stakes.*—Blair Athol beat Ely and Hopper. *Railway Stakes.*—Manrico beat Weatherspy, Bradamante, and 15 others. *Alexandra Plate.*—Anglo-Saxon beat Crisis, Exchequer, and 25 others. *Queen's Plate.*—Caller Ou beat Gibraltar and Guerilla. *50l. Plate.*—Dolphin beat Wild Thyme, Hawksbaw, and 5 others. *100l. Plate.*—Jessie beat Gamecock and Funnyfellow.

Obituary.

SIR EDMUND BACON, BART., died on the 30th ult., at Raveningham Park, Norfolk, in his 84th year. He was the premier baronet of England, and was in possession of two baronetcies—being representative of the 9th baronet of Redgrave (created in 1611) and 10th baronet of Mildenhall. He was eldest son of Sir Edmund Bacon, by the daughter of the late Sir William Beauchamp Proctor, Bart., and was born in 1779. He married in 1801 his cousin, Mary Anne Elizabeth, daughter of Mr. Dashwood Bacon, of Ottery St. Mary, and in 1820 succeeded to the baronetcy. He is succeeded in the family honours and estates by his nephew, Henry Hinckman Bacon, who was formerly in the 2d Dragoon Guards, born in 1820, and married in 1853 the third daughter of Sir Thomas Beckett, Bart.

SIR JOHN WATSON GORDON, R.A., President of the Royal Scottish Academy, died on the 1st inst. at Catherine Bank House, Edinburgh. He was born in Edinburgh about 74 years ago, and studied at the Academy of Trustees for the Encouragement of Manufacture in Edinburgh. He first exhibited in the Royal Academy in 1827, and continued to do so up to the present exhibition. In 1841 he was elected associate, and in 1851 became an Academician. He has filled the chair of President of the Royal Scottish Academy since the death of Sir W. Allan in 1850. In that year also he was appointed Limner to her Majesty for Scotland, on which occasion he received the honour of knighthood.

MR H. KER SEYMER, late M.P. for Dorsetshire, died on the 27th ult. at Ranston, Dorset, the seat of Sir Edward Baker, aged 57. He was much respected in the House, and though never in office, would have been, in the estimation of his friends, a most efficient servant of the Crown, if he had not preferred to maintain his independence in a private station.

MR. W. J. FOX, formerly M.P. for Oldham, died on the 3d inst. at 3, Sussex Place, Regent's Park, after a short illness, in his 78th year. He was born in Suffolk in 1786. His father, who was in the first instance a small farmer, afterwards became a weaver at Norwich. In early life Mr. Fox entered the Congregational ministry, but afterwards became a Unitarian preacher in Finsbury Place. He was one of the lecturers of the Anti-Corn Law League. He was elected M.P. for Oldham in 1847, and represented that Borough, with the exception of two brief intervals, until his retirement from public life. He published several volumes in his earlier life, including a series of lectures to working men. The first of his writings which attracted notice were signed "A Norwich Weaver Boy."

LIEUT.-COLONEL TORRENS, F.R.S., died on the 27th ult. at his residence at Craven Hill, in his 84th year. He was well known many years ago for his works on political economy and similar subjects, and for his exertions in connection with the newspaper press.

MAJOR COCHRANE, one of the Military Knights of Windsor, died a few days since at his lodgings in Windsor Castle. He entered the army in 1809, and in 1811 proceeded to the Peninsula, where he continued with his regiment, the Rifle Brigade, until the close of the war, being present at the defence of Cadiz, the actions of Arroyuez, San Munos, San Milan, the Bridge of Vera, and at the Battle of Vittoria. He subsequently went through the campaign of 1815, and was at the Battle of Waterloo and the capture of Paris; and, commanding the advanced guard of his corps, was its first officer to enter that capital. He was severely wounded in the left arm at Vera, and slightly in the breast at Waterloo. He had received the war medal and one clasp for the Peninsula, and the Waterloo medal.

MR. ANDREW MORTIMER DRUMMOND, the principal partner of the old established banking house of Messrs. Drummond, of Charing Cross, died on the 31st ult. at Tile House, Denham. He was a collateral member of the noble Scottish family of Strathallan, was born in 1785, and married in 1808 Lady Emily Charlotte Percy, fourth daughter of the first Earl of Beverley, and sister of the present peer.

MR. NATHANIEL HAWTHORNE, the distinguished American writer, died at Plymouth, N.H., on the 19th May. He was travelling in search of health, in company with Mr. Franklin Pierce, and was found dead in his bed. His writings, including "The Scarlet Letter" and "The House of the Seven Gables," are well known in both Europe and America. Mr. Hawthorne formerly filled the office of United States Consul at Liverpool, but resigned it in 1857.

BIRTHS.—On the 27th ult, at 33, Dover Street, the Countess of MEXBOROUGH, of a daughter—28th ult, at 24, Wilton Crescent, the Lady BURGHLEY, of a daughter—4th inst, at 5, St. George's Place, Hyde Park Corner, Lady SOUTHAMPTON, of a daughter—30th May, at Beech Wood, Dublin, the Hon. Mrs. FARRELL, of a son—6th inst, at 44, Bryanstone Street, Portman Square, the Hon. Mrs J. R. PLUNKET, of a daughter—27th ult, the Hon. Mrs. Frederick FITZMAURICE, of a daughter—27th ult, at Dolforgan, the wife of R. P. LONG, Esq., M.P., of a daughter.

MARRIAGES.—On the 31st ult, at St. Paul's, Knightsbridge, Captain the Hon. FREDERICK ARTHUR STANLEY, of the Grenadier Guards, youngest son of the Earl of Derby, to the Lady CONSTANCE VILLIERS, eldest daughter of the Earl of Clarendon—7th inst, in Westminster Abbey, Lord FREDERICK CAVENDISH, second son of his Grace the Duke of Devonshire, K.G., to the Hon. LUCY LYTTELTON, daughter of Lord Lyttelton, and Maid of Honour to the Queen—2d inst, in the Chapel Royal, Dublin, by special licence, his Serene Highness the Prince ALBRIGHT of WALDECK & PYRMONT, to DORA, youngest daughter of the late Rev. ROBERT GAGE, of Rathlin, county of Antrim—2d inst, at St George's, Hanover Square, CUTHBERT LARKING, Esq., late of the 15th Hussars eldest son of John Wingfield Larking, of The Firs, Lee, Kent, to the Lady ADELA HARE daughter of the Countess, and sister to the present Earl, of Listowel—9th inst, at St. George's, Hanover Square, EDWARD HENEAGE, Esq., late 1st Life Guards, of Hainton Hall, Lincolnshire, eldest son of the late George Fiennes Heneage, Esq., to the Lady FLEMANOR HARE, daughter of the Countess, and sister to the present Earl, of Listowel—8th inst, at Trinity Church, Paddington, CHARLES DENNIS O'ROURKE, Esq., J.P., of Clonbern, county of Galway, to HARRIETTE MARY, daughter of the late Admiral the Hon. WM LE POER TRENCH, son of William, 1st Earl of Clancarty—31st ult, at St. Paul's Knightsbridge, Capt. JAMES GRAHAM GOODENOUGH, R.N., to VICTORIA HENRIETTA, eldest daughter of WILLIAM JOHN HAMILTON, Esq., of Chesham Place, Belgrave Square—26th ult, at St. Oswald's Church, Chester Cathedral, the Rev F. C. HOPE GRANT, B.A., youngest son of Francis Grant, Esq., R.A., to FRANCES MARIA, youngest daughter of the Rev. T. EATON, canon residentiary of Chester, and rector of West Kirby—24th ult, at St. George's, Hanover Square, THOMAS GEORGE SYMONS, Esq., of Mynde Park, Herefordshire, to MARY HAYLEY, only surviving child of the late Rev. THOMAS EDWARD ALLEN, Chaplain H.E.I.C.S. Bengal—7th ult, at the parish church, Eccles, W. A. FAIRBAIRN, Esq., of Summer Hill, Pendleton, to HELEN, eldest daughter of RICHARD BIRLEY, Esq., of Manchester—2d inst, at Chigwell Church, Mr. G. C. ROGERS, Miller's Farm, Chigwell, to ELIZABETH JANE, eldest daughter of Mr. JOSEPH PROTHEROE, Nurseryman, of the same place.

DEATHS.—On the 26th ult, at her residence, 15, Cavendish Place, Cavendish Square, ELIZA BARONESS DE ROUEN, third daughter of J. Peirce, Esq., formerly of Gatton Park, Surrey, aged 72—28th ult, at Hilsea, Lady DOWNMAN, widow of Lieutenant-General Sir Thomas Downman, K.C.B., K.C.H., aged 78—7th inst at Berry Hill, Mansfield, Lady WALKER, wife of Sir Edward S. Walker, aged 50—1st inst, at Skendleby Hall, Lincolnshire, Sir EDWARD BRACKENBURY, K.T.S., K.F., K.C.B.A., aged 79—6th inst, at Montagu Grove, Hampstead, ELIZABETH, the wife of R. BURDON-SANDERSON, Esq., of West Jesmond, Northumberland, and only daughter of the late Sir James Sandrson, Bart, aged 67—30th March, killed in action in China while serving under Major Gordon, Lieutenant BASIL XAVIER CLIFFORD LETHBRIDGE PRATT, son of Henry F. A. Pratt, M.D., and grandson of Sir John Hesketh Lethbridge, Bart., of Sandhill Park, Somerset—29th ult, at Kemmington, WILLIAM PLOMER, Esq., only son of the late Sir William Plomer—7th inst, at Buckingham House, Tunbridge Wells, HASTINGS DENT, Esq., late of the Coldstream Guards, and of 42, Thurloe Square, London, fourth son of the late John Dent, Esq., M.P., of Hertford Street, Mayfair—4th inst, at Weston, SOPHIA BROADLEY, sister of the late Henry Broadley, Esq., M.P., aged 75—27th inst, at 9, Thurloe Square, Major-General T. ANDERSON, Colonel 34 Madras Cavalry—15th ult, at Montreal, Canada, HARRIET, wife of Colonel DANIEL LYSONS, C.B., aged 41—21st ult, at Lyons, DOROTHY, widow of Major A. K. AGNEW, formerly of the 6th Regt. of Bengal N.I., aged 54—24th ult, at Great Malvern, FRANCES, second daughter of the late SAMUEL FYLER, Esq., of Twickenham, Middlesex, and Hanover Square, London, barrister-at-law—31st ult, at the Mansion House, FREDERICK LAWRENCE, Esq., son of the late Alderman Lawrence, and brother of the Lord Mayor and Lady Mayoress, aged 56—1st ult, at Ravensbourne Park, Lewisham, MARY MALINDA, daughter of the late William Rea, Esq., of Blackheath, and widow of the late Commander WILLIAM MUDGE, Royal Navy—15th ult, at Oak Shade, near Penge, WILSON HETHERINGTON, Esq., barrister-at-law, aged 58—28th ult, in the Avenue de la Porte Maillot, Paris, Dr. THOMAS DAVISON, M.D., aged 75—27th ult, at Llwynegrin Hall, Flintshire, CHARLES EDWARD, fourth son of the late HENRY BANKES, Esq., aged 16—28th ult, ANNE WRIGHT, wife of the Rev. W. GRESLEY, prebendary of Lichfield, aged 39—21st ult, at Beaumont, county Dublin, the Rev. W. S. G. GUINNESS, aged 69—18th ult, the Rev. JOHN WOOD, incumbent of Grinshill and Broughton, Salop—27th ult, the Rev. HENRY BARTON, B.A., of Exeter College, Oxford, curate of Pitton and Farley, Wilts, aged 24—5th inst, the Rev. HENRY GRAY, vicar of Almondsbury, Gloucestershire, aged 56.

Markets.

COVENT GARDEN, June 11.

Outdoor produce of nearly every description is now abundant. Grapes and Strawberries are sufficient for the demand. Of Pine Apples there is also a fair supply. Arrivals of foreign goods continue heavy; among them are Endive, Carrots, Artichokes, Cherries, Tomatos, Apricots, and Plums. English Peas are also now plentiful; they fetch from 4s to 6s. per sieve. Lisbon Potatos realise from 1s. 6d to 2s. 6d. per dozen lbs. Asparagus fetches from 3s. to 6s. a bundle. Flowers chiefly consist of Cinerarias, Orchids, Heaths, Pansies, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 10s	Lemons, per 100, 6s to 10s
Grapes, per lb., 4s to 12s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	— Barcelona, do., 16s
Strawberries, p. punn., 2s to 6s	— New Brazil do., 20s.
Cherries, per lb., 6d to 9d	— Old do., do., 14s
Gooseberries, green, p qt. 3d to 6d	Almonds, do., 20s
Oranges, per 100, 10s to 14s	Walnuts, do., 12s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 1s to 1s 3d
Asparagus, per bundle, 3s to 6s	Cucumbers, each, 1s to 2s
French Beans, p. 100, 2s to 3s	Beet, per doz., 1s 6d to 2s
Peas, p. ½ sieve, 5s	Shallots, per lb., 10d
Potatos, York Regents, p. ton, 60s to 90s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 1s to 2s	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 1s to 2s	Mushrooms, p. pott., 1s to 1s 9d
Rhubarb, p. bundle, 2d to 3d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

POTATOS.—SOUTHWARK, Monday, June 6.

During the past week the arrivals both coastwise and by rail are still in excess of the demand; the trade is very heavy, and prices nominal. The following are this day's quotations:—Yorkshire Flukes, 3os. to 5os. per ton; do. Regents, 20s. to 30s.; Seedlings, 20s. to 30s.; do. Rocks, 20s. to 30s.; Dunbar Regents, 30s. to 40s; Perth, Forfar, and Fife Regents, 20s. to 30s.; do. do. Rocks, 20s. to 25s.; do. do. Reds, 20s. to 25s.

BRITISH WOOLS.—LONDON, June 9.

Prices are nominally receding, but not much business is as yet transacted.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	1	11				Leicest. Hoggs	2	0	—2	1	
Half-bred ditto	2	0	to 2	2		Ditto Wethers	1	10	to 1	11	
Down Ewes	1	9	—			Combing Skins	1	6	—2	0	
Kent Fleeces	2	0	—			Flannel Wool	1	6	—1	9	
						Blanket ditto	0	6	—1	0	

HOPS.—BOROUGH MARKET, FRIDAY, June 10.

Messrs. Pattenden & Smith report the demand limited to the immediate wants of consumers, who are generally bare of stock, and constant buyers. Good samples both of English and foreign are scarce, and command fully last week's prices.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, June 9.

Prime Meadow Hay	72s to 75s		Clover, old	90s to 110s	
Superior do. ..	80	86	New Clover ..	—	—
Inferior do. ..	55	60	Do. second cut ..	80	105
New do.	—	—	Straw	25	30
Rowen	—	—	HARVEY & EASTON.		

CUMBERLAND MARKET, Thursday, June 9.

Sup. Meadow Hay..	84sto 92s		Inferior Clover ..	84s to 94s	
Inferior do.	68	— 76	New do.	—	—
New do.	60	72	Straw	30	35
Superior Clover ..	105	—110	JOSHUA BAKER.		

WHITECHAPEL, THURSDAY, June 9.

Fine Meadow Hay..	78s to 82s		Prime 1st cutClover	105s to112s	
Inferior do.	70	75	Inferior do. do. ..	100	105
Prime New Hay ..	—	—	New 1st cut do. ..	—	—
Inferior	—	—	Prime 2d cut do. ..	104	108
Straw	25	28	Inferior do.	90	95

NEWGATE.—June 10.

Best Fresh Butter .. .. 12s. per dozen lbs.
Second do. do. .. .. 10s. ,,
Pork, 4s. 4d. to 4s. 8d. per 8 lbs.

COAL MARKET.—June 8.

Byass's Bebside West Hartley, 16s. 3d.; Holywell Main, 16s. 6d.; Lambert's West Hartley, 16s.; West Hartley, 16s. 3d.; Wylam, 16s. 6d.; Eden Main, 16s. 3d.; Walls End Braddylls Hetton, 16s. 6d.; Walls End Haswell, 17s. 6d.; Walls End Tunstall, 16s. 6d.; Walls End Hartlepool, 17s. 3d.; Walls End Heugh Hall, 17s.; Walls End Kelloe, 16s. 9d.; Walls End South Kelloe, 17s.—Ships at market, 36.

METROPOLITAN CATTLE MARKET.

MONDAY, June 6.

We have an unusually large supply of Beasts. The demand is moderate, and prices for the choicest qualities are not much lower, but on the average there is a considerable reduction. The number of Sheep is very much larger. The warm weather causes a bad trade for the big fat Sheep, and for all kinds lower prices are taken. Lambs and Calves are rather lower. From Germany and Holland there are 1450 Beasts, 6340 Sheep, 344 Calves, and 80 Pigs; from Spain, 350 Beasts; from Scotland, 720; from Ireland, 30; and 3110 from Norfolk and Suffolk.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	6 to	4	10	Best Long-wools. ..	—	..		
Best Short-horns	4	4 —	4	6	Do. Shorn ..	4	6 —	4	10
2d quality Beasts	2	8 —	3	8	Ewes & 2d quality ..	—	..		
Best Downs and Half-breds	—	..			Do. Shorn ..	4	0 —	4	4
Do. Shorn ..	5	0 —	5	2	Lambs	6	4 —	7	4
					Calves	3	4 —	5	4
					Pigs	3	0 —	4	4

Beasts, 6030; Sheep and Lambs, 32,450; Calves, 392; Pigs, 560.

THURSDAY, June 9.

We have a large supply of Beasts, and the warm weather makes buyers very cautious. Trade is dull, and it is difficult to maintain Monday's quotations for choice descriptions. Several remain unsold. The number of Sheep is also large and the demand small. We retain Monday's quotations, but a clearance cannot be effected. Lambs and Calves are selling about the same as on Monday. Our foreign supply consists of 740 Beasts, 2830 Sheep, and 559 Calves. Milch Cows, 55.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	6 to	4	10	Best Long-wools. ..	—	..		
Best Short-horns	4	4 —	4	6	Do. Shorn ..	4	6 —	4	10
2d quality Beasts	2	8 —	3	8	Ewes & 2d quality ..	—	..		
Best Downs and Half-breds	—	..			Do. Shorn ..	4	0 —	4	4
Do. Shorn ..	5	0 —	5	2	Lambs	6	4 —	7	4
					Calves	3	4 —	5	4
					Pigs	3	0 —	4	4

Beasts, 1635; Sheep and Lambs, 12,260; Calves, 77; Pigs, 160.

MARK LANE.—MONDAY, June 6.

The supply of English Wheat was moderate, that of Barley, Beans, and Peas limited, and of Oats the arrivals were to a fair extent. English Wheat sold steadily at last week's prices for the choicest qualities. Secondary sorts were dull and easier to purchase. There was a retail demand for foreign Wheat. Imports, 13,925 qrs. Town-made Flour remains unaltered. Country marks were taken quietly on former terms. Barley was in moderate request at former currencies for grinding samples. Malt was steady in value and demand. Beans were about the same as last week. Peas supported prices. Oats were in fair demand at quite as high rates for good corn. Imports, 8113 qrs.

PER IMPERIAL QUARTER		s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk ..	White	42	48	Red	40	48
— — fine selected runs ..	ditto	44	52	Red	40	48
— — Talavera		48	54			
— Norfolk		—		Red		—
— Foreign		36	52			
BARLEY, grind. & dist., 25s to 27s ..	Chev.	34	38	Malting ..	29	33
— Foreign .. grinding and distilling		22	26	Malting ..	27	31
OATS, Essex and Suffolk		18	22			
— Scotch and Lincolnshire—	Potato	20	25	Feed	18	22
— Irish	Potato	19	22	Feed		—
— Foreign	Poland and Brew	17	22	Feed	15	20
RYE		30	32	Foreign ..		—
RYE-MEAL, Foreign		—				—
BEANS, Mazagan.... 27s to 36s ..	Tick	30	33	Harrow ..	30	33
— Pigeon .... 32s to 40s ..	Winds.	—		Longpod		—
— Foreign	Small	36	42	Egyptian	30	32
PEAS, White, Essex and Kent ..	Boilers	32	33	Suffolk ..	33	34
— Maple .... 30s to 34s	Grey	28	30	Foreign ..	31	33
MAIZE	White	—		Yellow ..		—
FLOUR, best marks delivered ..	per sack	35	40			
— 2d do	ditto	28	34	Country ..	28	34
— Foreign	per barrel	15	25	Per sack	32	40

FRIDAY, June 10.

The weather since the 3d of June has been fine. The effects of the frost upon the Wheat plant have now become visible, but as it is the flag which is chiefly affected we do not apprehend any injurious results therefrom to the produce. The improvement we noted last week in the value of Wheat has been sustained during the present, but the tone of the trade is less buoyant, and as usual is affected by the fine summer weather. Former prices of spring corn have been generally well supported. Flour of fine brands has been in demand for export, and for such a slight advance has been realised. Since Friday last 67 grain-laden vessels have been reported arrived off the coast. The floating grain cargo trade has been firm in tone but not active, although the supplies have been better. Wheat was generally held at prices which were above buyers' notions, and hence there has been hardly anything done up to yesterday, when eight cargoes changed hands. Maize is in increased demand but not dearer. Barley quiet. Rye scarce. The arrivals of foreign Barley and English Oats this week have been good, of all other grain small, and of barrel Flour moderate. To-day's market was thinly attended, and the English Wheat left over from Monday has been cleared off at the prices of that day. Foreign is neglected and prices nominal. Spring Corn was unaltered in value, but there was rather more demand for Oats.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	860 qrs.	— qrs.	1320 qrs.	1370 sks.
Irish	—	—	1690	— ,,
				50 ,,
Foreign ..	1350 ,,	3050	13,170 ,,	7890 brls

LIVERPOOL, June 7.—Although we have had a good attendance from the country at to-day's market, Wheat has only moved slowly, and the buyer has had just the advantage. Flour is held at Friday's prices, but sellers find it difficult to make the recent advance. Indian Corn meets a fair consumptive inquiry, and from the small quantity offering mixed American is the turn dearer. Oats and Oatmeal dull but not lower. Beans scarce, but 6d. per qr. higher. Peas and Barley unchanged. Market closes without activity.

FRIDAY, June 10.—There was a fair attendance. Wheat in limited demand, and prices in favour of buyers. Flour: Western Canals in better demand at 19s. 9d. to 20s.; French quiet. Indian Corn steady; mixed, 28s. Egyptian Beans, Oats, and Oatmeal dull.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
April 30	39s 2d	30s 6d	19s 4d	28s 7d	33s 9d	32s 1d
May 7	38 9	30 3	19 5	32 8	34 0	32 1
— 14	39 3	29 9	19 8	28 5	34 3	32 6
— 21	39 8	29 6	20 0	31 5	34 2	32 9
— 28	39 5	29 0	19 10	27 7	34 6	31 9
June 4	38 11	29 6	19 10	28 4	34 10	33 5
Agg. Aver.	39 2	29 9	19 8	29 5	34 3	32 7

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	April 30.	May 7.	May 14.	May 21.	May 28.	June 4.
39s 8d	..	..	..		..	..
39 5	..	..	..	..		..
39 3	..	..		..	..	..
39 2		..	..	..	..	..
38 11	..	..	..	..	..	
38 9	..		..	..	..	..

WANTED, a PROPAGATOR and GREENHOUSE FOREMAN.—The Undersigned require, about the end of July, an experienced and successful Propagator of Stove, Greenhouse, and Soft-wooded Plants; must also be a good Cultivator of Specimen Plants. Unexceptionable references required.—Apply, stating age, where, and how long previously employed in same capacity, and wages expected, to Messrs. FRANCIS & ARTHUR DICKSON & SONS, The "Upton" Nurseries, Chester.

WANTED, an experienced middle-aged Man as WOODWARD to undertake the Sub-management of extensive Woods and Plantations. A married Man without incumbrance or a small family preferred. Unexceptionable references required.—Applications by post, stating salary expected, to be made to H. B. FESTING, Esq., Maiden Bradley, Frome, Somerset.

WANTED IMMEDIATELY, in the County of Bucks, and where there is a cottage, a general Single-handed GARDENER, married, without incumbrance, accustomed to Flower and Kitchen Gardening, and whose Wife has some knowledge of Poultry, and can occasionally take charge of the house.—Apply to Mr. BAKER 27, Queen Street, City, E.C.

WANTED, a WORKING GARDENER.—Must be industrious, honest, and skilful in the Growth of Plants and Flowers, the Selection of Shrubs and Trees, &c. One month on trial, and if suitable 20s. per week, and 15 per cent. on all flowers he grows, except specimen plants.—Inquire of the Proprietor, THOMAS CLAPHAM, Royal Park, Leeds. Letters not answered implies a negative.

WANTED, a COWMAN on a gentleman's Farm.—He must Milk and do general Farm work, and Kill Sheep and Pigs. Wages 14s. a week, with Milk, Firing, and Furnished Lodging. He must be a single man.—Address P. A., Post Office, East Sheen.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 38, married, no incumbrance; understands Greenhouses, Vines, Kitchen and Flower Gardens. Good character.—A. B., 4, Prospect Place, Ealing.

GARDENER (HEAD).—Age 35, married; has a good practical knowledge of his profession; can produce testimonials from his employers for the last 16 years, including eight in last situation.—J. K., Mr. Richard Smith, St. John's Nursery, Worcester.

GARDENER (HEAD).—Age 30, married; is competent in the growth of Stove and Greenhouse Plants; also the management of the Orchard House, Vinery, Successional Forcing, &c. Every inquiry will be found satisfactory. Country preferred.—W. L., 4, Glenmore Row, New Charlton, Kent.

GARDENER (HEAD).—Age 31, married; thoroughly experienced in Flower, Fruit, and Kitchen Gardens, also Early and Late Forcing; can take the Management of Meadow Land and Stock if required. Good character.—W. H. G., Drayton Green Cottages, Uxbridge Road, Ealing, Middlesex.

GARDENER (HEAD).—Age 32; thoroughly understands the Growing of Pines, Grapes, Peaches, Melons, Stove and Greenhouse Plants, the Management of Flower and Kitchen Gardens. Character will bear the strictest inquiries.—W. L., Messrs. Osborn & Sons, Fulham Nursery, London, S.W.

GARDENER (HEAD).—Scotch; married; thoroughly practical and working; is well up in modern Plant and Fruit Forcing; the Culture of Vines in pots, and the Management of Kitchen and Pleasure Gardens; has had experience as a Bailiff, and in the Erection of Horticultural Buildings. Four years' good character, and first-class testimonials.—F. J. H., J. Weeks & Co., Chelsea, S.W.

GARDENER (HEAD).—Of considerable experience; is now leaving his present situation; and as he has not got another in view, he would be glad to get employment under a first-class Gardener, until he meets with a suitable appointment. He wishes to gain more acquaintance with Ferns, Orchids, and Stove and Greenhouse Plants. To a competent Gardener he would pay 5l. for any time not exceeding a year.—Apply by letter to ALPHA, Post Office, Gainsborough.

GARDENER (HEAD), age 31, single.—J. HORWOOD, Gardener to G. H. Turnbull, Esq., The Rookery, Downe, Bromley, Kent, S.E., wishes to obtain a situation for his Foreman, who has served him for 4 years. He is fully competent to undertake a first-rate situation as Gardener, being of active and industrious habits, much experienced in the Forcing of Grapes and other Fruits, Flowers, and Vegetables; is a good Plantsman and Flower Gardener.—Address as above.

GARDENER (HEAD).—Middle-aged, married, no child; has a thorough practical knowledge of his profession in all its branches. Good references.—G. J., Fredk. G[illett], Nurseries, Blandford.

GARDENER (HEAD).—JOHN PEARSON, who has for upwards of two years Head Gardener to the Right Hon. Lord Foley, at Worksop Manor, Notts, will be at liberty at Lady-day next, to dispose of his services in a similar capacity. He is experienced in every department of Gardening, and can Layout; is thoroughly competent to undertake the Management of a large establishment. J. P. has been several years in the best places in England and Scotland. Can give unexceptionable references.

GARDENER (HEAD), or as GARDENER and BAILIFF.—Age 32; capable of undertaking all; Character to be obtained from some of the highest families in England.—E., 3, Eaton Terrace, St. John's Wood, London.

GARDENER (HEAD or SINGLE-HANDED).—Age 30, married; 10 years' experience in first-class places; good recommendation.—H. S., 48, Church Walk, Worksop.

GARDENER (HEAD), or a good single place.—Age 30, thoroughly understands his profession in all its branches; reference as to ability and character.—RD. JARRATT, Union Street, Maidstone, Kent.

GARDENER (HEAD, WORKING).—Age 36, married; has a thorough knowledge of the Management of Stove, Greenhouse and Late Forcing, Stove and Greenhouse Plants, &c. Two children; good character.—A. W., Mottingham, near Eltham, Kent.

GARDENER, to any lady or gentleman, lover of horticulture.—WILLIAM SMITH (married, and three children) has a large and varied experience in all branches of his profession; an innate love of the same; desires to be actuated by honour, based upon intelligent moral principles. Good references.—Street, Nunnery Lane, York.

GARDENER (UNDER or SINGLE-HANDED), where no objection to horse and carriage; would be useful; good character.—J. BILLING, Alford, Castle Cary.

GARDENER (UNDER.—Age 18; six years; character.—G. FENNELL, Bowden Hill, Chippenham.

GARDENER, or GARDENER and BAILIFF.—Married; thoroughly understands his business in all branches. Two daughters, 9 and 12 years of age. Wife as Dairy or Poultry woman if required.—H. G., Mr. Fletcher's, Mickleham, near Dorking, Surrey.

FOREMAN in a nobleman's or gentleman's Garden.—Age 21; 4½ years' good character.—T. J. S., Mr. J. [illegible], Merchant, Bull Ring, Ludlow, Shropshire.

FOREMAN, or FOREMAN and PROPAGATOR.—Age 29, married; upwards of 19 years' experience in London and Provincial nurseries. Thoroughly understands Soft-wooded Propagating, Budding, Grafting, &c. Good character.—A. B., Mr. Dean's Bradford Nursery, Shipley.

FOREMAN (or SINGLE-HANDED).—Age 35, understands Vines, Cucumbers, Melons, Stove and Orchard House, Kitchen and Flower Garden. Good character.—X. Y. Z., Post Office, Hersham, near Esher, Surrey.

PROPAGATOR and GROWER of Geraniums, Calceolarias, and Soft-wooded Plants generally. Has experience in Growing for exhibition and general routine of the best Nurseries near London.—A. B., No. 4, Weedington, Kentish Town.

A USEFUL MAN for the Season.—Budding Roses and Fruit Trees, Training, Layering, &c.—Harris, Stationer, 4A, Prince's Road, Notting Hill.

ASSISTANT to the Agent or Steward on a Home Estate where a high Premium would not be required. Son of a Clergyman, age 20, liberally educated, with some knowledge of Farming.—A. B., Post Office, Henley-on-Thames.

FARM BAILIFF.—Age 27, Scotch; has had experience in Steam Cultivation, Draining, and general Farming. Can be well recommended.—Apply to Mr. [illegible], Britannia Farms, near Bedford.

To the Nursery and Seed Trade.

SHOPMAN, or SHOPMAN and CLERK.—Age 22, has a thorough knowledge of his profession. Please address, with a first-class knowledge of plants, together with the same. Unexceptionable reference as to character and ability.—J. S., *Gardeners' Chronicle* Office, W.C.

HOUSE CARPENTER, and GENERAL FOREMAN.—Used to Farm Houses, Farm Buildings, Labourers' Cottages, &c. Recommended by a nobleman from his last situation.—3, Prince's Terrace, Alma Road, Wandsworth, S.W.

To Noblemen and Gentlemen.

CARPENTER on a gentleman's Estate.—Age 30, married; a good and experienced Workman. Good character as to character and ability.—H. H., Post Office, Beckenham.

THE GREENHOUSE in the STEREOSCOPE.—CRANSTON'S PATENT.
Six SLIDES of different Houses, Post free for 50 Stamps.
Single SLIDES, 12 Stamps each.
DESCRIPTIVE BOOK, fully illustrated (Second Thousand), Post free for 20 Stamps, from the Author and Patentee, JAMES CRANSTON, Architect, 1, Temple Row West, Birmingham.

HAIR RESTORED, preserved, and beautified by the use of ROWLAND'S MACASSAR OIL.—It prevents the hair falling off or turning grey, strengthens weak hair, cures scurf and dandriff, and makes it beautifully soft, pliable, and glossy. For children it is especially recommended, as forming the basis of a beautiful head of hair. Price 3s. 6d., 7s., 10s. 6d. (equal to four small), and 21s. per bottle. Caution—Ask for ROWLAND'S MACASSAR Oil. Sold at 20, Hatton Garden, E.C., and by Chemists and Perfumers.

AVOID PILLS and all other Medicines, that only aggravate and perpetuate diseases; their annoyance, discouragement, and all doctors' bills may be avoided by invalids in indifferent health sending their address to H. G. BOWEN, 77, Regent Street, W., London, and they will receive, post free, by post, the NATURAL REGENERATOR of perfect health, strong nerve, sound lungs and liver, refreshing sleep, and muscular energy to the most enfeebled, ensuring the rapid cure of indigestion (dyspepsia), constipation, distension, and spasms of the stomach, hæmorrhoids, torpidity of the liver, pains between the shoulders and at the pit of the stomach, nervousness, unfitness for study, fear, palpitation, consumption, bronchitis, dropsy, diarrhœa, dysentery, fevers, sore throats, catarrhs, colds, noises in the ears, rheumatism, gout, impurities, eruptions, scrofula, epilepsy, hysteria, neuralgia, irritability, sleeplessness, nervousness, headache, despondency, cramp, spasms, sinking, &c.

Valuable Remedies for the Afflicted.

DR. ROBERTS'S CELEBRATED OINTMENT, called "The Poor Man's Friend," is confidently recommended to the Public as an unfailing remedy for wounds of every description, a certain cure for Ulcerated Sore Legs, if of a year's standing, Cuts, Burns, Scalds, Chilblains, Scorbutic Eruptions, Sore Heads, Sore Feet, the Face, Sore and Inflamed Eyes, Sore Heads, Scurvy, Piles, Fistula, and Cancerous Humours, &c. Sold in Pots at 1s. 1½d., 2s. 9d., 11s., and 22s. each.—Also his PILULÆ ANTISCORBUTICÆ, confirmed by 60 years' experience to be, without exception, the best alterative medicines ever compounded for purifying the blood and assisting Nature in all her operations. Hence their efficacy in Scrofulas, Scorbutic Complaints, Glandular Swellings, such as those of the Neck, &c. They form a mild and safe Aperient, that may be taken at all times without confinement or change of diet. Sold in boxes at 1s. 1½d., 2s. 9d., &c.—Sold Wholesale by the Proprietors, BEACH & BARNICOTT, late Dr. Roberts' Dispensary, Bridport; by the London Houses, Reading, and all respectable Medicine Vendors in the United Kingdom and the Colonies. Observe: No Medicine sold under the above name can be genuine unless "BEACH & BARNICOTT, late Dr. ROBERTS'S," is engraved on the Government Stamp affixed to each package.

The Gardeners' Chronicle Newspaper.

SATURDAY, JUNE 18, 1864.

IN the ARCADES on the South Side of the Royal Horticultural Gardens on JUNE 22, Her Royal Highness the PRINCESS of WALES will OPEN the GRAND FETE and BAZAAR in aid of the BUILDING FUND of the FEMALE SCHOOL OF ART, 43, Queen Square, Bloomsbury, W.C.

Admission by Tickets: June 23, 5*s.*; or at the doors, 7*s.* 6*d.*; FRIDAY, June 24, 2*s.* 6*d*; SATURDAY, June 25, 1*s.*; which may be obtained of Mr MITCHELL, Royal Library, 33, Old Bond Street; Messrs. LEWIS & ORTON, 168 New Bond Street; Messrs OLLIVIER & Co., 17, Old Bond Street; Messrs. CHAPMAN & HALL, 193, Piccadilly, Mr. AUSTIN, Ticket Office, St. James's Hall, Piccadilly; Westminster Library, Knightsbridge, Messrs KEITH, PROWSE, & Co., 48, Cheapside; at all the entrances of the Horticultural Gardens; and of the Secretary, Miss GLYNN, 43, Queen Square, Bloomsbury, W.C.

News of the Week.

IN the House of Lords on Friday the Duke of SOMERSET, in reply to the Earl of HARDWICKE, described the intentions of the Government with regard to the reform of the government of Greenwich Hospital. On Monday Earl GRANVILLE moved, that in accordance with HER MAJESTY'S Message, a pension of 1000*l.* per annum should be granted to the Countess of ELGIN, with an additional 1000*l.* per annum from the Exchequer of India. The motion was agreed to. Lord WHARNCLIFFE moved an address to the Crown praying that the late decision of the Privy Council for the removal of the West Riding Assizes from York to Leeds, instead of to Wakefield, be reconsidered. The motion was opposed by Government, but was carried on a division by 80 to 54. The Public Schools Bill and the Scottish Episcopal Clergy Disabilities Renewal Bill passed through committee. The Admiralty Lands and Works Bill and the Court of Justiciary (Scotland) Bill were reported with amendments. The Insane Prisoners Act Amendment Bill was read a third time and passed. On Tuesday Earl GRANVILLE moved that, in accordance with the Message of the QUEEN, a sum of 20,000*l.* be granted to Sir Rowland Hill. The motion was agreed to. The Mortgage Debentures Bill was reported with amendments. The Ecclesiastical Courts and Registries (Ireland) Bill passed through Committee, with the exception of three clauses, which were withdrawn. The report of the amendments on the Public Schools Bill was received and adopted. The Court of Justiciary (Scotland) Bill was read a third time and passed. On Thursday, in answer to the Earl of HARDWICKE, the Duke of SOMERSET stated that it was intended to convert a certain number of Armstrong guns from breech-loaders into muzzle-loaders, and to rifle them on the "shunt" principle. The Chain Cables and Anchors Bill, the Summary Procedure (Scotland) Bill, and the Improvement of Land Act Bill passed through committee. The Mortgage Debentures Bill, the Public Schools Bill, and the Scottish Clergy Disabilities Bill were read a third time and passed.

In the Commons on Friday Lord R. CECIL moved that the duty of ascertaining the facts upon which legislation in respect to private Bills is to proceed should be discharged by some tribunal external to the House. Mr. M. GIBSON opposed the motion, and after considerable discussion it was withdrawn. A resolution moved by Mr. J. B. SMITH in favour of a gold currency for India was also withdrawn. The House went into a Committee of Supply, when, on the motion of Lord PALMERSTON, the sum of 20,000*l.* was voted to Sir ROWLAND HILL, in pursuance of HER MAJESTY'S Message. The report of the Countess of ELGIN'S pension of 1000*l.* a year, and that of the Greek Loan, were brought up and agreed to. On the motion for the second reading of the Weighing of Grain (Port of London) Bill the House was counted out. On Monday Mr. SMOLLETT moved for the appointment of a Select Committee to inquire into the claims of AZEEM JAH to the title and dignity of the Nawab of the Carnatic, and further to report upon the circumstances under which the treaty entered into between his father and the East India Company, in 1801, had been declared void. After some discussion the motion was negatived on a division by 62 to 45. The House then into a Committee of Supply on the Miscellaneous Estimates, and agreed to several votes. Mr. CARDWELL moved a resolution authorising the Government to guarantee a loan of 1,000,000*l.* to the colony of New Zealand. After a short discussion the resolution was agreed to. On the order for the third reading of the Collection of Taxes Bill, Sir W. JOLLIFFE moved the adjournment of the debate. The motion was seconded by Mr. NEWDEGATE, but was negatived on a division by 58 to 30. The debate was, however, ultimately adjourned. The Report of the Committee of Supply was brought up and agreed to. The Public and Refreshment Houses (Metropolis) Bill was recommitted. On Tuesday Mr. BRUCE moved the second reading of the Factory Acts Extension Bill, and said that it was founded upon the report of the Royal Commissioners appointed by the late Sir G. LEWIS to inquire into the condition of young children employed in certain manufactories. Lord INGESTRE moved that the Bill be referred to a select committee. After some discussion the amendment was withdrawn and the Bill was read a second time. Mr. HUBBARD moved a resolution that the inequalities and injustice attending the operation of the Property and Income-tax disqualify it for being reimposed in its present form as one of the means of levying the national revenue. The CHANCELLOR of the EXCHEQUER opposed the motion, which was negatived on a division by 67 to 28. Sir H. CAIRNS moved that the rules sanctioned by the Commissioners of National Education in Ireland, in November last, so far as regarded their operation on convent and monastic schools, were at variance with the principles of the system of national education. The ATTORNEY-GENERAL FOR IRELAND opposed the motion, and the debate was ultimately adjourned. On Wednesday Mr. C. FORSTER moved the second reading of the Forfeiture of Lands and Goods Bill, and said that its object was to protect the goods of persons convicted of crime from being seized and forfeited by the Crown. Mr. HUNT moved as an amendment, that the Bill be read a second time that day three months. After some discussion, the amendment was negatived without a division, and the Bill was read a second time. Mr. BUTT moved the second reading of the Security for Costs Bill. Mr. WHITESIDE moved that the Bill be read a second time that day three months. On a division the second reading was carried by 99 to 64. The County Voters Registration Bil was read a second time. The Servants Hiring (Scotland) Bill passed through committee with amendments. The adjourned debate on the motion for going into committee on the Elections Petitions Bill was then resumed, and was not concluded on the arrival of the hour for adjournment. The County Constabulary Superannuation (Ireland) Bill passed through committee. On Thursday Mr. FERRAND moved for a Select Committee to inquire into the construction, expense, and working of the Board of Charity Commissioners. The motion was opposed by Government, and after a long discussion was negatived on a division by 116 to 40. The House then went into a Committee of Supply upon the remaining Miscellaneous Estimates, and agreed to several votes. The Public and Refreshment Houses (Metropolis) Bill was read a third time and passed.

Accounts from Copenhagen state that the Rigsraad has been convoked for the 25th inst., and that many of the notables of that capital have proposed an address to the KING recommending an intimate constitutional union of Schleswig with the kingdom as essential for the independence of Denmark, and denouncing a personal union of Schleswig-Holstein as destructive of the kingdom.

We have news from New York to the 4th inst. General GRANT has altered the whole plan of his operations. Finding General LEE'S position between the North and South Anna Rivers to be too formidable for assault, he re-crossed the North Anna River, and marched to Hanover Town, where he crossed the Pamunkey and took up a position three miles to the south of that river. General LEE, on discovering this movement, rapidly swung round his left, and took up a position north of the Chickahominy, fronting the Federal forces, and completely covering Richmond. During these manœuvres some fighting took place, in which the Federals claim to have had the advantage. The latest despatch from General GRANT, dated June 3, states that on the previous day he made an attack on General LEE'S line, and drove the Confederates within their entrenchments, capturing 300 prisoners. The Federal loss is admitted to have reached 3000 in killed and wounded. There is also a report from Confederate sources of the defeat of a portion of General SHERMAN'S forces in Georgia, with a loss of from 5000 to 7000.

Home News.

THE COURT.—On Thursday afternoon, the 9th inst., the Queen, accompanied by Princess Louis of Hesse, Princess Beatrice, and Princess Leiningen, drove out in a carriage and four. In the evening Prince Alfred dined at Frogmore House with the Prince and Princess of Wales. Earl Granville had an audience of the Queen. On Friday morning her Majesty drove out in a carriage and four, accompanied by the Prince and Princess Louis of Hesse and Princess Leiningen. The Prince and Princess of Wales visited her Majesty from Frogmore House, and remained to luncheon. In the afternoon the Queen held a Privy Council, at which an order was approved constituting Leeds an assize town for the West Riding of Yorkshire. Earl Granville, Earl Russell, and Sir George Grey had audiences of the Queen. On Saturday morning the Queen walked and drove in the grounds, accompanied by Princess Louisa. The Prince and Princess Leiningen and the Princess Alberta of Leiningen afterwards took leave of her Majesty, and left the Castle. Princess Helena and Princess Louis of Hesse returned to the Castle from London. In the afternoon her Majesty drove out, accompanied by Princess Louis of Hesse. In the evening Prince Louis of Hesse arrived at the Castle from London, accompanied by Prince Hermann of Solms, Prince Ysenburg Budengen, and Count Erbach. Prince Alfred also arrived at the Castle. On Sunday morning the Queen, Princess Louis of Hesse, Prince Alfred, Princess Helena, Princess Louisa, and Princess Beatrice attended Divine service in the private chapel. The Dean of Windsor officiated. On Monday the Queen came to London expressly to visit the Duke of Newcastle, who is alarmingly ill. The Queen afterwards went to the Deanery at Westminster. Princess Louis of Hesse accompanied the Queen. Prince Alfred and Prince Louis of Hesse came to London. In the afternoon Princess Helena and Princess Louisa left the Castle for Buckingham Palace. In the evening Prince Hermann of Solms, Prince Ysenburg-Büdengen, and Count Erbach returned to London. The Princess Louisa returned from London at night. On Tuesday morning the Queen, accompanied by the Princess Louis of Hesse, walked and drove in the grounds. In the afternoon her Majesty and the Princess Louis of Hesse left Windsor for Twickenham to visit the Duke and Duchess d'Aumale. Prince Alfred, Princess Helena, and Prince Louis of Hesse returned from London. The Duke and Duchess of Buccleuch and Lady Victoria Scott arrived at the Castle on a visit. On Wednesday morning the Queen drove in the grounds, accompanied by Princess Louis of Hesse. Prince Alfred, Princess Helena, and Prince Louis of Hesse rode on horseback. Prince Philip of Wurtemburg and the Duchess of Wellington arrived at the Castle on a visit. On Thursday morning the Queen, accompanied by Princess Louis of Hesse, walked and drove. Prince Alfred came to London. The Chancellor of the Exchequer had an audience of the Queen. According to present arrangements the Queen and Royal family are expected to remain at Windsor till about the second week in July, when they will remove to Osborne. The Court will afterwards return to Windsor for a few days, and then go to Balmoral for the autumn.

THE PRINCE AND PRINCESS OF WALES.—On Saturday morning the Prince, accompanied by Prince Alfred and Prince Louis of Hesse, went to Chatham to witness the siege operations. The Princess took a carriage drive, accompanied by Princess Mary of Cambridge. In the evening the Prince and Princess, accompanied by Prince Alfred and Prince Adolphus of Mecklenburg Strelitz, went to the Italian Opera, Covent Garden. On Sunday morning the Prince and Princess attended Divine service at the Chapel Royal St. James's. The Sub-Dean preached the sermon. On Monday morning the Prince presided at a Council of the Duchy of Cornwall. The Princess took a carriage drive. In the afternoon the Prince, accompanied by Prince Alfred and Prince Louis of Hesse, rode out on horseback. In the evening the Prince and Princess, accompanied by Prince Alfred and Prince Louis of Hesse, went to the Caledonian Ball. On Tuesday morning the Prince visited the Duke of Newcastle. His Royal Highness afterwards visited the Duke of Cambridge, accompanied by Prince Alfred and Prince Louis of Hesse. In the afternoon the Princess, by command of the Queen, held a Drawing Room at St. James's Palace on behalf of her Majesty. The Prince and Princess afterwards visited Prince Arthur at Blackheath. On Wednesday, being Apposition Day at St. Paul's School, the Prince, after taking luncheon with the

Mercers' Company, visited the school, and attended the exercises of the day. In the afternoon the Prince and Princess went to Somerset House and inspected the Civil Service Volunteers. The Prince afterwards rode on horseback. The Princess took a carriage drive. On Thursday the Prince, accompanied by Prince Alfred, went to Gravesend and witnessed the sailing match of the Royal Thames Yacht Club. The Princess took a carriage drive. In the evening the Prince and Princess, accompanied by Prince Alfred, went to the Haymarket Theatre.

COURT ARRANGEMENTS.—It is announced that her Majesty's Ball, announced to take place on the 27th inst., has been postponed till the 29th inst.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday, and another was held yesterday.

THE CONFERENCE.—The sitting of the Conference, which stood adjourned at its last meeting to Wednesday, and was subsequently further adjourned to Thursday, was on that day again put off until Saturday (to-day).

LORD LIEUTENANCY.—It is stated that the Earl of Cork has been appointed lord-lieutenant of Somersetshire, in the room of Lord Portman, resigned.

PARLIAMENTARY MOVEMENTS.—The death of Lord A. Vane Tempest has caused a vacancy for North Durham. Sir Hedworth Williamson is mentioned as likely to become a candidate for the vacant seat in the Liberal interest.

KNIGHTHOOD.—The Queen has conferred the honour of Knighthood upon William Shee, Esq., one of the Judges of her Majesty's Court of Queen's Bench.

THE CHANNEL FLEET, consisting of the Edgar, 71, flag-ship of Rear-Admiral Dacres; Black Prince, 41; Warrior, 40; Defence, 16; and Prince Consort, 35, left Plymouth on Monday for Spithead, there to await further orders.

INSPECTORS OF SCHOOLS.—The Queen in Council, on a representation of the Committee of Council on Education, has ordered that her Majesty's Assistant-Inspectors of Schools shall all have the rank and title of her Majesty's Inspectors of Schools.

CIVIL LIST PENSIONS.—The following is the list of civil list pensioners for the past year:—Lady Inglis 500*l.*, as an acknowledgment of the brilliant services of the late Sir J. Inglis, during the Indian mutiny, especially the gallant defence of the Residence at Lucknow—services to which may partly be attributed his early death. Miss Eliza Cook 100*l.*, in consideration of her literary labours, both in poetry and prose, and her failing health. Rev. C. B. Gibson 100*l.*, as author of many literary works, and for the high testimony borne as to their value. Mr. Sheridan Knowles 100*l.*, in consideration of the talents of her late husband, Mr. J. Sheridan Knowles, as a dramatic author. Mr. Kenny Meadows 80*l.*, in acknowledgment of his merits as an artist, more especially evinced by his illustrations of Shakespeare. Miss Dinah Mulock 60*l.*, authoress of "John Halifax, Gentleman," "A Life for a Life," and other well-known works of fiction. Mr. W. Allingham 60*l*, on account of the literary merits of his poetical works. Mrs. Austin 60*l.*, in consideration of the services of her late husband, a civil engineer, who died whilst engaged in the public service, and who had devoted himself to the sanitary improvement of poor dwellings. Mrs. Leaf 50*l.*, as the widow of Mr. J. Leaf, who though of humble origin, was a contributor of articles of great merit to various journals. Mrs. Jean Williamson Thomson 30*l.*, sister of Mr. Hugh Miller, on account of his literary merit.

DEPOSITION OF BISHOP COLENSO.—Messrs. Brooks and Dubois, Proctors for the Metropolitan Bishop of Capetown, served on the 7th inst. a copy of the sentence of deposition on Bishop Colenso, in which the Metropolitan says—"We do, accordingly, decree and sentence the said Bishop of Natal to be deposed from the said office as such Bishop, and prohibited from the exercise of any divine office within any part of the Metropolitan Province of Capetown."

Foreign.

FRANCE.—The Emperor returned to Paris on Monday evening, and on the following morning his Majesty received Baron von Budberg, the Russian Minister in Paris. The latter left on Thursday for Kissingen to meet the Emperor of Russia. On Tuesday the Emperor presided at a Cabinet Council. The *Moniteur* of Friday evening says:—

"The Plenipotentiaries of the belligerent Powers at the London Conference have agreed to meet in order to amicably settle, under the auspices of one of the representatives of the neutral Powers, the disputed points relative to the carrying out of the armistice. The French Plenipotentiary has been chosen for this work of conciliation."

The *Pays* of Friday contained an article in which it believed itself enabled to state that the English Conservative party has decided upon bringing the present Cabinet to account relative to the whole of its acts since the commencement of the Dano-German conflict. It will also, it continues, openly, solemnly, and unanimously declare that the only guarantee and the only safeguard of peace remains in the general Congress proposed by the Emperor Napoleon. The same paper of Tuesday asserts that at the next meeting of the Conference England will propose a new line of demarcation, which is to traverse the mixed districts of Schleswig, from the Bay of Gametling to the south of the town of Brested. It considers, however, that it is doubtful whether the proposal will be accepted by Denmark. The same paper of Thursday says of the news of the fresh adjournment of the Conference:—

"These delays show, it is true, that the work of the Conference is very difficult, but they also leave us at liberty to suppose that the plenipotentiaries are determined not to meet without a previous agreement upon divers essential points, and when they do assemble, their meeting is likely to have a more satisfactory result than heretofore."

La France contains a statement respecting the new line of demarcation, similar to that referred to by the *Pays*, and adds:—

"Denmark, having been semi-officially consulted, has declared that the line of the Dannewerke is the only one she will accept."

The *Constitutionnel* of Saturday, in an article signed by M. Limayrac, observes that Denmark consents to a sacrifice, since with Germany the question is more or less one of increasing her territorial acquisition. The writer continues:—

"The situation of the two parties is entirely different—the one making a sacrifice should clearly inspire more interest than the one making an acquisition."

The same paper of Thursday, in an article signed by M. Limayrac, states that in case hostilities be recommenced England will be compelled to participate in the Dano-German conflict by her maritime interests in the Baltic, as well as by the fact that a family question is involved, and also by a state of things which the English Cabinet has created for itself, and which, already belonging to history, it is useless to dissemble. It adds:—

"None of these necessities exist for France; and we may therefore congratulate ourselves, because, if even with the intervention of England the war should remain limited, it would become general should France take part in it. If Europe has not to fear the scourge of a general war, it is to the far-seeing wisdom and moderation of the Imperial Government that it will be due."

The *Mémorial Diplomatique* of Saturday states that Earl Russell confidentially communicated to Count Apponyi the Danish note remitted to the former on the 2d of June, announcing the resumption of hostilities by Denmark on the 12th of June should the belligerent Powers not previously come to an agreement. Earl Russell at the same time intimated that should the Austrian fleet proceed to the Baltic, in the event of hostilities being resumed, the English Government would be compelled to send their fleet to those waters also. It continues as follows:—

"Count Apponyi is thereupon stated to have declared to Earl Russell that in the interest of the negotiations, and in order not to obstruct the combined efforts of the neutral Powers towards peace, Austria undertook, if the truce were not prolonged, not to send her fleet to the Baltic, wishing, at any price, to avoid a collision which would extend the Dano-German conflict, and might set the four corners of Europe on fire."

The *Gazette de France* of Saturday evening publishes, under reserve, a rumour asserting that the Emperor of Russia will come to Paris in a few days under the strictest incognito. The funeral of Marshal Pelissier, Duke of Malakoff, took place on the 9th inst., in the Chapel of the Invalides, with the usual military honours. Nearly 20,000 men of all arms took part in the solemnity. The arrangements rendered necessary by the death of Marshal Pelissier are said to be decided. Marshal M'Mahon, Duke of Magenta, will become Governor-General of Algeria; General Desvaux, at present Commanding-in-Chief the province of Constantine, will be Deputy-Governor; General Nesmes-Demauts, Commandant of Constantine; and General Martimprey will be recalled and named Senator. The Imperial decree nominating M. Renan Assistant-Curator of the Imperial Library has been cancelled, and M. Renan has been deprived of his functions as Professor in the College of France. Domiciliary visits have been made to the houses of about 20 advocates, amongst whom are MM. Carnot, Garnier-Pages, Dréo, Floquet, and others. They were suspected of having been members of an illegal association at the late elections. General Dembinski, Commander-in-Chief of the Polish insurrection of 1831, has just died in one of the Paris hospitals. The Alabama has arrived at Cherbourg, and been admitted to free *pratique*. She landed the crews of two captured Federal merchantmen, and is to be permitted to repair in dock. The Federal corvette Kearsage has since appeared off Cherbourg, looking out, as it is supposed, for the Alabama whenever she shall leave the port. Orders have been sent down to Cherbourg to change the armament of the iron-clads Magenta, Solferino, and Couronne. They are henceforth to carry rifled 30-pounders, 50-pounders, and four rifled 8 inch howitzers.

ALGERIA.—The latest despatches from Algeria are favourable. General Rose obtained a brilliant victory on the 6th in the province of Oran, repulsing an attack of the enemy, who had 200 killed and many wounded. The Marabout Si-El-Azerey, the instigator of the revolt, was among the killed. His death has been followed by dissension among the insurgents, for on the following day the Ouled Chaib and the Harrars are said to have asked pardon of General Deligny. Several labourers from Kabylia and from the Djurjura had, moreover, arrived at the plains in the neighbourhood of Algiers to seek employment in getting in the harvest. This incident is regarded as a proof that the inhabitants of those provinces are disposed to remain quiet. The troops at present Algeria amount to 54,000 men fit for action. Of these there are nearly 25,000 in the province of Oran.

SPAIN.—In the sitting of the Cortes on Senor Nocedal said—"The diffusion of dangerous ideas must be prevented by all means. The abolition of the word 'democracy' in the newspapers, to make them liable to punishment." The first article of the new press law was passed by the Cortes on Monday by a vote of 147 to 9. On Tuesday the Council of Ministers was occupied with the Peruvian question. It is asserted that the Cortes will be closed on the 20th. The *Epoca* says that the differences existing between Peru and Spain will be settled by direct negotiations between the two Powers. Another journal says that the representatives of England and France have taken joint steps in a non-official character to effect a reconciliation.

PORTUGAL.—The Cortes will be closed on the 15th inst. At Coimbra fires have occurred in the houses of several of the professors. Suspicions have fallen on the students, in consequence of which the Council of the University have suspended the lectures. No provision has been made for the security of the professors. The latest news says that tranquillity is completely restored. Very stormy weather has been experienced along the Portuguese coast.

DENMARK.—The Rigsraad (Common Assembly of the Kingdom and Schleswig) has been convoked for the 25th of June. A number of Notables of Copenhagen have proposed the following address to the King:—

"An intimate constitutional union of Schleswig with the kingdom is the essential condition for the independence of Denmark and the development of her nationality. A real union of Schleswig Holstein with the kingdom would mean the loss of Schleswig and the fall of Denmark. It would be impossible that the Government should consent to such a solution. A continued prolongation of the armistice would be possible unless the basis of a satisfactory peace be proposed."

The *Morning Post* states that the following declaration was made by the Plenipotentiaries of Denmark at the sitting of the Conference on the 2d inst.:—

"When at the period of the conclusion of the Treaty of London the present King of Denmark accepted the offer made of him to succeed to the then reigning Line, His Majesty's resolution was dictated principally and decisively by the firm hope that Europe would know how to maintain the rights which she had recognised and agreed to by this same Treaty. His Majesty did not wish by his refusal to raise any obstacle to the integrity of the Danish monarchy, or any ulterior guarantee of stability, and he knew by these conditions and sacrifices made by those having the right of accepting the offer made to him he compromised the rights of no one. Since then things have changed, and his Majesty has been obliged to submit to almost cruel disappointments in spite of his own efforts and those of his devoted people, the sole support for the realisation of a work in which the whole of Europe had concurred—his Majesty was obliged to take into consideration the possibility that it would not be realised. If it must be so, if the Powers of Europe really wish to abandon the Treaty of London, His Majesty, to avoid the resumption of hostilities, will oppose a territorial cession, provided always that he can obtain thereby not only peace, but also the perfectly autonomous, existence for that which belongs to him of his States, and on condition that the integrity of the ceded territories should not be fixed without consent. The Danish Government accepts, therefore, the proposition made at the last sitting by Earl Russell for re-establishment of peace between Denmark and the German Powers. But in order that peace, which we wish for, may be real, it must be under all conditions which will be necessary to assure to Denmark the integrity which comes to her by right, the political independence which the Treaty of London should guarantee to her, and for the preservation of which the Danish people hesitated to engage single handed in a sanguinary war with forces greatly superior to their own. The Danish plenipotentiaries feel bound to observe from the present that in the sacrifices wished to be imposed on Denmark there are limits which the Danish Government cannot exceed. The frontier of Denmark is a vital question for this country; it is necessary that she should possess a frontier having relation to her military and commercial interests, and that it ought to be fixed by sufficient guarantees. There is a point on which the Danish Government reserves itself to consult the kingdom. It is only on quite special conditions that His Majesty the King of Denmark will consent to the cession of the Duchy of Lauenburg. This duchy was acquired in his time by the King of Denmark in exchange for a part of Pomerania, to serve as an equivalent for the kingdom of Norway, sacrificed for the re-establishment of the peace of Europe, and it is essentially foreign to the question which has caused the present war. Finally, the Danish plenipotentiaries ought to claim for their Government the right to re-assume the position which it has incontestably maintained up to the present time, on the basis of the Treaty of London, as soon as it sees that the provisions and conditional abandonment of this position will not establish an equitable and just arrangement fitting to replace the stipulations of this treaty."

Baron von Scheel-Plessen, the Danish Ambassador to the Court of St. Petersburg, arrived at Copenhagen on Thursday. It is said that he is the bearer of a proposal on the part of Russia to establish Schleswig and Holstein within the Danish monarchy, while preserving the integrity of the kingdom. The *Dagbladet* of the 15th calls upon the Government, at the resumption of hostilities, should assistance from England and Sweden then be withheld, to seek support from the revolutionary elements of Europe, instead of from legally constituted Governments, which have forsaken the cause of Denmark. It also urges the formation of a foreign legion and the acceptance of Garibaldi's offer. The new railway line which has just been completed between Copenhagen and Elsinore was opened by the King last week.

THE DANISH DUCHIES.—A meeting of delegates from 107 political associations took place at Neumünster on Friday, at which it was resolved to address an appeal to the inhabitants of North Schleswig, expressing the views of Holstein on the

questions — those views being, in the words of the resolution, — no separation of the Duchies; no division of Schleswig; and a free and independent Schleswig-Holstein as far as the Königsau. Seven of the most respectable inhabitants of the Island of Sylt (on the western coast of Schleswig), some of whom were members of the deputation who recently went to Berlin, have been conveyed to Copenhagen by Captain Hemmer, of the Danish Navy. The Germans have abandoned Aalborg and withdrawn south. The Dannebrog is displayed upon all the houses in the town. The *Dagbladet* of Saturday says:—

"Schleswig-Holstein as a separate State within the Monarchy is incompatible with Denmark's rights and honour. No Danish King can listen to such a plan. A Government inclined to such a proposal would soon learn that the people will not sacrifice their national independence at any price."

FRANKFORT.—In the sitting of the Conference on Thursday week the Plenipotentiary of the Germanic Confederation made a declaration, in which he laid down the principle that no part of Schleswig can be ceded to Denmark without the consent of the population. The Frankfort *Post Zeitung* of Thursday, in a telegram from Vienna, states that the sitting of the Conference had again been adjourned, the Danish plenipotentiaries having declared that they were without instructions as to any further proposals in reference either to the armistice or to the division of Schleswig.

AUSTRIA.—The Emperor of Austria, accompanied by the Empress, arrived at Munich on Wednesday morning, and were received at the railway terminus by the King and the Royal Princes. In the evening their Imperial Majesties continued their journey to Kissingen, where they will meet the Emperor of Russia. From Kissingen the Emperor will proceed to Carlsbad, on a visit to the King of Prussia. The three Monarchs will be accompanied by their Ministers of Foreign Affairs. The *Oesterreichische Zeitung* of Saturday says:—

"The British Cabinet vehemently opposes the line of demarcation proposed by the German Powers, and even goes so far as to threaten warlike demonstrations."

It is said that Austria has put forward a candidate of her own for the throne of the Duchies, in the person of a Prince of Wasa, "descendant of the kings of Sweden," and "head of the intermediate Gottorpian branch of the House of Oldenburg." Several of the Austrian men-of-war at Trieste have received orders to be in readiness for war, in order to join the squadron of the North if necessary. It is reported that the third division of the fleet will be sent immediately to the North Sea. It is asserted that Baron von Poche, Governor of Mähren, will be appointed Minister of Commerce.

PRUSSIA.—Herr von Bismarck received a deputation from Schleswig on Sunday. He subsequently had a conference, lasting several hours, with Prince Gortschakoff, at which Councillor Von Oubril, the Russian ambassador in Berlin, was present. A protracted sitting of the Council of Ministers took place in the afternoon, and in the evening the King received the Minister President and Prince Gortschakoff. The interview lasted some time. Another Ministerial Council was held in the Royal Palace on Monday. Prince Gortschakoff proceeded on his journey to Kissingen on Tuesday morning. The King will leave for Carlsbad to-day. Herr von Bismarck will follow later. The semi-official *Nord Deutsche Allgemeine Zeitung* of Monday says:—

"Prussia has, up to the present time, insisted most decisively on the line of demarcation in Schleswig being drawn at Apenrade and Tondern. She also maintains that, in the event of any division of the duchy, the wishes of the population should be consulted."

The same paper of Tuesday says that the Prussian Government has not purchased vessels in France, as stated in some of the Berlin papers, but in America, and that largely. The *Provincial Correspondenz* publishes an article headed "The Government and the Diet," which concludes thus:—

"We hope that the glorious impressions made by recent events will have contributed to allay the unhappy dissension which has of late years prevailed, and that the same Chamber of Deputies which formerly opposed its veto to the Ministerial proposals will now support the Government in fulfilling the important tasks relating to Schleswig-Holstein, Prussia, and Germany. Should events of a more critical nature than the present arise, the Government will certainly not await the exhaustion of the present financial resources, but will summon the representatives of the country in the hope that an active and patriotic support will be obtained from them."

ITALY.—In the Chamber of Deputies on Monday, a question was put by Signor Mordini respecting the Danubian Principalities and Tunis. The Minister for Foreign Affairs, in reply, declared that in the diplomatic negotiations about to take place, the Italian Government, as a guaranteeing Power, was ready to take into consideration the present position of affairs, and to endeavour to find elements of agreement between the Powers. With regard to Tunis, the Minister declared that the necessary steps had been taken to protect the numerous Italian colony there. Italian policy requires the independence of Tunis. The Government will follow the course of events in order to preserve the influence due to Italy. The subject then dropped. The *Stampa* of Saturday evening says:—"The statement made by the *Gazette de Cologne*, that negotiations had recently taken place between France and Italy, is partly inaccurate and partly false."

RUSSIA.—Prince Gortschakoff left St. Petersburg on Friday for Berlin and Kissengen. The *Deutsche Petersburger Zeitung* of Saturday, in announcing the transfer of the Emperor's rights over a part of Schleswig Holstein, says:—"By this step of Russia the succession question between the houses of Oldenburg and Augustenburg is made an essentially internal question of Federal right, to be settled by the Diet." The same paper of Thursday publishes a semi-official article pointing out the absurdity of the assertions of the *Augsburg Gazette* that a personal union of the Duchies with Denmark, under the rule of a Prince of the Oldenburg branch, was aimed at by Russia; and that this would be rendered possible by the abdication of King Christian IX., and by the payment of an indemnity to the Duke of Augustenburg.

POLAND.—It is asserted that Russia is endeavouring to conclude with Austria and Prussia a treaty by which the three Powers would mutually guarantee their possession of the Polish provinces. The *Oyczyzna* of Monday says that the Russians have razed the village of Pruszanka, the inhabitants of which had bastinadoed a spy. Men, women, and children have been sent half-naked to Siberia. A decree of the National Government prohibits the purchase of national landed property sold by the Russians, declaring the sale to be null and void, even at third hand.

TURKEY.—On Friday Prince Couza, who has been received with great distinction at Constantinople, dined with the French Ambassador. In consequence of this visit the concentration of Turkish troops on the Danube has been countermanded. It is asserted that the arrangements suggested by Sir H. Bulwer have been agreed upon between the Porte and the Prince. These relate to a new Constitution, with a Senate and other important changes. The Conference regards the late proceedings in the Principalities as null. The Prince is daily expected to return to Bucharest. The Circassian emigration still continues. The emigrants are dying by hundreds.

TUNIS.—Advices from Tunis state that the Vice-Consuls, with the exception of that of England, had gone on board the ships of their respective nations. The Bedouins were disposed to recognise the sovereignty of the Porte, and to request the abolition of the Regency. Some of the ships in port had been assailed by Tunis pirates. Much agitation and alarm prevail in the town. The Arab Bey, Ali Ben Rdam, is said to have appointed a Bey of the Camp (this being the official title of the heir presumptive to the Regency of Tunis), and to have despatched him with a force of 5000 horse to the neighbourhood of Testour, 24 hours' march from Tunis.

PERSIA.—The Shah of Persia has resolved to send 20,000 men against the Turkomans of Astrabad, who are continually ravaging the province of Mauderazan.

CHINA.—By the Overland Mail we have intelligence from Shanghai to April 29. The Imperial troops continue to obtain successes over the rebels, and it was thought that the great Taeping movement or rebellion would soon be extinguished, although fears were entertained that the rebels may for a length of time continue to carry on marauding operations in the southern provinces of the empire.

JAPAN.—It was asserted in Japan that the Council of Daimios had agreed upon a peaceful policy with foreigners, and had themselves left the seaports and returned to their provinces. The Mikado himself is in favour of a more extended intercourse.

UNITED STATES.—On the 26th ult., General Grant, discovering General Lee's position between the North and South Anna Rivers to be too formidable for assault, recrossed the North Anna, and during the night moved by the left to the Pamunkey, which he crossed on the 27th and 28th at Hanover Town, 12 miles from Richmond. General Lee is reported, upon the discovery of this movement, to have swung round his left into a position confronting the Federals, and completely covering Richmond. His left (formerly his right) still holds Hanover Court House, and is under the command of General Breckinridge, by whom he has been reinforced. Despatches from General Grant, to the 31st ult., report that General Lee made a reconnaissance of the Federal left on the previous afternoon, resulting in a sharp conflict, in which General Crawford, who had advanced nearly to Shadygrove Church, at Mechanicsville, was driven back. The Confederates then retired. At the same time General Grant ordered an attack by his centre and left, which was not executed, owing to the order failing to reach General Wright. General Hancock, on the right, alone advanced, and took possession of the Confederate skirmishing line. On the 1st inst. General Grant ordered Wright's corps, supported by Smith, to attack the Confederate position at Cold Harbour; Hancock, Burnside, and Warren, being in readiness to advance their front. After a three hours' engagement Wright captured and held the Confederate works in his front. An unsuccessful endeavour was made by the Confederates to recapture them. On the 2nd, Sheridan defeated the Confederate cavalry and Gingman's infantry, at Cold Harbour. Burnside's corps advanced on the 1st, and was within a mile of Mechanicsville. Early on the 4th General Grant assaulted the Confederates, driving them into his intrenchments, but gaining no decisive advantage. The Federal troops occupy a position within 50 yards of the Confederates, and there remain. General Grant says that he captured over 3000 prisoners, and that his loss is not severe. Other official despatches state that the Federal loss was 3000 in killed and wounded. Three colonels were killed and two wounded. General Tyler was severely wounded. Lee occupies a good position north of the Chickahominy. He has been joined by a large portion of Beauregard's troops. Fitzhugh Lee, with 500 cavalry, is reported to have been captured whilst attempting a raid on White House. The Confederates attacked Butler's left on the 1st, but were repulsed. A Confederate iron-clad attacked the Federal monitors in James River, but was driven up after two hours' engagement. The Confederates have erected formidable batteries on the Mississippi, and burned several steamers. The Federals are being driven out of Arkansas by the Confederates. General Sherman reports an engagement between Macpherson and the Confederates, near Dallas, on the 28th ult., in which the Confederates lost 250 men in killed and wounded and 300 prisoners. The Federal loss is stated at 300. It is believed that General Johnston will continue to retire, and defer a general engagement until he reaches Atlanta, where he expects to be reinforced by General Polk's army. The Confederate General Forrest's cavalry are said to be at Corinth, preparing for a raid in General Sherman's rear. Fears are entertained of another attack upon Paducah. The Federal gunboats Granite City and Nyanza were captured in the Calcasieu River by the Confederates on the 6th inst. Secretary Stanton announces that Butler is now acting only on the defensive, and that General Baldy Smith, with the 18th Army Corps, has been transferred, *viâ* Fortress Monroe, to the Potomac Army. He also states that Generals Banks, Steele, and Rosecrans will remain in command of their respective departments, subject to the orders of General Canby, who has been placed in command of all the territory west of the Mississippi. The Federal Government have announced that they are prepared to pay in advance the interest on the public debt due on July 1. They have also raised the interest on temporary deposits to 6 per cent. Gold had risen another 4 per cent, having reached the unprecedented rate of 92 per cent. premium, notwithstanding the most extraordinary efforts on the part of Mr. Chase to prevent the rise. At the Cleveland Convention, on the 30th, General Fremont was unanimously nominated for President, and General Cochrane for Vice-President. The platform declared for the suppression of the rebellion, the constitutional abolition of slavery, the political equality of the negro, and the maintenance of the Monroe doctrine.

MEXICO.—The Emperor and Empress of Mexico and their suite arrived at Jamaica on the 20th ult. in the Austrian war steamer Novara, escorted by the French steamer Themis. Her Majesty's steamer Barracouta conveyed the illustrious personages up the harbour. After paying a visit to General Ashmore and the Lieut.-Governor, the imperial party returned to the wharf, where they took boat for the Barracouta, and were conveyed by that vessel back to Port Royal. Their Imperial Majesties left Port Royal for Vera Cruz on the 22d.

BRAZILS.—Accounts from Rio state that the Archduke Louis-Victor of Austria is the destined consort of the Princess, eldest daughter of the Emperor Dom Pedro, and heiress to the throne.

CHILI.—The news of the Spanish hostilities against Peru has created great excitement in Chili. Meetings have been held, at which resolutions demanding that the Government should energetically support Peru were passed. It is believed that the moderation of the Chilian Government will prevent the excitement from leading to lamentable complications.

NEW ZEALAND.—The following narrative of the recent military operations is given by the *Otago Times*:—

"From the seat of war the news is of a mixed nature. General Cameron has gained another bloodless victory in Maungatauteri, and the Waikato district may now be said to be in his hands. But the Maoris are not subdued, and it is difficult to fix any time when peace is likely to be made, or the rebellion to be finally suppressed. The Maoris are making a resistance that commands even the admiration of the troops opposed to them, and which keeps alive amongst those not actually engaged a spirit of passive resistance to constituted authority. Their tactics are to avoid coming to close quarters, and one after another they have withdrawn from their strongholds, after putting the General to vast expense and trouble in making approaches to them. They retire farther back into the country, and as the Auckland province is relieved of them their presence is dreaded in Hawke's Bay and Wellington. The mode of fighting they adopt is not to be set down to fear; the incident that has just occurred at Orakau, a pah near Kihi Kihi, demonstrates this. General Cameron was sent to take possession of it. He tried to storm it, but unsuccessfully, and determined to take it by sap. He sat down with 1300 men, consisting of regulars, militia, and the Horse Defence Corps; 400 Maories were inside; their doom seemed certain. He summoned them to surrender; they contemptuously refused—we will fight for ever and ever, they replied. They were 72 hours without water; twice they had sallied out and were driven in again; the approach to the devoted pah was fast being made; the General telegraphed to Auckland "their escape is impossible." Suddenly, in broad daylight, the 400 natives rushed out, and this time they chose wisely the direction they took. Right through the line of the 43d Regiment they tore their way and left the Queen's troops in a state behind them. Across the swamp they went, and would have escaped altogether scathless, but the cavalry corps rode round the swamp and turned a part of the main body back. Some 101 were then shot down, and 43 taken prisoners, besides which 18 or 20 were reported to be buried in the pah. The loss on our side was severe."

The following is another account from Taranaki:—

"It appears that in compliance with his directions, Captain Lloyd, of the 57th, left the Kaitaki camp in order to effect a reconnaissance of the southern spur of the range. At 6 o'clock in the morning Lieut. Cox, with some of the 57th, and Capt. Page, with Melbourne Volunteers, crossed the Oakura River from the camp on its banks, striking inland by the newly-

constructed road up the river towards the foot of the ranges. Here they halted until joined by Captain Lloyd and his party, the force now consisting of one captain, one subaltern, two sergeants, one drummer, and 53 rank and file of the 57th, with Dr. Jones and one captain, one subaltern, two sergeants, and 41 rank and file of the Melbourne Volunteers, the united numbers making a force, including officers, of 101. The march was continued as near the foot of the ranges towards the south as the broken state of the country would admit of, the men having to toil through high Fern, tutu and manuka scrub, up one wooded hillock and down another. On a portion of table land upon a rise to the left a small plantation was met with. This Captain Lloyd gave orders to destroy, at the same time handing his sword to Sergeant Anderson for the purpose of cutting it down, taking in exchange the sergeant's rifle and ammunition. Whilst this work was proceeding, Lieut. Cox, with the right sub-division of the 57th, advanced up another rise on to a flat piece of land, posting sentinels near the ruins of a quantity of wares destroyed by the soldiers on a former occasion. Afterwards six men, under Sergeant Anderson, fell back as a picket on the outer spur, carefully searching all around. Capt. Lloyd now passed to the front, descending the hill on to the flat where Capt. Mace's house was lying dead near a series of rifle pits, the men, after an interval, following down the hill, leaving a rearguard of 10 men on the look-out. The word was now passed to light pipes, and for the men to make themselves at ease; the soldiers and volunteers were consequently clustered round the cart road that leads to the beach. Ten minutes had scarcely elapsed when from the thick fern on the spur the natives poured in a volley, wounding one man. Upon this occurring, Capt. Lloyd leaped into the rifle pits, and ordered his men to seek cover as rapidly as possible, and open fire towards their front, the captain himself replying as quickly as he could load with the sergeant's rifle, which he had retained in his possession. After firing for some quarter of an hour, the word was passed to retire, which the men did as well as they could through the thick growth of vegetation, Capt. Lloyd and others falling, besides many receiving wounds, some of which, I am afraid, will prove mortal. Capt. Page with his men also retired, the country precluding the possibility of a rally being effected, three of the volunteers falling, and five receiving wounds. A hurried retreat was made on to Wherruiriki, a hill above Big Jack's pah (Hourarigi) near the beach, where they awaited assistance from town. During this manœuvre the small band was exposed to a galling cross-fire from the natives, who had rushed down between the force so as to divide it in two, whilst others, by passing southwards, had flanked the line of retreat. So soon as tidings reached town reinforcements were immediately despatched, a party of the 57th hurrying out and passing up the cart road to the rifle pits at Ahua Ahua, where they found five headless bodies, and a sixth that had been deprived of its clothing, but for some reason or other not decapitated. The bodies were brought into town by an escort of the 57th. Captain Lloyd leaves a widow and family, who have just arrived in Taranaki."

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Greenwich Hospital.*—The Earl of HARDWICKE called attention to the state of Greenwich Hospital. He said that the income of the hospital amounted to 4,560,000*l.*, but the charity was sick, and the character of its sickness was that of a house divided against itself. He asked what had been done to improve the management of the institution, and to settle the differences which had occurred among the members of the board.—The Duke of SOMERSET said he shared in the desire that the funds of the hospital should be properly distributed. It was the intention of the Government to introduce various reforms in the administration of the hospital, among which would be the reservation of the hospital as an infirmary for the reception of infirm and disabled seamen, and the application of the remainder of its revenue to augment the allowances of out-pensioners, and make provision for retired officers of the royal navy.—A short conversation followed, in which Lord COLCHESTER and the Earls of SHREWSBURY and DERBY took part, and the subject dropped.

MONDAY.—*Pension to Lady Elgin.*—The Queen's Message, recommending the grant of a pension to the Countess of Elgin and Kincardine, was taken into consideration, when Earl GRANVILLE moved that the pension be granted. The Earl of ELLENBOROUGH seconded the motion, which was supported by the Earl of DERBY, and agreed to.—Lord WHARNCLIFFE moved an address to her Majesty, praying that the late decision of the Privy Council ordering the removal of the *West Riding Assizes* from York to Leeds, instead of to Wakefield, be reconsidered. The motion was seconded by Lord HOUGHTON, and opposed by Earl GRANVILLE, who stated that Leeds had been selected simply on the ground of public convenience. — The discussion was continued by Lord BROUGHAM, Lord FEVERSHAM, and Earl DE GREY and RIPON.—The Earl of DERBY thought the great balance of opinion was in favour of Wakefield as against Leeds. He advised Lord Wharncliffe to withdraw the motion, but intimated that, if pressed, he should support it with his vote.—Lord WHARNCLIFFE declining to accede to the suggestion, a division took place, when the motion was carried by 80 to 54. The *Public Schools Bill*, and the *Scottish Episcopal Clergy Disabilities Bill*, passed through committee. The *Insane Prisoners Act Amendment Bill* was read a third time and passed.

TUESDAY.—*Pension to Sir R. Hill.*—Earl GRANVILLE moved the consideration of the Queen's Message relating to a grant of 20,000*l.* to Sir Rowland Hill, and eulogised the character and services of that gentleman in connection with postal reforms.—Similar testimony was paid to his merits by Lord BROUGHAM and the Marquis of CLANRICARDE, after which the motion was agreed to. On the motion for receiving the report of amendments on the *Mortgage Debentures Bill*, the Earl of MALMESBURY moved a clause authorising trustees to invest trust money in debentures.—The clause was opposed by Lord REDESDALE, Lord ST. LEONARDS, and Lord GRANWORTH, and was negatived. The *Ecclesiastical Courts and Registrars (Ireland) Bill* passed through Committee. The *Court of Justiciary (Scotland) Bill* was read a third time and passed.

THURSDAY.—*The Channel Fleet.*—The Earl of ELLENBOROUGH gave notice that he would at the next sitting ask the Foreign Secretary whether measures have been taken to reinforce the Channel fleet so that it may be equal to the blockade of the German ports as well as sufficient for the defence of the Danish islands. *Armstrong Guns.*—In reply to a question from the Earl of HARDWICKE, the Duke of SOMERSET said that it was the intention of the Admiralty to convert a certain number of Armstrong 70lb. breech-loaders into muzzle-loaders on the shunt principle. They were intended for naval guns, and would have the advantage of firing either a rifled projectile or the ordinary cast-iron shot. *The Ashantee War.*—In reply to the Earl of DERBY, Earl GRANVILLE promised to produce the papers relating to the war with the King of Ashantee. The *Chain Cables and Anchors Bill* and the *Improvement of Land Act* (1864) *Bill* passed through committee. The *Mortgage Debenture Bill*, the *Public Schools Bill*, and the *Scottish Episcopal Disabilities Removal Bill* were read a third time and passed. *Needlewomen of London.*—The Earl of CARNARVON asked when the report of the Commissioners would be produced respecting the death of a needlewoman in a millinery establishment at the West End, partly by overwork and partly by the abominable and discreditable condition of the room in which she was employed. Earl GRANVILLE promised that the report should forthwith be presented.—The Earl of SHAFTESBURY said that the proposed remedy was to be found in good sanitary laws. He felt certain that if the Legislature had wisdom enough to pass good sanitary laws and compel their adoption by a system of inspectorship, the burden upon the rates of this country would be reduced by at least one-third in the course of the next five years.

FRIDAY.—The Lord CHANCELLOR withdrew the *County Courts Amendment Act* for the present session. *The Dano-German Question.*—The Earl of ELLENBOROUGH called attention to the fact that in nine days' time the armistice would be at an end, and asked whether measures had been taken for putting the fleet in such a state as to make it equal at once to blockade the German ports, and defend Denmark.—Earl RUSSELL in reply said that as the Conference was still sitting, he could only state that her Majesty's fleet was fully prepared for any service it might be called upon to perform.—The Earl of DERBY thought that it would be best to see what would come of the pending negotiations.—The Marquis of CLANRICARDE protested against Parliament interfering with pending negotiations.—Earl RUSSELL replied that in the course of a few days negociations would come to an end, and it would then be known whether there would be peace or war.

(Left sitting.)

HOUSE OF COMMONS.

FRIDAY.—*Private Bills.*—On the order for going into Committee of Supply, Lord R. CECIL moved that the duty of ascertaining the facts upon which legislation in respect to Private Bills was to proceed should be discharged by some tribunal external to the House. There was the strongest necessity for such an alteration. Much unnecessary labour was thrown upon private members by the existing system of referring matters of fact to committees which might be better ascertained by some competent and impartial arbitrator. It imposed upon members the task of deciding on subjects of which they had no practical knowledge; and the effect was that much dissatisfaction was felt out of doors at many of their decisions.—Mr. M. GIBSON admitted that the duties imposed upon members of committees were of an arduous character, but contended for the necessity of an ultimate appeal to Parliament. He denied that great dissatisfaction existed out of doors at the decisions of committees, and feared that the adoption of any new system would create fresh impediments, and add to the expense of conducting the private bill legislation of Parliament.—The discussion was continued by Colonel W. PATTEN, Lord STANLEY, Mr. LOWE, Mr. R. HODGSON, Mr. R. DUTTON, Mr PUGH, and other members, the general opinion being that the existing system required amendment, while with regard to the best method of improving it, some members contended that the committees on private bills should act as a jury, with the Chairman as judge, whilst others advocated the plan of Lord R. Cecil. All, however, urged that it was desirable that when great public works were concerned, the members of the committee should possess some knowledge of the localities. Ultimately the motion was withdrawn; a division being impossible without counting out the House, as 19 members only were present. *Gold Currency for India.*—Mr. J. B. SMITH moved that the increasing trade and commerce of India, and the consequent demand for a portable circulating medium, required that a gold currency should be established in that empire. He said that constant complaints were received from India with regard to the difficulty experienced in introducing commodities for want of a convenient circulating medium.—Colonel SYKES, speaking from personal experience, said that the people of India were quite prepared for a gold coinage, either native or European, provided it was pure.—Sir C. WOOD admitted that the subject was important, but the paper circulation had been very successful in India, and was accepted by those who were engaged in commerce there. For gold there was little demand, whilst silver and copper circulated extensively. Even if a gold coinage were established, he doubted if it would be of any great assistance in conducting mercantile operations.—After some remarks from Mr. WATKIN and Mr. GOSCHEN, the motion was withdrawn. In Committee of Supply, Lord PALMERSTON moved a vote of 20,000*l.* to *Sir Rowland Hill*, in pursuance of her Majesty's message, in consideration of his great services in carrying out the postal system, and expressed his hope that the House would feel a pleasure in recognising the claims of so distinguished a public servant.—Mr. WILLIAMS was quite willing to admit that Sir Rowland Hill deserved well of the State; at the same time, considering that he had been in receipt of a very large salary, and that he now retired upon 2000*l.* a year, he considered the proposed grant excessive.—Mr. J. EWART, Mr A. TURNER, and Mr. CRAWFORD, as representing large constituencies, expressed their cordial approval of the grant.—Mr. MALINS, as the representative of a small constituency, also intimated his acquiescence in the proposition of the Government. After a short discussion the vote was agreed to *nem. con.* The remaining *Civil Service Estimates* were then proceeded with, and several votes were agreed to, when the Chairman was ordered to report progress. The Report of the *Countess of Elgin's Pension*, and that of the *Greek Loan (Consolidated Fund)*, were brought up and agreed to.—Mr. CRAWFORD, in moving the second reading of the *Weighing of Grain (Port of London) Bill*, defended himself from a charge of breaking a pledge upon the subject of the Bill, brought against him, he said, by Mr. Ayrton.—Colonel DICKSON moved that the debate be adjourned. After a short discussion the House was counted out.

MONDAY.—*The Conference.*—Mr. OSBORNE inquired whether Lord Palmerston had seen the statement (said to have been communicated on authority) in the *Morning Post*, as having been submitted by the Danish Plenipotentiaries to the Conference at its last sitting. If the paper was authentic, he wished to know whether the noble lord would produce it.—Lord PALMERSTON replied that he had not read the statement referred to.—Mr. KINGLAKE asked if the noble lord could confirm the statement that the belligerents had entrusted the duty of determining the line of boundary in the Duchy of Schleswig to the French Ambassador in London.—Lord PALMERSTON had not heard of the matter, and was not inclined to believe it.—On the order for going into committee of supply, Mr SMOLLETT moved that a select committee be appointed to inquire into the *Claims of his Highness Azeem Jah* to the title and dignity of the Nawab of the Carnatic; and further, to report upon the circumstances under which the treaty entered into between his highness's father, Azeem del Dowlah, and the India Company, dated the 31st July, 1801, had been declared void. He contended that a great political misdemeanour had been committed by those who had repudiated the claims of Azeem Jah, and that every consideration of public justice and national honour required that the House should not refuse inquiry. The motion was seconded by Mr. BAILLIE.—Mr. H. GRENFELL said that no wrong had been done to the Azeem Jah, who during his whole life had enjoyed the protection of the English Government. If the committee were granted it would be necessary to provide a remedy: and the remedy must be either to confer upon him the mock throne of the Carnatic, or give him a large pecuniary compensation. Before doing that it was necessary to show that wrong had been committed; and next, that it could be remedied without inflicting wrong upon others. He held that both these elements were wanting in the case.—SIR J. FERGUSSON said that if the committee were appointed their inquiry would be useless, because no fresh evidence could be collected on the subject. He called upon the House not to reopen a question which had been settled upwards of 60 years ago.—Mr. BAILLIE said that there were two important admissions in the Treaty of 1801—first, that the Nawab was the legitimate sovereign of the Carnatic, and next, that the East India Company had acquired the right to govern the Carnatic not by conquest, but by treaty. If, then, the treaty had ceased to exist, by what title did we now enjoy the territory.—Mr. LOWE was not prepared to say that the transaction was one in which we could take much pleasure, but he argued that the treaty was entered into without any intention of conveying rights to descendants. The Anglo-Indian Government retained to themselves the right of considering whether they would allow a new nomination to the Nawabship of the Carnatic, and all that could be said was that in two cases they elected to do so, and in the third that they would not. On a division the motion was negatived by 62 to 45.—Mr. HENNESSY expressed his surprise that the House had been permitted to go to a division without the Secretary for India offering any explanation on the subject.—Mr. MALINS rebuked Sir C. Wood for the indifference with which he had treated the matter, and the exultation with which he had hailed the result of the division.—Lord PALMERSTON said if his right hon. friend had manifested any exultation it was owing to the fact that the hon. and learned gentleman, Mr. Fitzroy Kelly, who was known to be full of the subject, was prepared to support the motion for inquiry, was so entirely dumbfounded by the arguments opposed to it that he was unable to reply.—Sir F. KELLY avowed that he had been outwitted by the strategy of the Government; but he now gave notice that, in justice to the honour of the House, he should take the earliest opportunity of reviving the discussion.—Mr. W. E. FORSTER stated that he had given his vote with the minority on the single ground that the Secretary for India had not risen to defend the conduct of his own administration.—Sir C. WOOD contended that as his department had been assailed he had a right, as the defendant, to hear all the case against it before he delivered a reply. Moreover, he considered that Sir J. Fergusson and Mr. Lowe had already made an ample defence.—Lord STANLEY regretted that Lord Palmerston should have regarded the motion in the light of a party attack, seeing that in the division one-half of the votes received by the Government had come from the Opposition side of the House. The House then went into Committee of Supply on the *Civil Service Estimates*. A great number of votes were agreed to, and at midnight the House resumed.—*New Zealand Loan.*—In Committee of the whole House Mr. CARDWELL explained the circumstances under which the Government had promised to guarantee to New Zealand a loan of one million sterling at 4 per cent., with a sinking fund of 2 per cent. The security offered to the Government was, he said, ample, as the surplus revenue of the colony was upwards of 250,000*l.* per annum, while the charge on the loan and the sinking fund (the first charge on the revenue) would not exceed 60,000*l.* a year. In committee he proposed a resolution authorising the guarantee of the loan.—Sir H. WILLOUGHBY doubted very much whether the colony had the margin of income over expenditure to which Mr. Cardwell had referred.—Mr. ADDERLEY thought the House ought to be careful how it entertained applications for colonial guarantees; at the same time he considered that the present case was an exceptional one, and that, on the whole, very little risk would be run by guaranteeing the loan, especially as it was to be understood that New Zealand should for the future pay the whole expense of imperial troops, with the exception of a single regiment. The resolution was then agreed to. On the motion for the third reading of the *Collection of Taxes Bill*, Sir W. JOLLIFFE complained that the measure was hurried forward with undue precipitation, and moved the adjournment of the debate. After some discussion, the House divided, when the motion was negatived by 90 to 51. Some further opposition being offered, the order of the day was postponed to Friday.

TUESDAY.—At a morning sitting, Mr. BRUCE moved the second reading of the *Factory Acts Extension Bill*, the object of which is to apply the provisions of the existing Factory Acts to other manufactories than those to which that Act refers. The Bill he stated was the result of a commission which had inquired into the subject of the employment of young children in the manufacture of lucifer matches, percussion caps, staining, pottery, fustian cutting, &c., in which between 17,000 and 18,000 children were employed.—A debate on the principle of the Bill followed, in the course of which Mr. INGESTRE moved that the Bill be referred to a select committee, but an objection being made to it he withdrew his motion, and the Bill was read a second time. *Vote by Ballot.*—At morning sitting, Mr. BERKELEY stated that he should on a future day move a resolution to the effect that as a general election was pending, and there was no law to prevent bribery and corruption, it was desirable that a fair trial should be given to vote by ballot. *The Conference.*—Mr. OSBORNE gave notice that on going into committee of supply he should call attention to the publication of the proceedings of the Conference in the public newspapers.—Mr. D. GRIFFITH asked whether, since secrecy is not observed by the parties to the Conference, it would not be a mere empty form to maintain it towards the House of Commons, and inquired, therefore, whether, when the extension of the armistice was consented to, it was understood and agreed that extension was not to be final.—Lord PALMERSTON replied that he had no reason to believe that it was intended that the prolongation of the armistice lately agreed upon should be final. *The Income Tax.*—Mr. HUBBARD called attention to the operation and extent of direct and indirect taxation now levied, with especial reference to the income tax and to the prospect of its continuance, and moved that the inequalities and injustice attending the operation of the existing property and income tax, disqualify it from being continuously reimposed in its present form as one of the means of levying the necessary revenue. He repeated the arguments he had used on a previous occasion on which he brought forward a similar motion, and urged the necessity of removing the anomalies which now surrounded the tax.—Mr. WHALLEY supported the motion, but argued in favour of the complete abolition of the tax.—The CHANCELLOR of the EXCHEQUER, in a short speech, replied to Mr. Hubbard, who had signified his dissent from a proposition which implied that a set of anomalies and solecisms in connection with the income tax should be substituted for those which exist in the present system, and urged that so long as the tax remained as it was the national revenue it was not practicable to levy it in any other form than that which was now in use.—After some observations from Mr. BOVILL, in support of the motion, and Mr. S. NORTHCOTE, in opposition to it, the motion was negatived on a division by 67 to 28.—Sir H. CAIRNS moved that in the opinion of the House, the rules sanctioned by the Commissioners of *National Education in Ireland*, on November 30, are, so far as regards the aid afforded to convent and monastic schools, at variance with the principles of the system of national education. He pointed out that, whereas the Roman Catholics declined to send their children to the mixed national schools, the commissioners had practically allowed the establishment of distinct training schools for Roman Catholics, and had therefore violated the principles of mixed and unseparatist education, which it was intended the national system to set up and preserve. He supported numerous facts and documents in support of his motion.—

hon. gentleman concluded by an assertion that the time had come when it was necessary to remodel the Board of Commissioners if it was intended to retain the system of national education in Ireland.—Mr DAWSON seconded the motion.—The ATTORNEY-GENERAL for IRELAND said that the Board of Commissioners had made no fundamental change in the practice of the system of national education, had introduced no innovation, and had in no wise trenched on the principles of National Education. He alleged that the convent schools from the very conception of the national system, had been in connection with the board, and it was well known that such a connection existed.—Mr. WHITESIDE urged that the Board of Commissioners had been guilty of a breach of faith in the conduct of the administration of the system of National Education, the object they had in view being to make the whole machinery of the board subservient to the promotion of a principle distinctly opposed to that on which the system was established. The debate was then adjourned.

WEDNESDAY.—Mr. C. FORSTER moved the second reading of the *Forfeiture of Lands and Goods Bill*, the object of which is to protect the goods of persons convicted of crime from being seized and forfeited by the Crown. He argued that the present law with regard to the property of felons was a remnant of a barbarous criminal code which the growing humanity and good sense of the public had long since condemned.—The motion was seconded by Mr. EWART.—Mr. HUNT opposed the Bill as a crude piece of legislation which did not provide any substitute for the law which it intended to repeal. He moved, as an amendment, that the Bill be read a second time that day three months.—The ATTORNEY-GENERAL expressed his intention to support the second reading of the Bill, although he declined to commit himself to details without inquiry. That inquiry he would, however, cause to be made in the course of the recess.—Mr. WHITESIDE spoke in favour of the measure, believing that it would be impossible to maintain the principle of the existing law.—Mr. HADFIELD, Mr. ROEBUCK, and Mr. MALINS supported the Bill.—Sir G. GREY thought we might well take an example from France in this matter.—Mr. PACKE thought the Government should take up the subject.—Sir F. KELLY urged Mr. Forster to proceed with the measure, and, after a short discussion, the amendment of Mr. Hunt was negatived without a division, and the Bill was read a second time.—Mr. BUTT moved the second reading of the *Security for Costs Bill*, the object of which he explained to be to remove the impediments which now exist to recovering debts by persons residing in England against debtors in Ireland, and *vice versâ*.—Mr. WHITESIDE opposed the Bill as unnecessary and mischievous, and moved that it be read a second time that day three months. The principle of the measure was, however, supported by the SOLICITOR-GENERAL and Sir COLMAN O LOGHLEN, and opposed by Mr. VANCE. On a division the second reading was carried by 99 to 64.—The *County Voters Registration Bill* was read a second time.—Mr. DUNLOP moved that the House should go into Committee on the *Servants Hiring (Scotland) Bill*, the object of which is to allow the dismissal of servants at the end of a month's notice, or on payment of a month's wages in advance, instead of at the end of six months, according to the present state of the law.—Mr. BLACK opposed the motion, on the ground that, if the change contemplated became law, servants would be constantly leaving their places for the most frivolous causes and at the most inconvenient time of the year. After some discussion the House went into Committee and agreed to the several clauses.—The adjourned debate on the motion for going into Committee on the *Elections Petition Bill* was resumed by Mr COLLINS, who contended that the measure would establish a new principle that would have the effect of deterring persons from petitioning against illegal returns, and thus secure guilty parties in their seats.—Mr. HUNT defended the Bill, and observed that, after the full discussion it had undergone last session, there was no ground whatever for now burking it by sending it to a Select Committee, as had been proposed on a former occasion by Mr. Ayrton.—Sir F. GOLDSMID then addressed the House in opposition to the measure, and spoke until the hour for adjournment arrived. The *County Constabulary Superannuation (Ireland) Bill* passed through Committee.—Mr. BARNES obtained leave to bring in a Bill to empower the occupiers of small tenements in certain cases to vote in the *Election of Guardians for the Poor*.

THURSDAY.—*Cork Harbour.*—In reply to Mr. HORSFALL, Mr. M. GIBSON said that a large bell-buoy was about to be erected on Daunt's Rock, in Cork harbour, and that steps would be taken to light and improve Roche's Point the nearest Atlantic telegraph station between Great Britain and America. *The Ashantee War.*—Lord C. PAGET, in answer to an inquiry of Sir J. HAY, said that a transport was taken up at the end of May, and would be ready in a few days to proceed to the Cape de Verd Islands, there to meet the Gladiator, paddle steamer, which had been ordered to Cape Coast Castle for the purpose of bringing away a portion of the troops there, which the transport would then convey to the West Indies. The number of troops to be removed was slightly above 500.—Sir J. PAKINGTON inquired when the Gladiator received orders to go to the coast on this service.—Lord C. PAGET answered that the orders were given that day. *The Conference.*—Mr. OSBORNE asked whether it was true that the meeting of the Conference on Danish affairs had been again postponed until Saturday.—Lord PALMERSTON believed it was.—Lord R. CECIL inquired whether the Conference had been postponed by consent of all the Powers belonging to it, by a majority of the Powers, or by the plenipotentiaries of England.—Lord PALMERSTON replied that he was not a member of the Conference, and that all he knew was that it was adjourned till Saturday. *Charity Commission.*—On the order for going into committee of supply, Mr FERRAND moved for a select committee to inquire into the construction, expense, and working of the Charity Commission. He traced at considerable length, and with much vehemence of manner, the proceedings of the commissioners since their appointment under the Act of 1853. He complained that they were to all intents and purposes a secret tribunal, with whose proceedings Government was utterly unacquainted, except through the very meagre reports that were periodically presented to Parliament. The commissioners themselves composed a snug nest o Whigs, and of the 40 persons connected with them as inspectors and clerks, every one, without exception, belonged to the Whig party. Their appointments to inspectorships had been characterised by political partisanship, bribery and corruption; and in the case of a Mr. John Simon, jun., he had been a coal and potato dealer in the Hampstead Road, and subsequently a daily labourer in Australia. The reports prepared by the commissioners were false. The funds under their control were mismanaged and misappropriated, and instead of the expense of working being 6000*l.* a year, as promised in 1853, it had grown up to 18,000*l.* This state of things, he alleged, was a disgrace to the Government, and he called upon the financial reformers to join him in pressing, by means of a select committee, a full and searching inquiry.—Mr. MONSELL said that Mr. Ferrand's observations were of such a personal character as to disentitle him to the support of the House.—Mr. F. POWELL also protested against Mr. Ferrand's accusations, which, he said, were devoid of foundation. He hoped, however, that the House would grant inquiry.—Mr. BRUCE opposed the motion, on the ground that Mr. Ferrand had indulged in a grossly personal attack, not only upon the commissioners, but also upon several members of the Government. He knew nothing of the antecedents of the inspector whom Mr. Ferrand had named, but he had been informed that, since his appointment, he had performed his duties in a satisfactory manner. Neither the commissioners nor the Government had the slightest objection to an inquiry, had it been moved for in a decent and respectful manner, but the violent and reckless accusations of Mr. Ferrand were so grossly hostile to men of high character and standing that the Government could not give their assent to it.—Mr. M. SMITH declared that the charges brought against the commissioners were utterly unfounded.—Mr. OSBORNE recommended the Government to grant the committee, for if the allegations were not founded in fact they would rebound upon Mr. Ferrand, and he would never be able to bring forward another charge in the House.—Mr. ADDERLEY thought that although the Charity Commissioners were men of the highest character, and their department a most useful branch of the public service, still, that charges were made of such gravity that the Government ought not to shirk inquiry.—Mr. LOWE defended the commissioners and their officers, as did Mr. J. A SMITH, who severely censured Mr. Ferrand for his reckless and calumnious language and his indifference to the feelings of absent parties.—Mr. MALINS felt bound by every consideration of good feeling and propriety to vote against the motion.—Lord GALWAY supported the motion, and said that the solicitor's bills ought to be submitted to investigation before a committee.—On a division the motion was negatived by 116 to 40. The House then went into committee of supply on the *Miscellaneous Estimates*, and agreed to a number of votes for the civil service. A motion to report progress at half an hour after midnight was rejected by 111 to 40. On the Report of the Committee of Supply, Mr. BUTT called attention to the inadequate remuneration of the special Commissioners of *Irish Fisheries*, especially the legal Commissioner, and moved that the vote be reduced by 1445*l.*, the salaries and expenses of the Commissioners for Ireland.—After an explanation by Sir R. PEEL, and some observations by other members, the amendment was withdrawn, and the resolutions in the report were agreed to. The *Public and Refreshment Houses (Metropolis, &c.), Bill* was read a third time and passed. The *Local Government Supplemental (No. 2) Bill*, the *Lunacy (Scotland) Bill*, and the *Accidents Compensation Act Amendment Bill* were read a second time. The order for the second reading of the *Church of England Estates Bill* was postponed. The adjourned debate on the *Election Petitions Bill* was further adjourned to Tuesday week. The adjourned debate on *National Education (Ireland)* was postponed to Thursday.

FRIDAY.—*Factories Acts Extension Bill.*—On the motion for going into Committee on this Bill, Mr. BAGWELL moved that it be an instruction to the Committee to take the case of the needlewomen and tailors of London into consideration.—Sir G. GREY thought it would be inexpedient to legislate without the report of the commission now sitting. The motion was withdrawn. The House then went into Committee. Clauses 1 to 6 were agreed to. On the next clause Mr. BRUCE moved an alteration.—Mr. ROEBUCK contended that the effect of the alteration would be to exclude the "packers" from the provisions of the Bill, and thereby to legislate in favour of the manufacturers.—After a long discussion Mr. BRUCE agreed to postpone the committee for 10 days.—The CHAIRMAN then reported progress, and obtained leave to sit on Monday week. [Left sitting.]

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England on Thursday reduced their rate of discount from 7 per cent., at which it was fixed on the 26th of May, to 6 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90 to 89⅞ for Money, and 90¼ to ⅜ for Account; Three per Cents. Reduced, 89⅝; New Three per Cents., 89 to 88⅞; Bank Stock, 238½ to 239; India Five per Cent. Stock, 104¾ to ½; Ditto Four per Cents., 99⅞; Ditto Four per Cent. Debentures, 1866, 98⅞; Exchequer Bills, March, 8*s.* dis.; Ditto June, 5*s.* dis.—FOREIGN: Brazilian 1852, '58, '60, 87¼ ex div.; Danish, 1864, 95½; Egyptian, 101⅜ to ½; Ditto, second issue, 101½; Greek, 23⅞ to 23¾; Italian, Maremmana Railway, 76; Mexican, 44½; Portuguese, 1856, &c., 48¾; Russian, 1822, 90; Ditto 1862, 87¾; Spanish, 53¼; Ditto Passive, 31¼ to 30½; Ditto Certificates, 10; Turkish, 1854, 90; Ditto, 1862, 71¾ to ⅞; Venezuela, 23½.

Gazette of the Week.

FRIDAY; *June* 10.—BANKRUPTS.—W. ARCHER, Bradford, Yorkshire, Hairdresser—J. BEER, Broadstairs, Kent, Mariner—T. BRANDON, Upper Tean, Staffordshire, Butcher—H. BASS, Strood, Kent, Clothier—J. BROWN, 180, Packington Street, Kentish Town, Builder—H. BROWN, Smethwick, Staffordshire, Miller—H. PATERSON, Gloucester Road, Croydon Common, late Builder—W. W. BAKER, East Retford, Nottinghamshire, Slater—J. BURGESS, Chiswick, Servant—H. CHESHER, Sloane Street, Chelsea, Brushmaker—W. H. CROWTHER, Broseley, Shropshire, Stationer—J. DAVIES, Sale, Cheshire, Joiner—S. DAVIS, High Street, Shadwell, Clothier—W. ELLIS, Wells, Norfolk, Provision Merchant—J. FELLOWS, Blaenavon, Monmouthshire, General Shopkeeper—G. FOWLES, Leeds, Tailor—C. P. FULLER, Cavendish Road, St. John's Wood, Horse Dealer's Assistant—W. G. GATCLIFF, Liverpool, Ship Broker—J. F. GEE, Cannon Street, City, Commission Agent—A. GRAY, Liverpool Street, Bishopsgate Street Without, Hatter—J. HOPKISS, Liverpool, Journeyman Smith—L. HINDLE, Salford, Lancashire, Innkeeper—J. HARRIS, Wellington Square, Chelsea, Artist—R. H. JONES, York Baths, Regent's Park, Bath Proprietor—W. IRLAM, Altrincham, Cheshire, Blacksmith—J. JENKINSON and J. STANSFIELD, Oldham, Cotton Waste Dealers—W. JORDAN, Rochester Road, Kentish Town—T. JOHNSTON, Old Church Street, Edgware Road, Carrier—J. JONES, Dudley, Worcestershire, Banker—J. JONES, Beaumaris, Anglesey, Tailor—S. KNIGHT, Ringmer, Sussex, Innkeeper—J. KELLY, Exeter, Devonshire, Dairyman—E. W. KENNEDY, Park Side, Cambridge—R. LOWDER, Sculthorpe, Norfolk, General Dealer—W. H. LANGLEY, Worcester, Commission Agent—R. LORD, Rawtenstall, Lancashire, Cotton Spinner—R. MILLAS, St. Peter's Street, Hackney Road, Baker—T. MADDOX, Above Elgn, Hereford, Coach Builder—G. MARLOW, Hook, Southampton, Baker—B. M. MARDON, Kingswear, Devonshire, Grocer—J. MADDOX, Birmingham, Gun Stock Dealer—J. MICHELL, late of Little Britain, City, Mine Agent—G. MARSH, Shirley, Hampshire, Grocer—J. MCCALL, Everton, Lancashire, Builder—H. MONTAGUE, Brook's Road, Plaistow Park, Journeyman—J. NESBIT, Barrow-in-Furness, Lancashire, Joiner—J. OSBORNE, Liverpool, Greengrocer—R. PALMER, Castle Eaton, Wiltshire, Farmer—J. ROBERTS, Cardiff, Glamorganshire, Grocer—J. READ, Kings Lynn, Norfolk, Licensed Victualler—J. SPENCER, Martin-by-Lincolnshire, Lincolnshire, Tanner—T. SMITH, Park Road, Dalston, Architect—EMMA SMITH, Tynemouth, Northumberland, Widow—C. G. SMITH, Kensington Square, JOHN SPENCER, Leeds, Cloth Merchant—J. E. SMITH, Ipswich, Suffolk, Horse Dealer—G. SHEPHERD, Middleton Tyas, Yorkshire, Labourer—J. SIMPSON, Stamford Bridge, Fulham Road, Master—J. H. SHORT, Kings Place, Commercial Road East, late Auctioneer—J. TURNBULL, Wigton, Cumberland, Digger—W. TOPLISS, Union Road, Battersea, Engine Driver—J. TURNER, Stonnington, Northumberland, Innkeeper—J. THORNTON, Bradford, Yorkshire, Cloth Manufacturer—F. VITTA, Longton, Staffordshire, Beerseller—J. J. WILLIAMS, Dorset Street, Deptford—J. WOOD, Dukinfield, Cheshire, Furniture Broker—M. T. WEST, late of Great Dover Street, Southwark, Surgeon—J. G. WILLIAMS, Boulogne sur-Mer, France—T. WILLIAMS, Llanrwst, Denbigh, Inn Grocer—J. WALKER, Manchester, Butcher—H. F. WOOD, late of May's Buildings, Charing Cross, Attorney-at-Law—R. WHITFIELD, Shildon, Durham, Journeyman Joiner—J. WOOD, late of Swansea, Glamorganshire, Haulier—G. WRIGGLESWORTH, Bedford Row, Surveyor—J. WILKINSON, Bradford, Hatter—J. H. WITTITCH, Duff Street, Poplar, Baker.

SCOTCH SEQUESTRATIONS.—J. ANDRA, Glasgow, Wine Merchant—J. COCHRAN, Glasgow, Chemist—J. FORSYTH, Elgin, Ironmonger—R. PRATT, Glasgow, Joiner—M. THOMSON, or HAY, Hutton, Dumfriesshire, Innkeeper—L. THOMPSON & Co., Glasgow, Jewellers.

TUESDAY; *June* 14.—BANKRUPTS.—F. ASTLEY, Gorton, Lancashire, Journeyman Plumber—J. BILLINGHAM, Rowley Regis, Staffordshire, Chain Maker—J. BUTT, Lincoln, Chemist—H. BONIFACE, Lower Beeding, Sussex, Farmer—H. A. BARR, Curtain Road, Shoreditch, Chair Maker—A. BRADBURY, Totterdown, Somersetshire, Victualler—R. BANKS, Windle within St Helen's, Lancashire, Pig Killer—T. W. BURFIELD, Fairlight, Sussex, late Wine Merchant—C. CATTERMOLE, sen., Birmingham, Journeyman Coach Maker—M. A. CLAPTON, Worcester, Draper—W. CURTIS, Bristol, Beer Retailer—J. J. CORBETT, Walsall, Staffordshire, Solicitor—J. T. CASE, Lewes, Sussex, Photographer—J. W. DIXON, Gateshead, Durham, Spinster—ELIZA DANIEL, Halifax, Yorkshire, Plumber—W. DENWELL, Bishop Monckton, Yorkshire, Cordwainer—J. DAVIES, Sale, Cheshire, Builder—H. H. DAVIES, Warwick, Licensed Victualler—I. DICKINSON, Whitehaven, Cumberland, Miller—W. DURRELL, Hawkhurst, Kent, Grocer—T. GRIFFITHS, Frost, Bury St. Edmunds, Suffolk, Baker—J. GREENWOOD, Batley Carr, Yorkshire, Grocer—H. T. GRAHAM, Upper Seymour Street, Portman Square, Gentleman—E. M. GREATREX, Surbiton, Surrey—J. GLAZEBROOK, Caythorpe, Nottinghamshire, Butcher—C. H. GROVES, Birmingham, Builder—E. HAYWARD, Upper Garden Street, Westminster, Coachsmith—G. HOLMES, Nottingham, Licensed Victualler—JOHN JENKINS, Newport, Monmouthshire, Provision Merchant—JOHN THOMAS JONES, Stoke-upon-Trent, Staffordshire, Tea Dealer—RICHARD JONES, Hereford, late Licensed Victualler—JOSEPH KNIGHT, Gibson Square, Islington, late General Merchant—THOMAS KIRBY, Lincoln, Licensed Victualler—E. LEES, Manchester, Auctioneer—T. R. LEWIS, Mickle Trafford, Cheshire, Superintendent Agent of an Insurance Company—B. MILLSON, Boston, Lincolnshire, Auctioneer—J. MILNES, Sunderland, Provision Dealer—J. MATHEX, Birmingham, Gun Maker—T. B. MORRIS, Richard Street, Commercial Road East, Stevedore—W. S. OAKEY, Cheltenham, Gloucestershire—H. POWELL, East Harrington, Somersetshire, Spirit Merchant—W. PEAT, Barnard Castle, Durham, Butcher—T. D'OYLY PAIN, Alpha Place, Park Road, Old Kent Road, Chemist—J. ROGERS, Shirley, Hampshire, Carpenter—J. M. R. RAWLINS, (known as R. WORKMAN), Bow St., Covent Garden, Clerk in Holy Orders—J. ROPER, Bristol, Chemist—P. P. ROD, Howland Street, Tottenham Court Road, Commission Agent—E. RODGERS, Chester, Tobacconist—J. C. SALVIDGE, East Harptree, Somersetshire, Victualler—D. SMEATON, Chapel Street, Somers Town, Baker—G. SCORAH and W. COOPER, Sheffield, Timber Merchants—H. THOMPSON, Dearham Row, Cumberland, Colliery Overman—W. WATERWORTH, Manchester, Wholesale Grocer—W. WEBBER, Tiverton, Devonshire, Innkeeper—D. WRIGHT, Birmingham, Glass Manufacturer—W. WHITTON, Island of Branksea, Dorsetshire, Foreman to the Branksea Pottery.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,203,835	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	13,553,835
		Silver Bullion	—
	£28,203,835		£28,203,835

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,122,267
Rest	3,396,168	Other Securities	19,664,925
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	8,812,211	Notes	5,075,285
Other Deposits	12,700,361	Gold and Silver Coin	760,370
Seven days and other bills	469,707		
	£39,813,447		£39,813,447

June 16, 1864. M. MARSHALL, Chief Cashier.

Metropolis and its Vicinity.

THE PRINCE CONSORT MEMORIAL.—The group of five figures to represent "Europe" in the monument about to be erected to the memory of the late Prince Consort was, by command of the Queen, offered to Mr. Gibson, the sculptor; but as he expressed his reluctance, from advancing years, to undertake a work of such magnitude, her Majesty has signified her wish that it should be executed by Mr. M'Dowall, the Royal Academician, who has accepted the commission. Mr. Foley, R.A., has been entrusted with the group "Asia." The groups "Africa" and "America" have been given to Messrs. Theed & Bell.

ST. PAUL'S SCHOOL.—The annual "Apposition," which took place on Wednesday for the 355th time, was rendered more than ordinarily brilliant by the presence of the Prince of Wales. The schoolroom in which the speeches were delivered was decorated with unusual magnificence, a colossal plume of the Prince of Wales's feathers being placed in front of the gallery facing the platform; and a costly chair adorned with the initials "A. E.," and the City arms, having been provided for the Royal visitor. Long before the commencement of the day's business all the seats were occupied by a distinguished assemblage, among whom were the Archbishops of York and Armagh, the Bishops of London, Oxford, Lichfield, Llandaff, and Down; Lords Ellenborough, Lyttelton, and Truro, and Chief Baron Pollock. The Prince, who had partaken of luncheon in the house of the High Master, Dr. Kynaston, entered the schoolroom about half-past 2, when the distribution of prizes was gone through in due order, and was followed by the performance of a series of dramatic scenes, Greek, English, and French. The scholars were then informed that at the request of the Prince of Wales their holydays would be elongated to the extent of a week, which was increased to a fortnight by the seven Bishops, who each solicited a day. As the guests retired "Three cheers for the Prince" and "Three cheers for the Bishops" caused the venerable building to resound. It is understood that the old Pauline dinner will be revived this year on the 2d of July.

INSPECTION OF THE CIVIL SERVICE VOLUNTEERS.—On Wednesday afternoon the Civil Service Volunteers, numbering 400 strong, were inspected by the Prince of Wales in the open square of Somerset House. Lord Bury was in command of the corps, which consisted of eight companies, under Captain Hawke, of the Audit Office; Captain Harrington and Captain Du Plat Taylor, of the Post Office; Captain Tom Taylor and Captain Mills, of Whitehall; Captain Willis, of the Admiralty; Captain Dalbiac and Captain Ennis, of the Inland Revenue. Seats were provided round each side of the square for the accommodation of spectators, and a canopy was fitted up in the Admiralty side of the square for the reception of the Prince and Princess of Wales, who honoured the ceremony by her presence, and the quadrangle was decorated with many flags. Their Royal Highnesses arrived at Somerset House shortly before 6 o'clock. The Prince wore the undress uniform of a general; the

Princess was still in mourning. The corps was drawn up in line, and saluted the Prince and Princess on their arrival on the ground, the band of the regiment playing the National Anthem. The Prince, in company with Lord Bury, first walked along the front and rear ranks, and his Royal Highness then returned to the Princess, and remained on the dais while the corps went through the usual battalion drill. They marched past at quick time and at the double, wheeling round the angles of the courtyard with remarkable precision. When formed in line the front ranks knelt to receive cavalry, and subsequently, by order of the Prince, they formed square to receive cavalry. After a series of marchings and countermarchings, changes of front, and other portions of the drill, the Prince desired that the men might form hollow square, in order that he might address them. The Prince then advanced, and addressing them, said:—

Gentlemen, I have asked your colonel, Lord Bury, to form you in square, in order that I might tell you how very much pleased I am at having been present at this inspection. I am quite sure that, under your able colonel, you have had every opportunity of learning and becoming proficient in your drill. You have learned your drill under a colonel who was himself instructed by General Knollys, in the regiment with which I am connected. I am pleased to see the proficiency to which you have attained. The manner in which you have gone through the movements affords proof that you have paid great attention to your drill. You have shown throughout a considerable amount of steadiness, and I observed on the part of all an evident anxiety to do their best. I am perfectly satisfied with all that I have seen to-day, and feel it an honour to be connected with your corps.

The Prince then handed to Lord Bury the Challenge Cup of 100 guineas, which his Royal Highness had given to be shot for at Wimbledon, and on Mr. Burroughes, the winner of the Cup, being presented, the Prince handed to him the smaller cup, presented by the regiment to the winner, congratulating him at the same time upon his success, and expressing a hope that he might be again the winner of the Challenge Cup. The corps then gave three hearty cheers for the Prince of Wales, followed immediately afterwards by three most hearty cheers by the spectators for Denmark. Their Royal Highnesses then left the ground amid the hearty cheering of all present.

NEW STREET IN SOUTHWARK.—A new and commodious thoroughfare, intended as a continuation eastward into the populous districts of Bermondsey and Rotherhithe of the main street recently opened between the borough of Southwark and the western parts of the metropolis by way of Stamford Street, was opened to the public use on Tuesday in presence of the Chairman of the Metropolitan Board of Works, the members of the Local Board for the district of St. Olave, and many other of the principal inhabitants. The new street, which connects Bermondsey and old St. Thomas's Street, is about 1050 feet long and 40 feet wide, and has been made by the London and Brighton Railway Company, at a cost of about 7000*l.* exclusive of allowances for compensation, at the instance and under the supervision of the Local Board of Works. This great local improvement is said to be mainly due to the Board of Works for St. Olave. A year or two ago, when the London and Brighton Railway Company were applying to Parliament for powers to enlarge their station at London Bridge and to improve its approaches by buying up much of the surrounding property, the Local Board succeeded in procuring the introduction of clauses into the Company's Bill which they have since made subservient to the public convenience by inducing the railway authorities to construct the new thoroughfare, in consideration of their having for their own purposes greatly altered the configuration of the district. This the company have done, too, wholly at their own expense, but they hope to be more than recouped in time by rents to be derived from letting the arches of their viaduct which skirts one side of the street. The street runs through a populous district, intersected until now by a number of little narrow and tortuous alleys, for which it is substituted, but it is said to have displaced the dwellings of about 200 of the labouring classes, who have in consequence gone no one appears to know whither, but probably, as they are bound to the locality by ties of interest, to herd in neighbourhoods already densely crowded. At the opening ceremony of Tuesday, Mr. Thwaites, the chairman of the Metropolitan Board, took occasion to dilate on the great public works in connection with the Thames Embankment on which the Board are now engaged, and which, he said, when completed, in conjunction with the new street from the Mansion House to Blackfriars Bridge, would afford a commodious thoroughfare, 100 feet in width for the greater part, from the heart of the city to the Houses of Parliament, in place of Cheapside, Ludgate Hill, Fleet Street, and the Strand. He mentioned, too, as a gratifying circumstance to the tax-paying community throughout the metropolis, that by an arrangement which the Metropolitan Board is now making with the Chancellor of the Exchequer, instead of the Board raising money to carry out its gigantic enterprises at the rate of 4½ per cent., it will obtain it from the Government at 3¾ per cent.—an operation, he said, which alone will effect a saving to the ratepayers of 18,600*l.* a year, over a period of 18½ years.

BUNHILL FIELDS BURIAL GROUND.—At the last meeting of the Common Council a memorial, signed by Mr. Remington Mills, M.P., Mr. Samuel Morley, and many other dissenters, was presented, praying the Court to take steps to secure the preservation in its present condition of Bunhill Fields burial ground. The memorialists stated that they had a deep personal interest in preventing the disturbance and desecration of the cemetery. They were informed that the leases under which the corporation of London had held the Finsbury prebendal estate for more than 300 years will finally run out at Christmas, 1867. and that the estate will then pass into the hands of the Ecclesiastical Commissioners. Of that estate the burial ground formed part, and they prayed the Court to make such arrangements before the expiration of the lease as might prevent the perversion of the ground to common uses. The ground, they said, was set apart as a place of interment by the corporation 200 years ago, and down to 1852, when it was closed as a place of sepulture, more than 120,000 corpses had been interred in it. "In this burying-ground," they observe, "are interred men whose memory and writings are among the most precious of our national heirlooms; some of the most fearless asserters of civil and religious liberty at critical periods of our history; notable men of all professions, and of all religious communities, divines, artists, reformers; a crowd of worthies and confessors whose learning, piety, and public services not only adorned the age in which they lived, but have proved a permanent blessing to the land, and whose names the world will not willingly let die. The Nonconformist bodies especially look upon this as the holy field of their illustrious dead, because here lie buried those whose remains were refused interment in the graveyards of the churches in which they had long faithfully ministered, and whose memory is reverently cherished in the hearts and homes of their religious descendants." The Court passed an unanimous resolution referring the memorial to the City Lands' Committee, for them to consider what steps should be taken for preserving the burial-ground in its present state.

THE METROPOLITAN BRIDGES.—At the last meeting of the Common Council, the chairman of the Bridge House Estates' Committee, presented a report on the Bill introduced into the House of Commons by Alderman Salomons to facilitate the traffic of the metropolis by improving the communications across the Thames. The Bill authorises the Metropolitan Board of Works to purchase by agreement Southwark Bridge and certain other bridges mentioned in a schedule annexed, and it enacts that any bridge so purchased shall be open for public use free from toll. It also provides that it shall be the duty of the Board to endeavour to purchase Southwark and Waterloo bridges before purchasing the other bridges. The Bill contains a clause directing that the corporation of London shall contribute out of the Bridge House Estates Fund a sum of not less than 50,000*l.* towards the purchase-money of Southwark Bridge, and that when purchased the bridge shall be maintained by the corporation of London out of the Bridge House Estates Fund. The committee stated that the introduction into Parliament, without the authority of the Court of Common Council, of a Bill dealing with the Bridge House funds, which are under the control and management of the corporation, was a proceeding of so unprecedented and dangerous a character as to render it, in their opinion, highly important that the measure should be opposed. The report gave rise to a discussion, in which the course taken by Alderman Salomons, without consulting the Court of Aldermen, was severely censured, but eventually the report was agreed to, and the Committee were authorised to prepare a petition to Parliament against the Bill.

THE CITY TRAFFIC.—A statement has just been published, under the authority of a Committee of the Court of Aldermen, respecting the proceedings taken on the part of the Corporation for carrying out the provisions of the City of London Traffic Regulation Act of last year. This document embodies a correspondence which has passed between Sir George Grey and the Corporation on the subject, and from which it appears that the Home Secretary, with the Attorney and Solicitor-General on the one hand, and the Court of Aldermen with the law officers of the Corporation on the other, are directly at variance in many respects as to the powers conferred by the new Act upon the Court of Aldermen to regulate the traffic. For the present the result of this difference seems to be that the Court of Aldermen have no course open to them but to confine the bye-laws which they had submitted for the sanction of the Home Secretary to those approved by the law officers of the Crown. These are only three in number out of 17. The first prescribes that every omnibus, metropolitan stage carriage, van, or other carriage, passing eastwards through St. Paul's Churchyard, the destination being London Bridge, or any place over the bridge, shall, on reaching the south-east corner of St. Paul's Churchyard, pass down Cannon Street, and thence over London Bridge; and that all carriages making the reverse journey shall traverse the same route. The second regulation is to the effect that no person shall drive any of the vehicles enumerated for the conveyance of goods and merchandise through any of the City streets between 9 a.m. and 6 p.m., if laden to a greater height than 16 feet from the ground, or a greater width than 7 feet. The third prohibits the driving of any cart, waggon, or other vehicle wholly or partially laden with timber, logs of wood, scaffolding poles, or any other freight exceeding 25 feet in length or 8 feet 6 inches in breadth, through any street in the City between 9 in the morning and 6 in the evening. These regulations are to be carried into effect at once; but the remaining bye-laws which closed the streets during certain hours to vehicles drawn by more than four horses, and prohibited the delivery of coals, [illegible] and beer in casks, in 24 of the principal streets, between 9 a.m. and 5 p.m., as well as the sale of vegetables, fruit, fish, and other articles carried on trucks or other vehicles, are for the present abandoned.

ABOLITION OF METROPOLITAN TURNPIKES.—On the 1st of July "The Metropolis Turnpike Road [illegible] Amendment" will take effect, when 25 toll gates and 56 side bars will disappear from the metropolis, as far as the tolls are concerned. The statute will set free from toll-gate obstruction about 51 miles of road on the north side of the Thames. At Fulham, including Walham Green and Earl's Court, all the gates and side bars are to be removed; also at Kensington, Hammersmith, and Notting Hill; Harrow Road, Kilburn, Camden Town, comprising the King's Road and High Street, Chalk Farm, Haverstock Hill, and the Brecknock Gate, as well as the gate in the road at Kentish Town. Further removals will take place at Holloway, Islington, Ball's Pond, Kingsland, the Cambridge Heath, Hackney, Twickenham, and Paddington. All the gates and side bars of the City Road are included.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, June 11, were 1285. The average number in the corresponding week of the 10 years, 1854-63, corrected for increase of population, was 1155. The present return is therefore 130 above the average. During the week the births of 955 boys and 938 girls, in all 1932 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1867.

Provincial.

BIRMINGHAM.—Between 30 and 40 boys narrowly escaped being poisoned in this town on Thursday week. It appears that the London and North-Western Company were having a sale of unclaimed goods, and among the articles were several sacks of Jatropha nuts, which are used in some branch of industry, and are pleasant to the palate, but poisonous. These nuts were scattered about the floor in a warehouse, and were picked up by the boys, who distributed them among their companions. All who ate them were speedily seized with vomiting pains in the stomach, and were sick. The sufferers were sent to the General Hospital, and by the employment of prompt means they were restored, but in several instances death had well-nigh been the consequences.

BURNLEY.—An order has been issued for the exhumation of the body of an old man named Butterworth, who recently died in this town under suspicious circumstances. In his last illness a person named Ingham, Dyson and his wife, and a man named Thomas Greenwood, waited upon him, and after his death the latter was locked up by Dyson and Greenwood, who took possession of all deceased's effects. Inquiry was made as to the existence of a will, in virtue of which it was alleged that they were empowered to act as they had done, but their attorney declined to produce it. Strong rumours speedily circulated in Burnley to the effect that the death of Butterworth was brought about by foul means.

CHATHAM.—A series of siege operations took place in this garrison on Saturday in the presence of the Prince of Wales, Prince Alfred, Prince Arthur, Prince Louis of Hesse, and the Duke of Cambridge. The operations consisted as usual of the explosion of mines, boat attack, and the explosion of torpedoes. About 4000 troops were engaged, and the operations were witnessed by many thousand spectators.

ETON.—The vacancy in the staff of the Upper School masters caused by the promotion of the Rev. F. Hoare-ford to the Lower School mastership has been filled by the advancement of the Rev. G. R. Dupuis from the Lower School.

LIVERPOOL.—The Mackay gun, and the Armstrong target, which showed five cleanly cut shot-holes, are exhibited in front of the Liverpool Exchange. On Monday, prior to the gun being sent to Shoeburyness for Government experiments.

MANCHESTER.—At the New Bailey, a few days since Silas Travis was brought up on remand charged with having attempted to murder his wife, at the time an inmate of Prestwich Lunatic Asylum. At the inquiry it was shown that the prisoner, during a visit to his wife at the asylum, where she had so far recovered that it was expected she would be able to leave in a few days, gave her two cakes, on breaking of which it was found to contain a number of pins in the form of fish-hooks. On tasting the cake they said that it had a bitter taste; and, on the prisoner being apprehended, a packet containing a white powder was found in his pocket. One of these packets had been analysed, and found to be antimony, which was found in the cake. The prisoner, on returning from the asylum, had told a lodger in his house, that, although the medical men said his wife was better, in her state she would never come out alive, and that he was "stiff" already, as he had two others waiting to marry him in Whit-week. The prisoner called a witness in his favour, but his evidence had a different effect. He stated that the prisoner and his wife when together

lived very unhappily, principally in consequence of his unkind treatment, as he never allowed her any money. He also had heard that the prisoner intended taking another wife. The magistrate committed the prisoner for trial at the assizes, stating that it was one of the most cruel and diabolical attempts to kill a person that he had ever known in the course of his experience, and he had been assured by medical men that the poison which the prisoner had attempted to administer would have caused a death of lingering and excruciating agony.

Newcastle-on-Tyne.—A murder was perpetrated at St. Mary's Island, near Old Hartley, on Saturday evening. A picnic party had been spending the day on the island, and were about to return home to Seaton Delaval. At that juncture a pitman, named Bell, who had been drinking in a public-house, went up to the group and demanded some money from a young man. An altercation ensued, in the course of which Bell, raising a loaded gun, shot one of the party in the thigh. Medical assistance was immediately obtained, but the wounded man gradually sank, and expired in a few hours.

Sheffield.—Great excitement was caused in one of the populous districts of this town on Monday morning, in consequence of a saw grinder, named Myers, having first murdered his wife, and then cut his own throat. The woman died immediately; and the man, who was removed to the infirmary, lies without any hope of recovery. At the inquest on Thursday the evidence showed that the murder was a most cruel and deliberate one, and the jury immediately returned a verdict of Wilful Murder against the husband.

Ireland.

The Emigration Movement.—Emigration to America proceeds with as much vigour at Queenstown as if it had only just begun. The ships are said to be invariably filled, and leave behind numbers of eager applicants for passages. One vessel last week took out 300 persons. The men were all young, with two exceptions. There were many women on board, and among them were seven nuns of the order of the Good Shepherd.

Scotland.

The Removal of Glasgow University.—The lands of Gilmorehill and West Bank were purchased on Wednesday by the authorities of the University of Glasgow, for the sum of 65,000*l.*, with the view of transferring the college buildings to that site at an early date. It is understood that the University will get immediate possession of the lands. These extend to nearly 50 acres, and after amply accommodating the college buildings, a large surplus of ground will remain, which, it is hoped, will be acquired by the corporation, and thrown into the West End Park, which would thus be made one of the finest in the kingdom.

Madeleine Smith.—An Inverness paper states that after the trial of Madeleine Smith for the alleged poisoning of her lover at Glasgow, her father and mother and the other members of the family left Blythswood Square and took a house in a rural district near Linlithgow, where she got married to a teacher, who felt pity for her condition. He got an appointment in an institution in one of the leading seaport towns in the south of England, and for a time seemed to be in the enjoyment of connubial felicity. But it was discovered that she was no less a personage than Madeleine Smith, and the scandal became so strong that the husband was compelled to leave his situation. They then proceeded to a smaller town in England, where, at a much reduced salary, the husband got another situation; but here, too, she was found out, and her husband fell into a melancholy mood and died. The wife was not long in following him, and died recently, it is said, of a broken heart.

The Tullibody Bridge Murder.—The trial of Thomas Arnot, for the murder of a lad named David Paton, on the Alloa Road, near Tullibody Bridge, on the 15th of March, took place on the 6th inst. before the High Court of Justiciary in Edinburgh. It was stated by the prisoner's counsel that he was insane, and unable to give instructions for his defence, and that therefore he was not a fit subject for trial. Evidence having been adduced as to the state of mind of the accused, the Court found that the case was beyond doubt one of present insanity, exempting the party from trial. Order was then made for the strict custody of the accused in Alloa prison until her Majesty's pleasure should be known.

The Murder near Edinburgh.—The trial of George Bryce on the charge of murdering a young woman named Jane Seaton, at Ratho, on the 16th of April last, commenced a few days since before the High Court of Justiciary, and occupied two days. A special defence of insanity was pleaded. The jury unanimously found the prisoner Guilty, but strongly recommended him to mercy on account of the low organisation of his mental faculties. He was sentenced to be executed on the 21st inst.

Railways.

Opening of the Hammersmith and City.—This important addition to the metropolitan system of railways was opened for public traffic on Monday. The line is worked by the Great Western, on the broad gauge, and the accommodation afforded is of the most liberal character, there being no fewer than 29 trains between Farringdon Street and Hammersmith, and 30 return trains daily. The first train leaves Hammersmith at 7.30 A.M., and the last at 10 P.M.; while the earliest train from Farringdon Street is 8.15 A.M., and the latest 10.15 P.M. The traffic, after leaving the Bishop's Road station at Paddington, runs over about a mile of the Great Western main line to the Hammersmith Junction at Green Lane, and thence to Hammersmith. The traffic now opened has the advantage of communication by every train with all the stations upon the Metropolitan Railway, as well as communication with stations at Notting Hill and Shepherd's Bush. Within a short period the Great Western Company will open a junction line which runs out of the Hammersmith Railway near Notting Hill, and joins the West London Extension near Kensington, by which the Great Western system will be placed in direct communication with the Crystal Palace and south of England. The time occupied in running between Farringdon Street and Hammersmith is 38 minutes, and the single fares 3*d.*, 6*d.*, and 1*s.*, with the return tickets at 1*s.*, 9*d.*, and 6*d.*

The Egham Accident.—Mr. E. Trigg, publican, of Market Street, Brighton, who had his leg and ribs broken, and sustained other severe injuries in the recent accident, died on Friday morning in Charing Cross Hospital from the shock to the system. The inquest was opened on Monday, and adjourned after the body had been identified. The inquest on the other persons killed in the accident was resumed at Egham on Tuesday. The officials of the company proved that the signals were all in order, and that, in addition, men were stationed along the line with hand signals. The general order was to show the "danger" signal for five minutes after a train passed, and the "caution" signal for five minutes more. The first train was started to stop at Egham, the second, which was started exactly six minutes after it, was to run through Egham and stop at the station beyond. The witnesses stated that the danger signals were exhibited at the station when the second train came in at the rate of about 10 or 15 miles an hour. The inquiry was again adjourned.

Collision on the Midland.—An alarming accident occurred on this line near Birmingham on Friday morning. As the 7 A.M. passenger train from Derby was approaching the ticket-platform, a goods train ran into it, owing, as it is said, to the negligence of the pointsman. About 15 passengers were more or less seriously injured. Among them was Mr. Stanbridge, the town-clerk of Birmingham, who received a severe shock, and several contusions about the head and face. Alderman Turner was also amongst the passengers, but escaped unhurt. Mr. Sutton, solicitor, of Temple Row, was bruised and cut, and Mr. Collinson, a Yorkshire gentleman, was severely cut in the face, and his shoulder contused. Other gentlemen, about 30 in number, sustained similar injuries, but it is hoped there will be no fatal results.

Sporting.

Cricket.—The annual match between 11 from the firm of Mr. Turner, Slough, and 11 from the firms of Messrs. Beck, Henderson, and Child, and Messrs. J. Carter & Co., of London, was played in the Home Park, Windsor, on the 15th inst.; when the former, after some excellent play on both sides, defeated their opponents by nine wickets. The score was as follows:—Slough Eleven, first innings, 74; 2d innings, 16, with nine wickets to fall. London Eleven, 1st innings, 48; 2d innings, 40; total, 88.

Obituary.

The Earl of Gosford, K.P., died on the 15th inst., after a short illness. His lordship, Archibald Acheson, Earl of Gosford, Viscount and Baron Gosford, of Market Hill, county Armagh, in the Peerage of Ireland; and Baron Worlingham, of Beccles, county Suffolk; and Baron Acheson, of Gloucairney, of the county Armagh, in that of the United Kingdom, and a baronet of Nova Scotia, was the only son of the second earl, who was for some years Governor-General of Canada, and was born in 1806. He married, in 1832, Lady Theodosia Brabazon, only daughter of the 10th Earl of Meath. He was an excellent landlord, and expended a large amount of money and time in the improvement of his landed property in Ireland. He was educated at Christ Church, Oxford, where he graduated B.A. in 1828, was elected M.P. for the county Armagh in 1830, which county he continuously represented up to 1847, when he was summoned to the House of Lords, during the lifetime of his father, as Baron Acheson. He was made a Knight of St. Patrick in 1855. His lordship is succeeded in the family honours and estates by his eldest son, Archibald Brabazon, Viscount Acheson, born in 1841.

Lord Archibald Vane Tempest, M.P. for North Durham, died on the 11th inst. He was the second son of the late Marquis of Londonderry, by his second wife, the daughter and heiress of Sir Harry Vane Tempest. He was born in 1825, and married in 1850 Lady Susan Pelham Conten, only daughter of the Duke of Newcastle, by whom he leaves an infant daughter. The deceased lord was educated at Eton, and, having adopted the army as his future profession, entered the Scots Fusilier Guards as ensign in 1843, became lieutenant and captain in 1849, and captain and lieutenant-colonel in 1854. He served with his regiment during the Eastern campaign, and received the medal and clasp for the siege and fall of Sebastopol. Soon after his return home from the East, in 1859, he retired from the service, his Parliamentary avocations interfering with his military duties. In 1862 he became a candidate for the city of Durham, but was unsuccessful. In the December following, however, he was placed at the head of the poll, but in June was unseated on petition. A vacancy having occurred in 1854 in the representation of North Durham by his brother, Lord Seaham, becoming a peer under the title of Earl Vane on the death of the Marquis of Londonderry, Lord Adolphus was returned, and held the seat uninterruptedly, on Conservative principles, until his death. He voted in favour of Lord Derby's Reform Bill, but occasionally supported Lord Palmerston's Government, and on the division on the Chinese war recorded his vote in favour of the Government.

Admiral Sir Arthur Fanshawe, K.C.B., died on Tuesday last, at his residence in the Regent's Park, after a long illness. He was the third son of the late Captain Robert Fanshawe, R.N., and was born in 1794. He entered the navy at an early age, and served in the flag-ship of Lord Gambier, in the expedition to Copenhagen in 1807, and was at the capture of the Russian 74 gunship Sewolod, in 1808. In 1809 and 1810 he was engaged in co-operating with the patriots on the coast of Spain: also, in 1811, assisted at the reduction of Java. He saw considerable service during the American war, and assisted at the capture of several privateers, and of the American frigate President, in 1815. He was flag captain in the Princess Charlotte in all the operations on the coast of Syria, and particularly distinguished himself at the bombardment of St. Jean d'Acre in 1840. After his return from the coast of Africa, in 1852, he was appointed superintendent of Portsmouth dockyard; in 1856 he was appointed Commander-in-Chief of the North American station; in 1857, he became Commander-in-Chief of the Mediterranean station; and, in 1860, was appointed Commander-in-Chief at Devonport; but was obliged to resign the last command from ill-health. In recognition of his services he was nominated a Knight Commander of the Bath, and a Knight of the Austrian Order of Leopold. He also enjoyed a flag-officer's good service pension of 300*l.* a year.

Professor Ferrier, A.B. Oxon, Professor of Metaphysics and Political Economy in the University of St. Andrews, died on the 11th inst. at West Port, in that city. His health had for some months been seriously impaired by organic disease of the heart; and latterly, he felt himself so completely incapacitated for conducting the business of his class that he had to delegate it to other hands. Repeated accessions of *angina pectoris* confirmed his friends in the fear that recovery was hopeless; and he died on Saturday.

Wills.—The will of Lord Ashburton has been sworn under 180,000*l.* personalty; the Countess of Glengall, 45,000*l.*; the Bishop of Peterborough, 80,000*l.*; Thomas Henry Maudslay, Esq., the engineer, 250,000*l.*; Miss Ann Simmons, of Yalding, Kent, 70,000*l.*

BIRTHS.—On the 9th inst. at 17, Bruton Street, the Countess Fortescue, of a daughter—12th inst, at 18, Queen's Gate, Hyde Park, the Lady Isabella Schuster, of a daughter—13th inst, at 16, Rutland Gate, the Lady Alfred Spencer Churchill, of a daughter—14th inst, at 17, Warwick Square, the Lady Henrietta D'Eyncourt, of a daughter—12th inst, at Meanwood Park, Leeds, the Hon. Mrs. Wm. Beckett Denison, of a daughter—8th inst, at 36, Westbourne Terrace, Hyde Park, the Hon. Mrs. Henry Noel, of a son—10th inst, at Formosa, near Maidenhead, the wife of George Douglas Pennant, Esq., of a son.

MARRIAGES.—On the 15th inst, at St. Paul's, Knightsbridge, Sir David Baird, Bart., to the Hon. Ellen Stuart, daughter of Lord and Lady Blantyre—11th inst, at St. Clement Danes, the Hon. Charles Stuart Savile, brother of the Earl of Mexborough, to Paulina Mary Ann King, only daughter of Major William John King, late 21st Fusiliers—14th inst, at All Saint's Church, Odiham, Francis Paynton Pigott Conant, late Captain 16th Lancers, Esq., eldest son of the late Francis Pigott Conant, Lieutenant-Governor of the Isle of Man, to the Hon. Henrietta Anne Carleton, eldest daughter of the Right Hon. Guy Lord Dorchester, of Greywell Hill, Hants—8th inst, at Trinity Church, Paddington, Charles Darcy O'Rorke, Esq., J.P. of Clonbern, county of Galway, to Harriet Mary Le Poer Trench, daughter of the late Admiral the Hon. William Le Poer Trench, son of William, first Earl of Clonearty—9th inst, at St. Peter's, Eaton Square, Captain the Hon. Frederic B. Best, late of H.M.'s 2d Bengal Fusiliers, second son of the Lord Wynford, to Charlotte Elizabeth, eldest daughter of Francis Hart Dyke, Esq., of Eccleston Square—8th inst, at the British Embassy, Paris, T. H. Grove, Esq., eldest son of Capt. Grove, R.N., Kincarding Castle, Perthshire, to Dona Mariquita, third daughter of the late Viscount and Viscountess de Lima—9th inst, in Trinity Episcopal Church, Edinburgh Charles Lawson, Esq., eldest son of the Right Hon. Charles Lawson, of Borthwick Hall, Lord Provost of the city of Edinburgh, to Mary, eldest daughter of Robert Stuart, Esq., of Carphin—7th inst, at St. James's, Piccadilly, Gilbert Greenall, Esq., M.P., Walton Hall, Warrington, Lancashire, to Susannah, eldest daughter of J. L. Rapp, Esq.—8th inst, by special licence, at the Church of the Bavarian Embassy, Warwick Street, Michael Sullivan, Esq., M.P., of Lachan Hall, county Kilkenny, to Margaret Sarina, daughter of the late Thomas Cormac, Esq., of the city of Kilkenny—11th inst, at Trinity Church, Marylebone, Frederick James, only surviving son of Joseph Underwood, Esq., of 5, Hyde Park Gardens, and Norwich, to Caroline, eldest surviving daughter of William Jackson, Esq., M.P.—9th inst, at West Malvern, William Forster, Esq., of Stanwin, Carlisle, to Georgina Frances, third daughter of the Very Rev. the Dean of Carlisle.

DEATHS.—On the 9th inst, at Honingham, the Hon. Charles William Powlett, only son of Lord Bayning, aged 19—10th inst, at Delgany, Ireland, the Hon. Louisa Scott, widow of James S. Scott, Esq., Q.C., aged 70—15th inst, at 22, Great George Street, Westminster, Georgiana, wife of the Right Hon. J. W. Henley, M.P.—10th inst, at Spa, Belgium, Lady Cunyngame, wife of Sir David Cunyngame, of Mauneraig, Bart., aged 49—9th inst, at Warlingham, near Croydon, Lady Hodgkinson, wife of Sir George Edmund Hodgkinson—At Sierra Leone, of hardships in the Ashantee war, Capt. Thomas Hugh Vans Baillie Hay, fourth son of the late Sir James Dalrymple Hay, Bart.—2d inst, at Florence, Emma Lydia, only daughter of the Dean of Elphin and Mrs. William Warburton—13th inst, at Pimlico, London, the Hon. John S. Gaskin, President of Her Majesty's Council in the Island of Barbadoes—23d March, at Honolulu, Sandwich Islands, suddenly, William Webster, Esq., C.E., Speaker of the last House of Assembly, and Agent for Crown Lands, aged 38—4th inst, John Crossley, of Scaitcliffe, Esq., M.A., barrister-at-law, J.P. and deputy-lieutenant of the county palatine of Lancaster, and of the West Riding of Yorkshire, aged 57—8th inst, at his residence, Park Hall, near Oswestry, Richard Henry Kinchant, Esq., J.P., and Deputy Lieutenant of the county of Salop, aged 69—2d, at Ashstead, near Epsom, Surrey, after a few days' illness, Daniel Maydwell, Esq., aged 82—May 30, at Hastings, Elizabeth Sandys, only daughter of the late Thomas Warren Kemp-thorne, Esq., of Glastonbury, and granddaughter of the late Rev. John Kemp-thorne, B.D., rector of St. Michael's, Gloucester—11th inst., at his residence, Nizell's House, Tunbridge, Samuel Cartwright, Esq., F.R.S., F.G.S., &c., aged 75—5th inst., the Rev. Henry Gray, vicar of Almondsbury, Gloucestershire, aged 56—11th inst, at Nerquis Hall, near Mold, the Rev. Lloyd Wynne, aged 78—10th inst, at 6, Den Crescent, Teignmouth, the Rev Harry Martin, of Elmfield, rector of Coombeinteignhead, aged 52—6th inst, at the Parsonage, St. Nicholas, Halewood, near Liverpool, the Rev. Jabez Jones, M.A., aged 58—At St Gregory's, Ramsgate, the Rev. Alfred Luck, aged 56.

Markets.

COVENT GARDEN, June 18

Outdoor produce of nearly every description is abundant. Grapes are sufficient for the demand, and Strawberries from open quarters begin to make their appearance. Of Pine Apples there is also a fair supply Arrivals of foreign goods continue heavy; among them are Endive, Carrots, Artichokes, Cherries, Tomatos, Apricots, and Plums. English Peas are also plentiful; they fetch from 6d. to 1s. a peck. Lisbon Potatos are now being superseded by samples of English growth Asparagus fetches from 2s. 6d. to 4s. a bundle. Flowers chiefly consist of Orchids, Heaths, Pansies, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Lemons, per 100, 6s to 10s
Grapes, per lb., 4s to 8s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	— Barcelona, do, 16s
Strawberries, p. punn., 1s 6d to 4s	— New Brazil, do., 20s.
Cherries, per lb., 6d to 9d	— Old do., do., 14s
Gooseberries, green, p. qt. 3d to 6d	Almonds, do., 20s
Oranges, per 100, 10s to 14s	Walnuts, do., 12s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 8d to 1s
Asparagus, per bundle, 2s 6d to 4s	Cucumbers, each, 1s to 2s
French Beans, p. 100, 2s to 3s	Beet, per doz., 1s 6d to 2s
Peas, p. peck, 6d to 1s	Shallots, per lb, 10d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 4d to 1s	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 6d to 1s 6d	Mushrooms, p. pott., 1s to 1s 9d
Rhubarb, p. bundle, 2d to 4d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

POTATOS.—SOUTHWARK, Monday, June 13.

During the past week the arrivals coastwise and by rail have been moderate, but more than equal to the demand; owing to the very warm weather, the consumption is very limited. The following are this day's quotations:—Yorkshire Flukes, 30s. to 50s. per ton; do. Regents, 20s. to 30s.; Seedlings, 20s. to 30s.; do. Rocks, 20s. to 30s.; Dunbar Regents, 30s. to 40s; Perth, Forfar, and Fife Regents, 20s. to 30s.; do. do. Rocks, 20s. to 25s.; do. do. Reds, 20s. to 25s.

BRITISH WOOLS.—LONDON, June 16.

Our trade is quiet, prices being too high in the country to allow of much business.

	s. d.	s. d.		s. d.	s. d.
South-down Hog-gets	1 11	..	Leicest. Hoggs	2 0	—2 1
Half-bred ditto	2 0	to 2 2	Ditto Wethers	1 10	to 1 11
Down Ewes	1 9	— ..	Combing Skins	1 6	—2 0
Kent Fleeces	2 0	— ..	Flannel Wool	1 6	—1 9
			Blanket ditto	0 6	—1 0

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, June 16.

Prime Meadow Hay	72s	to 75s	Clover, old	90s to 110s
Superior do.	80	86	New Clover	— —
Inferior do.	55	60	Do second cut	80 105
New do.	—	—	Straw	25 30
Rowen	—	—		

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, June 16.

Sup. Meadow Hay	84s	to 92s	Inferior Clover	80s to 95s
Inferior do.	68	76	New do.	70 84
New do.	60	75	Straw	32 36
Superior Clover	105	112		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, June 16.

Fine Meadow Hay	80s	to 84s	Prime 1st cut Clover	105s to 112s
Inferior do.	70	75	Inferior do. do.	95 100
Prime New Hay	—	—	New 1st cut do.	— —
Inferior	—	—	Prime 2d cut do.	100 108
Straw	25	28	Inferior do.	— —

COAL MARKET.—June 15.

Byass's Bebside West Hartley, 16s. 3d.; Holywell Main, 16s. 6d.; North Pelton Gas, 13s.; Walker Primrose, 13s 3d.; West Hartley, 16s. 3d.; Walls End Gosforth, 15s 6d.; Walls End Riddell, 15s. 6d.; Eden Main, 16s. 3d.; Walls End Braddylls Hetton, 16s. 6d.; Walls End Haswell, 17s. 6d; Walls End Hetton, 17s. 6d.; Walls End Russel's Hetton, 16s. 6d.; Walls End South Hetton, 17s. 6d.; Walls End Tunstall, 15s. 6d.; Walls End Cassop, 16s. 9d.; Walls End Hartlepool, 17s. 3d.; Walls End Heugh Hall, 17s.; Walls End Kelloe 16s. 9d.; Walls End East Hartlepool, 17s. 6d; Walls End South Hartlepool, 16s. 9d.; Walls End South Kelloe, 17s.—Ships at market, 39.

METROPOLITAN CATTLE MARKET.

MONDAY, June 13.

We have a large reduction in the supply of Beasts; consequently, although trade is dull, prices have advanced a little. Sheep are not quite so plentiful as on Monday last, yet the supply is good Trade is rather more cheerful, but it is very difficult to obtain higher rates. Lambs and Calves are selling about the same as on Thursday. From Germany and Holland there are 1360 Beasts, 4510 Sheep, 259 Calves, and 60 Pigs; from France, 13 Calves; from Scotland, 695 Beasts; from Ireland, 20; and 2560 from Norfolk and Suffolk.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	8	to 5	0	Best Long-wools.	..	—	..	
Best Short-horns	4	6	— 4	10	Do. Shorn	4	6	— 4	10
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	4	0	— 4	4
Do. Shorn	5	0	— 5	4	Lambs	6	4	— 7	4
					Calves	3	4	— 5	4
					Pigs	3	4	— 4	8

Beasts, 4970; Sheep and Lambs, 28,130; Calves, 304; Pigs, 680.

THURSDAY, June 16.

The number of Beasts is large, but it includes a considerable number in store condition. The choicest qualities are not lower. Our quotations generally are the same as on Monday; it is, however, difficult to effect a clearance. Sheep are also more plentiful; we have a demand at Monday's quotations. Lambs and Calves are not selling quite so well Our foreign supply consists of 510 Beasts, 3020 Sheep, and 600 Calves Milch Cows, 60.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	4	8	to 5	0	Best Long-wools.	4	6	— 4	10
Best Short-horns	4	6	— 4	10	Do. Shorn	..	..	—	..
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	4	0	— 4	4
Best Downs and Half-breds	5	0	— 5	4	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	4	0	— 7	0
					Calves	3	4	— 5	2
					Pigs	3	4	— 4	8

Beasts, 1850; Sheep and Lambs, 13,410; Calves, 773; Pigs, 210.

HOPS.—BOROUGH MARKET, FRIDAY, June 17.

Messrs. Pattenden & Smith report the stock of last years' growth nearly exhausted. Consumers buy only to supply immediate wants, which causes the trade to rule dull; prices barely so good as on Monday. The plant is progressing very favourably.

NEWGATE.—June 17.

Best Fresh Butter .. .. 12s. per dozen lbs.
Second do. do. .. .. 10s. ,,
Pork, 4s. 4d. to 4s. 8d. per 8 lbs.

MARK LANE.—MONDAY, June 13.

The supply of Wheat from Essex and Kent to this morning's market was very small, and met a quick sale at the prices of this day sen'night. There was a moderate attendance, and only a limited business was transacted in foreign Wheat, for which we do not alter our quotations. Barley, Beans, and Peas sold at last week's rates. The supply of Oats fresh up being small, there was a good demand for the few parcels on board ship at an advance of 6d. per qr. For Flour there was a moderate inquiry, and prices were unaltered.

PER IMPERIAL QUARTER	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk .. White	42—48	Red	38—48
— — fine selected runs .. ditto	44—52	Red	40—48
— — Talavera	48—51		
— Norfolk	—	Red	—
— Foreign	36—52		
BARLEY, grind. & dist, 25s to 27s .. Chev.	34—38	Malting ..	29—33
— Foreign .. grinding and distilling	22—26	Malting ..	27—31
OATS, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	17—22	Feed	15—20
RYE	30—32	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....27s to 36s...Tick	30—33	Harrow .	30 33
— Pigeon .... 32s to 40s .. Winds.	—	Longpod	—
— Foreign .....Small	32—36	Egyptian	30—32
PEAS, White, Essex and Kent .. Boilers	32—33	Suffolk ..	33—34
— Maple .... 30s to 34s .... Grey	28—30	Foreign ..	31—33
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered .. per sack	35—40		
— 2d do ..... ditto	28—34	Country ..	28—34
— Foreign ..... per barrel	16—24	Per sack	32—40

FRIDAY, June 17.

The weather became unsettled and showery on the 13th, and continued so until yesterday; it has since been fine. The Wheat trade throughout the kingdom this week has been inanimate, and in some markets rather lower rates have been accepted. A few purchases of English Wheat have been made for export to the continent. We do not observe any alteration in the value of Barley or Peas, but the prices of Oats and Beans have slightly improved. Flour has been in moderate demand at late rates. Since Friday last 8 vessels have been reported off the coast. The trade was moderately active, Odessa Wheat realising a small advance early in the week, as also Maize, but the demand has abated for the latter article. In Barley more business has been done, but prices remain the same. Paris, June 16.—Wheat: The tendency of markets in the interior is still for higher prices, and we closed here about 50c per sack dearer yesterday, which advance is maintained to-day. Flour was quiet, and more freely offered; the six marks are worth 37s. to 37s 3d. per 280 lbs., and the present stock of Flour reported as 13,400 cwts. The arrivals of English Oats and American Flour this week have been to a fair extent, of all other grain very small. The attendance at to-day's market was unusually limited. English Wheat was inquired after at the extreme rates of Monday last, holders of foreign rather raise their pretensions, but the business transacted was restricted. Barley, Beans, and Peas were steady at Monday's quotations. Oats continue scarce, and bring an advance of 6d. per qr.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	830 qrs.	— qrs.	1220 qrs	570 sks.
Irish	—	—	1290	— ,,
				150 ,,
Foreign ..	1570 ,,	—	7850 ,,	7440 brls

LIVERPOOL, June 14.—We have had a good attendance of millers and dealers at this day's market, and Wheat has commanded a good consumptive inquiry at the prices current on Friday last. Flour also is more saleable, and may be quoted the turn dearer. Indian Corn steady in value, but not much dealt in. Oats and Oatmeal neglected. Beans, Peas, and Barley show no alteration. The market closes better than it opened.

FRIDAY, June 17.—The market was moderately attended. Good demand for Wheat, both for consumption and export; prices 1d. per cental dearer. Flour steady at late rates. Moderate demand for Indian Corn. Egyptian Beans steady. Oats and Oatmeal dull.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans	Peas.
May 7	38s 9d	30s 3d	19s 5d	32s 3d	34s 0d	32s 1d
— 14	39 3	29 9	19 8	28 5	34 3	32 6
— 21	39 8	29 6	20 0	31 5	34 2	32 9
— 28	39 5	29 0	19 10	27 7	34 6	31 9
June 4	38 11	29 6	19 10	28 4	34 10	33 5
— 11	39 6	27 11	20 0	34 1	34 10	33 9
Agg. Aver.	39 3	29 4	19 9	30 4	34 5	32 9

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	May 7.	May 14.	May 21.	May 28.	June 4.	June 11.
39s 8d	..	..		..	..	..
39 6	..	..	..	..	..	
39 5	..	..	..		..	..
39 3	..		..	..	..	..
38 11	..	..	..	..		..
38 9 —		.	..	..	..	..

WANTED, a WORKING GARDENER.—Must be industrious, honest, and skilful in the Growth of Plants and Flowers, the Selection of Shrubs and Trees, &c. One month on trial, and if suitable 20s per week, and 15 per cent. on all flowers he grows, except specimen plants. Inquire of the Proprietor, THOMAS CLAPHAM, Royal Park, Leeds. Letters not answered implies a negative.

WANTED, an industrious MAN and his WIFE, without incumbrance.—The Man to attend to Kitchen Garden, Poultry, and to understand the Management of a few Sheep. The Wife to wait on Family when required Wages, 15s per week, house, and coals found. About 12 miles from London on the Great Northern Railway. State all particulars of character M., 35, Whitechapel Road, E.

WANT PLACES.—Letters to be Post Paid.

HEAD and UNDER GARDENERS.—HUGH LOW & Co. have now in their Nursery several men of excellent abilities and good characters, who are looking for situations in the above-named capacities. Gentlemen in want of Gardeners can have full particulars on application.—Clapton Nursery, London, N.E.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended by gentlemen.—Further particulars given on application to Messrs. HENDERSON & SON, Wellington Nursery, St. John's Wood, London.

GARDENER (HEAD).—Age 32, single; leaving in consequence of employer giving up his place.—Two years good character.—W. S. S., 17, Hanover Street, Upper Seymour Street.

GARDENER (HEAD), in any part of the Age 31, married; good character.—G. D., Post Office, Nottingham.

GARDENER (HEAD).—Age 35, married; has practical knowledge of his profession; can produce testimonials from his employers for the last 16 years, including present situation.—J. K., Mr. Richard Smith, St John's Nursery Worcester.

GARDENER (HEAD).—Age 30, married, without incumbrance; has a thorough practical knowledge of his profession in all its branches. Six years' good character.—R. W., W. Paul's, Waltham Cross, N.

GARDENER (HEAD).—Age 30, married, one understands Pines, Vines, Melons, Cucumbers, Stove and Greenhouse Plants, and Flower and Kitchen Gardens.—G. C., Office, Esher, Surrey.

GARDENER (HEAD).—Age 30, married; has practical knowledge of his profession. Wife would take the Laundry if required. Good testimonials.—G. R., Stanstead Nursery, Forest Hill, S.E.

GARDENER (HEAD).—Age 32, married; understands Vines, Greenhouse, and Flower and Kitchen Gardens; seven years and nine months' character from last place.—W. J., Office, West Wickham, Kent.

GARDENER (HEAD).—Age 40, married, no incumbrance; has a thorough practical knowledge of his profession in all its branches. Understands Land, if required. Satisfactory references.—T., Mr. Veitch's, 54, High Street, Exeter.

GARDENER (HEAD).—No incumbrance; understands his profession in all its branches, including Early and Late Forcing. Three years' good character.—G. H., Messrs. Cutbush's Highgate Nurseries, N.

GARDENER (HEAD), age 32, unmarried—Lady wishes to recommend a respectable Man, thoroughly competent, who has lived in her service two years.—E. G., 3, Park, Hampstead, N.W.

GARDENER (HEAD).—Age 29, single; thoroughly experienced in Flower, Fruit, and Kitchen Garden. Early and Late Forcing. Can take the Management of Land and Stock if required. Eight years' unexceptionable character.—A. B., Dod's Nursery, Epsom.

GARDENER (HEAD).—Age 30, married; is competent in the growth of Stove and Greenhouse Plants; has the management of the Orchard House, Vinery, Succession Houses, &c. Every inquiry will be found satisfactory. Country preferred.—W. L., 4, Glenmore Row, New Charlton, Kent.

GARDENER (HEAD).—Has had first-class experience both in England and Scotland; competent to undertake the Laying out and Improvement of Gardens as well as the general Management of them. Can give unexceptionable references.—PEARSON, Worksop Manor Gardens, Notts.

GARDENER (HEAD).—A gentleman wishes to recommend his Gardener, who has been with him four years, fully competent to take charge of Hothouses, Flower and Kitchen Gardens, and thoroughly understands Forcing.—H. B., Post Office, Streatham, S.

GARDENER (HEAD).—Age 42, married, no incumbrance; perfectly understands Pines, Vines, Stove and Greenhouse Plants, &c. Leaving in consequence of a death in the family, and will be at liberty for an engagement at any time.—Address, *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Age 30, single, Grower of Pines, Grapes, Orchids, Stove and Greenhouse Plants, &c., and a good Fruit, Flower, and Kitchen Gardener; unexceptionable.—F. LUCKHURST, Mr. Thomas Frost's Nurseries, Maidstone, Kent.

GARDENER (HEAD).—EDWIN HOLLAMBY has pleasure in recommending to any Lady or Gentleman in want of a person as above, an intelligent, industrious man of thorough experience in all departments of his profession; most satisfactory reference from present employer.—The Nurseries, Tunbridge Wells, and Groombridge, Kent.

GARDENER (HEAD).—Age 32, married; has several years' experience in the Management of an Estate; thoroughly understands the Forcing of all kinds of Fruits and Vegetables, also four years' practice in Growing Orchids, Stove and Greenhouse Plants, Ferns, &c., for Exhibition; unexceptionable character, and first-class references as to character from his present employer.—A. M., Mr. Slocombe's, Stationer, Ongar, Essex.

GARDENER (HEAD).—Scotch; married; thoroughly practical and working; is well up in modern Plant and Flower Forcing; the Culture of Vines in pots, and the Management of Kitchen and Pleasure Gardens; has had experience in the Erection of Horticultural Buildings. Four years' character, and first-class testimonials.—F. J. H., Messrs. Laird & Laing, Nurserymen, Forest Hill, S.E.

GARDENER (good HEAD WORKING).—Married; Children; thoroughly understands Early and Late Forcing, Pines, Vines, Cucumbers, Melons, Strawberries, &c., Stove and Greenhouse Plants, Peach House, Fruit, Flower, and Kitchen Gardens and Land and Stock if required. Character unexceptionable.—G. B., 3, Torquay Terrace, Seven Sisters Road, Holloway, N.

GARDENER (HEAD), age 25, where two or three are kept.—Mr. FROST, Bower Nursery, Maidstone, can recommend a Gardener to any gentleman requiring a steady person. Good character.—Address as above.

GARDENER (HEAD or SINGLE-HANDED).—Age 30, married, one child; understands the Forcing of Vines, Cucumbers, and Flowers. Seven years' good character.—E. S., 22, Cumberland Street, Chelsea, S.W.

GARDENER.—Age 30, married, without incumbrance; understands his profession in all its branches. Would take the Management of a Dairy or Laundry if required.—T. S., Horncastle Road, Boston, Lincolnshire

GARDENER, where there is assistance given.—Age 30, married; thoroughly understands his profession, as Grape Grower, and understands the Management of Stove. Can have character from his present employer.—A. B., 1, Laurel Grove, Park, Lower Sydenham, S.E.

GARDENER (SECOND), where several are kept, or a SINGLE-HANDED place with an Assistant. Has good character and references if required.—T. G., Post Office, Fetcham, Leatherhead.

IMPROVER (age 19), in any nobleman's or gentleman's Garden under a first-class Gardener, where his services are principally required in the Fruit and Plant Houses.—Ashville Farm, Andover, Hants.

PROPAGATOR, or PROPAGATOR and GENERAL WORKER, in Hard and Soft-wooded Plants.—Age 26, married, no incumbrance.—A. Z., Mrs Adams, 6, Fort Street, Spital Square, E.

BAILIFF.—Age 38, married, without incumbrance; thoroughly understands his business. Wife as Housekeeper, or to take charge of a Dairy, &c. Good character.—A. B., 5, Chesterton Road, Cambridge.

COACHMAN and GARDENER.—Age 30, married, no incumbrance. Thorough practical knowledge of his profession in all its branches. Character unexceptionable.—A. B. M., 72, Compton Street, St. John's Street, E.C.

The Gardeners' Chronicle Newspaper.

SATURDAY, JUNE 25, 1864.

SHAW'S TIFFANY.
For samples and prices apply to
J. SHAW & Co., 20, Oxford Street, Manchester

Wasps.
HAYTHORN'S HEXAGON and CHISWICK NETS will protect all kinds of Fruit from Wasps, Flies, Birds, &c. Patterns free by post.
Direct, Mr. HAYTHORN, Nottingham.

TANNED GARDEN NETTING.—Inch Mesh, 1*d.* per yard: in pieces containing 100 to 500 yards. Small quantities, 1½*d.* per yard. TOBACCO PAPER, price to the trade on application.
H. BROWN, Seedsman, 4, Commutation Row, Liverpool.

TANNED NETTING, for the Protection of Fruit Trees from Frost, Hail, and birds; also for the security of fresh-sown Seeds, at 1*d.* per square yard; 200 yards, 14s.; 400 yards, 25s.; 1000 yards, £3. WOOL NETTING, COTTON NETTING, SCRIM CANVAS, GARDEN MATS, TULIP COVERS, GREENHOUSE SHADES, &c.
JOHN EDDINGTON & Co., 48, Long Lane, Smithfield, E.C.; and 1a, Pentonville Road. W. Manufactory, 18, Old Kent Road, S.E.

TANNED GARDEN NETTING for preserving Seed Beds, Trees, Strawberries from Frost, Insects, Birds, &c., and as a Fence for Fowls, &c. 1 yard wide, 1½*d.*; 2 yards, 3*d.*; 4 yards, 4½*d.*; and 4 yards, 6*d.* per yard run, in any quantity, may be had at CHAS. WILLMOTT'S, 370, Strand, W.C.
VARNISHED FLOWER STICKS.—1 foot, 3*d.*; 1½, 4*d.*; 2, 5*d.*; 2½, 7*d.*; 3, 1*od.*; 4, 1s. 6*d.* per dozen. DAHLIA do., per dozen:—3 feet, 1s. 6*d.*; 4, 2s. 6*d.*; 5, 3s.; 6, 3s. 6*d.* An allowance to Nurserymen.

NETTING for FRUIT TREES, SEED BEDS, RIPE STRAWBERRIES, &c.—TANNED NETTING for Protecting the above from Frost, Blight, Birds, &c., 2 yards wide, 3*d.* per yard; or 100 yards, 25s.; 4 yards wide, 6*d.* per yard, or 50 yards, 20s. NEW TANNED NETTING, suited for any of the above purposes, or as a **Fence for Fowls, 2 yards wide, 6d. per yard; 4 yards wide, 1s. per yard; ½-inch mesh, 4 yards wide, 1s. 6d. per yard.**
Can be had in any quantity of EATON & DELLER, 6 and 7, Crooked Lane, London Bridge, E.C.

EDGINGTON'S GARDEN NETTING, the cheapest and most durable; 200 square yards, 14s.; 500 yards, 30s.; 1000 yards, 50s.
EDGINGTON'S RICK CLOTHS for 50 years have maintained their celebrity as the best.
EDGINGTON'S MARQUEES and TENTS are the prettiest.
EDGINGTON'S MARQUEES for hire are the most elegant and extensive.
Samples of material free on application. Be particular FREDERICK EDGINGTON & Co., Thomas Street, Old Kent Road, London, S.E.
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BENJAMIN EDGINGTON (only), 2, Duke Street, London Bridge, S.E.
No other Establishment.

TERRA COTTAS always on Sale, viz.—FOUNTAINS, VASES, STATUES, FLOWER POTS, TRACERY, CHIMNEY TOPS, PAVING TILES, &c., at
J. P. BOSWELL'S Galleries, Praed Street, Paddington, W.

HORTICULTURAL TOOLS.—Lawn Mowers, Garden Rollers, Garden Engines, Syringes, and Tools of all kinds; Wire Netting, Prize Churns, &c., delivered carriage free; Price List free.
BURGESS & KEY, 95, Newgate Street, E.C.; Works, Brentwood, Essex.

To Seed Merchants and Nurserymen.
SAYNOR AND COOKE, PRUNING and BUDDING KNIFE MANUFACTURERS, beg respectfully to say that they WILL NOT BE UNDERSOLD by any House in the Trade. They also warrant one of their Knives to last two of any other make.
Paxton Works, Sheffield.

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FOR PRICE LISTS of the PATENT WATER BALLASTING PARK, FIELD, and GARDEN ROLLERS, which are now acknowledged to be superior to all others, apply to Messrs. AMIES & BARFORD, Queen Street Iron Works, Peterborough, Patentees and Sole Manufacturers.

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS, Manufacturers of PORTABLE and FIXED STEAM ENGINES, Machinery for Pumping, Hoisting, Grinding, Sawing, &c., Engines for Steam Cultivation, Self Moving Engines for Common Roads and Agricultural Purposes generally.
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FOR SALE, Three very Handsome, good, and same as quite new, CONSERVATORIES, from 24 feet to 60 feet long, are warranted of the best materials and make, and to be sold a very great bargain—less than half price will be taken.
For further particulars, address E. DAVIS, Penfret Villa, Prize

WILLIAM SMITH, 164, King Street, Hammersmith, begs to call attention to the Stock of LIGHTS he has ready for use. All made of 2-inch Yellow Deal: 20, 7 ft. by 3 ft. 11 in., price 16*s.* or 17*s.* each; 20, 6 ft. by 3 ft. 11 in., price 14*s.*, or 15*s.* each; 15, 5 ft. 9 in. by 3 ft. 11½ in., price 16*s.*, or 14*s.* each; 10, 9 ft. 8 in. by 4 ft. 8½ in., price 13*s.* or 26*s.* each.
GREENHOUSES made to order at 1*s.* 1*d.* per square foot.

Greenhouses and Conservatories.
H. FREEMAN, Horticultural Works, Triangle, Hackney, N.E.—Good substantially-made GREENHOUSES, glazed, ready for fixing, 42 feet by 13 feet, 50*l.*; 21 feet by 13 feet, 28*l.*; 15 feet by 9 feet, 18*l.* A handsome CONSERVATORY, 30 feet by 19 feet, for Sale, price 130*l.* A large [illegible] given for any branch in Wood or Iron.

Greenhouses.
JOSEPH SMITH, New Road, Hammersmith, W., [illegible] GREENHOUSES, VINERIES, and HOT-BED HOUSES, [illegible] on the best approved plan, of good Yellow Deal, 21-oz. glass, and their [illegible] at 10*s.* per square foot; with best glass, 10*s.* 6*d.* per foot.
J. S. begs to call attention to his SPAN ROOF, 9 ft. by 16, 9 ft. by 12, Lean-to, 9 ft. by 12, or LEAN-TO, 8 ft. by 12, 8 ft. by 10, 20 by 12, 20 by 10, for Pits, &c. A well-seasoned Deal, various sizes, 21-oz. glass, fixed with Hay glass 8*d.* per foot.
Two-inch Lights made to order, 15-oz. glass, 8*d.* per foot.
Estimates for effectually Heating with hot water.
N.B. Second-hand, equal to new, a SPAN HOUSE, 17 by 12, complete with shelves (the brickwork required) and hot water pipes, 35*l.*

JAMES PHILLIPS AND CO. have the pleasure to hand their prices of FERN CASES.

12 inches long	..	..	£1	1	0	22 inches long	..	..	£1	15	0
14	..	..	1	5	0	24	..	..	2	2	0
16	..	..	1	8	0	28	..	..	2	10	0
18	..	..	1	10	0	28	..	..	3	0	0
20	..	..	1	14	0	30	..	..	3	10	0

FERN CASES, with Circular Tops, 3*s.* extra on above prices.
Glass Shades for Ornaments, Propagating Glasses, Milk Pans, Cucumber Tubes, Cases for Hothouses and Portmeirion, Pants of all
18*l*, Bishopsgate Street Without, London, E.C.

J. TYLOR AND SONS, Warwick Lane, Newgate Street, London, E.C., beg to call attention to their very superior manufacture of GARDEN ENGINES and SYRINGES.

Fig. 570.
J. TYLOR & SONS'
GALVANIZED IRON TUB GARDEN ENGINES,
with Registered Spreader

8 gal.	12 gal.	16 gal.
£2 15 6	£3 2 0	£3 12 6

24 gal.	30 gal.
£5 0 0	£5 12 0

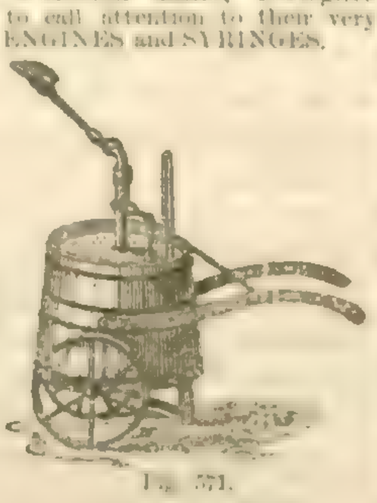

Fig. 571.
J. TYLOR & SONS'
OAK TUB GARDEN ENGINES,
with Registered Spreader.

15 gal.	28 gal.
£5 12 0	£7 0 0

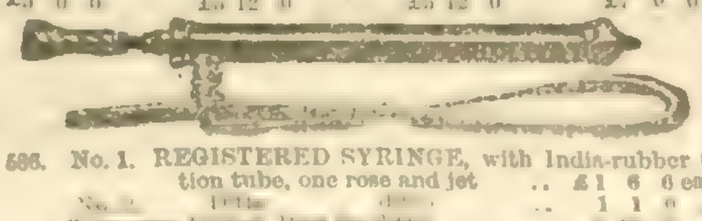

Fig. 588. No. 1. REGISTERED SYRINGE, with India-rubber suction tube, one rose and jet .. £1 6 6 each.

Fig. 590. Large GARDEN SYRINGE, with one rose and jet .. .. 10 6 each
,, 589. Middle Ditto ditto .. .. .. 9 6 ..
,, 588. Small Ditto ditto .. .. 8 6 ..
,, 587. LADIES' GARDEN SYRINGE, with one .. 6 9 ..

Fig. 591. READ'S SYRINGE, with two roses and one jet .. 16s. 6d.
READ'S SYRINGE, with one rose and jet 14 0
,, 592. Improved ditto ditto large .. 13 0
Garden Engines and Syringes of J. TYLOR & SONS' manufacture kept in stock by Ironmongers and Seedsmen in every part of the United Kingdom.
J. TYLOR & SONS, Manufacturers, Warwick Lane, Newgate Street, London, E.C.

FLOORING, MATCH BOARDS, DEALS, &c., as low as advertised. White Batten, 9*l.* per 120, 12 feet; Yellow ditto, 10*l.* ditto ditto; ¾ Floor Boards, well prepared, from 11s. 6*d.* per square; Matched Lining, from 12s.; Venetian Blind Laths from 8s. 6*d.* per 100 feet superficial. HARRIS'S CIRCULAR SAWING and PLANING MILLS, Chapel Street, Kensington.

Under the Patronage of Her Majesty.
CLARK AND HOPE (late CLARK), 55, Lionel Street, Birmingham, MANUFACTURERS of METALLIC and WOODEN HORTICULTURAL BUILDINGS, CONSERVATORIES, VERANDAHS, &c., CURVED and WIRE-WORK IRON SASHES, SKYLIGHTS, &c., and HOT WATER APPARATUS for Horticultural and Domestic purposes.

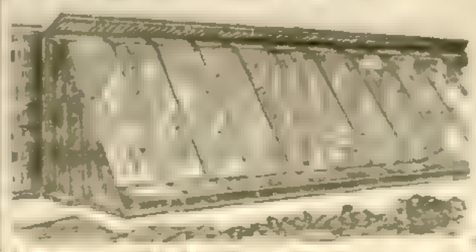

C. & H. beg to call attention to their NEW TREE COVER, or Continuous Glass Covering for Garden Walls, which is constructed of Cast and Wrought Iron, glazed with or without putty, and fitted together with bolts and nuts, constituting a Tenant's Fixture. It can be made 6, 7, or 8 feet wide, and 10, 12, or 14 feet high, the Lights being opened, regulated, or made of sliding and double [illegible], in lengths of [illegible] 30 feet, and the cost does not exceed [illegible].
Further particulars, with prices, forwarded upon application; and on receipt of the amount in postage stamps, a Book of Designs, plain 1s. 6*d.*, coloured 2s. 6*d.*, for Horticultural Buildings, &c.

DENNIS'S PATENT METALLIC HORTICULTURAL BUILDINGS are made from the

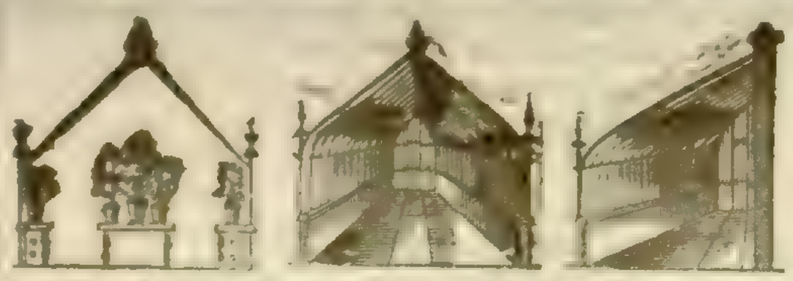

best Wrought Iron, [illegible] a [illegible] new principle. The [illegible] of Iron and Glass [illegible] by the [illegible] of fracture by [illegible], and a [illegible] Watering Pot [illegible].
The [illegible] practical advantages [illegible] of Heating, obtaining a [illegible] with the most [illegible], durability, and perfect [illegible]. They are [illegible] erected, portable, or more [illegible], and [illegible] the cost of a [illegible] wooden structure.
For Prospectus, &c., address T. H. P. DENNIS, Horticultural Builder, Hot-Water Engineer, &c., High Street, Chelmsford, Essex.

W. J. HOLLANDS, IRON MERCHANT, 31, Bankside, London, S.E.
HOT WATER PIPES, from Stock, per yard:—2-inch, 1*s.* 4*d.* 3-inch, 2*s.*; and 4-inch, 2*s.* 7*d.* BENDS, from Stock, 1*s.* 7*d.*, 2*s.* 6*d.*, and 3*s.* 3*d.* each. THROTTLE VALVES, 10*s.* 6*d.*, 13*s.* 6*d.*, and 15*s.* each. Other Connexions at equally low prices, and all goods of first-class manufacture. Estimates given, and orders by post punctually attended to the same day. A discount to the Trade.

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HOT-WATER PIPES, at Reduced Wholesale Prices, with Elbows, Syphons, Tee Pipes, and every other connection; Wrought and Cast-iron Boilers, Saddle, Conical, Cylinder, TUBULAR, and Flue, from 25*s.* each. Improved Bronzed and Iron Stands to use without brickwork, 5*s.* each. Valves from 1*s.* 6*d.* each. Patent Valves, Improved Furnace Doors, Furnace Bars, Supply Cisterns, and Builders' Castings of every description in stock, at
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*** Catalogues sent on receipt of 6 postage stamps.

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CRANSTON'S PATENT.
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Single SLIDES, 1½ Stamps each.
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SEWELL AND CO.'S MORNING and PROMENADE DRESSES made complete, with ROTONDES JACKETS, &c., trimmed *en suite*.
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Sold only by THRESHER & GLENNY, 152, Strand, W.C., next door to Somerset House.
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METCALFE, BINGLEY, AND CO.'S NEW PATTERN TOOTH BRUSHES, Penetrating Unbleached Hair Brushes, Improved Flesh Brushes, genuine Smyrna Sponges, and every description of Brush and Comb and Perfumery for the Toilet. METCALFE'S celebrated Alkaline Tooth Powder, 2*s.* per box. The FAIRY BOUQUET; the OXFORD and CAMBRIDGE BOUQUET. In bottles, 2*s.*, 3*s.* 6*d.*, and 5*s.* each.
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PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.
They are more easily trimmed and refilled than any other Lamp with similar burner.
There is no danger of chimneys breaking, and the chimney cannot become smoked.
For elevation of the above, suitable for the DINING-ROOM, DRAWING-ROOM, HALL, or LIBRARY, see Number 2 of this Journal. A REALLY GOOD LAMP.
The above may be obtained of any Lamp Dealer.

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WILLIAM S. BURTON, GENERAL FURNISHING IRONMONGER, by appointment to H.R.H. the Prince of Wales, sends a CATALOGUE gratis and post paid. It contains upwards of 300 Illustrations of his Unrivalled Stock of Sterling Silver and Electro Plate, Nickel Silver and Britannia Metal Goods, Dish Covers, Hot-water Dishes, Stoves, Fenders, Marble Chimney-pieces, Kitchen Ranges, Lamps, Gaseliers, Tea Trays, Urns and Kettles, Cooks, Table Cutlery, Baths, Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding, Bed Room Cornice Poles, &c., with Lists of Prices, and Plans of the 29 large Show Rooms, at 39, Oxford Street, W., 1, 1a, 2, 3, and 4, Newman Street, 4, 5, and 6, Perry's Place, and 1, Newman Yard, London, W.

The Furnishing of Bed Rooms.
HEAL AND SON have observed for some time that it would be advantageous to their customers to see a much larger selection of BED-ROOM FURNITURE than is usually displayed, and that to judge properly of the style and effect of the different descriptions of Furniture, it is necessary that each description should be placed in separate rooms. They have, therefore, erected large and specious Show Rooms, by which they are enabled not only to extend their show of Iron, Brass, and Wood Bedsteads and Bed Room Furniture, beyond what they believe has ever been attempted, but also to provide several small rooms for the purpose of keeping complete sets of Bed Room Furniture in the different styles.
Japanned Deal Goods may be seen in complete suites of five or six different colours, some of them light and ornamental, and others of a plainer description. Suites of stained Deal Gothic Furniture, Polished Deal, Oak, and Walnut, are also set apart in separate rooms, so that customers are able to see the effect as it would appear in their own rooms. A Suite of very superior Gothic Oak Furniture will generally be kept in stock, and from time to time new and select Furniture in various woods will be added.
Bed Furnishings are fitted to the Bedsteads in large numbers, so that a complete assortment may be seen, and the effect of any particular pattern ascertained as it would appear on the Bedstead.
A very large stock of Bedding (Heal & Son's original trade) is kept on the Bedsteads.
The stock of Mahogany goods for the better Bed Rooms, and Japanned Goods for plain and Servant's use, is very greatly increased. The entire Stock is arranged in eight rooms, six galleries (each 120 feet long), and two large ground floors, the whole forming as complete an assortment of Bed Room Furniture as they think can possibly be required.
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Their Bedding trade receives their constant and personal attention, every article being made on the Premises.
They particularly call attention to their Patent Spring Mattress, the Sommier Elastique Portatif. It is portable, durable, and elastic, and lower in price than the old Spring Mattress.
HEAL & SON'S ILLUSTRATED CATALOGUE of Bedsteads, Bedding, and Bed Room Furniture sent free by Post.
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THE EDINBURGH REVIEW, No. CCXLV.—ADVERTISEMENTS intended for insertion are requested to be forwarded to the Publishers immediately. ADVERTISEMENTS and BILLS cannot be received later than SATURDAY NEXT, July 2.
London: LONGMAN & Co., 39, Paternoster Row, E.C.

WANTED to BUY, SECOND-HAND, the ROYAL AGRICULTURAL SOCIETY'S JOURNALS up to 1861.
Apply to WILLIAM LAWSON, Brayton, Carlisle.

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A. B. C., Elmsett Rectory, Ipswich.

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London: ROBERT HARDWICKE, 192, Piccadilly, W.; and all Booksellers.

Early in July,
PRIZE POEMS receiving the 100 Guineas offered in the Advertisements, "HO! FOR A SHAKSPEARE." and awarded by Messrs. Webster, J. Stirling Coyne, Andrew Halliday, George Rose, and Thomas S. Stuart. Illustrated with Lithograph Portraits of Queen Elizabeth and the Queen of Beauty.
Can be had GRATIS at all the best Drapers in the Kingdom, or forwarded, on receipt of stamped address to DAY & SONS, Lithographers to the Queen, Publishers, Lincoln's Inn Fields, London, W.C.

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PORTABLE FARM RAILWAYS, a Substitute for FIELD CARTING. Report of a Discussion at the Maidstone Farmers' Club, January 21, 1864.
Maidstone: J. GRUNDY, 83, Bank Street. London: SIMPKIN, MARSHALL, & Co.

Lunar Influence on Weather.
Second Edition, now ready, in post 8vo, price 4s.
SAXBY'S WEATHER SYSTEM, or Lunar Influence on Weather. By S. M. SAXBY, R.N., Principal Instructor of Naval Engineers, H.M. Steam Reserve.
London: LONGMAN, GREEN, & Co., Paternoster Row, E.C.

Mr. Ormsby's New Work.
On Saturday Next will be published, in one vol. post 8vo, with 9 Vignette and 4 full-page Illustrations on Wood from Sketches by the Author,
AUTUMN RAMBLES in NORTH AFRICA; a Narrative of Excursions in Algeria and Tunis. By JOHN ORMSBY, Author of the "Ascent of the Grivola" in "Peaks, Passes, and Glaciers."
London: LONGMAN, GREEN, & Co., Paternoster Row, E.C.

Just Published, 1 Vol. 8vo, cloth, with 32 Plates, and numerous Woodcuts and Diagrams, price 5s.,
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Published 1 July 1, 1864.
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Adapted to the Standards of the Revised Code.
Revised Lesson Books for Standard I., 4d.; Revised Lesson Books for Standard II., 5d.; Revised Lesson Books for Standard III., 6d.; Revised Lesson Books for Standard IV., 9d.; Revised Lesson Books for Standard V., 1s. 6d.; Revised Lesson Books for Standard VI., 2s. 6d.
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Just Published,
CULTURAL DIRECTIONS for the ROSE; with select Lists of Sorts adapted to various circumstances and situations; and a Calendar of Operations to be performed during each month throughout the year. By JOHN CRANSTON, Nurseries, King's Acre, near Hereford. Second Edition, enlarged and improved.
London: HOULSTON & WRIGHT, Paternoster Row, E.C.; Derby J. A. ROWBOTTOM, Irongate.
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A Policy issued in 1834 for 4000*l.* had increased at August 1, 1861, to the sum of £5540 17 1
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Professional men introducing business will be liberally treated with.
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MORELL THEOBALD, Secretary.
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FOURTH DIVISION OF PROFITS.
At the Annual General Meeting, held on the 12th May last, a Reversionary Bonus of over £62,000 was appropriated to the Assured, equal to 42 per cent. on the Premiums paid.
The Accumulated Funds exceed £410,000
The Annual Income is over £70,000
The Claims by Death paid exceed £310,000
Bonuses declared £145,000
Every description of Life Assurance business is transacted.
Advances are made on Mortgage of Freehold Property, Life and Reversionary Interests, &c., and also to Assurers on Personal Security.
WILLIAM RATRAY, Actuary.

News of the Week.

THE House of Lords on Monday, being the anniversary of the QUEEN'S accession, did not sit. On Tuesday the Attorneys and Solicitors Remuneration Bill was read a second time, and referred to a Select Committee. On Thursday Earl RUSSELL gave notice that on Monday he would lay on the table the protocols of the Conference, and make a statement on the subject. Lord BROUGHAM introduced a Bill for the prevention of bribery at elections, which was read a first time. The Bishop of OXFORD moved the second reading of a Bill giving facilities for the performance of Divine Worship in Collegiate Schools. The Earl of SHAFTESBURY moved as an amendment that the Bill be read a second time that day three months. After some discussion the Bill was read a second time, and ordered to be committed on Tuesday week.

In the Commons on Friday Sir J. HAY moved a resolution that the Government, in landing forces on the Gold Coast for the purpose of waging war against the KING of ASHANTEE, without making sufficient provision for preserving the health of the troops, had incurred grave responsibility, and that the House lamented the want of foresight which had caused so large a loss of life. The motion was opposed by Government, and negatived on a division by a majority of 7, the numbers being 233 to 226. On Monday Mr. DISRAELI asked if there was any truth in the statement that the Prussian Minister, at the meeting of the Conference on Saturday, declared that in case the German ports were blockaded, the German Powers would not consider themselves bound by the convention of Paris with regard to privateering. He wished also to know whether, in the event of the Conference breaking up without a settlement of the question, hostilities would commence on the 26th, and when the protocols would be laid on the table of the House. The CHANCELLOR of the EXCHEQUER said that in the absence of Lord PALMERSTON he was not prepared to answer the questions, and requested Mr. DISRAELI to put them on the paper for the next day. Mr. OSBORNE asked what significance was to be given to the statement of Earl RUSSELL, on Friday, that her Majesty's fleet were "fully prepared for any service it might be called upon to render." Mr. S. FITZGERALD thought that the House should insist on a reply, and Lord J. MANNERS said that on an occasion of such importance it was the duty of the Prime Minister to have been in his place. Lord PALMERSTON at this juncture entered the House, and said in reply to Mr. OSBORNE that Earl RUSSELL's words meant that the fleet was ready to go anywhere, and was capable of performing any service. In answer to Mr. DISRAELI, he said he must decline to state what had occurred at the Conference. The suspension of hostilities would expire on Saturday, and if in the interim no agreement were come to between the belligerents, hostilities would recommence. When the Conference was concluded it would be the duty of the Government to lay the papers immediately before Parliament. In answer to further questions by Mr. BRIGHT, his lordship expressed his regret that his tongue was tied as to details, and could only repeat the assurance that the Government had been labouring incessantly to bring the belligerents to an agreement; and if they failed in doing so, he trusted that they would be able to show that it had not been their fault. The Government Annuities Bill was then read a third time and passed. Sir G. GREY moved the second reading of the Gaol Bill. Mr. NEWDEGATE moved as an amendment that the Bill be read a second time that day three months. After a long debate the amendment was negatived by 116 to 49, and the Bill was read a second time. On the order for resuming the adjourned debate on the third reading of the Collection of Taxes Bill, Sir J. TROLLOPE moved as an amendment that the Bill be read a third time that day three months. The amendment was opposed by Government, but was carried on a division by 132 to 128. The Bill was therefore lost. The Railways Construction Facilities Bill passed through committee. Sir C. O'LOGHLEN moved the second reading of the Railway Travelling (Ireland) Bill, the object of which was to compel the Irish railway companies to run one train each way on Sundays at certain hours. Mr. BLAKE moved as an amendment that the Bill be read a second time that day three months. On a division the amendment was carried by 40 to 21, so the Bill was lost. On Tuesday, at a morning sitting, the House went into Committee on the Court of Chancery (Ireland) Bill, and agreed to several of the clauses. Mr. WHITESIDE, who had entered the House before the 12th clause had been disposed of, charged the Government with taking advantage of the absence of the Irish members to push the measure forward at a morning sitting, and moved that the Chairman leave the chair. After some discussion the motion was carried against the Government by a majority of 1, the numbers being 42 to 41. At the evening sitting Mr. BERKELEY moved a resolution to the effect that at the next general election a fair trial should be given to the vote by ballot. Lord PALMERSTON opposed the motion, which was negatived on a division by 212 to 123. Mr. HENNESSY moved a resolution that some means should be devised by Government to check the emigration of the agricultural population of Ireland. The motion was opposed by Government, and negatived on a division by 80 to 52. On Wednesday the ATTORNEY GENERAL for IRELAND moved that on a future day the House should go into Committee for the purpose of considering the course to be taken with reference to the Court of Chancery (Ireland) Bill, in consequence of the division of the previous day. After some opposition the motion was agreed to. The House went into Committee on the Joint Stock Companies (Voting Papers) Bill, when Mr. PEACOCKE moved that the Chairman leave the chair. The motion was carried on a division by 76 to 19. The Weights and Measures (Metric System) Bill passed through Committee. Sir J. HAY moved the second reading of the Bank of England Notes (Scotland) Bill, the object of which was to legalise the tender of Bank of England Notes in Scotland. After a long debate the motion was withdrawn. Mr. LOCKE moved that the House go into Committee on the Jersey Court Bill, the object of which was to reform the constitution and practice of the Royal Court in that island. Mr. PAULL moved as an amendment that the States of Jersey be heard by counsel in opposition to the Bill. On the motion of Mr. AYRTON the debate was adjourned. On Thursday Lord PALMERSTON announced that the Conference met on Wednesday and adjourned to Saturday, when it would probably meet for the last time. It would be his duty on Monday to lay on the table of the House all the papers, including the proceedings on Saturday, and to accompany them by a statement in reference to the transactions to which the papers related. The Weighing of Grain (Port of London) Bill was read a second time, and referred to a select committee. The adjourned debate on Sir H. CAIRNS's resolution on the subject of National Education in Ireland, was resumed, when Mr. HENNESSY moved, as an amendment, the omission of the words "so far as regards their operation on the aid afforded to convent and monastic schools." After a long discussion the amendment was negatived by 112 to 8. The original resolution was then negatived by 91 to 59.

Home News.

The Court.—On Thursday afternoon, the 16th inst., the Queen, accompanied by the Prince and Princess Louis of Hesse and Princess Helena, took a drive in an open carriage and four. Prince Alfred arrived from London. The Marquis and Marchioness of Westminster arrived at the Castle on a visit. On Friday morning her Majesty, accompanied by the Princess Louis of Hesse, drove out. Princess Helena, Princess Louisa, Prince Alfred, and Prince Louis of Hesse rode on horseback. In the afternoon Prince and Princess Louis of Hesse left the Castle for Marlborough House on a visit to the Prince and Princess of Wales. Prince Alfred also went to London. The Grand Duke and Grand Duchess of Mecklenburg-Strelitz and Prince Adolphus visited Her Majesty, and remained to luncheon. Viscount Sydney, Lord Chamberlain, had an audience, and presented three addresses from the House of Lords to her Majesty. Princess Beatrice went to Claremont and visited the Queen Marie Amélie. The Dean of Westminster and Lady Augusta Stanley arrived at the Castle on a visit. On Saturday morning the Duchess of Wellington left the Castle for London. The Queen drove in the grounds. Prince Alfred returned from London. In the afternoon Prince Arthur, Earl De Grey and Ripon, and the Dean of Christchurch, arrived on a visit. On Sunday morning the Queen, Prince Alfred, Princess Helena, Princess Louisa, Prince Arthur, Prince Leopold, and Princess Beatrice, attended Divine service in the private chapel. The Dean of Christchurch preached the sermon. In the afternoon the Prince and Princess Louis of Hesse and the Duke of Cambridge arrived at the Castle on a visit. Prince Alfred, accompanied by Dr. Jenner, went to Woodnorton, near Evesham, to visit the Duke de Montpensier, who is suffering from severe illness. On Monday morning Princess Helena, Prince Arthur, and Prince Louis of Hesse went out riding. Prince Alfred returned from Worcestershire. The Duke of Cambridge left the Castle for London. Mustapha Pasha, son of the Pasha of Egypt, the Turkish Ambassador, Sir Moses Montefiore, and Earl Granville, arrived at the Castle from London. Earl Granville had an audience of the Queen. Mustapha Pasha was presented to the Queen by the Turkish Ambassador. Sir Moses Montefiore had an audience of her Majesty. In the afternoon Prince Alfred went to Marlborough House. The Queen, accompanied by the Princess Helena, drove out. The Prince and Princess Louis of Hesse, Princess Louisa, and Prince Arthur took a drive in an open carriage and four. The Earl and Countess De la Warr arrived at the Castle on a visit. On Tuesday morning, the Queen, accompanied by the Prince and Princess Louis of Hesse, Princess Helena, Princess Louisa, and Princess Beatrice, came to town and held a Court at Buckingham Palace. Lord Palmerston and the Earl of Clarendon had audiences of the Queen at Buckingham Palace. The Prince of Wales visited her Majesty. The infant Prince Albert Victor was also taken to the Palace to see her Majesty. In the afternoon Princess Beatrice visited Westminster Abbey with the Dean and Lady A. Stanley. Prince Arthur arrived at Buckingham Palace from Windsor. At six o'clock the Queen, accompanied by Prince and Princess Louis of Hesse and Princess Beatrice, visited the Prince and Princess of Wales at Marlborough House. Her Majesty then proceeded in an open carriage and four to the Paddington Station, and returned to Windsor Castle by the Great Western Railway. Prince Alfred accompanied the Queen to Windsor. In the evening Prince Arthur, Princess Helena, and Princess Louisa attended the performance at Her Majesty's Theatre. On Wednesday morning the Queen and the Princess Louis of Hesse drove in the grounds. Prince Alfred came to London to be present at the Levee. Princess Helena, Princess Louisa, and Prince Arthur visited the Royal Academy, and afterwards returned to Windsor. In the afternoon the Queen, with Princess Louis of Hesse, drove in the grounds. Princess Helena and Princess Louisa also took a carriage drive. Princess Victoria of Hesse took a carriage airing. Prince Alfred returned from London. The Countess Cowley and Lady F. Wellesley arrived on a visit. In the evening her Majesty had a dinner party. After dinner a musical performance took place before the Royal party in the Drawing-room. On Thursday the Queen received addresses of congratulation on the birth of the infant Prince Albert Victor of Wales, from the Upper and Lower Houses of the Convocation of the Province of Canterbury; from the Bishop and Clergy of the Cities of London and Westminster; and from the three denominations of Protestant Dissenters. The Queen returned a gracious answer to each of the addresses. The principal members of the deputations were then presented by Sir George Grey, and had the honour of kissing her Majesty's hand. Luncheon was served for the deputations in the dining room.

The Prince and Princess of Wales.—On Friday the Prince rode on horseback, accompanied by Prince Alfred and Prince Louis of Hesse. The Princess took a carriage drive, accompanied by Princess Louis of Hesse. In the evening the Prince and Princess, the Prince and Princess Louis of Hesse, and Prince Alfred honoured the Marchioness of Westminster with their company at a ball at Grosvenor House. On Saturday morning the Prince rode on horseback. In the afternoon the Prince and Princess, accompanied by Prince and Princess Louis of Hesse, took a carriage drive. In the evening the Prince and Princess Louis of Hesse went to a conversazione at the Royal College of Physicians. The Princess and Princess Louis of Hesse went to the Italian Opera, Covent Garden. On Sunday morning the Prince and Princess attended Divine service at the Chapel Royal, St. James's. The Rev. H. M. Birch preached the sermon. In the afternoon the Prince and Princess Louis of Hesse left Marlborough House for Windsor Castle. On Monday the Prince, accompanied by Prince Alfred, rode on horseback to Lord's Cricket Ground. The Princess took a carriage drive. In the evening the Prince and Princess of Wales and Prince Alfred honoured the Marquis and Marchioness of Abercorn with their company at a dinner and ball. On Tuesday the Prince, accompanied by Prince Alfred, rode out on horseback. The Prince and Princess afterwards took a carriage drive. In the evening the Prince went to the Adelphi Theatre. On Wednesday the Prince, accompanied by Prince Alfred, rode on horseback. In the afternoon his Royal Highness held a Levée at St. James's Palace on behalf of the Queen. The Princess took a carriage drive. In the evening the Prince and Princess honoured Lord and Lady Palmerston with their company at a dinner and ball. On Thursday the Prince and Princess went to the Bazaar in aid of the Female School of Art, at the Horticultural Gardens, Kensington. The Prince rode on horseback. The Princess took a carriage drive. In the evening their Royal Highnesses had a dinner party.

The Cabinet.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury, in Downing Street. Another Council was held yesterday.

The Conference.—All the Plenipotentiaries accredited to the Conference met on Saturday at the official residence of the First Lord of the Treasury, in Downing Street, and sat nearly four hours. The Conference met again on Wednesday, and sat three hours. Another meeting will be held to-day.

The Case of Bishop Colenso.—The Bishop of Natal presented an appeal to the Judicial Committee of Privy Council on Thursday against the judgment of the Bishop of Cape Town, depriving him of his see. The petition, which raises the question of the Bishop of Cape Town's jurisdiction, was ordered to stand over till the sitting after Michaelmas Term.

The Iron Clad Fleet.—The Royal Sovereign, cupola ship, steamed out of Portsmouth Harbour on Thursday morning to make a trial of her machinery and speed at Stokes Bay. There were on board Admiral Sir Michael Seymour, G.C.B., Rear-Admiral Elliot, Rear-Admiral Dacres, Rear-Admiral Robinson, comptroller of the navy; Captain Cowper Coles, the designer of the cupola; and several other officers. Captain Sherard Osborn, who has been appointed captain of the ship, took the command on the occasion. The trial terminated very satisfactorily, the vessel making 11 knots at full speed, and 8 knots at half boiler power.

Accident to the Bishop of Oxford.—On Thursday evening the Bishop of Oxford had a rather severe fall from his horse in Rotten Row. He was a good deal shaken, but was sufficiently recovered yesterday to attend Convocation.

Convocation.—Both Houses of the Convocation of Canterbury assembled at Westminster on Wednesday for the despatch of business. In the Upper House the Bishop of Oxford presented the report of the committee appointed to examine into the merits of "Essays and Reviews," stating that "the book contains false and dangerous statements and reasonings, at variance with the teaching of the Church of England, and deserving the condemnation of the Synod." His lordship moved that the report be received and adopted. The Bishop of London opposed the motion, on the ground that it was unwise at that late period to revive an interest in a book that had all but passed into oblivion. The motion was supported by the Archbishop of Canterbury and the Bishop of Llandaff, and was carried. The Bishop of Oxford then moved a resolution formally condemning the volume, as containing teaching contrary to the doctrine received by the United Church of England and Ireland, in common with the whole Catholic Church of Christ. The Bishop of Gloucester and Bristol seconded the motion, which was carried; the Bishops of London, Lincoln, and Bangor voting against it. In the Lower House, on the receipt of the resolution of the Upper House condemning "Essays and Reviews," Archdeacon Denison moved an address of thanks to their lordships for their report, and expressing concurrence in their resolution. The Rev. Dr. Jebb seconded the motion. The Rev. Canon Blakesley moved as an amendment that no further proceedings could be satisfactorily or safely taken in the matter. The Dean of Westminster seconded the amendment. After a long discussion the amendment was rejected by 30 to 18. Canon Selwyn then moved as an amendment that full time should be allowed for the due consideration of the subject. After some further discussion the Archdeacon of Ely moved that the debate be adjourned, which was agreed to. On Wednesday, in the Upper House, petitions on various subjects were presented. In the Lower House, the adjourned debate on Essays and Reviews was resumed, when Canon Selwyn's amendment, after some discussion, was lost. The Rev. Sir Henry Thompson, Bart., then moved an amendment against proceeding with the matter until a petition from Dr. Rowland Williams, praying to be heard before the House on his Essay, had been disposed of. This amendment was supported by the Hon. and Rev. S. Best, the Dean of Ely, and the Dean of Westminster, but was negatived on a division, by 31 to 22. The Rev. J. Bramston then moved an amendment that the House could not concur in the judgment of the Upper House, because it was of opinion that it was unadvisable to revive the judicial functions of convocation, and was incompetent satisfactorily to perform those functions. Archdeacon Hony seconded the motion. After a long discussion the amendment was negatived by 33 to 22. The original motion was then put, and after some further discussion, the debate, on the motion of Archdeacon Thorpe, was adjourned to Friday.

Foreign.

France.—The *Moniteur* of Wednesday evening says that the proposal to submit the Schleswig question to arbitration has been the object of preliminary negotiations between the Austrian and Prussian Governments. The two German Powers are said to have resolved upon accepting the good offices of a friendly Power; but the conditions of this acceptance are such that Denmark could not consent to the arrangement without abandoning the attitude she has hitherto observed and the claims contained in her ultimatum. The *Pays* of Monday publishes a telegram from Copenhagen, stating that England had asked the Danish Government whether the port of Korsoer, on the Great Belt, could, in case of necessity, supply provisions for 12 British vessels of war. The *Patrie* of Saturday asserts that Earl Cowley has asked whether the Emperor would be disposed at once to participate with England in a naval demonstration in the Baltic, and that the Imperial Government replied in the negative. The same paper publishes advices from Germany announcing that great endeavours are there making to supersede the Duke of Augustenburg as a candidate for the Duchies by Prince Peter of Oldenburg, who is allied to the family of the Czar. The *Constitutionnel*, alluding to the report that England would propose to intrust the disputed territorial question in the Duchies to arbitration, says:—

"We are convinced that the French Government would not entertain any objection, and that it can only wish success to this proposal."

La France of Sunday evening says that at the sitting of the Conference on Saturday the members were occupied with contradictory discussions and the irreconcilable pretensions of the different Powers. It adds that no important progress has been made, and that Sweden intends withdrawing its representative from the Conference should the line of the Dannewerke and the Schlei, as proposed by England, and to which Denmark acceded in making her *ultimatum*, be abandoned. The Paris papers publish detailed accounts of the fight between the Alabama and the Kearsarge, and with the exception of the *Opinion Nationale* are unanimous in extolling the gallantry of Captain Semmes and the crew of the Alabama in accepting the challenge of a vessel so much superior to her in men and guns. The *Constitutionnel*, in an article signed by M. Paulin Limayrac, states that the loss of the Alabama has caused great agitation, and that all the letters from Cherbourg testify to the profound regret prevailing in that town at the event. It also adds that from one end of France to the other the same feeling obtains, and that it is the generous nature of the French character which always urges the nation to display their sympathy for the weak and their admiration for unfortunate bravery. The *France* says that the crew of the Alabama were trained seamen, and experienced boarders, and would undoubtedly have captured the Kearsarge if they could have succeeded in boarding. It also states that the Kearsarge, on returning to Cherbourg during the afternoon of Sunday, landed 63 of the crew of the Alabama. Of this number 15 were wounded. The French authorities have charge of all the prisoners; the wounded men were sent to the Naval Hospital, where they receive every attention. It describes the joy of the Confederate prisoners on hearing of the safety of their commander, and says that the animosity between the prisoners and their captors is so strong that it is difficult to prevent fighting and bloodshed between them in the streets. The *Pays* states that the majority of the Alabama's crew were English, and that Captain Semmes was confident that if he could only board the Kearsarge his men would make short work of the Yankees. The *Temps* also pays a tribute of respect to the Alabama and her gallant captain and crew, and says that the friends of the North cannot regret the loss of this Red Rover, but they could not but follow with interest its audacious and brilliant career. The Japanese Ambassadors had their final interview with M. Drouyn de Lhuys on Monday, and left Paris on the following day on their return direct to Japan. Before leaving they signed a convention confirming former treaties, offered apologies for the assassination of Lieutenant Camus in Japan, and guaranteed the payment of the indemnity. The commercial negotiations between France and Switzerland are terminated, and the treaty was signed by the representatives of th

two countries on Tuesday. The Washington, the first vessel of the new French Transatlantic Company, left Havre last week, and thus inaugurated a new direct line between France and America.

SPAIN.—In the sitting of the Senate on Saturday several members spoke against the ancient constitutional privileges still enjoyed by the Basque provinces over the other provinces of the country. In the sitting of the Cortes on Wednesday, Senor Pacheco, in reply to a question from Senor Molino, said:—

"The squadron in the Pacific will be reinforced. The Chincha Islands will be occupied until the assassins of Talambo are punished, and it is proved that the Peruvian Government was foreign to the attempt on the life of Senor Mazarredo, recently Spanish Minister in Peru."

The Spanish Minister for Foreign Affairs has forwarded to the French Government his thanks for the services rendered by France to Spanish subjects in Peru. At the same time the Minister again declared that the policy of Spain is not one either of aggression or conquest.

PORTUGAL.—The Cortes was closed on the 18th inst. by the King in person. His Majesty in a brief speech congratulated the House on the abolition of the tobacco monopoly, the establishment of new banks, the improvement of the navy, and the general commercial progress.

DENMARK.—The arrival of Baron von Scheel-Plessen from St. Petersburgh on the 17th, created an important Ministerial crisis, caused by a difference in the principles held by the King, the Government, and the Privy Council. The difference was settled on Monday. The *Berlingske Tidende* of that day expresses doubts as regards the authenticity of the current statement relative to the Russian proposal for the settlement of the Dano-German question. The *Dagbladet* of Monday says:—

"The proposed Schleswig-Holstein solution is the very last the nation will accept. The people will never suffer the sacrifice of Schleswig and the Danish right. The King exists for the sake of the people. not the people for that of the King. No Ministry recommending the formation of a State of Schleswig-Holstein can stand."

THE DANISH DUCHIES.—A public meeting took place at Tondern on Tuesday, at which 5000 inhabitants of Western Schleswig were present. Resolutions in favour of the union of Schleswig and Holstein were passed amid great enthusiasm. The report in the German papers that the Schleswig islands have sent a deputation to the King of Prussia, to protest against the division of Schleswig, is contradicted. On the contrary, a deputation from those islands has had an audience of King Christian IX., and solicited his Majesty to maintain the connection of the islands with Denmark. The Duke of Augustenburg, on his journey through the districts of the Dittmarshes and the Marshes on the 21st, was everywhere received with the greatest enthusiasm. The town of Heide was illuminated, and a torchlight procession took place in the evening. He was received at Lunden with great ceremony by a large number of the inhabitants of Schleswig. A flotilla of gunboats arrived off Keitum last week, when the officer commanding the Danish troops landed a detachment and surrounded the town. Seven gentlemen known for their German sympathies were arrested and sent off in a steamer to Copenhagen. The Mayor was suspended for not having displayed sufficient energy. Keitum has been declared in a state of siege. The *Nord-Deutsche Flensburger Zeitung* of Friday publishes a decree of the chief civil authorities, ordering that German shall in future be the principal medium of education at the High School of Hadersleben. Instruction in Danish is only to be given six hours weekly.

SAXONY.—The First Chamber in the sitting of Tuesday unanimously adopted the declaration of the Chamber of Deputies opposing the division of Schleswig without the consent of the people.

FRANKFORT.—In the sitting of the Federal Diet on Thursday, the representative of the Grand Duchy of Oldenburg, stated the claims of Oldenburg to the Duchies of Schleswig-Holstein. He decidedly protested against the claims of the Duke of Augustenburg, and communicated to the Diet the renunciation of the Emperor of Russia of his rights in favour of Oldenburg. The subject was finally referred to a committee to be reported upon.

PRUSSIA.—It was announced on Wednesday that Prussia has rejected the English proposals relative to the line of demarcation in Schleswig, and has rejected the arbitration of any Power represented at the Conference. She will not recognise the decision of any arbitrator as binding, but will take it into consideration. She will accept a prolongation of the armistice, but not for a period of less than two months. It is believed in Berlin that hostilities will be resumed on Monday. The semi-official *Nord Deutsche Zeitung* of Thursday says:—

"Advices received here from Schleswig state that the troops are again moving northwards to take up their position. Thus we are again on the eve of war. A two months' prolongation of the armistice has been rejected, and the line of the Schlei is maintained as the utmost concession."

The semi-official *Provinzial Correspondenz* of Wednesday publishes an article headed "War or Peace," which concludes thus:—

"If the proposals of England in reference to the line of demarcation were at all acceptable, the Emperor of the French would be the only arbitrator possible, he having acquired the right to so distinguished an honour by the attitude he has hitherto held. But Prussia maintains her view that a safe basis on which to establish a line of demarcation can only be determined by consulting the inhabitants. The proposal of England seems to find some support from Austria, who wishes to prevent her from taking part in the war. England has declared that on the renewal of hostilities she will place herself with her fleet at the side of Denmark. Hence a prolongation of the armistice has this time a special importance, since possibly it may prove a question of the commencement of a general European war. While England insists upon a prolongation of the suspension of hostilities, Prussia wishes to bring about a real armistice for a long period, settled on precise conditions, and with a mutual engagement to give four weeks' notice of cessation. It is hoped that the meeting of Count Rechberg and Herr von Bismark, as also the personal interview of the two Sovereigns, may lead to a closer union on the question of the armistice."

AUSTRIA.—The semi-official Vienna papers of Wednesday are in favour of the arbitration in the Dano-Germanic question being submitted to the Emperor Napoleon. The Emperor of Austria arrived at Carlsbad on Wednesday morning. The King of Prussia, accompanied by Count von Bismark and his military suite, immediately paid a visit to the Emperor, which the latter returned. In the afternoon the King of Prussia entertained his Imperial Majesty at dinner. A circular Note was addressed by the Austrian Cabinet on the 14th inst. to its diplomatic agents abroad, in order to refute the exaggerated and erroneous allegations to which the meeting of the Emperors of Austria and Russia and the King of Prussia might give rise. The following is an abstract of this Note:—

"The Austrian representives are enjoined formally to deny that their Majesties have any definite object in view, or intend reciprocally to adopt any preconcerted programme. The two Emperors will only exchange their views and ideas upon the questions which at present occupy the Cabinets. Count Rechberg recommends the diplomatic agents energetically to deny every rumour of the existence of any reservation in reference to a Holy Alliance, or of the slightest hostile feeling towards any Power whatever. With regard to the visit of the Emperor Francis Joseph to the King of Prussia at Carlsbad, the note observes that although, under other circumstances, it would be explained as a simple act of politeness, yet now, while the arms of Austria and Prussia are united in the interests of Germany, nothing is more natural than the wish of the Emperor to discuss with his august ally what measures might accelerate a pacific solution of the Dano-Germanic conflict."

BAVARIA.—The Emperor and Empress of Russia and the young Grand Duchess arrived at Kissingen on Tuesday evening. The Emperor and Empress of Austria and the King of Bavaria subsequently arrived, and the King of Prussia is expected to follow with the Grand Duke of Mecklenburg, the Duke of Oldenburg, the hereditary Prince of Wurtemburg, Prince William of Baden, the Duke of Coburg-Gotha, the Duke of Saxe-Altenburg, and Prince Leopold of Coburg-Kohary.

ITALY.—The Italian Senate on Tuesday adopted the Bill for the equalisation of the land-tax by 95 to 55 votes. General Garibaldi has arrived at the Baths of Ischia from Caprera in the Duke of Sutherland's yacht Undine, accompanied by his son and 10 other persons. He is suffering much from his wound and from rheumatic affections.

RUSSIA.—It is reported that the Russian fleet has been ordered to the Baltic. The *Journal de St. Pétersbourg* states that the harbour of Sebastopol is being cleared of the hulls of the ships sunk at the entrance of the port at the beginning of the Crimean war. The same journal adds that in three years the railroad from Moscow to Koursk will be extended to Sebastopol.

CHINA.—A despatch from Shanghai of May 7 states that Major Gordon and the Futai have thrice assaulted Chang-Chow-Foo, and have been each time repulsed with great loss. The city still holds out.

UNITED STATES.—On the morning of the 3d General Grant made a general attack on Lee's defences north of the Chickahominy, with the intention of forcing the passage of the river. He was temporarily successful at some points, but was compelled to abandon his attempt to capture the main works, with a loss of 5000 to 6000 killed and wounded, and several hundred prisoners. At the termination of the battle General Grant held a line in advance of the position he occupied at the commencement. In the evening of the same day the Confederates attacked Smith's brigade on Grant's left, but after half an hour's furious fighting returned to their entrenchments. On the 4th the Confederates attacked Generals Hancock, Wright, and Smith, but were everywhere repulsed. General Hancock holds a line within forty yards of the Confederates. On the 5th and 6th the Confederates renewed their attacks on Grant's lines, but were each time repulsed. On the 7th the Confederates still held the battery at Columbia on the Mississippi. The Federal loss during the week was estimated at 10,000 men. No important movement occurred for the next two days, but the wounded of the two armies were collected, and the dead buried under a flag of truce. The latest news states that General Grant has abandoned the attempt to force Lee's Chickahominy line, and is making a fresh combination for the capture of Richmond. It is said that he has moved his left from General Lee's front, and that a portion of his troops have crossed to the south bank of the Chickahominy at Despatch Station. Rumours were current of a movement by Grant to the south bank of the James River, and that he intends to besiege General Lee's works on the Chickahominy. The 100-day men from the Western States have been sent to the front. There are again rumours through Confederate channels that Gen. Lee will shortly detach a portion of his army for a demonstration against Washington. The Federal General Hunter has defeated a small Confederate force under General Jones, near Staunton, Virginia. General Jones being killed, the command retired to Waynesboro', leaving in the hands of General Hunter six cannon and a large quantity of stores. Confederate official despatches contradict this statement, and assert that only a portion of General Jones's forces were in the battle, and that the retirement to Waynesborough was conducted in good order. General Sherman is on the railroad at Ackworth Station, having full possession forward to within six miles of Marietta. Despatches of the 6th report General Johnston's head-quarters at Marietta; his left was under General Polk; General Hood commanded the centre and General Hardee the right. Confederate batteries on both sides of the Mississippi at Greensville completely blockade the river; and have destroyed or captured four gunboats and seven transports. A fleet of gunboats has been sent to dislodge them, but accounts, up to the 5th, the Confederates still held their ground. The Confederate forces under General John Morgan, in Kentucky, occupied Mount Stirling, Paris, Georgetown, Cythiana, Falmouth, and Williamstown on the 9th. The two last are within 30 miles of Cincinnati. On the 10th they burnt the railway depot and plundered the stores at Lexington. Several small towns have also been plundered, and the Union citizens and farmers deprived of their houses and cattle; no damage has been done to the railways. An attack upon Cincinnati is apprehended, and troops are concentrating for the defence of Atlanta, Georgia. The Navy Department has authorised the contradiction of the reported fight between the Monitors and Confederate ironclads in James River on the 1st. The Confederates, in launches, from Fort M'Allister, have captured the Federal steamer Water Witch, in Ossabaw Sound, Georgia. The Baltimore Convention has unanimously nominated Mr. Lincoln for President, and Mr. Andrew Johnson for Vice President. Mr. Lincoln has accepted the nomination, and has approved the amendment to the Constitution prohibiting slavery. General Fremont has resigned his commission in the army, and accepted the nomination for the Presidency, on the ground that he believes the re-election of Mr. Lincoln would be fatal to the country. General Cochrane has accepted the nomination for the Vice Presidency. Major-General Buell has resigned his commission in the Volunteer service, but retains the rank of Colonel in the regular army. A meeting in honour of General Grant was held at Union Square on the 4th, and was attended by from 5000 to 10,000 persons. The resolutions expressed gratitude to General Grant for his achievements, thanks to General Sherman and the navy for their co-operation, and the determination to keep the army efficiently and promptly reinforced. Secretary Chase has arrived in New York to negotiate a temporary loan. On the 7th Mr. Hooker, of the Committee of Ways and Means, introduced a Bill authorising a new loan of 400,000,000 dols., 6 per cent. bonds, redeemable within 40 years, for support of the Government during the next fiscal year. Congress has struck out the money commutation clause from the Enrolment Act. The steamer Georgina Maccew has been driven ashore at Wilmington. A steamer (name unknown) has been destroyed while entering Charleston. The New York steamer Berkshire has been destroyed by fire at Esops Island, eight miles below Rondout. The fire was caused by the explosion of a lamp. The steamer had about 150 passengers, 40 or 50 of whom are supposed to be lost. The boat was built two weeks ago, and was burnt to the water's edge.

MEXICO.—The Emperor and Empress Maximilian have arrived at Vera Cruz. The pacification of the country is almost completed. A series of encounters has taken place, which resulted in favour of the French. A brilliant advantage has been obtained by Colonel Dupin at San Antonio. The Mexicans amounted to 200, that of the French to 12. Juarez is wandering about the country, but is unable to raise any town into a centre of resistance.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Burial Service.*—In reply to a question from EBURY, the Archbishop of CANTERBURY said that a great many of the clergy were averse to any change in the burial service; he therefore did not feel authorised to propose any legislation the subject. The *Church Services (Apocrypha) Bill*, the object of which was to allow clergymen of the Church of England to substitute other portions of the Scriptures for the lessons out of the Apocrypha, was withdrawn after a short discussion. On the report of the *Penal Servitude Acts Amendment Bill*, Earl of AIRLIE complained that it would prevent many men from emigrating. Some debate ensued, and ultimately the report was received. The *Universities Committee Act Amendment Bill*, the *Ecclesiastical Courts Registers (Ireland) Bill*, and the *Improvement of Land Act Bill* were reported, with amendments. The *Chancellor of Anchors Bill* was read a third time and passed.

MONDAY.—The House did not sit, the day being the anniversary of the Queen's accession.

TUESDAY.—*British Subjects in America.*—The Earl of ELLESMERE called attention to the case of a Montreal merchant named Levy, who, having arrived at Boston in a British vessel, in March last, was seized by the Federal States authorities before he left the ship, and subsequently tampered with and imprisoned. No cause was assigned for his arrest, and it was not until he had been confined ten days that he was liberated. He asked whether any information on the subject had reached the Government, and whether reparation had been demanded of, or voluntarily offered by, the Federal Government.—Earl RUSSELL replied that the latest despatch from Lord Lyons contained no reference to the case, but he would make inquiry into the matter.—The *Admiralty Loans Works Bill* was read a third time and passed.

Summary Procedure (Scotland) Bill passed through committee.—The Lord CHANCELLOR moved the second reading of the *Attorneys and Solicitors Remuneration Bill*. The effect of the present mode of paying for legal services had, he said, a direct tendency to encourage the unnecessary length and verbosity of legal documents, the cost of preparing a deed being calculated by the number of folios. As an attorney is not allowed to make a contract with a client as to payment for direct services, the remuneration was obtained in an indirect manner, by long bills, long pleadings, and a repetition of unnecessary writing. The Bill proposed to enable attorneys to make a specific contract with the client, and to take security for costs to be incurred. It also proposed to amend the present law as to the purchase of reversions, and the practice of the Court of Chancery with regard to property acquired by a woman after her marriage. Another provision of the Bill abolished the difference in the mode of distributing real and personal property among creditors after the death of the debtor. Power was also given by the Act, to any person wishing to dispose of his property by will, to make the Court of Chancery his trustee for receiving and distributing it.—Lord BROUGHAM, though he saw some objections to portions of the Bill, believed it contained some valuable provisions.—Lord ST. LEONARDS opposed the measure, and contended that it would destroy all confidence between attorney and client and strike the relations that ought to subsist between husband and wife.—Lord CRANWORTH thought the measure ought not to have included so many subjects having no connection with each other, and suggested that the Bill should be referred to a Select Committee.—Lord CRANWORTH concurred in this suggestion, though he gave the measure a qualified approval. The Bill was then read a second time and referred to a Select Committee.—The *Expenses of Seats (House of Commons) Bill* was read a second time.—The *Privy Council Appeals Act Amendment Bill*, the *Lunacy Acts Amendment Act Amendment Bill*, the *Ecclesiastical Courts and Registries (Ireland) Bill*, the *Chain Cables and Anchors Bill*, the *Improvement of Land Act (1864) Bill*, and the *Naval Prize Acts Repeal Bill* were read a third time and passed. The *Banking Copartnership Bill* was read a second time.

TUESDAY.—*The Conference.*—Earl RUSSELL said that last week, in reply to the Earl of Derby, he stated that in a few days the Conference would either come to an agreement or negotiations be broken off and hostilities recommenced. He regretted that the latter alternative appeared to be most probable; but on Monday next he would lay upon the table all the papers and protocols connected with the Conference and its proceedings, and at the same time make a statement to the House on the subject.—Lord BROUGHAM laid upon the table a Bill for the better prevention of *Bribery at Elections*. The Bill provided that the act of bribery should be punishable with imprisonment and not fine.—The Bishop of OXFORD moved the second reading of the *Facilities for Divine Service in Collegiate Schools Bill*, the object of which is to authorise the bishops to license the master, or one of the masters of incorporated schools, to perform Divine Service in the schools or in the parish church, with the consent of the incumbent, until chapels to be attached to the schools could be built.—The Earl of SHAFTESBURY regarded the Bill as affording facilities for practices which might become objectionable and lead to commotion and disturbance. He moved, as an amendment, that the Bill be read a second time on that day three months.—The Bill was also opposed by the Lord CHANCELLOR and Earl GREY. Ultimately, the amendment was withdrawn, and the second reading of the Bill was agreed to.—The *Beerhouses (Ireland) Bill* was read a second time.—The *Banking Copartnership Bill* and the *Vacating of Seats (House of Commons) Bill* passed through committee.

FRIDAY.—*Convocation.*—Lord HOUGHTON gave notice that on Tuesday he would ask a question regarding the powers of the Convocation of the province of Canterbury.—*Brazilian Slave Trade.*—Lord BROUGHAM gave notice that on Tuesday he would call attention to and express his high approbation of the course pursued by the Government of Brazil in totally abolishing the slave trade.—*Royal Academy.*—Earl of STANHOPE called attention to the present position of the Royal Academy, and asked what further steps the Government intended taking in reference to it. [Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*The Ashantee War.*—On the order for going into committee of supply, Mr. J. HAY moved a resolution "that her Majesty's Government, in landing forces on the Gold Coast for the purpose of waging war against the King of Ashantee, without making any sufficient provision for preserving the health of the troops to be employed there, have incurred a grave responsibility, and that this House laments the want of foresight which has caused so large a loss of life." He contended that no proper arrangements had been made for the proper accommodation of British troops in such a climate; that the Gladiator, which was to be sent to bring them home, was altogether unsuitable for such a service, and that the great mortality that had occurred was to be traced to the lamentable want of foresight on the part of the War-office in equipping the expedition.—The Marquis of HARTINGTON described the steps that had been taken to provide for the comfort and safety of the men, and contended that the staff of medical officers, and the supply of medical and hospital stores, were amply sufficient for a force of 1400 men. He had read a great many despatches from the Governor at the station, and from the officer commanding the troops, and he could not find that any complaint had been made to bear out the charges embodied in the resolution.—Mr H. SEYMER, Mr. B. COCHRANE, and Mr. LIDDELL supported the motion, Lord A. CHURCHILL and Mr. C. FORTESCUE opposed it.—Sir J. PAKINGTON said that the question before the House was not the policy of the Ashantee war, but whether the Government had adopted those precautions and taken care for the security of the troops which it was their bounden duty to have. He considered it proved by the papers that they had not done so, and should therefore vote for the motion.—Lord C. PAGET described the measures taken by the Admiralty for the removal of the troops, showing that there had been no delay on their part.—General PEEL said he was unable to understand from the papers or from the debate whether the responsibility rested on the Colonial Office or the War Office. Were these things to happen and nobody to be responsible?—Mr. CARDWELL vindicated the part which the Colonial Office had taken in the matter, and contended that the expedition had been provided with [illegible] stores and comforts.—Mr. COLLIER and Sir G. BOWYER supported the motion.—Mr. PEACOCKE opposed it.—Lord PALMERSTON said that although the Opposition had succeeded in their object to express censure, there could be no doubt that the motion was a party one and that the object was to censure the Government. He maintained that the conduct pursued in the recent war had been completely justified, and that no case had been made out to establish a charge of culpable negligence against any department of the Government. He trusted, therefore, that the House would not give its assent to a resolution founded on untruth and supported by accusations which were unfounded. He reminded the House that it was a Government of which the Earl of Derby was a leading member which had undertaken the protection of the native tribes on the Gold Coast.—Mr. DISRAELI said that Lord Palmerston was not correct when he said the protectorate of the native tribes had been undertaken by a Government of which Lord Derby was a member, as the obligation had arisen so long ago as 1826. Nor was he correct when he declared that the statements made by Sir John Hay were unfounded. The disasters which had occurred were patent to the world, and it was the constitutional duty of the Opposition to challenge the conduct of the Government for having caused it.—Lord PALMERSTON explained that the protectorate had been resumed under the Government of Sir R. Peel, of which the Earl of Derby was a member.—Mr DISRAELI said that a resolution of the House of Commons had sanctioned it. The House then divided, when the numbers were—For the resolution, 326; Against it, 233; Majority for the Government, 7. The result was loudly cheered by the Ministerialists, and counter-cheered by the Opposition. The House then went into committee of supply *pro forma*, but immediately afterwards resumed. The *Report on Supply* was brought up and agreed to.

MONDAY.—*Law of Partnership.*—In reply to Mr. BRIGHT, Mr M. GIBSON said it was the intention of the Government to introduce a measure for the amendment of the law of partnership. *The Conference.*—Mr. DISRAELI asked whether the statement which had appeared in the papers of that day, that the German Plenipotentiaries had declared at the Conference on Saturday that if hostilities were renewed between Germany and Denmark, Germany would resort to privateering, was correct. He also asked whether, if the Conference should be broken up on Wednesday, it was to be inferred that hostilities would be renewed on the 27th, and whether, in the event of the Conference concluding its business on Wednesday or any other day, the protocols would be laid upon the table of the House.—The CHANCELLOR of the EXCHEQUER, in the absence of the Premier, said that it would be more satisfactory to have the questions put on the paper in the usual way.—Mr. DISRAELI was unable to agree with this opinion. In the present critical circumstances he considered that he was justified in putting the questions without formal notice.—Mr. OSBORNE said that, remembering how we had drifted into war with Russia, and looking at the perilous position in which the country was placed at the present moment, he hoped some member of the Government would explain what degree of significance attached to the words uttered by Earl Russell in another place, that the Channel fleet was fully prepared for any service it might be called upon to undertake. He wished to know whether this was merely an idle threat, or an intimation on the part of her Majesty's Government of their intention to commit the suicidal act of plunging the country into war with Germany.—The CHANCELLOR of the EXCHEQUER said he was sorry that any inconvenience should arise from the position in which the House was placed, but, as no notice of the questions had been given to any member of the Government, he thought it would be to the interest of the public service that notice should be given.—Mr. S. FITZGERALD hoped the House would insist upon receiving an answer to the questions of Mr. Disraeli and Mr. Osborne.—Mr. D. GRIFFITH deprecated the continued reticence of Ministers, but attributed much of their unwillingness to be communicative to the fact that there were divisions in the Cabinet.—Lord J. MANNERS was of opinion that the country would be dissatisfied if the Government were to persist in withholding information from the House. If, as appeared to be the case, no one could answer questions with reference to the Conference but the chief of the Government, he thought that noble lord ought to be in his place. [Lord Palmerston here entered the House from behind the Speaker's chair, and was received with cheers from the Ministerial benches.] Lord J. Manners then repeated, for the information of Lord Palmerston, the substance of the questions put by Mr. Disraeli and Mr. Osborne.—Lord PALMERSTON replied, first to the question of Mr. Osborne, and said that Earl Russell had used the words in reference to the fleet in a general sense; in the same sense as the Duke of Wellington had declared that the British fleet was ready to go anywhere or meet any contingency that might arise. As to the revival of hostilities, the armistice expired on Saturday next, and if the belligerent parties did not in the interim agree to some arrangement for the restoration of peace, or for a boundary, or for a prolongation of the armistice, hostilities would no doubt be renewed. Whenever the negotiations were brought to a close it would be the duty of her Majesty's Government to lay the proceedings of the Conference before Parliament without delay.—Mr. BRIGHT reminded the noble lord that great anxiety was felt throughout the country on this subject, and that it would afford much gratification to the public if he could announce that the armistice was to be again prolonged.—Lord PALMERSTON was aware that much interest was naturally felt on the grave questions at issue before the Conference. Still, he was bound to repeat that his tongue was tied as to details, but he assured the House that her Majesty's Ministers were labouring incessantly to bring the belligerents to an agreement, and if they failed he believed they would be able to show that it was not their fault. The *Government Annuities, &c., Bill* was read a third time and passed.—The CHANCELLOR of the EXCHEQUER acknowledging the obligation he owed to the select committee to whom the measure had been referred, and Mr. S. FITZGERALD and other members expressing their entire approval of the Bill in its present shape.—On the motion for the second reading of the *Gaols Bill*, Sir G. GREY said that as some misapprehension existed with reference to the 4th clause, the object of which was not to force Roman Catholic chaplains into gaols against the desire of the magistrates, but merely to give the Secretary of State for the Home Department the power to amend prison rules, he was prepared to withdraw it.—Mr. ALDERSLEY was of opinion that no legislation to amend the present law relating to gaols could be satisfactory which did not include some definition of hard labour and a schedule of rules for gaols, and which did not provide for all gaols being gradually adapted to the separate system, and for a uniform and classified treatment of all prisoners. As, however, Sir G. Grey had expressed his intention to eliminate the 4th clause, he did not intend to oppose the measure at its present stage.—Mr. NEWDEGATE moved, as an amendment, that the Bill be read a second time that day three months. He said that it violated the principle of local self-government and failed to provide any adequate security or to locate responsibility to guard its application and render it an instrument effective for good. The definition of the rules should not be left with the Home Office, but should be laid down and enacted by Parliament itself, or the Home Secretary might on his own responsibility appoint Roman Catholic chaplains in prisons without consulting the justices, who would then be left to incur the odium of levying a tax to defray the cost.—Mr. BARROW seconded the amendment, resting his opposition to the measure mainly upon its [illegible].—Sir J. PAKINGTON approved of the Bill as a necessary measure, and thought the Secretary of State for the Home Department had acted wisely in withdrawing the 4th clause.—Mr. MAGUIRE contended that Roman Catholic prisoners had as much right to the administrations of a clergyman of their own religion as the Protestant prisoners had to theirs.—Mr. WHALLEY opposed the Bill.—Mr. WALPOLE, Mr. MAITLAND, Mr. HARDY, and Mr. SERJEANT ESTHWAITE supported the motion of Sir G. Grey, on which, while willing to carry out the Bill, he was not willing to admit that there was the slightest foundation for the apprehensions entertained by Mr. Newdegate. On a division, the amendment was negatived by 110 to 47, and the Bill was read a second time.—The adjourned debate on the third reading of the *Colleges of Peace Bill* was resumed by Sir J. TROLLOPE, who moved as an amendment that the Bill be read a third time that day three months. He contended that the Bill was an unnecessary interference on the part of the Government with the existing system.—The CHANCELLOR of the EXCHEQUER defended the Bill, and justified the omission of the metropolis from its operation. After some discussion the House divided, when the amendment was carried against the Government by 127 to 125. The Bill was therefore lost. The *Railway Construction Facilities Bill* passed through committee.—Sir C. O'LOGHLEN moved the second reading of the *Railway Travelling (Ireland) Bill*, the object of which was to compel railway companies in Ireland to run one train a day each way on Sundays.—Mr. BLAKE moved as an amendment that the Bill be read a second time that day three months.—The Bill was opposed by Lord NAAS, Mr. WHITESIDE, and others, and supported by Major GAVIN, Mr. O'REILLY, and Sir P. O'BRIEN. On a division the amendment was carried by 47 to 41. The Bill was therefore lost. The *Railway Order Confirmation Bill* and the *Pier and Harbour Orders Confirmation Bill* passed through Committee. The *Lunacy (Scotland) Bill* was read a second time.

TUESDAY.—*Court of Chancery (Ireland) Bill.*—At the morning sitting the House went into committee on this Bill, and agreed to several clauses. On clause 12, which provided for the appointment of one chief clerk, Mr. WHITESIDE moved that the Chairman leave the chair. He criticised the Bill at great length, and charged the Government with taking advantage of the absence of Irish members to press the measure forward at a morning sitting, and carry it through the committee by a *coup de main*.—The ATTORNEY GENERAL for IRELAND defended the course which he had adopted, and said that of late years no measure of law reform had passed through Parliament which had not been discussed at a morning sitting. The debate was protracted until four o'clock, when the committee divided, and the motion of Mr. Whiteside was carried against the Government by 42 to 41.—On the resumption of business at 6 o'clock, Sir C. O'LOGHLEN said that he had by mistake voted in the wrong lobby on the Court of Chancery (Ireland) Bill. His vote was needed to the majority, and he asked that the division list might be amended, by placing his name with the "Noes" instead of with the "Ayes."—The SPEAKER said that he could not give the honourable and learned gentleman any relief, as the chairman of committees had already, and properly, declared the result of the division. *The Ballot.*—Mr BERKELEY moved the following resolution:—"That, as a general election is impending, and it is notorious that our electoral system is defective and corrupt in practice, and as we have no law which can put down the intimidation of voters, nor prevent bribery, it is therefore expedient that a fair trial should be given to the vote by ballot." He urged that the present law was wholly unequal to deal with the patent evils and abuses of our electoral system, and that, as a general election could not be far distant, it would be wise and expedient to try the experiment of the ballot.—Mr LOCKE seconded the motion.—Lord PALMERSTON opposed it, and commented upon the circumstance that the feeling out of doors in favour of the ballot was on the decline. He objected to it because it was founded on an erroneous assertion, as it dealt with the right of voting as if it were a private right divested of responsibility, instead of a public trust. He was opposed to the ballot also because he did not believe it would remedy the evils against which it would be directed, and because secret voting was essentially un-English. On a division the motion was negatived by 212 to 123.—Mr. HENNESSY moved the two following resolutions:—"That this House observes with regret that the agricultural population of Ireland are rapidly leaving the country; 2, That this House trusts that her Majesty's Government will direct their attention to the subject, with a view of devising some means by which the Irish agricultural population may be induced to devote their capital and labour to reproductive employment at home."—Mr MAGUIRE seconded the motion.—Sir R. PEEL admitted that the drain of emigration from Ireland during the last few years was considerable. At the same time it should be remembered, that when the population of the country was little more than four millions, the Parliament of Ireland had expressed its regret that greater facilities were not afforded for the emigration of the people. Since the year 1845 the condition of the country had undoubtedly been much depressed, but signs of revival were at length apparent, and a greater breadth of land was now under cultivation than in the year 1845. The present rate of progress would, he hoped, be maintained, and he saw no reason for indulging in gloomy prognostications of the future.—Mr. MAGUIRE said that a law to protect the tenant and give him compensation for his improvements would be hailed as a great boon by the Irish people.—After some remarks by Sir P. O'BRIEN, Mr. MONSELL, Mr. M'MAHON, and Mr. BLAKE, Lord ATHLUMNEY said there was no doubt that the small farmer was beginning to discover that he could not keep his place in the country. He did not believe it was not in the power of Parliament to arrest the tide of emigration.—Mr. WHITESIDE said that Parliament might adopt measures to check, if not to avert emigration; and some measures would no doubt ere this have been matured had a Government been in office that would have been awake to its duties and to a sense of its responsibility.—Lord PALMERSTON said that so long as labour was better remunerated in England and in America, so long would the people of Ireland seek employment in those places. What he lamented was not that the Irish people were emigrating; but that in consequence of a combination of circumstances, and a state of things which had now in great part passed away, the country was not in a position to offer inducements to its own children to remain at home. Now, however, the condition of the country was improving, and he hoped that with the introduction of manufactures, and the improved system of cultivating the land, the material prosperity of the people would continue to increase. He suggested that Mr. Hennessy should rest satisfied with the debate that had taken place, and not press the motion to a division.—Mr. HENNESSY thought that at all events the latter paragraph of the resolution ought to be accepted by the House.—Sir G. GREY then moved the previous question, which was supported by Mr. WALPOLE and Mr. MONSELL, and opposed by Mr. LEFROY and Sir P. O'BRIEN.—On a division, the previous question was carried by 80 to 52.—Sir F. SMITH moved an address to the Crown, to appoint a commission to inquire into the condition as to pay and allowances of the *Remounts Quartermasters* of her Majesty's service, with the view to place these officers, should it seem expedient, on a better footing.—The Marquis of HARTINGTON assented to the motion, on condition that the words "with the view to place these officers on a better footing," be omitted.—Sir F. SMITH consenting, the motion as amended was agreed to.—The *Accidents Compensation Act Amendment Bill* passed through committee.

WEDNESDAY.—*Court of Chancery (Ireland) Bill.*—The ATTORNEY GENERAL for IRELAND moved that the House should on Thursday go into committee, for the purpose of considering what course ought to be taken with reference to this Bill, in consequence of a division having been unexpectedly taken at the morning sitting on Tuesday, when the Bill was in committee, which led to the Chairman leaving the chair without reporting progress.—Mr LOWE opposed the motion, and said that, whenever a motion that the Chairman should leave the chair was adopted, it was always understood that the Bill was lost.—Mr BUTT supported, and Mr WHITESIDE opposed the motion.—The SPEAKER cited several precedents in favour of the motion. The Bill was in the same position as if the House had been counted out upon the order of the day, and it was quite optional to renew it. The motion was then agreed to.—On the order for going into committee on the *Joint Stock Companies (Voting Papers) Bill*, Mr. CRAUFURD moved that the

Bill be committed that day three months: but, after a reply from Mr. GRIFFITH, he withdrew this motion, and the House went into committee upon the Bill. During the debate on the first clause, Mr. PEACOCKE moved that the Chairman leave the chair. On a division, this motion was carried by 76 to 49. The House then went again into committee upon the *Weights and Measures (Metric System) Bill*, taking up the discussion at the new clauses, including the substituted schedule of tables of values of the denominations of weights and measures on the metric system, expressed by means of the legalised denominations, the new clauses being framed in concurrence with the Government. The clauses and schedule were agreed to, after considerable discussion.—Sir J. HAY moved the second reading of the *Bank of England Notes (Scotland) Bill*. He explained that its object was to make Bank of England notes a legal tender in Scotland, where there was no legal tender other than gold, and pointed out the great commercial conveniences that would be the result of the measure.—Mr. FINLAY moved that the Bill be read a second time that day three months.—Mr. K. HODGSON, Governor of the Bank of England, suggested that, as the proposition involved wider questions of much importance, Sir J. Hay would do well not to press his measure.—Sir T. COLEBROOKE, Sir A. AGNEW, Mr. DALGLISH, and Mr. HANKEY, also stated objections to the Bill.—The CHANCELLOR of the EXCHEQUER said that the opinion of the House was clearly not favourable to the Bill. The question could not be considered apart from the establishment of branch Banks of England in Scotland. An objection lying at the root of it was that it belonged to a state of things entirely different and remote from the existing state of things regarding the circulation of the three countries, and legislation upon so difficult a subject required to be carefully digested and matured. After some further discussion Sir J. HAY withdrew the Bill, expressing a hope that the Government would next Session bring in a general Bill on the subject. On the Order for going into Committee upon the *Jersey Court Bill*, Mr. LOCKE explained that its object was to reform the constitution and practice of the royal court in that dependency.—Sir G. GREY said that the States of Jersey had expressed their readiness to introduce the necessary reforms without the intervention of Parliament, and recommended that the Bill should be withdrawn to give them an opportunity of so doing.—Mr. PAULL moved as an amendment that the States of Jersey be heard by their counsel, and be allowed to adduce evidence at the bar in opposition to the Bill.—On the motion of Mr. AYRTON the debate was adjourned. The *Superannuation (Union Officers) Bill*, the *Pilotage Order Confirmation Bill*, the *Pier and Harbour Orders Confirmation Bill*, and the *Countess of Elgin's Annuity Bill* were read a third time and passed.

THURSDAY.—*The Conference.*—There was a very numerous attendance of members, in anticipation of hearing a statement from Lord Palmerston, who on entering the House shortly before half-past 4 o'clock, was loudly cheered.—Mr. DISRAELI inquired whether the Government had any communication to make to the House respecting the meeting of the Conference on Wednesday.—Lord PALMERSTON said the question was a very natural one, and that he was well aware that the great anxiety felt by the House and the country was such as to entitle them to some communication on the subject from her Majesty's Government. The Conference met on the previous afternoon after the Levée, and adjourned until Saturday, when it would meet at an earlier hour. The probability was that it would be the last and final meeting, and it would become his duty, and that of his noble friend at the head of the Foreign Office, to lay on the table all the papers relating to the proceedings of the Conference (including, he hoped, those of Saturday), and to accompany them by a statement connected with the transactions to which they related.—Mr. WARD HUNT asked whether the Conference would meet on Saturday for the purpose of deliberating further, or merely to go through formalities.—Lord PALMERSTON said he had already stated that in his opinion the meeting of Saturday would probably be final. It was, however, impossible for him to tell until the meeting was over what would take place, but on Monday next he would state all he knew.—Mr. DISRAELI concluded that the Government would place the papers in the hands of members on Tuesday next.—Lord PALMERSTON replied that his impression was that the papers would be distributed to members the first thing on Tuesday morning.—Mr. CRAWFORD then moved the second reading of the *Weighing of Corn (Port of London) Bill*. He urged that the corporation were entitled by prescription, ancient charter, and usage to levy certain fees on the weighing of all the grain that came into the port of London, and that, as the measure essentially affected the public interest, it ought to be treated as a public and not as a private bill.—Mr. AYRTON moved, as an amendment, "That, inasmuch as the Bill sought to enlarge and alter the powers of the Corporation of the City of London to levy a rate or duty, and to alter existing rates and duties, on grain and seeds imported into the port of London for the use and benefit of the Corporation, the House was of opinion that the Bill ought not to be proceeded with until the standing orders relating to private Bills be duly complied with.—Colonel W. PATTEN asked the Speaker to decide whether the Bill ought to proceed as a public or private one.—The SPEAKER said there were many precedents for treating it as a public Bill, but that he thought it ought to be referred to a select committee.—The CHANCELLOR of the EXCHEQUER said the Government were determined to treat the Bill on its merits only.—Alderman ROSE defended the corporation.—After some debate, Mr. AYRTON withdrew his amendment, and the Bill was read a second time and referred to a select committee.—The adjourned debate on Sir HUGH CAIRNS' motion, objecting to certain assistance afforded under the rules of the *Board of National Education in Ireland* to convent and monastic schools, was resumed by the O'CONNOR DON, who spoke at some length against the motion.—Mr. BLACK supported the motion.—Mr. HENNESSY moved, as an amendment, to omit the words relating to convent and monastic schools from the resolution, in order to make it general in its terms.—Mr. BLAKE seconded the amendment.—Sir R. PEEL opposed both the motion and the amendment, which were, he said, attacks on the National system.—After some remarks from Mr. G. HARDY, Mr. MAGUIRE, Mr. BUTT, and Mr. LEFROY, the CHANCELLOR of the EXCHEQUER said that the history of the national system of education in Ireland was that of a series of modifications, the object of which was to conciliate, support, and make the system as universally acceptable as possible, and he denied that any exceptional favour had been shown to convent schools. The same favour had been offered to other schools, and accepted by the Presbyterians; and if it had been refused by the Episcopalians, they had themselves only to blame.—After a reply from Sir H. CAIRNS, and some observations from the ATTORNEY-GENERAL for IRELAND and Mr. WHITESIDE, the House divided, when the amendment was negatived by 112 to 8. A division was then taken on the original motion, which was also negatived by 91 to 59.

FRIDAY.—*Naval Reserve.*—In answer to Mr. HANKEY, Lord C. PAGET said that in future the privilege of carrying the blue ensign would be allowed to merchant vessels commanded and partly manned by officers and men of the Royal Naval Reserve. *Excise on Malt.*—On the order for going into Committee of Supply, Mr. MORRITT moved a resolution that in the event of any modification of the indirect taxation, the excise on malt required consideration.—The CHANCELLOR of the EXCHEQUER agreed to the propriety of the resolution in the abstract, but said it would be unadvisable to pledge the House to any particular course of action in dealing with the remission of a specific impost.—Lord J. MANNERS supported the motion.

Left sitting.]

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 89⅜ for Money, and 89⅞ to ¾ for Account; Three per Cents. Reduced, 88⅝ to ¾; New Three per Cents., 88½ to ¾; India Five per Cent. Stock, 104¼ to ⅜; Exchequer Bills, March, 8*s.* to 3*s.* dis.; Ditto June, 5*s.* dis.—FOREIGN: Chilian Three per Cents., 77⅛; Dutch Certificates, 99¼; Egyptian, 101; Greek, 22⅞; Italian, 69; Ditto Maremmana Railway, 76; Mexican, 42⅜ to 42¾; Ditto Six per Cents., scrip, ¼ dis.; New Granada, 12¾ to 12 ex div.; Ditto Deferred, 7¼; Portuguese, 1856, &c., 48⅞ to ⅝; Russian, 1862, 86¾ to ⅞; Ditto 1864, scrip, 3⅜ pm.; Sardinian, 83 ex div.; Spanish, 52¾; Ditto Passive, 28⅜ to 28; Ditto Certificates, 10; Turkish, 1862, 70¼ to ½; Venezuela, 22¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,280,385	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	13,630,385
		Silver Bullion	—
	£28,280,385		£28,280,385

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,122,267
Rest	3,303,455	Other Securities	20,729,589
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	9,287,594	Notes	8,107,655
Other Deposits	13,051,661	Gold and Silver Coin	688,676
Seven days and other bills	452,477		
	£40,648,187		£40,648,187

June 22, 1864. M. MARSHALL, Chief Cashier

Metropolis and its Vicinity.

DESTRUCTION OF THE ALABAMA.—A naval action took place on Sunday morning off Cherbourg between the Confederate cruiser Alabama and the Federal corvette Kearsarge. The Alabama had arrived at Cherbourg during the week from a two years' cruise, and obtained permission from the French authorities to repair in dock. As soon as her arrival was known the Kearsarge was despatched to the French coast for the purpose of preventing her putting to sea again. In spite, however, of the bad condition of the Alabama, and the superior weight of metal of the Kearsage, Captain Semmes, her commander, determined to accept the challenge, but he was not aware that the Kearsarge was plated with chain cables over her outside planking. Having therefore obtained permission to take in coal, he left the harbour, accompanied by the English steam yacht Deerhound, having previously sent on shore an iron chest containing specie, 60 chronometers, and other valuables. The French plated ship of war Couronne followed them out of harbour and stopped when the vessels were a league off the coast, her object being to see that there was no violation of the law of nations by any fight taking place within the legal distance from land. The Alabama had not steamed far before she encountered the Kearsarge, and the engagement began at 10 minutes after 11. The crew of the Kearsarge consisted of 150 men, that of the Alabama consisted of 120; and the Kearsarge carried two 100-pounders, the Alabama carrying no guns of that calibre. The Alabama commenced firing with her starboard battery, the distance between the contending vessels being about one mile. The Kearsarge immediately replied with her starboard guns; a very sharp, spirited firing was then kept up, shot sometimes being varied by shells. In manœuvring both vessels made seven complete circles at a distance of from a quarter to half a mile. Shortly after the action commenced a shot from the Kearsarge killed three men on board the Alabama, cutting them to pieces, and a second shot wounded three more men and killed another, while a third shot carried away the blade of the Alabama's fan and part of the rudder on her deck, disabling a gun, and causing much damage. Below and forward her compartments were all carried away, and the fire-room was filled with water. The Alabama fought under sail, first using her starboard battery and afterwards her port battery. She continued the engagement until the muzzles of her guns were under water, and one part of her deck was covered with dead and wounded. At this time she had received at least from 15 to 20 shots in her hull alone, and had seven or eight killed and 10 or 11 wounded, and was besides rapidly filling with water. Before giving up the action, she endeavoured to reach the French shore, distant about 9 miles, and hoisted what sail she had left—but it was of no avail; the water was filling the ship so rapidly as already to cause her to heel over to one side, and was putting out the fires of the engines. She therefore ceased fighting and lowered her boats, in which the dead and wounded were placed. Shortly afterwards she settled slowly by the stern and sank, the officers and crew jumping into the sea, when the Kearsarge's boats rowed up, and with the assistance of a French pilot boat, succeeded in picking up the remaining survivors of the Alabama, who are said to number about 60 men. The officer in command of the boats inquired for Semmes, and was told that he was drowned, whereas he had already been picked up by the yacht Deerhound, which had lowered her two boats, and with the assistance of the Alabama's whale boat and dingy, succeeded in saving about 40 men, including Captain Semmes and 13 officers, whom she has since landed at Southampton. The Kearsarge returned to Cherbourg apparently much disabled, her sides being torn showing the chain-plating. The Alabama's loss, as at present ascertained, in killed and wounded, is from 30 to 40 men, including Mr. Llewelyn surgeon, Mr. Robinson the carpenter, and about man drowned, six men killed, and one officer 16 men wounded. Captain Semmes received a wound from a shell in the right hand, and suffered much from being a long time in the water. When he came on board the Deerhound they had nothing on their drawers and shirts, having been stripped by and one of them insisted on seeing his captain, who then lying in Mr. Lancaster's cabin in a very exhausted state, as he had been intrusted by Captain Semmes with the ship's papers, and would give them up to one else. The men were all very anxious about the captain, and were rejoiced to find that he had been saved. Great pluck was shown on both sides during the action. On board the Alabama all the hands were let loose, and arrangements had been made for sinking her rather than that she should be captured. As far as is known, not a relic of the Alabama is in possession of her rival. When she was sinking Captain Semmes dropped his own sword into the sea to prevent the possibility of its getting into their hands, and the gunner made a hole in one of the Alabama's boats and sank her for the same reason. Before leaving the Deerhound Captain Semmes presented to Mr. Lancaster's son one of his officer's swords and a pistol in remembrance of the occurrence and the kind treatment he and his men had received on board the yacht. The men stated that the best practice generally on board the Alabama during the action was shown by the gunners who had been trained on board the Excellent in Portsmouth Harbour. The spectacle presented during the combat is described by those who witnessed it from the Deerhound as magnificent, and thus the extraordinary career of the Alabama has come to a grand and appropriate termination. The presence of the Deerhound on the scene was a providential circumstance, as in all probability the men saved by her would otherwise have been drowned, and a lamentable addition would thus have been made to the number of lives lost on the occasion. Great excitement was caused in Southampton by the arrival of the survivors. On Monday afternoon Captain Semmes on proceeding up the town was completely hemmed in by crowds of people, who collected around his carriage and vociferously cheered him along the streets. A great banquet to Captain Semmes and his officers, in honour of their bravery, is already spoken of by some of the leading citizens. Mr. Mason, the Confederate agent, Captain Bullock, and the Rev. M. Tremlett arrived from London during the night and had an interview with Captain Semmes, who left Southampton on Tuesday for a country residence to get a few days' repose and quiet, being somewhat exhausted from his wound and exposure in the water.

EXPERIMENTS AT SHOEBURYNESS.—On Friday last but one of the most important series of experiments which have been conducted at Shoebury by the members of the Iron-plate Committee was made, in the presence of the Lords of the Admiralty and one of the largest assemblages of naval and military officers and scientific gentlemen that have ever yet attended any of these trials. The target, which was 20 feet by 9 feet, was constructed after the pattern of the Lord Warden, which is building at Chatham, and represented the ordinary broadside of a wooden ship armour-plated, with the addition of an iron skin outside the frame timbers. These frame timbers were of English oak 12 inches thick, strengthened by connecting diagonal iron ties or bands 6 inches wide by 1¼ inch thick. Outside this was the inner planking, 8 inches thick, and then a complete casing of wrought iron, 1½ inch thick. Outside this casing again was 9 inches of oak, which was again protected by rolled armour plates 4½ inches thick by 20 feet long and 4 feet wide. Thus the total thickness of the target was 35½ inches, of which 6 inches were iron and 29½ inches oak. In addition to this mass there were three oak deck beams averaging 15 inches by 15 inches square, and a massive iron knee to each beam, weighing nearly 4 cwt. The armour-plate bolts were 2½ inches in diameter, and the beams which represented the upper and lower deck, and which were 4 inches thick, and laid longitudinally along the back of the target, gave additional stiffness to the whole. There were two guns in position opposite the target, all made on Sir William Armstrong's coil principle, and rifled on the shunt plan, which threw steel shot from 100 lb. to 300 lb. weight, with charges varying from 25 lb. to 50 lb. of powder. One of the first tried was a 40-pr. Frederick's light 7-inch gun, which sent the shot completely through the outside armour-plate, and made its effects more or less seriously manifest on the interior backing. The heavy 9.22-inch gun of Sir William Armstrong, loaded with 44 lb. of powder, sent a 250 lb. steel shot against the target with a velocity of 1460 feet a second, and not only went clean through, but went on through part of the hill beyond and fell nearly a mile out to sea. The force which it made of the back of the target was complete. At the part it struck, huge ragged splinters were scattered far and wide, and one of the massive iron knees was broken off and whirled away 30 yards.

striking a block of granite in its passage, and shivering a cloud of fragments out of it. What such a "knee" would have done traversing the crowded 'tween decks of a man-of-war it is almost fearful to contemplate. The Somerset 9·22-inch rifled gun, which only weighs 6½ tons, fired with 20 lb. charge, sent a steel shell of 170 lb. through both outer and inner plates and the intervening oak, where it burst, and so shattered the interior backing as to make it evident that all the pumping resources of a steam-frigate could scarcely keep down such a leak, and that two would send her to the bottom in 10 minutes. It failed, however, to get right through the target, though the hole which it made afterwards afforded a striking illustration of the importance of getting a shell through the armour of these iron-clads. Another 170 lb. steel shell, with a 7 lb. bursting charge, was fired, struck the hole made by the previous shell, passed through the armour-plate and lodged in the oak firmly, bursting and blowing its charge forward like a gun. It is difficult to describe accurately the tremendous destruction which this small charge produced. It shattered the back of the target to splinters, drove one of the armour bolts deep into the beam supporting the target, wrenched off and blew away to some distance one of the massive knees, and covered the ground far and near with fragments of the oak, each heavy enough and hurled with sufficient force to have cut a man in two. Anything more terrible than the effect of such a shell on the crew of a ship it would be difficult to conceive. Another shot fired from Sir William Armstrong's 10½-inch 300 pounder, with a 45 lb. charge, went through the lower part of the target with the same ease and destructive effect that the previous 220 lb. shot had passed through the upper. Some experiments were also tried with the chilled cast-iron shot, invented by Captain Palliser, of the 18th Hussars. These shot are cast in cold iron moulds instead of hot sand ones, by which, without adding a fraction to the cost of casting, but, on the contrary, reducing it by about 1*d.* per shot, the outside of the metal is chilled into the hardness of steel, and obtains with a cast projectile which costs about 2*s.* a result almost equal to that of a steel shot which costs 50*s.* The shot tried on this occasion were only 100-pounders from the Frederick gun with a 20 lb. charge, but in every case they went clear through the 4½-inch armour plate and deep into the backing beyond, when they broke up into minute fragments of from four to eight ounces weight, so that in fact the projectile carried in itself almost the penetrative powers of a steel shot, and the explosive fragments of the most powerful shell. After these experiments the target was in such a state of ruin that there was no place left sufficiently sound on which to try the effect of another projectile. The armour-plates, which were manufactured by the Millwall Company, deservedly attracted the highest praise. Though pierced in all directions there was not the slightest sign of a crack to be found in any part.

The Public Health. — The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, June 18, were 1296. The average number for the corresponding week in 10 years, 1854-63, corrected for increase of population, was 1173. The present return is therefore 123 above the average. During the week the births of 912 boys and 864 girls, in all 1776 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1856.

Provincial.

Derby.—It appears that the discoveries recently said to have been made respecting the will of Mr. George Nuttall, of this town, are not to be made the subject of fresh law proceedings on the part of Mr. Else. There have already been three trials, an appeal to the Lords Justices, and another to the House of Lords. Application was recently made to the Master of the Rolls to settle the costs to be paid by the plaintiffs, when his Honour directed the costs of the second and third trials to be costs in the cause, and made no order as to the costs of the first trial or of the appeals.

Manchester.—At the monthly meeting of the Central Executive Committee on Monday, the balance in the bank was reported to be 137,447*l.*, including 83,732*l.* received from the Bridgewater House Fund. Mr. Farnall's report showed a decrease of 9406 in the numbers relieved during the month in the 27 Unions of the cotton districts. A lengthy discussion took place on a motion by Mr. Hugh Mason, seconded by the Mayor of Manchester, for requesting powers under the Public Works Act for an additional loan of at least 500,000*l.* in anticipation of next winter's distress. Sir J. K. Shuttleworth said that the money not paid already by the Loan Commissioners was certain to be expended in respect of contracts already entered into; that many places which had obtained loans would be glad to enlarge them; that other places which had not obtained them would be glad to have them, and that the whole of the money so far allowed by Parliament was appropriated. The motion was carried unanimously.

Wakefield.—The boiler attached to a colliery engine near this town exploded on Saturday morning, killing four persons, wounding a number of others, and destroying and damaging a great amount of property.

York.—The following address from the working classes of this city was presented to Mr. Gladstone on Friday, by a deputation represented by Mr. Westhead, M.P., and Alderman Leeman:—

"Honoured Sir.—We, the working men of the city of York in public meeting assembled, desire to express to you our appreciation of your masterly and courageous speech, delivered in the House of Commons on the 11th of May last, in defence of the working classes, and in advocacy of their right to a fair share of representation in the Parliament of this country. We read your speech with admiration and a deep feeling of gratitude. It is a rare thing for a Minister of the Crown to speak with so much pride and generous warmth of our order. From the time when you first revised the tariff, and, standing by the side of Sir Robert Peel, by your eloquence assisted him to break down the ramparts of Protection, and give cheap bread to the labouring poor, you have, by many acts of statesmanship, been winning the hearts and affections of the people of this nation. Your great financial scheme of 1860 is still fresh in our memory. The treaty of commerce with France, and the abolition of the taxes on knowledge, with both of which measures your name is honourably and conspicuously associated, are producing blessings and benefits which are inestimable. We have marked the manifestations of your sympathy with the down-trodden and oppressed of every clime. You have advanced the cause of freedom in foreign lands by the withering power and unflinching courage with which you have from time to time assailed and exposed the misdeeds and cruelties of continental tyrants. To the provident operative you have, by your 'Post Office Savings Bank Bill,' given security for his small savings; and your Government Annuities Bill of this session is a measure which will stimulate the people to greater thrift and forethought, and inspire them with more independence. These acts, together with your speeches on the last-named measure, and on Mr. Baines's Borough Franchise Bill, make up a life that commands our lasting gratitude. We believe that when you say it is for the interests of the country that the question of Parliamentary Reform should be speedily entertained and settled, that you will strive to accomplish a settlement that will be satisfactory to the people. We believe this because we think you incapable of deceiving. We have marked the integrity and rectitude—the deep sincerity—which guide your life. We wish to sustain you in your noble efforts to obtain for us political recognition. Hitherto we have been, and we now are, aliens in the land of our birth. We have no political existence. Against the injustice of our position we have petitioned and protested. We have shown by argument and conduct our fitness for the exercise of the Parliamentary franchise. But we have been stigmatised as a 'vile mob,' as 'brutally depraved,' that 'would take bribes,' and 'overbear the other classes of society.' This has been said by members of that House which the lustre of your intellect adorns. Where is our violence? Where our disorder? In what have we manifested a desire not to submit to the law? We are Englishmen; we love our country; we regard her honour, and should be as ready in the day of danger to shed our blood in her defence as the highest in the land. You, respected sir, believe this. You have declared it, and have spoken words that have sunk deep into the hearts of every working man in every corner of the land. We thank you from our inmost souls. We look to you as a powerful and consistent advocate of our cause, and may God long preserve your life. That you may continue to be the sound and impartial statesman, the friend of the poor, seeking simple justice to all, is the fervent wish and desire of the working men of this ancient city."

To this address the Chancellor of the Exchequer replied as follows, in a letter addressed to Mr. Westhead, M.P., and Alderman Leeman:—

"My dear Sirs,—I have to acknowledge with sincere gratitude the receipt of the address from the working-men of York which you have been so good as to place in my hands. The terms and spirit of that address supply me with a fresh proof of a truth which has long been impressed upon my mind—namely, that in this country, while the errors and shortcomings of a public man are regarded with every indulgence, his well-intended efforts to render service to the State will never fail to receive an appreciation, which in some instances, like that now before me, goes far beyond his deserts. I hope that the thanks I now cordially return to those whom you represent will be taken as addressed to all who have expressed, or who might be inclined to express, particularly with regard to the subject of the franchise, sentiments corresponding with theirs.—I remain, my dear sirs, very faithfully yours, W. E. Gladstone."

Scotland.

Execution of the Ratho Murderer. — George Bryce, convicted at the recent trial at Edinburgh of the murder of a young woman named Jane Seaton, was executed on Tuesday morning in the presence of from 15,000 to 20,000 spectators. Efforts were made to obtain a commutation of the sentence, on the ground of his low mental organisation, but Sir G. Grey intimated, as was fully expected, that he saw no grounds on which to interfere with the course of justice. During the latter portion of his confinement, he showed great penitence and made a full confession of his guilt. He mounted the scaffold with a firm step and died without a struggle.

Obituary.

The Earl Poulett died on the 20th inst. at Hinton St. George, the family seat in Somersetshire, in his 81st year. The Right Hon. John Poulett, Earl Poulett, Viscount Hinton of Hinton St. George, Somerset, and Baron Poulett of Hinton in the peerage of England, was the eldest son of the fourth earl, by the daughter and heir of Admiral Sir George Pocock, K.C.B. He was born in 1783, and succeeded on the death of his father in 1819. He married in 1820, the daughter of the late Mr. Henry Berkeley Portman, by whom he had a family of three sons and a daughter, all of whom are dead, the last surviving of the sons, Viscount Hinton, having died in 1857. The deceased peer is succeeded in the title and estates by his nephew, Captain William Henry Poulett, born in 1827, son of the late Vice-Admiral Hon. George Poulett. The late earl was colonel of the 1st Somerset Militia from 1819 to 1852.

The Hon. Frederick Craven, only brother of Earl Craven, died on the 20th inst. at his residence in Park Street, after a very short illness. He was the youngest of the three sons of the first Earl Craven, by Miss Louisa Brunton, the actress, and was born in 1812.

Mr. Smith O'Brien died on the 18th inst., at Bangor, in his 61st year. He was born in 1803, and was the second son of Sir Edward O'Brien, fourth baronet, of Dromoland, in the county of Clare, by the eldest daughter and co-heiress of Mr. William Smith, of Cahirmoyle, Limerick. His elder brother (better known as Sir Lucius O'Brien, long the Conservative M.P. for Clare,) succeeded his father as fifth baronet in 1837, and became 13th Baron Inchiquin in 1855, on the death of his kinsman, the Marquis of Thomond. Mr. Smith O'Brien, after an education at Harrow, and Trinity College, Cambridge, entered Parliament in 1826 as the Tory M.P. for Ennis, and opposed Mr. O'Connell at the famous Clare election. He was member for Limerick from 1835 to 1849, and during that period he became notorious, first as a prisoner of the coal-hole of the House of Commons; next as the leader of the Irish rebels of 1848: next for his flight and capture in Widow Welsh's cabbage-garden; and, finally, for his trial on a charge of high treason and his sentence to death. His Majesty was advised to commute the death penalty, but Mr. O'Brien refused the boon, which, however, the Government compelled him to accept. He was sent to Bermuda, and refused to join Mitchell in forfeiting his word and escaping. He was ultimately pardoned (1856), and has latterly been living in comparative obscurity. Mr. O'Brien married, about 1836, the daughter of Mr. Joseph Gabbett, of Limerick, by whom he had a large family. His estates, which were transferred to his family before his conviction, did not come back to him, his eldest son having come into possession of Cahirmoyle, giving his father an annual income from the estate.

Markets.

COVENT GARDEN, June 25.

Outdoor produce continues abundant. Cherries and Strawberries are plentiful. Of Grapes and Pine Apples there is also a good supply. Arrivals of foreign goods continue heavy. English Peas are now plentiful. Lisbon Potatos are now being fast superseded by samples of home growth. Asparagus fetches from 2*s.* to 4*s.* a bundle. Flowers chiefly consist of Orchids, Heaths, Pansies, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Lemons, per 100, 6s to 10s
Grapes, per lb., 4s to 8s	Nuts, small, per bush., 14s to 18s
Apples, per ½ sieve, 2s 6d to 4s	— Barcelona, do., 16s
Strawberries, p. punn., 1s 6d to 4s	— New Brazil, do., 20s.
Cherries, per lb., 6d to 9d	— Old do., do., 14s
Gooseberries, green, p. qt. 3d to 6d	Almonds, do., 20s
Oranges, per 100, 10s to 14s	Walnuts, do., 12s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 4d to 9d
Asparagus, per bundle, 2s to 4s	Cucumbers, each, 1s to 2s
French Beans, p. 100, 1s 6d to 2s	Beet, per doz., 1s 6d to 2s
Peas, p. peck, 6d to 1s	Shallots, per lb., 10d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 4d to 1s	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 1s to 1s 6d	Mushrooms, p. pott., 1s to 1s 9d
Rhubarb, p. bundle, 2d to 4d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

POTATOS.—Southwark, Monday, June 20.

During the past week the arrivals coastwise and by rail have been moderate, but more than equal to the demand. As the old Potatos will be finished in the course of a few days, this will be our last report for the season. Quotations:—Yorkshire Flukes, 30s. to 50s. per ton; do. Regents, 20s. to 30s.; Seedlings, 20s. to 30s.; do. Rocks, 20s. to 30s.; Dunbar Regents, 30s. to 40s.; Perth, Forfar, and Fife Regents, 20s. to 30s.; do. do. Rocks, 20s. to 25s.; do. do. Reds, 20s. to 25s.

HAY.—Per Load of 36 Trusses.

Smithfield, Thursday, June 23.

Prime Meadow Hay	72s	to 75s	Clover, old	90s to 110s
Superior do.	80	86	New Clover	— —
Inferior do.	55	60	Do. second cut	80 105
New do.	—	—	Straw	25 30
Rowen	—	—		

Harvey & Easton.

Whitechapel, Thursday, June 23.

Fine Meadow Hay	80s	to 84s	Prime 1st cut Clover	105s to 112s
Inferior do.	70	75	Inferior do. do.	95 100
Prime New Hay	—	—	New 1st cut do.	— —
Inferior	—	—	Prime 2d cut do.	100 103
Straw	25	28	Inferior do.	— —

COAL MARKET.—June 22.

Byass's Bebside West Hartley, 16s. 3d.; Cowpen Hartley, 16s. 3d.; Hastings Hartley, 16s. 3d.; Holywell Main, 16s. 6d.; Tanfield Moor, 14s.; Tanfield Moor Butes, 14s.; Walker Primrose, 13s. 3d.; West Hartley, 16s. 3d.; Wylam, 16s. 6d.; Walls End Byron, 15s. 9d.; Walls End Harton, 15s. 6d.; Walls End Wharncliffe, 15s. 9d.; Eden Main, 16s. 3d.; Walls End Haswell, 17s. 6d.; Walls End South Hetton, 17s. 6d.; Walls End Tunstall, 16s.; Walls End Hartlepool, 17s. 3d.; Walls End Heugh Hall, 16s. 6d.; Walls End Kelloe, 16s. 9d.; Walls End East Hartlepool, 17s. 6d.; Walls End South Kelloe, 16s. 6d.—Ships at market, 74.

METROPOLITAN CATTLE MARKET.

Monday, June 20.

We have a larger supply of Beasts and a slow trade, consequently on the average prices are scarcely as good. The number of Sheep is about the same as on Monday last, but the demand is smaller. Some choice qualities are making nearly as much as on that day, but other kinds are lower. Trade is dull for Lambs and Calves. From Germany and Holland there are 1280 Beasts, 6020 Sheep, and 284 Calves; from Spain, 180 Beasts; from Scotland, 710; from Ireland, 20; and 2190 from Norfolk and Suffolk.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	4 8	to 5 0	Best Long-wools	—	—
Best Short-horns	4 6	— 4 8	Do. Shorn	4 6	— 4 8
2d quality Beasts	2 10	— 3 8	Ewes & 2d quality	—	—
Best Downs and Half-breds	—	—	Do. Shorn	4 0	— 4 4
Do. Shorn	5 0	— 5 4	Lambs	6 0	— 7 0
			Calves	3 4	— 5 2
			Pigs	3 4	— 4 6

Beasts, 5160; Sheep and Lambs, 28,730; Calves, 311; Pigs, 520.

Thursday, June 23.

The number of Beasts is considerably smaller than on Thursday last, yet there is a fair supply. The weather being favourable there is a demand at Monday's quotations. We have a good supply of Sheep; the trade is rather more active than on Monday last, but it is very difficult to obtain any higher prices. Trade is dull for Lambs and Calves, and prices on the average are lower. From Germany and Holland there are 540 Beasts, 3190 Sheep, and 663 Calves; and 120 Beasts from Spain. Milch Cows, 60.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	4 8	to 5 0	Best Long-wools	—	—
Best Short-horns	4 6	— 4 8	Do. Shorn	4 6	— 4 8
2d quality Beasts	2 10	— 3 8	Ewes & 2d quality	—	—
Best Downs and Half-breds	—	—	Do. Shorn	4 0	— 4 4
Do. Shorn	5 0	— 5 4	Lambs	6 0	— 7 0
			Calves	3 4	— 5 0
			Pigs	3 4	— 4 6

Beasts, 1380; Sheep and Lambs, 13,090; Calves, 838; Pigs, 190.

Hops.—Borough Market, Friday, June 24.

Messrs. Pattenden & Smith report a fair amount of business doing in 1863's at steady prices. Plantation accounts are not so favourable; cold nights retard the progress of the bine.

MARK LANE.—MONDAY, June 20.

The supply of Wheat from Essex and Kent to this morning's market was short, and was sold at an advance of 1s. per qr. The market was moderately attended, and foreign Wheat was taken in retail at our recent quotations. Barley and Peas were firm at last week's rates. Beans bring rather more money. Oats meet a fair inquiry at an advance of 6d. per qr. on the prices of this day sen'night. Flour was unaltered in value.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk..White	42—48	Red	38—45
— — fine selected runs..ditto	44—52	Red	40—48
— — Talavera	48—54		
— Norfolk	—	Red	—
— Foreign	36—52		
BARLEY, grind. &dist, 25s to 27s..Chev.	34—38	Malting ..	29—33
— Foreign..grinding and distilling	22—26	Malting ..	27—31
OATS, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	17—22	Feed	15—20
RYE	30—32	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....27s to 36s...Tick	30—33	Harrow ..	30—33
— Pigeon .... 32s to 40s..Winds.	—	Longpod	—
— Foreign .....Small	32—36	Egyptian	30—32
PEAS, White, Essex and Kent..Boilers	32—33	Suffolk ..	33—34
— Maple .... 30s to 34s .... Grey	28—30	Foreign ..	31—33
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered..per sack	35—40		
— 2d do ..... ditto	28—34	Country..	28—34
— Foreign ..... per barrel	16—24	Per sack	32—40

FRIDAY, June 24.

The weather on the 19th and 20th instant was fine, but we have since had showers daily. The Wheat plant is reported as generally coming into ear and looking well, but less promising than last year on the majority of the light land. Hay making is pretty general around London, but the crop in many cases is disappointing. An improved tone in the Wheat trade, stimulated by the uncertain aspect of politics, has manifested itself throughout the kingdom during the week, and an advance of about 1s. per qr. upon the previous current rates has been realised. The quotations for Spring Corn have been also fully supported, with rather an upward tendency in those of Oats, Beans, and Peas. Flour has been in improved request, and in Liverpool is quoted 6d. per qr. dearer. Since Friday last 3 grain-laden vessels have been reported off the coast. Paris, June 23.—Although a few of the country markets are dearer, generally speaking they have been quiet, with only a moderate business doing. Prices have not altered much one way or the other. Millers buy for present wants only. Flour has declined 1f. per sack, but the six marks and Paris manufactured have not altered much; the quotation for the former is 36s. 6d. per 280 lbs. The present stock is estimated at 15,250 cwts. The arrivals of English and foreign Wheat, of foreign Flour and Oats this week have been moderate, of English Oats and foreign Barley large. The attendance at this morning's market was small. English Wheat was held for an advance at 2s. to 3s. per qr., which checked business, and on the sales effected an improvement of 1s. per qr. was realised on both English and foreign, but business was not extensive. Barley, Beans, and Peas bring extreme rates of Monday, and Oats are 6d. per qr. dearer. For Flour there was a good inquiry at rather over late rates.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1630 qrs.	— qrs.	3650 qrs. 1180	1540 sks.
Irish	—	—		— ,,
Foreign ..	13,550 ,,	4570	22,530 ,,	50 ,, 2630 brls

LIVERPOOL, June 21.—At our market to-day Wheat was in active request, and an advance of 1d. to 2d. per cental on the week was generally established. Oats dull. Barley and Peas unchanged. Egyptian Beans the turn dearer. Indian Corn brought 6d. per qr. advance. Oatmeal quiet. There was a brisk trade in good fresh American Flour at 6d. per barrel over last Tuesday's rates. French Flour was generally held at 1s. per sack advance.

FRIDAY, June 24.—There was a moderate attendance at market. Wheat in good demand, at 2d. to 3d. per cental advance since Tuesday. Flour, French, 1s. 6d. per barrel higher. Indian Corn 9d. dearer, mixed 29s. to 29s. 3d. Egyptian Beans steady. Oats and Oatmeal unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
May 14	39s 3d	29s 9d	19s 8d	28s 5d	34s 3d	32s 6d
— 21	39 8	29 6	20 0	31 5	34 2	32 9
— 28	39 5	29 0	19 10	27 7	34 6	31 9
June 4	38 11	29 6	19 10	28 4	34 10	33 5
— 11	39 6	27 11	20 0	34 1	34 10	33 9
— 18	40 3	27 6	20 4	32 8	35 5	33 9
Agg. Aver.	39 6	29 10	19 11	30 5	34 8	33 0

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

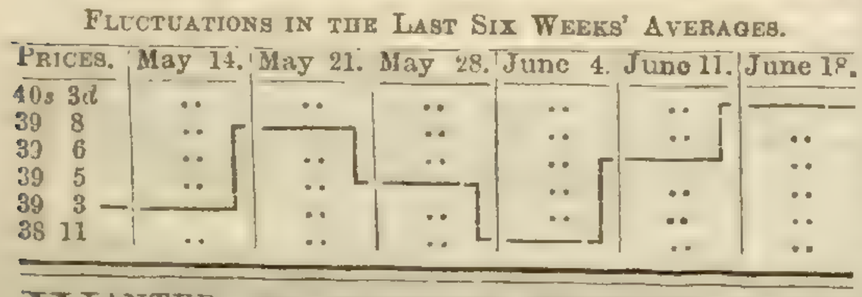

WANTED, an experienced FOREMAN, to take charge of Large Gardens, where a temporary reduction of the establishment is being made. Must understand Forcing Houses, Peach and Vine Houses, Conservatory, Bedding-out in Flower Grounds, Shrubs, particularly Rhododendrons, Kitchen Garden, and Wall Fruit. Must have lived in good places and have the highest testimonials. The gardens are at present in very good order, and the men experienced and attentive to their business. As they are well-known gardens, this situation affords a good opening to a clever, active, working young man, wishing to get experience and rise to the place of Head Gardener, to which, if found competent, it is likely he would be raised in these gardens after two years. Terms 40*l.* a year, furnished rooms in garden house, milk, and fuel.—Apply, sending copies of testimonials, and naming references, to X. Y. Z., *Gardeners' Chronicle* Office, W.C.

WANTED, in a Provincial Nursery, an honest, sober, industrious, and energetic Man, as GENERAL FOREMAN and PROPAGATOR of Soft and Hard-wooded Plants, of good address, and well up in the routine of Nursery business generally. None need apply unless they can produce unexceptionable testimonials to the above qualifications.—Address, in own hand-writing, to A. B., Messrs. Cooper & Bolton, Seed Merchants, 152, Fleet Street, London, E.C.

WANTED, a GARDENER, to Manage a small Garden and attend to Cows. An unexceptionable character required.—Apply, by letter, to Z. Z. Z., Morden, S.

WANTED, a WORKING GARDENER.—Must be industrious, honest, and skilful in the Growth of Plants and Flowers, the Selection of Shrubs and Trees, &c. One month on trial, and if suitable 20s. per week, and 15 per cent. on all flowers he grows, except specimen plants.—Inquire of the Proprietor, THOMAS CLAPHAM, Royal Park, Leeds. Letters not answered implies a negative.

WANTED, a FARM BAILIFF, for a Farm in Sussex.—A Man and Wife, without incumbrance. The Bailiff must be competent to Manage the Farm. The Wife would be required to superintend Dairy, &c., and also to act as Housekeeper, with separate apartments and board in the dwelling-house of the farm. She should know something of Cooking for occasional assistance in the absence of the family.—Apply by letter, stating age and references, to Mr. BLAKE, 4, Preston Street, Brighton.

WANTED, a COWMAN, on a gentleman's Farm, to Milk, mind Pigs and Poultry, kill Sheep and Pigs, and do General Farm Work. Wages 14s. a week, with Lodging, Firing, and Milk.—Apply by letter to P. A., Post Office, East Sheen.

WANT PLACES.—Letters to be Post Paid.

HEAD and UNDER GARDENERS.—HUGH LOW & Co. have now in their Nursery several men of excellent abilities and good characters, who are looking for situations in the above-named capacities. Gentlemen in want of Gardeners can have full particulars on application.—Clapton Nursery, London, N.E.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 26, single; has a complete knowledge of Forcing, also Flower and Kitchen Gardens. Can be well recommended.—G. L., The Post Office, Norwood, S.E.

GARDENER (HEAD).—Age 40, married, no incumbrance; has a thorough practical knowledge of his profession in all its branches. Understands Land, if required. Satisfactory references.—T., Mr. Veitch's, 54, High Street, Exeter.

GARDENER (HEAD), age 32, single.—A lady wishes to recommend a respectable Man, thoroughly competent, who has lived in her service two years.—E. G., 50, Belsize Park, Hampstead, N.W.

GARDENER (HEAD).—Has had first-class experience both in England and Scotland; competent to undertake the Laying out and Improvement of Gardens as well as the practical Management of them. Can give unexceptionable references.—JOHN PEARSON, Worksop Manor Gardens, Notts.

GARDENER (HEAD).—Age 42, married, no incumbrance; perfectly understands Pines, Vines, Stove and Greenhouse Plants, &c. Leaving in consequence of a death in the family, and will be at liberty for an engagement at any time.—X. LANCET, *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—EDWIN HOLLAMBY has much pleasure in recommending to any lady or gentleman who are in want of a person as above, an intelligent, industrious young Man, of thorough experience in all departments of his profession. The most satisfactory reference from present employer.—The Nurseries, Tunbridge Wells, and Groombridge, Kent.

GARDENER (HEAD).—Age 23, single; no objection to taking a good General Foreman's situation within 50 miles of London. Has had considerable experience in the Forcing of Peaches, Vines, &c., and in all other branches of his profession. Four years' good character. State wages.—M., 116, Hall Place, Maida Hill, London.

GARDENER (HEAD), married, with one child.—WM. WOOD & SON will have much pleasure in recommending to any lady or gentleman in want of a really good Gardener one who is thoroughly competent to manage a first-rate situation; has a good knowledge of Forcing Fruits of all kinds, Kitchen and Flower Gardens, &c.—Apply as above, Woodlands Nursery, Maresfield, Uckfield, Sussex.

GARDENER (HEAD).—Age 33, married, no incumbrance; has a practical knowledge of Early and Late Forcing Vines, Peaches, Strawberries, Melons, Cucumbers, and Stove and Greenhouse Plants; is a good Flower and Kitchen Gardener. Present employer will answer any questions. Good references from previous employers. Over three years' character.—A. B. C., Doman's Library, Lymington, Hants.

GARDENER (HEAD).—A gentleman, breaking up his Establishment, wishes to recommend his Gardener. He has a thorough practical knowledge of Early and Late Forcing of Fruit, Flowers, and Vegetables, Kitchen and Flower Garden. Is willing to go to any part of the country. Good personal character from the gentleman he is now with.—G. W. H., Mrs. Clark's, News Agent, Upper Sydenham, Kent.

GARDENER (HEAD), age 34, married.—WILLIAM WRIGHT begs to offer his services to any nobleman or gentleman requiring the services of a first-class industrious Gardener, fully competent in every branch of his profession, having had great experience in some of the first establishments in England. Testimonials and character unexceptionable.—Address as above, Hardwick, near Heath, Chesterfield.

GARDENER (HEAD).—JAS. SMITH (single), Gardener to the Right Hon. Lord Chief Baron, Hatton, Hounslow, is now at liberty to engage with any nobleman or gentleman requiring the services of a thoroughly practical and experienced Gardener. He has had considerable experience in good Gardens both in England and Scotland, and is fully competent to undertake the management of a first-rate establishment. Can give unexceptionable reference.

GARDENER (HEAD).—Age 27, single; in his last situation he produced well-coloured Grapes every month in the year; Peaches, Nectarines, Melons, and Figs from 1st May; Strawberries from 1st March. He also forced Pines, Cherries, and Cucumbers; managed large Vegetable and Flower Gardens, kept a Conservatory gay during autumn and winter, supplied Cut Flowers the whole year, and Forced Vegetables during winter and spring.—For references, &c., apply to J. P., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD), age 32, married, one child.—F. HICKS, Gardener to J. W. Freshfield, Esq., Leigh, near Reigate, Surrey, wishes to engage with any lady or gentleman; understands the Growing of Stove and Greenhouse Plants, Orchids, Ferns, and Forcing of Pines, Vines, Peaches, Melons, Cucumbers, and all kinds of Fruits, Flowers, and Vegetables; also Flower and Kitchen Gardens. Can be highly recommended. Three and a quarter years good character. Leaving on own account.—Address as above.

GARDENER (HEAD WORKING).—Age 36, married; has a thorough practical knowledge of all kinds of Forcing, Stove, and Greenhouse Plants, Kitchen, Fruit, and Flower Garden. Three years' good character.—A. B., Bedford Nursery, Haverstock Hill, London, N.W.

GARDENER (HEAD, or SINGLE-HANDED).—Age 29, married, no incumbrance; understands Stove and Greenhouse Plants (Forcing), Flower and Kitchen Gardens. Four and a half years' excellent character.—D. M., 3, Berkshire Cottages, Camden Road, Tunbridge Wells.

GARDENER (HEAD or SINGLE-HANDED).—Age 27; accustomed to Early and Late Forcing of Vines, Melons, Cucumbers, &c.—J. S., John Blackwell, Snaresbrook, N.E.

GARDENER (HEAD), where two or more are kept.—Age 23, single; understands his profession. Good reference.—A. C., *Gardeners' Chronicle* Office, W.C.

GARDENER.—Age about 35, married; understands Fruit, Flower, and Kitchen Gardens; can wait at Table; has had the care of Cows. Seven years in last place.—Rev. O. N., East Acton, W.

GARDENER.—Mr. FROST, Bower Nursery, Maidstone, Kent, can recommend a Gardener to any gentleman requiring a steady, practical man, with good character. A place where two or three are kept preferred.—Address as above.

GARDENER, to any nobleman or gentleman requiring a thoroughly practical Man in all branches; the Growing of Pines, Vines, Orchids, or any Plant in Cultivation. Three years' good character from last situation.—C. W., 12, Clarence Street, Plymouth, Devon.

GARDENER (SECOND) to a nobleman or gentleman. Age 23; has had considerable experience in the Propagation and Cultivation of Vines, Cucumbers, Melons, and Pines; character for ability, &c.—A. Z., Post Office, Ilford.

GARDENER (UNDER).—Age 19; experienced; references.—G. S., Hiscoke's Library, Richmond, Surrey.

GARDENER or IMPROVER.—Age 18; has been accustomed to Fires. Would give a Premium.—T. RUSSELL, Dowles, Bewdley.

IMPROVER, in a nobleman's or gentleman's Garden.—Age 17. A Premium given. Good character.—J. W., of Mr. Billson, Bookseller, Welford, Northamptonshire.

FOREMAN and PROPAGATOR in a Provincial Nursery.—Age 21. Good references.—Y. Z., *Gardeners' Chronicle* Office, W.C.

PROPAGATOR.—Is acquainted with Hard and Soft-wooded, more particularly Roses, Rhododendrons, Camellias, Hollyhocks, and Camellias, Budding and Grafting.—A. BYRON, College Street, Keighley, Yorkshire.

PROPAGATOR, or PROPAGATOR and GROWER of Hard and Soft-wooded Plants.—Age 26, married; good references.—A. Z., Mrs. Adams, 6, Fort Street, Spital Square, N.E.

ESTATE and FARM BAILIFF, or as GARDENER and BAILIFF (will be at liberty in July next).—Man thoroughly competent, having had great experience in the Management of Estate work, Management of Woods, &c. Wife capable of Managing the Dairy and the making of Cheese if required. For particulars, apply to Mr. EDWIN COOLING, Mile Ash Nurseries, Bath.

BAILIFF.—Age 40, married, no incumbrance; thoroughly understands his business. Wife as Cook, to take charge of a Dairy, &c. Satisfactory references will be given.—A. B., 5, Chesterton Road, Cambridge.

BAILIFF.—Age 35, married; can look after Cows, Sheep, &c., on a Grazing Farm; Wife (age 32), to look after the Dairy and Poultry. Weekly Wages and a Cottage preferred.—Messrs. Mavor's, 77, Park Street, Grosvenor Square, W.

SALESMAN, &c.—To Nurserymen requiring assistance of a really energetic and persevering Man; confidential, thoroughly experienced in the whole routine of Nursery trade, the getting up and despatch of Orders, Management of Men, &c. The highest testimonials for honesty, sobriety, ability, correctness in accounts, &c.—J. C. W., *Gardeners' Chronicle* Office, W.C.

SHOPMAN, or SHOPMAN and CLERK.—Seven years' experience. Good references.—Address, M. G., 11, Exchange Square, Liverpool.

HOUSE CARPENTER and GENERAL FOREMAN. Used to Farm Houses, Farm Buildings, Labourers' Cottages, &c. Recommended by a nobleman from his last situation.—L. 3, Prince's Terrace, Alma Road, Wandsworth, S.W.

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A GENTLE COURSE of PARR'S LIFE PILLS will increase the animal spirits, improve the complexion, and give strength and energy to the body.—May be had of any Chemist.

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Valuable Remedies for the Afflicted.

DR. ROBERTS'S CELEBRATED OINTMENT called "The Poor Man's Friend," is confidently recommended to the Public as an unfailing remedy for wounds of every description, a certain cure for Ulcerated Sore Legs, if of 20 years' standing, Cuts, Burns, Scalds, Chilblains, Scorbutic Eruptions and Pimples in the Face, Sore and Inflamed Eyes, Sore Heads, Sore Breasts, Fistula, and Cancerous Humours, &c. Sold in Pots, 1s. 1½d., 2s. 9d., 11s., and 22s. each.—Also his PILULÆ ANTISCROPHULÆ, confirmed by 60 years' experience to be, without exception, the best alterative medicines ever compounded for purifying the blood and assisting Nature in all her operations. Hence their efficacy in Scrofulas, Scorbutic Complaints, Glandular Swellings, and all those of the Neck, &c. They form a mild and superior Aperient, that may be taken at all times without confinement or change of diet. Sold in boxes at 1s. 1½d., 2s. 9d., 4s. 6d., 11s., and 22s.—Sold Wholesale by the Proprietors, BEACH & BARNICOTT, Royal Medicine Dispensary, Bridport; by the London Houses, Retail by all respectable Medicine Vendors in the United Kingdom and Foreign States. Observe: No Medicine sold under the above name can be genuine unless "BEACH & BARNICOTT, late Dr. ROBERTS, Bridport" engraved on the Government Stamp affixed to each package.

The Gardeners' Chronicle Newspaper.

SATURDAY, JULY 2, 1864.

Fire Insurance—Reduction of Duty.

ALBERT INSURANCE FIRE and MARINE COMPANY LIMITED, undertakes Fire Risks from June 24, at the Full Reduction of Duty.

The Premiums charged will be estimated by the individual risk; and the utmost liberality will be maintained in every transaction.

Professional men introducing business will be liberally treated with.

For Prospectus and every information apply at the Offices, 8, Finch Lane, or 7, Waterloo Place, Pall Mall; or throughout the Kingdom of any of the Agents of the Albert Life Office.

MORELL THEOBALD, Manager.

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FOURTH DIVISION OF PROFITS.

At the Annual General Meeting, held on the 12th May last, a Reversionary Bonus of over £62,000 was appropriated to the Assured, equal to 42 per cent. on the Premiums paid.

The Accumulated Funds exceed	£410,000
The Annual Income is over	£70,000
The Claims by Death paid exceed	£310,000
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Every description of Life Assurance business is transacted.

Advances are made on Mortgage of Freehold Property, Life and Reversionary Interests, &c., and also to Assurers on Personal Security.

WILLIAM RATRAY, Actuary.

Special Notice.—Life Department.

SCOTTISH UNION ASSURANCE COMPANY, 37, Cornhill, London, E.C.—Established 1824.

The Books close for the year on July 31, 1864.

Life Policies taken out before that date will rank for three full years at the next distribution of profits in 1866.

The following examples of Bonus additions are taken from the Company's books:—

A Policy issued in 1834 for 4000*l.* had increased at August 1, 1861, to the sum of	£5402 17 1
A Policy issued in 1836 for 5000*l.* had increased at August 1, 1861, to the sum of	6487 18 10
A Policy issued in 1841 for 1000*l.* had increased at August 1, 1861, to the sum of	1256 14 9

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DIRECTORS in LONDON.

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Francis Fearon, Esq. | Hugh F. Sandeman, Esq.
H. M. Kemshead, Esq. | G. Ramsay, Esq., Manager of the Company.
John Kingston, Esq.

Secretary—F. G. Smith, Esq.

Medical Officer—E. W. Duffin, Esq., M.D.

Solicitors—Messrs. Oliverson, Lavie, and Peachey.

The last Annual Report and Proposal Forms may be had on application at the Offices of the Company. F. G. SMITH, Secretary.

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DIVIDENDS of 12 to 15 PER CENT. PER ANNUM may be obtained in judiciously selected Mining Property; an advance of 500 to 1000 per Cent. and upwards on the outlay is of frequent occurrence.

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Early in July,

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EVERY BRITISH WILD FLOWER, LIFE SIZE and COLOURED to NATURE by HAND PAINTING. Described by J. T. B. SYME, Esq., F.L.S. Popular Account of Uses, Traditions, and History, by Mrs. LANKESTER, now issuing in Monthly Parts. Prospectuses gratis.

London: ROBERT HARDWICKE, 192, Piccadilly, W.; and all Booksellers.

Just Published, price 6*d.*

PORTABLE FARM RAILWAYS, a Substitute for FIELD CARTING. Report of a Discussion at the Maidstone Farmers' Club, January 21, 1864.

Maidstone: J. GRUNDY, 83, Bank Street. London: SIMPKIN, MARSHALL, & Co.

Price 4*s.* Quarterly; Annual Subscription, prepaid, 12*s.* post free.

THE NATURAL HISTORY REVIEW: No. XV., July, 1864.

CONTENTS: 1. Geological Text-book—2. "Natural Selection," applied to Man—3. The Habits of the Gorilla—4. De Blainville's Osteography of Mammals—5. Reports on the British Museum—6. Recent Works on Spiders—7. Botanical Lesson Books—8. New South-European Floras—9. Baillon's Adansonia—10. De Bary on Vegetable Parasites—11. Tulasne and De Notaris on Fungi—12. On Cave-Men. By JOHN LUBBOCK, F.R.S.—13. Further Remarks on the Human Remains from the Neanderthal. By Professor HUXLEY, F.R.S.—14. Proceedings of the Scientific Societies of London—15. Miscellanea.

WILLIAMS & NORGATE, Henrietta Street, Covent Garden, London; and South Frederick Street, Edinburgh.

SUPPLEMENT to GORDON'S PINETUM, containing Descriptions and additional Synonymes of all the Coniferous Plants not before enumerated in that work, with Corrections to the present time (1862). 8vo, cloth, 6*s.*

The Book to which this is a Supplement may still be had, price 16*s.*

JOHNSON'S COTTAGE GARDENER'S DICTIONARY, Describing all the Plants, Fruits, and Vegetables suitable for the Garden, Orchard, Greenhouse and Stove, with Rules for their Culture. Seventh Edition (857 closely printed pages), crown 8vo, cloth, reduced to 5*s.*

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GLENNY'S CULTURE of FLOWERS and PLANTS. 5*s.* 6*d.*
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GLENNY'S MANUAL of PRACTICAL GARDENING. 5*s* 6*d.*
GLENNY'S HANDY BOOK on GARDENING, and the GOLDEN RULES for GARDENERS. 1*s.*
GLENNY'S GARDENING for the MILLION, and AMATEUR COTTAGER'S GUIDE. 6*d.*
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GLENNY'S FARMING for the MILLION. 1*s.*

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New Work by Dr. M. F. Maury.

On Friday next will be published, in fcp. 8vo. with Maps,

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London: HOULSTON & WRIGHT, Paternoster Row, E.C.; Derby J. A. ROWBOTTOM, Irongate.

Price 1*s.* 6*d.*, or free by Post from the Author for 20 Stamps.

News of the Week.

IN the House of Lords on Monday, Earl RUSSELL announced that the Conference terminated on Saturday without result, and laid upon the table the protocols and papers relating to it. After describing at great length the events which had led to the assembling of the Conference, and the transactions at its various sittings, his lordship said that no pledge had ever been given to Denmark that this country would render her material aid; and as France and Russia both declined to take any active part on behalf of Denmark, Her Majesty's Government, looking to the probable results of such an interference ALD to the state of affairs in Italy and America, did not consider that the honour of England required her to take part in the present war. They considered it, however, to be their duty still to preserve a neutral attitude, although in saying this he did not mean to imply that contingencies might not arise to render a different policy necessary. The Earl of DERBY said that the Conference had terminated just as he had anticipated, and that it would shortly be the duty of Parliament and the country to decide whether Ministers had preserved inviolate the honour of England, and whether the difficulties which had arisen were not in great measure owing to their weak and vacillating policy. On Tuesday Lord TAUNTON moved the second reading of the Brokers Bonds and Rents Bill. The motion was opposed by Lord KINGSDOWN and Lord CHELMSFORD, and negatived without a division. On Thursday the Marquis of CLANRICARDE moved the second reading of the Oyster Fishery (England and Scotland) Bill. The motion was opposed by the Duke of RICHMOND and Lord STANLEY, and was ultimately withdrawn. The Government Annuities Bill was read a second time. The Earl of DONOUGHMORE moved a resolution censuring the manner in which the LORD-LIEUTENANT of IRELAND had exercised the power of remitting the whole or a portion of the sentences of persons convicted of agrarian outrages. Earl GRANVILLE and Lord CHELMSFORD opposed the motion, and the resolution was withdrawn.

In the Commons on Friday Mr. MORRITT moved that in case of a modification of the indirect taxation, the excise on malt required consideration. The motion was opposed by Government, and negatived on a division by 166 to 118. The Inland Revenue (Stamp Duties) Bill, and the Chimney-sweepers Regulation Bill passed through committee. On the motion for going into committee on the Court of Chancery (Ireland) Bill, Mr. LONGFIELD moved that it be referred to a select committee. After some discussion the motion was withdrawn, when Mr. WHITESIDE moved as an amendment that the committee be deferred for three months. On a division the amendment was negatived by 51 to 49. Mr. VANCE then moved the adjournment of the debate. On a division the motion was negatived by 56 to 51. Mr. COLLINS moved the adjournment of the House. On a division the motion was negatived by 56 to 53. The adjournment of the debate was then moved by Mr. LYGON. Lord PALMERSTON assented, and the debate was accordingly adjourned. On Monday Lord PALMERSTON laid on the table the protocols and papers relating to the Conference, and described the events which led to the invasion of the Duchies by the German Powers, and the subsequent efforts of the neutral Powers to bring about an arrangement between Germany and Denmark. He said that Her Majesty's Government felt great sympathy for Denmark, although she was originally in the wrong, but as France and Russia both declined to take active measures in her support, they did not feel it to be the duty of England to take part in the war. If, however, the struggle were transferred from the mainland to the islands, if Copenhagen were subjected to an assault, or the KING OF DENMARK were made prisoner of war, their decision might be a subject for re-consideration. Mr. DISRAELI said that the Conference met without a basis, and had separated without a result, and he would take the earliest opportunity of asking the opinion of the House on the policy of the Government. The House then went into Committee of Supply on the remaining Civil Service Estimates, and agreed to several of the votes. On Tuesday Mr. DISRAELI gave notice that on Monday he will move an address to HER MAJESTY, expressing the regret of the House that, while the course pursued by her Majesty's Government has failed to maintain their avowed policy of upholding the integrity and independence of Denmark, it has lowered the just influence of this country in the councils of Europe and thereby diminished the securities for peace. Mr. DOULTON called attention to the gradual diminution of open spaces in and around London, and moved that it was the duty of Government to provide for the preservation of such spaces within the limits of stated in the Enclosure Act of 1845. The motion was opposed by Mr. PEEL and Mr. COWPER, and supported by Mr. LOCKE, Sir W. FRASER, and Mr. TORRENS; and was carried against the Government, on a division, by 79 to 40. Mr. P. WYNDHAM moved the discontinuance of the annual grant voted by the House for Queen's Plates, on the ground that it no longer encourages the breed of good horses. General PEEL and Lord PALMERSTON expressed their disbelief in the alleged deterioration of the breed of horses, and after some discussion the motion was withdrawn. The House was shortly afterwards counted out. On Wednesday Mr. KINGLAKE gave notice that on Monday evening he will move, as an amendment to Mr. DISRAELI's motion, the substitution of words expressing the satisfaction of the House that HER MAJESTY has been advised to abstain from armed interference in the war between Denmark and the German Powers. Mr. HENNESSY moved the second reading of the Poor Law (Ireland) Acts Amendment Bill. Lord NAAS moved that the Bill be read a second time that day three months. On a division, the amendment was carried by 201 to 24; so the Bill was lost. The Tests Abolition (Oxford) Bill passed through Committee. The House then went into Committee upon the Street Music (Metropolis) Bill, when a long discussion took place on the first clause. After four divisions the hour for adjournment arrived, and the CHAIRMAN was ordered to report progress. On Thursday Mr. A. SMITH moved that the new School of Naval Architecture ought to be established in immediate connection with one of the chief naval arsenals, and not at South Kensington. Sir J. PAKINGTON and Lord C. PAGET opposed the motion, which was withdrawn. In answer to Mr. TREHERNE and Sir J. PAXTON, Sir G. GREY said that he did not regard the distress among the ribbon weavers at Coventry as a result of the French Treaty, or believe that it was within the power of legislation to remove it. Her Majesty's Government would be only too glad to see the same freedom of import existing in France and other countries that we had permitted those countries to enjoy here. The House then went into a Committee of Supply upon the remaining Civil Service Estimates, and after a long discussion agreed to the vote for public education in Great Britain. On the vote for the Department of Science and Art, a motion was made to reduce the amount of 97,582*l.* by 15,000*l.*, which was negatived by 131 to 73, and the vote was agreed to. The CHAIRMAN was then ordered to report progress. The House proceeded to consider the Lords'

amendments of the Penal Servitude Acts Amendment Bill, when Mr. HUNT moved to disagree to so much of those amendments as dispenses with the necessity of male licence-holders reporting themselves monthly to the police. Sir G. GREY opposed the motion. On a division it was carried against the Government by 129 to 84.

The war in the Danish Duchies recommenced on Sunday. The Prussians have already occupied the island of Alsen, and are erecting batteries on the coast of Jutland with a view of invading the Danish island of Fuhnen. The allied Powers have avowed their intention to occupy Jutland as a pledge, and to collect the taxes in order to indemnify themselves for war expenses.

From the United States we learn that General GRANT has abandoned the line of the Chickahominy, and moved the whole of his army to the south side of the James River, without opposition. General BALDY SMITH subsequently marched against Petersburg, and captured one of the Confederate works, two miles from the city, with 13 cannon and 400 prisoners. General HANCOCK then joined him in an attack on the outer defences of the city, and after two days fighting succeeded in dislodging the Confederates, capturing 450 prisoners and 4 guns. On the 18th the remainder of General GRANT's army took part in a general assault on the inner line of works, but were repulsed with heavy loss. Two subsequent attacks were made on the same day with the same results. The latest news states that General GRANT is entrenched a mile and a half from the city, and that his loss on the 18th was from 6000 to 8000 in killed and wounded. General LEE's whole army is supposed to be at Petersburg.

Home News.

THE COURT.—On Thursday afternoon, the 23rd ult., the Queen, accompanied by the Princess Louis of Hesse and Princess Beatrice, drove out in an open carriage and four. Prince Alfred, Prince Louis of Hesse, and Prince Arthur drove in a carriage and four to Virginia Water. Prince Leopold took a carriage drive. On Friday morning the Queen, accompanied by Prince Arthur and Prince Leopold, walked and drove in the grounds. Princess Helena and Princess Louisa came to London and inspected Mr. Holman Hunt's pictures, and Mr. Simpson's water-colour drawings of India. The Princesses then visited the bazaar in the Horticultural Gardens, and afterwards returned to Windsor. Prince Arthur left the Castle for Woolwich and embarked for Ostend, on his way to Germany. In the evening Prince and Princess Louis of Hesse left Windsor for Marlborough House, and accompanied the Prince and Princess of Wales to the ball given by the Duke of Devonshire at Devonshire House. On Saturday morning the Queen, accompanied by the Princess Helena, walked and drove in the grounds. Prince Alfred left the Castle for Portsmouth to rejoin his ship. In the afternoon the Princess of Wales, with the infant Prince Albert Victor, and Princess Louis of Hesse, arrived on a visit to the Queen. The Judge Advocate General had an audience of the Queen. In the evening Princess Helena and Princess Louisa came to London and attended the performance at Her Majesty's Theatre. The Princesses returned to Windsor at night. The Prince of Wales and Prince Louis of Hesse arrived at the Castle from Portsmouth. Lord Stanley of Alderley and the Rev. C. Kingsley arrived on a visit. Lord Stanley of Alderley had an audience of the Queen. On Sunday morning the Queen, the Prince and Princess of Wales, the Prince and Princess Louis of Hesse, Princess Helena, Princess Louisa and Princess Beatrice, attended Divine Service in the private Chapel. The Rev. C. Kingsley officiated. On Monday morning the Queen, accompanied by the Princess Louis of Hesse, walked and drove in the grounds. The Prince and Princess of Wales, Princess Helena, and Prince Louis of Hesse, rode on horseback. In the afternoon the Prince and Princess of Wales, and the Prince Albert Victor, left the Castle for Marlborough House. The Queen, accompanied by the Prince and Princess Louis of Hesse, drove out in a carriage and four. The Duke of Nemours, Count d'Eu, Princess Margaret, and Princess Blanche of Orleans arrived at the Castle on a visit to the Queen. On Tuesday morning the Queen, accompanied by Princess Helena and Princess Louisa came to London by the South Western Railway and inspected the frescoes of Mr. Herbert and Mr. Maclise in the Robing Room of the House of Lords. Her Majesty took luncheon with the Dean of Westminster and Lady Augusta Stanley at the Deanery, and the Princesses afterwards visited Westminster Abbey. Her Majesty and the Princesses returned to Windsor Castle at 5 o'clock. On Wednesday morning the Queen, accompanied by the Princess Louis of Hesse, walked and drove in the grounds. The Princess Helena, Princess Louisa, and Prince Louis of Hesse rode on horseback. In the evening the Prince and Princess Louis of Hesse and Princess Helena left the Castle for Buckingham Palace. Earl Russell arrived at the Castle, and had an audience of the Queen. Her Majesty afterwards gave audience to General Negrete, Minister Plenipotentiary from Salvador, who was presented to the Queen by Earl Russell. Earl Granville arrived at the Castle on a visit. On Thursday morning the Queen, accompanied by Princess Louisa and Princess Beatrice, walked and drove in the grounds. In the afternoon Prince and Prince Louis of Hesse and Princess Helena arrived at the Castle from Buckingham Palace. Sir George Grey had an audience of the Queen, and introduced the Bishop of Peterborough, who did homage to her Majesty on his appointment.

THE PRINCE AND PRINCESS OF WALES.—On Friday the Prince of Wales rode on horseback, accompanied by Prince Louis of Hesse. The Princess, accompanied by Princess Mary of Cambridge, went to Westminster Abbey to hear Mr. Hansen, the organist of Roskilde Cathedral, in Denmark, perform on the organ of the Abbey. In the afternoon the Prince went to Willis's Rooms, and presided at the meeting of the Society of Arts, and distributed the prizes given by the Society. In the evening the Prince and Princess honoured the Duke of Devonshire with their company at a dinner and ball. On Saturday morning the Prince of Wales, accompanied by Prince Louis of Hesse, left Marlborough House for Portsmouth for the purpose of visiting Prince Alfred on board the Racoon. The Princess, accompanied by Princess Louis of Hesse, left Marlborough House for Windsor on a visit to the Queen. In the evening the Prince, with Prince Louis, arrived at the Castle from Portsmouth. On Sunday the Prince and Princess attended Divine service in the private chapel of the Castle. On Monday their Royal Highnesses, with Prince Albert Victor of Wales, returned to London from Windsor. The Prince and Princess of Leiningen arrived at Marlborough House on a visit to the Prince and Princess. In the afternoon the Prince and Princess went to the House of Lords, and were present during the Ministerial statement on the Conference. The Princess, accompanied by the Princess of Leiningen, took a carriage drive. In the evening the Prince and Princess went to the Philharmonic concert at the Hanover Square Rooms. On Tuesday morning the Prince, accompanied by the Prince of Leiningen, rode on horseback. The Princess, accompanied by the Princess of Leiningen, took a carriage drive. The Prince and Princess, accompanied by the Prince and Princess of Leiningen, afterwards visited the Museum of the Geological Survey and the Royal School of Mines, in Jermyn Street. In the evening the Prince and Princess, accompanied by the Prince and Princess of Leiningen, went to the Adelphi Theatre. On Wednesday morning the Prince presided at the half-yearly meeting of the Governors of Wellington College, held at the New Palace of Westminster. In the afternoon the Prince and Princess went to the training ground of the Royal and Hon. Artillery Company, where his Royal Highness inspected the corps, and the Princess presented new colours to the company. In the evening their Royal Highnesses on behalf of the Queen gave a State Ball at Buckingham Palace, to which a party of between 1700 and 1800 was invited. On Thursday morning the Prince and Princess drove to Harrow, and were present at the usual proceedings of "Speech Day" at the school. Their Royal Highnesses afterwards took luncheon with the head-master.

DEPARTURE OF PRINCE ALFRED FOR NORWAY.—The screw corvette Racoon, 22, Captain Count Gleichen, sailed from Spithead on Saturday afternoon for Scotland and the north coast of Norway, with Prince Alfred on board. Before her departure the Prince of Wales arrived at Spithead in the Fire Queen, accompanied by Prince Louis of Hesse, on a visit to his brother. Their Royal Highnesses went to sea in the Racoon as far as St. Helen's, when they re-embarked in the Fire Queen, and returned to Portsmouth on their way to Windsor. The Racoon arrived in the Firth of Forth on Wednesday, when Prince Alfred landed and went to Dalkeith Palace on a visit to the Duke of Buccleuch. His Royal Highness returned to Edinburgh on Thursday, and is expected to leave the Firth to-day for Norway.

DEPARTURE OF PRINCE ARTHUR FOR GERMANY.—On Friday afternoon Prince Arthur, attended by his Governor, Major Elphinstone, and his private tutor, the Rev. W. R. Jolly, embarked at Woolwich in her Majesty's steam-vessel Vivid, for a summer trip on the Continent. His Royal Highness landed at Ostend on Saturday and proceeded to Brussels on a visit to the King of the Belgians. He will afterwards proceed to Coburg and Switzerland. A small pleasure skiff, about 15 feet in length, built by Messrs. White, of Cowes, on a principle which prevents it sinking, for the Prince's use and practice at the oar on the Thames, was shipped with his baggage in the Vivid, and will be conveyed to Germany, in order that the Prince, at his own desire, may continue his practice on the Rhine.

THE DUC DE MONTPENSIER is progressing favourably towards convalescence after a very serious illness. His Royal Highness is still at Woodnorton, the Worcestershire seat of the Duc d'Aumale.

COURT MOURNING.—The *Gazette* of last evening contains an order from the Lord Chamberlain's Office, for the Court to go into mourning for three weeks, from Tuesday next the 5th inst., for the late King of Wurtemberg.

THE CONFERENCE met again on Saturday. All the members were present. It sat about three hours, and then broke up, not to meet again. The protocols and papers were laid upon the tables of both Houses of Parliament on Monday evening. They constitute a history of the proceedings of that body from the first meeting on the 25th of April. The first business before the Plenipotentiaries was the consideration of the armistice, which was not definitively arranged until the third meeting on May 9. This being disposed of, it remained for Austria and Prussia to explain their objects. This led to a preliminary discussion respecting the Treaty of 1852, and it soon became evident that there was a divergency of opinion on the subject existing between all the members of the Conference. The discovery of this fact showed the hopelessness of the Conference, but, nevertheless, her Majesty's Government persevered, and passed on to the next consideration—the bases of pacification which Austria and Prussia were prepared to propose. These were stated to be—"The complete political independence of the Duchies and their close connection by means of common institutions." This being declined by Denmark, the German Powers, in the sitting of May 28th, went a step further, and demanded the entire and unqualified separation of the Duchies from Denmark and their union into a single state. This was rejected by the Danish representative at once, and did not meet with much approval from the other Plenipotentiaries. Earl Russell then proposed that Holstein, Lauenberg, and Schleswig, south of a line drawn more to the north than the mouth of the Schlei, and the line of the Dannewerke, should be ceded to Germany, and the rest of the Danish territory declared free from all German influence and claims. This plan was accepted by the neutral Powers, and, after a reference, by the representative of Denmark. In the meantime the armistice, which was about to expire, was renewed, after which Austria and Prussia declared that they would only consent to the line of demarcation being drawn from Apenrade to Tondern. After further unsuccessful attempts to bring the parties to an agreement, England proposed that the question should be regarded as settled, so far as both the lines were concerned, and that the disposal of the intermediate space should become the subject of the arbitration of a friendly Power. On June 22d the decisive meeting took place, at which the acceptance or rejection by the belligerents of this last possible proposal was to be announced. The German Powers expressed a refusal so put as to seem to indicate an acceptance of arbitration; the refusal of Denmark was clear and precise. As a last effort the representative of France recommended that the populations of the districts the possession of which was in dispute should be allowed to vote and decide for themselves whether they would be considered as Germans or Danes. The representative of Denmark at once rejected the proposal, and this put an end to the debate and extinguished the last hope of peace being established by means of the Conference. The final meeting on Saturday was merely of a formal character, for the signing of the protocol.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury, in Downing Street.

CONSERVATIVE MEETING.—On Tuesday afternoon a meeting of the Opposition, to consider the policy of her Majesty's Government in reference to the Danish-German question, was held at the residence of the Marquis of Salisbury, in Arlington Street. The meeting was attended by 231 members of the House of Commons, including Mr. Disraeli, General Peel, Lord John Manners, Mr. Walpole, and the principal members of the Derby Administration, and several of the Independent Irish party who occupy seats below the gangway, the only peer present being the Earl of Derby who took the chair on the occasion. The following is an abstract of the proceedings:—

The Earl of Derby first addressed the meeting. He commenced by stating that during the last two or three Sessions several attacks had been made in Parliament upon the Established Church, but that, owing to the firm front opposed to them, they had been discontinued, and he might say were now abandoned. He would not, he said, trouble them by referring to the 800 pages of papers on the Denmark question which had been laid before Parliament, or with the 161 pages of protocols and papers which had been issued that morning, but would content himself with reviewing in a very few words the course of proceeding which had been adopted by the noble earl the Secretary for Foreign Affairs and by the noble lord at the head of her Majesty's Government with regard to Denmark. Among the most remarkable of the statements which had been made by her Majesty's Government to Parliament during the discussions which had taken place on the Danish question was that in certain contingencies Denmark would not be allowed to enter upon the contest with Germany alone. It appeared, however, that as matters progressed the ground was shifted, and it was stated that in the event of certain contingencies—the Federal execution, for instance—action might be taken. The execution, however, did take place, and next there was the invasion of Schleswig. It was then intimated that Fredericia was to be regarded as a sacred spot. It was, however, taken possession of by the German forces, and finally a portion of Jutland also, yet nothing whatever was done to induce Denmark to believe that the promises held out to her would not be realised. He would not attempt to say that England ought or ought not to have interfered by force of arms; but what he did say was that Her Majesty's Government having conveyed its hope to Den-

mark that in the event of certain things occurring, England would stand by her side, the natural inference was that Denmark had been misled by those representations, and that she now had reason to complain that she found herself deserted by those by whom she had been given reason to hope that she would receive material assistance. He did not mean it to be understood, nor did he wish to convey, that his view was that England ought to interfere by force of arms; but that had not been the tone taken by Her Majesty's Government. Lord Palmerston, in his recent declaration in the House of Commons, had still maintained the same tone as that which had led Denmark to believe that she would receive support from England, that she would not be allowed to stand alone in the struggle; because he said that in the event of Copenhagen being bombarded, or the King taken a prisoner of war, it might become necessary to consider the matter, or to recommend a change of policy. But from the experience of the past there was no reason to believe that the noble lord might not, in view of these events having actually taken place, allege that some fresh contingency should yet arise before he could act. He contended that this vacillating and inconsistent policy was discreditable to the Government, and was calculated to lower the country immeasurably, to sink its renown, and lessen its influence in the eyes of Europe. He was not himself inclined to the counsels which must result in England's active interference in the affairs of Denmark should take place; but it was to be supposed that the Government who conveyed the idea that they were disposed to lend them military aid should have considered the consequences before they made such a declaration. In the part which he and those who acted with him thought they should take, it was considered right to deal with the Danish question by itself, and not to mix it up with the German question, or with the unhappy internecine strife which was now raging at the other side of the Atlantic. The Danish question should be dealt with by itself, and the resolution which he was now about to submit for the consideration of the meeting would simply be confined to an expression of opinion upon the course of conduct and the policy which had been pursued by her Majesty's Government. The Government had appeared desirous to leave it to the House to express an opinion, and they had endeavoured to impose the duty of electing that opinion upon the Opposition; but he was happy to say that neither Mr. Disraeli nor himself had fallen into that trap. While he did not desire to convey to them that he entertained a positive certainty that the resolution would carry with it a majority of the House of Commons, yet he solemnly and sincerely believed that it would carry with it the approving voice of the country. Whether it carried with it the voice of the House of Commons or not, he and the 16 friends who had carefully considered the resolution with him, and who had honoured him with their confidence on that occasion, felt it to be their bounden duty to elicit the opinion of the House of Commons on the acts of the Administration. His lordship then read to the meeting the resolution of which Mr. Disraeli subsequently gave notice in the House of Commons. It was received with loud and repeated cheering by the meeting.—Mr. Kerr next addressed the meeting. He said his feeling was that the resolution should embody an expression in favour of armed interference on behalf of Denmark. This observation was received with marks of disapprobation, and the Earl of Derby said that he must respectfully differ from the hon gentleman, because, if his suggestion were adopted, and embodied in the resolution, the Opposition, in the event of their coming into power, would be bound to carry on warlike operations in favour of Denmark, and to this they were not prepared to bind themselves.—An hon. Member, representing a northern county, said he believed that the feeling in his part of the country was entirely in favour of peace. He reminded the meeting that the constituencies of the country would narrowly watch the conduct of their representatives. From all he was able to learn, he believed that, whatever the country might think of the policy of her Majesty's Government in reference to the language held by them towards Denmark, it was decidedly in favour of maintaining a peaceful attitude. He apprehended, after the statement made in the House of Commons by Lord Palmerston, that if a resolution such as that now submitted to the meeting were carried against him in the House, it would be regarded as a demonstration in favour of war, and to this he was entirely opposed.—The Earl of Derby explained that in his opinion the resolution was not drawn so as to convey any such impression. This statement was received with expressions of approbation, and appeared to be acquiesced in generally by the meeting.—Lord H. Lennox said that he was not about to trouble the meeting at any length with opinions of his own, and had only to express his general concurrence in what had fallen from the noble Earl. He was anxious to know on what day it was proposed to move the resolution.—Mr. Disraeli said that his first intention was to give notice of the motion that evening for Thursday, and on Thursday to submit it to the House if that day should prove convenient to the Government. On further reflection, however, he thought that perhaps Thursday would be too early a day. He believed that Lord Palmerston was prepared to give every facility for proceeding with the debate, and under these circumstances he thought the more judicious course would be to give notice that evening in the House of Commons, and to move the resolution on Monday evening.—Sir J. Walsh said that he was adverse to an Opposition which would indulge in merely party views, but in the resolution proposed by Lord Derby he entirely concurred. He was expressing his opinions on the subject at considerable length, when there was a general movement in the direction of the door.—Mr. Kerr subsequently endeavoured to address the meeting, but was left with a very limited audience.

THE CHANNEL SQUADRON.—Admiral Dacres' squadron still remains at Spithead, awaiting orders from the Admiralty, but is expected to proceed shortly to the Downs. The Research and Enterprise, iron-cased frigates, the Wolverine, 21, Fawn, 17, Dauntless, and Salamis have been ordered to the Downs, where they will await the arrival of the squadron.

PARLIAMENTARY MOVEMENTS.—Sir Hedworth Williamson, Bart., was elected for North Durham on Tuesday in the room of the late Lord A. Vane Tempest, without opposition. There is a vacancy for East Gloucestershire, caused by the death of Sir C. W. Codrington. The Hon. Edward Dutton, eldest son of Lord Sherborne, is announced as a candidate for the vacant seat on Conservative principles. Mr. J. H. Gurney has announced the resignation of his seat for King's Lynn, on account of failing health. Sir Thomas Fowell Buxton is a candidate for the vacant seat in the Liberal interest. Sir E. Filmer will retire from the representation of West Kent at the close of the present Parliament. Mr. F. Hart Dyke, a son of Sir P. Dyke, will be a candidate for the vacant seat. Lord Pevensey has announced his intention to retire from the representation of East Sussex, on the ground of his precarious health, and the heavy expenses attending a contested election in Sussex. Mr. Walter Wyndham Burrell, of Ockendon House, Cuckfield, son of the late Sir Charles Burrell, is mentioned as his successor in the Conservative interest. Mr. Russell Gurney, Recorder of London, will become a candidate for Southampton at the next general election in the Conservative interest. Mr. William Barrow Simonds, of Abbott's Barton, will offer himself as a candidate for Winchester at the next general election in the Conservative interest. Mr. Hobson, chairman of the local board of guardians, and Mr. D. L. Lewis have announced themselves as candidates for Youghal; the former in the Conservative, the latter in the Liberal interest. Mr. Brett, Q.C., will be a candidate for Rochdale at the next general election in the Conservative interest.

CONVOCATION.—In the Upper House on Friday no business was transacted except the reception of the resolutions of the Lower House on the subject of the Synodical judgment on "Essays and Reviews." In the Lower House the Dean of Westminster opposed the adoption of the judgment in a speech of great length, in which he contended that the judgment was "ambiguous, indiscriminating, unfair, and therefore iniquitous." After some discussion the House divided, when the resolution concurring in the judgment was carried by 39 to 19. The Prolocutor and a deputation then took up the resolution to the Upper House with a protest against the decision, signed by the Dean of Westminster, the Dean of Christ Church, Canon Selwyn, Canon Blakesley, Archdeacon Moore, Archdeacon Hale, and other members. Convocation was then prorogued till the 18th August, after the Lord Primate had given his benediction, as usual, in Latin.

CONSECRATION OF BISHOPS.—On Wednesday, in the cathedral church of Canterbury, the Rev. Dr. Jeune, late Dean of Lincoln, was consecrated to the Bishopric of Peterborough; the Rev. Charles Henry Bromby, M.A., late Principal of the Training College, Cheltenham, to the Bishopric of Tasmania; and the Rev. Samuel Crowther, a negro, to the Bishopric of the Niger territory. The ceremony was performed by the Archbishop of Canterbury, assisted by the Bishops of Lincoln, Winchester, Gloucester, and Bristol.

THE REVENUE.—The Revenue returns for the year and quarter ended the 30th June show a decrease of 690,902*l.* on the year, and a decrease of 216,004*l.* on the quarter. The Year's account shows an increase in the Excise of 1,992,000*l.*; Stamps, 327,000*l.*; Taxes, 77,000*l.*; Post Office, 70,000*l.*; Crown Lands, 5000*l.*; Miscellaneous, 195,098*l*; and a decrease in the Customs of 1,279,000*l.*; Property Tax, 2,078 000*l.* The quarter's account shows an increase in the Excise of 459,000*l.*; Stamps, 145,000*l.*; Taxes, 42,000*l.*; Post Office, 10,000*l.*; Crown Lands, 500*l.*; and a decrease in the Customs of 411,000*l.*; Property Tax, 449,000*l.*; Miscellaneous, 12,501*l.* The total revenue of the year was 69,992,959*l.*, and that of the quarter, 18,274,200*l.*

BRITISH MUSEUM.—The Queen has appointed the Dean of Windsor to succeed Dr. Cureton as Crown Trustee of the British Museum.

OFFICIAL APPOINTMENT.—Colonel Romilly has been appointed a special commissioner of income tax, in the room of Mr. Pressly, C.B., resigned.

Foreign.

FRANCE.—The *Moniteur* of Sunday evening announces that the Conference has closed without any result. It says:—

"Yesterday's sitting of the London Conference passed off very quietly. The belligerents read declarations in which they explained the present position of affairs according to the views of their respective Governments. Earl Russell reviewed the labours of the Conference, and expressed a hope, in which the neutral Powers concurred, that, whatever might be the issue of the conflict, the independence of the Danish monarchy would be preserved."

The Paris papers notice the Ministerial statements made in the British Parliament on Monday in reference to the Danish question, in terms by no means complimentary to this country:—The *Constitutionnel* of Wednesday, in an article signed by M. Limayrac, points out the difference existing between the present resolution of Earl Russell and Lord Palmerston and their former policy, whereby passions were aroused which were to remain unsatisfied, and threats made which were to be followed by no results. It then says:

"Public opinion in Europe will hardly be able to understand these contradictions, and will find that they weaken the authority and influence of the English Government, and that if the negociations have failed, it was perhaps owing to the reason that these contradictions had been foreseen. The British Cabinet does not intend to go to war to protect the continental possessions of Denmark, and thus leaves the German Powers to act within those limits. It is only in the event of war being transferred to the Danish islands, of Copenhagen being attacked, or King Christian being made prisoner, that England would depart from her reserve, and reconsider the matter. These declarations made are precise, but are they prudent also? Do they not give too wide a field to one of the two belligerent parties, which now knows how far it can go without provoking the intervention of England, and is it not even told in positive terms that it may not go farther?"

The *France*, in an article on the same subject, says:—

"The statements made to Parliament have one advantage—they dispel all doubts and make precise the policy of the British Cabinet. We now know what they mean to do—or rather not to do. But what effect will these panic declarations produce on Parliament and on public opinion throughout England? What effect will they have in Germany and on the belligerents? We shall soon know. The extent and nature of the hostilities will speedily show what Austria and Prussia think of the conditional threats of the British Government. It is possible that its pacific attitude may render these Powers the more ardent in war, that they are more certain of the isolation of Denmark."

The *Pays* says—

"England appears to have laboured to unite passions, to smother resentment, and to strengthen conflicting pretensions. She is reaping what she has sown. At Copenhagen spite and distrust. At Berlin and Vienna hatred and contempt. It is now her shame to see that her promises henceforth will not be regarded more seriously than her threats."

The *Patrie*, in an article headed, "Save the cash-box," charges England with being actuated by purely sordid motives, and predicts for her the fate of Venice and Holland, and also other countries which place their material welfare far above considerations dictated by honour and duty. The *Opinion Nationale*, in an article on the "desertion of Denmark," says:—

"So Denmark is about to be crushed. Lord Palmerston has told us that Russia and France refused to take active measures to protect it. Russia we can understand—but France! Are the Danes less entitled to her interest than the Christians in Syria and Cochin China? The sum total of Lord Palmerston's statement amounts to this: England will not go to war. By and bye, there is no saying—contingencies might arise which would induce the noble lord to depart from his inaction; for instance, if Copenhagen were taken, and King Christian a prisoner. This sentence, equally odious and ridiculous, was actually uttered in the House of Commons. On the part of England this is nothing short of treachery. It is England who by her advice has reduced Denmark to its present extremity. Between the abject cowardice of the British Cabinet and the brutal insolence of M. de Bismarck we are at a loss to choose. Thus, once for all, it stands recorded that in 1864 force rules supreme in Europe, and that right cannot boast one single champion. History will judge and appreciate such an epoch and such a situation."

Count Commingès Guitant has been appointed Envoy Extraordinary and Minister Plenipotentiary of France at the Court of Brussels; Count Reculot at the Court of Lisbon, Viscount Meloizes-Fresnoy at the Court of Munich, and the Marquis of Cadore at the Court of Baden. Captain Winslow, of the Kearsarge, has addressed a letter to M. Bonfils, the Confederate agent at Cherbourg, demanding the delivery of the men belonging to the Alabama who were saved by the French pilot boats. The following is a copy of his letter and the reply:—

"U.S.S.S. Kearsarge, Cherbourg, June 21.

"Monsieur,—Certain pilot boats which I allowed—through humanity—to save several prisoners after the sinking of the Alabama, have taken them to Cherbourg. These officers and men are, nevertheless, subject to the obligations imposed by the laws of war; they are my prisoners, and I demand that they should surrender on board the Kearsarge. In the event of their attempting to release themselves from the obligation, through the means that have been employed, should a similar case arise they have no mercy to expect.—I am, &c.,

"To M. Bonfils. "JOHN A. WINSLOW, Captain."

"Sir,—I have received your letter, dated June 21. The object of your claim is wholly beyond my control, and I would point out that your demand should have been addressed not to me but to the French Government, under whose shelter the unfortunate men you refer to have found a refuge. I am not aware of any law of war which prohibits a soldier making his escape from the field of battle after a reverse, even after he has been captured, and I cannot see why a sailor should be debarred of the privilege of swimming away from his enemy. I must decline acting as your intermediary with certain persons, whose names you do not even mention, and whom, nevertheless, you consider to be your prisoners. Neither can I understand how the authorities of the United States can claim to detain prisoners within the territory of the French empire.

"To Captain John A. Winslow. "I am, &c., BONFILS."

M. Béhic, Minister of Commerce and Agriculture, has addressed a circular to the Chambers of Commerce, calling their attention to the practice of some houses which ship wine to England of making use of bottles which, from the thickness of the glass, or from the manner in which the bottom runs up into the inside, do not contain so much as they ought by from 10 to 20 per cent. The Minister urges on the Chambers the necessity of calling the attention of wine merchants to such practices, which have given rise to numerous complaints, and cannot fail, if persisted in, to do much injury to commerce. General Gomez, who defended in arms the rights of Charles V. to the throne of Spain, has just died at Bordeaux. The insurance offices interested in the case of La Pommerais have decided on paying in full to the two children of Mdme. de Pauw the amount of the insurances effected on her life. The two young girls will therefore receive between them the sum of 550,000f.

ALGERIA.—Official despatches from Algeria represent the news as daily becoming more decisive. General Deligny has penetrated to the centre of the rebellion in the south of the province of Oran, and similar successes have been achieved in the Tell. All the tribes of the Flittas, who were still in a state of revolt, have been driven into their last refuges, and have surrendered unconditionally. 4000 prisoners are retained as a guarantee for their submission. General Martimprey was to embark on the 29th ult., at Mortagenem, to return to Algiers.

DENMARK.—The Rigsraad was opened at Copenhagen on Saturday by Bishop Monrad, the President of the Council, who read the following Royal message:—

"We, Christian IX., send to the Rigsraad our royal salutation. The critical situation of the country and the extraordinary expenses which the war has already entailed, and which its continuation may yet further require, have imposed upon us the necessity of convoking the Rigsraad, in order that you may approve of the steps which our Government has taken, and that you may give your consent to the measures intended to create the resources which are indispensable. It is not we who have provoked war; our conscience tells us that we have done all that was in our power to avoid it. We have been attacked by a superior enemy, under the pretext that we have not observed the arrangements of 1851 and 1852. Before the commencement of hostilities our adversaries refused to accept a conference to consult in a friendly way with the other signatories of the London treaty, and it was not until they had seized the greater part of the peninsula that

they consented to its meeting, but declaring even then that they did not regard themselves as bound by the transactions of 1851 and 1852. During the short time that our reign has lasted, we have learnt by bitter experience how little the clearest rights now weigh in the political balance of Europe, and how a King and his people may be abandoned to themselves in the most unequal contest. Therefore it is that when England, supported by all the neutral Powers which sat in the conference of London, demanded of us to renounce altogether the portion of territory belonging to the Danish monarchy situated to the south of the Schlei and Dannewerke, we resigned ourselves to submission to a sacrifice which was so grievous to us. This sacrifice has not been accepted by the German Powers. We cannot sacrifice more. To the exhortations which have been made to us we have responded by a negative, in the firm conviction that our refusal is that also of the Danish people. May God change the dispositions of the Powers that hold the destiny of Europe in their hands! May He at least grant the sympathy of one amongst them be transformed into efficacious co-operation! Hereupon we assure the Rigsraad of our Royal favour."

In the sitting of the Folkething (Lower House of the Rigsraad) on the same day, the President of the Council, in reply to a question on the Conference, said:—

"The Danish Plenipotentiaries were instructed to accept the line of demarcation of the Schlei, and to agree to a fortnight's prolongation of the armistice should England firmly adhere to that line. Earl Russell promised that neither would he propose himself nor support the proposal of any other Plenipotentiary which would be less favourable for Denmark, unless Denmark herself should consent to such new proposals. Earl Russell, nevertheless, proposed, in the sitting of the Conference of the 18th inst., that the question should be submitted to arbitration, although Denmark did not consent to this proposal. I cannot explain how this proposal was consistent with Earl Russell's promise."

THE DANISH DUCHIES.—Prince Albert of Prussia arrived at the head-quarters of the army in the Duchies on Sunday, in consequence of a telegram sent by the King from Carlsbad. His Royal Highness was the bearer of an order to Marshal von Wrangel to recommence hostilities at once. In accordance with this order the Prussians opened fire from four batteries upon the fortifications of Alsen on Sunday, and began to concentrate their forces in Jutland, in the neighbourhood of Kölding. On Wednesday at daybreak 11 battalions of the Prussian army crossed the Alsen Sound, and captured the Island of Alsen, after some fighting. The passage of the main body of the Prussians was effected in 120 boats, conveying 3000 men at a time. The troops landed between Schwabeck and the most southerly point of Satrupholz. Notwithstanding the sharp fire of the Danes, their strand batteries were taken. They lost several guns, and retreated after stubbornly contesting each position. At 2 P.M. the Prussians had already reached Vollerup and Ulkeböl. 2400 Danes, including 100 officers, were taken prisoners. Colonel Kaufmann was severely wounded. The Danish loss was severe. The Prussian loss was three officers killed and 17 wounded, with 300 men killed and wounded. Some street fighting took place in Sonderborg, in which the Prussian loss was small. The attack of the Danish iron-clad Rolf Krake was twice repulsed by the Prussian batteries, and she was set on fire; but it is said that one of the Prussian pontoons was destroyed by her. Two large Danish ships of war have been severely handled by the Prussian batteries at Apenrade. Within five minutes one of them received 10 shots in her broadside, while the other lost her foremost. The coast of Kölding is kept in a state of constant alarm by Danish gunboats. The Prussians are now erecting batteries on the Jutland coast, opposite Middlefart, in the Island of Fünen. It is announced that Austria and Prussia intend to occupy the whole of Jutland, and to keep it as a pledge. They will collect the taxes in Jutland and employ the proceeds to meet the military expenses. On Thursday three Danish ships-of-war entered Dantzic under a flag of truce, and announced the renewal of the blockade, twenty days being allowed to neutral vessels to leave the port. The Austro-Prussian squadron, which has been lying for some time at Cuxhaven, has proceeded to Bremerhafen, where a Prussian iron-clad corvette, the Pedro, arrived on Tuesday under Portuguese colours. According to intelligence received at Heligoland on Monday an engagement between the German and Danish fleets will probably take place in those waters within a few days. The English frigate Wolverine and some despatch-boats are stationed at Heligoland. At a banquet given in his honour at Heide on the 23d ult. the Duke of Augustenburg said:—

"I rejoice to be the first German Prince of Schleswig-Holstein, and shall in future adopt no separate interests. The Prince and the people are ready to make any sacrifice to their liberators which may contribute to the welfare of Germany."

The General Committee of the Associations for Schleswig-Holstein at Altona have voted an address to the Duke of Augustenburg, assuring him, in view of the claims of the Grand Duke of Oldenburg, of the unchangeable fidelity and devotion of the people of Schleswig and Holstein.

FRANKFORT.—A telegram from Vienna states that the German Sovereigns at Carlsbad have come to an understanding upon the Dano-German question. According to this understanding Prussia, with the concurrence of Austria, will propose at the Federal Diet that the German Confederation shall declare war against Denmark. It is asserted that a motion will shortly be brought forward at the Federal Diet that Schleswig and Holstein united should be placed under the joint administration of the great German Powers until the question of the succession shall have been decided, and the respective claims of the Princes of Augustenburg and Oldenburg been examined. This is said to be the subject of the present arrangement between Prussia and Austria, and on this they are stated to be perfectly unanimous.

WURTEMBURG.—The King of Wurtemburg died at Rosenstein Castle at 5 o'clock on Saturday morning. His Majesty was born in 1781, and was the oldest sovereign in Europe. The new King has issued a proclamation of a cordial nature to the people. His Majesty solemnly declares that he will maintain the constitution. He alludes to the last autograph will of his deceased father, dated 1844, in which his late Majesty stated that he had devoted his life to the furtherance of the unity, independence, and the glory of Germany. He also desired that he might be buried at sunrise in the cemetery of Rothenberg; that his funeral might be simple, and that his body might be followed by only three carriages besides the escort.

SAXONY.—At the sitting of the Upper Chamber on Tuesday Chamberlain Zehmen moved that the Government be requested to use its influence with the Federal Diet that the entire Confederation should take part in the continuation of the war against Denmark, and that the war should be declared a Federal war. The Chamber referred the motion to a committee. In the sitting of Thursday, the motion came on for discussion, when the Chamber decided unanimously on requesting the Government to use its influence with the Federal Diet to induce that body to take part in the continuance of the war, and to settle the question of right to the succession in the Duchies as speedily as possible. Herr von Falkenstein, the Minister for Public Education, stated that instructions in this sense had already been forwarded to the Saxon representative at the Diet. He declared further that the active participation of the Diet in the war and the recognition of the Duke of Augustenburg appeared certain. The Ministerial *Provinzial Correspondenz* of Thursday, says:—

"At Carlsbad Austria and Prussia have come to decisive arrangements respecting the immediate objects of the campaign, and have agreed to the necessary steps for the ultimate solution of the question of the Duchies. The government and taxation of Jutland will be taken in hand by Prussia and Austria Preparations will be made for crossing into Funen. Schleswig-Holstein is to be placed under the common administration of Commissioners appointed by the German Powers. In the succession question, which has become doubtful, Prussia will wisely consult her own interests and those of Germany."

PRUSSIA.—The treaties for the renewal of the Zollverein, as proposed by Prussia, were signed on Tuesday by the representatives of Prussia, Saxony, Baden, Electoral Hesse, Thuringen, Brunswick, and Frankfort. The negotiations with Oldenburg are still going on.

AUSTRIA.—A despatch from Vienna states that the Allied Powers have sent a Circular Note to their respective representatives abroad, declaring that they no longer consider themselves bound by the concessions made by them at the Conference, since peace has not been re-established. It is also said that the German Plenipotentiaries have reserved for themselves the right of replying to the incomplete and one-sided summary of the proceedings of the last sitting of the Conference. A semi-official statement published on Wednesday declares the assertion of Earl Russell that Austria will confine herself to the occupation of Schleswig and Holstein to be erroneous. Austria has moreover declared that she will henceforth fulfil her duty as a German Power without regard to her own special interests. On Thursday the 23d the Emperor of Austria drove to Schlackenwerth on a visit to the ex-Grand Duke of Tuscany. His Majesty subsequently received Count von Bismark, and dined with the King of Prussia. The Emperor conferred the Grand Cross of the Order of St. Stephen upon Count von Bismark. The town was brilliantly illuminated in the evening. On Friday evening the Emperor left for Prague. The King of Prussia remained with the Emperor up to the time of his departure. General Von Roon arrived at Carlsbad in the evening. Count Rechberg left Carlsbad on the same day.

RUSSIA.—The semi-official *Deutsche Peterburger Zeitung* of Thursday, in a leading article favourable to Germany, says:—

"It would be inconsistent on the part of England to wage war against Germany, as she took no active steps when the German Powers rejected the Treaty of London of 1852, and subsequently occupied Schleswig and Jutland. England ought, logically, to advise Denmark to yield to Germany."

The *Gazette de Cologne* publishes the following summary of Russian propositions which have been the subject of negociations at Kissingen and Carlsbad. Russia, Prussia, and Austria bind themselves by a convention to act together on all the European questions of the present time; to declare the Polish question an internal not an international question, and mutually to guarantee to each other their existing frontiers. The ratifications of this convention are to be exchanged shortly. The Minister of Finance has submitted to the Council of State a project for the formation of a Russian Crédit Foncier and Industrial Bank. The establishment of these institutions will be undertaken by the first London houses, among which are the International Financial Society and the London Crédit Foncier. The Bank of Meiningen will also concur in the object. A disaster has occurred to interrupt the great fair of Nijni Novgorod. On the 4th ult. a fire broke out, which destroyed all the wooden erections for the business of the fair. The theatres, the shows, 30 restaurants, 50 hotels, public houses, and baths—in fact, almost the entire town has fallen a prey to the conflagration.

POLAND.—The Austrian Government, on the application of the Swiss Federal Council, has released General Langiewicz, who had been confined as a prisoner in the fortress of Jozefstadt. The Federal Government has given an assurance that the General will not return to Poland. Mdlle. Pustovoloff, the companion in arms of General Langiewicz, is about to be married to a lithographer at Vienna, a Pole by birth.

ITALY.—In the sitting of the Chamber of Deputies on Friday, the Minister of Finance announced that the *concessionaires* of the Crédit Foncier had withdrawn their proposition, in consequence of which the Ministry would withdraw their Bill authorising the concession. At the same time the Minister declared that a fresh Bill would be brought in, which, instead of granting an exclusive concession, should throw the project open to public competition. The Minister for Foreign Affairs, in reply to a question, declared that to protect Italian interests in Peru the Government had determined to hasten the departure of an Italian Minister to Lima. They also intended sending some vessels to the Pacific. In the sitting of Wednesday the Minister of Finance stated that he had been able partly to carry out his finance programme, although he had been in part unsuccessful. Respecting the deficits for 1864 and 1865, he would be able to provide for them by the sale of Crown lands to the value of 200 million lire, and by the sale of the State railways, without having recourse to a loan. He showed that he had effected reductions in the Budget of expenditure to the amount of 40 million lire, and that after the vote upon the new Constitutional law had been taken the reductions would reach 100 million lire. The revenue derived from the income-tax was regularly increasing. The Government and the nation could not accept the policy proposed by Signor Sarraco. The Government was likewise far from adopting the programme of the party of action, viz.—disarmament. The Ministerial programme was still that announced by the Cabinet on coming into office—viz., to hold themselves ready to take advantage of political events in Europe in order to bring about the realisation of the destinies of Italy. Signor Sarraco protested against the interpretation given by the Minister to his political programme, and declared that he had no intention of proposing a policy of disarmament. The Pope officiated in St. Peter's on Wednesday on the occasion of his Fête. He afterwards renewed the protest against the invasions and usurpations of the Papal provinces on the part of Piedmont, already put forth in his allocutions of 1859 and 1860, and in the address to the Catholic Bishops. The Congregation of the Index at Rome has condemned 13 works, among which are *Les Misérables* by Victor Hugo, and some romances of De Balzac and Soulié.

TURKEY.—The English Government has given biscuits to the value of 5000*l.* to the Circassians, and offered to the Porte to facilitate a special loan for the purchase of objects to be distributed among them. Immense suffering and mortality continue among the immigrants.

THE PRINCIPALITIES.—The Conference of Ambassadors has sanctioned the reported arrangement between the Porte and Prince Couza relative to a change in the constitution of the Principalities. Prince Couza has returned to Bucharest. Prince Soutzos, the ex-Hospodar of Moldavia, is dead.

TUNIS.—Advices from Tunis to the 12th ult. state that the emigration panic still continued, but that the Bey, who was beginning to realise the state of things, had dismissed his Minister, Caid Nissim. It was hoped the Casnadar would also be dismissed, as such a measure would contribute to the suppression of the rebellion. Tranquillity was restored in Sousse after some scenes of violence. The French inhabitants with their consul sought refuge on board their ships. The English consul remained in the town.

MOROCCO.—Despatches from Tangiers announce that a decree has been promulgated granting entire free trade to Europeans in Morocco. This measure has been taken in consequence of the reiterated remonstrances of France and other European Powers.

CAPE OF GOOD HOPE.—The Cape mail arrived on Tuesday with news from the Colony to the 22d of March. Sir Philip Wodehouse opened the Cape Parliament on the 27th of April, for the first time at Graham's Town. The previous attempts of the Government to raise an adequate revenue having proved ineffectual, additional public burdens had become necessary. The expenditure of 1863 was 191,613*l.* in excess of the receipts. Some of the public works must be suspended, and a new Loan Bill introduced. Among the other new measures will be a Bill for the construction and maintenance of the main roads of the colony, the re-introduction of the Succession Duties Bill, a Bill for the sale of Crown lands, the increase of the Customs Duties, Bills for the better administration of justice, and the registry of deeds, for the amendment of the Lands Beacon Act, for checking cattle stealing, issuing new certificates to the Fingoes, and preventing squatting. The Imperial Government has authorised the establishment at British Kaffraria of a defensive force of irregular horse to act as the police. A part of the country beyond the Kei is to be occupied. The head-quarters of the military is for the present to be established at Graham's Town; the Lieutenant-General commanding there to be Lieutenant-Governor of the colony. The Narcissus, flagship of Sir Baldwin Walker, was expected to leave for England on

the 26th of May. The Orestes had brought down to Simon's Bay Mr. Allington, Dr. Waghorn, and the remainder of the Church Mission from the Zambesi

PERSIA.—Advices from Persia state that the Shah had resolved upon despatching 20,000 men against the Turcomans in Astrabad.

UNITED STATES.—General Grant has again changed the whole plan of his operations. He has moved his entire army to the south side of the James River, and has effected a junction with General Butler. The movement commenced on the night of the 12th ult. General Baldy Smith's corps embarked at White House for Bermuda Hundred; the remainder of the troops marched to Charles City, Wilcox Landing on the James River. The army crossed the James River on the 14th at Powhattan Point. The Confederates made no attempt to harass the movement. On the night of the 14th Gen. Baldy Smith with 15,000 men advanced towards Petersburg, and opened an attack on the 15th. Fighting continued throughout the day, but with no decided advantage to Smith until the evening, when he carried a strong Confederate work two miles from the city, capturing 13 cannon and 400 prisoners. On the 16th and 17th the remainder of Grant's army joined Baldy Smith and Hancock, and dislodged the Confederates from the greater portion of their outer defences, capturing 450 prisoners and four cannon. At 4 A.M. on the 18th an assault by the entire Federal forces upon the Confederates' inner line was repulsed with heavy loss. A second and third attack at noon and 4 P.M. met with similar results. No further attempt to carry the works has been made. General Grant reports on the 19th that he is intrenched one mile and a half from the city. The Federal loss on the 17th and 18th is admitted to be 8000, but is believed to have been much greater; Hancock's corps alone lost 4200. The Confederate line forms a semi-circle in front of Petersburg, the flank resting on the Appomatox. General Lee's whole army is supposed to be at Petersburg. Confederate despatches report the defeat of General Sheridan at Gordonsville on the 12th by Generals Fitzhugh Lee and Hampton, with the loss of 500 prisoners, and leaving his dead and wounded on the field. Sheridan has since officially announced his return north of the North Anna River. He says that he achieved some unimportant success on the Virginia Central Railway, but admits his defeat at Gordonsville, with the loss of 505 killed and wounded. Much anxiety exists for the safety of Hunter, in consequence of Sheridan's failure to reinforce him. It is reported that Generals Breckinridge and Pickett have left Richmond to attack Hunter, who is reported by Richmond papers to have been repulsed in an attack upon Lynchburg on the 18th. Gen. Morgan has retired from Kentucky with the spoils of his recent raid. General Sherman has been ordered not to risk a general engagement outside of his entrenchments, and General Forrest is marching to attack his rear. The Federal expedition under Sturgis, which left Memphis to check Gen. Forrest's movements, has been defeated by Forrest, at Guntown, Tennessee, with loss of the artillery and many prisoners. General Sturgis was killed. The death of Bishop Polk is reported. Five Federal Generals, prisoners at Charleston, having been placed under fire during the renewal of the bombardment, the Secretary of War has ordered five Confederate prisoners of equal rank to be exposed to the Confederate fire among the Federals. The Senate by a majority of three has refused to repeal the commutation clause in the Conscription Act. The House of Representatives on the 13th ult. repealed the Fugitive Slave Law by a vote of 84 against 58. A joint resolution, which originated in the Senate, for the constitutional abolition of slavery failed to receive the necessary two-thirds vote in the House of Representatives on the 15th; 94 members voted for, and 65 against it. The House of Representatives has passed a bill forbidding time bargains in gold and exchange, and forbidding their negociation in public places. The tenders for the new 6 per cent. loan for 70,000,000 dollars amounted to 90 000,000 dollars. The Government accepted 41,000,000 at an average of 4¼ per cent. premium. It is reported that the balance of the loan will be offered by the Government at 4 per cent. premium. It is rumoured that Secretary Chase has received and will accept an offer of a loan from Germany. Gold rose on the 17th to 245. The whole markets are in confusion. The steamers Isabel, Pevensey, and Donegal have been captured. President Lincoln, on his visit to Philadelphia, made a speech in which he stated that Grant was in a position from which he could never be dislodged until Richmond was taken. Mr. Vallandigham has left Canada and returned to Ohio. On the 15th he made a speech at a Democratic convention in Hamilton, in which he declared that he would hereafter defend his liberty with his life, unless deprived of it by due process of law. He subsequently proceeded to his residence at Dayton.

THE PACIFIC.—Intelligence from Cape Haytien states that there are 22 Spanish vessels of war and transports in the Bay of Monte Christo. The news of the Spanish hostilities against Peru has created great excitement in Chili. Meetings have been held, at which resolutions demanding that the Government should energetically support Peru were passed. Subsequent advices report that Chili and Bolivia have joined Peru against Spain, and that the Chilian squadron has been ordered to the Peruvian waters. The mob in Panama has insulted the French Consul, who has demanded, in the name of his Government, redress from the President of Panama.

MEXICO.—The Emperor and Empress of Mexico landed at Vera Cruz on the 28th of May, and immediately started for the capital. On the 22d ult, Commandant Courcy defeated the united bands of Sandaval and Cadanina at Valparaiso, 30 miles from St. Zacatecas. The Mexicans had 120 killed, and lost in addition to 300 prisoners, five guns, an entire park of artillery, and 200 horses.

CUBA.—Advices from the Havannah state that the inhabitants have bought an iron-clad frigate to reinforce the Spanish squadron in Peru,

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Royal Academy.*—The Earl STANHOPE called attention to the present position of the Royal Academy, and asked what further steps the Government intended taking in reference to it. He cited the recommendations of the report of the Commissioners, to some of which the Academicians had objected, and contended that no site for a new building for the Academy ought to be given by the Crown till an understanding should be made as to an amendment of the rules.—Lord ST. LEONARD'S thought some of the disputed points were on matters on which the House could give no opinion; but after the decision of the House of Commons, it was certain the National Gallery must be retained in the present building. The Government ought not to impose any terms on the Academy which it was not disposed to accept.—Lord TAUNTON said, if the Academy was to be continually interfered with by the authority of the Government and Parliament, because it indirectly received some assistance from public money, it would be better for the institution and art itself if the Academy refused the assistance and relied wholly on its own resources.—Lord HOUGHTON approved the general conduct of the Academy, and thought it well deserved the patronage of the Government.—The Duke of RUTLAND hoped that in the erection of a new picture gallery some attention would be given to its architectural effect.—Lord HARDINGE believed the Academy had a moral, if not a legal claim to some accommodation at the public expense. But, on the other hand, it was right the Government should exact some conditions from the Academy in return.—Lord OVERSTONE was of opinion that the less the Government had to do with the Academy the better it would be for both. The institution should be left to its own energies.—Earl GRANVILLE said that the report of the commissioners had been referred to the Academy, which had, in reply, presented an address to her Majesty, who had left the question to the consideration of the Government. The House of Commons had rejected the proposal to leave the Academy in Trafalgar Square with enlarged space, and to that decision the Government bowed. Nothing, he thought, would be more unwise than for the Government to take upon itself the regulation of the Fine Arts; but, without going that length, it might usefully insist upon certain regulations calculated to popularise the Academy, and make it more efficient for public purposes in return for the facilities which it received. Government had not had time to consider these details, and he could not give a pledge as to any particular course they might take. In answer to Lord RAVENSWORTH, Lord STANLEY of ALDERLEY ascribed the imperfect working of the *Act for the Suppression of Nuisances caused by Noxious Vapours* from certain manufactories to the short time the law had been in operation.

MONDAY.—*The Conference.*—Earl RUSSELL laid on the table the protocols of the Conference. In doing so he said that he followed the course pursued by Lord Liverpool in 1823, when, after the failure of the previous negotiations, France entered upon the invasion of Spain. Against this invasion the English Government protested, though determined not to make it the ground of hostilities with France. The various questions to which the documents he produced referred were very intricate, almost too complicated to excite much public attention. They had long been regarded with indifference, but within the last two years events had brought them to a crisis. Having described the events which had followed the death of the late King of Denmark, and the efforts made by her Majesty's Government, first to prevent hostilities, secondly to obtain an armistice, and thirdly to bring about a Conference between the belligerents and the neutral Powers, his lordship said that at the last meeting of the Conference the Austrian Plenipotentiary made a declaration that it was not intended to carry on hostilities for the purpose of obtaining territory beyond the Duchies of Schleswig and Holstein; but her Majesty's Government could not accept that declaration as one upon which they could implicitly reply, after the numerous breaches of faith which the German Powers had already committed. He did not consider that our honour in any way required us to take part in the war, and at no time had a pledge been given that we intended to give material aid to Denmark. France and Russia had both declined taking any part in the war, and if we were to do so alone our mercantile marine would be exposed to great depredations; and unless we were to furnish extensive military assistance, our interference would be in vain. In considering the question we had to bear in mind the position and influence of this country, with all its complicated and multiplied connections in every part of the world. The civil war in America might cease, and our relations with that country, which now possessed an enormous army, and a powerful navy, might at any time be liable to a rupture. Under these circumstances the Government considered it to be their duty still to preserve a neutral attitude, although he did not mean to imply that contingencies might not arise to render a different policy necessary.—The Earl of DERBY, while deprecating premature discussion on the subject, remarked that the Conference had terminated just as he had anticipated. From the time it commenced its sittings it had been a doomed assembly, and it was hopeless to suppose that the slightest good would ever result from its deliberations. The Government now appeared to be earnestly desirous to maintain the peace of Europe, whereas their policy had hitherto been utterly inconsistent with that object. It would be the duty of Parliament and the country shortly to decide whether Ministers had preserved inviolate the honour of England, and whether the Continental difficulties which had arisen were not in great part owing to their weak and vacillating policy.—Earl GRANVILLE said that whenever the discussion took place, he hoped it would not be partial and incomplete.—Lord BROUGHAM regretted that the opportunity of settling the frontier had been lost. The *Superannuation (Union Officers) Bill*, the *Civil Courts (Ireland) Bill*, the *Servants' Hiring (Scotland) Bill*, and the *Coventry Free Grammar School Bill* were read a second time. The *Army Prize Bill* and the *Countess of Elgin and Kincardine Bill* passed through committee. The *Beerhouses (Ireland) Bill* was read a third time and passed.

TUESDAY.—*Brokers' Bonds and Rents Bill.*—Lord TAUNTON moved the second reading of this Bill.—Lord KINGSDOWN and Lord CHELMSFORD strongly opposed the measure, as it would deprive the Corporation of London of an income it had possessed for centuries; and Lord REDESDALE described it as a private Bill that repealed a public Act. The motion was negatived without a division.—Lord BROUGHAM called attention to the effect of the Aberdeen Act of 1845 for the suppression of the *Brazilian Slave Trade*. That measure had completely succeeded in its object, the slave traffic had ceased to exist, and there was no reason to apprehend its revival. He suggested that the Act, which was very severe in its enactments, and intended as a temporary measure only, might be safely repealed.—Earl RUSSELL admitted that the slave trade in Brazil had been abolished by a law of the empire itself; but he did not ascribe that abolition wholly to a change of policy on the part of the Brazilian Government. The Aberdeen Act had rendered the traffic unprofitable, but it was not expedient to repeal the law, as it was possible that, by a change of parties in Brazil, the slave trade might be revived.—Lord HOUGHTON thought the Brazilian Government did not merit the praise it had received. It had abandoned the slave trade from self-interest, but had always refused to take any steps towards emancipation. The *Valuation of Rateable Property (Ireland) Bill*, the *Cathedral Minor Corporation Bill*, and the *Pier and Harbour Orders Confirmation Bill* were read a second time. The *County Constabulary Superannuation Bill* was passed through committee.—The *Army Prize (Share and Deceased) Bill* and the *Coventry Free Grammar School Bill* were read a third time and passed.

THURSDAY.—The Marquis of CLANRICARDE moved the second reading of the *Oystery Fishery (England and Scotland) Bill*, and explained that its object was to provide for the further preservation of the oyster fisheries, which of late years, owing to the want of protection, had very much fallen off in their productiveness.—The Duke of RICHMOND opposed the Bill, on the ground that a commission was now engaged inquiring into the subject.—Lord STANLEY of ALDERLEY, on behalf of the Government, expressed a hope that the Bill would not be pressed further at present.—The Marquis of CLANRICARDE then withdrew the Bill.—The *Government Annuities Bill* was read a second time. The *Servants Hiring (Scotland) Bill* was withdrawn. The *Coventry Free Grammar School Bill* was read a third time and passed.—*Agrarian Outrages in Ireland.*—The Earl of DONOUGHMORE moved a resolution to the effect that, considering the extent to which agrarian outrages prevailed in certain counties in Ireland, and to the difficulties which existed in obtaining convictions for offences of this description, the power of the Lord Lieutenant of Ireland to remit the whole or a part of the sentences passed upon persons convicted of such crimes should be exercised with greater care and circumspection. He complained that the Lord Lieutenant had ordered the release of certain prisoners under sentence for an agrarian offence in the county of Westmeath, upon grounds which appeared to be insufficient.—Earl GRANVILLE opposed the motion, considering that it interfered with the royal prerogative, and ought not to be agreed to unless it was conclusively established that the Lord Lieutenant had been influenced by corrupt motives. As to the cases referred to by the noble earl, there was no doubt that Lord Carlisle had acted to the best of his judgment, and had very fairly exercised the royal prerogative. He trusted that the motion would not be pressed to a division.—The Earl of LEITRIM urged Lord Donoughmore to persist in his motion, and to take the sense of the House upon it.—Lord CHELMSFORD considered that no case had been made out to justify what was tantamount to a vote of censure on the Irish Viceroy. The motion was ultimately withdrawn.

FRIDAY.—*Japan.*—Earl GREY moved a series of resolutions to the effect that the relations between this country and Japan are in a highly unsatisfactory state; that fresh collisions must sooner or later lead to war, possibly resulting in the destruction of the Japanese Government, and spreading anarchy throughout the country; that the treaty with Japan should be carried out and modified, so as to place the future intercourse of the two nations on a better footing; and that an address be presented to her Majesty, praying her to seriously take these matters into consideration.

[Left sitting.]

HOUSE OF COMMONS.

FRIDAY.—*Naval Flags.*—Lord C. PAGET stated that in future there would be but three ensigns—the white for the royal navy, the blue for the naval reserve, and the red for the mercantile marine. The distinction of the three squadrons—red, white, and blue—was abolished, and the flag officers of the navy would now be simply admiral, vice-admiral, and rear-admiral. *Excise on Malt.*—On the order for going into Committee of Supply, Mr. MORRITT moved a resolution that in the event of any modification of the indirect taxation, the excise on malt required consideration.—The CHANCELLOR of the EXCHEQUER agreed to the propriety of the resolution in the abstract, but said it would be unadvisable to pledge the House to any particular course of action in dealing with the remission of a specific impost.—Lord J. MANNERS supported the motion.—Mr. NEATE opposed it on the ground that the owners and occupiers of land, by reason of their immunities from taxation, and the comparative lightness of their burdens, were not entitled to priority of consideration in any review of taxation.—Mr. NEWDEGATE briefly supported the resolution, which was negatived on a division by 136 to 118.—Mr. D. SEYMOUR called attention to the system pursued of removing paupers and persons under sentence of *Banishment from Jersey* to the seaports of England.—Sir G. GREY said he had received a report on the subject from the Lieutenant-Governor of Jersey, which he would lay upon the table.—In answer to Mr. MAGUIRE, the ATTORNEY-GENERAL for IRELAND said that a Bill was in preparation for regulating and reforming the *Irish Court of Admiralty*. The House then went into Committee of Supply *pro formâ*, and afterwards into Committee on the *Inland Revenue (Stamp Duties) Bill*, when on the motion of the CHANCELLOR of the EXCHEQUER a clause was added for the payment of taxes in Scotland by means of Post-Office orders. The House then went into Committee on the *Chimney Sweepers Regulation Bill*, the clauses of which were agreed to. The *Cranbourne Street Bill* was read a second time. The *Weighing of Grain (Port of London) Bill* passed through Committee. On the order for going into committee on the *Court of Chancery (Ireland) Bill*, Mr. LONGFIELD moved that the Bill be referred to a Select Committee. He contended at some length that a Bill like this, containing 192 clauses, was a job designed to increase patronage, and could only be properly dealt with in a Select Committee.—Colonel DUNNE seconded the motion.—Mr. W. HUNT recommended the Government to withdraw the Bill, as it was quite impossible that it could pass this session.—The ATTORNEY-GENERAL for IRELAND defended the Bill, and expressed a hope that the House would not be deterred from carrying out in Ireland those legal reforms which had already been of so much advantage in England.—Mr. LONGFIELD, at the suggestion of Mr Whiteside, withdrew his motion, when Mr. WHITESIDE moved as an amendment that the committee be postponed for three months. The House having divided, the amendment was negatived by 51 to 49.—Mr. VANCE then moved the adjournment of the debate.—Sir G. GREY said if the House would go into committee *pro formâ*, the Attorney-General for Ireland would then consider what course he would adopt in reference to the Bill. The Opposition declining to agree to the suggestion, the House again divided, when the motion to adjourn the debate was negatived by 56 to 51.—Mr. COLLINS next moved the adjournment of the House, and said he thought that, under the peculiar circumstances of the case, the Opposition would be justified in occupying the whole night in dividing the House. On a division the motion was again rejected by 56 to 53.—Mr. LYGON then moved the adjournment of the debate, and Lord PALMERSTON consenting, it was agreed to.

MONDAY.—*The Conference.*—Lord PALMERSTON, in a crowded house, brought up the protocols and papers of the Conference, and said that in conformity with his promise he proposed to make a short statement on a subject which had evoked the feelings, the aspirations, and, he might add, the anxieties of the whole country. The sympathy which the British nation felt for the cause of Denmark would do her honour in all time He did not, however, rise to excite that sympathy or to profit by it, but to state that the Conference having come to an end, the papers which he laid upon the table would at once be printed and placed in the hands of members. He then proceeded to give an outline of the circumstances which had led to the Treaty of 1852, and to the subsequent events down to the invasion of Schleswig. Up to that occurrence, he said, all the parties to the Treaty of 1852, not excepting Prussia, had acknowledged the importance of maintaining the independence of the kingdom of Denmark. The Conference, which assembled on 25th April, proposed an armistice, and hostilities were suspended for a month. During that period the neutral Powers —namely, France, Russia, Great Britain, and Sweden, exerted themselves to the utmost to bring about an arrangement by which peace might be restored. Ultimately the line of the Schlei was proposed as the boundary, and was reluctantly accepted by Denmark. To this, however, Germany would not agree, although for obvious reasons she was quite ready to agree to an armistice of not less than two months. Earl Russell, as the organ of the neutral Powers, then endeavoured to have the matter in dispute referred to arbitration, and the answer of the German Powers was that they would have no objection to a reference to a friendly Power, and that they would accept the proposal provided they were allowed to reserve their decision as to whether they should accept or reject whatever line of demarcation might be fixed upon by the arbitrator. As this was tantamount to a refusal of the arbitration, it would have been more frank and candid if Germany had declined the proposition altogether. The Danes declined the arbitration, stating that they had already made a great sacrifice by accepting the line of the Schlei, and that further north they would not go. The Ambassador of France then made a last effort at an adjustment of the differences between the belligerents by proposing that an appeal should be made to the inhabitants of the intermediate district to ascertain their relative nationality and what were their wishes in respect to government by Denmark or by Germany. The neutral Powers agreed to this suggestion, but it was negatived by Denmark. The labours of the Conference having thus been brought to a close, it became the duty of the Government to consider what course they ought to adopt. They felt that, although originally in the wrong, Denmark had been ill-used; that in her case might had overwhelmed right; and that the whole sympathy of the British nation had been aroused in her favour. Under these circumstances they would have been glad to have recommended the Sovereign to take part with Denmark in the approaching struggle. Remembering, however, that Denmark had orginally been in the wrong; that she had rejected a proposal which might have led to the restoration of peace; that France and Russia, for reasons which no doubt were satisfactory to themselves, were indisposed to give any material support to Denmark; and seeing that the whole brunt of any effort to dislodge the Germans from Schleswig and Holstein would fall upon England alone, her Majesty's Ministers did not consider it was consistent with their duty to advise the Queen to undertake such an enterprise. He did not say that if the war were to assume a different character — if the independence of Denmark were at stake—if Copenhagen were subjected to the horrors of an assault, and if the King were made a prisoner of war, it might not become the duty of the Government to reconsider the matter and submit their policy for the approval of Parliament.—Mr. DISRAELI wished to remind the House of the exact position in which it stood in reference to the matter. The House had not yet incurred any responsibility whatever on the subject. The Conference had not been called by desire of the neutral Powers, but by one of them only, and that one Great Britain. It had met without hope to separate without hope; it met without a basis, and it came to a termination without any result. The time, however, had now arrived when the House should give some opinion, and he considered it would forfeit all claim to the respect of the country if it evaded that responsibility. He therefore gave notice that on the earliest possible day he would invite the House to give its judgment on the foreign policy of the Government. He would have contented himself with this announcement had it not been for the closing observations of the noble lord at the head of the Government. He confessed he heard those words with astonishment. Was the House to understand that it was the islands of Denmark only that were necessary for the independence of the kingdom? If so, how came it that her Majesty's Government had declared that the possession by Denmark of the Duchies of Schleswig and Holstein was necessary for the balance of power and the maintenance of public law in Europe? For his own part, he could only look upon the words of the noble lord as a continuation of the senseless and spiritless menaces which had impaired the just influence of the country in the councils of Europe and had diminished the most effective means of obtaining peace. Such language was altogether unworthy of a great Minister. Far better and more dignified would it be to hold the language and the policy enunciated by Messrs. Cobden and Bright, for they would not have threatened any one. They would not have told Denmark that if she were attacked she would not be alone. They would not have exasperated Germany, and lured on Denmark by delusive counsels and fallacious hopes. *Annuity to the King of Greece.*—On the order for going into committee of supply, Mr. AYRTON moved a resolution to the effect that the grant to the King of Greece of an annuity of 4000*l.* out of moneys belonging to the Consolidated Fund, by treaty not made subject to the sanction of Parliament, was an exercise of the prerogative of the Crown that amounted to a violation of the privileges of the House of Commons. — The CHANCELLOR of the EXCHEQUER stated that the grant was made under the conditions of a treaty, and was justified both by precedent and by the peculiar circumstances of the case. The resolution was withdrawn. *Courts of Law.* — Mr. M. SMITH directed attention to the buildings and sheds used for the superior courts of law and equity, and the inadequate accommodation afforded by them for the judges, the bar, the jurors, and witnesses, and complained of the delay of the Government in introducing their promised measure for providing new courts of justice.—Mr. MALINS and Mr. A. MILLS bore testimony to the disgraceful condition of the present courts, and urged on the Government the necessity of immediate action. — The ATTORNEY-GENERAL said that difficulties had been interposed which, much against the will of the Lord Chancellor, had been the occasion of the delay; but it was intended shortly to introduce a measure on the subject, which he was not without hope Parliament might be induced to agree to even in the present session. *The Troops in Canada.*—Mr. ADDERLEY brought under notice the inexpediency of having detachments of British troops stationed in exposed parts on the Canadian frontier unless adequately supported by Canadian forces.—Mr. CARDWELL concurred in many of Mr Adderley's observations. He stated the changes made in Canada, especially with reference to the militia, the training of officers, and the preliminary arrangements for the organisation of a good defensive native force.—Lord R. CECIL remarked on the danger to which Canada was exposed.—Mr. C. FORTESCUE stated that preparations had been made and were making to meet future danger.—Colonel DUNNE called attention to the subject of *Recruiting for the Army*, and to the unwillingness of men to enlist, which created a difficulty in keeping up the numbers of the troops — The Marquis of HARTINGTON said that the number of men recruited had been sufficient to meet the wants of the year, and he therefore thought it unnecessary to discuss the reasons which prevented men from enlisting, for there was no present want of men. The House went into Committee of Supply, when several votes on account of the *Civil Service Estimates* were agreed to. The report of the *Inland Revenue Stamp Duties Bill* was brought up and agreed to. *The Chimney Sweepers Regulation Bill* was read a third time and passed. In committee on the *Greek Loan Bill*, Colonel DUNNE moved a clause providing that pensions and compensations payable to British subjects and others employed in the Ionian service when under British protection, and guaranteed by treaty, should be regularly paid.—The CHANCELLOR of the EXCHEQUER opposed the motion, on the ground that the Bill was intended to carry into effect the engagements of the Sovereign, and that the proviso ought to be the subject of a separate Bill. After some debate the motion was withdrawn, and the Bill passed through committee.

TUESDAY.—At the morning sitting the *Thames Conservancy Bill*, the *Lunacy (Scotland) Bill*, and the *Administration of Trusts (Scotland) Bill* passed through Committee. *The Danish Question.*—On the resumption of business at six o'clock, Mr. DISRAELI gave notice that, if convenient to her Majesty's Government, he would, on Monday next, move an address to the Crown thanking her Majesty for directing the correspondence on Denmark and Germany to be laid on the table; assuring her Majesty that the House had heard with deep concern that the sitting of the Conference had been brought to an ineffectual termination; and expressing to her Majesty its deep regret that, while the course pursued by the Government had failed to maintain their avowed policy of upholding the integrity and independence of Denmark, it had lowered the just influence of this country in the councils of Europe, and thereby diminished the securities of peace. (The notice was received with loud cheers from the Opposition benches) — Mr. KINGLAKE immediately announced, amid counter cheers from the Ministerialists, that he intended to move an amendment, the words of which he would give on the next day.—Mr. DOULTON called attention to the gradual diminution of *Open Spaces in and around the Metropolis*, and moved that it was the duty of the Government to provide for the preservation of such open spaces within the limits assigned by the Inclosure Act of 1845.—Mr. F. PEEL denied that there had been any considerable diminution of open spaces around London, as during the last 20 years only 1500 acres had been enclosed. The Government were not prepared to undertake the duty of raising the money that would be required to preserve such places by the compensation of lords of manors and other owners. The motion was supported by Mr. LOCKE, Sir W. FRASER, and Mr. TORRENS.—Mr. COWPER said that if the resolution were agreed to it would be mere waste paper, and suggested that the better course would be appoint a select committee to inquire into the subject, and ascertain to what extent the difficulties surrounding it might be overcome. On a division, the motion was carried against the Government by 79 to 40. *The Queen's Plates.*—Mr. P. WYNDHAM proposed that as the annual grant of sums of money voted for Queen's Plates no longer encouraged the breed of good horses, the object for which it was originally given, it should for the future be discontinued. He contended that the condition on which the money had been originally given was not merely to produce the best racing animal but the best breed of horse for general purposes, and that by the present system the Queen's Plates were monopolised by a few horses only.—Mr. NEWDEGATE thought the Government might do good service by withholding the public money unless subscriptions to double or treble the amount were forthcoming, so that a larger inducement might be extended to retain horses in the country which might become the sires of animals with more strength, speed, and power of endurance.—General PEEL denied that the breed of horses had degenerated; on the contrary, he believed that we had better horses now than ever we had. He would not do away with the Queen's Plates, because they held forth a certain encouragement to keep good animals in the country.—Sir R. PEEL could say from his own experience that the breed of horses had not deteriorated. He was free, however, to admit that it might be desirable to reconsider the conditions as to weights and distances upon which horses now ran for Queen's Plates.—Mr. GREGORY thought the Queen's Plates ought to be continued, but suggested that three of the Irish Plates should be taken from the Curragh to some of the provincial towns.—Mr. MERRY attributed the evil of which Mr. Wyndham complained to the large exportation of high-class mares. He feared, however that it would be impossible, under our present system of free-trade, to prevent the exportation —Lord PALMERSTON said that the best proof that the breed of horses had not deteriorated was to be found in the fact that foreigners were constantly coming to England and Ireland to purchase good animals. The question would, however, be referred to the Master of the Horse to consider whether it might not be desirable to reconsider the subject of weights and distances. The motion was then withdrawn. The select committee on the *Weighing of Grain (Port of London) Bill* was nominated. Leave was given to introduce certain Bills. On the order for resuming the adjourned debate on going into committee on the *Election Petitions Bill*, Sir F. GOLDSMID opposed the Bill, and was stating his objections when the House was counted out.

WEDNESDAY.—*The Vote of Censure.*—Mr. KINGLAKE gave notice that in lieu of the last paragraph of the address to be proposed by Mr. Disraeli on Monday, he would move to substitute, by way of amendment, the words following:—"To express the satisfaction with which we have learnt that at this conjuncture her Majesty has been advised to abstain from armed interference in the war now going on between Denmark and the German Powers."—Mr. FENNESSY moved the second reading of the *Poor-Law (Ireland) Acts Amendment Bill*, the object of which was to extend the system of out-door relief to Ireland, and to assimilate the law of that country to that of England in this and other respects.—Lord NAAS opposed the Bill, on the ground that it would inflict injustice on the ratepayers, and that in a few years the Poor law would be unworkable. He moved as an amendment that the Bill be read a second time that day three months —Sir R. PEEL also opposed the Bill, and on a division the second reading was negatived by 201 to 24. The *Tests Abolition (Oxford) Bill* passed through committee.—Mr. SELWYN, however, gave notice that the third reading would be opposed. *Street Music Metropolis Bill* —The House then went into Committee on Mr. Bass's Bill for the suppression of the street music nuisance.—Mr. HANKEY asked whether the peripatetic melodrama known as "Punch" was to be put down by the Bill.—Mr. BASS replied that he looked upon "Punch" as a national institution, and did not propose to interfere with it.—Mr. AYRTON defended the German and Italian musicians, and contended that street music was an attraction to London servants, which ought not to be discouraged —Sir J. PAKINGTON was quite willing to agree to any measure that would authorise the occupier of any house to remove any street musician that was annoying him.—Sir G. GREY supported the Bill, and put the case of a music-master who was giving lessons to his pupils, and who would be unable to continue his avocations if a German band or a barrel-organ were at work beneath his window The present Bill was a reasonable amendment of a defective and he would support it.—Mr. BASS, in supporting said that the late Mr. Thackeray had been driven to to house by bands and organ grinders, and that Mr had been forced out of London altogether. H affection and respect for scullery maids and nursery he could not consent to be worried out of his life they might be indulged with organ-grinding.—Sir J. warned the House against penal legislation. He annoyed like others by street music, but he thought rolling of carriages through the streets all night greater impediment to rest and comfort.—Mr. C said that the public highway was meant to accommodate public traffic The inconvenience occasioned by the carriages could not be compared to the setting up stands in the street, the playing of brass bands, the knocking at hall doors to levy black present law was defective, because the definition of nuisance was too vague and the remedy inoperative. Mr. HANKEY denounced the measure as a tyrannical object of which was to gratify the rich at the expense poor.—Mr. CLAY said that the Bill was not intended suppress street music, but to send it from places where not wanted to other places where it might be tolerated. AYRTON moved as an amendment to omit the words a house," and to substitute the words "in front of a Mr. BASS opposed the amendment, on the ground that be tantamount to the rejection of the measure altogether. On a division the amendment was negatived amid cheers, by 201 to 87. — Mr. BENTINCK moved an amendment, to give the magistrate discretion to order an on conviction to be imprisoned for any time not than three days.—Mr. CRAWFORD asked Mr. Bentinck what he proposed to do with the monkeys of grinders during the incarceration of their owners monkeys could not, he supposed, be sent to the workhouse. Mr. BENTINCK replied that he thought the monkeys ought to be supported at the expense of the metropolitan members. On a division the amendment was carried by 121 to 111. AYRTON moved that the proviso empowering a constable take a street musician into custody without warrant be omitted. On a division the motion was rejected by 111 to —Sir G. GREY then moved the insertion of words to the effect that no constable should be allowed to take a vagrant musician into custody unless the nuisance had been committed within his view.—The ATTORNEY-GENERAL supported the motion, on a division it was rejected by 118 to 84.—The hour of adjournment having now arrived, the CHAIRMAN reported progress. The House having resumed, the *Weights and Measures (Metric System) Bill* was read a third time and passed. The *Settled Estates Act Amendment Bill* was also read a third time and passed.

THURSDAY.—Mr. A. SMITH moved a resolution to the effect that the new *School of Naval Architecture* ought to be established in immediate connection with one of the chief naval arsenals, where the students might have, together with scientific lectures of a high order, the benefit of regular, progressive, and continuous instruction in every branch of practical shipbuilding; and further, that the South Kensington establishments and museums are altogether wanting in the educational staff and means of practical application indispensable for such school.—Sir J. PAKINGTON thought that the plan now in operation was a good one, and calculated to promote the study of the science to which it was directed.—Mr. C. PAGET explained that the dockyards lacked the means of furnishing the theoretical knowledge of naval architecture which was necessary to the school; and that it was to supply this want that part of the instruction to the students was given at South Kensington. The motion was withdrawn. *Coventry Ribbon Trade.*—Mr. TREHERNE called attention to the injury which the ribbon trade of Coventry had suffered, and was still suffering, from the operation of the commercial treaty with France; and asked the Government whether they would use their influence with the French Government to obtain the same free admission into France of English ribbons as was accorded by that treaty, on the principle of free trade to French manufactures of a similar description in this country. —Sir J. PAXTON thought the retention of a duty on the import of ribbons into France was a defect in the commercial treaty with that country, and urged upon the Government the necessity of making representations to the Emperor of the French with the view of inducing him to remit the import duty.—Mr. M. GIBSON did not consider the distress at Coventry to be a result of the French treaty, or that it was within the power of legislation to remove it. Her Majesty's Government would be only too glad to see the same free trade in import existing in France and other countries which was allowed in England.—Mr. NEWDEGATE said that the depression of trade consequent upon the new commercial arrangements had been such as to drive between 11,000 and 12,000 persons from the district.—The House then went into Committee of Supply on the *Civil Service Estimates.*—Mr. H. BRUCE moved the balance of the vote for *National Education*: and entered into a variety of statistics in explanation of the distribution of the grants, the number of schools in operation, the pupils attending them, and the general effect produced by the new revised code.—A long discussion ensued, in the course of which Mr. ADDERLEY, Lord R CECIL, Mr. HALFIELD, Sir S. NORTHCOTE, Sir J. PAKINGTON, Lord H. VANE, Sir BOWYER, Mr. LOWE, Mr. LYGON, and Mr. PUGH took part in the "conscience clauses" were subjected to critical examination. Ultimately the vote was agreed to without a division. The vote of 97,582*l.* for the *Science and Art Department* led to an animated debate, in the course of which the South Kensington Museum was severely criticised by Mr. GREGORY, Mr. AYRTON, Mr. MAGUIRE, Mr. C. BENTINCK, Sir G BOWYER, and others. Mr. AYRTON condemned the recent burlesque performances at the Horticultural Gardens, and Sir G. BOWYER said that he never entered the Museum without feeling that he was in a receptacle for stolen goods.—Mr. A. SMITH moved the rejection of the vote by 15,000*l.* for new buildings, but, on a division, the motion was negatived by 181 to 73. The House having resumed, on consideration of the Lords' amendments to the *Penal Servitude Acts Amendment Bill*, Mr WARD HUNT moved to disagree to so much of the amendments as dispensed with the necessity of the male holders of tickets of leave reporting themselves monthly to the police —Sir G. GREY opposed the motion, and contended that there was no necessity for monthly reports, and that they would interfere materially with the endeavours of convicts to obtain a honest livelihood.—Sir H. SEYMOUR supported the motion, on the ground that the system of monthly reports had already been tried with the best results in Ireland. On a division the motion of Mr. HUNT was carried against the Government by 129 to 84. The other amendments were agreed to with amendments. The *Exchequer Loan Bill* was read a third time and passed, after an explanatory statement from the CHANCELLOR of the EXCHEQUER in reply to Colonel DUNNE, and a short discussion on a proposal to recommit the Bill.

FRIDAY. — *Hudson's Bay Company.* — Mr. A. MILLS called attention to the present condition of the territories claimed by the Hudson's Bay Company; and moved an address for copies of all correspondence which had taken place between the Imperial and Canadian Governments respecting the western boundaries of Canada.—Mr. CARDWELL explained the nature of the transactions which had taken place, and agreed to lay the papers on the table. The motion was withdrawn.—Mr. BLAKE called attention to the necessity of amending the law

relating to the administration of *Lunatic Asylums in Ireland*, and of making better provision for the care of imbeciles in each workhouse. [Left sitting].

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90¼ to ⅜ for Money; Three per Cents. Reduced, 89½ to 89; New Three per Cents., 89½ to ¼; Bank Stock, 236½; India Stock, shut; Ditto Five per Cent. Stock, 104½ to ¾; Ditto Four per Cent., 99½; Ditto Bonds, 20s. to 13s. dis.; Five per Cent. Enfaced Paper, 105 to 104½.—FOREIGN: Brazilian, 1863, 87½; Dutch, Two and a Half per Cents., 62, ex div.; Greek, 26¼ to 26; Ditto Coupons, 11¾; Italian, 67 to ½ ex div.; Ditto Maremmana Railway, 74½ ex div., Mexican, 44½ to ¾; Ditto Six per Cents. Anglo-French 56½; New Granada Deferred, 7¾; Peruvian, 1862, 85 to 86 ex div.; Ditto for Acct., 83 ex div.; Portuguese, 1856, &c., 47¼ to ½; Russian, 1859, 53½; Ditto 1862, 87½ to ¾; Sardinian, 83½; Spanish Passive, 30¼ to 29⅞; Ditto Certificates, 10⅛; Turkish, 1858, 100*l*. Bonds, 73¼; Ditto 1862, 68¼ ex div.; Ditto for Acct., 67⅞ to 68⅛ ex div.; Ditto, 100*l*. Bonds, 68¼ to ½ ex div.; Venezuela, 1862, 55¾.

Metropolis and its Vicinity.

ELECTION OF SHERIFFS.—Friday being Midsummer Day the Liverymen assembled in Guildhall for the election of Sheriffs for London and Middlesex. It was understood that Aldermen Dakin and Besley would be elected without opposition, but in addition to the aldermen Messrs. Ellis, Croskey, and Gunn were put in nomination, and the two first were elected by a show of hands. A poll was demanded, which at the close on Friday showed a large majority for the aldermen. Messrs. Ellis and Gunn have since withdrawn from the contest, but the poll has nevertheless continued until yesterday afternoon, when Aldermen Dakin and Besley were declared to be elected by a large majority.

THE CASE OF MR. BEWICKE.—The select committee of the House of Commons have reported that, in their opinion, Mr. Bewicke is not entitled to any compensation out of the public purse. They are of opinion that, in order to lay any ground for a claim for such compensation, it was incumbent on Mr. Bewicke to prove that there had been a miscarriage of justice in his case, through the default of the persons charged with the administration of the law; and, after careful inquiry, they were satisfied that there was no such default. They are unable to accede to the proposition that persons who have been convicted in due course of law by evidence subsequently proved to be false are entitled to compensation out of the public purse; but, even if they could have acceded to such proposition, there are circumstances in Mr. Bewicke's case that would have taken it out of such general rule; Mr. Bewicke's own conduct, as admitted by himself, having furnished material evidence in support of the accusation against him, independently of other facts deposed to by witnesses of unimpeachable character. In the peculiar circumstances of the case they suggest for the favourable consideration of the Crown, whether the full value of his goods and chattels at the time of the forfeiture should not be restored to him, minus the net produce of the sale by auction, already voluntarily paid over to Mr. Bewicke by the commissioners.

METROPOLITAN POLICE COURTS.—Mr. Hall, the chief magistrate of Bow Street, is about to retire from that office, which he has held for the last 25 years. Mr. Henry, who has been his colleague in Bow Street for a considerable time, is to succeed him as chief magistrate; and Mr. Flowers, Recorder of Stamford, will succeed to the vacancy thus created.

ABOLITION OF TURNPIKES.—On Thursday, at noon, the new Act came into operation, and London was relieved from no less than 81 turnpike gates and bars all through the northern districts of the metropolis. The removal of these toll bars has opened 51 miles of road, and it is expected that the abolition of those on the Surrey side will soon follow.

THE SUBWAYS IN THE STREETS.—At one of the last meetings of the Metropolitan Board of Works it was resolved to withdraw the bill introduced into Parliament by the Board for giving them compulsory powers to place the pipes of gas and water companies and the wires of telegraph companies in subways. It appeared that the bill had been opposed by many powerful companies, and the Committee of the House of Commons had withdrawn the clause giving the Board power to place the pipes of gas companies in the subways, though it was well known that the streets were continually broken up by gas companies, and that these companies would effect a great saving by putting their pipes in subways. As, therefore, the Committee of the House of Commons had determined that the Board should not have the power in reference to gas companies, the Board resolved to withdraw the bill, and wait until the public were aware of the great value of subways.

BEDDINGTON HOUSE.—This celebrated mansion, the ancient seat of the Carews in Beddington Park, near Croydon, is about to become the Asylum for Female Orphans. At a special general court on Monday it was resolved, on the recommendation of a committee, to purchase Beddington House, with about 22 acres of the Park, of which above eight acres may be re-sold, leaving ample space for the purposes of the asylum. The purchase money is 15,000*l*., and the building can be put into thorough repair and converted into an appropriate asylum for about 6000*l*.

SUSPECTED MURDER AT ANERLEY.—An itinerant vendor of butter, eggs, &c., well known in Penge and its vicinity, was discovered dead in a field near the Anerley station a few days since. She was lying on her back, with her clothes over her head, in a pool of blood, which had flown from various wounds inflicted on her head and person. A short iron bar with which the blows are supposed to have been inflicted was found near the spot. Two navvies, with whom she was seen drinking at Penge two days previously, were apprehended on suspicion of having perpetrated the deed, and after several examinations were committed by the magistrate for trial. The coroner's jury also at the adjourned inquest on Tuesday returned a verdict of Wilful Murder against them.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Report states that the deaths registered in London in the week that ended Saturday, June 25, were 1262. The average number in the corresponding week of the 10 years, 1854–63, corrected for increase of population, was 1165. The present return is therefore 97 above the average. During the week the births of 973 boys and 224 girls, in all 1897 children, were registered in London. In the 10 corresponding weeks of the years 1854–63 the average number was 1901.

Provincial.

COWES.—Her Majesty has recently added 160 acres to her property at Osborne by the purchase of two farms for 5400*l*.

LIVERPOOL.—A shocking case of murder and suicide occurred in this town on Tuesday week. A woman called Hendron, the wife of a dock labourer, had been given to habits of intemperance for some time past, and had latterly shown symptoms of insanity. On the night in question she went to bed with her husband and two children, and while they were asleep she cut the throats of the children, and afterwards committed suicide by cutting her own throat. The jury at the inquest returned a verdict that the deceased woman cut her own throat and the throats of her children during a fit of temporary insanity. One of the children is likely to recover.

SALISBURY.—The Cathedral Restoration Fund has reached the sum of about 12,000*l*. It is estimated by Mr. Scott, the architect, that between 35,000*l*. and 40,000*l*. will be required. The whole of the Bishop of Salisbury's expenses in the suit against Dr. Rowland Williams, vicar of Broad Chalks, have been raised, so that no further subscriptions are needed.

SOUTHAMPTON.—Seven more of the crew of the late Confederate cruiser Alabama who were rescued from drowning by French pilot boats, arrived at this port on Friday from Havre. This makes a total of nearly 50 who have arrived at this port. Among them are the following officers:—Captain R. Semmes, Lieut. J. M. Kell, Lieut. Sinclair, Lieut. Howell (Marines), Mr. J. Bullock, master (a brother of Captain Bullock); Messrs. Maffitt and Anderson, midshipmen; Messrs. James Evans, George T. Fulham, Muliner, and Schröeder, master's assistants; Mr. O'Brien, engineer; Mr. W. B. Smith, captain's clerk.—On Monday, at a meeting of the students at Charing Cross Hospital, held in the lecture theatre of the institution, a committee was appointed to take steps to erect a memorial to the late Mr. David Herbert Llewellyn, surgeon of the Alabama, and formerly a student and silver medallist of the school.

Ireland.

THREATENING LETTERS IN WESTMEATH.—A few days since Mr. Morris, agent of Colonel Fulke Greville, M.P. for Westmeath, a supporter of tenant right, issued an order to the tenants on the Delvin estate, against cutting "turf," or peat, in Caddagh Bog. In consequence of this Mr. Morris received a threatening letter, telling him to expect a "doase of lead" if he did not "reprimand" the order. Colonel Greville has since published an address to his tenants, in which he says:—

"I cannot parley with assassins, nor can I suffer the life of one who has served me faithfully to be placed in jeopardy without taking the strongest measures to afford him that protection which unfortunately the laws of the land are inadequate to give. Therefore I give notice that if a hair of his head is touched, I am resolved to evict every family on the townland of Caddagh, and to level their houses with the ground."

Railways.

THE EGHAM ACCIDENT.—The coroner's inquest at Egham was resumed on Friday, when it appeared that the second guard of the second train had absconded, and the authorities were consequently unable to produce him before the jury. Colonel Yolland, the Government inspector, gave evidence, and stated his opinion that the system of running trains adopted by the railway company was dangerous. The jury returned a verdict of Manslaughter against Lee and Trainer, the driver and fireman of the second train, with a strong censure on the management of the line. The two men were admitted to bail in 100*l*. each, with two sureties of the same amount. The adjourned inquest on Mr. Esau Trigg, who died in the Westminster Hospital, was concluded on Monday. The evidence related only to the cause of death, as the scientific part of the subject was discussed at Egham. The jury, therefore, merely returned a verdict that deceased met his death from collision. It is stated that among the most serious sufferers from the recent railway accident at Egham is John C. Heenan, the Benicia Boy. It appears that when the first alarm was given he jumped on the platform as the train was moving, and falling heavily, injured his spine so severely that he has suffered from a continuous succession of fits ever since.

Obituary.

MRS WIGRAM, wife of the Bishop of Rochester, died on the 27th ult. at Mark Hall, Essex, after a very sudden attack of rheumatic fever, which proved fatal in the course of a few days. Mrs. Wigram belonged to the Arkwright family, and was on a visit to her relatives at the time of her death.

SIR CHRISTOPHER WILLIAM CODRINGTON, M.P. for East Gloucestershire, died on the 24th ult., at Dodington, in that county, from an attack of bronchitis, in his 60th year. He was son of the late Sir Bethell Codrington, by the sister of the second Lord Proby, and nephew of Sir Edward Codrington. The baronetcy has been in dispute, and, according to the rules of the Herald's College, has been sustained in the elder branch of the family, Sir William Raimond Codrington being acknowledged as the legitimate heir. The deceased member was elected for East Gloucester in 1834 on the death of Sir W. Guise, and has sat for that division ever since. He was born in 1805, and was educated at Christ Church, Oxford. He married, in 1836, Lady Georgina Charlotte Anne, second daughter of the late Duke of Beaufort by his first wife.

GENERAL SIR ROBERT GARDINER, G.C.B., K.C.H., colonel commandant of the B. Brigade, Royal Horse Artillery, died on Sunday last at his residence at Claremont, in his 83d year. He was born in 1781, joined the Royal Military Academy, Woolwich, in 1795, and obtained his commission in the Royal Artillery in 1797. In the same year he was present at the blockade of Gibraltar by the French and Spanish fleets, and in 1798 served under Sir Charles Stuart, at the capture of Minorca. In 1805 he served under Lord Cathcart in the north of Germany, and subsequently became aide-de-camp to Sir John Moore in Sicily and Portugal, and was present at the retreat from Corunna. He next served in the Walcheren expedition, and in 1810 proceeded to the Peninsula, and was present in the battles and sieges of Barossa, Badajos, Salamanca, Madrid, Burgos, Roleia, Vimiera, Morales, Vittoria, Pyrenees, Orthes, Tarbes, and Toulouse. In 1815 he was present with the Hussars at Quatre Bras and Waterloo, and at the occupation of Paris. For these services he was created a Knight Commander of the Bath. In 1816, on the marriage of the Princess Charlotte to Prince Leopold of Saxe-Coburg, he was selected for the post of principal Equerry. In 1831, on his Royal Highness accepting the throne of Belgium, Sir Robert continued to reside at Melbourne, on the Claremont estate. He was military Aide-de-Camp to George IV., William IV., and to her Majesty until he attained General's rank in 1841. In 1848 he was appointed Governor and Commander-in-Chief of Gibraltar, and his public service terminated with that appointment in 1855. He had become Colonel-Commandant of the 4th Battalion Royal Artillery in 1853, and was advanced to the Grand Cross of the Bath in 1855. In April, 1864, he was appointed Colonel-Commandant of the B. Brigade, Royal Horse Artillery. He received the order of the Guelph for his services in Hanover, the Russian Order of St. Anne for Waterloo, and the Spanish Grand Cross of Carlos III. He held a distinguished service pension, and had the gold medal and clasps for Barossa, Salamanca, Vittoria, Orthes, and Toulouse; the silver war medals for Roleia, Vimiera, and Corunna, and the Waterloo medal and clasp. He married, in 1816, the eldest daughter of Lieut.-General Sir John Macleod, of which marriage two children survive—Colonel Lynedoch Gardiner, and a daughter married to Major Frend.

MAJOR-GENERAL VIGORS died on the 21st ult., at Paris, after a short illness. He was the fourth son of the late Nicholas Aylward Vigors, Esq., of Old Leighlin and Erindale, Carlow. He served throughout the campaigns of 1838 and 1839 in Affghanistan. He commanded the two flank companies of the 13th Light Infantry, which formed a part of the force under Sir Robert Sale, sent in pursuit of the ruler of Candahar, passed the rapid Helmond with 18 men on a small raft, and landed close to the fort of Giriskh, which was found just vacated by the enemy. He commanded the left flank company of the 13th, with the forlorn hope, under Colonel Dennie, at the storm and capture of the Fort of Ghuznee, and was present at the capture of Cabul. He afterwards commanded the St. Helena Regiment, and for some time acted as Governor of St. Helena. He had received a medal and a good service pension for his services.

Markets.

COVENT GARDEN, July 2.

Outdoor produce continues abundant. Cherries and Strawberries are plentiful. Of Grapes and Pine Apples there is also a good supply, and Black, Red, and White Currants are sufficient for the demand. Arrivals of foreign goods this week comprise Apricots, which are abundant and cheap. English Peas are now plentiful. Lisbon Potatos are now nearly superseded by samples of home growth. Asparagus fetches from 4s. to 7s. a bundle. Flowers chiefly consist of Orchids, Heaths, Pansies, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Lemons, per 100, 5s to 9s
Grapes, per lb., 4s to 8s	Nuts, small, per bush., 14s to 18s
Strawberries, p. punn, 6d to 1s 6d	— Barcelona, do, 16s
Cherries, per lb., 6d to 9d	— New Brazil, do., 18s.
Gooseberries, green, p. qt. 3d to 6d	— Old do., do., 14s
Oranges, per 100, 10s to 14s	Almonds, do., 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 3d to 6d
Asparagus, per bundle, 4s to 7s	Cucumbers, each, 4d to 1s
French Beans, p. 100, 1s 6d to 2s	Beet, per doz., 1s 6d to 2s
Peas, p. basket, 2s 6d to 3s 6d	Shallots, per lb., 10d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 2d to 4d	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 9d to 1s	Mushrooms, p. pott., 1s to 1s 9d
Rhubarb, p. bundle, 2d to 4d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

NEWGATE.—July 1.

Best Fresh Butter .. .. 12*s*. per dozen lbs.
Second do. do. .. .. 10*s*. "
Pork, 4*s*. 4*d*. to 4*s*. 8*d*. per 8 lbs.

BRITISH WOOLS.—LONDON, July 1.

We have a fair demand for long wool, and at a very good price. Downs maintain their rates, but do not advance in the same proportion.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	2	0				Leicest. Hoggs	2	1	to		
Half-bred ditto	2	0	to 2	3		Ditto Wethers	2	0	—		
Down Ewes	1	10	—			Combing Skins	1	6	—1	9	
Kent Fleeces	2	1	—			Flannel Wool	1	0	—1	6	
						Blanket ditto	0	6	—0	9	

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, June 30.

Prime Meadow Hay	72s	to 75s	Clover, old	90s	to 110s
Superior do.	80	86	New Clover	—	—
Inferior do.	55	60	Do. second cut	80	105
New do.	—	—	Straw	25	30
Rowen	—	—	HARVEY & EASTON.		

CUMBERLAND MARKET, Thursday, June 30.

Sup. Meadow Hay	95s	to 105s	Inferior Clover	88s	to 96s
Inferior do.	80	88	New do.	80	98
New do.	84	92	Straw	32	36
Superior Clover	105	112	JOSHUA BAKER.		

WHITECHAPEL, THURSDAY, June 30.

Fine Meadow Hay	86s	to 90s	Prime 1st cut Clover	110s	to 114s
Inferior do.	80	84	Inferior do. do.	100	105
Prime New Hay	—	—	New Clover	80	86
Inferior	—	—	Prime 2d cut do.	105	110
Straw	25	28	Inferior do.	90	100

COAL MARKET.—June 29.

Byass's Bebside West Hartley, 16s. 3d.; Hastings Hartley, 16s. 3d.; Holywell Main, 16s. 0d.; Tanfield Moor, 13s. 6d.; Tanfield Moor Butes, 13s. 6d.; Eden Main, 16s. 6d.; Walls End Braddylls Hetton, 17s. 3d.; Walls End Haswell, 18s.; Walls End South Hetton, 17s. 9d.; Walls End Hartlepool, 17s. 6d.; Walls End Heugh Hall, 17s.; Walls End Kelloe, 17s.; Walls End South Kelloe, 17s.—Ships at market, 43.

METROPOLITAN CATTLE MARKET.

MONDAY, June 27.

The number of Beasts is considerably smaller than on Monday last, and a large proportion of middling quality; consequently choicer kinds have advanced in price, and a fair clearance of all descriptions is effected. Sheep are not quite so plentiful; prices are rather better on the average, although trade is not very brisk. Lambs and Calves are selling about the same as on Thursday. From Germany and Holland there are 1270 Beasts, 4490 Sheep, and 460 Calves; from France, 30 Calves; from Scotland, 360 Beasts; from Ireland, 30; from Norfolk and Suffolk, 2080; and 100 from the northern and midland counties.

	s.	d.	s.	d.		s.	d.	s.	d.
Best Scots, Herefords, &c.	5	0	to 5	2	Best Long-wools.	..	—	..	
Best Short-horns	4	8	— 4	10	Do. Shorn	4	8	— 4	10
2d quality Beasts	3	0	— 3	8	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	4	0	— 4	4
Do. Shorn	5	2	— 5	4	Lambs	6	0	— 7	0
					Calves	3	4	— 5	2
					Pigs	3	4	— 4	6

Beasts, 4580; Sheep and Lambs, 26,890; Calves, 524; Pigs, 370.

THURSDAY, June 30.

The number of Beasts is larger than on Thursday last, and trade is not very brisk, yet prices are nearly as good as on Monday. We have about an average supply of Sheep and Lambs; the demand is not quite so good as it has been, but there is no quotable reduction in price. Lambs and Calves are selling as on Monday last. Our foreign supply consists of 790 Beasts, 3190 Sheep, and 680 Pigs. Milch Cows 75.

	s.	d.	s.	d.		s.	d.	s.	d.
Best Scots, Herefords, &c.	4	10	to 5	2	Best Long-wools.	..	—	..	
Best Short-horns	4	6	— 4	10	Do. Shorn	4	6	— 4	10
2d quality Beasts	3	0	— 3	6	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds	..	..	—	..	Do. Shorn	4	0	— 4	6
Do. Shorn	5	0	— 5	4	Lambs	6	0	— 7	2
					Calves	3	4	— 5	4
					Pigs	3	4	— 4	0

Beasts, 1635; Sheep and Lambs, 12,610; Calves, 843; Pigs, 180.

HOPS.—BOROUGH MARKET, FRIDAY, July 1.

Messrs. Pattenden & Smith report a fair demand for the few Hops left of last year's growth, for which prices continue firm.

MARK LANE.—MONDAY, June 27.

The supply of Wheat from Essex and Kent to this morning's market was small, and we raise our quotations 2s. per qr. The attendance was good, but the transactions in foreign Wheat were limited to about 2s. per qr. over the rates current on Monday last. Barley, Beans, and Peas are firm at the prices of this day se'nnight. Oats bring an advance of 6d. to 1s. per qr. Country and foreign Flour were each 1s. per sack, and American 6d. per barrel dearer.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk.. White	44	46	Red	40	42
— — fine selected runs..ditto	46	48	Red	42	44
— — Talavera	50	54			
— Norfolk	—		Red	—	
— Foreign	38	52			
BARLEY, grind. & dist, 25s to 27s..Chev.	34	38	Malting	29	33
— Foreign..grinding and distilling	22	26	Malting	27	31
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish ..... Potato	19	22	Feed	—	
— Foreign ..... Poland and Brew	18	23	Feed	17	22
RYE	30	32	Foreign	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....27s to 36s...Tick	30	33	Harrow	30	33
— Pigeon .... 32s to 40s..Winds.	—		Longpod	—	
— Foreign ..... Small	32	36	Egyptian	30	32
PEAS, White, Essex and Kent..Boilers	32	33	Suffolk	33	34
— Maple .... 30s to 34s .... Grey	28	30	Foreign	31	33
MAIZE ..... White	—		Yellow	—	
FLOUR, best marks delivered..per sack	35	40			
— 2d do ..... ditto	28	34	Country	28	34
— Foreign ..... per barrel	18	25	Per sack	32	40

FRIDAY, July 1.

The weather since the 24th ult. has been cloudy, showery, and cold for the season of the year, and not particularly genial for the setting of the Wheat blossom. The plant is represented as very promising on good and well farmed soils, but less so on the poorer and light. During the past week the improved tone of the Wheat trade, consequent upon the state of politics, enabled holders to realise an advance of 1s. to 2s. per qr, but this improvement has been nearly lost again in the chief markets of the kingdom held during the last two days, and the dull state of the French markets has caused some proportion of those purchases lately made for export to be resold here. The English markets have been good for all kinds of Spring Corn at rather better prices. Flour has met a fair sale at an advance of 6d. per barrel and 1s. per sack. Since Friday last 2 grain-laden vessels have arrived off the coast, both Wheat. Late prices are asked, but buyers do not come forward unless where some concession is made, which is the exception. Paris, June 30.—Wheat: the Paris and country markets remain inactive, and the tendency of prices downwards. Flour has been a little firmer since yesterday, and quotations unaltered. The six marks are worth 35s. 9d. per 280 lbs. The stocks are estimated at 19,242 cwts. The arrivals of English and foreign Oats and foreign Barley are large, of English Wheat small, of foreign Wheat and Flour good. The market was very thinly attended, and English Wheat being scarce commanded Monday's prices, but foreign, for which the demand was limited, was purchaseable at 1s. per qr. less than on that day. Barley, Beans, and Peas are fully as dear. Oats are neglected, and must be quoted 6d. per qr. cheaper. Flour is 6d. per barrel lower.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English	1010 qrs.	— qrs.	3820 qrs.	920 sks.
Irish	—	—	1850	— ,,
Foreign	20,320 ,,	7760	36,860 ,,	100 ,, / 14490 brls

LIVERPOOL, June 28.—We have had a good attendance of both town and country millers and dealers at to-day's Corn Exchange, and notwithstanding the pacific tone of Parliament last night, Wheat has not given way more than 1d. per cental, and Flour 3d. per barrel and sack, with a fair consumptive demand thereat. Indian Corn is offered very sparingly, and cannot be bought any cheaper. Oats and Oatmeal steady at full prices. Beans are scarce, and 6d. per qr. dearer. The market on the whole is very sound at the reduction.

FRIDAY, July 1.—There was a fair attendance at market. Wheat rather dearer, with moderate demand. Flour: barrels more inquired for, but prices unchanged. Indian Corn steady. Egyptian Beans scarce. Saidi sold at 35s. Oats and Oatmeal firm.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
May 21	39s 8d	29s 6d	20s 0d	31s 5d	34s 2d	32s 9d
— 28	39 5	29 0	19 10	27 7	34 6	31 9
June 4	38 11	29 6	19 10	28 4	34 10	33 5
— 11	39 6	27 11	20 0	34 1	34 10	33 9
— 18	40 3	27 6	20 4	32 8	35 5	33 9
— 25	40 0	28 0	20 8	..	35 5	33 3
Agg. Aver.	39 8	28 7	20 1	30 10	34 10	33 1

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	May 21.	May 28.	June 4	June 11.	June 18.	June 25.
40s 3d	..	..	..	..		..
40 0	..	..	..	..	..	
39 8		..	..	..	..	..
39 6	..	..	..		..	..
39 5	..		..	..	..	..
38 11	..	..		..	..	..

WANTED, as GARDENER (HEAD WORKING), a married Man, about 30 years of age, who thoroughly understands his business in all its branches. One acquainted with Underwoods will be preferred. Must be of very active habits, and have an unexceptionable character in every respect.—Apply by letter to D P., 88, Eaton Place, Belgravia, S W.

WANTED, an experienced GARDENER to take charge of Flower and Kitchen Gardens, with Greenhouse and Hothouse. Wages 18s. a week and Cottage.—Apply to H. J. DAVIS, Esq., Tivoli, Newport, Monmouthshire.

WANTED, a GARDENER who understands the Management of Garden and Pleasure Grounds, single-handed, and who would make himself generally useful.—Apply by letter, with references, to Mr. GEO. GOULDSMITH, 6, Pont Street, Belgrave Square, S.W.

WANTED, an energetic Man as OUT-DOOR PROPAGATOR.—Apply to THOS. BAYNTON & Co., Penge Cottage Nursery, Penge, Surrey, S.

WANTED, a MAN and WIFE, without incumbrance.—The Man as plain Gardener, and to attend to Pony and Cow, the Wife as plain Cook in a small family. Dissenters objected to.—Address E.C., Baltic Wharf, Kingsland Road.

WANTED, a steady active YOUNG MAN for Jobbing Work, and to Assist in the Nursery. Wages 16s. per week.—Apply to GEO. J. WOOLLETT, Nurseryman, Caterham, Surrey.

WANTED, a YOUNG MAN who is accustomed to the Budding and Grafting of Roses, Fruit Trees, &c., also the Growth and Propagation of Soft-wooded Plants, and Nursery work in general.—I. H., Keyfield Nursery, St. Albans, Herts.

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UNDER COACHMAN.—Wanted, a Person accustomed to Carriages and Horses, and who, when the family are away, will be willing to help in the Garden.—Address D., *Gardeners' Chronicle Office*, W.C.

WANTED, a COWMAN, on a gentleman's Farm, to Milk, mind Pigs and Poultry, kill Sheep and Pigs, and do General Farm Work. Wages 14s. a week, with Lodging, Firing, and Milk.—Apply by letter to P. A., Post Office, East Sheen.

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GARDENER (HEAD).—Age 42, married, no incumbrance; perfectly understands Pines, Vines, Stove and Greenhouse Plants, &c. Leaving in consequence of a death in the family, and will be at liberty for an engagement at any time.—X. LANCET, *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Age 30, married, no incumbrance; thoroughly experienced in Flower, Fruit, and Kitchen Gardens; also Early and Late Forcing. Can take the Management of Land and Stock if required. Six years' good character.—R. W., Mr. W. Paul's, Waltham Cross, N.

GARDENER (HEAD), where there is Early and Late Forcing of Vines, Peaches, Melons, Cucumbers, Strawberries, &c.—Age 36, married; thoroughly understands his profession. Seven years and eleven months' character, which will bear the strictest investigation.—R K, Port Vale Lodge, Hertford.

GARDENER (HEAD).—EDWIN HOLLAMBY has much pleasure in recommending to any lady or gentleman who are in want of a person as above, an intelligent, industrious young Man, of thorough experience in all departments of his profession. The most satisfactory reference from present employer.—The Nurseries, Tunbridge Wells, and Groombridge, Kent.

GARDENER (HEAD).—Middle-aged, single, practical knowledge of his profession. Good character.—Polley's, 79, High Street, Wandsworth, S.W.

GARDENER (HEAD).—Scotch; married, practical and working; well up in modern practice in Forcing, the Culture of Vines in pots, the Management of Kitchen and Pleasure Gardens, and has had experience in Heating Horticultural Buildings. Four years' good character, and first-class testimonials.—J. F., Devonshire Road, Croydon.

To Noblemen and Others.

GARDENER (HEAD).—A. COOK, Pymmes Gardens, Edmonton, N., will shortly be disengaged, the family leaving, and is desirous to offer his services to any gentleman requiring a thorough Gardener. Can be highly recommended by present and former employers.

GARDENER (HEAD).—Age 32, married; has had experience in the Management of Large Gardens, including the Growing of all kinds of Fruits, Flowers, and Vegetables. Has also had practice in the Cultivation of Orchidaceous, Stove, and Greenhouse Plants, Ferns, &c., for Exhibition. Ten years' unexceptionable character, and first-class reference.—A. M., Mr. Slocombe, Ongar, Essex.

GARDENER (HEAD).—Age 33, married, no incumbrance; has a practical knowledge of Early and Late Forcing of Vines, Peaches, Strawberries, Melons, Cucumbers, and Greenhouse Plants; is a good Flower and Kitchen Gardener. Present employer will answer any questions. Good references from previous employers. Over three years' character.—A. B., Subscription Library, Lymington, Hants.

GARDENER (HEAD OR SINGLE).—Married, no incumbrance; understands Kitchen and Flower Gardens, and Plants in general. Good character.—B. C., 22, North Street, Edgware Road, London, W.

GARDENER (HEAD OR SINGLE-HANDED).—Age 35, married, no incumbrance. Has a good knowledge of Gardening in all its branches. Wife a good Dairy-woman. Four and a half years' excellent character.—D. M., No. 3, Berkshire Cottages, Upper Road, Tunbridge Wells.

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The Gardeners' Chronicle Newspaper.

SATURDAY, JULY 9, 1864.

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The Annual Income is over	£70,000
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Special Notice.—Life Department.

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The Books close for the year on July 31, 1864.

Life Policies taken out before that date will rank for three full years at the next distribution of profits in 1866.

The following examples of Bonus additions are taken from the Company's books:—

A Policy issued in 1834 for 4000*l.* had increased at August 1, 1861, to the sum of	£5402	17	1
A Policy issued in 1836 for 5000*l.* had increased at August 1, 1861, to the sum of	6487	18	10
A Policy issued in 1841 for 1000*l.* had increased at August 1, 1861, to the sum of	1256	14	9

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DIRECTORS in LONDON.

President—The Right Hon. the EARL of MANSFIELD.

Charles Balfour, Esq.	John Frank Mieville, Esq.
Robert Collum, Esq.	J. R. Robertson, Esq.
Francis Fearon, Esq.	Hugh F. Sandeman, Esq.
H. M. Kemshead, Esq.	G. Ramsay, Esq., Manager of the Company.
John Kingston, Esq.	

Secretary—F. G. Smith, Esq.
Medical Officer—E. W. Duffin, Esq., M.D
Solicitors—Messrs. Oliverson, Lavie, and Peachey.

The last Annual Report and Proposal Forms may be had on application at the Offices of the Company. F. G. SMITH, Secretary.
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IV. HISTORY OF OUR LORD IN ART.
V. ENGLISH HORSES.
VI. PUBLIC SCHOOLS.
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News of the Week.

IN the House of Lords on Friday Earl GREY moved a series of resolutions condemnatory of the policy pursued by Her Majesty's Government with regard to the empire of Japan, and urging the adoption of such changes in the treaty as would avert further hostilities and promote an increase of friendly commerce between the two nations to their mutual benefit. Earl RUSSELL opposed the motion, and after a short debate the resolutions were negatived on a division by 30 to 11. On Monday, in reply to the Marquis of CLANRICARDE, Earl RUSSELL stated that the Prussian Government had formally deniep the authenticity of the despatches recently published in its name, in reference to the alleged renewal of the Holy Alliance. The Earl of MALMESBURY gave notice that on Friday he would move a resolution on the recent Conference, identical in its terms with the resolution moved by Mr. DISRAELI in the House of Commons. On Tuesday, in answer to the Earl of SHAFTESBURY, Earl RUSSELL said that the Government had received no official confirmation of the report that the Prussian troops had refused quarter to the Swedish volunteers found in the Danish ranks when the island of Alsen was taken; but he would make inquiries on the subject. Lord BROUGHAM withdrew the Bribery Bill for the present Session. The Facilities for Divine Service in Collegiate Schools Bill passed through Committee. On Thursday the Railway Construction Facilities Bill was read a second time, on the understanding that it is to be referred to a Select Committee. Several other Bills were advanced a stage.

In the Commons on Friday, on the order for the third reading of the Tests Abolition (Oxford) Bill, Sir W. HEATHCOTE moved that it be read a third time that day three months. On a division the amendment was negatived by 150 to 140. On the question that the Bill be read a third time, another division was called for, which resulted in a tie, the numbers being—for the third reading, 170; against it 170. The SPEAKER having given his casting vote for the "ayes," the Bill was read a third time by a majority of one. On the question that the Bill do pass, the House again divided, when the motion was negatived by 173 to 171. The Bill was consequently thrown out. The Street Music (Metropolis) Bill passed through committee, with the addition of a new clause moved by Sir G. GREY. On Monday Mr. DISRAELI, in a speech of great length, moved the resolution of which he gave notice last week, that an Address be presented to the QUEEN regretting the failure of the Conference, and expressing the opinion of the House that, while the course pursued by Her Majesty's Government had failed to maintain their avowed policy of upholding the integrity and independence of Denmark, it had lowered the just influence of this country in the counsels of Europe, and thereby diminished the security for peace. Mr. NEWDEGATE moved, as an amendment, that the independence of Denmark and the possessions of that kingdom, on the terms proposed by the representatives of the neutral Powers in the Conference, ought to be guaranteed. The CHANCELLOR of the EXCHEQUER and the LORD ADVOCATE opposed Mr. DISRAELI'S resolution, which was supported by General PEEL and Lord STANLEY. The debate was then adjourned to Tuesday, when the motion was opposed by Mr. COBDEN, Mr. ROEBUCK, Mr. HORSMAN, Mr. W. E. FORSTER, Lord R. VANE, and Mr. WHALLEY, and supported by Lord R. CECIL, Mr. B. JOHNSTONE, Mr. LIDDELL, Lord R. MONTAGU, and Mr. S. FITZGERALD. The debate was then adjourned to Thursday. On Wednesday the Trespass (Ireland) Bill passed through Committee with amendments. On the order for going into Committee upon the Punishment of Rape Bill, Sir C. O'LOGHLEN moved as an amendment that the Bill be committed that day three months. On a division the amendment was carried by 84 to 78. The Bill was therefore lost. The Municipal Cor-

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porations (Ireland) Bill and the Fisheries (Fresh Water) Bill were withdrawn. On Thursday the adjourned debate on Mr. DISRAELI's resolution was resumed, when the motion was opposed by Mr. LAYARD, the ATTORNEY-GENERAL, and Mr. ONSLOW; and supported by Mr. HARDY, Mr. BENTINCK, Mr. COGAN, Sir F. GOLDSMID, Mr. PEACOCKE, and Lord JOHN MANNERS. The debate was then adjourned to last night, on the understanding that the question should then be brought to a division. The Cranbourne Street Bill passed through Committee, and the Street Music Bill after a division was read a third time and passed.

From the seat of war we have a report that Prussia intends to take possession of all the islands in the Danish Archipelago, and afterwards to attack Copenhagen itself. Prince JOHN of GLUCKSBURG, the youngest brother of the KING of DENMARK, has arrived at Berlin, and is supposed to be the bearer of a proposal for peace. The reported massacre of 400 Swedish Volunteers by the Prussians is contradicted.

Accounts from New Zealand announce another disaster to our troops in their contest with the natives. On the 29th of April General CAMERON, with a force consisting of the 43d Regiment and the crews of her Majesty's ships Esk, Harrier, and Curaçoa, attacked a strong position held by the Maoris at Tauranga. The assault was unsuccessful, but the natives, who had suffered severely, abandoned the position during the night. Our loss was 7 officers killed on the spot, 7 wounded, 3 of whom died after the action; 21 men killed and 77 wounded. Among the killed were Captain HAMILTON, of her Majesty's ship Esk; Commander HAY, of the Harrier; Lieut. Colonel BOOTH, commanding the 43d Regiment, three captains, and two lieutenants of the same regiment, and Lieutenant HILL, of the Curaçoa.

The latest accounts from the United States are ominous of disaster to the Army of the Potomac. On the 21st ult. the Federal corps under Generals HANCOCK and WRIGHT made a move from the right to the left for the purpose of more closely investing Petersburg, but were confronted by General HILL's corps, and driven back with grea loss. On a reconnaissance being made it was found that the Confederates were in strong force in an entrenched line, on which a general engagement took place, in which the Federals suffered heavily in killed and wounded, and lost four guns. On the 22d General HILL passed right through General GRANT's lines, attacked the second corps in its rear, drove it from its entrenchments, captured an entire brigade with five guns, and inflicted a loss exceeding 3000 in killed and wounded. In consequence of this disaster General GRANT has abandoned his advance upon the Weldon Railroad, and has withdrawn to his entrenched position before Petersburg. Confederate accounts assert that General HUNTER and two columns of General SHERMAN's army have been defeated with heavy loss; and it is said that General BUTLER's forces, while engaged in the destruction of the Petersburg and Richmond Railway, were suddenly attacked by General LEE and driven off with heavy loss. President LINCOLN visited General GRANT at his head-quarters at City Point on the 21st. The Senate has passed the Bill repealing the Fugitive Slave Law by a vote of 24 to 7.

Home News.

THE COURT.—On Friday morning the Princess Helena and Princess Louisa rode on horseback. In the afternoon the Prince and Princess Louis of Hesse left the Castle for Buckingham Palace. The Queen, accompanied by Princess Helena, took a carriage drive. On Saturday the Queen, accompanied by Princess Beatrice, come to London, and visited the Prince and Princess of Wales at Marlborough House, where her Majesty remained to luncheon. Her Majesty drove from Marlborough House to Carlton House Terrace, and honoured the Duke of Newcastle with a visit, and afterwards visited the studios of Mr. Foley and Mr. Durham to inspect their memorials of the Prince Consort. The Queen then went to Buckingham Palace, where the Duchess of Inverness had the honour of being received by her Majesty. The Prince and Princess Louis of Hesse joined her Majesty at Buckingham Palace. At 6 o'clock her Majesty, accompanied by Prince and Princess Louis of Hesse and Princess Beatrice, left the Palace in an open carriage and four, and drove up Constitution Hill, through Hyde Park, to the Great Western Station, where a special train was in readiness to convey her Majesty to Windsor. Prince and Princess Louis of Hesse returned to Buckingham Palace. Princess Helena and Princess Louisa went to Canterbury and inspected the cathedral. The Dean of Westminster, Lady A. Stanley, and Archdeacon Harrison accompanied the Princesses, and conducted them over the cathedral, St. Augustine's College, church of St. Martin's, and other objects of interest in the city. Archdeacon and Mrs. Harrison entertained their Royal Highnesses at luncheon, after which they returned to Windsor. In the evening the Earl of Clarendon arrived at the Castle on a visit to Her Majesty. On Sunday morning the Princess Helena, Princess Louisa, and Princess Beatrice attended Divine service in the private chapel. The Rev. E. W. Benson, Head Master of Wellington College, officiated. In the afternoon Prince and Princess Louis of Hesse arrived at the Castle from Buckingham Palace. On Monday morning the Queen, accompanied by the Princess Louis of Hesse, drove out. The Princess Helena, Princess Louisa, and Princess Louis of Hesse rode on horseback. The Princess Victoria of Hesse took a carriage airing. The Earl of Clarendon left the Castle. The Dowager Marchioness of Waterford had an audience of her Majesty. In the evening the Prince and Princess Louis of Hesse and Princess Helena left the Castle for Buckingham Palace. On Tuesday morning the Queen, accompanied by the Princess Beatrice, came to London, and visited the Horticultural Gardens at South Kensington. Her Majesty returned to Windsor Castle shortly before 1 o'clock. The Duchess of Cambridge and the Princess Mary visited the Queen and remained to luncheon. Princess Helena returned from London. The Earl and Countess of Hardwicke arrived at the Castle on a visit. On Wednesday morning the Queen walked and drove in the grounds, accompanied by Princess Louisa. In the afternoon the Prince and Princess Louis of Hesse arrived at the Castle from Buckingham Palace. Princess Helena and Princess Louisa went by special train to Twickenham, and visited the Duke and Duchess d'Aumale. The Princesses afterwards drove in an open carriage and four to Ham Common and visited the Duke and Duchess de Chartres, and returned to Windsor in the evening. The Princess Blanche of Orleans, the Countess Dowager Spencer, and the Right Hon. Sir Charles Wood arrived at the Castle on a visit. On Thursday morning the Queen, accompanied by Princess Louis of Hesse, drove in the grounds. Princess Helena, Princess Louisa, and Prince Louis of Hesse went out riding. Princess Beatrice and Princess Blanche of Orleans took a carriage drive.

THE PRINCE AND PRINCESS OF WALES.—On Friday morning the Prince and Princess left Marlborough House for the Wellington College, and were present at the proceedings of the "Speech-day" at the College. The Prince and Princess, after partaking of luncheon with the Head-Master, returned to town. In the afternoon the Prince of Wales, accompanied by Prince Leiningen, rode on horseback. In the evening the Prince and Princess, accompanied by the Prince and Princess of Leiningen, honoured the Duchess of Wellington with their company at a ball at Apsley House. On Saturday morning the Prince and Princess went to the bazaar in aid of the Earlswood Idiot Asylum, at the Hanover Square Rooms. The Queen, accompanied by Prince Beatrice, visited the Prince and Princess at Marlborough House, and took luncheon with their Royal Highnesses. The Prince, accompanied by the Prince of Leiningen, rode on horseback. The Princess, accompanied by the Princess of Leiningen, took a carriage drive. In the evening the Prince of Wales dined with the corporation of the Trinity House. The Princess, accompanied by the Prince and Princess of Leiningen, went to Her Majesty's Theatre. On Sunday morning the Prince and Princess, with the Prince and Princess of Leiningen, attended Divine service at the Chapel Royal, St. James's. The Bishop of London preached the sermon. On Monday morning the Prince and Princess, accompanied by Prince and Princess Leiningen, witnessed a review in Hyde Park. Their Royal Highnesses afterwards went to the London Hospital, where the Prince laid the foundation stone of the new wing of the Hospital. Their Royal Highnesses inspected the wards of the Hospital, and afterwards took luncheon with the President and the Governors. In the afternoon the Prince, accompanied by Prince Leiningen, rode on horseback. In the evening their Royal Highnesses had a dance at Marlborough House. On Tuesday the Prince and Princess, accompanied by Prince and Princess Louis of Hesse and the Prince and Princess of Leiningen, went to the Horse Show at the Agricultural Hall, Islington. In the afternoon the Princess, accompanied by Princess Louis of Hesse and the Princess of Leiningen, took a carriage drive. The Prince, accompanied by Prince Louis of Hesse and the Prince of Leiningen, rode on horseback. In the evening the Prince and Princess and the Prince and Princess of Leiningen dined with the Duke of Cambridge at Gloucester House. On Wednesday the Prince and Princess, accompanied by Prince and Princess Louis of Hesse, and the Prince and Princess Leiningen, visited the Horticultural Gardens at South Kensington. In the afternoon the Princess took a carriage drive. The Prince rode out on horseback. The Prince and Princess of Leiningen took leave of their Royal Highnesses, and left Marlborough House for the Isle of Wight. In the evening the Prince and Princess honoured the Duke and Duchess of Manchester with their company at dinner. On Thursday the Prince of Wales rode on horseback. In the afternoon the Prince and Princess went to the French Gallery, to view M. Gudin's picture of the "Arrival of Napoleon III. at Genoa during the late war," and afterwards took a carriage drive. In the evening their Royal Highnesses went to the Italian Opera, Covent Garden.

PRINCE ALFRED.—The Racoon, with Prince Alfred on board, was to have left the Firth of Forth for Norway on Saturday, but her departure has been delayed by the outbreak of smallpox on board. The crew have consequently been encamped for the time on the island of Incholm, and others have been removed to the Edinburgh Infirmary, while the vessel is subjected to a thorough purification. Prince Alfred, who landed on Saturday, is residing at Douglas's Hotel, Edinburgh, waiting the arrival of the Aurora, Captain Sir Leopold M'Clintock, which is understood he is now to join.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

MEETING OF THE CONSERVATIVE PEERS.—A meeting of Conservative Peers was held on Monday at the Marquis of Salisbury's residence in Arlington Street. About 80 peers were present, but the Earl of Derby was prevented attending by an attack of gout. The meeting lasted nearly two hours.

ORDER OF THE BATH.—The Queen has given orders for the appointment of Major-General Sir Henry Storks, K.C.B., and G.C.M.G., late Lord High Commissioner of the Ionian Islands, to be a Knight Grand Cross of the Bath.

Foreign.

FRANCE.—The Emperor presided at a Council of Ministers on Saturday, and left Fontainebleau on Thursday for Vichy. The Empress, with the Prince Impérial, left on the same day for St. Cloud. Baron von Beust was a visitor at Fontainebleau before the Emperor's departure. His Excellency dined with M. Drouyn du Lhuys on Sunday evening. The *Opinion Nationale* has received a second warning for an article signed by M. Guéroult, entitled "The Programme of the English Cabinet," in which, "by representing France to be subservient to the doctrine of peace at any price, it insults and calumniates the Emperor's Government." It is reported in Paris that the Danish Government has formally applied to France for her mediation, but that the application has been rejected. The Paris papers continue to discuss at great length the failure of the Conference, and by the violence of their language against this country betray their deep mortification at the resolution of the English Government not to embark in a war with Germany for Denmark. The prospect of England having singly to bear the brunt of the conflict, with the chance of humiliation and defeat, has for some been regarded with delight, and their disappointment finds vent in the strongest language. They discuss at great length the despatches published by the *Morning Post* in reference to the alleged revival of the Holy Alliance, and, notwithstanding the denials of the Austrian and Prussian Governments, express a firm belief in their authenticity. They regard the documents as affording material proof of what was suspected to be the real object of the meeting of the Sovereigns at Kissengen, and unanimously declare that the chief object of the alliance of the Northern Powers is hostility to France. The Emperor, as arbitrator in the differences between the Viceroy of Egypt and the Suez Canal Company, has, on the report of a commission appointed by his Majesty, awarded 84,000,000 fr. (3,200,000*l*.) to the company.

ALGERIA.—General Rose has met 500 deputies from the insurgent tribes on their way to make offers of submission. The Algiers journals state that the chief of the revolt will be transported to Senegal, and the insurgent tribes disarmed.

SPAIN.—A circular note on the Peruvian question has been addressed by the Spanish Government to its diplomatic agents abroad, denying all intention of setting up a claim of revindication, the only object of Spain being to occupy the Chincha Islands in order to obtain satisfaction from Peru. The note also adduces proofs of the risk of losing his life, encountered by the Duke of Mazaredo during his journey through Peru. The iron-clad frigate Numancia, the sailing frigates Berenguela, Blanca, and Vencedora, and the steamer San Quintin will sail for the Pacific in the course of the present month.

PORTUGAL.—Intelligence from Lisbon asserts that the Portuguese Government will shortly be obliged to contract a new loan. The vine disease is again prevalent in Portugal. The railway from Lisbon to Oporto has been opened for traffic. The formal inauguration will not yet take place. A commission is sitting to consider the question of Custom House reform. Preparations are making for the general elections.

DENMARK.—Letters from Copenhagen, dated the

1st inst., state that a rumour was current, and generally believed there, that the King was disposed to make peace. Prince John of Glucksburg, youngest brother of the King, passed through Lubeck on Monday on his way to Berlin, and this journey is regarded as an indication of such a desire. It is also reported that King Christian has personally requested the intervention of the Emperor of the French. An address to the King has been proposed in the Rigsraad, thanking his Majesty for his determination to cede territory rather than sacrifice the independence of the country. The rumoured resignation of General Gerlach, and the appointment of General Steinmann as his successor has been confirmed.

The Danish Duchies.—It is asserted that Prussia intends to take possession of all the islands in the Danish Archipelago successively, and afterwards to endeavour to attack the Danes in Copenhagen itself. On the 3d a reconnoitring force from the 8th Hussars and the 50th Infantry regiment drove back a party of Danes who had crossed the Limfjord. Sixty prisoners were taken, of whom 30 were wounded. The Prussian loss was inconsiderable. A private letter from Tondern says that during the night of the 6th, the Austrian Rifles took possession of the Island of Fohr. The Prussians continue actively employed in erecting batteries at Middelfahrt, opposite Fühnen. A telegram from Sonderburg of the 1st inst. stated that at the partial clearance of the battle field on the previous day, the Prussians discovered 400 Swedish volunteers, to whom no quarter was given. The statement is now said to be without foundation. The Danish loss at the capture of Alsen is officially stated to amount to from 2500 to 3000 men, most of them being killed and wounded, among whom are 81 officers. It is said that the Rolf Krake was but slightly injured in her engagement with the Prussian batteries. A ship-of-war, a gunboat, and two gun-sloops succeeded in making good their escape from the Alsen Sound, while one gun-sloop and a jolly-boat were blown up, the crews, however, being saved. The Prussians and Austrians are increasing the number of their troops in the Duchies. Very considerable contributions have been imposed upon the inhabitants of Jutland, which has been placed under Prussian administration. The Danish officials and inhabitants have been ordered to obey the Prussian authorities, to whom the Customs' dues and the revenues derived from other sources are to be handed over. General Munster has destroyed several bridges in the neighbourhood of Viborg, including the railway bridge at Rindsholm, and cut down the telegraph wires along the railway. He is also reported to have given notice to the English chief engineer of the line, that the railway bridge at Langau will be blown up in a few days. The Duke of Augustenburg on Sunday received the deputation with the address of the Schleswig Holstein committee. In his reply his Highness said that it was to be hoped that a division of Schleswig had been prevented by the active proceedings of the German Powers. He also said:—

"I hope that the claims put forward by the Grand Duke of Oldenburg will not defer the time when I shall be able to lead the Duchies against the common enemy. The interests of Germany and the welfare of the country demand a speedy settlement of public affairs on a firm basis. I may hope that the country will enable me to fulfil its obligations towards Germany, and to uphold the relations of that Power which will in future be our most effectual protection against Denmark."

Sweden.—It is announced that a Swedo-Norwegian squadron has received orders to put to sea immediately and to concentrate in the waters of Göttenburg, where it will take up a position of observation.

Holland.—The Emperor of Russia and the Czarewitch on leaving Kissingen are to pay a visit of several days' duration to the King of Holland at the Hague, after which the Czarewitch will visit Scheveningen, where he will remain some weeks for sea bathing.

Frankfort.—In the sitting of the Federal Diet on Thursday it was resolved, on the proposition of the Schleswig-Holstein Committee, to request the Government of the Grand Duke of Oldenburg to use the greatest despatch in substantiating his claims to the succession of the Duchies.

Hanover.—The Lower Chamber on the 1st inst. resolved, with the assent of the Minister of Justice, to represent to the Government whether, provided common action with the remaining Federal States appeared improbable, Hanover should not for her part commence constructing a German Federal fleet.

Prussia.—Prince John, youngest brother of King Christian of Denmark, arrived at Berlin on Wednesday, and will probably proceed to Carlsbad. The King of Prussia will leave Carlsbad for Gastein on the 15th inst. Count von Bismark has addressed a telegram to the Prussian Ambassador in London, stating that all the Prussian despatches on the "Holy Alliance" published by the *Morning Post* are pure inventions; and that no such document nor anything similar exist.

Austria.—Count Rechberg has addressed a despatch to the Austrian Ambassadors in Paris, London, St. Petersburg, and Stockholm, recapitulating all the proceedings of the Conference, in order to prove that Denmark is alone responsible for its failure, as she rejected the last proposition of the neutral Powers. The *Oesterreichische Zeitung* says that all the Austrian despatches published by the *Morning Post*, and professing to have passed between Count von Bismark and Count von Goltz in reference to the "Holy Alliance," are purely apocryphal, and an unquestionable fabrication. It adds that on the succession question "Austria is pledged to no claimant, and has entered into no engagements towards Russia." The evening edition of the official *Wiener Zeitung* also denies the conversation alleged by the *Morning Post* to have taken place between Count Rechberg and the Prussian Ambassador at Vienna, in which Austria is said to have claimed Russian aid and guarantees for her possessions as the conditions of an alliance between the Northern Powers. It declares that no proposition has been made tending in this direction.

Italy.—In the Chamber of Deputies on Tuesday the debate on the financial policy of the Government was continued. Signor Mordini reviewed the programme of the Left. Signor Lanza criticised the financial system of the Government. He contested the accuracy of the statement on the condition of the Treasury, and proposed economy in several departments. He also urged the Cabinet to maintain the understanding with France, in order to render the frontiers secure against invasion by brigands, stating that brigandage cost the country 50,000,000 lire annually. The President of the Council stated that no financial plan had been proposed in opposition to that brought forward by the Ministry, and that no political programme had been clearly laid down by their opponents, except that of the Left, demanding an immediate declaration of war. He objected to any order of the day which did not express absolute confidence in the Government. A vote of confidence was then passed by 182 to 126 votes.

Russia.—A Russian squadron, composed of one ship of the line, three frigates, and two transports, has been equipped at Cronstadt, where great naval preparations are making. It is said that a Russian squadron of evolution will shortly touch at the Swedish and Danish ports in the Baltic.

Greece.—The King returned unexpectedly to Athens on the 4th inst. Despatches from Greece give a sad picture of the political and financial position of the country, and state that the Ionian Islands are threatened with anarchy.

Danubian Principalities.—The Governments of England and France have agreed to adopt a united policy towards the Danubian Principalities. Prince Alexander Couza has returned to Bucharest perfectly satisfied with his mission to Constantinople.

Tunis.—The Bey of Tunis has sent 4000 soldiers against the insurgents. According to all accounts the insurrection of Tunis has had no connection with that of the Algerian tribes.

India.—A despatch from Bombay of the 9th June states that the Ameer of Afghanistan has defeated one of his brothers, who has fled into British territory. The Ameer is now marching against his other brothers.

China.—A telegram from Shanghai of May 23d says that Chang-chow-foo has been taken by Major Gordon, and that Taugyau has fallen. In his previous repulse at Chang-chow-foo he had 6 officers killed and 21 wounded. The killed were Colonel Morton, Captain Smythe, Captain Rhodes, Lieut. Greenlaw, Lieut. Williams, and Lieut. Brown. The wounded were Lieut. Reynold, Capt. Abbot, Capt. Hendrickson, Lieut. Maloney, Lieut. Johns, Capt. Donald, Capt. Maher, Lieut. Donley, Capt. Murphy, Capt. Hammond, Lieut. Robinson, Lieut. Matchet, Col. Rhodie, Capt. Graham, Col. Howard, Major Coates, Capt. Cane, Lieut. Jones, Capt. Bailey, Major Doyle, and Capt. Dunn.

Japan.—The expedition to re-open the Straits of Shimonoseki has sailed.

New Zealand.—Advices from New Zealand announce that on the 29th April General Cameron attacked the rebels, who held a very strong position near Tauranga. The assault was unsuccessful, but the Maoris, who had suffered severely, abandoned the position under cover of the night. Our loss, together with that of the Royal Navy, amounted to 7 officers killed, 7 wounded, 21 men killed, 77 wounded. The officers killed were—Captain Hamilton, H.M.S. Esk; Lieut. Hill, H.M.S. Curaçoa; Captain Glover, Captain Mure, Captain Hamilton, Captain Utterton, and Lieut. Langlands, of the 43d Regiment. The officers wounded were Commander Hay, H.M.S. Harrier (since dead); Lieut. Duff, H.M.S. Esk, very severely; Lieut. Hammick, H.M.S. Miranda (? Curaçoa), very severely; Lieut.-Colonel Booth, 43d Regiment (since dead); Lieut. Glover, 43d Regiment (since dead); Ensign Clark, 43d Regiment, severely; Ensign Nichol, 43d Regiment, slightly. The Maori loss was 100. Their leader has since been defeated by friendly natives.

United States.—The accounts from General Grant's head-quarters give indications of a retrograde movement, if not of a forced retreat, of the Potomac Army; but no details are known or permitted to be published. Unofficial despatches from City Point report that on the 21st ult. General Grant moved Wright's and Hancock's corps from right to left, in order to destroy the Weldon Railroad and invest Petersburg. During his march he had heavy skirmishing with Hill's corps. The Confederates being found in force and entrenched, General Grant ordered the whole army forward, and formed line of battle. A general engagement ensued on the left of his line, lasting throughout the night of the 21st, in which the Federals lost heavily in killed and wounded, besides four cannon. On the same day Fitzhugh Lee and Hampton attacked White House, but the assault was defeated by the arrival of Sheridan with reinforcements, and the participation of Federal gunboats. On the 22d General Hill slipped through a gap in Grant's line between the Second and Sixth Corps, suddenly attacked the Second in the rear, and drove it in confusion from its intrenchments. One entire Federal brigade, besides many other prisoners and five cannon, were captured. The loss in killed and wounded is said to exceed 3000. Skirmishing continued throughout the afternoon and night, when the Confederates retired to a strong position, which they still hold. In consequence of this disaster General Grant has been obliged to abandon his attempt to occupy the railways running south from Petersburg, and has withdrawn his lines to their previously intrenched position. Severe skirmishing occurs daily. Wilson's cavalry has struck the Danville Railroad near Burkesville, destroyed the track, and moved southward. Mr. Stanton reports that all the railroads leading to Richmond have been destroyed. On the 24th Sheridan commenced crossing the James River, near City Point. He was attacked by a heavy Confederate force, which he repulsed after a severe fight, in which he lost 1000 men. A portion of his troops were still north of the river on the 27th. General Grant has blockaded the James River below Fort Darling with sunken vessels. President Lincoln left Washington on the 21st for Grant's head-quarters. On the previous day Generals Grant, Butler, and Admiral Lee held a consultation on board the flag ship in the James River. It is reported that General Butler's forces, while engaged in destroying the Petersburg and Richmond Railroad, were surprised by General Lee, and driven back with heavy loss. Confederate despatches report that Hooker was repulsed on the 15th with great slaughter in an assault upon Cleburne of Johnston's army near Marietta. Nine brigades have been detached by Lee to operate against Hunter. Mr. Stanton announces that Hunter, finding his ammunition running short, is retreating to Western Virginia, but reports the complete success of his expedition to Lynchburg. On the other hand the Southern despatches state that the Confederates who were pursuing him had attacked him several times, captured 13 of his cannon, and inflicted heavy loss upon him in killed, wounded, and prisoners. At the last accounts he was between 50 and 60 miles north-west of Lynchburg. Sherman reports that two columns of his army, under Macpherson and Thomas, simultaneously attacked the Confederates at Kenesaw Mountains on the 27th, and were repulsed. He admits Thomas's loss at 2000 and Macpherson's at 500, among whom were General Harker and four colonels. Confederate despatches state the Federal loss at 4500. Sherman believes the Confederate loss to have been light, as they were protected by breastworks. The Confederate General Pillow is operating on Sherman's rear, and has captured the town of Lafayette. The Senate on the 23d ult. concurred in the repeal of the Fugitive Slave Law by a vote of 22 to 12. The House of Representatives has passed the Loan Bill, by a vote of 100 to 50, but has refused to repeal the privilege of commutation to conscripts. Gold is at 117 premium. The Constitutional Convention of Maryland has abolished slavery in that State by a majority of 53 to 27. The meeting of the Democratic Convention at Chicago for the inauguration of the Presidential campaign has been postponed to the 29th August. Mr. Lincoln has formally accepted the nomination of the Baltimore Convention. A mass meeting was held at the Cooper Institute on the 27th ult., to ratify the nomination of General Fremont for the Presidency. All the speakers vehemently denounced Mr. Lincoln. Isaac Henderson, navy agent at New York, and one of the proprietors of the *Evening Post*, an Administration journal, has been arrested upon a charge of defrauding the Government. The Grand Jury have declined to take action in the matter of the suppression of the *World* and *Journal of Commerce* newspapers, on the ground of inexpediency. Manhattan, the New York correspondent of the London *Standard*, has been arrested on the ground that the Ambassadors in London and Paris had declared that he did more injury by his articles to the cause of the North than any other man. He has since been liberated on a three days' parole.

Canada.—Another Ministerial crisis has occurred. The late Ministry resigned a short time since, in consequence of being unable to command a majority in the Assembly, and now the new Ministry, formed from the other side of the House, has been placed in a minority of 58 to 60 on a vote condemning a financial transaction, in which the leading ministers were concerned as members of a former Ministry. A dissolution is expected.

Parliament.

HOUSE OF LORDS.

Friday.—*Japan.*—Earl Grey moved a series of resolutions in reference to the relations between this country and Japan, with a view to the modification of the existing treaty.—Earl Russell denied that the treaty had been obtained by force, and contended that English subjects could not be allowed to be punished by torture and mutilation under the sanguinary laws of Japan. He admitted that the conduct of many Englishmen in Japan had been very blameable. They often, as in China, behaved insolently to the natives, but he knew of no particular regulations that could prevent these abuses. He defended the course taken by Sir R. Alcock in exacting from the Prince of Satsuma a compensation for the murder of Mr. Richardson, believing it was more likely to prevent any future war than to provoke it. This country was ready to make any concession the Japanese could reasonably ask for; but it would be better to maintain the rights we had acquired than to begin a new system of

policy, especially if it reversed the principles we had always acted on when dealing with Eastern nations.—The Bishop of OXFORD thought that the treaty had certainly been obtained by intimidation, and existed only by the terror the Japanese felt of our arms. The terms of the treaty had been violated by English traders, especially by the exportation of gold, which was prohibited, and the very existence of the Japanese Government was endangered by the policy we were pursuing. England could not wish to reduce Japan to a state of anarchy, yet that must be the result if the Japanese political system were destroyed without creating any substitute.—The Duke of SOMERSET defended the conduct of Admiral Kuper and the French Admiral in prohibiting the erection of new batteries in the harbour of Yokohama. The people were quite ready to trade with us, since they continued to send goods to the open ports, though the Daimios threatened them with severe punishment for so doing.—The Earl of CARNARVON feared the system that had prevailed in China was extending itself to Japan, and would prove mischievous to all concerned with it. It undermined the native authority, and set up nothing in its place.—Earl GREY having replied, the House divided, when the resolutions were negatived by a majority of 19, the numbers being 30 to 11.

MONDAY.—*The Holy Alliance.*—Earl RUSSELL, in reply to a question from the Marquis of CLANRICARDE, said that the correspondence published by the *Morning Post*, with reference to the alleged Holy Alliance, was declared by the Prussian Ambassador to be an absolute invention. *Vote of Censure.*—The Earl of MALMESBURY gave notice that on Friday he intended to move a resolution to the effect that the House regretted the failure of the Conference, and that in their opinion the course pursued by her Majesty's Government with reference to Denmark had lowered the country in the estimation of Europe, and had thereby endangered the continuance of peace. *The Kearsarge.*—The Earl of HARDWICKE asked if the reports of the action between the Alabama and the Kearsarge had drawn the attention of the Government to the efficiency of iron chain-work as a defensive armour for ships of war.—The Duke of SOMERSET said the Admiralty two or three years ago made some experiments with chain armour, which proved that it could not effectually resist cast iron shot fired from the common 68-pounder gun. Against steel projectiles the chain-work was no defence whatever.—The Earl of CLANCARTY called attention to an alteration in the rules affecting the grants to *Convent Schools in Ireland*, sanctioned by the National Board of Education.—Lord GRANVILLE defended the change, contending that no valid objection could be made to it, while the progress of education was assisted by the measure.

TUESDAY.—*Vote of Censure.*—The Marquis of CLANRICARDE gave notice that he will move, as an amendment to the Earl of Malmesbury's motion, to express the regret of the House that Denmark was allowed to expect from the English Government material aid in support of the objects of the Treaty of 1852. The *Holy Alliance.*—Lord STRATFORD DE REDCLIFFE said that on Friday, the 15th inst., he would call attention to the diplomatic correspondence on the revival of the Holy Alliance, recently published in the *Morning Post*. He did not mean to question the assurance of the Prussian Ambassador that this correspondence was a pure invitation, but he felt bound to state that some time since he saw in the hands of a person of high character and authority a correspondence identical with that which had been so published. *Alleged Massacre of Swedish Volunteers.*—The Earl of SHAFTESBURY brought under notice the reported massacre at Alsen in cold blood (after they had surrendered as prisoners of war) of a body of Swedish Volunteers by the Prussian troops. He denounced this alleged outrage as an act of atrocious barbarity, contrary to the usages of civilised warfare, and disgraceful to a Christian nation. He wished to know whether the Government had received any information on this subject, and if not, whether they would cause inquiries to be instituted respecting it.—Earl RUSSELL replied that none of the despatches received by the Government alluded to the occurrence, but he would direct inquiries to be made.—The Marquis of CLANRICARDE feared there was too much reason to believe that this barbarous act had really been perpetrated, although he was unwilling to give credence to it. He reminded their lordships that before now similar acts of atrocity had been held to be good reasons for going to war. The *Facilities for Divine Service in Collegiate Schools Bill* passed through committee.—Lord BROUGHAM withdrew the *Bribery Bill* for the present session. In Committee on the *Public-houses Bill*, Lord EGERTON of TATTON moved the omission of the words giving power to town councils to adopt the provisions of the Act if they think fit.—Earl GRANVILLE opposed the amendment, and on a division it was negatived by a majority of 7, the numbers being—for the amendment, 24; against it, 31.

THURSDAY.—The *Life Annuities and Life Assurances Bill*, the *Factory Acts Extension Bill*, the *Railways Construction Facilities Bill*, the *Railway Companies Powers Bill*, and the *Burghs Registration Bill* were read a second time. The *Civil Bill Courts (Ireland) Bill* and the *Salmon Fisheries (Scotland) Bill* passed through committee. The *Clerk of the Peace Removal Bill*, the *Greek Loan Bill*, and the *Pilotage Order Confirmation Bill*, were read a third time and passed.

FRIDAY.—*Alleged Massacre of Swedish Volunteers.*—Earl RUSSELL stated, in reference to the report that 400 Swedes had been murdered in cold blood by the Prussians in Jutland, that he had received information by telegraph from Copenhagen, in answer to his inquiries, that there was no truth in the report. *Vote of Censure.*—The Earl of MALMESBURY moved a resolution expressing the opinion of the House that, while the course pursued by her Majesty's Government had failed to maintain their avowed policy of upholding the integrity and independence of Denmark, it had lowered the just influence of this country in the councils of Europe, and thereby diminished the securities for peace. In introducing the question he regretted the absence, through indisposition, of the Earl of Derby.

[Left speaking.]

HOUSE OF COMMONS.

FRIDAY.—Mr. BLAKE called attention to amending the laws relating to the administration of *Lunatic Asylums in Ireland*, and of making better provision for the care of imbeciles in union workhouses.—Sir R. PEEL said he did not think there was any need of further legislation.—Mr. G. DUFF called attention to the Report of the Commission on the *Inns of Court* in 1854, and dwelt upon the defects of the system as pointed out in the report in regard to legal education.—The SOLICITOR-GENERAL believed the Inns of Court fairly represented the Bar, and no complaints had been made by the profession. *Epping Forest.*—Mr. COX moved a resolution that her Majesty's Government, in accordance with the recommendation of the Select Committee on Royal Forests, should obtain the sanction of Parliament for the enclosure of the remaining portion of the forest, and make provision for securing an adequate portion for the health and recreation of the inhabitants of the neighbourhood and the metropolis.—The SPEAKER ruled that the motion could not be put.—Mr. PEEL said that the Government would have no objection to the resolution; and that a proposition had already been made by the Treasury to the Metropolitan Board of Works for carrying out the suggestion of the Committee. *The Conference.*—Lord BURGHLEY asked for an explanation of the statement made by Bishop Monrad in the Danish Rigsraad in reference to Earl Russell's proposal of arbitration, after promising that he would make no proposal less favourable to Denmark than the line of the Schlei.—Lord PALMERSTON said that the statement was not absolutely correct. Earl Russell did not say that he would not make a proposal; what he said was this: if the Danes agreed to the line of the Schlei he would not himself propose or support another line if proposed by any other plenipotentiary. To that engagement he adhered; but while at last it was found that the Danes would not consent to a line north of the Schlei, or the Germans to a line south of Apenrade, it became necessary to break off negotiations or make the proposal which was then made in conjunction with other neutral Powers to refer the matter to the arbitration of a friendly Sovereign.—The House then went into Committee of Supply, and agreed to the votes in Class 7 of the *Civil Service Estimates*. In Committee on *Thames Embankment and Metropolitan Improvement (Loans)*, resolutions were agreed to authorising the Treasury to guarantee the repayment of moneys that may be borrowed under the Acts for Embanking the Thames and Improving the Metropolis. The *Factory Acts Extension Bill*, the *Inclosure (No. 2) Bill*, and the *Railways Acts Amendment Bill* were read a third time and passed. The *Indemnity Bill* was read a second time. The *Cranbourn Street Bill*, and the *Drainage and Improvement of Lands (Ireland) Bill* passed through Committee. On the order for the third reading of the *Tests Abolition (Oxford) Bill*, Sir W. HEATHCOTE moved that the Bill be read a third time that day three months. He said he should not discuss the merits of the Bill or its probable results; but would merely call attention to the position of the House with reference to the Bill, divided as its supporters were into three distinct sections entertaining different views, some members supporting the measure on the understanding that it would receive amendments, which had not been proposed.—On a division, the amendment was negatived by 150 to 140. The result was hailed by tumultuous cheering by the majority. On the question that the Bill be read a third time Lord R. CECIL complained of the conduct of Her Majesty's Ministers, who had, he said, distinctly stated that they would support certain amendments in the committee, where, however, none of those amendments had been proposed.—Sir G. GREY said that he had stated only his own individual opinion of the Bill, the principle of which he approved, and had therefore voted for the third reading.—Lord J. MANNERS, Sir M. FARQUHAR, Mr. NEATE, and Mr. COLLINS spoke almost in dumb-show, the House being in a great ferment. A division then took place, the result of which was an equality of numbers—for the third reading, 170; against it, 170.—The SPEAKER, in order to afford the House an opportunity to give another vote on the question that the Bill do pass, gave his casting vote to the "ayes," which made the number 171. The Bill was then read a third time.—On the question that it do pass, the House again divided, when the motion was negatived by 173 to 171. So the Bill, at that final stage, was lost. The result was received with loud cheers by the Opposition. The House went into committee again upon the *Street Music (Metropolis) Bill*.—Mr. AYRTON moved to add to clause 1 a proviso that the musician shall be truly informed by the person making the charge of the circumstances under which he is required to depart.—This amendment was negatived on a division by 98 to 67.—Sir G. GREY moved a proviso, that the person making a charge shall accompany the constable who shall take into custody any person offending to the nearest police-stationhouse and sign the charge-sheet, which was agreed to.—A new clause, moved by Sir G. GREY, as to the treatment of a charge brought to the police-court when it was shut, was likewise agreed to. The *Divorce and Matrimonial Causes (Amendment) Bill* passed through committee.

MONDAY.—*The Holy Alliance.*—Lord PALMERSTON said that he had received a communication from the Prussian Ambassador with reference to certain despatches which had appeared in the *Morning Post* respecting an alleged renewal of the Holy Alliance. The Ambassador said that the despatches were fabrications from beginning to end, and he therefore felt it right, with all the authority of his official character, to state that, so far as his Government was concerned, the whole of the "pretended correspondence was a complete invention."—*Vote of Censure.*—Mr. DISRAELI moved the resolutions, of which he gave notice last week, for an Address to the Crown, to thank her Majesty for directing the correspondence, and protocols of the Conference, to be laid before Parliament, assuring her Majesty that the House had heard, with deep concern, that the sittings of that Conference had been brought to a close without accomplishing the important purposes for which it was convened, and expressing great regret that, while the course pursued by her Majesty's Government had failed to maintain their avowed policy of upholding the integrity and independence of Denmark, it had lowered the just influence of this country in the councils of Europe, and thereby diminished the securities for peace. After adverting to the many long and disastrous wars of succession which had occurred in Europe at various periods, he said, that the first question which he would ask was, how it came to pass that the position of France relative to Denmark was so free from embarrassment and so dignified that it had lately received a tribute of admiration from Earl Russell, while the position of England, under precisely the same obligations, was one of infinite embarrassment and terrible mortification. He reminded the House that the other Powers of Europe had not interfered in the affairs of Denmark as Earl Russell had done. The language held by her Majesty's Government towards Denmark had been that of encouragement, while their policy had been marked by vacillation and deceit, amounting to perfidy. Lord Palmerston had declared that if Germany went to war with Denmark the latter Power would not find herself alone in the contest. The policy of the Government last year appeared to have been sincere, sound, and judicious; but the language which they had held towards France and Russia on the subject of Poland had alienated the good feeling of the former, while it had evoked the haughty sarcasm of the latter. Adverting to the history of Denmark during the last few months, he said that at the death of the late King there were two courses open to the Government, both of which were intelligible and honourable. They might have acted as France had done, or they might have followed the example of the other neutral Powers. He admitted that we were not bound by treaty obligations to go to the rescue of Denmark when attacked by Germany; but why did her Majesty's Ministers, just before the opening of Parliament, declare that "concert and co-operation" meant "material assistance?" When at length the Federal execution took place in Holstein, when Schleswig was invaded, and Jutland occupied, they proposed the Conference, at which they suggested the dismemberment of Denmark, and recommended that what remained from German spoliation should be placed under the joint guarantee of the great Powers. He maintained that the Government had failed to accomplish their avowed policy. They had been repulsed by Russia; their relations with France were estranged; their remonstrances to Austria, Prussia, and the German Diet were treated with dignified indifference or with open defiance; and they had declared that, as they had no allies, England could not go to war. These were words which should never have occurred to the heart of a British Minister, and should never have passed his lips. Lord Palmerston had frequently taunted him by asking, "What is your policy?" and the answer which he now gave him was, "Our policy is the honour of England and the peace of Europe." Unhappily the noble lord had betrayed both. He contended that the House of Commons ought not to allow the Government to escape from its responsibility; and it was with the view of challenging their conduct that he had moved his resolutions. They were intended as a protest against a policy which had lowered our just influence in the councils of Europe, and which had diminished the chances for peace. He denied that they would pledge those who might support them to the policy of war, but he asserted that they were inspired by a sincere desire to maintain peace.—The CHANCELLOR of the EXCHEQUER said he accepted the responsibility cast upon the Government, and was ready to do their part to meet the accusations. The declaration of Lord Palmerston in July last, upon which so much stress was laid, was justifiable, for at that period France and Russia were prepared to act in the spirit of that declaration. As to the censure cast upon the manner in which Earl Russell declined the proposal for a Congress, he said that Lord Russell was a man of truth and honour, and in the habit of speaking his mind with very little circumlocution; and he referred to some expressions of Mr. Disraeli upon the subject of the Congress much less courteous than those he had complained of. He noticed other instances in which Mr. Disraeli had, he said, not quoted the documents fairly and fully, and he accused him of having misled the House by his misquotations, and by allegations void of foundation. He showed that these misquotations and the false inferences drawn from them affected some of the most material charges against the Government. He contended that the charges brought against the Government as regarded their conduct towards Denmark, were entirely fallacious, if not the reverse of the truth. The policy of the Government had been to induce Denmark to fulfil her engagements of 1851 and to induce Germans to moderate their views. On the accession of the present King, the object of the Government was to maintain the Treaty of 1852, and to endeavour to bind the Powers of Europe to uphold it. But a new doctrine was promulgated by Austria and Prussia with reference to that treaty, which, in their opinion, altered its position. Her Majesty's Government, believing that it was for the advantage of Europe to uphold that treaty, thought it their duty to endeavour to obtain the co-operation of other Powers, and rally them in support of it. These efforts failed, but the parties responsible for the consequences of the failure were those who first receded from the treaty. After the refusal of France and Russia, he admitted that the tone of the Government was altered. Single-handed, the interference of England would be useless. He justified the course adopted by the Government in the Conference, having to do, among other difficulties, with the resolute determination of the Danish people not to agree to the project of a personal union of the Duchies. The policy, if it had failed of its immediate object, had avoided the perils of a general war in Europe. In conclusion, he said that Mr. Disraeli had given not the slightest inkling of what he would himself do if he were in power. He denied that the failure of their honest efforts had lowered the just influence of England. This was not the language of allied and friendly Powers. It was the echo of the almost ribald language of the obscure foreign journals. Mr. Disraeli did not venture to adopt the old and constitutional form of a vote of want of confidence, and he was wise. The object of the motion was to expedite the dissolution of the Government, in order that the right hon. gentleman and his friends might come in: and he felt sure that the House and the country would approve the conduct of Her Majesty's Government in these very difficult negotiations by rejecting a motion which prudence and patriotism alike condemned.—Mr. NEWDEGATE moved that the House should express an opinion that the independence of Denmark and the possessions of that kingdom, on the terms proposed by the representatives of the neutral Powers in the recent Conference, ought to be guaranteed. He thought it was of the utmost importance to the peace of the world that England should take some steps to regain the influence she had lost. He would not like to see her take that step alone; but, if she were compelled to do so, he had faith in her ability to overcome all her enemies.—Mr. GORE LANGTON seconded the amendment.—Mr. KINGLAKE said that the amendment meant not only war, but war throughout all time. Adverting to the amendment of which he had given notice, he said that its object was to eliminate the last paragraph of Mr. Disraeli's resolution, and to substitute an expression of satisfaction that her Majesty had been advised to abstain from armed interference in the war between Denmark and the German Powers. He thought that, if the original motion were carried, and a stigma cast upon the Administration, the effect would be to damage its credit and prestige; and he could not find that in any instance her Majesty's Government had advised the Danes to resist. War, he contended, would be impolitic; it was now too late, and it would be a violation of the principle of non-interference.—General PEEL supported the original motion. If the policy of the country was to be peace at any price, silence and non-interference would become better. If we were too rich to be drawn into war by provocation, it would be better to say so at once; but what would be said of a man who declined to defend his house because he was too rich to be shot at. Her Majesty's Government had done nothing to maintain the honour and the renown of England in a critical conjuncture; but on the contrary had made us the open scorn of our enemies, and the shame and derision of surrounding nations.—The LORD-ADVOCATE said that the Government had not given out any delusive promises to Denmark to induce her to oppose the German Powers. If the resolution meant anything it meant war, and the object of its proposer was to censure the Government for abstaining from it.—Lord STANLEY agreed that it was a war resolution. If it were so no considerations would induce him to vote for it; or if the question before the House were whether it was right or not to fight for Denmark he would give his adhesion to the Government, because he considered that to engage in a European war for the sake of the Duchies would be an act not only of impolicy but of insanity. The policy of the Government had, however, been weak, vacillating, and deceptive, for instead of proclaiming neutrality and non-intervention they had threatened Germany and lured on Denmark to her destruction.—On the motion of Mr. COBDEN the debate was adjourned. The *Cranbourn Street Bill* was recommitted, and a motion to report progress was negatived by 45 to 37. An adjournment was, however, subsequently agreed to. The *Public Schools Bill* was read a second time. The *India-office Bill* was committed.

TUESDAY.—*The Vote of Censure.*—The adjourned debate was resumed by Mr. COBDEN, who said that whether the country was to be lowered in the estimation of foreign nations or not depended very much upon her own conduct. He admitted that the manner in which our foreign affairs had been conducted was most unsatisfactory, but he could not bring himself to believe that what had been done had diminished the securities for peace. Our diplomacy had broken down, but if the effect of that catastrophe was to remove dynastic secrets and diplomatic engagements from the recesses of Downing Street to the broad daylight of the House of Commons, he for one would regard the result as the best guarantee for peace. Earl Russell appeared to have but little knowledge of the history and relations of foreign States, and his ignorance in this respect had exposed him to humiliation and rebuff from almost every European Power. There could be no doubt that Denmark had violated her engagements by her treatment of the Schleswig-Holstein population; but while he was by no means prepared to justify the violent step which Prussia and Austria had taken on that account, he did not consider that England was bound by any treaty obligations to send an armed expedition to her succour. We could neither gain nor lose any territory on the Continent by going

to war, and however ready we might have been to fly to arms had France cooperated with us, he did not consider that such intervention would have been either wise or necessary.—Lord R. Cecil believed that if Mr. Cobden had been Foreign Secretary instead of Earl Russell the country would occupy a position far prouder and nobler than that in which it now stood. He at least would not have made promises which he could not have fulfilled, nor would he have indulged in menaces from which he intended to recede. For much of the misfortune that had befallen Denmark her Majesty's Ministers were responsible, for they had declined offers of arbitration and mediation from Prussia, and of a Congress as proposed by France. They had held irritating language to Germany, and had held forth delusive hopes to Denmark, and when the latter was reduced to her sorest peril they lowered their tone and allowed her to be dismembered. Never, since Ancient Pistol swallowed the leek, saying he did it for revenge, had there been so humiliating an exhibition.—Mr. W. E. Forster agreed with Mr. Disraeli that the time had arrived when England must play the game of brag no longer. But the question in coming to a vote of censure upon the Government was whether the House had confidence in the Opposition, and that he was not prepared to concede.—Mr. Butler Johnstone said that to go to war now for Denmark would be to pursue a useless and suicidal policy, but the House ought no longer to leave the foreign policy of the country in the hands of statesmen who had made such a lamentable succession of blunders.—Lord H. Vane felt great sympathy for Denmark, but could not consent to go to war single-handed for her independence.—Mr. Liddell deprecated the constant system of interference which characterised the foreign policy of the Government; and, in supporting the resolution, said he would be prepared to justify it before the country whenever an opportunity were afforded him.—Lord R. Montagu supported the resolution, but would not do so on any account if he believed its adoption by the House would lead to war.—Mr. Whalley opposed the motion, and attributed the failure of our diplomacy to the secret and aggressive influence of the Papacy.—Mr. Roebuck stigmatised the conduct of the German Powers as cruel and cowardly. The facts of the case appeared to him to be in a nut shell. The small States of Germany had gone mad on the subject of nationality; the Danes, with the King at their head, had endeavoured to maintain the doctrine of empire; Prussia wanted a port in the Baltic, and also wished to divert the attention of democrats at home. Germany had become both mad and silly, and Earl Russell had aggravated her by repeated lectures. The noble earl had mistaken his vocation; he was intended for a schoolmaster, but Fortune made him a statesman. He believed that if the foreign policy of the country had been placed in the hands of Lord Palmerston, we should not be reduced to our present condition; and that if we had taken a bold stand at the first, the arrogance and injustice of Germany would have been effectually checked. He would, however, vote against the resolution, because he considered the present Government better than that which would succeed it.—Mr. Horsman denounced the madness and hypocrisy of the German Powers, and predicted that a day of reckoning would come when the whole of civilised Europe would declare that the heaviest calamity which could descend upon Austria and Prussia would be but a righteous retribution for the blood of slaughtered Danes now crying to Heaven for vengeance. With regard to the first resolution of Mr. Disraeli, he apprehended the House would give it a general assent, but when he went on to charge the Government with having failed to maintain the integrity and independence of Denmark and to censure them, he was inviting the House to adopt a conclusion that the facts did not justify. The truth was that for the last two years the House of Commons had acquiesced in the policy that they were now called upon to condemn. If, then, the country were dishonoured, it was not by her Majesty's Ministers, but by Parliament. The Government had no doubt made mistakes, but the Opposition had endorsed them. For his own part, he declined to give a vote which would assist to place in power a party which had shown more weakness and less courage than the Government—a party which had abdicated the high functions of a constitutional Opposition, and had stifled the voice of Parliament.—Mr. S. Fitzgerald admitted that the object of the resolution was intended to censure the Government for having lowered and humiliated the country, and he hoped the House of Commons had sufficient spirit to affirm it. The Government might declare that they were quite ready to go to the country upon their peace policy; but he could not imagine any greater incongruity than "Palmerston and Peace;" for on three separate occasions they had invited foreign countries to join them in going to war, and only a night or two since Earl Russell had declared in the House of Lords that they were still willing to go to war if they could but secure an ally. He denied that it was the duty of the Opposition to indicate a policy, but if they should go to the country they would be prepared to vindicate the course they now invited the House to adopt.—On the motion of Mr. Layard, the debate was adjourned until Thursday. The *Game (Ireland) Bill*, and the *Improvement of Land Act* (1864) *Bill*, were read a second time.—Mr. Bass's *Street Music Bill* was considered as amended, and was ordered to be read a third time on Wednesday. The *India Office Bill*, the *Drainage and Improvement of Lands (Ireland) Bill*, and the *Divorce and Matrimonial Causes (Amendment) Bill*, were read a third time and passed.

Wednesday.—The House went into committee on the *Trespass (Ireland) Bill*, the object of which is to preserve game in that country. The Bill was opposed on the ground that it went further than the English law, by making wild duck, wigeon, teal, woodcock, and rabbits "game." After several divisions rabbits were exempted from the protection of the Legislature, and the Bill passed through committee.—Sir S. Northcote moved the Committee on the *Punishment of Rape Bill*, a measure originated in the House of Lords by the Marquis of Westmeath.—Sir C. O'Loghlen moved that the Bill be committed that day three months. He argued that no case had been made out for the Bill, and that it was inexpedient to alter the criminal law unless after due deliberation and careful consideration.—The amendment was seconded by Mr. Roebuck.—The Attorney-General for Ireland opposed the Bill on grounds similar to those urged by Sir C. O'Loghlen. After a desultory discussion, the House divided, when the amendment was carried by 84 to 78. The Bill is therefore lost. The *Municipal Corporations (Ireland) Bill*, the object of which was to assimilate the law in Ireland to that of England with respect to the qualification of burgesses, was withdrawn. The *Fisheries (Fresh Water) Bill* was also withdrawn. The third reading of the *Street Music Bill* was postponed to Thursday. The House went into Committee on the *Insolvent Debtors Bill*; but, after a short discussion, the Chairman was ordered to report progress.

Thursday.—The *Vote of Censure.*—The adjourned debate was resumed by Mr. Layard, who, in a speech of great length, defended the conduct of the Foreign Office. He contended that Earl Russell had been misrepresented and wrongfully accused, and that the Opposition had not hesitated to garble and falsify despatches in order that they might traduce the character of a statesman who had already taken a distinguished place in history amongst those who had toiled on behalf of human freedom and progress. He asserted that everything that Earl Russell had done in reference to the Dano-German difficulty had been done with the entire concurrence of France, and not until after that Power had been consulted and its answer received. He believed that when passion and prejudice had passed away, the country would arrive at the conclusion that the proposals made by Lord Russell were conceived in great wisdom, for they satisfied all parties except Denmark, would have put an end to the question of succession, and would have restored the Duchies. It was, he thought, a great calamity that Denmark had refused those proposals. He denied that the construction which had been put upon the words of Lord Palmerston, namely, that if Denmark had to enter upon a contest with Germany she should not stand alone, was the logical or correct one. Those words were not meant to convey that in certain eventualities England alone would go to the assistance of Denmark, but that Denmark would not be without allies in Europe. Such was the belief of the noble lord, but the Powers who signed the Treaty of 1852 did not consider it incumbent upon them to join England in giving practical aid to Denmark. Having reviewed the correspondence which had taken place between the Foreign Office and the four Powers, he expressed his opinion that, had the Opposition been in office, they would have plunged the country into war with the Federal States of America. He believed, too, that if power were to be transferred to them now, one of the first consequences would be that steam-rams would be sent from Liverpool to prey upon the commerce of a friendly nation. In conclusion, he denied the indictment preferred against the Government through the Chief Secretary for Foreign Affairs, and he looked with confidence to a verdict of acquittal from the country.—Mr. G. Hardy repudiated the charge brought by Mr. Layard against the Opposition of having garbled and falsified despatches in order to misrepresent the conduct of Earl Russell, and stigmatised the charge as calumnious.—Mr. Layard moved that the word "calumnious" be taken down by the clerk at the table.—The Speaker intimated that he saw no ground for interfering.—Lord Palmerston condemned the language of Mr. Hardy as disorderly and censurable.—Mr. Disraeli said that the Under Secretary was guilty of an unparliamentary and indecorous exhibition, and that Mr Hardy had a perfect right to describe his language as calumnious.—The Chancellor of the Exchequer said that the objection should have been taken at the moment when the words were spoken.—Sir John Pakington said that if Mr. Layard was to be allowed to charge the Opposition with falsification they had a right to call the word calumnious.—Mr. B. Osborne put it to the House whether it was not imperilling its "just influence in the councils of Europe," by allowing members to get up and endeavour to overrule the decision of the Speaker.—The Speaker said that the language used on both sides had somewhat exceeded the ordinary rules of debate; but from what he knew of Mr. Hardy he was sure that he did not mean to impute motives. Under the circumstances, however, it was not necessary that he should interfere; and after what had occurred he trusted the harmony with which their debates were usually conducted would be restored.—Mr. Layard expressed regret at having used the word "falsification," and after some mutual explanations Mr. Hardy resumed his speech, and contended that the whole conduct of the Foreign Office in reference to the affairs of Denmark had been weak, vacillating, and calculated to encourage the Danes to enter upon a hopeless conflict with one of the greatest military Powers of Europe.—Sir F. Goldsmid said that if he were compelled to give an affirmative or a negative to the motion of Mr. Disraeli, though not concurring with many of his views, he could not say "nay" to his resolution; but he should be glad, if he could, to avoid a vote.—Mr. G. Bentinck said that although he was prepared to censure the policy of the Government, he would not support the resolution if it were true that a compact existed between the Opposition and the Ultramontane party below the gangway.—Mr. Cogan said that the policy of the Government towards Ireland was almost as unfortunate as that pursued in reference to Denmark. They had outraged and insulted the people of Ireland by sending Sir R. Peel to direct their affairs. He should join in voting censure upon them, not in order to place a Conservative Administration in power, but to purify the Liberal party.—Mr. Peacocke also spoke in favour of the resolution.—The Attorney-General denied all the charges brought against the Government, and said that their supposed menaces were only the language of strong and just remonstrance; and that they had made no promise they had not performed, and held out no prospect of help they had not rendered. The motion was intended only to answer the purposes of a party, and was unworthy of a great one.—Lord J. Manners observed that the motion had been censured as not indicating a policy. What it did indicate was that it was not right for England to hold out threats on the one hand, and promises of assistance on the other, unless she was prepared to fulfil them. The conduct of the Government had, he said, been characterised by a weakness, vacillation, and indecision that called for the condemnation of the House.—Mr. Onslow opposed the motion, considering that the Government had used their utmost efforts to secure the object of peace.—On the motion of Mr. Osborne, the debate was adjourned to Friday, with the understanding that it should then be brought to a conclusion.—The *Cranbourne Street Bill* passed through Committee. The *Indemnity Bill* was read a third time and passed. The *Courts of Justice Site Bill* was read a second time and referred to a Select Committee. The *Public Schools Bill* passed through Committee. On the motion for the third reading of the *Street Music Bill*, Sir W. Jolliffe moved, as an amendment, that it be read a third time that day three months. On a division the amendment was negatived by 49 to 18. The Bill was then read a third time and passed.

Friday.—*Vote of Censure.*—The adjourned debate was resumed by Mr. B. Osborne, who said that he by no means endorsed the foreign policy of the Government in its different details, but he did not like the injustice that had been done to Earl Russell, for which the whole Cabinet was responsible, including the noble lord the First Minister. As to the Conference, he described the proceedings as a combination of blarney and bluster, and ridiculed the statement that there had been an interchange of ideas between the plenipotentiaries, but what these ideas were which required an interchange, he did not pretend to understand. He thought theat this country was most fortunate in being relieved from th responsibilit of the guarantee proposed by the obstinacy of Denmark.

[Left speaking.]

City Intelligence.

Money Market. Friday.—British Funds: Consols closed at 90¼ to ⅛ for Money, and 90⅜ to ½ for Account; Three per Cents. Reduced, 89⅝ to ½; New Three per Cents., 89¼ to ⅜; India Stock, 215; Ditto Five per Cent. Stock, 104¼ to ⅜; Five per Cent. Enfaced Rupee Paper, 105; Exchequer Bills, March, 8*s.* dis.; Ditto June, par.—Foreign: Brazilian, 1863, 87; Egyptian, 101½; Greek, 25 to ¼; Mexican, 28⅞ ex all; Portuguese, 1856, &c., 47⅞ to 47½ ex div.; Russian, 1822, 89½; Ditto 1850, 85 ex div.; Ditto 1862, 87¾; Sardinian, 83¼; Spanish, 51⅝ to ½ ex div.; Turkish, 1854, 91¼ to ⅜; Ditto 1858, 70¾; Ditto 100*l.* Bonds, 71½; Ditto 1862, 100*l.* Bonds, 69⅛ to 69 ex div.; Venezuela, 1862, 56⅛.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,898,810	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	13,248,810
		Silver Bullion	—
	£27,898,810		£27,898,810

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,123,125
Rest	3,366,788	Other Securities	23,067,467
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	9,489,180	Notes	6,518,035
Other Deposits	13,471,415	Gold and Silver Coin	681,999
Seven days and other bills	509,293		
	£41,389,626		£41,389,626

July 7, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *July* 1.—BANKRUPTS.—J. Ashworth, Smallbridge, Lancashire, Butcher—J. Brightwell, Irthlingborough, Northamptonshire, Machine Boot Closer—J. Bower, Everton, Lancashire, Commission Agent—J. Blake, Castle Street, St Martin's Lane, Tailor—W. Betts, late of Middle Grove Street, Commercial Road East, Chandler's Shop Keeper—T. Bryant, Kentish Town Road, Grocer—W. Barber, Wolverhampton, Hay and Straw Dealer—E. Bates, late of Brighouse, Yorkshire, Pig Jobber—T. Brown, Wilsted Court, Somers Town, Coachmaker—R. J. Browne, Pelham Yard, Pelham Street, Brompton, Jobmaster—J. Beldon, Keighley, Yorkshire, Boot and Shoe Dealer—E. Balmforth, Batley, Yorkshire, Machine Maker—R. T. Bowtell, late of Manchester, Bookseller—J. Calthrop, Toddington, Bedfordshire, Sheriff's Officer—J. C. Clarkson, Manchester Street, Argyle Square, Railway Clerk—B. Cleworth, Bradford, Manchester, late Baker—J. Chalcroft, late of Mansfield Place, Junction Road, Upper Holloway, Carpenter—J. Calvert, Pateley Bridge, Yorkshire, Cattle Dealer—W. Dalcho, Peter's Court, St. Martin's Lane, Gold Lace Weaver—A. F. Fairbrass, Canterbury, Sail Maker—G. Fletcher, Bath, Ironmonger—H. T. Fletcher, Craven Street, Brunswick Place, City Road, Turner—J. W. Freeman, late of Blackheath Road, Greenwich, Cheesemonger—F. Fuller, Plaistow, Essex, Hatter—E. Guest, Margaret Street, Kennington, Dealer in Building Materials—G. R. Glenie, late of Connaught Terrace, Edgware Road, Bookseller—W. Gurdon, Wells next-the-Sea, Norfolk, Watch maker—F. Gardner, Luton, Bedfordshire, Straw Hat Manufacturer—H. Holmes, St. John Street, Smithfield, Baker and Confectioner—W Hacking, Nottingham, late Beerhouse Keeper—W. Howe & J. Howe, Aldershott, Builders—J. Hadfield, late of Nottingham, Cordwainer—H. Humby, New King Street, Deptford, Licensed Victualler—J. B. Hardwick, late of Nottingham—T. Heap and J. Horrocks, Whitefield, Lancashire, Silk Spinners—M. Henry, Leeds, Provision Dealer—W. H. Howarth, Nottingham, Foundryman—B. Hart, Edward Street, Kennington Cross, Commission Agent—H Jennings, late of Stacy Street, Borough, Corn Dealer—W. Jeynes, Berrow, Worcestershire, Farmer—D. Johnson, Warrington, Lancashire, Basket Manufacturer—R. Jennings, late of Cloudesley Square, Islington, Boarding House Keeper—J. Levingthall, late of Tenter Street South, Goodman's Fields, Dealer in Jewellery—H. Luff, Richmond, Surrey, Locksmith—G. H. Lawrence, Tonbridge Wells, Kent, Photographer—W. Lansley, Newgate Market, Butcher—W. Lee, Hereford, Builder—B. G. Lister and T. H. Lister, late of Leeds, Card Makers—J. D. Morton, late of St George's Road, Pimlico, Gentleman—J. Pemberton, Ipswich, Suffolk, Flour Seller—J. Poole, Kinfare, Staffordshire, Draper—W. Paget, Lant Street, Borough, Beer Retailer—J. Richardson, late of Cross Street, York Road, Lambeth, Stonemason—M. J. Rousillon, late of Liverpool, Wood Merchant—E. Read, Woodlands, Dorsetsh., Grocer—T. Roberts, Ossulton St., Somer's Town, Boot and Shoemaker—T. Roe, Duke St, Manchester Sq., Auctioneer—J. Rolfe, late of Hemming's Row, St. Martin's Lane, Licensed Victualler—J. Robson, late of Liverpool, Commission Agent—J. Straker, South Shields, Durham, Potato Dealer—J. Sadd, Upper Seymour Street Euston Square, Egg Merchant—R. Sills, Carnarvon, Seedsman—S. Saul, jun., late of Bulwell, Nottinghamshire, Match Manufacturer—L. Sendyk, Park Road, Peckham, Foreign Wine Dealer—J. Sharpe, late of Pudsey, Yorkshire, Dealer in Pigs—E. Smith, Southsea, Hampshire, Civil Engineer—E. Standeven, Oldham, Lancashire, Waste Dealer—G Samouelle, Cumberland Place, Newington, Printer and Publisher—W. Thomas, Bangor, Carnarvonshire, Cabinet Maker—G. Tanner, Chippenham, Wiltshire, Tailor and Draper—W. Turner, West Derby, Lancashire, Gardener—F. Tibbs, Norwich, Labourer—G. Titterton, Edward Street, Portman Square, Licensed Victualler—W. Tucker, late of Prospect Place, St. George's Road, Southwark, Clock and Watchmaker—J. Willis, Sloane Street, Manager to a Trunk Manufacturer—W. Warren, Hereford, Butcher—J. Walker, Manchester, Traveller—W. H. Wilcox, Teignmouth, Devonshire, Builder—R. Wilson, late of Spencer Street, Battersea Road, Retired Paymaster in the Royal Navy.

SCOTCH SEQUESTRATION.—J. Cameron, Aberfeldy, Perthshire, Sawmiller.

TUESDAY: *July* 5.—BANKRUPTS.—E Barkway, Northampton Gardener—J. W. J. Batten, Brook Street, Upper Clapton, Nurseryman—J. Barham, Dartmouth Terrace, Rotherhithe, Superannuated Clerk—W. Bryer, Mabledon Place, Euston Road, Veterinary Surgeon—E. Crudge, Bampton, Devonshire, Ironmonger—A. Cochrane, Camberwell Road, Camberwell, Jeweller—J. Connell, Dudley Street, St. Giles's-in-the-Fields, Journeyman Tailor—John Davies, Carnarvon, Auctioneer—Arthur Dunn, Fassett Square, Dalston, Foreman at a Soap Works—Rees Davis, Worthin, Shropshire, Miller—William Foad (commonly called William Miriams), Ramsgate, Kent, Maltman—T. Furmston, Ash, Sandwich, Licensed Victualler—P. H. Hoffmeyer, Red Lion Square, Holborn, Eau de Cologne Manufacturer—I. Hopton, George Street, Tower Hill, Provision Merchant—W. Holloway, Grove Road, Holloway, Baker and Flour Factor—H. Halstead, Leeds late Innkeeper—A. R. James, Grenada Terrace, Commercial Road, Ironmonger—J. W. Jolliffe, Ryde, Isle of Wight, Builder—W. James, Edgbaston, Warwickshire, Commission Agent—W. Lewis, Birmingham, Journeyman Jeweller—W. Lewis, Carmarthen, Painter—G. Martin, Ebbw Vale, Monmouthshire, Shoemaker—T. Marsh, Skegby, Nottinghamshire, Grocer—T. Marsh, Gravesend, Kent, Egg Merchant and Fruiterer—E. Mann, Leigh, Worcestershire, Butcher—J. Patchin, Garlick's Cottages, Sheepcot Lane, Battersea Park, Journeyman Painter—T. F Ponton, Victoria Street, King Edward's Road, Hackney, Commercial Traveller—M. Ringmacher, Red Lion Square, Holborn, Eau-de-Cologne Manufacturer—H. Raphael, Leman Street, Goodman's Fields, Cigar Manufacturer—J. M. Roberts, Thirsk, Yorkshire, Organist—J. Smith, Birmingham, Coppersmith—W. Shaw, Liverpool, Ironmonger—William Symonds, Norwich, Bookseller—George Stone, Birkenhead, Furniture Dealer—W. Senior, sen., Selby, Yorkshire, Tailor—J. Squelch, Birmingham, Gun Barrel Forger—E. Taylor, Crawley Down, Sussex, Foreman in a Brickyard—Z. Thompson, Halifax, Yorkshire, Tarpaulin and Oil Cloth Manufacturer—J. H. Wood and G. Tweedale, Sheffield, Coal Merchants—T. Walter, Birmingham, Accountant Clerk—J. D. Walker, Great Dalby, Leicestershire, Innkeeper—J. Wales, Broomhill, Sheffield, Fishmonger.

SCOTCH SEQUESTRATIONS—D. Johnston, Glasgow, Wine and Spirit Merchant—T. Mowbray, Edinburgh, Commission Agent.

Metropolis and its Vicinity.

The Debate.—On Monday afternoon, as the hour approached at which the House of Commons was to assemble, an extraordinary amount of excitement prevailed in the immediate neighbourhood, indicative of the interest taken out of doors in the impending debate, and recalling the gatherings in that quarter during the party struggle which preceded the passing of the Reform Bill. A great crowd had collected in Palace Yard to see the members enter the House, and did not disperse until towards 9 o'clock. The arrival of Lord Palmerston and of Mr. Disraeli was watched with eager curiosity. Mr. Disraeli made his appearance towards half-past 4 in an open carriage. He was soon recognised by the crowd, and received a few cheers as he passed, but they were faint in comparison with those with which Lord Palmerston was greeted on his arrival about a quarter of an hour later. The Premier, who was in a close carriage, had been recognised in Parliament Street, and the cheers which his appearance drew forth there were heard in Palace Yard, and became louder and louder as he approached the House. Mr. Gladstone leant back in his carriage, as if to avoid notice, and so passed into the House almost wholly unobserved. In the half

hour from a quarter past 4 the members arrived in great numbers. As Mr. Disraeli presented himself to speak, which he did about a quarter to 5, the House presented an extraordinary spectacle, resembling in its crowded state and in the prevailing excitement more the eve of a division after some great party struggle than the commencement of a debate. In the body of the House every available seat was occupied, and the members who had arrived late crowded the side galleries or stood in groups below the bar. The Duke of Cambridge, Earl Grey, Lord Llanover, Earl Powis, Lord Houghton, and Mr. Justice Shee sat in the part immediately over the clock assigned to distinguished strangers, and in the seats below the bar on either side of the entrance were Earl Russell, the Poet Laureate, the Duke of Argyll, the Bishop of Oxford, and other persons of note. Both the Speaker's and Strangers' Galleries were crowded during the night, and scores who had orders for the one or the other waited in the adjoining lobbies in the hope of being admitted.

REVIEW IN HYDE PARK.—On Monday morning a grand review took place in Hyde Park before the Prince and Princess of Wales, and the Duke of Cambridge. The troops on the ground included the Grenadier and Coldstream Guards, two batteries of the Royal Horse Artillery from Woolwich, the 5th Fusiliers, the Life Guards, and the Horse Guards Blue. The troops went through a series of file and volley firing, and there was a charge by the cavalry. The whole force then advanced in review order and presented arms to the staff. After these evolutions the whole force marched off the ground with their bands playing.

THE ELECTION OF SHERIFFS.—A Court of Aldermen was held on Monday, for the purpose of receiving the return of the result of the election of sheriffs for the ensuing year. The Common Serjeant reported that the choice of the Livery had fallen upon Alderman Besley and Alderman Dakin. A procession was then formed to the hustings, where a common hall had been called, when the Common Serjeant announced that the two aldermen were duly elected Sheriffs for the ensuing year.

THE CIRCASSIAN EXILES.—A public meeting was held at the London Tavern on Thursday, to raise means for the relief of the Circassian refugees who have been driven from their homes and cast upon the Turkish territory by the severity of Russian rule. Lord Stratford de Redcliffe took the chair, and among the speakers were the Earl of Shaftesbury, Lord Houghton, and the Marquis of Clanricarde. Resolutions expressing sympathy for the exiles were unanimously adopted, and a subscription was opened for their relief.

MIDDLE-CLASS EDUCATION.—A deputation from the Council of the National Association for the Promotion of Social Science had an interview with Lord Palmerston at Cambridge House a few dayssince to represent the expediency of issuing a Royal Commission to inquire into the grammar schools and other endowed schools in the United Kingdom, and generally into the state of education of the middle classes. The memorial presented by the deputation stated that the condition of middle class education is most unsatisfactory, and that there are some hundreds of grammar schools and other endowed schools, which have never yet formed the subject of adequate inquiry, and which might probably be made available for supplying in a great degree the want of efficient education for the middle classes. It referred to the important results already derived from the recent Commission of Inquiry into the colleges and great public schools, and urged his lordship to issue a Royal Commission forthwith for the purpose of inquiring into the condition of the grammar and endowed schools throughout the country. Lord Brougham, Earl Fortescue, the Bishop of London, Lord Lyttelton, Mr. E. Chadwick, C.B., and Mr. James Heywood, having addressed his lordship in support of the memorial, Lord Palmerston admitted the importance of the subject, and promised to give it his best attention.

THE RIGHT OF MEETING IN THE PARKS.—A special meeting of the committee of the metropolitan members and electors appointed to secure the right of public meeting in the parks irrespective of Government permission was held on Friday in the Tea-room of the House of Commons. Among those present were Mr. Ayrton, M.P.; Mr. Cox, M.P.; Mr. Locke, M.P.; Mr. Whalley, M.P., and others. Mr. Beales brought up an elaborate report as to the past and present position of the rights of the Crown over the parks. It stated that the Crown in the early part of the last century had in return for a large addition to the Civil List ceded its rights over the parks, which were then dedicated to the use of the people under certain restrictions, their management being vested in a public officer called Commissioner of Works, who was paid for his services out of the public moneys. It contended that, independently of this, the right of user exercised by the public for more than 40 years of itself dedicated these parks to the people. The report referred to various Acts of Parliament in support of these views, and concluded by declaring the right of the people to meet peaceably in the parks to be above all interference from the Government, who had no Act of Parliament to show the power of interference claimed by them. Considerable discussion followed the reading of the report, more particularly on the legal points involved in it, on which much difference of opinion was expressed by the legal members of the committee. Mr. Ayrton and Mr. Cox disputed the dedication and the right of user, while Mr. Whalley, Mr. Beales, and Mr. Shaen maintained its existence. Mr. Locke suggested a reference to two eminent counsel, but to this the majority objected. Several resolutions were proposed and rejected, and ultimately it was agreed, without any formal resolution, that Mr. Beales and those acting with him should, by holding a public meeting in one of the parks, get the question raised in such a manner that the user might be tried and fairly argued in the Court of Queen's Bench, and the question set at rest. If it was decided against the right of the people, then action should be taken in Parliament to get the law placed on a more satisfactory footing. It was admitted on all sides that the orders of the Commissioners of Police forbidding meetings in the parks were totally illegal, and not warranted by any existing law.

HORSE SHOW.—A show of horses was opened at the Agricultural Hall on Friday, when a large number of visitors, including many members of the aristocracy, attended. Upwards of 300 animals were exhibited, all of such a high standard of merit that the judges were unable to award all the prizes until Monday, when the Show was thrown open to the public at the charge of 1s., and about 20,000 persons availed themselves of the opportunity to visit the exhibition. On Tuesday the Prince and Princess of Wales visited the Show. There were about 5000 visitors present at the time, who received their Royal Highnesses with warm expressions of loyalty. The finest horses were brought into the ring for the inspection of the Royal visitors, and the Prince afterwards inspected the animals in the Floral Hall. Their Royal Highnesses spent some time in the Exhibition.

CONFEDERATE ENLISTMENTS.—A man named Seymour was brought before the chief magistrate at Bow Street on Friday on a charge of enlisting men for the Confederate service. From the evidence it appeared that four men were engaged by him to go as firemen in a steamer named the Rappan, lying at Calais, at a pay of 4*s.* a day while she lay in harbour. On proceeding to Calais the men found no steamer named the Rappan, but were referred to the officers of the Rappahannock Confederate steamer, who repudiated the engagement made by Seymour. The men came home and informed against the prisoner, who was committed for trial.

DESTRUCTION OF THE SAVOY CHURCH BY FIRE.—On Thursday afternoon a fire broke out in the Savoy Church, Strand, which resulted in the total destruction of that ancient edifice, the last relic of the Savoy Palace, which figures so conspicuously in English history. The fire broke out near the organ, which was at the time under the repair of some workmen, and before the engines could arrive the whole structure was in a blaze. The roof, which was recently restored and redecorated, chiefly at the cost of her Majesty as Duchess of Lancaster, fell in soon after the outbreak, and in the course of an hour the organ, the painted windows, and nearly every monument in the building were reduced to ashes, nothing being saved except the church plate and parish registers. The flames spread with such rapidity that they ignited some of the houses in the Strand, one of which, occupied by Mr. Finney, tailor, was entirely destroyed, while those adjoining were much damaged by fire and water. For two or three hours in the afternoon the Strand was impassable, and the excitement in the neighbourhood was immense. It is understood that most of the property was insured.

GREAT ROBBERY OF JEWELLERY IN THE CITY.—A daring robbery of jewellery was committed in broad daylight on Sunday at the shop of Mr. Johnson, jeweller and chronometer maker, at the corner of Hercules Passage, Threadneedle Street, to the extent, it is said, of nearly 4000*l.* The thieves are supposed to have secreted themselves in the course of Saturday night in some of the closets in the upper part of the premises, which are occupied chiefly by stockbrokers. No one has charge of the premises at night, so that the thieves had full range of the place. During Sunday, by means of crowbars and wedges, they succeeded in forcing an iron door on the ground floor, leading into the back of the shop, and then possessed themselves of the whole stock of jewellery, watches, pins, bracelets, earrings, and other valuable property, from the shop windows and glass cases on the counter, leaving nothing but the large clocks on the brackets, which were too bulky to remove. They attempted to break open an iron safe under the counter, but its strength thwarted them, though they must have been some hours in trying to force it open. Their failure in this respect was most fortunate, as the contents were chiefly diamonds and jewellery, of the value of 10,000*l.* The police are said to have obtained a clue to the thieves.

THE NEW POLICE UNIFORM.—On Wednesday morning the whole of the officers and men of the A Division on duty at the Houses of Parliament, Buckingham Palace, and the Government Offices, appeared in the new regulation helmet and surtout.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, July 2, were 1297. The average number in the corresponding week of the ten years, 1854-63, corrected for increase of population, was 1242. The present return is therefore 55 above the average. During the week the births of 1051 boys and 948 girls, in all 1999 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 1939.

Provincial.

CANTERBURY.—On Saturday the Princess Helena and the Princess Louisa, with the Hon. Colonel Liddell and the Hon. Mrs. Bruce in attendance, visited Canterbury for the purpose of inspecting the cathedral and other objects of interest in the city. Their Royal Highnesses travelled by special train on the London, Chatham, and Dover line, and arrived at Canterbury at 12 o'clock. Owing to a misapprehension as to the time at which the train was to arrive, no carriage was at the station, and their Royal Highnesses, instead of waiting, proceeded on foot over the Dane John recreation ground and through the principal streets of the city to the Cathedral, a distance of more than half a mile. They were recognised by several citizens from their likeness to the Queen. At the Cathedral the Royal visitors were received by the Dean of Westminster and Lady Augusta Stanley, Archdeacon Harrison and Mrs. Harrison being also in attendance. Both the Princesses appeared greatly pleased when going through the Cathedral, as the Dean of Westminster explained the different objects of interest. At 2 o'clock the Archdeacon and Mrs. Harrison had the honour of entertaining their Royal Highnesses at luncheon at their residence. Afterwards their Royal Highnesses, still attended by the Dean of Westminster, proceeded to the Missionary College of St. Augustine and St. Martin's Church, in which Christianity was first preached in England. At 4 o'clock they returned to the railway station in an open carriage, a considerable crowd of people having collected to witness their departure. On taking their seats in the saloon carriage of the Royal train the Princesses smilingly bowed their acknowledgements to the loyal greetings of the people on the platform.

GAINSBOROUGH.—Martha Howell, a young schoolmistress, residing at Springthorne, was charged at the Police Court a few days since with having attempted to shoot Emma Johnson, a teacher of music, living at the same place. It was alleged that on the evening of the 17th the parties, with some other young ladies, were walking near Somerby, apparently on the best terms, when Miss Howell pulled a pistol from her pocket, and fired it at Miss Johnson's head, wounding her. It appeared that she had on previous occasions presented a pistol at Miss Johnson, and threatened to shoot her but the threat was not regarded as serious. After the occurrence, Miss Howell was heard to express her regret that she had not shot Miss Johnson dead. No motive for the attempt has yet been assigned. She was committed for trial.

LIVERPOOL.—Several burglaries have recently been committed at the village of Hale, near this town, and the police were consequently on the alert. Two of their number, Whaldron and Holton, were on duty on the night of the 28th ult. on the high road, when they met a man who asked the way to Woolton. One officer turned his lamp upon him and said that he was the man they wanted, and they must take him into custody. The man instantly drew a pistol and fired at him, the ball grazing his back. The other officer thereupon closed with him, but received a shot in the abdomen, which caused a fearful wound. The man then drew a knife or chisel and inflicted several other wounds on the fallen man. At this moment the first officer struck the man senseless with his staff, and assistance having been procured, the prisoner was conveyed to the Woolton police-station. Upon his person was found two discharged pistols, and a third loaded with ball. He is an Irishman, and gave the name of John Daley. In the meantime the wounded officer, who has been 17 years in the force, was conveyed home, where it was found that his wounds were so serious that he is not expected to survive.

NORWICH.—The brethren of the English order of St. Benedict have commenced a series of pilgrimages to various points of monastic interest in Norfolk. Their first visit was made to Bawburgh, a village near this city, in the course of last week. A correspondence has passed between 23 Norwich clergymen and the Rev. E. A. Hillyard, rector of St. Lawrence, who has identified himself with the brethren. The 23 clergymen "earnestly and affectionately" entreated Mr. Hillyard to submit a statement of the view which he takes of his position and the principles which guide him to it, to Bishop, and to be guided by his recommendations. Mr. Hillyard replied that, after giving "prayerful attention" to this counsel, he declined to discontinue his daily administration of the Holy Communion to the monks. On this the 23 clergymen sent Mr. Hillyard a resolution in which they expressed a hope that he judgment, freed from the bias of a false impression, would yet give to the considerations put before him their due weight and influence. Mr. Hillyard, in a long reply, complained of "a course of unscrupulous agitation originated by persons as hostile to the Church as they are ignorant of its teaching." The 23 clergymen in conclusion intimated to Mr. Hillyard that they consider he is inflicting a heavy blow upon the interests of religion and of the Church which he is bound by the most solemn pledges to support. Referring to Brother Ignatius, as Mr. Lyne, they added that "not to speak of him as the enthusiastic eulogist of Rome, of his schismatic ministrations, or of the more than questionable nature of his doctrines and practices, suffice it that he acted, and still acts, in contempt of episcopal

authority, and of a sentence of inhibition the legality of which is not disputed."

PLYMOUTH.—On the 13th of May a waterman named M'Coy, while sailing through Plymouth Sound, was shockingly injured by a shot fired from the citadel during the artillery practice, and died after six hours of great suffering. A coroner's inquest was convened on the following day. It was adjourned five times, and a large mass of evidence having been carefully investigated, the jury on Monday week returned a verdict of Manslaughter against Major-General Hutchinson, the General commanding the district, stating that they considered him guilty of great negligence and indifference to the public safety, which alone, in their opinion, was the cause of the death of George M'Coy. The coroner accepted the verdict, but stated that he did not concur in it, because the law did not bear it out. General Hutchinson was subsequently apprehended at Government House, Mount Wise, and has since been admitted to bail. His trial will take place at the assizes at the close of this month. The verdict has given great satisfaction to the inhabitants, as the General had persisted in directing the artillery practice to be continued over the crowded waters of Plymouth Sound, notwithstanding several narrow escapes and the remonstrances addressed to him.

TUNBRIDGE.—A fatal explosion of gunpowder took place on Wednesday afternoon in the powder-mills of Messrs. Curtis & Harvey. The four men who were at work at the time were blown to pieces, and a carman who happened to be in the neighbourhood was seriously injured. The shock was felt at a distance of some miles.

Scotland.

ROYAL SCOTTISH ACADEMY.—At a meeting of the council of the Academy on Monday, Mr. George Harvey, the eminent Scottish landscape and historical painter, was elected President, in room of the late Sir John Watson Gordon.

Obituary.

MAJOR-GENERAL SAGE died a few days since. He served in Rewah in 1812, in the Nepaul war in 1815, for which he received a medal, with the army of the Indus in Affghanistan, and at the storming and capture of Ghuznee. For his services on that occasion he again received a medal. He was the brigadier who commanded the Saugor field force, and during the great mutiny of 1857 he held the fort of Saugor with a small and inadequate garrison during upwards of seven months, under trying circumstances, until relieved by the force under Sir Hugh Rose.

COLONEL SIR WILLIAM COX died on the 1st inst. at Monkstown, near Dublin, in his 87th year. He was born in 1776, and entered the army in 1794. He served with much distinction in the West Indies, Egypt, the Mediterranean, and the Peninsula. He was created Knight Bachelor in 1816, and became a colonel in 1819. He was a major-general in the Portuguese service, and was nominated a Knight of the Tower and Sword of Portugal in 1815.

CAPTAIN BROWN, R.N.C.B., Registrar-General of Seamen, died on the 29th ult, at Brixton, aged 72, after a long illness. He entered the Navy in 1805, and was present at Trafalgar in the same year, and at the surrender of Copenhagen in 1807. In 1810 he served in the Baltic, and when the American war of 1812 broke out, he saw much service on the lakes of Canada. In 1835, when the Bill for the Registration of Seamen was introduced by Lord Auckland and Sir James Graham, Captain Brown was appointed to the office of Registrar-General. He was concerned in most of the amendments in the law affecting the Mercantile Marine passed within the last 30 years, and latterly took an active part in the establishment of the Royal Naval Reserve. His exertions on this occasion affected his health, and compelled him to resign his office. As a mark of their appreciation of his services the Government, on his retirement, gave him rank as Post-Captain, and a Companionship of the Bath.

PROFESSOR MILLER, Professor of Surgery in the University of Edinburgh, died at Corstorphine on the 17th ult., at the age of 52. He was the son of the late Rev. James Miller, minister of Monikie, Forfarshire. He studied medicine in Edinburgh, and was the favourite pupil of Mr. Liston, with whom he resided for 15 years. In 1842, on the death of Sir Charles Bell, he was unanimously elected by the Town Council to fill the chair of surgery in Edinburgh University, where he was a very popular and successful teacher. He was also Professor of Pictorial Anatomy to the Royal Academy, and Surgeon-in-Ordinary to the Queen for Scotland. He was the author of "The Principles and Practice of Surgery," of the article "Surgery" in the "Encyclopædia Britannica," of "The Surgical Experiences of Chloroform," and of a considerable number of tracts on temperance, of which he was a strenuous advocate. He was an elder in the Free Church and an ardent supporter of its missionary schemes. A few weeks ago he was seized with congestion of the brain, which entirely prostrated his strength, both mentally and physically, and rapidly led to a fatal result. He married in 1834 a daughter of the late Major Gordon, of Rosiburn, Aberdeenshire, by whom he has left a numerous family.

THE REV. DR. CURETON, F.R.S., Canon of Westminster, and rector of St. Margaret's, chaplain in ordinary to the Queen, and the royal trustee of the British Museum, died on the 17th ult. at his country seat, Westbury, near Shrewsbury. He received a shock on the Brighton Railway, near Streatham, about a year ago, and not more than three days before his death had obtained 3170*l.* from the company as compensation for himself and his daughter, who had also sustained some injuries. But his last illness was attributable to other causes, and he went some weeks ago, a broken down invalid, to his seat in Shropshire where he died of rheumatic fever. Dr. Cureton, was a member of the French Institute, and of nearly every learned society in Europe, and was regarded as the most eminent Syriac scholar in England, and almost in Europe. He was born about 1808, and matriculated as servitor of Christ Church, Oxford. In 1830 he graduated as a double third class. In 1834, shortly after his ordination as priest, when he was a chaplain of Christ Church, he became sub-librarian of the Bodleian, in succession to the Rev. Ernest Hawkins. In 1837 he was appointed assistant keeper of the MSS. in the British Museum, where he remained till 1849, when he received a canonry at Westminster, to which an Act of Parliament has attached the rectory of the great parish of St. Margaret's. Two years previously he had been appointed chaplain in ordinary to the Queen—an honour due to the remarkable character of his literary labours, which secured the patronage of the late Prince Consort. In 1842, while at the British Museum, he edited the "Book of Religious and Philosophical Sects," from the Arabic of Sharastani; in 1843 he edited an Arabic commentary on the "Lamentations," and "The Pillar of the Creed of the Sunnites." In 1845 he edited and translated an ancient Syriac version of the epistles of St. Ignatius, under the title of the "Corpus Ignatianum," which gave rise to what will long be remembered in the Church as the Ignatian controversy. He also edited the famous "Palimpsest" of Homer found in the convent of Maria Deipara, in the desert of Nitria; the "Spicilegium Syriacum," specimens of Bardesan and other writers, a very old version of a Syriac palimpsest of the four Gospels; and a translation of Eusebius, and it is understood that he was engaged on some other work connected with St. Matthew's Gospel at the time of his death. Two or three years ago her Majesty personally appointed Dr. Cureton a Royal trustee of the British Museum, in which he had been so long a subordinate official. He married about 18 years ago the daughter of Mr. Blore, the eminent architect, by whom he leaves a large family, an infant only a few months old being the youngest.

MR. NASSAU W. SENIOR, late Master in Chancery and Professor of Political Economy at the University of Oxford, died on the 4th ult. at 18, Hyde Park Gate, in his 73d year. He was educated at Eton and Oxford, where he graduated in 1811, taking a distinguished first class in classics. Amongst his college contemporaries were Sir John T. Coleridge, the Earl of Delawarr, the Bishop of St. Asaph, the Provost of Oriel, the Dean of St. Paul's, and other gentlemen who have raised themselves to prominent positions. In 1818 he was called to the bar, and in 1836 was appointed a Master in Chancery, during the Chancellorship of Lord Cottenham. In 1825 he was elected Professor of Political Economy at Oxford, being the first holder of the professorship, which was founded in that year by the late Mr. Drummond, M.P. He resigned it in 1830, and was succeeded by the late Dr. Whately, Archbishop of Dublin. In 1847 he was re-elected to the same office in succession to Dr. Travers Twiss. For some years he held the office of Examiner in Political Economy in the University of London. He wrote many works on the science to which he devoted [illegible] and contributed to the "Quarterly," "Edinburgh," [illegible] other reviews.

MR. W. N. WELBY, barrister-at-law, and for many years recorder of Chester and junior counsel to the Treasury, died on the 1st inst., after a short but severe illness. He was in his 82d year.

MR. WASHINGTON WILKS, one of the leaders of a certain class of the advanced Liberal party, died suddenly on the 27th ult. under melancholy circumstances. He was addressing a Reform meeting in St. Pancras vestry hall, when he fell back on the platform, and was carried in a state of insensibility into one of the committee rooms and laid upon the table. A powerful galvanic battery was at once applied to the region of the heart and chest, and the efforts were continued for 20 minutes, but without effect, and the medical men at last announced that he was dead. The body was conveyed to the dead-house of St. Pancras workhouse to await an inquest, and the meeting immediately adjourned. At the inquest on Wednesday the jury returned a verdict of death from the effects of congestion of the brain produced from sudden excitement.

MR. GEORGE LANCE, the celebrated flower and fruit painter, died a few days since at New Brighton, Cheshire, in his 62nd year. He was born at Little Easton, Essex, in 1802. In 1828, he first began to exhibit at the Royal Academy, but it is only since 1835 that he has regularly been a contributor. Every one who is in the habit of visiting the Royal Academy must be familiar with Mr. Lance's beautiful imitations of fruit and flowers. He has three pictures in the Vernon Gallery, the most celebrated of which is "Red-cap."

WILLS.—The will of the Duchess of Gordon has been sworn under 60,000*l.* personalty; Mr. Francis Edward Smedley, of Grove Lodge, Regent's Park, and Beech Lodge, Great Marlow, 70,000*l.*; Rev. John Pinckney, D.D., of East Sheen, formerly of Lalcham, 120,000*l.*; Mrs. Eliza M.Claridge, of Nice, 30,000*l.* Mr. Thomas Boulton, of Madingley Lodge, Kensington 20,000*l.*; Mr. Henry Burnell, of Cheyne Walk, Chelsea, 20,000*l.*

BIRTHS.—On the 2d inst, at 66, Grosvenor Street, the Countess of CARNARVON, of a daughter—1st inst, at 94, Eaton Square, the Countess of MACCLESFIELD, of a son—29th ult, at 34, Murray Place, Edinburgh, the Countess of SOUTHESK, of a daughter—3d inst, at 53, Eaton Place, the Viscountess CASTLEROSSE, of a son—1st inst, at 17, Montagu Street, Portman Square, Lady MARY POWYS, of a daughter—18th ult. at 5, Portman Square, the Hon. Lady ABERCROMBY, of a daughter—5th inst, at 40, Wilton Crescent, the Hon. MRS. KENYON, of a son—20th ult, at Wimbledon, the Hon. Mrs. CHARLES HOBART, of a son—25th ult, at 22, Chester Sq., the Hon. Lady BIDDULPH, of a daughter—24th ult, at Overbury Court, Worcestershire, the Lady CATHERINE BERKELEY, of a son—24th ult, at the Heath House, near Cheadle, Staffordshire, the Hon. Mrs. PHILIPS, of a daughter—24th ult, at the Cloisters, Windsor, the Hon. MRS. HENRY PONSONBY, of a daughter—21st ult, at Belmore, near Bishops Waltham, Hon. Mrs. O'BRIEN, of a son and heir—22d ult, at The Rectory, Bedale, the Hon. Mrs. JOHN BERESFORD, of a son.

MARRIAGES.—On the 5th inst, at Christ's Church, Bray, co. Wicklow, Lord HENRY LOFTUS, brother to the late Marquis of Ely, to LOUISA Countess of SEAFIELD—16th ult, at Dunmore, Stirlingshire, the Right Hon. Lord ELPHINSTONE to the Lady CONSTANCE EUPHEMIA WORONZOW MURRAY, second daughter of the late, and sister of the present Earl of Dunmore—22d ult, at St. George's, Hanover Square, HENRY MILBANKE, Esq., to the Lady SUSAN GEORGINA GODOLPHIN OSBORNE, eldest daughter of the Duke of Leeds—7th inst, in the Chapel Royal, Whitehall, Colonel ARCHIBALD CAMPBELL, of the Scots Fusilier Guards, to the Hon. AUGUSTA CLEMENTINA, daughter of Lord and Lady CARINGTON—30th ult, by special license, at 42, Upper Grosvenor Street, Sir COUTTS LINDSAY, Bart., to CAROLINE BLANCHE, only surviving child of the late Right Hon. HENRY FITZROY, and niece of Lord Southampton—30th ult, at Westminster Abbey, FRANCIS JOHN THYNNE, Esq., eldest son of the Rev. Lord John Thynne, D.D., to EDITH MARCIA CAROLINE, daughter of RICHARD BRINSLEY SHERIDAN, Esq, M.P.—21st ult, at Uffculme, Devon, CHARLES ARTHUR WILLIAMS TROYTE, Esq., of Huntsman Court, Devon, eldest son of the late Arthur Henry Troyte, Esq., and grandson of Sir Thomas Dyke Acland, Bart., to KATHERINE MARY, eldest daughter of JOHN WALROND WALROND, Esq., and the Hon. Mrs. WALROND, of Bradfield—30th ult., at Huntsham, the Rev. WALTER HOOK, second son of the Dean of Chichester, to MARY DYKE, fourth daughter; and at the same time and place, LEONARD HARPER, Esq, barrister-at-law, second son of the Bishop of Christchurch, N.Z., to JOANNA D. DYKE, youngest daughter of the late ARTHUR TROYTE, Esq, and granddaughter of Sir Thomas Dyke Acland, Bart—15th ult, at Chiddingstone, Kent, Captain FREDERICK HENRY WALSH, late 78th Highlanders, to the Right Hon. AUGUSTA ANNABELLA Countess FERRERS—23d ult, at St. George's, Hanover Square, Captain EDWARD SOUTHWELL SOTHEBY, C.B., Naval A.D.C. to the Queen, second son of the late Admiral Thomas and Lady Mary Anne Sotheby, to LUCY ELIZABETH, second surviving daughter of the late HENRY JOHN ADEANE, Esq., of Babraham, Cambridgeshire—28th ult, at Little Munden, Herts, the Rev. EDWIN PRODGERS, incumbent of Ayot St. Peter, Welwyn, to ELIZABETH ELLEN, eldest daughter of HENRY E. SURTEES, Esq. M.P., of Dane End, Herts, and Redworth House, county Durham—21st ult, at Trinity Church, Bath, the Rev. EDWARD WALPOLE WARREN, B.A., of Magdalen College, Cambridge, younger son of Samuel Warren, Esq., Q.C., D.C.L., to AGNES SARAH, only child of JOHN KENNEDY, Esq, of Bath, late Administrator-General of Demerara and Essequibo, British Guiana

DEATHS.—On the 4th inst, at Kreuznach, in Germany, the Hon. CATHERINE VANNECK, eldest daughter of Lord and Lady HUNTINGFIELD, aged 24—7th inst, at Chelsea College, Lady WILSON, wife of Sir John M. Wilson, C.B., K.H., Military Commandant of Chelsea College, and daughter of Col. J. HOULTON, of Fairleigh Castle, Somerset—2d inst. at Melton Mowbray, ROWLAND ALEXANDER SOMERSET BRIDGEMAN, fourth son of Viscount and Viscountess Newport, aged 12—30th ult, at Mottisfont Abbey, Hants, ETHEL, youngest child of the Hon. HENRY CURZON, aged 8 months—18th ult, at 108, Gloucester Place, Portman Square, HENRY DAVID ERSKINE, eldest son of the late Hon. Henry David Erskine, Dean of Ripon—9th ult, at Inchmartine, Perthshire, the seat of Douglas Vaughan Allen, Esq., Lady DOUGLAS, widow of Lieut.-General Sir Neil Douglas, K.C.B., K.C.H., late Commandsr of the Forces in North Britain, aged 72—16th ult, at 13, Montagu Street, Russell Square, the Dowager Lady TANCRED—17th ult, at the British Consulate, Santos, Brazil, Capt. Sir HENRY V. HUNTLEY, R.N., aged 68—10th ult, at 1, Silver Hall Villas, Isleworth, Mrs. HOLCROFT (formerly Catherine North), mother of Lady T. FARQUHAR and mother-in-law of Sir Minto T. Farquhar, Bart., M.P.—11th ult, at Downside College, near Bath, Count MAZZINGHI, aged 65—17th ult, at the Hague, JEMIMA FREDERICA, daughter of the late Vice-Admiral VAN CAPELLEN—24th ult, at 22, Eccleston Square, ANNE LOUISA, eldest daughter of the late DONALD CAMERON, of Lochiel—27th ult, at his residence in Devonshire Place, JAMES WILLIAM FRESHFIELD, Esq., of Mynthurst, Reigate, aged 89—25th ult, ROBERT FISHER, Esq., of Chetwynd Grove, Salop, a magistrate of the county of Stafford, aged 59—1st inst, at Brighton, JOHN DALTON, Esq., of Sleningford Park, Yorkshire, and Fillingham Castle, in the county of Lincoln, aged 79—May 30th, at Midgham Cottage, Berks, MARY, relict of PHILIP GILL, Esq., of Ashampstead, deputy-lieutenant for Berks, eldest daughter of the late Thomas Dugald Campbell, Esq., of Inveraive House, Argyllshire, aged 85—16th ult, at Ryde, Isle of Wight, JOSHUA, second surviving son of the late JOSHUA SCHOLEFIELD, Esq., M.P., aged 53—17th May, on board the Ethiope, on her passage to England from Cape Coast Castle, CHRISTOPHER BOYD MCCLARTY MORALES, Esq., 4th W.I. Regiment, eldest son of the Hon. the Speaker of Jamaica, aged 22—13th ult, at 86, Gloucester Place, Portman Square, MARTIN THACKERAY, Esq., late Vice-Provost of King's College, Cambridge, aged 81—4th inst, at 117, Jermyn Street, THOMAS COLLEY GRATTAN, Esq, late her Majesty's Consul for the State of Massachusetts, United States—19th ult, at 6, St. John's Wood Road, HARRIET, relict of A. J. VALPY, Esq., aged 76—15th ult, in The Precincts, Canterbury, the Rev. JOSHUA STRATTON, M.A., Vicar of Graveney, Precentor and Minor Canon of Canterbury Cathedral—14th ult, at Overton Rectory, Hants, suddenly, the Rev. CHARLES JAMES HAWKINS, M.A., aged 55—21st ult, at Southend, the Rev. WILLIAM MATHIAS, incumbent of Burtle, Somersetshire, aged 48—21st ult, at Longfield Court, Kent, the Rev. J. KING, rector of Longfield, aged 63—23d ult, the Rev. J. BLATCH, B.D., formerly fellow of Magdalen College, Oxford, and resident vicar of Basingstoke, aged 89—23d ult, at The Parsonage, Poynton, Cheshire, the Rev. ROBERT LITLER, M.A., incumbent of that parish, aged 64—26th ult, at Wormhill Parsonage, the Rev. W. H. VALE, M.A., vicar of Tideswell and rural dean, aged 78—27th ult, at Tullybrogue, Glebe, near Dungannon, the Rev. Dr. WHITESIDE, Vicar of Scarborough, and brother of the Right Hon. J. Whiteside, M.P. for the University of Dublin—26th ult, at the Vicarage, Childerditch, the Rev. JOHN HEATLEY LEWIS, 22 years vicar of that parish, and a magistrate for Essex, aged 60—30th ult, at Brookville, Monkstown, county Dublin, the Rev. JOHN HANDS, of the London Missionary Society, aged 83—2d inst, at the Vicarage, Ellesmere, the Rev. J. D. DAY, for 19 years vicar of the parish, aged 51—2d inst, the Rev. W. WALKER, curate of Bodenham, Leominster, aged 28—5th inst, at Morecambe, drowned while bathing, the Rev. JOHN BRANTHWAITE, Principal of St. Edmund Hall, Oxford, and Rector of Gatcombe, Isle of Wight, aged 41—7th inst, Mr. CHARLES WOODROFFE, of The Westbourne Nursery, Harrow Road, London, aged 48.

Markets.

COVENT GARDEN, July 9.

Outdoor produce continues abundant. Cherries, Gooseberries, Raspberries, and Strawberries are plentiful. Of Grapes and Pine Apples there is also a good supply, and Black, Red, and White Currants are sufficient for the demand. Arrivals of foreign goods comprise Apricots and West India Pine Apples, both of which are abundant and cheap. English Peas are now plentiful. Potatos, owing to the dry weather, are for the most part small. Asparagus fetches from 4s. to 7s. a bundle. Flowers chiefly consist of Orchids, Heaths, Pansies, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Oranges, per 100, 10s to 16s
Grapes, per lb., 4s to 8s	Lemons, per 100, 5s to 9s
Strawberries, p. punn, 6d to 1s 6d	Nuts, Barcelona, do, 14s
Cherries, per lb., 6d to 9d	— New Brazil, do., 16s.
Gooseberries, green, p. qt., 3d to 6d	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 3d to 6d
Asparagus, per bundle, 4s to 7s	Cucumbers, each, 4d to 1s
French Beans, p. 100, 1s 6d to 2s	Beet, per doz., 1s 6d to 2s
Peas, p. basket, 2s 6d to 3s 6d	Shallots, per lb., 10d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 2d to 4d	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 9d to 1s	Mushrooms, p. pott., 1s to 1s 9d
Rhubarb p. bundle, 2d to 4d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

BRITISH WOOLS.—LONDON, July 7.

The state of our trade is healthy, and late prices are fully maintained. At the same time there is an absence of the excitement which has of late pervaded the country districts.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	..	..	..	2	0	..	Leicest. Hoggs	..	2	1	to ..
Half-bred ditto	..	2	0	to	2	3	Ditto Wethers	..	2	0	.. ..
Down Ewes	..	1	10	—	..		Combing Skins		1	6	—1 9
Kent Fleeces	..	2	1	—	..		Flannel Wool	..	1	0	—1 6
							Blanket ditto	..	0	6	—0 9

HOPS.—BOROUGH MARKET, FRIDAY, July 8

Messrs. Pattenden & Smith report a better demand for Hops of all descriptions; fine samples of 1863 growth are very scarce, and command rather higher prices. The weather is very ungenial for the progress of the plant, and the crop will

fall short of expectation, unless we get much higher temperature during the next two months. Currency:—

Mid and East Kents, p. cwt. ..	£5 12 to	£6 10 to	£9 0
Weald Kents	5 5 —	6 0 —	7 0
Sussex	4 15 —	5 10 —	6 0

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, July 7.

Prime Meadow Hay	75s to 80s	Clover, old	90s to 112s
Superior do. ..	84 95	New Clover ..	— —
Inferior do. ..	— —	Do. second cut ..	— —
New do.	55 72	Straw	25 30
Rowen	— —		

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, July 7.

Sup. Meadow Hay ..	95sto105s	Inferior Clover ..	90s to 100s
Inferior do.	75 88	New do.	95 108
New do.	75 90	Straw	30 34
Superior Clover ..	112 120		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, July 7.

Fine Meadow Hay ..	92s to 98s	Prime 1st cut Clover	110s to 115s
Inferior do.	85 90	Inferior do. do. ..	105 110
Prime New Hay ..	72 76	New Clover	88 95
Inferior	— —	Inferior do.	80 84
Straw	27 30	Prime 2d cut do. ..	108 112

COAL MARKET.—July 6.

Hastings Hartley, 17s. 3d.; Holywell Main, 16s. 3d.; Tanfield Moor Butes, 13s. 6d.; Walker Primrose, 13s. 6d.; Wylam, 16s. 3d.; Walls End Harton, 16s. 6d.; Eden Main, 16s. 9d.; Walls End Braddylls Hetton, 17s. 3d.; Walls End Haswell, 18s. 6d.; Walls End Hetton, 18s. 6d.; Walls End South Hetton, 18s. 6d.; Walls End Stewarts, 18s.; Walls End Tunstall, 16s. 6d.; Walls End Cassop, 17s. 6d.; Walls End Caradoc, 17s. 9d.; Walls End Hartlepool, 18s. 0d.; Walls End Heugh Hall, 17s. 6d.; Walls End Kelloe, 17s. 6d.; Walls End East Hartlepool, 18s. 3d.; Walls End South Hartlepool, 17s. 3d.; Walls End South Kelloe, 17s. 6d.—Ships at market, 68.

NEWGATE.—July 8.

Best Fresh Butter .. .. 12s. per dozen lbs.
Second do. do. .. .. 10s. "
Pork, 4s. 4d. to 4s. 8d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, July 4.

We have a few more Beasts, and trade is very slow, consequently we cannot quote scarcely as high as on Monday last, yet in some instances that day's prices are realised. The number of Sheep is not much altered, nor is the demand for them. Trade is dull at late rates. Lambs and Calves are sold at reduced prices. From Germany and Holland there are 1340 Beasts, 5370 Sheep, 361 Calves and 85 Pigs; from Spain, 124 Beasts; from France, 14 Calves; from Scotland, 250 Beasts; from Ireland, 50; from Norfolk and Suffolk, 900; and 650 from the northern and midland counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 10	to 5 0	Best Long-wools. ..	—	..
Best Short-horns	4 8	— 4 10	Do. Shorn ..	4 8	— 4 10
2d quality Beasts	3 0	— 3 8	Ewes & 2d quality ..	—	..
Best Downs and Half-breds	—	..	Do. Shorn ..	4 0	— 4 4
Do. Shorn ..	5 2	— 5 4	Lambs	5 8	— 6 8
			Calves	3 0	— 5 0
			Pigs ..	3 4	— 4 6

Beasts, 4730; Sheep and Lambs, 27,640; Calves, 410; Pigs, 470.

THURSDAY, July 7.

The number of Beasts is rather shorter than on Thursday last, and there is a good demand for choice qualities. Monday's quotations are readily obtained. The supply of Sheep is about the same as of late. Trade is dull and a clearance is not effected; but prices remain unaltered. Calves and Lambs are not selling quite so well. From Germany and Holland there are 690 Beasts, 3290 Sheep, and 697 Calves; and 67 Beasts from Spain. Milch Cows, 85.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 10	to 5 2	Best Long-wools. ..	—	..
Best Short-horns	4 8	— 4 10	Do. Shorn ..	4 6	— 4 10
2d quality Beasts	3 0	— 3 8	Ewes & 2d quality ..	—	..
Best Downs and Half-breds	—	..	Do. Shorn ..	4 0	— 4 4
Do. Shorn ..	5 2	— 5 4	Lambs	5 6	— 6 6
			Calves	3 0	— 4 10
			Pigs	3 4	— 4 6

Beasts, 1425; Sheep and Lambs, 12,700; Calves, 864; Pigs, 170.

MARK LANE.—MONDAY, July 4.

The supply of Wheat from Essex and Kent to this morning's market was small, and disposed of on the terms of this day sen'night. The attendance was moderate, and foreign Wheat was taken in retail only at Friday's decline, or 1s. per below the rates of last Monday. Barley and Peas are unaltered in value. Beans are the turn dearer, and Oats, of which the arrivals are considerable, must be quoted fully 6d. lower. We reduce our quotations of Flour 6d. per barrel.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk .. White	44—46	Red	40—42
— — fine selected runs .. ditto	46—48	Red	42—44
— — Talavera	50—54		
— Norfolk	—	Red	—
— Foreign	38—54		
BARLEY, grind. & dist., 25s to 27s .. Chev.	34—38	Malting ..	29—33
— Foreign .. grinding and distilling	22—26	Malting ..	27—31
OATS, Essex and Suffolk	18—22		
— Scotch and Lincolnshire—Potato	20—25	Feed	18—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	18—23	Feed	17—22
RYE	30—32	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan ....27s to 36s. . . Tick	30—33	Harrow ..	30—33
— Pigeon .... 32s to 40s. . Winds.	—	Longpod	—
— Foreign .....Small	32—36	Egyptian	30—32
PEAS, White, Essex and Kent .. Boilers	32—33	Suffolk ..	33—34
— Maple .... 30s to 34s .... Grey	28—30	Foreign ..	31—33
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered .. per sack	35—40		
— 2d do .....ditto	28—34	Country ..	28—34
— Foreign ..... per barrel	18—25	Per sack	32—34

FRIDAY, July 8.

The weather between the 1st and 4th inst. was unsettled with thunderstorms, it has since been fine, but excepting the 5th cloudy and cool; too much so, we think, to admit of a very favourable setting of the Wheat ears, and the reports we receive from the country are less favourable than they were. The crops are not well spoken of in the Western States of America, where rain appears to be much wanted, and in the interior of Russia the extreme and continued heat is said to be injuring the Wheat plant considerably. The Wheat trade in this kingdom since the 1st inst. has been inanimate, but prices have not undergone any quotable alteration. The previous value of all descriptions of Spring Corn was well supported with rather an improved tendency, particularly for Beans, owing, however, to the late arrivals of Oats here prices declined 6d. to 9d. per qr. Foreign Flour has been more freely offered, and is purchaseable here on somewhat lower terms, whilst in Liverpool it is quoted 6d. dearer. Since Friday last 15 vessels have been reported off the coast. Some cargoes of Wheat on passage have changed hands, and a few transactions for future shipment have taken place at fully late prices. Paris, July 7.—The Flour trade is inactive, and prices are declining. The six marks for delivery this month are quoted equal to 34s. 6d. per 280 lbs. The present stock has accumulated to 22,170 cwts. For Wheat 9d. per qr. lower rates have been accepted. The arrivals of British Oats and foreign Wheat have been large, of all other grain and Flour moderate. There was about the usual attendance at market. English Wheat was in demand at fully Monday's prices, and foreign commands the terms of that day. We observe no alteration in the value of Barley, Beans, or Peas, but the arrivals of Oats continuing to be somewhat in excess of the demand, our quotations are barely realised.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1420 qrs.	— qrs.	1350 qrs.	1640 sks.
Irish	—	—	5930	— "
				200 "
Foreign ..	21,610 "	1260	26,720 "	1370 brls

LIVERPOOL, July 5.—At our market to-day there was a good attendance, with a fair business in Wheat at Friday's advance of 2d. per cental. Oats 1d. per bushel dearer. Indian Corn 1s. 6d. per qr higher. Oatmeal 6d. per load dearer. There was an active demand for Flour, at rather higher prices.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
May 21	39 5d	29s 6d	19s 10d	27s 7d	34s 6d	31s 9d
June 4	38 11	29 0	19 10	28 4	34 10	33 5
— 11	39 6	27 6	20 0	34 1	34 10	33 9
— 18	40 3	27 11	20 4	32 8	35 5	33 9
— 25	40 0	28 6	20 8	..	35 5	33 3
July 2	40 9	27 2	20 9	31 2	36 2	34 0
Agg. Aver.	39 10	28 2	20 3	30 9	35 2	33 4

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	May 28.	June 4.	June 11.	June 18.	June 25.	July 2.
40s 9d	..	..	..	..	..	
40 3	..	..	..		..	..
40 0	..	..	..	..		..
39 6	..	..		..	..	..
39 5		..	..	..	..	..
38 11	..		..	..	..	..

To Rockwork Builders.

WANTED, a MAN who is thoroughly competent to erect Rockwork for Ferneries, &c., and furnish Designs.—Apply, giving list of references of former works, to Messrs. J. WEEKS & Co., Horticultural Builders, King's Road, Chelsea, S.W.

WANTED, a GARDENER, to take charge of a Kitchen and Flower Garden, with a Greenhouse and Vinery, &c. Wages, 15s. per week, with a house. A good character required.—Address, R. BIRD, Esq., Crewkerne, Somerset.

WANTED, an active, industrious, practical GARDENER, married, without incumbrance (no under Gardener kept), with a thorough knowledge of his business, which will be principally Out-door work. Unexceptionable references required, with at least 12 months' character from last situation. Teetotaller preferred. Wages, 25s. per week, with two small rooms. None need apply where the distance is over 15 miles from London.—Address, M., care of Messrs. NISSEN & PARKER, 43, Mark Lane, City.

WANTED, a MAN and WIFE, without incumbrance; the former as Gardener and to Manage one or two Cows—the latter as Laundress, and to attend to the Poultry and Dairy.—Address Y. Z., care of Mr. Frederick Sharpe, 4, Gracechurch Street, City, E.C.

WANTED, a WAREHOUSEMAN, in a London Wholesale Seed Establishment. No person need apply unless thoroughly acquainted with his business.—A. Z., *Gardeners' Chronicle* Office, W.C.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

TO HEAD GARDENERS.—Five Pounds will be given to the person who can obtain for the Advertiser employment in the Floral Department of a Private Garden.—J. B., 8, Square Hill, Maidstone, Kent.

GARDENER (HEAD).—Age 30; thoroughly proficient in every department, including Pines, Orchids, &c. Character unexceptionable.—G. G., Benger, Hertford.

GARDENER (HEAD), age 32, single.—A lady wishes to recommend a respectable Man, fully competent, who has lived with her two years.—E. G., 50, Belsize Park, Hampstead, N.W.

GARDENER (HEAD).—Age 31, married; 18 years' practice in every branch. Two years' good character.—P. B., 15, Burgess Place, Carrington, Nottingham.

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GARDENER, or GARDENER and BAILIFF.—Principle of life, no incumbrance, Scotch; thoroughly understands all branches of his profession. Wife to manage Dairy and Poultry if required.—A. B., Morshell's Park, Romford, Essex.

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The Gardeners' Chronicle Newspaper.

SATURDAY, JULY 16, 1864.

VICTORIA and LEGAL and COMMERCIAL LIFE ASSURANCE COMPANY, 18, King William Street, City.
FOURTH DIVISION OF PROFITS.
At the Annual General Meeting, held on the 12th May last, a Reversionary Bonus of over £62,000 was appropriated to the Assured, equal to 42 per cent. on the Premiums paid.

The Accumulated Funds exceed	£410,000
The Annual Income is over	£70,000
The Claims by Death paid exceed	£310,000
Bonuses declared	£145,000

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Advances are made on Mortgage of Freehold Property, Life and Reversionary Interests, &c., and also to Assurers on Personal Security.
William Ratray, Actuary.

Special Notice.—Life Department.
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37, Cornhill, London, E.C.—Established 1824.
The Books close for the year on July 31, 1864.
Life Policies taken out before that date will rank for three full years at the next distribution of profits in 1866.
The following examples of Bonus additions are taken from the Company's books:—

A Policy issued in 1834 for 4000*l.* had increased at August 1, 1861, to the sum of	£5492	17	1
A Policy issued in 1836 for 5000*l.* had increased at August 1, 1861, to the sum of	6487	18	10
A Policy issued in 1841 for 1000*l.* had increased at August 1, 1861, to the sum of	1256	14	9

Governor—His Grace the Duke of Hamilton and Brandon.
DIRECTORS in LONDON.
President—The Right Hon. the Earl of Mansfield.

Charles Balfour, Esq.	John Frank Mieville, Esq.
Robert Collum, Esq.	J. R. Robertson, Esq.
Francis Fearon, Esq.	Hugh F. Sandeman, Esq.
H. M. Kemshead, Esq.	G. Ramsay, Esq., Manager of the Company.
John Kingston, Esq.	

Secretary—F. G. Smith, Esq.
Medical Officer—E. W. Duffin, Esq., M.D.
Solicitors—Messrs. Oliverson, Lavie, and Peachey.
The last Annual Report and Proposal Forms may be had on application at the Offices of the Company. F. G. Smith, Secretary.
37, Cornhill, London, E.C.

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Just Published, price 6*d.*
PORTABLE FARM RAILWAYS, a Substitute for FIELD CARTING. Report of a Discussion at the Maidstone Farmers' Club, January 21, 1864.
Maidstone: J. Grundy, 83, Bank Street. London: Simpkin, Marshall, & Co.

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Contents:
I. Words and Places.
II. Ludwig Uhland.
III. Free Thinking; its History and Tendencies.
IV. The Circassian Exodus.
V. Lacordaire.
VI. Christian Art.
VII. Public Schools.
VIII. Travelling in England.
IX. The House of Commons.
John Murray, Albemarle Street, W.

News of the Week.

In the House of Lords on Friday the Earl of Malmesbury moved the resolution of which he had given notice, condemnatory of the Ministerial policy in reference to the affairs of Denmark. The motion was supported by Lord Chelmsford, the Earl of Carnarvon, and Earl Grey, and opposed by Lord Brougham, the Duke of Argyll, the Marquis of Clanricarde, the Earl of Clarendon, Lord Wodehouse, Earl Russell, and Earl Granville. On a division the resolution was carried by a majority of 9. Out of 242 Peers present, 123 voted for the Government, but the scale was turned by the proxies, of which the Opposition obtained 58, while the Government had only 45. On Monday Lord Ebury moved an address to the Crown, praying for the appointment of a Royal Commission to consider what steps should be taken to obviate the evil arising from the present compulsory and indiscriminate use of the burial service of the Church of England. The Archbishop of Canterbury said that he did not object to the appointment of a commission, though he could not agree to an alteration of the Church Service. The Bishop of London said that a large proportion of the clergy were satisfied with the present state of things, and that the best course would be to leave the matter in the hands of the Government. Earl Granville intimated that he would consult the Archbishop of Canterbury and Lord Ebury, but at present he could not give any pledge on the subject. The motion was then withdrawn. On Tuesday the Indemnity Bill and the Street Music Bill were read a second time. The Facilities for Divine Service in Collegiate Schools Bill, the Life Annuities and Life Assurances Bill and the Lunacy (Scotland) Bill were read a third time and passed. On Thursday Lord Brougham asked if the Government intended to take any legislative measures to prevent the recurrence of such fearful crimes as the murder which had taken place on the North London Railway, and generally to increase the security of the public when travelling by railways. Earl Granville said that the subject should receive the careful consideration of the Government. The Commons' amendments to the Penal Servitude Bill, after some debate and a division, were agreed to. On the order for the third reading of the Public and Refreshment Houses Bill, the Earl of Donoughmore moved an amendment making the Act compulsory all over the country. Earl Granville opposed the amendment, which was negatived on a division by 44 to 33. The Bill was then read a third time and passed.

In the Commons on Friday the adjourned debate on Mr. Disraeli's resolution, condemning the policy of Ministers in regard to Denmark, was resumed, when the motion was opposed by Mr. B. Osborne, Mr. Monsell, Lord Elcho, Mr. Scourfield, Mr. Buxton, Mr. Clay, and Lord Palmerston, and supported by Mr. Whiteside, Mr. B. Cochrane, The O'Donoghue, Sir S. Northcote, and Mr. Walpole. Mr. Newdegate's amendment having then been withdrawn, Mr. Kinglake moved as an amendment to substitute for the last paragraph of Mr. Disraeli's resolution words expressing the satisfaction of the House that, at this conjuncture, Her Majesty has been advised to abstain from armed interference in the war now going on between Denmark and the German Powers. At 20 minutes to 2 o'clock on Saturday morning the House divided, when the numbers were—For Mr. Disraeli's resolution, 295; against it, 313; majority for the Government, 18. The amendment of Mr. Kinglake was then agreed to, and the words were added to the original resolution. On Monday, in answer to Mr. D. Griffith, Lord Palmerston said that her Majesty's Government had reason to believe that there was no intention on the part of the German Powers to attack Copenhagen. Sir W. Jolliffe moved, that the services rendered by Sir F. Head, when Governor of Upper Canada in the years 1857 and 1858, call for the favourable consideration of her Majesty's Government. Mr. Cardwell admitted the services of Sir F. Head, and stated that his case, in common with that of other colonial governors, was under the consideration of the Government. The motion was withdrawn. The House then went into Committee of Supply, and agreed to several votes of the Civil Service Estimates. The Inland Revenue (Stamp Duties) Bill, and the Public Schools Bill, were read a third time and passed. Several other Bills were advanced a stage. On Tuesday Lord Palmerston stated, in reply to Mr. Hardcastle, that the conduct of the Brazilian Government with regard to the slave trade had been invariably marked by a violation of their treaty engagements; and that their conduct towards the Emancipados had been equally flagrant. Mr. Bright and Mr. S. Fitzgerald contended that Lord Palmerston had made an unjust attack upon the Brazilian Government, and that the Brazilian Slave Act ought to be repealed. Lord Palmerston in reply expressed his conviction that if the Act were repealed, the Brazilian slave trade would be revived with all its former horrors. Mr. D. Griffith moved a resolution condemning the practice of appointing a Peer and Privy Councillor exclusively to the office of Postmaster-General, and was speaking in support of the motion, when the House was counted out. On Wednesday Mr. Bouverie moved the second reading of the Uniformity Act Amendment Bill. Mr. Walpole moved as an amendment that the Bill be read a second time that day three months. On a division the amendment was carried by 157 to 101. The Bill was therefore lost. The Scottish Episcopal Clergy Disabilities Bill was read a second time, an amendment moved by Mr. Kinnaird for a Select Committee on the subject having been previously withdrawn. On the order for going into Committee on the Poisoned Grain Prohibition, &c., Bill, a discussion took place on an amendment to defer the committee for three months. On a division, the amendment was negatived by 60 to 38, and the House went into committee *pro formâ*. Several Bills were advanced a stage, and others were withdrawn. On Thursday, in reply to Mr. Cochrane, Mr. M. Gibson declined to promise that he would bring in any measure next session making it compulsory on railway companies to establish some mode of communication between guards and passengers in railway trains. On the order for the second reading of the New Zealand Guarantee of Loan Bill, Mr. A. Mills moved as an amendment that the Bill be read a second time that day three months. After a long debate, the amendment was negatived, on a division, by 92 to 55, and the Bill was read a second time. The House then went into Committee of Supply on the remaining Civil Service Estimates, when the votes for the National Gallery and British Historical Portrait Gallery were agreed to.

The Danish Ministry, at the request of the King, has resigned, and a new Cabinet has

been formed by Count MOLTKE NUTCHAU, a leading member of the strongest reactionary party. The first act of the new Ministry has been to send despatches to the Courts of Vienna and Berlin, containing proposals for the suspension of hostilities. The latest news states that hostilities have already been suspended by the Danes, and it is generally believed at Copenhagen that peace will shortly be concluded.

Home News.

THE COURT.—The Queen and Royal family left Windsor Castle on Monday for Osborne. On Thursday afternoon, the 7th inst., the Queen, accompanied by the Prince and Princess Louis of Hesse, Princess Helena, and Princess Louisa, went to Claremont and visited the Queen Marie Amélie. Princess Beatrice and Princess Blanche of Orleans took a carriage drive. Prince Edward of Saxe Weimar and the Duchess of Manchester arrived at the Castle on a visit. On Friday morning the Queen, accompanied by Princess Helena, drove out in a carriage and four, and visited her Majesty's Schools at Cumberland Lodge. Prince and Princess Louis of Hesse and Prince Edward of Saxe-Weimar took a carriage drive. Princess Helena and Princess Louisa drove in a carriage and four to Bagshot Park. The Count and Countess de Paris arrived at the Castle on a visit. The Belgian Minister and Madame Van de Weyer dined with the Queen and Royal family. On Saturday morning the Queen, accompanied by the Princess Louis of Hesse, Princess Louisa, and the Countess de Paris, rode out in a carriage and four. Prince Louis of Hesse, accompanied by the Count de Paris, went out riding. In the afternoon the Queen held a Privy Council. Earl Granville had an audience of the Queen. Sir George Grey remained on a visit. In the evening Prince and Princess Louis of Hesse honoured the Belgian Minister and Madame Van de Weyer with their company at dinner at New Lodge. On Sunday morning the Queen, Prince and Princess Louis of Hesse, Princess Helena, Princess Louisa, Princess Beatrice, and Prince Leopold, attended Divine service in the Private Chapel. The Rev. W. H. Brookfield officiated. In the afternoon the Prince and Princess of Wales arrived at the Castle. On Monday morning the Prince and Princess of Wales left the Castle for Marlborough House. Sir George Grey left for London. In the afternoon the Queen, Prince and Princess Louis of Hesse, the Princess Victoria of Hesse, Princess Helena, Princess Louisa, Princess Beatrice, and Prince Leopold left Windsor for Osborne. The Royal party travelled by the Great Western to Basingstoke, and thence by the South Western to Gosport, where they embarked for Osborne. On Tuesday, Prince William of Prussia, Her Majesty's grandson, arrived at Osborne, where he will remain for some weeks for the benefit of sea bathing. Prince Louis of Hesse and Princess Helena rode on horseback. On Wednesday the Queen, Princess Louisa, and Prince Leopold, drove out in a carriage and four.

THE PRINCE AND PRINCESS OF WALES. — On Friday morning the Prince rode on horseback. In the afternoon the Prince and Princess of Wales went to Lord's Ground to witness the cricket match between the schools of Eton and Harrow, and afterwards drove to the House of Lords. On Saturday morning the Prince of Wales rode to Lord's Cricket Ground. The Princess took a carriage drive. In the evening their Royal Highnesses went to the Adelphi Theatre. On Sunday morning the Prince and Princess of Wales attended Divine service at the Chapel Royal, St. James's. The Rev. H. Melvill preached the sermon. In the afternoon their Royal Highnesses left town for Windsor on a visit to the Queen. On Monday morning the Prince and Princess of Wales returned to Marlborough House from Windsor. Their Royal Highnesses afterwards went to the Clothworkers' Hall in the City, where his Royal Highness was enrolled a freeman of the Company. In the afternoon the Prince rode to Wimbledon. In the evening the Prince and Princess went to the Italian Opera. On Tuesday morning the Prince rode on horseback. A deputation of ladies, headed by Lady Wriothesley Russell, Lady Radstock, the Hon. Mrs. Lefroy, the Hon. Mrs. Warburton, the Hon. Mrs. Locke-King, Lady Peto, and Lady Havelock, had an interview with the Princess, and presented a Bible on behalf of the women of the United Kingdom. In the afternoon the Prince and Princess drove to Chiswick and visited the Dowager Duchess of Sutherland. In the evening their Royal Highnesses had a dinner party. On Wednesday the Prince rode on horseback. The Princess took a carriage drive. In the evening their Royal Highnesses went to the *conversazione* given by the Duke of Buccleuch at the Horticultural Gardens, South Kensington. On Thursday the Prince went to Windsor to preside at the annual meeting of the Prince Consort's Association, and distributed the prizes given by the Association. The Princess took a carriage drive. In the evening the Prince and Princess went to Her Majesty's Theatre. Their Royal Highnesses will leave Marlborough House to-day for the White Lodge, Richmond Park, and will dine this evening with the Duke of Buccleuch at his villa at Richmond. On Monday their Royal Highnesses will attend the Duchess of Cambridge's *fête champêtre* at Cambridge Cottage, Kew; and on Wednesday will visit the Duke and Duchess d'Aumale, at Orleans House, Twickenham. It is understood that the Prince will go to Scotland in the autumn for the shooting, and will again occupy Abergeldie Castle. It is expected that during his stay in the north, his Royal Highness will visit the Duke of Sutherland at Dunrobin Castle.

DEPARTURE OF PRINCE ALFRED FOR NORWAY.—On Tuesday morning Prince Alfred left Edinburgh for Granton, where he embarked in the screw frigate Aurora, which left the Frith on the same day for Christiansand, where the Prince will land.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

PARLIAMENTARY MOVEMENTS.—It is said that the session will be brought to a close on the 29th or 30th inst. The Ministerial white-bait dinner is appointed to take place at the Trafalgar, Greenwich, on Saturday, the 23d inst. Sir Michael Hicks Beach was elected for East Gloucestershire on Tuesday without opposition, the Hon. E. Dutton having retired in his favour. Viscount Royston, eldest son of the Earl of Hardwicke, is mentioned as the Conservative candidate for Norwich at the next election. Mr. C. Locock Webb is a candidate for Bodmin on Liberal Conservative principles. Sir George Stucley is a candidate for Barnstaple in the Conservative interest. Lieut.-Colonel Crosland is a candidate for Huddersfield in the Liberal interest. Sir F. Smith is about to retire from Chatham, and Mr. Arthur Otway, brother-in-law of Lord Clarence Paget, will offer himself as his successor in the Liberal interest. Mr. S. Beale is about to retire from Derby. Mr. G. C. Bentinck will retire from Taunton. Sir Henry Rawlinson will be a candidate for Frome in the Liberal interest. Mr. H. J. Selwyn is a candidate for Maldon in the Conservative interest. There are four candidates in the field for the seat about to be vacated by Mr. Ricardo at Worcester,—Mr. Allsopp, the brewer, a Conservative; Mr. Laslett, an Independent; Mr. Lycett, of the firm of Dent & Co., London, glove manufacturers; and Mr. Sherratt, Mayor of Worcester, in the Liberal interest. Mr. T. O. Trevelyan will be the Liberal candidate for Tynemouth.

THE NAVY.—A supplement to the *London Gazette* was published on Thursday, containing a memorandum from the Admiralty, by which the number of captains in the navy is to be reduced from 350 to 300; of commanders, from 450 to 400; and of lieutenants, from 1200 to 1000. The manner in which these reductions are to be made, and the advantages to be secured on retirement, are detailed in the memorandum.

THE ARMY.—It is stated that an important change is about to be made in the armament of our troops. It is understood that the committee appointed to consider the subject have strongly recommended that the whole of the infantry should be furnished with breech-loading rifles, and that the recommendation will be acted upon.

COLONIAL BISHOPRIC.—The Right Rev. Dr. Anderson, Bishop of Rupert's Land, is on his way to England, with a view of placing the resignation of his diocese in the hands of the Government.

COLONIAL APPOINTMENTS.—The Queen has appointed Sir Richard Graves MacDonnell, C.B., to be Lieut.-Governor of Nova Scotia, and Lieut.-General Sir Robert Percy Douglas, Bart., to be Lieut.-Governor of the Cape of Good Hope.

Foreign.

FRANCE.—The Empress presided on Wednesday at a Cabinet Council at St. Cloud for the first time since the Emperor's departure for Vichy. The following is a summary of a circular despatch addressed by M. Drouyn de Lhuys to the diplomatic agents of the Emperor on the 28th June, on the subject of the London Conference and the resumption of hostilities:—

"The Plenipotentiaries who met at London to re-establish peace between Germany and Denmark separated, after having confirmed the inutility of their efforts, and the belligerent parties immediately resumed arms. We sensibly regret that the labours of the Conference have not had a more satisfactory result, but it has not been the fault of France that the conclusion was not different. We have not shut our eyes to the difficulties which this negotiation presented. Thus, before its commencement, we had used every effort to obtain the meeting of the Conference upon the fittest conditions to facilitate its task. We had especially desired that a real armistice should be previously concluded for the entire duration of the deliberations, and that the basis of discussion should be determined in advance. The parties have been unable to agree upon these two points, and although this first difficulty inspired us at the outset with doubts as to the issue of the Conference, we have none the less sincerely seconded this effort at conciliation. The Plenipotentiary of the Emperor was, consequently, desired to support or to suggest every proposition which appeared likely to bring about an agreement. The point of departure of the discussion was naturally, first of all, to be sought in the arrangements of 1852. We asked ourselves, therefore, first, whether, if remodelled so as to attain their object better, they might not be made the basis of an equitable arrangement, and it was in this sense that the representative of France expressed himself at the opening of the negotiations. When, after recognition of the impossibility of keeping the discussion upon this ground, the English Government proposed an arrangement giving the southern portion of Schleswig to Holstein as well as Lauenburg, we did not hesitate to agree to this combination. It had in our eyes the advantage of taking into account the national sentiment of the German population of Schleswig, and of leaving to Holstein—increased by this annexation—the right of deciding upon its own fate. While lending our support to the English Plenipotentiaries, we acted in perfect conformity with the principles of our public law, and we should have been rejoiced at an arrangement which appeared to us acceptable to both parties. The German Powers did not consider themselves able to adopt it. They claimed for the frontier a line of demarcation which would have assured to Germany the possession of the districts, while Denmark persisted in not adding to the sacrifice to those she had consented to make in Southern Schleswig, as well as Holstein and Lauenburg. When all the other combinations put forward were set aside we suggested a last plan. We recommended that the populations forming the subject of dispute should be called upon to express their sentiments, and thus furnish the conference with the necessary data for tracing the line of separation in the most equitable manner. We have not failed to prevent the rupture of negotiations, and the difficulties are again left to be decided by arms. Opinion has been painfully sensibly moved by the resumption of hostilities, and looks with disquiet to the consequences so unequal a conflict may entail. For our part, we shall be unable to disregard the bearing of events so directly affecting the interests of all the maritime Powers in the North, and even those of the equilibrium of this portion of Europe. We entertain the sincere wishes that the dangers may be avoided which these events might bring about; and, guided by the same sentiments which have hitherto proved the rule of our conduct, in desiring to maintain the impartial attitude we have taken, we are willing to hope that no complication will arise of a grave a nature as to necessitate our embracing a different policy."

The *Constitutionnel* of Sunday expresses the desire that the pacific tendencies manifested by the *Dagblad* may be followed by some result, and says:—

"Denmark not being able to hope for material assistance from the Power which was incontestably the most interested in supporting her, may after a glorious war, notwithstanding a defeat, think of peace without in any way wounding the proudest national feeling."

The *Pays* of Monday contains an article referring to the despatches lately published by the *Morning Post*, respecting the alleged revival of the Holy Alliance. It says:—

"The Cabinets of St. Petersburg, Vienna, and Berlin take their epoch. The interviews that have taken place at Carlsbad and Kissingen will not prevail against the rights and the legitimate aspirations of modern Europe. The Sovereigns of Russia, Prussia, and Austria are now the only monarchs who persist in separating their own interests from the interests of their people. France and England are in another camp—the camp of the liberties of the new era and the rights of nationalities. Following the same object, they give one another the hand. France and England closely united will always be strong enough, without resort to force ever being necessary, to protect young Europe against the dark conspiracies of old Europe. The frank and sincere alliance of France and England secures the peace of the world, with liberty and victory for a long series of years."

La France contains an article in the same sense. A shocking disaster occurred to a steam-boat on the river Saône on Sunday afternoon. The vessel was crowded with passengers, who, rushing to one side, caused her to lurch, when 50 persons were thrown into the water and it is believed that 40 were drowned.

SPAIN.—The King will go to Paris next month on a visit to the Emperor of the French. The Queen will go to the sea baths of Cantabrique. The Madrid Liberal papers, commenting on the journey of the King to France, say that the object of this journey is to preserve the alliance with that country. The clerical papers are much opposed to this journey. The iron-clad frigate Numancia, the sailing frigates Berenguela, Blanca, and Vencedora, and the steamer San Quintin will sail for the Pacific after the arrival of the next mail at Southampton. The Madrid papers publish the terms on which the Government offer to settle the pending dispute with Peru, and to give up the Chincha Islands. If those terms are agreed upon, Spain offers to conclude a treaty with the Republic of Peru similar to those which exist between her and the other Spanish-American Republics. The *Official Gazette* of Saturday publishes the convention between France and Spain for the international railway service between the north of Spain and the south of France. The apprehensions of disturbances at Madrid, which would justify the adoption of precautionary measures, are now believed to be unfounded.

DENMARK.—At the request of the King, the whole Danish Ministry has resigned. On Friday the King deputed Count Charles Moltke-Nutchau to form a new Cabinet. The count belongs to the strongest reactionary party, and was formerly a member of the Bluhme Ministry. The Cabinet he has formed is as follows:—President of the Council and Minister of Foreign Affairs, M. de Bluhme; Minister of the Interior, M. Tillisch; Minister of War, Lieut.-General Hansen; Minister of Marine, Councillor Lütken; Minister of Justice and of Public Worship, Chamberlain Helzen; Minister of Finance, Councillor David; Minister for Schleswig, Chamberlain Johannsen. Count Moltke-Nutchau and M. de Quaade are Ministers without portfolios. The following is a summary of a Message sent by the New Ministry to the Rigsraad on Tuesday:—

"The King, deeming that men unconcerned in the past events would be better able to save the Fatherland, has decided upon a change of Ministers. We hope to obtain the confidence of the Rigsraad and the people, otherwise we shall be powerless. To lay down a programme would at present be impossible. The new Ministers can only give the assurance that, taking their stand firmly upon legal ground, they will never advise the King to adopt illegal measures. The Ministers will consider it as their mission to uphold the honour and independence of Denmark."

It is asserted that despatches were forwarded on Wednesday morning by the Government to the Courts of Vienna and Berlin, which are said to contain proposals for the suspension of hostilities. A Danish ship with a flag of truce, arrived at Swinemunde on Tuesday evening, with a despatch from Denmark requesting the suspension of hostilities. On Wednesday the military commander of Dantzig received a despatch announcing the suspension of hostilities on the part of the Danes. Colonel Kauffmann, of the

Danish army, proceeded on Tuesday to the Prussian head-quarters; it is supposed for the purpose of negotiating the suspension of hostilities. The belief is becoming very general that peace will shortly be concluded. It is asserted on good authority that M. de Quaade is about to proceed to Berlin; The following is stated to be the probable programme of the new Ministry:—Maintenance of the London Treaty with the support of England, France, and Russia; eventual entrance into the Germanic Confederation; consent to an administrative State of Schleswig-Holstein with some common institutions; and personal union of both Duchies with the Danish kingdom. Bishop Monrad is believed to have told the King that the country required peace, and that he was nevertheless not in a position to conclude a peace of an acceptable character. He was, however, ready, should his Majesty desire, to hold out even under these unfavourable circumstances. The official *Berlingske Tidende*, referring to the Ministerial crisis, says:—

"The cause of the crisis is not so much to be sought in any difference of opinion between the King and his responsible advisers with regard to any especial question, as in the entire situation, threatening such extreme danger to the country."

THE DANISH DUCHIES.—On Sunday afternoon the Prussian troops, under General Falkenstein, successfully crossed the Liim Fiord, near Aalborg, in boats. The head-quarters were removed to Attrupgaard on Wednesday, and to Frederickshaven on Thursday.

SWEDEN.—The screw line-of-battle ships Carl Johann and Stockholm, and the steam corvettes Vanadis and Gefle, put to sea last week, with orders to cruise between Gottenburg and Falsterbo, on the south-west coast of Sweden. One portion of the fleet has since been recalled, but the other is still held in readiness for service. According to a statement in the *Morgenblad* of Tuesday, the whole of the army intended for active service has been disembodied, the men being sent away on furlough.

FRANKFORT.—At the sitting of the Federal Diet on Thursday a proposition was made by Austria and Prussia that a request should be addressed to the Duke of Augustenburg similar to that addressed to the Grand Duke of Oldenburg, asking him to substantiate his hereditary claims to the Duchies. The vote upon this proposal has been postponed until the next sitting.

BELGIUM.—In the sitting of the Senate on Wednesday, a Royal decree was read closing the Legislative Session of 1863-1864.

WURTEMBURG.—At the opening of the Estates on Tuesday, the King, in his speech from the Throne, expressed a wish that unanimity should reign between the Government and the Estates, and assured them of his sincerity and love towards the people. He hoped that the Holstein question would be settled in a national sense, and in accordance with national right. The speech of the King was received with loud and general cheering. The civil list is to be retained on the same footing as in the former reign.

PRUSSIA.—Official intelligence arrived at Berlin on Wednesday that couriers had left Copenhagen for Vienna and Berlin with proposals for an armistice and peace. The Ministerial *Provinzial Correspondenz* of Thursday, referring to the recent change in the Danish Ministry, says:—

"It appears certain that this change is intended to preserve Denmark from further losses, by at last entering upon a path leading to peace. It may be presumed that the German Powers will meet any earnestly-meant peace policy of the Danish Government by every means in their power. But peace is no longer to be obtained by Denmark except by her giving up the whole of Schleswig-Holstein and recognising its independence. An armistice can also only be agreed to when an acceptable basis for peace negotiations has been offered."

The Customs treaty of the 28th ult., which Hanover and Oldenburg had signified their intention of joining, was signed at Berlin by their representatives on Monday.

AUSTRIA.—The Ministry for Foreign Affairs has received information that a courier from Copenhagen will shortly arrive at Vienna with proposals for an armistice.

ITALY.—In the Senate on Thursday the Budget came on for discussion. Signor Marliani referred to the relations with Spain, and demanded that the Italian Legation at Madrid should be abolished. The Minister for Foreign Affairs, in reply, said that Italy, having been recognised by the great Powers, did not seek to be acknowledged by Spain. Signor Marliani urged the Government to take possession of the Spanish College at Bologna. The President of the Council assured the Senate that the Government would exercise the rights to which it is entitled. It is believed that the Session will close on Monday next. Intelligence from Venetia announces that the country, especially the province of Verona, is infested by several bands of brigands.

TURKEY.—Accounts from Constantinople state that 40,000 militia have been disbanded, and the armaments hitherto carried on are being less urgently conducted. This is considered to show that the intentions of the Porte are of a peaceful nature. By an Imperial order the Turkish commercial flag has been altered. Instead of the red ground and white crescent, as hitherto, the colours are green ground with a red ball in the middle bearing a white crescent in its centre.

COAST OF AFRICA.—The news brought by the last mail respecting our troops on the Gold Coast is most unsatisfactory. It is stated that they were so diseased that hardly four men out of ten were fit for duty.

INDIA.—The Bombay mail of the 8th June says that the resignation of the chief command of the army by Sir Hugh Rose, and the appointment of Sir William Mansfield as his successor, are near at hand. The Ameer of Cabul is reported to have completely defeated Afzat Khan in a great battle at Bamcea. The tract of land situated at the foot of the Bhootan Hills, called Ambarree Fallacootah, is to be immediately annexed to the British territories. The sum of 10,000 rs. hitherto paid as a subsidy to the Bhootiahs on the frontier of Assam is to be discontinued. The Bhootiahs are to be hemmed in by posts established along our frontier, the garrisons of which are to prevent supplies of any kind reaching Bhootan from British India. These measures will soon bring the Bhootiahs to submission, as the Hill States depend on our territories for most of their supplies. Another suttee has taken place in Meywar. The son of the Rajah of Beygoon died and was burnt. During the ceremony his wife was thrown on the funeral pile and held there until she was burnt to death. Deva Sing, the chowkeydar, who caused the death of the Rev. Isider Loewenthal, at Peshawur, has been convicted of culpable homicide, and sentenced to imprisonment for two years. Two more new banks have been started at Bombay.

AUSTRALIA.—The transportation question continues to occupy public attention in the Australian colonies. Mr. Kyte has submitted a motion to the Parliament of Victoria, proposing a vote to defray the passage-money of a certain number of expirees annually from the colony to England. It was discussed on the 11th May, and supported by several prominent members, including Mr. O'Shanassy, Mr. Duffy, and Mr. Haines. The proposition was withdrawn, but not before it had evoked a strong expression of feeling against the continuance of transportation to any portion of Australia. It was admitted that the object proposed to be gained by the adoption of the motion would be achieved if the landing of a few expirees at Plymouth or Gravesend brought practically before people in England a sense of the evil they propose to bestow upon the colonies. The *Argus*, referring to this subject, makes the important statement that a memorial praying for the suppression of transportation has been drawn up in Western Australia itself, but that Dr. Hampton, the governor of that colony, has refused to send it to England. The salmon acclimatising experiment is proceeding successfully at Melbourne and Hobart Town.

NEW ZEALAND.—The following are the details of the recent disaster to our military and naval forces at Tauranga:—

"The natives, in considerable strength, had reached Tauranga before General Cameron went down, and had erected a pah of some considerable strength on the neck of land which connects Te Papa (the place where our camp was situated), and the main land. On the 27th and 28th April preparations were carefully made for an attack. Guns were got into position, and troops thrown into positions commanding the approaches to the pah. On the night between the 28th and 29th the 68th Regiment were marched round so as to reach the rear of the position, and succeeded in doing this perfectly unopposed. The whole day from half-past seven up to four o'clock in the afternoon the firing continued with terrific perseverance. The effect was very manifest in a large breach which extended about twenty yards, the rubbish of various kinds filling the trench nearly up to the level of the surrounding earth. At four o'clock the troops prepared for the assault, advanced towards the breach, the skirmishers on each flank pouring a searching fire into the place. The impression was that there could hardly be a living soul left in the place, which appeared to have been turned outside in by the explosion of the shells which had gone on all day. A well-directed, but feeble fire from the flanking angles, which opened on the column as it advanced at double-quick time up the slope to the breach, only served to modify the view very slightly. With a cheer the stormers crossed the ditch, scaled the bank, and plunged into the pah. They were led by Commander Hay of the Harrier, and consisted of the Naval Brigade and the 43d Regiment, in equal numbers, but when they dashed into the works they saw nothing of the enemy. There were fragments of the palisading, kits of food, mats, and other things lying about; but not a living soul visible. Beyond was a second palisade, also somewhat shattered and rent; over this the sailors at once swarmed into the second compartment. There were here no signs of life either. Two or three dead natives lay about, and there was an unusual amount of plunder of various kinds, in different parts of the opening. The usual love of loot which possesses every man-of-war's man was too much for discipline or prudence. Seeing no enemy they would not believe in one, and many threw down their guns to search for loot. They were soon joined by the 43d's men in some numbers, and, despite the exertions of their officers, they seem to have formed a very tumultuous band crowded into the inner division. Suddenly from every side, and even, as it seemed, from the ground at their feet, a terrific fire was poured upon them from hundreds of pieces; and the awful war-howls of the natives rang on every side of them. The 43d men were panic-struck, and fled at once without looking behind them, leaving their officers to stand, and, alas, fall unsupported. The sailors also fell back, and the place was all but evacuated, when Captain Hamilton, of the Esk, arrived with the supports, and waving his hand over his head shouted to his men to follow him. As he leaped into the pah a bullet pierced his brain, and he fell dead. His men rushed in, and a terrific fire was kept up for some time, until at last all the officers, with scarcely an exception, being killed and wounded, they fell back in disorder. The 68th Regiment had tried to assault on the opposite side according to orders, but it was found that the cross-fire was so terrific as to render it death to attempt to storm. It is believed that 300 men were in the pah, and they had concealed themselves in casements cut out of the ground, and covered with boughs and earth, which, in great measure protected them from the shells. The General lost no time in moving up guns and skirmishers and renewing the fire upon the place, but as it was now growing dark nothing more could be done by way of assault. The yells of triumph from the pah were tremendous, and many were the challenges sent through the darkness to the soldiers to come on once more. This was bravado however, as they knew very well that the assault would be renewed next morning, and did not mean to await its coming. About 10 o'clock they crept out of the pah and tried to escape unperceived in the darkness. They were, however, intercepted at a crossing-place of the river by the guard of the 68th and Naval Brigade, and broke and took to the swamp. Here they were fired at by the skirmishers of the whole regiment. They escaped for the most part under cover of the darkness, leaving between 20 and 30 of their number dead in the swamp. Our troops entered the pah at midnight, and found that the killed and wounded had not been touched by the natives. Our loss was enormous, especially in officers, a list of which has already been published."

UNITED STATES.—Secretary Chase has resigned, and Mr. Lincoln has nominated as his successor ex-Governor Todd, of Ohio, who having declined the appointment, Senator Fessenden, of Maine, was appointed, and confirmed by the Senate. Gold opened at 250, rose to 282, but declined to 260 on Mr. Fessenden's confirmation, and to 230 on the repeal of the Gold Bill by the Senate. There is no news from either of the armies. General Grant has made no further attempt to turn the Confederate position at Petersburg since his defeat on the 22d ult. The term of service of many of his veteran regiments expires from day to day, and the soldiers exhibit no disposition to re-enter the ranks. The Administration journals insist that he must be heavily reinforced before he again ventures to advance. Much anxiety is felt for the safety of General Sherman. Many of his supply trains have been captured, and the Confederate force in his rear is steadily augmenting. His loss during his present campaign is estimated at nearly 20,000 men. General Wilson's cavalry has destroyed 20 miles of the Danville Railroad. On their return on the 27th ult. they were interrupted by the Confederates at Beam's Station on the Weldon and Petersburg Railroad. Wilson fought all night and the following morning, but was unable to push his way through. General Meade sent the 6th Corps, with a division of the 2d Corps, to his assistance. General Polk, Bishop of Louisiana, was killed in battle in Georgia on the 14th ult. Mr. Joseph F. Scoville, the well-known "Manhattan" of the London *Standard* and *Herald*, died suddenly in New York on the 25th ult. in his 50th year. Colonel Marshall Anderson, of Cincinnati, brother of Major, now General Anderson, who commanded Fort Sumter when its bombardment by the State of South Carolina precipitated the war, has declined the nomination by the leaders of the Democratic party as "Presidential Elector for the 12th congressional district of Ohio." He has published a remarkable letter, stating as his grounds for this decision that he is opposed to the continuance of the war, and is in favour of the secession of the Western States from the Union. He says:—

"I want every voter to know that I am diametrically opposed to the continuance of this war. I will not, I cannot, consent to advocate and sustain any man, be he soldier or civilian, who is in favour of its prosecution. I am for a candidate who will lead us on under the banner of the Constitution, our motto, 'Union and liberty, or no union at all.' If we cannot have our glorious old Union, let us have God and Nature's Union. Let us follow the bright sparkling waters of the Ohio down to the Father of Waters, down to the Ocean of Peace. We poor Western serfs are crushed to the earth under national burdens, imposed upon us by our factory masters, by Lowell lords and shoddy ladies. I am tired of working for Yankee taskmasters. I hate their selfish meanness, their commercial restrictions for their own benefit, and am in favour of a Western Confederacy. I have paid tribute long enough to the looms and spindles of the East. I wish no longer to be the political pack mule of New England. They have taught me that when the burden becomes intolerable I have a right to throw it off. They invented the word 'secede,' and they have inculcated the doctrine that an oppressed people are justified in separating from their oppressors—peaceably if they can—forcibly if they must. The Union is dissolved."

CANADA.—A German emigrant train on the Grand Trunk Railway ran off the Beloid Bridge, near St. Hilaire, Canada East, on the morning of the 29th ult. 34 dead and from 30 to 40 wounded had been taken from the wreck. One car was yet to be examined.

BRITISH COLUMBIA.—The Colonial papers give details of an attack by Indians on the 7th of May upon a road party, working on the Bute Inlet route. The men were attacked at daybreak while most of them were asleep, and of 17 white men only three made their escape. The motive is supposed to have been plunder. The massacre has created a very painful feeling among the colonists generally, and it is feared that a like fate has overtaken a second party, who had been sent up by Bentinck Arm, and were working downwards.

MEXICO.—Official despatches from Mexico describe the solemn entry of the Emperor Maximilian into the capital on the 12th of June, amid unanimous and indescribable enthusiasm. The Indians of pure breed, who form seven-eighths of the population, were particularly conspicuous by the exuberance of their delight. The native chiefs addressed the Emperor Maximilian in the Aztec language, and hailed him as the avenger and regenerator destined by Providence to raise the Indian race from their humiliation and degradation.

THE PACIFIC.—The hostilities which have occurred between Spain and Peru, have caused great excitement in Chili. It is proposed to erect formidable batteries to guard the entrance to the harbour of Valparaiso. A commission has been appointed to proceed to England for the purpose of purchasing war steamers. In Peru subscriptions are raising for the purpose of maritime defence. On the 3d ult. a Spanish gun boat appeared in the Bay of Callao, under a flag of truce, and requested permission to anchor and deliver despatches to the minister of England, France, and Chili, which was refused. The officer commanding the gun boat then said that he wished solely to treat with the Peruvian Government for the suspension of hostilities, but this was also refused.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*Vote of Censure.*—The Earl of MALMESBURY moved a resolution expressing the opinion of the House that, while the course pursued by her Majesty's Government had failed to maintain their avowed policy of upholding the integrity and independence of Denmark, it had lowered the just influence of this country in the councils of Europe, and thereby diminished the securities for peace. Having regretted the absence, through indisposition, of the Earl of Derby, on whom the task of moving the resolution would have fallen, he expressed his fear that the violation of the Treaty of 1852 had set a bad precedent, which might at any future time be quoted as an excuse for violence and wrong. The German Diet had exceeded its powers in interfering with the European treaty, by asserting the principle of nationality against it. He would express no opinion as to the future, but as to the past he believed had the Government been firm and decided in its course the present conflict might have been prevented. He then traced the failure of all the negotiations to the interference of Lord Russell with questions connected rather with the internal government of Denmark than its foreign relations. He had placed himself in the position both of partisan and judge between Denmark and Germany, and had therefore pleased neither party, and destroyed his own influence as an English Minister.—The Duke of ARGYLL said that the resolution involved no principle, and explained no policy. The discussion raised on it was a mere contest of faction. The Opposition avowed that they would not have gone to war with Germany on behalf of Denmark; why, then, was not the Government justified in equally refraining from hostilities? He attributed the course taken by Denmark, in resisting the demands of Germany, in a great degree to a conviction on the part of the Danish Government that the sympathies of the country and of that House were on its side. He believed that Denmark had also speculated on a change in the Government of this country, by which it would be assisted. Instead of this, Denmark now saw the Government attacked on the very ground that they had endeavoured to form an European alliance to defend it.—Lord BROUGHAM said he had attentively studied the correspondence, and had come to the conclusion that the Government had not menaced Germany. He felt that they could not have stood silently by and seen the Danes overwhelmed without remonstrance and protest; at the same time it would be unreasonable to expect that England should, single-handed, take up arms against a third of continental Europe.—The Marquis of CLANRICARDE moved as an amendment to omit the latter part of the motion, and insert in lieu thereof "That this House regrets that Denmark was allowed to expect from the English Government material aid in support of the objects of the Treaty of 1852." While agreeing that the Government had deplorably mismanaged affairs, he could not concur in the terms of the motion, as he did not believe that the influence of England had been lowered, or that she stood humiliated before the nations of Europe.—The Earl of CLARENDON said that he had not shared the responsibilities of the Government during the most active part of the negotiations, but in the outset of the affair the Government had exhibited foresight and a clear appreciation of its gravity. They had shown an honest and sincere desire to bring about an amicable settlement, in which they would have succeeded if they had been met in an equal spirit, not only by the parties directly interested, but also by the other Powers who were equally parties to the Treaty of 1852.—Lord CHELMSFORD condemned the policy of the Government.—Lord WODEHOUSE would not admit that any promise of material aid had been given by England to Denmark. All the Government had done was to offer the Danes sound and honest advice, for which the other Powers were equally responsible with England. The Earl of CARNARVON argued that the conduct of the Government had from beginning to end been characterised by failure, and that it was the duty of Parliament to pass its judgment on a policy so indecisive, feeble, and humiliating.—Earl RUSSELL said he could not discover, either from the resolution or the speeches in support of it, what was the foreign policy of the Opposition. No two speakers seemed to agree in their notions as to how these negotiations ought to have been conducted. Lord Derby had admitted it would be wrong at any time to go to war for Denmark. Now, Lord Malmesbury thought, if the English Government had resolved on war when the German troops entered Schleswig, this conflict would have been prevented. The Treaty of 1852, though wise in its general objects and calculated to secure peace, was an artificial one, and dependent upon conditions the performance of which it was not in the power of England, France, and Russia to insure. The Government had chosen and acted on one principle — that of non-intervention, to which it had strictly adhered, as in the case of Italy and in the civil war in America. — Earl GREY supported the resolution. — Earl GRANVILLE said he felt convinced, from the course the debate had taken, that it would have a good effect on the country and remove a good deal of misapprehension. He contended that England had not lost her just influence in Europe. The complete concord between England and the neutral Powers throughout the sittings of the Conference was a proof that our influence was unimpaired. The taunts of the German newspapers were no evidence it had been diminished. There were parties in Europe to whom a war would have been an advantage, but if England had entered into hostilities it would only have been a dupe for their purposes. The House then divided, when the numbers were—

	Present.	Proxies.	Total.
Content	119 ..	58	177
Non-content ..	123 ..	45 ..	168
Majority for the resolution ..			—9

MONDAY.—*The Burial Service.*—Lord EBURY moved an address to the Crown praying for the appointment of a Commission to consider what steps should be taken to mitigate the evils arising from the present compulsory and indiscriminate use of the Burial Service of the Church of England. No less than 4000 clergymen had petitioned the Bishops to devise some remedy for the scandal and grievance caused in some cases by the existing form of the service; and he understood that the Primate admitted the grievance, and was prepared to assent to the motion with some restriction.—The Archbishop of CANTERBURY said that he would agree to the appointment of a Royal Commission, but could not approve any alteration in the Church Service as the remedy.—The Bishop of LONDON doubted the expediency of appointing a Commission, thinking it better that the responsible advisers of the Crown should take what steps they deemed right in the matter. There was a strong feeling on the part of the clergy against an alteration in the service, but it was possible to modify the law that prescribed the use of that service.—Earl GRANVILLE could not pledge the Government to any particular course of proceeding, but an attempt would be made to deal with the question in a manner satisfactory to all parties. The motion was then withdrawn. The *Publichouses and Refreshment Houses Bill* was considered in committee. On the clause giving to Town Councils and Improvement Commissioners the power of deciding on the adoption of the Act, the committee divided, and as the numbers for and against the clause were equal (31) it stands part of the Bill. Some discussion ensued on the manner in which the question had been put; but as any objection of this kind must be made before the division, and cannot be entertained afterwards, the report of the amendments was agreed to. The *India Offices Bill*, the *Summary Procedure (Scotland) Bill*, and the *Facilities for Divine Service in Collegiate Schools Bill* were read a third time and passed. The *Lunacy (Scotland) Bill* passed through committee. The *Thames Conservancy Bill* was read a second time.

TUESDAY.—*The Alleged Massacre of Swedish Volunteers.*—Earl RUSSELL, in reply to a question by Lord SHAFTESBURY, stated that a communication had been received from the Prussian Minister of Foreign Affairs, stating that the report of the German troops having massacred 400 Swedish Volunteers after the engagement of Düppel was altogether false.—The Earl of SHAFTESBURY read an extract from a private letter stating that the Prussians had fired on wounded Danes during the action, and referred to an order of the day issued by the Prussian Commander, notifying that every foreigner made prisoner in the Danish ranks and unable to prove that he had been regularly enrolled in the Danish service would be tried by court-martial, and on conviction shot. The order proved that the Prussian Government had no desire to mitigate the horrors of war.—Earl RUSSELL believed there was no intention to carry the order into effect. — On the motion of the Earl of MALMESBURY, the *Street Music Bill* was read a second time. The *Performance of Divine Worship in Collegiate Schools Bill* was read a third time.—The Earl of HARDWICKE withdrew the motion of which he had given notice, in reference to the *Memorial of Sir Francis Head*, as he understood the Government intended to make a proposal to Parliament on the subject early in the next Session.

THURSDAY.—*Railway Travelling.*—Lord BROUGHAM drew the attention of the Government to the general feeling of alarm created in the public mind by the recent occurrences in railway carriages, and urged the necessity of establishing some means by which the passengers could communicate with the guard. He hoped some measures would be adopted for the protection of the community.—Earl GRANVILLE promised that the subject should be carefully considered by the Government. —The amendments of the House of Commons to the *Penal Servitude Act* were considered, when the Earl of SHAFTESBURY moved that the fourth clause, which the Peers had struck out of the Bill, but which the Lower House had reinserted, be again struck out. The clause provides that the convict holder of a ticket of leave shall report himself to the police of the district in which he resides once a month. The noble lord examined the reasons given by the Commons for reinserting the clause, and declared himself strongly opposed to allowing it to remain part of the Bill. Its effect would be to increase every difficulty with which a released convict now had to contend in obtaining employment.—The Earl of CARNARVON thought that if Lord Shaftesbury's views were carried out the Bill would be wholly inoperative.—Earl GRANVILLE recommended the House to accept the meeasure as it came up from the Commons. On a division on the question whether their lordships' amendment should be sustained, the numbers were—Contents, 25; non-contents, 62. Clause 4, therefore, is reinserted in the Act. On the motion for the third reading of the *Public and Refreshment Houses Bill*, Lord DONOUGHMORE moved an amendment, making the Act compulsory on all places to which it would extend, instead of optional with the corporations and governing bodies. On a division the amendment was negatived by a majority ef 11, the numbers being 44 against 33 The Bill was then read a third time and passed. The *Factory Act Extension Bill* passed through committee, after a few observations from Lord SHAFTESBURY on the great benefit former legislation of the same kind had conferred on the workpeople employed in various manufactures. *The new Foreign Office.*—In answer to a question by Lord REDESDALE, Earl GRANVILLE stated it would be necessary for the Government to purchase the block of buildings between Parliament Street and the front of the new Foreign Office. The *Railways (Ireland) Act Amendment Bill* and the *Drainage and Improvement of Lands (Ireland) Bill* were read a second time. The *Indemnity Bill*, the *India Stocks Transfer Amendment Bill*, and the *Defence Act Amendment Bill* passed through committee. The *Civil Courts (Ireland) Bill* and the *India Offices Bill* were read a third time and passed.

FRIDAY.—*Essays and Reviews.*—Lord HOUGHTON asked whether her Majesty's Government have taken or are willing to take the opinion of the law officers of the Crown as to the powers of Convocation, to pass a synodical judgment on books written by clergymen or laymen; as to the immunity of members of that body from proceedings at common law consequent on such judgments; and as to the forms according to which such judicial power must be exercised if it belongs to that body. He asked the question because of the verdict that had been passed upon the volume called "Essays and Reviews." [Left speaking.]

HOUSE OF COMMONS.

FRIDAY.—*Vote of Censure.*—The adjourned debate was resumed by Mr. B. OSBORNE, who said that he by no means endorsed the foreign policy of the Government in its different details, but he did not like the injustice that had been done to Earl Russell, for which the whole Cabinet was responsible. It was not, he thought, any portion of the duty of the Opposition to find a policy for the Ministry; but in regard to the future policy to be adopted in our foreign relations, he considered that Mr. Cobden had correctly indicated the only line which could be followed with honour and with safety, for we were now isolated in Europe, and even the King of Ashantee was indifferent to our friendship. He concluded by giving a personal sketch of the Cabinet, as a museum of curiosities, containing many birds of rare and curious plumage, some alive and some stuffed, the noble lord at its head being undoubtedly the most active of the number; and though his domestic policy was what might be termed stationary, his foreign policy was pugnacious and progressive.—Mr. WHITESIDE argued that we had no right to give advice to foreign Powers unless we meant to assist them.—Mr. MONSELL opposed the motion; Mr. B. COCHRANE supported it.—Lord ELCHO said it was admitted that there had been a failure in the negotiations, but because they had failed that was no just ground for a vote of censure on the Government. He would be no party to a censure upon a Government which had earnestly, honestly, and perseveringly, though unsuccessfully, laboured for peace.—Mr. SCOURFIELD, Mr. BUXTON, and Mr. CLAY opposed the motion. — THE O'DONOGHUE denied that there was any compact among the Roman Catholic members to vote against the Government, or that there was any truth in the rumour that any agents of the Pontifical Government had undertaken a mission to England to bring pressure on the Catholic members. For his own part he would vote in favour of the motion, because the Government had done nothing for Ireland.—Sir S. NORTHCOTE said that the Opposition charged the Government with a general want of sagacity and of statesmanship in the whole course of the negotiations. The indictment was, not that their conduct had humiliated the country, but that they had deprived her of a portion of her just influence in Europe.—Mr. WALPOLE, after adverting to the cause of the war and to the conduct of Austria and Prussia in allowing themselves to be borne along with the revolutionary torrent, denounced the mode in which the Treaty of 1852 had been got rid of, to the injury of public law and national rights. His charge against the Government was founded, he said, upon the manner in which they had interfered during [illegible] 1862. The Government had not, what they ought to have had, a definite, distinct policy; they placed themselves in a false position by irritating Russia and France, and they had lost influence in Europe.—Lord PALMERSTON said if any doubt could have existed, when the motion was first made, as to its object and importance, that doubt must be dispelled, for the House had been told plainly that it was intended as a vote of no confidence in the Government. Efforts had been made in the discussion to separate Earl Russell from his colleagues. This was an unconstitutional course of proceeding. The Ministers were all equally responsible for what the Foreign Office had done. He regretted for his country the pains taken to vilify and degrade her. He maintained that the country stood as high as ever in the estimation of Europe. The motion asserted that the [illegible] influence of the country had been lowered. This was not a fact; it was a gratuitous libel upon the country by a party that hoped to rule it. He read a statement of what the present Administration had done during their five years' tenure of office, in the reduction of taxation, the diminution of the National Debt, and the reduction of the expenditure; and he showed the vast increase of the income of the country and of its foreign trade, and indicated other tests of the national prosperity. This being so, he contended that the Government had administered the affairs of the country with honour and advantage, and with credit to themselves, so as to entitle them to the approbation of the House and the confidence of the country.—Mr. DISRAELI replied, and defended himself against the charge of having misquoted documents,—Mr. NEWDEGATE having, with some reluctance, withdrawn his amendment, Mr. KINGLAKE moved an amendment, in lieu of the last paragraph of Mr. Disraeli's resolution, to substitute the words following:—"To express the satisfaction with which we have learnt that, at this conjuncture, Her Majesty has been advised to abstain from armed interference in the war now going on between Denmark and the German Powers." On a division, this amendment was carried by 313 to 295, a majority of 18 for the Government, and the words were added to the original resolution. The result of the division was received with tremendous applause and waving of hats and handkerchiefs.

MONDAY.—*Railway Trains.*—Mr. B. COCHRANE gave notice that on an early day he would call attention to the necessity of compelling railway companies to provide a means of communication between passengers and the guards of trains.—In reply to Sir F. HEYGATE, Mr. DILLWYN said it was not his intention to proceed with his motion on the necessity of reforming the *Irish Church* this session, but he hoped to do so early in the next.—The ATTORNEY-GENERAL for IRELAND intimated that it was not his intention to proceed with the *Court of Chancery (Ireland) Bill*, on account of the late period of the Session. *Reservoirs of Waterworks Companies.*—On the motion for going into Committee of Supply, Mr. FERRAND called attention to the proceedings of waterworks companies, and to the great danger to which the lives of people residing near their reservoirs are continually exposed. He contended that the reservoirs in Lancashire and Yorkshire were in a most defective state, and that it behoved the Government to cause immediate inquiry to be made into their condition, in order to prevent the recurrence of accidents similar to that which had proved so fatal at Sheffield.—Sir G. GREY declined on the part of the Government to assume the responsibility of a periodical inspection of these reservoirs, but added that if the works referred to were in a defective state, the persons in the neighbourhood ought to indict the companies in the manner provided by the law.—After a few words from Mr. W. E. FORSTER and Mr. HADFIELD the subject dropped. *The Address on the Conference.*—Lord PROBY, Comptroller of the Household, brought up the reply of her Majesty to the address of the Commons, in which Her Majesty stated that she shared in the deep concern felt by the House that the Conference had broken up without having accomplished the important purpose for which it was convened, and that she was happy to find that the House was satisfied with the course which she had adopted by abstaining from interfering in the war between Denmark and Germany. *The War in Denmark.*—In answer to Mr. D. GRIFFITH, Lord PALMERSTON said her Majesty's Government had reason to believe that there was no intention on the part of the German Powers to attack Copenhagen. *Case of Sir F. B. Head.*—Sir J. JOLLIFFE brought under notice the memorial of Sir Francis Bond Head to the Secretary for the Colonies, laid upon the table of the House on the 6th of June; and moved that, in the opinion of the House, the great but hitherto unrequited services rendered by Sir F. Head, when Governor of Upper Canada in 1837 and 1838, called for the favourable consideration of the Government.—Mr. CARDWELL bore testimony to the distinguished services of Sir F. Head during the period of his governorship, and said the subject was under the consideration of the Treasury, and that it would be considered in connection with the memorial of the colonial governors for retiring pensions. He hoped that the House would be satisfied with the proposal which the Government proposed to make on the subject next session.—Sir J. PAKINGTON hoped that Mr. Cardwell would take a generous view of Sir F. Head's case, and would recognise the irresistible claims which he had upon the gratitude of the country, for, had it not been for his energy and capacity, the province of Upper Canada would have been lost to the Crown.—Sir F. SMITH trusted that Sir F. Head would be treated with generosity, and not with parsimony.—Mr. ADDERLEY reminded the Government that the losses of the rebels in Canada had been made good, while Sir F. Head had for years been deprived of public employment.—Mr. ANGERSTEIN expressed his hope that the claim of Sir F. Head would not be mixed up with those of other colonial governors, as it rested upon different grounds altogether. The motion was then withdrawn. The House went into committee of supply on the *Civil Service Estimates.*—Sir R. PEEL, in proposing the vote of 316,769*l.* for *National Education in Ireland*, explained in detail the expenditure of the board, and observed that the reports of the inspectors on convent schools would be published in the course of a few days, and that they would be found on the whole most favourable to those institutions. The vote gave rise to a considerable discussion, in which the Irish members took part, and eventually the vote was agreed to without a division. Mr. WALPOLE moved the vote of 96,327*l.* for the *British Museum*, and explained that the amount was 1,486*l.* more than the sum voted last year. This increase was accounted for chiefly by the special purchases which had been made—both of them valuable acquisitions to the Museum and to the community at large. The first of these was the purchase of a collection recently found in a cave in the south of France, and calculated to throw great light on the question of the antiquity of man. The second purchase was a bronze lamp, found on the site of the Julian Palace, and supposed to be of Greek workmanship and of a date prior to the Christian era. Another purchase had been made since the date of the vote, and therefore not included in it,—the contents of the Farnese Palace, sold by the King of Naples. In that collection was a beautiful equestrian statue of Mars—one of the only three ancient equestrian statues known to be in existence. These acquisitions raised the question of providing additional accommodation for the national collections. Two courses were open to Parliament to adopt. One was to remove the natural history collections to South Kensington, where a site was already obtained, leaving

the [illegible] and other works at Bloomsbury, or to purchase of the Duke of Bedford and his tenants a sufficient quantity of land in the neighbourhood of the Museum for the gradual extension of the present building. The expense of the latter alternative might appear at first sight startling, but he believed that in the end it would not be found unreasonable. It was, therefore, thought, more desirable that this question should be settled before the prorogation of Parliament.—The Chancellor of the Exchequer said that beyond the circumstance of having invited designs for a building at South Kensington the Government had not, and would not, do anything without the sanction of Parliament. The vote was then agreed to, and the Chairman reported progress. The *Inland Revenue (Stamp Duties) Bill* and the *Public Schools Bill* were read a third time and passed. The *Ionian Islands States Acts of Parliament Legal &c., Bill*, the *Militia Pay Bill*, and the *Expiring Laws Continuance Bill* were read a second time. The *Court of Chancery (Ireland) Bill* was withdrawn. Several other Bills were advanced a stage.

Tuesday.—*The Highways Act Amendment Bill* was recommitted at a morning sitting, when the clauses were agreed to, with amendments.—*The Slave Trade and Brazils*.—On the reassembling of the House in the evening, Lord Palmerston stated, in reply to Mr. Hardcastle that the conduct of the Brazilian Government with regard to the slave trade had been invariably marked by a flagrant violation of treaty engagements, and that their conduct towards the Emancipados had been equally flagrant. All the efforts which her Majesty's Ministers had made to obtain justice for those negroes had failed.—Mr. Fitzgerald asked whether it was not the fact that the Brazilian Government had put down the slave trade, and that Lord Brougham had recently, in the House of Lords, expressed his warm appreciation of the exertions made by that Government for the purpose.—Lord Palmerston replied that if Brazil had, since 1852, put down the slave trade, it was by compulsion, and not by conviction.—Mr. Bright moved the adjournment of the House in order to enter his protest against the continuance of what was called the "Aberdeen Act," which, he argued, ought to have been repealed long since, and which, if not repealed, would preclude the possibility of re-establishing friendly relations between the two countries. He hoped that the debate of last week, which had elicited extraordinary unanimity of censure on the irritating and offensive policy of the Foreign Office, would serve as a caution to the Government to abandon that policy for the future.—Sir J. Elphinstone called attention to the inefficiency of the British squadron on the West Coast of Africa, and said we had not a single vessel, with the exception of the Rattlesnake, in those waters which could make more than 8 knots an hour.—Lord Palmerston said that if the Aberdeen Act were repealed the inevitable effect would be to revive the slave trade. This would be a most deplorable circumstance; and much as he valued the friendship of Brazil, he would rather surrender it than consent to a step which would have the effect of reducing that country again to the level of a slave-trading State. *Railway Trains*.—Mr. B. Cochrane called attention to the recent murder on the North London Railway, and inquired of the President of the Board of Trade whether, with the view of protecting the public, it would not be possible to compel railway companies to introduce into the carriages some mode of communicating with the guards.—Mr. M. Gibson said it would be possible to make such a mode of communication as that in use on railways in France, but he doubted its expediency. He had no intention of bringing in any bill to compel railway companies to adopt that or any other plan. *The Railway Murder*.—Mr. Butler asked whether it was the intention of Government to offer a reward for the apprehension of the murderer or murderers of Mr. Briggs, on the North London Railway on Saturday evening.—Sir G. Grey replied that the Government had offered a reward of 100*l*., and that Messrs. Robarts, Lubbock & Co., the bankers, had offered a similar sum. The report that the suspected murderer had been captured was not true, but he had been informed that the watch chain taken from the person of Mr. Briggs had been disposed of on the previous day to a silversmith, who had given the police an accurate description of the person who had brought it to him.—Mr. D. Griffith was moving "That the practice of appointing a peer and privy councillor exclusively to the *Office of Postmaster-General* is one which is not directed or required by law, and does not particularly conduce to the convenience of the distribution of Ministerial appointments or to the efficiency of the public service," when the House was counted out.

Wednesday.—The *Superior Courts of Common Law (Ireland) Bill*, the *Court of Queen's Bench (Ireland) Bill*, and the *Married Women's Acknowledgments Bill*, were withdrawn.—Mr. Bouverie moved the second reading of the *Uniformity Act Amendment Bill*, which proposed to repeal a portion of the Act of Charles II., requiring certain dignitaries of the Church and Fellows of Colleges in the Universities to make a declaration of Conformity to the Liturgy of the Church of England. Assuming that the Universities were lay Corporations, he contended that the exclusion by Act of Parliament of Protestant Nonconformists was unjust, as well as injurious even to the Universities themselves. The test did not exclude the profane, the sceptical, or the indifferent; it shut out only men of conscientious views, and was therefore no real security to the Church.—Mr. Walpole moved as an amendment that the Bill be read a second time that day three months. He said that Mr. Bouverie had withdrawn his Bill last year upon two grounds: first, because it was too late in the session, and it was equally so this year; second, because the objections in the Universities to the Bill were so strong, and there was a disinclination in the House to pass a measure that would end in undermining that foundation of religious instruction upon which secular education ought to stand. The real question was whether there ought to be an Established Church at all. Parliament had no right to dissever the connection between the Universities and the Church of England. The Dissenters had no grievance; the Colleges were open to them for the purposes of education, but the government of the Universities ought to be confined to those who were in connection with the Church.—Sir W. Heathcote seconded the amendment.—Mr. Monsell opposed the Bill, because under professions of liberality it was not liberal to Roman Catholics. It made a fundamental change in the whole system of University education, and would introduce a system which had been tried in other countries, and which, if carried out to its logical conclusion, would subvert the principle that religion should be at the foundation of education.—After some observations by Mr. Whalley in support of the Bill, and by Mr. Neate against it, the amendment was carried, on a division, by 157 to 101, so the Bill was lost.—Sir W. Heathcote moved the second reading of the *Scottish Episcopal Clergy Disabilities Removal Bill*, which had come down from the House of Lords. He said that these disabilities had been virtually imposed by an unobserved amendment of a clause introduced into the Act of 1792. They had been relaxed in 1840, and the object of this Bill was to repeal them. He hoped that English and Scotch members would combine to remove an oppression imposed by England upon Scotland.—Mr. Kinnaird moved, as an amendment, the appointment of a Select Committee to inquire how far any privileges which may be conferred upon the clergy of the Episcopal Church in Scotland would interfere with the Treaty of Union, and into the expediency of removing at the same time from the ministers of the Established Church of Scotland the disabilities imposed on them by the Act of Charles II.—After some remarks by Mr. Walter, Mr. G. Duff, Mr. Newdegate, Mr. Black, Lord H. Scott, Mr. Stirling, Mr. Hadfield, and Mr. Bouverie, the amendment was withdrawn, and the Bill read a second time. The *Poor-law Guardians Election Bill*, the *Insolvent Debtors Bill*, the *Petty Offences Law Amendment Bill*, the *County Voters Registration Bill*, the *Election Petitions Act* (1849) *Amendment Bill*, and the *Jersey Court Bill* were withdrawn. The *Ecclesiastical Court and Registries (Ireland) Bill* was read a third time and passed.—Mr. W. E. Duncombe opposed the recommittal of the *Poisoned Grain Prohibition Bill*, and moved that the House go into committee on the Bill that day three months. The motion was, on a division, negatived by 60 to 38, and the House went into committee on the Bill and agreed to the clauses. The *Report on Supply* was brought up. The *Expiring Laws Continuance Bill*, and the *Militia Ballots Suspension Bill* passed through committee. The *Trespass (Ireland) Bill* was read a third time and passed.

Thursday.—*Standing Orders*.—On the motion of Colonel W. Patten, a Select Committee was appointed to revise the standing orders, with instructions to consider the expediency of constituting a committee of referees (one of them to be an engineer) under the authority of the House, for more speedy and economical decisions of certain questions of fact commonly arising in the proceeding upon private Bills. *Railway Travelling*.—In reply to Mr. B. Cochrane, Mr. Gibson declined to give a promise that he would bring in any measure next session for making it compulsory on railway companies to introduce some mode of communication between passengers and guards, to prevent the murder and plunder of the former without the knowledge of the latter. *The Repulse in New Zealand*.—In answer to Sir M. Farquhar, Mr. Cardwell stated that despatches had reached the Colonial Office relative to the late repulse of the British troops at Karangua, on the east coast of New Zealand, which General Cameron attributed to the confusion created by the intricate nature of the interior defences of the pah, and by the sudden fall of so many officers of the attacking column. The despatches which the Government had received on the subject would be laid upon the table as soon as possible. On the order for the second reading of the *New Zealand (Guarantee of Loan) Bill*, Mr. A. Mills moved as an amendment that the Bill be read a second time that day three months. He said he had good authority for asserting that if the present war lasted until April next it would cost the taxpayers of this country not less than a million and a half sterling in the course of the year. It further appeared that the agent of the colony and the negotiator of the proposed loan, had no power to bind the New Zealand Legislature either in respect of the repayment of the loan or the contribution towards the military expenditure.—The Chancellor of the Exchequer said that the colony was not exclusively responsible for the war: that we were parties to the policy which had caused it. He then showed that the conditions and considerations under which the loan was guaranteed afforded a sufficient security, and were, upon the whole, advantageous to this country.—Mr. Whiteside inquired what was the policy of the Colonial Office with reference to the lands of the insurgent natives.—Mr. Roebuck said it was the inevitable tendency of the civilisation of the age that the brown man should disappear before the white. So long as the mother country proclaimed the policy of extermination, she could not turn round and repudiate the financial obligations which that policy entailed.—Sir H. Willoughby recommended the House not to mix itself up with any financial transactions with the colony.—Mr. Aytoun opposed the Bill.—Sir S. Northcote complained that the Government had not given the House sufficient information with regard to the future policy to be pursued towards New Zealand.—Mr. Cardwell defended the policy of the Bill, which was under all the circumstances a reasonable demand, which the mother country ought not to withhold. The Government had taken ample security for the guarantee, which was for a third only of the sum which the colony was in the first instance indisposed to raise. The present measure was justified by the unparalleled efforts which the colony was making for self-defence, and by the arrangement which it had made for the payment of military assistance for the future.—Mr. Adderley thought that on the whole the proposition was one which the House might fairly sanction.—Sir J. Trelawny, Mr. J. B. Smith, Colonel Sykes, Mr. Monsell, Sir J. D. Hay, Lord Stanley, and Mr. Cobden opposed the Bill, Mr. C. Fortescue supported it.—Mr. Whalley attributed all the disasters which had befallen our arms in New Zealand to the influence of the Roman Catholic clergy.—After some remarks by Sir J. Ferguson, Lord Palmerston said the doctrine of some of the opponents of the Bill would cast the colonies adrift. He was not prepared to agree to that principle. He lamented the war in New Zealand, but it was not owing to any dispute about land; it arose from the murder of some of our officers and men, and was entirely unconnected with land. The real question was whether the war was to continue. As to the security for the loan, the revenue and the waste lands in the colony afforded an ample security. On a division the amendment was negatived by 92 to 55, and the Bill was read a second time. *The War in Denmark*.—In answer to Mr. Griffith, Lord Palmerston said that the Government had received no information with regard to so monstrous a proposition as that the Prussians had demanded the payment of 11,000,000*l*., and the surrender of the Danish fleet as the conditions of peace. They had, however, reason to believe that negotiations were in progress for an armistice, but they were not aware that it had been concluded.—The House then went into Committee of Supply.—Some discussion ensued on the vote of 8876*l*., to complete the sum necessary for the *National Gallery*, Mr. Osborne and other members protesting against any attempt on the part of the Government to evade the recent vote of the House against the proposal for surrendering the National Gallery building to the Royal Academy, and removing the national pictures to a gallery to be erected behind Burlington House.—Lord Palmerston assured the Committee that the Government was quite prepared to accept the recent vote of the House as fatal to the Burlington House scheme. It would, however, be necessary to consider what provision should be made to house the Royal Academy.—Mr. Liddell saw no reason why the public should be called upon to provide accommodation for the Royal Academy, which was a wealthy private body, well able to provide for itself.—The vote was agreed to, as also a vote of 9000*l*. for the *National Portrait Gallery*.—In Committee on *Fortifications and Works*, the Marquis of Hartington moved resolutions to the effect that, towards providing a further sum for the construction of works for the defence of the Royal dockyards and arsenals, and of the ports of Dover and Portland, and for the creation of a central arsenal, a sum not exceeding 650,000*l*. be charged upon the Consolidated Fund, and that the Treasury be authorised to raise the same by annuities for a term not exceeding 30 years. The works for which the money was required had already been sanctioned by Parliament, and the total sum expended up to March last amounted to 2,854,000*l*. The resolutions were agreed to. The *Bleaching and Dyeing Works Act Extension Bill* was committed. A number of Bills were forwarded a stage.

Friday.—*Diseases of Cattle Prevention Bill*.—At the morning sitting, on the motion for going into committee on this Bill, Mr. Bagwell moved that the House should not resolve itself into such committee, but on the assurance of Mr. Baring that certain alterations would be introduced, he withdrew the amendment, and several clauses, with verbal amendments, were agreed to.—The Chairman then reported progress, and the House adjourned. The House resumed at six o'clock.

[Left sitting.]

City Intelligence.

Money Market. Friday.—British Funds: Consols closed at 90⅝ to ¾ for Money, and 91⅛ to 91 for Account; Three per Cents. Reduced, 89⅝ to ⅞; New Three per Cents., 89⅞ to ⅝; Annuities, 1885, 14 9-16; Bank Stock, 238½ to 240; India Five per Cent. Stock, 104⅜ to ⅝; Ditto Four per Cent. Debentures, 1866, 99; Exchequer Bills, March, 8*s*. dis.; Ditto June, par.—Foreign: Brazilian, 1863, 87⅛; Dutch Certificates, 99½; Greek, 24⅞; Italian, 68⅛ ex div.; Mexican, 29¼ to ½ ex all; Portuguese, 1853, 47⅞ ex div.; Ditto 1856, &c., 48 ex div.; Sardinian, 84¾; Spanish, 50½ ex div.; Ditto Passive, 29¼; Ditto Certificates, 10⅛ to ¼; Turkish, 1858, 72; Ditto 1862, 69¼ ex div.; Ditto 100*l*. Bonds, 69⅜ ex div.; Venezuela, 1862, 58; Ditto 1864, scrip, 6¾ dis.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,648,675	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	12,998,675
		Silver Bullion	—
	£27,648,675		£27,648,675

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,172,125
Rest	3,411,071	Other Securities	20,368,384
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	4,683,803	Notes	6,076,290
Other Deposits	15,082,746	Gold and Silver Coin	702,437
Seven days and other bills	588,616		
	£38,319,236		£38,319,236

July 14, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *July* 8.—BANKRUPTS.—E. Abbey, Oxford, Grocer—C. J. Attwood, Caegwyn, Flintshire, Gentleman—J. P. Bayly, Broad Street, Golden Square, Watchmaker—H. Bendall, Freshwater, Isle of Wight, Plumber—A. Brooks, Bedford, Photographer—T. Butler Alexton Rectory, Leicestershire, Clerk in Holy Orders—A Black, Surrey Terrace, Peckham, Carpenter and Builder—T. Burrell, jun., Waltham stow, Essex, Assistant to a Cattle Salesman—W. Chisnall, Sutton, Lancashire, Grocer—J. Caile, late of Trinity Street, Rotherhithe, Licensed Victualler—J. Candler, Mistley, Essex, Bricklayer—R Carr, Waterloo Terrace, Stepney, Cheesemonger—T Darlington, Burslem, Staffordshire Watchmaker—T. Denison, Yeadon, Yorkshire, Woollen Cloth Manufacturer—H. Day, Stoke-upon-Trent, Grocer—T. W. Eld, Derby, Silk Throwster—E. Evans, Wolverhampton, Licensed Victualler—C J. Ford, Wellington Street, Deptford, Plumber—A Forbes Liverpool, Grocer—John William Francis, Neath, Glamorganshire, Cabinet-maker—Charles Gubbins, Bournemouth, Southampton, Painter—William Hunter, Bishopswearmouth, Durham, Beerhouse Keeper—C. H Hamilton, Hanley, Staffordshire, Auctioneer—J. Hart, late of New North Road, Licensed Victualler—A. B Humphrey, Monkwearmouth, Durham, Painter—R. W. Haddon, Norwich—J Ioke, Shrewsbury, Grocer—R. Inglis, Church Street, Kensington, late Fishmonger—J H. Jones, Old Compton Street, Soho, House Painter—M. Jones, Liverpool, Coal Dealer—H. C. Johnson, Bath Road, Peckham, Accountant—T Knibbs, Heaton Norris, Lancashire, Carter—J. G. Kuhn, Hanover Square, Regent Street, Keeper of a Tavern—S. Levick, Sheffield, General Dealer—J. C. Laity, Plymouth, late, Draper—F. S. Mower, Taunton, Somersetshire, Innkeeper—J M'Isaac, Gravesend, Licensed Victualler—G. Natt, Chatham, Kent, Beerseller—J. Odden and G. Odden, Penge, Surrey, Grocers—M. O'Connor, Swindon, Wiltshire, Dealer in Boots and Shoes—J. Parsons, late of Waterloo Road, Beershop Keeper—H. Pamment, Sandwich Terrace, Bridge Road, Battersea, Pork Butcher—P. W. Perritt, Tottenham Villa, Hornsey, Lecturer—J. H. Richards, late of Twickenham, Manager to a Pianoforte Dealer—J. Stanford, Burlington Arcade, Piccadilly, Boot and Shoe Maker—R. Scragg, Hanley, Staffordshire, Modeller—G. Spedding, Westleigh, Lancashire, Cotton Factory Operative—T. J. Trysull, Staffordshire Farm Bailiff—J. Thomson, Liverpool Street, Bishopsgate Street, Boot Maker—G. White, Colville Mews, Lonsdale Road, Kensington Park Gardens—W. L. Williams, Hereford, Veterinary Surgeon—G Woodhead, Egmanton, Nottinghamshire, Master Blacksmith—J. Wilson, Albert Square, Clapham Road, Clerk to a Timber Merchant—J. Whitehead, Carham, Northumberland, Farmer—J. Waring, Nuneaton, Warwickshire, Baker—J. Webb, Bloxwich, Staffordshire, Bridle bit Manufacturer—J. Wallen, Plymouth, Fisherman—J. Williams, Ilfracombe, Devonshire, Coal Merchant—M. A. J. Wilkinson, Aldersgate Street, Governess—H. L. Watson, Paddock, Yorkshire, Commission Agent.

TUESDAY: *July* 12.—BANKRUPTS.—J. J. Bell, Wellingborough, Northamptonshire, Carpenter—S. Beaumont, South Street, Islington, late Barman—E. T. Burrow, Falmouth, Cornwall, Milliner—M. Bozward, Hallow, Worcestershire, Gardener—G. C. Beets, Wells, Norfolk, Grocer—E. Bradshaw, Thame, Oxfordshire, Draper—S. Bath, Widegate Street, Bishopsgate Street, Coal Dealer—J. Burrell, Oldham, Lancashire, late Eating House Keeper—W. H. Biggleston, Hereford, Greengrocer—D. Bucknell, Cirencester Street, Harrow Road, Plasterer—William Cook, Potterhanworth, Lincolnshire, Cordwainer—William Chilton, Longsight, Lancashire, Plumber—James Cutmore Ware, Hertfordshire, Furniture Broker—John Cudmore, Kenn, Devonshire, Miller—William Conyer, jun., Dewsbury, Yorkshire, Innkeeper—John Dyson, Almondbury, Yorkshire, Waste Dealer—A. W. Douthett, late of Woolwich, Kent, Grocer—J. Dale, Kingston-upon-Hull Sail Maker—J. Doran, late of Gravesend, Staff Assistant-Surgeon in the Army—E. Graham, West Cowes, Isle of Wight, Licensed Victualler—A. Gray, Norham, Northumberland, Grocer—J. Gunn, Fleet Street, City, Coffee House Keeper—B. L Goschalk, Liverpool, Shipping Butcher—J. Hardy, Liverpool, Slate Merchant—J. Hartley, late of Rochdale, Lancashire, Grease Manufacturer—W. J. Hoddinott, Feltham, Somersetshire, late Miller—T. Hewarth, Manchester, Baker—E. Hayes, Hunslet, Yorkshire, Relieving Officer—J. Harman, Alcester, Warwickshire, Needle Scourer—E. Heaton, Cragg Chadderton, Lancashire, Journeyman Bleacher—E. M. Halliday, London Wall, City, Rosette and Horse Cloth Maker—C. Johnson, Liverpool, School Proprietor—T. James, Newport, Isle of Wight, Cattle Dealer—R. Kemp, Paynton Street, Poplar, Mast and Block Maker—J. Kempin, Knossington, Leicestershire, Shoemaker—R Killburn, Batley, Yorkshire, Mason—T. Kenworthy, Manchester, late Grocer—W. G. King, Thornborough, Buckinghamshire, Farmer—C. Kirkup, Sunderland, Timber Merchant—G. King, Helmsley, Yorkshire Surgeon—J Kaye, Bradford, Yorkshire, Grocer—A. Macri, Cardiff, Glamorganshire, Shipbroker—J. Marsden, Youlgreave, Derbyshire, Grocer—J. Mellor, Nantwich, Cheshire, Assistant Gardener—H. Marsden, Harpenden, Hertfordshire, Trainer of Horses—W. B. Newell, Tunbridge Wells, Grocer—P. H. O'Connor, Uxbridge Gardens, Bayswater, late Provision Merchant—R. Outhwaite, Manchester, Salesman—H. Payne Sibbertoft, Northamptonsh., Butcher—D. Rodan, Bromley St., Commercial Road East, Chemist—W. Robbins, Harrow Road, Paddington, Omnibus Proprietor—V. Salmon and A. Wallach, Hackney Road, Boot and Shoe Manufacturers—C. C. Simpson, Southampton, Berlin Wool and Fancy Dealer—H. T. Sorbuts, late of Hyde, Cheshire, Millwright—T. Shelton, Harringworth, Northamptonshire, late Farmer—J. Smith, York Road, Lambeth, late Licensed Victualler—J. Turner, late of Southampton, Brush and Basket Manufacturer—S. Taylor, Frankley, Worcestershire, late Farmer—W. Veall, Charlotte Street, Mansion House, City, Attorney's Clerk—J. Woolley, late of Staleybridge, Lancashire, Cotton Waste Dealer—A. H. White, Ryde, Isle of Wight, Milliner—M. Waygood, Salem Place, Fulham, Soda Water Manufacturer—L. Wiener, Old Broad Street, Merchant—R. Woodcock, Weymouth, Dorsetshire, Ironmonger—W. Whitmore, jun., Dudley, Worcestershire, Butter Dealer.

Metropolis and its Vicinity.

The Prince and Princess of Wales at Cloth-workers' Hall.—On Monday the corporation of Cloth-workers, one of the oldest and wealthiest of the ancient

guilds of the city of London, presented the freedom of their Company to the Prince of Wales, and afterwards entertained his Royal Highness with the Princess, and a select company, at luncheon in their hall in Mincing Lane. The freedom was handed to the Prince in a gold box, set in a tablet of chestnut wood, part of a beam of the ancient hall of the company, on the site of which the present building was erected. The Prince, in acknowledging the compliment, assured the Master and Wardens that it was a great source of gratification to him to receive the freedom of their company and to be enrolled among its members. The Clerk then tendered to the Prince the accustomed oath, which he took and subscribed. It pledged his Royal Highness as a freeman to be good and true to our Sovereign Lady Queen Victoria; to observe, maintain, and keep the laws and ordinances for the government of "the fellowship of the art or mystery of Clothworkers," and for its common profit; to be obedient at all times and in all lawful matters to the Master, Wardens, and Assistants, and to attend before them at all times, "upon a lawful summons either of clerk or beadle," having no lawful or reasonable excuse to the contrary. The Prince and Princess were then conducted to the banquetting hall, where their Royal Highnesses took luncheon, which was served with befitting splendour. Their Royal Highnesses were loudly cheered in their passage through the city.

THE RECENT DIVISION.—It appears from an analysis of the division lists on the Vote of Censure in both Houses, that in the House of Lords the Government had a majority of 4 of those present; while the Opposition had a majority of 13 proxies. The Government were very strongly supported by the Episcopal Bench, 10 bishops having voted with them in person and 7 having sent their proxies. The only prelates who voted with the Opposition were the Bishops of Oxford and Bangor, the latter of whom sent a proxy. The Archbishops of York and Armagh voted with the Government. The Archbishop of Canterbury paired in favour of the Government, with the Bishop of Chichester against them. Earl Grey and Lord Denman voted against the Government. In the House of Commons 310 Liberals and 5 Conservatives voted for the Government; 379 Conservatives and 18 Liberals voted against them. The English votes gave them a majority of 41, the Scotch votes gave them a further majority of 23, while the Irish votes showed a majority of 46 against them. The five Conservative members who voted for Government were, Mr. J. Chapman, Hon. R. Dutton, Mr. David Pugh, Major Cornwall Legh, Mr. J. H. Scourfield. The following 18 Liberal Members voted against Government:—Sir J. Acton, Dr. Brady, Mr. Blake, Sir G. Bowyer, Mr. Cogan, Mr. Corbally, Colonel Greville, Mr. Greene, Mr. M'Evoy, Mr. M'Mahon, Mr. M'Cann, Mr. O'Reilly, The O'Donoghue. The O'Conor Don, Mr. O'Ferrall, Mr. Scully, Mr. Sullivan, Mr. L. Waldron. These are all Irish members, and, with the exception of Colonel Greville, Roman Catholics. No English or Scotch Liberal member voted against the Government.

ALLEGED NAVAL BATTLE IN THE CHANNEL. — A report reached Southampton on Thursday by the Wonder steamer, from Jersey, that fighting had taken place off the island between the Federal steamer Kearsarge and the Confederate steamer Florida, in which the Kearsarge was disabled and put into Gorey, while the Florida was brought up off Gorey, waiting to renew the engagement. There is no foundation for this report, so far at least as the Kearsarge is concerned. She has been, and still is, at anchor off Dover. The Sacramento, another Federal vessel, left Cherbourg for Dover on Thursday morning.

THE WIMBLEDON RIFLE MEETING.—On Monday the Wimbledon meeting was inaugurated in the same way as last year. The Prince of Wales rode to Wimbledon in the afternoon, personally to inspect the arrangements. His Royal Highness was received on the north side of the enclosure by several members of the Council, and conducted to the running deer range, where several shots were fired by the Royal party, at first with very bad success, owing to the peculiar glitter of the sun, which rendered it difficult to hit any object, especially one in rapid motion. The Prince, however, made the only bull's-eye that was recorded, fairly beating such accomplished deerstalkers as the Master of Lovat and Lord Elcho. After inspecting the tramways and the new ranges, his Royal Highness returned soon after 6 o'clock to London. On Tuesday several matches were shot off, including that for the Oxford and Cambridge Bronze Medal, which was won by Ensign Thomas, of Cambridge University; and the Middlesex Bronze Medal, won by Lieutenant Hopkins, of the 41st Middlesex. The All Comers' County Match was contested by four counties, and was won by Lancashire, beating Middlesex, Gloucestershire, and Derbyshire. On Wednesday the Prince of Wales's Prize was won by Sergeant Dodd, of the 2d Hereford; and the remainder of the day was devoted to the first stages of the Alexandra or All Comers Prize, for which there were 2000 competitors; the Duke of Cambridge's Prize, and the first series of the Extra Prizes. On Thursday the Duke of Cambridge's Prize was won by Mr. Edward Ross, of Cambridge University. The remaining business of the day included the first stages of the Queen's Prize, for which there were 4000 competitors; Lord Vernon's Prize, the Enfield Association Cup, the Alexandra, and the Extra Prizes.

THE GREAT EASTERN AT SHEERNESS.—The Great Eastern reached the Great Nore about 6 P.M. on Wednesday evening, where she was met by three powerful steam-tugs. She was able, however, to dispense with their assistance, and slowly steaming she rounded the point, and made for her moorings at Black Stakes, off Standgate Creek. There she safely cast anchor about 7 P.M. She was watched by a large crowd of spectators assembled along the beach and on the pier. She will now ship the Atlantic Telegraph Cable as soon as it is received from the manufacturers at East Greenwich. It will be sent in sections, and from the calculations made it appears that the work of shipping the whole cable will occupy nine months.

AFRICAN EXPLORATION.—News has at length been received from Khartûm of Mr. Samuel Baker, who after the departure of Captains Speke and Grant, started for the South in search of the reported lake, Luta Nzige. His party has now been met with returning to Gondokoro, a few hours' march from that place, and as one of the swiftest vessels on the river, placed at his disposal by the generosity of Mr. Petherick, was waiting his arrival at Gondokoro, it is expected that he will soon descend the Nile and communicate the results of his journey.

THE THAMES EMBANKMENT.—At the Sheriffs' Court on Monday, the case "Gwynne [*v.* the Metropolitan Board of Works" occupied the Court for the fifth day, and was brought to a conclusion. The plaintiff, Mr. Gwynne, who is an hydraulic and mechanical engineer at the bottom of Essex Street, by the Temple Pier, claimed upwards of 30,000*l.* compensation for being deprived of the water of the Thames, which was necessary to carry on his works. Last year his net profits exceeded 10,000*l.*, and he had taken new premises at Battersea, for which he paid 700*l.* The Board of Works did not require his premises for the embankment, but had made a roadway which deprived him of access to the river. On both sides numerous witnesses were called, some of whom stated their opinion that property in the neighbourhood would be increased in value by the improvements in progress. On the part of Mr. Gwynne a substantial compensation was claimed, and the several items were placed before the jury. Mr. Lush, Q.C., for the Board of Works, complained of the monstrous claim which had been made, and said it was impossible to exaggerate the importance of the case, for the compensation would come out of the public money in the shape of rates. Mr. C. Pollock, the assessor, in summing up the evidence, laid down the law on the subject, and said that the claimant was entitled to full and fair compensation. The jury, after a consultation of an hour and a half, gave a verdict for 14,000*l.*

THE MAIN DRAINAGE.—At a meeting of the Metropolitan Board of Works on Friday, Mr. Bazalgette, the engineer, reported that on the north side of the river 14,000,000 gallons of sewage were now discharged at Barking, and on the south side 12,000,000 gallons were discharged at Crossness, making together 26,000,000 gallons of sewage now discharged into the river far out of the metropolitan limits, at such a turn of the tide as to carry the obnoxious fluid seawards. This quantity is one-third of the whole metropolitan sewage.

THE SAVOY CHAPEL.—The Earl of Clarendon, Chancellor of the Duchy of Lancaster, has informed the authorities of the Duchy that her Majesty will graciously take upon herself the cost of restoring this ancient fabric, which was reduced to ruins by the fire of Thursday week. On Friday Mr. Sidney Smirke, the architect, made a careful inspection of the ruins, with a view to estimate the cost of rebuilding the chapel. He is understood to have expressed an opinion that the four walls which remain are not seriously injured, and may therefore be made available in the work of restoration. These walls, which are built of squared stone and boulder, are upon an average 4 feet thick, and must be at least 350 years old. The fabric was insured to the amount of 4000*l.*, a sum which will go far towards its restoration.

THE NEW ROOF OF GUILDHALL.—The new roof of this ancient edifice, which dates back upwards of four centuries and a half, is rapidly advancing towards completion. The old roof, which was nearly 200 years old, having been erected shortly after the fire of London in the place of the original one that was destroyed in the conflagration, had become very dilapidated and unsightly, and its removal had been long pressed on the Common Council, not only as a work of necessity, but as being unsuited to the structure itself, and offensive to architectural taste. For some time past the subject has been under the consideration of a committee, and on their report the Common Council resolved recently to expend about 24,000*l.* in the entire reconstruction of the roof, in denuding the building itself of a thick coating of cement which conceals much of its original ornamentation, and in restoring some of the foundations. The removal of the old roof has been for some time in progress, and it is said the new one will be so far completed by the 9th of November next as to admit of the Lord Mayor's feast being held in the hall on that day. It will be an open oak roof, somewhat resembling that of Westminster Hall in the interior, and will exactly correspond with the period in which the hall itself was built, and, indeed, with the original roof itself, as far as the style and character of that can now be ascertained after the lapse of more than 450 years. Externally it will have a very high pitch, with a louvre in the centre, the lower part of which will be a lantern of the size of an ordinary sitting-room for purposes of light and ventilation, and the upper portion a tapering metal spire about 150 feet from the ground, and which will be seen all over London. There will also be eight dormers or skylights on each side of the roof to give light to its interior. The design is a joint production by Mr. Horace Jones, the city architect, Mr. Digby Wyatt, and Mr. Edward Roberts, and the work is to be executed by Messrs. Myers under a contract with the Corporation.

PATRIOTIC FUND.—A report has been presented to Parliament showing that the Patriotic Fund, collected for the benefit of the widows and orphans of our men who lost their lives in the Crimean war, has reached 1,459,697*l.*, and that up to the end of 1862 551,05[illegible] has been expended in relief. The number of widows of non-commissioned officers and men placed on the list is 3508, and of children 4581; and 135 officers' widows and 230 officers' children are also put in receipt of allowances. Mr. Finlaison has estimated that the assets exceed the liabilities for the continuance of relief by 190,743*l.*, of which surplus he considers all [illegible] 90,000*l.* to be safely disposable. The commissioners have authorised an addition to the allowances to widows with children, the erection of a chapel for the Royal Victoria Patriotic Asylum, and the appointment of a clerical inspector to examine periodically the children in that asylum, and in the various institutions and temporary homes throughout the country in which children have been placed.

MURDER IN A RAILWAY CARRIAGE.—A frightful tragedy took place on Saturday evening in a first-class carriage of the North London line. Mr. Thomas Briggs, chief clerk in the bank of Messrs. Roberts & Co., while travelling the short distance from Fenchurch Street to Hackney, was robbed, brutally ill-used, and thrown out of the carriage, receiving such injuries that he died on Sunday night. The outrage was not discovered until the train arrived at Hackney, when the interior of the carriage was found covered with blood. Inquiries were made, without any immediate result, but meanwhile the body of Mr. Briggs was found lying insensible on the line by the driver and stoker of another train. On a surgical examination it was found that the unfortunate gentleman, who though nearly 70 years of age, was a fine tall hale man, had been frightfully wounded in the head, the skull in one place having been beaten in, and the ear nearly cut off. The money which he had in his pocket had not been taken, but his watch chain had been broken off and the watch was missing. The crime was committed between Bow and Hackney Wick. The train was due at the latter place within five minutes after leaving Bow, so that the attack must have been made almost as soon as the train was in motion. The carriage was covered with blood and bore other signs of a desperate struggle having taken place, but no noise was heard by the other passengers; although, when the body was thrown out at the door, one of the arteries in the wound appears to have burst, and to have sent a jet of blood through the open window of the next compartment upon the dresses of two ladies, who were unconscious of the frightful tragedy which was going on almost in their very presence. A hat found in the carriage turned out to be that worn by the murderer, who must have taken Mr. Briggs's in mistake; but the hope that this error would give the police a clue which might lead to his apprehension has proved fallacious, the hatter being unable to state the name of the purchaser. It has since been ascertained that the gold chain had been exchanged for another of a different pattern at a jeweller's in the city, by a man who appeared to be a German, and it is now hoped that the person who exchanged it will be found. The Government on Monday offered a reward of 100*l.* for his detection, and Messrs. Roberts & Co. and the railway company have each offered a similar sum. It is stated that the police have obtained another clue, which they are actively working out.

THE PUBLIC HEALTH. — The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, July 9, were 1268. The average number for the corresponding week of 10 years 1854-63, corrected for increase of population, was 1172. The present return is therefore 98 above the average. During the week the births of 967 boys and 909 girls, in all 1876 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1782.

Provincial.

ALDERSHOT.—At the Petty Sessions on Monday a case came before the magistrates which has excited a good deal of interest in connection with the prevailing feeling as to the insecurity of railway travelling, so long as passengers have no means of communication with the guards. A person called Henry Nash, a middle-aged man of respectable appearance, described as a yeoman, residing at Hawley, near Farnborough, surrendered to his bail on a charge of having indecently assaulted a young woman, named Moody, in a railway carriage, whilst travelling between Surbiton and Woking, on Wednesday, the 6th inst. The complainant, who is 20 years of age, was in attendance with her father, who is curator of the Winchester Museum, and with whom she resides. It

appeared from the statement of Mr. Bent, who prosecuted on behalf of the Railway Company, that the complainant took her seat in a second-class carriage at Waterloo Station, and shortly afterwards the prisoner entered the same compartment. He attempted to force a conversation with her, asking several questions, which she declined to answer. Another female then entered the railway carriage, and her presence caused the prisoner to desist for a time from putting any further questions. The complainant then felt safe, and the three rode down to Surbiton, where the female alluded to alighted, leaving Miss Moody alone with the prisoner. Almost immediately on the train leaving Surbiton, and before it had got fairly in motion, the prisoner laid himself on the seat opposite to complainant, and in a very insulting manner, repeated the questions he had previously put to her, which she again declined to answer. In order to avoid the annoyance, she got up and looked out of the window, but had scarcely done so when she felt a hand under her clothes. She immediately opened the door of the compartment and got outside, standing on the step of the carriage, the train at the time going at a rapid pace. She had no further recollection of anything that occurred until she found herself in the hands of the guard, and of Mr. Stokes, another passenger, the train being then at a standstill between Esher and Woking. It was then discovered that complainant had for some time been in a state of unconsciousness, and that she had been held in a most perilous position during the time by Mr. Stokes, a military bootmaker, of London and Aldershot, who was riding in the adjoining compartment, and whose notice was directed to the complainant by a boy who had observed her hanging by the handle of the door. Mr. Stokes bravely exerted himself to rescue her from this dangerous position, and had no sooner succeeded in drawing her to the door of his own compartment than she swooned on his arm, which was fortunately at that time round her waist. In this situation he held her for a distance of about five miles, when the attention of the guard having been attracted to the circumstance by a number of labourers at work in the adjacent fields, the train was stopped, and complainant safely placed in a carriage. On arriving at Woking station, Mr. Stokes insisted on the prisoner being taken into custody. This was accordingly done, but he was subsequently liberated on bail. After some discussion the magistrates decided that the case could not be dealt with by Hampshire magistrates, as the offence was committed in Surrey, before the arrival of the train at Woking. The case was therefore dismissed, and the prisoner, who was apparently unconcerned during the proceedings, left the court with his friends. Mr. Bent intimated his intention to take further proceedings, in order to resume the case in a Surrey court.

LEEDS.—On Tuesday the 8th inst. the West Riding bench of magistrates heard a complaint by the Society for the Prevention of Cruelty to Animals against two persons in this town, who are the owners of two horses which on the 27th ult. trotted against each other in a 50-miles race for 50*l.* a side. One horse accomplished the journey in three hours and fifty minutes, but the other died after going more than 40 miles. Mr. Green, the owner of the winner, was fined 5*l.* and costs, which was immediately paid; but Mr. John Robson, the owner of the animal which died, was committed to prison for a month, the magistrate being of opinion that his was an aggravated case, inasmuch as after his horse fell once he attempted to prosecute the journey, and only gave it up on a second break-down quickly occurring.

NORWICH.—The Poor-law Board has declined to interfere for the present with reference to the Rev. E. A. Hillyard, chaplain of the Norwich Workhouse, who is accused by the local guardians of unduly identifying himself with the brethren of the English Order of St. Benedict. The guardians have resolved to have an interview with the Poor-law Board on the subject.

YORK.—The National Association for the Promotion of Social Science will hold its eighth annual meeting in this city on the 22d September and seven following days. Lord Brougham will be President; the Archbishop of York will preside in the department of Education; the Right Hon. James P. Wilde, judge of the Probate Court, will occupy the chair in the section for Jurisprudence. The other two chairs are not yet filled.

Railways.

ACCIDENT ON THE GREAT EASTERN.—A fatal accident occurred on Wednesday afternoon to an up train from Harwich, near the Bradfield station. The engine left the rails and ran down an embankment, dragging the whole train of four carriages and two trucks after it. The passengers escaped with life, but six or seven of them were slightly injured. The fireman, however, was killed, his body having been crushed beneath the engine, while his hand still grasped the break.

Law.

THE ASSIZES: WESTERN CIRCUIT, WINCHESTER.—*The Attempted Murder at Bishopstoke.—Charles Gay*, a young man of 21, described as a common carrier, was indicted for feloniously attempting to shoot Kate Boyes, his wife's sister, with intent to kill and murder, at Bishopstoke, on the 20th May. It appeared that the prisoner had married one of the daughters of James Boyes, of Crowd Hill, and had been living so unhappily with her that she left him. He went to her father's house in the belief that she was there, and having hovered about the place for a couple of days, presented a pistol at the sister and pulled the trigger. The cap, however, only exploded, and it was a question for the jury whether the pistol was or was not loaded with a bullet. The foreman of the jury was a gunsmith, and after some time a bullet was extracted from the barrel, upon which the jury returned a verdict of *Guilty* of an attempt to do grievous bodily harm. The prisoner was sentenced to be kept in penal servitude for six years.

CENTRAL CRIMINAL COURT.—*The Islington Murder.—Frederick Charles Bricknell*, 23, waiter, was indicted for the wilful murder of Jane Jeary. The facts of this case were noticed at the time in our Metropolitan News. The prisoner was employed as under-waiter at the Lion Tavern, at Islington, and deceased was also a servant in the same house. On the night of the 8th June she had gone up to bed with her fellow-servant, and the latter having occasion to go downstairs, left her, and almost immediately heard a loud scream. She went up again, and met the prisoner on the stairs with a knife in his hand, when he said at once that he had done it. It appeared that for some time the prisoner had been paying his addresses to deceased, but latterly she had rejected them, and when he was taken into custody he made use of the expression that he was glad she was dead, as he would rather see her dead than see her married to anyone else. The medical evidence proved that the knife had penetrated the heart, dividing the principal artery, and that death must have been instantaneous. In the defence an attempt was made to reduce the crime to manslaughter. The jury, however, after a very short deliberation returned a verdict of *Guilty*, and Chief Justice Erle, having put on the black cap, passed sentence of death in the usual form. The prisoner, who, during the whole of the proceedings, appeared to be perfectly indifferent to what was going on, was then removed from the bar. The trial lasted very little more than an hour. *Sale of Diseased Meat.*—John Millar, 36, cattle dealer, pleaded *Guilty* to an indictment charging him with having sent to Newgate Market 300 lb. weight of beef for sale, well knowing the same to be diseased and unfit for human food. The Commissioner, in passing sentence, said the prisoner had admitted the offence of having killed a diseased cow and sent it up to London from Forfarshire. There was no doubt that very large quantities of beasts in a most unwholesome condition had been forwarded from various parts of the country to the metropolis. In fact, one butcher had candidly admitted in this court that he had sent up hundreds of pounds weight of diseased carcases. Now, it was most important that the farmers and butchers living in the country should be taught, in a manner which they could not misunderstand, that they could not with impunity impose upon the people of London in this sort of manner. The most effectual way of making this lesson felt and experienced was by imposing a punishment, and that not a light one, but one which should be fully understood for some time to come because of its heaviness. There was nothing in the present case which in the slightest degree diminished the amount of the crime. It was as bad as it could be. It was not like that of an ignorant man who did not know the law. Whether he had not sold more bad meat in Scotland was not exactly shown, although there was some evidence on the face of the depositions that he had; but, at all events, for some time to come he would be restrained from carrying on his nefarious attempts in London in injuring, or attempting to injure, the lives of the Queen's subjects, for the sentence upon him now was that he be imprisoned and kept to hard labour for 12 calendar months, that he pay a fine to Her Majesty of 50*l.*, and that he be further imprisoned until such fine be paid.

Obituary.

LADY CATHERINE MAUNSELL died suddenly on the 7th inst. at her residence at Malvern, at an advanced age. She was the youngest of the four daughters of the first Earl of Listowel, and great aunt of the present Earl. She married, in 1808, Mr. Richard Maunsell, who died in 1819.

ADMIRAL HAYES O'GRADY died at Erinagh House, county Clare, on the 8th inst., in his 77th year. He was educated at the Royal Naval College, and entered the Navy in 1802. After serving against the French off Boulogne, he was present at the reduction of the Cape of Good Hope, and then accompanied the expedition to the Rio de la Plata, and served at the destruction of an armed brigantine, off Monte Video, in 1806. After obtaining the rank of Lieutenant in 1807, he served successively on the St. Helena, Channel, Leeward Islands, Halifax, and North America stations, and was advanced to the rank of Commander in 1810. From that period until he attained Post rank in 1814 he was employed in the West Indies. He became Rear Admiral on reserved half pay in 1849, Vice Admiral in 1856, and Admiral in 1862.

COLONEL BREWSTER, the Commanding officer of the Inns of Court Rifle Volunteers, died on the 7th inst. at his residence in Warwick Square, Pimlico. He was well known as a most distinguished Volunteer officer. He had been suffering for a considerable time from an affection of the lungs, which terminated in pleurisy.

THE REV. JOHN BRANTHWAITE, Principal of St. Edmund Hall, Oxford, was accidentally drowned on the 5th inst. while bathing at Morecombe. It appears that he hired a machine for the purpose of bathing, and was drawn out only a short distance from the shore, as it was nearly high water. A few minutes afterwards he appeared to be floating on his back, but as he remained in that position for some time, persons on shore suggested that he was drowning. Two men belonging to the bathing machine endeavoured to reach him, but were unable to do so. A boat was then procured, after a delay of about half an hour, when the body was found in precisely the same position as it had been seen at first, the shoulders being a little out of the water, but the head completely immersed, and life quite extinct. When the body was taken on shore, means were adopted to restore animation, but to no purpose. It is a singular circumstance that three or four persons were bathing near Mr. Branthwaite whilst he was in the water, but none, until it was too late, had any idea that he was drowning. A verdict of accidentally drowned was returned. The deceased was 41 years of age and unmarried.

MR. THOMAS COLLEY GRATTAN, the well-known novelist, died at his lodgings in Jermyn Street on the 4th inst., at the age of 68. He was born in Dublin in 1796, and was the son of Mr. Colley Grattan, of Edenderry, King's County. He was intended for the profession of the law, but having an uncle and two cousins in the army, he entered the Militia in the hope of getting a commission. He served as a volunteer in the South American army in the war of independence against Spain, but marrying a Miss O Donnell, he left the service and settled in the south of France. In 1819 he produced "Philibert," a poetical romance, which was not successful. He then removed to Paris, and became a regular contributor to the "Edinburgh Review" and to the "New Monthly Magazine," then under the editorship of Thomas Campbell. In 1823 he published "Highways and Byeways, by a Walking Gentleman," the work by which he will be best remembered. This book had a great sale, and brought the author many offers from the booksellers which induced him to bring out a second and third series. He then produced in succession "Ben Nazir the Saracen," a play written for Kean, after which he removed to Brussels. While residing in that city he produced "Tales of Men and Cities," "Traits of Travel," "The Heiress of Bruges," "The History of the Netherlands," and "Jacqueline of Holland." The latter caused his expulsion from Brussels during the revolution, and his residence in Holland and Heidelberg, where he wrote his "Legends of the Rhine" and "Agnes de Mansfeldt." On the accession of Prince Leopold to the newly created throne of Belgium Mr. Grattan returned to Brussels, and in 1839 was appointed, at the special request of his Majesty, British Consul at Boston, where he published a pamphlet on the boundary question in America. In 1848 he was permitted to resign this office to his son, who had been acting as his deputy, and he was appointed a gentleman of the Privy Chamber in the royal household. He was also the author of "Civilised America," "Women of Colour," "The Cagot's Port and the Conscript's Bride," "England and the Disrupted States of America," "Beaten Paths, and Those who Trod Them."

WILLS.—The will of the Countess Dowager of Falmouth has been sworn under 14,000*l.*; the Hon. Charlotte Shore, sister of Lord Teignmouth, 16,000*l.*; Lieut.-Colonel Watson, 30,000*l.*; Mr. Frederick Richard Magenis, of Grosvenor Place, 140,000*l.*; Mr. Roger Cunliffe, the banker, 120,000*l.*; Mr. Samuel Brooks, banker, of Manchester, 250,000*l.*

BIRTHS.—On the 6th inst, at Hurstbourne Park, Hants, the Countess of PORTSMOUTH, of a son—8th inst, at Chevet Park, Lady MILBORNE SWINNERTON PILKINGTON, of a daughter—10th inst, at Warwick Square, Lady KATHARINE COKE, of a son—9th inst, at 15, Eccleston Square, the Hon. Mrs. FREDERIC HOGART, of a daughter—4th inst, at Overton House, Wakefield, the Hon. Mrs. FRANCIS STUART WORTLEY, of a son—7th inst, at 1, Oxford Square, Hyde Park, Lady WELDON, of a son.

MARRIAGES.—On the 12th, at St. Stephen's, Paddington, GEORGE, Marquis of Westmeath, to ELIZABETH CHARLOTTE, second daughter of the late DAVID VERNER, Esq., and niece of Colonel Sir W. Verner, Bart., M.P., K.C.H.—5th inst. at St. Paul's, Wilton Place, Commander the Hon. GEORGE FITZ-CLARENCE, R.N., to the Lady MARIA HENRIETTA SCOTT, eldest daughter of the Earl and Countess of CLONMELL—7th inst, at St Gabriel's, Pimlico, STEUART, the youngest son of the late Sir FRANCIS WORKMAN MACNAGHTEN, Bart., to the Lady EMILY FRANCES RICHARDSON, youngest daughter of the late Vice-Admiral Lord MARK ROBERT KERR and Charlotte Countess of Antrim—6th inst, at St. Thomas's Church, Marylebone, CHARLES HENRY CONGREVE, Esq., to ETHELDRED, third daughter of Lieutenant-General the Hon. Sir EDWARD CUST—7th inst, at St. James's, Piccadilly, the Rev. ROBERT WENTWORTH CRACROFT, rector of Harrington, Lincolnshire, to the Hon. ELIZABETH CATHARINE, second daughter of SACKVILLE W. and the late Lady CHARLOTTE LANE FOX—12th inst, at St. Paul's, Knightsbridge, Major BONAR MILLETT DEANE, 18th Royal Irish, to the Hon. LUCY BOSCAWEN—5th inst, at St. George's, Hanover Square, the Rev. THOMAS JONES, rector of Llanbeder, Breconshire, to CHARLOTTE AURIOL LEWIS, of Glynpedr, widow of the late Rev. Edward Lewis, J.P., rector of Llanbeder, youngest daughter of the late Very Rev. Dr. Hay Drummond, dean of Boeking, and niece of the late Earl of Kinnoull—9th inst, at St Mary's, Bryanston Square, the Rev. W. ROTHERY, of Pexham, to MARY CATHARINE, youngest daughter of the late JOSEPH HUME, Esq., M.P.

DEATHS.—On the 13th inst, at Addison Road, Lady MARY FOX (born Fitzclarence), aged 64—6th inst, at No. 5, Richmond Terrace, Whitehall, the Hon. Mrs. ARTHUR ARUNDELL—3d inst, at 4, Lower Belgrave Street, London, Lieut.-General CHARLES MURRAY HAY, colonel of the 91st Regiment, aged 62—2d inst, at Crondall, near Farnham, General ANTHONY BACON, K.T.S., late Major 17th Lancers, aged 68—8th inst, STAPYLTON STAPYLTON, Esq., of Myton Hall, near Boro' Bridge, in the county of York, aged 66—9th inst, at Brasted Rectory, the Rev. W. B. HEATHAM, M.A., rector of Brasted, aged 50—7th inst, at 47, Upper Baker Street, Regent's Park, the Rev. R. WILLIAMS, M.A., vicar of Aston Rowant, Oxfordshire, aged 65—3d inst, at Washingborough, the Rev. G. K. CAMPBELL, curate of Washingborough, aged 35—9th inst, at Brighton, the Rev. E. W. GRINFIELD, M.A., aged 79.

Markets.

COVENT GARDEN, July 16.

Most descriptions of outdoor produce continue abundant. Cherries, Gooseberries, Raspberries, and Strawberries are plentiful. Of Grapes and Pine Apples there is also a good supply, and Black, Red, and White Currants are sufficient for the demand. Arrivals of foreign goods comprise Apricots and West India Pine Apples, both of which are abundant and cheap. Green Walnuts for pickling may now be obtained. Peas are plentiful, as are also Potatos. Asparagus fetches from 4s. to 7s. a bundle. Flowers chiefly consist of Orchids, Heaths, Pansies, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Cherries, per lb, 6d to 9d
Grapes, per lb., 4s to 8s	Oranges, per 100, 10s to 16s
Peaches, per doz., 6s to 10s	Lemons, per 100, 5s to 9s
Nectarines, do., 6s to 12s	Nuts, Barcelona, do, 14s
Strawberries, p. punn, 6d to 1s 6d	— New Brazil, do., 16s.
Gooseberries, green, p. qt., 3d to 6d	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 3d to 6d
Asparagus, per bundle, 4s to 6s	Cucumbers, each, 4d to 1s
French Beans, p. ½ sieve, 1s	Beet, per doz., 1s 6d to 2s
Peas, p. basket, 2s 6d to 3s 6d	Shallots, per lb., 10d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 2d to 4d	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 9d to 1s	Mushrooms, p. pott., 1s to 1s 6d
Rhubarb p. bundle, 2d to 4d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

BRITISH WOOLS.—LONDON, July 14.

Our trade continues good, but prices not so high as in the country, where great excitement prevails.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	2	1		..		Leicest. Hoggs	2	4	to	..	
Half-bred ditto	2	4	to	2	5½	Ditto Wethers	2	2	—	..	
Down Ewes	1	11	—	..		Combing Skins	1	6	—	1	9
Kent Fleeces	2	3	—	..		Flannel Wool	1	0	—	1	6
						Blanket ditto	0	6	—	0	9

COAL MARKET.—July 13.

Hastings Hartley, 17s. 3d.; Holywell Main, 16s. 3d.; Tanfield Moor Butes, 13s. 6d.; West Hartley, 17s. 3d.; Wylam, 16s. 3d.; Walls End Byron, 16s. 9d; Walls End Harton, 16s. 6d.; Walls End Hebburn, 16s. 6d.; Walls End Braddylls Hetton, 17s. 3d.; Walls End South Hetton, 18s. 6d.; Walls End Tunstall, 16s. 6d.; Walls End Hartlepool, 18s. 3d.; Walls End Heugh Hall, 17s. 6d.; Walls End Kelloe, 17s. 3d.; Walls End East Hartlepool, 18s. 3d.; Walls End South Kelloe, 17s. 6d.—Ships at market, 48

HOPS.—BOROUGH MARKET, FRIDAY, July 15.

Messrs. Pattenden & Smith report rather more doing in Weald of Kent and Sussex of last year's growth, at a slight advance in prices. Foreign Hops also of all descriptions are

being more inquired after. The accounts from the plantations generally are favourable.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, July 14.

Prime Meadow Hay	80s	to 90s	Clover, old	95s	to 115s
Superior do. ..	92	100	New Clover ..	—	—
Inferior do. ..	—	—	Do. second cut ..	—	—
New do.	60	85	Straw	26	30
Rowen	—	—	HARVEY & EASTON.		

CUMBERLAND MARKET, Thursday, July 14.

Sup. Meadow Hay..	95s	to 105s	Inferior Clover ..	90s	to 105s
Inferior do.	75	88	New do.	75	105
New do.	75	90	Straw	32	36
Superior Clover ..	118	126	JOSHUA BAKER.		

WHITECHAPEL, THURSDAY, July 14.

Fine Meadow Hay..	94s	to 98s	Prime 1st cut Clover	115s	to 120s
Inferior do.	85	90	Inferior do. do. ..	105	110
Prime New Hay ..	70	80	New Clover	95	100
Inferior	—	—	Prime 2d cut do. ..	108	112
Straw	28	32	Inferior do.	—	—

METROPOLITAN CATTLE MARKET.

MONDAY, July 11.

We have a larger number of Beasts on offer, but a considersble proportion of middling quality. The choicest kinds are disposed of readily at fully late rates. The supply of Sheep is about the same as on Monday last; trade is still dull, and prices are not better. Trade is very heavy for Lambs at lower rates. Calves are selling as on Thursday. From Germany and Holland there are 1790 Beasts, 5230 Sheep, and 321 Calves; from Spain, 70 Beasts; from France, 15 Calves; from Scotland, 210 Beasts; from Ireland, 20; from Norfolk and Suffolk, 650; and 1800 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools. ..	—		..	
Best Short-horns	4	8	— 4	10	Do. Shorn ..	4	6	— 4	10
2d quality Beasts	3	0	— 3	8	Ewes & 2d quality	..		—	..
Best Downs and Half-breds	—		..		Do. Shorn ..	4	0	— 4	4
Do. Shorn ..	5	2	— 5	4	Lambs	5	4	— 6	6
					Calves	3	0	— 4	10
					Pigs ..	3	4	— 4	6

Beasts, 5260; Sheep and Lambs, 26,890; Calves, 372; Pigs, 410.

THURSDAY, July 14.

We have a large supply of Beasts and a slow trade. Prices are lower, and a considerable number remain unsold. Sheep are also more plentiful than for some time past. They cannot all be disposed of, even at our lower quotations. Trade is slow for Lambs, at about Monday's prices. There is not much alteration in the trade for calves. Our foreign supply consists of 870 Beasts, 2190 Sheep, and 760 Calves. Milch Cows 90.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8	to 4	10	Best Long-wools. ..	—		..	
Best Short-horns	4	6	— 4	8	Do. Shorn ..	4	4	— 4	8
2d quality Beasts	3	0	— 3	8	Ewes & 2d quality	..		—	..
Best Downs and Half-breds	—		..		Do. Shorn ..	3	10	— 4	4
Do. Shorn ..	5	0	— 5	4	Lambs	5	4	— 6	4
					Calves	3	0	— 4	8
					Pigs	3	4	— 4	4

Beasts, 1920; Sheep and Lambs, 13,170; Calves, 220; Pigs, 220.

MARK LANE.—MONDAY, July 11.

The supply of Wheat from Essex and Kent to this morning's market was small, and disposed of at the extreme rates of this day sen'night. Foreign was neglected, but on the business done, which was chiefly confined to necessitous buyers, last week's prices were insisted upon, excepting for Russian qualities, which were about 1s. per qr. lower. Barley supports our quotations. Beans and Peas are each 1s. per qr. dearer. Oats are the turn cheaper, and Russian must be written fully 6d. per qr. lower. The value of Flour is unaltered, and the demand limited.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	44	—46	Red	40	—42
— — fine selected runs .. ditto	46	—48	Red	42	—44
— — Talavera	50	—54			
— Norfolk	—		Red	—	
— Foreign	38	—54			
BARLEY, grind. & dist, 25s to 27s .. Chev.	34	—38	Malting ..	29	—33
— Foreign .. grinding and distilling	22	—26	Malting ..	27	—31
OATS, Essex and Suffolk	18	—22			
— Scotch and Lincolnshire—Potato	20	—25	Feed	18	—22
— Irish .....Potato	19	—22	Feed	—	
— Foreign .....Poland and Brew	18	—23	Feed	17	—22
RYE	30	—32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....27s to 36s...Tick	30	—33	Harrow ..	30	—33
— Pigeon .... 32s to 40s .. Winds.	—		Longpod	—	
— Foreign .....Small	32	—36	Egyptian	30	—32
PEAS, White, Essex and Kent .. Boilers	32	—33	Suffolk ..	33	—34
— Maple .... 30s to 34s .... Grey	28	—30	Foreign ..	31	—33
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered .. per sack	35	—40			
— 2d do ..... ditto	28	—34	Country ..	28	—34
— Foreign ..... per barrel	18	—25	Per sack	32	—34

FRIDAY, July 15.

The 9th was a dull cold day, but the weather has since been warmer with sun. As the Wheat car becomes developed, the effects of the ungenial weather is apparent, and there is no longer a doubt that the yield will be much less than would have been the case under more favourable circumstances. Beans in some districts appear to have suffered. The Wheat trade during the past week has been extremely firm, and purchasers of English have generally had to pay rather more money; foreign has been in less demand; on particular qualities, say Russian here, and American in Liverpool, somewhat lower rates have been accepted. Spring Corn of all kinds has been very firm in price with rather an improving tendency, excepting for Russian Oats on the spot, the large arrivals having caused a reduction of fully 6d. per qr. Flour is in moderate request at previous rates. Since Friday last 2 cargoes of Barley and 1 of Maize have arrived off the coast, and only one cargo of Wheat is now left on sale. Wheat has remained in moderate demand, but the increased pretensions of holders checked business. Maize advanced 6d. to 1s., and Barley 6d. to 9d. per qr. Paris, July 14.—The Flour trade is extremely quiet, but no lower prices have been accepted The six marks for delivery this month are quoted equal to 34s. 9d. per 280 lbs. The present stock of Flour is estimated at about 24,750 cwts. Wheat is held for late rates, but there are no buyers unless at a reduction of 9d. to 1s. per 480 lbs. The arrivals of English Wheat are small, of foreign moderate, of Barley there are none, of Oats, both English and foreign, large. This morning's market was very thinly attended. English Wheat being scarce commanded the extreme prices of Monday, and holders of foreign firmly insisted upon the rates of that day. The value of Spring Corn of all descriptions tends upwards.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	760 qrs.	— qrs.	4710 qrs.	1250 sks.
Irish	—	—	1789	— ,,
				320 ,,
Foreign ..	10,150 ,,	—	34,540 ,,	— brls

LIVERPOOL, July 12.—At our market to-day there was a good attendance of inland millers, who purchased pretty freely of fine red American Wheat, at 1d. per cental decline on the week. Oats unchanged. Oatmeal in limited request. Beans and Indian Corn brought full prices. Flour in fair demand, at a decline of 6d. per barrel and 1s. per sack.

FRIDAY, July 15.—There was a fair attendance at market. Wheat good demand, in some cases a penny advance over Tuesday. Flour unchanged in price or demand. Indian Corn steady; mixed, 30s. 6d. Egyptian Beans unaltered. Oats and Oatmeal dull.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
June 4	38s 11d	29s 0d	19s 10d	28s 4d	34s 10d	33s 5d
— 11	39 6	27 6	20 0	34 1	34 10	33 9
— 18	40 3	27 11	20 4	32 8	35 5	33 9
— 25	40 0	28 6	20 8	..	35 5	33 3
July 2	40 9	27 2	20 9	31 2	36 2	34 0
— 9	41 9	27 8	21 10	28 9	36 1	32 8
Agg. Aver.	40 2	27 11	20 7	31 0	35 6	33 6

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	June 4	June 11.	June 18.	June 25.	July 2.	July 9.
41s 9d	..	..	..	..	..	
40 9	..	..	..	..		..
40 3	..	..		..	..	..
40 0	..	..	..		..	..
39 6	..		..	..	..	..
38 11 —		..	..	..	..	..

NEWGATE.—July 15.

Best Fresh Butter .. .. 12s. per dozen lbs.
Second do. do. .. .. 10s. ,,
Pork, 4s. 4d. to 4s. 8d. per 8 lbs

WANTED, an active industrious PRACTICAL GARDENER, married, without incumbrance. Wages 20s. a week, with Cottage and Vegetables. He must thoroughly understand the Growth of Grapes and Peaches under Glass, and be a good Florist. Unexceptionable references required as to character and qualification.—T. K., Barmer, Lynn, Norfolk.

WANTED, a GARDENER and his WIFE.—A Lady in Surrey requires the services of a married Couple; the Man to act as Gardener, and be capable of undertaking the care of Kitchen and Flower Gardens, and a small piece of Land; and the Wife be fully competent to act as Laundress for a family of seven persons. Unexceptionable references as to character, &c., will be required. Wages for both 26s. per week, and Cottage free.—Apply by letter only to H. M., Mr. Jas. Veitch, Royal Exotic Nursery, King's Road, Chelsea, S.W.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 27, single; in his last situation he produced well-coloured Grapes every month in the year; Peaches, Nectarines, Melons, and Figs from May 1; Strawberries from March 1; Cucumbers from middle of January; Managed large Vegetable and Flower Gardens; kept a Conservatory gay during autumn and winter; supplied Cut Flowers the whole year; and choice Vegetables during winter and spring; he is also experienced in the Forcing of Pine Apples, Cherries, &c.—For references, &c., apply to J. P., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—The Advertiser has had first-class experience both in England and Scotland. Can undertake the Laying out and Improvement of Gardens, as well as the practical Management of them.—JNO. PEARSON, Jun., Kinlet Gardens, Bewdley, Worcestershire.

GARDENER (HEAD).—Age 33, married; thorough practical knowledge of his profession. Good character.—A. C., Mr. Cumming, Seedsman, Eccles, near Manchester.

GARDENER (HEAD).—Married, one child 12 years of age; has a practical knowledge of his profession in all its branches.—A. B., Post Office, Leytonstone, Essex, N.E.

GARDENER (HEAD).—Single; thoroughly proficient in every department. The best references.—W. T. K., Messrs. Glendinning, Chiswick Nursery, Chiswick.

GARDENER (HEAD).—Age 35, single; a good Flower, Fruit, and Kitchen Gardener; can grow Early Cucumbers and Melons; understands Stock and Land. Seven years' good character.—W. S., 25, Kinorton Street, Wilton Place, Knightsbridge, S.W.

GARDENER (HEAD).—Age 38, married, Scotch; has a thorough knowledge of the whole system of Gardening. Is willing, honest, and obliging, and untiring in his duties.—D., Mr. W. Paul, Nurseryman, Waltham Cross, N.

GARDENER (HEAD).—Middle-aged, married, small family, youngest eight years old; thoroughly understands his profession. Fourteen years' unexceptionable character.—A. B., 5, Inkerman Terrace, New Charlton, Kent.

GARDENER (HEAD).—Age 42, married, no incumbrance; perfectly understands Pines, Vines, Stove and Greenhouse Plants, &c. Leaving in consequence of a death in the family, and will be at liberty for an engagement at any time.—X. LANCET, *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Middle-aged, married, no incumbrance; has a thorough practical knowledge of Forcing Fruits, Flowers, &c. Can take the charge of Land and Stock if required. Many years good character.—A. D., care of Mr. Pantlin, Bookseller, 132 Manor Street, Clapham, S.

GARDENER (HEAD).—Middle-aged, married, no incumbrance; a thorough good Practical Gardener in all its various branches. Well understands Stock, Meadow Land, &c. Wife a good Dairy Woman. Six years' excellent character.—D. H., Gardener, Blackstones, Red Hill, Surrey.

GARDENER (HEAD).—Age 35, married; begs to offer his services to any nobleman or gentleman requiring the services of a first-class industrious Gardener, fully competent in every branch of his profession, having had great experience in some of the first establishments in the North and South of England. No objection to Woods or Meadow Land. Good character.—A. B., Mr. Wm. Paul, Nurseries, Waltham Cross, Herts, N.

GARDENER (HEAD).—Age 33, married, no incumbrance; has a practical knowledge of Early and Late Forcing Vines, Peaches, Strawberries, Melons, Cucumbers, and Stove and Greenhouse Plants; is a good Flower and Kitchen Gardener. Present employer will answer any questions. Good references from previous employers. Over three years' character.—A. B. C., Doman's Library, Lymington, Hants.

GARDENER (HEAD).—Age 39, married; wife and two children. Will shortly be disengaged in consequence of his present employer intending to manage his own establishment. He is authorised to say that his references will be most satisfactory; has a thorough knowledge of Early and Late Forcing, and has at present under his charge Vineries, Pine and Melon Pits, Orchids, Stove and Greenhouse Plants.—W. H., L. Solomon, Centre Row, Covent Garden, W.C.

GARDENER (HEAD), or GARDENER and BAILIFF.—Understands his profession in all its branches. Five years in last situation. Wife a good Dairy Woman in the Devonshire style; can make Cream Cheese, and an excellent Bread Baker.—A. B., Post Office, Milton, next Sittingbourne, Kent.

GARDENER (HEAD or SINGLE-HANDED).—Age 29, married, no incumbrance; has a good knowledge of Gardening in all its branches. Wife a good Dairy Woman. Four and a half years excellent character.—D. M., 3, Berkshire Cottages, Camden Road, Tunbridge Wells.

GARDENER.—Age 32; well understands Vines, Greenhouse, and Wall Trees, Kitchen and Flower Garden, Cucumbers and Melons. Twelve months' good character from last situation.—W. S., 17, Hanover Street, Upper Sydenham, Kent.

GARDENER.—Age 40, married; 25 years' experience in the Management of Kitchen and Pleasure Gardens, Greenhouse Plants; forcing Grapes, Melons, Cucumbers, &c. Wife 1*l.* with Cottage.—J. STEEL, 8, Wells' Place, New Town, Earl, Middlesex.

GARDENER (SECOND) or under the Foreman, where he can improve in the Florist line; understands the Management of Kitchen and Flower Gardens, and Out-door Work. Good character.—A. B., Mr. Slocombe, Stationer, Ongar, Essex.

To Noblemen and Gentlemen.

GARDENER and BAILIFF.—Age 35, married, no family; thoroughly understands his profession in all its branches, has had great practice in making new Kitchen and Flower Gardens and Laying-out Ornamental Pleasure Grounds, Woods and Plantations, and Management of Light and Heavy Soils, Draining and Redraining Waste Lands, also the Management of Stock. He thoroughly understands the Management of Poultry and Dairy with Devonshire Cream and Butter, as well as the Raw Cream Dairy. Five years' good character from late employer.—G. E. W., Post Office, Sandford, near Crediton, Devon.

BAILIFF and GARDENER, with 18 years' practical experience with noblemen and gentlemen. Copy of testimonials on application.—I. B., 33, Mary Street, Hampstead Road, London.

To Noblemen, Gentlemen, and Agriculturists.

FARM BAILIFF, ESTATE BAILIFF, or WOOD STEWARD.—A young Man, who has been employed 17 years on the estate of the Duke of Bedford, is well acquainted with Fencing, the general Management of Estates and Woodlands, and can make himself generally useful.—H. TAYLOR, Oakley Office, near Bedford.

FOREMAN, or SECOND GARDENER.—Age 24, married; has had good experience in his profession.—J. K., 16, Henrietta Street, Brunswick Square, London, W.C.

PROPAGATOR, PLANT GROWER, or FOREMAN, &c.—Long and extensive experience in Trade requirements.—BETA, A. Sargent, Station Road, Watford.

To Nurserymen and Florists.

PROPAGATOR, or PROPAGATOR and FOREMAN.—Age 24, single; first-class Budder and Grafter. Thoroughly understands the Nursery business in all its branches. Good references.—G. Y., 2, Albert Place, Belvedere, Kent.

FENDERS, STOVES, FIRE-IRONS, and CHIMNEY PIECES.—Buyers of the above are requested, before finally deciding, to visit WILLIAM S. BURTON'S SHOW-ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, CHIMNEY-PIECES, FIRE-IRONS, and GENERAL IRONMONGERY as cannot be approached elsewhere, either for variety, beauty of design, or exquisiteness of workmanship. Bright steel with ormolu ornaments, 3*l.* 15*s.* to 33*l.* 10*s.*; bronzed fenders, with standards, 7*s* to 5*l.* 12*s.*; steel fenders, 3*l* 3*s.* to 11*l*; ditto, with ormolu ornaments, from 3*l.* 3*s* to 18*l*; chimney-pieces, from 1*l.* to 100*l.*; fire-irons, from 2*s.* 3*d* the set to 4*l.* 4*s.* The BURTON and other PATENT STOVES, with radiating hearth-plates

CUTLERY, WARRANTED.—The most varied assortment of TABLE CUTLERY in the world, all warranted is on Sale at WILLIAM S. BURTON'S, at prices that are remunerative only because of the largeness of the sales.

Ivory Handles.	Table Knives per Dozen.	Dessert Knives per Dozen.	Carvers per Pair.
	s. d.	s. d.	s. d.
3¼-inch ivory handles	10 0	9 6	3 6
3¾-inch fine ivory handles	15 0	11 0	4 6
4-inch ivory balance handles	16 0	14 0	5 6
4-inch fine ivory handles	24 0	18 0	7 6
4-inch finest African ivory handles	32 0	26 0	11 0
Ditto, with silver ferules	40 0	33 0	13 6
Ditto, carved handles, silver ferules ..	50 0	43 0	17 6
Nickel electro silver handles, any pattern ..	25 0	19 0	7 6
Silver handles, of any pattern	84 0	54 0	21 0

Bone and Horn Handles—Knives and Forks per dozen.	s. d.	s. d.	s. d.
White bone handles	11 0	8 6	3 6
Ditto, balance handles	21 0	17 0	4 6
Black horn rimmed shoulders	17 0	14 0	3 6
Ditto, very strong riveted handles ..	12 0	9 0	3 6

The largest stock in existence of Plated Dessert Knives and Forks in cases and otherwise, and of the New Plated Fish Carvers

CLOCKS, CANDELABRA, BRONZES, and LAMPS.—WILLIAM S. BURTON invites inspection of his Stock displayed in two large show-rooms. Each article is of guaranteed quality, and some are objects of pure vertu, the productions of the first manufacturers of Paris, from whom William S. Burton imports them direct.

Clocks, from	7*s.* 6*d.* to 25*l.*
Candelabra, from	13*s.* 6*d.* to 16*l.* 10*s* per pair.
Bronzes, from	18*s.* 0*d.* to 16*l.* 16*s.*
Lamps, moderateur, from	6*s.* 0*d.* to 9*l.* 9*s.*

WILLIAM S. BURTON, GENERAL FURNISHING IRONMONGER by appointment to H.R.H. the Prince of Wales, sends a CATALOGUE gratis and post paid. It contains upwards of 600 Illustrations of his illimited Stock of Sterling Silver and Electro-Plate, Nickel Silver and Britannia Metal Goods, Dish Covers, Hot-water Dishes, Stoves, Fenders, Marble Chimney-pieces, Kitchen Ranges, Lamps, Gaseliers, Tea-Trays, Urns and Kettles, Clocks, Cutlery, Baths, Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding, Bed Room Cabinet Furniture, &c., with Lists of Prices and Plans of the 20 large Show Rooms, at 39, Oxford Street, W.; 1, 2, 3, and 4, Newman Street; 4, 5, and 6, Perry's Place; and 1, Newman Yard, London, W.

PURE PICKLES, SAUCES, JAMS, &c., and Improved Delicacies of the highest quality, pure and wholesome.—See *Lancet* and Dr. Hassall's Report.

CROSSE & BLACKWELL, Purveyors to the Queen, Soho Square, London. May be obtained from all Grocers and Oilmen.

Sauce.—Lea and Perrins'

WORCESTERSHIRE SAUCE

This delicious Condiment, pronounced by Connoisseurs

"THE ONLY GOOD SAUCE,"

Is prepared solely by LEA & PERRINS.

The public are respectfully cautioned against worthless imitations, and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper.

ASK FOR LEA AND PERRINS' SAUCE.

*** Sold Wholesale and for Export, by the Proprietors, Worcester; Messrs. CROSSE & BLACKWELL; Messrs. BARCLAY & SONS, London; and by Grocers and Oilmen universally.

DINNEFORD'S PURE FLUID MAGNESIA has during 25 years emphatically sanctioned by the Medical Profession, and universally accepted by the public, as the best remedy for Acidity of the Stomach, Heartburn, Headache, Gout, Indigestion, and as a mild Aperient for delicate constitutions, especially for ladies and children. It is prepared in a state of purity and of uniform strength by

DINNEFORD & Co., 172, New Bond Street, London, and sold by respectable Chemists throughout the world.

CORNS and BUNIONS.—A Gentleman, himself tormented with Corns, will be happy to afford others the information by which he obtained their complete removal in a short time without pain or any inconvenience.—Forward address on a stamped envelope to W. GODALL, Esq., Epsom, Surrey.

The Gardeners' Chronicle Newspaper.

SATURDAY, JULY 23, 1864.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.

TO LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &c., IN ENGLAND AND WALES, AND IN SCOTLAND.

The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose, Engines or Machinery for Drainage or Irrigation
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

VICTORIA and LEGAL and COMMERCIAL LIFE ASSURANCE COMPANY, 18, King William Street, City.

FOURTH DIVISION OF PROFITS.

At the Annual General Meeting, held on the 12th May last, a Reversionary Bonus of over £62,000 was appropriated to the Assured, equal to 42 per cent. on the Premiums paid.

The Accumulated Funds exceed	£410,000
The Annual Income is over	£70,000
The Claims by Death paid exceed	£310,000
Bonuses declared	£145,000

Every description of Life Assurance business is transacted.

Advances are made on Mortgage of Freehold Property, Life and Reversionary Interests, &c., and also to Assurers on Personal Security.

WILLIAM RATRAY, Actuary.

Special Notice.—Life Department.

SCOTTISH UNION ASSURANCE COMPANY,
37, Cornhill, London, E.C.—Established 1824.

The Books close for the year on July 31, 1864.

Life Policies taken out before that date will rank for three full years at the next distribution of profits in 1866.

The following examples of Bonus additions are taken from the Company's books :—

A Policy issued in 1834 for 4000*l.* had increased at August 1, 1861, to the sum of	£5402	17	1
A Policy issued in 1836 for 5000*l.* had increased at August 1, 1861, to the sum of	6487	18	10
A Policy issued in 1841 for 1000*l.* had increased at August 1, 1861, to the sum of	1256	14	9

Governor—His Grace the DUKE of HAMILTON and BRANDON.

DIRECTORS in LONDON.

President—The Right Hon. the EARL of MANSFIELD.

Charles Balfour, Esq. | John Frank Mieville, Esq.
Robert Collum, Esq. | J. R. Robertson, Esq.
Francis Fearon, Esq. | Hugh F. Sandeman, Esq.
H. M. Kemshead, Esq. | G. Ramsay, Esq., Manager of the Company.
John Kingston, Esq. |

Secretary—F. G. Smith, Esq.
Medical Officer—E. W. Duffin, Esq., M.D.
Solicitors—Messrs. Oliverson, Lavie, and Peachey.

The last Annual Report and Proposal Forms may be had on application at the Offices of the Company. F. G. SMITH, Secretary.
37, Cornhill, London, E.C.

Important Notice.

SCOTTISH UNION INSURANCE COMPANY,
No. 37, Cornhill, London. Established 1824.

Life proposals should be sent in before 31st July, in order to secure a share of the profits for the year then ending.

By order of the Board, F. G. SMITH, Secretary.
No. 37, Cornhill, London.

News of the Week.

IN the House of Lords on Friday Lord HOUGHTON asked whether the Government had taken or intended to take the opinion of the law officers of the Crown as to the powers of Convocation to pass synodical judgment on books written either by clergymen or laymen, and as to the immunity of the members of that body from proceedings at common law consequent on such judgment. The LORD CHANCELLOR censured the course taken by Convocation, and expressed his hope that the Bishops would pause for their own sakes, and not carry Convocation beyond its proper limits. It was not however the intention of the Government to take any steps in the matter. The Archbishop of CANTERBURY explained that the object of Convocation had been solely to vindicate the Church of England from complicity with opinions which the clergy considered mistaken and dangerous. The Bishop of OXFORD defended the judgment from the attack of the LORD CHANCELLOR, and after some further discussion the subject dropped. On Monday Lord BROUGHAM called attention to the subject of the Cuban slave trade, and said that while Spain had evaded or violated her treaty engagements, there was not the slightest symptom of the revival of the slave trade in Brazil. He again urged upon the Government the propriety of repealing the Aberdeen Act. Earl RUSSELL said that every English Government had been anxious to put down the slave trade, but when they had to rely on the aid of foreign Powers the question always presented difficulties, and the traffic had never been wholly suppressed. The Earl of MALMESBURY believed that the Government of Brazil had done all that it could to put down the slave trade, and concurred with Lord BROUGHAM in advising the repeal of the Aberdeen Act. Several Bills were read a third time. On Tuesday the Earl of CARNARVON gave notice that on Tuesday next Lord ELLENBOROUGH will call attention to the changes which have taken place in foreign affairs since the meeting of Parliament. In reply to Lord REDESDALE, Earl GRANVILLE said that the Government hoped to be able to prorogue Parliament at the end of next week, but owing to the state of private business in that House they were not in a position to name the precise day. On Thursday Earl FORTESCUE moved the second reading of the Weights and Measures Bill, which permits the use of the metric system of calculation by those who prefer it to the Imperial or local standards. The Marquis of SALISBURY moved as an amendment that the Bill be read a second time that day three months. On a division the motion for the second reading was carried by a majority of 11, the numbers being 34 to 23. On the motion for the second reading of the Poisoned Flesh Prohibition Bill, Lord WODEHOUSE moved as an amendment that the Bill be read a second time that day three months. On a division the motion for the second reading was carried by a majority of 13, the numbers being 31 to 18.

In the Commons on Friday the House went into Committee on the Cattle Diseases Prevention Bill and the Improvement of Land Act (1864) Bill; but neither Bill passed the Committee, and in both the CHAIRMAN was reported to report progress. After a desultory discussion on a variety of subjects, the House went into Committee of Supply on the remaining Civil Service and other Estimates, when certain votes were agreed to, after much discussion. On Monday Mr. OSBORNE called attention to the state of our political relations with Brazil. He contended that if the Aberdeen Act were repealed, Brazil would be happy to enter into a commercial treaty and a postal convention with us; but so long as it remained in force it would be a source of annoyance to Brazil and injurious to the trade of England. Lord PALMERSTON deprecated discussion at that moment, seeing that Ministers were negotiating through the Portuguese Government for the re-establishment of diplomatic relations with Brazil. After a short discussion the subject dropped. The House then went into Committee of Supply, and agreed to the votes for the Packet Service and for the Establishments on the Western Coast of Africa. On the order for going into committee on the New Zealand (Guarantee of Loan) Bill, Sir J. TRELAWNY moved an amendment for the appointment of a Select Committee. After a long discussion the amendment was negatived by 79 to 32. The House then went into Committee, and agreed to the clauses, with amendments. Several Bills were read a third time and passed. On Tuesday the Appropriation Bill was brought in and read a first time. Mr. MAGUIRE moved for a Select Committee to inquire into the present position of the paper manufacture of the United Kingdom with respect to foreign taxation. The CHANCELLOR of the EXCHEQUER said that if the motion were deferred to next Session the Government would offer no opposition to it. On this understanding the motion was withdrawn. Sir F. SMITH moved an Address to the Crown praying for a Royal Commission to consider the various systems of constructing and armour-plating ships of war for the British Navy, as well as for the navies of other maritime Powers, and to report what, in the opinion of such Commission, should be the system to be now adopted for the British Navy Lord C. PAGET opposed the motion, and after a short discussion it was withdrawn. On Wednesday Mr. COLLINS moved the second reading of the Facilities for Divine service in Collegiate Schools Bill, sent down from the Lords. Mr. HARDCASTLE moved as an amendment that the Bill be read a second time that day three months. Sir G. GREY recommended that the Bill should be referred to select committee, and reintroduced next session. Mr. COLLINS acceded to this suggestion, and withdrew the Bill. Several Bills were forwarded a stage, and others were withdrawn. On Thursday Sir C. WOOD made his annual statement of the revenue and expenditure of India. He showed that, after an equilibrium of revenue and expenditure, there had been a considerable surplus in three successive years, 8,313,000*l.* of debt had been paid off, and there was a balance in the Treasury of upwards of 19,000,000*l.* He concluded by moving a series of resolutions on the subject. After a long discussion, in which general satisfaction was expressed at the improved prospects of Indian finance, the resolutions were agreed to. The Consolidated Fund (Appropriation) Bill passed through committee. On the motion for the third reading of the New Zealand (Guarantee of Loan) Bill, Mr. HENNESSY moved, as an amendment, that the Bill be read a third time that day month. On a division, the amendment was negatived by 75 to 32. The Bill was then read a third time and passed.

A suspension of hostilities has been agreed upon between Austria, Prussia, and Denmark, commencing from noon of the 20th, and lasting until midnight of the 31st inst. The negotiations for peace will take place at Vienna.

By the Cape mail we learn that the colonists have been alarmed by the prospect of another Kaffir war. It was reported that the Kaffir chief KRELI had passed the Bashee with a large force and had a collision with the mounted police. The report turned out to be exaggerated, but the proceedings of the Kaffirs were so threatening that the Government had sent reinforcements to the frontier and were making every preparation for war.

From the United States we learn that General GRANT has so completely failed in the objects of his campaign, that General LEE has detached a large Confederate force for an offensive movement into Maryland and Pennsylvania. So much alarm is entertained in the North for the safety of Baltimore and Washington, that President LINCOLN, after proclaiming martial law in Kentucky, has called out 27,000 militia to repel the invasion, and has appointed the 8th of August as a day of humiliation and prayer.

Home News.

THE COURT.—The Queen and Royal family continue at Osborne. On Wednesday week Dr. Jenner arrived from London. On Thursday morning the Queen and Princess Louis of Hesse drove out. In the afternoon Prince and Princess Louis of Hesse, Princess Helena, Prince Leopold, and Prince William of Prussia went on board the Royal yacht Fairy, and cruised in the Solent. On Friday Prince and Princess Leiningen dined with her Majesty. Major-General Sir Henry Storks arrived at Osborne on a visit. On Saturday the Queen, accompanied by Princess Louisa, Princess Beatrice, and Princess Louis of Hesse, went on board the iron-cased ship Prince Consort, off Osborne. The Queen embarked in the Royal yacht Fairy at the Osborne Pier, and was conveyed in the barge from the Fairy to the Prince Consort, after inspecting which her Majesty returned ashore in the same manner. Earl De Grey and Ripon arrived on a visit. Sir Henry Storks left for London. On Sunday afternoon the Queen, Prince and Princess Louis of Hesse, and Princess Louisa, attended Divine service at Whippingham Church. The Rev. G. Prothero officiated. Dr. Jenner arrived from London. Earl De Grey returned to town. On Monday the Queen and the Prince and Princess Louis of Hesse walked and drove in the grounds. Princess Louisa and Princess Beatrice also walked and drove out. Mr. and Mrs. Morier arrived from London on a visit to the Queen. On Tuesday the Queen and Princess Louisa drove out. Dr. Jenner returned to London. Sir James Clark arrived, and remains at Osborne. Prince and Princess Louis of Hesse dined with Prince and Princess Leiningen. On Wednesday the Queen drove in the grounds both in the morning and afternoon, accompanied by Princess Louis of Hesse and the Princess Louisa. Prince Louis of Hesse went to Aldershot, and on his return was met at Southampton by the Princess Louis in the Fairy. The Duke of Argyll arrived on a visit to her Majesty. Prince and Princess Leiningen dined at Osborne.

THE PRINCE AND PRINCESS OF WALES.—On Friday the Prince rode on horseback. In the afternoon the Prince and Princess took a carriage drive. In the evening their Royal Highnesses honoured Earl and

Countess Spencer with their company at dinner at Spencer House. On Saturday their Royal Highnesses left Marlborough House for the White Lodge, Richmond Park, and dined in the evening with the Duke of Buccleuch at his villa at Richmond. On Monday their Royal Highnesses attended the Duchess of Cambridge's *fête champêtre* at Cambridge Cottage, Kew. On Wednesday morning the Prince went to Aldershot. In the evening the Prince and Princess dined with the Duke and Duchess d'Aumale, at Orleans House, Twickenham. On Thursday morning the Prince and Princess came to Marlborough House from Richmond Park. The Prince presided at a meeting of the Council of the Duchy of Cornwall.

PRINCESS HELENA has been confined to the house at Osborne for some days by an attack of scarlatina. The disease is of a mild form, and all the symptoms are very satisfactory. Her Royal Highness is now making favourable progress, and the rash has entirely disappeared.

ARRIVAL OF GRAND DUCHESS MARIE.—Her Imperial Highness the Grand Duchess Marie, sister of the Emperor of Russia, attended by a large retinue, landed at Dover on Thursday from Belgium, and was received by Baron Brunnow, the Russian Ambassador, the resident consul, and other personages connected with the Russian Government. Her Imperial Highness immediately left by the South-Eastern railway for Claridge's Hotel, whence she will go to Torquay for a few weeks. Prince Gortschakoff met the duchess on her arrival at the Charing Cross terminus.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

THE ARMY.—The colonelcy of the 91st Regiment, vacant by the death of General Hay, has been conferred on Lieut.-General Arbuthnot. The colonelcy of the 89th Regiment, vacated by this appointment, has been conferred on Major-General Gascoyne. Major-General Chesney has been appointed Colonel-Commandant of the Royal Artillery, in the room of the late General Sir R. W. Gardiner.

BARONETCY.—The Queen has directed letters patent to be passed under the Great Seal, granting the dignity of a Baronet of the United Kingdom to Sir Charles Lyell, of Kinnordy, Forfarshire, and the heirs male of his body lawfully begotten.

PARLIAMENTARY MOVEMENTS.—Sir Hugh Arbuthnott will retire from Kincardineshire, and Mr. James Dyce Nicol, of Ballogie, is the Ministerial candidate for the vacant seat. Lord Edward Cavendish, third son of the Duke of Devonshire, and the Hon. Reginald C. Abbot, son of Lord Colchester, will be candidates for East Sussex at the next election, the former in the Liberal, the latter in the Conservative interest. Mr. F. Calvert, Q. C., a brother of Sir Harry Verney, M.P., and Mr. N. M. Rothschild, eldest son of Baron Lionel de Rothschild, will be candidates for Aylesbury at the next election. The Hon. William George Eden, of Cantley Hall, will be the Liberal candidate for Great Grimsby, in the room of Mr. Chapman, who will retire. Mr. Scully has contradicted the report that he intends to retire from Cork.

CASE OF BISHOP COLENSO.—The council of the Colonial Bishoprics Fund, out of which part of the salary of the Bishop of Natal was paid, have transferred the amount hitherto granted to him to a reserved fund, pending the final decision of the question as to the legality of the Bishop of Cape Town's judgment suspending him from his see. The amount hitherto paid annually to the Bishop from the fund has been 682*l.* 10*s.*

THE CHANNEL FLEET, comprising the Edgar, Warrior, Black Prince, Defence, and Trinculo, under the command of Admiral Dacres, C.B., sailed from Spithead on Monday on a cruise westward. They will probably call at Torbay, and afterwards at Bristol, and other ports not visited during last summer's cruise. From the western ports the fleet is expected to proceed to the north coast of Ireland.

THE NEW CANON OF WESTMINSTER.—The Rev. William Conway, M.A., has been nominated to the canonry in Westminster Abbey, with the Rectory of St. Margaret, vacant by the death of the Rev. Dr. Cureton.

A NEW DECLARATION.—Dr. Daubeny, Professor of Botany in the University of Oxford, has called attention to a new declaration of religious opinion which has been issued by Mr. M'Leod, from the Royal College of Chemistry, with a view to obtain the signatures of scientific laymen. It appears that Sir David Brewster, Sir Henry Rawlinson, and about 150 others have already affixed their names to it. The gist of the declaration is contained in the following sentence:—"We conceive that it is impossible for the Word of God—as written in the book of nature—and God's Word written in Holy Scripture, to contradict one another, however much they may appear to differ." Dr. Daubeny has published the letter which he sent in reply, stating his reasons for withholding his sanction from such a creed. While generally admitting the justice of the declaration in principle, he fears its tendency is to "countenance that view of Scripture inspiration which, of the many entertained by divines of different schools, is the one which I regard as the narrowest and the most beset with difficulties."

COMMITTEE OF COUNCIL AND THE INSPECTORS OF SCHOOLS.—The report of the select committee appointed to inquire into the practice of the Committee of Council on Education with respect to the reports of her Majesty's inspectors of schools has been published. The committee find that no instance of marking the reports has occurred since Feb. 14, 1862, when a report by Mr. Longueville Jones was specially submitted to the president, with passages marked, written with a feeling of hostility to the department, and that report was sent back to him with remarks by the president. The committee however could not proceed with the investigation, owing to the illness of Mr. Jones. They say:—

"The principle involved in the subject of this inquiry and in the resolution is important. Your committee have carefully considered the action of the department, and have come to the conclusion that the supervision exercised in objecting to the insertion of irrelevant matter, of mere dissertation, and of controversial argument, is consistent with the powers of the Committee of Council, and has, on the whole, been exercised fairly and without excessive strictness. If passages occur in the reports, as printed, consisting of inference or arguments which may tend to support the educational views of the department, other passages may be found which have a contrary tendency. No objection is made to statements of facts observed by the inspectors within the circle of their official experience, whatever may be their bearing on the policy of the Committee of Council. The knowledge, or even a reasonable suspicion, that the inspectors' reports are subject to alteration, either directly or indirectly, at the instance of the department, has, without doubt, a tendency to lower their value, if they are to be regarded as independent sources of testimony in matters of opinion or controversy touching the educational views or policy of the Committee of Council. It appears however to your committee that whatever may have been the understanding under which the appointment of inspectors was originally sanctioned, Parliament cannot be presumed to be ignorant (since the year 1858 at latest), that the heads of the office have exercised a censorship over the inspectors' reports as to the insertion of argumentative or irrelevant matter; and your committee are of opinion that some such power is essential to the effectual working of the department so long as it retains its present constitution and functions. It has occurred to your committee that it might be possible to obtain all the information which the inspectors can be desired to give to the department or to Parliament, by requiring them to furnish answers to specific questions, instead of making general reports, and thus to avoid risk of misunderstanding, either between the department and the inspectors or between the department and Parliament as to the kind of information which the inspectors are required to give. It appears however that none of the reports for the last year have been objected to on the ground of nonconformity with the minute of 1861, as explained by the paragraph of August, 1863. For the information of Parliament your committee recommend that all instructions which may hereafter from time to time be issued to the inspectors, either as to their general or tabulated reports, should be laid before Parliament with the annual report of the Committee of Council."

Foreign.

FRANCE.—The Princess Clotilde, wife of Prince Napoleon, gave birth to a son on Saturday night. Prince Napoleon, who embarked on the previous evening at Havre for a cruise at sea, was not acquainted with the birth of the Prince till some time after the event. The Princess and the infant are doing well. The latter was privately baptised after the *accouchement*, and received the names of Napoleon Louis Joseph Jerome. The Empress paid a visit to the Princess on Sunday morning and remained half-an-hour. The King of the Belgians arrived in Paris on Tuesday evening on his way to Vichy on a visit to the Emperor of the French. His Majesty paid a visit to the Empress at St. Cloud on Wednesday, and left on Thursday morning for Vichy. It is rumoured in Paris that this visit is not connected with politics, but is for the purpose of arranging a marriage between his Majesty's second son, the Count of Flanders, and Princess Anna Murat. M. Drouyn de Lhuys, the Minister for Foreign Affairs, has been summoned for a few days to Vichy to confer with the Emperor. His Majesty is in perfect health. The French Government has addressed a circular to the various Powers, inviting them to take part in an international Congress, to be held in the autumn, for the purpose of regulating telegraphic communications in Europe. The *Constitutionnel* of Sunday publishes an article demonstrating that the project for the admission of Denmark into the German Confederation would disturb the balance of power in Europe, and says:—

"It would give rise to threatening contingencies, and would produce such complications and such opposition that it is impossible to consider the scheme as having been seriously entertained."

The *Pays* of Thursday evening publishes an article signed by its editorial secretary, opposing the pretensions of the German Powers to incorporate that portion of Schleswig inhabited by Danes. It says:—

"Before violating equity the German Powers, who are about to abandon the old right without adopting the new, should think twice. They should not forget that the law of retaliation exists. If the German Confederation be unjustly aggrandised it exposes itself to reprisals; if it now sets the example of a spirit of conquest, why should not others follow it to its detriment?"

The Court of Appeal on Saturday gave judgment on the appeal of M. Levy the publisher, against the sentence of the Civil Tribunal of the Seine, justifying the Prefect of Police for seizing all the copies of the Duc d'Aumale's "History of the House of Condé," after the authorities had allowed it to be printed. The civil tribunal held that the Prefect of Police was not amenable to common law, unless an authorisation from the Council of State were first obtained, and the Court of Appeal on Saturday confirmed judgment on the same grounds, namely, that the proceedings taken by the Duke d'Aumale and M. Michel Levy for the recovery of the property seized by the Prefect of Police, could not be sustained without the authority of the Council of State. It was announced in Court that an appeal would be lodged in the Court of Cassation against the judgment. A despatch from Fécamp states that a sharp cannonade was heard at sea from that place on Monday. An engagement was supposed to be proceeding between Federal and Confederate vessels. The *Débats* publishes a description of a formidable iron-cased vessel now building at Bordeaux, the peculiarity of which is, that she combines the characteristics of a turret ship with those of a steam ram. She is to be called the Sphinx, and is said to be different from any other vessel ever designed. She is iron-cased from the deck level to 1 metre 80 below the water line, with plates varying from 10 to 12 centimetres in thickness, according to their position. The stern is armed with a cast-steel spur, the extremity of which is placed about a metre below water, so as to strike an enemy below the plating. The deck is protected by cast-iron plates, placed under the planking, and supports two formidable iron-cased turrets. That on the bows is to be armed with a pivot gun, throwing solid shot of the weight of 300 pounds, the effect of which at short range no iron-casing is expected to withstand. The turret in the stern is to mount two long range pivot 70-pounders, to engage the enemy at a distance, but she is meant for close quarters.

SPAIN.—The King will leave for Paris on the 15th of August, the day of the inauguration of the Northern Railway. The Council of Ministers have decided to grant an amnesty to persons convicted of offences against the press laws. The statement that several despatches of Admiral Pinzon to the Government had been stolen during the passage of the couriers across the Isthmus of Panama is unfounded, the Government having received the Admiral's despatches. Communications have also been received from Chili, expressing the desire for friendly relations with Spain.

PORTUGAL.—A despatch from Lisbon states that a numerously signed petition of merchants has requested from the Government the free importation of cereals, the warehouses being empty and the crop insufficient.

BELGIUM.—King Leopold left Brussels on Tuesday evening for Vichy. By a Royal decree issued on Sunday the Chamber of Deputies is dissolved, and the new eletcions are fixed for the 11th August.

SWEDEN.—The Swedish and Norwegian fleet has been put out of commission, and the troops which had been mobilised have been disembodied. The construction of the first Monitor for the Swedish navy has been commenced at the ironworks. The materials for two others are ready. The *Dagligt Allehanda* of Friday says:

"Denmark is of little importance to strengthen Scandinavia against Russia. The absorption of Denmark by Germany would inspire us with pity, but not with alarm."

DENMARK.—Prince John of Glücksburg arrived at Lubeck on the 18th, and left by the steamer Ellida in the afternoon for Copenhagen. Three Danish ships of war under a flag of truce arrived off Dantzig harbour on the 13th with a despatch addressed to the military commander of Dantzig, announcing the suspension of hostilities on the part of the Danes.

THE DANISH DUCHIES.—On Thursday, the 14th, while General Falkenstein was planting the Austrian and Prussian flags at Skagen, the Danes attempted a landing at Aalbeck and Frederickshaven. They were driven off from the first place by a body of Hussars, and repulsed from the latter by a couple of guns. On the afternoon of the same day an engagement took place at Föhr between the allies and the Danish gunboats. During the night of the 17th, the Austrian troops took possession of the Island of Föhr. All the islands on the west coast of Schleswig are now in possession of the allies. The Danish Captain von Hammer has been taken prisoner in a creek of the Island of Fanoe, after having sunk seven boats. On Monday and Tuesday last a conflict took place between the Hanoverian and Prussian troops at Rendsburg. The Hanoverians attacked the Prussian outposts and soldiers, many of whom were wounded in the streets. Tumultuous assemblages even gathered before the hospitals, where some severely wounded Prussians were lying. The Prussian troops were compelled to remain under arms during the night. In consequence of these occurrences Prince Frederick Charles of Prussia informed the Commander-in-Chief of the Federal troops in Holstein that he had received orders to make himself master of Rendsburg. General Hake replied that, having only four companies at his disposal, he must yield to superior force, but that he declined to assume the responsibility for this step. In accordance with the previous announcement a Prussian force of 6000 men entered Rendsburg on Thursday. A meeting of Schleswig landowners took place at Kiel on Wednesday, to draw up an address to the highest civil authorities of Schleswig, requesting that the Duchies should be placed *ad interim*, until the decision of the succession question, under the joint government of Austria and Prussia.

FRANKFORT.—In the sitting of the Federal Diet on Thursday the Austro-Prussian motion that the Diet should called upon the Prince of Augustenburg to substantiate his claims to the throne of Schleswig-Holstein was adopted by a large majority.

AUSTRIA.—A despatch from Vienna, dated Saturday, says that the proposals of Denmark, addressed direct to the Courts of Berlin and Vienna, have been met on

the part of Austria and Prussia by a suspension of arms on land and sea from the 20th to the 31st July, during which period the blockade of the Prussian ports will be raised by the Danes. The German Powers have added the request that Denmark will immediately send Plenipotentiaries to Vienna, where the negotiations for peace are to take place. The Austrian Government has appointed Baron Halbhuber, Councillor of State, as Civil Commissioner for Jutland.

Prussia.—It is asserted on good authority that Count von Bismark will be present in Vienna at the negotiations for peace.

Italy.—In the sitting of the Chamber of Deputies on Sunday, Signori Bastoggi, Susani, and four other deputies resigned their seats. After an animated debate the Chamber adopted the order of the day presented by Signori Mari and Biancheri, whereby the Ministry were invited to bring in a Bill providing for cases in which the personal interests of Deputies might clash with their national duties. This was the last sitting of the Session, which closed on Monday. The Bill authorising the sale of the State Railways to the house of Messrs. Rothschild is postponed to next Session. A Royal decree published on Friday gives effect to the postal convention concluded between France and Italy, whereby money orders can be issued reciprocally in both countries. Garibaldi left Ischia on Tuesday morning at 7 o'clock for Caprera, where he arrived at noon on the next day. It is said that he is not in good health. The rumours of expeditions being undertaken by him are unfounded. The Neapolitan authorities have received intelligence that a three-masted steamer of suspicious appearance has been seen off the Island of Ischia, and two Italian ships of war have been directed to cruise off the island. The Pope left Rome on Monday for Castel Gandolfo. General de Montebello paid his respects to his Holiness at the station.

The Principalities.—A proclamation has been issued by Prince Couza stating the result of his journey to Constantinople, and expressing the gratitude of the country towards the Suzerain Court and the guaranteeing Powers. The Prince also formally announces that the Powers have recognised, saving some slight modifications, the acts of the 2d of May, sanctioned by a *plebiscite* of the Roumain people. The Roumain *Monitour* publishes the statute of the new Electoral Law. Another decree constitutes the Council of State and a Board of Control, and appoints the members of the same. The principal modifications of the Constitution mutually agreed upon between Prince Couza and the Porte were published on Sunday. In reference to the Constitution of the Senate, it was determined that the Senators directly appointed by the Prince are to possess a yearly income of 800 ducats, while a yearly income of 200 ducats is necessary for eligibility to the Chamber of Deputies. It is, however, reserved for the Chamber of Deputies, at their first sitting, definitively to decide upon this qualification.

West Africa.—The Sierra Leone *Free Town Observer* of June 16, states that M. Jules Gerard, known as the Lion-killer, has failed in his attempt to reach the interior of the continent by the route of Timbuctoo. He has been attacked and plundered by the natives, and with difficulty escaped with his life.

India.—Bombay papers of the 23d ult. state that Dr. Livingstone arrived in Bombay on the 15th ult. in the steamer Lady Nyassa, from Africa. The steamer, belonging to the Zambesi exploring expedition, is to be sold. Sir John Lawrence has declared himself opposed, for military reasons, to the extension of the Scinde Railway to Mooltan, and favourably inclined towards the maintenance of an Indus flotilla. His Excellency was still at Simla; and Sir Hugh Rose was expected to arrive there on his return from his recent trip to Cashmere about the 18th. Preparations are making for a census of Calcutta.

Cape of Good Hope.—Great alarm had been caused at the Cape by a telegram from the frontier stating that there was danger of a Kaffir war. Sir Walter Currie had reported to the Governor that the difficulties in the Transkei were increasing, and had recommended the 10th Regt. to be retained on the frontier. On the frontier it was even asserted that the paramount chief Kreli had crossed the Bashee in force, and had come in collision with the mounted police. Official telegrams from the Governor to the Commander of the Forces required the latter to proceed to the frontier immediately with every available man in the garrison. Accordingly the Commander of the Forces had started in the Valorous for Natal with the 2d battalion of the 11th Regiment, and the 5th Fusileers with a detachment of artillery and a battery of Armstrong guns for East London. The Cape Town Volunteers had tendered their services for garrison duty. Later advices from the frontier reported this alarm to have been in a great measure groundless, nothing like actual collision having taken place; and a trader who had passed through Kreli's country, and had arrived recently at King William's Town, found the tribe peaceable. The Commander of the Forces announced in Graham's Town, at the Mayor's dinner on the 15th June, that he did not apprehend a Kaffir war at present. It appears that Kreli had been irritated by the reported intention of the Governor to remove the Tambookies from their Queenstown locations into Transkei, and on that account the chief had been assuming a threatening tone. In return the Governor was desirous of making a warlike demonstration. The British authorities considered there was no fear of any actual disturbances, and it was likely that the Governor would reconsider the Tambookie question. The boundary line between the Orange Free State and the Basutas will, in all probability, be amicably settled. The Parliament is still sitting in Graham's Town. Several Government measures have been thrown out, among others the Bill for establishing a Deeds' Registry Office in Graham's Town, and that for the creation of a Supreme Court in one of the Eastern divisions. The agitation against the arbitrary *ex post facto* legislation of the Government and Parliament in connection with the Customs Protection Bill was continued in the colony. The home Government has consented to the annexation of No-Man's-Land. Sir Baldwin Walker in the Narcissus left for England on the 25th May. The Bishop of Cape Town is still at Natal, whence he will probably return in about a month. Bishop Tozer, of the late Central African Mission, is in Cape Town. Dr. Duff, the venerable Indian Missionary, is a passenger to England by the present mail steamer.

United States.—The Confederates have invaded Maryland and Pennsylvania in force, and the corps of Generals Ewell, Breckinridge, and Rhodes are all north of the Potomac. The invasion commenced on the 3d, when a Confederate force, variously estimated at from 6000 to a full corps, consisting of the veterans of Stonewall Jackson's army, under General Ewell, advanced up the Shenandoah valley, occupied Martinsburg, and drove General Sigel to Harper's Ferry. On the 4th General Sigel evacuated Harper's Ferry and retreated across the Potomac to Maryland Heights, destroying the iron bridge of the Baltimore and Ohio Railway at that point. The Confederates also crossed the Potomac on the same day, and at 4 P.M. were preparing to assault General Sigel's position. General Hunter on receiving this news hastened eastwards from Parkersburg to Sigel's assistance, but it is thought that he cannot reach him under 10 or 12 days; and meanwhile General Breckinridge is reported to be moving to retard his advance. The Confederates are now engaged in destroying the Baltimore and Ohio Railway, securing the harvest in the Shenandoah Valley, and running off horses, cattle, and other spoil. They have already occupied Frederick City, and are marching upon Baltimore, General Wallace, who had been sent against them, having been compelled to retreat after eight hours fighting at Monocacy, in which he sustained heavy loss, including Brigadier General Tyler and Colonel Seward of the New York artillery, taken prisoners. Great alarm exists in the Border towns and counties, and serious apprehensions are entertained for the safety both of Washington and Baltimore. President Lincoln has appointed the 8th of August for a day of humiliation and prayer; and has demanded 12,000 militia from New York, 12,000 from Pennsylvania, and 5000 from Massachusetts to repel the Confederate invasion. The Governor of New York has ordered an immediate draught to increase the State Militia to 75,000, and has ordered 5000 of the State Militia to Washington. Martial law has been proclaimed in Kentucky. General Grant has made no further attempt to turn the Confederate position at Petersburg since his defeat on the 22d ult., but it is reported that he has again demanded the surrender of the city, and that no answer has been returned by General Beauregard. It is now said that General Grant is preparing to reduce the Confederate works by bombardment. General Sherman reports that he occupied Kenesaw Mountain and Marietta on the morning of the 3d, the Confederates having retired towards the Chattahoochee. General Wilson's cavalry in their recent raid destroyed 20 miles of the Danville Railroad. On their return on the 27th ult. they were interrupted by the Confederates at Beam's Station on the Weldon and Petersburg Railroad. After three days' conflict, during which he lost all his trains, artillery, wounded, and between 2000 and 3000 men, he succeeded by a detour of 30 miles in escaping through the Confederate lines and rejoined Grant. 1300 negroes whom he kidnapped during the early part of his expedition were rescued. General Baldy Smith on the morning of the 30th attempted the capture of the Confederate intrenchments in his front, but was repulsed. Memphis papers state that General Carr defeated the Confederate General Shelby near St. Charles, Arkansas, on the 27th ult., capturing 200 prisoners and several cannon. The Federal loss was 200, that of the Confederates in killed and wounded is estimated at 500. During the night Shelby was reinforced by Marmaduke, when Carr retreated. It is reported that Marmaduke and Shelby are moving for a combined attack upon Steele at Little Rock. President Lincoln has ordered General Dix not to defend the action in the civil courts for the seizure of the *New York World* and *Journal of Commerce*. It is reported that Governor Seymour will enforce the orders of the Court, and order General Dix's arrest. The sinking of the Alabama by the Kearsarge has caused great rejoicing. Regrets are expressed that the steam-yacht Deerhound was not also sunk for rescuing Captain Semmes. Captain Winslow has been made a Commodore in recognition of his services. The authorities have arrested numbers of persons at New Orleans for recruiting for Juarez. The steamer Rouen has been captured. Gold is at 176 premium.

San Domingo.—Passengers arrived at Vigo assert that the insurgents at San Domingo had abandoned their position at Puerto Plata, and were prepared to surrender, provided the Spanish authorities would promise them a complete amnesty.

Parliament.

HOUSE OF LORDS.

Friday.—*Essays and Reviews.*—Lord Houghton, in asking whether her Majesty's Government have taken or are willing to take the opinion of the law officers of the Crown as to the powers of Convocation to pass a synodical judgment on books written by clergymen or laymen, regretted that the volume called "Essays and Reviews" should have been selected by Convocation as the first of an "Index Expurgatorius" with which literature seemed to be threatened. He declined to enter on a theological controversy, but described the origin and nature of the condemned work. The proceedings connected with it would, he thought, establish a dangerous precedent, as on the same principle of action any work might be censured. He suggested that, instead of exercising a doubtful authority, the better course would have been to answer by argument anything in the work that seemed objectionable; and urged that, if the powers claimed in this instance were extended to other cases, it would constitute a pressing grievance, and be a source of great danger to freedom of opinion and the liberty of religion.—The Lord Chancellor said there were three modes of dealing with Convocation since it had been permitted to deliberate actively. One was, to take no notice of its proceedings; another was, if it were likely to be mischievous, to prorogue it; and the third, when it exceeded its powers, to bring it to the bar of a court of justice. The supremacy of the Crown was most carefully guarded by the statutes, and any one who presumed to exercise that authority, directly or indirectly, save under special warrant of the Crown, was liable to the penalties of præmunire. Moreover, Parliament had carefully provided that no sentence, or anything else pronounced by Convocation, had any validity whatever, and could not be carried into practical effect. But he was only partially aware of what Convocation had done, his authority being chiefly the reports in the newspapers; and he was most reluctant to interfere, for the case might prove to be a serious one, and he shrank from doing anything which would enable the Chancellor of the Exchequer to sweep into his net at one haul the whole of the archbishops and bishops, and all the deans and chapters—in short, the entire Convocation. He warned the right rev. bench, however, of the peril in which they had put themselves, and advised the members of Convocation, if any attempt were made to draw it beyond its proper limits, at once to withdraw, and, remembering the pillar of salt, not to look behind. In conclusion he had to state that there was no intention on the part of the Government to take any steps in the matter.—The Archbishop of Canterbury said that the object of Convocation in dealing with "Essays and Reviews" was not persecution, but to vindicate the Church of England from all complicity in the doctrines propounded in that work. Desirous of proceeding legally, he had applied to Government for the opinion of the law officers of the Crown, which they had declined to give. He therefore took that of Sir Hugh Cairns and Mr. Rolt, who held that Convocation was proceeding legally.—The Bishop of London thought Convocation had a right to complain of the Government refusing to supply the opinion of the law officers of the Crown; but he doubted whether the course adopted by Convocation was the best that could have been devised. The Church had passed through more dangerous periods than the present, and he thought her influence would be more effectually extended by sound learning, good argument, and the pious lives of the clergy.—Lord Wensleydale said the Archbishop could obtain, by a motion in the House, the opinion of the judges as to the validity of proceedings proposed to Convocation.—The Bishop of Oxford argued that Convocation when called together had power to express an opinion on heretical doctrines, although it was doubtful whether it could proceed against the authors. The case involved the religion of the realm and the liberty of the subject, and when the highest authority under the Crown descended to ribaldry, he ought, if he did not respect himself, at least treat the audience whom he was addressing with some deference. He also complained of the misrepresentations of the Lord Chancellor, and indignantly repelled the insinuation that Convocation was asserting rights in violation of the Queen's supremacy.—The Lord Chancellor observed that he had now received a useful warning. He had wished to treat the matter in a good natured spirit, and without the slightest idea of bringing charges or making misrepresentations.—On the motion of the Earl of Malmesbury, the *Street Music Nuisance Suppression Bill* passed through committee. Several other Bills were advanced a stage.

Monday.—The *Burials Registration Bill* passed through Committee.—Lord Brougham called attention to the subject of the *Spanish Slave Trade*, and said that it was with the utmost grief and displeasure that he saw Spain evading and setting at naught the stipulations which had been made between European nations for the suppression of that nefarious traffic, and in giving encouragement to the exportation of negroes to Cuba. Our own West Indian colonies were loud in their complaints of the competition to which they were exposed by the slave-cultivated produce of Cuba, and stated that they suffered more from the increase of Cuban slavery than from the abolition of slavery in the British West Indies. If Spain persisted in her refusal to fulfil her solemn treaty obligations, not only ought our force of gun-boats to be largely augmented, but measures should be adopted for taxing the slave produce of the Spanish possessions in the tropics. The conduct of the Brazilian Government had nobly contrasted with that of Spain on this question, and Mr. Christie himself, although no friend to that Government, readily admitted the fact. He thought that there was a very strong case for repealing the Aberdeen Act, and denied that there was the slightest symptom of a renewal of the slave trade in Brazil, where, from the Emperor down to the smallest planter, every man was against it.—Earl Russell replied that successive Foreign Ministers had made representations on the subject to the Spanish Government, which had expressed its willingness to join with other countries in putting down the slave trade, but that, owing to the obstacles interposed by the planters in the colonies, their endeavours had not yet been attended with success. As to the suggestion to tax the slave-grown sugar of Cuba, such a proceeding would be perfectly inefficacious, whilst it could be brought here through France and other countries. He could only say that her Majesty's Government would not relax their efforts for the purpose of putting down the slave trade.—The Earl of Malmesbury concurred with Lord Brougham, that the Brazilian Government had done all in its power to discourage the traffic in slaves, and expressed the surprise with which he had heard its conduct impugned in the other House of Parliament. The *Mutual Surrender of Criminals (Prussia) Bill*, the *Militia Ballots Suspension Bill*, and the *Administration of Trusts (Scotland) Bill* were read a second time. The *Street Music Bill*, the *Railways (Ireland) Act Amendment Bill*, and the *Drainage and Improvement of Lands (Ireland) Bill* were read a third time and passed.

Countess Spencer with their company at dinner at Spencer House. On Saturday their Royal Highnesses left Marlborough House for the White Lodge, Richmond Park, and dined in the evening with the Duke of Buccleuch at his villa at Richmond. On Monday their Royal Highnesses attended the Duchess of Cambridge's *fête champêtre* at Cambridge Cottage, Kew. On Wednesday morning the Prince went to Aldershot. In the evening the Prince and Princess dined with the Duke and Duchess d'Aumale, at Orleans House, Twickenham. On Thursday morning the Prince and Princess came to Marlborough House from Richmond Park. The Prince presided at a meeting of the Council of the Duchy of Cornwall.

PRINCESS HELENA has been confined to the house at Osborne for some days by an attack of scarlatina. The disease is of a mild form, and all the symptoms are very satisfactory. Her Royal Highness is now making favourable progress, and the rash has entirely disappeared.

ARRIVAL OF GRAND DUCHESS MARIE.—Her Imperial Highness the Grand Duchess Marie, sister of the Emperor of Russia, attended by a large retinue, landed at Dover on Thursday from Belgium, and was received by Baron Brunnow, the Russian Ambassador, the resident consul, and other personages connected with the Russian Government. Her Imperial Highness immediately left by the South-Eastern railway for Claridge's Hotel, whence she will go to Torquay for a few weeks. Prince Gortschakoff met the duchess on her arrival at the Charing Cross terminus.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday.

THE ARMY.—The colonelcy of the 91st Regiment, vacant by the death of General Hay, has been conferred on Lieut.-General Arbuthnot. The colonelcy of the 89th Regiment, vacated by this appointment, has been conferred on Major-General Gascoyne. Major-General Chesney has been appointed Colonel-Commandant of the Royal Artillery, in the room of the late General Sir R. W. Gardiner.

BARONETCY.—The Queen has directed letters patent to be passed under the Great Seal, granting the dignity of a Baronet of the United Kingdom to Sir Charles Lyell, of Kinnordy, Forfarshire, and the heirs male of his body lawfully begotten.

PARLIAMENTARY MOVEMENTS.—Sir Hugh Arbuthnott will retire from Kincardineshire, and Mr. James Dyce Nicol, of Ballogie, is the Ministerial candidate for the vacant seat. Lord Edward Cavendish, third son of the Duke of Devonshire, and the Hon. Reginald C. Abbot, son of Lord Colchester, will be candidates for East Sussex at the next election, the former in the Liberal, the latter in the Conservative interest. Mr. F. Calvert, Q. C., a brother of Sir Harry Verney, M.P., and Mr. N. M. Rothschild, eldest son of Baron Lionel de Rothschild, will be candidates for Aylesbury at the next election. The Hon. William George Eden, of Cantley Hall, will be the Liberal candidate for Great Grimsby, in the room of Mr. Chapman, who will retire. Mr. Scully has contradicted the report that he intends to retire from Cork.

CASE OF BISHOP COLENSO.—The council of the Colonial Bishopries Fund, out of which part of the salary of the Bishop of Natal was paid, have transferred the amount hitherto granted to him to a reserved fund, pending the final decision of the question as to the legality of the Bishop of Cape Town's judgment suspending him from his see. The amount hitherto paid annually to the Bishop from the fund has been 682*l.* 10*s.*

THE CHANNEL FLEET, comprising the Edgar, Warrior, Black Prince, Defence, and Trinculo, under the command of Admiral Dacres, C.B., sailed from Spithead on Monday on a cruise westward. They will probably call at Torbay, and afterwards at Bristol, and other ports not visited during last summer's cruise. From the western ports the fleet is expected to proceed to the north coast of Ireland.

THE NEW CANON OF WESTMINSTER.—The Rev. William Conway, M.A., has been nominated to the canonry in Westminster Abbey, with the Rectory of St. Margaret, vacant by the death of the Rev. Dr. Cureton.

A NEW DECLARATION.—Dr. Daubeny, Professor of Botany in the University of Oxford, has called attention to a new declaration of religious opinion which has been issued by Mr. M'Leod, from the Royal College of Chemistry, with a view to obtain the signatures of scientific laymen. It appears that Sir David Brewster, Sir Henry Rawlinson, and about 150 others have already affixed their names to it. The gist of the declaration is contained in the following sentence:—"We conceive that it is impossible for the Word of God—as written in the book of nature—and God's Word written in Holy Scripture, to contradict one another, however much they may appear to differ." Dr. Daubeny has published the letter which he sent in reply, stating his reasons for withholding his sanction from such a creed. While generally admitting the justice of the declaration in principle, he fears its tendency is to "countenance that view of Scripture inspiration which, of the many entertained by divines of different schools, is the one which I regard as the narrowest and the most beset with difficulties."

COMMITTEE OF COUNCIL AND THE INSPECTORS OF SCHOOLS.—The report of the select committee appointed to inquire into the practice of the Committee of Council on Education with respect to the reports of her Majesty's inspectors of schools has been published. The committee find that no instance of marking the reports has occurred since Feb. 14, 1862, when a report by Mr. Longueville Jones was specially submitted to the president, with passages marked, written with a feeling of hostility to the department, and that report was sent back to him with remarks by the president. The committee however could not proceed with the investigation, owing to the illness of Mr. Jones. They say:—

"The principle involved in the subject of this inquiry and in the resolution is important. Your committee have carefully considered the action of the department, and have come to the conclusion that the supervision exercised in objecting to the insertion of irrelevant matter, of mere dissertation, and of controversial argument, is consistent with the powers of the Committee of Council, and has, on the whole, been exercised fairly and without excessive strictness. If passages occur in the reports, as printed, consisting of inference or arguments which may tend to support the educational views of the department, other passages may be found which have a contrary tendency. No objection is made to statements of facts observed by the inspectors within the circle of their official experience, whatever may be their bearing on the policy of the Committee of Council. The knowledge, or even a reasonable suspicion, that the inspectors' reports are subject to alteration, either directly or indirectly, at the instance of the department, has, without doubt, a tendency to lower their value, if they are to be regarded as independent sources of testimony in matters of opinion or controversy touching the educational views or policy of the Committee of Council. It appears however to your committee that whatever may have been the understanding under which the appointment of inspectors was originally sanctioned, Parliament cannot be presumed to be ignorant (since the year 1858 at latest), that the heads of the office have exercised a censorship over the inspectors' reports as to the insertion of argumentative or irrelevant matter; and your committee are of opinion that some such power is essential to the effectual working of the department so long as it retains its present constitution and functions. It has occurred to your committee that it might be possible to obtain all the information which the inspectors can be desired to give to the department or to Parliament, by requiring them to furnish answers to specific questions, instead of making general reports, and thus to avoid risk of misunderstanding, either between the department and the inspectors or between the department and Parliament, as to the kind of information which the inspectors are required to give. It appears however that none of the reports for the last year have been objected to on the ground of nonconformity with the minute of 1861, as explained by the paragraph of August, 1863. For the information of Parliament your committee recommend that all instructions which may hereafter from time to time be issued to the inspectors, either as to their general or tabulated reports, should be laid before Parliament with the annual report of the Committee of Council."

Foreign.

FRANCE.—The Princess Clotilde, wife of Prince Napoleon, gave birth to a son on Saturday night. Prince Napoleon, who embarked on the previous evening at Havre for a cruise at sea, was not acquainted with the birth of the Prince till some time after the event. The Princess and the infant are doing well. The latter was privately baptised after the *accouchement*, and received the names of Napoleon Louis Joseph Jerome. The Empress paid a visit to the Princess on Sunday morning and remained half-an-hour. The King of the Belgians arrived in Paris on Tuesday evening on his way to Vichy on a visit to the Emperor of the French. His Majesty paid a visit to the Empress at St. Cloud on Wednesday, and left on Thursday morning for Vichy. It is rumoured in Paris that this visit is not connected with politics, but is for the purpose of arranging a marriage between his Majesty's second son, the Count of Flanders, and Princess Anna Murat. M. Drouyn de Lhuys, the Minister for Foreign Affairs, has been summoned for a few days to Vichy to confer with the Emperor. His Majesty is in perfect health. The French Government has addressed a circular to the various Powers, inviting them to take part in an international Congress, to be held in the autumn, for the purpose of regulating telegraphic communications in Europe. The *Constitutionnel* of Sunday publishes an article demonstrating that the project for the admission of Denmark into the German Confederation would disturb the balance of power in Europe, and says:—

"It would give rise to threatening contingencies, and would produce such complications and such opposition that it is impossible to consider the scheme as having been seriously entertained."

The *Pays* of Thursday evening publishes an article signed by its editorial secretary, opposing the pretensions of the German Powers to incorporate that portion of Schleswig inhabited by Danes. It says:—

"Before violating equity the German Powers, who are about to abandon the old right without adopting the new, should think twice. They should not forget that the law of retaliation exists. If the German Confederation be unjustly aggrandised it exposes itself to reprisals; if it now sets the example of a spirit of conquest, why should not others follow it to its detriment?"

The Court of Appeal on Saturday gave judgment on the appeal of M. Levy the publisher, against the sentence of the Civil Tribunal of the Seine, justifying the Prefect of Police for seizing all the copies of the Duc d'Aumale's "History of the House of Condé," after the authorities had allowed it to be printed. The civil tribunal held that the Prefect of Police was not amenable to common law, unless an authorisation from the Council of State were first obtained, and the Court of Appeal on Saturday confirmed judgment on the same grounds, namely, that the proceedings taken by the Duke d'Aumale and M. Michel Levy for the recovery of the property seized by the Prefect of Police, could not be sustained without the authority of the Council of State. It was announced in Court that an appeal would be lodged in the Court of Cassation against the judgment. A despatch from Fécamp states that a sharp cannonade was heard at sea from that place on Monday. An engagement was supposed to be proceeding between Federal and Confederate vessels. The *Débats* publishes a description of a formidable iron-cased vessel now building at Bordeaux, the peculiarity of which is, that she combines the characteristics of a turret ship with those of a steam ram. She is to be called the Sphinx, and is said to be different from any other vessel ever designed. She is iron-cased from the deck level to 1 metre 80 below the water line, with plates varying from 10 to 12 centimetres in thickness, according to their position. The stern is armed with a cast-steel spur, the extremity of which is placed about a metre below water, so as to strike an enemy below the plating. The deck is protected by cast-iron plates, placed under the planking, and supports two formidable iron-cased turrets. That on the bows is to be armed with a pivot gun, throwing solid shot of the weight of 300 pounds, the effect of which at short range no iron-casing is expected to withstand. The turret in the stern is to mount two long range pivot 70-pounders, to engage the enemy at a distance, but she is meant for close quarters.

SPAIN.—The King will leave for Paris on the 15th of August, the day of the inauguration of the Northern Railway. The Council of Ministers have decided to grant an amnesty to persons convicted of offences against the press laws. The statement that several despatches of Admiral Pinzon to the Government had been stolen during the passage of the couriers across the Isthmus of Panama is unfounded, the Government having received the Admiral's despatches. Communications have also been received from Chili, expressing the desire for friendly relations with Spain.

PORTUGAL.—A despatch from Lisbon states that a numerously signed petition of merchants has requested from the Government the free importation of cereals, the warehouses being empty and the crop insufficient.

BELGIUM.—King Leopold left Brussels on Tuesday evening for Vichy. By a Royal decree issued on Sunday the Chamber of Deputies is dissolved, and the new eletcions are fixed for the 11th August.

SWEDEN.—The Swedish and Norwegian fleet has been put out of commission, and the troops which had been mobilised have been disembodied. The construction of the first Monitor for the Swedish navy has been commenced at the ironworks. The materials for two others are ready. The *Dagligt Allehanda* of Friday says:

"Denmark is of little importance to strengthen Scandinavia against Russia. The absorption of Denmark by Germany would inspire us with pity, but not with alarm."

DENMARK.—Prince John of Glücksburg arrived at Lubeck on the 18th, and left by the steamer Ellida in the afternoon for Copenhagen. Three Danish ships of war under a flag of truce arrived off Dantzig harbour on the 13th with a despatch addressed to the military commander of Dantzig, announcing the suspension of hostilities on the part of the Danes.

THE DANISH DUCHIES.—On Thursday, the 14th, while General Falkenstein was planting the Austrian and Prussian flags at Skagen, the Danes attempted a landing at Aalbeck and Frederickshaven. They were driven off from the first place by a body of Hussars, and repulsed from the latter by a couple of guns. On the afternoon of the same day an engagement took place at Föhr between the allies and the Danish gunboats. During the night of the 17th, the Austrian troops took possession of the Island of Föhr. All the islands on the west coast of Schleswig are now in possession of the allies. The Danish Captain von Hammer has been taken prisoner in a creek of the Island of Fanoe, after having sunk seven boats. On Monday and Tuesday last a conflict took place between the Hanoverian and Prussian troops at Rendsburg. The Hanoverians attacked the Prussian outposts and soldiers, many of whom were wounded in the streets. Tumultuous assemblages even gathered before the hospitals, where some severely wounded Prussians were lying. The Prussian troops were compelled to remain under arms during the night. In consequence of these occurrences Prince Frederick Charles of Prussia informed the Commander-in-Chief of the Federal troops in Holstein that he had received orders to make himself master of Rendsburg. General Hake replied that, having only four companies at his disposal, he must yield to superior force, but that he declined to assume the responsibility for this step. In accordance with the previous announcement a Prussian force of 6000 men entered Rendsburg on Thursday. A meeting of Schleswig landowners took place at Kiel on Wednesday, to draw up an address to the highest civil authorities of Schleswig, requesting that the Duchies should be placed *ad interim*, until the decision of the succession question, under the joint government of Austria and Prussia.

FRANKFORT.—In the sitting of the Federal Diet on Thursday the Austro-Prussian motion that the Diet should called upon the Prince of Augustenburg to substantiate his claims to the throne of Schleswig-Holstein was adopted by a large majority.

AUSTRIA.—A despatch from Vienna, dated Saturday, says that the proposals of Denmark, addressed direct to the Courts of Berlin and Vienna, have been met on

the part of Austria and Prussia by a suspension of arms on land and sea from the 20th to the 31st July, during which period the blockade of the Prussian ports will be raised by the Danes. The German Powers have added the request that Denmark will immediately send Plenipotentiaries to Vienna, where the negotiations for peace are to take place. The Austrian Government has appointed Baron Halbhuber, Councillor of State, as Civil Commissioner for Jutland.

Prussia.—It is asserted on good authority that Count von Bismark will be present in Vienna at the negotiations for peace.

Italy.—In the sitting of the Chamber of Deputies on Sunday, Signori Bastoggi, Susani, and four other deputies resigned their seats. After an animated debate the Chamber adopted the order of the day presented by Signori Mari and Biancheri, whereby the Ministry were invited to bring in a Bill providing for cases in which the personal interests of Deputies might clash with their national duties. This was the last sitting of the Session, which closed on Monday. The Bill authorising the sale of the State Railways to the house of Messrs. Rothschild is postponed to next Session. A Royal decree published on Friday gives effect to the postal convention concluded between France and Italy, whereby money-orders can be issued reciprocally in both countries. Garibaldi left Ischia on Tuesday morning at 7 o'clock for Caprera, where he arrived at noon on the next day. It is said that he is not in good health. The rumours of expeditions being undertaken by him are unfounded. The Neapolitan authorities have received intelligence that a three-masted steamer of suspicious appearance has been seen off the Island of Ischia, and two Italian ships of war have been directed to cruise off the island. The Pope left Rome on Monday for Castel Gandolfo. General de Montebello paid his respects to his Holiness at the station.

The Principalities.—A proclamation has been issued by Prince Couza stating the result of his journey to Constantinople, and expressing the gratitude of the country towards the Suzerain Court and the guaranteeing Powers. The Prince also formally announces that the Powers have recognised, saving some slight modifications, the acts of the 2d of May, sanctioned by a *plebiscite* of the Roumain people. The Roumain *Moniteur* publishes the statute of the new Electoral Law. Another decree constitutes the Council of State and a Board of Control, and appoints the members of the same. The principal modifications of the Constitution mutually agreed upon between Prince Couza and the Porte were published on Sunday. In reference to the Constitution of the Senate, it was determined that the Senators directly appointed by the Prince are to possess a yearly income of 800 ducats, while a yearly income of 200 ducats is necessary for eligibility to the Chamber of Deputies. It is, however, reserved for the Chamber of Deputies, at their first sitting, definitively to decide upon this qualification.

West Africa.—The Sierra Leone *Free Town Observer* of June 16, states that M. Jules Gerard, known as the Lion-killer, has failed in his attempt to reach the interior of the continent by the route of Timbuctoo. He has been attacked and plundered by the natives, and with difficulty escaped with his life.

India.—Bombay papers of the 23d ult. state that Dr. Livingstone arrived in Bombay on the 15th ult. in the steamer Lady Nyassa, from Africa. The steamer, belonging to the Zambesi exploring expedition, is to be sold. Sir John Lawrence has declared himself opposed, for military reasons, to the extension of the Scinde Railway to Mooltan, and favourably inclined towards the maintenance of an Indus flotilla. His Excellency was still at Simla; and Sir Hugh Rose was expected to arrive there on his return from his recent trip to Cashmere about the 18th. Preparations are making for a census of Calcutta.

Cape of Good Hope.—Great alarm had been caused at the Cape by a telegram from the frontier stating that there was danger of a Kaffir war. Sir Walter Currie had reported to the Governor that the difficulties in the Transkei were increasing, and had recommended the 10th Regt. to be retained on the frontier. On the frontier it was even asserted that the paramount chief Kreli had crossed the Bashee in force, and had come in collision with the mounted police. Official telegrams from the Governor to the Commander of the Forces required the latter to proceed to the frontier immediately with every available man in the garrison. Accordingly the Commander of the Forces had started in the Valorous for Natal with the 2d battalion of the 11th Regiment, and the 5th Fusileers with a detachment of artillery and a battery of Armstrong guns for East London. The Cape Town Volunteers had tendered their services for garrison duty. Later advices from the frontier reported this alarm to have been in a great measure groundless, nothing like actual collision having taken place; and a trader who had passed through Kreli's country, and had arrived recently at King William's Town, found the tribe peaceable. The Commander of the Forces announced in Graham's Town, at the Mayor's dinner on the 15th June, that he did not apprehend a Kaffir war at present. It appears that Kreli had been irritated by the reported intention of the Governor to remove the Tambookies from their Queenstown locations into Transkei, and on that account the chief had been assuming a threatening tone. In return the Governor was desirous of making a warlike demonstration. The British authorities considered there was no fear of any actual disturbances, and it was likely that the Governor would reconsider the Tambookie question. The boundary line between the Orange Free State and the Basutas will, in all probability, be amicably settled. The Parliament is still sitting in Graham's Town. Several Government measures have been thrown out, among others the Bill for establishing a Deeds' Registry Office in Graham's Town, and that for the creation of a Supreme Court in one of the Eastern divisions. The agitation against the arbitrary *ex post facto* legislation of the Government and Parliament in connection with the Customs Protection Bill was continued in the colony. The home Government has consented to the annexation of No-Man's-Land. Sir Baldwin Walker in the Narcissus left for England on the 25th May. The Bishop of Cape Town is still at Natal, whence he will probably return in about a month. Bishop Tozer, of the late Central African Mission, is in Cape Town. Dr. Duff, the venerable Indian Missionary, is a passenger to England by the present mail steamer.

United States.—The Confederates have invaded Maryland and Pennsylvania in force, and the corps of Generals Ewell, Breckinridge, and Rhodes are all north of the Potomac. The invasion commenced on the 3d, when a Confederate force, variously estimated at from 6000 to a full corps, consisting of the veterans of Stonewall Jackson's army, under General Ewell, advanced up the Shenandoah valley, occupied Martinsburg, and drove General Sigel to Harper's Ferry. On the 4th General Sigel evacuated Harper's Ferry and retreated across the Potomac to Maryland Heights, destroying the iron bridge of the Baltimore and Ohio Railway at that point. The Confederates also crossed the Potomac on the same day, and at 4 P.M. were preparing to assault General Sigel's position. General Hunter on receiving this news hastened eastwards from Parkersburg to Sigel's assistance, but it is thought that he cannot reach him under 10 or 12 days; and meanwhile General Breckinridge is reported to be moving to retard his advance. The Confederates are now engaged in destroying the Baltimore and Ohio Railway, securing the harvest in the Shenandoah Valley, and running off horses, cattle, and other spoil. They have already occupied Frederick City, and are marching upon Baltimore, General Wallace, who had been sent against them, having been compelled to retreat after eight hours fighting at Monocacy, in which he sustained heavy loss, including Brigadier General Tyler and Colonel Seward of the New York artillery, taken prisoners. Great alarm exists in the Border towns and counties, and serious apprehensions are entertained for the safety both of Washington and Baltimore. President Lincoln has appointed the 8th of August for a day of humiliation and prayer; and has demanded 12,000 militia from New York, 12,000 from Pennsylvania, and 5000 from Massachusetts to repel the Confederate invasion. The Governor of New York has ordered an immediate draught to increase the State Militia to 75,000, and has ordered 5000 of the State Militia to Washington. Martial law has been proclaimed in Kentucky. General Grant has made no further attempt to turn the Confederate position at Petersburg since his defeat on the 22d ult., but it is reported that he has again demanded the surrender of the city, and that no answer has been returned by General Beauregard. It is now said that General Grant is preparing to reduce the Confederate works by bombardment. General Sherman reports that he occupied Kenesaw Mountain and Marietta on the morning of the 3d, the Confederates having retired towards the Chattahoochee. General Wilson's cavalry in their recent raid destroyed 20 miles of the Danville Railroad. On their return on the 27th ult. they were interrupted by the Confederates at Beam's Station on the Weldon and Petersburg Railroad. After three days' conflict, during which he lost all his trains, artillery, wounded, and between 2000 and 3000 men, he succeeded by a detour of 30 miles in escaping through the Confederate lines and rejoined Grant. 1300 negroes whom he kidnapped during the early part of his expedition were rescued. General Baldy Smith on the morning of the 30th attempted the capture of the Confederate intrenchments in his front, but was repulsed. Memphis papers state that General Carr defeated the Confederate General Shelby near St. Charles, Arkansas, on the 27th ult., capturing 200 prisoners and several cannon. The Federal loss was 200, that of the Confederates in killed and wounded is estimated at 500. During the night Shelby was reinforced by Marmaduke, when Carr retreated. It is reported that Marmaduke and Shelby are moving for a combined attack upon Steele at Little Rock. President Lincoln has ordered General Dix not to defend the action in the civil courts for the seizure of the *New York World* and *Journal of Commerce*. It is reported that Governor Seymour will enforce the orders of the Court, and order General Dix's arrest. The sinking of the Alabama by the Kearsarge has caused great rejoicing. Regrets are expressed that the steam-yacht Deerhound was not also sunk for rescuing Captain Semmes. Captain Winslow has been made a Commodore in recognition of his services. The authorities have arrested numbers of persons at New Orleans for recruiting for Juarez. The steamer Rouen has been captured. Gold is at 176 premium.

San Domingo.—Passengers arrived at Vigo assert that the insurgents at San Domingo had abandoned their position at Puerto Plata, and were prepared to surrender, provided the Spanish authorities would promise them a complete amnesty.

Parliament.

HOUSE OF LORDS.

Friday.—*Essays and Reviews.*—Lord Houghton, in asking whether her Majesty's Government have taken or are willing to take the opinion of the law officers of the Crown as to the powers of Convocation to pass a synodical judgment on books written by clergymen or laymen, regretted that the volume called "Essays and Reviews" should have been selected by Convocation as the first of an "Index Expurgatorius" with which literature seemed to be threatened. He declined to enter on a theological controversy, but described the origin and nature of the condemned work. The proceedings connected with it would, he thought, establish a dangerous precedent, as on the same principle of action any work might be censured. He suggested that, instead of exercising a doubtful authority, the better course would have been to answer by argument anything in the work that seemed objectionable; and urged that, if the powers claimed in this instance were extended to other cases, it would constitute a pressing grievance, and be a source of great danger to freedom of opinion and the liberty of religion.—The Lord Chancellor said there were three modes of dealing with Convocation since it had been permitted to deliberate actively. One was, to take no notice of its proceedings; another was, if it were likely to be mischievous, to prorogue it; and the third, when it exceeded its powers, to bring it to the bar of a court of justice. The supremacy of the Crown was most carefully guarded by the statutes, and any one who presumed to exercise that authority, directly or indirectly, save under special warrant of the Crown, was liable to the penalties of premunire. Moreover, Parliament had carefully provided that no sentence, or anything else pronounced by Convocation, had any validity whatever, and could not be carried into practical effect. But he was only partially aware of what Convocation had done, his authority being chiefly the reports in the newspapers; and he was most reluctant to interfere, for the case might prove to be a serious one, and he shrank from doing anything which would enable the Chancellor of the Exchequer to sweep into his net at one haul the whole of the archbishops and bishops, and all the deans and chapters—in short, the entire Convocation. He warned the right rev. bench, however, of the peril in which they had put themselves, and advised the members of Convocation, if any attempt were made to draw it beyond its proper limits, at once to withdraw, and, remembering the pillar of salt, not to look behind. In conclusion he had to state that there was no intention on the part of the Government to take any steps in the matter.—The Archbishop of Canterbury said that the object of Convocation in dealing with "Essays and Reviews" was not persecution, but to vindicate the Church of England from all complicity in the doctrines propounded in that work. Desirous of proceeding legally, he had applied to Government for the opinion of the law officers of the Crown, which they had declined to give. He therefore took that of Sir Hugh Cairns and Mr. Rolt, who held that Convocation was proceeding legally.—The Bishop of London thought Convocation had a right to complain of the Government refusing to supply the opinion of the law officers of the Crown; but he doubted whether the course adopted by Convocation was the best that could have been devised. The Church had passed through more dangerous periods than the present, and he thought her influence would be more effectually extended by sound learning, good argument, and the pious lives of the clergy.—Lord Wensleydale said the Archbishop could obtain, by a motion in the House, the opinion of the judges as to the validity of proceedings proposed to Convocation.—The Bishop of Oxford argued that Convocation when called together had power to express an opinion on heretical doctrines, although it was doubtful whether it could proceed against the authors. The case involved the religion of the realm and the liberty of the subject, and when the highest authority under the Crown descended to ribaldry, he ought, if he did not respect himself, at least treat the audience whom he was addressing with some deference. He also complained of the misrepresentations of the Lord Chancellor, and indignantly repelled the insinuation that Convocation was asserting rights in violation of the Queen's supremacy.—The Lord Chancellor observed that he had now received a useful warning. He had wished to treat the matter in a good natured spirit, and without the slightest idea of bringing charges or making misrepresentations.—On the motion of the Earl of Malmesbury, the *Street Music Nuisance Suppression Bill* passed through committee. Several other Bills were advanced a stage.

Monday.—The *Burials Registration Bill* passed through Committee.—Lord Brougham called attention to the subject of the *Spanish Slave Trade*, and said that it was with the utmost grief and displeasure that he saw Spain evading and setting at naught the stipulations which had been made between European nations for the suppression of that nefarious traffic, and in giving encouragement to the exportation of negroes to Cuba. Our own West Indian colonies were loud in their complaints of the competition to which they were exposed by the slave-cultivated produce of Cuba, and stated that they suffered more from the increase of Cuban slavery than from the abolition of slavery in the British West Indies. If Spain persisted in her refusal to fulfil her solemn treaty obligations, not only ought our force of gun-boats to be largely augmented, but measures should be adopted for taxing the slave produce of the Spanish possessions in the tropics. The conduct of the Brazilian Government had nobly contrasted with that of Spain on this question, and Mr. Christie himself, although no friend to that Government, readily admitted the fact. He thought that there was a very strong case for repealing the Aberdeen Act, and denied that there was the slightest symptom of a renewal of the slave trade in Brazil, where, from the Emperor down to the smallest planter, every man was against it.—Earl Russell replied that successive Foreign Ministers had made representations on the subject to the Spanish Government, which had expressed its willingness to join with other countries in putting down the slave trade, but that, owing to the obstacles interposed by the planters in the colonies, their endeavours had not yet been attended with success. As to the suggestion to tax the slave-grown sugar of Cuba, such a proceeding would be perfectly inefficacious, whilst it could be brought here through France and other countries. He could only say that her Majesty's Government would not relax their efforts for the purpose of putting down the slave trade.—The Earl of Malmesbury concurred with Lord Brougham, that the Brazilian Government had done all in its power to discourage the traffic in slaves, and expressed the surprise with which he had heard its conduct impugned in the other House of Parliament. The *Mutual Surrender of Criminals (Prussia) Bill*, the *Malta Ballots Suspension Bill*, and the *Administration of Trusts (Scotland) Bill* were read a second time. The *Street Music Bill*, the *Railways (Ireland) Act Amendment Bill*, and the *Drainage and Improvement of Lands (Ireland) Bill* were read a third time and passed.

TUESDAY.—*Foreign Affairs.*—The Earl of CARNARVON gave notice that the Earl of Ellenborough would on Tuesday, the 26th, call attention to the changes which had taken place in the state of foreign affairs since the meeting of Parliament. The *Sale of Gas (Scotland) Bill*, the *Local Government Act* (1858), and the *Naval Discipline Bill* were read a second time. The *Mutual Surrender of Criminals (Prussia) Bill*, the *Militia Ballots Suspension Bill*, and the *Administration of Trusts (Scotland) Bill* passed through Committee. *The Prorogation.*—In answer to Lord REDESDALE, Earl GRANVILLE said the Government hoped to be able to prorogue Parliament at the end of next week, but, owing to the state of private business in their lordships' House, it might be necessary to delay it a few days longer.

THURSDAY.—The *College of Physicians Bill*, the *Inclosure Bill*, and the *Trespass (Ireland) Bill* passed through Committee.—Earl FORTESCUE moved the second reading of the *Weights and Measures (Metric System) Bill*, which had come up from the Commons, and described the advantages of the measure as likely to be very considerable, alike in a commercial and a scientific point of view.—The Marquis of SALISBURY opposed the Bill on the ground that it was an incomplete and unsatisfactory attempt to substitute a French equivalent for the imperial standard, by the use of decimal points that would not be understood, and which could not touch the multifarious weights and measures that did not come under the denomination of imperial. Believing that the measure would be utterly impracticable, he moved as an amendment that it be read a second time on that day three months.—The Bill was also opposed by the Earl of DONOUGHMORE.—The Duke of ARGYLL contended that the arguments relied upon by the opponents of the measure were inconclusive, and that, so far from the introduction of the proposed system being complicated and hard to understand, it was marked by extreme simplicity as compared, for example, with the system of weights and measures existing in Scotland, than which nothing could be more obscure or difficult of comprehension.—The Earl of HARROWBY also supported the Bill, because it was required by a large proportion of the mercantile community, and its adoption would be permissive, not compulsory. Lord BROUGHAM was of opinion that the measure, if passed, would not only prove a great convenience to the commercial classes, but increase the spread of education by relieving the poor from the trouble of mastering our antiquated and complex system, which occupied time that might more profitably be employed in the acquirement of other branches of knowledge.—The Earl of CARNARVON thought that the Bill to be effective should be compulsory. On a division the amendment was negatived by 34 to 23. The Bill was then read a second time. The *Turnpike Acts Continuance Bill*, the *Militia Pay Bill*, the *Registration of Deeds (Ireland) Bill*, the *Justices Proceedings (Sussex) Bill*, the *Expiring Laws Continuance Bill*, the *Highways Acts Continuance Bill*, the *Ionian Act of Parliament Repeal Bill*, and the *Turnpike Trusts Arrangements Bill* were read a second time.—On the motion for the second reading of the *Poisoned Flesh Prohibition Bill*, Lord WODEHOUSE said that it was necessary in the country to use poison for the destruction of rats, but if the Bill passed no poison could be laid for rats outside a dwelling house, not even in a garden.—The Duke of BUCCLEUCH said that the custom of throwing strychnine about for vermin led to the destruction of shepherd's dogs, which ate the poisoned vermin.—Lord TAUNTON concurred as to the danger arising from the use of strychnine as a poison for vermin.—The Marquis of CLANRICARDE said that pheasants were poisoned by eating worms generated in the bodies of poisoned animals. It was a curious but well known fact in natural history that though these worms did not die from the effects of the poison, they communicated it to birds.—Lord WODEHOUSE moved that the Bill be read a second time that day three months. It was very right to pass such a Bill as that of last session to prevent the poisoning of small birds, which were exceedingly useful, and if this were a measure to prevent the poisoning of foxes, without including noxious animals, he should not oppose it. But his opinion was that to accomplish a useful object, they were proposing a measure which would cause serious injury and inconvenience.—Lord PORTMAN said there were one or two points in the Bill which were well worthy of consideration, and it might be possible in committee to meet the objections. If a clause with regard to poisoned flesh had been inserted in the Poisoned Grain Bill of last session he had no doubt that it would have passed. The practice of keepers in his part of the country was to poison rabbits with strychnine and to place them for the purpose of killing other animals, and it was quite possible that children finding the dead rabbits might take them home, and that they might be eaten by the family. On a division, there were for the second reading, 31; against it, 18. The Bill was accordingly read a second time. The *Sale of Gas (Scotland) Bill*, the *Naval Discipline Bill*, and the *Local Government Act* (1858) *Bill*, passed through committee. The *Mutual Surrender of Criminals (Prussia) Bill*, the *Thames Embankment (Metropolis Improvement) Loan Bill*, the *Isle of Man Harbours Act Amendment Bill*, and the *Militia Ballot Suspension Bill* were read a third time and passed.

FRIDAY.—*Middle-class Education.*—In answer to Lord BROUGHAM, Earl GRANVILLE said that Government intended to appoint a Royal Commission to inquire into the subject of Middle-class Schools. *The Holy Alliance.*—Lord STRATFORD DE REDCLIFFE called attention to the rumours concerning the supposed revival of the so-called Holy Alliance, and inquired whether her Majesty's Ministers have any information thereon which may be communicated to Parliament without prejudice to the public service. He said that the influence and danger of such an Alliance was not confined to the nations in which it originated, and in the present state of European affairs their lordships could not rest unmindful of such proceedings.

[Left speaking.]

HOUSE OF COMMONS.

FRIDAY.—*Relations with Brazil.*—Lord PALMERSTON stated, in reply to Mr. OSBORNE, that there was no present intention to appoint a consul at Rio; and that the consul at Bahia would *ad interim* transact the consular business there. He also added that the Government did not intend to propose the repeal of the Brazilian Slave Act of 1845. *Ionian Islands.*—Mr. B. COCHRANE called attention to the discrepancies between the statements made by her Majesty's Government and those of the advisers of the King of Greece respecting the conditions on which the Ionian Islands have been annexed to Greece, and also to the convention respecting the claims of British subjects and others, signed at London in March last.—Mr. LAYARD stated that he hoped the Greek Government would do justice to the pensioners, and that some satisfactory arrangement would be made with the British bondholders. At the same time he felt that her Majesty's Government was not bound to interfere between the Government of Greece and its private creditors. Among other subjects discussed on the question of supply were the alleged ill treatment of a lunatic in the *Clonmel Asylum*; the resolutions and proceedings of the *Union Assessment Committees*, and the necessity of assisting their operation; and the unsatisfied claims of British subjects on the Government of *Portugal*. The House then went into Committee of Supply, and proceeded with the consideration of the remaining *Civil Service Estimates.*—The vote of 500*l* for the *Royal Academy of Music* led to an animated discussion, Mr. OSBORNE and others contending that, if the Government were to endow private institutions of this kind, it could not refuse similar assistance to academies of music at Dublin, Edinburgh, and other large cities throughout the United Kingdom, and possibly to schools of cookery, which, it was suggested, were required far more than institutions devoted to the arts. On a division the vote was affirmed by 52 to 42. Several other votes were agreed to.—Mr. CARDWELL stated that the vote for the *West Coast of Africa* would be taken on Monday, after the vote for the packet service. The resolution on *Works and Fortifications* were reported. The Report of the *Committee of Ways and Means* was brought up and agreed to, and a Bill ordered to be brought in. The *Public Works (Manufacturing Districts) Bill* and the *Westminster Bridge Traffic Bill* were read a second time. The *Turnpike Trusts Arrangements Bill*, the *Ionian States Acts of Parliament Repeal Bill*, and the *Harwich Harbour Act Amendment Bill* were read a third time and passed. Other Bills were forwarded a stage.

MONDAY.—*Casual Poor.*—Mr. C. VILLIERS stated, in reply to Mr. Lyall, that he would on Tuesday lay upon the table a Bill to carry out the special recommendations of the Poor-law Commissioners relating to the relief of the casual poor in the metropolis. *Denmark and Prussia.*—Mr. AYRTON inquired whether her Majesty's Government had intimated to that of Prussia that if the latter insisted upon departing from the treaty which settled the limits of the Germanic Confederation, this country would not hold itself bound by that article of the Treaty of 1815 under which England guaranteed to Prussia the peaceable possession of her Saxon provinces.—Lord PALMERSTON said that no communication of that nature had been made to the Prussian Government, and he did not think it would be expedient to follow the example of that Power. Prussia considered herself entitled to repudiate the Treaty of 1852 on the ground of the nonfulfilment by Denmark of certain obligations which had no relation to that treaty, and her Majesty's Government were not prepared to follow that example by repudiating the Treaty of Vienna because of totally irrelevant transactions that had taken place in 1864.—Sir J. PAKINGTON wished to know what was the exact position of the Treaty of 1852.—Lord PALMERSTON said the position of that treaty was the same as that of any other the conditions of which had been found by the signataries to be inexpedient to enforce. The contracting parties to the Treaty of 1852 had been taking part in negotiations the object of which was to modify its provisions, and in the late Conference all parties were willing, by common consent, to effect such a modification.—On the order for going into Committee of Supply, Mr. OSBORNE called attention to our *Relations with Brazil*, and condemned the operation of the Aberdeen Act of 1845, which he contended ought to be repealed. Lord Truro had pronounced it opposed to the principles of international law, and its action, combined with the overbearing language of the Government in Parliament, was irritating to the Brazilians in the extreme. Let that treaty be expunged from the statute book, and Brazil would be too happy to enter into a commercial treaty and a postal convention with us; but, so long as it remained in force, so long would it be a source of annoyance equally unfortunate to Brazil and injurious to the trade of this country.—Lord PALMERSTON deprecated discussion at that moment, seeing that Ministers through the Portuguese Government were negotiating the reestablishment of diplomatic relations with Brazil. He did not believe that the Aberdeen Act had any injurious effect upon the commerce of England with that country; and although he admitted that the Brazilian slave trade had ceased since the regulations adopted in 1852, it should not be forgotten that out of a population of seven millions and a half, upwards of three millions were slaves.—Mr. S. FITZGERALD congratulated Lord Palmerston on the moderate tone of his language as contrasted with that of last week, in which he spoke of the conduct of the Brazilian Government as flagitious and disgraceful. He believed that that Government was using every effort in its power to carry into effect the treaty stipulations for the liberation of the emancipados.—Sir H. CAIRNS said that the impression on the part of English capitalists and merchants having an interest in Brazil were almost universally opposed to the policy of the Government. With regard to the Aberdeen Act, as a question of international law, he had never looked upon it with any other feeling than that of amazement.—Mr. NEWDEGATE complained that the Brazilian Government were endeavouring to coerce the House into the repeal of the Aberdeen Act by persecuting English residents in Brazil, and he mentioned in particular the case of Mr. Christie, our late Minister at Rio, and of a Mr. Reeves. He also denounced the corruption of the legal tribunals of the country, and described the internal slave trade as of a most iniquitous and inhuman character.—Mr. T. BARING described the policy of the Government towards Brazil as taunting, irritating, and unfortunate.—Mr. PACKE brought under notice the report of the inspector of reformatories on the state of the *St. Bernard's Reformatory* at Whitwick, in Leicestershire, and to the recent outbreak among the inmates of that establishment, which he described as a nuisance to the neighbourhood.—Sir G. GREY described the precautions taken by the Government to prevent the recurrence of similar outbreaks.—Lord J. MANNERS and Mr. NEWDEGATE expressed their hope that the institution would be removed from the county altogether.—Mr. HEYGATE saw no necessity for so extreme a course. The House then went into committee on the remaining *Civil Service Estimates*. The vote for the *Packet Service* estimate and a vote to pay off *Exchequer Bills* were agreed to. The vote of 14,355*l*. on account of civil establishments on the *West Coast of Africa* led to some discussion on the Ashantee expedition, and Sir J. HAY moved the reduction of the vote by 2500*l*.—Mr. ADDERLEY gave notice that, early next session, he would move that the whole subject be referred to a select committee. Ultimately the amendment was withdrawn, and the vote was agreed to.—On the motion of Lord C. PAGET, a supplementary navy estimate, amounting to 220,000*l*., was agreed to for the purchase of the *Steam Rams at Birkenhead*. The whole of the supplies having thus been voted, the Chairman quitted the chair. On the motion for going into committee on the *New Zealand (Guarantee of Loan) Bill*, Sir JOHN TRELAWNY moved, as an amendment, that a select committee be appointed to inquire into the relative financial position of Great Britain and the colony, with a view to adjusting any outstanding balances and other matters connected therewith. On a division, the amendment was negatived by 79 to 32, and the Bill went through committee, after an ineffectual attempt of Mr. Morrison to reduce the amount of the guarantee from 1,000,000*l*. to 500,000*l*. The *Fortifications (Provisions for Expenses) Bill* was read a second time. The *Bleaching and Dyeing Works Act Extension Bill*, the *Turnpike Acts Continuance, &c., Bill*, the *Portsmouth Dockyard (Acquisition of Lands) Bill*, the *Militia Pay Bill*, the *Sheriff's Substitute (Scotland) Bill*, and the *Bank Notes, &c., Signature Bill* were read a third time and passed. Several other Bills were advanced a stage.

TUESDAY.—At the morning sitting the *Report of Supply* was brought up and agreed to. The *Improvement of Land Act* (1864) *Bill* and the *Contagious Diseases Bill* passed through committee. The *Appropriation Bill* was brought up and read a first time. *Reports of Inspectors of Schools.*—On the resumption of business in the evening, Lord PALMERSTON gave notice that he intended on Monday to move that the House, having considered the Report of the Select Committee on the practice of the Committee of Council with respect to the reports of her Majesty's Inspectors of Schools, was of opinion that the resolution of the House on the 12th April should be rescinded. *The Prussians in Jutland.*—In reply to Mr. WYLD, Mr. LAYARD stated that the Government had received information that Prussian troops had fired upon the Norwegian mail-steamer at Frederickshaven, in Jutland; but it was not stated that there were English passengers on board, or that the vessel was landing passengers. The explanation of the circumstance was that the Prussian forces had mistaken the steamer for a Danish vessel engaged in the landing of troops.—Mr. WYLD said there were several British subjects on board, who were placed in the utmost jeopardy by the firing. *Canada.*—In answer to Sir J WALSH, Mr. CARDWELL said that it was intended by the new Government of Canada, during the coming recess, to mature a measure for settling the constitution of the provinces by the application of the Federal principle to Canada itself, and the introduction into the union of the maritime provinces of the western territory. When these measures were matured they would be communicated to Parliament. *Japan.*—In answer to Mr. S. FITZGERALD the Marquis of HARTINGTON said that two companies of a British regiment had been despatched from Hong Kong to Japan, and that the total British force in the latter country, irrespective of marines, was now 800 men. *The Kaffirs.*—Mr. VANSITTART asked whether there was any truth that we were on the eve of another Kaffir war.—Mr. CARDWELL replied that he had not read a telegram on the subject in the evening papers, and that no information of the kind had reached the Government.—Mr. MAGUIRE moved for a Select Committee to inquire into the present position of the *Paper Manufacture* of Great Britain with respect to foreign taxation. He contended that owing to the operation of the treaty with France the British papermaker found himself unable to compete with the foreigner, as, although we boasted of having accepted free trade in its widest latitude, we exposed one branch of our industry to all the evils of the protective system. Owing to the export duty on rags the manufacturers of paper were placed at a disadvantage which neither improved machinery nor increased energy could counterbalance. He also read a number of letters from papermakers in various parts of the kingdom, giving a most discouraging account of their prospects and stating that, unless some remedial measures were adopted by the Government, ruin must inevitably overtake them.—The CHANCELLOR of the EXCHEQUER said that if Mr. Maguire would renew his motion next session, and the House were disposed to agree to it, the Government would offer no opposition. He did did not deny that there was considerable distress in particular branches of the paper manufacture, such as papers for printing and the middling and ordinary descriptions, which were those most liable to be brought into competition with the foreign article; but there was no ground for asserting that the entire paper trade of the kingdom was on the brink of ruin. Of the remedial measures that had been suggested, one was by making representations to foreign Governments with a view to induce them to remove the export duty on rags. France was the chief rag-exporting country in Europe, and since making his financial statement in the spring he was happy to say that much progress had been made in that direction, and but for the agitation set on foot by the British papermakers themselves, and the motion now before the House, the probability was that before many days or weeks had elapsed France would have made the concession urged upon her. Mr. SURTEES expressed the satisfaction with which he had heard the statement of the Chancellor of the Exchequer.—Lord H. Montagu did not think that Mr. Maguire had made out a case for inquiry.—Colonel DICKSON, Mr. NORRIS, Mr. BLACK, and Sir M. FARQUHAR urged on the Government the importance of granting a committee of inquiry. The motion was then withdrawn. *Armour Plated Ships.*—Sir F. SMITH moved an address to her Majesty, praying that she will issue a commission to consider the various systems now existing of constructing and armour-plating ships of war for the British navy, as well as for the navies of other maritime Powers, and to report what should be the system to be now adopted for the British navy. He criticised the proceedings of the Admiralty, and complained that no fixed principles of construction and armament had been laid down, whilst the expense incurred by the country in mere experiments was enormous, without any commensurate increase of efficiency to the service. He wished to know whether the Admiralty were aiming at speed, at weight of armament, or at power of resistance.—Lord C. PAGET said that in the midst of constant changes and improvements in the construction and armament of ships, the report of a Commission would come too late. The English armour-plated ships were quite equal, if not superior, to those of any other nation. He could not deny that our ships cost more, but this disadvantage was fully counterbalanced by their superior workmanship and durable qualities. As to the use of steel shot, the matter had not been lost sight of in connection with the construction of guns; and he believed that both in ships and guns we were not at all behind any other Power.—Sir J. HAY thought it would be desirable that a commission should report upon the description of ship that would be most available, first, for our protection at home, and next, for the protection of our commerce abroad. The requirements of ships were, a high rate of speed, great weight of armament, and facility of movement when in action. With these were also combined the questions of draught for our iron ships, and how they were to be coppered. As to targets, guns, and shot, he considered that these were matters over which the Government had been too long pausing.—Mr. LAIRD said that at present we were in so unsafe a position that if we were to go to war with the Federal States of America we should have to use all our dockyard resources to obtain vessels capable of crossing the Atlantic and competing with the so-called fast ships. If we had merely such vessels as those employed in the African squadron the fate of the Alabama would soon overtake them.—Sir S. M. PETO said that the only remedy was a reconstruction of the Admiralty.—Sir J. PAKINGTON opposed the motion on the ground that it would relieve the Admiralty from responsibility.—Sir F. SMITH withdrew the motion.—Sir F. KELLY obtained leave to bring in a Bill for the further prevention of *Bribery at Elections* of members to serve in Parliament. *Casual Poor.*—Mr. VILLIERS obtained leave to bring in a Bill to make provision for distributing the charge of relief to certain classes of poor persons over the metropolis. On the motion of the CHANCELLOR of the EXCHEQUER leave was given to bring in a Bill to amend an act of the present session relating to certain *Stamp Duties*. The *Criminal Justice Act* (1855) *Extension Bill* passed through Committee. The *Book Post Bills (Ireland) Bill* and the *Cathedral Minor Corporations Bill* were read a second time.

WEDNESDAY.—The *Inns of Court Bill*, the *Appeal in Criminal Cases Act Amendment Bill*, and the *Private Bill Costs Bill* were withdrawn.—Mr. COLLINS moved the second reading of the *Facilities for Divine Service in Collegiate Schools Bill*, sent down from the Lords.—Mr. HARDCASTLE moved that the Bill be read a second time that day three months. He opposed it on the ground that it would enable the masters of the smaller schools to have full religious service morning and evening, and to administer the Lord's Supper to the children separate and apart from their parents; and that, in the case of King Edward's schools, it would have an injurious effect upon Nonconformists, and practically exclude their children from the advantages of these institutions.—Mr. KINNAIRD seconded the amendment.—The Bill was also opposed by Mr. R. MILLS and Mr. NEATE, and supported by Mr. F. POWELL.—Sir G. GREY thought that the alarm which the Bill had excited among Nonconformists had been somewhat exaggerated. Looking, however, at the principle involved, he recommended that the Bill should be referred to a Select Committee and re-introduced next session.

—Mr. Collins expressed his willingness to accede to the suggestion. The amendment and original motion were then withdrawn, and the order for the second reading discharged. The *Income Tax Assessment Bill*, the *Consolidated Fund (Appropriation) Bill*, the *Stamp Duties Act* (1864) *Amendment Bill*, and the *Poor Relief (Metropolis) Bill* were read a second time. The *Contagious Diseases Corporations Bill*, the *Corn Accounts and Returns Bill*, the *Poor Removal Bill*, and the *Indian Medical Service Bill* passed through Committee. The *West Indian Incumbered Estates Act Amendment Bill*, the *Ex Eondis* (1,000,000*l.*) *Bill*, and the *Clerks of the Peace Removal Bill* were read a third time and passed.—Mr. Monsell obtained leave to introduce a Bill for the *Recording of Titles in Ireland*.—The Marquis of Hartington obtained leave to bring in a Bill to extinguish certain rights of way through the Land Portgate Ravelin and Glacis, and the Sallyport adjacent thereto, at Portsea Island.

Tuesday.—*Passports in France.*—In answer to Sir W. Fraser, Mr. Layard said that the French Government had removed all restrictions upon British subjects travelling in France. French *visés* were not required for the passports of Englishmen, and the passport was only asked for to identify nationality. Although passports were not strictly necessary, he would, however, advise travellers to provide themselves with them. The countries where passports were no longer required were Bavaria, Belgium, Denmark, Holland, France, Italy, Prussia, and Sweden and Norway. *Japan.*—In reply to a question, Lord C. Paget said that her Majesty's ship Conqueror was sent to Japan on the 21st of December with a limited crew and a force of 500 marines. This step had been taken in accordance with the decision of the Cabinet. *The Indian Budget.*—In Committee of the whole House, Sir C. Wood made his annual statement in reference to the revenue and expenditure of India. He congratulated the House and the country on the fact that the experience of the past year had more than confirmed the anticipations he had ventured to hold out at the corresponding period in 1863. During the three years ended April, 1862, the equilibrium of Indian finance had been so nearly restored that upon a revenue charge of 49 millions the difference was only 50,000*l.* At the close of the year ended April, 1863, instead of a deficit, the amount showed a surplus of upwards of 1,500,000*l.*, and for the year ended April last a surplus of 257,000*l.*; whilst Sir Charles Trevelyan looked forward to a surplus for the current year of 823,000*l.* This result had been accomplished mainly by the reductions effected in Indian expenditure, and notwithstanding a considerable remission of the extra taxation imposed during the mutiny. In addition to this, a large amount of debt had been discharged, consisting of a temporary loan in this country of one million and a half; India bonds, a quarter of a million; and India debentures, five millions and a half; so that there had been paid off in this country in the course of the last year 7,813,000*l.*, and 1,000,000*l.* in India; or a total of 8,813,000*l.* Further, he had the satisfaction of stating that this had been produced without reducing the estimated balance in the Indian Treasury, which, including 4,500,000*l.* at home, now amounted to 19,000,000*l.* The various sources from which the revenue was derived—opium, salt, customs, and land—were all in a healthy and thriving condition during the year; and there had been an increased expenditure of one million for public works, half a million for the improved survey and assessment for the land revenue with a view to facilitating the purchase and transfer of land, and a further half million for the administration of public justice. He detailed the various measures of internal administration adopted by the Government of India with a view to developing the natural resources of the country, including the construction of public works, the encouragement given to railways, the establishment of the electric telegraph, the impulse imparted to cotton cultivation, and the introduction and successful culture of tea and cinchona. With regard to politics, he said that tranquillity prevailed within our own territories in India. He traced the origin of the late operations against the fanatical tribes beyond the Punjab frontier, from the time of the Mahomedan schismatic, Syed Ahmed, to that of the Akhoond of Swat, their present head, and adverted to the quarrel with the chief of Bootan and his treatment of Mr. Eden, indicating the inexpensive measures to be adopted to bring the chief to reason, by occupying the passes of his territory, and cutting off his communications and supplies. In conclusion, he moved a series of resolutions declaratory of the financial condition of the respective presidencies and territories, showing that the net revenue of the several presidencies for the year ended the 30th of April, 1863, amounted to 36,662,867*l.*, and the charges thereof to 24,968,240*l.* leaving a surplus of revenue of 11,694,627*l.* From the latter were, however, to be deducted interest on the registered debt (8,350,680*l.*), and the charges defrayed in England on account of the Indian territory in the same period, including interest on the capital of railway and other companies (6,515,601*l.*)—leaving the net surplus of Indian income for the year 1,827,346*l.*—Mr. H. Seymour looked upon the statement as, on the whole, highly satisfactory; at the same time, he expressed his regret that greater encouragement was not given by the Indian Government to induce Englishmen to settle in the country.—Mr. J. B. Smith urged the importance of opening up the River Godavery, which was one of the natural highways of India, but which was navigable for 100 miles only out of 2600.—Mr. Crawford directed attention to the excessive export duty on saltpetre, the consumption of which, he said, had fallen away in consequence.—A desultory debate ensued, in the course of which Mr. Vansittart, Mr. Bazley, Mr. Torrens, Sir H. Willoughby, Colonel Sykes, and others expressed generally their satisfaction at the statement of Sir C. Wood, but agreed in condemning the system by which the Indian budget is delayed until the expiring days of the session. The resolutions were ultimately agreed to, and the House resumed. On the motion for going into committee on the *Consolidated Fund (Appropriation) Bill*, the Chancellor of the Exchequer took the opportunity to rectify the figures of the financial statement for the year 1864-65, as already laid before the House, and explained that the estimated balance of 328,000*l.* had been reduced by the purchase of the iron-clads to the sum of 55,000*l.* At the same time he saw no reason whatever for under-estimating the revenue which he hoped would be realised in the course of the current year. *The Treaty of Vienna.*—Mr. Ayrton called attention to the balance of power in Europe, for the maintenance of which the army supplies are appropriated, and entered a protest in the name of the people of England against the enormous expenditure which was annually incurred to maintain the Treaty of Vienna, the conditions of which Prussia had violated with impunity, and with a want of faith that constituted her eternal disgrace. He contended that we were no longer bound to guarantee to Prussia the portion of Saxony which that Treaty had given her.—Sir J. Fergusson condemned the foreign policy of her Majesty's Ministers as tending to encourage Prussia to break through her treaty engagements.—Lord Palmerston said that he was by no means prepared to defend the conduct of Prussia, but that the transactions which had taken place between Austria and Prussia on the one hand, and Denmark on the other, could not relieve us from any obligations which we, in common with other Powers, had entered into to guarantee to Prussia, under the Treaty of Vienna, a portion of Saxon territory. The Bill then passed through Committee.—On the order for the third reading of the *Ionian Islands (Guarantee of Loan) Bill*, Mr. Whalley called upon the Government to give an explicit answer to the question whether Governor Sir George Grey had not attributed the war in New Zealand to the machinations of the Roman Catholic priests.—Mr. Hennessy moved that the Bill be read a third time that day month. He cited testimonies favourable to the character of the Maories, and denounced the war, which, he said, compromised the honour of the country.—Mr. Cardwell reminded the House that the hostile natives occupied a very limited part of the colony, and he read a statement of Governor Grey as to the real origin of the war, the object of which was to put down a conspiracy by a small minority of the natives. On a division the amendment was negatived by 75 to 32. The Bill was then read a third time and passed. The House went into Committee on the *Fortifications (Provision for Expenses) Bill*, when the Marquis of Hartington made a short explanatory statement, in which he described the progress and condition of the works. The clauses of the Bill were agreed to after considerable discussion, chiefly in reference to the Central Arsenal and the Fortifications of Pembroke, Lord Palmerston stating that nothing would be done in regard to the Central Arsenal without the sanction of Parliament, Sir J. Hay's motion for the omission of Pembroke from the schedule being negatived on a division.

Friday.—The *Consolidation Fund (Appropriation) Bill* was read a third time and passed. *Indian Medical Service Bill.*—On the consideration of this Bill, as amended, Mr. Hennessy moved as an amendment an additional clause providing that any person being a natural born subject of her Majesty, who may be desirous of being appointed an assistant surgeon in the Indian army shall be examined as a candidate for such appointment. On a division the amendment was negatived by 31 to 11. The Lords' amendments to the *Railways (Ireland) Acts Amendment Bill*, and the *Drainage and Improvement of Lands (Ireland) Bill* were considered and agreed to. The *Defence Act Amendment Bill* passed through committee and was ordered to be read a third time on Monday.

[Left sitting.]

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 90¼ to ⅜ for Money, and 90½ for Account; Three per Cents. Reduced, 89⅜; New Three per Cents., 89 to ⅜; India Stock, 215; Ditto Five per Cent. Stock, 104⅞.—Foreign: Chilian Four and a Half per Cents., 82½; Dutch Certificates, 100; Equador New Consolidated, 12½; Ditto Provisional Land Warrant, 5½; Egyptian, second issue, 102½ to 103; Greek, 24½; Italian, 67½ ex div.; Ditto Maremmana Railway, 73¾ ex div.; Mexican, 81¾ ex div.; Portuguese, 1856, &c., 48½ ex div.; Russian, 1859, 55½; Ditto 1862, 89; Ditto 1864, 89¼; Spanish, 50⅝ to 51 ex div.; Ditto New Deferred, 44; Ditto Passive, 28⅜ to ½; Turkish, 1858, 71¾; Ditto Guaranteed, 102.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,106,250	Government Debt .. .	£11,015,100
		Other Securities	3,634,903
		Gold Coin and Bullion ..	12,456,250
		Silver Bullion	—
	£27,106,250		£27,106,250

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£11,093,125
Rest	3,468,793	Other Securities	19,281,960
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	4,462,490	Notes	5,410,695
Other Deposits	13,408,675	Gold and Silver Coin ..	715,311
Seven days and other bills	607,133		
	£36,500,091		£36,500,091

July 21, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *July* 15—BANKRUPTS.—H. Ascott, sen., Cumberland Terrace, Paddington, Eating House Keeper—J. Bousstead, Cardewlees, Cumberlandshire, Timber Merhant—T. Bainton, Penge, Surrey, Nurseryman—D. Baley, Bride Street, Holloway, Innkeeper—J. Bootherstone and G. Bootherstone, Stoke upon-Trent, Potters—H. Burgess, Pembroke Dock, Pembrokeshire, Plasterer—J. Booth, Little Bolton, Lancashire, Painter—G. Callaway, Sydney Street, Brompton, Commission Agent—F. Dinsdale, Rotherhithe Wall, Rotherhithe, Licensed Victualler—J. Dooley, Queen Anne Street, Cavendish Square, Lieutenant in the Army—T. Dean, Padiham, Lancashire, Grocer—W. Dickens and S. Fearnhough, Salford, Lancashire, Machinists—D. J. English, Chatham, Kent, Ship's Chandler—T. Edwards, Cardiff, Tailor—C. E. Farley, Steyning, Sussex, Wheelwright—G. Fox, Liverpool, Gasfitter and Chandelier Manufacturer—J. Foster, Hampton Wick, Middlesex, Carpenter—J. Goodman, Durham Street, Hackney Road, Boot and Shoe Maker—T. W. Harvey, Bristol, Beer Retailer—E. Horley, Upper Whitecross Street, St. Luke's, Baker—F. T. Hurrell, Mornington Crescent, Hampstead Road, Book-keeper—T. Howland, Upper Blandford Crescent, Great Dover Road, Commission Agent—Thomas Richardson Hyde, Notting, Tailor—Peter Hopson, Plumstead, Kent, Solicitor's Clerk—William Stourton Hanny, Shrewsbury, Shropshire, Watch Maker—A. Hobson, Birkenhead, Builder—J. Horton, Liverpool, Upholsterer's Foreman—W. Hadley, Handsworth, Staffordshire, Farmer—W. Hutt, Great New Street, Fetter Lane, City, Grocer—J. Harlow, Clayton, Lancashire, Grease Manufacturer—J. Hoare, Bideford, Devonshire, Bootmaker—W. Jones and E. Williams, Wolverhampton, Tailors and Drapers—W. Jones, Bethnal Green Road, Engineer—R. C. Jackson, Wellington Street, Milner Square, Islington, Clerk—J. Jarman, late of Birmingham, Commercial Traveller—A. Joy, Brenchley, Kent, Journeyman Bricklayer—T. Jones, Holywell, Flintshire, Innkeeper—T. King, Otley, Lancashire, Railway Contractor—E. J. Kerridge, Rose Villas, Battersea, Journeyman Candlemaker—J. M. T. Kingdom, Oxford Terrace, Old Kent Road, Law Clerk—J. G. Kuhn, Hanover Street, Regent Street, Middlesex, Keeper of a Tavern—W. Loseley, Leeds, Commercial Traveller—T. Morgan, Old Broad Street, City, Russia Broker—M. Mattinson, Todhills, Cumberlandshire, Innkeeper—T. Morris, Weston Zoyland, Somersetshire, Baker—S. Martin, late of Westbromwich, Staffordshire Gun Lock Manufacturer—F. Masters, Approach Road, Victoria Park Hackney, Linen Draper's Assistant—E. G. Markby, Chatteris, Cambridgeshire, Scrivener—J. K. Norton, Portsea, Journeyman Painter and Retailer of Beer—L. J. Noah, Gt. Portland St., Middlesex, General Merchant—T. Owens, Pembroke Dock, Pembrokeshire, Licensed Victualler—G. Peard, Barnstaple, Devonshire, Scrivener—G. Pratt, Lamb's Conduit Passage, Lamb's Conduit Street, Holborn, General Dealer—R. Pote, Warrington Street, Oakley Square, St. Pancras, Cheesemonger—W. Reddell, St. Martin's Court, St. Martin's Lane, Proprietor of a Fancy Repository—A. Rowe, St John Street, Clerkenwell, Grocer—J. Redgate, Sneinton, Nottinghamshire, Lace Manufacturer—W. N. Robinson, Ampthill, Bedfordshire, Saddler—T. Sage, jun., Chawleigh, Devonshire, Mason—J. Smith, Cheshunt, Hertfordshire, Furniture Dealer—W. Sedman, Scarborough, Baker—T. Smathers, Great Langhall, Cheshire—J. Stokes, Nottingham, Grocer—W. Thomas, Falmouth, Dealer—G. Tomkins, Wiggington, Hertfordshire, Builder—R. Vickers, Wolverhampton, Ironmonger—J. H. Venables, Whitchurch, Shropshire, Ironmonger—N. W. Westwood, Lupus Street, Ham and Tongue Dealer—D. Woodley, late of St Mary Church, Devonshire, Builder—H. Wigley, Shrubland Road, Queen's Road, Dalston, Solicitor's Clerk—J. Wilkinson, Allerton, Yorkshire, Journeyman Cabinet Maker—T. Woodward, Barton under-Needwood, Staffordshire, Butcher—W. Wisenden, Higham, Kent, Plumber.

SCOTCH SEQUESTRATIONS.—T. Inglis, Carrickstone, Dumbartonshire, Farmer—A. Morton, Arbroath, Engineer and Machine Maker—J. Newton & T. B. Newton, Greenock, Grain Merchants and Commission Agents.

TUESDAY: *July* 19.—BANKRUPTS.—C. Adkins, Frimley, Surrey, Stonemason—R. Bromley, Burnley, Lancashire, Oil Merchant—C. J. Beeton, and A. F. Beeton, late of Globe Wharf, Mile End, Steam Biscuit Bakers—G. Bentley, South End, Croydon, Timber Merchant—J. C. Burt, jun., Mount Place, Whitechapel Road, Dyer—J. Blythe, Bristol, Omnibus Conductor—G. W. Le Brun Corrie, New Ormond Street, late Purser—J. Clark, Deptford, Journeyman Blacksmith—F. Cuddon, Great Tower Street, City, Wine Merchant—J. H. Crossley, Dean Street, Britannia Fields, Islington, Skirt Manufacturer—C. Caunt, Great Gonerby, Lincolnshire, Cordwainer—W. E. Dod, Farringdon Road, Auctioneer—G. Ekins, Chadwell Street, Clerkenwell, Fish Salesman—J. Eden, Grendon Northamptonshire, Boot Manufacturer—E. Edwards, jun., North Tuddenham, Norfolk, Farm Labourer—W. T. Fryett, Nottingham, Riding Master—E. Foster, Hove, Sussex, late 9th Lancers—N. Galter, West Hartlepool, Durham, Watchmaker—W. Gray, Upton Lovell, Wiltshire, Clerk—J. Hesford, Eccles, Lancashire, Farmer—E. Hinds, Clayton Street, Islington, Assistant to a Ham and Beef Shopkeeper—Charles Harvey, Illogan, Cornwall, late Innkeeper—Thomas Hudson, Carlisle, Innkeeper—Samuel Isset, Dewsbury, Yorkshire, late Beerseller—Edwin Jones, Shrewsbury, Salop, Grocer—W. Lumbra, Alhampton, Somersetshire Beer house Keeper—D. E. Manners, Warwick Street, Pimlico, late Officer in the Army—M. Morgan John late of Aberdare, Glamorganshire, Widow—J. M'Laughlin, Preston Brook, Cheshire, Tanner—R. Parsons, Chesterfield, Derbyshire, Blacksmith—E. Pearson, New Hampton, Middlesex, Builder—H. Page, Blackheath, Greenwich, Baker—E. Place Macclesfield, Cheshire, Innkeeper—J. Roberts, Chilton Polden, Somersetshire, Grocer—G. W. Simmons, Albany Road, Camberwell, Florist—R. Stephenson, Bishopwearmouth, Durham, Cartwright—A. Smith, Sheffield, Scissor Maker—V. di Tergolina, late of Leicester Place, Leicester Square—J. Whittle, Seale, Surrey, Licensed Victualler—J. Wren, Gray's Inn Road, Cheesemonger—J. Whittaker, Manchester, Smallware Manufacturer—E. L. Yarnold, Remington Street, City Road, Actress.

SCOTCH SEQUESTRATIONS.—W. Banks, Leith, Ropemaker—R. Cringan, Carluke, Cabinet Maker—J. Mackenzie, Beauly, Innkeeper—W. Marr, Nairn, Clothier—P. Smitton, Auchterarder, Solicitor—S. Thompson, Glasgow, Spirit Merchant.

Metropolis and its Vicinity.

The Wimbledon Rifle Meeting.—On Friday the firing for the Queen's Cup, the Alexandra, and the Extra Prizes was continued, the first stage of the Queen's prize being concluded with the exception of firing off the ties. On Saturday considerable progress was made in the shooting for the Queen's Prize, the Alexandra, and others; but the only prize decided was the Cup of the Enfield Association, which was won by Sergeant Aldridge of the 4th Dorset. The Owl prize was shot for on Saturday night, and the arrangements made for it, with the various lamps to indicate danger or safety, had a pleasing effect. There were 18 competitors, but only two succeeded in knocking out the Owl's eye. On Sunday morning the Archbishop of York preached in the round tent to a congregation of about 3000 persons. On Monday the great event was the contest between the Houses of Lords and Commons, which took place in the presence of the Prince and Princess of Wales, and an immense concourse of spectators. The House of Lords was represented by the Marquis of Abercorn, the Earl of Aberdeen, the Earl of Airlie, Lord Bolton, Lord Dufferin, Earl Spencer, Earl of Ducie, Earl of Eldon, Viscount Lismore, Lord Suffield, and Lord Vernon. The Commons were represented by Lord Bury, Lord Grosvenor, Captain Wyndham, Mr. Talbot, Mr. Forster, Mr. Duncombe, Lord Elcho, Mr. Dillwyn, Mr. Vivian, Mr. Malcolm, and Mr. Humberstone. The Lords scored 249 at 200 yards, and 219 at 500, making a total of 468; and the Commons scored 228 at 200 yards, and 200 at 500, making a total of 428. The Lords therefore won by 40 points. The highest score was won by the Earl of Ducie who made 27 points. When the numbers were proclaimed, Lord Elcho, on the part of the Commons, called for "three cheers for the Lords, and bad luck to them next year!" whereupon Earl Ducie replied by calling for "three cheers for the Commons, and better luck to them next year." On Tuesday the contest for the Queen's Prize and that for the Ashburton Shield between the representatives of the public schools were decided. The former was won by Private Wyatt of the 1st London Brigade, who scored 60, beating Colonel Halford of the Leicester Rifles by one. The Ashburton Shield was won by Harrow, beating Cheltenham, Rugby, and Marlborough. Earl Spencer's Cup for the best shot of the respective elevens of the Public Schools was won by Corporal Thornton, of Cheltenham College. On Wednesday the chief feature of the shooting was the competition for the Mont Storm prizes, in addition to which the firing off the ties for the other prizes was proceeded with. On Thursday the great event was the shooting in the international match for Lord Elcho's Shield, between eight English and eight Scotch volunteers. The match resulted in a victory for the Scotch by a majority of 25. The English were the victors in the last and previous year; and this is the first time that the shield given by Lord Elcho has been won by his countrymen. The failure of the English party is mainly due to the unusually bad practice made by Lord Bury, who was disabled when taking his first shot by the fall of the pole which supports the wind-screen, giving him a severe blow in the mouth, and knocking out, it is said, one of his lordship's teeth. A fatal accident, the first that has occurred at these meetings, took place during the day. A private in the Coldstream Guards, who was employed as a marker at one of the pool targets for 500 yards, was shot through the body by a sergeant connected with the School of Musketry. He was immediately borne to the surgeon's tent, where it was at once seen that the wound was mortal. The sergeant was taken into custody and sent to London, to be dealt with by the authorities at the Horse Guards. Yesterday morning Mr. Wakley had a long interview with Dr. Westmacott, the surgeon to the Association, and gave it as his decided opinion that the death of the unfortunate man was inevitable. It is understood that this melancholy event will materially alter the programme for the proceedings of to-day. There will be no firing to disturb the wounded man should he still survive, so that every chance for his recovery may be given.

Intervention in America.—An influential deputation from the Society for Obtaining the Cessation of Hostilities in America waited on Lord Palmerston on Friday for the purpose of urging her Majesty's Govern-

ment to take steps to bring about peace between the belligerents. The deputation consisted of the Marquis of Clanricarde, the Bishop of Chichester, Lord Alfred Churchill, M.P., Mr. Yorke, M.P., Mr. Marsh, M.P., Mr. Repton, M.P., Colonel Grey, M.P., Mr. Danby Seymour, M.P., Mr. Spence of Liverpool, Admiral Anson, Sir Henry de Hoghton, Bart., Mr. Bramley Moore, M.P., and other gentlemen. The deputation having been introduced by the Marquis of Clanricarde, the hon. secretary submitted the resolutions adopted by the Society. Lord Palmerston, in reply, said that two facts were abundantly clear,—viz., that the war was cruelly destructive to the Americans themselves, and the inconvenience caused by it to other nations was excessive. The question remained, whether the Government had any rational ground for supposing that the Federal Government would listen to any proposals of mediation at the present moment. There was an old couplet—

"They who in quarrels interpose,
Will often wipe a bloody nose."

He was not afraid of a bloody nose, but he feared that premature efforts would only have the effect of exasperating the North, and making it more difficult, when the passions were a little calmed, to effect the object all must have in view. The Government was led to think, from all accounts that reached them, that this was not the moment at which any mediatory proposals could be usefully made. Each party was equally confident of ultimate success, and the North especially jealous of interference. If, however, at any future time reasonable ground could be shown for supposing that friendly suggestions would be listened to, her Majesty's Government would be happy to use their efforts to arrive at such a desirable result as that of terminating this unhappy war. Admiral Anson, the chairman of the Society, having thanked his lordship for his courtesy, the deputation withdrew.

THE LATE SIR CHARLES BARRY, R.A.—A memorial tablet to Sir Charles Barry has just been erected in the nave of Westminster Abbey, over the spot where the distinguished architect of the Houses of Parliament lies buried. It consists of a large cross let into a massive slab of black marble about 12 feet in length by 5 feet in width, with the following inscription on the cross:—"Sacred to the memory of the late Sir C. Barry, R.A., F.R.S., architect of the New Palace at Westminster and other buildings, who died on the 12th May, 1860, aged 64 years, and lies buried beneath this brass." The following text is also inscribed round the outside of the marble slab:—"Whatsoever ye do, do it heartily, as to the Lord and not unto men, for ye serve the Lord Christ."

EXPERIMENTS AT SHOEBURYNESS.—The artillery experiments that have been going on for some time past have now assumed an unusual degree of interest. The competition between the Whitworth and Armstrong guns has been followed by experiments with the guns of Mr. Lancaster, Mr. Lynell Thomas, Mr. Scott, and other inventors. The select committee have now on the ground four guns, the same in material, length, and calibre, differing only in their rifling, and the committee expect to decide betwixt them in the course of three weeks. In addition to this a 100-pounder gun has been tried, which was found capable of smashing in a target of 6½ feet iron plate, and about three yards of oak backing. This was done at 200 yards, and according to the calculation of the scientific men present, the same effect would be produced at 4000 yards, by merely increasing the charge of powder. On Monday the 600-pounder attained a range of 7372 yards, the weight of the cast-iron shot used being 513 lb., the charge 70 lb. and the utmost elevation 20 degrees 9 minutes. The 7-inch gun competition has resulted so far in showing the superiority of the Lancaster gun over its competitors rifled on the French, the Scott, and other systems.

LAYING THE FIRST STONE OF THE THAMES EMBANKMENT.—On Wednesday Mr. Thwaites, the Chairman of the Metropolitan Board of Works, laid the first stone of the Thames Embankment, in the presence of the Right Hon. W. Cowper and Lord John Manners, the present and late Commissioners of Works, and of a large number of the members and officers of the Board. The stone was laid opposite Whitehall Stairs, in that portion of the Embankment which is now in progress between Westminster and Hungerford Bridges. At the conclusion of the ceremony Mr. Cowper proposed a vote of thanks to Mr. Thwaites, and described the work as one of the great undertakings of the day. Lord J. Manners seconded the vote, and a similar vote was passed to Mr. Bazalgette, who was warmly congratulated on the ability displayed by him as engineer of the Embankment.

THE LATE MURDER IN A RAILWAY CARRIAGE.—A clue has at last been found to the track of the murderer of the late Mr. Briggs, and there is now no doubt that he will be brought to justice. His name is Franz Müller, a native of Cologne, 25 years of age, and for some time past he has been employed as a journeyman tailor in the firm of Messrs. Hodgkinson, hosiers, of Threadneedle Street. A few months ago he commenced paying his addresses to the sister of a cabman near the Harrow Road station, and on calling there on Monday week he produced a gold chain, which he said he had bought that morning, and gave the paper box which had contained it to the cabman's child. At the same time he said that he had been very unfortunate, that a cart having passed near his foot he had sprained his ankle, and that he was going to Canada. On seeing the accounts of the murder the cabman examined the box which had contained the chain, and saw that it bore the address of Mr. Death, the jeweller at whose shop it was exchanged. He immediately gave notice to the police, who went on Tuesday to the house at which Müller had lodged at Old Ford, Bow, and there obtained from one of the other lodgers a pawn ticket which he had bought of Müller. The ticket related to the gold chain Müller received from Mr. Death, and which Müller had pledged in a pawnshop in Bow. It was next ascertained that the hat found in the railway carriage had been purchased for Müller by the cabman who gave the information, and by whom it was at once identified. It further transpired that Müller sailed from the London Docks on Thursday afternoon in the sailing vessel Victoria, for New York. The Police Commissioners on learning these facts sent two detective officers, Inspector Tanner and Inspector Thompson, to Bow Street, when the magistrate after hearing the evidence granted a warrant for the apprehension of Müller. Mr. Adams, the American Minister, was present during the examination, and at his request a copy of the depositions was prepared to be forwarded to the Government in America. On Tuesday night at 9 o'clock Inspector Tanner, Sergeant Clarke, Mr. Death, and the cabman started from Euston Square for Liverpool, where they embarked on Wednesday for New York by the City of Washington steamer to arrest the murderer if they overtake the ship, or more probably to await his arrival at New York, as the steamer will reach America at least four days before the Victoria. The Government will send duplicate papers, under the charge of police-officers, for the seizure and extradition of Müller at New York by the steamer of to-day, in case any accident should happen to the City of Washington. It is expected that this second steamer will also arrive at New York before the Victoria. The inquest on the body of Mr. Briggs was resumed on Monday. The evidence of the surgeon who conducted the *post mortem* examination completely negatived the suggestion that death was owing to natural causes. Mrs. Buchan, of Peckham, the niece at whose house Mr. Briggs had dined on the evening of his death, was also examined, and mentioned that he had been threatened some time before his death by a person to whom he had refused to lend money, and the porter at Hackney Wick station deposed that one of the passengers was in a great hurry to leave the station on the arrival of the train. The inquest was then adjourned to Monday. The police last week had a good deal of trouble in consequence of numerous false alarms of the capture of the murderer, every one of which turned out to be a hoax.

ASCENT OF THE GODARD BALLOON.—On Wednesday evening M. Godard ascended from Cremorne in the new balloon, L'Aigle, in which he recently made a successful ascent in Paris, in the presence of the Emperor of the French. The peculiarity of this balloon is that it is filled on the Montgolfier principle, not with gas, but with air rarefied by the fire of rye straw, which is kept burning in a huge furnace placed in the centre of the car. The balloon, which is 117 feet high and 95 in circumference, ascended slowly from the gardens and proceeded in a direct line towards St. Paul's, passing over the Houses of Parliament and Hungerford Bridge, where a current of air diverted it towards Greenwich, where it descended safely. Ten thousand persons assembled at Cremorne to witness the ascent. M. Godard will ascend again from the same place on Monday.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week ending Saturday, July 16, were 1300. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1212. The present return is therefore 88 above the average. During the week the births of 955 boys and 919 girls, in all 1874 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1845.

Provincial.

ALDERSHOT.—The troops in camp had a field day on Wednesday in the presence of the Prince of Wales, the Duke of Cambridge, Prince Louis of Hesse, and a brilliant staff. After the inspection was finished Sir John Pennefather led the troops to an assault on a supposed enemy strongly posted on one of the hills. The movement afforded a fine display for all arms of the service, and the men being lightly accoutred, without knapsack or saddlebags, suffered less from the heat of the weather than is usual on such occasions. Including Dragoons, Hussars, Royal Artillery, Royal Engineers, Infantry, Rifles, and Military Train, there was a total of 8750 men on the ground, and 46 guns. The latter included a battery of 40-pounder Armstrong guns, which had not been before seen in military operations at Aldershot. Each gun was drawn by 12 horses, and attracted much attention.

DRIFFIELD.—Isaac Watson, servant of Mrs. Harrison, Driffield Wold, was summoned before the Rev. G. T. Clare, the Rev. R. H. Foord, and Mr. J. Grimston last week, and charged by Mrs. Harrison's manager with refusing to attend church on Sunday, after being requested by his mistress to do so. The defendant was ordered to attend some place of worship, and to pay 9*s.* 6*d.* costs.

GUILDFORD.—The recent outrage in a railway carriage between Weybridge and this town was on Friday brought before a court of Surrey magistrates at Kingston, when Miss Moody, Mr. Stokes, and other witnesses were examined. The prisoner was committed for trial, but admitted to bail in his own recognisances of 50*l.* and two sureties of 250*l.* each. His father and brother gave the required sureties, and he was liberated.

LEICESTER.—On Monday week Mr. Coxwell's balloon was entirely destroyed on the Leicester race-course. It appears that an amalgamated demonstration of the Foresters' Courts throughout the Midland and North-eastern Counties was held on the course, and among the attractions announced for the entertainment of the public was an ascent of Mr. Coxwell's large balloon. At 7 o'clock, the time fixed for the ascent, the balloon having been inflated, was held by a number of men while Mr. Coxwell was arranging the car and rigging, when, by some unexplained cause, the immense mass of silk was blown on one side; the balloon collapsed, and the gas escaped. The public, imagining they had been duped, set up an immense roar, and in a few seconds the balloon was torn to shreds, the police being powerless to control the mob. They next smashed the car, and afterwards set fire to the whole. A tumult took place, Mr. Coxwell was threatened, and had to be taken off the ground under the protection of the police. A man who was taken by the crowd for Mr. Coxwell had his coat torn to pieces. At the Town Hall on Monday the man who committed this assault was convicted and sent to gaol for a month, and one of the other rioters concerned in the destruction of the balloon was committed for trial at the Sessions, Mr. Coxwell being unable to identify more than one of them.

LEICESTER.—Mr. Sydney Turner, who was sent down by the Government to inquire into the state of the St. Bernard's Reformatory, has reported to the Secretary of State that the recent disorders were not due to any laxity of discipline, but rather to the discontent caused by the removal of the licence allowed under the former management of the institution. He believes that the reformatory is much wanted, is capable of being improved, and is worth another year's trial. Under this representation the Home Secretary has expressed himself willing to continue the certificate of the reformatory, but threatens to withdraw it on the next occasion of disorder among the inmates. In the meanwhile Mr. Turner is to visit the establishment at frequent intervals, and report its progress to Government. Four of the ringleaders in the recent riots were tried last week at the assizes, and sentenced to 21 days imprisonment with hard labour.

LIVERPOOL.—The Alexandra, about which so much discussion recently took place in the Court of Queen's Bench, left the Mersey on Sunday for Nassau with a general cargo of merchandise. Her name, however, has been changed, and she is now called the Mary, and is to be a trader between the Mersey and Nassau.

NORWICH.—The stoppage of the East of England Bank was announced on Wednesday. This is a joint-stock bank having its head office in this city, and 20 branches in neighbouring towns. Its liabilities are estimated at more than 600,000*l.*, and it is supposed that the deficiency will be twice as much as the paid-up capital and reserve fund, amounting to 303,584*l.*, the whole of which will also be lost. The Provincial Banking Corporation have taken over the business, commenced operations at Norwich and the various branches, and have arranged to place to the credit of each customer half the amount due to him by the Bank of England Bank.

PORTLAND.—On Tuesday week an insurrection took place among the convicts now undergoing their term of imprisonment. On that day the new dietary had been introduced, which seems to have greatly dissatisfied the convicts. Everything, however, went on well enough after the men had been marched back from their work when a party employed in a quarry refused to work, and attacked one of the civic guards. The impression among the convicts appeared to be that the guards would not make use of the short Enfield rifles with which they were armed, but this proved to be a mistake. Several of the gang rushed upon their guard, attempting to knock him down with their pickaxes and shovels. The officer discharged his weapon, and slightly wounded one of the ringleaders; and by this time he had received assistance from his brother officers, the result of which was that three or four of them fired upon the men, four or five of whom were shot, receiving, however, only slight wounds. This measure had the effect of quelling the disturbance, and the rioters were marched back to the prison and confined in punishment cells. No outbreak has since taken place, but every day large numbers of men refuse to work, alleging as an excuse that sufficient food is not given them to keep up their strength. On Friday a large body of them refused to leave their sheds after dinner and resume work, and it was not until the aid of the military was obtained that they would resume their occupation. Almost every day men are marched back from the quarries hauled to the prison, and it appears that about 250 are now confined in their cells. It was expected that on Thursday, Friday, and Saturday the men would again turn mutinous, as numbers of them were severely whipped on those days, but such was not the case.

...was attributable to the fact that the guards ...received orders to fire upon the convicts should ...outbreak take place.

...—A charge of immorality against the Rev. G. ...Aburn, vicar of Pickering, was investigated last ...in the Chancery Court of York Cathedral, and on ...day last the Chancellor gave judgment. He said he ...hesitated whether he should be justified in allowing ...defendant to resume his ministerial functions; but ...the hope that this would be sufficient, he should ...nce him to five years' suspension and costs. Notice ...appeal was given.

Ireland.

REPORTED NAVAL ENGAGEMENT OFF BANTRY BAY.—Two steamers, supposed to be Americans, were ...ting off the Bull Rock on Monday evening, the ...inst. At Darrynane the shots were heard from ...7 P.M., and the dairyman in Scariff saw the ships ...says his cattle were nearly driven mad by the ... One vessel seemed to him to be on fire. One ...t to the north, the other out to sea, after a while. ...D. O'Connell, who communicates this news to the ..., says that the Bull Rock is just to the north of ...ntry Bay; Scariff is an island four miles west of ...rynane, and 10 north of the Bull Rock.

Scotland.

MURDEROUS ASSAULT UPON A YOUNG LADY.—At a ...hour on Saturday evening one of the most brutal ...ults which have ever occurred in Scotland was per...ted on the person of a young lady, at Broomieloan, ...Sandyholes, a piece of common lying at the back of ...ock Nursery, Govan Road, two miles from ... It appears that between 10 and 11 o'clock ...Margaret Addie, a young lady moving in most ...table society, and residing at Weymouth Terrace, ...ley Road, was returning from Govan, whither she ...accompanied a friend. While passing the common ...was met by an Irishman, who accosted her; she ...on, but the man endeavoured to intercept her, ...tried to catch hold of her, she, meanwhile, putting ...th her utmost efforts to escape him. Ultimately, how...r, he succeeded in seizing her. She screamed as loud ...she could, and endeavoured to force herself from his ...p, but failed, when the ruffian, finding that she was ...termined to escape, struck her on the face and knocked ...to the ground, repeating the blows whenever she ...ramed, and telling her to hold her tongue. She was ...able to continue the struggle, and her assailant at ...succeeded in dragging her into a field of corn on ...lands of Heatheryhall. Here he committed a ...minal assault upon his victim, who struggled fear...ly with him. A woman and a boy who heard ...cries gave notice to Mr. Learmouth, farmer, of ...Hall-ton, who was proceeding down a neighbouring ...d, and who hurried to the spot and seized the ...fiend, though he fought and made desperate efforts ...escape. Miss Addie was removed to Glasgow, ...here it was found by the medical men that she had ...been treated in the most brutal manner. Her face was ...a mass of wounds and bruises. There was a cut upon ...the forehead, in a line with the nose, 3 inches in ...gth; the bridge of her nose was fractured, and the ...per lip was cut through in two places. The ...fortunate lady was so weak that the medical men were ...doubtful whether she would survive, and recommended ...that her deposition should be taken. Accordingly on ...Monday morning Sheriff Bell and Mr. Gemmel, ...Procurator-Fiscal, proceeded to her residence and took ...her deposition. The latest accounts state that although ...still conscious, she lies in a highly precarious condition.

Railways.

ACCIDENT ON THE NORTH EASTERN.—On Saturday ...ght a serious accident happened to the Great Northern ...press train, which left King's Cross at 10 A.M., with ...tors for the Royal Agricultural Society's Show at ...castle-on-Tyne, and passengers for Scotland. Shortly ...after crossing the Victoria Bridge over the Wear, at a ...speed, the fore axle of the engine broke, but the ...ine kept on the line. One of the coupling chains ...never snapped, and three first-class carriages ran off ...line and were much crushed. No passengers were ...seriously hurt, but several were severely cut and ...bruised. With the exception of Mr. Mark Phillips, of ...Binfield, Worcestershire, who has been removed to ...Neuth for quiet, nearly all the passengers going ...to Agricultural meeting escaped without injury.

NOTHER ACCIDENT ON THE NORTH-EASTERN.—On ...esday an accident, which might have resulted in ...serious consequences, took place at the Darlington ...n. A special train, consisting of an engine, ...er, and one carriage, had brought Lord Wenlock ...Castle Barnard, for the purpose of meeting the ...express to London at Darlington. While ...ing to the return line, the Scotch express ...ared in sight, and before it could be brought ...stand it struck the Castle Barnard train, ...ing the only carriage which belonged to it. The ...and fireman jumped off, and escaped injury. ...ately Darlington is one of the stations at which ...Scotch express stops, and therefore it was moving ...as it neared the station. Had the obstruction occurred at any station which the train passes at full speed the consequences might have been very disastrous. The Duke of Buccleuch and other distinguished visitors to the Agricultural Show at Newcastle were passengers in the train.

Law.

SOUTH WALES CIRCUIT: HAVERFORDWEST.—*Child Murder.*—*Mary Prout*, spinster, aged 22 years, was indicted for the wilful murder of her illegitimate child Rhoda Prout, at the parish of Amroth. From the evidence it appeared that the prisoner had been confined of the child in the Narberth workhouse, early in April, and had been discharged from the house six weeks afterwards. On May 20 she was seen with the baby in her arms near a pit called Little Pit, and two days after the dead body of the child was taken out of the pit with its skull fractured, apparently by the fall, and other serious injuries on various parts. The prisoner herself confessed that she threw the child into the pit and ran away. Evidence was given showing that several members of her family had been insane, but the medical testimony as to her actual condition pronounced her to be sane in mind. The jury returned a verdict of *Guilty*, coupled with a recommendation to mercy, and Mr Justice Crompton passed sentence of *Death* in the usual form, advising her to prepare herself for the worst. The prisoner, who appeared indifferent during the trial, was removed from the dock in a fainting state. The case has excited the greatest interest, as there has been no capital conviction and execution in Pembrokeshire for the past 50 years.

NORFOLK CIRCUIT: AYLESBURY.—*The Buckingham Murder.*—*William John Stevens*, 25, tailor, was indicted for the wilful murder of Ann Leeson, at Buckingham, on the 27th February. The prisoner and deceased had been keeping company together, and the prisoner, who was passionately fond of deceased, had got a notion that she was not behaving exactly as he thought she ought to do, and on the 27th February, about 6 o'clock, he followed her as she was going to the pump for water, and caught her in the street, put his arm round her waist, and with his right hand cut her throat from ear to ear. The poor creature ran forward into a baker's shop, and fell into the arms of the landlord, dying in about four minutes. The prisoner immediately ran into the entry of his own house and cut his own throat, from the wound in which he suffered so much that his trial had to be postponed from the last to the present assize. A boy proved that he saw the prisoner draw his hand across the throat of deceased, and directly after saw deceased run into the shop. Five witnesses, policemen and others, were called, and said that the prisoner had on many occasions told them that he had done it; that he wished he was dead instead of dear Annie; and that dear Annie was in heaven. The defence was insanity from jealousy. The jury returned a verdict of *Guilty*, and Baron Bramwell, after telling them that they could have returned no other verdict, passed sentence of *Death* upon the prisoner in the usual form.

HOME CIRCUIT: CHELMSFORD.—*Child Murder—Emma Howard* alias *Emma Pudney*, 23, a wretched-looking young woman, was indicted for the wilful murder of her child, Charles Isaac Howard, otherwise Pudney. The prisoner lived with her mother at Halstead, and had two illegitimate children, the one that lost its life being about a year and a half old, and the other four years old. She got her living by silk weaving, but at the time the offence was committed she was in a most miserable state of poverty, which had, no doubt, affected her mind, and, coupled with her mental condition in other respects, drove her to the commission of the act. On the afternoon of the 28th March she left her mother's house with her two children, stating that she could not support them, and that it was her intention to go to the union and ask for assistance. In about an hour she returned without the children, and when asked what had become of them, she replied that she hoped they were in heaven. A police constable accidentally passing the river Colne heard a child's voice cry out, "I shall fall! I shall fall!" and on going to the spot he saw the eldest child hanging by both hands from the branch of a tree and up to its neck in water, and the younger child floating in the water apparently dead. He rescued the first, and then got the second out of the water, but it was quite dead. He afterwards went to the house and asked the prisoner if it was true what he had heard respecting her children, and she replied that it was, and that she should go anywhere with him, but wished first to see her children. She then said that she first threw the younger child into the water, and held the other child to look at him while struggling in the river, and then threw him in, when he turned his face to her and called out "Mother, mother!" and she went away. According to the evidence of her mother, she had been for a considerable period before the occurrence in a low and desponding state, and fears were entertained that she would do violence to herself. Since the birth of her last child she had frequently complained of her head, and it appeared that several members of her family had been confined in a lunatic asylum. The jury returned a verdict of *Not Guilty* on the ground of insanity, and the prisoner was ordered to be detained during her Majesty's pleasure. Before she could be removed from the bar she cried piteously for her dead child, saying "Always a mother, always a mother," and would not be comforted till her living boy was put into her arms, when she embraced him with great affection, clinging to him and saying "Do you know me, dear? My Willie—my Willie—my dear Willie! you do love me, don't you, dear?" It was a most affecting spectacle.

MIDLAND CIRCUIT: LEICESTER.—*Alleged Murder of a Son.*—*John Upton* was indicted for the murder of his son William Upton, in January last. The strongest manifestations of popular feeling against the prisoner were made in the court and its vicinity; and at the time of the inquest the officers who had him in charge were obliged to disguise him in woman's clothes to get him away. The evidence showed that the boy was the son of the prisoner by a former wife, and being of a somewhat weak intellect he had difficulty in obtaining employment, which threw him on the hands of his father. In consequence of this there appeared to be a strong feeling of dislike to him on the part of his father and stepmother. In February the boy obtained work from a Mr. Edwards, but shortly some property was missed from Mr. Edwards's house, and as the boy was seen to be possessed of an unusual amount of money, he was taxed with the theft of the goods, and gave a very confused and contradictory explanation of how he came by his funds. His father, having heard of this, went to Mr. Edwards and pressed him very strongly to prosecute his son, but Mr. Edwards refused, and from that time till the discovery of the body in the Leicestershire Canal nothing more was seen of the boy. It was found he had received such fearful wounds upon his head and body that it was clear he had been murdered. A number of witnesses were called; but their evidence entirely failed to establish the accusation against the father of having murdered his son. At length the jury stopped the case, and Baron Bramwell declared there was not a shadow of evidence against the man, who was accordingly acquitted; but, owing to the feeling against him in the town, he was temporarily taken charge of by the police for safety.—WARWICK: *Attempted Wife Murder at Birmingham.*—*Henry Chatfield*, 20, bedstead maker, was indicted for wounding Elizabeth Chatfield, his wife, at Birmingham, on the 18th of June, with intent to murder her. It appeared from the evidence that a quarrel ensued between the prisoner and his wife, in which she refused to go home with him. Ultimately he got her home and ordered her to bed. She again refused, when he cut her throat with a razor. The wound was six inches across, and nearly half an inch in depth. She was taken to the hospital, and lay there in a precarious state for a week. The prisoner said he was sorry he had cut his wife's throat, but what he had done was in passion, and not intended. The jury returned a verdict of *Guilty*, and the judge sentenced him to 15 years' penal servitude.

OXFORD CIRCUIT: WORCESTER.—*Attempt at Double Murder.*—*Walter Jones, jun.*, was charged with feloniously wounding police sergeant Drew, of the Worcester constabulary. This trial excited considerable interest, on account of the respectability of the prisoner and his family, and the absence of any apparent motive for the offence. He is 21 years of age, and is the son of a medical practitioner of Worcester. He had been placed in the reference office at the railway works. On the morning of the 12th April he went to the shop of Mr. Perrins, gunsmith, and stole a pistol and some ammunition. This was as early as 8 o'clock, and he was next heard of on the racecourse, where, meeting a young girl named Emma Bull, he accosted her, and asked her to walk with him. She refused, on which, pulling the pistol from his pocket, he threatened to shoot her. The girl, alarmed at the sight of the weapon, ran away, when he fired at her. It happened that at the moment Bull had in her hand a piece of an iron ploughshare, which she was holding to her side with her left hand. The ball from the pistol passed through her hand, and, striking the piece of iron, glanced off without doing further mischief. But for the girl having this bit of iron in her hand there can be little doubt that the ball would have entered her body, and in all probability killed her. The girl ran into the city, and her cries alarming several persons, a hue and cry was set up, and the prisoner was chased for some distance through a portion of the suburbs called the Moors. Some of his pursuers, however, gave up the chase on Jones presenting the pistol at them. At last police-sergeant Drew, who had joined in the pursuit, came up with the prisoner in a passage and apprehended him. Jones asked what he had done to be taken into custody for, and Drew answered "Oh, not much, I suppose, but you must come and see." They then walked together a short distance, and on Drew turning his head to see who was behind them, Jones suddenly drew the pistol from his pocket, placed the muzzle against the officer's face, and fired. The bullet passed through the officer's cheek, knocking out some of his teeth, and the shock rendered him senseless for a short time. For some days his life was in danger, but he ultimately recovered, and was able to appear in court at the trial. After he had been thus disposed of, another chase took place, and the prisoner was eventually lodged in gaol and committed for trial. The jury found the prisoner *Guilty*, and he was sentenced to four years' penal servitude. Two other indictments had been preferred against him, one for stealing the pistol, and the other for shooting the girl Bull, but at the suggestion of the judge, as the case had arisen out of the same transaction, they were withdrawn. This prisoner on the morning before his trial made a most determined attempt to escape from gaol by means of a rope ladder, which he had manufactured from the prison towels, which he must have abstracted from time to time, and managed to conceal, cut up, and plait up into a unique ladder. He then succeeded in picking the lock of the ward gate and possessed himself of a broom which he tied to the end of the rope, and threw over the prison wall, where it lodged under the coping stone, but he was discovered in the act of ascending.

Obituary.

LORD WOOD, formerly Mr. Alexander Wood, of Woodcot, but for 20 years better known by the title of Lord Wood, which he bore as one of the Scotch judges, died on Tuesday at his residence at Woodcot Park, Haddingtonshire. He was born in Edinburgh, called to the Scotch bar in 1811, appointed Crown Counsel in 1825, and Steward of Kirkcudbright in 1830, elected Dean of the Faculty of Advocates in 1841, and in 1842 appointed one of the judges of the Court of Session, under the title of Lord Wood. In 1843 he was also made one of the Lords Commissioners of Justiciary. After having been 20 years on the bench, he retired in 1862.

THE HON. AND REV. RICHARD CUST, brother of the late Earl Brownlow, and great-uncle of the present peer, died on the 17th inst., at the Rectory, Belton. He was the brother of Colonel the Hon. Peregrine Cust and General the Hon. Sir Edward Cust, Master of the Ceremonies to her Majesty. He was born in 1785, and was appointed rector of Belton in 1810, and rector of Shelland in 1814. He was an honorary canon of Lincoln, and rural dean of North Grantham. He was unmarried, and was in his 79th year.

THE REV. EDWARD WILLIAM GRINFIELD, the venerable annotator of the Septuagint, and the founder of the Old Testament prize at Oxford, died a few days since in his 80th year. He graduated B.A. in 1806, and M.A. in 1808. Shortly after his ordination in 1808–9 he published his first work, entitled "The Crisis of Religion," followed by "An Address to Protestants," "Reflections on Infidelity," "The Connection of Natural and Revealed Theology," "Sermons on the Parables," "The Bulwarks of the English Church," "The Researches of Physiology," "Thoughts on Brougham's Education Bill," "The Doctrinal Harmony of the New Testament," &c. Between 1827 and 1863 he was engaged on his famous "Novum Testamentum Hellenicæ," which cost him 15 years' work at seven hours a day, and in which there are 40,000 quotations, the author's object being to show the connection between the Septuagint and the Greek Testament. In 1848 he wrote "Scholia Hellenistica," and two years later "An Apology for the Septuagint." He was a very laborious and zealous scholar, and a few years back founded the Oxford University prize which goes by his name, for the study of the Septuagint.

WILLS.—The will of Admiral Sir Edward Tucker, G.C.B., has been sworn under 30,000*l.*; Mr. James Kershaw, M.P., late of Oaklands, Manchester, and Streatham, Surrey, 300,000*l.*; Colonel Astell, of Everton House, Bedfordshire, formerly commanding the 3d Battalion of the Grenadier Guards, 80,000*l.*

BIRTHS.—On the 17th inst, at 3, Clifton Place, Lady ELIZABETH LESLIE MELVILLE CARTWRIGHT, of a daughter—16th inst, at 4, Cleveland Row, the Hon. Mrs. HENRY BYNG, née Countess Henrietta Danneskiold, of a daughter—15th inst, at Bridgewater House, St. James's, the Hon. Mrs. ALGERNON EGERTON, of a daughter—12th inst, at Wilmington House, Ryde, the Hon. Mrs. WYNDHAM QUIN, of a son—18th inst, at 3, Beauchamp Square, Leamington, the wife of the Hon. and Rev. WINGFIELD FIENNES, of a son—20th inst, at Wilton Crescent, the Hon. Mrs. WROTTESLEY, of a son.

MARRIAGES.—On the 16th inst, at St. George's, Hanover Square, the Marquis of HASTINGS, to Lady FLORENCE CECILIA PAGET, youngest daughter of the Marquis of Anglesey—At St. George's, Hanover Square, JOHN WILSON RIMINGTON, son of the late James Rimington, Esq., of Broomhead Hall, Yorkshire, to SOPHIA ANN ADELAIDE, daughter of the late Sir R. ABERCROMBY, Bart.—13th inst, at the parish church, Bispham, the Rev. EGERTON BOUGHTON LEIGH, M.A., of The Rectory, Harborough Magna, youngest son of J. W. Boughton Leigh, Esq., of Brownsover Hall, in the county of Warwick, and Guila-

borough Park, Northamptonshire, grandson of the late Sir Egerton Leigh, Bart., to ALICE, only child of the late THOMAS ANDREW, Esq., of Compstall, Cheshire—14th inst, at St. John's, Paddington, Major HUGH SOMERVILLE BURNEY, 6th Depot Battalion, only son of Colonel W. Burney, K.H., to EMILY, elder daughter; and EDMUND LIONEL WELLES, Esq., youngest and only surviving son of the late Dymoke Welles, Esq., of Grebby Hall, Lincolnshire, to LAURA DE BLAIR, younger daughter of THOMAS ROBERT JEFFERSON, Esq., of Gloucester Square—18th inst, at St. Mary of the Angels, Bayswater, COVENTRY PATMORE, Esq., to MARIANNE CAROLINE, youngest daughter of J. H. BYLES, Esq., late of Bowden Hall, Gloucester—19th inst, at the parish church, Hampstead, ARTHUR EDWARD HENDERSON, of 6, Canterbury Terrace, Maida Vale, eldest son of Arthur Henderson, Esq., of 1, Pine-apple Place, Edgware Road, to ROSA, youngest daughter of the late JOHN WILLIAM WEBSTER, Esq., of 1, Prospect Place, Kilburn.

DEATHS.—On the 10th inst, in Upper Brook Street, Grosvenor Square, HARRIET, wife of Colonel the Hon. HENRY HELY HUTCHINSON, and widow of the Hon. Frederick Sylvester North Douglas, only son of Lord Glenbervie—15th inst, at 47, Lower Grosvenor Street, CLAUDINE STANLEY, eldest daughter of Sir ROWLAND STANLEY ERRINGTON—10th inst, at Fern Acre Lodge, Gerrard's Cross, Bucks, JAMES BIRD, Esq., M.D., late Physician-General to the Bombay Medical Board, aged 67—16th inst, at Weston-super-Mare, DIANA PHILIPPA, youngest daughter of the President of St. John's College, Oxford, aged 14—17th inst, the Rev. JAMES COOPER, M.A., Chaplain of the Worshipful Company of Ironmongers, aged 65—13th inst, at Newhaven, the Rev. J. JUSTICE, Rector of Ightfield, Shropshire—14th inst, at Long Critchill, the Rev. M. KING, aged 68—30th April, on board H.M.S. Miranda, Tauranga, New Zealand, from a wound received on the 29th, when in command of a storming party, Commander E. HAY, H.M.S. Harrier, youngest son of the late Rear-Admiral James Hay, of Belton, East Lothian, aged 29—29th April, killed in action in New Zealand, Captain CHARLES REGINALD MURE, 43d Monmouthshire Light Infantry, aged 31—29th April, killed in action in New Zealand, aged 21, Ensign CHARLES JOHN LANGLANDS, 43d Light Infantry, eldest son of J. C. Langlands, Esq., of Old Bewick, Northumberland—17th inst, ADELIZA ARABELLA, relict of Vice-Admiral KATON, aged 82—16th inst, at Newnton House, Wilts, EDWARD DUGDALE BUCKNALL ESTCOURT, Esq., sixth son of the late Thomas Grimston Bucknall Estcourt, Esq., of Estcourt, in the county of Gloucester, and youngest brother of the Right Hon. T. H. Sotheron Estcourt, M.P., aged 46.

Markets.

COVENT GARDEN, July 23.

Notwithstanding the present dry weather, most descriptions of outdoor produce continue abundant. Cherries, Gooseberries, Raspberries, and Strawberries, though scarcer, are still sufficient for the demand. Of Grapes and Pine Apples there is also a good supply, and Black, Red, and White Currants are plentiful. The arrivals of foreign goods comprise Apricots and West India Pine Apples, both of which, especially the latter, are abundant and cheap. Green Walnuts for pickling may now be obtained. Peas are plentiful, as are also Potatos. Asparagus fetches from 4s. to 7s. a bundle. Flowers chiefly consist of Orchids, Heaths, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Cherries, per lb., 6d to 9d
Grapes, per lb., 4s to 8s	Oranges, per 100, 10s to 16s
Peaches, per doz., 6s to 10s	Lemons, per 100, 5s to 9s
Nectarines, do., 6s to 12s	Nuts, Barcelona, do., 14s
Strawberries, p. punn, 6d to 1s6d	— New Brazil, do., 16s.
Gooseberries, green, p. qt., 3d to 6d	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 3d to 6d
Asparagus, per bundle, 4s to 7s	Cucumbers, each, 4d to 1s
French Beans, p. ½ sieve, 3s to 4s	Beet, per doz., 1s 6d to 2s
Peas, p. basket, 2s 6d to 3s 6d	Shallots, per lb., 10d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 2d to 4d	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 9d to 1s	Mushrooms, p. pott., 1s to 1s9d
Rhubarb p. bundle, 2d to 4d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

COAL MARKET.—July 20.

Bebside West Hartley, 17s. 3d.; North Pelton Gas, 14s.; Tanfield Moor, 13s. 6d.; Wylam, 15s. 3d.; Walls End Gosforth, 17s.; Walls End Wharncliffe, 17s.; Walls End Haswell, 19s.; Walls End Hetton, 19s.; Walls End Hartlepool, 18s. 9d.; Walls End Heugh Hall, 17s. 9d.; Walls End South Hartlepool, 18s.; Walls End South Kelloe, 17s. 9d.; Walls End Trimdon Thornley, 17s.—Ships at market, 26.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, July 21.

Prime Meadow Hay	80s to 90s	Clover, old	95s to 115s	
Superior do. ..	92	100	New Clover ..	— —
Inferior do. ..	—	—	Do. second cut ..	— —
New do.	60	85	Straw	26 30
Rowen	—	—		

HARVEY & EASTON.

WHITECHAPEL, THURSDAY, July 21.

Fine Meadow Hay ..	94s to 98s	Prime 1st cut Clover	115s to 120s	
Inferior do.	85	90	Inferior do. do. ..	105 110
Prime New Hay ..	70	80	New Clover	95 100
Inferior	—	—	Prime 2d cut do. ..	108 112
Straw	28	32	Inferior do.	— —

NEWGATE.—July 22.

Best Fresh Butter .. .. 12s. per dozen lbs.
Second do. do. .. .. 10s. "
Pork, 4s. 4d. to 4s. 8d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, July 18.

We have an unusually large supply of large supply of Beasts, yet choicest descriptions are not very plentiful, and consequently best qualities met with purchasers at a small reduction. There is also a considerable increase in the number of Sheep and Lambs. Prices are lower for all kinds, and many remain unsold. Calves are selling about the same as on Thursday. From Germany and Holland there are 2290 Beasts, 9300 Sheep, 437 Calves, and 100 Pigs; from Spain, 270 Beasts; from Scotland, 210 Beasts; from Ireland, 160; from Norfolk and Suffolk, 300; and 2850 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8 to 5		0	Best Long-wools.	..	—	..	
Best Short-horns	4	6 — 4		8	Do. Shorn ..	4	4 — 4		8
2d quality Beasts	3	0 — 3		8	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds		—	..		Do. Shorn ..	3	8 — 4		4
Do. Shorn ..	5	0 — 5		2	Lambs	5	6 — 6		6
					Calves	3	4 — 4		8
					Pigs .. .	3	4 — 4		4

Beasts, 6620; Sheep and Lambs, 32,680; Calves, 484; Pigs, 480.

THURSDAY, July 21.

The number of Beasts is about the same as on Thursday last. Trade is very dull, and although we retain Monday's quotations, they are not generally obtained. There are not quite so many Sheep on offer; the demand is, however, exceeded. Several remain unsold, notwithstanding a disposition to take lower prices. There is more inquiry for Lambs, and choice qualities are selling rather better. Our foreign supply consists of 840 Beasts, 3180 Sheep, and 773 Calves. Milch Cows 95.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	8 to 5		0	Best Long-wools.	..	—	..	
Best Short-horns	4	6 — 4		8	Do. Shorn ..	4	4 — 4		8
2d quality Beasts	3	0 — 3		8	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds		—	..		Do. Shorn ..	3	8 — 4		4
Do. Shorn ..	5	0 — 5		2	Lambs	5	6 — 6		6
					Calves	3	4 — 4		8
					Pigs .. .	3	4 — 4		4

Beasts, 1905; Sheep and Lambs, 11,590; Calves, 931; Pigs, 180.

MARK LANE.—MONDAY, July 18.

The supply of Wheat from Essex and Kent to this morning's market was moderate, and disposed of at fully the prices of this day sen'night. The attendance was not large, and business in foreign Wheat was limited at our last week's quotations. Barley brings an advance of 6d. to 1s. per qr. Beans and Peas are each 2s. per qr. more money. For Flour there is some inquiry at the extreme rates lately current.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	44	46	Red	40	42
— — fine selected runs .. ditto	46	48	Red	42	44
— — Talavera	50	54			
— Norfolk	—		Red	—	
— Foreign	38	54			
BARLEY, grind. & dist., 25s to 27s .. Chev.	34	38	Malting ..	29	33
— Foreign .. grinding and distilling	22	26	Malting ..	27	31
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish .....Potato	18	22	Feed	—	
— Foreign .....Poland and Brew	19	23	Feed	17	22
RYE	30	32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....32s to 35s...Tick	33	36	Harrow ..	33	36
— Pigeon .... 36s to 40s .. Winds.	—		Longpod	—	
— Foreign .....Small	32	38	Egyptian	30	33
PEAS, White, Essex and Kent .. Boilers	33	35	Suffolk ..	33	37
— Maple .... 30s to 36s .... Grey	30	32	Foreign ..	31	33
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered .. per sack	35	40			
— 2d do ..... ditto	28	34	Country ..	28	34
— Foreign ..... per barrel	18	25	Per sack	32	34

FRIDAY, July 22.

Since the 15th inst. the weather has been very fine and hot. Our accounts from the country speak more favourably of the Wheat crops, and less so of the Beans and Peas. From the Continent the Wheat crop is well reported of in Italy, Hungary, France, and Germany, but the accounts from Russia are decidedly bad, and also from Ohio, Wisconsin, and Illinois. The Wheat trade during the present week has been less active, but previous prices were fully supported, and in a few markets even exceeded. All kinds of spring corn continue to advance in price, and are quoted rather dearer. Flour has been in fair request at fully late rates. Since Friday last 107 vessels have been reported off the coast. The floating trade has been very firm. Wheat for future shipment is in good demand; in consequence of the numerous arrivals, however, buyers hesitate to pay the extreme rates asked for cargoes off the coast. In Maize a large business has been done at improving prices. Paris, July 21.—There has been very little doing in Wheat and Flour, and prices are declining. The six marks for delivery this month are quoted equal to 33s. per 280 lbs. The present stock of Flour is estimated at 28,650 cwts. Wheat must be quoted 9d. per qr. cheaper. The arrivals of English and foreign Wheat and Flour this week have been small, of Barley we have no supply, that of Oats, both English and foreign, is large. The attendance at this morning's market was small. English Wheat maintained the rates of last Monday, but business in foreign was limited, nevertheless extreme prices were insisted upon for Russian qualities. Spring Corn of all descriptions was steady at Monday's quotations.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	480 qrs.	— qrs.	50 qrs.	1470 sks.
Irish	—	—	3.00	— "
				160 "
Foreign ..	8910 "	—	31.300 "	1200 brls

LIVERPOOL, July 19.—With only a small attendance of country buyers at to-day's market, Wheat nevertheless meets an active inquiry both for consumption and to hold over at an advance of 1d. per cental on last Friday's prices. Flour is not quotably dearer, but good brands are more difficult to buy. Indian Corn is somewhat checked by the high rates demanded. Oats and Oatmeal are both the turn dearer. Beans very steady. Peas and Barley unchanged. Market closes strong.

FRIDAY, July 22.—The market was moderately attended. Wheat quiet, and late rates barely supported in consequence of large arrivals. Flour steady. Indian Corn was in moderate demand, but without change in value. Egyptian Beans firm. Oats and Oatmeal steady.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
June 11	39s 6d	27s 6d	20s 0d	34s 1d	34s 10d	33s 9d
— 18	40 3	27 11	20 4	32 8	35 5	33 9
— 25	40 0	28 6	20 8	..	35 5	33 3
July 2	40 9	27 2	20 9	31 2	36 2	34 0
— 9	41 9	27 8	21 10	28 9	36 1	32 8
— 16	42 6	27 10	21 7	31 5	36 11	34 3
Agg. Aver.	40 9	27 8	20 10	31 7	35 10	33 7

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	June 11.	June 18.	June 25.	July 2.	July 9.	July 16.
42s 6d	..	..	..	..	..	
41 9	..	..	..	..		..
40 9	..	..	..		..	..
40 3	..		..	..	..	..
40 0	..	..	..	..	..	..
39 6		..	..	..	..	..

Manufacturers to the Queen and Prince of Wales.

FRY'S | HOMŒOPATHIC ICELAND MOSS PEARL | COCOA.

FRY'S SOLUBLE CHOCOLATE.

J. S. FRY & SONS were the only English Manufacturers of Cocoa who obtained the Prize Medal, 1862.

TAYLOR BROTHERS' GENUINE MUSTARD. Dr. HASSALL having subjected this Mustard to a rigorous microscopical examination and chemical analysis, reports that it contains the three essential properties of good Mustard, viz., Purity, Pungency, and Delicate Flavour. See that each Package bears their Trade Mark the "Prize Ox," and Dr. Hassall's Report. Sold by all Grocers, &c., throughout the Kingdom.

WANTED, a GARDENER who thoroughly understands Growing Grapes for Market. Must have character from last place. Liberal wages will be given to a competent Man.—Address, with all particulars, A. R., Advertising Agents, Finch Lane, Cornhill, E.C.

WANTED, a MAN and his WIFE.—Man as Gardener, Woman as General Servant, in a Small Family, from town. Both must understand their business, and unexceptionable characters.—Apply by letter to M. M., H., Lane, Cheapside, E.C.

Ground Workmen.

WANTED, a WORKING MAN, who understands Ground Work in general; also a NURSERY Woodbury Park, Tunbridge Wells.

WANTED, a Married Man, to be GARDENER, and his Wife to attend to the Dairy in the Laundry.—Address B. L., at Mr. Skelton's, 3, Manchester Square, W.

WANTED, a good SOFT-WOODED PROP —Apply by letter only, stating age, experience, expected, to Mr. WOODROFFE, "The Westbourne Nursery Road, W.

WANTED, in the course of the Autumn, a SHOPMAN and a SECOND SHOPMAN.—The have had considerable experience in the Management of a Retail Garden and Flower Seed Trade; have a good style well recommended. Both applicants to mention their age, and salary expected, and giving reference to their —Apply to W. DRUMMOND & SONS, 58, Dawson Street, Dr

WANT PLACES.—Letters to be Post

EXPERIENCED GARDENERS (or as GAR and BAILIFF), of various qualifications, recommended gentlemen.—Further particulars given on application to HENDERSON & SON, Wellington Nursery, St. John's Wood, L

GARDENERS.—JAMES DICKSON & SONS "Newton" Nurseries, Chester, can now recommend EXCELLENT Gardeners, of whom they will be glad to particular as to character and ability.

AGENT to a nobleman or gentleman. A young Man, who has obtained the Royal Agricultural Diploma, is desirous of meeting with a situation as an extensive knowledge of Farming, Surveying, and also possesses considerable information on the subject Repairs.—For particulars and references, &c., address Oulton Farm, Tarporley.

GARDENER (HEAD), disengaged after 8 Age 32; well experienced. Eight years' character last situation.—H. T., Nyman's Cottage, Crawley, Sussex.

GARDENER (HEAD).—Understands the routine of Gardening in all its branches.—Address ticulars to J. B., *Courier* Office, Liverpool.

GARDENER (HEAD).—Married, no incumbrance, understands Growing Fruits, Flowers, and Vegetables years' character.—O. P., Wightman's, Florist, Croydon, Surrey.

GARDENER (HEAD).—Age 30, married, no brance; thoroughly understands the Forcing of Fruit, Flowers, and Kitchen and Flower Gardens. G —G. S., Mr. Chapman's Nursery, Weybridge, Surrey.

GARDENER (HEAD).—Age 30, married, no brance; thoroughly experienced in Flower, Fruit, and Kitchen Gardens, also Early and Late Forcing, and can take the Management of Land and Stock if required. Six years' good character Mr. W. Paul, Waltham Cross, N.

GARDENER (HEAD).—Middle aged, no incumbrance; a thorough good practical gardener in various branches, also understands Stock, Meadow Land, a good Dairywoman. Six years' excellent character.—J. H. Blackstone's, Red Hill, Surrey.

GARDENER (HEAD), where one or more are to assist.—Can give 15 years' reference to his last which he left in consequence of his employer removing New Bread Street, Hendon, Middlesex.

GARDENER.—Age 40; good testimonials —J. DOUGHTY, Auctioneer, Midland Road, Derby

GARDENER.—A gentleman having dismissed house, &c., is desirous of recommending him Apply by letter to P. & P., 6, Gutter Lane, Cheapside, E.

To Noblemen and Gentlemen.

GARDENER, or GARDENER and BAILIFF, married, no incumbrance; is now about to leave recommended with great confidence by Messrs. Dickson Laing, as a trustworthy, active, business Man. He practical in every branch of his profession, and has had ence in the Re-arranging and Planting of Parks and the Erecting of Horticultural Buildings, and Heating cannot be surpassed in Pine, Grape, and Peach Growing rate Plant Grower, and thoroughly understands the Fruit Trees in the Orchard House. Unexceptionable testimonials of 16 years from two noblemen.—DICKSON LAING, Nurserymen, Stanstead Park, Forest Hill, L

To Noblemen and Gentlemen.

GARDENER and BAILIFF.—Age 35, family; thoroughly understands his profession, has had great practice in making new Kitchen and Fruit and Laying-out Ornamental Pleasure Grounds, Walks tions, and Management of Light and Heavy Soils, Reclaiming Waste Lands, also the Management of Pasture thoroughly understands the Management of Poultry, Devonshire Cream and Butter, as well as the Raw Cream years' good character from late employer.—G. F. Sandford, near Crediton, Devon.

GARDENER (SECOND or Otherwise), wholly the charge of Flower Garden or Forcing a large place. Fifteen years in good Establishments.—H Road Nurseries, Peckham, S.

GARDENER (SECOND).—Age 28, married, practical experience in all branches.—Y. Z., Street, Brunswick Square, W.C.

FOREMAN, or FOREMAN and PROPAGATOR Age 27; well understands the Cultivation of Rhododendrons, Conifers, &c., and the routine of the Nursery generally. Good reference.—A. D., The Nursery, Wan

STEWARD (UNDER), or STEWARD'S CLERK nobleman or gentleman. A Young Man.—Mr. Castle Street Nursery, Salisbury.

BAILIFF or LAND STEWARD.—Married, brance; has had considerable experience in the profession. First-class testimonials as to character particulars apply to JAMES DICKSON & SONS, 102, Eastgate

To Noblemen, Gentlemen, and Agriculturists.

FARM BAILIFF, ESTATE BAILIFF, STEWARD.—A young Man, who has been employed the estate of the Duke of Bedford, is well acquainted ing, the general Management of Estates and Woods, make himself generally useful.—H. TAYLOR, Oakley Bedford.

COWMAN, and to look after Cattle and Garden Age 27, single; no objection to assist in the Garden wise. Can kill sheep or pigs. Good references.—A. B. Library, 332, King's Road, Chelsea, S.W.

The Gardeners' Chronicle Newspaper.

SATURDAY, JULY 30, 1864.

VICTORIA and LEGAL and COMMERCIAL LIFE ASSURANCE COMPANY, 18, King William Street, City

FOURTH DIVISION OF PROFITS.

At the Annual General Meeting, held on the 12th May last, a Reversionary Bonus of over £62,000 was appropriated to the Assured, equal to 42 per cent. on the Premiums paid.

The Accumulated Funds exceed £410,000
The Capital Invested is over £70,000
The Claims by Death paid exceed £310,000
Claims Realized £145,000

Every description of Life Assurance business is transacted.

Advances are made on Mortgage of Freehold Property, Life and Reversionary Interests, &c., and also to Assurers on Personal Security.

WILLIAM RATRAY, Actuary.

News of the Week.

PARLIAMENT was prorogued yesterday by commission. The QUEEN'S Speech commenced by regretting that the endeavours made in concert with France, Russia, and Sweden to bring about a reconciliation between Germany and Denmark were not successful, but expressed a hope that the negotiations which have since been opened between the belligerents themselves may restore peace to the north of Europe. It then referred to the cession of the Ionian Islands, the relations with China, and the arrangement of the differences between Turkey and the Principalities. It expressed deep regret at the continuance of the civil war in America, and announced that HER MAJESTY will continue to observe a strict neutrality, and would rejoice at a friendly reconciliation between the contending parties. After an acknowledgment of the supplies voted by the House of Commons for the defence of the dockyards and arsenals, the Speech referred with satisfaction to the state of the manufacturing districts, to the revolt in New Zealand, and to the rapid development of the resources of India. It mentioned with approbation the leading measures which have become law during the session, and concluded with an expression of satisfaction that the general prosperity of the country has enabled Parliament, after making a sufficient provision for the public service, to effect a material reduction in the taxation of the country.

In the House of Lords on Friday Lord STRATFORD DE REDCLIFFE called attention to the recent rumours respecting a supposed revival of the Holy Alliance, and said that as the present state of the Continent was such that any event of that sort must be dangerous to the liberties of Europe, he hoped the Government would revert to the policy of a friendly understanding with France as the best security for the continuance of peace. Earl RUSSELL said that he had no belief in the authenticity of the published despatches, but admitted that there had been transactions in the past month which gave a certain appearance of truth to the substance of those documents. He had no apprehension that any serious danger could arise from the Holy Alliance, and could not imagine that the three Powers, seeing the changes of the times, would ever be so ill advised as to revive it in the face of all Europe. On Saturday the House held a short morning sitting, at which several Bills were advanced a stage. On Monday Earl GRANVILLE moved the second reading of the New Zealand (Guarantee of Loan) Bill, which had come up with the sanction of the Commons. The Earl of MALMESBURY condemned the measure as one of questionable policy, and said that if the colonies had to depend upon their own unaided efforts we should hear very little more of colonial wars. After some discussion the Bill was read a second time. On Tuesday the Earl of ELLENBOROUGH called attention to the great change that had taken place in foreign affairs since February last, and attributed the encroachments of Germany to the ostentatious declarations of HER MAJESTY'S Government that it would give no material aid to Denmark. He contended that every minor State of Europe had its security shaken by what had occurred in Denmark; and that, considering all the recent acts of the great military Powers, the devastation of Circassia, the oppression of Poland, and the ambiguous position of Russia and France towards England, we ought to have every means of national defence in complete preparation. Earl RUSSELL said that he did not intend to palliate the conduct of Austria and Prussia. If both sides would have listened to fair terms, these disputes might have been settled by negotiation; but Denmark had for many years persistently put herself in the wrong, and Germany would listen to no terms whatever. The question of going to war on behalf of Denmark had been decided by the House of Commons, which had approved the course of the Government in abstaining from active intervention, and he denied that the honour of England was at all involved in the contest. After some remarks from Lord STRATFORD DE REDCLIFFE the subject dropped. On Wednesday and on Thursday the House was occupied with the routine business of advancing various Bills through their different stages.

In the Commons on Friday Mr. COBDEN moved a series of resolutions condemning the recent great extension of the Government manufacturing establishments, and enforcing the principle that the Government ought not to be allowed to set up such establishments for the production of articles which could be better supplied by private manufacturers or public companies. After a long debate the motion was not pressed to a division, and the subject dropped. On Monday the Fortifications (Provision for Expenses) Bill was read a third time and passed, after some remarks by Mr. OSBORNE on the defects of our guns both for military and naval purposes. On the order for the third reading of the Indian Medical Service Bill, Mr. HENNESSY moved as an amendment that the order be discharged, on the ground that the Bill gave the Secretary of State for India the power of substituting the old system of nomination for the competitive system of which Parliament and the country generally approved. On a division the amendment was carried against the Government by 46 to 44. On the order for the third reading of the Cranbourne Street Bill, Mr. AYRTON moved as an amendment that the Bill be read a third time that day fortnight. On a division the amendment was negatived by 48 to 14, and the Bill was read a third time and passed. Mr. VILLIERS moved the order for going into Committee upon the Poor Relief (Metropolis) Bill. Mr. BOUVERIE moved as an amendment that the Bill be committed that day month. After a long discussion Mr. VILLIERS expressed his readiness to limit the operation of the Bill to the 1st of April next. On this understanding the amendment was withdrawn, and the House then went into Committee upon the Bill, and agreed to the clauses with amendments. On the order for going into committee on the Mutual Surrender of Criminals (Prussia) Bill, sent down from the Lords, Mr. J. WHITE moved, as an amendment, that the Bill be committed that day month, on the ground that under its provisions Prussia might demand the surrender of political refugees. After a long discussion the debate was adjourned. Lord PALMERSTON moved that in consequence of the recent report of the select committee exculpating Mr. LOWE from the charge of altering the reports of the Inspectors of Schools, the resolution of the 12th April be rescinded. The motion was agreed to. On Tuesday Mr. HENNESSY moved an Address to the QUEEN, praying her to grant fiat to the petition of right of Mr. O'MALLEY IRWIN, or to satisfy his claims without suit. The motion was opposed by the ATTORNEY-GENERALS for ENGLAND and IRELAND, and negatived without a division. The House was shortly afterwards counted out. On Wednesday, on the motion for the consideration of the report of the Standing Orders Revision Committee, Mr. ROEBUCK suggested that the whole question should be deferred till next Session, and moved as an amendment the adjournment of the debate. On a division the amendment was negatived by 51 to 14. The various changes recommended by the committee were then agreed to, with verbal amendments. The Mutual Surrender of Criminals (Prussia) Bill was withdrawn. On Thursday Lord E. HOWARD called attention to the extensive emigration to the United States in connection with the prolongation of the war in America, and suggested that the Government should exercise greater vigilance in putting down the organised system of fraud resorted to by Federal agents both in this country and in Ireland for entrapping British subjects into the United States army. Mr. LAYARD said that the question was a most difficult one to deal with; and that it was impossible for the Government to do more than to reiterate the caution they had given to emigrants respecting the dangers to which they would be exposed on their arrival on the other side of the Atlantic. The Partnership Law Amendment Bill was withdrawn.

From the United States we learn that the Confederate force which recently invaded Maryland, after advancing within a few miles of Baltimore and Washington, has recrossed the Potomac with immense quantities of plunder. During this incursion General LEE defeated the Federals under General WALLACE with great loss, making General TYLER prisoner, and subsequently captured a railway train, in which were General FRANKLIN and his staff.

Home News.

THE COURT.—The Queen and Royal family continue at Osborne. On Thursday week the Queen, accompanied by Princess Louisa and Princess Beatrice, drove in the grounds. In the afternoon her Majesty, accompanied by Prince and Princess Louis of Hesse and Prince William of Prussia, paid a visit to Prince and Princess Leiningen at West Cowes. On Friday the Queen, accompanied by her Royal Highness Princess Louis of Hesse and Princess Louisa, walked and drove in the grounds. Prince and Princess Louis of Hesse, and Princess Leiningen afterwards visited the prison for females at Parkhurst. On Saturday the Queen, accompanied by Princess Louis of Hesse, drove out. Prince Louis of Hesse and Prince William of Prussia took a cruise in the Fairy. The Earl of Clarendon arrived on a visit to her Majesty. On Sunday morning the Queen and Royal family attended Divine Service at Osborne. The Rev. G. Prothero officiated. On Monday the Queen, accompanied by Princess Louis of Hesse, walked and drove about the grounds. The Earl of Clarendon returned to London. On Tuesday the Queen, accompanied by Prince and Princess Louis of Hesse and Princess Beatrice, drove out. The Duke of Cambridge arrived from London on a visit. On Wednesday the Judge-Advocate-General had an audience of the Queen. Prince and Princess Leiningen dined with her Majesty and the Royal family. The Chancellor of the Exchequer arrived on a visit to the Queen. On Thursday the Queen held a Privy Council, which was attended by Earl Granville, Lord Palmerston, Sir G. Grey, and Mr. Gladstone. At the Council Parliament was ordered to be prorogued from yesterday (Friday) to Thursday, the 13th of October. Earl Granville and Lord Palmerston had audiences of the Queen. The Chancellor of the Exchequer left for London. The Dean of Westminster and Lady Augusta Stanley arrived on a visit to her Majesty.

THE PRINCE AND PRINCESS OF WALES.—On Friday afternoon the Prince and Princess left Marlborough House for Frogmore. On Saturday their Royal Highnesses embarked on the river in their new gig "Albert Edward," and witnessed the Eton Regatta; the Prince of Wales, Captain Grey, and the waterman rowing, while the Princess and the suite sat on the seats in the after part of the boat. On Sunday the Prince and Princess attended Divine service in the private chapel of Windsor Castle. The Dean of Windsor officiated. On Wednesday morning the Prince and Princess left Frogmore House for Goodwood on a visit to the Duke of Richmond during the races. Their Royal Highnesses travelled by the South Western Railway to Clapham Junction, and thence by the Brighton line through Balham and Redhill to Chichester. The Prince and Princess remained at Goodwood until yesterday, when they left for Osborne.

PRINCE FREDERICK WILLIAM, the young son of the Crown Prince and Princess of Prussia, who is visiting

the Queen at Osborne, will return to Berlin about the middle of next month.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Wednesday. Another will be held to-day.

PARLIAMENTARY MOVEMENTS. — The Ministerial white-bait dinner took place at the Trafalgar, Greenwich, on Saturday evening, and was presided over by Lord Palmerston in person. The death of Mr. Divett has caused a vacancy at Exeter. Mr. Coleridge, Q.C., will be the Liberal candidate, and Lord Courtenay, son of the Earl of Devon, will be the Conservative candidate for the vacant seat. Sir James Duke has issued an address, intimating his intention to retire from the representation of the City of London at the next election. The Lord Mayor, Alderman W. Lawrence, has announced himself a candidate for the vacant seat. It is stated that Mr. David Williams, of Dendreuth Castle, or Mr. Thomas Savin will contest Monmouthshire in the Liberal interest at the next election. Mr. G. Melly, of Liverpool, will offer himself as the Liberal candidate for Preston, in the room of Mr. Grenfell, who retires.

THE CHANNEL FLEET.—On Friday the Defence put into Plymouth to land at the Naval Hospital one of her seamen who has been attacked by small-pox. She parted with the fleet off the Start at noon, and was under orders to rejoin Admiral Dacres in Torbay on Saturday. The Black Prince landed one patient suffering from small-pox at Portland on Thursday. The Hector has joined the fleet since it left Spithead, but has since strained her starting wheel, and cannot steam astern.

ARRIVAL OF DR. LIVINGSTONE.—This distinguished traveller arrived in London on Saturday evening by the express train from Paris. He appeared to be in excellent health and spirits.

Foreign.

FRANCE.—Prince Humbert, son of the King of Italy, is expected in Paris on the 15th August. It is asserted that his Royal Highness will visit the camp at Châlons, and afterwards proceed to England. It is stated that M. Drouyn de Lhuys has addressed despatches to the French Ministers at Vienna and Berlin, to be communicated to M. de Rechberg and Count Von Bismark, touching the negotiations with Denmark. The despatches, which are said to be similar, if not identical in terms, earnestly recommend to both Governments a policy of moderation with a view to an arrangement which it will be honourable for Denmark to accept. *La France* of Friday evening, in an article headed "The State of Europe," says:—

"Everywhere violence supersedes right. Alliances are formed in the dark in order to re-act against the principles of our age. It is the division between the Western Powers which has rendered these alliances possible. France has no ambitious ideas, and will not concern herself with these impotent efforts of the reaction. She only sees with sorrow that the great Powers remain deaf to the generous advice that they should go forward to meet the formidable complications in which France alone on the Continent has nothing to fear, since she can hold aloof from them so long as her personal interests and her honour are not menaced."

In another article on Tuesday it says:—

"It is not the business of France to protect the treaties of 1815 from violation at the hands of those who forced them upon her. The alleged compact between the Courts of Petersburg, Vienna, and Berlin is tantamount to a confession that to mutilate Denmark, and to keep Venetia and Poland down, their own individual forces are not sufficient, and they require each other's assistance. Such an alliance would not be a threat or a challenge, far from it; it would only be a cry of distress."

A report of the Minister of War was published on Saturday, followed by an Imperial decree, modifying the administration of Algeria. The report says the insurrection was not only caused by fanaticism, but still more by an unfounded hope of surprising the vigilance of the authorities, who were believed to be disarmed, because divided in their action. The report, therefore, proposes to increase the power and responsibility of the Generals commanding divisions, making the Prefects subordinate to them, and intrusting them with the administration of the natives established beyond the limits of the communal districts. In accordance with this report the whole province is to be placed under the absolute authority of Marshal MacMahon, who will leave the Chalons camp to assume his command in the course of next month. Accounts from Algeria state that General Ismail has returned from Beja on the pretext of ill health, leaving his column with 12 cannon, blockaded by the insurgent Arabs. The Government candidates in the department of Ardêche and Dordogne have been elected by a large majority. Orders have been given to send the necessary transports to Mexico to bring back the troops that are to return from that country. The ships will leave France early in August. The *Vigie*, of Cherbourg, states that four Confederate men of war have been met with by merchant vessels cruising in the chops of the Channel; their names are the General Lee, the Georgia, the Florida, and the New Alabama; and two Confederate war steamers, called the Butterfly and the Paul Jones, have arrived at Ostend. The people of Cherbourg, according to the same authority, are in daily expectation of hearing of an engagement. A commission appointed to report upon the armament of the Kearsarge and the Alabama have reported in favour of men-of-war being armed with fewer guns, but of a much heavier calibre. The Minister of Marine is said to be opposed to the plan.

SPAIN.—The King will leave for Paris on the 14th of August. The Marquis de Santa Cruz and the Duke de Montezuma will accompany his Majesty. Several journals assert that at the last Council of Ministers it was resolved to act energetically in order to obtain satisfaction from Peru. The President of the Chamber of Deputies and the Minister of War have left for La Granja. Señor Mon will proceed to the Asturias shortly. A Royal decree, issued on Wednesday, appoints a committee of directors to erect a statue in honour of Christopher Columbus. It is stated that a Crédit Foncier for Spain is organising in London, with a capital of 300,000,000 reals, and that no privileges will be required from the Government.

PORTUGAL. — Owing to the scanty harvest in Portugal, it is considered probable that within a month certain ports will be opened for the free importation of foreign grain. It is officially announced that the next loan required by the Government will be offered to public competition. The King has conferred the title of Baron upon Mr. Hermann Stern, of the firm of Stern Brothers, London, in consideration of the services rendered by him to the credit of the country.

DENMARK.—M. de Quade and Colonel Kauffmann left Copenhagen last week for Vienna, as the Danish Plenipotentiaries to the Conference. At the sitting of the Folkesthing on Tuesday, the amendment of MM. Jagd and Liebe that "the Folkesthing should pass to the order of the day to avoid occasioning embarrassment to the Government," was rejected. The address was adopted by 60 votes to 21; seven members, among whom was Bishop Monrad, abstained from voting. The *Fädrelandet* of Tuesday states that a nine months' armistice is said to have been concluded between Denmark and the great German Powers, during which period the occupation of the Duchies by Austria and Prussia will be continued. It adds:—

"Should this news be confirmed, the arrangement must have been made by foreign mediation prior to the arrival of the Danish Plenipotentiaries, which is not improbable."

The *Berlingske Tidende* of Thursday states that the news published by the *Fädrelandet*, announcing the conclusion of a nine months' armistice between the great German powers and Denmark, is premature.

THE DANISH DUCHIES.—Captain von Hammer was taken prisoner last week in a creek off the Island of Fanoe, by the Prussian gunboat Blitz. Eight officers, 244 men, two steamers, two coasting vessels, 10 Customs' cutters, and five transport ships fell into the hands of the Prussians. The Prussian garrison in Kiel has been doubled, and patrols traverse the city every night.

WURTEMBURG.—In the Chamber of Deputies on Tuesday, Herr Oesterlein proposed a resolution to the following effect:—Solemnly to protest against the forcible occupation of Rendsburg by Prussian troops, and to request the Government, in conjunction with other States, to oppose this violence, the necessary means for that purpose being granted by the Chamber. This resolution was carried unanimously.

FRANKFORT.—In the recent vote of the Diet on the Austro-Prussian motion requiring the Prince of Augustenburg to substantiate his claims to the throne of Schleswig-Holstein, Saxony, Bavaria, Würtemburg, Darmstadt, and the 13th curia, voted in the minority against the motion, while the Saxon Duchies were in favour of the proposal, although they recognised the claims of the Duke of Augustenburg. General Hake, the commander of the Federal troops in Holstein, at the same sitting, reported to the Diet that the Prussians had informed him of their intention to occupy Rendsburg, and that, in presence of a superior force, he had resolved to withdraw the Federal garrison in order to avoid bloodshed. The Diet resolved to telegraph to General Hake, expressing their approval of his conduct, and requesting him to hand in a formal protest against the occupation. At the sitting of Thursday, convoked at the request of the representative of Prussia, he stated that he was instructed to declare that Prussia has no objection to the return of Federal troops to Rendsburg. The rumour that General Hake had been recalled is contradicted.

AUSTRIA.—The first sitting of the Conference was held on Tuesday at the Ministry for Foreign Affairs. Besides the principal plenipotentiaries of Austria, Prussia, and Denmark, Count Rechberg, Count von Bismarck, and M. de Quaade, there were also present the second plenipotentiaries, Baron Brenner, Baron Werther, and Colonel Kaufmann. At this meeting the Danish Plenipotentiary, M. de Quaade, declared that he was fully empowered to conduct the negotiations, reserving only to his Government the right of ulterior ratification. Nothing further of an official character is known, but it is rumoured in Vienna that Denmark has given up the Duchies, and abandoned the personal union, and that the costs are to be borne by the Duchies. The official *Abendpost* denies the rumour that Count Rechberg has caused the Austrian Ambassadors in London and Paris to declare that a complete separation of the Duchies from Denmark would be the maximum of the German demands, and that the Apenrade and Tondern line of demarcation was still possible. A Treaty of Commerce has been concluded between Austria and Mexico, securing considerable advantages to the former.

BAVARIA.—Advices from Munich state that a report is current that the young King of Bavaria intends to pass several years in the different States of Europe in the strictest *incognito*.

ITALY.—In the sitting of the Chamber of Deputies on Friday, the Minister of the Interior read a Royal decree proroguing the Session for an indeterminate period. The Minister of Public Works, Count Louis Frederic Manabrea, has left for Vichy. General de la Marmora left Naples on Monday on leave of absence for some time.

GREECE.—The National Asembly in its sitting of Friday censured the conduct of the Minister of War as unconstitutional, in having incurred expenses not authorised by the Budget, and without previously asking the Assembly to vote the necessary credit. A Ministerial crisis is imminent.

IONIAN ISLANDS.—The deputies from Corfu and Zante to the Greek National Assembly belong to the Conservative party. They have stated that they will do all in their power to obtain the adoption by the Assembly of the principle that the King not only reigns but governs.

TURKEY.—The Porte has closed all the Protestant missionary establishments and arrested several converts. The Bible and American Missionary Societies have since been reopened, in consequence of protests addressed to the Porte by the English and American Ambassadors. The Protestant movement is said to be greatly spreading among the Mussulmans. The forthcoming Turkish Budget will show a small surplus.

DANUBIAN PRINCIPALITIES.—The *Romanul* has been suppressed, in consequence of the publication of further violent attacks upon the Government.

TUNIS.—Advices from Tunis represent the condition of affairs at that place as very unfavourable. The Khasnadar persists in requiring the payment of a tax of 36 piastres. The insurgents have broken up their camp. The troops of the Bey are in the neighbourhood of Tunis. In consequence of the recent attempt to murder M. Beauval, D'Espeiulle, an officer attached to the Emperor's staff, had been ordered to make an inquiry into the affair, and report thereon to His Majesty.

INDIA.—Intelligence has been received in Calcutta by telegraph from Simla, of a battle having been fought in Cabul, in which the Ameer was victorious. Two thousand are said to have been killed on each side.

CHINA.—Major Gordon's force has been disbanded. Sir Frederick Bruce is returning home.

JAPAN.—Advices from Japan state that Sir Rutherford Alcock has arranged quarters for the British troops at Jeddo.

UNITED STATES. — General Lee *himself is* reported to have led the force which recently invaded Maryland, and which is said to have amounted to 30,000 men. In a battle on Monocacy River, lasting throughout the whole of the 9th, he defeated General Wallace, inflicting severe loss and driving him upon Baltimore. General Tyler and 1000 prisoners were captured.. After the battle on the Monocacy the Confederates marched straight to Washington, and burnt Mr. Francis Blair's residence near the city. On the 11th and 12th they made a demonstration against Fort Stevens, after which two divisions of the 6th Corps, which had arrived from Grant's army, drove them one mile beyond that Fort. During the night of the 12th all the Confederates retired from before Washington, and recrossed the Potomac at Poolesville and Edward Ferry, with enormous stores and a large number of horses. It is reported that the Federals have crossed the Potomac in pursuit. While these events were taking place near Washington, another body of Confederates was in force near Baltimore, destroying railway bridges and telegraphs. They burnt the residences of Governor Bradford and General Cadwallader, near Baltimore, and on the 11th captured two trains, in one of which were General Franklin and Staff. General Franklin, however, has since made his escape. The Confederates are conveying the spoils of their raid through Maryland down the Shenandoah valley to Stainton, from which point the Central Railway has been completely repaired. They are also using the Orange and Alexandria Railway, as well as waggons, to transport their spoils to Richmond. All General Hunter's supplies collected at Martinsburg, valued at 3,000,000 dollars, were captured by the Confederates when Sigel evacuated that place. On the 15th the Militia which had been called out for the defence of Washington were mustered out of service by order of the President, their aid being no longer needed. General Grant having considerably weakened his forces for the relief of Washington, the Confederates at Petersburgh give indications of assuming the offensive. Despatches of the 14th report that General Hill was threatening a flank movement against the Federal left. Demonstrations had also been made against other portions of the Federal line; and it is reported that the Confederates are running trains on the Virginia side of the Potomac to Manassas. Nashville papers of the 13th inst. report that General Sherman has crossed the Chattahoochee, with his whole army, and is immediately in front of the fortifications of Atlanta. There is no news of Forrest or of any other of the Confederate Generals in his rear. It is expected that Johnston, who has been retiring before him, will now offer or accept battle. Nothing is known of General Hunter's

position. During the recent alarm for the safety of Washington, the Militia of New York, New Jersey, Pennsylvania, and Massachusetts exhibited great indisposition to the President's call for 100-days' men for the defence of the capital. Governor Curtis, of Pennsylvania, openly accused his people of stupidity, or culpable indifference, and Mayor Gunther, of New York, publicly remonstrated against the removal of the Militia, on the ground of apprehended danger to the peace of that city. Secretary Fessenden has arrived in New York, and appealed to the bankers for a loan of 50,000,000 dollars until September 1, to meet the immediate wants of Government; and it is stated that the banks will agree to the loan. He has not made any further announcement of his policy. The American Consul at St. John's has telegraphed to the Governor of Maine that a small party of Confederates had left to depredate on the Maine frontier. Six steamboats have been burnt at St. Lewis by incendiaries; the loss is estimated at half a million of dollars. The Confederate steamer Florida has appeared off the mouth of Delaware, and has captured the steamer Electric Spark and four sailing vessels. Five Federal gunboats have been despatched in her pursuit. The steamer Rouen has been captured. A collision has occurred between two trains on the Delaware and Lakawanna Railway, in Pennsylvania, by which over 100 persons, principally Confederate prisoners, who were being conveyed to the camp at Elmira, New York, were killed or wounded. Gold is at 176 premium.

CANADA.—Mr. Brown and the new Canadian Ministry have proposed a federation of all the North American colonies, with a view to terminate the long existing provincial differences by the establishment of closer relations between Canada and her sister colonies of British North America. The scheme has been well received by the Lower Province, and it is the intention of the Government to hold a convention of delegates from both provinces at Charlottetown, Prince Edward's Island, in a few weeks, and also to send delegates to England, to seek the co-operation of the Imperial Government. The coroner's inquest in the case of the St. Hilaire Bridge disaster, has terminated in a verdict that the accident was owing to the gross carelessness of the engine-driver, who has been committed for trial.

MEXICO.—Intelligence from Mexico announces the proclamation of a general amnesty. It is reported that Uraga and Doblado had given their adhesion to the French.

Parliament.

HOUSE OF LORDS.

FRIDAY.—*The Holy Alliance.*—Lord STRATFORD DE REDCLIFFE in calling attention to the alleged revival of the Holy Alliance between Russia, Austria, and Prussia, said that such an event must be dangerous to the liberties of the rest of Europe, and arouse fears of those consequences which the efforts of our greatest Ministers had always been directed against—the success of despotism on the one hand, and of extreme democracy on the other. He urged upon the Government the necessity of taking steps to meet these results by cultivating the friendship of allies who were interested in preventing them, and especially of France, our great and able neighbour, who had deserved well at our hands, by husbanding the resources of the country, by placing its armaments upon the most efficient footing, and if we wished to avoid the usual fate of commercial States, by cherishing the traditions and spirit of the people.—Earl RUSSELL admitted the importance of the subject referred to, but expressed his belief that the correspondence which had excited his noble friend's apprehensions was not genuine. As to the probability of a revival of the Holy Alliance, he remarked that the former Holy Holy Alliance never constituted any formidable danger to this country; and although there could be no doubt that the Government and people of England would condemn the principle of such a compact, the practical effects could not in any way concern us. From the period of the French Revolution of 1830 the influence of the Holy Alliance had almost ceased to be felt, and he urged that the circumstances of Europe were so changed, that whatever the Holy Alliance might once have been, its revival was impossible, and need not excite any alarm. He could not believe that the Northern sovereigns desired more than to check the encroachments of democracy in their own dominions. With regard to the application of the principles of the Holy Alliance to the case of Denmark, England had declared her views, which agreed with those of France, but were opposed to those of Austria, Prussia, and Russia. He believed that nothing could be more conducive to the welfare of Europe than a good understanding between France and England, and that the important consequences referred to by his noble friend would cement and consolidate it. But he could not imagine that the other Powers, seeing the changes of the times, would ever be so ill-advised as to revive the Holy Alliance in the face of all Europe. The other business on the paper was disposed of.

SATURDAY.—The House had a morning sitting for a quarter of an hour, when the *Highways Act Amendment Bill*, the *Railway Companies Powers Bill*, the *Bank Notes &c. (Signature) Bill*, the *Bleaching and Dyeing Works Act Extension Bill*, the *Exchequer Bonds* (1,600,000*l.*) *Bill*, and the *Thames Conservancy Bill* passed through Committee, the latter with amendments. The *Contagious Diseases Bill*, the *Bank Post Bills (Ireland) Bill*, the *Corn Accounts and Returns Bill*, the *Westminster Bridge Tragic Bill*, the *Stamp Duties Act Amendment Bill*, and the *Portsmouth Dockyard (Acquisition of Lands) Bill* were read a second time. The *Justices Proceedings Confirmation (Sussex) Bill*, and the *Poisoned Flesh Prohibition Bill* were read a third time and passed.

MONDAY.—*The Treaty of* 1852.—Lord CAMPBELL asked whether the treaties by which the possession of Schleswig was guaranteed to Denmark, together with the Treaty of 1852, were now to be considered invalid. Till that point was settled it was impossible to do anything to restore the influence England had lost on the continent of Europe. As to the older treaties, though they dated from 1720, yet they were renewed in 1814, and he contended that this country was still bound by them. If their conditions were allowed to be violated the aggressive disposition of the great Powers would have no check, and very grave evils would be the consequence.—Earl GRANVILLE said the more ancient treaties with Denmark had been cancelled by subsequent war between that country and England. As to the Treaty of 1852, it contained no guarantee of any kind, and the only obligation it imposed on this country was to acknowledge the succession of the Danish Crown. It was found in the recent Conference that England was the only Power content to adhere to the treaty; it therefore became necessary to join with the co-signataries in modifying it.—The Marquis of CLANRICARDE doubted whether the old treaties had been completely cancelled. He thought they were renewed by the Treaty of Kiel. He trusted there would be no more Conferences on any subject, if we previously declared that under no circumstances would this country enforce the obligations of public law on other Powers.—Earl GRANVILLE, in moving the second reading of the *New Zealand (Guarantee of Loan) Bill*, explained the exceptional circumstances under which the Government had sanctioned the measure. He believed the security given by the resources of the colony were satisfactory.—The Earl of MALMESBURY opposed the Bill, as a most impolitic measure, and expressed his astonishment that the House of Commons should have passed it. It was an encouragement to all colonies, in the same circumstances as New Zealand, to get up little wars of which England bore the burden.—Lord LYVEDEN said no one approved these wars, but the difficulty was how to keep out of them. He objected to guaranteeing the loan, as it was, in fact, guaranteeing everything the settlers had done to the natives. As to the war itself, he understood the troops engaged in it regarded the service with disgust.—The Duke of CAMBRIDGE regretted the misfortune that had befallen a distinguished regiment during the operations of the war, but denied the imputation that it was caused by the disgust of the troops with the duty in which they were employed. If there were the slightest foundation for such a suspicion he should sincerely deplore it.—Earl DE GREY denied that the war was caused by the policy of the Colonial Government. It originated in the cruel and cowardly murder of a body of English troops, who were surprised in an ambush. Such an outrage could not be allowed to pass unpunished, but the Government wished to bring the hostilities to a close as soon as possible. The colonists bore a considerable portion of the expenditure, and had themselves raised a force of 10,000 volunteers, who had done their duty in a satisfactory manner.—Lord STRATFORD DE REDCLIFFE thought those colonies which had obtained their political independence ought to provide their own expenditure. But there was no necessity for anticipating a time when England would be obliged to abandon her colonies.—Lord TAUNTON did not think that public opinion would permit the difficulties that had arisen in New Zealand to be settled between the natives and the Europeans themselves. The presence of a few British troops might often be a great benefit to a colony, and there were exceptional cases in which the credit of the Home Government might be engaged for its relief.—The Earl of ELLENBOROUGH doubted if New Zealand could pay the charges it would incur next year out of its present surplus revenue.—The Earl of HARROWBY pointed out that the colonies were not allowed to have allies. This country was therefore bound to render them some assistance. The Bill was then read a second time. The *Post-office Order Bill* was read a second time, after a short discussion on a point of form.

TUESDAY.—The *Appropriation Bill*, the *Weights and Measures (Metric System) Bill*, the *New Zealand (Guarantee of Loan) Bill*, and other Bills passed through Committee. The *Fortifications (Provision of Expenses) Bill* was read a second time. *Foreign Affairs.*—The Earl of ELLENBOROUGH called attention to the altered state of foreign affairs since the opening of the session. That change affected not only the dignity of the Danish monarchy, which all the Powers had years ago thought essential to the peace of Europe, but also the validity of treaties, the security of the weaker States, and, above all, the progress of constitutional principles on the Continent. He regretted the decision of the Government and Legislature not to grant active aid to Denmark, and though he had no hopes of influencing that policy, he could not help saying that it was one which none of the more famous Ministers of this country would have adopted, and it would have been possible in no previous reign except that of James I. Such a policy ought not to be followed by any country that desired to be great. The real object of the Prussian Government was to arrest the growth of constitutional liberty in Denmark, and, finding that they could act with impunity, they had brought about the existing state of things. As to the alleged revival of the Holy Alliance, although there might be no foundation for the assertion, still he believed there was a much worse understanding between the three despotic Powers. The first Holy Alliance was a combination of princes against democracy and revolution, and not a conspiracy against their weaker neighbours; but the object of these princes now went much further. It was unreasonable to expect that a British Minister would be always successful in his negotiations, but the country had a right to demand that his proceedings should not render success impossible. The Government had brought in peace estimates, and by their declaration had deprived their diplomacy of its only support. But, having done this, he had a right to complain that they had interfered everywhere and in the most unpleasant manner. He regarded the late Conference as little better than a farce. Its result in transferring Schleswig to Germany destroyed the balance of power, and if the proceedings of the German Powers were to be sanctioned, how was any arrangement hereafter to be effected? The precedent of to-day would be the rule of to-morrow, and there would be no security left except force for the possession of its dominions by any Power. Thus, if the Germans wrested Kiel from Denmark, what security was there that they would not proceed to treat Holland in the same manner? Beyond this, he saw in this matter a declaration of war on the part of the despotic Powers against the advance of constitutional principles in Germany. They saw there how the constitutional movement in Prussia was likely to terminate, and although the policy was a wicked one, it was no doubt clever; but he trusted that its present success would not be permanent, for such things could not be done without retribution, terrible and overwhelming as an avalanche. Under these circumstances, all that this country could do was to rely upon its own strength, and revive that ancient patriotic spirit which did not consider lucre the only pursuit worth following.—Earl RUSSELL said that Lord Ellenborough had left out of consideration the facts that the Duchies were inhabited by two races, and that a population of 40 millions kindred to one of them thought that it was oppressed by the other. That was the chief difficulty. It should also be remembered that the arrangement made by the great Powers in 1852 was one which it was admitted on all hands must depend upon the willing concurrence of all the parties. Instead of there being any such concurrence, a controversy had been maintained ever since the signing of the treaty about the nonfulfilment of her promises by Denmark. It was impossible to say that Denmark had redeemed her pledges, or that she was altogether blameless. If the Government had upheld Denmark on the one hand, they must have compelled her to fulfil her promise on the other. He believed that if the parties directly interested had adhered to their engagements the difficulty might have been settled by negotiation; but Denmark, having for 11 years neglected to fulfil her pledges, a feeling was thereby excited in Germany which Austria and Prussia represented that they could not control. Under these circumstances, whilst France and Russia refused to interfere, it would have been futile for this country to have done so alone, and the determination of the Government had been ratified by Parliament and the country. How, he asked, had England forfeited her honour? We were not bound by any treaty to give material aid to Denmark; but, if any case did arise in which our honour was at stake, he was convinced that the country would rise as one man to defend it. He believed that after this affair of Schleswig was settled, the constitutional progress of Germany would be in no danger, and would not stand in need of aid. Such was the spirit of the times that he believed no sovereign would be so ill-advised as to resist it; but if England had blindly rushed into a war, and set all the Powers in hostile array to each other, we should have inflicted a much heavier blow on the liberties of Europe.—Lord STRATFORD DE REDCLIFFE thought that Lord Russell was rather too severe on Denmark, and, admitting the delicate and complicated character of the question, he could not but feel that this country had suffered some discredit. He regretted the course on which all the great Powers appeared to have entered. Russia was reducing cruelty to a system in all her possessions: and with regard to Prussia, no language could adequately express the censure she deserved. The subject then dropped.

WEDNESDAY.—The *Consolidated Fund Appropriation Bill*, the *New Zealand (Guarantee of Loan) Bill*, the *Fortifications (Provisions of Expenses) Bill*, and other Bills were read a third time and passed.—Lord WODEHOUSE moved the second reading of the *Poor Relief (Metropolis) Bill*. He said that the object of the measure was to defray the charge of relieving the casual and vagrant poor of London out of a general instead of a union rate.—Earl POWIS and Earl FORTESCUE objected to the machinery by which the Bill was to be carried into operation.—Lord REDESDALE said the Bill had been brought in too late in the Session to be properly discussed. Many of its details were also defective. He therefore moved the second reading that day six months.—The Earl of SHAFTESBURY hoped that the amendment would not be pressed, as the necessity for some measure of the kind during the winter was urgent. The amendment was then negatived without a division, and the Bill read a second time.

THURSDAY.—The LORD CHANCELLOR, in reply to Lord CHELMSFORD, stated that the *Prorogation* had been fixed for the next day. The *Poor Relief Bill* went through committee, and, the standing orders having been suspended, was read a third time and passed. The *Weights and Measures (Metric System) Bill* and the *Limited Penalties Bill* were read a third time and passed.

FRIDAY.—*The Prorogation.*—The House met at 3 o'clock for the prorogation of Parliament by Royal Commission. The Commons having been summoned to the bar, the *Royal Assent* was given to 104 Bills.—The LORD CHANCELLOR then read her Majesty's Speech as follows:—

"MY LORDS AND GENTLEMEN,

"We are commanded by her Majesty to release you from further attendance in parliament, and, at the same time, to convey to you her Majesty's acknowledgments for the zeal and assiduity with which you have applied yourselves to the discharge of your duties during the session of parliament now brought to a close.

"Her Majesty commands us to inform you that she greatly regrets that the endeavours which she made in concert with the Emperor of the French, the Emperor of Russia, and the King of Sweden, to bring about a reconciliation between the German Powers and the King of Denmark, were not successful, and that the hostilities which had been suspended during the negotiations were again resumed. Her Majesty trusts, however, that the negotiations which have been opened between the belligerents may restore peace to the North of Europe.

"Her Majesty having addressed herself to the Powers who were contracting parties to the treaty by which the Ionian republic was placed under the protectorate of Great Britain, and having obtained their consent to the annexation of that republic to the kingdom of Greece, and the States of the Ionian republic having agreed thereto, the republic of the seven islands has been formally united to the kingdom of Greece, and her Majesty trusts that the union so made will conduce to the welfare and prosperity of all the subjects of his Majesty the King of the Hellenes.

"Her Majesty's relations with the Emperor of China continue to be friendly, and the commerce of her subjects with the Chinese empire is increasing.

"Her Majesty has been engaged, in concert with the Emperor of Austria, the Emperor of the French, the King of Prussia, and the Emperor of Russia, in an endeavour to bring to effect an amicable arrangement of differences which had arisen between the Hospodar of Moldo-Wallachia and his Suzerain the Sultan. Her Majesty has the satisfaction to inform you that this endeavour has been successful.

"Her Majesty deeply laments that the civil war in North America has not been brought to a close. Her Majesty will continue to observe a strict neutrality between the belligerents, and would rejoice at a friendly reconciliation between the contending parties.

"GENTLEMEN OF THE HOUSE OF COMMONS,

"Her Majesty commands us to convey to you her warm acknowledgments for the liberal supplies which you have granted for the service of the present year, and towards the permanent defence of her Majesty's dockyards and arsenals.

"MY LORDS AND GENTLEMEN,

"Her Majesty has observed with satisfaction that the distress which the civil war in North America has created in some of the manufacturing districts has to a great extent abated, and her Majesty trusts that increased supplies of the raw material of industry may be extracted from countries by which it has hitherto been scantily furnished.

"The revolt of certain tribes in New Zealand has not yet been quelled, but it is satisfactory to her Majesty to know that a large portion of the native population of those islands have taken no part in this revolt.

"It has been a source of much gratification to her Majesty to observe the rapid development of the resources of her East Indian possessions, and the general contentment of the people inhabiting those extensive regions.

"Her Majesty has given her cordial assent to many measures of public usefulness, the result of your labours during the session now brought to a close.

"The Act for extending to women and children employed in various trades the regulations applicable to factories in general will tend materially to preserve the health and improve the education of those on whose behalf it was framed.

"The Act for authorising the grant of Government annuities will encourage habits of prudence among the working classes, and will afford them the means of securely investing the results of their industry.

"The Act for authorising a further advance for public works in some of the manufacturing districts will contribute to alleviate the distress in these districts, and will afford the means of completing many works of marked importance for the health of the population.

"The Act for giving increased facilities for the construction of railways will diminish the expenses attendant upon the extension of those important channels of communication.

"It has afforded to her Majesty the most heartfelt satisfaction to observe the general well-being and contentment which prevail throughout her dominions, and to remark the progressive increase and development of the national resources, and to find that, after sufficiently providing for the public service, you have been able to make a material diminution in the taxation of the country.

"On returning to your respective counties you will still

have important duties to perform, essentially connected with the linking together of the several classes of the community, and her Majesty fervently prays that the blessing of Almighty God may attend your exertions, and guide them to the object of her Majesty's constant solicitude, the welfare and happiness of her people."

The LORD CHANCELLOR then formally prorogued Parliament to Thursday, the 13th October.

HOUSE OF COMMONS.

FRIDAY.—The *Pilotage Order Confirmation Bill*, the *Poor Removal Bill*, and the *Stamp Duties Act* (1864) *Amendment Bill*, were read a third time and passed. The *Cranbourne Street Bill* passed through committee. *Vancouver's Island.*—In reply to Mr. A. MILLS, Mr. LAYARD stated that a despatch had been received from the Governor of Vancouver's Island, conveying a resolution of the Legislature stating that the offer of the Imperial Government to transfer the Crown lands to the colony did not afford an equivalent for the civil list asked. This was coupled, however, with the expression of a desire to be more or less united with British Columbia in sharing the expense. What the answer of the latter was to the proposal he was not aware, but he had no reason to believe that it would be a favourable one. *The Cape Colony.*—In reply to Mr. WARNER, Mr. CARDWELL stated that no arrangement had been come to with the Government of the Cape of Good Hope as to the expenses of possible future wars. He had that day received a despatch from the Governor stating that the expectations he had formed with regard to the continuance of tranquillity in the Transkei were well founded; that he would spare no pains to overcome by legitimate means the feelings of discontent entertained by the Kaffir chief, Kreli, and that the commander of the forces agreed with him in the opinion that it was inexpedient to make an advance on the frontier. *Government Manufacturers.*—Mr. COBDEN called attention to the recent great extension of the Government manufacturing establishments, contending that since we commenced business as shipbuilders, gunmakers, and tailors, the expenditure had enormously increased, while the efficiency of the service had suffered by the experiment. He argued that, so long as we maintained establishments in which we had no customer but ourselves, so long should we continue to produce more than we required. What we wanted was a thorough reform in the buying department, because if we were ignorant of the quality of the raw material, how was it possible that we could produce the best manufactured article? As an illustration of the folly of becoming our own manufacturers and discarding private workships, he stated that iron-clads, cannon, small arms, and clothing had all been proved to be defective, while marine steam-engines and compasses which we obtained from private manufacturers, and which constituted the lungs and brains of our great ships, were always found efficient. In conclusion, he moved—"That the recent great extension of Government manufacturing establishments calls for the attention of the Government. That it is expedient that steps be forthwith taken to place each separate establishment as nearly as possible on the footing of a private manufacturing concern or a public company, by taking a valuation of the fixed and floating capital employed, including the value of the land, and that upon this basis there be an annual stock-taking; when, after making all the customary deductions for depreciation of buildings, machinery, and plant, interest of capital, rates and taxes, and other charges, such a price be charged to the Government departments for articles supplied as shall preserve the capital intact; and that these accounts, with a balance sheet, be laid annually on the table of this House." Colonel BARTTELOT seconded the motion.—Mr. MONSELL contended that the Government establishments were not open to the censure of Mr. Cobden; but that, on the contrary, they were conducted on a good principle, and had been entirely successful.—Alderman ROSE opposed the motion, on the ground that it would leave the Government at the mercy of contractors.—Mr. WHITE gave his complete adhesion to the principles of Mr. Cobden.—Mr. CORRY defended the naval policy of Lord Derby's Government, and said that contract-built ships of the line had proved more expensive than dockyard ships.—Mr. CHILDERS said that so far as the manufacturing establishments of the dockyards were concerned, it was the intention of the Admiralty to take stock hereafter of all the plant in their possession on the first day of the year.—Colonel DICKSON supported the motion, and argued that the whole system of clothing the army might be greatly improved by trusting to private contract.—The Marquis of HARTINGTON showed that in cases where the contract system had been acted upon at a period of emergency it had almost invariably failed. It was to the Government, too, that the credit was due of having introduced the most modern improvements in the machinery for the manufacture of rifles.—After some remarks by Sir M. PETO, General PEEL, and Captain JERVIS, Mr. LAIRD expressed his opinion that construction and repair should be carried on in both public and private dockyards.—Mr. NEWDEGATE thought the House was indebted to Mr. Cobden for having elicited a very useful discussion. The subject then dropped, and the motion for the adjournment to Monday was agreed to.

MONDAY.—*Standing Orders.*—Some discussion ensued with reference to amending the standing orders respecting the private business of the House, and ultimately a resolution was carried limiting the number of members to serve on private bill committees to four, instead of five, as at present. The further consideration of the subject was adjourned.—In reply to Mr. CRAWFORD, Lord C. PAGET said there was no intention to appropriate any portion of *Greenwich Hospital* for the reception of worn out and disabled seamen of the merchant service.—Mr. COWPER, in replying to a question from Mr. HARVEY LEWIS, admitted the filthy condition of the *Serpentine*, the *Kensington Basin*, and the *Ornamental Water in the Regent's Park*, but said that it would not be prudent during the present warm weather to disturb the deposit of mud which had been allowed to collect in these haunts for public recreation. *Intervention in America.*—Mr. LINDSAY asked whether, considering the great sacrifice of life and property occasioned by the war still raging between the Federal and the Confederate States of America, and considering the loss the people of this country have suffered by the war, it was the intention of her Majesty's Government, in concert with the other Powers of Europe, to use their endeavours to bring about a suspension of hostilities.—Lord PALMERSTON assured the House that the Government deeply lamented the sacrifice of life and property in America, and the distress which the continuance of hostilities had occasioned among certain classes of her Majesty's subjects. The Government did not, however, think that in the present state of things any offer of mediation which they might make, either alone or in concert with other Powers, would have the effect of terminating the war. On the order for the third reading of the *Fortifications (Provisions for Expenses) Bill*, Mr. OSBORNE called attention to an important alteration which had been made in the proposed defences at Portsmouth and Spithead. He stated that the Royal Commissioners had recommended an inner circle of defences and that steps had been taken to build a fort on Stourbridge Shoal between Ryde and Portsmouth, but that the project had since been abandoned in consequence of the impossibility of obtaining a solid foundation. But even supposing this fort to have been built, he contended that we had no gun to arm it with, and that we had expended two millions and a half without being able to provide an efficient weapon either for the army or the navy, and that with regard to the latter we had nothing which could successfully resist an attack from armour-clad ships.—The Marquis of HARTINGTON said that a slight modification of the system of defence at Portsmouth was contemplated, but that in all essential respects the works would be precisely similar to those already recommended by the commissioners and sanctioned by the House of Commons. He denied that we had no guns with which to arm the forts, as experiment had proved that the 600-pounder was a most formidable and efficient weapon.—Captain JERVIS spoke approvingly of the exertions made by Sir William Armstrong, and said that the progress of gunnery had fully kept pace with the improvements made in building ships of war. The Bill was then read a third time and passed.—On the motion for the third reading of the *Indian Medical Service Bill*, Mr. HENNESSY urged that the measure would give the Secretary of State for India the power of discontinuing the competitive system and returning to the old and corrupt principle of nomination, which Parliament and the public had already condemned. He moved that the order for the third reading be discharged.—Colonel NORTH seconded the motion.—Sir C. WOOD disavowed any intention of making an attack upon the competitive system, and contended that the only object of the Bill was to enable the Secretary for India to obtain the services of those assistant-surgeons of the Queen's army who, having obtained commissions by competitive examination, might desire to volunteer into the Indian army.—Mr. MONSELL, Mr. LYSLEY, and Sir T. E. COLEBROOKE recommended the Government to withdraw the Bill. As at present worded it would entirely do away with the competitive principle.—Colonel SYKES said that there were already 200 vacancies in the army for assistant-surgeons for which candidates could not be found. On a division the motion of Mr. Hennessy was carried against the Government by 46 to 44. The Bill was therefore lost. The *Defence Act Amendment Bill* was read a third time and passed. On the order for the third reading of the *Cranbourne Street Bill*, Mr. AYRTON moved, as an amendment, that it be read a third time that day fortnight.—Mr. F. PEEL opposed the motion, and on a division the amendment was negatived by 48 to 14. The Bill was then read a third time and passed.—Mr. VILLIERS moved that the House go into committee on the *Poor Relief (Metropolis) Bill*. An animated discussion ensued, in the course of which exception was taken to power being given to the Metropolitan Board of Works to levy a tax for the relief of "destitute wayfarers, wanderers, and foundlings" in the metropolis. The opposition, however, was withdrawn upon an undertaking being given by Mr. Villiers that the duration of the Bill should be limited to the 1st of April next. The Bill then passed through committee. The *Naval Discipline Bill* was read a second time.—Mr. WHITE opposed the second reading of the *Mutual Surrender of Criminals Bill*, on the ground that it was directed against political exiles, and that it was a very suspicious circumstance that the Prussians, who had just aggrandised themselves by robbery and murder, should at this particular moment ask for such a measure. It was true that the House of Lords had passed the Bill, but that, in his opinion, was no recommendation in its favour.—Mr. LAYARD and the ATTORNEY-GENERAL denied that the Bill had any political bearing, and contended that it was precisely similar to the extradition treaties already in force with France, Italy, and other States.—Lord R. CECIL apprehended that the Bill would have a far wider scope, and that it would apply to deserters, who were in many cases political exiles.—Mr. S. FITZGERALD said that a man might be a political refugee in this country, and, having been convicted of some crime in his absence, might under this Bill be demanded from the British Government. There ought, he thought, to be a provision in the Bill to guard against such a contingency as that.—Lord PALMERSTON said that the treaty and the Bill required that proof should be given to satisfy her Majesty that if the offence charged had been committed in this country, it would, according to law, justify a remand.—Mr. LOCKE was opposed to straining a point in favour of Prussia, who was doing all she could to put down liberty upon the Continent; and it was the duty of Parliament to guard against her invasion of our shores to seize upon political refugees.—Mr. FERRAND moved the adjournment of the debate, arguing that the Bill was a flagrant and atrocious violation of the sacred right of asylum.—After some further discussion hostile to the principle of the measure, Lord PALMERSTON consented to the adjournment of the debate, and it was adjourned accordingly.—The *Bribery at Elections Bill* was withdrawn.—Lord PALMERSTON moved "That this House, having considered the report of the Select Committee appointed to inquire into the practice of the *Committee of Council on Education*, with respect to the reports of her Majesty's Inspectors of Schools, is of opinion that the resolution passed on the 12th day of April last with reference to such reports ought to be rescinded, and the said resolution is hereby rescinded." He stated the circumstances under which the resolution had been passed, and said that, as the Select Committee had reported directly at variance with that resolution, he thought it would be but an act of generosity and justice to Mr. Lowe to rescind it.—Mr. HOWES (the Chairman of the Select Committee) and Mr. WALTER supported the motion.—Lord R. CECIL said he was still of opinion that the Committee of Council were not justified in mutilating the reports of the Inspectors of Schools; but that he had no objection to the rescinding of the resolution, in order that it might not be considered that the personal honour of Mr. Lowe was affected. The resolution was then agreed to.

TUESDAY.—At the morning sitting, the *Naval Discipline Bill* passed through Committee. The *Poor Relief (Metropolis) Bill* and the *Salmon Fisheries (Scotland) Acts Amendment Bill* were read a third time and passed. The Lords' Amendments of several Bills were considered. In the evening, Mr. HENNESSY moved an address to her Majesty, to grant her fiat to the petition of right of *Mr. George O'Malley Irwin*, or to satisfy his claims without suit. He said that the case was one of the most extraordinary that had been ever brought before Parliament, in which a party had suffered injustice owing to the culpable neglect of officers of the Crown. He gave a detailed narrative of the facts of the case, and said that the Crown had no right to refuse a petition of right that the question might be brought before a jury.—Mr O'HAGAN said he had taken pains to ascertain the real facts of the case, which, if there was any truth in Mr. Irwin's representation of it, involved imputations upon distinguished persons, living and dead. He then stated the real facts, supported by documents, the contents of one of which, written by Mr. Irwin himself, were inconsistent with the case he now set up. The case had been investigated when persons were alive who were cognisant of the facts, and he cited opinions of high legal authorities adverse to it.—The ATTORNEY-GENERAL said that a petition of right was a remedy applicable to particular cases only, which did not include such a case as that in question. He showed the absurd consequences of the doctrine that a petition of right was a matter of pure right that could not be refused. The fiat was to be exercised under the advice of the law officers of the Crown.—Mr. MALINS said he felt bound to say, after the statement of Mr. O'Hagan, that the case of Mr. Irwin became perfectly ridiculous.—After some remarks by Mr. HADFIELD and Sir G. GREY, the motion was negatived without a division. The House was counted out at nine o'clock.

WEDNESDAY.—*Standing Orders.*—The adjourned debate on the proposed alterations in the standing orders for the regulation of private business, as suggested by Colonel PATTEN and the Committee of Revision, was resumed. After a long discussion on the details of the new machinery, Mr. ROEBUCK moved the adjournment of the debate, so that the whole subject might be discussed next session in the absence of a full house.—Lord PALMERSTON expressed himself in favour of adjournment, but said that if Colonel Wilson Patten chose to proceed he would vote with him. On a division, the motion for adjournment was negatived by 51 to 14. The discussion was continued until 5 o'clock, and the various changes recommended by the Committee were eventually agreed to with verbal amendments. The Lords' amendments to the *Thames Conservancy Bill*, were considered and agreed to. The motion for going into committee on the *Mutual Surrender of Criminals (Prussia) Bill* was discharged on the motion of Sir G. GREY. The ATTORNEY GENERAL for IRELAND obtained leave to bring in a Bill for the recording of titles in Ireland; Mr. BOUVERIE obtained leave to bring in a Bill to establish courts of conciliation, and Mr. BARING obtained leave to bring in a Bill to amend the *Salmon Fishery Act* (1861).

THURSDAY.—*Mexico.*—Mr. LAYARD, in reply to Mr. DUNLACE, stated that her Majesty's Government had intimated to that of the Emperor of the French that when the Archduke Maximilian should notify to the European Powers that he was in possession of the capital, it was their intention to advise the Queen to recognise his Government as the *de facto* Government of Mexico. The Lords' amendments to the *Railway Construction Facilities Bill* and the *Pier and Harbours Orders Confirmation Bill* were considered and agreed to; but the Lords' amendments to the *Railway Companies Powers Bill* were disagreed to. The order for committing the *Partnership Law Amendment Bill* was discharged and the Bill was withdrawn.—Lord E. HOWARD called attention to the subject of *Emigration to the Federal States*, in reference to the prolongation of the war now raging in America. He described the organised manner in which Federal agents both in England and in Ireland were entrapping young men under the pretence of finding them employment on railways, and enlisting them in the army, and called upon the Government to take some steps to prevent a disgraceful violation of the law, by means of which thousands of Queen's subjects were lured to their destruction.—Mr. LAYARD said the noble lord had done good service by calling attention to the subject, but that the question was a most difficult one to deal with. In fact, it was impossible for the Government to do more than to reiterate their warnings to emigrants as to the dangers to which they would be exposed on their arrival in the Federal States.—Mr. HENNESSY urged the Government to prevent, if possible, the kidnapping of young men in the South of Ireland.—Mr. LINDSAY said that persons disposed to emigrate to the Federal States should know that the value of the dollar had fallen from 4*s.* to 1*s.* 6*d.*, and that the Federal army had been reduced since the war from 2,300,000 men to 1,000,000.—Mr. P. TAYLOR defended the Northern Government, which was determined, he said, to put down slave-holding rebels.—Lord J. MANNERS, after a remark upon the inappropriateness of Mr. TAYLOR's speech, suggested that some warnings might be given to emigrants to America by the Emigration Commissioners.—Mr. FERRAND thought the working classes would be deeply grateful to the noble lord for the words of caution and warning he had addressed to them. The subject then dropped.

FRIDAY.—The House met about half-past 2, and were almost immediately afterwards summoned to the House of Lords to hear the Royal Assent given to various Bills, and to hear the Royal Speech on the Prorogation.

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England Directors on Monday raised the rate of discount to 7 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90 to 90⅛ for Money, and 90¼ to ⅜ for Account; Three per Cents. Reduced, 89⅞ to ⅞; New Three per Cents., 89⅛ to ⅜; India Five per Cent. Stock, 104¾ to ⅞; Ditto Bonds, 20*s.* dis.; Exchequer Bills, March, 10*s.* to 6*s.* dis.; Ditto June, 7*s.* dis.—FOREIGN: Buenos Ayres, 92½; Greek, 23⅞ to 24; Italian, 67; Mexican, 29 to ½; Portuguese, 1856, &c., 48; Ditto Acct., 48 to 47⅞; Russian, 1862, 88¾ to 89; Spanish New Deferred, 44; Ditto Passive, 29⅛ to ¼; Venezuela, 1862, 58.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,954,525	Government Debt	£11,015,100
		Other Securities	12,934,900
		Gold Coin and Bullion	3,004,525
		Silver Bullion	—
	£26,954,525		£26,954,525

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,015,100
Rest	3,504,128	Other Securities	20,102,621
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	4,961,046	Notes	3,519,000
Other Deposits	13,719,621	Gold and Silver Coin	623,076
Seven days and other bills	523,002		
	£37,260,797		£37,260,797

July 28, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *July* 22—BANKRUPTS.—G. W. AMOR, Hastar, Hampshire, Cook—J. ARMSTRONG, Crook, Durham, Grocer—H. BARNES, Lacy Tailor—E. BEHENNA, Truro, Cornwall, Carpenter—W. H. BERRY, Swansea, Tailor—T. BENNETT, Fletton, Huntingdonshire, Shopkeeper—T. C. BAKER, W. BAKER, Spintspill, Somersetshire, Beerhouse Keeper—T. C. BAKER, Castle Street, Leicester Square, Licensed Victualler—G. BEALEY, Fulham Road, Chilwell, Nottinghamshire, Lace Agent—J. BEZLEY, Fulham Road, Chelsea, late Ham and Beef Shop Keeper—T. R. BROWNE, Red Lion Square, Surrey, Commission Merchant—P. H. BARTON, Dartmouth Park Road, Upper Kentish Town, Professor of Music—T. CLARKE, Birmingham, Fruiterer—C. COX, York, Assurance Agent—J. CLARKE, Nottingham, Bonnet Front Manufacturer—J. DEARDEN, Halifax, Cotton Spinner—J. DURRANT, Prospect Place, Dartford Road, Dartford, Widow—M. WILLIAM DICKENSON, late of Potter's Coffee House, Broad Street, Bloomsbury—WILLIAM DAVIS, Birmingham, Working Jeweller—W. EDWIN HENRY DEBNAM, Plymouth, Boot and Shoemaker—W. ELGOOD, Leicester, General Commission Agent—R. HURST, of Kingston-upon Hull, Fishmonger—W. GRAHAM, Penrith, Cumberland, Innkeeper—R. GARY, W. GREGORY, Manchester, late Beerhouse Keeper—R. GARY, Kingston-upon Hull—W. HOBBS, Alveley, Shropshire, Innkeeper—E. HOLMAN, South Stoneham, Southampton, Blacksmith—E. HOLMES, Upper Whitecross Street, St Luke's, Baker—R. HIRST, Batley, Yorkshire, Joiner—W. HENSON, Swanington, Leicestershire, Publican—J. HOPE, Duke Street, Deptford, Working Engineer—S. R. JONES, Hertford, Contractor, Coal Merchant—J. JOHNSON, Watford, Northamptonshire, Corn Dealer—G. LANTON—R. JOHNCOCK, Wickham Market, Suffolk, Plumber—G.

[illegible], late Corn Dealer—J. [illegible], Silver Street, Notting Hill, Baker [illegible] (Willenhall Staffordshire, Victualler—W. MATSON, Dealer [illegible], Butcher—W. L. MAYNARD, Blackwater, Southampton, [illegible]—THOMAS MORRIS, Manchester, Warwickshire, Ribbon Weaver—[illegible] MORGAN, Hitchin, Hertfordshire, Grocer—W. M'KNIGHT, late of Nottingham, Draper—J. MESSENGER, Torpenhow, Cumberlandshire—[illegible] MILNES, York, Joiner—F. S. MAYNARD, Eastbourne, Sussex, Plumber—[illegible] Lower Mytton, Worcestershire, Cooper—C. NICHOLS, late of [illegible], Herefordshire, Herdsman—R. PARKES, Houghton Regis, Bedfordshire, Grocer—M. PICKUP, Rochdale, Lancashire, Grocer—J. RIMMER, [illegible], Lancashire, Surgeon—S. L. RICHARDSON, Liverpool, Clerk—H. T. [illegible], John Street, Tottenham Court Road, Marine Store Dealer—R. [illegible], Stockton-on-Tees, Weighman to Ironmasters—H. SUMNER, Whitwell Road, Kentish Stonemason—C. TERRY, Durham, Innkeeper—W. TRANTER, late of Brook Street, Ratcliffe, Cheesemonger—R. VOYSEY, [illegible], Hertfordshire, Bootmaker—W. WILKINS, Beaconsfield, Bucking[illegible] Grocer—R. C. WILLIAMS, Wolverhampton, Soap Maker—J. [illegible], late of Edmonsham, Watch and Clock Maker—R. YOUNG, Hert[illegible] Cordwainer.

TUESDAY, July 26.—BANKRUPTS.—R. ALLEN, late of Barrington [illegible], Station Timber Merchant—F. BLAKE and J. BLAKE, St. George's [illegible], Bayswater Road, Boarding House Keeper—J. BURGESS, Arthur [illegible], Caledonian Road, Slaughterman—J. BARLOW, Burslem, Staffordshire, Plate Grinder—S. BROWN, Morley, Derbyshire, Blacksmith—P. B. [illegible], St. Paul's Head, City Coffee House Agent—W. B. DEWSERY, Wellington Road, Purchasing Ironmonger—J. DUNCAN, late of Great Portland Street, Commission Agent—R. DUFFELL, Henry Street, [illegible], Lamps—J. R. DURHAM, Liverpool, Ironmonger—C. FOTHERGILL, Cutler to a [illegible]—G. W. EVANS, Dartmouth, Devonshire, Hunt and Show Dealer—J. [illegible], late of New Swindon, Wiltshire, Baker—R. FOTHERGILL, Bayham [illegible], Camden Town, Author—I. GIOVANELLI, Manchester, Eating House Keeper—J. GRIFFITHS, Wolverhampton, Staffordshire, Journeyman Timber—WILLIAM JOHN GRIFFITHS, Wolverhampton, Staffordshire, Licensed Victualler—RICHARD HEAP, Manchester, late Publican—J. HARDWICK, Wakefield, Joiner—H. JEFFCOCK, Manchester, late Provision [illegible], J. D. JONES, Aberystwith, Cardiganshire, Clerk in Holy Orders—[illegible], Paper Bag Maker—R. LANCASTER, late of [illegible], Stockwell, Land Agent—W. LANCASTER, late of Wylde's [illegible], Manufacturing Chemist—W. Lord, Oldham, Lancashire, Cotton Waste Dealer—L. LEVY, Little Rutland Street, Bedford Square, Wholesale Jewel Trader—J. LOVE, Branston, Leicestershire, [illegible], Farmer—J. LOVERS, late of Northleach, Gloucestershire, Land Surveyor—J. MOSLEY, late of Great Windmill Street, Haymarket, Saddler—J. W. MARTINDALE, late of Watford, Hertfordshire, Builder—G. NEWELL, [illegible], Pender's End, Enfield, Market Gardener—G. NORDON, New Cut, Lambeth, Shopman to a Glass and China Dealer—C. ORCHARD, jun., [illegible], Livery Stable Keeper—SAMUEL OSBY, Denstone, Staffordshire, Joiner—CORNELIUS PIERCY, Brighton, Sussex, Builder—SAMUEL [illegible], Nottingham, Hosier—R. G. PALMER, Bicester, Oxfordshire, Saddler—G. C. RIX, Guildford Street, Russell Square, Merchant—D. ROSSHAW, Heaton Norris, Lancashire, late Shoemaker—R. S. SUCKETT, Stockwell Terrace, Clapham Road, Baker—S. C. SHEPPARD, Calverton, Nottinghamshire, Schoolmaster—R. TEW, Leamington Priors, Warwickshire, Coachbuilder—R. TAZAKER, Ashton under Lyne, Lancashire, Engine Driver—H. THOMSON, Manchester, late General Smith—J. J. THOMPSON, Church Street, Deptford, Painter and Glazier—J. J. WELLS, Leicester Place, Leicester Square, late Manager of a Steam Saw Mill—J. H. WARD, [illegible], Holloway, Music Teacher—C. WEBB, Garway, Hertfordshire, Wheelwright.

SCOTCH SEQUESTRATIONS.—R. COLTART, Balmaclellan, Farmer—S. FORRESTER, Edinburgh, Law and General Printer—C. HUTCHESON, Greenock, Joiner—S. TORRANCE, Kilmarnock.

Metropolis and its Vicinity.

DINNER TO HER MAJESTY'S MINISTERS AT THE MANSION HOUSE.—On Wednesday evening the Lord Mayor entertained her Majesty's Ministers at dinner at the Mansion House. In returning thanks for the toast of Her Majesty's Ministers, Lord Palmerston spoke as follows:—

"I beg to return our cordial thanks for the very kind manner in which you have received the toast of our health. We are conscious that if we have experienced on this occasion an expression of goodwill and approval, it must be from the conviction which, I trust, is impressed on the minds of all who hear me that to the best of our ability we have done our duty. No set of men can do more—no set of men ought to do less. You have been pleased, my Lord Mayor, to remark that in spite of the fatigues of a rather long session, we are here at your festive board not much the worse for the labours we have gone through. But this, at least, I will say, that you have exhibited a kind foresight and regard for wearied statesmen, and you have waited until the end of a Session which we might have expected to be exhausted in our strength, to be wearied in our minds, to be enfeebled in our constitutions, and have summoned us to a feast which would repair the labours we had undergone, which should fit us to rush into the country to enjoy the pleasures and partake in the active exertions which a country life may entail. I can assure you that her Majesty's Ministers are always delighted to assemble at the festive board of the chief magistrate of the city of London, not simply from social, but also from most important political considerations. For in a country like this, the strength of which depends upon the union of all classes, it is a great advantage that opportunities should be given by which those who are charged with the conduct of affairs should have the means of making acquaintances and contracting friendships with those who are actively engaged in the commercial pursuits upon which the strength, the wealth, and the prosperity of the country so much depend. It is satisfactory, no doubt, to all to know that the prosperity of this country is great, so that her Majesty's Government and the Parliament may congratulate themselves in having contributed to that most fortunate result. It was said of a French statesman of a former period that, having consulted the leading mercantile men of his country how he could best help them, he was told, 'Let us alone.' Well, we have not left the mercantile classes alone, but instead of meddling officiously and injudiciously with laws to promote their welfare by direct interference with their concerns, we, on the contrary, have not left them alone, because we have been employed sedulously and successfully in striking off those shackles and fetters with which the less wise policy of former periods had encumbered and hampered them. My Lord Mayor, you have drunk 'The Army and Navy,' but peace has its victories as well as war. There are other countries which, in these times and in former periods, have sent forth their legions armed for the purposes of aggression to overthrow institutions, to conquer nations, to subdue rival communities, and to inflict misery and desolation wherever their footsteps trod. We have achieved triumphs, we have made aggressions; but we make them of a very different kind. The capital and the skill of Englishmen are spread over the whole surface of the globe; wherever skill and capital can contribute to the happiness of nations, there you will find Englishmen conquering not men, but the difficulties of nature, overthrowing not human institutions, but those obstacles which nature has opposed to the intercourse of men, contributing to the wealth, happiness, and prosperity of the nations by whom they are employed and in whose territories their operations are carried on. Well, my Lord Mayor, that is a proud and a satisfactory reflection for Englishmen to make, and I may be permitted to say that the commercial community of England is mainly the cause of those triumphs. It is by the successful industry and commerce of the merchants of England that that wealth is accumulated and that influence created by which those difficulties over the difficulties of nature for the benefit and happiness of mankind have been achieved and are now in progress among the nations."

Earl RUSSELL acknowledged the toast of the House of Lords, and amidst much laughter said:—

"It may appear to some as if your lordship had paid me a compliment which was hardly appropriate, when I remember that the House of Lords has not shown that degree of confidence which I thought I had some right to expect in the management of the foreign affairs of the country. I am happy, however, to think that this alarm of the House of Lords, which, in fact, was confined to those Lords who were in distant parts of the country, has been very much exaggerated. I am happy to think that you, my Lord Mayor, agree with me that never did this country stand in a prouder position, never was its influence greater with all foreign countries than at the present moment."

THE WIMBLEDON RIFLE MEETING.—Notwithstanding the unfavourable opinion of the surgeons the marker who was shot last week in the back is still living, and there are now some hopes that his life may be saved. On Friday the competition was brought to a close, the Earl of Dudley's prize being won by Lieut. Burt, of the 1st Warwick; the first Mont Storm prize by Sergeant Brook, of the 12th Middlesex; Lord Vernon's prize, by Eden, Inns of Court; and the Wimbledon Cup, by Sergeant Martin Smith, of the Victorias. On Saturday the distribution of prizes took place, and in the evening there was a review of about 10,000 volunteers by his Royal Highness the Commander in Chief. The prizes, in the absence of the Minister of War, were distributed by Lady Elcho. Previous to the distribution Lord Elcho addressed the volunteers, congratulating them on the success of the year's meeting, which had only been attended by the one misfortune—the accident to the marker, whose wound had excited commiseration in all quarters, her Majesty herself having sent a telegram that day to know his condition. In consideration of his state the sham fight which was intended became a mere review; and in order to prevent his being disturbed no guns were fired or bugles sounded. This rendered the closing spectacle of the meeting rather tame, but all present acquiesced in its propriety.

CORPORATION EXPENDITURE.—On Tuesday a report of the coal, corn, and finance committee of the Corporation of London was published, directing the attention of the Court of Common Council to the enormous sums of money which the court has of late voted for extraordinary purposes. The committee state that by the 10th of October next the City's cash will be overdrawn by a sum which they estimate at upwards of 43,320*l*, caused by an excess of expenditure over and above the ordinary income of the Corporation. The committee complain that a standing order of the Corporation, which requires that all votes for extra expenditure shall be submitted to the Committee before they are agreed to, has been neglected, or this serious deficit would not have happened.

GREAT SALE OF SHAKESPEARE'S WORKS.—The valuable library of the late Mr. George Daniel, of Canonbury, has been on sale during the last seven days at the rooms of Messrs. Sotheby & Co., in Wellington Street, and has excited extraordinary interest. Tuesday was chiefly devoted to the works of Shakespeare, comprising the four first folio editions, all of the first class, and much finer copies than can ever again occur for sale. The separate plays, also in quarto, as originally published during the lifetime of the poet, presented a remarkable feature, all being of the first editions, and of the highest degree of rarity. The following prices were obtained for these literary treasures:—The first folio of 1623 realised 682 guineas, and was bought for Miss Burdett Coutts; the second folio, 148*l*.; the third folio, 46*l*.; the fourth, 21*l*. 10*s*. Of the separate plays, the first edition of the Tragedy of Richard II., the first copy ever brought to public auction, realised 325 guineas; the first edition of Richard III., the only copy which has ever occurred for sale, 335 guineas; Love's Labour Lost, first edition, 330 guineas; Henry IV., second edition, 110 guineas; Romeo and Juliet, first complete edition, 50 guineas; Henry V., first edition, 220 guineas; Merchant of Venice, first edition, 95 guineas; Much Ado about Nothing, first edition, 255 guineas; Midsummer Night's Dream, first edition, 230 guineas; Merry Wives of Windsor, first edition, 330 guineas; Othello, first edition, 155 guineas; Lucrece, first edition, 150 guineas; Venus and Adonis, second edition, 240*l*.; Venus and Adonis, small edition of 1596, of which the only other known copy is in the Bodleian, 300 guineas; Sonnets, first edition, 215 guineas; Richard II., second edition, 103 guineas; Troilus and Cressida, first edition, 109 guineas. The day's sale amounted to 5871*l*. 5*s*.

THE MAIN DRAINAGE WORKS.—On Monday the Metropolitan Board of Works invited the members of metropolitan vestries and other friends to inspect their works at the outfalls on both sides of the river. They proceeded by steamer to Barking Creek, and entered one of the chambers of the great reservoir on the north side—the only one of the four which is not yet brought into use, and then went across the river to Crossness, and inspected the reservoir on the south side. These reservoirs being now finished will be brought into immediate use. The diversion already amounts to one-third of the whole metropolitan sewage.

NEW TRAFFIC REGULATIONS FOR THE CITY.—The new bye-laws, orders, and regulations for the City traffic, were published on Tuesday by order of the Lord Mayor; Sir George Grey, the Home Secretary, having approved of the alterations made at his suggestion by the Court of Aldermen. The following is a copy of the revised regulations:—

"Every omnibus, metropolitan stage carriage, van, or other carriage, licensed for the conveyance of passengers, at separate fares, passing eastward through St. Paul's Churchyard and proceeding to, or whose destination as stated on such vehicle, or in its licence, shall be London Bridge, shall, when it reaches the south-east corner of St. Paul's Cathedral, pass down Cannon Street, and thence over London Bridge; and every such carriage making the reverse journey shall traverse the like route; and the driver of every such omnibus, metropolitan stage carriage, van, or other carriage licensed for the conveyance of passengers at separate fares, shall drive the same pursuant to this regulation. 2. No person shall drive any cart, waggon, dray, or other vehicle for the conveyance of goods, wares, and merchandise, through the streets, between the hours of nine in the morning and six in the evening, laden to a greater height than 16 feet, measuring from the ground, or laden to a greater width than seven feet, or the breadth between the outsides of the wheels of which vehicle (except it shall have been in use before or on the 28th of July, 1863) shall be greater than seven feet. 3. No person shall draw any cart, waggon, or other vehicle wholly or partially laden with timber, scaffolding, or other poles, logs of wood, masts, spars, or other articles or things, whether consisting of wood, metal, or any other material, exceeding 25 feet in length, or eight feet six inches in breadth, through any street between the hours of nine in the morning and six in the evening."

THE DECORATIONS OF ST. PAUL'S.—On Friday the ceremony of uncovering the first of the mosaic paintings at St. Paul's Cathedral, forming part of the intended embellishments of the interior, took place in the presence of several noblemen and gentlemen forming the committee for raising funds for the decoration of the cathedral. It is a mosaic, designed by Mr. Alfred Stevens, and carefully executed by M. Salviati, of Venice. It is placed in one of the eight spandrels formed by the great arches of the dome under the whispering-gallery, and occupies a space of nearly 300 superficial feet, although, as seen from the floor of the cathedral, the effect of distance renders it hard to believe in its real dimensions. The design is intended to represent the Prophet Isaiah in a vision, with two attendant angels, and is one of a series of groups with which it is proposed to adorn the eight spandrels in that part of the edifice illustrative of the Prophets. It represents the Prophet seated, and turning half round towards the right, as if scanning some mystery which is indicated by a tablet held by an angel, while on the left another angel exhibits a separate revelation. It is executed upon a gold ground, which greatly enhances its effect, and has occupied M. Salviati two months, the cost being about 700*l*.

MURDER AND SUICIDE AT SOMERS TOWN.—On Monday afternoon it was discovered that a carpenter named Brown had murdered a married woman called Rosetta Bishop, who had been living with him as his wife, in one of the small streets in Somers Town, and that the murderer had committed suicide. It appeared from inquiry in the neighbourhood that on the night of Tuesday, the 19th, there was a fearful quarrel between them. The other lodgers in the house heard the striking of blows, accompanied by screams of murder; but the same circumstance had occurred so frequently before that little or no notice was taken of it. As the woman had not been seen in the neighbourhood since that night, some of the neighbours made inquiries of Brown about her, but he merely stated that she had gone away from him altogether, and had threatened to take proceedings against him. On the Sunday following her disappearance, the first-floor lodgers, believing that he had no one to attend to him, invited him to dinner, and mentioned the peculiar smell which appeared to proceed from the cellar. Brown in reply, stated that the smell arose from some uncooked meat which the missing woman had left locked up. On Monday afternoon one of the lodgers of a house having command of a back view of Brown's premises had occasion to fetch some water, when, to her amazement, she saw some one hanging between the two folding doors of the kitchen. She gave the alarm, and assistance being promptly obtained, the body of Brown was cut down, but life was extinct. The odour of decomposition which had previously been observed had now become intolerable, and on the police searching the premises they found the body of the woman in the coal cellar with her skull fractured, and in such a decomposed state that it was evident that the murder must have taken place several days before. The head was gaping with wounds and covered with worms, while portions of the brains and the skull were found wrapped up in the hearth-rug, and there were evident signs that some of the brains had actually been thrown upon the fire. The police have since found the axe with which the unfortunate woman was struck down, still stained with blood, in the waterbutt, where the murderer had thrown it. They also found that he had intended to bury the corpse in the kitchen, as the hearthstone was found loose, as if it had been taken up, but as the house drain ran below, it was of course impossible to place the body there. At the inquest which was opened on Thursday the evidence showed that the murdered woman was the wife of a painter at Gloucester, from whom she had been separated for many years. She had led a dissipated life for some time past, and had given the man Brown frequent cause for jealousy by her intrigues with other men in his own house and elsewhere. It appeared also that Brown was in possession of title-deeds of houses which appeared to belong to her, which, as the Coroner remarked, might show that the murder arose from a more sordid motive than jealousy. The inquest was ultimately adjourned to Tuesday, the Coroner stating that he should issue his warrant for the interment of the woman, but should not order the burial of Brown, in case the jury should feel it their duty in his case to return any special verdict.

THE LATE MURDER ON THE NORTH-LONDON RAILWAY.—On Friday the Government obtained a second warrant for the apprehension of Müller and sent it out in the

steamer of Saturday, in case any accident should happen to the City of Washington. The evidence on which this warrant was issued was taken in public, and was much fuller than has before been given. It is noticeable that a gentleman, a friend of Mr. Briggs, saw him in the carriage at the Bow Station, the last time he was seen alive. There were then two other persons in the compartment. Unfortunately this witness had a second-class ticket and did not get in beside his friend. This evidence was considered to show that there must have been two persons concerned in the murder, and this idea was supposed to be strengthened by the apprehension of a man at Stafford, whose appearance corresponded with the description of the murderer, and in whose pockets were found a duplicate for a gold watch and a pocket-book, in which the name of Müller occurred. Inspector Williamson saw the prisoner on Friday night, and at once found that he was not the man. He remains in custody however on a charge of felony. The police have since found in the house in which Müller lodged a life preserver with marks of blood. It was the property of a fellow workman, and had been taken by Müller without his knowledge. The coroner's inquest was resumed on Monday, but the proceedings were of a merely formal nature. Mr. Lee, a friend of Mr. Briggs, repeated the evidence which he had previously given before the magistrate to the effect that he saw and talked with Mr. Briggs on the night of his murder at the Bow Station, and that there were then two persons in the compartment with him, neither of whom attempted to get out. The inquest was then adjourned for a fortnight.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended on Saturday, July 23, were 1399. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1266. The present return is therefore 133 above the average. During the week the births of 976 boys and 894 girls, in all 1870 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 1831.

Provincial.

ALDERSHOT.—Two soldiers were drinking at a beer-house on Aldershot Moor, on Saturday, when a quarrel arose between them. One of the men was a private of the 75th Regiment, named Hutchins, and the other was called Barlow. During the altercation Barlow struck Hutchins, and with one blow behind the ear felled him to the ground dead. He was at once arrested, and has been committed for trial. He has hitherto borne a good character in his regiment, and at a late competition in camp with athletic games carried off several prizes.

BIRKENHEAD.—The Earl of Shaftesbury, after some correspondence with the Rev. Dr. Baylee, the Principal of St. Aidan's Theological College, has withdrawn his name from the list of Vice-Presidents of the institution, in consequence of a circular which has lately been issued intimating that "any Wesleyan wishing to become a minister of the Church of England can be admitted to St. Aidan's College without the preparatory examination, and on advantageous terms." Lord Shaftesbury has expressed his opinion that such a mode of "touting" for candidates for holy orders is as derogatory to the character of the Church of England as it is offensive to the Wesleyan community.

DURHAM.—John Croudace and Thomas Allison, who were convicted at the assizes last week of garotte robberies at Sunderland, and sentenced, the former to five years' and the latter to ten years' penal servitude, with 20 lashes each, underwent the punishment of flogging at the County Prison on Saturday. The instrument of punishment was manufactured by a sailor, who is undergoing imprisonment in the gaol, expressly for the purpose. The cat is ingeniously composed of nine thongs of stout leather, in each of which are nine knots, and these being connected to a flexible handle, the power, wielded by strong hands, is terrific. At every stroke the knots cut deeply, making flesh and blood fly in every direction. The prisoners were firmly tied up in a reclining position, the lower part of their shoulders exposed, the higher and lower part of their backs being protected by padding. The two warders alternately inflicted ten lashes each on each of the prisoners. The first lash was received with comparative equanimity by each prisoner; but on the second, the yell of agony which burst forth is represented as indescribable, and their cries continued during the remainder of the punishment. The prisoners were then taken down and removed to the prison infirmary in a state of complete prostration. Although the other prisoners did not witness the punishment, they could hear the shrieks of the sufferers in their cells, and it is hoped that the contemplation of the punishment may have a salutary effect on them.

LIVERPOOL.—A fatal collision took place between two steamers on Saturday night, at the entrance to the Mersey from the Crosby Channel. Between 10 and 11 o'clock the steamer Golden Pledge, belonging to Messrs. Klingender & Co., and fitted out in the Birkenhead docks with the intention, it is understood, of running the blockade of the Confederate States, went down the river with a clearance for Havana. She was heavily laden, and having her coals on board for the voyage, was very deep in the water. About half a mile outside the Rock Lighthouse, she was run into by the steamer Cognac, from Cadiz, belonging to Messrs. Harrison. The Golden Pledge received such serious damage that she almost immediately sank. The two engineers and one fireman went down with the vessel. The captain, the mate, and another man saved themselves by clinging to the Cognac, and 10 others were saved by a waterman's boat, which was towing at the stern of the ship at the time of the disaster, but most of them had to swim for their lives until they were picked up.

MANCHESTER.—On Tuesday morning a shocking murder and suicide were committed in a house in Great Ancoats. The occupiers of the house were James Gilbert, a pavier and wellsinker, with his wife and five children. About 6 in the morning a policeman heard cries of "murder" issuing from Junction Street, and on going in that direction met one of the girls of the family, who called out that her father had stabbed her mother. On entering the house the officer saw the wife at the top of the stairs, with her throat cut from ear to ear. The stairs were covered with blood, and the unfortunate woman only survived a few minutes. The officer proceeded upstairs, where he found the husband sitting on the side of a bed, with his throat cut, and a stream of blood flowing from the wound. He also died soon afterwards. A woman living in the neighbourhood had arrived before the policeman, but the murderer threatened to take her life if she interfered, and she left the house to obtain assistance. The deceased woman had been drinking for a week past, which is said to have led to the dreadful tragedy. The husband had been heard to say he would hang himself or cut somebody's throat. He was about 50 years old, and the wife was about 40. They had five children, the two eldest of whom had left the house, owing to their father's threats. The three others were in the house at the time of the murder. The jury at the inquest returned a verdict of Wilful Murder against James Gilbert, and that he afterwards committed "suicide, while in an unsound state of mind."

Ireland.

THE LORD LIEUTENANCY.—It is stated that the Earl of Carlisle, in consequence of ill-health, is likely to yield to the opinion of his medical advisers by withdrawing for a time from public life. It is thought that the Duke of Devonshire will be his successor in the Viceroyalty; and, in the event of his declining, the Marquis of Lansdowne and the Earl of Bessborough are mentioned.

SUSPENSION OF FATHER DALY.—The Rev. Peter Daly, of Galway, has been suspended by the Pope, on the report of his bishop, for attending a *soirée* of the Mechanics' Institution.

THE CASTLETON MURDER.—At the Mayo Assizes on Friday, Michael Morrison and Michael Clarke were indicted for the wilful murder of Lawrence Conlan, at Castlebar, in July 1863. These prisoners were tried for this offence at the last assizes, but the jury did not agree. The deceased was a member of the constabulary, and was returning home from the house of a friend in Castlebar on the 22d of July, 1863, when he was overtaken by the prisoners, who brutally murdered him by kicking him in the street, and by stabbing him in the neck with a knife. Morrison was tried first, and was found guilty, with a recommendation to mercy. Baron Deasy sentenced him to be hanged on the 25th of August. Michael Clarke was then tried and found Guilty, but as he did not absolutely strike the fatal blow the jury recommended him to mercy. Sentence of death was passed on him, but the judge informed him that the recommendation would be forwarded to the Lord Lieutenant, and that his life would probably be spared, but that the least punishment he should expect would be perpetual penal servitude.

ILLEGAL MARRIAGE.—At the Monaghan assizes on Friday, before Baron Fitzgerald, the Rev. John M'Loughton, Roman Catholic priest, was indicted for the second time for assisting to celebrate an illegal marriage between Daniel Peterson and Susanna Quinton, in Enniskillen. The prisoner was indicted at the last assizes, but his trial was postponed, and the case removed by certiorari from Fermanagh to Monaghan. It will be remembered that Miss Quinton was a ward in Chancery and a Protestant; Peterson was an attorney's clerk and a Roman Catholic; and their marriage was performed, without the knowledge of the young woman's friends, by a priest of whom they aver they know nothing. The jury found a verdict of Not Guilty. Their verdict does not affect the nullity of the marriage.

ALLEGED WIFE POISONING.—A remarkable case of alleged wife poisoning was tried at the assizes for Tyrone on Friday. The prisoner was William M'Nickle, and he was arraigned for the second time on this charge. It appeared that he had been married to his wife about three years, and that shortly before her death she had been confined of a child. During her illness a nurse made some gruel for her, which she left in charge of the prisoner while she went to the well for water. After partaking of this gruel the prisoner's wife died in great agony, and it was proved that her death was caused by arsenic. A dog which ate some of the gruel was at once removed by the prisoner and destroyed, and when it was discovered and examined six weeks afterwards, arsenic was found in its body. Under these circumstances, the prisoner was tried for murder, but the jury disagreed, and, after being locked up several hours, were discharged.

CONVICTION OF A PRIEST FOR FORGERY.—At the Tralee Assizes on the 16th, the Rev. John Jerrine [illegible], a Roman Catholic priest, was tried for having obtained money from several persons by falsely pretending that he was authorised by the Roman Catholic primate, Dr. Dixon, to collect money for the erection of a new church and school-house. He was also charged with forging the signature of Dr. Dixon to a document purporting to authorise him to collect money for the same purpose. He pleaded Guilty; and in mitigation of punishment stated that he had been curate of two parishes for 16 years, during which he had expended 1300*l.* of his own money in building three chapels for the accommodation of the parishioners. He therefore thought he was perfectly justified in endeavouring to collect the three or four hundred pounds with which he could enter some religious community. After an impressive address from Judge Ball, he was sentenced to 18 months' imprisonment.

Scotland.

SUSPECTED MURDER NEAR GLASGOW.—A woman named Jane Sneddon, 37 years of age, who gained a livelihood as a farm-worker, was murdered last week at Hamilton Farm, near Rutherglen. She was a woman of dissolute habits, and lodged occasionally in the house of a collier at Eastfield, but had no fixed place of residence. On the morning of the 20th she complained to her landlady that she had been severely injured on the previous Saturday. She said that she had been indulging in liquor on that day, and while lying in a partially intoxicated state in a piece of vacant ground between New Row, Hamilton Farm, a shameful assault had been committed upon her person, whereby she was wounded to the great effusion of blood. The unfortunate woman, it appears, lay on the ground a considerable time after the committal of the act, and then succeeded in reaching her lodgings. She did not inform her landlady that she had been assaulted till Wednesday, the 20th, and in the course of the day she gradually sank and died. About half-an-hour before she expired she stated that the assault had been committed by a collier called Thomas Cunningham. On receiving this statement the county police lost no time in apprehending Cunningham, who is a lad only 19 years of age. On Friday he was taken before Sheriff Bell on the charge of murder, and committed to prison for further examination.

Sporting.

NEWMARKET.

TUESDAY.—*Craven Stakes.*—Mr. J. Lowe's Angelsauce, Birchbroom, Fairwater, Manrico, and 5 others. Lord Westmoreland's Lady of Coverham beat Lady Alice, Overstone, St. Alexis, and 3 others. *Lavant Stakes.*—Mr. Spencer's b. or br. c. Longdown beat Sibena and [illegible]. *Steward's Cup.*—Lord Westmoreland's Marigold beat Ayr, Crisis, and 37 others. *Gratwicke Stakes.*—Mr. T. Ake's Blair Athol beat Peon, Miss Pickle, and Lightfinger. *Stakes.*—Mr. Savile's Haarlem beat Skirter, Jack [illegible], and Pampa. *Fifty Pounds.*—Duke of Beaufort's Box beat Erin-go-Bragh, Tyke, Ossian, Rosina, and Mo. *Match.*—Colonel Townley's Newchurch beat Almack.

WEDNESDAY.—The visit of the Prince and Princess of Wales, who arrived to-day, has been the event of the meeting this year, and has invested the Stakes day with an interest lacked in other respects. The *Drawing room Stakes.*—Mr. A. Cooper's Knight of Snowdon beat Glendusk, Harkaway, King George, Hollyfox, and Goldylocks. *Handicap.*—The Duke of Beaufort's Crytheia beat St. Vincent, Volunteer, 4 others. *Sweeps.*—Mr. R. Ten Broeck's Idler beat [illegible] and Gownsman. *Sweeps.*—Lord Glasgow's Sister to Ione beat Auricula, Procella, Gazza Ladra and Esperance. *Derby.*—Mr. W. G. Craven's Young Rapid walked over. *Goodwood Stakes.*—Mr. T. Parr's Blomfin beat [illegible], Thalestris, and 4 others. *Handicap Plate.*—Mr. [illegible] Deerfoot beat Olivia, Oberon, and 4 others. *Cesarewitch.*—Mr. Night's Sister Mary beat Antidote, Goram, Tring, and Papillon. *Findon Stakes.*—Mr. G. Bryan's Ostregor beat Koenig, Zambesi, Bunch, and Wild Boy.

THURSDAY.—*Third Year of the Twelfth Bentinck Memorial Stakes.*—Mr. J. Bowes's Old Orange Girl walked over. *Fourth Year of the Thirteenth Bentinck Memorial Stakes.*—Mr. [illegible] Baragahj beat Ely and Goldylocks. *Chichester Stakes.*—Mr. John Day's Master Richard beat Historian, Blue Bell, and others. *Sweeps.*—Baron Rothschild's Maid Marian beat Glasgow's ro. f., Stygne, and Skirter. *Goodwood Cup.*—Mr. Lupin's Dollar beat East Lancashire, The Ranger, Hermit, and 6 others. *Racing Stakes.*—Captain A. Cooper's Knight of Snowdon beat The Beadle and War Dance. *Molecomb Stakes.*—Duke of Beaufort's Koenig beat Zambesi and Lozenge. *Stakes.*—Captain Gray's King George beat Lady of Coverham, Beaver, and The Beadle. *Fourteenth Bentinck Memorial Stakes.*—Mr. Bowes's Farewell beat Harlem, Mr. Merryman, and others. *Zetland Stakes.*—Mr. W. I'Anson's Blair Athol walked over. *Sweeps.*—Count F. de Lagrange's Le Monarque walked over.

FRIDAY.—*Sweeps.*—Victorious beat Birchbroom and Cross. *March Stakes.*—No Name beat Prescription, Wild Thyme, 9 others. *Chesterfield Stakes.*—King of Utopia beat Exchequer, Madcap, and 23 others. *Nassau Stakes.*—Bradamante beat Beatrix, Auricula, and 3 others. *Nursery Handicap.*—Vanguard beat Lord Waldegrave, Watchbox, and 25 others; a dead heat between the second and third. *Duke of Richmond's Plate.*—Master Richard beat Erin-go-bragh and King of Clubs. *Sweeps.*—Llangollen beat Colleen and Glencenty c. Sardinia walked over. *Queen's Plate.*—Stanton beat Ace of Hearts.

ETON AND WESTMINSTER BOAT RACE.—The contest between oared boats, between the public schools of Eton and Westminster, took place on Thursday from Chiswick to Putney. The weather was fine, and there was a large assemblage of spectators on both banks of the river. The race was keenly contested, but Eton got the lead soon after the start and kept it to the close. Westminster made repeated and desperate efforts to reverse the position, but was overmatched.

Law.

HOUSE OF LORDS: *The Yelverton Marriage* (*Yelverton* v. *Yelverton* or *Longworth*).—The judgment of the House in this long litigated case was delivered on Thursday morning. It was an appeal from the decision of the Scotch courts of law declaring the marriage of Teresa Longworth, the respondent, with the Hon. Major Yelverton, the appellant, legal. The law lords present were the Lord Chancellor, Lord Kingsdown, Lord Wensleydale, and Lord Chelmsford. The Lord Chancellor read his judgment, and said there was nothing in the evidence which rendered it improbable, and much that made it probable, that a secret marriage had taken place between the parties in Scotland. He believed that the respondent agreed to go and cohabit with the appellant provided that a religious ceremony took place in a Roman Catholic chapel in Ireland. He believed the cohabitation which took place in Ireland was in consequence of what took place in Scotland, and he therefore agreed with two of the judges of the court below, that there was a marriage validly constituted in Scotland between the appellant and the respondent, and that they did then, and do now, stand in the relation of man and wife. In conclusion his lordship said that Lord Brougham, who was unable to attend to give judgment in person, agreed with him in favour of the marriage. Lord Wensleydale said that he had come to the conclusion that there had not been a legal marriage in Scotland, and that there had not been a promise of marriage *in* Ireland. He therefore moved that the decision of the court below be reversed. Lord Chelmsford thought that the conduct of the respondent at Roscrea was fatal to her case, for she would never have required the Roman Catholic ceremony to be performed if she felt that the Scotch marriage was legal. He did not consider the declaration of the appellant to Father Mooney "that he was a Protestant Catholic" was sufficient to constitute that marriage legal. The subsequent conduct of the parties was not sufficient to legalise the alleged Scotch marriage, even in Scotland not having taken place until after the Irish marriage. Having weighed the evidence carefully, he came to the conclusion that the respondent had entirely failed to establish her marriage, and that the interlocutory decision of the Court of Session ought to be reversed.—Lord Kingsdown said that he did not think there had been a promise of marriage in Scotland. He considered that the religious ceremony in Ireland was intended to have no legal effect, but simply to calm the conscientious scruples of the lady. Under all the circumstances he was of opinion that the respondent had entirely failed to establish her marriage.—The Lords being thus divided, 3 to 1, the Lord Chancellor then gave judgment that the judgment of the Court below be reversed, and that the actions against the appellant be stayed, but without costs. [A contemporary says—"The result of the judgment was anxiously waited for by Mrs. Yelverton at the office of her agent. On being made aware that the decision was against her she swooned, and for some time remained unconscious, passing from one fainting fit into another. Restoratives were administered, and after a short interval the poor lady rallied, and was then carried in a semi-prostrate state to a brougham, and conveyed to the residence of her uncle in Cambridge Terrace, Hyde Park." The *Morning Post* has the following:—"A minute of reference to oath has been lodged by Mrs. Yelverton, the practical result of which is to prevent the judgment being made final in Scotland until the parties to the suit have been examined on oath. Their evidence given in Ireland is considered most important."]

WESTERN CIRCUIT: EXETER.—*The Charge against General Hutchinson.*—The grand jury having ignored the bill preferred against *Major-General Walter Nelson Hutchinson*, for feloniously killing and slaying George M'Coy, at Devonport, the General took his place in the dock to be tried under the coroner's inquisition. He was dressed in private clothes, and on being arraigned pleaded Not Guilty. Mr. Lopes, who appeared for the Crown, said that Major-General Hutchinson was charged on the coroner's inquisition with what was called the manslaughter of a man named M'Coy, who was proceeding from the Breakwater in Plymouth Sound, when a ball directed from the Citadel struck his boat, and he was killed. Upon this a coroner's inquisition was held at Devonport, and a verdict of Manslaughter returned against General Hutchinson, as the Commander-in-Chief at Plymouth, by whose orders the artillery practice was carried on. Subsequently a bill was prepared, which had been ignored by the grand jury. He had since had the opportunity of consulting the authorities upon this subject, and was of opinion that the charge could not legally be brought home to the General, and he therefore should not offer any evidence on the coroner's inquisition. As, however, several communications which had been sent to the General in respect to the practice from the towns of Devonport and Plymouth had not been attended to, it was to be hoped that the death of this man at any rate would have the effect of causing the authorities for the future to take efficient measures to prevent similar fatalities. His lordship, addressing the jury, said—The course which the learned counsel has taken is the usual course. Where the grand jury have ignored a bill it is not usual to proceed further upon the coroner's inquisition. And not only is it not usual, but it would lead in some cases to a public scandal were it otherwise, because at the same assizes one jury might say that there was not enough evidence against a person even to put him on his trial, whilst another jury might find him guilty. The learned counsel, in my opinion, has in this case acted rightly, and I have had an opportunity of reading the depositions. As no evidence is offered against him, and as you have no opportunity of finding a man guilty without evidence, there is only one verdict you can return. The jury immediately returned a verdict of *Not Guilty*. His Lordship: Let him be discharged. General Hutchinson then bowed and left the dock.

OXFORD CIRCUIT: *The Murder of a Policeman at Willenhall.*—*Thomas Lockley*, 24, locksmith; *John Edwards*, 26, labourer; *George Lockley*, 21, labourer; *Joshua Stanley*, 26, brass-caster; and *Joseph Willetts*, 19, locksmith; were charged with the Wilful Murder of William Lyons, a police-constable, at Willenhall, on the 8th of May. It appeared from the evidence that the prisoners had been drinking and creating a disturbance in a public house, the landlord of which threatened to send for a policeman if they did not leave his house. On their departure they met deceased, to whom the prisoner Lockley used abusive language. The officer told him that he would lock him up if he did not go on. A struggle ensued, in which all the prisoners appeared more or less to have taken part. The deceased officer attempted to handcuff Thomas Lockley, who thereupon threw a brick at his head, fracturing the skull and causing such injuries that paralysis of the right side ensued, and he died on the next day. The defence was that deceased was not acting legally in the execution of his duty in endeavouring to handcuff Lockley, and that at most, therefore, he and his companions were only guilty of manslaughter. The jury found George Lockley, Thomas Lockley, Edwards, and Stanley, *Guilty* of Manslaughter, and *Acquitted* Willetts. Mr. Justice Shee sentenced Thomas Lockley, who threw the brick which gave the fatal blow, to eight years, six years, and Joshua Stanley, who had been recommended to mercy, to five years' penal servitude. The fifth man, George Lockley, his brother, to six years, John Edwards to [illegible] Willetts, who was acquitted, was then indicted for stealing the policeman's truncheon, but counsel for the prosecution considered that the ends of justice had been secured, and decline to offer any evidence. A verdict of *Not Guilty* was then recorded, and the prisoner was discharged.

MIDLAND CIRCUIT: NOTTINGHAM.—*The Fiskerton Murder.*—*Richard Parker*, butcher, aged 29, was charged with the wilful murder of his mother, Elizabeth Parker, at Fiskerton, on the 10th of May last, and also with shooting his father with intent to murder him. The prisoner, who was on bad terms with his father, went to the house drunk and threatened to fight him. The father called him a rogue and a villain, and ordered him to leave the house. The prisoner then went into the house and got a double-barrelled gun, upon which his mother induced the father to go away. He went towards the stable, closely followed by the mother, when the prisoner fired both barrels in succession. Both the father and mother were severely wounded, but the former recovered, and the latter, after lingering for some time, at length died of her wounds. The jury returned a verdict of *Wilful Murder*, with a recommendation to mercy on account of the prisoner's being in liquor. **The Judge: Prisoner, have you anything to say?** Prisoner: Yes, my lord, I am not guilty of wilful murder. I had no intention of murder; it was an accident. The Judge: I quite agree with the jury. I firmly believe that you fully intended to murder your father as well as your mother. The recommendation of the jury I will forward to the proper quarter. Mr. Justice Blackburn then passed sentence of *Death* in the usual form.

DERBY: *Murder of a Husband.*—*Mary M'Morrow* was indicted for the murder of her husband, on the 23d June, at North Wingfield, by setting fire to his clothes as he lay asleep and drunk on a squab in their sitting-room. The man died from the effects of the burns about a fortnight after the act had been perpetrated. It was urged in defence that the man had fallen into the fire whilst in a state of intoxication, but this was disproved by many witnesses, and his coat, which the prisoner had burnt to create the belief that he had fallen into the fire, was found to be burnt on the left side instead of the right. The prisoner was found *Guilty* of Manslaughter. Mr. Justice Keating sentenced her to seven years' penal servitude, and said that the Jury had taken a merciful view of the case. *Burning a Man with a Hot Poker.*—*Eliza Hoyland*, aged 48, a publican, pleaded Guilty to the charge of burning Thomas Shooter, at Chesterfield, with a poker. It appeared that the man was a tramp, and was in the house of defendant very drunk and refused to leave. The prisoner threatened that if he did not pay what was due and go she would apply a hot poker to his person, and she put the poker in the fire for the purpose. It was also stated that the man gave considerable offence by the indecent state of his clothes, and that his condition and conduct were disgusting. As he refused to go the prisoner at length got a man to put him on the ground, face downwards, and while in that position she carried out her threat, and put the hot poker against his flesh through an aperture in his trousers. A surgeon deposed that he found appearances of burning and excoriation, but he did not think the poker could have been red hot, or the burns would have more serious. The prisoner excused her conduct on the grounds already mentioned, and expressed her sorrow. Mr. Justice Keating severely commented on the offence, and sentenced her to three years' penal servitude. She seemed utterly astonished and overcome by the sentence.

Obituary.

THE DOWAGER COUNTESS AMHERST died a few days since at Bournemouth, in her 73d year. She was the eldest daughter of the third Duke of Dorset, and married first in 1811 the Earl of Plymouth; and secondly, in 1839, the first Earl Amherst. Her ladyship had no issue by either marriage.

LADY HARRIET ELLERTON died on the 27th inst., after a lingering illness, at her residence in Connaught Place, Hyde Park. She was the youngest daughter of the seventh Earl of Scarborough, and was twice married, first to the Rev. Frederick Manners-Sutton, and secondly, in 1837, to Mr. J. L. Ellerton.

MAJOR-GENERAL SIR WILLIAM BRERETON, R.A., K.C.B., K.H., died on Wednesday last in the Albany, Piccadilly, in his 78th year. He obtained his commission as second-lieutenant in 1805. He served in Spain from 1809, and was present at the defence of Cadiz and of Fort Matagorda, at the siege of San Sebastian, the battles of Barossa, Vittoria, the Pyrenees, Orthes, and Toulouse; in the retreat from Burgos, at San Munos, near Salamanca, Helete, St. Palais, Sanveterre, Aire, and Tarbes. In the campaign in the Netherlands he was present at Quatre Bras and at Waterloo. He was subsequently second in command of the expedition under General d'Aguilar against the forts of the Bocca Tigris, and the city of Canton. In the Crimean war he was on board H.M.S. Britannia, under the command of his relative, Vice-Admiral Dundas, and directed the rockets fired against the forts of Sebastopol in 1854. For a short period he held the command of the Irish Constabulary, and for a time was commandant of the 4th Brigade of the Horse Artillery. In 1838 he was made a Companion of the Bath, having the year previous been made a Knight of the Guelphic Order. In 1861 he was nominated a Knight Commander of the Bath, in recognition of his services. He also contributed largely to his military renown by his writings on the improvement of artillery. He received the silver war medal, with six clasps, and the Crimean medal and clasp for Sebastopol.

MAJOR-GENERAL HARDINGE, K.H., brother of the late Viscount Hardinge, and the late Sir Charles Hardinge, Bart., died on the 20th inst., at 32, Hyde Park Square, after a short illness, in his 74th year. He was the fourth son of the Rev. Henry Hardinge, and was born in 1790. He entered the Army at an early age, and obtained his commission in 1806. He served in the Peninsula from 1812 till the end of the war in 1814, including the battle of Vittoria, siege of San Sebastian, battles of Orthes and Toulouse, affairs at Orma, Tolosa, Bidassoa, and Tarbes. He served also in the campaign of 1815, and was present at Ligny and Quatre Bras. He was made a knight of the Royal Hanoverian Guelphic Order in 1825, in recognition of his services, and received the silver war medal and four clasps for the Peninsula. He attained the rank of Major-General in 1858.

ADMIRAL BERTIE CATOR died on the 23d inst., at the Palace Hotel, Buckingham Gate, in his 77th year. He entered the Navy in 1800, under his uncle, Captain Albemarle Bertie. He was actively employed in the capture of privateers in the Mediterranean, and was captured by two French frigates while in charge of a transport, on its way from the Cape of Good Hope to the Mauritius, but was exchanged shortly afterwards, and was then placed in command of the Bombay Anna, the East India Company's ship, in which he assisted at the capture of the Isle of France in 1810. He commanded the Actæon on the coast of America in an attack on the barracks, &c., in Lynn Haven Bay, in 1813, and took part in various other services afloat. After gaining post rank he was not employed afloat, and accepted the retirement of 1846, attaining the rank of Rear Admiral in 1851, and that of Admiral in 1862.

COLONEL FIELDING BROWNE, C.B., died at his residence, 82, Gloucester Crescent, Regent's Park, on the 22d inst., in his 80th year. He entered the Army in 1800, and accompanied the 40th Regiment to the Peninsula in 1808. He commanded the regiment at the assault of Badajoz, and was rewarded with the gold medal. He served also in the expedition against New Orleans, and commanded the regiment at the battle of Waterloo. He was appointed a barrack master in 1836, and after serving about 20 years at Malta returned to England, and had since been employed in charge at Regent's Park, St. John's Wood, and Kensington. Besides receiving the gold medal for Badajoz, he received the silver war medal with seven clasps for the other battles and siege.

MR. DIVETT, M.P. for Exeter, died on Tuesday, at Bystock, near Exmouth, after a long illness. He was the son of Mr. Edward Divett by the daughter of Mr. John Kensington. He was born in 1797, and was educated at Eton. He was first returned for the city of Exeter in 1832, and has ever since continuously represented the city in the Liberal interest. He was a magistrate and deputy-lieutenant for Devon; and chairman of the South Australian Banking and Land Company. He married in 1836 the daughter of Mr. George Ross.

MR. SERJEANT MEREWETHER, who was for 17 years Town Clerk of the City of London, died on the 22d inst. at his residence, Castle Field, near Calne, at the age of 84. He was called to the bar in 1809, and at the time of his death, as for many years before, held the rank of a serjeant-at-law, with a patent of precedence. He was a D.C.L., and attorney-general to the late Queen Dowager. For many years he held the office of Recorder of Reading, and went the Western Circuit. At one time, when he practised much before Parliamentary Committees, he is said to have realised an income of 5000*l.* a year. He was elected to the office of Town Clerk of London, at a salary of 2000*l.* a year, in 1842, when he was 62 years of age, and relinquished his professional practice in order to devote himself exclusively to the discharge of his duties. He resigned the office in his 79th year, from considerations of failing health and advanced age, and was allowed a pension of 1000*l.* a year from the Corporation. He was a man of fine presence, with much suavity of manner and a dignified bearing, and it is generally acknowledged by the civic authorities that the office was never more worthily sustained than by him. Serjeant Merewether had a large family, five of whom survive, his eldest son being Mr. Henry Merewether, Q.C., and Recorder of Devizes. It is remarkable that his death was preceded by a few hours by that of his brother, the Rev. Francis Merewether, Rector of Cole-orton, Leicestershire, at the age of 80.

MRS. WOOD, formerly better known as Miss Paton, the vocalist, died on Thursday at Bulcliffe Hall, Bretton West, near Wakefield, where she had resided for the last 12 months. She had retired from public life for many years, and was latterly a teacher of music at Leeds. It was at Drury Lane and Covent Garden, that as Miss Paton, she first won her fame as a vocalist, and gained a hold upon the admiration of the public, which never ceased until her retirement from the stage. Her *repertoire* extended through the whole range of English opera, in which there was scarcely a piece which she did not adorn by her attractive singing and dramatic talent. She was at the height of her reputation as a vocalist when she was married to Lord William Lennox. The union, however, did not prove a happy one, and no very long time elapsed before a separation, followed by a divorce, took place. She subsequently married Mr. Wood, himself a vocalist of considerable talent. She still, however, continued to maintain the position she had achieved as the first of English female vocalists, gradually contracting her public engagements, however, until she finally retired from the stage, and took up her residence at Wakefield, where she lived for several years. She afterwards removed to Leeds, where she for many years exercised the profession of a teacher of music.

MR. WILLIAM KEMMIS, formerly Crown solicitor, and solicitor to the Treasury in Ireland, died on the 20th inst., at his house in Kildare Street, Dublin. He assisted in person at the trials of 1798, and himself conducted, with great discretion, skill, and ability, every remarkable trial from 1801 to the end of the disturbed period of 1848, and received the thanks and approbation of each Attorney General and Administration under whose directions he acted. In 1859 he retired from his official duties, after a service of more than half a century. His death makes a vacancy in Irish society that will not easily be replaced, and removes an historical link between the past and present century.

WILLS.—The will of Mr. John Hamlin Smith, of Brighton, wine merchant, has been sworn under 35,000*l.* personalty; Mr. Thomas Feetham, late of Montague Square, and of Weybridge, coal merchant and wharfinger, 120,000*l*; Mr. T. P. Cooke, the popular actor, 25,000*l.*, exclusive of freehold estates.

BIRTHS.—On the 26th inst, at 22, Upper Grosvenor Street, the Lady MARY HERBERT, of a daughter—22d inst, at 37, South Street, Lady COLEBROOK, of a son—25th inst, Lady BEDINGFELD, of a son—12th inst, at Chevenage, the wife of the Hon J. Y. BULLER, of a son—20th inst, at Wilton Crescent, the Hon. Mrs. WROTTESLEY, of a son—20th inst, at Foulmire Rectory, near Royston, the Hon Mrs. ARTHUR SAVILE, of a daughter.

MARRIAGES.—On the 23d inst, at St. George's, Hanover Square, Lieut. GERALD EDMUND BOYLE, 1st Battalion Rifle Brigade, and son of the Hon. John Boyle, to Lady THERESA PEPYS, daughter of the first Earl of Cottenham—26th inst, at Trinity Church, Marylebone, the Hon. IVO DE VESCI EDWARD TWISLETON WYKEHAM FIENNES, Major 9th Queen's Royal Lancers, third son of Lord Saye and Sele, to ISABELLA EMILY, only daughter of CHARLES FRANCIS GREGG, Esq.—20th inst, at Epworth Church, Captain ELLIS P. F. REEVE, Coldstream Guards, eldest son of Ellis Reeve, Esq., to FANNY EMMA, second daughter of the Hon. and Rev. C. DUNDAS, rector of Epworth, Lincolnshire—21st inst, at St. Paul's, Knightsbridge, Lieut.-Colonel WILLIAM EARLE, Grenadier Guards, second son of Hardman Earle, Esq., Allerton Tower, Liverpool, to MARY, second daughter of General Sir W. J. CODRINGTON, K.C.B.—26th inst, at Alveston, Warwickshire, CHAS. RAYMOND PELLY, Esq., eldest son of Raymond Pelly, Esq., to LOUISA CATHERINE EMMA, youngest daughter of Sir ROBERT N. C. HAMILTON, Bart., K.C.B.—23d inst, at the Catholic Church, Spanish Place, and afterwards at the parish church, St. Marylebone, JAMES BUTLER HUGHES, Esq., of Waterford, youngest son of the late Captain Hughes, Killemly Caher, to MARGARET M'KENZIE, widow of Captain A. D. GORDON, H.M.'s Madras Fusiliers, and youngest daughter of the late Sir George Simpson, Governor-in-Chief of the Hon. Hudson's Bay Company's Territories—19th inst, at St. Paul's Church, Clifton, Lieutenant THOMAS ROWORTH PARR, Rifle Brigade, to MARY BRIDGET, daughter of the late Sir ALEXANDER M. DOWNIE—21st inst, at East Allington, Devon, the Rev. ROBERT PALK CAREW, youngest son of the late Sir Henry Carew, Bart., of Haccombe, Devon, to CHARLOTTE HORNSBY CLIFTON, widow of the Rev. R. C. Clifton, canon of Manchester, and Rector of Somerton, Oxon—21st inst, at St. John's Church, Paddington, WILLIAM SHEARMAN TURNER, Esq., to HELEN, third daughter of the late Sir RICHARD JENKINS, G.C.B., and M.P. for Shrewsbury—20th inst, at Westcott Church, HANBURY, son of the late ROBERT BARCLAY, Esq., to ADELINE HENRIETTA, daughter of ARTHUR KETT BARCLAY, Esq., of Bury Hill, Surrey.

DEATHS.—On the 24th inst, at Southsea, JAMES NEIL, third son of Lord TALBOT DE MALAHIDE, aged 12—20th inst, at Prince's Gardens, Kensington, EVELYN GEORGINA, the infant daughter of Mr. and Lady GEORGINA VERNON, aged 6 months—22d inst, at 25, Upper Brook Street, Lady RIDLEY, relict of Sir M. W. Ridley, Bart., aged 81—23d inst, at Semel Manor House, Melksham, ISABELLA ELIZABETH, wife of Admiral J. W. MONTAGU—21st inst, at 15, Pittville Lawn, Cheltenham, Lieut.-Colonel JOHN HAILES, late of the H.E.I.C.S., aged 72

—29th April, killed in action in New Zealand, Captain C. R. MURE, 43d Monmouthshire Light Infantry, aged 31—16th inst, at Albyn Place, Aberdeen, Captain ALEXANDER DINGWALL FORDYCE, R.N., of Culsh and Brucklay—26th inst, at Ashford House, near Haines, ALEXANDER MILLER, Esq., magistrate and deputy-lieutenant for the county of Middlesex—23d inst, Dr. W. BELL, M.D., of 33, George Street, Hanover Square—25th inst, at his residence at Eton, F. W. H. SCHONERSTEDT, Esq, 31 years German and Hebrew master at Eton College, aged 65—18th inst, at Ballynatray, Waterford, the Rev. GRICE BLAKENEY SMYTH, brother of the Princess of Capua and Lady Dinorben, aged 66—21st inst, at Cole Orton Rectory, the Rev. F. MEREWETHER, rector of Cole Orton, and vicar of Whitwick, Leicestershire, aged 80.

Markets.

COVENT GARDEN, July 30.

Notwithstanding the present dry weather, most descriptions of outdoor produce continue abundant. Cherries, Gooseberries, and Strawberries, though scarcer, are still sufficient for the demand. Of Grapes and Pine Apples there is also a good supply, and Black, Red, and White Currants are plentiful. The arrivals of foreign goods comprise Apricots and West India Pine Apples, both of which, especially the latter, are abundant and cheap. Green Walnuts for pickling may still be obtained. Peas are plentiful, as are also Potatos. Flowers chiefly consist of Orchids, Heaths, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Cherries, per lb., 6d to 9d
Grapes, per lb., 4s to 8s	Oranges, per 100, 16s to 20s
Peaches, per doz., 6s to 10s	Lemons, per 100, 5s to 9s
Nectarines, do., 6s to 12s	Nuts, Barcelona, do., 16s
Strawberries, p. punn, 6d to 1s 6d	— New Brazil, do., 16s.
Gooseberries, green, p. qt., 3d to 6d	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 6d to 8d
Asparagus, per bundle, 4s to 7s	Cucumbers, each, 4d to 1s
French Beans, p. ½ sieve, 3s to 4s	Beet, per doz., 1s 6d to 2s
Peas, p. basket, 2s 6d to 3s 6d	Shallots, per lb., 6d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 6d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 2d to 4d	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 6d to 9d	Mushrooms, p. pott., 1s to 1s 9d
Rhubarb p. bundle, 2d to 4d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

COAL MARKET.—July 27.

Lambert's West Hartley, 17s. 6d.; North Pelton Gas, 14s.; Tanfield Moor Butes, 13s. 6d.; Walker Primrose, 13s. 6d.; Walls End Byron, 17s. 6d.; Walls End Harton, 17s.; Walls End Wharncliffe, 17s. 3d.; Eden Main, 17s. 6d.; Walls End Belmont, 17s. 3d.; Walls End Braddylls Hetton, 18s.; Walls End Framwellgate, 17s. 3d.; Walls End Haswell, 19s.; Walls End South Hetton, 19s.; Walls End Tunstall, 17s. 3d.; Walls End Caradoc, 18s. 6d.; Walls End Hartlepool, 18s. 9d.; Walls End Heugh Hall, 18s.; Walls End Kelloe, 18s.; Walls End East Hartlepool, 18s. 9d.; Walls End South Hartlepool, 18s.; Walls End South Kelloe, 18s.—Ships at market, 81.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, July 28.

Prime Meadow Hay	70s	to 80s	Clover, old	95s	to 120s
Superior do. ..	90	100	New Clover ..	80	100
Inferior do. ..	—	—	Do. second cut ..	—	—
New do.	70	90	Straw	26	32
Rowen	—	—	HARVEY & EASTON.		

CUMBERLAND MARKET, Thursday, July 28.

Sup. Meadow Hay ..	98s	to 105s	Inferior Clover ..	95s	to 108s
Inferior do.	78	90	New do.	105	115
New do.	78	94	Straw	32	36
Superior Clover ..	118	126	JOSHUA BAKER.		

WHITECHAPEL, THURSDAY, July 28.

Fine Meadow Hay ..	90s	to 95s	Prime 1st cut Clover	110s	to 116
Inferior do.	84	90	Inferior do. do. ..	105	110s
Prime New Hay ..	80	84	Prime 2d cut do. ..	110	114
Inferior	70	80	New Clover	95	100
Straw	27	30	Inferior do.	—	—

NEWGATE.—July 29.

Best Fresh Butter .. .. 12s. per dozen lbs.
Second do. do. .. .. 10s. "
Pork, 4s. 4d. to 4s. 8d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, July 29.

Messrs. Pattenden & Smith report that the demand continues good, and fine samples difficult to be met with of last year's growth. The late advance is fully maintained. The plantation accounts are very favourable, and the crop bids fair to be of extraordinary good quality. Rain is much wanted.

BRITISH WOOLS.—LONDON, July 28.

Down wool sympathises with the great advance in long wool, and we quote it considerably dearer. All descriptions are on the advance.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hogs	2	3		2	4	Leicest. Hoggs ..	2	5	to 2	7	
Half-bred ditto ..	2	6	to	2	8	Ditto Wethers ..	2	3	— 2	4	
Down Ewes ..	2	1	—	2	2	Combing Skins	1	6	— 2	0	
Kent Fleeces ..	2	4	—	2	6	Flannel Wool ..	1	0	— 1	9	
						Blanket ditto ..	0	6	— 0	9	

METROPOLITAN CATTLE MARKET.

MONDAY, July 25.

The number of Beasts is considerably smaller than on Monday last, yet there is a fair supply. A better clearance is effected, but it is difficult to obtain much higher prices, except for a few choicer descriptions. The supply of Sheep and Lambs is very small. The trade is not very brisk, but prices are better for all descriptions. Choicest Calves are rather dearer. From Germany and Holland there are 2240 Beasts, 7590 Sheep, 306 Calves, and 220 Pigs; from Spain, 140 Beasts; from Scotland, 68 Beasts; from Ireland, 90; from Norfolk and Suffolk, 100; and 2510 from the Northern and Midland Counties.

	s.	d.		s.	d.
Best Scots, Herefords, &c. ..	4	10	to 5	2	
Best Short-horns	4	6	— 4	10	
2d quality Beasts	3	0	— 3	8	
Best Downs and Half-breds	—		..		
Do. Shorn ..	5	2	— 5	4	

	s.	d.		s.	d.
Best Long-wools. ..	—		..		
Do. Shorn ..	4	8	— 5	0	
Ewes & 2d quality ..	—		..		
Do. Shorn ..	4	0	— 4	6	
Lambs	5	8	— 6	8	
Calves	3	8	— 5	2	
Pigs	3	4	— 4	4	

Beasts, 5530; Sheep and Lambs, 24,280; Calves, 442; Pigs, 400.

THURSDAY, July 28.

We have a short supply of Beasts. The demand is pretty good, and Monday's quotations are well maintained. The number of Sheep and Lambs is about the same as on Thursday last. There is a better demand for them, and Monday's advance is freely given. Choice Calves are not quite so plentiful, and prices for all kinds are rather higher. Our foreign supply consists of 690 Beasts, 2480 Sheep, 658 Calves, and 140 Pigs. Milch Cows, 70.

	s.	d.		s.	d.
Best Scots, Herefords, &c. ..	4	10	to 5	2	
Best Short-horns	4	6	— 4	10	
2d quality Beasts	3	0	— 3	8	
Best Downs and Half-breds	—		..		
Do. Shorn ..	5	2	— 5	4	

	s.	d.		s.	d.
Best Long-wools. ..	—		..		
Do. Shorn ..	4	8	— 5	0	
Ewes & 2d quality ..	—		..		
Do. Shorn ..	4	0	— 4	6	
Lambs	5	8	— 6	8	
Calves	3	8	— 5	2	
Pigs	3	4	— 4	4	

Beasts, 1330; Sheep and Lambs, 11,570; Calves, 807: Pigs, 260.

MARK LANE.—MONDAY, July 25.

The supply of Wheat from Essex and Kent to this morning's market was small, and met a slow sale at the prices of this day sen'night. The market was tolerably attended, nevertheless foreign Wheat was neglected, and taken only in retail at the rates of last week. Grinding Barley was 6d. per qr. cheaper. Beans were fully as dear. Peas were 1s. per qr. dearer. The Oat trade was quiet, and sales could only be effected by submitting to a reduction of 6d. per qr. Flour remained steady:

PER IMPERIAL QUARTER.		s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk ..	White	44—46	Red	40—42
— — fine selected runs ..	ditto	46—48	Red	42—44
— — Talavera		50—54		
— Norfolk		—	Red	—
— Foreign		38—54		
BARLEY, grind. & dist, 25s to 27s ..	Chev.	34—38	Malting ..	29—33
— Foreign .. grinding and distilling		22—26	Malting ..	27—31
OATS, Essex and Suffolk		18—22		
— Scotch and Lincolnshire	—Potato	20—25	Feed	18—22
— Irish .....Potato		19—22	Feed	—
— Foreign .....Poland and Brew		18—23	Feed	17—22
RYE		30—32	Foreign ..	—
RYE-MEAL, Foreign		—		
BEANS, Mazagan....32s to 35s...	Tick	33—36	Harrow ..	33—36
— Pigeon .... 36s to 40s ..	Winds.	—	Longpod	—
— Foreign .....Small		32—38	Egyptian	30—33
PEAS, White, Essex and Kent ..	Boilers	34—36	Suffolk ..	34—38
— Maple .... 31s to 37s	Grey	31—33	Foreign ..	32—36
MAIZE .....White		—	Yellow ..	—
FLOUR, best marks delivered ..	per sack	35—40		
— 2d do	ditto	28—34	Country ..	28—34
— Foreign	per barrel	18—25	Per sack	32—34

FRIDAY, July 29.

With the exception of about three hours' rain on the 25th, and a little on the 26th, the weather since the 22d has continued fine and warm. Accounts of the Wheat crop vary much, and have seldom been more contradictory. We think that with a continuance of fine weather the crop, particularly on Wheat land, will prove better than seems to be generally anticipated, but the samples will be more variable, and probably there will be much thin Wheat with a lighter average weight. The breadth of Barley is large, but without rain the proportion of grinding will probably be large. Oats promise but moderately, and Beans and Peas badly. During the above named interval the Wheat trade has been dull throughout the kingdom, and in the majority of the principal markets a decline of about 1s. per qr. has resulted. Generally Oats, Beans, and Peas have continued to have an upward tendency of prices, but owing to the large arrivals of Oats here their previous value has been barely maintained. Barley has undergone little alteration in prices. Flour has been less in request, but we do not alter our quotations. Since Friday last 73 vessels have been reported off the coast. Paris, July 28.—The business has been limited during the week, but holders were very firm, and with a little demand even an advance of about 9d. per 280 lbs. has been obtained to-day in a few instances. The six marks for delivery this month are quoted equal to 34s. 9d. per 280 lbs. The present stock of Flour is estimated at 29,700 cwts. Very little has been done in Wheat at 6d. to 1s. per qr. higher rates. The arrivals of English Wheat are small and of Oats large, as also of foreign Wheat, Barley, Oats, and Flour. The attendance at this morning's market was almost confined to factors and agents; the English Wheat fresh up being held for Monday's prices remained unsold at the end of the market, but rather lower rates would have been accepted for foreign ex ship, had buyers come forward. Beans and Peas continue to improve in value. Prices of Oats are unaltered. Malting Barley is inquired after, but Grinding neglected.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	650 qrs.	— qrs.	1190 qrs.	390 sks.
Irish	—	—	3790	— "
Foreign ..	17,630 "	3470	80,540 "	340 " / 26760 brls

LIVERPOOL, July 26.—At our market to-day there was a fair business effected, chiefly in red American, at a decline of 2d. per cental on the price of this day week. Oats the turn dearer. Egyptian Beans firm. Indian Corn very plentiful, and must be quoted 9d. to 1s. per qr. cheaper. Oatmeal unchanged. Flour in fair demand at full prices.

FRIDAY, July 29.—The market was thinly attended. Wheat quiet, at 8s. 2d. to 8s. 3d. for amber. Flour steady, at late rates. Indian Corn 6d. lower. Beans unaltered. Oats and Oatmeal unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
June 18	40s 3d	27s 6d	20s 4d	32s 8d	35s 5d	33s d
— 25	40 0	28 0	20 8	..	35 5	33 3
July 2	40 9	27 2	20 9	31 2	36 2	34 0
— 9	41 9	27 8	21 10	28 9	36 1	32 8
— 16	42 6	27 10	21 7	31 5	36 11	34 3
— 23	43 0	27 3	21 0	34 0	37 8	35 7
Agg. Aver.	41 4	27 7	21 0	31 7	36 3	33 11

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	June 18.	June 25.	July 2.	July 9.	July 16.	July 23.
43s 0d	..	..	..	..	..	
42 6	..	..	..	..		..
41 9	..	..	..		..	..
40 9	..	..		..	..	..
40 3		..	..	..	..	..
40 0	..		..	..	..	..

WANTED, in the West of Ireland, a HEAD GARDENER.—Wages, 96l. a year, and a good House, no Fuel nor Vegetables allowed. He must understand Forcing Houses, Orchard Houses, and all usual Gardener's work.—M. S., 2, Mansfield Street, Portland Place, W.

WANTED, a good GARDENER.—Apply B. C., 25, Bishopsgate Within, E.C.

WANTED, an active Young Man as ASSISTANT in the Seed Shop and Counting House. Must have some knowledge of the Business and be a good Penman.—Apply by letter only, stating age, qualifications, and reference, also what salary required.—OSBORN & SONS, Fulham Nursery, London, S.W.

WANTED, as GROOM and GARDENER, a middle-aged man, to make himself generally useful, with care of Cow, Poultry, &c.—Address B. A., at Moreau's, Stationer and Bookseller, Queen's Road, Bayswater, W.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS.—JAMES DICKSON & SONS, "Newton" Nurseries, Chester, can now recommend EXCELLENT Gardeners, of whom they will be glad to [illegible] particular as to character and ability.

To Noblemen and Gentlemen.

GARDENER (HEAD).—Single; first-class ability. Of very sober and trustworthy principles; testimonials found to be of the highest order.—HORTUS, Post Office, Turn[illegible]

GARDENER (HEAD).—Will be disengaged August 6. His present and previous employers will be glad to afford their testimony to his proficiency in every department of the Garden, &c.—HORTUS, Mudie & Sons, 15, Coventry Street, [illegible]

GARDENER (HEAD).—J. MCNICOLL, late Gr[illegible] O. T. Alger, Esq., Bushy Heath, in consequence of Inver[illegible] Estate is open to an engagement. Orchard House Fruit [illegible] Management.—J. McN., J. J. Foster, Anmer Nurseries, Edgw[illegible]

GARDENER (HEAD).—Age 30, married, no [illegible] brance; thoroughly understands Forcing all kinds of Fruit, Flowers, and Vegetables; Stove and Greenhouse Plants; Kitchen and Flower Gardens. Good character.—G. S., Mr. Chapman's Nurseries, Weybridge, Surrey.

GARDENER (HEAD).—Age 32, married; has had many years experience in the Management of Large Gardens, including the Forcing of all kinds of Fruit, Flowers, and Vegetables; 4 years practice in the Cultivation of Orchidaceous, Stove and Greenhouse Plants, Ferns, &c., for Exhibition. 10 years unexceptionable character, and first-class references.—A. M., Mr. Shorey, Stationer, Ongar, Essex.

GARDENER (HEAD), age 37, married.—G. T[illegible] Gardener, Blyth Hall, Worksop, Notts, will be disengaged August, and will be happy to engage with any nobleman or gentleman in want of a thorough practical man. Has had extensive experience in all the various branches of his profession. Also wishes for a situation where there is scope for energy. No objection to Ireland.

GARDENER (HEAD).—Age 33, married, one child, begs to offer his services to any nobleman or gentleman requiring the services of a first-class Gardener, fully competent in every branch of his profession. No objection to Plantation, Park, or Arable Land. Present employer will answer any [illegible] Good references from previous employers.—G. M., at Sutton's, Reading.

GARDENER (HEAD), where three or four are kept. Age 27; understands Vinery, Peach Houses, Cucumber, Melons, Flower and Kitchen Gardens. Can be well recommended.—A. M., Post Office, Feltham, Middlesex.

GARDENER (HEAD) and BAILIFF.—Age [illegible] married; thoroughly experienced in Early and Late [illegible] of all kinds of Choice Fruit, Flowers, and Vegetables; Kitchen Flower Gardens; the Management of Land and Stock; Accounts, &c. Wife experienced Dairywoman if required. Family excellent character, and can be well recommended.—A. B., Mr. Henderson, Pine Apple Nursery, Edgeware Road, London, W.

GARDENER.—Age 40; good testimonials can be [illegible] —J. DOUGHTY, Auctioneer, Midland Road, Derby.

GARDENER (SECOND, or under the Foreman).—Understands the Management of Kitchen and Flower Gardens, Forcing, &c. The advertiser can be highly recommended.—A. Z., Mr. Slocombe, Chipping Ongar, Essex.

GARDENER (UNDER).—Age 19; wishes to improve himself in some Large Establishment. Three years' good character.—M., Post Office, Whetstone, Middlesex.

GARDENER (UNDER).—Age 21; three [illegible] years' good character.—M. W., Mr. Allmann's Nursery, Horsham, Sussex.

PROPAGATOR of Hard and Soft-wooded Plants, Grafting, &c.—For particulars, apply to ALFRED [illegible] Broxbourne, Herts.

FOREMAN, or FOREMAN and PROPAGATOR.—Age 27; well understands the Cultivation of Rhododendrons, Conifers, &c., and the routine of the Nursery generally. Good reference.—A. D., The Nursery, Wimbledon [illegible]

FOREMAN.—EDWARD BENNETT can with confidence recommend his Foreman in the above capacity; has had practical experience in Early and Late Forcing. Stove, Greenhouse, Orchids, and other Plants and Flowers. Three years' character. Direct as above, Osberton Hall, Worksop, Notts.

BAILIFF and GARDENER, with 18 years' practical experience with noblemen and gentlemen. Copy of testimonials on application.—I. B., 30, Mary Street, Hampstead Road, London.

To Noblemen, Gentlemen, and Agriculturists.

FARM BAILIFF, ESTATE BAILIFF, or WORKING STEWARD.—A young Man, who has been employed [illegible] the estate of the Duke of Bedford, is well acquainted with Farming, the general Management of Estates and Woodlands, and would make himself generally useful.—H. TAYLOR, Oakley, near Bedford.

BAILIFF or LAND STEWARD.—Married, no incumbrance; has had considerable experience in all branches of profession. First-class testimonials as to character and ability; particulars apply to JAMES DICKSON & SONS, 102, Eastgate Street, Chester.

STEWARD (UNDER), or STEWARD'S CLERK.—To nobleman or gentleman. A Young Man.—Mr. JOHN KEMP, Castle Street Nursery, Salisbury.

ASSISTANT BOOKKEEPER, SALESMAN, &c.—A Young Man accustomed to getting up Orders, experience.—L. Y., Botanic Gardens, Bury St. Edmunds.

GARDENER (HEAD or SINGLE).—Married, no incumbrance; practical knowledge of his profession; first-class character.—J. HOOPER, Mr. McArthur, Nurseryman, Makers, Edgware Road, London, W.

GARDENER (HEAD), or GARDENER and BAILIFF.—Age 35, married, no incumbrance; thoroughly understands his profession in all its various branches. Has had charge of Early and Late Forcing all kinds of Fruits; also the Management of Land and Stock. Wife a thorough good Dairywoman. Present and 12 years' unexceptionable character from late and previous employers. A copy of testimonials can be sent to any gentleman on application.—A. B., General Post Office, Exeter.

GARDENER (HEAD).—Age 24, single; has a good knowledge of Forcing Fruits, Flowers, and Vegetables. Three years' Management of Stove and Greenhouse Plants. Three years' good character.—I. BENNETT, Gardener, J. C. im Thurn, Esq., Elm Hill, London, S.

WANTED, a Good SOFT-WOODED PROPAGATOR.—Apply by letter only, stating age, experience, and wages expected, to Mr. WOODROFFE, The Westbourne Nurseries, Road, W.

GARDENER (HEAD).—Middle-aged, no incumbrance; will shortly be disengaged; [illegible] worthy; has had great experience in the growth of Pines, Peaches, Early and Late Fruits, Stove and Greenhouse Plants; good Flower and Kitchen Gardener. Character will bear strictest investigation. Wages not less than 70l. with [illegible] Croydon Street, Bryanstone Square.

GARDENER (HEAD).—Age 40, married; [illegible] age 11; thoroughly practical; experienced in Pines and Peaches, Cucumbers, &c. Good kitchen and [illegible] dener; Rose and Fern Grower. Four miles [illegible] character.—J. P. Post Office Laleham, Chertsey, Surrey.

The Gardeners' Chronicle Newspaper.

SATURDAY, AUGUST 6, 1864.

Universal Microscope. Price £5 5s.

SMITH, BECK, AND BECK, 31, Cornhill, E.C.; late 6, Coleman Street.
*** Catalogues sent on receipt of 6 postage stamps.

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SAYNOR AND COOKE, Pruning and Budding Knife Manufacturers, beg respectfully to say that they will not be undersold by any House in the Trade. They also warrant one of their Knives to last two of any other make
Paxton Works, Sheffield.

BENJAMIN EDGINGTON, Marquee, Tent, Rick Cloth, and Flag Manufacturer by Special Appointment to her Majesty.—MARQUEES, TEMPORARY ROOMS and AWNINGS, for Dinners, Balls, Parties, &c., on HIRE, lined, boarded, and decorated. RICK CLOTHS, New and Second-hand, with Poles, &c., complete. NETTING for Fruit Trees; Scrims for Greenhouse Blinds, &c. An Illustrated Catalogue sent free by post. Be particular to address, Benjamin Edgington (only), 2, Duke Street, London Bridge, S.E. No other Establishment.

FLOORING, MATCH BOARDS, DEALS, &c., as low as advertised. White Batten, 9*l.* per 120, 12 feet; Yellow ditto, per cube foot; 1 Floor Boards, well prepared, from 11*s.* 6*d.* per square; Matched Lining, from 12*s.*; Venetian Blind Laths from 5*s.* 6*d.* per 100 feet super.—Charles Cutler, Surrey Sawing and Planing Mills, Church Street, Kennington.

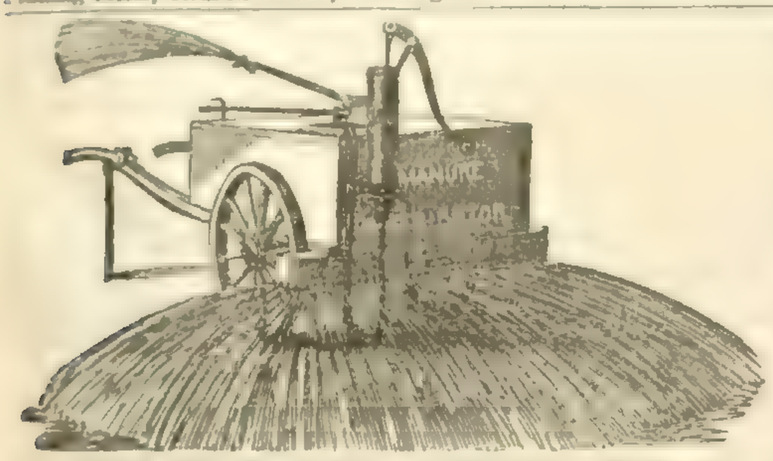

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The last great improvement in Washing Machines is in James's new Patent PRIZE WASHING, WRINGING, and MANGLING MACHINES, awarded several FIRST PRIZES. Will Wash 20 Shirts in 20 Minutes, with much less injury than with the hand. More than 300 Sold.

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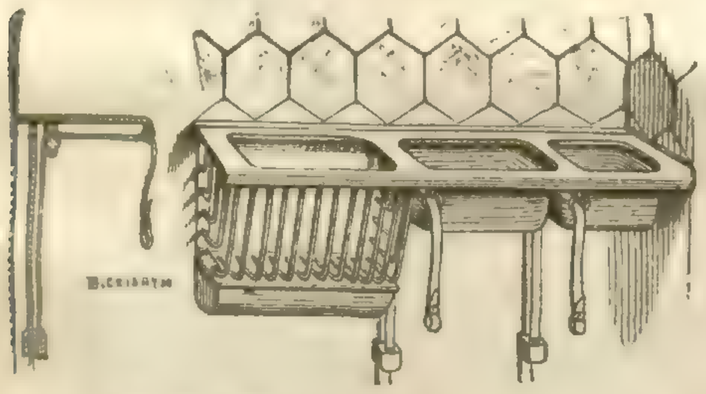

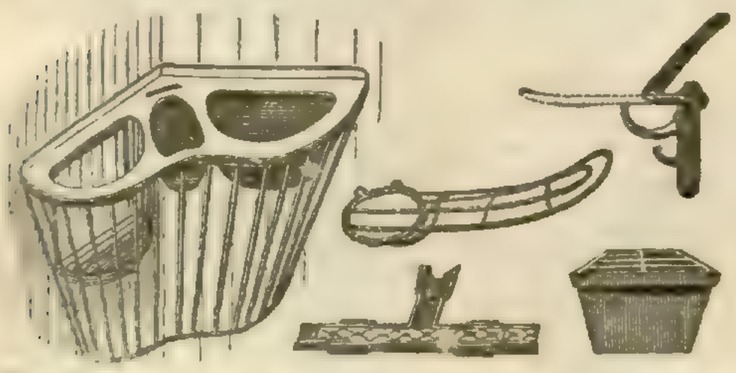

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THE QUARTERLY REVIEW, No. CCXXXI., published THIS DAY.
Contents:
I. Words and Places.
II. Ludwig Uhland.
III. Free Thinking; its History and Tendencies.
IV. The Circassian Exodus.
V. Lacordaire.
VI. Christian Art.
VII. Public Schools.
VIII. Travelling in England.
IX. The House of Commons.
John Murray, Albemarle Street, W.

News of the Week.

A PRELIMINARY treaty of peace and an armistice were signed on Monday at Vienna by the plenipotentiaries of Austria, Prussia, and Denmark. The **bases of the treaty of peace are the unreserved cession of Schleswig, Holstein, and Lauenburg, with the *enclaves* of Jutland, to Austria and Prussia, and a rectification of the Schleswig frontier in the interest of Germany. The armistice has been concluded for three months, terminable at six weeks' notice from either party; and during its continuance Jutland is to be occupied, and the government of the province administered by the allies.**

The French papers, almost without an exception, condemn the unexampled severity of the two great German Powers in despoiling Denmark of a third of her territory without regard to race, origin, or nationality. They condemn the proceeding as an abuse of power, and contend that the conditions of peace are contrary to equity and the principle of nationalities. They express their belief that Austria and Prussia have compromised themselves in the face of public opinion in Europe, that the bad effect of their ambition will recoil upon the whole of Germany, and that the wrongs of Denmark will ultimately be avenged by the outbreak of a more serious quarrel between them and the minor Powers of the Confederation, which are already resenting their conduct in the Duchies as a violation of the rights and privileges of the Federal Diet.

Advices from Tunis state that the insurrection has been brought to a close by a timely concession on the part of the Government. A reduction of taxation has been agreed upon, in consequence of which the principal tribes who were in revolt have sent in their submission, whilst the chief of the insurgents has been permitted to leave the Regency and go into voluntary exile.

From the United States we learn that President Lincoln has issued a call for 500,000 volunteers, to serve for 12 months. Should that number not be forthcoming a draft is to be enforced. The Confederates are engaged in an attempt to blockade the James River, with the object of cutting off General Grant's communications by water. Gen.

GRANT is said to have contracted his lines, though he is still proceeding with the siege of Petersburg. The capture of Atlanta by General SHERMAN is reported, but no official confirmation of the fact has been received. General JOHNSTON, who has hitherto commanded the Confederates in that quarter, has been superseded by General HOOD. A Confederate victory is reported from Fort Hudson on the Mississippi, where the Federal troops under the command of General ELLIOTT were attacked and routed with great slaughter. A strong Confederate force has invaded Kentucky, and is marching northwards. A conspiracy has been discovered in the Mississippi Valley, with the object of forming a separate Confederacy in the North West, and several of the Secessionists at St. Louis have been arrested. There are vague rumours of dissensions in the Federal Cabinet, from which it is said Mr. STANTON will shortly retire. An attempt to open negotiations for peace has been made on the Canadian side of Niagara, by Mr. CLAY and Mr. HOLCOMB on the part of the South, and Mr. HORACE GREELEY on the part of the North. The Confederate agents asked Mr. GREELEY to procure them a safe convoy to Washington to consult with the President personally on terms of pacification. Mr. LINCOLN replied that he would grant them a safe passage if duly accredited by their Government. The Confederate agents said they had no special, but only a general mission; upon which Mr. LINCOLN sent his private secretary to Mr. GREELEY, with a message addressed to whom it might concern, stating that he could only negotiate upon the terms of a thorough restoration of the Union and the abandonment of slavery. The negotiations were thereupon abruptly terminated, the Confederate agents refusing to enter upon a negotiation of which the basis was pre-arranged by the opposite party.

By the Bombay mail we learn that the VICEROY held a Durbar at Simla on the 15th of June, at which he addressed the chiefs of the Hill States in their own tongue, commending them for their loyalty to the Imperial Government, and urging upon them the duty of extending to their dependants and ryots the same beneficence of rule which they themselves experienced, and of encouraging the spread of education among their families and people. A great battle was fought on the 9th of June near Bameean, in Cabul, between the troops of the AMEER and those of his brother, AFZUL KHAN, in which the latter were utterly defeated, with loss of all their guns, ammunition, and camp equipage.

Home News.

THE COURT.—The Queen and Royal family, with the Prince and Princess of Wales, continue at Osborne. On Thursday, the 28th, her Majesty went on board the iron-cased cupola ship Royal Sovereign, lying off Osborne, accompanied by Princess Louisa and Prince Louis of Hesse. The Queen embarked in the Fairy at Osborne pier at six o'clock, and the yacht having been laid alongside the Royal Sovereign, her Majesty and the Royal party went on board, and were received by Captain Sherard Osborn and the officers of the ship and Captain Cowper Coles, who explained to her Majesty the construction and arrangement of the cupola and of the various parts of the ship, of which her Majesty expressed great admiration. The Queen remained on board for some time, and then, returning to the Fairy, cruised towards Ryde before returning to Osborne. Princess Louis of Hesse cruised with her Majesty. The Dean of Westminster and Lady Augusta Stanley arrived on a visit to her Majesty. On Friday morning the Prince and Princess of Wales and the infant Prince arrived from Goodwood on a visit to her Majesty. The Prince and Princess, the young Prince, and suite are occupying Osborne Cottage. On Saturday the Right Hon. C. P. Villiers arrived at Osborne, and had an audience of the Queen. In the afternoon her Majesty and Princess Louis of Hesse drove out. On Sunday the Queen and Princess Louisa attended evening service at Whippingham Church. The Dean of Westminster preached the sermon. The Prince and Princess of Wales attended the morning service. On Monday the Prince of Wales and Prince Louis of Hesse went to the Royal Victoria Hospital at Netley, where the Prince of Wales laid the first stone of the monument to the Crimean medical officers. On Tuesday the Queen and Princess Louisa drove out. The Prince and Princess of Wales and Prince and Princess Louis of Hesse cruised in the Fairy. On Wednesday the Queen, accompanied by the Princess of Wales and Princess Louis of Hesse, drove out. Earl Granville arrived on a visit to her Majesty. On Thursday Prince Leopold, accompanied by Prince Louis of Hesse, went to Bishop's Waltham and laid the foundation stone of a new infirmary. Earl Granville left for London. In the evening the Prince and Princess of Wales took a cruise in the Fairy to witness the Yacht Club race for the Queen's Cup. The Prince of Wales was expected to leave Cowes yesterday morning in the Victoria and Albert on a cruise to Torbay and the Western ports. His Royal Highness will return this afternoon.

THE QUEEN'S VISIT TO THE ROYAL SOVEREIGN.—It is well known that Captain Coles's plan was first taken up and pressed upon the notice of the Government by the Prince Consort; that his Royal Highness at once saw the advantages of the principle advocated by Captain Coles; and that, if the country is at last in possession of a ship armed on this principle, it is mainly due to his Royal Highness's early efforts in its support. The knowledge of this fact gave a melancholy interest to the Queen's visit to this noble ship on Thursday, and her Majesty repeatedly expressed to Captain Coles, who was on board by her special desire, the deep interest she had taken in his success, and her gratification to find it admitted on all sides to have been most complete.

THE PRINCE AND PRINCESS OF WALES will return to town on Monday from Osborne. On Tuesday morning the Prince will inaugurate the statue of the Prince Consort at the Licensed Victuallers' Asylum, and in the evening their Royal Highnesses will take their departure by railway for Abergeldie. The royal carriages and stud left town for Scotland on Wednesday last.

THE CABINET.—A Cabinet Council was held on Saturday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held on Monday.

PARLIAMENTARY MOVEMENTS.—The election for Exeter terminated on Thursday in the return of Lord Courtenay, the Conservative candidate, by a majority of 26; the numbers being—for Lord Courtenay 1096, for Mr. T. D. Coleridge 1070. It is said that Mr. Mowbray, the Conservative member for Durham, will not offer himself for re-election, but will come forward for the northern division of the county, in opposition to Sir H. Williamson. The Hon. H. Walpole will offer himself for East Norfolk in the Conservative interest in opposition to the Hon. Colonel Coke, the Liberal sitting member. Mr. Kelk, one of the contractors for the International Exhibition Building of 1862, will contest Ipswich in the Conservative interest in opposition to Mr. Adair. It is said that the Hon. Colonel Rowley will retire from Harwich, and that Colonel Capper will offer himself in the Conservative interest.

NEW AUSTRALIAN BISHOPRIC.—The Society for Promoting Christian Knowledge has voted a sum of 1000*l.* towards the endowment of the proposed new Bishopric of Grafton and Armidale. The new see will be formed out of the present extensive diocess of Sydney, and it is expected that a Bishop will be nominated in the course of a few days.

BISHOP COLENSO.—The Dean of Natal, the Archdeacon, Canon Callaway with several rectors, vicars, chaplains, and churchwardens of the diocese of Natal, have signed the following declaration:—"We, the undersigned clergy and lay members of the Church of England, being satisfied that Dr. Colenso has widely departed from the faith of the Church, and that he has been righteously deprived of his office by the Metropolitan, hereby declare our fixed resolve that we will no longer acknowledge him as our bishop."

THE CHANNEL FLEET.—Admiral Dacres' division of the fleet, consisting of the Edgar, Warrior, Black Prince, Prince Consort, and two rams, left Torbay on Friday evening for Ireland. On its arrival at Queenstown, the Lord Mayor of Dublin sent a letter to Admiral Dacres, inviting him to visit Dublin.

Foreign.

FRANCE.—The King of the Belgians arrived in Paris on Thursday morning from Vichy, and proceeded to the Hôtel Bristol. It is expected that his Majesty will remain in Paris about a week. The Earl of Clarendon arrived in Paris last week, and on Friday evening dined at the Hotel of the Minister for Foreign Affairs. On Saturday evening his lordship left for Wiesbaden. The Emperor has addressed a letter to Marshal Vaillant, dated Vichy, July 31, concerning the rebuilding of the Opera House and the Hôtel Dieu Hospital. His Majesty says that the Opera House is already in an advanced state, but the first stone of the Hôtel Dieu has not yet been laid. Marshal Vaillant is therefore instructed to urge the Prefect of the Seine to commence shortly the works of the Hôtel Dieu, as his Majesty, on moral grounds, considers that it is in the highest degree important that a building devoted to pleasure should not be constructed before an asylum for the suffering. The decision of the Emperor with reference to the Suez Canal has been published. The total indemnity to be allowed to the company for surrendering the stipulations of the 20th of July, 1856, and for relinquishing certain territories, is fixed at 84 millions, to be paid in 15 yearly instal-ments. The Court of Cassation has annulled the ... of the Court of Appeal in the prosecution directed ... M. St. Cheron, and has decided that the transmission ... periodical political correspondence for insertion ... ing newspapers does not of itself constitute ... The *Constitutionnel* of Saturday publishes an ... signed by M. Limayrac, alluding to the change ... opinion which has taken place in Germany ... Prussia and Austria, because those Powers ... altered their policy. It says:—

"Austria and Prussia at first acted in the name of ... federation; now the Diet is not even represented ... Conference at Vienna. The competence of the Diet ... the Succession Question is misunderstood. The ... Prussia and Austria with regard to the Succession Question ... given rise to certain rumours of arrangements which ... satisfy territorial ambition without taking into consideration ... wishes of the population. Germany is, above all, anxious ... the wise and equitable principle of regulating the question ... with the assistance of the parties interested is not ... France had demanded that the German Diet should be ... sented at the London Conference. This was perhaps ... and good political foresight; but it appears not to be ... in that light at Vienna and Berlin. It is on that ground ... Germany sees with displeasure, and not without ... the two Cabinets depart from the conditions which, ... present time, can alone bring about serious solutions ... produce desirable results."

The terms imposed on Denmark by the two ... Powers are considered by the Paris journals ... unexampled severity. The *France* denominates ... Draconian. Several of the other papers think that ... is some probability of difficulties arising before ... between the two Powers and the smaller Germ... and that in that manner Denmark may be ... The *Pays* publishes an article, signed by its ... secretary, severely censuring Austria and Prussia ... despoiling Denmark of the Duchies of Schleswig-Holstein, and Lauenburg, without regard to ... origin, or nationality. It says that the conditions ... peace violate openly the principle of nationalities, ... are in formal contradiction to the motives assigned ... Germany for the war. It adverts to the sympathy ... shown by France to Germany, and says:—

"This is the reason why we sincerely regret to see ... Prussia and Austria abuse their power towards Denmark ... impose upon her conditions of peace contrary to equity ... the principle of nationalities. Austria and Prussia, in ... thus, not only compromise themselves in the face of ... opinion in Europe, but the bad effect of their ... recoil upon the whole of Germany, a result which must ... and afflict France."

SPAIN.—The Madrid journals assert that the Queen ... on Wednesday signed the nomination of several new ... Councillors of State. Vice Admiral Lobo has left ... way of the Antilles, to join the Spanish squadron ... the Pacific. A Council of Ministers took place ... Thursday, at which administrative measures were ... discussed.

DENMARK.—The President of the Council on Friday ... at a private sitting of the Rigsraad, communicated ... the members that an armistice had been concluded ... Vienna. A motion was brought forward on Friday ... supported by a considerable number of the members, ... the effect that the silence with which the announcement ... ment was received on the previous day should not be ... construed into an approval of the conduct of the ... Government. Furlough has been granted to ... recruits who are now undergoing their preliminary ... drill. The troops stationed at Fulinen are returning to ... Copenhagen.

THE DANISH DUCHIES.—Herr Niëper, the Former ... Civil Commissioner for Holstein, left Altona on Sunday ... for Hanover, having been summoned thither by a ... gram from the King.

SAXONY.—At the sitting of the Chamber of Deputies ... at Dresden on Monday, a question was addressed to ... Baron von Beust, as to what steps the Saxon Government ... ment had taken with reference to the recent events ... Rendsburg, with a view to uphold the honour of the ... Confederation, and especially of Saxony and her ... against "Prussian arrogance." In reply, Baron von ... Beust read a declaration made by the Saxon representative ... tive at the last sitting of the Federal Diet. The ... Chamber thereupon passed the following resolution:—

"That the occupation of Rendsburg by Prussian troops ... which has taken place by the abuse of an overwhelming force ... is a violation of the rights of the German Confederation, and an ... outrage upon the honour of the German Federal troops. The ... Chamber hereby enters a protest against this act of violence ... on the part of a German Federal power."

BAVARIA.—The Bavarian Government has instructed ... its representative at Frankfort to propose that the Diet ... should demand the immediate withdrawal of the ... Prussian troops who recently occupied Rendsburg, and ... the restoration of the previous state of things in the ... town.

WURTEMBERG.—At the sitting of the Chamber of ... Deputies on Saturday, the various requests contained in ... the address, especially with respect to the organisation ... of justice and the revision of the constitution, were ... passed by 85 to 1. The motion of Herr Oesterlen ... expressing want of confidence in the Linden Ministry ... was rejected by 78 to 13 votes. The Chambers were ... prorogued on Tuesday.

FRANKFORT.—In the sitting of the Federal Diet ... on Thursday the representative of Electoral Hesse ... brought forward for decision the memorial of Prince ... Frederick William of Hesse, who, in referring to his ... hereditary rights in Denmark, also raised claims to the ... Duchy of Lauenburg.

PRUSSIA.—It is stated that Prussia has addressed ... notes to the Cabinets of Paris, London and St. Petersburg, purporting to give reassuring explanations

respecting the occupation of Rendsburg. The semi-official *Neue Preussische* (Kreuz) *Zeitung* of Thursday says:—

"The preliminaries of peace having been signed, the Federal execution in Holstein must enter a new phase, since there no longer exists any object for its continuance. Common declarations may therefore be expected to be made by Austria and Prussia at the Federal Diet."

AUSTRIA.—The preliminary Treaty of Peace and an armistice for three months were signed on Monday at Vienna by the Austrian, Prussian, and Danish Plenipotentiaries, at the Ministry for Foreign Affairs. The following are stated to be the bases of the proposed peace:—Lauenburg, Schleswig, and Holstein to be ceded to the two great German Powers. The Island of Arro to remain with Denmark; Alsen, however, and the islands in the North Sea to go with Schleswig, together with the Danish *enclaves* in Schleswig, the town of Ribe excepted. A rectification of the Jutland frontier will therefore take place. During the armistice Jutland will be occupied, and the Government of the province administered by the allies. A circular note has been addressed by the Austrian Government to its representatives abroad giving an analysis of the preliminaries of peace, and stating that all questions relative to the future disposal of the Duchies will be arranged by Austria in concert with the Federal governments, as such questions affect the general interests of Germany. According to the *Oesterreichische Zeitung* of Thursday, one of the paragraphs in the preliminaries of peace unconditionally grants to Austria and Prussia full liberty to dispose of the Duchies. The *Abendpost* (evening edition of the official *Wiener Zeitung*) says:—

"Lauenberg, Schleswig, and Holstein have been relinquished by Denmark, without any reserve. At the same time a rectification of the Schleswig frontier was determined upon in the interest of Germany. It is to the harmony existing between Austria and Prussia that Germany owes the realisation of her dearest wish, and to the same cause Europe owes it that a general conflict has been averted. Complete success was obtained by the moderation displayed by the great German Powers, and the conviction arrived at by Denmark of their future sincere and loyal alliance. The great German Powers did not wage war for the purpose of conquest, or to realise imaginary tendencies to nationality, but had in view the enforcement of positive and legitimate claims. The Elbe districts are separated from Denmark both by land and sea. These results will be sanctioned for ever by an honourable peace. Austria and Prussia do not wish to have any differences with the remainder of Germany, but they will respect the privileges and the well-established rights of the German Federal Diet."

Count von Bismark has left Vienna for Gastein to meet the King of Prussia.

ITALY.—A daring act of brigandage has been perpetrated in open day within seven miles of Florence. The carriage of Mrs. Beste, wife of Mr. Digby Beste, an English gentleman residing at Florence, was stopped on the afternoon of the 28th ult. as she was taking a drive on the high road to Faenza. The brigands fired twice, wounding one of the horses dangerously; they then tore from Mrs. Beste the jewels she had on, and carried off her son to the hills, retaining him for a ransom of 12,000 scudi (2800*l*.). The money was not paid, but the son was sent back about 4 o'clock the next morning. By some misapprehension of the signal agreed upon with his scouts, the chief of the brigands thought that they had received the ransom, and released the youth in the woods, at a distance of five miles from Mr. Beste's villa—giving him a pass to save him from molestation from others of his band, and desiring him to thank his parents for the money, which would pay their journey to Austria. The chief told him that he himself was a deserter from the Papal camp; that one of his band was a German, the others of Romagna and the Venetian States, and that they were 25 in number. Another Jewish boy, named Michael Cohen, 10 years of age, has been kidnapped by a priest at Rome with the view of being Christianised. The priest went to the boy's father, a shoemaker, to get a pair of shoes mended, and when the repairs were completed the boy was ordered to take them home, accompanied by the priest. Instead of going to his house the priest went straight to the "Catecumeni" and there left the boy, who in vain asked to be sent back to his master or parents. All the efforts of the latter to have their son released, or even to see him, have been vain. The Israelite community at Rome complained to the authorities, but without success, being told that the saving of a soul was a matter of far greater importance than the rights of a father.

TURKEY.—Despatches from Constantinople say that the city is crowded with Circassians. The emigration is costing the Ottoman Government large sums of money. The missionary question between Sir Henry Bulwer and the Porte has been settled. The missionary stations will be reopened, and the converts will for the present be sent to the provinces.

TUNIS.—Advices from Tunis state that the Arabs having gathered in their harvest, advanced in force upon Tunis. When they had arrived within two leagues of the capital the army of the Bey surrendered without an engagement. The leader of the insurrection then declared the desire of the insurgents to remain faithful to the Bey, their only wish being the dismissal of the Ministry and the abolition of the unjust tax. The Government thereupon resolved to make concessions, and reduced the capitation tax from 36 to 20 piastres, and abolished other taxes. An arrangement was then concluded between the Government and the insurgents. Fourteen of the principal tribes have already given in their submission. Ben Ghadani, the chief of the revolt, has been permitted to leave the Regency. The Bey is said to be enrolling fresh troops, principally Europeans.

INDIA.—By the Bombay mail of the 9th July we learn that Sirdar Mahomed Afzul's army has been signally defeated in Cabul by the troops of his brother, the Ameer Shere Mahomed Ali Khan. The engagement took place on the 2d of June, near Bameean, the leader of Afzul Khan's army having attempted to surprise that of the Ameer, in which he was frustrated, the latter being fully prepared. The action was long and bloody, and Afzul Khan's troops eventually fled in wild disorder, leaving their guns, ammunition, and camp equipage on the field. The loss on both sides was very heavy. The Viceroy held a Durbar at Simla on the 15th of June for the reception of the chiefs of the Hill States between the Sutlej and Jumna. His Excellency addressed the assembled chiefs in their vernacular language with great fluency and vigour, urging them to extend to their dependants and ryots the same beneficence of rule and management which they enjoyed themselves; to confine their revenue demands to that which is fair to them; to allow no exaction or oppression to have place; and to remember the value of knowledge, and the importance of education to themselves and also to their people. The epidemics of cholera and fever, which recently devastated Bombay, have greatly abated.

CAPE OF GOOD HOPE.—The Diamond Company's first steamer arrived at Falmouth on Saturday with news from the Cape to the 23d June. All danger of a Caffre war is believed by the Commander of the forces to have passed away, and the continuance of peace is considered certain. The few troops remaining in Cape Town are to be forwarded to the frontier, their places being filled by the 10th Regiment, now in Caffraria. Parliament was still sitting in Graham's Town. Several Government measures have been thrown out, among which was the Bill for establishing a Deeds Registry Office in Graham's Town, and that for the creation of a supreme court in one of the eastern divisions. Sir Philip Wodehouse has announced his intention of annexing the territories between the Kei and the Bashee to British Caffraria, and of giving out the land to settlers on military tenure.

UNITED STATES.—President Lincoln has issued a proclamation calling for half a million additional soldiers, and a draught for deficiencies on all quotas not completed by the 5th of September. The term of service for the draughted men will be one year. A Confederate force, estimated at 5000 men, is said to have recrossed the Potomac, 15 miles above Harper's Ferry. The Confederates are endeavouring to blockade the James River by planting heavy batteries below City Point, with a view to cut off Grant's communications by water. General Grant's lines are said to have been somewhat contracted; but the siege of Petersburg is to be vigorously prosecuted. Several encounters took place between Hunter's forces and the Confederates in their retreat from Maryland, during which the Federals captured four guns and a large amount of stores. The pursuit has now been abandoned. It is reported that General Averill, on the 19th ult., attacked 5000 Confederates under Early, near Winchester—killed and wounded 300, and captured 200 prisoners and four cannons. The Confederate General Lilley was made a prisoner. There were rumours of a severe engagement being in progress near Leesburg on the 20th, but no accounts have yet been received. A battle was fought before Atlanta on the 21st, in which Sherman defeated Hood, who had superseded Gen. Johnston. Hood fell back to the fortifications, leaving his killed and wounded on the field. Sherman took 4000 prisoners. The Federal loss amounted to 1500 men. It has since been reported that Sherman has occupied Atlanta; but no official confirmation has been received. Forrest with 10,000 men is marching upon Sherman's communication. He reached Huntsville on the 16th ult. General A. J. Smith, sent from Memphis in pursuit of Forrest, has had several encounters with the Confederates in Mississippi, in which he claims the advantage. A Louisville despatch of the 17th states that a Confederate force, from 5000 to 15,000 strong, commanded by General Ducker, had invaded Kentucky, and was marching northwards. Preparations for the defence of Louisville were actively progressing. General Canby is reported to be fortifying Morganzia, Louisiana, for a base of supplies, in contemplation of immediate operations in the Red River region. The Confederates, in heavy force, hold a strong position on the Atchafalaya River, 9 miles west of Morganzia. Confederate accounts state that a large Federal force, under Gen. Elliott, was attacked near Port Hudson on the 5th, and routed with great slaughter, the roads for miles being strewn with dead negroes, horses, and arms. Confederate despatches from Charleston assert that the Confederates have driven the Federals from John and James Island to Morris Island. The Confederate batteries have driven the Federal gunboats in the Stone River out of range. One Monitor has been seriously damaged. Secretary Fessenden has declined the terms offered by the banks for the loan of 50,000,000 dols. The quota of New York city under the President's last call is 23,140—upwards of 5000 more than was estimated. It is rumoured that a conspiracy has been discovered, extending throughout the Missi-sippi Valley, to form a separate Confederacy in the North-West. Several prominent Secessionists at Saint Louis, who were implicated, have been arrested. The Washington correspondent of the *New York Herald* says that the Secretary of State has determined to make a formal demand upon the British Government for the surrender of the "pirate Semmes." The *New York Times* and *Herald* publish despatches stating that Mr. Horace Greeley and President Lincoln's secretary, Mr. Hay, as representatives of the President, have had several interviews with Southern politicians at the Niagara Falls, in Canada, relative to peace negotiations. It appears that Mr. C. C. Clay and Mr. J. P. Holcomb, semi-official representatives of the Southern Government, communicated to Mr. Greeley that they were willing to proceed to Washington for the discussion of peace propositions, although not accredited by the Confederate Government for that purpose. President Lincoln replied, in a letter addressed "to whom it may concern," that the Federal Government would receive and meet on liberal terms any proposition embracing the restoration of peace, the integrity of the Union, and the abandonment of slavery, coming from the authority controlling the rebel army. Messrs. Clay and Holcomb thereupon emphatically declined visiting Washington, on the ground that Mr. Lincoln's answer precluded negotiations by prescribing beforehand the conditions of peace. If, they said, peace could only be secured by submission to terms of conquest, the generation was yet unborn that would witness the restoration of peace. Several of the war steamers sent in pursuit of the Florida have returned to port unsuccessful. The following Manifesto relative to the civil war, was issued by the Senate and House of Representatives of the Confederate States, after a secret debate of several hours, on the 10th of June:—

"The Congress of the Confederate States of America, acknowledging their responsibility to the opinion of the civilised world, to the great law of Christian philanthropy, and to the Supreme Ruler of the Universe, for the part they have been compelled to bear in the sad spectacle of war and carnage which this continent has for the last three years exhibited to the eyes of afflicted humanity, deem the present a fitting occasion to declare the principles, the sentiments, and the purposes by which they have been and are still actuated. They have ever deeply deplored the necessity which constrained them to take up arms in defence of their rights, and of the free institutions derived from their ancestors, and there is nothing they more ardently desire than peace, whensoever their enemy, by ceasing from the unprovoked war waged upon them, shall permit them to enjoy in peace the sheltering protection of those hereditary rights and those cherished institutions. The series of successes with which it has pleased Almighty God in so signal a manner to bless our arms on almost every point of our invaded border since the opening of the present campaign, enables us to profess this desire of peace in the interest of civilisation and humanity, without danger of having our motives misinterpreted of the declaration being ascribed to any unmanly sentiment, or any mistrust of our ability fully to maintain our cause. The repeated and disastrous checks, foreshadowing ultimate discomfiture, which their gigantic army, erected against the capital of the Confederacy, has already met with, are but a continuation of the same providential successes for us. We do not recur to these successes in any spirit of vain boasting, but in humble acknowledgment of that Almighty protection which has vouchsafed and granted them. The world must now see that some 8,000,000 people, inhabiting so extensive a territory, with such varied resources and such numerous facilities for defence as the benignant bounty of nature has bestowed upon us, and animated with one spirit to encounter every sacrifice of ease, of health, of property, of life itself, rather than be degraded from the condition of free and independent States, into which they were born, can never be conquered. Will not our adversaries themselves begin to feel that humanity has bled long enough; that tears and blood and treasure enough have been expended in a bootless undertaking, covering their own land, no less than ours, with a pall of mourning, and exposing them far more than ourselves to the catastrophe of financial exhaustion and bankruptcy, not to speak of the loss of their liberties by the despotism engendered in an aggressive warfare upon the liberties of another and kindred people? Will they be willing by a longer perseverance in a wanton and hopeless contest to make this continent which they so long boasted to be the chosen abode of liberty and self-government, of peace and a higher civilisation, the theatre of the most causeless and prodigal effusion of blood which the world has ever seen—of a virtual relapse into the barbarism of the ruder ages, and of the destruction of constitutional freedom by the lawlessness of usurped power? These are questions which our adversaries will decide for themselves. We desire to stand acquitted before the tribunal of the world, as well as in the eyes of omniscient justice, of any responsibility for the origin or prolongation of a war as contrary to the spirit of the age as to the traditions and acknowledged principles of the political system of America. On this continent, whatever opinions may have prevailed elsewhere, it has ever been held and acknowledged by all parties that government to be lawful must be founded on the consent of the governed. We were forced to dissolve our Federal connexion with our former associates by their aggressions on the fundamental principles of our compact of union with them, and in doing so we exercised a right consecrated in the great charter of American liberty—the right of a free people, when a Government proves destructive of the ends for which it was established, to recur to the original principles and to institute new guards for their security. The separate independence of the States, as the sovereign and coequal members of the Federal Union, had never been surrendered, and the pretensions of applying to independent communities, so constituted and organised, the ordinary rules for coercing and reducing rebellious subjects to obedience was a solecism in terms as well as an outrage on the principles of public law. The war made upon the Confederate States was, therefore, wholly one of aggression. On our side it has been strictly defensive. Born freemen and the descendants of a gallant ancestry, we had no option but to stand up in defence of our invaded firesides, of our desecrated altars, of our violated liberties and birthright, and of the prescriptive institutions which guard and protect them. We have not interfered, nor do we wish in any manner whatever to interfere, with the internal peace and prosperity of the States arrayed in hostility against us, or with the freest development of their destinies in any form of action or line of policy they may think proper to adopt for themselves. All we ask is a like immunity for ourselves, and to be left to ourselves in the undisturbed enjoyment of those inalienable rights of 'life, liberty, and the pursuit of happiness,' which our common ancestors declared to be the equal heritage of all the parties to the social compact. [illegible]

them forbear aggressions upon us, and the war is at an end. If there be questions which require adjustment by negotiations, we have ever been willing, and are still willing to enter into communication with our adversaries in a spirit of peace, of equity, and of manly frankness. Strong in the persuasion of the justice of our cause, in the manly devotion of our citizen soldiers and of the whole body of our people, and above all in the gracious protection of Heaven, we are not afraid to avow a sincere desire for peace on terms consistent with our honour and the permanent security of our rights, and as earnest aspiration to see the world once more restored to the beneficent pursuits of industry, and of mutual intercourse and exchanges so essential to its well-being, and which have been so gravely interrupted by the existence of this unnatural war in America. But if our adversaries, or those whom they have placed in power, deaf to the voice of reason and justice, steeled to the dictates of prudence and humanity by a presumptuous and delusive confidence in their own numbers, or those of their black and foreign mercenaries, shall determine upon an indefinite prolongation of the contest, upon them be the responsibility of a decision so ruinous to themselves, and so injurious to the interest and repose of mankind. For ourselves, we have no fear of the result. The wildest picture ever drawn by a disordered imagination comes short of the extravagance which would dream of the conquest of eight millions of people, resolved with one mind 'to die freemen rather than live slaves,' and forewarned by the savage and exterminating spirit in which this war has been waged upon them, and by the mad avowals of the supporters of the worse than Egyptian bondage that awaits them in the event of their subjugation. With these declarations of our dispositions, our principles, and our purposes, we commit our cause to the enlightened judgment of the world, to the sober reflections of our adversaries themselves, and to the solemn and righteous arbitrament of Heaven."

City Intelligence.

BANK RATE OF DISCOUNT.—The Directors of the Bank of England on Thursday raised their rate of discount from 7 per cent., to which it was advanced 10 days ago, to 8 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 89⅜ to ½ for Money, and 89¼ for Acct.; Three per Cents. Reduced, 88½ to ¾; New Three per Cents., 88⅝ to ¾; Annuities, 1885, 14 11-16; Bank Stock, 243 to 244; India Stock, 212; Ditto Five per Cent. Stock, 104⅛ to 104; Ditto Four per Cent., 99¼; Exchequer Bills, March, 20s. dis.; Ditto June, 10s. to 20s. dis.—FOREIGN: Brazilian, 1863, 86⅞ to 86; Egyptian, 101½ to 102; Greek, 23½; Italian, 67 to ⅛; Mexican, 28½ to ¾; Ditto 1864, 25⅞ to ⅝; Portuguese, 1856, &c., 48⅛; Russian, 1862, 88¾; Ditto 1864, 89⅜; Spanish, 49¾; Ditto Passive, 29⅛ to ⅜; Ditto Certificates, 11⅛ to 10⅞; Turkish, 1854, 90 to ¼; Ditto 1858, 71½ to 72⅛; Ditto 1862, 69¾; Ditto 100*l*. Bonds, 70¼; Venezuela, 1864, scrip, 8 dis.

Gazette of the Week.

FRIDAY: *July* 29.—BANKRUPTS.—M. G. ANDREWS, Worcester, Butcher—H. ADAMS, Ambergate, Derbyshire, Blacksmith—J. ARCHER, late of South Shoebury, Essex, Cattle Dealer—H. ALEXANDER, Gray's Inn Road, Manager to a Beer Retailer—H. J. ALLINSON, Malden Road, Kentish Town, Tobacconist—S. BISHOP, Lincoln, Tailor—A. BONNY, late of Reigate, Surrey, Wholesale Confectioner—W. BRUCE, Birstal, Yorkshire, Linendraper—T. L. BIRCH, Birmingham, Pewterer—M. W. BACON, Horsley, Derbyshire, Labourer—H. BINKS, Prittlewell, Essex, Coachbuilder and Wheelwright—J. BENNETT, Weobley, Herefordshire, Boot maker—S. BOTT, Langham Street, Portland Place, Lodging House Keeper—E. CATTERNS, Norfolk Street, Middlesex Hospital, Furniture Dealer—A. A. COLLINS, Broadway, Worcestershire, Tailor—J. COHEN, Wolverhampton—W. CADMAN, Bilston, Staffordshire, Charter Master—F. CAMPIN, late of Craven Street, Strand Civil Engineer—N. CROPLEY, Ely, Cambridgeshire, Spirit Merchant—G. CHAMBERS, Milton-next-Gravesend, Journeyman Blacksmith—W. DOBLE, Gloucester Place, Walworth Common, Wire Weaver—S. EVANS, Aberdare, Glamorganshire, late Butcher—J. FITCH, Redford Place, Lower Road, Rotherhithe, late Corn Chandler—W. FULLER, Lower Charlton, Kent, Coal Merchant—S. FAVELL and H. LINCOLN, Bourn, Lincolnshire, Coachbuilder—J. W. GOODSON, Elizabeth Street South, Pimlico, Builder—F. B. GARTY, jun., Portland Terrace, Holland Road, Brixton, Commission Agent—W. GELINECK, Sunderland Durham, Ship Broker—J. HUGOE, Bowman's Place, Holloway, Dressmaker—F. G. HICKS, late of Porchester Terrace, Camberwell New Road, Builder—C. HEAD, Sittingbourne, Kent, Coal Dealer—W. HODGKINSON, Derby, Labourer—J. J. HOWARD, Tutesworth, Staffordshire, Painter—A. HARTLEY, Rochdale, Lancashire, Fuller—W. HENDERSON, Old Shildon, Durham, Butcher—W. HARTHAN, Congleton, Cheshire, Silk Throwster—W. HINE, Yeovil, Somersetshire, Tailor—W. C. HARRIS, Liverpool, late Grocer—E. KENRICK, Holway, Flintshire, Publican—J. KELLY, Watering, Cornwall, Shoemaker—F. INSOLE, Ladbury, Hereford, Innkeeper—H. LEE, Danver's Street, Chelsea, Clerk—J. M'KELVEY, Catherine Street, Islington, Book Keeper—T. MUSSON, Long Eaton, Derbyshire, Baker—W. G. MEADOWS, Old Kent Road, Artist—J. MOORE, of Southsea, Hampshire, Upholsterer—A. MARTIN, Aldermanbury, French Bonnet Shape and Crown Manufacturer—J. M'COLLOUGH, Bridge Street, Southwark Bridge Road, Merchant—W. MACARTHY, King's College Road, Hampstead, Plumber—S. MARSHALL, late of Harley Street, Battersea, General Merchant—C. NEWCOMBE, Long Lane, Bermondsey, Builder—H. ORCHARD, St. Austell, Cornwall, Watchmaker—J. PENNINGTON, Ashton-in-Mackerfield, Lancashire Draper—E. L. PAGE, Hans Terrace, Pouiton Square, Chelsea, Gentleman—R. PAICE, late of Tunnel Road, Rotherhithe, Dealer in Ironmongery—T. P. PUNG, Brand Street, Greenwich, Engineer—C. POOL, Clifton Cottage, Clifton Street, Wandsworth Road, Stonemason—W. PEARCE Broadwall, Blackfriars, Licensed Victualler—W. ROBERTSON, Crutched Friars, City, Merchant—W. I. ROWELL, Chester Street, East Greenwich Oil Merchant—W. RAYSON, Birmingham, Baker—S. ROWING, Doncaster, Tailor—W. T. SCOTT, Lime Street, City, Dealer in Refined Petroleum—J. D. SALMON, Colchester, Brewer—C. SIMMONS, late of Lower George Street, Richmond, Plumber—B. SHEFFIELD, Upper Whitecross Street, late Account Book Manufacturer—C. SNEYD, Brighton, Working Jeweller—W. STRETTON, Tutbury, Staffordshire, Yeoman—W. SKINNER, late of Basinghall Street, Timber Merchant—T. SPORNE, late of Wormagay, Norfolkshire, Farmer—J. TAYLOR, Falkingham, Lincolnshire, Tailor—W. B. TYSACK, Norwich, Ironmonger—W. R. VINCE and G. VINCE, Nottingham, Scale Board Cutters—C. J. WILLIAMSON, Rochester, Kent, Fish Salesman—J. WEST, Church Accrington, Lancashire, Furniture Broker—J. WRIGHT, late of Ripley, Surrey, News Agent—J. WINFIELD, jun., Derby, Hay and Straw Dealer—J. R. WYATT, Lavender Hill, Wandsworth Road, Builder—G. A. WITTED, Smith Street, St. Pancras, Baker—T. B. WHITTLE, Bilston, Staffordshire, Saddler—W. D. WYATT, Oxford, Stone and Slate Dealer—J. T. WALKER, Middlesborough, Yorkshire, Beer House Keeper.

SCOTCH SEQUESTRATIONS—A. LAING, Forres, Elgin, Ironmonger—J. MACMILLAN, Inverness, Grocer—E. WEBB, Aberdeen, Hatter.

TUESDAY: *Aug.* 2.—BANKRUPTS.—J. AYSHFORD, Broadclist, Devonshire, Wheelwright—F. G. ANTHONY, Manby Grove, Stratford, Attorney's Clerk—T. AUSTIN, Worksop, Nottinghamshire—W. AYRE, Old Shildon, Durham, Boot Maker—J. BUTLER, Great Coram Street, Russell Square, Boot and Shoe Maker—J. R. BAXTER, Newmarket, Hay Dealer—W. BAKER, Huntspill, Somersetshire, Butcher—J. BOSWELL, Westbromwich, Staffordshire, Coal Dealer—J. J. BARKE, Manchester, Salesman—J. BALCHIN, Brighton, Lodging house Keeper—J. L. BLACKMORE, Worcester, Well Sinker—H. BECK, Swanington, Leicestershire, Organist—A. BASTEN, Hampden Street, Somers Town, Coachmaker—F. BLENKIRON, Duncan Terrace, Islington, Assistant to a Wholesale Warehouseman—W. BOARDMAN, Anderton, Cheshire, Farmer—D. BARRETT, late of Montpelier Place, Fulham, Publican—H. CREES, Landport, Hampshire, Coach Painter—W. H. CARTER, Cottingham, Yorkshire, Plumber—J. R. CUCKOW, Otham, near Maidstone, Kent, Wheelwright—J. CARDWELL & R. CARDWELL, Oakenshaw Lancashire, Manufacturers—G. CLARK, late of Windmill Row, Kennington Cross, Painter—J. CHILVERS, Great Yarmouth, Norfolk, Grocer—J. COLLEN, Whitehaven, Cumberland, Grocer—J. CORNLEY, Dawley, Shropshire, Boot Maker—J. C. DECKER, late of Regent's Park Road, General Merchant—P. DANDO & J. CHETWYND, Leadenhall Street, Ship Brokers—T. DAVIES, Kington, Herefordshire, Mail Cart Driver—F. DAWSON, late of Spencer Read, Hornsey New Town, Apothecary—J. H. DICKSON, late of Lower Tooting, Surrey, Machine Maker—A. A. ELLIS, Salford, Lancashire, Timber Dealer—G. J. FELLOWS, late of Crown Street, Soho, Gasfitter—J. H. FOX, late of Margaret Street, Clerkenwell, Bricklayer—R. GORDON, Wrexham, Denbighshire, Tailor—T. GORDON, Shrewsbury, Travelling Draper—D. GRAHAM, Grove Lane, Camberwell, Warehouseman's Salesman—W. H. HOAD, Eltham, Kent, Builder—W. HUMBY, Downton, Wiltshire, Blacksmith—D. HILL, Bishop's Hatfield, Hertfordshire, Grocer—J. HUGHES, Liverpool, Shipping Clerk—W. HESTED, late of Lupus Street, Pimlico, Butcher—G. H. HANSON, Portsea, Hants, Chemist and Druggist—A. HAYWARD, Margaret Street, Cavendish Square, Schoolmistress—F. W. HOFFMANN, Manchester, Commercial Traveller—G. HOLLAND, late of Matilda Street, Caledonian Road, Cab Proprietor—F. W. HUDSON, late of Warner Street, Dover Road, Spirit Merchant—W. JOHNSON, Dalston, Cumberland, Manager of Cotton Spinning Works—C. D. KERSHAW, Archer Terrace, East India Dock Road, Provision Dealer—JOHN GLANVILLE KELLOW, Woolwich, Tobacconist—GEORGE KNIGHT, Kenilworth Road, Victoria Park, late Boot and Shoe Dealer—R. LEIGHTON, Thornes, Yorkshire, Market Gardener—W. F. LAWRENCE, Ely—W. S. LOVEJOY, late of Lime Street, City, Commission Agent—J. LOCKET, late of Matilda Street, Caledonian Road, Cab Proprietor—E. LEGH, Camberwell Park, Camberwell, Gentleman—E. MARTELL, Whitchurch, Southampton, General Dealer—T. MOSTON, Burslem, Staffordshire, Bootmaker—W. P. MISSING, Drummond Street, Euston Square, late Newspaper Editor—W. MILLER, Church Row, High Street, Acton, Boot maker—J. M'CULLA, Birkenhead, Cheshire, Provision Dealer's Assistant—J. MALIPHANT, Brynmaur, Breconshire, Grocer—J. NEALE, late of Crick, Northamptonshire—H. A. NORRIS, Portsea, Hampshire, Clerk in her Majesty's Dockyard—J. NUTTALL, Rochdale, Lancashire, Cotton Spinner—H. NAYLOR, Lessoe and Codnor, Derbyshire, Colliery Contractor—R. OCKWELL, Cricklade, Wiltshire, Glover—T. PRIOR and L. PRIOR, Aldermaston, Berkshire, Farmers—W. S. PAGE, late of Old Street, St. Luke's Cocoa Nut Fibre Matting Manufacturer—T. L. PHILLIPS, Aberdare, Glamorganshire, Surgeon—E. H. POWELL, Grove Place, St. John's Wood, Commercial Clerk—E. O. PARKINSON, Twickenham, Advertisement Agent—G. RICHARDS, Hunt Street, Mile End New Town, late Fishmonger—J. REED, late of Rosedale Road, Dulwich, Solicitor—J. SMALE, Hirwain, Glamorganshire, Licensed Victualler—E. G. STERNFELDS, late of Cheapside, Merchant—T. SWAIN, Shrewsbury, Innkeeper—T. SMITH, King Street, Tower Hill, Carman—J. B. SIMPSON, late of New Bridge Street, Blackfriars, Hotel Keeper—F. SHEPHERD, High Street, Islington, Printer—T. TROTMAN, sen., and S. GASCOIGNE, Crimscot Street, Bermondsey, Hair Pin Manufacturers—J. TURNER, Tranquilla Terrace, Hammersmith Painter—W. H. TRUSS, late of Carey Lane, City, Warehouseman—R. TANNER, Stratford, Essex, Grocer—G. S. WILLINGS, Liverpool, Commission Agent—J. WILLIAMS, Bridlington Quay, Yorkshire, Builder—G. WEST, late of 305, Fulham Road, West Brompton, Baker—H. WALLIS, Goring Heath, Oxfordshire, Boot Maker—S. WATSON, Liverpool, Cabinet Maker—J. WOOD, late of Manchester, Beerhouse Keeper—J. WATKINS, Richmond Road, Hackney, Traveller—W. WILSON, late of Abbey Street, Bethnal Green Road, Cocoa Nut Fibre Manufacturer—E. WEBSTER, late of Luard Street, Caledonian Road, Gilt Button Maker.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,821,725	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	12,171,725
		Silver Bullion	—
	£26,821,725		£26,821,725

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,047,095
Rest	3,862,186	Other Securities	20,765,698
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,155,704	Notes	4,892,785
Other Deposits	13,519,626	Gold and Silver Coin	705,708
Seven days and other bills	560,770		
	£37,411,286		£37,411,286

Aug. 4, 1864. W. MILLER, Chief Cashier.

Metropolis and its Vicinity.

THE YELVERTON MARRIAGE CASE.—Mrs. Teresa Yelverton has addressed the following letter to the daily papers in reference to the recent judgment of the House of Lords:—

"Sir,—In this momentous crisis of my miserable fate, may I ask of the press and the public to suspend for awhile their judgment, and not to believe that the opinion of some of the law lords has finally deprived me of the status of wife. The case, as I am well advised, has not by any means terminated, a reference to oaths being competent, and the inherent right of parties seeking to establish a marriage. Even the opinion given on Thursday by their lordships is merely an opinion until it is affirmed, or in legal phrase extracted, by the High Court of Session in Scotland; and prior to that the examination on oath will take place, which in justice and fairness should have been granted when applied for by my counsel, the Lord Advocate. I believe it is the first principle of English justice, on which we pride ourselves over all nations, that a man should not be condemned unheard, and that he should be allowed to question face to face his accusers. Yet this is exactly what I have been deprived of, but which at this stage of the case I can, and do, demand. The reason why the Scotch Court did not have recourse to the examination of parties was simply that the Scotch lords, being so much more familiar with their own law than Englishmen can be supposed to be, were at no loss to discern a marriage on the written evidence before them; and the Scotch horror of perjury ever induces them to defer to the last extremity the examination of the parties themselves. The practical result of this reference to oaths would be, that should one party prove sufficient to establish a marriage—or the other fail to show that none had taken place—the Court of Session would refuse to endorse the opinion given in the House of Lords, and the whole case might be again brought before them. Hence, I appeal to the public through your medium to suspend their judgment until this last ordeal shall have been tried, and that the more especially as the Irish verdict of a jury and four judges, declaring me the wife of Major Yelverton, still stands unannulled. Had the action raised against me been one of nullity, or an action to prove that the marriages, Scotch or Irish, were neither of them legal, I should not assuredly have wasted six years of my life, my health, and fortune in the contention to be the wife of a man who refused to recognise me in that capacity. But the form of action raked up from obscure barbarism, and held forth as a means of escape to an unfortunate and desperate man, is such as to load me with infamy and drag me down to the depths whence there is no degradation deeper for a woman. A hundred years ago there was such an action in England, called jactitation, resorted to by men to rid themselves of the claims of those they had dishonoured. No woman with a soul above a slave's would submit in silence to such contumely. By this action they have left me but the alternative which the noble Wallace gave to his men—'To do, or die.' I hold my honour as a precious gem, which it is my duty to defend with my life, and by every power and strength of mind that God has given me; and as I am an honest woman in the sight of Heaven, I will so defend it till the last pulsation of the heart, and never desist until I have cast the foul slander from my hitherto untarnished fame.—I am, &c., "TERESA YELVERTON."

"29, Cambridge Terrace, Hyde Park, July 29."

THE RECENT VOLUNTEER REVIEW.—The Commander-in-Chief has made an official report to the Secretary-at-War of the condition of the Volunteers whom he reviewed on Saturday week on Wimbledon Common. Amidst much praise his Royal Highness points out some defects, and dwells on the necessity of giving increased attention to company and battalion drill. He also suggests that if there were fewer large gatherings of Volunteers—not more than three or four in the course of a season, when the members would be able to leave their employments in larger numbers and perhaps for a whole day, instead of a few hours, the regiments would then be better filled up and the movements more extended than it is possible to make them now.

THE WOUNDED SOLDIER AT WIMBLEDON continues to progress favourably, although the bullet having fallen back into the cavity of the chest, has not been capable of detection. The military surgeons entertain fair hopes of his recovery on account of his constitutional powers. Last week an effusion of blood took place into the left side of the thorax, impeding respiration, and pushing the heart to the right side. This effusion has not since apparently increased, and the patient is tolerably free from pain.

AUSTRALIAN BIRDS IN LONDON.—A barrister writing from Stone Buildings, Lincoln's Inn, has addressed the following letter to the *Times*, which publishes it under the title of "A Fact for the Acclimatisation Society":—"Three Australian love birds were observed in the garden of Lincoln's Inn in the summer of 1862, having doubtless escaped from some bird fancier in the neighbourhood. They were repeatedly seen during the summer and autumn both in this garden and in the garden of Lincoln's Inn Fields, but disappeared in the winter. In May last year three similar birds appeared again in Lincoln's Inn. They built a nest in one of the plane trees in Lincoln's Inn Fields, and laid seven eggs, but forsook the nest upon being disturbed by the too curious gardener. Last winter they again disappeared, but were seen occasionally in the early spring: this year both in this garden and in that of Lincoln's Inn Fields, looking rather melancholy upon the leafless trees. For the last month they have again taken to their old quarters in these gardens, and appear perfectly at home and happy, barring a few squabbles with the sparrows. They may generally be seen with the sparrows searching for food in the grass, their bright green plumage and long tails contrasting agreeably with their dusky friends' mean appearance. I am not aware whether they have built a nest this year, but think there is little doubt that they are the same three birds which first appeared here in 1862. The above facts may interest some of your readers. It is clear that Australian love birds must be more hardy than is generally supposed; and it is rather a puzzle how these three managed to get food during the winters of 1862 and 1863.

THE LUDGATE HILL VIADUCT.—*On Tuesday an* alarming accident occurred on *Ludgate Hill*, causing serious injuries to three working men, two of whom now lie in a precarious state. For some days past workmen have been engaged in raising the huge iron girders which are to form the viaduct for carrying the London, Chatham, and Dover Railway across that great thoroughfare. The span of the bridge is about 65 feet, and each girder weighs 15 tons and is nearly 70 feet long. The work, being attended with danger in a place where the traffic is so great, has been chiefly done during the night. In executing it a powerful derrick erected in the middle of the street, is employed, by means of which and of a crab each girder is gradually raised about 18 feet from the ground, and then swung into position. By Monday four of the six iron beams had been so raised, and placed across the street, and on Tuesday morning, shortly before 6 o'clock, a fifth was being lifted into its place. For that purpose eight men were working the crab at the south side of the street. They had raised the girder about 8 feet from the ground, when some of the tackle fouling the crab snapped, and the whole mass, which was at that moment swung obliquely across the street, fell with a crash, striking in its fall three of the men working the crab. They were taken to St. Bartholomew's Hospital, where one of them was found to be suffering from concussion of the brain and a large scalp wound, another from a scalp wound and injuries to the back and loins. The third, who was less badly hurt, was removed to his own home in the course of the day. The other two remain in the hospital, and are reported to be in a dangerous condition. The girder happened to descend upon a mass of woodwork at the bottom of the derrick, which had the effect of breaking its fall, otherwise the three men would probably have been crushed to death. In the course of the morning the girder was raised into position, and now, with two others, spans the street, a sixth remaining to be raised. The work in its present state is extremely unsightly, justifying in that respect some of the worst apprehensions formed of it; but it is said that the iron work of the sides will be of a very ornamental character, and when completed will go far to redeem the bridge from the charge of disfiguring the city. On each side there will be a light outer bridge for foot passengers, communicating, by means of a staircase in the abutment, with either side of Ludgate Hill. This will be a great public convenience, for at certain periods of the day the attempt to cross that crowded thoroughfare is almost a hopeless task. The great bridge over the Thames is also approaching completion, and, according to present expectations, the line will be opened to the Ludgate station early in October.

THE WESLEYAN CONFERENCE.—The 121st Conference of the Wesleyan Methodists took place last

week at Bradford. The first business was to complete its "Legal Hundred," by supplying the vacancies caused during the year by the death or superannuation of the constituent members in the English and Irish conferences. The conference having been thus legally constituted, the elections of president and secretary for the year 1864-65 were proceeded with and confirmed. The votes were distributed as follows:—For President: Rev. W. L. Thornton, M.A., 268; Rev. William Shaw, 42; Rev. W. Arthur, M.A., 18; Rev. John Bedford, 7. For Secretary: Rev. John Farrar, 262; Rev. John Bedford, 21; Rev. W. M. Punshon, 13.

New Roman Catholic Church at Kensington.—Arrangements have been made for the erection of a new Roman Catholic church in Kensington. At present all the accommodation which the Roman Catholics have in Kensington is for 200 persons. The site for the new church will cost 3000*l*.

Penny Omnibuses.—The omnibuses running between Westminster and Oxford Street, and Camden Town and Oxford Street, have commenced carrying passengers at 1*d*. each. This reduction has been occasioned by the appearance of a new line called the "Shakespeare" omnibuses between Camden Town and Westminster.

Penny Parcels Delivery.—A company is forming under the title of the Express Penny Parcels Delivery Company, with a capital of 50,000*l*., in 10*l*. shares. The prospectus states that the difficulty of having parcels delivered with regularity and despatch at reasonable rates has long been felt, and this company is formed to meet that growing want of the metropolis. It is true that, at present, there exists the London Parcels Delivery Company, but that company, in addition to parcels, carries goods of heavy weight, luggage, &c., and consequently the delivery is both slow and expensive. The new company proposes to convey parcels at the uniform rate of one penny for each parcel under 7 lb., and twopence under 14lbs., and there will be an hourly delivery during the ordinary business hours of the day. The company will, at first, limit its operations to the metropolis and its suburbs, within a radius of 12 miles from the chief office, and it is already promised the support of the principal wholesale houses and leading tradesmen both in the West End and the City, who by the present system are obliged to keep carts of their own at a very heavy expense. In order to facilitate the operations, stamps will be issued for the various offices; but engagements for the collection of money will be entered into where required.

Mule and Donkey Show.—A great show of mules and donkeys is about to follow the late successful Horse Show at the Agricultural Hall, Islington, under such patronage as will doubtless conduce to its success. The chief object of the promoters is not only to improve the breed of donkeys and mules, but also to encourage their proper and humane treatment. The Prince of Wales, Miss Burdett Coutts, the Earls of Clarendon and Harrowby, and the Rev. Mr. Jackson, rector of Stoke Newington, and a large number of the metropolitan clergy, as well as many prominent members of the Royal Society for Preventing Cruelty to Animals, are its leading supporters. The directors of the Agricultural Hall, having all the fittings used at the Horse Show still remaining, have granted the use of the hall, with its ring, at a nominal sum; and Mr. Douglas, the manager of the Horse Show, has undertaken the arrangements. Prizes are to be offered, and donkey races are to take place in the oval, so that the tempers of the animals may be judged. The entries are already very numerous, and as an incentive the Prince of Wales has entered an Egyptian donkey, a very fine specimen of the tribe. The Marquis of Exeter, Mr. S. Gurney, M.P., Colonel Somerset, Sir H. Stracey, and others have also entered some foreign donkeys; and Lord Clarendon will exhibit a splendid pair of mules. The costermongers of the metropolis will be fully represented, and the show is to open on Monday next, the 8th inst.

The Murder and Suicide at Somers Town.—The adjourned inquest in this case was resumed on Tuesday, when no new facts of any importance were elicited, except that a woman called Loader, who lodged in the house, had stated to a neighbour that she saw the murdered woman bleeding on the ground, and two teeth driven down her mouth. On being examined on this evidence, she at first said she did not recollect saying anything of the kind, and afterwards positively swore that she had never said anything of the kind. She admitted however that she heard the screams of the murdered woman, followed by a cry of murder, a blow, and a fall. The jury returned a verdict to the effect that Rosetta Bishop died from the effects of blows of a hatchet given to her knowingly and maliciously by James Brown, and that James Brown had been guilty of the crime of *felo de se* by hanging himself wilfully while in a sound state of mind. The Coroner then issued his warrant for the man's burial within 24 hours in unconsecrated ground and without Christian ceremony. The witness Loader was then directed to be brought into court, when the Coroner said he was requested by the jury to censure her most severely for not having called the attention of the police to the fact, clearly established, that she had seen the poor woman covered with blood, and heard her screams. He had also to tell her that her evidence throughout had been most unsatisfactory and prevaricating, and that she was deserving of the severest censure for her conduct throughout this dreadful affair.

Execution at Newgate.—On Monday morning Frederick Bricknell, a young man who was employed as a waiter at a public-house in the New Cattle Market, Islington, was executed in front of Newgate for the murder of a young woman in the same service because she slighted his addresses. The crowd outside was by no means so great as on many previous occasions, though it stretched to St. Sepulchre's Church and far towards Smithfield. There was a greater number of women and boys present than usual, but their behaviour was, on the whole, decent and orderly. The prisoner, who had conducted himself since his condemnation with great propriety, met his death firmly, and died without a struggle.

Incendiary Fire at Paddington.—A destructive fire broke out a few days since in the Artesian Saw Mills at Paddington, which appeared to be the work of an incendiary. On Tuesday, an elderly man named James Boxball, who had charge of the stables, was brought before the magistrate at Marylebone, on the charge of having set fire to the premises. The evidence consisted chiefly of the fact that the premises were safe before he came in the morning, and soon after he left they were discovered to be on fire. The prisoner was remanded.

Great Fire at Fulham.—On Thursday the villa of Colonel M'Murdo, Inspector-General of Volunteers, on the banks of the Thames, at Fulham, with all its valuable furniture and collection of pictures, was entirely destroyed by fire. The villa had a thatched roof, and it is supposed that a spark from the kitchen chimney, or from a passing steamer, must have fallen upon and ignited it. The plate and jewels were deposited in two massive iron safes which fell into the body of the fire, but as the safes were red-hot yesterday it is not yet ascertained whether the contents are preserved. Colonel M'Murdo and the family being absent, it is not known whether the premises were insured.

Keston Common on Fire.—On Sunday a fire broke out amongst the furze on Keston Common, near Hayes, Kent, and the flames, fanned by the strong wind, spread with great rapidity, until at length a stretch of country, about two miles in extent, was in a blaze.

The Public Health.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, July 30, were 1607. The average number in the corresponding week of the ten years 1854-63, corrected for increase of population, was 1302. The present return is, therefore, 305 above the average. During the week the births of 1011 boys and 940 girls, in all 1951 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 1859.

Provincial.

Aylesbury.—The execution of William John Stevens, for the wilful murder of Ann Leeson, at Buckingham, took place yesterday morning in front of the county gaol, in the presence of about 7000 persons. He acknowledged the justice of his sentence and died penitent.

Birkenhead.—In reply to the charge of "touting" for candidates for holy orders against St. Aidan's College by Lord Shaftesbury, the Rev. Dr. Baylee, the Principal, says, in a letter to the *Times*:—

"1. We have never received any students into this college on any other charges than those stated in our published prospectus. 2. We never proposed to do so either to Wesleyans or to any others. 3. The circular put into the papers was neither drawn up nor published by any of the authorities of this college. 4 During the last 18 years I have received some hundreds of applications from Wesleyans and other dissenting ministers requesting some additional facilities to enable them to prepare for holy orders, and I have never done so in a single instance. I have already explained to Lord Shaftesbury the circumstances connected with the circular to which his lordship referred. They were these:—A Wesleyan minister entered this college last term as an ordinary student. He asked me for some prospectuses to circulate among his friends. I gave them to him, and in some cases he on his own authority sent that paper to individuals. When application was made to me by Wesleyan ministers, I replied in every case that we could not receive the students on any other than our published terms, and although we have had nearly 100 applications, we have not made a reduction of terms, nor offered peculiar advantages to a single student. At our recent council meeting I drew up a notice to the same effect, to be appended to our ordinary advertisement. The insertion of that 'circular' in the papers was the work of some person unfriendly to this college. I think I may safely leave it to the judgment of the public whether we have been making any improper efforts to obtain pupils."

The Wesleyan papers on the other hand state that the following circular was recently issued by Dr. Baylee:—

"Any Wesleyan minister wishing to become a clergyman of the Church of England can be admitted to St. Aidan's College without preparatory examination, and on advantageous terms. The particulars may be known on application to the Principal, St. Aidan's College, Birkenhead."

Bishop's Waltham.—On Thursday the young Prince Leopold visited this town from Osborne, accompanied by his brother-in-law, Prince Louis of Hesse, and laid the foundation stone of a new Infirmary, established chiefly by the exertions of Mr. Arthur Helps, Clerk of the Privy Council, for the use of the sick poor of the neighbourhood. After a prayer had been offered up by the Bishop of Winchester, his Royal Highness laid the stone with a silver trowel in a workmanlike manner. After the ceremony their Royal Highnesses were entertained at luncheon in the Palace grounds. Mr. Arthur Helps, who presided, in proposing the Queen's health, said that it was principally through her Majesty that the building had been projected, and that the principal funds had been derived from the proceeds of the work containing the Addresses and Speeches of the Prince Consort, of which he might say, without betraying any secrets, that some sentences of that work were her Majesty's own. The health of the two Princes having been drunk, Prince Louis of Hesse briefly expressed the warmest thanks of Prince Leopold and himself for the kind way in which they had proposed and received the toast. During these festivities the town presented a very gay appearance. Nearly every house was decorated with flags, flowers, or evergreens. Several triumphal arches were erected across the principal streets, formed of evergreens and flowers, tastefully designed, and surmounted with banners with appropriate inscriptions.

Brixham.—A quarryman employed at Berry Head a few days since, perceived, after blasting, an aperture 12 feet or 14 feet overhead, which has since been found to lead to an extensive stalactite cavern, extending in several directions and for considerable distances. Many of the stalactites have assumed beautiful and curious forms. It is understood that a scientific exploration of the cavern will shortly be made.

Chesterton.—An old man called George Walker was found brutally murdered in front of a hut in which he had lived, near this town, on Thursday week. On the following day a man was apprehended at Tunstall, while offering in pledge a watch which exactly corresponded with the description of that taken from deceased. His name is Brough, and on being taken into custody he confessed that he was the murderer. Other evidence was adduced at the inquest which would have been sufficient to convict him of the crime without his confession. He is a young man, 24 years of age, a collier, and has resided in the neighbourhood all his life with his family. He has borne a good character hitherto, but he has the appearance of being feeble in intellect and weak in body, and is a most miserable looking creature, and most unlikely to be a murderer. He was committed for trial at the next Stafford assizes on the charge of wilful murder.

Clifton.—The directors of the Suspension Bridge have announced that it will probably be open for traffic early in October. Great progress is making with the roadway. The framework of the bridge is painting, and a portion of the railings for each side of the footpaths has arrived, and its erection will shortly be commenced. The road leading to the bridge on the Leigh or Somersetshire side is finished, and that on the Clifton side is in a forward state.

Cowes.—The annual regatta of the Royal Yacht Squadron commenced on Tuesday with the race for the Prince of Wales's Cup, which was witnessed by the Queen, the Princess of Wales, and other members of the Royal family, while the Prince went out in the Fairy to witness the match. The race was contested by the Arrow, cutter, 94 tons; the Terpsichore, cutter, 42 tons; the Alerte, cutter, 56 tons; the Phosphorus, cutter, 49 tons; and after a gallant contest between the Arrow and the Alerte was finally won by the Arrow. On Wednesday the cutter race for the Club Cup was contested by the Mosquito, Volante, Surf, Marina, Astarte, Vindex, and Arrow, but as neither vessel completed the course within the prescribed time, the race was null and void, and must be sailed again. So far as it was completed the Arrow was again victorious, followed at a considerable distance by the Mosquito and Astarte. On Thursday the Queen's Cup was sailed for by the Ursuline, Viking, Aline, Albertine, Intrepid and Vestal, and was won by the Albertine. The Aline came in first, but the Albertine won by time. The Prince and Princess of Wales went out in the Fairy to witness the conclusion of the race.

Durham.—On Saturday morning a fatal explosion occurred at Moorsley Colliery, belonging to the North Hetton Coal Company, in this county. One of the six boilers employed on the colliery burst, and was carried in four pieces high up into the air and over the tops of the pitmen's houses, to a distance of 290 to 300 yards. yards. The bricks and broken steam pipes were scattered in all directions. The two firemen who were attending the boilers were killed, and a child who was sitting in its grandmother's cottage, 60 yards distant, was also killed by a piece of the steam-pipe falling through the roof. Several children playing about the village streets were scalded, and the houses occupied by the pitmen were damaged by the explosion.

Liverpool.—The Federal frigate Niagara arrived in the Mersey on Wednesday afternoon, and after coaling, left yesterday for a cruise. Salutes were exchanged between her and her Majesty's ship Majestic.

Southampton.—On Monday the Prince of Wales laid the foundation-stone of a monument in the grounds of the Royal Victoria Hospital at Netley, to the memory of the officers of the Army Medical Department who died in the Crimean war. The monument has been designed by Mr. T. Hayter Lewis, architect, of John Street, Adelphi. It will be a plain monumental cross in the style of the beginning of the 13th century, 56 feet in height. The lower part will consist of a series of arches forming an octagonal arcade, supported on 16 coupled columns of Derbyshire marble, the principal part of the erection being of Portland stone. Under this arcade will be placed marble tablets, explaining the object of the memorial, and recording the names of the medical officers who fell in the Crimean war. This will be surmounted by a smaller arcade, also of an octagonal form, the column thence

tapering up gradually to a large cross. The site chosen is close by the river front of the grounds, and nearly opposite the medical officers' quarters. The contract for the erection of the monument has been taken by Messrs. Myers & Son, of London, who built the hospital, and the work will be executed under the management of Major Ravenhill, R.E. The Prince, who was accompanied by Prince Louis of Hesse and Prince Leiningen, was received on his arrival from Osborne by a large assemblage of military and naval officers, the medical staff and the medical students of the hospital. Dr. Gibson then read an appropriate address to his Royal Highness, who replied as follows:—

"It gives me great pleasure to respond to your request to inaugurate this well-deserved tribute to the memory of those medical officers who lost their lives in the performance of their onerous and important duties in her Majesty's service throughout the war in the Crimea. It is also particularly agreeable to me to assist in the foundation of your memorial near this building, connected as it is with the magnificent hospital in the creation of which my beloved and lamented father took so deep an interest, and in the maintenance of which the Queen also feels a like interest. The site chosen seems to be peculiarly appropriate, as, although the main object of the establishment of this noble hospital was for the relief of the sick and wounded of the army returning from the colonies, there is connected with it a medical school for the special instruction of young medical officers who are to have the future care of our soldiers in all climates and in all parts of the world wherein our troops may be called upon to serve. The names of those medical officers inscribed upon the memorial will thus be inseparably connected with our great military hospital and our army medical school."

A prayer having been offered up by the chaplain, the Prince appended his signature to a copy of the address, which was deposited under the foundation stone with copies of daily papers and a photograph of the monument. This stone was then lowered with the usual formalities. The Prince was subsequently entertained at luncheon before he returned to Osborne.

SUNDERLAND.—A telegram was received on Friday, by the owner of the barque Ouse of this port, stating that that vessel had put into the port of San Roque, near Gibraltar, in consequence of the master and crew having been poisoned. Three of the men had died, and the cook was taken into custody on the charge of mixing poison with their rations. Another telegram was received in Sunderland on Saturday, stating that, after a full examination into the circumstances, the cook was acquitted of the charge. Fresh hands were shipped, and the Ouse had sailed for Alexandria. No details relative to the cause of the men's death have yet been received; but it is believed that their food itself was bad, as very bad meat is often put on board ships in the northern ports for the use of the crew. The inspector of meat at this port recently died of fever, produced by the effluvium from some casks of provisions which he seized before they could be got on board a vessel.

TOWCESTER.—On Wednesday the ceremony of cutting the first sod of a new line of railway, to which considerable local importance is attached, was performed by Lady Palmerston, who owns large property in the neighbourhood, in a field lying within a short distance of this town. The line will commence at the Blisworth Station of the London and North Western, and will have running powers over the Banbury Line, as far as Towcester. It will there branch off to Greensnorton, and proceed through Bradden and Woodford to Fenny Compton, where a junction will be effected with the Oxford and Birmingham system of the Great Western. From that point the intended line will proceed through Kyneton to Stratford-on-Avon, where facilities will be gained for communication either with Worcester, Hereford, and South Wales, or, on the other hand, with Gloucester and Bristol. The total length of the line will be 32 miles and a few chains; the estimated cost, 300,000*l*. On arriving at the spot where the first sod had been already marked out, Lady Palmerston, lifting it upon a silver spade, deposited it in a light wheelbarrow, ornamented tastefully with silver, and bearing an inscription stating it to be the gift of Mr. T. R. Crompton, the contractor to the line. Her ladyship took up the wheelbarrow and propelled it steadily to the end of a long plank amid the warm applause of the spectators. Having accomplished her task, Lady Palmerston said:—

"I thank you very kindly for the flattering manner in which you have received me to-day, and I trust that the works now commenced will be found useful, and for the advantage of Northampton and its neighbourhood."

The three cheers given for Lady Palmerston were promptly followed by three others for the noble lord himself. Lord Palmerston, in returning thanks, expressed the great pleasure which he and Lady Palmerston felt in presiding at the commencement of a work which promised to be of so beneficial a character. Irrespective of other considerations it was, he said, a good social example for ladies in a high position to show that they could sometimes take to digging the soil. He trusted that the crop in this instance would be more permanent and more solid in its yield than agricultural operations occasionally were. The company then adjourned to a large marquee, where luncheon had been provided for about 250 guests. In returning thanks for the toast in honour of Lady Palmerston, Lord Palmerston said—

"I am requested by Lady Palmerston to tell you how sensible she is of the kindness which you have displayed towards her. She has made one speech to-day, and, like the celebrated orator, 'Single-Speech Hamilton,' who also made a very good speech, she ought not to be called on for a second the same day. But I am sure you may rely on the sincerity of the interest which Lady Palmerston takes in this railway, because her interests are bound up and identified with yours. She is a Northamptonshire lady, and she came here to-day not as a stranger, to promote an undertaking upon general principles of material advantage, but as one of yourselves, to help forward an enterprise that has for all a mutual interest."

His lordship, in subsequently acknowledging the toast of his own health, spoke at some length on the national advantages of railways, and created great merriment by the following illustrations of the great changes they have effected:—

"Let any man take a goods train of the present day, carrying, I will not say how many tons of commodities, at a rapid pace from a seat of manufactures in one part of the island to the nearest port of embarkation, and compare that with the old broad-wheeled waggon, with its six horses, all with docked tails, wincing in agony at the bite of the flies, and in vain seeking relief from the little bit of net that covered them, while the driver walked beside them, sometimes taking the advantage of a pony. The abolition of this slowest of all conveyances necessarily exercised a great influence upon the price of commodities. If any man will compare the present facilities for conveying manufactures to market with those which existed before railways were invented, he will see what an enormous stimulus they have given to the industrial prosperity of the land. Neither ought we to forget the social advantages which railways have conferred. They have rendered this island as regards facilities of communication between man and man almost one great capital. In former times many were born and lived and died in a country village without even knowing whether London was not paved, as some said, with gold. Now there is hardly a village within reasonable distance of the metropolis which at some time or other, probably on the occasion of some great national exhibition, has not contributed sight-seers from the provinces. The difference between the two periods may be exemplified in this way:—Formerly when a gentleman asked a friend in London to come down to him in the country, the friend came with things to last him for a fortnight or three weeks, and took perhaps a week on the journey. Now, if one gentleman meets another, say in St. James's Street, he says, 'I shall have some good shooting next week. Will you come down to me and spend a few days?' His friend replies, 'Oh, by all means I shall be charmed. What is the station nearest your house?' The first speaker rejoins, 'Why, I am not very well off at present in regard to railway communication—the nearest station is 16 miles from my house. But it is a good road, you will get a nice fly, and you can come very well.' Upon this the invited guest says—'Did you say it was Tuesday you asked me for?' 'Yes,' says the country gentleman, 'I think you told me you were free.' 'The fact is,' answers the friend, 'I have a very bad memory, and now I think of it I am very sorry, but I have a particular engagement for that day—some other time I shall be happy to go to you.' And so away he goes, and offers himself as a visitor to some other friend, who has got a station within one or two miles of his house."

Mr. Knightley, M.P., in returning thanks for the toast of the County Members, made the following remarks on Lord Palmerston's position in the Government, amidst the cheers and laughter of the company:—

"He congratulated the company upon the success with which the proceedings had passed off, and particularly upon the presence of guests so distinguished as Lord and Lady Palmerston, whom they desired, if possible, to see oftener in that part of the country. Somehow or other the country always drew a great distinction between Lord Palmerston and the rest of the Ministry. Whenever a good measure was brought forward—and a great many good measures had been introduced by the Government—it was always put down to the credit of the noble lord. Whenever anything went wrong, and in that establishment as well as in others mishaps would from time to time occur, the particular "kettle of fish" was always attributed to the cooking of one of his subordinates. A game of "chuck-farthing" was perpetually going on, in which if "heads" came down the noble viscount won, and if "tails" descended it was his colleagues who lost. Not that any unfair play could be charged against the noble lord; on the contrary, he invariably deprecated anything like a distinction being made. The country, however, was not to be shaken in its opinion. Somehow or other it always determined to give Lord Palmerston all the halfpence, and to give his colleagues all the kicks."

Ireland.

THE IRISH CHURCH.—The Lord Lieutenant has appointed the Rev. W. Alexander to be Dean of Emly, and has conferred the Deanery of Clonfert on Dr. Graves, who is to hold it in connection with his present office of Dean of the Chapel Royal.

FATAL EXCISE AFFRAY.—A few nights since at midnight the constabulary seized an illicit still and a quantity of whiskey near Ennis, in the county of Clare. About 200 of the country people immediately turned out, many of them jumping out of their beds in their shirts, and attempted to get back the booty. They closed in on the police, who were only six in number, and fearing that his men would be disarmed and killed, the head constable, Mr. Roger M'Loughlin, after repeated warning, ordered two of his men to fire. One person was mortally wounded. This fatality put an end to the affray, and the police carried off the whiskey. A coroner's jury has since returned a verdict that the police "were not justified in firing on the occasion." The owners of the still, Michael and Francis Sheedy, father and son, were taken before the Ennis magistrates on Friday, when the elder prisoner was ordered to pay the mitigated fine of 12*l*., or be imprisoned for six months, and the younger to pay 6*l*., or to undergo three months' imprisonment.

Railways.

COMMUNICATION IN RAILWAY TRAINS.—The Board of Trade has issued the following circular to the secretaries of the different railway companies:—

"Whitehall, July 5.

"Sir,—I am directed by the Lords of the Committee of Privy Council for Trade to request you to state to the directors that my lords have had under their consideration the complaints, frequently urged on their attention, of the danger existing or apprehended from the want of means of communication between the different portions of a railway train while in motion. Several instances have occurred of carriages having taken fire, or having been thrown off the rails, the passengers in which had no means of making their perilous situation known to the servants of the company in charge of the train. Recent occurrences, also, of a criminal nature in passenger railway trains have excited among the public a very general feeling of alarm. Under these circumstances, my lords are desirous of calling the attention of railway companies to this subject, with a view to the consideration by them of the question how far by means of increased facilities for communication between different portions of a railway train while in motion, or other improved regulations, it may be practicable to obviate the evils complained of and to allay the sense of insecurity at present prevalent among railway passengers. My lords are very sensible that without the cordial co-operation of the railway companies any attempt to introduce improvements in the system of railway management would be attended with doubtful success. Several expedients have been suggested as calculated in some degree to further the desired object. One expedient for guarding against offences in railway carriages which has been proposed is that of placing windows between the compartments of each carriage. As these windows might be provided with curtains, the privacy of the carriages would not ordinarily be interfered with. As an expedient for providing means of communication between the guard and the passengers, it has been suggested that every vehicle forming part of a passenger train should be furnished with footboards and handrails which would admit of the guard (or, in case of emergency, other persons) passing along the train. It appears to my lords deserving of consideration, whether this expedient, guarded, of course, by carefully framed regulations to prevent abuse, might not be generally adopted with very beneficial effects. The use of a cord running along the train, by means of which the guard can attract the attention of the engine-driver, has now existed on some lines so long as to prove that there is no difficulty in its application. I am to request that my lords may be favoured with the opinion of the directors as to the practical value of arrangements of the nature specified, and also with any suggestions which the directors may think adapted to accomplish the ends which my lords have in view. I am also to request that my lords may be informed what means are in practice on your line for effecting communication between portions of a train while in motion, and whether, with a view to the application of such means to the carriages of the company passing on the line of another company, any regulations of a general and compulsory character are deemed expedient.—I am, &c., "JAMES BOOTH."

FATAL ACCIDENT AT THE MARGATE STATION.—On Monday afternoon, as the London train was entering the Margate station, it ran into the Deal train, then waiting to be despatched. It appears that the down train reaches the Margate platform on the same line of rails as that on which the up train departs. The train from London was overdue 15 minutes, and the Deal train had collected its passengers, and only awaited the arrival of the London train to proceed on its journey. In the ordinary course of things the engine from the down train would have been attached to the carriages of the Deal train, and drawn them out of the station. But the down train, when it rounded the curve by which the terminus is approached, was seen to be coming at a frightful pace, and the certainty of a serious collision became apparent. Nothing could be done by the station-master or his servants, and the train dashed into the terminus at a speed which was sufficient to reduce to fragments the carriages of the Deal train, and also to smash the powerful buffer fixed at the end of the platform. Such was the force of the collision that the first-class carriage was driven up to the roof of the station, where it remained, supported by the second and third class, forming a complete pyramid. The buffers were broken off the carriages, two of which were shattered to pieces, and the permanent way torn up for some distance. The task of rescuing the passengers from the mass of ruins occupied more than an hour, when it was found that there were three cases of most serious injury, besides others more slightly hurt. Mrs. Locke, the wife of a respectable tradesman in the town, had both her thighs fractured, all her left ribs broken, with severe scalp wounds, and the left eye frightfully contused. She survived her injuries only two hours. An aged woman, a laundress named Goodchild, had her ribs fractured, and also sustained such severe injury to her back that she is in a very dangerous state. A woman named Taylor had her left arm broken, with other injuries. A gentleman from Faversham was a good deal hurt, though able to be removed to his residence, and a woman named Roguist, a visitor at Margate, was removed to the nearest house in a state of extraordinary nervous excitement, but it is hoped that she has received no serious injury. There were several other persons more or less hurt, but not sufficiently so to render it necessary to call in medical assistance. The accident would have been attended with much more serious consequences if it had not been that the carriages of the Deal train received the first shock of the collision. It is thought that otherwise the engine of the down train must have dashed completely through the station, when the destruction of life and property must have been dreadful. With respect to the cause of the collision, it is stated that when the train left London it was in charge of two guards, one of whom absented himself without leave at Ramsgate, and consequently the full power of the breaks could not be applied, so that the engine driver necessarily lost the command over the train as soon as he entered the steep incline leading to the Margate terminus. The inquest on Mrs. Locke was opened on Wednesday and adjourned.

ACCIDENT AT THE MANCHESTER STATION.—On Saturday as the passenger train from Stalybridge was approaching the incline near the Victoria station it came in contact with an engine and tender, which were standing partly on a branch line, but were not clear of the main one. The engine of the passenger train, as well as the engine and tender causing the obstruction, were much damaged. All the passengers were shaken, but only one of them complained seriously. The guard was bruised on his head and chest, and considerably shaken

Law.

Midland Circuit: Cambridge.—*The Cambridge Murder.*—*William Marion Wallis* was indicted for the Wilful Murder of Maria Hunt, at Cambridge, on Feb 28 last. There were also two other indictments against him—one for an assault on Maria Hunt, with intent to murder, and another for an assault upon Sally Harris Walker, with intent to murder. The trial excited very great interest from the peculiar circumstances of the case, the position of the parties, and the nature of the evidence. It will be remembered that the deceased, an old lady of 70 years of age, resided with another old lady, named Walker, at Prospect Cottage, Cambridge. On Sunday night, February 25th, the servant was going through the passage with a warming-pan in her hand, when she encountered a man with a black mask over his face, who rushed at her, knocked the candle out of her hand, and seeing the warming-pan beat Mrs. Hunt with it in a most violent manner. When the police arrived they found both ladies lying on the floor covered with blood, but the poor old lady dead. A number of circumstances of a highly suspicious character appeared to connect the prisoner with the outrage, and he was arrested. On March 15 Mrs Hunt died, and the prisoner was then charged with the capital offence. The evidence against him consisted of the depositions of the deceased lady taken shortly before her death, and the facts stated in court by the survivor. But it was of course purely circumstantial, no direct proof to fix the guilt upon the prisoner being available. Mr. Baron Channell in summing up the case carefully adverted to this fact, and the jury returned a verdict of Not Guilty on the ground of insanity. Lincoln.—*Shooting with Intent.*—*Martin Hurst* was indicted for shooting at Emma J. Ibson, at Corringham, on the 17th of June, with intent to murder her. The two young women were both schoolmistresses, and had been on excellent terms, assisting each other in private tuition, and visiting each other frequently. For some time before the crime prisoner appeared to be angry with or jealous of the prosecutrix, but the cause of this alteration of feeling was by no means clear. On the day in question the prisoner, while walking with the prosecutrix and some young ladies, drew a pistol from her pocket, and deliberately discharged it at the head of her friend. The forehead of the prosecutrix was scorched by the powder, but she had suffered no further injury. These facts having been clearly proved, the jury found the prisoner guilty of intending to do grievous bodily harm. Mr Justice Keating said that the absence of sufficient motive for the crime did not excuse it, and sentenced the prisoner to penal servitude for four years. The prisoner seemed in a highly excited state during the trial. *The Fleet Workhouse Murder*—*David Bloy* was indicted for the wilful murder of Simon Cote, at Fleet, on the 3d of December, 1860. The prisoner and deceased were sleeping in the same ward in the workhouse at Fleet, when the prisoner, who appears to have previously secreted a knife in his bed, went to Cote's bedside and cut his throat, falling down himself immediately after in an epileptic fit. There was no provocation for the act, and no previous quarrel. The prisoner had been for some time under medical care. He was subject to epileptic fits, and, although regarded as mad and so returned to the Lunacy Commissioners, was considered harmless and not put under restraint. About three weeks before the attack upon the deceased the prisoner had exhibited the first symptoms of violence in tearing his bed clothes upon his recovery from an epileptic fit. After cutting Cote's throat he became decidedly mad, and had only just recovered sufficiently to be put upon his trial now. Cote's wound went on well for a short time, but erysipelas supervened and caused his death. The jury *Acquitted* the prisoner on the ground of insanity, and he was ordered to be detained in confinement during her Majesty's pleasure. York.—*The Knaresmire Murder.*—*John Foy* was indicted for the wilful murder of Thomas Palfreman, on the 21st of May. The deceased was an amateur pugilist, and on the evening in question was drinking in a publichouse with a number of his friends and supporters. Foy and four other Irishmen were also present, and in the course of the evening Palfreman challenged him to fight for a shilling a side. Foy accepted the offer, and they fought some time, when the fighting became general. At length Palfreman cried out that he was stabbed, and on examination it turned out that he had received two wounds with a knife, one in the abdomen, and the other in the side, piercing the liver. He died in about 40 hours. On the morning after the fight, a blood stained pocket-knife was found in the place. The prisoner Foy had been seen with a similar weapon in his possession, and he was also near deceased at the time he was stabbed. The jury found him *Guilty* of Manslaughter, and he was sentenced to 20 years' penal servitude.

Home Circuit: Maidstone.—*Extraordinary Charge of Riot.*—*Thomas Cole, Edward Beeney, Alfred Taylor,* and *Henry Butcher,* four young men, surrendered to take their trial upon an indictment for misdemeanour in having riotously assembled and disturbed the public peace at Tunbridge Wells on the 2d of July. It appeared that a medical man in the town had made a complaint to the Home Secretary of the defective sanitary arrangements there, which had led to disease. An inspector sent down from the Home Office reported that this was not the case, and the lower classes, feeling indignant at the aspersion on their town, burnt the doctor in effigy and broke his windows. On the case being opened, Baron Martin suggested that it was a case for arrangement, and in the end the prisoners were dismissed on their own recognisances, and an engagement to pay 20*l.* for the damage done. *Sinking a Ship.*—*Heinrich Kohn,* a German ship carpenter, was charged with having entered into a conspiracy with other persons to sink the ship Alma, on which policies were effected to the extent of 30,000*l.* There was no doubt that the ship sank, the crew being taken off by another vessel; and the principal evidence against the prisoner was his own statements to parties on board the ship that rescued them. But as the vessel was foreign, the prisoner a foreigner, and the sinking of the ship took place on the high seas, the only charge that could be brought against him was that of having entered into a conspiracy with others for the purpose while the ship was at Ramsgate; and the jury not being satisfied with the evidence adduced, returned a verdict of *Not Guilty.* *Forgery*—*William James Epps,* 47, a very respectable-looking man, described as a commission agent, was charged with feloniously forging an acceptance to a bill of exchange for 2*l.* 11*s.* 8*d.* with intent to defraud. This case excited some interest on account of the position of the defendant, who was formerly proprietor of one of the principal hotels in the town, and who, at the time the offence was committed, was the proprietor of a restaurant, and also carried on the business of a seedsman at Maidstone. It appeared that the prisoner, who at the time was in pecuniary difficulties, had a foreman named George Beard, and that he produced to this person the bill of exchange in question, and asked him to put his name to it as the acceptor. He did so, and at this time there was no address to the bill, but subsequently the name of Rottingdean, Sussex, was written on the bill as the address of the acceptor, and it was then offered for discount to a loan company in London. It turned out that there was a person of respectability of the name of George Humphery Beard residing at Rottingdean, and the evidence was that the bill was discounted under the belief that he was the acceptor of the bill, the fact being that the prisoner was an entire stranger to him, and that he knew nothing of the transaction. At the close of the case for the prosecution, the prisoner's counsel submitted that the evidence had not established the offence of forgery. Mr. Justice Willes said it appeared that in the communications that took place between the parties before the bill was discounted, the prisoner had never represented that the acceptor of the bill was any other than the person who had really accepted it, and he was therefore of opinion that the indictment could not be sustained. The jury, therefore, under his lordship's direction, returned a verdict of *Not Guilty.* The prisoner was then tried upon a second indictment, charging him with the same offence in reference to a bill of exchange for 34*l.* 13*s.* 4*d.* In this case it appeared that the prisoner had caused the same person, George Beard, his foreman, to accept the bill in question, and that the address, Bottingdean, was afterwards added. He then took the bill to a person named Wood, residing at Maidstone, and asked him to discount it, stating that the acceptor was Mr Beard, a seedsman at Bottingdean, who was one of his customers, and that the bill had been given in payment of an account he owed him in his business. The Jury, after a very short deliberation, returned a verdict of *Guilty,* at the same time stating, in answer to a question put by the learned judge, that they were of opinion that prisoner had represented the acceptor of the bill to be a person of substance who was able to pay it, when in point of fact he knew perfectly well that the acceptor was a man of straw. Mr. Justice Willes, in passing sentence, said that the prisoner had been most properly convicted of the crime of forgery, and he was sorry to see that in the course of these transactions he had committed another offence—that of embezzlement, and that he had been convicted and sentenced to imprisonment for that offence. Under all the circumstances he felt called upon to pass a sentence of some severity, and to order him to be kept in penal servitude for four years. Guildford: *The Penge Murder.*—The grand jury threw out the bill against the two labouring men at Penge, who were charged with the murder of a woman at that place. Mr Justice Willes in his charge intimating doubts both on the point whether the woman had died from violence, and whether if she did, there was *prima facie* evidence of the prisoners being with her. *The Bahan Railway Accident.*—*Thomas Lee,* engine driver, and *John Trainer,* fireman on the South Western Railway, surrendered on an indictment charging them with the manslaughter of five persons—namely, Joseph Clegg, John Coppard, Edward Hall, Robert Wilkie, and William Winfold. The charge arose out of the fatal accident that took place at the Egham Station on the Tuesday of the last Ascot Races, when one train ran into another, the result being that the deceased persons lost their lives, and several others were seriously injured. The principal points were that a train was despatched from Ascot at 10 minutes past 7 in the evening, and that five minutes afterwards another train, of which the prisoners were the driver and the fireman, was despatched from the same station, and while the first train was in the act of starting from Egham it was run into by the latter. It appeared that those who had the management of the second train were not made acquainted with the fact that the one which preceded them was to stop at Egham, and that the driver and guard of the first train were also not made acquainted that a train was to follow them at so short an interval as five minutes. It was admitted by counsel for the prosecution that the unfortunate accident was undoubtedly, in a great measure, attributable to the want of proper arrangements on the part of the superior officers of the company; but it was at the same time contended that if the prisoners by culpable negligence, either by disregarding the signals or by going at too great speed, which prevented them from stopping the train, had caused the death of the unfortunate persons who were the subjects of the indictment, they would be amenable to the charge preferred against them. After several witnesses had been examined, and the regulations made by the managers of the company for the traffic on the race days had been put in evidence, Mr. Justice Willes interposed, and expressed his opinion that there was not sufficient evidence to show that the prisoners were accountable for what had occurred. It was clear that there was very great confusion with regard to the signals, and after the statement of Colonel Yolland it appeared to be extremely probable that if the second guard, who had absconded, had not neglected his duty in applying the break the train might have been stopped, and the accident would not have taken place. Another point was that the prisoners were entirely ignorant of the fact that the first train was to have stopped at Egham, and that, according to the signals, instead of being stopped at the Rusham station, which was at no great distance from Egham, they were actually, according to the regulations, invited to go on. He did not know what the jury thought of the case, but he must say for his own part that he thought the system adopted was a wrong one, and that if railway companies would persist in pursuing such a system, and fatal accidents resulted, juries would be quite justified in compelling them to pay heavy damages to the relatives of those who lost their lives under such circumstances. The question was whether the driver of a train who was kept in ignorance of the state of affairs upon the line was to be held responsible for an accident such as this, and this was the only question for the jury to consider. The Jury said they entirely coincided in the view taken of the case by the learned judge. They were thoroughly of opinion that there had been no culpable negligence on the part of the prisoners, and that the accident had arisen in consequence of the company having given dangerous instructions, which could not be carried out. Mr. Justice Willes said he was of the same opinion, and that it would have been very wrong to convict persons in the position of the prisoners, solely because they were unable to carry out arrangements of the description that had been referred to. It seemed to him that the accident was entirely to be attributed to the mistaken regulations made by the company, and not to any criminal negligence on the part of the prisoners, and that it would only be a waste of time to proceed further with the inquiry. The Jury then returned a verdict of *Not Guilty.* A similar verdict was then taken upon the coroner's inquisition, and the prisoners were ordered to be discharged.

Western Circuit, Bodmin.—*The Falmouth Lunacy Case.*—*Samuel Porter,* who was convicted at the last Spring Assizes for the culpable neglect of his brother, a lunatic, but in whose case a point of law was reserved for the consideration of the Court for Crown Cases Reserved, was placed at the bar to receive judgment, the Court of Appeal having decided in favour of the conviction. Mr. Justice Byles addressed him at some length on the enormity of his offence; but, as the jury had recommended him to mercy, he thought that justice would be satisfied by the punishment of nine months' imprisonment. To avoid all misapprehension, he desired to state that the law did not authorise hard labour to be imposed for this offence. The sentence of the Court therefore was that he be imprisoned for nine months.

Obituary.

Vice-Admiral Brasier died on the 28th ult., at Bradney, Shropshire, in his 80th year. He entered the navy in 1799, and was present at the battle of Copenhagen in 1801: at the blockade of Captain Francois, and surrender of the French frigates in 1803; at the attack on Curaçoa in 1804, and at the storming the fort of Batabano, Cuba, in 1806. He commanded a gunboat at the siege of Flushing in 1809, served on shore at the reduction of Guadaloupe in 1810, assisted at the destruction of two batteries and convoy at Morgion in 1812, and was present at the reduction of Genoa in 1814. After further serving in the Mediterranean and on the Irish station he became commander in 1822, and as such served in the West Indies and again in the Mediterranean. He obtained post rank in 1837, became rear-admiral on the reserved list in 1857, and vice-admiral in 1863.

Vice Admiral Morier died at Brunswick House, Eastbourne, on the 29th ult. He entered the navy in 1803; and served at the defence of Cadiz, the reduction of Ponza, the destruction of 10 armed feluccas near Cetraro, in the Gulf of Policastro; and the bombardment of Stonington, in America. He became commander in 1815, and after three years' service in the North Sea obtained post rank in 1830, became retired rear admiral in 1855, and vice admiral in 1862.

BIRTHS.—On the 27th ult, at Cassiobury Park, the Countess of Essex, of a son—28th ult, at the Admiralty, the Lady Hermione Graham, of a son—25th ult, at Castleton, the Hon. Lady Walker, of a son—29th ult, at Old Charlton, Kent, the Hon. Lady Stopford, of a son—31st ult, at 40, Chester Square, the Lady Frances Bushby, of a son—29th ult, at 122, George Street, Edinburgh, Lady Macpherson Grant, of a daughter—27th ult, at Park Cottage, Blackheath, Lady Honyman, of a daughter, stillborn—31st ult, at 48, Eaton Square, the Hon. Mrs. Tremayne, of a daughter.

MARRIAGES.—On the 28th ult, at St. James's, Piccadilly, Lieut.-Colonel Crichton-Stuart, M.P., eldest son of the late Lord James Stuart, and nephew of the late Marquis of Bute, to Gertrude Frances, second daughter of the Right Hon. Sir G Hamilton Seymour, G.C.B.—July 28, at St. Peter's, Pimlico, Edward John D'as Pate, Esq., of Hamilton Place, Piccadilly, to Mary Georgiana Elizabeth, second daughter of the late Colonel Henry Vaughan Brooke, C.B., and granddaughter of the late General Sir Willoughby Cotton, G.C.B.—1st inst., at St. Paul's, Knightsbridge, the Rev. Frederick Boyd, second son of the late Sir John Boyd, Bart., to Katharine Mary, only child of Henry William Beauclerk, Esq., and the late Lady Katharine Frances Beauclerk—28th ult, at Trinity Church, Paddington, C. M'Lean M'Hardy, second son of Rear-Admiral M'Hardy, to Amy, youngest daughter of the late Rev. John Bude, M.A., of Pembroke College, and of Bengeo, Herts—27th ult, at the parish church, Leeds, the Rev. R. F. W. Molesworth, 5th son of the Rev J. E. N. Molesworth, D.D., vicar of Rochdale, to Frances Elizabeth, second and only surviving daughter of the late Admiral G. Henderson—30th ult, at Trinity Church, Paddington, Commander T. E. Lewis, H. M.'s late Indian Navy, to Elizabeth, only daughter of the late Major-General Durant—28th ult, at the parish church of Farnham, W. Wynne Willson, M.A., Fellow of St. John's College, Oxford, and curate of St Matthew's, Denmark Hill, London, S., to Minnie, fifth surviving daughter of the Right Rev. Dr. Alexander, late Bishop of Jerusalem—28th ult, at St Paul's, Hampstead, Thomas Tyringham Bernard, Esq., of Winchendon Priory, Bucks, M.P., to Ellen, relict of Henry Elwes, Esq., late of Marcham Park, Berks—2d inst, at St. Edward's Church, Cambridge, the Rev. John Fuller, fellow and tutor of Emmanuel, rector of Thurcaston, to Emmeline Jane, eldest daughter of the Rev. R. Okes, D.D., provost of King's—28th ult, at St. Pancras Church, Charles Swain, son of Thomas Agnew, Esq., of Fairhope, Eccles, near Manchester, to Edith, daughter of W. Bradbury, Esq., of 13, Upper Woburn Place, Tavistock Square—26th ult, at St. Clements Danes, Strand, Andrew Henderson, of 17, Circus Road, St. John's Wood, youngest son of Mr. Edward George Henderson, of Wellington Nursery, St. John's Wood, to Harriet, fifth daughter of the late Mr. William Norton, of 219 and 88 Strand.

DEATHS.—On the 22d ult, at Sandywell Park, C. W. Horton, Esq., second son of the late Right Hon. Sir Robert Wilmot Horton, and late captain Coldstream Guards, aged 55—28th ult, at Belhus, Essex, Dorothy Ada, third daughter of Sir Thomas Barrett Lennard, aged 14 months—July 27, in Dover Street, Robert, youngest son of the late Sir Nicholas Colthurst, Bart., M.P., aged 34—28th ult, at Ash Hill, near Newton Abbot, Colonel John Heatly, late 69th Regiment—30th ult, at Mickleham, Lieut.-Colonel James Grissell, aged 61—1st inst, at Worthing, Caroline, wife of Vice Admiral Lyons, aged 75—25th ult, in London, Janetta Thereza, last surviving daughter of the late Rear-Admiral T. Stone, of the Portuguese Service, aged 66—20th ult, at Acomb House, Charlton Kings, Cheltenham, James Yeames, Esq., late H.B.M.'s Consul-General for the Ports on the Black Sea, aged 75—2d inst, after a few days' illness, John Laurie, Esq., of 18, Hyde Park Terrace, aged 67—17th ult, John Dysart, Esq., J.P., Mall wall, Londonderry, Ireland, aged 89—27th ult, Robert Batt, Esq., D.L. and J.P. of Purdysburn, county of Down, Ireland, aged 68—30th ult, at Plymouth, Dr. W. F. Soltau, M.B, aged 51—27th ult, at 2 Charlotte Street, Fitzroy Square, Dr. D. H. G. Wildbore, M.D., F.R.C.S.—27th ult, at his Parsonage, the Rev. A. B. Hill, M.A., incumbent of St. Paul's, Tiverton, aged 47.

Markets.

COVENT GARDEN, Aug. 6.

Notwithstanding the continuance of dry weather, most descriptions of outdoor produce are very abundant. Cherries, Gooseberries, and Strawberries, though scarcer, are still sufficient for the demand. Of Grapes and Pine Apples there is also a good supply, and Black, Red, and White Currants are plentiful. The arrivals of foreign goods comprise Apricots and West India Pine Apples, both of which, especially the latter, are abundant and cheap. Green Walnuts for pickling may still be obtained. Peas are plentiful, as are also Potatos. Flowers chiefly consist of Orchids, Heaths, Pelargoniums, Mignonette, and Roses.

FRUIT.

ine Apples, per lb., 6s to 8s	Cherries, per lb, 6d to 9d
Grapes, per lb., 4s to 8s	Oranges, per 100, 16s to 20s
Peaches, per doz., 6s to 10s	Lemons, per 100, 8s to 12s
Nectarines, do., 6s to 12s	Nuts, Barcelona, do., 16s
Strawberries, p. punn, 6d to 1s 6d	— New Brazil, do., 16s.
Gooseberries, green, p. qt., 3d to 6d	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Turnips, p. bunch, 6d to 8d
Asparagus, per bundle, 4s to 7s	Cucumbers, each, 4d to 1s
French Beans, p. ½ sieve, 3s to 4s	Beet, per doz., 1s 6d to 2s
Peas, p. basket, 2s 6d to 3s 6d	Shallots, per lb., 6d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 6d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
— new, per lb., 2d to 4d	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 6d to 9d	Mushrooms, p. pott., 1s to 1s 9d
Rhubarb p. bundle, 2d to 4d	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 5d

COAL MARKET.—Aug. 3.

Buddle's West Hartley, 17s. 9d.; Hastings Hartley, 17s. 9d.; North Pelton Gas, 14s.; Tanfield Moor, 13s. 6d.; Wylam, 15s.; Walls End Harton, 17s.; Walls End Riddell, 17s.; Walls End Wharncliffe, 17s.; Eden Main, 17s. 6d.; Walls End Haswell, 19s.; Walls End Hetton, 19s.; Kepier Grange 17s. 3d.; Walls End South Hetton, 19s.; Walls End Townsend, 17s.; Walls End Caradoc, 18s 3d; Walls End Hartlepool, 18s 9d; Walls End Heugh Hall, 18s.; Walls End Kellee

18s.; Walls End East Hartlepool, 18s. 9d.; Walls End South Kelloe, 18s.—Ships at market, 79.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Aug. 4

Prime Meadow Hay	90s	to 100s	Clover, old	90s to 120s
Superior do. ..	—	—	New Clover ..	— —
Inferior do. ..	75	85	Do. second cut ..	— —
New do.	60	92	Straw	27 32
Rowen	—	—	HARVEY & EASTON.	

WHITECHAPEL, THURSDAY, Aug. 4.

Fine Meadow Hay..	95s	to 100s	Prime 1st cut Clover	115s to 120s
Prime New Hay ..	80	86	Inferior do. do. ..	105 110
Inferior do.	70	75	Prime 2d cut do. ..	110 115
Inferior	70	80	New Clover	100 105
Straw	28	32	Inferior do.	— —

HOPS.—BOROUGH MARKET, FRIDAY, Aug. 5.

Messrs. Pattenden & Smith report that the market remains without change, and prices firm. The reports from the plantations speak generally of the want of rain, and the deteriorating influence this long continued drought has on the plant.

METROPOLITAN CATTLE MARKET.

MONDAY, Aug. 1.

We have a few more Beasts than on Monday last, but the average quality is very middling. The demand is pretty good, and last week's quotations are well maintained. There are also more Sheep and Lambs; they are, however, in request. Some choicest kinds make rather more money, but on the average we cannot quote higher. Calves are selling as on Thursday. From Germany and Holland there are 2860 Beasts, 7670 Sheep, 343 Calves, and 90 Pigs; from Scotland, 18 Beasts; from Ireland, 150; and 2960 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	2	Best Long-wools, ..	—	..		
Best Short-horns	4	6	— 4	10	Do. Shorn ..	4	8	— 5	0
2d quality Beasts	3	0	— 3	8	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds			—	..	Do. Shorn ..	4	0	— 4	6
Do. Shorn ..	5	2	— 5	4	Lambs	5	8	— 6	8
					Calves	3	8	— 5	2
					Pigs ..	3	4	— 4	4

Beasts, 5720; Sheep and Lambs, 27,120; Calves, 368; Pigs, 340.

THURSDAY, Aug. 4.

The number of Beasts is larger than on Thursday last, but the average quality is very middling. Trade is active, and Monday's quotations are well supported. There is very little alteration, both as regards numbers and quality, of Sheep and Lambs. The demand is rather brisk for choice descriptions, which are by no means plentiful. Prices are about the same as on Monday. The trade for Calves also remains unaltered. Our foreign supply consists of 790 Beasts, 2970 Sheep, and 673 Calves. Milch Cows, 70.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	2	Best Long-wools. ..	—	..		
Best Short-horns	4	6	— 4	10	Do. Shorn ..	4	8	— 5	0
2d quality Beasts	3	0	— 3	8	Ewes & 2d quality	..	—	..	
Best Downs and Half-breds			—	..	Do. Shorn ..	4	0	— 4	6
Do. Shorn ..	5	2	— 5	6	Lambs	5	8	— 6	8
					Calves	3	8	— 5	2
					Pigs .. .	3	4	— 4	6

Beasts, 1600; Sheep and Lambs, 12,240; Calves, 852: Pigs, 180.

MARK LANE.—MONDAY, Aug. 1.

The supply of English Wheat this morning was short; that of Barley, Beans, and Peas limited, with moderate arrivals of British Oats. The imports of foreign articles of the trade have been tolerably good. English Wheat met a slow sale at 1s. to 2s. per qr. decline. New Talavera appeared, quality fair. Foreign Wheat was in limited request, and prices were 1s. to 2s. per quarter lower on secondary descriptions. Imports 23,302 qrs. Town-made Flour was unaltered. Country marks were rather cheaper. Americans sold slightly lower. Grinding Barley was fully as dear. Malt supported prices steadily. Beans were quite as high. Peas met a moderate inquiry, and were held on fully as high rates. There was a fair extent of business done in Oats, at the extreme currency of last week. Imports, 35,821 qrs. Linseed sold at previous rates. Rapeseed was fully as dear. The floating trade was less brisk, and prices tended downwards.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	44	—46	Red	40	—42
— — fine selected runs .. ditto	46	—48	Red	42	—44
— — Talavera	50	—54			
— Norfolk	—		Red	—	
— Foreign	38	—54			
BARLEY, grind. & dist, 25s to 27s .. Chev.	34	—38	Malting ..	29	—33
— Foreign .. grinding and distilling	22	—26	Malting ..	27	—31
OATS, Essex and Suffolk	18	—22			
— Scotch and Lincolnshire—Potato	20	—25	Feed	18	—22
— Irish .....Potato	19	—22	Feed	—	
— Foreign .....Poland and Brew	18	—23	Feed	17	—22
RYE	30	—32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....32s to 35s...Tick	33	—36	Harrow ..	33	—36
— Pigeon .... 36s to 40s.. Winds.	—		Longpod	—	
— Foreign .....Small	32	—38	Egyptian	30	—33
PEAS, White, Essex and Kent..Boilers	34	—36	Suffolk ..	34	—38
— Maple .... 31s to 37s .... Grey	31	—33	Foreign ..	32	—36
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered .. per sack	35	—40			
— 2d do ..... ditto	28	—34	Country .	28	—34
— Foreign ..... per barrel	18	—25	Per sack	32	—34

FRIDAY, Aug. 5.

The bulk of the supply of home-grown Wheat on sale in to-day's market formed a portion of the arrivals on Monday. Although the show of samples was limited, millers purchased slowly at the recent decline in value. With foreign Wheat we were well supplied. Even the best qualities were a dull inquiry; in prices, however, no change took place. Floating cargoes of Wheat were dull, but most other produce afloat commanded extreme rates. There was less activity in the Barley trade, and in some instances the quotations were a shade lower. Malt commanded full currencies, and the demand for all kinds was steady. The quantity on offer was moderately extensive. The supply of Oats was only moderate, and a full average business was doing at full quotations. Scarcely any Beans were on show. The inquiry for them was steady, at very full prices. Peas sold readily, but no actual advance took place in the rates obtained. Linseed and cakes were in good request at very full prices. In agricultural seeds next to nothing was doing. New Rapeseed continues to be held at high rates.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour
English ..	1150 qrs.	30 qrs.	1000 qrs.	510 sks.
Irish	—	—	1670	— ,,
Foreign ..	19,460 ,,	3370	32,560 ,,	890 ,, / 14720 brls

WAKEFIELD, Aug. 5.—Weather hot; attendance thin. Wheat trade nominal, though factors offer at 1s. less. Beans steady. Oats turn lower.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
June 25	40s 0d	28s 0d	20s 8d	..	35s 5d	33s 3d
July 2	40 9	27 2	20 9	31s 2d	36 2	34 0
— 9	41 9	27 8	21 10	28 9	36 1	32 8
— 16	42 6	27 10	21 7	31 5	36 11	34 3
— 23	43 0	27 3	21 0	34 0	37 8	35 7
— 30	44 0	27 7	22 4	30 2	38 4	35 11
Agg. Aver.	42 0	27 7	21 4	31 1	36 9	34 3

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	June 25.	July 2.	July 9.	July 16.	July 23.	July 30.
44s 0d	..	..	..	..	..	—
43 0	..	..	..	..	—	..
42 6	..	..	..	—	..	..
41 9	..	..	—	..	..	..
40 9	..	—	..	..	..	..
40 0	—	..	..	..	..	..

BRITISH WOOLS.—LONDON, Aug. 4.

Our stocks are very small for the season of the year, the consumption of the present clip having commenced so much earlier than usual. We expect a little during this month, and an active resumption of business in September, according to the regular order of our business.

WANTED, a FARM MAN, from the Country; one experienced in the Management of Alderney Cows, the Feeding and Killing of Sheep, Pigs, and Poultry; he must also well understand the Rearing of Poultry, and Hay Binding, be willing to make himself generally useful, and clean, sober, and industrious in his habits.—Apply by letter to E. E., Post Office, Woodford, Essex.

WANTED, a FOREMAN, who has a good knowledge of Stove and Greenhouse Plants and Forcing, and who is not above his work, a Catholic preferred; none need apply whose character will not bear every investigation.—Further particulars will be given on applying to E. C., the Gardens, Danesfield, Marlow, Bucks.

WANTED, a GARDENER, to take the entire charge of Three small Greenhouses, Flower, and Kitchen Gardens, near London. Must understand his work thoroughly, and be a married man.—Apply to K. P., Grugeon's News Office, 75, Old Broad Street, E.C.

WANTED, a GARDENER.—Married, without incumbrance; to live in the House and take charge of Flower and Kitchen Gardens and Greenhouse; his Wife to Cook and Dairy one Cow.—For further particulars, apply to Mr. JAMES JOSSELYN, Jun., The Hills, Stratford St. Mary, Suffolk.

WANTED, a really energetic, clever GARDENER, to take charge of one of the best Gardens in Mexico, and where considerable improvements have to be carried out. Must be single. Liberal salary given, and unexceptional references as to character and ability required.—Apply by letter only, stating age and all particulars, to N. H. N., care of Mr. James Veitch, Royal Exotic Nursery, King's Road, Chelsea, S.W.

WANTED, a GARDENER for the Country, to take the care of a small Kitchen and Flower Garden; to attend to one Cow and a Pig, and make himself useful. A Cottage rent free, with milk and vegetables. Suitable for a middle-aged married Man with no incumbrance. None need apply unless with good references. Wages moderate. State full particulars by letter only.—A. B., Packer's Library, King Street, Portman Square, W.

WANTED, a Middle-aged good working GARDENER, accustomed to Flower and Kitchen Gardens, small Stove and Greenhouse work, who has a Son between 14 and 15 years old to help him in the Garden and run errands. No Fruit-forcing. Wages for Man and Boy, if able-bodied 1l. 5s. per week. No cottage or perquisites.—For particulars address M. D., The Villetta, Emsworth, Hants.

WANTED, a KITCHEN GARDENER, with some knowledge of Farming (married, without children, preferred), to take charge of an Agricultural Boarding School for poor boys. The Wife as Matron. None but Church people with very good character need apply.—Address, MISS C., Beckley Grove, near Oxford.

WANTED, a Good SOFT-WOODED PROPAGATOR. —Apply by letter only, stating age, experience, and wages expected, to Mr. WOODROFFE, The Westbourne Nursery, Harrow Road, W.

WANTED, as UNDER GARDENER, an active, steady, industrious man, who understands the Kitchen and Flower Garden, and whose wife is a good Laundress. A house and everything for Laundry work found. None need apply whose character will not bear strict investigation.—Address A. B., 85, Wood Street, Cheapside, E.C.

WANTED, an experienced GARDEN LABOURER, whose Wife can attend to a Lodge Gate. Wages 15s. per week, Gas and Rent free.—Apply, stating age, number of children, and the sort of work most accustomed to, GARDENER, Hookfield, Epsom.

WANTED, in a London Nursery, as CLERK and SHOPMAN, a person competent to keep the Books and assist with Correspondence; one having a knowledge of the Seed Trade preferred. Commencing salary, 20s. per week.—Address, in own handwriting, stating age, name, references, &c., ROBERT PARKER, Exotic Nursery, Tooting, Surrey, S

WANTED, an active Young Man as ASSISTANT in the Seed Shop and Counting House. Must have some knowledge of the Business and be a good Penman.—Apply by letter only, stating age, qualifications, and reference, also what salary required.—OSBORN & SONS, Fulham Nursery, London, S.W.

WANTED, a respectable person as good PLAIN COOK, who can make Bread, and attend to a small Dairy.—Address R. B., Post Office, Hertford.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Middle-aged, married, no incumbrance; has had great experience in the Growth of Pines, Grapes, Orchard house, Stove and Greenhouse Plants; can Grow for exhibition if required; good Flower and Kitchen Gardener. Character will bear the strictest investigation.—G. B, 18, Croydon Street, Bryanston Square, W.

GARDENER (HEAD).—Age 35, married; thoroughly practical Flower, Fruit, and Kitchen Gardener, Forcing and otherwise. Has lived in present situation seven years, and is leaving entirely on account of the breaking up of the establishment. Will be disengaged on Sept. 1. Any nobleman or gentleman requiring the services of such a person can have all particulars by applying to A. B., Post Office, Bilton, near Rugby.

GARDENER (HEAD).—Age 32, married, one child; has had good experience; thoroughly understands the Culture of Pines and Vines; the Management of Kitchen and Flower Gardens, &c.. Has lived in several large establishments where every department was thoroughly carried out. Is leaving present situation with four years' good character. Satisfactory reasons given for leaving. No single-handed place accepted.—WM. A. WILLIAMS, 8, Paradise Row, Holloway, Bath

GARDENER (HEAD).—Age 27, single; in his last situation he produced well-coloured Grapes every month in the year: Peaches, Nectarines, Melons, and Figs from May 1; Strawberries from March 1; Cucumbers from middle of January; managed large Vegetable and Flower Gardens; kept a Conservatory gay during autumn and winter; supplied Cut Flowers the whole year; and choice Vegetables during winter and spring; he is also experienced in the Forcing of Pine Apples, Cherries, &c.—For references, &c., apply to J. P., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Single; perfectly pr[illegible] every department. Best references.—W. T. K., Mo[illegible] dinning, Chiswick.

GARDENER (HEAD).—Age 30, married, 2 [illegible] Understands his profession in all its branches. G[illegible] —A. Z., Mr. Standish, Royal Nursery, Bagshot, Surrey.

GARDENER (HEAD).—Age 26; has had good [illegible] rience. Six years' good recommendations. Wages [illegible] House.—W. K, West Street, Great Marlow, Bucks.

GARDENER (HEAD).—Aged 34, married; under[illegible] his profession in all its branches; also Cultivation of P[illegible] Exhibitions.—H. MAY, Holly Lodge, Highgate, N.

GARDENER (HEAD).—Age 36, married. Scotch; thorough practical man. Has managed extensive Garden[illegible] Can take care of Land and Stock.—A. B., Manor Rooms, Hack[illegible] London, N.E.

GARDENER (HEAD).—Age 40, married, no incumbrance; understands Early Forcing, Vines, Pines, Cucumber[illegible] Flower and Kitchen Garden. Four years' character.—J. W. [illegible] Cologne Road, New Wandsworth, S.W.

GARDENER (HEAD).—Age 40, married, no incumbrance; thoroughly experienced in Flower, Fruit, & Kitchen Gardens. Forcing in all its branches. Good character.—C. W. M., E. P. Francis, Nurseries, Hertford.

GARDENER (HEAD).—Age 28; thoroughly understands Flowers, Forcing, and Kitchen Gardening. Can [illegible] seven years' excellent character from last employer.—W. C. [illegible] bridge Station, Surrey.

GARDENER (HEAD).—J. MCNICOLL, late Gardener to O. T. Alger, Esq., Bushy Heath, in consequence of Dispo[illegible] Estate is open to an engagement. Orchard House Fruit and [illegible] Management.—J. McN., J. J. Foster, Anmer Nurseries, Edgware.

GARDENER (HEAD).—Age 28, married, one chi[illegible] thoroughly practical in every branch of Forcing, Vine[illegible] Peaches, &c. A good Kitchen and Flower Gardener. Meadow La[illegible] if required. Two years' unexceptionable character.—G. H., Po[illegible] Office, Witley, Godalming, Surrey.

GARDENER (HEAD).—Age 32, married, [illegible] incumbrance; possesses a practical knowledge of Grapes, Pines, Grapes, Melons, Cucumbers, Strawberries, Seakale a[illegible] Asparagus; and Designing Flower Gardens. Good Plant Grower. Three years' excellent character.—M. J., 21, Effra Parade, Brixton.

GARDENER (HEAD).—The Advertiser has had [illegible] class experience both in England and Scotland. Can undertake the Laying out and Improvement of Gardens, as well as the practical Management of them.—JNO. PEARSON, Jun., Kinlet Gardens, near Worcestershire.

GARDENER (HEAD), or GARDENER and BAILIFF. —Age 35, married, no incumbrance; thoroughly understands his profession in all its various branches. Has had great practice in Early and Late Forcing all kinds of Fruits; also the Management of Land and Stock. Wife a thorough good Dairy and Poultry woman. 12 years' unexceptionable character from late and previous employers. A copy of testimonials can be sent to any gentleman if required.—A. B., General Post Office, Exeter.

GARDENER, near London or South of England.—Age 25; has had nine years' good practical experience in the general routine of Gardening. Good character, with testimonials.—A. F. Post Office, Sturry, near Canterbury.

GARDENER (SINGLE-HANDED).—Age 21, single; good practical knowledge of his profession. Two years' good character from late employer.—J. B., Post Office, Dartford, Kent.

GARDENER (SINGLE).—Age 23; has had seven years' good practice in Flower and Kitchen Gardening. Good character for ability, &c.—H. C., Valentine's, Ilford, E.

GARDENER, where three or more are kept.—Age 26, single; eight years' testimony from private, botanic, and nursery gardens. First-class references.—Apply, stating wages, to J. McP., Post Office, Upper Tooting, S.

GARDENER (UNDER).—Age 21; three and [illegible] years' good character.—M. W., Mr. Allman's Nurseries, Horsham, Sussex.

NURSERY FOREMAN.—CHARLES NOBLE is in want of a Man to fill the above situation; he must have a good general knowledge, business habits, and good address.—Particulars as to ability, wages, &c., may be addressed Sunningdale Nursery, Bagshot.

FOREMAN.—EDWARD BENNETT can with confidence recommend his Foreman in the above capacity: has had practical experience in Early and Late Forcing. Stove, Greenhouse Orchids, and other Plants and Flowers. Three years' character. Direct as above, Osberton Hall, Worksop, Notts.

PROPAGATOR of Hard and Soft-wooded Plants, Grafting, &c.—For particulars apply to ALFRED EVES, Broxbourne, Herts.

To Noblemen, Gentlemen, and Agriculturists.

FARM BAILIFF, ESTATE BAILIFF, or WOOD STEWARD.—A young Man, who has been employed 17 years on the estate of the Duke of Bedford, is well acquainted with Farming, the general Management of Estates and Woodlands, and can make himself generally useful.—H. TAYLOR, Oakley Office, near Bedford.

IMPROVER.—A Youth, age 19, wishes for improvement in a Gentleman's Garden; has had three years' experience. Premium will be given, and wages expected.—A. B., Post Office, 2[illegible] Lane, Peckham, S.E.

SHOPMAN.—Age 28, married; has had 13 years' experience.—R. C., *Gardeners' Chronicle* Office, W.C.

To the Seed Trade.

SHOPMAN.—Age 30; a practical and qualified person. Has had 15 years' experience in London and the Provinces. Unexceptionable reference.—A. B., 32 A, Great Cambridge Street, Hackney Road, London, N.E.

NURSERYMAN'S CARPENTER, or on a Gentleman's Estate; thoroughly understands Rustic and Rockwork.—[illegible] 34, Church Street, Camberwell, S.

BORWICK'S BAKING POWDER, recommended by the Analyst to the *Lancet* and Author of "Adulteration Detected," for making DIGESTIVE BREAD without Yeast, and rendering Puddings and Pastry light and wholesome. Sold everywhere.

Avoid Medicines.—They always aggravate Chronic Complaints, but DU BARRY'S delicious health-restoring

REVALENTA ARABICA FOOD invariably and effectually cures them. Extract of 60,000 cures:—Cure No. 58,216, "of the Marchioness de Bre[illegible] Naples, of a fearful liver complaint, wasting away, with a [illegible] palpitation all over, bad digestion, constant sleeplessness, low [illegible] and the most intolerable nervous agitation, which prevented [illegible] her sitting down for hours together, and which for years [illegible] had resisted the careful treatment of the best French and En[illegible] medical men."—Cure No. 1771: "Lord Stuart de Decies, [illegible] Lieutenant of Waterford, of many years' dyspepsia."—Cure N[illegible] "Fifty years' indescribable agony from dyspepsia, nervousness, [illegible] asthma, cough, constipation, flatulency, spasms, sickness, [illegible] vomiting. Maria Jolly."—Cure No. 47,121: "Miss Elizabeth [illegible] Nazing Vicarage, Waltham Cross, Herts, of extreme nervousness, [illegible] indigestion, gatherings, low spirits, and nervous fancies."—Cure No. 54,816: "The Rev. James T. Campbell, Fakenham, Norfolk, [illegible] indigestion and torpidity of the liver, which had resisted all [illegible] treatment."—Cure No. 54,812: "Miss Virginia Zegners, [illegible] tion." In Tins, 1lb., 2s. 9d.; 2lb. 4s. 6d.; 12lb. 22s.

BARRY DU BARRY & Co., 77, Regent Street, London, W.; FORTNUM & MASON, Purveyors to Her Majesty; at Pine-apple dealers; BATTY'S; PETTY & WOOD'S; ABBIS'S, 61, Gracechurch Street, E.C.; 4, Cheapside, E.C.; 63, 150, and 205, Oxford Street, W.; 55, Charing Cross S.W.; Upper Baker Street, W.; 330, 440, and 451, Strand, W.C.; and all Grocers and Chemists.

The Gardeners' Chronicle Newspaper.

SATURDAY, AUGUST 13, 1864.

VICTORIA and LEGAL and COMMERCIAL LIFE ASSURANCE COMPANY, 18, King William Street, City.

FOURTH DIVISION OF PROFITS

At the Annual General Meeting, held on the 12th May last, a Reversionary Bonus of over £62,000 was appropriated to the Assured equal to 42 per cent on the Premiums paid.

The Accumulated Funds exceed	£410,000
The Annual Income is over	£70,000
The Claims by Death paid exceed	£310,000
Bonuses declared	£145,000

Every description of Life Assurance business is transacted.

Advances are made on Mortgage of Freehold Property, Life and Reversionary Interests, &c., and also to Assurers on Personal Security.

WILLIAM RATRAY, Actuary.

WARNER'S KOH-I-NOOR LAMPS, TO BURN THE HYDRO-CARBON OILS.

PRODUCE A BRILLIANT LIGHT WITHOUT SMOKE OR SMELL.

They are more easily trimmed and refilled than any other Lamp with similar burner.

There is no danger of chimneys breaking, and the chimney cannot become stuck fast.

For designs of the above, adapted for the DINING ROOM, DRAWING ROOM, HALL, or LIBRARY, see Number 2 of this Journal. A REALLY GOOD LAMP.

The above may be obtained of any Lamp Dealer.

The Furnishing of Bed Rooms.

HEAL AND SON have observed for some time that it would be advantageous to their customers to see a much larger selection of BED-ROOM FURNITURE than is usually displayed, and that to judge properly of the style and effect of the different descriptions of Furniture, it is necessary that each description should be placed in separate rooms. They have, therefore, erected large and additional Show Rooms, by which they are enabled not only to extend their show of Iron, Brass, and Wood Bedsteads and Bed Room Furniture, beyond what they believe has ever been attempted, but also to provide several small rooms for the purpose of keeping complete suites of Bed Room Furniture in the different styles.

Japanned Deal Goods may be seen in complete suites of five or six different colours, some of them light and ornamental, and others of a plainer description. Suites of Stained Deal Gothic Furniture, Polished Deal, Oak, and Walnut, are also set apart in separate rooms, so that customers are able to see the effect as it would appear in their own rooms. A Suite of very superior Gothic Oak Furniture will generally be kept in stock, and from time to time new and select Furniture in various woods will be added.

Bed Furnitures are fitted to the Bedsteads in large numbers, so that a complete assortment may be seen, and the effect of any particular pattern ascertained as it would appear on the Bedstead.

A very large stock of Bedding (HEAL & SON'S original trade) is placed on the Bedsteads.

The stock of Mahogany goods for the better Bed Rooms, and Japanned Goods for plain and Servant's use, is very greatly increased. The entire Stock is arranged in eight rooms, six galleries (each 120 feet long), and two large ground floors, the whole forming as complete an assortment of Bed Room Furniture as they think can possibly be desired.

Every attention is paid to the manufacture of the Cabinet work, and they have just erected large Workshops on the premises for this purpose, that the manufacture may be under their own immediate care.

Their Bedding trade receives their constant and personal attention, every article being made on the Premises.

They particularly call attention to their Patent Spring Mattress, the Sommier Elastique Portatif. It is portable, durable, and elastic, and lower in price than the old Spring Mattress.

HEAL & SON'S ILLUSTRATED CATALOGUE of Bedsteads, Bedding, and Bed Room Furniture sent free by Post.

196, 197, 198, Tottenham Court Road, London, W.C.

WHITE and SOUND TEETH are indispensable to personal attraction, and to health longevity, by the proper mastication of food. ROWLANDS' ODONTO, or Pearl Dentifrice, preserves and imparts a pearl-like whiteness to the Teeth, eradicates Tartar and spots of incipient decay, strengthens the Gums, and gives a pleasing fragrance to the Breath. Price 2s. 9d. per box. Sold by Chemists and Perfumers. Ask for "ROWLANDS' Odonto."

Manufacturers to the Queen and Prince of Wales.

FRY'S HOMŒOPATHIC ICELAND MOSS PEARL COCOA.

FRY'S SOLUBLE CHOCOLATE.

J. S. FRY & SONS were the only English Manufacturers of Cocoa who obtained the Prize Medal, 1862.

PURE PICKLES, SAUCES, JAMS, &c., and Table Delicacies of the highest quality, pure and wholesome. See *Lancet* and Dr. Hassall's Report.

CROSSE & BLACKWELL, Purveyors to the Queen, Soho Square, London. May be obtained from all Grocers and Oilmen.

Sauce.—Lea and Perrins'

WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE," is prepared solely by LEA & PERRINS.

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News of the Week.

THE Danish Rigsdag was opened on Saturday by the KING in person. HIS MAJESTY, in his Speech from the Throne said that, notwithstanding the courage and endurance of the army and fleet, and the sacrifices which had been readily borne by the entire people, the war waged against Denmark by a superior force had compelled him to agree to the heaviest and most grievous concessions. But having been abandoned by all Europe he was forced to yield to numbers, and to endeavour to terminate a war the continuance of which would only have entailed greater losses and misfortunes, without the prospect of any improvement of their position. He said that he looked with comfort to the future in full reliance upon the people, and in the hope that brighter days would not fail if King and people united to heal the deep wounds inflicted upon the country.

The preliminaries of peace between Denmark and Germany, with the text of the armistice, have been published both at Vienna and Berlin. They confirm the details given last week in regard to the cession of Schleswig, Holstein, and Lauenburg, and contain the stipulations which have been agreed upon in reference to the financial question. The debt contracted on account of Denmark proper is to be borne by Denmark only, while that incurred for the benefit of Schleswig and Holstein is to be borne by the Duchies. The common debt is to be apportioned relatively to the respective populations of Denmark and the Duchies, except the English loan of December, 1863, for which, as it was raised to carry on the war, Denmark is alone to be accountable. The costs of the provisioning, billeting, and transport of the troops which will continue to occupy Jutland, are to be borne by that province, and the surplus revenue after payment of these expenses up to the time of its evacuation is to be returned to Denmark.

From Paris we learn that the trial of M. GARNIER PAGES, M. CARNOT, and others, for illegally convening an electoral meeting of more than 20 persons, has terminated in their conviction. The Court deliberated five hours before coming to a decision, and sentenced them to a fine of 500 francs each with costs. The defendants have resolved to appeal against the sentence.

A telegram from Madrid announces that great alarm has been caused by the apprehensions of a popular disturbance in that capital, in consequence of which the Government have taken measures to preserve order.

M. TRANGOTT, the head of the National Government of Poland, and four of his colleagues, were hanged on the glacis of the citadel of Warsaw on Friday morning. The sentence of death passed upon 11 other members of the National Government has been commuted to hard labour or to imprisonment in a Siberian fortress.

Accounts from Tunis state that the Arabs are greatly dissatisfied with their chiefs for coming to terms without insisting on the dismissal of the minister or Kasnadar; and the affairs of this Regency still appear so threatening that the French and Italian admirals have despatched two ships of war to the coast for the protection of the subjects of their respective countries.

From the United States we learn that General GRANT blew up a Confederate fort at Petersburg on the 30th ult., and then assaulted and carried a line of Confederate intrenchments. An entire regiment was destroyed, together with the fort. Four days previously he moved two corps to the north side of the James River, and intrenched them at Deep Bottom, 10 miles from Richmond. While this movement was in progress, General LEE attempted to outflank General BUTLER'S position at Bermuda Hundred, upon which General GRANT despatched an army corps to the rescue, and drove the Confederates from their breastworks, capturing four guns. The Federal troops who pursued the Maryland invaders have been attacked by the Confederates under General EARLY, near Winchester, and signally defeated. In their flight they were driven through Martinsburg to the Potomac, with heavy loss of men and artillery. The Confederates have since re-occupied Martinsburg, and have invaded in force the States of Maryland, Pennsylvania, and Kentucky. The reported capture of Atlanta by General SHERMAN is not confirmed, but severe fighting is reported to be going on before it. Mr. FESSENDEN has called for subscriptions to a popular loan of 200,000,000 dollars. It is reported from New York that a board of naval officers has decided that the persons rescued from the Alabama by the Deerhound were prisoners of war, and that the Government has approved this decision.

A telegram from Bombay states that the KING OF AVA has granted a perpetual concession for railways, telegraphs, and collieries within the territories of Burmah.

The latest advices from New Zealand state that military operations are suspended, and that the troops have gone into winter quarters.

Home News.

THE COURT.—The Queen and Royal family continue at Osborne. On Friday morning the 5th inst., the Prince of Wales and Prince Louis of Hesse, left Cowes in the Victoria and Albert on a cruise to Dartmouth and Torquay, where they visited the Grand Duchess Marie of Russia. In the afternoon the Queen, accompanied by the Princess of Wales and Princess Louis of Hesse, drove out in an open carriage and four. On Saturday afternoon the Queen, accompanied by Princess Beatrice, Prince William of Prussia, and Princess Leiningen, embarked in the Royal yacht Fairy, and cruised towards Spithead. Her Majesty returned at 8 o'clock. The Princess of Wales and Princess Louis of Hesse cruised in the Elfin, and met the Prince of Wales and Prince Louis of Hesse on their return from Torquay in the Royal yacht Victoria and Albert. The Right Hon. T. Milner Gibson arrived, and had an audience of the Queen. On Sunday the Queen, the Prince and Princess of Wales, and Prince and Princess Louis of Hesse attended divine service at Osborne. The Rev. G. Prothero officiated. On Monday morning the Prince and Princess of Wales took leave of her Majesty, and left Osborne for Marlborough House, accompanied by the infant Prince Albert Victor. The Queen and Princess Louis of Hesse walked and drove. Princess Helena took an airing. Mr. Arthur Helps arrived on a visit to the Queen and Royal family. On Tuesday the Queen and Princess Louis of Hesse drove out. On Wednesday the Queen and Royal family drove out in the morning and afternoon. The Right Hon. E. Cardwell arrived at Osborne on a visit to the Queen. In the evening Prince and Princess Leiningen dined with her Majesty. On Thursday morning the young Prince William of Prussia left Osborne on his return to Germany. It is announced that the Queen and Royal family will leave Osborne on the 28th or 29th inst. for Edinburgh, on their way to Balmoral, where her Majesty is expected to remain till the end of October.

THE PRINCE AND PRINCESS OF WALES returned from Osborne to Marlborough House on Monday. On Tuesday the Duke of Cambridge visited their Royal Highnesses. The Prince went to the Licensed Victuallers' Asylum, in Old Kent Road, and inaugurated the statue of the Prince Consort, recently erected in the grounds of the Asylum. On Wednesday the Prince and Princess drove to Kew and visited the Duchess of Cambridge. In the evening their Royal Highnesses, with Prince Albert Victor, left Marlborough House for Scotland by the London and North-Western Railway. They arrived in Stirling on Thursday morning, and proceeded thence by the Forth and Clyde Railway to Balloch, at the foot of Lochlomond, where a steamer was in waiting to convey them to Inversnaid, whence they were to post to Stronachlachar, and then sail over Loch Katrine to the entrance of the Trossachs. It was expected that their Royal Highnesses would remain at the new Trossachs Hotel on Thursday night, and go on to Callander yesterday morning. It is understood that the Prince and Princess will remain at Abergeldie Castle from six weeks to two months, and will then proceed to Copenhagen on a visit to the King of Denmark.

PRINCE NAPOLEON IN SCOTLAND. — On Friday morning Prince Napoleon arrived in the Clyde in his steam-yacht from Havre, on a cruise round the West and North Highlands. The Prince landed at Greenock during the day, and visited the Greenock foundry, where the massive engines of the three large French Transatlantic steamers, Washington, Lafayette, and Europa, have been made. He also visited the Europa, which was recently launched by Messrs. Scott & Co. His Imperial Highness returned to the ship in the evening, and on Saturday morning again landed, and embarked in the steamer Vivid for Bowling, whence he visited Loch Lomond, and then proceeded to Inverness, where he arrived on Monday evening. After visiting the various objects of interest in the town and neighbourhood, the Prince proceeded by the Caledonian Canal to Oban, where he rejoined his yacht. There is a curiosity in naval architecture on board the yacht—viz., a small pleasure yacht of about six tons, fitted up with a double screw propeller, and with its miniature machinery encased in mahogany framework. This boat hangs from the steamer's davits.

MARRIAGE OF DHULEEP SING.—The Alexandria correspondent of the *Times of India* gives the following account of the marriage of Dhuleep Sing, which took place at the British Consulate, Alexandria, on the 7th of June, in the presence of a very few witnesses:—"The young lady who has now become the Maharanee is the daughter of a European merchant here. Her mother is an Abyssinian. She is between 15 and 16 years of age, of a slight but graceful figure, interesting rather than handsome, not tall, and in complexion lighter than her husband. She is a Christian, and was educated in the American Presbyterian Mission School at Cairo; and it was during a chance visit there, while on his way out to India, that the Prince first saw his future bride, who was engaged as instructress in the school. Dhuleep Sing wore at the wedding European costume, excepting a red Tarboosh. The bride's dress was also European, of white moiré antique, a fichu point d'Alençon—short lace sleeves, orange blossoms in her dark hair, with, of course, the usual gauze veil. She wore but few jewels; a necklace of fine pearls and a bracelet set with diamonds were her only ornaments. The formula of civil marriage at her Britannic Majesty's Consulates in the Levant is very brief. Both parties declare that they know no lawful impediment to their union; then they declare that they mutually accept each other as husband and wife, and the civil ceremony is over. This formula was pronounced by the Prince in English; the bride, in a low but musical voice, read it in Arabic (that being the only language with which she is acquainted), and thus 'Bamba Muller' became the 'Maharanee.' She showed much self-possession through it all. A religious ceremony was performed by one of the American ministers at the house of the bride's father; and the newly-married pair retired to the Prince's house at Ramleh, a few miles from Alexandria. They will leave soon for England."

THE CHANNEL FLEET.—The Corporation and citizens of Cork gave a public dinner to Admiral Dacres and the officers of the Channel Fleet on Tuesday evening, in the ball room of the Imperial Hotel. Mr. Maguire, M.P., presided as Mayor of the City, and among the guests were Earl de Grey and Ripon, Secretary of State for War, the Duke of Somerset and the other Lords of the Admiralty, and other distinguished persons.

NEW BARONETCY.—The Queen has directed letters patent to be passed under the Great Seal, granting the dignity of a baronet of the United Kingdom to Thomas Burch Western, Esq., of Rivenhall, of Essex, and the heirs male of his body lawfully begotten.

Foreign.

FRANCE.—The Emperor left Vichy on Sunday morning, and arrived at 11 o'clock at Monflucon, where he met with an enthusiastic reception. His Majesty, after visiting the principal manufactories, continued his journey, arriving at St. Cloud at 9 P.M. On Tuesday the Emperor presided at a Ministerial Council at St. Cloud. King Leopold left Paris for Brussels on Tuesday evening. Preparations on an extensive scale are making at Paris for the *fêtes* in honour of the approaching visit of the King of Spain. On the 17th the entertainments at Versailles are to be of unprecedented magnificence and splendour, and 10,000 invitations are to be issued for that day. The semi-official journals state that the King's visit has no political significance, but is merely a return for that which the Empress Eugenie paid to the Court of the Escurial last year. His Majesty's stay in France will be limited to three or four days only. Monsignor Cerbet, Bishop of Perpignan, and M. Aristide Hasson, the sculptor, are dead. The trial of MM. Garnier Pagès, Carnot, Dreo, and others, for illegally convening an electoral meeting of more than 20 persons, terminated on Saturday before the Sixth Chamber of the Correctional Tribunal of the Seine. A curious incident marked the proceedings of the concluding sitting. M. Jules Favre addressed the Court in favour of M. Garnier Pagès, for upwards of two hours in a speech of such extraordinary power that when he had concluded M. Berryer rose and stated that the other defendants, yielding to a feeling of legitimate admiration for the brilliant defence just delivered, had come to the resolution not to weaken the hon. advocate's reasoning by any superstructure of defence on their part. They believed, he said, that there was not a judge in France who could condemn them after such arguments, and therefore they would not allow their counsel to add a word to what M. Jules Favre had uttered. The Court then withdrew to deliberate, and in spite of M. Berryer's anticipation, all the defendants were convicted and sentenced, after five hours' deliberation, to a fine of 500 fr. each, with costs. The defendants have resolved to appeal to the Cour Impériale, and, if need be, to the Court of Cassation, against the sentence. The trial of Frankowski, an agent of the Polish National Government, took place on Wednesday at the Court of Assize for the Seine. He was charged with having altered the numbers of some bonds of the Credit Foncier of Poland, stolen during the insurrection. The court sentenced him to two years' imprisonment, that being the lightest punishment that could be inflicted. The two ships Jura and Amazone are to sail forthwith from Toulon for Mexico, to bring back to France a portion of the troops. This year 10,000 will return, and 10,000 more next spring. The Amazone will first proceed to Cayenne with a batch of convicts, and thence to Vera Cruz. The Paris papers continue to discuss the terms of the peace between Denmark and the great German Powers. The *Constitutionnel* of Saturday, in an article correcting the journals which accuse the French Government of having allowed an opportunity for territorial aggrandisement to pass by, says:—

"The only thing true is that England, with the object of preserving the possessions of King Christian, would willingly have passed from diplomatic action to military action. But in a war with Germany France would have had to bear the full brunt and expense. England would have swept the sea, capturing the vessels belonging to the belligerents, and taking a glorious part, almost costless and convenient. France never had the promise nor the prospect of territorial aggrandisement. England offered nothing: France asked for nothing. Neither the Earl of Clarendon during his journeys to Paris, nor the British Cabinet in its diplomatic despatches, ever hinted at France taking the Rhine frontier."

SPAIN.—The ex-Duke of Parma has arrived at La Granja. The *Noticias* of Wednesday says that on account of the alarm existing at Madrid, the Government will take measures to maintain public order. The *Epoca* of Sunday states that some sergeants of the Saboya regiment have been arrested, and says:—"This measure appears to have some serious motive, although Madrid is tranquil." The *Libertad* and *Iberia* have been prosecuted for publishing seditious writings, and have been brought before the military tribunals. A Catalonian commission has arrived at Madrid to confer with the Government upon the means of terminating the industrial crisis. The frigate Carmen has received orders to sail for the Pacific.

PORTUGAL.—The King is at the Palace of Alfeite, practising, on the sands of the Tagus, a new cannon of his own invention. Excitement prevails respecting the elections, which are fixed for the 11th September. On Friday, being the anniversary of the establishment of the constitution, the King received the municipal authorities. His Majesty said that he would always maintain those institutions which contribute to the prosperity of his people. It is stated that at a Cabinet Council it has been resolved to permit the re-establishment of a limited number of religious houses, and that the Government has notified its intention to the Papal Nuncio. The vines are suffering from the intense heat.

SWITZERLAND.—The Federal Council has a second time requested from the Austrian Government the extradition of General Langiewicz. The ancient republic of Cressonniéres in the valley of Dappes, which has existed so long without magistrates, army, or taxes, has just disappeared from the map of Europe. On Sunday last the French gendarmery began to exercise their functions in the small district now definitively annexed to France.

BELGIUM.—King Leopold arrived at Brussels from Paris on Tuesday night, and immediately proceeded to Laeken. The result of the new elections for the Chamber of Representatives throughout the whole of Belgium gives a majority of 12 in favour of the Liberal party.

DENMARK.—The Rigsdag (Assembly for Denmark Proper) was opened on Saturday by the King in person, with the following speech from the throne:—

"Although the Session, to which we have summoned our faithful Rigsdag in accordance with article 27 of the Constitution, must be immediately prorogued on account of circumstances, we have yet felt the necessity of opening it in person, and of assembling around us the representatives of our people. Notwithstanding the courage and endurance with which our valiant army and fleet have fought for Denmark's right and honour, and notwithstanding the readiness with which the entire people has made every sacrifice for the salvation of the country, the war waged against us by a superior force will nevertheless compel us to subject people to the heaviest and most grievous concessions. If all Europe leaves us without assistance, we have seen ourselves forced to yield to numbers, and to endeavour to terminate a war the continuance of which under existing circumstances would only entail upon our beloved people and country greater losses and misfortunes, without holding out the prospect of any improvement of our position. Nevertheless, we look towards the future placidly in full reliance upon our brave Danish people, entertaining the firm hope that brighter days will not fail if King and people unite to heal the deep wounds inflicted upon our beloved country. We rely, especially on you, gentlemen, the elect of the nation, to labour faithfully with us for the welfare of the country, and wish you in your endeavours the blessing of Heaven!"

His Majesty then quitted the Chamber amidst the cheers of the members. The terms of the Treaty of Peace have created much dissatisfaction at Copenhagen, and the *Fadreland* attacks the Ministry with great bitterness. It complains of the secrecy with which the negotiations were conducted, and of the arrangement of the preliminaries without the consent of the Rigsdag. It charges the Ministry of Marine with incapacity, the War Department with carelessness, and the generals with ignorance of military affairs, and declares that a war so badly conducted could only terminate in a disgraceful peace.

SCHLESWIG-HOLSTEIN.—In accordance with instructions from Hanover and other minor German States the Federal execution troops have entered Lauenburg. The clergy and gentry of the district of Kiel held a meeting in that town on Monday, at which 23 persons only were present. The draught of a petition to the Schleswig-Holstein Commissioners was submitted for signature to the meeting. The petition explained the necessity of and demanded a common government for Schleswig-Holstein, under the protection of Prussia, and dwelt upon the importance of the closest union with that Power. After an animated discussion however the assembly refused to sign the petition. Two steamers arrived at Flensburg on Monday with 1000 soldiers, natives of Schleswig, who had been discharged from the Danish army. The soldiers landed amid loud rejoicings, singing National songs, and cheering for their Fatherland and liberty. Seven of the prisoners taken by the Danes from the island of Sylt also arrived.

HANOVER.—Prussia has demanded from Hanover and the other Governments concerned, explanations respecting the occupation of Lauenburg by the Federal troops. It is said that the Hanoverian representative at the Federal Diet, has been instructed to declare that should the Diet be unable to obtain satisfaction for the events which have taken place at Rendsburg, and which directly affect the authority of the Diet, Hanover will withdraw her troops from Holstein to avoid the possibility of a second violation of Federal rights.

PRUSSIA.—It is believed that the King of Prussia will not return to Berlin before the beginning of next month, and that at the end of September he will proceed to Baden to celebrate the Queen's birthday. Austria and Prussia are engaged in negotiations for a proposal to be made to the Federal Diet for the establishment of a joint Provisional Government for the Duchies.

AUSTRIA.—The following is an abstract of the Treaty of Peace concluded between the two great German Powers and Denmark, and of the protocol for the armistice:—

"The King of Denmark relinquishes his rights to Schleswig-Holstein and Lauenburg in favour of the Emperor of Austria and the King of Prussia, and agrees to recognise arrangements made by the two latter Sovereigns with regard to the Duchies. The surrender of Schleswig includes the islands belonging to that Duchy. Denmark also cedes her Jutland possessions to the south of the southern frontier of the district of Ribe. On the other hand, the Emperor and Sovereigns consent to an equivalent portion of Schleswig being incorporated with Denmark. The debts contracted on account of Denmark Proper or the Duchies will be borne respectively by either of them. The debts contracted on account of the monarchy will be proportionately borne by between Denmark Proper and the Duchies, with the exception of the loan contracted in England in 1863, which will be paid by Denmark, and the war expenses of the great German Powers, which will be borne by the latter. Both parties agree to an armistice on the basis of uti possidetis, from the 21 August to the 15th September, 14 days' notice to be given on either side of the resumption of hostilities. Contributions will no longer be raised in Jutland. The occupation by the allied troops will be continued for military purposes. It is stipulated that the expenses of victualling the troops will be borne by Jutland; the surplus revenue which may remain to be paid over to Denmark. The prisoners of war are to be set at liberty on condition of their parole not to serve in the Danish army before the conclusion of peace. After the signature of the preliminaries the definitive treaty of peace will be negotiated at Vienna."

HUNGARY.—The effects of the excessive drought are severely felt in Hungary, where, in some of the mountainous districts, the peasants are reduced to such misery as to be obliged to eat the leaves of trees and wild roots.

POLAND.—M. Trangott, the head of the Polish National Government, together with Krzyzanowski, Focyski, Zulinski, and Jezioranski, the chiefs of the different departments, were hanged on Friday morning on the glacis of the citadel. The sentences of death passed upon 11 officials of the National Govern-

have been commuted in some cases to hard labour, and in the others to imprisonment in a Siberian fortress.

ITALY.—A meeting to demand the dissolution of the Chamber of Deputies was to have been held this week at Florence; but information of the same having reached the authorities they could not permit it to be held for such an object, and the meeting was consequently abandoned. The official *Gazette* of Wednesday, reproducing in its bulletin several passages from a pastoral letter of the Archbishop of Vienna respecting the Pontifical loan, points out the violent language and base insults contained therein, and says:—

"They would not even be justified from enemies, and are unworthy of the sacerdotal character."

GREECE.—A new Ministry has been formed, composed as follows:—Admiral Canaris, President of the Council and Minister of Marine. M. Comoundouros, Minister of the Interior. M. Sotiropoulos, Minister of Finance. M. Carnalis, Minister of War. M. Andrue Loudos, Minister of Justice and *ad interim* Minister of Public Worship. M. Theodoros Delcyannis, Minister for Foreign Affairs. M. Deliorohi has been re-elected President of the National Assembly. The Ionian Deputies have arrived at Athens, and have met with an enthusiastic reception. They took the oath of allegiance on the 3d. The verification of the elections is completed. The discussion of the Constitution commenced on Friday.

TURKEY.—An Arab insurrection is reported to have again broken out below Bagdad. The Turkish troops have been defeated in three engagements with the insurgents, and have lost three guns. The Persian Gulf cable has been broken.

THE PRINCIPALITIES.—Prince Couza has granted a general amnesty to all political offenders. Foreigners, although included in that measure, are nevertheless to leave the Principalities immediately.

TUNIS.—Accounts from Tunis state that the Arabs are dissatisfied, with the terms of the recent pacification, and accuse their chiefs of having treated with the Bey without obtaining the dismissal of the Kasnadar. War continues between Sousse and the neighbouring villages. The French and Italian admirals have dispatched two ships of war to watch the coast and protect French and Italian subjects.

WEST COAST OF AFRICA.—The whole of the troops engaged in the Ashantee war have been withdrawn from the Prah, and the stores destroyed. The troops arrived at Cape Coast Castle after a most difficult march, in which they lost four men. All the attempts of Governor Freeman, of Lagos, to obtain an interview with the chiefs of Abbeokuta, with a view to bring about a more friendly feeling between the two places, have been frustrated by missionary influence at work in Abbeokuta, which has been antagonistic to Lagos since its union to Britain. The coast, from Cape St. Paul to Jachlin, was strictly blockaded by the cruisers Sparrow, Jaseur, Ranger, Speedwell, Zebra, Antelope, and Rattlesnake, to prevent a steamer from shipping slaves. She is much faster than any cruiser on the coast, except the Rattlesnake, and and has already been twice chased unsuccessfully by the Pandora.

INDIA.—The King of Ava has granted a perpetual concession for railways, telegraphs, and collieries in Burmah. Eight million pounds of leaf tobacco have been destroyed by fire at Manilla.

NEW ZEALAND.—The latest advices from New Zealand report no further military operations. The troops had gone into winter quarters.

UNITED STATES.—The Confederates under General Early turned upon the force which pursued them on their retreat from Maryland, defeated a portion of Hunter's troops commanded by Crook and Averill on the 23d and 24th ult., near Winchester, and compelled them to retreat to Harper's Ferry, with a loss of 1200 men. The Federal generals Averill, Kelley, and Mulligan were among the killed. The Confederates have since occupied Martinsburg, and commenced destroying the Baltimore and Ohio Railroad. General Early is still on the Virginian side of the Potomac, at Falling Waters. The Federals are guarding the fords of the Potomac at Williamsport. On the 26th ult. General Grant moved two corps to the north side of the James River, and is now intrenched at Deep Bottom, 10 miles from Richmond. In consequence of these movements General Lee attempted to outflank Butler's position at Bermuda Hundred. To check this attempt Grant despatched the 2d Army Corps to the north bank of the James River, and drove the Confederates from their breastworks, capturing four guns. He afterwards advanced to attack the Confederate fortifications. It was rumoured that General Lee had received a scalp wound while observing the Federal lines. On the 30th ult. General Grant blew up a Confederate fort at Petersburg. He then assaulted and carried a line of Confederate entrenchments. An entire regiment was destroyed, together with the fort. The battle was still progressing on the 30th, at noon. Preparations are making to resist a fresh Confederate invasion of Maryland. General Mosby, with 500 cavalry, is already in Maryland, near Edward's Ferry. The military authorities have enrolled, armed, and equipped all the negroes in Baltimore. The Confederate cavalry re-entered Kentucky on the 28th ult. The Confederates have also advanced in three columns into Pennsylvania, and occupied Chambersburg. The Governor of the State has issued a proclamation, stating that the invading force was larger than he expected, and that arms would be furnished to the citizens for the defence of Harrisburg. A battle was fought before Atlanta on the 21st, between the Federals under General Sherman, and the Confederates under General Hood, who had superseded Gen. Johnston. The Federals assert that Hood fell back to the fortifications, leaving his killed and wounded on the field, and that Sherman took 4000 prisoners; while the Federal loss amounted only to 1500 men. Another desperate engagement took place on the 22d ult. The Federals state that the result was indecisive, and that the Confederates lost 7000 men, and the Federals 2000 men, including General MacPherson, one of the ablest of the Federal commanders. General Hood, however, claims the victory, and announces that he captured 22 cannon and 2000 prisoners. On the following day both belligerents buried their dead under a flag of truce. Wheeler's cavalry has routed the Federals near Decatur, capturing their camp. General Hardie is operating in Sherman's rear. General Rousseau has rejoined Sherman, after destroying 30 miles of the Montgomery and Atlanta Railroad. Smith's expedition has returned to Memphis for supplies, after defeating Forrest in five engagements. Accounts from Charleston state that the bombardment of Sumter is progressing with renewed vigour—425 shells having been thrown at the fort on the 20th ult. Captain John Mitchell, the eldest son of John Mitchell, the celebrated Irish Repealer, who had recently been appointed by the Confederate Government to the command of Fort Sumter, was killed there on the 19th by a Federal cannon ball. This is the second son John Mitchell has lost in the Confederate service. The Government has received information that several thousand persons in Missouri, including Mr. Vallandigham, are implicated in the scheme for the formation of a North-Western Confederacy. The *New York Herald* asserts that a board of naval officers has decided that the persons rescued from the Alabama by the Deerhound were prisoners of war; and that the Government has approved this decision.

BRITISH COLUMBIA.—In accordance with the suggestion of Admiral Kingcome, Commander-in-Chief in the Pacific, the Governor has ordered the Fraser River to be buoyed up to New Westminster, beacons to be erected on the land in the narrowest part of the Channel, and a light ship to be placed on the Sand Heads. The Admiral says that the approach to the entrance of the Fraser River possesses many advantages over that of the Thames, and that when these precautions are completed a perfect stranger will have no difficulty in taking ships drawing from 19 to 20 feet to New Westminster.

MEXICO.—An Imperial decree was issued in Mexico on the 20th ult., providing that in the event of the death of the Emperor Maximilian, or other accident rendering it impossible for him to perform the functions of Government, the Regency of the newly created Empire shall be confided to the Empress. In honour of her Majesty the municipality of Mexico have resolved to erect a triumphal arch in the capital.

THE PACIFIC.—By the West India mail we learn that nothing further had transpired relating to the difficulty between Spain and Peru. In Peru the utmost exertions were used by the Government to have all war vessels in readiness, when it is ascertained how the Spanish admiral will act on receipt of fresh instructions.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 89¼ to ⅜ for Money, and 89⅜ to ½ for Account; Three per Cents. Reduced, 88⅝ to ¾; New Three per Cents., 88½ to ⅝; Five per Cent. Annuities, 1873, 104; Bank Stock, 244 to 242½; India Stock, 210; Ditto Five per Cent. Stock, 104⅛ to 103⅞; Ditto Bonds, 25s. dis.; Five and a Half per Cent. Enfaced Rupee Paper, 113; Exchequer Bills (June), 25s. to 15s. dis.—FOREIGN: Greek, 23¾; Italian, 67½; Mexican, 29 to 28¾; Ditto 1864, 26⅞ to 26; Portuguese, 1856, &c., 47⅞; Russian, 1850, 85; Ditto 1862, 87¾ to 88½; Spanish New Deferred, 43½ to ⅝; Ditto Passive, 30¼ to ½; Ditto Certificates, 12⅜ to 12; Turkish, 1858, 72: Ditto 100*l.* Bonds, 72½; Ditto 1862, 69⅜; Ditto 100*l.* Bonds, 69¼ to ⅜; Venezuela, 1864, scrip, 8⅝ to 9½ dis.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,574,365	Government Debt	£11,015,100
		Other Securities	3,834,500
		Gold Coin and Bullion	11,924,365
		Silver Bullion	—
	£26,574,365		£26,574,365

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£11,097,095
Rest	3,648,269	Other Securities	21,168,651
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	4,983,222	Notes	5,223,725
Other Deposits	14,419,766	Gold and Silver Coin	685,560
Seven days and other bills	530,674		
	£38,114,931		£38,114,931

Aug. 11, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Aug 5.*—BANKRUPTS.—J. B. ALLAN, East Sheen, Surrey, Teacher of Drawing—H. AUGARDE, Southampton, Musician—J. W. BARRY, Liverpool, Merchant—C. BROADHURST, Aston Juxta, Warwickshire Grocer—T. BOWEN, Llanfihangel Bryngabuan, Brecknockshire, Blacksmith—J. H. BRACHER, jun. Tisbury, Wiltshire, Farm Bailiff—W. BARRY, Bradford, Yorkshire, Book Canvasser—B. BARRETT, Birmingham, late Electro Plate Manufacturer—C. F. BURGESS & H. ROBERTS, Dursley, Staffordshire, late Sauce Manufacturers—T. BACON and T. L. ROGERS, Liverpool, Licensed Victuallers—W. BOARDMAN, Kersley, Lancashire, Shopkeeper—A. BARNEBY, High Street, Old Brentford, Barge Builder—J. BENTON, Church Street, Westham, Essex—L. W. CALL, Truro, Cornwall, Tailor—M. W. CONNELL, Brook Street, Kennington Road, Woodist—J. E. DEAN, Blackheath, Kent, Milliner—G. DALE, Stockton-on-Tees, Police Constable—E. DAVIES, Blackwood, Monmouthshire, Apothecary—J. DREW, Avening, Gloucestershire, Licensed Victualler—J. DAWSON, Holbeck, near Leeds, Millwright—R. W. B. DAVISON, Fenchurch Street, Ship Agent—N. DORRINGTON, Sundridge, Kent, Gun Dealer—H. M. LEATHES, Long Ditton, Surrey, Reporter—GEORGE EDWARDS, jun. Great Quebec Street, Bryanston Square, Builder—FRANCIS FRANK, Ware, Hertfordshire, Ironmonger—MILES FILBY, Lyng, Norfolk, Shoemaker—J. FORD, North Stoneham, Southampton, Cordwainer—R. FORD, High Street, Marylebone, Oilman—G. GOSTLING, Brompton Road, Middlesex, Ironmonger—C. HALE, Caerleon, Monmouthshire, Licensed Victualler—A. JONES, Chester, Slater—T. JOLLY, Liverpool, Licensed Victualler—E. JOHNSON, Nottingham, Painter—E. C. JAY, Holford Square, Pentonville, Minister—M. KILLINGLEY, Agnes Street, Wadeller Road, Journeyman Carpenter—C. R. KENNEDY, Birmingham, Barrister-at-law—J. LEWIS, Pembroke Dock, Joiner—W. LEES, of Stockton-upon-Tees, Durham, Currier—W. LOVER, Leamington Priors, Warwickshire, Licensed Victuallers' Assistant—C. T. LUTWYCH and A. LUTWYCH, Birmingham, Gold Chain Manufacturers—C. MAUGHAM, London Road, Greenwich, Iron Founder—R. MAGNUS and E. MAGNUS, St. Mary Axe, City, Shoe Manufacturers—G. MORGAN, New Charlton, Kent, Merchant—E. MAY, Wood's Buildings, Curtain Road, Shoreditch, Chain Manufacturer—P. M'DONALD, Liverpool, Journeyman Carter—S. MARRIOTT, Nuneaton, Warwickshire, Grocer—J. NICHOLSON, jun., Penrith, Cumberland, Assistant to a Butcher—J. J. OSBORNE, Upton, Cheshire, Attorney-at-Law—T. OAKES, sen., Burslem, Staffordshire, Tinman—G. PHILLIPS, Sydenham Terrace, Notting Hill, Assist. to a Cheesemonger—H. PLUMMER, Cupid Court, Golden Lane, Foreman to a Cotton Manufacturer—J. PAGE, Carlton St., Kentish Town, Coachmaker—C. PRITCHETT, St. Marlow, Buckinghamsh., Boot Maker—T. PARKIN, Islington Nursery, College Place, Liverpool Road, Islington, Nurseryman—W. POLLARD, Burnley, Lancashire, Palisade Maker—E. PUGH, London Road, Greenwich, Iron Founder—R. F. REEVE, Bingley, Yorkshire, Surgeon—I. J. ROSE, Myatt Street, North Brixton, late Railway Clerk—W. SIMPSON, Leeds, Share Broker—W. SALT, Birmingham, Brewery Agent—J. TAYLOR, Tunstall, Staffordshire, Grocer—A. G. TARPE, Pepper Street, Broadway, Union Street, Southwark, Pewterer—R. TRUEMAN, Derby, Maltster—J. TITTERTON (otherwise TITTERTON), Wolstanton, Staffordshire, Collier—H. H. UDALL, Beeston, Nottinghamshire, Plumber—W. G. WYATT, Brading, Isle of Wight, Draper—G. WARREN, Norwich, late Confectioner—J. WOOD, late of Falcon Street, City, Attorney-at-Law—T. WELLS, Brenchley, Kent, Tailor—J. WEBB, Swansea, Tobacconist—M. WAGSTAFF, Bishop's Frome, Herefordshire, late Innkeeper—J. WRIGHT, jun., late of Midway Road, Stoke Newington, Tobacco Manufacturer—J. WADE, Devonshire Place Mews, Livery Stable Keeper.

SCOTCH SEQUESTRATIONS.—T. ANDREW, Muirhouse, Ayrshire, Farmer—J. FLINT, Glasgow, Accountant—A. FRASER, Glasgow, Ironfounder—A. LENNOX, Pinmerry, Ayrshire, Farmer—A. MORISON, jun., Glasgow, Joiner.

TUESDAY, *Aug. 9.*—BANKRUPTS.—W. J. ADAMS, Esq., Messrs. W. J. & A. W. ADAMS, late C. ADAMS, St. Benet's Place, Gracechurch Street—J. M. ASHFIELD, York, Tailor—P. ANDREW, Camborne, Cornwall—AARON ALBERT ANDERSON, late of Liverpool, Cabinet Maker—G. BONE, Edward's Place, Balls Pond, Grocer—R. E. BULLEN, Dover, Lieutenant R.N., Half-pay—W. BROODBANK, Woodbridge, Suffolk, Plumber—M. A. BLIGHT, St. Agnes, Cornwall, Grocer—J. CLEGG, Salford, Lancashire, Currier—J. CHAPMAN, Sunderland, Timber Merchant—J. S. DAWES, Ashby-de-la-Zouch, Leicestershire, Innkeeper—F. D. DAVIES, West Brompton, Mason—W. B. DEAN, Dibden, Hampshire, Innkeeper and Brewer—H. DRESSER, Great St. Helen's, Merchant—J. J. ELLIOTT, Dartmouth, Devonshire, Journeyman Baker—J. EDWARDS, Rushall, Staffordshire, Gardener—C. EAST, Marden, Kent, Plumber—C. ELLIS, Adason Terrace, Kensington, Plumber—C. FURSE, Bridgwater, Somersetshire, Licensed Victualler—G. F. GRATTON, Gray's Inn Road, Licensed Victualler—T. HOLTBY, Beverley, Yorkshire, Grocer—M. J. HUBBARD, Canterbury Terrace, Lorrimore Square, Kennington, late Seller of Sewing Machines—J. HUTCHINGS, Cardiff, Glamorganshire, Butcher—W. HIGGINS, Manchester, Butcher—T. J. HOLLIS, Peckwater Street, Kentish Town, late General Salesman—R. HIBBERD, Manchester, Ironmonger—R. H. HAYES, Longton, Staffordsh., Surgeon—J. T. HAGREEN, Cambridge, Dentist—O. HOLLIER, Porchester, Hampshire, Commission Agent—J. JOHNSON, Norton, Derbyshire, Shopkeeper—H. H. JACOBS, Dover, Tailor—T. JONES, Swansea, Glamorganshire, Contractor—J. JACKSON, Oakham, Rutlandshire, Coachmaker—T. KING, Hastings, Sussex, Licensed Victualler—W. C. KEY, Dale End, Birmingham, Tobacconist—G. LAW, Maidstone, Kent, Timber Dealer—F. G. LEE, Fitzroy Street, Fitzroy Square, Clerk in Holy Orders—W. G. LEWIS, Great Suffolk Street, Southwark, Pewterer—J. LAWLEY, Loughborough, Leicestershire, Grocer—J. G. MANN, Hastings, Sussex, Blacksmith—C. MIDDLETON, Birmingham, Journeyman Gun Stocker—J. MILLS, Chipping Wycombe, Buckinghamshire, Baker—J. MILLER, jun., Maldon Road, Kentish Town, Chandler's Shop Keeper—A. M'CUBBIN, Bootle, Lancashire, Mariner—W. OATES, Sheffield, Pocket Blade Forger—E. A. G. PETERS, Liverpool, Photographic Artist—T. PAGE, Braunstone, Rutlandshire, Shoemaker—M. PEACH, Wansford, Northamptonshire, Licensed Victualler—S. PERRY, Derby, Tobacconist—G. ROBERTS, jun., Leeds, Yorkshire, Salt Dealer—P. SCHOLES, Oldham, Lancashire, Fruiterer—J. SLATER, Tong with Haulgh, Lancashire, Farmer—T. W. SCOTT, Bishopsgate Street Without, Draper—W. SIMKINS, Southampton, Butcher—W. TOPLEY, Derby, Baker—S. TRELEAVEN, Exeter, Schoolmaster—W. T. TREGIDGO, Falmouth, Cornwall, Master in the Royal Navy—C. S. WILLIAMS, Montague Place, Poplar, late Sailmaker—M. WELLS, York, Butcher—T. WOODCOCK, Halifax, Yorkshire, Joiner—G. YORK, Liverpool, Plumber

Metropolis and its Vicinity.

THE PRINCE CONSORT'S STATUE AT THE LICENSED VICTUALLERS' ASYLUM.—On Tuesday the Prince of Wales presided at the uncovering of a statue of his father, which the Licensed Victuallers have erected at their Asylum in the Old Kent Road, in grateful recollection of the fact that the Prince Consort laid the foundation stones of the two wings of the institution at two different periods. Though the rain fell heavily there was a numerous assemblage, and the Prince, in reply to an address which was presented to him, expressed the pleasure he felt in this honour paid to his father's memory, and his wish to follow his example. The statue, which is the work of Mr. Earle, is of Carrara marble, upwards of 8 feet high, standing on a pedestal formed of a solid block of Sicilian marble. It represents the Prince in a plain morning dress, in the act of replying to the address presented to him on his last visit to the Asylum, one hand resting on part of a Corinthian column, typical of his love of art, while the other hand grasps a scroll. The Prince of Wales before leaving expressed his approval of the statue, both as a likeness and as a work of art.

DECORATION OF THE HOUSES OF PARLIAMENT.—The report of the Commissioners appointed to consider the agreements with the artists engaged on the wall paintings of Westminster Palace has been printed. The Commissioners think a further sum of 3000*l.* in addition to the 3000*l.* he has already received, should be paid to Mr. Herbert for his "Moses," and that the contract as to the remaining eight pictures should be cancelled and a new contract entered into. They recommend that Mr. Maclise should receive 10,000*l.* for his two paintings already finished, instead of 7000*l.*, the sum agreed upon, the contract for the remainder to be cancelled and a new contract entered into. Messrs. Cope and Ward had eight pictures each to execute for 600*l.* each. Mr. Cope has completed six, and Mr. Ward five. The Commissioners recommend that they be requested to complete the remainder with all convenient speed, and be paid 100*l.* additional for each picture. Mr. Dyce's work was left incomplete at his death, and the Commissioners do not think the state of things calls for further interference. They express the

opinion that in future there should be no deviation from a contract entered into, believing that nothing would more effectually discourage the country from giving important commissions to artists, than the admission of a loose and indefinite system of payment which would make it impossible to form beforehand a reliable estimate of the expenditure to be incurred.

THE THAMES EMBANKMENT.—The construction of the greatest of metropolitan improvements — the Thames Embankment—is now making fair progress. Long rows of piles on the north side of the river between Westminster and Blackfriars bridges, the noise of the pile-driving machines, and of about 30 steam engines pumping and working on the temporary stages; and the long line of carts that crawl slowly along Fleet Street and the Strand, laden with rubbish to be shot into the river, all bear evidence that the work is proceeding with rapidity, though the progress of the work is somewhat impeded from the want of proper material to make the bank. The foundations of the river wall are carried down to 22 feet below high water level, or 14 feet below low water. From the foundations to about 6 feet below low water the whole space is to be filled up with concrete. Within the embankment will be constructed the Low Level Sewer, and a subway for water and gas pipes and telegraph wires, access to which may be obtained at any time without breaking up the road. The Low Level Sewer, between Whitefriars Street and the Victoria Street Sewer, is to be 8 feet 3 inches in diameter, and formed in brickwork, 13½ inches thick. From the Victoria Street Sewer to Westminster Bridge the Low Level Sewer will be 7 feet 9 inches in the clear. At Whitefriars the invert of the sewer will be 20 feet 3 inches below low water; the fall in the sewer will be at the rate of one in 2640, or 2 feet per mile. The subway to be formed above the sewer, but with an interval of 4 feet between the bottom of the crown of the sewer, will be 9 feet in width and 7 feet 6 inches in height, bringing the crown of the subway to a trifle more than 2 feet below the level of the roadway, the surface of the embankment being 4 feet above high water. The floor of the subterranean way through which the gas and water pipes and the telegraph wires are to be conducted will be gravelled, and will be 5 feet 6 inches below high water, so that ample room will be afforded for the workmen to walk through it and execute the necessary repairs. The river wall of the embankment is to be faced with granite from 2 feet below low water, and at high-water mark there will be bold mouldings of granite, and the parapet will be formed as an open balustrade at the parts where there are steam-boat piers and landing stages. A solid mooring bar of iron will be laid along the whole length of the embankment, and to it will be attached 58 mooring rings, held in lions' mouths, and to which barges, steamers, and river craft may be made fast. The dredging of the river, on the line of the river wall of the embankment, and the sinking of the foundations, are works of a very formidable character. The line of the face of the embankment is formed in the first instance with sufficient accuracy for the construction of the coffer dam. The curve is about 9000 feet radius, and is formed by offsets from lines taken from a pole set up about midway between two of the bridges to two other points on the bridges; these form an angle, and from its sides the effects are taken at every length of 50 feet, which determine the curve of the river front. In one portion of the work, Mr. Kitson, the contractor, adopts the old form of coffer-dam for getting to the foundations, while in the section of Mr Furness caissons are employed. The inner circle railway will be constructed on the inner side of the embankment, and not within the embankment itself, which will have quite sufficient to carry the Low Level Sewer and the subway. When completed, with the extension of New Earl Street, the Embankment will form a noble thoroughfare, having St. Paul's at one end and Westminster Abbey and the Houses of Parliament at the other.

GOVERNMENT NOTICE TO EMIGRANTS TO THE UNITED STATES.—The Emigration Commissioners have issued the following circular, by order of the Government, under the title of "Information for Emigrants to the United States."—"On arrival at New York you will be landed with your luggage at Castle Garden, where you will obtain, free of charge, good accommodation and instructions as to the best mode of reaching your destination. This establishment is under the supervision of the Commissioners of Emigration for the State of New York (one of whom is the president of the Irish Emigration Society), and affords every facility for obtaining inland passage-tickets by railroad and steamboats to all parts of the United States and Canada. Be cautious in buying in this country, or on board ship, 'Inland passage tickets' for travelling in the United States, as you may find them useless on your arrival in America. You will obtain them cheaper, and run no risk of imposition, by getting them at Castle Garden, New York. Do not trust to strangers, whose object in offering you assistance is either to entrap you into enlisting, or to gain your confidence for the purpose of defrauding you of your money. Do not accept invitations from strangers to drink, and be especially careful not to get drunk, or in any way to lose control over your own actions. Be very cautious as to the engagements you enter into for work. Remember that an American dollar is nominally equal to 4*s.* 2*d.* English money, and a cent is one halfpenny, but that under the present circumstances of the country they will not buy more than one-third as much of the necessaries of life as they would formerly buy."

EXPERIMENTS AT SHOEBURYNESS.—The Iron-plate Committee brought their official existence to a close on the 4th inst. with some experiments on a target representing an iron-clad built to scale upon the principle adopted by the French. Nearly all the Iron-plate Committee were present on this occasion, together with a large number of officers of both branches of the service, who were specially interested in seeing how the theory of foreign armour ships would stand the practice of such heavy ordinance as Shoebury could bring against them. The target represented in its upper part the French iron-clad La Gloire, and in its lower the last and best of the French iron-clads the Flandres. Both these vessels are built of wood, clothed with plates of small area, fastened to the sides with large "wood-screws," holding by coarse threads in the timber, instead of bolts passing entirely through, with nuts on the inside, which is the usual English plan. Though the plates were of the most perfect description made by the Millwall Company, the old smooth-bore 68-pounder, at 200 yards sent steel shot right through plate and framework, smashing the target to pieces; but the French method of fastening the plates with screws instead of bolts seemed absolutely perfect. It is obvious, however, that these screws can only be used with wooden ships which have been plated with armour, and the experiments both with this French target and with the Lord Warden a few months since have proved the worthlessness of wooden ships so plated, as compared with pure iron structures.

THE MAIN DRAINAGE.—At a meeting of the Metropolitan Board of Works on Friday, Mr. Bazalgette, the engineer read a detailed statement of the condition of the sewage works, from which it appeared that about one-third of the sewage which formerly flowed into the Thames had been diverted through the sewers, and as soon as the Metropolitan Railway was completed, a still larger quantity would be diverted.

THE MACKAY GUN.—It is understood that Government has given Mr. James Mackay, of Liverpool, an order for one of his windage adaptation guns, the weight to be 10 tons, and the bore the same diameter as the ordinary 68-pounder. A 12-pounder gun on the same principle as the heavy gun recently tried will shortly be publicly tested. It is said that the range already attained is much in excess of that of any other weapon.

THE COMET.—The comet first observed on the 5th July has been for some days distinctly visible to the naked eye in the immediate neighbourhood of the well-known group of the Pleiades, about two hours before daybreak. It is well seen through an ordinary opera-glass, and is visible almost as long as starlight lasts.

THE DONKEY SHOW.—On Tuesday the prizes were awarded by the judges to the mules and donkeys in this exhibition, which has proved a great success. The 1st prize, a silver cup, for English mules was gained by D. Sykes, Esq., of Pinner Park; the 2d by Mr. Rock, Blackstock Park, Islington; the 3d by Mr. Thomas Sparks, Romford. In the class for foreign donkeys the 1st prize, a silver cup, was won by the Prince of Wales; the 2d by Charles L. Sutherland, Esq.; the 3d by Samuel Gurney, Esq., M.P.; the extra prize by Sir H. Stracey, Bart. In the class of English donkeys the 1st prize was awarded to Lady V. Cecil; the 2d to Miss C. Garton. The remaining prizes were for donkeys almost exclusively used by costermongers in their business, and ranged from 5*l.* to 5*s.* each, besides numerous certificates of highly commended. The Rev. Thomas Jackson, rector of Stoke Newington, and friends, have added to each of the highly commended animals in these classes, an additional 10*s.*; and 5*s.* each to the commended; a sum of 9*l.* is also to be distributed among the owners of animals that have been kindly treated; which will in effect raise the 5*s.* prizes to 15*s.*, and give 5*s.* to those who had no prizes at all.

DEATH OF THE GUARDSMAN AT WIMBLEDON.—Private Cooper, the private of the Coldstream Guards who was accidentally shot on the 21st ult. at Wimbledon, died there on Tuesday. He was making favourable progress towards recovery as regards the wounded side until Friday night, when symptoms of congestion of the lung on the sound side became evident. These gradually increased in intensity, and he sank on Tuesday without pain. An inquest was opened on Thursday, and after hearing the medical evidence as to the cause of death, was adjourned to Monday. The body was buried on Thursday evening with military honours in Brompton Cemetery, in that portion of the ground allotted to the Household troops who die in the London district. The deceased bore a high character in the regiment as a quiet and steady man, and during his illness he constantly expressed his extreme anxiety that nothing should be done to Sergeant Roberts on account of the accident.

ROBBERY OF GOVERNMENT STORES AT WOOLWICH.—A wholesale system of robbery has been discovered at the Government Clothing Stores at Woolwich, and a number of non-commissioned officers and soldiers have been apprehended in possession of the stolen property. The robbery was first brought to light by a detective officer of the R Division, and the military police on searching the residences of a number of Artillery soldiers, holding superior positions at the establishment, found a very large amount of unmanufactured serge, flannel, cloth, calico, leather &c., and a number of manufactured articles, all branded with the broad arrow, and evidently stolen from the clothing stores. At present 10 persons are in custody, and a searching investigation which is in progress is expected to result in the apprehension of other delinquents.

COLLISION IN THE NORTH SEA.—The Italian ship Aguila de los Andes was towed into the Victoria Dock on Monday considerably damaged, having been in collision with the French ship Zelie off the Norfolk coast. The Italian struck the French ship with such force that she immediately foundered, carrying seven or eight of her crew to the bottom with her. The remainder of the French crew got on board the Italian, and were brought to London, with the exception of an apprentice boy, who was picked up at sea by a Dutch galliot.

NEW NAMES OF STREETS.—At the last meeting of the Metropolitan Board of Works all the subsidiary names in Upper Albany Street and Albany Street, Marylebone, were ordered to be abolished, and the whole thoroughfare to be renumbered and known as Albany Street. The same order was issued with regard to Seymour Street, Upper Seymour Street, and Crawford Street, Euston Road, which is to be called Seymour Street; and Moreton Street, Victoria Road South, and Victoria Road, St. Pancras, is to be called Victoria Road only. John Street, in the parish of St. George-in-the-East, was ordered to be called Sheridan Street, and several other thoroughfares were ordered to be renumbered with the odd numbers on one side and the even on the other.

THE RAILWAY MURDER.—The adjourned inquest on Mr. Briggs was resumed on Monday, when several new witnesses were examined, including Mr. Death, the jeweller; the woman at whose house Müller lodged; the wife of the cabman who gave the first clue to him, and some foreigners who had been his companions. The statements they made were only repetitons of what has been already published, corroborating the suspicions against Müller, but not carrying the case further. During the examination his photograph was produced and identified, and the hat found in the carriage was proved to have belonged to him. The inquiry was then again adjourned to Monday week. The following additional facts have been ascertained by the police since our last notice:—On the day of the murder Müller worked at his employment until 7 o'clock in the evening, after which he went to the house of Mr. Repsch, in Jewry Street, Minories. He was then left in the company of a fellow-workman called Haffa, Mr. and Mrs. Repsch having to go out. Haffa states that Müller left the house at 8 o'clock, and *that he himself* did not go out at all. Nothing further is known of Müller's movements until the next morning, when he got up and conducted himself in his usual cheerful manner, and after breakfast he went out. He did not return home however, at his usual time. In fact, it is not known when he did return, for all the other occupants had retired to bed. On the Monday following the murder Müller visited Mrs. Repsch, who at once saw he had got a new hat, for which he said he had given 14*s.* Mrs. Repsch also observed the ring he had got from Mr. Death, and took it from his scarf and examined it. On the following Wednesday, after some conversation Müller and Haffa went to the shop of Mr. Annis, in the Minories, where the former pawned the gold chain received from Mr. Death for 38*s.*, and on coming out of the shop Haffa gave him 12*s.* for the ticket. He advanced a further sum of 1*l.*, in order that Müller might get his own watch and guard, pawned for 4*l.*, out of pledge. When this was done they went to Prince's Street, Leicester Square, where Müller pledged the watch and guard for 4*l.*, and in consideration of a further advance of 5*s.*, Müller gave Haffa the ticket. It has been ascertained beyond doubt that on the morning of this day Müller had no money, and consequently when in the afternoon at the London Docks he paid 4*l.* of the passage money and went on board the Victoria, which he did immediately, he had only 5*s.* in his possession. From the information given by one of the agents of the vessel who did not leave the ship until it reached Gravesend, it appears that Müller attracted the attention of several of the passengers from being without a change of clothing or other requisites for so long a journey, and it was also noticed that one of the wristbands of his shirt was torn off. This drew a remark from one of the passengers that Müller had on no shirt at all, on which Müller said that on account of the edge of the wristband being frayed he had torn it off. On the way down the river the passengers read the newspapers containing the account of the murder, and commented freely upon it, but neither the agent nor the pilot is able to say whether Müller made any remark on the subject. The police have ascertained that the hat worn by Müller when he embarked is the same that was worn by Mr. Briggs on the night he was murdered. Of such importance was this considered that at the request of the Commissioners of Police Mr. Briggs, jun., accompanied Inspector Kerressey by the second mail steamer, the more effectively to complete the evidence necessary for the extradition of Müller. The sleeve lining found in the chimney in Müller's bedroom and the truncheon found in the neighbourhood are now in the possession of Dr. Taylor, who has submitted them to analysis and found the sleeve lining saturated with human blood, a portion of which he

thinks has been wiped from a boot; but he has not yet expressed an opinion regarding the truncheon. The father of Müller, a gunsmith, lives at Kemnitz, in Saxony, of which village Müller is a native. The German Legal Protection Society of London are endeavouring, by means of the most diligent inquiries, and by seeking information from every available quarter, to ascertain what were the precise movements of Müller on the day the murder took place. Their object is, if possible, to show that he was not on the railway at the time of the murder, and that he could have had no connection with the tragedy.

Hayes Common on Fire.—On Sunday evening the furze on Hayes Common, adjoining Keston Common, which was fired last week, was found to be in flames, which spread so rapidly that it was impossible to do anything but allow them to burn themselves out, which they did, after about four acres of furze had been destroyed. On Wednesday, at the petty sessions at Bromley, three grown-up lads residing at Beckenham were charged with having set fire to the furze. One of them called George Hall was committed for trial at the assizes. The others were discharged.

The Public Health.—The Registrar-General's Weekly Return states that the deaths in London in the week ending Saturday, Aug. 6, were 1595. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1342. The present return is therefore 253 above the average. During the week the births of 974 boys and 932 girls, in all 1906 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1852.

Provincial.

Basingstoke.—Earl De Grey and Ripon, Secretary of State for War, has directed the Marquis of Winchester, as Lord Lieutenant of Hampshire, to hold an inquiry into the circumstances which led to the disbandment of the Basingstoke Volunteers in May last, on the ground of their alleged disobedience to their commanding officers at the Albury Review. It appears that the corps deny that they refused to obey orders, and it is understood that every person able to throw light on the matter in dispute will be welcome to be heard, in order that the whole truth may come out.

Bilston.—A few days since a shocking outrage was committed at Coseley, near this town. An old man called Thomas Caddick was interposing to protect two of his daughters from the violence of Henry Christian, a collier, the husband of one of the women, when he was seized by the throat by his son-in-law and strangled. The jury returned a verdict of Manslaughter against Christian, who was committed for trial at the next Staffordshire assizes.

Birmingham.—Mr. Charles Rann Kennedy, the well-known barrister of the Midland Circuit, has filed a petition in the Bankruptcy Court. The only debt scheduled is the bill of costs in his late law suits against Mrs. Broun, formerly Mrs. Swinfen, for which execution has been issued.

Bradford.—On Tuesday Lord Palmerston laid the foundation stone of the new Exchange in this town, in the presence of an immense concourse of spectators. An attempt was made to induce the working classes to abstain from taking any part in the demonstration, in order to show their disapprobation of his lordship's policy in regard to the Reform question, but the introduction of politics on such an occasion was so generally opposed that the intention was ultimately abandoned, and his lordship's reception was of the most enthusiastic character not only from the people of Bradford, but from large numbers who had come from Leeds, Halifax, and other towns to see him. Soon after 12 o'clock Lord Palmerston, who had passed the previous night at Holme House, the residence of Mr. Ripley, arrived at the Peel Park, when a procession was formed to the site of the New Exchange. An address was there presented to his lordship, who immediately laid the stone with the usual ceremonies, and then delivered a brief speech thanking the inhabitants for the reception they had given him, and expressing his belief that as their industry was not only productive of peace, but was essentially prosperous in peace, it was therefore the cause and the effect of peace; and that the Exchange which is to rise from the site may be properly designated as a temple of peace. A grand dinner took place in the evening in the saloon of St. George's Hall, and in consequence of the immense numbers who were unable to obtain admission, an adjournment afterwards took place to the Great Hall, where the speeches were delivered. There were at least 4000 persons assembled when the company entered the Hall. Addresses were then presented to his lordship by the Corporation and Chamber of Commerce, after which a vote of thanks was unanimously given to him amidst overwhelming applause. In acknowledging the compliment Lord Palmerston spoke at great length on the trade and prosperity of Bradford, and on the effect produced upon it by the free trade policy of his Administration, of which he said that no other Administration that ever existed contained within itself a greater number of able, distinguished, and capable men, and that there never was a Government in which every department of State was better filled than it is at present. He then proceeded to give the following sketch of the history of free trade and its results:—

"We all recollect the time when, a proposal being made to abolish the protection which the agricultural producers had long enjoyed, the people were told that the country would be ruined—would be starved, that the land would go out of cultivation, that the agricultural interest would vanish and perish; and they said, 'For Heaven's sake don't inflict such a calamity upon the country.' Well, what has been the consequence? Not only by the repeal of the Corn-laws have the bulk of the community received largely supplies of food which previously they could not get, and been able in exchange for them to send forth the products of their industry, but the agriculturist himself has greatly benefited by the change. Every class which is protected puts on its nightcap and goes to sleep; and it requires that which the schoolboys call 'the cold pig,' the application of competition, to stimulate the energies of the man, and make him bestir himself, and improve the calling to which he has devoted his mind and capital. Well, that has been the case with the agricultural interest, and that would be the case with all other nations which shall adopt our principles of free-trade; but if you come to talk to them about it they pour forth such force of argument that you would think the trade would be ruined and the other branches of industry would be impoverished, and that you cannot afford to take the bread out of the mouth of this class and that class. But they forget the interests of the consumer. They look only to the small and local interests, and they are as deaf as an adder, and you cannot persuade them to adopt the doctrines you preach. Nothing can convince other nations except the broad and patent example of the prosperity which England has reached from the abolition of that protective system. We are often told that we ought to make commercial treaties with other countries, and thereby gain, in exchange for the admission of other commodities, facilities for the admission of ours. That system has been rendered impossible by that which we have already done. In the case of France it was a necessity, because the French Government, although desirous of entering into a system of free exchange with us, was unable to do so, except as the consequence of a treaty, and that treaty, as has justly been said, and every man in this town well knows, has been of the greatest advantage to England. I am glad to think that it has been peculiarly beneficial to Bradford, that it has been a great advantage to the French nation, who, when it was first proposed, thought it was a calamity from which they could probably with difficulty recover. Well, that treaty was made. We had to take off import duties from an immense number of commodities. It was impossible to limit the abolition of duty to articles coming from France, because, with our insular position, commodities from other countries would surely have come through France, and therefore what was granted to France was granted to every other country. In fact, we have acted upon what common sense prompts—your negotiation with a foreign country. If it is real and sincere that you will abolish certain import duties here if they will abolish certain duties, that is very much as if two men had shackles on their legs, and one was to say to the other, 'Now, if you will take off your shackles, I will take off mine, but not otherwise.' If the duties which we impose upon the importation of foreign commodities which are wanted by the consumers of this country are a burden upon the country itself, and the remission or abolition of these duties is a gain, whether it be accompanied or not by any corresponding remission or obligation on the part of other countries, we do it for our own sakes, and so we tell these foreign countries. They don't very much believe us. They say, making an erroneous use of words, and there is no greater cause of error in reasoning than the misapplication of terms, they say, especially in Germany, if we let in English commodities upon a low duty, and without difficulty, we shall be inundated by British commodities. They think in their own minds what an inundation of water is, and that the same evil effects would arise from the admission of European commodities, which would happen from the breaking of one of their great dykes. They totally forget that we are much too sensible to make them a present of what we have been making; that we only send our commodities abroad as an exchange for an equal value to be received here, and that therefore they cannot be inundated with our goods unless they themselves, by their own industry, create an equal value to send to us in return, and that consequently every additional commodity which we send abroad is the cause of additional industry, additional capital, and additional employment to their manufactures at home. Well, we have pursued this course. On the one hand we have acted on the principle of reducing duties for our own benefit and our own advantage, and we have held out to other countries the example of our success as an encouragement to them to follow our course. But I remember talking to a very distinguished political economist of a foreign country, and explaining to him how it had succeeded with us. He said, 'Ah! it is very well. You have got rich by Protection, and now you can afford Free Trade.' I tried to persuade him that Protection had slackened our course of progress—that we were less wealthy than we should have been if Protection had been got rid of sooner. He said, 'No; you have got rich by Protection, and now we are poor you want to keep us poor by asking us to get rid of that shield under cover of which you have amassed the wealth which you now possess.' Well, gentlemen, all I can say is that the course which has been pursued for the last five years has been conducted with benefit to the country. We have succeeded in preserving peace, although there were great events arising in different parts of the world in which we might have been implicated; and exhortations were not wanting. We might have been tempted, plausibly enough, upon good principles and good motives, but we refrained from doing so. We have maintained peace, and I think in that respect we have done our duty to the country. We have lamented, no doubt, that terrible war, that bloody war, which has been raging in the Northern part of the American continent; but we have felt that any endeavour on our part, or in conjunction with any other European Power, to interfere in that quarrel would have done mischief instead of good. The feelings are high when the quarrel is fierce and the battle raging: the combatants will not listen to the calm advice of friends, however good their intentions, and however wise their counsels. All that we have to do is to pursue the course by which in the first instance we averted the consequence of this calamitous war, to abstain from meddling, and to wait for that hour, which must come at last, when the two parties, exhausted by their mutual efforts, are at last weaned away from those revengeful feelings which at present influence them, and are more disposed to come to an amicable settlement. We can only hope that the time will shortly arrive when that blessed result will take place."

Lord Palmerston afterwards left for Saltaire, the residence of Mr. Titus Salt. On Wednesday after inspecting the celebrated works at that place, his lordship left Saltaire by the afternoon express train for town.

Bristol.—A man named Banister, a coach-liner, about 50 years of age, is in custody in this city on suspicion of having murdered his wife. It appears that on Friday morning his wife was found dead on the floor of the house, her head being cut in several places, as if with a razor or other sharp instrument. Banister was apprehended, and stated that the deceased fell over the stairs with an earthernware vessel, which broke, and caused the wounds in her head. An inquest has been opened and adjourned.

Croydon.—On Tuesday night a serious fire broke out in St. Peter's Church, near the East Croydon Railway station, caused by the carelessness of some workmen who were engaged in erecting a spire on the tower. Considerable damage was done to the roof and building before the flames were subdued, and the spire was totally destroyed. The church was fortuately insured.

Gravesend.—A terrible accident occurred in this town at an early hour on Saturday morning. Two men were engaged in cleaning out a cesspool when the gas suffocated one of them, and he fell off the ladder on which he was standing. Another man went down to recover him when he too was suffocated and fell in. The police were sent for, and Serjeant Coomber tried to recover the bodies, when he also was overpowered by the pestilential gas, and fell backwards. The foul air was at last expelled by means of a fire annihilator, when the three men were got out, but life was extinct in all of them.

Ipswich.—The 21st annual meeting of the British Archæological Association commenced in this town on Monday, under the presidency of Mr. G. Tomline, M.P. The proceedings were inaugurated with a meeting at the Town Hall, where the association was welcomed by the Mayor and Corporation, and the president delivered an address. In the course of the day the principal antiquities of the town were examined. On Tuesday an excursion was made to Bury St. Edmunds, where the members were received by the Mayor and Corporation at the Guildhall. After examining the churches and antiquities, visits were paid to Hengrave Hall, Risby, and Little Saxham, and on the return to Ipswich there was an evening meeting for reading papers and discussion. On Wednesday there was an excursion to Colchester, where the Mayor and Corporation received the members, who spent the day in inspecting the various antiquities in the town. On Thursday there was an excursion to Parham Hall and Church, thence to Bruisyard Church, to Dennington Church, and to Framlingham, concluding with a visit to the president at Orwell Park in the evening. The excursion yesterday included Woodbridge, Ufford Church, Buttry Abbey, and Orford Castle. To-day Sudbury, Long Melford, Lowenham, and Hadleigh, and Little Wenham Hall will be visited, and the Congress will conclude with an evening meeting.

Kingston.—The projected sewage works of Kingston and Surbiton have for the present been suspended by a Chancery suit. The Conservators of the River Thames have moved for an injunction to restrain the Mayor and Corporation of Kingston, from discharging the sewage of the town into the river. The corporation are about entirely to change the system of drainage in the town, and in place of the existing cesspools, which are to be removed, propose to construct new sewers on a large scale, and thus discharge the entire sewage of Kingston into the Thames, below the town, at a point near Teddington Lock. The Conservators object that the proposed plan of drainage will entirely nullify the purification of the river expected to result within the area of London from the operations of the Metropolitan Board of Works. Kingston already has an outfall into the Thames; but the Conservators of the river have refused permission for the new sewers to be connected with the old outfall, or for any additional sewage to be so discharged. They have therefore taken the present proceedings in order effectually to restrain the defendants from adding any further to the pollution of the stream. The suit is at present undecided, and stands over to the Michaelmas Term, the defendants giving an undertaking in the meantime not to commit any act from which the desired injunction, if granted, would restrain them. It appears from the local papers that it is not London only which objects to this discharge of the Kingston sewage into the river, but all the places between it and the metropolis. It is argued that if Kingston be allowed to do this, Thames Ditton, Moulsey, Hampton, Sunbury, Walton, and other of the rapidly-growing places along the banks of the river will do so likewise; so that whilst the stream below is kept uncontaminated, the sewage from the towns above London will flow down with the stream to Teddington, and thence up and down with each tide, making the Thames above Teddington little better eventually than an enormous cesspool.

Liverpool.—The El Tousson and El Monnassir, recently purchased by the Government from Messrs. Bravay, have been handed over to Messrs. Laird of Birkenhead, the builders, by Captain Paynter, of her Majesty's ship Majestic. Messrs. Laird have contracted with the Admiralty to complete them for sea. They will be re-named the Scorpion and the Wyvern, and are each to be armed with four 300 pounders, throwing a broadside of 1200 lb. The turrets are on Captain Coles's cupola principle. The Scorpion will probably be ready in a few weeks.

Manchester.—The fine old historical church of Manchester, now called the cathedral, has for some years been undergoing a process of restoration, and on the 4th inst. the ceremony of laying the foundation-stone of the new tower to be erected on the site of the old one was performed by the Bishop of the diocess. The ceremony was preceded by a service in the church, at which the Archbishop of York preached the sermon. After the ceremony of laying the stone a luncheon was given at the Palatine Hotel, which was attended by the

End Russell's Hetton, 17s. 6d.; Walls End Hartlepool, 18s. 9d.; Walls End Heugh Hall, 18s.; Walls End Kelloe, 17s. 9d.; Walls End East Hartlepool, 18s. 9d.; Walls End South Hartlepool, 17s. 9d.; Walls End South Kelloe, 18s.—Ships at market, 71.

HOPS.—BOROUGH MARKET, FRIDAY, Aug. 12.

Messrs. Pattenden & Smith report the demand steady for 1863 Hops, and late prices are fully maintained. The reports continue favourable both at home and abroad.

BRITISH WOOLS.—LONDON, Aug. 11.

As is usual in August the amount of business is small, but we expect renewed briskness and high prices in September, as the stocks on hand are so very deficient.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hogs	2	3		2	4	Leicest. Hoggs	2	5	to 2	7	
Half-bred ditto	2	6	to	2	8	Ditto Wethers	2	3	— 2	4	
Down Ewes	2	1	—	2	2	Combing Skins	1	6	— 2	0	
Kent Fleeces	2	4	—	2	6	Flannel Wool	1	0	— 1	9	
						Blanket ditto	0	6	— 0	9	

METROPOLITAN CATTLE MARKET.

MONDAY, Aug. 8.

We have a considerable increase in the supply of Beasts, but the average quality is still very middling; choice descriptions are not much lower; a clearance cannot be effected of inferior qualities. Sheep and Lambs are also more plentiful; there is a demand for them at about late rates. Calf trade is dull at rather lower prices. From Germany and Holland there are 2180 Beasts, 9260 Sheep, and 317 Calves; from Scotland, 49 Beasts; from Ireland, 270; and 3730 from the Northern and Midland Counties.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c.	4	10	to	5	0	Best Long-wools	..	—		..	
Best Short-horns	4	6	—	4	8	Do. Shorn	4	8	—	4	10
2d quality Beasts	2	8	—	3	6	Ewes & 2d quality	..	—		..	
Best Downs and Half-breds	..	..	—	..		Do. Shorn	4	0	—	4	4
Do. Shorn	5	2	—	5	4	Lambs	5	6	—	6	6
						Calves	3	8	—	5	0
						Pigs	3	4	—	4	4

Beasts, 6680; Sheep and Lambs, 30,640; Calves, 361; Pigs, 470.

THURSDAY, Aug. 11.

The number of Beasts is large, including many turned out unsold on Monday last. Trade is very heavy for middling qualities, but choicest kinds make about the same as on Monday. We are fairly supplied with Sheep and Lambs; the demand is not good, but there is no quotable difference in prices. Best Calves are rather dearer. From Germany and Holland there are 780 Beasts, 3890 Sheep, and 394 Calves; Milch Cows, 65.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c.	4	10	to	5	0	Best Long-wools	..	—		..	
Best Short-horns	4	6	—	4	8	Do. Shorn	4	8	—	4	10
2d quality Beasts	2	8	—	3	6	Ewes & 2d quality	..	—		..	
Best Downs and Half-breds	..	..	—	..		Do. Shorn	4	0	—	4	4
Do. Shorn	5	2	—	5	4	Lambs	5	6	—	6	6
						Calves	3	10	—	5	2
						Pigs	3	4	—	4	4

Beasts, 1805; Sheep and Lambs, 11,340; Calves, 499; Pigs, 140.

MARK LANE.—MONDAY, Aug. 8.

The supply of Wheat from Essex and Kent this morning was small, and the stands were pretty well cleared at a decline of 1s. per qr. upon the rates of this day se'nnight; there were several samples of this year's growth, quality of which varied considerably, the prices realised were irregular. Foreign was neglected, and to effect sales a reduction of 1s. per qr. had to be submitted to. Barley sold slowly at rather less money. Beans brought a trifling advance. Peas were unaltered in value. The Oat trade was steady at last week's quotations. There was little done in Flour without alteration in value.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	44	46	Red	40	42
— — fine selected runs..ditto	46	48	Red	42	44
— — Talavera	50	54			
— Norfolk	—		Red	—	
— Foreign	38	52			
BARLEY, grind. & dist., 25s to 27s..Chev.	34	38	Malting ..	29	33
— Foreign..grinding and distilling	22	26	Malting ..	27	31
OATS, Essex and Suffolk	18	22			
— Scotch and Lincolnshire—Potato	20	25	Feed	18	22
— Irish .....Potato	19	22	Feed	—	
— Foreign .....Poland and Brew	18	23	Feed	17	20
RYE	30	32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....32s to 35s...Tick	33	36	Harrow ..	33	36
— Pigeon .... 36s to 40s..Winds.	—		Longpod	—	
— Foreign .....Small	32	38	Egyptian	30	33
PEAS, White, Essex and Kent..Boilers	34	36	Suffolk ..	34	38
— Maple .... 31s to 37s .... Grey	31	33	Foreign ..	32	36
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered..per sack	35	40			
— 2d do .....ditto	28	34	Country .	28	34
— Foreign ..... per barrel	18	25	Per sack	32	34

FRIDAY, Aug. 12.

Up to last Tuesday the weather continued dry and hot; on that day we had several hours' rain, which appears to have been general throughout the country, but did not to any extent interfere with harvest operations, which are progressing rapidly in the districts south of the Humber. Since then it has been dry but much cooler. The Wheat trade has been unsettled during the week, and prices gave way about 1s. per qr., the sale being very restricted. Flour moved off slowly, with a downward tendency in its value. Feeding Barley met less attention, and the price receded 6d. per qr. in the larger ports of the east and west coast. Beans maintained the late advance well, but Peas are the turn easier, excepting in Liverpool, where a further improvement of 1s. to 2s. was established. Since Friday last 10 vessels have been reported off the coast. The floating trade has been very quiet for Wheat with declining prices. Maize has been in good demand at late rates. Barley steady. Paris, Aug. 11.—Flour: The trade has been very slow, and prices have declined 1s. to 1s. 6d. per 280 lbs. The six marks for delivery this month are quoted equal to 33s. per 280 lbs. The present stock of Flour is estimated at 30,500 cwts. In Wheat only a few transactions have taken place, at a reduction of about 9d. per 480 lbs. The arrivals of foreign Oats since Monday are large, of all descriptions of other grain, English and foreign, moderate. The attendance at this morning's market was thin; there was a considerable quantity of new English Wheat offered for sale, but as millers were not disposed to pay Monday's prices but little business was transacted. Foreign was neglected, and the few sales made were at barely late rates. Barley, Beans, and Peas were unaltered in value. Oats were rather easier.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	490 qrs.	— qrs.	1440 qrs	1640 sks.
Irish	—	—	1820	— ,,
Foreign ..	10,880 ,,	1390	59,870 ,,	— ,, / 1380 brls

LIVERPOOL, Aug. 9.—At our market to-day there was a better inquiry for Wheat, and a fair business was effected at the rates of Friday last. Oats less saleable. Barley, Beans, and Peas all brought full prices. Indian Corn scarce, and sold readily at 6d. to 9d. per quarter advance on the week. Oatmeal unchanged. There was a steady trade in Flour, at Friday's decline of 6d. per sack and barrel.

FRIDAY, Aug. 12.—The market closes quiet. Wheat in limited demand, at Tuesday's prices. Barrel Flour firm, but sack lower. Indian Corn 6d. dearer; 30s. paid for mixed to arrive, refused on the spot. Beans unaltered. Oats and Oatmeal quiet.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
July 2	40s 9d	27s 2d	20s 9d	31s 2	36s 2d	34s 0d
— 9	41 9	27 8	21 10	28 9d	36 1	32 8
— 16	42 6	27 10	21 7	31 5	36 11	34 3
— 23	43 0	27 3	21 0	34 0	37 8	35 7
— 30	44 0	27 7	22 4	30 2	38 4	35 11
Aug. 6	44 1	28 3	22 10	33 0	39 2	35 3
Agg. Aver.	42 8	27 7	21 9	31 5	37 5	34 7

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	July 2.	July 9.	July 16.	July 23.	July 30.	Aug. 6.
44s 1d	..	..	..	..	..	
44 0	..	..	..	..		..
43 0	..	..	..		..	..
42 6	..	..		..	..	..
41 9	..		..	..	..	..
40 9		..	..	..	..	..

WANTED, a NURSERY FOREMAN.—CHARLES NOBLE is in want of a Man to fill the above situation; he must have a good general knowledge, business habits, and good address.—Particulars as to ability, wages, &c., may be addressed Sunningdale Nursery, Bagshot.

WANTED, a CORRESPONDING CLERK.—Mr. JAMES VEITCH is in want of a thoroughly competent Young Man to act as above. A liberal and increasing salary will be given to any one making himself useful. The desire is to engage a permanent Person who is anxious to improve himself and rise in his profession. Unexceptionable references required.—Royal Exotic Nursery, King's Road, Chelsea, S.W.

WANTED, as GARDENER, a married Man, without incumbrance.—One who has a thorough practical knowledge of a Greenhouse, Kitchen Garden, Ornamental Grounds, &c. Assistance given, and a Cottage rent free. The place is situate 30 miles from London.—Address, stating age, wages required, and reference to last situation, to W. B., 7, Bolton Road, St. John's Wood, N.W.

WANTED, a KITCHEN GARDENER, with some knowledge of Farming (married, without children, preferred), to take charge of an Agricultural Boarding School for Poor Boys. The Wife as Matron. None but Church people with very good character need apply.—Address, Miss C., Beckley Grove, near Oxford.

WANTED, a JOBBING GARDENER, well up to his work.—Apply to Mr. G. FROST, Nurseryman, Bampton, Devon.

WANTED, a first-class HARD-WOODED and GENERAL PROPAGATOR.—None need apply who cannot give unexceptionable references for character and ability. Liberal wages will be given to a thoroughly competent Man.—Apply, stating age, experience, and wages expected to JAMES CARTER & Co., Crystal Palace Nursery, Forest Hill, Kent, S.E.

WANTED, a good HARD-WOODED PROPAGATOR.—Apply by letter only, stating age, experience, where employed, and wages expected, to G. CLARKE, Streatham Place Nursery, Brixton Hill, S.

WANTED, as PROPAGATOR, an honest, sober, industrious, and energetic Man. One that is well versed in the Propagation of Hard and Soft-wooded Plants, also Grafting Rhododendrons, Azaleas, Camellias, and Conifers, and to overlook the men in the houses. None need apply except those whose character will bear the strictest investigation respecting ability, &c.—Address G. H. BUNNEY, Nursery, Stratford, Essex, E.

WANTED, as PROPAGATOR in a Country Nursery, a Man thoroughly competent and willing to Propagate and Grow Roses, Rhododendrons, Hollies, Thujas, and the finer varieties of Shrubs in large numbers. He will also have charge of a few Greenhouse and Bedding Plants.—Address, with particulars, A. B., Messrs. Tetley Brothers, 3, Mincing Lane, London, E.C.

WANTED, a YOUNG MAN to take charge of Ferns and Orchids.—One that has filled a similar situation, and can have a good character from his last employer.—Address G. H. BUNNEY, Nursery, Stratford, Essex, E.

WANTED, an active honest YOUTH, about 17 years of age, desirous of Improvement in the Seed and Nursery Business.—Apply to Mr. SCOTT, Merriott Nurseries, Crewkerne, Somerset.

WANTED, a WORKING BAILIFF, and WIFE.—The Man to take the entire Management of a Small Farm, the Wife the Poultry, &c. A Cottage for their use. State age and terms.—Apply by letter, J. RICHARDS, Esq., 17, Calthorpe Street, Gray's Inn Road, W.C.

To Packers.

WANTED, a GENERAL PACKER, but more especially of Baskets and Boxes.—Mr. JAMES VEITCH is in want of a thoroughly competent Person to act as above. Liberal wages will be given in proportion to the Man's ability and energy.—Royal Exotic Nursery, King's Road, Chelsea, S.W.

WANTED, an experienced DAIRYMAID, who perfectly understands everything belonging to a Dairy and the care and Management of Poultry. Milking required.—Address F. B., 5, Milton Street, Dorset Square, London, N.W.

WANT PLACES.—Letters to be Post Paid.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Single; perfectly proficient in every department. Best references.—W. T. K., Messrs. Glendinning, Chiswick.

GARDENER (HEAD).—Age 28; has a thorough knowledge of his profession in all its branches. At present Foreman for Mr. Green, who will be happy to answer any inquiries.—M. D., Sir E. Antrobus's, The Gardens, Lower Cheam, Surrey, S.

GARDENER (HEAD).—Age 34, married; has a thorough practical knowledge of the Cultivation of Orchids, Vines, &c. The highest testimonials as to character and ability.—J. H., Messrs. Downie, Laird, & Laing, Stanstead Park, Forest Hill, S.E.

GARDENER (HEAD).—Age 30, married, no incumbrance; thoroughly experienced in Flower, Fruit, and Kitchen Gardens, also Early and Late Forcing, and can take the Management of Land and Stock if required. Six years' good character.—R. W., Mr. W. Paul, Waltham Cross, N.

GARDENER (HEAD).—Middle aged, married, no incumbrance; steady, sober, and industrious. Well experienced in his profession in all its various branches; well understands Stock, Meadow Land, &c. Wife a good Dairywoman. Six years' excellent character.—H. D., Post Office, Red Hill, Surrey.

GARDENER (HEAD).—Scotch; married; thoroughly practical and working. Well up in modern Plant and Fruit Forcing, the Culture of Vines in pots, the Management of Kitchen and Pleasure Gardens, and has had experience in the Erection of Horticultural Buildings. Four years' good character, and first-class testimonials.—J. F. H., 2, Walker's Cottages, Whitehorse Road, Croydon, S.

GARDENER (HEAD).—Will be at liberty to engage at November next.—Is acquainted with Forcing and all other branches. Three years' character.—Y. H. S., Messrs. Dawson & Son, 74, Cannon Street, London, E.C.

GARDENER (HEAD).—Age 34; very successful in the leading branches, and good Kitchen and Flower Gardener. Wife a good Laundress if required. Good characters.—HEAD GARDENER, Holmwood, Walton-on-Thames.

GARDENER (HEAD).—Age 36, married; practically acquainted with all kinds of Early and Late Forcing, Kitchen and Flower Gardens, and all the requirements of a large establishment. Satisfactory references.—A. B., 2, Gorefield Place, Bath.

GARDENER (HEAD).—Age 28, married; thoroughly understands Forcing, and Flower and Kitchen Gardens; have seven years' excellent character from last employer.—Y. Z., Weybridge Station, Surrey.

GARDENER (HEAD).—Age 40, married; thoroughly practical and experienced in Forcing Vines and Peaches, as good Kitchen and Flower Gardener; understands Roses and Ferns. Four years' first-class character.—J. P., Post Office, Lakeham, Chertsey.

GARDENER (HEAD).—Age 32, married; no incumbrance; possesses practical knowledge of Growing Pines, Grapes, Melons, Cucumbers, Strawberries, Peaches and Nectarines, and good Kitchen and Flower Gardener. Three years' good character.—M. J. R., 21, Effra Parade, Brixton, Surrey, S.

GARDENER (HEAD or SINGLE-HANDED).—Understands Gardening in all its branches. Two years' good character.—J. W., Post Office, Whitchurch, Hants.

GARDENER (HEAD or SINGLE-HANDED).—Age 35, married, no incumbrance; has a thorough knowledge of the profession in all its branches. Wife could take charge of the Dairy if required. Five years' excellent character.—A. E., Post Office, Tunbridge Wells.

GARDENER.—Single; good practical knowledge of his profession.—W. M. 30, Southampton Street, Strand, W.C.

GARDENER (SINGLE-HANDED).—Age 20; good reference.—J. B., Burleigh, Cheshunt, N.

GARDENER (SINGLE-HANDED).—Age 30, married, one child; understands Vines, Stove and Greenhouse Plants, and Flower and Kitchen Gardens. No objection to a Pony and Chaise. Good character.—G. G., F. Randall, Cato's Hill, Esher, Surrey.

GARDENER (SINGLE-HANDED or SECOND).—Age 25, single; good Flower and Kitchen Gardener. Willing to be useful. Twelve years' excellent character.—R. P., 36, St. George Place, Water Lane, Brixton, London, S.

GARDENER (SECOND or FOREMAN).—Age 23, has had good experience in Forcing of Fruits, Plants, and Grass; Kitchen Gardener. Two years' good character from last employer.—A. B., Mr. Page, News Agent, Lower Tooting, Surrey, S.

GARDENER, where three or more are kept.—Age 35, single; eight years' testimony from private, botanic, and nursery gardens. First-class references.—Apply, stating wages, to J. McP., Post Office, Upper Tooting, S.

GARDENER, or GARDENER and STEWARD.—A First-class Man is now disengaged.—ALPHA, *Gardeners' Chronicle* Office, W.C.

GARDENER, or to look after a Horse or Cow.—Age 25, single; accustomed to all branches of Gardening. Good character.—18, Town Road, Lower Edmonton, N.

FOREMAN (age 25).—Mr. MILLER, Combe Abbey, can recommend a Foreman in a good Garden.—A. B., The Gardens, Combe Abbey, Coventry.

To Nurserymen.

FOREMAN or SALESMAN.—Age 24; has had the charge of a Provincial Nursery for the last two years. An adept at Budding and Grafting. Thorough knowledge of the business. Good connection in the trade. Unexceptionable character.—A. L. B., Post Office, Darlington.

IMPROVER in a nobleman's or gentleman's Garden, where his services will principally be required in the Green and Plant Houses. A Premium given if required.—J. W. CLARIDGE, Andover, Hants.

LAND STEWARD or FACTOR.—Age 35; has at present the Management of Two Estates in Scotland, and is leaving his present situation owing to the death of one of the Proprietors. First-class testimonials and references.—FACTOR, Messrs. P. Lawson & Son, Edinburgh; and 28, King Street, Cheapside, London.

To Noblemen and Gentlemen.

LAND STEWARD, FARM BAILIFF, &c., to any nobleman or gentleman requiring the services of a thoroughly practical Estate or Farms' Manager.—In the prime of life, married, will shortly be disengaged. Having been brought up upon the Estate of His Grace the Duke of Bedford, first as Agricultural Pupil, and Foreman at the Oakley and Eversholt Model Farms, and subsequently, during the past 17 years, constantly employed under the supervision of the Head Steward in the direction of Estate Work generally, comprising Agricultural Drainage, the Management of Woodlands, Roads, Fences, &c., including Office Work, upon a very extensive scale in the Woburn and North Beds districts. The present signed does not consider it incumbent on him to refer to his qualifications as a Practical Man at greater length here, he being kindly permitted to make reference to His Grace's Agent, Woburn—Mr. HENRY TAYLOR, Oakley Office, Bedford.

FARM BAILIFF or STEWARD—Can Manage a Large Farm, or act as Steward to a nobleman or gentleman. Has had much practical experience. Unexceptionable references.—A. B., Post Office, Andover, Hants.

FARM BAILIFF, to any nobleman or gentleman.—Age 40, married; thoroughly trustworthy and practical; can take charge of Garden if required. Leaving in consequence of the Estate being Sold. Thirteen years' character from present employer.—J. B., Leavesden Farm, near Watford, Herts; or Messrs. DOWNIE, LAIRD, & LAING, Stanstead Park, Forest Hill, S.E.

FARM BAILIFF, or ASSISTANT to an Agent.—Age 40, married, a native of Roxburghshire; has had the Management of Woods, Fences, Roads, and Drainage on a large scale on one of the finest Estates in England. Satisfactory references can be given.—A. M., Post Office, Peterborough.

To Noblemen and Gentlemen.

BAILIFF and GARDENER.—Middle aged, married; can undertake the Superintendence of an Estate, understands all the routine of Gardening, and can be highly recommended by last employer or from gentlemen in the neighbourhood where lived.—J. S., *Gardeners' Chronicle* Office, W.C.

To Nurserymen.

JUNIOR CLERK and ASSISTANT SALESMAN.—Age 21; has been accustomed to the routine of the Nursery Business, and has a good knowledge of Plants. Good references.—D. S., Post Office, Stanford Road, Fulham, S.W.

SHOPMAN.—Age 28, married; has had 13 years' experience.—R. C., *Gardeners' Chronicle* Office, W.C.

ASSISTANT in the Retail Seed Shop.—Young, Scotch bred; no objection to go to Ireland. First-class reference.—ALPHA, *Gardeners' Chronicle* Office, W.C.

To Noblemen and Gentlemen.

CARPENTER on a gentleman's Estate.—Age 30, married; thoroughly understands his business, and can give good references both as to character and ability.—A. B., Post Office, Beckington, Bath.

COACHMAN and GARDENER (age 40, married).—H. LANE & SON can recommend to any family in the country a Man of 16 years' good character.—J. C., Post Office, Great Berkhamsted.

The Gardeners' Chronicle Newspaper.

SATURDAY, AUGUST 20, 1864.

Agriculture and Rural Economy.

PROFESSOR BUCKMAN, F.L.S., F.G.S., &c., will have VACANCIES for TWO PUPILS at Michaelmas.
For particulars apply at Manor Farm, Bradford Abbas, Sherborne, Dorset.

AGRICULTURAL PUPILS.—A Farmer near Reading, Berkshire, wishes for a PUPIL who will have every facility for learning practical Farming with the comforts of a good home. Unexceptionable references given and required.—Y. Z., Mr. Blewett, Chemist, Reading.

News of the Week.

THE Federal army before Petersburg has suffered another disaster, which appears likely to terminate General GRANT's campaign. For several weeks, during which the Federals have been apparently inactive, General GRANT had been constructing an immense mine in front of the outer line of the Confederate works. This mine, filled with six tons of powder, was sprung on the 30th ult., when the Confederate battery was blown into the air with 250 men of the North Carolina regiment. The Federal artillery instantly opened with shot and shell along the entire line, and General BURNSIDE's division rushing through the opening, carried the ruined battery and the first line of intrenchments. On attempting to advance further he was received by the Confederates under General BEAUREGARD with such a murderous and incessant fire that the negro troops fled in disorder, and the whole force was ultimately repulsed with a loss which is admitted to exceed 5600 men, and probably amounts to 10,000. When the news of this disaster reached the Government, President LINCOLN hastened to Fort Monroe, and had an interview with General GRANT, the nature of which may be inferred from the report that the Army of the Potomac is retiring on Washington, and that a Court of inquiry has been convened to investigate the disaster. The Confederates have burned Chambersville in Pennsylvania, and have again invaded Maryland in force. After occupying Hagerstown and advancing to Middlesburg, they retired from the latter State, and are said to have been overtaken and defeated by General AVERILL in Virginia, with a loss of 600 men and four guns. General EARLY, whose force amounts to upwards of 40,000 men, has been reinforced by Generals THOMAS and BRECKINRIDGE at Martinsburg, and is said to be establishing a base of operations in the Shenandoah valley. It is reported that General HOOD assaulted SHERMAN's position at Atlanta on the 27th ult., and was repulsed with considerable loss, but there are counter rumours that SHERMAN was defeated. Admiral FARRAGUT's fleet passed the forts at the entrance of Mobile harbour on the 27th ult., and disabled the Confederate rams. He was approaching the city on the 5th inst.

The dissatisfaction of the minor German Powers with the proceedings of Prussia and Austria in the Danish Duchies is still unabated, though there is an evident reluctance to press matters to a rupture at the present moment. It was announced a few days since that Saxony intended to move in the Federal Diet that an explanation be demanded from the two great Powers in reference to their having permitted the KING OF DENMARK to cede rights to them to which he had himself no title. The Berlin papers denounced this motion as an insult to the victors; and it is now stated that Saxony, yielding to urgent entreaties, will abstain from moving the proposition. The Danish Secretary of Legation, M. DE BILLE, and Staff Captain BRAHE, have arrived at Vienna from Copenhagen with instructions for the Danish Plenipotentiary respecting the peace negotiations. The German papers state that the delay in commencing the negotiations has been caused by the difficulty of arranging the financial questions between Denmark and the Duchies, which require most extensive preliminary investigation. The Prussians have prohibited the export of horses, cattle, and every description of provisions from Jutland during the continuance of the armistice, and are surveying the port of Kiel, with a view, it is said, of making it a naval station.

The recent execution of the five members of the Polish National Government has been followed by that of M. KRASICKI, who had been convicted of attempts on the life of General DE BERG, when governor of the city. Two of his accomplices appeared on the scaffold to receive the same punishment; but at the last moment their sentence was commuted to 20 years' hard labour. Six others who were concerned in the same attempts were sentenced to various terms of hard labour at the mines.

A serious riot, arising out of the recent O'CONNELL demonstration in Dublin, broke out on Friday between the Orangemen and Roman Catholics in Belfast, and continued with little intermission until midnight on Thursday last. The fury of the mob was at first directed against the chapels and private houses of persons who were obnoxious to them, after which they broke into the gunsmiths' shops and armed themselves for regular battle in the streets. Several persons were killed, and many more severely injured. The constabulary were obliged on more than one occasion to fire upon both parties, but nothing seemed to check the rioters until a large body of military arrived from Dublin. The troops now patrol the streets night and day, and it is hoped that tranquillity is restored. Party disturbances have also occurred in Londonderry and Dundalk, and there is a rumour that the rioting has extended to other towns in the North.

Home News.

THE COURT.—The Queen and Royal family continue at Osborne. On Friday the Queen, accompanied by Princess Beatrice, visited the Princess of Leiningen at West Cowes. On Saturday afternoon the Queen embarked in the Fairy and visited the Royal Victoria Hospital at Netley, accompanied by Prince Louis of Hesse and the Princess Leiningen. Earl Russell, on his way from London to Osborne, disembarked at Netley and accompanied her Majesty. The Queen went through the different wards, and inspected the wounded men lately returned from New Zealand. Her Majesty returned to Osborne at 8 o'clock. Earl Russell dined with the Queen and Royal family. On Sunday morning her Majesty, with the Princess Helena, Princess Louise, Prince Leopold, Princess Beatrice, and Prince Louis of Hesse, attended Divine service at Whippingham Church. The Rev. G. Prothero officiated. In the afternoon Earl Russell left for London. On Monday morning the Queen and Royal family walked in the grounds. In the afternoon her Majesty, with the Prince and Princess Louis of Hesse, Princess Helena, and Princess Leiningen, drove to Whippingham. On Tuesday the Queen and Princess Louis of Hesse walked and drove in the grounds. Lord and Lady Portman arrived on a visit to the Queen. On Wednesday afternoon the Queen gave an entertainment to the boys and girls of the Whippingham Schools. The children after taking tea, proceeded to a neighbouring field, where games and races took place in the presence of the Queen, the Royal family, and the ladies and gentlemen of the neighbourhood. It is announced that the Queen and Royal family will leave Osborne on the 25th inst. for Windsor, where they will remain four days and then proceed to Balmoral, where her Majesty is expected to remain till the end of October. The Queen will hold a council at Windsor on Saturday the 27th inst.

THE PRINCE AND PRINCESS OF WALES remained at the New Trossachs Hotel on the night of Thursday the 11th, and left on Friday morning for Callander and Aberdeen, whence they proceeded by the Deeside line to Aboyne, where they arrived soon after 5 o'clock. From Aboyne their Royal Highnesses posted to Abergeldie Castle, a drive of some 16 miles, and reached their destination at 7 o'clock. The weather throughout the journey was delightful. On Saturday the Duke of Cambridge and Princess Mary arrived at Abergeldie on a visit to the Prince and Princess. On Sunday their Royal Highnesses attended divine service in the parish church of Crathie. The Prince and the Duke of Cambridge have been enjoying grouse shooting on the Abergeldie moors since the opening day, and with fair success. It is understood that the Prince and Princess will remain at Abergeldie until the 2d of September, when they will proceed to Copenhagen on a visit to the King of Denmark. Their Royal Highnesses will embark at one of the Scotch ports, and will proceed to the Baltic in the Royal yacht Osborne, escorted by the Channel fleet, which is ordered to rendezvous at Leith by the 1st of September. After visiting Copenhagen, the Prince and Princess will visit Stockholm and other ports in the Baltic.

PRINCE ALFRED during his tour in Norway has enjoyed a few days' salmon fishing on the waters leased by the Duke of Roxburghe, which extend over three miles. A few days ago His Royal Highness, accompanied by the Duke of Roxbughe, left Norway in the Racoon, on a visit to Iceland and the North Cape, and will return home about the beginning of September.

PRINCE ARTHUR is making a tour in Switzerland, attended by Colonel F. Seymour and Major Elphinstone. His Royal Highness has lately been staying at Chamounix, whence he ascended on foot towards Mont Blanc as far as the Grands Mulets.

THE PRINCE AND PRINCESS LOUIS OF HESSE will embark in the Royal yacht Victoria and Albert at Gravesend on the 27th inst., on their return to Germany. The Victoria and Albert will be accompanied by her Majesty's new paddle yacht Alberta, which will receive the Prince and Pincess at Flushing, and convey their Royal Highnesses up the Rhine to Mayence, whence they will continue their journey by rail to Darmstadt.

PRINCE NAPOLEON IN SCOTLAND.—On Monday evening Prince Napoleon arrived in Glasgow, and put up at the George Hotel. On the next day the Prince drove to Hamilton, and on his return to the city visited the Exchange and the principal places of business. His Imperial Highness left Glasgow by an afternoon train for Stirling, where he visited the castle and inspected the armoury, the ancient palace, and the Douglas room. On Wednesday the Prince left Stirling for the Rumbling Bridge, Lochleven Castle, and Kinross.

THE ARMY—The Colonelcy of the 48th Regiment, vacant by the death of Sir J. Reynett, has been conferred on the Hon. General Dalzell; and the Colonelcy of the 86th Regiment, vacated by this promotion, has been conferred on Major-General Johnstone. Major-General Sir Richard James Dacres, K.C.B., has been appointed Colonel-Commandant of the Royal Artillery, in the room of the late Sir William Brereton.

PARLIAMENTARY MOVEMENTS.—Mr. W. Bagge, of Stradsett Hall, has consented to become a candidate for West Norfolk in the Conservative interest, in opposition to Mr. Brampton Gurdon. Mr. Townsend Mainwaring has contradicted the report of his intended retirement from the Denbigh boroughs. Alderman Lusk, Mr. M'Cullagh Torrens, and Mr. Phillips, of the Coal Exchange, are candidates for Finsbury, in the room of Sir M. Peto, who retires. Sir Thomas Lloyd, of Bronswydd, will be a candidate for Cardiganshire in the Liberal interest on the retirement of Colonel Powell. Mr. Grylls is a candidate for Helston in the Liberal Conservative interest, in the room of Mr. Rogers, who retires. Mr. Locock Webb is a candidate for Bodmin in the Conservative interest, in opposition to the sitting members. It is reported that Mr. Chapman will retire from Grimsby, and that the Hon. William George Eden, of Cantley Hall, near Doncaster, will offer himself as a candidate. Mr. George Melly, of Liverpool, has been invited to become a candidate for Preston, in the room of Mr. Grenfell, who retires. Sir John Romilly, Master of the Rolls, is mentioned as a candidate for Westminster, in the room of Sir De Lacy Evans, who retires. Mr. Edwin Chadwick, C.B., will be a candidate for Evesham; Sir John Heron Maxwell, Bart., for Greenwich; and Captain Walter for Reading. Sir Charles Douglas, who will offer himself as the successor of Sir John Trelawny, at Tavistock, will be opposed by Mr. Samuelson, a manufacturer of local influence.

THE CHANNEL FLEET, consisting of the Edgar, Warrior, Black Prince, Hector, Defence, Prince Consort, and Enterprise, arrived at Spithead on Thursday from their Irish cruise, and will sail again from Spithead in the course of a few days for a cruize on the coasts of Scotland. The fleet will then rendezvous at Leith and escort the Prince and Princess of Wales to the Baltic in the beginning of September.

Foreign.

FRANCE.—The King of Spain arrived at St. Cloud at 9 o'clock on Tuesday night. The Emperor awaited his Majesty at the entrance of the park, and the Empress with the Prince Imperial, Prince and Princess Lucien Murat, Prince and Princess Joachim Murat, and the Princess Anna Murat, received the King at the entrance of the grand staircase. The only members of the Imperial family who were not at the reception were the Princess Matilde, who was absent from "indisposition," and Prince Napoleon, who will not return from Scotland during his Majesty's visit. The great officers of the Court were afterwards presented to his Majesty. On Wednesday the King visited Paris *incognito*, and drove about the streets, and in the evening there was a gala dinner at St. Cloud. On Thursday the King held a reception at the Spanish Embassy; M. Drouyn de Lhuys was among the visitors. In the evening a grand dinner was given at the Tuileries, to which the Diplomatic Body were invited; and a state performance afterwards took place at the Opera. Yesterday there was a review of the National Guard, as well as of the Imperial Guards and the troops of the line. The great *fête* at Versailles is to take place to-day. To-morrow the King will go to Havre *incognito* to visit Queen Christina, and will return in the evening to Paris. The Emperor's *fête* took place on Monday, and passed off very successfully. The Emperor drove down the avenue of the Champs Elysées, and was warmly cheered wherever he was recognised. The peculiar feature of

the *fête* was the enormous numbers of English visitors who had been brought over by special excursion trains. The illuminations in the evening were splendid, and the concourse of people was immense. The Emperor on the occasion of the *fête*, and on the proposition of the Minister of Justice, granted pardons, commutations, or reductions of punishment to 1517 condemned prisoners of different categories. The Danish question is still the subject of discussion, and several of the journals express the opinion that in allowing Denmark to be sacrificed without making an effort to prevent it, France has lowered her prestige and influence abroad. The *Revue des Deux Mondes* contains an article from the pen of M. Eugene Forcade, in which it is contended that France threw away a golden opportunity in January last in rejecting the invitation of England to join her and act in common. It then proceeds to say:—

"Either (which seems impossible) war would have broken out, and in that case that compensation which was contemplated at a later period would have been assured; or (and this is what would most probably have happened) Austria and Prussia would have recoiled before the resolute union of France and England, an inhuman effusion of blood would have been avoided, Prussia would have been deprived of an opportunity of assuming in Europe a preponderance and power of impulse which cannot but cause uneasiness, and France would have been spared the humiliation of finding herself, for the first time in her history, excluded from a participation in the settlement of the affairs of the North. Indeed the balance-sheet of the policy which has prevailed is sadly negative. We have obtained no territorial compensation; the situation of the North of Europe has undergone great modifications without the participation of France, through arrangements quietly taken by Austria and Prussia in a *tête-a-tête* at Vienna. Such a state of things cannot be viewed with complacency; and it is idle to pretend that it should be regarded as satisfactory."

A conflagration broke out on Monday evening at Limoges, during the display of fireworks in honour of the Emperor's *fête*. The number of houses destroyed is estimated at 200. The *Courrier de Limoges* states whilst the fire was at its height, the Bishop, followed by his clergy, carried in solemn procession round the burning houses the relics of St. Aurelian and St. Martial. The fire, however, continued to rage with great fury, and was not subdued till Tuesday. The damage is estimated at from 160,000*l.* to 200,000*l.* Measures have been taken for the sustenance and shelter of those who have suffered by the catastrophe. The Emperor not being able to go to Limoges, on account of the arrival of the King of Spain, has sent his Aide-de-Camp, Colonel Reille, to relieve the greatest sufferers. The Empress and the Prince Imperial have each contributed 10,000f. The diligence of St. Tropez, which arrived at Toulon on the morning of the 14th, travelled part of the night in the midst of flames. From La Môle to Hyères all the plantations, right and left of the road, were on fire for an extent of five leagues. In some places, where the road was narrow, the passengers and horses were in danger from the Fir trees, which burst with loud explosions under the action of the flames. An imperial decree has been issued for the erection of a new Post-office in Paris. The necessity of this measure is proved by the following details of the objects carried by the Government mails:—The number of letters, 184 millions in 1852, had risen to 290 millions in the year ending 1st January last. In 1852 the number of journals and other printed papers sent by post was 94,863,666; in 1863, it was 212 millions, an increase of 125 per cent. Registered letters, which were only 437,075 in 1852, amounted in 1863 to 2,700,000, an increase of 517 per cent. The number of articles of all kinds conveyed by the mails in 1863 was 590,700,000 against 276,300,741 in 1852, an increase of 113 per cent. in 10 years. The Academy of the Beaux-Arts, at its sitting of Saturday, elected Mr. Benedict, of London, as a corresponding member in the section of musical composition, in the room of the late M. Beaulieu.

SPAIN.—The King of Spain left the Palace of Saint Ildefonse on Sunday afternoon for Paris. His Majesty proceeded direct to Villalba, whence he continued his journey towards the French frontier. On Monday he arrived at St. Sebastian, and attended the *fête* for the inauguration of the North of Spain Railway. The religious ceremonies having been performed, and the engines having received the benediction, M. Isaac Pereire addressed his Majesty. A banquet followed, at which the King presided, having on his right the Minister of Commerce and M. Emile Pereire, and on his left the Minister of the Interior and M. Isaac Pereire. His Majesty was applauded with enthusiasm, but no toasts were proposed. His Majesty afterwards left for Bordeaux, where he alighted at the Prefecture, and became the guest of Count de Bouville. On Tuesday, the King left for Paris by a special train. The Government have ordered General Prim to quit the capital, in consequence of the general opinion that he was the chief of the malcontents who recently attempted to disturb public tranquillity. The city of Oviedo has been assigned as his residence, dating from the 13th inst. The General left Madrid on Saturday afternoon. He was accompanied by a numerous crowd as far as the railway station. It is asserted that the Minister of Finance intends to propose a modification of the customs tariff with France, which is to be framed in a more liberal sense.

PORTUGAL.—The Federal frigate Niagara has sailed from Lisbon. Her destination is unknown. The Portuguese press considers that the dispute with Spain respecting the slaves captured on the African coast will soon be amicably settled. Great heat, unexampled for many years, prevails, and the grain crops and vines have suffered exceedingly. Election riots have occurred in the provinces.

DENMARK.—The Danish Secretary of Legation, M. de Bille, and Staff-Captain Brahe, arrived at Lubeck from Copenhagen on Thursday, and proceeded on their journey to Vienna. The King has addressed the following proclamation to the Danish army. It is not countersigned by any of the Ministers:—

"The war demands heavy sacrifices, and peace has been purchased at a still heavier cost; but the safety of the country requires peace in place of a continuation of the war. I know that the army was ready to recommence the struggle, but the final result was not in our power, and during the contest a considerable portion of the country, now in the hands of the enemy, would have had to endure oppression which would have entailed ruin. For this reason I have thought it right to endeavour to end the war, even at the sacrifice of portions of territory which have belonged to Denmark from time immemorial. All our hopes of assistance have been deceived, and the superior numbers of the enemy have given him the victory. I have witnessed the courage, valour, and fatigues of the army, and have seen its lofty deeds. I hope it will continue to preserve that affection for the King and the country by which it has hitherto been animated. "CHRISTIAN R."

SCHLESWIG-HOLSTEIN.—It is said that Austria and Prussia propose that the Duchies should be administered by a temporary Government composed of three members, one of whom will represent the Federal Diet. The Federal troops will remain in Holstein. A division of the Prussian flotilla, under the command of Captain Jachmann, is making a trial trip in the Schleswig waters of the Baltic. It will touch at Eckernforde and Flensburg. Two Prussian corvettes, with a division of Prussian gunboats, are shortly expected to arrive at Kiel. General Rieben and Captain Henk, two officers of the Prussian Ministry of Marine, have been engaged in inspecting the port during the last few days. The Prussians have prohibited the export from Jutland of the following important articles during the armistice:—Horses, oxen, pigs, bacon, rye, and oats.

SAXONY.—It was announced a few days since that Saxony intended to lay the following proposal before the German Diet—viz., that an explanation be demanded of Austria and Prussia in reference to those Powers having permitted the King of Denmark to cede rights to them to which he himself had no title. It is now stated that Saxony, "yielding to urgent entreaties," will abstain from bringing forward this proposal. The official *Dresdner Journal* of Friday publishes an article on the present position of the Schleswig-Holstein question, concluding thus:—

"Regarded from the point of view of German right, the great German Powers have acquired precisely as much right to the Duchies by Paragraph 1 of the peace preliminaries as was possessed by Denmark. They could not, therefore, declare the Federal Execution settled."

HANOVER.—In reply to the demand of Prussia respecting the occupation of Lauenburg by Federal troops, the Hanoverian Government has declared that it had no knowledge of the occupation of Lauenburg by Hanoverian troops, and that it was even surprised at such a step. The occupation was ordered by General Haake upon instructions from the Dresden Cabinet.

PRUSSIA.—The semi-official journal states that the intended proposal of Saxony to the Diet in reference to the Duchies has been withdrawn. It had previously, in a menacing article, described the proposal as an insult to the victors. The ratifications of the Zollverein treaties were exchanged in Berlin on Monday between Prussia and those German States which have already agreed to the renewal of these treaties. A Royal decree was published on Friday ordering the disbandment of the following troops:—All the unmobilised infantry of the class entitled to furlough above the number required upon a peace footing, the unmobilised artillery companies called into service from fortresses, and the regiments of Landwehr serving with mobilised troops. Those only of the latter are to be entitled to discharge who do not wish to remain with their colours. Similar orders have been issued with regard to troops of the same category serving in the reserve. The King of Prussia left Gastein for Ischl on Thursday, and will thence proceed to Vienna, to be present at the review. His Majesty will be accompanied by Count von Bismark.

AUSTRIA.—The Emperor of Russia and the King of Prussia are expected to arrive in Vienna on a visit to the Emperor of Austria about the 22d inst., when grand military reviews will take place in their presence. The instructions to M. von Quaade for the opening of peace negotiations were daily expected to arrive from Copenhagen. It is said that the delay in commencing the peace negotiations is only to be attributed to the difficulty experienced in arranging the financial questions between Denmark and the Duchies, which require most extensive preliminary investigation.

SWITZERLAND.—The ascents of Mont Blanc this year have increased in an extraordinary manner; not less than eight occurred in one week. Among the ascensionists were eight Englishmen, four of whom are members of the Alpine Club, a Scotchman, a Spaniard, a Swiss, and an Italian, the latter making the ascent from the Italian side. The ascent to the Grands Mulets has also been performed by three young ladies, the Misses Perkins, belonging to the family of the London brewer. The number of tourists who had arrived at Chamonnix up to the 6th was 3433.

ITALY.—Prince Humbert, son of the King of Italy, was about to visit Paris this week, to be present at the christening of his nephew and godson. It is now announced that as the Queen of Spain has not recognised King Victor Emmanuel as King of Italy, the Prince will not be in Paris during the visit of the King of Spain. His Royal Highness will make a journey through the Rhine provinces during the stay of the Spanish King at the Court of the Tuileries, and will go to Paris when the latter has returned to Spain. Accounts from Rome state that the mother of the Jewish boy Cohen having a few days ago gone to the Asylum of the Catecumeni to claim her son, and having used some strong language on the occasion, was immediately arrested and sent to prison.

POLAND.—Krasicki, Landowski, and Schmidt have been convicted of attempts on the life of General Berg. The first has been hanged, and the sentence of the two latter was commuted after their arrival at the gallows to 20 years' hard labour. Six other persons convicted of complicity in these attempts, have been sentenced some to 12 and others to 15 years' hard labour at the mines.

TURKEY.—Advices from Constantinople to the 9th inst., state that in consequence of the united protest of the American and English Ambassadors, the Porte has authorized the continuance of religious controversy in Protestant books, provided, however, that the Koran is not insulted. The Turkish chiefs who had been converts were to be removed to Karpouth.

INDIA.—By the Overland Mail of the 8th ult. we learn that preparations are making to punish the Rajah of Bhootan for the insults offered to the British Envoy at his Court. An English officer has been despatched to the frontier to gather information respecting the roads and passes into Bhootan, and the sources from which the necessary supplies may be obtained for the troops in certain contingencies. A company has been formed at Calcutta for the construction of docks at Garden Reach. A Juggernaut festival took place in Bengal on the 19th June, when two men and a woman threw themselves under the car and were crushed to death.

CHINA.—General Brown, the Commander-in-Chief in China, had left head-quarters at Hong-Kong for Shanghai in consequence of the prevailing apprehension that the Taepings might recover their lost ground, and threaten the safety of the city. The principal places held by the rebels are Woochow and Nanking; but both are closely invested by the Imperialists.

JAPAN.—The question of opening up the inland sea is still in suspense. A reinforcement of a battalion of English marines has arrived at Yokohama in her Majesty's ship Conqueror, and it is understood that Sir Rutherford Alcock is determined, when backed by a sufficient force, to re-open the inland sea to foreign shipping.

NEW ZEALAND.—No fresh military movements have taken place since the last accounts, but the Maories were hourly expected to attack Wata Wata. The garrison, however, were deemed strong enough for successful resistance. A reconnoitring party from Tauranga, under General Cameron in person, had discovered the Maories at Tepuha busily fortifying their position. Advices from Taranaki stated that the outlying settlers had been compelled by the Maories to abandon their stations and cattle and take refuge in the town. The latter were erecting a pah at Tupuraper, where they awaited reinforcements from Waikato before attacking the town by land and water. The town was consequently greatly excited, and the inhabitants were under arms night and day. It was also asserted that Captain Lloyd's head was still displayed to induce the wavering tribes to join the rebels. The seamen of the Esk, 64 in number, irritated by a statement in the Auckland *New Zealander*, that Captain Hamilton had been deserted by his men in the attack in which he lost his life, went in a body to the office of the Paper and commenced pulling down the building. The magistrates and other authorities endeavoured to prevent this act of violence, but the men were only appeased by the appearance of a new edition of the Paper withdrawing the charge against the Naval Brigade, and attributing the panic which caused the sudden retreat to a mistake of the 68th Regiment.

UNITED STATES.—General Grant's movement north of the James River was a feint to cover a grand assault upon Petersburg, which was opened at daylight on the 30th ult., by springing a mine under a Confederate earthwork in front of General Burnside's position. Five tons of gunpowder were exploded, carrying the fortification into the air, and burying 250 Confederates in the ruins. The Federal artillery immediately opened along the whole line, amid the fire of which Burnside charged and seized the ruined fort and a portion of the works upon either side. He then attempted to push on to the second line of defences, but was driven back by the terrific fire of the Confederates. A reserve division of negro troops was afterwards thrown forward, and met with a similar fate. The Confederates, then, in their turn, charged and ultimately drove the Federals, white and coloured, mingling in confusion, back to their intrenchments held previous to the assault. General Grant's loss was very heavy, no estimate placing it below 5000, while many carry it as high as 10,000. General Burnside was wounded, and General Bartlett captured. President Lincoln and General Grant met at Fortress Monroe on the following day, and proceeded to Norfolk, on board a steamer, for consultation. In the afternoon Mr. Lincoln returned to Washington, and Grant to his head-quarters. Nothing is yet known of their decisions, but it is rumoured that the whole Potomac army will

be immediately transferred to Washington, in anticipation of an advance against that capital by General Lee, at the head of his entire force. On the 21 inst. the wounded in the assault were removed and the dead buried under truce. A Court of Inquiry has been convened to investigate the Federal disaster, and the Government has again prohibited the publication of all military news. The Confederates who invaded Pennsylvania levied a contribution of 500,000 dolls. upon Chambersburg, on the 30th ult. The money not being paid they burnt the greater portion of the town, including all the public buildings. They then moved westward, and it was feared they would attack Bedford: but they ultimately retired from the State. On the 5th inst. they again crossed the Potomac in force, and occupied Hagerstown, in Maryland, and reached Middlesburg on the 6th. They were supposed to be marching on Pittsburg and Cumberland; but it appears that they retired from the State, and were overtaken and defeated at Moorefield in Virginia by General Averil, who captured 600 prisoners and four guns. Governor Curtin of Pennsylvania issued a proclamation on the 5th, calling for 30,000 volunteers to resist the invasion of Pennsylvania. The Confederate General Early's head-quarters are at Martinsburg. All accounts agree that his force numbers upwards of 40,000. Deserters assert that he has been heavily reinforced from Richmond, and that he is establishing a base of operations in the Shenandoah Valley. It is reported, non-officially, from Washington that another engagement occurred at Atlanta on the 27th ult., in which the Confederates were repulsed with much loss. There are counter-rumours that Sherman was defeated. A division of his cavalry, under General M'Cook, while returning from a raid to the rear of Atlanta, has been routed by the Confederates under General Ransom. Out of 3200 of M'Cook's men only 500 have yet reported at Marietta; the remaining 2700 are believed to have been either killed or captured. There were reports that General Forrest was at Atlanta under Hood, while another rumour is that he died at Columbus, Mississippi, on the 22d July, of lockjaw. Admiral Farragut attacked the defences of Mobile on the 27th, passed Fort Morgan, and disabled the Confederate rams. He was approaching the city on the 5th inst.

Mexico.—Advices to the 23d ult. state that the Emperor Maximilian had accepted the surrender of Uruguay.

San Domingo.—The latest news announce that the insurgents were desirous of capitulating.

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 89⅛ to 89 for Money, and 89¼ to ⅜ for Account; Three per Cents. Reduced, 88⅞ to ½; New Three per Cents., 88⅞ to ¼; Five per Cent. Annuities, 1873, 105¼; India Five per Cent. Stock, 104⅛ to 103⅞; Ditto Four per Cent., 99½ to ⅜; Exchequer Bills, March, 18s. dis.; Ditto June, 16s. to 25s. dis.—Foreign: Brazilian, 1852, '58, '60, 85¼; Italian, 67; New Granada, 12½; Portuguese, 1856, &c., 47½; Russian, 1862, 88¼ to ½; Spanish, 49¾; Ditto Passive, 30⅛ to ¼; Ditto Certificates, 12⅞ to ⅝; Turkish, 1858, 72 to ¼; Ditto, 1862, 69⅝.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,593,560	Government Debt .. .	£11,015,100
		Other Securities	3,834,900
		Gold Coin and Bullion ..	11,913,560
		Silver Bullion	—
	£26,593,560		£26,593,560

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£10,897,095
Rest	3,670,310	Other Securities	20,640,841
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,145,800	Notes	5,566,065
Other Deposits	13,980,445	Gold and Silver Coin ..	782,199
Seven days and other bills	526,644		
	£37,846,200		£37,846,200

Aug. 18, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Aug* 12.—BANKRUPTS.—J Allison, East Hetton, Durham Publican—J. Bateman, Cannock Chase, Staffordshire, Bricklayer—C. Bradshaw, Sheffield, Auctioneer—W. Bayliss, North Street, Edgware Road, Baker—W Burgess, Stiffkey, Norfolk, Butcher—G. Crane, Hallaton, Leicestershire, Butcher—G W Cullen, Ramsgate, Licensed Victualler—J. Chapman, Francis Terrace, Hackney Wick, Merchant's Clerk—R Catchpole, Maria Terrace, Barnsbury, Dealer in Wine and Spirit Warrants—C. Cosgrove, widow, and J. G. Cosgrove, Whitechapel Road, Rope Manufacturers—H. Charles, Levenshulme, Lancashire, Oil and Colour Dealer—F J Cartwright Leicester, Hosier and Shirt Maker—C. Davis, Westbromwich, Staffordshire Coal Dealer—E. Esam, Upper Cheney Row, Chelsea, Commercial Traveller—J. Ellis, Francis Street, Newington Butts, Carman—J. Emery, Newcastle-under-Lyme, Shoe Manufacturer—J. Flinn, jun., Earlsdon, Coventry, Watch Jeweller—S. Fielden and J. Greenwood, Todmorden, Lancashire, Manufacturers—Francis Grace, late of Oxford, Veterinary Surgeon—James Graham Redmain, Cumberland, Farmer—Charles Goodwin, Canterbury, Hop Merchant—James Gosden, Portsea, Hampshire, Beer Retailer—Ferdinand Hartman and A Newmann, Liverpool, General Merchants—T. Hollis, Sutton Coldfield, Warwickshire, Grocer—H. C. Hartridge, Wolverhampton, Staffordshire, Hair Dresser—D. Harries, Blaencawdd, Carmarthenshire, Farmer—J. Haynes, Girtford, Bedfordshire, Builder—D. Harrison, jun., Tamworth, Warwickshire, Butcher—T. Heslop, Richmond, Yorkshire, Butcher—W. Johnson, Bloomfield Street, City, Attorney's Clerk—W. Johnston, Queen Street, Chelsea, Journeyman Painter—R Labelle, Munster Street, Regent's Park, Cab Driver—J. Legh, Liverpool, Butcher's Assistant—G Leicester, Hereford, Builder—W. Lake, Doncaster, Coal and Potato Dealer—H. G Mallett, Great Grimsby, Railway Clerk—W Murdoch, Staveley, Westmoreland, Coal Merchant—W. Newman, Sheffield, Spring Knife Manufacturer—W. Nicholson, Liverpool, Grocer—W. Price, Wolverhampton, Staffordshire, Grocer—Robert Powell Palmer, Camberwell Road, Surrey, Builder—William Rees, Pembroke, Publican—Mary Ann Rippington, Southampton, Baker—W Robertson, Tullerie Street, Hackney Road, Shoemaker—H Rotherham, jun., Eckington, Derbyshire, Druggist's Assistant—T Rundle, Upper Street, Islington, Ironmonger—A. Rolfe, Amwell Street, Pentonville, Commission Agent—B. Stevenson, Wednesbury, Staffordshire Builder—L. Somers, City Road, Wholesale Stationer—J. Skelton, Stamford, Lincolnshire, Corn Merchant—W. A. Stockwell, Saville Place, Lambeth Road, Surrey, Dyer—F. Stephens, Wharton Street, Pentonville, Merchant's Clerk—R Spurling, East Ruston, Norfolk, Drover—W. Stevenson, Leicester, Hosier's Assistant—G. Smith, Sheffield Grocer—V. di Trabolina, Bedford Place, Russell Square, Author—J. Tennyson, Upper Tooting, Surrey, Corn and Coal Merchant—R Whistler, Ponsonby Street, Pimlico, Scale board Maker—W H Wells, Stoke Row, Oxfordshire, Baker—H. Ward, Brownhills, Staffordshire, Grocer and Provision Dealer—J Walmsley, Cheadle, Cheshire, Butcher—R White, Cheltenham Coal Merchant

TUESDAY: *Aug.* 16.—BANKRUPTS.—J. Bottomley, Oldham, Lancashire, late Beerseller—E. Brandon, Union Street, Bishopsgate Street, Hairdresser—R. Bullivant, New Wortley, Yorkshire, Commercial Traveller—S. Barton, Langley, Cheshire, Labourer—C. Burrell, Low Leyton, Essex, Sheep Salesman—C. Bishop, Chichester, Lay Vicar at the Cathedral—W. Brown, Blackpill, Glamorganshire, Contractor—G. S. Brittain, Sheffield, Butcher—J. Barker, Sunderland, Auctioneer—H. H. Baldwin, Castleford, Yorkshire Watchmaker—C P. Crosby, Stramshall, Staffordshire—J. J. Cravens, Brewer Street, Somers Town, Boot and Shoe Manufacturer—H. B. Cotes, St. James's Square, Clerk in House of Commons—T Caldecott, Manchester, Journeyman Plumber—E. Coward, Liverpool, Grocer—G. Dunkels, Bytton, Herefordshire, Brickmaker—W V Dawkes, Albany Street, Regent's Park—W Daniels, Martin Street, Bermondsey, late Steward—J R Dolby, Scotter, Lincolnshire, Coal Dealer—J Davies, Cartley, Shropshire, Hawker—S Evans, Denbigh, Coal Merchant—T Ebrill, Newgate Street, City, Foreign Glass Manufacturer—J Fitness, High Street, Denmark Hill, Camberwell, Plumber—Arthur Edward Fowle, Westerham, Kent, Watch and Clock Maker—H Gee, Manchester, Fireman—O Holt, Whitworth, Lancashire, Carter—J. B. Hards, Whetstone Park, High Holborn, Surveyor—R. A Hankey, jun., Leadgate, Durham, Joiner—J Haskey, Edgware Place, Edgware Road, Builder—M. A Haws and S. Haws, Kingston upon-Hull, Milliners—J. Hicks, Bray, Berkshire, Butcher—B. Ingson, Newcastle upon-Tyne, Foreman to a Marine Store Dealer—W Jennings, Walbrook, City, Wine Merchant—A. M Knights, late of Martham, Norfolk, Cattle Jobber—W. Knowles, Grange Road, Bermondsey, Rag Merchant—J. G. Knott, Lower Rosoman Street, Clerkenwell, Furnishing Undertaker—G. Lear, Erdington, Warwickshire—R. Livsey, Everton, Lancashire, Chemist—T Morgans, Bowlais, Glamorganshire, Haulier—J. May, Upper Albany Street, Regent's Park, Baker—J. Odam, Hackney Road, Shoreditch, Baker—J. Pender, Newark-upon-Trent, Nottinghamshire Butcher—R. Parish, Great Barton, Suffolk, Horse Dealer—G. L. Palmer, Liverpool, Hardware Merchant—Thomas Pennycuff, Dulwich—Edward John Rolls, Fawkham, Kent, Ship Builder—Henry Rogers, Litchfield, Hampshire, Baker—William Rowan, Malden Road, Haverstock Hill, Grocer—F Rothwell, Rochdale, Lancashire, Draper—W Rayne, Dewsbury, Yorkshire, Furniture Broker—G Rainbow, Northampton, Shoe Manufacturer—H Savage, Brooksby Street, Islington, Appraiser—W Singleton, Last Retford, Nottinghamshire, Draper—P Sexton, Earlsheaton, Yorkshire, Raiser, and M. Milnes, Batley Carr, Yorkshire, Weaver—W Simkins and not Sinkins, as previously advertised, Southampton, Butcher—W T S Snell, Waltham Cross, Hertfordshire, Gentleman—W Tanner, Portsea, Smith—T Thompson, Kennington Street, Kennington, Builder—J Threlkeld, Crewe, Cheshire Saddler—W J Thomas, late of Llanelly, Carmarthenshire, Tanner—R Thompson, Dover, Tea Dealer—R. Wavell, Newport, Isle of Wight, Postmaster—T. Western, Carlisle, Butcher—J. G. Wangler, Oxford, Watch and Clock Manufacturer—F. Walker, Ernest Street, Regent's Park, late Oil and Colour Man—J. Weston, Market Harborough, Leicestershire, Tailor.

Metropolis and its Vicinity.

The Atlantic Telegraph Cable.—Her Majesty's surveying steamer, Margaretta Stephenson, returned to St. John's, Newfoundland, on the 6th inst., with Mr. Cyrus W. Field on board. Heart's Content, Trinity Bay, has been selected as a landing place for the Atlantic telegraph cable. The harbour is one of the best in Newfoundland. The Great Eastern can anchor within one mile of the landing place.

St. Stephen's Chapel.—This ancient crypt, which is almost the only portion remaining of the old Palace at Westminster, and formed the basement story of St. Stephen's Chapel, after years of desecration, has been carefully restored as the chapel of the New Palace, and is now one of the most beautiful specimens of ecclesiastical architecture and decoration in the metropolis. The restoration has been carried out according to the design of the late Sir Charles Barry by his son Mr. Edward M. Barry, in whose charge the new palace has been placed since the death of his father in 1860. The stained glass windows, seven in number, represent the ministry and martyrdom of St. Stephen. The walls beneath the windows are covered with alabaster and inlaid marble, disposed in a rich diaper pattern, and the whole of the groining is decorated with arabesques and figures executed on gold grounds. The old bosses have been carefully preserved, and represent the martyrdom of St. Stephen, St. John, St. Catherine, St. Lawrence, and St. George and the Dragon, beautifully executed. The east wall is panelled with deep recessed tracery, with full-length figures on a gold ground. The centre panel is to contain a cross. The other eight panels represent St. Peter, St. Stephen, St. Oswald, St. Ethelrida, St. Edmund, St. Edward the Confessor, St. Margaret of Scotland, and St. Edward the Martyr. All the columns are of polished Purbeck marble.

Experiments at Shoeburyness.—The most important of all the many important experiments at Shoeburyness took place on Tuesday. The 600-pounder Armstrong muzzle-loader was fired, in the presence of the Count de Paris, the Duke de Chartres, the Duke de Montpensier, and the Prince de Joinville, at a floating Warrior target, which had been brought from Sheerness for the purpose. Originally it was intended that it should be fired from 2000 yards, the distance between the new Spithead Forts, but the select committee, in their desire to avoid the disabling the target by a foul shot at so great a distance, moored the target at 500 yards, and reduced the charge of powder from 70 lb. to 51½ lb., to represent the effect at 2000 yards. The first shell missed the target, but penetrated the wood framework, making two inconsiderable holes. The second grazed the head of the upper armour plate, bursting in the wood framework, a large portion of which went into the air in a shower. The third shell, too low for the target, struck the sea in front, and, ricochetting, struck the upper armour plate, passing through it and the backing, practically demolishing the target. On further examination it was found that all that had been said hitherto of the superiority of the guns over armour plates was confirmed. The upper armour plate had dropped from the target with every bolt broken, the backing was penetrated, one of the rear supports injured, and that portion of the target which represented the deck was more or less covered with bolt heads and splinters. In a word the third shell would have arrested the progress of any iron-clad afloat, assuming such iron-clad to have been forcing the Spithead or Needles passage at 2000 yards, and not a man would have survived at the guns. It was the universal opinion that this 600-pounder gun will sink any iron-clad ship that can be built. There is no country but England that has a 600-pounder, and we have only this one at present; but four more have been ordered for this year's delivery. At the conclusion of the firing the Prince de Joinville expressed the gratification with which he had witnessed the interesting experiments.

New Arrivals at the Zoological Gardens.—Mr. F. Buckland has addressed a letter to the *Times*, stating that Mr. Thompson, the head keeper, has returned from Calcutta, with a large number of rare and valuable animals, presented to the Zoological Society by the Baboo Rajenda Mullick, Mr. A. Grote, and Mr. W. Dunn. They include three young rhinoceroses, one rhinoceros hornbill, two concave cusqued hornbills, green-necked peafowl from Burmah, some very handsome Indian pheasants, besides other smaller birds, and two very large tortoises. One rhinoceros has been sent to the Dublin Society, the other two are in perfect health, though the original rhinoceros is somewhat jealous of the attentions they receive from visitors. The height of the male rhinoceros is 4 feet 3 inches, of the female 4 feet; the length of the male 9 feet 6 inches, of the female 9 feet 4½ inches; the girth of each being about 8 feet. One of the tortoises is a gigantic specimen, its weight being about 150 lb., and its girth 6 feet. It seems very active and lively this warm weather. The large horn bills, which are placed close to the pelicans, are magnificent birds. A little chamois has lately been born in the gardens; it is about the size and shape of a small kid, and, although so young, is nearly as active as its mother. The beaver has a nest of young, one of which came out for the first time into the pond on Saturday last; another having died in the nest some days ago, the parents brought it out and laid it on the bank. On Tuesday week Mr. Hancock and Mr. Bartlett, learning that a fine sturgeon was tethered in the Severn at Tewkesbury, went down to fetch it; with much difficulty and labour they succeeded in bringing it alive as far as Paddington, where it unfortunately died. Its weight was 225 lbs., and it measured no less than 8 feet 9 inches in length. It contained an enormous mass of roe (such as is manufactured into caviare by the Russians), which weighed 42 lbs., and which, as a calculation showed, contained no less than 1,881,600 eggs. The young salmon and trout which were hatched last year in the gardens are doing well, the salmon averaging 5 inches and the great lake trout no less than 8 inches in length.

The Donkey Show.—The Earl of Harrowby presided on Friday at the distribution of the prizes, and was accompanied by the Duchess Dowager of Beaufort, Miss Burdett Coutts, Mr. Charles Buxton, M.P., Mr. Gregson, M.P., Mr. Samuel Gurney, M.P., and other influential persons. His lordship said that the ladies and gentlemen who had given the prizes to the costermongers wished to reward the kindness of the owners who had cared for their animals, in order that those rewards might stand in contrast to the punishment which followed cruelty. He hoped that the awards of that day would do good by making owners of these animals treat their humble and hardworking beasts with patient forbearance. His lordship then gave the first classes of prizes, which were received by the grooms of the noblemen, gentlemen, and ladies to whom they were awarded. The Rev. Thomas Jackson, M.A., then distributed the prizes to the costermongers, each of whom went up to the chair, leading his donkey with him. One man showed a donkey 40 years old, and his lordship was so pleased with the appearance of the animal that he gave the owner an extra prize of a sovereign. Mr. Samuel Gurney then distributed other prizes, which were so awarded that every costermonger exhibitor had at least 5*s.*, and many much more. Cheers were then given for the chairman, for Miss Burdett Coutts, for the gentlemen who had interested themselves in the show, and for the managers. Racing then commenced; and a lesson in cessation from whipping was given by the riders being compelled to race without sticks or whips.

The New Traffic Regulations for the City.—On Thursday morning, at 6 o'clock, the City Police went on duty armed with new powers under the provisions of the recent Act, for the purpose of carrying into practice the regulations of the Court of Aldermen relating to the City traffic, as approved by her Majesty's Secretary of State. The first of these regulations declares that every vehicle licensed for the conveyance of passengers passing through St. Paul's Churchyard to or from London Bridge, or any place over the bridge, shall pass down Cannon Street. This order was carried out by a picked set of men, placed at the south-east corner of St. Paul's Churchyard and the eastern end of Cannon Street; but their services were little needed, as the drivers of the several vehicles were well acquainted with the regulations, and obeyed them accordingly. The change caused Cannon Street to exhibit a very lively appearance, while the overcrowding of Cheapside was entirely prevented, none but the omnibuses to and from London Bridge through Oxford Street and Holborn Hill, &c., being permitted to pass or return that way. It is believed that the regulations will prove of the utmost advantage to the public.

Removal of the Weigh House Chapel.—On Sunday morning the Rev. T. Binney announced the approaching removal of this building, which stands in the way of the Metropolitan District Railway from

Blackfriars Bridge to Tower Hill, part of what is called the "inner circle."

THE ROBBERY OF GOVERNMENT CLOTHING.—By direction of the War Department, a court of inquiry, composed of officers of the Royal Artillery, is now engaged in investigating the circumstances connected with the extensive system of robbery discovered at the Royal Military Clothing Stores by non-commissioned officers and gunners of the Royal Artillery, who were employed at the establishment. About one-half of the military cutters are now in custody, including a corporal and nine gunners. They were, in the first instance, ordered to be tried by garrison court-martial, but they will now remain under arrest until the termination of the court of inquiry. Since the discovery of this system of peculation at the military clothing stores, the police at Woolwich received information that a large quantity of Royal Marine clothing would be found at the residence of a pensioner now employed as a dockyard labourer, but who, as a tailor, recently received employment from the department of the Woolwich division of Marines. On Monday evening accordingly they proceeded to No. 3, Elgin Terrace, Woolwich, and found that the house was a complete depot for Royal Marine clothing. A cartload of the property was immediately seized and conveyed to the police station. It comprised two pieces of white cloth used for the manufacture of uniform jackets, several pairs of trousers, cut out but not manufactured, flannel and other shirts, flannel drawers, pieces of calico, silk-braiding, thread, brushes, &c. The man occupying the premises, whose name is Clark, was apprehended and taken before the magistrate at the police court on Tuesday, when the evidence showed that the clothing department allowed the master tailors to retain everything which was left after they had made up the articles for which the materials were supplied. This practice appeared to require further explanation, and the magistrate accordingly remanded the case for the attendance of the officers of the corps, and in the meantime admitted the prisoner to bail.

THE LATE ACCIDENT AT WIMBLEDON.—The inquest on Cooper, the Guardsman, was concluded on Monday, when the Coroner, in summing up, gave a sketch of the history of the National Rifle Association, and called attention to the circumstances under which the shooting took place on the 21st July, and the arrangements made to prevent danger. The first question for the jury to determine was whether Cooper died in consequence of a gunshot wound, and whether it was clear that Roberts, and no one else, fired. If they found in the affirmative on that point, there was the important question of responsibility. If they believed that Roberts disregarded the rules by which he ought to have been guided, it would be their duty to send the matter to a superior court; otherwise, they would acquit Sergeant Roberts by finding that death was caused accidentally. After an hour's absence the jury found a verdict of "Homicide by misadventure," accompanying it with an opinion that Roberts had been careless. He was discharged amid cheers from the assembled public.

THE LATE FIRE AT COLONEL M'MURDO'S.—One of the so-called fire-proof safes has at length been dug out of the ruins, and upon being opened was found not to have secured a single valuable, either of plate or jewellery. A presentation sword, from Lord Ellenborough, with a real Damascus blade, was found melted in two. This sword was made at the time of the Crusades, and was highly prized by the colonel. Another sword, presented by General Sir Charles Napier, has also been found injured in a similar manner, and the whole of the gold appointments and diamonds have been lost. So much value did the colonel attach to the various presentations that he had holes drilled in the bottom of the safes, so as to screw them down to the floor, and the flames entering the apertures destroyed the contents. Had it not been for the drilling of the safes everything might have been secured.

THE INCENDIARY FIRE AT PADDINGTON.—A short time ago the Artesian Saw Mills, at Paddington, were burned to the ground, and a carman employed on the premises, named Boxhall, was apprehended on suspicion of having wilfully caused the fire. There was, however, no evidence to implicate him, and he was discharged. A servant girl, named Cooper, only 12 years of age, has since been taken into custody, and examined at Marylebone Police Court on the charge of being the incendiary. She was in the mills after Boxhall left, and appears to have been the last person there before the fire broke out. The magistrate decided that there is some suspicion against her, and remanded her for a week, but took bail for her appearance in the sum of 100*l*.

ATTEMPT TO DROWN A QUACK DOCTOR.—On Tuesday evening three men were apprehended on the South Hackney side of Victoria Park on the charge of attempting to drown an old man, named Meredith, 67 years of age, a quack doctor, living at 52, Leonard Street, Finsbury. The charge was supported by several persons who witnessed the outrage. At first they thought it was a freak to duck the old man, but on perceiving the prisoners holding him down under the water, they called out for them not to drown him, and finding they would not desist, the bathers and spectators went to the assistance of the old man, who was struggling violently to save himself. The water in the lock where he was thrown in is about 10 feet in depth, and he had a narrow escape from death. It appeared that the young men were in debt to the quack doctor and invited him to the banks of the Regent's Canal, near the spot of Mr. Briggs's murder, under promise of payment. Instead of doing so they pushed him into the water. On being taken into custody they pleaded that they only meant to give him a ducking. The magistrate sentenced two of the prisoners to a fine of 20*s*. each, or a fortnights' imprisonment in the House of Correction. The other who took little part in the outrage, was discharged.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week ending on Saturday, the 13th inst., were 1433. The average number in the corresponding week of the 10 years, 1854-63, corrected for increase of population, was 1368. The present return is therefore 65 above the average. During the week the births of 1014 boys and 948 girls, in all 1962 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1832.

Provincial.

BATH.—On Monday, Henry Brine was brought up on remand charged with shooting at his wife, with intent to murder her on Sunday evening, the 7th inst. He admitted shooting her, but not intentionally, and said that she knew that the pistol was procured for another purpose. The magistrates committed him for trial at the assizes. Before leaving the dock he walked some steps to where his wife was sitting, and shook her by the hand.

BIRMINGHAM.—The purchase of Aston Park is nearly on the point of completion. The contract has been signed and sealed by the corporation and the company, and it only remains for the conveyance to be settled for the park to become the property of the town.

CANTERBURY.—The usual hospital sermon was preached at Canterbury Cathedral on the 9th inst., when the collection amounted to 35*l*. 13*s*. 4*d*. The various boxes contributed as follows:—Cathedral, 15*l*. 0*s*. 6*d*.; Assembly Rooms, 3*s*. 3*d*.; Fountain Hotel, 8*s*. 5*d*.; Hospital, 4*l*. 13*s*. 8*d*.; Corn Exchange, 3*d*.

HEREFORD.—The bronze statue, from the cast of Baron Marrochetti, to the memory of the late Sir G. C. Lewis, has arrived in Hereford. The 3d of September is fixed for its inauguration, and Lord Palmerston has promised to deliver the inaugural address. The Chancellor of the Exchequer is also expected to be present. While in Herefordshire Lord Palmerston will be the guest of the Rev. Archer Clive, of Whitfield, brother of Mr. George Clive, M.P.

HERNE BAY.—The Herne Bay, Hampton, and Reculver Fishery Company having carried in the late session of Parliament their Bill for establishing oyster fisheries in the estuary of the Thames, are about to celebrate their triumph by a festive demonstration on Tuesday next the 23d inst. The directors are to assemble at the railway station in procession. They will afterwards dine at the town hall with a number of invited guests. There will also be provided a gratuitous banquet for the poor. There are to be aquatic, athletic and rural sports, with prizes open to all England, bands of music and professional artists, dancing, illuminations and fireworks. Arrangements have been made with the London, Chatham, and Dover Railway Company, who have consented to issue at all stations on their line on Tuesday tickets available for return on that and the following day. All the entertainments will be free.

HULL.—A tremendous fire took place in this town on Monday. Several valuable warehouses belonging to Messrs. Thompson, M'Kay, & Co., and Messrs. Carver & Co., were consumed in Railway Street; and on Monday night the fire was still raging so furiously that the vessels in the docks were removed. The loss is estimated at 100,000*l*.

LIVERPOOL.—The local papers contain a narrative of fearful sufferings endured by the passengers and crew of a Liverpool vessel called the All Serene, that was capsized in a gale on her voyage from the Sandwich Islands to Sydney. Most of those on board took refuge in the chains, where they managed to make a raft or punt, to which they committed themselves, and for 16 days endured terrible sufferings on the open sea, men dying every day from want and disease. The survivors landed at last on an island in the Fiji group, where the natives, under missionary influence, treated them kindly.

LYNN.—An important meeting of the magistrates of Norfolk and Lincolnshire has been held in this town, for the purpose of defining the boundaries of the two counties in the large tract of land called Wingland. It appeared that the reclaimed land proposed to be divided consisted of about 5000 acres actually brought under cultivation, and above 1000 acres as yet only partially reclaimed. This work of reclamation is part of the original scheme of making a new county, which was to be called Victoria county; and the district, which through the operation of the new Outfall Act, now presents the aspect of highly-cultivated fields, was but a few years ago a dreary waste of alluvial mud, over which each tide passed. The magistrates, having agreed to the boundary line, which gives nearly an equal amount to either county, gave directions for the line to be marked out by stone posts or landmarks. This is but one portion of a very large tract of land that engineering skill is now taking from what has been known as the Wash, but which seems to have been ages back, dry land, as the immense submarine forest stretching across the mouth of the Wash off Hunstanton indicates. Many thousands of acres have also been already reclaimed through the operation of the Norfolk estuary scheme.

MERTHYR.—The scarcity of water is so great at the iron, tinplate, and coal works of South Wales that at many establishments the principal departments are at a complete standstill. Hundreds of hands are in consequence thrown out of employ, and both masters and men are suffering by the drought. The rain of last week brought a supply of water for a day or two, but the reappearance of the scorching heat has caused a second drought, almost severer than the first. As instances of the great loss to trade from want of water it may be mentioned that at several works the makers iron and tin-plates for the last six weeks could have been turned out in one week with an ample supply of water. Even the canals are so short of water that the boats are unable to accomplish their journeys within the usual time.

NORWICH.—It is understood that the Bishop of Norwich has commenced proceedings in the Arches Court against the Rev. C. Drury, rector of Claydon, Suffolk, for having officiated in the "monastery" established by Brother Ignatius in this city.

PLYMOUTH.—The Federal war corvette Sacramento put into the Sound on Tuesday evening, having run down off the Start the Norwegian brig Ceres, from Cadiz, with salt for Elsinore. The brig's crew were saved by the Sacramento, which was not damaged. The brig sunk at the time, but afterwards came up and floated on her beam ends from the cargo melting. A tug has been sent out to bring her in.

READING.—The adjourned inquest on Emma Lee and her three children, who were found drowned in the Thames at Caversham last week, was resumed and concluded on Tuesday. The husband had not been traced, but his brother came up from Tunbridge Wells to attend the inquest. He stated that the parties had lived unhappily for some years, and as he never understood that they were married, he had advised his brother to take the woman to her friends at Reading and sever the connection, which he agreed to do, after arranging with the witness to allow her 10*s*. a week. Several other persons deposed there was nothing in her manner, appearance, or conversation to lead them to the conclusion that she was not in the full possession of all her mental faculties, and that she was not destitute, as a sum of 14*s*. was left by her at her lodgings when she started for Caversham. The Coroner, in summing up, said there was no satisfactory evidence to show that the woman was otherwise than in the full possession of her mental faculties; and there was no evidence either of such destitution as would lead a person rashly to commit such an act as the destruction of herself and offspring. He suggested that they might have been accidentally drowned, perhaps through one of the children falling into the river, and the mother attempting to rescue it. The jury after deliberating a short time returned an open verdict of "Found drowned."

SOUTHAMPTON.—On Saturday evening two lions made their escape from Wombwell's menagerie, which is now exhibiting in this town. One of them was speedily recaptured, but the other made its way into the town and rushed into the sitting room of a house in Havelock Terrace, where the keepers succeeded in securing it by means of ropes, and lodged it in a cage in which it was conveyed to its quarters. During the commotion the wildest excitement was manifested by the other animals, among which is the identical lion which killed a boy a few years since, in the Ratcliffe Highway. It was only a few weeks since that one of the elephants in this menagerie escaped at Devizes, and ran about the town in an infuriated state, but was ultimately secured without doing any injury.—At the borough police-court on Friday, a German seaman named Adolph Björnsen, about 35 years old, was charged with wilfully murdering the captain of the barque Gustave Adolphe, an English registered vessel, on the high seas, on the 21st June. It appeared that the ship left London in the beginning of May for China, and while near Pernambuco the prisoner, who seems to have had no previous quarrel with any one, fired a pistol first at one of the mates, whom he missed, and then at the captain, whom he shot through the head. He then lowered himself into the life boat, and left the ship, none of the rest of the crew daring to molest him. When he had got some distance, when they fired at and struck the boat, and, taking him out of the water, put him in irons. The prisoner's counsel cast doubts on the nationality of the ship to carry the English flag, and the case was adjourned for the production of the register.

SUNDERLAND.—It has been ascertained that the two men who were poisoned on board the barque Ouse, in this port, were killed by arsenic, which the captain kept in an open tea-chest in the ship's store room. The cook, who had no idea that there was any arsenic on board, believed it to be flour, and used it in making pastry for a sea pie. In dismissing the charge recently brought against the cook at Gibraltar, the acting captain of the port animadverted in severe terms on the culpable negligence of the captain, not only in

having poison exposed in an open box among his ship's stores, but in having failed to give any caution on the subject to the cook, or even to acquaint him with the fact that there was poison in the store-room.

Tavistock.—The memorial statue erected in the Abbey Yard to the late Duke of Bedford, was uncovered last week in the presence of a large concourse of spectators. The statue, 7 feet high, is of bronze, and is placed on a circular pedestal of granite, 8 feet high. The sculptor was Mr. E. B. Stevens, of London.

Truro.—The water supply in Cornwall has not been so short as it is at present for at least 40 years. The effects of the long-continued drought are assuming a very serious character, and farmers are at their wits' end with respect to the watering of their stock. In some districts several sheep have been lost, and in the western part of the county some horned cattle have been lost, but sheep have thus far been the principal sufferers. The wool also is being much damaged by scurvy, and the price has consequently reached 1*s.* 6½*d.*, and even in some cases 1*s.* 7½*d.* per lb. The stock on hand, which a week or two ago was large, is now very small, and it is believed that prices will advance. The pasturage in the county is exceedingly scanty, and meat and butter are dearer than has been known at this time of the year for a long period. Scores of corn crops are infested with a small and destructive insect, closely resembling the common lice, which is doing considerable damage, and the farmers attribute this attack mainly to the dry hot season. Unless there are some steady showers of rain very shortly, many of the farmers will suffer to an extent by no means inconsiderable. The townspeople have also reason to hope for rain. New wells are being sunk, or old wells sunk deeper, in nearly all the towns in the county, and the different corporations have found it necessary to take the matter of the deficiency of water into their serious consideration. Where there are waterworks the usual supply has been reduced one-third. In one or two instances new reservoirs are constructing.

Tunstall.—A collier, 24 years of age, named Charles Brough, was charged before the magistrate on the 4th inst., with the wilful murder of George Walker, an old man of 74, who, formerly a respectable farmer, and still owning a small property, had for the last two years been living entirely alone in a rude hut on a piece of waste land near Audley. The old man had relatives in good circumstances, who had often urged him to reside with them, but he always refused. He was last seen alive on Wednesday week, when a labourer who had been in the habit of calling upon him, spent the evening in the hut, and promised to call again the next day. When he went on the Thursday evening he found the corpse of the old man lying almost naked in front of the building, dreadfully mutilated. A watch had been stolen from deceased on the night of the murder. On Friday afternoon the prisoner attempted to pawn this watch in Tunstall, and was at once arrested. While in the police cells the same evening he confessed that he was the murderer. He said he had been quarrelling with his father, and on leaving his home went to the hut to get a lodging, but the old man refused to let him in, upon which he picked up a piece of wood, struck deceased with it, took his watch and ran away. When the statement was repeated in evidence, the prisoner merely said it was true, and that he had nothing further to say. He was committed for trial at the next Stafford Assizes.

Uxbridge.—On Thursday, the 11th inst., a fire broke out in a rick of hay at Hay's Farm, Southall, in the occupation of Mr. Wilshin. Before the brigade fire-engines could reach the spot the flames had seized upon two other ricks of hay and clover, and also on the brick and timber buildings used as barns and stores. The flames were not subdued till Friday, by which time they had consumed seven ricks of hay and clover and ten brick and timber structures of great size, and filled with a valuable stock of grain, &c. The dwelling house was saved with its contents. It was at first supposed that the fire was the work of an incendiary, but the agents of the insurance offices have come to the conclusion that it arose from one of the stacks of hay overheating. Such an extensive fire has not happened in the neighbourhood for several years.

Ireland.

The Lord-Lieutenancy.—His Excellency the Earl of Carlisle left Dublin last week for Castle Howard, Malton, where he will remain for some time for the benefit of his health. It is generally believed that his Excellency has left Ireland for the last time, or that if he returns it will only be to bid farewell to the people as Viceroy.

Riot at Belfast.—On Friday morning at 2 o'clock a serious riot broke out in Belfast, when stones, bricks, bludgeons, and even guns were freely used. Before the police could get to the scene of violence, many persons were injured. A nunnery was totally wrecked by the Orangemen. The windows of St. Patrick's Burial Society's house were smashed, and several private houses were similarly treated. During the morning the workers in the factories assembled in the streets, and could not be prevailed upon to retire. A girl was maimed by a blow from a policeman's gun, a man was shot in the leg, and others hurt. In the evening the Roman Catholics in their turn smashed the windows of Dr. Cooke's meeting house and the Wesleyan chapel, while the Orangemen attacked the dwelling of the Roman Catholic bishop. The police at last interfered, and arrested several persons of both parties, and on Saturday and Sunday the town was comparatively tranquil. On Monday the rioting was renewed, and the mob wrecked several houses, including the National School in Brown Street. In the afternoon there was a regular battle between the Orangemen and the navvies, and the disturbed districts were crowded during the day by women, girls, and boys, carrying bludgeons, pitchforks, and other weapons. All the shops were closed at an early hour in the evening, and several persons were shot, one of whom has since died. Five companies of the 84th Regiment arrived from Dublin by the evening train, and prevented any serious collision during the night. On Tuesday, however, the rioting was renewed, all business was suspended, and the houses were closed. Several dreadful conflicts took place during the day between the police and the mob. The police fired upon the people, wounding about 30 persons, two mortally, and killing three. Five hundred navvies challenged the ship carpenters to a pitched battle, and the latter broke into the gunsmiths' shops and armed themselves. They subsequently heard a report that the Dublin coal porters were to arrive in Belfast to help the navvies, and went to the station, where they awaited the evening train in great force, about 1000 strong, and all armed, determined to attack the new comers. The report turned out to be erroneous, but several of the passengers were roughly treated. During the whole day mobs armed with hatchets, knives, pistols, and pitchforks paraded the streets; and about six o'clock a serious collision took place between the ship carpenters and navvies. The latter were forced into the mud-banks in the harbour, and fired upon from the banks of the river, when up to the neck in mud, by the Orange party. Nine or ten received gunshout wounds and one is reported dead. The magistrates swore in a number of special constables, and took possession of all the gunpowder in the shops. The Roman Catholics held a meeting, and appointed a deputation to go to Dublin and require Government to appoint Commissioners to govern the town, as they had no confidence in the magistrates. A subscription for the purchase of fire arms was also set on foot. Some squadrons of dragoons and artillery were sent down in the evening, with Major Esmond, of the constabulary force, who received full powers to quell the disorders at all hazards. 800 constabulary was also ordered to be concentrated on Belfast from eight different counties. On Wednesday morning the riots were renewed with lamentable consequences; great numbers having been maimed or injured with bludgeons, pitchforks, and gunshots. Five more men were taken to the hospital, two of whom are not likely to live. The hospitals are crowded with wounded, and the surgeons were busy all day performing amputations. Reinforcements were despatched almost hourly, and in the course of the day there were upwards of 4000 soldiers in Belfast. 12,000 Protestant operatives marched armed through the town, but without doing violence, and merely as an exhibition of strength. After midnight no serious disturbance occurred. The soldiers, police, and special constables patroled the streets all night. On Thursday a disturbance occurred at the funeral of one of the men who were shot, but it was soon suppressed, and without any casualty. The town is now tranquil.

Disturbances in Londonderry.—The 12th of August was celebrated by the apprentice boys firing cannon, hoisting flags, and marching in procession with sashes, badges, music, and banners. There was a sermon in the Strand Presbyterian Church. After nightfall the apprentice boys marched through the principal streets with torches. There was some fighting afterwards, and one or two persons are said to have been seriously injured.

Disturbances in Dundalk.—On Thursday night party riots broke out in Dundalk, where an immense mob burnt King William in effigy, and then rushed through the streets breaking the windows of the Protestants. The mob also attacked the ragged schools and Methodists' meeting-house, and broke every window in them. A body of troops was sent down at night from Dublin.

The Proposed Dockyard at Queenstown.—At the dinner given last week to the officers of the Channel fleet by the mayor and citizens of Cork, some amusement was caused by the attempts made to extract a promise from the Duke of Somerset on the subject of a Government dock to be constructed at Queenstown. His Grace, however, refused to commit himself, and reminded the meeting that the harbours which had no Government docks, such as Liverpool and Glasgow, were more prosperous than Portsmouth and Plymouth that possessed them, and urged the people to rely on their own exertions rather than on Government aid.

The National League.—On the day after the great demonstration at the laying of the foundation stone of the O'Connell Monument, an extraordinary meeting of "the Irish National League," was held for the purpose of conferring with the members of the association from the country who had come to Dublin ostensibly to take part in that display. This meeting was intended to be the formal inauguration of a revival of the "Young Ireland" agitation, the avowed object which is the dismemberment of the kingdom by force, whenever they shall think themselves strong enough to make the attempt.

The Derryveagh Murder.—The second trial of Francis Bradley for the Derryveagh murder took place at the late assizes. It will be remembered that Adam Grierson, steward of Mr. Adair, a landed proprietor in Donegal, was murdered on the 10th of April, 1863. A number of tenants had been evicted, and among them the prisoner's father. Grierson had superintended the evictions, and had, of course, incurred the hatred of the peasantry. He was about to emigrate to New Zealand on the 11th April, but on the evening before, as he returned to his house, after visiting a friend, he was shot from a limekiln. He was mortally wounded, but was able to go home, when he immediately told his wife that the prisoner was the man that fired at him. He afterwards made a dying declaration to the same effect, and was able to identify him among five or six others brought for his inspection. The prisoner was tried 12 months ago but the jury disagreed. At the spring assizes the trial was postponed, owing to the absence of a material witness, a woman who was confined of twins just at the time. The trial at length came on at the recent assizes, and after lasting two days again proved abortive, the jury, who had been locked up all night, stating that there was no chance of their agreeing to a verdict. They were then discharged, and the prisoner will be arraigned for the third time at the next assizes. It was expected that he would be immediately re-tried by another jury, but the Crown prosecutors decided on postponing the trial. An application to liberate him on bail was refused, and he was again consigned to prison.

Scotland.

The Yelverton Case.—An action for damages, stated at 3000*l.*, has been brought in Scotland by Mrs. Teresa Yelverton against the *Saturday Review* for an article published in that journal on Saturday, July 30.

The Scotch Sunday.—On Saturday week her Majesty's ship Salamis steamed up to Invergordon, at a late hour in the evening with the Commissioners on Fisheries, and left again early on Monday morning. The officers in command were desirous of obtaining supplies of provisions on Sunday; but the merchants declined to execute the orders on the Sabbath day. On this it was answered that the supplies would be got elsewhere, and the Salamis, after lying in the harbour 36 hours, took her departure on Monday morning too early for getting stores on board.

Mr. Hugh Miller.—It is stated that the family of Mr. Hugh Miller have resolved to put in complete repair the humble cottage in Cromarty in which he first saw the light. A neat railing is to be erected in front of the building. The cottage stands near the base of the handsome pillar, surmounted by a statue of Hugh Miller, which was erected to his memory by friends and admirers.

Railways.

Railway Accidents and their Causes.—In the year 1861 79 passengers were killed and 789 injured by railway accidents in the United Kingdom; in the year 1862, on an increased number of lines, 35 passengers were killed and 536 injured; and in the year 1863, on a still increasing length of line, 35 passengers were killed and 401 injured. The number of passengers in 1863 was 204,635,075 without including 64,391 season and periodical ticket holders. Estimating even that these last travelled on an average only 100 times each, the number of passengers killed in 1863 was less than one in 6,000,000, and of passengers injured less than one in 500,000. Of every five passengers killed three lost their lives through their own misconduct or want of caution, so that the number of passengers killed from causes beyond their own control was less than one passenger in 15,000,000. Of the passengers killed last year 12 met their death by getting out of or attempting to get into trains when in motion, five by incautiously crossing or standing on the line at a station, one by leaning out of the carriage window on approaching a bridge (since widened), one by getting out on the wrong side of a carriage, one (in Ireland) by getting on the roof of a carriage and walking along the train. Of the 13 passengers killed in 1863 from accidents to trains, three lost their lives through collisions between trains, and 10 from the trains getting off the line, 7 of the 10 in the accident on the Hunstanton line caused by a heifer being on the rails. Of the whole number of accidents to passenger trains in the United Kingdom reported to the Board of Trade in 1863—52 in all, exactly one a week, and precisely the same number as were reported to the board in 1862—32 were caused by collisions with other trains, 10 by the trains getting off the rails, six by their running off the proper line through the points being wrong, and only four from anything breaking or getting out of order. A large proportion of these accidents must have been preventible by careful management.

Great Eastern City Extension.—By the Extension Act, which has just become law, the Great Eastern Company undertake to run a train from Edmonton and Walthamstow to the Liverpool Street

Station every morning before 7 o'clock, and back again every evening at 6 o'clock, as may be most convenient for artisans, mechanics and labourers, at a charge not above 1*d.* per journey, but they are not to be compelled to issue such tickets for a less period than one week, nor without reasonable satisfaction that the applicants are of the working class, for which they may demand name and address both of applicant and employer, and in case of accident the company are not to be liable to any claim for compensation for injury to passengers beyond 100*l.*

THE METROPOLITAN EXTENSION TO FINSBURY.—Rapid progress is now making in the settlements for property, and the clearing of the ground for this extension. The contractor has full possession of all the ground as far as Aldersgate Street, with the exception of two blocks of buildings, which are advertised for sale and clearance in a few days. The principal station will be erected in Aldersgate Street, between the corner of Long Lane and Carthusian Street. Four lines of rail, two narrow and two broad guage, will be reached by a flight of stairs, on either side of the intended station. The foundations are now in progress for the bridge which will cross the line at Charterhouse Street into the square.

METROPOLITAN INNER CIRCLE.—The line sanctioned by Lord Stanley's committee will commence by a double junction with the West London Extension between the Richmond Road and Kensington, and passing through Earl's Court, will form a connection with the Metropolitan Extension Railway at High Street, Kensington, where there will be an exchange station, and by another fork will turn to the south to Glocester Road, where another exchange station will be made, and thence will continue parallel to the Metropolitan Extension to Alfred Place, West Brompton, where the terminal station of the Metropolitan Extension is intended to be made. By these junctions and the exchange stations, opportunities will be given to all the railways to find their way to the West London Extension, the London and North Western, the Great Western, the Brighton, and the London and South Western, to communicate with the inner circle, and distribute, exchange, and receive their traffic from it. The first station will be in Sloane Square. The line will pass to the south of Thurloe Square and thence across the Fulham Road, and across a number of secondary streets to Cadogan Terrace, at which point the Metropolitan Grand Union Line down to the Victoria Station is adopted, as it avoids a good deal of opposition from the district of Chester Square and other places. At the Victoria Station the Metropolitan District Line is adopted for a short distance, then the Grand Union proposed line, for the purpose of avoiding passing down Victoria Street, to which great objection was made. By taking this line, and running down Tothill Street, and widening it from a 30-feet street to a 60-feet street, a great public improvement will be accomplished. At the Westminster Hospital the District Railway is taken, and from that point eastward it alone is adopted. It is proposed to form a station at the Victoria Station, taking a clump of houses between the Station and Shaftesbury Terrace. At Westminster a station will be formed between Bridge Street and the Thames Embankment. From Westminster the line will go through the embankment to Charing Cross. It will pass under one of the openings of the bridge, and not interfere with the Charing Cross Railway in any way. There will be another local station at Blackfriars, and an exchange station with the London, Chatham, and Dover, which will intersect it there. From Blackfriars the line will follow the route of the new Street, called New Earl Street, and along that street up to very nearly the point where that new street joins Cannon Street. Then it will diverge and run parallel to Cannon Street, to the station of the Charing Cross Railway. The line will pass 10 feet below the level of their rails. So far the line will be kept through an inferior class of property. At Trinity Square the line will run into the station of the Metropolitan Extension, which has also passed this committee, and will thus entirely complete the inner circle. All the questions affecting sewers and works under the control of the Metropolitan Board of Works have been agreed upon. There is only the question of compensation to be paid. The length of the line will be 7¼ miles. The total area of the property required will be about 27 acres, the total number of buildings permanently removed will be 234, and the total number of buildings interfered with 808. The quantity of property permanently retained in the city will be less than an acre.

EXPLOSION OF A LOCOMOTIVE AT CAMDEN TOWN.—A fatal accident occurred on Tuesday morning at the Camden Road Station of the North London Railway. As the express train for Fenchurch Street was about to start, the boiler of the engine suddenly exploded, throwing the engine bodily into the street below. Fortunately no one was passing at the time, but the stoker was so severely injured that he died in the course of the night.

ACCIDENT AT BRIGHTON STATION.—An alarming accident took place on Tuesday morning at Brighton. The goods station is several feet below the main line, and the goods waggons are lowered down the incline by an engine. This process was going on on Tuesday, when the weight of the train, which was an unusually heavy one, broke the coupling chain of the engine, when the train dashed through the station, knocked down the outer wall, and rushed across the street, where it was stopped by a house, which suffered severely from the collision. Fortunately the people in the street heard the noise of the descending train and managed to get out of the way.

Law.

MIDLAND CIRCUIT: LEEDS.—*The Sheffield Murder.—Joseph Myers*, a saw grinder, was indicted for the wilful murder of his wife. He was evidently very weak, breathed heavily, and suffered from a slight cough. In a weak voice he pleaded not guilty to the indictment. The prisoner had been married for some years, and lived with his wife at Sheffield. He was about 43 years of age, and deceased was about a year older. They had several children, but at the period in question only two of them resided with them. On the 10th June, deceased went down stairs, dressed, with the exception of one boot. Shortly afterwards her husband went down with the boot in his hand, and threw it at her feet. Deceased made use of an expression to the effect that if he did not like it he might put the boot down his throat, and this appeared to be the only angry expression made use of by her. Nothing further was then said, and the prisoner went out. Shortly afterwards he returned and was seen to stab his wife rapidly two or three times. A neighbour, attracted by the cries and the scuffle, ran to the assistance of the wife, and found that she was bleeding from the throat and face, and that the prisoner was cutting his own throat with a table knife. The deceased died in a few minutes. The prisoner was taken to the Infirmary, where he recovered sufficiently to be now put upon trial. The jury after consulting together for about three minutes, found the prisoner *Guilty*. The prisoner having been asked in the usual form whether he had anything to say why sentence of death should not be passed, replied, "I was drunk the night before. I had had a quart of ale the morning I committed the deed. My wife said she would throw my bond up, and have me committed to prison. I did not know what I was doing or I should not have killed her." Mr. Justice Keating passed sentence of *Death* in a most impressive manner, and the prisoner was removed, apparently little affected by his position. *The Huddersfield Murder.—Joseph Haigh*, aged 38, cotton twister, was indicted for the wilful murder of Joseph Pogson, at Huddersfield, on the 7th of May last. It appeared from the evidence of the daughter of the prisoner that she, her father, mother, and sister, and also the deceased, who was her uncle, lived together in the prisoner's house. Between 3 and 4 o'clock on the morning of the 7th May she was awoke by a noise caused by her mother coming into her room and trying to shut the door in her father's face, who burst it in. She and her mother and sister tried to restrain him, when the uncle came in. Her father then broke away, laid hold of deceased, struck him down, and trampled on him. The witness then ran away and gave the alarm. When Thomas Haigh, the prisoner's brother, who lived close by, arrived he found deceased lying on the hearthstone insensible, and bleeding from the ears and mouth. The prisoner had then nothing on but his shirt. His feet were bare, but both legs and feet were splashed with blood. Deceased, whose skull was fractured, died between 8 and 9 that morning. It appeared that the prisoner was suffering from extreme depression and melancholy, and believed that his family were conspiring against him. When young he had received a severe wound in the head from some machinery. The jury after this evidence *Acquitted* the prisoner on the ground of insanity, and he was ordered to be detained during her Majesty's pleasure. *Attempted Murder.—William Wingfield* was indicted for shooting at Mary Birkinshaw, with intent to murder her. The prisoner was until lately a wheelwright at Brodsworth, near Doncaster, and the prosecutrix was his housekeeper. He had been for some time courting her, and had presented her with a ring, and asked her to marry him. In the beginning of this year, however, in consequence of his idle, dissolute habits, she had returned the ring, and refused to have anything more to do with him. About the 18th of April the prisoner became bankrupt. At that time a sum of 8*l.* was due to the prosecutrix for wages, and on the 28th of April she walked over to Doncaster to prove her claim. On the following day the prisoner called upon her at her mother's house, and asked her if she would have him, which she again refused to do. He next requested her to give him a kiss, and on her refusing that also asked her if she was ready to die. On her replying that she was not, he fastened the door with two small wooden wedges. She became much frightened, and threw her arms round him from behind over his arms, upon which he took a double-barrelled pistol out of his pocket and fired it at her over his left shoulder. He also attempted to discharge the other barrel, but it missed fire. The powder from the first discharge singed the prosecutrix's hair, whereupon she fell down, and the prisoner began to beat her on the head with the butt of his pistol. He then left off beating her for a moment, and appeared to be feeling in his pocket for another cap. The girl took advantage of the opportunity to jump up and run out of the room into the street. The prisoner followed her, and she then ran back into the house and endeavoured to shut the door upon him. A man named Wilson, who was passing, tried to stop the prisoner, who thereupon presented the pistol in his face and pulled the trigger. Fortunately, the cap again missed fire, but the prisoner made off, and succeeded in getting into the house after the prosecutrix, and was soon afterwards secured. The undischarged barrel of the pistol was found to be loaded with powder and ball, and the bullet fired from the discharged barrel was afterwards found in the room in which the pistol was fired. He was found *Guilty* of shooting at the prosecutrix with intent to do her grievous bodily harm, and was sentenced to 10 years' penal servitude. *The Rotherham Murder.—James Sargisson*, aged 20, labourer, was indicted for the Wilful Murder of John Cooper, at Laughten-en-le-Morthen near Rotherham, on the 9th of April. The deceased was a tall young man, 26 years old, and a gardener, who for some time had been in the employment of Messrs. Fisher & Holmes, nurserymen, at Handsworth, near Sheffield. His parents lived at Stone, 15 miles distant, and on the day in question he started from Handsworth to visit them. Between 9 and 10 o'clock that night he arrived at a place called Brook House, and repaired to a public house, where the prisoner and other persons were playing at dominoes. The prisoner then was dressed in drab clothes, and the deceased in dark clothes. The deceased had two bundles, one in a handkerchief and the other in paper, and a walking stick. In the conversation which passed among the company the time of night was talked about, and deceased showed his watch in order to tell the company the Sheffield time. After getting some refreshment he went away, and immediately before or after him the prisoner left the public-house. At that time a boy in the road noticed a man in light clothes standing opposite the public-house, as if watching, and shortly after a man in dark clothes, with two bundles and a walking-stick, was seen to walk down the road towards Abbey Lane. The man in light clothes, who was a smaller man than the other, was seen following on the opposite side of the road, where there was no footpath. The deceased never reached his friend's house, but on the following morning his body was found in Abbey Lane in a pool of blood, with a great hedge-stake lying by his side, on which was human blood and hair. Two bundles and a walking stick were also found close by. His hat was off, waistcoat open, and every pocket turned inside out with the exception of one, in which were some small things. A *post-mortem* examination proved that death had resulted from blows in front and at the back of the head, which was almost reduced to a state of pulp. There were also injuries on the eyes and hands. Suspicion attached to the prisoner, who made two or three different statements, ending in a confession that he was present when the murder was committed, but that the blow was struck by another person. The property of the deceased was found in prisoner's possession. The jury, after two minutes' consultation, pronounced a verdict of *Guilty*, and Mr. Justice Keating, in a very solemn and emphatic manner, passed sentence of death. The prisoner protested his innocence. *The Rastrick Murder.—Mary Ann Dyson* was indicted for the wilful murder of her two children, at Rastrick, near Halifax. The prisoner, 33 years of age, was the wife of a labourer living at Rastrick, and had always been an affectionate mother, but latterly she had shown signs of mental derangement, and it was proved that two of her brothers and sisters had died of water on the brain. After retiring for 30 minutes the jury acquitted the prisoner on the ground of insanity, and she was ordered to be confined during her Majesty's pleasure.

NORTHERN CIRCUIT: LIVERPOOL.—*Confederate Enlistments.—Messrs. John Jones* and *Robert Highat*, merchants and shipping dealers, carrying on business in Chapel Street, Liverpool, were charged, at the instance of Government, with having equipped and endeavoured to enlist, a number of seamen and others for the service of the Confederate navy, contrary to the terms of her Majesty's proclamation of neutrality. The prosecution was laid under the 59th George III., c. 69, sec. 2. It appeared that a steamer had been built in the Clyde, and registered in the name of Thomas Bold, a partner of the two defendants, as an expedient of a fictitious name and destination that might be used in the instance of El Tousson and El Mouassir was adopted. The steamer was called the Japan; and was built to be designed for the China trade; the men were engaged for a voyage to the Chinese waters at the Sailors' Home in Liverpool; and in March, 1863, the Japan steamed down the river ostensibly on a trial trip, from which of course she never returned. Mr. Jones, one of the defendants, was on board her, and she made for the French coast. Off Brest she was boarded by a small steamer, from which she received guns and ammunition; her name was changed to the Georgia, and Lieutenant Maury then appeared on deck in Confederate uniform and hoisted the Confederate flag. The men who were just before engaged for China were ordered into the cabin, where Lieutenant Maury offered them 4*l.* a month, and 10*l.* bounty, on condition of their enlisting for the Confederate service; and 25 of the crew at once consented to do so. After a cruise to the Cape and elsewhere, in the course of which several Federal vessels were boarded and searched, the Georgia returned into French waters; and one of the enlisting sailors, Francis Glassbrook, or Rivers, who could be admitted that he had gone by a variety of names, and was the principal witness for the prosecution, found himself again in Liverpool. There he was tracked out by one Maguire, a detective in the employment of the American Consul, who was the real author of this prosecution. While Messrs. Jones and Highat were again enlisting him for another cruise in the Georgia, then at Cherbourg, Maguire took him to the American Consul, who offered him the alternative of the same pay if he would accept the less arduous service of walking about Liverpool and remaining within call. Accordingly, he accepted both services, went down to the Havre steamer at Liverpool docks, took the 3*l.* promised him by the Confederates, and then immediately returned to the American Consulate. The Federal authorities had then of course the evidence in their own hands; and Messrs. Jones and Highat were accordingly prosecuted on the charge of violating the provisions of the Foreign Enlistment Act. The defence was that there was no case, as the enlistment, if any, was not in the British dominions, having been at Bass', outside the three miles, not within the meaning of the Act, which was directed against enlistments in British ports. The Lord Chief Justice overruled the objection, but consented to take a verdict. The jury then returned a verdict of *Guilty* on all the counts. Judgment was deferred, pending the case being taken to the Court of Queen's Bench on the objection raised.

CENTRAL CRIMINAL COURT: *Child Murder.—Mary Hewes*, 29, a good-looking young woman, was indicted for the wilful murder of Henry Bowen, her illegitimate child. The prisoner, who was an unmarried woman, was admitted into the Clerkenwell workhouse on the 16th July almost in a state of labour, and was shortly afterwards delivered of the child, which appeared to be healthy, and continued to be so until Saturday the 30th July, on which day she left the workhouse at 10 o'clock in the morning, taking the child with her. On the same morning the prisoner went into a public house in Gray's Inn Road, having with her a brown paper parcel, and told the servant that she wished to be left alone, as she desired to arrange some portion of her dress. Soon after this, she rang for some gin and water which she had ordered, and left the house, and on the servant going into the room where the prisoner had been, she saw some marks of soot on the fire-place, and having only recently cleaned it this excited suspicion, and she obtained some assistance, and a man put his hand up the chimney and took from thence a parcel, which was found to contain the dead body of a child. The prisoner was followed, and taken into custody by a police constable, and on his asking whether the child was dead, she said it was, and added that she was sorry she had done it, and wished she had taken the child to the workhouse, and that it buried. A letter written by the prisoner on the evening before she left the workhouse, to a friend who had visited her child, telling her that her child was also dead, though it was then alive and well, was produced, as showing the intention to destroy it, and the medical evidence proved that death was caused by suffocation. The jury, after a long consultation, returned a verdict of *Guilty*, but strongly recommended her to mercy, on the ground that she had been a good mother to the child down to the period of her leaving the workhouse. The prisoner was then called upon in the usual form to state whether she had anything to urge why sentence of death should not be passed upon her. She appeared to be almost unaware of what was passing, and after a short interval she sobbed out, "I am not guilty." Mr. Justice Byles then put on the black cap, and addressed the prisoner, said that the jury, after most anxious deliberation, had arrived at the conclusion that she had committed the crime of wilful murder. They had accompanied that verdict with a recommendation to mercy, and all he could say was that he would take care that this recommendation was forwarded to the proper quarter. His lordship then passed sentence of *Death* in the usual form, and the prisoner was carried from the dock in an almost insensible state. *Frauds.—Emile Werner*, a respectable-looking man, aged 29, and by profession an agent, surrendered in his bail to answer an indictment charging him and [illegible] unlawfully conspiring with Gustave Lhermet and [illegible] Flatow, and by false pretences obtaining from [illegible] Tancs Armero and others, his partners, [illegible] quantities of silk and other goods to the value of [illegible] with intent to defraud. At the last session Lhermet and Flatow pleaded guilty to the indictment, and sentence upon them was respited to the present session. The [illegible] Werner pleaded not guilty, and was remanded on bail to this day. It appeared that the prosecutors are bankers and general merchants in the Rue d'Enter, in Paris, and [illegible]

defendant had in May last year been engaged by them to open a branch establishment in London, as their agent, at a salary equal to 200*l.* per annum, with a certain commission on the sales he effected. He had extensive opportunities put into his hands by the prosecutor, and availing himself of those opportunities he effected ostensible sales of the goods to the amount of between 30,000*l.* and 40,000*l.* He was now charged with having combined and conspired with the other prisoners to let them have goods for which the assumed purchasers never intended to pay, except at a ruinous price, and that they divided the booty between them. The evidence was necessarily of great length, and the trial lasted two days, ending in a verdict of Guilty. The three prisoners were brought up for sentence together, and were each sentenced to two years' imprisonment with hard labour, and further to pay a fine of £ each to the use of her Majesty, and be further imprisoned until such fine be paid. *Manslaughter.—Mary Blake*, 30, a miserable looking creature, was charged with the manslaughter of her child. This was a case of a very distressing character, there being a second indictment against her for causing the death of another of her children, by gross inhumanity and neglect. It appeared that she was a married woman but her husband was convicted of some offence at the Clerkenwell Sessions in April last, and sentenced to penal servitude, and the prisoner had since taken up with another man. On the 22d of June she took up her abode with her six children in a room in Peartree Court, where she left the children almost entirely alone for three days and nights, and when the persons living in the house who were attracted by the cries of the children went into the room they discovered them in the most wretched condition, with nothing in the room but some bread and water, and the deceased infant had a piece of dirty rag in its mouth in which was wrapped up a small quantity of sugar. The whole family were removed to the workhouse, where every attention was paid to them, but two of them died shortly afterwards, and under these circumstances the present charge was preferred. The defence was that the unhappy event was more to be attributed to the state of misery and destitution in which the prisoner was placed, than to any culpable neglect on her part. The jury, after a short deliberation, found her *Guilty*, but strongly recommended her to mercy on account of the painful circumstances in which she was placed. The prisoner was sentenced to nine months' hard labour, his lordship observing that the sentence would have been much severer but for the recommendation of the jury. *Threatening Letters.—Edward Pace*, aged 22, was charged with threatening to kill Sir George Grey, and also with sending a threatening letter to Dr. Besley. It was proved that the prisoner was under a delusion that he was the Prince of Wales. The jury found a verdict of unsound mind, and the judge directed him to be kept in custody during her Majesty's pleasure.

Obituary.

Lady Frances Emily Tollemache died on the 14th inst. at Ham House, Petersham, aged 70. She was the daughter of the late Lord Huntingtower, and sister of the present Earl of Dysart.

The Hon. Mrs. Ferguson, wife of Admiral George Ferguson, of Pitfour, died on the 12th inst. in Charles Street, Berkeley Square. She was the second wife of Admiral Ferguson, to whom she was married in 1825. She was the eldest daughter of the first Lord Langford, and sister of Colonel Hon. R. T. Rowley, M.P.

Sir Charles T. M'Carthy, Governor of Ceylon, died on the 10th inst. at Spa, to which place he was on a visit for the benefit of his health. He was the son of the late Mr. Denis M'Carthy, of Cork, was born in 1820, and was married in 1848 to the eldest daughter of Sir Benjamin Hawes, K.C.B., Under Secretary of State for War. In 1856 he was appointed by Lord John Russell Colonial Secretary in Ceylon, and in the following year received the order of knighthood. In 1860 he was appointed by the Duke of Newcastle to the post of Governor of Ceylon, which he held up to the time of his death.

General Sir James H. Reynett, K.C.B., K.C.H., Colonel of the 48th Regiment, died at the banqueting house, Hampton Court Palace, on the 9th inst, in his 80th year. He was the son of the late Rev. Henry James Reynett, D.D. He entered the army in 1799, and served in the expedition against Ferrol in 1800, and was present at the action before that place. He was appointed to the Quartermaster-General's staff on the Army entering Spain in 1808; and was present at Lugo, the retreat to Corunna, and also at the battle. He was appointed to the Quartermaster-General's staff in Portugal in 1809, and was present at the affairs previous to and at the passage of the Douro and capture of Oporto, affair of Salamonde, battles of Talavera and Busaco, affairs upon the retreat to the lines before Lisbon, and subsequently in 1811 in those upon the advance from thence, at Pombal, Redinha, Sabugal, and Forz d'Arance, and also at the battle of Fuentes d'Onor. In 1816 he was appointed inspector of out-pensioners in Edinburgh, which office having been abolished in 1838, he was granted a compensation allowance of 120*l.* a year. He became a Colonel in 1830, Major-General in 1841, Lieut.-General in 1851, and General in 1860. He was appointed to the Colonelcy of the 48th Foot in 1850, and received the war medal with four clasps for his services. He married, in 1837, the daughter of James Campbell, Esq. He was groom of the bedchamber, and Aide-de-camp to William IV.; was appointed Deputy-Ranger of Richmond Park in 1844; and Lieutenant-Governor of Jersey in 1847.

Captain the Hon. Arthur James Douglas, R.N., died on the 14th inst. at the house of his brother, Colonel the Hon. Douglas Pennant, in Halkin Street, Belgrave Square. He was the youngest son of the Hon. John Douglas, second son of the fourteenth Earl of Morton, by his marriage with Lady Frances Harewood, eldest daughter of the first Earl of Harewood. He was born in 1802, and obtained his commission as commander in 1829, since which he had not been afloat. He became a captain on the retired list in 1856. He was cousin of the Marquis of Abercorn and Lord Claud Hamilton, M.P.

Mr. Bruce, formerly M.P. for Clackmannan, died on the 13th inst., at Kennet House, Clackmannanshire. He was born in 1795, and was the eldest son of Mr. Alexander Laurence Bruce, of Kennet, whose ancestors had possessed that estate since the early part of the 14th century, the original grant being made by King David Bruce, by a royal charter in 1359, "to his beloved and faithful cousin" Sir Robert de Bruce, Knt. Mr. Bruce was educated at Eton and St. Andrews, and at the age of 18 entered the Grenadier Guards, with which he served at Waterloo. In political opinions he was a Tory, and as such represented the county for several years prior to the passing of the Reform Bill. He was an unsuccessful candidate for the county in 1832, and again in 1835. He married the daughter of Sir James Fergusson, and leaves an only son, now in his 15th year.

Miss Katherine Southey died at Lairthwaite Cottage, Keswick, on the 12th inst. She was the third and only unmarried daughter of the poet, and was the last living link connecting the name of Southey with Keswick, more than 50 years having elapsed since the late Laureate fixed his residence in the lake metropolis. She was born at Greta Hall, and reached her 58th year on the Monday before her death, which was caused by congestion of the brain. By her death a civil list pension of 100*l.* per annum reverts to the Crown. She was buried on Tuesday in Crosthwaite churchyard, under the shade of Skiddaw, where already repose her father and mother, her brother Herbert, the eldest-born, and her sisters Emma and Isabel.

Mr. Alexander Hastie, formerly M.P. for Glasgow, died on the 13th inst., at Luskar House, Dunfermline, from an attack of paralysis, in his 60th year. Shortly before his illness he purchased the estate of Luskar for the sum of 70,000*l.* or 75,000*l.* Some time was necessary to prepare it for the residence of himself and family, and on the 11th he left Glasgow to enter upon its occupation. The announcement of his death only two days afterwards therefore came upon his friends in Glasgow somewhat suddenly. Mr. Hastie has left a widow, the daughter of Mr. Napier of Shandon, and two daughters, 9 and 6 years of age. For many years he occupied a prominent place in the political and commercial history of Glasgow. He was the principal partner of the East India firm of Robert Hastie and Company, was president of the Chamber of Commerce, and one of the Clyde trustees. In 1837 he became a member of the town council, and was elected Lord Provost in 1846. He was a Liberal in politics, and was an influential member of the United Presbyterian denomination.

Mr. Robson, the Comedian of the Olympic Theatre, died on the 11th inst., after a long illness, at his residence in Ampthill Square. He was born in 1821 at Margate. He was apprenticed at an early age to a copperplate engraver in London, but exchanged the blocks for the boards. Originally an obscure actor at the Grecian Theatre, he started into general celebrity almost immediately after his appearance at the Olympic in 1853, when his singularly original acting in two burlesques at once made him a subject of town talk. The Olympic was at that time under the management of Mr. Farren, but when it passed into the hands of Mr. Alfred Wigan, Mr. Robson still remained one of the company, and displayed a new talent as the representative of those characters in domestic drama that combine the comic with the pathetic. After the secession of Mr. Wigan he became manager of the Olympic conjointly with Mr. Emden, nor has he ever been a regular actor at any other theatre since his first appearance in 1853.

Wills.—The will of Baroness von Zandt, of Ovington House, Southampton, and Clarges Street, Piccadilly, widow first of General Sir Thomas Richard Dyer, Bart., and secondly of Baron von Zandt, has been sworn under 100,000*l.* Mr. George Gatty, of Felbridge Park, near East Grinstead, Taxing Master of the Court of Chancery, 160,000*l.* Mr. George Fieschi Heneage, late M.P., of Hainton Hall, near Louth, 50,000*l.* Mr. Andrew Mortimer Drummond, banker, of Charing Cross, and of Denham, Bucks, 60,000*l.* Mr. James William Freshfield, of Devonshire Place, Portland Place, and Mynthurst, Reigate, formerly M.P. for Falmouth, 120,000*l.* Mr. David Ricardo, of Gatcombe Park, Gloucestershire, 35,000*l.* The Rev. Dr. Cureton, Canon of Westminster, 16,000*l.*

Miscellaneous.

Public Pensions.—The public annuity and pension list naturally changes more or less with every year. The finance accounts recently issued for the year ending with March, 1864, introduce for the first time the names of the Prince and Princess of Wales for their respective annuities of 40,000*l.* and 10,000*l.* a year. The other royal annuities remain the same as before; for the House of Cambridge, 24,000*l.*; the Princess of Prussia, 8000*l.*; the Princess Louis, 6000*l.* The perpetual pensions, of course, remain the same, the heirs of William Penn heading the list with their 4000*l.* a year, to be paid as long as time and the Treasury shall last. The grant to the Canning family disappears from the list, and so does the retiring pension of Lord Lyndhurst; but there still remain four English ex-chancellors receiving their 5000*l.* a year, and there are two Irish ex-chancellors, four English retired judges, and a vice-chancellor. A retired Irish judge, Mr. Justice Crampton, has disappeared from the list; but time still spares the housemaid of the Irish House of Lords, to receive her pension. From the list of retired county court judges, Mr. E. Cooke has disappeared, but two new names are added—Mr. Serjeant Manning and Mr. W. Walker, The diplomatic pension list has received two new names, Sir J. Hudson and Mr. Christie. The compensation annuities make a long list. Prominent in it by magnitude of amount stands one peer receiving 7700*l.* a year, as formerly chief clerk of the Court of Queen's Bench; and another 4200*l.* as once registrar of the Irish Chancery; and there is a reverend pensioner with 4028*l.* a year, as formerly Clerk of the Hanapers, and 7352*l.* a year as once patentee of bankruptcy.

BIRTHS.—On the 14th inst, at Slains Castle, Aberdeenshire, the Countess of Erroll, of a son—6th inst, at Oaklease, Tockington, Lady Cuyler, of a daughter—11th inst, at Branston Rectory, Lincoln, the Hon. Mrs. A. S. Leslie Melville, of a daughter.—17th inst, at 28, Great Cumberland Place, Hyde Park, the Hon. Mrs. Mills, of a daughter—13th inst, at Hoddington House, Hants, the wife of G. Sclater Booth, Esq., M.P., prematurely, of twin daughters, one of whom only survived a few hours.

MARRIAGES.—On the 9th inst, at St. James's, Piccadilly, Michael Biddulph, Esq., of Ledbury, Herefordshire, to Adelaide Georgiana, youngest daughter of the Right Hon. Lieut.-General and Lady Alice Peel—13th inst, at the Roman Catholic Church in Spanish Place, and afterwards at St. Thomas's Church, Marylebone, the Baron D'Oullenbourg, 5th Regt. Cuirassiers in the French army, to Margaret, only daughter of the late James Forgan, Esq., and niece of Lieut.-General Cannon—11th inst. at the parish church, Wotton-under-Edge, Lieutenant G. H. F. Codrington, Scinde Horse, to Edith Henrietta, second daughter of Major-General Codrington, H.M.'s Indian Army.

DEATHS.—On the 15th inst, at 58, Rutland Gate, Wellesley Henry Somerset, fourth son of Lord and Lady Raglan, aged four months—13th inst, at Cheshunt, Lady Tarleton, aged 87—12th inst, at Wooton Courtney Rectory, Marian Emma, youngest daughter of the Right Rev. Bishop Chapman, aged 23—10th inst, at Wangford, Suffolk, Susanna, eldest daughter of the late T. Bolton, Esq., and niece of Admiral Viscount Nelson, aged 82—15th inst, at her residence, 3, Connaught Place West, Hyde Park, Emily Frances, youngest daughter of the late Sir Compton Domville, Bart, of Santry House, in the county of Dublin, aged 44—11th inst, at 122, George Street, Edinburgh, Frances Marion, infant daughter of Sir G. M. Grant, Bart., of Ballindalloch—8th inst, at Chateau Chaulier, Boulogne-sur-Mer, France, Captain John Hearsey, son of Lieutenant-General Sir John Hearsey, K.C.B., H.M.'s Indian Army, aged 31 years and 18 days—17th inst, at Richmond Hill, Surrey, Amelia, last surviving daughter of the late, and aunt of the present Sir Lionel Darell, Bart., aged 90—16th inst., at The Cloisters, Bath, Lieut.-Gen. Charles Denis Dun, H.M.'s Madras Army, aged 77—9th inst, at his residence at Tooting, Surrey, Captain George Randall, formerly of the 1st Life Guards, in which he served in the Peninsular War, and at Waterloo, aged 86—9th inst, at Stanley Hall, Gloucestershire, Dr. John Charles Campbell, M.D., late of the 4th Light Dragoons—11th inst, at Bradfield Hall, near Reading, the Rev. John Connop, aged 79—11th inst, at The Vicarage, Whissendine, Rutland, the Rev. H. Applebee, M.A., aged 71—13th inst, in Church Terrace, Lee, Kent, the Rev. George Spence, of Jesus College, Cambridge, aged 71—13th inst, at Willey Rectory, Shropshire, the Rev. Richard Rowley, late student of Christchurch, Oxford, and incumbent of Maiden Bradley, Wilts, aged 31—15th inst, at Jacobstow, Cornwall, the Rev. John Glanville, rector of that parish, aged 66.

Markets.

COVENT GARDEN, Aug. 20.

Outdoor produce, though not yet abundant, is improving in quality; prices, however, for some things continue high. Cherries, Gooseberries, and Strawberries, are all but over. Of Grapes and Pine Apples there is still a good supply. Currants are nearly over. Foreign goods comprise Apricots, Greengage Plums, and West India Pine Apples, all of which are abundant and cheap. Kent Filberts fetch from 55s. to 65s. per 100 lbs.; French kinds realise 32s. 6d. to 35s. per 100 lbs. New Walnuts are just coming into market, and will be plentiful. Potatos from Yorkshire and the midland counties are abundant. Peas are scarce. Flowers chiefly consist of Orchids, Heaths, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Cherries, per lb., 6d to 9d
Grapes, per lb., 4s to 8s	Oranges, per 100, 16s to 20s
Peaches, per doz., 6s to 10s	Lemons, per 100, 8s to 12s
Nectarines, do., 6s to 12s	Nuts, Barcelona, do, 16s
Gooseberries, green, p. qt., 3d to 6d	— New Brazil, do., 16s.
Apples, per sieve, 4s to 6s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 6d
Peas, p. basket, 2s 6d to 3s 6d	Garlic, per lb., 6d
Potatos, York Regents, p. ton, 60s to 80s	Lettuces, each, 1d to 2d
— Rocks, do., 45s to 55s	Endive, per score, 1s to 2s
— Flukes, 60s to 90s	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 6d to 9d	Mushrooms, p. pott., 1s to 1s 9d
Turnips, p. bunch, 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
Cucumbers, each, 4d to 1s	Herbs, per bunch, 6d

HAY.—Per Load of 36 Trusses.

Smithfield, Thursday, Aug. 18.

Prime Meadow Hay	90s	to 110s	Clover, old	100s	to 126s
Superior do.	—	—	New Clover	—	—
Inferior do.	75	85	Do. second cut	—	—
New do.	60	92	Straw	27	32
Rowen	—	—			

Harvey & Easton.

Cumberland Market, Thursday, Aug. 18.

Sup. Meadow Hay	112s	to 120s	Inferior Clover	100s	to 112s
Inferior do.	90	100	New do.	105	120
New do.	95	114	Straw	32	36
Superior Clover	120	132			

Joshua Baker.

Whitechapel, Thursday, Aug. 18.

Fine Meadow Hay	104s	to 108s	Prime 1st cut Clover	120s	to 126s
Prime New Hay	98	102	Inferior do. do.	110	120
Inferior do.	80	90	Prime 2d cut do.	115	120
Inferior	—	—	New Clover	105	110
Straw	28	32	Inferior do.	—	—

COAL MARKET.—Aug. 17.

Byass's Bebside West Hartley, 18s. 3d.; Lambert's West Hartley, 18s.; North Pelton Gas, 13s. 9d.; Walls End Harton, 17s.; Eden Main, 17s. 6d.; Walls End New Belmont, 17s. 6d.; Walls End Braddylls Hetton, 17s. 9d.; Walls End Hetton, 19s.; Walls End South Hetton, 19s.; Walls End Cassop, 18s.; Walls End Caradoc, 18s. 3d.; Walls End Hartlepool, 18s. 9d.; Walls End Heugh Hall, 18s.; Walls End Kelloe, 18s.; Walls End South Hartlepool, 17s. 9d.; Walls End South Kelloe, 18s.—Ships at market, 47.

HOPS.—Borough Market, Friday, Aug. 19.

Messrs. Pattenden & Smith report no alteration in the market for the few remaining samples of last year's growth, consumers merely purchasing from hand to mouth till a fair supply of the new crop arrives at market, a few pockets of which arrived yesterday, and were sold at 8*l.* per cwt. The accounts from the plantations with few exceptions are favourable.

NEWGATE.—Aug. 19.

Per 8 lbs. by the carcase.				Inferior Mutton	2s 8d	to 3s 0d
Inferior Beef	2s 8d	to 3s 0d		Middling do.	3 4	— 3 8
Middling	3 4	— 3 8		Prime do.	4 4	— 4 8
Prime large	4 0	— 4 2		Lamb	4 4	— 5 4
Do. small	4 4	— 4 6		Veal	4 0	— 4 4
Large Pork	3 4	— 3 8		Small Pork	4 2	— 4 6

BUTTER.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 14s. "
Pork, 4s. 4d. to 5s. 0d. per 8 lbs.

BRITISH WOOLS.—London, Aug. 18.

There is a return of confidence with the improvement in the money market, and as any particularly description of wool is required by the manufacturer a good price is realised for it, and a fair amount of business for the season is being transacted.

South-down Hoggets	s.	d.		s.	d.	Leicest. Hoggs	2	5 to 2 6
	2	2		2	3	Ditto Wethers	2	1 — 2 2
Half-bred ditto	2	6	to	2	7	Combing Skins	1	11 — 2 2
Down Ewes	2	0	—	2	1	Flannel Wool	1	0 — 1 9
Kent Fleeces	2	2½	—	2	3½	Blanket ditto	0	6 — 0 9

METROPOLITAN CATTLE MARKET.

Monday, Aug. 15.

The number of Beasts is smaller than on Monday last, yet it is large. The average quality is again very middling, consequently choice kinds fully maintain late rates. Trade is dull for inferior, and several remain unsold. The supply of Sheep and Lambs is about the same as last week. There is a fair demand for them at late prices. Trade for Calves is the same

as on Thursday. From Germany and Holland there are 2430 Beasts, 10,210 Sheep, 304 Calves, and 50 Pigs; from Spain, 196 Beasts; from Ireland, 190; and 2960 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools. ..	—		..	
Best Short-horns	4	6	— 4	8	Do. Shorn ..	4	8	— 4	10
2d quality Beasts	2	8	— 3	6	Ewes & 2d quality ..	—		..	
Best Downs and Half-breds	—		..		Do. Shorn ..	4	0	— 4	4
Do. Shorn ..	5	2	— 5	4	Lambs	5	6	— 6	6
					Calves	3	10	— 5	2
					Pigs ..	3	4	— 4	4

Beasts, 6210; Sheep and Lambs, 29,060; Calves, 334; Pigs, 420.

THURSDAY, Aug. 18.

Our supply of Beasts is rather shorter, and choice qualities are scarce; they are consequently readily disposed of at fully Monday's quotations. The number of Sheep and Lambs is about the same as of late. Trade is slow for them, and prices on the average scarcely as good. There is no alteration in the trade for Calves. Our foreign supply consists of 670 Beasts, 4060 Sheep, and 469 Calves. Milch Cows, 100.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools.	4	6	— 4	10
Best Short-horns	4	6	— 4	8	Do. Shorn ..	..		—	..
2d quality Beasts	2	8	— 3	6	Ewes & 2d quality	4	0	— 4	4
Best Downs and Half-breds ..	5	0	— 5	4	Do. Shorn ..	..		—	..
Do. Shorn	—		..		Lambs	5	4	— 6	4
					Calves	3	10	— 5	2
					Pigs .. .	3	4	— 4	4

Beasts, 1640; Sheep and Lambs, 11,630; Calves, 579; Pigs, 100.

MARK LANE.—MONDAY, Aug. 15.

There was only a moderate supply of Wheat from Essex and Kent to this morning's market, which consisted chiefly of the new crop, the quality of which was generally good, and the prices realised were 40s. to 43s. per qr. for red, and 44s. to 47s. per qr. for white; the few transactions in old English and foreign were at a decline of 1s. per qr. from the rates of this day se'nnight. Of new Barley there were several samples shown, which were mostly hard and white; 36s. was paid for good malting, grinding qualities were rather easier. Beans and Peas brought fully late rates. The Oat trade was steady, and in some instances Russian were sold at a trifle under the prices of this day week. Flour was unaltered in value.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk .. White	42	—46	Red	40	—42
— — fine selected runs .. ditto	44	—48	Red	41	—44
— — Talavera	48	—54			
— Norfolk	—		Red	—	
— Foreign	38	—52			
BARLEY, grind. & dist ,—s to —s .. Chev.	—		Malting ..	—	
— Foreign .. grinding and distilling	22	—28	Malting ..	28	—31
OATS, Essex and Suffolk	20	—22			
— Scotch and Lincolnshire—Potato	20	—24	Feed	20	—22
— Irish .....Potato	19	—22	Feed	—	
— Foreign .....Poland and Brew	20	—23	Feed	18	—21
RYE	30	—32	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan ....33s to 35s. .. Tick	34	—36	Harrow ..	34	—36
— Pigeon .... 37s to 40s .. Winds.	—		Longpod	—	
— Foreign .....Small	34	—38	Egyptian	33	—34
PEAS, White, Essex and Kent .. Boilers	36	—38	Suffolk ..	38	—40
— Maple .... 31s to 37s .... Grey	31	—33	Foreign ..	34	—40
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered .. per sack	35	—40			
— 2d do ..... ditto	28	—34	Country .	28	—34
— Foreign ..... per barrel	18	—25	Per sack	32	—35

ARRIVALS LAST WEEK.

	Wheat.	Barley.	Malt.	Oats.	Beans.	Peas.	Linseed.
English and Railway	Qrs. 4483	Qrs. 307	Qrs. 12,427	Qrs. 465	Qrs. 574	Qrs 574	Qrs. —
Scotch .	—	40	—	2309	—	—	—
Irish ..	—	—	—	3642	—	—	80
Foreign	22,606	1705	—	77260	26	26	2621

Flour—English, including Railways, 9,840 sks.; Scotch, —; Irish, — sks.; Foreign, 7,866 brls, 50 sacks.

FRIDAY, Aug. 19.

Excepting a few cold nights the weather since the 12th inst. continued dry and warm, favouring harvest operations, which are progressing very rapidly, many fields being already cleared in the South of England. Great inactivity prevailed during last week in the Wheat trade throughout the whole kingdom, and although no general decline has taken place, the tendency of prices was towards greater ease; at Liverpool 6d. to 1s. per qr. less money has been accepted to effect sales. Flour barely maintained its value. Spring Corn of all descriptions brings late rates, Beans and Peas being in several markets the turn dearer, owing to their scarcity. Since Friday last 105 vessels have been reported off the coast. The floating trade has been very active for Maize, and there is a good demand at improving prices for this article as well as for Barley and Linseed. Wheat has been neglected, and sales can only be effected at considerably lower rates. Paris, Aug. 18.—A moderate business has been done in Flour, and after having been a little lower, prices close about 1s. per 280 lbs. under last week's rates. The six marks for delivery this month are quoted equal to 32s. 3d. per 280 lbs. The present stock of Flour is estimated at 29,700 cwts. The Wheat trade continues slow at a reduction of 9d. to 1s. 3d. per 480 lbs. The arrivals of English grain and foreign Wheat and Barley since Monday have been short, but good of foreign Oats. There was a moderate attendance at this morning's market; the few samples of new English Wheat fresh up were taken at the extreme prices of Monday last, but old and foreign were neglected. Spring Corn of all descriptions was steady in value, excepting Russian Oats, which brought rather more money.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	660 qrs.	— qrs.	60 qrs.	450 sks.
Irish	—	—	1400	— ,,
Foreign ..	3750 ,,	2960	39,570 ,,	— ,, 3840 brls

LIVERPOOL, Aug. 16.—With only a very small attendance of buyers at this morning's market the business passing in Wheat has been of the most retail character, and we have to quote prices the turn lower than on Friday last. Flour is very dull, but holders do not press sales. Indian Corn meets a more extended inquiry for consumption, and prime mixed American brings full prices; round qualities being more plentiful, are rather cheaper. Oats and Oatmeal are without alteration. Beans fully as dear. Peas, on the contrary, are a shade easier. Market closes very inactive.

FRIDAY, Aug. 19.—The market fairly attended. Wheat sold more readily at the late decline. Flour quiet, without change in price. Indian Corn rather easier; mixed 30s. Beans steady. Oats and Oatmeal quiet.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
July 9	41s 9d	27s 8d	21s 10d	28s 9	36s 1d	32s 8d
— 16	42 6	27 10	21 7	31 5d	36 11	34 3
— 23	43 0	27 3	21 0	34 0	37 8	35 7
— 30	44 0	27 7	22 4	30 2	38 4	35 11
Aug. 6	44 1	28 3	22 10	33 0	39 2	35 3
— 13	43 6	28 1	22 0	32 9	39 8	36 9
Agg. Aver.	43 2	27 9	21 11	31 8	38 0	35 1

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	July 9.	July 16.	July 23.	July 30.	Aug. 6.	Aug. 13.
44s 1d	..	..	..	..		..
44 0	..	..	..		..	..
43 6	..	..	..	..	..	
43 0	..	..		..	..	..
42 6	..		..	..	..	..
41 9		..	..	..	..	..

For Sale.

E. DENCH has now left on hand THREE CONSERVATORIES, which he built for his own use, and ONE PIT, and will dispose of them a bargain, being prepared to make a great sacrifice.

For further particulars apply to E. DENCH, Pomfret Villa, Penge, where one can be seen standing ready.

To Nurserymen, Florists, and Seedsmen.

WANTED, an ACTIVE PARTNER, by an Old Established Firm, with first-class and extensive connections, to Travel for Orders during about three parts of the year, and when at home to attend to the Book Department. The share of profits to be disposed of is one-fourth, and a liberal daily allowance while travelling. This is an excellent opportuuity for an energetic Salesman, having a thorough knowledge of the above business, combined with address and ability. This business is capable of great extension, and the advertiser's object is rather to obtain an efficient person, than a premium for the share.—Address, A. B. C., care of Messrs. Whale & Waller, 57, Old Kent Road, S.E.

WANTED, as GARDENER, a married Man, without incumbrance, who fully understands the Management of Vines, and Hothouse and Greenhouse Plants, and can take charge of a Horse and Brougham. To be in Livery and live on the premises. An unexceptionable character indispensable.—Apply at 18, Highbury New Park, any day at 5 o'clock.

WANTED, as GARDENER, in a quiet place, 20 miles from London, a steady, single young Man, to live in the family. He must be neat in his work, and able to manage Kitchen and Flower Gardens, Growth of Bedding Stock, and small Greenhouse, without Forcing. He will have to milk two Cows, and look after small Farm Yard. Assistance given.—Address C. M., Godstone, Surrey.

WANTED, for the Country, a steady MAN to look after two Cows and a Horse, Poultry, &c. Must have been accustomed to Milk and to have done Farm work. Wages liberal, and a Cottage to live in. Age not over 30 years, married, and no children preferred. Personal character required.—Address or apply to Mr. PAGET, 155, Fenchurch Street, City, London, E.C.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, OFFICES, or any place of Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper. Can wait upon a single gentleman, and has excellent references.—HARRIET B., 2, Northumberland Street, Marylebone, W.

GARDENERS.—B. S. WILLIAMS is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Single; perfectly proficient in every department. Best references.—W. T. K., Messrs. Glendinning, Chiswick.

GARDENER (HEAD).—Age 30, married, no incumbrance; well experienced in Forcing and Management of Kitchen and Flower Gardens.—W. S., Post Office, Guildford, Surrey.

GARDENER (HEAD).—Age 30, married, no incumbrance; understands Early and Late Forcing, Fruit, Flowers, Vegetables, and Kitchen and Flower Gardens. Good character.—J. G. S., Mr. William Paul's Nursery, Waltham Cross, Herts.

GARDENER (HEAD).—Age 34; is very successful in the leading branches, and good Kitchen and Flower Gardener. Wife a good Laundress if required. Good characters.—GARDENER, Holmwood, Walton-on-Thames.

GARDENER (HEAD).—Age 36, married; practically acquainted with all kinds of Early and Late Forcing, Kitchen and Flower Gardens, and all the requirements of a large establishment. Satisfactory references.—A. B., 2, Gorefield Place, Bath.

GARDENER (HEAD).—Age 30, married, no incumbrance; understands Forcing Grapes, Peaches, Cucumbers, Melons, &c. Two years' and a half good character.—A. B. C., 6, Alma Place, New Town, Bromley, Kent, S.E.

GARDENER (HEAD).—Scotch; married; thoroughly practical and working. Well up in modern Plant and Fruit Forcing, Culture of Vines in pots, Management of Kitchen and Pleasure Gardens, and has had experience in the Erection of Horticultural Buildings. Four years' good character, and first-class testimonials.—J. F. H., 2, Walker's Cottages, Whitehorse Road, Croydon, S.

GARDENER (HEAD), to any nobleman or gentleman.—Married, no incumbrance; first-class industrious Gardener; fully competent in every branch of his profession, having had great experience. A good testimonial from the gentleman he is now leaving of 13 years' service, and leaving in consequence of an alteration in the establishment.—A. B., Post Office, Wokingham, Berks.

GARDENER (HEAD), to any nobleman or gentleman requiring the services of a first-class Gardener.—Age 33, married, one child; fully competent in every branch of his profession. No objection to Plantation, Meadow, or Arable Land. Present employer will answer any questions. Good references from previous employers.—G. M., at Sutton & Sons, Reading.

GARDENER (HEAD).—Age 30, married; has a thorough knowledge of the Theory and Practice of Horticulture. Can Design and Execute Plans of Gardens in all styles; and fully understands the principles of Horticultural Building, Heating, &c. Testimonials most satisfactory.—Address H. J. T., Crystal Palace Nursery, Forest Hill, Sydenham, S.E.

GARDENER (HEAD); age 36, married, with one child 7 years old.—C. DEAVIN, Gardener to E. C. Rudge, Esq., Abbey Manor, Evesham, begs to offer his services to any nobleman or gentleman requiring a Man thoroughly acquainted with Forcing Fruits, such as Pines, Grapes, Peaches, Melons, Strawberries, &c., together with Vegetables, Stove and Greenhouse Plants, Ferns, &c., and the general routine of Kitchen and Flower Gardens on an extensive scale. Seven years and three months' unexceptionable character.—Address as above.

GARDENER (HEAD or SINGLE-HANDED).—Age married; thoroughly understands his profession in all its branches. Two years' good character.—X. Y. Z., Watford, Herts.

GARDENER (HEAD), where several others are kept.—Age 30, married; has a thorough practical knowledge of the profession in all its branches. Has lived in the service of J. Butler, Esq., two years and six months; and in case of death and the sale of Plants, is open to an engagement as such man or gentleman. Character will bear the strictest inquiry.—W. D. Y., Mrs. Butler's Gardens, 2, Red Lion Street, W.

GARDENER (UNDER).—Age 23; eight years' experience. Can be well recommended for ability, honesty, and sobriety.—A. B., 4, Albert Place, Victoria Grove, Stoke Newington.

GARDENER (WORKING), or BAILIFF.—Age married; good character and testimonials.—J. B., Park Library, Weybridge.

GARDENER (SECOND or FOREMAN).—Age 23, good experience in Forcing of Fruits, and understands Flower and Kitchen Gardening. Two years' good character from last employer.—A. B., Mr. Page, News Agent, Lower Tooting, Surrey.

GARDENER, or GARDENER and STEWARD.—A First-class Man is now disengaged.—ALPHA, *Gardeners' Chronicle* Office, W.C.

To the Trade.

FOREMAN and PROPAGATOR.—Age 21; good references.—A. G., *Gardeners' Chronicle* Office, W.C.

FOREMAN, PROPAGATOR, PLANT GROWER, SALESMAN, &c.—Age 40, married; of extensive Trade experience.—ALPHA, 17, Atwell Cottages, Rye Lane, Peckham, S.E.

FOREMAN.—Address W. WOOD, Malvern Hall, Solihull. For character, &c., apply to Mr STEVENS, Malvern Hall, Solihull.

To Nurserymen.

FOREMAN or SALESMAN.—Age 24; has had charge of a Provincial Nursery for the last two years; good at Budding and Grafting. Thorough knowledge of the trade. Good connection in the trade. Unexceptionable character.—A. L. B., Post Office, Darlington.

PROPAGATOR in the Greenhouse.—Young; with present employer. Good character.—Messrs. T. S. & SON, Woodlands, Maresfield, Sussex.

PROPAGATOR.—Thoroughly acquainted with Roses, Rhododendrons, Coniferæ, and Camellias, and propagation of Soft and Hard-wooded Plants. Can be well recommended.—A. B., Post Office, Cheshunt, Herts.

PROPAGATOR (HARDWOODED) or GENERAL PROPAGATOR.—Extensive practice in First-class Establishments; an Expert Graftsman of Azaleas, Camellias, Rhododendrons, Exotic and Ornamental Shrubs, &c. Best reference apply to W. R., 1, Henneker Road, Stratford, Essex.

TO NURSERYMEN.—HENRY BAILEY, Jun., Shaw Gardens, Amersham, Bucks, is open to accept an engagement with a Nurseryman requiring the services of a thorough practical cultivator of Soft-wooded Plants, Fruit, &c. He has had the charge of the collection of "Pelargoniums" which have been exhibited with such great success from the above-mentioned place for the last five years, and has had excellent opportunities of acquiring a thorough knowledge of the cultivation of all kinds of Fruit. The advertiser could also act as corresponding Clerk occasionally if required, and would endeavour to promote in every way the interests of those accepting his services in the above capacity. Liberal salary required, and the most unexceptionable references given. No objection to France or Belgium.—Apply as above.

EXCHANGE.—A Gardener in a *first-class* place is anxious of placing his SON, aged 21, under him for a year, in good standing for one year or more; and would take a Youth who has had some experience in Fruit Forcing, &c. Apply by letter to H. B., Post Office, Linton, Staplehurst.

LAND STEWARD or FACTOR.—Age 35, is open to present the Management of Two Estates in Scotland; is leaving his present situation owing to the death of the proprietors. First-class testimonials and references.—FACTOR, P. Lawson & Son, Edinburgh; and 28, King Street, Cheapside.

To Noblemen and Gentlemen.

LAND STEWARD, FARM BAILIFF, &c.—A nobleman or gentleman requiring the services of a thoroughly practical Estate or Farms' Manager.—In the prime of life, and will shortly be disengaged. Having been brought up on the Estate of His Grace the Duke of Bedford, first as Agricultural and Foreman at the Oakley and Eversholt Model Farms, and subsequently, during the past 17 years, constantly employed under the supervision of the Head Steward in the direction of Estates generally, comprising Agricultural Drainage, the Management of Woodlands, Roads, Fences, &c., including Office Work, on an extensive scale in the Woburn and North Beds districts. The advertiser signed does not consider it incumbent on him to refer to his abilities as a Practical Man at greater length here, he being permitted to make reference to His Grace's Agent, Mr. HENRY TAYLOR, Oakley Office, Bedford.

To Noblemen and Gentlemen.

BAILIFF.—Married, Scotch; has a practical knowledge of Light and Heavy Land, Root and Hop Culture, Arable Cultivation, and all kinds of Agricultural Machinery. Reference given.—A. ROBERTSON, Lamberhurst, Kent.

FARMING BAILIFF.—Middle aged; can be highly recommended; is leaving his present employer in consequence of his giving up Farming. Wife understands the Management of a Dairy, Poultry, &c.—Address G. A., Pinner Park Farm, Middlesex.

FARM BAILIFF.—Middle aged; thoroughly understands the Management of a Farm and Stock, Manuring, &c. Wife can manage Dairy if required. Can produce satisfactory testimonials.—JOSEPH HUMPHREY, Bagshot Road, Frimley, Surrey.

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The Gardeners' Chronicle Newspaper.

SATURDAY, AUGUST 27, 1864.

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News of the Week.

A telegram from Vienna states that an interview took place on Monday in that city between the Prime Ministers of Prussia and Austria, Count Von Bismarck and Count Rechberg. Nothing official has transpired as to the results of this interview, but the Paris papers assert that a complete understanding has been established between the two Powers; that the Austrian Government no longer disapproves the policy of Prussia in favour of the Grand Duke of Oldenburg; and that Prussia will not quit the Duchies without territorial, political, and military compensations. As these arrangements are at direct variance with the views of the smaller German States in promoting the original aggression upon Denmark, no surprise has been created by the official announcement that Wurtemberg intends to propose in the Federal Diet that the minor States, with Bavaria at their head, shall form a third power in the Confederation, to counteract the domination of Austria and Prussia.

A treasonable conspiracy for the purpose of detaching the Italian Tyrol from the Austrian Empire has been discovered in that territory, and has been followed by several arrests at Trent, Pergine, Roveredo, Riva, Mori, and other places in the Tyrol and the Venetian provinces.

A serious disturbance took place on Monday in Geneva, in consequence of the Radical Committee having annulled the election of the Conservative candidate to the Council of State. The inhabitants of the Faubourg St. Gervais armed themselves, and a conflict ensued, in which eight persons were killed and 15 wounded. The authorities of the Canton being unable to deal with the rioters, Federal intervention was called in, and a battalion of Federal militia entered the city for the purpose of quelling the commotion, if necessary, by military power. The latest news states that tranquillity has been restored, and that the Grand Council of Geneva has decided to submit the affair of the late election to the judgment of the Federal Council.

An Imperial ukase has been issued at St. Petersburg, by which another province of Poland will disappear from the map of Europe as a portion of the ancient Polish kingdom. The Palatinate of Augustowo is henceforth to be incorporated with Russia, though for the present it will be administered by a native governor, in the person of General Zobolocki.

Accounts from India state that the King of Bokhara has released the four Italians whom he had imprisoned in the hope of obtaining a ransom, together with some Russian and French prisoners. The conditions upon which they have been set at liberty are not known, but it is stated positively that they have reached Orenburg, on their way to St. Petersburg.

Intelligence from the Cape of Good Hope states that the rumour that Kreli and his people were about to cross the Bashee is proved to have been false. Throughout the whole coast of the Canda country the tribes are in a state of great excitement, and hostilities were expected to break out among the natives themselves.

Admiral Farragut's fleet forced the passage of Mobile harbour on the 27th ult., after a severe engagement, in which one of the Federal Monitors was sunk and two Confederate ironclads were captured, while the Confederate Admiral lost a leg and was taken prisoner. The principal fort which defended the entrance of the harbour was treacherously surrendered by Colonel Anderson, in defiance of the orders given by the General in Chief that the fort should be defended to the last. Admiral Farragut was approaching the city on the 5th inst. with 14 ships and three Monitors, but there is no confirmation of the rumour that Mobile is actually in his hands. General Sherman reports that he is shelling Atlanta. General Sheridan's forces have moved up the Shenandoah Valley to check the Confederate movements in that quarter under General Early, and a report is current that a battle has been fought near Winchester. The statement that Mr. Stanton, the Secretary for War, had tendered his resignation, and that it had been accepted by President Lincoln, is said to be without foundation. An enormous mass meeting, attended by 100,000 persons, has been held at New York, at which resolutions were passed denouncing Mr. Lincoln's policy, and recommending General M'Clellan's nomination for the Presidency on a Constitutional platform.

The Belfast riots, notwithstanding the presence of the troops, were renewed on Friday, when the mob fired upon the police, and several civilians and constables were severely wounded. Tranquillity has since been restored by the personal intervention of the principal citizens, who appointed deputations of Protestants and Roman Catholics to go round the disturbed districts, and appeal to the people to desist. This measure was at once successful, and it is now hoped that the peace of the city will not be again disturbed.

Home News.

Return of the Queen from Osborne.—The Queen, accompanied by the Prince and Princess Louis of Hesse, the Princesses Helena, Louisa, and Beatrice, and Prince Leopold, left Osborne on Thursday afternoon for Windsor Castle, travelling by the usual route on the South-Western line to Basingstoke, and thence to Windsor on the Great Western. The Royal party arrived at Windsor at a quarter past 6 o'clock. It is expected that her Majesty will proceed to Scotland on Monday evening, travelling direct to Perth, where the Prince Consort Memorial will be inaugurated, after which the Queen will resume her journey to Balmoral. Her Majesty will remain in Scotland for about six weeks.

The Prince and Princess of Wales continue at Abergeldie. On Wednesday week the Duke of Cambridge left for Invermark Lodge, Lochlee, on a visit to the Earl of Dalhousie. The Prince and Princess of Wales and Princess Mary of Cambridge went to Lochmuick to the fishing, and returned in the evening by Birkhall. On Thursday his Royal Highness killed two fine stags in Glen Gelden. The Princesses visited the Falls of the Gaurawalt, where they lunched, and drove thence to Invercauld-house, returning home by the north side of the Dee. At night the deer at Abergeldie were shown by torchlight to the Royal party. A dance on the green sward followed. On Friday evening their Royal Highnesses gave a grand ball at the Castle to a distinguished party from the neighbourhood, the Prince and Princess, and Princess Mary joining heartily in the Scotch dances to the music of the bagpipes. On Saturday, the woods of Abergeldie were beaten for deer, but only one stag was killed, the wind being very rough, and rain falling heavily. During the day the Princess drove out, accompanied by Princess Mary. On Sunday the Prince and Princess and the Princess Mary attended Divine worship in the parish church. In the afternoon Colonel Farquharson, of Invercauld, paid a visit to their Royal Highnesses at Abergeldie. In the evening their Royal Highnesses had a drive. On Monday night the Prince and Princess gave another ball at Abergeldie, to which the tenantry on the Birkhall estate were invited. It is stated that their Royal Highnesses will stay in the Highlands till about the 10th of September, and that the Prince is about to erect a palace at Abergeldie, for which Mr. Smith, of Aberdeen, the architect of Balmoral Castle, is preparing the designs.

Prince Napoleon in Scotland.—On Thursday week his Imperial Highness left Kinross for Edinburgh, where he took up his quarters at the Royal Hotel. In the afternoon he drove to Roslin, returning to Edinburgh in the evening. On Friday morning the Prince left Edinburgh for Greenock, visiting Glasgow on his way. In the course of the day the Prince visited the works of Messrs. Robert Napier & Son, in Govan, and inspected the three frigates building there for the Turkish Government. He afterwards drove through the city. In the afternoon the Prince left by train for Greenock, where he embarked for France, after a few hours' stay at Arran.

The Ex-Royal Family of France.—On Wednesday the Count and Countess de Paris returned to York House, Twickenham, from their wedding excursion. The inhabitants of the village gave their Royal Highnesses an enthusiastic welcome; triumphal arches were erected in the street, while flags and streamers floated from every house. A congratulatory address was presented by the vicar, and in the evening a display of fireworks took place from the river. On the following day the Count de Paris sent 2000 francs (80*l*) to the vicar, to be distributed among the poor of the parish, accompanied by the following answer to the address which had been presented to him:—

"York House, Twickenham, Aug. 25, 1864.

"Sir,—I beg you to convey to the members of the committee of which you are chairman, and to all those who have taken part in the demonstration of yesterday, the expression of our gratification for the kind reception given to my wife and myself by the inhabitants of Twickenham. I thank you for the hearty welcome contained in your address. As I told you, we see in it an auspicious beginning for our new life, whose first happy days shall ever be associated with this place. It is, indeed, no new association for my family. Three times in this century has it found, during exile, an hospitable retreat in Twickenham, and the grateful memory of it has lived through its various fortunes. I still remember that when a boy, my grandfather used to point out to me among the groves of Twickenham the former abode of his younger years. That place is again occupied by one of us. You have alluded to the Duke d'Aumale in terms which, I dare say, he fully deserves, and which I regret only he has not been able to hear; for to him, rather than to me, ought to have been addressed yesterday's demonstration. What at least I can do is to tell you how highly all my family appreciate the feelings which have prompted it, and to address, in my turn, to all my new neighbours the good wishes which they have expressed to me yesterday.—Believe, me, Sir, very truly yours,

"Louis Philippe d'Orleans."

The Maharajah Dhuleep Singh is expected with the Maharanee to arrive at his estate at Elveden, near Thetford, in the course of next month. The Maharajah while residing on his estate last autumn and winter, made many improvements, and appears anxious to fulfil his duties as a country gentleman in an exemplary manner.

The Channel Fleet sailed from Spithead yesterday, for a cruise between Portland and the Lizard.

This arrangement differs from that announced last week, by which the fleet was to sail for Leith Roads to escort the Prince and Princess of Wales to the Baltic.

THE VOLUNTEERS.—At the review of the Liverpool Volunteers on Saturday, Colonel M'Murdo confirmed the report which has been in circulation for the last few weeks that he is about to retire from his post as Inspector-General of Volunteers. Instructions have been issued from the Horse Guards to the commanding officers of volunteer corps, that the "badge of efficiency to be worn by volunteers entitled to that distinction shall be a rim of silver round the right arm, to be worn above the cuff and below the elbow, passing over any other embroidery with which the uniform may be ornamented."

Foreign.

FRANCE.—A grand *fete* was given at Versailles on Saturday in honour of the King of Spain. The Emperor, the Empress, and the King of Spain drove from the Trianon in an open carriage, and witnessed the grand waterworks. They then dined in the grand salon. In the evening "Psyche" was performed in the palace theatre, which was illuminated by 3500 lights. After the performance there was a display of fireworks, and an illumination of the fountains and gardens. At midnight a grand supper of 200 covers was served in the Galérie des Glaces. At one o'clock in the morning their Majesties returned to St. Cloud. On Sunday the King intended to go to Havre to visit Queen Christina, but the visit was rendered unnecessary by the arrival of the Dowager Queen in Paris. The King had an interview with her Majesty on Saturday, and left Paris on Sunday night for Madrid, his departure having been hastened by the death of the Princess Czartoriska, daughter of Queen Christina. The King gave a costly emerald necklace to the Empress before leaving, and the Emperor gave the Grand Cross of the Legion of Honour to the Marquis de Santa Cruz and the Count de Montezuma, who were in attendance on his Majesty. Prince Napoleon has returned from Scotland. His yacht entered the port of Havre on Tuesday morning, and the Prince immediately left by rail for Paris. The *Constitutionnel* contradicts the rumour that the Emperor was about to make a journey to Ostend. The Emperor and Empress received Prince Metternich on Monday. The Prince will leave for Johannisberg on the 31st inst. The Emperor's *fête*, which passed off so successfully last week, has been followed by several hundred arrests. It appears that the police took offence at a cry of "Eh, Lambert!" which was heard in all parts of Paris, supposing that it meant something disrespectful to the Emperor, and 300 young men and boys were taken into custody for uttering it No one could give any account of the precise meaning of this cry, but it has since been ascertained that it was first raised by travellers in the English excursion trains, who were as usual noisy and boisterous, and ready to catch at any trifle to relieve the *ennui* of their journey. As, however, the French eagerly caught up the cry without knowing its meaning, the Prefect of Police has issued an order prohibiting inquiries after "Lambert" or any one else, and in default threatening prosecution for impeding the traffic. The cry however has spread much further than Paris, and is now heard at Madrid and Toledo. The Council-General for Puy de Dôme was opened on Tuesday. M. Rouher, the Minister of State, delivered a speech, stating that the new law affecting the Councils-General would have a largely decentralising character. It would also be very liberal, and confer upon the Councils-General the most entire authority over departmental affairs, restraining their bonds of subordination towards the State solely to the subjects affecting general interests, the unity of the territory, or the rights of political sovereignty. M. Rouland, Minister of the Council of State, has delivered a speech at Rouen, in which he said that the Emperor wished to have authority powerful and respected, in order to restrain evil passions and to widely promote the welfare of the country; but he also desired the free action of citizens in all the legitimate directions of human activity. At the opening of the Council-General for the Department of the Loire, the Duke de Persigny described the Emperor as the founder of liberty in France. He then gave a complete review of the theory of the Imperial Constitution. He showed the form of liberty to vary with every free people. "The present physiognomy of liberty, properly so called," he said, "may be recognised by the striking signs of the solidity and duration of the Government which it founds, and above all by the passion it inspires for great things." He then demonstrated that the political institutions of England are not adapted for France, "it not being possible for authority and liberty to remain in the hands of one class, as in England. Instead of subordinating one class to another, it is natural to render them independent, and this is the fundamental principle of our institutions. In order that the liberty of the Press may be a benefit, it is necessary in a country newly constituted that a new, vigorous, and independent political generation should arise to replace the minds enervated by revolutions." M. Behic, the Minister of Agriculture, Commerce, and Public Works, at a banquet given to him on Thursday by the merchants of Marseilles, announced that the time approached when the Customs dues will be assessed with a view to the financial interests of the country only, and that the completion of the whole system of railways in France would be hastened. He likewise promised the establishment of a new code of commercial legislation, an extension of the right of association, and an organisation for professional tuition. The *Moniteur* of Thursday announces that the *Courrier du Dimanche* has been suspended for two months, on account of an article signed by M. Alfred Assolant. Monsignore de Merode has arrived at Marseilles from Rome, on his way to Paris, where he will remain a few days. M. de la Ponterie, one of the editors of the *France*, has been sent to Mexico, taking with him the funds requisite for the creation of a *Moniteur* in that city.

ALGERIA.—Fresh disturbances have taken place in the province of Oran. Si-Mohammed has raised the tribes of Larbas and several other districts of Boghar. They have committed acts of incendiarism and assassination, cut the telegraph wires, and pillaged several caravanserais. The other districts of Oran and the province of Constantine are tranquil. The troops have established a military *cordon*, confining the insurrection, and preventing any reinforcements reaching it.

SPAIN.—The King of Spain arrived at Bayonne from Paris on Monday morning. The Queen is not expected to leave La Granja before the 10th September. Her Majesty will go to the Escurial, where she will stay a few days. The Ministerial journals reproduce the financial articles recently published by *El Diario Español*, which endeavoured to prove that the Passive Debt of Spain was equitably settled by the last law. The *Correspondencia* of Wednesday proposes an increase of the Custom's duties on the importation of foreign textile fabrics. The *Epoca* replies that it would be better to abolish those on the raw material.

PORTUGAL.—The *Gazette* officially denies the report of the establishment of convents.

BELGIUM.—The Belgian Chambers were re-opened on Tuesday without a speech from the Throne. The Prince de Ligne was re-elected President of the Senate. The session will only last a few days.

SWITZERLAND.—At the election of a member of the Conseil d'Etat, which took place at Geneva on Sunday, M. Chenevière, a Conservative, was returned by a majority of 300 over M. Fazy, the Radical candidate. The Radical committee annulled the election, and on the following day the Conservatives surrounded the building in which the sittings of the Council were held. The inhabitants of the Faubourg St. Gervais armed themselves, barricades were erected, and a conflict ensued, in which eight persons were killed and 15 wounded. The Government of the canton being unable to re-establish order, called for Federal intervention. The Federal Council thereupon sent M. Fornerod as Special Commissioner to the scene of the outbreak with a battalion of militia. The contending parties having refused to lay down their arms, the Commissioner ordered the Federal troops to enter the city, where they were well received by the population. There is still considerable excitement in the city, but it is hoped that tranquillity will soon be restored, as the Grand Council of Geneva have decided to submit the affair of the late election to the judgment of the Federal Council. The funeral of the eight victims who fell in the late disturbances took place on Thursday. The presence of a large body of militia prevented any further outbreak.

DENMARK.—The Crown Prince Humbert of Italy arrived at Copenhagen on Tuesday. The Prince and Princess Oscar of Sweden have also visited Copenhagen, and have now returned to Stockholm, which Prince Humbert is expected to visit shortly. The official *Berlingske Tidende* of the 16th states that at the last sitting of the Landsthing the President of the Council read a declaration, in the name of the Government, that in consequence of the cession of Schleswig to the two great German Powers, the Constitution of Nov. 18, 1863, had ceased to exist. M. Lehmann, alluding to the projects of solution by personal union, asked if the Government recognised the stipulation of the Constitution by which the King is unable to assume the government of a country separated from the Monarchy. M. de Bluhme answered that the King could not take such a step without the consent of the Rigsraad. In reply to further questions of M. Lehmann, the President of the Council stated that the present Rigsraad must, of course, cease to exist, but that the Ministry was unable to say what would be substituted in its place. In accordance with the armistice protocol signed on the 1st inst, the Plenipotentiaries of Denmark have given the required assurance that the Danish prisoners of war now in Prussia shall not serve again in the Danish army until the conclusion of peace.

SCHLESWIG-HOLSTEIN.—The occupation of Holstein by the Prussians and Austrians appears to be decided upon. General Gablenz, the commander of the Austrian troops, has arrived in Altona, and is making the necessary preparations. The municipalities from several of the Holstein towns met at Neumunster on Wednesday. A resolution was passed thanking the allies, and recognising the necessity of the Duchies joining Germany, and, so far as German interests demanded, Prussia in particular, without prejudice, however, to their independence. The resolution further states that the establishment of a provisional Government cannot be regarded as a proper means to secure the object in view, and fears are expressed lest the generally-desired speedy settlement of the affairs of the country, as regards its internal and foreign relations, be thereby unnecessarily deferred. Meetings in favour of the Prince of Augustenburg have been held in several of the other towns in the Duchies, at which resolutions were passed that no other claimant should have the support of the inhabitants. On Wednesday the Duke of Augustenburg despatched a memorial to Frankfort, with a view to establish the validity of his claims, as requested by the Federal Diet.

SAXONY.—The Saxon Diet was closed by the King on Tuesday. His Majesty, in his speech, mentioned the favourable financial state of the country, and referred upon the fact that the renewal of the Zollverein treaty on the part of Saxony will secure her commerce in future. He expressed a hope that the Schleswig-Holstein question would find a favourable solution, and one in accordance with the rights and wishes of Germany. He regretted that the Saxon troops were prohibited from actively taking part with the allies in the late war, and said:—

"The unshaken discipline and the strict fulfilment of their duty under difficult circumstances by the Saxon troops must, however, be acknowledged, and those are qualities as necessary to the soldier as valour on the field of battle. Full testimony is due to those brave men."

WURTEMBURG.—It is officially stated that Wurtemburg intends to propose that the minor German States, with Bavaria at their head, should form a third Power in the German Confederation, the other two being Austria and Prussia. It is not known in what form Würtemburg will embody this resolution at the Federal Diet.

HANOVER.—The King of Hanover is said to be slightly indisposed.

PRUSSIA.—Lieut.-General von Roon, the Minister of War, will visit the camp at Chalons, on the invitation of the Emperor of the French.

AUSTRIA.—The King of Prussia arrived at Vienna on Saturday evening, and was received at the railway station by the Emperor. His Majesty proceeded to the Palace of Schönbrunn, where he remained till Thursday, when he left for Stuttgard and Baden-Baden. Count von Bismark, who accompanied the King, had a long conference with Count Rechberg on Monday. It is reported that a complete understanding has been arrived at between Prussia and Austria, that the claims of the Grand Duke of Oldenburg gain ground, and that Prussia will not quit Schleswig-Holstein without territorial, political, and military compensations. It is said that the Austrian Government no longer disapproves the policy of Prussia. The statement of some foreign journals that a project for Federal reform drawn up by Count von Bismark was to be the subject of negotiations, is considered to be unfounded. The evening edition of the official *Gazette* says:—

"The visit of the King of Prussia is one of the most essential guarantees for peace in Europe. It also assures the safety and independence of Germany, and consequently the welfare, development, and tranquillity of our own provinces and of the other nations of Europe."

THE TYROL.—In consequence of a treasonable conspiracy which had been discovered in South Tyrol, several arrests have taken place at Trent, Pergine, Roveredo, Riva, Mori, and other places.

RUSSIA.—The Czar has ordered a reduction of the army, granting an immediate and unlimited discharge to those soldiers of the Guards, Artillery, Engineers, and the Interior Guard whose service expires on the 1st of January next.

POLAND.—According to an Imperial decree the Palatinate of Augustowo will be incorporated with Russia on the 27th inst., but will remain under the administration of a Polish Governor. General Zboloski has been nominated to that post.

ITALY.—The approaching visit of Prince Humbert to Paris is said to be connected with a project of marriage which, by the good offices of the Empress, has been arranged between him and the Princess Anna Maria. It is stated that as the Queen of Spain has not recognised King Victor Emmanuel as King of Italy, the Prince has decided not to be in Paris during the visit of the King of Spain. The inauguration of the statue of Rossini took place on Sunday at Pesaro, in presence of a very large number of spectators. The hymn sung on the occasion, composed by Mercadente, was much applauded. The Ministers Signori Peruzzi and Manna were present. Signor Peruzzi delivered a speech in presenting the medal sent by the municipalities of Florence and Brescia. The greatest enthusiasm was displayed by the people. Accounts from Rome state that Monsignor de Merode has left for Paris and Brussels on account of family affairs. Mgr. Meglia will be despatched to Mexico as Papal Internuncio. General von Willisen, Minister of Prussia at the Papal Court, died on the 20th inst. at Genzano of a malignant fever. It is reported in Rome that an attempt is making to induce the ex-king Francis II. to quit Rome "for a consideration," and that the Pope is to be allowed two years to provide himself with means of defence, as the French army is to be withdrawn.

GREECE.—Advices from Athens announce that the Cephalonian members have brought forward a motion in the National Assembly, proposing that the Government should declare it to be the wish of the nation that Candia, Thessaly, and Epirus should be peaceably annexed to Greece by means of treaties. The ministerial candidate, M. Messinezi, has been elected President

feeling. The loss is estimated at 3500*l.*, and the amount will probably be increased, as some of the injured animals will prove all but useless.

Brighton.—In the thunderstorm of Sunday morning a waterspout, the second of those which were observed off Worthing, was seen at sea off this town. A few minutes before the storm burst it became visible in the form of a dark blue column, about two miles distant. It rapidly rose from the water like a thick cloud of smoke from a chimney, and joined the dark clouds above. There seemed to be several other smaller connections with the sea, but the atmosphere soon became so thick and dark that the separation of the clouds and sea was not discernible. The downfall of hail was terrific, the streets being quickly covered with large pieces of ice, one of which was as large as a sparrow's egg.

Eccles.—During the last few days some thousands of silver pennies have been found in making a new road past the boundary wall on the west side of the ancient residence known as Monk's Hall, where it is probable the monks of Whalley Abbey, who were formerly the lords of the greater part of Eccles, Monton, and Swinton, had a grange with tithe barns, where they collected rents and tithes from their tenants and other inhabitants of the neighbourhood. About 1000 of these pennies have been examined, and of these 964 are coins of Henry III., 19 of John, and 17 of William I. of Scotland, known in history as William the Lion. The Solicitor of the Treasury has claimed the coins as the property of the Crown, being "treasure trove" by the common law of England, and has intimated that the Lords of the Treasury will consider the case of the finder when they have determined as to the disposal of the coins.

Farnham.—On Wednesday, the 17th inst., a fire broke out in Longmoor enclosure in Woolmer Forest, and continued to burn until Saturday. It commenced just below Sleaforth Gate, to the right of the Petersfield Road. It broke out simultaneously in a dozen different places, and owing to the dryness of the heath and furze, it spread with alarming rapidity. At Godalming, Guildford, and Aldershott, the fire was plainly seen, and when the military authorities of the latter place had ascertained its situation, a body of troops consisting of the 75th and 83d Regiments, and detachments of the Military Train and Royal Engineers—in all, about 1000 men—were despatched to Woolmer to dig a trench and employ other means for cutting it off. On their arrival, however, the flames had extended over a vast area of fir plantations, and it was evident that the reduction of the fire would be a work of days. The soldiers immediately began to dig trenches, and were relieved every two hours, each relay consisting of 160 men, while a large number of civilians were employed by the owners of the private property in the immediate vicinity, as great fears were entertained for the farmhouses and other houses near the wood, which owed their escape to the fortunate circumstance that there was scarcely any wind. Notwithstanding these exertions the fire continued to rage during Thursday, Friday, and a part of Saturday, leaving little but the blackened embers of thousands of fir trees in once flourishing plantations, and transforming the landscape for a long distance into a blighted wilderness. On Friday for a mile beyond New Inn the fire was burning to Weavers Hill, a distance of at least five miles, scaring from the coverts every living thing that it did not destroy, and darkening the air as far as the eye could see with smoke. Several cottages and outbuildings fell a prey to the flames, and of the quantity of game destroyed some idea may be formed from the fact that 12 hares were taken out of one hole burnt to death. On Saturday the military succeeded in arresting the progress of the flames, and on Sunday morning they returned to Aldershot through Farnham, where they were met by the bands of their regiments. The detachments of the Military Train and Royal Engineers left at a later period of the day, and arrived at the camp shortly before noon. The officers and men presented a most singular appearance, being completely begrimed in smoke, smut, and dust, which the absence of water and the nature of their duties had necessarily allowed to collect upon them. The fire, although apparently subdued, continued at intervals on Monday to break out suddenly in various places, having penetrated the peat for some distance, but no further danger is apprehended, as all communication has been cut off from the unconsumed portion of the forest by means of broad trenches. The damage is variously estimated; but as at least 1200 acres of timber in various stages of growth have been destroyed, it is supposed to amount to several thousands of pounds. The fire is believed to have been the work of incendiaries. The gipsies and broomsellers who were allowed to gather broom and depasture their cattle in the neighbourhood, have this year been denied those privileges, and some of them were heard to say that they would be revenged.

Oxford.—The Bishop of Oxford has addressed the following letter to the Rev. A. M. W. Christopher, Rector of St. Aldate's, explaining his views of the inspiration of the Holy Scriptures, which appear to have been erroneously reported in the newspaper accounts of the Diocesan Conference recently held in this city:—

"Near Chesham, Aug 17.

"My dear Mr. Christopher.—Many thanks for your very kind letter. I had not seen either of the newspaper extracts you send me, but if I had I should not have answered them. It is a hopeless endeavour to set oneself right by answering anything, and if you reply to one you must to all. I therefore, leave matters to right themselves. It is quite a different matter replying to you, and I do it with the greatest pleasure. I said nothing of the sort attributed to me in these extracts. Perhaps the subject was too abstruse to be treated so briefly, and this has led to misapprehension. In brief, my belief is this:—The whole Bible comes to us as 'the Word of God,' under the sanction of God the Holy Ghost. We cannot pick and choose amidst its contents. All is God's Word to us. But as I believe that this, which I hold as the only orthodox view, is encompassed with many difficulties by what is called the theory of 'verbal inspiration,' I desired to show how, in my judgment, a careful scrutiny of the Bible which revealed the 'divers manners' in which the Holy Ghost spake—i, sometimes by the mere mechanical use of the human agent who conveyed the message; as when (1) God wrote words on the first tables, or (2) dictated them on the second, or (3) committed them to prophets simply to repeat, or (4) spake through the prophets in rhapsody; sometimes by possessing the human instrument with a complete knowledge of that he was to speak, and leaving him to express it under the mere suggestion and guardianship of His own special presence, according to the natural use of the human faculties;—I desired, I say, to show how this would greatly lessen these difficulties, and enable men to realise the essential difference between Holy Scripture and any other books,—namely, that, as all truth comes from God, other books may be in a sense said to be inspired because they are true; but Holy Scripture alone can be affirmed to be true because it is inspired. You are quite free to make any use of this you see fit.—I am, ever yours most truly, "S. Oxon"

Sheffield.—Mr. Roebuck attended the annual dinner of the retiring Master Cutler on the 17th inst., and spoke as follows on Public Affairs:—

"The present Parliament has been described as a do-nothing Parliament. That do-nothing Parliament received into its hands a grand deposit. It was appointed to watch over the welfare and the interests of England. Thirty-five years ago there arose among the people of England a desire for reform. The reform began by liberating the Catholics. Then came the grand reform—the reform of Parliament itself. We then reformed the municipal corporations. We reformed the poor law, we reformed the government of the colonies, we reformed the municipalities of Ireland, and then we freed trade. That is the result of the reform of Parliament. Well, now, what is the result of that? I look round me, and I am proud of being an Englishman. Thrones have tumbled down, empires have been destroyed, the model republic has been rent in twain. But England stands serene in her greatness, and dares the world to oppose her onward progress. I am very much of that class of men who say, think not of rest while aught requires to be done; but still I cannot help considering the grand deposit that is in my hands—the great happiness, welfare, and well-being of the great people of England that is committed to me. Shall I hastily, rashly, imprudently do things which shall render doubtful and dangerous that which I am attempting to perfect? There were three things upon which the Parliament and the Government acted in a manner foreign to my view, and yet I am here to vindicate the course they pursued. First of these was the great schism that occurred in the model Republic on the other side of the Atlantic. My feeling was to at once recognise the Confederate States; and had I been Prime Minister it should have been done. Though out of every 20 men I meet 19 are sympathisers with the Confederate States, still I must say that the sympathy of England went not to the point of risking war for those States. Well then, Parliament taking its view, taking its cue—its command—from the kingdom over which it was destined to rule, said we will do nothing to risk the danger of a war. The Ministry, following Parliament, did the same thing. I think, as a bold politician, Lord Palmerston was wrong; but he is a much older man than I, and though I do not accord with his opinion, I cannot mistake the prudence of his conduct. He did what England desired he should do. He has followed what is called perfect neutrality, and we are now as we were at the beginning of that conflict. The next case in which Parliament acted differently from my view was that of Denmark. I thought Denmark was oppressed by the bandit powers of Germany, and I would have sent the English fleet to defend her. Again Lord Palmerston said 'No.' He followed the people of England. They felt for Denmark, but they did not feel so much for Denmark as to be willing to go to war for her. Lord Palmerston, a very wise old gentleman, took his view from the people of England, and we allowed Denmark to be made the prey of the robber Germany. Shame it is, no doubt, but I cannot help feeling that the shame rests with the people of England. Well, now I come to touch upon a ticklish subject—I mean the question of reform. Now you have returned a middle-class Parliament. I have been in that middle-class Parliament. I form a portion of it. I live in it from day to day, and from night to night. I know its feelings. I have probed its wishes. I know what it will do, and it will not reform itself. But still comes the question, are the people of England in such a state of mind as to compel Parliament to reform itself? I say they are not, and Lord Palmerston—again I quote the prudence of that wise old gentleman—said that Parliament is against reform. I will not propose reform until Parliament compels me. Well, now these are the three great things that the present Parliament have done. When you say they have done nothing, let me bring to your mind what would occur to a patient in a high fever if he sent for a doctor, and the doctor were to determine not to bleed him, is not that as positive a proceeding as bleeding him? I say, then, that determining not to go to war is as positive a proceeding as if they had determined to go to war. Though the patient might recover, and you would then say the doctor was a clever man; or he might die, and you might say he was a fool; still the fact would remain that the doctor had taken a step as complete in the one case as in the other. If he had bled him he would have been acting; by not bleeding him he would be equally acting. The do-nothing Parliament, by not going to war, has in every case been as active as if it had determined to batter down the whole world. Now, I look around me and I ask myself, what is the state of England? Is not property safe? Is not every man able to say what he likes? Does not every man enjoy that privilege so dear to Englishmen of grumbling as much as he wishes? Cannot you walk from one end of England to the other in perfect security? I ask you, the world over, or in past history, is there anything like it. Nothing. All I ask, and as I ask it the trembling and fear comes over me which came over the old superstitious heathen when a man had pursued a course of uninterrupted success, and he thought the gods were envious of his happiness and would turn a great catastrophe against him—I pray that our unrivalled happiness—unrivalled I call it, for it is such as the world never saw before—I pray that our unrivalled happiness may escape the terrible ending that the superstitious fear and tremble for. I say to you now that you ought to be very careful how you decide that your representatives ought to act. You are so happy, you are so distinguished from the rest of the world, that every step a wise man takes is taken with trembling and in terror lest he should in any way whatever render insecure that great happiness you now enjoy, which the world sees, and which the world envies."

Southampton.—On Saturday the inquiry respecting the murder on the high seas was resumed, when it appeared that there was some doubt whether the ship had a right to carry the English flag, and consequently whether the prisoner was within the English jurisdiction; but it was agreed that the point should be reserved for the superior court, and the prisoner was committed for trial.

Tiverton.—Lord Palmerston paid a visit to his constituents on Tuesday, for the purpose of attending the Tiverton Races, and was received with the greatest enthusiasm. The station and its approaches were crowded with people, by whom he was loudly cheered; and after his lordship had reached the hotel, he appeared at the window and made a speech, in which he made them merry by congratulating them on the good looks which they all, whether old or young, and especially those of the fair sex, derived from the healthy air and prosperity of the town. In the evening his lordship was entertained at a public dinner under the presidency of the Mayor, and in returning thanks for the toast of his health, spoke as follows on Public Affairs:—

"The rev. gentleman who returned thanks for the clergy did me the honour to allude to matters which are the personal acts of the Minister who fills the office that I do—I mean the choice of the persons who are to fill the high dignities of the Church. I am glad that the selections which I have thought it to be my duty to make have met with general approval. I hold the task of making those selections to be one of the most important duties that can devolve upon the person who holds the office which I have the honour to fill, because there are many things which depend upon a good choice—these are, in the first place, the moral and religious training of the country—of those who are members of the Church of which these persons are chosen to be high dignitaries; but there is a further bearing on a good selection in these cases, because in a free country like this, where every man is entitled to hold his own opinions, where men are accustomed to investigate the grounds of the opinions which they entertain or which they may intend to adopt, there must necessarily be great differences on religious subjects. No doubt we might all wish that the whole nation could be of one creed. That is impossible in a free country; but what can be done, and what ought to be done, is that those who hold high office and those who are at the head of the Established Church should by their bearing towards those who differ from them in religious opinions mitigate those acerbities which are, perhaps, inherent in the diversities of opinion on so important a matter, both here and hereafter; that they should, by their manner and bearing towards those of different opinion, render those differences as little perceptible as possible, and endeavour to inculcate that charity which is the basis of our common religion. I trust and believe that the choice which it has been my lot to make has been made in this direction, and that those who have been elevated to fill high positions in the Established Church will by their bearing towards different communions continue to prove that, although each may be sincere in holding opinions at variance one with another, all will, nevertheless, feel that there are common feelings, common interests, and common obligations which pervade the mass, and that those feelings, interests, and obligations ought not to be embittered by any asperities between different sects. We have most unhappily seen very recently proofs that in the sister kingdom those differences of religion have led to most disastrous and lamentable outbreaks; but let us not ascribe events entirely to difference of religious opinion; they are rather connected with long-established feuds, and should be looked upon rather as political demonstrations than as uncharitable feelings in regard to the religions of the two parties who came in contact. Notice has also been taken of the circumstance that it has fallen to the lot of the Government of which I am a member to preserve to this country the blessings of peace. Now, gentlemen, no doubt the preservation of peace, with honour, with consistency, with the interests and dignity of the country, with its interest at home and its dignity and reputation abroad—the preservation of peace upon such conditions is the primary duty of any administration that may be charged with the conduct of national affairs. I do not think it desirable that we should be of that section, which I believe really does not now exist, although it is a by-word sometimes used—I do not think it desirable that we should be of the peace-at-any-price party. I do not believe that those who are commonly designated by that name are at heart insensible to the honour and interest of the country. There may be differences of opinion as to the magnitude of the case, as to the validity of the reasons which may induce the country to draw the sword; but I am persuaded that there is no Englishman who would not, if he thought the interests and honour and dignity of the country were at stake, join in its defence by whatever means, personal or otherwise, which he might be able to command. There have been, indeed, of late years during the five years which I have been in office, several cases which might have led this country into war. We might have embarked in war, and with great acquiescence in popular feeling, for the rescue of the Poles. Well, we deplore their unhappy fate; we endeavoured to enlist in their cause the moral and political action of all the different Powers of Europe, and we did so; but they unfortunately failed, and perhaps it was in the nature of things that our efforts should not succeed. But however the enthusiasm of a large portion of the community might have urged us to take more active measures, we did not think—and I believe the majority of the country is of opinion that we thought right—we did not think that was an occasion on which it would be justifiable to call on the people of England to make those exertions and sacrifices which such a war would have called for. Then there was the American civil war. There is much diversity of opinion as to the merits of the contending parties. Some are for the North on the ground of their hatred of slavery; some are for the South on the ground of their love of freedom and independence. We might have been involved one way or the other if we had listened to many of those who urged different courses of action, we might have been involved in the quarrel; but I believe the country is glad we have abstained from taking that course. We could have had nothing to gain, and we should only have added thousands of our own sons to the hecatomb of victims which that calamitous and bloody slaughtering war has sacrificed. We may hope that time and reflection—and recent advices from America show some favourable symptoms—we may hope that time and reflection, and the fact of the immense losses which have been sustained, and the slight hopes of success which appear on the part of the North—we may hope that many months will not elapse before some progress will be made towards healing that tremendous breach which now exists. But of this I am convinced, that if we had yielded to those who, from the purest motives and from a sincere conviction, urged us to interfere to offer our mediation to endeavour to reconcile the quarrel between the parties before matters were ripe for our adjustment, we should not only have failed in accomplishing that object, but we should have embittered the feelings between that country and this, and have rendered the future

establishment of good relations between us and them less easy and more difficult. Therefore I think our neutrality was wise, and I am sure that it is appreciated by the country at large. Well, then came that unfortunate Danish question, and I am sure every Englishman who has a heart in his breast and a feeling of justice in his mind, sympathises with those unfortunate Danes, and wishes that this country could have been able to draw the sword successfully in their defence; but I am satisfied that those who reflect on the season of the year when that war broke out, on the means which this country could have applied for deciding in one sense that issue, I am satisfied that those who make these reflections will think that we acted wisely in not embarking in that dispute. To have sent a fleet in midwinter to the Baltic every sailor would tell you was an impossibility, but if it could have gone it would have been attended by no effectual result. Ships sailing on the sea cannot stop armies on land, and to have attempted to stop the progress of an army by sending a fleet to the Baltic would have been attempting to do that which it was not possible to accomplish. If England could have sent an army, and although we all know how admirable that army is on the peace establishment, we must acknowledge that we have no means of sending out a force at all equal to cope with the 300,000 or 400,000 men whom the 30,000,000 or 40,000,000 of Germany could have pitted against us, and that such an attempt would only have insured a disgraceful discomfiture—not to the army, indeed, but to the Government which sent out an inferior force and expected it to cope successfully with a force so vastly superior. We are, as a nation, I trust, sufficiently strong to defy attack from any enemy. We have, in round numbers, 300,000 militia and Volunteers, in addition to the regular army, and, as they can be immediately increased, we have force amply sufficient to defy attack from whatever quarter it may proceed. We have a fleet growing every year, adapting itself to the modern requirements of naval warfare, and fully adequate for the defence of the country. Our object is defence—not aggression. But this state of things does not allow this country to undertake vast operations beyond its confines; calling on the nation to make great exertions, to make great sacrifices, both of men and money, in order to send out an army fit to cope with the vast establishments maintained by other countries. Well, we did not think that the Danish cause would be considered as sufficiently British, and as sufficiently bearing on the interests and the security and the honour of England, as to make it justifiable to ask the country to make those exertions which such a war would render necessary; and I am sure that the verdict of the country will be that, in this respect, the Government judged rightly. But, while we have preserved peace, the nation has been doing its work too. It is the duty of the Government to keep the country at peace as long as it can do so without sacrificing its honour, its dignity, or its interests. It is the duty of the people of the country to foster its trade, to extend its commerce, to increase its resources, and to promote its welfare of every sort and kind. This duty has been nobly performed by the people of this kingdom; and there never was a period of equal length during which this country has made such enormous strides in wealth, and in everything which constitutes the comfort, the happiness, and the welfare of the nation. The Government can only contribute to these results by removing obstacles and affording facilities, but it remains for the people themselves to make those exertions by which alone these results can be obtained. Government cannot interfere with private enterprise. Every now and then we are called upon to subsidise or assist this or that enterprise; we are told that a little contribution from the public revenue would set up this manufacture, would assist another, would give scope to industry, and would foster a rising commerce; but these things are only done in countries where the people are paralysed by despotic power, and where they require the vivifying and electrical touch of the Government to rouse them to an exertion which is not their natural condition, nor their habitual practice. In this country every man is alive, every man knows best how to employ his capital, how to direct his genius, whatever it may be; whatever line you may take, whether it be active exertion in distant parts, or the studious labour of invention at home, or the direction of the industry of thousands of our manufacturing workmen, in this country every man knows best how to contribute to the public wealth and to his own prosperity and advantage, and all that the Government has to do is to leave things alone, to throw down barriers and obstructions, where barriers and obstructions are pressed, and to give that freedom to industry and activity to commerce by which alone the general welfare of the country can be advanced. That has been our task, and I think we have performed that task well and successfully, and if anybody will take the trouble to look back, which few men are disposed to do, because they are too busy looking forward; if any man will look back and glance at the immense progress which has taken place in this country during the last 30 years, he will be astonished at the magnitude of the improvements which have been made, the magnitude of the obstructions which have been thrown down, the magnitude of the new doors to industry which have been opened, and the progress which the country has made in national wealth and the comfort and happiness of the people."

WELLS.—The sentence of death passed upon John Allen, at the recent Assizes, for the murder of his wife, has been commuted to penal servitude for life. The respite appears to have been the spontaneous act of the Home Secretary. A memorial, signed by upwards of 500 of the principal gentry, clergy, and inhabitants of Taunton and neighbourhood, had been forwarded to London on Saturday, but it could not have been presented at the time the respite was despatched. Since the trial several facts have transpired which show the gross provocation to which Allen had been subjected by his wife, and these were all embodied in the memorial. The greatest satisfaction is therefore felt in the neighbourhood that his life has been spared. The receipt of the respite was at once made known to him by the governor of the gaol. On receiving the announcement he appeared stunned, and fainted. He was removed to the hospital of the gaol, where he now remains under the care of the surgeon.

WINCHESTER.—A court of inquiry, ordered by the Lord-Lieutenant of Hampshire at the instance of the Secretary of State for War, was held in this city a few days ago to investigate the circumstances which led to the recent disbandment of the Basingstoke corps for insubordination at the Albury review on Easter Monday. The court was composed of Sir George Pechell, Colonel-Commandant of the 4th Administrative Battalion of Hampshire, as president; Captain Burton, of the 31 Hants; and Captain Brace, 7th Hants. Colonel Luard, Assistant-Inspector of Volunteers, attended from the War Office. It appeared from the evidence that previous to the review a general order was issued by Colonel M'Murdo that no company in any battalion was to consist of less than 24 files. Lieut.-Colonel Humphery, M.P., previous to the commencement of the day's proceedings, found that the 1st Hants battalion which he commanded was composed of six companies, each under 24 files. He ordered Lieut. Brooks of the Basingstoke Company, which was the junior, to break it up and distribute the men among the others. Four of the men positively refused to obey this order, and one of them addressed the Colonel, saying that the 18th were the strongest on the ground, and asking him why he did not break up his own corps. Lieutenant Brooks having officially reported their refusal, Colonel Humphery broke up his own company (the Andover), thereby strengthening the Basingstoke Company to its requisite number, and thus enabling it to remain on the field, but administering to it a sharp rebuke on its insubordination and unworthiness of its conduct. After the review, Lieutenant Brooks resigned his commission, on the ground that, as he possessed no authority over his men, his services were useless. The Colonel reported the case to the Lord Lieutenant, who referred it to the Secretary of State for War, and eventually, by command of the Queen, the Basingstoke Company was disbanded. This decision caused great dissatisfaction to the inhabitants of Basingstoke, who petitioned for inquiry, on the ground that the insubordination was the act of but a few men, and should not therefore have been visited upon the whole corps. The inquiry lasted four hours, and the result will be reported to the Secretary of State for War before it is made public.

WORTHING.—During the thunderstorm of Sunday morning two waterspouts were seen off this place. An observer from the tower of Worthing College, in describing their appearance, says that the sea at nine o'clock was quite calm, with a slight breeze blowing from the N.E. At 9.5 the clouds were seen to revolve in a circle, about half a mile in diameter, and gradually approach the centre, which descended, diminishing in size, till, when about 50 feet from the surface of the sea, it increased, and united with a dense vapour arising from the water, in the shape of a cone. The sea for about a circle of 300 feet was in a most disturbed state, the immense waves rolling to a centre and throwing up masses of foam. At 9.15 the waterspout broke, and an exceeding heavy hailstorm attended its dissolution, some of the stones being about three-quarters of an inch in diameter. The disturbed water travelled to the eastward at the rate of nearly 40 miles an hour, and when opposite Brighton another waterspout was formed, but far more graceful in appearance than the first, the upper part not being so bulky, but much higher. Its existence, however, was but of short duration.

YORK.—The local papers contain a long account of a complaint preferred by the Lord Mayor of York to the Secretary of State for War, respecting the conduct of Colonel Dickson and the officers of the 16th Lancers, while in barracks in this city. It appears that on the regiment leaving York the Lord Mayor addressed a letter to the Secretary of State, saying that he deemed it his duty to lay before him the conduct of the officers and the discipline of the regiment. He complained, first, of being grossly insulted by Colonel Dickson and the officers, by "a most uncourteous and ungentlemanly act," in their neglecting, after his election, to leave their cards at the Mansion House, and then subsequently sending him an invitation to attend a ball without any cards accompanying the invitation. His next complaint was that two of the officers, on a Sunday night had amused themselves on the way to barracks by endeavouring to extinguish the gas lights, for which conduct they were summoned before the magistrates, and fined 2*l.* each. That subsequently Colonel Dickson, on leaving a ball, assaulted one of the policemen who had been the means of convicting the two officers, for which he was summoned before the magistrates, and after a number of adjournments eventually paid 5*l.* to the police fund rather than submit to a conviction. The officers having set such an example, his lordship said that the soldiers under them harboured an ill feeling towards the police; that collisions took place, and that he had found it necessary to write to Colonel Dickson, threatening to lay the matter before the Horse Guards unless the soldiers were kept quiet. He said that on one occasion, when police were endeavouring to identify an offending soldier on parade, the soldiers hissed them; that on another the soldiers used strong language to the Volunteers, of which the Lord Mayor was an officer; that his lordship had, on the occasion of a Volunteer non-commissioned officer's ball, been compelled to order special means to prevent a disturbance on the part of certain of the Lancers, who were taking supper in the neighbourhood; that numerous reports were made to him by the police of the conduct of the soldiers, and that his lordship and the citizens were glad when the regiment left the city. On the citizens becoming aware of the course the Lord Mayor had taken in the matter, they at once got up a memorial to the Duke of Cambridge, which was signed by the recorder, sheriff, nine aldermen, 29 councillors, eight magistrates, three deputy-lieutenants, the clerk of the peace, city coroner, the under-sheriff, one admiral, two retired colonels, two bankers, and several other gentlemen and tradesmen of the city, certifying that the conduct of the regiment was not such as to justify the complaints the Lord Mayor had made; but that, on the contrary, Colonel Dickson and those under his command, both officers and men, were [illegible] in very high esteem and respected by the citizens who greatly regretted their departure from the city. A similar memorial was also sent from officers of Rifle Volunteers, and the statement was further endorsed by an influential inhabitant in the neighbourhood of the barracks, by the town clerk, and by an extract from the minutes of the Watch Committee. Colonel Dickson himself also explained that the non-calling at the Mansion House was the result of ignorance of the custom, and that the invitation to the military ball sent to the Lord Mayor was given as a compliment, and not as an insult. To the latter allegation Colonel Dickson further alleged that the Lord Mayor gave an uncourteous reply, and this was the origin of a systematic display of ill feeling on the part of the Lord Mayor. The result of the investigation in this singular case is that the Commander-in-Chief has given a decision to the effect that the conduct of the regiment while in York was not such as to justify the complaints preferred against it.

Ireland.

THE RIOTS IN BELFAST.—On Friday morning another outbreak of the rioters took place in the Millfield district, and the police were fired at. At 9 o'clock the riots were renewed with unabated fury. Several persons were severely injured. A little boy was taken to the hospital with a bullet wound in the abdomen, and a little girl was shot in the wrist; nine civilians and four constables also received gunshot wounds. During the day a meeting was held, at which deputations of Protestant and Catholic gentlemen were appointed to visit the disturbed districts and reason with the rioters. This step appears to have been successful, and tranquillity has now been restored, though the military, as a matter of precaution, still patrol the town by day and night. It was feared that disturbances would take place at the funerals of the Roman Catholic party which took place on Sunday, but they passed off quietly. The friends of the deceased parties only were allowed to accompany their remains. Two inquests have been opened on the bodies of two of the men shot by the police, but the juries, who were half Protestants and half Roman Catholics, could not agree, and had to be discharged without finding a verdict.

Railways.

OPENING OF THE ISLE OF WIGHT LINE.—The first section of the railway from Ryde to Shanklin was opened for passenger traffic on Tuesday. Eleven trains are to run each way on week days, and two trains each way on Sundays. Coaches and omnibuses, under the management of the company, will complete the communication between Ventnor and Shanklin until the second section of the line from Shanklin to Ventnor is opened. The completion of this last work has been delayed by the difficulties met with in tunnelling through the high downs north of Ventnor.

COLLISION ON THE WEST MIDLAND.—A fearful collision between an excursion train and a mineral train occurred on Tuesday evening at the junction of the West Midland and Taff Vale Extension, at Pontypool Road. It appears that in the morning excursion trains ran at cheap fares from Shrewsbury, Worcester, and other places, to enable persons to view the Crumlin Viaduct and the neighbouring mountain scenery. Among the trains was one from Shrewsbury, Ludlow, and Leominster, but as the driver was not acquainted with the line except between Shrewsbury and Hereford, he was, in accordance with the company's rules, furnished with a pilot. The line from Crumlin to Pontypool is one which requires great care and judgment to drive over, having a descent on which some of the gradients are as high as 1 in 46. It is necessary, therefore, to have the line between Crumlin and Pontypool perfectly clear of all obstruction before a train is started from the former place, as a man is constantly kept in a box at Blandare, halfway down the descent, whose duty it is not to allow any train to pass until he has been telegraphed that the line to Pontypool is clear. The Shrewsbury and Hereford excursion train, which left Crumlin at 5 o'clock on Tuesday evening, was preceded by a coal train, which had reached the foot of the descent at Pontypool, and should have been shunted to a siding before the signalman at Blandare had signalled the line "clear" to the driver of the excursion train. It appears, however, that the man, knowing that the driver of the coal train had ample time to get out of the way, allowed the excursion train to pass. Unfortunately, while the coal train was shunting, one of the coupling chains broke, and when the excursion train was due at Pontypool a large portion of the coal train was still upon the main line. The train came down the incline with tremendous velocity, though the break was applied, and no danger was apprehended until, on rounding the curve towards the base of the hill, the pilot observed the coal train in the way. He at once blew the whistle, telling the guard to put all the pressure possible upon the breaks, which was done. Simultaneously with this the driver reversed the engine, and the stoker applied the engine break, but all was useless. Such was the speed now attained by the train that the breaks became ignited by the friction and thus became powerless. There were on the

of the National Assembly, by a majority of 182 votes to 142, over M. Delyorghi, the Opposition candidate.

Turkey.—Intelligence has been received of the submission of a chief tribe of the rebellious Arabs in Yemen. The city of Smyrna has been the scene of some disturbances, caused by the arrival of a Dervish from Medina, who announced the end of the world. This prophecy produced a great impression on the Mussulmans, and a band of Candiotes went through the streets, threatening fire and pillage, in concert with the Mussulman population. The disturbance was suppressed by the arrest of all the Candiotes, on the recommendation of the French consul-general.

Egypt.—The differences between the American Consul and the Egyptian Government have been settled, and the former has resumed his relations with the Government. Nubar Pacha has arrived at Alexandria, and left for Cairo.

Cape of Good Hope.—Accounts from the Cape to the 21st July state that the alarm raised on the frontier of an intention on the part of the Krelis to cross the Bashee was proved to have been groundless. Efforts were making to discover the authors of the rumour. Traders and travellers passing through the Canda country represented the country along the whole coast line to be in a disturbed state. The tribes are said to be more insolent than usual, and several councils had been held among the chiefs. A war amongst the natives in that locality was expected. Sir Walter Currie has returned to Graham's Town from the Transkei. The embodiment of the Irregular Horse had been abandoned. The conditions upon which grants of Transkeian territory were to be made were found to be too high, and were to be modified if the scheme was continued, but it was considered doubtful whether the territory would be given out for occupation. Parliament was to be prorogued on the 13th ult. Its removal to Graham's Town was considered unnecessary, and it was doubted whether the experiment would be repeated. In consequence of the stoppage of several Government works throughout the colony, a large number of working men had collected at Cape Town in search of employment, which could only be obtained at a low rate of wages. An intimation that free passages to New Zealand would shortly be offered by the Government of that colony, had induced large numbers to determine to emigrate there. The proposal of the Diamond Company to establish mail steam communication with Port Elizabeth, was agreed to without a division, but only on its containing a condition to call at Table or Simon's Bay also. The proposal of the Union Company to extend mail communication to the Mauritius, was rejected.

India.—By the Bombay Mail of the 23d ult. we learn that the Bhootanese are preparing to attack and seize the British territory of Kooch Behar, and have made a demand on the British Government for the arrears of subsidy alleged to be due for the Dooars of Assam. The British authorities in Assam have suspended all communications with Bhootan. The Rangoon papers mention a rumour that the King of Burmah is making preparations for war with the English in the province of Pegu. The four Italian silk-growers, who were imprisoned in Bokhara, with one Frenchman and 13 Russians, have been released by the Emir, after having been imprisoned for a year. The Italian Government in January last sent an agent, M. Bonhomme, to do what he could in the matter. Provided with letters from the Sultan, the Viceroy of Egypt, and other Mohammedan sovereigns, M. Bonhomme proposed to travel to Bokhara through India, but was dissuaded by the Viceroy of Egypt, as his death would have been insured by so doing, on account of the Emir regarding all Europeans as Englishmen, and entertaining a mortal hatred to them. M. Bonhomme then travelled through Persia to Russia, the only country with which the Emir holds regular relations; but even in Russia he was advised not to make the venture, and thus he could only forward his letters through the officials. The letters, however, remained unanswered, as the Emir dislikes such means of communication, and had only sent one answer to four letters from the Russian commandant at Orenburg. Notwithstanding all these difficulties the prisoners have been liberated, and have arrived at Orenburg on their way to St. Petersburg. The civil war between the Ameer of Cabul and his brothers is not yet at an end. The rumour that Sir Hugh Rose was to return to England in October is contradicted, and it is now stated that his Excellency will not leave India until the spring.

China.—The Portuguese Plenipotentiaries have been unable to obtain the ratification of their treaty with the Chinese Government. No fresh movements have been made by the rebels. The Futai, the Imperial Commander-in-Chief, has occupied two more cities.

New Zealand.—The *Gazette* of Tuesday contained a despatch and inclosure from General Cameron, from which it appears that, after abandoning the entrenchment at Tauranga where the English troops suffered so severely, the natives retired to two strong pahs in the ranges about 10 miles off, to which places, owing to the advanced season—being the middle of the New Zealand winter—it was not deemed prudent to follow them. The settlement of Whanganui being reported in danger, General Cameron transferred his head-quarters to Auckland, and Colonel Warre, with 300 men, was ordered to proceed from New Plymouth to resist the threatened attack, but in the meantime the rebels were met and defeated by a body of natives friendly to the English rule, and Whanganui was thus placed in a position of complete safety. The troops and militia are described as having been animated with but one desire to punish the perpetrators of the mutilations of Colonel Lloyd and his unfortunate comrades, on whom the natives appear to have practised all their ancient and most barbarous rites. The remains of one soldier are said to have borne unmistakeable evidence of acts of cannibalism too atrocious to record. All the troops not required for the defence of Tauranga were concentrating in Auckland, ready to be moved to any point that might be threatened. Since the affair at Tauranga there has been only one collision with the troops. That occurred in the neighbourhood of New Plymouth, where the rebels attacked a redoubt and were repulsed with great loss, whilst there was only one casualty on our side. Until the beginning of September further military operations are not considered practicable in any part of the island.

Australia.—The University Library at Sydney has been enriched by a present from the Queen. The Governor received by the last mail a copy of the collected Speeches of the Prince Consort, with an autograph from the Queen dedicating it to the University. His Excellency delivered this gift in person on the 1st of June. The Senate resolved, "That an address to her Majesty, expressive of their gratitude, should be prepared by the Vice-Chancellor." The volume is bound in white vellum and gold, and stamped with the crest, motto, and name of the Prince Consort. In the first page are the following words written in the Queen's own hand:—"Presented to the Sydney University Library, in memory of her great and good husband, by his broken-hearted widow. Victoria R., 1864." The book is to be preserved, as a Royal gift, in a box of oak and lined with purple velvet.

United States.—The situation at Petersburg remains unchanged. General Sheridan has superseded General Hunter in command of the Middle Military Division, embracing the department of Washington, the Susquehanna, Maryland, and Western Virginia. On the 5th a Confederate charge at Petersburg was repulsed with slaughter. General Grant visited General Sheridan, at Monocacy, Maryland, on the 6th, and returned to his head-quarters on the 8th. General Sheridan's forces have since occupied Martinsburg, and are marching to attack General Early in the Shenandoah Valley. Skirmishing commenced near Winchester on the 10th. The *World's* Washington special correspondent says there is reason to believe that a battle has been fought near Winchester between General Sheridan's forces and the main body of the Confederates under General Early. Very heavy cannonading was heard from that direction at Harper's Ferry on the 11th. General Sherman reports that he is shelling Atlanta. An explosion occurred on board the ammunition boat at City Point, on the James River, on the 9th inst., blowing the boat to atoms, prostrating all adjacent buildings, and killing and wounding 180 soldiers, labourers and others. The cause of the explosion is as yet undiscovered. Confederate official despatches from Mobile of the 5th report that Admiral Farragut, after a desperate engagement with the Confederate fleet, in which the Federal Monitor Tecumseh was sunk, and the Confederate ironclads Tennessee and Selina captured, entered the harbour, with 14 ships and three Monitors, and was approaching the city. The Confederate Admiral Buchanan lost a leg and was taken prisoner. It appears from the Confederate despatches that Fort Powell, on Dauphin Island, was evacuated and destroyed by the Confederates on the night of the 5th; and that Fort Gaines, through the treachery of its commander, Colonel Charles Anderson, of Alabama, was surrendered to the Federals on the morning of the 8th. The work was of great strength, was amply provisioned for six months for its garrison of 600 men, and Colonel Anderson had received explicit orders from General Payne, the commander of the department, to defend it to the last. It is asserted that General Beauregard has been ordered from Petersburg to take command at Mobile. Deserters to General Grant's lines report that Mobile has since been captured by Admiral Farragut, but their statements are discredited. General Banks issued an order on the 2d inst., enrolling all the able-bodied coloured men in his department, between the ages of 18 and 40 years, to be put into the existing coloured regiments. The 50 Confederate and 50 Federal officers, prisoners of war, who were to have been placed under fire at Charleston and Morris Island by their respective custodians, have been exchanged. The *New York Times* asserts from Washington that Secretary Stanton has resigned, and that his resignation has been accepted by Mr. Lincoln; but the statement is said to be unfounded. Governor Seymour has remonstrated with the authorities at Washington on the excessive quotas assigned to the cities of New York and Brooklyn under the President's late call for troops. A mass meeting to nominate General M'Clellan for the Presidency was held in New York on the 9th. It is estimated that upwards of 100,000 persons were present. The speeches and resolutions were all denunciatory of Mr. Lincoln, and declared Gen. M'Clellan to be the only man capable of suppressing the rebellion and restoring the Union. References to General Grant's military operations met with but slight applause.

Mexico.—Advices to the 23d ult. state that the Emperor Maximilian had accepted the surrender of Uruguay. Several unimportant engagements had taken place between some bands and the troops. The sanitary condition of the army was satisfactory.

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 89⅛ to 88⅞ for Money, and 89¼ to ⅜ for Account; Three per Cents. Reduced, 88¼ to ⅜; New Three per Cents., 88⅜ to ½; New Two and a Half per Cents., 74½; Bank Stock, 244; India Five per Cent. Stock, 104½; Ditto Bonds, 25s. dis.; Exchequer Bills, June, 25s. to 15s. dis.—Foreign: Egyptian, 102; Greek, 23½; Italian, 72¼; Mexican, 28⅝; Portuguese, 1853, 47½; Ditto 1856, &c., 47⅜ to ½; Russian, 1859, 54½; Ditto 1862, 58 to ½; Spanish New Deferred, 44; Ditto Passive, 30⅜ to ½; Ditto Certificates, 13¼; Turkish, 1854, 91; Ditto 1858, 100*l.* Bonds, 77 to 76½; Ditto 1862, 70¼ to 69⅜.

Bank of England.

ISSUE DEPARTMENT

Notes issued	£26,732,570	Government Debt	£11,015,100
		Other Securities	3,534,900
		Gold Coin and Bullion	12,182,570
		Silver Bullion	—
	£26,732,570		£26,732,570

BANKING DEPARTMENT

Proprietors Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£ 6,797,095
Rest	3,643,527	Other Securities	13,987,615
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,278,725	Notes	6,221,920
Other Deposits	13,714,161	Gold and Silver Coin	749,161
Seven days and other bills	536 398		
	£37,735,811		£37,735,811

Aug. 25, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY; *Aug.* 19.—BANKRUPTS.—T Boulton, Hereford, Butcher—W Ball, Knight's Hill Lower Norwood, Builder—C Burr, Homer Road, Hackney Wick, Optician—R. Baker, Bond Street, Chelsea, Tailor—J. Butt, Salisbury Street, Lisson Grove, Baker—J. Clark, Bradford, Yorkshire, Woolsorter—J Cousins, Basford, Nottinghamshire, Licensed Victualler—T Cawdrey, Norwich, Printer—C. Cockerell, Reedham, Norfolk, Drover—J. Cassell, Barnard Castle, Durham, Journeyman Skinner—E Copeland, Doncaster, Hosier—E. J. H Crouch, Addison Road North, Notting Hill, Clerk—R. C. Carmichael, Sutherland Street, Pimlico, Commission Agent—W. De Burgh, Oxton, Cheshire, Licensed Victualler—T. P. Durrant, Brighton, Auctioneer—E. T. Druce, Praed Street, Paddington, Butcher—J. Davies, Cardiff, Horse Dealer—F. T. Dobbelle, Poplar, Middlesex, Baker—J Dobbs, Charlton upon Medlock, Manchester, Beer Retailer—G. Edwards, Ipswich, Beer Retailer—T. Eccles, Hulme, Lancashire, late House Painter—J. Forrester, Penrith, Cumberland, Farmer—J. Fox, late of Everton Lancashire, Beerhouse Keeper—R. Fancourt, Forest-hill Street, Westminster, Beer Retailer—A Gaetrix, Manchester, Iron and Steel Merchant—H W Gutteridge, Lombard St., City, Merchant—T Gee, Oldham, Lancash., Cotton Spinner—J Garlick, Carlton Terrace, Peckham, Baker—S. L. Gower, Aldershot, Publican—C Hanscomb, Exchange Street, Strand, Surgical Surgeon of Companies—L. Haydon, Winchester, Jeweller—J Gardiner—W Honeyman, Manor Road, Bermondsey, Waterman—G. Horner, Bradford, Cutter-out at a Boot Manufactory—J. J. Hooper, Dalston Road, Hackney, Commercial Traveller—J. Holgate, Calverley, Yorkshire, Clothmaker—S. Inder, Martock Somersetshire, Butcher's Assistant—T. Jefferies, Kidderminster Worcestershire, late Licensed Victualler—W. Knight, Walsall, Staffordshire, Provision Merchant—R. Kilby, Chalk Farm Road, Camden Town, Baker—A. Ledicott and A. W. Carpenter, High Street, Southwark, Provision Merchants—J. Lister, Kellington, Yorkshire, Farmer—R Mosey, Salford, Lancashire, Fish Curer—M Meggitt, Kingston upon Hull, Widow—A Maitland, Lisle Street, Leicester Square, Bootmaker—J E Morgan, New Compton Street, Soho, Boot and Shoe Manufacturer—W. Owen, Portsea, Hampshire, Engineer in the Royal Navy—T Piercombe, Waterloo Road, Lambeth, Tobacconist—J Pierrick, Birmingham, Builder—J. Pickford, Spridington, Yorkshire, Servant—W Pratt, March, Cambridgeshire, Farmer—T. Parsons, Royal Hill, Bayswater, Butcher—L. H. Rogers, Grantham, Lincolnshire, Brazier—J Russell, Robert Street, Bedford Row, Coachman—James Robinson, Carlisle, Cattle Dealer—Samuel Swinburn, Melbur, Derbyshire, Bookkeeper—J Shaw, jun., Hoyland Common, Yorkshire, Mason—T. Sibson, Southsea, Hampshire, Foreman to a Tailor and Outfitter—A H. Smith, Dorset Street, Salisbury Square, City, Attorney—J Sanders, Isfield, Sussex, Market Gardener—J Stevens, jun., Camden Gardens, Bethnal Green Road, Metal and General Dealer—W Strange, Leicester, Cattle Dealer—E Shawcross, Manchester, Draper—D Spruce, Liverpool, Pawnbroker—W. Thurstans, sen., Oddicty, Worcestershire—J. T Trow, Ash, Surrey, Licensed Victualler—G. Tyler, Newton Street, High Holborn, Brass-founder—G W Thomp, Upton Gray, Hampshire, Butcher—T G. Thirkettle, Brighton, Surgeon Dentist—S. H Turner, Liverpool, Shipbroker—J Turner, Tewkesbury, Gloucestershire, Brazier—E. J Whitten, Wellingborough, Northamptonshire, late Banker's Clerk—E. Wright, Grafton Street, Mile End, Iron Merchant—J Wilton, Ledbury Street, Peckham, Builder—D Webb, Gun Lane, Limehouse, Butcher—J. West, Beccles, Suffolk, Journeyman Coachmaker—E. Weaver, New Street, Covent Garden, Tailor—W Wright, Nottingham, Butcher.

SCOTCH SEQUESTRATIONS—A Bennet, Coldstream, Cabinet Maker—Leonard Brothers & Co., Croy, Dumbartonshire, Ironmasters—D. Greig, Ceres, Cupar Fife, Baker—W Mackenzie, Campbeltown, Fish Curer—G. Williamson & Co., Glasgow, Calico printers.

TUESDAY, *Aug.* 23.—BANKRUPTS.—J. D Atkinson, Skelsmergh, Westmoreland, Husbandman—H. M Atkins, Norwich, Tailor—G Aston, Longton, Staffordshire, Butcher and Miner—W Anderson, Manchester, Commission Agent—J. Allen, Kidderminster, Tanner and Currier's Labourer—E. Bows, Earl Shilton, Leicestershire, Grocer—A. T. Batchelor, Gloucester Place, Walworth Common, late Refiner—G. A. Beck, Albert Street, Victoria Square, Pimlico, Commission Agent—W. Brean, Cerne Abbas, Dorsetshire, Farmer—W. Brayshay, Bloxwich, Staffordshire, Innkeeper—W B Britton and A Britton, Hastings, House Decorators—W. Baker, Croydon, late Post office Clerk—J. Brown, late of Cockle Park, Northumberland, Farm Servant—J. F. Cullen, Ramsgate, Plumber—Edward Durman, otherwise Henry Durman, Dagmar Road, Victoria Park, Builder—W Evans, Birmingham, General Wood Turner—W Ellwood, Silloth, Cumberland, Butcher—T Freeman, Northfield, Worcestershire, Agricultural Labourer—T. Field, Broad Court, Clerkenwell, General Dealer—Charles Fox, late of Salford, Lancashire, Cabinetmaker—George Giles, Brighton, Carpenter—C. Howell, Liverpool, Slate Dealer—J. Hill, Nailsea, Somersetshire—J. R. Handscomb, Reigate, Surrey, Plumber—W. Harkes, Lostock Gralam, Cheshire, Agricultural Implement Maker—A. Hartland, East Dean, Gloucestershire, Draper—W. Jones, Llandilo, Carmarthenshire, Victualler—Richard Kemsley, late of Borden, Kent, Fruiterer—James Kerry, Nuneaton, Warwickshire, Ribbon Weaver—John Kirby, late of Hulme, Lancashire, Letterpress Printer—G. Llewellyn, New Church Street, Lisson Grove, Corn Dealer—G B. Lloyd, late of Plumstead, Attorney's Clerk—R G Laird, Ivy Place, Coburg Road, Old Kent Road, Civil Engineer—J Lenthwaite, Old Radford, Nottinghamshire, Lace Maker—G. Livesage, Hanley, Staffordshire, Railway Porter—Walter Mangnall & Wilbraham Mangnall, Bolton, Lancashire, Paper Manufacturers—C Marton, Manchester, Inspector of Sewerages—C Merrett, Aldershot, late Grocer and Beerhouse Keeper—J Morgan, Upper Charlton Street, Portland Road, late Haulier—S. Mather, late of Manchester, Embroidress—T Morgan, Cardiff, Glamorganshire, Journeyman Sawyer—H M Muller, Buckingham Villas, Stratford New Town, Commission Agent—C W Nicholls, Manchester Brewer—G. W Naylor & G Claughton, Cheapside, Woollen Manufacturers—W Parry, Church Street, Deptford, Brick Merchant—A Patrick, Guildford, Surrey, Leatherseller—W. Pritchard, Everton, near Liverpool, Builder—J Potter, Worcester, Wheelwright—J. L Pickham, Littlehampton, Sussex, Wheelwright and Coach Painter—J Roberts, Lydiate, Merionethshire, Landowner—W. Ramsey, Red Lion Street, Clerkenwell, Manufacturing Jeweller—R. P. Ritchey, Maidstone, Kent, late a Lieutenant in the 3d, 14th, and 5th Light Dragoons—C. H. A von Schmeltz, St. David's Street, Bermondsey, Shipping Agent—J. Schofield, late of Manchester, Timekeeper—D Seaman, late of Norwich—A Tuley, Barnsbury Road, Islington, Tea Grocer—J. Woodcroft, Barnstaple, Devonshire, Draper—J Wrighton, Tingewick, Buckinghamshire, Farmer—J Williams, Coal House Colliery, Yorkshire, Engine Tenter—C Warburton, Marlborough Road, Old Kent Road, Clerk in her Majesty's Customs.

SCOTCH SEQUESTRATIONS—J Forbes & Co., Dunbar, Brewers—W. Lyon, Oldfold, Aberdeen, Farmer.

Metropolis and its Vicinity.

CAPTURE OF THE GEORGIA.—The Federal steam frigate Niagara arrived in Dover Roads on Wednesday morning, having on board Captain Withycombe and 33 men belonging to the screw steamer Georgia, which was captured by the Niagara while sailing under the British flag on the 15th inst. about 20 miles off Lisbon. The capture was made by the Commodore commanding the Niagara, on the ground that the Georgia was formerly in the service of the Confederate States as the celebrated cruiser of the same name. It appears that she was sold by auction a few months ago to Mr. Edward Bates, shipowner of Liverpool, though the Government is said to have warned the public against purchasing any vessel alleged to have been owned by the Confederate Government. The Georgia left Liverpool on the 8th inst. for Lisbon, having, it is said, been chartered by the Portuguese Government for the alleged purpose of conveying passengers between that place and the Cape de Verdes or the Azores. She had been regularly fitted up for such traffic, having accommodation for 30 first-class and 20 second-class passengers. There is reason to believe that the American commodore was kept informed of the destination of the vessel, and that she had been closely watched at Liverpool. This was her first voyage under her new ownership, and her crew had all received a month's pay in advance. Nothing unusual occurred till she arrived about 20 miles of Lisbon, when the Niagara was seen waiting for her. Captain Withycombe, her commander, who is a well-known blockade runner, did not deviate from his course until brought to with a couple of shots fired across his bows. He was shortly afterwards boarded by an armed boat's crew in command of an officer of the Niagara, who requested his attendance before the commodore. He protested against the insult which had been offered to the flag under which he was sailing, and insisted that as the Georgia was a British ship engaged in legitimate and peaceable traffic, no right could exist under which his course could be arrested. Upon getting on board the Niagara, the commodore explained that it was his duty to seize the Georgia, but he wished to cause Captain Withycombe and his crew as little discomfort as possible. The ship's papers were then taken possession of, the ship herself was sent to New York, and the crew detained as prisoners till the Niagara reached Dover, when they were landed at the Sailors' Home, in order to be forwarded to Liverpool. The Niagara saluted on bringing up in the bay, a compliment which was returned by the artillery from the Castle batteries. Soon after landing the Captain and crew of the captured vessel, she steamed off in the direction of the *Downs*.

AMERICAN SHIPS IN BRITISH PORTS.—The Commissioners of Customs have issued a general order to the collectors at the various ports that, in pursuance of instructions from the Lords of the Treasury, "no ship of war belonging to either of the belligerent powers of North America shall be allowed to enter any of her Majesty's ports for the purpose of being dismantled or sold."

ENTICING ENGLISH SOLDIERS TO DESERT.—On Monday, at the Woolwich Police Court, a well dressed man, who gave the name of Miles Ellison, aged 40, of 10, Newcastle Street, Strand, was charged before Mr. Traill with being in the Engineers' Barracks, Woolwich, for the purpose of inducing Royal Engineers to desert into the American army. Colour-Sergeant Wright said that the prisoner was on that morning discovered sleeping in the barracks with the other soldiers, and on investigating the matter there was reason to think he was there for the object of enticing men to desert for the American army. The prisoner arrived at the barracks on Friday, and during his stay there the American question had been continually under discussion. Henry Williamson, a private in the Royal Engineers, said that when he woke on Sunday morning he was surprised to find the prisoner sleeping next to him. The prisoner had taken men out of the barracks to publichouses and treated them. George Farnall, another Royal Engineer, said that on the previous Sunday he was in the barrack-room, and heard the prisoner in conversation with the persons present on the American question. He heard some Sappers say they would like to go out to America, if they were free from the English army. James Neale, another Royal Engineer, said he met with the prisoner at a public-house, and the latter induced him to take him to the barracks and allow him to occupy any spare bed. On the previous evening the prisoner was talking on the American question to him in the barrack-room. The witness appeared very unwilling to say what the prisoner said. On being threatened with commitment for not answering the magistrate's questions, he acknowledged that the prisoner had asked him if he would like to join the American army, but would not tell more than that he had expressed a conditional wish to go. Mr. Traill ordered the witness's sergeant to report his conduct to his commanding officer, remarking that an English soldier ought to be ashamed to express a wish to join the American army. A constable said the address given by the prisoner was false, and a clerk to Messrs. Hutton and Co., wholesale Berlin wool and trimming manufacturers in Newgate Street, identified the prisoner as having absconded in May with 8*l*. worth of samples intrusted to him as a traveller to the house. Mr. Traill said he would remand the prisoner till Saturday, and if the charge of tampering with the allegiance of the soldiers was fully established, he should commit him for a long term of imprisonment.

WESTMINSTER BRIDGE.—On Tuesday, by order of the Chief Commissioner of Works, preparations were made to complete the approaches to Westminster Bridge, and the last portion of the houses required for that purpose in Bridge Street, Parliament Street, and New Palace Yard, including Fendall's Hotel, will forthwith be pulled down. The Chief Commissioner of Police, acting under the provisions of the new Act for the regulation of metropolitan traffic, finding that the passage of heavy vehicles along the tramways in the centre of the bridge impedes the traffic, has placed police constables at either end to compel all heavy vehicles to cross the bridge at the sides next the footways, the centre of the bridge being reserved for light carriages and equestrians.

DWELLINGS FOR THE LABOURING CLASSES.—The efforts which have been making for some time past to improve the domestic condition of the working classes of the metropolis, are rapidly effecting a great change in various districts of the city and suburbs. The corporation of the city of London has recently set apart a valuable plot of ground near Farringdon Road, Clerkenwell, and voted 120,000*l*. towards the erection of houses expressly for working men and their families; Miss Burdett Coutts has lately expended about 50,000*l*. for a similar purpose in Bethnal Green; Lord Stanley and his co-trustees have devoted upwards of 20,000*l*. of the munificent gift of Mr. George Peabody to the erection of a substantial and commodious block of houses in the heart of Spitalfields, and are building others on a much larger scale at Islington; and the company in the city, established by Alderman Waterlow, and of which Lord Stanley is chairman, has raised upwards of 30,000*l*. for a like object. The houses erected by Miss Coutts at Columbia Square, Bethnal Green, afford by far the largest amount of accommodation, as they are the most imposing in appearance of any in London. They consist of four blocks, each five stories high, and form a square, with a large and commodious play-ground in the centre. There are in all 189 separate tenements, accessible by common entrances and stairs, and inhabited at present by 705 persons, of whom 417 are adults and 288 children. They are fitted up with every domestic convenience, and with a proper regard to ventilation and drainage. The rents vary, according to the number of rooms, from 5*s*. 6*d*. to 2*s*. a-week, and produce a gross annual sum of about 1800*l*. Of the present occupants 49 are porters and 46 labourers. The rest in smaller numbers are for the most part woodcarvers, turners, cabinetmakers, carpenters, corkcutters, clerks, weavers, stonemasons, harnessmakers, compositors, and bookbinders. In the centre of the playground is a clock-tower with tapering spire, and surrounded by flowering plants well tended. Flowers and creeping plants adorn most of the windows of the occupants, and the whole place has an air of cheerfulness and comfort, in marked contrast with the squalor and poverty of some parts of the surrounding neighbourhood. The Peabody block is situated in Commercial Street, Spitalfields, and is built on the same plan as those of Miss Coutts. It was opened in February last, and has from the first been fully occupied. It gives accommodation to 231 persons, including 53 men, 56 women, and 122 children; the number of rooms being 126. The site selected for the next series of buildings which the trustees of Mr. Peabody are about to erect, and which will be three times as large as that in Spitalfields, is in Greenman's Lane, Lower Road, Islington. Alderman Waterlow's company are expending 3200*l*. in improved dwellings in Redcross Street, Southwark, for 16 families, with two shops and basements, at a gross rental of 440*l*.; 7200*l*. in Brewhouse Lane, Wapping, for 60 families, at a rental of 850*l*.; 14,200*l*. in Old St. Pancras Road, for 100 families, at a rental of 1602*l*.; and 3230*l*. in King's Cross Road, Bagnigge Wells, for 20 families, at a rental of 382*l*.

INCREASING VALUE OF LAND IN THE CITY.—We stated last week that Weigh House Chapel, on Fish Street Hill, is about to be removed to make way for one of the new railways. As a proof of the present value of land in the city it is said that the railway company has offered for the small plot of freehold on which the chapel stands, and which 30 years ago cost 7000*l*., the sum of 95,000*l*., besides compensating Mr. Binney, the minister. A building has been erected in the present year in the neighbourhood of the Mansion House, on ground bought for the purpose, at the enormous rate of 1,800,000*l*. the statute acre; and two freehold houses in Old Broad Street, near Gresham House, were sold by auction on Thursday last for 23,500*l*., being at the rate of 300,000*l*. per acre, or 560*l*. per foot frontage. It is also said that the Grocers' Company have offered 40,000*l*. for the little chapel in the Poultry belonging to a congregation of Independents.

FORESTERS' FETE AT THE CRYSTAL PALACE.—The great annual *fête* of the Foresters took place on Tuesday at the Crystal Palace, but, owing to the wet weather, was not nearly so numerously attended as on preceding occasions, when from 70,000 to 80,000 persons have been present. In spite of the continuous rain, however, at an early hour in the morning the roads leading to Sydenham were alive with four-horse vans, filled with Foresters and their friends, while the railway stations were crowded. About 46,000 persons attended, a large proportion of them wearing the Robin Hood costume, while nearly all wore the regalia of the order. The amusements on account of the rain were necessarily confined to the interior of the building until late in the afternoon, when some games took place on the lawn. The weather was too stormy to allow Mr. Coxwell to make his promised balloon ascent. To accommodate the many thousands of visitors who had purchased tickets beforehand, and were unable to make use of them, the directors of the Palace agreed to allow the tickets for Tuesday to be made available on Monday next, when the *fête* of the London Gymnastic Society, the French excursion, Mr. Coxwell's balloon ascent, and other entertainments will take place.

THUNDERSTORM.—On Sunday morning, between 9 and 10 o'clock, London was visited by a storm of thunder, lightning, and rain, which, with a short intermission, lasted until 1 o'clock. A house in Bell's Court, Golden Lane, and another at Wandsworth, were struck by lightning. A barge moored off Vauxhall was also struck, the stern was split open, and a man on board injured. At Chelsea, Richmond, Isleworth, and other places, numbers of trees were injured, but it has not been ascertained that any serious damage was sustained.

THE INCENDIARY FIRE AT PADDINGTON.—On Friday the police reported that they could obtain no further evidence to implicate the servant girl in the recent fire at the Artesian Saw Mills, and the girl was accordingly discharged.

THE MURDER OF MR. BRIGGS.—On Sunday afternoon a report was received from Inspector Tanner, the head of the detective police at Scotland Yard, stating that he had safely arrived by the City of Manchester at New York, in company with Sergeant Clarke, of the detective police, and the two witnesses who went out for the purpose of identifying the supposed murderer Müller. Chief Inspector Tanner, on his arrival in New York, put himself in communication with the Government and police authorities, and received from them every possible assistance. The most complete arrangements have been made to effect Müller's capture on the arrival of the Victoria, a special steam vessel being kept in readiness, with steam up night and day, to start the moment the Victoria is sighted, in order that the pilot-boat may be anticipated, lest by any means information should reach Müller that the officers of justice are on his track—it being feared that he might in desperation seek by suicide to evade justice. Inspector Kerrissey, who followed with the second warrant in the City of Cork steamer, had arrived out safely. The adjourned inquest was resumed on Monday, when several of the acquaintances and countrymen of *Müller* were examined, and gave their evidence as to his showing them a chain and a ring, and selling the pawn-ticket to one of them. On the whole, however, no new light was thrown upon the case. The inquest was further adjourned till the 8th of September, by which time it is expected that Müller himself, as well as the witnesses who have gone to New York to identify him, will be present.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, August 20, were 1451. The average number in the corresponding week of the ten years 1854-63, corrected for increase of population was 1364. The present return is therefore 87 above the average. During the week there were of 1048 boys and 903 girls, in all 1951 children, registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 1842.

Provincial.

ABERYSTWITH.—On Friday the Montgomeryshire and Cardiganshire Volunteers assembled in this town for battalion drill. A spirit of rivalry has for some time existed between the 2d and 3d (Welsh) companies, and as the Montgomeryshire men were marching to the railway station on their return to some members of these companies threw down their rifles and commenced a fight. With some difficulty they were separated, and Captain Johns, of the 3d company, succeeded in getting his men into line. Having done so, with sword in hand he approached the offenders and administered a sharp rebuke. He was very badly received, a number of persons in both companies rushing out of the ranks and beginning another struggle, in which Captain Johns was struck over the eye, drawing blood. Major Drew interposed and contrived to quell the disturbance. The greatest excitement prevailed in the town, and it was with a feeling of relief that the inhabitants saw the volunteers take their departure.

BANBURY.—On Sunday morning Mr. Gulliver, of Swalcliffe Paddocks, near this town, the well-known breeder of racing stock, sustained a severe loss by the thunder storm. The lightning killed four valuable colts and a brood mare, and seriously injured some other animals. One mare is paralysed, and other is still suffering from partial paralysis, the lightning having apparently affected their brains. Redemption, the well-known brood mare, whose stock has always commanded high prices, has sustained a fracture of the near fore-leg, and to add to the misfortune, she is so

engine at the time the driver, stoker, pilot, and the son of Mr. Walker, of the Barton station. Seeing that destruction was almost inevitable, the driver jumped off and escaped. The stoker followed, but was seriously injured about the head and face. Mr. Walker placed his foot on the step of the engine, and was hurled down the bank with little injury to himself, though his clothes were torn into shreds. The pilot followed him, but was hurled into the river among large stones, and was much injured. The collision which immediately followed was terrific. The engine dashed several of the coal trucks into fragments, and mounting the remains of the break van of the coal train, stood on end. The tender also turned over on end, and the break van was smashed to atoms. A saloon carriage and a third-class carriage were also broken to pieces. The passengers, of whom there were nearly 100, were almost all injured, but no lives were lost, and it is hoped that death will not ensue from any of the injuries received. Those most seriously hurt are Mr. Fairburn, of Bristol, who sustained a concussion of the brain; Mr. Beavan, of Hereford; Mr. Shaw, of Holmer; Miss Emma Gee, of Worcester (with serious injuries); Mr. Choute, of Worcester; Mrs. Hartland, of Ledbury; Mr. Beavan, of Grosmont; Mrs. Hapton, of Hereford; Miss Rosa Thomson, of Malvern; Mr. C. F. Jones and Mrs. Steward, of Worcester. Six medical men were without delay summoned to the assistance of the injured persons, who were all sent to their homes, except the guard and stoker, who were conveyed to Hereford Infirmary. The passengers complain of the treatment received from the railway officials at Pontypool Road and especially of the apathy of the managers of the refreshment room there, who refused to supply warm water for the injured when required. Complaint is also made that no arrangements had been made at Worcester for the removal of the injured persons when they arrived by train at 1 o'clock in the morning. The loss to the company will be very serious.

Accident in the Liverpool Tunnel.—An accident, which might have been attended with fatal results, took place in the Waterloo tunnel on the London and North-Western Railway at Liverpool, on Monday night. Eleven workmen were proceeding with a truck through the tunnel to commence work on the line, when the truck came in collision with a goods waggon which had been left standing in the tunnel, without any light to warn advancing trains. The men were thrown off the truck and severely injured, but they are all likely to recover.

Law.

Central Criminal Court.—*Threatening Letters.*—*Robert Ward*, a respectably-dressed man of 50, was indicted for feloniously sending a letter to Edward Lloyd, threatening to murder him. The prosecutor is a draper in Shoreditch, employing upwards of 50 persons, and the prisoner, whom he had known for about 15 years, was formerly in his service as shopwalker, but left him in 1859. On his leaving, the prosecutor put a person named Gadd, already in his employment, into the vacant place of shopwalker. About six months ago the prisoner again applied to enter his service, alleging that he had been out of a situation for 12 months, that brokers were in his house in the possession of his furniture for rent in arrear, and that he was in great distress. Upon that the prosecutor took him into his employment as a buyer, but the prisoner again left him in April last, assigning as a reason that he wanted to better his condition. The prisoner being at that time indebted to him was asked by the prosecutor to pay. He wrote some letters in reply, but did not pay, and the prosecutor at length put the matter into the hands of his solicitor, though with no better result. On the 14th July the prosecutor received by post a letter in, he believed, the handwriting of the prisoner, but feigned, It was dated on the previous day, and was as follows:—"Mr. Lloyd,—Look out for next Saturday night, you Welsh ——. I shall put a stop to your life and serve you in the same way as I did old Briggs on Saturday night; also old Gadd. Yours, the Man that Means to Murder You." Mr. Gadd and another witness were also of opinion that the latter was in the prisoner's handwriting, with which they were familiar. It was a curious incident in the case that after the receipt of that missive by the prosecutor the prisoner was arrested on suspicion of being the murderer of Mr. Briggs, but was eventually released on inquiry, the police being convinced that he was not the man. The defence was that the threatening letter was not in the handwriting of the prisoner. His counsel also suggested that it was a piece of mere vulgar abuse, and was not a threat within the meaning of the Act. He admitted, at the same time, that it was a disgraceful production if the prisoner had any ill-feeling against Mr. Lloyd, and still more disgraceful if he had no such feeling. The jury, after a few minutes' deliberation, found the prisoner guilty of sending the letter, but recommended him to mercy, believing that he did not intend to execute the threat. Mr. Lloyd, the prosecutor, also said he did not think the prisoner intended to carry his threat into execution. He had a wife with 10 or 11 children depending entirely on him. Mr. Justice Byles, in passing sentence, addressed the prisoner, and said—"The jury have found you guilty of sending and delivering a letter threatening to kill and murder your employer. I have no doubt that when you wrote that letter or caused it to be written you had no notion of the gravity of the offence. Nobody could live in this country if such letters were allowed to pass with impunity. It is a very serious offence. I was under the impression until this moment that your offence was committed after the 25th July, for after that day for offences of this description I have now by the wisdom of the Legislature no power to pronounce a sentence of penal servitude for less than five years. Fortunately for you, however, the letter in question was written on the 13th and received on that day or the 14th July, and I therefore I have power to mitigate your sentence to some extent, but that sentence must be one of penal servitude; and, giving full effect to the recommendation of the jury and of the prosecutor, as an example to others, I cannot be otherwise than pronounce a sentence of penal servitude for three years."

Obituary.

Lord Berners died on the 19th inst., at Berrington, Herefordshire, in his 44th year. He was great grandson to the celebrated Admiral whose naval career is familiar to all readers of English history, and who was created a peer for his victory over the French fleet under Count de Grasse. The late peer was born at Alresford in 1820, and succeeded his uncle in 1846. He was formerly a Lieutenant in the Scots Fusilier Guards. He married, in 1850 the second daughter of the late John Singleton, Esq., and leaves three children—two boys and a girl—the eldest of whom succeeds to the title and estates, and is now in his 7th year.

Mr. Francis Scully, formerly M.P. for Tipperary, died on the 17th inst. in Paris, where he has resided for several years past. He was born in 1820, and was the fourth son of the late Mr. James Scully, of Tipperary, and cousin german of the member for Cork. From 1847 to 1857 he represented the county of Tipperary in Parliament. He married, in 1856, the daughter of Mr. John Sadlier, Mecrat, of Gloucester Square, Hyde Park, and by whom he leaves two sons.

Mr. J. Tucker Crawford, C.B., died on the 21st ult. at Havannah, where he had been Consul-General for 22 years. He was attached to the Consulate of Lisbon for some time previous to 1822, in which year he was Acting Consul-General in Portugal. He was appointed Vice-Consul at Tampico in 1827, and Consul in 1841. He was appointed Consul General at Havannah in 1842. In recognition of his services he was made a Companion of the Bath in 1859. He was a zealous and discreet servant of the Crown, and had the respect of all with whom his official duties brought him in contact.

Dr. R. Dundas Thomson, F.R.S., died on the 17th inst. at Dunstable, where he was on a visit to his brother. He was born in 1805, and was educated at Glasgow. After practising some time in that city he came to London, and was appointed lecturer on Chemistry at St. Thomas's Hospital. He was one of the founders of the Blenheim Free Dispensary, and long acted as one of its physicians. He also became physician of the Scottish Hospital, was a Fellow of the Royal Societies of London and Edinburgh, the Medico-Chirurgical and Chemical Societies. By his death the presidency of the British Meteorological Society, and the post of medical officer of health for the large metropolitan parish of Marylebone, become vacant. Dr. Thomson, in addition to his medical labours, found time to write and edit several scientific works.

Wills.—The will of Sir Francis Edward Scott, of Great Barr Hall, Staffordshire, has been sworn under 60,000*l.*; Mr. Martin Thackeray, of Gloucester Place, formerly Vice-Provost of King's, 35,000*l.*

BIRTHS.—On the 21st inst, at Thorndon, the Lady Petre, of a son—20th inst, at 23, Grosvenor Square, the Lady Adeliza Manners, of a daughter—22d inst, at 7, Cornwall Gardens, South Kensington, the Hon. Mrs. Ryder, of a son—17th inst, at 13, Bryanston Square, the Hon Mrs. Parnell, of a son—18th inst, at Castle Forbes, Ireland, the Hon. Mrs. Forbes, of a daughter, who only survived her birth a few hours—21st inst, at 96, Lower Baggot Street, Dublin, the Hon. Mrs. Ynyr Burges, of a daughter.

MARRIAGES.—On the 23d inst, at St. John's, Paddington, James Robert Alexander Haldane-Chinnery, Esq., only son of Alexander Haldane, Esq., of the Inner Temple, and of Westbourne Terrace, barrister, to Anna Elizabeth Frances Margaretta, only child of the Rev. Sir Nicholas Chinnery, Bart., of Flintfield in the county of Cork, and Hyde Park Square—23d inst, at Titsey, Surrey, the Rev. William Champion Streatfield, second son of the late W. C. Streatfield, Esq., of Chart's Edge, Kent, to Selina, third daughter of the late William Leveson Gower, Esq., of Titsey Park, Surrey—23d inst, at Highfield, near Southampton, Commander James Irwin, R.N., to Eloisa, eldest daughter of the late Colonel Girdlestone, Bengal Army—17th inst, at Baden-Baden, Lieut. T. L. Moore, of the Confederate States Navy, to Rose Standish, second daughter of Henry Ludlam, Esq., formerly of Richmond, Virginia.

DEATHS.—On the 17th inst, at Addison Lodge, Kensington, Harriett, relict of Colonel Henry Mellish, of Hodsack Priory, Nottinghamshire, and second daughter of Maria Arabella, relict, first, of Sir Duke Giffard, Bart., and afterwards of John Henry Marquis of Lansdowne, aged 75—18th inst, at Upper Norwood, C. Lindsay, Esq., late of the Bengal Civil Service, younger son of the late Hon. Robert Lindsay, of Balcarres, aged 64—19th inst, from the effects of a fall from his horse, Charles S. Geach, Esq., of 19, Dorset Square, eldest son of the late Charles Geach, M.P. for Coventry, aged 31—15th inst, at The Hermitage, St. Cyr, Touraine, Frank Rowland, infant son of Lieutenant General Cannon, aged four months—20th inst, at Rembach House, Fifeshire, Henry Lawrence, fourth surviving son of Lieut.-Col. Clement R. Browne, late of Her Majesty's Indian Army—2th inst, at Send Grove, Surrey, Kennethina, daughter of the late A. M'Leay, Esq., formerly Colonial Secretary of New South Wales, aged 57—20th inst, at 30, Grosvenor Street, T. A Stone, Esq. F.R.C.S., aged 67—15th inst, at Grove's End, Glamorganshire, J. L. Roberts, Esq., of Gadlys Uchaf, Aberdare, M.R.C.S., and J.P. for the counties of Glamorgan and Brecon, aged 53—19th inst, at Coynant House, Mile End, the Rev. Thomas Jones B.D., rector of Allhallows, Lombard Street, aged 79—9th inst, at The Grange, Newton Purcell, the Rev. W. D Ryland, rector of Hinton-in-the Hedges, aged 66—18th inst, at Guernsey, the Rev. Henry Orme Wood, son of the late Colonel Samuel Wood, C.B., aged 48—22d inst, at Canbury Lodge, Kingston-on-Thames, Frances, second daughter of the late Rev. P. Fisher, D.D., master of the Charterhouse, and canon of Norwich Cathedral—20th inst, at Priory House, Cheltenham, Evangeline Mary, only daughter of the Rev. George Butler, vice-principal of Cheltenham College, aged 5.

Markets.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Aug. 25.

Prime Meadow Hay	80s	to 120s	Clover, old	100s to 140s
Superior do. ..	—	—	New Clover ..	— —
Inferior do. ..	75	85	Do. second cut ..	— —
New do.	60	92	Straw	28 32
Rowen	—	—		

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, Aug. 25.

Sup. Meadow Hay ..	110s	to 120s	Inferior Clover ..	110s to 120s
Inferior do.	90	100	New do.	130 135
New do.	100	114	Straw	33 36
Superior Clover ..	130	140		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Aug. 25.

Fine Meadow Hay ..	104s	to 108s	Prime 1st cut Clover	120s to 126s
Prime New Hay ..	98	102	Inferior do. do ..	110 120
Inferior do.	80	90	Prime 2d cut do. ..	115 120
Inferior	—	—	New Clover	105 110
Straw	28	32	Inferior do.	— —

COVENT GARDEN, Aug. 27.

Outdoor produce, though not yet abundant, is improving in quality; prices, however, for some things continue high. Cherries, Gooseberries, and Strawberries, are all but over. Of Grapes and Pine Apples there is still a good supply. Currants are nearly over. Foreign goods comprise Apricots, Greengage Plums, and West India Pine Apples, all of which are abundant and cheap. Kent Filberts fetch from 65s. to 65s. per 100 lbs; French kinds realise 32s. 6d. to 35s. per 100 lbs. New Walnuts are just coming into market, and will be plentiful. Potatos from Yorkshire and the midland counties are abundant. Peas are scarce. Flowers chiefly consist of Orchids, Heaths, Pelargoniums, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Apples, per sieve, 4s to 6s
Grapes, per lb., 4s to 8s	Cherries, per lb., 6d to 9d
Peaches, per doz., 6s to 10s	Oranges, per 100, 16s to 20s
Nectarines, do., 6s to 12s	Lemons, per 100, 8s to 12s
Apricots, do., 1s 6d to 2s 6d	Nuts, Barcelona, do., 16s
Gooseberries, green, p qt., 3d to 6d	— New Brazil, do., 16s.
	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 6d
Peas, p. basket, 2s 6d to 3s 6d	Garlic, per lb., 6d
Potatos, York Regents, p. ton, 60s to 80s	Lettuces, each, 1d to 2d
— Rocks, do., 45s to 55s	Endive, per score, 1s to 2s
— Flukes, 60s to 90s	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 6d to 9d	Mushrooms, p. pott., 1s to 1s 9d
Turnips, p. bunch, 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
Cucumbers, each, 4d to 1s	Herbs, per bunch, 6d

METROPOLITAN CATTLE MARKET.

MONDAY, Aug. 22.

The number of Beasts is nearly as large as on Monday last. Choice qualities are still scarce, and are readily disposed of at fully late rates. Trade is slow for inferior, and a clearance cannot be effected. The supply of Sheep and Lambs is about the same as last week. The demand for Sheep is good, and in some instances higher prices are obtained. Trade is still bad for Lambs. From Germany and Holland there are 2400 Beasts, 1065 Sheep, 335 Calves, and 50 Pigs; from Spain, 106 Beasts; from Ireland, 280; and 2780 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools	4	8	— 4	10
Best Short-horns	4	6	— 4	10	Do. Shorn			—	..
2d quality Beasts	2	8	— 3	6	Ewes & 2d quality	4	0	— 4	6
Best Downs and Half-breds ..	5	2	— 5	6	Do. Shorn			—	..
Do. Shorn			—	..	Lambs	5	4	— 6	4
					Calves	3	10	— 5	0
					Pigs ..	3	2	— 4	4

Beasts, 6180; Sheep and Lambs, 29,270; Calves, 363; Pigs, 470.

THURSDAY, Aug. 25.

We have to-day a larger supply of Beasts than on Thursday last, and trade more cheerful, at fully the same prices as on Monday. Of Sheep and Lambs the supply is not so large as on this day week, but the demand is slow at about Monday's values. Best descriptions of Calves made 2d. per stone advance. Pork trade is also about 2d. per stone higher. The foreign arrivals are 640 Beasts, 2480 Sheep, and 500 Calves from Germany and Holland.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	0	Best Long-wools	4	8	— 4	10
Best Short-horns	4	6	— 4	10	Do. Shorn			—	..
2d quality Beasts	2	8	— 3	6	Ewes & 2d quality	4	0	— 4	4
Best Downs and Half-breds ..	5	2	— 5	6	Do. Shorn			—	..
Do. Shorn			—	..	Lambs	5	2	— 6	4
					Calves	4	0	— 5	0
					Pigs	3	4	— 4	6

Beasts, 1820; Sheep and Lambs, 9260; Calves, 595; Pigs, 160; Milch Cows, 110.

MARK LANE.—Monday, Aug. 22.

There was a fair supply of Wheat from Essex and Kent to this morning's market, consisting mostly of the new crop, which was all cleared at the rates of this day se'nnight. In foreign very little business was transacted, and we do not alter our quotations. Barley, Beans, and Peas, brought last week's rates, but Oats were 6d. per qr. dearer. Flour was unaltered in value. There were about 400 qrs. of new White Mustard Seed at market, quality mostly good, but being held beyond the views of the trade, no sales had taken place at a late hour.

Per Imperial Quarter.	s.	s.		s.	s.
Wheat, Essex, Kent, & Suffolk .. White	42	—46	Red	40	—42
— — fine selected runs .. ditto	44	—48	Red	41	—44
— — Talavera	48	—54			
— Norfolk	—		Red	—	
— Foreign	38	—52			
Barley, grind. & dist, —s to —s .. Chev	34	—36	Malting ..	32	—34
— Foreign .. grinding and distilling	22	—28	Malting ..	28	—31
Oats, Essex and Suffolk	20	—22			
— Scotch and Lincolnshire—Potato	20	—24	Feed	20	—22
— Irish .....Potato	19	—22	Feed	—	
— Foreign .....Poland and Brew	20	—23	Feed	18	—21
Rye	31	—33	Foreign ..	—	
Rye-meal, Foreign	—				
Beans, Mazagan ....33s to 35s .. Tick	34	—36	Harrow ..	34	—36
— Pigeon .... 37s to 40s .. Winds	—		Longpod	—	
— Foreign .....Small	34	—38	Egyptian	33	—34
Peas, White, Essex and Kent .. Boilers	36	—38	Suffolk ..	38	—40
— Maple .... —s to —s .... Grey	—		Foreign ..	34	—40
Maize .....White	—		Yellow ..	—	
Flour, best marks delivered .. per sack	35	—40			
— 2d do .....ditto	28	—34	Country .	28	—34
— Foreign ..... per barrel	18	—25	Per sack	32	—35

ARRIVALS LAST WEEK.

	Wheat.	Barley.	Malt.	Oats.	Beans.	Peas.	Linseed.
English and	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs	Qrs.
Railway	3036	139	11,925	997	374	510	—
Scotch .	—	—	—	165	—	—	—
Irish ..	—	—	28	2844	—	—	—
Foreign	5421	2962	—	62890	—	46	—

Flour—English, including Railways, 9,546 sks.; Scotch, —. Irish, — sks; Foreign, 3,845 brls, — sacks

FRIDAY, Aug. 26.

The weather during the past week has been less settled than of late. Some quantity of rain fell between Sunday and Tuesday afternoon, which does not appear to have been general; since then it has been fine. The Wheat trade throughout the country has shown more tone, and prices have been maintained, but business was not extensive; Liverpool and some of the Scotch markets quote a slight improvement in the value of Wheat. Flour remains a slow sale. Spring Corn of all descriptions sells readily at the last advance, the consumption being large. Since Friday last 24 vessels have

been reported off the coast. A moderate business has been done in floating cargoes; there was a little more inquiry for Wheat, and prices for this article have recovered a trifle. Barley was less inquired after. Paris, Aug. 25.—The trade is very quiet, at a further decline of about 1s. per 280 lbs The six marks for delivery this month are quoted equal to 31s. 3d. per 280 lbs. The present stock of Flour is estimated at 29,550 cwts. The transactions in Wheat have been very limited, and prices have declined 6d. to 1s. per 480 lbs. The arrivals of grain and Flour, both English and foreign, during the week have been short, with the exception of Oats, of which we have a fair supply from abroad There was a moderate attendance at market this morning; the little English Wheat on offer was taken at Monday's quotations, and the few sales made of foreign were upon that day's terms. Spring corn of all descriptions was firm at late rates.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1550 qrs.	130 qrs.	1960 qrs.	1130 sks.
Irish	—	—	1220	— ,,
				260 ,,
Foreign ..	1210 ,,	570	31,480 ,,	1340 brls

LIVERPOOL, Aug. 23.—With a very fair attendance of both local and country buyers at this morning's market, Wheat has found rather a better inquiry than of late, and some descriptions, such as amber and spring, may be quoted 1d. dearer than on Friday last. Flour exhibits no improvement either in demand or value. Indian Corn is held pretty firmly, but the demand is quite in retail at about previous rates. Oats and Oatmeal steady. Beans scarce and fully as dear. Peas and Barley in good consumptive request at former prices. The market closes with some degree of firmness.

FRIDAY, Aug. 26.—The market is moderately attended. Wheat in fair demand at Tuesday's prices. Flour quiet, but unchanged in value. Indian Corn more plentifully offered, and 30s. is the top price for mixed American. Beans steady. Oats and Oatmeal quiet, but prices keep steady.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
July 16	42s 6d	27s10d	21s 7d	31s 5d	36s11d	34s 3d
— 23	43 0	27 3	21 0	34 0	37 8	35 7
— 30	44 0	27 7	22 4	30 2	38 4	35 11
Aug. 6	44 1	28 3	22 10	33 0	39 2	35 3
— 13	43 6	28 1	22 0	32 9	39 8	36 9
— 20	42 7	28 7	22 11	31 6	40 9	35 5
Agg. Aver.	43 3	27 11	21 1	32 2	38 9	35 6

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	July 16.	July 23.	July 30.	Aug. 6.	Aug. 13.	Aug. 20.
44s 1d	..	..	..	..	..	..
44 0	..	..	..	..	..	..
43 6	..	..	..	..	..	..
43 0	..	..	..	..	..	..
42 7	..	..	..	..	..	..
42 6	..	..	..	..	..	..

NEWGATE.—Aug. 26.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 14s. ,,

Pork, 4s. 4d. to 5s. 0d. per 8 lbs.

BRITISH WOOLS.—LONDON, Aug. 25.

Our business continues in a healthy state, and fair prices are paid for any articles required for immediate use. Stocks are very short for the season.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	2	2	to	2	3	Leicest. Hoggs ..	2	5	to	2	6
Half-bred ditto ..	2	6	—	2	7	Ditto Wethers ..	2	1	—	2	2
Down Ewes ..	2	0	—	2	1	Combing Skins	1	11	—	2	2
Kent Fleeces ..	2	2½	—	2	3½	Flannel Wool ..	1	0	—	1	9
						Blanket ditto ..	0	6	—	0	9

COAL MARKET.—Aug. 24.

Byass's Bebside West Hartley, 18s. 3d.; Cowpen Hartley, 18s.; Holywell Main, 15s.; Lambert's West Hartley, 18s.; Tanfield Moor Butes, 13s. 6d.; Walker Primrose, 13s. 3d.; Walls End Burn, 17s.; Walls End Wharncliffe, 17s. 3d.; Eden Main, 17s. 6d.; Walls End Bell, 16s 9d.; Walls End Braddylls Hetton, 17s. 9d.; Walls End Haswell, 19s.; Walls End Hetton, 19s.; Walls End Russel's Hetton, 17s. 6d.; Walls End South Hetton, 19s.; Walls End Tunstall, 16s. 9d.; Walls End Caradoc, 18s. 3d.; Walls End Hartlepool, 18s. 9d.; Walls End Heugh Hall, 18s.; Walls End Kelloe, 17s. 9d.; Walls End East Hartlepool, 18s. 9d.; Walls End South Hartlepool, 17s. 9d.; Walls End South Kelloe, 18s.—Ships at market, 84.

HOPS.—BOROUGH MARKET, FRIDAY, Aug. 26.

Messrs. Pattenden & Smith report a steady demand for the few 1863's left on hand at firm prices. About 150 pockets of the new growth have arrived at market, all from Kent, which have realised from 7l. to 9l. per cwt., the quality being very superior.

AGRICULTURAL PUPILS.—A Farmer near Reading, Berkshire, wishes for a PUPIL who will have every facility for learning practical Farming, with the comforts of a good home. Unexceptionable references given and required.—Y. Z., Mr. Blewett, Chemist, Reading.

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WANTED, a MARKET GARDENER for the Vegetable Garden at the Sussex Lunatic Asylum. Wages 17s., with House, Coals, Vegetables, and Milk.—Apply by letter, stating experience, age, and if married, to Dr. ROBERTSON, Hayward's Heath, Sussex.

To Foresters or Woodrangers.

WANTED IMMEDIATELY, an active Man, well acquainted with the Management of Woods and Plantations, to undertake the duties of FORESTER or WOODRANGER on a gentleman's property A thorough knowledge of Planting indispensable.—Applications to be made to Messrs. DREW & SONS, Land Agents, 9, Queen Street, Exeter.—Exeter, Aug. 27

WANTED, a YOUNG MAN, from 18 to 20 years of age, strong, active, and willing, to assist in the Garden generally.—Apply, stating height, wages expected, and length of character to W. YOUNG, The Gardens, West Hill House, Highgate, Middlesex, N.

WANTED, for the Country, at Michaelmas, a married MAN and his WIFE, without incumbrance. The Man must understand the management of Greenhouse Plants, Kitchen and Flower Garden, milk one cow, look after a little Stock, and a Pony and Chaise occasionally. The Wife to take charge of the House, to Cook and attend on two persons occasionally, to reside in the house, and board themselves. Wages one guinea a week.—Apply by letter to A. B., No. 4, Bishopsgate Street Without, London, E.C.

WANTED, as UNDER GARDENER, a steady active Man, without incumbrance; who understands the Kitchen and Flower Garden, and whose Wife is a good Laundress, and where a House and all things found for the Laundry Work. Character must bear strict investigation —A. B., 85, Wood Street, Cheapside.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, OFFICES, or any place of Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper. Can wait upon a single gentleman, and has excellent references.—HARRIET B., 2, Northumberland Street, Marylebone, W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS.—B. S. WILLIAMS is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

A FIRST-RATE GROWER of ORCHIDS, FERNS, FRUITS, and CHOICE PLANTS of all kinds, with a thorough knowledge of Gardening in all its branches, offers his services to any nobleman or gentleman having or about to make an extensive Garden or Plant-growing Establishment. In addition to an acquaintance with some of the best public and private gardens in the neighbourhood of London, he has lately been for several years Superintendent of the unique Gardens at Rockville, Dublin, and of the erection of the great Fernery &c. there. Advertiser can furnish Plans for, and Superintend the Erection of Horticultural Buildings of all sorts, in the best and most economical manner.—J. O. B., 5, Victoria Grove, Bayswater, London, W.

GARDENER (HEAD).—Middle-aged, single, Scotch; has a practical knowledge of his profession in all its branches; was 13 years in his last situation, where he was very successful in growing Grapes and Wall Fruit.—WILLIAM MILLER, 30, Southampton Street, Strand, W.C.

GARDENER (HEAD).—Age 32, single; perfectly understands his profession in all its various branches. Eighteen years' experience.—A. B., 4, Crompton Street, Maida Hill, London, W.

GARDENER (HEAD).—Single; perfectly proficient in every department. Best references.—W. T. K., Messrs. Glendinning, Chiswick.

GARDENER (HEAD).—Age 30, single; fully competent in every branch of his profession. Best references.—P. G., Mr. Milnes', Buckland, Faringdon, Berks.

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GARDENER (HEAD).—Age 28, married; thoroughly understands Forcing, and Flower and Kitchen Gardening. Can have seven years' character from last employer.—W. C., Weybridge Station, Surrey.

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GARDENER (HEAD), age 30, single.—S. HATHERLY begs to offer his services to any nobleman or gentleman requiring a thoroughly practical man.—Northerwood, Lyndhurst, Hants.

GARDENER (HEAD).—Age 40, married; practical; understands the Management of Vines, Pines, Peaches, and other Fruits, Stove and Greenhouse Plants, Orchids, and the Kitchen and Flower Gardens, also the Forcing of Fruits, Flowers, and Vegetables, and Landscape Gardening.—B. 2, J. Cuthbert, 12, Clayton Square, Liverpool.

GARDENER (HEAD), to any nobleman or gentleman.—Married, no incumbrance; first-class industrious Gardener; fully competent in every branch of his profession, having had great experience. A good testimonial from the gentleman he is now leaving of 13 years' service, and leaving in consequence of an alteration in the establishment.—A. B., Post Office, Wokingham, Berks.

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The Gardeners' Chronicle Newspaper.

SATURDAY, SEPTEMBER 3, 1864.

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News of the Week.

THE accounts from the United States, though still undecisive, continue to show unabated energy in the prosecution of the campaign. During the night of the 13th ult., General GRANT transferred two of his corps to the north bank of the James River, and obtained a position within six miles of Richmond. After this operation he occupied Dutch Gap, defeating a force of Confederates, but the latter having subsequently been reinforced drove back the Federals, whose loss is said to have been upwards of 1000 men. It was at first supposed that this movement was intended to protect the engineering operations at Dutch Gap, where General BUTLER is constructing a canal to enable the Federal gun-boats to pass up the James River without encountering the formidable batteries below Drury's Bluff; but the real object of the movement has not yet been developed. On the 19th, the 5th corps of GRANT'S army took up a position on the Weldon Railroad, where they were surprised by the Confederates and driven back with the loss of 3000 men. The Federals were subsequently reinforced and recovered the lost ground, but as the fighting continued, General GRANT is said to have recalled his troops from the north bank of the James River. Meanwhile General SHERIDAN, who had moved up the Shenandoah Valley to check the Confederate movements in that quarter under General EARLY, was obliged by the arrival of Confederate reinforcements to retreat to Winchester, where he was attacked and routed by Gen. BRECKENRIDGE. It is said that he subsequently fled to Harper's Ferry, and that his waggon train crossed the Potomac on the evening of the 19th. This reverse, coupled with General EARLY'S advance northward, has created much excitement in Maryland, which had already been alarmed by the report that General LEE was making preparations for another invasion of the North in force. From Atlanta we learn that General SHERMAN was rapidly completing his preparations for the bombardment of the city, but General HOOD was known to have received heavy reinforcements, and there were indications that he was likely to assume the offensive. The Confederate General WHEELER attacked the town of Dalton on the 14th, and two days afterwards had a severe engagement with General STEADMAN at Graysville, in which the latter was wounded, but the result of the action is not stated. General BEAUREGARD with 20,000 men has arrived at Atlanta; but it is not known whether his movements are for the reinforcement of HOOD, or for the defence of Mobile. Despatches from Mobile announce that a battle between Fort Morgan and the Federal fleet had been in progress for several days, and that the Confederate commander had refused Admiral FARRAGUT'S summons to surrender, stating that he had the requisite forces as well as provisions for six months, and would hold out to the last extremity. A great Peace Convention has been held at Syracuse, at which resolutions were adopted denouncing Mr. LINCOLN, and appealing to the people to unite in efforts to bring about an armistice and a convention of the States. A similar meeting has been held at Springfield, in Illinois, and several of the Northern journals confidently predict that the peace delegates will control the Chicago Convention. The Confederate cruiser Tallahassee has been ordered away from Halifax by Admiral HOPE, and has sailed in an easterly direction, pursued by two Federal gunboats.

The peace Conference at Vienna, which was to have resumed its sittings on Monday, has been again adjourned, in consequence, it is supposed, of the announcement of the Danish Ministers to the Folkething that their Plenipotentiaries would be instructed to make an effort to recover the north of Schleswig for Denmark. The Prussian official journals refer to this announcement in terms which show that the German Powers will make no concessions, and they significantly add that until the definitive conclusion of peace the question of the withdrawal of the Prussian troops from Jutland and the Duchies cannot even be raised as a subject of discussion.

Accounts from Geneva state that the Federal Council have declared the election of M. CHENEVIERE to be valid. Tranquillity however is not yet restored. The people have not resumed their occupations, and fresh arrests have been made among the adherents of both parties, M. FONTANEL, the former State Councillor, being among the number. In consequence of the excited state of the city, the Federal Commissioners have ordered the postponement of the September *fêtes*, and the removal of the arsenal from St. Gervais, while a third battalion has been despatched from Berne in support of their authority.

Home News.

DEPARTURE OF THE QUEEN FOR SCOTLAND.—The Queen, accompanied by the Princess Helena, Princess Louisa, Princess Beatrice, and Prince Leopold, with the Duke and Duchess of Saxe Coburg, left Windsor Castle on Monday evening for Balmoral. The Royal party travelled by the Great Western to Bushbury Junction, where they joined the London and North-Western, and proceeded by way of Carlisle into Scotland. On arriving at Perth on Tuesday morning her Majesty was present at the uncovering of the monument to the Prince Consort which has just been erected in that city. The Queen left Perth a few minutes after eleven, and on reaching Aberdeen proceeded by the Deeside Railway to Aboyne, and posted thence to Balmoral, where the Royal party arrived at half-past four in the afternoon. The Prince and Princess of Wales received the Queen at the Castle, and dined with her Majesty in the evening.

THE COURT AT WINDSOR.—On Friday morning, being the anniversary of the birthday of the Prince Consort, the Queen and all the Royal family went early to Frogmore. The Queen afterwards drove in the grounds, accompanied by the Princess Louis of Hesse, Princess Helena and Princess Louisa. Prince Louis of Hesse and Prince Elimar of Oldenburg took a carriage drive. The Grand Duchess Marie of Russia visited the Queen and Princess Louis of Hesse. Prince Elimar of Oldenburg left the Castle. In the afternoon Princess Helena and Princess Louisa drove out in a carriage and four. On Saturday morning the Queen, accompanied by Princess Louis of Hesse, Princess Helena, Princess Louisa, and Prince Louis of Hesse, drove in the grounds of the Castle. The Prince and Princess Louis of Hesse took leave of her Majesty, and with the infant Princess Victoria left the Castle for Gravesend, where they embarked in the Royal yacht Victoria and Albert for the Continent. The Duke and Duchess of Montpensier and Princess Marie Amélie visited the Queen and remained to luncheon. In the afternoon the Queen held a Privy Council. Earl Granville, the Duke of Somerset, and Lord Palmerston had audiences of the Queen. The Duke and Duchess of Saxe-Coburg arrived at the Castle, on a visit to her Majesty. Princess Helena met the Duke and Duchess at the station of the South-Western Railway, and accompanied their Royal Highnesses to the Castle. Earl Spencer arrived on a visit. On Sunday morning the Queen, the Princess Helena, Princess Louisa, Princess Beatrice, and Prince Leopold and the Duke and Duchess of Saxe Coburg attended Divine service in the private chapel. The Hon. and Rev. C. L. Courtenay officiated.

THE PRINCE AND PRINCESS OF WALES will leave Abergeldie this morning for Denmark. Their Royal Highnesses will travel by the Deeside Railway to Ferryhill, and proceed thence by special train to Dundee, where they will embark in the Royal yacht Osborne for Copenhagen, accompanied by the Earl and Countess Spencer, and the Countess De Grey and Ripon. The Aurora, screw frigate, Captain Sir Francis M'Clintock, will escort their Royal Highnesses to the Baltic. It is said that after their visit to Copenhagen the Prince and Princess will visit Stockholm, St. Petersburg, and Paris. On Thursday week the Prince was successful in bringing down two stags in the Abergeldie woods while on a deer-stalking expedition. In the afternoon the Princess and the Princess Mary of Cambridge walked up to the wood to see the stags. In the evening the animals were shown in front of the castle, and there was a torchlight dance in the open air to the music of the bagpipes. Friday being the anniversary of the birthday of the Prince Consort, the tenantry were invited to meet the Prince of Wales at the obelisk erected by them to the memory of his Royal Highness. Here they were each served with a glass of spirits, which was drunk in silence. In the afternoon his Royal Highness went to Glengelder, deer-stalking, but was not so successful as on the previous day. Princess Mary of Cambridge left Abergeldie for London, the Princess of Wales accompanying her as far as Aboyne. Her Royal Highness was joined on her way south by the Duke of Cambridge, who had been on a visit to the Earl of Dalhousie. On Saturday, the Prince and Princess took a long drive to Donside, passing by Corndavon Lodge and Holmsdale to Lochbuig. Their Royal Highnesses then took ponies and rode by Larmagauld, to Sir Charles Forbes's shooting quarters at Corgarff. At this point carriages were in waiting, and their Royal Highnesses proceeded down Donside by Skellater, Invernan, and Candacraig to Castle Newe, where they took luncheon with Mr. and Mrs. Charles Forbes. After a stroll through the grounds around the castle, the Royal party started for home, and passing Blelack and Ballater, reached Abergeldie in the evening. On Sunday the Prince and Princess attended Divine service in the parish church of

Crathie. The Rev. Dr. Norman M'Leod, of Glasgow, officiated.

DEPARTURE OF PRINCE AND PRINCESS LOUIS OF HESSE.—On Saturday afternoon their Royal Highnesses Prince and Princess Louis of Hesse, with their infant daughter, Princess Victoria, left Windsor Castle for Gravesend, where they embarked in the Royal yacht Victoria and Albert for Flushing. At that port the Royal travellers embarked in the Alberta, and proceeded to Dordrecht. The embarcation at Gravesend was witnessed by crowds of spectators, and the Coastguard cutters and other vessels were dressed in colours. Professor Priestley, of King's College, has been appointed to attend the Princess at Darmstadt in her approaching confinement, which is expected to take place about the end of next month.

THE DUKE AND DUCHESS OF SAXE-COBURG landed at Dover on Saturday afternoon, and proceeded to Windsor on a visit to the Queen by the South-Eastern and South-Western Railways. Their Royal Highnesses accompanied her Majesty to Balmoral on Monday evening.

THE CROWN PRINCESS OF PRUSSIA.—Sir Charles Locock has been commissioned by the Queen to attend upon the Crown Princess of Prussia at her approaching confinement. He arrived at Berlin on Monday evening, and has since proceeded to Potsdam, where he will reside in the new palace of the Crown Prince and Princess.

PARLIAMENTARY MOVEMENTS.—At the Privy Council at Windsor on Saturday it was ordered that Parliament, which stood prorogued to Thursday, the 13th October, be further prorogued to Friday, the 11th November.

THE NAVY.—The recent Admiralty regulations by which the white ensign becomes the flag of the royal navy, the blue the flag of the royal naval reserve, and the red the flag of the mercantile marine, came into operation on the 1st inst. The white ensign was accordingly hoisted on Thursday by all her Majesty's ships in the home ports.

Foreign.

FRANCE.—The Crown Prince Humbert of Italy arrived at the Palais Royal on Saturday, and was met at the railway station by his sister, Princess Clotilde, and Prince Napoleon. On Sunday he went to St. Cloud, where the Emperor and Empress had a dinner in his honour, at which the Princess Matilde was present. On Monday the Emperor, accompanied by the Prince Imperial, Prince Humbert, and Prince Napoleon, left St. Cloud for the camp at Châlons, where they were joined in the evening by General von Roon, the Prussian Minister of War, who had been invited by the Emperor to visit the camp. Prince Humbert will remain at Châlons 11 days, and afterwards return with the Emperor to Paris. Prince Murat and his family have embarked at Toulon in the steam frigate Cacique, on a visit to the Holy Land. An Imperial decree was signed at Châlons on Thursday appointing the Duke of Magenta Governor of Algeria. Another decree provides for the reorganisation of the administrative staff of the colony. Senator Vaisse died suddenly at Lyons on the 29th ult. His abilities and firmness rendered valuable service to the Emperor after the *coup d'état*, and he has since 1853 administered with great tact the affairs of Lyons, the most revolutionary city in France. The *Bulletin des Lois* publishes two decrees, the first maintaining and confirming in favour of the Duke of Hamilton, the hereditary title of Duke de Châtelherault, created by Henry II., King of France, in favour of James Hamilton, Earl of Arran; the second conceding to Count de Talleyrand Périgord, and his direct legitimate descendants, in the male line by order of primogeniture, the title of Duke de Montmorency, which became extinct in the person of his maternal uncle, who died without issue in 1862. The recent speech of Count de Persigny is still the subject of much private discussion, but the papers generally, in the present condition of the press, touch but lightly on his designation of the Emperor as "the founder of liberty in France," and for the most part confine their criticisms to his expositions of the history of England. In former speeches he discussed the origin of the House of Hanover. In this last speech he dealt with the Conquest, and endeavoured to show that up to the present day the Anglo Saxon race labours under the yoke of the Norman conquerors, who exclusively monopolise power and freedom. The following passage will suffice to give an idea of the originality of his views on the subject of English liberty:—

"There is in England a whole political class, scattered all over the surface of the country, which being a traditional heir to the Conquest, possesses, since the days of William the Conqueror, all existing means of influence, which administers the counties, which renders justice, which collects taxes, secures public order; and, in a word, enjoys all the prerogatives which, in France, belong to the administrative hierarchy."

The *Opinion National* publishes an Irish manifesto, signed by The O'Donoghue, M.P., and Mr. John Martin, in the name of the Irish National League. It revives the numerous grievances of Ireland, and deplores the condition to which the country has been reduced under English misrule. The following extracts will indicate the general tone of the document:—

"The ruin of the national independence has brought about in Ireland, as everywhere else, the decay of public spirit, of genius, of the arts, of literature and industry. Moreover, the foreign government which is imposed upon us is the source of abuses and suffering to be seen nowhere but in Ireland. Ireland during the last 63 years, even in those called the famine years, has always produced more corn, more cattle, and other alimentary substances, than its whole population could consume. However, like Hindostan, she is subject to the visitation of famine, and whilst officially she is termed an integral part of the richest of all empires, her population is the poorest in Christendom . . . Ireland, which under the English government is the poorest country in Europe, has, with a few insignificant exceptions, to bear the same imposts as England, the richest country of Europe. The proportion of financial duties which weigh upon the two countries is partly shown in a parliamentary report for the year 1863. This report shows that the amount of imposts which Great Britain contributes to the revenues of the British empire is upon the basis of 20 per cent. for that portion of the United Kingdom, whilst for Ireland the proportion is 31¼ per cent. After having provided for all her local expenses, Ireland is still obliged to send annually to England, as the amount of the imposts due from her, three million pounds sterling for the expenses of the empire, that is to say, of England. About five million pounds sterling—the revenues of Irish estates—are sent annually to England to the proprietors of those estates who reside there, and of which nothing returns to Ireland. Since the 'Union' England, having seized upon our industry and our commerce, receives from Ireland considerable sums in exchange for the manufactures which she exports into the country, and which would be all manufactured in Ireland were Ireland self-governed. . . . . It is said we have a free press. It is true that in ordinary times the English Government tolerates much from us in this respect, through a haughty contempt of a people disarmed, disorganised, and which has virtually lost its franchise. When, however, as in 1848, there is danger that the press will provoke the Irish people to some manly effort, editors of journals can be and are condemned as guilty of treason by means of packed juries. They are loaded with chains and transported for having expressed the sentiments which five-sixths of their fellow-citizens entertain. We will not add any commentary to this simple exposition. But we profit by this occasion to congratulate the French people on being subject to none of the oppressions and calamities we have specified. May Divine Providence ever preserve to France her national liberty and power, and spare her the sufferings which afflict Ireland beneath a government adorned with the name of a free constitution."

The trial of Latour and Audouy for the murder of M. Bugad de Lassalle, of the Chateau de Baillard, and his three servants, terminated on Saturday at St. Foix, in the Basses Pyrenées. The trial lasted more than a week. There was strong presumption against both prisoners, one of whom was a baker, and the other a mountebank, but little that in England would be called evidence. The most important points against Latour were, that he had been dodging about the chateau some time before the crime was committed, and that in the bed of one of the victims was found a pocket comb, which was believed to be his. A number of witnesses were examined as to this comb. Many said that they had seen one like it in Latour's possession, but could not swear to its identity. It was alleged that after the murder he had been in possession of large sums of money, but it was not denied that he had engaged in smuggling. The charges against Audouy rested on two points—one, that he had announced the commission of the crime at Foix, 25 miles off, at a time when it had not been discovered in the neighbourhood; and had, moreover, been seen on the road. The second point was that he had asked a laundress to wash some of his clothes which were soaked in blood. The public prosecutor assumed that Latour had plotted the crime, and retained Audouy, whose strength was immense, to assist him in carrying it out. The Court found them both guilty. Latour was condemned to death, and Audouy to hard labour for life. On hearing the sentence Latour shouted "Vive l'Empereur!" proclaimed his innocence, and called down "everlasting infamy" on the judges and jury. Complaints have been general all through France of the effects of the excessive drought. The grass has been literally burnt up, the supply of water has been running short in the wells and springs, and man and beast have been alike suffering. On Wednesday the 24th ult. the inhabitants of Chalons-sur-Saone were much astonished to see the sun, which was shining brightly, suddenly obscured by a cloud of insects which intercepted its rays. The inhabitants began to shower water over them, and the ground and the towers of the cathedral were quickly covered. They proved to be winged ants, very rare in France, but frequently seen in hot countries. A change of weather was predicted by some old people, and the prediction was speedily verified by a fall of rain.

ALGERIA.—Advices from Algiers state that the expedition sent out against the assassins of M. Mollard Eginelles has been instructed to drive the insurgent population from Tell. Fresh fires have taken place in the forests of the Province of Constantine.

SPAIN.—The *Contemporaneo* and the *Discussion* publish articles demanding the dissolution of the Chamber of Deputies. The Opposition journals assert that Señores Salverria and Canovas have resigned. All these rumours are at present, however, unfounded. Señor Frazio, the representative of the Emperor of Mexico, has arrived at Madrid, and left for La Granja. He is the bearer of letters announcing to her Majesty the accession of the Emperor Maximilian to the Mexican throne.

SWITZERLAND.—Accounts from Geneva of Thursday last state that tranquillity is not yet restored. The people have not resumed their occupations, and arrests continue to be made among the adherents of both parties. Among the latest arrests is that of M. Fontand, the former State-Councillor. The Federal Council has despatched a third battalion from Berne, and the Federal Commissioners have ordered the removal of the Arsenal from St. Gervais. The September fêtes have also been postponed. Yesterday the election of M. Cheneviere to the Council of State was declared valid by the Federal Council. Geneva was then quiet. The Committee appointed to report on the Franco-Swiss treaty has unanimously decided to recommend its ratification to the Chamber. An International Medical Conference has been recently sitting at Geneva, and has terminated in the conclusion of a convention in 10 articles, affirming the neutralisation, in time of war, of military hospitals, of the whole official medical staff and of the wounded. Twelve States only appear as contracting parties, namely, France, Baden, Belgium, Denmark, Spain, Hesse, Italy, Holland, Portugal, Prussia, Switzerland, and Wurtemburg; but the protocol having been left open, all the other Powers may accede to the convention.

DENMARK.—The Grand Duke Nicholas was expected at Copenhagen on Thursday. The steamer Slesvig has left for Lübeck to convey his Imperial Highness from that place to Copenhagen. In the sitting of the Rigsraad on Saturday the President of the Council solemnly declared that at the peace negotiations the Government would endeavour to protect the interests of the Schleswigers, both as to their national and political rights. The declaration was received with general applause by the whole Assembly. The Finance Minister had previously stated in the Folkthing that the instructions sent to the Danish plenipotentiaries at Vienna were drawn up with the object of recovering the north of Schleswig for Denmark. The Chamber then adopted the budget for extraordinary expenses by 73 to 13 votes.

BAVARIA.—Count von Bismark, who has visited Munich on his way to Baden, was engaged in discussing important negotiations with the Minister of State, Baron von Schrenck, both on Saturday and Sunday. He left on Sunday evening, and was accompanied to the railway station by Adjutant-General Baron von Tann. The official *Baierische Zeitung* of Saturday, in an article on the interview between the Kings of Prussia and Bavaria says:—

"We hail this meeting with joy, since it proves not only the existence of an amicable and kindred feeling, but also affords hope that the hearts of the two monarchs will be drawn together by a mutual desire to further the interests of Germany. Many a dark cloud which still overshadows the horizon may vanish before this Royal meeting. In the interviews of German Princes distrust and ill-feeling may disappear, however deeply those evils may be rooted in the minds of the people."

PRUSSIA.—Lieut.-General von Roon, the Minister of War, has left Berlin to visit the camp at Chalons, on the invitation of the Emperor of the French. The semi-official *Nord-Deutsche Allgemeine Zeitung*, in reference to a declaration of the Danish Minister of Finance made in the sitting of the Folkething on the 25th ult., says:—

"Only on the supposition of the loyalty and absence of reservation on the part of the Danish Cabinet in signing the preliminaries were the German Powers prepared to accede to the conditions of the treaty."

The *Neue Preussische* (Kreuz) *Zeitung* of Tuesday says:—

"There can be no question of a withdrawal of the troops even from Jutland, before the definitive conclusion of peace. The return of all Prussian troops from the Duchies is, therefore, far less to be expected."

The semi-official *Provinzial Correspondenz* of Thursday in an article on the visit of the King of Prussia to Vienna, says:—

"The Austrian and Prussian Sovereigns are desirous of maintaining true friendship towards each other as allies, being convinced that not only their own States, but the whole of Germany, will thereby be benefited, while on the other hand Austria will have no cause to regard with jealousy the increase of power obtained by Prussia through her future relations with Schleswig-Holstein. On the other hand, it will require an effort for Prussia to support Austria in the fulfilment of her mission as a German Power in the south and south-east of Europe. The settlement of the future commercial relations between Austria and Prussia cannot be supposed to depend upon the fulfilment of certain political conditions."

AUSTRIA.—The *General Correspondenz* of Monday says that the Conference, which was to be held on that day, has been adjourned, probably because the Danish Plenipotentiaries are still awaiting several necessary documents. The *Presse* says that up to the present the Conference has been occupied solely with the territorial question, and that it has been resolved to appoint a committee as soon as possible for the regulation of the frontier line. The Danish Plenipotentiaries are M. de Quaade and Colonel Kauffmann, with Baron Guldencron and Captain Bille as secretaries. The Danish financial interests are represented by State Councillor Fenger, assisted by other financiers. The Prussian Ambassador at Vienna has received a note from Count von Bismark in reference to Austria and the Zollverein. Having first discussed the expressed desire of Austria to modify her relations with the Zollverein, the Minister proceeds to state that Prussia is willing to enter upon the subject, and that negotiations can be opened at Berlin so soon as the Austrian Government is prepared to treat.

THE TYROL.—Arrests continue at Trent and Venetia. It is rumoured that the police have discovered depôts of arms, munitions, and tricoloured flags.

ITALY.—The *Opinione* denies the rumour that a marriage has been arranged between Prince Humbert and Princess Murat. The envoy sent to the Italian Court by the Emperor Maximilian was received by the King on Tuesday. He expressed a hope that he might strengthen

the understanding existing between two peoples of the same race, whose Government was based on the national will, the basis of every free country. The King, in reply, expressed his satisfaction at receiving the Minister of the new Monarch, whom he had long esteemed. He was confident that the Emperor Maximilian would secure the happiness of his subjects by following liberal principles, and had no doubt that Italian subjects would find security and protection under the new reign. His Majesty concluded by expressing his best wishes in favour of a Sovereign whose personal qualities stood as high as his great mission. All the Ministerial journals formally contradict the rumour respecting the approaching issue of a new loan.

SICILY.—A great fire has taken place in the forest of Picuzza, a Crown domain near Palermo. The people assembled, and hastened to assist in arresting the progress of the flames.

GREECE.—An insulting letter addressed to the King by a member of the Opposition gave rise to an excited sitting of the Assembly on the 26th ult. Exasperation prevailed in the capital, and protests were signed by large numbers of persons. On Friday the Assembly expressed its indignation at the letter by a majority of 193 to 27 ; 28 members abstained from voting.

TURKEY.—The difficulties which had arisen between Turkey and Montenegro in reference to the frontier have been satisfactorily arranged by a mixed commission.

DANUBIAN PRINCIPALITIES.—A law has been published authorising the purchase by foreigners of estates in Roumania. A rural law has also been published dividing the peasants into three classes, proportionately to the number of cattle they possess. They will respectively receive about 14, 8, or 4 acres of land in Wallachia; 16, 12, or 6 acres in Moldavia; and 18, 12, or 8 acres in Bessarabia, according to the class to which they may belong. Compulsory labour is abolished. Great enthusiasm prevails throughout the country.

TUNIS.—Official advices from Tunis to the 27th ult., state that 14 tribes have made their submission, but 40 tribes are still in insurrection, and several chiefs who had manifested a wish for peace have been killed. A chief who signed conditions of peace was obliged to take refuge in Tunis. Most of the tribes demand the dismissal of the Kasnadar. It is asserted that as the Kasnadar persists in his present course of action, the Admirals of the various foreign fleets have advised the Turkish Commissioner to leave the country, in order to simplify the question and bring about a more speedy pacification.

INDIA.—A telegram from Bombay of August 9 says that Sir Charles Trevelyan recommends the introduction of the sovereign into India as a legal tender for ten rupees. The Persian Gulf telegraph cable is broken.

UNITED STATES.—On the night of the 13th two corps of Grant's army were transferred to Deep Bottom, north of the James, and on the following morning they attacked the Confederates, who retired skirmishing to within six miles of Richmond, when they were reinforced and drove back the Federals, who claim to have captured eight cannon and 500 prisoners, and assert that the Confederates left their dead and wounded on the field, including two brigades. General Grant's loss was upwards of 1000. This movement was supposed to be for the purpose of protecting General Butler, who is engaged in opening a new channel for the James River through Dutch Gap or across the Peninsula of Farries Island, to enable his gunboats to avoid the river obstructions below Drury's Bluff, which fortification, it is asserted, will be shortly attacked by the combined water and land forces. The real object of the movement, however, is not yet developed. Reconnaissances and skirmishing continue daily with considerable loss to both sides, but with no decisive results. In one of these reconnaissances Grant advanced to Fair Oaks, his right wing lying four miles from Malvern Hill towards Richmond. On the 15th the Confederates were repulsed in an attack upon Ridney, at Deep Bottom. The losses were heavy on both sides. On the 18th Warren occupied the Weldon Railroad at Reams. On the following afternoon the Confederates attacked but failed to dislodge him, On the 19th the Confederates at Petersburg shelled Grant's lines for three hours. The Federals were in readiness to repel an assault which was expected to follow, but none was made. On the same day the 5th corps of Grant's army took up a position on the Weldon Railroad, where they were surprised by the Confederates, and driven back with the loss of 3000 men. The Federals were subsequently reinforced, and recovered the lost ground. Grant's troops have since re-crossed from the north bank of the James River. Gen. Burnside has been replaced in the command of the 9th army corps, before Petersburg, by General Wilcox. Washington is filled with rumours of important movements by the armies of both Lee and Grant, which, it is declared, will shortly change the entire aspect of the campaign in Virginia. General Lee is reported to be preparing for a Northern invasion in force. The investigation of the late disaster at Petersburg was commenced on the 9th ult. under the presidency of General Hancock. General Sheridan's forces occupied Martinsburg on the 10th, and marched to attack General Early in the Shenandoah Valley. General Early evacuated Winchester on the 12th, retiring towards Strasbourg. There has been frequent skirmishing between Early's and Sheridan's forces, in one of which Sheridan's cavalry under Merritt, defeated Longstreet's cavalry at Front Royal, and took 300 prisoners. On the 18th a train of 70 waggons and 300 mules for Sheridan, with its guard of 150 men, were captured by Mosby near Berryville. On the 15th Sheridan entered Strasbourg, and learnt that Early had been reinforced and was advancing. Sheridan then retreated to Winchester, and thence to Berryville. His rear was attacked and routed at Winchester by Breckinridge on the 17th, with the loss of 300 men. On the 20th there were reports, *viâ* Philadelphia, of his defeat and retreat to Harper's Ferry. His waggon train is asserted to have crossed the Potomac during the night of the 19th, and to be now at Hagerstown in Maryland. Confederate despatches from Atlanta report that General Sherman assaulted the Confederate left on the 5th, gaining a temporary advantage, but was ultimately repulsed. Sherman unsuccessfully renewed his attempts to occupy the Macon Road on the 6th and 7th. The Federal losses upon each occasion were upwards of 500 men. The Confederate General Wheeler, operating in Sherman's rear, demanded the surrender of Dalton on the 14th, which being refused, he attacked the town. The garrison held out until aid from Chattanooga arrived on the following day, when Wheeler retired. On the 16th a severe engagement occurred at Graysville, 18 miles from Chattanooga, between the Confederate General Wheeler and General Steadman. Steadman was wounded, and Colonel Straight killed. The result of the action is not stated. The Confederates are in force at Cleveland, Tennessee. A Federal force has been sent from Chattanooga to dislodge them. Despatches of the 7th state that General Beauregard with 20,000 troops had arrived at Atlanta, but whether for the reinforcement of Hood or the defence of Mobile is unknown. Admiral Farragut's official report of the operations at Mobile on the 5th recounts that his fleet of 18 frigates and Monitors, lashed two and two together, moving in close order, ran up to Fort Morgan, and at short range poured in broadside after broadside of grape and canister, driving the artillerymen from their guns, silencing the fort and covering the passage of the fleet into the harbour, excepting the Monitor Tecumseh, which was blown up by a torpedo, and sank with nearly all on board. The vessels then separated and attacked the Confederate fleet, consisting of the ram Tennessee and the gunboats Selma, Morgan, and Gaines. The Selma was speedily captured, and the Morgan and Gaines driven into shoal water, but the Tennessee fought the whole Federal fleet for one hour and a half, and only surrendered when disabled in her rudder, and a combined movement was made by the Federals to run her down. The Federal loss is stated at 250; that of the Confederates at 300, principally prisoners captured on board the Selma and the Tennessee. The Federal ships the Hartford and Oneida were disabled, and the Philippe burnt during the action. The Federal land forces, under Federal General Granger, afterwards effected a lodgment on Dauphin Island. On the 9th, Admiral Farragut demanded the unconditional surrender of Fort Morgan. The Confederates refused, stating that it had been provisioned for six months, and strongly garrisoned, and would be held to the last extremity. Admiral Farragut then ordered an attack on the fort, which is exposed to an enfilading fire from the fleet and land forces, while Granger's forces have cut off communication with it in the rear. Two monitors and five gun boats have made a reconnaissance across the Dog River bar to within two miles of the Mobile batteries. The *Richmond Whig* of the 12th declares that with the reduction of Forts Gaines, Powell, and even Morgan, but a very small portion of the work before the Federals at Mobile will be accomplished, and that there will yet remain a succession of formidable earthworks upon either side of the bay, and numberless obstructions and torpedos in its bottom, for a distance of 30 miles, to be overcome and removed before the city can be reached. Hostilities by the Indians in the North-West have been renewed. Many of the settlers in Kansas have been murdered, their houses and crops burnt, and their cattle driven off. The inhabitants generally are fleeing to the towns for protection. General Blunt and Sherry, commanding on the border, are organizing a large military force to pursue and attack the Indians. Great agitation prevails in the press and among the people, and the desire for peace is increasing. The *New York Herald* recommends the sending of commissioners to Richmond to arrange an armistice for six months, and to call a convention of all the States to consult upon the best means of obtaining peace. The Democratic Peace Convention has assembled at Syracuse, and resolved not to support the nominee of the Chicago Convention unless a peace candidate is nominated. It further passed resolutions favouring an armistice and the calling a convention of the States, with a view to adopt a mode of reconciliation. Messrs. Vallandigham and Fernando Wood attended the Convention and made peace speeches. A Convention for a similar purpose has been held at Springfield, Illinois. Secretary Stanton has declined to appoint a commission to investigate the excessive quotas assigned to the cities of New York and Brooklyn, proposed by Governor Seymour, on the ground that it would operate to postpone the draught, and perhaps fatally delay the strengthening of the armies in the field. The Confederate privateer steamer Tallahassee has commenced operations off New York Harbour, and has already captured several vessels, including the emigrant ship Adriatic from London, the barque Tilconleon from Glasgow, the ship James Littlefield, and the pilot boat James Finch. Her officers state that since leaving Wilmington, from which port they ran the blockade, they have taken 50 vessels, of which 16 were captured within 30 hours. The Tallahassee on the 18th ran into Halifax for coals, and had obtained 300 tons when Admiral Hope ordered her away. She sailed on the 20th, steering eastward. Two Federal gunboats are in pursuit of her.

WEST INDIES.—Accounts received by the Canadian mail steamer Hibernian state that yellow fever is decimating the islands of Bermuda and Nassau. To such an extent has the epidemic spread in both islands, that the resident medical practitioners are quite unable to cope with the emergency, and all the principal army surgeons of the British troops in Canada have left for Bermuda.

MEXICO.—Advices to the 23d ult. state that the Emperor Maximilian had accepted the surrender of Uruguay. Expeditions were preparing against Monterey, Matamoras, and Victoria, in order to drive the Juarists from those places. Vidaurri held the chief power at Matamoras. Juarez had taken to flight. The naval squadron was to participate in the expedition against Matamoras, and land troops on the backs of the Rio Bravo. Acapulco had been surrounded by the force of Alvarez. General Meraga had declared for the empire, but only a few hundred of his men followed him. A large Liberal force holds Colima. The blockade of Mangenalla is not enforced.

SOUTH AMERICA.—Accounts from Buenos Ayres of July 27 state that the peace arrangement has fallen through, and hostilities have recommenced.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS. Consols closed at 88⅜ to ¼ for Money, and 88⅜ to ¼ for Account; Three per Cents. Reduced, 86⅛ to ⅜ ex div.; New Three per Cents, 86¼ to ½ ex div.; India Stock, 212; Ditto Five per Cent. Stock, 101⅛ to 104; Exchequer Bills, March, 20s. to 10s. dis.; Ditto June, 27s. dis. FOREIGN: Buenos Ayres, 92½; Greek, 21⅜ to ½; Mexican, 28⅜; Ditto 1864, 26½; Russian, 1859, 55; Ditto 1862, 87⅞ to 88⅜; Spanish Passive, 51⅞ to ⅝; Ditto Certificates, 11⅛ to ¼; Turkish, 1862, 70⅜ to ½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,879,975	Government Debt .. .	£11,015,100
		Other Securities	3,884,900
		Gold Coin and Bullion .	12,229,975
		Silver Bullion	— —
	£26,879,975		£26,879,975

BANKING DEPARTMENT

Proprietors' Capital ..	£14,554,000	Government Securities (including Dead Weight Annuity ..	£ 9,797,095
Rest	3,859,557	Other Securities	20,164,246
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,815,742	Notes	6,141,875
Other Deposits	13,073,751	Gold and Silver Coin .	750,058
Seven days and other bills	651,224		
	£37,853,274		£37,853,274

Sept. 1, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Aug* 26.—BANKRUPTS.—R. ATKINSON, East Retford Nottinghamshire, Potato Dealer—H. J. ANDREW, Liverpool, Draper—W. ALLEN Luton, Bedfordshire Builder—P. J. BRAMAH Ashby Place, Westminster Coachman—H. BAINES late of Ardwick Lancashire Butcher—T. BALLINGER, Halesowen, Worcestershire, Journeyman Baker—J. BRADBURY Grafton Street Soho China and Glass Dealer—J. BOWATER, Bedford—M. BELL Billingham, Durham Station Master—J. BOOTH, Keighley, Yorkshire, Worsted Spinner—H. BOOTH, Lambeth Works, Kent Road—H. BOYS late of Cranbrook Road—R. BUSH, Bethnal Green, Trunk and Box Maker—C. D. BUTT, Liverpool, Mining Agent—J. BRADSHAW, Liverpool, late Deliverer in Common—G. BURTON Great Cressingham, Cattle Dealer—J. BAXTER, Stamford Baron, Northamptonshire, Farmer—E. BELL late of New Street, Kennington Road—J. BARNETT, Prestwich, Lancashire Dealer in Watches—G. BLACKETT, late of Hunter Lancashire, Blacksmith—C. J. CHAMBERS Manchester, Mill Furnisher—J. A. COMPTON, Ketton, Rutlandshire Insurance Agent—J. COX, Upper Sundon, Bedfordshire, Innkeeper—D. DAVIS, Ystrad, Glamorganshire, Grocer—W. DEAN, Tottenham Court Road, Wholesale Upholsterer—H. H. DICK, Bath—J. H. DAVIS, Merthyr Tydvil, Glamorganshire, Accountant—H. C. DELPLANQUE, Notting Hill, Dancing and Music Master—W. ENGLISH, late of Chatham, Jeweller and Blacksmith—T. J. EVERTON, Union Street, Bishopsgate Street Without, Dealer in China and Fancy Goods—H. EDMONDS, Cheltenham, Tea Dealer—J. FORRESTER, Penrith, Cumberland, Farmer—S. GOOD, Newport, Monmouthshire, Furniture Broker—R. GROCOCK, Falkingham, Lincolnshire, Tailor—G. GRAHAM, Middlesborough, Yorkshire, Grocer—W. GIBSON, South Shields, Durham, Coal Trimmer—R. A. HARKER, jun., Leadgate, Durham, Joiner—A. W. HART, Tretire-with-Michaelchurch, Herefordshire Farm Bailiff—T. HILL, Sheffield, Auctioneer—E. HEAVEN, Manchester Terrace, Liverpool Road, Islington, late Builder—T. J. KEEN, late of Ledbury Road Bayswater, Tailor—R. LAW, Heywood, Lancashire, Potter—J. LAWSON Barnsley, Devonshire Clerk in Holy Orders—G. T. LEWIS, Worthington Shropshire Tailor's Foreman—J. LOWE, Liverpool, Potato Dealer—C. MARSHALL, Old Church Street, Paddington, Builder—W. M[illegible], Holtwood, North umberlandshire, Painter—H. NOTT, Wednesbury, Staffordshire, late Licensed Victualler—C. H. N[illegible], Oswestry, Shropshire, Professor of Music—J. PEARSON, Kingswinford, Staffordshire, Master Slate Dealer's Assistant—WILLIAM PARKIN, Elland, Yorkshire, Merchant's Grocer—THOMAS PARHAM Lydiard, Devonshire, Dairy Farmer, Cheltenham, Boot Maker—JOHN ROBERTSON, Stanwix Cumberland, Cattle Dealer—M. A. SMITH, Whitwell Hertfordshire, Grocer—J. L. S[illegible], Bradford Yorkshire Pork Butcher—J. THOMPSON late of Pudsey Yorkshire, Innkeeper—E. T. THOMSON, late of Richmond—W. THOMSON, Keighley, Draper—A. THOMSON, Rochdale Draper—R. THOMAS, St. James Wood Builder—A. THWAITES, Lloyd Sq. Clerkenwell, Dealer in Jewellery—W. W[illegible], Oldham Lancash., Cotton Mill Manager—R. W[illegible], Commercial Street Barnsbury Road Islington Dairyman—W. WALKER, Durham, late Innkeeper—S. WATKINS late of Cardiff Glamorganshire Grocer—J. WATT, Liverpool Glass Dealer—W. WILSON [illegible] of Ilford Essex Soldier—F. WESTLEY, late of Windsor Terrace, City Road, Stationer—J. R. WARLEIGH, Upminster, Essex, Ship and Insurance Broker—W. WHITE Warrington, Lancashire, Confectioner—J. WILD, Leeds late Joiner.

SCOTCH SEQUESTRATIONS.—J. R. MOORE and W. BAIRD, Glasgow, Wrights—W. PEACOCK, Lennoxtown Stirlingshire, Innkeeper—J. NICHOLSON, Dunscore, Dumfriesshire, Farmer—J. FORRESTER, Glasgow, Plasterer—T. WHITE, Glasgow, Grocer—A. MALCOLM, Milnathort Kinross-shire, Cabinet Maker—J. GREENHORN, Braehead, Lanarkshire.

Lime Merchant—J. WALLACE, Muirkirk, Ayrshire, Publican—A. DUNN, Glasgow, Lace and Sewed Muslin Warehouseman.

TUESDAY: *Aug.* 30.—BANKRUPTS—I. ATHERTON, Liverpool, Attorney—J. BOYDELL, Liverpool, Picture Frame Maker—J. F. BROWN, Paulton Terrace, Chelsea, Builder—H. BROWN, Rucklersbury, West India Merchant—C. BOHN, Waverley Road, Middlesex, Baker—J. BENTLEY, Enfield Highway, Middlesex, Baker—J. BRIGGS, Bradford, Stuff Manufacturer—A. BOCK, Birmingham, Journeyman Boot and Shoe Clicker—W. BROWN, Little Broad Street, Wapping, Barman—H. BROWN, Hanley, Staffordshire, Attorney—J. CORIN, Madron, Cornwall—W. COLLINS, Great Cambridge Street, Hackney Road, Boot and Shoe Dealer—W. CONEY, St. John's Wood Terrace, St. John's Wood, Builder—W. CROSS, Pratt Street, Camden Town, House Agent—J. DOLMAN, Dame Street, Islington, Wholesale Milliner—R. EVANS, Llangunllo, Radnorshire, Beerhouse Keeper—J. EVERETT, Glaucus Street, Bow, Carpenter—T. EVANS, Park Place, Lambeth, Cowkeeper—J. FRY, Horfield, Gloucestershire, Haulier—C. FLOOD, Kimbolton, Huntingdonshire, Tanner—H. B. GASKELL, Harman Street, Kingsland—C. HIGGINBOTHAM, Macclesfield, Brassfounder—G. R. HILL, Southsea, Hampshire, late Estate Agent—A. HOLLAND, Aldershot, Watchmaker—H. W. HAGART, Holborn, Commission Agent—W. HOOD, Deptford, Traveller—S. HAWES, Ipswich, Suffolk, Tailor—S. W. HORTON, Fulham, Commission Agent—J. HARRISS, Green Street, Leicester Square, Picture Dealer—R. JOHNSON, Newton Heath, near Manchester, Beerhouse Keeper—W. G. JOY, Bedford, Carpenter—J. KEEN, Odd Rode, Cheshire, Shoemaker—C. KNIGHT, Petersfield, Hants, Tailor—W. S. KEMP, Bristol, Commission Agent—J. KELLOW, Plumstead, Kent, Carpenter—J. G. KNIGHT, Balsall Heath, Worcestershire, Licensed Victualler—R. G. LAIRD, Cannon Street West, Civil Engineer—P. LANDER, Regent Street, Kensal Green, Stonemason—C. F. H. O. MAGRA, Atkinson's Place, Brixton, Gentleman—J. J. MILLER, Witham, Essex, Carpenter—C. MILLINGTON, Prince of Wales Road, Haverstock Hill, late Publican—H. M GLADPIGAN, Park Place, Clapham, Schoolmaster—J. F. MURRAY, New King Street, Covent Garden, Shoe Manufacturer—W. PARKES and E. HILL, Birmingham, Glass Merchants—T. PETERS, Birmingham and Derby, Tobacconist—W. PARKER, Stoke Gifford, Gloucestershire, Beer Retailer—W. PINNOCK, Prince of Wales's Road, Haverstock Hill—D. RAMSDEN, Lindley, Yorkshire, Clothier—B. ROWLEY, Stoke upon-Trent, late Licensed Victualler—J. HAYLOCK ROBINSON, Shoreditch, Baker—W. S. RICHES, Norwich, Licensed Victualler—J. SIESFELD, Hanover Street, Pimlico, late Share Dealer—R. SMITH, Gee Cross, Cheshire, Labourer—I. J. SOMMER, New Brompton, Kent, Bugle-Major 52d Regiment of Foot—J. C. SELLARS, Birkenhead, Analytical Chemist—E. SMITH, Portsea, Hampshire, Dressmaker—W. STEVENSON, Nassau Street, Middlesex Hospital, and Portland Mews, Carpenter—G. C. SOPER, Hammersmith, Gas Engineer—J. SIMPSON, Bromley, Middlesex, Builder—J. TURNHAM, Edgware Road, Licensed Victualler—C. TOMKINSON, Kingston on-Thames, Licensed Victualler—G. TOFFIN, Dalston, Cumberland, Farmer—T. TOOTAL, Woodplumpton, Lancashire, Provision Dealer—W. THIELE, Formosa Terrace, Paddington, Decorative Artist—L. WHITELEY, M. FARRAR, W. FARRAR, and W. H. LEVER, Halifax, Yorkshire, Cotton Spinners—J. WILKINSON, Kirkby Lonsdale, Westmoreland, Fellmonger—E. WHITE, Maldon, Essex, Bootmaker—J. WAKEFIELD, Bristol, Beer Retailer—W. WOODWORTH, Stretford, Lancashire, Salesman—G. A. WOODWARD, Liverpool, Commission Agent—T. WALTERS, Windmill Street, Haymarket, Grocer—J. WILSON, Kingston-upon-Hull, Tailor—J. WALKER, Morley, Leeds, Cloth Manufacturer—T. W. WATKINS, Birmingham, Commercial Traveller.

Metropolis and its Vicinity.

THE LAST OF OLD BLACKFRIARS BRIDGE.—The demolition of Blackfriars Bridge goes on rapidly, and the structure is now a mere wreck, 9 feet in perpendicular depth, measuring from the level of the former parapets, having already disappeared. The stone and other materials are lowered into barges moored in the river at several points, and are then taken away. During the removal it has been made clear that the necessity for closing the old bridge was not decided upon a day too soon. The only wonder is that it held together so long, considering the enormous traffic to which it has been constantly subjected. In order safely to secure their object the contractors have had recourse to every practicable plan suggested by modern engineering skill, and have adopted the use of a timber "gantry" of enormous strength, which will be continued completely across the river from the Surrey to the Middlesex shore, and upon which rails are laid for a new description of "steam traveller," for lifting the masonry and removing it from its former bed. Gangs of workmen are employed day and night in fixing the piles, and up to the present time no accident has occurred to any person employed upon the works.

THE HOLBORN VALLEY VIADUCT.—In the late session an act was passed to enable the City of London to form a viaduct across the Holborn Valley, and the wine and coal duties received by the corporation were extended for a further period of 10 years, for the purpose of providing means to defray the expense of the undertaking, including the alterations in Holborn Hill and Skinner Street. The duties were continued until 1872, and are now therefore further continued until 1882. Of the duties of 12*d.* per ton on coals a sum of 4*d.* is to be taken towards paying the interest on the money obtained for the City improvements, and for the purpose of this new act. Plans have been deposited of the intended viaduct and other improvements on both sides of Holborn Hill. The last portion of Field Lane will disappear, and the City are empowered to build proper dwellings for the poorer classes. The works are to be completed in five years, and within that time all property must be purchased. Steps have already been taken to carry out these great improvements.

REMOVAL OF THE COLOSSEUM.—It is announced that the Colosseum in the Regent's Park is about to be pulled down. The necessary sanction from the Crown has been obtained for the alterations, which include the erection of a handsome crescent on the Park side, and a pantechnicon—or warehouse for storing goods, on the Albany Street side.

FRENCH EXCURSIONISTS AT THE CRYSTAL PALACE.—On Monday, excursion boats and trains by the South-Eastern Railway from Boulogne, by the Chatham and Dover from Calais, Arras, &c., ran to the Crystal Palace. With both of these excursions 800 or 900 persons availed themselves of this opportunity of visiting the Palace, and nothing could exceed the delight and satisfaction of the French visitors at witnessing for the first time the Palace and its contents. The great fountains were played, Mr. Coxwell made a balloon ascent, the London Gymnastic Society competed for prizes, and the band of the Coldstream Guards and that of the Musique des Sapeurs Pompiers of St. Pierre, added to the enjoyment of the day.

ST. THOMAS'S HOSPITAL.—On Tuesday, at a numerous meeting of the governors of this hospital, Mr. Francis Hicks was unanimously elected to the office of Treasurer, in the room of Mr. R. Baggallay, who had resigned.

MAIN DRAINAGE ANTIQUITIES.—The following antiquities, fossil remains, &c., discovered in the progress of the main drainage works, have been presented to the British Museum by the Metropolitan Board of Works:—Human cranium, of the brachycephalic type; one of the cymbicephalic type; and one of full oval type, with frontal suture persistent, as in most Frankish skulls; portions of skull and horn cores of Bos primigenius; two crania of Bos longifrons, or primeval marsh ox; scapula, portion of humerus and astragalus of Bos; portion of cranium, and of upper and lower jaws of horse; lower jaw, with one molar tooth of Elephas primigenius; [articular head of femur of ditto; portions of antler of large reindeer (Taxandus priscus); left ramus of lower jaw of bottle-nose whale (Hyperoodon bidens); portions of right and left scapulæ of two different whales; six fragments of Ammonites multipostatus (lias); Bellovacina (Woolwich sands); mass of Ostrea and Cyrena cuneiformis (pliocene); Nautilus imperialis (London clay); a plain Roman sarcophagus of Purbeck marble, three Roman leaden coffins and some fragments of pottery, found at East Ham, in Essex; two Roman horseshoes of peculiar form, a flint celt, a fragment of Samian ware, inscribed "Julius," and a number of miscellaneous fragments of Roman and mediæval pottery.

UNION OF CITY LIVINGS.—Arrangements have been completed, under the Union of Benefices Act, for the incorporation of the rectories of St. Mary, Somerset, and St. Mary, Mounthaw, of which the Rev. Dr. Stebbing is rector, with the rectories of St. Nicholas, Cole Abbey, and St. Nicholas, Olave, of which Dr. Kynaston is rector. The former livings are in the gift of the Bishop of London and the Duke of Buccleuch alternately, and the latter in the gift of the Lord Chancellor and the Dean and Chapter of St. Paul's alternately. A portion of the endowment is to be applied to a church at Hoxton.

THE CRYSTAL SANITARIUM.—A Company has been formed, with Sir David Brewster as its chairman, for the purpose of bringing the climate of Madeira, as well as its accompaniments, within the reach of those whose health will not permit them to run the risk of a sea voyage. It is proposed to cover in with glass a large area of ground, and to preserve therein an equable temperature; to build residences having communication with the grounds so enclosed, and to lay out the interior in the most attractive form of landscape gardening, with the fruits and foliage suitable to a climate like Madeira. The property, which has been fully reported upon by upwards of 50 eminent physicians, consists of a mansion and park of about 140 acres, possessing all the advantages of salubrity and contiguity to the metropolis, and may now be purchased upon favourable terms. Suites of apartments and residences will be let furnished. There will be an hotel, from which the residents may have the option of being supplied, and which will also have apartments opening into the interior; the whole communicating externally with the surrounding landscape, and with sheltered walks for mild weather. The building will be strictly private to the residents. The class of persons likely to embrace the advantages of residence in such an establishment are those who are usually obliged to leave this country from September until May or June; many of whom are separated from their friends, or business occupations. The plan will also be available to many who during the greater portion of the year never stir out of their own homes, as a measure of precaution; and to numerous other individuals who will be advised to resort there during medical treatment by their own professional advisers. The capital is fixed at 250,000*l.*, in shares of 20*l.* each.

THE ENLISTMENT CASE AT WOOLWICH.—The man who was apprehended last week on the charge of enticing the soldiers at Woolwich to enlist in the Federal army was again brought up for examination on Saturday, when the evidence of some more soldiers were taken, but the charge of inciting to actual desertion was not made out. The magistrate in discharging the prisoner remarked on the bad state of discipline in the barracks, which admitted of a civilian passing the night there. The prisoner was again taken into custody on a charge of robbing his lodgings in London, and as the evidence in that case was complete, he was committed for trial.

THE GOVERNMENT CLOTHING FRAUDS.—The garrison court-martial, under the presidency of Col. Gibbon, of the Royal Artillery, has found nine soldiers guilty out of the 10 implicated in the recent robberies at the Government clothing establishment in Woolwich garrison, and have discharged the tenth. The prisoners were condemned to various terms of imprisonment—one, a corporal, to be reduced to the ranks and 56 days' imprisonment, four gunners to 84 days, and four to 112 days' imprisonment, all with hard labour. The inquiry at the Woolwich Police Court respecting the robbery of Royal Marine clothing has terminated in the discharge of the pensioner Clark, the magistrate's request for the attendance of some officer who could explain the mode in which the materials were served out to the master tailors, not having been complied with. The magistrate, under these circumstances, said that he had no alternative but to discharge the prisoner, but at the same time he felt it necessary to observe that the proceedings throughout this case exhibited a looseness of administration with regard to this Government establishment, such as he had never heard of. It was not for him to say how Government property should best be protected, but he would say that this case fully proved that a very loose state of things now prevailed.

FATAL COLLISION OF STEAMERS NEAR THE NORE.—At an early hour on the morning of the 24th ult., a collision took place between two screw steam colliers, the John Fenwick and the Amity, by which the latter was sunk, and her captain drowned. They struck near the Maplin Sands in the Swin, a few miles below the Nore, and the captain of the Amity, finding his ship sinking, ran her on the sands. Unfortunately she fell off as the tide rose, and sank in deep water. The rest of the crew got on board the John Fenwick, which remained by the wreck, but the captain, who was in the cabin at the moment arranging his papers, was carried down in the ship.

DEATH OF A CLERGYMAN'S CHILD FROM NEGLECT.—On Tuesday an adjourned inquest was held in the Finsbury Market House on the body of William Webb, five years of age, son of the Rev. S. T. Webb, recently curate of All Saints. It appeared from the evidence adduced at this and the previous sitting, that the father had been dismissed by the Rev. Mr. Hugo, the incumbent, for general misconduct, of which intemperance was admitted to form a part. His wife died in March last, and after giving the servant notice to quit, he went to Ireland on the plea of ill health, leaving four children—the eldest, a son, being only 13 years of age—for a whole month without any one to take charge of them, and with only 1*l.* 12*s.* to supply them with food. During this time the eldest daughter, who was 11 years of age, did everything connected with the domestic arrangements, but was obliged to borrow a sovereign from a lady for their support. The eldest brother sometimes washed the children. The money was all expended when the father returned home. The eldest daughter on being examined said that they had three rooms and a kitchen; that she and her sister slept with her father, and her two brothers slept with the servant girl. The medical evidence showed that the deceased had not received proper nourishment and attention, and that the other children also exhibited painful symptoms of want. Other evidence was given as to the filthy and emaciated state of the children, and one witness deposed to having heard Mr. Webb, on his return, using the most violent and brutal language towards his children, and throwing the saucepans and other articles at them. Other witnesses contradicted this statement, and on the whole the evidence as to the positive cruelty of Mr. Webb to the children while he was with them was conflicting. The jury, after a long deliberation, returned the following special verdict:—

"That William Samuel Webb, being an infant of tender age in charge of his father, died from spasm of the glottis; that improper food and the sadly neglected condition of the said child, predisposed to the disease from which *he died; and that* the conduct of the father is censurable."

MYSTERIOUS AFFAIR AT MILE END.—A tragedy, which is at present involved in mysterious circumstances, was brought to light in the east of London on Saturday. A man named Beckingham, a superannuated officer of the Post Office, resided at Mile End New Town with his wife and his wife's sister, but as they had not been seen for some days the neighbours broke in the doors and found the two women dead, and the man lying below the bed alive, with only his shirt on, and in a state of idiocy. The sister was kneeling with her face buried in her hands, but there were no marks of violence on either of them. The rooms were respectably furnished, and there appeared to be no want of anything except food. Beckingham, who is paralytic, and has exhibited symptoms of insanity for some time past, could give only incoherent answers to the questions addressed to him, so that nothing has yet been discovered as to the means by which the women met with their deaths. He stated however that he had not eaten anything for three days. At the inquest on Monday he was examined by the coroner, but his answers betrayed such mental imbecility that nothing could be gathered from him except the one point, that the women had not come by their death through him. The other evidence showed that the unfortunate women had drunk themselves into as imbecile a state as the man, and had given up eating altogether for the sake of drink. The inquest was ultimately adjourned in order that the stomachs might be submitted to chemical analysis, with a view to the detection of poison.

MURDER IN HATTON GARDEN.—On Sunday night a man called Henry Wilkinson, 29 years of age, a stonemason's labourer, residing at 9, Cross Street, Hatton Garden, murdered his wife, aged 28, by kicking her on the stomach. From the evidence at the Police Court on Monday, it appeared that the prisoner and his wife had for some time lived unhappily together in consequence of his jealousy. On Friday they quarrelled very seriously, but subsequently arranged their dispute and all went on quietly till Sunday, when some friends went to see them. After drinking a little they went to see their friends off by the last train on the Metropolitan Railway, where one of the friends kissed the deceased. This seemed very much to exasperate the prisoner, who abused and threatened his wife, and then struck her a fearful blow. Being afraid that he would still further ill-use her, she went home and asked the lodger to allow her to sleep with her. This request was complied with, and about midnight the prisoner went home, made use of most dreadful oaths and imprecations, broke into the lodger's room, and pulled his wife out of bed by the hair of her head. He then kicked and knocked her about, and at length

kicked her in the pit of the stomach. After this kick the unfortunate woman said, "You have now given me my death blow," and immediately rolled over and died. He then carried her down into his apartment, and laid her dead by the side of her sleeping children, one of them being eight, the other four years old. Although he was very drunk at the time, he seemed to be suddenly sobered by the death of his wife, and cried on finding that he had killed her. He was then taken into custody, and at the inquest on Wednesday the medical evidence proved that death was caused by a rupture of the spleen. The neighbours deposed that he was very kind to her when sober, and also to his two children, but had frequently ill-used her before when under the influence of drink. After some further evidence the inquest was adjourned to yesterday, when the jury returned a verdict of Manslaughter against the prisoner, the foreman stating that they had taken into consideration the fact that he had evidently no intention of causing his wife's death. He was then committed on the Coroner's warrant for trial at the Central Criminal Court. The prisoner was loudly hissed by the dense mob in the street as he was removed from the court.

RESPITE OF THE CONVICT MARY HARTLEY.—The sentence of death passed on Mary Hartley at the last session of the Central Criminal Court, for the murder of her illegitimate child, has been commuted to penal servitude for life.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the number of deaths registered in London in the week that ended on Saturday, August 27, was 1413. The average number in the corresponding week of the 10 previous years, 1854-63, corrected for increase of population, was 1349. The present return is, therefore, 54 above the average. During the week the births of 992 boys and 923 girls, in all 1915 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1844.

Provincial.

BOSTON.—It is asserted that Asiatic cholera has made its appearance in the Lincolnshire Fens, and proved fatal in several cases. The medical men attribute this attack to the long-continued drought, which has caused the drains to become little better than stagnant pools. The East Fen, in the neighbourhood of Boston, and along the banks of the Bell drain, are the places where it has made the greatest devastation.

DORCHESTER.—A few days since a fire broke out at Blackwood, in the New Forest, by which a large quantity of heath and furze was burnt. The fire extended to the Dorchester Railway, and burnt some of the telegraph posts on the line.

FLEETWOOD.—A singular case has been under investigation by the magistrates of this town. A person named Bond, salesman to the New Fylde Timber Company, was charged with stealing two 50*l.* notes, the property of the company. The history of the notes is a curious one. In October, 1863, they were paid to a young man called Mayor, the book-keeper of the company, in the presence of Bond. They were afterwards missed, and Mayor was charged with stealing them, Bond being the principal witness in the case. The young man was, however, discharged, but he took the disgrace so deeply to heart that he became paralysed, and has now been bedridden for about three years. On Wednesday week a pocket-book belonging to Bond was found, in which were the two missing notes. On being apprehended he declared that he knew nothing about them, and that they must have been wilfully placed in his pocket book to do him an injury. The case was remanded for a few days, when the prisoner was committed for trial at the sessions, On Saturday, at the Preston intermediate sessions, application was made for a postponement of the trial, and also that the prisoner might be set at liberty on bail. The court agreed to take bail for 400*l.*, the prisoner in 200*l.* and two sureties of 100*l.* each.

GLOUCESTER.—The execution of Lewis Gough, who was convicted at the last assizes of the murder of the blind woman Curthoys, at Thornbury, took place on Saturday in front of the county gaol. He died penitent, and acknowledged the justice of his sentence. The execution took place at the unusually early hour of 7 o'clock, so that the number of spectators present did not exceed 5000.

ISLE OF MAN.—The local papers state that at the recent dinner of the local agricultural show, the Bishop of Sodor and Man, in responding for The Church, made the following remarks on hunting:—"There was another matter to which he must refer now that he was speaking. He believed that they were in a great measure indebted to his Excellency the Lieutenant-Governor, who was working day and night for the interests of the island, for the pack of hounds which was exhibited at the show that day. In old times the clergy had to keep a pack of hounds for the parish. He did not know whether he would be asked to join the hunt, but he believed they had asked the archdeacon to do so, if he would preach a sermon for them. He would have no objection to the archdeacon doing so, provided he preached the sermon in pink, with top boots on."

KENDAL.—On Tuesday and Wednesday of last week the property of the late Miss Kate Southey was sold by auction on the lawn at Lairbeck Cottage. From this picturesque auction mart in Underskiddaw might be seen the lakes of Derwentwater and Bassenthwaite, and numerous mountain tops. Collectors and visitors from all parts were attracted on the occasion. The first day's sale was confined to furniture, but it was noticeable that whenever any article was stated to have come from Greta Hall, the poet's residence, the price invariably went up. On the second day the books and manuscripts were sold. There were not many lots of books, and those which contained no autograph scarcely elicited a second bidding. A presentation copy of "Wordsworth's Poetical Works," in five volumes, was sold for 1*l.* 16*s.*; the "Last Essays of Elia," two volumes, presentation copy, with Charles Lamb's autograph, for 15*s.*; a one-volume edition of "Shakspeare," with Southey's autograph, for 14*s.*; and a very fine edition of "Bacon's Essays," inscribed "R. Southey, Bristol, 1802," for 11*s.* 6*d.* Nineteen of Sir Walter Scott's letters to Southey were sold separately, the whole realising 11*l.* 1*s.* 6*d.* One of the most interesting of these (which is undated) thus refers to a favourable change in Scott's prospects—"I have been in London, pursuing Fortune's slippery ball, and have been fortunate enough, notwithstanding the change of men and measures, to secure the reversion of a considerable patent office, which was destined for me by Mr. Pitt and Lord Melville. I venture to hope my success has given some pleasure to my friends at Greta Hall and Grasmere; it is particularly acceptable to me, as it enables me without imprudence, or even injustice to my family, to retire from the bar, which I have always thought to be an irksome and even hateful profession." The manuscripts of the first sketch of "the Life of Nelson" and the "Vision of Judgment" (the copy from which the poem was printed), in Southey's handwriting, and handsomely bound, yielded the very inadequate sum of 4*l.* 5*s.* A reserved price being placed on the MS. "Life of Cowper," "Pilgrimage to Waterloo," and other works of the late Laureate, they were not sold. Among the correspondence announced for public competition were letters from Lockhart, Wordsworth, C. Lamb, Thomas Clarkson, and other public characters, but as the biddings were not in excess of the reserve they were not knocked down. A few of the letters were privately disposed of, among which was a very curious one from Clarkson, dated "Playford Hall, November 25, 1834." Referring to a forthcoming biography of Wilberforce by his son Robert, Clarkson writes:—"He was, I suppose, greatly surprised and hurt to find that the great labour of the abolition had fallen upon me, and therefore that he had less to tell of his father than he imagined, supposing, but falsely supposing, that his father had done everything in that great question. He had imagined, again, that his father was the author of the inquiry concerning the poor slaves, and that he had moved in it before me, if not that he had employed me in aiding him. It could not then but put him to pain to find that I was the first person who gave birth to the inquiry, and that I first suggested it to his father, and not his father to me."

MANCHESTER.—A new bridge across the Irwell, affording another means of communication between this city and Salford, was opened to the public last week. The cost has been defrayed by the Lancashire and Yorkshire Railway Company, but the work has been carried out by the Corporation of Salford. There are now 10 bridges used as public thoroughfares between the two boroughs.

NORWICH.—A few days since Brother Ignatius and the Benedictine brethren celebrated in their monastery the Festival of the Assumption of the Virgin Mary. A procession was formed, consisting of monks, young ladies, and boys, all splendidly dressed—the officiating priests wearing robes of cloth of gold and satin, the ladies dressed in white robes and veils, the boys in red stoles, cambric surplices, blue tippets, red sashes, and caps. Incense was freely used, and hymns were sung in praise of the Virgin. On the next morning the monks attended one of the parish churches of Norwich, and Brother Ignatius played the organ, thus identifying the festival of the previous day with the service of the Church of England.

OTTERSPOOL.—A Liverpool paper states that the Great Northern Railway Company have purchased Otterspool for 140,000*l.*, and that they propose to construct a dock there in direct communication with Manchester.

SUNDERLAND.—The mayor of this town has received an intimation that a portion of the French fleet, now cruising in the North Sea, may shortly be expected to visit this port. The visit will not be made by the whole of the fleet, but by a frigate and some gunboats. The commander of the frigate will examine the port; and if he is satisfied that it will accommodate the whole fleet, there is every probability that Sunderland may next summer be honoured with a visit from the entire squadron, the summer being now too far advanced to admit of the visit this year.

SWANAGE.—On Thursday afternoon (the 25th ult.) a waterspout of great size was seen from this port at a distance of between five and six miles. The atmosphere at the time was thick, with dark heavy clouds. Its first appearance was like a cloud of smoke, bright at the top and dark downwards. It was funnel-shaped at the top, narrowing until it was within 50 feet of the sea, when it gradually increased in size till it reached the water. Its height seemed to be about 150 feet, and its base had an apparent diameter of 30 feet. The surface of the sea at the spot whence it ascended was in a perfect foam, the whiteness of which strangely contrasted with the dark column rising upwards. It lasted about ten minutes, when it suddenly broke.

TIVERTON.—Lord Palmerston, before leaving this town last week, attended the races, and afterwards dined at the race ordinary. In returning thanks for the toast of his health, his lordship spoke as follows on the management of his Irish estates, and on the analogy between Parliament and the turf:—

The Chairman has adverted to what I have been doing in Ireland as an Irish proprietor. I will only say, that if, as my worthy friend stated, that man is a benefactor to mankind who makes two blades of grass grow where only one grew before, I may claim some merit, because I had at one time nearly 1000 acres of blowing sand where no blade of grass grew, and now, in consequence of having assiduously planted that sand with bent, which dies away after it has come to a certain growth, and is followed by grass, I have succeeded in covering the whole of that barren spot with grass, and therefore I have done something more than make two blades of grass grow where only one grew before. I am glad to say that I and my tenantry are on very good terms, and although I am happy to see a great many faces when I visit that part of the country, for their own sakes I should be glad if many of them would go to a place where they would be more able to benefit themselves. But so long as they choose to remain in their present position, I shall be most happy to allow them. I beg leave to advert in a certain degree, I will not say to politics but to political conditions, and especially to Government and Parliamentary conditions, for there is a great similarity between Government and Parliamentary conditions and the racing which we have been attending to-day. The House of Commons very much resembles a racecourse. First of all, parties go there and run for the Queen's Plate. It is a general sweepstakes, and more than one takes the stakes if he wins. Then, again, there is the match, and he is a lucky man who does not meet with his match, but almost every man does meet with his match, and he is not at all contented in that encounter. Our rules are somewhat similar to those which guide the turf, because there is that good feeling in the House of Commons which gives weight for age. It is very true that the young ones are sometimes very apt to bolt out of the course. We have one rule, which is not enjoyed to the same degree by the turf—that is to say, that sometimes we run a dead heat, which in Parliamentary language is expressed by the words 'a tie.' But then our judge does not make us run the heat over again, does not make us go through the debate again, and take the division over again. Our judge decides the matter on the spot, and a dead heat having been run, he decides in favour of one horse or the other just as he may think it best to do. The Speaker settles the matter. He gives the casting vote. Then there is another thing in which we greatly resemble the turf—that is to say, it often happens that a very good-looking horse breaks down. And so there is a great analogy in reality between things that apparently differ very much. I think I have shown—perhaps you were not aware of it before—that there is a great analogy between Parliament and the turf. I think I have kept my word, and given you a little of Parliamentary conditions. I hope in so doing that I have not intruded anything that was not strictly in accordance with your rules, and that I have not introduced anything which is not entirely appropriate to a race meeting."

WARRINGTON.—On Friday a young man, who gave the name of John Edward, and stated that he was an American, was brought before the borough magistrates, charged with having burglariously entered the Museum, and stolen upwards of 200 gold and silver coins of great value, including many of the reigns of Henry VIII., Elizabeth, James I., Charles I., and Charles II. On the previous Wednesday the prisoner was seen twice upon the premises; and on the next morning, when the curator and his family got up, it was discovered that several tables had been broken open and the coins extracted. The thief had obtained ingress through one of the windows. The chief constable immediately telegraphed to the authorities of Liverpool, London, Manchester, and elsewhere, requesting that notice of the robbery might be given to the bullion dealers. Early on the following morning the prisoner presented himself at the shop of a bullion dealer in Liverpool, and offered a large number of the coins for sale. He was detained and given into custody. It was ascertained that he had already disposed of some to the amount of 4*l.* 12*s.*, but the whole of the coins, fortunately, were recovered. The prisoner was remanded.

WORCESTER.—On Saturday a man named John Butler, keeper of one of the navigation locks on the Severn at Holt Fleet, about six miles from this city, was charged with the wilful murder of Catherine Gulliver, his housekeeper. The accused is 62 years of age, and the deceased was about 44. The prisoner is the oldest servant of the Severn Improvement Commissioners, and had charge of the locks at Holt. About four years ago his wife died, and the deceased woman went to live with him as his housekeeper, and there is no doubt that they lived together as man and wife. Some jealousy, however, arose between them. On one occasion the prisoner threatened to drown deceased, and she had consequently appealed to the police, and the officer of the district had remonstrated with Butler, and cautioned him as to his conduct. On Saturday, the 13th ult., which was the last time the deceased was seen alive, she went to a neighbour's at half-past 11 at night, and said Butler had threatened to lock her out. She then proceeded towards his house, and about midnight cries were heard, resembling, as one of the witnesses said, the bleating of a sheep. The noise at first appeared to proceed from between Butler's house and the lock (about 30 feet distant), and gradually grew fainter. The neighbours did not interfere, thinking it was only an ordinary quarrel between the two. The woman was never seen afterwards alive, and when the prisoner was questioned about her he answered in a sullen manner, and evasively, though he admitted that it was Mrs. Gulliver that was

bleating at midnight. The neighbours do not appear to have had their suspicion aroused until three days had elapsed, when rumours got abroad that the woman had been foully dealt with. The clergyman of the parish visited Butler, and questioned him about her, but he made no answer beyond saying that he did not know where she was. This confirming the suspicion excited, he was taken into custody. On the same day the body of deceased was found about 20 yards below the lock at Holt. A surgeon who examined the body deposed that death had been caused partly by a blow and partly by drowning. It was proved that the lock was full of water late on the Saturday night, and that it appeared in the same state on the following morning, when the gates were raised so as to pass water out of the lock into the river. A labouring man saw the prisoner standing by the side of the lock at half-past 5 o'clock on the Sunday morning, looking anxiously into the lock, but on seeing that the man was there he retired to his house, peeped from the door, and watched him go away. The bonnet of deceased, which had been torn from her head, was produced by the police, and the prisoner was committed for trial on the charge of Wilful Murder.

YARMOUTH.—A new hotel is erecting on the edge of a cliff at Alum Bay, and will be the largest in the Isle of Wight. It has been rendered necessary by the numerous visitors who cross from Lymington to Yarmouth, which is close to Alum Bay.

Ireland.

MURDER IN OMAGH.—A brutal and unprovoked murder was committed in Omagh on Saturday evening. The victim is Mr. John M'Crossan, a solicitor of considerable repute in the county of Donegal, who at the last assizes was solicitor for the plaintiff in the case of "Doyle v. M'Loughlin," coach builder, when a verdict of 8*l.* damages and 6*d.* costs was found for the plaintiff. M'Loughlin, the defendant, not paying the damages and costs, an execution was brought against him, and the sub-sheriff, Mr. Charles M'Crossan, brother of deceased, was on Saturday last about to proceed with the execution. M'Loughlin resisted, and had his house barricaded against the sheriff and his bailiffs. The sheriff, seeing that resistance was offered, sought the advice of his brother, who went to him, and while they were speaking together in the street before M'Loughlin's house, an iron rod, 5 feet 8 inches in length, having a hook with a barb at the point, was thrust by M'Loughlin out of the window on the upper story, and plunged into the throat of Mr. M'Crossan, lifting him off the ground, and inflicting a dreadful wound. The carotid artery was cut, and the blood gushed out in profusion. All the remedies which medical skill could devise were applied, and up to Sunday afternoon faint hopes were entertained of his recovery, but during the night a change for the worse set in, which became more serious, until he finally expired, after intense suffering, at 5 o'clock on Monday morning. The constabulary immediately forced their way into the house, and arrested M'Loughlin, and at the inquest on Tuesday the jury unanimously returned a verdict of "Wilful Murder" against the prisoner, who was then committed for trial.

Scotland.

INAUGURATION OF THE PRINCE CONSORT'S STATUE AT PERTH.—On Tuesday morning the Queen inaugurated with solemn ceremonial the statue which has been raised to the memory of the late Prince Consort by the city of Perth. The statue, which is by Mr. Brodie, of Edinburgh, though only of Redhall freestone, bears the stamp of artistic execution and fidelity, and serves, on a spot often visited by the Prince, to commemorate not only his name but his appearance. The figure is 9 feet in height, and the robe is that of a Knight of the Thistle; the dress is the doublet and trunk hose of the old Scottish Court, with the Garter below the left knee. The collar and star of the Thistle show very effectively on the richly embroidered doublet, and the mantle falls gracefully in the rear of the figure. The right hand rests on a square column or pedestal and holds an open scroll, on which the outlines of the Exhibition building of 1851 may be traced. The figure stands on a pedestal 18 feet high, making the whole height 22 feet. The pedestal is octagonal, approached by four octagonal graduated steps, and is surrounded by a circular railing of bronzed malleable iron of a star cross and floral pattern. The site chosen for the statue is on the North Inch of Perth, in the corner nearest to the Bridge of Tay; and the Pavilion erected for her Majesty's use on the occasion, was erected on the spot on which King Robert III. of Scotland is said to have viewed the sanguinary battle between Clan Chattan and Clan Quhele, commemorated in the "Fair Maid of Perth." The train bringing the Queen and Royal family from Windsor arrived at Perth at 20 minutes to 9. Her Majesty was accompanied by the Princesses Helena, Louisa, and Beatrice, Prince Leopold, and the Duke and Duchess of Saxe-Coburg. The Royal party were received at the station by the Lord Provost, magistrates, and Town Council, the Lord Provost of Edinburgh, the directors of the railway, the Sheriff and Sheriff-Substitute, the Procurator Fiscal, and other official persons, and proceeded in state to the site of the statue, through Marshal Place, Princes Street, St. John Street, George Street, and Charlotte Street. The procession was escorted by two troops of the 15th Hussars, and the streets were lined with detachments of Highlanders and other regiments brought for the occasion from various garrisons in Scotland. Several companies of Perthshire Volunteers were also on the ground. On arriving at the site, the municipal bodies, the Memorial Committee, and the high constables took up their places within the barrier, with the guard of honour of the 92d Highlanders and band of that regiment, while a large company were accommodated within the Royal pavilion. On the Queen's arrival the band played one stanza of the National Anthem, but without the sound of drums. The Rev. Mr. Burdon, Minister of East Church, Perth, then offered up a prayer that the Almighty would prosper and guard the work that they had finished, prolong her Majesty's reign, and fill it with the blessings of peace, of progress, and of Christian enterprise. The Lord Provost of Perth then presented a loyal address to her Majesty, after which the statue was uncovered, the guard of honour presented arms, the band of the 92d played the National Anthem, the pipes of the Highland regiments sounded a pibroch, and a battery of artillery placed at the top of the Inch fired a Royal salute. Having silently regarded the statue for a few minutes the Queen turned round, and commanding the Lord Provost of the city to kneel, conferred upon him the honour of knighthood, and to him, now Sir David Ross, her Majesty expressed her satisfaction with the statue, and with the proceedings of the day. The Duke of Saxe-Coburg, the brother of the deceased Prince, then presented the sculptor, Mr. Brodie, to the Queen, who repeated to him the expressions of her appreciation of the statue, both as a work of art and as a faithful resemblance of the Prince. The Royal party then, attended by the Lord Provost and magistrates, returned to the station, and at 20 minutes before 11 took their departure for Balmoral. The whole route from the railway station to the site was thronged with people, and her Majesty was welcomed during her progress through the city with the greatest enthusiasm.

GIFT OF A PUBLIC PARK.—Lord Willoughby de Eresby has resolved to give a park for the use of the inhabitants of Crieff. The ground selected stretches from the upper part of Burrell Street west to the Wool Mills, and extends to about 12 acres. The low ground is to be levelled, and part of it to be converted into a bowling-green, curling-pond, cricket-ground, &c., and the brae on the north side, next the town, is to be laid out as a promenade. The management of the park will be handed over to the Commissioners of the burgh, under the General Police Act.

THE YELVERTON CASE.—It is reported that Mrs. Yelverton (formerly Mrs. Forbes) is about to commence an action for a judicial separation.

Railways.

COLLISION ON THE MIDLAND.—An alarming accident took place on Monday morning at Stavely Station, near Chesterfield. The mail trains do not stop at this station, and as the driver saw the signal indicating that the line was clear he went on at full speed, and the engine dashed into a goods train from Derby, which, by an error of the pointsman, had been shunted across the main line instead of into a siding to await the passage of the mail. An awful crash was the consequence. The engine completely cut the goods train in two, and several carriages were shattered. The Post-office van was turned completely over, and the officer in charge of the mails received such injuries that his life is despaired of. The line was completely blocked, causing the stoppage of all for about two hours.

COLLISION ON THE EAST LANCASHIRE.—On Tuesday, a collision between two luggage trains took place on the East Lancashire section of the Lancashire and Yorkshire, close to the Burnley station. The goods train from Liverpool had entered the station, and the stoker, instead of allowing the waggons to run down the up main line, shunted them across the down line instead of the siding, at the very moment when a luggage train from Colne was approaching on the down line. Eight of the 23 waggons forming the Colne train were totally demolished, and the engine was thrown off the line, with the foremost waggons. Traffic was stopped on both lines for six hours. The damage is supposed to amount to between 500*l.* and 1000*l.*

THE LATE EXPLOSION ON THE NORTH LONDON.—The inquest on William Davis, the fireman killed by the explosion of the locomotive on the North London line on the 10th ult., was concluded on Thursday, when Captain Tyler, the Government inspector, read an elaborate report which he had made to the Board of Trade, the substance of which was that the copper stays supporting the fire-box had become weakened by long use and had ultimately given way. He stated that as these stays were covered, the gradual decay could only have been detected by taking the engine to pieces, or by subjecting it more frequently than appeared to have been done to hydraulic pressure. He added that the engineer on this line tested his engines more frequently than engineers were in the habit of doing, but still, as this case showed, not frequently enough. The jury returned a verdict of death by misadventure, with an expression of opinion that the engine ought to have been more frequently tested than it was, considering its age.

OPENING OF THE MID-WALES.—This important link in the Welsh railway system, extending from Llanidloes to Brecon, was opened for traffic on the 23d ult. The event was celebrated by a dinner at Brecon, presided over by Mr. Whalley, M.P., the chairman of the Company, supported by about 300 guests. The line, which is one of great interest, on leaving Llanidloes enters the vale of Tylwch and skirts the river Marteg until that stream empties itself into the Wye, about 12 miles from Llanidloes. It then proceeds along the banks of the Wye, passing the towns of Rhayra, New-bridge, and Builth, and continues its course to Boughrwd, where it crosses the river by a lattice girder bridge of 191 feet span. It then becomes a cross-country line until it joins the Brecon and Merthyr at Talyllyn, or "the Head of the Pool," a small village lying in a pretty valley at the base of Cader Idris, and five miles distant from Brecon.

OPENING OF THE WIGAN, ECCLES, AND TYLDESLEY.—The new line from Eccles, through Tyldesley to Wigan, constructed by the London and North-Western Company, was formally opened on the 24th ult., with considerable *éclat*. The new line, though only 12 miles in length, is likely to prove of very great utility.

THE EARLY DAYS OF RAILWAY TRAVELLING.—In the dinner given to celebrate the opening of the Eccles, Tyldesley, and Wigan Railway, on the 24th ult., Mr. Oliver Heywood, in proposing "The Landowners," said "he remembered travelling by rail when passengers had to give their names and spell them, in order to their being written on a large green paper ticket; and between Liverpool and Manchester there was a long stay at Newton, in order that passengers might refresh themselves with Eccles cakes. A 'guide' to the line to London cost 5*s.*, and there was a cheap edition at 2*s.* 6*d.* The former told the number of bricks in the Kilsby and Watford tunnels, and how they were fed on the company by the landowners of the neighbourhood. Now landowners knew their interests to be identical with the railway companies. He had heard that the London and North-Western carried into London daily two tons of watercresses and a ton of mushrooms."

A NEW RAILWAY DANGER.—The long list of casualties which have recently been published showing the necessity of protecting the railway traveller from the madman, the murderer, and the libertine, has now been increased by an enemy more remorseless still, the danger of fire. Several cases have occurred during the past few weeks, both on English and French railways, in which live coal sparks from the engine have been blown among the luggage or into the windows of passenger carriages. A lady travelling on the Strasbourg line a few days since had a narrow escape from being burnt to a cinder by a spark falling upon her dress; and on the 11th ult. the luggage piled on a first-class carriage of a North-Western train from London to Fleetwood was burnt almost to the roof before it was possible for the passengers to arrest the attention of the guard. In other cases the sparks have ignited fields of corn and farm buildings in the neighbourhood of the line. These accidents have been caused in every instance by the practice of burning coal, instead of coke, without any fender or other appliance for preventing the sparks flying through the chimneys of locomotives.

Obituary.

THE EARL OF MORLEY died on the 28th ult. after a short illness, at Whitaway, near Chudleigh, the residence of his mother-in-law Mrs. Parker, in his 54th year. He had been staying at Whitaway on a visit, and was in his usual health to within a week before his death, when he was seized with affection of the throat, which terminated fatally. He was born in 1810, and succeeded his father, who was the first Earl, in 1840. He married in 1842 the only daughter of Mrs. Edmund Parker, Esq., of Whitaway, and relict of W. Coryton, Esq., of Pentillie Castle, Cornwall. The Countess survives him, and he leaves by her two children—the Hon. Edward, Viscount Boringdon, now Earl of Morley, born at Kent House, Knightsbridge, in 1843, and Lady Catherine Parker. The deceased earl was a Liberal in politics, but had been attacked by paralysis in early life, had been an invalid several years, and was consequently unable to take any active part in public affairs. He was appointed colonel of the South Devon Militia in 1845, and was for some years a lord in waiting to the Queen, but resigned in 1852. He was a special deputy warden of the Stannaries, and for several years filled the office of chairman of the Plymouth Chamber of Commerce and chairman of the South Devon and Tavistock Railway Company, but had resigned the latter office. His lordship resided for many years, and up to within a recent period, at his family seat at Saltram, near Plymouth, where he was a large landed proprietor.

SIR CHARLES KNIGHTLEY, Bart., died on the 30th ult. at his seat, Fawsley Hall, near Daventry, in his 82d year. He was the eldest son of the Rev. Charles Knightley, by the daughter of Mr. Henry Boulton, of Moulton, Lincolnshire, and was born in 1781. He married in 1813 the eldest daughter of Mr. Felton Lionel Hervey, of Englefield Green, grandson of the first Earl of Bristol, and by her had a son and a daughter, both of whom survive—namely, Rainald, born in 1818, M.P. for South Northamptonshire, and Sophia Selina, married to the Hon. Henry F. H. Gage, eldest son of Viscount Gage. In 1849 he succeeded his uncle, the Rev. Sir J. Knightley, who was created a baronet in 1798, with remainder in default of male issue to the heirs male of his deceased brother Charles. He was educated at Rugby School, and afterwards completed his education at Oxford. He contested the southern division of Northamptonshire in 1831, and from 1832 sat for the division of the county. Since his retirement from Parliament he chiefly devoted his leisure to agricultural improvement and the welfare of his tenantry. He was a deputy-lieutenant and a patron of three livings.

SIR SAMUEL O'MALLEY, BART., died on the 16th ult., at his seat Kilboyne House, Mayo, in his 85th year. He was the

of Mr. Owen O'Malley, of Borrishowle, and was created a baronet in 1818. Independent of being the head of an ancient family, his name has been associated with the public affairs of Mayo for more than half a century. He was appointed a magistrate immediately on becoming of age, 68 years ago, and was the eldest magistrate, and the eldest deputy lieutenant of the county. He was the first to propose the introduction of a railway into Mayo, which he advocated for the last 30 years, but the accomplishment of that measure was reserved for the present Earl of Lucan. During the 38 years in which he held the commission of the peace no act of his ever met the censure of the superior tribunals or the Government of the country. In 1809 he married a daughter of Mr. J. Reilly. His eldest son, Sir William O'Malley, Knight, succeeds to the baronetcy.

SIR THOMAS SEBRIGHT, BART., died on the 27th ult. at Beechwood House, near Dunstable, in his 62d year. He had been suffering from dropsy for some time past, but his death was the result of congestion of the lungs. He is succeeded in the title and the large entailed estates by his eldest son, now Sir J. G. S. Sebright, who was educated at Christ Church, Oxford.

SIR JOHN RATCLIFFE died at his residence, Wyddrington, near Birmingham, on Thursday, after a few weeks illness, the immediate cause of death being diabetes. He was Mayor of Birmingham three times consecutively, and on the occasion of the Queen's visit to open Aston Park he received the honour of knighthood. He was for many years engaged in trade in the town, and had realised a large fortune.

ADMIRAL LORD HOTHAM died in London on the 20th ult., in his 78th year. He entered the navy in 1801, and was present at the blowing up of the Insolente in the Morbihan river in 1800; and at the cutting out the French corvette Guipe, from Vigo, in 1801. He afterwards served at the reduction of Aux Cayes and other ports of St. Domingo in 1803; at the attack on Curaçoa in 1804, at the capture of the French corvette Diligente, the destruction of the French privateer General Ernouf; and at Walcheren. He next served in the operations on the coast of America, including the attack on Craney Island and Hampton, and at the destruction of the United States schooner Asp in 1813. He also held other active employment up to 1826. He became a rear-admiral in 1854; vice-admiral in 1857; and admiral, a few weeks ago.

MR. CHARLES DASHWOOD PRESTON BRUCE, of Leckie House, died on the 25th ult. from the effects of a melancholy accident. He was returning home from the moor with Mr. Campbell, of Boquhan, when his horse reared, and threw him over a precipice on Boquhan Hills, killing him on the spot. On the death of Lady Preston Hay about two years ago, Mr. Bruce succeeded to the estate held in fee-simple of the late Sir Robert Preston. Circumstances had precluded his taking possession then; and just at the moment when he was about to enter upon his inheritance he has been killed by the restiveness of his horse. Mr. Bruce was born in 1802; in 1841 he married the Hon. Harriet Elizabeth, a daughter of Lord Rivers, but as the lady has no issue the estates fall to the late Earl of Elgin's second son, to be his possession so long as he does not succeed to the earldom, Sir Robert Preston's will having provided that his family name and estates shall never merge in the title or estates of the Lords of Broomhall.

THE REV. DR. MARSH, D.D., honorary canon of Worcester, died on the 24th ult. at the rectory of Beddington, near Croydon, about a month after he had completed his 89th year. He was almost the last of that company of earnest men who in the close of the last century and in the commencement of the present were the means of renewing the life and energy of the Church of England. He was also the intimate friend and associate of Charles Simeon, Henry Venn, Henry Thornton, and William Wilberforce, and had outlived them all. He became first known to the religious world about 1815 as an earnest fellow-worker with Mr. Simeon for the conversion of the Jews. He went to Amsterdam to convert the Dutch Jews, and became the friend of the late Dr. McCaul and of Dr. Alexander, who afterwards accepted the bishopric of Jerusalem. He was a great preacher, and whether before the University of Oxford or from a more congenial pulpit, he never failed to advocate the conversion of the Jews, and other favourite projects of the Evangelical School. He published a sermon on the return to health of George III., and one on the death of that sovereign; sermons on Justification by Faith, and on the death of the late Rev. James Haldane Stewart; "Plain Letters on Prophecy," a pamphlet "On the Claims of the Church of England on the Affections of the People," a "Catechism on the Church of England," and numerous other works. He was taken ill only a few days before his death, and retained his faculties to the last. His son, the Rev. William Tilson Marsh, of Oriel College, Oxford, is the incumbent of St. Leonards. Miss Catherine Marsh, one of his daughters, is widely known as the author of "English Hearts and English Hands," the "Memoirs of Captain Hedley Vicars," &c., and is distinguished for her energetic benevolence and success in reclaiming the navvies at Beckenham when railway works were in progress in that neighbourhood.

THE REV. THOMAS CATOR, rector of Kirk Smeaton and vicar of Womersley, died somewhat suddenly at his residence, Kirk-Smeaton, near Pontefract on the 24th ult. He had only been ill three days, and the fatal termination was not anticipated by his family. Mr. Cator had been for upwards of 30 years a magistrate of the West Riding. He married Lady Louisa, the daughter of the late Earl of Scarborough, who survives him. He had been 47 years vicar of Womersley, and 35 years rector of Kirk Smeaton.

WILLS.—The will of the Rev. Sir Thomas C. Miller, Bart., LL.B., late vicar of Froyle, Southampton, has been sworn under 60,000*l.* personalty. Major-General Hardinge, K.H., 35,000*l.*

Miscellaneous.

DIVORCE AND REMARRIAGE.—The marriage returns for 1862, which have just been issued, distinguish the marriage of 28 divorced persons in the year. Ten of these marriages took place in London. Fifteen divorced men married spinsters, and two divorced men married widows; nine divorced women were married to bachelors, and two divorced women to widowers. There was also an instance, at Birmingham, where a man and woman, once husband and wife, but divorced, were remarried. The number of divorced persons is increasing, anp hence these marriages of divorced persons increase; the number reported in 1862 was about three times as many as in any previous year.

INCOME TAX.—The number of persons charged with income-tax under Schedule D in Great Britain, gradually increases. In the year ending April 5, 1862, the number was 285,157, and they were charged upon incomes amounting to 89,013,493*l.*; and in the year ending April 5, 1863, the number rose to 293,468, and the income charged with tax to 93,322,864*l.* The increase extended to taxpayers of all classes, with one exception; those charged on incomes between 800*l.* and 900*l.* a year declined in number from 2048 to 2005, but the income taxed declined only from 1,672,431*l.* to 1,643,428*l.* In the year 1861-62 67 persons were charged with income-tax under Schedule D, upon incomes exceeding 50,000*l.* a year; in the year 1862-63, 80 persons. The schedule would, of course, include not only merchants and manufacturers, but joint-stock companies with the exception of the gas, railway, and canal companies, these being taxed under Schedule A as making their profits out of the use of land. Ireland presents in this return an unfortunate contrast with Great Britain. In the year 1861-62 17,602 persons were charged with income-tax in Ireland under Schedule D upon incomes amounting to 4,677,568*l.*; in the year 1862-63 only 17,438 persons, but the income still amounted to 4,637,743*l.*, or not 4000*l.* less than in the former year. The number charged on incomes between 5000*l.* and 10,000*l.* fell from 35 to 29, and on incomes between 10,000*l.* and 50,000*l.* from 26 to 22. Two were charged on incomes of 50,000*l.* and upwards in the year 1861-62, and three in 1862-63. The net amount of income-tax under all schedules is stated as follows for the year ending April 5, 1863:—England, 9,551,214*l.*; Scotland, 901,257*l*; Ireland, 796,170*l.*; total, 11,248,641*l.* The rate was 9*d.*

BIRTHS.—On the 29th ult., at 48, Rutland Gate, the Viscountess BURY, of a daughter—25th ult, at Stuston Rectory, Scole, the Hon. Mrs. EDWARD PAGET, of a son, stillborn—24th ult, at 78, Jesse Place, Castle Hill, Reading, the wife of the Hon. W. B. ANNESLEY, of a daughter—23d ult, at Merseworth Rectory, near Maidstone, the wife of Lieut.-Colonel TOTTENHAM, M.P., Scots Fusilier Guards, of a daughter—23d ult, at Merseworth Rectory, near Maidstone, the wife of Lieut.-Colonel TOTTENHAM, M.P., Scots Fusilier Guards, of a daughter—25th ult., at 24, Hill Street, Berkeley Square, the wife of Captain WILSON PATTEN, 1st Life Guards, of a daughter.

MARRIAGES.—On the 29th ult, at St. Paul's Church, Knightsbridge, Lieut.-Colonel BURNABY, Grenadier Guards, only son of Edwyn Burnaby, Esq., of Baggrave Hall, Leicestershire, to LOUISA JULIA MARY, second daughter of the late Sir WOLLASTON DIXIE, Bart., of Bosworth Park, Leicestershire—25th ult, at St James's, Westbourne Terrace, Captain BURGOYNE, R.N., &c., only son of General Sir John Fox Burgoyne, Bart., to EVELYN LAURA, daughter of Rear-Admiral Sir BALDWIN WAKE WALKER, Bart.—25th ult, at Wallasey, THOMAS FLETCHER, eldest son of Sir THOMAS F. F. BOUGHEY, Bart., of Aqualate Hall, Staffordshire, to SARAH ANNABELLA, only daughter of HAROLD LITTLEDALE, Esq., of Liscard Hall, Cheshire—25th ult, at Freshwater, Isle of Wight, RICHARD BIDDULPH MARTIN, eldest son of Robert Martin, Esq., of 21, Eaton Square, and Overbury Court, Worcestershire, to MARY FRANCES, only daughter of Rear-Admiral RICHARD CROZIER, of West Hill, Isle of Wight—25th ult, at Kirk Christ Rushen, near Douglas, JOHN QUAYLE, Esq., Sumner-General of the Isle of Man, to EMILY CATHERINE, eldest daughter of EDWARD MOORE GAWNE, Esq., Speaker of the House of Keys—25th ult, at St. Mary, Bryanston Square, Dr. CONWAY EVANS, M.D., of King Street, Covent Garden, to AMY LOUISA, second daughter of the late Major-General WILLIAM MILES, of North Villa, Regent's Park, and Cheshunt, Herts—25th ult, at Crawley, Sussex, ROBERT ROMER, Esq., B.A., Trinity Hall, Cambridge, second son of Frank Romer, Esq., to BETTY, second daughter of MARK LEMON, Esq.—25th ult, at Tor Mohun Church, Devon, the Rev. FRANCIS THOMAS ATWOOD, formerly vicar of Hammersmith and Great Grimsby, to CLEMENTINA AGNES, daughter of the Rev. SAMUEL LYSONS, M.A., F.S.A., of Hempsted Court, and rector of Rodmarton.

DEATHS.—On the 30th ult, at Torquay, the Hon. Mrs. PRIMROSE, widow of the Hon. F. W. Primrose, brother of the Earl of Rosebery—19th ult, at Old Charlton, FINETTA SYDNEY, only daughter of Major and Mrs. D. H. MACKINNON, and granddaughter of the Hon. Baron Dimsdale—16th ult, at Tan-y-Bwlch, North Wales, from the upsetting of a coach, CHARLOTTE WATTS, wife of George Watts, Esq., of Bayswater, and only child of the late Sir John Everitt, of Sloane Street, aged 70; and on the 19th ult, at Tan-y-Bwlch, from injuries received at the same time, GEORGE WATTS, Esq., aged 65—8th July, at Umballa, North-West Provinces, Captain BURKE CUPPAGE, 21st Hussars, only surviving son of Major-General Burke Cuppage, Royal Artillery, Lieutenant-Governor of Jersey—21st ult, at Lotus, near Dumfries, Lieut.-Colonel W. HYSLOP, retired list H.M.'s Indian Army, formerly commanding 3d Madras Light Cavalry—27th ult, at 26, Charles Street, Berkeley Square, CAROLINE MATILDA, relict of JOHN HEARLE TREMAYNE, Esq., of Heligan, Cornwall, aged 75—29th ult. at Mongewell House, Wallingford, JOANNA, relict of the late NATHANIEL PALMER, Esq., aged 86—23d ult, at the Lache, near Chester, ANNIE, widow of ROBERT GRIFFITHS TEMPLE, Esq., formerly Judge of the County Courts for North Staffordshire—22d ult, at Barragh Vicarage, county of Carlow, the Rev. GEORGE STONEY SWINNY, M.A., aged 71—25th ult, GEORGE BATT, Esq., of The Priory, Sydenham, and late of 412, Strand, seed merchant, aged 83.

Markets.

COVENT GARDEN, Sept. 3.

Outdoor produce is plentiful; prices for some things still continue high. Of Grapes there is now a good supply. Foreign goods comprise Pears and West India Pine Apples, both of which are abundant and cheap. Kent Filberts and Cobs fetch from 45s. to 60s. per 100 lbs. New Walnuts promise to be plentiful. Potatos from Yorkshire and the Midland counties are abundant but small. Flowers chiefly consist of Orchids Heaths, Asters, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Pears, per doz., 1s 6d to 3s
Grapes, per lb., 1s 6d to 4s	Apples, per sieve, 2s 6d to 6s
Peaches, per doz., 3s to 10s	Oranges, per 100, 16s to 20s
Nectarines, do., 2s to 8s	Lemons, per 100, 8s to 12s
Melons, each, 2s to 4s	Nuts, Barcelona, do., 16s
Figs, per doz., 1s 6d to 2s 6d	— New Brazil, do., 16s.
Plums, per ½ sieve, 2s to 4s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 6d
Peas, p. basket, 2s 6d to 3s 6d	Garlic, per lb., 6d
Potatos, York Regents, p. ton, 60s to 80s	Lettuces, each, 1d to 2d
— Rocks, do., 45s to 55s	Endive, per score, 1s to 2s
— Flukes, 60s to 90s	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 6d to 9d	Mushrooms, p. pott., 1s to 1s 9d
Turnips, p. bunch, 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
Cucumbers, each, 4d to 1s	Herbs, per bunch, 6d

BRITISH WOOLS.—LONDON, Sept. 1.

The past month has been characterised by its usual dulness, and not more than an average business has been transacted. Our stocks are lower in farmers', merchants', and manufacturers' hands than ever was known at this season of the year, and we therefore expect a good trade this month at full prices. The consumption of this year's clip of wool commenced in February with the fat sheep, and has continued with unprecedented activity to the present time and under ordinary circumstances must soon exhaust the supply. If any extraordinary demand should arise through the establishment of peace in America (a probability not sufficiently strong to speculate on), a considerable advance in price may be anticipated, in consequence of the exchange of our worsted manufactures for cotton, the stocks of goods being very small in the Confederate States.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	2	2	to	2	8	Leicest. Hoggs	2	5	to	2	6
Half-bred ditto	2	6	—	2	7	Ditto Wethers	2	1	—	2	2
Down Ewes	2	0	—	2	1	Combing Skins	1	11	—	2	2
Kent Fleeces	2	2½	—	2	3½	Flannel Wool	1	0	—	1	9
						Blanket ditto	0	6	—	0	9

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Sept. 1.

Prime Meadow Hay	80s	to 120s	Clover, old	100s to 140s
Superior do.	—	—	New Clover	— —
Inferior do.	75	85	Do. second cut	— —
New do.	60	92	Straw	28 32
Rowen	—	—		

HARVEY & EASTON.

WHITECHAPEL, THURSDAY, Sept. 1.

Fine Meadow Hay	110s	to 118s	Prime 1st cut Clover	130s to 140s
Inferior do.	100	110	Inferior do. do.	120 130
Prime New Hay	—	—	Prime 2d cut do.	118 126
Inferior	—	—	New Clover	— —
Straw	28	32	Inferior do.	— —

COAL MARKET.—Aug. 31.

Hastings Hartley, 18s. 3d; Holywell Main, 16s.; North Pelton Gas, 18s. 9d.; Walls End Haswell, 19s.; Walls End Hetton, 19s.; Walls End Tunstall, 17s.; Birch Grove Graigola, 21s.—Ships at market, 21.

NEWGATE.—Sept. 2.

Best Fresh Butter .. .. 16*s.* per dozen lbs.
Second do. do. .. .. 14*s.* ,,

Pork, 4*s.* 8*d.* to 5*s.* 0*d.* per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Sept. 2.

Messrs. Pattenden & Smith report the demand for Hops principally confined to those of last year's growth, which command fully last week's quotations. As yet there is but little doing in new Hops, the majority of the samples being of an inferior quality. Picking next week will become general, when a supply of good ones may be expected, and the demand increase.

METROPOLITAN CATTLE MARKET.

MONDAY, Aug. 29.

The number of Beasts to-day is very large, but the average quality is still very inferior. The choicest kinds are selling quite as dear as on Monday last, and in some instances rather dearer. The supply of Sheep and Lambs is about the same as of late. Trade is very dull for them, and it is difficult to obtain late rates. Calves are selling as on Thursday. From Germany and Holland there are 2580 Beasts, 10,470 Sheep, 99 Calves, and 50 Pigs; from Ireland, 270 Beasts; and 3540 from the Northern and Midland Counties.

	s.	d.		s.	d.		s.	d.		s.	d.
Best Scots, Herefords, &c.	4	10	to	5	0	Best Long-wools	4	8	—	4	10
Best Short-horns	4	6	—	4	10	Do. Shorn	..	..	—	..	..
2d quality Beasts	2	8	—	3	6	Ewes & 2d quality	4	0	—	4	4
Best Downs and Half-breds	5	2	—	5	6	Do. Shorn	..	..	—	..	..
Do. Shorn	..	..	—	..	..	Lambs	5	2	—	6	4
						Calves	4	0	—	5	0
						Pigs	3	4	—	4	6

Beasts, 6890; Sheep and Lambs, 29,270; Calves, 124; Pigs, 460.

THURSDAY, Sept. 1.

The number of Beasts is large, and the demand very limited. Prices are on the average lower, and several remain unsold. Sheep are not so plentiful as of late, but the supply far exceeds the demand. Trade is exceedingly heavy, and a clearance cannot be effected, notwithstanding a disposition to sell at rather less than their own quotations. Lamb trade is very bad, and Calves are selling at the same as on Monday. Our foreign supply consists of 1029 Beasts, 3030 Sheep, and 660 Calves.

	s.	d.		s.	d.		s.	d.		s.	d.
Best Scots, Herefords, &c.	4	8	to	5	0	Best Long-wools	4	6	—	4	10
Best Short-horns	4	6	—	4	8	Do. Shorn	..	..	—	..	..
2d quality Beasts	2	8	—	3	4	Ewes & 2d quality	4	0	—	4	4
Best Downs and Half-breds	5	0	—	5	4	Do. Shorn	..	..	—	..	..
Do. Shorn	..	..	—	..	..	Lambs	5	0	—	6	0
						Calves	4	0	—	5	0
						Pigs	3	4	—	4	6

Beasts, 1730; Sheep and Lambs, 3740; Calves, 780; Pigs, 140; Milch Cows, 95.

MARK LANE.—MONDAY, Aug. 29.

There was a moderate supply of Wheat from Essex and Kent to this morning's market, which was sold at the extreme rates of this day se'nnight. Foreign was held for late prices, but the business done was extremely limited. For new Malting Barley there was a good demand at the prices of this day week, but for grinding there was little inquiry. Beans and Peas were unaltered in value. The Oat trade was steady at former quotations. Flour was neglected. Of Mustard Seed the supply was small, and it was sold 1s. per bushel below the prices of last week.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk.. White	42	—46	Red	40	—42
— — fine selected runs..ditto	44	—48	Red	41	—44
— — Talavera	48	—54			
— Norfolk	—		Red	—	
— Foreign	38	—52			
BARLEY, grind. & dist., —s to —s..Chev.	34	—36	Malting	32	—34
— Foreign..grinding and distilling	22	—28	Malting	28	—31
OATS, Essex and Suffolk	20	—22			
— Scotch and Lincolnshire—Potato	20	—24	Feed	20	—22
— Irish ..... Potato	19	—22	Feed	—	
— Foreign ..... Poland and Brow	20	—23	Feed	18	—21
RYE	31	—33	Foreign	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....33s to 35s..Tick	34	—36	Harrow	34	—36
— Pigeon .... 37s to 40s..Winds.	—		Longpod	—	
— Foreign ..... Small	34	—38	Egyptian	33	—34
PEAS, White, Essex and Kent..Boilers	36	—38	Suffolk	38	—40
— Maple .... —s to —s .... Grey	—		Foreign	34	—40
MAIZE ..... White	—		Yellow	—	
FLOUR, best marks delivered..per sack	35	—40			
— 2d do ..... ditto	28	—34	Country	28	—34
— Foreign ..... per barrel	18	—25	Per sack	32	—36

FRIDAY, Sept. 2.

With the exception of some showers on Tuesday and Wednesday, the weather has been fine and hot. Although business in

he Wheat trade has been limited in extent, former prices, more particularly for English Wheat, have been fully supported, excepting in Liverpool and Glasgow, where purchases might have been rather more easily effected. The malting season not having commenced, the sale of Barley is almost necessarily confined to grinding qualities, the value of which remains unaltered. Former prices of Beans, Peas, and Oats were well supported. The sale of Flour has been dull, and in Liverpool slightly lower rates have been accepted. The reports of the Wheat and Barley crops continue to be favourable. Since Friday last 120 vessels have been reported off the coast. The floating trade has not been very active; for Wheat cargoes off the coast only 1s. per qr. lower rates are obtainable. Paris, Sept. 1.—In Flour, only a moderate amount of business has been done, but late rates have been well maintained. The six marks for delivery this month are quoted equal to 31s. 6d. per 280 lbs. The present stock of Flour is estimated at 29,450 cwts. Wheat is very difficult of sale unless at a further reduction in price. The arrivals of English Wheat and Barley this week are small, of English and foreign Oats and foreign Barley large, of foreign Wheat and Flour good. The attendance at this morning's market was nearly confined to the stand holders. New English Wheat was taken at Monday's prices, but scarcely any business was transacted in foreign, and late rates are nominal. We observe no alteration in the value of any description of Spring Corn.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1530 qrs.	230 qrs.	260 qrs.	1690 sks.
Irish	—	—	2900	— ,,
				— ,,
Foreign ..	11,810 ,,	9690	52,940 ,,	9860 brls

LIVERPOOL, Aug. 30.—We have had a much better attendance at this morning's market both of local and distant buyers, but they did not appear to be much in want of foreign Wheat, and we have consequently to report only a very moderate extent of business at previous rates. Flour slow, without quotable change in value. Indian Corn meets a healthy consumptive sale, but the supply offering ex ship being much in excess of the demand, we quote Danubian 6d. per qr. lower than on Friday; American keeps its ground. Oats and Oatmeal are both in fair request at full prices. The stock of Egyptian Beans here now is so small that their value is quite nominal. Peas and Barley have a good sale. Market closes without animation.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
July 23	43s 0d	27s 3d	21s 8d	34s 0d	37s 8d	35s 7d
— 30	44 0	27 7	22 4	30 2	38 4	35 11
Aug. 6	44 1	28 3	22 10	33 0	39 2	35 3
— 13	43 6	28 1	22 0	32 9	39 8	36 9
— 20	42 7	28 7	22 11	31 6	40 9	35 5
— 27	42 5	29 1	22 0	32 8	41 1	35 6
Agg. Aver.	43 3	28 2	22 2	32 4	39 5	35 9

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

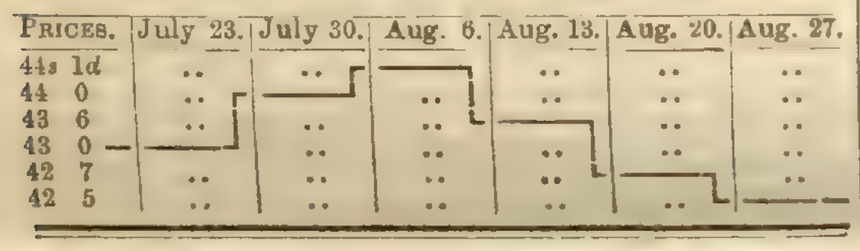

WANTED, in a large London Nursery, a first-rate CORRESPONDING CLERK.—One who could also Travel and attend on Visitors if required will be preferred.—State age and all particulars to A. Z., *Gardeners' Chronicle* Office, W.C.

WANTED, a respectable married MAN, without any family, to manage a Wholesale and Retail Seed Business, also to have a knowledge of the Nursery Trade. Good reference required.—All letters to be addressed A. W., *Gardeners' Chronicle* Office, W.C.

Propagator.

WANTED, a FOREMAN to take charge of Coniferæ, Roses, &c. A competent person will receive liberal encouragement.—Apply by letter, addressed NURSERY, Messrs. Peter Lawson & Son, Edinburgh.

WANTED, a first-rate PROPAGATOR, for a large Provincial Nursery in the South of England; he must thoroughly understand the Propagation, in large quantities, of Coniferæ, Roses, Rhododendrons, and Hardy Shrubs generally.—Apply by letter, containing reference, to M., Messrs. Cooper & Bolton, Seed Merchants, 152, Fleet Street, E.C.

WANTED, a GROOM and GARDENER; one who will take an interest and delight to keep a Small Garden in good order. He must also thoroughly understand Horses, and be a good Coachman to drive a pair.—Apply to J. W., 19, Edith Grove, Brompton, W.

WANTED, a good MAN, who understands Stoking, and can make himself generally useful in or out of the Houses.—Inquire at STEELL's Nurseries, Richmond, Surrey.

WANTED, a DAIRYMAID.—Well experienced; thoroughly understanding her business in the Dairy and Poultry. To Milk.—Apply to F. B., 5, Milton Street, Marylebone, London, N.W.

Dairywoman.

WANTED, a DAIRYWOMAN who thoroughly understands her business, and possesses an unquestionably good character. The place would be suitable for a married person, if her husband has been accustomed to and takes an interest in Cattle or Pigs. In any case state wages required, with references.—D. W., Messrs. Castle & Lamb, 133, Salisbury Square, Fleet Street, E.C.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, OFFICES, or any place of Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper. Can wait upon a single gentleman, and has excellent references.—HARRIET B., 2, Northumberland Street, Marylebone, W.

GARDENERS.—B. S. WILLIAMS is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 30, single; fully competent in every branch of his profession. Best references.—P. G., Mr. Milnes', Buckland, Faringdon, Berks.

GARDENER (HEAD), to any nobleman or gentleman requiring the services of a thoroughly practical, energetic, and experienced Gardener.—Single; has had great experience in every department of Gardening, Early and Late Forcing of Fruits and Vegetables, including Vines, Pines, &c., Stove and Greenhouse Plants, and Flower, Fruit, and Kitchen Gardens. Can give unexceptionable references for ability, &c.—A. B., Messrs. E. G. Henderson & Son, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 30; thoroughly understands Forcing, and Flower and Kitchen Gardening. Can have three years' excellent character from last employer.—A. SCOTT, North Gate Nursery, Chichester.

GARDENER (HEAD).—Age 40, married, no incumbrance; understands Early Forcing Vines, Pines, Cucumbers, Melons, Kitchen and Flower Gardens; also Land and Stock. Two years' character.—Y. Z., 6, Cologne Road, New Wandsworth, S.

GARDENER (HEAD).—Age 39, married, no incumbrance; thoroughly practical knowledge of his profession in all its branches. Eight years' good character.—J. J. C., Aspinall's Library, Penge, S.E.

GARDENER (HEAD).—Age 35, married; thoroughly understands his profession in all its branches, including Early and Late Forcing. No single handed place accepted.—N. B., Messrs. Cutbush & Son, The Nurseries, Highgate, N.

GARDENER (HEAD).—Age 40, married; understands his work, and can give satisfactory references.—D. BLACKSHAW, Gardener to Sir Edward Blount, Bart., Mawley Hall, Cleobury Mortimer, Shropshire.

GARDENER (HEAD).—Age 35, married, no incumbrance; can have good reference. Wife a Laundress, and can take charge of Dairy and Poultry.—A. B., 8, Lea Bridge Road, Clapton, London, N.E.

GARDENER (HEAD).—Middle-aged, single, Scotch; has a practical knowledge of his profession in all its branches; was 13 years in his last situation, where he was very successful in growing Grapes and Wall Fruit.—W. M., 30, Southampton Street, Strand, W.C.

GARDENER (HEAD).—Age 28, married; has a thorough knowledge of his profession in all its branches. Wife an excellent Dairywoman, or would not object to do the Family's Washing. Two years' good character from last place.—Y. Z., Ivery's Nursery, Dorking, Surrey.

GARDENER (HEAD).—Age 31, married; has a good practical knowledge of his profession in all its branches, including the Forcing of Grapes, Melons, Cucumbers, &c., also a good Flower and Kitchen Gardener. Four years' good character from the family he is about leaving.—A. B., Post Office, Fordhouses, Wolverhampton.

GARDENER (HEAD), age 30.—THOMAS EASDALE, Gardener to the late H. V. Lynes, Esq., Clapton, Middlesex, will be disengaged at the end of September. The very highest references given as to ability and character.—Address as above.

GARDENER (HEAD), to any nobleman or gentleman.—Married, no incumbrance; first-class industrious Gardener; fully competent in every branch of his profession, having had great experience. A good testimonial of 13 years' service, from the gentleman he is now leaving in consequence of an alteration in the establishment.—A. B., Post Office, Wokingham, Berks.

GARDENER (HEAD).—Middle aged, married, no incumbrance; a good working industrious Man. Understands Pines, Grapes, Melons, Cucumbers, Hothouse and Greenhouse Plants, an excellent Flower and Kitchen Gardener, the Management of Cattle, Meadow Land, &c. Wife competent to take charge of House, and an excellent Dairywoman. Six years' unexceptionable character.—D. H., Mead Vale, Red Hill, Surrey.

GARDENER (HEAD), to any nobleman or gentleman requiring the services of a first-class Gardener.—Age 33, married, one child; fully competent in every branch of his profession. No objection to Plantation, Meadow, or Arable Land. Present employer will answer any questions. Good references from previous employers.—G. M., at Sutton & Sons, Reading.

GARDENER (HEAD WORKING), at a small place where one or more are kept preferred.—Age 27, single; understands the Management of Flower and Kitchen Gardens. Five years' character.—X., J. Redrup, News Agent, Uxbridge.

GARDENER (HEAD or SINGLE-HANDED).—Married, no incumbrance; thoroughly understands Fruit, Flower, and Kitchen Gardening. Good character from last and previous employer.—H. S., the Post Office, Godstone, Surrey.

To Noblemen and Gentlemen.

GARDENER (HEAD), or GARDENER and BAILIFF.—Age 36, married; thoroughly practical. Leaving present situation entirely owing to the death of his late employer, J. Scott Smith, Esq. Can be well recommended.—J. M. F., Beechwood Park, Tunbridge Wells, Kent.

GARDENER.—Age 23, single; has had good practice in Propagation and Forcing of Vines, Melons, Cucumbers, &c. Four years' good character.—H. C., Valentine's, Ilford, E.

GARDENER.—Age 26; capable of Cultivating good Fruit, Flowers, Plants, and Vegetables under glass and in the open ground; is a good Propagator of Bedding Plants, and thoroughly understands their arrangement in the Flower Garden. Can have six years' good character on application to Mr. W. FOWLE, Dogmersfield Park, near Winchfield, Hants.

To Ladies, Noblemen, and Gentlemen.

GARDENER.—WILLIAM FIELDER, Gardener at Ealing Park Gardens, the residence of the late Mrs. Lawrence, is leaving his situation, and wishes for an engagement as above. He has been in his present situation upwards of eight years, and can obtain an unexceptionable character from his present employer. W. F. is well known by Messrs. Veitch, Low, and many other eminent Nurserymen of the present day. From the kindness of his present employers he has the privilege of showing their grounds to any gentleman who would wish to go over them. W. F., to save trouble, begs to state that the wages he requires are 30s. per week, with house, firing, &c.—WILLIAM FIELDER, Ealing Park Gardens, Little Ealing, Middlesex, W.

GARDENER, or GARDENER and STEWARD.—A First-class Man is now disengaged.—BETA, *Gardeners' Chronicle* Office, W.C.

GARDENER (SECOND).—Age 25; thoroughly understands Forcing of Pines, Vines, Peaches, &c., Orchard House, Stove and Greenhouse Plants, and Flower and Kitchen Gardens. First-class character.—X. Y. Z., 12, Queen's Road, Norland Square, Notting Hill, W.

GARDENER (UNDER or SINGLE-HANDED).—Age 30, single; understands Ferns, Flower and Kitchen Gardens. Twelve months' good character. Leaving in consequence of the family going away.—J. B., Post Office, Turner's Hill, Cheshunt, Herts.

GARDENER (UNDER).—Age 23, single; eight years' experience; can be well recommended for ability, honesty, and sobriety.—H. R. H., 4, Albert Place, Victoria Road, Stoke Newington.

GARDENER (UNDER), age 20.—A Lady wishes to recommend her Gardener as an Under Gardener, in a situation where he could learn something of his business. He can have an excellent character for steadiness and industry, and is a good Gardener, but does not understand Greenhouse Plants.—A. B., Post Office, Croydon, S.

To Nurserymen and Market Growers.

FOREMAN and GENERAL PROPAGATOR.—Age 26; Good character.—F. Q., 8, Westmorland Place, Camberwell, S.

PROPAGATOR and GROWER for Market.—J. TOMBS, Mr. Jackson's Nursery, Kingston.

TO NURSERYMEN.—HENRY BAILEY, Jun., Shardeloes Gardens, Amersham, Bucks, is open to accept an engagement with a Nurseryman requiring the services of a thoroughly competent cultivator of Soft-wooded Plants, Fruit, &c. He has had the entire charge of the collection of "Pelargoniums" which have been exhibited with such great success from the above-mentioned place for the last five years, and has had excellent opportunities of acquiring a thorough knowledge of the cultivation of all kinds of Fruit. The advertiser could also act as corresponding Clerk occasionally if required, and would endeavour to promote in every way the interests of any one accepting his services in the above capacity. Liberal salary required, and the most unexceptionable references given. No objection to France or Belgium.—Apply as above.

TO NURSERYMEN.—A Young Man, experienced in the Propagation and Cultivation of Fruit Trees, Roses, &c., is willing to make himself useful.—J. E. T., Spring Grove Nursery, Isleworth, W.

APPRENTICE.—The friends of a respectable Youth, in his 16th year, wish to place him with a Practical Gardener where he would have a good opportunity of Learning the Business in its various branches. Comfortable home in a moral family desirable.—Apply, D., Post Office, Cranbrook.

To Noblemen and Gentlemen.

LAND STEWARD, FARM BAILIFF, &c., to any nobleman or gentleman requiring the services of a thoroughly practical Estate or Farms' Manager.—In the prime of life, married, will shortly be disengaged. Has been brought up upon the Estate of His Grace the Duke of Bedford, first as Agricultural Pupil and Foreman at the Oakley and Eversholt Model Farms, and subsequently, during the past 17 years, constantly employed under the supervision of the Head Steward in the direction of Estate Work generally, comprising Agricultural Drainage, the Management of Woodlands, Roads, Fences, &c., including Office Work, upon an extensive scale in the Woburn and North Beds districts. The undersigned does not consider it incumbent on him to refer to his own abilities as a Practical Man at greater length here, he being only permitted to make reference to His Grace's Agent, Mr. HENRY TAYLOR, Oakley Office, Bedford.

FARMING BAILIFF.—Middle aged; can be highly recommended; is leaving his present employer in consequence of his giving up Farming. Wife understands the Management of a Dairy, Poultry, &c.—Address G. A., Pinner Park Farm, Middlesex.

FARM BAILIFF.—Age 36, married; thoroughly practical, and understands the Cultivation both of Heavy and Light Soils, the Drainage of Wet Lands, and anything in connection with an Estate; the Rearing, Breeding, and Feeding of both Cattle and Sheep. Wife a first-class Dairywoman, will take charge of a small Dairy if required. First-class testimonials.—H. B., Home Farm, Highnam, Gloucester.

To the Nursery and Seed Trade.

SHOPMAN (HEAD), or TRAVELLER.—Can give first-class references.—N. S., *Gardeners' Chronicle* Office, W.C.

SHOPMAN.—Age 28; good references. Thirteen years' experience.—R. C., *Gardeners' Chronicle* Office, W.C.

ASSISTANT SHOPMAN.—Messrs. WM. CUTBUSH & SON require immediately an active steady Young Man, of good address, as ASSISTANT SHOPMAN and CLERK.—Apply, own handwriting, stating age, &c., Highgate Nurseries, London, N.

To Noblemen and Gentlemen.

CARPENTER on a gentleman's Estate.—Age 30, married; thoroughly understands his business, and can give good references as to character and ability.—A. B., Post Office, Beckington, Bath.

GROOM and GARDENER, or as good PLAIN GARDENER, in a small family.—The Wife as good Cook, or Cook and Housekeeper to a single lady or gentleman. No incumbrance. Eighteen months' good character from the situation they both leave at Michaelmas.—HENRY HAYWARD, The Vicarage, Strood, Rochester, Kent.

THE GREENHOUSE in the STEREOSCOPE.
CRANSTON'S PATENT.
Six SLIDES of different Houses, Post free for 50 Stamps.
Single SLIDES, 12 Stamps each.
DESCRIPTIVE BOOK, fully illustrated (Second Thousand), Post free for 20 Stamps, from the Author and Patentee, JAMES CRANSTON, Architect, 1, Temple Row West, Birmingham.

THRESHER'S COLOURED FLANNEL SHIRTS
Next Door to Somerset House, Strand, W.C.

Manufacturers to the Queen and Prince of Wales.

FRY'S HOMŒOPATHIC ICELAND MOSS PEARL COCOA.
FRY'S SOLUBLE CHOCOLATE.
J. S. FRY & SONS were the only English Manufacturers (Prize) who obtained the Prize Medal, 1862.

BORWICK'S BAKING POWDER, recommended by the Analyst to the *Lancet* and Author of "Adulterations Detected," for making DIGESTIVE BREAD without Yeast, and rendering Puddings and Pastry light and wholesome. Sold everywhere.

VICHY and LITHIA WATERS
Established Remedies for Gout, Dyspepsia, Acidity, &c.
These Waters, as now prepared at the Malvern Springs, are vastly SUPERIOR to those ordinarily sold.
Six Dozen Hampers, carriage free, on application to Messrs. BURROW, Malvern.

Sauce.—Lea and Perrins'

WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE," is prepared solely by LEA & PERRINS.
The public are respectfully cautioned against worthless imitations, and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper. ASK FOR LEA & PERRINS' SAUCE.
*** Sold Wholesale and for Export, by the Proprietors, Worcester; Messrs. CROSSE & BLACKWELL; Messrs. BARCLAY & SONS, London, &c., and by Grocers and Oilmen universally.

TAYLOR BROTHERS' GENUINE MUSTARD.—Dr. HASSALL having subjected this Mustard to a rigorous microscopical examination and chemical analysis, reports that it contains the three essential properties of good Mustard, viz., Pure Pungency, and Delicate Flavour. See that each Package bears the Trade Mark the "Prize Ox," and Dr. Hassall's Report. Sold by Grocers, &c., throughout the kingdom.

DINNEFORD'S PURE FLUID MAGNESIA has for during 25 years emphatically sanctioned by the Medical Profession, and universally accepted by the public, as the best remedy for Acidity of the Stomach, Heartburn, Headache, Gout, Indigestion, and as a mild Aperient for delicate constitutions, especially for ladies and children. It is prepared in a state of perfect purity and of uniform strength by
DINNEFORD & Co., 172, New Bond Street, London, and sold by respectable Chemists throughout the world.

Avoid Medicines.—They always aggravate Chronic Complaints, but DU BARRY's delicious health-restoring
REVALENTA ARABICA FOOD invariably and effectually cures them. Extract of 60,000 cures:—Cure No. 58,216, "of the Marchioness de Brehan, Naples, of a fearful liver complaint, wasting away, with a nervous palpitation all over, bad digestion, constant sleeplessness, low spirits, and the most intolerable nervous agitation, which prevented her sitting down for hours together, and which for seven years had resisted the careful treatment of the best French and English medical men."—Cure No. 1771: "Lord Stuart de Decies, Lieutenant of Waterford, of many years' dyspepsia."—Cure No. 2: "Fifty years' indescribable agony from dyspepsia, nervousness, asthma, cough, constipation, flatulency, spasms, sickness, vomiting. Maria Jolly."—Cure No 47,121: "Miss Elizabeth Jane Nazing Vicarage, Waltham Cross, Herts, of extreme nervousness, indigestion, gatherings, low spirits, and nervous fancies."—Cure No. 54,816: "The Rev. James T. Campbell, Fakenham, Norfolk, indigestion and torpidity of the liver, which had resisted all other treatment."—Cure No. 54,812: "Miss Virginia Zeguers, Perugia, tion." In Tins, 1 lb., 2s. 9d.; 2 lb. 4s. 6d.; 12 lb. 22s.; 24 lb. 40s.
BARRY DU BARRY & Co., 77, Regent Street, London, W.C.; FORTNUM & MASON, Purveyors to Her Majesty; at PHILLIPS's, dealers; BATTY's; PETTY & WOOD's; ABBIS's, 61, Gracechurch Street, E.C.; 4 Cheapside, E.C.; 63, 150, and 208, Oxford Street, W.; Upper Baker Street, W.; 330, 440, and 451, Strand, W.C.; 65 Charing Cross, S.W.; 103, Tottenham Court Road, W.; and all Grocers and Chemists.

GIRDWOOD'S MELOSSOON or SHEEP PROTECTING DIP.—This preparation, besides being a sure Parasites, forms an artificial yolk of great value for the sheep's wool. It is the Best, Cheapest, and Safest of all Dipping Compositions.
Price 6d. per lb. Above a cwt. free to stations.
To be had of Mr. ROBERT GIRDWOOD, Tanfield, Edinburgh, and Agents.

The Gardeners' Chronicle Newspaper.

SATURDAY, SEPTEMBER 10, 1864.

ROYAL SCHOOL of MINES.

Director—Sir RODERICK IMPEY MURCHISON, K.C.B., F.R.S., &c.

During the Session, 1864-5, which will COMMENCE on OCTOBER 3, the following COURSES of LECTURES and PRACTICAL DEMONSTRATIONS will be given:—

1. CHEMISTRY, by A. W. Hofmann, LL.D., F.R.S., &c.
2. METALLURGY, by John Percy, M.A., F.R.S.
3. NATURAL HISTORY, by T. H. Huxley, F.R.S.
4. MINERALOGY } by Warrington W. Smyth, M.A., F.R.S.
5. MINING }
6. GEOLOGY, by A. C. Ramsay, F.R.S.
7. APPLIED MECHANICS, by Robert Willis, M.A., F.R.S.
8. PHYSICS, by John Tyndall, F.R.S.

Instruction in Mechanical Drawing, by Rev. J. Haythorne Edgar, M.A.

The Fee for Students desirous of becoming Associates is 30*l.* in one sum, on entrance, or two annual payments of 20*l.*, exclusive of the Laboratories.

Pupils are received in the Royal College of Chemistry (the Laboratory of the School), under the direction of Dr. Hofmann, and in the Metallurgical Laboratory, under the direction of Dr. Percy.

Tickets to separate Course of Lectures are issued at 5*l.* and 4*l.* each.

Officers in the Queen's Service, Her Majesty's Consuls, acting Mining Agents and Managers, may obtain tickets at reduced prices.

Certificated Schoolmasters, Pupil-teachers, and others engaged in Education, are also admitted to the Lectures at reduced fees.

His Royal Highness the Prince of Wales has granted two Scholarships, and several others have also been established.

For a Prospectus and information, apply at the Museum of Practical Geology, Jermyn Street, London, S.W.

TRENHAM REEKS, Registrar.

News of the Week.

THE latest advices from the United States announce that General GRANT maintains his position on the Weldon Railroad, but has made no attempt to take advantage of a situation which has cost him such severe losses to secure. The object of his recent movements at Deep Bottom is still unknown, but it is stated that in his operations at that place and on the Weldon Railway he lost in a single week 12,000 men. General LEE appears to attach little importance to the movements of the Federal Commander-in-Chief, for after depatching large reinforcements to Atlanta, he has himself occupied the Shenandoah Valley with a large force. General EARLY, who had previously been manœuvring in that valley at the head of 30,000 men, attacked General SHERIDAN, near Charleston, on the 21st ult., and drove him back to Harper's Ferry with a loss of 1000 men. General EARLY has since occupied Martinsburg, and it is reported that on the arrival of General LEE the Confederate army will invade Maryland, with a view either of threatening Washington, or of carrying the war into the Northern States. The siege of Mobile is said to be at an end, Admiral FARRAGUT having discovered that the harbour has been closed by an ironclad sunk in mid-channel, and that the city is consequently inaccessible to the Federal squadron. The political news in connection with the approaching Presidential contest, is daily becoming more interesting. There is now no doubt that the Chicago Convention will nominate a Democratic candidate for the Presidency, and gold has fallen in anticipation that General M'CLELLAN will be selected as their candidate. Meanwhile the leading Abolitionists of Boston have called upon President LINCOLN and General FREMONT to withdraw their names as candidates, and to call a convention to nominate a fresh Republican candidate. General FREMONT has consented to withdraw if President LINCOLN will do so also.

The Danish Rigsraad was closed on the 1st inst., when a short message was read from the KING, in which he said that he would convoke the Chambers for an extraordinary session if necessary. The reports of the political and military committees had been adopted by the Folksthing on the previous day.

The Peace Conferences at Vienna were resumed on Tuesday, when the rectification of the frontiers is said to have been the subject of discussion. It is reported in diplomatic circles in Vienna that great difficulties are anticipated in the settlement of the financial question, and that the Danish Plenipotentiaries have threatened to break off the negotiations and terminate the armistice if Prussia persists in exacting further pecuniary sacrifices, the effect of which would inevitably produce the financial ruin of Denmark.

From Geneva we learn that M. JAMES FAZY, one of the chiefs of the Liberal party, having been cited to appear before the Juge d'Instruction, has left the city, stating that he has taken that step to avoid assassination. M. FAZY's proceedings have been condemned throughout Switzerland. No further arrests have been made, and tranquillity has been partially restored.

The Bombay mail of the 8th ult. informs us that the Viceroy will leave Simla early next month, for Lahore, and will proceed to Calcutta about the beginning of November. Sir CHARLES TREVELYAN's minute on the introduction of a gold currency has been published in the *Gazette*, and the introduction of the English sovereign into India as a legal tender for 10 rupees has been adopted by the Governor General in Council. The Bhootanese have commenced quarrelling among themselves, and there is every prospect of a serious civil war between the respective chiefs. The latest news from Afghanistan states that the AMEER and his rebellious brother have been reconciled, and that a good understanding has at length been established between them.

A telegram from Shanghai of the 22d July announces the capture of the city of Cangsing. A camp of instruction has been formed under Colonel GORDON for the purpose of training the Chinese troops.

The Maories in New Zealand were attacked and defeated by the British troops on the 25th June. The Maories lost 200 men, and the chief who commanded them at Gatepa was among the killed.

FRANZ MÜLLER, the supposed murderer of Mr. BRIGGS on the North London Railway, was arrested at New York on the arrival of the Victoria packet ship, on the 24th ult. The hat and watch of Mr. BRIGGS were found in his possession. The legal proceedings for his extradition were in progress when the mail left.

Home News.

THE QUEEN IN SCOTLAND.—The Queen and Royal family continue at Balmoral. On Wednesday week the Queen, accompanied by the Duchess of Saxe-Coburg and Princess Helena, walked and drove out. In the afternoon her Majesty, with the Duchess of Saxe-Coburg and Princess Beatrice, took a carriage drive. The Prince of Wales and the Duke of Saxe-Coburg went out grouse shooting. In the evening the Prince and Princess of Wales dined with her Majesty. On Thursday morning the Queen, accompanied by the Duchess of Saxe Coburg, Princess Helena, and Princess Louisa, walked and drove in the grounds of the Castle. In the afternoon her Majesty, with Princess Helena and Princess Beatrice, drove to Abergeldie. On Friday morning the Queen, accompanied by the Duchess of Saxe Coburg and Gotha and Princess Helena, walked and drove in the grounds of the Castle. In the afternoon her Majesty drove out with the Duchess of Saxe Coburg and Prince Leopold. In the evening the Prince and Princess of Wales dined with her Majesty. On Saturday the Queen, accompanied by the Duke and Duchess of Saxe-Coburg and Princess Louisa, drove to Alt-na-Guithasach, when her Majesty and the Royal party proceeded up the Loch Muich to the Glassalt, returning in the evening by the Lynn of Muich to Birkhall. On Sunday the Princess Helena and the Duchess of Saxe-Coburg attended Divine service at the parish church of Craithie. The Rev. Dr. Fowler officiated. On Monday the Queen drove out, accompanied by the Duchess of Saxe-Coburg. The Duke of Saxe-Coburg went out deer-stalking. Mr. Morier arrived at the Castle, and dined with her Majesty and the Royal family. On Tuesday the Queen, accompanied by the Duke and Duchess of Saxe-Coburg and Princess Helena, drove to Loch Bulig, whence they went to Inchrory, returning home by Tornahush and Gairn Sheil.

VISIT OF THE PRINCE AND PRINCESS OF WALES TO DENMARK.—On Saturday afternoon the Prince and Princess of Wales embarked at Dundee on their visit to Denmark. In consequence of some misunderstanding as to the Prince's intentions, great preparations had been made at Dundee for his reception, and the streets were crowded with people to do him honour, when a telegram was received announcing that the embarkation would take place at Broughty Ferry. The magistrates immediately despatched the Town Clerk and Sheriff by a special engine to that place, to apprise the Prince of the expectations of the people and of the danger to the public peace should he not come up to Dundee. The Earl of Camperdown, whose carriages had been ordered to be at Dundee station for the Royal party, also went down to intercept the Royal train and urge the Prince and Princess to come. It appeared that his Royal Highness, who had all along deprecated a public demonstration on the occasion, was quite unaware of the extensive preparations for his reception, and, learning on his journey that Broughty afforded a nearer and quieter port of embarkation, had given orders that the train should be stopped there. The apprehension also had been entertained that through the delay at Dundee the evening tide might be lost for the sailing of the Royal squadron. His Royal Highness, however, being assured that the depth of water would be sufficient for an hour or two, and by the Council deputation that the time occupied at Dundee would be short, agreed at once to fulfil the public expectation. On entering Dundee in the open carriage of the Earl of Camperdown, their Royal Highnesses were received with the utmost enthusiasm by the vast crowds of townspeople and the mechanics who had left their work to take part in the demonstration. After passing through the town amidst the cheers of the spectators, the Royal party arrived at the jetty, where they were detained for some time by the absence of the barge of the Osborne, which had gone down to Broughty. At length it arrived alongside the jetty, and the Prince and Princess immediately embarked, followed by another barge with the infant Prince, and were rowed out to the Osborne, which crossed the bar shortly before 6 o'clock, followed by the Salamis and the Medusa, and accompanied down the Firth by nearly all the steamers of the port, each with large numbers of passengers. Their Royal Highnesses arrived at Elsinore at 10 o'clock on Tuesday morning, and landed at 1 P.M., amidst the cheers of the inhabitants. The King and Queen met them on their arrival, and accompanied them to the castle of Fredensborg, where they will reside during their stay in Denmark. It is understood that the visit is strictly private, the Prince and Princess travelling under the names of the Baron and Baroness of Renfrew.

PRINCE ALFRED is expected to return from Norway in about three weeks, when his Royal Highness will go to Scotland, and remain at Balmoral until the return of the Court to Windsor.

PRINCESS HELENA.—The Austrian journals state that the recent visit of Prince Elimar of Oldenburg to Windsor Castle was with a view to a matrimonial alliance between his Highness and the Princess Helena. The Prince, who is brother of the Grand Duke of Oldenburg, is in his 21st year.

PRINCE HUMBERT of Italy was expected to embark yesterday at Cherbourg, in Prince Napoleon's yacht, for Southampton, accompanied by Prince Napoleon and Princess Clotilde, and will probably arrive in London in the beginning of next week. During his stay in England the Prince will reside with the Marquis d'Azeglio, the Italian Minister in London, who has arrived from Spa in order to receive his Royal Highness.

Foreign.

FRANCE.—The Emperor and his guests returned to St. Cloud on Saturday. During his stay in camp, the Emperor conferred on General von Roon, Prussian Minister of War, the Cross of Officer of the Legion of Honour. It is reported that his Majesty will shortly have an interview with the King of Prussia. Prince Humbert of Italy is at St. Germain-en-Laye, on a visit to Prince Napoleon and the Princess Clotilde. General von Roon has left Paris for Cherbourg. On Tuesday the Emperor received MM. Rouher, Boudet, and Drouyn de Lhuys. A Ministerial Council was held on Tuesday. The Empress left on Tuesday evening for Schwalbach, in Nassau, where her Majesty is expected to remain for a month. The Empress travelled strictly *incognita*. General Bazaine has been appointed Marshal of France, and General Martimprès has been nominated Senator. M. Baroche, following the example of M. de Persigny, has delivered a speech to his constituents, in which he hinted at liberal reforms in the Councils General, to be carried out, however, within wise limits. The Duke de Morny a few days since laid the first stone of a new church at Domville, in the presence of a great concourse of spectators. After the ceremony the Duke delivered the following speech:—

"I thank you for having invited me to preside at this touching ceremony. As soon as a commune is founded, the first want, the first thought, of its inhabitants is to build a church, that they may group themselves round its tutelary steeple, and assemble in the sanctuary on the day of rest with one common fraternal sentiment of piety and charity. It is the bounden duty of us all, according to our means, to promote the construction of those edifices which respond so well to the wants of the inhabitants. At present allow me to observe to all the laborious population around me that it is a singular phenomenon to see this commune, so poor only two years since, undertake to build from its own resources, and without help from strangers, not only a church, but a dwelling for the curé and a schoolhouse. It is right that all should know that this is owing to the development of the general welfare and prosperity which the Government of the Emperor has produced. The Emperor, my friends, has re-established authority, order, and liberty in France. Those are the true and great elements of labour; without them there can be neither confidence, nor courage, nor enterprise. I say this expressly for all of you whose labour is the sole resource for bringing up your families. If you have security in your toil and confidence in the future, you are indebted for it to the beloved chief of our great nation. Therefore, I call on you to join with me in expressing the deep gratitude so justly due in one unanimous cry, '*Vive l'Empereur!*'"

The *Constitutionnel* of Friday contains an article signed by M. Paulin Limayrac, reviewing the language used by MM. Rouher, Rouland, and Behic at the opening of the Councils-General. It says:—

"In view of these manifestations of the ideas of the Government, who can deny to the Empire the spirit of progress and initiative? In the restricted sphere of a department, as in the wider sphere of State, we find the Imperial policy animated by the desire of most completely and surely developing principles

in which we discover the same thought of giving to France all the benefits of progress and saving her from all excesses of revolution."

The *Constitutionnel* of Sunday contains an article by M. Paulin Limayrac, commendatory of the speech of the Duke de Persigny. It shows that the Governments of the Restoration of July and the Republic could not live with liberty, and concludes as follows:—

"For 12 years past facts have replied to theory. Tried by unsuccessful essays, wise by experience, and disabused of false promises, the nation will no longer lose the substance for the shadow. It knows that it enjoys true liberty since it possesses universal suffrage, which is the true reign of public opinion."

The *Patrie* of Wednesday denies the statement of certain journals that Prussia had taken steps to obtain from the French Government a modification of paragraph 13 of the Treaty of Commerce between the two countries, and adds:—

"France is determined to consent to no change whatever in that treaty, the ratifications of which will be exchanged between the two Governments on the 31st of October."

The once celebrated Père Enfantin, the founder, or rather restorer, of the sect called St. Simonians, in the first years of the reign of Louis Philippe, died of apoplexy on the 1st inst. in Paris, in his 69th year. His funeral took place on Sunday at Père la Chaise, and was attended by more than 200 persons, several of whom had in other times been partisans of the doctrines of the St. Simonians, and may still in theory, if not in practice, adhere to them. In accordance with his last will there was no religious ceremony whatever, either at the house in which he died, nor at the cemetery. The body was not taken to any church, but was carried direct to the graveyard from his residence. No clergyman of any religious persuasion was present, and no prayer was uttered over the grave. The *Courrier de St. Etienne* has suspended publication in despair. Its editors have been imprisoned one after the other, and its proprietors have been condemned in heavy fines, until they have become convinced that it is impossible to carry on the paper as an independent journal. M. Béhic, the Minister of the Interior, has issued a circular to railway authorities, calling upon them to insist on enforcing the regulations against smoking in railway carriages, a practice so dangerous to ladies in light dresses and crinoline, and often an annoyance to other passengers. The railway from Cagne to Nice is expected to be opened to the public before the end of October. Travellers will then be able to proceed the whole way from Marseilles to Nice by rail.

ALGERIA.—Marshal Macmahon, who has been appointed Governor-General of Algeria, will embark at Marseilles on the 20th inst. for Algeria, accompanied by a numerous suite. It is said that he proposes, on his arrival, to go through the whole of the southern part of the colony with a body of 10,000 men. "Such a force," he is reported to have said, "can pass anywhere."

SPAIN.—The *Noticias* of Friday, alluding to some assertions of the Opposition journals, says that the Government will not change the working of the new press law; but if the press were to adopt a conciliatory attitude, the Government would certainly interpret the spirit of the law in its favour. The Queen on Saturday received M. Fazio, the envoy of the Emperor Maximilian, who presented a letter from his Majesty. M. Fazio's speech and the Queen's reply expressed the sympathy and good understanding between Spain and Mexico. The Marquis Rivere, the Plenipotentiary of Spain in Portugal, will be appointed ambassador at the Court of the Emperor Maximilian, and it is believed that Señor Gonzales Bravo will be shortly appointed Ambassador to the Court of Rome. A singular trial took place at Madrid a few days since. A soldier was cited before the police-court for having stolen a gold cup of considerable value which had been placed as a votive offering on one of the numerous altars dedicated in that city to the Virgin. The soldier at once explained that he and his family being in great distress, he had appealed to the Holy Mother for assistance, and that while engaged in prayer and contemplation of the four millions' worth of jewels displayed on her brocaded petticoat, she stooped, and with a charming smile, handed him the golden cup. This explanation was received by the Court in profound silence, and the case handed over to the ecclesiastical commission, to whom it at once occurred that however inconvenient the admission of the miracle might be, it would be highly impolitic to dispute its possibility. They therefore gave the cup to the soldier, at the same time solemnly warning him for the future against similar favours from images of any kind, and impressing him with the conviction that the Virgin required profound silence from him as a proof of his gratitude.

PORTUGAL.—Advices from Lisbon state that the agitation still continues in the district of Villa Real.

SWITZERLAND.—Tranquillity has been partially restored at Geneva, and no further arrests have been made. On Friday, M. James Fazy was cited before the Juge d'Instruction, but instead of obeying the summons he immediately quitted Geneva, and published an explanation in the paper, stating that he had retired from the town to the frontier to prevent assassination, and that he will watch for a period of reaction. This letter has produced an unpleasant impression, and M. Fazy's proceedings have been condemned throughout Switzerland. A Socialist agitator, well known in Switzerland, M. Lassalle, has just been killed in a duel with a Moldo-Wallachian near Geneva. He was shot through the stomach, and only survived a few hours. The duel did not originate in political motives.

BELGIUM.—The second session of the Catholic Congress of Belgium was opened at Malines on the 29th ult., when about 4000 persons were present, including the notabilities of the Belgian Catholic party, with distinguished persons from various countries in Europe. The members of the Congress assembled in the Cathedral of St. Rambert, where a mass was celebrated by the Archbishop of Malines. They then proceeded to the Diocesan College, where Baron de Gerlach was appointed president, and delivered a long address on the subject of the general situation of Catholicism in Europe, and particularly in Belgium. The first day's sitting was brought to a conclusion by an address of devotedness to the Pope, which was immediately forwarded to Cardinal Antonelli, to be presented to his Holiness. On the 1st the great event of the sitting was the speech of the Bishop of Orleans, who in a speech of three hours, discussed the question of popular education in all its bearings, and adduced arguments to refute the attacks directed against the education imparted by religious bodies. On the 2d Father Herman, a converted Jew, formerly musical assistant to M. Liszt, and who officiated as confessor to the Catholic pirate who was hung with his three Protestant companions a short time since at Newgate, gave an account of the execution, in which he described the serenity and the ecstatic expression of the Catholic culprit, while the Protestants, on the contrary, "grimaced horribly, and their countenances betrayed the sufferings of their souls, henceforth delivered over to infernal torments." Father Felix, a celebrated Jesuit, then addressed the meeting, and endeavoured to reconcile the theory of an infallible Church with liberty of conscience. The peroration of his harangue produced an inconceivable effect. "I propose to you," he exclaimed, raising his hands to heaven, "to terminate this sitting by a cheer in honour of Jesus Christ, our Lord and Saviour." The assembly replied to this proposal by cries a hundred times repeated of "*Vive Jésus Christ!*" 'Our Holy Father the Pope, and our Holy Mother the Holy Church' were shouted in the same fashion, and when the orator quitted the tribune the members of the Congress mounted on the chairs and benches, waving their hats and their handkerchiefs, and crying with heads bare, '*Vive le Père Felix, Vive les Jésuites!*'" The sittings closed with a sermon by Father Felix, and a banquet at which the first toast was to the Pope, "the Great Father of Christianity." One of the speakers, M. de Kerchove, said, "We are the sons of Jesus Christ, and we will never retreat before the sons of Voltaire." Another speaker said, "Let us close our ranks, fire upon the enemy, and advance." It has been decided that a congress of the Catholic press shall assemble every year from the 15th August to the 1st October. The first meeting is to take place next year at Brussels.

DENMARK.—The Grand Duke Nicholas of Russia, the Czarewitch, arrived in Copenhagen on the 1st inst., and left on the 7th. His Imperial Highness was accompanied by the Crown Prince to Elsinore. Distinguished Danish orders were bestowed by the King on the members of the suite. It is believed that the betrothal of the Czarewitch to the Princess Dagmar, the second daughter of King Christian, will take place shortly; the Prince is 21 years of age and the Princess 17. The Prince and Princess of Wales landed at Elsinore on Tuesday, and proceeded to the Castle of Fredensburg, where the Czarewitch had previously arrived. The Rigsraad was closed on the 1st inst. Herr von Bluhme, the President of the Council, read a short message from the King, ordering the close of the session. His Majesty said that, if necessary, he would convoke the Chambers for an extraordinary session. The proposals contained in the reports of the political and military committees were adopted by the Folksthing on the previous day, after an animated debate. At the sitting of the Landsthing on the previous Tuesday, the President of the Council stated that the Government, while desirous of the negotiations being brought to a close as early as might be, would endeavour to save as much of Schleswig as possible, and at the same time to preserve the political and national independence of those parts of the country irretrievably lost. Herr von Bluhme added that success in this respect was uncertain, that he had little hope, and that all the means that could be made use of had already been employed. The political committee of the Folksthing recommended the adoption of the following resolution:—

"The Folksthing expresses its confidence that in concluding peace the Government will support the natural and sacred right of the populations to determine their own future by means of free voting by districts or by communes."

Deputations from the north of Schleswig have arrived at Copenhagen with addresses to King Christian demanding protection for their nationalities. The official *Berlingske Tidende* has published a reply to the recent comments of the semi-official Prussian organ, on the statement of the Danish Finance Minister as to the efforts made by the Government to preserve the Danish portion of Schleswig to the monarchy. It says that these efforts were by no means incompatible with a loyal interpretation of the peace preliminaries.

BAVARIA.—The latest news from Munich states that the King of Prussia paid King Louis a visit at Hohenschwangau, a royal chateau in Upper Bavaria, on his way to Baden-Baden. On the 27th and 28th Count von Bismark had long conferences with Baron Schrenk, the Bavarian Minister for Foreign Affairs, and in the night of Sunday, the 28th, he followed the Sovereign to Hohenschwangau.

FRANKFORT.—A marriage is about to take place between M. d'Erlanger, banker and consul-general of Greece at Frankfort, and Miss Slidell, youngest daughter of the representative of the Confederate States at Paris.

SAXONY.—The betrothal of the Princess Sophie, the only unmarried daughter of the King of Saxony, to Duke Charles Theodore, brother of the Empress Elizabeth of Austria, has just taken place at Possenhofen.

BOHEMIA.—The ex-Grand Duke of Tuscany has been re-elected Mayor of Schlackenwerth, in Bohemia, the ex-Sovereign being content to act as mayor of the village in which he resides.

PRUSSIA.—The semi-official *Provinzial Correspondenz* of Thursday states that the commercial negotiations with Austria will probably commence next week, and says:—

"The basis and point of departure for the negotiations on the part of Prussia are solely the position, with reference to her commercial policy, which Prussia has acquired by the Treaty of Commerce with France, and by the newly-established Zollverein upon the basis of that treaty. It is quite impossible that this position should be abandoned. The question entirely centres in finding means to bring about a closer and more beneficial connexion between Austria and the Zollverein."

AUSTRIA.—A sitting of the Conference was held at Vienna on Tuesday. It is supposed that the rectification of the frontier was the subject of discussion. It is said that the recent delay was caused by the Danes, who display the greatest tenacity upon the financial question, and threaten to break off negotiations and give notice of the termination of the armistice—being of opinion that they cannot lose more than is already lost. It appears also that the inhabitants of the Duchies lay claim to a part of the outstanding instalments of the sum accorded to Denmark as an indemnification for the Sound Dues, to a part of the Danish fleet, &c., and that their claims are supported by one, if not by both of the great German Powers. The report that Austria intends forming 10 new infantry regiments immediately after the conclusion of peace is contradicted by the official journals, which state that it has not the least foundation. On the contrary, it is announced that great reductions will be made in the Austrian army. Some of the Vienna journals profess great indignation against the Emperor Maximilian, on account of his entering into relations with the kingdom of Italy.

ITALY.—The anniversary of Garibaldi's entry into Naples and the expulsion of the Bourbons has been celebrated by a brilliant *fête* in that city. The brigand chief, Crocco, has embarked at Civita Vecchia on board a Spanish steamer, and with a Spanish passport. The brigand chief Varia has been handed over to the Italian authorities by the commander of the French troops in Rome. Cardinal Savelli, a native of Corsica, who was promoted to the purple by the reigning Pope in 1853, died a few days since at the age of 72, after having held most important offices, among which the most conspicuous were those of Governor of Rome and Delegate of the Province of Viterbo. The Pope dined on Tuesday with Prince Borghese. His Holiness is said to have presented to the Emperor Napoleon the lance found in the tomb of Charlemagne.

SICILY.—Advices from Palermo announce that five English ships of war from Malta, under the flag of Rear-Admiral, had arrived there on their way to Catania and Naples.

RUSSIA.—The Emperor of Russia arrived in Berlin on Sunday night by special train from St. Petersburg. His Majesty, who was accompanied by a numerous retinue, was received at the station by the Crown Prince, who accompanied him to Potsdam. It had been originally intended that the Emperor should sup at Potsdam with the Crown Prince and Princess, but his Majesty did not alight, and proceeded on to Brandenburg, where he took supper, and immediately resumed his journey to Darmstadt, where the Empress is residing. It is stated that Prince Gortschakoff is about to go abroad on leave of absence. The armour-plated frigate Sebastopol has just been launched at Cronstadt; she exceeds the size of the Gloire and Normandie, which are the largest frigates in the French navy, and nearly equals in measurement the Warrior and Black Prince. She is armed at the prow with an immense ram. The Russian steam frigate Sadunch, Admiral Cyraloff, has been totally lost off the coast of Uando. Three officers and 20 seamen were drowned; the rest of the crew were saved with difficulty.

THE PRINCIPALITIES.—A numerous deputation from the Assembly has presented an address to Prince Conza, in reply to his message at the opening of the Session. The address testifies to the satisfaction and gratitude of the entire nation, and promises unlimited confidence and support to the Prince. All political refugees have been expelled from Roumania within the last few days, and many hundreds have already arrived at Constantinople.

SYRIA.—Fresh disturbances have taken place in the district of Payaz. Dede Bey, an influential local chief who had lately been put under arrest by order of the Government, heads the revolt, and has with him 2000 mountaineers, well armed and mounted. The

rebels have established a regular camp in a spot which commands the roads to Aleppo and other important towns. Fears are entertained for the safety of the port of Alexandretta, which has already been attacked, and the governor of Aleppo has thrown 50 men into the place by way of a garrison.

TUNIS. — Advices from Tunis to the 31st ult. state that business had then been resumed, and that the caravans had recommenced their journeys between the towns of the interior. The Bey had sent another body of 6000 men against the insurgents on the coast. The English, French, and Italian fleets have been recalled, a few vessels being left at the disposal of the Consuls.

INDIA.—The Viceroy will leave Simla for Lahore early in October, and return to Calcutta in November. Sir Charles Trevelyan's recommendation for the introduction of the English sovereign into India as a legal tender for 10 rupees has been adopted by the Governor-General in Council, subject to the approval of the Secretary of State. The Bhootanese are now quarrelling among themselves, and there is every prospect of a serious civil war. The latest intelligence from Affghanistan states that the Ameer and his rebellious brother, the Sirdar Mahomed Uzul Khan, have made friends, and it was expected that the latter would accompany the Ameer on his return to Cabool. The Maharajah of Cashmere has applied to Government to grant him some land in lieu of the money he lent them during the mutinies and in consideration of his services on that occasion.

CHINA.—A telegram from Shanghai of July 22 states that the city of Cangsing has been captured. A camp of instruction has been formed under Colonel Gordon for the purpose of training the Chinese troops.

COCHIN CHINA.—Advices from Saigon to the 26th July announce that a new Franco-Annamite treaty was signed on the 15th of that month. The principal clauses of the treaty are the following:—The establishment of a French protectorate in six provinces of Lower Cochin China; the opening of three important ports on the Annam coast, with the concession of nine kilometres of ground in the vicinity of each port, where French merchants shall be at liberty to travel and trade; entire liberty to French missionaries to propagate the Christian religion throughout the whole kingdom; the establishment of Consular agents at Hué and the ports opened to commerce; and payment of an indemnity of 100,000,000f. to the French Government. It is said that the new treaty is favourably received by the colony.

NEW ZEALAND.—The Maories were attacked and defeated by the British troops on the 25th ult. The enemy lost 200 men. The chief who commanded the Maories at Gate Pah was among the killed.

UNITED STATES.—General Grant has successfully resisted all attempts to dislodge him from the Weldon Railroad. He is now entrenched at Reams station, and holds seven miles of the line, while his cavalry are operating on the Danville Railroad. All his attempts however to advance his lines have proved ineffectual, the Confederates being found in force at every point. General Hancock, with the 2d Corps, has been withdrawn from Deep Bottom, and has gone to the support of Warren. The Confederates attacked General Birney at Deep Bottom on the 18th ult., but were repulsed. The Federal losses at Deep Bottom and on the Weldon Railroad during the week are asserted to have been 12,000. The Fifth Corps alone is admitted to have lost 5000. General Early defeated Sheridan near Charleston on the 21st ult., and drove him to Hallton and Harper's Ferry, with a loss of 1000 men. The accounts from the Upper Potomac are conflicting, some stating that General Early was repulsed on the 25th in an attempt to cross the Potomac at Williamsport, while others assert that he has run a considerable force into Maryland, by crossing the Potomac above Harper's Ferry. It is reported that General Lee in person has occupied the Shenandoah Valley with a large force of infantry and cavalry. On the 21st General Wheeler cut the Chattanooga and Knoxville Railway near London. He is moving towards Knoxville, followed by the Federal General Steadman. General Forrest has made a raid into Memphis, but retired with some plunder, pursued by the Federals. The Confederate Colonel Dickson routed a body of Federal cavalry at Gainsville, Florida, on the 18th, capturing 150 prisoners and one cannon. He also rescued 100 negroes kidnapped by the Federals. Nashville despatches of the 14th state that during a reconnaissance of the obstructions of Mobile Bay on the 14th Admiral Farragut discovered that an ironclad had been sunk directly in the channel, rendering approach to the city impossible. There is nothing further from Atlanta, except positive confirmation that Hood has been heavily reinforced. The Mayor of Mobile has ordered all non-combatants to leave the city, and urged its defence to the last extremity. Rumours of a movement by the Administration for an armistice continue. The *New York Herald* asserts that Judge Black has gone to Niagara Falls to re-open peace negociations on the part of the Administration with the Confederate Commissioners. General Butler has arrived at Washington, and Banks is also expected. It is believed that a change in the Cabinet will shortly take place. Prominent Republicans of Boston have proposed to Mr. Lincoln and General Fremont to withdraw from the Presidential contest, in order that a new Convention may be called, and a candidate selected who will receive the united support of the party. General Fremont replied that he was willing to comply, provided his conduct met with the approbation of the Cleveland Convention, and that Mr. Lincoln definitively withdrew. Chicago despatches report that the nomination of General M'Clellan by the convention is considered certain, and that of Mr. Pendleton, of Ohio, for Vice-President. Gold has fallen to 250½, the decline being caused by the probability of M'Clellan's nomination. Joseph Howard, jun., the author of the forged proclamation, was released on the 25th from Fort Lafayette, by order of Mr. Stanton. The Tallahassee destroyed 22 Federal fishing vessels off Prince Edward's Island on the 25th. The Victoria, with Müller, the suspected murderer of Mr. Briggs, on board, reached New York on the 24th ult. Muller was at once arrested, and the proceedings for his extradition were in progress when the mail left. Ex-Surgeon-General Hammond has been found guilty by a court-martial at Washington of the grossest frauds and peculation while in office in the matter of supplies for the sick and wounded soldiers, and declared for ever disqualified to again hold office under the Government.

City Intelligence.

BANK RATE OF DISCOUNT.—The directors of the Bank of England on Thursday raised their rate of discount from 8 per cent., at which it had stood since the 4th ult., to 9 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 87¼ to ⅜ for Money, and 87⅛ to ¼ for Account; Three per Cents. Reduced, 85⅝; New Three per Cents., 85¼ to ⅜; Bank Stock, 242; India Five per Cent. Stock, 103¾ to 104; Five and a Half per Cent. Enfaced Rupee Paper, 110.—FOREIGN: Brazilian, 1852, '58, '60, 85½; Ditto 1863, 86; Egyptian, 98½ to 99 ex div.; Italian, 66½ to ⅝; Mexican, 27½ to ¾; Ditto 1864, 25¼; Portuguese, 1856, &c., 47½; Russian, 1862, 88; Ditto 1864, 88⅞; Ditto Scrip, 4 to 3½ pm.; Sardinian, 84; Spanish, 43½; Ditto Passive, 30⅞ to ⅝; Turkish, 1858, 68½ ex div.; Ditto 1862, 70; Ditto 100*l.* Bonds, 70; Ditto Guaranteed, 90¼; Venezuela, 1864, 46¼ ex div.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,876,805	Government Debt	£11,015,100
		Other Securities	3,534,900
		Gold Coin and Bullion ..	12,326,805
		Silver Bullion	—
	£26,876,805		£26,876,805

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£10,797,093
Rest	3,879,270	Other Securities	20,308,310
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,022,373	Notes	6,047,035
Other Deposits	12,304,035	Gold and Silver Coin ..	743,552
Seven days and other bills	557,250		
	£37,915,927		£37,915,927

Sept. 8, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY, *Sept.* 2.—BANKRUPTS.—H. ARMSTRONG, Newark-upon-Trent, Nottinghamshire, Cabinet Maker—J. H. BARNES, Hastings, Carpenter—J. BARROWCLIFF, Nottingham, Hosiery Manufacturer—E. BRITT, Manchester, General Dealer—H. BUSFIELD, Clarendon Grove, Somers Town, Journeyman Cabinet Maker—J. CROW, Doncaster, Yorkshire Grocer—W. B. CHESTER, Liverpool, Brewer's Agent—J. R. CASS, Leicester, Hosier and Glover—J. CROWTHER, Halifax, Yorkshire Power Loom Overlooker—J. CARSES, Liverpool, Boot and Shoe Maker—J. DUNCAN, Duncan Terrace, Islington, Merchant and Ship Owner—A. DANIEL, Bury Place, Bloomsbury, Water and Electro Gilder—HERBERT STEVENSON FISK sued as H. S. FISK, late of Moreton Terrace, Pimlico, Cabinet Maker—G. FLETCHER, Manchester, Furniture Broker—F. FRANKENHEIM, Bloomsbury Square, Diamond Merchant—G. GRAEGER, late of New Oxford Street, Bookbinder—WALTER GALE, Brighton, Southampton Builder—CHARLES HUNT, Birmingham, Brass Caster—THOMAS HUTCHINGS, late of Glengall Grove, Old Kent Road, Commission Agent—WILLIAM HALLIDAY, Skipton, Yorkshire, Draper—R. B. HOWARD, High Holborn, Dealer in Curiosities—J. JENKIN, Tywardreath, Cornwall, Licensed Hawker—J. W. JOHNSON, Cullum, Bristol, Coal Dealer—C. JONES, Stokesay, Shropshire, Shopkeeper—T. J. JEFFERY, Davies Street, Oxford Street, Timber Merchant—J. JILLS, West Haddon, Northamptonshire, Tailor—R. JONES, Llanwonno, Glamorganshire, late Grocer—G. KEMBLE, Ipswich, Suffolk, Plumber—J. KELLAWAY, late of Birkenhead, Cheshire, Mariner—W. H. KAYE, late of Sutton Street, Soho, Builder—G. KIRK, Carlthorpe, Nottinghamshire, Cottager—L. LANE, St. George's Road, Southwark, Journeyman Tailor—J. LOCK, Milton, Northamptonshire, Blacksmith—J. LEE, sen., White Hart Street, Drury Lane, Greengrocer—A. LOUIS, Gresham House, Old Broad Street, City, Commission Agent—FRANCIS MILNER, Leighton Road, Kentish Town, late Merchant—WILLIAM ALLEN MOSS, Liverpool, Ropemaker—JAMES MATTHEWS, Cullompton, Devonshire, late Chemist—J. D. MEARS, sued as J. MEARS, late of [illegible] Old Ford, Builder—H. NAYLOR, Ipsecoe, Derbyshire, Colliery Contractor—W. NICHOLLS, Avening, Gloucestershire, Dealer in Wood—J. OGDEN, Oldham, Lancashire, Cotton Spinner—J. ORME, Birmingham, Journeyman Iron Plate Worker—W. PAYNE, Newnham, Gloucestershire, Attorney—T. PAYNE, jun., Harrow, General Dealer—C. PEGG, Blackman Street, Newington, Surrey, Upholsterer—J. T. RICHARDS, Church Row, Marlborough Road, Dalston, Grocer—H. A. RINGE, Ipswich, Grocer—WILLIAM SEYS (otherwise WILHELM SEYS), Shevills Buildings, Globe Road, Mile End, Baker—C. M. SPENCER, Great Tower Street, City, Wine Merchant—R. SIMPSON, Everton, Lancashire, Surgeon—T. W. SMITH, Clifton, Bristol, Coachman—J. STONE, late Wormegay, Lynn, Norfolk, Farmer—T. STAFFORD, Beacon Hill, [illegible] Road, Holloway, Builder—F. SPANN, Nottingham, Hosiery Manufacturer—D. M. SMITH, Kenda, Westmoreland, Innkeeper—A. St. Cyr, High Holborn, [illegible] Wine Merchant—D. SPENCER, Walton, Suffolk, Carter—R. SIM, Northumberland Place, Bishopsgate Street Without, Harness and Carriage Furniture Manufacturer—H. TAYLOR, Cardiff, Glamorgan, Grocer—W. [illegible], Clarence Cottages, Clarence Road, Clapham, Builder—THOMAS ST. GEORGE, St. George-in-the-East, Boarding House Keeper—C. VAUGHAN, Little Farrington Street, Clerk in Holy Orders—T. D. VIGURS, Pinchbeck Street, Northwood, Dealer—JOHN WILLIAM SAMUEL VINCENT sued as J. W. S. VINCENT, Peckham Road, Camberwell, Potato Dealer—J. WARNER, Richmond, Surrey, Lay Proprietor—G. WELLS, Sutton-in-Ashfield, Nottinghamshire, Beerhouse keeper—W. H. WRIGGLESWORTH, Knaresborough, Yorkshire, Commission Agent—G. YOUNG, Newark-upon-Trent, Nottinghamshire, Flour Dealer.

SCOTCH SEQUESTRATIONS.—J. FITZSIMMONS, Edinburgh, Fishmonger—J. & J. MARTIN, Glasgow, Grocers—J. MACBEAN, Glasgow, Grocer—W. [illegible], Leith, Plumber.

TUESDAY, *Sept.* 6.—BANKRUPTS.—H. ASHWORTH, Godley cum Newton, Cheshire, Machine Broker—W. BRAMLEY, Jarrow, Durham, Draper—J. BENNETT, Cheetham, Lancashire, late Cotton Waste Dealer—J. BEST, Darlington, Durham, Butcher—G. BRIGGS, King Street, Lambeth Walk, Builder and Plasterer—W. BROOK, late of Bradford, Yorkshire, Hatter—T. BROOKS, late of Thorne, Yorkshire, Wheelwright—W. BROOKS, Lower Calvert Cottages, Caledonian Road, Islington, Dairyman—J. G. BUSSEY, Lincoln, Norfolk, Wine Merchant—G. BUTLER, Queen's Road, Bayswater, Carpenter—J. BOWDEN, Devizes, Wiltshire, Greengrocer—C. CROSS, [illegible], Westminster—JOHN WESTON CRAIG, New Maldon Street, [illegible]—[illegible], Chesterton Street, [illegible], Bell Hanger—[illegible], Eyre Court, Hampstead Road, [illegible], Builder—J. and H. [illegible], Dorchester Street, [illegible], Builders—G. [illegible], Regent Street, [illegible], Grocer—G. [illegible], Eagle Street, [illegible], Builder—J. [illegible], Cavendish Street, Pentonville, [illegible], Builder—[illegible], Dorchester Place, [illegible], Builder—W. [illegible], Pentonville, [illegible], Builder—[illegible], Ebrington, Gloucestershire, late Coffee-house Keeper—J. E. HAMILTON, Hammersmith, [illegible], Builder—[illegible], Isaacson, St. James's Place, New Cross, Naturalist—R. JONES, Oldham, Lancashire, Beerseller—J. JOANNY, late of Great Newport Street, Soho, Glovemaker—[illegible], late of Manchester, Manufacturer—S. LEVICK, Shadwell, Cabinet Dealer—A. J. MEROA, Nantwich, Cheshire, Grocer—G. MOSS, Hanley, Lancashire—T. MOSS, Manchester, Cabinet Maker—J. MARSDEN, Newton-in-Tyndale, Cornwall, Sawyer—W. NEWSOME, Everton, Lancashire, late Porter and Beer Retailer—[illegible], Bakewell, Derbyshire, Wool Dealer—GEORGE CONSTANTINE RIDD, of Guildford Street, Russell Square, Leather Merchant—SAMUEL [illegible], Church Street, Hackney, Bread and Biscuit Baker—J. SWALES, Mary Chester, Screw Bolt Manufacturer—[illegible], Lancaster, Lead Smelter—[illegible], Wood Dealer—H. THOMPSON, Keyes Cliffe, Northamptonshire, Grocer—J. THOMPSON, Newcastle-upon-Tyne, Butcher—J. TOMKINS, Shelton, Staffordshire, Cheesemonger and Provision Dealer—H. M. TOWLE, Manchester, Tea Dealer—W. WILLIAMS, Monks Coppenhall, Cheshire, Cooper—W. WYATT, Lloyd's Coffee-house, Cornhill, Insurance Agent.

SCOTCH SEQUESTRATIONS.—C. INNES, Charlestown of Aberlour, Banffshire, Innkeeper—W. SPENCE, Kirkwall, Draper—J. & M. WILSON, Glasgow, Coachbuilders.

Metropolis and its Vicinity.

APPREHENSION OF MÜLLER.—By the arrival of the American mail we learn that Franz Muller was arrested on the arrival of the Victoria at New York on the 24th ult. In order to render it impossible for him to escape on his arrival at New York, a private circular was placed in the hands of all New York pilots, requesting them to deliver no newspapers on board and to inform the captain privately of what had occurred, and offering 5*l.* to the pilot who first boarded the ship. A brief whisper from the pilot apprised the captain of what was to follow. From that moment Muller was closely watched, though he did not know it. The English detectives accompanied the health officer, who boarded the ship in the evening off Staten Island. The steerage passengers were then called aft, for medical inspection, as they were told. Muller answered to his name when summoned, and on descending to the cabin found himself in presence of the police officers and the two chief witnesses against him. Among the eight passengers, including Müller, who were taken into the cabin, Mr. Death pointed out the accused. When charged with the crime, he turned "ghastly white," but soon recovered his self-possession, and denied all knowledge of it, and accounted for his possession of the murdered man's hat and watch, which were found in his baggage, by stating that he had bought them in London. Previous to the detectives boarding the Victoria, some excursionists cried out, "How are you, Muller? Throw the murderer overboard." The prisoner is a man 24 years old, and not prepossessing in appearance; height, 5 feet 6 inches; light hair, and small grey eyes. He was poorly dressed. He was conducted to the head-quarters of the police, where his portrait was taken. The people were disappointed in his appearance. They expected to see a fierce-looking individual, instead of a poor, cowering-looking man, as he is, who seemed to be more dead than alive. He said he would like to have the benefit of legal advice, but was unable to pay. Counsel was then assigned him by the Court, Mr. Shaffer being selected for that purpose. He was examined before the United States Commissioner, Newton. Müller sat quietly, and evinced no interest in the proceedings. In answer to the Court he said he expected his sister from 139, Nassau Street, but he could not say if she was in court. Mr. Marbury then opened the case for the Crown. He quoted the treaty, providing for the delivering up of persons fleeing from justice in one country, when found in another charged with certain crimes, and demanded that the prisoner, Franz Muller, who was charged with murdering Thomas Briggs, in the county of Middlesex, be rendered up for trial, if the evidence adduced warranted his commitment for trial on the charge of murder. Mr. Marbury then briefly narrated the story of the murder, and proposed to read the depositions of the witnesses examined in England. Mr. Shaffer, who defended the prisoner, objected to the admissibility of those papers, unless the witnesses were all present to be cross-examined. He also contended that the signature of Mr. Adams, certifying that the depositions were authentic, must be proved. The Commissioner, however, decided that the certificate of the United States' Minister, under the seal of the Legation, must be received. After a long discussion, Mr. Marbury read the depositions upon which the warrant of arrest was based, and called witnesses to prove the authenticity of the documents. Inspectors Tanner and Kerressey were then sworn, and recapitulated the evidence they adduced in London. Mr. Robert Death was next sworn, and after recapitulating the evidence adduced in London, went on to say that he had not the least doubt as to the identity of the prisoner. When he saw him on board the Victoria he was requested to wait till he was called in the cabin where the prisoner stood, with a number of other persons. He looked at all those present; there were eight or nine, all strangers. After looking at them all deliberately, he told Inspectors Tanner and Kerressey that the second man was the man. In cross-examination, Mr. Death said that he identified the prisoner by his light and general appearance. He had not been able to speak as to whether he had

whiskers or not, but he had no moustache or beard. He should say prisoner was rather under middle size, and not a thick-set but rather a slight man. The prisoner's counsel called attention to the depositions, which stated that a tall and thin and not thick-set man sat beside Mr. Briggs. Witness went on to say that when he boarded the Victoria he knew he was going to identify the man. The description of the man was given by himself and brother. J. Matthews was sworn, and said that Müller's hat fitted his head in an ordinary way, but a little too easy. Detective Tremnann deposed that the prisoner had told him he had had the hat about a year, and that he had had the watch two years. This was the case for the Crown, when the Court adjourned till next day, the 27th ult., when the City of Baltimore, which brings this news, left New York. It is supposed that Inspector Tanner left New York with the prisoner on the 6th, and will arrive in England about the 15th. The greatest excitement prevailed in New York consequent upon Müller's arrest, and the papers contain long details of his conduct and proceedings during the voyage. They state that the cook of the vessel, who slept in the next berth, voluntarily stated to the captain that Müller, during the voyage, seemed to sleep very unsoundly, often awaking with a start, or talking in his sleep, exclaiming "Who's there?" "Take your hands off!" and similar expressions denoting a very perturbed mind. He had sold two of his shirts during the voyage to pay for his food, and his evident want of money and clothing had often been the subject of conversation among the passengers. Mr. Briggs's watch was found in the trunk of the prisoner, sewed up in a piece of chamois leather, and his black silk hat, marked "Digance, hatter," had been worn by the prisoner during the voyage, but when taken charge of by Inspector Tanner a cap was borrowed for him to go on shore. It is stated that the voyage of the Victoria was one of such unusual length, that one of the passengers said in Müller's hearing that there must be a murderer on board, but he took no notice of the remark. The adjourned inquest on Mr. Briggs was resumed on Thursday, and adjourned to the 19th inst., on which day the detective officers will no doubt have returned with their prisoner from America. On Tuesday night a man called Augustus King confessed to the landlord of a tavern at Bow that he was Müller's accomplice in the murder. He was taken before the magistrate at Worship Street Police Court on Thursday, when he said that he was tipsy at the time of the confession, and denied any further connection with the murder than helping to carry Mr. Briggs's body from the railway. There seems to be little doubt that the revelation was made in bravado while he was drunk, but the magistrate ordered the matter to be investigated, and remanded the prisoner for a week.

UTILIZATION OF SEWAGE.—A Select Committee of the House of Commons sat in May, June, and July of the present year to inquire into plans for dealing with the sewage of the metropolis and other large towns, with a view to its utilization to agricultural purposes. The Committee examined a great number of witnesses, and agreed to the following report, which has just been published:—

"The Committee commenced their inquiry by examining into all those plans for utilising, in a liquid state, the sewage of the metropolis which had been laid before the Metropolitan Board of Works, and were referred to the Committee by an order of the House. The Committee have ascertained from Cornish engineers of the greatest reputation the prices of the steam engines and pumps which would be required to raise various quantities of sewage to stated heights. Mr. Bateman, the well-known water engineer, was examined as to the prices of the mains and pipes which would be necessary for the conveyance and distribution of sewage over land, and the estimated cost of laying them down and jointing them. The Committee has come to the conclusion that it is not only possible to utilise the sewage of towns, by conveying it in a liquid state through mains and pipes to the country, but that such an undertaking may be made to result in pecuniary benefit to the ratepayers of the towns whose sewage is thus utilised. That benefit may, in a few years, be greatly increased; for the amount of artificial manures is even at present insufficient, and the sources whence some of the most important are obtained will in a few years be exhausted. Other means of fertilising land must therefore be resorted to. The Committee, having examined the chairman and engineer of the Metropolitan Board of Works, are of opinion that more might have been done by that Board towards the profitable use of the sewage of London; and that the completion of the outfall sewerage of the metropolis ought, at the earliest possible moment, to be followed by the adoption of a system which may convert that sewage from a nuisance into a permanent and increasing source of agricultural fertility. Even if a pecuniary benefit were not to be secured, yet such a consideration should not deter local authorities from taking such steps as are possible to free rivers from pollution. The Committee examined several witnesses regarding the pollution of the rivers and streams of the country. There can be no doubt as to the injury which results from the practice of conducting sewage and other refuse matters into the rivers, whence numerous towns, villages, and country populations derive their water supply. It is imperatively necessary that such a practice should be discontinued. No efficient artificial method has been discovered to purify, for drinking and culinary purposes, water which has been once infected by town sewage. By no known mechanical or chemical means can such water be more than partially cleansed; it is always liable to putrify again. Processes of filtering and deodorisation cannot, therefore, be relied upon to do more than mitigate the evil. Water which appears perfectly pure to the eye is sufficient, under certain conditions, to breed serious epidemics in the population which drinks it. Soils, however, and the roots of growing plants have a great and rapid power of abstracting impurities from sewage water, and rendering it again innocuous and free from contamination. Mr. Ffennell, the Chief Inspector of Fisheries, stated in his evidence that sewage water in a putrifying state is destructive to fish. A considerable increase in the amount of food for the people and of revenue to the owners of rivers would, therefore, result from purifying the rivers of the United Kingdom, which are now contaminated by sewage and other matters. If the sewage of towns is no longer to flow into rivers, the only alternative which remains is to dispose of it on the land. It has been decided that it is a nuisance at common law to discharge any sewage into a river. Yet the law is, nevertheless, inoperative, for want of powers to remove the nuisance. Until within the last 30 years it has been the custom to utilise all the nightsoil and other refuse on the land. Great obstructions used to be thrown in the way of making house drains which should empty themselves into the street sewer. The use of the latter was confined to the conveyance of the surface waters of the town. There was a service of scavengers whose duty it was to remove excrementitious matters in their carts; and it was the office of the mayors of towns to take care that rivers, streams, and ponds were kept free from all noxious or filthy substances. But when the modern water closets came into vogue, and the practice was introduced of flushing house drains into the sewers, then the diluted nightsoil first began to find its way into rivers. Yet the removal of house refuse to the land would now be much easier and cheaper than it was formerly; because carriage by suspension in a liquid is the cheapest mode of transport. In many towns of Lancashire there are to this day numerous cesspits. This is the case with Manchester, where the local authorities expend about 20,000*l.* a year for emptying them and then removing the contents to the land, and receive back 50 per cent. by the sale of the material. A system of sewerage, and the necessary works to remove all the refuse in a liquid state to the adjacent fields, would, in Mr. Rawlinson's opinion, cause a saving to the town. The Commissioners of Sewers and the Board of Health took no steps to prevent the introduction of the practice of flushing the refuse of houses into the street sewers, and thence into the rivers. For they were of opinion that no time should be lost in freeing habitations from the dangerous infection of putrifying substances: and assumed that when this more pressing object had been accomplished the law would be again respected, and measures would be taken to free the rivers and restore the refuse once more to the land. Dwelling-houses in the metropolis and many parts of England have already been freed, which has caused the increased pollution of rivers. This latter evil is becoming worse every year in proportion to the adoption of a better water supply, of a more perfect system of house drainage, and the increase of the population. Dr. Acland and other witnesses believe that rivers can be effectually freed from pollution only by extending the Local Government Act to entire watersheds; or, rather, by establishing boards somewhat similar to the present local boards of towns, which should extend over the whole area of each catchment basin, instead of being restricted to the precincts of each town. These watershed or catchment boards should, in the opinion of those witnesses, have all the powers for this purpose which are now enjoyed by the local boards of towns; and they should be placed under the direct authority and supervision of the Home Office. They furthermore hold that it should be the duty of the Home Secretary to see that the law, as to the pollution of streams, is strictly enforced by these watershed boards. The Secretary of the local government office, as well as Mr. Rawlinson, the inspecting engineer, while concurring in the necessity of appointing a board for each catchment basin, gave a decided opinion that the duty of the watershed board should be merely to supervise the action of the local boards within their district, and enforce an obedience to the law in causing them to desist from polluting the streams; but that the necessary works should be carried out by the local boards alone. The Committee recommend that the important object of completely freeing the entire basins of rivers from pollution should be rendered possible by general legislative enactment, enabling the inhabitants of such entire districts to adopt some controlling power for that purpose; but it should include a provision for compelling local boards to render the sewage of their districts innocuous by application to the land for agricultural purposes. The case of the valley of the Thames (where the purification of the river, which has been sought by the expenditure of enormous sums, is to a considerable extent counteracted by the increased discharge of sewage from towns higher up the stream) requires special and immediate attention. Before concluding the inquiry the Committee received some evidence with regard to the measures now being carried out by the Metropolitan Board of Works for diverting the sewage of the metropolis. This inquiry the Committee have been unable to complete."

NEW RIDE IN ST. JAMES'S PARK.—Alterations are making in St. James's Park, in order to provide a ride for horsemen similar to Rotten Row in Hyde Park. The portion of the Park which Mr. Cowper, the Chief Commissioner of Works, has set apart for this purpose, extends from Storey's Gate to Buckingham Palace, being the whole length of Birdcage Walk. In the course of a few days the railings on the north side of Birdcage Walk will be removed 30 or 40 feet back, and that strip of ground will be cut off from the enclosure.

THE CITY TRAFFIC REGULATIONS.—On Saturday the first case under the new act for the regulation of the City traffic came before the sitting magistrate at Guildhall. A carman in the employment of a building firm in Bishopsgate Street was charged with driving a cart laden with timber exceeding 25 feet in length through the City between the hours of 9 A.M. and 6 P.M. The offence was proved, and as it was the first case a nominal fine was inflicted.

METROPOLITAN IMPROVEMENTS.—Among the works sanctioned by Parliament in the last Session for the convenience or embellishment of the metropolis, the most important was the raising of Holborn valley, which will be commenced forthwith, and will present one of the most effective views of street architecture in London. Another great work for which powers were granted is the formation of a large wharf and graving docks, to stretch right across the Isle of Dogs, with an inner dock to run north at right angles towards the West India Docks, while on the south side of the river the Commercial Dock Company have obtained powers to extend their works; and new docks are to be made near the Southwark Waterworks, to be called the West London Docks. An Act was passed for the formation of a new park at Rotherhithe, on the site of some market gardens, to be called Southwark Park; it will be about the size of St. James's, and will afford recreation and enjoyment to the large industrial communities located in the populous parishes of Rotherhithe, Bermondsey, and Deptford. A new market is to be established in the heart of the Borough, with a frontage in the London Road. Two new bridges are to be constructed, one at Wandsworth, with approaches leading from St. John's Hill on the south to the King's Road on the north of the river; and another at Chelsea, to be called Albert Bridge, which will connect the west side of Battersea Park with Cheyne Walk and the populous districts of Chelsea and Brompton.

THE EVANGELICAL ALLIANCE.—Mr. Spurgeon's withdrawal from this body has been announced.

THEATRE PREACHING.—On Sunday evening the first of the series of theatres which it is proposed to occupy during the next few months for the purpose of religious services—the Surrey, in the Blackfriars Road—was opened, and received a very large congregation of a mixed character. The private boxes and the boxes generally were filled by persons to whom religious services were evidently no novelty. The pit was also filled, many of those present being a class of persons seldom seen in churches or chapels. The rest were respectably dressed persons, apparently working-men and tradespeople. The galleries were not opened. It was announced that the service will be repeated to-morrow evening in the same place, and that the Marylebone, Sadler's Wells, Standard, and Pavilion Theatres will be opened for similar religious services on the first Sunday evening in October.

ALTERATION IN THE NAMES OF STREETS.—The following alterations in the names of some of the principal metropolitan thoroughfares have just been effected by the Metropolitan Board of Works:—Bear Lane and York Street, St. Luke's, Finsbury, is now Central Street; and John's Row and Wilmington Street in the same locality, is merged into one thoroughfare, and named Lever Street. Southampton Street, Russell Square, is now called Cosmo Place; the distinction of Great and Little Russell Street, Covent Garden, is abolished, and the two are now Bedford Street. Holloway Road now extends from Upper Street, Islington, to the Great Northern Railway, and the host of terraces, places, buildings, &c., are merged into one common nomenclature, Holloway Road; while the road has been entirely renumbered, the numbers running from north to south, the odd numbers on the west, and the even on the east. Pitfield Street, Hoxton, now extends from Old Street Road to the New North Road, and Haberdasher's Walk and Place no longer exists. Foley Place, Marylebone, has been renamed Langham Place; Marylebone Street, Regent Street, is now called Glasshouse Street; and Queen Street, Golden Square, is now Denman Street. Numerous other alterations are in contemplation.

PRESERVATION OF THE THAMES FROM POLLUTION.—On Tuesday the Thames Conservancy Commissioners, under the provisions of the Act of last session, took vigorous measures to prevent any further pollution of the river by gas companies and other manufacturers allowing washing stuff, "blue peter," and other offensive matter to pass into the Thames; and to prevent the throwing of gravel, ballast, &c., therein, or its deposit in any position on the banks, or upon any stream thereof within eight miles, from which it may be carried by flood into the river.

WESTMINSTER BRIDGE IMPROVEMENTS.—On Tuesday, by order of the Chief Commissioner of Works, the removal of the whole of the houses required to complete the approaches to Westminster Bridge was commenced in Parliament Street, New Palace Yard, and Bridge Street.

DESTITUTION IN SHOREDITCH.—One of the most painful among the many cases of misery and death resulting from destitution in the metropolis, was investigated a few days since by a coroner's jury in the east end of London. Mr. Henry Jeffreys had formerly been in a large way of business near Maidstone, as a paper manufacturer, and was known to scientific men as a skilful preparer of fibres for the purpose of paper-making and for manufactures of certain kinds, interesting specimens of which were exhibited in the Indian department of the last Exhibition, but by a reverse of fortune he and his family became reduced to great poverty. Determined to battle bravely with their altered circumstances they went on from day to day, working and endeavouring by every honest means to increase their income and reduce their expenditure. In this desperate struggle the two daughters took a prominent part, working day and night for a slopseller who paid them 2*s.* a dozen for making flannel shirts, and for blue and white ones 2*s.* 6*d.* a dozen. This incessant work, with little food and the bare boards to sleep upon, at length produced their effects, and one by one the members of this unfortunate family were stricken down by illness and thereby deprived of the means of procuring even the scanty food which had hitherto enabled them to exist. One of the daughters died from effusion of serum on the brain, caused by want of proper nourishment, refusing to the last to allow any medical man to see her, because he must at the same time discover the misery of the family. The other daughter lay on the floor in a dying condition when the coroner's jury visited the place; and she also refused to be handed over to the workhouse authorities. The jury returned a verdict in accordance with the evidence, and the publication of the case immediately excited so much compassion that a subscription has been opened for the benefit of the family, and there is reason to hope that they will now be placed in more comfortable circumstances.

ALLEGED WIFE MURDER IN SHOREDITCH.—A few

days since a woman called Mary Anne Birch was found lying dead on the floor of a room at No. 19, Margaret Street, Shoreditch, with marks of severe violence on her body. On Sunday night Thomas Birch, the husband of deceased, had some friends at his house. A quarrel then took place between him and his wife. When the friends left they both went to bed. Next morning at five o'clock the husband, who is a bricklayer, states that he left the house, leaving his wife asleep in bed. In the evening, at half-past eight o'clock, he returned home, and found her dead. There were marks of violence on the stomach and eyes, which appeared to have been inflicted by kicks. The police, after investigating the affair, arrested the husband on suspicion of causing the death of his wife, and a *post mortem* examination of the body proved that death was caused by the rupture of the meningeal artery, and the consequent slow effusion of blood on the brain. The rupture had been caused either by a fall or a blow—most probably by the latter. The body was covered with marks of blows, some of evidently recent date, the others two or three weeks old. At the inquest on Tuesday the prisoner, Thomas Birch, a powerful looking man, was brought up in custody under a warrant from the Secretary of State, and the witnesses proved that he was known in the neighbourhood as the man who ill used his wife, and that she was in the habit of drinking to excess. The coroner, in summing up, said that it was for the jury to say whether death was occasioned in cool blood, or in a quarrel arising from the intoxication of the deceased. In the one case the verdict should be one of wilful murder, but in the second it would be one of manslaughter only. After an hour's delibration, the jury returned a verdict of Manslaughter against Thomas Birch. The Coroner then issued his warrant for the committal of the prisoner to Newgate, to take his trial at the Central Criminal Court. At the Worship Street police court on Thursday, the magistrate took a more serious view of the case, and committed the prisoner for trial on the capital charge.

THE LATE MURDER IN HATTON GARDEN.—After the inquest on Friday, at which the jury returned a verdict of Manslaughter against the prisoner, he was again taken before the Police Magistrate at Clerkenwell, who committed him for trial on the charge of Wilful Murder.

SUICIDE OF A SOLICITOR IN BATTERSEA PARK.—On Wednesday an inquest was held at Wandsworth on the body of Mr. Edward Villiers Crotty, aged 50 years. It appeared from the evidence that he was born in France, but was of Irish extraction, and was by profession a solicitor. He had lost a large fortune by betting on horse races; and, in fact, had ruined himself, and reduced his family to such straitened circumstances that his wife was obliged to go out to work as a milliner in order to support them. On Monday evening he was found lying in Battersea Park in a dying state, from the effects of prussic acid, and he died before he could be removed. The jury returned a verdict of suicide while in a state of temporary insanity.

THE MYSTERIOUS AFFAIR AT MILE END. — The adjourned inquest on the bodies of Mrs. Backingham and Mrs. Gribbins, found dead in a house at Mile End on the 26th August, was resumed and concluded on Wednesday, when Dr. Letheby stated the results of the *post mortem* examination and of the analysis of the stomachs. It appeared that all the appearances of the analysis led to the conclusion that the deaths were caused by the administration of cyanide of potassium, a white powder extensively used by photographers. The jury, after a brief consultation, returned a verdict "that the deceased persons died from the effects of poison; but how it was administered there was no evidence to show."

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, September 3, were 1441. The average number in the corresponding week of the previous 10 years, excluding the deaths from cholera in 1854, and corrected for increase of population, was 1227. The present return is therefore 214 above the average. During the week the births of 970 boys and 897 girls, in all 1867 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1872.

Provincial.

ABERDOVEY.—Mr. Stansfeld, M.P., who has recently been staying in this town for the benefit of his health, was invited to a public meeting a few days ago, and presented with an address, thanking him for his "manly, independent, and able" conduct, both as a statesman and as a Minister of the Crown, from the commencement of his official career to its memorable termination. In reply, Mr. Stansfeld reviewed his connection with the Admiralty, Garibaldi, and Mazzini. He said:—

Nelson used to say, "Get alongside of your enemy, and then board, cutlass in hand." That state of things has now entirely gone by. Science in this, as in other matters, has made enormous strides. Perhaps the days of broadsides are entirely gone by. Our modern vessels are no longer made of wood, but constructed of iron; and if we look into the future the force of our navy will not depend so much upon the defensive as upon the offensive power of the guns. If I were to state now what I believe to be the idea of the future navy of this country, it would be this—that you should construct your vessels, starting with your guns, and with these instruments of offence you should look upon your ships simply as water carriages; that you should give them as much speed as possible, and that they should be manned by as small a crew as possible, or, to use a common expression, to have as few eggs as possible in the same basket. In all times of progress and change in the defensive armaments of the country, there must be a great increase of expenditure. To use a mercantile phrase, your old stock is getting dead, and although it is lying in your harbour you must build or buy other vessels. We have a very large fleet on our waters; they have to be kept up, they have to be manned, and besides all that, you must be building a fresh and entirely new set of vessels for the future use of this country. He then referred to Italian affairs, and said:—There has been an immense change in the position of that country. You have practically an Italy. To whom and to what is that Italy now mainly owing? I say that it is owing to the effects of two causes. It is owing, in the first instance, and if I were to assign the palm of merit I should give it to them—it is due in the first instance to the exertions of a party which has been called the National party in Italy. That party rose when there was no faith and when there was no reason to have any faith in the kings that reigned over the Italian peninsula. Now you have a kingdom, and the king pledged to carry out the interests of the people. I say that this National Italian party are worthy of the sympathy of the friends of liberty, members of whom—Garibaldi on the one hand, and Mazzini on the other—have long been my personal friends. We know now what to think, and we know what the world thinks, of the chivalry and genius of Garibaldi. That has been shown, and it is not necessary to sing his praises. It was a source of great gratification to me to find that Garibaldi was received with open arms, and *fêted* by the aristocracy of this country. Some will say—"Now, you don't identify yourself with all the imprudent acts of these men." I say that they have not always been prudent. If they had been prudent they would not have done what they have achieved. It is not always the prudent that gain the victory, and when it is a forlorn hope it is not the prudent, it is the enthusiastic, that lead ultimately to a great victory. The great thing that we should have in view in dealing with men is that we should understand their character. I feel that I do know the character, objects, and lives of these men. Upon one of these men lately—upon his name and upon his character—a cloud seemed to hang, a storm seemed to be impending, that threatened his liberty, and perhaps his life. I was in a peculiar position. On the one hand I was his private friend, who had known him for years, and upon whom, if it was on any one, it was incumbent to speak of the knowledge I had of him. On the other hand, I was a member of a Government whose rights and position I had to consider as well as my own. I was frequently told that I might have been taught to combine prudence with private friendship, and if I had tact, and if I had known how to act, that I should have still been a member of the Government. I cannot agree with these members. There is a time, I say, for prudence, but there is a time also for something more than prudence. I felt that it was my duty to protest against the charges made against him, and I determined to do so regardless of what the consequences might be to me. And I say that if I had been false to these men who have been risking their lives for this noble cause, I should not have been worthy of the place I held. I spoke as his friend, and I protested against the calumnies that were brought against him. It was thought that this event, with the very strong denials which I had given from time to time, afforded room for an attack upon the Government of the day. Now then came another duty. I felt that that which was a private duty which I should answer, should not fall upon those who were unwilling that I should leave them. They divided upon the question, and they stuck to me. But so soon as Lord Palmerston, the Premier of this country, made it evident that he was not abandoning his colleague—though he refused to leave me—I insisted upon resigning, for I would not be a source of weakness instead of strength to a Government which I wished to support. And I have the satisfaction of thinking that the course which I pursued has met with the general approval of the largest majority of the Liberal party. I have had ample evidence of it in numerous letters, and in the press of this country, and, without detaining you any longer, though last yet not least, I have evidence of it to-day."

BILSTON.—A shocking case of child murder was discovered a few days since at Cosley. A little girl called Eliza Sillitoe, aged about six years, was found dead, and her body in a decomposed state, in a field of wheat. Her neckerchief, saturated with blood, was found some distance from the body, pressed together, as if it had been thrown there, her hat was placed by her side, her shoes and stockings off, the shoes being also placed by her side, and the stockings tucked in them. The ground under the body was saturated with blood which had flown from the corpse, and two surgeons gave it as their opinion that the blood had flown from a wound before death on or about the throat. Suspicion at once attached to the girl's father, a miner, named Richard Hale, who had been imprisoned on the charge of causing the death, by neglect, of the child's mother, whom he married after the birth of the child. He was known to have uttered threats against the child, and to have desired her death. After his arrest a woman, named Cecilia Baker, with whom he had recently cohabited, was taken into custody, and two witnesses deposed that they had seen her coming out of the cornfield in company with him from a point near to the spot where the body was found, and during the time that it must have been lying there. The jury, at the inquest, returned a verdict of "Wilful Murder" against the father, who was thereupon committed for trial at the next assizes.

BIRMINGHAM.—The triennial musical festival in aid of the General Hospital in this town commenced on Tuesday, under the presidency of the Earl of Lichfield, and continued daily up to last night. The performances included Mendelssohn's "St. Paul" and "Hymn of Praise," and "Elijah," Handel's "Messiah," Beethoven's "Mount of Olives," and Mr. Costa's new oratorio "Naaman." The evening concerts included two new cantatas, the "Bride of Dunkerron" by Mr. H. Smart, and "Kenilworth" by Mr. Arthur Sullivan, in addition to the usual selections of miscellaneous music. The principal performers were Mdlle. Titiens, Madame Rudersdorff, Madame Lemmens Sherrington, Mdlle. Adelina Patti, Madame Sainton-Dolby, Mr. Sims Reeves, Mr. Santley, Mr. Weiss, Madame Arabella Goddard, Messrs. Sainton and Blagrove. Mr. Costa was the conductor, and the band included 140 instrumentalists and a choral body of 367 singers. The great event of the festival was the first performance of Mr. Costa's "Naaman," which was completely successful, and was received throughout with the greatest possible enthusiasm, no less than 12 pieces being encored.

DOVER.—The morning and evening mail trains of the London, Chatham, and Dover Railway Company now land and embark the mails and passengers with their luggage at the Admiralty Pier at this port, thus entirely superseding the use of small boats and saving the transit to and from the packet and the railway. This is a great boon to travellers on dark and boisterous nights, and saves them the expense of cab or omnibus hire and the well-known exactions of the Dover town porters.

DUFFIELD.—Isaac Watson, servant of Mrs Harrison, Duffield Wold, was summoned before the magistrates a few days since, charged by Mrs. Harrison's manager with refusing to attend church on Sunday after being requested by his mistress to do so. The defendant was ordered to attend some place of worship and to pay expenses.

HEREFORD. — On Saturday the memorial statue recently erected in this city in honour of Sir George Cornewall Lewis, the late Minister for War, was publicly unveiled by Lord Palmerston, under whom he had successively filled three of the highest offices of the State. A vast assemblage of the citizens and inhabitants of the county assembled to witness the ceremony, and Lord Palmerston was welcomed with great enthusiasm. After receiving addresses from the corporation and the monument committee, Lord Palmerston drew aside the curtain which covered the statue, amid the deafening cheers of the multitude, the troops simultaneously presenting arms, salutes being also fired, and the militia band playing a slow march. The statue, which is by Baron Marochetti, is in bronze, and is considered an excellent and characteristic likeness, representing the late statesman in the plain morning dress of an English gentleman. The pedestal bears the following inscription:—Sir George Cornewall Lewis, a wise and honest statesman, a profound scholar, a kind and firm friend; M.P. for the county of Hereford from 1847 to 1852; chief steward of the city: Chancellor of the Exchequer from 1855 to 1858; Home Secretary from 1859 to 1860; Secretary for War from 1860 to 1863. Born, 1806; died, 1863." Lord Palmerston then stood forward, and after thanking the company for the reception they had given him, and referring to the effect of such memorials in stimulating men to great enterprises, spoke as follows on the claims of Sir George Lewis to the respect and gratitude of his countrymen:—

"You are now assembled to confer posthumous honour on a great and distinguished statesman, who, by the inscrutable decrees of Providence, was taken away from us prematurely, and at a moment when, in the full vigour of his age, we might have expected from him the continuance of long and useful public labours. All you can do now is that which you have met here to perform—viz., to commemorate by a lasting memorial the respect and esteem which his contemporaries felt for him, and to hold out to future ages an instructive and inspiring example to induce them to emulate that career which he so honourably and usefully followed. There has seldom been any man in a great public career who so entitled himself to the respect and admiration of his fellow countrymen as the late Sir George Lewis. I may say that the whole active part of his life was devoted, in one way or another, to the service of his country. During the latter part of his life he filled some of the most arduous and most important offices in the State. He was at one time Chancellor of the Exchequer, and managed during the Crimean War—a period of great anxiety and great difficulty—the financial concerns of the kingdom; and it is perfectly true that there never was a Finance Minister who acquired and retained to a greater degree than Sir G. Lewis did the confidence of all that commercial community who are so much interested in the accurate and efficient discharge of the functions of that minister. He then afterwards took charge of the internal affairs of the country as Secretary of State for the Home Department, and there, in that perpetual intercourse which he had with the gentry, the nobility, the corporations, and the different communities connected with our domestic administration, he conciliated their esteem, acquired their confidence, and so, with great advantage, fulfilled the duties of that important post. A vacancy unfortunately happened, through an event much to be deplored, in the office of Minister for the War Department; and Sir George Lewis—not according to his own inclination, because he would have preferred remaining at the post which he then occupied, but at the earnest request of myself and others connected with the Government—undertook the more arduous duties of the War Minister of this country. Those duties he admirably performed; and I cannot charge myself with the belief that, however heavy their pressure was upon him, they tended in any degree to shorten his valuable life. Therefore, in all those great and important public positions, he fulfilled his duties in a manner which won for him the respect, the esteem, and the approbation of all concerned in those several departments, exhibiting at the same time a versatility of talent which perhaps few men in an equal degree possessed. In his Parliamentary labours he was an able and efficient debater. He stood up manfully against all opponents in defence of his own opinions, but with a calmness, a forbearance, a power of cool logical argument, which, although he convinced many who had previously differed from him in opinion, and although he confuted his political antagonists, yet prevented him, even in the warmth of debate, from ever making a personal political enemy. And those who know, in any sphere of life, how much the passions are apt to be excited by finding opinions adverse to their own supported by able antagonists, and how much the human mind is impatient of contradiction, must know what a fund of good nature, what a fund of calm forbearance, what a fund of substantial reasoning there must have existed in a mind which could pass through debates in the House of Commons night after night and year after year, repelling attacks on some occasions, urging opinions on others, and yet, although distinguished as an able speaker, never by any lapse or yielding to any impulse converting a political antagonist into a personal enemy. But not only was Sir G. Lewis most distinguished as a public man.

As was well observed by Mr. Clive, he contrived, in a way which excited not only the admiration but the astonishment of those who knew him—he contrived, while engaged almost all the active part of his life in the performance of public duties of greater or less importance, and all requiring great devotion and time, to acquire more varied, more extensive and deeper knowledge of all kinds than has often fallen to the lot even of those who have nothing else to do but apply their minds to its acquisition. He was one of the most learned men in private life as well as one of the most active in public duties. Mr. Clive has well stated that there is one here who can bear testimony to the fact that, however great was his learning, there was in him withal an unpretending singleness and simplicity of mind—that he was not given to any unnecessary display of his knowledge—that a man might have passed hours in his society, and unless the conversation turned by itself upon subjects with which Sir G. Lewis was so much better acquainted than most of those with whom he came in contact, he might have gone away ignorant of what a vast store of information he had heaped up in his active and industrious mind. But that knowledge was not merely useful, as all intellectual acquisitions are, but the habit of mind formed in acquiring it enabled him better to perform the public duties with which he was from time to time charged. The great and, I may say, the leading quality of his mind was a thirsting after truth. His great object was to ascertain truth. He was not impatient of contradiction or of opposition; his aim was, by comparing his own ideas with those of others, whether living or dead, whether in conversation or in books, to get at the truth and test the correctness or incorrectness of particular opinions. That quality he possessed in a greater degree than almost any one whom I have had the good fortune to meet. It was that quality which endeared him as a public man to those with whom he had to enter into communion. But in his private relations of life there was a warmth of heart, a steadiness of affection, a total unselfishness of feeling which rendered him dear to all his friends, which made him invaluable to all his family connexions, and which inspired in those who came near him in the exchange of domestic intercourse sentiments deeper even than those which can be entertained by any now assembled to do honour to his memory. It is, therefore, I say, a becoming act on the part of the people of this town and county to have erected the statue which we have now uncovered, which, being the work of one of the most distinguished artists of the present day, does give us as accurate a resemblance as possible of the features of him in whose honour it has been raised. And I hope that those whom I am addressing, and those who may follow them, generation after generation, when they pass this statue, will say "This is the statue of a man dear to his country, who rendered important services to his country, who served his Sovereign and his fellow countrymen with honesty of purpose, and with successful results." His career was a career to be imitated by all, even by those who may not possess those qualities which enabled him to arrive at that summit to which he attained. Every man in his way may make such progress as his intellectual endowments and his natural disposition may permit; and be assured that the imitation of great excellence; although it may not result in equal distinction, is the certain course to fit every man, whatever may be his talents, to be a useful member of the community and to earn the goodwill and esteem of his companions and friends in life. I therefore trust, gentlemen, that this memorial will not only prove in the present day the respect and admiration which the people of Hereford felt for Sir G. Lewis, but will be a perpetual lesson to them and their posterity, teaching them the course they ought to follow in order to benefit those among whom their lot is cast, and secure for themselves the esteem and approbation of their fellow men. Gentlemen, I beg again to thank you for having been allowed to take part in this most interesting ceremony, and to congratulate you on having brought it to so successful an issue."

The people then dispersed, and Lord Palmerston immediately drove off amid vociferous cheering with the Bishop of Hereford, to take luncheon at the palace. At the station, while waiting the departure of the train, his lordship was an object of immense interest. Ladies pressed forward to shake hands with him; farmers crowded round him, and grasped his hand as with a vice; and one of the number, rushing up to the carriage, believing no doubt that a Prime Minister should know everything, asked him what horse would win the St. Leger? Lord Palmerston laughed in his good-humoured style, but whether he satisfied his interrogator or not is not stated. At all the stations on the line at which it was known that the Premier was in the train there was the usual cheering and the same desire to see him.—The 141st Festival of the Three Choirs took place last week with complete success. The performances included Haydn's "Creation," Mendelssohn's "Elijah," Spohr's "Fall of Babylon," Rossini's "Stabat Mater," selections from Handel's "Judas Maccabæus" and "Israel in Egypt;" and Handel's "Messiah." There were secular concerts on Tuesday, Wednesday, and Thursday evenings, a chamber concert on Friday evening, and the festival as usual terminated with a ball. The collections amounted to about 1000*l*.

IPSWICH.—A congress of clerical and lay members of the Church is to be held in this town next month. It is to be entirely under the control of the Evangelical party, and doctrinal subjects as well as those more directly appertaining to discipline are to be discussed. The managers have laid down the basis on which they wish the congress to be held, and the principles on which they invite attendance. They say in their circular that "addresses will be delivered by the Rev. James Bardsley, Manchester; the Rev. E. Garbett, London; the Rev. E. Hoare, Tunbridge Wells; the Rev. Dr. Miller, Birmingham, and others, on the following subjects:—1, The Inspiration of Scripture; 2, The Atonement; 3, The Reality and Eternity of Future Punishment of the Wicked; 4, The Breadth, Freeness, and yet Exclusiveness of the Gospel; 5, The Rights and Duties of the Lay Members of the Church of England; 6, The Articles, Liturgy, and Subscription; 7, The Faults of the Evangelical Body of the Church of England; 8, The Best Mode of Presenting the Privileges of the Church of England to the Working Classes." As Claydon, the parish in which Brother Ignatius until lately officiated, is close to Ipswich, this congress will no doubt have a special reference to the proceedings recently enacted there.

LEEDS.—The nuisance committee of the Leeds Town Council has let the removal of the night-soil from the whole of the drainage district to the Economic Sanitary Company for 1050*l*. per annum, for a period of three years. This business has hitherto cost the town between 2000*l*. and 3000*l*. per annum.

LUTTERWORTH.—For some days past there has been a rumour which has caused considerable excitement in Leicestershire, that Bishop Colenso has engaged to preach to-morrow in this town and also at Claybrook, an adjoining village. The Rev. Robert Henry Johnson, who is the incumbent of these livings, graduated at Oxford in 1802, and may therefore be supposed to be considerably more than 80 years of age. The newly appointed Bishop of Peterborough (Dr. Jeune) has written to Mr. Johnson, expressing a hope that he will not allow Bishop Colenso to officiate in his church, at the same time intimating that if he does so he may feel it his duty to bring the matter under the notice of the ecclesiastical courts.

MAIDSTONE.—Sir George Grey, as Secretary of State, at the urgent request of the corporation and inhabitants of this town, has appointed a commissioner to inspect and report as to the present condition of the Medway, the waters of which are stated to be in a disgraceful condition, in consequence of receiving the refuse of numerous factories, &c.

PORTMADOC.—Lord Palmerston paid a visit to North Wales on the 30th ult. He came *viâ* Llanrwst, and travelled through the picturesque vale of Dolwyddelw, and, after inspecting the Welsh Slate Company's quarry at Festiniog, of which he is the principal proprietor, he proceeded to Tan-y-bwlch by the Festiniog Railway. On the 31st his lordship went up by the railway to inspect his new slate quarry near the top of Moelwyn Mountain, and on the 1st inst. arrived in this town and visited the Welsh Slate Company's wharf. He then took his departure for Hereford.

SHEFFIELD.—At the Cutlers' Feast on the 1st inst., Mr. Roebuck, M.P., in returning thanks for the borough members, made the following remarks on the House of Commons and on the duties of representatives:

"I have been taught to believe, and I think I am right in believing, that the business of a legislator is a matter to be learned—that law making is a subject which requires an apprenticeship. The lawyer goes through certain forms, a member of the Church of England goes through certain forms, but it would seem a legislator is what I have heard of the gig driver—it comes by instinct. Every man believes that he is exactly in the position to make laws for the country to which he belongs. Well, Sir, I think very differently. When I put before myself the point at which I aimed—that of being a representative of the people of England in the House of Commons,—what I did was to consider everything which I thought would conduce to make an efficient member of the House of Commons. There were three things which I found requisite as a member of that House—first, appropriate knowledge; next, honesty; and, 3dly, courage—and any one of these three being absent I found would nullify the other two. I found that you could have perfect knowledge; that you could have a desire to do well, but that if you had not courage to face the difficulties the thing fell before you; and you don't know, sir, the difficulties a member of the House of Commons has to encounter. There is cajolery of every sort, there is temptation of every description; but the grand thing is that that man should say to himself, 'Now I am here representing the people of England,' for though I am returned for the borough of Sheffield, still I am also representing the people of England. There is no mistake. Though I read in the papers that I am mistaken, still that is the fact—I am representing the people of England. And in this great capacity you don't know, sir, the difficulties we have to go through. Why, I will only state one class of those difficulties. Do what I will, sir, I feel very much like the drummer-boy who said, 'Hit him where you will, you cannot please him.' I feel that say what I like there are people determined to oppose it. I feel that there are buzzing flies, not simply bred in dirt, but nurtured in dirt. Their only object is to be uncomfortable to cleanly people. Now, that is really the thing we have to go through. Do what we will, we cannot please everybody. Now, I believe we have before us difficulties as great as have ever fallen to the lot of the representatives of the people of England. Great indeed are now our difficulties. A Tory of the old-fashioned stamp you cannot find now—we are all Liberals, every man of us. I want to know now where is the man who is opposed to free trade? Where is the man who will say the difficulties have happened which he predicted before the Reformed Parliament? I would admire any man who could catch a real old-fashioned Tory. I should advise him to put him under a glass shade and send him to a geological society as an antiquated specimen. These are my views. I have been representing the people of England for some 32 years—I wish it were a shorter time, for then I should be a younger man; but the fact is so—but I will tell any man who wishes to represent the people of England that he had better prepare himself for that great work by learning the great business of life, that the world is before him, and that the people of England influence the world."

SHIELDS.—About two years ago the Duke of Northumberland, with the co-operation of the Ecclesiastical Commissioners, established five new ecclesiastical districts in the large seaport town of North Shields, and appointed the requisite number of clergymen to them. In two instances the new districts were attached to churches already in existence, Holy Saviour in the village of Tynemouth, and Trinity Church, North Shields; but for the other three new churches had to be built, viz., in the fishing village of Whitley, in the pit district of Percy Main, and in the Low Street of North Shields, the latter for the use of the sailors of the port immediately adjacent to the Tyne Sailors' Home, which owes its existence to the munificence of the duke. The foundation stones of these religious edifices were laid two years ago, and the entire cost of their erection has been defrayed by the Duke of Northumberland. The Sailors' Church, St. Peter's, was consecrated by the Bishop of Durham on the 30th ult. St. John's Church at Percy Main was consecrated on Friday, and St. Paul's at Whitley on Saturday. In addition to these new churches five new parsonage houses have been built, and a large house, making the sixth, has been purchased by the Duke of Northumberland. Extensive schools will be provided for the children of the poor in connection with the new churches, to which the Duke will be a large contributor. It has not been definitely settled with the Ecclesiastical Commissioners what will be the exact proportion of the Duke of Northumberland's contribution to this magnificent scheme of church extension; but it is said that his Grace does not expect it to fall much short of 100,000*l*. Exclusive of this large outlay for churches and parsonage houses, and the immense expenditure upon Alnwick Castle, the following sums have been expended by the Duke upon his estate since he came into possession in 1847, to Dec. 31, 1863:—For roads, bridges, &c., 39,689*l*. 11*s*.; buildings, cottages, &c., 308,336*l*. 12*s*. 9*d*.; drainage, 176,582*l*. 4*s*.; total, 524,607*l*. 16*s*. 10*d*.

STRATFORD-ON-AVON.—The accounts of the Committee of the Stratford Festival are now made up, and the result is a deficiency of more than 3000*l*., which the committee will have to make good. It appears from their accounts that the total subscriptions were 2298*l*. 18*s*. 7*d*., of which 1567*l*. 12*s*. was for the festival, 259*l*. 15*s*. for the school, and 471*l*. 11*s*. 7*d*. for the monument. After payment of preliminary expenses and expenses of management (1839*l*. 18*s*. 7*d*.) there was left towards the festival 313*l*. 5*s*. 5*d*.; the school 51*l*. 15*s*.; and the monument, 93*l*. 19*s*. 7*d*. The receipts for the festival (including the 313*l*. 5*s*. 5*d*. tickets [of admission, &c.,) and proceeds of sale by auction of materials of pavilion, &c., amounted to 5356*l*. 2*s*. 3*d*. The sale by auction only realized 375*l*. 15*s*. 10*d*. The contract for the pavilion was 1300*l*., but there was 2052*l*. 19*s*. 11*d*. for extras. The dramatic and musical performances and scenery cost nearly 2000*l*.; fireworks, 56*l*. 19*s*.; balloon, 30*l*.; bands of music, 65*l*. 19*s*.; police, 152*l*.; refreshments for performers, 747*l*. 6*s*. 5*d*.; the total payments being 8664*l*. 10*s*. 7*d*., leaving a deficiency of 3308*l*. 8*s*. 3*d*. This deficiency is attributed to the inexperience of the committee in conducting public festivities and too sanguine reliance upon distant sales. The proceeds of the sale of tickets for the three performances and ball were 4345*l*. 11*s*. 7*d*.

SWALCLIFFE.—It has been found necessary to destroy Mr. Gulliver's mare Redemption, on account of the injuries she received during the late thunderstorm. Hopes were entertained that she would recover from the broken leg, but they proved futile, and the poor animal was shot. The loss is serious to Mr. Gulliver, as he was a few weeks since offered 1400*l*. for the mare. She was the dam of the yearling which was sold in June last for 710 guineas, and her former progeny had made great prices.

TAVISTOCK.—The "Forest of Dartmoor," as it was anciently called, has recently been cultivated and colonised in various parts. Around the convict prison at Princetown hundreds of acres of land have been reclaimed and brought into cultivation, chiefly by means of convict labour. Barley, oats, and roots are successfully cultivated, and as much as two tons of hay per acre, it is said, have been produced this year on the prison farm. Efforts are now making to obtain the advantages of railway accommodation on the moor by constructing a branch from the Devon line to Princetown, and a memorial to the Prince of Wales praying for his countenance and assistance, was adopted at a public meeting convened last week for the purpose.

WINSLOW.—At the Petty Sessions on the 31st ult. the sitting magistrates inflicted a fine of 4*s*. and costs amounting to 8*s*. 6*d*., on Daniel Neale, a shoemaker of this place, for having uttered a profane oath whilst in a state of drunkenness, and sentenced him, in default of payment, to go to gaol for ten days with hard labour. He was further fined 5*s*., and 8*s*. 9*d*. costs, for getting drunk.

Ireland.

THE LATE RIOTS IN BELFAST.—It is stated that the Government are about to issue a commission of inquiry into the late riots. The sum claimed as presentments for injuries sustained by wrecking during the 14 days of the riots amounts to between 9000*l*. and 10,000*l*. 176 people were wounded and nine killed, and the number of persons arrested and awaiting their trial was exactly 50. A deputation from the magistrates of Belfast had an interview with Mr. Thomas Larcom, Under Secretary for Ireland, and the Attorney General, on Monday, to make a representation to them on the state of affairs in that town. The deputation consisted of the Mayor (Mr. Lytle), Mr. Dunville, J.P., Dr. Murney, J.P., Mr. W. T. Ewart, J.P., and Mr. David Taylor, J.P. The deputation communicated a resolution adopted by the magistrates recommending a reconstruction of the local police, with a view to provide such a fresh organisation as may be adequate to preserve the peace of the town in future. The deputation also pressed for an augmentation of the force to the number of 400, the executive functions to be vested in the person of a distinct commissioner, and the expense to be borne jointly by the town and the Government as in Dublin. They further submitted the re-establishment of Belfast as the head-quarters of a military district. The interview lasted for nearly an hour and a half; and at its close, Sir Thomas Larcom stated

that the recommendations which had been made would receive the best attention of the Irish Government. The local papers state that it had already been resolved by the Government, in consequence of the recent disturbances, again to make Belfast the head-quarters of a military district, of which Brigadier-General Haines will take command. The depôts now quartered there are to be removed, and the barracks will be immediately occupied by a full regiment, said to be the 74th. The General is to reside in the town. In connection with this topic we may mention that a singular controversy has arisen between the Marquis of Donegal, Lord Lieutenant of the county, and Mr. Lytle, the Mayor of Belfast, in regard to the conduct of the latter during the riots. Lord Donegal, at a masonic dinner in honour of his installation as Grand Master of the Freemasons of Downshire, took occasion to censure the Mayor for absenting himself at a time when his presence as chief magistrate was imperatively demanded. The Mayor in reply stated that he went to Harrogate for the benefit of his health on Thursday, the 11th, and there was no serious rioting until the Monday following. The Mayor then asks Lord Donegal why he himself, being the Lord-Lieutenant of the county, the chief of all its magistrates, having the command of the entire constabulary force, and requiring only to request in order to obtain the aid of the military powers if he felt it necessary, did not take measures to suppress the riots. Lord Donegal, in reply, says, with reference to his own non-interference, that what he complained of was the want of decisive action at the outset; that he was not aware of the Mayor's absence for several days, and that the magistrates had so much greater local knowledge than himself that he did not at any time feel justified in interfering in such a way as to relieve them from responsibility. The Mayor, in a rejoinder, gives an account of Lord Donegal's movements, in order to show that he was actually in the town while the riots were in progress, and rebukes his lordship for the irregularity of censuring him at a masonic banquet, held in connection with a ceremony of that craft. On this point the Mayor is supported by the public opinion of the Masonic body, and the observations made by Lord Donegal at the banquet have been the subject of discussion in the Grand Lodge, where, it is understood, they were held to be altogether at variance with the principles of the Order. His lordship is to be called upon for an explanation, on receipt of which the matter will be further discussed.

THREATENING NOTICES.—Lord Vaux of Harrowden, who is the proprietor of extensive estates in the county of Westmeath, has been held up to public execration in a most unwarrantable manner on account of his dealings with one of his tenants. It appears that he found it necessary to transfer a small farm on his property from the late occupier, a widow named Nowlan, to a new tenant, and the champions of tenant-right have taken advantage of this circumstance to issue the following document, which, under the form of an appeal for the relief of the dispossessed tenant, is in reality an incendiary proclamation, calculated to arouse the worst passions of the peasantry. It is all the more dangerous on account of being signed by a Roman Catholic priest. This document, printed in the form of a placard on green paper, and displayed in sensational capitals, was posted in every direction through Mullingar during the great fair of that town, held at the beginning of last week. It is as follows:—

"Stop and read! Landlordism in Westmeath! The Widow Nowlan, of Habsboro' near Mullingar, at all times paid her rent; was willing and able to continue doing so. She held about six acres on the property of Lord Vaux, of Harrowden, the chief support of herself and her orphans! Her holding was in as high a state of cultivation as that of any of her class in the country. Her husband, on the faith of landlord honour, alas! paid a considerable sum of money for the possession of it. When process hags were about being taken last spring to dispossess her, she was advised to crop the land, there being reason to hope at that time that Lord Vaux would not dispossess any tenant willing and able to pay a fair rent, much less a poor widow!!! She has been dispossessed! She has been deprived of her crops!! No compensation has been made to her!! Her neighbour, Michael Ball, of Ballinea, though not better able to pay than the former tenant, now has both land and crops! From a penny to a shilling will be thankfully received to compensate the poor widow, and may be left at any of the shops in town. "LUKE BARTON, C.C.

"Mullingar, 27th August, 1864."

It is said that Mr. C. D. Fox, J.P., agent to Lord Palmerston on his Sligo estates, received a threatening letter a few days since through the post, telling him that he would be shot like a dog, either at the cattle show or on the first favourable opportunity, if he did not leave Sligo at once, in consequence of what the writer calls his tyranny. It appears that Mr. Fox was under the necessity of serving notices to quit on two tenants on the property who are largely in arrears.

WIFE MURDER BY A LUNATIC.—Mr. William Hudson, of Tooloobeu, near Loughrea, in the west of Ireland, has lately been suffering from insanity, but was allowed to remain at large in his own house. He was sitting quietly with his wife and daughter a few days since, when he suddenly seized a razor and cut his wife's throat, and afterwards destroyed himself in the same manner. His daughter was unharmed. The occurrence has created a great sensation in the neighbourhood. Mrs. Hudson was the daughter of the late Dr. Coffee, rector of Killeran, in the diocese of Tuam, and was connected with the highest families in the county. Nine children are left orphans by this tragedy.

Railways.

ACCIDENT AT THE BIRMINGHAM STATION.—An accident, nearly attended with very serious consequences, occurred at the London and North Western Company's Station at Birmingham on Monday night. The 6 o'clock express from London, due at 9 P.M., arrived punctually. The engine had passed through the tunnel to the station, with the tender, guard's van, and one passenger carriage, when the second and third carriages were thrown off the rails, and the fourth carriage was thrown on its side. The remaining portion of the train, consisting of three or four first and second class carriages, with the last guard's van, remained on the rails. The train having been brought to a stand, the carriage thrown on its side was dragged along a few yards, and ultimately the end of it came in contact with a portion of the platform, which it tore up. A part of one large flagstone, three feet in length, was forced into the carriage, which fortunately contained only two passengers, who escaped without serious injury, and were extricated through the windows. The other passengers were not injured, but many of them were in a state of great excitement. Major Dixon, of the 1st Royals, was standing on the platform when the accident occurred, and was knocked down and much shaken. Two causes have been assigned for the accident. One is, that the turn-table, over which the train had to pass, had been left improperly fastened; the other is, that there was something wrong in connection with the points.

ACCIDENT AT THE ALTRINCHAM STATION.—On Wednesday morning a special train of London and North-Western carriages was despatched from Manchester to Knutsford with passengers to the agricultural show. The train reached Altrincham in safety, and part of it was there backed upon a siding in order that three other carriages might be added. The train was an exceedingly long and heavy one, being filled with passengers. In the act of backing the train the engine accidentally got detached, and the empty carriages rolling down the incline came into collision with the train. The shock was so great as to throw many of the passengers from their seats. Dr. Bowman, of Manchester, received severe shocks, and Mrs. Bowman had her face cut. Mrs. Hodgkinson, of Old Trafford, was struck so violently on one of the jaws that it nearly cut through the cheek. Several other passengers sustained bruises on the face, and a farmer named Bridges, from Bury, had a severe cut near one eye. All the passengers except three went forward with the train.

Obituary.

THE DUKE OF CLEVELAND died on Tuesday at Raby Castle, near Durham, having only succeeded his brother the late duke in January last. William John Frederick Vane, third Duke of Cleveland, Marquis of Cleveland, Earl of Darlington and Viscount Barnard, Baron Raby of Raby Castle, Durham, was born in London in 1792, and was the second son of the third Earl of Darlington (who was created Marquis of Cleveland in 1827, and Duke of Cleveland in 1833), by the second daughter and co-heiress of the last Lord Bolton. He assumed the name of Powlett on inheriting his mother's property, and was for many years familiar to the sportsmen of England as Lord William Powlett. He resumed his paternal name of Vane by royal license, shortly after succeeding to the dukedom. He graduated M.A. at Oxford in 1812; was M.P. for St. Ives 1846-52, and for Ludlow 1852-7, but took no active part in the debates of the Lower House. He married, in 1815, Lady Catherine Lowther, daughter of the first Earl of Lonsdale, but had no issue by his marriage. Lord William Powlett began his racing career somewhat late in life, but his horses were well known as winners at Ascot, Goodwood, Doncaster, and Bath, of which city he owned a considerable portion. He was a steward of the Jockey Club, and was most liberal as an owner of horses, and as a landlord at Downham. His Grace is succeeded in his titles and vast estates by his only surviving brother, Lord Harry George Vane, M.P. for Hastings, who was born in 1803; was educated at Oriel College, Oxford; and married, in 1854, Viscountess Dalmeny, daughter of the fourth Earl Stanhope. Lord Harry Vane was attached to the Embassy at Paris in 1829; was Secretary of Legation at Stockholm in 1839; sat for South Durham, in the Liberal interest, from 1841 to 1857, when, on his brother Henry, Duke of Cleveland, supporting the Derby Ministry, he was not re-elected, and was returned for Hastings, in the neighbourhood of which he had purchased Battle Abbey from the Webster family. As the present duke has no family, the heir-presumptive is Mr. Henry Morgan Vane, born in 1808, who by his marriage in 1853 with the daughter of the Rev. R. Farrer, has three sons, who may perpetuate this famous title.

THE PRINCESS DE POLIGNAC, one of the celebrities of a bygone era, died in Paris on Saturday. She was the daughter of Lord Rancliffe, of Bunny Hall, near Nottingham, a title which became extinct on his lordship's death about six years ago. When young, the Hon. Miss Parkyns married, first (in 1817), the Marquis de Choiseul, the head of a distinguished French family. In 1825 she became wife of the French Ambassador, Prince Polignac, who afterwards became Minister of Foreign Affairs and President of the Council to Charles X., and whose administration was notorious for the conquest of Algiers and the ruin of the monarchy. When Charles X. fled in 1830, Prince Polignac was arrested at Granville, and sent to St. Lo, but was nearly massacred on his way by the infuriated populace. He was sent to Vincennes till his trial, when he was condemned to perpetual imprisonment, to forfeiture of titles and orders, and to civil death. He was released by the amnesty of November, 1836, and died in 1847.

VICE-ADMIRAL THE HON. THOMAS BEST died on the 4th inst. in Hyde Park Square, in his 66th year. He was the second son of the late Lord Wynford, formerly Chief Justice of the Court of Common Pleas, and was born in 1799. He entered the navy in 1812, and after being present at the capture of the islands in Passamaquoddy Bay, and bombarding the town of Stonington, served on the Irish and South American stations, off Newfoundland, in the Channel, in the Mediterranean, and again in South America. After obtaining Commander's rank he served on the Jamaica station, and was Second-Captain of the William and Mary yacht, until he obtained Post rank in 1830. He became Rear-Admiral on the reserved list in 1855, and Vice-Admiral in 1862. He married in 1835, the daughter of the second Lord Kenyon.

LADY MARY HAMILTON died on the 3d inst. She was the fourth daughter of the late Lord Panmure by his first marriage. She was born in 1799, and married in 1824, Mr. James Hamilton, of Bangour, who died in 1851.

LADY SUSAN REEVE died on the 3rd inst. at Londenham House, Lincolnshire, in her 63d year. She was the youngest daughter of the fifth Earl of Harborough, by the youngest daughter of Colonel the Hon. John Monckton. She was born in 1802, and married in 1823, General John Reeve, by whom her ladyship leaves a family.

SIR WILLIAM FRANCIS ELIOTT, Bart., died on the 3d inst. in London, in his 76th year. He was the seventh baronet, and succeeded his father in 1812. He is succeeded in the baronetcy by his son, William Francis Augustus, who was born in 1827, and appointed a lieutenant of the 93d Foot in 1848. He has since retired from the army.

SIR HENRY LACY YEA, Bart., died on the 31st ult., in his 66th year. He succeeded his brother in 1862. He was unmarried, and having no brothers the baronetcy becomes extinct.

CAPTAIN WOOD, R.N., died at 13, Red Lion Square, on the 3d inst., in his 59th year. He entered the navy in 1820, and after obtaining the rank of lieutenant served in the Erebus in Captain James Clark Ross's voyage of discovery to the Antarctic Seas from 1839 to 1843. He was promoted to the rank of commander for his services, and for many years past has filled the office of Resident Manager of the Mendicity Society.

WILLS.—The will of the Right Hon. Lady Grenville, of Dropmore, has been sworn under 25,000*l* personalty; Earl Powlett, 120,000*l*.; William Salt, Esq., banker, of Lombard Street, and Russell Square, 30,000*l*.; Henry Mercerou, Esq., of Hackney Road, 140,000*l*.

Miscellaneous.

OUR MINERAL WEALTH.—Mr. Robert Hunt, Keeper of Mining Records at the Royal School of Mines, has published the following abstract of the statistics of our mineral production for 1863. The value of the minerals produced was 29,151,976*l*., from which metals of the value of 36,364,327*l*. were extracted. Of gold quartz we produced 385 tons, worth 1500*l*.; of tin ore, 15,157 tons, worth 963,985*l*; of copper ore, 212,947 tons, worth 1,100,554*l*.; of lead ore, 91,283 tons, worth 1,193,530*l*.; of silver ore, 88 tons, worth 5703*l*.; and of zinc ore, 12,941 tons, worth 29,968*l*. During the year in question there were sold 95,376 tons of pyrites, for 62,035*l*.; and the rarer minerals wolfram, uranium, gossans, arsenic and earthy minerals raised were of the value of 1,980,866*l*. These items, with the value of 9,101,552 tons of iron ore, 3,240,890*l*, and 86,292,215 tons of coal, 20,572,945*l*., raises the total to 29,151,976*l*., which was manufactured into nearly 40,000,000*l*. worth of merchantable produce. To produce these results direct employment has been given to at least 500,000 men.

BIRTHS.—On the 1st inst, at South Park, Penshurst, Viscountess HARDINGE, of a son—5th inst, at Trabolgan, Lady FERMOY, of a son—26th ult, at 11, Lowndes Square, the Lady EVELYN HEATHCOTE, of a daughter—29th ult, at Cheltenham, the wife of Major-General J. T. BRETT, retired List Madras Army, of a son—2d inst, at 5, Connaught Place West, Hyde Park, the wife of PETER P. RALLI, Esq., of a daughter.

MARRIAGES.—On the 1st inst, at St. Jude's, Southsea, ANDREW, eldest son of CHARLES STIRLING, Esq, of Muiravonside, Stirlingshire, to GEORGINA LOUISA, second daughter of the late Sir HENRY M. BLACKWOOD, Bart.—30th ult, at Blennerhasset, Cumberland, WILLIAM HILL, Esq., to MARIA, second daughter of Sir WILFRID LAWSON, Bart., of Brayton, Cumberland—6th inst, at St. Cross Church, Suffolk, WILLIAM OLIVER JACKSON, Esq., of Ahanesk, of Cork, to MILLICENT ANNE, daughter of the late Lieut.-General Sir JOHN ROSE, K.C.B., of Holme, Inverness—1st inst, at Winford, ARTHUR, second surviving son of the late MORGAN POPKIN TREHERNE, Esq., of Coytrahene, Glamorganshire, to HARRIET MARGARET ANNE, daughter of the late Rear Admiral CHRISTIAN, and granddaughter of the late Rear Admiral Sir Hugh Cloberry Christian, K.H.—31st ult, at the parish church of St. Alphage, Greenwich, EDWARD JOHN ROUTH, Esq., Fellow of St. Peter's College, Cambridge, son of the late Commissary-General Sir Randolph Isham Routh, K.C.B., to HILDA, eldest surviving daughter of GEORGE BIDDELL AIRY, Esq., Astronomer Royal—31st ult, at Lexden, Essex, LEONARD HOWARD LOYD IRBY, C.B., of Boyland Hall, Norfolk, to GERALDINE ALICIA MARIA, daughter of the late Rev. J. BALFOUR MAGENIS, rector of Great Horkesley.

DEATHS.—On the 27th ult, at Hermand, N.B., ISABELLA GRAHAM, widow of Lord DUNDRENNAN—6th inst, at Hastings, WILLIAM WESTERN KNATCHBULL, youngest son of the late Right Hon. Sir Edward and the Dowager Lady Knatchbull, aged 27—4th inst, at Crown Point, near Norwich, ROBERT LAMPLEY SUTTON HARVEY, eldest son of Mr. and Lady Henrietta Harvey, aged 17—3d inst, in London, Sir WILLIAM FRANCIS ELIOTT, Bart., of Stobo and Wells, Roxburghshire, N.B., aged 72—22d ult, at Stourfield, Christchurch, Hants, Admiral WILLIAM CHARNOCK POPHAM, eldest son of the late Admiral Sir Home Popham, K.C.B. and K.M.—3d inst, at Old Charlton, the infant son of Admiral Sir MONTAGU STOPFORD—31st ult, at Riseholme Rectory, near Lincoln, JOHN JACKSON, only child of the Ven. Archdeacon KAYE, aged 16 weeks and 4 days—26th ult, at Middlewood, Herefordshire, ANNE, widow of H. R. HUGHES, Esq., of Bache Hall, second son of the late Rev. Edward Hughes, of Kinmel Park, Co. Denbigh—3d inst, suddenly, at Llandudno, while on a visit to friends, WILLIAM STREET, Esq., of The Retreat, Reigate, one of the magistrates for the county of Surrey, aged 66—2d inst, at Frogmore, Weston-under-Penyard, Herefordshire, W. BRIDGMAN, Esq., a magistrate and Deputy-Lieutenant for the county.—2d inst, at Mollington Vicarage, Oxon, ELIZABETH, widow of Alderman HOOPER, of Queenhithe, London—31st ult, at his house at Putney, Z. A. JESSEL, Esq., of Saville Row, aged 71—Aug 30, at Cliff Cottage, Guernsey, JOHN HINDMARSH, Esq., nephew and secretary of the late George Stephenson, Esq., C.E.—29th ult, at Dréot, the Rev. PHILIP SIDNEY ASHWORTH, M.A., rector of Brelicot, and vicar of Tibberton, Worcestershire, aged 54—1st inst, the Rev. M. MUNDY, vicar of Rockbeare, and late incumbent of Lynton, Devon aged 67—31st ult, the Rev. W. J. CLAYTON, vicar of Ickleton, Cambridgeshire, aged 68—24th July, at Nynee Tal, India, the Rev. T. H. BUAN, Chaplain at Bareilly, and late Domestic Chaplain to the Bishop of Calcutta, aged 30.

Markets.

COVENT GARDEN, Sept. 10.

Supplies of most things are on the increase, especially those of Grapes and Melons. Apples, Plums, and Peaches are also abundant, and there is likewise a fair supply of William's Bon Chrétien Pear, a fine kind at this season. Kent Filberts and Cobs fetch from 45s. to 60s. per 100 lbs. New Walnuts promise to be plentiful. For Potatos there is a heavy sale, and prices for them have a downward tendency. Flowers chiefly consist of Orchids, Heaths, Asters, Fuchsias, Pinks, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Pears, per doz., 1s 6d to 3s
Grapes, per lb., 1s to 3s	Apples, per sieve, 1s to 2s
Peaches, per doz., 1s 6d to 8s	Oranges, per 100, 16s to 20s
Nectarines, do., 1s 6d to 6s	Lemons, per 100, 14s to 20s
Melons, each, 1s to 4s	Nuts, Barcelona, do., 16s
Figs, per doz., 1s to 2s 6d	— New Brazil, do., 16s.
Plums, per ½ sieve, 2s to 4s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 6d
Peas, p. basket, 2s 6d to 3s 6d	Garlic, per lb., 6d
Potatos, York Regents, p. ton, 60s to 80s	Lettuces, each, 1d to 2d
— Rocks, do., 45s to 55s	Endive, per score, 1s to 2s
— Flukes, 60s to 90s	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 6d to 9d	Mushrooms, p. pott., 1s to 1s9d
Turnips, p. bunch, 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
Cucumbers, each, 4d to 1s	Herbs, per bunch, 6d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Sept. 8

Prime Meadow Hay	90s to 115s	Clover, old	100s to 185s
Superior do. ..	— —	New Clover ..	— —
Inferior do. ..	— —	Do. second cut ..	— —
New do.	— —	Straw	27 32
Rowen	— —		

HARVEY & EASTON.

WHITECHAPEL, THURSDAY, Sept. 8.

Fine Meadow Hay ..	110s to 115s	Prime 1st cut Clover	130s to 138s
Inferior do.	90 100	Inferior do. do. ..	120 130
Prime New Hay ..	— —	Prime 2d cut do. ..	120 130
Inferior	— —	New Clover	— —
Straw	30 34	Inferior do.	115 120

NEWGATE.—Sept. 9.

Best Fresh Butter .. .. 16s. per dozen lbs.
Second do. do. .. .. 14s. "
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Sept. 9.

Messrs. Pattenden & Smith report a brisk demand for the new growth at slightly advanced prices. The colour is rapidly going off in all the districts, and fine samples will be scarce. Currency:—

Mid and East Kents, p. cwt.	£7 0 to £9 0
Weald Kents	4 10 — 6 10
Sussex	4 4 — 6 0

Very choice higher.

METROPOLITAN CATTLE MARKET.

MONDAY, Sept. 5.

The number of Beasts is smaller than on Monday last, and the average quality is not improved. Trade is therefore brisk for choice descriptions at rather higher rates. The supply of Sheep is also smaller. Trade for them is not very active, yet some of the choicest kinds are rather dearer. Lambs meet with a very dull sale, and are making very little more per lb. than Sheep Calf trade is dull. From Germany and Holland there are 2940 Beasts, 10,430 Sheep, 302 Calves, and 70 Pigs; from Spain, 165 Beasts; from Ireland, 380; and 2630 from the Northern and Midland Counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 10	to 5 2	Best Long-wools.	4 8	— 5 2
Best Short-horns	4 8	— 4 10	Do. Shorn	— ..	
2d quality Beasts	2 8	— 3 4	Ewes & 2d quality	4 2	— 4 6
Best Downs and Half-breds ..	5 2	— 5 6	Do. Shorn	— ..	
Do. Shorn	— ..		Lambs	5 0	— 6 0
			Calves	3 0	— 4 8
			Pigs	3 4	— 4 6

Beasts, 6420; Sheep and Lambs, 26,570; Calves, 324; Pigs, 490.

THURSDAY, Sept. 8.

We have scarcely any good Beasts at market; a few choice ones have realised quite 8d. per lb. The supply of all kinds is shorter, and prices on the average are about the same as on Monday. Sheep are not very plentiful, but quite equal to the demand. Trade is slow, but good qualities fully maintain late rates. There is rather more inquiry for lambs, but the season is nearly over. Good Calves are rather dearer. From Germany and Holland there are 595 Beasts, 2130 Sheep, 495 Calves, and 60 Pigs; and 69 Beasts from Spain.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	4 10	to 5 2	Best Long-wools.	4 8	— 5 2
Best Short-horns	4 8	— 4 10	Do. Shorn	— ..	
2d quality Beasts	2 8	— 3 4	Ewes & 2d quality	4 2	— 4 6
Best Downs and Half-breds ..	5 2	— 5 6	Do. Shorn	— ..	
Do. Shorn	— ..		Lambs	5 0	— 6 0
			Calves	3 8	— 4 10
			Pigs	3 4	— 4 8

Beasts, 1430; Sheep and Lambs, 7130; Calves, 474; Pigs, 150; Milch Cows, 110.

MARK LANE.—MONDAY, Sept. 5.

The supply of Wheat from Essex and Kent to this morning's market was small, and the greater portion of the latter in poor condition; it met a slow sale at the prices of this day se'nnight, and a portion remained unsold at the close. There was only a moderate attendance, and foreign Wheat was too much neglected to admit of our altering our quotations. Barley was rather cheaper. Beans and Peas brought the prices of this day week. The Oat trade was steady, with a fair consumptive demand. For Flour there was a fair inquiry at late rates. Mustard seed brought an advance of 6d. to 1s. per bushel.

PER IMPERIAL QUARTER.

	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk .. White	42—46	Red	40—42
— — fine selected runs .. ditto	44—48	Red	41—44
— — Talavera	48—54		
— Norfolk	—	Red	—
— Foreign	38—52		
BARLEY, grind. & dist, —s to —s .. Chev.	34—36	Malting ..	32—34
— Foreign .. grinding and distilling	22—28	Malting ..	28—31
OATS, Essex and Suffolk	20—22		
— Scotch and Lincolnshire—Potato	20—24	Feed	20—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	20—23	Feed	18—21
RYE	31—33	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan ....33s to 35s...Tick	34—36	Harrow ..	34—36
— Pigeon .... 37s to 40s.. Winds.	—	Longpod	—
— Foreign ..... Small	34—38	Egyptian	33—34
PEAS, White, Essex and Kent .. Boilers	36—38	Suffolk ..	38—40
— Maple .... —s to —s .... Grey	—	Foreign ..	34—40
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered .. per sack	35—40		
— 2d do ..... ditto	28—34	Country ..	28—34
— Foreign ..... per barrel	18—25	Per sack	32—36

FRIDAY, Sept. 9.

The weather since the 2d inst. has been warm and showery, and likely to prove of great benefit to the pastures and root crops. The Wheat trade has continued to be inactive, and in several markets a further slight concession in price has been acceded to; here however at the close of Wednesday a slightly increased disposition to purchase Wheat was perceptible; the English left over from Monday was disposed of on the terms of that day, and a few c. f. and i. sales from the Baltic were effected at the lowest rates at which offers have yet been obtainable. Barley has been slow of sale, and previous rates were obtained with difficulty. Oats, Beans, and Peas maintained their former value. In Flour a moderate business only has been transacted, and somewhat lower prices were accepted. Since Friday last 25 vessels have been reported off the coast. The floating trade has not been active; several cargoes of Wheat have been placed at a little lower rates. Maize is slow at 3d. to 6d. per qr. lower prices. Barley is declining. Paris, Sept. 8.—Flour is held for extreme rates, but only a very few transactions have taken place. The six marks for delivery this month are quoted equal to 31s. 9d. per 280 lbs. The present stock of Flour is estimated at 27,100 cwts. Wheat: buyers press for a decline, which holders resist, and the business done has been only trifling. The arrivals of English Wheat and Barley this week have been moderate, also of foreign Oats, of foreign Barley, and English Oats large, and foreign Wheat small. To-day's market was badly attended. The little English Wheat on offer was taken at Monday's prices; foreign was neglected; our quotations of that day may be repeated. Spring Corn sold slowly at about late rates.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1110 qrs.	1090 qrs.	220 qrs.	420 sks.
Irish	—	—	3800	— "
Foreign ..	4440 "	3180	23,620 "	380 " / 6220 brls

LIVERPOOL, Sept. 6.—We have had only a very small attendance of millers and dealers at our Corn Exchange to-day, and the demand for Wheat has been of the most retail character, at barely the rates of Friday last. Flour very difficult to move, but we cannot buy fine fresh parcels any cheaper. Indian Corn has declined 3d. per qr, with a fair consumptive inquiry. Oats and Oatmeal quiet, without change in valve. Peas and Barley must be quoted the turn easier. A very poor market throughout, with a heavy fall of rain all the morning.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
July 30	44s 0d	27s 7d	22s 4d	30s 2d	38s 4d	35s 11d
Aug. 6	44 1	28 3	22 10	33 0	39 2	35 3
— 13	43 6	28 1	22 0	32 9	39 8	36 9
— 20	42 7	28 7	22 11	31 6	40 9	35 5
— 27	42 5	29 1	22 0	32 8	41 1	35 6
Sept. 3	42 3	31 1	22 5	34 1	40 9	35 9
Agg. Aver.	43 1	28 9	22 5	32 4	39 11	35 9

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	July 30.	Aug. 6.	Aug. 13.	Aug. 20.	Aug. 27.	Sept. 3.
44s 1d	..		..	..	..	..
44 0 —		..	..	..	..	..
43 6	..	..		..	..	..
42 7	..	..	..		..	..
42 5	..	..	..	..		..
42 3	..	..	..	..	..	

WANTED, as HEAD GARDENER, a middle-aged married Man, without a large family, trustworthy, active, industrious, and well qualified in all the departments of his profession. An Under Gardener is kept.—Address T. T., Perryn House, Twickenham, S.W.

WANTED, a GARDENER.—Must be active and industrious, and understand thoroughly Forcing in all its branches, Flower and Kitchen Gardens. One man is kept under him. Wages 18s. per week and a good house.—Address, with full particulars, to D. D., care of Mr. Ladd, News Agent, Bargate Street, Canterbury.

WANTED, a first-class HARD-WOODED and GENERAL PROPAGATOR.—None need apply who cannot give unexceptionable references for character and ability. Liberal wages will be given to a thoroughly competent Man.—Apply, stating age, experience, and wages expected, to JAMES CARTER & Co., Crystal Palace Nursery, Forest Hill, Kent, S.E.

WANTED, an ASSISTANT, who has had several years' experience in the business. Such only need apply as can be thoroughly recommended by last employer.—Address, stating age, whether married or single, and wages expected, CHIVAS & WEAVER, Seedsmen, Chester.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, OFFICES, or any place of Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper. Can wait upon a single gentleman, and has excellent references.—HARRIET B., 2, Northumberland Street, Marylebone, W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS.—B. S. WILLIAMS is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

GARDENER (HEAD).—Understands his profession in all branches.—G. H. W., Mrs Gregson, Avely, Essex.

GARDENER (HEAD).—Capable of improving an old Garden, or making a new one. J. B., Post Office, Hounslow, W.

GARDENER (HEAD).—Age 30, single; fully competent in every branch of his profession. Best references.—P. G., Mr. Milnes', Buckland, Faringdon, Berks.

GARDENER (HEAD).—Age 30, married, no incumbrance; understands the Growing of all kinds of Fruit, Stove and Greenhouse Plants, and Kitchen and Flower Gardens. Good character.—S. G., 3, Andover Road, Hornsey Road, Holloway, N.

GARDENER (HEAD).—Middle-aged, single; understands Pines, Vines, Hothouse and Greenhouse Plants Good Kitchen Gardener. Two years' character.—T. E., 7, Queen's Road West, Chelsea, W.

GARDENER (HEAD).—Married, no incumbrance; has a thorough knowledge of his profession. Can have good recommendation from two last situations.—W. F., Hartswood, Reigate, Surrey.

GARDENER (HEAD).—Age 35, married; thoroughly understands his profession in all its branches, including Early and Late Forcing, Plant Growing, &c. No single-handed place accepted. Good references.—Messrs. PROTHEROE & MORRIS, American Nurseries, Leytonstone, Essex, N.E.

GARDENER (HEAD).—Age 31, married; has a practical knowledge of his profession in all its branches, the Forcing of Grapes, Melons, Cucumbers, &c., also a good Flower and Kitchen Gardener. Four years' good character from [illegible]; he is about leaving.—A. B., Post Office, Fordhouses, W[illegible]

GARDENER (HEAD).—Age 44, married; [illegible] aged 17. Understands Pines, Vines, Stove and [illegible] Plants, &c. Wife has lived in some of the leading families as Cook, and capable of taking charge of a Mansion [illegible] Leaving situation at the end of the present month.—[illegible] Stevenson Street, Cannon Town, Essex.

GARDENER (HEAD).—Middle aged, [illegible] incumbrance; a good working industrious Man. Understands Pines, Grapes, Melons, Cucumbers, Hothouse and Greenhouse Plants, an excellent Flower and Kitchen Gardener, the Management of Cattle, Meadow Land, &c. Wife competent to take charge of Dairy and an excellent Dairywoman. Six years' unexceptionable character.—D. H., Mead Vale, Red Hill, Surrey

GARDENER (HEAD).—Age 40, married; [illegible] extensive practice in Early and Late Forcing of Pines, Peaches, Cucumbers, Melons, &c.; and a thorough practical knowledge of Gardening in all its branches. Can have an excellent character from the Right Hon. Lord Lilford, Lilford Hall, Oundle. Present employer has lived upwards of four and a-half years as Head Gardener.—DUNCAN, Lilford Hall, Oundle, Northamptonshire.

To Noblemen and Gentlemen.

GARDENER (HEAD).—Age 41; versed in [illegible] Fruit and Kitchen Gardening, Propagating, Specimen Growing, Bedding, and British Botany, Ground work and [illegible] Forester; the greatest experience in removing large Specimen Trees; treatment of Conifers especially successful. No character.—C. S. JOBSON, Wimbledon Park, S.W.

GARDENER (HEAD), age 36, married, with [illegible] 7 years old.—The Advertiser begs to offer his services to a nobleman or gentleman requiring a Man thoroughly acquainted with Forcing Fruits, such as Pines, Grapes, Peaches, Melons, Strawberries, &c., together with Vegetables, Stove and Greenhouse Plants, Flowers, &c., and the general routine of Kitchen and Flower Gardens on an extensive scale. Seven years and three months' unexceptionable character.—C. D. N., 52, Conduit Street, Regent Street, [illegible]

GARDENER (HEAD WORKING).—Age 36, [illegible] thoroughly understands Vines, Early and Late Forcing, Stove Plants, Kitchen Gardens, &c. Three years' good character.—Bedford Nursery, Hampstead Road, N.W.

GARDENER (HEAD), where two or more are kept.—Age 24; thoroughly understands his profession. Has had experience in Early and Late Forcing, with Vines, Melons, Cucumbers, also Flower and Kitchen Gardens. Three years' character.—S. S., Holly Cottage, Wimbledon, Surrey, S.W.

GARDENER (HEAD), where one or two more are kept.—Age 35, single; understands the Greenhouse, Flower and Kitchen Garden, Early Cucumbers and Melons, the Management of Cows, Pigs, Sheep, Land, &c. Country preferred. Good character from two last employers.—S. A. W., 10, Park Side, Knightsbridge.

GARDENERS (HEAD or SINGLE-HANDED).—A [illegible] begs to recommend two good experienced Gardeners (Head or Single-handed). One, middle-aged, whose wife, a good Cook, would be glad of occasional work. No incumbrance.—2, Beckley Grove, near Oxford.

GARDENER (HEAD, SECOND, or SINGLE-HANDED).—Age 25, single; well understands the Stove and Greenhouse Plants, also Flower and Kitchen Gardens. Two years' good character, also references from former places.—J. W., 6, Albert Cottages, Street, King's Road, Chelsea, S.W.

To Noblemen and Gentlemen.

GARDENER (HEAD), or GARDENER and BAILIFF.—Age 36, married; thoroughly practical. Leaving situation entirely owing to the death of his late employer, J. [illegible] Smith, Esq. Can be well recommended.—J. M. F., Beechwood, Tunbridge Wells, Kent.

GARDENER (HEAD), or HEAD BAILIFF, or both.—Middle-aged, married, active and energetic; is a first-rate Gardener, and thoroughly understands the Management of a Farm and Stock, &c., Wife a good Dairywoman. Ten years' good character, and can be well recommended by the nobleman he is about to leave.—G. B., Post Office, Penshurst, Kent.

GARDENER.—Single, thoroughly good; will [illegible] object to look after a Cow or Pony and Chaise. A character given.—A. Z., Post Office, Norbiton, Kingston, Surrey.

GARDENER (UNDER), in a large Establishment.—Age 21; 18 months' good character from present employer.—C. S., The Gardens, Combermere Abbey, Whitchurch, Salop.

GARDENER (UNDER).—Age 22; seven years' experience; wishes to become more acquainted with Forcing, Orchard Houses. Would give a small Premium if required. Good character.—L. M., Kingston House, Hyde Park Gate, London.

GARDENER (UNDER).—Has had two years' experience in a first-rate Nursery; understands Propagating, and the preservation of Pansies for Show.—J. P. C., Trimmer's, Post Office, Cowley Town, N.W.

PROPAGATOR, or PROPAGATOR and FOREMAN.—Extensive practice in first-class Establishments; [illegible] the Propagation of Hard and Soft-wooded departments, also an expert Graftsman of Azaleas, Camellias, Coniferæ, Roses, Rhododendrons, &c. Satisfactory reference.—A. B., *Gardeners' Chronicle* Office.

PROPAGATOR in a Nursery.—Age 28; active, and [illegible] to the Business. Can Propagate, Pot, Pack, and Label. Moderate wages only required, but a constant situation indispensable. Reference good and genuine.—JAMES, at Mr. Water's, Bentley, Farnham, Surrey.

STEWARD or BAILIFF, at Michaelmas next.—Understands the value of Stock, Corn, &c.—A. Y., Post Office, Alton, Hants.

BAILIFF.—A Lincolnshire Man, married; understands the Management of Light and Heavy Land, Breeding and Feeding of Stock, and can keep Accounts.—Five years' good character.—J. P., Post Office, Wandsworth, Surrey, S.W.

FARM BAILIFF.—Age 28, married, no incumbrance; well versed in Farming. Understands the management of Cattle, having managed a Farm for the last eight years in the Island of Jersey. First-class testimonials and references.—E. [illegible] Choix, Millbrook, Jersey.

FARM BAILIFF.—Age 36, married; thoroughly practical, and understands the Cultivation both of Heavy and Light Soils, the Drainage of Wet Lands, and anything in connection with an Estate; the Rearing, Breeding, and Feeding of Horses and Sheep. Wife a first-class Dairywoman, will take charge of the Dairy if required. First-class testimonials.—H. B., Highnam, Gloucester.

SHOPMAN (HEAD), or TRAVELLER.—Has [illegible] years' experience in London and Provincial Houses. Unexceptionable references on application to G. S. T., Post Office, Wandsworth.

SHOPMAN.—Age 28; good references. Thirteen [illegible] experience.—R. C., *Gardeners' Chronicle* Office, W.C.

HOUSE CARPENTER and MANAGER of Water [illegible] gentleman's Estate.—Understands Gas and Water Fitting.—E. P. W., Postmaster, Abingdon.

THRESHER'S COLOURED FLANNEL SHIRTS
Next Door to Somerset House, Strand, W.C.

Great Bargains in best [illegible] GLASS
TABLE
GAS CHANDELIERS, LAMPS, &c.
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The Gardeners' Chronicle Newspaper.

SATURDAY, SEPTEMBER 17, 1864.

Great Bargains in best

TABLE GLASS,

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CASH ONLY.

News of the Week.

ADVICES from the United States announce that on the 25th ult. the Confederates attacked General HANCOCK's position on the south of the Reames Station on the Weldon Railroad, and after a desperate fight retook four of the seven miles of the line which the Federals had occupied. The Federal loss is estimated at 2000 men and nine guns, while that of the Confederates is said to amount to 5000 men. The Confederate forces under General EARLY are retreating up the Shenandoah Valley, closely followed by the Federals under General SHERIDAN, whose advance is reported to have skirmished with EARLY's rear-guard near Charlestown and Middleway. The object of this retrograde movement on the part of General EARLY is not known, but it is believed that General LEE has recalled the troops from the Shenandoah Valley, in order to make a general attack upon GRANT's position. Secretary STANTON reports that one corps of General SHERMAN's army has entered Atlanta, and that General HOOD, finding his communications destroyed, has retired to Macon. During his retreat a battle was fought at East Point, in which the Federals were successful. Both armies, however, suffered heavy loss, and that of General HOOD is said to have been cut in two, the Confederate General HARDEE being among the killed. It is said that the Confederate Generals FORREST, WHEELER, and MORGAN have since united their forces, with the intention of entirely intercepting General SHERMAN's communications. From Mobile we learn that Fort Morgan, with all its garrison, guns, and stores, had surrendered to Admiral FARRAGUT, who has landed 4000 men on the mainland at Grant's Pass, and is busy removing the torpedoes and other obstructions to his passage up to Mobile. The local papers, however, express the utmost confidence that the city can be successfully defended. The political news in connection with the approaching Presidential contest is more important than the military intelligence. The Chicago Convention has nominated General M'CLELLAN for President, and Mr. PENDLETON, of Ohio, for Vice-President, on the principle of maintaining the Union and Constitution by conciliaiion and compromise, and of making immediate efforts to bring about a cessation of hostilities and a convention of the States. The Convention also resolved that any attempt at interference by the military with the freedom of the approaching elections should be resisted by force.

The Peace Conference at Vienna met on Tuesday and again on Wednesday, when the financial question is said to have been the subject of discussion. It is understood that so little progress has been made towards the conclusion of peace that the prolongation of the armistice, which will otherwise expire on the 31st inst., may be considered as tacitly accepted by both belligerents.

On Tuesday the whole of the Spanish Ministry tendered their resignation to the QUEEN. After some consideration HER MAJESTY accepted their resignation, and deputed M. MON to undertake the construction of a new Cabinet, with the understanding that Senor PACHECO should remain Minister for Foreign Affairs. M. MON was unable to reconstruct his Ministry, and the QUEEN on Thursday summoned Marshal O'DONNELL to her councils.

A despatch from Constantinople states that in consequence of the explanations of NUBAR PASHA, the Porte has accepted the bases of the arbitration of the Emperor NAPOLEON in the Suez Canal question.

FRANZ MÜLLER was surrendered by the United States Government under the Extradition Treaty on the 31st ult., and arrived yesterday at Liverpool in charge of Inspector TANNER, who is expected to bring him to London in the course of to-day.

Home News.

THE QUEEN IN SCOTLAND.—On Wednesday week, the Queen, accompanied by the Duchess of Saxe-Coburg and Princess Louisa, drove to the Linn of Quoich. Princess Helena drove to Birkhall. On Thursday the Queen, accompanied by the Duke and Duchess of Saxe-Coburg and Princess Helena, drove to Allanquoich, whence they ascended on ponies to the summit of Glenquoich, where they had luncheon. The Royal party returned to Balmoral by way of Braemar and the Linn of Dee. On Friday the Queen drove and walked, accompanied by the Duchess of Saxe-Coburg and the Royal family. On Saturday the Queen, accompanied by the Princess Helena, drove to Alt-na-Guithasach, and went to the Dhu Loch. Sir Charles Wood left the Castle. On Sunday afternoon the Queen, with the Duchess of Saxe-Coburg and Princess Helena, attended Divine service at the parish church of Crathie. The Rev. Mr. Stephen, of Renfrew, officiated. On Monday morning the Queen drove out, accompanied by Princess Louisa. In the afternoon her Majesty went out with Princess Helena and Princess Beatrice. The Duke of Saxe-Coburg went out deer stalking in the forest. On Tuesday the Queen, accompanied by the Duchess of Saxe Coburg and Princess Louisa, drove to Birkhall. Princess Helena visited the Countess of Fife at Mar Lodge. Earl Russell arrived at the Castle as Secretary of State in attendance on her Majesty.

THE PRINCE AND PRINCESS OF WALES, accompanied by the King and Queen of Denmark, visited Elsinore and the Castle of Kronborg on Saturday. The Royal party afterwards went on board the Osborne, and had a short cruise in the Sound. On Wednesday their Royal Highnesses left Fredensborg for Bernstorff, the family residence of the King before he ascended the throne. A triumphal arch was erected at Bernstorff, national airs were played on their arrival, and an address was read by the clergyman of the parish. The King of Denmark returned thanks on behalf of his Royal son-in-law and daughter. There was a large concourse of people, by whom the Prince and Princess were heartily cheered. Their Royal Highnesses have not yet visited Copenhagen.

THE CROWN PRINCESS OF PRUSSIA gave birth to a Prince at noon on Thursday. Her Royal Highness and the infant Prince are doing well.

PRINCE ALFRED arrived in the Firth of Forth from Norway in the Racoon early on Tuesday morning. His Royal Highness went ashore at 7 o'clock to catch the first train for the north, on his way to Balmoral.

PRINCE ARTHUR, attended by Major Elphinstone and Colonel Seymour, arrived on Saturday last at Baden-Baden.

PRINCE HUMBERT, the Crown Prince of Italy, arrived at Southampton on Sunday from Cherbourg, in Prince Napoleon's yacht, accompanied by Prince Napoleon and Princess Clotilde. His Royal Highness remained on Sunday night at the Dolphin Hotel, and left Southampton on Monday morning for the residence of the Marquis d'Azeglio, the Italian Minister in London. On Monday evening the Prince dined with Lord Palmerston; and on Tuesday his Royal Highness, with the Italian Minister and all the members of his suite, left town for the Doncaster races. On Thursday the Prince left Doncaster for York, and returned yesterday to London.

PRINCE NAPOLEON AND THE PRINCESS CLOTILDE, after the departure of Prince Humbert for London, remained at Southampton until Monday morning, when they proceeded in their steam yacht Prince Jerome to Spithead, where the yacht anchored. The Prince and Princess immediately disembarked in the double screw barge La Mouche, the little tender attached to the yacht, and steamed into Portsmouth harbour, landing at the King's stairs of the dockyard. Their Imperial Highnesses were there received by Admiral Sir Michael Seymour and other naval authorities, who conducted them over the chief points of interest in the yard and arsenal. They then drove to Southsea, where they took luncheon with the French Vice-Consul, after which they paid a short visit to the Excellent, and witnessed some blank practice from her 12-ton guns. They then returned in La Mouche to the Prince Jerome, which left Spithead at 10 P.M. for Havre.

ORDERS OF KNIGHTHOOD.—One of the vacant Garters has been conferred upon the Marquis of Lansdowne. Lord Lovat will have the vacant Ribbon of the Thistle. Lord Lismore will be the new Knight of St. Patrick.

DIPLOMATIC APPOINTMENTS. — The Queen has appointed Sir Andrew Buchanan, now Ambassador at Berlin, to be Ambassador at St. Petersburg; and Lord Napier, now Ambassador at St. Petersburg, to be mbassador at Berlin.

THE CHURCH IN THE COLONIES.—The Archbishops of Canterbury, York, Armagh, and Dublin have issued an address in behalf of the Society for the Propagation of the Gospel, addressed to the clergy and laity of the United Church of England and Ireland, in aid of Church work in the colonies and dependencies of the British Crown. The following is their Graces' appeal:—

"We beseech you, brethren, to weigh as in the sight of God the few words we feel called upon to address to you, touching the duty of our Church and nation as to the maintenance of Christian missions. We deem the obligation binding us to discharge this duty to be at this time specially imperative. The scattering of our people throughout the world, the large emigration of our own poor, who, unless we plant among them the Church of God, must lapse into heathenism; the obligations which we contract to the heathen people amongst whom our emigrants settle, and to whom they inevitably carry the contagion of our diseases and of our sins; and the fact that our Crown holds in India a vast empire over Mussulmans and Pagans—all these things force upon us the inevitable alternative of either neglecting daily the plainest obligations, or of doing heartily the work of evangelising the world. The main present hindrance to the discharge of this work is the lack of funds. From every side the cry for aid reaches us daily."

This address then quotes extracts from the recent appeals of the Bishops of Calcutta, Labuan, Cape Town, Grahamstown, the Orange River, Honolulu, Ontario, and Columbia, and the Dean of Maritzburg in Natal. In these appeals two of the colonial bishops—those of Capetown and Grahamstown—express an intention of abandoning the work or reducing the number of mission agents, unless an additional grant be made; while the Bishop of Honolulu reports the utter surprise of people in the Sandwich Islands that so little is forthcoming from home "when great and effectual doors are being opened." The Bishop of Ontario, in Canada, applies for six travelling missionaries "who shall be wholly supported (if necessary) for at least three years from external sources," and the Bishop of Columbia states that there is a further want in his diocess "at once of 13 additional clergy and five catechists, at a cost of 4000*l.* a year." Their Graces then conclude as follows:—

"Shall such calls as these remain unanswered? And if they do, must not these rejected multitudes cry unto the Lord against us, and it be a sin which shall land to the charge of our Church and nation? We earnestly and affectionately entreat you to make a new and great effort for a large increase of our present missionary funds. Speaking in the name of the Vice-Presidents of the Society for the Propagation of the Gospel, we plead specially for that peculiar instrument of service. But we do not limit our sympathies to it. We are convinced that in no other way can the work be done than by every parish, as a part of its separate parochial existence, raising its own contributions for the work; and we therefore beseech our brethren of the clergy to preach one sermon annually and make a collection for Church of England missions; and we pray our brethren of the laity to help them, not only by their contributions to this annual collection, but by becoming regular subscribers, if they are not such at present, or, if they are, by increasing on a new scale of Christian liberality their aid to the funds of the societies they support, and by forming themselves into associations for the more complete effecting of this great work of God."

Foreign.

FRANCE.—A despatch from the Prussian Government has been received at the French Foreign Office, communicating an outline of the bases for the peace negotiations between Denmark and Austria and Prussia, and a similar despatch has been sent to Earl Russell. It is said that the proposed terms are considered unjust and ungenerous by the French Cabinet, which considers that the people of the Duchies ought to have been consulted about their ruler, in order to secure tranquillity and content for the future. The Paris papers say that Earl Russell has answered the despatch, and severely commented on the hard terms which Prussia imposes on Denmark, but that the French Foreign Office has hitherto observed a significant silence. The Paris papers comment with great indignation on the language of the Prussian journals, which, in justifying the conduct of Germany to Denmark, boldly assert that language ought to be the line of demarcation between nations, and consequently that France should yield up the whole of Alsace, including the cities of Strasburg and Metz. The *Siècle* publishes the following article on the subject, observing that, in conformity with the well-known wish expressed by Kant, the Germans would gladly convert humanity into one family, but on condition that it should be ruled with a Prussian or Austrian rod:—

"It needed William Tell and his successors to drive them from Switzerland. They oppressed Italy for centuries, and still hold Venice in a nameless oppression. They have recompensed Hungary for her devotedness to Germany by stripping her of her autonomy and of her Constitution. In the most odious of conspiracies they divided Poland with Russia, and the manner in which they treat Denmark, from which they would gladly take the last dollar, the last inhabitant, and the last ship, proves what is to be expected from them when they are conquerors. Add to this that they have almost always made war for unjust causes, and have been the aggressors on their neighbours, and that, when at peace with foreign countries, they have continually fought among themselves either with cannon or by intrigues. The history of Germany is a long civil war, and at the present time Germany is still at war with Germany on all points."

A letter from Schwalbach, in the Duchy of Nassau, states that the Empress of the French resides in a new villa belonging to M. Arnold Herber, which had been selected as the residence of the Empress of Russia during her Majesty's stay in July last, but which was not occupied, as it was discovered that the owner entertained Liberal opinions. The inhabitants remark that the simple manner in which the Empress Eugenie lives offers a remarkable contrast to that adopted by the Empress Marie Alexandrowna. The latter entered Schwalbach in the state carriage of the Duke of Nassau, accompanied by a countless retinue, who occupied a great number of carriages, while in advance of her Majesty's carriage rode the Nassau gendarmes, and

behind it was the chief of the Wiesbaden police in his grandest uniform. The whole road from Wiesbaden was occupied by armed foresters and gendarmes, and in Schwalbach a great number of police had assembled, under the plea of protecting the imperial guests, whilst extraordinary measures were adopted against the Poles. At the arrival of the Empress Eugenie Her Majesty declined the attendance of the Duke's adjutants, who received her at the Wiesbaden station, as well as the use of the state carriage which was placed at her disposal, and also refused to allow the gendarmes to precede her carriage. Her Majesty took a simple hackney carriage from the station, and drove to Schwalbach without halting. The imperial retinue consists of some ladies, her immediate Court attendants, and her servants, consisting of not more than 30 persons altogether. At Wiesbaden, as well as at Schwalbach, the Empress was received by the unofficial public with cordial greetings, which were gracefully returned. Since her arrival her Majesty has received visits from the King of Prussia, the Queen of the Netherlands, the Duke of Nassau, and Princess William of Hesse. Prince and Princess Napoleon arrived in Paris on Wednesday from their trip to Southampton with Prince Humbert of Italy. It is said that negotiations have been opened with the Archbishop of Paris for the purpose of removing the obstacles opposed to the baptism of the children of Prince Napoleon. The situation in which Victor Emmanuel, the intended godfather, is placed in relation to the Church, has prevented the baptism of the first, and the Prince will not consent to the ceremony for the second taking place before the obstacles to the baptism of the first have been removed. To obtain this result is the object of the present negotiations, and there is no doubt that it will be attained. The *Moniteur* publishes a long report from M. Duruy, the Minister of Public Instruction, on the result of the competition which was thrown open as long ago as 1852, for a prize of 50,000f. (2000*l*.), to be awarded for the most useful and practical application of the voltaic pile. The competition was to be left open for five years; but as in 1858 no improvement had been brought forward of sufficient merit to deserve the reward, the time was extended for another four years, which have just elapsed. The commission has now made its award, by conferring the prize on M. Ruhmkorff, for the well-known electric machine which bears his name. The murderer Latour was guillotined at Foix on Monday. Notwithstanding the rain, an immense crowd assembled to witness the execution. He refused to allow any priest to accompany him to the scaffold, and uttered the most dreadful blasphemies. He maintained a stubborn demeanour, and on his way to the scaffold sang in a loud voice, to the air of the *Marseillaise*, some verses composed by himself in reference to his execution.

ALGERIA.—The *Commerce Algérien* states that a multitude of locusts alighted on the village of St. Arnaud, on the 29th ult. The colonists were for a moment astounded at this sudden invasion, but, mindful of the danger with which their crops were threatened, they attacked the locusts with great energy. After many efforts they succeeded in dispersing them, employing for that purpose every weapon they could lay their hands on—such as sticks, forks, and sithes. These locusts were of a gray colour, tolerably large, and extremely voracious. Their arrival was preceded by a whirlwind from the desert.

SPAIN.—The whole Ministry on Monday evening tendered their resignation to the Queen. On Wednesday her Majesty accepted their resignation, and deputed Señor Mon to reconstitute the Cabinet, with the condition that Señor Pacheco should remain Minister for Foreign Affairs. The Ministerial crisis continued on Thursday, and the Queen on that day summoned Marshal O'Donnell.

PORTUGAL.—The elections have passed off quietly, and have resulted in a very large majority for the Government. The extension of the Beja Railway has been inaugurated. The Bank of Portugal, authorised by the Government, has raised its rate of discount to 7 per cent., an unprecedented measure.

SWITZERLAND.—The French Government has forbidden M. James Fazy to remain in the frontier department. This measure has not been caused by any demand of the Federal Council. In consequence of the Austrian Government refusing to grant the extradition of Langiewicz, notwithstanding its former promise to that effect, the Federal Council will cease negotiating on the subject, without, however, renouncing the justice of its demand.

DENMARK.—An address bearing several thousand signatures was presented to the King a few days since by a deputation of the chief inhabitants of Copenhagen. The address expressed the profound conviction that it was necessary to follow a different line of policy to that pursued by the Eider-Danish Cabinet, which had brought such great calamities upon the country. It said—

"The choice of the new councillors of the Crown guarantees to us that the efforts made to restore the prosperity of peace will attain their end. The undersigned, animated by sincere patriotism, and penetrated with the gravity of the circumstances, declare themselves further ready for all sacrifices which the deliverance of the country may still require."

His Majesty replied as follows:—

"I thank you, gentlemen, for the sentiments of confidence and devotion which you express towards me. Your language goes to my heart, for it proves to me the opportuneness of the measures which I have thought well to take, in concert with my Ministers, to restore peace to our country."

SCHLESWIG-HOLSTEIN.—An address signed by almost the entire inhabitants of North Schleswig and Als has been presented to the German Civil Commissioners in the duchy, stating that it is the universal desire in North Schleswig to remain and live in constant connection with Denmark, and that they would rather agree to a division of Schleswig according to nationalities than follow Holstein to Germany, and thereby assist in constituting a State of Schleswig-Holstein. They therefore pray that Germany will not exercise her rights of war by annihilating the nationality of upwards of 200,000 Schleswig Danes, and depriving them of their connection with Denmark, a connection in which they say they have found themselves happy for centuries. A telegram containing the pith of this address was stopped by the Prussian authorities at Berlin on the 8th inst. It is said that until the conclusion of peace Jutland and the Duchies will remain occupied by a corps of 30,000 Prussians and an equal number of Austrians. The Germanic Diet has provisionally taken on itself, by way of advances, the different expenses of the Federal Commission in the Duchies of Holstein and Lauenburg.

PRUSSIA.—The King of Prussia, after paying a visit to the Empress Eugenie at Schwalbach, returned on Sunday evening to Frankfort, to be present at a grand diplomatic dinner at the Prussian Embassy. It is said that his Majesty was very coldly received by the Frankfort people. On Monday night his Majesty returned to Berlin, accompanied by Count von Bismarck. The *Nord-deutsche Zeitung* of Tuesday says that the Prussian Government has already sent a suitable reply to the last note of Earl Russell upon the preliminaries of peace. No official notification has yet been received from Darmstadt and Nassau relative to their entering the Zollverein on the basis of the Franco-Prussian treaty of commerce. The Archbishop of Cologne, Cardinal Johannes von Geissel, died on Thursday in his 69th year, after having been archbishop of the diocess for 23 years. He was a native of Neustadt, in the Bavarian palatinate. In 1857 he proceeded to Rome, and there received the cardinal's hat at the hands of the Pope.

AUSTRIA.—A sitting of the Conference took place on Tuesday. It is asserted that the subject of discussion was a proposition made by Austria and Prussia that the claims of the Duchies to the treasure and State property of Denmark should be settled by payment of a fixed amount. Another sitting took place on Wednesday, but very little progress was made towards the conclusion of peace. The armistice will be prolonged, as neither of the belligerents has given notice that it has to cease on the 31st of October. The report that the Emperor of Austria was about to visit Berlin is contradicted. The sittings of the Conference between Austria and Prussia in reference to the Customs' Union will be held in Prague, but the date of their opening has not yet been decided on. It is rumoured that Austria has determined to acknowledge the Kingdom of Italy, a step which is regarded as an effort to disarm the hostility to the Empire in Italy, and secure her position in her Italian States. It is also reported that the Austrian Government intends shortly to recognise King George of Greece, regard having been paid to all family considerations towards Bavaria.

ITALY.—The Pope has returned to Rome. An immense concourse of people assembled on the line of route to the Vatican, and cheered his Holiness. It is stated that one of the two cardinals' hats now vacant will be conferred upon Monsignore Manning, formerly archdeacon of Chichester, and brother-in-law of the Bishop of Oxford, and the other on a French bishop, who is a close personal friend of the Emperor. A telegram from Turin states that the brigand chief Crocco, who was said to have left Rome with a Spanish passport, is still at Rome, under the protection of the Papal Government. The *Opinione* of Turin publishes an official list of the crimes imputed to Crocco, amounting to 65 in all, and comprising murder, highway robbery, arson, and pillage under every possible form.

RUSSIA. — A subscription has been opened in the columns of the *Invalide Russe* for the sufferers by the conflagration at Simbirsk. The same paper announces that a large fire had also taken place at Karsum, and adds that incendiarism was on the increase in that neighbourhood.

POLAND.—The *Posen Journal* states that the sentences passed on the Polish ladies who have been so long in confinement in that city have just been published. The Countess Ostrowska has been condemned to five years' imprisonment with irons; the Countess Wodzioka and Mesdame Zebrowska to 10 months of the same punishment; Mesdames Wilkoszewska and Ilning to six months; and Mesdames Alexandrowicz and Dymidowicz to four. All the ladies have appealed.

GREECE.—Several foreign journals state that the betrothal of King George of Greece to the Grand Duchess Alexandrovna, daughter of the Emperor of Russia, has taken place at St. Petersburg. Some doubt is thrown upon the statement by the fact that the Grand Duchess is only 11 years of age. The debt of 1824-25 has been recognised by the Greek Government. The original capital of 7,000,000*l*. sterling has been consolidated at 2½ millions at 5 per cent. interest. The Powers have, it is stated, shown themselves favourable to this arrangement, and have made important concessions. The 100*l*. bonds have been capitalised at 45 and the Coupons at 15.

TURKEY.—A despatch from Constantinople, dated the 7th inst., states that in consequence of the explanations of Nubar Pasha the Porte has accepted the basis of the arbitration of the Emperor Napoleon in the Suez Canal question.

TUNIS.—The Turkish Government has consented to recall the Turkish fleet from Tunis, as well as the Commissioner accredited to the Bey. On the complaint of General Beauval the Bey has expelled the Zouaves who attacked the Spanish Consulate and commenced sacking it. The Spanish Consul has referred the question of reparation to Madrid, and awaits instructions. At the request of a Tunisian General an English ship-of-war has captured a Maltese boat carrying munitions and cannon for the insurgents. The Bey has sent another column into the interior, but the insurrection still maintains itself. The chiefs will soon arrived at Tunis to receive their investiture deem that peace is impossible unless the Kasnadar be dismissed, the taxes reduced, and the tribunals reformed. The towns of Monastir and Sfax have violently repulsed the agents of the Bey.

ABYSSINIA.—M. Lejean, French Consul at Massaouah on the Red Sea, has arrived at Marseilles. He has been thrown into prison by King Theodore, and only gained his liberty by accepting the decree of expulsion from that territory. He reports that he left in prison his brother captive, the British Consul, who was required by his Æthiopian Majesty to transmit to England a proposal of marriage with Queen Victoria. No satisfactory answer having reached him, the King sent the Consul to prison, where he is likely to remain until rescued by a special expedition.

PERSIA.—Mr. Benjamin Langfield and his manservant, while on their way from a port in the Caspian to Sherat, have been murdered and robbed by the drivers of the vehicles in which they were travelling. The English Consul at Teheran has set out to investigate the case and trace the criminals, and the Russian Consul, who was a friend of Mr. Langfield, was expected to co-operate with the same object.

CHINA. — Advices received overland through St. Petersburg, report the capitulation of Nankin.

NEW ZEALAND.—The following account of the recent defeat of the Maories is given by the *Melbourne Argus* of July 25:—

"After the reverse at the Gate Pa, the Maories were immeasurably elated, and the leader of the east coast tribes, Rawiri, sent a written challenge to the commander of the troops at Tauranga, of which the following is a literal translation:—'Now hear what we have to say. We have been waiting for you to come and attack us for a whole *month, but you have* not come, and now we are coming to you. We give you warning, therefore, that you may expect to see me within a month, and not to let any of your soldiers out, for our young men will certainly shoot them. We give you warning that you may not say it is murder, for it won't be murder.' The Maories had not to wait long. On the 21st June, Colonel Greer, in charge of the forces of Tauranga, received information that the enemy were intrenching themselves at a spot 12 miles inland from the scene of the late engagement. Colonel Greer marched out to the place with an Armstrong gun, 6-pounder, and 600 men of the 43d and 68th, and the Waikato Militia (Victorian Volunteers) Regiments, and found that the enemy had commenced the erection of a new pa on a narrow neck of land, surrounded on three sides by deep gullies, and completely commanding the Tauranga Road. All that had been done, however, was to construct a single line of rifle-pits. The Maories assumed the offensive themselves, their skirmishers firing briskly on the troops as they arrived across the plain. The skirmishers were, however, soon driven in, and Colonel Greer extended his men, placed his gun in position 500 yard from the pits, and maintained a sharp fire for two hours, while he sent for reinforcements. As soon as the reinforcements were sufficiently near to give support, the advance was sounded, and, with a cheer which made the hills ring again, the 43d, the 68th, and the Waikato Militia rushed forward to the position. The Maories received them with a heavy volley, and stood their ground well. The troops dashed into the pits and a hand-to-hand encounter took place. It was not of long duration. The soldiers, determined to remove the stain the Gate Pa repulse had cast upon them, used the bayonet with effect, and three or four minutes saw the Maories flying to the gullies, pursued by both cavalry and infantry. The former followed them for a distance of 10 miles, and with their breech-loading carbines did good service, though, owing to the swamps and gullies with which the district abounds, they could not prevent the escape of the main body of the enemy. 68 Maories were killed in the rifle-pits, and altogether 107 bodies were collected. 27 wounded men were also brought in, and 10 other prisoners. Among the killed were Rawiri, the leader of the Maories at the Gate Pa, and Henare Taratoa, the writer of Rawiri's challenge to the troops, a man much respected for his ability and education. Many more Maories must have been killed in the ravines, where it was not possible for the troops to find them. The English loss was comparatively trifling. Nine men were killed and 30 wounded. Among the wounded were Captain F. A. Smith and Captain H. Bernard of the 43d, and Captain Trent, Captain Casement, Lieutenant Stuart, and Ensign Palmer. The engagement will be severely felt by the east coast tribes, but it has far from crushed their spirit. The latest advices report that they are erecting another pa in a strong position farther back. It was said that Colonel Greer would attempt also to storm this work. Rawiri and William Thompson, the leading rebel chiefs, were in the neighbourhood of Tauranga during the fight, intending to attack the place should the soldiers be repulsed. The guns of the Corvette Esk were trained on the camp, and every preparation made to give the enemy a warm reception. As matters turned out, however, Thompson declined testing the issue. Mr Fox, the Colonial Secretary, has just received the allegiance of Wi Tako, a powerful chieftain of the Wellington district, who had raised the King flag, trained men, and threatened to destroy the peace of the southern part of the island. The New Zealand authorities are taking active steps to place military settlers on the conquered soil. The 1st Waikato Militia are to be located at Tauranga, and the 2d, 3d, and 4th Regiments in the heart of the Waikato country. This plan will effectually cut the rebels off from their accustomed sources of supplies."

UNITED STATES.—On the 25th ult. the Confederates made repeated assaults upon Hancock's corps near

Reams, on the Weldon Railroad, without important advantage until 5 P.M., when, by a furious onslaught, they broke his lines, scattered the troops in all directions, capturing many prisoners and cannon, and recovering possession of four miles of the railway, leaving three miles still in their possession. Shortly afterwards Ward's 5th Corps came to the rescue, when the battle ceased. The Federal loss is estimated at 2000 men and nine guns, while that of the Confederates is said to be 5000 men. On the 28th General Sheridan returned to Charleston and discovered that the Confederates under General Early had disappeared from his front. The latest accounts of the 2d state that General Early's head-quarters are at Bunker's Hill, midway between Martinsburg and Winchester. It is believed that General Lee has recalled the troops from the Shenandoah Valley, in order to make a general attack upon Grant's position. General Wade Hampton has been appointed chief of cavalry in Lee's army. Accounts from Mobile announce that Fort Morgan and the garrison of 600 men, including General Paige, surrendered to Admiral Farragut on the 23d ult., after 24 hours' bombardment. The Confederates spiked the cannon, 60 in number, and destroyed all other *matériel* in the fort previous to the surrender. Admiral Farragut has obtained the services of the men who were engaged by the Confederates in setting the torpedoes, and is now occupied in raising them. Secretary Stanton announces the evacuation of Atlanta by Hood, and the occupation of the city by a corps of Sherman's army. A battle has been fought between Hood and Sherman's main body at East Point, with a heavy loss to both sides. No details are given, but it is said that Sherman was successful, and that Hood has retired to Macon. It is also asserted that Hood's army was cut in two, with heavy loss, and that the Confederate General Hardee was killed. The latest advices state that the Confederate Generals Forrest, Wheeler, and Morgan have joined forces, and are operating upon Sherman's communications. Ten thousand Confederates, with 12 guns, are reported to be within 17 miles of Nashville, on the Murfreesboro' road. A battle is expected. The Confederates have resumed active operations in Arkansas. On the 23d ult. Colonel Shelby captured nearly a whole Federal regiment, between Duval Bluff and Little Rock. He is now reported marching upon Duval Bluff and St. Charles. Guerillas along the White River fire upon all passing boats. General Sully's command defeated the Indians in a battle on Knife River, Kansas, on the 25th ult., killing and wounding 150 of their number. General Sully's loss was five killed and 30 wounded. The National Democratic Convention for the nomination of President and Vice-President assembled at Chicago on the 29th ult. On the following day Governor Seymour was elected Chairman by acclamation, and made a long speech in favour of peace, reconciliation, and a return to the principles of the Constitution. The Convention subsequently adopted a platform which resolved upon the preservation of the Union and Constitution by conciliation and compromise, and demanded an immediate negotiation for the armistice and Convention of the States. It also resolved to resist by force any interference by the military at the approaching elections. On the 31st General M'Clellan was nominated for President and the Hon. G. Pendleton of Ohio for Vice-President by acclamation. Mr. Stanton reports that the troops credited to the States reduces Mr. Lincoln's last call to 300,000 men, and that 100,000 new troops promptly furnished are all that Grant asks for the capture of Richmond, and to give the finishing blow to the Confederate armies. It is reported from Washington that proposals have been received from Germany for a loan of 1,000,000,000 dols., for 75 years, at 3 per cent.; 20 per cent. of the loan is to be paid in coin, 10 per cent, in currency, and the balance in outstanding United States' obligations. The Tallahassee has run the blockade of Wilmington in spite of a vigorous fire from the Federal gunboat Monticello. Her destruction of 22 fishing vessels is denied. It is officially announced that the peace mission of Jaques and Gilmore to Richmond was not authorised by the Administration. The Minister Plenipotentiary from the Government of the Emperor Maximilian arrived in Washington on the 2d inst. Juarez is reported to have arrived at New Orleans. Müller has been surrendered to the British authorities.

BRITISH COLUMBIA.—An expedition has been organised by the colonial Government and colonists of Vancouver Island, for the purpose of exploring the northern and central parts of the island. These parts have never been surveyed, and are practically unknown. In addition to fixing the topography of the island, they are to look out for open ground for settlements, and for indications of gold, copper, and coal. The party is under the leadership of Dr. Robert Brown, of Edinburgh, who has made himself favourably known in the colony as a man of practical science. The expedition was to start from Victoria in a gunboat to the mouth of the Cowitchan river, from which place explorations will be commenced. Her Majesty's ship Tribune, bearing the Admiral's flag, had grounded in the Fraser River, but after discharging her guns and stores she was got off without any damage except a little straining, and arrived safely at Esquimalt on the 10th July. The Admiral's reason for taking the Tribune across the bar was to protect the people of New Westminster from Indians who had been committing atrocities in the neighbourhood.

MEXICO.—The Emperor Maximilian left the capital on the 10th of August on a tour through the provinces of Queretaro, Guanajato, and San Luis. The blockade of all the Mexican ports has been raised; the censorship has been abolished in Mexico, and a commission has been appointed to organise the administration of justice. New Orleans despatches to the 24th ult. announce the arrival at that city of the family of President Juarez, who is himself reported to be on his way to the same destination. Notwithstanding the military operations in course of execution to reduce the guerillas, General Bazaine has taken measures for sending home the French troops. The Juarists received three serious checks on the 1st, 10th, and 14th of August. General Cheverria was taken prisoner.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 88¼ to 87¼ for Money, and 88¼ to ⅜ for Account; Three per Cents. Reduced, 86¼ to ⅜; New Three per Cents., 86½; India Stock, 212; Ditto Five per Cent. Stock, 101⅛ to 103¼; Exchequer Bills, June, 25s. to 18s. dis.—FOREIGN: Buenos Ayres Six per Cents., 92½; Egyptian, 96 ex div.; Ditto, second issue, 96½ to 96 ex div.; Italian (Maremmana Railway), 72; Russian, 1822, 90 ex div.; Ditto 1862, 87⅛ to ⅞; Ditto 1864, scrip, 3¼ pm.; Spanish Passive, 32½; Ditto Certificates, 13⅜ to 14; Turkish, 1854, 90½; Ditto 1858, 68¾ ex div.; Ditto 1862, 70½; Ditto 100*l*. Bonds, 70.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,807,115	Government Debt	£11,015,100
		Other Securities	3,844,900
		Gold Coin and Bullion ..	12,157,115
		Silver Bullion	—
	£26,807,115		£26,807,115

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£10,797,095
Rest	3,501,097	Other Securities	20,487,579
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,702,051	Notes	6,391,0 0
Other Deposits	12,723,620	Gold and Silver Coin ..	748,396
Seven days and other bills	544,259		
	£38,424,070		£38,424,070

Sept. 15, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Sept.* 9.—BANKRUPTS.—J. AYLWARD, Birkenhead, Cabinet Maker—W. J. BLACKSHAW, Tunstall, Staffordshire, Plumber—J. BOOSEY, Abridge, Essex, Greengrocer—W. BUNKER, Northampton, Butcher—T. BOTTRILL, late of Platt Terrace, St. Pancras Road, Billiard Table Keeper—J. COLLINGWOOD, Manchester, Fire Brick Manufacturer—J. W. I. COZENS, late of Quebec Street, New Road—GEORGE CHADWICK, Hulme, Manchester, late Grocer—EDWIN JOHN HENRY CLUNN, Addison Road North, Notting Hill, Clerk—W. DRABWELL, Rowland's Row, Stepney Green, Stepney, Commission Agent—MARY ELIZA DAVIES, Monkton, Pembrokeshire, Grocer—W. DAVEY, Tiverton Devonshire Butcher—J. FIDLER, St. Helen's, Lancashire, Ironmonger—C. FELL, Great Coram Street, Barrister-at-Law—W. FELL, Gateshead, Durham Draper—J. HORTON, Edgbaston, Birmingham, late Contractor—R. E. HUGHES, Weston-super-Mare, Somersetshire—J. HARNETT, Tottenham Street, Tottenham Court Road, Engineer—C. HAYES, East Anstey, Devonshire, Farmer—J. HAMLEN, Saint Sidwell, Exeter, Manufacturer of Ladies' Under-clothing—J. HALL, Sunderland, Labourer—W. JONES, Victoria Road, Southampton, Butcher—W. KETLEY, Myddelton Terrace, Battersea, Secretary to the Staffordshire Rolling Stock Company Limited—CHARLES LONSDALE, Middleton Tyas, Yorkshire, Farmer—THOMAS BROAD LAWRANCE, Church Street, Kingston-on-Thames, Grocer—T. MITCHELL, Birmingham, Painter—H. MUDDLE and F. ELSWORTH, Stanford Rivers, Essex, Omnibus Proprietors—J. C. PATON, Leeds, Cloth Merchant—J. ROSE, Cradley, Staffordshire, Journeyman Boat Builder—W. RADLEY, Church Street, Shoreditch Oil and Colourman—J. ROBERTS, Llanfachreth, Merionethshire, Land Surveyor—C. ROBINSON, Oldham, Lancashire, Dealer in Roller Leather, &c.—A. E. SMITH, Bristol, Baker—J. SANGLY, Warrington, Lancashire, Ale Beerhouse-keeper—J. SHUTER, Sutton-in-Ashfield, Nottinghamshire, Huckster—R. L. THOMSON, Leadenhall Street, City, Shipbroker—J. THOMAS, Everton, Lancashire, Painter—E. WHITE, Chapel Street, Pentonville, Builder—M. WALDRON, late of Arundel Street, Strand, Commission Agent—L. WHITELEY, J. GARNER, M. FARRAR, W. FARRAR, and W. H. LEVER, Rastrick, Yorkshire, Cotton Spinners—W. WHITWORTH, North Muskham, Nottinghamshire, Wheelwright.

SCOTCH SEQUESTRATIONS—D. CAMERON, Carslet, Renfrewshire, Farmer—A. COWAN, Edinburgh, General Draper—R. and W. CUTHBERTSON, Glasgow, Grocers—W. GILMOUR, Glasgow, Ship and Insurance Broker—A. M'AULAY, Stornoway, Ross-shire, Merchant—WILSON & BLACK, Haddington, Grocers—W. WATSON, Little Creech, Sutherland, Farmer.

TUESDAY: *Sept.* 13.—BANKRUPTS.—J. T. ARMSTON, Red Lion Street, High Holborn, Builder's Foreman—F. L. BELINE, Harewood Street, Dorset Square, Schoolmaster—A. CORBLIN, jun., Oakley Street, Chelsea, Wine and Spirit Merchant—C. G. COLLETT, Mansfield Place, Hampstead Road, late Brush and Broom Manufacturer—W. DAFT, Sheffield, Boot and Shoemaker—R. FREEMAN, North Street, Lisson Grove, Butcher—JOHN GOSWELL, Wimbledon, Surrey, Carpenter—JOHN JAMES HAMMOND, Portsea, Hampshire, Builder—BENJAMIN D. HEATHCOTE, Derby, Journeyman Cabinet Maker—J. KIMBERLEY, Stafford, Confectioner—O. MILLS, Llanidloes, Montgomeryshire, Printer—J. MORGAN, Madeley, Shropshire, Travelling Draper—JAMES OWENS, Llansannan, Denbighshire, Publican—JOSEPH PENNOCK, Manchester, Civil Engineer—HARRY PROWSE, Birmingham, Felt Manufacturer—SAMUEL JAMES POWELL, Penkridge, Staffordshire, Cooper—WILLIAM HENRY ROBINSON, Threadneedle Street, City, Mining Secretary—C. RAWLINSON, Sneinton, Nottinghamshire, late Fruiterer—T. RHODES, Manchester, Warehouseman—E. ROBERTS, Providence Place, New North Street, City Road, Journeyman Gilder—J. SYKES, Leeds, Stay Manufacturer—C. SAXBY, Rodmell, Sussex, Seedsman—S. SICHMON, Bucklersbury, Diamond Merchant—R. SPARWAY, North Rd., Forest Hill, late Bill Broker—D. SMITH, Liverpool, Travelling Draper—W. TURNER, Circus Road, Kentish Town, Assistant to a Cheesemonger—H. D. TAYLOR, Manchester, late Provision Merchant—R. WOOLWARD, Weedington Road, Kentish Town, Plumber—J. WALKER, Worcester, Upholsterer—S. H. WINTER, Clarence Place, Woolwich Common, Schoolmaster—J. WILKINSON, Sheffield, Auctioneer—W. WILLIAMS, Liverpool, Merchant.

Metropolis and its Vicinity.

ARRIVAL OF MULLER.—The case of Franz Müller was resumed in the United States Court at New York on the 27th ult. The British Government was represented by Mr. Marbury, as on the previous day; while Messrs. Chauncey, Schaffer, and E. Blankman appeared for the prisoner. The Court was thronged with spectators anxious to obtain a view of the prisoner, who sat with an unmoved countenance. Mr. Blankman, on behalf of Müller, applied for an adjournment to give time to prepare for the defence. Mr. Marbury, for the British Government, opposed the adjournment. Mr. Blankman briefly responded, urging a motion for a brief adjournment. Mr. Schaffer followed for the defence, and maintained that as yet there was nothing to justify the committal, the accused being a foreigner. He contended that the treaty under which the extradition was demanded had been suspended, and also adverted to the Florida being a pirate sent out by English subjects. Inspector Tanner having been re-examined as to the height of the prisoner, Mr. Schaffer contended that Müller could not be one of the two men seen in the compartment with Mr. Briggs on the night of the murder. Commissioner Newton then delivered his decision, stating that under the circumstances he was constrained to grant a certificate and commit the prisoner, being satisfied as to his guilt. President Lincoln having approved this judgment, the warrant of extradition was made out. The warrant arrived in New York on the 31st ult., but Inspector Tanner did not take formal custody of his prisoner until the morning of the Etna's sailing, when he was conveyed in a close carriage to the Etna. On arriving on board he was placed under close guard in the hospital of the ship, one of two men being constantly on watch over him. He was not put in irons, and during the voyage he appeared indifferent, and was engaged in reading Dickens's works. No conversation touching his guilt or innocence was permitted with him during the voyage. In New York strong excitement prevailed among the German population prior to the arrival of the Victoria, but the evidence adduced on the hearing of the case in New York was sufficient to quell that feeling, and at his departure there was little or no popular demonstration. The New York papers publish a correspondence in which Inspector Tanner acknowledged the aid received from Mr. Kennedy, superintendent of the New York police, and inclosed 10*l*. as a gratuity to one of his officers from whom he had received valuable assistance. The Etna arrived off Queenstown on Thursday and proceeded to Liverpool, where Müller was expected to be landed yesterday and brought on immediately to London.

FATAL ACCIDEN TO CAPTAIN SPEKE, THE EXPLORER OF THE NILE.—It was announced by Sir R. Murchison yesterday morning in the Geographical Section at Bath that Captain Speke was accidentally shot dead on Thursday evening whilst shooting at Corsham. He left Bath early in the morning, and when about four miles in the country, while getting through a hedge, his gun went off and shot him through the heart. He was expected to take a prominent part in the discussion of the Section yesterday. There is a counter statement that it is the captain's brother who is shot.

THE PEACE MOVEMENT IN AMERICA.—An address from the people of Great Britain and Ireland to the people of the United States in favour of peace is now in course of signature. It appeals to the ties of race and kindred, and asks if there has not been enough of strife and bloodshed, of misery, and suffering? "It is now," it says, "time for you to pause, and after calmly reviewing all that you have accomplished, the distance which you have travelled from your well-known landmarks, and the difficulties and dangers that are certainly before you, to take counsel together as to the best means of restoring peace. It is in your hands to give peace to the American Continent. We appeal to you to recognise the duty which attaches to your high privilege, and to make peace with the Southern States, and we make this appeal in the name of religion, humanity, civilisation, and common justice." In Ireland the address has met with hearty support from the people generally, Protestant and Catholic alike—the clergy taking a very active part in promoting the object. The people of Dublin, Cork, Belfast, Limerick, Drogheda, Queenstown, and the principal towns in Ireland are signing the address in immense numbers. In Manchester, Liverpool, Leeds, Huddersfield, York, Leicester, Preston, Stockport, Macclesfield, Chester, Congleton, Bury, Oldham, Bath, Stafford, Stoke-upon-Trent, and in many other towns in England and Scotland, the number of signatures is daily increasing. If the signatures which the address is receiving in London may be taken as a sign of popularity this movement is certainly popular. As the time is near at hand when the people of the United States will decide the question of peace or war for another four years, the friends of peace and humanity are anxious that the counsels of the people of Great Britain and Ireland should be uttered in favour of peace, believing that a people can best address a republican government and a republican multitude.

THE GEORGIA.—It is announced that the Government has declined to interfere in the case of the steamer Georgia, seized off Lisbon by the Federal frigate Niagara.

MR. SPURGEON AND THE EVANGELICAL ALLIANCE.—The retirement of Mr. Spurgeon from the Evangelical Alliance was briefly mentioned in our last. It appears that Mr. Spurgeon has been preaching sermons on the subject of baptismal regeneration, which have been construed into attacks on the Evangelical clergy of the Church of England, many of whom have replied to his strictures upon them. In this he is supposed to have

violated the following rule of the Alliance:—"That when required by conscience to assert or defend any views or principle wherein they differ from Christian brethren who agree with them in vital truths, the members of this Alliance will aim earnestly, by the help of the Holy Spirit, to avoid all rash and groundless insinuations, personal imputations, or irritating allusions, and to maintain the meekness and gentleness of Christ by speaking the truth only in love." Mr. Spurgeon has addressed a long letter to the Committee of the Alliance, in which he maintains his ground that the Evangelical clergy of the Church are guilty of "grievous dissimulation," and that their subscriptions are "dishonest in the highest degree." He says he has imputed nothing, and that he has merely asserted truisms of the most obvious character. "I have said," he continues, "and say again, that it is neither honest nor moral for men to swear one way and to believe another, and I have not imputed such conduct to the brethren in question. I have proved it, alas, too surely. If any clergyman can say that the words under dispute exactly express his own views, and that he would not wish to see them altered, I have only so far dissented from him as your own rules allow, and have upon that point, but upon that only, even vindicated his position in the Anglican Establishment." He declines to retract anything he has preached or published, and adds, "I impeach before the bar of universal Christendom the men who, knowing that baptism does not regenerate, yet declare in public that it does; if Christendom will not consider the impeachment, let it stand on record before the merciful face of the Great Head of the Church, and let Him do as seemeth Him good." Mr. Spurgeon also addresses a letter "To the Christian public," for the purpose of showing that the charges he has brought against the Evangelical clergy are neither novel nor singular. To do this he quotes passages, in which the charges have been maintained, from the works of the Hon. and Rev. Baptist W. Noel, the Rev. W. Robinson, the Rev. W. Thorn, the Rev. S. Minton, of Worcester College, Oxford, the Rev. Thomas Davis, and the Society for the Revision of the Liturgy. He concludes by saying:—"Dear friends.—This is but a sample of the whole, and I confidently appeal to the great heart of the British people against the charge of inventing a rash or groundless accusation. To the Most High God I leave my work in this matter. He knoweth that zeal for His truth alone urges me to pursue my present path, involving me, as it does, in all the pains which contumely and hatred can inflict."

PROMISED VISIT OF BROTHER IGNATIUS TO LONDON.—An announcement that "Brother Ignatius," whose proceedings at Claydon and Norwich have recently excited much attention, was to preach in the church of St. Mary Magdalene, Munster Square, drew an overwhelming congregation on Sunday morning. The service commenced with the appearance of 20 surpliced choristers in the chancel, followed by two priests, wearing green stoles, but no university hoods. Then came the Rev. Edward Stuart, the incumbent, wearing a cope richly embroidered, the ornamentation at the back forming a rich yellow embroidered cross. The two candles (between which was a large gilt cross) on the altar had been previously lighted. In the first place, Mr. Stuart incensed the altar. A young boy, surpliced and kneeling, then presented what is called a "boat," made apparently of silver, containing the incense, then the thurible or censer in which the incense was burned, and in which it was fumed. This thurible, which was provided with long chains, Mr. Stuart took from the "Thurifer" the attendant, and swung it in the air, until the altar became enveloped in a white cloud. While these proceedings were going on the choristers chanted the *Te Deum* with much solemnity. When the Gospel of the day was announced, the church was again incensed. During the recital of the Nicene Creed, most of the congregation knelt down at the words, "and was incarnate by the Holy Ghost." At the close of the ante-Communion Service Mr. Stuart stood with his face to the congregation, and stripped himself of his cope, leaving on the "alb," a long white linen garment, reaching almost to the feet, but different from the ordinary clerical surplice, and a "girdle" round his waist, representing the girding of the priest's loins in memory of our Lord's admonition to readiness. He wore also an embroidered green stole, crossed over his breast. In this attire he went into the pulpit, to the amazement of those who had come to hear Brother Ignatius. He then said:—

"Brother Ignatius tells me that he has got a sore throat, and cannot preach here to-day. I am sorry for it, because some have come here probably for the purpose of hearing him. It is not my fault. Before I gave you notice last Sunday morning that he would preach here to-day, I received a distinct assurance from him that nothing should hinder him from coming here. Perhaps Brother Ignatius thinks a promise is nothing, and that is my opinion about his sore throat. When I asked him to preach here last summer, and engaged to give him what might be collected for his mission, about 150*l.* being raised, he had no sore throat; but as the offertory collection to-day was to be on behalf of the Church of St. Mary Magdalene, poor Brother Ignatius has got a sore throat. Now, as some have no doubt come to hear Brother Ignatius, I will wait a minute or two to allow those who like to leave the church to go. Those who like to remain I shall be of course glad to see to listen to a common-place sermon."

About three minutes elapsed, and as no one seemed disposed to move, Mr. Stuart proceeded, taking for his text the first chapter of St. Paul's Epistle to the Ephesians, verses 22 and 23, "And gave him to be the head over all things to the Church." He said there were things in the world quite as important as Brother Ignatius, which existed before Brother Ignatius, and would exist after him, whether he had a sore throat or not. He was going to speak that morning of one of those things, which was the Church of Christ. They were told in the apostolic writings that there was a Church on earth; secondly, what that Church was; and thirdly, who was the head of that Church. It was important that people should be taught these things, because in these days people have very different ideas about the Church of Christ. Many people did not know what the Church was, and every clergyman knew that the question was frequently put to him, "What really is the Church?" or "How many Churches are there?". Is the Church that of England, Rome, France, Russia, Constantinople, or any other country? Some said the Queen was the head of the Church, others that the Pope of Rome was its head. Some affirmed that *extra ecclesia nulla salus*—that there was no salvation beyond the pale of the Church—which was quite true. It was, however, asked what was the nature of the Church, and whether any distinct and definite answer could be given to that question. He thought St. Paul answered the question when he said that the Church was the body of Christ. There was really only one Church on earth, for there was only one body of Christ, and men were made members of that Church by baptism, the Holy Communion being the centre of unity. The Church was Catholic—not simply national, for a national was simply part of a Catholic Church. It was not a Roman Catholic Church, for the word "Roman" showed that the Church to which it was attached was only a portion of the Catholic Church. It certainly had been said that members of that communion did not call themselves Roman Catholics, and that the term "Roman" was only applied to them by persons who were opposed to them in faith. The word "Roman," however, occurred in the canons of the Church as settled by the Council of Trent, and to repudiate that word was a lie on their part. At the same time he saw no use in employing the language of invective against the Roman Catholics or in calling them idolators. It would be far better if every one would exert himself to prevent the spread of schism, strife, and variance, and to bring about the re-union of Christendom. Such a thing might not take place in our own day, but all should so strive through misrepresentations and difficulties, that if Catholic unity could not be restored, no blame should rest with them. At the close of the sermon, Mr. Stuart went back to the altar, where he resumed the Eucharistic vestment, and proceeded to the administration of the Holy Communion, the service being chorally rendered.

DESTRUCTION OF MILTON'S HOUSE IN BARBICAN.—This interesting relic of the poet Milton has just been pulled down to make way for the extension of the Metropolitan Railway from the Victoria Street Station to Finsbury Circus. Of late years such parts of the house as remained intact—namely, the study, schoolroom, and kitchen—have been used for mercantile purposes, and the part which faces Barbican had long been a dyer's shop. It was known as No. 17 in the street, and was situated a few paces from the north-east corner of Aldersgate Street on the right hand, leading towards Finsbury Square. It was here that Milton resided just before he became Latin secretary to Cromwell, and about the time of his reconciliation with his first wife, Mary Powell. He was then about 37 years of age. "About this time (1645)," wrote Dr. Johnson in his memoir of the poet, "he had taken a large house in Barbican for the reception of scholars; but the numerous relations of his wife, to whom he generously granted a refuge for a while, occupied his rooms. In time, however, they went away, and the house again, said his nephew Philips, now looked like a house of the Muses only, though the accession of scholars was not great." The schoolroom and study were a good way back from the present line of the street, and were probably selected by Milton on that account, as he had previously chosen a house in Aldersgate Street, as Johnson tells us at the upper end of a passage, that he might avoid the noise. It is likely to have been a house situate in a garden, of which there were many handsome ones at that time in the parish of Cripplegate, in which it stood. The schoolroom and study were lined with oak panelling, and the windows were latticed. In taking down the building a small coffin was found embedded in one of the walls, containing what is said to be the skeleton of a monkey in perfect preservation. By an agreeable coincidence, while the house of the poet of "Paradise Lost" has been destroyed in a utilitarian age, the venerable church of St. Giles, Cripplegate, hard by, in which his remains are interred, is undergoing a partial restoration. It is a very venerable and interesting fabric, being upwards of 750 years old, having been founded in 1090 by Alfrane, the first master of St. Bartholomew's Hospital, and dedicated to St. Giles, Abbot of Nimes, in France. Besides being the burial-place of Milton, it has a historic interest as the church in which the marriage of Oliver Cromwell was solemnised, and in which the remains of Fox, the martyrologist, Speed, and many other worthies are interred. There, too, the burial of Defoe is registered, although he was not interred in the church or the adjacent cemetery, but in the neighbourhood. The original structure was at first small, but was at different times greatly enlarged, until at length, in 1545, it was completely destroyed by fire. The present edifice was then erected, and escaped the great fire of London in 1666. It is therefore among the oldest of the churches in the city of London, and is celebrated not more for the noble of distinguished persons which repose within its walls than for itself, being a fine specimen of Gothic architecture, richly adorned with monuments and many memorials of antiquity, furnished with a peal of not less than ten of the finest bells, to which are attached a set of chimes, which play every third hour and vary every day. It has been recently decorated with some handsome stained-glass windows, the gifts of old parishioners. In the adjacent cemetery are some fine remains of the old wall of London and part of an ancient bastion.

THE DIETRICHSTEIN CASE.—Our readers will remember this case, in which it was alleged that Mr. Sigismund Dietrichstein had swindled two City houses out of a large sum of money which was due to them for shares sold to him. The accused left the country, and was traced by detective officers to Pesth in Hungary, but the Austrian authorities refused to give him up, trying him, however, themselves for the alleged crime committed here. He was acquitted, and has subsequently the means of restoring to the prosecutors a considerable amount of the property. A few days since he returned to England, and having been soon apprehended he was last week brought up at the Mansion House, when the prosecutors formally withdrew from the case, and the prisoner's solicitor said he was rather the victim than the wrong-doer. As the prosecution was therefore at an end, the prisoner was discharged.

REPORTED APPEARANCE OF A NEW ALABAMA.—The following despatch, dated Bremerhaven, Sept. 1, has been received at Lloyd's from an agent of the Shipping Association:—"A large steamer is reported to have run into Nieudiep on Saturday, with French colours flying for a pilot. A boat went out and put one on board. The steamer then came out under Prussian colours, and on reaching Bremerhaven again changed colours, and hoisted the Confederate flag. The pilot who took her to Bremerhaven believes she still remains there. She steamed 10 knots at half speed, and is reported to be under the command of Captain Semmes (late of the Alabama), with 300 men on board, and the frigate is pierced for 40 guns. She is said to have been built at Bordeaux, where there are three similar in course of building." This statement is contradicted by the *Weser Zeitung*, which affirms that the vessel which has arrived from Bordeaux, has been purchased by the Prussian Government, with a view *of adding her to the* Prussian navy. Her name was the Osacca, but *she has* been renamed the Victoria.

PARISH RATES IN THE METROPOLIS.—The amount in the pound actually levied during last year for the relief of the poor, the county rate, and the metropolitan local management rate in the metropolitan parishes was as follows:—Clapham poor-rate, 2*s.* 10*d.*; county, 4*d.*; metropolitan, 2*s.* 6*d.* Mile End New Town, poor, 4*s.* 6*d.*; metropolitan, 2*s.* 6*d.* Paddington, poor and county together, 3*s.* 8*d.*; metropolitan, 2*s.* 1*s.* St. Anne, Westminster, poor, 2*s.* 3*d.*; metropolitan, 3*s.* St. Clement Danes, poor and county together, 2*s.* 3*d.*; metropolitan, 2*s.* St. George's, Hanover Square, poor 1*s.* 8*d.*; county, 3¾*d.*; general management, 1*s.*; local sewers, ½*d.* St. Mary, Kennington, poor, 8*d.*; police 6*d.*; county, 3*d.*; metropolitan, 1*s.* 5½*d.* St. Mary Islington, poor, 1*s.* 8*d.*; county, 3*d.*; metropolitan, 6*d.* St. Marylebone, poor, 2*s.* 2*d.*; county, 3¾*d.*; metropolitan, 1*s.* 8¾*d.* St. Pancras, poor, 2*s.* 2*d*; county and metropolitan, 1*s.* 9½*d.* St. Saviour, Southwark, poor 4*s.* 2*d.*; metropolitan, 2*s.* 4*d.* St. Nicholas, Deptford, poor and county, 5*s.* 7*d.*; metropolitan, 2*s.* 8*d.*

MYSTERIOUS DEATH ON THE METROPOLITAN RAILWAY.—On Saturday night a fatal occurrence, which for some days was the subject of much mystery, took place at the Portland Road station of the Metropolitan Railway. A woman was killed by falling on the line while endeavouring to enter one of the carriages when the train was in motion. It was at first supposed to be an accident, but a report was afterwards circulated that she deliberately threw herself on the rails with a view to self-destruction, and it was subsequently asserted that she was pushed beneath the train by a man who immediately made off up the staircase of the station. It appeared that deceased, who was a fine-looking woman of about 30 years of age, was accompanied by a man to the Portland Road station, and that they took two third-class tickets for the Edgware Road station. One of these tickets was returned with others from the Edgware station on Sunday morning as having been given up there on the previous night. It appears from this that the man could not have run away from the Portland station as alleged, but got into the train and went on to the Edgware Road, but his conduct in leaving the station without communicating with the authorities there respecting the accident to the woman, or making any inquiries about her subsequently, tended to keep up the mystery of the case. The woman had a wedding-ring on her finger, and her dress, which was half mourning, was very old and much mended. She was not identified till Wednesday, when Mr. C. Pritchard, upholsterer and undertaker, of Crescent Street, Euston Square, identified her as his

daughter. He stated that her name was Emma Jane Gollop, and that she was the wife of a chairmaker in Harrow Street, Lisson Grove. They had three children, one 11, another 6, and one three years of age. Her husband was an invalid and in very bad circumstances. She had unfortunately formed a connexion with a married man named Henry Powell, an organpipemaker, working at some organ builders in the Euston Road. On Saturday night between 11 and 12, his son in law and daughter were having something to drink with him at a publichouse near the Hampstead Road, when she went off in a huff, and threatened to go to an aunt from whom she had some expectations. Her husband left to go home by the train, and on Monday morning came to witness's house and said that his wife had not been home; but added that while he was in the train and just as it was moving off towards Baker Street he saw her and Powell together on the platform, and had he seen her before the train started he would have got out of the carriage and made her get in. The police on Thursday discovered the residence of Powell, but as there was no charge against him he was not taken into custody. He has not offered any explanation of the circumstances, nor has he given any reason why he did not come forward to give information on the matter when the death of the woman was made public, and a full description of her given in the newspapers. He is a man of about 50 years of age, and is said to have been in the company of deceased for some time previous to their appearance at the railway station near midnight. The coroner's inquiry into the case is adjourned until Monday, October 3, but in consequence of the new light which has been thrown on the matter, he will probably appoint an earlier day for the resumption of the inquest.

STARVATION AT CHELSEA.—About three weeks ago, a man between 30 and 40 years of age, who gave the name of Selby, took an unfurnished room on the first floor at 4, Durham Street, Chelsea, at the rate of 3*s.* 6*d.* per week, as he alleged for the occupancy of two of his maiden sisters, but in reality, as it turned out afterwards, for himself and his three sisters. From that time nothing was seen of two of the sisters by any person, and the other sister and her brother appeared to live in a most secluded manner, as they were seldom heard except at night. The stench which latterly emanated from the room was very great; and the landlord attributing it to the dirty habits of his new lodgers, determined to see the man. He did not succeed in doing so till Friday morning last, when Selby told him that he was in great trouble; that one of his sisters had died on the previous Monday, that his other sister had died on the Tuesday, and that he did not know what to do, as he could not get an order for their burial without a doctor's certificate. He asked the landlord not to tell anybody about the affair, but of course he felt it his duty to communicate the facts to the Coroner's officer, who proceeded to the room, which was locked inside. He threatened to force the door if it was not unfastened, and was then admitted. A frightful spectacle presented itself. Stretched before him lay the dead bodies of two women in a state of decomposition and hardly recognisable. They resembled skeletons covered with green tissue-paper more than human bodies. Both were without any clothing except a chemise; one was stretched on an iron bedstead with web sacking, and the other lay crouched up in one corner of the room. The only other articles of furniture were two chairs. An inquest was held on Saturday, when the man said that his right name was Moss, and that he had been a solicitor's clerk. The deceased were his two sisters, aged 38 and 40. The surviving sister, who lived with them, said that she could not get them to take any food. A surgeon who had performed a *post mortem* examination, said that he found no traces of food in either of the stomachs, and it was his opinion that they died from exhaustion from fever or the want of proper sustenance. The jury returned a verdict in accordance with the medical evidence.

PANIC IN THE ADELPHI THEATRE. — On Friday night during the performance at this theatre some one in the gallery shouted out at the top of his voice "Fire," and repeated the cry several times. A rush was made to the doors, and a gentleman named Horatio Prater, of 6, Commercial Road, Bayswater, was forced down upon the floor of the pit, was trampled upon by a number of persons, and had his arm broken. The alarm was groundless, and order having been restored, the performance was resumed.

CHILD MURDER AT PADDINGTON. — On Tuesday morning, at 8 o'clock, a charwoman employed in cleaning out the first-class ladies' waiting-room on the departure platform of the Great Western station at Paddington, found under a sofa the dead body of a fine female child, in long clothes, and tied up in an apron, the string of which was drawn tightly round the child's neck. Mr. Durdle, chief inspector of the railway company's police, ordered the body to be taken to the police station, where it was examined by a surgeon, who said the child was about ten days old, had been remarkably healthy, and had been dead about three hours. At the time the body was found there was a lady in an adjoining first-class ladies' waiting-room, who, on being interrogated by Mr. Durdle, stated that she had come to the station to see a lady off by the 6 A.M. train, and had been resting herself since that time. The lady gave her name and address, which Mr. Durdle found to be correct, and he allowed her to go at large. On Wednesday Dr. Lankester held an inquest on the body, when the surgeon who had examined it, stated that it had been strangled by the ligature round its neck. There was also a severe fracture of the skull over the right parietal bone, but the immediate cause of death was strangulation. The coroner said there could be no doubt that this was as atrocious and cruel a murder as that of Mr. Briggs, and endeavours ought to be made to bring the guilty parties to justice. In Paddington, taking its size and population, there were more infanticides than in any other district of the metropolis, and being a wealthy parish the authorities ought to offer a large reward for the apprehension of the delinquents, for in this case the probability was that there was a second party concerned. He would adjourn the inquest for three weeks to enable the police to exercise their vigilance.

CASE OF CRUELTY AT GREENWICH.—A few days since a girl was found in the market-place at Greenwich in an almost exhausted state, and with a long iron chain fastened around her neck by means of a padlock. The girl, who is supposed to be about 11 years of age, was discovered by the market-constable, having evidently made her escape from some place of confinement. In addition to her sufferings from long confinement, her emaciated state indicated that she had also endured the horrors of starvation. The only thing that could be ascertained from her was that her name was Sarah White. Her mind appeared to be in such a state that she was unable to name the place she had escaped from. The unfortunate creature was removed to the Greenwich Union, where she remains, under the treatment of the house-surgeon; and the police are making strict inquiries about the matter.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, September 10, were 1352. The average number in the corresponding week of the 10 years, 1854-63, excluding the deaths from epidemic cholera in 1854, and corrected for increase of population, was 1212. The present return is therefore 140 above the average. During the week the births of 954 boys and 985 girls, in all 1939 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1852.

Provincial.

ABINGDON.—The Memorial to the Prince Consort in this town is now almost completed, and it is hoped that her Majesty will inaugurate it on her return to Windsor. The base of the Memorial is quadrangular, and there will be a medallion of the Queen in each panel, with bands of roses on the shafts at each angle. It will support four columns of red Mansfield stone, upon the angles of which the British lion, holding the quartered and emblazoned arms of the Prince Consort and her Majesty, will be carved. The main octagonal shaft will rise in the centre of these columns; its panels will contain suitable carved emblems, and it will be surmounted by a richly sculptured and clustered capital, from which will ascend five shafts, carved, and displaying the armorial bearings of the borough, county, and diocese. The pedestal will be crowned by a colossal statue of the Prince, in his robes as Chancellor of the Order of the Garter.

BASINGSTOKE.—The disbandment of the Basingstoke Rifle Volunteer Corps for not obeying the command of the officer at Guildford on Easter Monday, has been confirmed by Earl De Grey and Ripon, after a full consideration of the evidence adduced at the late court of inquiry held at Winchester.

BATH.—The 34th annual meeting of the British Association commenced in this city on Wednesday, under the presidency of Sir Charles Lyell, Bart. The President's inaugural address, instead of taking a general review of the progress of science in all its departments, like those of former Presidents, confined itself to the history and origin of the hot springs of Bath, and to the geological phenomena connected with them, discussing at great length all the theories to which these phenomena have given rise among the past and present schools of geologists. The address, which was of great length, was loudly cheered during its delivery and at its close. On Thursday the different sections assembled in the rooms appointed for them, for the reading and discussion of reports, the presidents being as follows:—Mathematical and Physical Science, Professor Cayley; Chemical Science, Dr. Odling; Geology, Professor Phillips; Zoology and Botany, Dr. J. E. Gray, of the British Museum; Physiology, Dr. Edward Smith; Geography and Ethnology, Sir Roderick I. Murchison; Economic Science and Statistics, Dr. William Farr; Mechanical Science, Mr. Hawkshaw. On Thursday evening there was a *conversazione* in the Assembly Rooms. Yesterday the sections met at usual. To-day, after the meeting of the sections, excursions will be made to Frome, Holwell, and the Vallis; Stanton Drew and Radstock. In the evening a banquet will be given in the Guildhall by the mayor of the city. On Monday, the sections will meet as usual. The general committee will meet in the afternoon to decide upon the place of meeting in 1865. In the evening Dr. Livingstone will deliver an address in the Theatre concerning his explorations in Africa during the last six years. On Tuesday, the sections will meet as usual. In the evening there will be a Microscopical Soirée in the Assembly Rooms. The instruments collected will be insured during their railway transit for not less than 6000*l.* On Wednesday the concluding general meeting will take place, and in the evening there will be a banquet in the Guildhall, given by Mr. Tite, M.P. On Thursday, excursions will be made to Bristol and Clifton, to Salisbury, Old Sarum, and Stonehenge.

BILLINGHAY. — On Friday a destructive fire took place in this village, which is three and a half miles from Tattershall, five from Kirkstead, and twelve from Boston. It broke out in the chimney of a thatched hovel, in a yard belonging to a wood dealer. The wind at the time was blowing a gale, and the flames spread so quickly to the other thatched cottages in the neighbourhood, that they were not extinguished until nine cottages, the Primitive Methodist Chapel, and numerous outbuildings were burnt down. Nearly 100 men, women, and children are now accommodated with temporary lodgings in the village school-room, and their sufferings must be very great for some time, as they have lost all their clothes and furniture in the fire. On the following day another fire broke out in the stack yard of Mr. John Sharpe, of Billinghay fen. The stacks were wholly consumed, but the fire was prevented from spreading beyond the yard.

BIRKENHEAD.—Mr. Jacob Jacobson, a person who has hitherto held a respectable position, and been employed as assistant overseer of Oxton, has been sent to Chester Castle, under a commitment order from the Commissioners of Assessed Taxes, for a deficiency of more than 47*l.* in his accounts. It is stated that he is also deficient to a considerable amount in his income-tax collections.

BIRMINGHAM.—On Monday the purchase of Aston Hall and Park was completed at the Town Clerk's office. The keys were handed to the mayor, as possession of the hall and 43 acres of land, with a chair by way of possession of the chattels and effects. The Park will be formally opened by the mayor on an early day.—The receipts of the recent Festival far exceed the expenses, and the funds of the General Hospital will be benefited to the extent of at least 3000*l.* by the speculation. The returns amount in all to 13,166*l.* 6*s.* 9*d.*

CLAYBROOK.—The announcement that Bishop Colenso had agreed to preach a sermon for the village schools in the church of this parish on Sunday afternoon, and that the Bishop of Peterborough would exercise his episcopal authority to prevent the sermon being preached, created considerable excitement in Leicestershire last week. In spite of the Bishop of Peterborough's disapproval of the proposed service, the public announcement that Bishop Colenso would preach was repeated on Saturday, and in the evening of that day the Bishop, accompanied by a lay friend, arrived from London at Claybrook vicarage, the residence of the Rev. R. H. Johnson, who holds the vicarage of Claybrook in conjunction with the rectory of Lutterworth, about four miles distant. Shortly after the Bishop's arrival, Mr. Gates, of Lutterworth, who acted as agent of the Bishop of Peterborough, presented himself at the vicarage and inquired for Bishop Colenso. The vicar had an interview with Mr. Gates, and during the conversation Mr. Johnson was served with an inhibition from the Bishop, forbidding him to allow a sermon to be preached by Bishop Colenso. A similar document was served upon the Rev. Lewis Wood, Mr. Johnson's curate and son-in-law. Mr. Gates then renewed his request that he might see Bishop Colenso. The Bishop said that he knew nothing of Mr. Gates, and as he did not desire to have any communication with him he declined to see him. Mr. Gates then left the vicarage. On Sunday morning, as Bishop Colenso, accompanied by his friend and Mr. Johnson, were passing through the churchyard, a person holding a document in his hand attempted to approach the Bishop, but was prevented by the Bishop's friend, and, during a slight altercation that took place, Bishop Colenso and Mr. Johnson passed into the church, and along the centre aisle to the chancel. They were followed by the agent of the Bishop of Peterborough, who, accompanied by the churchwardens, proceeded to the chancel, where Bishop Colenso was kneeling at the communion table. While the Bishop was kneeling, the Bishop of Peterborough's agent, holding out a written document, addressed some remarks to the Bishop, who, however, did not notice him. The agent then threw the notice at the Bishop, and it fell at his feet, and there remained until the Bishop had passed out of the church at the conclusion of the service, when it was picked up by some official connected with the church. Mr. Johnson announced at the morning service that his diocesan had served him with a notice commanding him not to allow Bishop Colenso to preach in his church, but intimated that the Bishop would publish the sermon he had intended to preach, and that, to prevent disappointment, he would address a meeting at the school-room in the evening. There was a large attendance at the afternoon service, and Bishop Colenso, attired in his episcopal robes, took his place at the communion table. The service was conducted throughout by the Rev. Lewis Wood, the curate, who, before the sermon, delivered an address to the congregation with reference to what had occurred in the morning and on Saturday evening. He said that Bishop Colenso, on hearing that the Bishop of the diocese had forbidden the vicar to allow him to preach in the church, had at once declared that he would not be the cause of an unseemly

strife in the parish, and would abstain from occupying the pulpit. He then referred to Bishop Colenso's work, and said that Mr. Johnson, the vicar, and himself heartily and entirely approved that work, and recommended the parishioners to read and study it for themselves. They believed the Bishop to be a true and faithful servant of God, who was doing his utmost to advance the cause of true religion, and to promote the solid lasting welfare of our national Church. He compared the manner in which he had been treated by the Bishops and others, to the treatment of Wickliffe, the great reformer of Lutterworth, who was defamed and calumniated, and would have been burnt alive if the Bishops of his time could have done it. He said that it was their firm belief that, as Wickliffe put first an open English Bible into the hands of his countrymen, so the Bishop of Natal had been one of the first to do his part—and he had done it manfully and well—to advance still further the work of the Reformation, and to enable English laymen to read that Bible for themselves, when opened, thoughtfully and intelligently, as God, who gave His book, would have them read it, and not with the blind, unreasoning credulity of a priest-ridden people. They thanked God that they had lived to see this day—a day of increased light, a day of increased love of the truth, and of simple, straightforward utterance of it; a day of hope for the future of the Church of England. At 6 o'clock the village schoolroom was crowded, and a large number of persons were unable to gain admission. Bishop Colenso addressed those assembled on "Our Father in Heaven." The crowd outside became so impatient to hear him that an adjournment to the green was resolved upon, and Bishop Colenso continued his address standing upon a table in the open air. He impressed upon his audience the importance of conveying the message of the love of God to the millions who are ignorant of it. He then gave some interesting particulars of the mission work in his own diocess—a district, he said, "which the Queen has placed under my charge as Bishop, with regard to the affairs of the Church of England." He read several extracts from letters he had received from native converts, while he had been in England, as evidence of the solid work that had been done in the diocess in preparing those natives for future usefulness among their fellows. At the conclusion of the address the people assembled sang the "Doxology," at the Bishop's request, and he then bade them affectionately "Good-bye."

CHATTERIS.—One of the most frightful fires that ever occurred in the Isle of Ely, took place on Wednesday, on the farm of Mr. Smith Billups. There was a high wind blowing at the time, and the progress of the flames was so rapid that more than 70 houses and cottages were destroyed in about two hours, rendering between 80 and 100 poor families houseless and destitute. The fire is supposed to be the work of an incendiary.

HERNE BAY.—On Friday afternoon, Mr. Surtees, M.P., who has been staying some time at Broomfield House, Herne, started for a drive in a pony phaeton, to this place, accompanied by Mrs. Surtees and their child, with a footman in attendance. After passing the turnpike-gate the pony shied and ran into an adjoining field, upsetting the vehicle. Mrs. Surtees and the child were taken up in a state of insensibilty, the former having pitched heavily on her head. The child, though not dead when taken up, did not long survive. Mrs. Surtees, it is feared, sustained fracture of the skull and total destruction of the sight of one eye. Mr. Surtees and the footman escaped with a few bruises. The Jury at the inquest on the child returned a verdict of Accidental Death.

LEEDS.—The execution of the two condemned murderers, Myers and Sargisson, tock place on Saturday in front of Armley Gaol, and is said to have been the first execution which ever took place in Leeds. The culprits admitted the justice of their sentence, although Sargisson maintained to the last that his accomplice in the murder of John Cooper had taken a more active part in the deed than himself. In Myers' case the only witness of the murder was his own little girl, who saw him cut her mother's throat, and who was obliged to come forward and give fatal evidence against her father. Both men showed a disposition to comply with the exhortations of their religious advisers, and were visited while in prison by the Bishop of Ripon, who spent an hour with each culprit. It is said that 80,000 persons attended the execution, which passed off without any disorderly conduct. Great excitement, however, was subsequently caused in the town by the statements of some Sheffield newspapers that Myers lived for 20 minutes or half an hour after the drop fell, respiration having continued through the wound in his neck, caused by his attempt to commit suicide. It is now said that these statements were founded on misapprehension. The governor of the gaol and all the other officials who were on the scaffold state that Myers died instantly; that he fell "plump," and never moved a muscle afterwards. The surgeon states that after the first shock of strangulation there was a slight attempt at respiration, which might have continued for a few seconds, but it was quite plain that death was instantaneous. The wound in the throat certainly bled on the rope, compressing the upper rings of the trachea, but it was only as much blood as stained the lower part of the white cap by which the executioner had covered the face. Myers never struggled after he fell, while Sargisson exhibited signs of life for two or three minutes afterwards. A screen which had been erected in front of the scaffold completely concealed the bodies from the enormous crowd, so that the populace could not see anything that took place after the drop fell.

LIVERPOOL. — The local papers state that the prisoners, James P. Brice and James Scott, who were convicted at the last Assizes of the attack on Dr. Rowe, and sentenced to 18 months' imprisonment with hard labour, are now employed as bricklayers' labourers in the erection of a new wing at Kirkdale Gaol.—At Vauxhall Foundry, on Friday, a man named Farrell was assisting in lifting a cylinder, weighing 5 tons, from the pit in which it had been cast, when a ring in the tackling, by which the heavy piece of metal was suspended, gave way, and the cylinder, falling to the ground, rolled into the pit from which it had just been raised. On account of the breaking of the tackling the huge metal cylinder was allowed to remain in the hole, none of those engaged in the work having the slightest suspicion that one of their fellow-workmen was buried beneath it on the fiery sand. On Saturday morning Mrs. Farrell went to the foundry to inquire about her husband, but was told that he was not there, and it was not until 17 hours after the fall of the cylinder that it occurred to two of the men that it was possible the man might be in the pit, and they went in and raked about with sticks. In a short time they discovered the foot of a man projecting from under the edge of the cylinder, and on raising the cylinder the body of Farrell was discovered on the bed of the pit, the heat of which was even then oppressive. His head was completely flattened, and the body was roasted so much that portions of the charred flesh fell off. The jury at the inquest returned a verdict of Accidental Death, with a statement of their opinion that the accident resulted from the insufficient strength of the ring employed at the end of the tackle; and that there was gross carelessness on the part of deceased's fellow-workmen in not inquiring properly concerning him at the time.

MANCHESTER.—At the monthly meeting of the Executive Relief Committee on Monday, the Hon. Secretary reported that the balance in the bank was now 124,400*l.* 2*s.* 4*d.* The reduction in the numbers relieved during last month had been 2934, since the end of January in this year 102,755, and since the height of the distress in January, 1863, 375,249. In 17 districts the local committees had been able to suspend relief; and the pressure was now confined to Ashton, Glossop, Preston, and Wigan. Mr. Commissioner Farnall reported that on the 3d inst. there was an increase in the number of persons receiving parochial relief, as compared with the 6th ult. of 61, and that not more than 2000 out of 3860 able-bodied men now in receipt of relief were fit to be employed on public works. Mr. Rawlinson reported that 80 towns, townships, parishes, and districts had adopted the provisions of the Public Works Act, and in most of them works were in progress. The total amount sanctioned by Parliament was 1,850,000*l.* Out of this sum the Poor Law Board had ordered, and the Exchequer Loan Commissioners had paid over, 577,609*l.*, leaving a residue of 1,272,391*l.*, a large portion of which had been applied for. The weekly wages on these public works varied from 12*s.* to 20*s.* per man. The report added that the experiment of excavating works by distressed cotton operatives had now been tried on a large scale; and though some of the works, town sewering and house draining, might have been considered beyond the scope of such labour, the determination and intelligence of the men had overcome all difficulties.

NEWCASTLE-ON-TYNE.—On the 8th inst. an inquest was held on the body of Mr. William Keith Murray, brother of Sir Patrick Keith Murray, of Ochtertyre, Perthshire. He had formerly been an officer in the 60th Rifles, but had left the regiment and had come to Newcastle for a course of instruction in Messrs. Palmer's works, at Jarrow. On the 7th inst. about midnight, he entered the billiard-rooms of the Central Exchange, which he was in the habit of frequenting. After being there some short time he was supplied with a glass of gin, and shortly after he was seen putting some liquid into it. As soon as he swallowed it he suddenly collapsed, and sank with his head on one side. A medical man who was present attended to him, and while the deceased was sitting in a chair in this condition a small bottle which smelt of prussic acid was taken out of his pocket. He was subsequently taken to the infirmary, where he shortly afterwards died from the effects of the poison. He had been in the habit of taking laudanum in considerable quantities. The jury returned a verdict that death was caused by prussic acid, administered by himself, and that there was no evidence to show the state of mind he was in when he took it.

NORWICH.—At the Blofield Petty Sessions, a few days since, an information was laid against Mr. Burroughes, late M.P. for East Norfolk, by the local inspector of nuisances, for not having proper privy accommodation and drainage on his cottage property. It was stated in support of the information that Mr. Burroughes owned three cottages in Hemblington; that they consisted of two rooms each, and that each cottage was occupied by a family. In the first there were a man, his wife, and seven children; in the second a man, his wife, and six children; in the third, a man, his wife, and two children. These three families, consisting of 21 men, women, and children, had not a single privy; the only places they had to make use of were holes, one immediately opposite the cottage door, and another within a few feet of the cottage door. For the defence a surveyor was called, who stated that there was no offensive smell on the premises, that the drainage was good, that there was a good supply of water, and that the holes referred to were at some distance from the cottages. The Chairman said that the majority of the bench considered that a nuisance existed under the 12th section of the Act of Parliament; there was not sufficient accommodation, and the bench would make an order for abatement by October 10. The costs were allowed. A second information was then preferred against Mr. Burroughes for causing, by his default, a nuisance to exist on the premises, in the occupation of Jonathan T. Throne, at South Walsham, by not providing proper accommodation. It appeared that in this case there was no drainage or accommodation, and that there was a hole in the garden where the refuse was put, which was not covered up in any way. The family consisted of a man, his wife, a grown-up daughter, her illegitimate child, and two grown-up sons. The premises were in a wretched state generally, the thatch broken away, the water pouring into the pent-up room below, &c. For the defence, evidence was adduced to show that a bricklayer had inspected the premises, and that there was nothing offensive or unwholesome about them. The Chairman said that in this case the magistrates were also unanimous that there was not sufficient privy accommodation—in fact, there was none at all. An order was made for the abatement of the nuisance by October 10, and costs were allowed. Notice was given of appeal to the Quarter Sessions.

PLYMOUTH.—The English ship Jane D. Cooper, with mahogany, from Manzanilla and New York, put into Plymouth Sound on Monday, with her steward, a man of colour, in irons on a charge of having poisoned the captain, and subsequently threatened violence to one of the seamen, who mentioned his suspicions. The prisoner, who denied the charge, had been 17 days in irons when the ship entered the Sound. By the advice of the magistrates the ship has since sailed with the prisoner for Bremerhaven, to which port she was bound.

PRESTON.—About six months ago the magistrates of Lancashire agreed to appoint Roman Catholic gaol chaplains under the Prison Ministers' Act, for Kirkdale and Preston Houses of Correction. Since that time they have granted different sums of money for the alteration and fitting up of certain portions of the gaols so as to facilitate the worship of the Roman Catholic prisoners, and have also appointed chaplains to conduct the services. At the annual meeting on the 8th inst., Lord Stanley in the chair, Mr. T. B. Addison, Recorder of Preston, moved that, in accordance with the recommendation of the visiting justices of the House of Correction at Preston, a sum not exceeding 40*l.* be granted for the purchase of the vestments, chalice, linen, crucifix, candlesticks, and other articles necessary to enable the Roman Catholic minister to celebrate the services of his Church. The motion was seconded by Mr. R. Townley Parker. Mr. S. Parker moved as an amendment, "That no crucifix or graven image be introduced within the walls of the Preston gaol at the expense of the county." The amendment fell to the ground for want of a seconder, and on the court dividing on the original motion, 18 hands were held up for it, and 19 against it. The names were then taken with the following result:—For the motion, 22; against it, 21. The motion was declared to be carried.—On Tuesday morning a dreadful tragedy was perpetrated by a man named William Berry, miller, of 29, Ormskirk Road, this town. Since Whitsuntide he has been in a despondent state, partly through business affairs, arising from an unfounded jealousy of his wife. Early on Tuesday morning the woman was heard screaming, and it was subsequently discovered that she had been stabbed in several places about her breast, and that her throat had been cut. She bled very profusely, and died about half an hour after she was found. The man then made an attempt upon his life, and was found sitting on a chair with his throat cut, and the latest reports state that he is not likely to survive. The murdered woman was the mother of two children, and expected to be shortly confined of a third.

SANDRINGHAM.—Great preparations are making for the reception of the Prince and Princess of Wales for the shooting season, after their return from Denmark in October. The prospects of the shooting season on the Royal estate are very good, there being a large quantity of partridges and an abundance of pheasants and other game. The alterations and improvements which have been made, under the direction of Mr. Carmichael, the resident steward, have already completely changed the aspect of the estates. The plantations, which had become completely overgrown and choked with underwood, have been thinned, portions of the park have been raised and planted, and excellent roads made; a new and commodious house has been provided within the park for the head keeper, and on the table land before it have been constructed 18 large pheasantries, each being about 50 feet square, all connected with each other, and forming one large and compact block. The kitchen garden, which has been laid out, and which is to supply with fruit and vege-

tables the Royal table throughout the year, both at Sandringham and in London, comprises 15 acres, 7 of which are completely enclosed with brick walls, that on the north side being of great height, and parallel with it are six large grape conservatories, each 50 feet long. The choice fruits and vegetables are to be grown within the inner enclosure, while beyond that fruit trees have been planted, and the ordinary fruits and vegetables grown. The new labourers' dwellings, each of which is provided with three sleeping apartments, are nearly completed, and others are to be commenced. All the old cottages have been repaired, painted, and drained. The road on the north-east side of the park, leading to West Newton and Appleton, has been widened; and the wild underwood that grew out into the road has been replaced by a neat cossly-worked fence. The stables have been extended so as to insure uniformity of appearance, and afford sufficient accommodation for his Royal Highness's stud. The court yard is to be paved with the best Aberdeen granite. The Controller's house, situate in the park to the south-west of the Hall, is completed, the carriage drive and lawn are laid out, and offices, &c., fitted up. No alteration has as yet been made to the Hall. A model has been constructed according to the plans of Mr. Humbert, and if they are carried out a splendid palace will supersede the present modest mansion of Sandringham House. The beautiful Norwich gates and their accompaniments are on the point of completion, the decorators being now engaged in putting the finishing touch to them. They are to be faced with green bronze, and on the summit of each of the four pedestals is a griffin rampant bearing a shield. In the centre and surmounting the whole within a wreath, the Royal arms inside representing the crown and feathers, and outside a shield bearing the arms of England and Denmark united. The lower panels of the two principal pedestals have on the inner side the modern arms of Norfolk in relief, consisting of a castle and two angels with drawn swords, and on the outside the central position is occupied by the old Norfolk arms, above which are the arms of Norwich and Great Yarmouth, and below the arms of Lynn and Thetford. The gates with the additional trellis on each side form a crescent, and placed as they are at the end of the beautiful avenue of limes, at the principal entrance to the park, present a magnificent appearance. The Home Farm falls into the hands of the Prince of Wales at Michaelmas.

SHIELDS.—On Wednesday night, about 11 o'clock, a fatal explosion took place in Seghill Colliery, about eight miles from this town, while 19 men and boys, forming the night shift, were at work in the pit. It was at first supposed that all hands had been killed, but by the immediate efforts made at bank, 11 of them were got out of the pit alive. The remaining eight were killed. The bodies were all recovered on Thursday night. At the inquest on Monday it was shown that the explosion was caused by gas from an old working, ignited by a lamp which had got broken by a fall of stone. The jury returned a verdict of Accidental Death.

TIPTON.—A great strike of colliers against a notice from the masters for a reduction of 6*d.* a day in the men's wages has been organised throughout the whole of the South Staffordshire mining districts. On the 8th inst. between 8000 and 10,000 men assembled at Tipton to discuss their grievances; while another meeting, attended by 3000 persons, was held on the same day at Deepfields; and on Monday last a meeting of from 5000 to 7000 was held at Cannock Chase. At the Duffield meeting an immediate strike was determined upon, and at all the meetings resolutions were passed and arrangements made for bringing out on strike the whole mining population of South Staffordshire. It has been suggested that two well known County Court Judges of the district should act as arbitrators; but the proposal does not seem to have suited the views of all concerned.

Scotland.

FATAL BOILER EXPLOSION.—On Friday afternoon a boiler at the print works of Messrs. J. & A. Conbrough, Strathblane, about 12 miles from Glasgow, exploded while the works were in full operation. The furnace door was projected with great force against a dye-house immediately opposite, the wall of which was blown down. It then traversed the whole length of the interior, knocking down the wall at the opposite end, with a considerable portion of the roof. When the walls gave way the interior of the dye house was exposed to a deluge of scalding water mixed with steam, occasioning injuries which in several cases proved fatal, in addition to those who were hurt by the falling materials. Fourteen persons were injured, seven of whom—a woman, three boys, and three men—subsequently died; and of the remaining number, three remain in a very dangerous state.

EXTENSIVE FORGERIES IN KIRKWALL.—Mr. William Spence, a well-known merchant in Kirkwall, has been imprisoned for extensive forgeries. He was an elder in the United Presbyterian Church, and from the interest which he took in religious matters, had previously enjoyed a high reputation. The defalcations as at present ascertained amount to 2580*l.* Mr. Spence made no attempt to hide or deny his criminality. He was privately examined in the presence of the Sheriff and Procurator-Fiscal, and it is understood that his trial will take place in the High Court of Justiciary in Edinburgh, in November.

Law.

COURT OF CHANCERY (Before Vice Chancellor Kindersley, the Vacation Judge, at Southampton).—*The Lords of Croquet.—Reid v. the Earl of Essex and Another.*—This was a suit instituted by Captain Mayne Reid, the well-known author of many popular Indian novels, against the Earl of Essex and Miss Emily Faithfull, the Earl's publisher, to restrain the plaintiff's copyright in his recent work on "Croquet." The bill gives some account of the introduction into England of this national game, and of the extraordinary development which has since been accomplished in its science and rules. It appears from the statements of the bill that the plaintiff's work (of which he is the sole author and copyright proprietor) was published for him in the latter part of last year by Mr. Sweet, of King William Street, Charing Cross; that until then there had been short printed instructions had been sold in accompaniment and explanation of the game; and that owing to the poverty and vagueness of those instructions, and their failure to provide for numerous questions which arose, each original ground had from time to time, according to its own caprice and for its own local purposes, enlarged the existing rules and added new rules and new technical expressions, thereby occasioning a wide-spread and inconvenient variety in the rules and vocabulary of the game. Under these circumstances the plaintiff, considering that a comprehensive set of rules would, if well drawn up in respect of [illegible] and language, and introduced to the public, be admirably adapted throughout the country, determined to compile and publish such a work to add to it all requisite or explanatory notes and practical instructions, and, in fact, to compose a work which (so far as his intention and endeavours would avail) should prove an authoritative handbook on the game. He, accordingly, bestowed more than four months' labour and considerable expense in studying the science of the game, and all practical details connected with it, and particularly in collecting, investigating, and developing the existing rules and in inventing new rules and reducing the knowledge, views, and materials so acquired into an original and well-digested written shape. His work "Croquet" was the result. It contained, amongst other matters, no less than 126 "rules," with explanatory foot notes subjoined, all which were his own original composition. And the bill alleges that by far the greater part of the rules were, even in substance and tenor, first published in and by means of the work in question. It appears that the defendant, Miss Emily Faithfull, lately printed and published for the Earl of Essex, her co-defendant, a book called "The Rules of Croquet, revised and corrected by an Old Hand," which has already reached a second edition. The bill alleges that this book was a piracy of the plaintiff's copyright, being a copy, partly verbatim and partly with merely colourable alterations, of the greater part of his rules and footnotes, and that its sale (the price being only 6*d.*) would seriously interfere with that of the plaintiff's work, which, being of considerably larger bulk, costs 2*s.* 6*d.* It appears that the Earl of Essex had procured the "Old Hand's Book" to be compiled for him by a friend for the purpose of its being regularly issued and sent out with the sets of implements known to the toy trade and to the public as the "Cassiobury Croquet," and that he being individually innocent of the piracy, and not being then aware that the work in question was a legal infringement of the plaintiff's copyright, had declined to discontinue its publication. The plaintiff, therefore, filed his bill, praying for the usual injunction and other relief, and now moved upon notice for an injunction with the hearing. After hearing the case of the plaintiff, both the defendants (who had only recently become aware of the real nature and extent of the piracy) consenting thereto, the Vice-Chancellor made the following order:—That a perpetual injunction should issue, restraining the further publication, &c., of the "Old Hand's" book; that all copies remaining unsold should be delivered up to the plaintiff to be destroyed; and that the earl should forthwith pay the plaintiff 125*l.* by way of compensation for injury already occasioned by the infringement, together also with all costs of suit (which are said to be 185*l.*)

Sporting.

DONCASTER RACES.

TUESDAY.—*Fitzwilliam Stakes.*—Mr. Crook's Adventurer beat Master Richard, Victorious, and 13 others. *Glasgow Stakes.*—Mr. J. Osborne's Brown Bread beat Lord Waldegrave, Brother to Bird on the Wing, and St. Leger. *Revival Plate.*—Marquis of Hastings's Attraction beat La Mechante, Caryophyllus, and Wellan. *Selling Stakes.*—Mr. Jackson's Catalogue beat Lazzaroni, Nell Digby, The Lafer, Lady Cochrane, and Busy Bee. *Great Yorkshire Handicap.*—Mr. Fleming's Magnum Bonum beat Revolver, Raglan, and 15 others. Won cleverly by a neck, Revolver defeating Raglan by a couple of lengths for second. *Champagne Stakes.*—Mr. J. Merry's Zambesi beat Gardevisure, Reginella, and 7 others. *Doncaster Plate.*—Mr. C. Snewing's Barter beat Gaily, Jane Shore, and 8 others. *Filly Stakes.*—Mr. J. Osborne's Wild Agnes beat Sister to Ascham, Fair Melrose, Sympathy, and Spice.

WEDNESDAY: THE ST. LEGER DAY.—*Sweepstakes.*—Captain White's My Fancy beat Attraction, Prescription, Moulsey, Wings of the Wind, and Fleur des Champs. The *Municipal Stakes.*—Mr. R. C. Naylor's Blondina beat Duke of Beaufort's b. or br. f. Siberia, Plutus, and Lord Glasgow's br. f. by Young Melbourne. The *St. Leger Stakes.*—Mr. W. I'Anson's ch. c. Blair Athol beat General Peel, Cambuscan, Miner, Black Rock, Claremont, Baragah, Ely, Knight of Snowdon, and Brindisi. Betting—2 to 1 agst Blair Athol, 3 to 1 agst General Peel, 11 to 2 agst Miner, 8 to 1 agst Baragah, 100 to 6 agst Cambuscan, 25 to 1 each agst Ely and Knight of Snowdon, 30 to 1 agst Claremont, and 50 to 1 agst Black Rock and Brindisi. After one failure they were despatched from the post in a drenching shower of rain, which speedily destroyed the difference in the colours of the riders. General Peel got away with a slight lead, having with him Ely, Blair Athol, Baragah, Knight of Snowdon, and Claremont, the next division being headed by Miner and Black Rock, Brindisi and Cambuscan bringing up the rear. After running a quarter of a mile General Peel was pulled back, which left Ely in possession of the lead, Miner second, Baragah third, followed closely by Claremont, Ely, General Peel, and the favourite; as they neared the Hill, Miner assumed the lead, followed by Baragah, Claremont, and Ely, but on rounding the bend they were joined by the two favourites and Cambuscan, this lot running in company to the rifle butts, where Baragah was observed in advance, having Claremont in his rear; the pair, however, were headed at the Red House by Ely, followed by General Peel, Miner, and Cambuscan, so closely together that it was difficult to discern which was leading. When fairly in the straight Ely gave way, and was immediately headed by General Peel, who was shortly after joined by Cambuscan and Blair Athol, who ran in company to the distance, when Blair Athol attempted to divide General Peel and Cambuscan, but had to pull round them, which lost him some ground, but waiting with patience to the enclosure, he came up, and in the next few strides won, amid the most vociferous cheering, in a canter by a couple of lengths, General Peel obtaining the second money by a head from Cambuscan, who finished four lengths in advance of Miner; Ely fifth, Baragah sixth, Brindisi seventh, and Knight of Snowdon next. Black Rock and Claremont trotted in the last two. *Stand Plate Handicap.*—Mr. Drewitt's Diomed beat Nell Digby, Argonaut, and 12 others. *Handicap Sweeps.*—Mr. Elphinstone's Tesane beat Anonyma, Mongrel, and 18 others. *Corporation Plate.*—Mr. John Day's Master Richard beat Grace Darling, Lost Lynn, and 11 others. *The Member's Plate.*—Baron Rothschild's Lycoris beat Ambrosia, Lizzie Bob, Cadet Gu, and Merry Wife.

THURSDAY.—*The Zetland Stakes.*—Mr. Joseph Dawson's Mathematician walked over. *The Portland Plate.*—Mr. W. Partington's Persimmon beat Wenlock, Lynn, and 15 others. Won in a canter by seven lengths. At the commencement of the race Flying Fish crossed her legs and fell heavily, rolling over several times and breaking her thigh. She was subsequently destroyed. The Cobbler rolled over her, and Howarth, his rider, was seriously injured. *The Champagne Stakes.*—The Marquis of Hastings's Caterpillar beat Flower Way, Lynx, and 4 others. *The Corporation Handicap.*—Sir J. Hawley's Wenlock beat Twilight, Blue Mantle, and 16 others. *The Bigginton Stakes.*—Mr. Osborne's Wild Agnes beat Victorious, Furze Chat, and Warwicktop. *Sweep.*—Captain Grey's Audax beat Brahma, Joker, and 7 others. *The Scarborough Stakes.*—Mr. W. Phillips's Persimmon beat General Peel.

FRIDAY.—*The Stakes.*—The Beaver beat King George and Coup d'Etat. *Three Parts.*—Washington beat Skylark, Lytham and 11 others. *Dane Star Stakes.*—Lily beat Coast Guard, Tooi Toi and 6 others. *Scarborough Hotel Cup.*—Deerhurst beat St Alexis, Chicquot the Jester, and 2 others. *Doncaster Cup.*—General Peel beat Hippolyta, Miner, and Rapid Rhone. Won by a head. *Nursery Stakes.*—Vesta beat Wild Poppy, Club Queen, and 10 others. *Low Hall Stakes.*—Bellington beat Eva to Brave, Syren, and 4 others. *Sweeps.*—Cambuscan beat Cossa Ladra.

THE FORTHCOMING PRIZE FIGHT.—On Thursday there was a great meeting of patrons of the prize ring at the Three Tuns, Moor Street, Soho, to witness the arrangements for depositing a portion of the 500*l.* stakes on the forthcoming fight for the championship between Jem Mace and Joe Coburn. The final deposit will be made on Tuesday next. It has been settled that the fight shall take place on Tuesday, the 4th of October, and that if by the 23d inst. the place of fighting has not been decided upon, the men or their deputies are to toss for choice of some place in Ireland, within 100 miles and over 20 miles of Dublin. At present the betting is not very brisk, but odds are given in favour of Mace.

Obituary.

THE EARL OF CARDIGAN died at his residence in Piccadilly on Thursday morning, at the advanced age of 82. The deceased George Cadogan, Viscount Chelsea, Baron Cadogan, of Oakley, Bucks, and Baron Oakley, of Caversham, Oxfordshire, was born in 1782, and succeeded to the baronies (save the barony of Oakley, which he acquired by letters patent in 1831), as third earl, at the death of his brother in 1847. He entered the navy in 1795, and for 29 years of his professional career saw much active service. He commanded the Pallas in the Walcheren expedition; commanded the naval forces at the destruction of Zara, in 1814, for which he received the Austrian order of Maria Theresa. He attained the rank of Rear-Admiral in 1841, and that of Admiral in 1857. He married, in 1810, the daughter of J. Blake, Esq., of Ardfry, and sister of the first Lord Wallscourt, by whom he leaves three sons and two daughters. His lordship is succeeded by his eldest son, Henry Charles Viscount Chelsea, born in 1812, married in 1836 his cousin, third daughter of the Hon. and Rev. Gerald V. Wellesley, niece of the late Duke of Wellington, secretary of embassy at Paris and St. Petersburgh, and M.P. for Reading from 1841 to 1847, and for Dover from 1852 to 1857.

LIEUT.-GENERAL BYAM, Colonel of the 18th Hussars, died at Byam House, Brighton, on Friday last, in his 69th year. He entered the army in 1811, and served in the campaigns of 1812, 1813, 1814, and 1815, including the battles of Salamanca, Vittoria, Orthes, and Waterloo, besides minor affairs. He was severely wounded by grapeshot while carrying the regimental colour of the 38th at Salamanca, and was slightly wounded at Waterloo. He became a Major-General in 1851, and Lieut.-General in 1858. He had received the war-medal with three clasps for his services, and obtained the colonelcy of the 18th Hussars in 1858.

BIRTHS.—On the 14th inst, at 11, Duchess Street, Lady R. CECIL, of a son—15th inst, at 17, Eaton Place South, the Hon. Mrs. C. SPRING RICE, of a son—13th inst., at Kilvington Hall, the Lady CECILIA TURTON, of a daughter—11th inst, at Hadlow Park, Kent, Lady YARDLEY, of a son—10th inst, at Bentley Hall, near Ashbourne, the wife of ROWLAND HUGH COTTON, of a daughter—9th inst, at Aberdeen, the wife of Captain FINLAY, 78th Highlanders, of a daughter—9th inst, at Sandgate, the wife of Colonel Grey, 85th Light Infantry, of a daughter.

MARRIAGES—On the 6th inst, at Thornton Hall, Bucks, Captain FITZGERALD, eldest son of the late T. Fitzgerald, Esq., of Shalstone House, Bucks, to MARY, eldest daughter of the Hon. RICHARD CAVENDISH—8th inst, at Castle Bellingham Church, Sir THOMAS P. BUTLER, Bart., of Ballintemple, Carlow, to HESTER ELIZABETH, eldest daughter of Sir ALAN E. BELLINGHAM, Bart., of Castle Bellingham—8th inst, at Finedon, Captain EDMUND LEWIN TAVERNER, of the Bombay Staff Corps, eldest son of Edmund Taverner, Esq., of Stoke Newington, to MARY, fifth daughter of the late HERBERT MACKWORTH, Esq., R.N., and granddaughter of the late Sir Digby Mackworth, Bart., of Cavendish Hall—6th, at St. Cross, Suffolk, WILLIAM OLIVER JACKSON, Esq., of Ahanesk, Cork, to MILLICENT ANNE, daughter of the late Lieut.-General Sir JOHN ROSE, K.C.B., of Holme, Inverness—At the residence of her Britannic Majesty's Consul at Cologne, THOMAS CHARLES WAVE SCOTT, Esq., of Beechwood, Forfarshire, to MARIA THERESA SUTHERLAND, daughter of Admiral Sir THOMAS COCHRANE, G.C.B.—11th inst, at St. Paul's, Knightsbridge, Lieut.-Colonel ARTHUR FREMANTLE, Coldstream Guards, to MARY, daughter of the late RICHARD HALL, Esq., of Findon Place, Sussex—10th inst, at Little Dalby, CHARLES ARKWRIGHT, Esq., second son of the late Rev. S. Arkwright, of Mark Hall, Essex, to HONORIA, third daughter of E. B. HARTOFF, Esq., M.P., of Dalby Hall, Melton Mowbray—7th inst, at Heilingley, Captain W. J. BRADFORD, Royal Artillery, son of Major-General Bradford, C.B., to EMMA CHALONER, daughter of the Rev. JOHN OLIVE, vicar of Heilingley, Sussex.

DEATHS.—On the 11th inst, at Bournemouth, ELEANOR HESTER, fifth daughter of Earl FORTESCUE, aged 20 months—11th inst, at Bedfords, Essex, EDWARD, the eldest son of the Hon. HENRY W. PETRE, aged 19—5th inst, at The Hall, Meole Brace, Shrewsbury, LUCY ELIZABETH, wife of ARTHUR H. BATHER, Esq., and fourth daughter of the late Right Rev. Bishop Blomfield—9th inst, at Homburg, near Frankfort-on-the Maine, ALICIA, widow of Captain GEORGE PROBYN, of Bryanstone Square, and youngest surviving daughter of the late Sir FRANCIS WORKMAN MACNAGHTEN, Bart.—6th inst, at 52, Harley Street, ELIZABETH, wife of JOHN ROLT, Esq., M.P.—11th inst, at Clouskeagh Castle, Dublin, THOMAS WALLACE THOMPSON, Esq., second son of Thomas H. Thompson, Esq., of Mayne, Co. Meath, and grandson of the late Thomas Wallace, Esq., M.P., of Belfield, Co. Dublin, aged 24—8th inst, at 85, Waterloo Road, Dublin, Lieut.-General JOHN W. FRITH, Colonel of the 3d Regiment, aged 74—8th inst, at St Leonard's-on-Sea, Major-General EDWARD VICARS, late Royal Engineers—10th inst, at Jersey, Major-General

A. F. CRAWFORD, late Royal Artillery, aged 77—6th inst, at Billacombe, near Plymouth, CORDELIA ANNE DUKE, widow of General OLDFIELD, Royal Engineers, C.B., of Oldfield, Royal Engineers, C.B., of Oldfield Lawn, Sussex—7th inst, at Beauchamp Lodge, near Taunton, MARY ELIZABETH, widow of Lieut.-Colonel C. H. BAINES, of Belmont, Bath—8th inst, at Chapel Place, Vere Street, MONTAGU GORE, Esq., aged 64—8th inst, at his residence, Wyck Hill House, Gloucestershire, CHARLES VAN NOTTEN POLE, Esq., a deputy lieutenant and magistrate of that county, aged 91—9th inst, at Clyro Court, Radnorshire, T. B. M. BASKERVILLE, Esq., aged 74—9th inst, at Great Malvern, RICHARD GOUGH, Esq., of Kilworth House, Leicestershire, magistrate and deputy-lieutenant of the county, aged 76—8th inst, at 18, Clarendon Road, Kensington, JEAN, widow of ALLAN CUNNINGHAM, of Lower Belgrave Place, aged 74—8th inst, at 5, Mathon Place, Richmond Road, Barnsbury, the Rev. C. BERRY, late of Hatfield Heath, Essex, aged 76.

Markets.

COVENT GARDEN, Sept. 7.

Supplies of most things are still on the increase, especially those of Grapes and Melons. Apples, Plums, and Peaches are also abundant, and there is likewise a fair supply of William's Bon Chrétien Pear, a fine kind at this season. Kent Filberts and Cobs fetch from 45s. to 60s. per 100 lbs. New Walnuts promise to be plentiful. For Potatos there is a heavy sale, and prices for them have a downward tendency. Flowers chiefly consist of Orchids, Heaths, Asters, Fuchsias, Pinks, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Pears, per doz., 1s 6d to 3s
Grapes, per lb., 1s to 3s	Apples, per sieve, 1s to 2s
Peaches, per doz., 1s 6d to 8s	Oranges, per 100, 16s to 20s
Nectarines, do., 1s 6d to 6s	Lemons, per 100, 14s to 20s
Melons, each, 1s to 4s	Nuts, Barcelona, do., 16s
Figs, per doz., 1s to 2s 6d	— New Brazil, do., 16s.
Plums, per ½ sieve, 2s to 4s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 6d
Peas, p. basket, 2s 6d to 3s 6d	Garlic, per lb., 6d
Potatos, York Regents, p. ton, 60s to 80s	Lettuces, each, 1d to 2d
— Rocks, do., 45s to 55s	Endive, per score, 1s to 2s
— Flukes, 60s to 90s	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 6d to 9d	Mushrooms, p. pott., 1s to 1s9d
Turnips, p. bunch, 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
Cucumbers, each, 4d to 1s	Herbs, per bunch, 6d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Sept. 15.

Prime Meadow Hay	80s to 110s		Clover, old	100s to 130s
Superior do.	.. —	—	New Clover ..	— —
Inferior do.	.. —	—	Do. second cut ..	95 120
New do.	.. —	—	Straw	27 32
Rowen	.. —	—	HARVEY & EASTON.	

CUMBERLAND MARKET, Thursday, Sept. 15.

Sup. Meadow Hay	105s to 115s		Inferior Clover ..	105s to 115s
Inferior do. ..	.. 90	98	New do.	— —
New do. ..	.. —	—	Straw	32 36
Superior Clover	..126	135	JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, Sept. 15.

Fine Meadow Hay	100s to 108s		Prime 1st cut Clover	120s to 130s
Inferior do. ..	.. 90	100	Inferior do. do.	..115 120
Prime New Hay	.. —	—	Prime 2d cut do.	..115 123
Inferior	.. —	—	New Clover ..	.. — —
Straw	.. 30	34	Inferior do. ..	.. — —

BRITISH WOOLS.—LONDON, Sept. 16.

The high rate of interest still curtails our business to immediate requirements. Stocks were very small, and the least symptom of renewed demand would raise the price.

	s. d.	s. d.		s. d.	s. d.
South-down Hoggets	2 2	to 2 3	Leicest. Hoggs ..	2 5	to 2 6
Half-bred ditto ..	2 6	— 2 7	Ditto Wethers ..	2 1	—2 2
Down Ewes ..	2 0	— 2 1	Combing Skins	1 11	—2 2
Kent Fleeces ..	2 2½	— 2 3½	Flannel Wool ..	1 0	—1 9
			Blanket ditto ..	0 6	—0 9

COAL MARKET.—Sept. 14.

Burn's West Hartley, 18s.; Byass's Bebside West Hartley, 20s. 3d.; Cowpen Hartley, 20s. 3d.; Holywell Main, 17s. 9d.; Tanfield Moor Butes, 14s.; Walker Primrose, 18s. 9d.; Wylam, 17s. 9d.; Walls End Byron, 19s. 9d.; Walls End Harton, 19s. 3d.; Eden Main, 20s.; Walls End Haswell, 21s.; Walls End Hetton, 21s.; Walls End New Belmont, 20s.; Walls End South Hetton, 21s.; Walls End Tunstall, 19s. 9d.; Walls End Caradoc, 20s. 9d.; Walls End Hartlepool, 20s. 9d.; Walls End Heugh Hall, 20s. 6d.; Walls End Kelloe, 20s.; Walls End East Hartlepool, 20s. 9d.; Walls End South Kelloe, 20s. 6d. —Ships at market, 45.

METROPOLITAN CATTLE MARKET.

MONDAY, Sept. 12.

The number of Beasts is rather smaller, but still it is large. Choicest kinds are scarce, and are readily disposed of. Inferior qualities are dull of sale, but all kinds are dearer. The supply of Sheep is very much shorter, and prices for all kinds are higher. There is rather more inquiry for Lambs, but the season is about over. Good Calves are dearer. From Germany and Holland there are 2960 Beasts, 9280 Sheep, 277 Calves, and 155 Pigs; from Scotland, 35 Beasts; from Ireland, 480; and 2570 from the Northern and Midland Counties.

	s. d.	s. d.		s. d.	s. d.
Best Scots, Herefords, &c. ..	5 0	to 5 4	Best Long-wools.	5 0	— 5 4
Best Short-horns	4 8	— 5 0	Do. Shorn	— ..	
2d quality Beasts	3 0	— 3 8	Ewes & 2d quality	4 4	— 4 8
Best Downs and Half-breds ..	5 4	— 5 6	Do. Shorn	— ..	
Do. Shorn	— ..		Lambs	5 0	— 6 0
			Calves	3 8	— 5 2
			Pigs	3 4	— 5 0

Beasts, 6280; Sheep and Lambs, 24,290; Calves, 288; Pigs, 540.

THURSDAY, Sept. 15.

We have rather a larger supply of Beasts than on Thursday last; trade is, however, active, and Monday's quotations are fully supported. The number of Sheep is about the same as last week, the demand is greater, and on the average prices are better. Lambs and Calves maintain Monday's quotations. From Germany and Holland there are 630 Beasts, 2690 Sheep, 469 Calves, and 150 Pigs; and 395 Beasts from Spain.

	s. d.	s. d.		s. d.	s. d.
Best Scots, Herefords, &c. ..	5 0	to 5 4	Best Long-wools.	5 2	— 5 4
Best Short-horns	4 8	— 5 0	Do. Shorn	— ..	
2d quality Beasts	3 4	— 4 0	Ewes & 2d quality	4 4	— 4 8
Best Downs and Half-breds ..	5 4	— 5 8	Do. Shorn	— ..	
Do. Shorn	— ..		Lambs	5 0	— 6 0
			Calves	3 8	— 5 2
			Pigs	3 4	— 5 0

Beasts, 1550; Sheep and Lambs, 7020; Calves, 565; Pigs, 280; Milch Cows, 150.

NEWGATE.—Sept. 16.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 15s. "
Pork, 4s. 8d. to 5s. 0d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Sept. 16.

Messrs. Pattenden & Smith report an active demand for all descriptions of the new growth, at advancing prices. Yearlings and old Hops not much inquired for.

MARK LANE.—MONDAY, Sept. 12.

The supply of Wheat from Essex and Kent to this morning's market was moderate, nevertheless sales could only be effected at a decline of fully 1s. per qr. upon the prices of this day se'nnight, and a portion remained unsold at a late hour. The attendance was limited, and for foreign Wheat we do not alter our quotations, but where it was necessary to clear vessels or to force sales rather lower rates were submitted to. Barley of all descriptions was 1s. to 2s. per qr. cheaper. Of Beans and Peas there was scarcely any offering, and late prices were maintained. To effect sales of Oats it was necessary to submit to a reduction of 6d. per qr. Flour maintained late rates.

PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk .. White	41—45	Red	39—41
— — fine selected runs .. ditto	43—47	Red	40—43
— — Talavera	47—53		
— Norfolk	—	Red	—
— Foreign	38—52		
BARLEY, grind. & dist., —s to —s .. Chev.	34—36	Malting ..	32—34
— Foreign .. grinding and distilling	22—28	Malting ..	28—31
OATS, Essex and Suffolk	20—22		
— Scotch and Lincolnshire—Potato	20—24	Feed	20—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	20—23	Feed	18—21
RYE	31—33	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....33s to 35s...Tick	34—36	Harrow ..	34—36
— Pigeon .... 37s to 40s.. Winds.	—	Longpod	—
— Foreign .....Small	34—38	Egyptian	33—34
PEAS, White, Essex and Kent .. Boilers	36—38	Suffolk ..	38—40
— Maple .... —s to —s .... Grey	—	Foreign ..	34—40
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered .. per sack	35—40		
— 2d do ..... ditto	28—34	Country ..	28—34
— Foreign ..... per barrel	18—25	Per sack	32—36

FRIDAY, Sept. 16.

The weather continued to be very fine from the 9th to the 12th inst. inclusive, but has since been showery and boisterous, with S.W. and S. winds. Inactivity continues to characterise the Wheat markets throughout the kingdom, and prices are variously quoted from 1s. to 2s. per qr. lower on the week. Malting Barley meets with little attention at present, and the value of grinding is affected by the recent arrivals of Maize, consequently prices have receded 6d. to 1s. per qr., and in some instances even more. The value of Beans and Peas is unchanged. Oats here and in several markets have been sold at a decline of 6d. per qr. The Flour trade has been heavy, and rather lower prices have been submitted to. Since Friday last 15 vessels with Wheat and 3 with Maize have been reported off the coast. The floating trade has been depressed during the week, neither Wheat nor Maize is in demand for future shipment, and also arrived cargoes have been very difficult of sale; the prices have receded 6d. to 1s. per qr. for Wheat, and 6d. per qr. for Maize and Barley. Paris, Sept. 15.—Flour: The transactions have been limited at fully late rates, which have even been exceeded in a few instances. The present stock of Flour is estimated at 27,000 cwts. The six marks for delivery this month are quoted equal to 32s. 6d. per 280 lbs. Wheat: An advance of about 6d. per 480 lbs. is asked by the holders, but very rarely obtained. The arrivals of English Wheat this week are good, of Barley small, of Oats large, of foreign Wheat and Oats good, and of Barley and Flour considerable. The market was again thinly attended, and Wheat, both English and foreign, met a very slow retail sale at barely Monday's prices. Spring Corn of all descriptions was unaltered in value.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	2120 qrs.	610 qrs.	1430 qrs.	410 sks.
Irish	—	—	2460	— "
				550 "
Foreign ..	27,300 "	5260	27,740 "	36720 brls

LIVERPOOL, Sept. 13.—Our market has been well attended by both local and distant buyers to-day, but all still act with extreme caution, and sellers of Wheat have been forced to make a further reduction of 1d. per cental on the rates of last market day. Flour neglected, but not offering cheaper. The supply of Indian Corn being much in excess of the demand, prices still gave way, and we must note all descriptions fully 3d. per qr. lower than on Friday. Oats and Oatmeal very dull. Peas 1s. per qr. lower. Market closes without the least symptom of improvement.

FRIDAY, Sept. 16.—There was a moderate attendance at market. Wheat in rather better demand at Tuesday's rates. Flour slow sale and unchanged. Indian Corn dull; mixed, 28s. to 28s. 6d. Beans, Oats, and Oatmeal steady.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Aug. 6	44s 1d	28s 3d	22s 10d	33s 0d	39s 2d	35s 3d
— 13	43 6	28 1	22 0	32 9	39 8	36 9
— 20	42 7	28 7	22 11	31 6	40 9	35 5
— 27	42 5	29 1	22 0	32 8	41 1	35 6
Sept. 3	42 3	31 1	22 5	34 1	40 9	35 9
— 10	42 4	32 1	21 9	34 7	40 10	36 11
Agg. Aver.	42 10	29 6	22 4	33 1	40 6	35 11

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Aug. 6.	Aug. 13.	Aug. 20.	Aug. 27.	Sept. 3.	Sept. 10.
44s 1d—	—\	..	..	..	..	..
43 6	.. _	—\	..	..	..	..
42 7	..	.. _	—\	..	..	..
42 5	..	..	.. _	—\	..	..
42 4	..	..	..	.. _	—\	—
42 3	..	..	..	..	_	..

WANTED, a MANAGING BAILIFF.—Shortly will be required, a married Man, who has a knowledge of Plantations, Woods, &c., to undertake the Superintendence of a Home Farm (under the Agents), of 500 Acres, with Park adjoining.—Applications in the handwriting of the applicant, stating age and references as to qualifications, &c., must be addressed to Messrs. J. & S. DRUCE, Eynsham, near Oxford.

WANTED, a thorough GARDENER (SINGLE-HANDED), understanding Fruit Trees as well as raising Vegetables, with some knowledge of Carpentering, &c. One with a boy between 12 and 14 preferred. None need apply but such as can furnish satisfactory testimonials of character and ability. Address, Z. P., Post Office, Preston, Brighton, Sussex.

WANTED, a YOUNG MAN who has had some little experience in Orchid Culture, and desires to improve under an experienced hand. He must have a decided love for the above class of Flowers.—ROBERT WARNER, Broomfield, Chelmsford, Essex.

WANTED, by the Advertiser, a number of WORKMEN well used to the Spade, general Ground Work, Planting, Turfing, Walk Making, &c. Married Men not objected to. Wages 15s. to 21s. per week. Constant employment.—BARRON, Garden Architect, Landscape Gardener, &c., Shenley, Herts.

WANTED, as SHOPMAN and SALESMAN in the country, an active, intelligent Man of thorough business habits.—Apply in own handwriting to M. H., Messrs. Hurst & Co., Seedsmen, 6, Leadenhall Street, London, E.C., stating age, experience, references, and salary.

WANTED, as DAIRY and POULTRY WOMAN in a Gentleman's family, a clean, active, respectable young person who understands the Management of a Dairy perfectly, and the Rearing of Poultry in general, and can be well recommended. Apply L. P., Twyford, Reading.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, OFFICES, or any Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper, and has lived upon a single gentleman, and has excellent references.—Rate, 2, Northumberland Street, Marylebone, W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended by gentlemen.—Further particulars given on application to Messrs. HENDERSON & SON, Wellington Nursery, St. John's Wood, London.

GARDENER (HEAD).—Age 23, single; thoroughly understands his profession in all its branches. Four years' character from one of the first practical Gardeners in the Kingdom.—J. M. Y.—Mr. Henderson's, 30, Bow Street, London, W.C.

GARDENER (HEAD).—Age 24, single; understands the Management of Vines, Peaches, Melons, and Cucumbers; also Stove and Greenhouse, and Flower and Kitchen Gardens. Good character.—W. W., Post Office, North Elmham, Norfolk.

GARDENER (HEAD).—Age 32, single; well experienced in the Culture of Pines, Grapes, Peaches, Mushrooms, and Kitchen Gardening generally, and very active and obliging. Has good character and first-class testimonials.—J. J. S., Post Office, Cheshunt.

GARDENER (HEAD).—Age 27, single; good practical knowledge of Forcing, the Management of Fruits and Flowers in Kitchen and Flower Garden. Six years' good references. Wages 21s. per week.—W. K., 16, Grenville Street, Brunswick Square.

GARDENER (HEAD), to any Gentleman requiring a good supply of Fruit, Flowers, and Vegetables, both under Glass and Late.—Age 34, no incumbrance; good references.—J. JACKSON, Hereston's Nurseries, King's Acre, Hereford.

GARDENER (HEAD).—Age 34, married; has a thorough practical knowledge of his profession in all its branches, including the Forcing of Pines, Grapes, Melons, &c., also a good Kitchen and Flower Gardener. Eighteen years' unexceptionable character from present and previous employers.—I. TAILOR, Garden to H.R.H. The Duchess of Cambridge, Kew, Surrey, W.

GARDENER (HEAD, or SINGLE-HANDED).—Age 30, married, no incumbrance; has a good knowledge of Kitchen and Flower Gardens, Greenhouse, and Vinery. Wife a good woman. Five years' excellent character.—E. S. B., Post Office, Tunbridge Wells.

GARDENER.—Middle aged, married; can Grow Early Fruits, Flowers, and Vegetables successfully and extensively; understands the Management of the Kitchen Garden, Culture of Fruits in Orchard Houses, and anything required of a Gardener. Seven years' character.—B. R., Post Office, Bexley Heath, Kent.

GARDENER (age 25).—J. CROSS, Gardener, Grange, Alresford, can with confidence recommend a Young Man, who has a good knowledge of Fruit, Flower, and Kitchen Gardens, including the Forcing of Fruits, Plant Growing, &c.; has had the entire charge of a Garden, and is leaving through a change in the establishment. The Lady he is now leaving will be pleased to speak as to character.—Apply as above.

GARDENER.—Married, with small family; thoroughly competent to take the Management of Conservatories, Forcing Houses, Orchard House, and Flower and Kitchen Gardens, and a small quantity of Pasture Land if required. Leaving present situation in consequence of the death of employer, with whom he lived many years. Has an excellent character.—A., Mr. Tiley, Nurseryman, 14, Abbey Churchyard, Bath.

GARDENER (SECOND or FOREMAN).—Age 23. Has had good experience in all kinds of Forcing, Fruit, Flower, and Kitchen Gardening. No objection to Scotland or Ireland. Good character.—J. B., 50, Crimbles Street, Camp Road, Leeds.

GARDENER (SECOND or UNDER), in a good Establishment.—Age 22; seven years' experience; wishes to be more acquainted with Forcing. Good character.—S. M., Kingston House, Hyde Park Gate, London, W.

GENERAL or OUT-DOOR NURSERY FOREMAN. Possesses a good practical knowledge of the business; has been in the Management of Fruit Trees, Roses, Rhododendrons, Coniferæ, also hardy and Ornamental Trees and Shrubs; thoroughly acquainted with the value of Nursery Stock generally. Has been Salesman and Correspondent, and has filled responsible situation as Nursery Foreman.—L. M. N., Messrs. F. & A. Dickson & Co., Nurserymen and Seedsmen, Chester.

STEWARD or BAILIFF, at Michaelmas next.—Understands the value of Stock, Corn, &c.—A. Y., Post Office, Basingstoke, Hants.

FARMING STEWARD or BAILIFF, at Michaelmas next.—Has had long experience in the Management of Arable and Heavy Lands, the Rearing of all kinds of Stock, Buying, Selling, Marketing, Book Keeping, Paying, &c., also the Management of Woods, Timber, Draining, &c. First-class reference from present employer, who is letting his Land and retiring from Farming.—A. B., Post Office, Great Ilford, Essex.

To Noblemen, Gentlemen, and Agriculturists.

FARM BAILIFF to any Gentleman who desires a first-class Manager.—In the prime of life; has been Farming on a large scale in Leicestershire, has a thorough practical knowledge of the Management of Stock, Grass, and Arable Lands, and can be well recommended. Reference is kindly permitted to Thomas Mellor Warner, Esq., The Abbey, Leicester.—Mr. THOMAS MELLOR, Manor Farm, Oakley, Bedford.

FARM BAILIFF (WORKING).—A most competent and trustworthy Man, who has had the entire Management of a Home Farm for 13 years for Jonathan King, Esq., of Watford; last with GEORGE ALEXANDER, — Smith, Esq., Hemel Hempsted. Highest references.

SHOPMAN (HEAD), TRAVELLER, or MANAGER. Good Salesman. Unexceptionable references from present and previous employers.—Q. P., *Gardeners' Chronicle* Office, Wellington Street, Strand.

SHOPMAN (HEAD), or TRAVELLER.—Has had 7 years' experience in London and Provincial Houses.—Unexceptionable references on application to G. S. T., Post Office, Wandsworth.

Nursery and Seed Trade.

CLERK and SHOPMAN, and ASSISTANT SALESMAN if required. Good reference.—X. Y. Z., Post Office, Kentish Town, N.

GROOM and GARDENER, or as good Plain GARDENER, in a small family.—Age 30; the Wife as Cook, or as Cook and Housekeeper to a single Lady or Gentleman. No incumbrance. Eighteen months' good character from last situation they both leave at Michaelmas.—HENRY HAYWARD, Vicarage, Stoke, Rochester, Kent.

COWMAN.—Has had for 20 years the Management of a large Herd of Short-horned Cattle; understands the Management of Land.—A. B., Post Office, Victoria Crescent, Burton-on-Trent.

The Gardeners' Chronicle Newspaper.

SATURDAY, SEPTEMBER 24, 1864.

ROYAL SCHOOL of MINES.

Director—Sir RODERICK IMPEY MURCHISON, K.C.B., F.R.S., &c.

During the Session 1864-5, which will COMMENCE on OCTOBER 3, the following COURSES of LECTURES and PRACTICAL DEMONSTRATIONS will be given :—

1. CHEMISTRY, by A. W. Hofmann, LL.D., F.R.S., &c.
2. METALLURGY, by John Percy, M.A., F.R.S.
3. NATURAL HISTORY, by T. H. Huxley, F.R.S.
4. MINERALOGY } by Warrington W. Smyth, M.A., F.R.S.
5. MINING }
6. GEOLOGY, by A. C. Ramsay, F.R.S.
7. APPLIED MECHANICS, by Robert Willis, M.A., F.R.S.
8. PHYSICS, by John Tyndall, F.R.S.

Instruction in Mechanical Drawing, by Rev. J. Haythorne Edgar, M.A.

The Fee for Students desirous of becoming Associates is 30*l.* in one sum, on entrance, or two annual payments of 20*l.*, exclusive of the Laboratories.

Pupils are received in the Royal College of Chemistry (the Laboratory of the School), under the direction of Dr. Hofmann, and in the Metallurgical Laboratory, under the direction of Dr. Percy.

Tickets to separate Course of Lectures are issued at 3*l.* and 1*l.* each.

Officers in the Queen's Service, Her Majesty's Consuls, acting Mining Agents and Managers, may obtain tickets at reduced prices.

Certificated Schoolmasters, Pupil-teachers, and others engaged in Education, are also admitted to the Lectures at reduced fees.

His Royal Highness the Prince of Wales has granted two Scholarships, and several others have also been established.

For a Prospectus and information, apply at the Museum of Practical Geology, Jermyn Street, London, S.W.

TRENHAM REEKS, Registrar.

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MORELL THEOBALD, Manager Fire Department.

News of the Week.

IT is officially announced that a convention was signed on the 15th inst. between the EMPEROR OF THE FRENCH and the KING OF ITALY, by which the Roman question has at length been solved. This convention, which is the most important political event that has occurred in Italy since the Peace of Villafranca, provides that King VICTOR EMMANUEL shall undertake to respect the present territory of the Church and to prevent by force any attack that may be made upon it; that the Pontifical army shall be raised to a sufficient strength to maintain the authority of the POPE both in the interior and on the frontiers of his States; that the French force shall be gradually withdrawn, so that the occupation may entirely cease within two years; that the KING OF ITALY shall undertake the liquidation of a share of the Roman debt proportioned to the extent of those States of the Church now annexed to his dominions; and finally, that the capital of Italy shall be removed from Turin to Florence. A Royal decree was issued at Turin on Wednesday convoking the Italian Parliament for the 5th of October, when the convention and its ultimate results will no doubt be the subjects of discussion. Meanwhile the people of Turin, irritated by the intended abandonment of their city as the capital in favour of Florence, have manifested their dissatisfaction by riotous demonstrations, and have attacked the military who interfered to prevent them from forcing their way into the ministerial residence. The military fired upon the mob, and several persons on both sides were killed and wounded. A large body of troops has since arrived at Turin; the National Guard has been called out, and it is hoped that the tranquillity of the city will not be further disturbed.

The QUEEN OF SPAIN last week, by the advice of Marshal O'DONNELL, entrusted Marshal NARVAEZ with the formation of a new Ministry. The Marshal has succeeded in forming an Administration, in which he fills the office of President of the Council without a portfolio. The new Cabinet has announced a conciliatory policy, and in proof of its sincerity has suspended the prosecutions against the press.

General M'CLELLAN has accepted his nomination to the Presidency by the Chicago Convention. He approves the pacific nature of the platform, but declares the re-establishment of the Union to be indispensable, and to be pursued at all hazards. The announcement of the capture of Atlanta is confirmed. General SHERMAN, finding that the city was not easily assailable from the north, made a sweep round it to Jonesborough, a station on the Macon Railway, where the Confederates held some works, from which they were dislodged after a sharp engagement, attended by considerable loss on both sides. The result of this battle enabled General SHERMAN to place his forces between Macon and Atlanta, and to cut off General HOOD from a part of his army, and from his only road of supply. General HOOD therefore blew up his magazines and evacuated the town, which the Federals occupied on the 2d inst. General SHERMAN, on the day after the battle of Jonesborough, advanced to Lovejoy's Station, where he found General HOOD in force and so strongly intrenched that he deemed it imprudent to attack him, and retired to Atlanta. Accounts from Mobile state that Admiral FARRAGUT has succeeded in blowing up the ram which the Confederates had sunk across the channel; and the papers publish a report received from deserters that Mobile has since surrendered. Gen. LEE, having been reinforced by part of General EARLY'S force from the Shenandoah Valley, was preparing to attack General GRANT'S left, and the next mail will probably bring accounts of a severe engagement between the two armies. President LINCOLN has ordered a day of thanksgiving and salutes from all the navy yards and arsenals, for the victories at Atlanta and Mobile, and has tendered his thanks to Admiral FARRAGUT and General SHERMAN. The draft in New York and Brooklyn will not take place. It is reported that General FREMONT has withdrawn his name as a candidate for the Presidency.

The New York papers publish accounts from Matamoras, announcing that the Mexican General CORTINAS has defeated the French at Victoria City with heavy loss, and subsequently marched to defend Matamoras, where another battle was expected.

Home News.

THE COURT IN SCOTLAND. — On Wednesday week Prince Alfred arrived at the Castle from Norway. In the afternoon the Queen went out, accompanied by Prince Alfred. Sir Frederick Bruce arrived on a visit. On Thursday the Queen, accompanied by the Duchess of Saxe Coburg and Princess Louisa, drove to Alt-na-Guithasach. Princess Helena drove to Invercauld. On Friday morning the weather prevented any of the Royal family from going out. In the afternoon the Queen walked and drove, accompanied by the Duchess of Saxe Coburg. On Saturday morning the Duke and Duchess of Saxe Coburg took leave of her Majesty to return to the Continent. The Queen, accompanied by Princess Helena, drove to Invercauld, and went up the Sluggan. On Sunday the Queen, Princess Helena, Princess Louisa, Prince Alfred, and Prince Leopold attended Divine service in the Castle. The Rev. Dr. Caird officiated. In the evening Earl Russell and the Rev. Dr. Caird dined with her Majesty. On Monday morning the Queen drove out, accompanied by Princess Louisa. In the afternoon her Majesty, with Princess Helena, took a carriage drive. Lord Napier arrived at the Castle, and had an audience of her Majesty, to kiss hands on his appointment as Ambassador to the Court of Prussia. In the evening his lordship dined with her Majesty and the Royal family. On Tuesday morning the Queen drove out, accompanied by Princess Helena. In the afternoon her Majesty took a carriage drive with Princess Louisa and Princess Beatrice. Prince Elimar of Oldenburg arrived on a visit to her Majesty. Lord Napier left the Castle.

THE PRINCE AND PRINCESS OF WALES IN DENMARK. —On Friday evening the King and Queen of Denmark, in honour of the visit of the Prince and Princess of Wales, held a great reception in the Christiansborg Palace—the first event of the kind that has occurred in Copenhagen for nearly a quarter of a century. The reception was followed by a concert and supper. On Sunday the Prince of Wales attended Divine service in the chapel of the Embassy. The Princess went with the members of her own family to the parish church of Gjentofle. In the afternoon their Royal Highnesses visited the château of Charlottenlund, where they dined with the Landgrave of Hesse, and in the evening drove to Sorgenfri, the residence of the Queen Dowager, where they remained till night. On Monday they visited the Castle of Rosenborg, and lunched with the widow of Prince Frederick, late the heir apparent to the throne. In the afternoon their Royal Highnesses visited the Museum of Antiquities, and in the evening dined with Sir Augustus Paget, the British Minister. On Tuesday evening the Prince and Princess accompanied the King and Royal family to the Opera House in Copenhagen, and on leaving the theatre were loudly cheered. Their Royal Highnesses will leave Copenhagen to-day for Stockholm, and will return to Copenhagen after a stay of three days in the former city. Their Royal Highnesses will then remain another week in Denmark, after which they will probably proceed to Paris.

THE DUKE AND DUCHESS OF SAXE COBURG left the Palace Hotel on Monday evening for Dover, where they embarked for Calais on their way to Paris and Brussels.

PRINCE HUMBERT, the Crown Prince of Italy, after inspecting York Minster on Thursday, proceeded to Malton and Beverley, where he passed the night. On Friday, after making some purchases of horses, the Prince left for Rugby, where he passed the night, and on Saturday morning left for London, visiting on his way Mentmore, the seat of Baron de Rothschild. On Sunday morning the Prince attended High Mass at the Roman Catholic Church in Hatton Garden. In the afternoon his Royal Highness visited Hampton Court, Richmond, and Kew Gardens. In the evening the Marquis d'Azeglio had a diplomatic dinner to meet the Prince. On Monday morning his Royal Highness, attended by the Italian Minister and General Revel, went to the Bow Street Police Court to hear the examination of Müller, and to become acquainted with the mode adopted at the preliminary proceedings against criminals in England. The Prince afterwards visited Mr. Anderson's paddocks at Willesden and inspected his stud of horses. On Tuesday morning the Prince, accompanied by the Italian Minister, left town for Windsor. His Royal Highness first visited the hunting and steeplechase stable of Mr. Dalley, at Old Windsor. He next visited Frogmore and the royal farm, and then drove to the Castle, where he inspected the private apartments. His Royal Highness next visited St. George's Chapel, and then drove through the Long Walk and Windsor Forest to Cumberland Lodge, to see the hunting-stables of the Prince of Wales. The Prince afterwards returned through Eton to Slough, and proceeded thence to London by the Great Western Railway. On Wednesday morning his Royal Highness, accompanied by the Italian minister and suite, went to Woolwich, and witnessed a grand review and field-day, after which he visited the several departments of the Royal Arsenal. On Thursday the Prince visited the British Museum, Westminster Abbey, and the Houses of Parliament.

THE DUKE AND DUCHESS OF MONTPENSIER have left England on their return to Madrid. Their Royal Highnesses embarked at Dover, to which place they were accompanied by the Duke de Nemours, who then returned to Tunbridge Wells.

THE IRONCLAD FLEET.—The Admiralty have determined to do away with much of the rigging which crowds most of the ships of the ironclad squadron, and to give each a lighter rig; the fact of the Enterprise and the Defence beating all the other ships of the Channel fleet on a wind, when under full sail, having induced the Board to alter the other vessels of the squadron to the same description of rig.

Foreign.

FRANCE.—It is officially announced that a convention has been signed between the French and Italian Governments, by which Italy is about to transfer her capital to Florence; and that France has notified to the Pope that the French will evacuate Rome within two years, the King of Italy undertaking to respect the independence of the Papal territory as it now exists. The *Constitutionnel* of Thursday reprints the letter of the Emperor to M. Thouvenel, dated May 20, 1862; and in an article on the subject, signed by M. Limayrac, observes that the occupation of Rome has always been regarded as both exceptional and temporary. It then continues as follows :—

"The French Government, impressed by the happy change that has taken place in the Italian Peninsula within the last two years, the anarchical passions having there been either appeased or suppressed, was ready to seize the first opportunity of putting an end to a situation embarrassing and onerous to all. Moreover, so soon as the Italian Government, hitherto occupied in discussing the necessary organisation of a new State, and in determining upon the choice of a capital on strategic, administrative, and political grounds, had given notice of its resolution to transfer the capital, the Government of the Emperor thought that the moment had come to deliberate upon the conditions which would enable it to leave Rome with perfect safety. The following are the stipulations of the arrangement. Italy engages herself to respect the actual territory of the Pope, and to prevent by force any attack that may be made on it from abroad. France is to withdraw her troops in proportion to the organisation of the Pontifical army; the evacuation of Rome to be accomplished in two years. The Pontifical army to be of sufficient strength to maintain the Papal authority and tranquillity, both in the interior and on the frontiers of the Papal States; the Italian Government to raise no objection to either the elements or number of men composing that army, provided always that it does not degenerate into a means of attack against Italy. Finally, Italy undertakes the liquidation of a share of the Roman debt proportioned to the extent of those States of the Church now annexed to the Kingdom of Italy."

The *France* states that the Emperor is preparing to make some important changes in the constitution, and that the principal object he has in view at present is to obtain, through the medium of the Ministry, the sanction of the Chambers for every political measure that may be brought forward. The *Moniteur* of Saturday morning says that negociations are in progress, with the object of prolonging the armistice between Denmark and Germany until the 15th December. It is said that a Bill is to be brought

forward next session for the abolition of *octroi* duties—a tax levied at the gates on every article of consumption which enters Paris. The Empress Eugenie received on Wednesday a visit from the Emperor of Russia at Schwalbach. His Majesty remained a few hours with the Empress, and was accompanied by Count Adlerberg, the Adjutant-General. It is stated that on leaving Schwalbach the Empress will visit the Queen of Prussia at Baden, to which place the Emperor and Empress of Russia will also go from Frederichshafen. The King of Prussia, it is asserted, will also visit Baden after the manœuvres of the Prussian army have taken place. It is added that the Emperor Napoleon will join the Empress at Baden, but the rumour that this would probably give rise to an interview between the French, Russian, and Prussian Sovereigns is considered to be unfounded. Prince Napoleon has left Paris for his estate of Prangins, in Switzerland. He will be absent about a fortnight or three weeks, and will return for the *fêtes* which are to be given next month at Compiègne in honour of Prince Humbert on his arrival from England. The Duke of Cambridge has passed through Paris to London, on his way back from Germany. His Royal Highness breakfasted on Friday morning with the Emperor. Marshal M'Mahon, Duke de Magenta, embarked on Saturday at Toulon, to take possession of his post as Governor-General of Algeria. Preparations are making at Toulon for the immediate embarkation of an entire division of from 10,000 to12,000 men who are to follow Marshal M'Mahon as reinforcements. An Imperial decree was issued on Sunday, creating a Professorship of Political Economy and Public Law in the Faculty of Law at Paris. Another decree abolishes the obligation for ships going long voyages to carry a surgeon when they shall have 30 men on board. They will only be obliged to carry a surgeon when the number of persons on board amounts to 100. The Chantilly races took place on Sunday. For the Imperial Haras Prize, Guillaume le Taciturne was first, Criterium second, and Clermont third. For the Chantilly Prize, Vermouth came in first.

SPAIN.—Marshal Narvaez has succeeded in forming a new Ministry, composed as follows:—President of the Council, without Portfolio, Marshal Narvaez; Minister for Foreign Affairs, Senor Lorente; Minister for War, Senor Cordova; Minister for Justice, Senor Lorenzo Arrazola; Minister for Marine, Senor Armera; Minister for the Interior, Senor Gonzalez Bravo; Minister for Finance, Senor M. Barzanollana; Minister for Public Works, Senor Galiano; Minister for Public Worship, Senor Seijas Lozano. The new Cabinet announces a conciliatory policy. The prosecutions against the journals are suspended; and the Minister of the Interior has addressed a circular to the Civil Governors, recommending them to treat impartially all political parties, and at the same time to exercise severity in the maintenance of law and order. It is believed that the Cortes will shortly be dissolved. It is said that the Dowager Queen Christina is to be allowed to return to Spain. Her Majesty purposes going first to Oviedo, where the younger branches of her family are residing.

SWITZERLAND.—The Federal Chambers were opened at Berne on Wednesday, and the National Council commenced the discussion of the Franco-Swiss Treaty of Commerce. The majority of the Committee propose the immediate ratification of the treaty, while the minority demand its postponement. The debate was continued on Thursday. A public petition has been addressed to the National Council, demanding a revision of the Federal Constitution, the provisions of which are opposed to the conclusion of a treaty of commerce with France, in order that such treaty may be concluded in a constitutional manner; the revision to be obtained by an appeal to the people of Switzerland. The Government of Berne has given its sanction, with certain reservations, to the statutes of the Credit Mobilier Européen. M. Duplan Veillon, the Federal magistrate in Geneva, has issued a warrant of arrest against M. James Fazy.

HOLLAND.—The Legislative Session was opened by the King on Monday. His Majesty, in his speech from the throne, said:—

"The country and the colonies are in a prosperous state. A number of public works are contemplated. Bills for the abolition of local excise duties will be laid before you, together with other important financial propositions. The redemption of the debt will be continued. A project for the reorganisation of the Customs' tariff in the Dutch colonies of East India will also be laid before the Chamber."

BADEN.—In consequence of a recent disturbance in the assembly-room at Baden-Baden, the Grand Ducal Commissary has addressed the following letter to the class of female visitors constituting the *demi-monde*, who have for the last two or three years collected at that place from all quarters of Europe:—

"Madam,—In consequence of a measure adopted by the Grand Ducal Minister of the Interior, and the execution of which I am charged to superintend, I find myself under the necessity of interdicting to you the conversation rooms and the public promenade. If I inform you of it by this letter, you will perceive in such a proceeding my desire to avoid a scene which would certainly be as unpleasant for you as for myself.—Accept, madam, &c., MULLER, Grand Ducal Commissary."

SCHLESWIG-HOLSTEIN.—The commander-in-chief of the allied army has issued a proclamation prohibiting the circulation of petitions and the collecting of signatures under penalty of the rigorous infliction of martial law. The proclamation, in conclusion, reminds the people that the state of war continues. The ten Schleswigers, whose sentence of death for desertion from the Danish army was subsequently commuted to imprisonment for life, arrived at Kiel on Saturday. The civil commissioners have announced in the *Gazette* that only those claims made on the Danish Treasury on account of the late war, or preparations for the war, will be taken into consideration at the peace negotiations.

PRUSSIA.—The new correspondence between Count von Bismark and Lord Russell which has been lately discussed in the French and German press, has just been published. The first despatch is addressed by Count von Bismark to the Prussian Minister in London. In this document the Count says that during his visit to Vienna Lord Bloomfield expressed to him the wish of the English Government that Prussia and Austria should not impose upon the Danish Crown conditions too hard and unbearable. The Count says that he answered that nothing was further from their intentions than an unjust severity, and that they could only make those demands which were the necessary result of the situation. To that purpose, he says, the Prussian Government has remained true. In complete understanding with the Imperial Austrian Government they have been obliged to insist upon the entire cession of the three Duchies as an indispensable demand, without which neither the national feeling would be satisfied, nor the sacrifices justified to which the obstinacy of the Danish Government had forced them; but they had demanded no portions of the kingdom of Denmark, although they held completely in their hand a large and important province, and without any possibility for the Danes to deprive them of it. He desired the Minister to express to Earl Russell the hope that the British Government would not refuse to recognise the moderation and placability which had been displayed by the two German Powers. To this document Earl Russell returned the following reply, addressed to Mr. W. Lowther:—

"Foreign Office, Aug. 20, 1864.

"Sir,—I have received from M. Katte a despatch of M. de Bismark to Count Bernstorff, together with an official copy of the preliminaries of peace signed on the 1st of August at Vienna. Her Majesty's Government would have preferred a total silence instead of the task of commenting on the conditions of the peace. Challenged, however, by M. de Bismark's invitation to admit the moderation and forbearance of the great German Governments, her Majesty's Government feel bound not to disguise their own sentiments upon these matters. Her Majesty's Government have indeed from time to time, as events took place, repeatedly declared their opinion that the aggression of Austria and Prussia upon Denmark was unjust, and that the war as waged by Germany against Denmark had not for its groundwork either that justice or that necessity which are the only bases on which war ought to be undertaken. Considering the war, therefore to have been wholly unnecessary on the part of Germany, they deeply lament that the advantages acquired by successful hostilities should have been used by Austria and Prussia to dismember the Danish Monarchy, which it was the object of the Treaty of 1852 to preserve entire. Her Majesty's Government are also bound to remark, when the satisfaction of national feelings is referred to, that it appears certain that a considerable number, perhaps 200,000 or 300,000 of the loyal Danish population, are transferred to a German State, and it is to be feared that the complaints hitherto made respecting the attempts to force the language of Denmark upon the German subjects of a Danish Sovereign will be succeeded by complaints of the attempts to force the language of Germany upon the Danish subjects of a German Sovereign. Her Majesty's Government had hoped that at least the districts to the north of Flensburg would, in pursuance of a suggestion made by the Prussian Plenipotentiary in the Conference of London, have been left under the Danish Crown. If it is said that force has decided this question, and that the superiority of the arms of Austria and Prussia over those of Denmark was incontestable, the assertion must be admitted. But in that case it is out of place to claim credit for equity and moderation. Her Majesty's Government see with satisfaction, however, that the wording of the 1st Article fully admits by implication the right of Christian IX. to rule over the Duchies of Holstein, Schleswig, and Lauenburg, for, if they were not his to hold, they could not be his to give away. In considering this question her Majesty's Government have always had in view the elements of a solid and durable peace. Even in cases where it is justifiable to depart from the settlement of established and recognised treaties, it is essential that the new settlement should not partake of the weakness of the old—that when new elements of dominion are combined and new bonds of allegiance are required, nations should be satisfied, and should willingly embrace as permanent the new conditions of peace. It is in this point of view that her Majesty's Government are anxious to see the destiny of the Duchies, which are now to be separated from Denmark, speedily and satisfactorily settled. They desire to see the wishes of the people of these Duchies consulted on the choice of their future Sovereign, and to see the Duchies receive free constitutional institutions. In this manner alone the welfare and peace of Europe as well as the future tranquillity of the Duchies, will be secured, for her Majesty's Government cannot feel at all secure of the prospects of a lasting peace until the wishes of the people of Holstein, Schleswig, and Lauenburg have been fairly and fully consulted. An arrangement which should set aside those wishes and suppress free institutions would only be a new source of disquiet and disturbance in Europe. You will read this despatch to M. de Bismark, and give him a copy of it.

"I am, &c., RUSSELL."

The semi-official *Nord-Deutsche Allgemeine Zeitung* of Berlin, of Wednesday says:—

"The intention of extending the term of the armistice for a longer period has been abandoned, the protraction of the peace negotiations on the part of Denmark not having been without influence on that point. In fact, the political situation in Copenhagen has assumed a peculiar character. Not only do the Swedish papers evince in the most pointed manner Scandinavian tendencies, but even the Copenhagen journals openly avow sentiments favourable to the formation of a Scandinavian dynasty. Instead of recognising, they attack the stipulations of the peace preliminaries. It is therefore quite intelligible that the great German Powers should adhere strictly to paragraph 1 of the protocol of the armistice, whereby hostilities can be resumed at any time after a six weeks' notice."

AUSTRIA.—The Emperor of Austria left Vienna on Monday for Hungary and returned on Wednesday. There is a report that a conspiracy against his life has been detected. The Conference at Prague has been opened. *La Nouvelle Presse Libre* foretells that it will end in disappointment. The *Presse* of Monday asserts that the Danish Cabinet is willing to consent to the proposal that the claims of the Duchies on the public property of the kingdom should be satisfied with the payment by Denmark of a round sum, this arrangement to be preceded by one definitively settling the respective allotment of the assets and liabilities of the country. It also says:—

"Financial difficulties only delay the conclusion of peace. The negotiations on the prolongation of the armistice which has expired are near their end. The demand of Denmark that the troops of the allied armies in Jutland are not to be provisioned by Denmark, has been absolutely rejected by the German Powers."

The *General Correspondence* says that all the alarming rumours respecting a return to a personal union between Denmark and the Duchies, a speedy evacuation of Jutland, or a deviation from the frontier line formerly established between Schleswig and Jutland are devoid of all foundation.

RUSSIA.—The *Times* states that information has reached it in a very authentic shape that Russia fully expected the breaking out of war as the result of the correspondence with the English and French Governments last year on the subject of Poland, and was resolved that this time at least she would do something better with her fleet than suffer it to be cooped up behind the defences of Cronstadt, or sunk in the harbour of Sebastopol. She had come to the conclusion that she could strike a blow which, though it might not succeed in crippling the commercial superiority of England, would nevertheless inflict great discredit on her arms and serious damage on her commerce. For this purpose instructions had been issued to the Russian Admirals on the American and Californian coasts, directing them to leave their respective ports by different routes for a common place of rendezvous, to be ascertained in mid ocean by latitude and longitude. The fleet thus assembled was to hold itself in readiness, in the event of a war with England, to bear down on the Australian colonies. Melbourne was to be the first place attacked, then Hobart Town in Tasmania, then Adelaide, then Sydney, then New Zealand. The force to be assembled for the purpose was fully adequate to the service required of it. The ships that were to be detached from the New York station would have mustered 456 guns, and those from *Japan and California* would have carried altogether *43 guns; the* number of seamen was 2971, and there were 127 officers. The vessels were principally armed with 9-pounders, but the Admirals had orders to obtain from New York whatever rifled guns they might require.

POLAND.—An imperial rescript was issued on Tuesday, accompanied by five decrees, containing a series of liberal measures relative to public instruction in Poland, the creation of an university at Warsaw, and the establishment of numerous superior, middle, and primary schools, and a free school for women. The Poles are to preserve the use of their national language. For the other nationalities of the kingdom special schools are established, in which their respective idioms will be used. A sixth decree modifies the penal code, by mitigating the penalties hitherto inflicted, and abolishes corporal punishment. The *Lloyd* of Vienna states that the greater number of Poles confined by the Austrian authorities at Olmutz have resolved to enter the service of the Emperor of Mexico, and that many of them have already enrolled themselves. About 100 were taken to Vienna, whence they were removed to the southward. They are all fine young men, with a good military appearance. The trial of the Poles of the Duchy of Posen is taking a turn more favourable to the accused. At their counsel's demand, which was not opposed by the Public Prosecutor, who finds the charge unsupported, 10 or 12 of them have been set at liberty on the sole condition of holding themselves in readiness to appear if their presence should be deemed necessary. Prince Radzivil and Prince Roman Czartoryski have also been released, the former unconditionally, the latter on giving bail to the amount of 10,000 thalers.

ITALY.—A Royal decree was issued on Wednesday convoking the Senate and the Chamber of Deputies for the 5th of next month. In explanation of this measure the *Opinione* says that on the 15th inst. a convention was agreed to by the French and Italian Governments concerning the cessation of the French occupation of Rome within two years. This convention was signed for France by M. Drouyn de Lhuys, and for Italy by the Chevalier Nigra, first plenipotentiary, and the Marquis Pepoli, plenipotentiary on an extraordinary mission. It also says that the ratifications were exchanged on Tuesday last, and that the King has convoked the Chambers for the purpose of informing the National Parliament of the stipulations of the convention without delay. It is provided by the convention that Florence shall become the capital of Italy. The Turin journals discuss this removal of the capital, and state that if such a measure be necessary to advance the solution of the Roman question, the Italian Government could not assume the responsibility of a refusal. On Tuesday evening a number of young men, of whom several were workmen,

paraded the streets, shouting, "Down with the Ministry." The bystanders witnessed this demonstration with indifference, and the assemblage subsequently dispersed of its own accord. On Wednesday evening another popular demonstration took place before the Royal Palace. Shouts were raised of "Turin for the Capital!" A group of rioters endeavoured to break the line formed by the military and to force their way into the Ministerial residence. The military were then obliged to fire, killing and wounding several persons. 20 Carbineers were also wounded, five of them seriously. On Thursday the city was tranquil and had resumed its ordinary aspect. The official *Gazette* publishes an account of these events, stating that the collision before the Palace was the result of accident. The Carbineers were attacked by the crowd, and without orders made use of their arms in self defence. An investigation has been ordered into the conduct of some of the agents of the police. A large body of troops has arrived at Turin, and has been placed under the command of General Della Rocca. The National Guard has also been called out. A proclamation has been issued by the Syndic, recommending the people to return to a state of tranquillity.—An encyclical letter of the Pope, addressed to the Polish bishops, was distributed among the cardinals at Rome on Sunday. This letter draws a vivid picture of the persecution directed by the Russian Government against the Catholic Church. The Pope stigmatises the Russian Government as cruel, rebukes its excesses, and condemns it before heaven and earth. He censures also the confiscations and deportations carried out in Poland, and the treatment of the Archbishop of Warsaw, unjustly despoiled. His Holiness condemns, however, the Polish revolution, and reminds the Catholics of their duty to obey all civil authorities. The bishops, clergy, and all faithful Catholics in Russia are enjoined to persevere in the faith with courage and resignation, and are warned that they do not owe obedience to measures contrary to their conscience and to Divine laws. The Pope, in conclusion, threatens the persecutors with Divine justice, "which," he says, "will soon appear, for the time of mercy is short, and the powerful are powerfully chastised." The *Perseveranza* of Friday publishes a despatch from Rome, stating that the Cohen family has emigrated from that city in order to escape the persecution of the Government. Notwithstanding the steps taken by the French Ambassador, young Cohen had not been restored to his parents. Garibaldi's health is perfectly re-established.

Malta.—On the 6th inst. a soldier of the 22d Regiment, named John Burns, was tried before the Criminal Court for the murder of Sergeant Ludgate, of the same regiment, by shooting him through the neck. The prisoner's counsel endeavoured to prove that the death was the result of accident, but the jury after, after 10 minutes' deliberation, unanimously found him guilty, but recommended him to mercy on account of his youth, as he was but 22 years of age. The judge however, passed sentence of death, and the prisoner was executed on the 16th.

Greece.—In the sitting of the National Assembly on Monday the abolition of the Senate was decided upon by a large majority. In future, therefore, one Chamber only will exist. Public opinion is in favour of this step.

Turkey.—The Prince de Joinville has arrived in Constantinople. The Porte has signed the treaty with England relative to the Turco-Indian line of telegraph.

Egypt.—Letters from Alexandria to the 10th inst. state that the Egyptian Government has concluded a loan of 125,000,000 francs with the firm of Oppenheim, redeemable in 15 years.

India.—The Bombay mail of the 23d August states that tranquillity prevails throughout the whole of British India. The Viceroy and Governor-General will leave Simla towards the end of September, as his Excellency is to be in Lahore on the 1st October, when Sir R. Montgomery will resign the Lieutenant-Governorship of the Punjaub, and Sir Herbert Edwardes be installed as his successor. From Affghanistan it is reported that in spite of the recent reconciliation the Ameer has made prisoners of Ufzul Khan and his brothers, and sent them to Cabool. The Shah of Persia is said to have sent an ambassador to the Ameer, demanding the release of the son of the late Sooltan Jan and the restoration of Herat, and all the Persian guns taken at that place. If the Ameer agrees to these terms he is to receive 18,000 gold mohurs a year from Persia; and if he rejects them the Persian army will advance to Herat. It is said that arrangements have been made with the Ameer of Cabool, by which he engaged to coerce and keep in order for the future the hill tribes on our extreme north-western frontier. The rebel Jhoorie Singh was hanged at Mirzapore on the 3d August. The Persian Gulf telegraph is still interrupted.

China.—A telegram from Shanghai of August 6 states that the Imperialists have captured Nankin.

United States.—General M'Clellan has accepted the nomination of the Chicago Convention. He declares for the Union at all hazards, and says a spirit of conciliation and compromise must be exercised, but union is the one condition of peace. Any State willing to return to the Union should be received at once with all constitutional rights. A large enthusiastic meeting for the ratification of M'Clellan's nomination to the Presidency has been held in New York. General Grant has written a letter asserting that the Confederates have in their ranks their last man, and that if the North continues undivided the end of the war is not far distant. Despatches from General Sherman, 26 miles south of Atlanta, report that on the 30th ult. he left the vicinity of Atlanta with the main portion of his army, made a detour to the south-west, crossed the West Point Railway, and after repulsing an attack upon his right by the Confederates, who were in force at Jonesborough, occupied the Macon Railway, and interposed his army between that place and Atlanta. On the 1st inst. he attacked Jonesborough and carried the Confederate works, capturing 3000 prisoners and 27 cannon. He admits his loss in the action at 1500, and estimates that of the Confederates at 2000. He says that he burned 400 of the Confederate dead, and left on the field 400 Confederate wounded, whom he could not remove. The Jonesborough garrison retired to Lovejoy Station, 30 miles south of Atlanta. In consequence of these operations, General Hood blew up his works at Atlanta, removed or destroyed all *matériel* excepting 14 cannon, and during the night retired from the city, but in what direction does not appear. On the following morning General Slocum, who, with the 20th Corps, had been left to hold Sherman's communications, occupied Atlanta. On the 7th inst. General Sherman pursued General Hood's army to his headquarters at the rear of Lovejoy's Station, but finding the Confederates in force and strongly entrenched he withdrew, having accomplished the great object of the campaign, the capture of Atlanta; around which his army is now encamped. The Southern press attach little importance to the loss of Atlanta. General Lee has been reinforced from Early's corps. According to both Federal and Confederate accounts, Grant and Lee are concentrating their forces about Petersburg, and it is believed that a great battle for the possession of the Weldon Railway is imminent. Skirmishing continues in the Shenandoah Valley, but the positions of the main forces of the hostile armies appear to be unchanged. General Early at the latest dates had taken a strong position west of the Opequan, covering Winchester. Admiral Farragut has blown up the ram Nashville, which was sunk across the channel of the river bar at Mobile; and, according to news received from deserters, his fleet passed Dog River bar, and after a brief shelling Mobile surrendered, the Confederates withdrawing to the interior. General Rosseau announces that Generals Wheeler and Roddy have retired from Nashville and Chattanooga Railway. Richmond journals of the 1st report that General Wheeler has burnt the railway bridge over the Tennessee river at London, and captured 900 prisoners at Marysville and Newmarket. Both the Federal and Confederate accounts report that General John Morgan was surprised at Greenville, Tennessee, on the 4th, himself killed, and 75 of his command captured by Federals under General Silvers. Mr. Stanton states that on the 5th General Grant celebrated the occupation of Atlanta by shelling Petersburg. Mr. Lincoln, on the 3d, issued a proclamation tendering the thanks of the nation to Admiral Farragut, Generals Canby, Granger, and Sherman, and the forces under their command, for their achievements at Mobile and Atlanta, and ordering salutes to be fired from every arsenal and navy yard in Federal possession in celebration of their victories. He also recommended that a general thanksgiving be offered in all the churches on the following Sunday. The draught which was ordered for the 5th has been postponed, and further time given for the filling of quotas by volunteering. The credits allowed for naval and other recruits not previously accredited have reduced the quota of New York city to 1114 men, who it is believed can be speedily supplied without recourse to a draught. Secretary Seward made a speech at Auburn, New York, on the 3d, in which he declared that the salvation of the Union depends upon the election of Mr. Lincoln; that slavery is no longer an issue of the war, and will not be interfered with after peace is restored; and that the Democratic party is aiding and abetting the rebellion. He also stated that no draught will be necessary, as the armies are recruiting as rapidly as required by volunteering. It is announced that the Administration will shortly permit free trade in cotton, provided it is paid for in greenbacks, and shipped to or through New York.

Mexico.—Advices from Rio Grande state that the Mexican General Cortinas met the French forces 10 leagues north of Victoria, and after an obstinate battle of five hours, routed them with heavy loss. It is added that the affair was most brilliant, and caused great rejoicing among the Mexican people. It is said that General Alvarez has also defeated the French and Algerine troops in four pitched battles at Brea, in the State of Guerrero. The terms of the battle were no quarter, and the prisoners taken by the Mexicans were put to death. Fresh conflicts are expected in the State of Tamaulipos. Matamoras advices state that a French force of marines have taken possession of Bogond at the mouth of the Rio Grande, and it is reported that a force of 1500 had landed further up the river, where it is stated that Cortinas would attack them. Colonel Riva Palacio has made an official report claiming to have won, on the 5th of July, at Zitacuaro, a victory over 2000 Imperialists, putting them to flight. Don R. G. Paez, private secretary of Juarez, has given in his adhesion to French rule.

Canada.—It is reported that the Canadian Conference has decided that the union of the British North American provinces would be satisfactory provided that the terms of alliance could be arranged.

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 88 for Money, and 88⅜ for Account; Reduced and New Three per Cents., 86⅝ to ½; India Five per Cent. Stock, 103⅝ to 104⅝; Ditto Bonds, 20*s.* dis.; Exchequer Bills, March, 5*s.* dis.; Ditto June, 23*s.* dis.—Foreign: Italian, 66½; Mexican, 27⅜ to ⅜; Ditto 1864, 25⅜; Portuguese, 1856, &c., 46½ to ⅝; Russian, 1862, 88; Spanish Passive, 31¼ to ½; Ditto Certificates, 14; Turkish, 1854, 91¼ to 91; Ditto 1858, 100*l.* Bonds, 72½ ex div.; Ditto, 1862, 100*l.* Bonds, 70¼; Venezuela, 1862, 56⅛; Ditto 1864, 45 ex div.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,073,720	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	12,423,720
		Silver Bullion	—
	£27,073,720		£27,073,720

BANKING DEPARTMENT

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,797,095
Rest	3,917,539	Other securities	13,901,363
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,815,611	Notes	6,735,875
Other Deposits	12,380,681	Gold and Silver Coin	747,387
Seven days and other bills	504,860		
	£38,181,720		£38,181,720

Sept. 22, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY *Sept.* 16.—BANKRUPTS.—R. Adams, Welshpool, Montgomeryshire, Saddler.—G. Arkins, Burton upon Trent, Staffordsh., Labourer at a Brewery.—W. Ashton & J. Ashton, jun., Blackburn, Lancashire, Cotton Manufacturers.—P. Brown, Burton under Needwood, Staffordshire, Plumber.—J. Bastow, St. Mary Church, Devonshire, Beerhouse Keeper.—J. Brierley, Bucklawton, Cheshire, Cotton Spinner.—R. Brown, Wolverhampton, Beerhouse Keeper.—T. Bulmer, Beaufort Terrace, Kingsland Road, Engineer.—W. Bussey & W. H. Peirce, Cornhill, Ship Brokers.—J. Cutler, Marton, Lancashire, Cordwainer.—W. Crewe, Lowestoft, Suffolk, Cooper.—G. F. Chastey, Inwardleigh, Devonshire, Farmer.—T. I. Dimsdale, late of Globe Terrace, West Ham, Essex, Fancy Manufacturer.—J. F. Davis, Peterborough, Northamptonshire, Photographic Artist.—J. Dickinson, Richmond, Yorkshire, Innkeeper.—T. R. Edwards, Malden Rd., Kentish Town, Attorney.—H. Fenwick, Canterbury, Brewer.—Dealer.—C. Franklin, late of Harlow, Essex, Corn Merchant.—A. F. Foster, Museum Street, Bloomsbury, Esquire.—W. Foster, Gateshead, Low Fell, Durham, Contractor.—J. Fleming, Wolverhampton, Grocer.—J. Gaunt, Goodrich, Lancashire, Baker.—J. B. Hall, Stroud, Gloucestershire, Manufacturer.—G. Harrison, Weymouth Mews, Portland Place, Carpenter.—J. Hoyle, Great Harwood, Lancashire, Watchmaker.—E. Hartland, late of Westbromwich, Staffordshire, Builder.—H. Hitchcock, New Cross Road, Grocer.—W. Halliwell, Blackburn, Lancashire, Cotton Manufacturer.—T. I. Jeffery, Davies Street, Oxford Street, Timber Merchant.—G. Kemsley, Aylesford, Kent, Beer Retailer.—W. Lockett, Hulme, Lancashire, Stationer.—Thomas Laverack, Edward Street, Regent's Park, Greengrocer.—Robert William Linton, Exmouth, Devonshire, Farmer.—George Matthews, Lydney, late Blacksmith.—T. E. Marsland, late of Church Road, Battersea, Gentleman.—G. Marshall, Romsey, Southampton, Ironmonger.—J. P. Morgan, Bartholomew Close, Bookbinder.—H. Morgan, Aberystwith, Cardiganshire, Innkeeper.—J. Neale, Wigston Magna, Leicestershire, Beerhouse Keeper.—J. Oxley, Wells, Somersetshire, Greengrocer.—J. Page, Leamington Priors, Warwickshire, Coal Merchant.—W. Phillips, Sedgley, Staffordshire, Assurance Agent.—G. J. Patterson, Wolverhampton, Innkeeper.—W. G. Parbery, Northampton, Grocer.—J. C. Partridge, Ibthlingborough, Northamptonshire, Boot Manufacturer.—G. J. Russell, Maidstone, Painter.—W. Reed, late of Plaistow Road, West Ham, Builder.—M. Rooks, Manchester, Beerhouse Keeper.—W. R. Rhodes, Hampton, Middlesex, Plumber.—J. Richardson, Chapel Street, Lambeth, Fishmonger.—R. Styles, High Street, Kingsland, Fishmonger.—J. Swinfells, Manchester, Commission Agent.—J. Smellie, Leicester, Clockmaker.—T. Smellie, Seaforth, Lancashire, Stone Mason.—W. H. Smith, Upper Fountain Place, City Road, Engraver.—W. Turner, Great Gidding, Huntingdonshire, Baker.—Joseph Vickers, Braithwaite, Cumberland, Butcher.—Pieter Bernardus Van der Vlies, Liverpool, Licensed Victualler.—J. Walker, jun., Pool Hayes, Staffordshire, Farm Labourer.—M. Williams, Liskeard, Cornwall, Assayer of Metallic Ores.—J. Williams, Liverpool, Porter.—F. Williams, Plymouth, Grocer.—J. Wills and W. M. Wills, Liverpool, Merchants.—J. Wilkinson, Strensall, Yorkshire, Farmer.—G. O. Warburton, Leicester, Commission Agent.

SCOTCH SEQUESTRATIONS.—J. Campbell, Thurso, Caithnessshire, Merchant.—G. Ruddoch, Aberlour, Banffshire, Merchant.—J. Scott, Rochallie, Perthshire, Farmer.

TUESDAY: *Sept* 20.—BANKRUPTS.—J. Antley, Overton, Flintshire, Innkeeper.—C. Austen, late of Wolverhampton, Grocer.—M. Atkinson, Middlesborough, Yorkshire, Grocer.—J. Blenkinsopp, Balkan Street, Belgrave Square, Domestic Servant.—E. Boothroyd, Hanley, Staffordshire, Builder.—W. Black, Heigham, Norwich, Horse Dealer.—M. Buck, Skeyton, Norfolk, Carpenter and Builder.—F. Bassil, Fenchurch Street, City, Shipowner.—W. Collieson, Tennison Street, Lambeth, Boarding and Lodging House Keeper.—J. W. Cheeham, Tunbridge, Kent, Grocer.—W. H. Carpenter, Churston Ferrers, Devonshire, Licensed Victualler.—J. S. Cobb, Park Crescent, Stockwell, Clerk in her Majesty's Customs.—W. R. Crabtree & J. Crabtree, Rochdale, Lancashire, Machine Makers.—H. Dale, late of Shacklewell, Hackney, Commercial Clerk.—W. Dauncey, Sheffield, Millwright.—E. Dixson, Ledbury, Herefordshire, Wheelwright.—E. E. Gellowski, Liverpool, Sculptor.—J. Gurney, Stanbridge, Bedfordshire, Farmer.—W. Jones, Fontiden, Montgomeryshire, Flannel Manufacturer.—W. Jenkinson, Greenheys, Manchester, Baker.—C. Kelly, Clifton, Bristol, Licensed Victualler.—T. Moore, Ashby-de-la Zouch, Leicestershire, Common Carrier.—F. Mumford, Leatherhead, Surrey, Boot Maker.—T. Poyntington, Brunswick Terrace, Westbourne Grove, Italian Warehouseman.—J. Fidler, Neath, Glamorganshire, Boot Maker.—W. Pearse, Winsford, Somersetshire, Butcher.—H. Russell, Kidderminster, Worcestershire, Plumber.—William Reeves, Down, Kent, late Blacksmith.—William Sharples, Tyldesley, Lancashire, Blacksmith.—Joseph Salisbury, Earl Shilton, Leicestershire, Inn Keeper.—Thomas Sharples, Tyldesley, Lancashire, Joiner.—Samuel Sanderson, late of Bridlington, Yorkshire, Lodging house Keeper.—T. Smith, Gidling Street, Deckhead, Journeyman Cooper.—W. Tonkin, Truro, Cornwall, Mine Share Broker.—A. W. Tabrner, Railway Place, Fenchurch Street, City, Printer.—J. Thomson, Northwold, Norfolk, Grocer.—W. S. Whitcroft, Whitwick, Leicestershire, Baker.—J. Walker, Market Rasen, Lincolnshire, Timber Merchant.—H. Walker, Robert Street, Hoxton, Wire Worker.

SCOTCH SEQUESTRATIONS.—J. Sinclair, Milton of Campsie, Lanarkshire, Farmer.—R. Stevenson, Alloa, Clackmannan, Farmer.

Metropolis and its Vicinity.

Arrival and Examination of Muller.—On the arrival of the Etna in the Mersey on Friday night she was met by the steam-tug Fury, from Birkenhead, having on board one of the Liverpool detectives. At half-past 10 o'clock Müller was landed at the south end of the Princess Pier, and was at once conveyed in a cab to the Detective Office.

Police officers were seated in the vehicle with him, and others followed in other cabs. The excitement in the town from the time the Etna came in sight was very great, and it increased as he was landed and conveyed to the police-office. He was kept at Liverpool till the departure of Saturday morning train, when he was brought to London. There were great crowds for many hours awaiting the arrival of the train at the Camden ticket platform as well as at Euston Square and Bow Street, the mob at the latter place being so numerous and violent that they nearly upset the prison van in which the prisoner was removed from Euston Square to Bow Street. Great disappointment was expressed by the roughs when they caught sight of the prisoner as he left the van, his mean and worn appearance not at all coming up to their expectations of the person who could have planned and executed the murder of a tall, powerfully made man like Mr. Briggs. The hour was too far advanced to allow the magistrate to open the case on Saturday afternoon, and the case was accordingly adjourned till Monday, when Müller was placed at the bar charged with the wilful murder of Mr. Thomas Briggs on the night of the 9th July. Every requisite precaution had been taken to prevent confusion in front of the court. People had commenced gathering about the doors of the station as early as 4 o'clock in the morning, and by 7 there could not have been fewer than 500 persons waiting to see the prisoner removed from the cells to the court. At half-past 7 Superintendent Durkin cleared the space between the police-station and the court opposite, and Müller was taken across to the cells attached to the latter. There was some shouting as he passed, but the prisoner took no notice of it, and when he was out of sight the mob dispersed, satisfied of the impossibility of getting admission to hear the examination. Consequently at 10 o'clock, when the doors of the court were open, the street was comparatively clear, a strong body of police being stationed at each end of the street to prevent a crowd in front of the building. Mr. Flowers was the presiding magistrate for the day, his brother magistrate, Mr. Vaughan, having arranged to take the ordinary charges in the Board-room of the Strand Union, which adjoins the court. The limited space devoted to the public was occupied almost exclusively by the representatives of the English and foreign press, the artists of the illustrated papers, and a few literary men. Prince Humbert, with his aide-de-camp and the Italian Minister, were among the gentlemen accommodated with seats upon the bench. Shortly after 11 Mr. Giffard, the counsel for the Crown, who was accompanied by Mr. Pollard, the Solicitor to the Treasury, intimated his readiness to proceed with the case. The chief clerk then directed the gaoler to place his prisoner at the bar. Müller walked in, preserving the same gait and unmoved expression of the face which he is said to have generally maintained since his apprehension. He scarcely looked up once during the whole proceedings, but when he was offered a seat in the dock his face became slightly flushed for a moment only. Indeed, any act or word of kindness appears to affect him keenly, while he heard the most damaging statements as to his having trafficked with the property of the murdered man apparently with perfect indifference. The charge on the sheet having been read over to the prisoner, Mr. Beard, the solicitor instructed by the German Society to defend the prisoner, requested that all the witnesses for the prosecution should be kept out of court, excepting the one under examination. He did not wish to include Inspector Tanner in the general order. The magistrate at once agreed to this request. Inspector Tanner stated that the witnesses were already out of court; he had given a direction to that effect. Mr. Giffard then said that he was instructed on behalf of the Crown to prefer the charge just read against the prisoner at the bar. It would be mere affectation to pretend that the circumstances were not sufficiently well known to the Court already. It was enough to state that on the 9th of July last the late Mr. Thomas Briggs was deprived of his life by an act of violence in a railway carriage. He was at the time in possession of certain property, and the prisoner was found dealing with a portion of that property within 40 hours after the outrage was committed. A man's hat was left in the carriage which Mr. Briggs had occupied, and this hat is said to have belonged to the prisoner; while the hat worn by Mr. Briggs, it is believed, on the night of the murder, was found in the possession of the prisoner when he was taken into custody. It would be for the prisoner to explain these circumstances, and doubtless his worship would feel it his duty, at a later period of the investigation, to submit the question of his guilt or innocence to another tribunal. He proposed, for the present, to examine some of the witnesses in attendance, and then to ask for a remand to a future day. Mr. David Buchan, 23, Nelson Square, Peckham, woollen warehouseman, the husband of a niece of Mr. Briggs, who dined with them on the day of the murder; William Timbs, the guard of the North London Railway, who found the body; Mr. T. J. Briggs, the son of the deceased; Mr. Death, the jeweller; Jonathan Matthews, the cabdriver; the prisoner's landlady, two of his countrymen and acquaintances, and Sergeant Clarke, of the detective force, who was sent to New York to apprehend him, were then examined. Their evidence identified the property of Mr. Briggs as having been in the possession of the prisoner, but added little to the facts already familiar to our readers. Sergeant Clarke, who deposed to finding Mr. Briggs's watch and hat in the prisoner's possession when he was arrested, stated that when asked if he had possessed the articles long, he replied that he had had the watch about two years, and the hat about 12 months. Mr. Giffard then asked for a remand, to complete the evidence, when the magistrate ordered the case to be remanded till that day week. There was some delay in getting the prisoner out of the dock, owing to the passage having become blocked up; but he stood quite calm and collected. After his removal to the cell the chief clerk asked him if he wanted anything, when he said that if he had to speak he should prefer doing so in the English language, as he could express himself more clearly than he could in his own native tongue. He asked the officer in attendance upon him why he had not been taken to Stepney, instead of Bow Street. The constable told him that all Government prosecutions were conducted at Bow Street. He replied, "Well, it is of no consequence. I shall get justice wherever it is." About an hour after the close of the examination Müller was once more conducted to the prisoner's van. The street had been kept clear for a short time, the ordinary traffic being sent round by the Market. On stepping into the van he was again hooted by the crowd at the bottom of the street, but he had evidently become too much accustomed to the noise to be disconcerted by it. He was then driven to the House of Detention. The adjourned inquest was resumed on Monday at Hackney, and again adjourned to Tuesday, when several of the witnesses who had given evidence at the police court on the previous day were examined at great length, but nothing was elicited which was not already known to the public. At the close of their examination the inquiry was further adjourned till Monday next, when it is expected that Müller will be brought before the Jury.

THE SELF-ACCUSED ACCOMPLICE OF MÜLLER.—George Augustus King, the man who accused himself of being an accomplice of Müller, was brought up on Saturday at the Worship Street Court, when Mr. Lee, who saw two men in the carriage with Mr. Briggs swore positively that the prisoner was not one of them. Some other evidence having been given, the magistrate discharged the prisoner, telling him that he had only himself to blame for what he had suffered.

THE FATAL ACCIDENT TO CAPTAIN SPEKE.—The report which we mentioned briefly last week that Captain Speke, the explorer of the Nile, had been accidentally shot dead whilst shooting at Corsham, has unfortunately proved to be true. It appears that on Thursday, the 17th inst., he left Bath early in the morning, and when about four miles in the country, while getting over a low wall, his gun by some mischance exploded while the muzzle of it was pointed at his chest. The charge entering his body passed completely through, severing the main arteries of the chest, lacerating the lungs, and passing close to the heart. Mr. Fuller, his cousin, who was shooting with him, hearing the gun fired, turned round in time to see him fall from the wall into the field, and the keeper, who was marking birds at a short distance, seeing his master run towards the deceased, also went up and found him mortally wounded. He was only sensible for a few minutes. On Mr. Fuller coming up he moved his hand to his chest and said feebly, "Don't move me," Shortly afterwards he breathed his last. A surgeon was on the spot very soon after the accident, but he was dead before his arrival. Captain Speke was 38 years of age and unmarried. At the inquest the jury unanimously returned a verdict that "Deceased died from the accidental discharge of his own gun, after living a quarter of an hour." They also appended an expression of sympathy for the family of deceased in their bereavement, which was a loss both to his family and to the whole country. At the meeting of the British Association of Section E, on Friday, where it was understood that a discussion would take place between Captain Burton and Captain Speke on the sources of the Nile, there was a great rush to the Geographical Section at an early hour. The shocking death of Captain Speke, however, cast a gloom over the whole assembly, and the President, Sir Roderick Murchison, on taking the chair, moved the following resolution:—

"That the geographers and ethnologists of the British Association having heard with profound regret of the fatal accident which has befallen Captain Speke, and by which they have suddenly lost so eminent an associate, resolve that their most heartfelt condolence be offered to his relatives on his being cut off in so awful a manner in the fulness of his strength and vigour."

The resolution was unanimously passed, every person in the room holding up his hand.

GREAT FIRE IN THE CITY.—On Monday morning, between three and four o'clock, a fire broke out in Gresham Street, which in point of extent and destruction of property, has not been equalled since the burning of Cotton's Wharf. It was first discovered by a police-constable, who noticed a strong glare of light and volumes of smoke issuing from the premises of Messrs. Tapling, carpe manufacturers, in Gresham Street West. The building, which is about 170 feet long and 100 feet high, is situated nearly opposite the Goldsmiths' Hall, the upper floors being occupied as warehouses by Messrs. Hellaby. It is in a large block of houses formed by Gresham Street, Wood Street, and Staining Lane, and contains some of the most costly-stocked premises in the city. On ascertaining that a serious conflagration was raging inside the building, the constable raised an alarm, and in a few minutes a number of engines were hastening to the spot, which had then become the scene of the wildest confusion and dismay. The fire soon gained great head, and the flames roared through 40 windows, threatening all the adjoining property. In consequence of the great danger to Haberdashers' Hall, measures were promptly adopted by the firemen and others for removing the paintings and other valuable articles kept therein. This work was not commenced a moment too soon, for the flames rapidly extended to the Hall, which has just been repaired at a cost of 10,000*l*. They also seized on the premises of Messrs. Edmonds, button-makers, and Mr. Jones, warehouseman, at the corner of Wood Street, and had full possession of a district to considerable extent, from which they rose high in the air. Haberdashers' Hall was built by Sir Christopher Wren on a portion of the site of the original building which was destroyed by the Great Fire of London. It was a heavy building of brick, having no particular pretensions to exterior ornament, but richly fashioned and decorated in the interior. A short time since, when the premises of Messrs. Tapling & Co. were erected, a handsome gateway and passage leading to the court-room and back buildings was erected in Gresham Street, to harmonise with the new structure, and a handsome pair of iron gates were fixed in the new doorway, the old walls being repaired, but not rebuilt. Of these the greater part are destroyed. In the banquetting-hall there were several valuable paintings by early masters, most of which have been saved, but part of the carved work of Grinling Gibbons, with the roof and painted ceiling of the hall, have been entirely destroyed. The Hall and offices are understood to be insured for 10,000*l*., but that sum will, it is said, by no means cover the damage. All the business premises were fully insured, and the books of the different firms were saved. The fire continued burning all Monday, and was not entirely got under until the evening. The origin of the fire is not known.

DESTRUCTION OF THE SURREY RICE MILLS.—On Thursday night at 10 o'clock, a fire of considerable magnitude took place at the rice mills in the Grand Surrey Canal and Docks, Rotherhithe, which resulted in the complete destruction of the property, involving a loss of upwards, it is reported, of 30,000*l*. The mills which were the property of Messrs. Chapman, Hazell, and Gray, were the largest of the kind in the metropolis. The mills were largely insured. The fire is supposed to have been caused by friction of the machinery or spontaneous combustion. This is the second time the mills have been burned down—the former event occurring about 50 years ago.

NEW AUSTINFRIARS.—On Tuesday the foundation-stone of a new Roman Catholic church, in connection with the Mission of St. Augustine, was laid in Hoxton Square, Shoreditch, in the presence of Monsignor Manning, the Roman Catholic Provost of Westminster. After the ceremony Dr. Manning addressed the assembly. He said the act of that day would leave its mark upon the Catholic history of London, for where the Church of God laid its hand it had a tenacity of hold, and never let go the inheritance which God had given it. The Catholic Church, he continued, had inscribed its name on the corners of the streets of London, and the ancient sanctuaries of Blackfriars, and Greyfriars, and Whitefriars, and Austinfriars were known to this day. But the deluge came, and by the inscrutable permission of God swept away those sanctuaries of His saints. The Church of God was refounding those sanctuaries once more, and that day Austinfriars was created afresh in another part of London, and once again had St. Augustine entered among English Catholics to perform his mission. The mission had peculiar fitness, for between St. Augustine and England there was a singular analogy. It was hardly fitting that he should speak before the fathers of the great order of the father whose name they bore; but it seemed as though St. Augustine sent a great message to the English people when he said that intellect without faith led to the depths of a great abyss, for intellect without the faith of God led men to the depths of immorality. King Solomon was an instance of this, for through God he had knowledge of all sciences, and spake of all things, great and small. He was acquainted with all those sciences of the natural world of which men in these days showed themselves so proud; and yet his end was a great and terrible fall. St. Augustine was born of Christian parents, but was not baptised and sanctified to the faith of God in his early years. He grew up with a cultivated intellect, and became a teacher of rhetoric and philosophy, and was head and shoulders in intellect above the men of his age; but for the lack of holy baptism he plunged into immorality, and stained his holy soul, and until the age of 30 lived a life of shame. Here was an example for England. No country in the world was more intellectual than England, and no country in the world was so proud of its reason, so confident and so unbelieving. In England reason was the test of all things, and yet in no country was there so much spiritual blindness. Men thought that by the power of reason they could attain to a knowledge of God. Intellectual education was esteemed by parents as something they should give their children to insure their future prosperity, and many Catholic

parents intrusted their children to schools not under Catholic teachers, because intellectual cultivation was thought of greater moment than the spiritual welfare of the children. Now, St. Augustine brought these parents and this people the message that intellect by itself would lead men into moral aberrations. St. Augustine said that if men would understand the knowledge of God they must seek it by believing. There were men in his day who set up to be teachers of the people, and they taught that the things to be believed must first be understood; but St. Augustine taught that understanding would come by belief only. Another lesson for England was to be found in what St. Augustine told a sect in Africa who persecuted in a fearful manner the followers of the true Church, whom they greatly outnumbered. St. Augustine used one great weapon against those who lifted themselves so high against the Church of God. He said:—"You are the Church of this part of Africa; but you have no communion with the Church which is united with the Gauls, with the Spaniards, and which is the Church of those who worship God in the far East and in the far West. You speak this one tongue, but the Church of God speaks all the tongues under the sun, and has preached the Gospel from the day of Pentecost to this hour." The application to be made of this was that in this country there was a Church which was not in communion with any other Church in the world. It sprung up three centuries since, and its followers greatly outnumbered the Catholics in this country. But the Church was isolated. What part had it with the Holy Catholic Church, which all people recognised as the only Church which our Divine Master founded upon earth? Were its clergy recognised as priests by the faithful in any part of the world, and what part or lot had it? Let its ministers pass over the water half an hour's distance to another shore, and what followed? Were they received in Communion in France or Spain? No; and this had been taught by St. Augustine when he said that there was but one channel from God, and that was the Holy Catholic Church, in which was held in one community all nations under the sun. Dr. Manning then went on to say that much had lately been said about the conversion of England, and of that time when the hands now lifted up in religious warfare would be joined before the altar. That was a blessed vision, he said, but he feared it was far off, and he described it as the mission of the Catholic Church to labour and to wait. The conversion, he said, would not be done by controversy, but might take place through the grace of God, and light would then be restored to England. Among the listeners to this discourse was the Rev. Dr. Campbell, the well-known Dissenting minister.

The New Chapel of King's College.—This new chapel, intended for the worship of the professors, students, and staff of the college, has just been completed, from designs by Mr. Gilbert Scott, the architect. It has been consecrated by the Bishop of London, and will be opened for divine worship on the first Sunday in October. There are seats to accommodate 600 persons. Some portion of the carved work and decorations yet remain to be done. The building, which is at the back of the great entrance-hall at Somerset House, has been entirely constructed by the voluntary contributions of the patrons and professors of the college, the collegians, and their friends.

Charge of Imprisoning a Wife.—At the Lambeth Police Court on Tuesday, Mr. Edward Hammond, a gentleman residing at Laurel House, Peckham, and Elizabeth Allen his servant, were brought up for the third time on remand on the charge of locking up and keeping in close confinement his wife, Rosalind Hammond, without just cause; and Emily Wakeman, a young woman who had formerly lived in the service of Mr. Hammond, but who, it was alleged, had been for the last two years his mistress, was charged jointly with them with assaulting Mrs. Hammond and conspiring together to imprison that lady, to the great injury of her health. Mrs. Hammond, a dejected but intellectual-looking woman, and who gave her evidence with perfect clearness and composure, deposed that when she married her husband she had an income of 600*l.* a year. He was then a widower, and had four children, the eldest of whom was a boy of about 10, the next 14, a girl, and there were two other girls, about 6 and 7. In 1862, after her confinement with her second child, she discovered that an improper intercourse was going on between her husband and Emily Wakeman. When she remonstrated with her husband, he laid the blame upon the two women. She then wrote a letter to the girl's father, apprising him that his daughter had been seduced by Mr. Hammond, but when this became known the housemaid compelled her by intimidation to write another letter to the girl's mother, declaring that the statements she had previously made were entirely false. Her husband afterwards severely beat her with his closed fists, and the women afterwards struck her on various occasions. She was then locked up in a room on the allegation of unsound mind. After remaining in this state for two years, she contrived to attract the attention of a neighbour, to whom she passed pieces of paper-hanging torn from the walls, describing her condition. Immiediate measures were taken for her release and a medcal man who examined her after she, recovered her liberty, deposed that there were no grounds whatever for asserting that she was of unsound mind. In cross-examination she admitted that she had herself had a child before marriage by a physician, the proprietor of a hydropathic establishment at which she was a patient, and that she took that child to the house of her husband, who knew all about it before he married her. Other witnesses deposed that Mr. Hammond and Emily Wakeman were constantly out together in a carriage, and that she had been seen wearing Mrs. Hammond's dresses. Mr. Norton said that the case was one for further inquiry. He should have preferred, himself, that some other course should have been taken, but when he heard from inquiries he personally directed to be made, that this unfortunate lady was confined in this way, he determined not to lose an hour in bringing the case to light. The case has now been investigated, and the result was such as to leave him no other course than to send the case to the sessions. In the case of assault there would be separate indictments, so that the one prisoner might be able to give evidence for the other. The prisoners were then committed both for conspiracy and assault, but liberated on heavy bail.

The Late Sir George Cornewall Lewis.—A memorial bust of the late Sir G. Lewis, modelled by Mr. Weeks, the sculptor, under the direction of Mr. Lowe, M.P., has just been placed in Westminster Abbey by a few of Sir George's private friends. It is a fine work of art, and the entire cost, exclusive of the fees to the dean of Westminster, which are stated to be very considerable, is 215 guineas. It has been erected in the western porch of the abbey, near the monuments of Sir William Follett, John Kemble, and Sir Eyre Coote. At the bottom of the bust is a square piece of polished marble, on which the following inscription is engraved:—

"In memory of the Right Hon. Sir George Cornewall Lewis, Bart., of Harpton Court, in the county of Radnor, successively Chancellor of the Exchequer and Secretary of State for the Home and War Departments. In him eminence as a scholar and as an author, large stores of varied knowledge, employed in the advantage and instruction of mankind, and an earnest devotion to literature, unsullied by intolerance or envy, were combined with a gentle and beneficent character, steadfast pursuit of the public good, and the comprehensive wisdom of a statesman. This bust is erected by many friends to mark their affectionate esteem and admiration, and to record his honoured name among the lasting dead who lie buried beneath these walls. Born April 21, 1806; died April 13, 1863."

Adulteration of Beer, Pepper, and Snuff.—The report of Mr. Phillips, the principal of the laboratory of the Inland Revenue Department, for the present year, has just been published. It states that during the last financial year 26 samples of beer and of materials found in the possession of licensed brewers have been analysed, and of these 20 were found to be illicit; the prohibited ingredients being, in 14 samples, grains of Paradise, one of these samples containing, in addition, tobacco; in two others Cocculus indicus was present in large and dangerous quantities; two samples contained capsicum; and the remaining two proto-sulphate of iron. Generally the prohibited materials employed in the adulteration of beer are not injurious to health, the object of the fraudulent brewers or retailers of beer being more to increase the bulk of their goods than to render the beer stupefying by the addition of noxious materials. Still, he says, there can be little doubt that the practice of adulterating beer with poisonous matters, such as tobacco and Cocculus indicus, is more prevalent than might be inferred from the small number of detections made, as the fraud is difficult to discover unless the offender be caught in the act of committing it. Considering therefore this circumstance, and the abominable character of the offence, Mr. Phillips is of opinion that it would be only just to the community to make public the names of those persons convicted of adding Cocculus indicus or other deleterious substances to beer brewed for sale; and he feels no hesitation in stating that the two instances of the use of the dangerous drug in question occurred in the neighbourhood of Wirksworth, in Derbyshire, and that many of the detections of the use of grains of Paradise were also made in the same district. He states also that the experience of many years has led him to the conclusion that the adulteration of beer with drugs, as distinguished from the mere dilution or increasing of the bulk of the article, is more prevalent in the Midland Counties and the West Riding of Yorkshire than in any other parts of the kingdom. With regard to pepper, Mr. Phillips says that there is reason to believe that it is still adulterated extensively either by the grinders or the wholesale dealers. Within the past year he analysed 30 samples, of which he reports to the Board that only 12 were genuine and 18 adulterated, the adulterants being the starch and husks of rice, wheat starch, linseed meal, and in one instance ground pine wood. A country seizure of adulterated pepper led to the examination of the stocks of pepper in possession of two firms in London largely engaged in the trade, and the result was that it was felt right to seize about a ton and a half of ground pepper heavily adulterated with rice husks, the whole of which was destroyed. In both instances it appeared that the dealers were innocent of the fraud, and that the grinder alone was the offender; but still they cannot be exculpated from blame, for, while they insist upon the return of an unreasonable percentage of ground produce from the public grinders, they must expect that the loss of weight which unavoidably occurs in grinding will be made up by illicit materials. The adulteration varied in these two cases from 10 to 15 per cent. In respect to snuff Mr. Phillips states that while few articles of consumption are now sold in so genuine a state as tobacco, and the use of prohibited materials in the manufacture of snuff is seldom attempted, there is a form of adulteration of the latter article far more injurious than the comparatively mild sophistications sometimes discovered. The law permits the use of lime water in the manufacture of high-dried snuffs, such as Irish and Welsh, but it does not state what proportion of lime shall be present in the water, although there can be little doubt that a perfectly clear solution of lime in water was meant. Many manufacturers, however, assert that such a solution is useless, and persist in the use of what may be termed "lime-wash," or a thick mixture of undissolved lime and water. Several unsuccessful attempts have been made within the last two years to suppress the practice, which is still growing, of using such a mixture; and probably until the use of lime in the manufacture of snuff is absolutely prohibited the fraud can never be crushed. It has been generally understood that lime was essential in the preparation of high-dried snuff; but a fine specimen of such snuff, made by an eminent firm in Ireland, has recently been analysed, the result being that no more lime was present than what may be found in normal American tobacco; and it is believed that the same firm strenuously opposed the legalising the use of lime-water, and still maintain that lime, even in small quantity, deteriorates the quality of snuff. The vicious form of adulteration referred to is almost entirely confined to the north of Ireland, where it appears the habit is very prevalent among the women employed in the linen and other factories of taking snuff highly charged with lime, and which is known as "white snuff;" and the manufacturers allege, in extenuation of their dishonest practices, that no other description of snuff is acceptable to their customers, apparently forgetting that they themselves have, by their long-continued illicit practices, engendered the habit which they now seek to bring forward as a plea for their fraudulent transactions. There have lately been submitted to Mr. Phillips several samples of snuff obtained from manufacturers in Belfast, in which it was impossible to say from a mere inspection whether lime or tobacco predominated; and he has received information from respectable members in the trade that some manufacturers do not even care to use a mixture of lime and water, but actually grind up dry lime with the tobacco in the process of manufacture. The evil in question appears to demand, both upon social and fiscal considerations, an immediate remedy. It can never be suppressed under the existing law, and the only effectual course to be adopted is the entire prohibition of the use of lime in the manufacture of snuff. Mr. Phillips has reason to believe that the obnoxious practice is distasteful to many manufacturers, who, however, feel compelled in self defence to adopt it, and that its continuance is mainly due to the unscrupulous operations of one or two members of the trade.

The late Case of Cruelty to a Child.—At the weekly meeting of the Greenwich Board of Guardians on Friday the case of a girl, aged 11 years, who was found a few days since in Greenwich Market with an iron chain fastened round her neck with a padlock, and in a state of absolute starvation, was brought under investigation. The girl stated that she left her home about a fortnight since, because her father, who resided in Moore Street, Deptford, and was employed on the railway, constantly ill-treated her. He fastened a chain round her neck and attached a log of wood to the other end of the chain, and often compelled her to sleep behind the door without clothing. He had also stripped her and beaten her with a rod until her back was torn. The father, who was in attendance, stated that he was employed at the New Cross station. He admitted that he placed the chain on the girl's neck, and that he compelled her to sleep with it so attached. The chain had been on her neck about 10 days when the girl was found, and he punished her in this way to "shame" her and keep her from begging. After some discussion, it was unanimously resolved to take proceedings against the father at the Greenwich Police Court.

The Jeffreys Family.—The police authorities have made public a statement respecting the relatives of the late Lucretia Jeffreys, the young woman who died from overwork and want of necessaries, at Mile End, a short time since. It appears that the police have received a number of letters and documents with reference to the different members of the family, which conclusively prove they are not deserving objects of public sympathy. These documents show that the father was a journeyman paper-stainer, at Maidstone, where he used to hang about the courts as a sort of amateur attorney, to get up defences for criminals, with the assistance of a disreputable solicitor, long ago dead. Then he worked in a brick-field, very poor and ill-dressed. For some time afterwards he haunted dirty lodging-houses in Maidstone without visible means of livelihood. Two years and a half ago he migrated to Mile End Road, and about six months afterwards his sons, his daughters, a girl living with them, and another woman, were apprehended on a charge of burglary in a silversmith's shop at Lewes, some of the stolen property being found in their house. They were tried and sentenced, two to ten years' penal servitude, and two to twelve months' imprisonment with hard labour. The father never committed himself so far as to perpetrate

an indictable offence, though he has been arrested on civil process; but the police assert that from his roof in London his sons and daughters and their confederates sallied forth to commit the burglaries and robberies which so recently kept a large district of Kent, familiarly known to them, in terror. These atrocities have considerably diminished since the autumn of 1862, when the girls came out of gaol after undergoing their punishment, and from that time the household sank rapidly towards complete destitution. The daughters were unable, without male accomplices, to carry on the practice of housebreaking; their father was unable or unwilling to obtain work; and thus was caused the catastrophe which recently caused so much painful excitement. There is no doubt of the fact that the daughter really died of destitution, and that the whole family has been in a dreadfully destitute condition for a very long period, but it has been mainly brought about by their own misconduct. Inspector Hill of Maidstone, goes so far as to intimate that the father himself had speculated on the catastrophe as a means of raising money, for he says: "Jeffreys was always an artful dodger; but I think this affair of the inquest is his masterpiece." It is unnecessary to add that the magistrates, after hearing these facts, at once declined to receive any more contributions for the family, and that the public subscription for their relief has also been stopped.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, Sept. 17, were 1236. The average number in the corresponding week of the 10 years, 1854-63, excluding deaths fro epidemic cholera in 1854, and corrected for increase of population, was 1192. The present return is therefore 44 above the average. During the week the births of 957 boys and 911 girls, in all 1868 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1848.

Provincial.

BATH.—The members of the British Association on Saturday, after the meeting of the sections, made excursions to Frome, Holwell, and the Vallis; Stanton Drew and Radstock. Those who chose the former excursion were entertained at luncheon by the Earl of Cork; those who chose the latter by Lady Waldegrave and Mr. Chichester Fortescue. But the rain rendered the trips less enjoyable than they would otherwise have been. In the evening the Mayor gave a dinner to the leading members in the Guildhall. On Monday a meeting of the General Committee was held for the purpose of receiving invitations from different towns for the future meetings of the Association. Mr. Galton, one of the general secretaries, read an application from Dundee for 1867. Sir R. Murchison said the inhabitants of Dundee expected to finish the erection of the Albert Institution by 1867, which would accommodate all the sections of the Association. Mr. Galton next read an application from Nottingham for 1865, another from Birmingham, each supported by about 14 bodies in those towns. An application was also read from Southampton. Dr. Daubeny said he had to repeat, on behalf of Mr. Bateman, an application on the part of the Potteries. Mr. Galton also read an application from Norwich. Mr. Spencer Ball said he had a letter from Plymouth, the Town Council of which were desirous that the Association should visit that town in a few years. Sir R. Murchison moved that the next meeting of the Association be held at Birmingham. Mr. Fairbairn seconded the motion. Professor Miller moved as an amendment that the next meeting be held at Nottingham. Dr. Hicks seconded it. After some discussion Dr. Robertson withdrew the claims of Nottingham, but said he trusted that Nottingham would be chosen for the following year. The original motion was then put, and unanimously agreed to. Sir R. Murchison then moved that Professor Phillips be president for next year. Lord Wrottesley seconded the motion, which passed with acclamation. Lord Leigh, Lord Lichfield, Lord Wrottesley, the Bishop of Worcester, Mr. Adderley, Mr. Scholefield, M.P., and Mr. Chance were appointed vice-presidents. In the evening Dr. Livingstone delivered his promised address on his African explorations, and the interest excited was so great that it was necessary to divide the company and get one of the officers of the Association to read a copy of the address in one room while Dr. Livingstone delivered it in the other. On Tuesday there was a Microscopical Soirée in the Assembly Rooms. On Wednesday the members were entertained at a banquet in the Guildhall, given by Mr. Tite, M.P. On Thursday, excursions were made to Bristol and Clifton, to Salisbury, Old Sarum, and Stonehenge.

BIRMINGHAM.—The strike of the South Staffordshire colliers has deprived the manufacturers of this town of the usual supply of coal, and the result is that several works are partially stopped in consequence. A public meeting was held on Thursday, at which a committee was appointed to confer with the coalmasters and the men, and earnestly request them to accept the arbitration of Lord Lichfield, Lord Lyttelton, and the Mayor of Birmingham.

BRISTOL.—The arrangements for the Church congress which is about to take place in this city, have been completed. On the first day there will be Divine service in the Cathedral, with a sermon by the Dean of Ely. In the afternoon papers will be read on the Increase of the Episcopate; Home Missions and Lay Agency; Synods of the Church; Rural Deans and Decanal Chapters; Foreign Missions and Supply of Missionary Candidates. On the second day papers will be read on Parochial Subdivision, Organisation, and Action; Collegiate Churches in Great Towns; Church Architecture and Decoration; Mutual Relations of the Church in England and Ireland; Free and Open Churches; Augmentation of Small Livings, and Queen Anne's Bounty; Social Hindrances to the Spread of Christianity; Dwellings; Employments; Intemperate Habits; Ignorance; Injurious Publications. On the third day papers will be read on the Education of the Clergy; Systematic Cultivation of English Composition; Public Reading and Speaking; Associations for Aiding Poor, Enfeebled, and Disabled Clergymen, and the Widows and Children of the Clergy; Church Finance; Middle-class Education; Adult Education and Night Schools; the Revised Code and Church Training Colleges; Church in the Workhouses; Church Music.

HALIFAX. — An equestrian statue of the Prince Consort, cast in bronze by Messrs. Elkington, of Birmingham, from a model by Mr. Thornicroft, of London, at a cost of 1300*l.*, raised by a general subscription in this town, was on Saturday publicly unveiled, on its Aberdeen granite pedestal, at Ward's-end. The volunteers, the corporation, and subscribers, walked in procession from the Town Hall, accompanied by Sir Charles Wood, as one of the members for the Borough, and Sir F. Crossley as one of the members for the Riding. Archdeacon Musgrave having offered up a prayer, Sir F. Crossley, presented the statue, in the name of the subscribers, to the Mayor for the corporation. The Mayor having accepted the statue, Sir C. Wood pronounced an eulogium on the character of his Royal Highness. The assemblage then gave three cheers for the Queen and three for the Prince and Princess of Wales.

LEEDS.—The suspension of the Leeds Banking Company was announced on Monday. The cause is attributed to the London agents, Messrs. Smith, Payne, & Co., having returned their drafts unpaid on Saturday. It is stated that the deposits and balances due by the bank represent about 500,000*l.*, and that there are bills for about 2,000,000*l.* under discount, bearing the company's endorsement, of which a very considerable proportion will come back upon them. Under these circumstances there is reason to apprehend that the liquidation will be a long and expensive one, and that heavy calls will have to be made on the shareholders. As there are 230 shareholders, it is believed the creditors will not lose anything, while an endeavour is to be made to reconstruct the establishment. It is understood that the difficulties of the bank have been brought about by advances on mills, and the extension of its discount business in channels scarcely possessing the proper facilities. The paid-up capital of 110,100*l.* was insufficient to properly support these enlarged operations.

NEWPORT.—Mr. John Frost, the well-known Chartist leader of Monmouthshire, has lately reappeared in public. Since his return to this country through the Queen's clemency he has lived in retirement at Stapleton, near Bristol. In his 84th year, a hale and hearty man, he is now engaged in writing a series of letters to a local paper, the *Star of Gwent*: in which he shows that his opinions have been toned down by time and circumstances, as well as by the gradual and satisfactory progress of our political system. In one of his letters he gives details of his life after he was convicted. On his way to Van Diemen's Land in the Mandarin convict ship, he was asked to join in a mutiny. "When we were within a few days' sail of the Cape of Good Hope a prisoner brought me a letter. The writer was a prisoner, a smart little man. He had been a mate of a ship, and was pretty well educated. It was handed over to me with great caution, as if it contained something to be known to me only. I read it. In this letter I was informed 'that it was the determination of the far greater part of the prisoners to take possession of the ship; that having great confidence in me, they begged me to join in the plan; and the writer assured me that my orders should be obeyed.' This letter put me into an awkward position. To conceal it from the superintendent, should the fact come to his knowledge, would have been deemed a crime, and of the worst sort. On the other hand I did not like to betray the writer. I showed the letter to Mr. Williams. He seemed to favour the experiment. 'Let us look at the matter carefully,' said I. 'Suppose this should be a trap. We have made one mistake; do not let us make another. Suppose we should attempt and be killed; it would not be a very honourable death? Suppose we should succeed; do you think that we should exercise authority over the prisoners? I will have nothing to do with it.' I destroyed the letter." On arriving at their destination the superintendent interceded with the governor, but without success:—"When the superintendent returned on board he repeated to us the conversation which he had had with the governor, and he assured us—and I believe sincerely—that he was sorry he had not succeeded. 'Frost,' said he, 'we are about to part in all probability for ever. I am happy to tell you that since you have been under my command you have acted the part of a gentleman; and mark,' said he, looking at me very significantly, 'nothing that you said, nothing that you did, was unknown to me; and with this knowledge I again repeat that you have acted the part of a gentleman. I address the same language to you, Williams.' This language set me thinking, and it confirmed suspicions which I had previously formed. 'Nothing that you said, nothing that you did, was unknown to me.' Then he must have been acquainted with the affair of the letter. No doubt of it.'"

NOTTINGHAM.—A young woman called Elizabeth Wragg, aged 19, was brought before the local bench of magistrates a few days since, charged with the murder of her son Arthur, a child only a fortnight old. It appeared from the evidence that some boys, while gathering blackberries near Mapperley Hills, a short distance from the town, found the naked body of a child, cold but warm. There was a piece of narrow web tightly round its neck, which had caused strangulation. The boys immediately gave information to the police, who on the same night captured the prisoner, who, with the infant, had just been discharged from the Nottingham Union. At first she denied all knowledge of the affair, but ultimately confessed that the child was hers, and that she had caused its death by strangulation, as she feared to take it home on account of her mother. She was remanded to Monday last, when she was again remanded by the magistrates. On the same day a verdict of Wilful Murder was returned against her by the coroner's jury.

STOCKPORT.—The municipality of Stockport are about to memorialise Government in favour of the removal of the Cheshire assizes from the ancient capital of the county to their own town. In support of the proposal it is alleged that Stockport is the largest town in the county, and that it would be a more convenient place for the inhabitants of Cheshire generally.

TAUNTON.—On Saturday a very severe thunderstorm burst over this town, accompanied by torrents of hail and rain. Whilst the storm was at its height the pinnacles and parapet of St. Mary's tower were struck by lightning, and large quantities of the ornamental stonework were thrown to the ground, and a quantity of lead roofing melted. This tower, which is considered the handsomest in Somerset, and is regarded with great pride by the inhabitants of Taunton, has just been completed a year or so, having been just rebuilt at a cost of 9000*l.* or 10,000*l.*—On Saturday week a shocking suicide was committed by Mrs. Spooner, aged 35, the mother of three children. She and her husband, a London accountant, have been staying in this town; and on Saturday morning they left home together to go to market, on nearing which Mrs. Spooner told her husband that she wished to call upon her aunt, who lived near the railway, and left him for that purpose. She was afterwards seen upon a footbridge which crosses the line, where she stood for 10 minutes until the train from Exeter was seen coming up. She then descended to the line, took off her bonnet and other articles of dress, stepped deliberately on the line, and stood bowing her head against the approaching train. She was struck to the ground dead, and terribly mutilated. The train, which was going almost at full speed, was stopped as soon as possible, and the guard ran back to where the lady was, but assistance was of no avail. At the inquest it appeared that after the birth of each of her children Mrs. Spooner had been subject to extraordinary fits of nervous excitement, and the jury returned a verdict of Temporary Insanity.

WAKEFIELD.—Five men are in custody in this town for alleged participation in a poaching affray that took place in Methley Park, the seat of Mr. Titus Salt, on the night of the 30th ult. It appears that between 10 and 11 o'clock on that night, John Kemp, a gamekeeper watcher for Mr. Salt, saw two men ranging on the grounds. He went towards them, but they made off, and to raise an alarm, it is said, he fired his gun. As soon as he had done so he saw four men coming towards him from the edge of a "planting," and two or three others coming from another direction. When he saw that there might probably be a disturbance, he put down his gun, and on the men coming up they struck him with bludgeons, tied his legs and arms together, and demanded to know where his gun was. On threatening that if he did not tell them they would take his life; but they were at last dissuaded from further violence by one of their number. After they left him Kemp bit through the cord that fastened his arms, and then cut the cord that held his legs. The prisoners have been remanded.

WILTON.—Lord Palmerston, at the request of Lord Herbert of Lea, delivered on Wednesday to the successful competitors the prizes won at the annual meeting of the Wilts Rifle Association. In his speech his lordship made the following remarks on the Volunteer system:—

"I must say that a nobler display of national feeling, sagacious patriotism, and of persevering courage was never exhibited by any nation. Its original cause was temporary, but I trust that its effects will be permanent, and that this institution, so valuable and so important to the best interests of the country, will continue for all ages to come to be a great national institution. We differ in many things from the great Powers of the Continent. We live on an island open to any invader who might chance to land on our shores at almost every point of our large maritime circumference. We therefore cannot pretend to defend ourselves as a continental States may do, which, being accessible in only one direction, by one valley or by one pass, may strengthen the attack, by one vulnerable points, and by stationing their fortify their vulnerable points, and by stationing their a military force may think themselves secure from invasion until they can collect a large army to resist the invading enemy. We have not thought it possible, and it would be idle to

colish to attempt to fortify the whole of the extensive shores which begirt these islands. We have done that which is within our means and which is sufficient for our purpose. We have begun and carried out to a great extent those works which are necessary to protect from sudden attack those naval dockyards and arsenals which are the cradles of our maritime power and the defenders of the best interests of the country; for it is needless for me to point out that if we lost the command of the seas which surround our shores and a hostile squadron was allowed to blockade our ports, our commerce, our industry, and our independence would be seriously endangered. This work was begun by the late noble occupant of these estates, who devoted his best energies to commence these operations. His plans have been followed out, and I trust that they will soon be successfully completed. Well, although the defence of England, if she is ever attacked, must be by armies on the field, it is not our habit, it does not suit our constitution nor our interest to assemble permanently under arms those hundred of thousands of soldiers who may be found in every country of Europe. We think that it would be an unnecessary pressure upon our own resources to keep and maintain such a force in time of peace. We think that it would draw away a valuable portion of the people from the pursuits of industry, and be a drain on the wealth and resources of the country for a time of emergency. We have, however, the Militia—an admirable force, well disciplined, ably officered, and animated with the best spirit. We have thus a force of some 112,000 men ready, if the occasion be required, to take its place in line beside the regular army. Well, then, the Volunteers of England came forward to make up the deficiency. You came forward with courage, patriotism, and a devotion to the public service beyond all praise, which has excited the admiration of all the world, and which has entitled you to the warmest thanks of the country. I believe that I am not overstating the case when I say that at the present moment there are from 150,000 to 160,000 Volunteers organised, equipped, trained and disciplined with officers who have made themselves acquainted with their duties, and we know that when these corps have assembled in considerable numbers, and joined in the movements which do not belong simply to battalions, but also to divisional operations, they have excited the admiration of military men, and the astonishment of the strangers who have visited this country. You know, gentlemen Volunteers of England, you well know that numbers alone do not constitute strength; that large assemblies of men, although in uniform and with the best of weapons, are not by their numbers alone competent to meet with success an enemy disciplined and trained; and, therefore you have, at a great sacrifice of private occupation, at a great devotion of time, which in this country is money, you have made these sacrifices in order to become thoroughly acquainted with the duties of your profession—your honourable profession, for so I will call it. You have by your perseverance, by your constant attention to your duties, made yourselves masters of all those movements which belong to separate battalions, and also to collections of battalions in brigades and divisions. You have have also well thought that it is one thing to meet and another to kill an enemy. To move to meet an enemy without being able to bring him down is only getting nearer to danger yourselves. There is, however, no fear that those who have so well exhibited their skill to-day and yesterday will neglect a practice as necessary almost as your drill, and even your battalion and divisional exercises. The people of this island have in all times been famous as marksmen, and in the days of old when war was carried on, I will not say with less deadly, but with more clumsy weapons, such as bows and arrows, the British archer was celebrated in every battle-field of Europe in which he was engaged, and his skill was shown from the slaughter which he made of his opponents. Well, gentlemen, that keen eye, that strong arm which so distinguished your ancestors is not wanting to you. This day you have given ample proofs of your skill in the weapon which is placed in your hands. You have proved yourselves worthy descendants of worthy ancestors, equally ready to defend your shores from attack, and, if need be, to vindicate the honour of your country wherever your services may be required."

Ireland.

THE BELFAST RIOTS.—The *Belfast Whig* states that the special commission of assize will be held in Belfast in the last week of the present month or the first week in October for the trial of those charged with offences arising out of the recent riots. It has been stated that Chief Justice Lefroy and Chief Justice Monahan would be the presiding judges, but it now appears that the judges will be Baron Deasy and Judge Christian. The ship carpenters last week struck work because their employers would not dismiss some Roman Catholic fellow-workmen, who were alleged to have played the part of spies. On Monday, however, they returned to their labour, as they were assured that their suspicions were unfounded.

Scotland.

ROMAN CATHOLIC BISHOPRIC OF EDINBURGH.—The Rev. Dr. John Strain, president of St. Mary's Roman Catholic College at Blairs, near Aberdeen, has been appointed to succeed the late Dr. Gillis in the bishopric of Edinburgh.

DEATH OF JAMES FLEMING.—James Fleming, the old man whose name was so prominently connected with the Sandyford murder, died on Tuesday week, at his son's residence at Dunoon, in his 90th year.

Sporting.

THE FORTHCOMING PRIZE FIGHT.—The fight between Mace and Coburn for 500*l.* a side, is now adjusted. The last deposit of 50*l.* a-side was on Tuesday subscribed by the backers of the men, and has since been handed over to the final stakeholder. The fight is to take place on Tuesday, October 4, and the articles of agreement state that it is to take place in Ireland. The men, who have been in training under the surveillance of professionals, have recently shifted their quarters, to prevent police interference prior to the day of fighting. Mace is to hand 100*l.* over to Coburn towards his expenses in coming from America to fight. In betting, Coburn is now the favourite

Law.

CENTRAL CRIMINAL COURT: *The Hatton Garden Murder.*—*Henry Wilkinson*, mason, 30, was charged with the murder of his wife. It will be remembered that the prisoner and his wife lived in the neighbourhood of Hatton Garden, and that some quarrel having arisen between them, the prisoner when in a state of drunkenness went into the room where his wife was sleeping, dragged her out of bed and inflicted upon her such injuries that she died very shortly afterwards. The jury returned a verdict of manslaughter, and the prisoner was sentenced to 12 months' imprisonment. *Attempted Murder in Leicester Square.*—*John Williams*, a saddler, was charged with wounding his wife with intent to murder her, and in a second count with intent to do her grievous bodily harm. The act was committed on the 25th August, in Leicester Square, where the prisoner found her walking with a man. The prosecutrix, according to her own admission, had for some time been living a very profligate life, and had given the prisoner great provocation. The jury found him guilty of unlawfully wounding, and he was sentenced to three months' imprisonment. *Infringement of the Lunacy Act.*—*Mr. Henry Wilkins*, a surgeon, residing at Ealing, surrendered to take his trial on the charge of having undertaken, without a licence from the Commissioners of Lunacy, the care of a female lunatic. It was shown that his treatment had been perfectly proper and humane, the only point being as to his infringement of the law. The jury found him guilty, and he was ordered to enter into his recognisances to appear next session to receive judgment.

Obituary.

VISCOUNTESS HARDINGE died on the 15th inst. at South Park, Penshurst, having been confined on the 1st inst. She was the second and youngest daughter of the Earl of Lucan, by Lady Anne Brudenell, sixth daughter of the late Earl of Cardigan. She married the second Lord Hardinge in 1856, and leaves a numerous family.

THE COUNTESS DOWAGER OF EFFINGHAM died at Brighton on the 17th inst., in her 89th year. She was the eldest daughter of the third Earl of Rosebery by his second wife, the only daughter of Sir Francis Vincent. She was born in 1776, and married in 1800 the first Earl of Effingham, who died in 1845. Her ladyship was married a second time, in 1858, to Mr. Thomas Holmes.

MAJOR-GENERAL CRAWFORD died at Jersey on the 17th inst. He entered the Royal Artillery in 1803, and served in the lines in front of Sobral, in Portugal, in 1809, at the capture of Genoa in 1814, and subsequently in the American war, including the taking of Washington and the engagements before New Orleans. He attained the rank of Major-General in 1851.

CAPTAIN SPEKE, whose death cast such a gloom over the meeting of the British Association at Bath last week, was the second son of Mr. William Speke, of Jordans, in Somersetshire. He was born in 1827, and was educated in one of the county grammar schools. Having entered the Indian army he was present at most of the engagements under Lord Gough in the Punjaub, and served subsequently under Lord Clyde in the suppression of the Indian mutiny. His adventures as a hunter and scientific explorer in Somali land and other parts of Africa in 1854-5, in company with Captain Burton, are familiar to the readers of "Blackwood." From Africa he went to the Crimea as a volunteer in the Turkish Contingent. He had a desire to explore the fauna of the Caucasus, but abandoned the idea on receiving an invitation to rejoin Captain Burton in another African expedition. In 1858, when Captain Burton was sick at Kazeh, Captain Speke having heard of the lake Victoria N'yanza from some Arab merchants, determined to reach it. Finding that its southern extremity was on the high plateau land between 3000 and 4000 feet above the sea, and that the waters of this lake were fresh, he was convinced that this body of water must be the great southernmost reservoir out of which the White or Main Nile flowed at its northern end. Accompanied by Captain Grant—one of the heroes of the Indian mutiny—he explored the country in the summer of 1858. In the spring of 1859, Captains Speke and Grant went out again and traced the Nile to the Victoria N'yanza lake, thus solving a problem which had puzzled the world for 3000 years. Homer spoke of the Nile whose sources were unknown; Herodotus confessed himself unable to solve the mystery; Alexander the Great, and Nero, both were baffled in the search. It is hardly necessary to mention the enthusiastic reception given to Captain Speke on his return to this country. He was the lion of the season. He was received by the Royal Geographical Society at one of their most crowded meetings, held out of their regular session, with the heartiest welcome. "Even the sills of the windows facing the courtyard," said the reports of the day, "had their clusters of visitors, straining eye and ear to see the men who had solved the great geographical problem of past ages," and Sir Roderick Murchison, in presenting Captains Speke and Grant to the assembly, spoke of their enterprise and its important results in terms which drew hearty cheers from those who heard him. For this discovery Captain Speke obtained the medal of the Royal Geographical Society. The Queen congratulated Sir Roderick Murchison on the success of the expedition, towards which the Government contributed the necessary funds, and the Prince of Wales attended Captain Speke's narrative of his travels at the Royal Institution. The King of Italy ordered gold medals to be forwarded to the explorers, on which the motto was "Honor a Nilo," and the letter of the Italian Minister accompanying the gift was couched in such graceful terms that Sir Roderick Murchison designated it as "worthy of the country which reared a Columbus." Captain Speke's county was not slow to recognise his merits; and Sir William Miles, the senior member for the county, brought forward the subject in the House of Commons, and drew forth from Lord Palmerston a hearty tribute of respect.

BIRTHS.—On the 17th inst, the Countess of MUNSTER, of a son.—14th inst, at Paris, the Baroness ALPHONSE DE ROTHSCHILD, of a daughter—15th inst, in Westbourne Square, the Baroness STANSFORTH, of a son—18th inst, at Holly Bank, Emsworth, Hants, the Hon. Mrs. PAKENHAM, of a son—10th inst, at Terworth, Notts, the Hon. Mrs. LEGH CLOWES, of a son—13th inst, at East Dereham, Norfolk, Mrs. W. E. G. BULWER, of a son.

MARRIAGES.—On the 13th inst, at St. George's Catholic Cathedral, Southwark, the MARQUIS DE LYS, to MARY ELIZABETH, eldest daughter of CHARLES PORTER, Esq., of The Mythe, Gloucestershire—14th inst, at the British Consulate, Calais, and afterwards on the 15th inst, at St. Omer, France, Rear-Admiral the Hon. GEORGE F. HASTINGS, C.B., to MATHILDE ALICE, only daughter of W. H. HITCHCOCK, Esq., of St. Omer—20th inst, at St. Jude's, Southsea, Rear-Admiral ARTHUR LOWE, son of the late Dean of Exeter, to ELIZABETH HENRIETTA, eldest daughter of Admiral Sir HENRY D. CHADS, K.C.B.—20th inst, at St. Michael's, Chester Square, Captain GASCOIGNE, Grenadier Guards, eldest son of General Gascoigne, to FRANCES CHARLOTTE, only child of CHARLES ORBY WOMBWELL, Esq.

DEATHS.—On the 15th inst, at Brighton, Lady BIRCH, wife of Lieutenant-General Sir R. Birch, K.C.B., aged 52—15th inst, at Monkstown, county Dublin, Lady DOMBRAIN, wife of Sir James Dombrain, late Inspector-General of the Coast Guard in Ireland—18th June, at his residence, near Christchurch, Canterbury, New Zealand, the Ven. OCTAVIUS MATHIAS, Archdeacon of Akaroa, New Zealand, and late vicar of Horsford, in the county of Norfolk—17th inst, at Llanvaelog Rectory, Anglesey, the Rev. Chancellor TREVOR, M.A., chancellor of the diocese, and canon residentiary of Bangor, J.P. for the counties of Anglesea and Carnarvon, aged 70—14th inst, at Highgate Rise, GERTRUDE PRISCILLA, widow of Captain G. DESPARD, resident magistrate of the county Meath, Ireland, and formerly of H.M.'s 53d Foot, aged 61—16th inst, Captain L. W. SEYMOUR, late of the 2d Bombay Light Cavalry, third surviving son of Dr. Seymour, of Charles Street, Berkeley Square, aged 56—23d ult, at Bermuda, Captain ALLAN E. LOCKHART, Royal Engineers, third son of A. E. Lockhart, Esq., of Cleghorn and Borthwickbrae—11th ult, at Nassau, Lieutenant A. F. P. COSENS, 1st W.I. Regt., only son of the late F. Cosens, Esq., of Dorchester, aged 25—9th inst, at St. Germain, near Paris, Dr GEORGE E. W. WOOD, M.D., late of East Sheen, aged 58—19th inst, at Westbourne Lodge, Harrow Road, CHARLES ALEXANDER SAUNDERS, Esq., late secretary and general superintendent of the Great Western Railway, aged 67.

Markets.

COVENT GARDEN, Sept. 24.

Supplies of most things are abundant, especially those of Grapes and Melons. Apples, Plums, and Peaches are quite sufficient for the demand, and there is likewise a fair supply of Louise Bonne of Jersey Pear, a good kind at this season. Kent Filberts and Cobs fetch from 70s. to 80s. per 100 lbs. New Walnuts promise to be plentiful. For Potatos there is a heavy sale, and prices for them have a downward tendency. Flowers chiefly consist of Orchids, Heaths, Asters, Fuchsias, Pinks, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Pears, per doz., 1s 6d to 3s
Grapes, per lb., 1s to 3s	Apples, per sieve, 1s to 2s
Peaches, per doz., 4s to 8s	Oranges, per 100, 16s to 20s
Nectarines, do., 1s 6d to 6s	Lemons, per 100, 10s to 14s
Melons, each, 1s to 4s	Nuts, Barcelona, do., 16s
Figs, per doz., 1s to 2s 6d	— New Brazil, do., 16s.
Plums, per ½ sieve, 2s to 4s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 6d
Peas, p. basket, 2s 6d to 3s 6d	Garlic, per lb., 6d
Potatos, York Regents, p. ton, 60s to 80s	Lettuces, each, 1d to 2d
— Rocks, do., 45s to 55s	Endive, per score, 1s to 2s
— Flukes, 60s to 90s	Horse Radish, p. bunch, 1s to 4s
Carrots, per bunch, 6d to 9d	Mushrooms, p. pott., 1s to 1s 9d
Turnips, p. bunch, 6d to 8d	Parsley, p. 12 bunches, 3s to 4s
Cucumbers, each, 4d to 1s	Herbs, per bunch, 6d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Sept. 22

Prime Meadow Hay	80s	to 110s	Clover, old	100s to 130s
Superior do.	—	—	New Clover	— —
Inferior do.	—	—	Do. second cut	95 120
New do.	—	—	Straw	27 32
Rowen	—	—		

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, Sept. 22.

Sup. Meadow Hay	108s	to 115s	Inferior Clover	100s to 112s
Inferior do.	90	98	New do.	— —
New do.	—	—	Straw	32 36
Superior Clover	120	130		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Sept. 22.

Fine Meadow Hay	100s	to 105s	Prime 1st cut Clover	120s to 128s
Inferior do.	95	100	Inferior do. do.	115 120
Prime New Hay	—	—	Prime 2d cut do.	115 125
Inferior	—	—	New Clover	— —
Straw	28	32	Inferior do.	— —

BRITISH WOOLS.—LONDON, Sept. 22.

The state of our trade is quiescent but hopeful, as the holders of fleeces are only in moderate stock, and await the necessities of the consumers, in consequence of the impossibility of replacing at a considerable reduction, should they submit to one.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	2	2	to	2	3	Leicest. Hoggs	2	5	to	2	6
Half-bred ditto	2	6	—	2	7	Ditto Wethers	2	1	—	2	2
Down Ewes	2	0	—	2	1	Combing Skins	1	11	—	2	2
Kent Fleeces	2	2½	—	2	3½	Fiannel Wool	1	0	—	1	9
						Blanket ditto	0	6	—	0	9

COAL MARKET.—Sept. 21.

Buddle's West Hartley, 20s.; West Hartley, 20s.; Walls End Riddell, 19s. 9d.; Eden Main, 20s.; Walls End Bell, 19s. 6d.; Walls End Braddylls Hetton, 20s. 9d.; Walls End Pensher Primrose, 20s.; Walls End South Hetton, 21s. 3d.; Walls End Cassop, 20s. 6d.; Walls End Hartlepool, 21s. 3d.; Walls End Heugh Hall, 20s. 6d.; Walls End Kelloe, 20s. 6d.; Walls End East Hartlepool, 21s. 3d.; Walls End South Kelloe, 20s. 6d.—Ships at market, 32.

METROPOLITAN CATTLE MARKET.

MONDAY, Sept. 19.

There are a few more Beasts than on Monday last. The trade is brisk, and late prices are fully maintained. The number of Sheep is about the same as last week. The demand is good, and prices have advanced quite 2d. per 8 lbs. Choicest Calves are also rather dearer. From Germany and Holland there are 3190 Beasts, 7830 Sheep, 390 Calves, and 200 Pigs; from Scotland, 54 Beasts; from Ireland, 480; and 2610 from the Northern and Midland Counties.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c.	5	2	to	5	4	Best Long-wools	5	2	—	5	6
Best Short-horns	4	10	—	5	2	Do. Shorn	—			—	
2d quality Beasts	3	4	—	4	0	Ewes & 2d quality	4	8	—	5	0
Best Downs and Half-breds	5	6	—	5	8	Do. Shorn	—			—	
Do. Shorn	—			—		Lambs	5	0	—	6	0
						Calves	3	8	—	5	4
						Pigs	3	4	—	5	0

Beasts, 6690; Sheep and Lambs, 24,230; Calves, 405; Pigs, 680.

THURSDAY, Sept. 22.

The number of Beasts is rather smaller than on Thursday last, yet it is large. Choicest kinds are not very plentiful, and some of these make nearly as much as on Monday, but on the average trade is not so good. The supply of Sheep is larger and the demand limited. Prices generally are lower, and a clearance cannot be effected. Calves are selling nearly the same as on Monday. Our foreign supply consists of 990 Beasts, 3460 Sheep, 482 Calves, and 85 Pigs.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c.	5	0	to	5	4	Best Long-wools	5	0	—	5	4
Best Short-horns	4	8	—	5	2	Do. Shorn	—			—	
2d quality Beasts	3	0	—	4	0	Ewes & 2d quality	4	6	—	4	10
Best Downs and Half-breds	5	4	—	5	6	Do. Shorn	—			—	
Do. Shorn	—			—		Lambs	5	0	—	6	0
						Calves	3	8	—	5	2
						Pigs	3	4	—	5	0

Beasts, 1480; Sheep and Lambs, 8230; Calves, 543; Pigs, 170; Milch Cows, 95.

NEWGATE.—Sept. 23.

Best Fresh Butter .. .. 17*s.* per dozen lbs.
Second do. do. .. .. 15*s.* „
Pork, 4*s.* 8*d.* to 5*s.* 4*d.* per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Sept. 23.

Messrs. Pattenden & Smith report a very active trade in all descriptions of the new growth, at the late advance in

prices; fine samples are already becoming very scarce, and no doubt will shortly go much dearer.

MARK LANE.—MONDAY, Sept. 19.

The supply of Wheat from Essex and Kent to this morning's market was moderate, nevertheless sales could only be proceeded with at a decline of 1s. to 2s. per qr. upon the prices of this day se'nnight. The demand for foreign Wheat was quite of a retail character, and a reduction of 1s. per qr. was generally submitted to on the business transacted. Of new English Barley there was a large supply, the quality generally inferior to the first samples shown; the demand was very limited, and we reduce our quotations 1s. to 2s. per qr. Beans and Peas bring late rates. The Oat trade was heavy, and to effect sales it was necessary to submit to a slight reduction. Flour was 6d. per barrel lower.

PER IMPERIAL QUARTER.	s. s.		s. s
WHEAT, Essex, Kent, & Suffolk..White	40—44	Red	38—41
— — fine selected runs..ditto	42—44	Red	39—42
— — Talavera	47—53		
— Norfolk	—	Red	—
— Foreign	36—50		
BARLEY, grind. & dist, 26s to 30s..Chev.	32—35	Malting ..	30—33
— Foreign..grinding and distilling	22—28	Malting ..	28—31
OATS, Essex and Suffolk	20—22		
— Scotch and Lincolnshire—Potato	20—24	Feed	20—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	20—23	Feed	18—21
RYE	31—33	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....33s to 35s...Tick	34—36	Harrow ..	34—36
— Pigeon .... 35s to 40s..Winds.	—	Longpod	—
— Foreign .....Small	34—38	Egyptian	33—34
PEAS, White, Essex and Kent..Boilers	36—38	Suffolk ..	38—40
— Maple .... —s to —s .... Grey	—	Foreign ..	34—40
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered..per sack	35—40		
— 2d do .....ditto	28—34	Country..	28—34
— Foreign ..... per barrel	18—25	Per sack	32—36

FRIDAY, Sept. 23.

The weather since the 16th cannot be termed otherwise than fine, although unsettled, with showers almost daily. During the past week the Wheat trade has continued to be much depressed, and a further decline in prices of 1s. to 2s. per qr. has been quoted throughout the kingdom, the demand being quite inadequate to the supplies. The value of Barley has also declined 1s. per qr., whilst Oats, Beans, and Peas were each purchaseable at a slight reduction in the majority of markets. Flour has been unsaleable excepting at a reduction of 6d. per barrel and 6d. to 1s. per sack. Since Friday last 174 vessels have been reported off the coast. In consequence of the very numerous arrivals buyers held back, and the floating trade was nearly at a standstill for a few days; yesterday and the day before several transactions have taken place at 1s. per qr. reduction on Wheat and Maize. Barley must be quoted 6d. per qr. lower. Paris, Sept. 22.—Flour: Business has been very limited at declining prices. The six marks for delivery this month are quoted equal to 32s. per 280 lbs. The present stock of Flour is estimated at 26,800 cwts. Wheat is very slow of sale, even at 6d. per qr. under last week's rates. The arrivals of English and foreign Wheat and English Oats this week have been good, of English Barley small, and of foreign Barley and Oats large. There was scarcely any attendance of buyers at this day's market; a few samples of the best English Wheat were taken at Monday's prices, but all other qualities were quite neglected, and the late value, both of English and foreign, was entirely nominal. Of Spring Corn the few sales made were at rather lower rates.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1450 qrs.	380 qrs.	1440 qrs.	1040 sks.
Irish	—	—	1260	— ,,
				200 ,,
Foreign ..	10,940 ,,	5510	52,860 ,,	2820 brls

LIVERPOOL, Sept. 20.—We have had only a poor attendance at to-day's market, and the entire business has just been from "hand to mouth," at nominally previous rates for Wheat and Flour, and 3d. per qr. reduction on Indian Corn. Oats and Oatmeal are also dull. Beans, Peas, and Barley steady in value, but not much inquired for. Market closes exceedingly tame.

FRIDAY, Sept. 23.—There was a thin attendance at market. Wheat met a slow sale and was 2d. per cental lower. Flour offered at 6d. decline. Indian Corn 6d. lower; mixed 27s. 6d. Beans, Oats, and Oatmeal unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Aug. 13	43s 6d	28s 1d	22s 0d	32s 9d	39s 8d	36s 9d
— 20	42 7	28 7	22 11	31 6	40 9	35 5
— 27	42 5	29 1	22 0	32 8	41 1	35 6
Sept. 3	42 3	31 1	22 5	34 1	40 9	35 9
— 10	42 4	32 1	21 9	34 7	40 10	36 11
— 17	42 0	32 2	20 11	35 6	41 2	36 5
Agg. Aver.	42 6	30 2	22 0	33 6	40 10	36 1

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

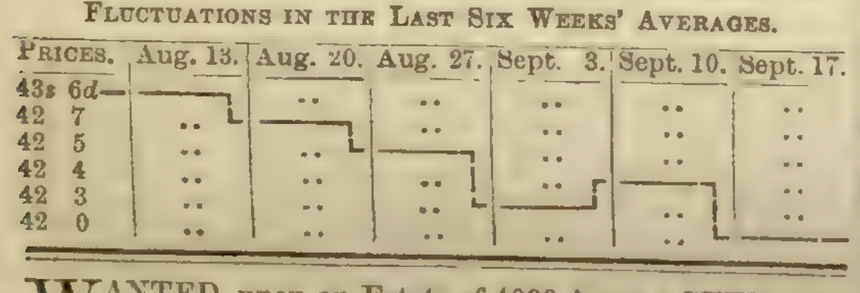

WANTED, upon an Estate of 4000 Acres, a STEWARD and GENERAL MANAGER.—Besides an experience of Land Agency, of the Erection of Cottages and Buildings, of the Construction of Roads, &c, he must be qualified to take a leading part at the Agricultural and other Meetings of the neighbourhood. Stipend £350, with Residence. Security required.—Full particulars to be addressed to S. M. E., *Gardeners' Chronicle* Office, W.C.

WANTED IMMEDIATELY, a FOREMAN, in a large Nursery in the West of England.—One who understands the Growing and proper treatment of Vines and Orchids; must also be a good Propagator of Hard and Soft-wooded Plants, a Graftsman of Azaleas and Camellias, a good Grower of Dahlias, and a good Salesman.—Apply, with references, to P., Messrs. Low & Co, Nurserymen, Clapton, London, N.E.

WANTED, a NURSERY FOREMAN.—He must have been bred to the business, and be able to produce unexceptionable testimonials; also a PROPAGATOR for the Houses.—Apply, stating age, salary, &c., to JAS. DICKSON & SONS, 32, S. Hanover Street, Edinburgh.

WANTED, in the Country, a respectable married MAN to Manage a Wholesale and Retail Seed Business, also to have a knowledge of the Nursery Business. None need apply without having good references, as no other will be treated with.—All letters addressed W. R., *Gardeners' Chronicle* Office, W.C.

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WANTED, as DAIRY and POULTRY WOMAN in a Gentleman's family, a clean, active, respectably conducted person who understands the Management of a Dairy perfectly, and the Rearing of Poultry in general, and can be well recommended.—Apply L. P., Twyford, Reading.

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The Gardeners' Chronicle Newspaper.

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459,156	12,000	68 0 0	35 0 0
484,173	6,800	35 14 0	19 16 8
506,975	5,000	7 10 0	4 6 4

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	£	*s*.	*d*.	£	*s*.	*d*.	£	*s*.	*d*.	£	*s*.	*d*.
12 Table Forks	1	13	0	2	0	0	2	4	0	2	10	0
12 Table Spoons	1	13	0	2	0	0	2	4	0	2	10	0
12 Dessert Forks	1	14	0	1	10	0	1	12	0	1	15	0
12 Dessert Spoons	1	14	0	1	10	0	1	12	0	1	15	0
12 Tea Spoons	0	16	0	1	0	0	1	2	0	1	5	0
6 Egg Spoons, gt. bowls..	0	10	0	0	12	0	0	12	0	0	13	6
2 Sauce Ladles	0	6	0	0	8	0	0	8	0	0	9	0
1 Gravy Spoon	0	6	6	0	9	0	0	10	0	0	11	0
2 Salt Spoons, gt. bowls..	0	3	4	0	4	0	0	4	0	0	4	6
1 Mustard Spoon, gt. bwl.	0	1	8	0	2	0	0	2	0	0	2	3
1 Pair of Sugar Tongs ..	0	2	6	0	3	6	0	3	6	0	4	0
1 Pair of Fish Carvers ..	1	4	0	1	10	0	1	10	0	1	10	0
1 Butter Knife	0	2	6	0	4	0	0	5	6	0	6	0
1 Soup Ladle	0	10	0	0	12	0	0	16	0	0	17	0
1 Sugar Sifter	0	3	3	0	4	6	0	4	6	0	5	0
Total	9	19	9	12	9	0	13	9	6	14	17	3

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News of the Week.

The accounts received this week from all parts of Italy inform us that the Franco-Italian convention has been received with the greatest satisfaction; but strong opposition is still shown to the removal of the capital to Florence, if that measure is intended to be a renunciation of Rome. In Turin the people, irritated by the journals of the republican and clerical parties, renewed the rioting on the 22d ult., and, after raising seditious cries, threw stones and fired shots before the Royal Palace. The police and troops fired upon the populace, killing and wounding 20 persons. Several soldiers were also severely wounded, and the colonel and 10 men were killed. On Friday morning the announcement that the King had dismissed the Ministry and had commissioned General Della Marmora to form a new Cabinet, had an excellent effect in allaying the popular irritation. The city at once resumed its ordinary aspect, the shops were opened, and the artisans resumed work; and the tranquillity of the city has not been further disturbed. The municipality of Turin has since addressed a remonstrance to the Government, stating that on the first announcement of the convention the universal sentiment was one of satisfaction; but on learning the condition of the transfer of the capital to Florence, the people considered that such a step signified the renunciation of Rome. In common with the inhabitants of many other towns they were opposed to this renunciation, but were still ready, as they had been for a long time past, to sacrifice their material interests for the idea of Rome as a capital. A great meeting, at which all shades of Liberal opinions were represented, was held at Naples on Wednesday, when resolutions were unanimously adopted approving the Convention, proclaiming Rome to be the capital of Italy, and Venice free, and calling upon the Government to disregard municipal interests in choosing a provisional capital. General Della Marmora has not yet succeeded in completing the new Ministry, and a Royal decree has been issued, postponing the opening of the Italian Parliament from the 4th to the 24th inst., in order to afford time for the formation of a Cabinet. A despatch from Rome says that the Pope has received the news of the Convention with great interest, and has stated that he will examine it with the attention it deserves. The French journals discuss at great length the real meaning of the Convention. The semi-official papers represent the transfer of the capital to Florence as a practical renunciation of Rome, while the Liberal papers regard the treaty as most favourable to the Italian cause, maintaining that it must ultimately lead to the unity of Italy and to the establishment of the seat of Government at Rome.

A despatch from Vienna states that it is the intention of the Austrian Government to protest against the Franco-Italian Convention as a flagrant attack upon the treaties of Villafranca and Zurich. The Earl of Clarendon, who is now in Vienna on a mission from her Majesty's Government, is said to have intimated to Count Rechberg that the Italian question urgently requires a solution, and that if Austria forms a Northern alliance to oppose the Convention, England will not co-operate with her, although she is ready to support Austria if she leans towards the policy of the Western Powers. His lordship is also said to have urged the necessity of bringing the peace negociations with Denmark to a speedy issue. To these representations the Austrian Government is said to have reserved its reply.

The Spanish Cortes were dissolved by Royal decree on Friday, and the new elections are to take place on the 22d November.

Accounts from the United States inform us that some of the leaders of the Peace Democracy have declined to accept General M'CLELLAN on the terms of his recent letter, and intend shortly to hold a meeting to nominate another candidate. Mr. VALLANDIGHAM, however, who was one of the first to object to General M'CLELLAN's letter, has now announced his intention to support him, and the ratification meetings at New York, Washington, and throughout the North have been unanimous in his favour. The election of Mr. LINCOLN is preferred by the Southern journals to that of General M'CLELLAN, whether regarded from the peace or the war point of view. Both General GRANT and General SHERMAN have urgently demanded reinforcements, and in consequence of their representations Secretary STANTON has ordered the draft to take place on the 19th inst. in all the States which have not furnished their quota. General SHERIDAN defeated General EARLY with heavy loss in the Shenandoah Valley on the 18th ult. A large Confederate cavalry force has made a raid within General GRANT's lines, capturing 2500 cattle. The rumour that Admiral FARRAGUT's vessels had advanced within shelling distance of Mobile is discredited at Washington.

Advices from Mexico state that the French have taken the port of Matamoras, and that CORTINAS, being unable to hold the city against them, has crossed the Rio Grande with 2000 men, and after driving the Confederate Colonel FORDE out of Brownsville, has occupied that town in the name of the Federal Government, to which he has offered the services of his troops.

Home News.

THE COURT IN SCOTLAND.—On Wednesday week the Queen, accompanied by Princess Helena, walked in the grounds of the Castle. In the afternoon her Majesty, with Princess Helena, Prince Alfred, and Prince Elimar of Oldenburg, drove to the Lynn of Dee. On Thursday the Queen, accompanied by Princess Helena, Prince Alfred, and Prince Elimar of Oldenburg, went to Alt-na-Guithasach and the Lynn of Mnich. Princess Louisa, Princess Beatrice, and Prince Leopold went to the Lynn of Quoich. On Friday the Queen drove out, accompanied by Prince Leopold. In the afternoon her Majesty, accompanied by the Princess Helena and Prince Elimar of Oldenburg, drove to Invercauld, returning by Aberarder. Mr. Morier arrived on a visit. On Saturday the Queen, accompanied by Princess Helena, drove by Invercauld to Allanquoich, where ponies and ghillies were in waiting. Her Majesty and the Princess having mounted, proceeded up the vale of the Quoich to Ben-a-bourd, recrossing the terrace that divides Glen Lui and Glendery from the Quoich Glen on their return to Mar Lodge. The Royal carriage there met her Majesty, who returned by Braemar to Balmoral about 7 P.M. Prince Elimar, of Oldenburg, left the Castle for Inverness. Earl Russell left for Edinburgh. On Sunday afternoon the Queen, with Princess Helena and Prince Alfred, attended Divine service at the parish church of Crathie. The Rev. Dr. Stewart officiated. On Monday the Queen, accompanied by Princess Helena and Prince Alfred, drove to Alt-na-Guithasach. The Right Hon. W. E. Gladstone arrived as the Minister in attendance on the Queen. Mr. Morier and the Rev. Dr. Stewart left the Castle. On Tuesday morning the Queen and Princesses drove out. On Wednesday morning Lieut. Haig arrived at the Castle in attendance on Prince Alfred.

VISIT OF THE PRINCE AND PRINCESS OF WALES TO SWEDEN.—On Saturday the Prince and Princess of Wales left Copenhagen in the Royal yacht Osborne for Stockholm. The Danish Royal family and Sir Augustus Paget accompanied their Royal Highnesses on board. Salutes were fired from the batteries of the forts. The ships in the harbour, as well as the public and private buildings, were decorated with flags; and the Prince and Princess were loudly cheered by the spectators. The Royal yacht was sighted from the entrance of the Port of Stockholm at noon on Monday. Prince Oscar and the Danish Ambassador went out to meet their Royal Highnesses, and joined them 12 miles outside the harbour. The royal yacht arrived at Stockholm at 7.30, and the Prince and Princess landed by torchlight. An immense crowd of people had assembled at the landing-place, by whom they were most enthusiastically received. Prince Oscar accompanied their Royal Highnesses to the Palace, where the Royal family were assembled to receive them. On leaving Stockholm their Royal Highnesses will return to Copenhagen, where they will remain another week, after which they will probably proceed to Paris. The projected journey of the Prince and Princess to St. Petersburg has been abandoned. Their Royal Highnesses are expected to return to Sandringham Hall on the 15th or 16th inst.

PRINCE HUMBERT OF ITALY.—On Friday his Royal Highness visited St. Paul's, the Bank of England, the Tower, and Barclay & Perkins's Brewery. On Saturday the Prince visited the Crystal Palace. On Sunday his Royal Highness attended high mass in the Roman Catholic Chapel in Farm Street, and afterwards inspected the Queen's stables at the Royal Mews, Pimlico. In the afternoon the Prince went by water to Greenwich, where he visited the chapel and hospital, and then dined at the Trafalgar. On Monday the Prince visited Aldershot, and witnessed a grand review of troops, followed by a sham fight. His Royal Highness then proceeded to the camp, where he visited the Prince Consort's library, the principal cook-house, the commissariat, and the gymnasium, and then took luncheon at the officers' mess of the Royal Dragoons. He next inspected a portion of the cavalry barracks, and returned to London in the afternoon. On Tuesday morning before breakfast the Prince paid a visit to the Knightsbridge Barracks, for the inspection of the 1st Life Guards. After breakfast his Royal Highness visited the Model Prison at Pentonville and the Army Clothing Factory at Pimlico. In the evening the Italian Minister gave a grand dinner, at which the commanding officers at Aldershot were invited to meet his Royal Highness. On Wednesday morning the Prince was engaged in paying farewell visits prior to his departure for the Continent. In the afternoon his Royal Highness took a drive with the Italian Minister. On Thursday morning his Royal Highness left town for Folkestone on his way to Boulogne.

THE GRAND DUCHESS MARIE, sister of the Emperor of Russia, accompanied by her husband the Count Stroganoff, their family and suite, left London on Sunday by the South-Eastern Railway for Dover, where she embarked for Calais on her way to Paris.

THE REVENUE.—The *Globe* of last evening says:—

"We have every reason to anticipate that the Revenue returns for the quarter and the four quarters ending this evening, will show no falling off in the gratifying results which it has been our pleasing duty to record on each occasion of making up the national accounts. The changes, whether of increase or decrease in the totals, will be very small, and will show that the national Revenue suffers but infinitesimally notwithstanding the very considerable remissions of taxation which we have experienced of late years."

Foreign.

FRANCE.—The Emperor went out shooting on Tuesday in the forest of Rambouillet. A Cabinet Council was held on Wednesday, the Emperor presiding. In the afternoon his Majesty visited the Grand Duchess Marie of Russia, who is staying at the Hotel Westminster. The Empress is expected to return from Schwalbach about the 2d or 3d, and the Court will soon afterwards go to Compiègne. M. Vuitry, Governor of the Bank of France, has been appointed President of the Council of State, in the room of M. Rouland, who has succeeded M. Vuitry as Governor of the Bank. The Vice-President of the Council of State is also to receive fresh functions. Queen Christina has left Paris for Spain. Earl Cowley, Baron de Budberg, and Count Goltz, the British, Russian, and Prussian Ambassadors, have returned to Paris. Prince Metternich is expected shortly. The rumour that he had been superseded is contradicted. Sir Henry Bulwer has arrived in Paris, and dined on Tuesday evening at the Ministry for Foreign Affairs. Monsignore de Mérode, the Papal Minister of War, arrived in Paris a few days since from Brussels, and left the same evening for Roche-en-Brenny on a visit to Count de Montalembert, his brother-in-law, whence he was to proceed to Marseilles on his return to Rome. An Imperial decree has been issued declaring the herring and mackerel fishery henceforward free, and suppressing the regulations hitherto in force respecting it. The *Moniteur* states that the Octroi question does not engage the attention of the Government at present. It is announced that M. Drouyn de Lhuys has addressed a circular note to the French official agents abroad defining the nature of the Franco-Italian Convention. The statement that Austria and Spain had protested against the Convention is formally contradicted. The Convention has been published this week. It contains only four articles:—

"Art. 1. The Government of the Emperor of the French engages to withdraw its troops from the territory of the Holy See by degrees, according as the latter shall form an army of foreign Catholics. The evacuation shall be effected within the space of two years. Art. 2. The Government of the King of Italy, on its side, engages to respect the formation of the Pontifical army, provided that it shall not become a danger to Italy. Art. 3. The Government of the King of Italy, besides, engages to respect the present territory of the Holy See, and to preserve it from all attacks from without. Art. 4. The Government of the King of Italy declares that it is ready to enter into negotiations to take to its charge the part of the Roman debt which falls to the share of the province of Emilia."

The *Moniteur* of Friday reprints the recent article of the *Constitutionnel*, together with an extract from a note of M. Drouyn de Lhuys, dated Oct. 18, 1862; and also the letter of May 20, 1862, addressed by the Emperor to M. Thouvenel on the Roman question. The *Pays* of Friday evening asserts that on the previous day Count de Sartiges delivered to Cardinal Antonelli a note of M. Drouyn de Lhuys, informing the Pontifical Government of the Franco-Italian convention respecting the evacuation of Rome concluded on the 15th and ratified on the 20th ult.

La France of Friday evening, in an article on the transfer of the capital of Italy to Florence, says:—

"This act, which is about to be accomplished, has another object in view than the solution alone of the Roman question. The fear and apprehension entertained by Italy arise from the attitude of Austria, and the military measures on the frontier are to provide against events that might probably follow the alliance initiated by the late interviews of the Sovereigns at Kissengen and Carlsbad. Austria might remove all fear of complications by relinquishing every ambitious afterthought in reference to Italy, even as Italy has done in reference to Rome, thus recognising an accomplished fact; and, finally, pacifically settling the Venetian question, which otherwise threatens to be a permanent source of disquiet in Europe."

The *Constitutionnel* of Saturday, in an article examining the Convention, shows that the Imperial Government has been faithful to its mission.

"Ever convinced that the temporal power of the Pope was not opposed to the liberty and independence of Italy, it was sufficient for the Government to know how to await the favourable moment to effect a solution which should at one and the same time put an end to the retrograde tendencies of the Roman court and the revolutionary tendencies of Italy. We ought to congratulate ourselves that time has rendered possible the combination which will accomplish this double result so necessary to the tranquillity of Europe."

The same journal of Wednesday publishes an article signed by M. Paulin Limayrac, which states that the convention assures to the Pope the independence of his army and his financial arrangements, and continues as follows:—

"The Pope could not refuse to accede to a convention without placing his enemies in the right. There is no secret understanding in the convention. Before the 15th of September a false state of things existed for all parties. Now matters have a true aspect for all: for Italy, who now sees foreigners only at Venice; for the Pope, who re-enters the normal condition of his whole power; and for France, who, faithful to herself, will not have quitted Rome before having given to the Holy See guarantees against external danger and the means of insuring its security within."

The *Debats* shows that the Church party is in error in supposing that a complete renunciation of all hope of Rome as the metropolis of Italy is the result of the Convention. It says:—

"Is it to be said that Italy must renounce, and that we must resign for her more complete hopes? Certainly not. The step which has just been taken leads to an object perhaps more distant than can be now believed. Can the Romans themselves avoid turning their eyes toward that Italy which surrounds and presses them on all sides, and which they are disposed to consider—inhabitants themselves of a capital without a country—as a state without a capital? On the day when the Roman Government shall have accustomed its subjects to the practice of free institutions, when the Pontifical power shall be seated in that elevated sphere, on that day Rome, nourished with hope and with liberty, will fall like ripe fruit into the lap of Italy."

The same journal in another article thus describes the manner in which the Convention has been received in foreign countries:—

"The foreign press brings us the expression of the feelings which the sudden announcement of the Convention excites in the principal Courts and nations of Europe. In England it is loudly applauded; in Austria alarm is felt; at Berlin and St. Petersburg they keep on the reserve: and, to speak the truth, appear equally disposed, according to circumstances, to be alarmed with Austria, or to rejoice against her. It would not, perhaps, be false reasoning to think that one of the first results of the Convention will be to accelerate the work of the Conference at Vienna. The Germans are certainly coming down and capitulating on the question of the division of the assets. Those who had accused Denmark of obstinacy have suddenly changed their opinions, and now say that she shows herself very accommodating."

The *Temps* also refers to the question of Rome.

"To believe that the Italian Government will not think of Rome, and that Italy will also forget it, is, in our opinion, a strange illusion. To think that the Roman Government will succeed in the new trial it is called on to attempt is another. Events will necessarily and inevitably develope themselves according to the true logic of things. At a period which cannot at present be foreseen the temporal power will disappear. Italy will have its definitive capital, and all those interests will gain by it—the Pope, relieved of the material cares of politics, in moral authority; Italy, grouped around its natural centre, in assurance and strength; and France herself, supported by a nation restored to its normal conditions of security."

SPAIN.—The Cortes were dissolved by Royal decree on Friday. The new elections are to take place on the 22d of November. It is expected that the Progressist party will abandon their policy of abstaining from voting. An amnesty has been granted for all offences of the press. It is stated that Senor Pacheco will be appointed Spanish Ambassador to the Court of Rome.

SWITZERLAND.—The Federal Assembly was opened at Berne on Wednesday week. On Saturday the National Council ratified the treaty of commerce between France and Switzerland by 96 against 20 votes. The Council of the States commenced the discussion of the Treaty on Monday, and passed it on Wednesday by a majority of 31 to 11. The ratification of the treaty is thus an accomplished fact. The Council of the States has unanimously rejected the appeal of the Geneva Electoral Bureau against the Federal decision confirming the election of M. Chenevière, and has accorded full powers to the Federal Council in the matter. A lengthy report has been sent by the Federal Council to the Federal Assembly concerning the recent disturbances at Geneva. After detailing the events already known, and stating the measures adopted by the Federal commissioners to restore tranquillity, the report formally contradicts the rumour that the riots were occasioned by foreign influence. It recommends the Assembly to approve the steps taken by the Federal Council for the restoration of order at Geneva; to empower the Council to allow the Commissioners and the troops in occupation to remain at Geneva so long as circumstances shall require their presence; to authorise the necessary credit for the

purpose, and to request the Council to lay a further report on this matter before the Assembly during the winter session.

DENMARK.—The Czarewitch arrived at Copenhagen on Monday night, and alighted at the hotel of the Russian Embassy. His betrothal to the Princess Dagmar, the second daughter of the King of Denmark, was formally announced on Wednesday evening at the Castle of Bernstorff.

JUTLAND.—An order of the Prussian Government directs that the army of occupation, numbering about 30,000 men, shall go into winter quarters in the towns of the eastern district of Jutland between Friedrichshaven and Horsens. A proclamation, dated the 20th ult. has been issued by General Hugo von Falkenstein, the Commander-in-Chief of the allied troops in Jutland. The General states that he has received official instructions from Copenhagen simply under cover to be forwarded to the Danish *employés* in Jutland. He adds that neither the present Administration of Jutland nor the Danish *employés* have any official intercourse with the Copenhagen Government. They depend solely upon the military Government of the province, from which alone the officials are to receive orders, and all acts in contravention thereof must be punished as offences against the present Government of Jutland. An order has since been issued prohibiting the entry of all Danish papers into Jutland, with the exception of the *Berlingske Tidende*, the *Flyreposten*, and the *Illustrated Journal*. It is also announced that as the revenue of Jutland is insufficient to pay for the provisions served out to the army of occupation, a duty will be levied from the beginning of October next on all goods coming from Denmark.

SCHLESWIG HOLSTEIN.—Marshal von Wrangel has returned to Berlin, and General von Gablenz has arrived in Schleswig from that city. After the termination of the manœuvres Prince Frederick Charles will return to Schleswig. The head-quarters of the Prussian army will be removed to the Palace of Glücksburg, which is to be put in readiness for that purpose. From 12 to 14 gunboats, two frigates, and two corvettes will remain during the winter in the harbour of Flensburg.

PRUSSIA.—The semi-official *Nord Deutsche Zeitung*, referring to Count von Bismark's despatch of the 31st of August, in reply to the English notes of the 20th ult., states that the former does not enter into the details of Earl Russell's note, but merely mentions that Prussia never called in question the rights of Christian IX., and could not, therefore, demand his renunciation of those rights. With regard to the apprehensions expressed of possible disadvantages to the nationalities of North Schleswig, Count von Bismark declares that they are unfounded, and says that the events which have transpired between the close of the London Conference and the conclusion of the preliminaries of peace have induced Prussia to return to her proposal of the 28th of May. In conclusion, he expresses his satisfaction that England is now paying more attention to the wishes of the Duchies than she did at the Conference, and rejoices that in this respect at least there is an assimilation of the views of the two Cabinets. The semi-official *Provinzial Correspondenz* of Wednesday says:—

"The delay in the peace negotiations, which has been entirely the fault of the Danes, has compelled the Allies to adopt every means to cause Denmark to hasten the work of pacification, especially by substituting more severe action for the forbearing manner in which the conditions of the armistice have hitherto been carried out. The Commander in Jutland has already taken some measures to arouse Denmark to a consciousness of the country being occupied by an enemy. It is to be hoped that these measures will suffice, and that the victors will not be compelled to make more serious application of the regulations of the armistice with the view of obtaining real peace."

The Governments of Bavaria and Wurtemberg have signified to the Prussian Government their desire to adhere to the Zollverein treaties of the 28th of June and the 11th of July of the present year. Counsellor Meixner, from Munich, has arrived in Berlin, and on Tuesday took part in the debates on the reconstruction of the Zollverein.

AUSTRIA.—The Duke de Grammont, the French Ambassador, arrived at Vienna on Wednesday, and on the following day presented to Count Rechberg the notification of the Franco-Italian Convention. The *Europa* of Tuesday asserts that Austria intends to protest against the Convention, as a flagrant breach of the Treaties of Villafranca and of Zurich. The Earl of Clarendon has arrived in Vienna from London on a mission from the British Government. The *Neue Freie Presse* of Wednesday says:—

"The Earl of Clarendon has explained to Count Rechberg the necessity for bringing the peace negotiations to a speedy issue. He also advocated the early inauguration of the rule of the Duke of Augustenburg, who would be recognised by England. Lord Clarendon further explained that the Italian question urgently required a solution, and that should Austria form a northern alliance to oppose the latest movement of the Franco-Italian policy, England would not co-operate with her, although the latter was ready to support Austria should she lean towards the policy of the Western Powers. To these overtures the Austrian Government reserved its reply."

A telegram from Vienna states that at the fifth sitting of the Conference, on Friday last, the Plenipotentiaries approved the proposals of the Committee for the settlement of the frontier. Denmark is preparing proposals for the settlement of the question of the Duchies having a share in the State property of the kingdom. The *General Correspondenz* denies the assertion of some journals that France had invited Austria to take part in the negotiations respecting Rome, and that the Franco-Italian convention had been drawn up in consequence of Austria declining the invitation.

BOHEMIA.—A horrible case of murder and cannibalism is reported from Eidlitz, in Bohemia. A man of wild and rude character, nick-named Russ, well known to the police, residing at the village of Quinan, was disappointed in matrimonial overtures he made to a girl of the village, who preferred marrying some one else. Filled with vengeance of a vague kind he went on the high road early on the morning of the 8th ult. with the determination of murdering the first woman he met. An old widow lady, named Conrad, in her 60th year, was proceeding to early mass at Quinan, when she met the ruffian, who at once compelled her to go with him into a lonely part of the forest, where, after committing violence on her, he killed her by throttling her with his hands. He next stripped her to the skin, cut off various parts of her body, and carried the fragments of flesh, together with her clothes, umbrella, and five florins, to his lodging. The next day he boiled the flesh with some potatoes, and consumed the whole of it, with the exception of the fat, which he skimmed from his cannibal stew and poured into a bottle. The latter he put in his pocket, and then went coolly to his work as usual, which he pursued until his arrest three days subsequently. The widow being missed by her friends, a search was made, and the naked and mutilated body—the arms, legs, breasts, and other parts having been cut off—was found in the wood. Russ was suspected by the police, and on being charged with the crime, confessed it at once, and gave all the horrible details. He awaits his trial at the prison of Kaaben.

BAVARIA.—Great excitement has been caused in the art circles of Munich by King Louis the elder having ordered that the three statues of Venus and the well-known Torso should be removed from the Glyptothek to a lumber-room in the new Pinakothek, where they can be no longer seen by the public. The attendants at the Glyptothek are instructed to inform all inquirers for these statues that they have been sent to be embossed. On moving the statues the servants contrived to let fall the most valuable one of the three, which cost 25,000 florins, and so complete has been the destruction that it will be impossible to restore it.

WURTEMBERG.—A change has taken place in the Ministry. Herren von Hugel, von Linden, and von Sigel have resigned, and the following appointments have been made:—Herr Varnbühler, Foreign Affairs; Herr Gessler, Interior; Herr Renner (provisionally), Finance; Herr Golther, Public Worship.

RUSSIA.—The Emperor of Russia arrived at Potsdam on Saturday, and had an interview with the King of Prussia. It is stated that the Emperor and Empress go to Nice towards the middle of October, where the Empress will pass the winter. An Imperial decree has been promulgated, ordering the issuing of 6,000,000 roubles in small silver coinage, and holding out the prospect of a further issue. A second decree sanctions the extension of the term for payment of the mortgage debts of landed proprietors for a period of 37 years. Financial statements are expected to be shortly issued by the Government.

POLAND.—The National Polish Government has issued a proclamation respecting the recent insurrection. The following is an abstract of this document:—

"Fifty thousand patriots have already been put to death in the field or on the scaffold; and 150,000 have been exiled for life to Siberia. But what is this out of a nation of forty millions of people, firmly resolved to win its freedom, sword in hand, or die in the struggle? The insurrection has only failed because the movement was restricted by its immediate leaders within too narrow limits. It was made a mere party contest, an armed demonstration instead of being an universal rising of the whole Polish race. Another error was the confidence reposed in the aid of foreign Powers. The Poles should have relied upon themselves alone, and should everywhere have risen as one man against their oppressors. Forty millions of hands can never be bound in chains by any earthly Power. The present is therefore but a transitional state. The struggle is only undergoing a transformation, and will be renewed on a far greater scale than before. What is called peace by the Russians is a far worse state for the Poles than war. Russia has vowed their destruction, and will carry on her designs without halt or pause, so long as she is able, whether there is an insurrection on foot or not. In that solitude which she calls peace, should she be able to establish it, she will silently but surely prosecute her more occult but equally efficacious methods for annihilating the race and nationality of Poland, without attracting the attention of the world. But when there is a struggle for independence going on, the eyes of mankind are turned to the conflict, and their moral sense is shocked, while their sympathy is enlisted and their indignation aroused, by the barbarous measures taken to suppress it. The Poles have no middle course between freedom and independence, won at the risk of life, or inevitable slavery and death for the individual, with the speedy annihilation of their nationality. It was the Poles who alone saved Europe from the sword and the superstition of the Turk, when John Sobieski, at the head of his Crusaders, routed the Moslem hosts before the gates of Vienna. And they have now as holy a cause to maintain, and as great a deliverance to win."

ITALY.—The accounts from all parts of Italy state that the Franco-Italian Convention has been received with the greatest satisfaction, except in Turin itself; and there seems to be but one opinion—that the kingdom has made a great advance towards the long desired unity by the arrangements entered into. Of the whole Italian press only two journals, the *Gazetta del Popolo*, the organ of Mazzini, and the *Civita Cattolica*, the clerical journal, are hostile to the Convention. Great dissatisfaction, however, exists at Turin, and the inhabitants view with dismay the proposed change of the seat of Government. The idea of seeing the city that has for ages been the capital of the House of Savoy becoming a provincial town, has been industriously held up, both by the Republican and the ultra-Church party, as an abandonment of a people so long devoted to the cause of United Italy. Under the influence of these representations the disturbances were renewed on the 22d ult. Groups of people assembled and raised seditious cries, throwing stones and firing shots before the Royal Palace. The police and troops stationed on the Piazza of San Carlo fired upon the populace, killing and wounding 20 persons. Several soldiers were severely wounded, and 10, with the colonel, were killed. In consequence of these events, the Ministry declared to the King that they were ready to retire from their posts should his Majesty think such a step necessary for the pacification of the city. They added that they had not previously resigned, as they did not wish to appear to avoid the responsibility. The King thereupon formally requested the Ministry to send in their resignations, and summoned General Della Marmora to form a new Cabinet. The announcement of this change of Ministry at once produced an excellent effect, and no rioting has since occurred. The new Cabinet is not yet completed, but Signori Lanza, Petitti, Pacini, and Sella have accepted the portfolios which were offered them, and negotiations are in progress with Baron Ricasoli and several other statesmen to complete the Ministry. It is asserted that the programme of General Della Marmora will be the execution of the stipulations of the Franco-Italian Treaty, including the transfer of the capital to Florence. A Royal decree has been issued postponing the opening of the Parliament from the 5th to the 24th of October. This delay has been determined on in order to afford time for the formation of a Cabinet. A remonstrance has been addressed by the Turin municipality to the Government, which says:—

"On the first announcement of the Franco-Italian Convention the universal sentiment was one of sincere satisfaction, but on learning the condition of the transfer of the capital the people remembered the vote of the Parliament proclaiming Rome as the capital of Italy. For the Turinese, as for the inhabitants of many other towns in Italy and abroad, the transfer of the capital signifies the renunciation of Rome. The Turinese have for a long time past sacrificed their material interests for the idea of Rome as the capital."

A popular meeting has been held at Turin, at which an address was voted to the Syndic expressing identical sentiments with those of the municipal address. A letter has been published from the captain commanding the Carabineers in the Castello Square on the night of the 21st ult., which states that the troops were not ordered to fire upon the people, but that the discharge took place by accident. The *Osservatore Romano* contradicts the statement that Count de Sartiges, the French ambassador, had had an interview with the Pope relative to the Franco-Italian convention, and states that the convention itself has not yet reached Rome. The French papers on the other hand assert that Count de Sartiges has communicated both to the Pope and Cardinal Antonelli a note from M. Drouyn de Lhuys, announcing the Franco-Italian Convention, at the same time intimating that the Government of the Emperor renewed its offer of advice, and promised its assistance in carrying out the measures which his Holiness might deem necessary to adopt in view of the state of things which the Pontifical Government might shortly have to meet. The Pope and Cardinal Antonelli declared almost simultaneously that they were not surprised at the announcement, since they were aware that the present *status quo* could not be maintained for ever by the presence of the French troops, and that the Emperor had always acted loyally, and had indicated that the intervention was essentially provisional. The Pope added that he had at that moment no observation to make relative to the engagements undertaken by Italy in reference to France, and requested time for mature reflection before communicating his impression of the effects the new state of things might have upon the Papacy. Monseigneur de Bonnechose, at the ceremony of receiving the Cardinal's hat, said that France had always wished, and still wished, guarantees for the temporal power of the Pope. The Emperor Napoleon also desired them, because he knew France too well not to be aware of this sentiment, and of the necessity for union between France and the Holy See. An important public meeting took place in Naples on Wednesday, at which all shades of Liberal politics were represented. General Tupputi of the National Guard presided. The meeting approved the Franco-Italian Convention, proclaimed Rome to be the capital of Italy, and Venice free; and called upon the Government to disregard municipal interests in choosing a provisional capital, and to consider the interests of the nation in making a choice, Naples herself having forgotten her rank as the first city of Italy in order to leave liberty of choice to the Government. Cheers were given for the King. A statement that Austria had protested against the Convention, and that war was probable, was received with applause. An unanimous subscription was made for the sufferers during the disturbances at Turin. The proceedings passed off with perfect order and gave general satisfaction.

DANUBIAN PRINCIPALITIES.—Six thousand peasants have lately arrived at Rouginossa, an estate belonging to Prince Couza, to express their gratitude for the

decree making them landed proprietors. The Prince recommended them to forget their past sufferings, and to live as friends with their former masters.

TUNIS.—Advices from Tunis to the 23d ult. state that the garrison of Sousse had made a sortie, which was repulsed with loss. The insurgents were buying large quantities of arms.

CAPE OF GOOD HOPE.—The Cape Mail has arrived with news from Table Bay to the 20th ult. The Cape Parliament was prorogued on the 26th July by the Governor Sir Philip Wodehouse, who stated that its assembly for the first time in Graham's Town had proved completely successful. Just before the prorogation the Legislative Council determined to annex British Caffraria—a resolution passed, it is said, after all but two of the western and midland members had left. Public meetings have been held in King William's Town repudiating the incorporation. The Governor was to have gone to Caffraria for a short sojourn, when he would proceed to the Free State to settle a dispute with Basutoland about the boundary line. The Hon. Richard Southey has been appointed Colonial Secretary in place of the Hon. R. W. Rawson, now in England. Efforts are making at the Cape to grow rice and linseed, and to manufacture tobacco.

INDIA. — The Overland Mail from Calcutta has arrived. There is no news of political interest except the announcement that preparations are still going on for the chastisement of the Bhootanees, unless they make ample reparation for the late insult to our envoy.

CHINA.—The capture of Nankin by the Imperialists is confirmed. The Taeping rebellion has thus been brought to a close. The city fell into the hands of the Imperialists, after several days' fighting, on the 19th July, together with the principal rebel leaders. The Tien-wang, the rebel Emperor, avoided the pain of witnessing this final disaster by taking gold-leaf two days previously. When the besiegers commenced their attack the Chung-wang escaped, with the Tien-wang's young son and several others, but was retaken, and the Kan-wang, who was called the Shield King, is also a prisoner.

NEW ZEALAND. — The *Wanganui Chronicle* of June 29th says that the head of Captain Lloyd has been recovered and sent to Taranaki for burial. It says :—

"Mr. Charles Broughton, of this place, having learnt that Captain Lloyd's head was in a pa on the Waitotara, and being promised the assistance of two of the Waitotara natives, without whose aid he says he could not have gained his object, went out to Waitotara on Saturday last, and having taken up his quarters at a friendly native's pa about two and a half miles from Perikama (the pa where Te Ua was with the head), he sent a messenger requesting an interview with Te Ua, who, accompanied by Hapurona, of Waitara, and some of the leading Taranaki and Ngatiruanui chiefs, with a following of nearly 100 men, made his appearance next morning about daylight. They entered the pa from both ends, armed to the teeth; and while the other sat down for a 'korero' about 35 remained standing, as if on guard. Te Ua then asked Mr. Broughton what he wanted. His reply was that, having heard that he had the head of an officer, an English gentleman, he, a private individual, feeling it an insult that it should remain so close to the settlement, had come, unarmed, and of his own accord, to request him to give it up. Te Ua made a long speech, chanting 'waiatas' and 'pai marire' songs, the purport being that he was anxious to be at peace and to do no evil. Mr. Broughton declined to enter on political subjects, and again asked for the head. After some difficulty it was delivered to him, and he arrived in town with it on Sunday. The head, we understand, is almost perfect, merely wanting part of the under jaw, and is easily recognisable. Ensign Cumming will take it to Taranaki for burial."

UNITED STATES.—General M'Clellan's declaration that the Union must be preserved at all hazards, has caused a split in the Democratic party. Several members of the peace section declare that General M'Clellan has accepted the nomination without the platform; that he does not represent the sentiments of the convention, and that they will not support his election. The leading peace organ, the *New York Daily News*, asserts that measures are on foot to reassemble the convention and nominate a new ticket. Mr. Vallandigham, however, who at first concurred in this opposition to McClellan, delivered a speech at Dayton, Ohio, on the 16th ult., in which he declared his intention to support him. It is also said that the M'Clellan ratification meetings at New York, Washington, and throughout the North have been great successes, and that much enthusiasm was manifested in his favour. The *New York World* congratulates the Democrats on being free of the Peace party. The Republican Ticket has been elected in Maine. The election of Mr. Lincoln is preferred by the Southern journals to that of General M'Clellan, whether regarded from the peace or the war point of view. General Lee has been reinforced from Early's corps. According to both Federal and Confederate accounts, Grant and Lee are concentrating their forces about Petersburg, and it is believed that a great battle for the possession of the Weldon Railway is imminent. General Grant arrived in Washington on the 16th ult. for the purpose of appealing to the Government for more men, and of urging the immediate enforcement of the draft. General Sherman had previously written a letter to the same effect. Secretary Stanton accordingly ordered the draft to take place on the 19th ult. in all those States which had not supplied their full quota. General Sheridan attacked the Confederates under General Early, on the morning of the 18th ult. A furious battle ensued, which lasted throughout the day, and is said by the Northern journals to have resulted in a defeat of Early and his retreat up the Shenandoah Valley, with a loss of 2500 prisoners, five cannon, and 5000 killed and wounded, among whom were Generals Rhodes, Warton, and Shalder. The Federal loss was 3000, including General Russell among the killed. After the battle Sheridan occupied Winchester. The report from New Orleans that Admiral Farragut's Monitors had anchored within shelling range of Mobile is discredited at Washington. Official despatches from the Admiral of the 12th make no mention of it. Letters from New Orleans of the 7th state that 2500 of General Granger's troops have returned to that city from Mobile harbour, and will shortly be despatched upon an expedition in a new direction. Southern journals publish rumours that Admiral Farragut's fleet is about to attack Wilmington. On the 7th inst. Gen. Sherman pursued Gen. Hood's army to his head-quarters at the rear of Lovejoy's Station, but finding the Confederates in force and strongly entrenched he withdrew, having accomplished the great object of the campaign, the capture of Atlanta; around which his army is now encamped. General Sherman has since ordered all citizens to leave Atlanta with their moveable property, and to proceed north or south. General Hood obtained 10 days' truce for this purpose, but protested against the cruelty of the order. General Sherman, in a congratulatory order to his army on the 8th, attributes his success at Atlanta to Hood's mistake in sending the Confederate cavalry to the Federal rear beyond the reach of speedy recall, which enabled him to make his flank movement to Jonesborough without fear of being cut off from his communications. It was rumoured that Sherman with a large force was reinforcing Grant. The Confederate cavalry under General Hampton on the 16th made a raid within Grant's lines, capturing 2500 cattle, opposite Harrison's landing. One whole regiment of Grant's cavalry, which pursued them, were captured. The Confederates, under Generals Price and Shelley, are preparing another invasion of Missouri. The Democratic State Convention, assembled at Albany, has nominated Governor Seymour and Lieutenant-Governor Jones for re-election in November. The steamer Georgia, captured by the Federal steamer Niagara off Lisbon, has arrived at Fortress Monroe in a disabled condition. Thirty Confederates from Canada have captured two steamers on Lake Erie. It is supposed that they will attempt the rescue of the prisoners on Johnson Island.

MEXICO.—The latest advices state that Juarez had been driven from Monterey into Chihuahua. 5000 French attacked Cortinas at Matamoras on the 6th ult. During the engagement the Confederates on the Rio Grande, under Colonel Forde, espoused the cause of the French and attacked Cortinas. The Federal forces stationed at Bruzos de Santiago then attacked and drove Forde off. After the engagement Cortinas crossed the river and occupied Brownsville, Texas, where he hoisted the Federal flag, declared himself an American citizen, and offered the services of his troops to the Federal Government. The truth of this news is doubted in New Orleans.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 87⅝ to ¾ for Money, and 87⅞ to 88 for Acct Three per Cents. Reduced, 85¾; New Three per Cents., 85¾ to ½; India Five per Cent. Stock, 103¾ to ½; Ditto Bonds, 26*s.* dis.; Five per Cent. Enfaced Rupee Paper, 100½ to 101; Exchequer Bills, March, 11*s.* to 4*s.* dis.; Ditto June, 23*s.* dis. — FOREIGN: Egyptian, 96½; Greek, 23⅛; Ditto for Acct., 23; Mexican, 26¾ to ½; Portuguese, 1856, &c., 46⅜; Ditto for Acct., 46⅝; Russian, 1850, 84¾; Ditto 1859, 53; Ditto 1862, 87¼ to 87½; Ditto 1864, 89; Spanish New Deferred, 43; Ditto Passive, 30⅝ to ½; Ditto Certificates, 13⅛ to ¼; Turkish, 1858, 68½; Ditto 1862, 69⅓ to ¼; Venezuela, 1862, 55½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,043,690	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	12,393,690
		Silver Bullion	—
	£27,043,690		£27,043,690

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£10,797,095
Rest	3,995,106	Other Securities	20,404,489
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,083,958	Notes	6,803,665
		Gold and Silver Coin ..	727,433
Other Deposits	12,588,902		
Seven days and other bills	611,716		
	£38,732,682		£38,732,682

Sept. 29, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Sept.* 23.—BANKRUPTS.—C. ALLEN, Portsmouth, Licensed Victualler—J. BENNETT, Hartfield, Sussex, Gamekeeper—H. BRISTOW, Hastings, Sussex, Builder—H. BOOTHERSTONE, Fenton, Staffordshire, Potter—R. G. BALES, Liverpool, Ale Merchant—W. BECKFORD, New Land, Buckinghamshire, Baker—I. BARNES, Bow Lane, City, Warehouseman—J. J. BOCOCK, Kirtling, Cambridgeshire, Farmer—J. BURDON, Walton-on-the-Hill, Lancashire, Joiner—J. BRADSHAW, Rochdale, Cotton Carder—C. BAKER, Liverpool, Basket Maker—R. COLLENS, Mark Lane, Commission Agent—J. CONNOR, Ipswich, Suffolk, Tobacconist—M. DORELL, Hastings, Cabinet Maker—W. H. DASHWOOD, St. James's Street, Newport, Isle of Wight, Surgeon—W. DAMP, Isle of Wight, Hampshire, Builder—J. DRAGE, Bozeat, Northamptonshire, Boot and Shoemaker—W. DOLEMAN, Leader Street, Chelsea, Grocer—W. DICKISON, Warwick, Licensed Victualler—G. DEAN, High Street, Camden Town, Hosier—B. DAVIS, Mountfield, Sussex, Surveyor—JOHN ELDRIDGE, Liverpool, Pawnbroker—M. I. FLOCKTON, Devonshire Street, Portland Place, Turpentine and Tar Distiller—HENRY EDWARD FOX, Stratheden Terrace, New Road, Hammersmith, Tobacconist—G. L. FARREN, York Terrace, South Place, Upper Grange Road, Bermondsey, late Ship's Steward—E. T. GREEN, Dennett's Road, Green Road, Peckham, no business—THOMAS GRIFFITHS, Swansea, Glamorganshire, Labourer—F. HALL, Blackmoor Street, Drury Lane, Bootmaker—C. HOLMAN, Denmark Street, Camberwell, Slater—J. HASLAM, Lancashire, Machine Fitter—S. HAWKWELL, Thirsk, Yorkshire, Painter—T. HABIN, Arundel, Sussex, Boot and Shoemaker—G. HALL, Ingleton, Cheshire, Journeyman Bellhanger—I. HUGGETT, Groombridge, Sussex, Earthworks Contractor—G. HALL, Bow Brickhill, Buckinghamshire, Labourer—D. HERBERT, Christchurch, Monmouthshire, Licensed Victualler—GEORGE HEWITT, Norwich, Ironfounder—THOMAS HALL, Lichfield, Butcher—JACOB HART, Nicholas Street, St. Peter's Road, Mile End, Dealer in Cigars—CHARLES HOBSON, Weymouth, Dorsetshire, Coal Merchant—H. JONES, Little Marlow, Buckinghamshire, Grocer—T. JENKINS, Cheltenham, Tailor—W. JOHN, late of East Brook, Glamorganshire, Hay Dealer—H. W. KING, Stepney Green, Mile End, Commercial Traveller—J. KEMP, Deal, Grocer—E. LAMBERT, late of Cuckfield, Sussex, Tea Dealer—P. LORD, Rochdale, Lancashire, Licensed Victualler—MAUNDER, Bridgwater, Somersetshire, Fruiterer—G. MELMOTH, Bristol, Glamorganshire, Grocer—S. MORGAN, Newport, Monmouthshire, Licensed Victualler—B. MORGAN, Cardiff, Glamorganshire, Bristol Channel Pilot—G. H. MOORE, Heyhouses, Lancashire, Incumbent of St. Nicholas Church—T. OLIVER, Portsmouth, Jobbing Painter and Glazier—J. F. [illegible], Cutford Road, Islington, Flannel Warehouseman—W. OWENS, Chester, Cab Proprietor—T. OWENS, Cheadle, Cheshire, Joiner—W. OSBORNE, Ingleton, Yorkshire, Trainer of Racehorses—S. R. PRATT, Fenton Staffordshire, Painter—WILLIAM QUICKFALL, Sandown, Isle of Wight, Lodging House Keeper—J. RICHARDSON, late of Thetford, Norfolk, Carpenter—M. RAYNER, Kingston-upon Hull, Ale Merchant—E. ROSE, Liverpool, Coal Dealer—F. G. SMITH, Bedfordbury, Covent Garden, Stonemaster—F. H. STAGG, Sheffield, File Manufacturer—J. W. SMITH, Manchester, Bookseller—R. SADLER, Jun., Heybridge, Essex, Ironmonger—B. SMITH, Stanley, Yorkshire, Miner—R. SHAILER, late of Camberwell, J. R. SHELDON, Liverpool, Baker—S. TURLEY, Stanhope Terrace, Hyde Park Gardens, Livery Stable Keeper—H. TOMLINSON, Manchester, Dealer in Machinery—J. TAYLOR, Droylesden, Lancashire, Farmer—A. [illegible], Manchester, Agent—E. VOCE, Leicester, Boot and Shoe Manufacturer—WALTON, Sunderland, Master Mariner—I. WILLIAMS, Dudley, Worcestershire, Fruiterer—G. WELLS, Brighton, Tobacconist—J. WRIGHT, Lowestoft, Dyer—G. WALKER, Frodingham, Lincolnshire, Shoemaker—H. [illegible], Longton, Staffordshire, Shoemaker—J. WHITTAKER, Nottingham, Grocer—W. WEBBER, Harrow Road, Paddington, Cheesemonger.

TUESDAY: *Sept.* 27.—BANKRUPTS.—J. ALLEN, Berkeley, Gloucestershire, Beerseller and Baker—W. AUSTIN, jun., late of Nottingham, Lace Manufacturer—J. APPLETON, Elland, Yorkshire, Contractor—J. H. ALLEN, Liverpool, Timber Dealer—C. J. ABLITT, Great Yarmouth, Licensed Victualler—J. BOURNE, King Street, Dunstan Street, Kingsland, Bootmaker—S. BESWICK, Over, Cheshire, Salt Proprietor—J. G. BARR, St. Ives, Cornwall, Teacher of Music—F. V. BOOTHBY, Cleveland Square, Fitzroy Square, Ironmonger—W. C. BANKS, Lewisham Bridge, Architect—W. BUTTERY, sen., West Hartlepool, Fruiterer—C. BARRY, Gwennap, Cornwall, Mine Broker—I. BOCOCK, jun., Pudsey, Yorkshire, Cloth Manufacturer—W. L. BOOTHBY, Strand, Leather Bag Manufacturer—G. BREWER, Manchester, Shipbroker—C. CLARK, Cardiff, Commission Agent—W. CORNELIUS, Chard, Somersetshire, Confectioner—J. [illegible], Leeds, Cloth and Hosiery Manufacturer—W. DICKINSON, Nottingham, Plumber—W. FREEMAN, Tenbury, Worcestershire, Auctioneer—J. GIEVE, West Street, Golden Sq., Woollen Draper—W. GRIFFITHS, Milford, Pembrokeshire, Bootmaker—W. GILLESPIE, Warwick Terrace, New Cross—F. LE HUNTE, New Church Road, Camberwell, Surrey, Commission Agent—J. HOLLOWAY, late of Nottingham, Builder—J. R. HORSFIELD, Barnsley, Yorkshire Publican—E. HILL, Weston-super-Mare, Somersetshire, Beerhouse Keeper—B. JAMES, North Street, Grove End Road, Launceston—W. JANNINGS, Walworth Common, Brewer—F. S. JONES, St. Thomas Street, Ladywood, Birmingham, Builder—E. KIRBY, Liverpool, Accountant—G. L. ELLAND, Yorkshire, Stone Mason and Contractor—J. LUCAS, late of Wellow, Nottinghamshire, Brickmaker—E. LAVIN, Street Hill, Provision Merchant—G. LOVETT, Heigham, Norwich, Butcher—W. MAY, Wilderness Row, Goswell Street, Upholsterer—J. MAYNE, Stapleton, Gloucestershire, Beer Retailer—G. MYNER, Blackwall, Blackwall, Excavator—J. MORGAN, Llandovery, Carmarthenshire, Inn Keeper—A. J. MARGERUM, York, Hatter—S. MARKWELL, Wantage, Berkshire, Blacksmith—E. MANCUR, Laurie Terrace, Southwark, Mercer—H. M. NEPEAN, Argyle Villa, Harrow Road, Captain in the Madras Staff Corps—G. NEWNHAM, Landport, Hampshire, Carver and Gilder—LOUIS GEORGE OSBORN, Cowley Road, Brixton, Surrey, Baker—C. PIERCE, late of Birkenhead—E. S. PORTER, Spittlegate, Lincolnshire, Baker and Grocer—J. PARTINGTON, Manchester, Mill Furnisher—J. PAY, King's Place, Pall Mall, Dealer in Works of Art—J. REVILL, Sheffield, Spring Knife Manufacturer—J. RICHARDS, Weston-super Mare, Somersetshire, Fishmonger—D. STOCK, Weston super-Mare, Somersetshire—SWIFT, Halifax, Yorkshire, Worsted Spinner—J. BRADBURY, Smethwick, Liverpool, Cotton Waste Dealer—W. A. STEVENS, Old Swan, Lancashire, Druggist—W. TURNER and D. JOHNSON, Leeds, Cloth Manufacturers—THACKRAY, Monkwearmouth, Durham, Grocer—C. TURNER, Leeds, Cloth Manufacturer—J. THOMAS, Old Street, St. Luke's, Timber Merchant—H. WILLIAMS, Stanley Street, Pimlico, Builder—G. WILSON, late Carlton, Nottinghamshire, Publican—A. W. WILLIS, Great Russell Street, Bloomsbury, Black Lead Pencil Manufacturer—T. WHEELER, Cranborne, Dorsetshire, Farmer—C. WILSON, late of Liverpool, Boarding-house Keeper—R. WILLIAMS, Worcester, Grocer—J. D. WEEKES, New Bond Street, Carey Street, Lincoln's Inn Fields, Attorney-at-law.

SCOTCH SEQUESTRATIONS.—P. CAMERON & Co., Glasgow, Nautical Instrument Maker—A. MATHIESON, Clockforbie, Aberdeenshire, Crofter—A. RUSSELL, SON, and Co., Glasgow, Manufacturers.

Metropolis and its Vicinity.

ELECTION OF LORD MAYOR.—On Thursday, being Michaelmas Day, the Liverymen of the City of London met in Guildhall for the purpose of electing a Lord Mayor. The choice fell on Aldermen Hale and Phillips, the two senior aldermen below the chair. These names were sent to the Court of Aldermen, who selected Alderman Hale, who will, therefore, be Lord Mayor for the ensuing year.

THE NEW SHERIFFS.—The ceremony of administering the oaths to the sheriffs for the ensuing year, Alderman Dakin and Alderman Besley, took place on Wednesday at Guildhall. The new sheriffs commence their duties on Thursday, in presiding at the election of the new Lord Mayor.

COMMITTAL OF MULLER.—On Monday morning the prisoner Müller was brought both before the coroner's jury and the police magistrate at Bow Street. The inquest commenced first. The evidence given before the coroner was little more than a repetition of what is already known, the chief points on which corroborative testimony was produced, being that of the hat found in the railway carriage and stated to have belonged to Müller, and that of the hat found in his possession at New York, and identified as having been the property of Mr. Briggs. With regard to the former, Matthews the cabman, who had already identified it as the hat which he bought for Müller in Marylebone, was again subjected to cross-examination by Müller's legal adviser, and it is evident that an attempt will be made at the trial to discredit his evidence. With regard to the other hat it will be remembered that when Mr. Briggs's son was first called upon to identify it he expressed an opinion that while similar in other respects to the one worn by his father, it differed from it in appearing to be rather more than an inch shorter. This admission was at once fastened upon by the solicitor for the defence, who evidently thought that the admission on the part of the son would tend greatly to the benefit of the prisoner. It was now shown, however, that this fact has materially added to the strength of the case as against the prisoner. Mr. Digance, the hatter of the Royal Exchange, identified the hat as having been supplied by him to Mr. Briggs, who had been a regular customer of his for 35 years, &c. He distinctly deposed that it had been cut down an inch or more, the part cut out being close to the brim, and the

hat itself having been again put together by a neat piece of sewing, an operation which would not have been performed by a hatter, who would have refastened the brim with composition. Mr. Digance added that the part cut off was that on which he usually put the name of the customer. This evidence was confirmed by that of the man who actually made the hat, and who identified it by a private mark still visible. Other witnesses proved that Mr. Brigg's hat was in the possession of Müller immediately after the 9th of July. After hearing this evidence, with other facts relating to the pawning of the watch and the medical testimony, the jury, after an absence of 20 minutes, returned the following verdict:—

"That deceased died from the effects of foul violence, inflicted on him in a first-class carriage of the North London Railway on the night of the 9th of July last, and we find that Franz Müller is the man by whom that violence was committed."

The Coroner said that this was equivalent to a verdict of wilful murder. The Foreman said that the jury also wished to append to their verdict the following:—

"The jury, while passing their verdict, take this opportunity of expressing their dissatisfaction with the present state of railway accommodation, as affording facilities for the perpetration of various crimes and offences, and earnestly desire to call the attention of the Home Government to the subject, and to the necessity of enforcing the adoption by railway companies of some more effectual system of protection to life, character, and property."

The verdict of "Wilful Murder against Franz Müller" was then recorded, and the coroner made out his warrant committing him to Newgate for trial. At the Police Court, after the new evidence in reference to the hats had been added to the depositions, the prisoner said that he had nothing to say now, and his legal adviser stated that the defence would be reserved to a future day. The names of the several witnesses were then called over, and all parties were bound over to prosecute at the next sessions at the Central Criminal Court, which will be held on the 24th October next. The prisoner was then formally committed for trial on the charge of wilful murder. The instant his committal became known there was great excitement among the hundreds who had congregated to see him taken away in the van. Throughout Bow Street there was not a window which was not crowded with people four and five deep, while the street itself was completely blocked with the sight-seers. Soon after 5 o'clock the van drove up to the door of the court, and Müller, in charge of Superintendent Durkin, was taken into the street. The moment he was seen a tremendous shouting arose. He was hurried into the van, which at once drove away, and the people gradually dispersed.

The New Ride in St. James's Park.—The arrangements for the new ride in St. James's Park, similar in many respects to that of Rotten Row in Hyde Park, are rapidly approaching completion. It appears that during the sitting of Parliament, considerable inconvenience has been felt on account of the number of vehicles and people on horseback proceeding along Birdcage Walk, and that this inconvience will be much increased when the Thames embankment is opened. The First Commissioner therefore determined to form a new route from the Houses of Parliament, along the Birdcage Walk, to Buckingham Palace; the whole interval between two rows of trees, nearly as wide as the Mall on the north side, being added to the old causeway, one portion to form a carriage thoroughfare; the other, under the shade, to be reserved for equestrians. The alterations will in no way affect the trees in the Park, which will remain as at present.

The Malta and Alexandria Telegraph.—Messrs. Glass, Elliot, & Co., have announced the re-opening of the Malta and Alexandria Telegraph, for the transmission of messages to Egypt, India, China, Australia, &c.

The Main Drainage Scheme.—At the last meeting of the Metropolitan Board of Works 11 tenders for the engines of the Abbey Mills pumping station were opened. Mr. Slaughter's estimate was 112,500*l.*; Messrs. Sandys, Bedding, & Co., 87,000*l.*; Messrs. Hardy & Co., 88,700*l.*; Harvy & Co., 88,000*l.*; Mr. J. Fleming, 111,000*l.*; Messrs. G. Forrester & Co., 78,450*l.*; Messrs. James Watt & Co., 60,900*l.*; Messrs. T. Rothwell & Co., 54,570*l.*; Messrs. D. Adamson & Co., 82,590*l.*; Mr. Robert Dalgliesh, 70,560*l.*; and Messrs. Maudslay & Field, 134,228*l.* The Board accepted the tender of Messrs. T. Rothwell & Co., subject to the usual inquiries.

Statue to Sir James Outram.—The Thames Embankment Committee reported to the Metropolitan Board of Works at their last meeting, that having considered the letter from the First Commissioner of her Majesty's Works, relative to the erection of a statue of Sir James Outram on land reclaimed by the Thames Embankment, they were of opinion that the application should receive the most favourable consideration of the Board, the question of the exact site and other details being reserved for future determination. The report was unanimously agreed to.

New Roman Churches at Barnet and Waltham.—The first stone of a Roman Catholic Church at Barnet has just been laid by Bishop Morris. The church is to be Gothic in character, and the architects are Messrs. Willson & Nicholl. It will be about 50 feet long by 32 wide, and will accommodate about 200 persons. Another Roman Catholic Church was opened last Sunday at Waltham.

Fire at the City Telegraph Station. — At a late hour on Monday night a fire broke out in the Telegraph Station in Threadneedle Street, and at first assumed a most serious aspect. The fire occurred in the stationery room of the Magnetic Company and soon spread to the premises of the Submarine below. Eight engines, four of which were worked by steam, were speedily got to work, but the fire was not subdued until the premises were considerably damaged, and many of the electric machines destroyed. Mr. B. Langham, of the North British and Mercantile Fire Office, and two firemen had a narrow escape with their lives by beams falling on them, and received severe contusions. The loss will fall on the London, Liverpool, and other offices. The operations of both companies have not been interrupted by the fire.

The Public Health.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, September 24, were 1229. The average number in the corresponding week of 10 years, 1854-63, excluding the deaths from cholera in 1854 and corrected for increase of population, was 1181. The present return is therefore 48 above the average. During the week the births of 975 boys and 978 girls, in all 1953 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1881.

Provincial.

Canterbury.—A number of the ladies of Canterbury recently got up a subscription to defray the cost of placing a figure of the Dean of Canterbury in one of the new niches of the cathedral, as a tribute of the esteem entertained for him. So soon, however, as intimation of this intention was given to Dean Alford, he declined the compliment, and suggested that the figure of Edward the Black Prince should be substituted. It is understood that the dean's suggestion will be carried out.

Driffield.—The whole of the incendiaries proved and supposed to have been implicated in the disastrous series of fires in the stack-yards of the Wold district last winter are now believed to be in the hands of the police. During the imprisonment of Sherwood, the incendiary who is now with two others under penal servitude, he implicated two men known as "Lurcher Slenderman," and "Big Ben" as parties to certain of the Wold fires. Slenderman was examined before the Driffield Bench at the time, and liberated on recognisances to appear when called on, but being guilty of riotous conduct and threatening to repeat the Wold fires at Rillington a fortnight ago, he was sent to prison by the Malton Bench and is secure for six or seven months to come. Since Slenderman's committal Superintendent Young, of Driffield, has traced Big Ben, who has been wanted ever since the fires. This man was brought before the Driffield Bench last week, and the evidence against him being similar to that against Slenderman, he was liberated upon recognisances to appear when called upon. When living in the Malton district he was a notorious poacher, and a warrant has been held for his apprehension for nearly five years. He was at once taken to Norton, where he was brought before the magistrates on Saturday, charged with night poaching on Lord Middleton's estate at Grimston, in 1859, and using a net and dog to take game. After hearing the statement of the keeper, the Bench remanded the prisoner for a week. Thus the Wold farmers are relieved from another cause of apprehension.

Grantham.—A public meeting was held in the Town Hall last week, to concert measures for the restoration of the fine old parish church. Earl Brownlow occupied the chair, and stated that Mr. G. G. Scott had thoroughly examined the fabric, and prepared an elaborate report. The alterations and restorations he had recommended would cost about 14,000*l.* The subscription list now amounts to 6000*l.*

Guildford.—At the Hatch Gate, at Merrow, a mile and a half from this town, resides Elijah Wyatt, a man aged about 60, and adjoining his cottage is that of a Mrs. Keil. Between these neighbours a feud has long existed, the woman claiming a right of way through Wyatt's yard to the common well. Wyatt finding that Mrs. Keil persisted, in spite of his remonstrances, in "trespassing," as he called it, upon his premises, drove in some stakes on Thursday week, and placed a heap of wood against her back door, so as to bar her out of his yard. Upon this she remonstrated with him while he held in his hand the axe with which he had been driving in the stakes. On his threatening to do her some bodily injury, she called Mrs. Hill, an old woman 60 years of age, to her assistance, whereupon Wyatt became exasperated, and felled Mrs. Hill by a severe blow with the flat side of the axe upon her neck. He then attempted to do the same to Mrs. Keil, but she closed with him and tried to get the axe out of his hands. Some neighbours coming up the man was disarmed, and shortly afterwards given into custody. A surgeon, who examined Mrs. Hill's wounds, found them of an alarming character; and on Friday Wyatt was taken before a magistrate, and remanded for a week.

Ilminster.—The funeral of Captain Speke took place on Friday in a vault under the church of Dowlish Wake, near this town, in the presence of a large concourse of people. Captain Grant, Dr. Livingstone, and Sir Roderick Murchison were among the mourners.

Ipswich.—It is announced that in order to avoid all interference with the Bristol Church Congress, the "Congress" or "aggregate meeting" of clerical and lay members of the Church of England residing in the eastern counties, which it was proposed to hold at Ipswich in the present month, is deferred until next spring.

Kendal.—Lord Brougham completed his 86th birthday on Monday week. To commemorate the event, and as a tribute of admiration to the venerable peer, Mr. Joseph Wilkinson, of Bonscale, Ullswater, a veteran politician, who in former days took a very active part in his lordship's Westmoreland contests, has erected a stone memorial pillar on the summit of Hallen Hag, which overhangs the lake immediately above Howtown. It stands 12 feet high, and is an object conspicuous enough to be seen from Cross Fell with the aid of a good glass.

Leeds.—At a meeting of the shareholders of the Leeds Banking Company on Wednesday, the committee of investigation presented a statement showing a total liability of 1,330,308*l.*, and assets of only 826,695*l.* At the termination of the discussion it was resolved to wind up, and three liquidators were appointed to carry out the resolution. It was stated to the meeting that the committee had already taken the preliminary steps for this purpose by presenting a petition to the Court of Chancery, which will be supported by Messrs. Smith, Payne, & Co., and by other individual creditors in Leeds and the neighbourhood. The serious difficulties in which the bank is placed may be judged of by the fact that a call will have to be made of nearly 120*l.* upon each of the 7340 shares. It has also been discovered that Mr. J. W. Marsden, an ironmaster, who has absconded to America, and to whom the bank had made large advances, had by himself and his cashier forged bills to the amount of 80,000*l.* Mr. Thomas Skaife, his cashier and brother in law, was brought before the magistrates on Saturday, charged with the forgery, when he confessed the whole matter, alleging that more than one thousand entries in one book relate to bills, every one of which was forged. He was committed for trial.

Middlesborough. — On Friday afternoon, Henry Kerne, a German Jew, residing in Vine Street, in this town, murdered his son Daniel, aged five and a half years, by nearly cutting his head off with a razor. He afterwards cut his own throat, and immediately expired. It appears that he had quarrelled with his wife, who had threatened to leave him, and that he had complained bitterly of her conduct in stripping the place of its furniture. He had also for some time suffered from the loss of his eyesight, and this, with the unhappy state of his domestic arrangements, is assigned as the motive of the deed.

Milford.—The natural advantages of this harbour are at last about to be turned to some practical account, and, as a first step in that direction, the foundation stone of the Hubberston Docks has been laid, and the works are already in progress. The new Milford Docks are also to be commenced without delay, and there is every probability that the Newton Noyes Ocean Pier will be carried out as well. A line of railway is proposed to Fishguard and Cardigan, which will place the port in direct communication with the great narrow gauge systems of the country.

Newcastle on Tyne.—A Protestant monastery, which promises to rival that of Brother Ignatius at Norwich, has been established in this town, with a view to the education of the poor, the visitation of the sick, the propagation of the doctrines of the Church of England, and preaching. The chief of the new fraternity, to which is to be assigned the title of the "English Order of Mercy," is the Rev. Brother Paul, of Bloomfield Terrace, Grosvenor Road, London. The brothers will live in community, and their habit is a black serge cassock and belt, with a sombrielto for the head. The rules are that all shall rise at 6 every morning, when prayer, meditation, and other matters occupy the time till breakfast. Their duties will then commence and last till 12, when dinner is served. Recreation is allowed till 2. Duties again till 5. Tea at 7; and office and chapel till 10, when all retire to rest. The superior states that none will be allowed to join the order unless they can produce good testimonials as to their efficiency and good living. The novitiate lasts for six months, at the expiration of which the vows of poverty, chastity, and implicit obedience are taken. The order is very poor, and the superior is appealing to the public for help, as the establishment is to be opened this month.

Oxford.—The Archbishop of Canterbury, as Visitor of All Souls' College, has given judgment in the case of "Watson and Freemantle (Appellants) *v.* the Warden and Fellows of All Souls' College, Oxford (Respondents). His Grace confirms the report of his assessors, Sir John T. Coleridge and Dr. Travers Twiss, and in conformity with their recommendation, advises that on the day of election, after the service in the chapel, the business of the election shall take precedence of all other, and, until that be concluded, none other shall be entered upon. In regard to costs, his Grace suggests to the warden and fellows that, if their costs be paid out of a common college fund, those of the appellants should also be paid out of the same fund.—Mr. Benjamin Waters, for many years the faithful servant of Dr. Stanley, Dean of Westminster, died at the Deanery on the 21st ult., after having in the previous week lost two children, aged five and seven years. He was buried on Monday at the Holywell Cemetery in this city. Dr. Stanley, who travelled many miles for the purpose of performing the last services of the

Church over the body of a devoted and affectionate domestic, was much affected during the ceremony. Lady Augusta Stanley, to mark her respect for the deceased, attended in company with Dr. Jacobson, Regius Professor of Divinity, as one of the mourners.

RIPON.—At the annual dinner of the Ripon and Clare Agricultural Society on Friday, Earl de Grey and Ripon, in replying to the toast of "The Ministry," spoke as follows on the subject of war and taxation :—

"He remembered that on one occasion when the Premier had to return thanks for the same toast in an assembly containing men of all parties, he assured those who differed from him that they might most conscientiously and honestly drink the health of her Majesty's Ministers, inasmuch as the best thing which could possibly happen to their physical health would be their being turned out of office. But he did not now feel it necessary to give a similar assurance, as he hoped that those present did not disapprove the main principles which had guided the general conduct of her Majesty's Government in the administration of the affairs of the country. The task which they had had before them during the past twelve months had been one of no ordinary difficulty, and one which it would be easily believed had caused them no ordinary anxiety. They saw going on in Europe an attempt, which they held to be unjustifiable and violent, to invade the rights of a small nation on the part of certain great Powers for objects of which they could not approve, and in a cause with which they could feel no sympathy. They were entitled to lift up their voice in common with the other great Powers of Europe who were not belligerents in the quarrel, and freely to express their opinions upon the questions at issue. They did so, but they were not bound—this country was not bound—by any treaty engagement which rendered it a point of honour with them to engage in the quarrel on the part of Denmark. If that had been the case her Majesty's present Government would not have hesitated for a moment—no Government that could exist in this country would have hesitated at once to draw the sword in any quarrel in which the honour and good faith of England was engaged. But the treaty to which England was a party was one to which other great Powers of Europe were parties also, and it was right, it was wise, he thought, on the part of prudent men that they should endeavour to go hand in hand with those other Powers. They were not called upon by any special obligation to engage single-handed in a contest in which others were as much interested as the English Government; and although they made known their sympathies—although they did not hesitate to assure the other great Powers that they were prepared to co-operate with them in any measures they might mutually agree upon—yet they did not feel they should be justified in involving this country in the enormous evils of war when they found France and Russia unprepared to drive matters to that extremity, and unwilling to follow them in that path. He believed that in the course the Government then took—that was to say, in the efforts they made for the preservation of peace, and in their determination not to bring war upon this country—they were supported by the great body of the people of every shade of opinion. The maintenance of peace was of the first importance to the agriculture, industry, and commerce of this country; but that could only be done by the outlay of money for naval and military purposes. If they desired to see the flag of England maintained untarnished, and its reputation unsullied, they must be prepared to pay for it. But he believed—and the story of the last few years was there to prove it—that there were few, it may, men in this country who were not prepared to pay the price of national honour and national security. Her Majesty's Government under his noble friend Lord Palmerston, whose name would go down to posterity connected more than any other man with the national defence of England—had shown their determination to place those defences on a satisfactory footing. But, on the other hand, this he could say, that her Majesty's Government were as anxious as any men in the country to bring the expenditure of the country within the narrowest limits consistently with the requirements of the public service; and by that means to effect every reduction of taxation that might be legitimately possible. Although the Chancellor of the Exchequer would have the money which was needed for the public service, there was no man in the country, he would undertake to say, who was more zealous than he in the cause of financial reform. But it must be borne in mind that we had a vast empire extending into every quarter of the globe, and that our ships were in every port, and our commerce was upon every sea, and if he did not misinterpret the feelings of this country, though sometimes there was grumbling at the cost of colonial expenditure and of naval armaments, they were not prepared to abandon their colonies, or give up their commerce. If they were not prepared for that, and if they wished to remain a great nation, spreading their arms unto every part of the world, and enfolding the globe within them, they must be prepared to bear the various burdens and discharge the various duties of that great position."

ROMFORD.—A shocking murder was committed at Chadwell Heath, near this town, on Saturday. A woman named Blunt had for some time cohabited with Francis Wane, a man of irregular habits and occupation. They had separated, however, and she was about to be married on Sunday to another man. On Saturday the father of the intended husband found her dead with her throat cut in three places. Suspicion fell upon Wane, and pursuit being made, a man answering his description was captured with stains of blood upon his clothes. He was examined on Thursday at the Stratford Police Court, when the principal evidence against him was his having been near the cottage at the time of the murder, and the footmarks observed going to and from the place, which corresponded with some peculiar malformation of the prisoner's feet. He was remanded for a week. At the inquest on Wednesday several witnesses swore to the fact that the prisoner had threatened on various occasions to take the life of the murdered woman. The policeman proved that the boots worn by the prisoner corresponded with the footmarks seen near the cottage; and two of the inmates of Ilford Gaol, who were brought up in custody, deposed that when the prisoner was lodged there on Monday, he told them that he had committed the murder. The jury immediately returned a verdict of Wilful Murder against the prisoner.

RUGBY.—The Rev. T. N. Hutchinson, M.A., Second Master of King Edward's School, Birmingham, has been appointed by Dr. Temple to take charge of the scientific department of Rugby School, in order to carry out the suggestions of the Royal Commissioners with regard to the more systematic teaching of natural and experimental science in public schools.

STOCKPORT.—On Monday, at the borough police court, a man named John Ridgway was committed to take his trial at the ensuing sessions upon several charges of obtaining goods by false pretences. The facts disclosed in the course of an inquiry, which has occupied a considerable time, show that the prisoner was a member of the "long firm." He was first charged with obtaining a number of Cochin China fowls from Mrs. Seddon, of Arborfield, Reading. In August last Mrs. Seddon advertised in the *Field* newspaper that she had several fowls of that description to dispose of, and, in the course of a few days, received a letter signed "W. B. Lloyd," with a reference to the Union Bank, Manchester, asking her to send the fowls to the Stockport station, promising to transmit the money (4*l.*) in due course. The fowls were sent as requested, and arrived at their destination; but in the meantime inquiries had been set on foot as to the identity of "W. B. Lloyd, Esq.," with John Ridgway, the prisoner, and when he appeared at the station to fetch the fowls he was detained. It could not at first be ascertained by whom the fowls had been sent, and the inquiries set on foot for that purpose revealed extensive transactions of a suspicious character in which the prisoner had been engaged. Mr. Hays, house agent, near Manchester, in one of whose houses the prisoner and his wife had lived for some months, in the name of Greenhalgh, described an enormous quantity of articles he had seen arrive at the house, addressed to "Horace G. Gladstone." Among these were nine barrels of soft soap, two dozen of clocks, and a large case of leather. Recently a London firm, who had supplied the prisoner with 200*l.* worth of jewellery, sent down two clerks to inquire into his respectability, as he had written for a fresh supply. Mr. John Price, station-master at the Chelford station on the London and North-Western Railway, told the Court that in April last he had delivered to the prisoner, who said his name was Gladstone, two thorough-bred Alderney bulls and six Alderney heifers, worth about 130*l.*, which had been forwarded by Mr. J. Stubbs, farmer, of Upmarden, Suffolk; and a police officer named Rogers, who had known the prisoner for several years, during which time he was working at an iron foundry in Gorton, Lancashire, also described a few of his dealings. While living at Gorton, packages and parcels used to arrive almost daily, among the articles enumerated by the witness being cases of wine, six barrels of ale from Glasgow, perambulators, stone bottles of liquor, cases of jet ornaments, &c. On one occasion he obtained a gun worth 30*l.* from a clergyman in Cheshire, and on the following day a warrant was issued for the apprehension of the prisoner, but when the officer went to execute it it was found that he had left the neighbourhood about an hour before. There are several other charges against the prisoner, most of which will doubtless be entered into at the sessions; among them that of having received from Portsmouth a white-nosed monkey, valued at 3*l.*; a peacock and hen, from the same locality; and a gun valued at 10*l.*, from Mr. James Shakespeare, Cotton Hill, Shrewsbury.

WOLVERHAMPTON.—A meeting of coal masters was held in this town last week, when a deputation was appointed to confer with the Earl of Lichfield as Lord Lieutenant of the County, and the magistrates of the district as to the means to be adopted to put a stop to the illegal assemblages which are now meeting daily in various parts of the district for the purpose of intimidation, and preventing the continuing at work of those colliers who are not mixed up with the strike in the Dudley district. The masters expressed their strong determination not to give way in the matter of the wages; and it was shown that although they have not been brought before the public, very gross cases of intimidation have been practised. Eighteen thousand miners are now on strike in the Black Country, and the number is rapidly increasing. The offered mediation of the Mayor of Birmingham and a committee of gentlemen has been declined by both parties.

VENTNOR.—A drinking fountain has been erected at Black Gang, at the back of the Isle of Wight, dedicated in an inscription "to the memory of Shakespeare." The fountain has been erected by Mr. Letts, a gentleman residing at Black Gang.

YORK.—The eighth annual meeting of the National Association for the Promotion of Social Science commenced in this city on the 22d ult., when Lord Brougham, the President, delivered his inaugural address. This address, which was of great length, touched upon almost every subject of interest which has occupied public attention during the year, including extradition treaties, colonial policy, the American war, the plan for abridging the labours of Parliamentary Committees, Mr. Gladstone's scheme of Government insurance, the Lord Chancellor's County Courts Bill, the compilation of judicial statistics, the sewerage problem, the security of railway passengers, the present position of the convict system, the establishment of cooking depôts for the working classes, Mr. Lawson's Permissive Bill, the policy of foreign Governments, including the conduct of Prussia towards Denmark, the emancipation of the serfs in Russia, the oppression of Poland, the development of public instruction in France, the changes in the French code of bankruptcy, and the continuance of restrictions on liberty and the doctrines of Duke de Persigny. On the 23d, Sir J. P. Wilde, the President of the Jurisprudence Department, delivered an introductory address on land reform, after which the business of the several departments was regularly commenced. These departments were four in number—viz., Jurisprudence, Education, Health, and Economy and Trade. To the Jurisprudence Department was annexed a Reformatory Section, to deal with the special subject of the treatment of criminals, and a General Average Section, for the discussion of the draught of a code prepared by the International General Average Committee. An Agricultural Section was added to the department of Economy and Trade, to which were referred the subjects of statute history, the sale and transport of cattle, &c. The important department of Education was presided over by the Archbishop of York, who delivered an opening address of great interest on the subject of public schools and middle-class education. In the department of Health Sir Charles Hastings on Tuesday delivered an address of great importance on the subject of the public health, and on Wednesday Mr. E. Chadwick delivered the inaugural address in the department of Economy and Trade. Among the subjects discussed in the different sections were the Law of Real Property, the Legal Profession, Insanity, Prison Discipline, Public Schools and Grammar Schools, Juvenile Labour, the Utilisation of Town Sewage, the Patent Laws, the Laws of Maritime Warfare and their effect on Commerce, Government Security for Small Investments, the Social Condition of the Cotton Districts, the Co-operative Movement, &c. Delegates attended from Antwerp, Amsterdam, Bremen, Boston, Hamburg, Lübeck, Copenhagen, Russia, and other places abroad, to hear the discussions on the subject of marine insurance and general average—a matter of much importance to the merchants and shipowners of all nations. A grand banquet took place on Saturday, and a *conversazione* on Tuesday, and the proceedings terminated on Thursday the 29th.

Ireland.

LORD DONEGAL AND THE MASONIC BODY.—A reply has been received from the Marquis of Donegal to the official communication recently addressed to him by the Grand Lodge of Ireland, requiring an explanation of the violation of one of the standing orders of Masonry in the introduction of subjects having a political character at the recent Masonic Festival in Belfast. In his reply Lord Donegal candidly admits his error, and expresses his regret at having selected that occasion to make observations whose tendency and character the Masonic Body had reason to complain of. His lordship's reply will be laid before the Grand Lodge on Thursday next, and will then be fully considered.

MURDER IN KILKENNY.—The *Kilkenny Moderator* gives an account of the discovery of a murder under singular circumstances. A Mr. Maher, a farmer, was overtaken by the rain in a lonely locality near Freshford on Sunday week, and with a view to sheltering himself made his way to a small disused culvert. The roof being quite low, he found it necessary to crouch on his hands and knees in order to get in. On stooping to enter, he was surprised to see the passage at the further end obstructed by what was evidently the body of a man in a recumbent position. Thinking that some wayfarer had fallen asleep, he asked if he was asleep. Receiving no reply, he scrutinised the object with care, and observing that stones were placed on various parts of the body, became suspicious that some foul deed had been committed. The deceased, with the exception of the hat, had all his clothes on, and the pockets were not disturbed. Around the throat was found a red handkerchief, bound so tightly as to leave deep indentations in the neck. There were also scratches, as if caused by the nails of a person's fingers, down the neck at either side, and from the rigid state of the body it was evident the unfortunate man must have been dead from 20 to 24 hours. At the inquest held on the body the jury returned a verdict of Wilful Murder against some person or persons unknown.

Scotland.

SHARKS IN THE FORTH.—On Monday morning, while Mr. Barland, druggist, of Edinburgh, and some other gentlemen were bathing outside the eastern breakwater at Granton, a shark suddenly rose and seized him by the leg, biting him in three places. Fortunately, Mr. Barland was near the bulwarks; and notwithstanding the severe nature of the injuries he had sustained, he was able to get out of the water. The shark was afterwards seen by the other bathers, who estimated it at about three feet in length.

Railways.

ACCIDENT TO AN EXPRESS TRAIN.—On Monday morning, as the down morning express boat train on the London, Chatham, and Dover line was passing over the embankment at Penge, the engine left the rails, and after running for 200 yards over the sleepers and permanent way, fell upon its side down the embankment, dragging with it a second-class carriage containing three or four passengers, including one of the company's workmen, whose leg was broken. The first-class carriages not having left the line, all the passengers, of whom there were about 30, escaped unin-

except one, an Engineer officer stationed at Chatham, whose shin was grazed. The driver and stoker of the engine stuck to their posts, and were both slightly hurt; but the guard was able to proceed to Dover with most of the passengers in a special train which was sent down from Victoria immediately upon telegraphic notice of the accident reaching London.

Collision on the Great Eastern.—On Tuesday morning at an early hour a goods train from Norwich on reaching the Thetford Station ran into a train of empty cattle trucks, with a third-class carriage attached. This carriage was fortunately empty, or there would have been a great loss of life, as the carriage was completely smashed, as were several of the cattle trucks. The engine of the goods train sustained some damage, but the driver and stoker escaped without serious injury. The collision caused a great wreck of plant, and the up-line was blocked for some hours.

Collision near Bradford.—About midnight on the 14th ult., on the arrival of the Doncaster express at the Laister Dyke Station on the Leeds, Bradford, and Halifax Junction, the porters in charge detached from it two carriages for the Bradford branch, while the rest of the train went on to Halifax. The two carriages, in which were 30 or 40 passengers, were left standing, without any red signal lamp attached to them, on the main line. Meanwhile an empty train of carriages came up in the direction of Bradford, and the man at the signals not being aware that the carriages were standing on the down line, gave no signal. The result was that the train of empty carriages ran into the two carriages, one of which, a first-class, was broken, and the passengers in it were all more or less injured; while in the other all the passengers were severely stunned and shaken. Mr. F. Hurst from Bradford had four ribs broken, and was otherwise severely injured. Mr. Jacob Newboult of Kirkdale had one rib broken. Mr. John Laycock of Ivegate, and Mr. H. Nicholson of Westgate received severe internal injury.

Railway Refreshment Rooms.—A coroner's inquest was held at Enfield on Saturday on the body of Mr. Henry Leggatt, the well-known printseller of Cornhill. It appeared that during a recent journey to Manchester, he bought a bason of soup at the Rugby station and swallowed a nail with it. The agony he suffered appears to have been intense. The jury returned a verdict of "Accidental Death." It is stated that the deceased had just effected an insurance against accidents of all kinds with the Railway Passengers Assurance Company, of which his family will reap the *benefit* under these circumstances.

Sporting.

The Great Prize Fight for 1000*l*.—The whole of the stakes, 500*l*. a side, are now deposited in the hands of the stakeholder for the fight between Coburn and Mace; the former will fight at 11 st. 7 lb. and Mace at 11 st. 5 lb., and both men are fully confident of success. The fight is fixed to come off next Tuesday, Oct. 4, and the only hitch in the matter is as to the locality for the battle. Coburn, who is an Irishman by birth, adheres to the terms of agreement, viz.—"That the fight shall take place within 20 and not exceeding 100 miles of Dublin;" but there is reason to know that active measures in official quarters are being made to prevent a fight in Ireland, and that unless an alteration (but which Coburn peremptorily refuses) can be effected, a postponement of the fight or "a draw" must be the consequence.

Obituary.

Lady Louisa Tollemache Brooke, youngest sister of the Earl of Fife, died on the 23d ult. in the prime of life. She was the youngest daughter of General the Hon. Sir Alex. Duff, second son of the third Earl of Fife, and married in 1848, Mr. Richard Brooke, eldest son of Sir Richard Brooke, Bart., of Norton Priory, Cheshire.

Sir George Frederick Edmonstone, K.C.B., died on the 24th ult. at Effingham Hill, in his 51st year, after a long illness. He entered the civil service of the East India Company in 1830, and after filling the office of Foreign Secretary to the India Government, was appointed Lieutenant-Governor of the North-Western Provinces of Bengal, which he was at length compelled to relinquish from impaired health. He was made a Knight Commander of the Bath last year, in recognition of his public services.

Major-General Vicars, R.E., died on the 8th ult. He served with Lord John Hay on the north coast of Spain, and received a brevet majority, the Cross of Bilbao, and the Orders of St. Ferdinand and Isabel II. of Spain, for distinguished gallantry in the action before San Sebastian in October, 1836. Before the outbreak of hostilities with Russia in 1854, he was selected for special duty with the fleet under Admiral Dundas, and on his way out was attacked by paralysis at Lisbon, from which he never entirely recovered, but retired on full pay after 32 years' service.

Commander Colby, one of the captains of Greenwich Hospital, died on the 21st ult., in his 83d year. He served in Lord Duncan's action off Camperdown; in the defeat of the French squadron in Donegal Bay; in the repulse of Linois' squadron, in Vizagapatam Roads; in Sir R. Calder's action at Trafalgar; at the defence of Gaeta, the forcing of the Dardanelles, and the destruction of the Turkish squadron at Point Pesquies, where he was wounded. He co-operated with the army in Egypt in the attack upon Rosetta, in 1807; and in 1809 he cut out an armed transport in Quiberon Bay, and was present at the reduction of Genoa, in 1814. He was made a commander in 1814; and was appointed to Greenwich Hospital for his services in 1850.

Mr. Walter Savage Landor died at Florence on the 17th ult., in his 90th year. He was born in 1775, and had obtained celebrity as a scholar and a poet before the end of the last century. His "Imaginary Conversations" have rendered his name familiar to all readers of English literature. He was the son of the late Mr. Walter Landor, of Ipsley Court, Warwickshire, and Llanthony Abbey, Monmouthshire, by his second marriage with the daughter and co-heiress of Mr. Charles Savage, of Tachbrooke, and was born in 1775. He was educated at Rugby and Trinity College, Oxford, but quitted the University without a degree, and travelled for some time. After selling his estate in Monmouthshire he raised at his own expense, in 1808, a body of troops in aid of the Spanish patriots. He was created a colonel in the Spanish army, but resigned his commission on the extinction of the constitution. After his marriage in 1811 to a French lady, he resided for many years abroad, first at Tours and then at Florence. On his return to England he settled at Bath. Latterly, he had been compelled to reside permanently abroad to escape the heavy costs which he had been ordered to pay on being convicted of aspersing the character of a lady in that city in a manner which cast an indelible stigma on his reputation.

Mr. Joshua Bates, partner in the eminent house of Baring Brothers & Co., died on Saturday at New Lodge, Windsor Forest, the seat of M. van de Weyer, the Belgian Minister, who married his only daughter.

Miscellaneous.

Earthquake in the North of England.—On Monday morning, between 12 and 1 o'clock, there was a shock of an earthquake in the North of England. At Leeds, Rochdale, Manchester, and other places, people were awoke by the shock, and various descriptions of the phenomenon are given, some comparing it to thunder felt but not heard, others to shaking and rocking. At Skipton and other places in the Craven district the shock was preceded by a rushing noise, not unlike that produced by the machinery of a mill during working hours. Many persons were awakened from their sleep, either by the noise or the shaking of the beds; and some describe the effect experienced by them as being similar to an electric shock. At Rochdale and its suburbs, watches and clocks were stopped, houses were violently shaken, doors and windows rattled, bells tinkled, dogs set barking and howling, and policemen on their beats frightened. The night porter at the railway station, seated in his cabin, was alarmed by the rattling of the signal wires, and by a noise similar to that of an engine passing over an archway. At Manchester, Broughton, Pendlebury, Hebden Bridge, and Clitheroe, the shock produced the sensation of the bed having been lifted in some cases, while in others the houses were shaken. The earthquake, which was accompanied by a low rumbling noise, lasted about two seconds, and seemed to pass from north-east to south-west. At Bacup the shock set the pots and pans violently rattling, and was felt through the town and suburbs. At Todmorden Road and Brickfield the motion felt was not so much that of a vibration as a sharp, sudden shock, as if some giant power had seized the houses and given them a violent, momentary shock.

Post-office Savings Banks.—An official document has been issued showing that at the end of March upwards of four millions had been deposited with the National Debt Commissioners on account of the Post-office Savings Banks, and that 372,955 accounts had been opened by depositors. This sum is about a tenth of the deposits in the old savings-banks, but in numbers the depositors in the Post-office banks are more than a fifth of the number who have accounts with the old banks, the average amount of the deposits in the Post-office banks being less than half the average for the old banks, and not reaching 11*l*., even including the deposits of friendly and other societies. It seems, therefore, to be more especially the small savings-bank depositors who avail themselves of the Post-office banks. The chief business of these banks is in England. The deposits in Ireland are but 160,756*l*., in Scotland 107,931*l*., in the Channel Islands 7598*l*., in Wales 121,029*l*. In England there were in March last 327,346 depositors, and 3,700,176*l*. due to them, and in November last England had 1,283,795 depositors in the old savings-banks, with 34,516,825*l*. due to them. The counties in which Post-office banks have the largest deposits are Middlesex with 741,383*l*., and Warwickshire with 526,098*l*. After Middlesex and Warwickshire comes Surrey, with 277,599*l*.; Kent, with 238,919*l*.; Lancashire, with 193,226*l*.; Staffordshire, with 171,641*l*.; Southampton, with 148,578*l*.; Essex, with 120,502*l*.; and Yorkshire, with 118,566*l*. The remaining English counties had accumulated less than 100,000*l*. each; the amount due to depositors in Bedfordshire being 15,652*l*.; Berkshire, 26,458*l*.; Buckinghamshire, 27,694*l*.; Cambridgeshire, 31,353*l*.; Cheshire, 60,651*l*.; Cornwall, 26,735*l*.; Cumberland, 15,661*l*.; Derbyshire, 27,401*l*.; Devonshire, 45,072*l*.; Dorsetshire, 17,448*l*.; Durham, 64,815*l*.; Gloucestershire, 92,295*l*.; Herefordshire, 10,763*l*.; Herttordshire, 81,011*l*.; Huntingdonshire, 14,935*l*.; Leicestershire, 21,504*l*.; Lincolnshire, 40,180*l*.; Monmouthshire, 26,257*l*.; Norfolk, 43,645*l*.; Northamptonshire, 29,931*l*.; Northumberland, 31,593*l*.; Nottinghamshire, 68,050*l*.; Oxfordshire, 32,230*l*.; Rutlandshire, 2553*l*.; Shropshire, 26,963*l*.; Somersetshire, 64,630*l*.; Suffolk, 35,906*l*.; Sussex, 97,772*l*.; Westmoreland, 11,017*l*.; Wiltshire, 30,309*l*.; and Worcestershire, 43,196*l*. At Birmingham the deposits amount to 367,535*l*. The expenses of the Post-office savings-banks for their two-and-a-half years of existence (a large proportion of them, however, of much more recent establishment) appear from this return to have been about 62,000*l*., and the return shows a surplus of assets over habilities, after paying interest and all expenses. Time will show whether there is as great a liability as in the old savings-banks to losses by sales of stock having to be made when the price is low in order to meet an unusual number of withdrawals when money is in demand. There has been loss amounting to 1093*l*. by defalcation of a postmaster at Beverley, but that sum will be reduced to the extent of the amount recovered from his sureties. It is of interest to observe that although the deposits in the Post-office banks amount to 4,097,492*l*., the deposits in the old savings-banks were, when the accounts were made up in November last, only about 600,000*l*. less than at the time when the Post-office banks were started.

BIRTHS.—On the 28th ult, the Countess of Lincoln, of a son and heir—29th ult, at Ashsham Rectory, Kent, the Lady Victoria Villiers, of a daughter—28th ult, at Hampton Court, Lady Frederic Kerr, of a son—26th ult, at Sudbury Rectory, Derbyshire, the Hon. Mrs F. Anson, of a son—25th ult, at the British Legation, Darmstadt, the Hon. Mrs Corbett, of a daughter—22d ult, at 15, Bottons, West Brompton, the Hon. Mrs. Blakeney, of a daughter—8th ult, at 28 Pembroke Place, Dublin, Lady Burke, wife of Sir B. Burke, LL.D., Ulster King of Arms, of a son—25th ult, at 35, Devonshire Place, W., the wife of Henry Paull, Esq., M.P., of a daughter—21st ult, at Denbies, Dorking, the wife of G. Cubitt, Esq., M.P., of a daughter.

MARRIAGES.—On the 15th ult, at St. George's, Hanover Square, Captain Hamilton Pakenham, late 2d Life Guards, to Gwenydd Frances, eldest daughter of Colonel the Hon. R. Rowley, M.P., and Hon. Mrs. Rowley—20th ult, at Rischolme Church, the Rev. J. M. Bury, vicar of Tickhill, Yorkshire, to Frances Eliza, second daughter of the late Bishop of Lincoln—24th ult, at All Saints, Kensington Park, Richard Eyton, only son of Richard Garnett, Esq., of Eyton, Northamptonshire, to Edel Cecilia, youngest daughter of the late Rev. Howell J. Phillips, M.A., and niece of Major General Sir Trevell Phillips—22d ult, at St. Michael le Belfrey, York, Lieutenant Henry Vaughan, R.N., only son of the Rev. J. J. Vaughan, M.A., rector of Gotham, Nottinghamshire, and grandson of the late Right Hon. Sir John Vaughan, one of the Justices of the Court of Common Pleas, to Emily, widow of the late W. Preston, Esq., of Holly Bank, near Liverpool, and eldest daughter of W. Hudson, Esq., of Ousechffe, near York—21st ult, at the parish church, Buscot, Captain A. L. Richards, Grenadier Guards, to Florence, eldest daughter of R. Campbell, Esq., of Buscot Park—21st ult, at the Legation of the United States, Paris, the Hon. Henry S. Sanford, Minister of the United States to Belgium, to Gertrude Ellen, daughter of John De Pey, Esq., of Philadelphia, United States.

DEATHS.—On the 27th ult, at Stoke Talmage, Oxfordshire, of scarlet fever, Amy Mary, only daughter of the Hon. and Rev. William Byron, aged 5 years and 9 months—13th July, at Monte Video, South America, Henry Meade, Esq., clerk to the British Legation at Monte Video, third son of the late Lieut. General the Hon. John Meade, C.B.—18th ult, at Saville Place, Clifton, Florence, daughter of the late Sir Charles Cuyler, Bart., and the Dowager Lady Cuyler—22d ult, at 6, Marlborough Buildings, Bath, Lady Caldwell, widow of Sir H. J. Caldwell, Bart.—19th ult, at Croft House, Tenby, Pembrokeshire, Lieutenant-Colonel Richards, late of the 3d Bombay Native Infantry—21st ult, at 18, George Street, Devonport, Margaret Booker, youngest daughter of Lieutenant-Colonel Nesham, aged 18 years and 6 months—22d inst, at 28, Upper Grosvenor Street, Isabella Ann, youngest daughter of the late Colonel Mercer, of the 1st Life Guards, aged 74—22d ult, in London, Captain John A. Kissick, R.N., and Knight of San Fernando of Spain, late of Dunkirk—27th ult, at Maisonnette, Stoke Gabriel, Devonshire, the residence of her son-in-law, Maria, widow of Henry Holdsworth, Esq., of Dartmouth, aged 94—20th ult, at 10, Somerford Grove, Stoke Newington, Mrs. Hone, widow of Mr. William Hone, author of the "Every-day Book," &c., aged 82—20th ult, at Epsom, J. C. Morris, Esq., aged 82—16th ult, at Geraldstown House, Navan, Ireland, the Rev. F. Nolan, LL.D., F.R.S., vicar of Prittlewell, Essex, aged 84—24th ult, at 70, Grand Parade, Brighton, the Rev. F. Augustus Weekes, M.A., rector of Aston-on-Trent, aged 43—12th ult, at Northampton, the Rev. Halford Robert Burdett, Chaplain to the Northampton General Lunatic Asylum, aged 51—24th ult, at Bere Regis, Dorset, the Rev. Carrington Ley, M.A., Balliol College, Oxford, vicar of the parish, aged 75.

Markets.

COVENT GARDEN, Oct. 1.

Supplies of most things continue abundant, especially those of Grapes and Melons. Apples, Plums, and Peaches are likewise sufficient for the demand, and there is also a fair supply of Louise Bonne of Jersey Pear, a good kind at this season, and also of Marie Louise and Gansel's Bergamot. Kent Filberts and Cobs fetch from 70s. to 80s. per 100 lbs. New Walnuts are very plentiful, and Oranges begin to make their appearance. For Potatos there is a heavy sale, and prices for them have a downward tendency. Flowers chiefly consist of Orchids, Heaths, Asters, Fuchsias, Pinks, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb.,	6s to 8s	Apples, per sieve,	1s to 2s
Grapes, per lb.,	1s to 3s	Oranges, per 100,	6s
Peaches, per doz.,	4s to 8s	Lemons, per 100,	6s to 12s
Melons, each,	1s to 4s	Nuts, Barcelona, do.,	16s
Figs, per doz.,	1s to 2s 6d	— New Brazil, do.,	16s.
Plums, per ½ sieve,	2s to 4s	Almonds, do.,	18s to 20s
Pears, per doz.,	1s 6d to 3s		

VEGETABLES.

Cabbages, per doz.,	1s to 2s	Beet, per doz.,	1s 6d to 2s
French Beans, p. ½ sieve,	3s to 4s	Shallots, per lb.,	6d
Peas, p. basket,	2s 6d to 3s 6d	Garlic, per lb.,	6d
Potatos, York Regents, p. ton,	60s to 80s	Lettuces, each,	1d to 2d
— Rocks, do.,	45s to 55s	Endive, per score,	1s to 2s
— Flukes,	60s to 90s	Horse Radish, p. bunch,	1s to 4s
Carrots, per bunch,	6d to 9d	Mushrooms, p. pott.,	1s to 1s9d
Turnips, p. bunch,	6d to 8d	Parsley, p. 12 bunches,	3s to 4s
Cucumbers, each,	4d to 1s	Herbs, per bunch,	6d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Sept. 29.

Prime Meadow Hay	75s	to 105s	Clover, old	100s	to 127s
Superior do.	—	—	New Clover	—	—
Inferior do.	—	—	Do. second cut	—	—
New do.	—	—	Straw	28	30
Rowen	—	—			

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, Sept. 29.

Sup. Meadow Hay	105s	to 112s	Inferior Clover	96s	to 110s
Inferior do.	86	96	New do.	—	—
New do.	—	—	Straw	32	36
Superior Clover	120	130			

JOSHUA BAKER.

WHITECHAPEL, Thursday, Sept. 29

Fine Meadow Hay	105s	to 108s	Prime 1st cut Clover	126s	to 130s
Inferior do.	100	105	Inferior do. do.	120	126
Prime New Hay	—	—	Prime 2d cut do.	120	126
Inferior	—	—	New Clover	—	—
Straw	28	32	Interior do.	—	—

BRITISH WOOLS.—LONDON, Sept. 29.

Our prices are merely nominal, as the present state of the money market precludes business, and as our stocks are low there is no possibility of replacing if a reduction to any extent were submitted to. There are large capitalists disposed to make purchases for their own consumption should holders give way in prices considerably, but they are only able to obtain a very small supply.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hog-gets	2	2	to	2	3	Leicest. Hoggs..	2	5	to	2	6
Half-bred ditto..	2	6	—	2	7	Ditto Wethers ..	2	1	—	2	2
Down Ewes ..	2	0	—	2	1	Combing Skins	1	11	—	2	2
Kent Fleeces ..	2	2½	—	2	3½	Flannel Wool ..	1	0	—	1	9
						Blanket ditto ..	0	6	—	0	9

COAL MARKET.—Sept. 28.

Hastings Hartley, 19s. 3d.; Walker Primrose, 14s.; Wylam, 18s. 6d.; Walls End Acorn Close, 18s. 9d.; Walls End Eden, 18s. 9d.; Walls End Gosforth, 18s. 9d.; Walls End Harton, 18s. 9d.; Walls End Wharncliffe, 18s. 9d.; Eden Main, 19s.; Walls End Hetton, 20s. 6d.; Walls End New Belmont, 19s. 6d.; Walls End Cassop, 19s. 3d.; Walls End Hartlepool, 20s. 3d.; Walls End Heugh Hall, 20s.; Walls End East Hartlepool, 20s. 3d.; Walls End South Kelloe, 20s.; Walls End West Tees, 17s. 9d.—Ships at market, 87.

METROPOLITAN CATTLE MARKET.

MONDAY, Sept. 26.

There are a few more Beasts than on Monday last, but choice qualities are by no means plentiful. Prices are not much altered on the average. Inferior kinds met with a dull sale, and are rather lower. There is a considerable increase in the number of Sheep; trade is consequently dull, and on the average prices are lower. Calves are selling about the same as on Thursday. From Germany and Holland there are 3290 Beasts, 10,130 Sheep, 373 Calves, and 220 Pigs; from Spain, 60 Beasts; from Ireland, 570; and 2760 from the Northern and Midland Counties.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c. ..	5	0	to	5	4	Best Long-wools.	5	0	—	5	4
Best Short-horns	4	8	—	5	0	Do. Shorn			—		..
2d quality Beasts	3	0	—	4	0	Ewes & 2d quality	4	6	—	4	10
Best Downs and Half-breds ..	5	4	—	5	6	Do. Shorn			—		..
Do. Shorn			—		..	Lambs	5	0	—	6	0
						Calves	3	8	—	5	0
						Pigs	3	4	—	5	0

Beasts, 6930; Sheep and Lambs, 28,790; Calves, 386; Pigs, 590

THURSDAY, Sept. 29.

The number of Beasts is not so large as of late. Choice qualities continue to be very scarce, and command high rates. The supply of Sheep is about the same as on Thursday last, but the demand is smaller, and it is difficult to realise Monday's quotations. There is no alteration in the trade for Calves. Our foreign supply consists of 680 Beasts, 4560 Sheep, 490 Calves, and 165 Pigs.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c. ..	5	0	to	5	4	Best Long-wools.	5	0	—	5	4
Best Short-horns	4	8	—	5	0	Do. Shorn			—		..
2d quality Beasts	3	0	—	4	0	Ewes & 2d quality	4	6	—	4	10
Best Downs and Half-breds ..	5	4	—	5	6	Do. Shorn			—		..
Do. Shorn			—		..	Lambs			—		..
						Calves	3	8	—	5	0
						Pigs .. .	3	4	—	4	10

Beasts, 1370; Sheep and Lambs, 8290; Calves, 566; Pigs, 320; Milch Cows, 90.

NEWGATE.—Sept. 30.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 15s. "
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Sept. 30.

Messrs. Pattenden & Smith report a continued active demand for descriptions of the new growth, fine samples of which are very scarce and meet with a ready sale, at the late advance in prices; low and middling sorts are a little easier.

MARK LANE.—MONDAY, Sept. 26.

The supply of Wheat from Essex and Kent to this morning's market was moderate, and met a slow sale at a decline of 1s. to 2s. per qr. upon the prices of this day se'nnight, some quantity remaining unsold towards the close of the market; the attendance of buyers was very small, and foreign Wheat was taken in retail only at a reduction of 1s. per qr. Barley was neglected and almost unsaleable, with the exception of the finest quality of Malting. Beans were 1s. per qr. cheaper, and Peas unaltered in value. The Oat trade was dull, and to effect sales it was necessary to submit to a decline of 6d. per qr, The little business done in Flour was at about late rates.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk.. White	39	42	Red	36	41
— — fine selected runs..ditto	41	44	Red	39	42
— — Talavera	46	53			
— Norfolk	—		Red	—	
— Foreign	35	50			
BARLEY, grind. & dist, 26s to 30s..Chev.	32	35	Malting ..	30	33
— Foreign..grinding and distilling	22	27	Malting ..	28	31
OATS, Essex and Suffolk	20	22			
— Scotch and Lincolnshire—Potato	20	24	Feed	20	22
— Irish .....Potato	19	22	Feed	—	
— Foreign .....Poland and Brew	20	23	Feed	18	21
RYE	31	33	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....33s to 35s...Tick	34	36	Harrow ..	34	36
— Pigeon .... 35s to 40s..Winds.	—		Longpod	—	
— Foreign .....Small	34	38	Egyptian	33	34
PEAS, White, Essex and Kent..Boilers	36	40	Suffolk ..	38	41
— Maple .... —s to —s .... Grey	—		Foreign ..	34	40
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered..per sack	35	40			
— 2d do ..... ditto	28	34	Country .	28	34
— Foreign ..... per barrel	18	25	Per sack	32	36

FRIDAY, Sept. 30.

Since the 23d inst. the weather has been warm and very fine. The late depression in the value of Wheat has continued this week, and a further fall of fully 1s. per qr. is quoted in the majority of markets throughout the kingdom. Barley is rather cheaper, and very unsaleable. Oats have also been difficult of disposal and generally lower, the depression here having been caused by large arrivals, chiefly of Russian qualities. Little alteration has occurred in the value of Beans and Peas. Flour is neglected, and in several of the principal markets it is quoted 6d. per barrel lower. Since Friday last 19 vessels have been reported off the coast. A fair business has been done during the week in floating cargoes; the prices of Wheat and Maize are recovering a trifle, and other descriptions of grain have remained unaltered. Paris, Sept. 29.—Flour has declined about 1s. per 280 lb. since this day week, and continues very slow of sale. The six marks for delivery this month are quoted equal to 31s. 6d. per 280 lb. The present stock of Flour is estimated at 27,500 cwt. Wheat prices gave way yesterday 1s. 6d. per 480 lb., but no sales can be effected to-day unless at a further reduction. The arrivals of English Wheat and Barley are good, and also foreign Wheat; of English and foreign Oats and foreign Barley considerable. The attendance at to-day's market was small, and the little business transacted in Wheat, either English or foreign, was at about Monday's prices. Spring Corn of all descriptions was slow of sale. Oats were 6d. cheaper.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	2420 qrs.	1170 qrs.	3390 qrs.	780 sks.
Irish	—	—	2180	— "
Foreign ..	18,070 "	12,870	77,620 "	500 " / — brls

LIVERPOOL, Sept. 27.—Our market has been well attended to-day, and we have to report a more healthy demand for Wheat than we have had of late, but without any improvement in value. Flour dull at Friday's rates. Indian Corn less depressed, and meets a much better sale at our last quotations. Oats and Oatmeal difficult to move. Beans nominal. Peas and Barley fair sale at late rates. The market closes with some degree of firmness.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Aug. 20	42s 7d	28s 7d	22s 11d	31s 6d	40s 9d	35s 5d
— 27	42 5	29 1	22 0	32 8	41 1	35 6
Sept. 3	42 3	31 1	22 5	34 1	40 9	35 9
— 10	42 4	32 1	21 9	34 7	40 10	36 11
— 17	42 0	32 2	20 11	35 6	41 2	36 5
— 24	40 11	31 5	20 11	34 7	40 7	37 1
Agg. Aver.	42 1	30 9	21 10	33 10	41 0	36 2

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

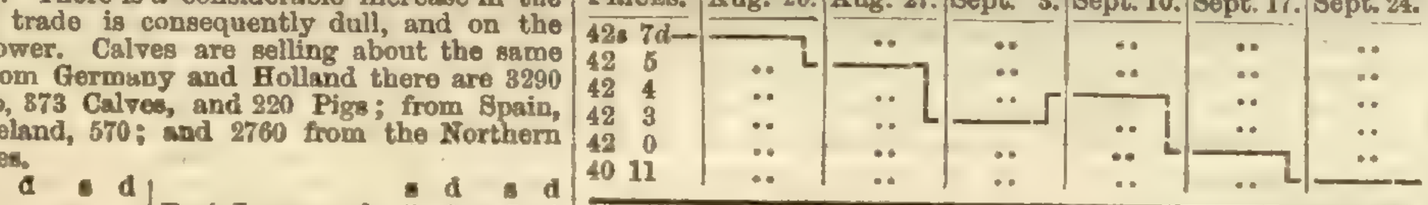

WANTED, a TRAVELLER, accustomed to Solicit Orders in the Retail Seed Trade. Unexceptionable references required.—G. & W. YATES, Manchester.

WANTED, an active Man as KNIFEMAN and FOREMAN in a Country Nursery.—Wages £1 a week, with Cottage.—Address J. M. RONALD, Chichester.

To Parents and Guardians.

WANTED IMMEDIATELY, Two Young MEN, in a large Forcing Horticultural Establishment, near London, where the choicest of Fruits, Plants, and Flowers, are extensively cultivated. They will begin with a liberal salary, and live on the premises. A small Premium required.—B. B., *Gardeners' Chronicle* Office, W.C.

WANTED, a thoroughly respectable energetic MAN, without incumbrance, about 30 years of age. He must understand Flowers, Kitchen Garden, and Grapes. Another man is kept.—Address, by letter, C.B., 5, Russia Row, Milk St., Cheapside, E.C.

WANTED, a good practical Working Man, as GARDENER (married without incumbrance), to take the General Management of a Flower and Kitchen Garden. At present there is but little glass, but a knowledge of Forcing will be requisite. An Under Gardener is kept, who attends to two cows, Meadow Land, &c. He will reside on the Premises.—Address W., Post Office, Redhill, Surrey.

WANTED, a good practical GARDENER to take charge of the Garden of a small Square in London. He must be married, and without incumbrance, and give his whole time to his duties. His Wife will be required to take charge of a Gate to be opened occasionally for Carriages and Horses. There is a Lodge attached to the Gate for the occupation of the Gardener, free of rent and taxes. Wages 20s. per week.—Apply by letter only to Mr. E. BECKETT, 16, Warwick Street, Regent Street, W.

WANTED, a MAN and WIFE, without incumbrance,—The former as Gardener, with a knowledge of Flowers and Kitchen Gardens, Hot-water Pits, Cucumbers, Melons, &c., and to take charge of one or two Cows; the latter as Laundress, and to manage the Family Dairy and Poultry. A Cottage on the premises, with Coals supplied. Wages to be agreed upon.—Address Y. Z., Mr. Frederick Sharpe, 4, Gracechurch Street, City, E.C.

WANTED, a respectable Young Man as SECOND CLERK and ASSISTANT to the Seed Trade.—H. BROWN, 4, Commutation Row, Liverpool.

WANTED, a SHOPMAN, in a large Provincial House. Address, with wages required, Box 167, Post Office, Hull.

WANTED, in a leading Provincial House, as CLERK and UNDER SHOPMAN, a steady active young Man of good address, competent to keep the Books, and must have a good knowledge of the Seed Trade. Commencing salary 20s. a week.—Address in own handwriting, stating age, reference, &c., to ROBT. T. VEITCH, Seed Warehouse, 54, High Street, Exeter.

WANTED, a PORTER for the Seed Trade.—DICKSONS & BROWN, Seed Merchants, Manchester, are in immediate want of an active Man as Porter. One having a knowledge of the Trade preferred. References (which will be strictly inquired into), must be unexceptionable.—Apply by letter only as above.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, OFFICES, or any place of Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper. Can wait upon a single gentleman, and has excellent references.—HARRIET B., 2, Northumberland Street, Marylebone, W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS.—B. S. WILLIAMS is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any Gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

GARDENER (HEAD).—Married, no incumbrance; has a thorough knowledge of his profession. Good recommendation from his last two employers.—W. F. HARTSWOOD, Reigate, Surrey.

To Noblemen and Gentlemen.

GARDENER (HEAD).—Age 30, married; thoroughly understands his profession in all its branches. First-class references.—J. L., Stanstead Park Nursery, Forest Hill, S.E.

GARDENER (HEAD), where not less than three are kept.—Age 24, single; has a good practical knowledge of his profession in all its branches. Good character.—G. G., Post Office, North Elmham, Norfolk.

GARDENER (HEAD).—Age 35, married, no incumbrance; thoroughly understands his profession in all its branches. Three and a half years' good character.—W. W., Post Office, Bushy Heath, Herts.

GARDENER (HEAD).—Married; thoroughly understands every branch of his profession. Can have first-class character from his late employer.—G. P., Fraser's Nurseries, Lea Bridge Road, N.E.

GARDENER (HEAD).—Age 30, married, no incumbrance; thoroughly understands Forcing in all its branches, Stove and Greenhouse Plants, Kitchen and Flower Gardens. First-class character.—G. G., 3, Andover Road, Hornsey Road, Holloway, N.

GARDENER (HEAD).—Age 29, married; has thorough practical knowledge of his profession in all its branches. Five years' character from the gentleman he is now with. No objection to any part.—W. JENNER, Gardener to J. Williams, Esq., Dulwich, Surrey, S.

GARDENER (HEAD).—Age 35, married, no incumbrance; understands the Growing of all kinds of Fruit, Stove and Greenhouse Plants, Kitchen and Flower Garden, also the Management of Arable and Meadow land. Wife experienced Dairywoman.—L. P., at Mr. Baxindine's Nursery, Guildford, Surrey.

GARDENER (HEAD).—Age 32; first-class Grower of Grapes, Peaches, Melons, &c., also Specimen Stove and Greenhouse Plants for Exhibition, good Kitchen and Flower Garden, Orchard-house Trees, &c. No objection to Ireland. First-class references.—B. G., Mr. William Bull's Establishment for New and Rare Plants, King's Road, Chelsea, S.W.

GARDENER (HEAD), age 37, married.—In consequence of the death of the late Sir Charles Knightley, Bart., with whom he has lived upwards of 12 years, JOHN BROWN offers his services in the above capacity to any Nobleman or Gentleman requiring the services of a first-class Gardener. Unexceptionable references as to character and abilities can be had.—JOHN BROWN, Fawsley Park, Daventry.

To Noblemen and Gentlemen.

GARDENER (HEAD).—Age 41; versed in Fruit, Fruit; and Kitchen Gardening, Propagating, Specimen Plant Growing, Bedding and British Botany, Ground Work and Planting. Forester; the greatest experience in removing large specimen Plants and Trees; treatment of Conifers especially successful. Thorough Planting and Ground Works by contract or otherwise required. Nine years' character.—C. S. JOHNSON, Wimbledon Common, S.W.

GARDENER (HEAD, or a good SECOND).—Has thorough practical knowledge of his profession. Can give references.—W. E. C., Colonade, Hawkhurst, Kent.

GARDENER (HEAD), where two or more are kept.—Married, two children; has a thorough practical knowledge of his profession in all its branches. Three and a half years in present situation, and nine years previous with a County M.P. Good character.—J. T., 3, Victoria Cottages, Digle's Gardens, Worcester.

GARDENER.—Age 32, married, no incumbrance; possesses a practical knowledge of Forcing Pines, Grapes, Melons, Cucumbers, &c., also Fruit and Flower Gardens, and Plant Grower.—M. Y., The Nursery, Streatham Place, Brixton.

GARDENER.—JOHN KEYNES has the opportunity of recommending a first-rate GARDENER; to a Gentleman Amateur he would be invaluable, having been one of the most successful competitors for Plants and Fruits for many years. Five years' character.—Castle Street, Salisbury.

GARDENER (SINGLE-HANDED).—Age 50, married, no incumbrance; good experience. No objection to a Cow where a Boy is kept. Three years' character.—J. W., G. Jackson, Nurseryman, Kingston, Surrey, S.W.

GARDENER (UNDER), age 23.—A Gardener recommends a strong, active, industrious, and useful Man.—G. Jun., Frenche, Kidderminster.

GARDENER (UNDER), in a large Establishment.—Age 19; three years' good character.—R., Post Office, Fairstone, Middlesex, N.

GARDENER (IMPROVER).—A Gardener's Son, aged 17, wishes for a situation in a nobleman's establishment; would give 5l. to a good Gardener where he would get a knowledge of all kinds of Forcing. Good references.—C. G., Post Office, Mansion House, London, W.

GARDENER, or STEWARD and GARDENER (married).—A. MCINTYRE begs to offer his services to any Nobleman or Gentleman in the above capacity. Has lived for 10 years as Gardener to the late Earl of Clare, Mount Shannon. Left on death of his employer and reduction of establishment. Highest testimonials as to character, ability, &c.—128, *Queen's Road, Dublin, N.B.*

To Nurserymen and Market Growers.

FOREMAN, or FOREMAN and GENERAL PROPAGATGR.—Age 26; good character if required.—L. F. 1, Alfred Cottages, Acton Green, Middlesex, S.W.

GENERAL or OUT-DOOR NURSERY FOREMAN.—Possesses a good practical knowledge of the business, especially in the Management of Fruit Trees, Roses, Rhododendrons, Conifers, also hardy and Ornamental Trees and Shrubs; thoroughly acquainted with the value of Nursery Stock generally; is a good Salesman and Correspondent, and has filled responsible situations as Nursery Foreman.—L. M. N., Messrs. F. & A. Dickson & Son, Nurserymen and Seedsmen, Chester.

FORESTER, FENCER, HEDGER, WIRE FENCER, and CIRCULAR SAWYER, &c.; can also do the Joiner work in his own department.—Scotch; any Gentleman requiring a person in these capacities or any of them, will please address to SURREY, Post Office, Staines, Berkshire, No. 12.

ROSE PROPAGATOR (SECOND).—WM. WOOD & SON have the opportunity of recommending a Youth age 19 as Under Propagator of Roses, Conifers, Rhododendrons, &c.—Apply as above, Woodlands Nursery, Maresfield, near Uckfield, Sussex.

PROPAGATOR in a Nursery.—Age 26; a Frenchman who knows the language thoroughly, understands the Culture of Roses, Conifers and Hardy Plants, also the pruning of Peach and Apricot Trees (wall); and Pear, Apple, and Plum Trees (pyramid), after Messrs. Alexis Lepère and Dubreuil's methods.—Address BOILEAU, Newton, near Wakefield, Yorkshire.

PROPAGATOR (UNDER).—Has had six years experience in Roses, Rhododendrons, Conifers.—Apply, stating wages, A. B., at Rollisson's Nurseries, Lower Tooting, Surrey, S.

To Head Gardeners.

IMPROVER.—A Youth of 16 or 17, Son of a Gardener, wishes to place himself under a first-class man for one or two years. An adequate Premium given. References exchanged.—THE GARDENER, Hopton Hall, near Lowestoft, Suffolk.

STEWARD or BAILIFF, at Michaelmas next.—Understands the value of Stock, Corn, &c.—A. Y., Post Office, Botley, Hants.

MANAGING FARM BAILIFF.—Middle-aged; has thorough knowledge of Arable and Meadow Land; also Feeding and Raising all kinds of Stock. Don't mind work. Wife can attend to Dairy and Poultry if required. Eight years' good character from last employer.—C. G., Post Office, Chorley Wood, Rickmansworth, Herts.

BAILIFF or FOREMAN.—Middle age, married; has had great practical experience. Good references.—1, East Bay, Enfield Highway, N.

BAILIFF.—Age 30; is practically acquainted with the Management of Land and Stock. Understands Land Surveying; has attended Markets, &c. Good references.—H. G., Smallburgh, Norfolk.

To Noblemen, Gentlemen, and Agriculturists.

FARM BAILIFF to any Gentleman who desires a first-class Manager.—In the prime of life; has been Farming on a large scale in Leicestershire, has a thorough practical knowledge of the Management of Stock, Grass, and Arable Lands, and can be well recommended. Reference is kindly permitted to THOMAS WARNER, Esq., The Abbey, Leicester.—Mr. THOMAS MELLOWS, Home Farm, Oakley, Bedford.

TO SEEDSMEN.—Has had 10 years' experience, five in England, and five in Canada West.—F. R., Mr. Lacy, Seedsman, Warwick.

TO the SEED TRADE.—Young; has had 7 years' experience. Unexceptionable references.—S. E., *Gardeners' Chronicle* Office, W.C.

ESTATE CARPENTER, BUILDER, and DRAUGHTSMAN.—In prime of life, married; 14 years' unexceptionable reference as to assiduity, integrity, and general respectability of character.—A. H., 47, Baker Street, Portman Square, London.

The Gardeners' Chronicle Newspaper.

SATURDAY, OCTOBER 8, 1864.

ALBERT INSURANCE COMPANY, LIMITED,
(FIRE and MARINE).
Premiums charged estimated by the individual risk; the utmost liberality maintained in every transaction. Agents Wanted.
Offices: 8, Finch Lane; or 7, Waterloo Place, Pall Mall, S.W.
Morell Theobald, Manager Fire Department.

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Just Published, 3d Edition, with Additions, price 21*s.* cloth,
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Now ready, in 1 Vol. small 8vo, with numerous Illustrations, price 7*s.* 6*d.* cloth.
THE OX; his Diseases and their Treatment; with an Essay on Parturition in the Cow. By J. R. Dobson, M.R.C.V.S. Being a Popular Treatise on the Diseases of Horned Stock for the use of the Farmer and Stock-keeper.
London: Longman, Green, & Co., Paternoster Row, E.C.

News of the Week.

The Revenue Returns which were published on Saturday again afford a remarkable proof of the elasticity of the national resources. Notwithstanding the late remissions of taxation, the deficiency on the year is only 120,438*l.*, while the returns of the half year show an increase of 164,981*l.*, and those of the quarter show an increase of no less than 380,295*l.* The principal sources of prosperity are the Excise, the Stamps, and the Post Office.

The Emperor of the French has directed M. Drouyn de Lhuys, his Minister for Foreign Affairs, to address to his Ambassador at Rome a letter on the subject of the Convention between France and Italy. In this important document M. Drouyn de Lhuys states that the French occupation of Rome has never been regarded otherwise than as a temporary and abnormal expedient, and that France has heartily desired the moment when she might be able to withdraw her troops without compromising the internal tranquillity of the country and the authority of the Pontifical Government. In 1859 and again in 1860 the withdrawal was contemplated, but given up from exceptional circumstances. France, he says, had many reasons for wishing that the occupation should not be indefinitely prolonged. In the first place it constituted an act of intervention contrary to one of the fundamental principles of her public law, and one the more difficult for her to justify, as her object in lending her armed support to Piedmont was to liberate Italy from foreign intervention. It also brought two distinct Sovereignties face to face on the same ground. The nature of things had been stronger than the good intentions of man. The French Commander had been repeatedly changed, but the same difficulties had always recurred. Then there was the difference of "political considerations." The two Governments did not obey the same inspirations or act upon the same principles. The conscience of France led her often to give counsels which the conscience of the Pope led him to disregard. If France insisted she appeared to abuse her position; if she took part in acts inconsistent with her social state and with the maxims of her legislation she hardly escaped the responsibility of a policy she was unable to approve. The Holy See, from its very nature, had particular codes and laws in opposition to the ideas of the age; and thus the relations of the two Governments were made more delicate and their reciprocal susceptibilities were brought into greater relief by the presence of the French in Rome. He proceeds to say that circumstances have now occurred which enable France to withdraw her troops without danger. The revolutionary party has been put down, Italy has ceased to claim Rome as a capital, and has herself proposed to transfer the metropolis to another city. Italy will also guarantee the Holy See against foreign attacks, and the finances of the Pope will be reinvigorated by relieving him from the debt which he at present bears, thereby enabling him to raise an army sufficiently well organised and numerous to make his authority respected at home. M. Drouyn de Lhuys concludes by expressing the conviction that the Holy See, like France, must sincerely desire that moment when the protection of French arms will be no longer necessary for its security, and when it will be able, without peril to the great interests which it represents, to return to the normal situation of an independent Government.

The new Italian Ministry has formally notified its acceptance of the Convention with France, and of the conditions under which the evacuation of Rome is to take place. It has also announced its intention to propose to Parliament to alleviate the losses which Turin will have sustained, and has paid a just tribute of admiration to the patriotic services of that city to the cause of Italian independence. Accounts from Rome state that the Pope considers the Convention merely as a guarantee of the revolution against his sovereign rights which will be brought about by Piedmont, and that he has ordered public prayers and processions to be used daily in view of the gravity of the present state of things. The Roman Committee has issued a manifesto stating that the Convention has been well received by the Roman population, and is considered an application of the principle of non-intervention to Rome. A public meeting has been held in Milan, at which a resolution was adopted declaring the Convention to be a sign of progress and of the resurrection of Italy, and especially on the ground that it presents the means of realising the national programme, which cannot be accomplished without Rome for a capital.

From the United States we learn, that after the battle near Winchester on the 18th ult., General Sheridan pursued the Confederates under General Early as far as Fisher's Hill, in the Shenandoah Valley. He there found the Confederate force strongly entrenched, but after a desperate engagement, which lasted until dark, he succeeded in completely routing them, with a loss of 16 guns. The Confederates had eight generals killed and wounded, and at the latest dates were retreating in disorder directly towards Richmond, leaving the road to Lynchburg unobstructed, while General Lee was said to be unable to spare another army of sufficient strength to oppose the progress of General Sheridan. The news of this victory has caused the greatest rejoicing throughout the North, and a salute of 10 shotted guns from each battery along General Grant's entire line was fired on the 23d in honour of the achievement. The Confederate General Price has commenced an invasion of Missouri, supported by General Shelby. Generals Fremont and Cochrane have withdrawn from the Presidential contest, and Mr. Lincoln and General M'Clellan are now the only candidates. The latter is finally assured of the support of the Democratic party. It is reported that General Sherman has proposed an informal peace conference with Governor Brown, of Georgia, and Vice-President Stephens; and numerous other peace rumours are current at New York.

Home News.

The Court in Scotland.—On Wednesday, the 28th ult., Prince Alfred went out deer stalking in Mar Forest. In the afternoon the Queen drove to Loch Bulig, accompanied by Princess Helena and Princess Louisa. On Thursday morning the Queen drove out, accompanied by the Princesses, and in the afternoon went up the Glen. Her Majesty honoured Mr. Brodie, of Aberdeen, with sittings for a statue to be erected in Aberdeen, by the subscriptions of the working classes of Aberdeenshire. On Friday the Queen, accompanied by Princess Helena, drove to Alt-na-Guithasach, and went to the Falls of Glassalt. On Saturday the Queen, accompanied by Princess Louisa, Prince Alfred, and Prince Leopold, drove to Castleton, and returned by the Lion's Face. Mr. Gladstone dined with her Majesty and the Royal family. On Sunday the Queen and Royal family attended Divine service at the Castle. The Rev. John M'Leod officiated. Princess Helena attended Divine service at the parish church of Crathie. On Monday morning the Queen, accompanied by Princess Louisa, went out driving. In the afternoon her Majesty, accompanied by Princess Helena, proceeded up Glen Gelder to Lochnagar, and returned by Alt-na-Guithasach Prince Alfred went out deer-stalking in Mar Forest. The Earl and Countess De La Warr dined with the Queen and Royal family. On Tuesday morning the Queen went out in the grounds with Princess Helena, and in the afternoon her Majesty went out, accompanied by Prince Leopold. In the evening Prince Arthur arrived from London. It is understood that her Majesty will return to Windsor on the 25th inst., and remain there until about the 19th or 20th of December. The Court will then leave for Osborne to spend the Christmas.

The Prince and Princess of Wales left Stockholm at 10 o'clock on Monday morning for Gottenburg. They were accompanied to the railway station by the Swedish Royal family, and Prince Oscar escorted them as far as Helsingborg. Their Royal Highnesses landed at Elsinore on Wednesday afternoon, and were there met by the King and Crown Prince of Denmark. The Royal party proceeded immediately to Fredensborg. The Prince and Princess are expected to return to Sandringham Hall on the 15th or 16th inst.

Return of Prince Arthur.—Her Majesty's paddle steam-vessel Vivid arrived at Woolwich on Monday morning from Antwerp, with Prince Arthur on board, on his return from the Continent. In the course of the day the Prince left town for Balmoral.

Parliamentary Movements.—The election for Hastings, vacant by the accession of Lord Harry Vane to the peerage as Duke of Cleveland, terminated on Wednesday in the return of the Hon. George Waldegrave Leslie, the Liberal candidate, by a majority of 41 over Mr. P. F. Robertson, the numbers being 633 to 592. The death of Mr. David Morris has caused a vacancy in the Carmarthen Boroughs. There are two candidates for the vacant seat, Mr. Gwyn Jeffries, F.R.S., and Mr. William Morris, a banker at Carmarthen; the former in the Conservative, the latter in the Liberal interest. Lord William Graham has announced his intention to retire from Herefordshire. Sir Joseph Russell Bailey, Bart., of Eaton Court, has consented to be put in nomination for the vacant seat in the Conservative interest.

The Lord-Lieutenancy of Ireland.—The Earl of Carlisle has resigned the Lord-Lieutenancy of Ireland in consequence of his continued ill-health; and Lord Wodehouse, late Under-Secretary for the Colonies, has been appointed his successor.

Colonial Appointment.—The Queen has appointed John Maclean, Esq., C.B., now Lieutenant-Governor of British Kaffraria, to be Lieutenant-Governor of Natal.

Consular Appointments.—The Queen has appointed Captain Richard Francis Burton, now Consul at Fernando Po, to be Consul at Santos in South America; Frank Parish, Esq., now Consul at Buenos Ayres, to be Consul-General at Cuba; Charles A. Sinclair, Esq., now Consul at Chinkiang, to be Consul at Foo-chow-foo; Frederick Harvey, Esq., now Consul at Ningpo, to be Consul at Chinkiang; and William Henry Fittock, Esq., now Vice-Consul at Shanghai, to be Consul at Ningpo.

The Navy.—The Admiralty on Saturday sent orders to Portsmouth to pay the Royal Sovereign, turret ship, out of commission, and place her in the Steam Reserve at that port. On Wednesday another order was sent to attach her to the Excellent gunnery ship for experimental purposes. It is understood that Captain Osborn, the First Lieutenant, and a sufficient number of men will be kept on board to carry on the experiments with her turrets and guns during the winter months. It is also stated that the Warrior, 40, iron-frigate, and the Himalaya screw troop-ship, are both about to be paid out of commission, and their crews transferred to the wooden three-decker Victoria, the new flagship for the Mediterranean, which the Admiralty are unable to man without putting other ships out of commission.

The Revenue.—The Revenue Returns for the year and quarter ended September 30, show a decrease on the year of 120,438*l.*, an increase on the half year of 164,981*l.*, and an increase on the quarter of 380,985*l.* The year's account shows an increase in the Excise of 2,104,000*l.*; Stamps, 392,000*l.*; Taxes, 59,000*l.*; Post Office, 200,000*l.*; Crown Lands, 5000*l.*; Miscellaneous, 371,562*l.*; and a decrease in the Customs of 1,198,000*l.*; Property Tax, 2,054,000*l.* The quarter's account shows an increase in the Excise of 430,000*l.*; Stamps, 76,000*l.*; Post Office, 140,000*l.*; Crown Lands, 1000*l.*; Miscellaneous, 73,985*l.*; and a decrease in the Customs of 248,000*l.*; Taxes, 8000*l.*; Property Tax, 84,000*l.*

Foreign.

France.—By order of the Emperor the French Minister for Foreign Affairs has addressed the following despatch to Count de Sartiges, ambassador of France at Rome:—

"Paris, Sept. 12, 1864.

"M. le Comte,—The position we occupy at Rome has long been the subject of the most serious pre-occupations on the part of the Emperor's Government. Circumstances have seemed to us favourable to examine anew the real position of affairs, and we believe it useful to communicate to the Holy See the result of our reflections. I have no occasion to recall the considerations which have led the flag of France to Rome, and which have hitherto determined us to retain it there. We were resolved not to abandon this post of honour as long as the object of the occupation should not be attained. Yet we have never thought that this situation ought to be permanent; we have always considered it as abnormal and temporary. It is in these terms that the first plenipotentiary of the Emperor characterised it eight years ago. He added, conformably to his Majesty's orders, that we heartily desired the

moment when we should be able to withdraw our troops from Rome without comprising the internal tranquillity of the country and the authority of the Pontifical Government. We have renewed the same declarations upon every occasion. At the commencement of 1859 the Holy Father had made upon his part the proposition to fix the evacuation of the territory guarded by our troops for the end of that year. The war which then broke out in Italy having decided the Emperor to renounce their recall, the same idea was again taken up as soon as events appeared to authorise the hope that the Pontifical Government would be in a position to provide for its security with its own forces. Thence arose the agreement established in 1860, in virtue of which the departure of the French troops was to be carried out in the month of August. The agitations which ensued at that same period again prevented the execution of a measure which the Holy See desired as we did. But the Emperor's Government has none the less continued to see an exceptional and transitory fact in the presence of our troops at Rome, to which, in mutual interest, we ought to put a stop as soon as the security and independence of the Holy See should be placed out of reach of new perils. How many reasons, indeed, had we not to wish that the occupation should not be indefinitely prolonged. It constitutes an act of intervention contrary to one of the fundamental principles of our public law, and one so much the more difficult for us to justify as our object in lending to Piedmont the support of our arms has been to liberate Italy from foreign intervention. This situation has, besides, the consequence of placing two distinct sovereignties face to face upon the same ground, and of thus being a frequent cause of grave difficulties. The nature of things is here stronger than the goodwill of men. Numerous changes have taken place in the chief command of the French army, and the same disagreements, the same conflicts of jurisdiction, have been reproduced, at every period, between our generals in chief—whose first duty is clearly to watch over the safety of their army, and the representatives of the Pontifical authority, jealous of maintaining the independence of the territorial Sovereign in acts of internal administration. To these inevitable inconveniences, which the French agents most sincerely devoted to the Holy See have not succeeded in removing, were joined those which fatally result from the difference of political points of view. The two Governments do not obey the same inspiration, and do not proceed according to the same principles. Our conscience too often compels us to give advice which the conscience of the Court of Rome too often also believes itself forced to decline. If our persistence took too marked a character we should seem to abuse the strength of our position, and in that case the Pontifical Government would lose in public opinion the merit of the wisest resolutions. Upon the other hand, in assisting at acts in discord with our social condition and with the maxims of our legislation, we can hardly escape the responsibility of a policy we are unable to approve. The Holy See, by reason of its own nature, has its particular codes and law, which upon many occasions are in unfortunate opposition to the ideas of the present day. Distant from Rome, we should still certainly regret to see it apply them rigorously, and, guided by filial devotion, we should undoubtedly not believe ourselves able to keep silence when similar facts should happen to give pretexts to the accusations of its adversaries; but our presence at Rome, which creates for us more imperious obligations in this respect, also, under the circumstances, renders the relations of the two Governments more delicate, and brings their reciprocal susceptibilities the more in conflict. Manifest as these inconveniences might be, we were careful not to allow ourselves to be diverted from the mission we had accepted. The Holy Father had no army to protect his authority in the interior against the projects of the revolutionary party. On the other hand, the most unquiet disposition prevailed in the peninsula on the subject of the possession of Rome, which the Italian Government itself, by the mouth of its Ministers in parliament, as well as by diplomatic communications, claimed as the capital of Italy. So long as the Cabinet of Turin was possess d with these views we could not but fear that if our troops were recalled the territory of the Holy See would be exposed to attacks which the Pontifical Government would not have been in a position to repel. We desired to afford it our armed support until the danger of these unreflecting movements appeared to have passed away. We are now impressed, M. le Comte, by the many changes manifest in this regard in the general condition of the peninsula. The Italian Government has exerted itself for the last two years to disperse the last relics of those formidable associations which, favoured by circumstances, were formed beyond its action, and whose projects were principally directed against Rome. After contending with them openly, it has succeeded in dissolving them, and each time they have essayed to effect a reconstruction has easily defeated their plots. That Government has not confined itself to preventing the organisation of any irregular force on its territory for attacking the provinces under Pontifical sovereignty; it has given its policy towards the Holy See a tendency more in harmony with its international duties. It has ceased to put before the Chambers the absolute programme which proclaimed Rome as the capital of Italy, and to address to us peremptory declarations on the subject, formerly so frequent. Other ideas have made their way in the best minds, and tend to prevail more and more. Renouncing the pursuit by force of a project which we were determined to oppose, and being unable, on the other hand, to maintain at Turin the seat of an authority whose presence is necessary at a more central point of the new state, the Turin Cabinet itself intended to transfer its capital to another city. To us, M. le Comte, this eventuality is of the highest importance for the Holy See as for the Emperor's Government, for, when realised, it would constitute a new state of things no longer offering the same dangers. After having obtained from Italy the guarantees we should feel bound to stipulate in favour of the Holy See against foreign attacks, it would only remain for us to aid the Pontifical Government in forming an army sufficiently well organised and numerous enough to make its authority respected at home. It would find us disposed to second the recruiting of this army by every means in our power. Its present resources, we are aware, would not enable it to support the maintenance of a considerable effective, but certain arrangements in view would acquit the Holy See of a portion of the debt, the interest of which it considered its dignity required it to meet. Being thus placed in possession of important sums—defended at home by a devoted army—protected without its territory by the engagements we should have demanded from Italy, the Pontifical Government would be placed in a situation which, in ensuring its independence and security, would enable us to assign a term to the presence of our troops in the Roman States. Thus would be verified the words addressed by the Emperor to the King of Italy in a letter dated July 12, 1861:—'I shall leave my troops at Rome so long as your Majesty shall not be reconciled with the Pope, or that the Holy Father shall be menaced with seeing the States remaining to him invaded by a regular or irregular force.' Such, M. le Comte, are the observations suggested by an attentive and conscientious study of present circumstances, and which the Emperor's Government deems expedient to communicate to the Court of Rome. The Holy See, as we ourselves, certainly most sincerely desires that moment when the protection of our arms will be no longer necessary for its security, and when it will be able without peril to the great interests which it represents to return to the normal situation of an independent Government. We are confident, therefore, that it will render full justice to he sentiments which guide us, and it is with this persuasion that I authorise you to draw the attention of Cardinal Antonelli to the considerations I have just laid before you. You will read this dispatch to his eminence.—Receive, &c.,

"DROUYN DE LHUYS."

The Paris papers publish the text of the Convention, consisting of the four articles which we published last week. It is asserted that the ratification has been delayed, and will only take place after the transfer of the capital of Italy to Florence. The *Constitutionnel* of Tuesday, replying to an article of a Turin journal on the Roman question, says:—

"The French Government was determined to enter into negotiations respecting the evacuation of the Pontifical territory on account of the declaration of the Turin Cabinet that from political, administrative, and strategic considerations, it had resolved upon transferring the capital to Florence. This transfer being the deciding motive of the negotiations and the principal condition of the recall of the army of occupation, it must precede, not follow, the recall of the army."

The Empress of the French left Schwalbach on Monday for Baden, where she arrived on Tuesday morning. The Grand Duke and Duchess of Baden and the King of Prussia went to meet her Majesty, who proceeded to the residence of the Duchess of Hamilton. The Empress left Baden on Wednesday morning, and arrived at St. Cloud in the evening. The Emperor went as far as Meaux to meet her Majesty. Prince Humbert arrived in Paris on the 29th ult. and was received by the Emperor on Friday at St. Cloud. On Tuesday his Royal Highness paid a farewell visit to the Emperor, and left on Wednesday for Turin. Chevalier di Nigra, the Italian Minister, arrived in Paris on Saturday morning. Count von Bismark, the Prussian Prime Minister, arrived in Paris on Wednesday, and left on Thursday morning for Biarritz. The nomination of Prince Talleyrand as French Ambassador at St. Petersburg is considered certain. It is said that M. Mercier, the French Ambassador at Washington, will replace M. Barrot at Madrid. The Minister of Public Instruction has addressed a circular to the Rectors of the Faculties, expressing the desire that the professors should give voluntary courses in the populous cities within the district of their academy, as will be done this winter at the Sorbonne in Paris. The negotiations which have been in progress for several weeks past in Paris between the Commissioners of England, France, Holland, and Belgium, with the view of assimilating and equalising the drawback on refined sugars in these countries, were brought to a satisfactory conclusion on Wednesday, when a provisional convention was signed by the commissioners at the French Ministry of Commerce, subject, however, to ratification by their respective Governments. The Mexican packet has brought a draught of 2,500,000f. of the Mexican Government upon its Minister of Finance, in execution of the Convention of Miramar. The Lyons journals give particulars of a horseflesh banquet that has just taken place in that city. A large number of amateurs assembled in the dining-room of one of the principal restaurants, and to them were served up no less than 11 dishes, all of horse beef. These were two soups, bouilli, horse à la mode, truffled sausages, fried brains, lion à l'Italienne, cauliflower *au jus de cheval*, cold horse pie, and other chevaline delicacies. The fare was generally approved. Among the guests were merchants, manufacturers, professional men, journalists, veterinary surgeons, and physicians; but the last, it is added, were not numerous.

SPAIN.—Queen Christina arrived in Madrid from Paris on Friday evening. Her Majesty was well received by the crowd assembled to witness her return. Senor Mon has been appointed Spanish ambassador at Paris, and Senor Pacheco ambassador at Rome. General Prim arrived at Madrid on Wednesday. He is now convalescent. It is expected that the Progressista party will abandon their policy of abstaining from voting at the new elections. The *Clamor Publico* is in favour of settling the San Domingo question by preserving only the towns of San Domingo, Samorna, and Puerto Plata, abandoning the rest of the island, and terminating the war.

DENMARK.—The *Berlingske Tidende* of Thursday in its weekly review says:—

"Denmark never obstructed the peace negotiations. She represented to the allied Powers that her interests demanded that North Schleswig should remain with Denmark. Financial difficulties induced the allies to make demands which are not in conformity with the preliminaries of peace, since Denmark did not recognise the principle of a partition of the State property."

The neutral Powers have made representations to Austria and Prussia relative to the proceedings of General Falkenstein in Jutland.

SCHLESWIG-HOLSTEIN.—Accounts from Kiel state that Herren Samwer and Franke, the present councillors of the Duke of Augustenburg, have expressed to him the wish to be relieved of their functions. It is further stated that the Duke has determined to accept their resignation, and that he wishes to surround himself with advisers favourable to an intimate connection of the Duchies with Prussia.

PRUSSIA.—Count von Bismark left Berlin on Saturday evening to join the King at Baden-Baden, and left that place on Tuesday for Biarritz for the benefit of sea-bathing. The King is expected to return to Berlin on the 14th inst. After the baptism of the Royal infant on the 18th, the Crown Prince, Crown Princess, and family will go to Nice, where they will reside for two months. The Emperor of Russia is not expected to be present at the christening. The semi-official *Provinzial Correspondenz* of Wednesday says—

"The firm attitude of the great German Powers is said to have caused the Danish Government to come to the determination of making advances for a peaceful settlement of the pending financial difficulties. We hope that the work of peace will soon be brought to a successful issue. The convocation of the Prussian Diet can hardly be expected to take place before the first fortnight in December. Councillor Ahlefeldt, the representative of the Duke of Augustenburg, has had an interview with Herr von Bismark, which may have resulted in clearly defining the position of the Duke, especially with regard to Prussia. The Duke has hitherto been frequently induced to follow a mistaken course."

AUSTRIA.—The Princess Maria Theresa, daughter of the Archduke Albert, was betrothed on Thursday to the Duke of Würtemberg, grandson of Louis Philippe. The *Neue Freie Presse* of Monday states that in Friday's sitting of the Conference the Danish proposition to settle by arbitration the question of liquidating that portion of the public property of Denmark to be given up to the Duchies was declared on the part of Germany to be inadmissible, and a demand was made by the German Plenipotentiaries that Denmark should give a definitive answer on this point. The Danish Plenipotentiaries replied that they would telegraph to their Government for instructions. At the sitting of Wednesday the Danish Plenipotentiaries are said to have made certain concessions in the boundary and financial questions, but they insist that the Duchies should have no part of the indemnity paid for the redemption of the Sound dues, and finally made a fresh proposition for the settlement of the question. Herr von Balan, recently arrived from Berlin, was present at the Conference. The disputed question of the boundary line between Schleswig and Jutland relates to the small town of Christiansfeld in Schleswig, which is claimed by Denmark. Count Schöller, of the Danish service, has arrived at Copenhagen from Vienna to discuss the point with the Danish Minister of Schleswig.—Herr von Hasenbach, the Prussian representative at the Conference held in Prague for the purpose of bringing about an understanding between Austria and Prussia in reference to the future position of the former towards the Zollverein, has returned to Berlin, and has been received by the Minister of Finance. Herr von Hye, the Austrian representative, has also left for Vienna, but will return to Prague after receiving verbal instructions from his Government. It is stated on reliable authority that the negotiations have only been postponed, and not broken off.

BAVARIA.—Herr von Schrenk, the President of the Council and Minister for Foreign Affairs, has, at his own request, been relieved of his functions, and for the present has retired into private life. Herr von Neumayr has been temporarily appointed Minister for Foreign Affairs, and Herr Pfeufer Minister of Commerce.

RUSSIA.—The betrothal of the Crown Prince of Russia with the Princess Dagmar of Denmark has been officially announced in St. Petersburg. A salute of 101 guns was fired in honour of the event. The semi-official *Petersburger Zeitung* of Tuesday publishes an article which concludes thus:—

"The Encyclical Letter of the Pope on Polish affairs is the work of the Jesuits, who are afraid they may lose their power by the newly-awakened civilisation of the people. In other respects Russia is indifferent to the Encyclical Letter."

A portion of the great powder mill of Ochta, a suburb of St. Petersburg, exploded last week. About 30 buildings were destroyed: a large number set on fire, and about 80 injured. Six workmen were killed, more than 50 wounded, and no trace whatever can be found of three others. The country around suffered severely from the shock, and all the windows of the Convent of Smolnos, on the other side of the Neva, were destroyed.

ITALY.—The Queen of Holland arrived at Turin on Wednesday evening, and has set out again for Venice. The new Cabinet is now definitively formed, and Baron Ricasoli has assisted, with all his influence, in its formation. The following is the official list of the new administration:—General della Marmora, President of the Council, Minister for Foreign Affairs, and *ad interim* Minister of Marine; Signor Lanza, Interior; Signor Tacini, Public Works; Signor Petitti, War; Signor Selza, Finance; Signor Torelli, Commerce; Signor Natoli, Public Instruction; Signor Vacca, Justice. The official *Gazette* of Friday evening says:—

"The new Ministry, in assuming the reins of government, finds it necessary to make known its intentions respecting the political question. The Ministry accepts the convention stipulated with France, and, at the same time, the condition of the transfer of the capital to another locality. It will submit a Bill on this subject to Parliament, and will also propose gradual measures of a nature to lighten the loss which will be sustained by Turin, without postponing the period fixed by the convention for the evacuation of Pontifical territory by the French troops. The Ministry further expresses confidence in the patriotic devotion of the city of Turin and the whole Italian populations."

Baron Ricasoli has returned to Florence. Before leaving Turin he held a Conference with his political friends, and urged them to support the Ministry. A decree has been issued convoking the Italian Parliament for the 24th inst. This decree is accompanied by a report, dated Sept. 19, addressed to the King by the late Ministry, which says:—

"At the moment we assumed the reins of Government the Roman question was in such a condition that it would have been unworthy and useless to immediately commence fresh negotiations. The Government waited an opportunity, and hastened to take advantage of it when it considered the general state of affairs in Europe to be favourable. After the decree

tions of Parliament, which were to guide the Government, the Roman question could only be solved by moral means. To obtain the application of the principle of non-intervention it was necessary to proceed in accord with France. The Emperor of the French has always desired to be able to withdraw his troops from Rome, not only from this not being in conformity with the principles and public rights whereon the Empire and its policy are based, but also because the resurrection of Italy will be one of the principal glories of his reign. But the Emperor considered that he could not, by suddenly withdrawing his troops in a body, abandon the Power that he had protected during 15 years with his arms. In order to reassure the Catholic sentiment, the Italian Government could not but promise not to attack the Pontifical territory, and to prevent any attack being made by irregular bands from the frontiers of the Italian kingdom. This promise, loyally given and firmly kept, neither destroys nor diminishes the rights or the aspirations of the nation, but rather confirms the necessity of operating solely by moral force to obtain the triumph of the national ideas. Nevertheless, while the Government was engaged with the Roman question it did not forget the Venetian question. Austria occupied in Venetia might become a menace under circumstances to be foreseen. The principal idea of the King was always the organisation of a system of defence necessitating the transfer of the seat of Government to a locality more favourably situated than the present capital. Military considerations caused Florence to be selected. This transfer, although essentially a home question, is connected with the French occupation, [illegible] facilitated, from having been regarded by France as a guarantee that Italy had renounced the use of violent measures towards the Papacy. The report then proceeds to speak of the sacrifices made by Turin, and acknowledges its merits; and in conclusion, it expresses confidence that Turin will follow the example of its King, who has devoted himself entirely to Italy.

The *Europe* of Thursday publishes a lengthy analysis of a despatch addressed by M. Drouyn de Lhuys on the 23d ult. to the French Minister at Turin. This despatch explains the resistance which France was obliged to offer to the first demands of the Italian Government. It declares that the latter had not protected the interests of the Holy Father, and did not consider the conditions which had been laid down at the outset for conciliating the two opposing interests. M. Drouyn de Lhuys points out the new policy adopted by the Cabinet of Turin, based upon the important resolution to choose another capital than Rome—a circumstance calculated to appease the extreme party in Italy, and showing conciliatory dispositions. In conclusion, M. Drouyn de Lhuys says that the best and surest guarantee for the Papacy is in the loyal and scrupulous execution of the Convention, and its scrupulous execution cannot be doubted, since it bears the signature of France. The official *Kreuz Zeitung* of Thursday publishes a correspondence from Rome, dated the 25th ult., giving an account of the French Minister's notification of the Franco-Italian Convention to Cardinal Antonelli. It says that the Cardinal, in a despatch subsequently addressed to Monsignore Chigi, the Papal Nuncio at Paris, on the subject, complains of the French Government having left the Holy See in ignorance of the convention. His Eminence says:—

"The Pope can at any moment replace the French by a garrison sent by another Power, since the Pope's own military force is inadequate to maintain the independence of the Holy See. His Holiness thinks that, although Piedmont had renounced making open attacks against the Pope, it would nevertheless continue the war. The Pope considers the convention merely as a guarantee of the revolution which will be brought about by Piedmont. If the Pope continues to be disturbed in the exercise of his sovereign rights, and if his right to establish his means of defence as he may think fit be contested, he will be compelled to protest against such a misuse of power, and to assume the attitude which his duty as a Sovereign will necessitate."

The Pope has ordered public prayers and daily processions in view of the gravity of the present state of things. Several persons were arrested on the 29th ult. for having been concerned in a popular demonstration, at which seditious cries were raised, but they have since been set at liberty. The Roman Committee has issued a manifesto, stating that the convention is well received by the Roman population, and is considered an application of the principle of non-intervention. The *Gazzetta del Popolo* publishes an address to the Italians, issued by the Society of "The United Committees of Turin," in which an explanation is given of the events of the 21st and 22d of September. The municipalities of several towns in Piedmont have passed resolutions expressing sympathy for the municipality of Turin. Signor Villamarina, Prefect of Milan, in a letter to the Society of Sciences in that city, announces that he has received a visit from an orderly officer of the King, charged by his Majesty to congratulate Milan on its dignified and expressive attitude, and to assure him that the convention will be fully carried out. A political meeting was held at Milan on Sunday, at which a resolution was passed expressing the conviction that the Franco-Italian Convention was a sign of great progress and of the resurrection of Italy. The convention was also considered to present the means of realizing the national programme, which cannot be accomplished out of Rome.

Greece.—Advices from Athens state that the Austrian Minister has presented his credentials to the King, and that Herr von Schmidthels, the Prussian Plenipotentiary at Athens, has also presented to King George a communication from the Prussian Government recognising the new dynasty.

Turkey.—The Duke and Duchess d'Aumale, the Prince and Princess de Joinville, the Prince de Condé, and Duc de Guise returned to Constantinople on the 23d ult. from an excursion to Broussa and the Trojan Olympus, and left on the following day for Smyrna and the Ionian Islands. Prince Murat arrived on the 23d ult. in the French paddle-sloop Cacique, and took up his quarters at the French Embassy.

Danubian Principalities.—The Roumân journals strongly attack the *Journal des Débats* on account of its articles against the rural law, pointing out their prejudice and the grave errors they contain. Prince Couza has issued a decree, introducing the decimal system of weights and measures into Roumania. The apportionment of the lands destined for the peasants is being peacefully carried out. The Prince has visited Jassy, and has been enthusiastically received by the population.

India.—Mr. Alexander Lawrence, nephew of the Viceroy, has been killed by the fall of a bridge.

United States.—The latest accounts from the Shenandoah prove the first report of Sheridan's success to have been greatly exaggerated. General Early's entire loss, it is now stated, did not exceed 6000 men, while that of the Federals in killed and wounded alone was upwards of 4500. At one time the Federals, mowed down by the Confederate artillery and musketry fire, were thrown into confusion, and were on the point of giving way, when, by a desperate charge of all his cavalry, Sheridan turned Early's right flank, and compelled him to retire. Early continued to fall back during the 20th, followed by Sheridan, and on the 21st made a stand at Fisher's Hill, two and a half miles south of Strasburg. Sheridan attacked him in the evening, but was repulsed. On the 22d, at 4 P.M., Sheridan renewed the attack, and after a severe conflict, lasting until dark, forced Early to evacuate the position with the loss of 16 cannon. The Federals state that the darkness only saved Early's army from destruction. The losses in killed and wounded on either side are not stated. Among the killed and wounded were the Confederate Generals Rhodes, Ransom, Gordon, Terry, Goodwin, Bradley, Johnson, and Fitzhugh Lee. Early is believed to be retreating in disorder direct towards Richmond, and it is said that General Lee, in the face of Grant's army, cannot detach a sufficient force to oppose General Sheridan's pursuit. The news of this victory has caused intense rejoicing in the North, and General Grant's army fired a salute of shotted guns in honour of the achievement. The Richmond papers publish an order from the Confederate War Department for the enrolment of all white males between 17 and 50 not actually serving with the Confederate armies in the field. There is no news of the expected conflict between the opposing forces of Grant and Lee on the Weldon Railway. Despatches from Macon, Georgia, of the 17th, state that General Sherman had invited Governor Brown, of that State, and Vice-President Stephens to Atlanta, to confer on the subject of peace. Sherman and Hood have concluded the exchange of 2000 prisoners upon either side, captured in the recent battles at Atlanta and Jonesborough. The truce for the removal of the Atlanta inhabitants, which expired on the 22d, has been extended. New Orleans letters of the 15th announce that, with the exception of the garrisons left in Forts Morgan and Gaines, General Grainger's forces, lately co-operating with Admiral Farragut in Mobile, have returned to that city. St. Louis despatches of the 22d state that General Price, with 25,000 Confederate troops, has crossed Arkansas river, and is going northward for an invasion of Missouri. Two steamers on Lake Erie were captured and destroyed near Bass Island on the 19th ult. by Confederates, passengers on board. By the admission of a Confederate officer arrested in disguise at Sandusky City on the 18th, it appears that the object of the Confederates in seizing and destroying these steamers was at the outset the capture of the Federal steamer Michigan and the liberation of the Johnstown Island prisoners. The arrest of the officer prevented the necessary co-operation from the land, and compelled the abandonment of the enterprise. The report that two Confederate armed steamers had appeared on the Lake was untrue. Postmaster-General Blair, at the request of Mr. Lincoln, has resigned office. Ex-Governor Dennison, of Ohio, succeeds him. General Fremont and General Cochrane have formally withdrawn from the Presidential contest.

Canada.—The meeting of the representatives of the maritime provinces of Nova Scotia, New Brunswick, and Prince Edward's Island, to deliberate upon the expediency of forming a union, took place on the 1st ult. Delegates were present from Canada East and West, and the question of a general confederacy of all the provinces was fully discussed. The desirableness of such a confederacy was affirmed by the conference, and it was agreed that they should reassemble at Halifax in about a fortnight, and that subsequently a general conference should be held in Quebec. The most serious opposition is in Canada East, where the French element is dominant, and where the dream of a new Franco-American nationality is indulged in.

West Indies.—Advices from Bermuda report that yellow fever was on the increase. Seven of the military surgeons who recently left the North American Provinces to render assistance, were at the last accounts ill with the fever. Drs. Ewell and Mellery had died, and Dr. Lloyd was not expected to recover. Captain Lockhart, of the Royal Engineers, Dr. Harrison, of the Royal Artillery, and several officers of the Queen's Royals and others, have also fallen victims to the disease.

San Domingo.—Advices from San Domingo announce that the Spanish General completely defeated the insurgents in an engagement on the 31st of August. The insurgents lost six cannon, and their general, Martinez, was killed. General Gandara, after this victory, returned to Monte Christi, and sent Senor Figuerra to Spain to explain to the Government the state of affairs.

Mexico.—Advices from Matamoras to the 9th ult. confirm the news of the occupation of Brownsville by Cortinas. They also announce several successes on the part of the Imperialists. On the 1st of August Colonel Turre and the Zouaves under his command forced a passage through the Mexican defences at Candelaria, defeating Ugalde, who defended the position with 300 men, of whom he lost 150 in the engagement. This brilliant feat of arms determined the Mexicans to abandon the formidable defences of Huejustla.

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 88 to ¼ for Money, and 88⅛ to ¼ for Acct.; Reduced and New Three per Cents, 86⅛ to ¼; Annuities, 1885, 14 5-16; India Five per Cent. Stock, 104; Ditto Four per Cent. Debentures, 1866, 97½; Five per Cent. Enfaced Rupee Paper, 102; Exchequer Bills, March, 7s. dis; Ditto June, 18s. to 20s. dis. Foreign: Egyptian, 96⅛; Ditto 100*l.* Bonds, 96⅛; Greek, 22⅛ to 28; Ditto Coupons, 9⅛; Italian, 65⅛ to ⅜; Mexican, 27½ to 26⅛; Spanish, 19; Ditto Passive, 31 to 30⅛; Ditto Certificates, 13⅛ to ½; Turkish, 1862, 70⅛ to ¾; Ditto 100*l.* Bonds, 70½; Venezuela, 21½; Do. 1864, 43⅛.

Bank of England.

ISSUE DEPARTMENT:

Notes issued	£28,927,690	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	13,277,690
		Silver Bullion	
	£28,927,690		£28,927,690

BANKING DEPARTMENT

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,797,035
Rest	4,903,961	Other Securities	20,588,965
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,677,691	Notes	3,123,675
Other Deposits	11,731,768	Gold and Silver Coin	773,729
Seven days and other bills	662,202		
	£37,728,620		£37,728,620

Oct. 6, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY, Sep. 30.—BANKRUPTS.—C. H. Andrews, Crosby Hall Chambers, Bishopsgate Street, City, Merchant—J. Bessey, St. Columb, Cornwall, Carpenter—J. Buckley, York, Cabinetmaker—T. Halcrow, Spencer Street, Islington, Journeyman Shoemaker—E. Hazell, Blackfriars Road, Cheesemonger—F. Brown, late of Caledonian Road, Money Scrivener—D. G. Brereton, Cheetham, Manchester, late Captain in the 9th Royal Lancashire Militia—J. Crawford, High Street, Newington Butts, Ironmonger—J. Cox, Hampton Wick, Builder—H. J. Cox, Birmingham, late Licensed Victualler—G. W. Cassey, Hazel and Flower [illegible] Rye, Cheesemonger—J. Crampton and J. Wilson, jun., Pawnbrokers, Pewston Yorkshire—[illegible], Spinners—[illegible], Dewsbury, Yorkshire—H. Daines, Millwright, Suffolk—[illegible] Davey, late of Upper White cross Street, City—[illegible], Licensed Victualler, late Lodging House Keeper—Joseph [illegible], Carpenter—[illegible], Builder—James Edney, Yarmouth, Hardware and General Dealer—Henry Eccles, Grosvenor Chambers, Mitchell's Hill, Lancaster, Commission Agent—R. Fenerty, South Kelsey, Lincolnshire, Coal Dealer—G. Fetter, Wadworth Road, Lambeth, Victualler—E. [illegible], Lavenham, Hampshire, Drawing Master—W. R. Gerrard, Folkestone, Fish Dealer—G. P. Garlick, Astwood Bank, Worcestershire, Chemist—I. Gray, Mitcham, Surrey, Ringer—M. A. Haward, Manchester, Provision Dealer—I. Heatley (sued as E. Heatley), Andover Road, Hornsey Road, Carpenter—M. Heap, Stacksteads, Lancashire, Joiner—J. Hall, Crayton, Yorkshire, Farmer—J. T. Harris, Newark-upon-Trent, Nottinghamshire, Painter—G. Jones, White Hart Street, Kennington Road, Baker—J. Jackson, H Barn Hill, Provision Dealer—J. Jones, Liverpool, Builders Foreman—W. Kirkland, Baking, Nottinghamshire, Baker—J. Lewis Matheuleth, Montgomeryshire, Ship Carpenter—G. T. Kent, Birmingham, Portfolio Manufacturer—Robert Latham, Wednesbury, Staffordshire, Corn and Flour Dealer—Peter Lennigan, Rotherham, Yorkshire, Grocer—T. B. Lee, Tarporley, Derbyshire, Innkeeper—I. Latham, Chester, Brushmaker—J. Lockett, Hackney Road, Butcher—R. Lane, Farmington, Gloucestershire, Farm Bailiff—W. Leigh, late of Manchester, Coachmaker—I. Levy, St. George's Street East, Outfitter—F. Mills, Beccles, Suffolk, Tailor—J. Morgan, Southsea, Hants, Commission Agent—T. Marsh, Southampton, Watchmaker—J. Metcalf, Mudderm d, Yorkshire, Painter—G. Matthews, York, Butcher—C. M. Oliver, Truro, Hand, Cornwall, Farm Superintendent—W. Parker, Yeovil, Somersetshire, Saddler—D. Pearson, Liversedge, Yorkshire, Iron Smelter—J. G. Pennell, Liverpool, Coal Agent—J. Perkins, Irthlingborough, Northamptonshire, Shoe Manufacturer—J. H. Raven, Cuddington, Sussex, Lodging House Keeper—John Richards, Cardiff, Glamorganshire, Ship Owner—Robert Rigby, late of Okeford Fitzpaine, Dorsetshire, Farmer—T. Reeves, Newport, Shropshire, Butcher—J. Rawnsley, late of Little Horton, Yorkshire, Wool Dealer—G. Ranson, Crown Place, Mile End Road, Carpenter—W. Rainsford, Witley, Surrey, Grocer—G. Shaw, late of Spalding, Lincolnshire, Journeyman Watchmaker—C. Vant, Mile End Road, Tailor—J. Williams, Aston, Warwickshire—G. Wright, Aston, New Town, Warwickshire—J. W. Watson, Cambridge, Publican—W. Watson, Ryton, Durham, Nail and Chain Maker—T. Woodward, Burton-under-Needwood, Staffordshire, late Butcher—T. Windsor, Carnarvon, Publican—J. Yeates, Southport, Lancashire, Schoolmaster.

TUESDAY: Oct. 4.—BANKRUPTS.—G. Bentley, Cheadle, Staffordshire, Labourer—W. Brocklehurst, Bulwell, Nottinghamshire, Licensed Victualler—M. S. Bee, Great Grimsby, Lincolnshire, Tailor—C. Breakell, Preston, late Beerseller—G. Brunyee, Ardwick, Manchester, late Plasterer—J. Bailey, Liverpool, late Clog Maker—T. Broghen, Leeds, Currier—E. Bray, Ibstock, Leicestershire Colliery Proprietor—W. G. Barrett, Croydon, Surrey, Tutor—J. W. Body, Bouverie Street, Fleet Street, City, Painter—P. J. C. Bedford, Ashley Place, Victoria Street, Westminster, Money Scrivener—W. H. Craft, Litchfield Street, Soho, House Painter—R. Cuthbert, Portsmouth, Greengrocer—H. Crowe, late of Swan College Garden, London Wall, Wine Merchant—J. Crofts, late of Crown Court, Bow Street, Dealer in Musical Instruments—E. Cutts, Sheffield, Licensed Victualler—E. C. Downing, Bildeston, Suffolk, Innkeeper—Thomas Davies, Liverpool, Barman—Henry Elliott, Mountain Ash, Glamorganshire, Shoemaker—Joseph Edwards, Worcester, Coal Dealer—J. Fairhall, Minster, Kent, Farmer—W. Farrows, Wigan, Lancashire, Oil and Grease Manufacturer—N. Fawell, late of West Hauksweil, Yorkshire, Farmer—J. Feldwick, Redhill, Surrey, Builder—H. Gorringe, South Street, Marshall Street, Golden Square, Piece Broker—T. Goode, Burbage, Leicestershire, Farmer—W. George, Aldenham Street, St. Pancras, late Ham and Beef Dealer—J. B. Goode, Winchester, late Farmer—B. Gardiner, Bywater Street, Chelsea, Watchman—C. L. Hoppe & G. V. Hunter, Liverpool, Provision Merchants—T. Hardy, late of Hertford Street, Mayfair, Baker—T. H. Howell, Bathpool, Somersetshire, Yeoman—Thomas Hanshaw, late of Huntsworth Terrace, Portman Market, Coach Proprietor—William Evans Howe, Lower Thames Street, City, Wine Merchant—Mary Ingdale, Hereford Street, Lisson Grove, late Baker—Adolphe Jouhin, St Benet's Place, Gracechurch Street, City, Commission Agent—Elizabeth Jemmison, Margate, Railway Station Attendant—A. Kinsky (sued as F. Gilbert & Co., and trading as J. Gilbert), Guildhall Chambers, Basinghall Street, City, General Merchant—I. Lewis, Eldon Street, Finsbury, Furniture Dealer—J. Lowenthal, Little Tower Street, City, Cheesemonger—J. Morrish, Aberavon, Glamorganshire, Shoemaker—G. Milner, Birmingham, Journeyman Sawmaker—Sir J. J. R. Mackenzie, Bart., late of Burton Street, Eaton Square—J. Northcliffe, late of St. Helen's, Lancashire, Licensed Victualler—B. O'Connor, Runcorn Gap, Lancashire, Clothier—G. Pronger, Horley, Surrey, late Foreman t

a Timber Merchant—J. E. PARSONS, Crown Street, Soho, Carpenter—S. PATERSON, Liverpool, Grocer—G. PAXTON, Euston Road, Middlesex—G. PYE, Blackburn, Lancashire, Cotton Manufacturer—L. REYMOND, Hay market, Commission Agent—P. RABEY, jun., Redruth, Cornwall, Commission Agent—R. ROBERTS, Arlington Square, New North Road, Mantle Manufacturer—H. ROWTON, Dudley, Worcestershire, Chemist—A. RENAND, Birmingham, late Upholsterer—JOHN RAWE, Tofthill, Durham, Grocer—J. SHIPMAN, Leeds, late Grocer—C. T. SANSON, Montpelier Road, Peckham, Clerk—W. H. SEXTON, Milton Road, Hornsey New Town, Stationer's Assistant—F. STONE, Burghclere, Hampshire, Farmer—W. SLADDEN, Crowndale Road, Camden Town, Attorney at Law—W. H. TYLER, Hen and Chicken Lane, Walworth, Retail Brewer—A. TAULEGNE, Greek Street, Soho, Commission Agent—E. THORNTON, Manchester, Accountant—W. WELDON, Falcon Court, Fleet Street, City Publisher—C. WINGROVE, Great Leighs, Essex, Cattle Dealer—J. T. WAY, Burlington Mews, Carpenter—E. WILKINSON, Worksop, Nottinghamshire, Carver and Gilder—T. WALLEY, Caroline Terrace, Brook Green, Hammersmith, Commercial Traveller—H. WOLLEN, Fore Street, Cripplegate, Cheesemonger—F. YOUNG, Elizabeth Terrace, Old Town, Clapham, Pianoforte Tuner.

SCOTCH SEQUESTRATIONS.—R. INNES, Edinburgh, Artist and Portrait Painter—G. MILNE, Coachford, Aberdeenshire, Farmer—T. ROBERTSON, Ardrossan and Saltcoats, Ayrshire, Flesher—R. STEWART, Armadale, Grocer.

Metropolis and its Vicinity.

DREADFUL EXPLOSION AT ERITH.—On Saturday morning, at 20 minutes to 7, the powder magazines of Messrs. Hall & Son, and of the Low-wood Company at Belvedere, exploded with disastrous results both to life and property. The scene of the catastrophe was in the Erith Marshes, between Plumstead and Erith, on the banks of the Thames. At this spot, about a mile or a mile and a quarter from the Belvidere station of the North Kent Railway, and between the latter and Erith Church, and closely abutting on the banks of the river, at the end of Erith Reach, were two large magazines, the property of Messrs. Hall & Son, of the Dartford Powder Mills and Lombard Street, and of the Low-wood Company, of Tranmere, Lancashire. The plot of land on which these magazines stood, and which is surrounded by ditches to render them isolated, is about 25 acres in extent. The distance between the two magazines was between 50 and 60 yards. The only buildings near these were the residences of the managers of the works and their families, and one or two cottages for the workmen. At the north-western extremity of the marshes, from a quarter to half a mile away, stands a building used as a magazine for gunpowder by the Government. This is about midway between the site of the magazines which exploded and the new building erected at Crossness Point by the Metropolitan Board of Works for the southern outfall and pumping station of the main drainage of London. It appears that two barges left the powder mills of Messrs. Hall & Son, at Dartford, on Friday night, and proceeded up the river, both completely laden with casks of gunpowder, for the purpose of depositing them in the magazine. They were then known to have each two men and a boy on board, but whether there were any others has not been ascertained. It appears certain, however, that the explosion, which took place at precisely 20 minutes before 7 o'clock, first occurred on board one of the barges, that it was succeeded instantly by a second, and subsequently by a third and more violent one. It is supposed that the explosion was caused by a man on board one of the barges, whilst smoking, dropping some lighted tobacco from his pipe and igniting the powder, although this is but a surmise. In an instant both the barges were blown to atoms, and the two magazines instantly followed. The owners state that there were 750 barrels in the large magazine, and 200 in the barges. Each barrel contained about 100 lb. of powder; so that there would be 95,000 lb. of powder in the large magazine and the barges alone. The amount in the smaller magazine is said by the agents not to have exceeded 90 barrels; so that the whole amount was about 104,000 lbs. Not only were the buildings razed to the ground, nothing whatever being left but their foundations, but the very earth itself, for the space of hundreds of yards, was turned up in huge masses or blocks of a ton weight and upwards in all directions. Of the house of Mr. Rayner, the storekeeper, nothing remains but a few feet of one of the western walls, while the residence of Mr. Silver, the Low-wood storekeeper, has the parlour and the flooring of the first floor hanging downward in a slanting position over it, the whole of the upper part being gone. The *débris* of bricks and materials lie scattered about for many hundred yards, and heavy beams of timber, some weighing over half a ton, are lying in the adjoining fields. A large portion of the Belvedere Station, upwards of a mile distant, was carried away; and the bricks of a new building in course of erection at the station completely covered the line, and formed a pile for a considerable distance in the centre of the "six-foot" of the railway. In the districts of Erith, Belvedere, and Plumstead there was havoc in every direction. At Erith, not only were the windows, but the window sashes, and even the shutters blown out; and there was scarcely a house that did not suffer more or less. At Belvedere the Hotel had all its lower windows crushed in. To the westward, up the hill, nearly all the windows were smashed; and two shops had the whole of their fronts broken in, as if a coal waggon had dashed through them. Some of the villa residences had their walls split and their ceilings cracked, and their furniture injured and broken. Woolwich also suffered immensely; the barrack windows on the Common were smashed in every direction; and so great was the shock that the inhabitants thought it was the Arsenal that had exploded, and it was not until some portions of books of Messrs. Hall & Co. descended into the streets that the truth developed itself. In the metropolis the shock was supposed to be that of an earthquake; doors and windows rattled, shutters were thrown down, and people shaken in their beds, over its whole extent, particularly in the higher ground. For at least 50 miles round London the shock was distinctly felt. The amount of window-glass smashed and other injuries inflicted on house property down the river is something fabulous; but the most imminent danger arose from the destruction of the river embankment. The Thames at that part is only kept from inundating the surrounding country by means of embankments, in which the explosion produced a gap of 100 yards in width. It was happily low tide, or the results would have been disastrous. The embankment at Dagenham on the other side of the river was broken through about a century ago, and it was many months before the water was got off the country again. There was just time in the present case to repair the embankment sufficiently before high tide. This result was only achieved, however, by immense exertions, and the highest praise is deserved by all who were concerned in the operation. Mr. Moore, the engineer on the spot, immediately realised the danger and telegraphed for the navvies from the Crossness station of the Metropolitan Board of Works, and General Warde, the commandant of Woolwich, at once sent 1500 Sappers and Miners and Artillery to the spot. They were followed speedily by the 5th Fusiliers, who kept the ground from intrusion, and later in the day by the Marines, both from the garrison at Woolwich. Before the troops arrived, the navvies had wheeled large masses of clay in front of the breach, while others puddled it into a solid bottom, by which means the subsequent military operations were greatly facilitated. Fortunately the river was low, and before the tide rose the large detachments of soldiers and navvies had raised another embankment with clay and sand bags, sufficient to prevent the low lands in the vicinity from being drowned. Meanwhile the South Eastern Railway Company had sent down a special train to bring up the wounded to Guy's Hospital. Seven persons are now lying in that institution more or less injured, and two others died soon after their admission. Nine or 10 are known to have been killed, including Mr. Rayner, Messrs. Hall's storekeeper, Mr. Wright, the under storekeeper, and the four men belonging to the barges. How the explosion originated appears unknown, and it is feared, as is usual in such cases, that all who could throw light on the matter have perished in the catastrophe. On Sunday thousands upon thousands of people visited the scene of the explosion, travelling mostly by the North Kent Railway, and it required the aid of a strong body of police at the Erith and Belvedere Stations to maintain order and prevent accident. On Monday also several thousand persons visited the scene of the catastrophe and approached as near the spot as the guards stationed round it would allow. During the whole day the navvies of the Metropolitan Board of Works were hard at work strengthening the river embankment, and their efforts, with those of the military on the previous day, were crowned with complete success. On Monday there was the highest tide of the month, and though the flood rose to a great height, and a strong north-easterly wind beat dead against it, nothing beyond the wash of the higher waves went over the embankment. The excitement of the populace on Sunday night led to a shocking accident. There was an immense crowd of persons at the little side station of Belvedere, and the most frantic efforts were made to get into the carriages as they arrived. The railway authorities at London Bridge despatched extra trains one after another as fast as they could do so with safety, to bring up the people, but in spite of all their efforts there was great delay, and the last up-train did not leave the Belvedere station until 3 o'clock on Monday morning. At intervals during the night, whenever a train stopped, either there or at Erith, a frightful rush was made at it, and the people crowded the carriages almost to suffocation, in spite of the efforts of the police and the railway company's servants to restrain them. Many clambered upon the tops of the carriages, others took possession of the engine tender, and some even bestrode the buffers until they were pulled off by main force by the police. During this confusion a young Italian called Morandi fell between the carriages, and was so dreadfully mangled that he died in less than an hour after his removal to the hospital. The coroner's inquest on the bodies of three of the persons killed by the explosion was opened on Tuesday at the village of Belvedere. It was stated that the persons now in hospital, and who may be expected to give some evidence on the subject, will not be in a condition to be examined for some weeks to come. The proceedings, which were mainly confined to the identification of the bodies, were adjourned for a week. The inquest on the two persons who died in Guy's Hospital, and also on the Italian who was killed by falling under the carriages of a train at the Erith platform on Sunday night, took place on Wednesday, when the jury in both cases returned verdicts of Accidental Death, appending to the former case their opinion that there was no evidence to show how the explosion was caused, and that the practice of allowing stoves or lights of any description on board gunpowder barges should be discontinued. On Monday evening a public meeting on the subject of the explosion was held at the Pier Hotel, Erith. Archdeacon Smith, vicar of the parish, took the chair, and said that the object of the meeting was to make representations to Government or the proper authorities against the erection or re-erection of gunpowder factories in proximity to populous towns and, secondly, to form an approximate statement for the claims for compensation. Several gentlemen having addressed the meeting, it was unanimously resolved that the recent disaster proved clearly the impropriety of large quantities of gunpowder and explosive matter being allowed to be manufactured or stored in the vicinity of populous places, and that communications be made to the Home Office and to the local magistrates, pointing out the danger attending the establishment of powder magazines and warehouses in such places, and urging the discontinuance of existing licences and the refusal to grant new licences for the same purpose in future. A committee was appointed to carry out the resolution, and it was decided that it be an instruction to the committee to consider the present mode of carrying powder in barges, and to make proper representations to Government on the subject. The meeting was then adjourned until after the inquest, in order to obtain some idea of the amount of claims for compensation. A meeting with a similar object was held on Thursday at Belvedere.

METROPOLITAN BOARD OF WORKS.—The Metropolitan Board of Works are required by their Act to keep their account with the Bank of England, and as they have 200,000*l.* to place out at interest for three months, the Bank under the circumstances have agreed to treat this case as an exceptional one, and to allow 5 per cent. interest on the deposit.

NEW MAGISTRATES.—The Lord Chancellor, on the recommendation of the Marquis of Salisbury, as lord-lieutenant of the county, has placed the names of Alderman and Sheriff Dakin and Mr. Henry Lowman Taylor, a leading member of the Court of Common Council and of the Metropolitan Board of Works, upon the commission of the peace for Middlesex; and has also appointed them magistrates for the city of Westminster.

TESTIMONIAL TO SIR MOSES MONTEFIORE.—On Thursday the thanks of the Common Council of the City of London were publicly presented to Sir Moses Montefiore for the distinguished services which he has rendered to the cause of suffering humanity all over the world, without distinction of class or creed. The Lord Mayor in a short speech, expressed the feeling of the Court, and Sir Moses made a suitable reply.

PROPOSED OPENING OF SOUTHWARK BRIDGE.—At the Court of Common Council on Thursday a proposal to open Southwark Bridge free to the public for six months as an experiment was presented by the Bridge House Estates Committee, and ordered to be printed and circulated among the members, for further consideration.

DEMOLITION OF THE EXHIBITION OF 1862 BUILDING.—Two of the great features of the building—the brick arches—disappeared on Saturday last and on the preceding Saturday. The eastern arch was first demolished. A party of Royal Engineers from Chatham was employed for some days previously in lodging charges of powder to demolish the large arch which supported the eastern gable end of the nave. The arch was of brickwork, in Portland cement, semicircular in form, with a span of 59 feet. It was built on three bands, each about 2 feet 6 inches deep, so that the total depth of the arch was 7 feet 6 inches, the width of the top band being 6 feet, and that of the lower one 3 feet. To have demolished this arch in the ordinary way would have necessitated the use of extensive scaffolding, and would have involved considerable labour. It was therefore suggested that it would form a good experiment for the Royal Engineers. Mr. Freake, who has bought the material of the building, and is pulling it down, willingly agreed to the proposal, and the Sappers accordingly commenced work by boring four holes in each haunch of the arch to receive small charges of powder. This method was adopted as being safer than the more expeditious plan of using a single large charge at each haunch, which would probably have caused some of the bricks to fly in a dangerous way. The total amount of powder used was 19 lb. Half-past 12 on Saturday the 24th having been fixed upon as the time for the explosion, and the part of the Exhibition Road in front of the arch having been cleared by the police in case of accident, the officer in charge of the party fired the charges simultaneously by means of an electric battery. The effect was very satisfactory, the haunches of the arch were broken and slightly pushed out, the crown opened, and the parts fell together, separating into several pieces in their fall. The demolition of the western arch took place on Saturday evening in the same manner.

SCHOOL OF NAVAL ARCHITECTURE.—The Committee of Council on Education, after communication with the Admiralty and the Institute of Naval Architects, have determined to open at South Kensington a Royal school of naval architecture and marine engineering. The school is for the instruction not only of Admiralty pupils from the dockyards and officers of the navy, but also of naval architects and shipbuilders in wood and iron, marine engineers, foremen of works, shipwrights, &c. The Admiralty have deposited their collection of naval models at the South Kensington Museum, and the Committee of Council trust that private shipbuilders will give their assistance in rendering the collection more complete. The school will have a

yearly session at South Kensington of six months, from November to April. It will open early in November next. When the school is not open arrangements will be made, if possible, for study in the Royal dockyards and in private yards. Four free studentships will be given in competition if qualified candidates come up, and to the best two of these scholarships of 50*l.* per annum. The competition this year will take place early in November, at a time to be hereafter announced. Diplomas will be given to all persons, whether they have received their instructions at the school or not, who pass the final examinations of the school, provided they give satisfactory evidence of having gone through the course of practical work recommended by the Council of the Institute of Naval Architects. These diplomas will be of two grades, according to the success of the candidate in the examination, the title of the higher grade being Fellow, and of the lower Graduate of the Royal Society of Naval Architecture. Certificates for success in special subjects and prizes also will be given to the students at the end of the session. The Rev. J. Woolley, LL.D., has been appointed Director, Mr. C. W. Merrifield, F.R.S., Principal, and Mr. Purkiss, the Senior Wrangler of the present year, Vice Principal of the new school.

Union of City Benefices.—The first union under the Bishop of London's Bill is on the point of being carried into effect. It is that of the parish of Allhallows, Lombard Street, with the parishes of St. Benet, Gracechurch, and St. Leonard, Eastcheap. In 1801 these parishes contained together a population of 1412 souls. The population has gone on gradually decreasing, and in 1861 had diminished to 805. The rector of Allhallows has enjoyed an income of 396*l.* per annum, and the rector of St. Benet with St. Leonard an income of 302*l.* per annum. Neither of them resided on their benefices. The consent of the Dean and Chapter of Canterbury, of the Dean and Chapter of St. Paul's, of the vestries of the respective parishes, and of the Ecclesiastical Commissioners has been obtained by the Bishop to the intended union, and the scheme now only awaits ratification by her Majesty in Council. The Rev. Thomas Jones, who had been rector of Allhallows since 1853, died within the last few weeks, so that the provisions of the scheme will, after the order is gazetted, be brought into immediate operation. The provisions are of the most simple description. The surviving rector (the Rev. Charles Mackenzie, M.A.) is to be rector of the united parishes with the united endowments; the Church of Allhallows, Lombard Street, which will afford room for all the parishioners, is to be the church of the united parishes, and a parsonage for the rector is to be at once provided so as to secure his actual residence. The Church of St. Benet, at the corner of Fenchurch Street, is to be taken down, and the site offered to the Commissioners of Sewers for public improvements, at a price to be agreed upon, subject to the consent of the Lord Mayor and the Bishop of London. With part of the proceeds of this sale a new church is to be built, and a new parish formed in a densely-peopled and destitute part of Stepney, to be called "St. Benet's, Stepney," and endowed with at least 300*l.* a year. It is also understood that as the rectory of St. Clement's, Eastcheap, has become vacant by the death of the Rev. W. Johnson, advantage will be taken of this event to unite that benefice to those of St. Mary Abchurch, and St. Lawrence Pountney.

Improvement of Ludgate Hill.—At the last meeting of the City Commission of Sewers, Mr. Haywood, the engineer, laid before them a plan for effecting a great improvement at Ludgate Hill, west of the new railway bridge now constructing by the London Chatham and Dover Railway Company. By this plan it is proposed to form a circus, 160 feet in diameter, at the junction of Ludgate Hill, Bridge Street, Fleet Street, and Farringdon Street; to make a resting place in the centre of the circus, and thus to cause the traffic going in any direction to travel round it to get to the opposite side. The obelisks are to be set back, resting places are to be formed round them, so as to facilitate the crossing of foot passengers, and further to regulate the carriage traffic. As the whole of the property on the Ludgate Hill side of the circus is to be removed, the commission will only have to acquire such vacant ground as may be requisite, and one-half of the circus can be carried out very shortly. It will be in itself a great easement to the traffic, even if the other side be not completed. To complete the western half of the circus three houses only would have to be taken down; these the commission can acquire under the powers of its Act, should it approve of the plan and be able to obtain the funds to carry it out. In answer to a question, Mr. Haywood said he had every reason to believe that the London Chatham and Dover Company would be disposed to assist in carrying out the improvement. Several of the Commissioners considered the subject to be one of great public importance, and it was resolved to refer the plan to the Improvement Committee to consider and report.

Holborn Valley Improvement.—The following provisions of the Act authorising the Corporation to raise the Holborn Valley will be read with interest:—The plans, sections, and books of reference will remain in the respective offices in which they are deposited for inspection until the completion of the works, 1*s.* being charged for each inspection. The Act provides for, 1. a viaduct, or high-level street, commenced at Ely Court, Holborn Hill, and terminating in Skinner Street, at the Old Bailey; 2. a new street commencing at the junction of Hatton Garden with Holborn Hill, and terminating in the Farringdon Road, nearly opposite the spot where the new line of street from the Metropolitan Meat Market will join Farringdon Road; 3. a street commencing at St. Sepulchre's Church, on the north side of Skinner Street, and terminating in Farringdon Road, about 50 yards to the north of Snow Hill; 4. the widening of Shoe Lane, and the raising of that lane so as to form a junction with the roadway of the viaduct. The west side of Farringdon Road between Holborn Hill and the junction of the new street No. 2 is to be widened, and the levels of Farringdon Street and Farringdon Road are to be altered, commencing at Newcastle Street and terminating about 230 feet north of New Charles Street, beyond the Metropolitan Railway Station. Snow Hill, Field Lane, and Great Saffron Hill, between Holborn Hill and Charles Street, are to be stopped up and otherwise appropriated, as are also the present roadway of Skinner Street and Holborn Hill and the south end of King Street and Ely Place. If the Corporation do not purchase the property scheduled within five years after the passing of the Act, their compulsory powers to make such purchase are to cease. Should the viaduct, or raised way, and new lines of street be not completed within five years, viz., by 1869, the powers given by the Act to the Corporation are to cease, except as to so much of it as may then be completed.

William Roupell, the ex-M.P.—The Porchester, transport vessel, which has left Deptford this week with 300 convicts for Gibraltar, was to have taken out with them William Roupell, the ex-M.P. for Lambeth, but it was found that his stay in England is necessary in connection with the property affected by his forgeries. He is at present employed in the Extension Works at Chatham, and may be seen daily as a common labourer, dressed in a grey coarse convict suit, using a spade or pick-axe, getting stone, or yoked with other convicts to a cart on the works in progress for the enlargement of Chatham Dockyard.

Fatal Accident on Board her Majesty's Ship Phaeton.—On the 19th of August, on the passage of the Phaeton from Fortress Monroe to Jamaica, the main topsail tye was carried away, and Lieutenant Charles A. F. Paget, being officer of the watch, was struck on the head by the fly-block, which fractured his skull. He remained insensible, and died in 10 minutes. He was buried the next day with the usual honours, deeply regretted by his messmates. This promising young officer was the third son of Lord William Paget and grandson of the late Marquis of Anglesea.

The Mysterious Death on the Metropolitan Railway.—On Monday afternoon, the adjourned inquest on the woman who was unknown at the previous sitting on the 14th ult., but who has since been identified as Emma Jane Gollop, aged 31, a married woman, who was killed at the Portland Road Station of the Metropolitan Railway on Sunday, the 11th ult., was resumed at the Board Room of Marylebone Workhouse. The man Powell, in whose company she was proved to have been up to the moment of the starting of the train from the platform, was in attendance. Mr. Charles Prichard, of 3, Crescent Street, Euston Square, identified the body as that of his daughter, and said she was the wife of a chairmaker named Henry Gollop. He last saw her alive between 8 and 9 o'clock on the evening of her death with her husband at a public-house in the Euston Road. She was then quite sober. Henry Gollop, of 15, Earl Street, Lisson Grove, said that deceased was his wife. He last saw her alive standing with Powell on the platform of the Portland Road Station, shortly after midnight. He was then in the train into which he had got at the Gower Street Station a few minutes before. She had been with him and Powell drinking at the public-house, and left there about 10 o'clock to get some tea and sugar. Francis Powell said that he resided at No. 1, Clarendon Street, Somers Town, and was an organ builder in the employ of Messrs. Hill & Son. He had been acquainted with the deceased and her family about nine years. On Saturday night the 10th ult. he had been drinking with her and her husband at a public-house, and after he had left them deceased met him in the road and asked him for more drink. They then went into three other publichouses, where they had gin-and-water. She then wanted him to see her home, but he said it was too far. She then asked him to go as far as the station, and he did so. On arrival there deceased said she would not go unless he went too, saying, "Don't be afraid; I have money for the tickets." He then took two tickets, and followed her to the platform. When she got towards the end of the train it began to move slowly, and on his looking in that direction he saw her falling apparently on her hands and knees. Knowing that she was tipsy he ran away and left her, fearing she would get him as well as herself into trouble. He got out of the station as soon as he could. He ran partly up one staircase, and, finding a barrier, he then went up the other, where there was an official taking tickets, and, as he could not find one, he paid him 2*d.* and passed, and went away home. He believed he gave deceased the tickets. He did not know anything had happened to her till the Wednesday afternoon following. The solicitor for the Railway Company said he was in a position to produce positive evidence that one of the two tickets issued to this witness and deceased was used that night and delivered up at the Edgware Road Station by some one, and it could not have been deceased. The coroner, in summing up the evidence, said he did not think that any criminal charge had been established against Powell, but it became a question as to whether proper precautions were taken by the company for the safety of passagers. The jury ultimately returned a verdict. "That the deceased was killed while attempting to get into a train on the Metropolitan Railway on the morning of the 11th September, and that her death was accidental." They, however, appended the following resolution to their verdict:—

"The jury empanelled on the 14th September, and adjourned to the 3d October, 1864, at the St. Marylebone Workhouse, on the body of Emma Jane Gollop, who came by her death on the Metropolitan Railway on the 11th September last, having returned a verdict of Accidental Death, are of opinion that on the arrival of the train at the Portland Road Station, where the accident happened, there was not a proper complement of officials to secure the safety of the passengers, and recommended to the attention of the Metropolitan Railway Company greater caution on this point in future."

Case of Shooting in Epping Forest.—An inquest was held at the London Hospital last week on the body of a boy named Jamieson, who was shot in Epping Forest by another boy named Mordaunt. It seemed that Mordaunt, who is only about 15 years of age, had been entrusted with a gun, and was using it in bravado about Epping Forest. Some angry words passed between him and a group of other boys, among whom was the deceased, when he levelled the gun at deceased and fired at him. The inquest was adjourned to Monday last, when the jury returned a verdict of death from accident and misadventure. The father of the deceased expressed himself dissatisfied with the verdict, and at the Ilford Petty Sessions on Saturday the magistrates, in remanding the case for a week, intimated their intention to send the prisoner for trial, but admitted him to bail.

Supposed Child Murder at Acton.—At the Hammersmith police court on Saturday, two women named Campbell and Harris, well dressed persons, who had been living at Argyll Lodge, Mill Hill Road, Acton, were charged with having concealed the birth of two children. A woman employed by them as a sempstress and their servant, while sweeping out a room found the bodies of two children in a box. Information was given to the police, and the prisoners were taken into custody. The surgeon who had examined the bodies expressed an opinion that the children had been born two years ago. The prisoners were remanded for further inquiry, but admitted to bail in two sureties of 100*l.* each.

The Public Health.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended on Saturday, October 1, were 1284. The deaths in the corresponding week of the 10 years 1854-63, deducting the deaths from epidemic cholera in the 39th week of 1854, and corrected for increase of population, were 1252. The present return is therefore 32 above the average. During the week the births of 1062 boys and 961 girls, in all 2023 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1900.

Provincial.

Bilston.—A meeting of colliers on strike was held in this town on Tuesday. There were upwards of 2000 men present, but the proceedings were of a very orderly character. It was resolved to continue the strike until the masters give the men the wages they demand. A second request that the men would consent to have the dispute settled by the arbitration of the Lord-Lieutenants of Staffordshire and Worcestershire and the Mayor of Birmingham was resolutely refused. The men said that they would play for another 13 weeks before they would give in. It was also resolved to send a delegate into Lancashire to the miners there, in order to prevail upon them to strike, and thus prevent 10,000 tons of coal a day from coming into South Staffordshire. On Thursday a conference took place between Lord Leigh and the coal masters, in which his lordship urged them to make concessions to the men, but they declined to do so; and the proposed mediation has consequently been rejected by both parties.

Burton-on-Trent.—An investigation of great interest has just taken place in Thor's Cave, the magnificent cavern which has its opening in the face of a limestone cliff, at the height of about 250 feet above the level of the river Manifold, above the Wetton and Butterton Road. Several attempts have been made to ascertain the archæological treasures that might reasonably be supposed to be contained on the floor of the cave, but all researches until the present time have proved fruitless. Impressed by the favourable position of the cavern, its main entrance facing almost due north, Mr. Edwin Brown of this town has long been under the impression that there was a great probability of discovering in the mud of the cave both bones and teeth of some of those extinct animals which inhabited this country during the glacial epoch, the northerly currents of which period conveyed the mud into the

cave; or, failing geological discoveries, that there might be found traces of the ancient tribes of the human race having inhabited the precincts of the cave, which traces had escaped the partial attempts of previous explorers to detect. To the end that an efficient search should be made, a small grant of money was lately obtained from the Midland Scientific Association; the permission of the Duke of Devonshire was freely granted, and the services of Mr. Samuel Carrington, of Wetton, as superintendent of the works, were enlisted. Operations were commenced systematically a few days ago. Men were employed carefully to remove the floor of the cave layer by layer, and, after submitting it to the practised eye of Mr. Carrington, to throw it through a cleft of the rock down the western declivity of the hill. Many hours had not elapsed before articles of Celtic manufacture presented themselves. The cave had evidently been occupied at various times and for long periods by the wild tribes of our island, who, levelling spaces in the floor in some out-of-the-way nook of the cavern, made their fires and carried on all the operations of ordinary life. Layers of charcoal, burnt to the state of soot, were found more than a foot in thickness, together with numerous fragments of pottery of the Celtic and Romano-Celtic periods, and bones of animals that had been used as food. In one place, near the stone known as the "Druids' altar," and about 5 feet from the surface, an ancient interment was discovered. The skeleton was placed in the contracted form common to the most ancient burials, but, being unprotected by any cist, the bones were much crushed. It was accompanied by a bone instrument, made apparently from the brow antler of the red deer, perforated in two different directions, and with a hole also at the base. Probably it had been used with strings as a fastening to the skin cloak of the deceased, but as no similar article has ever been discovered in the many barrows that have been opened by Mr. Carrington, or by the late Mr. Bateman and others, in Staffordshire or Derbyshire, the use is at present problematical. It is a singular circumstance that several other similar articles were found in different parts of the cave. The collection of antiquities so far brought to light comprises bones carved in several peculiar ways, fragments of gritstone querns, an armilla and a fine fibula of the harp pattern, both of bronze; several bronze articles of very peculiar construction, more or less highly ornamented, and of which the uses cannot at present be even guessed; whetstones of two kinds, one of them perforated to suspend to the dress; a stone curiously shaped and pierced, possibly used to attach to a fishing net; iron knives of ancient pattern; also a spear-head, an arrow-head, and an adze of unusual shape, all of iron; a large Y-shaped piece of iron, use unknown, and other articles too numerous or too obscure to be catalogued. The discovery cannot fail to be of great interest to all who have studied the history of our barbarous British tribes. It is, however, singular that so far no discovery has been made of flint instruments, nor of bones of extinct animals, but the researches which are being continued may yet bring both to light, as the operations now in progress promise the discovery shortly of the passage by which the cavern is continued into the heart of the hill.

Devonport.—Miss Julia Genevra St. Aubyn, eldest daughter of the Rev. W. J. St. Aubyn, rector of Stoke Damarel, and niece of the lord of the manor of this town, died last week from the result of an accident by fire. The evidence at the inquest showed that she had purposed going with her father to dine with the Bishop of Jamaica at the house of Mr. Samuel Triscott, on the evening of Saturday, the 17th ult., and had nearly completed her toilet for the occasion, when in stooping she brought her arm too near a lighted candle, and one of the sleeves of her dress became ignited. The flames rapidly spread to other portions of her clothes, and she ran to her father, who was in an adjoining room. He immediately extinguished the fire, but, unfortunately, such severe burns had already been received that she died from their effects. The jury returned a verdict of Accidental Death.

Driffield.—Just 12 months ago a series of incendiary fires took place upon the Yorkshire Wolds and in the North of Lincolnshire, in which not less than 30,000*l.* value of grain and property was destroyed. The last of the supposed incendiaries among those men known as "the Wold rangers," was committed to prison by the Norton bench on Saturday last on a charge of poaching, and on the same day the mania for firing stackyards seems to have broken out afresh. Since Saturday fires of an alarming nature have occurred upon the old ground, and the Wold country is just now in as great a state of alarm and anxiety as it was during the disasters of last winter. Scarcely a prisoner who has been committed but has uttered threats of vengeance during the present winter, and it would really seem that these threats have more meaning in them than has been generally thought. The incendiary fire of Saturday took place at Scawby, a village south of the Humber, where cattlesheds and the produce of 19 acres of Barley and 12 of Wheat formed one immense fire, visible for many miles. On the same day Mr. Denison's stacks at Minsthorpe were found to be on fire. In this case about 400*l.* damage was sustained, but it is thought that children playing with lucifers may have caused this fire. Throughout Monday night the inhabitants of the whole Wold district were alarmed by one of the largest conflagrations that has yet occurred, and which illumined the sky to such an extent that it seemed as if the whole range of the Wolds had been set on fire, in fulfilment of the threats of some of the incendiaries. This conflagration was also south of the Humber, at Warren, near Barton, but it was distinctly seen for 50 miles, and it totally destroyed the produce of 500 acres of land in corn and hay. The total loss in buildings and produce is stated to be 4000*l.*, but the owner, Mr. John Stephenson, is believed to be insured. On Tuesday another fire, just off the Wold district, at Hull Bridge, near Beverley, broke out, the origin of which is also far from clear.

Falmouth.—On Saturday a fine specimen of the diodon, or basking shark, weighing nearly 7 cwt., was captured at Newquay, in this county, about a mile from the shore. On Tuesday the captain of a smack lying in Porthleven harbour, observed near the shore a strange fish, covered with scales, and eventually effected its capture. It proved to be an albicore, a fish generally found in the tropics, about 3½ feet long, and weighed three quarters of a cwt.

Ironbridge.—A fatal accident, causing the loss of nine lives, occurred in the Madeley Wood Pit on Tuesday, the 27th ult. The last relay of workmen were ascending the pit, having left off work for the day, when some part of the machinery gave way, and three men and six boys were precipitated to the bottom and killed on the spot. The jury at the inquest returned a verdict of Accidental Death.

Liverpool.—On Sunday the 25th ult. a man called Ellis Green, a pavior, aged 47, while in a state of drunkenness, made a brutal attack on his wife's sister, Elizabeth Lowe, aged 34, who lived with them and their children. He first struck her a heavy blow between the eyes, which brought her to the ground on her back. He then stood on a box, 2 or 3 feet high, and jumped from it on her breast with his heavy boots on. The deceased managed to get up, and her sister, Mrs. Green, helped her into the court. Her face was covered with blood, she spat blood, and was so seriously injured internally that she died on Sunday last. At the inquest on Monday the medical evidence proved that the frontal bone was fractured into small pieces, which had been driven into the skull, the brain being completely covered with matter, produced by the detached pieces of bones. The jury returned a verdict of "Wilful Murder" against Green; and he was committed for trial under the coroner's warrant. It appears that no information was given to the police authorities, and it was only by accident that on Sunday they heard of the case.

Newcastle-under-Lyne.—On Saturday last Richard Fielder, a sergeant of the 3d Staffordshire Militia, attempted to murder his wife in the barracks of this town. They had both been drinking, and the wife, whose drunken habits had led to a notice that they must leave the barracks, took some money out of her husband's pocket, which so enraged him that he deliberately loaded his rifle and shot her. Fortunately the bullet did not hit any vital part, but passed up her arm from the wrist to the elbow-joint and lodged in the wall behind. The husband, who complained bitterly that his wife had disgraced him, was taken into custody, and on Monday was committed for trial at the next Staffordshire Assizes on the charge of attempting to commit murder.

Oxford.—The site of the old workhouse in this city has been purchased for the Roman Catholics, who are about to erect upon it a college on a grand and extensive scale. Father Newman, formerly Fellow of Oriel College, previous to his going over to the Church of Rome, is spoken of as the first head of this new collegiate establishment. Some time ago the Roman Catholic nobility and gentry expressed their willingness to send their sons to the University of Oxford, and it is anticipated that many will avail themselves of this opportunity of doing so.

Portsmouth.—At a meeting of the Town Council, acting as the local Board of Health under the provisions of the Local Government Act recently adopted in this borough, a report was read from the Drainage Committee, recommending that the plan for the complete drainage of the town proposed by Mr. Lewis Angell, C.E., the engineer to the Board, and approved by Mr. Hawkshaw, C.E., should be carried out without delay. The motion for the adoption of the report was carried with only three dissentients. The estimated cost is 100,000*l.*, but the actual cost will in all probability considerably exceed that amount.

Preston.—The inquest on the body of Mary Barry, who was murdered in this town by her husband, William Barry, on the 13th ult., was resumed in the police court on Friday. After the evidence previously given had been read over, about a dozen witnesses were examined in regard to the state of the prisoner's mind, and to his conduct anterior and subsequent to the tragedy. At the conclusion of the evidence the jury returned a verdict of Wilful Murder against the prisoner, who was committed to Lancaster Assizes for trial.

Salthill.—At the annual dinner of the Royal South Buckinghamshire Agricultural Association, on Wednesday, Mr. Tromper, in giving the toast of the "County Members," remarked that Mr. Disraeli, in his speech the other day at Aylesbury, had described farmers and farming in a too roseate hue. The returns from wheat, the staple article of their produce, were most unsatisfactory, and this year their Turnip fields were in a miserable condition. He was told that one effect of the right hon. gentleman's speech was that wheat fell 2*s.*, but he was sure that was a result which the right hon. gentleman did not wish. At this moment the food of beasts, were producing a higher price than the great article of human consumption. He dissented from the proposal of the right hon. gentleman to cross Downs with Cotswolds. Mr. Disraeli, he said:—

"Mr. Tromper has thought fit—and no man from his experience was more entitled to do so—to make some remarks about observations which I recently made before a party of my constituents in another part of the county. I am sure you will allow me very briefly to notice these observations as I am apt to think, upon reflection, that you will be inclined to think that my views are not so ill-founded as Mr. Tromper would lead you to suppose with regard to the character of the present harvest—a very grave question, upon which no one ought to speak with levity or thoughtlessness. I certainly formed my opinion from information which reached me from various parts of the country. From that information I formed an opinion that we had a very fine harvest: and, as regards that part of England in which I am most interested, namely, the county which I represent, I had some individual means of some personal opportunities of obtaining information. I had listened and observed in the Chiltern Hill, in my own immediate neighbourhood, and from what I learned and observed, I thought the harvest had realised the expectations which it had received in the greater part of the country. I did not mean to say that all crops had succeeded. I cannot recall a harvest in which some result has occurred, but I thought that the general results of the harvest were highly satisfactory. I visited the northern part of our county, and our celebrated Vale, and all my opportunities of observation led me to think that the ordinary character which was given to the crops was sound, and that it was abundant and successful. I made, however, I made one mistake. I was remiss in not visiting the extreme south of the county, but the reason was that I found that all the parties agreed that the cereal crops were most abundant, and knowing what they were in the county which I lived, and learning what they were in the vale of Aylesbury, it never occurred to me that in the extreme south where there is a piece of corn land inferior to few in England, laid out most conveniently in ample and admirable farms, cultivated by some of the most skilful farmers in the country, I say it never occurred to me that in the land of the Tyrells, the Nashes, the Aldridges, and the Pullens, there was such a complete and absolute failure. There I confess I made a great mistake. I have learned again what I have often learned before, that you should never take anything for granted; but such was my confidence in the soil—such were my recollections of Chippenham farmers, and such my knowledge of the men whom I had always met with confidence as my constituents, that in the presence of abundance of cereal crops I believed that the south would produce results equal to that of any other part of the county. And from what I have seen since I cannot believe—even after the Demosthenic vigour of Mr. Tromper—that this favoured part of the county of Buckingham has been struck with that barrenness to which he has alluded. Indeed, when I listened with attention to the speech of my friend, I discovered towards the end that it was not so much low production as low prices that he complained of. Gentlemen, I honestly admit that I cannot share high prices. I once supported a system—as did the majority of the gentlemen connected with the cultivation of land in this country—which might have had the effect that has been now universally given up by the country. I don't think that I shall be called upon to secure high prices that way by the skilful farmers of Buckingham. Mr. Disraeli stated that at this moment food for men commands a better price than food for beasts, and asked, 'What are we to do?' I will tell you what to do—produce food for beasts. Our business as traders is to get a good return for the employment of your capital; and although I regret that the admirable cereal productions of this part of the country do not command a price which can remunerate the grower, still if you consider that what is only intended for beasts will give you a larger price, as commercial men we have only one line to take under the circumstances. I must refer to the statement, which if I cannot contradict, must cost me the honour of representing you, namely, that the unhappy observations which I made to your fellow-citizens at Aylesbury absolutely lowered the price of wheat. My friend Mr. Tromper, who is a cautious man, said that he had heard it, but he had an ardent supporter behind me who stated that it was quite true. I have rarely seen so serious a charge made, and I do not know upon what authority the portentous conclusion has been arrived at. Now, I satisfied myself that the result of my observations at Aylesbury, if I had any intention upon the subject, must have had a contrary tendency. If any person of authority, who is supposed to have the confidence of some part of the country, announces that the harvest has been so prolific and so abundant that it has seldom been equalled, the foreign importer will begin to pause, and ask what was the use of sending his produce to an island where he was told there was such a harvest. I should therefore say that if I had not made that speech the price of Wheat would have sunk 4*s.* instead of 2*s.* The third charge against me is that I recommended the farmers at Aylesbury to cross their Downs with Cotswolds. What have we heard against that proposition? An immense deal of declamation; but no facts, no data are placed before you which should make you for a moment give up your own opinion. An hon. friend of mine who represents a Cotswold county—who generally, when I have made some after-dinner remarks, follows me with some very grave observations—has made some reference to the views which I offered upon that occasion. Mr. Walter, above all men that I know, has the happy art of making the most oracular observations in the most oracular manner. He has doubts—he has doubts, of the justness of my observation, and his only answer is an *à priori* one. Everybody takes it for granted that if the Downs of this county are crossed by a Cotswold ram, then immediately the meat will grow coarse and inferior. But has any one proved that? I have asked gentlemen, and I believe there are gentlemen in this room who have tried that experiment, and I have been told by them that the result is very different from that which is announced without any proof whatever. If you cross a flock of Southdowns with a Cotswold ram, the effect upon the meat is not of a considerable character; but what is the effect upon the fleece? I suppose you get 5*s.* more for each fleece that you produce, and that your flock amounts to 300, then in those days of agricultural desolation described by my friend, you will find that at the end of the year a profit of 5*s.* on 300 fleeces is an item not to be despised. Nobody supposes that you are going to cross like as many cousins intermarrying. You cross with discretion, and you will find that a fine black nose will never propagate coarse meat. I can't have gone over the Salthill indictment, and I appeal to your confidence whether I have not replied to those charges that have been brought forward. I feel confident that in a

short time you will be all of my opinion, that it has been a good harvest. My test of a good harvest is this—Why is there not a great importation of corn? If there were a great importation of corn at the present moment it is impossible to describe the disastrous effects that it would have upon the public credit, and consequently upon the public property of the country. It ought to be some consolation to the farmers of the country that by their skill, under Divine Providence, they have produced such abundant cereal crops; that at the moment when the credit of the country was in a most delicate state, and when it was strained to its utmost, they have saved us from a commercial collapse, the effects of which would have been of a most deleterious and dangerous character. (A Voice, 'What thanks do they get for it?' Our farmers may be proud of their position, and ought to feel a great satisfaction that the crops which have been produced under their skill have preserved the country from one of the most severe and serious panics that probably ever could have occurred in England."

SUNDERLAND.—The French frigate Danae and the corvette l'Expeditive are now paying a visit to this port. The mayor and officials of the borough have entertained the officers at a public dinner and ball, and the Naval Reserve men have also given a public dinner to the crew.

WINDSOR.—A shocking tragedy was discovered on Sunday afternoon in the village of old Windsor. A man named Cook, who was formerly in business as a barber at Eton, had resided for four years in the village. About eight months ago his wife died, leaving him with five young children. It was known that his family was in distress, and various parties in the neighbourhood had given them relief. On Sunday afternoon suspicion was excited by the circumstance that neither he nor any of his children were seen about the place. On a forcible entrance being made it was found that three of his little girls were lying, side by side, dead in one room. In another room a girl about 12 years of age was found suffering from the effects of poison, but still living; and in another room was the man himself and a girl about eight years of age, each with their throats cut, but still alive. The father, however, died in the course of the evening. It is supposed that his mind had become affected by his poverty, aggravated by the recent death of his wife. One of the two children who were found living when the house was entered, died on Tuesday, but the other still survives, and hopes are entertained of her recovery. At the inquest on Wednesday the jury returned a verdict that the father destroyed himself and his children by poison, but that there was no satisfactory evidence to show the state of his mind at the time.

YORK.—A melancholy accident occurred on the 28th ult, at an hotel in this city. A box containing a loaded revolver was found under the pillow in one of the bedrooms, and was taken into the bar with a view to find out the owner. Mr. Sams Parke, of Manchester, who was staying in the hotel, was in the act of examining it, when the pistol went off and the ball lodged in the temple of Miss Kilvington, the barmaid, causing death in a few hours. At the inquest it was proved that the pistol, every barrel of which was loaded with ball, had been left in the hotel by Mr. Wright, innkeeper, of Hull. The evidence showed clearly that the explosion was the result of an accident, and that its effect on the mind of Mr. Parke himself had been such that the medical men considered it would be dangerous to remove him to be present at the inquest. The coroner, in summing up, exonerated Mr. Parke from blame, but threw it upon Mr. Wright, for the careless manner in which he had left so dangerous a weapon within the reach of others. The jury returned a verdict of Accidental Death.

Ireland.

THE VICEROYALTY.—The announcement that the Earl of Carlisle's health has compelled him to resign the Lord-Lieutenancy, and that Lord Wodehouse, Under-Secretary of State for the Colonies, has been appointed his successor, has not diminished the general desire to have the Prince of Wales as Viceroy of Ireland. A recent correspondence in the *Times* has powerfully influenced the movement on this subject. At the dinner of the Ballinasloe Society the Earl of Clancarty stated that he would wish to see the Prince occupying the viceregal position in Dublin, where they would have an opportunity of knowing and valuing their future Sovereign. The Princess was one who would be an ornament to the throne, and who, if she were in Dublin, would be looked upon as the loveliest of the lovely. Major Darcey also expressed a wish that the Prince would go to Ireland, and that the Queen should occasionally hold her Court in Dublin. It would make them feel less like a colony of Great Britain under a Governor, and more like a part and parcel of the empire.

STATUE OF FATHER MATHEW.—The bronze statue of the late Father Mathew, by Mr. Foley, will be inaugurated in Cork on the 10th inst., the anniversary of the birthday of the "Apostle of Temperance." The site selected is at the north-end of Patrick Street, near Patrick's Bridge. The figure appears in the dress commonly worn by Father Mathew, who is represented in the act of administering the "pledge," the right arm and hand extended in an attitude of benediction, while the left holds a temperance medal.

A SHERIFF'S OFFICER SHOT DEAD BY A BARRISTER.—On Thursday, the 29th ult., bailiffs went to distrain from Mr. William Odell, barrister, and clerk to the School of Art, Royal Dublin Society, at Rathmines. Mr. Odell cautioned them against proceeding, and on their persisting, shot one through the head. The man died immediately. Mr. Odell was arrested on Friday and committed for trial on the charge of Wilful Murder.

Railways.

THE BLACKFRIARS RAILWAY BRIDGE.—On Thursday the directors of the London Chatham and Dover Railway, with a number of their friends, passed over the new railway bridge at Blackfriars, in a train consisting of several carriages. The rails were found to allow of easy and steady locomotion, and there was no oscillation on the bridge. A number of persons had assembled on the temporary bridge at Blackfriars to witness the experiment, and the train as it passed was loudly cheered. It is understood that the line is in readiness to be opened to the City side of the river as soon as the Government inspector has given his sanction.

Sporting.

THE EXPECTED PRIZE FIGHT.—The battle between Mace and Coburn, which was appointed to take place on Tuesday in Ireland, did not come off. It was, according to Coburn's nomination on Friday, to take place between Gooldis Cross station and Cashel, but the representatives of the men disagreed on Monday about the selection of a referee, and those acting for Mace stated that they would return to England that evening. Coburn's agent declared that his man was anxious for a fight, and would appear at the proper hour at the ringside. Neither Mace nor any of the pugilists who visited Dublin went down by any of the trains on Monday or Tuesday. Coburn was stopping at a farmhouse near Gooldis Cross. The police searched for him, but he escaped. The match, therefore, is believed to be off. On all the stations from Kildare to Limerick Junction the police were on the alert, and several persons mistaken for Mace and Coburn were arrested on the line. The *Limerick Chronicle* states that Coburn, accompanied by his friends, faced the spot intended for the fight, amid tremendous shouts from an immense multitude assembled. It is understood that both parties claim the stakes.

Miscellaneous.

BEGGING LETTER WRITERS.—The *Messager du Midi* states that Baron Rothschild possesses the most voluminous collection of begging letters that any financier ever received. They form a complete series. Among the number is one lately addressed to the baron, containing the very tempting proposition that for the bagatelle of 50,000f. the writer would engage to show how he could prolong his life to the age of 150 years. The following is the baron's reply:—"Sir,—It has frequently happened to me to be threatened with death if I did not give a sum of money. You are certainly the first that has ever asked me for it in proposing to prolong my life. Your proposition is, without doubt, far better and more humane. But my religion teaches me that we are all under the hand of God, and I will not do anything to withdraw myself from His decrees. My refusal, moreover, does not in any way attack your discovery, from which you will not fail, I hope, to profit yourself. Regretting that I cannot accede to your proposal, I sincerely congratulate you on the 150 years which you are called on to live in this world.—Accept, &c., J. DE ROTHSCHILD."

Obituary.

GENERAL REEVE, Colonel of the 61st Regiment of Foot, died on Sunday morning at his seat in Lincolnshire, at an advanced age, having survived his wife, Lady Susan, youngest daughter of the fifth Earl of Harborough, only a few weeks, her ladyship having died on the 3d of last month. General Reeve entered the army exactly 64 years ago, as ensign in the Grenadier Guards. He served with that regiment in Sicily in 1806 and 1807, in Sir John Moore's campaign in 1808 and 1809, including the battle of Corunna; and in the expedition to Walcheren in 1809. He went to Cadiz in 1811, and remained in the Peninsula until the beginning of 1814. He was present at the passage of Bidassoa, the battles of the Nivelle and Nive, and served in the campaign of 1815, including the battles of Quatre Bras and Waterloo, the storming of Peronne and capture of Paris, remaining with the army of occupation until its return to England in 1818. He had received the war medal with three clasps. He attained the rank of Major General in 1841, Lieut.-General in 1851, and General in 1859. He was appointed Colonel of the 61st Regiment in 1852.

MR DAVID MORRIS, M.P for the Carmarthen burghs, died on Friday morning, in his 78th year. He was elected member for Carmarthen in 1837, and continued to represent the constituency in Parliament from that time uninterruptedly until his death, a period of 27 years. He was a liberal in politics, being a supporter of the ballot, abolition of church-rates, extension of the franchise, &c. He was the principal in the old-established banking firm of Messrs. David Morris & Sons, Carmarthen.

MR COMMISSIONER FANE, one of the Commissioners of the Court of Bankruptcy, died suddenly on Tuesday at Weymouth in his 69th year. He had been connected with the Court in different capacities for 38 years, and had filled the office of Commissioner since the year 1852. For some time past he has been in a feeble state of health, and unable from that cause to attend to his public duties.

MR. WILLIAM TAIT, formerly well-known as a publisher in Edinburgh, died on Tuesday at his house in Walker Street, in that city, in his 72d year. He was the son of an opulent builder, and has died unmarried, his nearest relative being his sister, the wife of Mr Adam Black, the publisher. In 1832 he established "Tait's Edinburgh Magazine," which became one of the organs of the ultra radical party, and was one of the precursors of cheap periodicals. About 16 years ago he retired from business, and purchased the house and property of Prior Bank, near Melrose, where he has chiefly resided ever since, though still retaining his house in Edinburgh. His naturally vigorous frame and temperate habits ensured him good health until last January, when a severe influenza was followed by a slight attack of a paralytic nature, from which he never quite rallied.

MR. MONTAGU GORE, who died a few days ago, was one of the family of the Gores of Barrow Court, and was born in 1811. He was well known in the literary world, and was a contributor to the newspaper press. He was never married. He sat in Parliament for Devizes in 1834, and for Barnstaple in 1841, and was an effective speaker in the House of Commons. He took considerable interest in the management of the National Life-boat Institution, and travelled a great deal to promote the establishment of sailors' homes.

WILLS.—The will of Lieut.-General Sir William Brereton has been sworn under 25,000*l*. Mr. Charles Jacomb, of Upper Clapton, and of Basing-hall Street, woolbroker, 60,000*l*. Mr. George Almond, of St. James's Street, army accoutrement maker, 20,000*l*. The Hon. Mrs. Pennington, of Muncaster Castle, Cumberland, 25,000*l*. Mr. Edmund Hanborough Joynson, of St. Mary Cray, paper manufacturer, 15,000*l*. Mr. William Simpson, civil engineer, 30,000*l*. Mr. Joseph Vickers, the distiller, 100,000*l*. Mr George Randall, of Lower Tooting, Surrey, 30,000*l*. Lieut.-Colonel Dunbar, of Westbourne Terrace, 11,000*l*.

BIRTHS.—On the 3d inst, at Coptfold Hall, Essex, the Lady CATHERINE PETRE, of a son—4th inst at Orleton, Salop, the Hon. Mrs. ROBERT HERBERT, of a daughter—1st inst, at 6, Elton Terrace, Edinburgh, the Hon Mrs. WALKER, of Dairy, of a daughter—1st inst, at Hazlewood, Watford, the Hon. Mrs. SEYMOUR DAWSON DAMER, of a son—30th ult, the wife of the Hon. C. C. CHETWYND, of a daughter—26th ult, at Whiston Rectory, Rotherham, the Hon Mrs WILLIAM HOWARD, of a daughter, stillborn—7th inst, at 12, Nottingham Place, Regent's Park, Lady RICH, the wife of Sir C H. J Rich, Bart., of a daughter—28th ult, at Nyneheed Court, the wife of W. A. SANFORD, Esq., of a daughter—29th ult, at Holy Rood House, Beckenham, the wife of BERTH P. CATOR, Esq., of a son.

MARRIAGES.—On the 4th inst, at Alderley Church, GEORGE HOWARD, Esq., son of the Hon Charles Howard, M.P., to the Hon ROSALIND STANLEY, youngest daughter of Lord and Lady Stanley of Alderley—4th inst, at St. Paul's, Knightsbridge, EDWARD ROBERT LYTTON BULWER LYTTON, Esq, her Majesty's Secretary of Legation at Athens, only son of the Right Hon. Sir Edward Lytton Bulwer Lytton, Bart., M.P., to EDITH, second daughter of the late Hon EDWARD VILLIERS, and niece of the Earl of Clarendon—4th inst, in the church of St. Peter, Rue de Chaillot, Champs Elysées, Paris, M. EMILE I ERLANGER, banker, of Paris, to Miss SLIDELL, daughter of the Hon Mr Slidell, Confederate Envoy to France—29th ult, at Grandore, HENRY J T S TOWNSEND, Esq, of Chevenage Gloucestershire, late 21 Lde Guards, only son of the Rev. Maurice Fitzgerald Stephens Townsend, of Castle Townsend, and vicar of Thornbury, to JANE A C, eldest daughter of J. H. HUSSEY DE BURGH, Esq, of Kilfinnin, county of Cork—5th inst, at St. Michael's, Chester Square, the Rev. WILLIAM HENRY WHITE, vicar of Kenton, Suffolk, to HELEN ADELINE MACKWORTH, elder daughter of the late WINTHROP MACKWORTH PRAED, Esq, M P—5th inst, at West Wickham, Kent, HENRY, youngest son of WILLIAM DICKINSON, Esq, of Wickham Hall, to HENRIETTA VANSITTART, eldest daughter of EDWARD VANSITTART NEALE, Esq, of West Wickham.

DEATHS.—On the 27th ult, at Bath, the Hon. Mrs. CHARLES TOLLEMACHE, widow of the Hon. Charles Tollemache, aged 84—Aug 5th, at Hong Kong, on board the Light of the Age, from a fall, which he survived only one hour and a half, ROBERT CHARLES NEEDHAM, cadet, second son of the Hon. F. H. Needham, aged 19—27th ult, at Cheltenham, the BARON DU BUS DE PHILIPPES, aged 65—Sept. 30, at Ryde, Lady MONTAGU, widow of Vice-Admiral Sir William A. Montagu, K.C.H., C.B., and daughter of the late Sir George W. Leeds, Bart.—9th ult, at Madeira, MARY GRANT, youngest daughter of the late JOHN FORBES, Esq., and sister of the late Sir Charles Forbes, Bart., of Newe and Edinglassie, aged 2?—24th ult, at Malvern, Captain J. HAVELOCK, Bombay Staff Corps, second son of the late Sir Henry Havelock, of Lucknow, K.C.B., aged 32—25th ult, at Timoleague, county Cork, CATHERINE, relict of Lieut.-Colonel TRAVERS—7th inst, at Bermuda, FRANCES HENRIETTA, wife of Major H R WEBBE, 2d (Queen's) Royal Regiment, aged 25—28th ult, WILLIAM SMITH, Esq, of the Dam House, Sheffield, and of Gray's Inn, Barrister-at-law, Justice of the Peace for the West Riding of Yorkshire, aged 68—29th t, at Calverley Lodge, Tunbridge Wells, MARIA, only surviving daughter of the late JOHN HARMAN, Esq, formerly of Higham House, Woodford, aged 83—29th ult, at Wokingham, Berks, W. S. ROUND, Esq., of Lincoln's Inn, barrister-at-law, and late of King's Beech Hill, Berks, aged 70—3d inst, suddenly, at his chambers, 3, Harcourt Buildings, Temple, CHARLES WINSTON, Esq., of the Inner Temple, barrister-at-law, aged 50—4th inst, at Kirklands of Ancrum, Jedburgh, Roxburghshire, JOHN RICHARDSON, Esq, formerly of Finlyer Street, Westminster, and Wilton Crescent, Solicitor, aged 84—5th inst, at The Green, Tottenham, Dr. C. H. LOVELL, M.D., aged 74—24 inst, at 6, Kensington Park Road, Bayswater, Dr. EDWARD HODGES, M.D., late of Bath, aged 54—3d inst, at Newport, Isle of Wight, Dr. CHARLES ALBERT WATERWORTH, M.D., aged 24—3d inst, at Humberstone, Leicestershire, Dr. RICHARD ROSCOE, M.D., of London, sixth son of the late William Roscoe, Esq., of Liverpool, aged 71—29th ult, at Bembridge, Isle of Wight, the Ven. J. T. H. LE MESURIER, Archdeacon of Malta, and chaplain to the forces in that Island, aged 79—28th ult, at the Vicarage, Ravensthorpe, Northampton the Rev. W. A. BUCKLAND, aged 43—2d inst, at 3, Harpur Street, the Rev. S. PAYNE formerly incumbent of Hunstanworth, Durham, aged 85—1st inst, at Cromer, the Rev. RICHARD CARTER SMITH, M.A., incumbent of St. Paul's, Charlton, aged 62—28th ult, at Upper Park, Dedham, Essex, the Rev. CHARLES EYRE, aged 80—1st inst, at West Grimstead Rectory, near Salisbury, the Rev. W. E. BRENDON—29th Sept., the Rev. ROBERT GREEN HIBBERT WARE, B.A., vicar of Chrishall, aged 38—28th ult, at Wigtown, the Rev. PETER YOUNG, the oldest minister in the Church of Scotland, in the 92d year of his age, and the 66th of his ministry.

Markets.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Oct. 6.

Prime Meadow Hay	80s	to 110s	Clover, old	100s to 120s
Superior do. ..	—	—	New Clover ..	— —
Inferior do. ..	—	—	Do. second cut ..	90 110
New do.	—	—	Straw	27 32
Rowen	—	—		

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, Oct. 6.

Sup. Meadow Hay	108s	to 115s	Inferior Clover	100s to 112s
Inferior do.	90	100	New do.	— —
New do.	—	—	Straw	32 36
Superior Clover	120	130		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Oct. 6

Fine Meadow Hay	105s	to 108s	Prime 1st cut Clover	126s to 130s
Inferior do.	100	105	Inferior do. do. ..	120 126
Prime New Hay ..	—	—	Prime 2d cut do. ..	120 126
Inferior	—	—	New Clover	— —
Straw	28	32	Inferior do.	— —

COVENT GARDEN, Oct. 8.

Supplies of most things continue abundant, especially Grapes. Apples and Plums are likewise sufficient for the demand, and

there is also a fair supply of Louise Bonne of Jersey and also of Marie Louise and Gansel's Bergamot Pears. Kent Filberts and Cobs fetch from 70s. to 80s. per 100 lbs. New Walnuts are very plentiful, and Oranges begin to make their appearance. For Potatos there is a heavy sale. Flowers chiefly consist of Orchids, Heaths, Asters, Fuchsias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Apples, per sieve, 1s to 2s
Grapes, per lb., 1s to 3s	Oranges, per 100, 6s to 12s
Melons, each, 1s to 4s	Lemons, per 100, 6s to 12s
Peaches, per doz., 6s to 12s	Nuts, Barcelona, do., 16s
Figs, per doz., 1s to 2s 6d	— New Brazil, do., 16s.
Plums, per ½ sieve, 2s to 4s	Almonds, do., 18s to 20s
Pears. per doz., 1s 6d to 3s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 6d to 8d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 6d to 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
Carrots, per bunch, 6d to 9d	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 6d to 8d	Mushrooms, p. pott., 1s to 1s9d
Cucumbers, each, 4d to 1s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

BRITISH WOOLS.—London, Oct. 6.

Our quotations are still nominal, as the stock of fleeces is low for the season of the year, and no disposition exists to force it into the market, and a demand for any quantity would immediately restore the prices to their former position.

	s.	d.		s.	d.
South-down Hoggets	2	2	to ..	..	
Half-bred ditto	2	4	—2	6	
Down Ewes	2	0	—	..	
Kent Fleeces	2	0½	—2	1½	
Combing Skins	1	10	—2	0	
Flannel Wool	1	0	—1	9	
Blanket ditto	0	6	—0	9	
Leicest. Hoggs	2	3	to 2	5	
Ditto Wethers	2	0	—2	1	

COAL MARKET.—Oct. 5.

Byron's Hartley, 17s.; Hastings Hartley, 19s. 3d.; Holywell Main, 19s.; Lambert's West Hartley, 19s.; Tanfield Moor, 14s.; Wylam, 19s.; Walls End Harton, 19s.; Walls End Bell, 19s.; Walls End Hetton, 21s.; Walls End Russel's Hetton, 19s. 6d.; Walls End South Hetton, 21s; Walls End Hartlepool, 20s. 9d.; Walls End East Hartlepool, 20s. 9d.—Ships at market, 29.

METROPOLITAN CATTLE MARKET.

Monday, Oct. 3.

The number of Beasts is nearly as large as on Monday last. Choice qualities are very scarce, and make higher prices; other kinds are selling about the same as of late. Sheep are not quite so plentiful, yet there are enough for the demand. Trade is slow, but quotations are still high. Trade is dull for Calves at rather lower rates. From Germany and Holland there are 3490 Beasts, 10,260 Sheep, 396 Calves, and 260 Pigs; from Ireland, 630 Beasts; and 2450 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	5	2	to 5	6	Best Long-wools	5	0	—5	4
Best Short-horns	4	10	—5	2	Do. Shorn	..	..	—	..
2d quality Beasts	3	4	—4	4	Ewes & 2d quality	4	6	—4	10
Best Downs and Half-breds	5	4	—5	8	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	5	0 —6 0
					Calves	..	..	3	4 —4 10
					Pigs	..	..	3	4 —4 10

Beasts, 6740; Sheep and Lambs, 26,350; Calves, 406; Pigs, 690.

Thursday, Oct. 6.

The number of Beasts is smaller than for many weeks past and choice qualities are very scarce; consequently trade is active, at Monday's quotations. The supply of sheep is also small, but the demand is by no means large. Trade is slow at Monday's prices. Good Calves are not so plentiful as of late, and prices are higher. Our foreign supply consists of 530 Beasts, 1670 Sheep, and 310 Calves.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	5	2	to 5	6	Best Long-wools	5	0	—5	4
Best Short-horns	4	10	—5	2	Do. Shorn	..	..	—	..
2d quality Beasts	3	4	—4	4	Ewes & 2d quality	4	6	—4	10
Best Downs and Half-breds	5	4	—5	8	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	—	..
					Calves	..	..	3	8 —5 2
					Pigs	..	..	3	4 —4 10

Beasts, 1230; Sheep and Lambs, 6490; Calves, 370; Pigs, 240; Milch Cows, 105.

NEWGATE.—Oct. 7.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 15s. "
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

HOPS.—Borough Market, Friday, Oct. 7.

Messrs. Pattenden & Smith report an active demand for the new growth, a large proportion of which has already passed into the hands of the consumers. Choice samples are not plentiful, and command rather higher rates.

MARK LANE.—Monday, Oct. 3.

The supply of Wheat from Essex and Kent to this morning's market was small, and met a slow sale at the prices of this day se'nnight. There was a moderate attendance, and foreign Wheat was neglected, but we do not alter our quotations. Malting Barley brought last week's rates. Grinding was 6d. to 1s. per qr. cheaper. Beans and Peas were unaltered in value. The arrivals of foreign Oats, consisting principally of Russian, are very large, and to effect sales it was necessary to submit to a decline of 1s. per qr., at which reduction a considerable quantity was sold. Flour was steady in value, without much decline.

Per Imperial Quarter.	s.	s.		s.	s.
Wheat, Essex, Kent, & Suffolk .. White	39	—42	Red	36	—41
— — fine selected runs .. ditto	41	—44	Red	39	—42
— — Talavera	46	—53			
— Norfolk	—		Red	—	
— Foreign	35	—50			
Barley, grind. & dist., 26s to 30s .. Chev.	32	—35	Malting ..	30	—33
— Foreign .. grinding and distilling	22	—27	Malting ..	28	—31
Oats, Essex and Suffolk	20	—22			
— Scotch and Lincolnshire—Potato	20	—24	Feed	20	—22
— Irish .....Potato	19	—22	Feed	—	
— Foreign .....Poland and Brew	20	—23	Feed	18	—21
Rye	31	—33	Foreign ..	—	
Rye-meal, Foreign	—				
Beans, Mazagan....33s to 35s...Tick	34	—36	Harrow ..	34	—36
— Pigeon .... 35s to 40s.. Winds.	—		Longpod	—	
— Foreign .....Small	34	—38	Egyptian	33	—34
Peas, White, Essex and Kent.. Boilers	36	—40	Suffolk ..	38	—41
— Maple .... —s to —s .... Grey	—		Foreign ..	34	—40
Maize .....White	—		Yellow ..	—	
Flour, best marks delivered .. per sack	35	—40			
— 2d do ..... ditto	28	—34	Country ..	28	—34
— Foreign ..... per barrel	18	—25	Per sack	32	—36

Friday, Oct. 7.

The weather since the 30th ult. has been fine, with a clear atmosphere and lower temperature. The supplies of English Wheat having diminished, the trade throughout the kingdom has evinced a somewhat firmer tone, and previous prices have been fully established, in a few markets slightly exceeded. Malting Barley begins to attract rather more attention, particularly the finest quality, but grinding qualities continue to be depressed in value. Oats have been generally disposed of on rather lower terms, and in several important markets are quoted 6d. to 1s. per qr. cheaper. We observe little alteration in the value of Beans, but Peas are the turn lower. Flour has not changed in price. Since Friday last only one cargo of Maize has been reported off the coast, and the number of cargoes left on sale is reduced to five. In the absence of a supply, buyers hold back, and the transactions have been only trifling; the prices of all descriptions of grain must be quoted nominally unaltered. Paris, Oct. 6.—Flour continues difficult of sale at declining rates; Wheat, too, is neglected, and a further reduction of about 9d. per 480 lb. has been established. The present stock of Flour is estimated at 28,000 cwt. The six marks for delivery this month are quoted equal to 31s. 6d. per 280 lb. The arrivals of foreign Barley are good, all other grain both English and foreign large, of foreign moderate. The attendance at this morning's market was again very small, and Wheat, both English and foreign, was offered at Monday's prices without attracting much attention; its value is consequently nominal. Spring Corn of all descriptions was unaltered in value, with the exception of Russian Oats, which met a better inquiry at a little over Monday's prices.

Arrivals this Week.

	Wheat.	Barley.	Oats.	Flour.
English ..	1970 qrs.	1110 qrs.	3260 qrs.	380 sks.
Irish	—	—	1760	— ,,
Foreign ..	23,170 ,,	2960	49,750 ,,	— ,, 7470 brls

Liverpool, Oct. 4.—With a good attendance of millers and dealers at to-day's market we have to report a very healthy consumptive demand for Wheat at an improvement of 1d. per cental on fine ambers, and at previous rates for all other qualities. Flour steady, but no better to sell. Indian Corn finds an extended inquiry, and we have to quote round yellow fully 3d. per quarter dearer than on Friday; no change, however, has occurred in American. Oats and Oatmell very dull, and rather cheaper. Beans, Peas, and Barley have each a fair retail sale at former prices. Market closes with firmness.

Friday, Oct. 7.—Market moderately attended, but the business doing is dull, and prices would have improved but for the failures which have taken place of late, and which naturally cause much distrust.

Averages	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Aug. 27	42s 5d	29s 1d	22s 0d	32s 8d	41s 1d	35s 6d
Sept. 3	42 3	31 1	22 5	34 1	40 9	35 9
— 10	42 4	32 1	21 9	34 7	40 10	36 11
— 17	42 0	32 2	20 11	35 6	41 2	36 5
— 24	40 11	31 5	20 11	34 7	40 7	37 1
Oct. 1	39 8	30 11	20 7	35 4	40 4	37 1
Agg. Aver.	41 7	31 1	21 5	34 5	40 11	36 5

Fluctuations in the Last Six Weeks' Averages.

Prices.	Aug. 27.	Sept. 3.	Sept. 10.	Sept. 17.	Sept. 24.	Oct. 1.
42s 5d	—	..	..	..	..	..
42 4	..	..	..	..	..	..
42 3	..	..	..	..	..	..
42 0	..	..	..	..	..	..
40 11	..	..	..	..	..	..
39 8	..	..	..	..	..	..

WANTED IMMEDIATELY, a GARDENER who thoroughly understands Forcing Pines, Grapes, Cucumbers, &c., and every other branch of his profession. He must be active, industrious, honest, and able to give references to his last employer, with reasons for leaving him, and also to the Clergyman of the parish. No pretender need apply, as he would not stay; but an honest industrious Man might make himself comfortable, and shortly make the first step to establish a Business for himself.—Address, stating age, lowest wages per week, which must be moderate, and references, to Mr. Johnson, Post Office, Chatteris, March, Cambridgeshire.

WANTED, an Out-door PROPAGATOR, GRAFTER, BUDDER, &c.—Messrs. Lee are in want of an active, experienced Young Man in the above capacity to take the Management of one of their Country Nurseries.—Royal Vineyard Nursery, Hammersmith, London, W.

WANTED, 4 miles from London, an UNDER GARDENER.—He will have to take charge of some small Cows, and make himself generally useful. Also a LAD, who has heretofore assisted in the Stoves and Houses.—Address, stating previous employment, name and address of employer, how long in last situation, age, and wages expected, to A. B., 28, Great James Street, Bedford Row, London, W.C.

To Garden Labourers.

WANTED, TWO or THREE respectable steady MEN.—Constant employment. Wages 16s. per week.—Apply to W. Holmes, Frampton Park Nursery, Hackney, N.E.

MESSRS. LEE require the services of a SHOPMAN and TRAVELLER with a Knowledge of Agricultural Seeds and Nursery Stock.—Royal Vineyard Nursery, Hammersmith, W.

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WANTED, in a leading Provincial House, as CLERK and UNDER SHOPMAN, a steady active young Man of good address, competent to keep the Books, and must have a good knowledge of the Seed Trade. Commencing salary 20s. a week.—Address in own handwriting, stating age, reference, &c., to Robt. T. Veitch, Seed Warehouse, 54, High Street, Exeter.

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GARDENER (Head).—Age 45, married; Early and Late Forcing, Flower and Kitchen Ga take charge of Land if required. Seven and a half y tionable character.—W. M., Bute House, Campden Hi

GARDENER (Head).—Age 35, married, no brance; thoroughly understands his profession in all its Three and a half years' good character.—W. W., Post Heath, Herts.

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SATURDAY, OCTOBER 15, 1864.

GRESHAM LIFE ASSURANCE SOCIETY,
37, Old Jewry, London, E.C.
F. Allan Curtis, Actuary and Secretary

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News of the Week.

A telegram was received at the Foreign Office on Wednesday from General Cameron, announcing the welcome news that the war in New Zealand is at an end. General Cameron states that a meeting had taken place between the Governor of the colony and the natives of Tauranga, at which the Maoris submitted unconditionally to the Queen's authority, and placed their lands at the Governor's disposal. The despatch adds that they have been permitted to return to their lands, of which only a small portion will be forfeited.

By the Overland Mail we learn that the Viceroy was about to visit Lahore to hold a Durbar for the reception of all the Punjaub chiefs, after which he intended to hold a Durbar at Delhi, and then return to Calcutta and open the legislative session. It is stated that Sir Charles Trevelyan will return from India in April, and that no successor with the title of Finance Minister will be appointed. Accounts from Japan state that affairs in that country were becoming more and more complicated, and preparations were making for a commencement of hostilities.

A telegram from Vienna announces that the French Ambassador on Tuesday communicated to the Austrian Government a despatch from M. Drouyn de Lhuys, stating that the recent Convention between France and Italy has affected no Austrian interest, and that the French Government cannot presuppose that it has excited any irritation on the part of the Cabinet of Vienna, as such a feeling between two friendly Cabinets only appears intelligible when the course pursued by one affects any interest of the other. It says that the French Cabinet would rather hope that on a closer examination of the text of the Convention, the Austrian Government will be of opinion that the step taken by France deserves the thanks of Austria and of the whole of Europe, its main object being to set aside an obstacle by which European peace is permanently threatened, and by this means to lighten the heavy burdens which weigh upon all the Great Powers. Simultaneously with the announcement of this despatch, the *Constitutionnel* has published an article signed by its principal editor, for the purpose of allaying the disquieting rumours concerning Austria. After stating that the convention solely affects Rome, and in no way alters the position of the other parts of Italy, it says that all sensible men must understand that France has no desire to complicate the Roman question by the question of Venice, and to kindle in the north of the peninsula what she seeks to extinguish in the south.

The official journals of Vienna announce the immediate reduction of the Austrian army, and state that in Venetia alone the reduction will amount to 15,000 men.

A telegram from Copenhagen states that there is a prospect of the peace negotiations at Vienna being soon brought to a conclusion. Denmark, it is said, has agreed to the proportion which the Duchies are to have in the public property of the kingdom. The sum named is nine millions of rigsdalers.

Accounts from the United States inform us that after his victory at Fisher's Hill, General Sheridan pursued the Confederates to Broom's Gap, where he again attacked General Early, and was repulsed. General Early then assumed the offensive and drove Sheridan back six miles to Port Republic, and, it was believed, across the Shenandoah River at that point. The successes of the Confederates in Missouri are fully confirmed. General Price has captured Farmington, Potosi, and other towns, and is moving on St. Louis, which is in a state of great agitation. General Grant has resumed operations on the north side of the James River, and reports various successful movements against the Confederate lines. The position of General Sherman at Atlanta is threatened by General Forrest, who is operating in his rear with great success, while General Rousseau, who had been

sent to oppose him, is retiring. General HOOD was advancing towards the Alabama line to support these operations.

From Quebec we learn that the GOVERNOR-GENERAL of Canada has summoned the colonial governors to a conference, to be held on the 10th inst. in that city, for the purpose of arranging the confederation of the British provinces.

Home News.

THE COURT IN SCOTLAND.—On Wednesday week the Queen drove out, accompanied by Princess Helena, and in the afternoon Her Majesty, accompanied by Princess Helena and Prince Arthur, went to Craig Clunie. On Thursday the Queen, accompanied by Princess Helena and Prince Arthur, drove through Braemar to Loch Callater, whence they rode on ponies to Loch Kander, returning to Balmoral in the evening. On Friday the Queen drove to Alt-na-Guithasach, accompanied by Princess Helena and Princess Beatrice. Prince Alfred accompanied Colonel Farquharson in a drive for deer in the Balloch Buie Wood. The Dean of Westminster and Lady Augusta Stanley arrived on a visit. On Saturday morning the Queen walked in the grounds, accompanied by Princess Helena. In the afternoon her Majesty went out, accompanied by Princess Louisa. Mr. Gladstone left the Castle. The Rev. Dr. Norman M'Leod arrived on a visit. On Sunday afternoon the Queen and Princess Helena attended Divine service at the parish church of Crathie. Princess Helena and Prince Alfred attended the service in the morning. The Rev. Dr. M'Leod officiated on both occasions. On Monday morning the Queen went out. In the afternoon her Majesty, accompanied by Princess Helena, the Dean of Westminster, and Lady Augusta Stanley, drove to the Lynn of Muick. On Tuesday morning the Queen went out, accompanied by Princess Helena. In the afternoon her Majesty, accompanied by Princess Helena and Princess Beatrice, drove round by Ballater. Prince Alfred dined with the Earl and Countess De la Warr.

THE PRINCE AND PRINCESS OF WALES.—The Royal yacht Osborne, with the Prince and Princess of Wales and the infant Prince, arrived at Travemunde on Wednesday morning. Their Royal Highnesses proceeded to Glückstadt by special train, and are now staying at Fredensborg with the King and Queen of Denmark. It is understood that the infant Prince will return immediately to Scotland, by way of Lübeck, Hamburg, and Hull, in order to avoid the long sea journey; and that the Osborne, after landing his Royal Highness at Lübeck, will return to Copenhagen, to await the decision of the Prince and Princess as to their route homewards. It is announced that at some future time his Royal Highness, as Prince of Wales, will probably pay a visit to the Emperor of the French.

PRINCE ALFRED is expected to arrive at Floors Castle, near Kelso, on the 17th inst., on a visit to the Duke and Duchess of Roxburghe.

ORDER OF THE GARTER.—The *Gazette* of last evening announces that the Queen has dispensed with all the statutes and regulations in regard to installation in favour of the Marquis of Lansdowne as a Knight of the Order of the Garter.

Foreign.

FRANCE.—The Duke de Montebello, M. Adolphe Barrot, Monseigneur Darboy, Archbishop of Paris, MM. Boinvilliers, Godelle, Salignac-Fénelon, Chabrier, and Nieuwerkerke have been appointed Senators. The following diplomatic appointments have been made:—M. Benedetti as Ambassador to Berlin, Baron de Talleyrand to St. Petersburg, M. Mercier to Madrid, M. Châteaurenard to Washington, M. Reculot to Frankfort, Count Massignac to Teheran, M. Bourée to Lisbon, M. Gobineau to Athens, and M. Bondy to Hesse. The Mediterranean squadron returned to Toulon on Sunday morning. The *Pays* mentions, under reserve, a rumour of differences in the British Cabinet, which may bring about a modification in the Ministry. The *Constitutionnel* of Monday, in an article signed by M. Limayrac, opposes the views of extreme parties, who see in the Convention the fall of the temporal power and the abandonment of Rome. It says that the Convention "will be executed in letter and spirit. Thinking otherwise, the ultra-Italian press grievously insults the King of Italy, as do the clerical press the Pope." The same journal of Wednesday has an article, also signed by M. Limayrac, relative to the disquieting rumours concerning Austria. It says:—

"The Convention solely affects Rome, and in no way modifies the position of other parts of Italy. Without doubt agitators may continue to work in Venetia, and committees may issue proclamations speaking of an offensive and defensive alliance and of war in the spring. But this is not a new state of things, and is one for which the Convention is not responsible. All sensible men must understand that France has no desire to complicate the Roman question by the question of Venice, and to kindle in the north of the peninsula what she seeks to extinguish in the south."

The *France* and *Patrie* of Tuesday affirm that conciliatory ideas are beginning to prevail at Rome, and that an arrangement of the financial questions is not considered impossible. The same journals declare that a formal contradiction has been given to the statement that the Pope will refuse to reorganise his army. The speech which the Duke de Persigny delivered some time back at St. Etienne having been the object of many attacks, the Duke has recently addressed a letter to one of his friends, in which he replies to the objections of his critics. The following are the principal passages of the answer:—

"When comparing the organisation of English society with ours, I said that since, in France, the functions of authority were not confided to the electoral body itself as in England, but to an administrative hierarchy constituted apart from that body, it was impossible to establish amongst us the forms of English liberty without rendering authority subordinate to liberty, and thus ruining one by the other; and this all-important consideration imposed on us the obligation of founding our institutions on the separation of authority and liberty, instead of uniting them in the same hands as in England. This was the substance of my speech. As the liberty founded by the Empire is, after all, only an application of the theories propounded by Locke and Montesquieu, it would have been curious to see professors of liberalism assail the leading doctrine of these two great chiefs of modern liberalism. Nothing could have been more piquant than the refutation, by the Liberal school, of the famous chapter of the *Esprit des Lois* which treats of the condition of liberty among all nations. When the illustrious philosopher so strikingly demonstrated that liberty resides in the separation of the three great powers which exist in every kind of society—the executive, the legislative, and the judicial—and that as they happen to be more or less united, in the hands of one man or one assembly, or more or less separated and independent, so despotism or liberty prevails, he little thought that the day would come when his faithless disciples, more occupied with particular aims than with liberty itself, would abjure his doctrines. What do I say? They have not ventured to deny the doctrines; but, finding it more prudent to ignore them, they have passed by without seeing them. Do you know, in fact, in what light they consider the thesis of my speech? Sometimes as the glorification of administrative centralisation in opposition to the liberal principles of the Government, and sometimes as the exposition of a political *régime* which would exclude any change in the present state, by condemning beforehand all the progress of which liberty is capable. The last of those two charges appears to me to be puerile. How, in fact, admit that a nation which disposes in a sovereign manner of the legislative power by means of universal suffrage, can be deprived, against its will, of the progress which it may wish to be accomplished? In what can the principle and form of the institutions of France be an obstacle to the manifestation of her will? From the moment that the country is rendered the master of its destinies, its liberty is founded, for it has the means of realising, whenever it pleases, all the developments which it may consider to be required. To itself, therefore, still more than to the founder of liberty, belongs the power of accelerating or retarding, according to circumstances, the progress of its institutions. If rendered prudent by the experience of the former disorders of France, it shows itself to be less impatient than certain minds to favour all the aspirations of liberty, that act is a disposition of public opinion which may be approved of or regretted, but which can in no way affect the theory of the liberty of the Empire."

Jacques Jasmin, the celebrated hairdresser and troubadour of Agen, died on the 6th inst. His fame was very great, not only in the south of France, but throughout the whole country. He commenced his poetic career in 1825, and received numerous presents in the course of his life from the towns of Southern France, to which he was invited to recite his poetry. He also received local academical prizes and the Cross of the Legion of Honour, under the Ministry of M. de Salvandy. His most celebrated work is "Les Papilotas de Jasmin." The journals also announce the death of Rear-Admiral de Hell and of the well-known lithotritic doctor, Baron de Heurteloup. It is said that M. Renan is about to leave for Asia, to visit the places where the greater part of the life of St. Paul was passed, previous to the publication of his new work on the preaching of the Apostles. M. Jules Gerard, the celebrated traveller, better known under the name of the "lion-killer," is said to have been drowned in the river Jong, 120 miles from Sierra Leone. The Duke of Somerset and the Lords of the Admiralty passed through Toulon a few days since on their way to Malta.

ALGERIA.—On the 21 inst. Lacroix's column defeated the insurgents of Bon Stada; and the Aumale subdivision, under General Folivet, on the 30th ult. repulsed an attack of 1500 insurgents, commanded by the uncle of Bon Hamza. The loss of the Arabs was 400 killed and 400 wounded; that of the French is estimated at 80 killed and 27 wounded. Gen. Deligny commenced operations on the 2d. It is asserted that the insurrection of the tribes is spreading among the natives, who appear to obey a real summons to a holy war.

SPAIN.—On Monday, being the Queen's birthday, a reception was held at the Palace, and a review took place. All the officers of the army and navy were promoted a step. It is asserted that at a Council of Ministers held on the 6th inst., the recall of Admiral Pinzon was decided upon. Measures were also adopted for the future command and reinforcement of the Pacific squadron. The Minister of Finance is unable to effect any credit operation under the conditions voted by Congress, and will therefore await the deliberations of the new Chambers. The Central Committee of the Progressista party have sent in their resignation, on account of their abstinence from politics in the approaching elections no longer appearing necessary. A general meeting of the Progressista party will take place on the 16th inst. The *Politica* asserts that the Democrats will demand permission to hold public meetings. Señor Mon has accepted the post of Ambassador to France. Queen Christina has left for the Asturias. Señor Calderon Collantes died on Sunday.

PORTUGAL.—The mortal remains of the Infante Don Juan, hitherto unburied, have been transferred in solemn procession from the church of the Jeronimites to the Royal mausoleum at San Vicente.

DENMARK.—It is stated that a commission has been formed at St. Petersburg for the purpose of preparing the Princess Dagmar for the reception of the [illegible] baptism according to the form in use in the [illegible] Church. The Emperor has presented her with a [illegible] necklace valued at 12,000*l*, and the Empress presented her with a pair of diamond bracelets. The marriage will not take place for about 18 months, when her Royal Highness will be approaching the completion of her 19th year. The Princess will visit St. Petersburg in the course of next summer. Captain Schindler has returned to Vienna. He is stated to be the bearer of the Danish Government's approval of the settlement of the frontier question proposed at the Vienna Conference. The *Faedrelandet* of Monday says:—

"The conclusion of peace is near at hand, Denmark has consented to fix at a round sum of 9,000,000 rigsdalers the share which the Duchies are to have in the public debt of Denmark. This amount is consequently to be deducted from the portion of the Danish public debt which, when arranged should fall to the charge of the Duchies."

PRUSSIA.—The Crown Prince and Princess have abandoned their intention of visiting Nice. Their Royal Highnesses will proceed to Switzerland, and will return to Berlin by the 22d of December. Count von Bismarck is expected to return from Biarritz on the 28th. Baron Budberg arrived at Berlin on Sunday evening and proceeded on Monday to Darmstadt to join the Emperor of Russia. On his return to Berlin the King of Prussia will meet the Emperor and Empress of Russia at Darmstadt. The Emperor of Russia will visit Berlin on his return to St. Petersburg at the commencement of November. The treaties by which Bavaria, Würtemberg, Hesse-Darmstadt, and Nassau join the reconstituted Zollverein were signed on Wednesday.

AUSTRIA.—The *Oesterreichische Zeitung* of Sunday says that the reduction of the Austrian army is a positive fact. In Venetia alone the reductions will amount to 15,000 men. All soldiers on furlough will be to leave Venetia at latest on the 15th inst. At Vienna the sitting of the Conference a compromise was effected on the financial question. On Wednesday none but secondary questions were discussed. There now only remains the drawing up of the treaty of peace. The Duke de Gramont on Thursday communicated to Count Rechberg a despatch addressed to him by M. Drouyn de Lhuys on the position of Austria with regard to the Franco-Italian Convention. The despatch contains the official notification of the Convention, and is said to be to the following effect:—

M. Drouyn de Lhuys very courteously, but also very firmly states that no necessity exists to forward a special notification of the conclusion of the Convention to foreign Powers. The stability upon the part of the Cabinet of Vienna at the present moment of the French Government is the less to be presupposed as such a feeling between two friendly Cabinets would be unintelligible when the course pursued by one affects any interest of the other. The text of the Convention has now been published, from which it is apparent that no Austrian interest is affected thereby. The French Cabinet would therefore hope that upon closer examination of the text of the Convention the Austrian Government would be of opinion that the policy inaugurated by France deserved the thanks of Austria and of the whole of Europe, being mainly calculated to set aside the obstacle by which European peace is permanently and seriously threatened, and by this means to lighten the heavy responsibility weighing upon all the great Powers.

The reports of a Ministerial crisis are considered premature, the Emperor being absent from Vienna. It is, nevertheless, believed that Count Rechberg will tender his resignation, on account of the complicated state of foreign policy. Accounts from Prague say that the Zollverein negotiations have only been postponed, and not broken off; and that the conference will shortly continue its deliberations, in which both Saxon and Bavarian Plenipotentiaries will take part.

RUSSIA.—A letter from St. Petersburg states that the Russian Government had given its adhesion to the French policy in the Roman question. It is said to be certain that the Emperor will accompany the Empress to Nice. The *Journal de St. Petersbourg* of yesterday states that the recent article published by the *Deutsche Petersburger Zeitung*, with respect to the encyclical letter of the Pope concerning the Poles, is only to be regarded as of secondary importance, and is devoid of all semi-official character.

ITALY.—The *Official Gazette* of Friday publishes the text of the Convention. It is asserted that the Minister of the Interior has annulled the deliberations of the provincial Council of Turin of the 23d September protesting against the Convention. Signor Scialoja has resigned the Presidency of the Senate, and Signor Mamiani has been appointed his successor. The Marquis Pepoli has tendered his resignation as Ambassador at St. Petersburg. Baron Ricasoli has arrived at Florence. Letters from Rome state that at all the meetings held by the Cardinals since the 20th ult. ecclesiastical affairs only have been discussed, and that all statements to the contrary are erroneous. It is stated, however, that the Pope has declared in the presence of visitors that prudence was necessary, but that it were idle to hope that the Holy See will ever treat with the Kingdom of Italy. A rumour was current on Sunday that a demonstration had been projected, but the requisite precautions having been taken by the French troops, tranquillity was maintained. The Austrian Ambassador was expected at Rome on the 15th inst. The *Correspondencia di Roma* publishes a semi-official article on the strategical position of Florence as the capital of Italy. The same paper declares itself authorised to treat as apocryphal the pretended allocution of the Pope, published by the official *Dziennick* of Warsaw, in which his Holiness is made to blame the Polish clergy for their [illegible]

conduct. Signor Meglea has proceeded to Paris on his way to Mexico.

Greece.—The Vienna journals publish advices from Athens, stating that Earl Russell has addressed a note to the Greek Cabinet, declaring that England recognises no factions in Greece, and condemns anarchical demonstrations. Earl Russell further states that in case of necessity England will, in conjunction with France and Russia, take measures for the maintenance of order and the strengthening of the reigning dynasty.

Turkey.—A telegram from Constantinople of the 5th states that a financial crisis prevailed in the Turkish capital. Interest had risen to 14 per cent., and it was impossible to obtain money even at that rate. Prince Murat had embarked for Syria.

Morocco.—The Government of Morocco has ordered the Tangier Custom House to pay the indemnity of 125,000 francs claimed by France for the assassination of a French subject.

India.—By the overland mail we have news from Bombay to the 8th ult. The Viceroy was about to visit Lahore for the purpose of holding a Durbar to receive all the chiefs of the Punjab Province. His Excellency will then hold a Durbar at Delhi, the first held there since the rebellion, and afterwards return to Calcutta to open the Legislative Session, which is expected to be an important one. It is stated that Sir C. Trevelyan will retire from India in April next, and that no successor with the title of Finance Minister will be appointed. The manager of the finances will be a secretary merely. Sir Alexander Lawrence, son of the late Sir Henry, and nephew of the Viceroy, met with instantaneous death by a bridge over a precipice in the Thibet road having given way under his horse. Accounts from Cabul state that Mohammed Khan has assumed the government of Turkistan, and that Sirdah Afzul Khan has been treacherously thrown into prison by his brother, the Ameer of Cabul, and his fortune, amounting to 2,500,000 f., confiscated. An embassy has arrived in Cashmere from Kokand, an independent sovereignty in Central Asia, on its way to the Viceroy, to procure the advice and assistance of the British in reference to the attempts of the Russians to make a high-road for troops through that kingdom. They state that the object of these aggressions on the part of Russia is to be in readiness to attack India in case of a war with England. Colonel Eden, the Political Agent in Mewar, has again been mobbed by rioters, who attacked his house and tried to seize him, with the intention of killing him. He was saved by the young Rajah, who fortunately came to his assistance in time to prevent his being torn to pieces by the mob. The Government of India have been for some time watching the conduct of the Nawab of Kotah, who has been building a strong fort in his province; and they have now insisted on his immediately demolishing it. The inhabitants of the Kubhoo Valley, in Munipoor (Burmah), which was restored to Ava on the conclusion of the treaty with Burmah, have petitioned the Government to be again taken under its care, in consequence of the oppressive character of their own Government. Sir W. Denison, the Governor of Madras, has refused to carry out Sir Charles Wood's instructions relative to the officers of the Indian army, on the ground that they are a flagrant violation of the guarantee granted by the Imperial Parliament to the officers of the late Company on being transferred to the service of the Crown. The Judicial Commissioner of the Punjab has confirmed the judgment of Sir H. Edwardes in the case of the Umballah conspirators, all of whom are to be transported for life.

Japan.—According to the latest intelligence received at Shanghai from Japan, the state of affairs had become more complicated. There was a prospect of hostilities in the Straits of Shimonosaki. An attack on Prince Nagato's fortifications was expected.

New Zealand.—The following telegram from Lieut.-General Cameron, dated Tauranga, Aug. 6, reached Cairo on Monday:—"A meeting took place on the 5th and 6th of August between his Excellency the Governor of New Zealand and the natives of Tauranga, at which the latter submitted unconditionally to the Queen's authority, and placed their lands at the Governor's disposal. They have been permitted to return to their lands, a small portion only of which will be forfeited."

United States.—General Sheridan on the 24th ult. reported that there never was an army so badly routed as that of General Early, whom he had driven from Mount Jackson without bringing on an engagement, the Confederates rapidly retreating. On the 29th ult. he reported that he had pursued Early to Fort Republic; and that his cavalry had destroyed much property at Staunton and Waynesboro'. The Southern papers on the other hand report that Sheridan attacked Early on the 26th at Broom's Gap, and was repulsed, whereupon Early assumed the offensive, and drove Sheridan back six miles to Fort Republic, and it was believed across the Shenandoah River at that point. General Grant reports from the Army of the Potomac that Ord's corps advanced on the 29th ult., and carried the strong fortifications of Chapin's farm, capturing 15 guns and 200 prisoners. Ord was wounded. General Birney advanced simultaneously from Deep Bottom, and carried the Newmarket road and entrenchments, scattering the enemy and taking a few prisoners. General Burnham was killed, and one division of the 18th corps suffered severely. Birney then marched towards Richmond, and has arrived within five miles of it. The Newmarket and Richmond roads and the whole country were full of field fortifications. In a subsequent report General Grant states that Warren on the 30th carried the Confederate line on the right, and was following up his success. General Meade has moved from the left, and carried the Confederate lines near Poplar Grove. Butler has repulsed an attack on his line. All the operations on the north side of the James River have therefore been successful, Fort Morgan, Chapin's Bluff, and six other strong earthworks, together with 16 guns and 500 prisoners, being captured. Despatches from Louisville state that Governor Brown, of Georgia, had submitted propositions for peace to General Sherman. These propositions were forwarded to Mr. Lincoln, and were said to have been under consideration on the 26th. The papers contradict the latter statement, but Louisville telegrams re-affirm the former, and add that General Sherman had despatched Commissioners into the Confederate lines to discuss the proposition personally with Governor Brown and Vice-President Stephens. It is now rumoured that the Georgia State authorities referred the question of a peaceable settlement to the Confederate Government. Sherman and Hood have concluded the exchange of 2000 prisoners upon either side, captured in the recent battles at Atlanta and Jonesborough. The truce for the removal of the Atlanta inhabitants, which expired on the 22d, has been extended. Sherman reports Hood to be moving towards the Alabama line. Forrest, with 8000 men and 10 guns, is operating in Sherman's rear. He has captured Athens, with the garrison, and destroyed the railroad between Decatur and Athens, and all the bridges between Athens and Pulaski for 30 miles. He is now moving his whole force to Chattanooga Railroad. Rousseau has taken the field against Forrest. Southern papers state that General Beauregard had received the command of the Confederate armies in Georgia. The Confederate General Price has entered Missouri with 30,000 men, and it is supposed that he will march into a central part in the State. A large force under Generals Kirby Smith and Shelly is co-operating with him. The Federals evacuated Pilotknob, and retreated to Mineral Point. Price advanced 20 miles to the north east of Pilotknob, and has since captured Farmington and Potosi. General Rosencranz has issued an appeal calling the people to arms. Business at St. Louis was suspended, and preparations were making for the defence of the city. It is believed that Admiral Farragut will be transferred to the North Atlantic fleet, when it is expected he will attack Wilmington. Admiral Lee will command in Mobile Bay. President Davis, in a speech made at Salisbury, North Carolina, referred to the recent reverses of the Confederate arms, and stated that though there was a temporary gloom, yet the spirit of the Confederacy was unbroken, and peace and independence would be wrung from the hated foe. He urged all absent soldiers to return to the army. The Richmond papers admit the defeat in the first day's fighting in the Shenandoah Valley, and estimate the Confederate loss at 2500 men, and that of the Federals at 6000 men. Secretary Stanton urges the people to encourage enlistments to enable General Sherman to hold Atlanta and advance still further. A mass meeting in favour of Mr. Lincoln has been held at New York. Mayor Gunther, of New York, had vetoed the resolution of the aldermen to illuminate the streets of the city in honour of recent victories. The mayor, in his message, says the victories are not considered "Union" triumphs by the President, but abolition ones, and he is unable to rejoice over victories which are not Union victories.

Canada.—The Governor of Canada has summoned the Governors of the British North American Colonies to a conference, to be held in Quebec on the 10th inst., for the purpose of arranging the confederation of the British provinces.

San Domingo.—The latest news from St. Domingo states that the chiefs of the revolution have retired to Hayti, and are making proposals to the Spanish generals for a termination of the war.

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 88¼ to ⅛ for Money, and 88⅜ for Account.; Three per Cents. Reduced, 86¼ to ½; New Three per Cents, 86⅜ to ¼; Annuities, 1885, 14 5-16; Bank Stock, 235; India Stock, 212; Ditto Five per Cent. Stock, 104⅛ to 103⅞; Ditto Bonds, 8s. dis.; Five per Cent. Enfaced Rupee Paper, 100; Exchequer Bills, March, 6s. to 10s. dis.; Ditto June, 24s. dis.—Foreign: Brazilian, 1863, 83¼ ex div.; Egyptian, 96 to ½; Ditto second issue, 96⅜; Greek, 22½; Italian, 65¼; Mexican, 26¼ to ⅜; Portuguese, 1856, &c., 46½; Ditto for Acct., 47 to 46⅜; Russian, 1822, 88⅛; Ditto 1862, 86⅞ to 87; Ditto 1864, 86 ex div.; Sardinian, 82⅛; Spanish Passive, 30⅛ to ⅜; Turkish, 1862, 68¾ to 69¼; Ditto Acct., 69⅛; Ditto 100l. Bonds, 69¼.

Gazette of the Week.

Friday: Oct. 7.—Bankrupts.—J. Andrew, Gwennap, Cornwall Miner—J. Ascough, West Tanfield, Yorkshire, Farmer—A. Addison Kingston upon-Hull, Innkeeper—J. Ames, Bedford, Journeyman Smith—W. Barker, Stamford, Lincolnshire, Innkeeper—T. Bather, Birkenhead, Cheshire, Milk Dealer—G. A. Buck, late Albert Street, Pimlico, Commission Agent—C. Bacons, Stalham, Norfolk, Boot and Shoe Maker—G. A Bacon Yarmouth, Hampshire, Bookseller—T. Booton, sen., Clun, Shropshire, Innkeeper—T. Chambers, Old Shildon, Durham, Stationer—J. Carter, Ragdale, Surrey, Builder—R. Cooke, Tennis Place, King Street, Borough, Attendant at a Railway Station—Patrick Cruikshank, Great St. Helen's, City, Merchant—John Cates, Leeds, Architect—W. Douglas Gregory's Buildings, Sheffield, Bootmaker—C. Davis, Highgate Road, St Pancras, Cellerman—S Dawson, Leeds, Contractor—S A. Emery, Gloucester Place, Cowley Road, Brixton, Comedian—G S. Fawkes, Hulme, Lancashire, Agent—G Garbett, jun., Aston juxta-Birmingham, Retail Brewer—R Goddard Haverfordwest, Cattle Grazier—W. Hodgson, Guildford Street East, Clerkenwell, Hatter—H. Harris, Swansea, [illegible] Victoria Road, Kensington, Victualler—J. Hall, Caton View, Cheshire, and Jerusalem, R. Heaton [illegible] British Street, Hackney, Builder—W. Hay, Bootle, Lancashire, Builder—W. Hay, Bootle, Lancashire, Builder—W. Hay, Bootle, Lancashire

who has perished in the catastrophe. Of these the bodies of five have been found and identified, and six are missing—namely, the four bargemen and two labourers employed about the magazine of Messrs. Hall. The inquest on the persons killed by the explosion was resumed at Erith on Tuesday. Several additional witnesses were examined, whose evidence, although failing to prove the actual cause of the explosion, detailed a variety of circumstances which amply explained its occurrence. After confirming what was already well understood, that the first explosion took place on board one of the barges, it was clearly proved that it was impossible to prevent the men from smoking or from having fires on board for the purpose of cooking; that the regulations of the Trinity House make it necessary for the barges to exhibit two lights when sailing at night, and three when at anchor; and moreover that while they are lying off the wharfs discharging their powder, they are constantly exposed to the sparks of passing steamers. It was further shown that chemical works, and a glue factory, with a steam-engine and chimney, are close to one of the magazines still standing in the marshes; and one of the Government officials at Woolwich deposed that, having been present, three years ago, when a magazine belonging to the Messrs. Hall was being emptied, he found it full of nails and iron, and told the deceased storekeeper, Mr. Rayner, that he never was in a more dangerous place in his life; when Rayner replied, "Oh, you Government people are too particular!" It was also proved that a letter had been found in the handwriting of Mr. Rayner, complaining to the manager of Messrs. Hall's mills at Dartford that the casks in which the powder was packed were so badly made that the powder was constantly falling out from the looseness of the hoops. This letter, however, was not dated, and the managers of the Dartford mills stated that it must have referred to a period long past when the casks were made by contract, whereas at present all the casks were manufactured on the premises. The inquest was again adjourned. On Wednesday another inquest was opened at Guy's Hospital on the body of the girl Osborn, and adjourned for the production of Mr. Rayner's letter, and also to enable the Coroner to apply to the Board of Trade for the appointment of some competent person to make an examination into the state of the casks in Messrs. Hall's warehouse. At a meeting of the Woolwich Local Board of Health on Tuesday, a discussion took place respecting the existence of powder magazines near populous districts, and it was stated that the inhabitants of Woolwich had stores of powder much nearer than those at Erith, and that the stores at Purfleet should be removed at least as far down the Thames as Foulness. The thanks of the Board were unanimously voted to General Warde and the officers and men under his command, and also to Mr. Webster, Mr. Houghton, and the men employed under their direction, for their active and laborious exertions in reinstating the river wall, and thereby averting the devastating effects which must have resulted to the district from the overflowing of the Thames. The Board also expressed their approval of the police arrangements upon the occasion.

GUNPOWDER STORES.—The Home Office has instituted inquiries as to the quantity of gunpowder in store in all the localities where it is kept to any large amount. The law already provides a limitation on the quantity kept where the manufacture is conducted, and on the amount kept on hand by the licensed retailers of the article. There are also stringent regulations for the protection of the Government stores by sea and land. But it is in the large warehouses of the manufacturers and wholesale dealers that the greatest quantities are to be found, and it is to these that the new legislation on the subject will be specially directed. The War Department has also issued an official order by which lucifer and congreve matches or any similar means of obtaining fire, as well as smoking, are absolutely interdicted on board all Government vessels taking in or delivering gunpowder to any of the national magazines. A code of regulations has been issued, limiting the leave accorded to the crews of vessels lying alongside a magazine for the reception or delivery of gunpowder. Under no circumstances is such a vessel to be wholly deserted; and, in the case of a steamer, an engineer, a stoker, a master or mate, and a boy are to constitute the minimum crew to be left on board.

THE INSURANCE OFFICES AND THE LATE EXPLOSION.—A legal point has arisen which is likely to give rise to considerable trouble unless the parties interested enter into a compromise. A large amount of the injury done by the Erith explosion occurred in houses which had been insured in various fire insurance companies. Application having been made to some of these offices for compensation, on the ground that the policies insured them from accidents from fire and water, a meeting of the "Associated Fire Offices" has been held at the Sun Office, at which it was determined not to pay a single claim arising out of the explosion, but at once to repudiate any liability for injuries to property caused by it. A large body of the parties insured will not, it is said, submit to this decision. They contend that the accident could not have occurred but through fire, and therefore that the property of the parties insured is clearly covered by their policies. The same question was raised at Liverpool a short time ago, when the explosion occurred on board the Lottie Sleigh. All the companies except the Royal at first refused to make compensation in that case, but after a short time they held a meeting, and came to the conclusion that their wisest and best course was to follow the example of the Royal and pay the claims. A dissentient shareholder of the Royal applied to the Court of Chancery for an injunction to restrain the company from paying these claims, but the motion was refused, and the applicant condemned in the costs of the proceedings. As the Royal has now concurred in the determination of the offices represented at the Sun meeting, it is believed that the course adopted will be to select a case for trial, upon the issue of which all the others may be determined.

THE PEACE ADDRESS TO AMERICA.—Sir Henry de Hoghton, Bart., transmitted to the Governor of New York by the mail steamer of Saturday the following address, signed within three weeks by about 350,000 persons, comprising every class of the community, and the clergy of all denominations, especially the Catholic priesthood of Ireland, from which country more than 130,000 signatures were obtained. The signatures extended over 700 yards of canvas in four parallel columns, which, if taken consecutively, would stretch beyond a mile and a half in length:—

"FOR PEACE IN AMERICA.

"The People of the United Kingdom of Great Britain and Ireland, to the People of the United States of America.

"We are of the same race, and many of you are our brothers. We, therefore, come to you as peacemakers, and address you in plain language as friends and as fellow men. We ask you, has there not been enough of strife and bloodshed, of misery and suffering; and is it not time to cease the cruel war in which you are engaged? There is not a Christian man or woman among us whose heart does not respond affirmatively to this question. We have admired your free institutions, and have gladly witnessed your rise as a people to eminence in wealth and political power. You promised to become one mighty nation, famed for the liberties of its citizens, the triumphs of peace, and the conquests of commerce. When this unfortunate war began, our hearts were more inclined towards you than towards your sister States, because we believed with you that the action of the South was but the work of a faction. When you asserted that Secession was the work of disappointed ambition, and promised to quell it within 60 days, we accepted your assurance in good faith, looking for the speedy restoration of peace, for we did not wish to see the American Union broken up. But so far from this promise being fulfilled (and your efforts to accomplish it have been unprecedented in the annals of history), peace and the restoration of the Union are apparently as distant as ever. The events of the struggle have convinced us that a more united people never rose up in defence of their rights than those of the Southern States. Surely there must be many now among you who share with us the conviction that it has become utterly impossible to subdue the South, or to restore the American Union, as it existed in the past days of the Republic. You have tried sufficiently, and found the gulf between you and the seceded States to widen with each effort that is made to subdue them. We believe that it is now time for you to pause, and after calmly reviewing all that you have accomplished, the distance which you have travelled from your well-known landmarks, and the difficulties and dangers that are certainly before you, to take counsel together as to the best means of restoring peace. We cannot forget that the question of peace or war was never submitted for your consideration before hostilities had actually commenced: that they came upon you little by little; that both Government and people found themselves plunged into this fearful contest almost unawares, and that you have never been permitted as yet an opportunity of consulting together in general convention for the purpose of making known your opinions and wishes about the war, or any of the vast issues growing out of it. We believe that the war has changed (for the present at least) the character of your Government. It has swept away your freedom of speech, your free press, and the inestimable right of *habeas corpus*. We believe that the Southern people are only following the precepts and example taught and practised by your fathers and theirs, when they withdrew their allegiance from the mother country, and that the Declaration of Independence, which you hallow and celebrate every 4th day of July, asserts, as self-evident, the right of the Southern people to set up a Government of their own. We believe that should you, at the end of another three and a half years' war, succeed in subduing the South and restoring the Union by force of arms, you will find out, when it is too late, that those pillars upon which rests your Republican form of Government have been violently torn down, and that your own liberties have been buried in the ruins. We ask you to compare the course pursued by the South now and the Colonies in 1776, with that adopted by the North now, and the mother country then, and we think you will discover many striking resemblances. It is in your hands to give peace to the American continent. The Southern States have appealed to you for peace, and to be let alone. We appeal to you to recognise the duty which attaches to your high privilege, and to make peace with the Southern States; and we make this appeal in the name of religion, humanity, civilisation, and common justice."

THE ALLEGED CHILD MURDER AT ACTON.—On Saturday the two sisters Mrs. Campbell and Miss Harris, who were apprehended on the charge of murdering the two children found in a box in their bedroom at Acton, were again examined before the magistrate at Hammersmith. There was no evidence directly connecting either of the sisters with the children, nor could it be ascertained from the bodies of the children, which were dried to mummies, whether they had been born alive. Under these circumstances the magistrate discharged the prisoners, stating that the police could apprehend them again if any fresh evidence were obtained.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday October 8th were 1263. The average number in the corresponding week of the 10 years 1854-63, excluding the deaths from cholera in 1854, and corrected for increase of population, was 1193. The present return is therefore 70 above the average. During the week the births of 997 boys and 899 girls, in all 1896 children, were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 1798.

Provincial.

BILSTON.—On Monday the largest meeting that has been yet held of the colliers on strike in South Staffordshire, took place in this town. Detachments of men marched into the town from Wednesbury, Great Bridge, Tipton, Dudley, Oldbury, and Brierley Hill, each headed by bands of music and men carrying mottoed banners. They were followed by a force of policemen, until by the time the meeting commenced the policemen in the town numbered 150 men. Major M'Knight, the deputy chief constable of Staffordshire, had refused to allow the bands to play on the high road, near to collieries where miners are at work, such movements by the men who are out being intended to draw out the men who have resumed work. At the meeting there were, perhaps, 8000 persons, nearly all of them miners. The speakers complained of the interference of Major M'Knight and the police authorities, and said they should bring such interference before the constituted authorities, for the men on strike were peaceable and loyal subjects of her Majesty, and would allow no one to tempt them to break the peace. Lord Leigh's offers of mediation were severely handled, and clergymen and others who had counselled return to work on masters' terms were censured as friends only of the wealthy. Efforts made on the previous night by individual employers to secure some arrangement between themselves and the leaders of the strike were described, and the determination repeated that henceforth no communication with such an object in view shall take place between the representatives of the two contending sides. It was asserted that the masters were quite able to give the rise, and that they were only contending for the subjection of the men. Central points in the district were announced at which bands of men were to meet on the next day to beat the drums at half-past 4 in the morning, to "turn out the black-legs." The chairman announced that pecuniary help and expressions of sympathy had been received from Birmingham, and that the sympathy of different branches of artisans was very strong in their favour, and this sympathy, if they were true to themselves, would enable them to win this struggle, which was characterised as of the last importance to the collier; for if he should lose, his "day of hope" was designated as "gone." At the close of the meeting a resolution was unanimously come to that the strike should be continued till the masters gave them "the wages." The 80 Lancers who are in barracks at Birmingham have for some time been kept "saddled" and ready to ride into the Black Country at a moment's notice, and a number of the Volunteers have been kept under arms in Bingley Hall ready for any emergency which the strike may give rise in Birmingham, where there is a strong sympathy with the colliers among all classes, and where a rumour had got abroad that the colliers intended to march into the town in vast numbers with anything but a peaceable intent. During the whole of the strike the Earl of Dudley has had one colliery at Himley at work by men who have accepted the reduced wages; but they have been daily subjected to much taunting and intimidation. On Monday the cottage of one of these workmen, named Joseph Roberts, who lives at Gornal Wood, was partially destroyed, and his own life and those of all his family attempted by one of those diabolical trade outrages which are unhappily so notorious in workmen's disputes in Sheffield. At an early hour in the morning Roberts, who was sleeping with his wife and children in the top story of his dwelling, was aroused by something like a heavily loaded can having been thrust through the window of the bedroom in which they were all lying, and almost immediately afterwards a terrible explosion happened, which blew off the roof of the house. Assistance was soon at hand coming, when it was found that all the sleepers had escaped uninjured. This is the first colliers' strike during which this class of outrage has been committed in this district, but it is the third crime of the kind which has been perpetrated during the present excitement. The police have arrested one of the leaders of the strike on suspicion of his being the offender.

BOLTON.—The Chancellor of the Exchequer arrived in this town on Tuesday, and was presented with addresses from the corporation and also from the working classes. The presentation took place in the Temperance Hall, which is capable of holding about 3000 people, and every part of the building was crowded to excess. Mr. Gladstone returned thanks in a speech of great length, from which the following are extracts:—

"I know very well that I am receiving, in testimony of your confidence, a reward due rather to the labours of others. I know that it is those who were pioneers in the field of legislation to whom your gratitude is mainly due. I cannot consider myself to be other than one of the humblest of all the labourers in that cause, and not one of the first among them. I claim at your hands no credit whatever other than such as is due to secondary abilities and to a second part, but yet a part taken in a useful process. We have during a lifetime an alteration brought about in relations classes in this country, such as must make the heart of man leap within his breast to think upon. We have mistrust and alienation gradually fading away like mists the rising sun; and we have seen throughout all parts country, and throughout all classes of the community, ments of mutual confidence, respect, and esteem taking place of that alienation and estrangement. Believe me appreciate that generosity of the English character been so signally exhibited by the mass of the people in

country, and with which they have shown themselves so ready to acknowledge the efforts of the Legislature on their behalf. The changes we have seen within the last 20 or 25 years, especially in the field of economical legislation, are of a character so marked that, perhaps, we cannot expect anything precisely similar to occur. It is not often that it is given to those called on to bear a part in public affairs to be enabled by their puny exertions, under the direction of an allwise Providence, to do an amount of good which is, upon the whole, both so extensive and unmixed as the good which has been done in England within our recollection by the liberation of industry, of capital, and of skill. In general when we see parties violently at issue, and principles keenly contested, the conditions of human life do not permit us to hope anything better than that in the solution of those controversies at least a balance of good may be secured; but here we have witnessed changes carried into effect which have conferred good alike upon those by whom they were promoted and upon those by whom they were opposed. And moreover we have seen this, that although these changes referred in their primary aspect only to material and commercial interests, yet they have proved to be fraught with a profound moral and social character. In increasing the wealth of the nation, they have warmed the heart of the nation. In disposing of arguments which seemed to separate man from man, they have disposed of jealousies which separated class from class. And while these Acts of Parliament take their place upon the register of the Statute Book, they are not to be judged only by the formal terms in which they are conceived, but must be regarded rather as angels of mercy, ministers of peace, and restorers of union through every part and corner of the land. I hear with pain that throughout the district of South Lancashire, and perhaps especially in a town which hitherto has not had to encounter the extreme severity of the recent scarcity of cotton, pressure is now very sharply felt. I am afraid we must admit there is a recurrence of another extension of distress, but the distress is of a different character from that which formerly prevailed. It is not attended with such gloomy prospects. When the cotton famine first began to bear upon Lancashire, it was absolutely impossible to know at what point its calamitous results would close. We knew that the principal source of supply was stopped. We did not know in what degree other countries of the world would prove able to minister to our wants. After a time it has been found that, though nothing will as yet enable England to dispense with the American supply, the powers of other countries have been developed to a very considerable extent, and very large contributions have been obtained from quarters which previously had hardly been reckoned on, or had, indeed, been scarcely dreamed of in the enumeration of our resources. We may now—and this is the difference to which I refer—venture as far as it becomes a frail being like man to give an opinion on such a matter—we may now venture to say that the knot of the problem is in the main untied, and that sources of supply do exist in the world which will sustain the future prosperity of the cotton industry of England, and probably tend to place it upon a firmer basis than it could ever be said to occupy when it depended almost entirely on the productions of America, and when those productions themselves were due to a state of society and to a description of labour which in this country we look upon as being unnatural and contrary to the best interests of humanity. Therefore, it is a great point that your brethren of the working class, and such among you as belong to that class, and not only you, but all who compose the other sections of the community, and whose interests are completely identified with yours, when the pinch comes, if it be not now felt by you, may derive consolation from the reflection that there is ground for a confident hope that the calamity is a temporary one, and that the inconveniences you are now enduring are attendant on a course of transition and on the process of return from a state of things which is unnatural and exceptional to a state of things which is durable, sound, and healthy. I do not believe that 25 years of more effective or beneficial legislation are to be found in the history of any country than of those of the last 25 years in England. If there be any who think that there is still a pressure for great improvement—and I certainly am one who believe that much may yet remain to be done—let them also bear this in mind, that we live in a state of things in which a conviction once taking hold of the minds of the people, of the different classes of which it is composed, will be fairly answered in the conduct of the Houses of the Legislature. When I speak of what remains to be done I don't at all mean to say that we stand now as we stood 20 years ago. On the contrary, crying grievances, gross evils, and mischief have with great prudence, wisdom, and circumspection, but, at the same time with great firmness and decision, been remedied. The improvements that are before us are, therefore, in many respects of a different character from the improvements that lay behind us to be made. There are adjustments which our institutions will require. The progress of education, the progress of good and sound habits in the community, the increasing confidences which unite classes together, all these things point to a gradual enlargement of the privileges possessed by the people, and sure we may be that as the necessity and the occasion for such changes are felt, a liberal disposition to adjust such changes will likewise be felt among us. I trust we shall never live again to see the time, a time bearing the smallest resemblance to the great public crisis which marked the commencement of the reign of William IV. —the crisis known as the crisis of the Reform Bill. The triumph then achieved was not only in itself a great advantage to the country, but I think it was a pledge that altogether improvements would be attained by a process less critical and violent. I hope the time is coming when more and more all social and political questions will be disposed of, not by violent action, but by friendly persuasion, by the close contact of mind with mind, by a constant diffusion of information, by keeping the people well apprised of all the Legislature is doing and intending for them, and that there will be a gradual substitution of what we may call moral force in the settling political controversies for that dangerous manifestation that has often been the only means of remedy available in other times for the removal and cure of grievances. I cannot touch on a question of this kind without in one single word performing an act of justice to those who were the real and effective promoters of the measures that were gradually adopted by Parliament for what is called the emancipation of the press of this country. The penny press of this country has now been in operation for a certain number of years: there were those who were led to anticipate that that organ would be a dangerous organ, that it would minister food to bad passions, and that it would tend to create jealousies in the country. We have now had a pretty long experience, and it is no more than justice to the gentlemen by whom that press is conducted, no more than justice to them, without the smallest reproach to others who have conducted a press of a somewhat different character, to say that every one of those sinister anticipations has been signally disappointed, and that these organs of public opinion, copies of which are sold at so cheap a rate as to find their way into almost every man's house, have been second to none in their regard for moral principle, in their respect for personal character, in their fidelity to the duties they have undertaken, and, lastly, let me add—for it is a vital element—in the cause of attachment to the law and in loyalty to the Throne; and that press in my opinion has proved to be not only a means of conveying innocent and useful information to the masses of the population, but it has been a powerful political engine, contributing to the stability of our institutions, conveying home to the mind of the working man a sense of his interest in the country, and is in point of fact entitled in the highest sense to the honourable designation of a thoroughly Conservative power. I trust that we may venture to look forward to a continuance and an increase of those feelings of mutual regard which now happily unite together the several portions of this community, and I trust that also it may be the happy privilege of the people of this country to be governed in future generations as they are governed in the present age, by a Sovereign whose affection for her people, whose knowledge of the principles of the Constitution, whose fidelity and attachment to those principles, and whose exhibitions of every personal virtue and qualities of excellence may make her a model for imitation, as well as an object, which she is, of tenderest and warmest attachment throughout all classes of the community."

On Wednesday Mr. Gladstone fulfilled the main purpose for which he had visited Bolton, by formally opening the Park at Farnworth, so liberally bestowed on the town by Mr. Barnes, M.P. The day was observed as a general holiday, and the park and all the roads leading to it were decorated with flags, banners, and triumphal arches. Mr. Gladstone addressed the meeting at great length, and reviewed the past and present state of the factory system, the character of the factory population, the effect of their occupations on the public health, and the value of public parks in cultivating a love of nature and natural objects. A *déjeuner* then took place in the Pavilion, after which Mr. Gladstone proceeded to Liverpool.

Bristol.—The Church Congress was opened in this city on Tuesday, under the presidency of the Bishop of Gloucester and Bristol. Divine service was first performed at the cathedral, where a sermon was preached by the Dean of Ely on the text "Go and do," which was afterwards eulogised by the President as one of the noblest inaugural addresses which could possibly have been delivered. In the afternoon the actual business of the Congress commenced at the Victoria Rooms, when the Rev. Canon Kennaway read a paper on the increase of the episcopate, in which he advocated the creation of suffragan bishops without seats in Parliament, and the admission of archdeacons to episcopal orders. Prebendary Mackarness, the Rev. B. Belcher, the Earl of Harrowby and others spoke strongly in favour of a large increase of the episcopate. Mr. Beresford Hope urged that dioceses should be made conterminous with counties; and that the increase of the Episcopate should be forced on the Government by a simultaneous attack from the bishops and the laity. The Rev. W. Bamfield, a naval chaplain, advocated the appointment of a bishop who should have charge of the religious condition both of the Royal Navy and merchant service. The President, in summing up the discussion, congratulated the Congress on the fact that the subject had been discussed with much greater unanimity and a desire for agreement than when it was started at the Cambridge congress. The Rev. Canon M'Neile introduced the next subject—"Home Missions and Lay Agency," in which he contended that preaching was neglected, and too great attention paid to ritualism, by which great estrangement from the Church was produced, and consequently that there was a great demand for the operation of the home mission, including lay agency. The Rev. Canon Woodgate protested against the remarks of Canon M'Neile against ritualism and music. Prebendary Trevor read a paper on the history of synods, in which he concluded that the reform most immediately called for in the Church was the revival of the diocesan synod. The Rev. T. Lathbury, incumbent of St. Simon's, Bristol, and the Rev. A. T. Lee read papers on the same subject, the latter relating specially to synodal action in the Church of Ireland. Dr. Pusey, who was received with loud cheers, advocated the revival of synodal action, more especially in view of the recent judgments of the Judicial Committee of the Privy Council. The Archdeacon of Taunton, the Rev. C. Keble, and the Right Hon. J. Napier also advocated a revival of synods. The subject of rural deans and decanal chapters was introduced by the Archdeacon of Ely and the Rev. Prebendary Maine. Prebendary Mackarness, Mr. R. R. Rowe, of Cambridge, the Rev. A. T. Lee, and Mr. Davies, of the Church Institution, took part in the discussion which followed, all testifying to the value of ruro-decanal chapters. This closed the afternoon meeting. On Wednesday the Rev. T. V. French read a paper chiefly on "Missionary Colleges," suggesting that one of the Arabic Professorships at Oxford might be advantageously employed to train up a body of missionaries skilled in the language of Mahomedan countries; and Canon Lyttelton read a paper proposing the establishment of professorships for missionary history. Mr. Beresford Hope read a paper in favour of the establishment of Collegiate Churches in large towns. Mr. Knott read a paper in favour of parochial subdivision; and Mr. Clabon read a paper recommending the creation of church defence committees in each parish. Archdeacon Denison and Lord Lyttelton thought that this suggestion was inapplicable to country parishes. Canon Trevor thought that Mr. Hope's suggestion for the establishment of collegiate churches was a thoroughly conservative measure, while the subdivision of parishes was essentially a democratic and unecclesiastical measure. The Rev. F. Lyne (Brother Ignatius) then presented himself in his Benedictine dress, with shaven head, and sandalled feet, and was received with a storm of hisses. The President said that Mr. Lyne was a member of the Congress and a deacon of the Church, and he was sure they would do wisely and respect themselves in hearing him. Mr. Lyne then spoke at some length on the defects of the parochial system, and argued that they were only to be remedied by men who would follow such rules as those of St. Benedict, and by the restoration of monasteries in our large towns. At the close of his speech, which was frequently interrupted by cries of disapprobation, Mr. Lyne left the room. The Earl of Harrowby then rose and said that if it had not been for the startling apparition which had just disappeared, he should not have taken part in this discussion. A few years ago they would as soon have expected to see St. Benedict himself appearing before them. He thought it a matter of regret that any one who undertook to deal with the masses of vice and misery in our great towns should raise obstacles in his own way by offending the feelings of other people. He asked if a man could not attempt to do good among the labouring classes without wearing an obnoxious habit, or without shaving his crown. If a man thought that everything should be done for the spread of the doctrines of a Reformed Church, was it necessary that he should put on an appearance which was connected with the idea of a totally different Church? He hoped that these men would reconsider their course, and reflect whether it was not possible to extract all the good which might be found in the inner principle of the rule of St. Benedict without wearing his garb. Papers were then read on Church Architecture and Decoration, on Free and Open Churches, on the Augmentation of Small Livings, on Dilapidations, on the mutual relations of the Church in England and Ireland, and on the Social Hindrances to the Spread of Christianity, on all of which brief discussions followed. On Thursday the Dean of Canterbury read a paper on the Education of the Clergy, in which he advocated an "apprenticeship" of candidates for holy orders, in order to make them acquainted with parochial work. The paper excited general interest, and the discussion upon it was of great length and importance. The other papers read were on Associations for the relief of poor and aged Clergy, Church Finance, and the Revised Code. It was announced in the course of the day that the Congress will be held next year at Norwich.

Canterbury.—The Archbishop of Canterbury commenced his primary visitation at the Cathedral on Tuesday. The following are extracts:—

"Much uneasiness had been caused by the frequently repeated assertion that the number of candidates for Holy Orders had within the last few years considerably diminished, and that the proportion of candidates from the Universities had decreased; but there were some facts which seemed to contradict that statement. Between the year 1850 and the year 1861 the number of clergy in England and Wales had risen from 17,621 to 19,193, showing an addition of 1574; and of the 285 candidates ordained at Christmas, 1863, 203 were from Oxford and Cambridge, 22 from Durham and Dublin, and the remainder from the smaller Colleges. It was obvious, however, that the number of small benefices, and the opportunities afforded by competitive examination for more lucrative employments, were calculated to influence unfairly the supply of candidates for the ministry; and the vast increase of new churches and the additional staff of curates employed in some of the old churches might account for the difficulty of procuring sufficient assistance. In spite of the increase of the clergy between 1850 and 1861, it was quite clear that the number of candidates ordained had diminished on an average about 65 per year. The fact of a large increase in the number of the clergy, together with the vast annual addition to the population, forced strongly upon attention the necessity of an increase in the Episcopate. That some of the dioceses were much too large for ecclesiastic supervision had been long felt. There were too ways of supplying this acknowledged want—the subdivision of dioceses, or the appointment of suffragan bishops. At the present moment the diocess of Exeter demanded such relief, both on account of its extent and population. He regretted that the hopes which had been entertained of the formation of a see of Cornwall had been frustrated for the present. The question of the appointment of a suffragan bishop for the diocess of Exeter was still under consideration. As a means of facilitating the attendance of the public at places of worship, there had recently been established an institution entitled the National Society for Promoting Freedom of Worship in the Church. He had not as yet felt himself at liberty to give any countenance to that society. He fully recognised the importance of having the churches open to the poor without calling upon them to pay for the seats, but he believed that the movement to which he alluded transgressed the ancient rules of the Church, which imposed upon the churchwardens the duty of assigning seats to the parishioners. No doubt that privileges given by law had in many instances been abused, and illegal claims had been set up by persons of their right to dispose of these seats. It was most important that all persons should have their minds disabused of that erroneous impression, for as soon as a person ceased to reside in a parish he had no claim to any seat in the church. This new society proposed to deprive the churchwardens of the function which they now exercised, and to throw open every seat to the whole community. If the society would confine its efforts to the establishment of freedom of public worship, the abolition of all payments for seats, and the provision of adequate stipends for the clergy, it should have his willing countenance. The issue of a Royal Commission to consider and revise the various forms of subscription and declaration made by the clergy had naturally attracted the attention of Churchmen to its proceedings. The idea of abolishing all clerical subscriptions had met with little favour from either the clergy or the laity; but there could be no doubt that the existing forms of subscription were too numerous, and that some of them might be modified without lessening the moral obligation of the subscribers to maintain the tenets of the Church inviolate. The labours of the commission had been brought nearly to a close, and he confidently anticipated that the result would prove satisfactory to the members of the Church in general. He would now pass to that much agitated question—the revision of the burial service. Some years since a considerable body of the clergy—about 4000—petitioned the Legislature for relief from the grievance of reading the burial service over every corpse, not excepting those who had died unbaptized, or who had been excommunicated, or laid violent hands on themselves. The petitioners sought a remedy not in the alteration of the service, but in a change of the law. He confessed that he entertained a strong objection to the changes proposed to be introduced. That there were incon-

veniences and evils connected with the burial service it would be vain to deny, but he looked upon the proposed mode of mitigating those evils as worse than the disease. The change proposed was repugnant to the feelings of the great body of the clergy, and in opposition to their deliberate opinion. He did not think it would be wise to proceed. Certain remedial alternatives had been suggested, but he did not think they would commend themselves to the Church The question of the revision of a single office in the Liturgy would lead to the consideration of its general revision, and any such proposal would be met by the strenuous opposition of the great majority of the clergy of the Church, whatever might be their peculiar bias on theological questions. He did not think it necessary to enter further into the discussion of the question, and would merely say that having expressed his willingness to consent to the appointment of a Royal Commission for a revision of the table of Lessons and some other matters, it was probable that on the reassembling of Parliament such a commission would be appointed. There were other topics engrossing the attention of Churchmen which could not be so soon dismissed. There had existed within the pale of the Church during the last two generations disciples of two distinct schools of thought. The basis of one section had been rather an exercise of individual liberty in the interpretation of the sacred writings, with less reference to the principles laid down by Church authority; while the other looked to that authority for direction and aid in ascertaining the meaning of Holy Scripture. Both were equally anxious to retain the Scripture as God's Word. Recently, however, a third party had arisen, small indeed in number, who claimed the right of maintaining that although the Holy Bible contains the Word of God, the Word of God is not coextensive with the sacred volume, and that it is left to each individual to decide which is the Divine element and which is the human, and to reject that which does not approve itself to a man's verifying faculty. This new principle struck at the root of all fixed doctrine as deducible from Holy Scripture, for each minister and each lay member would feel at liberty to eliminate all such passages as were repugnant to his own views, feelings, and convictions. It might well be asked what would become of Christianity if it was to be surrendered to the caprice of every mind. It might be urged that the Articles of the Church would act as a check on these dangerous innovations; but how long would that be suffered to exist when the basis had been sapped to its foundation? Each distinctive doctrine of Christianity would disappear in turn from the formularies of the Church, and the result would be simple deism—that deism which reared its head towards the close of the 17th century. But the friends of the Church need not feel any misgivings, for as she had outlived other assaults, she would outlive the present. Another error to be combated at the present moment was that which had been raised with respect to the inspiration of Holy Scripture. It might have pleased Almighty God to have communicated His word and will in some such supernatural manner as to have conveyed it in every case to the ear and heart of men without the intervention of any subordinate agency. There would then have been no question of the Divine and the human element. But it seemed good to him that men should be the instrument and channel by which the revelation of Himself and His counsels towards men should be imparted, and in intrusting the prophets and apostles with that commission He did not divest each individual of his peculiarities of temperament and talent. Thus far we must be prepared to allow the human element, and to acknowledge that those who were the appointed channels of communication were not mere machines. There was a wide difference between the authority which teaches the very heart of an inspired writer and the absolute dictation of every word by the Holy Spirit. All we ought to maintain was the absolute and universal authority of every portion of Scripture as written under the Divine superintendence which guarded the writer from error—the exact words in some cases being dictated, as in the case of the Decalogue. The theory of complete verbal inspiration was not necessary to the maintenance of the position held by the Church, that the canon of Scripture not only contains God's Word, but God's Word written; nor were the teachers of the Church called upon to lay down any new theory of inspiration, but rather to invite her sons to adopt the declaration of unfeigned belief in all the canonical Scriptures of the Old and New Testament as the written Word of God, and to teach the people from it as having that Divine authority. It was satisfactory to him to find that this view of inspiration was in accordance with the opinion expressed by his predecessor seven years ago. It might be asked, "If these be your views of the authority of Scripture, how will you reconcile some of its statements with the more recent discoveries of science?" He thought that too much alarm had been felt in some quarters on that point. The Word of God did not profess to teach us science. The object of revelation was not to teach us as to the secrets of nature, but to make us wise unto salvation. The Word of God might incidentally touch on subjects bearing on physical science, but it never introduced them with the view of affirming scientific truth. Unless the Word of God distinctly initiated a proposition to be received as revealed truth, we need not allow ourselves to be perplexed by any apparent discrepancy between the two. Let Science pursue her own course, and let us not be always imagining that she ever entertains designs hostile to the truth of God's Word. Let us devote ourselves to our holy calling, in the full assurance that our faith rests on a foundation which it is impossible for any human efforts to subvert. It was most satisfactory to find that so many able replies had been published to the attacks which had been made on the authority of the Holy Scriptures, and particularly to the critical examination of the Pentateuch and the Book of Joshua. It was his firm belief that if the negative school of theology pursued its course in the same direction and in the same spirit, it must before long work out its own condemnation. It must soon exhibit the consequence to which the principle leads,—the negation of all that is distinctive in Christianity,—and then would follow what had been witnessed in Germany, a yearning after a definite system of religious belief, to meet the wants and cravings of fallen nature, and a return to that belief which alone can satisfy it. Considerable alarm had been felt as to the recent decision of the Privy Council, but he thought that no general conclusion as to any future decisions could be drawn from the tenor of that decision, and much of the apprehension which prevailed was, he thought, quite groundless. His desire was to abate the alarm which was not unnaturally felt when the decision was supposed to have had a much wider scope, and to dissuade his rev. brethren from committing themselves to any particular line of conduct in consequence of apprehensions which might have less foundation than many persons imagined."

DRIFFIELD.—The rapid spread of incendiarism in the stackyards of the Yorkshire Wolds and North Lincolnshire, 10,000*l.* worth of produce having been destroyed last week, has induced the Woldsmen to appoint night-watchers, with dogs, in their stackyards, the same as during last winter. On Monday night the stackyard of Mr. R. Thompson, of Harpham, a village about midway between Burlington and this town, just at the foot of the Yorkshire Wold district, was found to be on fire. The yard contained several corn stacks, and on one side a large pile of straw, the produce of some days' threshing. The whole of this straw, with a tare-straw stack and a haystack, was completely burnt, but as the wind was blowing from the corn stacks, they were saved. The damage done was about 300*l.* The fire was seen for many miles. The police are said to have a good ground for suspecting a well-known person as the incendiary in this case. As this is the sixth fire which has occurred within a few days, it has been resolved to form little confederations of adjoining parishes, and to raise and support a fire brigade, and provide a good engine in each centre. Many of the farmers are threshing their corn rather than risk its destruction.

LEEDS.—On Thursday Vice-Chancellor Kindersley made an order, in accordance with three petitions which were presented to him, for the winding up of the Leeds Banking Company, and appointed Mr. Turquand sole provisional liquidator, subject hereafter to an application to the Court in term.

MANCHESTER.—The monthly meeting of the executive committee of the Central Relief Fund was held in the Town Hall on Monday, the Earl of Derby in the chair. Mr. Maclure in his monthly report stated that there were in September 212,520 cotton operatives in full work, 102,047 on short time, and 135,821 out of work, and by comparison with previous months it thus appeared that the improved condition of things which commenced in the early part of the year had been replaced by a gradual increase in the distress, which had reduced the cotton operatives almost to the condition they were in last January. The relief table was, however, more favourable, doubtless from the fact of cotton operatives getting other kinds of employment. In September the number in receipt of relief was 103,002, as compared with 196,116 in January last, and with 468,610 in January, 1863. The greatest amount of distress exists in the unions of Ashton and Glossop. Mr. Rawlinson's report stated that 4879 were engaged directly on public works in September, and some 80 towns, parishes, and districts have adopted the Act. As many as 13,000 men, representing 50,000 persons, can readily have employment on the several public works. Some conversation ensued on the subject of the neglect of certain corporations to place operatives on public works, and Mr. Rawlinson admitted that such was the case, but he had no power to coerce local authorities. Mr. Farnall then read his monthly report, in which it was stated that there was an increase of persons receiving relief in 27 unions on the 1st inst., as compared with the 3d ult., of 12,299. In the afternoon the meeting of the general committee was held in the mayor's parlour, the Mayor of Manchester presiding. The Earl of Derby, and most of the noblemen and gentlemen who had been present at the meeting of the executive committee, also attended. Mr. Maclure's report stated that during the months of June and July there was a steady increase in the employment of the factory population. The committee therefore urged the local committees to close their distribution of relief during the summer months, while out-door labour could be resorted to, in order that the local and general sources of relief might be husbanded for a period of distress. During the last month the improved condition of the cotton districts had been so much disturbed that on the 24th of Sept. 42,973 had been added to the number of factory operatives working short time, and 33,725 to those out of work, as well as 9316 to the number of persons receiving relief from boards of guardians and district relief committees. During the last fortnight there had been a further diminution of work, and it is estimated that about 114,000 persons are now aided either by the guardians or district relief committees. The report then went on to refer to the operations of the Public Works Act, both past and prospective. Dr. Watts made some remarks upon numbers of persons employed under the Act, and the number unemployed, which he did not consider quite a favourable indication of the success of the measure, and he criticised its operations in other respects. Several other gentlemen spoke on the subject, including Mr. Farnall, who said that there were now on the pauper lists of the unions in the cotton districts 300 able-bodied men, wholly unemployed, and who were fully capable of being put to out-door work, provided the local authorities could find it for them. Sir J. P. Kay Shuttleworth, speaking on the general question, said that the general opinion of the central executive committee was that, though the phenomenon they were now meeting might increase in its gravity, and assume perhaps even a more alarming appearance in the course of a week or two, yet that it would not be prolonged. As a committee they thought that they might possibly have to meet successive crises of this kind, but that the various periods of depression would be succeeded by periods in which the pressure would be relieved. The committee were aware that in publishing a fair and full account of the amount of balance which they had in their hands—210,000*l.*—they might produce an impression that they had means for the relief of the wants of the district equal to those which they had wielded before—he meant equal in proportion to present wants as compared with those of former times. The impression which the central committee had was this—that, however transient the pressure might be, it was so likely again to occur that it required the utmost caution upon their part; the fund which they at present had in their hands was not more than adequate; and the most cautious expenditure and the utmost vigilance on their part were necessary to meet the wants of the district. The report was then received and adopted.

OXFORD.—A meeting of the provost and fellows of Queen's College took place on Tuesday for the election of a principal of St. Edmund Hall, when the choice of the society fell upon the Rev. Edward Moore, late fellow on the consolidated foundation and tutor, and dean of Queen's.

ST. IVES.—The annual meeting of the Huntingdonshire Agricultural Society was held in this town on Friday. Lord Robert Montagu, in returning thanks for the county members, spoke as follows on the Sewage of Towns question:—

"In rising to respond, he must apologise for not being present at their July fair. When they caught a truant they generally asked him where he had been and what he had been doing, but, as their local newspaper had said he was away he would make a clean breast of it. He was doing his duty looking after the interests of agriculturists in the capacity of the health of the towns. He had been the chairman of the Sewage Committee. That involved considerable labour. In the first place there was a very extensive correspondence to keep up, then to master the subject, to look for witnesses, interviews with the witnesses to prepare them, and, lastly, it was the duty of the chairman to correct the report of the evidence that was given. The committee was composed of hard, shrewd men of business, who were not easily led. Among them were Mr. John Bright, Mr. Wilson, Mr. Cowper, the Chief Commissioner of Works, and many others. He purposed to give them a sketch of the proceedings. He had not run the risk of supporting a theory without evidence. Before that people used to tell them why they should not be paid to put the sewage on their land. The only question that was raised was how it could best be done. That he might make himself understood he would take a few examples. A Government engineer said that in the Thames there was in part of the year there was more sewage than water. The Thames supplied 800,000 people with water. In Manchester, which was on the Medlock, Mr. Rawlinson said, you might be seen walking on the scum of its surface. Was it necessary that some steps should be taken to put a stop to a practice like this? Some would say that this water was filtered, but men of science had stated that filtering did not take from water the qualities of putrescence, and that it was always capable of engendering disease. Mr Rawlinson, on several other similar matters, stated that there was spread over a bridge where formerly a cart could pass, but now a boat could not get through. The land around, meanwhile, was waterlogged. In the rivers the trout and fish were killed by the sewage. At the mouth of the Dee 300 families depended on the salmon they caught. There might be many hundreds and thousands supported in the same way at the mouth of the Thames. In many parts cattle had been killed by drinking water in the brooks where sewage had been introduced. Besides the safety which was needed for the public health of the population should be considered, and hundreds of lives might be saved. The noble lord then referred to the state of the Ouse, and said that if it were added to it would do them a great injury, and, as the Yankees would say, 'The tall spectre has arisen from Kimbolton to Huntingdon.' A few years ago Croydon was emptying its sewage into the river. Complaints were made, and at last 14 different actions were brought against the Town Council, and seven injunctions were put out against them, which with the suits cost 10,000*l.* Other experiments cost them 2000*l.*, and they got a final injunction from Vice-Chancellor Wood, who said the sewage must be turned upon the land. The price of land rose at once, and the corporation were compelled to pay 4*l.* an acre for it. They immediately let it at 5*l.* an acre, at a profit of 250*l.* a year. The voice of lamentation was now heard because they had contracted for 21 years with a farmer that he should take the sewage for 5*l.* an acre. They came to the committee, and said they could make a guinea an acre. They wanted to extend the area of the sewage, but could not, on account of the contract. It thus paralysed the town. He must conclude, as he had already occupied much time with what he had fondled as his baby. Some would, perhaps, retort that it was a very dirty one, but it did not follow that there was extreme poverty; indeed, he would say that it was one of the richest."

Ireland.

INAUGURATION OF FATHER MATHEW'S STATUE.—The statue of Fathew Mathew was unveiled at Cork on Monday. An imposing procession traversed the principal streets of the town, and halted opposite the statue in Patrick Street, when the Mayor, J. Maguire, M.P., addressed them on the excellence of the man in whose honour it was erected. The statue was then unveiled amid general cheers, and the whole proceedings passed off without accident or ill-feeling.

ATTEMPTED MURDER IN DONEGAL.—The *Mail* of Thursday evening publishes a private telegram, stating that Mr. Wilson, the steward of the Earl of Leitrim, has been shot in Donegal, and it is feared that he is mortally wounded.

OUTRAGE IN LONGFORD.—A brutal, and possibly fatal outrage was perpetrated on Sunday evening at Ballinamuck, in the county of Longford. It appears that a feud existed between three families named Farrell, Cassidy, and Merriman, who resided near each other, and three brothers of the Merriman family having determined to silence their opponents, waylaid Patrick Cassidy and James Farrell, and beat them in a most savage manner with shovels, spades, &c. During the affray Patrick Cassidy received a severe blow on the head with a shovel, which leaves him in a precarious state. Farrell was not beaten so much, but sustained some injuries. After satisfying themselves the brothers decamped, leaving their victims weltering in blood. The police have captured Peter and James Merriman, but Francis has escaped. Cassidy is considered to be in danger.

THE CLADDAGH FISHERMEN.—The Claddagh fishermen have given another proof of the lawless spirit which actuates them. By one of their regulations they have bound themselves to fish only every second night; and, even though the bay may be filled with fish on the prohibited nights, they will neither put

es themselves nor allow others to do so; and any who transgress this law are sure to incur their vengeance. On Thursday week a shoal of herrings visited the bay, greater than was ever witnessed before. The water was literally alive with them, and they swarmed even up to the dock quays. But it was one of the night's duty not to rest by the Claddagh men, and though Captain Oliver, with a few men who did not share in the opinions of their fellows, put to sea, and shot their nets at the mouth of the harbour, the people rushed to the pier to inflict vengeance on those who had dared to infringe their rules. Two boats were manned, and went out to engage the intruders, and threw large stones at Captain Oliver, his men, and the crew of the second boat. Captain Oliver expected an attack, and consequently was armed: and after some time he fired at one of the boats with the view of frightening the men. The stones, however, still continued, and the nets had to be taken up. A man named Canavan, seeing the attack from the dock, procured aid and went out to assist the men who were attacked; but all had to return to the dock, some of the men being seriously injured. Some of the assailants are known and will be prosecuted. On Friday night the Claddagh men thought proper to go out and captured in a few hours nearly half a million of herrings, which brought from 15s. to 1*l.* per "mace" of 500.

DOUBLE MURDER AT BALBRIGGAN.—On Monday last two sisters called Murphy were murdered at Hollywood Great, four miles from Balbriggan. They lived in comparative comfort with their brother, a farmer, who went on that day to visit a married sister who lived at some distance. On his return he alarmed the neighbours, and stated that he had found one of his sisters lying murdered in the house, and another lying dead in a field at some little distance. He has been taken into custody on suspicion that he is himself the murderer, on the ground that there had been disputes between him and his sisters in reference to their father's will. The jury at the inquest returned a verdict of Wilful Murder against some person or persons unknown. The prisoner was then remanded on a magistrate's warrant till Tuesday next, when he will be brought up for further examination at Balbriggan.

Railways.

ACCIDENTS ON THE SOUTH-WESTERN.—A collision took place on Monday night, near the old Godalming station, on the South-Western. An up train from Godalming was run into by the Portsmouth down train, when the engine and tender of the former were thrown over and much injured, and one carriage was nearly shattered to pieces. The passengers escaped with comparatively little injury. The extinguishing of an auxiliary signal lamp is assigned as the cause of the accident. On Tuesday evening the up passenger train from London ran into a goods train at the Putney station. The break van of the goods train was shattered to pieces, and several of the trucks were thrown off the line. The engine of the passenger train was also partly thrown off the rails, but no lives were lost, although many of the passengers were shaken severely by the shock.

ACCIDENT ON THE GREAT NORTHERN.—On Friday evening the Midland express, which left King's Cross at 7 o'clock, ran into a goods train, which was shunting at Welwyn Station. The engine of the express was thrown off the rails, but both the fireman and stoker escaped with slight injury. Two or three carriages next the engine were smashed, but fortunately they were unoccupied. In the other carriages many passengers sustained contusions, and one had his ribs broken, but no one was dangerously hurt. The goods vans and their contents were scattered in every direction, covering both the up and down lines, which were thereby completely blocked for many hours.

Obituary.

THE REV. SIR WILLIAM MARRIOTT SMITH-MARRIOTT, Bart., died on the 4th inst. at the rectory, Horsmonden, Kent, in his 64th year. He was the second son of Sir John Wyldbore, second baronet, by the daughter and co-heiress of the Rev. James Marriott, D.C.L., of Horsmonden. He was educated at Trinity College, Cambridge, where he graduated B.A. in 1825, and M.A. in 1829. He was appointed rector of Horsmonden in 1825. He succeeded to the baronetcy on the death of his brother in 1862, having assumed by sign manual, in 1857, the additional surname and arms of Marriott. He married first, in 1832, the fourth daughter of Mr. Thomas Law Hodges, of Hemstead, Kent, by whom he leaves issue; and secondly, in 1844, Frances, the third daughter of Mr. Robert Radclyffe, of Foxdenton Hall, Lancaster. He is succeeded by his eldest son, William Henry, born in 1835.

SIR CHARLES HENRY COOTE, premier baronet of Ireland, of Ballyfinn House, Queen's County, died on the 8th inst. at 5, Connaught Place, at the age of 74. He succeeded his kinsman, Lord Mountrath, in 1802, being great grandson of the great grandson of the first baronet. He represented the Queen's County in the House of Commons from 1821 to 1847, and regained his seat in 1852. He was colonel of the Queen's County Militia. He is succeeded by his son, Charles Henry, born at Ballyfinn, in 1815.

THE HON. AND REV. GEORGE SPENCER, Father Ignatius of the Order of Passionists, died a few days since. He was the youngest son of the second Earl Spencer, and brother of the third earl, who was better known by his courtesy title of Viscount Althorp. He was born in 1799, and was educated at Eton and Trinity College, Cambridge, where he graduated in 1820. In 1828, having entered priests' orders, he was presented to the family living of Brington, near Northampton, which he held until 1830, when he seceded from the Established Church and joined the communion of the Church of Rome. He studied for some time at Rome, and then became a priest of that Church, eventually joining the Order of Passionists. He occasionally presented a curious appearance in the streets of London in his mediæval costume, his naked legs, and feet strapped up with wooden sandals.

MR. WILLIAM TRIPE, for many years proprietor of the Surrey Zoological Gardens, died on Sunday last, after a short illness, at his residence, Cringleford, near Norwich. He became proprietor of the gardens in 1844, having previously been secretary to Mr. Cross, the original founder of them, and he continued the proprietorship till 1856, when the property was vested in a limited liability company. The grand music hall was afterwards used as a chapel by Mr. Spurgeon, and is now employed as the temporary site of St. Thomas's Hospital.

Miscellaneous.

NATIONAL EXHIBITIONS.—The returns of the number of visitors to national institutions give the following results in 11 of their number placed in the order in which they attract the public:—South Kensington Museum, National Gallery, British Museum, Kew Gardens, Hampton Court, Houses of Parliament, the Tower, Windsor Castle, Museum of Practical Geology, National Portrait Gallery, Soane Museum. In 1861 they were visited by 2,815,445 persons; in 1862, the Exhibition year, by 4,641,770; in 1863, with a sort of reaction in sight-seeing, by only 2,656,773. But the South Kensington Museum and Hampton Court Palace had more visitors in 1863 than in 1861.

IMPROVEMENTS IN THE TEMPLE.—In addition to the renovation of the Temple Church, which has just been completed, the benchers of the Inner Temple are making great improvements. The hall and library are to be redecorated, and the hall ventilated on an improved principle. An immense row of chambers faced with white stone, has been erected on the vacant ground beyond Crown Office Row, facing the Temple Gardens and Fig Tree Court.

BIRTHS.—On the 6th inst. at Dunerub Park, Perthshire, the Lady Ro[illegible] of a son.—6th inst. at 9, Chesterfield Street, Mayfair, the Hon. Mrs. OKEOVER of a daughter.—7th inst. at her residence, 32, Prince's Gardens, Kensington, Lady DONALDSON, wife of Sir Stuart Alexander Donaldson, of a son.—11th inst. at Streatham, Lady KAY, wife of Sir Kenyeth Grove Kay, Bart., of a son.

MARRIAGES.—15th inst. at the cathedral of Freetown, the Hon. E. G. L. COCHRANE, Commander R.N., youngest son of the late Earl of Dundonald, to ADELAIDE G., only daughter of his Excellency Major BLACKALL, of Colamber Manor, county Longford, Ireland, and Governor of Sierra Leone.—11th inst. at Christ Church, Upper Hyde Park Gardens, the Hon. ALGERNON SYDNEY ARTHUR ANNESLEY, only surviving son of the late Viscount Valentia, to HELEN SYDNEY, younger daughter of the late GRIFFITH RICHARDS, Esq., Queen's Counsel.—5th inst. in Walton Church, the Hon. and Rev. WALTER BERKELEY PORTMAN, youngest son of Lord Portman, and rector of Corton Denham, to ALICE, youngest daughter of the late Sir JOHN MORDAUNT, Bart., and sister to Sir Charles Mordaunt, Bart., M.P. for South Warwickshire.—6th inst. at St. James's, Piccadilly, the Hon. RICHARD EDWARDES, to ROSA, widow of the late HUGH WM. BUTLER, of Bathwick Hill, Somerset.—6th inst. at Loseby, Leicestershire, C. S. BURNABY, Esq., major Notts R.V., youngest son of the late Colonel Burnaby, of Evington, Leicestershire, to ANNE ELIZABETH, youngest daughter of the late Sir F. G. FOWKE, Bart., of Loseby Hall.—6th inst. at Mount Trenchard, JOHN RAYNOR ARTHUR, Esq., of the Bombay Civil Service, third surviving son of the late General Sir George Arthur, Bart., K.C.B., to AILEEN, third daughter of the Hon. STEPHEN SPRING RICE.—11th inst. at St. Peter's, Dublin, the Rev. JOHN WESTROPP BRADY, of Aghadoe, Killarney, to CHARLOTTE LOUISA, second daughter of the LORD CHANCELLOR of IRELAND.—7th inst. at Canterbury Cathedral, JULIAN, third son of the late JOHN MARSHALL, Esq., of Headingley House, Leeds, to FLORENCE ASHTON, eldest daughter of the Rev. JOHN THOMAS, canon of Canterbury.—6th inst. at St. Mary, Barnes, CLEMENT ALEXANDER MIDDLETON, of the Bombay Civil Service, barrister-at-law, eldest son of C. J. Middleton, Esq., registrar of H.M.'s Court of Probate, to EDITH, youngest daughter of the Rev. CANON MELVILL, B.D., rector of Barnes, and chaplain in ordinary to the Queen.—12th inst. at the chapel of the Spanish Embassy, DON JOSÉ BERNARDINO FERNANDEZ DE VELASCO, DUKE DE FRIAS, to VICTOIRE, youngest daughter of M. W. BALE, Esq., of Upper Seymour Street, Portman Square.

DEATHS.—On the 7th inst. at her residence in Hill Street, Berkeley Square, the Hon. FRANCES BURROWES, widow of Colonel Thomas Burrowes, of Dungan Castle, Meath, and daughter of Lord Decies, last Archbishop of Tuam, aged 93.—7th inst. at Risholme Rectory, Lincolnshire, ELIZA, widow of the Right Rev. JOHN KAYE, Lord Bishop of Lincoln, aged 83.—8th inst. in Paris, HANNAH JANE, widow of Captain the Hon. Archibald COCHRANE, R.N., aged 75.—1st inst. JOSEPH D. HOLDFORTH, Esq., of Caley Hall, near Otley, J.P. for the West Riding of Yorkshire.—10th inst. at 16, Mansell Street, G. S. WALLIS, Esq., J.P. for Middlesex, and member of the Metropolitan Board of Works, aged 76.—4th inst. at 127, Strand, Captain A. TORRENS, late of the 76th Regiment, brother of the late Colonel R. Torrens, and Proprietor of the *Globe* Newspaper, aged 76.—Sept. 15, at Orleans Camp, near Quebec, Canada East, Lieutenant GERALD FITZGERALD, the 1st Batt. King's Own Hussars, aged 23.—3d inst. at Dover, Lieutenant BEZELS REECE, 37th Regiment, second son of the late B. Reece, Esq., of Barbadoes.—7th inst. JOHN RANDALL, Esq., of 19, Upper Bedford Place, Russell Square, and the Inner Temple, aged 65.—3d ult. at Bermuda, Dr. DAVID MILROY, M.D., F.R.C.S.E, 30th Regiment, son of the Rev. Andrew Milroy, Edinburgh.—2d inst. at Lausanne, Dr. WILLIAM RUSSELL, M.D., eldest son of the late Dr. James Russell, M.D., Edinburgh.—1st inst. at The Parsonage, Littleborough, Lancashire, the Rev. THOMAS STOCKIS MILLS, late incumbent of that parish, and D.L. and J.P. for Lancashire and Cheshire and the West Riding of Yorkshire.—5th inst. at Eastbourne, the Rev. WM. BEAUCLERK ROBINSON, M.A. Oxon, late rector of Lithington, Sussex, aged 82.—8th inst. at The Rectory, the Rev. E. WADE, M.A., rector of Blaxhall, and incumbent of Wantisden, Suffolk, aged 67.

Markets.

BRITISH WOOLS.—LONDON, Oct. 14.

There has been more business doing, and a reduction has been submitted to on some few parcels. Our stocks, however, are generally light, and many holders prefer waiting till next year before submitting to losses.

COVENT GARDEN, Oct. 15.

The market is now crowded with all kinds of hardy fruit in season, especially Pears, of which there is abundance of admirable specimens. Grapes are likewise sufficient for the demand, and there is also a fair supply of Pine Apples. Kent Filberts and Cobs fetch from 7os. to 80s. per 100 lbs. New Walnuts are very plentiful, and Oranges begin to make their appearance. Tomatos are large and fine. For Potatos there is a heavy sale. Flowers chiefly consist of Orchids, Heaths, Asters, Fuchsias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Apples, per sieve, 1s to 2s
Grapes, per lb., 1s to 3s	Oranges, per 100, 6s to 12s
Melons, each, 1s to 4s	Lemons, per 100, 6s to 12s
Peaches, per doz., 6s to 12s	Nuts, Barcelona, do., 16s
Figs, per doz., 1s to 2s 6d	— New Brazil, do., 16s.
Plums, per ½ sieve, 2s to 4s	Almonds, do., 18s to 20s
Pears, per doz., 1s 6d to 3s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 2s to 4s	Shallots, per lb., 6d to 8d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 6d to 8d
— Rocks, do., 45s to 55s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
Carrots, per bunch, 6d to 9d	Horse Radish, p. bunch, 4s to 6s
Turnips, p. bunch, 6d to 8d	Mushrooms, p. pott., 1s to 1s 6d
Cucumbers, each, 4d to 1s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Oct. 13

Prime Meadow Hay	80s	to 110s	Clover, old	100s	to 130s
Superior do.	—	—	New Clover	—	—
Inferior do.	—	—	Do. second cut	90	110
New do.	—	—	Straw	27	32
Rowen	—	—			

HALSEY & EASTON.

CUMBERLAND MARKET, Thursday, Oct. 13.

Sup. Meadow Hay	105s	to 110s	Inferior Clover	100s	to 114s
Inferior do.	90	98	New do.	—	—
New do.	—	—	Straw	31	34
Superior Clover	126	132			

JOSHUA BALLER.

WHITECHAPEL, THURSDAY, Oct. 13.

Fine Meadow Hay	105s	to 108s	Prime 1st cut Clover	126s	to 132s
Inferior do.	110	114	Inferior do. do.	115	120
Prime New Hay	—	—	Prime 2d cut do.	115	120
Inferior	—	—	New Clover	—	—
Straw	28	32	Inferior do.	—	—

NEWGATE.—Oct. 14.

Best Fresh Butter .. .. 17s per dozen lbs.
Second do. do. .. .. 15s. "
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Oct. 14.

Messrs. Pattenden & Smith report a very active demand for the better portion of the new growth at last week's prices. At Weyhill Fair yesterday a very brisk trade was done at the following prices:—Farnhams, from 8*l.* 8s. to 9*l.* 9s.; Country, from 7*l.* 10s. to 8*l.* 10s.

METROPOLITAN CATTLE MARKET.

MONDAY, Oct. 10.

The supply of Beasts is rather larger than on Monday last; there is a fair demand for best qualities, but prices are lower. Several inferior remain unsold. Sheep are more plentiful, and trade is very dull; lower prices are taken, and a large number remain unsold. Good Calves are in demand at full prices. From Germany and Holland there are 2780 Beasts, 7130 Sheep, 150 Calves, and 30 Pigs; from Spain, 197 Beasts; from Ireland, 640; and 3150 from the Northern and Midland Counties.

	s	d	s	d
Best Scots, Herefords, &c.	5	2 to 5		4
Best Short-horns	4	10 — 5		0
2d quality Beasts	3	4 — 4		4
Best Downs and Half-breds	5	2 — 5		4
Do. Shorn	—		—	

	s	d	s	d
Best Long-wools	4	10 — 5		2
Do. Shorn	—		—	
Ewes & 2d quality	4	4 — 4		8
Do. Shorn	—		—	
Lambs	5	0 — 6		0
Calves	3	8 — 5		2
Pigs	3	4 — 5		0

Beasts, 6950; Sheep and Lambs, 29,060; Calves, 162; Pigs, 390.

THURSDAY, Oct. 13.

The number of Beasts is much larger than for a long time past, yet choice qualities are by no means plentiful, and these make about the same as on Monday. A large proportion of other kinds remain unsold. Although the supply of Sheep is not very large, it exceeds the demand. Trade is unusually heavy, and Monday's prices cannot be maintained throughout. Good Calves are in demand, at full rates. Our foreign supply consists of 1030 Beasts, 3090 Sheep, 255 Calves, and 80 Pigs.

	s	d	s	d
Best Scots, Herefords, &c.	5	0 to 5		4
Best Short-horns	4	8 — 5		0
2d quality Beasts	3	0 — 4		0
Best Downs and Half-breds	5	2 — 5		4
Do. Shorn	—		—	

	s	d	s	d
Best Long-wools	4	8 — 5		2
Do. Shorn	—		—	
Ewes & 2d quality	4	2 — 4		6
Do. Shorn	—		—	
Lambs	—		—	
Calves	3	8 — 5		4
Pigs	3	4 — 5		0

Beasts, 1030; Sheep and Lambs, 3090; Calves, 255; Pigs, 80; Milch Cows, —.

MARK LANE.—MONDAY, Oct. 10.

The supply of Wheat from Essex and Kent to this morning's market was very small, and disposed of at the prices of this day se'nnight. There was a moderate attendance, and foreign Wheat attracted rather more attention than of late, but cannot be quoted dearer. Barley sold slowly at about the prices of this day week. Beans and Peas were unaltered in value. The Oat trade was steady, and Russian brought an advance of fully 6d. per qr. upon last Monday's rates. In Flour there was but little done.

PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk.. White	39	—42	Red	36	—41
— — fine selected runs..ditto	41	—44	Red	39	—42
— — Talavera	46	—53			
— Norfolk	—		Red	—	
— Foreign	35	—50			
BARLEY, grind. & dist., 26s to 30s..Chev.	32	—35	Malting	30	—33
— Foreign..grinding and distilling	22	—27	Malting	28	—31
OATS, Essex and Suffolk	20	—22			
— Scotch and Lincolnshire—Potato	20	—24	Feed	20	—22
— Irish ..... Potato	19	—22	Feed	—	
— Foreign ..... Poland and Brew	20	—23	Feed	18	—21
RYE	31	—33	Foreign	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan.... 33s to 35s..Tick	34	—36	Harrow	34	—36
— Pigeon .... 35s to 40s..Winds.	—		Longpod	—	
— Foreign ..... Small	34	—38	Egyptian	33	—34
PEAS, White, Essex and Kent..Boilers	36	—40	Suffolk	38	—41
— Maple .... —s to —s .... Grey	—		Foreign	34	—40
MAIZE ..... White	—		Yellow	—	
FLOUR, best marks delivered..per sack	35	—40			
— 2d do ..... ditto	28	—34	Country	28	—34
— Foreign ..... per barrel	18	—25	Per sack	32	—36

FRIDAY, Oct. 14.

The weather since the 7th inst. has been fine, but dull. The supplies of English Wheat during the week have continued to be small, which has enabled farmers and factors to

realise the extreme rates previously obtainable. Transactions in foreign have been of limited extent only at former prices. The demand for Malting Barley increases, and late quotations have been somewhat exceeded in Scotland and the East coast markets. The value of Beans and Peas has not undergone any material alteration. Oats have been written cheaper in Liverpool, Hull, Newcastle, and Glasgow, but the improvement of 6d. per qr. established here for Russian on Monday has been maintained. Business in Flour has been dull at previous prices. Since Friday last 61 vessels have been reported off the coast. The floating trade has been extremely quiet; holders resisted the lower offers made for Wheat, and only a few cargoes of Maize having changed hands at late rates, all other descriptions of spring corn must be quoted nominally unaltered, no transactions having taken place. Paris, Oct. 13.—The Flour trade is very dull, and prices have given way 6d. per 280 lb. In Wheat only very little business has been done, and late rates are barely supported. The present stock of Flour is estimated at 29,000 cwt. The six marks for delivery this month are quoted equal to 31s. 3d. per 280 lb. The arrivals of Irish and foreign Oats are large, of English grain small, and of foreign Wheat and Barley moderate. The attendance at this morning's market was very limited, and the little English Wheat on offer was taken at Monday's prices, but foreign being almost entirely neglected, that day's value was quite nominal. Spring Corn was steady, without any alteration in value.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	320 qrs.	810 qrs.	140 qrs.	490 sks.
Irish	—	—	4100	— ,,
Foreign ..	9280 ,,	1100	39,560 ,,	30 ,, — brls

LIVERPOOL, Oct. 11.—Although we have had a fair attendance of both millers and dealers at to-day's market, Wheat has moved only very slowly at Friday's prices. Flour neglected, but is not offering cheaper. Indian Corn is more pressed for sale, and there being few buyers we have to note a reduction of fully 3d. per qr. on all descriptions. Oats and Oatmeal are both the turn lower. Beans, Peas, and Barley nominally unchanged. Market may be characterised as very dull throughout.

FRIDAY, Oct 14.—Market thinly attended. Wheat barely supported Tuesday's quotations. Flour slow and rather easier. Indian Corn 3d. lower. Beans steady. Oats and Oatmeal dull.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Sept. 3	42s 3d	31s 1d	22s 5d	34s 1d	40s 9d	35s 9d
— 10	42 4	32 1	21 9	34 7	40 10	36 11
— 17	42 0	32 2	20 11	35 6	41 2	36 5
— 24	40 11	31 5	20 11	34 7	40 7	37 1
Oct. 1	39 8	30 11	20 7	35 4	40 4	37 1
— 8	38 9	30 2	20 0	30 11	38 11	35 8
Agg. Aver.	41 0	31 4	21 1	34 2	40 7	36 6

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Sept. 3.	Sept. 10.	Sept. 17.	Sept. 24.	Oct. 1.	Oct. 8.
42s 4d	..		..	..	..	..
42 3		..	..	..	..	..
42 0	..	..		..	..	..
40 11	..	..	..		..	..
39 8	..	..	..	..		..
38 9	..	..	..	..	..	

COAL MARKET.—Oct. 12.

Hastings Hartley, 19s. 6d.; Holywell Main, 18s. 6d.; Lambert's West Hartley, 19s. 3d.; Tanfield Moor Butes, 15s. 3d.; Walker Primrose, 14s. 3d.; Walls End Acorn Close, 20s.; Walls End Eden, 20s.; Walls End Harton, 20s.; Walls End Riddell, 20s.; Walls End Wharncliffe, 20s.; Eden Main 20s. 3d.; Walls End Bell, 19s. 9d.; Walls End Haswell, 21s. 6d.; Walls End Hetton, 21s. 6d.; Walls End Kepier Grange, 20s. 6d.; Walls End New Belmont, 20s. 3d.; Walls End South Hetton, 21s. 6d.; Walls End Tunstall, 20s.; Walls End Caradoc, 21s; Walls' End Hartlepool, 21s. 3d.; Walls End Heugh Hall, 20s. 9d.; Walls End Kelloe, 20s. 6d.; Walls End East Hartlepool, 21s. 3d.; Walls End South Hartlepool, 20s. 3d.; Walls End South Kelloe, 20s. 9d.—Ships at market, 68.

WANTED, a good WORKING BAILIFF, for a Small Dairy Farm in Gloucestershire.—A married Man, whose Wife can undertake the Dairy and Poultry Yard, will be preferred.—Address Mr. P. R., Post Office, Gloucester.

Seed Trade—Traveller.

WANTED, a Young Man as TRAVELLER, and to assist occasionally.—One who has had some experience amongst Market Gardeners preferred.—Address, B. J., Cooper & Bolton & Co., 152, Fleet Street, London, E.C.

WANTED, a SHOPMAN, in a large Provincial House.—Address, with wages required, Box 167, Post Office, Hull.

WANTED, an efficient SHOPMAN, in a Provincial Seed Warehouse.—Must have a thorough knowledge of Wholesale and Retail Trade. Salary, 100*l.* per annum. Also a SECOND SHOPMAN WANTED; Wages, 20*s.* to 24*s.*—Address, with full references, which will be most strictly inquired into, T., care of Messrs. Hurst & Son, 6, Leadenhall Street, E.C.

WANTED, in a leading Provincial House, as CLERK and UNDER SHOPMAN, a steady active young Man of good address, competent to keep the Books, and must have a good knowledge of the Seed Trade. Commencing salary 20s. a week.—Address in own handwriting, stating age, reference, &c., to ROBT. T. VEITCH, Seed Warehouse, 54, High Street, Exeter.

Garden Labourers.

CHARLES SHARPE AND CO., Sleaford, want THREE or FOUR GARDEN LABOURERS, well accustomed to Nursery work; the employment will be constant.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, OFFICES, or any place of Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper. Can wait upon a single gentleman, and has excellent references.—HARRIET B., 2, Northumberland Street, Marylebone, W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS.—B. S. WILLIAMS is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any Gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

GARDENER (HEAD), to any Nobleman or Gentleman who requires the services of a practical Man.—Age 28; has lived four years as Foreman in one of the most noted Establishments in Sussex, where he is at liberty to remain until he is suited with a situation. Every satisfaction will be given as to character and ability.—H. W., Cookbridge Nursery, near Lewes, Sussex.

GARDENER (HEAD).—Age 40, married; active and energetic. Thoroughly understands his profession in all its branches. A first-class Gardener. Fourteen years' character.—A. B., 372, Euston Road, N.W.

GARDENER (HEAD).—Age 40, married, no incumbrance; understands Early and Late Forcing, Flower and Kitchen Gardens, and Land and Stock if required.—M. H., Post Office, Harrow on the Hill, N.W.

GARDENER (HEAD), where there is scope for energy, &c.—Age 38, married; a first-class Gardener. Eight years' unexceptionable character from his late employer.—F. J. S., Harwood End, Post Office, Ross, Herefordshire.

GARDENER (HEAD).—Age 30, married; thoroughly understands Forcing, and Flower and Kitchen Gardening.—Apply to Messrs. OSBORN & SONS, Fulham Nursery; or THOS. DAVIES, Gardener, South Hayling, Havant.

GARDENER (HEAD).—Age 30, married; thoroughly understands Forcing and the routine of Gardening generally. Can be strongly recommended by his present employer.—BUTLER & MCCULLOCH, Seed Merchants, Covent Garden Market, London, W.C.

GARDENER (HEAD).—Age 35, married, no incumbrance; understands the Growing of all kinds of Fruit, Stove and Greenhouse Plants, Kitchen and Flower Garden, also the Management of Arable and Meadow land. Wife experienced Dairywoman.—L. P., at Mr. Baxindine's Nursery, Guildford, Surrey.

GARDENER (HEAD), to any Nobleman or Gentleman.—Age 38; thoroughly understands his profession. Has had 12 years' practical experience. First-class testimonials, with good references.—For particulars apply to Mr. YOUNG, The Gardens, West Hill House, Highgate, Middlesex, N.

GARDENER (HEAD), will be shortly disengaged.—Age 24, single; has a thorough practical knowledge of his profession in all its branches. Can have a first-class character from his present employer, whom he has been with upwards of three years.—Mr. KNACKDON, J. R. W., Esq., Alscot Park, Stratford-on-Avon.

GARDENER (HEAD).—A First-class Cultivator of Plants, Fruits, and Flowers is now disengaged, and is open to offers from Noblemen and Gentlemen in want of a trustworthy man. Highly satisfactory testimonials from last employer.—BETA, 30, Southampton Street, Strand, London, W.C.

GARDENER (HEAD).—Age 34, single; understands practically Early and Late Forcing of Flowers, Fruits, and Vegetables, Kitchen and Flower Garden, &c. Good characters from former employers. No objection to any part of the country.—E. W., 4, Potter's Fields, Tooley Street, London, S.E.

GARDENER (HEAD).—Industrious, honest; thoroughly understands the Forcing of all kinds of Fruits and Flowers, and the management of Kitchen and Flower Garden; has had 12 years' first class experience in noblemen's gardens. Excellent character from his last situation, and can be highly recommended.—R. B., Post Office, Maida Hill, London, W.

GARDENER (HEAD).—Mr. J. MEREDITH, The Vineyard, Garston, near Liverpool, will have much pleasure in recommending a thorough practical Gardener to any Nobleman or Gentleman requiring the same. Highest references as to character and ability given.—Address Mr. J. MEREDITH, The Vineyard, Garston, near Liverpool.

GARDENER (HEAD), age 37, married.—In consequence of the death of the late Sir Charles Knightley, Bart., with whom he has lived upwards of 12 years, JOHN BROWN now offers his services in the above capacity to any Nobleman or Gentleman requiring the services of a first-class Gardener. Satisfactory references as to character and abilities can be had.—JOHN BROWN, Fawsley Park, Daventry.

GARDENER (HEAD).—Age 32, married, no incumbrance; has obtained in large Establishments a good knowledge of his profession, Growing Grapes, Pines, Peaches, Melons, and Cucumbers, also Flower, Fruit, and Vegetable Gardens. Three years' good character. Can be recommended by two Judges at the Fruit and Flower Shows near London.—M. Y., The Nursery, Streatham Place, Brixton Hill, S.

GARDENER (HEAD), or no objection to a good Single-handed place.—Five years' character.—J. S., Mr. French, Church Fields, Leyton, Essex, N.E.

GARDENER (HEAD) and FORESTER, or either.—Single; has had much experience in his profession; will be found to possess a thorough knowledge of Woods, Planting, Thinning, &c., and general Improvements.—A. B., 10, Charles Street, St. John's Wood, London, N.W.

GARDENER, with a good conscientious employer.—Young; eight years' good character.—A. B. C., Post Office, Hammersmith.

GARDENER.—Mr. Alderman MECHI is desirous to obtain a situation for WILLIAM REED, who has served him faithfully as Gardener for eight years.—WILLIAM REED, Tiptree Heath, Kelvedon, Essex.

GARDENER.—JOHN KEYNES has the opportunity of recommending a first-rate GARDENER; to a Gentleman Amateur he would be invaluable, having been one of the most successful competitors for Plants and Fruits for many years. Fifteen years' character.—Castle Street, Salisbury.

GARDENER (UNDER), in a large Establishment.—Three years' good character.—R., Post Office, Whetstone, Middlesex, N.

GARDENER, or GARDENER and BAILIFF.—Age 36, married, no incumbrance; thoroughly practical; has had great experience in all branches of his profession. Can be highly recommended.—W. B., 4, Alfred Street, Bath.

FOREMAN or JOBBING MAN, or to Manage a Nursery.—Middle aged, steady and industrious; 30 years in the Nursery. First-class Knifeman; Pruning, Budding, Grafting, Training, Nailing, &c.—G. T., 35, Princes Road, Notting Hill, W.

PROPAGATOR, PLANT GROWER, or FOREMAN, &c.—Age 40; extensive experience. Accustomed to Market and general Growing.—ALPHA, 26, Nicholas Street, Hoxton, N.

PROPAGATOR (GENERAL).—Has had long experience, and thoroughly understands his profession. Satisfactory references.—A. B., Post Office, Alphington, near Exeter.

PROPAGATOR (ASSISTANT).—Age 19; thoroughly acquainted with Roses, Rhododendrons, and Conifers. Good references.—H. B., Mr. Page, News Agent, Lower Tooting, Surrey, S.

FARM BAILIFF.—Age 47, no incumbrance; his Wife could take the Management of a Small Dairy. Three and a half years' good character.—S. G., *Times* Office, St. Albans.

BAILIFF.—Age 30; is practically acquainted with the Management of Land and Stock. Understands Land Surveying; has attended Markets, &c. Good references.—H. G., Smallburgh, Norfolk.

BAILIFF (WORKING).—Married; steady, active; understands the Cultivation of Arable and Pasture, Breeding, Feeding, Rearing of Cattle. The highest references can be given as to character and capability.—A. G., 143, Oxford Street, London, W.

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ASSISTANT, Wholesale or Retail.—Four years' reference to present employer.—S., 61, Vine Street, Liverpool.

To the Nursery and Seed Trade.

CLERK (JUNIOR).—Age 21; has been accustomed to the routine of the business, and has a fair knowledge of plants. Good references.—A. B. S., *Gardeners' Chronicle* Office, W.C.

ESTATE CARPENTER, BUILDER, and practical DRAUGHTSMAN.—In prime of life, married; 14 years' unexceptionable reference as to assiduity, integrity, and general respectability of character.—A. H., 47, Baker Street, Portman Square, London.

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CASH ONLY.

The Furnishing of Bed Rooms.

HEAL AND SON have observed for some time that it would be advantageous to their customers to see a larger selection of BED-ROOM FURNITURE than is usually displayed, and that to judge properly of the style and effect of different descriptions of Furniture, it is necessary that each collection should be placed in separate rooms. They have therefore erected large and additional Show Rooms, by which they are enabled not only to extend their show of Iron, Brass, and Wood Bedsteads and Bed Room Furniture, beyond what they believe has been attempted, but also to provide several small rooms for the purpose of keeping complete suites of Bed Room Furniture in the different woods.

Japanned Deal Goods may be seen in complete suites of various different colours, some of them light and ornamental, as well as in a plainer description. Suites of Stained Deal Gothic, Stained and Polished Deal, Oak, and Walnut, are also set apart in separate rooms, so that customers are able to see the effect as it would appear in their own rooms. A Suite of very superior Gothic Oak Furniture will generally be kept in stock, and from time to time new patterns of Furniture in various woods will be added.

Bed Furnitures are fitted to the Bedsteads in large numbers, so that a complete assortment may be seen, and the effect of any particular pattern ascertained as it would appear on the Bedstead.

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The stock of Mahogany goods for the better Bed Rooms, and Japanned Goods for plain and Servant's use, is very greatly enlarged. The entire Stock is arranged in eight rooms, six galleries (each 50 feet long), and two large ground floors, the whole forming a most complete an assortment of Bed Room Furniture as they believe can possibly be desired.

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SATURDAY, OCTOBER 22, 1864.

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12 Dessert Forks	1	14	0	1	10	0	1	12	0	1	15	0
12 Dessert Spoons	1	14	0	1	10	0	1	12	0	1	15	0
12 Tea Spoons	0	16	0	1	0	0	1	2	0	1	5	0
6 Egg Spoons, gt. bowls..	0	10	0	0	12	0	0	12	0	0	13	6
1 Sauce Ladles	0	6	0	0	8	0	0	8	0	0	9	0
1 Gravy Spoon	0	6	6	0	9	0	0	10	0	0	11	0
2 Salt Spoons, gt. bowls..	0	3	4	0	4	0	0	4	0	0	4	6
1 Mustard Spoon, gt. bwl.	0	1	8	0	2	0	0	2	0	0	2	3
1 Pair of Sugar Tongs ..	0	2	6	0	3	6	0	3	6	0	4	0
1 Pair of Fish Carvers ..	1	4	0	1	10	0	1	10	0	1	10	0
1 Butter Knife	0	2	6	0	4	0	0	5	6	0	6	0
1 Soup Ladle	0	10	0	0	12	0	0	16	0	0	17	0
1 Sugar Sifter	0	3	3	0	4	6	0	4	6	0	5	0
Total	9	19	9	12	9	0	13	9	6	14	17	3

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ALBEMARLE STREET, October, 1864.

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Bone Manure versus Mineral Phosphates.—See THORLEY'S FARMER'S ALMANACK for 1865, page 48.—Published at 145, Fleet Street, London, E.C. May be had of all Booksellers and Newsvendors in Town and Country.

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THE QUARTERLY REVIEW, No. CCXXXII., is published THIS DAY.
CONTENTS:
I. THE FRENCH IN COCHIN CHINA AND CAMBODIA.
II. WORKMEN'S BENEFIT SOCIETIES.
III. VENETIAN STATE PAPERS.
IV. SMITH'S DICTIONARY OF THE BIBLE.
V. HEALTH OF THE ARMY IN INDIA.
VI. PHOTOGRAPHY.
VII. JOHN GIBSON LOCKHART.
VIII. SIR JAMES WILDE ON A DIGEST OF LAWS.
IX. DR. NEWMAN'S APOLOGIA.
JOHN MURRAY, Albemarle Street, W.

News of the Week.

BY the overland mail we learn that every effort to obtain redress for the insulting treatment of Mr. EDEN'S mission having failed, the invasion of Bhootan has been decided on. General SHOWERS is to command the invading force, which will enter the Bhootan territory from four different points. Despatches from Shanghai announce that the Imperialists have taken Hoochow; and from Japan we learn that it has been determined that the British, French, and Dutch fleets at Yokohama shall force a passage into the inland sea. In Australia the transportation question was absorbing public attention to the exclusion of every other topic. Mr. CARDWELL'S despatch, announcing that transportation to Western Australia

would be persisted in, had caused the greatest dissatisfaction at Melbourne; and the Victorian Ministry had informed the Governor of their determination to invite all the colonies, except Western Australia, to unite in common action to oppose the continuance of the system, and to isolate the convict settlement from the other colonies by withdrawing from the contract for the postal service with England, unless the mail steamships cease to touch at any port in Western Australia.

The official journals of Vienna announce that Austria has not protested against the Convention, and that the relations between France and Austria have undergone no change. They state that the Vienna Cabinet has accepted the Convention in a conciliatory spirit, and has replied to it by an extensive measure of disarmament.

From the United States we have the important news that the greater portion of General GRANT's army has recrossed the James River, and it is generally admitted that all his recent operations have been failures. On the 8th the Confederates assumed the offensive, attacked General BUTLER's lines, and captured his artillery. They then attacked General BIRNEY, but were repulsed and driven to their inner line of defence. General LONGSTREET has joined General EARLY with 20,000 men, and has assumed the command in the Shenandoah valley. General SHERIDAN is at Harrisonburg, his advance being opposed by the combined force of LONGSTREET and EARLY, and his supplies and communications interrupted by the Confederate guerillas. General PRICE, with a force estimated at 20,000, and 5000 Federal recruits who have joined him, is making a victorious march through Missouri; and a portion of his force has already appeared before Jefferson, the capital of the State, where, it is said, he intends to establish a State government. General FORREST is still operating with success in the rear of General SHERMAN at Atlanta, and is said to have complete control over his communications.

Accounts from the Brazils state that war has been *declared between Brazil and Uruguay*. The great Banking firm of SOUTO at Rio has failed for a large amount, leading to the failure of several other firms; and the commercial crisis was so severe that the Government had decreed the suspension of cash payments by the Bank.

Advices from the Pacific state that the Peruvian Government has resolved to declare war against Spain unless she abandons the Chincha Islands.

Home News.

THE COURT IN SCOTLAND.—On Wednesday, the 12th, the Queen, accompanied by Princess Helena, drove to Invercauld. The Abergeldie woods were driven for deer in the presence of Prince Alfred, who was accompanied by Sir Alexander Bannerman and the Hon. Lionel S. West. Sir George Grey arrived at the Castle as the Secretary of State in attendance on the Queen. On Thursday the Queen, accompanied by Prince Arthur, drove to the Lynn of Muick. The Dean of Westminster left the Castle. The Hon. Sir Frederick Bruce arrived on a visit. On Friday morning the Queen went out, and in the afternoon her Majesty went out driving, accompanied by Princess Helena and Prince Leopold. On Saturday morning the Queen went out, accompanied by Princess Helena; and in the afternoon drove to Invercauld, accompanied by Princess Helena and Princess Beatrice. On Sunday the Queen and Royal family attended Divine service in the Castle. The Rev. A. H. Charteris, of Park Church, Glasgow, officiated. On Monday morning the Queen, accompanied by Princess Helena, went out. In the afternoon her Majesty drove to Glen Ey, accompanied by Princess Helena. The Hon. Sir Frederick Bruce left the Castle. On Tuesday morning the Queen, accompanied by Prince Leopold, drove to Loch Muick. Prince Alfred left for Floors Castle on a visit to the Duke and Duchess of Roxburghe. Princess Helena visited the Earl and Countess Delawarr at Abergeldie. In the evening Prince Albert Victor of Wales arrived from Denmark. It is now announced that the Queen and Royal family will leave Balmoral on Wednesday the 26th inst., instead of Monday the 24th, and will arrive at Windsor Castle at 9 o'clock on Thursday morning.

RETURN OF PRINCE ALBERT VICTOR.—Her Majesty's ship Salamis arrived in the Humber from Cuxhaven on Sunday afternoon, having on board the infant Prince Albert Victor, in charge of the Countess De Grey and Ripon. The weather was rather rough, and the Prince had suffered from sea sickness, but recovered as the vessel approached the Humber. The landing did not take place till 8 o'clock on Monday morning, when the Countess De Grey and the nurse with the Royal infant, landed on the town pier amid the cheers of thousands of people, and proceeded by a special train to Edinburgh, where they passed the night at the Douglas Hotel. On Tuesday morning, at 9 o'clock, the Prince left Edinburgh for Balmoral, where he arrived in the course of the afternoon, and will remain with her Majesty till the return of the Court to Windsor.

THE PRINCE AND PRINCESS OF WALES leave Copenhagen to-day.

PRINCE ALFRED arrived in Edinburgh on Tuesday from Balmoral, and left that city on Wednesday for Floors Castle on a visit to the Duke of Roxburghe.

LORD PALMERSTON attained his 80th year on Thursday. His lordship is at Broadlands, and is in excellent health.

Foreign.

FRANCE.—It is asserted that the Emperor will go to Nice to-day to visit the Emperor of Russia. The *Constitutionnel* of Saturday contradicts the news that the Council of Marshals would meet earlier than usual this year on account of extraordinary duties. The Bourse was very flat on Wednesday in consequence of adverse rumours. It was stated that the bullion in the Bank had decreased 15,000,000f. since the last return, and that a note would appear in the *Moniteur* calling for the immediate payment of the arrears of the last loan. The *Constitutionnel* of Thursday denies these rumours on authority, and says that there is a slight improvement in the state of the Treasury; and that the Government will sell the bonds of the last loan, the instalments on which are overdue. The *Moniteur du Soir* has since confirmed this denial.

ALGERIA.—The Duke of Magenta announces that, notwithstanding the sharpness of the struggle at some points, he is master of the situation. It is stated that, in consequence of this despatch, the selection of any fresh troops for Algeria will cease, the reinforcements already determined on being sufficient. General Jolivet has followed up his late success by defeating Si-Lala. Several tribes have made their submission.

SPAIN.—The *Epoca* says that Spain should not remain aloof from the arrangements tending to guarantee the independence of the States of the Pope, which must be under the guarantee of Europe if the French quit Rome. A circular has been issued by Señor Gonzalez Bravo, Minister of the Interior, relative to the elections, which recommends the Governors of the provinces in every measure to strictly observe the law. The Minister states also that electoral rights are to be exercised with the most entire liberty. This circular has been well received by the Madrid journals. The Progressistas having been authorised to hold a public meeting, a meeting of 300 has been held under the presidency of Señor Olozaga, at which a Central Committee was appointed, including among its members General Espartero, Señor Olozaga, Señor Madoz, and General Prim. The *Epoca* announces that two-thirds of the committee are favourable to the policy of abstaining from voting. The *Novedades* pronounces against the continuance of this policy on the part of the Progressistas. It also condemns the employment of force, which does not convince any one, and advises a return to the Constitution of 1837. Señor Mon has not yet accepted the French embassy. The *Iberia* states that 500 workmen have been dismissed from the Arsenal of Carrara. The *Epoca* and the *Politica* urge the Government to keep the Chincha Islands as a pledge until Peru shall have given satisfaction.

PORTUGAL.—The official *Gazette* of Saturday publishes an article declaring that the Conservative party in Portugal may be considered as extinct, not a single Conservative candidate having been elected Deputy. A political transformation is therefore inevitable, the Reform party taking up the position of the Progressista party, and the Government remaining Progressistas.

SWITZERLAND.—The Federal Council on Wednesday authorised the department of Commerce to open negotiations for a treaty of commerce with the Zollverein. The inquiry into the late disturbances at Geneva has terminated, and M. Duplan Veillon, the Federal magistrate, has returned to Lausanne. On the 16th M. Friedrich, the Independent candidate at Geneva, was elected a member of the National Council by 5800 votes, the number of persons voting being 11,000. A conflict took place in the evening between the adverse political parties. On the 13th inst. the Federal mail was plundered by nine armed brigands, on Monte Cenere. M. Lattuada, one of the passengers, was wounded by the robbers, and has since died. The chief of the band is said to be one Gianotto, from Acrolo, a ferocious fellow, who constantly lives in the mountains, and against whom warrants have long been out. During the whole of the 12th, the day preceding the robbery, he was seen in the neighbourhood. He left towards evening, carrying away provisions, as he said, for his comrades. He had with him a bar of iron, which appears to have been used for prising open the trunks of the travellers. This bar was found close by the spot where the mail was attacked. The Government has issued a proclamation, promising a reward of 500f. to whoever shall bring in Gianotto, dead or alive. At Maccagno the Royal Carbineers have arrested persons on suspicion of having formed part of the band. Six watches were found upon the prisoners, one of which of the peculiar kind habitually worn by the conductors of the Swiss diligences.

DENMARK.—M. de Bille, a member of the Left, has demanded of the Ministry that they should ask the sanction of the Rigsdag to a prosecution for high treason being instituted against the *Dagbladet* on account of the following article which it published on Saturday in reference to the succession to the throne:—

"Should peace be concluded in accordance with the preliminaries, the basis of the present order of succession will be overthrown, in which case the legitimate heir to the Danish throne would be Prince Frederick of Hesse, not Christian IX."

JUTLAND.—General de Gablenz, the Austrian commander in Jutland, in an announcement on the subject of winter quarters just published, orders that where requisitions of the military authorities are not immediately complied with, the mayor of the place shall be imprisoned on bread and water, and that all houses shall be occupied by the soldiers, only one room being left for the owner's family and servants.

SCHLESWIG HOLSTEIN.—The semi-official Prussian *Correspondenz* of Berlin on Wednesday publishes the following article on the Danish question:—

"After the conclusion of peace it will be necessary provisionally to organise the government of the Duchies. Preliminarily the administration will be conducted by Austria and Prussia. The succession question will also have to be settled, and for that purpose Prussia and Austria, with the approval of the Federal Diet, will convoke an assembly of legates. The statement that a preference has been shown on the part of Prussia to the claims of one of the two Princes is entirely founded upon mere conjecture or upon a policy the tendency of which is foreign to that of Prussia. The legates, after having been given and properly considered, as well as the general interests of Germany, a final resolution on the matter will be passed."

PRUSSIA.—The King of Prussia arrived at Homburg on Saturday in excellent health. During his return journey he passed two hours with the Emperor of Russia at Darmstadt. Baron Von der Plessen arrived at Berlin on Saturday from Vienna and has had repeated conferences with Herr Von Thiele. Lord Napier arrived at Berlin on Monday and left for St. Petersburg, where he will remain several days. The Archduke Leopold of Austria arrived on Monday to attend the baptism of the infant son of the Crown Prince. His Imperial Highness was received at the railway station by the Crown Prince Field-Marshal von Wrangel, the general staff, and a company of the Kaiser Franz Grenadiers, with their colours. The Archduke afterwards supped with the King and the Crown Prince, and received the insignia and order of the Black Eagle from the hands of the King.

AUSTRIA.—Both Houses of the Reichsrath will be convoked on the 16th of November. On Saturday the Conference held its 11th sitting. It is hoped that peace will be concluded before the end of the present month, some points of minor importance relating to the financial question only remaining to be arranged. The *Oesterreichische Zeitung* of Saturday says:—

"Letters from Paris state that the relations between France and Austria have undergone no change. The Venetian question has not been touched upon. Austria has not protested against the Franco-Italian Convention, and there has been no question of a Congress. Prussia hastened to consent to the Convention. Napoleon, however, will never agree to the aggrandisement of Prussia without adequate compensation. At Berlin there is possibly an idea of abandoning Austria to her fate if certain concessions be made to Prussia, but no negotiations have taken place on the subject."

The *Wanderer* of Vienna publishes the following article:—

"According to reliable information, Austria has taken a decided part as regards the Convention of the 15th September. Without deviating from the principles which have hitherto directed the policy of the Vienna Cabinet in all questions relating to Italy, the Austrian Government has come to a decision which is of the most reassuring nature. We believe we may state that the Vienna Cabinet will inaugurate a policy of conciliation towards France in this sense—that, without abandoning its passive policy in the affairs of Italy, it will accompany it with a certain character of benevolent abstention. We further add that this change in the attitude assumed by Austria will not entail any change in the Cabinet. Independently of the resolution taken by the Government not to oppose the Convention of the 15th of September, the Austrian Ambassador at the Roman Court will receive instructions to endeavour to the Holy See, so as to prevent it entertaining wrong illusions as regards the mission of Austria."

THE TYROL AND VENETIA.—On Sunday last refugees from the south of the Tyrol appeared in the province of Udine. They were dressed in Garibaldi blouses, and carried a tricoloured flag. The barracks of the gendarmes in Spilembergo and Maniago were surprised, the guard disarmed, and the barracks plundered. Attempts to induce the inhabitants to rise having failed, the refugees withdrew to the mountain passes. Troops were despatched in pursuit and to protect the inhabitants. Sixteen young men, on their way to join the refugees, were attacked by the soldiers. The names of the leader and several of the men of the band are known to the authorities.

RUSSIA.—The Emperor and Empress of Russia arrived at Lyons on Wednesday evening, and proceeded on their journey to Nice at 11 A.M. on Thursday. Their Majesties preserved the strictest incognito.

ITALY.—The electoral colleges have re-elected the Ministers Della Marmora, Lanza, Petitti, and Sella. The electors of Castel-Maggiore have returned the Marquis Pepoli as member to Parliament. The report

disarmament and discharge of soldiers of various classes on unlimited furlough is officially contradicted. Baron Ricasoli has arrived at Turin. The *Italia Militare* of Saturday says that a decree of amnesty on behalf of the prisoners taken at Aspromonte has been signed by his Majesty. A meeting of workmen was held in Turin on Sunday to present a petition to Parliament requesting the impeachment of the late Ministry, and protesting against the Franco-Italian Convention. Four persons spoke, protesting against the charge of municipalism which had been brought against Turin. The *Opinione* publishes an article on the state of the Italian finances. It expresses its belief that the new Minister will not have recourse to a fresh loan, but will carry into effect the measures already prepared for the alienation of the Treasury Bonds and the sale of the Government railways. It states the circulation of the Treasury Bonds to be 200 or 300 millions, which ought not, it says, to cause any anxiety. By the two measures above mentioned the Minister can obtain 350 millions to meet the requirements of the State. It concludes by urging the new Ministry to effect economy in the different departments, and advises the discharge of some classes of soldiers. The Grand Duke of Tuscany has protested against the project of making Florence the capital of Italy, as contrary to the rights reserved to him by the Treaty of Munich. Letters from Rome state that the *Correspondencia di Roma* violently attacks the Franco-Italian Convention, and criticises the interpretation given to that Convention by the *Constitutionnel* and the *France*. The Czarewitch was expected at Rome. The Pontifical gendarmes, assisted by the French troops, have arrested five brigands of the band by whom some French gendarmes were assassinated. In the territory of Ascoli 26 gendarmes attacked a numerous band of Neapolitan brigands who had stolen 250 sheep. Several of the band were wounded.

Greece.—Intelligence from Athens to the 13th inst. states that the Opposition continued their agitation in the Assembly. The Bill introducing universal suffrage had been voted. A Royal message was communicated to the Assembly in its sitting on Wednesday. The King complains of the slowness of the Parliamentary debates, which exasperates the people, and fixes a period of one month for the Assembly to finish drawing up the Constitution and the electoral law. Should this not be accomplished at the expiration of that period, the King reserves to himself liberty of action, and throws the responsibility upon the Assembly. An unsuccessful attempt was made on the 11th inst. to assassinate the Minister of the Interior.

Tunis.—Advices from Tunis to the 12th inst. state that the troops of the Bey have beaten the insurgents on the coast, and that the latter have made their submission.

India.—The invasion of Bhootan has been decided on, all attempts to obtain reparation for the insulting treatment of Mr. Eden's Mission having failed. The invading force will be commanded by General Showers, and will enter the country at four separate points. The Viceroy has conferred the Star of India upon the Rajah of Kupportolah, who did good service in the mutiny, is a Christian, and a man of considerable ability. Shah Abbas, son of the late ex-King of Delhi, a state prisoner in Rangoon, has been released on condition that he shall pass the rest of his life at Rangoon. Feroze Shah, one of the sons of the late ex-King of Delhi, who took a prominent part in the mutiny, and for whose apprehension the British Government offered a reward of 10,000 rs., has made his appearance in the Serony Jungles.

China.—A telegram from Shanghai of the 5th Sept. states that the Imperialists have captured Hoochow. The loss of life at the taking of Nankin is said to have been 100,000.

Japan.—Intelligence from Japan announces that it has been determined that the English, French, and Dutch fleets at Yokohama shall force a passage into the inland sea.

Australia.—The transportation question was engaging the attention of the colonists to the exclusion of almost every other subject. On the arrival of Mr. Cardwell's despatch, communicating the determination of the Home Government to continue transportation to Western Australia, with the details of the debate in the House of Lords on the Penal Servitude Bill, the Ministry determined to invite all the colonies, except Western Australia, to unite in common action to oppose the continuance of the system, and to withdraw from the contract for the postal service with England, unless the mail steamships cease to touch at any port in Western Australia, in order to isolate the convict settlement from the colony. The following minute was subsequently submitted by the Ministry to Sir Charles Darling to be transmitted to the Home Government:—

"The copy of Mr. Cardwell's despatch, in reply to the resolutions of both Houses of Parliament against the continuance of transportation to Western Australia, which your Excellency did me the honour to transmit to me, has been duly laid before my colleagues. It is to the Government of this colony matter of the utmost regret that all efforts made by them, the Parliament, and the people of Victoria, in common with the other colonies, have failed to secure that measure of justice the colonists had a right to expect; but the decision of her Majesty's Government is still more deeply to be deplored as at direct variance with the statement made by the Duke of Newcastle in 1853, and in contravention of the policy which it was declared by his Grace to be the duty of her Majesty's Government to adopt towards the Australian colonies. In the concluding paragraph of a minute which I had the honour to submit to your Excellency in September last, I felt it necessary to indicate the course this Government would be forced to pursue in the event of the threatened continuance of transportation being carried out; and it now becomes my duty to state to your Excellency the steps which your advisers have felt it imperative upon them to take in the discharge of their responsibility to the people of this colony. Upon a careful consideration of Mr. Cardwell's despatch, written in the face of all the earnest representations addressed to her Majesty's Government, it has been forced upon the attention of myself and my colleagues that further remonstrance is in itself useless; and that the time has arrived when it is incumbent upon us in the exercise of our powers of self government to initiate legislation in connexion with the colonies whose interests are alike affected for our common protection. I have accordingly addressed a circular to the Chief Secretary of each of the colonies interested, inviting the co-operation of their respective Governments in framing a measure to be submitted to the consideration of the several Parliaments prohibitive of all intercourse whatsoever with Western Australia, in order that her position as the only convict colony in Australia may be distinctly marked. Sufficient time has not yet elapsed for me to have received any reply, but from the universal feeling of dissatisfaction which prevails throughout the free colonies I can have no doubt that the proposition will meet with their approval. Intimately connected with this proposition is the question of the postal service with Great Britain. No measure for the isolation of Western Australia could be efficient while the mail steamers continue to call at King George's Sound; and, although serious inconvenience must result from any interruption to frequent and regular postal communication, so deeply is the Government that the justice of Victoria in the dread of the contamination of transportation, would deny themselves the privilege of the mail service than be exposed even to the possibility of the introduction of convicts, that I have to beg your Excellency will be pleased to notify formally to the Imperial authorities that unless the terms of the existing arrangement with the Peninsular and Oriental Company be altered, and the company consent that their packets shall not touch at any port in Western Australia, the Government of Victoria will, at the expiration of six months from the 1st of November next, cease to contribute to the annual subsidy; and further, that they withdraw their offer to join in establishing a fortnightly service except upon similar conditions. I cannot express to your Excellency the pain your advisers have felt in being obliged to take this course; but to have hesitated would have been to neglect their highest duty. In requesting that your Excellency will forward a copy of this memorandum to the Right Hon. the Secretary of State for the Colonies, I would venture to suggest that it be accompanied by your Excellency's testimony to the reality of the feelings of the people of Victoria, as made known by memorials and through the public press; and also to the discontent which has manifested itself throughout the colony, at the decision of her Majesty's Government. "James M'Culloch."

"Chief Secretary's Office, Melbourne, Aug. 24."

New Zealand.—The last mail brought an account of the defeat of the Maori rebels at Pa Te Ranga, the position taken up by them after the evacuation of the Gate Pa. This last event has proved more decisive than was at first anticipated. The Maori combinations have been completely broken up, and peace is probably re-established. Several of the principal leaders have given in their submission, and it was reported that even William Thompson was about to meet the Governor and take the oath of allegiance.

United States.—It begins to be admitted that General Grant's recent operations at Deep Bottom and Petersburg are, like all his previous movements, failures. The Confederates claim to have captured 1500 prisoners during the recent engagements to the south-west of Petersburg, and the Federal loss north and south of the James River on the 29th and 30th ult., is estimated at 4000. Secretary Stanton reports a series of skirmishes at Deep Bottom on the 7th inst., attended with considerable loss in artillery to the Federals, and many killed and wounded on both sides, but no decisive advantage to either. On the same day the Federals under Burbridge attacked Saltville in Western Virginia, and were badly repulsed, retreating in confusion, pursued by the Confederates. On the 7th the Confederates attacked Butler's lines, drove in Kautz, and captured his artillery. They then attacked Birney, but were repulsed. Birney recaptured Kautz's position, and drove the Confederates to their inner line of defence. Affairs in Missouri are threatening for the Federal cause. General Price continues his victorious march, and a portion of his force has appeared before Jefferson City, the capital of the State. The Pilot Knob garrison reached Rolla, Missouri, on the 2d, with the loss of 300 men during their retreat. General Ewing has arrived at St. Louis. A large force under Magruder and Kirby Smith is reported to have entered Arkansas, and to be preparing for a combined movement against Little Rock and the capture of General Steele and his army. If successful, it is believed that they will combine with General Price, attack St. Louis, and proclaim the annexation of Missouri to the Southern Confederacy. General Forrest's forces destroyed portions of the railway between Chattanooga and Allatoona on the 4th inst., and captured Big Shanty. On the 5th a division from General Hood's army under General French, by a flank movement, crossed the Chattahoochie, gained Sherman's rear, and attacked Allatoona, but were repulsed, after a severe fight, with heavy loss, leaving behind them their dead and wounded. The Federals state their own loss at 300, and that of the Confederates at 500. General Thomas has been sent to Nashville by General Sherman to take charge of the Federal forces there, and to watch General Forrest. Southern papers state that Hood has moved his army 35 miles westward without molestation. The Governor of Georgia has declined Sherman's proposition for an informal peace conference. Letters from Sheridan's head-quarters confirm the Confederate account of his defeat. Longstreet is asserted to have joined Early on the 26th with 20,000 troops, and to have assumed the command. The Confederates have almost entire possession of Sheridan's communications, and guerillas occasionally intercept his supply trains. General Early reports on the 20th ult. that if the people of Lynchburg will guard against raiding, he is in a position to check Sheridan's further advance. Despatches from Admiral Farragut, received on the 1st, contradict the recent report of the proximity of the Federal gunboats to Mobile. In accordance with a resolution passed by Convention, the Governor of Tennessee has issued an order that all persons voting in the Presidential election must swear to oppose an armistice and peace negotiations with armed rebels until Constitutional laws and Constitutional proclamations are re-established throughout the States. The Governor of Tennessee has conscripted white men and negroes between 18 and 45 years of age. Secretary Fessenden has advertised for proposals to a new loan of 40,000,000 dollars of Five-Twenty gold-bearing Bonds. The amount of the public debt announced on the 30th September is 1,960,000,000 dollars. Several banking houses in Chicago which have been engaged in speculations in grain and produce have failed in consequence of the heavy decline in prices. Crowds gathered around the banks, and were dispersed by the military. The steamer Matagorda has been captured. The steamers Night Hawk and Lineh have been destroyed, and the steamer Condor beached, off Wilmington. The *Macon Telegraph* contains a speech alleged to have been delivered by President Jefferson Davis, asserting that Sherman will be compelled to re-enact the retreat of Moscow; and that the independence of the South would be established, and the enemy defeated if half the absent troops returned to their duty. The Southern press is dissatisfied with the speech, and doubts its authenticity. It is also believed by the Administration at Washington and by the public in New York to be a forgery.

Mexico.—The New York journals publish a doubtful report from New Orleans that during the absence of the Emperor Maximilian from Mexico city, Miramon, backed by the Archbishop of Mexico, had declared against Maximilian. Miramon (?) held half the city. There were contradictory reports that the French had raised the blockade of the Mexican ports.

Brazils.—Accounts from Rio of Sept. 25 state that war has been declared between Brazil and Uruguay. The banking firm of M. Souto has failed for a very large amount. Other failures took place in consequence, and were followed by a commercial crisis. A slightly better feeling, however, now prevails. The Government has decreed the suspension of cash payments for notes by the Bank of Brazil, and has given a forced currency to the Bank's paper.

Peru.—Advices from Peru assert that the Peruvian Congress has resolved to declare war against Spain unless she abandons the Chincha Islands.

City Intelligence.

Money Market, Friday.—British Funds: Consols for Money, 88¼ to ⅜; Ditto for Account, 88⅜; Three per Cents. Reduced, 86⅞ to ½; New Three per Cents., 86¾, 87; Bank Stock, 237, 236; India Five per Cent. Stock, 104⅛ to ⅜; Five per Cent. Enfaced Rupee Paper, 100, 101; Exchequer Bills, March, 6s. to 9s. dis.; Ditto June, 12s. to 8s. dis. Foreign: Brazilian, 1863, 81 to ½ ex div.; Chilian Six per Cents., 100 ex div.; Egyptian, second issue, 95⅜ to ¾; Greek, 21⅜; Ditto Coupons, 9; Italian, 64⅜; Ditto for Account, 64⅛ to ¼; Mexican, 25¼; Ditto 1864, 24¼; Moorish, 90; Peruvian, 1862, 80; Portuguese, 1853, 46⅜ to ½; Ditto for Account, 46⅜; Ditto 1856, &c., 46⅜ to ¾; Russian, 1862, 87 to ½; Ditto 1864, 86½ to 87 ex div.; Sardinian, 82; Ditto for Account, 82½; Spanish Passive, 29¼; Ditto Certificates, 13⅜; Turkish, 1858, 68; Ditto 100*l.* Bonds 69; Ditto, 1862, for Account, 69⅜ to ¾; Ditto, 100*l* Bonds, 70¼ to ½; Venezuela, 1862, 55¼ to ½; Ditto 1864, 43¼.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£26,880,025	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	12,230,025
		Silver Bullion	—
	£26,880,025		£26,880,025

BANKING DEPARTMENT

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£9,570,212
Rest	3,219,485	Other Securities	19,760,748
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	3,273,569	Notes	5,647,090
Other Deposits	14,998,454	Gold and Silver Coin ..	772,463
Seven days and other Bills	595,985		
	£35,770,613		£35,770,513

Oct. 20, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Oct.* 14.—BANKRUPTS.—J. M. Allan and T. Waller, Lillypot Lane, City, Warehousemen—W. Bennett, Widnes Dock, Lancashire, Labourer—W. Bailey, Wakefield, Yorkshire, Printing Ink Maker—G. Bird, Church Street, Stoke Newington, Milliner—E. H. Baittain, Birmingham, Manager to a Pawnbroker—C. Bolsover, Rusholme, Lancashire, Boot and Shoe Maker—W. Barrett, Sevenoaks, Kent, Coal Merchant—R. Brillman, Leadenhall Street, City, Watch Manufacturer—G. Cole, Liverpool, Licensed Victualler—T. Cook and J. Aspin, Blackburn, Lancashire, Cotton Manufacturers—J. Cooper, Hanley, Staffordshire, Beerseller—T. Cooper, Chesterfield, Derbyshire, Saddler—W. Chancellor, late of Midford, Somersetshire, Innkeeper—F. Clement, Brandon Terrace, Brixton, late Butcher—R. Comrie, jun., Fakenham, Norfolk, Cabinetmaker—W. Davis, Cardiff, Glamorganshire, Shoemaker—S. C. Dean, Union Street, Spitalfields, Assistant to a Boot Manufacturer—J. Duckworth, Adlington, Lancashire, Coal Dealer—E. Dabley, Pellington, Yorkshire, Butcher—H. J. Davis, Buxton Villas, Leytonstone Road, Essex, Mercantile Clerk—A. Dickinson, Fenam, Lancashire,

Engineer—J. N. Earle, Redruth, Cornwall, Printer—R. Foulkes, Conway, Carnarvonshire, Labourer—T. Gordon, Duke Street, Piccadilly, late Hotel Keeper — Joseph Garforth, Halifax, Yorkshire, Grocer—Richard Griffin, Stourport, Worcestershire, Gardener—John Alexander Gilmore, Trinity Street, Liverpool Road, Islington, Attorney's Clerk—W. Huzzy, late of Saundersfoot Brewery, Pembrokeshire—W. B. Howe, Rainham, Kent, Tea Dealer—H. E. Harrison, Richmond, Surrey, late Captain Rifle Volunteers — T. Houseman, Gilbert Street, Grosvenor Square Butler—G. T. Hatton, Ticknall, Derbyshire, Publican—J. Haw good, Chatham Place, Walworth New Town, Ginger Beer Manufacturer —J. Hains, Thornton Street, Horselydown, Butcher—J. Jickling, Gray's Inn Road, late Biscuit Baker—Joseph James Jeffries, late of Old Bailey, Dentist—A. Jenkinson, Clement's Lane, City, Attorney-at-law—J. Kirby, late of Manchester, Beerseller—J. G. Kilpin, Portsea, Hampshire, Watchmaker—H. Lambert, Northampton, Shoemaker—J. Maguire, Salford, Lancashire, Journeyman Calico Printer—J. Mendell, Sambrook Court, City, Commission Merchant—H. W. Martin, Camberwell Park, Poulterer —W. Murray, Manchester, Horse Dealer—J. Moore, Stratton St. Margaret, Wiltshire, Miller—T. Nash, Shambles, Worcestershire, Brewer —W. J. Powell, High Street, Shadwell, Oil and Colour Man—D. J. Pickering, Clayton Place, Kennington Road, late Cab Proprietor—W. Peel and G. T. Cobbett, Wolverhampton, Printers—J. Pearcey, Deptford, Licensed Victualler—J. Parton, Hanley, Staffordshire, Carter—L. Peacock, Old Shildon, Durham, Journeyman Joiner—W. E. Perigo, Walsall, Staffordshire, Licensed Victualler—J. Ryan, Russell Street, Bermondsey, late Licensed Victualler—J. W. Ridgway, Staleybridge, Cheshire, Corn Dealer—Charles Senior, Doncaster, Cabinetmaker—T. Stafford, Gateshead, Durham, Contractor — J. Scott, Seagrave, Leicestershire, Tailor—W. Sweet, Fowey, Cornwall, Blacksmith—T. Sidgwick, Yarm, Yorkshire, late Farmer—D. Symmons, St Nicholas, Pembrokeshire, Farmer—P. Smith, Tyldesly, Lancashire, Provision Dealer—C. J. Smith, High Street, Kingsland, Coffee House Keeper—R. J. Symonds, Southtown, Suffolk, Boatbuilder—J. Symmons, Llanfairnant-y-goff, Pembrokeshire, Farmer—W. Stevenson, Belgrave, Leicestershire, Builder—I. B. Seddon, late of Manchester, Salesman—H. Tozer, Twerton, Somersetshire, Baker—H. Thackrah, Leeds, Woollen Merchant —E. Tolson, Horsforth, Woodside, Yorkshire, Mungo Dealer—W. Strange and R. Wood, The Grove, Alexandra Park, Beer Dealers—T. Wyatt, Colaton Raleigh, Devonshire, Farmer—T. Watson, Cheapside, Accountant —J. W. Wardell, Approach Road, Bethnal Green, Butcher—J. Wilson, Russia Court, City, Commission Agent—R. Williams, late Victoria Terrace, Portland Town, late Tobacconist—S. West, Loughborough, Leicestershire, Victualler—R. Walton, Lowestoft, Suffolk, Hosier—H. Woodcock and J. Pearson, Leicester, Plumbers.

SCOTCH SEQUESTRATIONS — W. Gardner, Glasgow, Optician—J. Lang, Keith, Banffshire, Merchant—W. H. Purves, North Berwick, Hotel Keeper.

TUESDAY: *Oct.* 19.—BANKRUPTS.—R. Ashworth, Oswaldtwistle, Lancashire, Builder—H. Atwood and A. Atwood, Gloucester Road, Old Brompton, Market Gardeners—W. Archer, Louth, Lincolnshire, Tuner of Pianofortes—R. Bamber, Bolton, Lancashire, Overlooker of Power Looms —W. H. Bridgman, Church Stretton, Shropshire, Farmer—G. B. Brokenshaw, Fowey, Cornwall, Shipwright — J. Birdsall, Leeds, Tanner — J. W. Beedle, Leeds, Currier—G. F. Bloxam, Waterloo Place, Pall Mall, Wine Merchant—R. Baxendell, Manchester, Corn Merchant—S Bullen, jun., Hereford Tailor—T. T. Bartlett, Woolwich, Butcher—R. Brillman, Leadenhall Street, City, Watch Manufacturer — B. Beasley, St. James's Street, Piccadilly, Gun Manufacturer—G. G. Chittenden, Tunbridge, Kent, Plasterer—J. Cunliffe, Goole, Yorkshire, Shipowner—A. F. Clapp, Abergele, Denbighshire, Licensed Victualler—W. W. Carr, Earl Street, Edgware Road, Cheesemonger—J. Clark, Owston, Lincolnshire, Auctioneer—W Deeley, Leighton Buzzard, Bedfordshire, Plumber —R. Doul, Bristol, Master Lumper—C. J. Dowsett, Bromley by Bow, Middlesex, Cheesemonger—W. Davis, Cardiff, Glamorganshire, Shoemaker —L. M. Emerton and F. Emerton, Arthur Street, Brompton, Dairymen—M. Ellis, late of Short Street, Wentworth Street, Whitechapel, General Dealer—T. Fuller, late of Winchester Bdgs, Great Winchester St., City, Mining Agent—J Forsdike, High St., Shoreditch, Tobacco Manufacturer —J. Gooch, Westbourne Park Road, Paddington, Baker—B. Gordon, late of Burnley, Lancashire, Assistant to a Pork Butcher—J. P. Grain, Conduit Street, Bond Street, Wine Merchant—R. Goldstine, West Street, Golden Square, Piece Broker—T. Hudson, Portsmouth, Beer Retailer—J. Hill, Holbeach, Lincolnshire, Schoolmaster—G. Huckstable, Dock Street, East Smithfield, Tailor—E. Harper, Southport, Lancashire, late Commercial Traveller—M. Hackney, Stoke-upon Trent, Staffordshire, Potter — F. Headley, Farnborough, Kent, Corn Dealer—J. Hodgman, Rochester, Kent, Master Mariner—A. Houston, Manchester, Joiner—J. R Hodge, Pembroke, Tailor—W. Jones, Cardiff, Glamorganshire, Licensed Victualler —R. W. Keene, Malcolm Place, Clapham, Artist—A B. Kemp, Bradford, Yorkshire, Merchant—A. Kay, Halifax Yorkshire, Commission Agent—D. Kitchings, Birmingham, Retail Brewer—A. Kaye, Pudsey, Yorkshire, Grocer—C. A. Kelly, Manchester, Drysalter—J. L. Lloyd & W. Grove, Birmingham, Paraffin Lamp Makers—E. Laverack, Leeds, Tailor—S. Lloyd, Oswestry, Shropshire, Toll Collector—W. Merrill, Farcet, Huntingdonshire, Carpenter—C. Martin, Leicester, Builder—W. Marsden, Leeds, Ironfounder—J. Mortimer, Rotherham, Yorkshire, Journeyman Currier—J. Moore, Liverpool, Horse Dealer—J. Naylor, Leeds, Bill Broker —T. Owens, Liverpool, Boot and Shoe Maker—A. Prebe, Tavistock Terrace, Upper Holloway, Vendor of Medicine—H. H. Parker, Kingston-upon-Hull, Bootmaker—W. H. Punchard, Paignton, Devonshire, Baker—J. Puttick, Gloucestershire, Seaman—C Pendar, Mousehole, Cornwall, Innkeeper—T Rees, Ferryside, Carmarthenshire, Grocer—E. Rennell, Sussex Road, Upper Holloway, late Lodginghouse Keeper—W. Robson, Saltburn by-the-Sea, Builder—A. Rogers, Crouch End, Hornsey, Cow Keeper—W. Russell, Newport Pagnell, Buckinghamshire, Blacksmith—J. Springbett, Clement's Lane, Lombard Street, Architect—J. Strout, jun., Poliphant, Cornwall, armer—R. Simm, Oakenshaw, Lancashire, Warehouseman—F. A. Tamplin, Liverpool, Commission Agent—J. Tingle, East Dean, Gloucestershire, Greengrocer—G. Townend, Kingston-upon-Hull, Butcher—E. Taplin, late of Liverpool, Coal Dealer—W. Targett, New Compton Street, Soho, Undertaker—W. B. Thelwall, Windsor, Berkshire, Clerk in her Majesty's Civil Service—E. Wood, Eaglesfield, Cumberland Butcher—R. Whittaker, Emsworth, Hampshire, late Beer Retailer—J. T. Wilson, Bristol, Wine Merchant—R. Walton, jun., Bristol, Town Traveller — J. Wardle, Bishopwearmouth, Durham, Engineman—W. Wilson, Croydon Common, Surrey, Bricklayer.

SCOTCH SEQUESTRATIONS.—W. Bowie, Dumbarton, Spirit Merchant—J. Horlock, Gann, Glasgow, Wine Merchant—W. Sim, Glasgow, Contractor—W. Walker, Glasgow, Spirit Merchant—J. Wood, Glasgow, Joiner.

Metropolis and its Vicinity.

Industrial Exhibition at the Agricultural Hall.—On Monday afternoon the North London Working Classes Industrial Exhibition was opened at the Agricultural Hall, Islington, by Earl Russell, who had consented to preside on the occasion. The object of the exhibition, which is under the patronage of the Earl of Shaftesbury and numerous other gentlemen connected with the metropolis, is to bring together as large an assemblage as possible of works of an artistic, scientific, and useful character, the production of the artisan who is the exhibitor, manufactured in the ordinary way of business, being specimens of superior workmanship or of novelty in design; new inventions or original contrivances to economise labour or time; and useful, artistic, or ornamental articles, which may have been produced in spare hours, whether by working men or working women. For the best productions in the various departments prizes are to be awarded in the respective classes, and although on some of the days of exhibition the Hall is opened to the public at a charge of sixpence, to enable working people to see it the admission fee is reduced to twopence each evening from 7 till 10 o'clock. The guarantee fund, from noblemen, gentlemen, and others supporting the movement, amounts to more than 350*l.*, of which 50*l.* was guaranteed by Miss Coutts, and 100*l.* by Mr. S. Morley. The inaugural ceremony included a musical performance, in which Miss Louisa Pyne, Miss Leffler, Mr. Gayler, Mr. Lewis Thomas, and other professionals took part, supported by a choir of upwards of a thousand voices, the musical arrangements being conducted by Dr. Wesley, of Winchester Cathedral. Earl Russell, who was accompanied by the Countess Russell and Lady Amelia Romilly, in declaring the Exhibition open spoke as follows:—

"Ladies and gentlemen, I have to congratulate you on the Exhibition which I have just been permitted to witness. It has given me the greatest satisfaction to observe the works of skill and industry of the North London working classes That which I have seen does the working classes of North London the highest credit. There are works of skill and ingenuity in carving, in cabinet work, and in various kinds of professional art which would take me long, indeed, to enumerate, but which you will see for yourselves from day to day, and which cannot fail of giving you the highest satisfaction. I must confess that it affords me pride and pleasure to be the fellow-countrymen of men who have so employed their time, who have exhibited the greatest ingenuity in the works that they have performed, and in that manner have done credit to the country to which they belong. Those who first conceived the thought of this Exhibition of Industry did but justice to the industry of their countrymen, and I congratulate them on the great success which has already attended their efforts. It is in this manner that this country gives another proof that the working classes of London are, as I believe, the highest in the world, the most distinguished in the works that they perform, the most ready to accomplish anything that may be set before them, and thus making this great community that which it ought to be—the head of the civilised world in all those works which betoken civilization and progress. We must all be thankful that it is permitted to us by a gracious Providence to enjoy under the laws of this country, under the safeguards of the monarchy of this country, that security by which time can be made available, and every one can be certain that if he is industrious, if he devotes his time to works which do him credit, he will receive the rewards of that industry. It is therefore that we ought to be thankful that an Almighty power, under whom we enjoy so many benefits, permits all classes to join together, we, who have other works to perform, performing those works on our part, and the industrious artisans performing the duties allotted to them, and all, I trust, combined to raise the reputation of this great country. I was happy to accede to the proposal when a wish was expressed that I should attend here to-day and preside at the opening of this Exhibition, and I must say that I had no conception when I acceded to that wish that the works of industry which were to be shown would betoken so much skill and such beautiful results of the operations of labour. I congratulate you upon them, and I declare this Exhibition is opened from this time."

A vote of thanks, moved by Mr. D. Seymour, M.P., and seconded by Mr. George Cruikshank, was then voted enthusiastically to his lordship for his kindness in presiding. In acknowledging the compliment his lordship said—

"I beg to return you my heartfelt thanks for the honour you have done me. To me it has been a very easy and delightful duty to preside at this ceremony. This at least I can say, that I myself have been a working man from an early period of a long life; and though I do not wish to enter into any political discussion, you will, perhaps, permit me to tell you what happened to me when I had the honour of being a Member of Parliament for the city of London. A measure was brought into Parliament, and a very excellent measure as I thought, by Sir Robert Peel, for promoting freedom of trade with regard to many articles of art and manufacture. Many of those whom it affected came to me, and complained that while they were exposed to competition, and while their trade would be thrown open to all the nations of Europe and the world—(I remember one man especially, who was a shoemaker, and who complained that it was with great difficulty that he could obtain one piece of meat in the course of a week)—the bread which they ate was taxed, and they wished me to oppose the measure. I said to them, "Permit me to tell you that I think no such injustice as you apprehend can long continue; that if your trade is thrown open to the competition of the whole world you will not find corn will be taxed for many years, but that you will have the benefit of free trade along with others." And so accordingly a few years afterwards a Bill was introduced for the repeal of the corn law, and free trade was extended to the farmers and other grades of society in this country. With that example before us, I may well say that while you pursue your industry —while you show the industry and skill that you do whenever any question arises in which your rights and privileges are concerned, you will find that after some discussion—for no great progress is made in this country by any question until it has undergone a good deal of soaking—whatever is just and for the common benefit is sure to be sanctioned by Parliament in the end. But allow me also to say that it does not happen to us in politics as it does to those who work in some other ways. For instance, I saw a machine to-day, by which, I think, the ten-thousandth part of a grain difference in weight could be shown by an exceedingly nice and delicate balance. I saw also a watch made to go exactly to the minute and the second. Now, we who are engaged in politics are not able to work with any such mechanical accuracy; and therefore it well becomes you, as it has become you in former times, to show patience and confidence in the laws of your country. Perhaps it is needless to tell you that in the great year 1848, when the streets of Paris and Vienna were deluged with the blood of men fighting for their rights, and while others perished in maintaining order, the people of London rose in insurrection, but in insurrection on behalf of order and peace, and for the maintenance of the laws and the constitution of their country. I trust such will be your conduct in future, as it was in 1848; for you may depend upon it that this is a country in which, by means of discussion, by means of the Press, by means of Parliament, by means of public opinion expressed in a thousand ways, truth at last gains the supremacy, and, under God, every evil will be abolished."

The Thames Embankment.—On Wednesday the ceremony of laying the first stone of that portion of the Thames Embankment comprised in the second contract was laid, in the presence of a large number of members of the Board of Works and their friends, by Mr. Bazalgette, the engineer-in-chief, on the bank of the river, at the lower end of Arundel Street, Strand. The work to be executed under this contract extends from the eastern side of Waterloo Bridge to the lower end of the Temple Gardens, a length of 1970 feet. About its centre will stand the Temple Steamboat Pier, in length 470 feet, a piece of granite masonry presenting an imposing front to the river, and breaking the uniformity of the river wall. Some difficulties have been experienced in carrying the works to their present stage, but the contractor, Mr. Ritson, seems to have met them in a manner that has given full satisfaction to the Board of Works. Mr. Bazalgette, in his address to the assembled company, expressed his regret that the Legislature had not given the Board of Works power to buy the property along the margin of the river, so that, instead of giving compensation for loss of business, they might, at a slightly-increased cost, have taken the property and have made a good frontage along the [illegible] of the river. There could be no doubt that this [illegible] yet take place, as it could not be supposed that [illegible] ornamental grounds and a handsome wide road [illegible] miserable property now standing at the river side [illegible] be allowed to remain.

Blackfriars Bridge.—The demolition of the [illegible] Blackfriars Bridge proceeds rapidly. The road [illegible] above the arches has been cleared away for some [illegible] and on Friday the keystone of the second arch [illegible] Surrey side was removed in the presence of a [illegible] number of engineers and scientific men. The [illegible] machinery constructed for the purpose is simple [illegible] highly effective, and the work of unkeying the [illegible] was performed with ease and rapidity.

Visit of General Todleben.—It is understood that General Todleben, who devised and executed the defences of Sebastopol, and whose work during the Crimean war is now the subject of so much attention among military men, is about to pay England a visit, and that during the principal part of his stay he will be the guest of Captain Blakely.

Great Fire at Pimlico.—On Sunday morning about 4 o'clock a fire occurred at Messrs. Sa[illegible] Patent Wheel Works, in Pimlico, which was not extinguished until the large buildings of the [illegible] filled with valuable machinery and manufactured [illegible] were destroyed. The loss of property will be great, and it is not known if the firm was insured. No lives were lost.

Demolition of the Great Exhibition Building.—On Saturday all the arrangements for removing the towers in the Exhibition Road were completed. Captain Fowke and his staff of Royal Engineers are preparatory to operations for that purpose. All the [illegible] and the rest of the building have already been removed. The ground is expected to be cleared by the end of the year, when operations will be commenced for the erection of the proposed new museum for the department of science and art.

Proposed Removal of Middle Row.—At the [illegible] meeting of the Metropolitan Board of Works it was brought up from the Streets Committee [illegible] proposed removal of Middle Row, Holborn. The Committee said that they instructed the superintending architect to survey and report on the probable cost of removing the property in question, and that he had reported that the net cost of acquiring the property part of the property would be 61,152*l.*; that in his opinion it would not be advisable to touch Staples Inn as originally proposed by Mr. Marrable, as the rents after return from the sale of ground rents, would be less than 20,000*l.* The houses were all let to tenants having valuable business interests in the ground floors, and the upper floors were occupied as chambers by solicitors of Staples Inn. The advance in straight line of frontage would not, in his opinion, be equivalent to the cost incurred, and it would be questionable in point of taste to destroy one of the few picturesque examples of half-timber style now left in the metropolis. The report was received, and ordered to be taken into consideration on a future day.

The City Police.—The City Committee have resolved to adopt for the force the "Britannia" helmet, recommended to them two years ago by Dr. Borlase Childs, the surgeon to the force. The Britannia helmet has been adopted by the Metropolitan and several provincial forces, and is likely to come into general use.

The late Explosion at Erith.—The adjourned inquest on the persons killed by the Erith explosion was resumed on Tuesday. Several witnesses were examined, but no information could be obtained as to the cause. Mr. Raynor's letter, complaining of the leaky state of the powder barrels. Some men accustomed to unload powder barges were examined, and stated that they were in the habit of having fires on board during the voyage when the powder was battened down, and when they were landing powder. They were also obliged to show lights on board to prevent being run down by steamers, which one of the witnesses stated was a more imminent danger than that of being blown up. The inquiry was again adjourned. The inquest on the girl Osborn, who died in Guy's Hospital from the effects of the explosion, was concluded on Wednesday. Mr. Hall and some other witnesses were examined, but no fresh light was thrown on the calamity. The jury returned a verdict that deceased met her death by accident caused by an explosion of gunpowder, but as to originating there was no evidence to show.

Southwark Bridge.—The Court of Common Council on Thursday discussed at some length the report of a committee in favour of opening Southwark Bridge free of toll, for six months, by way of experiment. A motion for the adoption of the report was opposed on the ground that if the bridge were once opened it could never be closed again; and that the corporation had no funds for its purchase. The motion to open the bridge was ultimately carried by a large majority, but in consequence of some technical point in regard to funds, the report was referred to the Coal, corn, and finance committee before being finally carried out.

The Ludgate Hill Circus.—At a meeting of the City Commissioners of Sewers, on Tuesday, a report was read from the committee which had been appointed to report on the expediency of constructing a circus at the junction of Ludgate Hill and Fleet Street.

committee strongly approved of the project and recommended its immediate adoption. After some discussion on the means of obtaining funds for the purpose, an amendment was moved for referring the report of the Court of Common Council, with a view of obtaining their assistance in carrying the scheme into effect. On a division the amendment was lost, and the report of the committee was adopted.

Fire at Blackfriars Station. — On Thursday morning between three and four o'clock, a fire was discovered at the new station of the London Chatham and Dover Railway, on the south side of Blackfriars Bridge. It occurred in the booking-office, and is supposed to have been caused by an escape of gas. The office was burnt, with some thousands of railway tickets, and considerable damage was done to the premises below, but it was eventually extinguished without the aid of the brigade engines.

The Forthcoming Trial of Müller.—On Thursday afternoon Mr. Serjeant Parry, who will hold the leading brief for the defence, had a consultation with Mr. Metcalfe, Mr. E. Besley, Mr. Beard, and Dr. Juch of the German Protection Society, at which it was decided that the trial should take place at the session which commences on Monday next, unless any circumstances should arise to necessitate an application for a postponement.

Garibaldi's Yacht.—The Princess Olga schooner, 50 tons, has been bought by the committee of the Garibaldi Fund, to be presented to General Garibaldi, for his use at Caprera. This vessel was built by Mr. Joseph White, of East Cowes, for Mr. Rutherfoord, of the Royal Victoria Yacht Club, who himself furnished the design. She is built of the best English oak and East India teak; copper bolted and fastened. She has no wood treenail. Her internal fittings are commodious and elegant. Her saloon and lady's cabin were painted by Sang and his assistants, the fruit and flowers by Benson, the figures by Bendixen. Her head, a likeness of the Princess Olga, of Russia, was carved by Hellier, of Portsmouth. She is very fast, and has won many prizes, and has been long recognised as the show yacht of her class.

The Public Health. — The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday October 15 were 1355. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1183. The present return is therefore 172 above the average. During the week the births of 1020 boys and 1052 girls, in all 2072 children, were registered in London. In the ten corresponding weeks of the years 1854 63 the average number was 1851.

Provincial.

Ascot.—A very barbarous murder has been discovered at Sunning Hill Park, the seat of Mr. P. H. Crutchley, near this town. On Saturday afternoon a carrier named Kentish called about half-past 5 o'clock at a lodge near the road leading to Sunning Dale, for the purpose of leaving some papers. This lodge was kept by an old woman named Butler, about 70 years of age. On his opening the door and entering the lodge he was horrified to find the old woman sitting on the floor near the entrance, with her head covered with wounds and streaming with blood. On asking her what was the matter she was just able to utter a few exclamations of pain, and became insensible. He hastened to the adjacent farm for assistance, but she died from the injuries she had received before medical aid could be obtained. There were three frightful cuts on the back, and two on the top of the head, all of them evidently inflicted with some blunt instrument, as the cap which she wore had not been cut through. Two of the Berks Constabulary immediately proceeded to the lodge, and minutely searched the premises in the hope of finding some traces which might lead to the arrest of the murderer. By the side of the body were found a bunch of four keys and a seal, engraved with the letter "G." The poor woman, who was in the receipt of parochial relief, was the housekeeper of William Mancey, who is in the employ of Mr. Nelson, a racehorse trainer at Winkfield, who left her alive and asleep on Saturday morning, and was at Winkfield at the time when the deed was perpetrated. As Mrs. Butler was in very poor circumstances it is thought that the murder has been committed from motives of malice and not of plunder. The officers remained on the premises during the whole of Saturday night, and from their inquiries suspicion has fallen upon two tramps who were seen in the neighbourhood during the day, and are said to have insulted several persons who refused to give them alms. At the inquest on Wednesday the jury, after a long deliberation, returned a verdict of "Wilful murder against some person or persons unknown."

Bristol.—The Bishop of Gloucester and Bristol has prohibited Brother Ignatius from preaching in his diocese. This step has been taken in answer to a memorial signed by the rural dean and many of the clergy and laity, calling his lordship's attention to the fact that Brother Ignatius had announced his intention to preach if possible in some church in Bristol or its neighbourhood on the following Sunday. In his reply the bishop says that in his position as chairman of the Church Congress he felt it to be his duty to permit Mr. Lyne, as a member of the Congress and ticket-holder, to address the meeting, but he feels it equally binding upon him as bishop most distinctly to prohibit the admission of Mr. Lyne into any of the pulpits of his diocese.

Bilston.—The colliers' strike, which has caused so much excitement and suffering in this district, was supposed to be at an end on Monday, but subsequent events have proved that the supposition was premature. On Saturday a meeting of the men was held in this town, when Mr. Samuel Griffiths, a well known metal broker, addressed them, and pointed out how hopeless was the chance of the men gaining their object in the present state of the iron trade. The committee then proposed a resolution that the men should return to their work, but they could not bring themselves at once to confess that all their past sufferings had been endured in vain, and the resolution was received in silence. A meeting of the committee was afterwards held, when they resolved to break up their organisation, and leave each man to do as he pleased. This resolution was practically carried out on Monday morning, when large numbers returned to their work. A large body of men, however, still remained on strike, and meetings have since been held, at which violent sentiments were uttered, and were followed by attempts to call out the men who had resumed work. On Wednesday morning a party of 8000 marched in a body to Lord Dudley's pits, when a collision took place between them and the police, who took 19 of the ringleaders into custody. The magistrate remanded the prisoners for a week, with an intimation that he will then commit them for trial at the assizes.

Chatham.—A public meeting of the inhabitants of this town, convened by the High Constable in accordance with a numerously-signed requisition, was held on Monday for the purpose of taking into consideration the great danger experienced by the inhabitants from the close proximity of the large gunpowder magazines and stores at Upnor Castle, and urging upon the proper authorities the necessity of taking steps to protect the lives and property of the inhabitants of the neighbourhood. It was stated that the powder stores at Chatham are among the largest in the country, the quantity at present in store being so vast that if an explosion were to occur it would infallibly destroy the dockyards and naval establishments at Chatham and Sheerness, and spread ruin and devastation in both places. It was only a short time since that the Upnor magazine had a narrow escape of being destroyed, a fire having been discovered in a part of the establishment, which was only extinguished after some difficulty. It was ultimately resolved to present a memorial to the Government to adopt such measures as might be deemed necessary to prevent the calamitous results of an explosion at the magazines.

Coseley.—It will be remembered that a few weeks ago a miner named Hale was committed by the local magistrates to take his trial at the next Stafford Assizes, on the charge of wilfully murdering his daughter, a little girl eight years of age, at Coseley. A woman named Cecilia Baker, with whom he had been living, was also charged, but the evidence against her not being conclusive she was discharged. During the past week additional evidence has been obtained, and the woman has been taken into custody and committed for trial with Hale at the next assizes.

Liverpool.—On Wednesday, the 12th, the Chancellor of the Exchequer was entertained by the Mayor at a banquet in the Town Hall. In returning thanks for the toast of his health, Mr. Gladstone said:—

"I speak the language of the utmost sincerity when I say that in my opinion, after an experience that has now become a long one, the one standing pain to the political man in England, the one serious drawback to the satisfaction of his public life, is not the fear of criticism by which on every side he is surrounded, and which I hold to be one of the greatest and most essential advantages he enjoys—it is not the labour, even the exciting labour he is called upon to perform, but it is a sense of the inequality of his best exertions to the arduous duty of government and of legislation. There is no affectation in that language. It is justified by an appeal to the plainest facts, for I apprehend it to be beyond the possibility of dispute that this great and remarkable country has undertaken responsibilities of empire such as never before lay on the shoulders or upon the minds of men. What nation in any part of the world has had relations such as we have had in every corner of the globe? What nation has had its factories, its interests, its ships, its commerce in every part of the habitable world? What nation has governed, as we govern, distant millions many times outnumbering ourselves? What nation has claimed, as we claim, to bear the sway in the name of Queen Victoria of so large a proportion of the surface of the earth? What nation has made itself responsible, as we have made ourselves responsible, for the welfare of 40 or 45 separate States, in every portion of the world, which we know by the name of our colonies; and what nation has at the same time had the care of all those direct interests and relations, been charged with the same responsibility in the exercise of its moral influence abroad, in the example it is called upon to set, in the sympathy it must feel with the cause of right and justice and constitutional freedom, wherever that cause is at issue, throughout any portion of the world? I am not one of those who could look forward with satisfaction to the waning of the splendour of the sun of England's prosperity. I hope, on the contrary, it may ever continue, and that the honour of the country may continually grow; but, at the same time, I do not scruple to say that I do witness with the utmost satisfaction the gradual growth of opinion and sentiment on the part of the people of England, whose sentiments in the long run govern the course of policy of the Government, the growth of the tone and temper which recognises those great facts of our enormous—nay, even our over-extended responsibilities. It is not very long since, not in this country alone, but in every country of the civilised world, there prevailed what I may call a lust of territorial aggrandisement, and a notion had gone abroad, connected, no doubt, in great part, with false economical theories, that the happiness and the greatness of a people are to be continually augmented by obtaining constant accessions to their extent of territorial away. I hope the time has come when the people of England have thoroughly shaken themselves free from that delusion—when they have arrived at a solid and mature conviction that a nation may have too much territory as well as too little even. However, if you have too much territory you have contracted responsibilities in regard to it, of which you cannot honourably free yourselves, but you have at least reached the point at which all lust of extended territory has been sincerely and permanently forsworn. What we have now to do is, I think, to cultivate what Providence has given us, but not to seek any addition to the sphere of our labours, still further to overtax those human powers which are already charged beyond their true faculty for the satisfactory discharge of their responsibility. I think we may trace in other ways the progress of a true and just political philosophy, the philosophy of practical politics. On the part of the people of this country a great change has taken place in the mind of England within the last three generations with regard to the government of our colonies. A century ago the idea on which our colonial relations were based was narrow and selfish. In one respect, indeed, the administration of the old American provinces was conducted upon a system which might still afford some useful lessons, but it rested essentially on the idea that, as far as economical and commercial matters were concerned, the interests of the colonies were to be made subservient to those of the mother country, and that the channels of their trade and their industrial exertions were to be forced in a direction different from that which nature might point out, in order to make them tributary to the greatness of the mother land. We have fully and entirely awakened from any such dream. We have given to the colonies practical freedom. I am not prepared to say that we have not something to rectify on the other side of the account. We observe a disposition on the part of some colonies calling themselves our own, to set up against the industry and productions of England the mischiefs and obstructions of an exploded protective system. With regard to the government of these dependencies in general, there is not much to be done. Slowly, perhaps, and cautiously, but firmly and resolutely, we may find it needful to rectify the distribution of burdens and benefits, in order to place the people of England not in the position of ascendancy and superiority, which they have in good faith surrendered, but in that position of justice and equality to which they have an indisputable claim. Our duty is to get rid as far as may be of interference with the affairs of our fellow subjects abroad, to afford them the protection and shelter of the power of this great empire, but at the same time not to consent to be charged with the payment of vast sums of money for the sake of performing duties which belong to the colonists rather than to us, and the performance of which in every case is an inalienable part of the functions of freedom. There cannot be a grosser mistake in politics than to suppose that you can separate the benefits of freedom and its burdens. Is it to be imagined that it would be a benefit to a nation if some unknown and unseen benefactor were to undertake the payment of its taxes? No, it is necessary, if you choose to succeed to and claim the dignity of freedom, that you should provide the means by which free institutions can be maintained. In this direction we are in one sense moderating our views. We are learning that we have enough to do—more, perhaps, than we can probably accomplish—in confining ourselves to those immediate duties with which Providence has charged us. These duties are not slight. What revelations have we had within the last 30 or 40 years with regard to the condition of England itself! how many sore places have been disclosed! how much has been improved and reformed! But how much also does the conviction remain behind that there is still a great deal to be done! In regard to what is called foreign policy, we witnessed something of a similar movement of public sentiment to that in regard to the question of our foreign dominions. It is impossible that to a country like England the affairs of foreign nations can ever be indifferent. It is impossible that England, in my opinion at least, ever should forswear the interest she must naturally feel in the cause of truth, of justice, of order, and of good government; but it is possible, nay, it is greatly desirable, that England should recognise the immense advantages which the Almighty has bestowed upon us in the independence of our insular position. The first result of that independence is that with regard at least to every European question out of which most of the disturbance of the peace of the world arises, England—and England alone—is as a nation essentially and pre-eminently impartial; but this position of impartiality is a position at once of dignity and of power. It is a position in which happily you do not require to be always seeking by artificial means for the creation of influence. It is a position in which influence will come to you of itself, because amid the conflicts of the passions and interests of others, confidence will be reposed in the judgment of a country known to be free from the influence of these passions. Therefore, feeling, as I have said, on the one hand, the consolation and the advantage that public men in England must derive from the strenuous support which they receive on all hands from their fellow citizens, and on the other for the chastened humility with which they should regard a function they must know to be beyond their strength, it is with satisfaction I anticipate a state of things growing and consolidating itself in the public opinion of this country from year to year, which tends to inspire the belief that we are shaking off schemes, projects, and ideas that would draw us forth beyond our sphere, that our immediate duty should tend to involve us in continual embarrassments, and that we are consequently setting free our hands and energies for the great works which do still always remain to us in the administration of the British Empire, and in studying the happiness of the people of England. Doubtless, there is still much to be done—the instinct of preservation has always been the most powerful in this country, and justly has it been the most powerful of all our impulses, because we have had that which was worth preserving; but the instinct of preservation is best promoted and upheld when dutifully and honestly combined with the instinct of improvement and the laws and condition of this country after all that has been done yet will offer a rich harvest to the wise and judicious efforts of the statesmen of future times, and with the hope that the result of those efforts will be in the future as in the past, not the impairing or diminution of the national inheritance, but the rendering it larger and more secure for those who are to come after us, even as we are happy to see it has been increased in value and deepened in stability by the changes and reformations which during the last 30 years it has undergone."

On the following day addresses were presented to the Chancellor of the Exchequer by the Chamber of Commerce and the Financial Reform Association, in St. George's Hall. The latter address was a criticism on the financial measures of the right hon. gentleman, and was generally considered to be so much out of place that it was received with hisses from various parts of the Hall. It said that it was exceedingly to be regretted that, instead of taking a penny off the income tax this year, Mr. Gladstone did not retain the penny and abolish the corn tax, and expressed the hope that in his future budgets he would make arrangements for the entire abolition of the duties on tea, sugar, and coffee; and in

succeeding years would proceed steadily in the great work of liberating capital, skill, and industry from all fiscal obstructions to their operations, looking for revenue from wealth actually created, not, as heretofore, to the means of its production. The Chancellor of the Exchequer, in reply, said:—

"I see in this address a latent principle, on which in my own peculiar position as Minister of Finance I confess I look with a certain degree of suspicion. Its authors want to promote public economy by making the payment of large taxes insupportable. Direct taxation, I admit, if we were to proceed upon abstract principles, is a sound principle; but, gentlemen, have some compassion upon those whose first necessity, whose first duty it is to provide for the maintenance of public credit—to provide for the defences of the country—to provide in every department for the full efficiency of the public service. I wish I could teach every political philosopher and every financial reformer, to extend some indulgence to those who would ascend along with them, if they could, into the seventh heaven of speculation, but who have weights and clogs tied to their feet which bind them down to earth, and render it necessary for them to infuse large dilution, large participation of secondary matter, into that system of abstract reasoning by which, if they could, they would be very glad to be guided. That is an important reservation from me. Allow me to say that I trust that at no time will any Government be induced for the sake of seeking favour with the belief—and I am quite sure that in seeking favour they would fail to find it—let no Government be induced under the notion of abstract, extensive, sudden, and sweeping reforms to endanger the vital principle of public credit, or to risk throwing the finances of the country into confusion; but, subject to these limitations, I, for one, trust that progress will be the law of our Legislature in that as well as in every other particular, and in that particular not less than in any other. I am very glad to think that among the sources to which we may now look for the progressive extension of fiscal reform, we may, I trust without too confidently reckoning on the future, calculate a steady increase in the revenue of the country. Indeed, this is no matter of secondary importance. There was a time—and that time is within the recollection of almost the whole of us—there was a time when the revenue of this country was nearly stationary. In an important period marked by many and most beneficial changes in every respect—the important period between 1830 and 1840—a period which was almost barren in measures of commercial and fiscal improvement, the increment of the revenue was almost imperceptibly slow. But it is now our gratifying duty to record from year to year, quite independently of the progress of the imposition of any new taxation, a considerable increase in the public receipts, as the result of that increased activity of capital and industry which has been imparted to the various industrial classes of this country. There is a source upon which, indeed, we cannot reckon with confidence from year to year, because circumstances may interfere to break the continuity of progress, but upon which, in looking over a series of years, I think we may reckon with considerable confidence, and which, therefore, leads to the belief that we have as yet by no means arrived at the term of fiscal and financial improvement: but there is one consideration on which, in concluding these remarks, I will briefly touch. It is fraught with so many topics of reflection, it brings into view so much of the future, it extends itself over so many departments of the deepest human interest, that even to touch upon it almost appals the mind. We all remember that before the repeal of the corn laws we were told that we should get into a state of dependence on foreign supplies. Let us do literal justice, at least, to the prophets from whom these menaces proceeded. We have fallen into a state of dependence upon foreign supply. *Prima facie*, therefore, the prophecy is justified; but yet when we state what that prophecy really meant—because the real meaning of it was this, "You will obtain your corn from abroad, and your own fields at home will remain uncultivated,"—that was their full prediction,—I need not ask whether that full prediction has been verified or not. As far as my knowledge goes, the fields of this country continue to be cultivated. I believe that those who are happy enough to be possessed of any portion of the lands of the country still continue to receive some rent for those lands. In point of fact it is not only that they continue to be cultivated, but there is a great deal better cultivation than ever. It is not only that they produce as they did before, but they produce a great deal more than ever they did before. It is not only that they produce more than they did before, but it is this—that they produce what is less in the character of the mere necessaries of life, and what is more in the character of the comforts, and, in addition in one sense, let me say, the luxuries of life for the mass of the population. It is that which has increased the general progress in the condition of the country, and which has made us dependent on foreign supply, because we find it cheaper and better to get our corn from abroad; but, gentlemen, at the same time, there is something I believe almost unprecedented, nay, as regards any great country, something quite unprecedented, in the condition of a nation whose commercial position might now be defined as ours. Nearly one-half of the essential food of the people of England—I mean grain—is cultivated and raised in other lands, and perhaps I might say, independently of food, nearly one-half, possibly, for aught I know, it may be more than the one-half, of the whole materials of the labour of the country are also produced in other lands. What is the condition of a country whose industry is distinguished by features like these? Here is opened to us a vista almost interminable, because we are not only dependent, but we are increasingly dependent on foreign supply. I see, indeed, and I see with joy, in the figures of the Customs' revenue that there is a decreasing duty on foreign grain, because a small revenue from that source means abundance at home and cheapness in the main essential element of the subsistence of the people. That is the case comparing one year with the years that are nearest to it; but if we look a little further what must we expect? Population and trade have grown enormously, but have they reached their limit? Have your dock walls reached their limit? Has the extension of Liverpool reached its limit? When I was a child its population was 100,000; now it has more than quadrupled its numbers. Is there any reason why the rate of that increase should be slackened in the future? For my part, I know of none. If it please God to preserve to us the inestimable blessing of peace, I know no reason why the trade of the country should not continue to extend with the population of this country—should not continue to grow—why along with the growth of the population in mere numbers the powers and efficacy of the moral agents at work within it should not also continue to grow in future times as they happily have grown during the last 30 years; and I know no reason why we should refuse to accept the benefit Providence thus offers us in the increase of numbers, of power, and, as we believe and trust, of happiness and virtue, because we see, and must plainly see, that it will be and must be accomplished from day to day with increasing dependence on foreign supply. For when we consider the matter, what does dependence upon foreign supply mean? It means, I humbly trust, progress, the substantial progress towards that state of things which may still be remote, which neither we nor our children may live to see, but yet which we may hope lies in some happy future—that state of things in which the intercourse between nation and nation, produced by human industry, the blessed result of that law of labour which Providence imposed on our first parents and all their descendants, shall weave a web of kindness by the incessant action of the interchange of commodities between country and country, shall diminish progressively the force of those motives which dispose men to violence and aggression, and shall progressively surround and increase the power and efficacy of those motives which incline men to live in concord, amity, and love with one another. I am not insensible—none of you can be insensible—and still less can any one responsible for public affairs be insensible, to the gravity of the questions which must be encountered in the working out the great problem before us. What is to be the condition of a country with respect to the necessary element of the means of defence? What is to be the state of the maritime and international law of the world? How far the rules hitherto applicable to its conduct are safe, good, or wise, or require alteration or modification by the joint consent of the nations in order to meet the exigencies of coming times? All these are questions which must be examined and must be brought in due time to their solution; but beyond, and above, and beneath, and around these questions is embraced the destiny of our time, and the extension of those great laws of industry and exchange which are a wider and larger fulfilment of the beneficent design of the Almighty in giving different productions to different climates and countries of the earth. My belief is that the law of that extension will prevail, and that as our dependence on foreign supply increases, we may become more and more pledged and bound to a policy of peace and justice, to setting a good example of moderation and wisdom, and promoting the influence of every principle that conduces to the happiness both of ourselves and of our fellow men among the various surrounding nations of the earth."

LYNN.—On Wednesday Lord Stanley addressed his constituents in this town in a speech of great length. He declared himself for non-intervention in the quarrels both of America and of Germany. He regarded the Danish debate as an almost unanimous protest on the part of the House of Commons against intervention in the affairs of foreign States, and as establishing this principle as the standing maxim of our policy for the future. He approved of the Italian Convention, and thought it impossible to doubt that Rome, or at least the Roman territory, would pass into other hands at no very distant date. He considered it clear that the clumsy scheme of a German Confederation had in practice broken down; that the mutual rivalry of Austria and Prussia would make it impossible for all Germany to be united for any purpose, or in any manner, as a single community, and that the smaller States would eventually be united to Austria or Prussia; and he earnestly hoped that England would do nothing to prevent it. He believed the breaking up of the Turkish Empire to be only a question of time, and probably not a very long time. He was in favour of encouraging the federation of the North American colonies, and considered the opposition of the Australians to transportation to be so reasonable that he hoped the Government would not stand upon the legal rights of England, but would make concessions while they could do so freely and with a good grace. With regard to domestic matters, he urged the abolition of the fire-insurance duty, and the reduction of the income-tax, and was of opinion that they could not expect the total repeal of the malt-tax. He also urged the necessity of economy, especially in the naval estimates. On the extension of the franchise he was not hopeful. Small measures, he said, would not be acceptable, and a large measure could not be carried.

MANCHESTER.—The Chancellor of the Exchequer paid a visit to this city on Friday, and after receiving an address from the Town Council, presided at the distribution of the prizes and certificates of honour awarded to the successful competitors in the Oxford middle-class examination. In returning thanks for the address of the Corporation, Mr. Gladstone spoke as follows on the foreign policy of the Government:—

"One of the characteristics of our time is the mutual feeling of concern of every nation in the affairs and destinies and prospects of every other nation, and in no country can that sentiment of general interest and of concern be so natural, so suitable, so efficient, as in a country like England, placed in universal relation with every people of the earth. Under these circumstances it becomes a matter of the deepest importance that wisdom, circumspection, courage, and justice should direct the foreign policy of this country. In speaking of this principle I hold that the disinterested position of England is above all that which should be borne in mind, that we have higher dignity—that we have higher influence with regard to all questions in the least affecting the policy of Europe, as speaking with a judicial impartiality to which no other country from its position can in the same degree aspire, although, in point of fact, it is no special virtue on our part, but is the result of that position in which Providence has placed us with regard to the other states of Europe, so that we can have no desire with regard to them except that peace and harmony should prevail amongst them, and that they should adopt for their standing guidance of conduct the principle of respecting the rights of one another. That is a happy position for us to maintain. It places us, as it were, by the side of every European nation in the character of the friend of each and all. It makes us feel that the time is gone by when it was the fashion and the custom of the country to speak of one great country abroad in particular as our natural enemy. We have no natural enemy. Every country of Europe is our natural friend; and if to any country of Europe in particular we are to look as the country by a close relation with which we may best promote the general interest of the civilised world, it is that very country which once, in the blindness of uncharitableness and in natural yet unhappy prejudice, we regarded as our natural enemy. I trust that you think that the conduct of the Government in the regulation of its foreign policy has been actuated by a sincere desire to perform towards all countries of the world the offices of friendship. I trust, indeed I am confident, that you think that that disposition has been indicated by the Government—and not specially by the Government, for in this respect they have been no more than the organs of the feelings of the people—that disposition to respect the rights of every country, to avoid undue interference in its concerns, has been indicated in regard to the lamentable war which still desolates the continent of America. England was a sad sufferer by that war. I don't believe that history records a case in which the dissensions of a country have produced such wide calamities in other nations beyond its borders; but we felt that it was our duty to respect American [illegible] respect the discretion of the Americans to deal with [illegible] affairs whatever might be our particular opinion as to wisdom of any course they were pursuing, or as to the [illegible] bility of any object they had in view. For my own [illegible] confess I always had great doubts as to the practica[illegible] reducing to subjection any large portion of a country [illegible] manifests a determined disposition to separate; but what[illegible] be our opinion, we have no right to place it in a [illegible] should make us the judge of what it is fit for another [illegible] to do. Theirs is the responsibility; ours has been [illegible] suffering. But if we groan over the suffering which has been experienced among our own population, let us [illegible] frightful magnitude of the calamities the Americans [illegible] undergoing. It is for them, as they have the responsibility, to judge of their own course. I entertain, in the [illegible] this conviction, that by an attempt to enforce our judgment instead of theirs we should have done [illegible] but embitter a contest already too much exasperated. In the second place, I feel that the sentiment with which we ought to regard this most unhappy war is [illegible] We have no jealousy of American greatness, we have [illegible] to fear them, or any other nation. We feel they are brethren by blood and language. We know their [illegible] is calculated to continue in relations of the most [illegible] intercourse with us, and we ought to pray Almighty God it may please Him in His mercy to bring this sanguinary contest, if it be His will, at an early period to such a nation as shall be best for the happiness, peace, and welfare, and prosperity of all the inhabitants of [illegible] once the United States. With regard to other questions of foreign policy I need not say much. I might express a warm and enthusiastic feeling of this country with regard to what is believed to be the cause of freedom, of justice, in the Italian peninsula. Lately we have been informed of [illegible] which I deem of the greatest importance with regard to the future happiness of the Italian people. I mean the [illegible] Italian treaty. I am not able to pronounce any dispassionate official judgment on the merits of that convention; but I may venture to say I regard it with the eye of [illegible] satisfaction. It may not, it is true, promise an [illegible] solution of the very serious difficulties with which the destinies of the Italian people are still beset. But we know that the best and wisest men of Italy believe that by this treaty a great step has been gained towards the consolidation of freedom in that country. As an object in view, I cannot express to you what I feel its importance. I do believe that the fusion of the separate and feeble States of Italy into a kingdom which shall be united and powerful, and which on all [illegible] questions must almost of necessity be disinterested, is an event of incalculable importance to the happiness of [illegible] I ventured a few minutes ago to say that England is singularly favoured in her insular position, which renders her impartial in regard to questions of European politics. The Alps very nearly do for Italy what the sea does for us. It is hardly possible that Italy could be a power which, circumstances animated by the pernicious and destructive madness of the principle of territorial aggrandisement. In the best sense of the word, on European questions, the single Italy, even as it is, still more when fully consolidated and brought to its natural limits, must be for every European question a power conservative of honour and justice, conservative of the peace and welfare of the world. We merit in regard to the treaty, but it is a subject on which, in a view of its provisions which it appears to warrant, we exchange mutual congratulations. The solution of the problems will follow, under God's providence, in good time. While something has been accomplished, and it may be that treaty has a tendency to divest the great political [illegible] issue in Italy of its more distinctive ecclesiastical [illegible] It is well that Italians, and a large portion of our own countrymen, should understand that, in our warm sympathy for Italian unity and freedom, the people of England are governed by what may be called sectarian motives. The people of England have their own religious convictions, are sufficiently decided in the maintenance and exposition of them, but they contemplate this Italian question in the true and single view that what they look at is entirely a question of political rights and justice, and that they recommend and support precisely the same principles in regard to the consolidation and unity of Italy as they would do if the religion of Italy were in every respect the same as ours."

At the distribution of prizes to the Oxford middle-class competitors, Mr. Gladstone spoke as follows on the subject of the Universities:—

"For many long years it has been my undeserved but [illegible] lot to represent in Parliament one of the ancient Universities of the country. Often and long have I deplored, and [illegible] have I felt the difficulty of keeping together in harmonious efficiency the older and the newer pursuits of our [illegible] civilization. If we go back for some two or three generations in this country to what we were ourselves at the time of [illegible] inventions and manufactures, what do we see? [illegible] through the rural districts the old world existing [illegible] unchanged, in each University everything that belonged to the future of society remaining almost exactly as it [illegible] and then, passing into Lancashire, or into Staffordshire or West Riding of Yorkshire, we see a new world growing [illegible] a great degree in company with the old one, with [illegible] rising towns, multiplying population, and distributing [illegible] and gradually calling into existence both powerful classes and powerful faculties of mind, adapted and dedicated to [illegible] circumstances of the present day. But between the two we see little sympathy or connexion. [illegible] ladies and gentlemen, my belief is that it is a happy distinction of this country that what is not [illegible] does not require to forswear brotherhood with what is [illegible] and I do not believe that any higher duty, or any more fruitful of reward, can attach to any one of us in more [illegible] stations than the effort, according to our respective [illegible] to harmonise these two great powers together. More has been done in our towns for the purpose. The [illegible] of invidious distinction and unjust preference [illegible] the way between heart and heart which was [illegible] and barred up before; but as regards the special [illegible] these institutions and the great commercial and manufacturing districts of the country, no doubt there was much difficulty in bringing them together. Commerce and manufactures require that the period of education, or what is education in the more specific sense, should be [illegible] term at a time of life earlier than that which a [illegible] education has commonly been judged to require. And [illegible] no doubt that there was a want of connexion between the district and the ancient universities of the country. I do not [illegible] step has been made in filling up that gap. I do not [illegible] any more important or any wiser measure has been adopted by those ancient institutions than was adopted, and foremost, I am glad to say, by the University with which I have the honour to be connected, when, under the auspices of some distinguished and excellent men [illegible] among its sons, it was led to make the first effort for the foundation of this system. I trust that that effort on the part of the Universities will not be their last effort [illegible]

...and sound law, notwithstanding the real difficulties t... which I admitted, I have no doubt they might be met, and that, I believe, will yet be done, to place the powerful commercial class of the [illegible] districts of our country into closer connection with the [illegible] and most valuable seats of learning. But they deserve honour for that great effort. It was a great innovation in their customs, and they had the right nature to persevere here. Strongly liable to the charge of innovation, it bore the true character of improvement. They were, therefore, not deterred by any apprehension of any previous criticism to which they might be subjected. Having claimed to your halls the London which is their due, let me in return say that it is the highest honour, in my humble judgment, to the manufacturing and commercial districts of Lancashire—those very districts in which novelty and progress were most particularly represented—that they distinguished themselves beyond almost any other portion of the country in their readiness, in their eagerness to close with the offer of the old Universities to make these local examinations an important and prominent part of your educational and your social system. I anticipate with the utmost confidence the continued and increasing success of this great effort. I must add that there is not a wish that lies nearer to my heart than to see the healthful interchange, the free interchange which belongs to the operations of commerce applied also in all its breadth to the operations of the mind and of the heart. There are none of us who have not much to learn from those who are placed in other positions. There are none of the separate classes connected with our institutions and connected with the power and wealth of the country that have not much to learn from one another. By an increasing they will learn nothing of what they have, they will gain much of what they have not; and I must not tell to you, for you feel it more readily than I do, that the commercial, the material pursuits of this age require more than ever—more than in any period of human existence—the balancing and compensation which is afforded by the highest enlivening pursuits. It is more than ever necessary that the powers of the Christian revelation—of the Christian faith—should be exercised and felt over the whole surface of society and down to its profoundest depths. But that Christian revelation has not been only a revelation of spiritual truth, it was a revelation in which spiritual truth was designed to carry with it and to draw after it the perfect development of every human excellence. The soaring faculties of the imagination, the searching powers of the mind, that which has made philosophers, artists, and poets, who are the glory of mankind—these things were not proscribed by Christianity. They were elevated into a higher sphere, and when I speak of civilising agencies I draw no distinction for the present argument between the beneficent purposes of the Gospel and those other excellences which the Gospel, independently of its religious aims, has been the most powerful and fruitful agent in promoting."

PORTSMOUTH.—The launch of another iron-clad of 35 guns, the Royal Alfred, took place in this dockyard on Saturday. She was laid down in 1859, but was afterwards lengthened and converted into an iron-clad ram, and it is intended to plate her with 4½-inch iron plates down to her water-lines. The launch was witnessed by about 10,000 persons. The Lord Clyde iron clad of 16 guns was successfully launched at Pembroke on Thursday.

YARMOUTH.—The fine screw steamer Ontario, of 3200 tons, belonging to the National Steam Navigation Company, ran on the Hasborough Sands on Sunday morning, while on her first voyage from Shields to Alexandria, with coals and iron. Every effort made to get her off has failed, and she has become a total wreck. The crew refused to abandon the vessel, and had not been rescued on Thursday morning.

WAKEFIELD.—On Friday night at the village of East Moor, near this town, George Atkinson, a collier employed at Methley, near Leeds, made an attempt to murder his wife by cutting her throat with a razor. She succeeded in making her escape before he completed his purpose, and the wound he inflicted was only superficial. It appears that they had been married for 13 years, and that the wife left him some time ago to live with a collier named John Young, at East Moor. The prisoner had gone over from Methley to ask her to return to him, which she refused to do. He was taken into custody and remanded for further inquiry.

Ireland.

THE LATE OUTRAGE IN DONEGAL.—It is now hoped that Mr. Wilson, the agent of the Earl of Leitrim, who was shot at and severely wounded a few days ago, will recover. The utmost exertions have been made by the police to detect the assassins; but though they wore the cloaks of the constabulary and were seen to walk quietly away from the place, the peasantry will give no information. Several persons have been arrested on suspicion; but the evidence, so far as it has yet appeared, has not been sufficient to detain them.

Railways.

DESTRUCTIVE COLLISION ON THE GREAT NORTHERN.—On Tuesday morning a collision took place at Grantham, between two Manchester goods trains laden with valuable merchandise, consisting of tea, silks, &c. One of the trains left Peterborough at 12 30 and the other at 12.50. The latter train ran at full speed into the former while standing at Grantham station, and as it was travelling at the rate of between 30 and 40 miles an hour, the collision was terrific. Twelve trucks were completely smashed, and the up and down lines were literally strewn with tea. One truck was cut clean in two, each half standing some distance apart from the other on two wheels. The driver of the train and the fireman were so seriously injured that their recovery is despaired of; and the damage to property is immense.

Obituary.

THE DUKE OF NEWCASTLE died on Tuesday evening at Clumber, after a long illness, brought on, like that of Lord Herbert, by over-work in the public service. His Grace, Henry Pelham Pelham Pelham Clinton, K.G., Duke of Newcastle, under Lyme in St. Pudelsie, Earl of Lincoln, and Baron Clinton, Lord Warden of the Stannaries of Cornwall and Devonshire, Lord Lieutenant of Nottinghamshire, Ritter and Master Forester of Sherwood, Hereditary Steward of the Sherwood Rangers, High Steward of Retford, Keeper of St. Briavel's Castle &c., was born in Clarges Street, Berkeley Square, in May, 1811, and was consequently in his 54th year. He was educated at Eton and at Christ Church, where he was the contemporary of Mr Gladstone, Lord Elgin, Lord Canning, Lord Herbert of Lea, and the Marquis of Dalhousie, all of whom lived to fill high offices in the political world, and of whom Mr. Gladstone is now the sole survivor. He represented South Notts in Parliament from 1832 to 1846; represented the Falkirk burghs from 1846 to 1851, when he succeeded to the House of Lords on the death of his father. He was a Lord of the Treasury from 1834 to 1835, first Commissioner of Woods and Forests from 1841 to 1846, Chief Secretary for Ireland in 1846, Secretary of State for the Colonies from 1852 to 1854, Secretary of State for War from 1854 to 1855, again Colonial Secretary from 1859 to 1864, when his ill health obliged him to retire from public life. While he held the latter office in 1860 he was selected by the Queen to travel through her North American dominions with the Prince of Wales, and the visits paid to him on his declined by her Majesty and his Royal Highness are the best proofs of the manner in which he discharged this responsible duty. In 1832 he married Lady Susan Harriet Catherine Hamilton Douglas, only daughter of the Duke of Hamilton, by whom he has left four sons and a daughter. The latter, Lady Susan Charlotte Catherine Pelham Clinton, married in 1860, Lord Adolphus Vane Tempest, M.P., for South Durham, who died a few months ago. The second son, Lord Edward William, born in 1836, is an officer in the Rifle Brigade; the third and fourth, Lords Arthur and Albert, born respectively in 1840 and 1845, are in the navy. The eldest son, who succeeds to the titles and estates, Henry Pelham, Earl of Lincoln, was formerly M.P for Newark, and was born in 1834. He was educated at Eton and Christ Church, and married in 1861, Henrietta Adela, daughter of Mr Henry Thomas Hope, of Deepdene, by whom he has issue two daughters, and one son and heir, Lord Clinton, born a week or two back.

VICE ADMIRAL LORD SOMERVILLE died on Wednesday morning at Newtold Conyn, Leamington, where he had resided for many years. He was the 17th Baron Somerville, in the peerage of Scotland, and succeeded to the title in 1842. He entered the navy at an early age, but retired from active service when holding the rank of captain. He attained the rank of Vice-Admiral in 1862. He married in 1833 the only daughter of Mr. John Hayman, by whom he leaves two sons and five daughters, and is succeeded in the title by his eldest son, Hugh, born in 1839. His Lordship was in his 77th year, and had been in a critical state of health for a considerable time.

SIR ALEXANDER LAWRENCE, BART., whose accidental death was announced by the last Indian mail, was the eldest son of Sir Henry Montgomery Lawrence, K.C.B., who fell at Lucknow, by the youngest daughter of the Rev. George Marshall, of Cardonagh, in Ireland. He was born at Allahabad in 1835, entered the Bengal Civil Service in 1857, and was assistant commissioner in the Punjaub. He married in 1862 the daughter of Dr. Every Kennedy, of Upper Merrion Street, Dublin, and of Ballynastra Castle, Dublin county. He was created a baronet for his father's services in India in 1858, with remainder to his brother, Henry Waldemar, who succeeds him in the title.

SIR WILLIAM EDMUND CRADOCK HARTOPP, BART., died on the 16th inst. at Four Oaks Park, Warwickshire, in his 67th year. He was the third son of the first baronet, and succeeded to the baronetcy on the death of his brother in 1849. He married in 1825 the eldest daughter of Mr. Henry Bloomfield Keene, by whom he leaves a family. His eldest daughter married the late Sir Francis E Scott, Bart.; his second daughter married Mr. Farnham, M.P.; and the fourth married Lord Walter Scott, son of the Duke of Buccleuch. He was educated at Rugby, and was deputy-lieutenant of the counties of Leicester and Warwick. He is succeeded in the title and estates by his eldest son, John William Hartopp, born in 1829, formerly captain in the 17th Lancers, and now major in the 1st Warwickshire Volunteers. He married, in 1855, the eldest daughter of the late Mr. Edward Gyles Howard, a collateral member of the ducal house of Norfolk.

VICE ADMIRAL GREVILLE, C.B., died on the 18th inst., after a long illness, at Canon Hill, near Maidenhead, aged 70. He was the second son of Lieut.-Colonel Greville, by the second daughter of Sir Bellingham Graham, Bart. He married, in 1816, the only child of the late General Despard. He entered the navy in 1806, and served on the north coast of Spain, in the action of Lissa, and afterwards on the Boulogne and North American stations. In 1817 he held the office of private secretary to Viscount Combermere. After holding various employments and commands, he was, in 1851, appointed to the command of the Trafalgar, 120, on the Mediterranean station, in which ship he served during the war with Russia. For his services during the war in the East he was made a companion of the Bath, an officer of the Legion of Honour, and decorated with the Medjidie of the 3d Class. He attained the rank of rear admiral in 1856, and vice-admiral in 1863. He had been in the receipt of a good service pension since 1863.

BIRTHS.—On the 14th inst, at North Mymms Place, the Lady VIOLET GREVILLE, of a son—15th inst, at Cauldwell, Burton-on-Trent, Lady GRESLEY, of a son, prematurely, which survived its birth a few hours only—13th inst, at Queen's Gate Gardens, South Kensington, Lady OUTRAM, of a son—12th inst, at the North Camp, Aldershot, the Hon. Mrs. H. H. CLIFFORD, of a daughter—11th inst, at Whitkirk, the Hon. Mrs. EDWARD W. WAND, of a son—13th inst, at Annesley Park, the wife of JOHN CHAWORTH MUSTERS, Esq., of a daughter.

MARRIAGES.—On the 15th inst, at Tallaght Church, Dublin, the Rev. LUKE FOWLER, second son of the late Bishop of Ossory and Ferns, prebendary of Aghour, county Kilkenny, to DORA, daughter-in-law of the Very Rev. CHARLES VIGNOLES, Dean of Ossory—22d Sept. at St. George's, Basseterre, St. Kitt's, JAMES ROBERT LONGDEN, Esq., President of the Virgin Islands, to ALICE EMILY, eldest daughter of the Hon. JAMES S BERRIDGE, President of the Council of St. Kitt's—13th inst, at the Congregational Church, Stalybridge, JAMES R BARNES, only son of Thomas Barnes, Esq., M.P., of Farnworth, Lancashire, and the Quinta, Denbighshire, to ELLEN, youngest daughter of JOHN CHEETHAM, Esq., of Eastwood, Stalybridge—13th inst, at St. James's, Taunton, Captain ARNOLD, of Nethercott Hall, Devon, to GEORGIANA ELIZABETH, only daughter of J. C. CASTON, Esq., of The Priory, Taunton—13th inst, at Stoke Church, near Guildford, Captain W. CAREY, Royal Artillery, to JULIA, youngest daughter of Lieutenant-Colonel WILLIAM HEWETT, late Rifle Brigade—12th inst, at Kirklington, LEONARD JAQUES, Esq., eldest son of R. M. Jaques, Esq., of Easby Abbey, Yorkshire, to AGATHA ELIZA, eldest daughter of ALEXR. BODDAM, Esq., of Kirklington Hall, Notts.

DEATHS.—On the 11th inst, on the voyage home from Malta, ALFRED GREVILLE HOWARD, second son of Lord and Lady Alfred Hervey, and midshipman on board H.M.S. Revenge, aged 15—6th inst, LOUISA FRANCES, fourth daughter of the late Hon. FRANCIS TALBOT, of William Place, Witham, Essex, aged 79—14th inst, in Cheltenham, the Hon. Mrs. BROWNE, daughter of the 10th Lord Petre, and widow of ARTHUR HUGHES, aged [illegible]—[illegible] inst, at Stanford Court, Worcestershire, HENRY, second son of Sir THOMAS WINNINGTON Bart., M.P., aged 11—[illegible] inst, at Monk's Mill House, Wittersham-under-Edge, Colonel JOHN R BRAGGE HALE, of Bradley Court, Gloucestershire, and late of the 1st Life Guards and 11 Light Dragoons—15th inst, at Ipswich, Ipswich, Suffolk, Major CHARLES WALTON, Royal Artillery, aged 58—11th inst, at St. Marks Hill, Captain M W [illegible], aged 67—14th inst, at 18 North Bank, Regent's Park, Captain W. H. KENNEDY, R.N., sixth son of the late Hugh Kennedy, Esq., of Culra, co. Down, aged 56—17th inst, at Barton, Derbyshire, JOHN EVANS, Esq., Q.C., of 59, Cumberland Terrace, Regent's Park, aged 68—8th inst, MAURICE JOHNSON, of Brandeston Lodge, Suffolk, and Aswergh Far Hall, Spalding, Esq., Deputy Lieutenant and J.P. for the county of Lincoln, aged 49—8th inst, GEORGE LUCAS, Esq., J.P. of Newport Pagnel, aged 77—10th inst, at Slade Hall, Devon, THOMASINE, wife of W. POPE, Esq., aged 75—12th inst, at Merton, Surrey, MARY MCILWRAITH, only surviving daughter of the late B. R. HAYDON, Esq.—the historical painter—18th inst, at Rotherham, suddenly, R. A. LONG-PHILLIPS, Esq., M.A., F.R.G.S., late scholar of Christ's College, Cambridge, and formerly head master of the Grammar School at Leeds—14th inst, A. T. TATE, Esq., of Llanelly, Carmarthenshire, Deputy [illegible] of the Rev. James Tate, late [illegible] of St. Pauls—14th inst, at Heathcote, [illegible], MRS. ANN CATHERINE DYKES, widow of the Rev. Henry Dykes, of Harrow, aged 78—11th, at 4, Dowry Square, Clifton, Bristol, the Rev. GEORGE OUSELEY FESWICKE, M.A., lord of the manor, and patron of the church of Blaston St. Giles, in the county of Leicester, aged 81—12th inst, at Welford, Gloucestershire, the Rev. CHARLES DAVENPORT, M.A., rector of the parish, aged 68—14th inst, at Bentham, Yorkshire, the Rev. WILLIAM CLAYTON, rector of that parish, aged 46.

Markets.

COVENT GARDEN, Oct. 22.

The market is still crowded with all kinds of hardy fruit in season, especially Pears, of which there is abundance of admirable specimens. Grapes are likewise sufficient for the demand. Of Pine Apples there is but a limited supply. Kent Filberts and Cobs fetch from 70s. to 80s. per 100 lbs. New Walnuts are very plentiful, and Oranges begin to make their appearance. Tomatos are large and fine. For Potatos there is a heavy sale. Flowers chiefly consist of Orchids, Heaths, Asters, Fuchsias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Apples, per sieve, 1s to 2s
Grapes, per lb., 1s to 5s	Oranges, per 100, 6s to 12s
Melons, each, 1s to 4s	Lemons, per 100, 6s to 12s
Peaches, per doz., 6s to 18s	Nuts, Barcelona, do., 16s
Figs, per doz., 2s	— New Brazil, do., 16s.
Plums, per ½ sieve, 2s to 4s	Almonds, do., 18s to 20s
Pears, per doz., 1s 6d to 3s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 60s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s
Carrots, per bunch, 4d to 6d	Horse Radish, p. bunch, 1s to 1s
Turnips, p. bunch, 6d to 8d	Mushrooms, p. pott., 1s to 1s6d
Cucumbers, each, 4d to 1s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Oct. 20

Prime Meadow Hay	80s to 110s	Clover, old	100s to 130s
Superior do. ..	— —	New Clover .	— —
Inferior do. ..	— —	Do. second cut ..	90 110
New do.	— —	Straw	27 32
Rowen	— —	HARVEY & EASTON.	

CUMBERLAND MARKET, Thursday, Oct. 20.

Sup. Meadow Hay	108s to 115s	Inferior Clover	105s to 111s
Inferior do.	90 100	New do.	— —
New do.	— —	Straw	30 34
Superior Clover	120 132	JOSHUA BAKER.	

WHITECHAPEL, THURSDAY, Oct. 20.

Fine Meadow Hay	105s to 108s	Prime 1st cut Clover	126s to 132s
Inferior do.	95 100	Inferior do. do. ..	115 120
Prime New Hay ..	— —	Prime 2d cut do. ..	120 128
Inferior	— —	New Clover	— —
Straw	26 30	Inferior do.	— —

NEWGATE.—Oct. 21.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 15s. "
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

BRITISH WOOLS.—LONDON, Oct. 21.

There has been more business doing in fleeces, but still only in small quantities, as the holders are not pressing large supplies on the market.

	s. d.	s. d.		s. d.	s. d.
South-down Hoggets	2 0	to 2 0½	Combing Skins ..	— ..	
Half-bred ditto..	2 1½	— 2 3	Flannel Wool ..	0 11½	to 1 1½
Down Ewes ..	1 10	— 1 11	Blanket ditto	— ..	
Kent Fleeces ..	2 0	— ..	Leicest. Hoggs..	2 1½	— 2 3
			Ditto Wethers ..	2 0½	— ..

HOPS.—BOROUGH MARKET, FRIDAY, Oct. 21.

Messrs. Pattenden & Smith report more activity in the market this week, all good sound samples being in greater request, and prices for fine descriptions rule rather higher.

METROPOLITAN CATTLE MARKET.

MONDAY, Oct. 17.

We have to-day an unusually large supply of Beasts; still, however, the choice qualities are not very plentiful, and there is very little reduction in them. A considerable number of inferior remain unsold. The number of Sheep is also very large, and the average quality good. Prices are lower, and a clearance cannot be effected. Calves are more plentiful, and quotations are lower. From Germany and Holland there are 3840 Beasts, 10,030 Sheep, 369 Calves, and 165 Pigs; from Spain, 125 Beasts; from Ireland, 760; and 3150 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	2
Best Scots, Herefords, &c. ..	4	10	to 5	2	Best Long-wools.	4	8	— 5	0
Best Short-horns	4	6	— 4	10	Do. Shorn		—	..	
2d quality Beasts	3	0	— 3	10	Ewes & 2d quality	4	0	— 4	6
Best Downs and Half-breds ..	5	2	— 5	4	Do. Shorn		—	..	
Do. Shorn		—	..		Lambs		—	..	
					Calves	3	0	— 5	0
					Pigs	3	4	— 5	0

Beasts, 8150; Sheep and Lambs, 29,740; Calves, 377; Pigs, 620.

THURSDAY, Oct. 20.

We have a larger supply of Beasts, but it consists chiefly of those left over from Monday and middling qualities. Trade is

dull, but there is no quotable reduction in price. The number of Sheep is small, yet it exceeds the demand. The choicest descriptions meet with purchasers at Monday's rates, but inferior are very difficult to dispose of. Calves are selling about the same as of late. Our foreign supply consists of 1560 Beasts, 2640 Sheep, 391 Calves, and 140 Pigs.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c. ..	4	10	to 5	2	Best Long-wools.	4	8	— 5	0
Best Short-horns	4	6	— 4	10	Do. Shorn			—	..
2d quality Beasts	3	0	— 3	10	Ewes & 2d quality	4	0	— 4	6
Best Downs and Half-breds ..	5	2	— 5	4	Do. Shorn			—	..
Do. Shorn			—	..	Lambs			—	..
					Calves	3	6	— 5	0
					Pigs .. .	3	4	— 5	0

Beasts, 2470 ; Sheep and Lambs, 5270 ; Calves, 438 ; Pigs, 260 ; Milch Cows, 130.

COAL MARKET.—Oct. 19.

Buddle's West Hartley, 19s. 6d. ; Byass's Bebside West Hartley, 19s. 6d. ; Hastings Hartley, 19s. 6d. ; Walls End Hetton, 21s. 6d. ; Walls End Tunstall, 20s. ; Walls End Heugh Hall, 20s. 6d. ; Walls End South Kelloe, 20s. 6d.—Ships at market, 26.

MARK LANE.—MONDAY, Oct. 17.

The supply of Wheat from Essex and Kent being very small induced factors at the opening to hold for a slight advance, but the Wheat remaining unsold they were ultimately compelled to accept the prices of last week; there was a moderate attendance of country buyers, who took foreign slowly and in retail quantities at late rates. Fine Malting Barley was in good demand at last week's rates, other descriptions were unaltered in value. Beans and Peas brought late prices. The Oat trade was quiet, and we do not alter our quotations. Flour was in moderate demand at about former rates.

PRICE PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk White..	39	—42	Red	36	—41
— — fine selected runs..ditto	41	—44	Red	39	—42
— — Talavera	46	—53			
— Norfolk	—		Red	—	
— Foreign	35	—50			
BARLEY, grind. & dist, 26s to 30s..Chev.	32	—35	Malting ..	30	—33
— Foreign..grinding and distilling	22	—27	Malting ..	28	—31
OATS, Essex and Suffolk	20	—22			
— Scotch and Lincolnshire—Potato	20	—24	Feed	20	—22
— Irish .....Potato	19	—22	Feed	—	
— Foreign .....Poland and Brew	20	—23	Feed	18	—21
RYE	31	—33	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....33s to 35s...Tick	34	—36	Harrow ..	34	—36
— Pigeon .... 35s to 40s..Winds.	—		Longpod	—	
— Foreign .....Small	34	—38	Egyptian	33	—34
PEAS, White, Essex and Kent..Boilers	36	—40	Suffolk ..	38	—41
— Maple .... —s to —s .... Grey	—		Foreign ..	34	—40
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered..per sack	35	—40			
—. 2d do ..... ditto	28	—34	Country .	28	—34
— Foreign ..... per barrel	18	—25	Per sack	32	—36

FRIDAY, Oct. 21.

The weather since the 14th inst. has continued to be fine, until the evening of the 19th, when some rain fell. The Wheat trade during the week has been dull, but prices have remained everywhere much the same as previously quoted, and the same may be said of Spring Corn of all descriptions, Maize perhaps excepted, which is somewhat cheaper. Flour is unaltered in value. Since Friday last 81 vessels have been reported off the coast. A moderate business has been done in Wheat at slightly reduced rates, but fine qualities are in demand; Maize was dull and rather lower, but found yesterday a little more inquiry. All other descriptions of Spring Corn are very quiet. Paris, Oct. 20.—The Flour trade has remained exceedingly slow at late rates. The present stock of Flour is estimated at 31,930 cwt. The six marks for delivery this month are quoted equal to 31s. 3d. per 280 lb. There is only a little Wheat on offer, but even this cannot be sold except at a reduction of about 9d. per 480 lbs. The arrivals of English Wheat and foreign Oats are small, of foreign Wheat and English Barley moderate, of English Oats and foreign Barley considerable, and good of foreign Flour. The attendance at this morning's market was limited, and grain of all descriptions neglected; prices may be considered nominally the same as on Monday.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	840 qrs.	1070 qrs.	2440 qrs.	1250 sks.
Irish	—	—	6980	— ,,
				300 ,,
Foreign ..	16,270 ,,	12,220	13,850 ,,	15510 brls

LIVERPOOL, Oct. 18.—Our market to-day has been fairly attended, but both millers and dealers are careless about buying whilst our trade remains in such an exceedingly dull state, and the business passing in Wheat has been of the most limited character, at a decline of 1d. per cental on Friday's quotations. Flour is difficult to sell, and very irregular in value. Indian Corn still droops, and we must quote all descriptions 3d. per qr. cheaper to-day. Oats and Oatmeal are both the turn lower. Beans, Peas, and Barley are nominally unaltered in value. The market closes very lifeless.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Sept. 10	42s 4d	32s 1d	21s 9d	34s 7d	40s10d	36s11d
— 17	42 0	32 2	20 11	35 6	41 2	36 5
— 24	40 11	31 5	20 11	34 7	40 7	37 1
Oct. 1	39 8	30 11	20 7	35 4	40 4	37 1
— 8	38 9	30 2	20 0	30 11	38 11	35 8
— 15	38 1	29 11	20 1	33 9	39 3	35 4
Agg. Aver.	40 4	31 1	20 9	34 1	40 4	36 5

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Sept. 10.	Sept. 17.	Sept. 24	Oct. 1.	Oct. 8.	Oct. 15.
42s 4d—	———	..	..	..	..	..
42 0	..	———	..	..	..	..
40 11	..	..	———	..	..	..
39 8	..	..	..	———	..	..
38 9	..	..	..	..	———	..
38 1	..	..	..	..	..	———

YORKSHIRE AGRICULTURAL SOCIETY. — The Council of the Yorkshire Agricultural Society are prepared to receive applications for the office of SECRETARY, accompanied with Testimonials Salary 105*l.* per annum, and travelling expenses. —Applications to be sent on or before Nov. 10 to Chairman of Finance Committee, Messrs. SWANN & Co., Bankers, York.

WANTED, an ASSISTANT in the SEED TRADE, who has had some experience in the Trade. —Apply, in own handwriting, stating salary, &c., to F. G. GODWIN, 3 & 4, Norfolk Market Hall, Sheffield.

WANTED, a MARRIED COUPLE, to work in a large Garden, near Town Man must be active and willing; Woman would be the better if accustomed to Field work. Character must bear strict investigation, and recommended by a Head Gardener an acquisition. Wages 27s. the two.—Letters addressed Messrs. CUTBUSH & SON, Highgate, N

WANTED, a NURSERY FOREMAN.—Messrs. J. & C. LEE require the services of an experienced Out-door FOREMAN to manage Fruit Trees and all other Hardy Plants. Applicants to state references and salary required.—Royal Vineyard Nursery, Hammersmith, W.

WANTED, a NURSERY FOREMAN. — A. THRELKELD is in want of a Young Man to act as SALESMAN, BOOK-KEEPER, PROPAGATOR, &c. Must be of good moral character. Wages 25s. per week.—Belfast Nursery, Ireland.

WANTED, a NURSERY FOREMAN and PLANT GROWER.—Apply, stating age, wages required, &c, with references as to qualification and respectability, to STEPHEN BROWN, Sudbury, Suffolk.

To Plant Growers.

WANTED, a clever GROWER of STOVE PLANTS, both Hard and Soft-wooded, Flowering and Fine-foliage Plants, including Caladiums, Gloxinias, &c., and to assist as Salesman in the Plant Department.—Apply to Mr. VEITCH, Royal Exotic Nursery, King's Road, Chelsea, W.

WANTED, as CLERK and SALESMAN, an active, intelligent young Man, well acquainted with the Stock and routine of a Country Nursery where Hardy Plants and Flowers only are cultivated. The collection is a very fine one, and this is a very good opportunity for a young Man wishing to rise and to obtain a position and name in the Nursery business.—Apply, stating salary and references, &c., QUERCUS, *Gardeners' Chronicle* Office, W.C.

WANTED, a SHOPMAN and APPRENTICE.—DOWNIE, LAIRD, & LAING are open to engage a HEAD SHOPMAN for their Seed Establishment in Edinburgh. He must know the Retail Trade thoroughly, and one having a knowledge of Plants preferred. Also an APPRENTICE for their House in London, who must be active, willing, and a good scholar.—Apply, with full particulars, stating references, &c., to 17, Frederick Street, Edinburgh.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, OFFICES, or any place of Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper. Can wait upon a single gentleman, and has excellent references.—HARRIET B., 2, Northumberland Street, Marylebone, W.

To the Nobility and Gentry.

J. WEEKS AND CO. have on their Books the Names of several first-class GARDENERS, whom they can highly recommend.—Apply to J. WEEKS & Co., King's Road, Chelsea, S.W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS.—B. S. WILLIAMS is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any Gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

GARDENER (HEAD).—Understands Forcing in all its branches, and Flower and Kitchen Gardening.—H. C., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Age 40; very successful in Flower and Kitchen Gardening. The highest references can be given.—A. A., Lightwater, Windlesham, Surrey.

GARDENER (HEAD).—Age 30, married; thoroughly understands Forcing, and Flower and Kitchen Gardening.—Apply to Messrs. OSBORN & SONS, Fulham Nursery; or THOS. DAVIES, Gardener, South Hayling, Havant.

GARDENER (HEAD).—Age 30; experienced in the different departments of his profession; nearly six years' excellent character from present employer.—W., Hunton Court, Staplehurst, Kent.

GARDENER (HEAD).—Married, without incumbrance JOSEPH NICKSON is now at liberty to engage as above, to any Nobleman or Gentleman. Has lived in first-class places for 20 years.—Shuckburgh Park, near Daventry, Warwickshire.

GARDENER (HEAD).—No incumbrance; superior abilities. No objection to a small Dairy. Good hand at Grapes, Plants, Flowers, and Vegetables. First-class character.—D. E., Wightman's, Florist, Croydon Common, Surrey, S.E.

GARDENER (HEAD).—Age 28, single; twelve years' experience in all kinds of Forcing, Kitchen and Flower Gardening, Plant Growing, &c. Four years' good character.—J. D., Hewell Hall, Bromsgrove, Worcester.

GARDENER (HEAD).—Age 34, married, two children; thoroughly acquainted with Early and Late Forcing, the Management of Orchard-house, Stove and Greenhouse Plants, and Kitchen Garden; Pleasure Ground Planting, &c.—F. J., Messrs. Pridham & Sanders. Sion Nursery, Croydon, S.

GARDENER (HEAD).—Age 34, married, Wife and one Child; has had 16 years' practical knowledge of his profession in Early and Late Forcing, Kitchen and Flower Gardens. Can produce first-class testimonials from the lady he has just left. Three years' character.—A. M., Datchet House, Windsor, Bucks.

GARDENER (HEAD).—Age 26; has a thorough practical knowledge of Gardening in all its branches, Early and Late Forcing, Flower and Kitchen Gardens, Stove and Greenhouse Plants, and Ferns. Good character, with references.—A. B., Post Office, Bridge Gate, Derby.

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GARDENER (HEAD).—W. BEEBY (age 24, single), will be shortly disengaged. He has a thorough practical knowledge of his profession in all its branches. Can have a first-class character from his present employer, with whom he has been upwards of three years.—Mr. KNACKSTON, J. R. West, Esq., Alscot Park, Stratford-on-Avon.

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GARDENER (SECOND, or under the Foreman); understands the Management of Kitchen and Flower Garden, Early and Late Forcing, Propagating, &c., with good reference.—A.B., Mr. J. Roberts, News Agent, 195, High Street, Shoreditch, E.C.

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The Gardeners' Chronicle Newspaper.

SATURDAY, OCTOBER 29, 1864.

GRESHAM LIFE ASSURANCE SOCIETY,
37, Old Jewry, London, E.C.
F. Allan Curtis, Actuary and Secretary.

THE QUARTERLY REVIEW, No. CCXXXII., is published THIS DAY.

Contents:

I. The French in Cochin China and Cambodia.
II. Workmen's Benefit Societies.
III. Venetian State Papers.
IV. Smith's Dictionary of the Bible.
V. Health of the Army in India.
VI. Photography.
VII. John Gibson Lockhart.
VIII. Sir James Wilde on a Digest of Laws.
IX. Dr. Newman's Apologia.

John Murray, Albemarle Street, W.

This day is published, price 1s.,
MORTON'S NEW FARMER'S ALMANACK and YEAR-BOOK of PROGRESS for 1865.
Blackie & Son, 44, Paternoster Row, London, E.C.; and sold by all Booksellers.

THORLEY'S FARMERS' ALMANACK for 1865 contains some Startling and Useful Information for Agriculturists. Price 4d., Post free for five Stamps. May be had of all Booksellers and Newsvenders in Town and Country. Published by Joseph Thorley, 145, Fleet Street, City, E.C.

"To Farmers and Country Gentlemen.—We commend to their attention the 'Farmers Almanack for 1865,' issued by Mr. Thorley, which, though published at 1d., contains a large body of facts, and many materials for investigation and discussion."—*London Review*, October 22, 1864.

To Nurserymen and Seedsmen.—Notice.

THE GARDENERS' YEAR-BOOK, ALMANACK, and DIRECTORY for 1865, by Robert Hogg, LL.D., F.L.S., will be published on December 1. Any alterations in the style and Address of Firms are requested to be sent forthwith to the Editor, so that the necessary Corrections may be made in the Directory portion.
"Journal of Horticulture" Office, 171, Fleet Street, London, E.C.

HOGG'S GARDENERS' YEAR-BOOK, ALMANACK, and DIRECTORY for 1865.—ADVERTISEMENTS intended for Insertion in the forthcoming issue, on December 1, should be forwarded immediately, to prevent disappointment.
"Journal of Horticulture" Office, 171, Fleet Street, London, E.C.

The Prize Essay on

THE REARING of CALVES. By Thomas Bowick, Britannia Farms, Bedford (late Stoneleigh Abbey Farm).
By special permission of the Royal Agricultural Society of England, a reprint from their Journal of the above Essay is now before the public, by Messrs Day, Son, & Hewitt, 22, Dorset Street, Baker Street, London. Price, by post, Three Stamps, or Five Copies for Twelve Stamps. This celebrated Essay should be in the hands of all Breeders, from the large Dairy Farmer down to the Cottager with his One Cow.

The Opinions of the Press.

"Mr Bowick's Essay, in a concise way, goes into the question of the construction of the Calf House, the condition of the Cow before Calving, the best season for Calving, the Feeding of Calves, the Quantity of Milk and other Food, the Health and Disease of the Young Calf, the Spring and Summer Feeding, &c. We recommend the perusal of the Essay to those who are employed in rearing calves."—*Mark Lane Express*, November, 1863.

"It is a cheap tract, well written, on a matter of great practical importance, and is certain to receive a wide circulation."—*Agriculturist Gazette*, November, 1863.

"The Essay will be very acceptable to Farmers in general, and a better two-penn'worth it would be impossible to recommend. It ought to be sown broadcast over England; and no farmer, bailiff, or servant in husbandry should be without it."—*Worcester Herald*, 24 January, 1864.

Address: Day, Son, & Hewitt, 22, Dorset Street, Baker Street, London.

Just published, enlarged and improved, the 13th Edition of the MINIATURE FRUIT GARDEN. By Thos. Rivers. 3s.
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This day is published, Illustrated by Ten Coloured and Eight Tinted Plates, royal 8vo, price 1l. 11s. 6d., Part I. (containing Accipitres), of OOTHECA WOLLEYANA, an Illustrated and Descriptive Catalogue of the Collection of Birds' Eggs formed by the late John Wolley, Jun., M.A., F.Z.S. Edited from the original Notes of Alfred Newton, M.A., F.L.S., &c.
John Van Voorst, 1, Paternoster Row, E.C.

THE SUMMER of 1865, with Observations on the Summers of England, &c. By Thomas De Bottay, Member of the British and Scottish Meteorological Societies. Will be published early in April next.
Robertson & Tranford, 246, Strand, W.C.

Just Completed, price 3l. 3s., in cloth,
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On Saturday, in 1 vol., with numerous Portraits of Greyhounds, &c., on Wood, and a Frontispiece on Steel, price 21s.
THE GREYHOUND in 1864: being the Second Edition of a Treatise on the Art of Breeding, Rearing, and Training Greyhounds for Public Running. Their Diseases and Treatment containing also the National Rules for the Management of Coursing Meetings, and for the Decision of Courses. By Stonehenge, Author of "The Dog in Health and Disease."
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On Thursday, Nov. 3, in One Vol. crown 8vo, price 9s. cloth,
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THEO LEIGH. By the Author of "Denis Donne," is now publishing in "ONCE A WEEK."
London: Bradbury & Evans, 11, Bouverie Street, E.C.

LOVED AT LAST; A New Novel by Mark Lemon, Author of "Wait for the End." In Three Vols., post 8vo. Nearly ready.
London: Bradbury & Evans, 11, Bouverie Street, E.C.

News of the Week.

The Emperor of the French left Paris on Wednesday for Nice to visit the Emperor of Russia. The King of the Belgians left Geneva on the previous day for the same place, and it is said that the King of Italy is also likely to visit Nice during the interview of the two Emperors.

The Italian Chamber of Deputies was re-opened on Monday, and was attended by a very large number of members. The Ministers laid on the table the Franco-Italian Convention and the diplomatic correspondence relating to it, together with a bill for the transfer of the capital to Florence. There was some fear that the revolutionary party would take advantage of the occasion to excite the people to a renewed demonstration against the transference of the capital, and a military force was in readiness to suppress any outbreak, but no attempt was made to disturb the public peace. On Tuesday the Parliament was adjourned till further orders for the purpose of allowing time for the consideration of the Convention. On the same day about 200 deputies held a meeting at which they expressed themselves unanimously in favour of the Convention. It is believed that the Convention, as well as the bill for the transfer of the capital to Florence, will be carried by a large majority.

A telegram from Vienna states that Count Richberg, the Minister for Foreign Affairs, has retired from the Cabinet, and has been succeeded by Count Mensdorff-Pouilly.

The news from the United States continues favourable to the Confederates. In the recent engagement on the north of the James River, the Federals were driven to a distance of five miles from their entrenched lines before Petersburg, with the loss of ten guns. General Grant subsequently visited Washington to consult President Lincoln on the state of affairs, and it is rumoured that since his return to the army he has removed Generals Meade and Warren from their commands in consequence of their protesting against the policy of assaulting impregnable earthworks. General Longstreet has superseded General Early in the command of the Confederate force in the Shenandoah Valley, and General Sheridan has retreated to Strasburg after devastating the country and burning all the barns, mills, and houses between the Blue Ridge and the North Mountains. In Missouri General Price has been attacked in front and rear by Generals Pleasanton and Curtis, but has nevertheless sent a portion of his force north of the Missouri River, and has established his head-quarters at Booneville, where he has proclaimed his intention to remain in the State if the people will rally to his standard. Accounts from Richmond state that General Hood has re-captured Atlanta and Rome, with four Federal corps; and the Southern journals generally assert that the movements which are progressing in Georgia render General Sherman's position untenable. The voting for the Presidential Election commenced on the 12th inst. In Ohio and Indiana the Republicans obtained a large majority. In Pennsylvania the voting was largely in favour of the Democrats; and in Maryland there was a majority of several thousands against the adoption of an anti-slavery constitution. It is believed that the vote of the soldiers serving in the Federal army will not reverse this result in either of these States.

The Conference of the British American colonies at Quebec has resolved upon the confederation of all the provinces. A proposal that the Crown shall appoint the head of the Confederate Executive and the Governors of the provinces has been favourably received; and it is understood that an invitation will be sent forthwith to all the Pacific colonies to join the Confederation.

Albemarle Street, October, 1864.

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JOHN MURRAY, ALBEMARLE STREET, W.

Home News.

THE QUEEN IN SCOTLAND.—On Wednesday week the rain prevented the Queen and Royal family from going out but for a very short time. Dr. Sieveking left the Castle. On Thursday morning the Queen and Royal family were prevented from going out in consequence of the unfavourable state of the weather. Her Majesty went out for a short time in the afternoon. On Friday the Queen, accompanied by Princess Helena, drove to the Lynn of Quoich. On Saturday Sir George Grey dined with the Queen and the Royal Family. On Sunday morning the Queen and Princess Helena attended Divine Service at the parish Church of Crathie. The Rev. A. Anderson officiated. On Monday the Queen, accompanied by Princess Helena and Prince Arthur, drove to the Lynn of Dee. On Tuesday the Queen, accompanied by Princess Helena, drove round by Invercauld. Sir George Grey left the Castle for Falloden. The Queen's departure from Balmoral, which was first announced for the 24th, and then postponed to the 26th, was again postponed till yesterday, in consequence of the slight indisposition of the Princess Louisa. By the last arrangements her Majesty, accompanied by the Princesses Helena, Louisa, and Beatrice, Prince Arthur, Prince Leopold, and Prince Albert Victor, were to leave Balmoral at noon yesterday, and post to Aboyne, whence they were to proceed by a special train at half-past two o'clock to Aberdeen and Perth, where the Royal party were to halt one hour, for dinner. From Perth the train was to proceed to Carlisle, where a halt of 15 minutes was to be made for refreshment. From Carlisle the run was to be uninterrupted to Windsor, where the Royal train was timed to arrive at nine o'clock this morning.

THE PRINCE AND PRINCESS OF WALES left Copenhagen on Saturday afternoon in the Osborne, They were accompanied on board by the King, the Royal family, the Ministers, and members of the Diplomatic body, and a large number of the higher civil and military officials. Their Royal Highnesses were attended by a guard of honour, and salutes were fired from the batteries and men-of-war in the port. Large crowds of people were present at the embarkation. Their Royal Highnesses arrived at Travemünde on Sunday morning at 11-45, and proceeded at 2.30 P.M. by special train, through Büchen and Lüneburg to Brunswick, where they slept at the hotel. On Monday morning after an early breakfast they went by special train to Ballenstedt, to visit the Princess Alexandra's grandmother, the mother of the King of Denmark. On Tuesday the Prince and Princess left Ballenstedt for Hanover, where they arrived at 4 P.M., and were received by the King and Crown Prince of Hanover at the railway station. On Wednesday their Royal Highnesses left Hanover by special train for Cologne, accompanied by the Crown Prince and Princess of Prussia, who had arrived from Berlin. Their Royal Highnesses are expected at Darmstadt on the 1st of November. It is rumoured that on their return to England the Prince and Princess will pay a visit to the Earl and Countess of Derby, at Knowsley.

PRINCE ALFRED arrived at Windsor Castle on Saturday night from Scotland. On Tuesday his Royal Highness went out shooting. On Wednesday the Prince came to town, and returned to the Castle in the evening. His Royal Highness will shortly leave England for Bonn, on the Rhine, where he will reside during the coming winter for the purpose of studying in the university of that town.

PRIVY COUNCIL.—The Queen will hold a Council at Windsor Castle on Tuesday next, the 1st of November.

PARLIAMENTARY MOVEMENTS.—The *Post* of yesterday contradicts the popular rumour that a dissolution of Parliament is imminent. On the contrary, "it believes that it is warranted in postponing it, as far as Ministerial intentions are concerned, to the extremest limits—viz., to 1866."

THE CHURCH.—It is stated that Archdeacon Bentinck has resigned the canonry of Westminster, which he has held since 1809, and that the Rev. Ernest Hawkins, Secretary of the Society for the Propagation of the Gospel, and Minister of Curzon Chapel, has been appointed his successor.

Foreign.

FRANCE.—The Emperor left Paris on Wednesday for Nice to visit the Emperor and Empress of Russia. It is said that the Czar, prior to his return to St. Petersburg, will go to Compiègne on a visit to the Emperor and Empress. A Cabinet Council was held at St. Cloud on Saturday. Count von Bismark has arrived in Paris, and seen the Emperor. He dined on Tuesday evening at the Ministry for Foreign Affairs, with Count Goltz and M. Benedetti. It is stated that a project is under serious consideration of establishing a Public Works Fund, to occupy the same position towards undertakings of general utility for the whole of France as is fulfilled by the Works Fund for the city of Paris. The amount set apart for the new fund is not yet decided, but it will probably be raised by a loan applicable to the great works of public utility which have been recently discussed. The *Constitutionnel* of Thursday says that it is authorised formally to deny the rumours relative to the issue of a new loan. The same paper publishes an article by M. Paulin Limayrac, stating that the Convention of the 15th of September having been concluded in good faith, its execution will be equally so. It also combats the exaggerations both of the extreme revolutionary party and also of the ultra-Conservative party, who distort the text of any treaty, however clear. The *France* of Tuesday, alluding to the rumour at Vienna of an understanding between France and Austria, says that nothing is known on the subject, but the Venetian question is in that respect a difficulty which very considerable concessions on the part of Austria could alone remove. A pamphlet, entitled "The Convention of the 15th of September," and believed to be of semi-official origin, was published on Sunday. It says:—

"There can be no doubt that the conditions of the treaty will be loyally carried out, and that the object of the Convention is to bring about such an understanding between the Papacy and Italy as may allow of a solution of the great and fundamental question of Rome. Catholicism would thus rally round the cause of Italy, and the difficulties still existing on the other side of the Alps, and which prevent the establishment of order in Europe, would be solved. We are sufficiently acquainted with the sagacity of the Holy Father to be convinced that he will give no pretext to the turbulent spirits who will not fail to seek obstacles whereby the happy and speedy reconciliation of the Papacy and Italy may be prevented."

The Legitimist party in Paris are using every effort to form a legion for the Pope; and have offered the command to General Lamoricière, who has replied that when a real army is formed, he will be happy to take charge of it, but not till then. The Duc de Dodeauville Rochefoucauld, one of the most faithful and constant adherents of legitimacy in France, died a few days since, at the age of 82. The death of Admiral Romain Desfosses is also announced.

SPAIN.—A meeting of capitalists took place on Wednesday at the Ministry of Finance. The Minister said that, pending the opening of the Chambers, it would be necessary to satisfy the wants of the Treasury. He appealed to the patriotism of those present to negotiate 600,000,000 reals of the bonds given in payment of the national property, or to subscribe to an issue of hypothecated notes of the Bank, bearing interest at 6 per cent. The meeting separated without coming to any decision. It is stated that at a meeting of the Progressista party it has been decided that the members should continue their abstention from politics. Señor Madoz expressed a contrary opinion. The *Noticias* of Friday says that the Bank of Spain has concluded a loan of 20,000,000 reals with Señor Salamanca, and that the Sub-Governor of the Bank would leave for Paris on Saturday to purchase gold. The Council of Ministers was occupied on Friday morning with Peruvian affairs. It is said that as explanations have been refused by Peru, diplomatic relations between that country and Spain are entirely suspended. Admiral Pareja left Madrid on Wednesday for the Pacific, to replace Admiral Pinzon.

BELGIUM.—The King of the Belgians left Geneva on Tuesday for Lyons and Marseilles, whence his Majesty will probably go to Nice.

DENMARK.—The *Flyveposten* of Thursday asserts that the sitting of the Council of State held on Tuesday had a material influence on the speedy conclusion of peace, and Lieutenant Blohme at once started for Vienna with despatches to that effect. Rumours have since been current at Copenhagen that a further delay has occurred. The *Dagbladet* of yesterday says:—

"We hear, but cannot vouch for the truth of the news, that on Wednesday intelligence unfavourable to peace, arrived here, and the sudden summons of the Council of State was on that account. The orders issued by the military authorities at Copenhagen seem to confirm this rumour. It is asserted that Prussia demands that the treaty of peace should not be submitted to the Rigsraad. The rumour that General Falkenstein has absolutely forbidden all imports and exports by sea is fully confirmed."

The *Elberfelder Zeitung* of Monday states that a clause has been inserted in the treaty, whereby Denmark engages to give compensation for the captured German shipping.

JUTLAND.—General Falkenstein has declared that all functionaries in Jutland will be appointed by him. From the 1st of November all the present postal officials in Jutland will be dismissed. It is asserted that General Falkenstein will entirely prohibit exports and imports by sea from and to Jutland.

THE DUCHIES.—The *Schleswig-Holsteinische Zeitung* states that the Federal Diet has decided that a very considerable portion of the expense incurred for the Federal army of execution and the civil administration of Holstein shall be defrayed from the revenue of the Duchy. The *Lübecker Zeitung* of Saturday says that the motion to annex Lauenburg to Prussia has been carried in the Lantag of that Duchy.

PRUSSIA.—The semi-official *Nord-Deutsche Zeitung* of Monday says that Prussia is not in a position to comply with the resolution of the Lauenburg Diet for annexation to Prussia without further negotiations, since Austria, in virtue of treaties, is, in fact, co-possessor, and has through the alliance acquired moral rights which the Cabinet of Berlin will conscientiously respect. It says, however, that Prussia, fully appreciating the frank and honourable advances of the inhabitants, will neglect nothing to meet their wishes. It is denied, on good authority, that Prussia recently demanded to continue the occupation of Jutland after the conclusion of peace.

AUSTRIA.—The opening of both Houses of the Reichsrath will take place on the 13th November, four days sooner than was at first intended. Rechberg has tendered his resignation, which has been accepted by the Emperor. Count Mensdorff has been appointed as his successor, and took [illegible] of office on Wednesday as Minister for Foreign Affairs and Commerce. Since his resignation Rechberg has received a satisfactory reply to the [illegible] which he had sent to M. Drouyn de Lhuys in reply to the Convention of the 15th of September. The treaty of peace between Denmark and the [illegible] German Powers has been concluded so far as essential points are concerned; some special [illegible] such as that referring to the Port station of [illegible] at Hamburg, being the only ones not yet settled. The following is said to be a summary of its provisions:

"The treaty will differ but little from the preliminaries already executed at Vienna. In conformity with [illegible] the preliminaries, the Jutland Enclaves in the [illegible] territory, situated to the south of the southern [illegible] district of Ribe, and ceded by Denmark to the Germans, have been exchanged against a portion of Northern [illegible] The new frontier of Schleswig will be fixed to the [illegible] town of Christiansfeld; on the east it descends to [illegible] Stenderup, in order that the eastern side of Schleswig [illegible] possessed by Germany, would be a-continuous [illegible] Island of Funen, may remain with Denmark. The [illegible] tion of the debts contracted on account of the [illegible] monarchy have been settled in accordance with [illegible] down in Article 8 of the preliminaries. The reduction [illegible] State property, which was not mentioned in the preliminaries, has also taken place, whereby the Duchies will receive [illegible] of about 8,500,000 thalers, in lieu of about 14,000,000 which they would have had the right to reclaim."

VENETIA.—During the late invasion of Udine [illegible] of insurgents commanded by Talassi, formerly a [illegible] in Garibaldi's army, took possession of the town, [illegible] the tax collectors at Spilembergo and Maniago, and [illegible] in return a formal receipt. On the 19th the insurgents bivouacked at Capo di Ponte, intending to take possession of Belluno. Subsequently they received orders to disperse and to hide their arms. They are about 100, among whom are several deserters, and have taken refuge in the forest of Consiglio, where [illegible] deserters at Cadore and Belluno are endeavouring to join them. Up to the present time the leaders have not been captured, although many arrests have been made. A strict watch is maintained on the frontiers by the authorities, no emigrants being permitted to pass. Contradictory reports are current respecting the situation of the insurgents. One account states that the band is reduced to a small number, and has found any followers among the people; while others state that numerous bands still exist. About 1,000 insurgents are said to have taken refuge in the mountains, where they will be able to offer a prolonged resistance.

RUSSIA.—The Emperor and Empress of Russia arrived at Nice on Friday. On Saturday his Majesty gave a banquet to the battalion of Chasseurs à pied of the Guard. Prince Wittgenstein proposed a toast to the health of the Emperor of the French, and the commander of the troops reciprocated by proposing the toast of the Russian Majesty. On Sunday the Emperor and Empress, with their children, made an excursion in open carriage to Villefranche. In the evening their Majesty attended the representation at the Italian Theatre. General Sonnaz has arrived at Nice to congratulate the Czar and the Emperor Napoleon in the name of the King of Italy. The Emperor is expected at Stuttgard on the 31st inst., when, together with the Queen of Würtemberg, he will assist at the celebration of the service in commemoration of the death of their mother. A Russian frigate has arrived at Villafranca. It is asserted she is on her way to Civita Vecchia to fetch the Czarewitch. Prince Gortschakoff, who has hitherto accompanied the Czar, has gone to Berlin, where he will await the arrival at Nice of the Emperor and Count von Bismark. The Russian papers announce the death of the veteran General Paul Petrovitsch Liprandi, so well known in the Crimean war.

POLAND.—Letters from St. Petersburg state that the so-called Constantine party in Polish affairs has been defeated. The introduction of political reforms is to be expected after a social revolution in Poland has taken place. The Russian Government has not taken sides either in the White or Red Polish party.

ITALY.—The Chamber of Deputies was reopened on Monday under the presidency of Signor Casati. A very large number of Deputies were present, and [illegible] the members of the old Ministry. The new Ministers were in their places. The town was perfectly quiet, and the military were not called out. In the Chamber of Deputies Signor Della Marmora laid on the table the Franco-Italian Convention and the diplomatic correspondence connected therewith. Signor Rattazzi brought forward a Bill for the transfer of the capital to Florence, fixing the necessary credit at 7,000,000 francs, and requested that it might be declared urgent. Several Bills were introduced by different members requesting an inquiry into the late events at Naples. An investigation was agreed to, and a committee of nine members appointed for the purpose. The Minister then made a statement relative to the Convention. He said that they presented the Convention to the Chambers, believing not only that its sanction was henceforth a political necessity, but that its benefits were immensely superior to its inconveniences. The Ministerial declaration acknowledged the great sacrifices involved in the transfer of the capital, but the result of the measure would be the removal of foreign troops from Italian soil, and the preparation

a satisfactory solution of the Roman question, it was in the name of the national dignity, independence, and unity that these sacrifices were called for. The diplomatic documents communicated to the Chamber were the Convention and the protocols of the 15th September and the 30th October, two notes from Signor Visconti-Venosta to the Chevalier di Nigra, a note from the latter to the former, and the declaration of the late Ministry to the King. The Note of Chevalier di Nigra to Signor Visconti-Venosta related the history of the negotiations. It stated that the French Government demanded, in addition to a promise not to attack Pontifical territory, some real guarantee in order to inspire the Pope with confidence in the Catholic sentiment of the King of Italy. The Italian negotiators had formal instructions to reject all conditions contrary to the right of the nation. The Marquis Pepoli informed the Emperor Napoleon that the Italian Government, from strategic, political, and administrative reasons, was occupied with the question of removing the seat of Government from Turin. The Emperor replied that this resolution would remove many difficulties. The note further stated that in the negotiations it had been well understood that the Convention should not and could not signify either more or less than what it stated—namely, that Italy undertook to renounce all violent measures. On Tuesday the sittings of the Parliament were adjourned until further orders. A meeting of about 200 deputies took place on the same day, at which they expressed themselves unanimously in favour of the Convention. The members of the Opposition were to meet on Wednesday. It is believed that the Bill for the transfer of the capital to Florence will be carried by a large majority. Seven out of nine Bureaux in the Chamber of Deputies have nominated their representatives to the Committee which will report on the Bill for the transfer of the capital. These are all favourable to the Convention. The following letter from Garibaldi, declaring himself opposed to the Franco-Italian Convention, appeared on Friday in the *Diritto*, which was seized in consequence with some other journals which copied the declaration:—

"Caprera, Oct. 10.

"That the guilty should be anxious to find accomplices, the thing is but natural; but that an attempt should be made to drag me through the mire with the men who have defiled Italy with the Convention of September 15th is what I was not prepared for. With Bonaparte the only convention possible is this—purify our country of his presence—not in two years, but in two days."

The following letter has also been addressed by Garibaldi to the priest Pantaleo, congratulating him on having thrown off the clerical dress:—

"Caprera, Oct. 10.

"My Dear Pantaleo—It is not in the name of Italy alone, but in that of all humanity, that I thank you for the courageous resolution you have adopted to cast off the uniform of the enemies of liberty and of progress. To women first, and next to generous priests like yourself, it belongs to deliver Italy from an institution which, if beneficial in former times, has now become a desolating scourge. The priests' dress was sanctified by Campanella, Bruno, Arnoldo, Savanarola, and Ugo Bassi, but it is now cursed by every one.

Yours for life, Garibaldi."

Perfect tranquillity reigns in Turin, and there is not the least indication of excitement. Proclamations of the Syndics and the commanders of the National Guard and manifestos of the working men's associations have been published, recommending the people to preserve order and tranquillity. One of the societies of working men has adopted a resolution inviting the working class generally to prove by their actions that they are not forgetful of their reputation and their past actions, and that they will maintain in the present days a calm and dignified attitude. The resolution also declared that they would regard as a traitor to his country whoever should attempt to disturb public order. The Grand Duke of Tuscany has protested against the project of making Florence the capital of Italy, as contrary to the rights reserved to him by the Treaty of Munich. Letters from Rome state that the *Correspondencia di Roma* violently attacks the Convention, and criticises the interpretation given to it by the *Constitutionnel* and the *France*. The Czarewitch was expected at Rome.

Greece.—The Ministers on Friday declared that the signature of the Constitution could not take place unless a proviso to that effect were contained therein. The Royal proposal was adopted, after a discussion, by a majority of 186 to 124, ten members abstaining from voting. The National Assembly, in its sitting of Saturday, revoked the decree whereby six members of the Miaouli Ministry, during the reign of King Otho, were deprived of civil rights for 10 years. The following is the text of the despatch from Earl Russell to Mr. Erskine, of which the Greek papers have given a very distorted version:—

"Foreign Office, Sept. 19.

"Sir,—I have received your despatch of the 1st inst. reporting the request of Count Sponneck that her Majesty's Government would exert their influence with the National Assembly, and especially with the so-called 'English party,' to induce them to proceed with the discussion of the Constitution without unnecessary delay. You will state to Count Soonneck that her Majesty's Government have no relations with any political party in Greece, and only wish to act in concert with France and Russia in the general interests of Greece. But as regards the request made by Count Sponneck for the exertion of English influence on the National Assembly, you will say that although her Majesty's Government would not object to her Majesty's representative expressing to any deputies who may speak to him on public affairs an opinion in favour of an early settlement of the Constitution, it would not be consistent with the principles of her Majesty's Government to attempt to influence the decisions of the Assembly, while to do so would be setting a bad example and might lead other Powers to exert influence in some other and more objectionable direction. The less foreign Powers interfere in the internal affairs of Greece the better will be the prospect of internal tranquillity and external peace for that kingdom.

"I am, &c., Russell."

Cape of Good Hope.—By the mail steamer Briton we have Cape news to the 20th ult. Sir Philip Wodehouse intended to proceed about the close of September from British Kaffraria to the Orange River Free State to settle the boundary of Moshesh's country. The incorporation of British Kaffraria with the Cape colony has been referred to the Home Government. The Lieutenant-Governor, Sir Percy Douglas, was at Graham's Town. The natives are quiet. Kreli is to be located between the Kei and the Bashee. The year's revenue to June 30 was 671,144*l.*, and the expenditure 625,616*l.* Of the former 136,000*l.* consisted of loans. The additional taxes may make up the deficiency. The weather was fine, the land cultivated extensive, and the harvest promising. The llama is to be introduced from South America. The Government has placed 200 men to work, for the purpose of extending the railroad from Wellington to Worcester. The Supreme Court has quashed the sentence of deprivation pronounced by the Synod of the Dutch Reformed Church on the Rev. Mr. Kotze, one of her ministers, on the ground that he was not allowed a legal trial.

China.—The overland mail has brought further details of the capture of Hoochow by the Imperialists. It appears that the Taepings, after defeating the Franco-Chinese force which was besieging the city, and capturing a fleet of the Imperial gunboats, suddenly evacuated Hoochow and dispersed, although their large force had just been augmented by a body of fugitives from Nankin, and the besiegers under M. d'Aiguebelle were barely able to maintain their positions. The Emperor has issued orders that two of the chiefs taken at Nankin, Chung-Wang and Kan-Wang, the latter a brother of the rebel Prince of Peace, should be sent to Pekin, where they will be brushed with wire brushes till their flesh is gradually torn from their bodies and they die under the operation.

Japan.—The latest news from Kagosima states that the Prince of Nagato still objects to the passage of foreign ships through the Straits of Simonoseki into the inland sea, and even fired a shot across the bows of the Cormorant when she attempted to enter. A fleet was about to sail for the Straits in July last to punish the Prince for this conduct, when the Japanese Ambassadors who were here two years ago arrived and reported the treaty they had made with the Emperor of the French, guaranteeing the opening of the sea within three months. On the news of this peaceful solution of the difficulty the expedition was stopped, but it was soon announced that the Gorogio and the Tycoon repudiated their ambassadors, and stated that they had no authority to execute such a treaty, and that the Government could not guarantee its fulfilment. The chief ambassador at the same time received permission to commit suicide by performing the *Hari-Kari*. It was therefore resolved by all the Christian Ambassadors to resume the expedition to force the passage into the inland sea. The ships of war which will compose the expedition are 17 in number, viz. the Conqueror, 78; Euryalus, 35; Barossa, Leopard, and Tartar frigates; Coquette, Cormorant, and Bouncer corvettes, all under the English flag, and armed with Armstrong guns; the French ships Semiramis, Dupleix, and Tancrede; the Dutch ships Medusa, Metalen, Kims, Djamba, and Amsterdam; and the Takiang, chartered by the United States Minister in order to show the American flag when the forts are engaged.

New Zealand.—The *Gazette* of Friday night contains despatches from the governor and commander-in-chief in New Zealand, which officially confirm the unqualified submission of the insurgent natives in the Tauranga district. It is not yet known what effect their submission will have on the other tribes.

West Indies.—A telegram from Halifax of Oct. 5 says that yellow fever is abating at Bermuda, and all the medical officers are recovering. Those that can be spared are to return in a few days to Canada. All the effective troops stationed in the islands have been removed to Halifax, a guard and the convalescents remaining.

United States.—General Grant, after visiting Washington, has returned to Petersburg. The military situation is unchanged. It is rumoured that General Grant has removed Generals Warren and Meade for protesting against his orders to assault the Confederate works in their front, which are of great strength. General Lee's report of the engagement of the 8th on the north of the James River states that he attacked the Federals on the Charles City road, and drove them from two intrenched lines, capturing 10 guns. Finding that they were further strongly intrenched, he did not press them. General Gregg was killed. Southern journals claim the engagement as a signal victory, the Federals being driven five miles from the city. General Grant reports that his loss amounted to 400 men, the Confederate loss being 1100. General Longstreet has superseded General Early. General Sheridan has retreated to Strasburg. He reports that on the 9th inst. he repulsed Early's cavalry, who followed him to that point, capturing 330 prisoners and 11 cannon. He states that in obedience to the orders of General Grant to make the Shenandoah Valley a barren waste, he had devastated the whole country between the Blue Ridge and the North Mountains, destroying 2000 barns and 70 mills, which were filled with hay, farming implements, meal, and flour. In retaliation for the shooting of a subordinate officer he burnt all the dwellings within five miles' radius of the spot where he fell. General Sherman reports on the 9th inst. that Hood's forces, operating in his rear, had occupied Dalton, and that he feared an attack by them on Kingston and Rome. He adds that seven miles of their way to Chattanooga are destroyed, but that, having plenty of provisions in Atlanta, he feels secure so far as his main army is concerned. The Richmond journals contain rumours that Hood had recaptured Atlanta, together with four Federal corps: and other Southern journals still assert that the movements progressing in Georgia render Sherman's position untenable. Despatches from Augusta, Georgia, of the 8th inst., report the recapture of Rome by the Confederates, with over 3000 prisoners. A Federal force of infantry and artillery from General Washburn's department, under Colonel Hodge, proceeding up the Tennessee on transports convoyed by gunboats, was attacked and driven back at East Point on the 10 inst., by General Forrest. The Federals admit the loss of two transports, all their artillery, and 50 men killed and wounded. General Burbridge, who, with a large Federal force, was recently sent from Mount Stirling, Kentucky, to destroy the saltworks in South-Eastern Virginia, has returned to Kentucky unsuccessful. He attacked Saltville on the 3d inst., and was repulsed with heavy loss; and, having expended his ammunition, was forced to retreat precipitately. The latest accounts from Missouri, to the 12th inst., state that the Confederates have been attacked by Pleasanton in the rear, and by Curtis in front, and that one portion of their force has withdrawn from before Jefferson city, moving westward; while another has advanced north of the Missouri River. They have destroyed the bridges and portions of the Pacific Railway near Sedalia, and General Price, whose head-quarters are at Booneville, has made a speech asserting that if the people would rally to his standard he would remain in Missouri. It was reported that the preparations which were being made for a Federal attack on Wilmington, both by sea and land, were nearly completed. The National Democratic Committee has published an address to the people of the United States, denouncing the acts of tyranny and usurpation of the Administration, the suppression of Democratic newspapers, and the imposition of test oaths; and threatening the adoption of revolutionary measures in case of any illegal interference in the approaching elections. The elections in the States of Pennsylvania, Ohio, and Indiana were held on the 12th. The Republican ticket has been elected in Indiana and Ohio by a large majority. In Pennsylvania there is a large Democratic majority on the home vote, which it is believed the soldiers' vote cannot overcome. In Maryland the elections show a majority of several thousand against the adoption of an anti-slavery Constitution. It is believed that the soldiers' vote will not reverse this result. The *New York World* publishes a statement showing that the public debt, including the appropriations to be made by the next Congress, amounts to 4,000,000,000 dols. The steamer Constance has been sunk off Charleston. Chief Justice Taney died at Washington on the 12th. It is reported that Mr. Case will succeed him. Vice-President Stephens has written a letter, in which he says that the only key-note to peace is the acknowledgment of the sovereignty of the States. He favours an armistice and a convention of the States, and believes that the question of the boundaries of the Confederacies, Union or Unions, would adjust themselves to the interest of parties and the exigencies of the times.

Canada.—The British American Conference at Quebec has unanimously resolved upon the confederation of all the provinces. It is understood that an invitation will be sent to the Pacific colonies to join the Confederation. A proposal for the Crown to appoint the head of the Confederate Executive and the Governors of the provinces has been favourably received.

Mexico.—Advices from Mexico to the 1st inst. state that the Mexican main army has been defeated near Durango, with a loss of 20 guns. Vidaurri, Quiroga, Doblado, Zuloaga, and Garza had made their submission. The troops were pursuing Juarez in the north-west. The French have occupied Matamoras, and General Bazaine was preparing for the return of those French troops under orders to leave Mexico. The Emperor Maximilian in his recent tour was everywhere received with enthusiasm.

San Domingo.—General Gandara has informed the Madrid Government that the San Domingo insurgents have made serious proposals for peace.

City Intelligence.

Money Market, Friday.—British Funds: Consols closed at 89⅞ to ⅜ for Money, and 89¼ to ⅜ for Account; Three per Cents. Reduced, 87⅛ to ¼; New Three per Cents., 87⅝ to ¾; India Five per Cent. Stock, 105⅛ to ¼; Exchequer Bills, March, 4*s.* dis.; Ditto June, 14*s.* dis.—Foreign: Chilian Four and a Half per Cents., 82; Greek, 22½; Ditto Coupons, 9½; Italian, 64½; Ditto Maremmana Railway, 71⅛; Mexican, 26¾ to 27¼; New Granada Deferred, 6½; Peruvian, 1862,

81¾; Portuguese, 1856, &c., 46¼; Russian, 1822, 88½; Ditto 1862, 87¾ to 88; Ditto 1864, 86¼; Spanish, 47¾; Ditto Passive, 31¼; Ditto Acct., 31⅜ to ¾; Ditto Certificates, 14 to ¼; Turkish, 1858, 68⅝; Ditto 1862, 71⅛; Ditto 100*l*. Bonds, 71¾; Venezuela, 1862, 56; Ditto 1864, 42 to 41½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued..	£27,056,155	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	12,406,155
		Silver Bullion	—
	£27,056,155		£27,056,155

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£9,410,461
Rest	3,273,896	Other Securities	19,767,497
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	3,723,549	Notes	6,097,250
Other Deposits	13,897,777	Gold and Silver Coin ..	739,564
Seven days and other bills	566,840		
	£36,015,062		£36,015,062

Oct. 27, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Oct.* 21. — BANKRUPTS.—J. F. ANDREWS, Woolwich Licensed Victualler—J. ANDERSON, Rishton, Lancashire, Cotton Spinner—J. C. ADCOCK, Leicester, Stone and Marble Mason — J. ALLEN, Worcester, Licensed Victualler—E. BACON, Leeds, Shoe Manufacturer—W. BUCK, North Walsham, Norfolk, Carpenter—M. A. BOYLE, Brunswick Gardens, Kensington, Engraver—J. BAKER, Sussex Place, Cubitt Town, Poplar, Journeyman Sawyer—W. BENNETT, Salford, Lancashire, Plasterer—E. BOOTH, Batley, Yorkshire—J. BOYLE, late of Pontlottyn, Glamorganshire, Dealer in Potatos—J. BURNINGHAM and H. BURNINGHAM, Edgware Road, Dealers in Game—S. BALMFORTH, Clackheaton, Yorkshire, Currier—J. CROSSLEY, Leeds, Journeyman Stonemason—H. P. COOK, Romford, Essex, Coach Builder—F. H. CARSON, Horton Road, Dalston, Salesman—R. CHESHIRE, jun., Rugeley, Staffordshire, Grocer—W. CHISWELL, Halton Road, Cross Street, Islington, Smith—W. CAMBAGE, Bishop Auckland, Durham Hairdresser—C. W CROSS, Halliford Street, Islington Bottled Beer Merchant—J. CAVES, Elstree Street, St. Pancras Road, Coach Wheelwright—G. E CRESSWELL Deptford, late Pork Butcher—T. DIBB, Leeds, Grocer—R. EMSLEY, Pannal, Yorkshire, Farmer—E. ELWOOD, Huxley Cheshire, Farmer—M. EASTHAM Little Bolton, Lancash., Provision Dealer—J. EASTCOTT King's Road Islington, Wine Proprietor—C. J. FROST Bristol Coachbuilder—W FRANCE, Chorlton-upon Medlock, Lancashire Provision Dealer—M. FITZGERALD, King's Road, Chelsea, Oil and Colourman—W. GRIFFITHS, Whitchurch, Shropshire, Innkeeper—J. GODBOLT, Westcroft Place Hammersmith, Builder—M. HARRISON, Manchester Cotton waste Dealer—J. HOWSON, Liverpool, Commission Merchant—J. HARRIS, Birmingham, Commission Agent—J. HUTCHINSON, Bradford, Yorkshire, Greengrocer—H. HOGG, Bristol, Chemist—R. HENWOOD, Little Ormond Yard, Queen Square, Bloomsbury, Licensed Victualler—A. HARTLAND, late of East Dean, Gloucestershire, Grocer—J. HENRY, Hastings, Sussex, Tailor and Habit Maker—G. D. HODGES, late of Portland Place, North Brixton, Secretary to the Independent Fire Insurance Company—G. KENWARD, St. Leonard's-on-Sea, Shoemaker—C. LAKE, Marlborough Road, High Street, Peckham, Baker—E. LILLEY, Birmingham, Printer—SAMUEL LAWSON, Rochdale, Lancashire, Travelling Draper—WILLIAM LINSLEY and EDWARD ARMITAGE, Leeds, Curriers—CHARLES LACEY, Halifax, Yorkshire, Beerseller — JACOB RICHARD LLOYD, Narberth Pembrokeshire, Captain in the Royal Marine Light Infantry—W. MATTHEWS, Whitchurch, Buckinghamshire, Boot and Shoe Maker—J. MING, Licensed Victualler, Liverpool—C. MCINTYRE, Newcastle-upon-Tyne, Rivet Maker—C. MARSDEN, North Place, Kingsland Road, Decorative Marble Paper Manufacturer—J. MEREDITH, Kingston, Surrey, Grocer—W. MILLER, Burslem, Staffordshire, Beerseller—R. MAYALL, Manchester, Staymaker—W. MURRAY, Manchester, Dealer in Horses—W. NOBLE, Camborne, Cornwall—P. OSMENT, Exeter, Silversmith—T. PARSONS, Spen Brook, Lancashire, Cotton Manufacturer—W. J. PASSELL, Landport, Hampshire, Builder—G. PARES, Taunton St. James, Somersetshire, General Dealer—W. RENTON, Culvert Road, York Road, Battersea, Carpenter—B. ROBINSON, Albert Terrace, York Road, Holloway, late Licensed Victualler—C. ROSS, Birmingham, Patten Ring Maker—G. M. ROE, Aldershot, Hampshire, Grocer—J ROWLAND (known also by the names of RAE and ROBERTS), Brondesbury Terrace, Kilburn, Spinster—R. SHEPPARD, Pilton, Somersetshire, Carpenter and Cabinetmaker—J. SANDFORD, Holmfirth, Yorkshire, Innkeeper's Manager—R. W. SMITH, Winchester, Hampshire, Surgeon—D. SPENCER, Heywood, Lancashire, Commission Agent—J. TAYLOR, Albany Place, Hornsey Road, Hornsey, Carman—H. TAYLOR, Horsforth, Yorkshire, Scribbling Miller—W. H. VALPY, Little Queen Street, Westminster, Surgeon—T. WILLIAMS, Cardiff, Tobacconist—J. WORMALD, Markham Street, Chelsea, Civil Engineer—J. WINCHESTER, Dallington, Sussex, Huckster—G. W. WARD, King's Road, Chelsea, Builder—S. WALKER, late of Bingham, Nottinghamshire, Commission Agent—J. WELLS, Liverpool, Dealer in Fancy Goods—E J. A. WIGLEY, Landport, Hampshire, Builder — H. WRIGHT, Devonshire Buildings, Worship Street, Cabinet Maker—C. WINGROVE, Great Leighs, Essex, Cattle Dealer—R. WEBSTER, Leeds, Drysalter—W. YEATMAN, Richmond, Surrey, Fruiterer and Greengrocer.

SCOTCH SEQUESTRATIONS—A. BROADFOOT, Kirkpatrick, Durham, Draper—R. CAVERS, Hawick, Roxburghshire, Grocer—A. FINDLAY, Fife Keith, Banffshire, Butcher—J. HAY, Glasgow, Contractor—J. M'CONOCHIE, Glasgow, Confectioner—A. MORRISON, Glasgow, Doctor of Laws—G. PATERSON & SON, Edinburgh, Builders—A. ROME, Dumfriesshire, Moffat, Grocer.

TUESDAY: *Oct.* 25.—BANKRUPTS.—W. A. ATTKINS, Salford, Lancashire, Agent—C. ASHTON, Heywood, Lancashire, Waste Dealer—B. L BARNETT, Gracechurch Street, City, Ship Agent—T BAKER, Kingston-on-Thames Nurseryman—J. BARKER Albert Terrace, Ball's Pond Road, Watch Jeweller—R. BIRCH, Liverpool, Licensed Victualler—J. BURBIDGE, late of Basinghall Street, Commission Agent—G. BRYANT, late of Great St. Andrew Street, Seven Dials, Sculptor—J. CHALKLEY, Dorset Villas, Northumberland Park, Tottenham, Brewer—H. B. CRAVEN, late of Eastcheap, City, Corn Merchant—J COTTERELL, late of Gloucester Road, Commercial Road East—J. COBLEY, Leicester, Market Gardener—G. CUTLER, Liverpool, Bookkeeper — P. DANCE, Worcester, Joiner—I. DOWNTON, Wilton, Wiltshire, Dealer in Marine Stores—R. D. DWYER, Everton, Liverpool, Metal Dealer—T. DAVIES, King's College Road, St. John's Wood, Cheesemonger—D. DAVIES, Cardiff, Glamorganshire, Innkeeper—J. DENISON, Guiseley, Yorkshire, Cloth Manufacturer—H. ELLIS, late of Deptford, Contractor—H. FOSTER, Church Road, Homerton, late Grocer—L. FAHEY, St. James's Ter., Hamilton Rd., Lower Norwood, Bootmaker—E. FAULKNER, Bessborough Gardens, Pimlico, Mercantile Clerk—F. FRANCIS, Brighton, Sussex, Tobacconist—W. H. FORBES, late of Fleet Street, Licensed Victualler—C. E. GIBBONS, Great Marlow, Buckinghamshire, Common Brewer—J. GRIFFITHS, late of Wednesbury, Provision Dealer—J GEORGE, late of Chalk Farm Road, Haverstock Hill, Cheesemonger—W. B. GILBER, Bridgewater, Somersetshire, Licensed Victualler—W. GIMSON, Aylesbury Street, Clerkenwell, Card Manufacturer—J. HART, Monkwell Street, City, Commission Agent—J. HOLT, Huddersfield, Wheelwright—E. HOWARTH, Middleton, near Manchester, Cotton Spinner—A. HANHAM, Briton Ferry, Neath, Glamorganshire, Market Gardener—S. HURST, late of Scarborough, Provision Merchant—A. HOWARTH, Liverpool, Potted Beef Manufacturer—T. W. HEAP, Cheetham, Lancashire, Commercial Clerk—G. HAYWARD, Wolverhampton, Professor of Music—B. HARRISON, Castleford, Yorkshire, Shoemaker—M. HUMBY, Salisbury, Clock and Watchmaker—JOHN HENDERSON, High Street, Shadwell, Beer Retailer—THOMAS JENKINS, Thatcham, Berkshire Blacksmith—THOMAS JARVIS, late of Earl's Court, Old Brompton, Brewer—KESTER KNAGGS, Kilham, Yorkshire, Labourer—ALFRED KIEN, Plumstead, Deputy Superintendent of Stores, Royal Arsenal, Woolwich—E. LAWRENCE, Shrewsbury, Innkeeper—R LEES, Oldham, Lancashire, Cotton Spinner—J. LOWCOCK, Colne, Lancashire, Cotton Manufacturer—J. LINDON, Old Stratford, Warwickshire, Farmer—H. MITTELL, Canterbury, Victualler—H. MORRIS Eling, Hampshire, Farmer—F. MUIRHEAD, Wilson Street, Gray's Inn Road, Commission Agent—D. K. MAWER, Victoria Road, Pimlico, Upholsterer—J. MITCHELL, Halifax, Yorkshire, Gardener—J. MARTIN, Chipping Wycombe, Buckinghamshire, Innkeeper—M. MARKS, Cardiff, Furniture Broker—C C. MORSE, Liverpool, Licensed Victualler—W, MOYSE, Fordham, Cambridgeshire, Baker—H. MADDISON, Hatton Garden, Gold Chain Manufacturer—H. NOWLAN, Chilton Street, Lower Road, Rotherhithe, Builder—W. H. OSBORN, late of Foley Street, Portland Place, Accountant—D. ORCHARD, Ryde, Isle of Wight, Lodging House Keeper—D. PATTISON, Thirsk, Yorkshire, Painter — C. PRICE, Llanfihangel, Radnorshire, late Draper—J. PEAKE, Lichfield, Furniture Broker—G PRICKETT, late of Tonsley Hill, Wandsworth, Dealer in Felt—G PHILLIPS, Red Lion Passage, Holborn Poulterer—GEORGE FREDERICK PIPER, Burton-upon Trent, Miller—HENRY PAINE, Canterbury—JOSIAH PEARSONS, Clare, Suffolk, Baker—O. REWMAN, Almond Villas, Wiltshire Road, Angell Town, Brixton, Commission Agent—T. A. F. REYNOLDS, late of Cecil Street, Strand, Solicitor—J. C. ROBERTSON, late of North Woolwich Road, Merchant—J B RICKARDS, Oakley Square, Hampstead Road—A. J SEVERNE, Worcester, Fish Dealer—E. SARGEANT, Gosport, Plumber—G. SLOAN, Brompton Road, Tailor—L. G. SMITH, Needingworth, Huntingdonshire, Carpenter—E. SYKES, Huddersfield, Cotton Spinner—J. STUCKEY, jun., Clevedon, Somersetshire, Fly Driver—J. SOLOMON, Bradford, Yorkshire, Tailor—J. SMEED, Whitstable, Kent, Farmer—C. TARGETT, New Compton Street, Soho, Undertaker—A. THORNTON, late of Raistrick, Yorkshire, Manufacturer—J. A. URRY, West Cowes, Isle of Wight, Grocer—E. WHITEHEAD, Oldham, Lancashire, Cotton Spinner—F. WHEELER, Kingston-on-Thames, Grocer—C. WILD and J. WILD, Elland, Yorkshire, Cotton Doublers—J. WHITNEY, Kingsley, Staffordshire, Dealer in Sand.

SCOTCH SEQUESTRATIONS.—J. BONNAR, Edinburgh, Painter—J. PEARSON, Glasgow, Wholesale Grocer.

Metropolis and its Vicinity.

PROCEEDINGS IN BANKRUPTCY.—In April last the Lord Chancellor, dissatisfied with the accounts of the official assignees and messengers of the Court of Bankruptcy for the Leeds district, requested Mr. Commissioner Ayrton, one of the commissioners there, and Mr. Harding, the London accountant, to institute a rigid examination and scrutiny of all their books, and to report to him on the subject. The result of this investigation turned out to be of so very lamentable a character that his Lordship, immediately it was made known to him, followed up his request by issuing an order directing a similar proceeding as to the accounts of every official assignee and messenger in all the district courts in the country, with power also to inquire into the manner in which the bills of costs were taxed by the registrars of the various courts. The inquiry under this order has been completed so far as regards the courts at Leeds, Birmingham, Manchester, and Liverpool, and the result is that, besides the discovery of many very gross irregularities, it has been found that large sums of money have been improperly retained, both by the official assignees and by the messengers, which ought to have been paid over to the Chief Registrar's account—sums it is said already amounting in the aggregate to upwards of 14,000*l*. It as understood to be his Lordship's intention that the inquiry shall be extended to the accounts of the official assignees and messengers acting in London.

BRITISH MUSEUM.—The nine statues from the Farnese Palace at Rome, recently purchased from the ex-King of Naples, were received at the British Museum last week. They are—A Mercury, nearly identical in pose and scale with the celebrated statue in the Belvedere of the Vatican, and a counterpart of one which forms the principal ornament of Lansdowne House;—the equestrian figure of a Roman Emperor, curious as one of the only four equestrian statues that have descended to us from antiquity;—the celebrated and unique copy of the Diadumenos of Polycletus, a Greek athlete binding a diadem round his head, estimated by Pliny to be worth the equivalent of 20,000*l*. in his own day, and ranked third, if not second, among the productions of Polycletus;—an Apollo playing on the lyre, in the same attitude as the beautiful statue from Cyrene, already in the Museum;—an heroic figure, supposed to represent a King of the Macedonian period in the character of a Deity, according to the system of ideal portraiture which prevailed after the time of Alexander the Great;—a Satyr holding up a basket containing an Amorino;—a group of Mercury and Herse;—a male torso. These statues formed part of the celebrated Farnese collection, the remainder of which is now in the Museo Borbonico at Naples. They were all found in the Baths of Caracalla. Their acquisition is mainly due to the friendly intervention of Mr. William Storey, the well-known American sculptor at Rome.—Mr. Edward Wigan, of Highbury Terrace, has just presented to the Museum 293 coins from his celebrated collection of Roman imperial coins.

RELIGIOUS PERSECUTION IN TURKEY.—A numerous deputation, introduced by Lord Calthorpe, and composed mainly of members of the Evangelical Alliance, presented a memorial to Earl Russell on Wednesday at the Foreign Office, inviting his attention to the recent proceedings of the Turkish Government at Constantinople, as constituting a violation of religious liberty. Earl Russell, in reply, explained that the subject was one of considerable difficulty as to the facts, the Turkish Government alleging that the steps they had taken were the result of indiscretion on the part of the missionaries in performing their services in places where they were likely to cause a disturbance of the public peace. He could not agree in the view taken by the Turkish authorities that the converts must not communicate their convictions to others lest they should induce them also to become Protestants. That was a natural exercise of their religion in which the Hatti Humayoun said they should not be molested. Whilst they should firmly insist on that agreement being carried out, it behoved those who went out as missionaries to treat the national religion with that respect with which they would expect to have their own treated by people of all creeds living in this country. He understood that the three men who had been imprisoned for embracing the Protestant faith had been released, but he would make inquiry as to the statement that banishment had followed their release from prison.

THE ANGLO-INDIAN TELEGRAPH.—A despatch from Bombay of October 2 says that the Persian Gulf Telegraph cable has been repaired. The land line is completed from Bushire to Teheran, and messages have come through to Bombay in 12 hours. The extension from Teheran to Bagdad will be finished next month, but the disputes on the frontier prevent communication with the latter city.

VISIT OF M. BERRYER TO ENGLAND.—It is announced that the celebrated French lawyer, M. Berryer, is about to become the guest of Lord Brougham in Londo... invitation to a public dinner, signed by the A... General and a large number of members of the ... Court, has been presented to M. Berryer and a... by him. It is expected that the dinner will take p... on an early day in the approaching term, a... Berryer's stay in England will be limited to a few ... only.

THE RUSSIAN GENERAL TODLEBEN arrived in Lo... on Saturday, on a visit to Captain Blakely. On T... he paid a visit to Woolwich, and was receive... military honours, the horse and foot artillery ... paraded on the Common. After taking luncheon ... mess-room he proceeded to the marshes, and w... the successful testing of one of Captain B... 11-inch steel guns (throwing 600 lb. shot), inten... the Russian Government. He subsequently ... the various departments of the Arsenal and re... to town. Last evening he was entertained at ... by the Duke of Cambridge, and a banquet ... given in his honour next week by the Army ... Navy Club.

SOUTHWARK BRIDGE.—A Court of Common Co... was held on Thursday at Guildhall, the Lord May... the chair, when a motion was agreed to, giving ... to the Court to pay the expense of throwing ... Southwark Bridge to the public out of the City ...

CONDITION OF MINES IN GREAT BRITAIN.—... commissioners appointed some time ago to inquire ... and report upon the state of metalliferous mines, ... are now under the same regulations as coal ... have just made their report. They state that ... health of the workmen in these mines is unsatisfa... and recommend improved ventilation of the mines ... a better communication between the levels; the ... cages instead of ladders for conveying the men ... down the shafts; convenient houses on the surface ... the use of the miners in changing and drying ... clothes; the better protection of shafts, and ... stringent rules in regard to blasting; the effe... closing or protection of abandoned shafts and old ... the non-employment of boys under the age of ... below the surface, and the adoption of such a sys... mine clubs as will afford the men sufficient ... nance during sickness as well as while suffering ... the effects of accident. The report is signed by ... Kinnaird, Sir Philip Grey Egerton, Bart., Mr. K... M.P.; Hon. F. Leveson Gower, Mr. St. Aubyn, M... Davey, Mr. Headlam Greenhow, and Mr. P. H. H...

MR. BAKER'S AFRICAN EXPEDITION.—Mr. Petheri... late vice-consul at Khartoum, has written to Sir ... Murchison from Berber, dated August 11, stating ... he has had several interviews with Hburshid Agha ... from the interior of Gondokoro, who state that ... accompanied Mr. Baker to Kamrasi's residence, ... they had met with a good reception; that Mr. B... was in excellent health, but had lost the whole ... cattle, and had been training bullocks for riding. ... all agree that Mr. Baker and his 10 men, under ... guidance of a confidential person of the chief, left ... place to inspect a lake, but their accounts of the ... are conflicting. Some say he went to the Lutu N... while others maintain that he left for Lake N... and did not intend to return, but to proceed onwards ... Zanzibar. Mr. Petherick is inclined to believe ... statement that he went to the Lutu Nzigi, and ... that nothing more can be heard of him until the ... trading campaign.

SWINDLING AT A LADIES' SCHOOL AT BLACKHEATH.—A singular case of fraud has been brought ... the last few days before the magistrate of Green... Police Court. A young girl, calling herself ... Horsfall, and stating that she was the niece of ... Horsfall, M.P., and an heiress in her own right with ... income of several hundreds a year, entered Mr. ... Harvey's school at Blackheath as a parlour boarder, ... obtained such an extraordinary amount of credit ... her story that she managed to swindle several ... men of Greenwich out of a large amount of valuable ... property, as well as to steal from Miss Harvey ... At the adjourned examination on Wednesday the ... was densely crowded, and several of the tradesmen ... whom she had swindled, detailed the manner ... which she had succeeded in imposing on them, ... obtaining jewellery and other costly articles, which ... immediately pawned. She was committed for trial ... the next sessions of the Central Criminal Court.

BURGLARY AND ATTEMPTED MURDER AT WOODFORD.—On Friday night a daring burglary was committed ... at the house of Mr. Joseph Kemsley, farmer, situated ... in a somewhat retired spot near Woodford. About ... past 11 o'clock at night his two daughters were ... awakened from their sleep by three men dressed ... labourers, and with crape over their faces, standing ... over them, one with a pistol and a heavy bludgeon. ... The girls both fainted from fright, and the burglars ... took advantage of their helpless condition to ... possession of a small gold watch and key; a ... silver watch with silver guard; two cloth waistcoats ... hats; about 4*l*. in gold, and 9*s*. in silver. While ... were ransacking the house a man-servant who slept ... stairs heard them, but was afraid to venture down to ... give any alarm; but a policeman named Delaberche, ... observing an unusual moving about of lights in the ... house, effected an entrance, when the burglars immediately set upon him and beat him most severely about ... the head and body, and left him for dead in the passage. ... They then decamped. The man-servant did not ...

any alarm, and the policeman lay weltering in his blood for a considerable time, until the sergeant of police and another patrol passed round that way and discovered him. The sergeant at once sent for medical assistance, and had him conveyed to the police-station, where he at present remains in such a dangerous state that, erysipelas having supervened, his death is daily expected. Notice was at once sent to the different police-stations in the county of Essex, and active measures were taken to discover the burglars, but no trace of them has yet been obtained. The fact that they left their pistol behind encourages the hope that they will eventually be traced.

The Public Health.—The Registrar-General's Weekly Return states that in the week that ended on Saturday October 22, the deaths of 1335 persons were registered in London. The average number in the corresponding week of the ten years, 1854-63, corrected for increase of population, was 1188. The present return is therefore 147 above the average. During the week the births of 997 boys and 967 girls, in all 1964 children were registered in London. In the ten corresponding weeks of the years 1854-63 the average number was 1895.

Provincial.

Bilston.—The men on strike are still as determined as ever to remain out; but the determination of the authorities not to permit large bodies of men to congregate with bands early in the morning in the neighbourhood of collieries where the men are at work has materially checked their meetings. The military and police, however, are still in great force in the Dudley and Tipton districts, to which the strike is now confined. In the Bilston and Wolverhampton district by far the greater number of the pits are at work. On Monday a mass meeting, which was attended by 15,000 persons, was held at Tipton, at which a vote of censure upon the police for preventing the bands from playing was adopted, and the men expressed their determination to stand out until they had their wages. The meeting passed off very quietly considering the vast numbers present. There was a large body of police, as well as two troops of Hussars, in the town during the time.

Brighton.—On Tuesday evening, the 20th inst. about 6 or 7 o'clock, Miss Isabella Naylor, 26 years of age, daughter of Mr. Naylor, of York Place, left her home apparently in excellent health and spirits. She did not, however, return at night, and great alarm was consequently felt for her safety, as she had been suffering from fits. The police at once instituted inquiries, and Sergeant Baldwin, who is stationed at Preston, hearing that there was a young woman in the neighbourhood of Preston and Patcham who was acting very strangely, concluded that it was the missing person, and with five or six men went out to make a search. The whole neighbourhood was completely scoured, and not a pond or well, or any place that was likely to conceal her, was passed without a minute examination. The hills were searched, and at length a portion of a woman's dress was discovered. Sergeant Baldwin kept his lantern on, in order to give the young lady an opportunity of retracing her steps, if she had chosen to do so, to a place of safety. Instead, however, of approaching the light, she ran away from it, and completely undressed herself as she did so, for, on a closer search being made, the whole of a woman's garments were found at different places on the hill. The search was kept up till late, but no signs of the missing person could be found. Sergeant Baldwin then proceeded to Brighton to communicate with her friends, and at daybreak again made a search over the hills. The last portions of attire which were found were a pair of boots, a pair of stockings, drawers, and a chemise, and these were nearly half a mile from where the first things were found. The search was perseveringly carried on, and ultimately the body, which was identified as that of Miss Naylor, was found quite naked and dead in a ploughed field between Patcham and Stanmer Park. She was lying on her back, and must have run fully a mile after she had completely undressed herself. At the inquest on Friday, a surgeon stated that death arose from exhaustion, want of food for 36 hours, and exposure on a severely cold and windy night. The jury returned a verdict that death arose from exhaustion and exposure, all arising from temporary insanity.

Clumber.—The funeral of the Duke of Newcastle took place on Thursday in the family mausoleum in the parish church of Markham Clinton, about seven miles from Clumber House. Nothing could exceed the respect shown to the Duke's memory by the whole country round. Every shop in Worksop, and many in Retford, were closed entirely till after the funeral; from Bothamsall and Retford Church towers flags were flying half-mast high, and the bells of all the churches in the neighbourhood tolled from ten to two. The tenantry attended on horseback, two and two, and the hearse was drawn by six horses. The chief mourners were the Earl of Lincoln, Lord Arthur Clinton, Lord Albert Clinton, and the Duke of Hamilton. The second mourning coach conveyed Sir Cornwallis Ricketts, Bart., and Captain D'Eyncourt, R.N., brothers-in-law of the late duke; Admiral Sir G. R. Mundy, K.C.B., and Lord Foley, cousins of his Grace. And a third conveyed Lord De Tabley and the Right Hon. W. E. Gladstone, executors of the late duke; and Lord Harris, representing the Prince of Wales. The pall-bearers, who were on horseback, consisted of tenantry whose families had been longest connected with the estate.

Liverpool.—A bazaar was held last week in St. George's Hall, in aid of the Southern Prisoners' Relief Fund. [A number of aristocratic and fashionable ladies of Southern birth or proclivities presided at stalls named after the various Confederate States, and contributions were received from all parts of the United Kingdom, from Paris, Rome, the Southern States, Canada, and even from New York. The attendance daily was immense, upwards of 5000 being present on Friday, when the admission was reduced to a shilling, while at least 2000 were obliged to be refused admission. The amount produced was about 11,000*l.*, exclusive of 9000*l.* received in subscriptions—an enormous sum to be raised for a charitable object during the present critical state of business affairs.

Liskeard.—Mr. Bernal Osborne addressed his constituents in this town on Friday evening. He said that the Ministry had thoroughly neglected all domestic questions, while it had exhibited peculiar abilities for entangling us in foreign embroilments. He censured them for lecturing Germany, bombarding Japan, and bullying the Brazils; and contended at great length that their policy in the Polish question was inconsistent, injurious to Poland and obnoxious to Russia, a policy of "foolish, unmeaning, criminal swagger." He condemned in strong terms the whole conduct of the Government in the Dano-German dispute, and said that if the country had been saved from the horrors of war and from 10 per cent. income tax, and if Germany had not been devastated and mothers were not now mourning in England—it was not attributable to any act of the Government, but to the unwillingness of the French Emperor and to Mr. Gladstone's opposition. He described Earl Russell as the proper leader of the Liberal party, and said that the party had never held up its head in the House of Commons as it did in his time, and he hesitated not to declare that the Liberal party had neither a flag nor a leader, and was in the Slough of Despond. With regard to the Opposition, he said that if Diogenes were to descend into the House of Commons with a Davy's lamp to discover a Tory party, he would find only three pure Tories—Mr. Newdegate, Mr. Bentinck, and Lord Palmerston. The names of Whigs and Tories were becoming by-words; and he could not see why some new combination should not be tried. He asked if there was any statesman more liberal in voting, speaking, and writing than Lord Stanley, and why he was to be deterred from voting for Lord Stanley because he sat on the opposite benches? The time, he said, would come when a change would take place, and the Government chariot of moderate progress and sensible reform would go on its way.

Malton.—The continued prevalence of fires in stackyards has caused inquiry to be made by some of the insurance offices into a current report that these fires occur only in the stackyards of farmers who have used reaping machines. It is said that threatening notices to that effect have been found in some places, but there is no tangible shape for the rumour. It has, however, had the effect of alarming some of the insurance offices. No alteration of rates has yet been made, but in certain cases the insurance agents have been instructed to inquire of their customers whether they use reapers, which tend to lessen the demand for labour.

Manchester.—A notice has been issued from the office of the Public Works Act in this city, urgently recommending the civil authorities throughout Lancashire and Cheshire, who have received loans under the provisions of the Act, to proceed with such work as will afford employment for the largest number of indigent factory operatives.

Newcastle on Tyne.—It will be remembered that the case of Mr. Bewicke, the Northumbrian magistrate, who suffered ruinous hardships in consequence of being convicted of a felony on the evidence of perjurers, was investigated last session by Parliamentary Committee, who reported that Mr. Bewicke was entitled to no more compensation than the restitution of 400*l.*, the proceeds of the sale of his goods. The Treasury, however, have since taken up the matter, and it has spontaneously awarded to Mr. Bewicke an additional sum of 750*l.*

Norwich.—On Tuesday morning Sir John Walsham, inspector of the Poor-law Board, opened an official inquiry into the allegations preferred against the Rev. E. A. Hillyard, chaplain of the workhouse, of having neglected his duties, and "identified himself with Brother Ignatius and the English Order of St. Benedict." The inquiry took place in the Guildhall. Among the witnesses examined was the Rev. Gideon J. Ouseley, who signed his name with a cross, and appeared in a long black robe. He created much laughter by stating that he was ordained in Ireland by the Bishop of Down and Connor on the "Feast of St. Peter," and that he arrived in Norwich on "St. Alban's Day." On being asked what were the dates of these days, he said that they would be found in the Prayer Book, the former being the 17th and the latter the 30th of June. Sir J. Walsham asked if the latter was not the 29th, upon which he begged pardon and said it was. He stated that he had been assisting at a private school at Bognor before he came to Norwich—a school for the education of girls in "the Catholic faith"—not the Roman Catholic faith, but the Catholic faith, which was of course connected with the Church of England. He came to Norwich to assist Mr. Hillyard and the monks of the Church of England, and since then had "celebrated the sacrifice" daily in the monastery. On Wednesday Mr. Hillyard and several clergymen of the city were examined, and their evidence threw a good deal of light on the proceedings of the monks at Norwich and elsewhere. At the conclusion of this evidence Sir John Walsham said that he would make his report on an early day.

Oxford.—The Fellows of Balliol College have adopted a resolution which will henceforth admit Roman Catholic undergraduates to that College.

Plymouth.—Sir Robert Collier, the Solicitor-General, addressed his constituents in this town on the 20th inst. in a speech of great length, in which he reviewed the domestic and foreign policy of the Government, and particularly the various international questions with which they have had to deal. The following is an abstract of his remarks on the American and Danish questions:—

"The present times have been particularly trying times for the law officers of the Crown. A much greater amount of labour and a greater amount of responsibility has been thrown upon us than is usual; and that greater amount of labour and responsibility has chiefly arisen from the American war. That war has given rise to questions of very great importance—to international questions of the highest importance, some of them, indeed, governed by authorities, but others for which lawyers will search precedents and search the books in vain. A great number of new questions have arisen which could be determined only by reference to the general principles of international law, and I may add to the general principles of common sense and of justice, upon which all laws ought to be founded. Under these circumstances we have been loath to give that advice to the Crown which we deemed inconsistent with law. You are aware that we are not consulted upon questions of policy, but only upon questions of law. Now, I believe that the whole country approves of the determination of her Majesty's Government to maintain a strict neutrality between the two belligerents. But it is one thing to say that you will have neutrality, it is another to act in perfect impartiality as a neutral—it is, as leaving nothing to steer a course you have to navigate between a number of rocks and quicksands. There is, however, a third thing more difficult still, and that is, so to act that you shall not be accused by either party of want of neutrality, which I venture to say is impossible—for the more eager partisans on both sides require all the questions that arise to be decided in their favour—a species of neutrality which resembles that sort of Irish reciprocity which is said to be all on one side. Now, I think it is some testimony to the real neutrality of the Government that we have been complained of by both sides. I expected that such would be the case; for if we were really neutrals, it was almost inevitable and unavoidable. You are aware, that in most of the great wars which have desolated the world in modern times, England, unfortunately for herself, has been a belligerent. In this, the greatest, and perhaps the most distressing of all, we occupy the comparatively novel position of neutrals. I think that you will agree with me that it becomes us as a great nation, now that we are neutrals, to submit to those rules which we laid down when we were belligerents—for nothing would be more unworthy of us, nothing would tend more to the discredit of this nation among the nations of the world, if it should be said that we laid down different rules of law according to the accident of our position—in one case being neutrals, and in the other belligerents. In order to protect our belligerent rights, we, as belligerents, laid down certain rules which to some extent threw a burden upon neutrals. That burden which we threw upon others it is our duty ourselves to bear; and upon that principle—a principle of fairness and justice which everybody will acknowledge—my colleague and myself have acted in tendering the advice which we have given to her Majesty's Government. I may say this on behalf both of my colleague and myself, that, although we are not so presumptuous as to suppose that we have always been in the right, this I will assert, we have dealt with every question which came before us in an impartial and judicial spirit, determined to the best of our judgment not to allow ourselves to be influenced by sympathy with either belligerent—by either partiality for the weaker or fear of the stronger—but where we have had reason to think that the Federal Government have violated the international law, where they have unduly stretched the rules of international law, we have invariably thought it our duty to remonstrate, and require redress. I think it but fair and proper for me to say that, as far as the decisions of the American prize courts are concerned, I think that we have no great ground of complaint. The cases have been fairly argued by counsel on both sides; the American judges have paid the greatest respect to the decisions of our courts and of their own; and although I do not commit myself so far as to say that I agree with every proposition of international law which has been laid down, or with the view of the facts always which has been adopted by the courts, yet I think it but fair to say that upon the whole the judgments have been well considered, and given with a desire to do justice. With regard to the Alexandra she was seized before I became a law officer of the Crown, but I altogether approved of the seizure of that vessel. Unfortunately it has happened—and I deeply regret it—that the decision of that case turned upon a technical question, so that the real construction of that portion of the Foreign Enlistment Act applicable to the case has not been arrived at. That such was the fact I regard as a reproach to our laws. I think that her Majesty's Government were right in preventing the steam rams from sailing from Birkenhead. In that case we have come to a compromise, and I probably you will think with me that discretion was the better part of valour, knowing the difficulties by which one is surrounded in dealing with matters under this Foreign Enlistment Act. Considering those difficulties, we thought it well to put an end to the matter by buying those vessels, and they therefore are now part of the effective navy of this country, instead of having issued from our ports to prey upon the commerce of nations with which we are at peace, and possibly to involve us in hostilities; for the object of the Government, I may say, has not been to punish or inconvenience the individual, but to prevent and punish cruisers issuing from our ports. With regard to Denmark and Germany, I will not attempt to give you the history of the published correspondence further than to say that it amounts to this:—Both parties put forward incompatible pretensions, and Lord Russell endeavoured most earnestly and anxiously to keep peace between them. That is the sum of the whole correspondence; and I venture to say that any man who will read that correspondence candidly will admit that the documents which are the shortest, the tersest, and the most to the point, are the letters of Lord Russell. I think further that this fact ought to be dwelt upon rather more than it has been hitherto:—In September, 1862, Lord Russell made a proposal to Denmark for the government of the Duchies—a proposal altogether consistent with the honour and integrity of the Danish monarchy, and which could have been accepted by Denmark without humiliation. That proposal was actually

agreed to by the German Diet, and if it had been agreed to by Denmark, would have put an end to the whole dispute. Denmark would have escaped the humiliation which she has suffered, the thousands who have fallen would have been spared, and the feelings of Germany would never have arrived at that state of exasperation which they have reached. I cannot help thinking that it was most unfortunate that this proposition was at that time rejected by the Danish Government—and, I will say further—for I believe it is now generally admitted—that Lord Russell in making the proposal at that time was entirely in the right. I venture to assert that there has been no occasion in his whole life in which he has been more completely in the right, and yet there never was an occasion on which he was more abused. Well, following up the Danish question, finally, as you know, a Conference was proposed; and I venture to think that that was the last chance—and a good chance—of obtaining peace; for when matters had proceeded so far that the dispute was only with regard to a strip of territory not very many miles broad, there was every reason to hope that the two parties would come to an arrangement—and it is most unfair to judge by the event. It is most unfair to judge anybody by the event; you must judge by the conduct, and by the circumstances under which that conduct was pursued. Without any desire to impute blame to Denmark, I must express a deep regret that the Danish Government did not then accept the conditions obtained by Lord Russell, and which were infinitely preferable to those to which she has since been obliged to submit."

PORTLAND.—The Bishop of Salisbury held a confirmation at Portland convict establishment on Sunday week, when 58 prisoners and 17 young persons, the sons and daughters of the officers connected with the establishment, were admitted to the holy rite.

PRESTEIGN.—A determined attempt at murder was made on Friday week at the village of Kinsham, close to the borders of the county of Hereford, on the Radnorshire side. It appears that for some years past an idle and dissolute fellow named Joseph Morris, a terror to the neighbourhood, has resided in a cottage within a short distance of Coombe Moor, an extensive morass surrounded by preserved forests, his poaching depredations upon which have several times caused him to be an inmate of the Hereford County Gaol. He was married to a decent woman, who had frequently endeavoured to dissuade him from his evil courses. On Friday morning, during the absence of his father-in-law, he stole a shilling from the old man's pocket and then went off. He returned in the evening about 6 o'clock, and then found his wife near a well, about 150 yards from the cottage. While she was in the act of washing her hands at the spring, he suddenly made his appearance on the bank overhanging the well, armed with a gun, which he deliberately fired at her. The charge struck her head, literally carrying away the scalp. She fell down insensible, but as she was a woman of strong constitution she soon recovered and cried for help. On her removal to the cottage she was examined by a surgeon, who gave no hope of her recovery. Morris is supposed to have hidden himself in the great Coombe Moor. He has been in the 7th Hussars, from which regiment he deserted no less than four times, was consequently branded as a felon and a deserter, imprisoned for nine months, received 50 lashes, and finally drummed out of the regiment. He was under the impression that his wife had given such information of his whereabouts after his desertion as led to his arrest, and the act which he has just committed is attributed to a desire for vengeance.

PRESTON.—The gaol chaplain difficulty at the Preston House of Correction is likely to be amicably settled. It was recently rumoured that opposition had been raised to the application of a grant of 40*l.* made at the last quarter sessions for the purchase of vestments, &c., for the Roman Catholic service in the above gaol. Since then Dr. Goss, the Roman Catholic bishop, has written to Mr. T. B. Addison, of Preston, to the effect that the vote will not be accepted, and that the money needed for the purchase of articles required in the service will be provided by the Catholics themselves.

ROCHESTER.—A special meeting of the corporation was held a few days since, the Mayor presiding, for the purpose of adopting the necessary measures for bringing under the notice of Government the danger likely to arise to the inhabitants of this city and of Chatham from gunpowder explosions. After some discussion, it was unanimously resolved to present a memorial to the Secretary of State for War, directing his attention to the extreme danger consequent upon the storing of large quantities of gunpowder, and other explosive materials in the vicinity of populous places, and particularly to the danger which arose to the inhabitants of the populous towns of Chatham and Rochester from the large supplies of gunpowder and other explosive materials now in store at Upnor Castle, and urging the absolute necessity of putting a stop to the practice of building gunpowder stores in the neighbourhood of populous places. The memorial also stated that the corporation had reason to believe that as much as 30,000 barrels of gunpowder were occasionally in store at Upnor, and should an explosion ever occur, the dockyard and other Government establishments at Chatham, together with a great portion of that town and Rochester, would undoubtedly be destroyed. The corporation, therefore, expressed a hope that measures would be at once taken by the War Department to have the large stores of gunpowder distributed, and that such other measures should be adopted as would appear effectual to lessen the probability of an explosion, and the consequent large destruction of life and property.

WHITECROFT.—On Monday night a burglary and attempted murder were committed at Whitecroft, in the Forest of Dean. The house of Mr. Wood, haulier, was attacked during the night by a party of five men, one of them dressed in women's clothes, and all wearing black masks over their faces. Mr. Wood's son confronted the burglars, when they fired at him, and it is feared that he is mortally wounded. The robbers then ransacked the house, and carried off two 5*l.* notes and some gold and silver money, the surviving inmates being too much terrified to offer resistance. The burglars got safely away with their booty, and no trace of them has yet been discovered.

WIGAN.—Considerable excitement has been caused in this town by the proceedings of two men called Rowe and Horrocks, who have taken possession of an old unoccupied place known as the Manor House in a part of the town called Scholes. On effecting an entry the men fortified themselves in the building, stating that they were acting as the authorised representatives of James Horrocks, a grocer of Spinning Moor, Durham, to whom that house, the adjacent property, and land around, to the extent of 50 statute acres, all belonged. The Manor House for the last 40 years has been held by persons of the name of Heaton, and the trustees, under the will of the late head of the family, determined to attempt an ejectment. This was successfully done on Wednesday week, but the attacking party leaving the back door open, the ejected party again entered, and was not again removed. On Saturday a grand siege was arranged to take place. An attacking party of about a score went to the spot and commenced an assault upon the house, in which they might perhaps have been successful had not the police interfered to stop the breach of the peace, and taken their leader into custody. For some minutes the scene was a most exciting one, the besieged hurling bricks and stones upon their opponents, who were armed with picks, bludgeons, and axes. Between the two great damage was done. It has now been determined that peaceable means shall be taken to determine the ownership of the house. The executors of the late tenant, Mr. Burns, have a right to the occupancy of the premises, and they purpose proceeding against the claimants from Durham under the acts of 15th Richard II., c. 2, and 8th of Henry VI., c. 9. In order to do this, it was necessary that a justice of the peace should view the house to satisfy himself of the "forcible retainer;" and accordingly on Saturday the spot was visited by Mr. Joseph Meek, J.P., and the holders will be summoned to appear before the magistrates at petty sessions. The property which Horrocks claims is very valuable. Fifty statute acres around the Manor House includes land belonging to Earl Crawford and Balcarres, to the executors of the late Mr. Roger Anderton, the executors of the late Mr. Ralph Greenough, and other leading landowners in the neighbourhood. Most of it is thickly covered with houses, and the mines beneath are very valuable.

YARMOUTH.—The Ontario steamer has become a total wreck. Before she broke up the Yarmouth boatmen were applied to to bring the crew ashore in the life boat, but they refused to go off unless they were paid 500*l.* The boatmen of a neighbouring station went off for 100*l.*, but the sea was so high that they were obliged to return without reaching the ship. The crew, 68 in number, subsequently left the wreck in one of the ship's boats, and reached a steamer, which landed them at Yarmouth on the same night. The captain and six of the officers refused to abandon the vessel until Friday, when they left her in the ship's life boat, and were landed by a steam tug on the same day. The value of the vessel was upwards of 120,000*l.*, but she was only insured for 90,000*l.*

Ireland.

TRIAL OF THE CARRICK WITCH.—A woman named Mary Doheny, known as "the Carrick Witch," was tried at the Clonmel Quarter Sessions on the 21st inst., for fraudulently obtaining goods from Joseph and Mary Reeves, at Carrick-on-Suir, on the 1st June last. Mary Reeves deposed that the prisoner had attempted to cure one of her children with herbs boiled in new milk, and continued attending the house for the purpose nearly every day during ten months. She said she used to see her dead father and other dead members of the witness's family in the Moate at Ballydine; and, as a proof, prisoner said that witness was to get a note from them, which Captain James Power was to write for them. Witness's child was sent for the note, and several letters were received purporting to come from the deceased relatives. The prisoner next said she wanted bread, butter, and tea for the people in the Moate, and these were daily supplied during four months. Witness also fancied that she saw her own deceased father. He was sitting in a chair opposite the door, quite near her, having on a blue coat, knee breeches, and a hat. He said three times he was going, and that he would return with plenty; and the prisoner said he was going with "the gentry," but would return. The prisoner often asked the witness for wine and spirits. Since her arrest there was no appearance from the other world. The husband of this woman, Joseph Reeves, a sub-constable, now stationed at Kilmainham, near Dublin, was as great a dupe as his wife. He deposed that he saw and knew his father-in-law, who was only 20 yards from him. He believed that the man had come to life, and thought he had a ghostly appearance. He never saw a dead man standing before. He saw his son also in an empty house where he was brought by the prisoner. He, too, ... ghostly appearance, and had not the shape of ... person, and the prisoner stated that it would ... considerable time for him to come to perfection. ... jury found the prisoner Guilty. Mr. ... Howley, who presided on the Bench, stated ... he had been informed by the ... of constabulary that the dead persons ... personated by the prisoner's blind husband and ... who led them about. One of the apparitions ... dark, and the other in the night. The prisoner ... cried—"Oh, my Lord, think of my poor blind ... my poor children!" The Judge said—"You ... terrible woman and a dangerous impostor. You ... be confined in gaol for 12 months and kept ... labour."

Scotland.

EARL RUSSELL AND THE ABERDEEN UNIVERSITY.—Earl Russell is expected to visit Aberdeen in the ... week in November, for the purpose of delivering ... inaugural address as rector of the University. The ... fixed for the purpose is the 11th of the month.

GLASGOW CATHEDRAL.—An interesting ceremony took place in Glasgow Cathedral on Tuesday, being the formal presentation to the Board of ... the series of painted windows with which the Ca... has been decorated. The Right Hon. W. Cowper, ... Commissioner of Works, was present, and in ... the gift delivered an address on the subject of the decoration.

THE ORGAN IN THE KIRK OF SCOTLAND.—On Sunday the Rev. Dr. Lee intimated to the congregation of Old Greyfriars, Edinburgh, that a sum of 5... been subscribed for the purpose of erecting an ... the church. He thanked the congregation ... liberal response to his appeal, which he ... intended as a proof of personal sympathy with ... regard to this matter, and named a committee ... congregation to co-operate with the elders and ... in taking steps for the immediate building of an ... which it was hoped would be in use before the ... meeting of the General Assembly.

GREAT STORM ON THE NORTH-EAST COAST.—A great storm occurred on Saturday and Sunday ... north-east coast of Scotland from Berwick ... Orkneys. It was severely felt in the Firth of Forth. The vessels for London could not leave ... five vessels, chiefly foreign, were cast ashore ... Granton. The crews were saved, except one man ... in a premature attempt to escape. A Dutch ... was wrecked near Dunbar, and four lives were ... In Caithness and Banffshire the storm was the severest ... that has visited the coast for many years. Much ... damage was done by the storm to buildings and ... property on shore. Trees, mills, and bridges ... washed away by the flooding of the rivers; houses ... blown down, and the railways in several places ... much injured.

Law.

CENTRAL CRIMINAL COURT: *Trial of Muller for the Murder of Mr. Briggs*.—On Thursday *Franz Muller* was placed ... dock, and formally charged before the Lord Chief ... Pollock and Baron Martin with the wilful murder ... Thomas Briggs, in a railway carriage, on the North ... Railway, on Saturday, the 9th July. The prisoner ... appeared as unconcerned as he has hitherto done ... firmly into the box, and when called on to plead, answered ... a respectful but firm tone, Not Guilty. The Solicitor-General, ... Mr. Serjeant Ballantine, Mr. Hannen, Mr. Giffard, ... Beasley appeared for the prosecution on behalf of the ... instructed by Mr. Greenwood, Q.C., Solicitor to the ... Mr. Serjeant Parry, Mr. Metcalfe, and Mr. Besley, ... by Mr. Thomas Beard, appeared for the defence. On ... soner being informed he was entitled to be tried by a ... of foreigners and Englishmen, Mr. Serjeant Parry said ... the full concurrence of his legal advisers, and at the ... own desire, he had elected to be tried by a jury of ... The jurymen were then selected from the separate ... the five home counties in succession, the right of ... being very extensively exercised on both sides, the ... appearing to object mainly to tailors and bootmakers. ... prisoner's advisers to publicans and butchers. The ... of getting a jury into the box occupied more than half ... and it was nearly 11 o'clock when the jury had been ... and the trial fairly commenced. The Clerk of Arraigns ... then read the indictment, the Solicitor General ... case at great length on behalf of the prosecution, reading ... all the facts which have been made familiar to the ... the previous investigations before the coroner and ... police court. He then proceeded to call the witnesses, ... including Mr. Buchan and his wife, the niece of Mr. ... at whose house he dined on the day of the murder, ... ticket collector, guards, and engine-driver of the ... train, two clerks of Messrs. Robarts' bank, the surgeon ... had examined the body when discovered, the police, ... Mr. Death the jeweller, Arthur Repsch and his wife, ... Haffa, with whom the prisoner spent the greater ... Saturday, and the persons with whom he lodged. ... evidence of these parties brought down the case to ... the circumstances attending the finding of Mr. Briggs, ... and the description of the wounds on his person, together ... the identification of the prisoner as the person who ... Mr. Briggs's chain for another. The case was then ... to yesterday, when the principal witness examined was ... cabman Matthews, who repeated his evidence in regard ... hat which he had purchased for the prisoner. He ... jected to a severe cross-examination, and admitted that ... made some mistakes in his former evidence at the police ... but the main facts which he was called to establish ... unshaken. His wife was also subjected to a cross-examination ... The hatter by whom the prisoner's hat was made and ... were called to identify the hat. Evidence was then given ... the prisoner paying for his passage to New York, and ... Clarke and Inspector Tanner deposed to the circumstances ... his apprehension in that city, and the statements made ... when the property of Mr. Briggs was found in his possession.

Mr. Briggs junior was next called, and identified the property as having belonged to his late father. Mr. Degance, hatter, of the Royal Exchange, proved that the hat found on the prisoner had been sold by him to Mr. Briggs and cut down, so as to close the notice. The actual maker of the hat confirmed this fact. The Solicitor General said that this was the case for the prosecution. Serjeant Parry then addressed the jury for the defence, contending that the evidence had failed to bring the charge home to the prisoner, and that in a case of such doubt he ought to be acquitted. At the close of his address the Court again adjourned to this morning. It is not expected that the trial will be concluded before Monday. The excitement out of doors was very great both on Thursday and yesterday, but the crowd at the entrances of the Court was less yesterday than on the previous day. *Thomas Long Lethbridge Littleton Hare*, described in the calendar as being a farmer, was indicted for unlawfully, maliciously, and feloniously sending to Viscount Curzon a letter or writing, threatening to kill and murder the said Viscount Curzon, then well knowing the contents of the said letter. The prosecutor of this indictment was Viscount Curzon, the eldest son and heir of Earl Howe, and the prisoner was the son of a female who formerly had been the tenant of one of the noble earl's farms in the county of Leicester. It would appear that the prisoner had taken great offence because, owing to the embarrassed circumstances of his mother and her family, the farm had been taken out of the mother's hands and let to another person. Under this fancied grievance it would appear that the prisoner, before the commission of the offence with which he was charged in the present indictment, wantonly and maliciously broke the windows of Earl Howe's town mansion in South Audley Street, and having been apprehended on the spot was brought before a magistrate and sentenced to a month's imprisonment. As soon as he came out of prison, after serving that term of incarceration, he wrote and sent the letter on which this indictment was based. The letter was addressed to Viscount Curzon, and was in the following terms:—"Curzon,—Twenty months have elapsed since I stated in a letter that your father was a liar, a robber, and a shabby fellah and would turn like a weathercock. When I wrote the letter to you, then living at Pen, in the Amersham division, God only knew my motive, which I now refresh your memory with for so doing. Bone of his bone, you treated that with disdain. I expect Cancell? but for that monster of a villain Thynne; but be it as it may, I shall be on the watch strictly for you and your father and Thynne to put my menace into execution. You may sneer at this, but by God I carry that with me in the streets of London as rid the earth of tyrants; and I let you know I belong to that stamp of men as stands to his principles, and determined to shoot my of you down, and think no more of it than you did in shooting a hare on the farm in the year of grace 1840. Remember, it has entered so deep into the soul that it only calls for its execution. I mean, tie me up by the neck in the heavens. You may rely on this. Pencil, ink, and parchment are for some men; but I declare to God you have had every chance to remedy and redress Father Lynch. Now it is my turn, and by God beware. What I mean I say and what I say I mean. To-morrow, if I have a chance, I actually will blow out your brains and throw your body into the slur hole." Viscount Curzon was then called, and on being shown the letter in question proved that he received it the 8th February last. The father of the prisoner had been tenant under witness's father, Earl Howe, of a farm called Shackleston, in the county of Leicester. The prisoner, when asked by the Court whether he had any questions to put to this witness, replied, "Oh, yes! several," and in a most irrelevant manner proceeded to cross-examine the noble prosecutor, who in reply to interrogations put by the prisoner replied that he (witness) had no previous knowledge of him, and to the best of his belief he had never seen him until he was in custody on the present charge. He believed that the prisoner's father had held the farm in question from the year 1811, and then it fell into the hands of his widow. He had heard that stated, but did not know it of his own knowledge. Police-sergeant Henry Beard, of the metropolitan police force, was next examined, and proved that he received the letter, which has already been read, from Mr. Parker, on or about the 2d or 3d of August last, and in consequence he proceeded to take the prisoner into custody. He admitted that his name was John Hill, and then witness told him that he had a warrant to apprehend him for sending a letter to Viscount Curzon threatening to kill him. The prisoner at once said—"I sent it, and I have sent one to Earl Howe too." The witness further stated that he then showed the prisoner the letters, and asked him if he had ever seen them before. The prisoner took them in his hand, and having looked at them replied, "Yes, I sent them." In the envelope received by Viscount Curzon were two envelopes, one the letter written in ink, and the other written in pencil. These were the two letters shown to the prisoner, and admitted to have been sent by him to the prosecutor. The witness proceeded to prove that after he had taken the prisoner into custody he found upon him another letter, or rather the draft of a letter, addressed to Earl Howe, and dated the 11th of July, 1864, and was in these terms:—"Richard William Penn Curzon, a name paid for, but better known as Earl Howe: the 28th day of December, the year of grace 1860, I sent you a letter, and you must know that there was something behind. Earl Howe, are you aware that you have been a trespasser on the farm since 1814? Are you aware that since 1855 you have been an outlaw, a felon, and a robber? If the communication is worth a modus, the curse of heaven lies at the door of Gopsall ready to work on." The document on being put in showed a rude drawing of that which the learned judge designated as a horoscope of the Howe family rudely depicted, but evidencing a most revengeful spirit on the part of the prisoner. The prisoner put several questions to the witness, charging him with falsehood, and asserting that he (witness) had offered him 50*l.* to go out to Australia, but that he had said he would not go there at any price. Several witnesses were called, who proved that the letters in question were in the handwriting of the prisoner, with which they were well acquainted. The prisoner, when called upon, went into a rambling statement, in which he averred that his family had been unjustly removed from the farm in question but admitted that he had destroyed and demolished the windows of Earl Howe's mansion in the way which had been described. He however denied the authorship of the letter in question, but alleged that he knew of a letter having been written by his brother on the same subject in the year 1861. He declared, in an incoherent and rambling tone, that he was innocent of the offence imputed to him by this indictment. The jury, after a short consultation in their box, returned a verdict of *Guilty*, accompanying their verdict with a recommendation to mercy, on the ground that the prisoner, at the time he wrote the letter, was labouring under a fancied grievance. Mr. Justice Willes, in passing sentence, said that in this country, if a tenant had a complaint against his landlord for a grievance, it must be enforced in a court of law, and not by having recourse to threatening letters. Nobody who had heard the case could doubt that the prisoner was an exceedingly silly, foolish person. This case was certainly a degree worse than that of the same character which had been disposed of that morning, and the Court would make a distinction. The sentence upon the prisoner was, that he be imprisoned and kept to hard labour for two years. The prisoner was removed protesting his innocence in a singularly incoherent manner.

Obituary.

The Dowager Lady Shelborne died on the 21st inst. at Bradwell Grove, in her 84th year. Her ladyship was the only child of the second Lord Stowell, and married in 1807 the second Lord Sherborne, by whom she had issue the Countess Dowager of Ducie, the present Lord Sherborne, the Hon. John Thomas Dutton, and the Hon. Ralph H. Dutton, M.P.

Lady Boswell died at Culdees on the 15th inst. She was the widow of Sir A. Boswell, vice-lieutenant of Ayrshire, the eldest son of Dr Johnson's biographer, and like his father—and unlike his grandfather, old Lord Auchinleck—a Tory of the Tories. He was called out by Mr Stuart, of Dunearn, for writing a political song of an offensive nature. Mr. Stuart was attended by the Earl of Rosslyn, and Sir A. Boswell by the Hon. John Douglas, brother of the Marquis of Queensberry. The duel was fought at Auchtertool, near Balcurvie, in 1822. The ball of Mr Stuart struck Sir A. Boswell on the shoulder and entered the spine, and he died shortly afterwards at Balcurvie House. Mr Stuart was tried for murder, defended by Lord Jeffrey, and acquitted. But the sensation caused by this avowed political duel was immense. Lady Boswell had lived in retirement for the last 42 years.

Mr. William George Howard died in Dublin last week. He was the son of the late Hon and Rev. Francis Howard, nephew of the Earl of Wicklow, and heir to his title and estates. On Friday the 21st ultimo he had an interview on the body. It was proved that he had died several days previously in a low and disreputable house in Dolphin's Barn, and indulged to excess in intoxicating liquors. His death was caused by dysentery acting on a broken down constitution, and the jury found a verdict to that effect. The deceased was only 39 years of age, and was married.

Major Weyland, formerly M.P. for Oxfordshire, died at his family seat, Woodrising Hall, Norfolk, on the 14th inst. He was born in 1789, and was the second surviving son of Mr John Weyland, of Woodrising, by the daughter of Mr John Nourse, of Woodeaton Hall, Oxfordshire. He studied for a short time at St. John's College, Cambridge, but obtained a commission in the 16th Light Dragoons, and served with that regiment through the Peninsular war. He succeeded, under the will of his maternal grandfather, to the Woodeaton estate in 1825, and was high sheriff of Oxfordshire in 1832, in which year he was elected M.P. for the county in the Reform interest, and continued to represent it until 1837. In 1854 he succeeded to the Woodrising estate on the death of his elder brother, and resigned the Oxfordshire property to his eldest son. He married, in 1820, the daughter of Mr. Charles Gordon, of Cluny, Aberdeenshire, widow of Sir John Lowther Johnstone, of Westerhall, Bart. He leaves two sons and a daughter. The daughter married, in 1844, the present Earl of Verulam; and the elder son, John, born 1821, married, in 1853, Lady Catherine de Burgh, daughter of the Marquis of Clanricarde. Sir Frederic Johnstone, Bart., is the major's grandson by marriage, and Sir William Bowyer Smijth, Bart., is his nephew—his sister's son. Major Weyland was very popular both in Norfolk and in Oxfordshire, and as a magistrate and deputy-lieutenant of both counties he was universally respected.

Captain Becher, the well-known sportsman, the father of steeplechase riders, and whose deeds in the saddle, some 30 years back, have immortalised him in the annals of that sport, died on the 11th inst. He was born in Norfolk, and was the son of a farmer in that county, who was very conspicuous as a horseman, and the last of the leather breeches school. Captain Becher commenced his career on a pony, and was remarkable both for the boldness of his riding and for the judgment he displayed in the hunting field. Being popular with the noblemen and gentlemen in his neighbourhood, he received the appointment of captain in a yeomanry regiment, which gave him a *status* among his contemporaries of much benefit throughout his career. He first became known as a steeplechase rider in 1830 at St. Albans, and continued the most successful rider of his day till 1838, when he retired, his frame requiring rest from the many severe accidents he encountered during his career, and which caused him to walk lame. In appearance Captain Becher was strong as a Hercules, and he could endure any amount of labour and fatigue. In knowledge of pace he was second to none, and in finding out the weak parts of a country he was very clever. Against his integrity nothing was ever alleged, but he failed to make hay while the sun shone, and retired into privacy upon a competency on his wife's side, which rendered the close of his checkered career calm and placid.

Mr. Morgan Thomas, Inspector General of Hospitals, died at 2, Queen's Terrace, Woolwich Common, on Saturday, in his 80th year. He entered the army as an assistant surgeon in 1804, and served in the campaign in Italy in 1805-6, including the occupation of Sicily, the descent on the coast of Calabria, the battle of Maida, and siege of Scylla Castle. He afterwards accompanied the expedition to Sweden, under Sir John Moore, and the subsequent expedition to Portugal and Spain up to the retreat to Corunna. In 1815 he was present at the capture of Guadaloupe. He became assistant inspector in 1836; deputy inspector general in 1841; and inspector general in 1850. He had received the silver war medal with two clasps for his services.

Mr. Thomas Young died on the 11th inst., at his residence in Eaton Square, at an advanced age. He was descended from highly respectable parents in a small country town in Scotland, and was for some time in the navy, but left that service, and afterwards accompanied the Duke of Devonshire as secretary in his embassy to the coronation of the Emperor Nicholas. He was subsequently for several years private secretary to Lord Melbourne, and by his tact and conciliatory manners rendered good services to his administration.

Pastor Theodore Fliedner, the founder of Protestant deaconess institutions, died at Kaiserswerth on the 4th inst. Englishmen have a peculiar interest in Kaiserswerth, not only as being the scene of Miss Nightingale's training for the Crimea, but also that, in some sort, the whole idea may be said to be of English origin. Early in 1823 Pastor Fliedner visited this country, when he became acquainted with Mrs. Fry. The interest which her benevolent labours excited induced him, on his return to Prussia, to establish a society in aid of discharged prisoners. He began the experiment in a small summer-house in his garden at Kaiserswerth, and from this small beginning arose the present institution, consisting of schools, hospital, lunatic asylum, Magdalene house, &c., served by upwards of 350 deaconesses and probationers, who spend their time in ministering to the poor and sick. Besides the central institution there are upwards of 30 independent institutions in various parts of the world, as Berlin, Smyrna, Jerusalem, Pittsburg, Paris, &c., numbering in the aggregate upwards of 2000 deaconesses. These institutions form a union, and, though independent, are in close communication—a circumstance of some importance in the event of an European war, as many deaconesses would be found in the military hospitals nursing the wounded, as indeed was the case both in the Crimean and Danish wars. The last conference of the union was to have been held on the 4th inst., at Kaiserswerth, under the presidency of Pastor Fliedner, but he died on the very day the deputies should have assembled, in the 64th year of his age, and the 28th of the foundation of his institution. He may be said to be a remarkable instance of a man contending against difficulties and prejudice living to see his system fully acknowledged.

Will.—The will of Mr Thos Forsyth Forrest, of Boldon House and Marsden Cottage, near South Shields, has been sworn under 60,000*l.* personalty—Rev John Le Marchant, of Belmont, Ryde, 30,000*l.*—Mr George Thomas Dowdery, wholesale druggist, of Paternoster Row, London, 20,000*l.*—Mr. Zadok Aaron Jeapel, pearl and diamond merchant, of Savile Row, and Gordon House, Putney, 14,000*l.*

BIRTHS.—On the 19th inst, at 5, Leinster Street, Dublin, the Countess of Longford, of twin sons—25th inst, at 28, Charles Street, Mayfair, the Viscountess Stormont, of a son—21st inst, at Calveley, the Lady Constance Grosvenor, of a daughter—26th inst, at the residence of the Earl of Clarendon, 1, Grosvenor Crescent, Belgrave Square, Lady Skelmersdale, of a son and heir—23d inst, at 42, Grosvenor Square, Lady Kinnaird, of a daughter—24th inst, at the St. George's Hotel, Lady Churchill, of a son and heir—25th inst, at 14, New Street, Spring Gardens, the Lady Constance Marsham, of a son and heir—26th inst, at Newburgh Park, Yorkshire, the Lady Julia Wombwell, of a daughter—24th inst, at 10, James Street, Buckingham Gate, Lady Russell, the wife of Colonel Sir William Russell, Bart., of a son, stillborn—22d inst, at The Grange, Ingleby, the Hon. Mrs Percy, of a son—24th inst, at 27, Albany Street, Edinburgh, the Hon. Mrs. D. S. Dickson, of a son—18th inst, at Dalfryn, Aberdare, the wife of the Right Hon. H. A. Bruce, M.P., of a son—24th inst, at the residence of Lord Chief Justice Cockburn, 44, Hertford Street, May Fair, Mrs. Charles Carnegie, of a son.

MARRIAGES.—On the 18th inst, at St. George's, Hanover Square, Sir Matthew Wentat Mackenzie, Bart., to the Lady Helen M'Donnell, only daughter of the late Earl of Antrim—18th inst, at Paris, in St. John's Episcopal Church, the Hon. Thomas John Hovell Thurlow, son of the late and brother of the present Lord Thurlow, to the Lady Elma Bruce, eldest daughter of the late Earl of Elgin and Kincardine—18th inst, by special licence, at Roscommon, the Hon. Charles St. George Crofton, second son of Lord and Lady Crofton, to Theresa Augusta, third daughter of Daniel Tighe, Esq., and the Hon. Mrs. Tighe, Rosanna, Wicklow—25th inst, at Christ Church, Hyde Park, Algernon Augustus Stewart, Esq., Royal Artillery, to Sophia Anne Eleanor, daughter of the late Hon. and Very Rev. Henry Lewis Hobart, Dean of Windsor and Wolverhampton, and the Hon. Charlotte Selina Hobart, of Langdown, Southampton—20th inst, at Lucan Church, Major A. L. Marsh, late of the 35th Regiment, son of the Rev. G. A. E. Marsh, rector of Bunger, Finishire, to Susan Agnes, daughter of the late General Sir H. S. Scott, K.C.B., of Woodville, Lucan—18th inst, at St. Ninian's Chapel, Castle Douglas, John Rainsford Story, Esq., jun., of Lexington Hall, Leicestershire, to Louisa Katharine, eldest daughter of Richard Joseph Congreve, and granddaughter of the late Richard Congreve, of Congreve and Barton,—18th inst, at St. Anne's, Dublin, C. J. Vandeleur, Esq., Captain 7th Dragoon Guards, second son of Colonel Vandeleur, M.P., of Kilrush House, co. Clare, to Charlotte Mary, youngest daughter of the late Rev. R. Berry, of Carrigrenane, Cork—18th ult, at Landour, Lieut. Thomas T. Cautley, Bengal Royal Engineers, third son of the late Admiral Cautley, to Emily Georgina, youngest daughter of Major General Campbell, Royal Artillery.

DEATHS.—On the 20th inst, at Dover House, Whitehall, Lucia Georgiana Mary, eldest twin daughter of Viscount and Viscountess Clifden, aged 2 years—3d inst, at Madeira, three weeks after her marriage, Adelaide, wife of Captain the Hon. Ernest Cochrane, R.N., and only daughter of his Excellency Major Blackall, Governor of Sierra Leone, aged 23—15th inst, at Witham, Elizabeth Margaret, eldest daughter of the late Hon. Francis Talbot, of Witham Place, Witham, Essex, aged 89—20th inst, at The Whetmore, Onibury, Shropshire, Jane Isabella Erskine, eldest daughter of the late Hon. James Erskine-Murray, of Aberdona, Fifeshire, of injuries received from burns—21th inst, at Edinburgh, Walter Newent, Esq., of Chester Street, Belgravia, London, Baron of the Austrian Empire, aged 64—14th inst, at Woodhead, Fyvie, Aberdeenshire, Mary Garioch, wife of the Very Rev. Dean Wilson, aged 57—18th inst, at 11, Upper Merrion Street, Dublin, Henrietta Margaret Eyre, daughter of the late Very Rev Dr Mansell, Dean of Leighlin, and relict of the Rev William Attelee, M.A., Prebendary of Cloghor, Rector of Fintona, and of Bradfield Hall, Norfolk, aged 78—20th inst, at Dover, Lieut.-General George Sandys, of H.M.'s Indian Army, colonel of the late 6th Madras Light Infantry—15th inst, at Hornsey Road, Major Cobb, late of the 48th Regt., aged 65—21st inst, at Aberdeen, Captain Furneaux, R.N., inspecting commander of the Coastguard, and second son of the late Major-General Furneaux, R.A.—17th ult, at St. George's, Bermuda, Lieut. W. E. Molesworth, Royal Artillery, youngest son of the late Capt. Molesworth, Royal Artillery, aged 22—20th inst, at Epsom, R. J. Scott, Esq., Bengal Civil Service, son of Lieut.-General Scott, R.A., aged 41—19th inst, at Beccles, Robert Fiske, Esq., late of Kessingland, Suffolk, third and last surviving son of the late Samuel Fiske, Esq., of Clopton Hall, Rattlesden, aged 81—21st inst, John J. Mayhew, Esq., of Over Hall, Colne Engaine, J.P. for the county of Essex, aged 64—24th inst, in Queen's Square, Bath, H. Godwin, Esq., J.P., aged 83—23d inst, at 11, Nelson Street, Dublin, B. F. Norwood, Esq., J.P., aged 81—15th inst, at Norton House, Stockton-on-Tees, Anne Louisa Sarah, wife of John Hogg, Esq., J.P., M.A., F.R.S., and barrister-at-law, of the Inner Temple—22d inst, at Windsor Villas, Plymouth, John Burnell, Esq., an alderman and magistrate of that town, aged 72—20th inst, after a few days' illness, Julianna Carolina, widow of T. W. Ratcliffe, Esq., of Gloucester Place, Hyde Park Gardens, and Castle Coakley, St. Croix, Danish West Indies, aged 70—19th inst, at the West Mall, Clifton, Dr Archibald Robertson, M.D., F.R.S., many years senior physician of the General Infirmary, Northampton, aged 74—21st inst, at Greenwich Hospital, Joseph Alles, Esq., aged 54—23d inst, at 19, Campden Grove, Kensington, Fanny Hutchins Callcott, daughter of the late Dr. Callcott, aged 58—23d inst, Georgina, wife of the Rev. Edward Auriol, rector of St. Dunstan's in the West—17th inst, at Montpellier Mansion, Cheltenham, the Rev. J. Simpson, formerly fellow and tutor of Sidney Sussex College, Cambridge—19th inst, at Great Yarmouth, the Rev. M. Waters, B.A., incumbent of St. George's Chapel, in that town, aged 57—14th inst, the Rev. Stephen Westbrook, M.A., late of Katharine College, Cambridge, incumbent of St. John's, Huddersfield—22d inst, at Heyford, Warren, Oxon, the Rev. W. Wethered, B.C.L., rector of that parish, aged 49.

Markets.

COVENT GARDEN, Oct. 29.

The market is still crowded with all kinds of hardy fruit in season, especially Pears, of which there is abundance of admirable specimens. Among the latter are Marie Louise, Duchesse d'Angoulême, Crassane, and others. Grapes are likewise sufficient for the demand; among them are Dutch Hamburghs at from 9d. to 1s. per lb. Of Pine Apples there is but a limited supply. Kent Filberts and Cobs fetch from 75s. to 85s. per 100 lbs. Walnuts are very plentiful, and Oranges begin to make their appearance. Lemons fetch from 5s. to

10s. per 100. Tomatos are large and fine. For Potatos there is a heavy sale. Flowers chiefly consist of Orchids, Heaths, Asters, Fuchsias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Apples, per sieve, 1s to 2s
Grapes, per lb., 1s to 5s	Oranges, per 100, 6s to 12s
Melons, each, 1s to 4s	Lemons, per 100, 5s to 10s
Peaches, per doz., 6s to 18s	Nuts, Barcelona, do., 16s
Plums, per ½ sieve, 2s to 4s	— New Brazil, do., 16s.
Pears, per doz., 1s 6d to 3s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 60s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s 6d
Carrots, per bunch, 4d to 9d	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
Cucumbers, each, 4d to 1s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

BRITISH WOOLS.—LONDON, Oct. 28.

A rather better feeling has manifested itself this week in consequence of a demand for the supply of current wants, in addition to the apprehension that monetary matters have seen their worst, and more business has been transacted.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	2	0	to	2	0½	Combing Skins	—	..	to	—	..
Half-bred ditto	2	1½	—	2	3	Flannel Wool	..	..	to	..	..
Down Ewes	1	10	—	1	11	Blanket ditto	..	..	—	..	..
Kent Fleeces	1	11	—	2	0	Leicest. Hoggs	2	1½	—	2	3½
						Ditto Wethers	2	0½	—	..	..

METROPOLITAN CATTLE MARKET.

MONDAY, Oct. 24.

The number of Beasts is considerably smaller than on Monday last, yet however it is large. Choice qualities are still scarce, and full prices are obtained for them. The supply of Sheep is also smaller, but fully equal to the demand. Trade is very dull, and it is only in a few instances that higher prices are realised. Calves are selling about the same as on Thursday. From Germany and Holland there are 4060 Beasts, 9280 Sheep, 335 Calves, and 110 Pigs; from Spain, 140 Beasts; from Ireland, 560; and 1840 from the Northern and Midland Counties.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c.	5	0	to	5	4	Best Long-wools	4	8	—	5	0
Best Short-horns	4	8	—	5	0	Do. Shorn	..	..	—	..	..
2d quality Beasts	3	0	—	3	8	Ewes & 2d quality	4	0	—	4	6
Best Downs and Half-breds	5	2	—	5	4	Do. Shorn	..	..	—	..	..
Do. Shorn	..	..	—	..	..	Lambs	..	..	—	..	..
						Calves	..	..	3	6	— 5 0
						Pigs	..	..	3	4	— 5 0

Beasts, 6820; Sheep and Lambs, 24,030; Calves, 346; Pigs, 570

THURSDAY, Oct. 27.

The number of Beasts is much smaller than last week, and consists principally of inferior quality. The few choice qualities on offer maintain Monday's quotations. The supply of Sheep is also small, but the demand is equally so. Best descriptions met with customers at fully late prices, but it is difficult to find purchasers for middling qualities. Calves are selling about the same as on Monday. Our foreign supply consists of 980 Beasts, 1830 Sheep, 399 Calves, and 100 Pigs.

	s	d		s	d		s	d		s	d
Best Scots, Herefords, &c.	5	0	to	5	4	Best Long-wools	4	8	—	5	0
Best Short-horns	4	8	—	5	0	Do. Shorn	..	..	—	..	..
2d quality Beasts	3	0	—	3	8	Ewes & 2d quality	4	0	—	4	6
Best Downs and Half-breds	5	2	—	5	4	Do. Shorn	..	..	—	..	..
Do. Shorn	..	..	—	..	..	Lambs	..	..	—	..	..
						Calves	..	..	3	6	— 5 0
						Pigs	..	..	3	4	— 5 0

Beasts, 1670; Sheep and Lambs, 4060; Calves, 450; Pigs, 180; Milch Cows, 110.

HOPS.—BOROUGH MARKET, FRIDAY, Oct. 28.

Messrs. Pattenden & Smith report a continued brisk demand for all descriptions of the new growth, fine samples of which are daily becoming more and more scarce, and prices gradually improving.

COAL MARKET.—Oct. 26.

Buddle's West Hartley, 19s. 6d.; Cowpen Hartley, 19s. 6d.; Hastings Hartley, 19s. 6d.; Wylam, 18s. 9d.; Eden Main, 20s. 3d.; Walls End Haswell, 21s. 6d.; Walls End Hartlepool, 21s. 6d.; Walls End Heugh Hall, 20s. 9d.—Ships at market, 9

POTATOS.—SOUTHWARK, Monday, Oct. 24.

During the last week the arrivals coastwise have been limited, but the supplies by railway have been large. The following are this day's quotations:—Yorkshire Flukes, per ton, 90s. to 100s.; do. Regents, 70s. to 80s.; Kent and Essex Regents, 75s. to 80s.; do. do. Rocks, 60s. to 70s.; Perth, Forfar, and Fife Regents, 70s. to 80s.; Belgian Whites, 45s. to 55s.

MARK LANE.—MONDAY, Oct. 24.

The supply of Wheat from Essex and Kent to this morning's market was small, and taken slowly at the prices of this day se'nnight; the attendance was limited, and the inquiry for foreign Wheat was quite of a retail character at about the same terms as last week. Barley, Beans, and Peas brought last week's quotations. The Oat trade was steady, and in some instances a trifling advance was obtained. For Flour there was but little demand.

PRICE PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk White	39	42	Red	36	41
— — fine selected runs ditto	41	44	Red	39	42
— — Talavera	46	53			
— Norfolk	—		Red	—	
— Foreign	35	50			
BARLEY, grind. & dist., 26s to 30s. Chev.	32	35	Malting	30	33
— Foreign grinding and distilling	22	27	Malting	28	31
OATS, Essex and Suffolk	20	22			
— Scotch and Lincolnshire—Potato	20	24	Feed	20	22
— Irish —Potato	19	22	Feed	—	
— Foreign Poland and Brew	20	23	Feed	18	21
RYE	31	33	Foreign	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan 33s to 35s. Tick	34	36	Harrow	24	36
— Pigeon 35s to 40s. Winds.	—		Longpod	—	
— Foreign Small	34	38	Egyptian	33	34
PEAS, White, Essex and Kent. Boilers	36	40	Suffolk	38	41
— Maple —s to —s Grey	—		Foreign	34	40
MAIZE White	—		Yellow	—	
FLOUR, best marks delivered per sack	35	40			
— 2d do ditto	28	34	Country	28	34
— Foreign per barrel	18	25	Per sack	32	36

FRIDAY, Oct. 28.

The weather from the 21st inst. to the afternoon of the 23d was very boisterous, with heavy storms of rain and south-westerly gales; from the 23d until the evening of the 26th it was finer, but dull with the exception of the 24th, which was very bright and warm; during the night of the 26th it rained easily, and some showers fell yesterday; this day is fine.

The trade during the week has continued to be very inactive for grain of all descriptions, and where any change has occurred in prices, either of Wheat or Spring Corn, it has generally been against the sellers. Notwithstanding the small supplies of English Wheat to this market, it has required a demand for Yorkshire to take them off at late rates The finest malting Barley continues to be sought after at full prices, and although the late values of Spring Corn have been realised with the exception of Maize, which is about 6d. to 1s. per qr. lower, the tendency of prices generally throughout the kingdom has been downwards. Flour has been less inquired after. Since Friday last 50 vessels have been reported off the coast. A fair business has been done in Wheat, which has improved 6d. per qr. in value. Maize found a fair sale at late rates. No change can be reported for other descriptions of grain. Paris, Oct. 27.—The Flour trade has remained very limited at unaltered rates. The present stock of Flour is estimated at 31,000 cwt. The six marks for delivery this month are quoted equal to 30s. 9d. per 280 lb. The finest qualities of Wheat are taken at late prices; in other descriptions, however, scarcely any business has been done, buyers pressing for a decline of 9d. per 480 lbs. The arrivals of Irish Oats this week have been good, but of all other grain and Flour small. To-day's market was thinly attended. The English Wheat fresh up was held for Monday's prices, and business in foreign was quite of a retail character at that day's quotations. The value of Barley, Beans, and Peas is unaltered. Oats support previous rates.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English	1580 qrs.	940 qrs.	— qrs.	1660 sks.
Irish	—	50	5220	— ,,
Foreign	1500 ,,	160	6410 ,,	100 ,, 590 brls

LIVERPOOL: Oct. 25.—Much more confidence has been exhibited in our market to-day, and, compared with the lowest point of Friday last, we quote a recovery of 1d. to 2d. per cental on Wheat, with a fair amount of business passing. Flour is more saleable, but cannot be called dearer. Indian Corn finds more buyers, and with less quantity offering we report it fully 3d. per qr. in sellers' favour. Oats and Oatmeal very dull. Beans, Peas, and Barley fair sale at late rates. Market closes with a good tone.

FRIDAY, Oct. 28.—There was an average attendance at market. Wheat very firm at Tuesday's rates Flour rather a better inquiry. Indian Corn steady; mixed, 27s 6d.; Galatz, 26s. 6d. Beans, unchanged; Oats and Oatmeal, moderate sale at late rates.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Sept. 17	42s 0d	32s 2d	20s 11d	35s 6d	41s 2d	36s 5d
— 24	40 11	31 5	20 11	34 7	40 7	37 1
Oct. 1	39 8	30 11	20 7	35 4	40 4	37 1
— 8	38 9	30 2	20 0	30 11	38 11	35 8
— 15	38 1	29 11	20 1	33 9	39 3	35 4
— 22	38 6	30 2	20 0	29 1	38 2	35 5
Agg. Aver.	39 8	30 9	20 5	33 2	39 9	36 2

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Sept. 17.	Sept. 24	Oct. 1.	Oct. 8.	Oct. 15.	Oct. 22.
42s 0d—						
40 11	..	..	..	..	..	..
39 8	..	..	..	..	..	..
38 9	..	..	..	..	..	..
38 6	..	..	..	..	..	..
38 1	..	..	..	..	..	..

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Oct. 27.

Prime Meadow Hay	80s	to 110s	Clover, old	100s	to 130s
Superior do.	—	—	New Clover	—	—
Inferior do.	—	—	Do. second cut	90	110
New do.	—	—	Straw	27	32
Rowen	—	—			

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, Oct. 27.

Sup. Meadow Hay	105s	to 112s	Inferior Clover	105s	to 114s
Inferior do.	94	98	New do.	—	—
New do.	—	—	Straw	30	34
Superior Clover	120	132			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Oct. 27.

Fine Meadow Hay	105s	to 108s	Prime 1st cut Clover	126s	to 132s
Inferior do.	95	100	Inferior do. do.	115	120
Prime New Hay	—	—	Prime 2d cut do.	120	128
Inferior	—	—	New Clover	—	—
Straw	26	30	Inferior do.	—	—

NEWGATE.—Oct. 28.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 15s. ,,
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

AGRICULTURAL PUPIL.—Mr. HENRY EVERSHED has a VACANCY for a PUPIL. Park Hall, Gosfield, Halsted, Essex.

YORKSHIRE AGRICULTURAL SOCIETY. — The Council of the Yorkshire Agricultural Society are prepared to receive applications for the office of SECRETARY, accompanied with Testimonials. Salary 105l per annum, and travelling expenses. —Applications to be sent on or before Nov. 10 to Chairman of Finance Committee, Messrs. SWANN & Co., Bankers, York.

MR. JAMES VEITCH is in immediate want of an energetic, clever Man as CHIEF SUPERINTENDENT and SALESMAN, at his Coombe Wood Nursery. This Nursery is at present in extent about 25 Acres (which may probably be increased), and is filled with a first-class stock of Hardy Ornamental Trees and Shrubs, American Plants, Roses, &c. There is a very nice Residence, and a Salary of 100l. per annum, with a prospective rise if the Stock improves and the extent of Land and Business increases. Every facility and encouragement will be given to an enterprising man.—Royal Exotic Nursery, King's Road, Chelsea.

N.B. The Coombe Wood Nursery is near Kingston-on-Thames, and about five miles from Chelsea.

WANTED, as DRAUGHTSMAN and GENERAL ASSISTANT to a Landscape Gardener in the North of England, a Person who Writes and Draws neatly and with facility, and has a good knowledge of Gardening and Ground work. The Salary will be in proportion to the degree of competency. No one but an experienced man, of gentlemanly habits, whose moral and professional character can be thoroughly attested, need apply.—Address, by letter only, stating age, antecedents, whether married or single, and the salary required, with copies of testimonials, to E. KEMP, Birkenhead Park, Cheshire.

WANTED, a NURSERY FOREMAN and PLANT GROWER.—Apply, stating age, wages required, &c., with references as to qualification and respectability, to STEPHEN BROWN, Sudbury, Suffolk.

Seed Trade.

WANTED, a thoroughly efficient BOOK-KEEPER, who has already held a similar situation in the Nursery and Seed Trade. Also an ASSISTANT, thoroughly acquainted with the Seed business, and who can execute Garden Seed orders accurately, neatly, and expeditiously. In both cases it is imperative that the hand-writing be good and distinct, and that first-class testimonials as to character and ability can be produced.—Apply, stating age, salary expected, and all particulars, to JAMES DICKSON & SONS, 102, Eastgate Street, Chester.

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"Journal of Horticulture" Office, 171, Fleet Street, London E.C.

To Nurserymen and Seedsmen.—Notice.

THE GARDENERS' YEAR-BOOK, ALMANACK, and DIRECTORY for 1865, by ROBERT HOGG, LL.D., F.L.S., will be published on December 1. Any alterations in the style and Address of Firms are requested to be sent forthwith to the Editor, so that the necessary Corrections may be made in the Directory portion.
"Journal of Horticulture" Office, 171, Fleet Street, London, E.C.

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News of the Week.

THE Emperor NAPOLEON returned to St. Cloud on Monday evening from his visit to the EMPEROR of RUSSIA at Nice. In passing through Marseilles on his return, the EMPEROR had an interview with the KING of the BELGIANS. The EMPEROR of RUSSIA left Nice soon after the departure of the Emperor NAPOLEON, and proceeded to Potsdam on a visit to the KING of PRUSSIA. The report which was current on Monday that the interview of the two EMPERORS would result in a joint invitation to the other Sovereigns of Europe to assemble in a Congress, is now said to be without foundation.

The treaty of peace between Denmark and Austria and Prussia was signed in Vienna on Sunday afternoon. It consists of 24 articles, but the chief stipulations are as follows:—The KING OF DENMARK cedes in favour of the KING OF PRUSSIA and the EMPEROR OF AUSTRIA all his rights over the Duchies of Lauenberg, Holstein, and Schleswig, the Jutland territory of Mogelhonden, and the Islands of Amrom, Föhr, Sylt, and Römsee. As an equivalent for the Jutland territory and the four islands, Denmark is allowed to retain a narrow strip of territory in Northern Schleswig, and the peninsula of Stenderup. The new frontiers are to be settled by a mixed commission of Prussian, Austrian, and Danish plenipotentiaries. The Duchies are to pay 29 millions of rix-thalers as their share of the Danish debt; and Denmark is to restore all the merchantmen she has captured during the war, and to indemnify the owners of those that have been sold. The treaty is to be ratified within three weeks, and Jutland to be evacuated within the three weeks following the ratification. The only question now remaining for settlement is the disposal of the Duchies. The Danish Rigsraad is summoned to meet to-day for the ratification of the treaty.

The Italian Chamber of Deputies reassembled on Thursday, when the Committee presented their report on the Bill for the transfer of the capital to Florence, and recommended the adoption of the Bill in the form submitted by the Government. After a short discussion the debate on the Convention was adjourned, and Monday next was fixed for the discussion of the Bill for the transfer of the capital.

A telegram from Suez announces that the Allies after three days fighting have destroyed the forts of Prince NAGATO, and forced the Straits of Simonosaki. The loss of life was small, and no officers were killed. The Japanese, who fought hard, have sued for peace, and the Straits are open. On the 5th ult. Calcutta was visited by a terrific hurricane, which inflicted great damage to the shipping in the river, and to property on shore. One of the telegrams states that a great part of the city and many of the villages bordering on the river were inundated, and 12,000 persons drowned.

From the United States we learn that General GRANT, since his return to the army, has made an attempt against the Confederate works near the Darby Town Road, and that his troops, amounting to two divisions, were repulsed with considerable loss. At daylight on the 19th ult. General LONGSTREET surprised and attacked the army of General SHERIDAN at Cedar Creek, and drove it back in total confusion, four miles to Middletown. In the afternoon, General SHERIDAN, who was absent at Winchester, returned, re-organised his army, confronted the Confederates with his whole line, and succeeded in driving them back beyond the lost ground, and re-capturing Woodstock. Darkness at length put a stop to the contest. There was great loss on both sides, that of the Federals is estimated at 5000 men. General PRICE, in Missouri, has captured Glasgow, and is receiving a vast number of recruits to his army, which is now assuming formidable proportions. The Southern journals state that General SHERMAN's position is such that the evacuation of Atlanta may daily be expected. President LINCOLN has made a speech disclaiming any purpose of interfering with the operation of the constitutional law, whatever may be the result of the forthcoming Presidential election. The Pennsylvania election is not yet decided, the soldiers' vote, as had been anticipated, showing a large Republican majority. In Maryland there was a majority of 1500 against the adoption of an anti-slavery constitution, but this result was neutralised by the soldiers' vote, and an anti-slavery constitution adopted. Judge HOLT has reported to the Secretary at War that an extensive conspiracy against the Union exists, with a design to form a North-Western Confederacy.

Accounts from the Brazils announce that the Confederate cruiser Florida has been captured by the Federal steamer Wachusetts while lying under the guns of the Brazilian forts in the harbour of Bahia.

Home News.

RETURN OF THE QUEEN TO WINDSOR.—The Queen, accompanied by the Princesses Helena, Louisa, and Beatrice, Prince Arthur, Prince Leopold, and Prince Albert Victor, arrived at Windsor Castle on Saturday morning from Balmoral. The Princess Louisa, who slept at Carlisle on the previous night, arrived at the Castle in the evening. On Sunday morning the Queen, Princess Helena, Princess Beatrice, Prince Arthur, and Prince Leopold, attended Divine Service in the private chapel. The Rev. C. Tarver officiated. On Monday morning the Queen walked and drove in the grounds. Prince Arthur went out shooting. In the afternoon the Queen held a Privy Council, at which Earl Granville, Earl De Grey, Earl Russell, and Mr. Cardwell were present. Lord Wodehouse was sworn as a Privy Councillor, and appointed Lord-Lieutenant of Ireland. Sir Andrew Buchanan was presented at an audience by Earl Russell, on his appointment as Ambassador at St. Petersburg. Senor Arranjoiz, the Mexican Minister, was presented by Earl Russell, and delivered his credentials. Earl Granville, Earl Russell, and Lord Wodehouse had audiences of her Majesty. Princess Louisa went out driving. On Tuesday morning the Queen walked and drove in the grounds. Princess Louisa went out driving. Prince Arthur left the Castle for Greenwich Park. Princess Helena rode in the Riding School. On Wednesday morning the Queen drove out, accompanied by Princess Helena. Princess Louisa went out driving. Prince Albert Victor took a carriage airing. Lady Buchanan had an interview with her Majesty.

ACCOUCHEMENT OF THE PRINCESS ALICE.—On Tuesday at noon the Princess Alice of Hesse was safely delivered of a daughter at Darmstadt. Her Royal Highness and the infant Princess are doing well.

PRINCE ALFRED on Friday morning went to Dover, and presented new colours to the 13th Light Infantry, and in the evening embarked for Ostend on his way to Bonn.

THE PRINCESS LOUISA, whose indisposition detained the Court at Balmoral somewhat longer than had been originally intended, broke her journey at Carlisle on Friday night, when the Queen travelled to Windsor. Her Royal Highness stayed at the County Hotel, accompanied by Dr. Jenner, Lady Jocelyn, and the Hon. Colonel de Ros, and having passed a tranquil night, resumed her journey south on Saturday morning at 11 o'clock, arriving at Windsor in the evening shortly before 8.

CABINET COUNCIL.—Summonses have been issued for a Cabinet Council on the 15th inst., at the official residence of the First Lord of the Treasury in Downing Street.

PARLIAMENTARY MOVEMENTS.—At the Council held by the Queen at Windsor on Tuesday last, Parliament was further prorogued from Friday, the 11th of November, to Friday, the 13th of January. The election for the Carmarthen boroughs took place on Monday, when Mr. William Morris was elected in the Liberal interest without opposition. There is a vacancy in West Suffolk, caused by the death of the Marquis of Bristol, and the consequent elevation of Earl Jermyn to the House of Lords. Lord Augustus Hervey, brother of the retiring member, and Sir Edward C. Kerrison, of Brome Hall, are mentioned as probable candidates for the vacant seat.

THE CHANNEL SQUADRON has received direction to separate, and the ships have proceeded to their respective stations to refit and lay up for the winter season. The Edgar (flagship), Warrior, Hector have returned to Portsmouth, and the Prince, Defence, Prince Consort, Research, and Enterprise have returned to Plymouth, where the two will be prepared for service in the Mediterranean.

Foreign.

FRANCE.—The Emperor left Paris on the 28th for Nice to visit the Emperor and Empress of Russia. His Majesty reached Nice on the following day in perfect health, and was loudly cheered by the people. In the evening his Majesty, accompanied by General Fleury, took a walk in the town, which was splendidly illuminated. At 10 o'clock on Friday morning the Emperor received the Council-General and the municipality, and was preparing to proceed to the Villa Pauline when the Emperor Alexander came in uniform, accompanied by the persons of his suite, to pay a visit to the Emperor of the French. The Emperor Alexander wished to make the first visit, in order to express his thanks for the kind reception given him in France. At half-past 10 the Emperor Napoleon visited in his turn the Emperor and Empress of Russia. He afterwards took a walk in the town, and was everywhere received with acclamations. At noon the two Sovereigns reviewed the troops of the garrison. The rain coming on prevented the proposed visit to Villafranca, where the Russian squadron and the French Imperial yacht L'Aigle were at anchor. The Emperor Napoleon dined with their Majesties of Russia, and in the evening there was a grand representation at the Italian Theatre. On Saturday morning the Emperor Napoleon left for Toulon, where he reviewed the experimental squadron, and witnessed a sham attack of the forts. His Majesty slept at Toulon at night. On Sunday morning the Emperor left for Marseilles, and, after visiting the principal buildings of the city, proceeded to Lyons, where he passed the night. On Monday morning his Majesty reviewed the garrison of that city, and then left for St. Cloud, where he arrived at 6 in the evening. A Cabinet Council was held on Wednesday at St. Cloud. It is stated that the Emperor will go to Compiègne on the 7th inst. The next series of visitors is expected to arrive there on the 15th. The *Constitutionnel* of Thursday publishes an article signed by M. Paulin Limayrac, pointing out the great enthusiasm with which the Emperor was received by the population on his journey through France to pay a visit of courtesy to the Emperor and Empress of Russia.

ALGERIA.—Several columns are to take the offensive about the 5th inst., to make simultaneous attacks upon the insurgents of the south from different sides, and thus to cut off their retreat. This plan is expected to produce decisive results. General Yusuf received the submission of the greater part of the civil tribes of Boghar on the 21st ult.

SPAIN.—General Espartero has written a letter declining the presidency of the Progressista Committee, but he approves the policy of abstaining from voting. It is said that as explanations have been refused by Peru, diplomatic relations between that country and Spain are entirely suspended. Admiral Pareja left Madrid on Wednesday for the Pacific. The *Correspondencia* states that he goes not to replace Admiral Pinzon, but with diplomatic powers to supersede Señor Salazar y Mazarredo. A Royal decree has been issued raising the pay of subalterns and soldiers of all arms 10 reals per month. The new Ministers have presented a long report to the Queen on the proper mode of educating the Infanta Prince of the Asturias. In this report they remind her Majesty of the grandeur and power of the Spanish Monarchy in the 16th century, the struggle it has since passed through, and the great wars waged with a view to the equilibrium of Europe; and predict that those wars, "how disastrous soever they may have been, are but the light prelude to those which may yet be dreaded and expected." They therefore recommend the appointment of seven officers from every branch of the land service, to give the future Sovereign an education suited to his rank, and fitting for putting himself at the head of his armies—because, they add, Spain was great so long as the Spanish armies were commanded by the King in person, and she must again become so. They then proceed to state that "religion is the soul of Monarchs;" that it "stifles evil tendencies and checks the passions;" and that "the religious education of Princes should be directed more philosophically and more profoundly, morally speaking, than that of private individuals, however high their social or official position." They conclude by saying that the careful and perfect education which her Majesty has hitherto given to her august son, and the exquisite tact which her Majesty has shown, naturally inspired her Ministers with the desire that her Majesty should reserve for herself the supreme direction of the Prince's education, which will be the "greatest and most precious guarantee of its perfection." In accordance with this report the Queen has issued a Royal decree directing that the professional education of the Prince is to be proceeded with in all its different branches according to the development of his abilities; that it

[illegible] shall propose to her Majesty such professors as they shall consider suitable to conduct his education, and reserving to herself the chief personal superintendence of his education and instruction. Another Royal decree appoints the following staff of Professors exclusively for the military education of his Royal Highness: Major-General Antonio Sanchez Osorio, Director-General of Studies; Emilio Bernaldez, Colonel of Infantry; Fernandez de Filguera, Lieutenant-Colonel of Engineers; Martin Moreno, of Lucena, Lieutenant-Colonel of the Staff; Enrique Sola, of Valls, Lieutenant-Colonel of Infantry; José Sanchez, of Castella, Major of Artillery; and Cæsar Tournelle, of Belgium, Captain of Cavalry, to be preceptors.

DENMARK.—**The Treaty of Peace was signed on the** 30th ult. It contains 21 articles, and a few supplementary ones. The following **is a summary of the details:—**

Art. 1 simply reproduces the corresponding article of the Preliminaries, in which the King of Denmark cedes all rights to the Duchies of Schleswig, Holstein, and Lauenburg in favour of the King of Prussia and the Emperor of Austria. As equivalent for the Jutland territory of Mogelton-moor, the island of Amrom, the Jutland portions of the islands of Fehr, Sylt, Romsee, &c., which Denmark has ceded to the Duchies, a portion of Northern Schleswig has been restored to Denmark. The peninsula of Stenderup, opposite Fahnen, is included in Danish Schleswig. In granting this compensation for the Jutland *enclaves*, which was earnestly desired by Denmark, owing to the strategic position of the ceded territory, the German Powers have wished to show that the separation of Schleswig from the Danish monarchy was not the first step towards the dismemberment of Denmark. On the other hand, the treaty contains no stipulation guaranteeing to the Danish population living in German Schleswig the use of their national language. Art. 6 stipulates for the appointment of a mixed commission of Prussian, Austrian and Danish Plenipotentiaries to settle the details of the new boundary line upon the spot. Art. 7 contains arrangements respecting private landed property which will be bisected by the new frontier. The following articles are devoted to financial matters. The portion of the Danish debt which falls upon the Duchies amounts to 29 million rigsdalers. The manner in which this sum is to be repaid to Denmark by the Duchies is stipulated by the treaty. Denmark further binds herself to return the captured German ships, with their cargoes, wherever the same have not been already sold. In such cases Denmark undertakes to compensate the owners.

The Rigsraad has been convoked by Royal letters patent for the 5th of November for the ratification of the Treaty, but the Prussian troops will not evacuate Jutland until the expiration of 21 days after the ratification, during which period Prussia will continue to retain all her former power in the province. The *Dagbladet* of Sunday says:—

"The Minister of the Interior has informed the representatives from Jutland to the Rigsdag that the complaints made by the Danish Government to the neutral Powers concerning the violation of the preliminaries of peace by Prussia have always been fruitless."

JUTLAND.—**A proclamation of General Falkenstein, dated the 2d inst., has been published. It concludes thus:—**

"An alleviation has taken place only on the supposition that the conclusion of peace will be ratified in Copenhagen within the fixed period. Should, however, contrary to expectation, the ratification be delayed, all ordinances will immediately be again put in force with greater severity."

FRANKFORT.—**In the sitting of the Federal Diet on Thursday, the memorial of the Grand Duke of Oldenburg, substantiating his claims to the Duchies, was** referred to the Committee for the affairs of Holstein. The Duke of Augustenburg has supplemented his memorial with a further document, explanatory of certain points in the former one, which was presented to the Diet on Thursday.

PRUSSIA.—The Czar, accompanied by the Grand Duke of Saxe-Weimar, arrived at Potsdam on Wednesday afternoon, and dined with the King at Sans-Souci. They attended the ballet at Berlin in the evening. The Czar had accepted an invitation to join a hunting party at Letzlingen yesterday and to-day. Prince Frederick Charles of Prussia will not be present at this party. The Emperor of Russia will leave this evening. Prior to his reception by the King for his farewell audience, his Majesty conferred upon the French Ambassador, Prince Talleyrand, the Order of the Black Eagle. The Prussian Ambassador at Paris, Count Goltz, has been decorated with the First Class Order of the Red Eagle. Count von Bismark arrived at Berlin on Saturday evening, and proceeded direct from the railway station to the residence of the Minister of War. A conference of Ministers took place on Sunday, after which Count von Bismark had an interview with Prince Gortschakoff. The Minister was then received by the King, and, with Prince Gortschakoff, dined with His Majesty in the evening. It is stated that Prince Gortschakoff, during his short stay in Berlin, held several consultations in reference to the pending political questions, the successful solution of which must interest both Russia and Prussia. A Paris letter in the *Oesterreichische Zeitung* of Sunday states that Count von Bismark only obtained at Paris the consent to the annexation of the Duchy of Lauenburg on condition of its being effected after coming to an understanding with Austria, and under the title of compensation for the expenses of the war. Count von Bismark, however, expressly declared that Prussia had no intention of annexing the Duchies of Schleswig and Holstein. The semi-official *Nord-Deutsche Zeitung* of Thursday says:—

"Prussia, Austria, and Holstein can scarcely be expected after the final conclusion of peace to pay for the maintenance of the troops of the other German States who may chance to occupy territory ceded to the great German Powers. In what manner Hanover and Saxony will settle the matter with the other minor States is not for us to discuss. It is asserted that Herr von Ahlefeld will bring forward some acceptable proposals for the annexation of the Duchies to Prussia."

AUSTRIA.—**The Treaty of Peace was signed at Vienna** on Sunday at 2 P.M. The ratification is to take place in three weeks, and the evacuation of Jutland will follow within three weeks from the time of the ratification. The official journals of Wednesday declare that since the resignation of Count Rechberg the ministerial crisis has come to an end, and that every statement of further changes in the Cabinet imminent is an invention. They also assert that the resignation of Count Rechberg has no connection with questions concerning the relations existing between Austria and Prussia. They say:—

"Count Mensdorff is convinced that to further the common interest of Germany a really intimate relation of the two Powers is necessary, in which view the Emperor of Austria fully coincides. The Austrian Government has, therefore, hastened to assure the Cabinet of Prussia that the change of Ministers in no way affects the relations of the two Powers. Prussia and Austria having to occupy the provinces ceded to them, will shortly enter into negotiations with the Federal Diet for the withdrawal of the Federal troops now quartered in the Duchies."

The following is said to be a correct analysis of a despatch addressed by the Cabinet of Vienna to that of the Tuileries on the 12th inst., in reference to the Convention of the 15th Sept. last:—

"Although the Austrian Cabinet feels great regret that the Roman Government was not consulted prior to the conclusion of the convention, it has yet received with satisfaction the assurance that France has had the preservation of the Papal authority exclusively in view. It is in the fact of the signature of the convention by France that Austria sees a guarantee for this authority. Owing to the manner in which the Government of King Victor Emmanuel has hitherto trodden under foot the most solemn treaties, the Cabinet of Vienna would not have considered this guarantee to exist simply from the fact of those obligations being contracted by the Italian Government; but France is sufficiently powerful to protect the Roman territory efficaciously, even when the last French soldier shall have left. In other respects full liberty of decision will naturally remain with the pope as well as with every Power placed outside the convention. Equally as the Pope has the incontestable right of invoking the protection of the Catholic Powers in case he should find himself threatened, the Catholic Powers upon their part would also in that case claim the absolute right of granting this protection to his Holiness as they might think fit and suitable in a political point of view. Under such circumstances Europe may assuredly hope that Austria and France would act together."

ITALY.—The Chamber of Deputies reassembled on Thursday, when the Franco-Italian Convention came on for discussion. Signor Boggio thought the diplomatic documents communicated to the Chamber were insufficient. He demanded that the Notes exchanged between Italy and other Powers since the first despatch of Chevalier Visconti should likewise be brought before the House. General Della Marmora, in reply, said that the Government had already considered that question, and did not think it necessary to communicate other documents than those already submitted. **Signor Petrucelli asked the Government whether the statements made in the note of Chevalier** Nigra really represented the true state of affairs. In reply, Signor Lanza stated that it was not becoming to throw doubt upon a solemn diplomatic act from simple assertions of newspapers. The note of Chevalier Nigra was true, and substantiated in every particular. It was also recognised as such by the two contracting parties. **Signor Monca brought up the** report of the committee upon the transfer of the capital to Florence. Signor Ferrari proposed that the Chamber should first discuss whether it was necessary to bring in the Bill for the approval of the Convention. After a short discussion the debate upon this previous question was adjourned, and Monday next fixed for the discussion of the Bill for the transfer of the capital. The report of the committee upon that Bill, in conclusion, recommended its adoption conformably to the draught submitted by the Government. The Minister of Public Works has left Turin for the purpose of being present at the inauguration of the new railway from Pracchia to Pistoja. He will then proceed to Florence to take the necessary steps for the early transfer of the capital to that city. **It is asserted that the Minister of Public Works** has entered into negotiations with the British Government for the purpose of establishing a new Indian postal service, by means of special trains on the Susa and Brindisi lines, as soon as the Brindisi lines shall have been finished. The Prefect of Turin has annulled the resolution of the Turin municipality whereby the conclusion of the inquiry into the September events was approved. Several journals have been seized for publishing a proclamation of a committee requesting assistance for Venetia. It is announced that the King, convinced of the necessity for the introduction of great economies in the public administration, and desirous of co operating in the difficult task of the Ministry, has renounced three millions and a half of the Civil List in favour of the State. A telegram from Rome states that all the documents relating to political trials preserved in the archives of the Tribunal of the Sacred College have been burnt by order of Monsignore Sagretti. Cardinal Antonelli has resolved upon not disbanding the Pontifical army, but intends transforming the troops of the line into gendarmes. The Roman Government and the French authorities have complied with the request of the Italian Government for the extradition of the brigand Carnevale.

RUSSIA.—The *Invalide Russe* of Wednesday, in reply to an article of *La France* referring to the interview of the Emperors of France and Russia, says:—

"Russia, preferring liberty of action, has likewise no desire for an alliance. The visit to Nice was simply an act of courtesy, and was devoid of any political bearing. The advice of *La France* to avoid approximation between the two countries was superfluous, as no attempt with that object is likely to originate with Russia."

GREECE.—Advices from Athens state that since the King's Message the National Assembly has discussed the Constitution with calm serenity, and that addresses have been received from all the Greek provinces, enthusiastically approving the Message. The Assembly terminated its discussion on the 28th, and the draught was read over and adopted on the following day. The Constitution was definitively passed by the Assembly on the 31st, and the King will speedily give his assent to it. The country is tranquil.

INDIA.—A terrific cyclone broke over Calcutta on the 5th October, causing enormous destruction of property. 110 ships were wrecked. The Nemesis lost her topmast and bowsprit, and was driven on shore, but was expected to be got off in time to leave with the next mails. The Bengal also got on shore, but was supposed to be uninjured, and it was uncertain when she could be got off. The Nubia was dismasted. The Sydney, Punjab, Madras, and Moulmein steamers belonging to the British India Steam Company, were driven ashore, and only two of them had been got off much injured. The Persia steamer, belonging to the same company, was lost in the same gale off the Sandheads, and only two of the crew saved. The total loss is estimated at 200,000,000 francs. A great portion of the city was inundated, and the villages bordering on the river were under water. One of the telegrams says that 12,000 persons lost their lives.

JAPAN.—The Admiralty have received a telegram stating that the Straits of Simono Saki are open, the passage having been forced by 16 vessels of war after three days' fighting. All the batteries have been destroyed, and sixty 24 and 36-pounder bronze guns have been embarked. The loss of life has been small, considering the result, and no officers have been killed. The Japanese have asked for peace.

WEST INDIES.—Considerable sickness prevailed at Trinidad, principally fever. Small-pox continued its ravages at Jamaica, and was rapidly extending over the island.

CANADA.—Quebec despatches state that the Conference had decided on confederation, which will be submitted to the existing Parliament without direct reference to the public.

UNITED STATES.—General Grant, after visiting Washington, has returned to Petersburg. Secretaries Stanton, Seward, and Fessenden have since gone to General Grant's head-quarters to urge upon him the political necessity of his achieving some decisive military success previous to the Presidential election, and to **authorise him to concentrate troops from any and every quarter in furtherance of that object. Two** divisions of Grant's army made a reconnaissance on the 13th to Darbey Town Road, where they found a new formidable line of Confederate works. They assaulted them, but having been repulsed they withdrew, pursued by the Confederates. The Federal loss was 400 men. General Lee reports that the assault was easily repulsed, with a slight Confederate loss. It is rumoured that General Grant has removed Generals Warren and Meade for protesting against his orders to assault the Confederate works in their front, which are of great strength. On the morning of the 19th ult., in a dense fog before daylight, Generals Longstreet and Early attacked and surprised General Sheridan's army, which was posted on the north bank of Cedar Creek, near Strasburg (which, during the absence of General Sheridan at Washington, was under the command of General Wright), and drove it in confusion, with the loss of many prisoners, 24 cannon, and much other *materiel*, to Middletown, four miles distant. A pause in the conflict occurred, apparently on the part of the Confederates, to prepare for a final charge, during **which General Sheridan arrived on the field.** He immediately resumed the command, reorganised his forces, repulsed the Confederate assault, countercharged with nearly his whole line, and after an obstinate contest forced back the Confederates beyond the lost ground and recaptured Strasburg. Darkness terminated the battle, and during the night the Confederates retired towards Woodstock. No official report of the killed and wounded upon either side has yet been published. Newspaper correspondents state the Federal loss at 5000. Sheridan claims to have captured 1600 prisoners and 50 guns. The Federal General Bidewell was among the killed, and Generals Wright, Grover, and Ricketts were wounded. The Confederate General Ramseur was wounded and captured, and has since died. Despatches from Georgia report that General Hood recaptured Resaca on the 12th and Dalton on the 14th, taking prisoners the entire Federal garrisons at both places and destroying large sections of the railway. On the 16th he occupied Lafayette, from which place, according to a report from General Schofield, at Chattanooga, he retired southward on the 17th. Southern despatches indicate that the object of this movement is to change his base of operations to North Alabama, where Hood will be joined by Beauregard, for the prosecution of the campaign against Huntsville, Alabama. The Southern journals continue to represent Sherman's position to be such that the evacuation of Atlanta may daily be expected. Forrest has invaded Western Kentucky. The Confederate General Price

in Missouri, after occupying Sedalia, Danville, and Lexington, has captured Glasgow, and is recruiting his army, which is now assuming formidable proportions. General Curtis has engaged Price's advance, and General Rosecrans was marching against him. A Federal force has also been concentrated at Kansas city to attack him. Twenty-five armed gueri'las arrived at St. Alban's, Vermont, robbed the bank, killed two citizens, and afterwards left in the direction of Canada. They have since been captured, and the money recovered. The Canadian authorities assisted in arresting them. The steamer Roanoke has been captured by the Confederate Lieutenant Brain, who took her to Bermuda, where he landed the passengers, and burned the Roanoake off the harbour. Afterwards Lieutenant Brain returned to Bermuda with his crew in boats, when he was arrested by the British authorities. In Pennsylvania, where there was a large Democratic majority on the home vote, the soldiers' vote showed a large majority for the Republicans; the result therefore is not yet decided. In Maryland the elections showed a majority of 1500 against the adoption of an anti-slavery constitution. This was defeated by 3000 soldiers' votes, and an anti-slavery constitution was adopted. The Governor of Maryland, however, decided to throw out the soldiers' votes as unconstitutional. The *New York World* publishes a statement showing that the public debt, including the appropriations to be made by the next Congress, amounts to 4,000,000,000 dols. The steamer Constance has been sunk off Charleston. The Democratic Presidential electors of Tennessee recently waited upon Mr. Lincoln and petitioned the modification of Governor Johnston's test oath and the guarantee of non-interference by the military in the November elections. They were summarily dismissed with the assurance that Mr. Lincoln "intended to manage his side of the Presidential contest in his own way, and that he expected the friends of George B. M'Clellan to manage their side in their way." President Lincoln has since made a speech, stating that some persons have construed some remarks of Mr. Seward into a threat that if he was defeated in the Presidential election he would do what he could to ruin the Government; while others interpreted the fact of the Chicago Convention not adjourning *sine die* as an intimation that if their nominee were selected he would at once seize the control of the Government. The people he said need not be uneasy on the latter point, since their will, constitutionally expressed, must be law for all. Several dry-goods and other merchants in Washington and Baltimore have been arrested and imprisoned in Washington, by order of Mr. Stanton. The charge against them is believed to be contraband trading. Judge Holt has issued a report to the Secretary of War asserting that an extensive conspiracy against the Union exists, and for the formation of a North-Western Confederacy throughout the West. The *Tribune* publishes a letter from Mr. John Bright, M.P., to Mr. Horace Greeley, recommending the re-election of Mr. Lincoln and the prosecution of the war. The *Richmond Enquirer* recommends a conscription, and also, that all negroes arming should be made free. The paper thinks the people will call upon the next Congress to provide for it by law. The Confederate Government of Louisiana also recommends arming the slaves.

BRAZILS.—The Confederate steam-ship Florida was captured on October 7 by the Federal steamer Wachusetts, in the harbour of Bahia. At the time of her capture the Florida was lying under the guns of the Brazilian forts and of the Brazilian fleet, and Captain Morris, her commander, was on shore. Captain Morris is now on board the West Indian packet on his way to London. Great excitement has been caused in Bahia by this alleged breach of faith on the part of the American Consul, Mr. Wilson. The Brazilian Ministry has been completed by the appointment of Senhor Dias Vieira as Minister for Foreign Affairs.

THE PACIFIC.—In the northern provinces of Chili large deposits of guano had been discovered, which will yield 25 per cent. of ammonia. Ex-President Moutt has proceeded to Peru as Plenipotentiary from Chili, to take his place in the proposed South American Federal Congress, and to represent Chili in aiding Peru, if necessary, to repel the Spaniards from her territory. The Spanish squadron lies peaceably at the Chincha Islands receiving abundant supplies. The only inhabitants left on the islands are Chinese labourers. Provisions are at war prices. The Peruvians are still actively engaged constructing their navy, and their monitors are being completed with vigour. The Government has decreed that no charters for the exportation of guano are to be entered into after the 1st of October till further notice, in order that the large stocks in Europe may be wrought off.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 89⅝ to ½ for Money, and 89⅝ to ¾ for Account; Reduced and New Three per Cents., 87⅝ to ½; India Stock, 214; Ditto Five per Cent. Stock, 106 to 105¾; Ditto Bonds, par to 3*s.* dis.; Five per Cent. Enfaced Rupee Paper, 100; Ditto Five and a Half per Cent., 108; Exchequer Bills, March, 5*s.* dis.—FOREIGN: Belgian Four and a Half per Cents., 98¼ ex div.; Dutch Two and a Half per Cents., 62½; Egyptian, 95¾ to 96; Ditto 100*l.* Bonds, 96; Greek, 23⅝; Italian (Maremmana Railway), 71; Mexican, 27¼; Ditto 1864, 25¾; Moorish, 92; New Granada, 11½; Peruvian, 1862, 83; Russian, 1862, 86¼ ex div.; Ditto 1864, 87; Sardinian, 84½; Spanish, 48; Ditto New Deferred, 42⅛; Ditto Passive, 31⅜ to 30½; Ditto Certificates, 13¾ to ⅞; Turkish, 1858, 100*l.* Bonds, 74; Ditto 1862, 72 to ½; Venezuela, 1862, 50½ ex div.

Gazette of the Week.

FRIDAY: *Oct.* 28.—BANKRUPTS.—W. ATKINSON, Westbourne Street, Pimlico, Tailor—W. AMBLER, Shrewsbury, Grocer—J. T. ASHWORTH, Buersil Head, Lancashire, Farm Labourer—J. ALIOT, Swinton, Yorkshire, Coal Miner—C. L. BAILEY, late Redbourn, Hertfordshire, Straw Hat Manufacturer—W. BENTHAM, Ferryhill, Durham, Common Brewer—J. BATEMAN, Halifax, Boot and Shoemaker—M. H. BESWICK, Handsworth, Staffordshire, Clerk—G. BUTLER, late of Cheltenham, Butcher—J. BRICKNELL, Birmingham Ivory Turner—T. BRASSINGTON, late of Croydon—A. BABINGTON, late of Lower Doctor Street, Walworth Engraver—R. R. BROWN, Marnhull, Dorsetshire, Cattle Dealer—S. BEXTON, Long Eaton, Derbyshire, Lacemaker—S. R. BRIDGES, Cotton Street, Mile End, Wood and Stone Pavior—R. BUSBY, Salmon Lane, Limehouse Dairyman—J. G. BARTON, Old Broad Street, City, Metal Broker—J. CLUTTERBUCK, Pucks Hole, Gloucestershire, Farmer—D. COHEN, Birmingham, Tailor—J. COATES, Loughborough, Leicestershire, Union Clerk—H. I. CAEN, Manchester, Feather Manufacturer—R. C. COOMBS, Bristol, Licensed Victualler—J. CORBETT, late of Birmingham, Builder—R. COLEMAN, Pont Street Belgrave Square, Greengrocer—R. [illegible]CK, Sunderland, Teacher of Navigation—C. DELL, Mitcham Common, Surrey, Journeyman Silk Printer—H. DAY, Ipswich, Suffolk, Painter—S. DUTFIELD, Mathon, Worcestershire, Butcher—J. DUCKWORTH and C. PARKER, Blackburn, Lancashire, Manufacturers—T. EVANS, late of Bermondsey Street, Southwark, Greengrocer—J. EVANS, Blackheath, Staffordshire, Charter Master—J. EVANS, Ettingshall, Staffordshire, Licensed Victualler—B. FARMER, Norwich, Norfolk, Schoolmaster—W. J. B. FRENCH, Wilton, Wiltshire, Surgeon—G. FISHER, late of Stafford Place, Pimlico, Coal Merchant—P. S. FLETCHER Aston, Warwickshire, Journeyman Coach Fitter—J. H. FULLER, Bishop Monkton, Yorkshire, Farmer—J. GLASSON, Newark, upon-Trent, Nottinghamshire, Engineer—G. GOSDEN, Freshwater, Isle of Wight, Builder—W. GUNNING (commonly known as WILLIE CAPE), Moor Street, Sloane Square, Chelsea—H. GANS, Leman Street, Goodman's Field's, Boot and Shoe Maker—C. A. M GRANT, Westbourne Park Road—G. GRADWELL, Liverpool, Assistant to a Butcher—E. GLADWISH, Ore, Sussex, Carpenter—W. GIBES, late of Upper Stamford St., Blackfriars, Machinist—P. HARRIGAN, Cumberland Place, Paddington, Tailor—J. HENDERSON, Vauxhall Walk, Lambeth, Oil and Colour Maker—G. HORTON, Newtown, Staffordshire, Innkeeper—W. HOPKINS, jun., Birmingham, Picture-frame Maker—C. F. HUGHES, late of Westbromwich, Staffordshire, Coal Merchant—T. HEWSON, Hewlett Road, Old Ford, Clerk—C. J. HALLIDAY, late of Cleveland Sq., Hyde Park—E. HADRILL, late of Brabant Court, City, Merchant—J. J. HATCH, late of Judd Street, Euston Road, Boot Dealer—H. C. HOPKINS, late of Castle Street, Leicester Square, Engineer—J. HEATH, jun., Heanor, Derbyshire, Lacemaker—S. HALL, late of Caversham, Oxfordshire, Publican—J. H. HYDE, Frimley, Surrey, Farmer—J. HAMILTON, Weduesfield, Staffordshire, Ground Bailiff—J. HUGHES, Liverpool, Butcher—G. HEAD, Brighton, Upholsterer—C. IVENS, Coventry, Commission Agent—W. JENNINGS, Arthur Street, New Cross Road, Sub-contractor for Ground Work—EDWIN FOX JACKSON, Sheffield, Fancy Goods Dealer—JOHN JONES, Glyncorrwg, Glamorganshire, Grocer—N. KELLY, late of White Street, Southwark, Merchant—H. KELLER, Swansea, Glamorganshire, Publican and Interpreter—S. F. M. LINDHARD, Hartlepool, Durham, Merchant—T. LLOYD, Swansea, Glamorganshire Baker—W. F. MILLIS, Offord Road, Barnsbury, Dealer in Bottled Beer—G. MOSS, Cannon Street, City—J. MARSHALL, Oswaldtwistle, Lancashire, Cotton Manufacturer—S. MARRIOTT, late of Stroud, Gloucestershire, Drapers' Assistant—J. H. NEWMAN, Albert Terrace, Notting Hill, Watch and Clock Manufacturer—F. PARKS, Charles Street, Stepney, Butcher—T. B. PLEYDELL, Bradford, Devonshire, Major in the Royal Marines—J. PAYNE, late of Hyde Park Street, Bayswater, Butler—WILLIAM PELSON, late of Hailey, Oxfordshire, General Dealer—Rev. SPENCER PERCIVAL POWYS, Leicester, Clerk—JOHN MOSES RICHARDSON, late of Crowley, Sussex, Timber Dealer—RICHARD WILLIAM REEDER, Cleveland St., Cambridge Road, Bethnal Green, Wheelwright—W. ROSS, Harrogate, Yorkshire, Greengrocer—W. ROBERTS, Lower Sloane Street, Chelsea, Oil and Colourman—R. RICHARDSON, Chester, Brazier—E ROBATHAN, Cwmburla, Glamorganshire, Sorter at Tin Works—W. SIMPSON, Manchester, Beer Retailer—J. W. SALTER, Great Torrington, Devonshire, Professor of Music—Z. SILVERSTON, Euston Road, Manufacturing Jeweller—N. SCILLOE, James Street, Oxford Street, Fishmonger—A. S. SAALFELD, Leeds, Cloth Merchant—W. SMITH, Winlaton, Durham, Painter—G. S. TOVEY, Stanford Road, Fulham, late Grocer—L. THOMPSON, Barnsbury Road, Islington—J. C. TIGHE, late of Richmond Terrace, Clapham, Commission Agent—T. THOMPSON, of Amber Mills, Derbyshire, Mustard Manufacturer—A. J. VILLIERS, late of Hanover Street, Pimlico, Lieutenant—S. VOWLES, Hotwells, Bristol, Painter—F. W. WHITON, Birmingham, Chemist—T. J. WILLIAMS Liverpool, Assistant to a Hosier—G. WINDROW, Manchester, Licensed Victualler—H. K. WINFIELD, Bury St. Edmund's, Pig Dealer—J. WHITAKER, Bacup, Lancashire, Cotton Manufacturer.

SCOTCH SEQUESTRATIONS.—W. BOWIE, Dumbarton, Spirit Merchant—W. HALLIDAY, Edinburgh, Manufacturer of Paperhangings—J. MORISON, Stornoway, Ross shire, Merchant—J. M'GREGOR, Glasgow, Tea Merchant—R. WALLACE, Fenwick, Ayrshire, Farmer—A. MUIRHEAD, Glasgow, Contractor.

TUESDAY: *Nov.* 1.—BANKRUPTS.—F. AUISEBROOK and W. RILEY, Nottingham, Smallware Dealers—H. ALTY, Farrington, near Preston, Lancashire, Farmer—C. AYERS, Gloucester, Haulier—E. BEHRENDS, Cleveland Road, Islington, Merchant—A. BURGESS, Winnington Hill, Cheshire, Salt Manufacturer—T. BOULTON, Longbridge, Staffordshire, Potter—R. BYRNE, Liverpool, Stock and Share Broker—T. BLACKSHAW, Preston, Lancashire, Grocer—J. BROOKES, Rochdale, Lancashire, Clogger—H. L. BEVAN, Birkenhead, Cheshire, late Merchant's Clerk—J. COOPER, Ludworth, Derbyshire, Boot and Shoe Maker—J CURRY, Thirsk, Yorkshire, Horse Dealer—W. COTSON and L. P. MILES, Perry Vale, Forest Hill, Brewers—G. CARTER, Newport, Monmouthshire, Licensed Victualler—W. COUNSELL, Charles Street, Manchester Square, Commercial Clerk—E. S. COWAP, Chester, Manager of an Oil Works—J. CHAPPELL, Horbury, Yorkshire, Scribbling Miller—W. CLARKE, Carmarthen, Grocer—J. DUNSTAN, Truro, Cornwall, Merchant—W. DURLING, Devonshire Street, Mile End, Butcher—F. DURR, Union Street, Whitechapel, Baker—T. DILLOW, Moulton, Northamptonshire, Labourer—T. W. DRAGE, Bozeat, Northamptonshire, Grocer—J. DEAN, Burnley, Lancashire, Tailor and Draper—T. DAVOCK, Manchester, Army Contractor—W. ELSWORTH, Bramley, Yorkshire, late Mill Owner—W. FRENCH, Robinson Terrace, Lower Road, Deptford, Licensed Victualler—J. GRIFFITHS, sen., Shrewsbury, Cabinet Maker—JOSEPH GUEST, Bilston, Staffordshire, Licensed Victualler—TRACY GOODE, Weobly, Herefordshire, Tailor—ISAAC GOVIER, Taunton, Somersetshire, Innkeeper—W. GRIFFIN, Church Street, Shoreditch, Lamp and Paraffin Oil Dealer—R. GILL, Leeds, Yorkshire, Innkeeper—T. HARRIS, Englefield Road, Southgate Road, Foreman in Livery Stables—C. R. HICKS, Guildford, Surrey, Draper—W. HALLAM, Stoke-upon-Trent, Staffordshire, Journeyman Potter—J JACOB, Northampton, Carpenter—W. JONES, Woolton, Lancashire, Builder—J. JOHN, Cardiff, Glamorganshire, late Beerhouse Keeper—J. B. KNIGHT, Stockport, Cheshire, Greengrocer—W. LAWRENCE, Winterslow Place, North Brixton, Coal Merchant—J. L. LEMON, Birkenhead, Cheshire. Theatrical Manager—E. J. S. LEE, Grafton Street, Tottenham Court Road, Editor—R. MANSER Crumbies, Eastbourne, Sussex, Pork Butcher—O. MURRELL, Bethnal Green Road, Wood Turner—J M'DOWELL, Chatham, Kent, Marine Store Dealer—W. MILLARD, Brunswick Street, Barnsbury Road, late Beershop Keeper—W. MUMFORD and H. MUMFORD, Kingston on-Thames, Boot and Shoe Makers—H. NEWTON, Sheffield, Yorkshire, Chemist—H. W. NEATHAM, Newbury, Berkshire, Draper's Assistant—J. R. NORTH, Hawthorne Grove, Penge, Commercial Traveller—J. NEW, Southall, Middlesex, Grocer—W. NELSON (not W. PELSON, as previously advertised), late of Hailey, Oxfordshire, General Dealer—T N. OLIVER, Old Fish Street, Old Change, Cocoa-nut Matting Manufacturer—G. OWEN, St. David's, Pembrokeshire, Grocer—F. ORCHARD, jun., Forest Gate, Essex, Accountant—R. PLUMMER, Leeds, Stuff Manufacturer—J. POWELL, Askham Bryan, near York, Tailor—W. D. PARKIN, Malvern Terrace, Kilburn, Builder—EDWARD PENNOCK, Salford, near Manchester, Licensed Hawker—W. T. PAYN, Lymington, Hampshire, Outfitter—C. P. ROSSON, Salford, Lancashire, Chemist—J. K. RIGBY, Bury, Lancashire, Tinplate Worker—T. RICKETS, Chandos Street, Covent Garden, Gas Apparatus Manufacturer—J. RAWLINGS, Wootton Bassett, Wiltshire, Cordwainer—L. ROBERTS, Sheffield, Yorkshire, Table Blade Maker—H. RUSSELL, Aldermanbury, City, Woollen Merchant—B. SYKES, Lancaster, Watchmaker—J. SWIFT, Drummond Street, Euston Road, Professor of Singing—J. SIMPSON, Newcastle-upon-Tyne, Builder—F. SMITH, Warrington, Lancashire, Fowl Dealer—C. SHERLOCK, Irlam, near Warrington, Lancashire, Blacksmith—E. SMITH, Wrightington, near Wigan, Lancashire, Provision Shopkeeper—T. G. SMALES (otherwise called T MARWOOD), Stockton-on Tees, Durham, Butcher—T. STOKES, Liverpool, Porter—W. J. TOOLE, Leeds, Hair Dresser—W. TINSLEY, Teignmouth, Devonshire, Commercial Traveller—W. TIMMS, Grafton Road, Kentish Town, Carman—W. TAYLOR, Prince Patrick Place, Milwall, late Grocer—J. TYLCOAT, White Hart Street, Drury Lane, Furniture Dealer—J. TROESCHEL, Providence Place, Vauxhall Bridge Road, Baker—J. WOOD, Huddersfield, Fishmonger—T. L WILLIAMS, Welchpool, Montgomeryshire, Coal Merchant—J. WATSON, Burnley, Lancashire, Cotton Manufacturer—W. C. H. WILLIAMS, Croydon, Surrey, Veterinary Surgeon—T. WILLIAMS, Manchester, Boiler Maker.

SCOTCH SEQUESTRATIONS.—J. ANDERSON, Inverness, Wood Merchant—H. ANDERSON, Inverness, Manager for J. ANDERSON, Wood Merchant—J. GIBSON, Glasgow, Contractor—A. M'ALPINE, Linlithgow, Joiner.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,221,130	Government Debt	
		Other Securities	
		Gold Coin and Bullion	
		Silver Bullion	
	£27,221,130		

BANKING DEPARTMENT

Proprietors' Capital	£14,553,000	Government Securities (including Weight Annuity	
Rest	3,271,791	Other Securities	
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	3,777,941	Notes	
Other Deposits	13,849,428	Gold and Silver Coin	
Seven days and other bills	552,480		
	£36,003,640		

Nov. 3, 1864. W. MILLER, Chief Cashier.

Metropolis and its Vicinity.

THE BOARD OF TRADE.—The report of the Committee appointed to inquire into the arrangement between the Foreign Office and the Board of Trade in reference to trade with foreign nations has been issued. The present arrangement between the two offices contemplates that the Foreign Secretary should refer all matters connected with trade that come before him to the Board of Trade—for instance, they relate to questions on which he has to advise publication if they relate to information which it desirable that the Government should make public. With the exception of some correspondence with consuls under the Mercantile Marine Act, there is, as a rule, no direct communication between the Board of Trade and the members of the diplomatic or consular services. With regard to the representations of the commercial community to Government on foreign trade, there appears to be no rule or practice defining to which department they should be made; but if they are made to the Board of Trade they are forwarded thence to the Foreign Office, and if to the Foreign Office the opinion of the Board of Trade is generally taken respecting them. In the Board of Trade there are officers whose peculiar duty it is to attend to foreign commerce, but in the Foreign Office there are no such officers, that department apportioning almost all its business among clerks geographically. These arrangements have given rise to much dissatisfaction, the committee have carefully considered the suggestions made to them, which have tended in two distinct or rather opposite directions—on the one hand, that the Foreign Office should be self-sufficing for commercial as well as for other matters, and should no longer refer them to the Board of Trade; and, on the other hand, that the present relations between the two offices should continue, but should be improved. In relation to the former they think there is much force in the arguments that would not serve the interests of our foreign commerce to leave them without the support and protection of a special department in the Government. Upon the latter position, then, that the Foreign Office continue to consult the Board of Trade, the committee had brought before them two suggestions:—1, that there should be attached to the Foreign Office itself an officer or officers who should take special charge of the correspondence of the Board of Trade; and 2, that the Board of Trade be put in direct communication with the members of the diplomatic and consular services, and that such communication be carried on through the Foreign Office, with such provisions as shall prevent collision between the two offices. The committee adopt both suggestions, and recommend that the Board of Trade be placed more nearly upon an equality with the Foreign Office than it is at present, in order that its opinion, when asked, may have more weight, and that its chief be always a member of the Cabinet. They think that if the Board of Trade were enabled to carry on communication through the Foreign Office, that Department would be more quickly informed of such facts as it is its duty to publish, would be able more speedily to serve the interests of individual merchants, and in transactions in which its opinion is asked by the Foreign Office to obtain that full information without which its opinion is of little value. In the course of their report the committee state it to be their opinion that, in order to secure harmonious action of the Government upon commercial matters, if the Board of Trade be consulted by one office, it should be by the other—as, for instance, by the India and Colonial Office as much as by the Foreign Office, in relation to the duties levied upon British goods.

METROPOLITAN HOUSELESS POOR.—The new directions have been sent by the Poor-law Board to the Guardians of the Metropolitan Unions and parishes with regard to the Act providing for the Metropolitan Houseless Poor, passed at the close of the last session. The Act has been received with great favour by the union and parochial authorities; but they applied to the Poor-law Board to issue a circular explaining the provisions of the Act:—

"Poor-law Board, Whitehall, S.W. (&c.

"Sir,—On the 4th of August last the Poor-law Board addressed to the guardians of the several unions and parishes within the metropolis a circular letter, directing attention to the provisions of the Metropolitan Houseless Poor Act then passed during the last session, and requesting to be informed of the nature and extent of the arrangements which the guardians proposed to make with the view of securing the objects of the Legislature in passing that measure. The Board have recently received several communications requesting information on various points connected with the Act, &c.

it appears desirable, therefore, that they should state, for the guidance of the guardians generally, their views upon the [illegible] matters which have been brought under their notice. In the first place, it is important to observe that the poor persons included within the operation of the Act are destitute wayfarers, wanderers, and foundlings, being the class of paupers provided for by the 11th and 12th Victoria, cap. 110, sec. 4, and thereby rendered chargeable upon the common fund of unions. As the present statute only refers to paupers relieved during the night, the Board think that there will not be much difficulty in deciding what cases come within the provisions. The objects to be relieved will be houseless persons, but the Board think it right to observe that they were advised by counsel on a question arising under the former statute, that no person could be considered as a destitute wayfarer or wanderer within its meaning if he applied for relief in a parish where he was legally settled. The Act does not extend to the resident poor, who ought always to be received into the workhouse in the usual manner, and should never, except under some peculiar circumstances, be admitted into the ordinary vagrant wards. In the next place, it is proper to remark that the relief for which the guardians will be entitled to be reimbursed is such only as shall have been administered between the hours of 8 o'clock at night and 8 o'clock in the morning. But it is a condition before obtaining reimbursement under the Act that the Poor law Board shall have certified that proper wards or other places for the reception of the classes in question have been provided by the guardians. Without undertaking to prescribe with full detail what provisions should be made, the Board desire to offer the following observations on the subject:—With regard to the nature of the accommodation, they consider it necessary that there should be at least two separate wards, one for males and another for females and young children. There should be a yard containing a bath room and water closet attached to each department, and in the yard of the male department a shed should be provided for the vagrants to work in. The most convenient form for a vagrant ward is, perhaps, a parallelogram, and each ward, besides being of sufficient capacity with respect to width and height to accommodate the number of persons required to sleep in it, should be fitted up with a sleeping platform or barrack bed, of adequate depth along each side of it, with a convenient gangway down the middle. The platform should be divided by means of boards, and the space allotted to each person should be at least 2 ft. 3 in. wide. Above the head of each platform there may be a shelf the whole length of the room, and divided into corresponding spaces for the deposit of clothes. The ventilation should be effected by means of openings at proper intervals, and placed as near the ceiling as practicable on each side of the room. Means should be provided for heating the wards in severe weather, either by hot-water pipes, gas, or other stoves. Hot-water pipes will be found preferable to open fire places or stoves. The bedding, which should be sufficient for warmth, may consist of clean straw or cocoa fibre, in a loose tick, with a rug, or rugs, for each person, but for the women and children some additional covering should be provided. Where the admissions are likely to be numerous, the wards for each sex should be placed under a superintendent, a male for the men and a female for the women, and the Board consider that a reasonable allowance for the necessary remuneration of such superintendents would properly fall within the terms of section 4 of the Act. Without more precise information than they now possess, the Board are unable to lay down any exact rule as to the extent of accommodation which should be provided in each union or parish, but they may state generally that the wards should be large enough to receive such a number as, having regard to the peculiar circumstances of the locality, and the maximum number of applications on ordinary occasions, would be likely to require relief. Any excess over the ordinary number of applicants occasioned by unforeseen circumstances should arise, so that the accommodation provided by the guardians should be inadequate, and the guardians should have to provide temporary accommodation for such cases by making arrangements for their reception in lodging houses, the Board would not sanction any such lodging-house as within the provisions of the Act, unless it were registered, and thus brought under the inspection of the police. The food supplied to the inmates of the vagrant wards should be sufficient for their actual necessities, but not such as, either in quantity or quality, would tend to increase the number of applicants, or encourage imposture. The Board consider it expedient that a task of work should be required from each able-bodied person relieved, in return for his food and lodging, in conformity with the 5th and 6th Victoria, cap. 57, sec. 6, and where the guardians have not prescribed a task of work, the Board recommend that they should at once do so, and forward their resolution to the Board for approval. The Board are enabled to state as the result of their experience that in those unions where a task of work has been systematically enacted, in pursuance of that statute, vagrancy has sensibly diminished. In many unions, however, a practice has crept in of dispensing with the task of work when the vagrant prefers to leave the workhouse without receiving an allowance of food in the morning. The Board consider this practice very objectionable, and calculated, as the result shows, to encourage vagrancy. A task of work suited to the age, strength, and capacity of the pauper should always be exacted, whether food be required in the morning or not, and a notice should be hung up in some conspicuous place near the entrance to the wards, that any person refusing to perform such task will be liable to be imprisoned under the Act lastly referred to, and kept to hard labour for one calendar month as an idle and disorderly person. The Board likewise consider it very advisable that the persons of vagrants should be cleansed on admission, according to the regulations of the workhouse. Care must, of course, be taken that no person who appears to be in such a state of health as to be likely to suffer from being placed in a bath should be subjected to that treatment. The Board think it expedient that a separate admission and discharge book should be kept by the master of the workhouse, or under his supervision, for this class of paupers, in which book the following particulars should be recorded—viz., the date and hour of admission and discharge; the name, presumed age, and occupation of each pauper; where the pauper slept on the preceding night, and where he or she is going to, and the quantity and cost of the food or other relief supplied to each person within the hours prescribed by the Act. At the same time it must be recollected that no relief in money given to any such person can be reimbursed under any circumstances. The Board having thus stated generally their views with reference to the provision which should be made for the relief of the classes in question, trust that the guardians will experience no difficulty in speedily making such arrangements for that purpose as will enable the Board to certify that proper wards or places of reception under suitable regulations have been provided in conformity with the intention of the legislature.—I am, your obedient servant,

"C. Gilpin, Secretary."

The Visit of M. Berryer.—The Benchers of the Middle Temple Have granted the use of their splendid old Hall, in which they lately entertained the Prince of Wales, for the dinner to be given by the English Bar to M. Berryer on Tuesday next.

General Todleben visited Woolwich Dockyard on Monday morning, and was received by Commodore Superintendent Dunlop, C.B. He then embarked in the Admiralty steam-vessel Vivid, and proceeded down the river to Long Reach to see the works now in progress for the southern sewage outfall, and the scene of the recent gunpowder explosion at Erith. On Tuesday he visited Chatham, accompanied by General Sir John Burgoyne, Inspector-General of Royal Engineers; Captain the Hon. G. Wrottesley, General Sir J. M. F. Smith, M.P.; Mr. Reed, Chief Constructor of the Navy; and an Attaché from the Russian Embassy in London. He was received on his arrival at Chatham by Major-General Sir Robert Walpole, commanding the garrison, accompanied by Colonel Collinson, R.E., Captain Moorsom, and other staff-officers. At the dockyard he was received by Captain Stewart, the captain superintendent, who conducted him round the yard, where he examined the Lord Warden and the iron ship Bellerophon with marked attention. He then proceeded to the Royal Engineer establishment at Brompton, and after taking luncheon in the messroom, inspected the companies of Royal Engineers, the hall of study for the officers, the schools, the museum, and the depot field-works. He then returned to town by the London, Chatham, and Dover Railway, expressing, before his departure, the pleasure which his visit to Chatham had afforded him. On Wednesday he left town for Portsmouth, on a visit to General Lord W. Paulet, the commander-in-chief of that garrison.

Experiments at Shoeburyness.—Some experiments were made a few days since at Shoeburyness to test the penetrating powers of Mr. Whitworth's 70-pounder gun. The object fired at was the old Warrior target at a distance of 400 yards. The shell fired was of an entirely new pattern, but it failed to penetrate further than to a depth flush with the armour-plate, where it lodged without doing further harm.

The Late Explosion at Erith.—The adjourned inquest on the sufferers by the Erith powder magazine explosion was resumed on Tuesday, but no fresh facts were elicited, the principal witnesses being persons employed about the magazine or in the factories, whose evidence related exclusively to the way in which powder was brought up in barges and taken into the magazines.

The Convict Müller.—On Monday morning the Sheriffs of London, accompanied by the Under-Sheriffs, the Ordinary of Newgate, and Governor, visited Müller in his cell, and announced to him that Monday, the 14th of November, had been fixed for his execution. The convict received the intimation with calmness. The Sheriffs exhorted him to make the best use of the interval which remained to him to live, and he appeared to understand the full force of the entreaty. During the interview he acknowledged that he had had a fair trial, but was understood to say, in effect, that the evidence in support of an *alibi* had done him more harm than good. He spoke in broken English and in a low tone, and his remarks on that subject left somewhat different impressions on the minds of the deputation. By some he was understood to refer to the prejudice which his case had suffered by having recourse to the evidence of two women of immoral character, and by others he was supposed to have questioned a line of defence which, though undertaken with the best intentions, tended, in the result, to weaken his case, as it previously stood on its merits, and was eventually used to strengthen that of the prosecution. He was told by one of the Sheriffs in effect that but for the *alibi* the case for the prosecution would have remained practically unanswered, and that his counsel were justified in resorting to it if they believed, as no doubt they did, there was anything in it, and in sifting it to the bottom. He appeared to adhere to his own opinion upon the point, and the conversation was not further continued. He has not yet made any confession. At a meeting of the German Legal Protection Society on Wednesday evening, it was resolved to present a memorial to Sir George Grey, praying for a reprieve on the ground that the evidence was not conclusive.

Mysterious Death in the Green Park.—On Friday an adjourned inquest was held at the Westminster Hospital respecting the death of George King, late gas inspector in the employ of the Chartered Gas Company. It appeared that he had been found lying in the Green Park some evenings before, and was carried to St. George's Hospital. He was there supposed to be drunk, and was handed over to the police cells. Having been bailed out thence he was taken home, and soon afterwards was removed to the Westminster Hospital, where it was found that his head was covered with blows and bruises, of which he soon afterwards died. Two men deposed that they saw deceased stagger and fall heavily in the park, and one of them assisted in sending him to the hospital. Others supposed that he had been stupefied by gas fumes which he inhaled in the course of his occupation. The surgeons of St. George's Hospital stated that none of the wounds on the man's head were observed when he was in that institution, and the surgeons of Westminster Hospital clearly proved that the injuries must have been inflicted by blows; but there was no possibility of tracing their infliction. The jury therefore returned a verdict that deceased died from a fractured skull, but how caused there was no evidence to show; and they unanimously expressed their opinion that the medical authorities ought to have detained him at St. George's Hospital, and not handed him over to the police.

The Public Health.—The Registrar-General's Weekly Return states that the deaths in London in the week which ended Saturday, October 29, were 1409. The average number in the corresponding week of 10 years, 1854-63, corrected for increase of population, was 1199. The present return is therefore 210 above the average. During the week the births of 1044 boys and 987 girls, in all 2031 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1926.

Provincial.

Carlisle.—On Saturday morning the Metropolitan Board of Works, including Mr. Thwaites, the chairman, Mr. Freeman, chairman of the Main Drainage Committee, and about 25 members of the Board, and accompanied by Mr. Bazalgette, their chief engineer, arrived in this town to inspect the works in operation for the utilization of the sewage of the city. They first proceeded to the Town Hall, where they were received by the Mayor and a small deputation of the Local Board of Health, and were joined by Mr. Lawson, M.P., Mr. Potter, M.P., and other gentlemen. They then proceeded to the Willow Holme, near the main outlet of the sewage of the city, where the works conducted by Mr. Alexander M'Dougall, chymist, Manchester, are in operation, and that gentleman explained to the Board the manner in which the sewage is applied to the land he has in hand, the area actually irrigated being about 60 acres. The Board were first taken to a small engine-house, near which is sunk a deep well, into which the sewage is run, and where it is disinfected. The process of disinfection is very simple. In two barrels, placed in a covered house, carbolic acid, which is insoluble in pure water, is dissolved in lime water, and then runs into a third barrel. This is the disinfecting liquid, and it runs slowly into the well below, in which the sewage is collected, and there it is mixed with it, and then pumped into canals which convey it on the land. A broad canal is run round the field, which can be stopped up at any point, and sewage diverted into movable iron channels, from which it is shed upon the land. Mr. M'Dougall stated that the principal part of the sewage of Carlisle is thus utilized. But the sewage of one district of the town enters the main outlet sewer lower down than his works, and that part is not made use of by him. By the erection of another engine this also could be made available for the land; but as the district in question is one in which there are few water closets, Mr. M'Dougall does not consider the sewage of sufficient value to warrant the expense of an additional engine. Speaking in rough numbers the population in the district of which the sewage is not utilized, but is run into the river, is about 7,000 or 8,000; while that of the whole of the other districts of the town (all the sewage of which is applied to the soil) is 22,000 or 23,000 people. Mr. M'Dougall stated that there had not been any complaints made of the slightest smell from his land or works, and the Metropolitan Board verified this by their own personal inspection and observation. As the Board walked over the land Mr. M'Dougall made some interesting statements as to the effects of the application of disinfected sewage to the land. He had found that, whereas in places where sewage has been applied in a putrefied state the finer grasses are destroyed and rank coarse grass takes its place, the application of disinfected sewage had not been attended with a like result. The fine grasses were still preserved. Fears had been expressed by practical farmers that although they might do to depasture milch cows upon, yet, when these meadows came to be used for sheep feeding, the animals would be ruined by the disease of "flukes in the liver." Experience had shown these fears to be groundless, the deodoriser acting as a preventive. Nor had any foot-rot been experienced. Indeed, the disinfector being an antiseptic, any sheep slightly affected with foot-rot were cured by being put upon the irrigated land. There is one portion of the land leased by Mr. M'Dougall which is not irrigated. The stock are free to roam over both portions of the holmes, and it was found that they much preferred the irrigated part; indeed, they had to be penned on that not irrigated if it was thought desirable to keep them there; and the Board, by contrasting the colour of the grass in the two parts of the land, saw how much more luxuriant was the grass on that which was irrigated. Mr. M'Dougall stated that he considered the produce on the irrigated meadows to be about four times as great as that on the land to which the liquid sewage is not applied; and in some parts, where the irrigations had been made more frequently, five times as great. According to the plan usually followed, the sewage is pumped on each section of the field for four hours at a time, and as it takes about four months to go over the whole area in this way, each section is irrigated three times a year. Mr. M'Dougall expressed his opinion that the best way to make the application and sewage profitable would be to cut the grass and carry it away for stall-fed oxen, the manure of which should be taken away to fertilise an arable farm where winter food could be grown. Having finished their inspection of the works, the Board returned to the city, and learnt from the butcher by whom the land is rented (Mr. Moffat

Hetherington) that he considered the application of the sewage most beneficial. Experience had shown him that it was twice as valuable to him as land otherwise of equal value which had not been irrigated. The Board, who expressed themselves much pleased with what they had seen, left for Edinburgh in the evening, and purpose extending their tour to Glasgow.

CHATHAM.—The Government authorities intend to make alterations of an important character in the storing of gunpowder, so as to diminish the chances of disaster at the great magazines. Two old ships are preparing at this dockyard for use as floating magazines for storing powder discharged from ships of war ; and it is expected that one or two more of the ships now lying idle in the Medway will be made available for the same purpose.

COSELEY.—A meeting of colliers was held at Coseley on Saturday, at which it was agreed that, with some exceptions, the strike should terminate and the men return to their work. It was admitted that the men had endured great privations during the strike, which has lasted for 17 weeks. The examination of the 19 colliers charged with unlawfully assembling, intimidation, and conspiracy, was resumed on Friday morning at Bilston before the stipendiary magistrate of the district. After hearing counsel on both sides, the magistrate fully committed the prisoners for trial.

HUDDERSFIELD.—A young man, named Haigh, who has just completed his articles to a solicitor in this town, was on Saturday lodged in Chester police-station on a charge of forging cheques in his brother's name to the amount of 2000*l.* on the Huddersfield Bank. The forgery was discovered on Friday, and it was then ascertained that Haigh had absconded. Officers were despatched to Manchester, from whence they traced him to Crewe, and finally apprehended him in a first class railway carriage in Chester, just on the point of starting for Holyhead. Only 20*l.* was found upon him.

LIVERPOOL.—The Canadian steam-ship Jura, on entering the Mersey in a fog on Thursday morning, ran ashore near Crosby Point, and broke her back. It is feared that she will become a total wreck. — The new Act of Parliament for closing public-houses between the hours of one and four in the morning was adopted on Monday by the Town Council of Liverpool, after a brief discussion.—On the 27th ult. the wife of a labouring man named Dawson, residing in Wellington Road, during a fit of mental aberration killed one of her children, a girl one year and ten months old, by cutting its throat with a table knife. She then seized another and older child, and would have destroyed it had not its screams aroused the attention of the neighbours. She then seized a third child, but being prevented while in the act of attempting to cut its throat, she inflicted a severe wound upon her own neck and throat. She was removed to the main bridewell, where she tore off the plasters from her throat, and caused violent hæmorrhage. She is still in a critical condition. It appears that she has not been long liberated from a lunatic asylum.

OXFORD.—At a meeting of the Hebdomadal Council on Thursday it was proposed by the Vice-Chancellor, that in consideration of the labours of Mr. Jowett, the Regius Professor of Greek, a salary of 400*l.* a year be paid to him. On a division this motion was lost by a majority of one, the numbers being 11 to 10. The opponents of the motion were the Provost of Oriel, President of St. John's, President of Magdalen, Warden of All Souls, Warden of New College, Professor Heurtley, Professor Mansel, Mr. Michell, Mr. Hansell, Mr. Turner, and the Senior Proctor. The supporters of the motion were the Vice-Chancellor, the Dean of Christ Church, Master of Balliol, Professor Pusey, Professor Jacobson, Professor Wilson, Professor Price, Professor Bernard, Mr. Eaton, and the Junior Proctor.

PRESTON.—At the last meeting of the Town Council, Alderman Miller intimated his intention of presenting to the town a plot of ground for a public park to join the very beautiful park in Avenham Valley, which has just been laid out by Mr. Milner, the well-known landscape gardener. Alderman Miller has given between 2000*l.* and 3000*l.* for the land, but it is stated that if it had been brought into the public market for sale it would have realised between 4000*l.* and 5000*l.* The gift is made subject to the condition that the Corporation shall make a yearly grant of 40*l.* for the foundation of a scholastic exhibition in the Preston Grammar School.—On Friday, Joshua Bond was tried at the sessions for an offence of a very unusual character. He was charged with stealing two 50*l.* notes, belonging to his employers, the New Fylde Timber Company. Four years ago these notes were paid to a clerk of the company, named Mayor, and as they were missed after being paid to him, he was charged with stealing them, examined before the magistrates, and acquitted. He languished however under the charge, and almost ever since his acquittal he has been bedridden. Two months since the notes were found in a pocket-book, which Bond acknowledged to be his, though he denied all knowledge of them. On Friday he was tried for stealing them, and was acquitted. The trial lasted between eight and nine hours.

Ireland.

THE MURDER AT RATHMINES.—Mr. Odell, the barrister who shot a bailiff who had been sent to take his goods in execution, was tried before the Criminal Court of Dublin last week. The trial lasted three days. There was no dispute as to the facts of the murder; but it was contended for the defence that the prisoner was insane at the time he shot the man. The jury, after a long consultation, on Saturday returned a verdict acquitting the prisoner on the ground of insanity.

FATAL RAILWAY ACCIDENT.—On Saturday evening the train from Dublin to Galway ran off the line near Ballinasloe, when a carriage was overturned and two persons were killed—Mr. Glenville, a builder of Ballinasloe, and Thomas Henry, a servant of the company. Three harvestmen sustained fractured limbs, and about 20 others were slightly injured.

THE OUTRAGE IN DONEGAL.—The local papers state that Mr. Wilson is progressing favourably, and that the best hopes of his ultimate recovery are entertained by his medical attendants. Nothing has yet been effected towards the discovery of the assassins.

Law.

CENTRAL CRIMINAL COURT: *The Trial of Muller.*—On Saturday morning Serjeant Parry, in accordance with his statement on the previous day, that he would call witnesses to show that the prisoner was elsewhere at the time the murder was committed, called Mr. Lee, of Hackney Wick, an omnibus driver, and two women called Jones and Eldred, for that purpose, but the evidence of the former was of no value, and that of the latter merely showed that the prisoner was at Camberwell on the evening of the murder, and rather strengthened the case for the prosecution than otherwise, by showing that it was possible for him to have returned to London by the same conveyance as Mr. Briggs. The Solicitor-General having replied on the whole case, the Lord Chief Baron summed up He said that it was his duty to state to the jury any point of law that might arise, and for them to draw their own conclusions from the facts, and there could be no doubt that Mr Briggs on the night of the 9th July was murdered. He would say nothing of the manner in which the murder was committed ; but of the fact there could be no doubt. He would state to them the facts as they had been brought before them, and it would be for them to form their own opinion. It had been argued that it was a case of circumstantial evidence. It was so in almost every case tried in a court by evidence of that nature. The majority of criminal offences decided in the courts of this country depended upon circumstantial evidence. Direct evidence might be mistaken in various ways, in the person, or in many other ways. The indirect testimony of a number of facts, all concurring to the same direction, does away with the idea that there can have been perjury or a mistake. There was another question he would go into, which was the degree of certainty with which they ought to agree. Serjeant Parry had said they must not find the prisoner guilty unless they were as satisfied as if they had seen him commit the act. He did not think that was exactly the certainty they ought to feel. It was only necessary to have that certainty with which they would transact their most important concerns, although the present inquiry was a most important one to the prisoner. To require more would not tend to lessen crime in the country. Serjeant Parry had said it was better that many guilty should escape than one innocent should suffer. There were instances where innocent persons had been confounded with the guilty and had been convicted as such. The only rule to be laid down was to use the utmost vigilance, and take care if a man be innocent he should be acquitted. The jury should take the facts of the case and separate those which they believed from those they did not believe, and draw the conclusions which result from these facts, and whatever be the conclusions arrived at, he thought they might rely upon a safe issue. There could be no doubt if the case for the prosecution did not bring home to their minds the satisfactory conclusion that the prisoner was guilty, he was entitled to be found not guilty. It was said that the prisoner was not of such stature and strength as would be required to commit the deed. If they believed he could not have done it, he was entitled to a verdict of not guilty. And the third line of the defence was in the nature of an alibi. If they thought that there was a satisfactory case on the part of the prosecution, and this were met by an alibi, the alibi should be weighed against the case for the prosecution. It became their province to sift the alibi, and to weigh it well with the case for the prosecution, and they were called upon to decide to which side the truth leans. Mr. Briggs appeared to have got out at London Bridge from an omnibus, and to have gone to the Fenchurch Street station intending to go to Hackney, and he was seen at the Bow station. His lordship commented on the evidence of Mr. Lee, and said he thought the prosecution were right in not calling him. [Mr. Briggs was found about one-third the distance from Hackney-wick upon the line, his head towards Hackney-wick. He drew the attention of the jury to this because it showed that Mr. Briggs must have been put out of the carriage feet foremost. He informed the jury that whether Mr. Briggs jumped out or not it would make no difference to the person charged with the murder, as it was clear he had received several desperate wounds before leaving the carriage, and if he left the carriage from the fear of the violence of whoever was inside it would be equal; but Mr. Briggs's hat was gone and another left in its place, and his watch and chain were gone. On the following Monday Mr. Death exchanged a chain; and, in consequence of suspicions, persons were sent out to anticipate the arrival of Muller in America, and in the prisoner's box was found the watch and a hat also, which was at first said was not Mr. Briggs's, because it was too low; but it turned out to have been cut down. The hat found in the carriage and the watch and chain are the three links in the chain of evidence for the prosecution, all of which were distinctly apart from each other, and if any one of them were made out, it would be for the jury to say whether he had given a satisfactory account. The prisoner was in possession of the chain on the Monday; but there was no evidence that he had the watch at that time. The prisoner had never said he had bought the watch and chain at the docks. (Serjeant Parry said the counsel for the prisoner had stated so after an interview with the prisoner.) The Lord Chief Baron said that was his counsel's suggestion. The prisoner himself had said he had the watch for two years. His lordship then alluded to the hat, which was said to be the hat of Mr. Briggs, and said it was proved, as far as it possibly could be, that it did belong to Mr. Briggs, and it would be for the jury to say whether they were satisfied of the fact. He remarked that if half the industry that had been exercised in finding all the old hats of Mr. Digance had been devoted to finding out the person of whom the prisoner bought it, he could have been found. (Serjeant Parry reminded his lordship that Mr. Digance had said he would not swear it was the hat he supplied to Mr. Briggs.) The Lord Chief Baron said that was undoubtedly so; but it was for the jury to say how far what that witness had said led them to the belief that that was the hat. The circumstances connected with the second hat were certainly of rather a peculiar nature. The hat had a remarkable lining, of which Mr. Walker had very few, not more than two, of the description. With regard to the *alibi* it was a matter so entirely for the consideration of the jury that he should say but few words, and he briefly alluded to the evidence given by the witnesses, and said it was for the jury to consider the whole facts spoken to by them, and say whether it established it without doubt in their minds. He remarked that the prisoner might have returned to Camberwell by the same route as Mr. Briggs to the city, or he might have gone the same route from the city to home. His lordship said they were in the facts to which he thought it necessary to draw the attention of the jury. He wished to have the whole of the evidence read over before he did so. The jury said it was not at all necessary. His lordship, in conclusion, said the verdict was to be entirely theirs, and he urged upon them, if they had gathered from his remarks anything that would prejudice their minds, to dismiss it entirely at once. He had endeavoured to be as impartial as possible, and he was sure they would acquit themselves of their task in a manner conducive to their conscience and their duty to their God, and might the God of all truth guide their deliberations to a verdict according to the truth and the case. The jury then retired, and were absent about 20 minutes, when they returned into court. The prisoner had been seated during their absence, then placed in front of the dock. On the question being put by the Clerk whether they found the prisoner guilty or not guilty, the foreman said that they found the accused "Guilty." The Chief Baron having conferred for a short time with Mr. Martin, the usual question having been put by the Clerk as to whether he had anything to say why sentence of death should not be passed upon him, Muller showed no indication of emotion was seen in the slight twitching of his compressed upper lip, replied "I submit to judgment." Mr. Baron Martin having put on the black cap, addressing the prisoner, said,—Franz Muller, you have been found guilty by the jury of the murder of Mr. Briggs. It is no part of our duty to express generally our opinion with respect to the verdict of the jury. It is theirs and theirs only to decide upon your guilt or your innocence. It is the duty only for the Judges to state, in passing sentence, if they entirely concur with the verdict, and they do so for two reasons. It is satisfactory if the opinion of the Judges concurs with that of the jury, and I am authorised by the Chief Baron to say, as I state on my own behalf, that we are perfectly satisfied with the verdict, and had I been on the jury I would have found it so in it. And there is a second reason for the statement. It is to remove entirely from your mind any idea of the possibility that you will live in this world much longer. Within a short period you will be removed from it by a violent death. I therefore beseech you, avail yourself of what I have said, which will be afforded you—the means, so far as you can, of making your peace with your Maker, and be prepared to meet your fate which very shortly awaits you. I forbear going into the particulars of the case ; but there are a variety of circumstances in it which if the evidence had been gone into more fully would have more and more tended to establish your guilt. The whole evidence as to your movements during the day of the murder points to that conclusion. You left the city for Blyth about 11. You continued at the house of Mr. Blyth between 7 and 8, when, according to the testimony of Mr. Blyth, who was evidently favourable, you started at a quick pace, telling him you were going to Camberwell to see a certain woman Eldred. You went there. It may be that the jury supposed she was telling the truth when she stated you were there after 9 o'clock, but in my opinion she was mistaken. From the time you left the city it was earlier; you had time to return by omnibus towards the Fenchurch Street before the train started, where, observing Mr Briggs with his exhibiting this watch and chain, you formed the design to rob him. There are other circumstances which tend to the same conclusion. What is your history during the week? You exchange the chain of Mr. Briggs for that of Mr. Death's You immediately proceed to pledge it in order to receive a sum of money upon it. Having got you take out of pledge your own watch and chain, and having got them, you proceed to pledge them again at another shop for a higher sum and sell the ticket. If these facts were known, I have no doubt it would be found that the Devil, and for the purpose of getting money to America, you robbed Mr. Briggs of his watch and chain with these contrived, with assistance from your friends, sufficient money to pay your passage. That, I have little doubt, is the true history of the transaction. to these facts for the purpose of removing from your all idea of there being any possibility of a commuted sentence. I must say, after listening to all the which has been adduced, I feel no more doubt that committed this murder, than I do with regard to occurrence of any other event of which I am aware which I did not see with my own eyes. The sentence now to pass on you is not that of the Chief Baron, my sentence ; it is the sentence which the law imposes on all persons found guilty of murder, and that you be taken back to the prison whence you thence to the place of execution, and there be hanged neck until you are dead, and that your body taken down and buried in the precincts of the prison you were last confined before this sentence of execution passed upon you, and may the Lord have mercy on your The last solemn words were scarcely uttered when the warders standing immediately behind Muller came remove him from the bar. The prisoner, who did display surprising firmness and self-possession, said English, "I wish to say I am satisfied with my trial I have been convicted by your law, but not upon the ment—by false." The prisoner had not completed sentence when the self command which he had shown throughout the trial with an imperturbability which him capable of the most desperate deeds, entirely and he left the dock dissolved in tears.

Obituary.

THE MARQUIS OF BRISTOL died on the 30th ult. at Park, near Bury St. Edmund's, from an attack of ivsentery 64th year. The fatal result has occasioned no surprise, ship's local medical attendants having for some days the case a hopeless one, though Sir Ranald Martin great experience in the treatment of this disease in India, was, up to within the last day to anticipate a favourable change. His lordship 1800, and succeeded to the title as recently as death of his father. He was educated at Trinity Cambridge, where he graduated M.A. in 1822, LL.D. in 1862. In 1830 he married the fourth fifth Duke of Rutland, who died in 1848, leaving two daughters. He represented Bury St. Edmunds till 1859, when he succeeded to the peerage. He of Treasurer to the Household from 1841 capacity officiated at the christening of the January 25, 1842. His politics were Liberal has always been universally respected, and severely felt in the neighbourhood where he sons the second, Lord Augustus Henry Charles in 1837, married, in 1861, the daughter of Mr of Kensington, widow of Mr. Ashton Benyon; John William Nicholas Hervey, was born in 1846. The daughter Lord Francis Hervey, was born in

: Lady Adeliza Georgiana Hervey was born in [illegible]

[illegible], Colonel of this [illegible] Foot, died on the 27th [illegible] Lyndhurst in his 80th year. [illegible] in 1808, served in Sicily in 1806-7 with [illegible] Guards, under Sir John Moore; subsequently [illegible] Russia in the Peninsula and in France, in the years 1813 and 1814, including the investment and [illegible], the battles of Orthez and Toulouse, [illegible] affairs of outposts. In 1815 he served [illegible] the 7th Hussars; was present at Quatre [illegible] squadron of the rearguard in the affair at [illegible] and at the battle of Waterloo where he was [illegible]. He received the war medal with two clasps [illegible]. He went on half-pay in 1821. He [illegible] exchanged to the 85th Regiment in 1825.

GENERAL BENTINCK, Colonel of the 17th Foot, died in [illegible] on the 28th ult., while on a visit to his brother-[illegible] Count Waldeck, at Bergheim Castle, in Germany. He [illegible] of General Sir Henry Bentinck, and served in [illegible] and at Waterloo with the Coldstream Guards. He [illegible] the second son of Count John Adolphus Bentinck, [illegible] a near relation of the Duke of Portland. He [illegible] in 1799, and married in 1846 the Countess [illegible] daughter of Count Waldeck. He entered the army [illegible] he obtained his rank as Major General was [illegible] Guards. He served with the 2d Battalion [illegible] Cadiz, and the Isle of Leon, from March, 1812, [illegible]. He was wounded at the battle of Barossa, [illegible] exchanged into the regiment in Portugal. He [illegible] Lieutenant at the 2d Battalion, and accompanied [illegible] companies that were sent to Holland in 1813, under [illegible], and was engaged in the successful attack of [illegible] the bombardment of Antwerp, and the operations [illegible] Zuyp Zam. He was afterwards attached to the [illegible] Deputy Assistant Adjutant-General, under Sir [illegible], at the battle of Waterloo and the capitulation [illegible] for which service he received the brevet rank of [illegible] and was appointed Assistant-Adjutant-General to the [illegible] destined to serve in the army of occupation [illegible] dissolution in 1818. He was appointed Colonel of the [illegible] Regiment in 1857.

ADMIRAL EDWARDS died at Huntingdon on the 22d inst., in his 90th year. He entered the navy in 1796, and after serving on the home station and in the West Indies, was made [illegible] in 1802, and in that capacity, after serving at [illegible] and in the North Sea, returned to the West [illegible] and served in the Atlas, 74, in the action off St. [illegible] in 1806. In 1809 he obtained command of the [illegible], sloop, and was unfortunately captured on his [illegible] with despatches. On regaining his liberty he [illegible] 1810, 1811, and 1813, in the Mediterranean and [illegible] in the latter year was advanced to the rank of [illegible]. He was commander of the Doterel, 18, from 1825 [illegible] promoted to post rank in 1826; became rear-admiral on [illegible] list in 1854, vice-admiral in 1860, and admiral [illegible].

ADMIRAL LYSTER died at Mount Henry, Wexford, on the [illegible] inst. He entered the navy in 1811, and served on the West Indian and North American stations until 1815. He was [illegible] employed on the coast of Africa, in South America, and [illegible] Indian station, and in 1831 proceeded to China, and [illegible] in forcing the passage of the Boca Tigris in 1834. He [illegible] commander in 1841, and in 1842 sailed for the East [illegible]. He was second in command of the expedition to [illegible] in 1845, was honourably mentioned in the [illegible], and was consequently posted in the same year. [illegible] home in 1846, and as captain of the Penelope, [illegible] important services at the capture of Lagos in 1851, [illegible] commanded a division of the attacking force, and was [illegible] wounded. He was captain superintendent of the Royal [illegible] Dockyard, and of the Royal Hospital at [illegible] from 1858 to 1861, and received the captain's good [illegible] in until promoted to flag rank in 1863.

[illegible] LEECH, the well known illustrator of "Punch," [illegible] Saturday evening in his 47th year. He was born in [illegible] 1817 and was educated at the Charterhouse, where [illegible] contemporary of Mr. Thackeray. He had been for [illegible] in failing health, his nervous system having given [illegible] to the continued annoyances of street music. For [illegible] past he had foretold that the organ nuisance would [illegible]. He fled from it from Brunswick Square to Kensington, [illegible] did not escape it, although he took ample vengeance [illegible] in the pages of "Punch." His sketches in that [illegible] are a treasurement in themselves, and sufficiently show [illegible] powerful power of his pencil in the happy and laughable [illegible] of the weaknesses and absurdities of modern [illegible] of every class and of every nation. The nature of his [illegible], and probably a great sensitiveness of organisation, [illegible] him peculiarly susceptible to annoyance from [illegible] to such an extent had his bodily and mental [illegible] suffered from these that he was ordered by his medical [illegible] to travel abroad during last summer. He returned [illegible] somewhat better in physical health, but even more [illegible] the torture of the street organ and similar sources [illegible]. He was not, however, thought by his friends to be [illegible] sufferer as he really was, and on Friday he was [illegible] upon his medical man and consult with him for [illegible]. On Saturday so little apprehension was entertained [illegible] serious result that a party of children were enjoying themselves at his house when he expired.

[illegible]—The will of General Sir Robert William Gardiner, K.C.H., of Melbourne Lodge, Claremont, and Gun [illegible], St. James's Park, has been sworn under 18,000*l.* [illegible] Admiral Bertie Cornelius Cator, formerly of [illegible] Square, Hyde Park, but late of the Palace Hotel, [illegible] Gate, 40,000*l.* William Lowndes, of The Bury, [illegible], 40,000*l.*

[illegible]—On the 28th ult, at 26, Curzon Street, Mayfair, the Lady CHARLOTTE RUSSELL, of a son—25th ult, at 14, New [illegible] Gardens, the Lady CONSTANCE MARSHAM, of a [illegible]—at 14, Bryanston Street, Portman Square, the [illegible] LEWIS RANDOLPH, of a son—29th ult, at Glanusk [illegible], Brecknockshire, Lady BAILEY, wife of Sir J. B. Bailey, [illegible] of a son and heir—25th ult, at Pynes, Devon, Lady [illegible] of a son—24th ult, at Tangier, Morocco, the wife [illegible] Colonel DRUMMOND-HAY, of a daughter.

[illegible]—On the 25th ult, at Christ Church, Upper [illegible] Gardens, Captain ALGERNON AUGUSTUS STEWART, [illegible], to SOPHIA ANNE ELEANOR, daughter of the [illegible] and Very Rev. HENRY LEWIS HOPART, Dean of [illegible] Winchester—on the 27th ult, at the parish church, Wickham, [illegible] GIVEN, Esq., captain the Royal Dragoons, to [illegible] ERINE, youngest daughter of the late Rear-Admiral [illegible] HER, C.B., K.C.H., &c., of Wickham, Hants—[illegible] British Legation, Berne, E. CARL SCHLESINGER, [illegible], to ELLEN MADELINE, youngest daughter of the [illegible] WELL, Esq., Assistant-Secretary to the General Post [illegible], at St. Mary's Church, Dover, Colonel C. W. D [illegible] STAVELEY, C.B., 44th Regiment, eldest son of the late Lieut.-General W. Staveley, C.B., Commander-in-chief at Madras, to SUSAN MILLICENT, second daughter of CHAS. MINET, Esq., of Pier House, Dover—27th ult, at Pear Tree Church, near Southampton, Captain OLIVER W. SIMPSON, 2d Royal Lanark Militia, and fifth son of Joseph L. P. HOARE, Esq., of Brownlow, Hants, to CATHERINE ANNE, eldest daughter of GEORGE JAMES, Esq., of Ridgway, near Southampton.

DEATHS.—On the 16th ult, at Paris, the Lady CATHARINE BRUCE—28th ult, at Boulogne-sur-Mer, ELIZABETH ESSEX Lady HENNYMAN, widow of Colonel Sir Ord Hennyman, Bart., of Annandale, formerly commanding the Grenadier Guards—28th ult, at 7, Calverly Park, Tunbridge Wells, ELIZA, fifth daughter of the late Sir HENRY HAWLEY, Bart., of Leybourne Grange, in the county of Kent—At Monydown Park, near Basingstoke, Sir RICHARD HENRY CHARLES RYCROFT, Bart., aged 70—1st inst, at Brighton, the Ven. CHARLES PARR BURNEY, D.D., Archdeacon of Colchester, and rector of Wickham Bishops, Essex, aged 79—26th ult, at Monks Grove, Chertsey, Mrs. ST. AUBYN, relict of Jas. St. Aubyn, Esq., of St. Michael's Mount, Cornwall—24th ult, at Malvern, JOHN SKELTON, Esq., formerly of Broom Hill, Moor Allerton, near Leeds, aged 60—20th ult, at Dover, Lieut.-General GEORGE SANDYS, of H.M.'s Indian Army, colonel of the late 6th Madras Light Cavalry—30th ult, Captain ST. JOHN WILLIAM C. CHARLTON, late of the Royal Dragoons, eldest son of St. John C. Charlton, Esq., Apley Castle, Shropshire, aged 33—Sept. 7th, on board the Dane, four days after embarking on his homeward voyage, invalided, from British Caffraria, Captain ROBERT HENRY DICK MACFARLANE, 2d Battalion 5th Fusiliers, of Dolavoured, Perthshire—Sept. 11th, at Bermuda, of yellow fever, Lieutenant WILLIAM THELAWNY SCOTT, Royal Artillery, only child of William Pulteney Scott, of Lincoln's Inn Fields and Brompton, aged 21—21 inst, PEREGRINE BINGHAM, Esq., many years one of the magistrates at the Marlborough Street Police Court, aged 70—21st ult, at Lewes, FRANCIS H. GELL, Esq., one of H.M.'s coroners for Sussex, aged 79—22d ult, in London, H. G. WILCOX, Esq., Engineer to the Municipal Drainage Works, Bombay, aged 53—25th ult, at 26, Osnaburgh Street, Regent's Park, the Rev. BRISCO OWEN, B.D., Oxon, Rector of Remenham, Berks—22d ult, at Croom's Hill, Blackheath, the Rev. W. CRABTREE, rector of Cheesecombe, Oxfordshire, aged 82—At Birling Vicarage, the Rev. HENRY DAMPIER PHELPS, aged 73—22d ult, at the Vicarage, Watlington, Oxon, the Rev. W. W. J. A. LANGFORD, aged 62.

Markets.

COVENT GARDEN, Nov. 5.

The market is still well supplied with most kinds of hardy fruit in season, especially Pears, of which there is an abundant supply. Among them are Marie Louise, Duchesse d'Angoulême, Crassane, and others. Grapes are likewise sufficient for the demand; among them are Dutch Hamburghs at from 9d to 1s. per lb. Of Pine Apples there is but a limited supply. Kent Filberts and Cobs fetch from 70s to 80s. per 100 lbs. Walnuts are very plentiful, and Oranges begin to make their appearance. Lemons fetch from 5s. to 10s per 100. Tomatos are large and fine. For Potatos there is an improved sale, and prices are a trifle higher than they were last week. Flowers chiefly consist of Orchids, Heaths, Chrysanthemums, Fuchsias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Apples, per sieve, 1s to 2s
Grapes, per lb., 1s to 5s	Oranges, per 100, 6s to 12s
Melons, each, 1s to 4s	Lemons, per 100, 5s to 10s
Peaches, per doz., 6s to 18s	Nuts, Barcelona, do., 16s
Plums, per ½ sieve, 2s to 4s	— New Brazil, do., 16s.
Pears, per doz., 1s 6d to 3s	Almonds, do., 14s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 60s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s 6d
Carrots, per bunch, 4d to 9d	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 6d to 8d	Mushrooms, p. pott., 1s to 1s 9d
Cucumbers, each 4d to 1s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

BRITISH WOOLS.—LONDON, Nov. 3.

Our demand is very limited indeed. The uncertainty about the future rate of interest seems to paralyse both buyers and sellers, as neither party knows what calculations to act upon.

	s.	d.		s.	d.
South-down Hoggets	2	0	to 2	0½	
Half-bred ditto	2	1½	— 2	3	
Down Ewes	1	10	— 1	11	
Kent Fleeces	1	11	— 2	0	
Combing Skins	—	..			
Flannel Wool	..	..	to ..	½	
Blanket ditto	..	..	— ..		
Leicest. Hoggs	2	1½	— 2	3	
Ditto Wethers	2	0½	— ..		

METROPOLITAN CATTLE MARKET.

MONDAY, Oct. 31.

The number of Beasts is again smaller, and the average quality is scarcely improved. Choice descriptions are readily disposed of, and in some instances make beyond our highest quotation. Good Sheep are scarce, and meet with ready purchasers at rather higher rates. Inferior are with difficulty disposed of at late prices. Calves are rather dearer than on Thursday. From Germany and Holland there are 3080 Beasts, 7630 Sheep, 321 Calves, and 60 Pigs; from Spain, 90 Beasts; from Scotland, 40; from Ireland, 560; and 1960 om the Northern and Midland Counties.

	s	d	s	d
Best Scots, Herefords, &c.	5	2 to 5		4
Best Short-horns	4	10	— 5	2
2d quality Beasts	3	4	— 3	10
Best Downs and Half-breds	5	4	— 5	6
Do. Shorn	..	..	—	..
Best Long-wools	4	10	— 5	2
Do. Shorn	..	..	—	..
Lambs	..	..	—	..
Ewes & 2d quality	4	4	— 4	8
Do. Shorn	..	..	—	..
Calves	..	..	3 8	— 5 2
Pigs	..	..	3 0	— 5 0

Beasts, 5940; Sheep and Lambs, 20,960; Calves, 329; Pigs, 890

THURSDAY, Nov. 3.

The supply of Beasts is small, and the best descriptions are readily disposed of at fully Monday's quotations. A better clearance is effected of other kinds than of late. The number of Sheep is very small. The demand for them is brisk at higher prices. Good Calves are also in demand. Our foreign supply consists of 760 Beasts, 1430 Sheep, 238 Calves, and 60 Pigs.

	s	d	s	d
Best Scots, Herefords, &c.	5	2 to 5		4
Best Short-horns	4	10	— 5	2
2d quality Beasts	3	4	— 3	10
Best Downs and Half-breds	5	4	— 5	8
Do. Shorn	..	..	—	..
Best Long-wools	5	0	— 5	4
Do. Shorn	..	..	—	..
Ewes & 2d quality	4	6	— 4	10
Do. Shorn	..	..	—	..
Lambs	..	..	—	..
Calves	..	..	3 8	— 5 2
Pigs	..	..	3 0	— 5 0

Beasts, 1130; Sheep and Lambs, 3980; Calves, 285; Pigs, 160; Milch Cows, 95.

NEWGATE.—Nov. 4.

Best Fresh Butter .. .. 17*s.* per dozen lbs.
Second do. do. .. .. 15*s.* "
Pork, 4*s.* 8*d.* to 5*s.* 4*d.* per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Nov. 4.

Messrs. Pattenden & Smith report a continuous active demand for consumption at improved rates.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Nov. 3

Prime Meadow Hay	80s	to 110s	Clover, old	100s	to 130s
Superior do. ..	—	—	New Clover ..	—	—
Inferior do. ..	—	—	Do. second cut ..	90	110
New do.	—	—	Straw	27	32
Rowen	—	—			

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, Nov. 3.

Sup. Meadow Hay	100s	to 114s	Inferior Clover ..	—s	to —s
Inferior do.	—	—	New do.	—	—
New do.	—	—	Straw	30	34
Superior Clover ..	110	130			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Nov. 3.

Fine Meadow Hay	100s	to 105s	Prime 1st cut Clover	126s	to 132s
Inferior do.	95	100	Inferior do. do. ..	110	120
Prime New Hay ..	—	—	Prime 2d cut do. ..	118	126
Inferior	—	—	New Clover	—	—
Straw	27	30	Inferior do.	—	—

MARK LANE.—MONDAY, Oct 31.

The supply of Wheat from Essex and Kent to this morning's market was short, and of Spring Corn only moderate. English Wheat found a steady sale at the prices of last Monday. The demand for foreign Wheat was in retail, at no quotable variation in the value of any description. Good malting Barley sold quietly on former terms; secondary sorts dull. Beans were easier bought. Peas sold at as much money. Oats were taken off to a fair extent at the quotations of this day week. Linseed was a slow sale, and Rapeseed. The value of town Flour was unaltered; country marks were steady in price; American brands remain firm. The floating trade was unvaried for any article, with a moderate demand.

PRICE PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk White ..	39	—42	Red	36	—41
— — fine selected runs .. ditto	41	—44	Red	39	—42
— — Talavera	46	—53			
— Norfolk	—		Red	—	
— Foreign	35	—50			
BARLEY, grind. & dist., 26s to 30s .. Chev.	32	—35	Malting ..	30	—33
— Foreign .. grinding and distilling	21	—27	Malting .	28	—31
OATS, Essex and Suffolk	20	—22			
— Scotch and Lincolnshire—Potato	20	—24	Feed	20	—22
— Irish ..... Potato	19	—22	Feed	—	
— Foreign ..... Poland and Brew	20	—23	Feed	18	—21
RYE	31	—33	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan .... 33s to 35s .. Tick	34	—36	Harrow ..	34	—36
— Pigeon .... 35s to 40s .. Winds.	—		Longpod	—	
— Foreign ..... Small	34	—38	Egyptian	33	—34
PEAS, White, Essex and Kent .. Boilers	36	—40	Suffolk ..	38	—41
— Maple .... —s to —s .... Grey	—		Foreign ..	32	—38
MAIZE ..... White	—		Yellow ..	—	
FLOUR, best marks delivered .. per sack	35	—40			
— 2d do ..... ditto	28	—34	Country ..	28	—34
— Foreign ..... per barrel	18	—25	Per sack	32	—36

FRIDAY, Nov. 4.

The weather from the 28th to the 31st ult. was damp and dull; it has since been dry with a lower temperature, last night frosty. The Wheat trade has continued to be devoid of animation, and the sale restricted to the millers' immediate requirements. Prices are unaltered. The previous rates have been maintained for the finest malting Barley, but all other qualities are more difficult of sale, and consequently the turn lower in value. Beans are quoted rather cheaper in several markets. Oats and Peas have not undergone any alteration in value. Flour has been in limited demand at our quotations. Since Friday last 60 vessels have been reported off the coast. A moderate business has been done in Wheat during the week, and the cargoes left off the coast are held for higher prices; Maize has been active at late rates. Linseed is rather higher in value. Paris, Nov. 3.—Wheat and Flour have remained unaltered in value, but the market shows a little more steadiness, and buyers at late rates begin to come forward. The six marks for delivery this month are quoted equal to 31s. per 280 lb. The present stock of Flour is estimated at 32,260 cwt. The arrivals of English Wheat and Barley are moderate, of Oats good, of foreign Barley small, of Wheat and Oats large. The attendance at this morning's market was unusually small, and the little English Wheat fresh up was disposed of at Monday's prices, which were repeated for foreign, but the transactions were only of nominal amount. Spring Corn of all descriptions was difficult of sale at about Monday's prices.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	870 qrs.	910 qrs.	580 qrs.	560 sks.
Irish	—	—	2000	— "
Foreign ..	31,520 "	1 0	39,940 "	100 "
				— brls

LIVERPOOL: Nov. 1.—We have had a fair attendance of the trade at our market to-day, but we have found only a very moderate demand for Wheat at last Friday's prices. Flour being scarce is held with much firmness. Indian Corn may be called the turn stiffer, with a limited inquiry. Oats and Oatmeal command full rates. Beans are the turn dearer. No change in Peas or Barley. Market closes steady but without animation.

FRIDAY, Nov. 4.—The market was thinly attended. Wheat quiet, at Tuesday's rates. Flour 6d. dearer. Indian Corn steady. Beans unchanged. Oats and Oatmeal quiet.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Sept. 24	40*s* 1*d*	31*s* 5*d*	20*s* 11*d*	34*s* 7*d*	40*s* 7*d*	37*s* 1*d*
Oct. 1	39 8	30 11	20 7	35 4	40 4	37 1
— 8	38 9	30 2	20 0	33 11	38 11	35 8
— 15	38 1	29 11	20 1	33 9	39 3	35 4
— 22	38 6	30 2	20 0	29 1	38 2	35 5
— 29	38 9	30 2	20 1	30 9	38 0	35 0
Agg. Aver.	39 2	30 6	20 3	32 5	39 2	35 11

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Sept. 24	Oct. 1.	Oct. 8.	Oct. 15.	Oct. 22.	Oct. 29.
40*s* 1*d*—		..	..	..	..	..
39 8	..	..	..	..	..	..
38 9	..	..	..	..	..	
38 6	..	..	..	..		
38 1	..	..	..			
..	..	..	..	..	..	..

COAL MARKET.—Nov. 2.

Hastings Hartley, 20s. 3d.; Eden Main, 21s. 6d.; Walls End Haswell, 22s. 6d.; Walls End Hetton, 22s. 6d.; Walls End Tunstall, 21s. 3d.; Walls End East Hartlepool, 22s. 3d.; Walls End Trimdon Grange, 20s. 6d.; Cym Garnant Stone, 22s. 6d.—Ships at market, 17.

POTATOS.—SOUTHWARK, Monday, Oct. 31.

During the last week the arrivals coastwise have been small, but very considerable by rail. Trade steady. The following are this day's quotations:—Yorkshire Flukes, per ton, 90s. to 100s.; do. Regents, 70s. to 80s.; Kent and Essex Regents, 75s. to 80s.; do. do. Rocks, 60s. to 70s.; Perth, Forfar, and Fife Regents, 70s. to 80s.; Belgian Whites, 45s. to 55s.

WANTED, as DRAUGHTSMAN and GENERAL ASSISTANT to a Landscape Gardener in the North of England, a Person who Writes and Draws neatly and with facility, and has a good knowledge of Gardening and Ground work. The Salary will be in proportion to the degree of competency. No one but an experienced man, of gentlemanly habits, whose moral and professional character can be thoroughly attested, need apply.—Address, by letter only, stating age, antecedents, whether married or single, and the salary required, with copies of testimonials, to E. KEMP, Birkenhead Park, Cheshire.

Seed Trade.

WANTED, a thoroughly efficient BOOK-KEEPER, who has already held a similar situation in the Nursery and Seed Trade. Also an ASSISTANT, thoroughly acquainted with the Seed business, and who can execute Garden Seed orders accurately, neatly, and expeditiously. In both cases it is imperative that the hand-writing be good and distinct, and that first-class testimonials as to character and ability can be produced.—Apply, stating age, salary expected, and all particulars, to JAMES DICKSON & SONS, 102, Eastgate Street, Chester.

WANTED, a good INVOICE CLERK in a London House.—Apply by letter, stating where last employed and salary expected, to "NURSERY," *Gardeners' Chronicle* Office, W.C.

WANTED, a SHOPMAN.—He must have a thorough knowledge of the Seed Trade, and be a good Counter Hand.—Apply to 1739, *Scotsman* Office, Edinburgh.

WANTED, a steady active MAN, to assist generally in the Business, for a small Florist, Nursery, and Jobbing Business, in the North Suburbs of London. He must Mow well. If approved on trial, a share in the business would be given.—Apply by letter or personally to A. B., 5, Oxford Street, Downham Road, Islington, London, N.E.

WANTED, a First-class NURSERY FOREMAN. Wages 30s. per week, House and Coal. None need apply whose character will not bear the strictest investigation.—Apply to Mr. SHAW, Stamford Nursery, Bowdon, Cheshire.

To Knifemen.

WANTED, a good BUDDER, GRAFTER, and LAYERER, to be under the Foreman.—Apply, stating age, references, &c., to J. C. WHEELER & SON, Nurseryman, Gloucester.

WANTED, a WORKING BAILIFF and his WIFE for a county in North Wales. Among his duties he will be required to Butcher for the family, and his Wife must do the Dairy work, and be capable of rearing and managing Poultry.—Apply to A. Z., Mudie & Sons, 15, Coventry Street, London, W.

WANTED, as PROPAGATOR, a steady energetic Man, thoroughly acquainted with Fruits, Roses, Evergreens, and Conifers; and who is a good Penman and willing to make himself generally useful. Will find this a good opening. A first-class man will meet with every reasonable encouragement. Testimonials as to character and ability will be required.—Apply to JOHN PALMER & SON, Nurserymen, Annan.

WANTED, a GARDENER.—One that has worked in a London Nursery preferred.—R. GREEN, 154, Kingsland Road, N.E; and the Bedford Conservatories, Covent Garden, W.C.

WANTED, a UNDER GARDENER, a married Man in Lancashire, who understands Potting and Propagating, and the General Management of Houses, Gardens, &c. A Catholic will be preferred. Wages 15s. per week, with a cottage and garden rent free.—Address, N. B., Post Office, Great Crosby, Liverpool.

WANTED, a GROOM and GARDENER.—He must thoroughly understand Horses; be a good Working Man; accustomed to Drive; and have a good character.—Apply to J. WEEKS, King's Road, Chelsea, S.W.

WANTED, as COWMAN and DAIRYMAID, without incumbrance, in a large establishment and good family. Wife to Manage the Dairy and Bake while the family is resident, and must thoroughly understand the Management of Poultry. Wages liberal, and good cottage attached to the dairy and joining the farm. No one need apply who cannot produce first-rate testimonials as to Dairy Management and Tidiness.—For particulars apply to C. O., Post Office, Maidenhead, Berks.

WANTED, a DAIRYMAID, experienced, who understands Poultry and can Milk.—Apply to F. B., 5, Milton Street, Dorset Square, London, N.W.

WANT PLACES.—Letters to be Post Paid.

CARE of CHAMBERS, OFFICES, or any place of Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper. Can wait upon a single gentleman, and has excellent references.—HARRIET B., 2, Northumberland Street, Marylebone, W.

GARDENERS, FORESTERS and BAILIFFS, or LAND STEWARDS.—The undersigned can always recommend the above, whose characters and abilities may be strictly relied on. Full particulars upon application.—JAMES DICKSON & SONS, The "Newton" Nurseries, Chester.

GARDENERS.—B. S. WILLIAMS is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any Gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway. London, N.

To the Nobility and Gentry.

J. WEEKS AND CO. have on their Books the Names of several first-class GARDENERS, whom they can highly recommend.—Apply to J. WEEKS & Co., King's Road, Chelsea, S.W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

To Nurserymen.

GENERAL NURSERY FOREMAN, or SUPERINTENDENT of the Out-door Department of a Nursery.—Energetic and persevering; possesses good business habits. Well up in the Management and Propagation of Out-door Stock generally, including Fruit Trees, Roses, Rhododendrons, and Coniferæ. Is a good Salesman. Good references.—W. W., *Gardeners' Chronicle* Office, W.C.

GROUND FOREMAN, or to Manage a Nursery.—Middle-aged, business habits, 30 years' practice; first-class Knifeman, Pruning, Propagator; good Plantsman, &c.—S. S., Mr. Harris, Stationer, 4, Prince's Road, Notting Hill, W.

GARDENER (HEAD).—Age 29, married; has a thorough practical knowledge of his profession. Five years' character from the Gentleman he is leaving.—W. JENNER, Gardener to J. Willson, Esq., Dulwich, Surrey, S.

GARDENER (HEAD).—Age 35, married, with family; a good practical Man, who understands Laying out and Planting. Over 6 years' good character. Please state wages.—Y. Z., Messrs. Paul & Son, Cheshunt Nurseries.

GARDENER (HEAD).—Age 30, married, one child; thoroughly competent in every department of his profession; also the Management of Land and Farm Stock. Good references from previous employers.—A. B., 1, Rectory Place, Parson's Green, Fulham, S.W.

GARDENER (HEAD).—Age 32, single; thoroughly industrious, steady, skilful in Forcing of Fruits, Flowers, Kitchen and Flower Gardens. Has had 15 years' practical experience in Noblemen's and Gentlemen's Gardens. Unexceptionable character.—C. W., Post Office, Maida Hill, London, W.

GARDENER (HEAD), age 29, married.—Mr. J. MEREDITH will have much pleasure in recommending to any nobleman or gentleman a thorough practical Gardener, well versed in the various branches of his profession. Highest testimonials and references given.—Apply to J. MEREDITH, The Vineyard, Garston, Liverpool.

GARDENER (HEAD), to any Nobleman or Gentleman requiring a First-class Man.—The Advertiser (age 30, married, one child), respectfully tenders his services as above. He is fully competent in every branch of his profession, including Forcing Pines, Melons, Vines, Stove and Greenhouse Plants, &c., and can take charge of Plantation, Arable, or Meadow Land. First-class references may be had from previous employers.—G. M., care of Sutton & Sons, Reading.

GARDENER.—Age 31, married; has a thorough knowledge of his profession in all its branches. Five years' good character.—J. S., W. H. Miller, Stationer, Epsom.

GARDENER (UNDER).—Age 21, single; a steady active young Man. Three and a half years' good character.—F. J. HOUSEGO, 7, Orchard Street, Clapham, S.

GARDENER (UNDER, or IMPROVER in a Gentleman's Garden).—Eight years' good character from last situation.—J. G., 26, Andover Road, Holloway, N.

GARDENER, or GARDENER and BAILIFF.—In the prime of life, and without incumbrance. A situation in the neighbourhood preferred. Can be highly recommended. Has had considerable experience in Forcing Fruits, Flowers, and Vegetables; also in the Cultivation of Arable and Pasture Land on the most approved principles, and in the Rearing and Feeding of Stock. Will leave present situation 31st December.—T. S. S., Barr & Sugden, 12, King Street, Covent Garden, W.C. The Advertiser has been known to Messrs. Barr & Sugden 14 years.

STEWARD or BAILIFF.—Age 36, married, two children; has had the entire Management of a Farm of 1000 acres; good Judge of Stock; understands Draining. Security if required. Can be highly recommended.—Messrs. GEORGE GIBBS & Co., Seedsmen, 25 and 26, Down Street, Piccadilly, London, W., who will attend to any communications.

BAILIFF or STEWARD.—Age 38, married; has had 25 years' experience in both Light and Heavy Land Farming. Thoroughly acquainted with every description of Draining, the Breeding, Rearing, and Fattening of all kinds of Stock, and the general Management of an Estate. Can produce the highest testimonials and references.—J. S., 5, Beaufort Terrace, Peckham Rye, Surrey, S.

BAILIFF and SHEPHERD.—Middle-age, married; has a thorough practical knowledge of Farming in all its branches. Can have unexceptionable character from present employer.—A. B., 111 A., Cheapside, London, E.C.

To the Nursery and Seed Trade.

SHOPMAN.—Age 23; first-class references.—W. W., *Gardeners' Chronicle* Office, W.C.

SHOPMAN.—Has had eight years' experience; understands the Seed Trade thoroughly, and has a fair knowledge of Plants, &c. Can give three years' good recommendation.—W. C., *Gardeners' Chronicle* Office, W.C.

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Bedsteads from	12s. 6d. to £20 0s. each.
Shower Baths, from	8s. 0d. to £ 6 0s. each.
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(All other kinds at the same rate).	
Pure Colza Oil	4s. per gallon.

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	£ s. d.	£ s. d.	£ s. d.	£ s. d.
12 Table Forks	1 13 0	2 0 0	2 4 0	2 10 0
12 Table Spoons	1 13 0	2 0 0	2 4 0	2 10 0
12 Dessert Forks	1 14 0	1 10 0	1 12 0	1 15 0
12 Dessert Spoons	1 14 0	1 10 0	1 12 0	1 15 0
12 Tea Spoons	0 16 0	1 0 0	1 2 0	1 5 0
6 Egg Spoons, gt. bowls..	0 10 0	0 12 0	0 12 0	0 13 6
2 Sauce Ladles	0 6 0	0 8 0	0 8 0	0 9 0
1 Gravy Spoon	0 6 6	0 9 0	0 10 0	0 11 0
2 Salt Spoons, gt. bowls..	0 3 4	0 4 0	0 4 0	0 4 6
1 Mustard Spoon, gt. bwl.	0 1 8	0 2 0	0 2 0	0 2 3
1 Pair of Sugar Tongs ..	0 2 6	0 3 6	0 3 6	0 4 0
1 Pair of Fish Carvers ..	1 4 0	1 10 0	1 10 0	1 10 0
1 Butter Knife	0 2 6	0 4 0	0 5 6	0 6 0
1 Soup Ladle	0 10 0	0 12 0	0 16 0	0 17 0
1 Sugar Sifter	0 3 3	0 4 6	0 4 6	0 5 0
Total	9 19 9	12 9 0	13 9 6	14 17 3

Any article to be had singly at the same prices. An oak chest to contain the above, and a relative number of knives, &c., 2*l.* 15*s.* Tea and coffee sets, dish covers and corner dishes, cruet and liqueur frames, &c., at proportionate prices. All kinds of replating done by the patent process.

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Japanned Deal Goods may be seen in complete suites of different colours, some of them light and ornamental, others of a plainer description. Suites of Stained Deal Goods, Polished Deal, Oak, and Walnut, are also set apart in separate rooms, so that customers are able to see the effect as they would have it in their own rooms. A Suite of very superior Gothic Furniture will generally be kept in stock, and from time to time new Furniture in various woods will be added.
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A very large stock of Bedding (HEAL & SON'S own make) is placed on the Bedsteads.
The stock of Mahogany goods for the better Bedrooms, and Japanned Goods for plain and Servant's use, is very large. The entire Stock is arranged in eight rooms, six of which are 100 feet long), and two large ground floors, the whole forming a complete an assortment of Bed Room Furniture as can possibly be desired.
Every attention is paid to the manufacture of the Bedding, and they have just erected large Workshops on the premises for the purpose, that the manufacture may be under their own care.
Their Bedding trade receives their constant and personal attention, every article being made on the Premises.
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The Gardeners' Chronicle Newspaper.

SATURDAY, NOVEMBER 12, 1864.

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"Journal of Horticulture" Office, 171, Fleet Street, London, E.C.

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This day is published, price £2 10s., the Third and concluding Part of Vol. XXIV. of the
TRANSACTIONS of the LINNEAN SOCIETY of LONDON.
Sold by LONGMAN & Co., Paternoster Row, E.C.; and by Mr. KIPPIST, at the Apartments of the Society, Burlington House, Piccadilly; of whom may be had all or any of the preceding Volumes.
The Fellows of the Society are requested to apply to Mr. KIPPIST for their Copies, between the hours of 10 and 4 o'clock. Complete sets of the first Twenty Volumes may be obtained at the Society's apartments by the Fellows, at the reduced price of £20.
The first Seven Volumes of the Society's 8vo JOURNAL are now complete, and may be purchased at the price of 12s. each for the Botanical Journal; or 8s. each for either the Zoological or Botanical Journal separately.

THE SUMMER of 1865, with Observations on the Summers of England, &c. By THOMAS DU BOULAY, Member of the British and Scottish Meteorological Societies. Will be published early in April next.
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CULTURAL DIRECTIONS for the ROSE; with select Lists of Sorts adapted to various circumstances and situations; and a Calendar of Operations to be performed during each month throughout the year. By JOHN CRANSTON, Nurseries, King's Acre, near Hereford. Second Edition, enlarged and improved.
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Third Edition, price 5s.,
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CASH ONLY.

DR. HOFMANN, F.R.S., will COMMENCE a COURSE of TEN LECTURES on CHEMISTRY, on FRIDAY, Nov. 18, at 8 P.M., to be continued on each succeeding Wednesday and Friday evenings at the same hour. Tickets for the whole Course may be had at the Royal School of Mines, Jermyn Street, price 5s.
TRENHAM REEKS, Registrar.

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Prompt Settlements.
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News of the Week.

THE Danish Rigsraad was opened at Copenhagen on Saturday. The Speech from the Throne deplored the unhappy result of the war and the hard conditions which the German Powers had imposed upon Denmark. The Treaty of Peace was read a first time in the Folkething on Tuesday, and was adopted on Wednesday by a majority of 75 to 21. All the deputies from Schleswig and from the enclaves which have been ceded by the treaty to Germany, voted against its adoption. The treaty was then sent up to the Landsthing, and was expected to be adopted by that body at a public sitting yesterday.

The *Moniteur* of Saturday published a despatch addressed by M. DROUYN DE LHUYS to the French Ambassador at Turin for the purpose of correcting what he calls the "erroneous impression" of the negotiations leading to the Franco-Italian Convention conveyed in the despatches of the Cavaliere DI NIGRA, the Italian Minister in Paris. It appears that Cavaliere DI NIGRA in his narrative of the negotiations which had been conducted by Count PEPOLI and himself on behalf of Italy, observed that the negotiators had received from their Government formal orders not to accept any conditions opposed to the "rights of the nation" and "national aspirations." M. DROUYN DE LHUYS complains that these terms, as repeated in the Italian Chambers and Italian journals, appeared to imply some secret design, and he therefore wishes it to be understood that Florence is not to be considered as a stage on the way to Rome, and that in the event of the withdrawal of the French troops leading to a spontaneous revolution at Rome, France retains her liberty of action, such a contingency not having been contemplated by the Convention. To this despatch the Italian Minister has replied that Italy as well as France reserves to herself entire liberty of action in the event of the outbreak of a revolution in Rome, and that the words "national aspirations" imply the employment of no means except those of civilization and progress, while they contemplate a reconciliation between Italy and the Papacy on the basis of a free Church in a free State. The publication of these despatches has created great interest in Paris, and it is currently reported that M. DROUYN DE LHUYS, having dissatisfied the Italians and failed to propitiate the clerical party, will retire from office and be succeeded by M. THOUVENEL.

The discussion of the Bill for the transfer of the capital to Florence commenced on Monday in the Italian Chamber of Deputies, and is still in progress.

The latest news from the United States informs us that General GRANT on the 27th ult. made a reconnaissance in force against General LEE's right, while General BUTLER simultaneously advanced against the left. The Confederates, who were fully prepared at all points, after an obstinate contest repulsed both attacks with the loss of several hundred killed and wounded, and took a number of prisoners. General GRANT lost 1500 killed and wounded, and General BUTLER's losses were still heavier. The accounts of the military movements in Georgia and Missouri are very confused. It is reported that General SHERMAN has evacuated Atlanta, and though the report is not confirmed, it is certain that his position is considered untenable, and that General HOOD is again threatening an advance into Tennessee. The defeat of General PRICE is not confirmed; and it is now said that he is merely retiring to Arkansas with the spoils of his late campaign in Missouri. Gen. FORREST is threatening Columbus and Paducah in Kentucky.

At a convention of the Governors of the Confederate States held at Augusta, Georgia, on the 17th ult., it was unanimously resolved to authorise Congress to place in the military service every able-bodied man, irrespective of colour. It is reported that in accordance with this resolution the Confederates will arm 300,000 negroes for the spring campaign. President DAVIS has made a speech at Columbia, South Carolina, in which he announced that General BEAUREGARD had gone to Georgia to aid General HOOD, and that with the forces over which they would have command, General SHERMAN'S escape from defeat or disgraceful retreat will be impossible. President DAVIS has appointed the 16th inst. as a day of thanksgiving for the late successes of the Confederate arms.

Home News.

THE COURT.—On Thursday the 3rd inst. the Queen, accompanied by Princess Helena and Prince Leopold, went to the Wellington College, and inspected the whole of the establishment. Her Majesty travelled from Windsor by special trains of the Great Western and South-Eastern Railways, and returned by the road. Princess Louisa went out driving. Prince Albert Victor also took a carriage drive. On Friday the Duchess of Cambridge arrived at the Castle on a visit to her Majesty. On Saturday morning the Queen walked and drove in the grounds, accompanied by Princess Beatrice. Princess Helena rode in the Riding School. Princess Louisa went out driving. The Judge Advocate General had an audience of the Queen. On Sunday morning the Queen, the Duchess of Cambridge, Princess Helena, Princess Beatrice, and Prince Leopold, attended Divine service in the private chapel. The Rev. C. Tarver officiated. In the afternoon the Duchess of Cambridge drove out in a carriage and four. The Duke of Cambridge and Earl Granville arrived at the Castle on a visit. On Monday morning the Queen walked and drove in the grounds, accompanied by Princess Beatrice. Princess Helena rode in the Riding School. The Duke of Cambridge and the Duchess of Cambridge left the Castle for London. Earl Granville also left the Castle. On Tuesday morning the Queen, accompanied by Princess Helena, walked and drove in the grounds. Princess Louisa went out driving. The Prince and Princess of Wales arrived at the Castle on a visit to Her Majesty. Earl de Grey and Ripon arrived on a visit. On Wednesday morning, being the birthday of the Prince of Wales, the band of the 2d Life Guards performed a selection of music in the quadrangle. The Queen, accompanied by the Princess of Wales and Princess Helena, drove out in a carriage and four. The Prince of Wales went out shooting. On Thursday morning the Queen, accompanied by the Princess of Wales, drove in the grounds. Princess Helena took a carriage drive. Princess Louisa went out driving. The Prince of Wales went out riding.

THE PRINCE AND PRINCESS OF WALES arrived at Marlborough House on Monday afternoon from their continental tour. After leaving Denmark, their Royal Highnesses visited the King and Queen of Hanover, the Prince and Princess Louis of Hesse, and the Count and Countess of Flanders at Brussels. On Sunday their Royal Highnesses arrived at Antwerp from Brussels, and embarked at an early hour on their return home. The Prince and Princess landed at Woolwich at 2 o'clock on Monday afternoon, and immediately proceeded to Marlborough House. The Duchess of Cambridge and the Duke of Cambridge visited their Royal Highnesses shortly after their arrival. On Tuesday the Prince and Princess left Marlborough House to pass a few days with her Majesty at Windsor Castle. On Wednesday, being the Prince's birthday, the shops of the royal tradesmen and several of the clubhouses and public institutions were illuminated. The Prince and Princess will leave Windsor on Tuesday for Knowsley, on a visit to the Earl and Countess of Derby, and will remain there till the following Saturday. During their stay, the Prince and Princess will visit Liverpool, and it is understood that Friday will be the day selected for the purpose.

THE ARMY.—The colonelcy of the 12th Foot, vacant by the death of General Bentinck, has been conferred on Lieut.-General Colvile; and the colonelcy of the 80th Foot, vacant by the death of General Robbins, has been conferred on Major-General Young.

THE IRON CLAD FLEET.—The Warrior, 40, iron-clad frigate, is ordered to be paid off on the 22d inst. Much surprise has been expressed at the Admiralty paying off a ship in such excellent condition, but it is supposed that they require her men for the Victoria screw three decker, the new flagship for the Mediterranean, for which there is great difficulty in obtaining men.

Foreign.

FRANCE.—The Emperor and Empress left St. Cloud on Monday for Compiègne. The King of the Belgians, accompanied by the Duke of Brabant and the Prince of Orange, left Paris on Thursday for Compiègne. The

Italian Minister, Signor Nigra, is among the guests invited to participate in the festivities at that place. The Papal Nuncio, Monsignore Chigi, was received by the Emperor and Empress at St. Cloud on Sunday. State Councillor Persil has been appointed Senator. M. Boudet, Minister of the Interior, has been nominated Grand Cross of the Legion of Honour. The *Moniteur* of Saturday published a long despatch from M. Drouyn de Lhuys, written with the view of correcting what he calls the "erroneous impression" of the negotiations leading to the Franco-Italian Convention conveyed in Cavaliere di Nigra's recent despatch. M. Drouyn de Lhuys maintains that Florence is not to be considered as a stage on the way to Rome, and points out that in the event of the withdrawal of the French troops leading to a spontaneous revolution at Rome, France retains her liberty of action, such a contingency not having been contemplated by the Convention. He refers to the terms "rights of the nation" and "national aspirations," which have so frequently been used in the Italian Parliament and the Italian press, as indicating "underhand ways among certain parties," and "aspirations at variance with the declared object of the Convention," and says that it is difficult to explain how Italian Royalty is to find itself some day at Rome when it seemingly forbids itself to go there. He declares that the moral means of which Italy has reserved to herself the use, consist solely in the forces of civilisation and progress; that the only aspirations which the Court of Turin can consider legitimate have for their object the reconciliation of Italy with the Papacy; that the transfer of the capital is a solemn pledge to France, and that to suppress the pledge would be to annul the contract. To this despatch Cavaliere di Nigra, the Italian Minister in Paris, has replied in a despatch stating that the Italian Ministers have done and said nothing to give rise to the supposition of underhand ways, that they have expressly reserved the national aspirations, and that in the event of the Papal Government being unable to subsist by itself, the two Governments would have full liberty of action upon either side. These sentiments have since been repeated in an enlarged form by General Della Marmora, the Italian Minister for Foreign Affairs, in a despatch referred to in our Italian news. The *Constitutionnel* of Thursday considers this despatch of General Della Marmora as a fresh proof of the good understanding between the French and Italian Governments. The diplomatic convention, regulating the sugar legislation, was signed in Paris on Tuesday by the representatives of England, France, Belgium, and Holland. — A double murder has been perpetrated this week at Boulogne. A man called Leduc, who had separated from his wife in France, had two illegitimate children by a woman in London, where he had been living as a waiter. He took these children to Boulogne in the steamer a few days since, and drowned them in the harbour. He then went to his wife's house, but finding that his clothes were wet, and hearing that two bodies of children had been found drowned, she charged him with the murder, upon which he absconded to a country village of which he was a native. He was traced and apprehended, and on being brought back to Boulogne he confessed the crime.

SPAIN.—The *Politica* of Friday states that Admiral Pareja is the bearer of an ultimatum to Peru, demanding from the Peruvian Government prompt and full satisfaction, and that if he does not obtain it the Spanish squadron is at once to take possession of the principal ports of the Republic, and to destroy its fleet. The municipal elections have terminated. They have resulted in the election of half of the candidates of the Progressista and half of those of the Moderate party. By a Royal decree published on Saturday the increase of pay conceded to the other troops is extended to the artillery, infantry, and the navy. Señor Bravo Murillo has published a pamphlet against the holders of the certificates of the Passive Debt, who, he says, have no right to provoke solemn declarations and promises on the part of the Government, as the Chambers have always rejected their exaggerated demands. The *Correspondencia* asserts that the Government will shortly introduce a new and more liberal press law. The British schooner Mermaid, from Cardiff to Ancona, was fired into a few days since from a Spanish battery at Ceuta, and sunk. The master and crew saved themselves by taking to their boats. The Spanish authorities require all vessels to show their colours when passing within range of the fortress, and the firing is attributed to neglect of this rule.

SWITZERLAND.—The trial of Dr. Hermann Demme and Madame Sophia Trumpy, accused of poisoning the husband of the latter, terminated on Saturday night, when the jury, after two hours deliberation, returned a verdict of Not Guilty.

DENMARK.—The President of the Council opened the Rigsraad on Saturday. The speech from the Throne deplored the unhappy result of the war waged against the great German Powers, and the hard conditions of peace which had been imposed upon Denmark. The speech expressed the King's hope that the Rigsraad would resign itself to the heavy misfortunes which have befallen the country, and said that his Majesty will shortly submit to that body a bill for making the necessary changes in the November Constitution. Immediately upon the meeting of the Rigsraad the treaty of peace was laid before the house by the Government. In the evening there was a private sitting of both houses which lasted until midnight. On Monday the Rigsraad held three sittings with closed doors. On Tuesday the Treaty was read a first time in a public sitting of the Folkething (Lower House) of the Rigsraad. After a very short debate it was unanimously resolved that it should be read a second time. The final vote was taken on Wednesday, when the treaty was approved by 75 to 21 votes. One member abstained from voting, and four others were absent. All the deputies from Schleswig and the *enclaves* ceded by the treaty to Germany voted against the adoption of the Treaty. The Bill was immediately sent up to the Landsthing (Uppper House) of the Rigsraad, in which the debate commenced on Thursday with closed doors, and was expected to be concluded yesterday in a public sitting. The Government will thus be enabled to forward the ratification to Vienna to-day.

AUSTRIA.—The official journals state that the scheme of a congress is again under discussion, and that confidential interviews on the subject have taken place between the representatives of some Courts. It is said that the King of the Belgians takes an interest in the success of the scheme, and that the principal difficulty is the position of Austria in the Italian question. A new State loan for 25,000,000 florins, bearing 5 per cent. interest, was officially announced on Wednesday. The issue price is fixed at 87. The following is said to be a correct summary of the contents of a despatch addressed to the Roman Government by the Austrian Cabinet, on the Franco-Italian Convention.

"The interests of Austria will not allow her to interfere in the affairs of Italy, and the Holy See must not reckon upon her assistance with respect to the stipulations of the Convention. The Government of the Pope, on the contrary, will act in conformity with its best interests in profiting by the two years' delay to make efficient arrangements for being able to protect itself at the end of that period."

VENETIA.—Official advices from Venice announce that an armed band of insurgents has been discovered on Mount Rauth, in Friuli. They fired a few shots, wounding three soldiers, and then disappeared. A band of about 50 men, probably not the same, entered Venzone on the 7th inst. At Ponteba, a large village on the road, they seized the post horses, and withdrew towards Carnia. Troops have been sent in pursuit.

ITALY.—General Della Marmora on Monday addressed a note to Cavaliere di Nigra, Italian Ambassador at Paris, in consequence of the publication of the despatch of M. Drouyn de Lhuys in the *Moniteur*. He says:—

"The Government repels the thought of ever having recourse to secret dealings, but has entire confidence in the action of civilisation and progress. Both powers may have their own opinion upon the consequences of this act, but this cannot be the subject of practical discussion from the moment that Italy affirms that if her tendencies are to be realised it shall never be by the violation of the treaty. Whatever may be the national aspirations, independently of the question of a strict execution of the Treaty, this is a ground on which the King's Government cannot place itself. The aspirations of a people belong to its national conscience, and cannot form the subject of an international discussion. Reconciliation between Italy and the Papacy has always been an object of the Government, and the Convention will help to attain it. As regards the meaning of the transfer of the capital, facts will speak for themselves. Ulterior events cannot be discussed between the two Governments. It is for events to solve the problem. Italy deems her honour concerned in continuing the policy of Count Cavour. M. Drouyn de Lhuys having taken the initiative in mentioning the possibility of a spontaneous revolution in Rome, and of the fall of the temporal power, Italy reserves, as France does, her liberty of action for such a case."

The report of the committee of the Chamber of Deputies on the transfer of the capital to Florence, presented at the re-assembling of the House on Thursday the 3d inst, stated that the principal object of the Convention was to put an end to the French occupation of Rome. The national aspirations, it said, would not be satisfied by the Convention, but it would prepare the way for their fulfilment by the force of unavoidable circumstances, while it constituted the Italians the guardians of the principle of non-intervention in reference to Rome. It rejected the doubt that that principle would not be carried out loyally, and stated that for the present the Convention might possibly cause an increase of the expenditure. The transfer of the capital, it said, was an act of home policy, and was the cause and not the object of the stipulations of the Convention. It further stated that the committee had had regard to the different positions of the contracting Governments, and believed every declaration of principle to be both perilous and useless. In conclusion it recommended the adoption of the Bill, as proposed by the Government. Signor Ferrari proposed that the Chamber should first discuss whether it was necessary to bring in the Bill for the approval of the Convention. After a short discussion the debate upon this previous question was adjourned, and Monday fixed for the discussion of the Bill for the transfer of the capital. In the sitting of Friday the Minister of Finance made his financial statement, according to which 200,000,000 lire were required for the public expenditure to the end of 1864. He said that he did not intend to propose any fresh loans until the financial position of Italy had considerably improved. He announced an immediate reduction of 60,000,000 lire in the public expenditure, 42,000,000 lire of which will be introduced in the Naval Department; and said that still greater reductions will be effected by means of the fundamental laws of the kingdom. To cover the deficit of 200 millions he proposed a Bill, to come into force prior to the 25th November, from which he expects an increase of 40,000,000 lire in the proceeds of the tobacco, salt, and other indirect taxes. He asked for [illegible] the Chamber to certain contracts in re[illegible] Crown property, whereby at least 40 m[illegible] once accrue to the Treasury. He [illegible] that the landed property tax to the [illegible] 124,000,000 lire, payable either in [illegible] coupons of the public debt, should [illegible] pated, and that authorisation to issue Treas[illegible] to the amount of 36,000,000 lire should be [illegible] him. Finally, he announced, amidst genera[illegible] all parts of the House, that a Bill would [illegible] cated to the Chambers, by which the King s[illegible] renounces three millions of his Civil List. [illegible] Bills were then submitted to the Chamb[illegible] Ministry. A Bill for the transfer in the [illegible] accounts of the sum of 1,067,000 lire of R[illegible] credit of the town of Turin, as indemnity [illegible] change of the capital from there to Florence; [illegible] the transfer of the Court of Cassation from [illegible] Turin in 1865; and a Bill to permit public [illegible] to establish their head offices in other places [illegible] capital. The Minister of Justice stated that [illegible] withdraw the Bill on ecclesiastical property [illegible] it before the House in another form. S[illegible] declared that the contract for the sale of [illegible] Railways had been accepted by the Ministry, [illegible] it would be difficult immediately to submit [illegible] the Chamber for approval, obstacles having [illegible] by the contractors on account of the transfer [illegible] capital. In the sitting of Monday some explan[illegible] were exchanged between Signori Minghetti and [illegible] relative to the financial statement. Signor [illegible] spoke upon the previous question of the [illegible] the transfer of the capital, maintaining the [illegible] sity for a special Bill for the approval [illegible] Convention, which would imply a territorial [illegible] in the State and a charge upon the [illegible] Several other members also spoke on the [illegible] tion. Signor Boggio commended the Min[illegible] the note they had despatched to Cavaliere di [illegible] He thought he saw some disagreement in the [illegible] tation of the different notes, and moved the [illegible] of the debate upon the Convention until [illegible] had been restored between them. Signor [illegible] supported the motion, and requested the Min[illegible] state whether the French Government accepted [illegible] Della Marmora's interpretation of the "national [illegible] General Della Marmora rejected the explanation [illegible] Boggio, who, having confounded notes and [illegible] formed a hasty judgment and departed from [illegible] The Minister positively confirmed Cavaliere di [illegible] Note of the 15th September, and recommended [illegible] Chamber to form a calm decision, carefully [illegible] passionately weighing the question. He stated [illegible] after the publication of the despatch of M. [illegible] Lhuys it was considered necessary to publish [illegible] Signor Boggio subsequently stated that he [illegible] press for a suspension of the debate on the Convention. In the sitting of Tuesday the debate on the transfer of the capital was resumed, when Signor Ferrari moved the previous question. The Minister of the Interior opposed the motion, affirming that no territorial change was implied by the Convention, nor any charge upon the finances. The Parliament, he said, was entirely free from any financial engagement respecting the Roman public debt. The Chamber then rejected the previous question and continued the debate on the transfer of the capital. Signor Miceli opposed the Convention as contrary to the national independence and the public right. Signor Visconti-Venosta stated what was the French and what the Italian policy in the Roman question. The Convention of the 15th September offered common bases for a loyal compromise between the two policies. He explained the clauses of the treaty, and stated that the reason of the transfer of the capital was a fact of home policy of which the Ministry took advantage to facilitate the negotiations. He described the character of the engagements taken and the reciprocal liberty of action reserved in case of unforeseen events, and said that the dignity and interest of Italy require the loyal execution of the treaty. By this great experiment the Government of the Pope would be restored to its normal condition, and he hoped that it would lead to a reconciliation between the Church and Italy. In the sitting of Wednesday, Signor Buoncompagni stated the grounds on which he was at first opposed to the Convention and the transfer of the capital. Considering, however, the almost unanimous wishes of Italy, he had deferred to public opinion by now voting in favour of the measures in question. He added that they must always proceed in unison with France, without sacrificing their policy to hers. They might be certain that France, once having left Rome, would return there no more. They should go to Rome at a distant period by means of civilisation, liberty, and justice. Signor Laporta opposed the Bill, considering it equivalent to a renunciation of Rome. In the sitting of Thursday Signor Lazzaro opposed the Bill. Signor Bufferio censured the tendency to Piedmontism. Signor Ferrari considered Rome for the capital as a [illegible] which could not be entered into at present. "We ought," he said, "to choose another city, such as Florence." By accepting the treaty with the transfer of the capital he considered he acted freely and [illegible] the sentiments and respected the dignity and interests of Italy. He said that every one would interpret the treaty after his own fashion. He himself was

opinion that intervention might take place at Rome. He ardently desired the maintenance of the alliance with France, a nation which afforded a generous example to the whole world. Let them have faith. He would go where destiny called them. He believed in the future of the Latin world, and considered the treaty with France as a warning to the Sovereign Pontiff. Signor Cassinis spoke against the Convention.—Great damage has been caused in Tuscany by heavy floods, which have broken up the railways at several points. The lower parts of Florence were inundated, houses and furniture were destroyed, and the Arno rose to the level of the parapets of the quays. The Czarewitch arrived at Turin on Tuesday evening *incognito*, alighting at the Hôtel de Florence, where he was visited on Wednesday morning by the Duke d'Aosta and Prince Carignan. On the same day the King paid a visit to the Czarewitch, who at once returned it.

RUSSIA.—Intelligence has just been received at St. Petersburg of the opening of the telegraph line from Irkutsk to Kiachta. News may now be sent to Pekin in four days' less time than formerly by the ordinary post.

THE DANUBIAN PRINCIPALITIES.—The elections to the General Councils have terminated, and are favourable to the Government. Prince Couza has sent in a bill to the Council of State relative to the introduction of civil registry and civil marriage into the Principalities. A Roman Catholic seminary has been established by the Government at Varry.

INDIA.—By the Bombay mail we have particulars of the disastrous hurricane which passed over Calcutta on the 5th October, causing immense destruction of life and property. Of more than 200 ships in the Hooghly it is said that only 10 were left at their moorings after the storm, the rest having been stranded or sunk. The destruction of property on land was also great, and there is every reason to fear that the loss of life has not been overrated. The Viceroy and Governor-General left Simla on the 8th Oct. and reached Lahore on the 14th. There was to be a large gathering of Asiatic nobility at the grand Vice-regal Durbar on the 18th. His Excellency was to formally inaugurate the opening of the Lahore and Mooltan section of the Punjaub Railway on the 19th. The Bhootan Field Force will be ready to move by the 15th November. It is not to be a general officer command, but to consist of two brigades, under Brigadier General Mulcaster, operating from the right, and Brigadier-General Dunsford co-operating subordinately on the left. The Ameer of Cabool, after settling Toorkistan, intends to march against Candahar. The Secretary of State has instructed the Governor-General to discourage the native princes from sending costly presents to her Majesty.

EGYPT.—Advices from Constantinople state that all difficulties respecting the transport through Egypt of British troops have been removed.

JAPAN.—The following are the details of the action fought at Simonosaki by the allied fleets on the 5th and 6th September. The fleet consisted of the Euryalus, Conqueror, Tartar, Barossa, Perseus, Argus, Coquette, and Bouncer (English); Semiramis, Tancrede, and Dupleix (French); Metalen-Cruz, Djambi, Medusa, and Amsterdam (Dutch); and the merchant steamer Takiang, bearing the American flag. The Tartar, Dupleix, Barossa, Leopard, Metalen, and Djambi were the first vessels to open fire, and were immediately answered vigorously by the Japanese. In three-quarters of an hour the first battery was silenced by the heavy guns of the squadron, and shortly afterwards a storming party was landed, which carried the battery in a gallant style, and spiked the guns, although it was defended by 800 men. On the following day the whole squadron engaged the remaining batteries, and silenced them one after another, after which another storming party was landed, which succeeded in carrying several, after hard fighting. In these storming parties a body of our Royal Marines peculiarly distinguished themselves, and carried an entrenched camp, with a loss of 10 killed and about 30 wounded. The Japanese used arrows, which caused very troublesome wounds, as the heads remained in the flesh after the shafts had been withdrawn. The Perseus got on shore, but was able to use her guns with effect notwithstanding. On the morning of the 7th the Tartar, Metalen, Djambi, and Dupleix opened fire on the forts at Hakusima; then the Japanese sent off a boat bearing a flag of truce, and having on board one of Nagato's subjects who had recently returned from England. He expressed his regret at having fired on foreign vessels, but asserted that he had been acting under orders from the Tycoon and Mikado. He said he was willing to submit to any conditions, and pay any indemnity the allied Admirals chose to impose. Parties were landed from the fleet, who completely demolished the batteries, destroying 60 guns of large calibre and a number of smaller ones, and taking others more valuable on board the fleet. The Inland Sea was then opened. The ships suffered little or no injury, and comparatively few casualties happened on board. The loss of the English was 15 killed and 40 wounded—among the latter Captain Alexander, of the Euryalus, in the foot, which it is feared will have to be amputated; Lieutenant Edwards and Mr. Atkinson, of the same vessel, slightly; Lieutenant Brownlow, of the Tartar, badly, in the leg; and Mr. Wingfield, of the same vessel, badly. The casualties among the French and Dutch are very trifling. The following Convention was subsequently agreed on:—

"1. Henceforward all ships of all countries passing through the Straits of Simonoseki shall be treated in a friendly manner. Ships shall be allowed to purchase coal, provisions, wood, and water, and every other necessary. As the harbour of Simonosaki is subject to violent winds and currents, people suffering from stress of weather shall be allowed to land without opposition. 2. Not only shall new forts not be built, but no repairs shall be made to the old ones, nor shall guns be mounted thereon. 3. Although the town of Simonosaki might have been partly burnt for having fired on foreign ships, it was left standing. A ransom shall be paid for this, and, in addition, the whole expenses of the expedition shall be defrayed by the Prince—the sum to be settled by the Foreign Minister at Yeddo. 4. This agreement being merely for the cessation of hostilities upon this occasion, it has nothing to do with questions affecting Chosiu, which have to be settled between the Japanese Government and the Ministers of foreign Powers."

NEW ZEALAND.—Advices from New Zealand continue satisfactory. No hostile movements by the rebel natives have taken place. Many of them are surrendering their arms.

UNITED STATES.—Generals Grant and Butler, on the 27th ult. made simultaneous reconnaissances against General Lee's right and left, but found the Confederates fully prepared against attack upon all points. After an obstinate contest the Federal Generals were repulsed with considerable loss—that of Grant being 1500 killed and wounded, and that of Butler being still heavier. On the 30th the Confederates penetrated into Grant's lines for some distance between the 2d and 5th corps, taking numerous prisoners. They afterwards charged the breastworks, but were repulsed. The Confederates are reported to be in strong force and reorganising in the Shenandoah Valley. Their cavalry occupy Fisher's Hill, their main force being at Newmarket. Sheridan is at Cedar Creek. Confederate accounts state that in the attack on the 19th, Early captured and brought off 18 guns and 1300 prisoners. The Federals subsequently captured 30 guns, which became blocked in the streets of Strasburg. The Confederates lost less than 1000 men. The Southern papers assert that arrangements are making for the Confederates to occupy and hold Atlanta. General Hood attacked Decatur, Alabama, but was repulsed with the loss of four guns and 100 prisoners. He has retreated westward along the south side of the Tennessee river. The rumour that Sherman has evacuated Atlanta is not confirmed. A large force under Forrest has been concentrated on the line of the Tennessee river to attack Paducah and Columbus, Kentucky. Gen. Beauregard has issued an address granting an amnesty to absent soldiers returning within 30 days. He says that he joins the army full of hope and confidence in the struggle, to strike a blow which shall bring success to the Southern army and a triumph to the cause of peace and to the country. The Northern journals report that General Price's army has been routed, dispersed, and driven below Fort Scott by General Pleasanton, with the loss of many thousand men and all his guns but one, while two of his generals and a large number of men were made prisoners; but the news is not believed, and Price is said to be retreating to Arkansas, with the spoils of his late occupation of Missouri. The bombardment of Charleston is progressing. A large fleet of Federal vessels has arrived there. Another large fleet is concentrating at Hampton Roads to attack Wilmington, from which port the Confederate cruisers Tallahassee and Edith have left for a raid upon Federal commerce. Resolutions passed by the Southern Governments declare their firm, unalterable purpose to maintain the rights of self-government, establish their independence, and uphold the State rights and sovereignty, or perish in the attempt. The Indiana Democratic and State committee have issued a manifesto stating that the Republican party committed stupendous and systematic frauds in the late election. A resolution has been introduced in the Alabama Legislature declaring if the Democratic party be successful, Alabama will be willing to negociate on the basis of the Chicago platform if other Southern States concur. The military authorities have arrested the Democratic soldiers' electioneering agents in Baltimore and Washington, and closed their offices, on a charge of falsely signing and forging the names of officers and soldiers entitled to vote. At the examination before the military committee one agent pleaded guilty. The forgery of soldiers' names by the New York State agents at Baltimore has been proved, and the military commission have condemned Donahue and Ferry, two of these agents, to imprisonment for life. At a mass meeting of merchants and bankers, held at Wall Street in favour of M'Clellan, resolutions were passed declaring that the financial and commercial interests demand a change in the administration. Lincoln's abolition policy was denounced. The war democracy have held a meeting in New York. General Dix read an address refusing to support the Chicago nominee or platform, and recommending the reorganisation of the democracy. General Dix has declared that the military will protect the purity of the polls against the intentions of rebel agents and deserters who are entering the frontier States from Canada. Governor Bramlett of Kentucky has issued a proclamation declaring that he will tolerate no military interference in the approaching elections, and directing the sheriffs to arrest the offenders if any be attempted. A serious political riot has taken place at Philadelphia during a democratic procession, and numerous arrests were made. The National Democratic Committee have issued an address stating that Mr. Lincoln's unscrupulous supporters are determined to employ for his re-election a system of violence and fraud unknown in American history. The committee urge the people to let nothing prevent their casting a democratic vote. The Democratic press assert that the charges are manufactured by the Administration, the agent having pleaded guilty in the interest of the Government. They also state that it is part of Mr. Lincoln's way of managing the campaign to elect himself. Mr. Wendell Phillips has made a speech asserting that he was not willing to trust Lincoln with the future of the country. He admitted that Lincoln was the only candidate in the field, but he must do the people's will. Proceedings have commenced at St. John's, Upper Canada, for the extradition of the Confederate raiders who were captured after the attack on St. Alban's, Vermont. The prisoners have now been removed to Montreal, when their examination will be concluded. Lieutenant Young has written a letter claiming that he is a Confederate commissioned officer, and commanded an expedition in Vermont to burn towns and villages, in retaliation for the devastation of the Shenandoah Valley. He says he violated no Canadian law, and was arrested and delivered to the British authorities on Canadian territory by armed American citizens. The military at Buffalo are under arms, being apprehensive of a raid from Canada. President Lincoln has declined by letter to interfere with Governor Johnson's proclamation, requiring a test oath from Presidential electors. Mr. Pendleton, the Democratic candidate for the Vice-Presidency, has asserted in a speech and by letter, that the Democratic party is pledged to the restoration of a constitutional union. President Lincoln has proclaimed the Nevada Territory a State of the Union. President Davis has made a speech, stating that the Federals had repulsed all attempts at negotiation, and that foreign intervention and foreign recognition were an *ignis fatuus*, and victory alone could achieve peace and independence. He repudiated contemptuously any negotiation by separate States. He says that General Beauregard had gone to Georgia to assist Hood, whose army had increased in strength and confidence since the fall of Atlanta, and he hoped that within thirty days Sherman would seek a crossing on the Tennessee River. President Davis has appointed the 16th inst. as a day of thanksgiving for recent successes of the Confederate arms.

CANADA.—Quebec despatches state that the Conference had decided on confederation, which will be submitted to the existing Parliament without direct reference to the public. The constitution of the Confederation will, probably, provide for the appointment of the Governor General, with Cabinet advisers, by the Crown. The Crown will also appoint the members of the Upper Chamber for life. The members of the Lower House will be elected for five years. The Governor General is to appoint the Lieutenant-Governors of the provinces.

BRAZILS.—The excitement caused by the seizure of the Florida at Bahia was so great that the people tore down the consular arms and broke them in pieces. Mr. Wilson, the United States Consul, went away in the Wachusetts without appointing any one to act in his absence. The Governor of Bahia has suspended official relations with the Consul until the Brazilian Government has deliberated on the facts, and in the meantime has forbidden the admission of the Wachusetts into any of the ports of the province.

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England, on Thursday, reduced their rate of discount from 9 per cent., at which it was fixed on the 8th of September, to 8 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90⅞ to 91⅛ for Money, and 90 to 89⅞ for Account; Three per Cents. Reduced, 89 to 88⅞; New Three per Cents., 89⅛ to 88⅜; Annuities, 1885, 14¼ to ⅜; India Five per Cent. Stock, 107 to 106½; Ditto for Account, 104¾ ex div.; Exchequer Bills, June, 5*s.* dis.—FOREIGN: Brazilian, 1863, 82½; Danish, 1864, 94; Egyptian, 95; Ditto, second issue, 95; Ditto 100*l.* Bonds, 95½; Greek, 23 to 22¾; Italian, 64⅜; Mexican, 28½; Ditto 1864, 26⅝ to ⅜; Portuguese, 1853, 47½; Ditto 1856, &c., 47¼; Russian, 1862, 87 ex div.; Spanish Passive, 30¾ to 31; Ditto Certificates, 13⅞ to 14⅛; Turkish, 1854, 90 to 89; Ditto 1862, 72¼; Ditto 100*l.* Bonds, 72¾; Venezuela, 19⅛ ex div.; Ditto, 1862, 51¼ ex div.; Ditto, 1864, 40¼ to 40.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,575,010	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	12,925,010
		Silver Bullion	—
	£27,575,010		£27,575,010

BANKING DEPARTMENT

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£9,972,512
Rest	3,334,487	Other Securities	19,506,244
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	4,560,836	Notes	7,184,915
Other Deposits	13,438,450	Gold and Silver Coin ..	722,260
Seven days and other bills	529,238		
	£37,386,011		£37,386,011

Nov. 10, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Nov.* 4.—BANKRUPTS—J. ADAMS, Oxford, Painter—T. K. ADKINS, Wallingford, Berkshire, Miller—S. AUSTEN, Brenchley, Kent, Beershop Keeper—W. BUNTING, Snettisham, Norfolk, Labourer—G. BROWN, jun., Bushey Heath, Hertfordshire, Smith—W. BRADLEY, Hackney Road, Boot Manufacturer—P. A. H. BREWER, late of Lower Thames Street, General Merchant—G. BRAZIER, Hastings, Sussex, Sawyer—J. BEBB, Dorrington, Shropshire, Farmer—W. COOPER, Bow, Devonshire, Farmer—J. CARTER, Weaverham, Cheshire, Grocer—H. CALLAWAY, Southsea, Portsea, Clerk—J. CURTIS, Hastings, Sussex, Auctioneer—F. CRANE, Whitwick, Leicestershire, Bricklayer—T. L. CATER, Stanley Street, New Cross, Grocer—H. CODD and G. R. LORIMER, Glasshouse Street, Regent Street, Cork Merchants—J. DENMAN, Broadbottom, Cheshire, Licensed Victualler—W. T. DAVEY, Avenue Terrace, Shepherd's Bush, Photographer—F. F. DORRELL and L. M. DORRELL, Palmerston Street, Battersea, Iron Founders—J. D. DEBEGER, Gane Place, New Road, Hammersmith, Plumber—J. EATON, Northampton, Commercial Clerk—R. FARR, Rochdale, Lancashire, Groom—T. FIELD, Scratage, near Hounslow, Brickmaker—J. FOSTER, Hastings, Sussex, Fruiterer—J. FRANCKLING, Little Britain, City, Brace Manufacturer—M. L. FEARNSIDE, Huddersfield, Yorkshire, Commission Agent—J. GREGORY, Readby, Lincolnshire, Grocer—E. J. GIBBS, Warrington Gardens, Maida Hill West, Schoolmaster—C. A. HEPBURNE, Acuba Villa, Lower Norwood, Tutor—E. HOLGATE and J. W. HOLGATE, Over Darwen, Lancashire, Upholsterers—J. HORWELL, Leather Lane, Holborn, Cheesemonger—R. HAIGH, Bury, Lancashire, Tobacconist—E. JONES, Sandbach, Cheshire, Millwright—R. JONES, Abergele, Denbighshire, Printer—T. JONES, Talley, Carmarthenshire, Publican—J. JAMES, Beaufort, Breconshire, Innkeeper—J. JACKSON, Capel Curig, Carnarvonshire, Waiter—W. JENNINGS, Oxford, Publican—J. S. KEDDLE, Uxbridge, Middlesex—M. W. LEAKE, Wingfield, Upper Norwood—EVAN LEWIS, Llandudno, Carnarvonshire, Builder—J. LIGHT, Portland Place, Wandsworth Road, Cheesemonger—A. LITTLE, Wigton, Cumberland, Innkeeper—W. MASON, Boston Spa, Yorkshire, Auctioneer—Z. M. MALLOCK, Paignton, Devonshire, Retired Colonel in the Bengal Royal Artillery—J. MURPHY, Manchester, Accountant—W. MORRIS, Wolverhampton, Railway Porter—J. J. MACKIE, Great Yarmouth, Norfolk, Photographic Artist—HENRY CORNELIUS McCARTER (sued also as H. C. McCARTER), Fetter Lane, Foreman to a Gas Fitter—J. MUNKS, Haddenham, Cambridgeshire, Tailor—S. NEWHAM, King's Lynn, Norfolk, Schoolmistress—A. NEGENBORN, Liverpool, Commission Merchant—E. NEWHAM, King's Lynn, Norfolk, Schoolmistress—W. OELRICHS, Bread Street, Cheapside, Manufacturer of Trimmings—T. OTTEWILL, late of Charlotte Terrace, Barnsbury Road, Islington Photographic Apparatus Maker—A. H. PALMER, Bath, Lieutenant—E. J. PALMER, Birmingham, Painter—S. PAGE, South Normanton, Derbyshire, Bricklayer—T. PICKARD and W. HINDLE, Leeds, Cloth Manufacturers—J. REDGATE, Alfreton, Derbyshire, Carpenter—J. ROBERTS, Margaret Street, Hackney Fields, Plumber—WILLIAM CHARLES READ, Gun Lane, Limehouse, Instructor in Gunnery—MARY RAPER, Leeds, Shopkeeper—WILLIAM J. SHARWOOD, Lower Thames Street, City, Wholesale Druggist—J. H. SOLLER, St. John Street Road, Clerkenwell, Watchmaker—R. SMITH, Chalk Farm Road, Camden Town, Builder—M. STAVELEY (sued and committed as M. STAVELY), George Street, Grosvenor Square, late Board and Lodginghouse Keeper—C. SMITH, Derby, Gardener—J. SMITH, Birmingham, Commercial Traveller—J. TAPPING, Chatham Street, Battersea Park, late Grocer—J. W. B. THOMAS, Llandilo, Carmarthenshire—W. THORPE, Selston, Nottinghamshire, Ironstone Getter and Miner—R. TODD, Regent Square, Gray's Inn Road, Lodginghouse Keeper—A. B. VAUGHAN, Liverpool, Commission Agent—J. WILLIAMS, Backchurch Lane, Whitechapel, Coffee House Keeper—J. WARDROP, Little Tower Street, City, Wine Merchant—H. T. WATSON, Goole, Yorkshire, Merchant—W. WALKER, North Malvern, Worcestershire, Chemist—T. WIGGLESWORTH and J. WIGGLESWORTH, Accrington, Lancashire, Cotton Manufacturers—W. WHITELEY, Pudsey, Yorkshire, Tanner—J. YEATES, Southport, Lancashire, Schoolmaster.

SCOTCH SEQUESTRATION.—R. BOYLE, Ayr, Potter.

TUESDAY: *Nov.* 8.—BANKRUPTS.—R. Atkin, Walthamstow, Essex, Farmer—N. W. AYLEN, Forest Hill, Lewisham, Greengrocer—J. B. ACEY, Kingston-upon-Hull, Yorkshire, Musicseller—J. BRAYSHAW and T. BRAYSHAW, Leeds, Yorkshire, Cloth Manufacturers—J. BLACKWOOD, Lincoln, Hawker—M. A. BOARD, Bristol, Cabinet Maker—J. BEESON, Ratcliffe-on-Trent, Nottinghamshire, Wood Dealer—F. M. BOOTH, Gildersome, near Leeds, Mule Spinner—J. BOWLES, Ely, Veterinary Surgeon—F. BALLS, jun., Stretton, Suffolk, Farmer—E. BARWELL, Witham, Essex, Butcher—C. J. BLACKHALL, St. John's Road, Hoxton, Journeyman Pianoforte Maker—T. H. COOK, Rochester Terrace, Westminster, Cheesemonger—J. COLES, Newport Pagnell, Buckinghamshire, Dealer in Hay and Straw—T. A. COMSTOCK, Museum Street, Bloomsbury, Manager for the Sale of Sewing Machines—R. COOKE, Shirley, Hampshire, Gentleman—R. CLARKE, West Winterslow, Wiltshire, Bootmaker—W. F. CROFTS, East Lane, Bermondsey, Commercial Clerk—R. CROOK, late of Liverpool Merchant—J. DEIGHTON, Thorner, Leeds, Builder—C. L. DEWSBURY, Cleveland Yard, King Street, St. James's, Livery Stable Keeper—I. H. EVANS, J. STUTTARD, and J. STANSFIELD, Nelson, Lancashire, Cotton Manufacturers—J. FENN ELSDON, Lime Street, Fenchurch Street, General Merchant—J. FAIREY, St. Neot's, Hampshire, Parchment Manufacturer—THOMAS JOHN FRANKLAND, and NOAH JOHN STRICKLAND, Castleton, Yorkshire, Wood Dealers—THOMAS GIBSON, West Hartlepool, Durham, Painter—JAMES GODIER, London Street, North Street, Whitechapel, Fish Salesman—J. V. GREEY, Sandwich, Kent, Painter and Plumber—T. GRIMES, Queen's Road, Bayswater, Stonemason—W. GREENWOOD and W. J. CARTWRIGHT, Rawfolds, Yorkshire, Cloth Merchants—H. HUGHES, Llanychaiarn, Cardiganshire, Labourer—W. HURLEY, Bristol, Grocer—H. HILL, T. SCHOFIELD, and E. SCHOFIELD, Oldham, Lancashire, Cotton Spinners—A. J. HALL, Old Broad Street, City, Stationer—J. HOLT, Prestwich-cum-Oldham, Lancashire—H. JOYNES, Leicester, Dyer—G. JOHNSON, St. Ann's Road, Notting Hill, Commission Agent—J. B. JONES, Upper Berkeley Street West, Shirt Tailor—J. KITSON, Bradford, Mechanic—J. KIPPAX, Habergham Eaves, Lancashire, Cotton Manufacturer—W. J. KERVEN, Arlington Street, Cornwall Road, Brixton Hill, Carpenter—T. MORRIS, of Daventry, Northamptonshire, Commercial Clerk—J. W. MARSDEN, Bermondsey Street, Assistant to a Fishmonger—J. MANNING, Birmingham, Tailor—J. MILLS, Hanley, Staffordshire, Brickmaker—S. MARRIOTT, Greenwich, Blacksmith—W. T. NIXON, Sheerness, Kent, Stationer—D. ORCHARD, Ryde, Hampshire, Lodging-house Keeper—G. POWELL, Cranmer Terrace, Cranmer Road, Brixton, Commercial Traveller—G. PAYNE, Holloway Road, Islington, Corn Chandler—G. PROFFIT, Monks Coppenhall, Cheshire, Brickmaker—J. E. PORTER, Goole, Yorkshire, Woollen Draper—W. POOL, Sharnbrook, Bedfordshire, Farmer—B. REES, Swansea, Glamorganshire, Wheelwright—J. ROBINSON, Manchester, Commission Agent—FRANCIS GEORGE SHERRINGTON, New Church Street, Marylebone Pastrycook—C. SMITH, Queen's Road East, Chelsea, Furniture Broker—J. P. SANDLE, West Tilbury, Essex, Farmer—E. ST. ALBYN, Hercules Buildings, Lambeth, and W. BARRATT, Lambeth Road, Bottled Beer Merchants—C. STATES, Norwich, Hotel Keeper—J. SPELLER, Beauchamp Roothing, Essex, Hay Carter—T. SEVERS, Stockton upon Tees, Durham, Farmer—D. SALE, Devonshire Street, Queen's Square, Bloomsbury, Builder—J. STRANGE, Purton, Wiltshire, Boarding House Keeper—T. TRIBE, Sutton, Builder—W. THOMAS, Redruth, Cornwall, Farmer—W. TYLER, Aslockton, Nottinghamshire, Wheelwright—J. TURNER, Portsea, Hampshire, Licensed Eating House Keeper—E. TOWNSEND, Brighton, Sussex, News Agent—E. TAYLOR, Salford, Lancashire, Machinist—J. H. WILKIN, Hadleigh, Suffolk, Grocer—W. WILES, Stratford, Essex, Bottled Beer Merchant—G. WHITE, Birkenhead, Tailor—F. G. WHITE, Taunton, Somersetshire, Brewer—J. WOOD, Monks Coppenhall, Cheshire, late Beerhouse Keeper—J. WAKEFIELD, Bristol, Beerhouse Keeper—R. WALLHEAD, North Collingham, Nottinghamshire, Fruiterer—R. WILLIAMS, Llandudno, Carnarvonshire, Lodging House Keeper—R. WILLIAMS, Everton, Liverpool, Joiner.

SCOTCH SEQUESTRATIONS—W. BOYD, Glasgow, late Tinsmith—A. CAMPBELL, Greenock, Merchant—A. and G. FORREST and Co., Fisherrow, Mid-Lothian, Engineers—W. FULTON and Son, Glasgow, Ham Curers—G. KNOWLES, Edinburgh, Builder.

Metropolis and its Vicinity.

THE NEW LORD MAYOR.—On Tuesday Alderman Hale, the new Lord Mayor, was publicly sworn into office in Guildhall, in the presence of the retiring Lord Mayor, the Court of Aldermen, the principal officers of the Corporation, and many of the citizens. On Wednesday, being Lord Mayor's day, he was escorted from Guildhall to Westminster according to custom, and presented to the Barons of the Court of Exchequer. The procession left Guildhall at half-past eleven, passing through King Street, Cheapside, St. Martin's-le-Grand, Aldersgate Street, Jewin Street, Redcross Street, Finsbury Circus, London Wall, Moorgate Street, Princes Street, King William Street, Cannon Street, St. Paul's Churchyard, Ludgate Hill, Fleet Street, Temple Bar, the Strand and Charing Cross, to Westminster Hall. It included the boys of the Marine Society, the bands of the London Militia, the Society for the Protection of Life from Fire, the London Rifle Brigade, the Grenadier Guards, the Artillery Company, and the mounted band of the 1st Life Guards. The Tallow Chandlers' Company (of which the new Lord Mayor is a member) attended in a number of carriages, accompanied by a military band. There were also six knights in armour, each attended by two esquires in appropriate costume, and an unusually large display of the flags and banners of the various livery companies, the rest of the procession being made up of the usual official personages, aldermen, sheriffs, City officers, late and new Lord Mayor, Lady Mayoress, and a military guard of honour from the 13th Hussars. At the Banquet in Guildhall in the evening the principal speakers were the Lord Chancellor, Lord Palmerston, Lord Brougham, the Chancellor of the Exchequer, and M. Berryer. In returning thanks for her Majesty's Ministers, Lord Palmerston said:—

"It has been the practice of those who have had like myself to address the great assemblages met within these walls upon occasions like this to have to tell them something with regard to public affairs which might excite their interest, or perhaps be unknown to those who heard it. That, unfortunately, is not my lot upon the present occasion. Nothing can be more dull, nothing could be less calculated to excite interest in hearers than to tell them Europe is peaceful; that we anticipate no event which should disturb the general tranquillity of this part of the world; and that this country is in a state of progressive improvement and prosperity. But such is the statement which I have this evening to make. There is, indeed, one unfortunate exception to that general prosperity. There is a certain renewal of distress in part of our manufacturing population. I trust that that renewal arises from those vicissitudes to which great commercial transactions are liable—that it arises from those fluctuations of value and those uncertainties of calculation to which commercial countries must from time to time be subject, and that it is not any indication of any failure in the resources and future prosperity of the country. With regard to things abroad, I have nothing to say about Europe except that it is quiet, and we hope it will continue so. Events have occurred in the Eastern Seas by which we hope that the commercial transactions of Europe with Japan will be placed on a more safe and satisfactory footing than that upon which they have hitherto stood. We are glad also to know that in that vast empire of China, containing, as has been stated, one-third of the human race, our relations with the Government are greatly improved, and there is a fair prospect that the nations of Europe will enlarge from year to year their valuable commercial intercourse with that great and productive and most populous empire. There is one dark spot in the picture which the affairs of the world present. That dark spot lies on the other side of the Atlantic. We grieve, and every man of right mind must grieve, that that bloody and disastrous war which broke out three years ago among the kindred nations of the northern part of America still rages—still lays waste the fertile plains of that continent, still bedews with the blood of its people those forests and tracts of territory which ought to be cultivated and become the source of wealth, of pleasure, and of happiness to mankind. We may trust that human nature will not long permit that deadly and disastrous strife to continue; that the contending parties, within some period not remote, will find it better to be reconciled than to fight, and that those disputes which have bedewed that continent with blood will be settled by amicable arrangement between themselves. The beginning of that strife was expected to be attended in this country with the most disastrous results to our manufactures. These alarms have been found to be groundless. At all events, out of evil may come some good; and I trust that in future our sources of supply will be spread over a great portion of the globe, and that we shall no longer be dependent upon any one country for those materials which are so essential for the industry, the wealth, and prosperity of a great part of the population of the country. I congratulate you, my Lord Mayor, on the present occasion, upon the number of distinguished guests you have invited to your table. You have two men here present, eminent in their respective countries for their great intellectual attainments and for the services which they have rendered to mankind. The one is your fellow countryman; the other a native of that great nation which lies but a short distance from our shores. It is needless that I should say that the first whom I allude to is a man well known to this city as to all the country—I mean Lord Brougham—a man who has distinguished himself in every career of intellectual display, whether as an advocate most eloquent and successful, whether as a Parliamentary orator with eloquence and power never exceeded, whether as having distinguished himself in literature, whether as having trodden successfully all the various paths of science, or whether, not content with his own attainments, but anxious to spread the blessings of knowledge and instruction throughout the land, the promoter of the diffusion of knowledge and the education of all classes of the community. But you have also a most distinguished foreigner present—you have M. Berryer here, a man who has attained great eminence, the greatest eminence in his own country, whose name is known throughout all the nations of Europe, unrivalled in eloquence at the Bar, respected and esteemed for that dignity of character, for that elevation of mind, for that nobleness of sentiment which are essential when coupled with eloquence and talent to make the perfection of a legal or of any other character. I am glad that I have had the opportunity of doing homage to the talent and ability of France by your inviting to your table the man who is so worthy a representative of the intellect and, I would say, of the patriotism of his country. I trust that his visit to England—that this banquet will add another link to that bond of friendship which ought to unite, and which I trust does unite, two nations neighbouring to each other—nations who are worthy of each other—who stand foremost in the civilisation of the world—who are capable of inflicting on each other enormous injury as enemies, but who are able on the other hand to confer upon each other the greatest benefits as friends.'

M. Berryer, in returning thanks for the toast of his health, spoke as follows:—

"Milord Maire, Milords, Mesdames, Messieurs,—Je voudrais pouvoir vous remercier dignement de la faveur insigne qui m'a été accordée d'être admis dans cette solennelle et majestueuse assemblée. Je ne puis recevoir en ma personne et accepter pour moi-même les paroles bienveillantes et flatteuses que vous venez de faire entendre, et qui ont été développées par Lord Palmerston—avec une bonne grâce généreuse de la part d'un esprit aussi distingué que le sien; et je ne saurais mieux vous exprimer mes remercîments qu'en vous disant avec sincérité quelle admiration j'éprouve devant cette fidèle conservation des vieilles coutumes nationales. Heureuse la nation qui sait garder ainsi la tradition des vieux pères, et jusqu'à les usages qui peuvent paraître de peu d'importance, mais qui font revivre les ancêtres par une sorte de coexistence avec les générations qui leur succèdent; antiques souvenirs qui deviennent la base solide des progrès, des améliorations que les temps réclament. Il n'est pas de spectacle qui parle plus hautement à l'esprit, et qui émeuve plus les cœurs que celui que nous voyons en ce moment, et pour les yeux qui le contemplent il en est qui seraient bientôt remplis des larmes du regret. Je me livrerais ici à de trop pénibles reflexions, en voyant à la fois, maintenues à travers les siècles, la personne d'une reine bien aimée, l'autorité Royale respectée, et respectueuse elle-même de toutes la nation; près du trône ce grand corps [illegible] Chambre des Lords, où vivent, et les dignes [illegible] qui ont fait jadis la gloire de ce pays, et les hommes qui se sont illustrés par les grands services des [illegible] gences au sein d'une nation éclairée. Plus loin des Communes, composée d'hommes [illegible] représentants des interêts et des volontés d'un [illegible] ment et intelligemment interrogé; et cette grande municipale dont vous êtes, Milord Maire, le [illegible] able chef, et qui, avec une majestueuse autorité et indépendance, maintient les anciens droits et [illegible] lèges de cette antique cité. Ne vous étonnez pas, M. impressions pénibles que subit en ce moment l'honneur de parler devant vous. . . . Mais je suis en dehors de ma patrie, et je m'arrête, je salue, Milord, et je vous remercie."

THE BAR DINNER TO M. BERRYER.—On Tuesday evening M. Berryer, the illustrious French [illegible] and statesman, who arrived in England on Saturday a visit to Lord Brougham, was entertained by the of England at a sumptuous banquet in the Hall of the Middle Temple. More than 400 guests, including the leading members of the Bar, sat down to dinner, and had there been sufficient accommodation about 100 more would have been presents, whose applications for tickets the committee were obliged to refuse. The Attorney-General took the chair, and at the [illegible] on his right and left were M. Berryer, M. Dupin (the bâtonnier of the French Bar), Lord Brougham, Lord Kingsdown, Lord Chief Justice Cockburn, Lord Chancellor of the Exchequer, Lord Justice Knight Bruce, Vice-Chancellor Wood, Vice-Chancellor Stuart, Baron Martin, Baron Pigott, Baron Bramwell, Justice Blackburn, Justice Byles, Justice Mellor, the Solicitor-General, Mr. Walpole, M.P.; Mr. Rolt, M.P.; Mr. Kelly, M.P.; Sir E. Ryan, Sir E. Wilmot, Sir Alexander, Mr. Ingham, M.P.; Mr. Roebuck, M.P.; Mr. M. Smith, M.P; Mr. Ewart, M.P.; Sir H. Cairns, M.P.; Mr. Stuart Wortley, Recorder of London, the Common Serjeant, Samuel Warren, Dr. Twiss, Dr. Deane, Peacocke, M.P.; Mr. Locke, M.P.; The Hon. Denman, M.P.; Mr. D. Seymour, M.P.; Mr. Pope, M.P.; Mr. Phinn, Q.C.; the Judge-Advocate General, Mr. Erle, Q.C.; Serjeant Parry, and Serjeant Ballantine. The general company at the lower tables was arranged according to their seniority, and altogether there has not been such a gathering of the legal profession in the memory of the oldest member. After the health of the Queen, the Prince and Princess of Wales and the Emperor of the French, the Attorney-General called upon the company to do themselves the honour of drinking the health of the illustrious citizen, the distinguished patriot, the great orator, and the unrivalled advocate whom they had the *honour of* [illegible] among them that evening. He described in detail the brilliant career of M. Berryer as a lawyer and statesman, and said that while he remained always faithful to his political principles, he had raised his voice in favour of moderation and justice when his party was triumphant, and had shown his impartiality and sympathy for misfortune of every kind by becoming in succession the advocate of Marshal Ney, Lamennais, Chateaubriand, the present Emperor of the French, and the Count de Montalembert. The toast was drunk with loud and continued cheering, and in reply, M. Berryer spoke as follows:—

"Vous me croirez quand je vous dirai que je suis profondément ému à l'aspect de cette imposante et presque fraternelle réception. Je me vois accueilli au milieu de la grande [illegible] Angleterre; vous ne vous étonnerez pas qu'il y ait [illegible] dans ma manière d'exprimer mes remercîments. [illegible] Monsieur l'Attorney-Général, je vous félicitais et je [illegible] grand et noble pays de voir l'Attorney-Général (spectacle pour nous) déployer un zèle aussi éclairé que sage à seconder les associations qui ont pour objet de perfectionner la loi. Aujourd'hui, comme avocat, je me sens ému de voir parler, comme chef du barreau, au nom des [illegible] Grand et beau spectacle, qui me rappelle que telle est la coutume de mon pays quand les Procureurs-Généraux et Avocats-Généraux s'appelaient eux-mêmes les généraux avocats. En me parlant au nom du barreau Anglais, daignez me complimenter sur les travaux de ma vie. J'avoue que je me sens humilié de ces compliments [illegible] je me rappelle ce que furent les avocats Anglais qui m'ont honoré de leur amitié; ce que fut [illegible] Lyndhurst, que nous pleurons tous, et cet autre grand homme qui a voulu m'initier à toutes les grandeurs de ce pays—ce noble propagateur de tous les progrès de toutes les institutions libérales même dans cette Angleterre, ce grand homme que je salue, Lord Brougham. Après 50 ans de travaux j'ai reçu de mes confrères de France un témoignage de fraternelle sympathie. Mais ici, au milieu des miens. J'étais soutenu par cinquante années de relations amicales. Encore une fois, j'étais auprès [illegible] mais près de vous je ne saurais dire ce que je sens. [illegible] moi dire ce que j'éprouve en ce moment; il me semble que c'est la voix de la postérité que j'entends tomber de [illegible] Il y a une pensée plus féconde pour l'avenir qu'[illegible] rendu à un seul homme. Il y a l'alliance des barreaux des deux nations les plus civilisées du monde. J'ai [illegible] toutes les cours de justice de votre pays, à toutes [illegible] tions judiciaires, j'ai été frappé de la situation qui est faite au barreau. Rien ne pouvait plus me toucher que ces [illegible] familiers entre le juge et l'avocat. Cela prouve à [illegible] l'attention qui lui est accordée, et j'y vois une [illegible] le sentiment d'indépendance qui doit appartenir [illegible] noble profession. Je fais des vœux ardents pour [illegible] ance des deux barreaux vienne à se cimenter [illegible] pouvons en France avoir de ces réunions que la [illegible] dans ce pays; mais nous pouvons nous mettre en [illegible] cation les uns avec les autres, et de ces communications naîtra, je l'espère, l'union des intelligences. Le barreau Français n'a pas, comme le barreau Anglais, [illegible] hommes à toutes les situations de la vie politique. Au milieu de nos révolutions, les hommes qui se respectent n'ont pas voulu accepter d'emplois. Le barreau est resté [illegible] ceux qui, froissés dans leurs convictions, n'ont pas fléchir. On comte parmi eux les hommes les plus [illegible] Nous possédons le libre échange; mais il ne faut pas [illegible]

[illegible] à l'échange de scieries et des cotonnades ; il faut que ce [illegible] échange des idées. Vous pourrez trouver chez [illegible] de bonnes à prendre. Nous rencontrons [illegible] des écrivains instruits, éclairés ; une presse puissante, [illegible] ne connaissons pas. Je vote pour l'alliance des deux [illegible] et je prie mon collègue de seconder mon vote."

The Attorney-General next proposed "the health of M. Desmarest and the Bar of France." In returning thanks, M. Desmarest said:—

"Je suis ému quand je me lève pour répondre au toast si [illegible] et si affectueux porté au barreau de France. L'union [illegible] deux barreaux a été le rêve de mon intelligence. [illegible] considère les choses du monde (même après un [illegible] aussi splendide) il est impossible de méconnaître [illegible] monde deux influences, la force et la justice. Je [illegible] pas sure de mal de la force ; quant à la justice, c'est [illegible] d'en dire du bien, devant votre gloire présente et [illegible] gloire ancienne ; permettez-moi d'ajouter, en [illegible] de ces deux porte-étendards du droit et de la justice, [illegible] et M. Berryer. Il existe une grande [illegible] dans leurs caractères. Tous deux ils ont porté bien [illegible] intellectuelle ; tous deux ils ont brillé dans les [illegible] publiques ; tous deux, enfin, sont membres de [illegible] Française. J'avoue que je serais troublé si [illegible] à apporter ici que le tribut de ma seule [illegible] ignorance. Mais aussitôt que j'ai été informé de votre [illegible] invitation, j'ai profité de ces réunions légales [illegible] en France pour dire à nos avocats l'honneur [illegible] fait. Tous, jeunes et vieux, m'ont [illegible], "Allez en Angleterre." Je n'ai pas eu le [illegible] consulter les membres de notre barreau de [illegible], mais tous m'auraient tenu le même langage—tous. [illegible] la grande image du monde judiciaire de France donnant [illegible] au monde judiciaire d'Angleterre, degré préliminaire [illegible] pour mener entre nous une alliance plus intime, selon la belle [illegible] de celui qui devrait être notre bâtonnier perpétuel, et qui [illegible] toujours notre bâtonnier moral. Messieurs, permettez-moi [illegible] dire mes chers confrères, vous nous avez donné l'exemple, [illegible] certain qu'il sera suivi. Un de vos hommes d'état, [illegible] notre Chancelier de l'Echiquier, disait dans une circonstance [illegible] avec cette incomparable éloquence qui rappelle les [illegible] jours de l'antiquité, que, dans le temps où nous vivons, [illegible] progrès de la civilisation devrait s'accomplir par des moyens [illegible] plus doux que dans les temps passés. Ces paroles, qui con[illegible] bien des difficultés, ont trouvé de l'écho en France. Je [illegible] avec vous un traité d'alliance qui servira à la conquête [illegible] pacifique du progrès."

M. Rodot also returned thanks on behalf of the junior Bar of France, The other toasts were acknowledged by Lord Brougham, Lord Chief Justice Cockburn, Lord Kingsdown, the Chancellor of the Exchequer, Sir Fitzroy Kelly and the Lord Justice Knight Bruce. M. Berryer left London yesterday morning for Paris, accompanied by Lord Brougham, M. Desmarest and M. Rodot. Owing to pressing professional engagements, he was unable to prolong his stay in England.

NORTH LONDON INDUSTRIAL EXHIBITION.—The Industrial Exhibition of Working Men which has been opened at the Agricultural Hall, Islington, for the last three weeks, was closed on Monday, when the Chancellor of the Exchequer delivered an address on the rights, duties, and dignity of labour. The Exhibition has been most successful, having been visited by about 250,000 persons, and the proceeds have not only been enough to pay all expenses, but to leave a surplus of more than 1000*l.* for future exhibitions. Another gratifying fact in connection with the Exhibition is that not a single article has been stolen or injured, and no single police case of any kind has arisen from it. The names of the successful candidates for prizes will be announced in the course of a few days, and the prizes will be publicly awarded by the Earl of Shaftesbury in January. The following is an extract from Mr. Gladstone's address:—

"No person can, even as a contemporary observer, reflect upon the recent history of this country without perceiving that it is fraught with the promise of most important results, not only to the community as a community, but particularly to the labouring classes, and the greatest lesson which our recent history ought to teach those classes—the great lesson which I will presume to say it has taught them, and is teaching them, after a dependence and thankfulness to the Almighty for the gifts and opportunities they enjoy, is the lesson of self-reliance. Now, I believe it is not possible in a well-organised society that any one class should make essential progress in any way except through its own exertions. I know—I trust I do not forget—that there are duties of class towards class, as there are duties of the individual man towards his fellow-man. But the duty performed by one class towards another, and especially by the higher towards the humbler classes, will be found generally to consist in the mitigation, possibly the removal, but more frequently the mitigation, of evils and abuses of a gross and galling nature. But the mere mitigation of abuses will never give energy and dignity of character to a class, and especially to the great labouring classes of the community. It is upon themselves they must depend in order to exhibit in the face of their fellow-countrymen those characteristics which constitute the true basis of greatness. I know that it is too true that the advance of civilisation and the improvements which have been made in our laws and institutions do not and cannot be said as yet to have touched the entire mass of the community. There are still those who are said to belong to the 'dangerous classes.' There are still those who, in much larger numbers, are said, and with truth are said, to belong to the helpless classes: those upon whom illness and bereavements fall, and not only such, but even whole classes of persons, particularly unmarried females, who, under the conditions of modern society, are in a social position still beset with difficulties [illegible] bulk of the labouring population in the great towns of [illegible] country, and particularly in this vast metropolis, consists [illegible] who being dependent upon their own labour have the means of making their labour as a general rule effective for their subsistence, even for their comfort, and the comfort of their wives and families. Now, much has been done by good, honest, and wise legislation towards setting free the industry of the labouring man and enabling him to carry that best and almost the only commodity which he can possess to the best market it can command. I am far from thinking that Parliament has as yet done all in that respect which we may reasonably hope for; but perhaps it would be true—I believe it would be true—to say we cannot look again for such vast and [illegible] improvements of the law, for such large and beneficial revolution in the condition of the labouring classes of this country at any future time as has been brought about within the last 20 or 25 years, partly by the progress of new gigantic and most useful inventions, and partly by a wise legislation in Parliament. Therefore, ladies and gentlemen, and you, my friends, whom I address in such numbers, of the working-classes, bear with me when I say that it is upon yourselves you must depend. If you are looking for improvement in your state, if you are looking for a larger admission to the direct rights of citizenship, if you are looking for the increase of the comforts of life, if you are looking to be able to make better provision for the education of your children, if you are looking to the making provision for the contingency of your sudden removal—for each and for all of those things, depend upon it that, under the favour of Almighty God, it is upon yourselves you must rely. And, therefore, ladies and gentlemen, it is that I cordially and sincerely congratulate you upon an Exhibition such as that we have witnessed here. A sentiment of admiration not unmingled with surprise will, I think, possess the mind of the impartial observer when he comes within these walls and sees, or has seen, the nature of the works they contain. We see here an evidence of the growth of the labouring class. I must say that in one point of view an interest attaches to what we see within this Agricultural Hall such as never attached to the more gorgeous Exhibitions of 1851 and 1862. Those great Exhibitions and their promoters will have reason to reckon among the many beneficial results of these Exhibitions the fact that without doubt they gave the first suggestion for the creation of a spectacle such as we now behold. But in these great Exhibitions we saw what the wealth of the world could do, we saw what were the resources of skill and industry, aided by the profuse employment of capital. But here we have drawn upon no such resources of capital. We see here as it were in its first formation the efforts of British labour, and we have reason to congratulate the country first of all for the possession of such skill as is here displayed; and, secondly, upon the disposition to use for such healthful and beneficial purposes the scanty leisure afforded after the hours of toil and the remaining energies which the beneficial exercise of labour has left unexhausted. As I have said, it is the property of these exhibitions to open before us a long vista in the future, as well as to supply us with most interesting suggestions for the present. But I see also in them a manifestation of the desire of the labouring classes to play out honestly and in the most conciliatory spirit the game of life. The labouring class, like every other class, has had its lessons to learn. It has had to learn how to bear the reverses of fortune, and how that lesson has been learnt the recent history of Lancashire will tell to our posterity. But the labouring class has also had to learn a lesson—I venture to say a still more difficult one to learn—the lesson of respecting, under whatever pressure, the rights, the independence, and freedom of choice of a minority of their own body. But that is a lesson with regard to which I ardently hope—nay, I confidently believe—great progress has been made. Sure I am that if the minds of the operative class be set upon a permanent improvement in the condition of its members, speaking from what I see within this Hall, I say they are walking in the right path. Let them show before their fellow-countrymen the gifts which they possess; let them continue to exhibit in every relation of life that obedience to law, nay, that love of law which they have shown within these walls; let them carry home more and more to the minds of every class of the community the conviction that we of this country are all one in heart, one in hope, one in desire, one in interest. Let them take for their motto the union and harmony of all classes one with another, and I am confident they will find that whatever improvements they may think they have a right to expect at the hands of those who are invested with the privilege of governing them, they may rest confident in the belief that such improvements will never be long or unduly delayed. It is with an earnest mind and heart I express to you a fervent desire that this exhibition, and all that has belonged to this exhibition, may be productive of happy results, not only in the present but also in future years. My concluding duty is to declare to you that this exhibition is closed, but when I say that it is closed I do not speak of it as of a thing dead and departed. If it be closed, it is closed like the year, which, when it dies away, by the very process of its dying makes preparation for another spring. It is closed like the corn which we drop into the earth, and which is placed there in order that its death may be the precursor of renovated life and of renewed fertility. That, happily, is not mere anticipation. Already there are indications upon every side that the example which you have set is a fruitful example. The example which was set to you some six months ago has been fruitful in the production of your exhibition, and the example you have set has already led to such results that I could give you a list of towns and places in which it is contemplated to hold similar exhibitions. Let us not, therefore, in speaking of this exhibition as having reached its natural termination in the sense that the doors of the hall will be closed, and the objects here collected will be dispersed—let us not forget that it still retains its moral force, and still promises to be, as we hope it will be, the happy parent of many children—of scenes like this, and, if possible, exceeding this It will help to confirm in the minds of the labouring community the useful lesson which they have already learnt, and will likewise prove to be an effective means of leading them onward in the path, not of illusory and unsubstantial, but of true and real progress and healthful and Christian civilization."

METROPOLITAN BOARD OF WORKS.—At the last meeting of the Board of Works, Major Lyon asked who bore the expense of the deputation to Carlisle and Edinburgh, to inspect the drainage works of those places, and whether the Board paid for those members who stayed down there for their own pleasure. The Chairman said that the expense of the deputation down and back was borne by the Board, but the arrangement that was made was that there should be just sufficient time allowed to inspect the works, and return, and that those who chose to stay longer were to pay all extra expenses. Several members had availed themselves of the opportunity to take a little pleasure, and had paid the extra money for it. Mr. Crellin and Mr. H. Lowman Taylor, who were unable to go, expressed their satisfaction at the arrangement. The Chairman said that a report of their inspection would be drawn up and laid before the Board.

PROF. FARADAY AND SPIRITUALISM.—Prof. Faraday has sent the following reply in answer to a spiritual invitation:—"Gentlemen, I am obliged by your courteous invitation, but really I have been so disappointed by the 'manifestations' to which my notice has at different times been called that I am not encouraged to give any more attention to them, and I therefore leave those to which you refer in the hands of the professors of legerdemain. If spirit communications not utterly worthless should happen to start into activity, I will trust the spirits to find out for themselves how they can move my attention. I am tired of them. With thanks, I am very truly yours, M. FARADAY.—Royal Institution, Oct. 8."

GENERAL TODLEBEN last week visited the camp at Aldershott, accompanied by the Earl of Cardigan, and was present at an inspection and review of the whole of the troops at that station. During his recent visit to Portsmouth he was the guest of General Lord W. Paulet, and inspected the various objects of interest in and around Portsmouth, the lines of fortifications, the dockyard, the turret ship Royal Sovereign, the gunnery ship Excellent, &c. On Saturday he went to Plymouth on a visit to General Hutchinson, the commander in chief, and during his stay he inspected the new fortifications, the dockyards, and other objects of interest. On Wednesday he left for London to dine with Earl de Grey and Ripon, the Minister of War. Next week he will go to Liverpool, where he will be the guest of the Russian Consul.

OPENING OF SOUTHWARK BRIDGE.—On Tuesday last this bridge was thrown open to the public toll free, the Corporation having leased the bridge for the sum of 18340*l.* from the company for six months, with the option of extending the period to 12 months, on payment of an additional sum of 2750*l.* Lord Mayor Lawrence officiated on the occasion, as the last act of his official year. The ceremony included a procession with the Lord Mayor and Lady Mayoress in the state carriage, accompanied by his usual retainers, with a few members of the corporation in private carriages, and a few flags and steamers waved from the centre of the bridge. On the arrival of the Lord Mayor the barriers were thrown down, his lordship declared the bridge open free of toll, and the ceremony terminated.

FUNERAL OF MR. LEECH.—The funeral of Mr. Leech took place on Friday at Kensal Green Cemetary. It was conducted in a private manner, only the relatives and a few of his literary associates accompanying the body from the house; but a large body of friends and admirers of his genius met the procession in the cemetery. The grave in which he was buried is on the south side of the cemetery, and only separated by one from that of his friend Mr. Thackeray, whose funeral he had attended 10 months ago.

THE ERITH EXPLOSION.—The Coroner's inquest on the persons killed by the late explosion at Erith was resumed on Tuesday. The evidence related to what may be called an episode in the main inquiry. A witness at a previous sitting having stated that the Government magazines were conducted in a much more careless manner than private ones, the Marquis of Hartington sent some workmen from Purfleet to disprove that statement. These men described the mode in which the powder was dealt with, the unserviceable powder and the defective casks disposed of, apparently to the satisfaction of the jury. The witnesses further stated that the Government, often purchased new casks from the Messrs. Hall's cooperage, and nothing could be better than the casks obtained from that quarter. The inquiry was then adjourned for another week, the Coroner stating that he had no doubt that the inquest would then be concluded.

THE CITY AND THE SEWAGE.—A requisition, signed by almost every banker in the City, as well as by a number of the principal merchants, has been presented to the Lord Mayor on his accession to office, requesting him to call a meeting of the citizens of London to consider the best means to be adopted for securing the proper utilisation of the sewage in the interests of the ratepayers and of agriculture.

VALUE OF LAND IN THE CITY.—At the Lord Mayor's Court last week, before Mr. Commissioner Kerr and a special jury, a compensation case of "Hayward *v.* The Metropolitan Railway Company" was tried, in order to award a sum for the house 17, Barbican, in which Milton had for some time resided, and which is still standing. On the part of the claimant nearly 3700*l.* was demanded, and on the part of the company 1500*l.* had been offered, and the value given was from 1999*l.* to 2200*l.* As an instance of the value of property in the City of London, it was proved in evidence that as much as 2,000,000*l.* per acre had been given. The jury eventually awarded 3250*l.* At the Lord Mayor's Court on Saturday, before Mr. Karslake, Q.C. as assessor, and a special jury, a compensation case which has been pending some time, "Lawrence and others *v.* the Charing Cross Railway Company," was heard. The claim in this case was in respect of two houses, 5 and 6, Cannon Street, near Turnwheel Lane, which were built in 1852 by Alderman Lawrence, the Lord Mayor, and let respectively at 350*l.* and 450*l.* One was leased to Baron Rothschild and would expire in 1866, and the other to a public company and would expire in 1874. The principal question raised before the jury was the value of the reversion. All the witnesses admitted that property in the city had greatly increased in value within the last few years, and "enormously" so within the "commercial area." Several witnesses described the houses as worth respectively 650*l.* and 850*l.* a year. On the part of Alderman Lawrence the property was estimated by different valuers at from 29,000*l.* to 30,700*l.* On the other hand the valuers for the company estimated it from 21,000*l.* to 21,600*l.*, including the usual 10 per cent. for a compulsory sale. The jury assessed the value at 25,100*l.*, including 100*l.* for fixtures. Another Court was held on Saturday to assess the sum to be given in the case of "Elder *v.* The Metropolitan Railway Company," for some freehold land in Barbican. The claim was 8500*l.*, which was opposed by the Company. The jury awarded 8300*l.* for the property.

FRAUDS IN THE CITY.—Two cases of fraud and forgery in commercial circles have lately been the

were last week. Onions are being largely imported from Germany. Flowers chiefly consist of Orchids, Heaths, Chrysanthemums, Fuchsias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 6s to 8s	Apples, per sieve, 1s to 2s
Grapes, per lb., 1s to 5s	Oranges, per 100, 6s to 12s
Melons, each, 1s to 4s	Lemons, per 100, 5s to 10s
Peaches, per doz., 6s to 18s	Nuts, Barcelona, do., 16s
Plums, per ½ sieve, 2s to 4s	— New Brazil, do., 16s.
Pears. per doz., 1s 6d to 3s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 60s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Seakale, p. punn., 3s 6d to 4s
Carrots, per bunch, 4d to 9d	Endive, per score, 1s to 2s 6d
Turnips, p. bunch, 6d to 8d	Horse Radish, p. bunch, 1s to 4s
Cucumbers, each 4d to 1s	Mushrooms, p. pott., 1s to 1s9d
	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

BRITISH WOOLS.—London, Nov. 10.

There has been more business doing generally, and in some descriptions of carding skin a considerable advance has been realised in consequence of their being cheaper in proportion than other qualities.

	s. d.		s. d.
South-down Hoggets	1 10	to	1 11
Half-bred ditto..	2 1	—	2 2
Down Ewes ..	1 9½	—	1 10
Kent Fleeces		—	2 0
Combing Skins ..		—	..
Flannel Wool		to	1 10
Blanket ditto ..	0 6	—	0 9
Leicest. Hoggs..	2 0	—	2 1
Ditto Wethers ..	1 11	—	2 0

METROPOLITAN CATTLE MARKET.

Monday, Nov. 7.

The number of Beasts is considerably larger than on Monday last; choice qualities, however, are not plentiful, and prices are no lower. There are a few more Sheep, and trade is not brisk; yet prices are quite as high as of late. Good Calves are in demand at rather more money. From Germany and Holland there are 3860 Beasts, 7350 Sheep, 250 Calves, and 180 Pigs; from Scotland, 80 Beasts; from Ireland, 570; and 1980 om the Northern and Midland Counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	5 2	to 5 4	Best Long-wools.	5 0	— 5 4
Best Short-horns	4 10	— 5 2	Do. Shorn		— ..
2d quality Beasts	3 4	— 3 10	Ewes & 2d quality	4 6	— 4 10
Best Downs and Half-breds ..	5 6	— 5 8	Do. Shorn		— ..
Do. Shorn		— ..	Lambs		— ..
			Calves	3 8	— 5 4
			Pigs	3 0	— 5 0

Beasts, 7110; Sheep and Lambs, 21,360; Calves, 266; Pigs, 350.

Thursday, Nov. 10.

We have a fair supply of Beasts. The favourable weather causes a good demand. Choice descriptions are readily disposed of at fully Monday's quotations. The number of Sheep, although not large, is quite equal to the demand. We retain Monday's quotations, but trade is by no means brisk. There is no alteration in trade for Calves. Our foreign supply consists of 480 Beasts, 950 Sheep, 323 Calves, and 44 Pigs.

	s d	s d		s d	s d
Best Scots, Herefords, &c. ..	5 2	to 5 4	Best Long-wools.	5 0	— 5 4
Best Short-horns	4 10	— 5 2	Do. Shorn		— ..
2d quality Beasts	3 4	— 3 10	Ewes & 2d quality	4 6	— 4 10
Best Downs and Half-breds ..	5 6	— 5 8	Do. Shorn		— ..
Do. Shorn		— ..	Lambs		— ..
			Calves	3 8	— 5 4
			Pigs	3 0	— 5 0

Beasts, 1235; Sheep and Lambs, 3850; Calves, 345; Pigs, 140; Milch Cows, —.

COAL MARKET.—Nov. 9.

Buddle's West Hartley, 20s. 3d.; Cowpen Hartley, 20s. 3d.; Hastings Hartley, 20s. 3d.; Holywell Main, 18s. 6d.; West Hartley, 20s. 3d.; West Wylam 17s. 6d.; Wylam 18s. 6d.; Walls End Acorn Close, 21s. 3d.; Walls End Byron, 21s. 6d.; Walls End Eden, 21s. 3d.; Walls End Harton, 21s. 3d.; Eden Main, 21s. 6d.; Walls End Bell, 21s. 3d.; Walls End Framwellgate, 21s. 3d.; Walls End Hetton, 23s.; Walls End Pensher Primrose, 21s. 6d.; Walls End Pittington, 20s. 6d.; Walls End Tunstall, 21s. 3d.; Walls End Cassop, 22s.; Walls End Kelloe, 21s. 6d.; Walls End East Hartlepool, 22s. 3d.; Walls End South Hartlepool, 21s. 3d.—Ships at market, 56.

NEWGATE.—Nov. 11.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 15s. "
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

HOPS.—Borough Market, Friday, Nov. 11.

Messrs. Pattenden & Smith report continued activity in the Hop market, at steadily advancing prices.

HAY.—Per Load of 36 Trusses.

Smithfield, Thursday, Nov. 10.

Prime Meadow Hay	80s	to 110s	Clover, old	100s	to 130s
Superior do. ..	—	—	New Clover ..	—	—
Inferior do. ..	—	—	Do. second cut ..	90	110
New do.	—	—	Straw	27	32
Rowen	—	—			

Harvey & Easton.

Cumberland Market, Thursday, Nov. 10.

Sup. Meadow Hay..	108s	to 115s	Inferior Clover ..	108s	to 115s
Inferior do.	90	98	New do.	—	—
New do.	—	—	Straw	30	34
Superior Clover ..	120	132			

Joshua Baker.

Whitechapel, Thursday, Nov. 10.

Fine Meadow Hay..	100s	to 105s	Prime 1st cut Clover	126s	to 132
Inferior do.	95	100	Inferior do. do. ..	110	120
Prime New Hay ..	—	—	Prime 2d cut do. ..	118	126
Inferior	—	—	New Clover	—	—
Straw	27	30	Inferior do.	—	—

MARK LANE.—Monday, Nov. 7.

The supply of Wheat from Essex and Kent to this morning's market was small, and there being some inquiry for Yorkshire it met with a ready sale at the prices of this day se'nnight. There was a moderate attendance, but only a trifling and very retail demand for foreign Wheat at late rates; with the exception of Russian, sales of which ex ship were pressed at a reduction of 1s. per qr., the arrivals being considerable. Prime malting Barley sold freely at the prices of this day week, but secondary qualities were difficult of sale and rather cheaper. In the value of Beans and Peas there was no quotable alteration. Oats were a slow sale at about late rates. Flour was unaltered in value.

Price per Imperial Quarter.	s. s.		s. s.
Wheat, Essex, Kent, & Suffolk White..	39—42	Red	36—41
— — fine selected runs..ditto	41—44	Red	39—42
— — Talavera	46—53		
— Norfolk	—	Red	—
— Foreign	35—50		
Barley, grind. & dist., 26s to 30s..Chev.	32—35	Malting ..	30—33
— Foreign..grinding and distilling	21—27	Malting ..	28—31
Oats, Essex and Suffolk	20—22		
— Scotch and Lincolnshire—Potato	20—24	Feed	20—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	20—23	Feed	18—21
Rye	31—33	Foreign ..	—
Rye-meal, Foreign	—		
Beans, Mazagan....33s to 35s...Tick	34—36	Harrow ..	34—36
— Pigeon .... 35s to 40s.. Winds.	—	Longpod	—
— Foreign .....Small	34—38	Egyptian	33—34
Peas, White, Essex and Kent..Boilers	36—40	Suffolk ..	38—41
— Maple .... —s to —s .... Grey	—	Foreign ..	32—38
Maize .....White	—	Yellow ..	—
Flour, best marks delivered..per sack	35—40		
— 2d do ..... ditto	28—34	Country..	28—34
— Foreign ..... per barrel	18—25	Per sack	32—36

Friday, Nov. 11.

The Wheat trade has continued inactive, but on the whole the tone was better than of late, and the supplies from abroad being moderate, former rates are fully maintained. The same applies to malting Barley, but grinding is a slow sale at low prices; the Scotch markets quote a reduction of 1s. per qr. for all sorts of this corn. Oats move off slowly. The value of Beans and Peas still tends downwards. Flour meets a good demand at extreme prices for best sacks and fine barrels for shipping, common and sour neglected. Since Friday last 51 vessels have been reported off the coast. The floating trade has been quiet, a moderate business has been done in Wheat and Maize at late rates, but a better tone prevailed yesterday, after the reduction of the Bank rate, and Wheat was improving in value. Paris, Nov. 10.—Business has not been very active, but prices have improved 6d. per sack for Flour and 1s. per qr. for Wheat. The present stock of Flour is estimated at 31,000 cwt. The six marks for delivery this month are quoted equal to 31s. 6d. per 280 lb. The arrivals of English Grain during the week have been small, but good of foreign Wheat and Oats. There was a poor attendance at this morning's market and but few transactions took place in any article. We do not alter our quotations of Monday.

Arrivals this Week.

	Wheat.	Barley.	Oats.	Flour.
English ..	2110 qrs.	2180 qrs.	3750 qrs.	960 sks.
Irish	—	—	1430	— "
Foreign ..	18,370 "	—	32,860 "	240 " / — brls

Liverpool: Nov. 8.—We have had a rather full attendance at our market to-day, and Wheat has commanded a fair consumptive inquiry at previous rates. Flour from scarcity is the turn against buyers. Indian Corn rules dull at 3d. per qr. decline. Oats and Oatmeal more saleable at full prices. Beans and Barley steady at previous rates.

Friday, Nov. 11.—Moderate attendance. Wheat in fair request at about late rates. Flour a turn dearer, with more inquiry. Indian Corn steady: mixed, 22s. 6d. Beans unaltered. Oats and Oatmeal fair sale. Prices hardening.

Averages	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Oct. 1	39s 8d	30s 11d	20s 7d	35s 4d	40s 4d	37s 1d
— 8	38 9	30 2	20 0	30 11	38 11	35 8
— 15	38 1	29 11	20 1	33 9	39 3	35 4
— 22	38 6	30 2	20 0	29 1	38 2	35 5
— 29	38 9	30 2	20 1	30 9	38 0	35 0
Nov. 5	38 11	30 3	20 2	29 9	37 9	35 5
Agg. Aver.	38 9	30 3	20 2	31 7	38 9	35 3

Fluctuations in the Last Six Weeks' Averages.

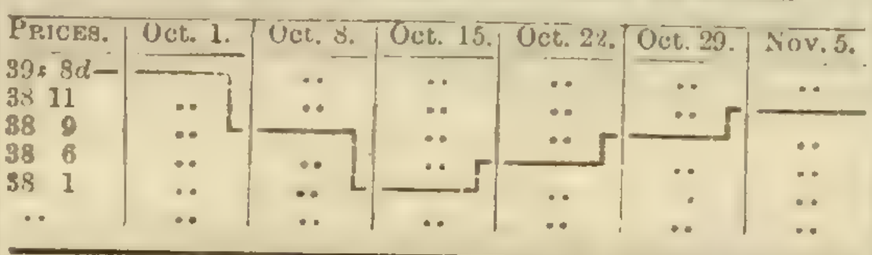

NURSERY FOREMAN.—Messrs. J. & C. Lee require the services of an intelligent Foreman for their Home Nursery; he must thoroughly understand the Management of Fruit Trees, and be acquainted with Roses and Shrubs in general. Unexceptionable references as to character and integrity.—Applications, stating terms, to be made to Messrs. Lee, at the Royal Vineyard Nursery, Hammersmith, W.

WANTED, as HEAD SHOPMAN, a Man about 30 years of age, of good address, and thoroughly up in the Retail Seed Trade. Must be a first-class Counter Hand, with unexceptionable character as regards honesty and ability. If with an ordinary knowledge of Plants, preferred.—Address B. H., Messrs. Hurst & Son, Leadenhall Street, London, E.C.

WANTED, a SHOPMAN in a Wholesale Seed Warehouse. Must be experienced and be able to give the best references.—A. B. C., *Gardeners' Chronicle* Office, W.C.

Traveller and Shopman.

WANTED, in a London Wholesale Seed Establishment, a YOUNG MAN well qualified for the above situation. A liberal salary will be given, and a permanent situation secured.—Apply by letter, with references, to A. B. C., *Gardeners' Chronicle* Office, W.C.

WANTED, an ASSISTANT or UNDER SHOPMAN in the SEED TRADE.—Apply in own handwriting, stating experience, age, references, wages expected, &c., to Edward Taylor, Seed and Manure Merchant, Malton, Yorkshire.

WANTED, as PROPAGATOR, a steady energetic Man, thoroughly acquainted with Fruits, Roses, Evergreens, and Conifers; and who is a good Penman and willing to make himself generally useful. Will find this a good opening. A first-class man will meet with every reasonable encouragement. Testimonials as to character and ability will be required.—Apply to John Palmer & Son, Nurserymen, Annan.

WANT PLACES.—Letters to be Post Paid

DAILY or OCCASIONAL GOVERNESS.—A Lady has resided many years in France, seeks a re-engagement in London to instruct in English, French and Music (on the new system); the rudiments of German and Italian; terms moderate.—H. H., 29, Queen's Road, Camden Square, N.W.

HOUSEKEEPER, or as COMPANION.—A Lady, aged 35, who can be highly recommended, has had much experience. She would be willing to take charge of two little Girls, or to accept any position of trust.—A. Z., 2, Northumberland Road, New Road, Hammersmith, W.

CARE of CHAMBERS, OFFICES, or Property in Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper. Could be upon a single gentleman, and has excellent references.—Harriet, 2, Northumberland Street, Marylebone, W.

GARDENERS, FORESTERS and BAILIFFS, LAND STEWARDS.—The undersigned can recommend the above, whose characters and abilities may be relied on. Full particulars upon application.—James Dickson & Son, "Newton" Nurseries, Chester.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. Henderson & Son, Wellington Nursery, St. John's Wood, London.

GARDENERS.—B. S. Williams begs to call attention to his Correspondence with several experienced Gardeners seeking situations, and will be pleased to recommend to any Gentlemen requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

To the Nobility and Gentry.

J. WEEKS and CO. have on their Books the Names of several first-class GARDENERS, whom they can confidently recommend.—Apply to J. Weeks & Co., King's Road, Chelsea, S.W.

TO LANDED PROPRIETORS.—The Advertiser (age 37), who has had the entire superintendence and management of an Estate for 16 years, is desirous of a re-engagement with any Nobleman or Gentleman requiring an AGENT. An Agency on a small scale, provided a Farm could be held with it, would not be objected to. Reference to late employer.—X. Y. Z., *Gardeners' Chronicle* Office, W.C.

LAND ESTATE AGENT.—A Young Man who has been expressly educated for the profession, and possesses a thorough knowledge of the business in all its branches, has practical experience in the Designing and Drawing of Plans for Buildings, Cottages, Houses, and the general Improvement of Estates, including the Planting and Thinning of Plantations, Pleasure Land, &c. First-class references, &c., amongst whom are Noblemen.—For particulars apply to A. W. H., Allertree, near Derby.

LAND STEWARD or BAILIFF.—Age 34, married, acquainted with all the details of Modern Agriculture, Arable and Pasture Land, Irrigation, Drainage, and the Accounts connected with the Management of an Estate (at present under the management of one); Dairy or Poultry not objected to.—Deacon, Land Agent, Oundle, Northamptonshire.

FARM BAILIFF.—The Advertiser wishes to recommend a useful Farm Bailiff, who is a good Judge of Stock, Accountant, &c., and is not afraid of Work.—J. H., Woodhatch, Horley, Surrey.

PLANT GROWER, PROPAGATOR, FOREMAN.—Extensive and thorough experience.—H. A., 2, Cross Street, St. John's Road, N.

To the Trade.

HOUSE FOREMAN, SALESMAN, &c.—First-class practical knowledge of the Glass department. Reference to two leading Firms in London. No objection to Travel.—A. B., Office, Chichester, Sussex.

GARDENER (Head).—Age 40, married; active, energetic; any Gentleman about to improve his Garden will find the Advertiser a most experienced person. Four years' character.—M. O., Pearson's Nursery, Camden Town, N.W.

GARDENER (Head), age 31, married.—H. C. would be glad to recommend a thoroughly practical Man in all branches of his profession, where Gardening is carried on extensively. Five years' character from last place.—J. S., West Hill, Epsom.

GARDENER (Head), age 29, married.—Mr. Meredith will have much pleasure in recommending to a nobleman or gentleman a thorough practical Gardener, well versed in the various branches of his profession. Highest testimonials and references given.—Apply to J. Meredith, The Vineyard, Old Swan, Liverpool.

GARDENER.—Age 32, single. Seven years' character.—G. B., Post Office, Colchester.

GARDENER.—Age 27, single; has a thorough knowledge of his profession in all its branches. Unexceptionable reference can be given.—Quercus, Morse's Nursery, Epsom.

GARDENER (Single-handed or Second).—Age 30, single, a Teetotaller; 10 years' experience, four of which single-handed.—G. W., Mr. Wise, Chertsey.

SHOPMAN.—A Young Man, accustomed to the Retail sale and Retail Seed Trade. Is thoroughly conversant with the Trade, and can be highly recommended.—R. C., Messrs. Rendle's, 6, Leadenhall Street, London, E.C.

PORTER.—Age 30; from the Country.—Inquire, Upper Tachbrook Street, Pimlico, S.W.

HAIR RESTORED, PRESERVED, IMPROVED and BEAUTIFIED by the use of ROWLAND'S MACASSAR OIL.—This elegant and fragrant Oil is universally held in high repute for its wonderfully nourishing properties. For children it is invaluable, as forming the basis of a beautiful head of hair. Price 3s. 6d., 7s., and 10s. 6d. (equal to four small), and 21s. per bottle.
Sold at 20, Hatton Garden, and by Chemists and Perfumers.

ANOTHER CURE this week of ASTHMA of 10 years' duration, by Dr. LOCOCK'S PULMONIC WAFERS, communicated by Mr. M. Bell, Chemist, 63, Clare [illegible] Street, Manchester, Nov. 7, 1864:—"Mrs. Ann S[illegible], wife of a Manchester, had pains across the chest, headache, difficulty of breathing, pains in the loins, and a dry cough [illegible] respiration (30 in the minute). All kinds of medicine were tried with little effect. She at last tried Dr Locock's Wafers, and has taken three boxes, felt herself perfectly cured [illegible] offer you this for publication, that others may [illegible] benefit." To Singers and Public Speakers these Wafers are [illegible] for clearing and strengthening the voice. They have an [illegible] Price 1s. 1½d., 2s. 9d., and 11s. per box. Sold by all Druggists.

CORNS and BUNIONS.—A Gentleman, who has been tormented with Corns, will be happy to afford other sufferers information by which he obtained their complete removal in a few days without pain or any inconvenience.—Forward address on a stamped envelope to W. Goodall, Esq., Epsom, Surrey.

The Gardeners' Chronicle Newspaper.

SATURDAY, NOVEMBER 19, 1864.

FREE and ASSISTED EMIGRATION to AUSTRALIA and NEW ZEALAND, also Lowest Fares.
Address Mr. A. Dorant, Agent for Government Emigration, St. Albans, Herts.

SCOTTISH UNION INSURANCE COMPANY (FIRE and LIFE), 37, Cornhill, London, E.C. Established 1824.
Moderate Rates of Premium.
Liberal Conditions.
Prompt Settlements.
Prospectuses in full and Proposal Forms at the Company's Offices.
37, Cornhill, London. Freder. G. Smith, Secretary.

To Gardeners.—Notice.

GARDENERS whose NAMES appeared in connection with the Seats of the Nobility in HOGG'S GARDENERS' YEAR BOOK for 1864, will oblige by forwarding particulars of any change that may have occurred, so as to make the List for 1865 as complete as possible.—171, Fleet Street, E.C.

To Nurserymen and Seedsmen.—Notice.

THE GARDENERS' YEAR-BOOK, ALMANACK, and DIRECTORY for 1865, by Robert Hogg, LL.D., F.L.S., will be published on December 1. Any alterations in the style and Address of Firms are requested to be sent forthwith to the Editor, so that the necessary Corrections may be made in the Directory portion.
"Journal of Horticulture" Office, 171, Fleet Street, London, E.C.

HOGG'S GARDENERS' YEAR-BOOK, ALMANACK, and DIRECTORY for 1865.—ADVERTISEMENTS intended for insertion in the forthcoming issue, on December 1, should be forwarded not later than Thursday next, November 24, to prevent disappointment.
"Journal of Horticulture" Office, 171, Fleet Street, London, E.C.

THE SUMMER of 1865, with Observations on the Summers of England, &c. By Thomas Du Boulay, Member of the British and Scottish Meteorological Societies. Will be published early in April next.
Rogerson & Tuxford, 246, Strand, W.C.

Just published, enlarged and improved, the 12th Edition of the
MINIATURE FRUIT GARDEN.
By Thos. Rivers. 3s.
London: Longman & Co.; or post free from the Author, Sawbridgeworth, Herts.

Third Edition, price 5s.,
PRACTICAL TREATISE on the CULTIVATION of the GRAPE VINE. By William Thomson, Gardener to His Grace the Duke of Buccleuch, Dalkeith Park, Scotland.
W. Blackwood & Sons, Edinburgh and London.

Just Published,
CULTURAL DIRECTIONS for the ROSE; with Select Lists of Sorts adapted to various circumstances and localities; and a Calendar of Operations to be performed during each month throughout the year. By John Cranston, Nurseries, King's Acre, near Hereford. Second Edition, enlarged and improved.
London: Houlston & Wright, Paternoster Row, E.C.; Derby: J. Bemrose, Irongate.
Price 1s. 6d., or free by Post from the Author for 20 Stamps.

Now ready, price 1s.,
WORTON'S NEW FARMER'S ALMANACK and YEAR-BOOK of PROGRESS for 1865.
Blackie & Son, 44, Paternoster Row, London, E.C.; and sold by all Booksellers, and at the Railway Stalls.

Now ready, price 1s. sewed, or 2s. bound and interleaved,
JOHNSON AND SHAW'S FARMER'S ALMANAC and CALENDAR for 1865, containing all the latest Improvements and Inventions in Agriculture, a complete List of Fairs, &c., and the usual information contained in an Almanac.
William Ridgway, 169, Piccadilly, W.; and all Booksellers and Railway Stations.

Just Completed, price 3*l.* 3s., in cloth,
THE FARM HOMESTEADS of ENGLAND; illustrated by a Series of Detail Drawings of existing Homesteads, prepared by the leading Authorities in the country, with a Digest by the Editor of the leading principles adopted. J. Bailey Denton, Agricultural Engineer, Editor.
London: Chapman & Hall, Piccadilly.

Corpulency and Leanness.
Just published, in fcp. 8vo., price 3s. 6d. cloth,
THE HANDBOOK of DINING; or, Corpulency and Leanness scientifically considered. By Brillat-Savarin, Author of "Physiologie du Goût." Translated by L. F. Simpson. New Edition, revised; with two Additional Chapters.
London: Longman, Green, & Co., Paternoster Row, E.C.

Hunter's Key to Colenso's Arithmetic.
Just published, in 12mo, price 5s.,
A KEY to COLENSO'S ARITHMETIC: Adapted to the Revised and Enlarged Edition of 1864. By the Rev. John Hunter, M.A., formerly Vice-Principal of the National Society's Training College, Battersea.
London: Longman, Green, & Co., Paternoster Row, E.C.

Great Bargains in best
TABLE GLASS, CHINA,
GAS CHANDELIERS, LAMPS, &c.
Bonâ fide Selling Off, prior to Extensive Alterations.
T. R. GRIMES' SHOW ROOMS,
83, New Bond Street, W.
Cash only.

THRESHER'S COLOURED FLANNEL SHIRTS.
Next Door to Somerset House, Strand, W.C.

Sauce.—Lea and Perrins'
WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE," is prepared solely by Lea & Perrins.
The public are respectfully cautioned against worthless imitations, and should see that Lea & Perrins' Names are on Wrapper, Label, Bottle, and Stopper. Ask for Lea & Perrins' Sauce.
*** Sold Wholesale and for Export, by the Proprietors, Worcester; Messrs. Crosse & Blackwell; Messrs. Barclay & Sons, London, &c.; and by Grocers and Oilmen universally.

TAYLOR BROTHERS' GENUINE MUSTARD.
Dr. Hassall having subjected this Mustard to a rigorous Microscopical examination and chemical analysis, reports that it contains the three essential properties of good Mustard, viz., Purity, Pungency, and Delicate Flavour. See that each Package bears their Trade Mark the "Prize Ox," and Dr. Hassall's Report. Sold by all Grocers, &c., throughout the kingdom.

BACON.—It has been for many years a great difficulty with Housekeepers to know where to obtain Bacon the quality of which can be thoroughly depended upon. Hillier & Son, who during the last 40 years have converted more than Half a Million of Pigs into prime Bacon so well known by the Trade, have hitherto confined themselves to supplying Dealers only, but finding that so many SINGLE SIDES to families at prices as under:—Smoke Middle Sides, 9d. per lb.; Hams, 11d. per lb.; delivered free to any Railway Station in the United Kingdom.
The Trade supplied.
Address, Hillier & Son, Newmarket, Stroud, Gloucestershire.

In One Volume, demy 8vo, price 18s., *illustrated with numerous Plans, Sections, and Sketches of Gardens and General Objects, a New Edition, greatly enlarged, of*

HOW TO LAY OUT A GARDEN.

INTENDED AS A GENERAL GUIDE IN CHOOSING, FORMING, OR IMPROVING AN ESTATE FROM A QUARTER OF AN ACRE TO A HUNDRED ACRES IN EXTENT.

By EDWARD KEMP, Landscape Gardener, Birkenhead.

"Mr. Kemp's book contains the fruits of his own experience,—an experience guided both by taste and judgment."—*Builder.*

"There may be more learned and classic works on the subject of Landscape Gardening; but we doubt if there is one that contains so much useful information and practical details, relative to the Laying out of a Garden, as are to be found in this unpretending volume."—*Gardeners' Chronicle.*

LONDON: BRADBURY and EVANS, 11, BOUVERIE STREET, E.C.

News of the Week.

The Landsthing of the Danish Rigsraad adopted the Treaty of Peace on Friday by a majority of 55 to 4. The Treaty was signed by the King on Saturday; and the formal exchange of the ratifications took place on Wednesday at Vienna.

The Emperor of Austria delivered a Speech from the Throne on Monday at the formal opening of the Reichsrath. His Majesty announced his intention, at the close of the present session, to allow the lesser Reichsrath to come into operation, and to promote constitutional activity in all his kingdoms, and throughout his whole empire. He said that, animated as he was by the earnest endeavour to assist in the preservation and maintenance of general peace, he congratulated himself on the good understanding and friendly relations existing between his Government and the other Great Powers of Europe, and should not cease to uphold these relations, and to do everything in order to preserve his empire from foreign complications. His Majesty made no allusion to Italy, but referred at some length to the question of Schleswig-Holstein, which had, he said, been settled "in the most honourable manner." He expressed his satisfaction that the courage of the allied troops and the navies of Austria and Prussia had "conquered that splendid prize," and that the "wise and just reticence of the neutral Powers" had facilitated the final understanding. The late events in Poland had necessitated exceptional measures for the maintenance of internal order, but these measures would be constantly relaxed as the popular excitement subsided, and would, he hoped, be entirely withdrawn at no distant period. His Majesty next adverted to the financial situation of the Empire, which he admitted to be extraordinary and precarious. Everywhere, he said, the money markets had been convulsed; the demands of the State had increased, and trade had suffered beneath a heavy pressure. He therefore recommended to their attention various financial and other measures, by which the arrangements of the financial year would have to be regulated on improved principles; the incidence of taxation would be so distributed that large results would be obtained through more equitable methods; tariffs favourable to foreign industry, yet beneficial to Austria, would be contrived; and the railway system be developed by special legislation and generous charters. His Majesty concluded by expressing his firm confidence that, with the counsel and assistance of the Reichsrath, he should succeed in conducting the empire entrusted to him by Providence with a strong hand towards a fortunate future.

The general debate on the Convention in the Italian Parliament closed on Wednesday, and the discussion of the articles commenced on Thursday. The rising in Venetia is considered so serious by the Austrian Government that 18 districts of the provinces of Friuli and Trevisa have been placed under martial law, and troops have been sent to guard the passes into the Tyrol. A severe engagement took place on Wednesday between the Italian troops and the Garibaldians, at Bagolino in Northern Lombardy, with great loss on both sides. The conflict terminated in the capture or dispersion of all the insurgents.

From the seat of war in Virginia we learn that General Grant's troops are engaged in building log houses, preparatory it is supposed to going into winter quarters. The Federal losses in the late attack of Generals Grant and Butler on General Lee's lines are said to have been between 4000 and 5000. Two entire brigades of General Butler's division were cut off from retreat by the fire of the Confederate batteries, and ultimately captured. General Hood has crossed the Tennessee river at the head of 30,000 men, and is moving northwards, while General Forrest is operating in Kentucky. The defeat of General Price is not confirmed; and it is now said that he is merely retiring to Arkansas with the spoils of his late campaign in Missouri. A mass meeting of merchants and bankers has been held at New York to denounce Mr. Lincoln's policy, and to call for a change in the Administration. From various States there is an outcry raised against the open violation of the liberty of voting by the military authorities. General Butler has suddenly arrived in New York, and it is supposed that he has been sent by President Lincoln to supersede General Dix during the elections.

Home News.

The Court.—On Friday morning the Queen drove out, accompanied by the Princess of Wales. The Prince of Wales went out shooting. Princess Louisa took a carriage drive. Lord and Lady Bloomfield arrived at the Castle on a visit. On Saturday morning the Queen walked and drove in the grounds. The Princess of Wales and Princess Helena took a carriage drive. Princess Louisa went out driving. The Prince of Wales went out shooting. The Right Hon. Edward Cardwell and Mr. Arthur Helps arrived at the Castle on a visit. In the evening the Queen had a dinner party. On Sunday morning the Queen, the Prince and Princess of Wales, Princess Helena, Prince Leopold, and Princess Beatrice attended Divine service in the Private Chapel. The Rev. J. S. Blunt preached the sermon. On Monday morning the Queen, accompanied by the Prince and Princess of Wales and Princess Helena, went to Claremont and visited Queen Marie Amélie. Her Majesty went by special train on the South-Western Railway to the Teddington Station, and drove thence to Claremont and back. Baron Brunnow, the Russian Ambassador, the Earl and Countess Cowley, Viscount Palmerston, and Lieut.-Gen. the Hon. Sir J. Yorke Scarlett arrived at the Castle on a visit. In the evening the Queen had a dinner party. On Tuesday morning the Queen walked in the grounds, accompanied by Princess Beatrice. The Prince and Princess of Wales came to London. In the afternoon the Prince presided at a meeting of the Council of the Duchy of Cornwall. In the evening their Royal Highnesses returned to Windsor. On Wednesday morning the Queen, accompanied by the Princess of Wales, drove in the grounds. In the afternoon her Majesty visited the British Orphan Asylum at Slough, accompanied by the Princess of Wales and Princess Helena. The Queen was received at the asylum by the directors and secretary of the Institution, and inspected the arrangements of the whole establishment. The Prince of Wales went out shooting, accompanied by Earl Cowley. Princess Helena rode in the Riding School. Princess Louisa went out driving. On Thursday morning Princess Helena came to London. The Prince of Wales went out hunting with the harriers.

The Prince and Princess of Wales, in consequence of the illness of Lord Derby from a severe attack of gout, have indefinitely postponed their visit to Knowsley and Liverpool.

The Cabinet.—A Cabinet Council was held on Tuesday at the official residence of the First Lord of the Treasury in Downing Street. Another Council was held yesterday.

Ministerial Appointment.—Lord Dufferin has been appointed Under-Secretary for India, in succession to Lord Wodehouse.

Diplomatic Appointment.—The Queen has appointed the Hon. Peter Campbell Scarlett, C.B., late Minister at Athens, to be Minister Plenipotentiary to the Emperor of Mexico.

COLONIAL APPOINTMENTS.—The Queen has appointed Major-General Sir Henry Knight Storks, G.C.B., to be Governor of Malta and its dependencies; and Rawson William Rawson, Esq., C.B., to be Governor of the Bahama Islands.

ABANDONMENT OF TRANSPORTATION TO AUSTRALIA.—The *Times* of yesterday announces that her Majesty's Government does not intend to enforce the rights of the mother country against the public opinion of the colonists; and that, subject to the approval of Parliament, transportation to the Australian Continent will cease within a limited period.

Foreign.

FRANCE.—Prince La Tour d'Auvergne has left for London. M. Thouvenel has been suffering from a serious indisposition, which has inspired great anxiety. He is, however, said to be out of danger. The *Presse* asserts that M. Fould on Wednesday signed the Budget for 1866, which shows a surplus of one million. The *Patrie* asserts that England intends calling upon the Powers to protest collectively against the capture of the Florida, and to support the claims of Brazil. The *Constitutionnel* of Tuesday, in an article signed by M. Paulin Limayrac, analyses the late speech of General della Marmora, to which it gives its entire approval. The Convention of the 15th September seems to be viewed with great disfavour by the French prelates. Mgr. Plantier, Bishop of Nismes, has issued a pastoral letter to the clergy of his diocess, in which he condemns, in no measured terms, the "declared enemies and hypocritical friends" of the Pope, and expresses his indignation against those who are anxious to see a reconciliation effected between the Holy See and Italy. He then enumerates the crimes of the Italian Government, and adds:—

"Such is the Italy which is authorised to assume a haughty bearing and to demand advances and reparation from Pius IX.; and if Pius IX. will make no concesssion, if the despoiled will not apologise to the spoiler, if the martyr will not ask pardon of the executioner for the blows received, the poor Pope will be convicted of blindness and obstinacy, and be considered doubly guilty because he can neither appreciate the gentleness of the monstrous outrages he has suffered, nor bless the parricidal hand which has inflicted all these injuries. By dint of calumnies, unjust reproaches, and arrogant counsels addressed to him, by dint of designating him as a fair prey for spoliation, and of speaking of him with brutality, though innocent, while Italy, so deeply guilty, is treated with all tenderness, the Pope has been driven to that extreme limit where a helpless Government only exists by a kind of miracle which holds it suspended over the gulf. Deprived of all serious support from within, since his army has been massacred; soon to be left without support from France, who is about to withdraw her troops; no longer connected with other crowns by any common bond, since most of the Governments have ceased to have either among themselves or with Rome any community of political doctrines or rights—all earthly hopes seem to have vanished."

Under the recent convention between France and Switzerland the export duty upon rags from France, which by the Treaty of Commerce with England was fixed at 12 francs, will be reduced, by successive diminutions spread over a period of three years, to 4 francs on 100 kilogrammes. Great Britain will of course participate in the advantages of this reduction.

SPAIN.—The *Epoca* of Friday, in an article on Spanish Finance, says:—

"According to news which we have received from London it is certain that a sum of 100,000,000 reals has been obtained in that city to meet the necessities of the Spanish Treasury. A like sum has been offered by several French capitalists. All the efforts of the Minister of Finance tend to bring as many foreign capitalists as possible into our market, seeing that a great part of the precious metals in our country is absorbed by the redemption of debt and by public works."

The same paper says that the Government has refused to allow a meeting to be held in Madrid by the Democratic party. A Royal decree has been issued appointing Admiral Pareja to the command of the Pacific squadron, in the place of Admiral Pinzon, who has been recalled. The whole Peruvian question is to be brought before the Chambers. Inundations have occurred near Valencia, whereby the irrigation of 27 villages has been destroyed, and much loss of life caused. M. Adolphe Barrot returned to Paris on the 16th inst. The adjudication on the contracts for the construction of the railway to the Asturias took place on the 10th inst. It is feared that the Spanish steamer Luis, which left Gibraltar for Malaga on the evening of the 26th of October, has been lost with all her crew and passengers.

DENMARK.—The Landsthing of the Rigsraad held a public sitting on Friday, when the Treaty was approved by a majority of 55, four members abstaining from voting. All the Schleswig members present voted either against the Treaty or not at all. A private sitting of the Council of State was held on Saturday, at which the King signed the Treaty. Count Moltke Hvidtfeldt, the Danish Plenipotentiary, immediately left for Vienna, in charge of the ratified Treaty. Three Royal proclamations were issued on Thursday. The first releases the inhabitants of the ceded Duchies from their oath of allegiance, and the second is a farewell address to the people of Schleswig and Holstein. The third is addressed to the Danes, and says:—

"The separation from the Kingdom of those inhabitants of Schleswig who were bound to Denmark both by sentiment and language is the most painful sacrifice of all. We have lost much, but have not lost hope. The future belongs to those who are in earnest!"

SCHLESWIG-HOLSTEIN.—In compliance with the terms of the treaty of peace, the Austrian and Prussian troops began their march homewards as soon as the ratification of the treaty had taken place. An address was presented on Friday to the Duke of Augustenburg by the magistrates and a deputation of Kiel citizens, on the occasion of the conclusion of peace. In his reply the Duke said:—

"We must, above all, thank the Sovereigns of the great German Powers and their armies. The Duchies of Schleswig-Holstein will always remember what they owe to the common German Fatherland, and especially to Prussia. If we do make a sacrifice in this direction, we act in our own most immediate interests. The Duchies could play an important part if their position and their sailors were made use of by the Prussian navy. I hope that my rights will soon be generally acknowledged."

The uncle of the Duke of Augustenburg, the Prince of Noer, has married an American lady named Lee, and has consequently been obliged to renounce his rights as member of a sovereign house, his bride having refused to consent to a morganatic marriage. At his solicitation, the Emperor of Austria has conferred on him the title of prince, and the children born of the marriage will bear the title of Counts of Noer. The prince can no longer lay claim to the title of "highness," and his agnatic rights will devolve on his only son by his first marriage.

SWITZERLAND.—The elections to the Grand Council of Geneva have resulted in a victory for the Independents, who will have a majority of 20 in that assembly.

BELGIUM.—The King returned to Brussels from Paris on Monday night, and was received at the station by the Duchess of Brabant and the Count of Flanders. His Majesty immediately proceeded to his palace at Laeken. The Count of Flanders will pass the winter at Ceylon, and not in Egypt as originally announced.

PRUSSIA.—Lord Napier, the new English Ambassador, arrived in Berlin on Wednesday from St. Petersburg. M. Benedetti, the new French Ambassador, is expected to arrive in Berlin to-day. The ratifications of the treaties relative to the entry of Bavaria, Würtemberg, Darmstadt, and Nassau into the Zollverein, were exchanged at Berlin on Saturday. On Wednesday, after the completion of the ratification of the treaty of peace with Denmark, the King of Prussia conferred on Count von Bismarck the insignia of the Order of the Black Eagle, as a recognition of his services. The Court of Assizes of Berlin has just been engaged in the trial of three prisoners, Louis Grothe, his mother, now a widow named Quinche, and a young woman called Marie Fischer, on the charge of having murdered Professor Grégy. The murder, which took place last spring under mysterious circumstances, caused great emotion at Berlin. In the evening of the 17th April Professor Grégy left his home, and although he generally returned at an early hour, was not seen again alive. Two days afterwards the body of a man was found in the Spree sewed up in a sack. The head was leaning on the chest, the legs were bent up, and a rope was drawn tightly round the neck. The body was that of Professor Grégy. Numerous marks of violence found on the body showed that he had fallen under the hands of several assailants. The head had no less than twelve wounds on it, most of which had penetrated to the brain. The right hand was also covered with wounds, and two of the fingers were wanting. The police, after long searches, discovered that the murder had been committed in a cellar inhabited by three persons of infamous character—the woman Quinche, her son Louis Grothe, and Marie Fischer, the son's mistress, with whom it is supposed Professor Grégy had an intrigue. The jury found them guilty and they were condemned to death. The prisoners have all made a full confession of their guilt.

AUSTRIA.—The formal exchange of the ratifications of the Treaty of Peace between the German Powers and Denmark took place at Vienna on Wednesday morning. The Reichsrath reassembled on Saturday. Archduke Rainer acted as President in the Upper House. He made a short speech, at the conclusion of which he called for three cheers for the Emperor. In the Lower House Herr von Schmerling occupied the presidential chair; 137 members were present, including nine Poles. Herr von Hasner made a long speech, in the course of which he alluded to the questions of the day, and concluded by expressing his conviction that the present state of things demanded the concentration of all their energies upon home affairs, in which it was imperative they should go forward without haste, as without delay. On Monday the formal opening of the Reichsrath by the Emperor in person took place in the great Hall of Ceremonies of the Hofburg. His Majesty delivered the following Speech from the Throne:—

"Honoured Members of my Reichsrath,—After arrangements have been made during the former part of the Session by which the Reichsrath, in force of its constitutional right, is enabled to treat subjects of legislation common to all my kingdoms and countries, I have convoked that body for the execution of this purpose, as the collective representation of my empire. While I now formally open its Session I greet you, the Archdukes and Princes of my House, most honoured and illustrious gentlemen of both Houses of the Reichsrath. It is my intention, so soon as the termination of your duties shall have brought this Session to a close, to allow the lesser Reichsrath to come into operation. I also expect that in the eastern portion of my empire the same constitutional activity which has so happily prevailed in my principality of Siebenburgen will everywhere begin afresh. To this object, which I desire shortly to see achieved, not only in the interest of those kingdoms, but also of my whole empire, the chief endeavours of my Government are directed. Confidence and real unanimity will conduce to blessed results. A series of events, important not only to my [illegible] also to the whole empire, has occurred [illegible] close of the last Session and the present [illegible] acceptance of the Mexican Imperial Th[illegible] consent, on the part of my brother, the Arch[illegible] Maximilian, now Emperor Maximilian I[illegible] rendered necessary a settlement of the rights of [illegible] thereby brought under consideration. For [illegible] executed a family compact at Miramar on the [illegible] the present year, which my Government is [illegible] municate to you. Animated by the earnest [illegible] assist in the preservation and maintenance of [illegible] I congratulate myself upon the good [illegible] friendly relations existing between my Govern[illegible] other great Powers of Europe. I shall not cease [illegible] these relations, and to do everything in order to [illegible] empire, at present occupied with so many [illegible] from foreign complications. A subject of d[illegible] years in the north of Germany has just been [illegible] most honourable manner. The representatives [illegible] will participate with truly patriotic feeling in [illegible] that a close which contains the fulfilment of the [illegible] tations has been put to the war between the Ger[illegible] and Denmark by the Treaty of Peace, signed at [illegible] the 30th of October, and the ratification of which is [illegible] in a few days. The courage of the allied troops and [illegible] of Austria and Prussia has conquered that splendid [illegible] the wise and just forbearance of the neutral Powers [illegible] facilitated the final understanding. The high [illegible] unanimity between myself and my august Federal [illegible] King of Prussia, has again been proved by mem[illegible] But I do not doubt that in face of the glorious [illegible] solution of the question by which Germany has [illegible] to her inmost core, the entire country will [illegible] concord which affords so powerful a guarantee [illegible] safety and welfare, as well as for the quiet and [illegible] Europe. To my regret, the unfortunate influences [illegible] in the Kingdom of Poland have recently exercised [illegible] countries bordering my empire have imposed upon my Government the necessity of undertaking exceptional [illegible] those countries for the preservation of internal [illegible] the protection of the persons and property of the [illegible] population. They have been accompanied with [illegible] results for the security of these imperilled interests [illegible] perceived with satisfaction that some of these measures [illegible] already shown themselves capable of being dispensed [illegible] and I gladly give myself up to the expectation that [illegible] be entirely withdrawn at no distant period. To [illegible] my kingdom will claim your special attention [illegible] not possible that the unfavourable conditions which [illegible] where govern the European money-markets [illegible] without obstructive influences on the progress of [illegible] politico-economical and financial development of [illegible] In this unmistakably difficult situation the [illegible] of the increased demands of the State has yet constantly [illegible] punctually provided for. The earnest striving to [illegible] affords satisfactory expectation that when the extraordinary [illegible] State expenses still at present existing have been [illegible] the disturbance in the finance and in the system of [illegible] Budget will at last be removed. Two Budgets will [illegible] tionally be laid before you in the present session—[illegible] the year 1865, and immediately afterwards that for [illegible] By this transitory measure it is intended to introduce [illegible] succession of time in the sessions of the Reichsrath [illegible] Provincial Diets, and also insure the possibility of [illegible] the labours of the Budget prior to the commencement of the [illegible] financial year. The first financial law constitutionally [illegible] has been included in the general Budget for 1866. It will [illegible] be laid before you in this session by my Government. I recommend to your especial attention the Bills to be laid before you for the regulation of the direct taxation, the speedy settlement of which is to be desired as much in the interest of the State as [illegible] and equitable partition of the burden of taxation on a provision better corresponding to the demands of the times. Your attention will also be directed to the consideration of other financial measures with the object of improving existing laws, and the partial, not unimportant, alleviation of the burdens of the taxpayers. I mention in this category [illegible] to lessen the poll-tax is my principality of Siebenburgen. For several years past the politico economical unity of the Empire, which is designated in the 19th article of the Federal Act as the object of the efforts of the Federation, has taken a more decided shape in later treaties, and one more in accordance with the requirements of the time. This question has claimed the full attention of my Government. To bring about a successful solution of this problem, which is of importance to the Federal Diet, and greatly concerns the interests of all, negotiations have become necessary, which are now being conducted by my Government with that earnestness befitting the subject. The result of these negotiations will be communicated to you by my Government, and I hope that they will not be without favourable influence upon the establishment of the new customs' tariff which is to come into operation in the course of this Session. Regarding the advantages which will accrue to my empire in every respect by the increase of means of communication, I have commissioned my Government at once to [illegible] uninterrupted and energetic labours to the preparation of a plan for the formation of a network of railways suitable to the wants of my kingdoms and principalities. Conformably to these views, my Government will bring before you a series of Bills in reference to the State guarantee to several railway undertakings. At any rate, in the course of the Session, and as soon as possible, a Bill will be submitted to constitutional consideration, having for its object the construction of a line to the principality of Transylvania and [illegible] interior of that country. With deep regret I have perceived the heavy pressure to which trade in my territories, as elsewhere, has been exposed; yet the advanced period already taken up induces me to hope that, should the blessings of peace, its own power and [illegible] lation, it will again attain a lasting and satisfactory [illegible] ment. Several Bills having reference to political interests, as well as other matters coming within the province of the assembled Reichsrath, are being prepared by Government to be laid before you, and will be brought under discussion in the course of the Session. It is my [illegible] fulfilment of which your devoted zeal is a guarantee. The question to which you are about to turn your attention must be speedily settled, since a series of important and [illegible] Bills have been prepared by my Government for the [illegible] tion of the lesser Reichsrath, whose return depends on this condition. Honoured Members of my Reichsrath, I now dismiss you with the assurance of my Imperial favour and grace to the consideration of the important questions before you, I am not unaware of their difficulties; but I have confidence that, with your counsel and assistance, I shall succeed in conducting the empire intrusted to me [illegible] dence with a strong hand towards a fortunate future. In this confidence from the love and fidelity, from the [illegible] and strength of my subjects, whom I recommend to the Almighty protection of Heaven, wishing from my [illegible] heart that their destinies may conduce to the happiness and fame of their common fatherland."

In the Lower House of the Reichsrath on Thursday Herr von Plener brought forward the Budget for 1866. The total revenue is estimated at 518 millions [illegible] and the total expenditure at 548 millions; [illegible]

of the deficit will be covered by the indemnity to be paid by the Duchies for the Austrian portion of the [illegible] war expenses, and the remainder will be provided for by a loan. In reply to a question whether the Government intended to bring in a Bill on Ministerial responsibility, Herr von Schmerling promised an answer at an early date.

VENETIA.—On the 8th inst. a band of insurgents attacked the Austrians at Andreis, near Maniago. Several Austrians were killed and wounded, among the former being a lieutenant. The insurgents had one wounded, who remained a prisoner in the hands of the Austrians. On the 10th an engagement took place in the district of Carnia, near Moggio, between the Austrians and insurgents. Martial law has been proclaimed in 18 districts of the provinces of Friuli and Treviso. Sentinels and patrols are ordered to fire upon assemblages after the first summons to disperse. The penalty of death will be remitted in the case of those who voluntarily surrender themselves, or who are given up by the population. It is officially announced that a band of insurgents is proceeding towards the mountains of the Tyrol. Troops have been sent to guard the mountain passes. The official *Gazette* of Turin emphatically condemns this insurrection, and says that it is impossible for the Italian Government to permit a violation of the frontiers, or to allow itself on any account to be involved or compromised in the movement. A severe engagement took place on the 16th, between the Italian troops and the Garibaldians at Bagolino, in Northern Lombardy. Both sides lost many men in killed and wounded. The conflict terminated in the capture of a part and the dispersion of the rest of the Garibaldian band.

ITALY.—It is rumoured that certain modifications will probably take place in the Italian Ministry, General della Marmora and several other Ministers having only temporarily accepted their portfolios. In the sitting of the Chamber of Deputies on Friday Signor Petruccelli spoke against the Bill. Signor Dondes stated that he should vote in favour of it, being convinced that Florence would prove the definitive capital of Italy. In the sitting of Saturday General Della Marmora addressed the Chamber to the following effect:—

"I do not wish to deliver a speech, but to make some declarations. Before the Convention was concluded I was opposed to it, fearing it would disturb the already cemented union of the Italian provinces, and occasion the renewal of conflicts at home. This I pointed out to M. Drouyn de Lhuys and the Emperor. On returning to Italy I was led, contrary to my intentions, to accept office under a difficult state of things; then, finding a treaty signed, I threw aside all apprehension, and prepared myself to support it in concert with my colleagues. I observed, contrary to my previous impressions, that there was no real danger of discord, no risk of a renewal of disturbances. I saw also that everybody in Italy regarded the engagements of September as serious, and the sentiments manifested by Parliament on the occasion of the recent exchange of despatches with France prove the loyalty with which the Convention is regarded. We have, therefore, been able to say that the Ministry will have the strength to execute the treaty — strength derived from your votes and the moral support of the country. The question of the transfer of the capital is a delicate one for me, a Piedmontese. Turin, militarily, cannot be the capital, but the public mind should have been prepared for the news of its change. I regret the suspicion which has been cast upon the intentions of France. I have been able to approach the Emperor on several occasions, and have found him disposed ever since 1852 to occupy himself at some time with Italian affairs. He persisted, notwithstanding certain opposition, that Italian affairs should be discussed at the Congress of Paris. You remember the Crimea and the glorious Italian war? The King having had an interview with the Emperor at Valleggia, the result was that the former only accepted the preliminaries of the Peace of Villafranca as far as he himself was concerned. On Count Cavour's death the Emperor generously recognised the Kingdom of Italy, thus rendering possible its recognition by the other Powers. In 1862 he sent his brother to compliment the King at Naples. Perhaps the Emperor had once doubts, as some of us have had, of the possibility of Italian unity, but now I am convinced that it makes our unity irrevocable. We will not take one step backwards; we will go forward prudently and slowly, but without intermission. The Roman question still remains perfectly clear in all men's minds. As regards the mode of solution, it is not undesirable to have time before us. I have great confidence in the Emperor, who has entirely devoted himself to the Roman question. I believe also that he will do as for Venice; I speak as a private person. Some solution will become possible with respect to Venice. I believe the intentions of the Emperor of Austria may be brought to fresh negotiations with this object. I renew the expression of my wish that you should approve the treaty."

Signor Musolino then spoke at great length against the Convention, which he considered fatal. He proposed to fortify Turin. In the sitting of Monday Signor Berti opposed the transfer of the capital, believing that it would lessen the strength of Italy. The Marquis Pepoli said that the Convention had relieved Italy, whose influence abroad the French occupation of Rome had diminished; and had asserted her stability and unity, because the transfer of the capital was a serious pledge that France would abandon her ideas of a Federation. It had freed the French Government from the responsibility of a reactionary policy at Rome and relieved the National party. Because Russia and Germany had settled the Schleswig-Holstein and Polish questions among themselves, France had solved in Italy the question of the occupation of Rome. He hoped the Convention would re-establish confidence between England and France, disturbed by the refusal of the former to participate in a Congress. The task of Italy was to further this alliance, which alone could secure the triumph of liberal ideas. He vehemently repelled the fear of a cession of territory. Signor Boggio attacked the Convention. General La Marmora said that the fusion of the Italians was a fact throughout the army. In the sitting of Tuesday General della Marmora explained a passage in his previous speech as follows:—

"When mentioning the Venetian question no menace or pressure was intended. He only expressed the hope that the Austrian Emperor might be led to the conclusion that the retention of Venice was neither required by his interest nor military honour. He deeply deplored the movement in Friuli, and blamed those by whom it was being fostered. The Ministry was placed in difficult circumstances. It was under the political and undeclinable necessity of accepting the Convention, whatever might be the opinion of its members. After mature consideration, they were convinced that it was to the interest of Italy to accept the treaty, notwithstanding the clause for the transfer of the capital, which was considered by France as the only serious guarantee under which the evacuation of Rome could take place. By this evacuation positive advantages are obtained. In mentioning the report that had been spread of a contemplated cession of Italian territory, he said France would never wish thus to disturb the peace of Europe. If the treaty should not have the result of opening the gates of Rome, it would yet greatly facilitate the solution of the Roman question. The attainment of Rome as the capital of Italy would be the effect of progress, not of force. Experience would prove if the temporal power could subsist by itself. Italy ought to show that she had no wish to trouble the Pope while giving that proof. Let them, therefore, confidently await the result. If the transfer were not bound up with the Convention, he would reject the transfer as the cause of serious derangements, and a great increase of the public expenses. He felt that he could invoke the support of the Deputies to overcome the difficulties in attaining their end."

Signor Mordini opposed the Convention, but supported the Bill for the transference of the capital. In the sitting of Wednesday Signor Tecchio spoke against both the Convention and the transfer of the capital. Signor Rattazzi declared himself in favour of those measures, and stated that the Convention consecrated the principle of non-intervention. He said that since the Liberals approve, and the Retrograde party reject, the Convention, he was the more convinced of its value. The general debate then closed. The discussion of the articles of the Convention commenced on Thursday, when Signor Mosca said that the Emperor had already declared that he did not regard Rome as the mortmain of the Catholic world. He interpreted the letter of M. Drouyn de Lhuys of the 31st of May in a sense favourable to the emancipation of the Romans. The Committee on the financial Bills have invited the Directors General of the Customs and PostOffice to be present at their sittings. The Committee entirely concur in the views of the Minister of Finance, and it is believed that the application of his financial measures will be far more easy than had been expected. The municipalities of Brescia and several other towns have declared their readiness to anticipate the payment of the land-tax for 1865 on account of their citizens. The generals and orderly officers of the households of the King of Italy and of Prince Humbert have spontaneously renounced the pay they received from his Majesty's privy purse. The sum paid to the generals was 4000 francs a year, and to the others 2000 francs. General Della Rovere, the ex-minister, is dead.

RUSSIA.—Lord Napier received the principal English residents in St. Petersburg on Saturday previous to his quitting the post of Ambassador at the Russian Court, and addressed them as follows:—

"If peace was preserved during the past year it was owing to the attitude of the English Ministry, who did not allow themselves to be carried away by the critical state of affairs. The British and Russian Governments are both convinced of the necessity of maintaining peace, and this has caused the great change in the feelings of England towards Russia. The relations between the two countries are now most satisfactory. He hoped that a further improvement would take place, by the extension of commerce between the two countries, by the development of the liberal tendencies of the Russian Government, and a more reserved policy on the part of that Government in the Eastern question. He further expressed regret that free-trade principles were not sufficiently acted upon in Russia, and hoped for a speedy change in the Russian commercial system."

POLAND.—The Governor of Galicia issued a proclamation on Friday, stating that, with the exception of high treason and rioting, the treatment of crimes and offences under the jurisdiction of the military tribunals during the state of siege will henceforward be transferred to the civil tribunals. The French papers state that preparations are making for an approaching insurrection in Galicia, for which purpose arms and money have been already provided.

TURKEY.—A convention has been concluded between the British Government and the Porte for the working of the Anglo-Indian telegraph. A Turkish office will be established in Fao, where the land and submarine lines meet. One wire from Constantinople will be exclusively used for Indian messages. The Brussels convention is to apply to the general service. The tariff for a single message from Constantinople to Fao will be 22 francs 50 cents. The budget for 1864-65 shows a revenue of 14737,231*l*. The expenditure is estimated at 14,571,238*l*. The increase in the latter over that of last year is occasioned by the public debt and the Circassian immigration. A reduction in the army and navy expenses to the amount of 37,758*l*. will be made. The dividend for the Consolidés has been provided for. The Ottoman Bank estimates the loss in the cotton crop from the late rains at 60 per cent.

THE PRINCIPALITIES.—Prince Couza has granted to an English company the concession for the construction of six iron bridges over the principal rivers in the Principalities. They are to be completed in three years. The new penal code and a decree rendering public instruction obligatory have been published.

TUNIS.—A dreadful accident has occurred at Tunis, by which 8 officers, 3 seamen, and 1 marine of Her Majesty's ship Orlando were drowned. It appears that a cutter, having on board Lieutenant Still, Surgeon Wood, Captain Pritchard, R.M., Midshipmen De Gama, Fielding, and Kemble, Master's Assistant Hadnill, and Assistant-Paymaster Stratford, with four seamen and one marine, left the ship in the morning on a picnic party, and while returning at three o'clock in the afternoon, under sail, a sudden squall struck the boat when about a thousand yards from the shore, and upset it. Seeing that all hope of assistance was impossible, one of the seamen, the coxswain, struck out for the shore, and was the only man saved. He was found the next morning completely exhausted and in a state of nudity, in an Arab hut, by another cutter of the Orlando, which, in tow of the French frigate Invincible's steam launch, had been sent in search of the missing boat. Up to the last accounts, nothing else had been found but a jacket belonging to Mr. Fielding and a portion of the mast of the boat, although the Orlando and Tyrian had been searching under steam for the missing bodies. The sudden calamity created universal sympathy in Tunis. All the foreign representatives displayed their flags half-mast high, and waited upon the English consul-general to express their condolence. Mr. Fielding, one of the officers who perished, was one of the few survivors of the wreck of her Majesty's ship Orpheus on the coast of New Zealand.

INDIA.—The details of the great storm at Calcutta confirm the first accounts of its destructive ravages. The Hooghly is still filled with wrecks and dead bodies; and it is estimated that between Calcutta and Diamond Harbour 5000 persons perished. The huge storm wave which came in during the cyclone was 30 feet in height at that point, and swept the country bare. From the accounts received from various districts it appears that the storm was about 100 miles in circumference, and that Calcutta must have been about 30 miles from the centre. Two centres have been certainly found—one at sea, and the other at Midnapore. From a knowledge of the law of storms, Captain Watson, of the ship Clarence, which was caught by the cyclone in the Bay of Bengal, saw its nature at once, put his ship about, and stood away from the centre of the storm, thereby delaying his ship for six days, but at the expiration of that time he brought her back without the loss of a single spar.

JAPAN.—The official list of the killed and wounded in the late action with the forts at Simonoseki, shows that the English squadron had eight killed and 48 wounded; the French squadron, two killed and nine wounded; and the Dutch squadron, two killed and three wounded. There were no officers among the killed. The English officers wounded were Captain J. Alexander, Mr. C. W. Atkinson, Mipshipman; and Lieutenant Frederick E. Edwards, of the Euryalus, the former dangerously, the two latter slightly; Lieutenant A. de V. Brownlow, of the Tartar, dangerously; Mr. E. J. Wingfield, Midshipman of the same ship, severely; Lieut.-Colonel Adair, Captain N. W. de Courcey, and Lieutenant J. W. Inglis, of the Royal Marines, the former slightly, the two latter severely. The Japanese Government has announced to the Swiss Federal Council the proximate arrival of a fresh embassy from that country, who will visit Switzerland in the course of their travels.

NEW ZEALAND.—The expectations of peace conveyed by the last mail have not been realised so fully as was anticipated. So far as concerns the east coast natives at Tauranga the submission has been complete; but it has not been followed by that of the Waikato tribes, and there is every reason to believe that as the spring advances these latter will once more be actively in arms. It was understood that William Thompson, who was in the neighbourhood of Tauranga, was only waiting to see whether the Governor would act with clemency or severity, but he has now declared that, come what may, nothing shall induce him to abandon the cause of the King while a vestige of Kingism remains. His followers, reduced by deaths in fight and from disease and hardship to a mere handful, are at present in the hilly country between Tauranga and Waikato, and although few in number they have it in their power to harass the semi-military villages that are forming on the Waikato frontier, and keep that class of settlers perpetually on the alert. The other branch of the Waikato natives, under Rewi Maniapoto, are still as defiant as ever, and are only waiting the result of a gathering now taking place at Taranaki to continue the war at whatever point may be there determined upon. In the meanwhile, the troops are still in winter quarters, and, as the only mode of employing them seems to be at Taranaki, a campaign in that district is to be commenced as soon as the weather settles.

AUSTRALIA.—A quarrel has broken out between the two colonies of New South Wales and Victoria, in reference to the collection of Customs' duties along the inland frontier. New South Wales claims the Murray as part of her territory, and therefore proposes to seize all goods which she may find on the river, unless customs duties are paid upon them. This arrangement is resisted by Victoria, and if the affair had occurred in Europe or in any countries possessing standing armies, the result would no doubt be war, but as the colonies

are now circumstanced, the subject, it is supposed, will be brought before the courts of law, and will ultimately find its way to the Privy Council. The Anti-Transportation League continued to hold periodical meetings, and public feeling on this subject was strongly excited, the Council of the League being determined to proceed with their scheme of sending home all expirees. The young salmon have been safely deposited in Badger Creek, a tributary of the Yarra, about 40 miles from Melbourne.

UNITED STATES.—Further accounts of the combined attack of Generals Grant and Butler on General Lee's lines, state that General Grant threw forward three entire corps, the 9th, 5th, and 2d, with the expectation of carrying or flanking the entire Confederate works covering the Southside Railway. General Lee interposed a strong force between the 5th and 2nd corps, doubled up the right flank of the latter, and drove it back in confusion, capturing many prisoners. General Grant's loss in killed and wounded was 1500. General Butler's operations on the right were equally unsuccessful. Both the 10th and 18th Corps were repulsed with heavy loss in attacks upon what were considered weak points in the enemy's lines. Two brigades were cut off from retreat by the fire of the Confederate batteries. They were forced to throw themselves upon the ground to escape annihilation, and were captured in that position. Both wings of the army returned, under cover of the night, to their original position. The total Federal losses are said to have been between 4000 and 5000. The whole movement is set down as a stupendous blunder, although Grant and Meade were both on the field. General Lee has telegraphed that in the operations of the 30th General Mahon swept the Federal lines half-a-mile, capturing 230 officers and men, without himself losing a man. General Grant's troops are now building log-houses, which is suggestive of winter quarters. Commander Cushing, of the Federal gunboat Monticello, reports that he sank the Confederate ram Albemarle in Roanoke River, on the night of the 27th ult., by exploding a torpedo under her bottom. The vessel with which he made the attack was sunk by the fire of the Albemarle, and out of the crew of 14 only himself and one seaman escaped with life. General Hood, with 30,000 men, is reported to have crossed the Tennessee River, and to be moving northward. The Confederates have captured the gunboat Undine on the Tennessee River. Generals Forrest, Buford, Chalmers, and Bell, are concentrating their forces. They have 14 cannon, besides the captured gunboat. Deserters state that orders had been read to the Confederate troops to the effect that Hood would cross the Tennessee at Bridgeport, and march northward, while Forrest attacked Johnsonsville. Southern papers say that Hood is now probably in middle Tennessee. They anticipate great results from his movements. Beauregard's head-quarters are at Gadsen. It is rumoured that Sherman is moving eastward from Atlanta, the Federal garrison of which is reported to number 5000 men. Mr. Seward has informed the Mayors of New York and Buffalo that the State Department had information from Canada that a conspiracy existed to fire the principal Northern cities on the Presidential election day. The Mayor of New York informed Mr. Seward, in reply, that he had no fear of these incendiary threats being carried out. He was, however, prepared for the emergency. The Democratic press charge the Administration with fabricating the report in order to put the cities under martial law. Considerable excitement prevails at Ogdensburg, a raid from the Canadian frontier being apprehended. General Butler has arrived at New York, and it is reported from Washington that he will temporarily supersede General Dix, who will be retained to co-operate with him. Governor Seymour has issued a proclamation appealing to all parties to unite in allaying undue excitement during the election. The State officers will see that every man has a free ballot, and no military organisations will be permitted near the polls. Military interference will be resisted with the full force of law. General Dix has issued another proclamation, stating that no military will be embodied around the polls. The military will, if called upon, aid the civil authorities. Several Democratic electioneering agents have addressed reports to Governor Seymour, stating that the Administration and military authorities put every possible difficulty in the way of their obtaining soldiers' votes, and that they gave unfair facilities to the Republican agents. The Commissioners sent to Washington by Governor Seymour report that the Administration have refused their demands on behalf of the State of New York for the surrender of the State agents for trial by the State authorities. The Military Commission commenced the trial of these agents at Washington on the 3d. The Court denied the prisoners' plea of non-jurisdiction. The trial was adjourned until the 14th. The mob broke up the M'Clellan meeting at Baltimore. A meeting of merchants and bankers has been held at Wall Street in favour of President Lincoln. The blockade-runner Lady Stirling, with 900 bales of cotton, was captured by three blockaders off Wilmington on the night of the 28th ult. The vessel and cargo are valued at 800,000 dols. The privateer Olonstea has captured the bark Empress Theresa. The new Confederate cruiser Chickamauga, which escaped from Wilmington on the 27th, has burnt the ship Shooting Star and two barks off Cape Delaware. The Tallahassee has also destroyed several vessels off Black Island. The *Richmond Sentinel*, the organ of the Confederate Government, recommends the arming of the slaves. Vice-President Stephen's letter, in reply to General Sherman's invitation to visit Atlanta, is published. He asserts that he has no power to act without the consent of the Confederate Government, but he believes peace not to be impossible if based upon honour, right, and justice to all parties, provided truth and reason be permitted to have full sway. The Republican journals ridicule the numerously signed address recently sent from England to Governor Seymour, entreating the North to let the South go. The *New York Evening Post* says it is a kind of advice which the American people may take, perhaps, when the English free Ireland, Scotland, the Channel Islands, and India

CANADA.—The Vermont prisoners have been transferred from St. John's to Montreal, where the three judges of the Court of Queen's Bench have refused to grant a writ of *habeas corpus* for them, on the ground that they were still under the magistrates' jurisdiction, and that no commitment had been yet made. A judicial investigation into the affair, under the Ashburton Treaty, was in progress at Montreal. The delegates to the late Intercolonial Convention have been *fêted* in brilliant style in the leading cities of Canada West.

MEXICO.—Official advices from Mexico state the condition of affairs to be most satisfactory. The Emperor Maximilian continued his journey amid the enthusiasm of the populations. A great impression had been created by the capture of Matamoras. The Juarist troops had revolted and been disbanded, and since the fight of the 21st September Juarez had with him not more than 100 cavalry. He fled on the 27th towards Chihuahua.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 90⅞ to 91 for Money, and 89¾ to ⅞ for Account; Three per Cents. Reduced, 88⅝ to 89; New Three per Cents., 88⅞ to 88¾; Annuities, 1885, 14¼; Bank Stock, 237; India Five per Cent. Stock, 106½ to ¾; Ditto Bonds, 5*s.* dis.; Five per Cent. Enfaced Rupee Paper, 101½; and Exchequer Bills, June, 5*s.* dis.—FOREIGN: Egyptian, 95¾ to 96; Greek, 23; Ditto Coupons, 9½; Italian, 64¾; Mexican, 28⅞; Ditto, 1864, 27⅛; Portuguese, 1856, &c., 47¾; Ditto, 47⅝ to ½; Russian, 1822, 88¾; Ditto, 1862, 87 to 86⅝, ex div.; Ditto, 1864, 87¾; Spanish, 48⅜; Ditto Passive, 30⅞; Turkish, 1862, 71¾ to ¼; Ditto 100*l.* Bonds, 71⅛; Venezuela, 18⅜, ex div.; Ditto, 1862, 49½ to 49, ex div.; Ditto, 1864, 39½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,766,240	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	13,116,240
		Silver Bullion	—
	£27,766,240		£27,766,240

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£10,374,542
Rest	3,310,036	Other Securities	19,305,241
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,142,368	Notes	7,571,855
		Gold and Silver Coin .	736,115
Other Deposits	14,426,234		
Seven days and other bills	556,115		
	£37,987.753		£37,987 753

Nov. 17, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Nov.* 11.—BANKRUPTS—E. O. AYRE, Mark Lane, City, Corn Commission Agent — C. ALLCARD, Tranmere, Cheshire, Builder — J. BROCKLEY, Hanley Staffordshire, Cabinet Maker—E. BLAKENEY, Wolverhampton, Brazier—R. BOWLAND, Gravelly Hill, near Birmingham, late Gold Chain Maker—E. BROOKS and S. LOMAX, Tottington, Lower End, Lancashire, Manufacturers—S. F. BILTON, Chancery Lane, Barrister-at-Law—T. BURROWES, late of South Lambeth Road, Surrey, Stock Broker—J. BOLTON, Huddersfield, Manufacturer—J. BROOK, Huddersfield, Manufacturing Chemist—S. A. CLEAVER, Colebrook Row, Islington, Lodging-house Keeper—H. T. COOPER, Charlotte Terrace, Islington, Writing and Dressing Case Maker—R. C. COLLINS, Bath, Wine Merchant—J. A. CHRISTIAN, Great Grimsby, Lincolnshire, Innkeeper — C. W. CLARK, Morley, Yorkshire, Brickmaker—G. DRING, Morton-in-Marsh, Gloucestershire, Farrier—EDWARD T. DUNN, Hammersmith, Commercial Clerk—W. DYER, Brixton, Surrey, General Dealer and Beer Retailer—C. DAWSON, Birkby, Yorkshire, Painter—H. DOCWRA, Kingston on Thames, Surrey, Fishmonger—M. A. EDWARDS, Cambridge Terrace, Shepherd's Bush, Mason Modeller—C. FENN, Fetter Lane, Cheesemonger—G. S. FRANKHAM, Upper Norwood, Surrey, Builder—E. FREEMAN, Keighley, Yorkshire, Linendraper—W. GRAY, Stamford Bridge, Yorkshire, Brickmaker—S. GLITSENSTEIN, Great Tower Street, City, Wine Merchant—W. HARRISON, Sheffield, File Grinder—J. HACKNEY, Tunstall, Staffordshire, Beerseller—J. J. HOWARD, West Monckton, Somersetshire, Spinster—C. E. HOWARD, West Monkton, Somersetshire J. JARRATT, Wolverhampton, Forge Roller—J. W. JONES, Gloucester Terrace, Commercial Road East, Shoe Manufacturer—R. J. KENNETT, jun., Clapham Road, Surrey, Stationer—T. LAVERY, late of Fordingbridge, Hampshire, Farmer—J. LORD, Manchester, Yarn Agent—G. MORLEY, sen., Birmingham, Japanner—E. MASON, Shrubland Road, Dalston, Cheesemonger—J. MAYO, Jun., Clapham, Surrey, Carman and Contractor—R. F. MILGATE, Page's Walk, Swan Street, Old Kent Road Dealer in Cattle—R. MAKINS, Crosby Row, Walworth Road, Manager to a Licensed Retailer of Beer—T. H. MARTIN and N. SLIGHT, Cavendish Street, Hoxton, Printers—W. NASH, Trevethin, Monmouthshire, Beerhouse Keeper—G. PHILCOX, Aldershott, Watchmaker—J. PRICE, Liverpool, Builder—W. PASCOE, Ludgvan, Cornwall, Tailor—J. PASSEY, jun, Worcester, Carpenter—J. PARKER, Friars Mount, Bethnal Green, Pianoforte Smith—W. QUARTERMAN, Loughborough, Gloucestershire, Shoemaker—THOMAS ROWLANDS, Liverpool, Butcher—JOHN CHARLES RAINE, Hungerford, Berks, Butcher—JOHN SOMERVILLE, Stockwell Common, Surrey, Builder—JAMES SHARP, Warrington, Lancashire, Provision Dealer—C. SHAXSON, Llanelly, Carmarthenshire, Grocer—J. SILCOCK, Chesterfield, Derbyshire Beerhouse Keeper—J. C. TETTENBORN Chatham Road, Wandsworth Common, Musician—J. TURNER, Harwich, Essex, Bootmaker—J. THIRLWELL, Southport, Lancashire, Slater—R. WOODRUFFE, Harlaxton, Lincolnshire, Innkeeper—T. A. WOODS, Fenton Street, Commercial Road East, Accountant—J. WRIGHT, Ilkeston, Derbyshire, Boatman—J. WOOLLEY, Barnsley, Yorkshire, Warehouseman—M. WILLIAMS, Earlswood, Glamorganshire, Publican—J. WARTS, jun., Wellingborough, Northamptonshire, Machinist.

SCOTCH SEQUESTRATIONS.—H. FRASER & Co., Glasgow, Wine Merchants—D. M'INTOSH, Campbeltown, Argyllshire, Fisherman—D. THOMSON, Glasgow, Tea Merchant.

TUESDAY: *Nov.* 15.—BANKRUPTS.—C. AYRES, Gloucester, Haulier—I. ARCHER, Tranmere, Cheshire, Nurseryman—A. BISHOP, Denham Bucks, Bootmaker—T. BURKE, Leeds, Boot and Shoe M... Beer, Castle Road, Kentish Town, Journeyman Carpenter—... York, Tobacconist—T. BROADBENT, T. WHITTAKER, a... worth, Yorkshire, Cotton Spinners—R. BOXALL, ... Blacksmith—A. BLEACKLEY, Manchester, Cashier—... stock Street, City Road, Merchant's Clerk—T. ... Cheshire, Bricklayer—I. COLEMAN, Swan Street, Min... CHEATHAM, Queen Street, Stepney, Merchant's Clerk—... R. CORRIN, Tranmere, Cheshire, Builders—J. DAVY, ... Doyle, Liverpool, Merchant—O. K. EDGE, Greenhers ... T. EATOCK, Bolton, Lancashire, Bookseller—J. ... W. H. EMERSON, late of Ilfracombe, Devonsh., late ... —C. FULLAGAR, Bexley Heath, Kent, Medical Assistant—M. ... F. MULLER, Mincing Lane, City, Merchants—J. ... Breconshire, Coal and Mine Contractor—E. ... Derbyshire, Grocer—H. GOODMAN, Deptford, Licensed ... Accrington, Lancashire, Cotton Waste Dealer—E. ... Street, Chelsea, Chemist—A. H. GILL, Nottingham, ... HILTON, Bury, Lancashire, Clerk—C. HAYNES, Bew... Journeyman Baker—E. HODD, Bygrove Cottage, Mer... Gentleman—A. HOARE, Basinghall Street, City ... HADFIELD, Manchester, Farmer—M. LEVI, Birmingham ... LE GROVE, Whiskin Street, Clerkenwell, Letter ... Bouverie St., City—T. M'KNIGHT & T. M'KNIGHT, jun. ... —J. MORTON, Leeds, Hairdresser—W. MALLOW, Ha... Kentish Town, Builder—W. MILDREN, St. Keverne, ... E. MAYS, Vauxhall St., Lambeth, Corn Dealer—J. M'KERROW, ... jun., and H. M'KERROW, St. Paul's Buildings, Lit... Fancy Dress Manufacturers—J. L. MOFFAT and W. R... mission Agents—C. MILLS, Lichfield, Licensed Victual... Swansea, Draper—S. MAYER, late of Armitage, Staffor... ware Manufacturer—S. W. NIGHTINGALE, Mayfield ... T. PARKINSON, Lancaster, Bootmaker—J. PEACOCK, jun., ... facturer—E. PALMER, Birmingham, late Ale Dealer—T. ... Norwich, late Farmer—W. RICH, New Brentford, Pewter... Stanningley, Yorkshire, Joiner—G. READ, West Place ... Smith—F. W. RAGGETT, Brighton, late Lodging ... READING, Handsworth, Staffordshire, Commission Agent—W. ... Norton-in-the Moors, Staffordshire, Journeyman Blacksm... Bristol, late Commission Agent—MARY ANN SMITH, ... Luke's, late Dairy Keeper—THOMAS SMITH, Birmingham, ... R. TODD, Senor Street, Westbourne Square, Paddington, ... House Keeper—T. THOMPSON, Liverpool, Dealer in Millinery ... Wigan, Lancashire, late Inspector of Roads—S. TH... Lancashire, Manager and Salesman—J. G. UTTLEY, Man... —W. WEBSTER, Bristol, Beer Retailer—J. W. WILLIAMS, ... Carnarvonshire, Grocer—R. WILLIAMS, Everton, Liverpool ... WATSON, Union Street, Middlesex Hospital, Cheesemonger—... SON, Gripgley on-the-Hill, Nottinghamshire, Farmer—... Ordsall, Nottinghamshire, Labourer—A. B. WILBRAHAM, ... Grosvenor Square, late Ensign in the Coldstream Guards—... Tuxford, Nottinghamshire, Milliner—H. YOUNG, Great ... Westminster, Beer Retailer.

SCOTCH SEQUESTRATIONS—J. BROWN, Greenock, Coal Mer... —JOSEPH JAMES BRIERLY, Glasgow, Manufacturer—R. TAYLOR, Glasgow, Shipbuilder—J. THORNE, Firhills, Forfarshire, Farmer—R. ... Glasgow, Merchant.

Metropolis and its Vicinity.

THE CORPORATION AND THE SEWAGE.—A ... Court of Common Council was held on Saturday ... Mansion House, to take into consideration a report ... the Coal, Corn, and Finance Committee of the Corporation on the utilisation of the sewage of the metropolis, which had been referred to them on the requisition of a public meeting of the inhabitants of the ... The Lord Mayor presided. The report stated that the committee, fully aware of the great importance of the subject, not only to the ratepayers but to all classes of the community, had attentively considered it in all its bearings, and had been favoured with the assistance and advice of Lord Robert Montagu, M.P., and Dr. Bowring, M.P., both of whom had acted as chairmen of Committees of the House of Commons on the utilisation of metropolitan sewage. It recognised the value of sewage manure, and adduced facts to show that it was commonly applied far too profusely. It stated that the committee were in favour of a plan of distribution to be carried out by a public company, the ratepayers to receive a fluctuating rent varying according to the profits realised by the company; but in the present state of knowledge of the subject, they thought that nothing should be done at present, and that further and thorough investigation should be instituted without delay, either by the sanction of Parliament or by the Government. Deputy Bone moved that the report be agreed to, and said that as the Metropolitan Board of Works was about to discuss some plan for the disposal of the sewage, the committee, of which he was the chairman, felt that there were not sufficient data to act upon, and that more information should be obtained before any decision was arrived at upon so important a subject. Mr. Isaacs seconded the motion. He believed that the plan proposed to be carried out by the Metropolitan Board of Works was to endeavour to reclaim ... 12,000 acres of sand on the shore of the German Ocean by depositing an enormous quantity of the sewage on that spot, and this was to be done in conjunction with a company who were to receive 7½ per cent. interest, and any additional profit that might be derived from the operation was to be divided between the company and the Metropolitan Board of Works. It seemed to him that this plan was one that was not likely to succeed, and that, instead of its treating the sewage as an article of great value and importance, it treated it as a thing to be got rid of. Mr. Harris, Mr. E. T. Philipps, Deputy Elliott, and Mr. Pedler supported the motion. Alderman Rose, M.P., said that there could not be the least doubt of the very great value of the sewage manure. What they wanted to do, now, was to prevent a certain body that had ... taxed the ratepayers of the metropolis to the extent of seven millions from spending two or three ... more in carrying out a chimerical scheme which ... not by any possibility be attended with any good ... Mr. H. Lowman Taylor said that though he was ... the representatives of the City at the Metropolitan Board of Works, he was at the same time of ... that this question was much more likely to be settled ... a manner satisfactory to the public and the ratepayers of the metropolis by a committee of the House of Commons than by the Metropolitan Board of Works. Mr. Norris, M.P., suggested that a Royal commission should be applied for to consider the subject. Deputy Saunders concurred in this suggestion. Deputy ... motion was then put and carried unanimously. Mr. ... next moved that the committee should be instructed to take the necessary steps to obtain a royal commission. After some discussion the Common Serjeant expressed

[illegible] that it would not be prudent for the Corpo[illegible] to apply to the Government to issue a Royal [illegible] commission, as they had no power to control the scope of such a commission, and the result might be to [illegible]ously affect the principle of local self-government. Mr. Lawley upon this withdrew his motion, and [illegible] resolution empowering the committee to confer with the Government, and to take any other steps they might deem advisable in the matter, was agreed to.

The Board of Works and the Sewage.—A special meeting of the Metropolitan Board of Works was held on Tuesday to receive the report of the Main Drainage Committee, relative to the utilisation of the sewage. Several communications on the subject of application of the sewage were read, with the report of the Chairman and other members on their recent inspection of the works for the utilisation of sewage at Rugby, Croydon, Carlisle, and Edinburgh; and the several tenders for taking the sewage, with the recommendations of the Committee thereon. A report from the Main Drainage Committee was then read, stating the opinion of the Committee that the tender of Messrs. Hope & Napier, for dealing with the sewage on the north side of the Thames, so far as their general scheme is concerned, offers the greatest advantages; and recommending the Board to refer the subject back to the Committee to negociate the precise terms upon which the concession may be granted to those parties. Mr. Freeman said that the only two real tenders were that of Mr. Ellis and that of Messrs. Hope & Napier. With regard to Mr. Ellis's, they had spent millions to take the soil to Barking Creek, and should they now spend millions more to bring it back to Hampstead Heath? As to the scheme of Messrs. Hope & Napier, it took the soil from the point to which they carried it and conveyed it farther from the metropolis; and it would be the means of irrigating the land through which it passed, for the farmers in Essex would be as ready to buy it as any other farmers; and in addition to that they would have an outlet to any amount of sewage that might be collected in their reservoirs. It had been proved that the soil was valuable as a manure, and the result of carrying out Messrs. Hope & Napier's scheme would be to reclaim Maplin Sands, comprising 20,000 acres of now useless sand. He had, under these circumstances, no hesitation in moving the adoption of the report. Mr. Doulton seconded the motion. Mr. Collinson moved as an amendment, that it be referred to the Main Drainage Committee to consider the best means of utilising a portion of the sewage of the metropolis, for the purpose of ascertaining its commercial value, and to report their recommendations to the Board, in order that *application* may be made in the ensuing Session of Parliament for the necessary powers to carry them into effect. Mr. Savage seconded the amendment. Mr. Tite, M.P., supported the recommendation of the committee. Mr. Legg and Mr. Saunders supported the amendment. Mr. Newton said that Mr. Ellis proposed to pump the sewage through iron pipes to Hampstead Heath, which would require 70,000*l.* for the necessary pumping power, 40,000*l.* for pipes, and 8000*l.* for reservoirs—a total of 118,000*l.* exclusive of his mains, which would cost 2,500,000*l.*, so that the expenditure in carrying out his plan would be something like six millions. But the proposal of Messrs. Hope & Napier was to carry the sewage down into the county of Essex by gravitation and by distributing it over some 5000 acres of land, there to stop till they had tried the experiment. No doubt the metropolitan sewage was valuable. The citizens of London had put it on record that it was worth 2,889,972*l.* Mr. Ellis said he could insure 30 per cent. return, and he proposed to take 5 per cent. himself and then divide any excess between himself and the Board; while Messrs. Hope & Napier proposed to take 2½ per cent. and then give the Board the remainder until they had arrived at 7 per cent. The expense of maintaining the great pumping power according to Mr. Ellis's plan on the north side would be 200,000*l.* annually, while the small pumping power of Messrs. Hope & Napier would only require an outlay of 20,000*l.* annually. Mr. Carpmael, Mr. Healey, Mr. Samuda, and Mr. Miller, M.P., spoke in favour of the motion. Mr. Roach opposed it. Mr. Doulton, M.P., said that the City had placed on record the opinion that the sewage was worth two millions and some odd thousand pounds. Now, he would propose to generously allow the City the two millions if the corporation would kindly pay the other portion of their estimate, and take the sewage off the hands of the Board. He supported the motion, and said that as the scheme would require an Act of Parliament, the members who voted for it would be voting for a fair and impartial inquiry before a Parliamentary committee. Mr. Lowman Taylor said that Messrs. Hope & Napier asked the Board to concede the sewage for 50 years, and on particular conditions, one of which was that the Crown made them a grant of the sands which it was their purpose to irrigate, and this, he maintained, it would not be prudent for the Board to agree to. Mr. Savage objected to any scheme which could not bind them for 50 years. After a few words from Mr. Dixon and Mr. Richardson, M.P., in support of the original motion, the amendment was put and negatived by a majority of 18, the numbers being 26 to 8. On the original motion being put, Mr. H. L. Taylor moved, as an amendment, that it is undesirable to accept any proposal that requires the concession of 50 years, and that other conditions in the scheme of Messrs. Hope & Napier render it impolitic to adopt it without further consideration. On a division the amendment was negatived by 25 to 9. Mr. Legg then moved another amendment that the Board should advertise for further tenders, which was also negatived by 26 to 9. The original motion was then put, and carried by a majority of 17—the numbers being 26 to 9.

Sewage Malaria at Woolwich.—A fatal epidemic has been raging for some time past at Woolwich. The most distressing cases have been among families connected with the Government departments of the Arsenal and Dockyard. The cause is supposed to be malaria, occasioned by the low level outfall of the sewage at Barking Creek. At two-thirds flow the surface of the tide is covered with a dark pestiferous matter, proved to be a remnant of the outfall, cast back before the ebb is sufficiently swept away. After each receding tide, and when the flood begins to make its appearance, the atmosphere along the river becomes insupportable.

The Widening of Park Lane.—At the meeting of the Metropolitan Board of Works on Friday, Mr. Tite, M.P., called attention to the question of opening Hamilton Place, or some improvement at the southern end of Park Lane, and moved that the Streets Committee be authorised to give the usual Parliamentary notice. Mr. Roche seconded the motion. Mr. D'Iffanger opposed it, on the ground that there should first be a full inquiry into the compensation and the cost it would involve. Mr. Miller, M.P., supported the motion, and said that it left two courses open to the Board; if they did not give the preliminary notice they could not go to Parliament; if they did they could go to Parliament or not as they chose. After a few words from Mr. Newton and Mr. Healey, Mr. Tite framed a motion in distinct terms, pledging the Board to nothing beyond giving the preliminary notice to put them in a position to go to Parliament if it was thought desirable. This motion was carried on a division by 22 to 8.

Thames Embankment.—A special meeting of the Metropolitan Board of Works was held last week, when a report from the Embankment Committee was read, recommending that the immediate backing of the embankment wall should be of material wholly obtained from the land, and that the remainder of the filling-in should be supplied from the land and from the bed of the river in such proportions as the engineer shall consider best suited to form a solid embankment. Mr. Newton moved that the order of the Board prohibiting the contractors from receiving any soil for filling-in other than that supplied from the river, be rescinded. After a long discussion the motion was carried by a majority of 19 to 2. Mr. Newton then moved, and Mr. Legg seconded the adoption of the report. After another long discussion the motion was carried by 17 to 3.

Execution and Confession of Müller.—Sir George Grey, the Home Secretary, after full consideration of the memorial submitted to him by the German Legal Protection Society, and communication with the Lord Chief Baron Pollock and Mr. Baron Martin, who tried the prisoner, declined on Saturday to interpose to respite or commute the sentence; stating that he saw no ground which could justify him in advising her Majesty to interfere with the due course of the law in the case. Mr. Beard lost no time in seeing the convict and apprising him of the decision. Müller received the intelligence with calmness and composure, and expressed himself to the effect that he had been prepared for the result. On Sunday the convict was chiefly occupied in religious duties. He attended the services in the prison chapel morning and evening, and was seen in the course of the day by the Rev. Mr. Walbaum, minister of the German Chapel, St. James's, and by the Rev. Dr. Cappel, minister of the German Lutheran Chapel in Alie Street, Goodman's Fields. The excitement around the prison on Sunday was almost unprecedented. From 3 o'clock until 5 in the afternoon, although the day was wet, a crowd of people had assembled in front of the prison. Most of the crowd were then dispersed by a heavy shower of rain, but only to collect again on its cessation, and at 8 o'clock the evening the Old Bailey was all but impassable. In the open space opposite the gaol, and, indeed, throughout the whole length of the Old Bailey from Ludgate Hill to Newgate Street, formidable barriers were erected, about 20 feet apart, to lessen the pressure of the crowd, and especially to prevent the fearful surging which takes place on extraordinary occasions of the kind, and to which the weak are liable to succumb. A similar precaution was taken in Giltspur Street, which stretches from Newgate Street to Smithfield, and, indeed, wherever a view, however remote, could be had of the place of execution. The windows of the Court-house in the Old Bailey were barricaded, as was also the churchyard of St. Sepulchre, where loss of life was caused about 30 years ago, on a similar occasion, by the palisading along the top of a dwarf wall surrounding the church, and to which people had clung in great numbers, giving way. The execution took place on Monday morning in the presence of thousands of spectators, the number being much larger than has been seen at any execution in London for many years past. Müller persisted in asserting that he was innocent, even when he had the rope round his neck, but it will be a great satisfaction to the public to know that at the last moment of his existence he confessed his guilt, and that no doubt now remains that Müller, and Müller alone, was the murderer. He walked up the steps leading to the scaffold with a firm step. He was accompanied by the Rev. Mr. Davis and Dr. Cappel. His appearance on the scaffold was the signal for a tremendous yell, but with this exception, the conduct of the crowd was tolerably orderly and decorous. After the rope had been placed round the neck of the culprit, Dr. Cappel took hold of one of his hands and again prayed with him. and having done so for some time, he concluded by addressing him as follows:—"Müller, in a few moments you will appear before your God. I ask you now, for the last time, have you committed this crime?" He replied, "I am innocent." Dr. Cappel then said, interrogatively, "You are innocent?" Müller replied, "God knows what I have done." Dr. Cappel then said, "Does God know that you have committed this crime?" Müller was silent. Dr. Cappel went on, "In a few minutes you will be before God. I ask you now, solemnly and for the last time, have you committed this crime?" Müller then said, "*Yes, I have done it. No one else was concerned in it.*" Almost at the same instant, and while the words were upon the lips of the culprit, the drop fell, and, after a very brief struggle, he ceased to exist. After the body had hung the usual time it was cut down and buried in a coffin, filled with quick lime, in one of the corridors of the prison, where all the great malefactors for many years past have been interred. At the Court of Aldermen on Tuesday the Sheriffs reported that the Governor of Newgate had placed in their hands a paper from Müller, containing much of what had already been published in his behalf, accounting for the manner in which he passed the Saturday night of the murder, and the way in which he became possessed of the watch and chain of Mr. Briggs. It did not contain any statement of his guilt, and as he had since made a confession, the Sheriffs sealed it up, and handed to the Court to deal with it as they might think proper, believing that its publication would answer no useful purpose. Alderman Wilson called attention to a letter published in one of the penny papers by the Rev. Mr. Battiscombe, of Blackheath, after he had obtained access to Müller in his cell, asserting in the strongest possible terms his belief in the convict's innocence. He moved that the Gaol Committee be instructed to inquire by whose authority this clergyman obtained admission to a convict under sentence of death, and that the communication now made by the Sheriffs in reference to the statement left by Müller be also referred to the said committee for consideration and report. Alderman Copeland seconded the motion, which was agreed to.

The Murder in Plaistow Marshes.—The Dutchman Kohl was again brought before the magistrates at Ilford on Saturday, when some of the lodgers in his house stated that they saw him come home about half-past one o'clock—about the hour when the prisoner said he was with deceased in the neighbourhood of the docks; that his clothes were then covered with mud; and that in the course of the evening he broke open the boxes of the missing man, and said they were empty. The prisoner was again remanded. The adjourned inquest was resumed on Thursday, when the police reported that they had been engaged daily in a minute search in the reed field and adjacent meadows, in order to trace, if possible, some of the missing articles belonging to the murdered man, but they discovered nothing but the original handle of the chopper with which the murder was committed. The chopper itself had been fresh painted with red paint for the purpose of concealing the stains of blood, and a new handle had been fixed to it. The old handle was at once identified by the owner, from whom the prisoner had borrowed it, and the place where the red paint was purchased has been ascertained. They also produced a witness who stated that a few days ago, while he was walking in the reed bed, near the spot where the body was found, he picked up a large clasp knife, which has been identified as the property of the prisoner. The police have also obtained information to show that the prisoner pledged the missing clothes of the deceased and some articles of jewellery. The key belonging to deceased's boxes and the duplicates have likewise been found. Dr. Letheby attended the court to say that he had not yet had time to make a chemical analysis of the spots found on the hatchet and the clothes. After some further evidence had been given the inquest was again adjourned. Several thousand persons have daily visited the scene of the murder, and large numbers have proceeded from the metropolis in carts and other vehicles to the river side, where the police have been engaged in searching the mud and banks of the Thames at low water.

New Park at Wimbledon.—A meeting of the residents at Wimbledon was held on Friday to receive a proposal from Earl Spencer respecting Wimbledon Common. His lordship, who presided over the meeting, stated that, as lord of the manor, he proposed, if the consent of the copyholders and the sanction of Parliament be obtained, to convert all the important part of Wimbledon Common into a public park. The cost of the conversion he proposed to defray by the sale of detached or outlying fragments for villa purposes. The cost of keeping it in order he would take upon himself and his successors, retaining for this purpose the right of pasturage. He would, in virtue of his position of lord of the manor, assume the name and functions of protector of the park, having an officer of Government associated with him, in order that the public may not

suffer from any caprice of himself or his successors, and that permanent arrangements may be made for holding in the park the meetings of associations of a national character, such as the Rifle meetings. If this proposal be carried out, the public will have secured to them for ever a park of not less than 700 acres, or not very far from the extent of Hyde Park and Kensington Gardens together. The meeting appointed a committee to examine the scheme, and if the consent of the copyholders be obtained, an Act of Parliament will be required to sanction it.

GENERAL TODLEBEN returned to London on Thursday night from a visit to Newcastle, Sheffield, Manchester, and Liverpool.

NATIONAL TEMPERANCE LEAGUE.—A public meeting of this League was held on Monday evening in Guildhall. Before the hour announced for opening the doors, Guildhall Yard was filled with a densely-packed throng, and when the hall was opened a rush took place which caused great alarm. The space allotted for the holders of special tickets was speedily stormed and carried by the unprivileged, and in the course of a very few minutes the spacious hall was completely filled, a very large proportion of those present being ladies. The Lord Mayor took the chair, and said that as a magistrate he could say that one-half of his time when sitting upon the bench was occupied in dealing with offences arising from drunkenness. Any movement, therefore, that was intended to diminish drunkenness must be a noble, benevolent, and Christian movement. He could not but think that medical men were rather to blame for encouraging the use of strong drinks. Although he did himself sometimes take a glass of wine, yet when his medical man recommended wine upon the ground that his active life demanded extra nourishment, he took the medicine, but not the wine, and he found himself the better for doing so. Mr. S. Gurney, M.P., read a statement setting forth the object of the League, which was briefly to change the habits of the people in regard to the use of intoxicating liquors. For that purpose they adopted the double mode of example and precept. Seeking no coercive measures, they appealed by means of public meetings, lectures, conferences, and the press to the sympathies, patriotism, and consciences of the people. The movement was advancing, and temperance principles were making progress among the ranks of the army, 2500 soldiers having signed the pledge at Warley, and more than 1000 at Woolwich, while regimental temperance societies have been formed in India, Malta, Gibraltar, and other foreign stations. Mr. S. Morley said that, believing as he did that the question of drunkenness lay at the root of the great social question, he thought thanks were due to the Corporation of London for affording the League an opportunity of distinctly bringing the subject under the notice of their fellow-citizens. He was glad to find that among the clergy of the Church of England there was a large and increasing class of abstainers, and he wished he could say as much of the Dissenting clergy. The League took the ground of persuasion, but he thought something more was required, and he would suggest that habitual drunkards should be treated as lunatics, and should be imprisoned. He thought, too, it was a grave question whether beer should be sold for consumption on the premises, and he looked with favour upon a proposition to close public-houses at 6 in the evening. As for the Permissive Bill, he, although a supporter of the League, and not a member of the Alliance, was of opinion that something like that measure was required, and he should wish to see the licensing system amended by transferring the power of granting licences from the magistrates to the inhabitants of a district. The Rev. R. Maguire, incumbent of Clerkenwell, vindicated total abstainers from the imputation of being men with one idea. They disclaimed all intention of putting forward temperance as a panacea for all evils, but they sought to get rid of strong drink because it was the great parent of evil. The *Times* had recently classed strong drink, humorously of course, with Mr. Banting's sugar and Addison's beefsteak club. But if sugar made Mr. Banting fat, he never on that account broke anybody's head, nor did the eating of underdone beefsteaks cause injury to any one but those who ate them. The use of strong drink, however, did not alone injure the drinker, but it led to quarrels and to calamities, affecting not only individuals, but the community at large. Drunkards were a class by themselves, and it was the duty of all others to join in an effort to raise their brethren out of the dismal swamp into which strong drink had led them. Mr. B. Scott, Chamberlain of the City of London, said that, although the wealthier classes in the present day were not chargeable with setting a bad example to the humbler classes, yet their predecessors had done so, and it was right that they should now make an effort to cure the evil which had been caused. He referred to several instances in former times of Royal excesses at civic banquets, and said that he did not advocate coercive legislation, as he believed that moral suasion and Christian example would do all that legislation could do for them. Mr. H. Dixon, a member of the College of Surgeons, and Coroner for South Oxfordshire, said he felt that in the matter of strong drinks the doctors had much to answer for. The public should not trust to medical authority on that point, because opinions were divided, but they should rely on their own experience, and the results of their observation in other cases. He admitted that alcohol might sometimes be useful as a medicine, but it would have been well for the public, although ill for the doctors, if that fact had never been found out, because for every one who had been benefited in their bodies by the use of alcohol, thousands had perished, souls and bodies, by its abuse. Mr. G. Cruikshank said that their place of meeting suggested the question whether it might not be possible to discontinue the use of strong drinks at great civic feasts. As it might be said that there could be no enjoyment at such a feast, he recommended the Lord Mayor, amidst loud cheers and laughter, to make the experiment by inviting the company now gathered in that hall. The Rev. Newman Hall replied at some length to a recent article in the *Times*, which had charged them with vulgarity and fanaticism, and with having nothing in common with Father Mathew but the name. He said that free trade, slavery, and even Christianity had been thought vulgar, but it was not so now, and as to the charge of fanaticism and ignorance, he said that their cause was making such progress, that those who wished to join before the movement became a success must do so speedily. The thanks of the meeting were then given to the Lord Mayor for presiding, and a Benediction having been pronounced, the proceedings were brought to a close by singing the National Anthem.

THE LATE EXPLOSION AT ERITH.—The adjourned inquest on the persons killed by this explosion was brought to a close on Tuesday, when the jury, after a consultation of nearly two hours, returned the following verdict:—

"We find that the deaths of George Raynor, John York, and Thomas Hubbard were caused by an explosion of gunpowder which originated in one of the barges belonging to Messrs. John Hall & Sons while unloading at the jetty of their magazine at Erith, but how that explosion was caused we have no evidence before us to show. From the evidence which has been adduced before us we would respectfully call the attention of Her Majesty's Government to the many serious omissions and imperfections in the present Acts of Parliament relating to the gunpowder trade, and would urge upon their consideration the following as a few of the points on which immediate legislation is required:—1. The quantity of gunpowder stored in any one place or conveyed in any one barge, waggon, or railway train. 2. The construction and situation of magazines, their proximity to populous districts, to river walls, and other sources of danger, and the licensing the same. 3. The construction of barges and other vessels for the conveyance of powder, and the necessity of their having better distinguishing marks. 4. The shipping and discharging powder generally. 5. The importance of Government inspection and supervision of the storing, packing, and conveyance of gunpowder. 6. The penalties relating to the infringement of all Acts of Parliament bearing on this subject."

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week ending Saturday, Nov. 12, were 1586. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1279. The present return is therefore 307 above the average. The most fatal diseases have been bronchitis or pneumonia, and the very young and the very old have been the principal sufferers. During the week the births of 1003 boys and 991 girls, in all 1994 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1917.

Provincial.

DEAL.—The new pier in this harbour was formally opened on the 8th inst., Mrs. Hugessen, the wife of one of the members for the Cinque Ports, officiating at the ceremony. The day was one of general rejoicing in the town. A public dinner followed the opening, and was attended by Lord Clarence Paget, Mr. Hugessen, Sir Brook Bridges, and Sir Edward Dering, the borough and county members, all of whom congratulated the townspeople and the shareholders on the successful completion of their undertaking.

LIVERPOOL.—For some time past the walls of Ashton, in Lancashire, have been covered with placards offering employment in glass works in New York to young men, 15*s.* a week, with food and clothing, being promised as the remuneration. As there is at present great distress amongst the operatives of Ashton, about 300 young men and lads, from 16 to 30 years of age, engaged themselves to the agent, and late on Tuesday night about 180 of them arrived in Liverpool, with the intention of sailing to New York in a vessel called the Great Western. On arriving at the Brunswick Station, carts were in readiness to convey them to the Canada Dock, where the Great Western was lying. The men, however, had been without food all day, and on demanding something to eat a dispute arose, which attracted the attention of Mr. Underwood, of the Sefton Foundry, who questioned the "emigrants," and on hearing their story told them that in all probability the whole affair was an attempt to entrap them as recruits for the Federal armies. Upon this numbers of them refused to go on board the Great Western, to the great chagrin of the "agent," and Mr. Underwood found them shelter in his own premises. He also communicated what had occurred to the police authorities, who found on inquiry that there were already in the town about 90 men from London, who had been engaged at a house in Westminster by an American, who offered them 15 dollars a month, with a new suit of clothes on arrival at New York, the wages to commence from the time of going on board the ship. About 30 of these arrived from London, among whom were several foreigners, by express on Tuesday afternoon; and 58 others followed by a later train. On hearing what had taken place, a great number of them either refused to go on board the Great W[illegible] or left her after joining her in the [illegible]. Two of them asserted that they were offered [illegible] missions in the Federal army. The police [illegible] 600 emigrants on board, the majority [illegible] Irish, and of this number about 200 were [illegible] "recruits." The ship was preparing [illegible] Mersey for New York on Wednesday, when [illegible] stopped by order of the Custom House auth[illegible] the plea that she had on board several passe[illegible] had been kidnapped under various pretences [illegible] in the Federal army. The matter will [illegible] undergo a strict investigation.

PLYMOUTH.—Lieutenant Francis Main, of the [illegible] clad Black Prince, 41, Captain Lord F. H. Ker[illegible] tried last week by court-martial on board the [illegible] Royal Adelaide, in Hamoaze, for being asle[illegible] hammock on the main deck of that ship [illegible] 2d November in the first watch when the [illegible] lying in the Sound, he being the officer of [illegible] Captain Phillimore presided, and the charg[illegible] proved, Lieutenant Main was dismissed the [illegible] The sentence would perhaps have been less seve[illegible] from the fact of his having been punished about [illegible] months since for a similar offence.

PORTSMOUTH.—In the account which appeared [illegible] week of the court-martial on board the Victory, [illegible] tenant Lord Arthur Pelham Clinton was mentione[illegible] the officer who was tried and dismissed the ser[illegible] desertion. This is inaccurate. The officer who [illegible] dismissed is his brother, Midshipman Lord [illegible] Sidney Pelham Clinton.

SANDWICH.—Thomas and Samuel Croker, [illegible] Hanbury, aged 26 years, said to be twin brothers, [illegible] have been travelling in various parts of the provinces [illegible] London, swindling every one with whom they [illegible] contact, were brought before Mr. Deedes, the Record[illegible] the recent Quarter Sessions in this town. The pri[illegible] were committed for trial from Ramsgate, which [illegible] they visited during the busiest part of the sea[illegible] took up their abode at the chief hotel, whe[illegible] letters, addressed to "Thomas Hanbury, Esq., [illegible] had been waiting their arrival some days. They [illegible] sented themselves as sons of a widow lady [illegible] Hanbury, who was a frequent guest at the [illegible] stated that they should require apartments [illegible] weeks, by which time they expected their mother [illegible] be there. Every confidence was put in them [illegible] dined sumptuously every day, the landlord felt [illegible] by the attendance of two distinguished guests, [illegible] every day's post brought innumerable letters addre[illegible] to the "F.R.S." Numerous friends, said to be [illegible] tial gentlemen, well "got up," were [illegible] at dinner by the brothers, to whom the g[illegible] attention and courtesy were paid by the [illegible] lord and his domestics. Time wore on, and [illegible] day the landlord's bills for lodgings and payment[illegible] behalf of his guests were largely increased. Repe[illegible] applications for a settlement were made to the [illegible] who made the everlasting excuse "that they [illegible] replies from their mother, Mrs. Hanbury, and that [illegible] might be expected soon to join them, or that she [illegible] promised to send them 200*l.*" One morning, [illegible] having then been nine weeks at their abode, and [illegible] that the applications of the landlord for payment [illegible] stronger and more frequent, they signed a che[illegible] over 100*l.* in their assumed name, and left word [illegible] they were going for a drive, and would return [illegible] evening. They did not, however, return to R[illegible] but went to Canterbury, where the police [illegible] warrant for their apprehension, the cheque [illegible] been dishonoured on being presented at the [illegible] London. Their apprehension was effected in the [illegible] place by the vigilance of a tradesman in High S[illegible] Ramsgate, who had also been defrauded. The R[illegible] said the conduct of the prisoners would not war[illegible] him in saying a word in their favour, and as they [illegible] been found guilty on both indictments, they w[illegible] imprisoned for 12 months each, with hard labour.

SHIREOAKS.—The Chancellor of the Exchequer [illegible] intimated his intention of presenting to the [illegible] church of St. Luke, Shireoaks, Nottinghamshire [illegible] stained glass window, in memory of his friend [illegible] colleague, the Duke of Newcastle.

SUNNINGHILL.—The Berks police believe they are [illegible] the track of the tramps who are suspected of the [illegible] murder of the old woman in the lodge of Mr. [illegible] Crutchley's estate at Sunninghill Park. A cousin [illegible] of Lady Wiltshire, who lives near the scene of the [illegible] crime, had seen the man and woman in the neighbourhood of his house, and ordered them off the premises. Being shown two men who had been committed as vagrants to Aylesbury Gaol, he at once identified one of them, named Smith, as the man he saw, and described his dress, which in a very remarkable manner corresponded with the dress Smith wore when he was taken to prison. Renewed efforts are making to discover the woman who was with Smith at the time of the murder.

WINDSOR.—On Saturday, at the Borough Police Court, Ellen West, a lady's maid, about 35 years of age, was brought before the mayor, charged with obtaining two silk dresses, valued at about 10*l.* each, from Messrs. Bird & Allen, linendrapers, of High Street. The prisoner, up to the time of her apprehension, had been in the service of Lady Phipps, wife of Colonel the Hon. Sir C. B. Phipps, Keeper of her Majesty's Privy Purse, residing in Windsor Castle. On Friday [illegible]

went to Messrs. Bird & Allen's, and obtained two silk dresses under the pretence of their being for her mistress, and immediately proceeded to a pawnbroker in Thomas Street for the purpose of raising money upon them. The pawnbroker, suspecting that something was wrong, made inquiries, and having ascertained the manner in which the dresses had been obtained, the prisoner was apprehended. A searching investigation was then made into her conduct of late, when it was discovered that she had pawned articles of great value belonging to Lady Phipps at various places in London and elsewhere. Among the articles so stolen and pawned, it is understood, are some jewellery and an Indian shawl, a present from the Queen, roughly valued at upwards of 100 guineas. The prisoner was remanded for further inquiry.

WORCESTER.—A dreadful fire occurred on Friday night at the Worcester Railway works. The damage is estimated at 25,000*l*., and more than 400 workpeople will be thrown out of employment. The cause of the fire is unknown.

YARMOUTH.—The Court appointed to investigate the recent loss of the Ontario gave judgment on Monday. They were of opinion that no blame attached to the captain, because the ship was in charge of a licensed pilot, and the master was locally unacquainted with the coast. The Court had, therefore, great pleasure in restoring to Captain Brooking his certificate. They were sorry they could not say the same with regard to the pilot; but under the Merchant Shipping Act of 1854 they could not take any further action in his case. The facts, however, would be reported to the Board of Trade. It was unnecessary for them to give any opinion on the question of the Yarmouth lifeboat, but a report on the subject would also be sent to the Board of Trade.

Ireland.

THE NEW LORD LIEUTENANT AND THE CORPORATION.—Lord Wodehouse, in returning thanks last week for the address of the Dublin Corporation, avoided all allusion to the controversial and party questions which the address touched upon, and described the policy which should guide an Irish Viceroy by saying that "the welfare of Ireland depended not upon the aid of the Government, but upon the energy and enterprise of Irishmen, and upon the existence of that mutual confidence to the growth of which he rejoiced to receive their testimony." This reply has given great annoyance to the Ultramontane party in the Corporation, and at their last meeting Alderman Plunkett designated the exhortation to "self-reliance" as "gammon," Mr. Sullivan declared it to be an "affront," while the Hon. Mr. Vereker, the author of the address, declared that it was "beginning at the wrong end to talk of self-reliance until they received a just and impartial Government, which they had not at present."

THE BELFAST RIOTS.—The Court of Queen's Bench on Wednesday refused the application to admit to bail certain persons at present lying in Belfast Gaol on charges arising out of the recent riots. Judge Hayes alone was in favour of enlarging them. The Commissioners are proceeding with the inquiry at Belfast, but the Protestant party has entirely withdrawn and refused to take any part in the proceedings.

THE IRISH LEAGUE.—The Paris journal *La France* published last week a statement of the grievances of Ireland, issued by the Irish League, which it described as "an association recently formed in England by several members of Parliament, and other illustrious Liberals, with the view of obtaining a repeal of the Union." This statement, it says, "is only the preliminary one of a series of publications translated into all languages, and disseminated over the Continent, which will make known to the whole world the injustice of the English Government, and the violation of Ireland's rights." The *France* concludes by saying, "We profit by this occasion to congratulate the French people that they are not subject to any of the miseries and oppressions which weigh on Ireland. May Providence ever preserve to France her national liberty and power; and may she ever be spared that which Ireland suffers under a reign which is dignified with the name of constitutional freedom."

THE MURDER OF TWO SISTERS AT BALBRIGGAN.—The investigation into the murder of the sisters Ellen and Anne Murphy, at Holywood Great, on the 10th October, was resumed on Tuesday in the Courthouse, Balbriggan, before a full bench of magistrates. Richard Murphy, the brother, who stood charged on suspicion of being the murderer, was brought before the court in custody. Several additional witnesses were examined, and the solicitor for the prisoner declined to cross-examine them. After hearing the evidence, the prisoner was formally committed for trial.

Scotland.

INSTALLATION OF EARL RUSSELL AT ABERDEEN.—The ceremony of installing Earl Russell as Lord Rector of Aberdeen University took place on the 11th inst. The formal installation ceremony took place in Marischal College, after which his lordship, accompanied by the town council and University authorities, proceeded to the Music Hall, and delivered his inaugural address, of which the following is a summary:—

After thanking the students for the honour they had done him in choosing him as their Lord Rector, he said that he would not detain them by attempting to eulogise on the beauties of literature or the acquisitions of science, but would propose as the subject of his address the discussion of the two questions—first, is there any law or general rule by which the decline of States is governed; and, secondly, what is the general aspect of the world at present, and does it teach us to hope or to despond? In discussing the first branch of his subject, he entered at some length into a consideration of the causes of the fall of the Roman Empire, and attributed it to the corruption of the Government, corruption in morals and religion. This corruption existing, the Government naturally fell into the hands of men able and powerful enough to become the tyrants of the people; and it was vain to think, as Brutus and Cassius had done, that they destroyed the tyranny thus created by assassinating the Emperor. What was required was not the death of a man, but the regeneration of a people. He then referred to the Reformation and its effects on freedom, and traced the gradual rise of the spirit of liberty on the Continent, and proceeded to consider the present state of Europe and of the world, remarking, however, that it was perilous ground to walk upon. It was evident that barbarian races must give way before the more civilised. This was exemplified in America and other countries. He went on to inquire whether, with regard to Europe, any improvement had been made in government. He needed not to refer to England, for this country, he said, had for many years enjoyed in its perfection, or nearly in its perfection, that which he believed to be the best of the imperfect forms of government which man can attain to. But, within a not long time, a representative Government more or less imperfect had sprung up in various parts of Europe. In France, in Austria, in Spain, in Portugal, and in some other countries, there were forms of representative monarchy; and the struggle, similar to what had taken place in this country from the accession of James I. to the accession of George II., for free institutions was now going on in these countries. Referring to Italy, he rejoiced that Italy, which was so long dead, which for so many centuries lay in the torpor to which she had been condemned by the arms of Charles V., had roused herself and risen again; and as she flourished once as the republic of a single city, spreading its arts and arms everywhere, as she flourished again as a number of disunited republics, each distinguished by its arts and by its vigour in carrying on war and contest against the others, so he hoped now there might be a third shape of freedom and happiness to Italy, and that as a Constitutional monarchy she would shine again among the Powers and States of Europe. He then referred to the struggles of Greece to get through its factions and its difficulties of every kind, and then went on to speak of the continent of Africa, which in many parts had got rid of that detestable crime the slave-trade, and expressed his belief that the task of civilising Africa would not be a useless sacrifice, but that light was still to shine in that part of the world. Of this faith was a man who was never named in society but with honour—Captain Speke, the traveller of Africa. Referring to America, he said, there was another portion of the globe where they still had to lament the scenes of bloodshed which were to be witnessed. There we still had to lament that the bloody arbitrament of war had not been brought to a close; and if there was any bright spot in that dark scene it was for the African race. But he could not but believe that the civil war in America, whichever way it might end—whether the States might again unite, or whether there was to be a final separation, he could not but believe that out of these events the African race were to receive their freedom. He was sure he need not speak to them of abhorrence of slavery, because they must all have that abhorrence as strong as they had had; but there was one thing which made it quite impossible that the master and the slave should ever live in harmony together. He then referred to the progress of religion, of civilising influences, and of Christianity, and to the need for the exercise of charity in the discussions now going on on this subject. He concluded, amid great applause, by thanking the audience for the attention they had given him.

Railways.

COLLISION ON THE GREAT NORTHERN.—On Tuesday morning, as a coal train was standing at the Biggleswade station, the Parliamentary train, which leaves London at 7.48, ran into it with such violence as to smash several trucks and greatly to alarm the passengers. As the train, however, was in the act of stopping, they escaped without injury. The line was blocked for about an hour. A dense fog prevailed at the time, and the driver of the passenger train did not see the coal train till it was too late to avoid the collision.

COLLISION ON THE EDINBURGH AND GLASGOW.—On Thursday the 10th inst. a collision occurred at the Helensburgh Junction between a mineral train from Campsie and the train from Balloch. Eight or ten passengers were slightly hurt, and the guard of the passenger train and the driver of the mineral train, were seriously injured.

Law.

COURT OF CHANCERY: *St. Thomas's Hospital.*—The Lord Chancellor on the 8th gave judgment on the appeal from a decision of Vice Chancellor Wood in the matter of two suits respecting the site of St. Thomas's Hospital, out of which arose the farther question whether the corporation of the City or the governors of the hospital had the final control of its affairs. His lordship said he had come to the conclusion that the decision of the Vice-Chancellor was right, and that the power to select the site for the hospital was vested in the donation governors. He also gave his opinion that the corporation had parted with all the power they originally possessed to the governors, and that though the hospital seal remained in their possession, they could only affix it to documents at the instruction of the governors. He therefore dismissed the bill without costs, but as there was power to appeal to the House of Lords, he hoped, for the sake of the charity, that some agreement would be come to to put the record in such a shape as would finally decide the question at issue, without further litigation.

Obituary.

THE DOWAGER MARCHIONESS OF QUEENSBERRY died on the 13th inst, at 1, Lowndes Street, in her 70th year. Her ladyship was the eldest daughter of the late Major James Sholto Douglas, by the daughter of Mr. James Dawes, of Rockspring, Jamaica, and in 1817 married the sixth Marquis of Queensberry, who died in 1856.

LORD MANNERS died at Hastings on Monday, from consumption, in his 46th year. John Henry Manners-Sutton, second Baron of Foston, Lincolnshire, was eldest son of the Right Hon Thomas Manners-Sutton, grandson of the third Duke of Rutland, and brother of the Archbishop of Canterbury, who became Solicitor-General in 1805, and shortly afterwards one of the Barons of the Exchequer, and in 1807 was appointed Lord Chancellor of Ireland, when he was raised to the peerage as Baron Manners. His mother was a daughter of Mr. James Butler, of Fethard, a near relative of the Earl of Glengall. He was born in Stephen's Green, Dublin, in 1818, succeeded his father in 1842, and married, in 1848, the third daughter of Captain Dashwood, R.N., by whom he leaves a youthful family—three sons and two daughters. He is succeeded in the title by the Hon. John Thomas Manners-Sutton, born in 1852. He was a Deputy-Lieutenant of Suffolk, and Captain in the West Suffolk Militia.

THE RIGHT HON. THOMAS ERSKINE died at Bournemouth, on the 9th inst., in his 77th year. He was the third son of the famous Lord Erskine, was educated at Trinity College, Cambridge, and called to the bar at Lincoln's Inn in 1813. He became Queen's Counsel in 1827, and four years afterwards was appointed chief judge of the Court of Review. In 1839 he was appointed one of the judges of the Court of Common Pleas, but ill health compelled him to resign in 1845. He was a Commissioner of the Duchy of Cornwall.

ADMIRAL THE HON. SIR MONTAGU STOPFORD, K.C.B., died at Edinburgh on the 10th inst, in his 66th year. He entered the navy in 1810, on board the flagship of his uncle, the late Admiral Sir Robert Stopford, then the naval Commander-in-Chief at the Cape of Good Hope, and the following year was present at the conquest of Java. After being employed in various ships, he joined the Alceste, which conveyed Lord Amherst on his embassy to China, and was wrecked in that ship on his passage home in 1817. He commanded the Pique, on the North American and West India station, from 1842 until 1846. For nearly four years he was admiral-superintendent of Devonport dockyard: in 1855 he was appointed admiral-superintendent at Malta, and took part in the war against Russia in the Black Sea. In recognition of his services during the war he was nominated a Knight Commander of the Bath, and a Commander of the Legion of Honour, and received the Order of the Medjidie. He attained the rank of admiral in 1863. In February this year he was granted a service pension, and was placed on the reserved half-pay list. He was the fourth son of the third Earl of Courtown, by his marriage with the eldest daughter of the third Duke of Buccleuch. He was born in 1798, and was twice married, first in 1827, to the second daughter of the late General Sir Henry Whitmore, and secondly in 1853, to the youngest daughter of Mr. John Kay, of the North Charlton, Northumberland.

LIEUT.-COLONEL COLEBROOKE died on the 8th inst, in his 75th year. He entered the Royal Artillery as second lieutenant in 1806, and served in the expedition to Walcheren in 1809; he became captain in 1822, major in 1837, and lieutenant-colonel in 1854.

MR. J. R. M'CULLOCH, the well-known political economist, died on the 11th inst. in his 75th year. He was born in Wigtownshire, in 1789, and was for many years a contributor to the *Scotsman* newspaper. In 1828 he left Edinburgh, and was appointed Professor of Political Economy in the new University of London. He held that chair until 1832, when he resigned. Since 1838 he has been Comptroller of the Government Stationery Office, and enjoyed a pension of 200*l*. per annum for literary services, given to him by the late Sir Robert Peel. His chief literary works are his "Dictionary of Commerce and Commercial Navigation," "Statistical Account of the British Empire," and his "Dictionary of Geography." He was one of the Foreign Associates of the Institute of France.

WILLS.—The will of the Duke of Cleveland has been sworn under 180,000*l*. personalty.—Mr. George Brassey, of Bramfield, Herts, 60,000*l*.—Mr. John Davis, of Cranbrooke Park, Ilford, 120,000*l*.

BIRTHS.—On the 11th inst, at Edinburgh, the Duchess of ARGYLL, of a daughter—9th inst, in London, the Duchess of MANCHESTER, of a daughter, stillborn—7th inst, at Pennoxstone, Lady COCKBURN, of a son—8th inst, at 99, Belgrave Road, the Hon. Mrs L. AGAR ELLIS, of a son—15th inst, at Dytchley, the Hon. Mrs. AUGUSTUS HALFORD, of a son.

MARRIAGES.—On the 10th inst, at Corfe Castle, Dorset, NATHANIEL BOND, Esq., of Holme, eldest son of the Rev. Nathaniel Bond, of Creech Grange, Dorset, to Lady SELINA JANE SCOTT, daughter of the late, and sister of the present, Earl of Eldon—10th inst, at the parish church, Puddlestown, Dorset, Lieutenant JOSEPH NAPIER, 23d Royal Welsh Fusiliers, second son of the Right Hon. Joseph Napier, to MARIA, second daughter of the late JOSEPH MORTIMER, Esq., of Weymouth, Dorset—9th inst, at the parish church of Ockbrook, Derbyshire, JOHN ELLIS, Esq., of Chateau de Tillieuls, Boulogne-sur-Mer, to SUSANNAH, eldest daughter of the late Rear-Admiral Sir JOHN HINDMARSH—10th inst, at St. Clement's, Hastings, JOHN A. SYMONDS, Esq., of Lincoln's Inn, and Fellow of Magdalen College, Oxford, only son of Dr. Symonds, of Clifton, to JANET CATHERINE, youngest daughter of F. NORTH, Esq., M.P., of Hastings Lodge, and Rougham, Norfolk—8th inst, at the Collegiate Church, Wolverhampton, GEORGE SIMON, Esq., of Denmark Hill, Surrey, and Fenchurch Street, to MARIA, sister of J. J. POWELL, Esq., Q.C., and M.P. for Gloucester—9th inst, at Westminster Abbey, EVAN COLVILLE, second son of the Rev. EVAN NEPEAN, canon of Westminster, and chaplain in ordinary to the Queen, to ELIZABETH ANNE, eldest daughter of E. F. JENNER, Esq., of Lowndes Street, Belgrave Square.

DEATHS.—On the 10th inst, at Lathom House, Lancashire, the Hon. CONSTANCE ADELA BOOTLE-WILBRAHAM, daughter of Lord and Lady SKELMERSDALE, aged two years and four months—30th Sept., at Ellerslie, in the Island of Jamaica, the Hon. EMILY PRICE, wife of George Price, Esq., and daughter of the 14th Baron Dusany—14th inst, at 29, Eccleston Street South, RALPH ST. JOHN, aged 10 months, youngest child of HENRY and the Hon. Mrs. NUGENT BANKES—6th inst, at the Castle, Portstewart, the Hon. Mrs. CAMPBELL—9th inst, at Southsea, Lady DE ROTTENBURG, widow of Lieutenant-General Sir F. de Rottenburg, K.C.H., aged 81—13th inst, at Cliff House, Ramsgate, Lady CURTIS, relict of Sir William Curtis, Bart.—1st ult, at Government House, Freetown, universally regretted, KATE, wife of his Excellency Major BLACKALL, of Colamber Manor, Longford, Ireland, and Governor of Sierra Leone—15th Sept. last, at Fernando Po, Western Africa, J. W. B. LYNSLAGER, Esq., for some time Governor of the Island and Acting British Consul, and for 37 years resident merchant there, aged 54—1st inst, at Zofingen, in Switzerland, ELIZA, eldest daughter of the late Admiral Sir WILLIAM HOPE JOHNSTONE, aged 71—10th inst, at Boulogne-sur-Mer, EMMA, eldest daughter of the late Colonel Sir F. HANKEY, G.C.M.G., aged 66—13th inst, at Great Malvern, MARGARET, widow of the late PETER BORTHWICK, Esq., M.P. for Evesham, aged 59—8th inst, at Llandudno, LEONARD, third son of JOHN BRIGHT, Esq., M.P., aged 5—13th inst, Colonel HENRY DAWKINS, late of the Coldstream Guards, of Over Norton, Oxfordsh., aged 75—11th inst., in London, Lieut.-Colonel W. BROOKES, late town major of Dublin, and formerly Her Majesty's 75th Regiment—9th inst, at 28, Woburn Square, SARAH, widow of J. H. GLOVER, Esq., F.S.A., librarian in ordinary to the Queen, aged 69—11th inst, at his residence, Great Yarmouth, the Rev. EDWARD BARKER FRERE, M.A., formerly vicar of Biggleswade, Beds, and incumbent of Ilketshall St. Lawrence, Suffolk, aged 82—8th inst, in Green Street, Grosvenor Square, the Rev. W. ANDREWS, M.D., rector of Postwick, Norfolk, aged 54—8th inst, at The Rectory, Leaden Roding, Essex, the Rev. T. PARKES, M.A., rector, third son of T. Parkes, Esq., of Stoke Newington, aged 38—14th inst, at St. John's Parsonage, Hoxton, after a few days' illness, the Rev. A. P. KELLY, M.A., 38 years incumbent of the parish, aged 68—10th inst, at Oxen

End, Little Bardfield, the Rev. CHRISTOPHER SOMERS CLARKE, Vicar of Lindsell—12th inst, at Redland, Bristol, the Rev. ANDREWES REEVE, B.A., of Kingswear, near Dartmouth, aged 47—10th inst, on Kirkliston Manse, the Rev. ADAM DUNCAN TAIT, minister of the parish of Kirkliston, near Edinburgh —10th inst, at South Kensington, Mrs. EYLES, wife of Mr. George Eyles, Superintendent of the Royal Horticultural Gardens, aged 50 years.

Markets.

COVENT GARDEN, Nov. 19.

The market is still pretty well supplied with most kinds of hardy fruit in season, but vegetables are somewhat scarce and dear. Amongst Pears are Marie Louise, Duchesse d'Angoulême, Crassane, and others. Grapes are still sufficient for the demand; among them are Dutch Hamburghs at from 9d to 1s. per lb. Of Pine Apples there is but a limited supply. Kent Filberts and Cobs fetch from 70s to 80s. per 100 lbs Walnuts are very plentiful, and Oranges begin to make their appearance. Some Seakale and forced Kidney Beans may now be had. Lemons fetch from 5s. to 10s per 100. Tomatos are large and fine. For Potatos there is an improved sale, and prices are a trifle higher than they were last week. Onions are being largely imported from Germany. Flowers chiefly consist of Orchids, Heaths, Chrysanthemums, Fuchsias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 4s to 6s	Oranges, per 100, 4s to 8s
Grapes, per lb., 1s to 5s	Lemons, per 100, 5s to 8s
Melons, each, 1s to 4s	Nuts, Barcelona, do., 16s
Peaches, per doz., 6s to 18s	— New Brazil, do., 14s.
Pears, per doz., 1s 6d to 3s	Almonds, do., 18s to 20s
Apples, per sieve, 1s to 2s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 60s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Seakale, p. punn., 3s 6d to 4s
Carrots, per bunch, 4d to 9d	Endive, per score, 1s to 2s 6d
Turnips, p. bunch, 6d to 8d	Horse Radish, p. bunch, 1s to 4s
Cucumbers, each 4d to 1s	Mushrooms, p. pott., 1s to 1s9d
	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

POTATOS.—SOUTHWARK, Monday, Nov. 14.

During the past week the arrivals coastwise and by rail have been fair; the trade is steady, and top samples sold readily. The following are this day's quotations:—Yorkshire Flukes, per ton, 90s. to 110s.; do. Regents, 80s. to 95s.; Dunbar Regents, 90s. to 100s.; Kent and Essex Regents, 80s. to 95s.; do. do. Rocks, 65s. to 70s.; Perth, Forfar, and Fife Regents, 70s. to 80s.; Belgian Whites, 50s. to 60s.

BRITISH WOOLS.—LONDON, Nov. 17.

There has been more business doing generally, and in some descriptions of carding skin a considerable advance has been realised in consequence of their being cheaper in proportion than other qualities.

	s. d.		s. d.
South-down Hog-gets	1 10 to	1 11	Combing Skins —
Half-bred ditto	2 1 —	2 2	Flannel Wool 1 3½ to	1 10
Down Ewes	1 9½ —	1 10	Blanket ditto 0 6 —	0 9
Kent Fleeces	—	2 0	Leicest. Hoggs 2 0 —	2 1
			Ditto Wethers 1 11 —	2 0

METROPOLITAN CATTLE MARKET.

MONDAY, Nov. 14.

The supply of Beasts is not quite so large as on Monday last; however the trade is dull, and it is difficult to realise that day's quotations. The number of Sheep is larger, and the demand for them smaller, consequently on the average prices are lower, although there is scarcely a quotable reduction. Trade is dull for Calves. From Germany and Holland there are 3060 Beasts, 8530 Sheep, 200 Calves, and 90 Pigs; from Scotland, 50 Beasts; from Ireland, 540; and 2080 from the Northern and Midland Counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 2 to	5 4	Best Long-wools	5 0 —	5 2
Best Short-horns	4 10 —	5 2	Do. Shorn	—	—
2d quality Beasts	3 4 —	3 8	Ewes & 2d quality	4 4 —	4 8
Best Downs and Half-breds	5 4 —	5 8	Do. Shorn	—	—
Do. Shorn	—	—	Lambs	—	—
			Calves	3 8 —	5 2
			Pigs	3 0 —	5 0

Beasts, 6580; Sheep and Lambs, 24,450; Calves, 210; Pigs, 350.

THURSDAY, Nov. 17.

We have a large number of Beasts on offer, but still choice qualities are not plentiful. Trade is exceedingly dull. Primest qualities meet with customers at about late rates. Many remain unsold. There is about an average supply of Sheep; they cannot all be disposed of; prices remain nearly the same as on Monday. Calves are rather lower in price. Our foreign supply consists of 850 Beasts, 870 Sheep, and 348 Calves.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 0 to	5 4	Best Long-wools	5 0 —	5 2
Best Short-horns	4 8 —	5 0	Do. Shorn	—	—
2d quality Beasts	3 0 —	3 8	Ewes & 2d quality	4 4 —	4 6
Best Downs and Half-breds	5 4 —	5 6	Do. Shorn	—	—
Do. Shorn	—	—	Lambs	—	—
			Calves	3 8 —	5 0
			Pigs	3 0 —	4 8

Beasts, 1520; Sheep and Lambs, 3550; Calves, 360; Pigs, 120; Milch Cows, 50.

COAL MARKET.—Nov. 16.

Bowers's West Hartley, 20s. 3d.; Lambert's West Hartley, 19s. 9d.; West Hartley, 20s. 3d.; Eden Main, 22s.; Walls End Braddylls Hetton, 22s. 6d.; Walls End Haswell, 23s.; Walls End Hetton, 23s.—Ships at market, 14.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Nov. 17.

Prime Meadow Hay	95s to	105s	Clover, old 110s to 126s
Superior do.	—	—	New Clover — —
Inferior do.	—	—	Do. second cut — —
New do.	—	—	Straw 25 30
Rowen	—	—	

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, Nov. 17.

Sup. Meadow Hay	98s to	112s	Inferior Clover —s to —s
Inferior do.	—	—	New do. — —
New do.	—	—	Straw 30 34
Superior Clover	108	132	

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Nov. 17.

Fine Meadow Hay	100s to	105s	Prime 1st cut Clover 123s to 130s
Inferior do.	95	100	Inferior do. do. 110 115
Prime New Hay	—	—	Prime 2d cut do. 115 120
Inferior	—	—	New Clover — —
Straw	25	28	Inferior do. — —

NEWGATE.—Nov. 18.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 15s. ,,
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

HOPS.—BOROUGH MARKET, FRIDAY, Nov. 18.

Messrs. Pattenden & Smith report an active demand for consumption for Hops of all descriptions, at a further slight advance in prices. Fine samples are becoming scarce. Old Hops are also in better request at an advance of 5s. per cwt.

MARK LANE.—MONDAY, Nov. 14.

The supply of Wheat to this morning's market was moderate, nevertheless it met a slow sale at prices of this day se'nnight. There was a fair attendance at this morning's market, and the business done in foreign Wheat was quite of a retail character. Barley brought about last week's rates Beans and Peas were unchanged in value. The Oat trade was firm, and in some instances rather more money was obtained. For Flour there was but little inquiry, and prices were unaltered.

PRICE PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk.. White	39—42	Red	36—41
— — fine selected runs..ditto	41—44	Red	39—42
— — Talavera	46—53		
— Norfolk	—	Red	—
— Foreign	35—50		
BARLEY, grind. & dist., 26s to 30s..Chev.	32—35	Malting ..	30—33
— Foreign..grinding and distilling	21—27	Malting ..	28—31
OATS, Essex and Suffolk	20—22		
— Scotch and Lincolnshire—Potato	20—24	Feed	20—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	20—23	Feed	18—21
RYE	31—33	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....33s to 35s...Tick	34—36	Harrow ..	34—36
— Pigeon .... 35s to 40s..Winds.	—	Longpod	—
— Foreign .....Small	34—38	Egyptian	33—34
PEAS, White, Essex and Kent..Boilers	36—40	Suffolk ..	38—41
— Maple .... —s to —s .... Grey	—	Foreign ..	32—38
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered..per sack	35—40		
— 2d do ..... ditto	28—34	Country..	28—34
— Foreign ..... per barrel	18—25	Per sack	32—36

FRIDAY, Nov. 18.

Stormy and rainy weather has prevailed during the past week. The better tone noticed in the Wheat trade has in some degree subsided, the value of this article being about maintained in the country markets, Hull excepted, where a decline of 1s. per qr. is reported. The prices of secondary Barley are still tending downwards. Oats met a better inquiry which enabled holders to maintain late rates. Peas and Beans are neglected. Flour is firm at former prices for best qualities. Since Friday last 6 vessels have been reported off the coast. The floating trade has been steady during the week, and the few cargoes off the coast are held for extreme late rates. Linseed is in request and about 1s. per qr. dearer. Paris, Nov. 17.—The Flour trade has been very slow, and prices have declined 6d. per 280 lbs. The six marks for delivery this month are quoted equal to 31s. 3d. per 280 lb. The present stock of Flour is estimated at 31,000 cwt. Wheat has remained steady. The arrivals of foreign Wheat are large, of all other grain moderate. The attendance at this morning's market was small. The English Wheat left over from Monday has been sold at prices of that day. Foreign was neglected, and in the little business transacted there was no alteration in value.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	620 qrs.	570 qrs.	— qrs.	1030 sks.
Irish	—	—	1760	— ,,
				40 ,,
Foreign ..	17.110 ,,	1550	21,780 ,,	5720 brls

LIVERPOOL: Nov. 15.—We have had an average attendance of buyers at to-day's market, and with a fair consumptive demand for Wheat we quote all descriptions fully as dear as on Friday last, whilst Flour may be called the turn in sellers' favour, and scarce. Indian Corn is not saleable except at a reduction of 3d per qr., which few holders will submit to. Oats slow. Oatmeal rather better. No quotable change in other articles. Market closes steady.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Oct. 8	38s 0d	30s 2d	20s 0d	30s 11d	38s 11d	35s 8d
— 15	38 1	29 11	20 1	33 9	39 3	35 4
— 22	38 6	30 2	20 0	29 1	38 2	35 5
— 29	38 9	30 2	20 1	30 9	38 0	35 0
Nov. 5	38 11	30 3	20 2	29 9	37 9	35 5
— 12	38 9	30 1	19 11	33 0	37 11	35 9
Agg. Aver.	38 8	30 1	20 0	31 2	38 4	35 4

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Oct. 8.	Oct. 15.	Oct. 22.	Oct. 29.	Nov. 5.	Nov. 12.
38s 11d	..	..	..	..		..
38 9	..	..	..		..	
38 6	..	..		..	..	..
38 1	..		..	..	..	..
38 0 —		..	..	..	..	..
..	..	..	..	..	..	..

WANTED, an ASSISTANT, by a Land Surveyor, Auctioneer, and Land Agent, practising in the country near London. Salary 75*l.* a year, increasing 5*l.* annually.—Apply by letter, stating age, particulars of experience and qualifications, to O. P., *Estates Gazette* Office, 200, Fleet Street, London, E.C.

WANTED, in a Wholesale Seed House, an experienced CORRESPONDING and SAMPLE-ROOM CLERK.—Apply by letter, stating Salary expected, to L. P. C., *Gardeners' Chronicle* Office, W.C.

WANTED, a FARM FOREMAN, or MANAGER, for a moderate-sized Farm in Yorkshire.—Address, by letter, stating full particulars, wages, former employment, &c., to N. D., Mr. REED'S, 5, Great Portland Street, London, W.

FRUIT TREE FOREMAN.—WM. WOOD & SON are requiring the services of a competent Man, who is thoroughly conversant with the Management of Fruit Trees, also an expert Budder and Grafter, &c.—Apply as above, Woodlands Nursery, Maresfield, Uckfield, Sussex.

WANTED, a PRACTICAL FOREMAN, to take charge of a NURSERY, to live on the Premises.—Wages not so much an object as a Man who thoroughly understands his business as a Grower for Market and general purposes. None need apply but those with sober and steady habits.—FLORIST, T. Hawkins, Bishops Road, Bayswater, W.

WANTED, a GROUND FOREMAN in a London Nursery.—Must be a good Salesman, and well up in Grafting and Budding. Good wages to a Man with first-class reference.—Apply at Horsood's Nursery, Shepherd's Bush, W.

WANTED, a GARDENER for Edwardes Square, Kensington.—He must have a good character for industry and sobriety. Wages, 21s. per week, with Lodge to live in. Testimonials to be sent to W. J. BULLOCK, Esq., 13, Edwardes Square, Kensington, W., on or before the 24th inst.

WANTED, a thoroughly practical GARDENER who can grow Grapes, Cucumbers, &c., and has a knowledge of Out a Garden. To a respectable Man the situation would be permanent one. A good Lodge is in course of erection. Wages per week, with Coals and Lodge.—Apply by letter to G. care of Mr. Thomas Whalley, Seedsman, Liverpool.

WANTED, as PROPAGATOR, a steady Man, thoroughly acquainted with Fruits, Roses, Evergreens and Conifers; and who is a good Penman and willing to make himself generally useful. Will find this a good opening. A first-class man will meet with every reasonable encouragement. A reference as to character and ability will be required.—Apply to PALMER & SON, Nurserymen, Annan.

Under Gardener.

WANTED, a Working Man as UNDER GARDENER and to take charge of Cows and Pigs, and [illegible]. Wages 18s. per week.—Address A. B., 28, Great James Street, Bedford Row, W.C., stating age, previous occupation, [illegible] and how long, will be attended to immediately.

WANTED, a GROOM and GARDENER—[illegible] thoroughly understand Horses, and be a [illegible]. Apply to J. WEEKS, King's Road, Chelsea, W.

WANTED, in a Wholesale Provincial House, a PORTER who can execute carefully Orders in the Grass Seed Department. Must produce unexceptionable references as to character, and also for accuracy and ability.—Address, stating age, W. T., Messrs. Hurst & Son, 6, Leadenhall Street, London, E.C.

WANTED, GROUND WORKMEN.—Mr. [illegible] in want of a couple of really efficient Men to [illegible] Labourers and carry out the Improvement and Maintenance of Gardens and Grounds, Planting, &c., either from Plans or under the direction of a Head Superintendent. Wages according to ability and activity.—Royal Exotic Nursery, King's Road, Chelsea, S.W.

WANTED, NURSERY LABOURERS.—Mr. [illegible] is in want of several practised and active Young Men for Spade Work, for his New Nursery, near Kingston-on-Thames. The wages will be from 15s. to 18s. per week, according to ability and constant work.—Apply to Mr. VEITCH, Royal Exotic Nursery, King's Road, Chelsea, London, S.W.

WANT PLACES.—Letters to be Post Paid.

DAILY or OCCASIONAL GOVERNESS.—A Lady has resided many years in France, seeks a re-engagement in London to instruct in English, French and Music with [illegible] the new system); the rudiments of German and Drawing if moderate.—H. H., 29, Queen's Road, Camden Square, N.W.

HOUSEKEEPER, or as COMPANION to a Lady.—A Lady, aged 35, who can be highly recommended, and has had much experience. She would be willing to educate two little Girls, or to accept any position of trust.—A. A., 30, Arthur Road, New Road, Hammersmith, W.

CARE of CHAMBERS, OFFICES, or any Trust, required by a person of good character, who has been accustomed to service both as Cook and Housekeeper. Can be upon a single gentleman, and has excellent references.—Baker, 2, Northumberland Street, Marylebone, W.

GARDENERS, FORESTERS and BAILIFFS LAND STEWARDS.—The undersigned can always recommend the above, whose characters and abilities may be strictly relied on. Full particulars upon application.—JAMES DICKSON & SON, The "Newton" Nurseries, Chester.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. [illegible] HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS.—B. S. WILLIAMS'S Correspondence with several experienced Gardeners in situations, and will be pleased to recommend to any [illegible] requiring such, a thoroughly competent Man. Applications receive immediate personal attention.—Paradise and Palace Nurseries, Holloway, London, N.

To the Nobility and Gentry.

J. WEEKS AND CO. have on their Books the Names of several first-class GARDENERS, whom they can highly recommend.—Apply to J. WEEKS & Co., King's Road, Chelsea, S.W.

TO LANDED PROPRIETORS.—The Advertiser (age 37), who has had the entire superintendence and management of an Estate for 16 years, is desirous of a re-engagement with any Nobleman or Gentleman requiring an AGENT. An Estate of small scale, provided a Farm could be held with it, would be objected to. Reference to late employer.—N. G., *Gardeners' Chronicle* Office, W.C.

GARDENER (HEAD).—Age 38; thoroughly understands Flowers, Fruits, and Kitchen Garden, and Forcing. Two years' good character.—A. B., Post Office, Dedham, Essex.

GARDENER (HEAD), age 31, married.—H. C. would be glad to recommend a thoroughly practical Man in branches of his profession, where Gardening is carried on. Five years' character from last place.—J. S., West Hill, Epsom.

GARDENER (HEAD), age 34, single.—WM. WOOD & SON will have much pleasure in recommending to Nobleman or Gentleman in want of a really good Gardener, thoroughly conversant with his profession in all its branches, a Young Man as above. Can be well recommended from last situation.—Address, Woodlands Nursery, Maresfield, Uckfield, Sussex.

GARDENER (HEAD, or good SINGLE-HANDED). Age 28; is very successful in the leading branches, as Kitchen and Flower Gardener. First-class character.—J. Joyce, Stationer, Bell Street, Reigate.

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GARDENER.—Age 27, married, no incumbrance, a thorough knowledge of his profession. Good references from Mr. Lawrence, Gardener, Farnham Castle.—M. J. W., Nursery, Farnham, Surrey.

GENERAL FOREMAN in a Gentleman's Establishment.—Age 24; six years' experience in large place, character.—J. B., High Leigh, Hoddesdon, Herts.

PROPAGATOR, or PROPAGATOR and SALESMAN. Thoroughly competent, and can be well recommended, preferred.—A. M., 24, Vale Place, Hammersmith, W.

LAND STEWARD or BAILIFF.—Age 34; thoroughly acquainted with all the details of Modern Agriculture, Arable and Pasture Land, Irrigation, Drainage, and the Valuation connected with the Management of an Estate (or a Farm under the management of one); Dairy or Poultry not objected to.—DEACON, Land Agent, Oundle, Northamptonshire.

STEWARD or BAILIFF.—A practical [illegible] Man, having the Management of an Estate in one of the Midland Counties, is open to a re-engagement. Thoroughly understands all the details of modern Agriculture on Heavy and Light Soils, Growth and Management of Woods, Drainage, Levelling, &c.—Messrs. Gibbs & Co., Half Moon Street, Piccadilly, London.

BAILIFF.—An experienced man, of [illegible] habits. Can obtain the highest testimonials as to character and abilities. He is quite competent to Manage a Farm of 300 acres, a good judge of all kinds of Stock, and the general routine of work.—D. D., Post Office, Blandford, Dorset.

BAILIFF, or WORKING BAILIFF.—A respectable and thoroughly practical Man, who has had experience in all matters connected with the Management of a Farm, and can be highly recommended.—Bevan, Son, & Co., Land Agents, 3, Tavistock Street, Covent Garden, W.C.

GROOM and GARDENER.—Age 29, single; does not object to Stock. Good character.—Apply for particulars, to A. B. C. Phillipson's Library, Kingston, S.W.

The Gardeners' Chronicle Newspaper.

SATURDAY, NOVEMBER 26, 1864.

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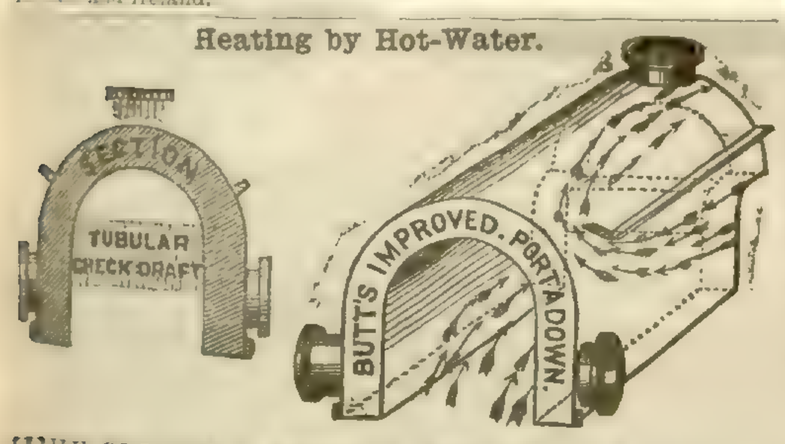

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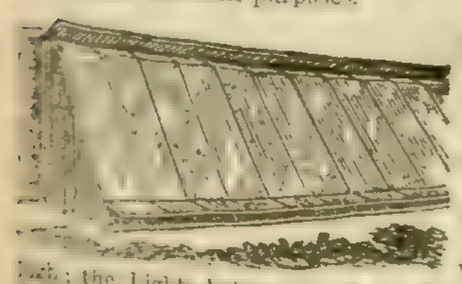

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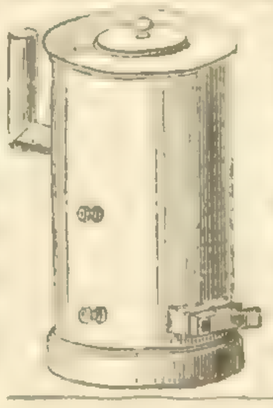

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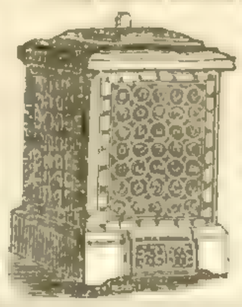

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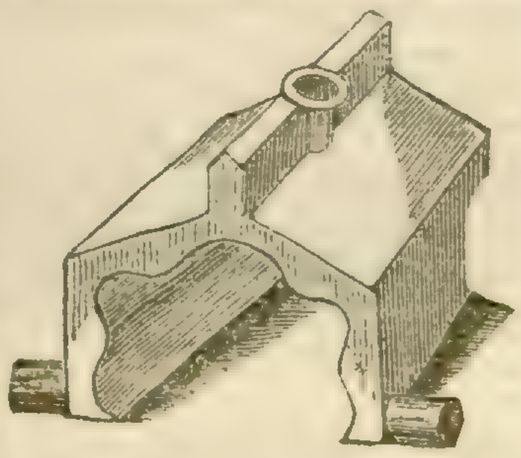

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6 Egg Spoons, gt. bowls..	0	10	0	0	12	0	0	12	0	0	13	6
2 Sauce Ladles	0	6	0	0	8	0	0	8	0	0	9	0
1 Gravy Spoon	0	6	6	0	9	0	0	10	0	0	11	0
2 Salt Spoons, gt. bowls..	0	3	4	0	4	0	0	4	0	0	4	6
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Applications to be addressed to WILLIAM CLIFFORD, the Secretary, at the Offices of the Company, 52, Parliament Street, S.W.

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Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or private works of drainage or other improvements, may borrow the proportionate share of the cost, and charge the same with interest on the lands improved.
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News of the Week.

THE Italian Chamber of Deputies on Saturday after a debate of several days, passed the Bill for the transfer of the capital to Florence by a majority of 247, the numbers being 31... On Sunday the financial Bills submitted by the Government were agreed to by a majority of ... to 77; and on Wednesday the Chamber adopted the Bill for a reduction in the emoluments of public functionaries.

It is reported in Paris that Austria has resolved to recognise the kingdom of Italy, and that the resumption of commercial intercourse and re-establishment of diplomatic relations between Vienna and Florence will take place forthwith. In the Lower House of the Reichsrath on Thursday, the Minister announced that the Government has no intention of proposing during the present session a Bill establishing ministerial responsibility, considering that the proper time for such a measure will...

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arrive until the Imperial Constitution shall be virtually in operation in all parts of the empire.

The EMPEROR of RUSSIA has sanctioned a decree for the abolition of convents throughout Poland. All those which were implicated in the late insurrection are to be entirely suppressed, while the few remaining will be placed under Government supervision.

By the Bombay mail we have the details of the visit of the VICEROY to the capital of the Punjaub, and of the grand Viceregal Durbar which he held there on the 18th ult., and at which upwards of 400 rajahs and chiefs were present. The KHAN of KOKAN has been defeated by the Russians at Ieskund and compelled to retreat to Kokan, which the Russians subsequently attacked and captured. The KING of BOKHARA has espoused the cause of UZUL KHAN, and is taking active measures against the AMEER of CABOOL. It is reported at Bombay that the Bhooteas have submitted, but the rumour requires confirmation.

A telegram from Shanghai informs us that Prince NAGATO has agreed to open the Straits of Simonosaki, and to pay the expense of the Allied expedition.

From the United States we learn that Mr. LINCOLN has been re-elected President by a popular majority of nearly 400,000. He carried all the States except New Jersey, Kentucky, and Delaware, and obtained 213 electoral votes against 21 for Gen. M'CLELLAN. General BUTLER formally assumed the military command of New York on the 5th inst., but the elections passed off without disturbance. General LEE's forces are said to be now equal in number to those of General GRANT, and it is expected that he will at once assume the offensive. General SHERIDAN is surrounded by the Confederate cavalry at Winchester, and his horses are dying for want of forage. General FORREST has captured Johnsonsville in Tennessee with the Federal gunboats and transports, all the Federal stores and many cannon. It is reported that General SHERMAN has evacuated and burnt Atlanta, and is now retreating through Georgia to Charleston in South Carolina; but the report requires confirmation. Mr. SEWARD has made a speech at Auburn, in which he declared that the war must go on until one side or the other succumbs from exhaustion. The Confederate Congress reassembled at Richmond on the 7th inst. President DAVIS, in his Message, declared that the military situation is favourable for the Confederacy, and the condition of the finances so far satisfactory that the continuance of judicious legislation, with the abundant resources of the South, will enable all exigencies of the war to be promptly met. He states that, as there is no change in the policy of foreign Powers towards the Confederacy, the people must rely upon themselves to conquer a peace and establish their independence. He disapproves of the proposal to arm the slaves, but thinks that a portion of them may be turned to good account in the army as engineers, labourers, and pioneers. If, however, the alternative should ever be presented of subjugation or the employment of the slave as a soldier, there is, he says, no reason to doubt what should then be their decision. He repeats the willingness of the South to negotiate for a peaceful solution, but the expressed determination of the Federal Government to make no peace except on terms of Southern submission and degradation, leaves no hope of the cessation of hostilities until the Northern delusion of ability to conquer the South is dispelled.

Home News.

THE COURT.—On Thursday the 17th, the Duke and Duchess d'Aumale arrived at the Castle on a visit. On Friday morning the Queen, accompanied by the Princess of Wales and the Duchess d'Aumale, drove out in a carriage and four. The Prince of Wales, accompanied by the Duke d'Aumale, went out shooting. Princess Louisa drove in the grounds. The Duke of Nemours, the Princess Marguerite, and Princess Blanche of Orleans, arrived at the Castle on a visit. On Saturday morning the Queen drove out, accompanied by the Princess of Wales and Princess Helena. The Prince of Wales went out shooting. The Duke of Nemours and the Princesses of Orleans left the Castle. Sir George Grey arrived at the Castle on a visit. In the evening the Queen had a dinner party. On Sunday morning the Queen, the Prince and Princess of Wales, Princess Helena, and Princess Beatrice attended Divine service in the private chapel. The Dean of Windsor officiated, and administered the sacrament. In the afternoon the Prince and Princess of Wales attended Divine service at St. George's Chapel. On Monday morning the Queen, accompanied by Prince Arthur and Princess Beatrice, walked and drove in the grounds. The Prince of Wales went out hunting. Prince Arthur arrived at the Castle. Princess Louisa went out driving. The Princess of Wales and Princess Helena attended the consecration of the new church in Windsor, of which the first stone was laid last year by the Crown Princess of Prussia. Earl Russell had an audience of the Queen, and presented the Hon. P. C. Scarlett, on his appointment as Minister to Mexico. Prince de Latour d'Auvergne, the French Ambassador, Viscount and Viscountess Sydney, Viscount and Viscountess Palmerston, the Hon. Sir Frederick Bruce, and Lieut.-General Sir Richard Airey arrived at the Castle on a visit. In the evening the Queen had a dinner party. On Tuesday morning the Queen, accompanied by the Princess of Wales, Princess Helena, and Princess Beatrice, drove out in a carriage and four. Her Majesty went to the Norfolk and Flemish Farms and inspected the animals about to be exhibited at the Cattle Shows. In the afternoon Baron Brunnow, the Russian Ambassador, had an audience of the Queen, and presented General Todleben to her Majesty. The Princess Louisa walked and drove in the grounds. The Prince of Wales went out shooting. Prince Arthur returned to Greenwich Park. The French Ambassador, Viscount and Viscountess Sydney, Viscount and Viscountess Palmerston, and Lieut.-General Sir Richard Airey, left the Castle. On Wednesday morning the Prince and Princess of Wales and the infant Prince Albert Victor left the Castle for Marlborough House. The Queen, accompanied by Princess Helena, walked and drove in the grounds. Princess Louisa went out driving. On Thursday morning the Queen, accompanied by Princess Beatrice, walked and drove in the grounds. Princess Louisa and Prince Leopold went out driving. Princess Helena rode in the Riding-school. Yesterday morning the Queen came to town, accompanied by the Princess Helena. Her Majesty returned to Windsor in the afternoon.

THE PRINCE AND PRINCESS OF WALES, with Prince Albert Victor, arrived at Marlborough House on Wednesday from Windsor Castle. Shortly after their arrival they were visited by General Tom Thumb, his wife and family, an intimation having been previously sent to the General that the Prince and Princess would be happy to receive them. In the evening their Royal Highnesses went to the Princess's Theatre. On Thursday afternoon the Prince and Princess, accompanied by the infant Prince, left London by special train on the Great Eastern Railway for Sandringham Hall, where they arrived at 4.15. It is expected that their Royal Highnesses will remain at Sandringham till after Christmas.

THE CABINET.—A Cabinet Council was held on Tuesday at the official residence of the First Lord of the Treasury, in Downing Street. Another Council was held on Thursday. Another will be held to-day.

DIPLOMATIC MOVEMENTS.—It is stated that Lord Lyons, her Majesty's Minister at Washington, is about to return to England on six months' leave, in consequence of ill health, caused by the onerous duties which have devolved upon him since the commencement of the civil war.

LORD LIEUTENANCIES. — Lord Belper has been appointed Lord Lieutenant of Notts, in the room of the late Duke of Newcastle; and Lord Wenlock has been appointed Lord Lieutenant of the East Riding of Yorkshire, in the room of the Earl of Carlisle, whose state of health has obliged him to resign.

THE NAVY.—The Victoria, 121, screw steamship, intended as the flagship for Rear-Admiral Smart, commander-in chief in the Mediterranean, left Spithead on Wednesday for that station, calling at Plymouth on her way down Channel, for the purpose of obtaining more men, being still short of her complement. The Warrior, 40, iron screw frigate, was paid off at Portsmouth on Monday, and placed in the second division of the steam reserve. It is understood that the Admiralty, in compliance with the expressed wish of the country, have authorised Captain Cowper Coles to construct an entirely new ship on his cupola principle.

Foreign.

FRANCE.—The Customs authorities have published a volume of statistics, from which it appears that the total receipts of the French Customs during the past year amounted to 195,494,200f., being an increase of nearly 9 millions over the preceding year. The *Constitutionnel* of Friday contradicts as entirely without foundation the statement published by several journals that M. Drouyn de Lhuys had addressed a fresh despatch to M. de Sartiges, the French Ambassador at Rome; and also that he had sent a circular note to the French diplomatic agents at the Catholic Courts of Europe, stating that France guarantees the temporal power of the Pope. The same paper of Wednesday says that the Emperor has expressed to M. de Persigny his regret that, in a letter to M. Girardin, he had manifested a desire to see some modifications introduced into the Press Laws. The *Patrie* of Friday states that a despatch of M. Drouyn de Lhuys, dated the 7th November, declares that the rigorous application of the principle of non-intervention cannot be admitted in respect of Rome, the seat of Catholicism. M. Drouyn de Lhuys recapitulates his assertion that France reserves her right to liberty of action. The *Memorial Diplomatique*, the semi-official organ of the French Foreign Office, contains an article on the cutting-out of the Florida in the port of Bahia, denouncing that outrage on neutral rights. It concludes in these terms:—

"What strikes us as extremely grave in this outrageous proceeding is the apparently fixed determination of the Washington Government to set at nought many universally-recognised doctrines and duties of international law, which, although they are not laid down in any written code, have acquired all the force of law, are pronounced sacred by humanity and reason, and are consecrated by usage and the adhesion of every civilised nation. We had occasion in our publications of the 20th December and 27th March last, to demonstrate how, in the seizure and condemnation of the British barque Springbok, the maritime jurisprudence of the United States Prize Court set at defiance the best-established doctrines of international law, and we pointed out the dangers which neutral Powers would incur if they permitted such a precedent to pass without protest, as it might hereafter be invoked against them. We feel it our duty again to direct attention to that danger. The rights of neutrals, repeatedly trampled under foot by the United States, have, in the case of the Florida, been violated in an unprecedented manner. Never since the introduction of international law has a grosser outrage been perpetrated. The midnight attack on the Florida, the murder of her crew, and the cutting out of that vessel within the port of Bahia, and under the Brazilian batteries, is unparalleled in modern maritime warfare. The perpetration of that nefarious outrage bespeaks reckless contempt for the rights and power of neutral nations, as well as a total disregard of every international obligation."

The population of France, according to the last census, was 37,382,225, not including the colonies and French subjects abroad. The male population was 18,612,504, and the female 18,739,721. An analysis of this return gives the following numbers:—Boys, 10,210,556; girls, 9,487,541; married men, 7,503,024; married women, 7,457,115; widowers, 928,924; and widows, 1,795,065.

ALGERIA.—General Yusuf received at Raghouat, on the 16th inst., the submission of all the tribes of his division, with the exception of some small bodies now on the way to Raghouat. General Yusuf was to effect a junction with General Deligny on the 19th inst.

SPAIN.—The Duke of Rivas, President of the Council of State, has resigned, and is succeeded by the Marquis Vilumia. Señor Mon has accepted the post of Ambassador to the French Court. The *Epoca* says that it is the duty of Spain to defend the Papacy by endeavouring to come to an understanding on the subject with France. The Queen has bestowed on the sufferers by the inundations at Valencia the sums destined to celebrate her Majesty's fête. The town of Alcira is described as a heap of ruins in a great lake, the people flying from the catastrophe, and the streets and squares filled with dead horses, broken furniture, &c. The whole land along the coast is described as a sea. The town of Tous lost upwards of 100 houses, and all the other towns along the coast are said to have suffered equally.

SWITZERLAND. — The acquittal of Dr. Hermann Demme, on the charge of poisoning his friend M. Trumpy, has been succeeded by a lamentable family tragedy. After the trial he was betrothed to Madlle. Flora Trumpy, the daughter of the deceased; when meeting with some slight obstacles as to matters of form relating to their marriage, they made their way to Ouchy, and drowned themselves in the Lake of Geneva, leaving a farewell letter announcing their intention to commit suicide together. It is also announced that Madame Trumpy, who was tried with Dr Demme on the charge of being an accessory to the alleged poisoning of her husband, is suffering from mental derangement. She imagines that the trial is still going on, and continually requests to be taken back to the cell which she occupied at the Hotel de Ville while in confinement.

PRUSSIA.—Lord Napier had an audience of the King on Monday, and presented his credentials as British Ambassador to the Prussian Court. His Excellency afterwards visited Count von Bismark. Count Karolyi has also been received by the King. The Prince of Hohenzollern has left for Vienna. The semi-official *Provincial Correspondenz* of Wednesday says that the great German Powers expect Germany to confide in them that the Schleswig-Holstein question will be settled in accordance with the rights and interests of Germany. It then proceeds as follows:—

"The Prussian Government considers the further occupation of Holstein by the Federal troops to be inadmissible under any pretext. To bring about the speedy withdrawal of the Federal troops the regulations prescribed by the Federal Diet for such a case will first be adopted. To this end negotiations have lately been carried on with Austria, and we hope to obtain the requisite concurrence of that Power. The reply, however, of the Austrian Government to the Prussian propositions has not yet been received."

Count von Bismark has addressed a circular note to all Prussian Consuls, instructing them to treat all vessels belonging to the Duchies which have passed into the possession of the great German Powers as Prussian vessels. The circular further states that such vessels are to pay the same dues as Prussian shipping

In the sitting of the Criminal Court at Berlin on Monday the Public Prosecutor demanded that sentence of death and confiscation of property should be passed, in their absence, upon MM. Dzialynski Guttry, Wolnicwiez Koraczewski, Taczanowski, Zakzewski Radencki, Lutomski Yagnszewski, and Luknszewski, for high treason. Sentence of death was also demanded for the same offence against M. Kosinski, a prisoner at the bar of the court. In the sitting of Wednesday the Public Prosecutor demanded that Prince Czartoryski should be sentenced to six years' imprisonment with hard labour, and at the expiration of that period remain for six years under the surveillance of the police. For Prince Radziwill he requested an acquittal.

AUSTRIA.—In the debate on the Address in the Upper House of the Reichsrath on Tuesday, Count Rechberg said:—

"Austria requires the Prussian alliance as much as Prussia that of Austria. Unfortunately these views were formerly unrecognised, and the consequence to Austria was the war of 1859, which nearly resulted in the loss of her position as a great Power, and caused the loss of Neuenburg to Prussia. The German Middle States look to Austria for help, and every Government in Austria must maintain an alliance with them."

He also pointed out the necessity of the great German Powers acting in concert with the Federal Diet. The Address was then voted by the House. In the sitting of the Lower House on Thursday, Herr von Schmerling, Minister of Finance, stated, in reply to a question, that it was not the intention of the Government during the present Session to bring in a Bill for establishing Ministerial responsibility. He considered that the proper moment for such a measure would only arrive when the Imperial Constitution should have been virtually carried into effect in all parts of the Empire. In conclusion, he denied that the want of such a law was prejudicial to constitutional government.

ITALY.—In the sitting of the Chamber of Deputies on Friday, an order of the day was adopted, by which the various resolutions proposed by some of the members were summarily rejected. In the sitting of Saturday, Signor San Donato proposed the transfer of the capital to Naples, which was opposed by several Neapolitan deputies; and the proposition was withdrawn. General Della Marmora, in opposing the motion, said that King Victor Emmanuel was enthusiastically received on the occasion of his late visit to Naples, and that Francis II. had now no influence whatever. Of this fact the ex-King was himself aware. The General added that two steamers lying in the port of Civita Vecchia, and belonging to Francis II., had been recently offered him for sale. He then showed that Naples was not suitable for the capital of Italy. The Chamber then decided, by 296 to 63, to pass on to the discussion of the separate articles of the Bill. Signor Dixon demanded that the Government should provide for the defence of the country and the arming of the forts. General Della Marmora demonstrated that Italy could defend herself, and that she was not at the mercy of a single battle. He admitted, however, that the united population under arms would render great assistance in case it was necessary to sustain a long defence. He added that it was greatly to the interest of France not to allow Italy to be crushed. The Bill then passed by 317 to 70 votes. Two members abstained from voting. In the sitting of Sunday the Financial Bills of the Government came on for discussion. Signor Sella demanded that in view of the urgency of the question the House should abstain from a general discussion, and proceed at once to the consideration of the separate clauses. To this proposition the House consented, and the first five clauses of the Bills were agreed to. An extraordinary sitting was held in the evening, at which the entire Financial Bills submitted by Signor Sella were agreed to by 137 to 77 votes. On Wednesday the Chamber adopted the Bill for a reduction in the emoluments of public functionaries. In the Senate on Monday Signor Sella brought forward a Financial Bill, for which he requested urgency. The debate on the Bill commenced on Thursday. The Committee of the Senate appointed to examine the Bill for the transfer of the capital are favourable to that measure. The *Official Gazette* continues to publish lists of the numerous municipalities which have offered to pay the land-tax in advance. Accounts from Rome in the French papers assert that as soon as the votes on the Convention and the bill for the transfer of the capital have been taken in the Italian Parliament, Cardinal Antonelli will address a despatch to Paris, explaining the views of the Pontifical Government in reference to those measures.

GREECE.—The King on the 12th addressed a message to the National Assembly, thanking that body for having finished the Constitution, and appointing a day for the members to take the oath of fidelity. The King also requested a revision of the law relative to the Catholic bishops, and recommended the assembly to devise some practical means of amending the Constitution in this respect. This message was published the day after it was issued, and on the 14th was read to the National Assembly, where it gave rise to an animated debate. The Opposition moved a vote of censure on the Ministry for publishing the message before it had been read to the House. On the question being put, however, the act of the Ministry was approved by 177 to 118 votes.

RUSSIA.—Sir Andrew Buchanan, the new British Ambassador to the Russian Court, has arrived at St. Petersburg, and will present his credentials to the Emperor to-morrow. The *Petersburger-Deutsche Zeitung* of Saturday says that the visit of the Czarewitch to Rome was without political importance in the sense of a better understanding between Russia and Rome. The relations between the two Courts are unchanged since the last Encyclical Letter of the Pope. The same paper of Sunday declares the statement of the *Wanderer*, that a threatening note had been despatched by Russia to the Saxon Government, wherein the dismissal of Baron von Beust was demanded, to be untrue. It also states that the assertion of the *exequatur* of the Saxon Consul at Warsaw having been withdrawn is equally unfounded. The consecration of a piece of ground at Sebastopol, which has been conceded by the Russian Government as a cemetery for the remains of all the French officers and soldiers who fell during the siege of that fortress, took place a few days since with great solemnity, in the presence of the Russian Commander-in-Chief and the officers and troops of the garrison.

POLAND.—It is positively stated that the decree for the abolition of convents has received the Emperor's sanction. Those convents which were implicated in the late insurrection will be entirely suppressed, and the few remaining establishments will be placed under Government supervision.

DANUBIAN PRINCIPALITIES.—Prince Couza has issued a decree instituting a school for the study of the fine arts. The Session of the Councils-General has been opened. All the Councils have sent addresses of congratulation to Prince Couza. Two of them have also voted the necessary funds for the erection of statues of the Prince; four, provincial colleges to bear his name; and 10 others, monuments to be erected in his honour.

CAPE OF GOOD HOPE.—By the Cape mail we have news from Table Bay to the 21st ult. The Governor was in the Free States, engaged in settling the boundary line between that country and Basutoland. The utmost quiet prevailed in Kaffirland. Kreli was settling down upon the lands allotted to him. The despatch from the home government upsetting the previous arrangements made for the settlement of Trankeian territory had caused much dissatisfaction on the frontier. Some of the Kaffir leaders were raising a report that the English Government, afraid of Kreli, had restored some of his country to keep him quiet, but when a fitting opportunity arrived he would retake the whole. A fierce engagement had taken place between the Damaras and the Namaquas, the former tribe seeking to recover a larger number of cattle stolen by the latter from the celebrated traveller Andersen. The Damaras were victorious, but Andersen never recovered his property. He received a bullet in the leg, which shattered the bone, and was carried to a missionary station, where he was left. Mr. John Fairburn, the founder of the press of South Africa, died at Wynberg on Oct. 5. Mr. Bain, the geologist, died at Cape Town on Oct. 20. The Bishop of Cape Town had convened another diocesan synod for next January. Lay delegates were invited to attend. The Cape postmaster-general was ordered to make good the defalcations of the receiving clerk, lately discovered.

INDIA.—By the overland mail we have advices from Bombay to the 28th October. Sir John Lawrence, the Viceroy, arrived at the capital of the Punjab on the 14th October, and met with an enthusiastic reception from all classes of the European and native communities. On the 15th his Excellency, after a public levee, gave private durbar to the Maharajah of Cashmere and 13 other native chiefs. On the 17th, his Excellency paid vice-regal return visits to the Maharajahs, and conducted the ceremony of the Rajah of Kuppoortula's investiture with the Star of India. On the 18th he held a grand Vice-regal Durbar, which was attended by 604 Rajahs, Brahmins, Nabobs, and chiefs, including kings under our protection, princes of the hills, military lords from the Affghan border, the two high priests of the Sikh nation, and the high nobility of the Punjab. No native monarch in the whole history of India ever convoked such a durbar, and the Indian press agrees in asserting that it was the most splendid and imposing ever held. The costumes were magnificent in the extreme. The Rajah of Jheend was dressed in pure white muslin, gleaming with diamonds and emeralds, and a yellow turban. The Maharajah of Putteala wore a dress of rich lavender silk, but so overlaid with emeralds and pearls that the colour could hardly be distinguished. The Maharajah of Cashmere and his son, 10 years of age, were in white, with red and yellow turbans, emeralds and diamonds. One Chief, of great stature, appeared in black and gold with a green turban; another showed his true Sikh extraction by a robe of pure yellow. When Sir John Lawrence appeared on the throne the entire meeting rose in his honour. He then addressed the Chiefs in Hindostanee with the ease and fluency of a native, the first time in Indian history that such a proceeding has been recorded. The following is a summary of his speech:—

"He told them how, when he lately stood in the presence of the Queen of England, she had inculcated on him the duty of promoting their welfare, and how her Consort, the Prince whose greatness and goodness were everywhere known, had always felt the deepest interest in the prosperity of India. He reminded them that 18 years had elapsed since he first set foot in Lahore, and that during 13 years out of them he had been a resident in the province. For many years, he said, his brother, Sir Henry Lawrence, and himself governed that vast country. They all knew him well, and his memory would ever be in their hearts as a ruler who was a real friend of his people. He might truly say that from the day they first exercised [illegible] in the land they spared neither their time nor their [illegible] nor their health in endeavouring to accomplish the [illegible] which they had undertaken. They studied to make themselves acquainted with the usages, the feelings, and the [illegible] every class and race, and they endeavoured to improve the condition of all. He next pointed out the great service which the administration had done for that great province, as well as for other parts of the peninsula. He described three [illegible] reform as resulting from the imposition of British [illegible] the Punjabees. It had reduced the taxation of the [illegible] a very large amount; it had promoted material reform by the construction of roads and canals; and it had [illegible] schools for popular instruction throughout the country. He acknowledged the devotion by which in the hour of danger they had repaid the obligation. The [illegible] loyalty now reigned, and pervaded all classes of the people without distinction. He next pointed out that the system of administration in the Punjab bore its fruits even after its first commencement that, even when the [illegible] mutiny took place, the people in the province remained on the part of the British authority against the mutineers. Much more, he said, would they do so now, when the advantages of British rule had been fully developed, and when the [illegible] ryot as well as every chief acknowledged that the peace and security which they enjoyed were attributable to the [illegible] and intelligent Government under which they lived. In conclusion he told them to educate their children in some [illegible] ing, and to acquaint themselves with the true [illegible] intentions of their rulers, so that they might [illegible] recognise the character of our Government."

At the close of the Durbar the whole 604 [illegible] chiefs were presented to the Viceroy one by one. In the evening Sir Robert Montgomery, the Lieutenant-Governor of Lahore, gave a grand dinner in honour of the event, at which he spoke affectionately of Sir John Lawrence and his two brothers as the friends of his boyhood, at a time when, 45 years ago, they were at school together at Londonderry. Two battalions of British infantry, with a few squadrons of cavalry, sufficed to represent the military power of England on the great occasion, and the assembled chiefs were so much delighted with the bagpipes of the 93d Highlanders that at their request the pipers were three times brought up and played round the great tent; and it is added that the Maharajah of Cashmere has sent an embassy to Sealkote for the express purpose of getting instruction on the instrument from the Highlanders quartered there, while another Hill chieftain has bespoken the genuine article direct from Edinburgh. According to the *Delhi Gazette* the Khan of Kokan, having learned that 12,000 Russian troops had marched against Tashkund, started from Kokan with [illegible] troops, and gave them battle at Tashkund. The Russians, it is reported, were victorious, and the Khan of Kokan was compelled to retreat. The Russians after taking Tashkund, marched against Kokan and occupied it. Sirdar Mahomed Ameer Khan of Candahar is making preparations for war, and is resolved to fight the Ameer of Cabool. He is fortifying Kelat, has put all his officers on oath to fight to the last. The Ameer of Cabool has received a threatening letter from the King of Bokhara regarding his treatment of Dost Khan and his son. The King has entered upon warlike measures in support of the latter against the Ameer. A body of 12,000 Persians have reached Karaiz on their way to Herat. Affghanistan is in an unsettled state. The Ameer of Cabool's treatment of his brother Dost Khan has excited against him the indignation of all the chiefs. It is rumoured that the Bhotanese have submitted, and offered reparation for the insult to the British authorities. The rumour requires confirmation. The Bhooteas have despatched troops to a dozen different points for the defence of the Dooars. They are able to bring 25,000 troops into the field. The Waghurs have again risen in rebellion in Kattiawar, and defeated the Guicowar's troops sent against them. A small British force, under Major Dennis, accompanied by Major Keatinge, V.C., the political agent, has left Rajkote to quell the insurrection. It is reported from Simla that Sir Robert Napier will succeed Sir H. Rose in the command of the Indian army. Sir C. Trevelyan is said to have been suddenly attacked with severe illness. Sir Herbert Edwardes is said to be alarmingly ill, and will have to leave for England almost immediately. At the instance of the Governor the opulent native community of Bombay subscribed 10,000*l.* in one day for the Cyclone Relief Fund in Calcutta. Mr. David Sassoon, the well-known Jewish merchant of Bombay, has applied to the Secretary of State for permission to erect a statue to the Prince Consort in the gardens of the Victoria Museum at Bombay.

JAPAN.—A telegram from Shanghai of October 1 says that Prince Nagato has agreed to open the Straits of Simonosaki, not to rebuild the demolished forts, and to pay the expenses of the allied expedition. The British merchants have addressed Sir Rutherford Alcock, calling attention to the violation of the treaty in the stoppage of the silk trade by the Japanese authorities. The *Gazette* of Friday contains the despatch of Admiral Kuper on the action of Simonosaki. It confirms the details already published, and gives ample praise to the French, Dutch, and American officers who supported the Admiral in operations.

UNITED STATES.—The Presidential election has passed off quietly. Mr. Lincoln and Mr. Andrew Johnson, of Tennessee, have been elected President and Vice-President. Mr. Lincoln carried all the States except New Jersey, Kentucky, and Delaware. He obtained 213 electoral votes, against 21 for General M'Clellan, and a popular majority of nearly 400,000 votes.

General M'Clellan's majority in New York city was 37,000. Two thirds of the Congress are Republican. The State elections are still undetermined; both Democrats and Republicans claim a victory. Mr. Fenton has been elected Governor of New York in the room of Mr. Seymour. Mr. Lincoln was serenaded at Washington on the 10th, and made a speech, in which he declared the peaceable consummation of the recent elections in the midst of a great civil war proved the ability of a Republican Government to maintain its existence in a great emergency, and at the same time preserve the liberties of its people. Now that the elections were over, he appealed to all parties to unite in a common effort to save the common country, and, while expressing his gratitude to Almighty God for directing the mind of the country to what he considered a right conclusion, he added that it afforded no satisfaction to think any other man might have been disappointed by the result. General M'Clellan has resigned his commission in the Federal army. General Butler formally assumed the military command of New York on the 5th. He declared that he would not interfere with the elections unless the civil authorities failed to preserve the peace. He promised that every citizen should be protected in the right of suffrage by the whole power of the Government, and declared that the Federal armies were ministers of good, and not evil, and the soldiers the safeguards of constitutional liberty. He threatened at the same time the punishment by the Federal Government after the elections of all who should be detected in offering fraudulent votes. It is positively asserted that he has warned several prominent gold brokers that they must not speculate in gold to the detriment of the Government; and that he has declared that there can be no militia in any State except the armies of the United States. The elections in all the wards of the city passed over quietly, and there was no disturbance anywhere. General Butler has since left for the James River. Confederate journals state that now, for the first time, Lee's forces equal Grant's in number. An offensive movement by Lee is anticipated. The Confederates reconnoitred Grant's left, and after considerable skirmishing and the loss of a couple of hundred men on either side, the Confederates returned to their intrenchments. General Grant's troops are building log houses. The Confederates in the Shenandoah Valley have been reinforced, and are attempting to flank Sheridan. They threaten Pennsylvania and Maryland. It is said that General Early will assume the offensive by making a flank movement round the Federal right; and there are rumours of a co-operative movement by Longstreet and Breckenridge in South-Western Virginia for an invasion of the Northern States. Sheridan has retired to Winchester. Many of his horses have died of starvation. All attempts to secure forage to the east or west of his camp are repelled by Mosby's cavalry, and many of the foraging parties, together with their trains, have been captured. Forrest captured Johnsonsville, Tennessee, on the 3d of October, with three gunboats, eight transports, their officers and crews, all the Federal stores, and many cannon. The Federal garrison had previously evacuated the place. Federal officers from Chattanooga report that Sherman has abandoned the pursuit of Hood, and, finding it impossible to hold Atlanta, has evacuated Atlanta and burnt that place; also that Lee is destroying the railway and removing the rails to Chattanooga. They add that Sherman, with five corps, was marching through Georgia towards Charleston, South Carolina, a distance of 300 miles. This statement is contradicted by some of the papers, which assert that he has started for Andersonsville or Savannah on a 60 day's campaign, while other papers state that he is marching on Knoxville, his object being Lynchburg, Virginia. Hood is said to be marching on Chattanooga, where Forrest is expected to join him. General Blunt reports skirmishing with Price's rear guard at Newtown, Missouri, on the 28th. Price was still moving towards Arkansas, Confederate accounts confirm the sinking of the Albemarle, and report the capture of Plymouth, North Carolina, by the Federal gunboats on the 31st ult. The Confederates evacuated the city on the approach of the gunboats. The great expedition against Wilmington has been abandoned. Mr. Seward has made a speech at Auburn, in which he declared that there was no intention on the part of the Administration to abandon the present war measures against slavery for the adoption of a policy of conservation and concession, and that the war must go on until one side or the other succumbed through exhaustion. The illegal capture of the Florida in Bahia creates much discussion. Capt. Collins's conduct is approved by the people, but will not, it is thought, be supported by the Government. A Bill has been introduced into the Confederate Congress, which reassembled at Richmond on the 7th inst., enlisting all white men between 18 and 45, and revoking all exemptions. The following is an abstract of President Davis's Message at the opening of the Congress:—

"The military, financial, and material situation of the country is favourable. Foreign relations are unchanged. He considers the disregard of recognition by European nations as unreasonable, since the French and English Governments had long since expressed their conviction that the United States were unable to conquer the Confederacy. Two years since the French Government announced to the London and St. Petersburg Cabinets its conclusion that the United States were unable to achieve a decisive military success; and the replies of England and Russia intimated no contrary opinion. Neutrals seek to palliate the wrong of non-recognition, by professing to consider that recognition would be valueless without further intervention. The South disclaims any desire for intervention, and mistrusts its advantages. It seeks no favour and wishes no intervention. It knows itself competent to maintain its rights and independence. England in 1862 refused recognition on the ground that the action of the British Government would inflame the passions of the belligerents and prevent the return of peace. Experience shows this opinion to be erroneous, as the result is the reverse of what the British Ministry humanely desired. A contrary policy, just to the South, is still within the power of the British Government, and would produce consequences the opposite of those which have followed its course since the commencement of the war. Peace was impossible without independence. It was not to be expected that the North would anticipate the neutral Powers in the recognition of the independence of the South. History would be unable for those reasons to absolve the European nations from a share in the moral responsibility for the unnecessary lives that had been sacrificed during the war. The Government adequately provides for a foreign loan, if only rated 6d. in the pound. He recommends the Government to purchase the slaves it employs, engaging to give them freedom at the termination of their service, rather than impressment for a short period. He also suggests that the number of slaves employed by the Government be increased to 40,000, and employed as engineers, labourers, and pioneers. This number, by preparatory training, will form a more valuable reserve in case of emergency than a larger number suddenly called from field labour. Beyond this limit and these employments it does not seem desirable to go. He disapproves of a general levy and arming of the slaves; but should the alternative be presented of subjugation, or the employment of slaves as soldiers, no doubt exists what would then be his decision. The South was willing to negociate for a peaceful solution, but the Federal Government expressed its determination to make no peace except on terms of Southern submission and degradation, leaving no hope of the cessation of hostilities until the Northern delusion of ability to conquer the South is dispelled."

BRAZILS.—Accounts from Rio of October 25 state that immediately on the receipt of the news of the capture of the Florida the Brazilian Government addressed a note to General Webb, the United States Minister at that Court. General Webb, in reply, assured the Brazilian Cabinet that the United States Government had no complicity with the act of the captain of the Wachusetts, and that every reparation will be offered to it that honour and justice require, more promptly and frankly than if the same act had been perpetrated in a harbour of the most powerful maritime nation of the world. At the same time he says that it will be to his Government, as it is to himself, a source of very sincere regret that, if such an event must of necessity have occurred, it did not take place in the waters of England, which, 15 days after hearing of the rebellion in the United States, joyfully proclaimed the Southern States a "belligerent" Power, while they wanted the manhood to declare, in the face of Europe, the destruction of the American Government and Union by a recognition of their sovereignty and independence.

MEXICO.—Advices from Mexico give the rumour of an attempt to assassinate the Empress Charlotte. The rumour is not credited. The Juarez leaders are rapidly giving adherence to the Emperor.

SAN DOMINGO.—Advices from San Domingo to the 25th ult., state that the insurgent commissioners who were sent to ask the conditions upon which peace would be concluded, have not yet returned.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 91⅛ to ¼ for Money, and 89⅞ to ¾ for Account; Three per Cents. Reduced, 89⅛; New Three per Cents., 89 to 88⅞; New Two and a Half per Cents., 72; India Five per Cent. Stock, 106⅛ to ½; Ditto Four per Cent. Debentures, 1866, 97¾; Ditto Bonds, 5*s.* pm.; Four per Cent. Enfaced Rupee Paper, 89; Ditto Five and a Half per Cent., 110; Exchequer Bills, June, 5*s.* dis.—FOREIGN: Danish, 1864, 95; Egyptian, 95¼ to 95; Greek, 23 to ¼; Italian, 64¾; Ditto Maremmana Railway, 71½; Mexican, 29½ to ¼; Ditto 1864, 27⅜ to ⅝; Portuguese, 1856, &c., 48⅛ to 47⅞; Russian, 1862, 87 ex div.; Spanish Passive, 31¼ to ½; Ditto Certificates, 13¾; Turkish, 1858, 72; Ditto 100*l.* Bonds, 77½; Ditto 1862, 71½; Ditto for Acct., 72 to 71⅝; Ditto 100*l.* Bonds, 71⅞ to 72¼; Venezuela, 1862, 48¼ to 49 ex div.; Ditto 1864, 40.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,054,240	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	13,404,240
		Silver Bullion	—
	£28,054,240		£28,054,240

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£10,374,512
Rest	3,318,095	Other Securities	18,713,407
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	5,518,860	Notes	8,489,385
Other Deposits	14,358,521	Gold and Silver Coin ..	726,851
Seven days and other bills	555,712		
	£38,304,188		£38,304,188

Nov. 24, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Nov.* 18.—BANKRUPTS.—I. E. ANDERSON, Seacroft, Yorkshire, Saddler — R. ANDOW, Southport, Lancashire, Lodging House Keeper—T. ADAMS, Cross Street, Eagle Street, Boot and Shoemaker—J. BELMAN, Silloth, Cumberland, Grocer—W. BUCKTON, Leeds, Twine Manufacturer — R. BULWER, Beccles, Suffolk, Publican — J. BENTLEY Rusk within Oswaldtwistle, Lancashire, Joiner — G. R. BROWN, St. Alban's Terrace, Kennington Road, Assistant at a Music Hall—C. H. BANE, Manchester, Chemist—J. BURTON, Stamford, Lincolnshire, Licensed Victualler—T. BRADBURY Eyton, Shropsh National Schoolmaster—J. W. DUNDAY Dalston Post Office Clerk—G. BARTON, Oxford, Wine Merchant—J. J. BENTLEY, Paradise Row, Hackney, Grocer—J. BOWLES, Cambridge, Grocer—J. BROWN, Walpole Street, New Cross, Hay, Straw, and Corn Dealer—G. BUSH, jun., York Terrace, Howard Road, Stoke Newington, Bookbinder—J. BIRD and G. HICKLING, Loughborough, Leicestershire, Elastic Web Manufacturers—T. COLE, Leeds, South—D. CUTLEY, Newton, Cheshire, Roller Coverer—J. S. COLE, Great Yarmouth, Printer—E. CARDALL, Coventry, Warwickshire, Licensed Victualler—C. CARPENTER, Brighton, Stay and Crinoline Manufacturer—J. DRAKE, Bradford, Yorkshire, Joiner—J. M. EMLER, Exeter Street, Chelsea, late Licensed Victualler — WILLIAM ELMORE, Liverpool, Commission Agent — J. S. ELGEE, Selwood Terrace, Old Brompton, Licensed Victualler—T. FISHER, Barrow-in-Furness, Lancashire, Grocer—W. FLITCROFT, Bolton, Lancashire, Manufacturer—J. FLEMING, Halifax, Dealer in Fancy Goods—S. FAIRWEATHER, late of Framlingham, Suffolk, Beerhouse Keeper—J. GILES, Mark, Somersetshire, Beerhouse Keeper—J. GORROD, Beccles, Suffolk, late Publican—E. GURNING, Westmoreland Place, Bayswater, Builder—T. GREGORY, Queen's Ferry, Flintshire, Publican—T. GANNON, Liquorpond Street Gray's Inn Road Gasfitter—J. GLADSTONE and T. H. GLADSTONE, White Lion Court, Cornhill, City, Merchants—J. GREEN, late of Nottingham, Victualler—C. GREY, Bromborough, Cheshire, Farmer—W. GRAY, Liverpool Provision Dealer—J. HANCOCK, Ryde, Isle of Wight, Cabinet Maker—J. HANCOCK, Ranmoor, Yorkshire Labourer—J. HUNT, Ipswich, Travelling Draper—WILLIAM THOMPSON HALLAM (sued as WILLIAM THOMAS HALLAM), Beeston, Nottinghamshire, late Draper's Assistant—ARTHUR HEBDEN, Leeds, Yorkshire, Twine Manufacturer—C. HEALEY, Wakefield, Licensed Victualler—A. HEALD, Nelson, Lancashire, Cotton Manufacturer—G. HIDE, Hitchin, Herts, Timber Carrier—JOHN HARRISON, Brunswick Terrace, Westbourne Grove, Bayswater, Tailor — WILLIAM EDWARD HOOK, Devonport, Devonshire, Hardwareman — EDWARD HAMMONT, Hastings, Shoemaker — E. S. JONES, Rhyl, Flintshire, Grocer—D. JONES and R. JONES, Brynmawr, Brecconshire, Grocers—J. G. JACKISCH, Manchester, Commission Agent—I. LAWSON, Southsea, Hampshire, Lodging House Keeper—J. J. LITTLEWOOD, Tewkesbury, Gloucestershire, Innkeeper — E. LEPPER, late of Birmingham, Button Maker—S. MEARICK, Conduit Street, Regent Street, Boarding House Keeper—J. C. MORROW, Brighton, late Railway Clerk—W. MARTIN, Fowey, Cornwall, Baker—J. PRIESTMAN, jun., Warrington, Lancashire, Tanner—E. PARFECT, Headley, Hampshire, Builder — T. PATRICK, Kirby Street, Hatton Garden, Button Manufacturer—A. PICKEN, Northampton, Jeweller—J. PIDDINGTON, Gracechurch Street, City, Commercial Agent—A. C. QUINTIN, Gloucester, Dentist—S. ROBSON, South Shields, Durham, Grocer—T. RUDKIN, Fulham Road, Middlesex, Builder—S. ROBERTS, Liverpool, Architect—F. C. RILEY, Burton-upon-Trent, Railway Clerk—F. ROOKER, Manchester, Machinist—D. REVETT, Eden Wood, Lancashire, Manufacturer and Warp Sizer—H. ROGERS, Chapeltown, Leeds, Book Keeper and Accountant—T. SINDEN, Cardington Street, Euston Square, Marble Paper Manufacturer—G. SELIG, Princes Street, Wilson Street, Finsbury, Wholesale Jeweller—J. W. SPOKES, late of Tottenham Court Road, House Agent—F. SMITH, East Hampstead, Berkshire, Sheep Salesman—J. SHARIF, Birmingham, Army Contractor—J. A. SIMPSON, Great Ilford, Essex, late Merchant—W. TAYLOR, Burnley, Contractor—W. R. THORNHILL, Liverpl. Ironmonger—R. THACKRAY, Leeds, late Dealer in Corn—H. TITHERINGTON, late of Rochdale, Innkeeper—H. TAYLOR, Heywood, Lancashire, late Beerseller—G. WALTON, Sheffield, Yorkshire, Commission Agent — J. WEBBER, Halberton, Devonshire, Yeoman—J. WARRINGTON, sen., Cawood, Yorkshire, Farmer—J. WALKER, Derby, Journeyman Wheelwright—J. WHITE, Westbromwich, Staffordshire, Attorney's Clerk—W. C. WHITTENBURY, Leeds, late Furniture Dealer—J. WILLIAMSON, Wilmslow, Cheshire, Provision Dealer—J. WHITTAKER, Radcliffe, Lancashire, Grocer—R. WILLIAMSON, Heaton, Yorkshire, Innkeeper—T. WEBB, Harlington, near Uxbridge, Middlesex, Butcher—T. L. WALKER, Bradford, Yorkshire, Painter—W. H. WEBB, Gosport, Hampshire, Baker—A. WILLIS, Nottingham, Journeyman Dyer—W. C. WILKINS, Long Acre, Engineer.

SCOTCH SEQUESTRATIONS.—T. ROAG, Greenock, Ironmonger—J. GRAY, Huntly, Corn and Meal Dealer—WILSON & GRAY, Glasgow—M. WILSON, Glasgow, Teacher and Publisher.

TUESDAY: *Nov.* 22.—BANKRUPTS.—T. H. ABELL, Plymouth, Fancy Draper—R. ALDRIDGE, Somerford Grove, Tottenham, Plumber—S. BRYAN, Vine Street, Westminster, Worker at a Needle Manufactory—H. W. BUTLER, Merton, Surrey, Floor Cloth Manufacturer — G. CONQUEST, Whitton, Middlesex, Licensed Victualler—W. COX, Seagley, Staffordshire, Grocer—W. CRUDGE, Bampton, Devonshire, Cabinet Maker—J. CRICHTON, Threadneedle Street, City, Commission Agent—H. DIXON, Birmingham, Journeyman Spoon Maker—J. DUNKIN, Minera, Denbighshire, Mine Agent—W. J. EELS, jun., Hastings, Seedsman—T. EAVES, Coventry, Plumber—W. H. ELLIOT, Lamb's Conduit Street, Stationer—M. EATON and H. J. EATON, Wimborne Minster, Dorsetshire, Builders—L. ELKAN, Mincing Lane, City, Merchant—J. FLETCHER, New Brompton, Kent, Baker—J. S. FLINT, Tonbridge Wells, Kent, late Railway Goods Manager—ROBINSON FENWICK, late of North Seaton, Northumberland, Working Pitman—WILLIAM GREENWOOD, Blackburn, Manufacturer—GEORGE GANN, Somerset Terrace, Cornwall Road, Brixton, Carpenter — JAMES GARNER, Northampton, Fishmonger — J. GALLIMORE, Ilkeston, Derbyshire, Grocer—B. PARKER HUDSON, Leeds, late Draper—W. HARRIS, Great Prescott Street, Goodman's Fields, Diamond Merchant—S. HUSSEY, Norfolk Road, Hackney, Commission Agent — J. HUMPREY, Stafford, Beerhouse-keeper—S. HUNDLEY, Worcester, Baker—C. N. HAMMOND and F. HAMMOND, Lower Whitecross Street, Tin and Zinc Plate Workers—J. HALL, Eastbourne House, Addison Road, Kensington—W. HATELY, Jarrow, Durham, General Draper—H. T. HUNT, late of Stratford, Essex, Hair and Net Manufacturer—W. JOYNSON, Liverpool, Builder — J. KENNINGHAM, Broughton, Lancashire, Teacher—J. KETTLE, Birmingham, Malt and Coffee Roaster—J. KNAPP, Manor Street, Clapham, Coach Builder—J. LEWIS, Bodenham, Herefordshire, Labourer—G. P. LASCARIDI, Winchester House, Old Broad Street, Insurance and Discount Agent—T. MAISH, Poyle, Middlesex—J. MEASURES, Peterborough, Northamptonshire, Baker — SHADRACH MANSELL, of Kidsgrove, Staffordshire, Puddler — JAMES MURRELL, Norwich, Glass and China Dealer — J. MCCULLOCH, Stockton-on-Tees, Tea Dealer—J. NARDIN, late of Wilmington Square, Clerkenwell, Importer of Swiss Watches—M. NICKSON, Lancaster, Milliner—L. NIXON, Stafford, Shoe Manufacturer—J. OWEN, Hulme, Lancashire, Grocer—W. POTTER, Manchester, Newspaper Agent—A. PERKINS, jun., Bridgewater, Somersetshire, Accountant—J. REYNOLDS, Bolton-le-Moors, Lancashire, Commission Agent—W. S. ROSE, Norris Street, Haymarket, Tailor—J. ROME, late of Hulme, Lancashire, Machine Broker—J. RATCLIFF, Longton, Staffordshire, Baker—T. ROBINSON, Leigh, Essex, Innkeeper—J. ROOKES, Cardigan, Grocer—R. R. H. SEARLE, Plymouth, Chemist—F. SMITH, Fenchurch Street, City, Commission Merchant—R. STEEL, Wortley, Yorkshire, Cordwainer—A. SCHOFIELD, Liverpool, Commission Agent—J. SYMES, Bristol, Innkeeper—J. SHUTTLEWORTH, Kelbrook, Yorkshire, Innkeeper—H. SCHOLFIELD, Lansdowne Terrace, Hornsey New Town, Photographer—H. W. SEABROOK, Gloucester Terrace, Park Walk, Chelsea, Clerk—H. W. STEAR, St. Benet's Place, Gracechurch Street, City, Merchant—J. SHAW, jun., Hoyland Common, Yorkshire, Mason—J. C. TATE, Newcastle-upon-Tyne, Engraver—H. TAYLOR, North Meol's, Lancashire—J. C. TREMLETT, Kerswell, Devonshire, Shoemaker—W. TOPLIS, late of Greenside, Lancashire, Dairyman—R. WILSON, Ipswich, Cattle Dealer—A. S. WILLIAMS, Derby, Engraver—W. WILSON, Kingsland Green, Kingsland, Merchant's Clerk—W. WILDMAN, St Neots, Huntingdonshire Builder—J. WOOD, Sheffield, Table Knife Maker — W. WRATTEN, Canterbury, Kent, Tanner and Leather Dresser.

SCOTCH SEQUESTRATIONS — THE CLYDE SHIPBUILDING COMPANY, Port-Glasgow—G. MAY, Glasgow, Restaurateur—J. M'ARTNEY, Keilybridge, Perthshire, Farmer — C. MITCHELL, Crinan, Argyllshire, Fish Curer—J. RAEBURN, Edinburgh, Commission Agent.

Metropolis and its Vicinity.

THE ROMAN WALL OF LONDON.—At a meeting of the Society of Antiquaries last week, Earl Stanhope, the President, in the chair, Mr. Tite, M.P. read a paper descriptive of some recently discovered remains of the walls of Roman London. He stated that in 1853 a beautiful tessellated pavement was found by him under Gresham House in Broad Street. This interesting discovery had always led him to believe that similar remains existed in the same neighbourhood, further strengthened by the fact that in Trinity Square, just adjoining, a portion of the ancient wall of London still existed above ground, which, though not Roman, was supposed to rest on Roman foundations. In 1841 the Blackwall Railway, much further north than this point, cut through Roman remains of the great wall, but beyond that slight indication things remained in the same state until the autumn of this year. In 1864 certain very large works were undertaken in Cooper Row for the erection of immense warehouses by a London architect, Mr. Clifton, who in August of this year photographed some curious remains discovered in executing these works. On visiting the spot he found a very extensive fragment of a Norman wall, with archer

arrow slits and other defensive appliances. The fragment was 110 feet long, and in height from the bottom of the foundation to the top of the parapet 41 ft. All the foundations and a considerable portion of the lower wall were undoubtedly Roman, built of square stones in regular courses, with bonding courses of Roman brick of intense hardness and excellent cement. The cement was so hard that he could not procure a whole brick for exhibition, but had obtained one broken in half. This specimen seemed to be as hard as any red earthenware, and was, as was always the case with the Romans, more of what we should call a tile, being about a foot square and 1½ thick. The mortar between the bricks, unlike our modern system, was nearly as thick as the bricks themselves, and abounding in portions of pounded brick. He showed the exact place of these remains in an ancient plan of London in the reign of Elizabeth, when the walls and gates were in existence. He then pointed out a few other localities where undoubted Roman remains of these walls were traceable—viz., Camomile Street, the street still called London Wall, and near Moorgate. In referring to the history of Roman London, he pointed out that there could have been no walls at the time when Suetonius abandoned it in A.D. 61. He quoted some Norman historians, who referred the walls to a period as late as the Empress Helena, but his opinion seemed to be that they dated about the second century of our era. Of the distinctly Norman work above this level he attributed that to the period when Archbishop Langton and William Marshall, Earl of Pembroke, had failed in their first endeavours to prevail on King John to restore the ancient laws contained in the Great Charter; the associated Barons assumed their arms, and with their forces marched first to Northampton and thence to Bedford. They were favourably received there by William de Beauchamp, and there also came to them messengers from London, who privately advised them immediately to go thither. On this they advanced to Ware, and arrived at Aldgate after a night march on the 24th of May, 1215, the Sunday before Ascension Day. Finding the gates open, says Roger de Wendover, they entered the city without any tumult, while the inhabitants were performing Divine service; for the rich citizens were favourable to the Barons, and the poor ones were afraid to complain of them. After this, the walls being in a ruinous state, they restored them, using the materials of the Jews' houses existing in the neighbourhood and then destroyed to build up the defences, which, as Fitzstephen relates, were in a subsequent reign in a high state of excellence. Mr. Tite pursued his history of the wall of London through its various phases of ruin and revival until the patriotic Lord Mayor, citizen, and draper Ralph Joscelyne, in 1477, completely restored all the walls, gates, and towers, in which work he was assisted by the Goldsmiths' and other companies, and by Sir John Crosby, a member of the Grocers' Company. The gradual increase of the necessities of the citizens for more space and the Great Fire of 1666 completed the destruction of these once important defences, and but few remains now exist to show their extent and value. The total area enclosed by the walls which still constitutes the great "City of London" is only about 380 acres. The paper was illustrated by beautiful drawings of the remains by Mr. Brass and Mr. Tyerman, and was listened to with much attention.

SUICIDE OF COLONEL TENNANT.—On Wednesday morning Lieut.-Colonel Tennant, late of the 35th Regiment of Foot, committed suicide by shooting himself at his residence, Raglan Road. The jury at the inquest returned a verdict of Temporary Insanity.

ALTERATION OF THE CAPE MAILS.—Commencing with next month the direct mail packets for the Cape of Good Hope, St. Helena, and Ascension, will in future leave Plymouth on the morning of the 10th of each month, on the arrival of the mail from London on the previous evening. When the 9th of the month falls on Sunday, the mails will not be despatched from London until the evening of the 10th, and the packet will not sail until the morning of the 11th. These packets will go on from the Cape to Mauritius, calling at Natal, and any letters for Mauritius, specially directed *viâ* Cape of Good Hope, will be sent by that route at the same rate of postage as when forwarded *viâ* Southampton and Suez.

VALUE OF LAND IN THE CITY.—At the Sheriff's Court on the 11th a special jury was summoned to assess the amount to be given by the Metropolitan Railway for a freehold house in Charterhouse Square built in 1708 and leased in 1856 for 21 years at 70*l.* a year. The value of the reversion, with the addition of 15 per cent. on account of the compulsory sale, was estimated by several valuers at from 2400*l.* to 2500*l.* The claimant was one of two trustees under a marriage settlement, and it was a great disappointment to part with the property, which, like all other city property, had greatly increased, and was increasing, in value. The jury awarded the compensation at 2450*l.* Another special jury was summoned to the Sheriff's Court in the case of "Ellis *v.* The Tottenham and Hampstead Junction Railway Company," to award the amount of compensation for some land, and for damage done by a cutting in the property of the claimant. The jury gave 1105*l.* for the land, and 750*l.* for the severance made to the property. At the Lord Mayor's Court last week, the case of the trustees of Dr. Williams' Library and the Metropolitan Railway Company was heard, when the jury assessed the amount of compensation at 10,200*l.*

OPENING OF A REFRESHMENT ROOM IN THE BRITISH MUSEUM.—On Monday a great and long desired improvement in connection with the reading-room of the British Museum was officially announced, the establishment of a refreshment-room. The regulations are few and simple, and such as to promote the general comfort of readers and students.

SACRILEGE IN THE INNER TEMPLE.—A correspondent of the *Times*, under the signature of "Old Mortality Redivivus," states that he has discovered the tomb and monument of Selden in the Inner Temple, covered with rubbish, and totally neglected. He has also found that the dust and bones of this profound scholar have been carted away and shot into a dusthole. He suggests the removal of the old monument from its present position behind the seats of the Benchers of the Middle Temple to the ambulatory of the Greek Church, where at least the stranger may read without inconvenience the simple memorial.

THE SUBSCRIPTIONS FOR THE WOUNDED DANES.—The committee formed under the presidency of the Marquis of Clanricarde, to collect funds for the relief of the sick and wounded of the Danish army, have remitted a final sum of 121*l.* 15*s.* 6*d.* to the Danish committee at Copenhagen, making a total of nearly 9200*l.* collected in England and remitted to Denmark for this benevolent object.

REPORTED LOSS OF CAPTAIN SEMMES'S NEW STEAMER.—On Monday a notice was posted at Lloyd's, announcing the loss of the Sea King, screw steamship, on the rocks near the Desertas, off the Island of Madeira. This is the steamer which was taken up for the service of Captain Semmes, late of the Alabama, and which changed her name to the Shenandoah on her arrival at Madeira, where the Laurel steamer met her with men and stores. The report of her loss is discredited by the Confederate agents in this country. When last heard of she was at sea, and far from the Desertas.

THE PLAISTOW MURDER.—On Saturday the prisoner was again brought before the magistrates at Ilford, when Mr. Giffard, the barrister, stated that he appeared on behalf of the Government, who had determined to take the matter into their own hands, and asked for a remand, in order to complete the case for the prosecution. This was agreed to, and the further examination was adjourned to Saturday. The coroner's inquest was resumed on Wednesday, when, for the first time, the prisoner was brought before the jury. He was defended by a solicitor, and the evidence of the witnesses previously taken was read over to him. Dr. Letheby gave in a report of the chemical analysis he had made of spots on the prisoner's clothes and on the hatchet, showing that there were upon them traces of blood, of human hair, and of threads that appeared to have come from the neckerchief of the murdered man. The Coroner then summed up, and the jury returned a verdict of Wilful Murder against the prisoner, who was committed for trial on the coroner's warrant.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths registered in London in the week that ended Saturday, November 19, were 1742. The average number in the corresponding week of ten years, 1854-63, corrected for increase of population, was 1411. The present return is therefore 331 above the average. Bronchitis continues to be the principal cause of this excessive and rapid increase in the mortality. During the week the births of 944 boys and 1016 girls, in all 1960 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1906.

Provincial.

ALDERLEY.—The local papers state that during his recent visit to Cheshire Earl Russell planted a Spanish chestnut to commemorate his son's marriage, and that throughout the festivities he was the merriest of the merry. At the dance in the evening his lordship, oblivious to the cares of State, led a buxom Cheshire lass down a long country dance, and on arriving at the bottom of the room evinced signs of exhaustion, when one of his friends went up, and, tapping him on his shoulder, advised his lordship "to rest, and be thankful!" The Earl enjoyed the joke, and joined in the laugh it excited.

BROMLEY.—Two railway labourers, called Staples and Turner, were brought before the magistrates in this town on Tuesday, on a charge of murdering James Fisher, at Orpington, on Saturday night. The deceased had been quarrelling with one of the prisoners at the door of a public-house, but was advised by two constables to go home. The prisoners went after him, and the policemen suspecting that they intended mischief, followed, but before they could overtake them the prisoners had attacked the deceased, and were in the act of lifting him from the ground. His face was covered with blood, and he appeared to have been savagely kicked about the eyes, one of which had been entirely destroyed. He was insensible, and never rallied. The prisoners were remanded to await the result of the inquest.

DEVONPORT.—On Thursday night a fire broke out in the Dockyard in a large store-room for cabin furniture, immediately over the steam [illegible]. Nearly all the furniture and the west roof of the [illegible] were destroyed. A portion of the flooring was burnt, and some slight damage done to the [illegible].

DOVER.—The Robin Hood, 800 tons, from [illegible] to Hongkong, with a general cargo, was run [illegible] the Spirit of the Ocean, homeward bound, [illegible] geness on Monday night. The captain and [illegible] to their boats, and the Robin Hood immediately [illegible] down. Part of the crew were picked up and [illegible] London; the other part were landed at [illegible]. Another ship, called the Horizon, belonging [illegible] same owners, was abandoned in the Channel [illegible] 22d inst. with 10 feet of water in her hold, [illegible] voyage from Calcutta to London. The crew [illegible] picked up by a Dutch vessel.

LEEDS.—A meeting of the contributories [illegible] Leeds Banking Company took place on Wednesday [illegible] Vice-Chancellor Kindersley's chambers, in Lincoln's Inn. Mr. Turquand, the official liquidator [illegible] Company, applied for leave to issue notices of [illegible] 70*l.* per share. From his statement it appeared [illegible] the liabilities of the Company are 503,000*l.*, [illegible] call of 70*l.* a share on the 7340 shares would produce 513,800*l.*, a sum sufficient to meet all ultimate requirements. Leave to issue the notices was at once given, all questions as to the rights of individual shareholders or classes of shareholders being left open.

LEICESTER.—Two labouring men, when digging in a gravel pit at Stockerton in June last, found a purse containing 62 gold coins, which were forwarded to the Treasury as "treasure trove." A few days since the chief constable of the county received instructions from the Lords of the Treasury to pay the finder the sum of 55*l.* 13*s.* 9*d.*, being the value of the treasure.

LIVERPOOL.—The Government has instructed the Solicitor to the Treasury to make a thorough investigation into the facts of the Federal Enlistment case, and to detain the ship in the meantime. The Solicitor to the Treasury has placed the matter in the hands of Messrs. Bateson, Robinson, and Morris. Mr. [illegible] has got 126 men back from the ship, and has sent them to their homes. The Mayor has received a communication from Sir George Grey informing him that a commission has been appointed by her Majesty to inquire into the sanitary condition of Liverpool.

MALTON.—The great consternation into which the farmers of the East Riding have been thrown by the numerous incendiary fires has induced them to set night watchers over their property. Mr. Spink, of Bartindale, near Hunmanby, was aroused early on Monday week by his watcher announcing that he had seen a man run away from the stacks. An examination was immediately made, when it was found that a train of straw had been placed from one stack to another, and a second train from the stacks to the house. This circumstance induced the police to make a closer scrutiny into the affair, and measuring the footmarks around the stacks, they found them exactly to correspond with the footmarks that led to Mr. Spink's house. The officers at once charged the watcher with having made the trains himself, and demanded his object for so doing. The watcher eventually confessed he had made the trains, stating that he thought Mr. Spink would applaud his extreme watchfulness. He did consider him such a trustworthy servant that he would employ him on the farm throughout the year. Mr. Spink declined to prosecute, but of course immediately dismissed the man. A movement is on foot among the Wold farmers for the purpose of associating and only employing labourers of respectability, the object being to starve out and drive away those suspicious characters known as "fire rangers."

MANCHESTER.—At a meeting of the Executive Committee on Monday, the Hon. Secretary reported that the balance in the bank was 89,528*l.* 19*s.* 7*d.*, and that on the 12th inst. there was an increase of 737 in the number of persons receiving parochial relief as compared with the previous week, the total number being 109,309. It was stated that there was a balance of upwards of [illegible] in the hands of various local committees [illegible] remitted for distribution. After some discussion it was resolved to issue a circular to these committees stating that, in justice to those who have faithfully remitted all the subscriptions confided to them and also to the public, on whom further claims have been [illegible] advocated, the Central Committee trust that unremitted balances will be regarded as a [illegible] which the Central Committee may depend for the relief of the indigence of the cotton districts.

NORWICH.—Brother Ignatius announced a few [illegible] since that he would have nothing further to do with any "Norwich monks" in connection with his mission. This declaration was provoked by the conduct of Brother Martin, a young man named William [illegible] has resided for some time in Norwich. It appears some time since Brother Martin quitted the monastery as he considered himself aggrieved by a too severe penance inflicted upon him by Brother Dunstan in the absence of Brother Ignatius. On the return of Brother Ignatius to Norwich, the penance was remitted, and Brother Martin was reinstated. A day or two afterwards he left the monastery for good, and has since published a letter in the *Norfolk News*, stating that having taken the *Penny Post* from the library without permission, but intending to ask for it to read [illegible]

the night watch, he was condemned to a penance, to which he did not choose to submit. He says:—

"I was ordered to say 100 rosaries, all paternosters (the Lord's Prayer). Now, as there are 61 beads on the rosary, and I was to say a paternoster for each, and go round 100 times, you will observe that my punishment for this slight misdemeanour was to repeat the Lord's Prayer 1000 times! And what was more, instead of going to bed at half past three and sleeping as I should otherwise have done, after watch and services, I was to sit up to perform this task, and then keep my watch, the next night after all. But this was not the whole of the penalty. The prior directed also that I should write out the 'Rule of Silence' 50 times; and as each time would occupy about 20 minutes, here was the prospect of the additional occupation of about 17 hours, whenever I could find the time between services and work. The result was that the thorough disgust which had been for some time growing in my mind with the monastic life as carried out on this Hill reached its climax, and I left the same evening, having good reason to know that this severe penance was more the consequence of personal ill-feeling towards me than of any particular regard to the law which I was said to have broken. Another brother had read different newspapers at forbidden times and without leave, but no notice had been taken of the offence. I question whether, were the prior so strict with others as he was with me, they would not also refuse submission, seeing that the prior (Brother Dunstan) is like myself but a young man (he is only 17), and the two others are about three or four and twenty. I may say, in conclusion, that Ignatius's profession that the rule of St. Benedict is strictly kept in Norwich is altogether a mistake. I have spent four months and a half there, and have seen such irregularities as have convinced me that this so-called Anglican Order of Benedictines is all a sham. I took my vows for six months; and therefore, though I have for some time been surprised at what I witnessed, and of which the public outside have little idea, I thought I would at least stay out my time. I am now glad, however, at the step I have taken, and shall with your leave, take an early opportunity of exposing the hollowness of the whole affair.—I am, W. BELL (late + MARTIN, A.O.S.B.)"

NOTTINGHAM.—Proceedings have been taken, by direction of the Lord Chancellor, against the official assignee of the Nottingham Bankruptcy Court, to enable the assignee "to show cause why he should not pay 20 per cent. on the extra funds he had in hand." Mr. Commissioner Sanders presided as judge, and after the evidence of the assignee was tendered on Saturday, the examination was adjourned to the 29th inst.

PLYMOUTH. — The Norwegian barque Tamworth, from Bordeaux for Buenos Ayres, put into the Sound on Sunday. She has on board 59 French and German passengers, some of whom are detained by force. Eleven of the Frenchmen have made several attempts to leave the vessel, but are detained on the plea that they have been enrolled in France to serve the Brazilian Government, and have accepted the bounty.

SHEFFIELD.—The Town Council have presented a memorial to the Home Secretary pointing out the injury caused by the discharge of sewage and other noxious matters into streams and rivers, and praying that as the law at present is inoperative to prevent the evil, Sir George Grey will bring in a Bill during the next session of Parliament to prohibit the pollution of rivers and to make the penalties heavier and more effective.

SUNDERLAND.—The knighthood of the Legion of Honour has just been conferred by the Emperor on M. Paulin Niboyet, the French Consul at Sunderland, as a reward for the services he has rendered to the shipping trade of the two countries.

TYNEMOUTH. — The Aberdeen passenger steamer Stanley, and a schooner, name unknown, were wrecked off Tynemouth Battery Point on Thursday night. All the crew of the schooner were lost, and 20 to 30 lives perished from the steamer, 33 persons being saved by the rocket apparatus. The only boat that could get alongside was the Tynemouth lifeboat of the National Institution, and in doing so she broke all her oars, was stove in on her broadside, and lost two of her crew.

WINDSOR.—On Monday, being the 24th birthday of the Crown Princess of Prussia, the Church of All Saints, of which her Royal Highness on her last birthday laid the foundation stone, was consecrated by the Bishop of Oxford. The Princess of Wales and the Princess Helena, attended by several ladies of the Court, were present at the service.—On Monday Ellen West, lady's maid to Lady Phipps, was again brought up for examination on charges of robbing her mistress, and of obtaining goods under false pretences, and was fully committed for trial by the bench of magistrates. Since her apprehension nearly 200 letters have been found in her room at Lady Phipps's residence in Windsor Castle, all of them relating to property which she had made away with. The greater part of this property has been recovered through the exertions of the police.

Ireland.

FEDERAL RECRUITING IN IRELAND.—At the Athlone Court House, a few days since, John Murphy was charged with tampering with some soldiers of the 25th Regiment, with a view to induce them to desert and join the Federal army. The prisoner seems to have acted in a very incautious manner, as he spoke openly in publichouses and elsewhere to several soldiers about the advantages they might secure by enlisting in the Northern service. One soldier stated that the prisoner offered him a commission on condition of his getting nine others to desert with him. In his possession were found some seditious papers and pamphlets, principally of American origin. He was remanded for the production of further evidence, and has since been committed for trial.

Railways.

SOUTH-WESTERN EXTENSION TO THE CITY.—It is understood that an agreement has been made between the South-Western Company and the London, Chatham, and Dover, by which the former will obtain access for their whole system over the Metropolitan Extension lines of the latter to the Ludgate Hill Station, and thence over their City Junction line to the Metropolitan and Great Northern at Farringdon Street. The arrangement also embraces the widening of the Metropolitan Extension lines, and the providing additional accommodation at Farringdon Street for the South-Western, if required, at their cost, upon land already acquired by the London, Chatham, and Dover; and the whole of the system will be completed in the ensuing summer.

PROPOSED RAILWAY UNDER THE RIVER MERSEY.—It is intended to apply to Parliament in the coming session for powers to be vested in the Great Western, London and North-Western, and other companies, to form a new company for the purpose of connecting Liverpool and Birkenhead by rail. The project is to carry a line up the Cheshire bank, from Birkenhead to Bebbington, thence by a tunnel under the Mersey to Toxteth Park, which is the south end of the borough of Liverpool. It is intended to connect this line with the Chester and Birkenhead on the one hand, and with the Liverpool Central on the other; and also to extend it into the higher parts of the town of Liverpool.

Law.

COURT OF CHANCERY: *St. Thomas's Hospital.*—This case was again brought before the Lord Chancellor on Wednesday. It may be remembered that on a previous day he intimated his opinion that the right lay with the chartered Governors, but adjourned the case that it might be put in such a shape as to allow the Corporation to carry it to the House of Lords. It was now stated that the City would not prosecute the matter further, as they were satisfied with the adverse decisions of his lordship and Vice Chancellor Wood. The appeal was therefore dismissed with costs.

COURT OF QUEEN'S BENCH: (Sittings in Banco before Lord Chief Justice Cockburn and Justices Crompton and Shee.)—*The Confederate Enlistment Case.—The Queen* v. *Jones and Highatt.*—This was the great enlistment case, tried at Liverpool before the Lord Chief Justice, when the defendants Jones and Highatt were found guilty of enlisting seamen for a Confederate cruiser, which was at the time lying at Calais. Some points of law, however, were reserved, which came on for argument before this Court on Wednesday; but after the case was called the counsel for the prisoners intimated that they would not contest the matter further, on the understanding that the fine to be imposed on them did not exceed 50*l*. The Attorney-General, for the Crown, agreed to this arrangement, as it was the first case and the points were new. The Lord Chief Justice said that the Court would sanction the arrangement, but they hoped it would be understood that it is not because the fine inflicted was comparatively moderate that they entertained any doubt of the importance of the statute that had been violated, and the necessity of their upholding and enforcing the law as essential to the character and honour of this country. This must not at all be taken as a guide what the Court would do on any future occasion should the law be again violated. The defendants were then fined 50*l*. each.

COURT OF DIVORCE: *Codrington* v. *Codrington, Anderson and Mildmay.*—This was a suit for a divorce instituted by Admiral Codrington against his wife with Major Anderson and Lieut. Mildmay as co-respondents. After occupying a special jury for several days in the summer, and again this term by adjournment, it terminated on Wednesday, when the jury found a verdict that Mrs. Codrington had committed adultery both with Colonel Anderson and with Lieutenant Mildmay, and that Admiral Codrington had not by his conduct conduced to his wife's misconduct. The question of costs was reserved.

CENTRAL CRIMINAL COURT: *The Case of Locking-up a Wife.—Edward Hammond, Emily Wakeman,* and *Elizabeth Allan,* surrendered to take their trial upon an indictment charging them with unlawfully imprisoning for a hundred and twenty-one days, Rosalind Hammond, the wife of the male defendant. There was also a second indictment against them for a common assault. The facts of the case are all well-known, having been so recently before the magistrates at the police-court. The husband now pleaded Guilty, and the two female prisoners were discharged. The Court postponed judgment on the husband, and in the meantime admitted him to bail.

Obituary.

THE MARCHIONESS OF NORTHAMPTON died on Friday evening at Northampton House, Piccadilly, after a long illness. Her ladyship was the second daughter of Mr. Henry and Lady Mary Vyner, and was the sister of the Countess de Grey and Ripon, and of Mr. Vyner, M.P. She married the Marquis of Northampton in 1859, but there is no issue by the marriage.

ADMIRAL GEORGE BRINE died at Richmond, on the 16th inst. in his 79th year. He entered the navy in 1797, and after serving in the Channel, at the Cape of Good Hope, the Isle of France, and the Rio de la Plata, was for some time stationed off Guernsey. At the close of 1804 and in 1805 he officiated as flag officer to his father, Admiral James Brine, who held the second command at Plymouth. He subsequently served in the Channel, Mediterranean, Baltic, North Sea, and Downs, until 1815, and from that time until 1818 he commanded the Musquito, 18, at St. Helena. He accepted the retirement in 1846; became Rear Admiral in 1851, Vice-Admiral in 1857, and Admiral in 1863.

COLONEL HENRY DAWKINS, late of the Coldstream Guards, died on the 13th inst., at his family seat, Over Norton, Oxfordshire. He was born in 1788, and was the eldest son of the late Mr. Henry Dawkins, of Over Norton, by the daughter of General Sir Henry Clinton, and sister of the late Generals Sir William and Sir Henry Clinton, G.C.B. He was educated at Harrow and Marlow, and entered the army as Ensign in the Coldstream Guards in 1804. He embarked in 1809 to join the 1st Battalion, then serving with the Duke of Wellington's army in Portugal, and was Lieut.-Colonel of the Battalion from 1815 to 1826, when he exchanged to half-pay unattached. He was badly wounded at the enemy's sortie from Bayonne in 1814. He served with his company at the battle of Waterloo and the capitulation of Paris, and remained with the army of occupation. He received the war medal with six clasps for Nive, Nivelle, Vittoria, Salamanca, Ciudad Rodrigo, Fuentes d'Onor, and the medal for Waterloo. He became colonel in 1837, and retired from the army in 1846. He represented Boroughbridge in Parliament from 1820 to 1830, and was a deputy-lieutenant and justice of the peace for the county of Oxford.

COMMANDER MORTIMER died at Salcombe Regis on the 12th inst., in his 72d year. He served in the Barfleur, under Admiral Cornwallis, and towards the close of 1805 assisted in towing the Victory, with the body of Lord Nelson on board, to Spithead. He was midshipman of the Warrior at the taking of the Ionian Islands and of Ischia and Procida, in 1809; commanded a mortar vessel at the defence of Sicily; was lieutenant of the Venerable at the capture of the French frigates Alcmene and Iphigénie, in 1814; lieutenant of the Malta, at the surrender of Naples, and commanded her boats in cutting out a ship from under the batteries of Gaeta, in 1815. He was admitted to the out-pension of Greenwich Hospital in 1831.

MR SPOONER, M.P. for North Warwickshire, died on Thursday morning at Henwood Lodge, Leamington, in his 83d year. Mr. Spooner was born at Birches Green in 1783, and was educated at Rugby. In 1830 he was elected member for Boroughbridge, but was unseated on petition. He represented Birmingham in the Conservative interest from 1844 until the general election in 1847, when he unsuccessfully contested the borough with the late Mr. Muntz. He was however immediately returned for North Warwickshire, which he has continued to represent uninterruptedly to the present time. He was for many years one of the recognised leaders of the Protestant cause in the House of Commons, and was the indefatigable opponent of the grant to Maynooth. He married, in 1804, the fourth daughter of Dr. Wetherell, Dean of Hereford. His eldest sister married the well-known William Wilberforce, M.P. for Yorkshire, the father of the Bishop of Oxford. Mr. Spooner had long been in a precarious state of health, and had announced his intention of retiring into private life at the next general election.

BIRTHS.—On the 20th inst, at Packington Hall, the Countess of AYLESFORD, of a son—21st inst, at 27, Grosvenor Square, the Hon Mrs. OAKELEY, of a son—17th inst, at Holmefield, Lyndhurst, Hants, the wife of Commander the Hon. MAURICE H. NELSON, H.M.S. Rinaldo, of a son—19th inst, at 1, Prince's Square, Hyde Park, W., the Dowager Lady NEPEAN, wife of Dr. KIRKMAN, of a son—25th inst, at Anstey Manor, Alton, Lady MILLER, wife of Sir C. H. Miller, Bart., of a daughter—16th inst, at Dun House, Montrose, Forfarshire, N.B., Mrs. KENNEDY ERSKINE, of a son and heir.

MARRIAGES.—24th inst, at St. Mary's, Bryanston Square, His Excellency M. DE BILLE, Danish Minister at the Court of St. James's, to LOUISA ELIZABETH, daughter of the late Sir COMPTON DOMVILE, Bart., and half sister of the present Bart.—19th inst, at St. George's, Hanover Square, Lieut.-Colonel FARQUHARSON, of Invercauld (Scots Fusilier Guards) to ELIZABETH LOUISA, eldest daughter of ALEXANDER OSWALD, Esq., of Auchincruive and the late Lady Louisa Oswald, and niece of the Earl Craven—17th inst, at Botlys and Lyne Church, Surrey, the Rev. HUGH F. SMITH MARRIOTT, of Horsmonden, Kent, to FRANCES CATHERINE MARY, second daughter of Admiral the Hon. GEORGE CAVENDISH, of Lyne Grove, Surrey—15th inst, at St. James's, Piccadilly, Lieutenant-Colonel HENEAGE, of the Coldstream Guards, to FLORENCE, only daughter of Sir JOHN and Lady ELEANOR CATHCART—16th inst, at Lockington, Leicestershire, GEORGE ERNEST PAGET, Esq., Royal Horse Guards, of Sutton, Notts, to SOPHIA, third daughter of the late Colonel CHARLES HOLDEN—17th inst, at the parish church, Kensington, JOHN KING, Esq., second son of the late Admiral Philip Parker King, R.N., and grandson to the former Governor of Australia, to ANTOINETTE STRATENUS, eldest daughter of the Rev HENRY GEHLE, D.D., K.N.L.—17th inst, at St. James-the-Less, Westminster, the Rev. A. ROBINSON, M.A., chaplain H.M.'s Indian Service, to ALICE MARY, eldest daughter of Major-General STRANSHAM, Royal Marine Light Infantry.

DEATHS.—On the 14th inst, at Torquay, the Lady MARY ST. LAWRENCE, third daughter of the Earl of Howth—15th inst, at Clifton, of enteric fever, MARY AUGUSTA HILDA, second daughter of the Hon. HENRY SPENCER LAW, aged 22—16th inst, at Torquay, Lady HOUSTOUN, relict of Sir Robert Houstoun, K.C.B., of Clerkington, N.B.—17th inst, at 1, Sussex Place, Hyde Park, Lady CROFT, wife of Sir A. D. Croft, Bart.—16th inst, Mrs. MAYNE, second daughter of the late Sir John T. Taylor, Bart.—18th inst, at 42, Portman Place, Maida Hill, CATHERINE CHARLOTTE, relict of NATHANIEL BEARD, Esq., and daughter of the late Sir Thomas Carr, of Beddingham, Sussex, aged 80—16th inst, at 6, Arlington Villas, Clifton, Major.-Gen. BEGBIE, H.M.'s Madras Artillery, aged 60—18th inst, at 3, Crescent Villas, Plymouth, ANNE CATHERINE, wife of Major-General TREVOR, aged 58—14th inst, at Elmfield House, near Exeter, at an advanced age, HARRIET, widow of General GAGE JOHN HALL, colonel of H.M.'s 70th Regiment—19th inst, at 6, Highgate Rise, Lieut.-Colonel J. S. F. DICK, late Deputy-Inspector of Volunteers, second son of Lieut.-General Dick, aged 38—16th inst, at 3, Wellesley Terrace, Dover, Lieut.-Colonel GIRARDOT, late of the Coldstream Guards, aged 70.

Markets.

COVENT GARDEN, Nov. 26.

Most kinds of hardy fruit are plentiful, but vegetables continue somewhat scarce and dear. Amongst Pears are Marie Louise, Winter Nelis, Duchesse d'Angoulême, Crassane, and others. Grapes are still sufficient for the demand, and good Dutch Hamburghs may now be obtained at from 9d. to 1s. per lb. Of Pine Apples there is but a limited supply. Kent Filberts and Cobs fetch from 70s. to 80s. per 100 lbs. Walnuts are plentiful, and Oranges begin to get more abundant. Some Seakale and forced Kidney Beans may now be had. Lemons fetch from 5s. to 10s. per 100. Tomatos are getting over. For Potatos prices are still comparatively high. Onions are being largely imported from Germany. Flowers chiefly consist of Orchids, Heaths, Chrysanthemums, Chinese Primulas, Azaleas, Camellias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 4s to 6s	Oranges, per 100, 4s to 8s
Grapes, per lb., 1s to 5s	Lemons, per 100, 5s to 8s
Melons, each, 1s to 4s	Nuts, Barcelona, do., 16s
Peaches, per doz., 6s to 18s	— New Brazil, do., 14s.
Pears, per doz., 1s 6d to 3s	Almonds, do., 18s to 20s
Apples, per sieve, 1s to 2s	

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, p. ½ sieve, 3s to 4s	Shallots, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 60s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Seakale, p. punn, 3s 6d to 4s
Carrots, per bunch, 4d to 9d	Endive, per score, 1s to 2s 6d
Turnips, p. bunch, 6d to 8d	Horse Radish, p. bunch, 1s to 4s
Cucumbers, each 4d to 1s	Mushrooms, p. pott., 1s to 1s 9d
	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

POTATOS.—SOUTHWARK, Monday, Nov. 21.

During the past week the arrivals coastwise and by rai have been moderate; the trade continues good for all best sorts. The following are this day's quotations:—Yorkshire

Flukes, per ton, 90s. to 110s.; do. Regents, 80s. to 95s.; Dunbar Regents, 90s. to 100s.; Kent and Essex Regents, 80s. to 95s.; do. do. Rocks, 70s. to 75s.; Perth, Forfar, and Fife Regents, 70s. to 80s.; Belgian Whites, 55s. to 60s.

BRITISH WOOLS.—London, Nov. 24.

We have had a brisk demand for most descriptions of wool at a considerable advance on long qualities.

	s. d.	s. d.		s. d.	s. d.
South-down Hoggets	1 11 to	2 0	Combing Skins	—	
Half-bred ditto	2 3 —	2 4	Flannel Wool	1 3½ to	1 10
Down Ewes	1 10 —	1 11	Blanket ditto	0 6 —	0 9
Kent Fleeces	2 1 —	2 2	Leicest. Hoggs	2 2 —	2 3
			Ditto Wethers	—	2 1

METROPOLITAN CATTLE MARKET.

Monday, Nov. 21.

The number of Beasts is rather smaller than on Monday last. Choice qualities are still scarce, and command high prices. The supply of Sheep is shorter, but a fair average for the time of year. The demand is very limited, and prices are scarcely as good as of late. The trade for Calves is the same as on Thursday. From Germany and Holland there are 3060 Beasts, 6180 Sheep, 205 Calves, and 80 Pigs; from Scotland, 40 Beasts; from Ireland, 580; and 2200 from the Northern and Midland Counties.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 2 to	5 4	Best Long-wools	5 0 —	5 2
Best Short-horns	4 10 —	5 2	Do. Shorn	—	
2d quality Beasts	3 4 —	3 8	Ewes & 2d quality	4 4 —	4 6
Best Downs and Half-breds	5 4 —	5 6	Do. Shorn	—	
Do. Shorn	—		Lambs	—	
			Calves	3 8 —	5 0
			Pigs	3 0 —	4 8

Beasts, 6130; Sheep and Lambs, 20,850; Calves, 220; Pigs, 280

Thursday, Nov. 24.

Although the supply of Beasts is by no means large, it is fully equal to the demand. Trade is very dull, and it is difficult to realise Monday's quotations. There is very little business doing in the Sheep market. The few good qualities on offer are disposed of at about Monday's prices. Trade is very inactive for all descriptions of Stock. The foreign supply is 340 Beasts, 570 Sheep, 195 Calves, and 30 Pigs, from Germany and Holland.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 0 to	5 2	Best Long-wools	5 0 —	5 2
Best Short-horns	4 10 —	5 0	Do. Shorn	—	
2d quality Beasts	3 0 —	3 8	Ewes & 2d quality	4 4 —	4 6
Best Downs and Half-breds	5 4 —	5 6	Do. Shorn	—	
Do. Shorn	—		Lambs	—	
			Calves	3 8 —	5 0
			Pigs	3 0 —	4 4

Beasts, 910; Sheep and Lambs, 1950; Calves, 213; Pigs, 170; Milch Cows, 70.

COAL MARKET.—Nov. 23.

Cowpen Hartley, 18s. 9d.; West Hartley, 19s. 9d.; Walls End Hetton, 23s.; Walls End Cassop, 23s.; Walls End Hartlepool, 23s.; Cym Garnant Stone, 22s. 6d.—Ships at market, 7.

HAY.—Per Load of 36 Trusses.

Smithfield, Thursday, Nov. 24.

Prime Meadow Hay	95s to 105s	Clover, old	110s to 126s
Superior do.	— —	New Clover	— —
Inferior do.	— —	Do. second cut	— —
New do.	— —	Straw	25 30
Rowen	— —		

Harvey & Easton.

Whitechapel, Thursday, Nov. 24.

Fine Meadow Hay	100s to 105s	Prime 1st cut Clover	123s to 130s
Inferior do.	95 100	Inferior do. do.	110 115
Prime New Hay	— —	Prime 2d cut do.	115 120
Inferior	— —	New Clover	— —
Straw	25 28	Inferior do.	— —

NEWGATE.—Nov. 25.

Best Fresh Butter .. .. 17s. per dozen lbs.
Second do. do. .. .. 15s. ,,
Pork, 4s. 8d. to 5s. 4d. per 8 lbs.

HOPS.—Borough Market, Friday, Nov. 25.

Messrs. Pattenden & Smith report an unusually good demand at this period of the year for Hops of all descriptions; fine samples are very scarce, and command higher rates. There is somewhat more demand for old Hops at improved prices.

MARK LANE.—Monday, Nov. 21.

There was a short supply of English Wheat to this morning's market, and a moderate quantity of Spring Corn, with fair arrivals of Irish Oats. Dry English Wheat was taken off steadily at last Monday's prices. Damp parcels not wanted. The inquiry for foreign Wheat was in retail, and prices were without any quotable variation. Fine malting Barley sold steadily at previous rates; other kinds dull and easier to buy. Malt realised barely as much money. Beans sold on rather lower terms. Peas were unaltered in value. The business transacted in Oats was to a moderate extent, at about last Monday's currency. Town Flour was unchanged. Country marks brought as much money. Americans were firm.

Price per Imperial Quarter.	s. s.		s. s.
Wheat, Essex, Kent, & Suffolk .. White	39—42	Red	36—41
— — fine selected runs .. ditto	41—44	Red	39—42
— — Talavera	46—53		
— Norfolk	—	Red	—
— Foreign	35—50		
Barley, grind. & dist., 26s to 30s .. Chev.	32—35	Malting ..	30—33
— Foreign .. grinding and distilling	21—27	Malting ..	28—31
Oats, Essex and Suffolk	20—22		
— Scotch and Lincolnshire—Potato	20—24	Feed	20—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	20—23	Feed	18—21
Rye	31—33	Foreign ..	—
Rye-meal, Foreign	—		
Beans, Mazagan....33s to 35s...Tick	34—36	Harrow ..	34—36
— Pigeon .... 35s to 40s.. Winds.	—	Longpod	—
— Foreign .....Small	34—38	Egyptian	33—34
Peas, White, Essex and Kent..Boilers	36—40	Suffolk ..	38—41
— Maple .... —s to —s .... Grey	—	Foreign ..	32—38
Maize .....White	—	Yellow ..	—
Flour, best marks delivered..per sack	35—40		
— 2d do .....ditto	28—34	Country..	28—34
— Foreign ..... per barrel	18—25	Per sack	32—36

Friday, Nov. 25.

The weather since the 19th has been very stormy, much rain has fallen, and yesterday morning some snow. The continued dulness and inactivity in the Wheat trade has been somewhat increased during the past week in several of the country markets, owing to the condition of the Wheat being affected by the weather, but we observe no alteration in the quotations. Business in spring corn has been equally inanimate, and any change that may have occurred in prices has been against the holders. Since Friday last 34 vessels have been reported off the coast. The floating trade has been quiet, and the few cargoes of Wheat off the coast are held for late rates, but there is no demand. Paris, Nov. 24.—Flour has remained unaltered in value, but only a limited business has been transacted. The six marks for delivery this month are quoted equal to 31s. 3d. per 280 lb. The present stock of Flour is estimated at 29,600 cwt. Wheat is a slow sale at 9d. per 480 lbs. decline. The arrivals of all grain, both English and foreign, during the week have been very small, with the exception of foreign Barley, which was good. The attendance at this morning's market was very limited. The value of Wheat, either English or foreign, is unaltered from Monday, but the little business doing is quite of a retail character. Prices of all descriptions of spring corn are unchanged.

Arrivals this Week.

	Wheat.	Barley.	Oats.	Flour.
English	950 qrs.	870 qrs.	1570 qrs.	340 sks.
Irish	—	—	500	— ,,
Foreign	5610 ,,	3620	3630 ,,	50 ,, / 3110 brls

Liverpool: Nov. 22.—At this morning's market we had very little more than the usual consumptive demand from millers and dealers for Wheat, but some considerable purchases having been made for American account, we quote prices fully as high as on Friday. Flour is held firmly, but moves slowly. American corn is no cheaper, but Danubian is offering ex quay at 3d. per qr. reduction. Oats and Oatmeal less active than of late. Beans meet a better sale. Peas and Barley are not much inquired for. At close of market sellers of Wheat are looking for better prices.

Friday, Nov. 25.—Market moderately attended. Wheat steady at Tuesday's rates. Flour dull. Indian Corn weak. Beans steady. Oats and Oatmeal quiet.

Averages	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Oct. 15	38s 1d	29s 11d	20s 1d	33s 9d	39s 2d	35s 4d
— 22	38 6	30 2	20 0	29 1	38 2	35 5
— 29	38 9	30 2	20 1	30 9	38 0	35 0
Nov. 5	38 11	30 3	20 2	29 9	37 9	35 5
— 12	38 9	30 1	19 11	33 0	37 11	35 9
— 19	38 9	29 9	19 5	29 9	37 9	34 11
Agg. Aver.	38 8	30 1	19 11	31 0	38 2	35 3

Fluctuations in the Last Six Weeks' Averages.

Prices.	Oct. 15.	Oct. 22.	Oct. 29.	Nov. 5.	Nov. 12.	Nov. 19.
38s 11d	..	..	..		..	..
38 9	..	..		..		
38 6	..		..	..	..	..
38 1 —		..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..

£40 REQUIRED by a respectable party for One Month, upon Security worth at any time £150; to be returned punctually with £10 interest. Reference if required.—Mr. Saunders, 1, Roberts Row, Fulham, S.W.

WANTED, in an extensive Forcing Establishment near London, an active and energetic YOUNG MAN who thoroughly understands the Forcing of Vines, Grapes, Peaches, Melons, Strawberries, Cucumbers, and Mushrooms. Wages, 16s. per week, with furnished rooms, firing, and candles.—Apply, with references, to W.X., *Gardeners' Chronicle* Office, W.C.

WANTED, an active WORKING GARDENER, with good knowledge of large Conservatories and Winter Gardens. —No Testimonials, &c., returned.—Address, prepaid, Box 85, Wakefield.

WANTED, a MARRIED MAN, to Manage a small Garden and to take charge of Cows and Pigs. Wife to manage Dairy and Poultry.—Apply, stating full particulars, to B. W., Post Office, Pocklington, York.

WANTED, a successful PROPAGATOR of general Nursery Stock.—He must be thoroughly acquainted with his business, and be able to give satisfactory reference as to his ability, honesty, and sobriety.—Apply by letter, stating wages, &c., to Thomas J. Caparn, King's Road Nursery, Newark.

WANTED, an Out-door PROPAGATOR, and to act as SALESMAN occasionally.—Must be well acquainted with the general Management of Nursery Stock, especially Fruit Trees and Roses. He must be sober, persevering, and of obliging disposition. —Apply, in own handwriting, stating age and past experience, to D. S. Thomson, Wimbledon Nursery, Surrey, S.

To Knifemen.

WANTED, a good BUDDER, GRAFTER, and LAYERER, to be under the Foreman.—Apply, stating age, references, &c., to J. C. Wheeler & Son, Nurserymen, Gloucester.

WANTED IMMEDIATELY, a good PACKER of PLANTS, who is also a good KNIFEMAN.—To an experienced and respectable man, 21s. per week will be given.—Apply in own handwriting to Messrs. J. & C. Lee, Royal Vineyard Nursery, Hammersmith, London, W.

WANTED, a GROOM and GARDENER.—He must thoroughly understand Horses, and be a good Coachman.—Apply to J. Weeks, King's Road, Chelsea, W.

WANT PLACES.—Letters to be Post Paid.

DAILY or OCCASIONAL GOVERNESS.—A Lady who has resided many years in France, seeks a re-engagement in London to instruct in English, French and Music with Singing (by the new system); the rudiments of German and Drawing. Terms moderate.—H. H., 29, Queen's Road, Camden Square, N.W.

HOUSEKEEPER, or as COMPANION to a Lady.—A Lady, aged 35, who can be highly recommended, and who has had much experience. She would be willing to educate one or two little Girls, or to accept any position of trust.—A. A., 30, Avenue Road, New Road, Hammersmith, W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. Henderson & Son, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS.—B. S. Williams is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any Gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

To the Nobility and Gentry.

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GARDENERS, FORESTERS and BAILIFFS, or LAND STEWARDS.—The undersigned can always recommend the above, whose characters and abilities may be strictly relied on. Full particulars upon application.—James Dickson & Sons, The "Newton" Nurseries, Chester.

GARDENER (Head).—Age 31, married; has a thorough practical knowledge of his profession in the Management of Conservatories, Forcing Grapes, Melons, Cucumbers: also a good Kitchen and Flower Gardener.—J. W., Post Office, Epsom, Surrey.

GARDENER (Head), age 37, married.—In consequence of the death of the late Sir Charles Knightley, Bart., with whom he has lived upwards of 12 years, John Brown now offers his services in the above capacity to any Noblemau or Gentleman requiring the services of a first-class Gardener. Satisfactory references as to character and abilities can be had.—John Brown, Fawsley Park, Daventry.

GARDENER (Head).—Age 40, no incumbrance; understands the Growing of all kinds of Fruit, Greenhouse Plants, Orchard House, Kitchen and Flower Gardens, Reading, Berks. Unexceptionable references will be given.—A.

GARDENER (Head).—Age 30, married, no incumbrance; thoroughly understands Early Forcing, Flowers, and Vegetables; Stove and Greenhouse Plants, and Flower Gardens. Ireland not objected to. Good character.—M. I., Day's, Newsvender, 2, Durham Place, Sisters' Road, Holloway, N.

To the Trade.

GARDENER (Head.)—The Advertiser, age 36, who has held good situations as Head latterly a responsible situation as Manager and Seed, Bulb, and Nursery Business, requires a similar capacity, where the proprietor is non-resident, energy and integrity is required. A good Grower to the management of men. No objection to Present character and antecedents will bear the closest Alpha, Worth's Warehouse, 77, Regent Street, W.

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GARDENER (Head), where one or more are kept. Age 45; thoroughly understands his profession. Can be highly recommended, and have a good character from the gentleman he is about leaving.—T. R., G. Stidolph, College Nursery, Bromley, Kent.

GARDENER.—Age 27, single; has a thorough knowledge of his profession in all its branches. Unexceptionable reference can be given.—Quercus, Morse's Nursery, Hackney.

GARDENER.—Age 38; thoroughly understands Flowers, Fruits, and Vegetables, Flower and Kitchen Gardens, Forcing of all kinds. Two years' good character.—Dedham, Essex.

GARDENER.—Age 23; understands the Culture of Early and Late Forcing of Vines, Pines, Peaches, Melons, Cucumbers, and Strawberries, &c., Kitchen, Fruit, and Flower Garden. No objection to Ireland.—A. E. D., 2, Hythe, Kent.

PROPAGATOR, or PROPAGATOR and SALESMAN.—Thoroughly competent and can be well recommended. Country preferred.—A. M., 24, Vale Place, Hammersmith, W.

STEWARD or BAILIFF.—Age 37; practical and experienced; understands everything connected with the proper Management of an Estate or Farm, and can be highly recommended; would not object to undertake the Management of an extensive Dairy, having had considerable experience in it.—X. Y., Messrs. Harvey & Co., 3, Tavistock Street, Covent Garden, London, W.C.

STEWARD or BAILIFF.—A practical Man, having the Management of an Estate in one of the Midland Counties, is open to a re-engagement. Thoroughly conversant with all the details of modern Agriculture on Heavy and Light Soils. Growth and Management of Woods, Drainage, Levelling, &c.—Messrs. Gibbs & Co., Half Moon Street, Piccadilly, London.

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The Gardeners' Chronicle Newspaper.

SATURDAY, DECEMBER 3, 1864.

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P.S.—See future Advertisement.

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News of the Week.

EARL RUSSELL'S reply to the Confederate Manifesto, which has been transmitted to the principal Governments of Europe by Messrs. SLIDELL, MASON, and DUDLEY MANN, has been published this week. It is remarkable as adopting a phraseology different from that hitherto employed by her Majesty's Ministers both in Parliament and in their diplomatic communications. While still describing the Southern States as "the so-called Confederate States of America," it no longer speaks of the "United States of America;" but uses the phrase, "the Northern and Southern States of the formerly united Republic of America." It declares that since the commencement of the civil war in 1861, her Majesty's Government have entertained sentiments of friendship equally for the North and for the South. It says that they have never presumed to judge the causes of the rupture; but they deplore the sanguinary struggle, and anxiously look forward to its termination. In the meantime they are convinced that they best consult the interests of peace and respect the rights of all parties by continuing to observe a strict and impartial neutrality.

The Prussian Government on Monday despatched a Plenipotentiary Extraordinary to Dresden and Hanover, to demand in the name of Austria and Prussia the evacuation of Holstein and Lauenburg by the Saxon and Hanoverian troops within a period of five days. This demand is made upon the ground that the Federal execution, which Saxony and Hanover were ordered by the Diet to carry out, must now be considered at an end, not only from the participation of the two Great Powers in the execution, but also by virtue of the right they have acquired by the treaty of peace. An extraordinary sitting of the Federal Diet was held on Tuesday, when Saxony proposed that the Diet should determine whether the Federal execution was to be considered at an end. This proposal was referred to the committee on the Holstein question. It was then proposed by Bavaria that General HAKE, commander of the Federal forces in Holstein, should be directed not to abandon his present position without further orders. This was agreed to by a majority of votes in spite of the energetic opposition of the Prussian Plenipotentiary to the protracted occupation of the Duchy by the troops engaged in the Federal execution.

The debate on the Address in the Lower House of the Austrian Reichsrath commenced on the day. The draft of the Address regrets the interruption of constitutional activity in some parts of the empire, and expresses a hope that Croatian, Hungarian, and Galician Diets will speedily be convened, and that a national representation by election will be shortly introduced into the Lombardo-Venetian kingdom. It declares that the re-establishment of constitutional conditions in the two kingdoms of Hungary and Croatia is of high importance to the whole empire, and that by the immediate convocation of the Diets of these kingdoms the Government will give proof of its desire to bring to maturity the fruits of constitutional life in Austria. It regards the re-establishment and consolidation of a lasting peace as the unalterable determination of the Government. It describes the financial position of the country as very serious, and urges a return to the strict regulation of the expenses of the state in accordance with the general revenue. It says that it is indispensable to reduce the expenditure for the army and navy, and declares that a law establishing Ministerial responsibility is urgently needed to complete the Austrian constitution.

The report of the committee of the Italian Senate warmly approves the Franco-Italian Convention, and proposes the adoption of the Bill for the transfer of the capital to Florence.

From the United States we learn that General M'CLELLAN'S resignation of his commission as Major-General in the Federal army has been accepted, and that General SHERIDAN has been appointed his successor. The Confederates are said to have made an unsuccessful attempt to pierce General GRANT'S lines, but no particulars are given. As the Dutch Gap Canal was completed, it was thought that General GRANT would shortly again attack the Confederate capital. General BRECKENRIDGE had defeated the Federals at Bull's Gap, capturing several hundred prisoners, ten stand of colours, six pieces of artillery, and their camp waggons. General SHERIDAN'S army was encamped near Winchester, watched more or less by the Confederates under General EARLY. The position of General SHERMAN is the subject of much speculation, but his actual movements are unknown. The evacuation and burning of Atlanta are confirmed. General BUTLER has left New York and returned to the James River. A speech delivered by him in New York before his departure has given rise to a rumour that the Administration will shortly offer peace propositions to the South on the basis of the abolition of slavery. The French Minister has had an interview with Mr. SEWARD, in which he is said to have expressed the strong wish of the Emperor for peace, and to have renewed the offer of French intervention.

Home News.

THE COURT.—On Friday the Queen came to London and inspected the new barracks recently built at Chelsea for the Guards. Her Majesty afterwards drove to Albemarle Street, and honoured Lady Cowper with a visit, returning to Windsor about 2 o'clock. The Prussian Ambassador and Countess Bernstorff arrived at the Castle on a visit. On Saturday morning the Queen, accompanied by Princess Beatrice, walked and drove in the grounds. Princess Helena rode in the Riding School. Princess Louise and Prince Leopold went out driving. In the evening Princess Helena came to London and attended the performance at the Olympic Theatre, returning to Windsor at a quarter before 12. Sir Charles Wood arrived at the Castle on a visit. On Sunday morning the Queen, Princess Helena, Princess Beatrice, and Prince Leopold, attended Divine service in the private chapel. The Dean of Westminster preached the sermon. On Monday morning the Queen took a carriage drive. Princess Helena rode in the Riding School. In the afternoon the Queen, accompanied by Princess Helena, went to Ham, and visited the Duke and Duchess de Chartres. On Tuesday the Queen and Princess Louisa walked in the grounds. The Maharajah Duleep Singh and the Maharanee visited her Majesty. In the evening Princess Helena and Prince Leopold came to London and attended the performance at the Princess's Theatre, returning to Windsor at midnight. On Wednesday morning the Queen, accompanied by Princess Helena and Princess Louisa, walked and drove in the grounds of the Castle. In the afternoon her Majesty held a Council, which was attended by Earl

Granville, Earl Russell, Lord Stanley of Alderley, and Sir George Grey. Earl Russell had an audience of the Queen, and presented M. Barreda, Minister of Peru. Earl Granville had an audience. Mr. Henry, chief magistrate at Bow Street, was presented to her Majesty by Sir George Grey, and received the honour of Knighthood. In the evening Mr. and Mrs. Alfred Wigan had the honour of reading a selection of English poetry before her Majesty and the Royal family. On Thursday morning the Queen, accompanied by Princess Louisa, walked and drove in the grounds. Princess Helena walked and drove in the Riding School. Prince Leopold drove out. In the afternoon Princess Louisa took a drive.

THE PRINCE AND PRINCESS OF WALES attended divine service at Sandringham Church on Sunday. On Tuesday the Prince attended a private meet of the West Norfolk Hunt, held at the preserves of Anmer. The Princess drove to the "meet," attended by the Countess of Macclesfield. Two foxes were found, and a good run obtained. On Wednesday the Prince commenced shooting on the Appleton side of the estate. The Duke of Cambridge arrived on a visit. On Thursday there was a grand battue shooting, and the Prince's birthday was celebrated at Sandringham by a dinner. At the neighbouring town of King's Lynn the bells were rung, flags were exhibited, and an illumination was arranged.

THE EX-ROYAL FAMILY OF FRANCE.—The marriage of Prince Louis Philippe of Orleans, Comte d'Eu, son of the Duke de Nemours, to the Princess Isabella, eldest daughter of the Emperor of Brazil, and heiress to the throne, took place at Rio de Janeiro on the 15th October. The Princess was born in 1846, and the Prince in 1842.

THE CABINET.—A Cabinet Council was held on Saturday. Another Council was held on Tuesday, another on Thursday, and another yesterday.

MANIFESTO OF THE CONFEDERATE STATES AND EARL RUSSELL'S REPLY.—The following note has been addressed to the principal European Governments by the diplomatic representatives of the Confederate Government abroad, transmitting an official copy of the manifesto recently issued by the Congress of the Confederate States:—

"SIR,—The undersigned Commissioners of the Confederate States of America, in pursuance of the instructions of their Government, have the honour to present to your Excellency a copy of a manifesto issued by the Congress of said States with the approval of the President, and of which the President was instructed to cause copies to be transmitted to their Commissioners abroad, to the end that the same might be by them laid before foreign Governments; they at the same time communicate a copy of the preamble and resolutions of Congress accompanying such manifesto. The dispositions, principles, and purposes by which the Confederate States have been and are still animated are set forth in this paper with all the authority due to the solemn declarations of the legislative and executive branches of their Government, and with a clearness which leaves no room for comment or explanation. In a few sentences it is pointed out that 'all they ask is immunity from interference with their internal peace and prosperity, and to be left in the undisturbed enjoyment of their inalienable rights of life, liberty, and the pursuit of happiness, which their common ancestry declared to be the equal heritage of all parties to the social compact. Let them forbear aggressions thereon, and the war is at an end. If there be questions which require adjustment by negotiations, they have ever been willing and are still willing, to enter into communication with their adversaries in a spirit of equity and manly frankness, and submit their cause to the enlightened judgment of the world, the sober reflection of their adversaries themselves, and to the solemn and righteous arbitrament of Heaven. The undersigned beg leave most respectfully to invite the attention of the Government of his Imperial Majesty to this frank and full explanation of the attitude and purposes of the Confederate States, and will merely remark, in addition, that since the issue of that manifesto the war has continued to be waged by our enemies with even increased ferocity, a more signal disregard of all the rules of civilised warfare, and more wanton violation of the obligations of international law. The undersigned, having thus complied with the instructions of their Government, beg to assure your Excellency of the distinguished consideration with which they have the honour to be, Your Excellency's most obedient servants, "JOHN SLIDELL,
"J. M. MASON,
"A. DUDLEY MANN."

To this note Earl Russell has sent the following reply:—

"Foreign Office, Nov. 25, 1864.

"GENTLEMEN,—I have had the honour to receive the copy which you have sent me of the Manifesto issued by the Congress of the so-called Confederate States of America. Her Majesty's Government deeply lament the protracted nature of the struggle between the Northern and Southern States of the formerly United Republic of North America. Great Britain has since 1783 remained, with the exception of a short period, connected by friendly relations with both the Northern and the Southern States. Since the commencement of the Civil War, which broke out in 1861, Her Majesty's Government have continued to entertain sentiments of friendship equally for the North and for the South. Of the causes of the rupture Her Majesty's Government have never presumed to judge; they deplore the commencement of this sanguinary struggle, and anxiously look forward to the period of its termination. In the meantime they are convinced that they best consult the interests of peace and respect the rights of all parties by observing a strict and impartial neutrality. Such a neutrality Her Majesty has faithfully maintained, and will continue to maintain. I request you, Gentlemen, to accept, &c.,
"To J. Slidell, Esq., J. Mason, Esq., and "RUSSELL"
"A. Dudley Mann, Esq."

RUMOURED RESIGNATION OF THE BISHOP OF EXETER.—It is currently reported that the Bishop of Exeter has intimated to her Majesty's Government his willingness to resign the see over which he has presided for so many years, on condition of the diocese being subdivided by the erection of a bishopric of Cornwall, or the appointment of a suffragan bishop, *cum jure successionis*. His lordship, who is 86 years of age, has held the see since 1831. The Government, it is said, decline to accede to the erection of a bishopric of Cornwall, but are not averse to the appointment of a suffragan bishop, provided no legal difficulties stand in the way. The subject has therefore been referred to the law officers of the Crown.

COLONIAL BISHOPRICS.—The Right Rev. Dr. George Smith, who was consecrated to the Bishopric of Victoria (Hong Kong) in 1849, has resigned his see and returned to England. It is stated that the present diocese of British Columbia is to be divided by the erection of a second bishopric, the seat of which is to be at New Westminster. A sum of 7500*l.* has been raised towards its endowment. Arrangements have been completed for the erection of a bishopric at Lahore.

CHURCH APPOINTMENT.—The Rev. William Brice Ady, M.A., has been appointed by the Bishop of Rochester to the archdeaconry of Colchester, in the room of the Venerable Dr. Burney.

COURT OF FINAL APPEAL.—An association, composed of the Earl of Shrewsbury, Lord Lyttelton, Lord Richard Cavendish, Sir Walter Farquhar, Lord A. Compton, Sir Willoughby Jones, the Hon. Colin Lindsay, Sir Henry Baker, Sir George Prevost, Archdeacon Harris, Archdeacon Downall, Archdeacon Huxtable, the Warden of All Souls', Oxford. Canon Wordsworth, Dr. Jelf, Dr. Pusey, the Rev. W. Denton, the Rev. J. Keble, the Master of Cains College, Cambridge, and other gentlemen, lay and clerical, has been formed for the purpose of promoting the amendment of the law of final appeal in matters affecting doctrine. It is proposed that for the time to come no archbishop or bishop shall have any place in the court of final appeal, whether as member of the court or assessor; but that in cases affecting doctrine it shall be held as essential that the doctrine of the Church be declared and interpreted by reference to the spirituality. The association is to be open to all members of the Church, whether lay or clerical.

KNIGHTHOOD.—At the Court held at Windsor on Wednesday, the Queen conferred the honour of Knighthood on Thomas Henry, Esq., Chief Magistrate at Bow Street.

THE ARMY.—The Colonelcy of the 58th Regiment, vacant by the death of General Wynyard, has been conferred on Major-General Charles Craufurd Hay.

PARLIAMENTARY MOVEMENTS.—The Hon. E. C. Leigh and Mr. W. Davenport Bromley are candidates for North Warwickshire, vacant by the death of Mr. Spooner, the former in the Liberal, the latter in the Conservative interest. Mr. Daniel Adolphus Lange is a candidate for Evesham on Liberal-Conservative principles. Mr. W. H. Gladstone, son of the Chancellor of the Exchequer, will be a candidate for Chester at the next election, in the Liberal interest.; Lord Alfred Churchill will retire from Woodstock Mr. Henry Barnett, of Glympton Hall, member of the well-known banking firm, will be a candidate for the vacant seat in the Conservative interest, and Mr. Henry, of Stratheden House, Hyde Park, and Mr. Bazley, son of Mr. Bazley, M.P. for Manchester, will come forward in the Liberal interest. Mr. P. Fitzgerald, of Upton House, near Kineton, Warwickshire, is mentioned as a candidate for Buckingham in the Conservative interest, in opposition to Mr. Hubbard. Mr. Evan M. Richards, of Brooklands, Glamorganshire, a partner in the firm of Dillwyn & Co., Swansea, will be a candidate for Honiton on Liberal principles. Mr. Justice Haliburton will retire from Launceston, and Mr. Alexander H. Campbell, of Werrington Manor, will offer himself as his successor in the Conservative interest. Mr. Alfred Smee, F.R.S., and Mr. Arthur Otway, a brother-in-law of Lord Clarence Paget, Secretary to the Admiralty, are candidates for Chatham, the former in the Conservative and the latter in the Liberal interest. Mr. Kelk, the contractor, will be the Conservative candidate for Harwich, from which Colonel Rowley will retire. Mr. George Hudson has offered himself for Whitby, on Conservative principles. Mr. Gard retires from Exeter on account of failing health. The Hon. Marke Rolle is mentioned as the Conservative candidate for the vacant seat. General Buckley will retire from Salisbury; Mr. Hamilton, a brother of the bishop, and Mr. Chapman are canvassing the electors, the former on Liberal, the latter on Conservative principles. Mr. Marsh, M.P., will offer himself for re-election. Mr. W. W. Burrell, a son of the late Sir Charles Burrell, Bart., is a candidate for East Sussex, in the room of Viscount Pevensey, who retires; and the Hon. F. Cavendish, a son of the Duke of Devonshire, is also in the field in the Liberal interest. Mr. K. Macaulay, Q.C., and Mr. F. S. Powell, the sitting members for Cambridge, intend offering themselves for re-election; Mr. Christie, lately Minister at Brazil, is canvassing the electors in the Liberal interest. Sir Hugh Owen, Bart., will retire from the Pembrokeshire boroughs, and Mr. R. Potter, Chairman of the Great Western Railway, will offer himself for the vacant seat. Mr. Fitzroy, M.P. for Thetford, will contest South Northamptonshire in the Liberal interest Sir Henry Rawlinson will be a candidate for Frome in the Liberal interest; Lord Edward Thynne, M.P., will seek re-election. Colonel Crossland and Mr. Akroyd are candidates for Huddersfield. Mr. Waring, a railway contractor, is a candidate for Poole in the Liberal interest. Mr. Isaacs, an extensive employer of labour in the town, is a candidate for Northampton, in opposition to Lord Henley and Mr. C. Gilpin. Mr. W. K. Slaney has been invited to become a candidate for Shrewsbury. Mr. Richard Forbes of Read Hall, and Mr. J. C. P. Starkie of Ashton Hall, will be candidates for Clitheroe, the former in the Liberal, the latter in the Conservative interest; Mr. J. T. Hopwood, the sitting member, will offer himself for re-election. Mr. Rogers will retire from Helston, and Major Grylls offers himself as his successor on Liberal-Conservative principles, and will probably be opposed in the Liberal interest by Mr. A. W. Goring, formerly M.P. for Yarmouth. Mr. F. Surtees will contest South Durham in conjunction with Mr. Farrer, in the Conservative interest, in opposition to Mr. H. Pease, the Liberal member, and Captain F. Beaumont is spoken of as a second Liberal candidate. Mr. Bremridge has announced his retirement from Barnstaple, and Sir G. Stucley, Bart., has declared himself a candidate for the vacant seat on Liberal-Conservative principles. Mr. Christopher Sykes, a son of the late Sir Tatton Sykes, is a candidate for Beverley, in the room of Mr. Walker, who retires. Mr. Joseph Hoare, of London, has announced himself a candidate for Hull; Mr. Somes, M.P., and Mr. Clay, M.P., will offer themselves for re-election. Lord H. Thynne and Colonel Bathurst are candidates for South Wiltshire, and will be opposed by Mr. Grove, of Fern, in the Liberal interest. Mr. Morgan Lloyd, of the North Wales Bar, will be a candidate for Merionethshire in the Liberal interest, in the room of Mr. Williams, who retires. Mr. J. H. Palmer, Q.C., will be a candidate for Great Grimsby in the Liberal interest; and Mr. Chapman, the Conservative member, will offer himself for re-election. Mr. A. G. Martin, the Chancery barrister, will be a candidate for Kidderminster in the Conservative interest, in opposition to the Hon. Colonel White, the present member, and one of the Lords of the Treasury.

Foreign.

FRANCE.—The following is the text of the letter of Count de Persigny, which the Emperor "regretted" that he should have written without first consulting his Majesty. It is dated Chamaraude, November 2:—

"My dear M. de Girardin,—I have not confined myself to read the two long passages you have pointed out in the remarkable book you have been good enough to send me; I have perused nearly the whole of it, and with the greatest interest. The original idea which you set forth with so much talent is worthy to be taken most seriously into consideration, and I think it must ultimately prevail. But it is not enough to be in the right—it is requisite that you should be backed by public opinion. I think that, like many eminent minds who see too far and go too far for their own times, you are ahead of public opinion. You say somewhere that witches ceased to be dangerous when people ceased to burn them. That is true; but then people no longer believe in witches, and they still believe in newspapers. You endeavour to make out that the press has no influence, and that is true so far as the discussion of opinions goes; but there are many people who dread the scandals that the press may produce, and the passions which may be aroused in consequence. Moreover, I could not understand passing without transition from the present state of things to that which you propose. Assuredly the day when the press may enjoy the same liberty as it does in England, where its freedom is useful to all and injurious to none, that day shall witness the end of our revolutions, and the crowning of the edifice; but whatever boldness I may feel in my own mind, I do not think public opinion sufficiently prepared to accept a *regime* which beforehand would inspire so many interests with anxiety. On that point I differ from you, but I confess that that question of the press pre-occupies me much, and that I should feel but little inclined at present to maintain the present *regime* without important modifications. Receive, &c., "PERSIGNY."

The pleasure of the visitors at Compiègne was marred on Tuesday week by a melancholy accident, which took place at the commencement of a boar hunt, got up for the Prince of Orange, in the forest of Laigue. As Count Gustave de Lupel was proceeding to the place of meeting, his horse gave a sudden start, which lifted his rider to a considerable height, and in again coming down on the saddle he received a most violent shock. He remained for a short time in his seat, but at length fell to the ground from the pain he was suffering. He was then placed in a carriage and conveyed to his Château of Autrèches. Dr. Corvisart, the Emperor's physician, was sent to him, but he found the injury to be beyond the reach of medical art, and the count died in the course of the night. A second *avertissement* has been given to the *Union de l'Ouest*, on the ground that it accuses the Government with having sequestrated all the liberties of France since the 2d December, "thus holding up the Government to hatred and contempt." It is stated that negociations are going on for the sale to the French Government of coal beds far more extensive than those of Saarbruck and Belgium. They are said to be situated in Germany, in a district close to the French frontier. Several French papers state that a new club, to be called the "Silent Club," is about to be established in Paris. The members may eat, drink, read, write, or smoke, but they must not speak, nor wear creaking boots, nor play at dominoes, nor "rattle the bones," nor, in short, make any noise whatever. The floors will be covered with thick carpets, and the doors will open and shut without a sound. At the last sitting of the Paris Geographical Society, M. Molte-Brun read a letter he had received from the French consul at Sierra Leone, confirming the account of the death of Jules Gérard, the lion-killer, who was drowned in attempting to cross the river Jong.

ALGERIA.—Tranquillity prevails in all the provinces, with the exception of Babor. Marshal M'Mahon was to leave on the 1st of December to be present at the annual meeting of the Marshals of France.

SPAIN.—The result of the elections is favourable to the Moderate Liberal party. The *Noticias* announces the departure of several vessels laden with coal and

provisions for the squadron in the Pacific. The *Epoca* says that Spain cannot admit of any mediation between herself and Peru in the present state of the question, and that Chili having declared coal to be contraband of war, Spain might not to regard her as a neutral Power. The same Paper of Tuesday says the Minister of Finance has investigated the resources of the country, and decided that they are equal to bear the charges on the revenue up to the end of the year. A ministerial circular has been published, ordering that the press laws are to be rigorously enforced now that the elections have terminated. The Queen has conferred the Grand Cross of the Order of Charles III. on Cardinal Wiseman and several ex-Ministers, as well as on M. Corradi, formerly director of the *Clamor Publico*. The brother of the King Consort, the Infante Don Enrique, has been banished to the Canary Islands, for addressing a letter to the King and Queen making offensive observations on public and family matters. The Queen has pardoned the inmates of the Military School of Segovia who had been condemned, for mutiny, to serve as soldiers of the penal class. General Van Halen, whose name was once familiar to Englishmen, and who took part in the battle of Trafalgar, the wars of the Belgian revolution, and the civil war against Don Carlos, has just died at Cadiz, almost forgotten, at the age of 75.

SWITZERLAND.—It seems that in spite of the farewell letters of Dr. Demme and Mdlle. Trumpy, there are grave doubts of their having committed suicide. and it is now suspected that the letters were written to disguise the circumstance that they have absconded. Among the rumours in circulation to explain the cause of their sudden disappearance, it is said that Dr. Demme is accused of having robbed an attaché of the Brazilian Embassy at Berlin, whom he attended three years back, of a diamond ring, which he gave to Mdlle. Flora Trumpy as a wedding present, and that other rings and articles of value have been abstracted from an English family staying at the Bernerhof, who had also been under Dr. Demme's medical treatment; as well as from a lady of distinction at Berlin, during the passage of her trunks through Berne. The late M. Trumpy was in business as a general carrier, and in this way it is sought to connect Dr. Demme with the supposed robbery. It is said that M. Leuzinger Schnell, the guardian of Mdlle. Flora Trumpy, has lodged a charge of abduction against Dr. Demme, and the Paris *Presse* mentions a report that he and Mdlle. Trumpy have been recognised at Havre when embarking for America. It is even said that the Swiss Consul demanded their extradition, which was not granted by the authorities on the ground that the law was not applicable in their case. The mystery of the case has since been increased by a telegram received at Berne on Nov. 28, from the Swiss Consul in Milan, stating that Dr. Demme and "his wife" had been seen in that city a week ago, and by another telegram from Berne dated on Thursday last, stating that an official report has been received by the Federal Council to the effect that Dr. Demme and Mademoiselle Trumpy have poisoned themselves at Nervi, near Genoa.

DENMARK.—The King of Denmark, accompanied by the Crown Prince and the Minister of the Interior, set out on Monday for Jutland, where they will remain until the 9th December.

THE DUCHIES.—On Monday evening Prince Frederick Charles of Prussia summoned the officers of his Staff, and instructed them to hold themselves in readiness to carry out, at a moment's notice, the orders for the departure of the Prussian troops from the Duchies. Prince Arenberg and Count Wallis, of the Austrian Staff, were present.

PRUSSIA.—A Plenipotentiary Extraordinary left Berlin on Monday for Dresden and Hanover, to demand the evacuation of Holstein by the Saxon and Hanoverian troops, and the immediate recall from Holstein of the Federal Commissioners, on the ground that the Federal execution is at an end, not only from the participation of Austria and Prussia in the execution, but also by virtue of their rights acquired by the Treaty of Peace. The Berlin official paper says that Hanover has signified her compliance with this demand, but Saxony has not replied to the summons, and the Prussian Government, regarding this as a refusal, intends, in conjunction with Austria, to make a complaint against that Power at the next sitting of the Federal Diet. The mediation of Austria, however, having been accepted, there is no longer any danger of a collision between the Prussian forces and the Federal troops in the Duchies.

HANOVER.—The official *Gazette* of Wednesday says that the Hanoverian and Saxon Governments at present carrying out the Federal execution in Holstein and Lauenburg are now bound to withdraw from that execution, recall their troops, and notify the fact to the Federal Diet. It also says that the Hanoverian Government, now that the Treaty of Peace has been communicated to the Diet, will fulfil this duty as quickly as possible, reserving the succession question for special discussion.

FRANKFORT.—An extraordinary sitting of the Federal Diet took place on Tuesday. The Treaty of Peace with Denmark was communicated by the representatives of Austria and Prussia. Saxony made a proposition that the Diet should determine whether the Federal Execution in Holstein is to be considered at an end. This proposal was referred to the Committees on the Holstein question. The report of General Hake, Commander of the Federal forces in Holstein, asking for fresh instructions, was then read. Bavaria proposed that the General should be directed not to abandon his present position without further orders. This was agreed to by a majority of votes, and the report was likewise referred to the Committees. The views entertained by Prussia on every point in regard to the protracted occupation of Holstein by the troops engaged in the Federal execution were stoutly maintained by the representative of that country.

AUSTRIA.—The draught of the Address of the Lower House of the Reichsrath, in reply to the Speech from the Throne, was published on Saturday. The following is a summary of its contents:—

"It regrets the interruption of constitutional activity in some portions of the Empire. It expresses a wish that the Croatian and Hungarian Diets may be convened after the close of the Session, and hopes that the Lombardo-Venetian and Galician Diets will likewise soon be assembled. It regards the re-establishment and consolidation of a lasting peace as the unalterable determination of the Government. It confidently believes that the Government, co-operating with the German Confederation, will assist the Duchies in fully obtaining their rights in the succession question, and in effecting an independent settlement of their own affairs. It will gladly hail all efforts on the part of the Government to oppose separatist tendencies adverse to the interests of the German Confederation, and any endeavours tending to strengthen by Federal reform the bond between the German States. It hopes that the exceptional circumstances necessitating the proclamation of a state of siege in Galicia will shortly disappear. It asks for a reduction in the military and naval expenditure, and declares that a law establishing Ministerial responsibility is urgently needed to complete the Austrian constitution. In conclusion, it expresses hopes that the inconveniences caused by the failure of the commercial negotiations with Prussia will be lessened by the proposed modifications in the Customs' tariff."

The discussion of the Address in full sitting commenced on Tuesday. Count Kinsky reviewed unfavourably the state of the finances, and censured the foreign policy hitherto pursued by the Government. Dr. Berger said that the principles expressed in the Address showed the wish of the House to be that an alteration should be made in the policy of the Government. He represented Austria's position as isolated, and declared that her only real ally was Germany. Austria must energetically oppose every separatist endeavour of Prussia. The debate on the paragraphs of the Address then commenced, the first three of which were passed. In the sitting of Thursday Herr von Schmerling, in a speech on the Hungarian question, said that it was only to be solved by calm preparation. It was the duty of the Government to exercise some influence on the coming elections in Hungary, more especially as the Opposition were displaying great activity. The moderation now prevailing in public opinion in that country would render possible the convocation of the Hungarian Diet at an early period. The Government desired to reconcile Hungary, and to meet any acceptable proposition which might be made by the Hungarian Diet. It would only be possible to effect a modification of the Hungarian Constitution in a constitutional manner. The paragraphs of the draught Address, referring to the convocation of the Hungarian Diet, were then agreed to, an amendment fixing a period for that convocation having been rejected. The Minister of Commerce has introduced a Bill for the construction of a Transylvanian Railroad.

VENETIA.—An official notification has been issued abolishing martial law, in consequence of the dispersion of the armed bands in the district of Friuli. A court-martial will assemble at Udine for the trial of those inculpated in the movement.

BAVARIA.—Herr von der Pfordten, the Bavarian Minister at the Federal Diet, has been recalled, and was expected to arrive at Munich on Thursday.

ITALY.—In the Chamber of Deputies on Friday the Minister of the Interior brought forward a Bill for authority to promulgate throughout the kingdom the civil, maritime, and commercial code, and other laws. The Minister of Justice has brought in a Bill for the suppression of all religious corporations and ecclesiastical benefices throughout the Kingdom of Italy. In the Senate on Monday Signor Sella brought forward a Financial Bill, for which he requested urgency. The debate on the Bill commenced on Thursday, and on Friday the Bill passed by 108 to 27 votes. The report of the Committee of the Senate warmly approves the Franco-Italian Convention, and proposes the adoption of the Bill for the transfer of the capital to Florence. In the discussion of the Convention on Wednesday, Signori Sclopis and Ricotti opposed the measure, while Prince Moliterno and Signor Durando spoke in favour of it. General Della Marmora, in answer to Signor Ricotti, said that the Venetian question was merely one of vanity so far as Austria was concerned. Germany could not believe that Venice was necessary to her existence. He protested against the supposition of Signor Ricotti that France coveted any portion of Italian territory. In the sitting of Thursday, Signor Durando spoke in favour of the Convention, and Signori Tacco and Pareto opposed it. General Della Marmora made a speech in refutation of the arguments and assertions of Signor Pareto. The *Official Gazette* publishes a fresh list of municipalities which have anticipated the payment of the land-tax for 1865. Senor Pacheco, the new Spanish Ambassador, has had an audience of the Pope to present his credentials. Cavaliere Righetti, the fortunate owner of the gigantic statue of Hercules lately discovered in that city, has presented it to the Pope, who has graciously accepted it. The magnificence of this gift may be imagined when it is known that only a few days before a Roman nobleman offered more than 40,000*l.* for the statue, and even a higher offer was made for it on behalf of the French Government. A very important question has lately been decided at Naples. It will be remembered that the late Prince of Capua, a younger brother of Ferdinand II., married Miss Penelope Smith, an Irish lady. The marriage was not acknowledged by the Royal family, and the Prince and Princess left the country. On the death of the late Dowager, mother of Ferdinand II., efforts were made to mitigate the position of the Prince and Princess, as the Princess was never acknowledged as such by the Bourbons. It has, however, now been decided by the Supreme Court of Justice in Naples that she is entitled to her full rank, while her children are legitimated and placed by the Italian law courts on the same footing with the other descendants of the Royal family. The Prince of Capua died about a year since too early to witness the justice done to his wife and children.

RUSSIA.—Vice-Admiral Romanoff, one of the veterans of the Russian navy, died a few days since. His service dates from the year 1813, and last year he celebrated the 50th anniversary of his entering the navy. During the Crimean war he commanded the steam flotilla in the Gulf of Finland, but finding that its sphere of action there was very limited, he went to Sebastopol, where he signalised himself by his valour during the siege. The celebrated Russian astronomer Frederic Struve, whose name is associated with all the great works of triangulation and geodesy carried out in Russia and Eastern Europe, died on the 23d ult. at St. Petersburg. Colonel Stremouchoff, of the Imperial Guard, was recently condemned to 12 years' hard labour in the mines and the loss of his decorations and titles of nobility for having mortally wounded Major Klokalcheff in a duel. Major the Baron Wolff and Lieutenant Spetchinski, who acted as seconds, were also condemned to 10 years' hard labour in the mines. The Emperor has now commuted the sentence of the colonel to military degradation, with service in the army as a private soldier. Baron Wolff and Lieutenant Spetchinski will be imprisoned in a fortress for three months.

POLAND.—The Imperial decree which has been issued closing certain convents in Poland, orders that all Catholic monasteries and convents having less than eight members, and also those whose participation in the late insurrection was notorious, or has since been proved, are to be immediately closed. The inmates may enter other religious establishments, or will be allowed to go abroad at the public expense. In religious establishments which are not suppressed by this decree are forbidden to maintain relations with either the Provincials or Generals of their orders. The confiscated property of the monasteries and convents will be exclusively devoted to ecclesiastical, educational and charitable purposes. In pursuance of this decree 71 monasteries and four convents have been closed on account of not possessing the requisite number of inmates, and 39 other religious houses on account of participation in the Polish insurrection. The *Breslau Gazette* of Monday says that General Berg has received instructions to forward shortly to his Government a report on the general situation of the Kingdom of Poland, and to state whether there is any possibility of provisionally raising the state of siege in certain districts. He is also instructed to cause an address to be signed requesting the complete incorporation of the Kingdom of Poland with the Russian empire.

ABYSSINIA.—Accounts from Massowa state that every attempt to communicate privately with Captain Cameron and the other British captives at Gondar has proved unsuccessful. It appears that our unfortunate countrymen are confined in a tent next to that of King Theodore, and all intercourse with them is strictly forbidden under the severest penalties. Each European is chained to a dependant of the Royal household, the latter being relieved at short intervals. The chain is never more than four feet long, so that the prisoner can scarcely move without the knowledge of the guard.

INDIA.—When the last mail left Calcutta no tidings of the Persia had been received, and it is feared that she has been lost with all hands on board. She had 30 cabin passengers and about 120 natives on deck.

JAPAN.—Advices from Japan state that trade is flourishing at Yeddo. The Daimios have agreed to reside there. Prince Nagato is said to decline payment of the indemnity. A strong feeling prevails against him, and his palace has been levelled to the ground. There was a good prospect that the Japanese authorities would withdraw the restrictions on the trade with Yokohama.

AUSTRALIA.—The *Melbourne Argus* says that the first instalment of convicts, whose time has expired, have been reshipped to England.

NEW ZEALAND.—Advices from New Zealand announce that Mr. Fox's Ministry have tendered their resignation, but the Governor has declined to accept it. Two hundred Maori prisoners have escaped, and are now fomenting rebellion. A native rising is threatened in Tauranga.

UNITED STATES.—The New York Press accepts Mr. Lincoln's election as a declaration of four years' more war. In the approaching Congress the Senate will consist of 38 Republicans and 14 Democrats, and the House of Representatives of 134 Republicans as-

...Democratic members. General M'Clellan's resigna... has been accepted, and Sheridan has been appointed to the vacant major-generalship. General Butler has left New York for the James River. The *Tribune* asserts that he has been offered by the President, but has declined, the appointment of Secretary of War, in succession to Mr. Stanton. In a speech which he made at the Fifth Avenue Hotel, he stated that he thought the time had arrived when the North, in the magnanimity of her strength, could offer an amnesty to the South. If this was not accepted by the 3d of January next, it would be the duty of the people of the North to drive the traitors into Mexico, the West Indies, or elsewhere, and divide the estates among the soldiers. In consequence of this speech, the opinion prevails that the offer of amnesty, and a formal proposition to the Southern States to return to the Union on the basis of the abolition of slavery, will immediately be made by Mr. Lincoln. The Confederates have again attempted to force Grant's line, but were repulsed. The Dutch Gap Canal is complete, and Richmond papers anticipate that Grant will attack Richmond immediately. General Early is reported to have retired to Strasburg. General Sheridan continues encamped in the neighbourhood of Winchester. The Confederate cavalry, during a reconnaissance of his position, were driven back and pursued beyond Front Royal, with a loss of two guns and 150 prisoners. Nothing official has yet been received from General Sherman. The Western press assert that, after destroying the public buildings, manufactories, the defensive works, and the railroads north and south of Atlanta, he moved southward from the city with 30,000 men, carrying 30 days' rations. The most contradictory statements are circulated respecting his subsequent movements. One account persists in declaring that he is marching upon Augusta and Savannah, another that his object is the liberation of the Federal prisoners at Andersonville, a third that he is moving into Alabama to destroy Hood's communications at Montgomery and Selma, while a fourth is equally positive that, instead of advancing, he has returned to Chattanooga, and, with his whole army, excepting the portion left with General Thomas to hold the Tennessee, is rapidly moving upon Lynchburg, Virginia. Confederate accounts to the 11th urge upon the people the necessity of being prepared for startling news from Georgia. Hood is said to be marching on Chattanooga with 30,000 men, where Forrest is expected to join him. A large force, under Magruder, has endeavoured to cross the Mississippi, near Gaines Landing, to reinforce Hood. A Confederate force on the Mississippi side is co-operating. It is believed that the Federal gunboats will prevent the crossing. Several attempts to cross *loose cattle* over the Mississippi for Hood have been frustrated. Three thousand cattle, strongly guarded, have crossed the Black River. A body of Federal troops, however, subsequently attacked the guards, captured a third of the cattle, and dispersed the remainder. The Federals have evacuated Rome, after having destroyed the public edifices and manufactories. On the 13th and 14th the Confederate General Breckinridge recaptured Bull's Gap, Tennessee, defeating General Gillem, recapturing 400 prisoners, 10 stand of colours, six cannon, and all the Federal trains. The Federal General Canby, while reconnoitring White River, Arkansas, on board the steamer Cricket, on the 6th, was severely wounded by a guerilla, but the wound is not likely to be fatal. Lieutenant-Governor Jacob, of Kentucky, has been arrested and sent to the Washington political prison. On the arrival of the Florida the American Consul at Bahia proceeded to Washington, where he had an interview with Mr. Seward. The crew and captain of the Florida have all been committed to the Old Capitol Prison at Washington, while the vessel has been sent to New York for adjudication. It is not known what course Mr. Seward will pursue in giving satisfaction to the Brazilian Government. The French Minister and Mr. Seward have had an interview on the question of peace. The Minister expressed the strong wish of the Emperor for peace, and said that he could but congratulate the Secretary of State on the new course which the Cabinet of Washington seemed inclined to follow. To this Mr. Seward replied that the idea of a peace had always been the fundamental idea of the Government; that the only difficulty in the way was as to the proper manner to reach it; that the United States could not accept a humiliating peace, but that whenever a proposition to that effect, maintaining the dignity, interests, and honour of the nation, would be offered, he would not hesitate in supporting it with all his influence. To this the French Minister replied that he was exceedingly pleased to find his Excellency thus disposed; but that in his estimation it was impossible to ascertain whether or not such a peace was attainable unless the Government should take the proper steps to approach the South and open negotiations on the subject. He further added, that although the Government of the Emperor had not been fortunate in its efforts to open relations between the North and the South, it had never receded a step from its opinion in the matter, and that it was still of the opinion that this war could not end without trying at least the ways of diplomacy before plunging again into the uncertainty and perils of an endless war. To this Mr. Seward frankly admitted that his Government had been mistaken in the character and consequences of the war with the South; that he never imagined that the rebellion was endowed with so much resolution and vitality; and that he was ready to acknowledge himself in error on that subject. After a protracted conversation, the French Minister left Mr. Seward with a renewal of the offer to place the services of his Government at the disposal of Mr. Lincoln. He said, what he had already said in many instances, that the Emperor was ready to do all in his power to facilitate negotiations with the South, and that he would spare neither time, trouble, nor money, if necessary, to attain so desirable an end. To this Mr. Seward replied that he would see Mr. Lincoln, talk the matter over with him, and begged the Minister of France to call again in a week for an answer. In the discussion on President Davis's Message in the Confederate Congress, the question of the arming of the slaves was opposed by a large number of members. Mr. Foote, of Mississippi, was the principal speaker in favour of the measure, and Mr. Miles, of South Carolina, and a Virginian member were the principal speakers in opposition to it. The report of the Confederate Secretary of State states that he does not see the necessity, nor approve the policy of arming the slaves. The *Richmond Whig* opposes President Davis's proposition to emancipate the slaves after service. The Governor of Georgia, in a message to the Legislature of that State, declares that this war may continue indefinitely unless the people, both North and South, in their capacity as sovereign States, shall bring their influence to bear upon both Governments, requiring them to stop the war, and permit the people of each State to vote to which confederacy they will unite their destiny. In the meantime the Southern *animus* must be sustained. The Governor disapproves arming the slaves, but would employ them in all useful capacities. The Tallahassee had arrived at Wilmington, although fired at heavily by the blockading squadron.

CANADA.—The prosecution in the case of the St. Alban's raiders was closed at Montreal on the 12th. Lieut. Bennett Young handed in his commission from the Confederate Secretary of War, and asked for a delay of 30 days to enable him to communicate with the Government at Richmond before offering his defence. The Judges granted the request. The authorities of Toronto have received an intimation of an intended raid into Canada by the members of the Fenian Brotherhood in the Federal States. — The *Quebec Mercury* publishes the following draft of the new constitution proposed for the Canadian Federation :—

"1. That the Federal union, with the Crown of Great Britain at the head, is the arrangement best fitted to protect the existing interests, and to promote in the future the prosperity of British North America, provided always that such union may be effected upon principles of equity towards the different provinces. 2. That the system of federation for the provinces of British North America, the best adapted in present circumstances for the protection of the varied interests of the several provinces, and the most fit to produce efficiency, harmony, and permanence in the working of the union, will be a general government and parliament, which will have the control of affairs common to all the country, with local legislatures and governments for each of the Canadas, Nova Scotia, New Brunswick, and the Island of Prince Edward. These local governments and legislatures to have control respectively of local affairs. The admission into the union on equitable terms of the province of Newfoundland, the north-west territory, Vancouver's Island, and British Columbia, is to be provided for. 3. The Federal government and parliament are to be formed, in so far as circumstances may permit, on the model of the British constitution; the convention wishing thus to express its desire of perpetuating the ties which unite us to the mother country, and to serve more efficiently the interests of the populations of the different provinces. 4. The executive power will reside in the Sovereign of Great Britain, and will be administered by the Sovereign, or his representative, according to the principles of the British constitution. 5. The Sovereign, or his representative, will be the commander-in-chief of the forces by land and sea. 6. There shall be for all the confederated provinces one general parliament, composed of a legislative council and a House of Commons. 7. In order to form the legislative council the provinces shall be divided into three parts. The first shall comprise Upper Canada; the second Lower Canada, and the third, Nova Scotia, New Brunswick, and Prince Edward's Island. These three parts shall be represented by equal numbers in the legislative council. In this manner Upper Canada will have 24 councillors; Lower Canada 24; and the three maritime provinces, 24, of whom 10 will be for Nova Scotia, 10 for New Brunswick, and 4 for Prince Edward's Island. 8. Newfoundland on entering the union will have the right to four legislative councillors. 9. The conditions of admission into the union of the north-west territory, British Columbia, and Vancouver's Island shall be determined upon by the Federal parliament, and approved by her Majesty: and with regard to the admission and conditions of admission of British Columbia or Vancouver's Island, the consent of the local legislatures will be necessary. 10. Legislative councillors are to be named for life by the Crown, under the great seal of the general government. Legislative councillors shall lose their seats by the fact of a continued absence during two years consecutively. 11. Legislative councillors must be born or naturalised British subjects, of 30 years of age, and possessed of, and continuing to be possessed of, real property to the value of 4000 dollars, free from all encumbrances. But with respect to Newfoundland the property may be real or personal. 12. The legislative council shall have the decision of all questions relative to the eligibility or want of eligibility of its members. 13. The first legislative councillors shall be taken from the existing legislative councils of the different provinces, except Prince Edward's Island. If a sufficient number of councillors shall not be found willing to serve the complement must necessarily be found elsewhere. These councillors are to be named by the Crown, on the recommendation of the general government, on the presentation of the respective local governments. In the nomination regard is to be had to legislative councillors representing the opposition in each province, in order that all political parties shall be, as much as possible, proportionably and equitably represented in the Federal Legislative Council. 14. The president of the legislative council, until it shall have been otherwise decided by the general parliament, shall be chosen from among the legislative councillors by the Crown, who may remove him at pleasure. He is to have only a casting vote. 15. Each of the 24 legislative councillors who are to represent Lower Canada in the legislative council of the federal legislature shall be named to represent one of the electoral divisions named in schedule A, chapter 1, of the Consolidated Statutes of Canada, and such councillor must reside or possess his qualification in the division whose representation is to be assigned to him. 16. The representation in the Federal House of Commons shall have for its basis the population determined by the official census taken every 10 years, and the number of representatives shall be at first as follows:—Upper Canada shall have 82; Lower Canada, 65; Nova Scotia, 19; New Brunswick, 15; Newfoundland, 8; Prince Edward's Island, 5. 17. There shall be no change in the representation of the different provinces before the census of 1871. 18. Immediately after the census of 1871, and every subsequent decennial census, the representation of each of the provinces in the House of Commons shall be repartitioned on the basis of population. 19. Lower Canada shall never have more nor less than 65 representatives, and the other provinces shall have, after the census, the proportion of representation to which each shall have the right, taking for basis of calculation the total of the representation of Lower Canada. 20. There shall be no reduction in the number of representatives elected for any one province, unless the total of its population shall have decreased to the extent of 5 per cent. or more, in comparison with the total of the population of the Confederate provinces. 21. In computing the number of representatives at each decennial period no regard shall be had for fractions, except when they exceed half the number which would give them right to a representative, and then these fractions shall have a right to a representative. 22. The legislatures of the different provinces shall divide their provinces respectively into counties, and shall define the limits thereof. 23. The federal parliament may increase the number of its members when it shall think proper, but must preserve the proportions then existing. 24. The local legislatures may from time to time change the electoral districts for the purpose of representation in the Federal House of Commons, and may redistribute, in such manner as may be thought advisable, the representatives to whom they may respectively be entitled in the Federal House of Commons. 25. Until it shall be otherwise decided by the federal parliament, all the laws on the following subjects, which shall have been in force in the several provinces at the date of the proclamation of the union, shall continue to be in force—viz., the laws relative to the qualification or non-qualification of persons to sit and vote in the legislative assembly of each province, as well as those which regard the capacity or incapacity of voters and oaths imposed upon voters, those relating to returning officers, their powers and duties, to elections, to the time which elections are to last, to contested elections and proceedings incident thereto, to the vacating of seats, to the issuing and execution of new writs in case the vacancies arising from causes other than the dissolution of parliament—all of which shall be applicable to the elections of members of the Federal House of Commons according to the province for which they may be elected. 26. The duration of parliament shall be for five years, unless it shall be previously dissolved by the governor general. 27. There shall never be a greater lapse of time than one year between the end of one federal session and the beginning of another.

"*Federal Legislature.*—28. The general parliament shall have power to make laws for the peace, welfare, and good government of the confederate provinces, but always without prejudice to the sovereignty of Great Britain. 29. The following subjects shall be placed especially under its control:—The public debt and property. Trade and commerce. Duties on imports and exports, except on the export of squared timber, logs, masts, spars, planks, sawed lumber, coal, and other minerals. Excise duties. The raising of money by any other mode or system of taxation. Loans of money on public credit. The postal service. Steamboat or other shipping companies, railroads, canals, and other works connecting two or more provinces, or which are prolonged beyond the limits of one of them. Steamers navigating between the confederated provinces and other countries, telegraphic communications, and the incorporation of telegraphic companies. All other works which, though situated in the province, shall be declared in their acts of incorporation to be for the general benefit. The census. The military defences and the military and naval services. Marks, buoys, and lighthouses, navigation and shipping. Quarantine. Sea and inland fisheries. Navigable waters between one province and a foreign country, or between two provinces. Coin and the coinage of money. Banks of exchange and promissory notes. Interest. Legal tenders. Bankruptcy and insolvency. Patents of invention and discovery. Copyrights. Indians and Indian reserves. Naturalisation and aliens. Marriage and divorce. The criminal laws (except the constitution of the courts of criminal jurisdiction), comprising the procedure in criminal cases. The power of making uniform all the laws relative to property and civil rights in Upper Canada, Nova Scotia, New Brunswick, Prince Edward's Island, and Newfoundland, as well as the procedure in all the courts of these provinces. But no statute which the federal parliament shall pass for this purpose shall have force or authority in any of these provinces until it shall have received the sanction of the local legislature. The establishment of a general court of appeal for all the confederate provinces. Emigration. Agriculture. And in general, all matters of a general character not especially and exclusively reserved for the control of the local governments and legislatures.

"*Central Government.*—30. The general government and parliament shall have all the necessary powers as a portion of the British empire, to fulfil towards foreign countries the obligations arising from treaties existing or which may exist between Great Britain and these countries. 31. The federal government may, when it shall think fit, create new judicial tribunals, and the federal government may consequently appoint new judges and officers, if that shall become necessary or advantageous for the public. 32. All the courts, judges, and officers of the different provinces are to aid the general government and to obey it in the exercise of its rights and powers, and for these purposes there shall be general courts, judges, and officers of government. 33. The general government shall appoint and pay the judges of the superior courts in the different provinces, and the county courts in Upper Canada. The federal parliament shall fix their salaries. 34. Until the lands of Upper Canada, New Brunswick, Nova Scotia, Newfoundland, and Prince Edward Island, shall have been consolidated, the judges of these provinces, who are to be named by the general government, shall be taken from their respective bars. 35. The judges of the Courts of Admiralty, who now receive salaries, shall be paid by the general government. 36. The judges of the superior courts shall hold their offices during good behaviour, but they may be dismissed only on an address of the two houses of the federal parliament.

"*Local Governors.*—37. Each province shall have an executive officer called a lieutenant governor, who shall be named by the Governor-General in Council, under the great seal of the confederate provinces, and during good pleasure; but this good pleasure must not be exercised before the lapse of five years unless for cause, which cause must be communicated in writing to the lieutenant governor immediately after his dismissal, and also by a message to the two houses of the federal parliament in the first week of the next following session. 38. The lieutenant governors shall be paid by the general government. 39. The convention, in thus regulating the salaries of the lieutenant governors, does not intend to

prejudice the claim of Prince Edward Island on the Imperial Parliament for the salary now paid to its lieutenant governor.

"*Local legislatures.*—42. The governments and parliaments of the federal provinces shall be constituted in the manner in which their existing legislatures shall respectively judge most fitting. 43. The local legislatures shall have power from time to time to amend or change their constitution. 44. The local legislatures shall have power to make laws on the following subjects, viz.:—Direct taxation and the imposition of export duties on squared timber, logs, masts, spars, deals, sawed lumber, coals, and other minerals. Loans of money on the credit of their province. The creation and tenure of local offices, and the appointment and payment of local officers. Agriculture. Immigration. Education (excepting the rights and privileges which the Catholic and Protestant minorities may possess with respect to separate schools in the two Canadas at the moment of the union). The sale and regulation of public lands other than those belonging to the general government. Sea and inland fisheries. The establishment, maintenance, and regulation of penitentiaries and reformatories. The establishment, maintenance, and management of hospitals, asylums and all kinds of charitable institutions. Shop, tavern, auctioneers', and other licences. Local works. The incorporation of private and local companies. Property and civil rights, with the exception of those placed under the general government. Punishment by fines, penalties, and imprisonment for breaches of laws within their legislative jurisdiction, as well as the procedure in civil cases. And generally all matters of a private or local nature.

"*Miscellaneous Powers.*—43. The power of pardoning criminals, of reprieving, commuting, or remitting their sentences in whole or part, which power, belonging of right to the Crown, shall reside in the person of the lieutenant governors in council; but these last must obey the instructions which may from time to time be addressed to them in this respect by the general government as well as the laws passed by the general parliament. 44. With respect to all questions in which the federal and local legislatures have a current control, the laws of the general parliament are to be supreme over those of the local legislatures. The laws of the latter will be null and void when they may conflict with those of the general parliament. 45. The English and French language may be employed simultaneously in the deliberations of the federal parliament, as well as in the legislature of Lower Canada, the federal courts, and the courts of Lower Canada. 46. No taxes are to be imposed on public properties belonging to the federal or local governments. 47. Every bill having for its object the appropriation of any portion of the public revenue, the creation of new taxes or imposts, must originate in the federal House of Commons or the local legislative assembly, as the case may be. 48. Every vote, resolution, address, or bill of the Federal House of Commons or any local legislative assembly, having for object the appropriation of any part whatever of the revenue, or the creation of taxes or imposts, must be preceded by a message from the Governor General or the lieutenant governor, as the case may be, and the message must be laid before the house during the same session in which such vote, resolution, address, or bill shall be passed. 49. Any bill of the general legislature will be subject to rejection by her Majesty during the two years following the passing of the bill; and those of the local governments during the 12 months following their adoption.

"*Seat of Government.*—50. Ottawa is to be the seat of the federal government; but the Royal prerogative is saved in respect to the fixing of the seat of the general government. 52. Toronto is chosen for the seat of the Upper Canadian, and Quebec for that of the government of Lower Canada. There is to be no change as to the local seats of government of the other provinces.

"*Monies and Properties.*—53. All monies in the Treasury, balances in the hands of bankers, and all other securities in the treasuries of the different provinces at the time of union, shall belong to the general government. 54. The public works and properties following, belonging to the different provinces, shall belong to the general government, viz.:—The canals. Public harbours. Lighthouses, piers, and wharfs. Steam boats, dredges, and other public vessels. Improvements in rivers and lakes. Railways and railway shares. Mortgages and other debts due to the province by the railway companies. Custom-houses, post-offices, and other public buildings, except those reserved by the general government for the use of the local legislatures and governments. Ordnance property transferred to the colonies by the Imperial government. Arsenals, drill rooms, and military clothing, accoutrements, and ammunition. Lands reserved for public purposes. 55. All the lands, mines, minerals, and Royal prerogatives belonging to her Majesty in the provinces of Upper Canada, Lower Canada, New Brunswick Nova Scotia, and P, Edward's Island, for the use of those provinces, will belong respectively to the local governments of the territories where they are situated, subject, nevertheless, to the trusts and interests of third parties therein. 56. All sums of money due by th epurchasers or lessees of these lands, mines, and minerals at the period of the union will also belong to the local government. 57. The different provinces will remain respectively in possession of all other public properties which may be found within them, but the confederation will have the right to take such lands and public properties as it may require for the fortification or defence of the country.

"*Debt and Finance.*—58. The general government will assume all the debts and obligations of the different provinces. 59. The debt of Canada, so far as it is not specially attributed to Upper or Lower Canada respectively, is not at the time of the union to exceed 62,500,000 dollars; that of Nova Scotia, 8,000,000 dollars; and that of New Brunswick, 7,000,000 dollars. 60. But if Nova Scotia and New Brunswick do not contract obligations exceeding those to which these provinces are now liable, and if these obligations shall be respectively less than seven and eight millions at the time of the union, they shall be entitled annually to 5 per cent. on the difference which may exist between the total capital of their obligations and the sums of eight and seven millions respectively. There is a like provision for Newfoundland and Prince Edward's Island. The foregoing is not intended to restrain the powers which the governments of these provinces possess through their legislatures, but simply to limit the debts which they will be allowed to bring into the account against the general government. But the respective legislatures, after the expiration of five years from the date of the union, will have no powers to contract the obligations just spoken of. 61. As Newfoundland and the island of Prince Edward have not contracted debts equal to those of the other provinces, they will have the right to receive an advance from the general government in semi-annual payments of an amount equal to the interest of 5 per cent. on the difference between the amount of their respective debts at the date of the union, and the average of the debt per head of the population of Canada, Nova Scotia, and New Brunswick at the same date. 62. In consideration of the transference of the power of legislation to the general legislature, the provinces are to have the right respectively to a grant of 80 cents per head of the population, computed on the population of 1861. The population of Newfoundland is estimated for this purpose at 130,000 souls. The provinces will not be able to claim more from the general government for local objects, and this aid is to be paid them semi-annually and in advance. 63. As the condition of New Brunswick is such that that province must expend immediately a considerable amount from her local revenue, that province is to receive annually during ten years an additional sum of 62,000 dollars. But so long as her obligations shall remain below 7,000,000 dollars there shall be deducted from this sum of 62,000 dollars an amount equal to the interest at 5 per cent, on the difference between the capital sum of the provincial debt and 7,000,000 dollars. 64. Newfoundland, for abandoning her rights on her mines, minerals, and Crown lands, which are not yet sold nor occupied, shall receive annually 150,000 dollars in semi-annual payments. But that province reserves the right to open, construct, and control her roads and bridges situated on these lands, which, however, shall be subject to the laws, in that respect, which the general government shall think ought to be enacted. 65. The general government is to assume all the engagements which may have been undertaken before the union with the Imperial government for the defence of the provinces.

"*Inter-Colonial Railway.*—66. The general government is to cause to be completed without delay the Inter-colonial Railway between River du Loup and Truro, in Nova Scotia, making it pass through New Brunswick.

"*Western Territory.*—67. The convention, attaching the highest importance for the confederate provinces to the communication with the north-west territories, and to the amelioration necessary for the development of the commerce between the great west and the sea, engages itself to give effect to these as soon as the state of the provinces will permit.

"*Procedure.*—68. The sanction of the Imperial parliament and of the local parliaments is to be sought for the union of the provinces on the principles adopted by the convention. 69. The deliberations of the convention shall be signed by the delegates, and submitted by each local delegation to its government; and the president of the convention is authorised to submit a copy to the governor general, in order that he may transmit it to the Secretary of State for the Colonies."

BRITISH COLUMBIA.—Intelligence from Vancouver Island states that Dr. Rae had reached Victoria, overland from Canada, on the mission of a trans-continental telegraph. He had surveyed the entire route, and considered that the connecting of Canada with Vancouver Island by telegraph direct will be completed in about two years. Already 1200 miles of wire had arrived east of the Rocky Mountains, and 600 more were on their way to Vancouver Island, making in all 1800 miles, the distance from Red River to Victoria. Dr. Rae had entertained some doubt of an overland waggon road till he reached the Fraser River Road, when he at once wrote home to say that not the slightest difficulty existed in the way of a waggon road to Tête Jaune Cache and across the mountains to Red River.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 89¼ to ⅛ ex div. for Money, and 89¼ to ⅜ for Account; Three per Cents. Reduced, 88⅜ to ½; New Three per Cents., 88⅜; India Five per Cent. Stock, 103¼ to ½; Ditto Four per Cent. Debentures, 1866, 97¾; Ditto Bonds, 6s. pm.; Five and a Half per Cent. Enfaced Rupee Paper, 108½; Exchequer Bills, June, 6s. dis.—FOREIGN: Brazilian, 1863, 83½; Dutch Two and a Half per Cents., 97; Egyptian, 95¼; Ditto, second issue, 100l. Bonds, 95½; Greek, 22⅞ to 23⅛; Italian, 64¾; Mexican, 29⅜ to ⅛; New Granada, 12⅛; Ditto Deferred, 6¾; Portuguese, 1856, &c., 47⅞; Ditto for Acct., 47⅛; Russian, 1862, 86⅞; Spanish Passive, 32¾ to 33; Ditto Certificates, 15⅛ to ¼; Turkish, 1854, 88; Ditto, 1862, 71¾; Ditto 100l. Bonds, 71¼; Venezuela, 1864, 41¼ to 40¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,855,260	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	13,205,260
		Silver Bullion	
	£27,855,260		£27,855,260

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£10,474,542
Rest	3,288,211	Other Securities	18,629,163
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,301,202	Notes	8,032,160
Other Deposits	13,272,161	Gold and Silver Coin ..	784,664
Seven days and other bills	507,955		
	£37,920,529		£37,920,529

Dec. 1, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Nov.* 25.—BANKRUPTS.—C. ARNOLD, Hart Street, Bloomsbury Square, Boarding House Keeper—A. ANDREWS, Northampton, Shoe Manufacturer—J. BRETT, Fakenham, Norfolk, Baker—H. BRIGHT, Yarmouth, Isle of Wight, late Postmaster—W. BARNETT, Edgbaston, Warwickshire—J. BUCKET, late of Castle Street, Leicester Square—T. BROWN, Ironvilla, Derbyshire, Grocer—J. BURRAGE, St. Clement's, Norwich Tailor—W. G. BALLS, late of Wells Street, Jewing Street, City, Tailor—T. G. BEARD, Basingstoke, Hampshire, Bookseller—S. COOP, Woolfold, Lancashire, Wheelwright—J. CALLCOTT, Birmingham, Draper—J. CAMPBELL, Suffolk Street, Commercial Road East, Comedian—W. G. CHAPMAN, Howley Street, Lambeth, Clerk to a Publisher—J. G. CROWE, East Retford, Nottinghamshire, Publican—J. CRUMP, Leominster, Innkeeper—W. F. COXHEAD, Ingatestone, Essex, Harness Maker—H. CLARK, Swansea, Licensed Victualler—J. CRAVEN, Liverpool, late Coal Merchant J. DANIEL, Worcester, Out of Business—E. DIXON, Leeds, Grocer—W. DOUGLASS, Coventry, Ironmonger's Assistant—J. B. ELLIOTT, Pinxton, Derbyshire, Cordwainer—E. E ELLIOT, Victoria Road, South Kensington, late Accountant General of the Bombay Presidency—G. EVANS Gloucester, Builder—J. FURNESS, Bury, Hat Manufacturer—W. H. GRANT, Ryde, Waiter—W. GODDARD, late of Stoke Newington, Licensed Victualler—J. GOODWIN, Warrington, Lancashire, Bread Baker—G. GRANT, Great Tower Street, City, Leather Manufacturer—E. GRAYSTONE, Albert Terrace, Islington, Carpenter—W. H. GODDARD, Rye, Sussex, Plumber—J. GAIN, Southampton, Builder—J. GILBERTSON, Liverpool, Master Carter—S. GLAVCOPIDI, Gresham Street, Merchant—JOHANN GEISSLER, Manchester, Merchant—WILLIAM GEORGE, Dover, Inspector of Plate Layers—W. HAYES, Barnsley, Yorkshire, Potato Dealer—G. HUMPHREY, Norwich, late Baker—B. HOBSON, Sheffield Engineer—J. HALLIDAY, Birkenhead, Provision Dealer—G. W. HAWLEY, Oakham, Rutland, Coal Merchant—J. HARPER, Dudley Port, Staffordshire, Journeyman Joiner—W. JOYCE, late of Margate, Kent, Comedian—R. JONES, Bryncroes, Carnarvonshire, Farmer—Rev. W. W. KING, Percy Street, Tottenham Court Road, Rector—R. KEDGE, Hackett's Terrace, Peckham New Town, Cowkeeper—A. KAHL, Champion Grove, Grove Lane, Camberwell, Ship Broker—J. LANAGAN, late Gillias Street, Kentish Town, late Farmer—J. G. LEECH, Portland Terrace, Upper Norwood, Journeyman Carpenter—P [illegible] of Howley Street, York Road, Lambeth, Clerk—W [illegible] Cardington Street, Hampstead Road, Pianoforte Small Wo[illegible] E. C. LINDSAY, Bromley Cottages, Bromley, Clerk—W. M'D[illegible] Yorkshire, Draper—J. MARTIN, Lanteglos-by-Fowey, Cornwall [illegible] C MAYOR, Oxford Street, Fruiterer—E. MARTIN, late of Out [illegible] North, Bow, Lucifer Match Maker—G. I. NOBLE, Chri[illegible] Finsbury, Oil and Pickle Merchant—J. NICHOLSON, Bir[illegible] Dealer—E. C. NAYLOR, late of Basinghall Street, City, W[illegible] PERRY, Birmingham Publican—W. PICKERING, Birmingham [illegible] J. PERRY, late of Harlesden Villas, Harlesden Green Clerk—T [illegible] late of Sparkbrook, Warwickshire, late Licensed Victualler—W [illegible] Birkdale, Lancashire, Contractor—J. SIMPSON, Liverpool, H[illegible] Commission Agent—G. SEE, Ainsworth, Lancashire, Carter—W [illegible] Wormwood Street, City, Butcher—J. STORER, Langley Mill, [illegible] Carriage Spring Maker—T. SMITH, Junction Mews, Padd[illegible] Dealer—A. SMITH, Dockhead, Bermondsey, Tailor—T. [illegible] Hedley, Northumberlandshire—J. SHELDON, Birmingham, Bra[illegible] Maker—J. M. SMITH and G. M'KENZIE CRAIG, Liverpool, [illegible] R. TAYLOR, late Lindsey Place, Chelsea late Traveller—J. [illegible] Landore, Glamorganshire, Sheep Dealer—J. THOMPSON, High H[illegible] Yorkshire, Joiner—W. F. TUBBS, Woolston, Southampton, [illegible] TONELLI, late of Kingston upon-Hull, Refreshment room K[illegible] WEBSTER, St. Helen's, Lancash, Joiner—H. W. WARD, jun. late [illegible] Lane, City, Appraiser—T. B. WALFORD, Rushmere, Suffolk, F[illegible] M. WARREN, Stonefield Street, Islington, Lodging house K[illegible] WAKEFORD, Hereford, Mercer—J. WEBB, Blomwich, Staffordsh[illegible] bit Manufacturer—E. WOOD, Wavertree, Lancashire, Journeyman [illegible] —C. N. WRIGHT, jun., Nottingham, Printer—C. WALTER, Le[illegible] Warwickshire, Butcher—J. R. WILLIAMS, Llanfechell, Anglesea [illegible]

SCOTCH SEQUESTRATIONS.—J. MCNAB, Glasgow Accountant—ROBERTSON & Co., Rutherglen, Lanarkshire, Cloth Manufacturers—WAGNER, Dundee, Blacksmith.

TUESDAY: *Nov.* 29.—BANKRUPTS.—R. ALLCOCK, Active [illegible] Gray's Inn Road, General Dealer—E. ASSON, jun. Barnsley, Yorkshire, Coach Builder—T. AVRAMACHIS, Regent Street, Tobacco Importer—Manufacturer—R. ANDREWS, late of Carlton Road, Kentish Town, General Dealer—H. BROWN, late of Harrow Road, Middlesex, Horse Dealer—S. BAINES, Brighouse, Yorkshire, late Worsted Manufacturer—G. BOOTH, late of Pall Mall, Gentleman—H. BELLAMY, Sheffield, Auctioneer—J. G. BRETT New North Street, Red Lion Square, Clerk—W. BOULDING, Stratford, Essex, Spinster—F. CANT, Aldersgate Street, Boot Manufacturer—J. COOK, Hereford, Fruiterer—G. CHARLESWORTH, Haslingden, Lancashire, Card Dealer—J. CAPPER, Northwich, Cheshire, Boot and Shoe Manufacturer—R. DRAPER, Cheltenham, Bootmaker—T. DUCKETT, Dudley, Shropshire, Beerseller—G EWENS, Aberdeen Terrace, Green Bank, Victoria Park—T. EMBERSON, Surbiton, Surrey, Draper—J. EVERARD, Great Yarmouth, Norfolk, Bricklayer—J. FINCKH, late of Coleman Street, City—J. GOODALL, late of Surbiton Hill, Surrey, Beer Retailer—D. GURNEY, Cheapside Photographer—K. GRANT, Brighton, Sussex, Spinster—E. (sued as WALTER EPHRAIM GOATLEY), late of Bromley, Kent, Accountant—T. GABRIEL, Pentredwfr, Denbighshire, Blacksmith—R. HADLEY, Sheffield, Iron Founder—J. HINDLEY, Ashton-under-Lyne, Lancashire, Boilermaker—W. H. HERRICK, late of Jermyn Street, St James's, and of Officer in the Army—K. S. H. HARTOG, late of Manchester Buildings, Westminster, Commission Agent—W. HARVEY, Huncote, Leicestershire, Maltster—G. HAMES, late of Friendly Cottages, Old Ford Road, Silk Manufacturer—WILLIAM HARRIS, Vigo Street, Regent Street, Gas Maker—J. HARRIS Churston Ferrers, Devonshire, Baker—R. HORNE, West Teignmouth, Devonshire, Master Mariner—JAMES IRELAND, late of Milford Lane, Strand, Licensed Victualler—JENKIN JONES, Chapel-le-Frith, Derbyshire, Blacksmith—CHARLES DAVIS JOHNSON, late of Church Strert, Minories, Plumber—H. LYONS, Ebenezer Square, Houndsditch, General Dealer—J. LEONARD, Houghton-le Spring, Durham, Draper—R. LEE, late of Albert Place, Bow Common—G. L. LOCKE, late of Cardington Street, Hampstead Road, Pianoforte Small Works Maker—J. LEWIS, Merthyr Tydfil, Glamorganshire, Tailor—D. LONGHURST, Eastbourne, Sussex, Fish Dealer—A. LAYTON, Guildford Street, Russell Square, late Banker's Clerk—W. LUPTON, Armley, near Leeds, Out Merchant—J. MAVROGORDATO, Gresham Street, City, Glove Manufacturer—E. MORTIMER, late of Cambridge Terrace, Hyde Park, Commission Agent—W. MOULDS, Selby, Yorkshire, Innkeeper—A. I. MARKS, Sunderland, Furniture Dealer—J. MONKS, late of Warrington, Lancashire—W. [illegible] Moses, Southampton, Baker—H. MERRIMAN, East Dean, Gloucestershire, Collier—W. NICHOLL, Halifax, Yorkshire, Woolstapler—T. R. NOCK, Leatherhead Surrey, Chemist—J. OLDHAM, Manchester, Beer house Keeper—T. H. PRICE, High Street, Stepney, Cork Manufacturer—W. PALIN Oxton, Cheshire, Corn Merchant—E. C. PLOWDEN, Craven Street, Strand, Wine Merchant—T. POULTER, Teddington, Middlesex—J. PILLING, J. EAVES, & T. EAVES, Rawtenstall, Lancashire, Cotton Manufacturers—THOMAS PHILLIPS, Ffynongoch, Cardiganshire, Grocer—ALFRED T. RUSHTON, Worcester, Boot Manufacturer—M. ROBSON, Bury, Lancashire, Wheelwright—R. DE RYMER, Oldham, Lancashire, Painter—L. O. RUNTZ REES, Great St. Helen's, City, Merchant—J. H REYNOLDS, Redruth, Cornwall, Printer—E. REDFERN, Stockport, Cheshire, Innkeeper—M. STEINAU, late of Oxenden Street, Haymarket—I. SPIER, Birmingham, late Metal Dealer—H. S. SEARLE, Alma Villa, Wellington Road North, Hounslow, Tailor—E. J. STANNARD, St. Benet's Place, [illegible] Wine Merchant—G. STANSFIELD, Hulme, Lancashire, Butcher—W. H. SALTHILL, Southampton, Milliner—R. P. SAPH, Salisbury, Hatter—J. STEPHENS and J. KEARNEY, Lombard Street, Tailors—H. TURNER, Rose Cottage, Old Ford—R. TEPPER, Chapel Street, Grosvenor Square, Tobacconist—M. A. THORN, Goswell Road, Trimming Manufacturer—J. WILSON, late of High Street, Notting Hill, Auctioneer—F. W. WINSER, Gravesend, Chemist—S. WATTS, Cardiff, Eating and Beer House Keeper—J. WARDILL, Lower Shadwell, Engineer and Ironfounder—W. S. WALLIS, Camberwell Road—W. H. WISE, Solihull, Warwickshire, Farmer—I. WAINWRIGHT, Fareham, Hampshire, Corn Merchant—H. J. WENDT, Rotherham, Yorkshire, Blacksmith—W. WIGGINS, late of Popham Street, Islington, Tripe Dealer—J. WILLIAMS, Ipswich Suffolk, Builder and Contractor—G. WALLEN, late of Offord Road, Barnsbury, Commission Agent—F. DE YRIGOYTI, Muscovy Court, Tower Hill, City, Wine Merchant.

SCOTCH SEQUESTRATIONS—R. ALLAN, Carter in Millport, Buteshire—ANDERSON & WATT, Glasgow, Galvanisers—W. FALCONER, Glasgow, Grocer—W. M'MILLAN, Allanmore, Farmer—H. SIM, Keith, Banffshire, Vintner—W. WILSON, Crofthead, Cattle Dealer.

Metropolis and its Vicinity.

THE NATIONAL GALLERY.—The Vestry of St. Martin-in-the-Fields have received a communication from the Office of Woods and Forests stating that the Government will require the whole of the workhouse and the site for the purposes of the National Gallery, and inviting the Vestry to send in their estimate of its value.

CLOSE OF THE VOLUNTEER SEASON.—The Volunteer season was practically brought to a close on Saturday by Colonel M'Murdo's inspection of the Inns of Court Rifles in Richmond Park; by the presentation of prizes to the London Rifle Brigade by the Lady Mayoress at the Crystal Palace; by the presentation of the prizes of the London Scottish by Lady Elcho in Westminster Hall; and by the presentation of the prizes of the South Middlesex by Lord Ranelagh at Beaufort House. Lord Elcho, in his address to the London Scottish, said that the corps had something on which to congratulate themselves in being abie to secure such music as the pipes, considering the premium offered for pipers by the chiefs of India. It was music highly appreciated in that country, and he could only conclude that the people of this country who failed to appreciate its charms must be in a melancholy state of mind. Colonel M'Murdo, in his address to the Inns of Court corps, said that they were looked up to as the model regiment of the service. Of many of their movements he could only say that they were perfect—they could not be better performed. With reference to one movement—that of receiving cavalry in line—he said that in these days of improved ordnance, it would certainly take the place of the old arrangement of forming square, at least when there was time for the men to use their rifles against the advancing horse. It was for this reason that he further advocated the employment of breech-loaders. He also praised the effective manner in which the fire had been kept up when advancing in line, a movement which, he regretted, was not practised by the regular army, as it

...the natural impulse of men following up a wavering ...ency. At the dinner of the corps, which took place ...e Middle Temple Hall, on Tuesday evening, Colonel ...Murdo again addressed them. After adverting to ...e rapidity with which the Volunteer force created ..., he proceeded as follows:—

"When the Queen reviewed the Volunteers in Hyde Park in ..., he looked forward to it with anxiety, for he felt that if ... was a failure in that review the Volunteer Force would ... to nothing. The Prince Consort also regarded that review ... the same light, and said, 'Are you sure that it will succeed; ... is not an ordinary review, it is a demonstration?'—and ... demonstration it was taken by every nation in Europe. ... that time the Volunteers had the advantage of being ...ularly inspected by officers sent by the Commander-in-... The entire strength of the Volunteer army now was ... men, which showed an increase of 5000 men since the ... December last. It was natural that he should be proud ... he looked on the success of this movement. The ...nteers were efficient in their drill, but if they were called ... to take part in a war he confessed that he should feel ...ous about them, for he must admit that they were not ...pared for such an emergency so far as their *matériel* was ...erned. He called upon the Inns of Court Volunteers to ... themselves the pattern corps in this respect—they ... accustom themselves to carry a knapsack. A Volunteer ... called upon for active service would not be in the field ... than a fortnight, or, at the most, a month, and for such ... a knapsack would answer every purpose, which would ...—he would not say a linen shirt, for that would be too ... luxury—but a change of socks, a flannel shirt, a pair of ..., and perhaps a piece of soap. He should be glad also ... the men carry greatcoats. It was a sad thing when a ...nteer, after standing under arms in rain for several hours ... getting stiff with cold from sitting in a railway carriage, ... his health, and thus his family fell into poverty, and the ...try lost his service. The use of the greatcoat would ...nteract this."

GARIBALDI'S ACCEPTANCE OF HIS YACHT.—The ...lowing letter has been received by the committee: ..."Caprera, Nov. 18.—Ladies and Gentlemen,—The ...cht which you have presented me is indeed a precious ..., and immensely more precious is the generous ...nevolence with which you have honoured me. I shall ...l my life be justly proud of having—not merited, ...because it was merited by others rather than myself—...t, by good fortune, gained your sympathy. Bene...factors to me, a humble individual, this is a gift on ...behalf of the sacred cause of my country—the cause of ...very oppressed people. With every grateful feeling ...of my heart, I am yours, Giuseppe Garibaldi.—To the ...enerous Subscribers for the Yacht."

GOVERNMENT POWDER BARGES AND MAGAZINES.—Colonel Boxer, R.A., Superintendent of Royal laboratories, has been appointed by the Secretaries of State for War and the Home Departments to inspect all magazines on shore, and establish a uniform regulation for them. The following regulations to be observed by masters in charge of barges, &c., in the Thames, Medway, Orwell, and canals adjoining, were issued last week:—

"*1. No fires* are to be lighted on board any barge or craft ...ying gunpowder or other combustible stores to any place ...the River Thames within one mile below Gravesend, or in ...ther of the canals leading to Aldershott or Weedon; nor ...tween the Nore and Chatham in the River Medway; nor ...within two miles of the Spit or outer buoy leading to Harwich Harbour. 2. When the barge or other craft is one mile below Gravesend, and not nearer than half a mile of any inhabited place or magazine, fires may be lighted on board for cooking purposes only. 3. No barge having powder on board is to remain alongside the jetty or wharf of any magazine during the night, nor at any time (day or night) except when actually employed in the operation of embarking or disembarking ...der or ammunition, but is to haul off and anchor at a ...tance of not less than 900 yards from such jetty or wharf if ...wder is on board, and if empty of not less than 400 yards. 4. No barge having powder on board is to be left without a ...sponsible watchman in charge. 5. With regard to the ...ing and riding lights required to be carried according to the Admiralty regulations, the usual tinder box, &c., will be used for the purpose of striking a light, and under no pretence are lucifer matches to be on board. Smoking on board is most strictly prohibited. 6. As soon as the barges, &c., have been loaded, the hatches are to be carefully covered with tarpaulins and battened down, and are not to be removed or disturbed until the cargo is ready to be discharged. 7. A powder flag must be kept flying during the time the combustible stores are on board."

A code of instructions has also been issued for the guidance of the foremen and others employed on board the floating magazines. These instructions provide that no person is to enter the magazine portion of the ship without changing his shoes for the proper slippers provided for the purpose, and the labourers employed in working the magazines or removing powder from vessels are not to carry knives or other objectionable articles, and are to wear the dresses to be in future provided for their use. The foremen are to see that the magazines are carefully swept with a hair broom after every day's work, and take care that a proper supply of hides, wadmiltilts, and mats is in readiness and use during the removal of powder. The foremen are to be particular in hoisting the "red flag" during the day, and to take care that one of the labourers allowed for the protection of the ship is constantly on deck keeping a look-out, which duty, under the foreman's directions, is to be performed by the labourers alternately. A night watch, consisting of one foreman and two labourers, is to be efficiently kept, one of the latter being always on deck. The foreman will visit the watch every four hours, and the result is to be entered in a book and reported in the morning to the military store officer in charge. The pumps are to be sounded at least once a day, and care is to be taken that the fire-engines and appurtenances are kept clean and in perfect working order. No person having the slightest appearance of being intoxicated is to be permitted to enter the ship, nor are any spirituous liquors to be allowed on board. No fires or lights of any kind are to be allowed on board the ship at any time, except those at the masthead during the night. The men on watch are to hail all boats approaching the ship.

THE NEW RIDE IN ST. JAMES'S PARK.—This new ride, some time since planned by Mr. Cowper, the First Commissioner of Works, is rapidly approaching completion, and will be ready for use by the commencement of the London season. It extends the whole length of Birdcage Walk, from Storey's Gate to Buckingham Gate. The railings of the enclosure have been placed several feet back, and sufficient space taken from the enclosed ground without at all interfering with the width of the carriage road in Birdcage Walk. In order that the new ride may be entirely free from interruptions, the unsightly lodge opposite Queen's Square Gate has been removed. The new marble fountain will stand by the side of the ride.

METROPOLITAN IMPROVEMENTS.—Within the last few days notices have been given of intended applications to Parliament in the ensuing Session to introduce Bills for the improvement of the metropolis. The most important of these notices relate to the construction of new thoroughfares where they have long been wanted—viz., Hamilton Place to Park Lane, from Piccadilly; Cadogan Place, Chelsea, to the South Kensington Museum; and the opening to the public of all the bridges on which toll is now leviable—viz., Waterloo Bridge, Vauxhall Bridge, Chelsea Suspension Bridge, Battersea Bridge, Lambeth Bridge, and Deptford Creek Bridge. The power to purchase and throw open the bridges is to be vested in the Corporation of London, the Metropolitan Board of Works, and the Commissioners of Woods and Forests, and the Bill, if granted, will enable and require the parishes adjoining the bridges to contribute towards the expense of such purchase, and for that purpose empower the levying of a rate. The Piccadilly and Park Lane New Road Bill is to empower the Metropolitan Board of Works to form and open a new public carriage road commencing near the north end of Hamilton Place and terminating in Park Lane, nearly opposite Pitt's Head Mews, about 130 yards south of Stanhope Gate. The South Kensington New Road Bill will give power to the company applying for it to make a street or road commencing at Pont Street, in the parish of St. Luke, Chelsea, crossing Cadogan Place and Sloane Street, and terminating in the Cromwell Road or Brompton Road, Old Brompton, near the east end of the South Kensington Museum.

METROPOLITAN BOARD OF WORKS.—At a meeting of the Board on Friday, it was reported that the Bank of England had agreed to advance them money for certain required purposes in two loans, to be repaid, one in ten years, the other in 30 years, at the rate of 4½ per cent. A rather angry discussion ensued respecting the statements made before the House of Commons' committee on sewage, and since then in the public press, to the effect that the Board had used Mr. Ridley unfairly in first accepting his tender, and then refusing to complete the contract with him. It was finally agreed by a considerable majority to refer these statements to a committee, with a view to an investigation of the whole matter.

MUSEUM AND SCHOOL OF ART FOR NORTH-EAST LONDON.—A vigorous movement has commenced in the North-east of London for the purpose of establishing a museum and educational classes connected therewith. The great distance of South Kensington from the hives of industry in the opposite quarters of the metropolis, and the consequent inconvenience and loss of time incurred by workmen in the desire to profit by its advantages, have given rise to a very wide-spread feeling on their part, for an art museum in their own locality. The first public meeting on the subject was held yesterday at Hoxton; and it is proposed to hold meetings throughout the whole district to agitate the question.

MÜLLER'S LETTER TO HIS PARENTS.—It is well known that after the condemnation of Franz Müller he wrote a letter to his parents, and it has often been affirmed that in this document he made no allusion to his guilt or innocence; but a perusal of the annexed translation of the letter will show that this assertion, like so many others made for, by, and concerning him, is very wide of the truth:—

"Newgate, London, Nov. 1.

"Dearest Parents, Brothers and Sisters, Friends and Acquaintances,—With trembling hand and sorrowful heart I take up the pen to give you further particulars of my misfortune, which, in consequence of my disobedience towards you, dearest parents, has followed me, and has infinitely shortened the days of my life. I now plainly comprehend the sentence which stands written in the Bible—that whosoever does not honour his father and mother will be followed by an early death; but I only see it now when it is too late. I hope, nevertheless, that you who were so dear to me will not discard me if all the world repulse me; for hope ushers us into life, floats around the happy boy, animates youth with its magic light, and will not be buried with the gray-headed man, for if he closes his weary career at the grave, yet at the grave he plants hope; and on this account I also hope that you will forgive me with all your hearts. I will now briefly tell you how it happened that I am overtaken by an unexpected death, which, nevertheless, I do not deserve, but God oftentimes punishes man by judgments which he does not deserve, and that is now the case with me, in order to punish me for my evil deeds towards you, my dearest parents; for had I listened to you and not proceeded to England this misfortune would not have befallen me, but it is now too late, and therefore I will say no more on that subject, but will describe how it came about. I was at work with a person called Louis Wild, and became acquainted with his sister, Grace Matthews, and things proceeded so far that I meditated marrying her. As I was also acquainted with her brother, John Matthews, it happened that he bought a hat for me. Through the purchase of this hat he brought me to my unexpected death, as I had given up acquaintanceship with his sister. On July 9, 1864, a man was murdered in a railway carriage. From him a watch, chain, and hat were taken at the same time, and another hat was left in the carriage, which hat was similar to the one which John Matthews had bought for me. A reward of 2000 thalers was now offered for those who could give information respecting the murder. I had long previously resolved to go to America, as you yourselves know: and therefore, on Monday, July the 11th, 1864, I went towards the office to pay my passage to America, and on the way a watch and chain were offered me and I bought them, and, as it afterwards appeared, they were the watch and chain belonging to the gentleman who was murdered in the railway carriage on July 9, 1864. I left London for America on July 14, 1864, and reached New York on August 24, 1864, and was there arrested because John Matthews had accused me of the murder, and consequently I was brought back to London. I could not now bring forward the man from whom I had bought the watch and chain, and John Matthews swore that the hat which was left in the railway carriage was the hat he had bought for me on October 24, 1863. I was now required to say where I was on July 9, and also what I did; yet the people said they could not remember, which might easily be the case after so long a time, and on this account I was found guilty of the murder and sentenced to death; but God the Almighty knows that I am innocent, and therefore I shall die in peace. I have now said all upon the subject which I can say, and I will therefore end my letter, for I have nothing more to say. We must now part from one another for this world, therefore farewell for ever; nevertheless, my fervent blessing follows you. I shall see you no more in this world, and only in that world where there will be no more separation. Loving you sincerely here, I await with longing heart the moment when we shall see one another again in that world. In this hope I will conclude, but I pray, dearest parents, and brothers and sisters, that you will not be sorrowful, for I am tranquil and in peace, for what can give greater consolation than to be in affliction without guilt, and as it is also said in the Holy Scripture, 'Fear not they who can kill the body, fear rather much more they who can destroy body and soul,' and, therefore, I shall atone for the sins towards you of which I have been guilty, and then the Lord will also graciously receive me. Time has been left me till the 14th of November, and therefore I write you some lines and send them as soon as possible in order that I may have peace, which I can only receive when you forgive me from your hearts, and that you will not refuse to me. In the hope that you will not let my request be uncomplied with, I remain your loving son and brother, FRANZ MULLER, who was sold as a slave in London by John Matthews for 2000 thalers."

In consequence of the publication of this letter, Mr. Sheriff Dakin has felt it to be his duty to publish the letter written in answer to that communication by the father of the convict. It should be explained that the letter of the convict, which was written on the 1st of November, a fortnight before his execution, was placed in the hands of Sheriff Dakin on that day to be forwarded to its destination. The Sheriff forwarded it without delay, and the reply, having been received at Newgate on the 12th of November, the day but one before the execution, was immediately handed to the condemned man. After the execution it passed into the hands of the sheriffs as the proper custodians of such a document, and the following literal translation of it is now published with their sanction and at their request:—

"Unhappy Son,—We received your letter on the 6th of November, but, alas! how deeply have you fallen. You ask us to forgive you; we do forgive you, and if you are guilty, may God forgive you also. If you are innocent, may God lighten your last hours. I must conclude, for my thoughts fail me. God be with you. Amen.—YOUR UNHAPPY FATHER.

"Langen Dembach, Nov. 9."

The extreme brevity of the letter in comparison with the length of that to which it was a reply, and its general tone, produced an impression on the minds of the Sheriffs and the authorities at Newgate at the time that the convict had failed to convince his father of his innocence.

MANSLAUGHTER BY BURNING.—On Tuesday the coroner for the City held an inquest on the body of a young woman called Deacon, who had died in Bartholomew Hospital from burning, in consequence, as she alleged, of an attempt by her master, a tailor, named Withers, about three weeks since, to commit upon her a criminal assault. She stated that, in the course of the struggle which ensued she was thrust against the chimney-piece, and fell into the fireplace in such a manner that she was in fact sitting on the grate. So great was her excitement that she was not conscious of having caught fire until her whole dress was in a blaze. She has remained in the hospital ever since, and at one time it was expected that she would recover, but on Sunday she became worse and died soon afterwards. The jury returned a verdict of Manslaughter against Withers, who was committed to Newgate for trial.

GREAT FIRE AT DOCKHEAD, BERMONDSEY.—On Friday evening a great fire broke out on the premises of Messrs. Barry Brothers, wharfingers and saltpetre merchants, Mill Street, Dockhead, lately in the occupation of Messrs. Meriton and Hagen, and known as the Sufferance Wharves, Bermondsey. The premises contained many thousand tons of saltpetre, and as a strong wind was blowing from S.E. to S.W., the powder piles and blocks of saltpetre caught fire at intervals, illuminating the air round about with all the colours of the rainbow, and scattering smoke, ashes, and sparks on the factories and buildings in the immediate neighbourhood. Several engines arrived within a short time, but such was the combustible nature of the contents of the building that all their efforts were ineffectual in subduing the vast mass of fire, and operations were almost solely directed towards preventing it extending to the adjacent wharves and premises. The fire was not effectually checked until Saturday afternoon, but it is not yet thoroughly extinguished, and may continue smouldering for three or four days to come. On Saturday evening a wall fell, in consequence of the pressure caused by the effect of steam and water upon the jute stored within, but the firemen luckily escaped.

The damage is estimated at nearly a quarter of a million.

MURDER AT CLERKENWELL.—A shocking case of murder took place on Wednesday the 23d ult., on the premises of Messrs. French, manufacturing jewellers in Newcastle Place, Clerkenwell. Two young men, called Roberts and Jackson, were working on the premises till a late hour, when some of the neighbours heard cries of "murder" and groans proceeding from the place. On going to ascertain the cause they saw Jackson make his escape from the premises over a wall, and found Roberts covered with blood, with his head and face severely beaten. He was taken to the hospital, where he soon after died, and Jackson was taken into custody. At the inquest on Saturday it was stated that the blows were inflicted with a broom-handle, but beyond the fact that the prisoner was 8*l.* or 10*l.* in debt to deceased there appears to have been no motive for the attack. The jury returned a verdict of Wilful Murder against the prisoner, and on Thursday, at Clerkenwell Police Court, the magistrate fully committed him for trial, on the capital charge, at the next session of the Central Criminal Court.

THE PLAISTOW MURDER.—On Saturday the prisoner Kohl was again brought before the Ilford magistrates, when additional evidence was given, and he was fully committed for trial at the next session of the Central Criminal Court.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday, the 26th November, were 1677. The average number in the corresponding week of the 10 years, 1854-63, corrected for increase of population, was 1518. The present return is therefore 159 above the average. The most fatal disease in the list was, as in the previous week, bronchitis. During the week the births of 1004 boys and 940 girls, in all 1944 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1920.

Provincial.

BIRKENHEAD.—During the past week Mr. Childers, M.P., the Civil Lord of the Admiralty, has been the guest of Mr. Laird, M.P., at Birkenhead. Mr. Childers has charge of the docks, basins, and the account-keeping at the dockyards. He is therefore looking round and seeing how things are managed by such trusts as the Mersey Docks and Harbour Board. He has taken the opportunity to inspect the Birkenhead Dock Works, the yard of Messrs. Laird Brothers, and especially the iron-clad Agincourt. He has also inspected the docks and dock works on the Liverpool side.

BRISTOL.—A meeting was convened at Broadmead Rooms on Thursday, to adopt an address from Bristol expressive of gratification at the re-election of President Lincoln, and the consequent continuance and extension of the anti-slavery policy which the Federal Government has inaugurated under his Administration. Sixpence and twopence were charged for admission. The room was crowded to excess. Mr. Powell, a working man, in dumb show moved that Mr. Warren, Town Councillor, should act as chairman. Mr. Warren was unable to get a hearing, the audience singing "We won't go home till morning," "John Brown," and other songs. Cheers were given for Jeff. Davis and Lee, and groans for Grant, Butler, and Lincoln. At last a rush was made on the platform, and the intending speakers were ignominiously routed. Some Northern sympathisers remaining, another charge was made. The chairman's table was wrenched in pieces, and the platform left in possession of the friends of the South. After the lapse of about an hour the gas was lowered and the police cleared the room.

BROMLEY.—The inquest on the farm labourer Fisher, who was found in a dying state in the road at Orpington on the night of the 19th ult., took place on Friday, when the jury returned a verdict of Wilful Murder against the two men Staples and Turner who were taken into custody at the time. The magistrates have since committed them for trial on the capital charge.

DUDLEY.—On the 16th ult. eight workmen were ascending the shaft of the Counterfield Colliery, at Withymore, when the chain broke, and they fell to the bottom of the pit. They were all killed by the fall, or died immediately after. The jury at the inquest returned a verdict that the deceased men came by their deaths through the negligence of the colliery engineer and manager, and accordingly returned a verdict of Manslaughter against Zechariah Mason, the manager, and James Leadham, the engineer.

HARTLEPOOL.—A singular discovery of stolen property took place on the 16th ult. at Elwick, near West Hartlepool. In August, 1863, Mr. James Park, the son of Mr. Justice Park, was a guest of the Rev. J. A. Park, at Elwick Hall, and on the night of the 11th, before the household had retired to rest, a pocket-book, containing two Bank of England notes, one for 200*l.* and the other for 100*l.*, a cheque for 57*l.*, four sovereigns and some silver, a massive gold watch and chain, gold pin, and studs, were stolen from his dressing-room. Suspicion attached to the butler, who was brought before the magistrates, but for want of evidence was discharged. He left the neighbourhood, and got a situation in the south; and a strict watch was kept over the premises for upwards of a month, but no clue was obtained to the perpetration of the robbery, or the discovery of the stolen property. On the 16th ult., 15 months after the robbery, as two of Mr. Park's workmen were engaged in cutting a stack of hay, they found the pocket-book containing the whole of the missing property, about 3 feet from the outside of the stack. They will no doubt receive the 20*l.* reward that was offered at the time of the robbery.

LEICESTER.—A double murder was committed on Saturday morning at Syston, a village about four miles from that town. A man called Baum, a wheelwright, murdered his wife and infant daughter by cutting their throats, and then attempted to commit suicide. The prisoner was prevented by his mother-in-law from accomplishing this part of his purpose, and was ultimately overpowered by two men, whom he attempted to stab with a carving fork. He was taken before the magistrates in the course of the day, and remanded. At the inquest on Monday the jury returned a verdict of Wilful Murder against the prisoner.

LIVERPOOL.—The American ship Great Western sailed from the Mersey on Tuesday morning for New York, the Government having decided that it had no claim upon the ship. It is understood that the owners of the vessel, Messrs. Baring Brothers, have lodged a claim against the Government for losses sustained by the detention of the ship.

MAIDENHEAD.—On Monday a vagrant named Croft alias Smith, was charged before the county magistrates at Maidenhead, with the murder of the old woman, Elizabeth Butler, at Sunninghill Park, on the 15th October. He had been in prison for a month for vagrancy, and on the expiration of that sentence he was arrested on this charge. The carrier who discovered the body of deceased, the surgeon who made the *post mortem* examination, and the two men who saw the prisoner in the neighbourhood, gave evidence; and, on the application of the chief constable of the county, the prisoner was remanded for a week.

MANCHESTER.—On Monday a meeting of the Central Relief Committee was held in the Town Hall, Sir J. K. Shuttleworth in the chair. The Hon. Secretary reported the receipt during the week of 145*l.* 6*s.* 3*d.*, and a balance in the bank of 82,669*l.* 18*s.* 2*d.* Mr. Farnall's report stated that on the 19th ult. there was a decrease of 1048 persons in receipt of relief in the 27 distressed unions. A long correspondence was then read respecting the loans granted under the Public Works Act, chiefly in reference to the complaint of the Central Committee, that out of the 1,200,000*l.* which was placed at the disposal of the towns of Lancashire by the Act of 1863, Manchester had obtained upwards of 200,000*l.*, but was spending it in a manner to afford very little employment to the distressed operatives. In fact, in the last week of October the number of factory operatives at work in Manchester was only 98, while Glossop with a loan of 16,401*l.* was employing 392. The defence set up by the Corporation of Manchester was that they were compelled to take loans for which they had no real occasion, that the only works they could set on foot were such as would necessarily give employment to little unskilled labour, and that the Poor Law Board was informed of these facts when the loans were applied for and granted.

NEWCASTLE.—Another coasting steamer, called the Dalhousie, foundered during the gale of Thursday the 24th ult. off the mouth of the Tay, on her voyage from Dundee to this port, and every soul on board is reported to have perished. Another steamer, the William Hutt, is reported to have gone down on Thursday morning in St. Nicholas Gat, between Yarmouth and Lowestoft. One of the crew was picked up by a smack, but nothing is known of the others.

OXFORD.—The annual meeting of the Society for Augmenting Small Benefices in this diocese was held in the Sheldonian Theatre on Friday, under the presidency of the Bishop of Oxford. Resolutions in favour of the object of the meeting were moved and seconded by Mr. Walter, M.P.; Mr. H. Barnett, Mr. Cardwell, M.P.; Mr. Disraeli, M.P.; Mr. Beresford Hope, Mr. Hubbard, M.P.; Professor Bernard, Colonel North, M.P.; and Lord Barrington. The following is a summary of Mr. Disraeli's speech on the occasion:—

"During the last few years while the principle of religious liberty, which I am sure no Churchman now wishes to disturb or distrusts—has been developed and carried out to its completeness, the country after years of discussion has come to a determination that the union between Church and State is perfectly consistent with the existence and complete development of the principle of religious liberty, and that if a separation did occur, there would be something besides religious truth that would be endangered—that is, political liberty would be imperilled. It was once held to be impossible that the Church could exist in this country long in consequence of the great spread of Dissent; but during this period of transition, we fell upon a statistical age. Statistics were studied by the nation, and they discovered that there had not been a spread of Dissent, that on the contrary, Dissent had diminished—I mean true religious Dissent—that the descendants of the Puritan families, of whom I shall always speak with that respect which their high qualities and historical character deserve, had almost all merged in the Church itself, and that, in fact, there was no reason for supposing that the Church could not be maintained in its original and constitutional position. The country, however, has resolved that its nationality shall not be abdicated, and the consequence is that the Church must assert its nationality. I remember some three years ago, at a meeting of one of these diocesan societies, I ventured briefly to point out the measures by which I thought the nationality of the Church might be practically asserted; and though I do not now enter into any details on the subject, I will notice them briefly, because they will complete the position from which I wish to draw some inferences that affect the [illegible] meeting. I said then I thought there were [illegible] which the nationality of the Church might be asserted, being, as I say, not only the duty, but a [illegible] Church that it should be asserted in a practical [illegible] in the first place, I said the nationality of the Church [illegible] asserted with regard to the question of education. I [illegible] it is of the utmost importance that the Church [illegible] any way compromise that legitimate position we [illegible] with reference to the question of education, which [illegible] has obtained by natural circumstances, and which [illegible] tioned by law. Secondly, I said another practical [illegible] asserting its nationality was to support, but [illegible] extravagant, but a temperate and moderate [illegible] extension of the episcopate. The third measure [illegible] all ecclesiastical matters which were not of a strictly [illegible] nature the assistance of the laity should be called [illegible] operation with the clergy, in order that we should [illegible] from the public mind that vulgar but pernicious [illegible] the Church is an ecclesiastical corporation. The [illegible] measure was to assert the rights and duties of Convocation, which exist in our parochial constitution, and are [illegible] them; and the fifth measure was to support and [illegible] diocesan institutions. Now, in my opinion these are [illegible] temperate in conception, but practical in execution, which [illegible] carried out—and I believe they might be carried out, for they are entirely adapted to the temper of the times—would add amazingly to the efficiency of the Church. As I am upon this subject I will venture to say there are three other [illegible] measures which I think ought now to engage the attention of churchmen, and the first is that we should favour in every possible manner the formation of Convocation on a [illegible] basis, and with a fuller representation of the parochial clergy. It is not necessary now, nor would it be convenient, to enter into details on this subject. I would just intimate that if the two provinces were united the basis would be much broader, and at this moment in the province of York the parochial clergy are more fully represented than in the province of Canterbury. There is something, I think, ridiculous in the fact that the diocess of London, for example, with [illegible] is only represented in Convocation by two parochial [illegible] men. The next measure I hope we shall induce my right [illegible] friend (Mr. Cardwell) to undertake, and that is to [illegible] relations of our colonial Church—which remember, is [illegible] Established Church, in a more satisfactory state than [illegible] present. Another measure which in my own mind is [illegible] is the formation of some tribunal of last appeal in [illegible] matters. No one accuses the Church of apathy. No one accuses the Church of not possessing influence. No one accuses the Church of wanting power or intelligence. If they say it is still doomed, the Church must [illegible] it is still in greater danger than ever, and [illegible] danger comes not from an anti-Church party but from its own intestine dissensions and from the differences that exist in its own bosom. I am not here to deny, or, what is more, to regret the existence of parties in the Church. Parties in the Church have always existed. They existed in the Church at Jerusalem. They existed in the Church of Ephesus. They existed always in the Church at Rome. There are some who are satisfied by symbolical ceremonies, and feel that their [illegible] only adequately satisfied by ecclesiastical arrangements of that character. There are others who can only be satisfied by the ecstasy of spiritual enthusiasm; but as long as they who counsel or pursue these modes meet on the common platform of true sound Church principles—and I hold that the acknowledgment of the Church as the sacred depository of [illegible] truth is a true Church principle—I do not think that such a course of conduct is to be regretted, but on the whole I [illegible] no doubt that it has been extremely advantageous to the country and to the Church. And I believe that the [illegible] parties in the Church have effected as great advantage to the Church as the two great parties in the constitution have achieved for public liberty and the good government of the country. But there is yet another party to which I must for a moment refer, because, no doubt, the influence of that party upon that cordial co-operation of Churchmen by which the objects of these societies can be effectively supported is very great, and I cannot say that it is advantageous. Now, that is a party which is described by an epithet which I have observed that a distinguished prelate of the Church has used in a recent address to his clergy, but which appears to me to be an epithet that I should not use within these classic walls, for it has hardly as yet entered into the category of classical expressions. It is an epithet, my lord, that would imply a particular degree of comprehension. But whilst fully acknowledging the great abilities, the great eloquence, and the great knowledge of the new Church party to which I am alluding, I must say that there is this peculiarity about the comprehension which they attempt to accomplish. Hitherto there has been nothing new in a Church party aiming at the comprehensive; but then this has always happened, that the comprehension which they have aimed at has been possible. They have always wished to include those who believed anything; but the remarkable peculiarity of the comprehension of the party to which I now refer is this—that they seem to wish to include everybody who believes nothing. Now, this party is not founded upon the principle of authority—on which all Church parties hitherto in this country, and in all countries to some degree, have always been founded. But it is founded upon a very singular principle. It is founded upon the principle of criticism. Now, doubt is an element of criticism, and the tendency of criticism is necessarily sceptical. I use the epithet in a philosophical, and not in a popular or odious sense. It is quite possible, for example, that a party which is founded upon the principle of criticism may arrive at conclusions which may be monstrous. They may, for example, reject inspiration as a principle and miracles as a practice. That is possible. And I think it is quite [illegible] that, having arrived at that conclusion, they should repudiate creeds and reject articles of faith, because creeds and articles of faith cannot exist or be sustained without acknowledging the principle of inspiration and the practice of miracles. All that I admit; but what I do not understand, and what I wish to draw the attention of this assembly and of the country to is this—that having arrived at this conclusion, having arrived conscientiously at the conclusion that with these opinions such a party must repudiate creeds and articles, that they should not carry their principles to a legitimate conclusion, but that, repudiating creeds and subscribing articles, they are still the sworn supporters of the [illegible] siastical establishments, fervent upholders of the [illegible] of the Church—even of the rectors, vicars and curates. the common blunder—the common cry—that articles of [illegible] and religious creeds are the arms of the clergy, and are [illegible] tyrannise over the land. They are exactly the reverse. precise creed and the strict article are the title-deeds of the laity to the religion which has descended to them. [illegible] whenever these questions have been brought before Parliament I have always opposed alterations of creeds, articles and subscriptions on this broad principle—that the security and certainty which they furnish are the [illegible] privileges of the laity, and that you cannot tell in what position the laity will be if that security is withdrawn. Before I conclude I cannot but ask myself this question—Will these opinions succeed? Is there a possibility of their success? My conviction is that they will fail. I do perfect justice to the great talent, the great knowledge, and the considerable information which the new party command; but I believe they will fail—for two reasons. In the first place, having

illustrated all their writings, I believe without any exception whether they consist of fascinating eloquence, diversified learning, or picturesque sensibility—I speak seriously what I feel—that too exercised by one honoured in this university, and whom to know is to admire and regard; or whether I find them in the crude conclusions of prelates who appear to me to have commenced their theological studies when they grasped the crozier, and who introduced to society their discoveries with the startling wonder and the simplicity of their own savages; or whether I read the productions of nebulous professors, who appear in their books to have revived chaos, and who, if they could only succeed, would make a perpetual study of their writings, would go through that eternal punishment to which they object. Now, whether it be the provincial arrogance and pretentiousness complacency which flash and glare in an essay or review, I find that the common characteristic in all their writings is this, that their learning is always second-hand. In the first place, when I examine those who have been the founders of the new school in this learning; men who undoubtedly have gone through the process of original research, and who are their equals for learning and perseverance and laborious solidity for many generations—the great scholars of Germany—I find this in their labours, that there is nothing new. I will admit their great qualities; as philologists they are equal to the great scholars of the 18th, and have not reached at the end of the 17th century. In their knowledge of the cognate Semitic dialects they are infinitely superior. In the new theory, or science of language as it is called, they have of course an advantage which the old scholars have not shared with them, because it is a science which has only been developed in our own time. But this I do say, that in all important conclusions from the alleged contradictions of the Book of Genesis down to the formation of the Hebrew text, and in every important event, historical, literary, and political, that occurred in that long interval, they have been anticipated by the great Hebrew scholars who flourished in the seventeenth and at the end of the seventeenth century. There is another characteristic of the present age which never existed in preceding ages, and which we are told must be dangerous and destructive to the Church and to all religious establishments, and that is the progress of science. The teachings of science and its discoveries are not, we are told, consistent with the teachings of the Church. Now, I am sure there is not one in this theatre who is not prepared to do full justice to the labours of scientific men, and who does not fully appreciate the discoveries of science which have added so much to the comfort of life and to the comfort of man. But it is of the greatest importance, when this tattle about science is mentioned, that we should annex to it precise ideas. I hold that the highest function of science is the interpretation of nature—and the interpretation of the highest nature is the highest science. What is the highest nature? Man is the highest nature. But I must say that when you compare the interpretation of the highest nature with the most advanced, the most fashionable and modish school of modern science—compare that with some other teachings with which we are familiar—I am not prepared to say that a lecture room is more scientific than the Church. What is the question now placed before society with a glib assurance the most astounding? The question is this—is a man an ape or an angel? My lord, I am on the side of the angel. I repudiate with indignation and abhorrence those views. I believe they are foreign to the conscience of humanity; and I will say more than that, even in the strictest intellectual point of view, I believe the severest metaphysical analysis is opposed to that conclusion. But on the other hand, what does the Church teach us? What is its interpretation of this highest nature? It teaches us that man is made in the image of his Creator—a source of inspiration, of solace—a source from which flow all every right principle of morals and every Divine truth. I say, therefore, that when we are told that the teachings of the Church are not consistent with the discoveries of science, and that in that sense the inferiority of the Church is shown, I totally deny the proposition. I say that the scientific teaching of the Church upon the most important of all subjects is, in fact, infinitely superior to anything that has been brought forward by any of those new discoveries. In fact, it is between those two principles that society will have to decide. Upon our acceptance of that Divine truth, of which the Church is the guardian, all sound and coherent and sensible legislation depends. It is the only security for civilization; it is the only guarantee of real progress."

RADNOR.—A memorial to the late Sir G. C. Lewis was inaugurated on Wednesday at New Radnor. It is in the style of an Eleanor Cross, from the design of Mr. Gibbs, of Oxford, and is built mainly of Box ground stone, 77 feet high by 25 feet in width at the base, and octagonal in form. It comprises three distinct stages. On the front of the stage next the base is the following inscription:—"Radnorshire to her most distinguished Son, Sir George Cornewall Lewis, Bart. Died 1863." Under this inscription there is a medallion portrait in marble of the late Baronet, and on the second stage above it, in four recesses, divided by eight columns, stand, under richly-carved canopies, four allegorical figures, each 6 feet high, representing Justice, Truth, Oratory, and Literature. The next stage consists of columns of red Mansfield stone, placed round an octagonal shaft, and decorated with the coats of arms of England, Ireland, Scotland, and Wales, immediately over which are four large griffins grasping the arms of the Lewis family. An ornamental spire springing from this last stage, and having at the top a carved cross with a circle entwined in its centre, terminates the structure. The memorial stands on a triangular plot of grass at the entrance to New Radnor by the Kington Road, at a point where three roads intersect one another, so that every visitor to the town will pass within a few yards of it. The Earl of Clarendon inaugurated the monument, and Sir J. Walsh, the Bishop of St. David's, and the Rev. Sir Gilbert Lewis, spoke on the occasion.

ROCHDALE.—On Wednesday, the 23d ult., Mr. Cobden addressed his constituents in this town on the principal events of the last Session, with especial reference to the Schleswig Holstein question and the civil war in America. The following is a summary of his speech, which fills nearly six columns of the daily papers:—

"The proceedings of the Session have led in my opinion to a complete revolution in our foreign policy, and have put an immeasurable gulf between the old traditions of the Foreign Office and the principles which I hope to see adopted in the conduct of our foreign affairs. During the 30 years since I first, by pen or voice, gave utterance to any sentiment in public I have always attached the utmost importance to the principle of non-intervention in the concerns of other nations. During the last Session the whole attention of Parliament, as far as the action of the two great parties who contend for power and place are concerned, was given to this question of Schleswig-Holstein. I am not going into the history of that most complicated of all questions further than this, that in 1852, through the mischievous activity of our Foreign Office, seven diplomatists were brought round a green table in London to settle the destinies of a million of people in the two provinces of Schleswig-Holstein, without the slightest reference to the wants or wishes, or tendencies, or interest of the people A treaty was settled, the object of which was to draw closer these two provinces and Denmark. The tendency of the great majority of the people of the provinces—about a million in all—being altogether in the direction of Germany, from that time to this year that treaty was followed by constant agitation and discord. A couple of wars sprang out of it, and the upshot of it is that it has been torn to pieces by two of the Governments who were parties to it. Great debates took place in both Houses of Parliament, in one of which the Earl of Ellenborough, in advocating war, reprobated the love of repose and the love of money which had, he said, become the engrossing passion of the people of this country. Now if he wished to show that the English people in money matters are chivalrously generous, almost foolishly generous, he would call no other witness than Lord Ellenborough himself, to whom they gave an annual allowance of 7700*l*., although he had no moral claim, and certainly no legal right to it that would be recognised in any other country. In the House of Commons there was a general opinion that there was a great struggle going on in the Cabinet as to whether we should declare war against Germany. The country members however and the members representing large constituencies, went to the whippers-in, and told them distinctly that the nation would allow no war for any such matter as Schleswig-Holstein. The Opposition, who had been urging the Government to do something, brought forward a motion condemning them, and ultimately an amendment was carried, which neither absolved nor condemned the Government, but merely expressed satisfaction that we had escaped war, and there the matter ended. But this is not a very honourable position to be left in. The Government encouraged a small Power to fight with a big one, and then backed out themselves, for which we are caricatured in every country in Europe. It is not enough that the Government should not interfere in foreign questions, it is not enough that the Government should not lecture foreign countries as to what policy they should pursue; but Englishmen, through their public speakers and their press, must learn to treat foreign nations in a different spirit than they have hitherto done; and they must learn to do it as a point of honour to other countries, as well as from a sense of self-respect of what is due to themselves. I have no hesitation in saying that what was done in London and Paris last year on the subject of Poland has led thousands of the generous youth of Poland to a premature grave, thousands more to Siberian exile, and has incapacitated the insurrection, if that can be called an insurrection, which never had a chance from the beginning. We are the only people in the whole world that make foreign topics matters of passionate, earnest, internal politics. You never see in France or Germany, or in America, the newspapers taking up foreign questions, and attacking each other because they are not of the same opinions. I believe I might be Prime Minister if I would say that you are the wisest, the best, and the happiest people in the whole world. I have no doubt that I might be Prime Minister. I have seen in my experience Prime Ministers made by this process. If we are to discuss these foreign questions at all, let us do so calmly and temperately, as I now mean to do the subject of the American war. And first, as to the cause of this disruption: why have not the Southern States followed the example of our English revolutions, and even of their own in 1776, by publishing a programme of their grievances? Because they have but the grievance they want to consolidate, perpetuate, and extend—slavery, but they cannot do it. But, instead of taking a straightforward course, they constantly say, 'Leave us alone; all we want is to be left alone.' That is the reason why the Conservative Governments of Europe and so large a portion of the upper classes in England have consented to back the insurrection. Now, how would they feel it Essex and Kent, having been beaten on the subject of the Corn laws, had chosen to set up Kent and Essex and East Anglia right across the Thames, as the Secessionists have sought to attempt to cut off Louisiana from the mouth of the Mississippi, and if they had said "We want to be left alone." The late Presidential election has given to the world a spectacle such as was never before presented by any other people. The contest was between General M'Clellan, who desires to put down the war without making the abolition of slavery a condition, and Mr. Lincoln, who desires to put down the war and extirpate slavery from the South. The whole people have preferred acting in the interests of humanity. They have preferred the continuance of war rather than the continuance of degrading slavery. Let us have no more of the late talk that this is not a war to put down slavery. I do not believe that that country in my day will ever be separated. I look upon the geographical difficulties in the way of separation to be absolutely insurmountable. Take the case of the Mississippi; that river with its tributaries flows through 20,000 miles of navigable waters into the Gulf of Mexico. It would be far easier for Essex or Kent to carry off the mouths of the Thames and set up an East Anglian kingdom than for Louisiana to carry off the mouths of the Mississippi and set up for an independent State. There are some few hundreds of thousands in the counties of Kent and Essex, but the valley of the Mississippi will become the home of 200,000,000, and this makes it infinitely more impossible that the United States should allow the mouths of the Mississippi to be carried off than that England should suffer the mouth of the Thames to be taken away. And here I would notice the total ignorance of everything relating to American geography among the ruling classes of this country. If I were a rich man I would endow a professor's chair at Oxford and Cambridge to instruct the undergraduates of those Universities in American history. I would undertake to say, and I speak advisedly, that I will take any undergraduate now at Oxford or Cambridge, and I will bring him to a map of the United States, and ask him to put his finger on Chicago, and I will undertake to say that he does not go within 1000 miles of it. Yet these young gentlemen know all about the geography of ancient Greece and Egypt, and also about the Ilissus, which, when I saw it, resembled the bed of a dried-up torrent, and was occupied by a number of Athenian laundresses. You know my opinions with respect to the future of America. I don't desire to carry them out, and I should not have said so much if so much had not been said on the other side. I want nothing but neutrality. But if we are to have perfect neutrality on this subject, let us try, for Heaven's sake, to have a little more temper in the discussion of a question for which, happily for us, we are not responsible. I am mute and silenced when I recollect that I have been protesting against war ever since I came into public life, but I have never succeeded in preventing wars all over the world. I could not say to America, 'Why do you insist on carrying on this civil war?' I should at once be subject to the reply, 'Why do you not take the beam out of your own eye before you take the mote out of ours?' But I fear that the advocates of all these wars, against which I have always been vainly protesting, are now turning up the whites of their eyes, as if they had been Quakers from their birth. With regard to domestic policy, I defy you to find a necessity for keeping up your present military establishment and spending 25,000,000*l* a year on the army and navy. Mr. Gladstone has been the most extravagant Chancellor who ever managed the Treasury, but he has proved himself a master in adjusting the burdens of the country. I mean that he found the weight placed on the animal in such a way as to render it most difficult for him to carry it, the burden was tied round his knees, it was fastened to his tail, it hung over his eyes, it blinded him, impeded his movement, and lamed him at every step. Then came Mr. Gladstone and released the fettered limbs, placing the burden most ingeniously on the softest possible pad on the animal's shoulders, but we must not forget that the beast is still carrying the burden, and a great deal more than we had to bear before this beautiful process was commenced. We never before had a Government which extracted from the country 70 millions of income in time of peace. Mr. Gladstone is the man who has by his talents and ability enabled the Government to get this money; but he has nearly finished his career of manifolding the sources of revenue; and any future services that he can render must be in reducing the expenditure. I trust therefore that he will appeal to the British public on the subject; and that he will be enabled during the next Session to make a large reduction in the actual expenditure."

RUGBY.—At the annual meeting of the Rugby and Deincehurst Conservative Association, on the 24th ult., Mr. Newdegate spoke at considerable length in justification of the course which he pursued during the last Session. He said:—

"You will forgive me for saying that great anxiety is manifested to know what will be my future conduct in relation to party. I can only give you that best of all assurances, my conduct in the past. There is no man who recognises more fully the necessity for party organisation. Remember that I have held the office of "whipper-in" for the Conservative party, and no more zealous whipper-in ever undertook the duty who worked harder than I did, so long as I was confident of one thing—that there was a strict reason between the principle which we had advanced to the country and the action of the party for which I laboured as the representative of those opinions; but of late years circumstances have occurred which rendered it my duty, as representing distinct opinions, to take my seat below the gangway as an independent member. If North Warwickshire has not the courage to support her member when he seems to be isolated on a division, and has not the inclination to abide by the opinions which she had so long directed him to advocate, and I can say is that I await the expression of her opinion, and if she is changed in principle I shall readily acknowledge the justice of her verdict if she declares that I am no longer fitted to be her representative. But I must remind North Warwickshire of this: for 16 or 17 years I have taken an active part in public life, always in the sense of the principles on which I was first returned. You cannot give me back these 17 years; you cannot cancel them; and were I now to abandon those principles I should not stand like a young man free from all engagements in entering Parliament for the first time, but it might be that my whole past conduct would rise up against me and condemn me. I should have to struggle forward, constantly reminded of abandoned principles, of abandoned opinions. I should be impotent for good, and therefore I qualify the question that has been put to me, 'Will you support Lord Derby and his party for every constitutional purpose and in every constitutional mode of action?' But if I find either Lord Derby's party or himself departing from the great fundamental principles of our Protestant constitution, I will oppose the leaders of that party acting, I am happy to say, with the body of that party in the House of Commons, as I did upon the Prison Ministers Bill—a Bill for the qualified establishment of Roman Catholic chaplains in every gaol to be paid by the ratepayers. I will oppose them as I did on the Lords' Bill, which was an exaggeration of the principles proposed by Sir G. Grey during the last Session. In accordance with the principles to which I adhere, I will support Lord Derby's party, as I have always done, but I will not be carried beyond those principles."

WINDSOR.—On Monday morning the massive sarcophagus, which is intended to be placed in the new Mausoleum at Frogmore, as a receptacle for the remains of the Prince Consort, was conveyed from the Windsor terminus of the Great Western Railway to the royal grounds at Frogmore. The sarcophagus, which is of a dark polished Scotch granite, arrived at Windsor from Aberdeen on Sunday morning. It consists of two parts, each of which was carefully packed in a strong wooden case. They weigh together about 13 tons. The recumbent statue of the Prince Consort, which is to be placed on the top of the sarcophagus, will be the work of Baron Marochetti. The Mausoleum itself is now nearly finished.

Scotland.

THE YELVERTON CASE.—Major Yelverton's petition to apply the judgment of the House of Lords was in the "single bills" of the first division of the Court of Session last week, and was remitted to the summer roll. On Saturday an application was made to the Lord President on behalf of Mrs. Theresa Longworth or Yelverton, craving leave to put in a condescendence *res noviter* to the effect that Major Yelverton had repeatedly admitted the Scotch marriage to his brother Frederick Yelverton, now deceased, and in particular had talked with him during his last illness, in presence and hearing of Sarah Mullins, his nurse, in terms implying an acknowledgment of said marriage. The application concluded with a prayer that it should be received with other documents, and "remitted to probation." The application was directed to stand over till the judges had seen the "condescendence" and other documents which the counsel for the "pursuer" had in hand. The calling lists of the Court of Session also contain notice of an action of damages at the instance of the Honourable Maria Theresa Longworth or Yelverton, residing in Edinburgh, against Alexander James Beresford Hope, of Bedgebury Park, Kent, and John Douglas Cook, of The Albany, Middlesex, both residing in or near London, or elsewhere furth of Scotland, against whom arrestments have been used *ad fundandam jurisdictionem*. The defenders are the registered proprietors of the *Saturday Review*, and the grounds of action are the alleged libel in the article on the Yelverton case which appeared in the *Saturday Review* soon after the House of Lords'

decision. The damages claimed are 3000*l*. In connection with these proceedings we may mention that the Irish papers announce the death of "Father Mooney," the Irish priest who performed the marriage ceremony between Miss Theresa Longworth and Major Yelverton, in the little chapel of Kilbroney, Rostrevor. The deceased gentleman was subjected to a very severe cross-examination at the trial of the Yelverton case, in Dublin, and it is said "he was never himself since."

FATAL CATASTROPHE AT GLASGOW.—On Wednesday night a harbour ferry boat, containing 22 persons, was upset by the swell of a steamer. Four of the passengers succeeded in reaching the shore, and under medical treatment were so far restored in the course of an hour or two that they were able to be taken to their homes. Three others were found holding on by the keel of the boat, and one was found beneath immersed in the water convulsively clutching the gunwale. The three men on the keel were taken ashore little the worse, but the fourth, a man about 50 years of age, died in the course of the evening. The remaining 14 persons were drowned.

Railways.

LOCKING UP PASSENGERS IN RAILWAY CARRIAGES.—The Lord Advocate, in a lecture delivered at Portobello on Friday evening, observed: "Posterity will say—'What times those were when travellers were stopped at Bagshot, or Hounslow, or Shooter's Hill! Railroads, no doubt, put an end to these adventures, but only to give rise to greater danger. Would you believe it?' My successor in this hall may say in 1964: 'Would you believe it, a 100 years ago they treated a traveller like a convict? They locked him in a box, and, ill or well, living or dead, no man could see him, and he could see no man, until he had gone 40 miles. It is a fact. He might be shut up with a murderer, a madman, with a drunkard, or a villain; he might die of apoplexy; he might have his throat cut; all this was thought of no consequence at that time. The simple arrangements which we now make were often proposed, but resisted with frantic wrath as being utterly impracticable. They had built their carriages for people to be imprisoned in them, and therefore imprisoned they must be. The easy expedient of a gangway outside the carriage and a bell inside was assailed with a hundred good and conclusive objections. People would use it recklessly; and it was a pity to disturb the guard when asleep. It would enable anybody to stop the train, although, as you all know, it does not enable any one to stop the train; it would enable thieves to leave the carriages and to escape—which is about as good a reason for not making a road to your house."

EXTRAORDINARY TERMINATION OF A SUPPOSED RAILWAY TRAGEDY.—About 10 o'clock on Monday the 21st ult. the Liverpool detectives received a telegram from Rugby stating that a man had been robbed and murdered in the London express train to Liverpool, and it was believed that he had been thrown out of the railway carriage. A number of detectives awaited the arrival of the train at Liverpool, and on its reaching the platform at once proceeded to the compartment indicated in the telegram, and arrested four sailors and an artillery sergeant as the parties concerned in the outrage. These men were at once taken to the police office and closely questioned, but two of the sailors were so much intoxicated that they could give no account of the affair. The artillery sergeant, however, stated that when near Rugby a sailor, who had been the messmate of the other prisoners in Messrs. Baines & Co.'s ship Commodore Perry, while in a state of intoxication, lurched against the door, which flew open, and he fell out, while the train was going at express speed. In the course of the night the Rugby and Stafford detectives telegraphed that they could not find or hear anything of the missing man. The sailors and the soldier who had been arrested were therefore detained in custody until Tuesday morning, when Mr. Eccles, of the Rugby police, telegraphed that the supposed victim had been discovered dancing in a fell near the railway, a few miles from Rugby, "to keep himself warm." A few hours afterwards the man himself appeared before the Liverpool stipendiary magistrate, sound and well, and without even a scratch on him. He stated that when he awoke in the morning he found himself, to his great astonishment, in a ditch at the foot of a railway embankment, without having the slightest idea how he came there. His escape, which of course gave great satisfaction to his fellow-passengers, was almost miraculous under the circumstances, as the train was going about 40 miles an hour when he fell out.

Law.

COURT OF CHANCERY (Before the Lords Justices.)—*Brooke v. Lord Mostyn.*—The hearing of this suit occupied the Court for several days in June last, and their lordships now delivered judgment. Sir Thomas Mostyn, who died in 1831, devised certain of his estates in Wales, which were subject to mortgages amounting to 270,000*l*., to trustees for 500 years, upon trust to raise certain legacies, one of which was a legacy of 20,000*l*. to his natural daughter, Eliza Mostyn, and subject thereto the estates were given to Lord Mostyn for his life, and to his son, the present Lord Mostyn, in tail. Eliza Mostyn, in 1840, married Captain Brooke, and the legacy of 20,000*l*. was then vested in trust for the husband and wife for their lives, and after their death for their children: the plaintiff, Charles Hyde Mostyn Brooke, being the only child. Interest was partially paid for some time on the legacies, and the legacy duty was paid; but in 1842 an application was made to the Legacy Duty Office by Lord Mostyn for a return of the legacy duty, on the ground that the personal estate and the real estate charged with the legacies were insufficient. This led to further arrangements, and an Act of Parliament was obtained for the sale of the estates; the other legatees released their legacies, and a suit of "Brooke v. Mostyn" was instituted for the payment of the 20,000*l*. legacy. A petition was presented for a compromise, and reference made to the Master to inquire whether it would be for the benefit of the infant. The Master, on evidence of the value of the estates, approved of the compromise, the terms of which were that the trustees of the settlement released the estate and accepted the bond of Lord Mostyn for 20,000*l*. in lieu thereof, the evidence laid before the Master showing that the trustees would get nothing of the legacy from the estates. The estates were afterwards sold for large sums of money, which appeared to leave a surplus. The plaintiff came of age in 1860, and instituted this suit, praying to have the compromise set aside, on the ground of fraud, and to be allowed to charge his legacy on the proceeds of the sale, Lord Mostyn's bond proving worthless. The Master of the Rolls dismissed the bill without costs, holding it doubtful whether at the time the estates would have realised enough, and holding that the compromise was proper and bonâ fide. The plaintiff appealed. The judgment of the Lord Justice Turner occupied above two hours in delivery, nearly the whole time being occupied in reading portions of the pleadings and evidence; at the conclusion of which he said that the jurisdiction of the Court to approve of compromises on behalf of infants was most beneficial, that no compromise between adults would be set aside unless fraud, by which he meant moral fraud, or concealment, was proved, and that a compromise, with the sanction of the Court, in which infants were concerned, was equally binding. Nor did the value for which the estates were ultimately sold affect the compromise, nor several other things which had been relied upon. The evidence before the Master was a valuation by a surveyor, Mr. Sisson, in which he valued the estates subject to the legacy at 151,000*l*. But there was at that time in the possession of the plaintiffs a report by Mr. Sisson, from which it appeared how he had come to this conclusion. He estimated the net rental by what it had been on the average of the last ten years, but during that time one-fourth, or sometimes one-half, had been laid out in repairs, and if these facts had been brought before the Master, no doubt he would have made a special report on the subject, or would have refused to sanction the compromise; at all events this report ought not to have been kept back. His lordship therefore thought that the decree of the Court below ought to be reversed. Lord Justice Knight Bruce concurred. The compromise must be set aside, and the plaintiff—if it would be of any use to him—must have an account of the proceeds of the sales of the estates. The decree must be very carefully drawn up, and the cause should be in the paper for December 13.

COURT OF QUEEN'S BENCH: (Sittings in Banco, befor Justices Crompton, Mellor, and Shee.)—*Fisher* v. *Howard.*—*The Bonâ fide Traveller Question.*—This was an appeal against a conviction of Mr. Arnold, one of the metropolitan police magistrates, under the 2d and 3d Vict., c. 47, sec. 42, by which it was enacted that "no licensed victualler should open his house for the sale of fermented liquors on Sundays, Christmas Days, and Good Fridays, before 1 o'clock in the afternoon, except for the refreshment of travellers." It appeared that some persons were going from the Victoria station to Croydon on a Sunday. They had absolutely taken their tickets, and they then, before the train started, went into the appellant's refreshment rooms at the station, and were served with some refreshments. Mr. Arnold convicted the publican under the Act, upon which he appealed on the ground that the parties supplied with refreshments were travellers, and came within the exemption in the Act. Mr. C. Pollock now urged, on the part of the respondent, and in support of the conviction, that these persons were not travellers. The Act said nothing respecting persons being passengers by railways. Justice Crompton.—What is the meaning of the word "traveller?" When does a man become a traveller? Mr. Pollock said that according to the view of the other side a man would become a traveller as soon as he left his house. Many of the persons who kept refreshment houses were also innkeepers. If the appellant was justified in serving these parties with refreshments, any publican had a right to give refreshment to any one who alleged that he was going by a railway. A man might feel a want of something before he reached the railway station. A man might live at Highgate and might feel a necessity of tasting something soon after he started from his home. Would the publican be justified in serving him? If so, it would render the statute nugatory. The Act had no reference to railways. Justice Mellor: A man takes a railway ticket, and although he did not start at the moment, yet surely he was a traveller. Justice Crompton: When a man has taken his ticket he certainly must be considered to have become a traveller, and he might feel anxious to have a glass before starting. Mr. Pollock: I cannot say such a man is not a traveller. Justice Crompton: Some persons require more refreshment than others, and a person might like to take something before starting, fearing he might not be able to procure anything for some time afterwards. Justice Mellor: Here is a man who has taken his ticket, and just before starting felt some cause for a little fermented liquor. Surely he might take it. Mr. Pollock said: Supposing he left his chambers on a Sunday morning to go to see his aunt, who lived at Croydon, why should he go all the way to the station before he could get anything! Why might he not get it as he was walking to the station at the first public-house he came to? He thought a man was as much a traveller when he left his house as he was after he got to the station and had taken his ticket. Justice Mellor said there was reason in every case. If it was to be said that after a man had taken his ticket he was not a traveller, and could not obtain refreshments, railway travelling on Sundays might be stopped altogether. Mr. Pollock said he thought that two men walking from Highgate were as much travellers as those who were going by railway. Counsel for the appellant were not heard. Mr. Justice Crompton said the conviction must be quashed. The parties in this case were travellers in the full sense of the term. For himself, he thought a man might be considered a traveller who was going by rail before he took his ticket. Mr. Justice Mellor said the Act was for the prevention of persons going into public-houses and sitting down drinking and smoking. These cases must be decided in a great measure by common sense. Conviction quashed, and judgment given for the appellant.

COURT OF COMMON PLEAS.—(Sittings in Banc) before Lord Chief Justice Erle and Justices Byles and Keating.)—*Taylor* v. *Humfreys: The Bonâ-fide Traveller Question.*—The Court on Friday the 18th ult. gave judgment in this case, which was an appeal from a decision of justices. The case stated that a policeman had gone to a public-house in the village of Moseley, two miles from Birmingham, at half-past 11 o'clock on a Sunday morning in May last. The door was closed, but not fastened, and on entering he found a number of persons in the house—32 altogether, some of whom were getting bread and cheese and beer, and others beer. He accordingly laid an information against the landlord for keeping his house open during Divine service. The landlord called two of the men last admitted, and who were eating bread and cheese and drinking ale, and they proved that they were artisans, and that they had left Birmingham that morning for a walk, and had taken a walk of seven miles by the lanes and fields, and were returning home to Birmingham through Manly, and, being fatigued, and having yet two miles to walk, they demanded admission into the public-house. They were asked if they were travellers, they said they were, and were admitted, and had bread and cheese and beer. The justices were of opinion that they were not travellers, that they had stopped at a distance not near to their homes that they had ceased to be travellers, and their journey had come to an end, and that it was the same thing as if they had stopped at a public-house in their own street close to their own doors. It was contended for the respondent that they must be *bonâ fide* travellers; that they must be wayfarers to be entitled to admittance; that persons who merely went out for a walk, and turned into the nearest public-house were not travellers; that these men were not, and the conviction was right. For the appellant it was contended that the men had not ceased to be travellers, for they had two miles further to walk; and that the decision of the justices was not in accordance either with justice or common sense. These men were fatigued with their walk. They were artisans who, having toiled in close workshops all the week, sought a breath of country air, and being fatigued and having two miles further to go, a rest and some refreshment to them made all the difference whether the walk did them good or harm. It was therefore submitted that they were travellers within the meaning of the statute, and that the appellant really believed them to be so. Mr. Justice Byles asked whether, supposing that they were travellers and the innkeeper would not believe them not open his door to them, he was not liable to an action? Counsel for the appellant replied that he would be liable not only to an action but to an indictment also. The Court, in giving judgment, said there were a great number of persons, such as artisans, to whom Sunday was the sole opportunity of taking exercise, and these persons walking out for that purpose under the circumstances stated had certainly a right to obtain refreshment. The object of the Act was for the better observance of the Lord's day, and everybody but travellers were prevented obtaining refreshment. Persons were not to be allowed to go to publichouses for the purpose of getting drink. But all those who were abroad either for enjoyment or business, except those who went abroad for the mere purpose of getting drink, if the publican really believed them in that sense to be travellers and to require refreshment, he ought to supply them, and was not liable to the penalties of the statute. A person would not be a traveller if he went abroad solely for the purpose of drinking, and it did not signify whether a person was a stranger or an inhabitant. The Court thought the conviction wrong on the grounds stated, but, as there were other persons in the house besides those persons examined, the case was remitted back to the justices to find whether as to those persons the publican really believed them to be travellers. Conviction quashed.

Obituary.

LORD ELIOT, eldest son of the Earl of St. Germans, died at the family seat, Port Eliot, Cornwall, on the 26th ult. He was born in 1827, and was formerly in the 1st Life Guards, in which regiment he obtained the rank of captain in 1852. For some years his lordship had been an invalid, and during the fortnight had been gradually sinking. By his death his next brother, the Hon. Wm. Gordon Cornwallis, now in the diplomatic service, becomes heir apparent to the family honours.

LADY ALVANLEY died after a short illness on the 2nd inst. in her 63d year, at Thorpe Perrow Hall, Yorkshire, the seat of Mr. and Lady Augusta H. Millbank, where she had been staying since the early part of October. She was the fifth daughter of the first Duke of Cleveland, by his first marriage with Lady Katherine Powlett, the second daughter and co-heir of the sixth Duke of Bolton. Her ladyship was born in 1801, and married, 1831, Colonel the Hon Richard Pepper Arden, afterwards third and last Lord Alvanley of Alvanley. Her two brothers, the second and third Dukes of Cleveland, have died within less than 12 months.

THE DOWAGER COUNTESS OF ABINGDON died on the 26th ult. at 64, Eccleston Square. She was daughter of the late Lord Mark Kerr and the Countess of Antrim, was born in 1810, and in 1841 married, as his second wife, the fifth Earl of Abingdon, who died in 1854.

LADY DICK LAUDER died on the 22d ult. at Greenhill House, Edinburgh, in her 79th year. She was the second daughter of the late Earl of Stair, and was married to Sir John Dick Lauder, Bart.

COUNT PHILIP COLLOREDO MARQUIS OF RECANATI, Grand Master of the Knights of Malta and of the Holy Sepulchre, died a few days since at Recanati, in his 85th year. The venerable successor of Villaret, the Conqueror of Rhodes, and D'Aubusson, L'Isle Adam, and La Vallette, the defenders of Rhodes and Malta, was a link between feudal and modern Europe. He was admitted a member of the Order at Malta under the Grand Master De Rohan, whose code of laws still governs that island; and for 20 years he has been chief of the Order, which, though deprived of its dominions, still preserves the honours of sovereignty and a very large property, and has an Ambassador at several European Courts. One of the last acts of his life was to give to the beautiful church attached to the hospital of the Order in Great Ormond Street, London, a splendid altar of rosso antico, designed by an eminent Roman artist. On Tuesday Cardinal Wiseman officiated at High Mass in commemoration of the deceased Count in this church, which is a little gem of the classical style of architecture, and with the hospital adjoining was built and endowed by Sir George Bowyer, who is a Knight of the Order.

GENERAL WYNYARD, C.B., colonel of the 58th Foot, died on the 21th ult. He entered the army in 1803, served with the Grenadier Guards in Sicily from 1808 to March, 1810, when he was severely wounded at the attack on Santa Maura, for which he subsequently obtained the brevet rank of major; he was also present and on the staff with the force that occupied Ischia and Procida. He was made a Companion of the Bath in 1846, was aide-de-camp to William IV., and was appointed colonel of the 58th Regiment in 1851. He attained the rank of general in 1860.

GENERAL IRVING died on the 22d ult. at Balmae, near Kircudbright, aged 91. He was formerly a captain in the Royal Irish Artillery, and retired upon full pay when that corps was broken up. He entered the army in 1793, and attained the rank of general in 1856.

THE RIGHT REV. DR. M'NALLY, the Roman Catholic Bishop of Clogher, died at his residence in Monaghan on the 21st ult. after a painful and protracted illness.

MR HUGH ANDREW JOHNSTONE MUNRO died suddenly a few days since from disease of the heart. He was educated at Christ Church, Oxford, and was known to artists as one of the most successful and hard-working of amateurs. He was born in 1820, and was the son of Sir Alexander Munro, of Novar, Ross-shire, and nephew of General Johnstone, of Auchin Castle, Dumfriesshire. In spite of his birth and position as one of the chief Highland proprietors, and of the ample means at his disposal, he was singularly averse to any sort of ostentation, and he lived by choice the life of an artist. His large income was devoted to the improvement of his estates, to the extension of his gallery of works of art, and to numerous acts of kindness to the class of artists for whom he had an especial regard. His studio at Hamilton Place was the resort of connoisseurs and men of letters; and there can be no doubt

...st, had he adopted art as a profession, he would have taken high rank among Royal Academicians. He leaves one sister, who inherits his magnificent gallery of pictures and estates, Isabella Margaret, who married in 1834 the Hon. Henry Butler Johnstone, brother of Lord Dunboyne, and formerly M.P. for Canterbury.

Mr. James Skene, of Rubislaw, Aberdeenshire, formerly Secretary of the Board of Trustees for Scottish Manufactures, died at Frewen Hall, Oxford, on Sunday last, in his 90th year. He was one of the earliest and most intimate friends of Sir Walter Scott, whose acquaintance he made about 1796, after his return from Saxony, whither he had gone to study German. He was called to the bar of Scotland in 1797, and his was the oldest name but one in that list, that of Lord Brougham, who was called to the bar in 1800, standing next. In 1797 also he was appointed Cornet of the Royal Edinburgh Horse Volunteers, a regiment raised mainly by the exertions of Sir Walter Scott, who filled the office of Quartermaster in it. He married a daughter of Sir William Forbes, of Pitsligo, celebrated in the history of Scottish banking, and by that lady had several children; one of his granddaughters is married to the Archbishop of York. Sir Walter Scott dedicated to him the fourth canto of "Marmion."

The Rev. George Lock, Vicar of Lee, died on the 17th ult., in his 94th year. His family long inherited Norbury Park, Surrey. He was educated at Christchurch, Oxford, and ordained deacon in 1793. After a few years' occupancy of a small family living in Somersetshire he was in 1803 inducted to the valuable living of Lee, in the gift of the Lord Chancellor, and held it up to the time of his death, thereby completing the 62d year of his incumbency. He performed duty in three parish churches on the same site, having outlived the duration of one church which was erected during his holding of the living, and which fell into decay in consequence of defective foundations. The population has grown from 300 to nearly 5000 since his appointment, and Lee has now four churches.

The Rev. Dr. Cahill, who at one time occupied a prominent position as a popular lecturer on scientific subjects, died at Boston, in the United States, on the 28th Oct. He was a politician of O'Connell principles and opinions, and established and edited in Dublin a paper called *The Old Irelander*; but the enterprise was not profitable, and he became embarrassed, in consequence of which he went to America, and continued up to the period of his death a popular lecturer and preacher at Boston. He was for some years Professor of Natural Philosophy in the Ecclesiastical College of Carlow.

Mr. David Roberts, R.A., fell down in a fit of apoplexy in Berners Street on Friday afternoon, and died at his house in Fitzroy Street in the same evening. He was born in Edinburgh in 1796, and began his active life as a house-painter in that city; he rose in 1822 to be a scene-painter in Drury Lane Theatre, along with another Academician, Mr. Clarkson Stanfield; and after that began to exhibit in the Royal Academy. He then travelled in Spain and in the East, and published more than one fine series of sketches, which gave him a great public reputation, and which entirely justified his election into the Academy in 1841. He was the best architectural painter that our country has yet produced, and it is hard to say whether he most excelled in rendering the solemn cathedrals of the middle ages, with their high altars and gorgeous painted windows, or the stately temples, tombs, and pyramids of antiquity. Apart from the interest which attaches to him as an artist, and which is to be measured by the amount of his actual achievements, there is another interest which belongs to his career, as one of the self-made men, who from small beginnings have fought their way upwards to fame, wealth, and station. Mr. Roberts married early in life. His wife, a person of singular beauty, though of humble birth, was the model of Mary Queen of Scots in Sir William Allan's *famous picture* of that unfortunate Queen landing at Leith. He leaves only one daughter, who married last year the son of Mr. E. Bicknell, the great collector, whose pictures were sold at Christie's last year.

Miscellaneous.

Egyptian Kings anterior to Moses.—About three years ago, M. Auguste Mariette discovered at Sakharah, in the necropolis of ancient Memphis, not far from the Great Pyramids, the funereal chapel of the tomb of two personages called Nekht and Tounari. These personages filled important offices in Egypt under the reign of Rhamses II.—that is, about the time when Moses lived. One of the walls of the chapel is adorned with a bas-relief, containing a hieroglyphic list of 85 medallions containing the names of kings, arranged in two lines. This list has been called the table of Sakharah and is the most important feature of the monument. M. Mariette has now, by continuing his excavations, discovered some fragments which were wanting to render it complete. Herr Dümichen has just discovered in a temple at Abydos, dedicated to Osiris by King Sethos, of the 19th dynasty, a tablet containing a list of 76 kings, from Menes to Sethos, without break or erasure. The tablet, of which fragments are in the British Museum, was, no doubt, when perfect, the counterpart of this, differing merely in carrying down the list one king further—namely, to Rhamses II., the son of Sethos, who completed the temple begun by his father. The present tablet gives many names of kings in the earlier dynasties hitherto unknown.

Exploration of the Amazon.—It appears that the Morona, a Peruvian steamer charged with the exploration of the Amazon, has arrived at the port of Mayro, only 95 leagues from the Pacific, carrying 7 feet of water to the port. She came from England, ascended the Amazon 700 leagues, the Ucayati 200 leagues, and then passed up the Pachitea, which till then had only been navigated by Indian canoes.

The Lost Othona.—For several months past works of reclamation have been carried on on the Essex coast, at St. Peter's Head, in the parish of Bradwell, during which traces of Roman buildings have been discovered, comprising portions of a wall of great strength, consisting of regular ashlar, alternating with rows of bonding tiles. In the field where the excavations have been made stands the little Norman chapel—now a barn—of St. Peter's-on-the-Wall, built of Roman materials, and this fact, coupled with the notices of Ithancester (Othona) of mediæval writers, leads to the inference that this is the lost Othona of the Notitia, one of the nine stations of the Fortenses, who, in the decline of the Roman power in Britain, were charged with the protection of this part of the coast against the piratical Saxons. In the immediate vicinity the spade has turned up several skeletons of mediæval interment, and numerous vestiges of Roman occupation, consisting of quantities of Samian and Caistor ware, glass beads, and coins of the Lower Empire.

Discovery of an Ancient British City near Edinburgh.—A few months ago a large number of stone coffins were discovered near the "Cat-stane," about six miles from Edinburgh, by Mr. Hutchison, of Carlowrie. The same gentleman has since discovered the remains of an ancient British town on the western side of Craigiehill, about a mile distant from the former relics, on the Linlithgow side of the Almond River. Many years ago, when cutting a road through Craigiehill, between Kirkliston and Cramond, the workmen came upon a stone kist, the end of which is still to be seen projecting from the bank over the carriage way. Several attempts have been made by archæologists to unravel the mystery of this kist, but without effect. Some time ago Professor Simpson thought he had observed on the hill indications of an ancient British city; and recently he wrote to Mr. Hutchison on the matter, requesting him to obtain permission from the proprietor of the hill, Mr. Hope Vere, to make explorations. This permission was readily granted, and a few weeks since Mr. Hutchison on examining the hill came upon traces of three walls or ramparts enclosing a space near the western top of the hill, upon which were numerous raised circular rings of stones, apparently the foundations of British houses. Professor Simpson, accompanied by Dr. Macbean and Mr. Hutchison, subsequently made a more systematic investigation, which exposed portions of the faces of the three lines of walls, one of the raised circles inside, and a gate which had formed one of the entrances to the encampment. The ramparts are arranged in a fortified manner, as parallels, and towards that part of the hill from which alone any attack could be made, the other sides presenting natural barriers which, in those times, no invading force could have hoped to overcome. Excavations were made behind the old stone kist, which seems to have been placed just outside the city walls, but nothing of interest was found there.

Iron Fortifications.—A few days after the arrival of General Todleben in London, the directors of the Millwall Ironworks Company invited a large number of military and scientific gentlemen to visit their premises at Millwall to view a three-gun wrought-iron shield which they had completed to the order of the Russian Government, for the defence of Cronstadt. There were present, among others, General George, C.B., General Elias, General Lefroy, Admiral Collinson, Colonel Willmott, Colonel Campbell, Colonel Atchinson, Colonel Haggarton, Colonel Harness, Major Fenwick, Major Millward, Major Field, Commodore Stewart, Captain Sir J. Hay, Captain Chads, Captain Hall, Captain Sherard Osborn, Hon. Captain Egerton, Captain Harrison, Captain Heath, Captain Galton, Dr. Percy, Mr. Reed, Chief Constructor of the Navy; Mr. Tucke, chief inspecting officer of the Admiralty; Mr. Baskcombe, practical instructor of shipbuilding at South Kensington; Le Comte de Vandine, Hon. A. Kinnaird, M.P.; Mr. Leicester O'Beirne, Mr. Bessemer, &c. The shield in question is constructed on the system of fortification patented by Messrs. Hughes & Lancaster. It is 43 feet 6 inches long by 10 feet in height, and is composed of wrought-iron bars, of a size hitherto unattempted in "grooved rolls," 12 inches by 12 inches rolled with a "rebate" and corresponding hollows on the opposite sides strengthened by dovetailed ribs at their back, 3 inches in thickness, which are attached by keys or wedges in dovetailed holes to upright beams or girders, 14 inches by 14 inches, on each side of the embrasures and at the ends, and in two equal divisions of its length, to four frames or brackets like the letter A, with one vertical side. The foundation plate on which the whole structure stands, is 43 feet 6 inches long, 2 feet wide, and 3½ inches thick, rolled in one length. The total weight of the shield is about 140 tons. Each embrasure is 4 feet from the platform, and 4 feet high. In the throat it is 2 feet 2 inches in width, or, with the shelving of the cheeks, 2 feet 9 inches. The military advantages of such an opening in an iron parapet of 15 inches thickness is that the guns can be worked so as to take a greater sweep of range than is possible where the parapet is of masonry. In point of strength, an inch thickness of iron is equal to one foot thickness of stonework, so that the power of a resistance of the shield in question is equivalent to that of a wall 15 feet thick. As a matter of experiment it is to be put upon the parapet of one of the outer ports at Cronstadt, but should it be found to answer the expectations of General Todleben it will itself take the place of the parapet, the whole metal platform being fastened by clamps and rivets into the granite rampart. The piece of work excited general admiration. The visitors also saw a 6-inch plate rolled for the defence of a ship's side, of which the Company is at present executing a large order for the Russian Government.

BIRTHS.—On the 22d ult, at Abinger Hall, Dorking, Lady Abinger, of a daughter—22d ult, at Springwood Park, Kelso, Lady Scott Douglas, of a son—26th Oct., at Copenhagen, Lady Paget, of a son—25th ult, at No. 7, Hyde Park Gardens, the Hon. Mrs. William Byron, of a daughter—28th ult, at 1, Chesham Street, the Hon. Mrs. Gordon, of a son.

MARRIAGES.—On the 29th ult, at Quiddenham Church, Commander Frederick William Charteris, R.N., third son of the Earl of Wemyss and March, to the Lady Louisa Kappel, second daughter of the Earl of Albemarle—28th ult, at St. George's, Hanover Square, Frederick Henry Maitland, Esq., 8th Royal Irish Hussars, eldest son of Colonel Maitland, late commanding 5th Regt B.N.I., great grandson of the sixth Earl of Lauderdale, to Charlotte Sarah, eldest daughter of Lieut.-Colonel Sleigh, late colonel-commandant 2d King's County Regiment, B.N.A., formerly of her Majesty's 77th and 2d West India Regiments—24th ult, at St. James's Church Piccadilly, Algernon Gilliat, Esq., of Fernhill, Berks, to Mary Augusta Georgiana, younger daughter of the Hon. and Rev. Edward Moore, canon of Windsor—24th ult, at St. John's, Paddington, Lieutenant-Colonel Lothian Nicholson, Royal Engineers, C.B., to Mary, second daughter of the Right Hon. Sir John Romilly, the Master of the Rolls—24th ult, at the parish church, Ealing, the Rev. Lyttleton H. Powys Maurice, curate of Wednesbury, Staffordshire, eldest son of the Rev. J. P. Maurice and the Hon. Mrs. Maurice, to Georgiana Elizabeth, eldest daughter of Frank Heathcote, Esq., of Mountfield, Ealing—23d ult, at the British Consulate, Genoa, the Baron Iver Holger Rosenkrantz, Chamberlain to H.M. the King of Denmark and his Minister Resident in Italy, Chevalier of the Order of Danebroge, to Julia Louisa, youngest daughter of the late Major Lewis Mackenzie, of Southwick Crescent, London—29th ult, at Christ Church, Lancaster Gate, G. W. Heaton, Esq., of Lincoln's Inn, and late High Sheriff of Vancouver Island, to Annette Hannah, second daughter of the late James Gordon Campbell, B.C.S.

DEATHS.—On the 23d ult, at St. Leonards-on-Sea, Penelope, widow of the Hon. and Rev. L. Powys, formerly rector of Titchmarsh, Northamptonshire, aged 81—21st ult, at Garboldisham Hall, the Hon. Mrs. Molyneux Montgomerie, of diphtheria, aged 52—26th ult, at Brussels, Emily Isabella, daughter of Captain and Mrs. Hawkins, of Shirenewton House, Monmouthshire, and sister of the Countess of Kintore, aged 20—22d ult, at Balmae, near Kirkcudbright, General George Irving, late of Royal Irish Artillery, aged 91—27th ult, at The Oaks, Bevis Hill, Southampton, Barbarina, eldest daughter of Major-General F. C. Wells, aged 16 years and six months—30th ult, in Chester Square, suddenly, Colonel Des Vœux—29th ult, at Putteridge, Bury, Herts, Thomas Sowerby, Esq., late lieutenant-colonel Coldstream Guards, aged 75—20th ult, at 1, Keynsham Place, Chatkyll, Laurie Park, Sydenham, the wife of Lieut.-Colonel Wm. Jervis—17th ult, Hannah Letitia, wife of Major Stansfeld, of Field House, near Halifax, aged 56—14th ult, 70 miles from Malta, returning to England on board the Peninsular and Oriental Company's steamer Massilia, after 25 years' service in India, Major John Wray, Deputy Quartermaster-General of the Bombay Army, aged 44—12th ult, at Pesth, after a few days' illness, Captain Edmund Charles Cuthbert, Royal Artillery, only son of the late James Cuthbert, Esq., seigneur of Lanorale, Lower Canada, aged 28—22d ult, at Kingston, Portsmouth, Commander George Boucher Dewes—16th ult, at St. Leonards-on-Sea, Susanna, wife of the Venerable Henry Harper, rector of Elveden, Suffolk, and late Archdeacon of Madras—27th ult, at Boulogne-sur-Mer, of paralysis, Charles Manners Lushington, Esq., aged 45—16th ult, at Redruth, Cornwall, S. Davey, Esq., J.P. and D.L., and Deputy Warden of the Stannaries of Cornwall, aged 80—25th ult, at Morland Hall, Penrith, F. B. Atkinson, Esq., J.P., aged 59—19th ult, at Paris, Edmund Molyneux, Esq., H.M.'s Consul for the State of Georgia—14th ult, John MacGillivray Noble, Esq., who had recently come into the possession of the estates of Gask Failie and Inverernie, Nairnshire, after 12 years' litigation, aged 61—16th ult, at Ousecliffe, near York, William Hudson, Esq. registrar of Her Majesty's Court of Probate for the North and East Ridings of Yorkshire, aged 67—19th ult, Roger Riding, M.D., of 79, Kensington Gardens Square—18th ult, at Rodney Lodge, Cheltenham, Dr. John L. Arnott, M.D. Edinburgh, and M.R.C.S.E., aged 23—27th ult, at Hitchen, Dr. Frederick Hawkins, M.D., aged 68—22d ult, Ernest Richard Seymour, Esq., Barrister-at-law, eldest surviving son of Dr. Seymour, M.D., of Charles Street, Berkeley Sq.—23d ult, at Dorset Villa, Reading, William Everett, Esq., Fellow of New College, Oxford, and Barrister-at-law, Western Circuit, youngest son of the late Rev. William Everett, B.D., formerly Fellow of New College, Oxford, and Vicar of Romford, Essex—15th ult, at Bath, James Western, Esq., late of Great James Street, Bedford Row, aged 90—17th ult, at Nunwick, Northumberland, the Rev. William John Trevenen, M.A., incumbent of Holme, Hunts, and domestic chaplain to Lord Teignmouth—18th ult, at Ventnor, the Rev. Henry Low, late fellow and tutor of Exeter College, Oxford—21st ult, at Filey, suddenly, from paralysis, the Rev. Edward Gambier Pym, nephew of Lord Gambier, rector of Washington, Durham, and late rector of Willian, Herts, and incumbent of Fylingdales, Yorkshire, aged 36—22d ult, the Rev. Evan Morgan, vicar of Llantrisant, Glamorganshire, J.P. for that county, aged 77—25th ult, at St. Leonard's, Exeter, the Rev. Dr. C. Porter, D.D., for many years President of King's College, Nova Scotia, aged 85—22d ult, at Headington, near Oxford, the Rev. John Robinson, eldest son of J. J. Robinson, Esq., of Box Grove, Guildford, aged 34—21st ult, the Rev. John F. Benwell, rector of Neenton, Shropshire, aged 79—30th ult, at Weston Colville Rectory, Cambridgeshire, the Rev. William Acton, aged 76—27th ult, the Rev. W. Powell, M.A., of Jesus College, Oxford, and vicar of Mundon, Essex, aged 42.

Markets.

COVENT GARDEN, Dec. 3.

Apples and Pears of excellent quality may now be obtained in abundance. Amongst the latter are Marie Louise, Winter Nelis, Glou Morceau, Easter Beurré, Beurré Diel, Crassane, and others. Grapes are still sufficient for the demand, and good Dutch Hamburghs may now be obtained at from 9d. to 1s. per lb. Of Pine Apples there is now a plentiful supply. Kent Filberts and Cobs fetch from 70s to 80s. per 100 lbs. Walnuts are plentiful, and Oranges begin to get more abundant. Some Seakale and forced Kidney Beans may now be had. Lemons fetch from 5s. to 10s. per 100. Pomegranates may now be obtained. For Potatos prices are still comparatively high. Flowers chiefly consist of Orchids, Heaths, Chrysanthemums, Chinese Primulas, Azaleas, Camellias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 4s to 6s	Oranges, per 100, 4s to 8s
Grapes, per lb., 1s to 5s	Lemons, per 100, 5s to 8s
Melons, each, 1s to 4s	Nuts, Barcelona, do., 16s
Pears, per doz., 1s 6d to 3s	— New Brazil, do., 14s.
Apples, per sieve, 1s to 2s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, about 2s per 100	Shallots, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 60s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Seakale, p. puun., 3s 6d to 4s
Carrots, per bunch, 4d to 9d	Endive, per score, 1s to 2s 6d
Turnips, p. bunch, 6d to 8d	Horse Radish, p. bunch, 1s to 4s
Cucumbers, each 4d to 1s	Mushrooms, p. pott., 1s to 1s9d
	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

BRITISH WOOLS.—London, Dec. 1.

We have had a brisk demand for most descriptions of wool, but especially long wool, and at a considerable advance up to the end of last week, but this week a halt has taken place, and we expect a calm for the remainder of the year.

METROPOLITAN CATTLE MARKET.

MONDAY, Nov. 28.

The supply of Beasts is very much smaller than for a long time past. Good qualities are readily disposed of at high prices. In a few instances even last quotations are exceeded. All kinds are dearer. The number of Sheep is also small, and prices are higher. A good clearance is effected. Good Calves are scarce and dear. From Germany and Holland there are 850 Beasts, 600 Sheep, 68 Calves, and 95 Pigs; from Scotland, 100 Beasts; from Ireland, 500; and 2000 from the Northern and Midland Counties.

	s.	d.	s.	d.
Best Scots, Herefords, &c. ..	5	4 to 5	6	
Best Short-horns	5	0 — 5	4	
2d quality Beasts	3	4 — 4	0	
Best Downs and Half-breds ..	5	8 — 5	10	
Do. Shorn	—	..		

	s.	d.	s.	d.
Best Long-wools.	5	4 —	5	6
Do. Shorn	—	..		
Ewes & 2d quality	4	6 —	5	0
Do. Shorn	—	..		
Lambs	—	..		
Calves	4	0 —	5	6
Pigs ..	3	0 —	5	0

Beasts, 7850; Sheep and Lambs, 17,580; Calves, 70; Pigs, 475.

THURSDAY, Dec. 1.

The supply of Beasts is again short. The demand is active, and Monday's quotations are readily obtained. The number of Sheep is considerably larger than on Thursday last, yet it is not excessive. Trade is not quite so brisk, but there is no quotable reduction in price. Calves are more plentiful; there is, however, a demand for them. Our foreign supply consists of 1067 Beasts, 240 Sheep, 287 Calves, and 140 Pigs.

	s.	d.	s.	d.
Best Scots, Herefords, &c. ..	5	4 to 5	6	
Best Short-horns	5	0 — 5	4	
2d quality Beasts	3	4 — 4	0	
Best Downs and Half-breds ..	5	8 — 5	10	
Do. Shorn	—	..		

	s.	d.	s.	d.
Best Long-wools.	5	4 —	5	6
Do. Shorn	—	..		
Ewes & 2d quality	4	6 —	5	0
Do. Shorn	—	..		
Lambs	—	..		
Calves	4	0 —	5	6
Pigs ..	3	0 —	5	0

Beasts, 1610; Sheep and Lambs, 4120; Calves, 315; Pigs, 180; Milch Cows, 75.

COAL MARKET.—Nov. 30.

Byass's Bobside West Hartley, 19s.; Davison's West Hartley, 19s; Hastings Hartley, 19s; West Hartley, 19s.; Wylam, 18s. 6d.; Eden Main, 22s; Walls End Ball, 21s. 6d.; Walls End Braddylls Hetton, 22s 6d.; Walls End Haswell, 23s.; Walls End Hetton, 22s.; Walls End Kepier Grange, 22s. 3d.; Walls End Russell's Hetton, 22s. 6d; Walls End Tunstall, 22s.; Walls End Hartlepool, 22s; Walls End Heugh Hall, 22s. 3d.; Walls End East Hartlepool, 23s.; Walls End South Kelloe, 22s. 3d.—Ships at market, 41.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Dec. 1.

Prime Meadow Hay	95s to 105s	Clover, old	110s to 126s
Superior do. ..	— —	New Clover ..	— —
Inferior do. ..	— —	Do. second cut ..	— —
New do.	— —	Straw	25 30
Rowen	— —		

HARVEY & EASTON.

MARK LANE.—MONDAY, Nov. 28.

The supply of Wheat from Essex and Kent to this morning's market was small, and met a slow sale at last week's quotations, the greater part not being disposed of towards the close of the market. The attendance was limited, and foreign Wheat neglected, the sale being confined to retail purchasers on late terms. Barley of all descriptions was difficult of sale at last week's rates. Beans and Peas were unaltered in value. The arrivals of Oats being very short, the trade was firm, and Russians brought rather more money. Flour was steady at late prices.

PRICE PER IMPERIAL QUARTER.		s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk ..	White	39	42	Red	36	41
— — fine selected runs ..	ditto	41	44	Red	39	42
— — Talavera		46	53			
— Norfolk		—		Red	—	
— Foreign		35	50			
BARLEY, grind. & dist., 26s to 30s ..	Chev.	32	35	Malting ..	30	33
— Foreign ..	grinding and distilling	21	27	Malting ..	26	31
OATS, Essex and Suffolk		20	22			
— Scotch and Lincolnshire	Potato	20	24	Feed	20	22
— Irish	Potato	19	22	Feed	—	
— Foreign	Poland and Brew	20	23	Feed	18	21
RYE		31	33	Foreign ..	—	
RYE-MEAL, Foreign		—				
BEANS, Mazagan	33s to 35s .. Tick	34	36	Harrow ..	34	36
— Pigeon	35s to 40s .. Winds.	—		Longpod	—	
— Foreign	Small	34	38	Egyptian	33	34
PEAS, White, Essex and Kent ..	Boilers	36	40	Suffolk ..	38	41
— Maple	—s to —s .... Grey	—		Foreign ..	32	40
MAIZE	White	—		Yellow ..	—	
FLOUR, best marks delivered ..	per sack	35	40			
— 2d do	ditto	23	34	Country .	28	34
— Foreign	per barrel	18	25	Per sack	32	36

FRIDAY, Dec. 2.

The weather since the 25th has been wet, with gales from the S. and S.W.; yesterday and to-day fine. We have to report a continuance of the dull inactive trade which characterised the business in Wheat since so long a time, but as there is a serious falling off in arrivals from abroad at our English ports, late rates have been maintained. Barley prices still tend downwards. Beans remain as last quoted, but Peas were the turn cheaper in some markets. Oats met a better inquiry, and old sweet boiled parcels have improved in value; Russians have advanced 6d. to 1s. per qr. from the lowest point. Flour remained unaltered. Since Friday last 22 vessels have been reported off the coast. The arrivals continuing to be very small, and there being only very little demand for all descriptions of grain, the floating trade has been inactive, and we cannot quote any alteration in prices. Paris, Dec. 1.—Flour has remained dull and unaltered in value. The six marks for delivery this month are quoted equal to 31s. 3d. per 196 lb. The present stock of Flour is estimated at 71,000 cwt. There is still little doing in Wheat, and 9d. per quarter lower rates have been accepted in some instances. The arrivals of Wheat this week, both English and foreign, have been to a fair extent, also of Barley, and small of Oats and Flour. The attendance was very limited, as was also the business transacted. Wheat, both English and foreign, may be quoted the same as on Monday. Barley, Beans, and Peas were a dull sale. Monday's currency for Oats is fully supported.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1040 qrs.	780 qrs.	1220 qrs.	590 sks.
Irish	—	—	600	—
Foreign ..	16,460 ,,	2090	5120 ,,	50 ,,
				— brls

LIVERPOOL: Nov. 29.—We have not had a large attendance at our corn exchange this morning, and the demand for Wheat has been only of a moderate character; prices, however, are fully as high as last market day, and in some instances even rather higher. Flour has improved 6d. per barrel and sack, and there is some business passing in French for shipment early next year. Indian Corn is offered sparingly to-day, and Danubian finding rather more inquiry, holders advanced their pretensions 6d. per qr.; no change in American. Oats a shade dearer, but Oatmeal being in better supply shows no alteration in value. Beans, Peas, and Barley are each slow of sale at our quotations. Market closes remarkably firm.

FRIDAY, Dec. 2.—Market very moderately attended. Wheat in consumptive demand at full rates. Flour in fair inquiry without change in value. Indian Corn 6d. dearer for Galatz. Mixed American unchanged. Beans, Oats, and Oatmeal steady.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Oct. 22	38s 6d	30s 2d	20s 0d	29s 1d	38s 2d	35s 5d
— 29	38 9	30 2	20 1	30 9	38 0	35 0
Nov. 5	38 11	30 3	20 2	29 9	37 9	35 5
— 12	38 9	30 1	19 11	33 0	37 11	35 9
— 19	38 9	29 9	19 5	29 9	37 9	34 11
— 26	38 8	29 3	20 0	40 0	37 10	35 1
Agg. Aver.	38 9	29 11	19 11	32 0	37 11	35 2

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

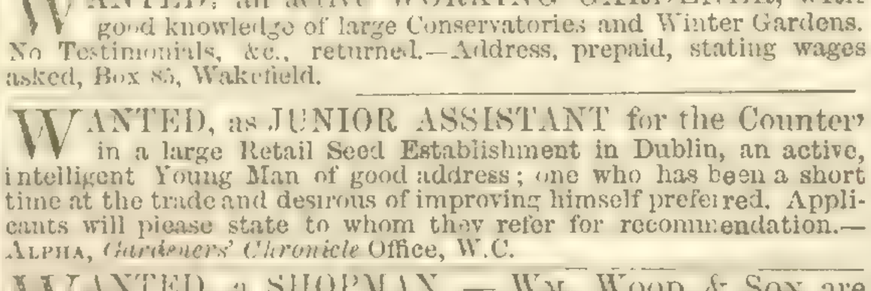

WANTED, as FOREMAN, an Experienced Man.—Must be used to Laying-out New Grounds, Road Making, &c.; and competent to undertake the Management of from 50 to 60 Men. A good reference will be required from last employer.—Address, Mr. HAWKS, Contractor, Oxford Road, Reading.

To Knifemen.

WANTED, a good BUDDER, GRAFTER, and LAYERER, to be under the Foreman.—Apply, stating age, references, &c., to J. C. WHEELER & SON, Nurserymen, Gloucester.

Flower Gardener Only.

WANTED, an active WORKING GARDENER, with good knowledge of large Conservatories and Winter Gardens. No Testimonials, &c., returned.—Address, prepaid, stating wages asked, Box 85, Wakefield.

WANTED, as JUNIOR ASSISTANT for the Counter in a large Retail Seed Establishment in Dublin, an active, intelligent Young Man of good address; one who has been a short time at the trade and desirous of improving himself preferred. Applicants will please state to whom they refer for recommendation.—ALPHA, *Gardeners' Chronicle* Office, W.C.

WANTED, a SHOPMAN. — WM. WOOD & SON are requiring the services of a steady, respectable MAN for the Seed Department of their business. One who has some knowledge of the Nursery business will be preferred.—Address, stating terms, as above. Woodlands Nursery, Maresfield, Uckfield, Sussex.

WANTED, an UNDER SHOPMAN in a Wholesale London Seed Warehouse.—Apply by letter, stating age, salary required, and where last employed.—A. B., *Gardeners' Chronicle* Office, W.C.

WANTED, as ROUGH CARPENTER, FENCER, and GATE MAKER, a respectable Man, who thoroughly knows his business.—Apply to HENRY WHITEMAN, Bailiff, Buckhurst, Sunningfall, Berks, stating references, wages, &c.

WANT PLACES.—Letters to be Post Paid.

HOUSEKEEPER, or as COMPANION to a Lady.—A Lady, aged 35, who can be highly recommended, and who has had much experience. She would be willing to educate one or two little Girls, or to accept any position of trust.—A. A., 30, Avenue Road, New Road, Hammersmith, W.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS.—B. S. WILLIAMS is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any Gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

GARDENERS, FORESTERS and BAILIFFS, or LAND STEWARDS.—The undersigned can always recommend the above, whose characters and abilities may be strictly relied on. Full particulars upon application.—JAMES DICKSON & SONS, The "Newton" Nurseries, Chester.

GARDENER (HEAD).—Age 33, single; has a thorough knowledge of his profession. Can be well recommended. Two years' good character.—E. G., Mr. Snooks, Poulterer, Kensington, W.

GARDENER (HEAD).—Age 26; understands Forcing Flowers, Fruits, and Vegetables. Seven years' experience. Can be well recommended.—ALMA, Bull Hotel, Gerrard's Cross, Bucks.

GARDENER (HEAD).—Age 25, single; has a thorough practical knowledge of his profession in all its branches. A good character from his last employer.—G. R., Post Office, Nuthall, Nottingham.

GARDENER (HEAD).—Age 38; practical working. Understands Forcing of all kinds of Fruits, Flowers, and Vegetables, and Flower and Kitchen Gardens. Two years' good character.—S. S., Post Office, Dedham, Essex.

GARDENER (HEAD).—Age 35, no incumbrance; will be disengaged the first week in January. Thoroughly practical in all branches of his profession; has also a practical knowledge of Erecting and Heating Horticultural Buildings. Nine years' unexceptionable character. W. B., 19, Queen Street, Brompton, S.W.

GARDENER (HEAD), age 37, married.—In consequence of the death of the late Sir Charles Knightley, Bart., with whom he has lived upwards of 12 years, JOHN BROWN now offers his services in the above capacity to any Nobleman or Gentleman requiring the services of a first-class Gardener. Satisfactory references as to character and abilities can be had.—JOHN BROWN, Fawsley Park, Daventry.

GARDENER (HEAD).—Age 33, married; thoroughly understands the Management of Kitchen and Flower Gardens, including the Forcing of Vegetables, Fruits, and Flowers; the growth of Fruits in pots, the Laying out of Grounds, making Fruit Tree Borders, &c. No objection to any part of the United Kingdom or Ireland. Will be at liberty on January 2 next. Good wages expected. Reference kindly permitted to present employer, Hy. J. Ramsden, Esq.—THOS. ELLAM, Oxton Hall, Tadcaster.

GARDENER (HEAD).—Age 34, married; thoroughly practical, having lived a great many years in some of the best Gardens in England and Scotland, where the various Systems of Gardening were carried on with spirit; also well up in Modern Plants, and the Cultivation of Tropical Fruit, with experience in Horticultural Buildings. Four years' first-class character from last situation. No objection to Scotland or Ireland.—A. M., Messrs. Pridham & Sanders, Sion Nursery, Croydon, S.

GARDENER. — Age 27, single; has a thorough knowledge of his profession in all its branches. Unexceptionable reference can be given.—QUERCUS, Morse's Nursery, Epsom.

GARDENER (UNDER).—Age 20; well understands his profession. Three years' good character.—Mr. [illegible], Surrey.

FOREMAN, PROPAGATOR, &c.—First-class experience, and reference to London and Provincial Nurseries.—A. B., Alfred Terrace, Britannia Road, Fulham, S.W.

To Nurserymen.

FOREMAN and PROPAGATOR.—Thoroughly understands the routine of general Nursery work; has practice in the Propagation of Fruit Trees, and Ornamental and Shrubs. References from two of the most eminent firms.—A. B., 78, Alvin Street, Gloucester.

To Noblemen and Gentlemen.

LAND STEWARD.—Further information communicated with.—C. H., 29, Andover Road, Hampshire.

STEWARD or BAILIFF.—A practical Man, having the Management of an Estate in one of the Midland Counties, is open to a re-engagement. Thoroughly conversant with all the details of modern Agriculture on Heavy and Light Soils, Growth and Management of Woods, Drainage, Levelling, &c.—Messrs. Gibbs & Co., Half Moon Street, Piccadilly, London, W.

BAILIFF or STEWARD.—Aged 38, married, active and industrious; understands his business in all its branches. Six years' good character.—S. C., Moss End, Warfield, Bracknell.

FARM BAILIFF.—The Advertiser wishes to recommend a useful Man as above, who is a good judge of Stock, Accountant, &c., and is not afraid of work.—J. H., Wardley, Horley, Surrey.

FARM BAILIFF, in January next.—Is well acquainted with the Management both of Heavy and Light Land, has considerable experience; has been very successful in the Management of Stock in general. First-class testimonials as to character.—B. C., Post Office, Barnet, N.

FARM BAILIFF.—Age 40; active, thoroughly conversant with all Agricultural pursuits, the Breeding, Rearing and Feeding of Cattle, and the Cultivation of both Pasture and Arable Land. The highest references can be given as to character and capability.—D. C., Pinner Station, Pinner, Middlesex.

SHOPMAN.—Age 28, married; nine years' [illegible].—C. R., *Gardeners' Chronicle* Office, W.C.

SHOPMAN in a Nursery and Seed Business, or ASSISTANT, to execute orders in a London Firm. Has a knowledge of the Nursery Business.—JAMES TAPLIN, Messrs. Wood & Son, Woodlands Nursery, Maresfield, Sussex.

TO NURSERYMEN and SEEDSMEN.—A Youth, age 16, son of a Gardener, wishes to obtain a situation to ASSIST in the SEED-SHOP or in the Plant Department. Has been two years in a Garden.—A. B., Mr. Jones, Seedsman, &c., Henley-on-Thames, Oxon.

To the Seed Trade.

WAREHOUSEMAN, or SHOPMAN (UNDER).—Must be well recommended.—A. M., 24, Lord Street, Liverpool.

DAIRYMAID (HEAD).—Single; an experienced Ayrshire Dairymaid. First-class reference.—A. Z., 1, Thomas Street, Bangor, North Wales.

DAIRYMAID (UPPER), in a Nobleman's Family, thoroughly experienced, understands her duties in all branches. First-class references from former situations in Noble Families.—N. K., W. H. Smith & Son, 33, Union Street, Bristol.

COOK (THOROUGH)—Can be highly recommended by the Lady she is now leaving.—A. G., J. Beaun, Butcher, Harrow Green, Willesden, Middlesex, N.W.

THRESHER'S COLOURED FLANNEL SHIRTS
Next Door to Somerset House, Strand, W.C.

THE GREENHOUSE in the STEREOSCOPE.
CRANSTON'S PATENT.
Six SLIDES of different Houses, Post free for 60 Stamps.
Single SLIDES, 12 Stamps each.
DESCRIPTIVE BOOK, fully illustrated (Second Thousand), Post free for 20 Stamps, from the Author and Patentee, JAMES CRANSTON, Architect, 1, Temple Row West, Birmingham.

WHITE and SOUND TEETH are indispensable to personal attraction and to health and longevity. The proper mastication of food with ROWLAND'S ODONTO, or Pearl Dentifrice, preserves and imparts a pearl-like whiteness to the Teeth, eradicates Tartar and spots of incipient decay, strengthens the Gums, and gives a pleasing fragrance to the Breath. Price 2s. 9d. per box. Sold at 20, Hatton Garden; and by Chemists and Perfumers. Ask for "ROWLANDS' Odonto."

TAYLOR BROTHERS' GENUINE MUSTARD.—Dr. HASSALL having subjected this Mustard to a most minute microscopical examination and chemical analysis, reports that it contains the three essential properties of good Mustard, viz., Flavour, Pungency, and Delicate Flavour. See that each Package bears the Trade Mark the "Prize Ox," and Dr. Hassall's Report. Sold by all Grocers, &c., throughout the kingdom.

Sauce.—Lea and Perrins'
WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs "the ONLY GOOD SAUCE," is prepared solely by LEA & PERRINS.
The public are respectfully cautioned against worthless imitations, and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper. ASK FOR LEA & PERRINS' SAUCE.
*** Sold Wholesale and for Export, by the Proprietors, Worcester; Messrs. CROSSE & BLACKWELL; Messrs. BARCLAY & SONS, London; and by Grocers and Oilmen universally.

DINNEFORD'S PURE FLUID MAGNESIA has during 25 years emphatically sanctioned by the Medical Profession, and universally accepted by the public, as the best remedy for Acidity of the Stomach, Heartburn, Headache, Gout, Indigestion, and as a mild Aperient for delicate constitutions, especially for ladies and children. It is prepared in a state of great purity and of uniform strength by
DINNEFORD & Co., 172, New Bond Street, London, and sold by respectable Chemists throughout the world.

No more Medicine.
PERFECT DIGESTION, strong Nerves, sound Lungs, healthy Liver, refreshing Sleep, and functional regularity restored to energy to the most disordered or enfeebled are restored by
DU BARRY'S REVALENTA ARABICA FOOD.
Extract from 60,000 cures:—Cure No. 58,256, "of the Marquis de Bréhan, Naples, of a fearful liver complaint, wasting away, nervous palpitation all over, bad digestion, constant sleeplessness, spirits, and the most intolerable nervous agitation, which even her sitting down for hours together, and which for years had resisted the careful treatment of the best French and medical men." In Tins, 1 lb., 2s. 9d.; 2 lb. 4s. 6d.; 12 lb. 22s.
BARRY DU BARRY & Co., 77, Regent Street, London, W.; FORTNUM & MASON, Piccadilly, W.; at PHILIPS's, Tea-dealers; PETTY & WOOD's; ABBIS's, 61, Gracechurch Street; 4 Cheapside.

CARBOLIC ACID for Medical, Commercial, Disinfecting purposes, at greatly reduced prices.
CALVERT, CLIFT, & Co., 7, Bond Street, Manchester.

A WHOLE LIFE may be PASSED with scarcely a DAY of ILLNESS if PARR'S LIFE PILLS be used on the first premonitory symptoms of functional derangement.
May be had of any Chemist.

PARR'S LIFE PILLS are particularly recommended to all persons suffering from Headache or Indigestion, which arising from constitutional inaction, biliary derangement, or indulgence at the table. They have never been known to fail affording immediate relief.—May be had of any Chemist.

CORNS and BUNIONS.—A Gentleman, many years tormented with Corns, will be happy to afford others the information by which he obtained their complete removal in a short time without pain or any inconvenience.—Forward address on a stamped envelope to W. GOODALL, Esq., Epsom, Surrey.

The Gardeners' Chronicle Newspaper.

SATURDAY, DECEMBER 17, 1864.

THRESHER'S COLOURED FLANNEL SHIRTS.
Next Door to Somerset House, Strand, W.C.

Moires Antiques.

SEWELL AND CO. have the Largest Selection of Spitalfields MOIRES ANTIQUES, in White, Black, and all New Colours, at 4½ guineas the full dress.
Compton House, Frith Street; and Old Compton Street, Soho, W.

Evening and Ball Dresses.

SEWELL AND CO. have, in anticipation of Christmas, prepared a choice variety of TULLE, NETT, and TARLATAN DRESSES. They have also some beautiful patterns in EVENING ROBES exclusively designed for their house.
SEWELL & Co., Compton House, Old Compton Street; and Frith Street, Soho Square, W.

Great Bargains in best

TABLE GLASS, CHINA,
GAS CHANDELIERS, LAMPS, &c.
Bonâ fide Selling Off, prior to Extensive Alterations.
T. R. GRIMES' SHOW ROOMS,
83, New Bond Street, W.
CASH ONLY.

THE PERFECT SUBSTITUTE for SILVER.—The REAL NICKEL SILVER, introduced more than 30 years ago by WILLIAM S. BURTON, when PLATED by the patent process of Messrs. Elkington & Co., is beyond all comparison the very best article next to sterling silver that can be employed as such, either usefully or ornamentally, as by no possible test can it be distinguished from real silver.

A small useful set guaranteed of first quality for finish and durability, as follows:—

	Fiddle or Old Silver Pattern.			Bead Pattern.			Thread or Brunswick Pattern.			King's or Lily, &c.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
12 Table Forks	1	13	0	2	0	0	2	4	0	2	10	0
12 Table Spoons	1	13	0	2	0	0	2	4	0	2	10	0
12 Dessert Forks	1	4	0	1	10	0	1	12	0	1	15	0
12 Dessert Spoons	1	4	0	1	10	0	1	12	0	1	15	0
12 Tea Spoons	0	16	0	1	0	0	1	2	0	1	5	0
6 Egg Spoons, gt. bowls..	0	10	0	0	12	0	0	12	0	0	13	6
1 Sauce Ladles	0	6	0	0	8	0	0	8	0	0	9	0
1 Gravy Spoon	0	6	6	0	9	0	0	10	0	0	11	0
6 Salt Spoons, gt. bowls..	0	3	4	0	4	0	0	4	0	0	4	6
1 Mustard Spoon, gt. bwl.	0	1	8	0	2	0	0	2	0	0	2	3
1 Pair of Sugar Tongs ..	0	2	6	0	3	6	0	3	6	0	4	0
1 Pair of Fish Carvers ..	1	4	0	1	10	0	1	10	0	1	10	0
1 Butter Knife	0	2	6	0	4	0	0	5	6	0	6	0
1 Soup Ladle	0	10	0	0	12	0	0	16	0	0	17	0
1 Sugar Sifter	0	3	3	0	4	6	0	4	6	0	5	0
Total	9	19	9	12	9	0	13	9	6	14	17	3

Any article to be had singly at the same prices. An oak chest to contain the above, and a relative number of knives, &c., 2*l.* 15*s.* Tea and coffee sets, dish covers and corner dishes, cruet and liqueur frames, &c., at proportionate prices. All kinds of replating done by the patent process.

CUTLERY, WARRANTED.—The most varied assortment of TABLE CUTLERY in the world, all warranted, on Sale at WILLIAM S. BURTON'S, at prices that are remunerative only because of the largeness of the sales.

Ivory Handles.	Table Knives per Dozen.		Dessert Knives per Dozen.		Carvers per Pair.	
	s.	d.	s.	d.	s.	d.
3-inch ivory handles	12	0	9	6	4	6
3½-inch fine ivory handles	15	0	11	6	4	6
4-inch ivory balance handles	18	0	14	0	5	0
4-inch fine ivory handles	24	0	18	0	7	3
4-inch finest African ivory handles ..	32	0	26	0	11	0
Ditto, with silver ferules	40	0	33	0	12	6
Ditto, carved handles, silver ferules ..	50	0	43	0	17	6
Nickel electro silver handles, any pattern .	25	0	19	0	7	6
Silver handles, of any pattern	84	0	54	0	21	0
Bone and Horn Handles—Knives and Forks per dozen.	s.	d.	s.	d.	s.	d.
White bone handles	11	0	8	6	2	6
Ditto, balance handles	21	0	17	0	4	6
Black horn rimmed shoulders	17	0	14	0	4	0
Ditto, very strong riveted handles ..	12	0	9	0	3	0

The largest stock in existence of Plated Dessert Knives and Forks, in cases and otherwise, and of the New Plated Fish Carvers.

DISH COVERS and HOT-WATER DISHES, in every material, in great variety, and of the newest and most recherché patterns, are on SHOW at WILLIAM S. BURTON'S. Tin Dish Covers, 6*d.* the set of six; Block Tin, 12*s.* 3*d.* to 28*s.* 9*d.* the set of six; elegant Modern Patterns, 31*s.* to 58*s.* 6*d.* the set; Britannia Metal, with or without Silver-plated Handles, 76*s.* 6*d.* to 110*s.* 6*d.* the set; Sheffield Plated, £10 to £16 10*s.* the set; Block Tin Hot-water Dishes, with Wells for Gravy, 12*s.* to 30*s.*; Britannia Metal, 22*s.* to 77*s.*; Electro Plated on Nickel, full size, £11 11*s.*

WILLIAM S. BURTON, GENERAL FURNISHING IRONMONGER by appointment to H.R.H. the Prince of Wales, sends a CATALOGUE gratis and post paid. It contains upwards of 600 Illustrations of his illimited Stock of Sterling Silver and Electro-Plate, Nickel Silver and Britannia Metal Goods, Dish Covers, Hot-water Dishes, Stoves, Fenders, Marble Chimney-pieces, Kitchen Ranges, Lamps, Gaseliers, Tea-Trays, Urns and Kettles, Clocks, Table Cutlery, Baths, Toilet Ware, Turnery, Iron and Brass Bedsteads, Bedding, Bed Room Cabinet Furniture, &c., with Lists of Prices, and Plans of the 20 large Show Rooms, at 39, Oxford Street, W.; 1, 1A, 2, 3, and 4, Newman Street; 4, 5, and 6, Perry's Place, and 1, Newman Yard, London, W.

Manufacturers to the Queen and Prince of Wales.

FRY'S HOMŒOPATHIC ICELAND MOSS PEARL COCOA.
FRY'S SOLUBLE CHOCOLATE.
J. S. FRY & SONS were the only English Manufacturers of Cocoa who obtained the Prize Medal, 1862.

TAYLOR BROTHERS' GENUINE MUSTARD.
Dr. HASSALL having subjected this Mustard to a rigorous microscopical examination and chemical analysis, reports that it contains the three essential properties of good Mustard, viz., Purity Pungency, and Delicate Flavour. See that each Package bears their Trade Mark the "Prize Ox," and Dr. Hassall's Report. Sold by all Grocers, &c., throughout the kingdom.

Sauce.—Lea and Perrins'

WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE," is prepared solely by LEA & PERRINS.
The public are respectfully cautioned against worthless imitations and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper. ASK FOR LEA & PERRINS' SAUCE.
*** Sold Wholesale and for Export, by the Proprietors, Worcester; Messrs. CROSSE & BLACKWELL; Messrs. BARCLAY & SONS, London, &c.; and by Grocers and Oilmen universally.

CHRISTMAS PRESENTS and NEW YEAR'S GIFTS for the Promotion of Personal Attraction.—ROWLANDS' MACASSAR OIL creates and sustains a luxuriant Head of Hair. ROWLANDS' KALYDOR renders the Skin soft, fair, and blooming, and eradicates all defects. ROWLANDS' ODONTO, or Pearl Dentifrice, imparts a pearl-like whiteness to the Teeth, and a pleasing fragrance to the Breath.—Sold at 20, Hatton Garden, and by Chemists and Perfumers.
Ask for "ROWLANDS'" Articles.

SCOTTISH UNION INSURANCE COMPANY (FIRE and LIFE), 37, Cornhill, London, E.C. Established 1824.
Moderate Rates of Premium.
Liberal Conditions.
Prompt Settlements.
Prospectuses in full and Proposal Forms at the Company's Offices. No. 37, Cornhill, London. FREDK. G. SMITH, Secretary.

THE LANDS IMPROVEMENT COMPANY.
Incorporated by Special Act of Parliament in 1853.
2, Old Palace Yard, Westminster, S.W.
To LANDOWNERS, THE CLERGY, ESTATE AGENTS, SURVEYORS, &C., IN ENGLAND AND WALES, AND IN SCOTLAND.

The Company advances money, unlimited in amount, for the following works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for 25 years.

1. Drainage, Irrigation and Warping, Embanking, Inclosing, Clearing, Reclamation, Planting, for any beneficial purpose. Engines or Machinery for Drainage or Irrigation.
2. Farm Roads, Tramways and Railroads for agricultural or farming purposes.
3. Jetties or Landing places on the sea coast or on the banks of navigable rivers or lakes.
4. The Erection of Farm Houses, Labourers' Cottages, and other Buildings required for Farm purposes, and the improvement of and additions to Farm Houses and other buildings for Farm purposes.

Landowners assessed under the provisions of any Act of Parliament, Royal Charter, or Commission in respect of any public or general works of drainage or other improvements, may borrow their proportionate share of the cost, and charge the same with the expenses on the lands improved.

No investigation of title is required, and the Company being of a strictly financial character do not interfere with the plans and execution of the Works, which are controlled only by the Government Enclosure Commissioners.

For further information, and for forms of application, apply to the Honourable WILLIAM NAPIER, Managing Director, 2, Old Palace Yard, Westminster, S.W

COMMODORE NUTT and MINNIE WARREN, on MONDAY EVENING and during the WEEK, at ST. JAMES'S HALL, PICCADILLY, at 8 o'Clock ONLY, in consequence of their engagement at the Crystal Palace during the day.
COMMODORE NUTT and MINNIE WARREN, Best Man and Bridesmaid to General Tom Thumb and Wife, will give ONE LEVEE each Evening, and appear in a MELANGE of SONGS, DANCES, DUETS, &c. Change of Programme at each Levee.
Admission 1*s* and 2*s*.; Reserved Stalls, 3*s*. each. Children under 10 years of age, half price in 2*s*. and 3*s*. places.
On BOXING DAY and during the HOLIDAYS there will be THREE LEVEES daily, at 11, 3, and 8 o'Clock.

DUBLIN INTERNATIONAL EXHIBITION of FINE ARTS and MANUFACTURES, 1865.
Under the Special Patronage of HER MAJESTY THE QUEEN.
Intending Exhibitors are informed that December 31 is the latest day on which APPLICATIONS for SPACE will be received.
The requisite Forms can be obtained at the House of the Society of Arts, John Street, Adelphi, London, W.C.; or at the Exhibition Palace, Dublin. By Order. HENRY PARKINSON, Secretary.

News of the Week.

ADVICES from New Zealand confirm the telegraphic announcement received a fortnight since through Australia that the hope of a permanent peace with the Maories may be considered at an end. The 200 Waikato prisoners who escaped from the island of Kawau, near Auckland, on the 12th September have entrenched themselves in a strong pah in an almost inaccessible position in the northern part of the island, which has hitherto remained at peace. They have there been supplied with firearms and provisions, and it is feared that the neighbouring tribes which have heretofore taken no part in the hostilities will be induced to join them. From Tauranga, also, where peace was supposed to have been established by the last victory, the Maories who declined to join in the submission of the others have built a large work near the site of the Gate Pah, and have stopped the surveyors in measuring the confiscated lands on the highway to the Waikato district. Two pahs have been captured and destroyed by the troops in Taranaki, but the real campaign in that province has not yet commenced. This unsatisfactory state of affairs has been complicated by a dispute between the Governor and the Ministry on the policy and conduct of the war. The Ministry, it appears, required that the Maories should be required to give up their arms and sufficient land to enable the colony to keep faith with the military settlers. Sir GEORGE GREY refused both requests, and the Ministry thereupon resigned. The Governor, however, refused to accept their resignations, and it is understood that the Ministers have consented to retain office until the meeting of the Assembly.

A despatch from Madrid announces the resignation of the Narvaez Ministry, caused, it is said, by the resolution of the English Government to recognise the insurgents of San Domingo as belligerents, in pursuance of the reservation expressed by England when the island was annexed to Spain. The Spanish Cabinet accordingly decided on the abandonment of San Domingo, but the QUEEN refused her consent, whereupon the Ministers tendered their resignations.

The long debate in the Italian Senate on the Bill for the transfer of the capital was brought to a conclusion on Friday, when the Bill was adopted by a majority of 87, the numbers being 134 to 47. The Bill received the Royal assent on Monday, and on the following day the Minister of Finance announced that the transfer of the capital will be carried out in the course of next May. A Royal decree has since been issued sanctioning the Convention of the 15th September.

Accounts from Constantinople state that the Porte has accepted the proposition which it had previously refused for the appointment of a commission by the great Powers, to place the police of the Danube under international control. A convention has been signed between the Porte and Persia for a new Indian telegraph line.

From the United States we learn that General SHERMAN, after having been repulsed in his first attempt to cross the Oconnee River, has succeeded in crossing it with his main army, and avoiding Macon, Augusta and all the other large towns against which he was supposed to be marching, is making his way to the sea at Beaufort. He is still however 100 miles distant from the coast, and is harassed on all sides by the Confederates, who are rapidly concentrating their forces around him. General HOOD attacked the Federal army at Franklin, in Tennessee, on the 30th ult., scaled their works, and captured some guns and prisoners. General SCHOFIELD, the Federal Commander, was subsequently reinforced and recovered the ground, but nevertheless evacuated the position on the same night, and retired on Nashville, a distance of 30 miles, closely followed by General HOOD. The two armies are now facing each other before Nashville, and a great battle is considered imminent. General GRANT has made a cavalry reconnaissance of the Confederate position, and is supposed by the Richmond papers to be preparing an early demonstration against General LEE, who was never, they say, so well prepared to receive him as he is now. The Confederate Congress has unanimously rejected the peace propositions of the Washington Cabinet. Admiral PORTER announces that the Confederate cruiser Florida has been "accidentally" run down and sunk in Hampton Roads, with all her guns on board, by a Federal transport.

Home News.

THE COURT.—The Queen and Royal family are, according to the latest arrangements, expected to leave Windsor Castle to-day for Osborne, where the Court will probably remain for about eight weeks. On Saturday morning the Queen walked and drove in the grounds, accompanied by Princess Helena. Princess Louisa took a carriage drive. The Archbishop of Canterbury arrived at the Castle on a visit. On Sunday morning the Queen, Princess Helena, Princess Louisa, Princess Beatrice, and Prince Leopold attended Divine service in the private chapel. The Rev. W. R. Jolley read the prayers, and the Archbishop of Canterbury preached the sermon. On Monday morning the Queen, accompanied by Princess Beatrice, walked in the grounds. Princess Helena rode in the Riding School, and Princess Louisa went out driving. Prince Leopold went by the South-Western Railway to Richmond, and visited Lady Bowater at Richmond Park. The Archbishop of Canterbury left the Castle. On Tuesday morning the Queen, accompanied by Princess Louisa, walked and drove in the grounds. Princess Helena rode in the Home Park, and Princess Beatrice went out walking. Princess Louisa drove out. Prince Arthur and Countess Blucher arrived at the Castle on a visit. On Wednesday morning the Queen, accompanied by the Royal family, went to the Royal Mausoleum at Frogmore, and remained there some time. Her Majesty passed the day in complete retirement. On Thursday morning Prince Arthur left the Castle for Greenwich Park. The Queen walked and drove in the grounds. Princess Helena rode in the Home Park, and Princess Beatrice went out walking.

ANNIVERSARY OF THE PRINCE CONSORT'S DEATH.—Wednesday being the third anniversary of the death of the Prince Consort, the day was observed with much solemnity at Windsor. About half-past 11 in the morning the Queen, accompanied by the younger members of the Royal family, attired in deep mourning, repaired to the Mausoleum in the grounds of Frogmore House, where the remains of the late Prince are interred. The Mausoleum, which is a building of noble proportions, and is adorned with costly stones and marble, is approached by a flight of steps furnished with stone balustrading. At the top of the steps is an open portico, within which is a door, having over it a coat of arms and the monogram "V.A." entwined on each side of it. Beneath the coat of arms is a brass tablet, with a raised Latin inscription, recording the death of the Prince, while the roof of the portico is decorated with Venetian mosaics, representing a blue sky with golden stars and other ornaments. The interior of the Mausoleum contains the tomb of the

Prince, the body being interred at present in a temporary sarcophagus till the building is finished, when it will be placed in the granite sarcophagus lately received from Scotland. On the tomb, which is approched by a flight of steps at the foot, lies the recumbent effigy of the Prince, while two small portable flights of steps covered with black cloth are placed on each side of the tomb near the head. Above all is a carved wooden canopy, which on Wednesday, together with the tomb itself, was hung with wreaths and garlands, *immortelles*, white azaleas, and evergreens, while a heap of wreaths of *immortelles* was lying at the foot of the tomb, near which was a burning lamp, for the purpose of throwing light on the objects near at hand. Choice exotics were also disposed around the interior, giving it a very beautiful appearance, although yet in an unfinished state. By the permission of her Majesty the servants of the Royal Household and the Queen's tradesmen, with their families, were allowed to visit the Mausoleum between the hours of 12 and 3, and, accordingly, some hundreds availed themselves of the privilege, and during the time set apart for the admission a constant stream of visitors passed through the upper part of the Long Walk to the Frogmore grounds, on their way to the tomb. The public were rigorously excluded, the Mausoleum and its approaches being strictly guarded by the Royal Household police, who were instructed to refuse the very numerous and constant applications for admittance to the grounds.

THE PRINCE AND PRINCESS OF WALES.—The Prince of Wales and his distinguished visitors have been shooting on various parts of the estate since the last reports were published. On Saturday Prince Edward of Saxe-Weimar, Prince Teck, the Earl of Sefton, the Marquis of Hartington, M.P., Colonel Bailey, and Admiral Seymour left Sandringham. On Sunday the Prince and Princess attended Divine Service at Sandringham Church. The Rev. P. B. Moxon officiated and preached. On Monday Colonel the Hon. H. Percy left Sandringham. The Prince and Princess will pay a visit of two or three days to the Earl and Countess of Leicester, at Holkham, about the 2d of January.—The wedding present from the people of Victoria to the Princess of Wales, the result of a shilling subscription, comes home by the Black wall clipper Monarch, which sailed on the 22d October." It consists of a flower vase, of which the following is a description. From a stand, composed of polished blackwood from Mount Macedon, rises a rockwork of quartz specimens streaked with gold obtained from Wood's Point, Castlemaine, and Tarnagulla, and bright black nubbly antimony from Costerfield. Supported by this is a base of St. Arnaud silver, exhibiting specimens of the Australian fauna and flora. From the centre of the group spring two golden stems of the oak, symbolising England and Denmark; and the tree fern, representing Victoria. The whole is surmounted by a fluted silver bowl for flowers, round the border of which are grapes and frosted vine-leaves. The cost is 300 guineas.

PARLIAMENTARY MOVEMENTS.—It is understood that Parliament will meet on the 7th February for the despatch of business. Mr. Davenport Bromley was elected for North Warwickshire on Tuesday without opposition. Messrs. Labouchere and Flower are candidates for Windsor in the Liberal interest, in opposition to the two sitting members, Mr. Vansittart and Colonel Vyse.

ORDER OF THE STAR OF INDIA.—The Queen has appointed his Highness Furzund Dilbund Rasekhul Itgad Dowlut-i-Englishia Rajah Rajegan Rajah Rundheer Sing, Bahadoor of Kuppoorthulla, and his Highness Maharajah Rugbeo Raj Sing, Bahadoor of Rewah, to be Knights of the Star of India.

THE CASE OF BISHOP COLENSO.—The appeal of Dr. Colenso against the decision of his Metropolitan, the Bishop of Cape Town, depriving him of his see of Natal, and prohibiting him from "the exercise of any Divine office within the metropolitan province of Cape Town," because of the views promulgated by him in certain works which he has published, came on for hearing on Wednesday morning before the Judicial Committee of the Privy Council. The members of the Council present were the Lord Chancellor, Lord Cranworth, Lord Kingsdown, Dr. Lushington, and the Master of the Rolls. Mr. W. James, Q.C., of the Chancery bar, Mr. Fitzjames Stephen, Mr. Westlake, and Mr. E. Charles appeared for the appellant; Sir Hugh Cairns, the Queen's Advocate, and Mr. Badeley for the Bishop of Cape Town. Bishop Colenso in his appeal not only prays for a reversal of the sentence of deposition pronounced upon him by Dr. Gray, the Bishop of Cape Town, on the 16th December last, but also denies the validity of that sentence and the jurisdiction on which it purports to be founded. On this ground he prays Her Majesty, through the Judicial Committee, to declare that the Letters Patent under which he holds his episcopate, constitute an indefeasible title until they shall be recalled for some legal cause of forfeiture, and that the Letters Patent by virtue of which the Bishop of Cape Town claims to have acted were unduly obtained from Her Majesty, and cannot, for other reasons, affect his own rights. Should the opinion of the Court be adverse to him on this point, he further prays that his petition may be heard by way of appeal from the sentence of which he complains, and thereby raises another issue on the question of jurisdiction, inasmuch as the Bishop of Cape Town recognises no appeal from his own Court except to the Archbishop of Canterbury, and, in conceding that, affects to waive "any real or supposed rights of this Church." The Bishop of Cape Town in fact appears "under protest," denying that her Majesty in Council has any jurisdiction in the subject-matter of the said petition, or that any appeal lies from what he has done in the matter of the complaint of the Right Rev. Dr. Colenso, either to her Majesty in Council or to the Judicial Committee, and concluding by stating various reasons why, Dr. Colenso not having availed himself of the liberty of appeal to the Archbishop of Canterbury, as provided, his appeal to the Judicial Committee of the Privy Council should not be allowed. The Judicial Committee, therefore, have first to decide whether or not all the proceedings at Cape Town in December last were null and void, and, secondly, whether or not the Royal supremacy, in its most important function, extends to the Colonies. Until the first of these questions shall be determined in the negative, and the second in the affirmative, the Judicial Committee cannot proceed to entertain the merits of the cause. Mr. W. M. James opened the case on the part of the appellant, Dr. Colenso, and occupied nearly the whole day with an argument to prove that Bishop Gray has no legal authority over Dr. Colenso, and that the Court ought to annul the sentence. Mr. F. Stephen followed on the same side, and had not concluded when the Court rose. On Thursday Mr. Stephen entered into an elaborate argument to prove that the powers granted to the Bishop of Cape Town in his letters patent were null and void, beyond the constitutional powers of the Sovereign to grant, and therefore of no effect in law. The Queen's Advocate was then heard for the Bishop of Cape Town, and continued his argument till the Court rose. Yesterday the Queen's Advocate resumed his address, and contended that the Metropolitan had a right to deprive, and that the Metropolitan constituted the court; that Bishop Colenso had solemnly accepted his appointment subject to the jurisdiction of the Bishop of Cape Town, and was by every consideration bound by the Metropolitan jurisdiction. Sir H. Cairns followed on the same side, and had not concluded when the Court rose.

THE CHRISTMAS HOLIDAYS.—The Lords of the Treasury have issued a minute directing that Monday, the 26th inst., shall be observed as a holiday at the Custom House, the Inland Revenue Office, the Post Office, and generally in all places that are under Government control. They have also given notice to the Bank of England to pay all bills accepted by the Paymaster General on the 24th if they are presented for payment on that day, but at the same time add that if they are presented on the 26th they must be then paid. The day cannot therefore be observed as a general holiday at the Bank of England, and the same reasons will operate with regard to all other banks.

Foreign.

FRANCE.—The Emperor, the Empress, and the Prince Imperial returned to Paris on Wednesday. A Cabinet Council was held at the Tuileries on Thursday. The *Moniteur* of Wednesday publishes the Treaty of Commerce concluded between France and Switzerland. An Imperial decree orders that from the 1st of January next the transfer dues imposed by the law of 1857 on foreign companies shall be levied upon half the capital represented by shares, and upon the whole amount of obligations. The funeral of M. Mocquard took place on Monday. A large body of Ministers and persons of note were present. Marshal Vaillant pronounced a funeral oration over the grave, in which he recalled the fidelity of M. Mocquard to the Emperor. He said that he had come to bring the last farewell of the Sovereign from whom the deceased had so lately received a last embrace. M. de La Guéronnière also made a speech, in which he paid a tribute to M. Mocquard in the name of the Senate and the Press. A remarkable character recently died in Paris, the dwarf Richebourg, who, though not quite so celebrated as "General Tom Thumb," was an historical personage. Richebourg, who was only 60 centimetres high, was in his 16th year placed in the household of the Duchess of Orleans, the mother of King Louis Philippe. He was often made useful for the transmission of despatches. He was dressed up as a baby, and important State papers were placed in his clothes, and thus he was able to effect a communication between Paris and the *emigrés*, which could hardly have taken place by any other means. The most suspicious of *sans culottes* never took it into his head to stop a nurse with a baby in her arms. For the last 30 years he lived in Paris in one of the houses in the remotest part of the Faubourg St. Germain. He had a morbid dread of appearing in public, and it is recorded that during this long period he never put his foot outside the house. He received from the Orleans family a pension of 3000f. per annum. He had attained the ripe age of 92. The *Constitutionnel* of Friday contains an article, signed by M. Limayrac, on the connection between Tunis and Turkey, of which the following is a summary:—

"It reverts to the declaration of France that she would not permit any change in the nature of the relations between the Bey and the Sultan, and would oppose the establishment of Turkish domination over any part of Tunisian territory. The journey of the Tunisian Envoy, Kaireddine, to Constantinople, was declared by the Bey and the Divan to be a visit of pure courtesy. If, however, he had the mission of modifying the present conditions of sovereignty in the Regency, it was [illegible] both at Constantinople and Tunis, how France would [illegible] such a pretension."

The steamship Louisiane has arrived at St. Nazaire from Mexico with 5,000,000f., 2,000,000f. of which are on account of the French Government. The English steamer Iowa, of 1700 tons, which sailed from Havre on Wednesday week for New York, ran ashore during the night at Omonville, near Cherbourg. The crew and passengers were saved.

SPAIN.—A Council of Ministers was held on Friday night, and terminated at about 1 A.M. on Saturday, after which Señor Llorente, Minister of State, presented his resignation. Señor Antonio Benavides was subsequently appointed Minister of Foreign Affairs in place of Señor Llorente, and took the oath of allegiance to the Queen. The entire Ministry has since resigned. The *Noticias* of Wednesday says that it has been officially announced that the English Government intend to recognise the insurgents of San Domingo as belligerents, the Ministers resolved to tender their resignation. The *Epoca* of Wednesday says that the Council of Ministers had unanimously decided to announce the abandonment of San Domingo in the Speech from the Throne, but the Queen having refused her assent to this resolution a Ministerial crisis took place. The resolution of England to recognise the rebels as belligerents was in pursuance of the reservation expressed by her at the time of the annexation of the island to Spain. This course was adopted by England on account of the Spanish blockade of San Domingo having been declared ineffectual. The Government has reinforced the Pacific squadron by sending out the iron-clad frigate Numancia, just finished in France.

PORTUGAL.—A telegram from Lisbon, dated the 12th inst., announces that the Minister of Marine had resigned. It was also asserted that a similar step had been taken by the Minister of Public Works.

SWITZERLAND.—The following decree has been issued by the Swiss Federal Assembly:—

"Considering the petitions of a large number of Swiss citizens domiciled at Trieste, Smyrna, and St. Petersburg and the message of the Federal Council of the 25th November 1864, the Federal Assembly of the Swiss Confederation decrees —1. The Federal Council is authorised to permit the use on sea of the Swiss flag for Swiss vessels; 2. Until an [illegible] decision of the Federal Assembly, the Federal Council [illegible] receives full powers to adopt the necessary measures for the execution of the present decree."

The opening of the Assizes in Geneva took place on Tuesday, in the presence of a large crowd of people. The families of the persons who were killed during the late disturbances demanded permission to put forward claims for indemnity, which was granted by the jury.

DENMARK.—King Christian, in his reply to the deputation of North Schleswigers who recently visited him at Kolding, said that he most deeply regretted the separation of Schleswig from Denmark, but that, having once ceded that province, he hoped that the Schleswigers would be reasonable, and submit to their fate with patience. Prior to their reception by his Majesty the members of the deputation laid aside the Danish colours they were wearing, as the King would only receive them as Schleswigers.

THE DUCHIES.—It has recently been announced that Prussia has put forth a formal claim to the succession of the Duchies, on the ground that the King of Prussia is a descendant of the Princess Elizabeth, daughter of King John I. of Denmark, who was married in 1500 to Joachim I., Elector of Brandenburg. It is stated that on the occasion of that marriage it had been stipulated that, if King John remained without any male descendant, the succession in the Duchies should be open to the children of his daughter Elizabeth. Those stipulations have never been executed, but the fact that the descendants of the Elector Joachim have not maintained the rights which were secured to them, is said to prove nothing against the validity of those provisions. The Austrian journals oppose this argument with the greatest energy; they allow that they did not at first regard the affair in a serious light, but now that the rights of the House of Hohenzollern have been seriously brought forward in the settlement of the succession of the Duchies, they endeavour to prove that those pretended claims are only a "juridical curiosity." The *New Free Press* of Vienna is of opinion that if the result of a marriage contracted 364 years ago between an Elector of Brandenburg and a Danish Princess be brought forward, pretensions much better founded than those of Prussia may be raised. It therefore considers it a duty to establish that the rights of the daughter of Christian II., successor of John I., take precedence of those of the children of Elizabeth, his sister. The daughter, the Princess Christina, who married Francis of Lorraine, is the mother and grandmother of all the Princes of the House of Austria. The latter must therefore, it says, come before the House of Prussia.

PRUSSIA.—The Crown Prince and Princess of Prussia, who have been residing in Switzerland for some time, arrived at Carlsruhe on Saturday on a visit to the Grand Duke and Duchess of Baden. The *Kreuz Zeitung* announces that the Prussian Government will no longer content itself with taking measures against the journals which publish letters hostile to Prussia, but will also attack the correspondents themselves. A statistical return states that there were killed in Berlin, from the 1st October, 1863, to the 1st October, 1864, 1552 horses, the flesh of which was sold for food at 25c. and 30c. the pound.

AUSTRIA.—In the Lower House of the Reichsrath on Tuesday, it was determined to continue the increased taxation until the end of March, 1865. A petition of General Langiewicz was laid before the Chamber by Dr. Reichauer, in which the petitioner requested to be set at liberty. The Marquis de Lisboa has arrived at Vienna from Brazil, to formally solicit the consent of Duke Augustus of Saxe-Coburg to the marriage of the young Prince of Saxe-Coburg Gotha to the Princess Leopoldine of Brazil. On the return of the marquis to Brazil the marriage will be celebrated in that capital.

VENETIA.—The Garibaldian bands of Friuli have been entirely dispersed, and the Austrian Lieutenant at Venetia has proclaimed the cessation of martial law.

ITALY.—In the sitting of the Italian Senate on Friday the Bill for the transfer of the capital to Florence was passed by 134 against 47 votes. Two members abstained from voting. The Royal assent has since been given to the Bill, and from the date of that assent the two years within which the French will evacuate Rome, will be calculated. The *Official Gazette* of Thursday publishes the law for the transfer of the capital, countersigned by all the Ministers. The same paper contains a Royal decree sanctioning the convention of the 15th September. In the sitting of Tuesday the Minister of Finance said that Parliament would probably continue its sittings during the first two months of 1865, and then adjourn for a considerable time to allow of the transfer of the capital. This measure would be carried out in the course of next May. It is said that the successive recall of the French army of occupation from Rome is to commence at the end of January. It is asserted that a plot has been discovered at Rome against the life of the Pope, Cardinal Antonelli, and the ex-King of Naples. The conspirators are said to be three brothers from Ferrara, who dressed exactly alike, and were so much like each other that one could easily be mistaken for the other. Arms and letters compromising several high personages are said to have been discovered at their lodgings. It is positively stated that the Pope will hold no Consistory at Christmas, as was expected. It is also asserted that the Pope had determined to send a passport to Baron Meyendorff, the Russian Minister at Rome, but afterwards relinquished his intention. It is said, however, that Baron Meyendorff will not in future be received at the Vatican. A French court martial has passed sentence of death upon a Neapolitan named Graziani for the murder of two French gendarmes. The environs of Bologna have been inundated by the overflowing of the rivers in the vicinity of that town.

FRANCE.—The King took the oath to the new constitution on the 28th ult. The Bishop of Athens recited the customary prayers, and one of the secretaries presented to his Majesty the formula of the oath. The King then rose, and placing his hand on the Book of the Evangelists, took the following oath:—"I swear in the name of the Holy, Consubstantial, and Indivisible Trinity, that I will protect the dominant religion of the Hellenes; that I will watch over the constitution and the laws of the Greek people; and that I will preserve and protect the national independence and the integrity of the Greek kingdom." His Majesty pronounced the oath in Greek, and in a strong, firm voice, distinctly heard in every part of the chamber. A salute of 101 guns announced to the public that the ceremony had taken place. His Majesty then returned to the palace amidst the acclamations of the people.

TURKEY.—A Convention has been signed between the Porte and Persia for an Indian telegraph line. The service will soon open. The Porte has accepted the proposition previously refused for the appointment of a commission by the great Powers to place the police of the Danube under international control.

WEST COAST OF AFRICA.—The Governor of Cape Coast Castle has levied a tax upon licences for the sale of spirits, &c., to assist in meeting the heavy expenses incurred during the Ashantee War. On the 21st October her Majesty's ship Investigator arrived from a cruise of 400 miles up the Niger, bringing highly satisfactory reports as to the resources of the river for trade. Dr. Baikie, who has established a native colony and has resided for some years in the interior, returned by her. He purposes proceeding to England by next steamer.

JAPAN.—Advices from Japan state that the late fight at Shimonosaki has had the happiest effect upon the Daimios, and that the representatives of the European Powers have been received at Jeddo by the Grand Council of the Empire, who gave them complete satisfaction. The silk trade is to be freed from all restrictions, and the territory of the Prince of Nagato having been confiscated by the Tycoon, the latter will pay the indemnity demanded by the European Powers. It is said that the Prince of Nagato has been stripped by the Mikado of all his titles.

AUSTRALIA.—The dispute between Victoria and New South Wales on the question of border customs is as far from adjustment as ever, and custom-houses and officers still guard both sides of the Murray river. Meetings have been held in various parts of the colony to protest against the continuance of transportation to Australia, and in each case a petition to the Queen on the subject has been unanimously adopted. The people of Albany, Western Australia, have resolved to co-operate with the eastern colonies in the matter; and the Adelaide Parliament have adopted a bill which is a copy of the Victorian Act, and is intended to prevent the landing in South Australia of all liberated convicts whose sentences have not expired for at least three years.

POLYNESIA.—Bishop Patteson's mission party were savagely attacked at a village of Santa Cruz island by the natives. Two young men were killed and one wounded. The bishop escaped unhurt. The French have taken possession of the three islands of the Loyalty group, as dependencies on New Caledonia, and have sent out Catholic missionaries to convert the natives, many of whom had already been converted to the Protestant faith by the missionaries of the London Missionary Society.

NEW ZEALAND.—The hopes of permanent peace with the natives of New Zealand have been abruptly dispelled. The dearly-bought victory at Rangariri, it will be remembered, left 200 prisoners in our possession. For several months these men were lodged on a hulk named the Marion, lying in the Waitemata, off Auckland. Unused to confinement, however, they suffered in health, and on this account Sir George Grey gave up to them a little island—his own property—termed Kawau, lying 20 miles from Auckland. This island, upon which Sir George Grey has a comfortable establishment, and which he uses for acclimatisation experiments, lies two miles off the main land. The breadth of water was considered a sufficient guarantee against any attempt at escape, and the prisoners were left to wander about the island under the surveillance of a chaplain, an interpreter, a surgeon, and a warder. One Sunday morning, however, it was discovered that they had left the island, taking with them everything they could carry. Subsequent information showed that during the night they took to the boats with their spades, and using these implements as paddles easily succeeded, all but two, in reaching the opposite coast. These two happened to be left behind; but when the alarm had been given and men-of-war brought up, they actually contrived to slip into another boat and follow their comrades under the very eyes of the authorities. The fugitives proceeded to the northern part of the island, which has hitherto remained in peace, the tribes having taken no part in the hostilities one way or the other; but there is reason to fear that this unfortunate incident may precipitate a struggle. Not only have the escaped prisoners been allowed to build a strong intrenched pah in an almost inaccessible position termed the Great Maha, but they have been supplied with firearms and provisions. An interpreter, who was despatched to invite them back to custody, at first found them open to terms, and it was thought that they would evacuate their position on a promise of 4000 acres of desirable land to be assigned them in settlement. Subsequently, however, they thought better of their opportunity, and "resolutely refused to do anything else but remain where they were." One of the leading chiefs of the northern tribes has publicly said that the Waikatos are not to be interfered with, but are to be left "to work their own deliverance," that is, they are to be left to defy the Government, and to live by plundering the settlers of their cattle. It is feared that some of the tribes may be induced to join the Waikatos, and it is now anxiously remembered that there are at least 14,000 defenceless men, women, and children in the district north of Auckland, and two millions worth of property. The news from Tauranga, where it was hoped that the last victory, and subsequent submission, had established peace, is not satisfactory. A number of natives, who declined from the first to come in, have built a large work near the site of the disastrous Gate Pah, and have stopped the surveyors in measuring the confiscated lands at Te Puna, which is on the highway to the Waikato district. A force of 300 men, under Colonel Warre, was despatched against two rebel pahs at Matahani and Mataitawa, in the Taranaki province, which they captured and destroyed. The only casualty to our force was one private wounded; the rebels had one man killed. To add to the complications, disputes have arisen between Sir George Grey and the Fox Ministry, who having pledged themselves to thoroughly suppress the native outbreak, have been unable, since the receipt of Mr. Cardwell's last dispatches, to work cordially with the Governor, and have tendered their resignations. Sir George, however, has declined to accept them, and it is understood that the Ministry will continue in office until the meeting of the Legislature.

UNITED STATES.—Richmond papers of the 29th ult. assert that General Sherman was baffled in his attempt to penetrate Georgia. He neither captured Macon nor threatened Augusta, and for a whole week was unable to advance 10 miles, being harassed on his flank and rear, manfully resisted in front, and forced to avoid all important towns. Augusta papers of the 26th state that he was repulsed in crossing the Oconnee River, but General Grant has reported to Mr. Stanton that his main army has since crossed that river, and is now *en route* for the sea coast, leaving Augusta behind. His advance cavalry endeavoured to open communication with Beaufort, but were intercepted near Savannah River, and the whole force either killed, captured, or driven back. It is reported that the two columns of Sherman's army are endeavouring to form a junction. The Richmond papers say that Sherman is still 100 miles from the sea, and harassed on all sides. Five thousand negroes are working on the defences of Augusta. Generals Beauregard and Johnston were in Augusta on the 23d, and General Bragg has left Wilmington for the same city, where a heavy Confederate force is concentrating from all quarters. It is reported that Burnside has sailed from Fort Monroe with 20,000 men to meet Sherman. A battle took place on the 30th ult. at Franklin, between a portion of Thomas's and Hood's armies. The Confederates drove the Federals back and scaled their works, capturing guns and prisoners. The Federals were subsequently reinforced and recovered their ground, but evacuated their position the same night, and retired on Nashville, a distance of 30 miles. The Confederates crossed Harpeth River next morning at the fords near Franklin, and were confronting Thomas on the 4th inst. The Federals claim the capture of 1000 prisoners in the battle at Franklin, and estimate the Confederate killed and wounded at from 3000 to 6000, among whom were Generals Clewburn and Wirt Adams; they state their own entire loss at less than 1000. Thomas's army was in line of battle about Nashville throughout the 4th. Skirmishing was continuous and severe, but there is as yet no announcement of the expected general engagement. Administration journals admit that if Hood decides not to attack Thomas in his present strongly fortified position, there is no material obstacle to prevent his uniting with Breckenridge, destroying the communication of Chattanooga and Knoxville, invading Kentucky, or of establishing permanent communication with General Lee. The retreat of Thomas for 29 miles, after the battle at Franklin, is now pronounced a piece of strategy. The Federals have evacuated Columbia, removing their wounded to Nashville, where great excitement prevails. The latest advices from the Army of the Potomac report that heavy artillery and musketry firing was heard early on the 29th ult. on the north side of James River, in the vicinity of Dutch Gap. The gunboats were also supposed to be engaged; but no particulars had been received up to the sailing of the mail boat. General Grant despatched Gregg's cavalry on the 1st on a *reconnaissance* to ascertain if Lee was sending troops south. Gregg captured and destroyed Stoney Creek Station and a quantity of stores, and afterwards retreated, followed by the Confederates, towards the Federal camp. He obtained no information of troops passing southward. The Florida has been "accidentally" run into by a Federal transport off Fort Munroe. She was badly damaged, and sank with all her guns on board in nine fathoms of water. The *New York World* thinks the pretence of accident too shallow to deceive any one, but adds that it is possible the Government had no complicity in the transaction. Mayor Gunther has recommended the Common Council to offer a reward of 25,000 dollars for the detection and legal conviction of the New York incendiaries, and the Association of Proprietors has offered 20,000 dollars for the same object. General Dixon, in an order dated the 26th, declares that if they are detected and convicted they shall be executed without a day's delay. The examination of the persons suspected of firing the hotels was commenced on the 2d inst. by a military commission. Publication of the proceedings is for the present prohibited. Mr. Seward has refused to present the British peace address to Mr. Lincoln. The Confederate Congress has unanimously rejected the proposition of pacific measures on the basis of the recognition of State rights, and the original statutes of slavery. Resolutions have been submitted in the Confederate Congress to the effect that the South would, if shortly recognised by the North, unite with the North in maintaining the Monroe doctrine. If recognition was delayed, the South would abandon the Monroe doctrine in exchange for material advantages for herself. The Confederates are constructing formidable defensive works at Alexandria, Louisiana, rendering it impossible for the Union gunboats to ascend Red River. The Confederate Governor of the State has organised 10 regiments of negro troops at Shreveport, where they are engaged at present in strengthening the defences of the place, but are regularly drilled and disciplined. Governor Allen was endeavouring to induce the Confederate Government to incorporate them into the army. Captain Semmes, of Alabama notoriety, arrived at Bagdad, Mexico, on the 15th October, on his way to Richmond *viâ* Matamoras. The Chickamauga has arrived at Wilmington, after a slight brush with the blockaders, and the Tallahassee was safely in that port, and was to leave in a few days with a cargo of cotton for Bermuda.

CANADA.—The Canadian Government has refused the request of the St. Alban's raiders to refer to Richmond for evidence of their connection with the Confederate Government.

BRITISH COLUMBIA.—Since the arrival of the Hon. Admiral Denman to take command of the squadron in the Pacific, Esquimalt has been made the chief naval station in lieu of Valparaiso. All ships of war, previous to their return to England, will therefore return to Vancouver Island.

MEXICO.—Advices from Mexico, published in the New York papers, state that on the 18th ult. the French landed troops at Mazatlan, and took possession of the town, which had been evacuated on the previous night. Alvarez had defeated the Imperial forces, and was marching on Acapulco.

SAN DOMINGO.—Advices from San Domingo report

that successes have been gained by the native forces over the Spanish troops.

City Intelligence.

BANK RATE OF DISCOUNT.—The Bank of England on Thursday reduced their rate of discount from 7 per cent., to which it was lowered three weeks back, to 6 per cent.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 88¼ to ½ for Money, and 89⅛ for Account Three per Cents. Reduced, 88¼ to ½; New Three per Cents., 88½ to ½; Annuities, 1885, 14 7-16; Bank Stock, 239 to 238; India Stock, shut; Ditto for Acct., 216 ex div.; Ditto Five per Cent. Stock, 103; Exchequer Bills, March, 4s. dis.—FOREIGN: Brazilian Old Five per Cents., 98; Egyptian, 95½; Ditto 1864, 95⅜ to 95½; Ditto Scrip, 1¼ to ½ pm.; Italian, 65; Ditto Maremmana Railway, 71½; Mexican, 29⅜ to ½; Ditto 1864, 27½; Portuguese, 1853, 47½; Russian, 1862, 87½ to ½; Turkish, 1858, 100*l.* Bonds, 73; Ditto 1862, 72¼ to 72.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,004,075	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	13,354,075
		Silver Bullion	—
	£28,004,075		£28,004,075

BANKING DEPARTMENT.

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£10,474,542
Rest	3,325,294	Other Securities	17,730,066
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,161,719	Notes	3,825,560
Other Deposits	12,247,474	Gold and Silver Coin ..	768,636
Seven days and other bills	491,117		
	£37,798,604		£37,798,604

Dec. 15, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Dec.* 9.—BANKRUPTS—R. and A. BRAY Choppards, Yorkshire, Woollen Cloth Manufacturers—F BINGHAM, late of Murray Street Hoxton Watch Movement Maker—C BONNER, Devonshire Grove, Old Kent Road, Common Agent—G D. BENNETT, Wolverhampton Retail Brewer—E BARNES, New Hampton Middlesex Omnibus Driver—H. BROWNE, Birmingham, Licensed Victualler—J. CLEMENTS Bristol, Broker—J CLEMISON, Neat Enstone Oxfordshire Miller—E. COLLEY, Bilston, Staffordshire, Hay Dealer—J. DAWSON, Kirkburton, Yorkshire, Fancy Manufacturer—R. EMMITT, Swinehead Lincolnshire, Baker—T. EVA, Helston, Cornwall Builder—J EVANS, Haverfordwest, Pembrokeshire, Tutor—M FAYER, East Stoke, Nottinghamshire, Cattle Jobber—H. FARNSWORTH, Colnor, Derbyshire, Framework Knitter—R S. FOSTER, Upton Nottinghamshire, Baker—J. FITZPATRICK, Norwich, Sawyer—B GIBBS, Rochdale Lancashire Book Keeper—W. C GAGOS, Howden, Yorkshire, Wine Merchant—J GRIFFITHS, Walton, Radnorshire, Mason—M. GOYMER, Cable Street Whitechapel, Baker—H. B. GLOVER, Basinghall Street, Accountant—G. HAYDON, Southampton, Builder—H. HEWITT, Coventry Warwickshire Builder—R. HARVEY, Derby, Chenille Net Manufacturer—HERCULES HALL, Wigan Lancashire Innkeeper—HENRY HARVEY, Hentland, Herefordshire, Butcher—AARON HARVEY, Allsop's Buildings, St. George's-in-the-East, Boarding House Keeper—MUNNS JOHN HARWICK Rothersthorpe Northamptonshire Miller—WOODTHORPE HARRISON, Carlton-le-Moorland, Lincolnshire, Butcher—R. HURRELL, Jun., Botolph Lane, City, Provision Merchant—W. HUGHES, Ford, Shropshire, Butcher—N HARRIMAN, Loughborough, Leicestershire, Licensed Victualler—ROBERT HANNAH, Argyle Street Regent Street, Tailor—J H. HAMSWORTH, Milton Street, City, Tallow Chandler—J. HOLDSWORTH, Leeds China Dealer—T JONES Bilston, Staffordshire, Boatman—W. C JEFFERY Westbourne Street Pimlico Plumber—J JONES, New Radnor, Radnorshire Carpenter R JOHNSON, Liverpool, Cotton Salesman—A. J. JAGUES, Barnsley, Yorkshire, Mason—J. JONES, Glyncorrwg, Glamorganshire Grocer—J S JOHNSON, Great Yarmouth, Baker—GEORGE JOSLYN, Witham Essex Beerhouse-keeper—J. JONES, Coventry, Warwickshire, Egg and Fish Dealer—S KILBURN Stanstead, Suffolk, Dealer—W. KIRBY, Woolwich, Smith—J LEICESTER jun Seacombe, Cheshire, Assistant in a Coal Yard—J LILBURN Liverpool Provision Dealer—W. LEWIS, Crasswall, Herefordshire Labourer—H. LODGE Rufford's Row, Islington, Tailor—J LITTLEWOOD Manchester, Calico Printer—J. LOWE, jun., Birmingham, Auctioneer—C MEAKIN, Derby, Commission Agent—J. MALTBY Gotham Nottinghamshire, Tailor—E J C MATTI Great St. Helen's, City, Merchant—W. MADDAMS, Euston Road late Cabinet Maker—J. C. MULLER Noble Street, St. Luke's, Insurance Agent—W. MORBEY, Northampton Cabinet Maker—T MARCHANT, East Street, Walworth, Joiner—G MITCHELL Weymouth Street, Hackney Road, Compiler of Indexes to Books—J MOORE, Leatherhead, Surrey Plumber—S L MULLEN Elizabeth Terrace Liverpool Terrace Islington, Watch Jeweller—T. NOBBS Sheldon Street, Paddington, Cheesemonger—J. E. NIXON, Claremont Terrace, Pentonville Road, Attorney-at-law—G. POWELL, Leominster, Herefordsh., Shoemaker—T PALLISTER, Rothbury Northumberland, late Grocer—J. PEARN Liskeard, Cornwall Licensed Victualler—J W. PEARSE St. James's Cottages Holloway, Traveller—G. PETERS, Birmingham, Tobacconist—G. POLLISTON, Burford Oxfordshire Butcher—G PELLING, Brentwood, Grocer—H READ, Liverpool, Provision Dealer—E RAPER Cambridge, Corn Merchant—H. RUMBELOW, De Beauvoir Road South, Accountant's Clerk—J ROLFE Gayton Northamptonshire, late Innkeeper—W. RODENHURST, Birmingham, Shawl Dealer—W. ROBERTSON, Worcester, Licensed Horse Dealer—P T SNOW Chelsea College Chelsea, Retired Lieutenant-Colonel—B. SMITH Jewry Street, City, Drysalter—G SMITH, Milton-next-Gravesend Commission Agent—R SHAW Marehay, Derbyshire Painter and Glazier—W SHUFF Path Coachbuilder J SNOWDON, South Shields, Shipowner—A STANTON Nottingham Pork Butcher—J SUNTER, Bradford, Yorkshire, Grocer—H SPRAGUE late of Cheltenham, Clerk—J. SMITH Bilston Staffordshire, Iron Refiner R W SHUFF Ipswich, Corn Chandler—J THOMAS Craig y Tewgord Glamorganshire, Grocer—S. TAYLOR, Upper Marsh Westminster Road Lambeth Farrier—M THORNE, Leeds Actress—J TATE, Derby, Tobacconist—H TUPPER, Brighton, Sussex, Draper—W H TAYLOR, Bardney, Lincolnshire, Farmer—J. TUCKER Lower Road Deptford, Dairyman—J. TURBRIDGE, Walmer Road, Notting Hill Painter—C WEBB, Marple Cheshire Cotton Manufacturer—A H WALKER, St. Alban's Place, Edgeware Road, Publisher—C WATSON, Strood, Kent, Butcher—J. WOODS, Green Walk, Blackfriars Road Whitesmith—R. WALDRON, Bath, Bread Manufacturer—C. S. WATSON Chapel Street Edgware Road Bootmaker—J F. WARING Derby, Coal Dealer H WILLIAMS Llandudno, Carnarvonshire, Bootmaker—G. WHITEHEAD Mobberley Yorkshire, Innkeeper—J WELBOURNE, Alfreton, Derbyshire Tinman—W WATTS, Willenhall, Staffordshire, Baker—W. WILEMAN Measham, Derbyshire, Bricklayer—E N YOUNG, Greenwich, Photographic Artist—J YEA Southampton, Watchmaker

SCOTCH SEQUESTRATIONS—R SPENCE Glasgow, Plumber—W. YUILL & SON and D YUILL Glasgow, Wine and Spirit Merchants—R. GRAHAM Carlisle, Grocer—J. LAW, Broxburn, Uphall, Farmer—S. WATSON Wayside, Thurso, Farmer—A. ROSS, Tain, Spirit Merchant.

TUESDAY *Dec* 13—BANKRUPTS—M. ANTHONY, Gutter Lane, Cheapside Traveller—J ARNOLD, jun., late of Mount St., Grosvenor Sq., Veterinary Surgeon—E BUTTERFIELD, Bradford, Yorkshire, Joiner—C. BOURNER, Devonshire Grove, Old Kent Road, Agent—J. BENNETT, Cuckfield, Sussex, Hampshire Cattle Dealer—W. BARTON, Chevening, Kent, Farmer—J. BRADLEY, Blackburn, Lancashire, Currier—J N. BIRKLEY, Yeovil, Somersetshire, Cattle Dealer—W ROOT, Hooley, Yorkshire, Stonemason—H. BOOTH Five Court Holborn, Engraver—G. BELL, Littleport, Cambridgeshire Farmer—J BARTHOLICK, Holbeck, Yorkshire, Woollen Printer—H ROBERTS High Street Shoreditch, Baker—S S. BOWER Greenhers, Lancashire Provision Dealer—G BOWER Ilkeston Derbyshire, Cattle Jobber—A BARKER, Sheffield Stationer—T. ROBINSON BAKER, Herbert Road Plumstead Commercial Traveller—J BRADSHAW, Liverpool, Barman—J [illegible] Kirkhampton, Yorkshire Grocer—G E COTTRELL, late New Square Lincoln's Inn Barrister at Law—W. B. CLARK, Great Cowley Lancashire Slum Builder—G C COOKE Castle Street East, Oxford Market Cowkeeper—E DIXON, Boston, Lincolnshire, Blacksmith—P BOTTOMLEY Eccleshill, Builder—G W DICK, Bury St Edmund's, Suffolk late Farmer—W T DIXON, Salford, Lancashire, Licensed Victualler—J J FERRIS, Princes Street, Leicester Square Waiter—W. R. BARRY, Birmingham Journeyman Cab Driver—W. FRASER, Wigan, Lancashire, Milliner—ROBERT FOSTER, Leeds, Cap Manufacturer—J FOULKES, Blackburn, Lancashire, late Lithographer—F. G. G. FERRAND, Bromley, Kent, Builder—R. FARCOURT, King Street, Baker Street, Portman Square, Journeyman Carpenter—J. FENBY, Bedwardine, Worcestershire, Schoolmaster—H. GRIFFIN, Southport, Lancashire—J. HOWARD, Salford, Lancashire, Commission Agent—J. H. HARMSWORTH Milton Street, Cripplegate, Tallow Chandler—W HOLCRAFT, Oxford Street West, Photographer—W. HARRISON, Milton-next-Gravesend Kent, Trinity Pilot—J E HORSFALL, Hebden Bridge, Yorkshire, Doubler—J. HOPSON Peterborough, Northamptonshire, Straw Hat Maker—J. HOARE, Upper Tottenham Road, Hornsey Road, Bricklayer—T. HUTCHINSON, late of Manchester, Auctioneer—W. HUNTLEY, Aldershot, Hampshire, Bootmaker—I. JONES, Old Kent Road, Timber Dealer—W. G. JAMES, Wolverhampton, Sinker—S. LEGG Liverpool, Shipwright—G. LUCKES, Bridgwater, Somersetshire, Master Mariner—J. LAKE, Forest Hill, Kent, Builder—J. LOWE, Manchester, Grocer—F. C. MARSHALL, Market Row, Oxford Market, Pork Butcher—M. MONK, Northampton, Saddler and Harness Maker—J. MIDDLEDITCH, Bury St Edmunds, Suffolk, Cork Manufacturer—G. MAJER, Bridlington, Yorkshire, Innkeeper—W. NEALE, Mount Street, New Road, Whitechapel, Attorney's Clerk—T. S. NORTON, Brunswick Terrace, Westbourne Grove West, Carpenter—W. H. ORAM, Derby, Poulterer—JOHN SAMPSON, RUSDEN OKE, Tranmere, Cheshire, late Sailmaker—HENRY PREEGRAVE, Holbeach, Lincolnshire, Butcher—HENRY THOMAS PHILLIPS, late of Gray's Inn Road, Greengrocer—J PENICUD Great Titchfield Street, Oxford Market, late Perfumer—W. PARSONS Gravel Road, Bromley Common, Builder—W. H. POYNTON, Loughborough, Leicestershire, Butcher—P. QUIGLEY, Upper Charlotte Street, Fitzroy Square, Tailor—T. A. RED, Kingston-upon-Hull, Provision Dealer—W. H. ROWLAND, Cambridge Place, Paddington, Plumber—J. ROBINSON, Ash, Surrey, Baker—J. W. SCOTT, Newby Place, Poplar, late Licensed Victualler—M. A. SHEPARD, Gloucester Road, South Kensington, Milliner—J. SMITH, Accrington, Lancashire, Labourer—W. SHARPLES, Pilkington, Lancashire, Yeast Dealer—C. TAYLOR, Ipswich, Working Jeweller—J. TENCH, Harborne, Staffordshire, Attorney-at-law—C. TEESDALE, late of Wellington Square, King's Road, Chelsea—H. TUPPEN, Brighton, Draper—J. S. S. TALBOT, Westow Hill, Norwood, Job and Post Master—J. UPTON, Lichfield, Blacksmith—S. WALTON, Bradford, Yorkshire, Stuff Manufacturer—C. M. WILSON, rector of White Roding, Essex—F. WETTON, Castle Church, Staffordshire, Labourer—R. T. WHITLOCK, West Street, Walworth, late Cheesemonger—E. P. WILSON, Essex Road, Islington, Mantle Manufacturer—H. T. WATSON and J. CUNLIFFE, Goole, Yorkshire, Ship Owners.

SCOTCH SEQUESTRATIONS.—STEEL & GILCHRIST, Dumfries, Drapers—G. SANGSTER, Aberdeen, Manufacturer—J. THOMPSON, Alloa, Flesher—A. WYATT, Glasgow, Wine Merchant.

Metropolis and its Vicinity.

THE THAMES EMBANKMENT.—At a meeting of the Metropolitan Board of Works on Friday, Mr. Samuda called attention to the fact that No. 1 contract of the Thames Embankment between Westminster and Waterloo Bridges, in the hands of Mr. Furness, was proceeding at a rate which would require eight years for its completion, instead of two years and a-half in which the contractor was bound to complete the task. A letter was read from Mr. Furness, making various excuses for the slow progress hitherto made, but they failed to satisfy the Board; and it was unanimously resolved that it be referred to the Main Drainage Committee to investigate the matter, and report what steps ought to be taken in consequence of the delay.

BRITISH MUSEUM.—The trustees of the British Museum, in consequence of Christmas Day falling on Sunday, have granted the *employés* in that institution a holiday on Monday, the 2d of January, instead of Monday, the 26th inst. By this arrangement the public will not be deprived of the opportunity of visiting the Museum. On the last occasion of Christmas Day falling on Sunday the persons who visited the Museum on the day following exceeded 20,000.

DESTRUCTION OF THE EXHIBITION BUILDING.—On Monday the complete demolition of the grand entrance to the Great Exhibition Building in the Cromwell Road was accomplished by the Royal Engineers and Sappers and Miners, under Lieut. Knocker, in the presence of General Sir J. Burgoyne, Lord Mountcharles, the Marquis of Salisbury, Sir Charles Forbes, Col. Chapman, Captain Fowke, and a larger crowd of spectators than on any previous occasion. The grand entrance, it will be remembered, was a structure of great magnitude and strength, consisting of three arches, and containing a total amount of between 5000 and 6000 tons of masonry, 150 feet in length by 63 in height. There were 110 charges or chambers, containing a total force of 180 lb. of gunpowder, for the purpose of displacing at one discharge this formidable mass of material. When the bugle sounded the three batteries were fired, and almost instantaneously the structure crumbled down from crown to base, amid the cheering of the spectators, falling entirely within the enclosure, and without scattering any of the bricks or *débris* in the adjoining road, or near the neighbouring houses, which were crowded with spectators. The entire space will now be cleared and railed in, until it is determined what form the new museum on its site is to assume.

THE NAVAL MODELS.—The collection of models of naval architecture which has hitherto been deposited in Somerset House has been removed to the South Kensington Museum, until suitable premises are built. It will be opened to the public for the first time, without restriction, on the 19th inst. The series begins with the "Great Harry," of Henry VII.'s time, and is continued to the iron ships now building both in her Majesty's dockyards and private yards.

THE WESTMINSTER PLAY.—The *Phormio* of Terence was performed on Thursday evening by the senior pupils at Westminster School, when the theatre was crowded by old Westminster scholars and the friends of the students; the slips being filled with ladies. The epilogue contained some humorous allusions to street music, Mr. Bass and his Bill, Mr. Babbage and the German bands, the Civil Service examinations, amateur naturalists, the aquarium mania, and other topics of the day.

UTILISATION OF SEWAGE.—On Saturday a deputation of gentlemen, including the chief corporate officers and other gentlemen of Birmingham, Nottingham, Derby, Wolverhampton, Coventry, Preston, and Bath, arrived in town to present to Sir George Grey a memorial of the Council of the Borough of Birmingham adopted for that purpose, praying for the introduction of a public general Bill for the utilisation of sewage, and for preventing the pollution of rivers and streams. Previous to proceeding to the Home Office, they held a meeting at the Westminster Palace Hotel, for the purpose of discussing the question and coming to such resolutions as would enable them to offer Sir G. Grey some practical suggestions as to what was best to be done. Mr. Henry Higgins was called to the chair, and pointed out how necessary it was for them to have some definite proposal to make when they wished the Government to bring in a Bill to meet their wants. The Bill that they must ask for must be a general one, that would meet the requirements of all places, and he thought it would be the best way to give Sir G. Grey a general outline of what they wanted, and leave the Government to deal with the details. Alderman Madeley thought that large towns ought not to be allowed to pollute the streams and rivers, but that the sewage should be put upon the land. All the members of Parliament considered it a very important, but at the same time a very delicate, question to deal with. He thought all they would be able to do that morning would be to pass a resolution to affirm the desirability of something being done, but not to come to a resolution to support the report of the Town Council. Mr. Heron, town-clerk of Manchester, said they had not pure streams in Manchester, but, for all that, he did not think the present system of water closets was the best mode of dealing with the question. There had been a host of proposals put before the Town Council of Manchester, and it was considered that they ought to adopt one of them. With regard to the evidence taken before Select Committees of the House of Commons, he said the fault was that no practical man had been examined before them, and the only result of their inquiry was that they recommended that something should be done, but did not say what; and it was only when they came to frame a Bill that they would find the great difficulties they had to contend against. He believed that it would be impossible for them to have anything but a permissive Bill. If a compulsory Bill were to be proposed in Parliament, the very corporations which were there that day would rise up and oppose the imposition of a duty which would entail upon them considerable cost and difficulty. Therefore he was satisfied that nothing but a permissive Bill would be tolerated in Parliament. Mr. Bass called attention to the last Agricultural Society's meeting at Brighton, where a gentleman who farmed extensively and used to cart the soil in its solid state, said that he had been compelled to give it up since it had become diluted with water. Mr. Standbridge said that if they could get the power they wanted there would be no necessity for them to attempt to separate the solid part of the manure from the liquid, as they could get it all used. It would be impossible for them to return to the old system, for it would cause the demolition of a great part of Birmingham, and would besides seriously affect the manufacturing interests, as they must have a sewer for the drainage of the manufactories. Mr. Page said that a gentleman he knew had done away with water-closets in houses on his property, and resorted to the old system. The result had been that he could let the houses at 3*d.*, and in some cases 6*d.* per week cheaper, and, as an agriculturist, he found the value of having the manure in the state in which it ought to be brought on the ground, instead of having it spoiled by being diluted with water. The memorial, as he read it, was not to compel any town to adopt it, but give them power, where there was a river of water, they thought it desirable to preserve the power to purchase land, the same as railways did, for the purpose of providing for the sewage without letting it go into the river. Mr. Sadler said that if there was not a single water-closet in Birmingham the stuff that flowed into the river from the manufactories would be so bad that no fish would live within miles of it. They wished to have the permissive power given to the governing local bodies to deal with the question in their own localities. He thought that if the Government declined to give them local powers to purchase or lease land, and to cede the sewage to persons who would carry it to the land, and to take advantage of every circumstance that would facilitate that object, it ought to take the matter into its own hands, and construct carriers to convey the sewage from all the large towns to the country, where it could be utilised, and not allow it to go into any of the rivers in the kingdom. The town of Birmingham had grown so largely that the sewage discharged into the River Tame had increased from 10,000,000 to 15,000,000 gallons per day, and that was still further augmented by numerous little townships that were springing up in the vicinity of Birmingham. He suggested that the sewage should be taken to districts where it could be spread over the land, and the towns and townships should pay a rate towards the expense according to their population. The Birmingham deputation had invited the other gentlemen to join them not in going for anything special, but for something general. The Chairman thought the time had arrived when the Government ought to give to local governing bodies the power to deal with their sewage. Mr. Beale said it was very desirable to know if the sewage was as valuable dry as it was in a liquid state, because the process of drying was very simple. Mr. Bass said that was not the question; they had not met to discuss the chemical properties of manure, but to try and get Sir George Grey to include in a Bill power to compel those townships which might afterwards come into the system of sewage they might adopt to pay their quota of the expense of making the sewers. Alderman

Bath thought they ought to come to an unanimous opinion as to what they ought to ask Sir G. Grey. They ought to confine themselves to elementary principles, and by that means he would be able to understand what they wanted, and be more likely to bring in a Bill that would be suitable for all the country, instead of for individual towns. Whatever might be their opinion with regard to watercloset, it was certain they must have liquid sewage to deal with, and they must not let it go into their streams and rivers. He therefore thought it would be desirable they should agree upon some principle to lay before Sir George Grey for a Bill that would be suitable to all towns in the country. The Chairman said that by way of bringing the matter to a practical shape he would move the following resolution :—

"That in the opinion of this meeting it is absolutely necessary that a Bill should be introduced into Parliament in the present session by her Majesty's Government, to enable local authorities to deal with and utilise the sewage of their towns and districts so as to prevent the pollution of rivers and streams."

Mr. Page seconded the motion, and thought the Government would pay great deference to the opinion of so high an authority as Professor Liebig. The Mayor of Bath said the case of Birmingham was totally different from that of Bath. The latter was situated in a rich valley, and could not adopt a system of sewage such as that suggested in the memorial. Nevertheless, the Corporation of Bath would give the meeting all the co-operation and support in its power. The resolution was then put and carried unanimously. The meeting then broke up, and proceeded to the official residence of Sir George Grey, where they were met by Mr. Scholefield, M.P., who introduced the deputation. The interview having commenced with the reading of the preceding resolution, a long conversation ensued between the Home Secretary and the deputation, on the defects in their existing powers which the corporations complained of, and the powers they wanted to gain. The deputation stated in effect that they wanted a more extended outfall; to have the means of distributing the sewage in the cheapest manner possible; to have the power to carry it along turnpike roads; to be protected from responsibility in the case of smaller towns in the watershed polluting the rivers; to have power to act independently or collectively along the whole line of the watershed for the distribution of the sewage over the land, and also to sell the sewage to a company if it should be thought desirable to do so; to have power to cross rivers, and purchase such lands as might be necessary to distribute the sewage; to have power to compel parishes or private individuals to let them cross their land on giving compensation, and also to compel parishes to join in the expense of getting rid of their sewage.—Sir G. Grey in reply said that he had better have a case stated. The subject was a very important one, and had been under the consideration of the Government, but what he wanted was to have some practical suggestions as to the remedy which they asked.

COURT OF BANKRUPTCY.—By an order of the Lord Chancellor, dated the 3d inst., and to take effect from the 11th proximo, Mr. Mansfield Parkyns, the official assignee of the Court of Bankruptcy for the Exeter District, is transferred to the Court of Bankruptcy in London, and appointed an official assignee of the London Court, to act in the room of Mr. Cannan, one of the official assignees in the London Court, who has resigned his office. Mr. Theophilus Carrick, one of the official assignees for the Leeds District, is transferred to the Exeter Court, in the room of Mr. Parkyns; and Mr. George Young, one of the official assignees for the Leeds District, in addition to being appointed official assignee at Leeds, is also appointed official assignee at Hull and Sheffield.

THE LATE MURDER OF MR. BRIGGS.—The statement that Matthews has received the reward of 300*l.* offered for the conviction of Muller is contradicted. It is said that the railway company and the bank have handed over their respective sums to Sir Richard Mayne, and when Government add their portion, the question of how the money shall be divided will then come under consideration. It is said, however, that it will be equally divided between Mr. Death, Matthews, and the two Repsches.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended on Saturday the 10th inst. were 1522. The average number in the corresponding week of the 10 years 1854-63, corrected for increase of population, was 1467. The present return is therefore 55 over the average. During the week the births of 1020 boys and 941 girls, in all 1961 children, were registered in London. In the 10 corresponding weeks of the years 1854-63 the average number was 1886.

Provincial.

BRADFORD.—A Reform meeting was held in St. George's Hall on the 8th inst., and was attended by Sir F. Crossley, Bart., M.P.; Mr. Stansfeld, M.P.; Mr. Baines, M.P.; Mr. Forster, M.P.; and reformers from all parts of the West Riding. Mr. Forster, M.P., was called to the chair, and spoke as follows :—

"The necessity for reform was as great now as when the present Parliament was elected, and the demand for it was equally urgent. He admitted that he did not expect an extension of the franchise would be obtained from the present Parliament, and he urged the working classes to take measures to make their opinions known when the House of Commons was dissolved. The present feeling as to reform was not so strong as at the passing of the last Reform Bill, or even at the time of the Chartist agitation; but there was still so much feeling in the large towns and amongst prominent leading men of the Liberal party, that he would venture to prophecy, that when the dissolution of Parliament took place, the Liberal members would be just as much pledged to reform as they were at the last dissolution. The question, therefore, was—were those pledges to be taken seriously? In fact, would it not be dangerous if those pledges were to be trifled with by the next Parliament, as they had been by the present Parliament? If Parliament admitted that changes were required, and they trifled with them as they had done in times past, he considered that it would be destructive to political morality, dangerous to Parliament, and the least evil would be, that it would be utterly destructive, for many years, of the Liberal party. Although he was not so sanguine as to expect reform at the hands of Lord Palmerston, he looked forward to the future that lay before Mr. Gladstone, who felt that he had responsibilities, and if the people did their duty would not forsake them. Looking at the position in which they stood, he believed that it was more hopeful than was generally supposed. At the next dissolution the Liberal party would be again pledged to the reform measure. If they found themselves in opposition, they would be bound to bring the matter forward with a determination to carry it, and if they were in power they would have to stake that power upon its adoption. He believed that the country would have a Reform Bill, and he agreed with Mr. Leatham, that the danger was not so much that they should have no reform, but that the Reform Bill would be a bad one. He hoped that the working men would keep themselves informed of what was going on. He directed them to study a work recently written by Earl Grey, and called attention to the writer's comments on the representation of minorities, which he said would give enormous power to men with crotchets; and as to plurality voting, which was one of the subjects Lord Grey dwelt upon, he thought it required little time to form an opinion on a course so contrary to every principle of representative government. Sir F. Crossley moved the first resolution as follows :—"That the present state of Parliamentary representation, excluding as it does a majority of the people from any share in self-government, is most unsatisfactory and unjust." The hon. baronet advocated an extension of the franchise and vote by ballot, and combated the objections which were urged against those measures.—Mr. Stansfeld, M.P., seconded the resolution. After noticing the failure of the reform measures of the Conservatives, and of the Liberal measure introduced at the opening of the present Parliament, he said there were many reasons which induced him to imagine that the question of reform could hardly fail to be seriously raised in the next Parliament. Pledges would be again invited; but he conjured them, in fairness to their representatives, to invite no such pledge unless they were prepared to support those of whom they asked that pledge. He trusted, too, that, warned by the past, no candidate would accept such pledge, unless, as far as in him lay, he was prepared to insist that his party should redeem it. There had been a fault in the out of doors agitation upon reform which it was necessary to avoid in the future. It had been treated sentimentally rather than in practical earnest. Discussions had been held as to whether they should start with the principle of a compromise; and if a compromise, what compromise; and then, but too often, experience had shown them that a programme at length accepted had been as far as all practical labour was concerned, allowed to fall to the ground. In his judgment such discussions continued too long were worse than a waste of time. Let every man, let every association of men, declare with the utmost of freedom the utmost extent of their wishes; but let them, at the same time they spoke openly and thought freely, show that they possessed judgment and common sense. Let them recognise the fact that reform which was not revolutionary was necessarily progressive and gradual, and that whatever their opinion might be, there must inevitably be a compromise—a poor and a worthless compromise if they refused to assist in the work, but a substantial measure of reform, though still a compromise, if they put their shoulders to the wheel. He noticed a fear of being swamped by the extension of the franchise among those who possessed the monopoly of political power, a disposition to put off the evil day when they must share it with the working classes. They should have no difficulty in dealing with the fear. No reasonable man desired reform of such a nature that its consequence should be that the whole legislation and administration of the country should take its tone from what might be called the working classes' opinion alone. There was not the remotest chance of any measure being even introduced into the House in which such a danger would lurk. He was quite sure Mr. Baines would have no difficulty in proving the innocence of his progeny of any such design, and yet such a measure, should it be forthcoming, would be worthy of their support. If they gained a footing within the pale of the franchise, they became a part of the body politic; their political life might be said to have commenced; and the future would depend entirely on the use they made of the vantage ground they would have gained. Not only would such a measure be worthy of them, but it would require their earnest support if they were to overcome the disinclination of which he had spoken. The public must supply the breeze to fill the sails, and they alone could supply that motive power. It would be a discredit to our statesmanship if the present state of affairs could any longer remain. The present franchise stopped just where a class began; and though the present temper of society was to tone down and obliterate those lines of demarcation, the effect of the present state of affairs was to perpetuate it. He was tired of hearing the praises of the Lancashire operatives sounded by men who did not seem inclined to carry them to their logical results. He had read with great pleasure the thoughtful speech of Sir James Kay-Shuttleworth on the progress of the working classes. One reading such a speech as a page of history, might well expect that the next page would be a record of the admission of such men to take their share in the rights and duties of statesmanship. It was not because of any misgovernment that he would demand reform. He did not mean to say that there was not always plenty for the reformer to do, but that was not the true or the logical ground upon which to base their demand for reform. He would ask for reform because of that progress which had rendered it inevitable, and which proved it to be safe, and all the more safe, and all the more likely to fructify to the advantage of the country if it was willingly accorded. There were statesmen who feared this progress, who called it democracy, and who would seek to stem its tide; but that democracy alone was dangerous which was a reaction against gross misgovernment, and which had its stormy birth in days of ignorance, bigotry, and oppressive rule. In the progress which they desired there was no such danger. There was nothing which they should anticipate in that but increased stability to the institutions of the country—a new power and added lustre to our national life—and above all, and more than ever before, a re-knitting together of the bonds which bind class with class, till the lines of demarcation between them shall be lost in the harmony of the constitutional edifice. There were statesmen, also, who trusted and did not fear. There were those who had faith in their countrymen, and in the destinies of their country. Let them trust those who trusted and they would not be deceived; and when they asked for reform, let them ask for it recognising all the merits and the benefits of the present and the past; let them ask for it as a right, for it was a right let them ask for it also as a duty; let them make their claim to the right of fulfilling all the duties of statesmanship in a great and free, and orderly community, and their claim would be heard. The times were ripening for that event. Its advent was accepted in principle by the intelligence of the country, and it needed but one thing more to secure its realisation, and that one thing was their labour and their will. The resolution was passed amid general acclamation.—Mr. Baines, M.P., moved "That further delay in remedying this injustice, after it had been repeatedly admitted in speeches from the throne and by the leaders of both parties, would be derogatory to the character of Parliament, and destructive to political morality." He showed that all parties, and both Houses of Parliament, were pledged to an extension of the franchise, and he urged that an effort should be made to compel them to redeem that pledge by the introduction of a measure in the next session, which, being the last session of Parliament, was the most favourable for the consideration of such a subject. The first session of a new Parliament was in many respects the worst, as the passing of the measure would necessarily cause a dissolution, and compel many members to pay over again what in fact was the price they had paid for their seats. He thought they would be successful. He had obtained last session 240 votes (including pairs) for the second reading of his Bill, and he was below Mr. Locke King. Yet the success of a private member was not so great as that of a Government might be expected to be, for many refused to vote for such a measure unless as a Government measure. He called upon Mr. Gladstone to lead the Liberal party in passing the measure of reform next session. He replied to the argument that the working classes were indirectly represented by suggesting "turn and turn about." The working classes should get the direct, the upper classes the indirect, representation. As to alleged ignorance of the working classes, it was impossible they could make grosser blunders than had been committed by the upper and middle classes when they upheld the corn and navigation laws, and other restrictions upon commerce and industry. He believed the enlargement of the representation would improve the character of the House. Faith, he agreed with Mr. Stansfeld, was an important element in politics as well as in religion, and he had faith in the working classes.—Mr. R. Kell seconded the motion, which was adopted; and on the motion of Alderman Godwin, seconded by Mr. Councillor Whitehead, and supported by Mr. Alfred Illingworth, the following resolution was adopted :—"That it is necessary reformers throughout the country should co-operate with energy in order to induce the Government and Parliament to settle satisfactorily the reform question. This meeting, therefore, rejoices in the establishment of the National Reform Union for that object, and promises to that organisation its hearty support."

KENDAL.—On Saturday night the 8th inst., Mr. Henry Kirkby, of Underbarrow, and Mr. Robert Dacre, of Lyth, left this town to return home, after attending the market. Both resided on the other side of the steep limestone ridge, known as Scout Scar and Cunswick Scar, which separates Kendal from the valley of Crosthwaite, Lyth, and Underbarrow. They were well-to-do farmers, living on their own estates. The night was dark and stormy, and floods were out in all directions on the low-lying lands below the Scar. Mr. Kirkby however, never reached that point. He was found on the following morning lying dead near a limekiln not many hundred yards distant from Kendal, having apparently been killed by a fall from the top of the kiln. It is supposed that he and his companion had been taking a short cut from the end of the town into the Underbarrow Road. This path traverses the quarries and the ground where the limekilns are situated, and it is probable that Mr. Kirkby mistook his way in the dark. Mr. Dacre was last heard of at the Punch Bowl Inn, Underbarrow, about a mile and a half from his own house. He stated there that he had lost Mr. Kirkby, he did not know how, and was urged not to go forward, as the mosses, across which a portion of his road lay, were flooded. He, however, declined this advice, and has not since been heard of. There is no doubt that he was drowned on the moss, and it is thought that his body has been carried by the swollen stream of the Underbarrow pool and river Gilpin past his own house to the sea at Milnthorpe sands, in Morecambe Bay.

LIVERPOOL.—There is every reason to believe that the ship Floating Light, from Bombay to Liverpool, has foundered in St. George's Channel, with a cargo valued at upwards of 200 000*l.* She was a large Quebec-built ship, of 1400 tons, and belonged to Messrs. Kennedy, of Liverpool. She sailed from Bombay on the 26th August with a crew of between 30 and 40. Her cargo comprised 5300 bales of cotton, averaging in value about 30*l.* a bale, 673 bales of jute, 28 tons of cocoa-nut fibre rope, and 90 tons of linseed. She was due, but no apprehensions for her safety were entertained until the 8th inst., when a seaman's chest was washed ashore on the Pembroke coast, with several bales of cotton and other articles which have been identified as belonging to the Floating Light. A piece of a ship's quarter with the name in gilt letters has since been washed ashore. It is therefore believed that the ship has either foundered or been wrecked in the Channel during the recent heavy weather. Nothing has been heard of the crew, and the worst fears are entertained as to their fate.

MOLD.—A dreadful colliery accident took place on Thursday morning, at the works of Messrs. Craig, Taylor, and Craig, Leeswood Green Colliery, near Mold, whereby nine men lost their lives. The cause of the accident is attributed to water rushing into the pit where the men were working from an old pit adjoining.

SHIELDS.—The Court of Inquiry respecting the loss of the Stanley steamer, have acquitted Captain Howling, and declared him entitled to renewal of his certificate. The Court considered that the absence of leading lights, and other circumstances over which he had no control, led to the catastrophe.

SOUTHPORT.—The Rev. C. Hesketh, rector of North Meols, has given 30 acres of land to the town of South-

part, for the purpose of forming a public park. The plot is situated on the north-east side of the town, and is considered admirably adapted for the purpose.

WINDSOR.—On Saturday a large portion of the mosaics intended for the decoration of the interior of the Wolsey Chapel arrived at Windsor Castle. They consist of a number of designs, manufactured by Dr. Salviati, at Venice, from drawings by Messrs. Clayton & Bell, and will be placed in the borders on each side of the eight windows, which will eventually be filled with stained glass. The decorations on the west wall of the chapel will be of the richest description of mosaic work; and the 28 panels between the carved stone-work of the wall will be inlaid, it is understood, with figures of the Sovereigns of England, executed from cartoons by Messrs. Clayton & Bell, while the whole work will be surrounded by a golden border, ornamented with red roses. The walls beneath the north and south windows are to be covered with pictures in marble inlay work by Baron Triqueti. The entire work is to be executed at the cost of the children of the Queen, as a memorial of the Prince Consort.

Scotland.

THE EDINBURGH PRINCE CONSORT MEMORIAL.—It is understood that the Council of the Architectural Institute of Scotland are of opinion that the proposal for the erection of the Prince Consort Memorial on Arthur's Seat should not be entertained.

SUSPECTED MURDER IN COLDSTREAM.—On Monday week the wife of a man named Alexander Thomson was found lying dead in the house occupied by them. The deceased was severely cut about the head, and her arms and other parts of her person were a mass of bruises. The room and bed were saturated with blood, and there were other indications of a violent struggle having ensued. The husband said that he and his wife had quarrelled during the night, and that she had seized the poker and he the tongs, and that they had struck each other. A slight cut was found on his head, and the poker and tongs were smeared with blood. A strong cord was also found tied about deceased's leg. The man was taken into custody, and the sheriff substitute and procurator fiscal are investigating the occurrence, which has created a great sensation in the neighbourhood.

Railways.

THE SCOTTISH CENTRAL.—It is stated that the directors of the Scottish Central have given orders for fitting up some of their first-class carriages with plate-glass panes between the different compartments.

FATAL ACCIDENT ON THE BORDER COUNTIES.—On Saturday an accident occurred on the Border Counties line at Falstone Station, causing the death of two men. At Falstone the single line of rails begins, and the speed of all trains passing the station is reduced to four miles an hour, in order to allow the driver to receive the train-staff. The train to which the accident happened was loaded with coal, and had just passed the station at a low rate of speed, when the engine jumped off the rails, and sank about 2 feet into the ground between the main line and a siding. The tender was twisted round at right angles with the engine, and the driver and stoker were killed on the spot. The line having become blocked by the coal trucks, the whole of the trains over the Waverley route on Saturday were delayed.

Law.

COURT OF DIVORCE.—*Stone* v. *Stone and Appleton*.—The only decision of Mr. Justice Cresswell that ever was reversed was in this case, which was a suit brought by Captain Stone against his wife and her medical attendant, who absconded at the commencement of the action. The jury in the first trial in 1863, returned a verdict for the petitioner, with damages against the co-respondent at 2000*l*., but the full court ordered a new trial contrary to Mr Justice Cresswell's opinion. The second trial terminated on Thursday, when the jury reversed the decision of their predecessors, and found for the respondent. As the co-respondent, Mr. Appleton, did not make his appearance, having absconded, it was said, for debt, the judge informed the jury that, though they had found the lady innocent, they must find the gentleman guilty and assess him in damages. The jury at first refused to give damages against him, but on the Judge telling them that they must assess some damages, as he had admitted his guilt by not appearing, they awarded damages of one farthing.

HOME CIRCUIT: CHELMSFORD.—*The Murder on Chadwell Heath*.—Frances Blunt, alias *Toddy*, 44, a great hulking fellow, 6 feet high, with deformed feet, was charged upon an indictment, and also on the coroner's inquisition, with the Wilful Murder of Amelia Blunt, on the 24th September, by cutting her throat. This case was fully noticed at the time of the murder in our Provincial news, and it will be remembered that the prisoner and deceased had once cohabited together, but the woman left him on account of his cruelty, and went to live in an old man's cottage on the heath, whose son proposed to marry her, and the banns had been duly published. The prisoner, who had often threatened her for leaving him, called at the cottage at a time when the woman was alone in the cottage washing, and there cut her throat, leaving her hanging over the wash-tub as if still alive. In that position she was found by the old man when he returned to the cottage. The evidence against the prisoner was very conclusive, and the jury returned a verdict of *Guilty*. Baron Channell then addressed the prisoner, and said: You have been found, after a most careful trial, guilty of wilful murder, and I entirely concur in the verdict of the jury. Upon the facts they could come to no other conclusion, and your life is forfeited. The law will be more merciful, however, to you than you were to your victim, for you will have time to repent, which you denied to her. My duty is to pass upon you the sentence of the law. His lordship then passed sentence of *Death* in the usual form. The prisoner did not exhibit the slightest emotion during any period of the trial, and when the judge had concluded he turned round and walked deliberately away from the bar. The trial lasted nearly seven hours. *Attempted Murder.*—*Henry Augustus Munns* was convicted of wounding a young woman, named Charlotte Turner, in a transport of jealousy, with intent to do her grievous bodily harm, and was sentenced to 10 years' penal servitude. HERTFORD.—*The Highway Robbery at Brickenden bury.*—*George Savage*, a young man, described as a bricklayer, of Yardley, was indicted for the murderous attack on Mr. Joseph Barker, farmer, on the 29th October. The details of this case were given last week in our Provincial news, and the facts as there stated were fully proved. When the jury were considering their verdict, one of them turned round and asked whether, if the prisoner was convicted, he would suffer death? Baron Channel: You have no right, sir, to ask that question. Several of the jury desired it to be understood that they had not wished it to be asked. The juror said he alone wished to ask it. The Judge: Sir, you ought, when you are in the jury-box, to deliver your judgment according to the evidence. You are responsible upon the oath you have taken, for finding a true verdict according to the evidence, leaving the law to take its course. In this particular case, however,—that there may be no unfounded notion in the mind of any one of you—I may tell you that though it was a capital offence not long ago, it is so no longer. But I do not approve the question being asked. The Juror: I thank you, my lord. But Lord Brougham— The Judge: Pray, sir, apply your mind to the discharge of your duty.—The jury then turned round in the box, and in a few moments returned a verdict of *Guilty of the whole charge*. It was then proved that the prisoner in 1859 was convicted of burglary, and sentenced to four years' penal servitude. In answer to the Judge, it was stated that it was not known whether he had served his full time, but it had expired. The Judge then proceeded to pass sentence upon the prisoner as follows:—You have been convicted of wounding with intent to murder, and the jury have shown that they were well aware of the atrocity of the offence. The evidence was so clear and conclusive that I can conceive of no reasonable doubt; and I rejoice that the jury, doing their duty to their country and the law, have not shrunk from giving the verdict which the evidence appeared to require, leaving the consequences to the law. Until a short time ago the offence of which you have been convicted was punishable with death. That is not so now. But, looking at the wicked and atrocious nature of the attack which you made upon the life of this old man, and also considering that this is not your first offence, but that you have been already convicted of a felony with violence, the sentence of the Court is that you be kept in penal servitude for the term of 20 years." The impression produced by this sentence upon the crowded audience was certainly not that it was too severe. On the prisoner it produced no impression beyond exciting his rage, and with a fierce look and in an insolent tone he said, "Ah! I shall be back before long!" *Attempted Murder at Watford.*—*Thomas Fountain*, 26, formerly in the Royal Marines, was charged with feloniously and maliciously assaulting and wounding Mary Stone, with intent to murder her. The circumstances under which this charge was preferred were of a rather remarkable character. The prosecutrix was a respectable young woman, in the service of Mr. Coles, a stockbroker, residing at Notting Hill, but at the time of the occurrence she had gone to assist the family of her brother, who had taken a farm called Bushey Lodge Farm, in the neighbourhood of Watford. On the afternoon of Oct. 3 the prosecutrix had been sent to Watford on an errand. On returning home between 5 and 6 o'clock in the evening she found herself seized by the shoulders by the prisoner, who tore off her bonnet, and, without saying a word, drew a large clasp knife across the right side of her neck, close to her jaw, thereby inflicting a wound 5 inches long. She screamed, and the prisoner then put his fingers into her mouth to prevent her from making a noise, and upon her putting up her hand and laying hold of the knife to endeavour to protect herself the prisoner drew the blade through her fingers, and cut two or three of them severely, and he then inflicted a second wound on the left side of the neck of the prosecutrix. Happily at this moment a cart, in which Mr. Thurlow, a farmer living near the spot, and his wife, were returning home from Watford, was heard approaching, and the prisoner jumped over a hedge and made off. On Mr. Thurlow coming up to the prosecutrix she was found to be in a terrible condition, almost covered with blood, and nearly fainting, and with the assistance of other persons who came up she was removed to Bushey Lodge Farm, when a surgeon was sent for to examine her, and it appeared by his evidence that, if the wounds on the neck had been a little deeper it would have inevitably caused almost instantaneous death, as one of the principal arteries would have been severed. After the prisoner had committed the outrage he ran across a number of fields, pursued by several persons, and, in his way, he swam, or waded through, the River Colne, and was at length taken into custody while endeavouring to conceal himself under a hedge. On the route he had taken there were picked up the hat of the prisoner, and also a large clasp knife, such as is used by sailors, which was covered with blood, and there was no doubt that it was with this weapon that the injuries had been inflicted upon the prosecutrix. The defence was that the prisoner had formerly been in the Royal Marines and had received some injury in the head, in consequence of which he was discharged with a pension, and on the day in question he had been to Watford to receive his pension, and had got drunk and was robbed, and, meeting with the prosecutrix, he was under the delusion that she was the person who had robbed him, and this induced him to attack her in the manner described. There was no attempt at robbery, and the prisoner's conduct could not be accounted for in any other manner. The jury, after a short consultation, found the prisoner *Guilty* of wounding the prosecutrix, with intent to do her grievous bodily harm. Mr. Baron Channell, in passing sentence, said he regretted to see a man, who appeared by the papers before him to have been in her Majesty's service and to have been discharged with a good character, standing at the bar to receive judgment for such an offence as this. There was no doubt that the act had been committed through his giving way to habits of intoxication, which at the moment had deprived him of self-control; but it was equally clear that he had no malice against the prosecutrix, and that the act was not committed with the intention to rob her, or anything of that sort. The offence, however, was still a most serious one, and he felt himself compelled, by his duty to the public, to pass a sentence of penal servitude, but under all the circumstances, it should be for the shortest period allowed by law, which was five years.

NORTHERN CIRCUIT: YORK.—*Child Murder near Howden.*—*Alice Wilson*, 25, was charged with the wilful murder of Thomas Wilson, her infant son, nine months old, at Booth, near Howden, on November 12. The prisoner was a married woman, and had two children, the issue of that marriage. The eldest was a boy, who died, and the other, who still survived, was a girl of three years. The prisoner was deserted by her husband in 1862, and she then went to service. In February or March of the present year she returned to her mother's house at Booth, near Howden. She was then in the family way, and gave birth to the child who formed the subject of the present inquiry. As soon as the prisoner was in a fit state to be removed, she, with her two children, the girl and the newly-born infant, went to the Howden Union, and from thence was removed to the workhouse at Beverley. She remained there until November 11, on which day, which was a Friday, she left with her children, the girl and the deceased. At that time the child was suffering from scrofulous or scorbutic eruptions. On leaving Beverley Workhouse, the prisoner went to Snaith, and there remained all night. On the following morning she left that place with her children, and went by the carrier's waggon to Howden. A passenger, Mrs. Gibson, entered the carrier's conveyance in the course of the journey, and then saw the prisoner with her two children, the youngest of whom, deceased, she was suckling at the breast. Mrs. Gibson had some conversation with the prisoner, and said that she was going to attend the statute at Howden on the following Tuesday for the purpose of being engaged as a farm servant, and that then she should put her two children to nurse. Mrs. Gibson told the prisoner she would not be able to maintain her children, and received no reply to this observation. The prisoner arrived at Howden at half-past 12 o'clock, and left the carrier's cart without paying her fare. She stated that her mother lived at Howden, and that she would go to her and get the money for her fare, and return with the money and give it to the carrier. The prisoner's mother did not reside at Howden, and therefore the prisoner made a false statement, apparently perhaps to mislead the carrier as to her whereabouts. After leaving the waggon the prisoner took the road to Booth, which is almost two miles from Howden. About half-past 1 o'clock she was seen a mile out of Howden by a woman named Dennis, who observed her with her two children pass her house, which is nearly half-way between Howden and Booth. Dennis observed that the prisoner was carrying something in her arms having the appearance of a child with a hood upon its head. From this time the prisoner was not seen again until three o'clock in the afternoon, when she was met by a little girl named Mary Barker, whom she was acquainted, on the banks of the river. The prisoner had some conversation with this girl and then left her. At half-past three o'clock the prisoner went to the house of Mrs. Harrison, at Booth, who knew the prisoner well, and had a talk with her about her children. She had then only one child with her, and Mrs. Harrison asked her about the other child. The prisoner said it had been ill all the time it had been in the workhouse, and had died on the previous Monday, was buried on the Wednesday, and that she had left the workhouse on the Friday with her girl. She made this statement although within a couple of hours before she was seen carrying the child, and at that time it was perfectly well. Her mother afterwards returned home, and being dissatisfied with the statements about the child, pressed her with questions, when the prisoner said that she had thrown the child into a neighbour's pigstye, where the body was subsequently found covered with earth and stones. The medical evidence showed that death had been caused by suffocation. The judge having summed up, the jury were engaged in deliberation for three hours, after which they returned a verdict of *Guilty*, but recommended the prisoner to mercy. Mr. Justice Keating passed on the prisoner the sentence of *Death* in the usual form, but stated he would forward the recommendation to the proper quarter. DURHAM.—*Brutal Outrage on a Woman at Washington.*—*Henry Lewins*, 24, pitman; *Thomas Ramshaw*, 24, married man, pitman; and *Miles Handy*, 40, pitman, were indicted for having committed a rape on the person of Maria Page, a married woman 64 years of age, at Washington, on the 15th of August. The circumstances of the case were of the most revolting description, and the result of the outrage upon the unfortunate woman has been that she has since been subject to fits. On coming into court to give her evidence she swooned, and the assistance of a physician was necessary before she was able to give evidence. The case was fully proved, and the jury, after an absence of nearly two hours, returned a verdict of *Guilty* against all the prisoners. Mr. Justice Keating then said—Prisoners at the bar, you have been convicted on evidence that has satisfied both the jury, and myself, of an offence, one of the most aggravated of this kind, and one in which, during my experience—now many, many years—I think I never before met with. It is but a short time since the offence of which you have been convicted was a capital offence; and had it remained so at the present time you would all have been left, beyond all doubt, for execution. The law is now more mildly administered, so far as the punishment of death is concerned; but it is my duty to pass upon you a sentence scarcely less severe. The sentence of the Court is that you, and each of you, be kept in penal servitude for the term of your natural life. On hearing this sentence Handy appeared perfectly astounded, and stood seemingly unaware of its full meaning, but at length leaned forward and inquired of an officer of the court the nature of the sentence, and on receiving the answer, turned ashy pale, and immediately darted down the stairs, whither the other prisoners had been removed. The cries of the relations of the prisoners were heart-rending. Handy's wife and a number of his children, who were present, appeared to be in a state of perfect frenzy; his wife was taken away fainting by some of her friends. Also were other relations of the prisoners. The case occupied from 10 in the morning until 6 o'clock in the evening. MANCHESTER.—*William Slater* and *Holland Cheetham* were charged with having, at Reddish, near Stockport, on the 5th August last, maliciously and feloniously wounded Thomas Wild, a master bricklayer, with intent to do him grievous bodily harm. The interest of the case arose mainly from the fact that the assault occurred in connexion with a trade organisation against the use of machinery for the purpose of pressing bricks, and was one of a series of outrages which had of late been committed by brickmakers in the neighbourhood, and also from the very violent nature of the assault committed. The case lasted nine hours, and the jury returned a verdict of *Guilty* against both prisoners. Mr. Justice Shee-burn, in passing sentence, characterised this as a very bad case, and observed that trades unions might be very useful in their way, but it was not to be tolerated that such unions should be made instruments of oppression and of interference with men who wished to earn their wages honestly by their labour. He felt it his duty to deal very severely with the case, and sentenced the prisoners to be each kept in penal servitude for 20 years. *Arson by a Manufacturer.*—*David Goldstone*, 29, was charged with having, at Manchester, on the 7th November, maliciously and feloniously set fire to a certain warehouse, shop, etc., in his possession, and used by him in carrying on the trade and manufacture of caps, with intent to defraud the British Insurance Company. The jury returned a verdict of *Guilty*. The judge said there was ample evidence to justify the verdict. The crime was of great magnitude, and the slightest sentence he could pass would be penal servitude for 15 years.

NORTH WALES CIRCUIT: CHESTER.—*Attempted Child Murder.*—*Eliza Ashley*, a servant, was indicted for attempting to drown her daughter, three years of age, on the 13th of August. The case presented the usual features—great poverty on the part of the mother, and no means of supporting the child. She tied an apron tightly round its throat, and threw it into a brook. It appears to have managed to keep its head out of the water, and was subsequently found almost dead by a farmer. The jury returned a verdict of *Guilty*, and Justice Mellor said that he should not be doing his duty unless he sentenced prisoner to be kept in penal servitude for life. *Child Murder.*—*Mary Marsh* was tried for the wilful murder of her child at Leeswood on the 31st July. The case was fully proved, and the jury returned a verdict of *Guilty*, with a recommendation to mercy. Mr. Justice Mellor passed sentence of *Death* in the usual form.

[illegible] that he would forward the recommendation of the jury in the proper quarter. [Sir George Grey has since considered the recommendation to mercy, and after consultation with the [illegible] has recommended the extension of the mercy of the [illegible] and the sentence will therefore be commuted to penal [illegible] for life.]

[illegible] Circuit: Gloucester. — *Child Murder.* — *Sarah* [illegible] was charged with the wilful murder of her female child at Westcote. This was a deplorable case. The prisoner, a woman of 40 years of age, having become *enceinte*, and being unmarried, was turned out of her house by her mother and brother, and for a month had been wandering about the fields, sleeping under hedges and in hovels at night. On the 9th August she was seen walking across a field apparently ill, and late in the day two women who knew her, and observed an alteration in her appearance, asked her what she had had with it "what she had had." She replied that she had had nothing, but some blood was traced to a heap of stones, under which the body of a newly-born child was found. Its skull was fractured, a bloody stone was picked up with child's hair on it, and there were bruises on the child's body. Evidence having been given proving that the prisoner was near the spot where the body was found, the surgeon who made the *post-mortem* examination of the child, showed that the child had breathed and had a separate existence, and that death was caused by effusion of blood on the brain, caused by external violence. The child was prematurely born, being an eight months' child, and the mother was partly paralytic. For the defence it was contended that there was no proof of her intention to destroy the child, although the facts might support a charge of concealment of birth. The prisoner was found *Guilty* of concealment of birth, and sentenced to two years' imprisonment. *Child Murder at Cheltenham.*—*Elizabeth Perren* was charged with the wilful murder of Louisa Perren, at Cheltenham, on the 6th September, 1863. This case excited a good deal of interest, and the court was crowded. On the 11th August, 1861, the prisoner was delivered of a female child at the Cheltenham Workhouse. On recovering she went out to service, and put the child out to nurse, where it remained till the 5th September, 1863, when she took it away, and it had never been seen alive afterwards. At that time the prisoner was in service at Mrs. Cox's, Ormond Terrace, Cheltenham, and Mrs. Cox noticed a smell in the house afterwards, which she attributed to a defect in the drain pipe. Mrs. Cox left Ormond Terrace in September last, and some alteration taking place in the premises, the dead body of a child was found under the floor. The prisoner was then apprehended in London, and admitted having made away with the child, but there was no proof that the body found was that of her child. The judge in summing up told the jury that they must either find the prisoner guilty of murder or acquit her altogether. After carefully going through the whole of the evidence, and commenting on the statement made by the prisoner, and the absence of any explanation as to what had become of the child, he left the verdict in the hands of the jury. The jury, after half an hour's consideration, found the prisoner *Not Guilty*. *Child Murder at Withington.*—*Sarah Ann Green* was charged with the wilful murder of her male child at Withington on the 1st May. The prisoner was an unmarried woman, and was supposed to be in the family way. A change being observed in her appearance she was questioned, and at first denied that she had been delivered, but on the surgeon being sent to examine her she said she had had a miscarriage, that the child was born dead, and that her stepfather had buried it in the garden. The garden was searched, and the body of a full-grown child was found. A surgeon proved the existence of certain marks on the head of the child, which he said might have caused death. The child had breathed, and had a separate existence from the mother. Mr. Baron Bramwell said there was no evidence to support the charge of murder. The prisoner was then found Guilty of concealment of birth and sentenced to six months' imprisonment. *William Belcher* stepfather to the prisoner was then tried and found *Guilty* of aiding in the concealment of birth, and sentenced to two years' imprisonment. *Attempted Murder at Painswick.*—*James Billings* was charged with firing a pistol at Elizabeth Trow, at Painswick, with intent to murder her, on the 3d October; and also with wounding Job Barnfield with a knife with intent to resist his lawful apprehension. This was a serious case of attempted revenge by a jilted suitor. The prisoner and the prosecutrix had kept company, but for some reason the girl had broken off the acquaintance; and as she persisted in refusing to receive his addresses the prisoner declared that no one else should have her if he did not. On the 3d October the prisoner met the girl, and presenting a pistol fired the charge, carrying away some of her ribbons. He then rushed upon her with a knife, but was stopped. He was found *Guilty* of unlawfully wounding with intent to do bodily harm, and was sentenced to seven years' penal servitude. Stafford.—*The Colliers' Strike.*—*James Bishop*, a working collier, and 18 other miners and colliers, were indicted for conspiracy to keep up the rate of wages by intimidation of workmen, for riot and unlawful assembly, and for assaults upon the police in the execution of their duty. The indictment contained 14 counts. It will be remembered that one method the colliers took to advance their cause was to parade in front of the pits where men were at work early in the morning, with a view to intimidation. On one of these occasions the police interfered, a fight took place, and these 19 men were apprehended. Mr. Kenealy, who defended them, took the novel course in a criminal case of entering a demurrer to the evidence in the case of twelve of the prisoners, which the judge after some hesitation agreed to accept but Mr. Powell, Q.C., who acted for the Attorney-General, refused to join issue, and the trial went on. Mr. Justice Byles in summing up, said if the jury believed the evidence, there could be no doubt that they had been guilty of conspiracy and of an unlawful assembly. At the same time no great harm had been done, and, in the event of the jury finding the prisoners guilty, that would be taken into consideration. The jury, after brief deliberation, returned a verdict of *Guilty* against all the prisoners. Mr. Powell, on behalf of the prosecution, recommended them to mercy. The Earl of Lichfield, Lord-Lieutenant of the county, also on behalf of himself and the magistracy, recommended the prisoners to the leniency of the Court. He said, the county had remained in the same state as a week, it was when the prisoners were arrested, they could not have done so consistently with their duty, but he was happy to say that order had been restored, and the men generally had returned to work. Considering, therefore, that the prisoners had been in prison for six weeks, and also that they had had enormous sums extracted from them for their defence before the magistrates and on their trial, he hoped the Court would be as lenient to them as possible. Mr. Justice Byles said he should gladly listen to the representations made to him on behalf of the prisoners, and the more so as he did not doubt that they had been misled by others, and from their own ignorance of the law. He thought the course taken by the magistrates during the disturbances and by the police had been most judicious. They appeared to have acted at the very moment, and not before, when by their interference they could do good and prevent mischief. The exercise of wisdom was opportunity, and that the magistrates had seized it was most fortunate for the county and for the prisoners themselves. Under all the circumstances he sentenced Bishop and eight others to one month's imprisonment with hard labour, and discharged the rest upon their entering into recognisances to keep the peace, and come up for judgment in the event of their breaking it. The prisoners appeared to be generally thankful to have got off so easily. *The Outrage on a Woman in the Black Country.*—Five ironworks operatives at Lea Brook, were charged with an outrage on a married woman, whose leg they broke at the same time. The oldest of the prisoners was 26 years of age, and the youngest two were aged each 18 years. The jury found them all *Guilty* of the attempt, and recommended them to mercy. Mr. Justice Byles.—To mercy!—on what ground, gentlemen? The Foreman.—On account of their age, my lord. The Judge.—Their age! Why one is 26 years of age, and is a married man. Mr. Justice Byles, in passing sentence said, that if they had been convicted of the capital offence he should have sentenced them to such a term of penal servitude that, before it had expired, the youngest prisoner amongst them would have become an old man. Owing, however, to the evidence of the surgeon not having been quite complete on this point, and to the prosecutrix not having referred to the grosser usage until a fortnight after the offence, when she was visited in the hospital by her husband, the jury had found the prisoners guilty on the lesser count. Their sentence would, therefore, be 18 months' imprisonment each, with hard labour.

Central Criminal Court: *Swindling by a Pretended Heiress.*—*Mary Horsfall*, 22, spinster, was indicted for stealing a chain, a ring, two bracelets, and several other articles of jewellery, the property of Miss Caroline Olley. This case has been several times before the public. The prisoner went to Miss Harvey, who keeps an educational establishment at Blackheath, early in September, and introduced herself to her as Miss Horsfall, niece of Mr. Horsfall, M.P. She said she was somewhat backward in her education, and wanted a little polishing. Terms were agreed upon, and she entered Ashburnham Hall as a parlour pupil, and very soon made herself intimately acquainted with the other inmates, and succeeded in getting herself into their good graces in a very short space of time, telling them that she would one day come into possession of vast estates. She slept in the same bed-room as the prosecutrix, and it was while so occupying part of her room that the robbery took place. On the 24th September Miss Harvey and the prisoner left for Bath, on a trip to see the rich relations of the latter, who boasted of the good things in perspective. After she had left the establishment Miss Olley missed the articles mentioned in the indictment. Witnesses were called to prove that the prisoner had pledged the greater part of the property at Mr. Jawley's, Farringdon Street, and at a pawnbroker's at Greenwich. The jury found her *Guilty*. Two other indictments were then gone into, charging her with obtaining goods by fraud, but by the judge's direction the prisoner was acquitted on both, the false pretence not being made out satisfactorily. The Recorder asked whether anything was known of the prisoner previous to her going to reside with Miss Harvey. Police constable Margetson, said he had ascertained that she was the daughter of very poor parents in Yorkshire, and the wife of a labouring man. He had traced her to Liverpool, Manchester, Leeds, and other places, where she had put up at the principal hotels, obtaining from tradesmen in those towns large quantities of valuable goods under false pretences, and disposing of them in order to maintain the character she had assumed. As a proof of the skill with which she imposed on people it was mentioned that she had at Birmingham become acquainted with a gentleman named Hewitt, over whom she gained such an ascendancy as to obtain from him a promise of marriage, and a carriage, horses, five pianos, and other expensive articles had been ordered preparatory to the ceremony. The Recorder sentenced the prisoner to 18 months' imprisonment with hard labour. *The Clerkenwell Murder.*—*Alfred Thomas Jackson*, 22, jeweller, was tried upon an indictment charging him with the wilful murder of James Ploughman Roberts. It will be remembered from the details of the case, which have already appeared in our Metropolitan news, that the prisoner and deceased were employed at a working jeweller's at Clerkenwell, and were together in the shop after the other workmen had left. The deceased was found nearly insensible, but intimated that the prisoner had assaulted him, and died soon after. The jury found a verdict of Manslaughter. Baron Pigott, in passing sentence, told the prisoner that the jury had taken the most merciful view of his case. He was bound to tell him that he thought his was a very bad case, and that he did with great cruelty and determination inflict very grievous injuries on this unfortunate youth, and he saw nothing in the circumstances which could reduce its enormity. The prisoner must be taught, and others must be taught the sacred nature of human life, and that they must not beat out a fellow-creature's brains without incurring the gravest punishment. For that very heinous crime he felt it his duty to pass upon him the severest sentence in his power—namely, that he be kept in penal servitude for the remainder of his natural life. *Child Murder.*—*Elizabeth Strangeways* was indicted for the murder of her infant child. The prisoner, who is barely 16 years of age, had lived as a domestic servant in Kennington. The dead body of an infant, to which she had given birth, was found on the evening of the 9th November tied up in a piece of black silk in a secluded part of Cardington Street, in which her mistress resided. Its throat was cut, and there was a fracture of the right parietal bone. These injuries, in the opinion of a surgeon, had caused its death. There was some doubt, however, whether the child had had an existence independent of the mother. The jury found the prisoner *Guilty* of the minor offence of concealing the birth, recommending her to mercy on account of her youth, and she was sentenced to 12 months' imprisonment with hard labour.

Obituary.

Lord William Fitzgerald died on the 8th inst. at his residence, Harcourt Terrace, Dublin, in his 71st year. He was the youngest son of the second Duke of Leinster, by the only daughter and heir of the last Lord St. George. He was born in 1793, and was unmarried. He took a warm interest in Irish politics, and was the author of a pamphlet entitled "Suggestions for the Better Government of Ireland."

Major-General Nepean died at 18, Marine Parade, Dover, on the 8th inst., in his 69th year. He was the third son of Sir Evan Nepean, Bart., and was born in 1795. He entered the army early in life as Cornet in the 16th Light Dragoons. He went on unattached half-pay, in 1826, shortly after he obtained his rank as Major. He served in the Peninsula and at Waterloo, and was present with his regiment at the battle of the Nive. He had received the Peninsular war medal and the one for Waterloo. He attained the rank of Major-General in 1818.

General Sir George Turner, K.C.B., Colonel-Commandant of the 12th Brigade of the Royal Artillery, died on the 9th inst. at Menie House, Aberdeenshire, in his 85th year. He was born in 1780, and obtained his commission of Second-Lieutenant in the Royal Artillery in 1797. He was at the capture of the Cape of Good Hope in 1806, joined the army in the Peninsula in 1813, and served with it until the end of the war. He was present at the battles of Orthes and Toulouse, and at the affairs of Vic Bigorre and Tarbes. He received the gold medal and one clasp for Orthes and Toulouse. In 1831 he was made a Companion of the Bath, and in 1862 a Knight Commander of that order. In 1852, he was appointed Colonel-Commandant of the 12th Brigade Royal Artillery.

Professor Boole, F.R.S., Professor of Mathematics in Queen's College, Cork, died suddenly on the 9th inst. His earlier years were spent in the neighbourhood of Lincoln, and it was during his residence in that city that he first became known by his contributions to the "Cambridge and Dublin Mathematical Journal." The great abilities shown in those papers led to high expectations of his future career, and these expectations were further heightened by the publication of "The Mathematical Analysis of Logic." About 10 years since he was chosen to be the Professor of Mathematics at Cork. Soon after his appointment he received the honorary degree of LL.D. from the University of Dublin; and in 1851 he published "An Investigation of the Laws of Thought, on which are founded the Mathematical Theories of Logic and Probabilities." The subject of this volume was continued in a memoir in the Transactions of the Royal Society of Edinburgh, "On the Combination of Testimonies and of Judgment," and soon afterwards, when he was elected a Fellow of the Royal Society, he resumed the subject in a paper "On the Theory of Probabilities," read before the Society on the 19th of June, 1862, and since published in the Philosophical Transactions. In the meanwhile he wrote his work on "Differential Equations," which has become a class-book in the University of Cambridge. He was engaged in the preparation of a second edition of this work at the time of his death, and he spent part of his last summer vacation in London ransacking the treasures of the Royal Society and the British Museum, that his book might be as perfect as possible. An untimely death, caused by an effusion upon the lungs, has put a stop to his labours.

Mr. Justice Elgee, the American judge, died suddenly from disease of the heart, on the 7th October, at New Orleans. He was grandson of the late Archdeacon Elgee, of Wexford, and the only brother of Lady Wilde. Having settled many years ago in the Southern States he rapidly acquired a distinguished position at the American bar, and eventually rose to the bench. He had, however, retired from the practice of his profession, and at the commencement of the war was one of the wealthiest men in Louisiana. Only a year before he had invested 100,000*l.* in the purchase of an estate, the largest purchase ever made in Louisiana by a single individual. This plantation he called "Leinster," as a memorial of his fatherland. Judge Elgee leaves an only son, who, before the war, was secretary of the United States Legation at Mexico, and is now aide-de-camp to General Lee.

Wills.—The will of the Hon. Hannah Jane Cochrane, of Sussex Square, has been sworn under 35,000*l.* personalty; Miss Maria Harman, of Calverley Lodge, Tunbridge Wells, 25,000*l.*; Mr. Joseph Underwood, of Hyde Park Gardens, Eastcheap and Norwich, 200,000*l.*; Mr. Henry Lewis Wickham, of Chesterfield Street, Mayfair, 35,000*l.*; the Ven. John Thomas Howe le Mesurier, M.A., late archdeacon of Malta, 12,000*l.*

BIRTHS.—On the 11th inst, at 3, Merrion Square East, Dublin, the Lady Lurgan, of a daughter—6th inst, at 8, Park Street, Grosvenor Square, the Hon. Mrs. Trefusis, of a son—8th inst, at Anglesea Barracks, Portsmouth, the wife of Lieut.-Colonel Dalyell, 21st Fusiliers, of a daughter—12th inst, at 33, Hertford Street, Mayfair, the wife of G. M. W. Peacocke, Esq., M.P., of a daughter.

MARRIAGES.—On the 8th inst, at Russborough, the seat of the bride's father, by special licence, Lieut.-Colonel Chetwynd Stapylton, commanding 32d Light Infantry, to Lady Barbara Leeson, daughter of the Earl and Countess of Milltown—8th inst, at Shalford, Surrey, Commander John Liddell, R.N., eldest son of Sir John Liddell, K.C.B., to Sydney Elizabeth, eldest daughter of the late George Carew-Gibson, Esq., of Bradston Brook, Surrey, and Sandgate Lodge, Sussex—8th inst, at Trinity Church, Bath, Captain Henry F. Hancock, Royal Engineers, eldest son of Major-General Hancock, to Madeline, second daughter of Major Ashmore, of Bath—At St. Thomas's Church, Ryde, Isle of Wight, Colonel Pocklington, Assistant-Quartermaster-General, Horse Guards, to Harriet Fletcher, eldest daughter of Vice-Admiral Carter, C.B.—8th inst, at St. Stephen's Church, Thomas George Battersby, Esq., eldest son of George Battersby, Esq., LL.D., Q.C., of Loughbawn, county of Westmeath, to Georgiana Maria, youngest daughter of the late Lieut.-Col. Middleton, 42d Royal Highland Regiment—8th inst, at St. Mary's, Bryanston Square, James Henry Murray, Esq., son of James Murray, Esq., of 16, Bryanston Square, and Ancoats Hall, Manchester, to Blanche, second daughter of the Rev. G. Sloane Stanley, rector of Branstone, Leicestershire—13th inst, at St. George's, Hanover Square, Henry Wilbraham, Esq., barrister, and late fellow of Trinity College, Cambridge, to Mary Jane, only daughter of Christopher Marriott, Esq.

DEATHS—On the 12th inst, at 1, Barrington Villas, Shooter's Hill, Frederick St. Clare, the infant son of Colonel the Hon. Edward Gage, Royal Horse Artillery, and Mrs. Edward Gage—9th inst, at Worthing, Georgiana, eldest daughter of the late General Sir H. Wheatley, Bart.—5th inst, at 51, Thurloe Square, Lady Smith, aged 62—7th inst, at Place St. Louis, 1, Versailles, Lydia Sarah, relict of Major-General Walker, late of H.E.I.C.S., and of 7, Stanhope Terrace, Hyde Park Gardens—9th inst, at Cheltenham, Eliza Grace, daughter of the late Major-General Hunt, Royal Marine Light Infantry—11th inst, at Torquay, Wyndham Anna Maria, widow of Paulet St. John Mildmay, Esq., of Hasle Grove, Somerset—12th inst, in Grosvenor Place, after an illness of 27 hours, George Dodd, Esq., J.P., F.R.S., formerly M.P. for Maidstone—6th, at Hoppyland Castle, Durham, George Thomas Leaton Blenkinsopp, Esq., senior Justice of the Peace for the county of Durham, senior but one for the county of Northumberland, and Deputy Lieutenant for both counties, aged 82—10th inst, John Greenwood Sudded, Esq., J.P., of Eastwood House, Keighley, Yorkshire, aged 46—11th inst, at Greenhill, near Barnet, Herts, Samuel Richard Block Esq., J.P., aged 72—11th inst, Francis Turner, Esq., of Queen Square, St. James's Park, and New Square, Lincoln's Inn, one of the benchers of the Inner Temple, aged 79—9th inst, at 30, Queen's Road Camden Square, William W. Swain, Esq., late major 36th Foot, aged 81—3d inst, at 111, Prince's Street, Edinburgh, Henrietta, youngest daughter of the late Major A. Erskine, of Venlaw, Peeblesshire—9th inst, at the residence of his father, 3, Gloucester Gardens, Hyde Park, Captain Charles George Luard, of the Royal Artillery—10th inst, at Clifton, Capt. Charles Paulet Rotton, Royal Artillery, aged 35—7th inst, Captain Thomas Smith, R.N., aged 77—4th inst, at Lincoln, Captain John Wilson, R.N., aged 81—3d ult, drowned by the capsizing of the ship's cutter, in Tunis Bay, Samuel Brooke Kemble, midshipman of H.M.S. Orlando, second son of the Rev. Charles Kemble, rector of Bath, in his 16th year—6th inst, at South Somercotes, Lincolnshire, the Rev. F. Martin, M.A., Trinity College, Cambridge, hon. canon of Lincoln Cathedral, rural dean, and chaplain to the Bishop of St. Davids—1st inst, at Kirby Moorside, the Rev. W. D. Carter, vicar of that place, aged 68—12th inst, at The Parsonage, Horrington, Wells, Somerset, the Rev. Xavier N. Paszkowicz, M.Ph., LL.D., incumbent of Horrington, and chaplain to the Somerset County Lunatic Asylum, aged 50—12th inst, at Terrington, the Rev. Charles Hall, rector of Terrington and Routh, in the county of York, aged 64—12th inst, at Leamington, the Rev. J. A. Ormerod, third son of George Ormerod, Esq., of Sudbury Park, and fellow of Brasenose College, Oxford, aged 61—Nov. 23, at Funchal, Madeira, the Rev. Richard Virgoe, M.A., incumbent of Trinity Church, Crockham, Kent, aged 41.

Markets.

COVENT GARDEN, Dec. 17.

The market is well supplied both with Fruit and Vegetables, and Christmas trees and other Evergreens are abundant. Pears, consisting of Knight's Monarch, Passe Colmar, Beurré D'Aremberg, Winter Nelis, Glou Morceau, Easter Beurré, Beurré Diel, Crassane, and others may now be had in excellent condition. Apples may also now be obtained in abundance. Grapes are still sufficient for the demand, and of Pine Apples there is also a fair supply. Kent Cobs fetch from 70s to 80s. per 100 lbs. Walnuts are plentiful, and Oranges are abundant. Some Seakale and forced Kidney Beans may now be had. Lemons fetch from 5s to 8s per 100. Pomegranates may now be obtained. For Potatos prices are still comparatively high. Flowers chiefly consist of Orchids, Heaths, Chrysanthemums, Chinese Primulas, Azaleas, Camellias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 4s to 6s	Oranges, per 100, 4s to 8s
Grapes, per lb., 5s to 8s	Lemons, per 100, 5s to 8s
Melons, each, 1s to 4s	Nuts, Cob, p. 100 lb., 70s to 80s
Pears, per doz., 1s 6d to 3s	— Brazil, p. bush., 14s
Apples, per sieve, 1s to 2s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, 2s to 3s per 100	Shallots, per lb., 3d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 3d
— Rocks, do., 45s to 60s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Seakale, p. punn., 3s to 3s 6d
Carrots, per bunch, 4d to 6d	Endive, per score, 1s to 2s 6d
Turnips, p. bunch, 6d to 8d	Horse Radish, p. bunch, 1s to 4s
Cucumbers, each 4d to 1s	Mushrooms, p. pott., 1s to 1s 6d
	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

BRITISH WOOLS.—LONDON, Dec. 15.

As is usual at this season of the year, our trade is dull, and no business doing in fleeces or fleece sorts. Skin wool is cheaper than last week by ½d. per lb., with the exception of fine descriptions, which maintain their value.

	s.	d.		s.	d.					
South-down Hoggets	2	0	to	2	1	Combing Skins	—	..		
Half-bred ditto	2	5	—	2	6	Flannel Wool	1	3½	to	1	4
Down Ewes	1	10	—	1	11	Blanket ditto	0	6	—	0	9
Kent Fleeces	2	2	—	2	2½	Leicest. Hoggs	2	3	—	2	6
						Ditto Wethers	2	1	—	2	2

COAL MARKET.—Dec. 14.

Byass's Bebside West Hartley, 18s. 6d.; Hastings Hartley, 18s. 3d.; Holywell Main, 18s. 6d; West Hartley, 18s. 6d.; Wylam, 18s. 6d.; Walls End Harton, 20s. 3d.; Walls End Hetton, 22s. 6d; Walls End Russell's Hetton, 21s. 9d.; Walls End South Hetton, 22s. 6d.; Walls End Sunderland, 20s.; Walls End Hartlepool, 22s. 3d.; Walls End Heugh Hall, 22s.; Walls End Kelloe, 21s. 9d.; Walls End East Hartlepool, 22s. 3d.; Walls End South Kelloe, 22s.—Ships at market, 35.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Dec. 15.

Prime Meadow Hay	95s	to 105s	Clover, old	110s	to 126s
Superior do.	—	—	New Clover	—	—
Inferior do.	—	—	Do. second cut	—	—
New do.	—	—	Straw	25	30
Rowen	—	—			

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, Dec. 15.

Sup. Meadow Hay	105s	to 112s	Inferior Clover	110s	to 117s
Inferior do.	90	97	New do.	—	—
New do.	—	—	Straw	30	34
Superior Clover	126	132			

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Dec. 15.

Fine Meadow Hay	100s	to 105s	Prime 1st cut Clover	120s	to 126s
Inferior do.	95	100	Inferior do. do.	110	115
Prime New Hay	—	—	Prime 2d cut do.	115	120
Inferior	—	—	Inferior do.	—	—
Straw	26	29	New Clover	—	—

HOPS.—BOROUGH MARKET, FRIDAY, Dec. 16.

Messrs. Pattenden & Smith report that the market continues in a very healthy state, with a steady demand for all classes of the new growth, stocks of which are in a very reduced state. Large sales of old Hops have taken place within the last fortnight, at advanced rates.

POTATOS.—SOUTHWARK, Monday, Dec. 12.

During the past week the arrivals, both coastwise and by rail having been more liberal, coupled with the mildness of the weather, have caused a heaviness, and less money had to be submitted to. The following are this day's quotations:—Yorkshire Flukes, per ton, 90s. to 110s.; do. Regents, 80s. to 100s.; Dunbar Regents, 90s. to 100s.; Kent and Essex Regents, 80s. to 95s.; do. do. Rocks, 70s. to 75s.; Perth, Forfar, and Fife Regents, 70s to 80s.; do. do. Rocks, 65s. to 70s.; Belgian Whites, 55s. to 65s.

METROPOLITAN CATTLE MARKET.

MONDAY, Dec. 12.

The number of Beasts is very moderate, this being "Great Market Day," and the trade for them is good. Some of the choicest descriptions make rather more than over top quotations. The supply of Sheep is short, and the demand active, consequently prices are better for all descriptions. Good Calves are rather dearer. From Germany and Holland there are 950 Beasts, 5530 Sheep, 190 Calves, and 110 Pigs; from Spain, 50 Beasts; from Scotland, 1100; from Norfolk and Suffolk, 550; from Ireland, 400; from the Western Counties, 550; and 2800 from the Northern and Midland Counties.

	s.	d.		s.	d.		s.	d.		s.	d.
Best Scots, Herefords, &c.	5	8	to 5	10		Best Long-wools.	5	4	— 5	8	
Best Short-horns	5	4	— 5	8		Do. Shorn	..	..	— ..		
2d quality Beasts	3	4	— 4	8		Ewes & 2d quality	4	6	— 5	0	
Best Downs and Half-breds	5	8	— 6	0		Do. Shorn	..	..	— ..		
Do. Shorn	..	..	—	..		Lambs	..	..	.. —	..	
						Calves	..	..	4 4 — 5	6	
						Pigs	..	..	3 4 — 5	0	

Beasts, 7030; Sheep and Lambs, 21,750; Calves, 210; Pigs, 390.

THURSDAY, Dec. 15.

The number of Beasts is by no means excessive for the season. Trade is not very brisk, yet Monday's quotations are well maintained for choice qualities. The supply of Sheep is shorter than was expected, but quite equal to the demand. Trade is slow at Monday's quotations. Choice Calves are in demand at rather higher rates. Our foreign supply consists of 650 Beasts, 2120 Sheep, 225 Calves, and 110 Pigs.

	s.	d.		s.	d.						
Best Scots, Herefords, &c.	5	8	to 5	10		Best Long-wools.	5	4	— 5	8	
Best Short-horns	5	4	— 5	8		Do. Shorn	..	..	— ..		
2d quality Beasts	3	4	— 4	8		Ewes & 2d quality	4	6	— 5	0	
Best Downs and Half-breds	5	8	— 6	0		Do. Shorn	..	..	— ..		
Do. Shorn	..	..	—	..		Lambs	..	..	— ..		
						Calves	..	..	4 4 — 5	8	
						Pigs	..	..	3 4 — 5	0	

Beasts, 2360; Sheep and Lambs, 4810; Calves, 266; Pigs, 260; Milch Cows, 75.

MARK LANE.—MONDAY, Dec. 12.

The supply of Wheat from Essex and Kent was rather larger than of late, the condition was less satisfactory, and it met a very slow sale at 1s. per qr. below the rates of this day se'nnight. There was an improved attendance, and foreign Wheat attracted more attention, but prices are unaltered. Fine malting Barley was 1s. per qr. cheaper, but secondary qualities were difficult of disposal at a decline of 2s. per qr. Beans were unaltered in value. Peas were 1s. to 2s. per qr. Of foreign Oats there was a fair arrival fresh per qr. cheaper. Of foreign Oats there was a fair arrival fresh up, and they met a steady sale at last week's rates. In the value of Flour there is no change.

PRICE PER IMPERIAL QUARTER.	s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk..White	39	42	Red	36	41
— — fine selected runs..ditto	41	44	Red	39	42
— — Talavera	46	53			
— Norfolk	—		Red	—	
— Foreign	35	50			
BARLEY, grind. & dist, 24s to 28s..Chev.	30	33	Malting ..	29	33
— Foreign..grinding and distilling	20	25	Malting ..	25	27
OATS, Essex and Suffolk	20	22			
— Scotch and Lincolnshire—Potato	20	24	Feed	20	22
— Irish .....Potato	19	22	Feed	—	
— Foreign .....Poland and Brew	20	23	Feed	18	21
RYE	31	33	Foreign ..	—	
RYE-MEAL, Foreign	—				
BEANS, Mazagan....32s to 35s...Tick	34	36	Harrow ..	34	36
— Pigeon .... 35s to 40s..Winds.	—		Longpod	—	
— Foreign .....Small	32	38	Egyptian	33	34
PEAS, White, Essex and Kent..Boilers	35	37	Suffolk ..	37	39
— Maple .... —s to —s .... Grey	—		Foreign ..	32	36
MAIZE .....White	—		Yellow ..	—	
FLOUR, best marks delivered..per sack	35	40			
— 2d do ..... ditto	28	34	Country ..	28	34
— Foreign ..... per barrel	18	25	Per sack	32	36

FRIDAY, Dec. 16.

The weather during the past week has been mostly cloudy, mild and damp until yesterday, when it become colder. We have noticed no increase in the activity of the Wheat trade, and prices remain unaltered except for new home-grown, which is quoted in some markets 1s. per qr. lower, owing to its poor condition. Prime malting Barley dull, other qualities are fully 1s. 6d. per qr. cheaper. Oats on the spot were much easier, and to ensure sales ex steamer a decline was submitted to, but landed parcels maintain the late improvement in most markets. Beans and Peas move off very slowly. Good sweet Flour is scarce, and barrels of known brands would sell readily at former prices. Since Friday last 30 vessels have been reported off the coast. The floating trade has continued quiet, and prices have not undergone any alteration, excepting of Barley, which is still declining. Paris, Dec. 15.—Flour has remained very dull, and only a limited business has been done at rather lower rates. The present stock of Flour is estimated at 31,650 cwt. The six marks for delivery this month are quoted equal to 30s. 9d. per 280 lb. The offers of Wheat are more numerous, but little only has been sold at about 9d. per 480 lb. lower prices. The arrivals of English and foreign grain and Flour since Monday have been moderate, with the exception of foreign Oats, which were large. There was a small attendance at this morning's market, and the business transacted was very limited, prices of all articles remaining nominally as on Monday, with the exception of undried foreign Oats, which were rather cheaper.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1760 qrs.	2660 qrs.	10 qrs.	3030 sks.
Irish	—	—	1950	— ,,
				150 ,,
Foreign ..	7070 ,,	8490	58,880 ,,	— brls

LIVERPOOL: Dec. 13.—The market was fairly attended. Wheat in moderate demand at prices of Friday. Flour quiet and unchanged in value. Indian Corn 3d. lower for Danubian, with fair sale. Beans, Oats, and Oatmeal slow and unaltered.

FRIDAY, Dec. 16.—Market but moderately attended. Wheat in fair consumptive demand at, in some instances, rather easier prices. Flour unchanged. Indian Corn in rather better demand, at the decline. Beans, Oats, and Oatmeal slow sale.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Nov. 5	38s 11d	30s 3d	20s 2d	29s 9d	37s 9d	35s 5d
— 12	38 9	30 1	19 11	33 0	37 11	35 9
— 19	38 9	29 9	19 5	29 9	37 9	34 11
— 26	38 8	29 3	20 0	30 0	37 10	35 1
Dec. 3	38 5	29 2	20 3	26 8	37 10	35 5
— 10	38 4	28 8	19 10	26 7	37 2	34 11
Agg. Aver.	38 8	29 6	19 11	30 11	37 8	35 2

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Nov. 5.	Nov. 12.	Nov. 19.	Oct. 26.	Dec. 3.	Dec. 10.
38s 11d	—	..	..	..	..	..
38 9	..	—	—	..	..	..
38 8	..	..	..	—	..	..
38 5	..	..	..	..	—	..
38 4	..	..	..	..	..	—
..	..	..	..	..	..	..

WANTED, a person of great experience and thorough knowledge of the Nursery business, to act as GENERAL FOREMAN and SALESMAN in an extensive Nursery. No one need apply unless his testimonials for integrity, and knowledge of the business are first-class.—Apply to WM. SKIRVING, Walton Nursery, Liverpool.

WANTED, a CLERK and TRAVELLER in a Wholesale Seed Warehouse.—Must thoroughly understand his business, and give the best references as to character and ability. A married Man preferred.—Apply by letter, stating age, where last employed, salary required, to H. A., *Gardeners' Chronicle* Office, W.C.

WANTED, as CLERK, SHOPMAN, and SALESMAN, an active intelligent Man.—Application in own handwriting to be made to LUCOMBE, PINCE & Co., Exeter Nursery, Exeter.

WANTED, in a Nursery, an active Young Man as PROPAGATOR.—He must also be quick at Potting, Tying, and well up in Growing for Market.—For further particulars apply to J. C., High Beech, Essex.

WANTED, a YOUTH for the Seed Trade—[illegible] own handwriting, stating age, &c., to X [illegible] *Chronicle* Office, W.C.

WANTED PLACES.—Letters to be Post Paid.

HOUSEKEEPER, or as COMPANION [illegible] A Lady, aged 35, who can be highly recommended [illegible] has had much experience. She would be willing to [illegible] two little Girls, or to accept any position of trust.—A. A. [illegible] Road, New Road, Hammersmith, W.

EXPERIENCED GARDENERS (or as GA[illegible] and BAILIFF), of various qualifications, recommended [illegible] gentlemen.—Further particulars given on application [illegible] HENDERSON & SON, Wellington Nursery, St. John's Wood [illegible]

GARDENERS.—B. S. WILLIAMS [illegible] Correspondence with several experienced Gardeners [illegible] situations, and will be pleased to recommend to any [illegible] requiring such, a thoroughly competent Man. Applications [illegible] receive immediate personal attention.—Paradise and [illegible] Nurseries, Holloway, London, N.

GARDENERS, FORESTERS and BAILIFFS [illegible] LAND STEWARDS.—The undersigned can always recommend the above, whose characters and abilities may be [illegible] on. Full particulars upon application.—JAMES DICKSON & SON, "Newton" Nurseries, Chester.

TO GENTLEMEN proceeding to or having Estates in NEW ZEALAND.—The Advertiser, who is well [illegible] with the Laying-out, Planting, and general Improvement [illegible] and who has had the charge of large numbers of men, [illegible] to enter into an engagement with any Gentleman who [illegible] would be required in any of the above capacities. Married, [illegible] married, with a family, some of whom might also be employed.—A. B., *Gardeners' Chronicle* Office, W.C.

A YOUNG MAN wishes to place himself with a [illegible] Farmer, with a view of obtaining an insight into the [illegible] WORKING of Hop, Arable, and Pasture Land.—Address [illegible] particulars, stating size of farm, &c., with Premium required, to T. SIMMONDS, Rock House, Farnham, Surrey.

GROUND FOREMAN.—Has had many years' experience in the leading London and Provincial Nurseries. First-class reference as to abilities, &c.—J. M., Messrs. Glendinning & Co., Chiswick Nurseries, London, W.

GARDENER (HEAD).—Middle-aged, married, no incumbrance. A good practical man; will be disengaged the end of December, in consequence of the death of his employer and breaking up of the establishment. Fourteen years' good character.—P. I., 9, Exchange Street, Norwich.

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GARDENER (HEAD), age 37, married.—In consequence of the death of the late Sir Charles Knightley, Bart., with whom he has lived upwards of 12 years, JOHN BROWN offers his services in the above capacity to any Nobleman or Gentleman requiring the services of a first-class Gardener. Satisfactory references as to character and abilities can be had.—John Brown, Fawsley Park, Daventry.

To Noblemen and Gentlemen.

GARDENER (HEAD), where a thoroughly trustworthy and competent person is required.—Age 27, single. Has had practical experience in some of the finest establishments in the country. Three and a half years' excellent character from present employer, and first-class references as to competency, integrity, &c.—C. P., The Gardens, Cyfarthfa Castle, Merthyr Tydfil, South Wales.

GARDENER (HEAD), to any Nobleman or Gentleman requiring a First-class Man.—The Advertiser (age 29, one child), respectfully tenders his services as above. Is well competent in every branch of his profession, including Pines, Melons, Vines, Stove and Greenhouse Plants, &c., and has charge of Plantation, Arable, or Meadow Land. First-class testimonials may be had from previous employers.—G. M., care of Sutton & Sons, Reading.

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GARDENER (SECOND or UNDER), where several are kept, and where he can improve himself in Forcing.—Is single; if with a practical Man will pay a small Premium. Has two years and a half good character.—E. H., Keswick Hall, near Norwich, Norfolk.

GARDENER (UNDER), in a Gentleman's Establishment, where he would have opportunities of improving himself.—Age 20; has been used to gardening all his life, is very strong and active, can have a good character from his present employer.—W. [illegible] Office, Hampton Wick, Middlesex, S.W.

To Noblemen and Gentlemen.

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12 Dessert Spoons	1	4	0	1	10	0	1	12	0	1	15	0
12 Tea Spoons	0	16	0	1	0	0	1	2	0	1	5	0
6 Egg Spoons, gt. bowls..	0	10	0	0	12	0	0	12	0	0	13	6
2 Sauce Ladles	0	6	0	0	8	0	0	8	0	0	9	0
1 Gravy Spoon	0	6	6	0	9	0	0	10	0	0	11	0
2 Salt Spoons, gt. bowls..	0	3	4	0	4	0	0	4	0	0	4	6
1 Mustard Spoon, gt. bwl.	0	1	8	0	2	0	0	2	0	0	2	3
1 Pair of Sugar Tongs ..	0	2	6	0	3	6	0	3	6	0	4	0
1 Pair of Fish Carvers ..	1	4	0	1	10	0	1	10	0	1	10	0
1 Butter Knife	0	2	6	0	4	0	0	5	6	0	6	0
1 Soup Ladle	0	10	0	0	12	0	0	16	0	0	17	0
1 Sugar Sifter	0	3	3	0	4	6	0	4	6	0	5	0
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3¾-inch fine ivory handles	15	0	11	6	4	6
4-inch ivory balance handles	18	0	14	0	5	0
4-inch fine ivory handles	24	0	18	0	7	3
4-inch finest African ivory handles	32	0	26	0	11	0
Ditto, with silver ferules	40	0	33	0	12	6
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Nickel electro silver handles, any pattern ..	25	0	19	0	7	6
Silver handles, of any pattern	84	0	54	0	21	0
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White bone handles	11	0	8	6	2	6
Ditto, balance handles	21	0	17	0	4	6
Black horn rimmed shoulders	17	0	14	0	4	0
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News of the Week.

BY the Bombay mail we learn that Sir JOHN LAWRENCE returned to Calcutta on the 1st November from his Viceregal progress to the capital of the Punjaub. The entrance of the British force into Bhootan will take place about the middle of this month. There was an awful gale at Calcutta on the 21st ult., but it was fortunately attended with slight damage. A more serious storm has occurred on the Madras coast, which has reduced Masulipatam to a complete wreck by an inundation, and thousands of lives are said to have been lost.

Accounts from Japan have been received through Holland, stating that the Prince of NEZAS having refused to pay the war indemnity stipulated in the treaty of peace, the Criminal Tribunal of Yeddo decided that his two palaces should be razed to the ground, and all his servants put to death. This sentence having been approved by the MIKADO and the TYCOON, the Prince's palaces were immediately destroyed, and all his servants, numbering 420 men and 300 women and children, put to death. The Prince on learning these facts, sent his first minister to Yeddo, to invoke the intercession of the Ministers of France, England, Holland, America, and Russia; and to announce that he had decided on executing all the provisions of the treaty and on the immediate payment of the indemnity.

A despatch from Melbourne of October 26 states that the first instalment of convicts whose time has expired has been re-shipped to England. There has been a Ministerial crisis in New Zealand, Mr. Fox's Ministry having tendered their resignation which the Governor declined to accept. Two hundred Maori prisoners had effected their escape and were fomenting rebellion; and a native rising was threatened in Tauranga.

The Court of Correctional Appeal in Paris delivered judgment on Wednesday on the appeal of the 13 deputies accused of holding illegal meetings, and confirmed the sentence pronounced by the Tribunal of First Instance. It is said that the case will now be taken to the Court of Cassation.

A despatch from Copenhagen announces that the King of DENMARK arrived at Kolding on Tuesday, and on the following day received a deputation of 5000 Schleswigers from the district

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of Hagersley, Abenraa, and Flensborg, who presented an Address to HIS MAJESTY, assuring him that if the wishes of the inhabitants prevailed in the final decision on the destiny of Schleswig, it would then be seen how deeply love for the ancient Fatherland was rooted in the hearts of the Schleswigers.

The Federal Diet at Frankfort on Monday, by a majority of 9 to 6, agreed to the evacuation of the Duchies by the Federal troops, as demanded by Prussia and Austria.

In the sitting of the Austrian Reichsrath on Friday, the Prime Minister, Count MENSDORFF-POUILLY said that the principal policy of Austria was to avoid a great and an apparently inevitable war. Austria was willing to preserve peace, but at the same time was determined to resist her enemies, and no one could demand that she should adopt the initiative in bringing about a better understanding with Italy, by whom the mere existence of Austria was regarded as an aggression. These declarations are supposed to have been caused by the recent statement of the Prime Minister of Italy that the possession of Venice was merely a matter of vanity on the part of Austria, and that Germany could not believe that the Queen of the Adriatic was necessary to her existence.

The debate on the Convention is still proceeding in the Italian Senate. In the sitting of Monday the Minister of the Interior said that the temporal power of the POPE was not necessary to the splendour and independence of the spiritual power, and that the solution of the question was to be found in the principle of a free Church in a free State. He added that intervention was about to cease, and though Italy had an interest in repelling all foreign aggression to uphold the temporal power, yet, in the event of a movement breaking out in the Papal territories, Italy was not under engagement to repress it. In the sitting of Tuesday General CIALDINI said that no compromise was possible between Austria and Italy, and that the passes of the Apennines were real Thermopylæ. General DELLA MARMORA, the Prime Minister, amidst great cheering, stated that he shared the views expressed by General CIALDINI.

From the United States we have at length some details of General SHERMAN'S movements. After burning Atlanta he divided his army into two columns, one of which is marching on Augusta direct, while the other is proceeding to the same city by way of Macon and Milledgeville, destroying everything by the way. The Confederate General HOWELL COBB, with 8000 militia, is contesting his advance, retiring upon Macon, which is believed to be strongly fortified. General BEAUREGARD has issued an address to the Georgians, calling upon them to destroy everything on the invaders' march, and stating that he is hastening to their defence. General HOOD is making rapid progress in Tennessee, and is advancing on Pulaski, from which the Federals are retreating towards Columbo, where an engagement is expected. Since the defeat of the Federals under GILLEM at Bull's Gap, General BRECKENRIDGE has obtained full possession of East Tennessee and South-Western Virginia. The Confederates are mining in the neighbourhood of Petersburg, and an immediate movement by General LEE is anticipated. An attempt has been made to destroy the public buildings of New York by fire. The plot, however, which is ascribed to Confederate emissaries, was discovered in time to be frustrated. A prohibition to export munitions of war has been issued by the Canadian authorities, in consequence of information that stores of such articles were collecting at various points.

Home News.

THE COURT.—On Thursday evening, the 1st inst., Princess Helena went to London and attended the performance at the Haymarket Theatre, returning to Windsor Castle at 12 o'clock. On Friday morning the Queen, accompanied by Princess Louisa, walked and drove in the grounds. Princess Helena rode in the Riding School. On Saturday morning the Queen, accompanied by Princess Helena and Prince Leopold, visited the barracks of the Life Guards and Coldstream Guards in Windsor. Both regiments were formed up in their respective barrack-yards and received her Majesty with a Royal salute. The Queen went over some of the quarters in each barrack and the stables of the Cavalry, and saw a ride in the Riding School of the 2d Life Guards. In the afternoon her Majesty drove out, accompanied by Princess Helena. Princess Louisa went out driving. Prince Arthur arrived from Greenwich Park. The Earl of Clarendon and Count de Lavradio, the Portuguese Minister, arrived at the Castle on a visit. On Sunday morning the Queen, Princess Helena, Princess Louisa, Princess Beatrice, Prince Arthur, and Prince Leopold, attended Divine service in the Private Chapel. The Dean of Canterbury officiated. In the afternoon her Majesty and Princess Helena attended Divine service in St. George's Chapel. On Monday morning Prince Arthur left the Castle for Greenwich Park. The Earl of Clarendon returned to London. The Queen, accompanied by Princess Helena, came to town by special train on the Great Western Railway, and inspected the works in progress at the Prince Consort's Memorial in Hyde Park. Her Majesty then visited the Horticultural Gardens at South Kensington, and afterwards went to Buckingham Palace, returning to Windsor in the afternoon. Princess Louisa and Prince Leopold walked and drove in the grounds. Princess Beatrice took a carriage drive. Lady Napier arrived at the Castle on a visit. On Tuesday morning the Queen, accompanied by Princess Helena, drove in the grounds. Princess Louisa went out driving. Princess Beatrice took a carriage drive. In the afternoon the Queen drove to Clewer Church to visit the grave of a faithful servant, named Glover, who died about four months ago, it being Her Majesty's intention to erect a tablet to his memory. After having strewed some flowers on the grave, Her Majesty was conducted over the interior of the church, which has been recently repaired and embellished with stained glass windows. The Queen remained some time, and afterwards inspected some of the monuments in the churchyard. Princess Helena went by the South-Western Railway to Kew, and visited the Duchess of Cambridge. Her Royal Highness afterwards visited the Count and Countess of Paris, at Twickenham, and returned by road to Windsor. On Wednesday morning the Queen, accompanied by Princess Helena and Princess Louisa, drove in the grounds. Princess Beatrice went out walking. Lady Napier left the Castle. The Earl and Countess Russell arrived at the Castle on a visit. On Thursday morning the Queen, accompanied by Princess Helena, walked and drove in the grounds. Princess Louisa went out driving. It is expected that the Queen, with the various members of the Royal family, will leave Windsor on the 17th or 19th inst. for Osborne, where the Queen will spend Christmas. The Court will probably remain about six weeks at Osborne, and then return to Windsor.

THE PRINCE AND PRINCESS OF WALES.—On Friday the Duke of Cambridge left Sandringham for London. On Saturday the Prince went out wild fowl shooting on Wolverton Marshes. On Sunday morning the Prince and Princess attended Divine service at Sandringham church. The Rev. R. W. Pearse, incumbent of Gaywood, officiated and preached. On Monday the Prince went out with the West Norfolk hounds. The Princess drove to the meet at Houghton. In the afternoon Prince Edward of Saxe Weimar, Earl Granville, the Earl of Sefton, the Marquis of Hartington, Colonel Hon. H. Percy, and Admiral Seymour, arrived at Sandringham on a visit. On Tuesday the Royal party had a successful day's shooting in the Commodore and Deringham Woods. On Wednesday the Prince, accompanied by Prince Edward of Saxe Weimar, the Earl of Sefton, the Marquis of Hartington, Colonel Hon. H. Percy and Admiral Seymour, drove to Westacre, and had two runs with the West Norfolk hounds. Earl Granville returned to town.

ORDER OF THE GARTER.—It is rumoured that one of the vacant Garters will be conferred on Earl Spencer.

THE LAY ADDRESS TO THE ARCHBISHOPS.—On Thursday afternoon a large number of laymen, members of the Church of England and Ireland, attended at Lambeth Palace for the purpose of presenting to the Archbishops of Canterbury and York an address, numerously signed, thanking them for their recent pastoral letters on matters which have recently been productive of some agitation in the Church. Among those present were Sir Brook Bridges, Bart., M.P., Mr. Newdegate, M.P., the Hon. A. Kinnaird, M.P., the Rev. Canon Wordsworth, the Earl Romney, Mr. H. E. Pellew, Colonel Geddes Walker, Lord Calthorpe, Mr. H. Hoare, Mr. J. G. Talbot, Mr. Wilbraham Taylor, the Rev. W. Mayow, M.A., incumbent of West Brompton, the Rev. Dr. Jelf, principal of King's College, Archdeacon Utterton, Sir Walter James, and other clergymen and gentlemen. The Earl of Romney read the address, which had been signed by 137,000 persons. It acknowledged with deep gratitude the pastorals lately issued by their Graces to the two provinces of Canterbury and York, and prayed that they might be richly endowed with wisdom from on high, and be enabled, with the other primates and bishops of the United Church of England and Ireland, to take effectual counsel for upholding, amid the peculiar dangers of the present times, the Divine authority of Holy Scripture, and the integrity of the faith, so that the Gospel of our Lord and Saviour might be taught in all its purity, and handed on, without diminution or addition, to their children's children. The Archbishop of Canterbury read the following reply:—

"I accept with cordial satisfaction the expression of your gratitude for the pastoral letter which I recently addressed to the clergy and laity of my province under circumstances of no ordinary gravity. Articles of belief, which had ever been held by the Church catholic and by all its several branches, seemed to be impugned, and deep anxiety pervaded the minds of a large proportion of the members of our Church. I thus felt myself called upon to give my reasons for having dissented from the recent judgment of the Privy Council—the principle on which I proceeded—the very principle laid down and recognised by that judgment itself, namely, that such rule or teaching only is to be ascribed to the Church, as we find to be expressly stated in her Articles and formularies, or which are plainly involved in or to be collected from that which is written. The doctrines in question seem to me to be so 'plainly involved in or to be collected from' the Articles and formularies of our Church that I had no alternative but to dissent from a judgment which affirmed the contrary; and it is most gratifying to me to find that the course I then pursued is so consonant with the views and feelings of the large and important body of Churchmen whom you represent, and that there is so resolute a determination on their part to maintain and uphold the cardinal doctrines of our Church."

The Archbishop of York replied as follows:—

"I thank you most sincerely for the address that has just been read, so far as it relates to myself. I thank you for the support which it gives to me whose experience in the episcopal office has been short, and who would gladly have left the leading part in these discussions entirely to older and wiser prelates. Nothing but a strong sense of duty would have drawn from me the pastoral letter to which the address is a reply. I do not conceal from myself that these are times of severe trial. The person of our Lord himself, and the Divine doctrines that fell from His own lips, will hardly escape the criticism which has begun with the book that reveals them; but, on the other hand, past ages have seen the same sort of cloud storm the sky, and the storm has passed, and the Sun of Righteousness shines still unchanged in the heavens, Author of light and life to them that turn towards Him. I am persuaded that this will be the issue now, even if the storm be long, and many hearts fail because of it. The duty of Christian teachers at this time is not difficult to see. The Church of England is founded on the Word of God—that is her law and her doctrine. She has no other weapon against sin and evil in the world. Our duty is to be more and more active in preaching that Word—more earnest in the study of it, and of all that can throw light upon it—more sedulous in presenting its warnings and consolations convincingly to our people—more diligent in instructing our children—more careful that our preaching shall not be an echo of some past generation, but an application of eternal truths to the needs of men and women in this somewhat luxurious and self-indulgent but intellectual age. If this is the effect of our present troubles, the Church of Christ may emerge from them chastened and strengthened for her work of turning souls to Christ."

THE CASE OF BISHOP COLENSO.—The hearing of the petition of the Bishop of Natal by the Judicial Committee of the Privy Council, which was fixed for Monday next, is deferred till Wednesday the 14th. The Bishop of Capetown intends to appear "under protest."

THE BISHOP OF EXETER.—The report that Bishop Phillpotts had tendered his resignation is contradicted. His Lordship, who is in his 87th year, finds his bodily strength unequal to the task of visitation, but his mental powers are unimpaired, and he continues to devote himself to the superintendence of the spiritual interests of his extensive diocess with his old energy and zeal.

THE COMMISSION ON CLERICAL SUBSCRIPTION.—It is announced that the commissioners have unanimously adopted a resolution moved by the Bishop of Oxford, seconded by the Earl of Harrowby, and that, while the declaration of "unfeigned assent and consent to all and everything contained in the Book of Common Prayer" is proposed to be abolished, a uniform subscription made up from an old form is substituted.

PARLIAMENTARY MOVEMENTS.—The election for West Suffolk took place on Thursday, when Lord Augustus Hervey was returned without opposition. The election for North Warwickshire takes place on Tuesday, when it is expected that Mr. Davenport Bromley, the Conservative candidate, will be returned without opposition, Mr. Leigh having retired from the contest on account of the near approach of a dissolution. It is said that Viscount Amberley, eldest son of Earl Russell, will contest South Devon at the next election. Mr. D. A. Lang, of Regent Street, and Colonel Bourne, of Heathfield, Wavertree, are candidates for Evesham; the former in the Liberal and the latter in the Conservative interest. Mr. Arthur Bass is a candidate for Stafford in the Liberal interest. The reported death of Mr. Williams, the member for Lambeth, is contradicted.

OFFICIAL APPOINTMENTS.—Mr. W. Rathbone Greg, Commissioner of Customs, has been appointed Comptroller of the Stationery Office in the room of the late Mr. J. R. M'Culloch. Colonel Frederick Romilly has been appointed a Commissioner of Customs in the room of Mr. Greg.

CONSULAR APPOINTMENT.—The Queen has appointed Charles Livingstone, Esq., now Consul at Fernando Po, to be also Consul in the territories on the Western Coast of Africa, comprised within the Bight of Biafra, and lying between Cape Formosa and Cape St. John.

Foreign.

FRANCE.—The Court of Correctional Appeal on Wednesday delivered judgment in the case of the 13 deputies accused of holding illegal meetings, and confirmed the sentence pronounced by the Tribunal of First Instance. It will be remembered that when the

last general election took place a number of deputies, including MM. Ollivier Pagès, Carnot, and others has led to the Imperial system of nominating candidates, and a meeting in Paris with a view of organising Opposition electoral committees throughout the Empire. The Government, aware of their proceedings, and [illegible] meeting was illegal on account of more than 20 persons being present, dispersed the meeting, and forcibly seized their papers. These proceedings led to a judicial investigation before the Police Correctional, by which the deputies were condemned, upon which they appealed to the Court Imperial. Lawyers of the highest class—MM. Jules Favre, Dufaure, Hébert, Crémieux, and Berryer, defended the accused, and showed that their proceedings were not contrary to the laws of the constitution, inasmuch as the number present was only 13, and therefore did not reach that [illegible] by law. The Procureur General on the other hand maintained that the objection raised to the number of persons included in the indictment was too trivial to require refutation; and that the Government might, if it chose, have prosecuted only one or two of the number present. He contended that the nature of the association was precisely such as to justify the Government in taking steps to dissolve it; and that it was the abuse of the right of association which had produced the downfall of the French monarchy. The Court having decided in favour of the Government by rejecting the appeal, the case will be carried, it is said to the Court of Cassation, whose judgment will be final. The Court of Rouen has given its decision in the case of MM. Chevon and Chaibois, prosecuted for illegally furnishing electoral correspondences to provincial newspapers. The Court confirms the judgment delivered in this case by the Tribunal of First Instance. The stay of the Court at Compiègne is now drawing to a close. The weather has been fine, and out of door sports have been pursued with great spirit. A shooting party assembled again in the Forest of Laigue, when about 1200 head of game were brought down by 11 guns. A hunt also took place, followed by the *curée* by torchlight. The Emperor, the Empress, and the Prince Imperial were present in *chars-à-banc*. Private theatricals have also been given by a portion of the guests, under the direction of the Princess de Metternich. An interlude of Ombres Chinoises is said to have been a remarkable success, the effects produced by the electric light having been marvellous. Among the scenes represented were "The Sleeping Beauty," in which the part of the Princess was filled by the Countess de Pourtalès, and that of Prince Charming by the Duke de Mouchy. It is said that the Emperor and his Ministers have come to the conclusion that the existing provisions for public works shall not be exceeded, and that no loan will be required for any purpose whatever. It is also said that the new budgets will not be made known until next month, as the Legislative Chambers will not meet before February. The French steamer Ardeche has arrived at Lisbon from Mexico with one regiment of the French expeditionary army. The sanitary condition of the troops is good. Mr. Dayton, the American Minister at the Court of the Tuileries, died on the 1st inst. The improvement which took place last week in the health of M. Mocquard does not continue. His condition causes great anxiety, and no hope is entertained of his recovery. The Emperor paid him a visit on Saturday, and remained with him nearly an hour.

SPAIN.—A long Conference took place on Tuesday between the French Ambassador and the Minister for Foreign Affairs. The *Epoca* asserts that the Madrid Cabinet has unanimously decided to support those candidates for the presidency of the Congress who have already held that office. The *Noticias* of Wednesday contradicts the report that the Minister of Finance was negotiating for a loan on the basis of an arrangement with the holders of the Passive Bonds.

PORTUGAL.—A disagreement of a certain gravity has just broken out between the Court of Rome and the Portuguese Government relative to a question which dates back to more than a century, and which relates to the nomination of Portuguese bishops in Hindostan and in Indo-China. The Pope is said to have signified to the King of Portugal that he had decided on adopting a serious measure. The nature of it has not been stated; but it appears to have led to the recall of Marshal Saldanha, the Portuguese Minister at Rome. A telegram from Lisbon, dated Dec. 8, announces that the French Sisters of Charity at Macao will be replaced by Portuguese Sisters.

SWITZERLAND.—The Federal Assembly have elected M. Schenck, of Berne, by a large majority, President of the Swiss Confederation for 1865, and M. Knusel, of Lucerne, Vice-President. There is no further doubt as to the fate of Dr. Demme and his partner in flight Madlle. Fanny Trumpy, a telegram having been received from the Swiss consul at Genoa announcing that they had committed suicide by poison at an hotel in Nervi, near that city. They arrived at the hotel on the 29th ult. and engaged an apartment, in which they were found dead next morning, the body of the doctor lying on the bed, and that of Madlle. Trumpy on the floor. On the arrival, in accordance with the local custom, their bodies were publicly exhibited in the public square for the purpose of identification. The following letter gives the details of their suicide:—

"On the 29th a foreign gentleman, accompanied by a young lady, alighted from a hired carriage at the Hotel Anglais, in the Palazzo Gropello, at Nervi. The lady was elegantly dressed in travelling costume, and the gentleman also. Without giving his name, the latter asked for a bedroom and supper. Nothing was noticeable in the appearance of the two travellers except their affectionate manner towards each other. They had their supper, after which the lady sat down to the piano and the gentleman read the newspapers. Some moments after they retired to rest, and being asked if it would be necessary to call them in the morning, they said it would be useless, seeing they had come on foot from Genoa, were wearied, and wished to rest. Late in the afternoon of the next day the innkeeper, not seeing his new guests appear in the dining room, sent a waiter to knock at their door, but no answer was returned. The magistrate was sent for immediately, and the door burst open in his presence. On the bed lay the gentleman, with his head turned towards the pillow; the lady was lying on the floor, with her arms twisted together like those of a person who had died from poison. The unfortunate couple had been dead at least six or seven hours, for their bodies were cold. Nothing was found in their trunks except some old clothes, and the doctor had a few coppers in his pockets. A few drops of a mixture found in a glass proved that they had taken strychnine. Upon a table were found a little phial of poison, two empty glasses, and two others still containing poison. Upon another table were some letters written in pencil. One of them, addressed to the landlord, assured him that their bill would be paid by their family. Another, written in German, was directed, "To my poor father, Demme," and requested pardon for the sorrow the writer had brought upon his family. A third, in the handwriting of the young lady, contained only a single line. "Hermann has killed himself, and I will follow" Other papers proved the identity of the parties. The bodies were exposed to public inspection in Nervi, guarded by two gendarmes. The Berne police were telegraphed to at once, and desired that photographs should be taken of the deceased. The juge d'instruction also set out for Nervi, to remove every doubt. The Swiss Government has claimed the bodies, which will be removed for interment to Berne."

DENMARK.—The King of Denmark arrived at Kolding on the 6th inst. On the following day the King received a deputation of 5000 Schleswigers, who, in spite of the prohibition of the Civil Commissioners, had travelled to that town from the districts of Hagerslev, Abenraa, and Flensborg, to pay their respects to his Majesty. The deputation presented an address to the King, the concluding paragraph of which says that if the wishes of the inhabitants should prevail in the final decision on the destiny of Schleswig, it would then be seen how deeply love for the ancient Fatherland was rooted in the hearts of the Schleswigers. Several thousand inhabitants of the town of Schleswig also wanted to proceed to Kolding to render homage to the King. This was forbidden by the authorities, and several arrests in consequence took place.

HESSE CASSEL.—The Chambers have drawn up and presented an address to the Elector of Hesse, protesting against the unconstitutional condition of the country, and showing how schools, agriculture, and trade have consequently deteriorated, and requesting reforms. The Elector, in reply, told the Chambers in very curt language that they had overstepped the limits of their position. If the promises of the June Patent had not been fulfilled, the fault did not lie with the Government, but with the Chambers. The dispute about the constitution and the progress of material interests would not cease until a fresh electoral law had been introduced and new Chambers had been elected. The Elector added that he had entire confidence in his Ministers, and expected that the Chambers would in future abstain from all steps incompatible with the authority of the Sovereign. An extraordinary sitting of the municipality of Cassel was held on Monday, at which a vote of thanks was passed to the Chambers for addressing the Elector on the subject.

PRUSSIA.—The Prussian troops from the late seat of war entered Berlin on Wednesday, with the King at their head. The streets through which they passed were lined by an enthusiastic crowd, and the houses were gaily decorated. A brilliant illumination of the city took place at night.

FRANKFORT.—In the sitting of the Federal Diet on Monday the Austro-Prussian proposition relative to the evacuation of Holstein and Lauenburg by the Federal troops was adopted by 9 against 6 votes. Saxony, Bavaria, Wurtemberg, Darmstadt, and the 12th and 13th Curiæ, voted against the proposal. Luxembourg abstained from voting. The representatives of Austria and Prussia then stated that the Civil Commissioners of those Powers in Schleswig would also undertake the administration of the Duchies of Holstein and Lauenberg.

AUSTRIA.—In the sitting of the Lower House of the Reichsrath on Friday, Count Mensdorff-Pouilly said that the principal policy of Austria was to avoid a great and an apparently inevitable war. It was her task to direct her efforts towards the solution of the German question in thorough earnestness, and in a manner which should be both compatible with her rights and also, if possible, with the preservation of her connection with Prussia, so necessary to the interest of Germany and peace. The programme of the Cabinet was tranquillity and conciliation, but firmness. No one could demand that Austria should adopt the initiative in bringing about a better understanding with Italy, by whom the mere existence of Austria was regarded as an aggression. Austria was willing to preserve peace, but at the same time was determined to resist her enemies, and she reckoned on the entire support both of the House and of the population. The Minister of War stated that Austria would willingly disarm, but the step must be initiated by other Powers. Dr. Brinz asked what course the Government intended to pursue in the settlement of the succession question in the Duchies. Herr Kuranda declared himself opposed to the Prussian alliance. Dr. Mühlfeld said that he considered it to be the mission of Austria to strengthen the German [illegible] whereas, on the contrary, that body had been [illegible] by her. Count Mensdorff said that the present [illegible] of the negotiations did not admit of more [illegible] information being given. Austria had not [illegible] in the Danish war from mere love of [illegible] The paragraph of the Address relating to [illegible] was then adopted as originally drawn up. In sitting of Saturday, Paragraph 13, stating that House expected from the Government [illegible] demanded by the constitution of the cases [illegible] of the state of siege in Galicia, was adopted Chamber, notwithstanding that the Minister of [illegible] had declared previously the motives and reasons [illegible] measure. The Minister said that the [illegible] could not at present be altered. Herren Von [illegible] Schmerling warmly opposed the idea that it was duty of the Government to make the statement the sitting of Monday the Czech members who had not yet appeared in the House sent in a document to the effect that they resigned the post to which their constituents had elected them. The debate on the Address was then continued. The Minister of [illegible] said the Government adhered to the principles expressed in the Address, and that the measures of the Government would prove that it recognised the necessity economy. Paragraphs from 14 to 18 of the Address were then adopted.

WURTEMBURG.—Passports have been abolished the Kingdom of Wurtemburg. Foreigners, however must be prepared to furnish proof of their [illegible] and nationality if called upon to do so.

SAXE-COBURG GOTHA.—The *Almanach de Gotha* the year 1865, which has just appeared, continues maintain the validity of the treaty of Zurich, pay no attention to the European changes of the few years. The King of the Two Sicilies is Francis II., residing at Rome; the Duke of Parma Robert I, residing at the chateau of Wartegg; Grand Duke of Tuscany is Ferdinand IV., residing Dresden and Lindau. Under the division of Italy read, "King Victor Emmanuel, who takes the title of the 17th March, 1861, the title of King of Italy."

ITALY.—In the sitting of the Senate on the General Della Marmora, in reply to some questions made by Signor Linati, declared that to Italian the best reception had been accorded him in France. All the senators who had been France could bear witness to the universal sympathy felt towards Italy in that country testified by the French press. The Minister Finance denied the rumour that the Bank of had ceased discounting bills. In the sitting of day General Della Marmora, in reply to Signor Galoagno, declined to give any explanation the existence of fresh documents relating to Convention. Signor San Martino opposed the tion, and said that the Venetian question precede that of Rome. If war were imposs Government should endeavour to restore the The Marquis d'Azeglio being unwell, sent favourable to the measure, which was read to the It expressed doubts whether the proclamation as the capital of Italy had served the interest nation. He desired Rome to be an Italian not the capital of Italy. Rome must not cease the seat of the Papacy. The moment of conflict had arrived. In the sitting of Monday the Minister the Interior said that so long as the temporal existed, the danger of foreign intervention removed. He said:—

"The temporal power is not necessary to the spiritual independence of the spiritual power. But this is a question; we have declared that it was necessary to the progress of civilisation, and to leave the Pope at his subjects, by which means the cessation of foreign tion would be obtained. This question can only be accord with France, the first of the Catholic Powers principle of a free Church in a free State the base exists. Under the Convention foreign intervention cease. Italy has an interest in repelling all foreign tending to support the temporal power. In the movement breaking out in Pontifical territory, Italy engage herself to repress it. The only engagement by her is not to attack or allow the Pontifical territory attacked. The Convention is, therefore, favourable policy. The transfer of the capital is not unattended convenience, but it will consolidate the dynasty and of Italy."

This speech was received with great applause. In sitting of Tuesday General Cialdini supported transfer of the capital from a strategic point of "No compromise," he said, "was possible between Austria and Italy; the passes of the Apennines real Thermopylæ." This speech was received applause. Signor Pallavicino opposed the Convention and was in favour of going to Rome and making Venetia. Signor Revel censured the Convention other motives, and considered the independence Poutifical temporal power necessary. General Marmora stated that he shared the views expressed General Cialdini. In the sitting of Wednesday Gallina said that the Convention ought to be notwithstanding its origin. The transfer of the was necessary; but it ought to be effected gradually

RUSSIA.—An Imperial ukase, dated December authorises the issue of a lottery loan of 100 roubles, in bonds of the value of 100 roubles, interest at 5 per cent. These bonds are redeemable 60 years by means of drawings, two of which will held annually for the first 30 years, and one drawing annually during the last 30 years. At these drawings

...will range from 120 roubles upwards, payable ...Amsterdam, and the total sum distributed at each ...drawing will amount to 600,000 roubles. The subscrip... ...which are payable in ten monthly instalments, to ...commence on the 1st of January, 1865, will be opened ...on the 24th inst., and closed on the 24th inst. The ...proceeds of the loan are to be applied to the increase of ...the capital of the National Bank, and for the promotion ...of national industry.

...—The King took the oath to the new ...Chamber on the 28th ult., and the Assembly, having ...terminated its labours, has been dissolved. General ...tranquillity prevails in the capital.

ALBANIA.—The Paris evening papers publish letters ...from Belgrade announcing disturbances in Albania. ...Several Albanians are reported to have taken up ...arms, arrested their Mudir, and massacred a certain ...number of the Turkish officials who came to collect the ...taxes. Some of the officials escaped, and took refuge ...at Scutari. The Pasha of Nicha was marching upon ...Scutari with a battalion of infantry, 200 cavalry, and ...a battery of artillery. There was a probability of the ...movement extending. The roads were not safe. The ...insurgents were led by Mehemet Spahir.

EGYPT.—The *Indépendance Belge* asserts that the ...Viceroy of Egypt, acting under the influence of Nubar ...Pasha, and "yielding to suggestions from London and ...Constantinople," refuses to comply with the injunctions ...contained in the award of the Emperor of the French, ...to whom the difference between his Highness and ...Nubar Pasha had been referred.

INDIA.—By the Overland mail we have advices from ...Bombay to November 14. Sir John Lawrence arrived ...at Calcutta from the Punjaub on the 1st November. ...Sir C. Trevelyan's health has suffered so severely that ...it has altered his intention of remaining in the North-...West, and starts for Calcutta as soon as possible. It ...is feared that he will be obliged to leave India. The ...entrance of the British force into the Bhootan dooars ...will take place about the middle of December. The ...centre column force will enter the dooars from ...the frontier line, and push the Bhooteas before ...them into the hilly country of Bhootan proper, ...which is altogether rocky and barren, and wholly ...dependent for the necessaries of life on the dooars. ...The Government of India has decided that the expenses ...of the expedition are to be debited to the government ...of Bengal. There is a rumour which wants confirma-...tion, that the European artillery at Bellary have turned ...out in open mutiny, burnt down the adjutant's office ...and orderly room, and entirely destroyed the archives ...and documents therein. It is said that all the Western ...Chiefs and Khans have determined to punish the ...Ameer for his treacherous conduct towards his ...brothers. They have called upon him to release Afzul ...Khan and recall Azim Khan, and restore to them their ...share of the paternal state, adding that if he did not ...do so within one month they would invade his territory. ...The Ameer has held a council, at which it was deter-...mined that the Ameer should remain firm and send no ...answer to the demand. Some particulars have been ...received of the battle which took place between the ...Russians and the Kokanees at Huzrut Sooltan. The ...Russians at first made an assault on the fort, and took ...it after hard fighting. About 4000 Kokanees were ...killed, and 2000 taken prisoners, and 18 towns situated ...near the fort were set on fire by the Russians. ...The cities of Jumkut and Seerum, 60 miles ...distant, and the city of Oolyan, between Kashgur ...and Yarkund, were also taken. The Russians then ...marched on Tashkund and Kokan. A telegram ...received in Bombay on the 7th Nov. announces that a ...great storm had occurred on the east coast, and that ...Masulipatam had been reduced to complete wreck by ...inundation, the telegraph lines destroyed, and thousands ...of lives lost. Another gale of some violence passed ...over the Sandheads, near Calcutta, on the 21st and 22d ...October, and some slight damage was done to the ...shipping. A meeting of the citizens of Bombay was ...held in the Town Hall on the 2d November, presided ...over by Sir Jamsetjee Jejeebhoy, for the purpose of ...devising means to alleviate the distress in Calcutta ...caused by the late hurricane. Nearly 5000*l.* was ...collected in the room, in addition to the amount ...previously remitted. The subscriptions already raised ...in Bombay on account of the Fund amount to about ...21,000*l.* Mr. David Sassoon, the head of the Jewish ...community of Bombay, died at Poonah on Saturday, ...the 7th November, in his 72d year. He has left six ...sons and four daughters, and a fortune estimated at ...several millions sterling.

JAPAN.—Advices from Japan state that the Prince ...of Nagato having refused to pay the war indemnity ...stipulated in the treaty of peace, a judgment of the ...criminal tribunal of Yeddo had decided that his two ...palaces should be razed to the ground and his servants ...put to death. This sentence was approved of by the ...Mikado and by the Tycoon—the spiritual and temporal ...sovereigns of Japan—and it is said that the number of ...servants killed in execution of it was 420 men and 215 ...women and children. The Prince, on learning these ...facts, was deeply concerned, and sent to the capital his ...first minister on board the English corvette Barossa, ...which was placed at his disposal by Admiral Kuper. ...The minister on arriving at Yeddo waited on the ...representatives of France, England, Holland, America, ...and Russia, and besought them to intercede with the ...Tycoon in favour of the Prince his master, who had decided on executing all the provisions of the treaty, and immediately paying the sums due. Such was the situation of affairs at the last date. Trade was flourishing at Yeddo, and the Daimios have agreed to reside there.

AUSTRALIA.—The *Melbourne Argus* says that the first instalment of convicts, whose time has expired, have been reshipped to England.

UNITED STATES.—Accounts have at length been received from GenSherman. After evacuating Atlanta he set out on an expedition through Georgia to Augusta. His order of march, dated the 9th, directed his officers to forage liberally on the enemy's country, to enforce devastation, more or less relentless, according to the hostility they should meet, and to seize every negro who could be rendered serviceable. His army then branched off in two columns, one for Augusta direct, the other for Augusta by way of Macon and Milledgeville. The latter column, before proceeding to Augusta, was to destroy Macon and the Western Railroad, the National Armoury, and the Central Laboratory at Macon, and all property at Milledgeville, including the State Capitol, in which the Legislature of Georgia is now sitting. Leaving the Georgia Central Railway, it was then to join the other column at Augusta. This latter has already destroyed the Georgia State road from Atlanta to Carrington, 40 miles, and is continuing the war of devastation at Augusta. A general wreck is meditated, including the Confederate arsenal and the most extensive powder mills south. Their route after leaving Augusta is unknown, but Savannah, Beaufort, Charleston, and Lynchburg, are named. Such is the programme. It is stated that the Macon column had burnt Jonesborough, Griffin, Stone Mountain, Hillesborough, Monticello, Canton, and other Georgian towns, as well as everything in the line of march; and that General Cobb with 8000 militia met the Macon column at Jonesborough, 22 miles distant, and drove them back. The Washington papers also assert that Milledgeville, the capital of Georgia, together with a number of the State Legislature, have been captured by a detachment of cavalry, but this statement is discredited. The Richmond papers report Macon and Augusta as well fortified, and predict to Sherman a repetition of Burgoyne's defeat during the Revolution. Confederate journals of the 21st state that Sherman has crossed the Ocmulgee River, moving in the direction of Augusta. They also publish numerous exhortations from General Beauregard, the Richmond authorities, and leading citizens of Georgia, to the people of the State to remove or destroy on the line of Sherman's march all property which could in anywise benefit him, to burn bridges, obstruct roads, and to assail him in front, flank, and rear with any and all weapons at command. General Beauregard, who was at Corinth, Mississippi, on the 18th, concentrating a large force, had announced that he would speedily be with them and assist in their defence. The whole force of General Beauregard's department, including General Hood's army, is estimated at 65,000. Louisville despatches report that Hood has occupied Waynesborough, Tennessee, threatening both Pulaski and Nashville. They also state that Breckinridge, after driving Gillem into Knoxville, turned northwards, and on the 21st was at Powell's Bridge, on Rowell's River, within six miles of Cumberland Gap. General Burbridge, with a strong Federal force, has marched from Lexington, Kentucky, to oppose his advance. It is asserted from Washington that the greater part of Early's army has been drawn from the Shenandoah Valley to Richmond and Petersburg, to enable Lee to send an equal force from his army to oppose Sherman in Georgia. The Confederates are said to be mining extensively in front of Petersburg, and immense quantities of powder have been received there from the South. General Grant arrived in New York on the 17th ult., and left again for the field on the 21st. The object of his visit is unknown. An attempt was made on the 25th ult. to set fire to New York in nine places simultaneously—at Barnum's Museum and eight principal hotels. Little damage was done. Two persons, supposed to be Confederate emissaries, have been arrested. President Lincoln has proclaimed that the blockade at Norfolk in Virginia, and Fernandina and Pensacola in Florida, shall be raised, and these ports opened to domestic and foreign commerce on and after the 1st December, subject to the necessities of war. A careful correction of the enrolment lists has been ordered preparatory to a new draught throughout the Northern States. Some of the papers assert that Mr. Lincoln will not send peace commissioners to Richmond, and that he will announce the policy of his administration in his message to Congress. Vice-President Stephens has addressed a letter to Senator Semmes, of Louisiana, stating that he does not favour any convention of the States, as has been reported, unless the proposal for such a convention should come from the Federal Government. He adds that the old Union and constitution are dead for ever, except so far as the constitution has been preserved by the Confederacy. There is for the Union as it was no resurrection by any power short of that which brought Lazarus from the tomb. He concludes by stating that his views have not changed since 1861, that he then considered the issue before the South to be independence or subjugation, and that when Georgia seceded, he, in full consciousness of all prospective trials, sacrifices, and responsibilities, pledged himself to stand by her, and he should keep his pledge.

CANADA.—The Canadian authorities have forbidden the export of arms and ammunition, in consequence of having received information that the Southerners in the western cities of Canada were collecting shot, shell, and cannon at various points.

BRAZILS.—Hostile measures had been taken by the Brazilian authorities to enforce their claims on the Government of the Banda Oriental. The blockade of Montevideo by a Brazilian squadron has been declared, and a division of the Brazilian army has crossed the frontier, and advanced in the Oriental territory as far as Ceiro Largo. General Flores had appeared before Montevideo with 3000 men, but retired without attempting to take the city. The United States Minister at Rio, General Webb, has disavowed the proceedings of the Wachusetts in the port of Bahia, and has promised on the part of his Government that full satisfaction should be given to the Brazilian authorities. This promise was held worthy of little credit. Buenos Ayres continued to progress under the administration of General Mitre. Gold had been discovered in large quantities in San Juan, at the foot of the Cordillera Mountains. More than 500 ounces were obtained in nuggets in one day by two miners.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 89¼ to ⅜ for Money, and 89⅜ to ½ for Account; Three per Cents. Reduced, 88⅞ to ⅞; New Three per Cents., 88⅝ to ¾; Annuities, 1885, 14⅛; Bank Stock, 239; India Five per Cent. Stock, 103 to 103½; Ditto Four per Cent. Debentures, 1866, 97½; Ditto Bonds, 1*s.* to 5*s.* pm.: Exchequer Bills, June, 7*s.* to 2*s.* dis.—FOREIGN: Egyptian, 95½; Ditto 1864, 94; Ditto Scrip, ¾ pm.; Mexican, 29¼ to ½; Ditto 1864, 27½ to ¾; Russian, 1862, 87¼ to 86¾; Spanish Passive, 31½ to ¾; Ditto Certificates, 14½; Turkish, 1854, 87½; Ditto 1862, 71½; Ditto 100*l.* Bonds, 71½; Venezuela, 1864, 43½.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£27,741,515	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	13,091,515
		Silver Bullion	—
	£27,741,515		£27,741,515

BANKING DEPARTMENT.

Proprietors' Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,474,542
Rest	3,213,944	Other Securities	18,155,132
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	6,488,544	Notes	8,099,905
Other Deposits	12,565,765	Gold and Silver Coin	749,179
Seven days and other bills	157,908		
	£37,478,158		£37,478,158

Dec. 8, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Dec. 2.*—BANKRUPTS.—J. APPLETON, Moore Park Terrace, Fulham, Grocer.—J. ARMITAGE, Walton, near Northwich, Cheshire, Grocer.—G. ATKINSON, Elwick, Durham, Innkeeper.—J. ALLEN, Half Moon Crescent, Barnsbury Road, Licensed Victualler.—H. D. BRIGGS, Leadenhall Market, City, Poulterer.—J. CHAPLIN and H. BARROWS, Padiham, Lancashire, Cotton Manufacturers.—D. W. BUCHANAN, Wellingborough, Northamptonshire, Shoe Upper Machinist.—J. BUNSTEAD, New Stanford, Lincolnshire, Joiner.—W. BLACKETT, Croydon, Surrey, Builder.—W. O. BIDDERS, JOHN BIDDERS, W. BIDDERS, and JAMES BIDDERS, Leicester, Wholesale Boot and Shoe Manufacturers.—W. BLAKENSHIP, Manchester, House Painter.—G. BUTCHER, sen., Birmingham, Gun Barrel Maker.—T. BINNS, Nantwich, Cheshire, Dealer Dealer.—J. CRIGHTON, High Street, Whitechapel, Butcher.—T. W. CONEY, Huddersfield, Manager of Livery Stables.—J. CRAIGHTON, Pudsey, Yorkshire, Oil Dealer.—H. CARTER, Droitwich, Worcestershire, Surgeon.—W. CONYBEARE, J. S. GOTTS, and G. NOBLE, Norwich, Coach Builders.—T. CRAIGHAN, Cumberwell New Road, Jeweller.—T. COOPER, J. YATES, and A. RICHARDS, Oldham, Lancashire, Cotton Spinners.—J. DUCKWORTH, Bradford, Lancashire, Innkeeper.—R. DUFFY, Carlisle, Fruiterer.—J. DAWSON, Littlechurch, Derbyshire, Greengrocer.—R. J. DOLL, Great James Street, Bedford Row, Attorney-at-law.—J. EAST, sen., and J. EAST, jun., St. Mark's Road, Lancaster Road, Kensington, Bricklayers.—J. FIRTH, jun., Kingston-upon Hull, Licensed Victualler.—T. FELL, Bingley, Yorkshire, Stuff Merchant.—A. FRANKS, Middlesex Street, Aldgate, City, Publican.—G. M. GLASS, Brandon Street, Walworth, Gelatine Manufacturer.—T. GREEN, New Radford, Nottinghamshire, Grocer.—J. GIBSON, Tunstall, Staffordshire, Potter.—T. GREGORY, Reigate, Surrey, Linendraper.—F. GOLDSMITH, Great Chapel Street, Westminster, Pork Butcher.—E. HOGAN, Haddenham, Stone Merchant.—S. P. HEARLE, East Temple Chambers, Whitefriars Street, Advertising Agent.—W. HEADON, Church Road, Islington, Commission Agent.—H. HARMAN, Swansea, late Licensed Victualler.—R. KEMP, Fenny Stratford, Buckinghamshire, Innkeeper.—W. LAMB, Clarkson Street, Bethnal Green Road, Railway Clerk.—A. LAYTON, Guildford Street, Russell Square, late Banker's Clerk.—EDWIN LOBLEY, Morley, near Leeds, Rag Merchant.—M. W. LOMAS, Ashton-under-Lyne, Lancashire, Grocer.—J. MISSING, Rochester, Kent, Licensed Victualler.—H. MOSS, Cirencester, Painter.—G. J. MICHELL, High Street, Wandsworth, late Butcher.—J. M. CALE, late of Platt Terrace, Old St. Pancras Road, Marble Mason.—J. MINERS, Chacewater, Cornwall, Boot and Shoe Maker.—W. B. R. MEARNS, Oxford, Practical Brewer.—A. MACKLIN, Belgrave Road, St. John's Wood, Admiralty Clerk.—S. MARSHALL, Nottingham, Box Manufacturer.—M. NOBLE, Norwich.—A. PAYNE and W. JONES, High Road, Lee, Carpenters.—T. PEARSON, Hulme, Lancashire, late Hay Dealer.—G. PERRYMAN, Brandon, Devonshire, Farmer.—J. H. PERRY, Arundel St., Strand, Magneto-pathist.—E. ROBERTS, Openshaw, Lancashire, Grocer.—W. RENWICK, Manchester, Plasterer.—E. SHEPHERD, Goswell Street, Clerk to a Warehouseman.—GEORGE WILLIAM COLLMAN SELBY, sued as GEORGE SELBY, and known also as WILLIAM SELBY, Peckham, Egg Merchant.—THOMAS SHEPPARD, Aston, Warwickshire, late Baker.—SAMUEL SENIOR & JONAS SENIOR, Lockwood, Yorkshire, Clog Iron Makers.—CHARLES SIMPSON, Hanley, Staffordshire, Fishmonger.—J. D. SHARPE, Villa Road, Brixton Road, Collector to the Iron and Citizen Steamboat Companies.—E. SKEATS, late of Redbridge, Hampshire, Corn Dealer.—E. SWEETAPPLE, Whitechurch, Hampshire, Paper Manufacturer.—I. SAMUELS, Birmingham, Journeyman Japanner.—S. SAMSON, Underhill, Kent, Labourer.—G. H. SAMSON, Underhill, Kent, Labourer.—F. SAMSON, Underhill, Kent, Labourer.—J. SAMSON, Colchester, Labourer.—E. SAMSON, Underhill, Kent, Labourer.—J. SAMSON, Folkestone, Accountant.—R. STARK, Devonport, Carpenter.—J. SAMSON, [illegible], Northampton-shire, Licensed Victualler.—J. TURNER, [illegible], Devonshire, Farmer.—J. THEOBALD, Romford, Essex.—F. B. J. P. VOSTER, Portsmouth, Commission Agent.—W. WILSON, Kingston upon Hull, Journeyman Tinplate.—M. WILLIAMS, Larkswood, Glamorganshire, Publican.—G. DE VISS WAGE, Baldock, Hertfordshire, Scrivener.—W. WOOD, Tunstall, Staffordshire, Bootseller.—R. WOOD, Burlington Street, Harrow Road, Master.—W. WILLIAMS, Whetstone, Middlesex, Fishmonger's Assistant.—M. S. WALKER, Wakefield, Yorkshire, Fruit Merchant.—T. WISE, sen., and T. WISE, jun., Lancaster, Coach Builders.

TUESDAY: *Dec. 6.*—BANKRUPTS.—W. ALLEN, Berwick Street, Leicester Square, Job Master.—M. BRENNAND and R. WHITAKER, jun., Rochdale, Lancashire, Flannel Manufacturers.—J. J. BARNETT and G. BARNETT, Bow Lane, City, Woollen Warehousemen.—R. BOLDING, Elizabeth Street, Hackney Road, Looking-glass Maker.—J. BAILES, Chester, Carver and Gilder.—H. BIRD, Ashley de la Zouch, Leicestershire, Boatman.—G. BERRY, Brimington Road, Bath Road, Peckham, Solicitor's Clerk.—J. BIDDLECOMBE, Newport, Isle of Wight, Bootmaker.—H. G. BATES, London Practical Brewer.—A. MACKLIN, Belgrave Road, St. John's Wood, Admiralty Clerk.—S. MARSHALL, Nottingham, Box Manufacturer.—M. NOBLE, Norwich.—A. PAYNE and W. JONES, High Road, Lee, Carpenters.—T. PEARSON, Hulme, Lancashire, late Hay Dealer.—G. PERRYMAN, Brandon, Devonshire, Farmer.—J. H. PERRY, Arundel St., Strand, Magneto-pathist.—E. ROBERTS, Openshaw, Lancashire, Grocer.—W. RENWICK, Manchester, Plasterer.—E. SHEPHERD, Goswell Street, Clerk to a Warehouseman.—GEORGE WILLIAM COLLMAN SELBY, sued as GEORGE SELBY, and known also as WILLIAM SELBY, Peckham, Egg Merchant.—THOMAS SHEPPARD, Aston, Warwickshire, late Baker.—SAMUEL SENIOR & JONAS SENIOR, Lockwood, Yorkshire, Clog Iron Makers.—CHARLES SIMPSON, Hanley, Staffordshire, Fishmonger.—J. D. SHARPE, Villa Road, Brixton Road, Collector to the Iron and Citizen Steamboat Companies.—E. SKEATS, late of Redbridge, Hampshire, Corn Dealer.—E. SWEETAPPLE, Whitechurch, Hampshire, Paper Manufacturer.—I. SAMUELS, Birmingham, Journeyman Japanner.—S. SAMSON, Underhill, Kent, Labourer.—G. H. SAMSON, Underhill, Kent, Labourer.—F. SAMSON, Underhill, Kent, Labourer.—J. SAMSON, Colchester, Labourer.—E. SAMSON, Underhill, Kent, Labourer.—J. SAMSON, Folkestone, Accountant.—R. STARK, Devonport, Carpenter.—J. SAMSON, [illegible], Northampton-shire, Licensed Victualler.—J. TURNER, [illegible], Devonshire, Farmer.—J. THEOBALD, Romford, Essex.—F. B. J. P. VOSTER, Portsmouth, Commission Agent.—W. WILSON, Kingston upon Hull, Journeyman Tinplate.—M. WILLIAMS, Larkswood, Glamorganshire, Publican.—G. DE VISS WAGE, Baldock, Hertfordshire, Scrivener.—W. WOOD, Tunstall, Staffordshire, Bootseller.—R. WOOD, Burlington Street, Harrow Road, Master.—W. WILLIAMS, Whetstone, Middlesex, Fishmonger's Assistant.—M. S. WALKER, Wakefield, Yorkshire, Fruit Merchant.—T. WISE, sen., and T. WISE, jun., Lancaster, Coach Builders.

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Walworth, Wholesale Boot Manufacturer—C. TAYLOR, Pencomb, Herefordshire, Farmer—R. TOMLINSON, Hinstock, Shropshire, Journeyman [illegible] Commission Agent—T. [illegible], Brass Manufacturer—J. WESTERBY, [illegible] Norfolk Square, Forest Hill, Butcher [illegible] RATIONS—A. CRAIG, Glasgow, House Furnisher—J. T. [illegible], Edinburgh, Coal Master—J. M'GHIE, West Kilbride, [illegible], Farmers—J. MILLAR, J. W. B. MILLAR, and M. MILLAR, [illegible], Edinburgh, Farmers—W. WILSON, Stirling, Boot and Shoemaker.

Metropolis and its Vicinity.

THE PRINCE CONSORT MEMORIAL.—The Queen paid a visit to the site of this Memorial on Monday, and inspected the works preparing for the foundations. The sculpture for the Memorial will all be executed in Sicilian marble, of which the Marble Arch in Hyde Park is constructed, and which appears to stand externally in our climate better than any other description. Its colour is not pure white, but it is sufficiently so for external works. The larger works will be at the lower angles of the pyramid of steps, and the groups of figures will represent the four quarters of the world. Mr. M'Dowell has in hand the group of Europe, Mr. Foley has Asia; Africa has been confided to Mr. Theed, and America to Mr. John Bell. At each angle of the podium, and having a cluster of granite columns at the back, there is also a marble group, though somewhat smaller in dimensions. These groups are—Agriculture, which has been given to Mr. Calder Marshall; Manufactures, which Mr. Weeks has in hand; Commerce, which has been given to Mr. Thorneycroft; and Engineering, which is from the design of Mr. Lawlor. On the upper portion of the shrine will be figures of the Virtues, the Arts, and Sciences idealised, which are to be executed in Sicilian marble by Messrs. Philip and Armistead.

GENERAL POST OFFICE.—Preliminary notices have been issued to the several freeholders, householders, and occupiers of property and premises in Newgate Street, St. Martin's-le-Grand, Christopher Court, King's Head Court, Three Doves Passage, Angel Street, and Bath Street, Newgate Street, announcing the intention of the Post Office authorities to make an immediate application, in conformity with the standing orders of the House of Commons, for a Bill to extend the General Post Office to the west from St. Martin's-le-Grand to and inclusive of 75, Newgate Street and Bath Street. The extension has been rendered necessary by the pressing demands upon the controllers for more space, and the growing importance of the Savings Bank Department.

THE LATE MURDER OF MR. BRIGGS.—The Home Secretary has decided that the cabman Matthews is entitled to the whole of the reward of 300*l.* for giving information which led to the conviction of Müller for the murder of Mr. Briggs. The sum has been ordered to be paid to him in a few days. In the meanwhile he has been arrested for a debt of 30*l.* by one of his numerous small creditors, whose aggregate claims amount to 560*l.* Though the present claimant only demands 30*l.*, the others will, of course, lodge detainers against him, and a vesting order will be immediately obtained for the assignees to receive the money payable to him from the Government. He will thus not only enjoy no benefit whatever from the money, but before he can regain his liberty he will have to go through the Court of Bankruptcy for the remaining 260*l.* He is now confined in the debtors' side of Horsemonger Lane Gaol.

THE PROPOSED WIDENING OF PARK LANE.—A deputation of members of the Metropolitan Board of Works had an interview with Mr. Cowper on Monday to ask the assistance of the Government in carrying the proposed improvement of Park Lane into effect. Mr. Thwaites, the chairman, said that there were three ways in which the improvement might be carried out. One was that the carriages should pass out through the park gates into Piccadilly, and on the other side, that there should be an opening into Kensington, which could be done without inconvenience. It would be very desirable if such an arrangement could be made. Another plan was by the opening of Upper Hamilton Place, not for the purpose of allowing heavy traffic to pass that way, but for carriages and cabs. It would then become a question of widening Park Lane: but the property was of very great value, and there was no doubt one or two parties would be inconvenienced thereby—one of them being the Duke of Cambridge; but it would be a great relief and a public convenience. The Board of Works had, for the purpose of giving them a *locus standi* in the House of Commons, inserted advertisements in the papers, giving notice of their intention to carry out this improvement; but a portion of what would be required was Crown property. The First Commissioner said he was very glad to hear that the Board had taken up this subject earnestly, as there was a very great traffic down Park Lane, and he had heard of several serious accidents there. As regarded the remedy, he thought it would be useless to let cabs go one way and the heavy traffic continue to struggle up Park Lane. If a remedy was to be applied it should be a large and positive one, and not a partial one. There was a great objection to make Hyde Park Corner a centre for cab traffic; for on a summer's day people liked to stop about there and Rotten Row with their carriages, and it would greatly destroy the only open space if cabs were allowed to pass through the Park. He would certainly, in the execution of his duty, most strenuously oppose it. The Commissioners of Police would have their duties greatly increased if the traffic was allowed to pass through those arches. He thought that the expense of this improvement should be at once faced, and if the Metropolitan Board of Works was a very poor body, without any funds, they could then plead their poverty. He then came to the plan for widening Park Lane, which he thought would be too expensive. If they adopted the other alternative, that of opening Upper Hamilton Place, every facility would be given on the part of the Crown for that object.

ALTERATION OF STREET NAMES.—The Metropolitan Board of Works has abolished the names of King Street and Upper King Street, Bloomsbury, and ordered the whole line of thoroughfare from Russell Square to Holborn to be called Southampton Road. The name of Warwick Square, Kensington, is altered to Warwick Gardens. The names of St. Paul's Villas and Murray Villas, Camden Town, are abolished, and the whole line of thoroughfare called St. Paul's Road. The names of St. Stephen's Terrace and Hereford Terrace, Paddington, are abolished, and the whole line of thoroughfare called Hereford Road. The many subsidiary names in High Street and Newington Butts, extending from the Elephant and Castle to Penton Place, are abolished, and the line of thoroughfare is called Newington Butts. The whole line between Penton Place and Kennington Gate is to be called Kennington Park Road.

FINSBURY PARK.—At the meeting of the Metropolitan Board of Works on Friday a sum of 45,652*l.* was ordered to be paid for the purchase of the land for the new park at Finsbury.

MEMORIAL TO MR. THACKERAY.—A bust of Mr. Thackeray, by Baron Marochetti, is to be placed in Westminster Abbey, close to the monument of Addison.

GREAT BURGLARY IN LOMBARD STREET.—On Monday a discovery was made of a robbery of bullion, bills of exchange, foreign notes, and other valuable securities, to a large amount, which is supposed to have been effected some time during Saturday or Sunday night, on the premises of Messrs. Baum & Co., long established in Lombard Street as bullion dealers and moneychangers. The manner in which the burglary appears to have been effected, and many of the attendant circumstances are mysterious, and at present baffle the most experienced of the city police. The premises are situated at the corner of Birchin Lane and Lombard Street. They are upon the ground floor, with cellars below, and the rest of the house, which is very large and lofty, is let out as offices to merchants and others. At night the whole house is in the charge of a respectable elderly woman, the widow of a sergeant of police, as housekeeper, and with her a niece and her husband reside, the three occupying the topmost story. A watch-dog has the run of the whole of the passages and staircases at nights, and is accustomed to bark on the slightest unusual noise. He was found on Monday morning with a strap, which had been used in tying up some of the securities that had been stolen, hanging loosely round his neck, but he was still going at large about the house, and the circumstance of the strap, inexplicable itself, unless used in restraining the animal, which would only have made him the more noisy, is one of the mysterious incidents connected with the robbery. Messrs. Baum closed their premises for the night on Saturday evening about 9 o'clock. They had then in their iron safe, securely locked to all appearance, and enclosed in a strong-room equally well secured, a large amount of foreign coin, English, foreign, and colonial notes, certificates for shares, foreign bonds, bills of exchange, 57 gold and 37 silver watches. On Monday morning, at 9 o'clock, one of the partners in the firm opened the premises, and shortly afterwards went to the strong-room, accompanied by a boy with a lighted candle. The room is guarded by double doors with formidable locks. On applying his key to the lock of the outer door he found that the scutcheon had been torn off and the lock itself had been tampered with. Looking round a corner of the room he discovered that a hole about 18 inches square, and large enough to admit a boy of ordinary size, had been cut through the wall where there had formerly been a door, and an entrance thus made into the room. The iron safe was open, three of the locks of the inner door of the room had been wrenched off, empty cashboxes were strewn about, and the place was in disorder in other respects. The way in which the iron safe appeared to have been opened was inexplicable. The door had been removed from its hinges, but although four formidable crowbars were lying about, there was no mark visible about the iron to show that any of them had been used in prizing it open, nor were there any indications of recent use on the crowbars themselves. Not only had the door of the safe been removed by the hinges, but a most formidable lock inside of it had been broken in pieces, and its wards scattered about. The safe was completely empty, and a couple of morticing chisels, such as are used by joiners, and the points of which had been broken off, on the floor. How the thieves got into the premises remains to be explained. The street door, which is common to the whole house, opens into a passage, on the right-hand of which is a door communicating with the counting-house of Messrs. Baum. The street door cannot be unlocked from the outside. It is in two halves, opening inwards, and at night is secured by bolts and crossbars on the inside, there being no lock either on the outside or inside. A person leaving the house after it had been closed for the night might remove the crossbars and bolts from the street door, but he could not fasten the door after him, and a passing policeman would probably soon find that it was open as he went his round. To prevent such a discovery the thieves had recourse to an extraordinary expedient. Before leaving they actually screwed a spring latch inside the door, and on closing the door behind them as they passed out it fastened itself on the inner side, and so presented afterwards the appearance from the outside of being secure. The robbery and the mystery which hangs about it have excited a good deal of interest in the city. The Messrs. Baum have been in business in Lombard Street for 30 or 40 years, and their loss is estimated at about 3000*l.* They have offered a reward of 700*l.*, of which 200*l.* will be given to any person who shall, within three months, furnish such information as shall lead to the apprehension of the thieves, and 500*l.* for such information as shall, within the same period, lead to the recovery of the stolen property, or a proportionate part of that sum, according to the amount recovered. The housekeeper and her nephew and niece, who are reported to be respectable people, are unable to give any explanation of the affair. They live at the top of the house, five or six stories from the basement, and had not been disturbed either on Saturday or Sunday night. The dog had barked a good deal at one part of the night, but that was not at all an unusual circumstance.

CHARGE OF FRAUD AGAINST AN OFFICER IN THE GUARDS.—A few days since Mr. Arthur Boyle Wilbraham, formerly an officer in the Coldstream Guards, was charged at the Marlborough Street Police Court with obtaining on false pretences large quantities of valuable jewellery from two of the leading West End firms, Mr. Emanuel and Mr. Hancock. After hearing the evidence, the magistrate said that if the accused had not recently become a bankrupt these proceedings would never have been heard of; but it was a case of such importance that he must send it to a jury. The evidence respecting the property of Mr. Hancock was postponed for a week, the defendant being committed on the charge preferred by Mr. Emanuel, moderate bail being accepted for his reappearance. On Wednesday Mr. Wilbraham was again brought before the Court on the charge preferred by Mr. Hancock, when it was stated by the lawyers on both sides that in the interval both firms had been privately settled with, and that Mr. Hancock declined to go on with the charge, while Mr. Emanuel wished to withdraw from his. The magistrate, however, decided that as Mr. Emanuel had already entered into recognizances to prosecute, he had no power to interfere, and that the case must now be determined at the quarter sessions.

GENERAL TOM THUMB.—After having visited nearly all the sights of London, General Tom Thumb and his wife and family have left town for Paris, where they will remain for a short time.

MR. SPURGEON.—It is stated that Mr. Spurgeon has deliberately renounced the title of "Reverend," and that he no longer desires to be so addressed.

COURT OF BANKRUPTCY.—The Lord Chancellor has issued another order in Bankruptcy, appointing Mr. W. S. Ayrton, of Leeds, and Mr. R. P. Harding, of London, to investigate and examine the books and accounts of the official assignees and messengers of the London Court, and to report to his lordship, at the close of their investigations, both as to the facts, and as to what system, in their opinion, will best conduce to accuracy.

BALLOON ASCENT.—Mr. Coxwell, accompanied by Mr. Glaisher, F.R.S., ascended on Friday, under the sanction of the War Department, from Woolwich Arsenal in the military balloon "Mars" for the purpose of commencing a series of winter observations. The ascent was necessarily confined to a moderate elevation. The inflation consumed about 30,000 cubic feet of gas, and was completed at half-past 2, when, Mr. Glaisher having adjusted his instruments at the head of the car, the balloon was liberated, and proceeded towards the south-east, where it was visible for a considerable time in the direction of Gravesend. The weather was highly favourable.

THE PUBLIC HEALTH.—The Registrar-General's Return states that the deaths in London in the week that ended on Saturday, December 3, were 1624. The average number in the corresponding week of the

previous years, corrected for increase of population, was 1558. The present return is therefore 86 above the average. Bronchitis was fatal in 234 cases. The corrected average was 210. During the week the births of 1016 boys and 947 girls, in all 1963 children, were registered in London. In the 10 corresponding weeks of the years 1854—63 the average number was 1939.

Provincial.

BIRMINGHAM.— A public meeting was held in the Town Hall, on Tuesday evening, Lord Leigh, Lord Lieutenant of Warwickshire, in the chair, when the prizes offered for competition by the members of the 1st Administrative battalion of Warwickshire Volunteers during the past season were distributed to the winners. The formal presentation of the prizes was, at the request of Colonel Mason, undertaken by Sir John Pakington, who spoke as follows on the occasion :—

"He considered it due to the volunteers of Birmingham that he should appear among them in the uniform of that which he considered appropriately term a sister service—the Yeomanry Cavalry of England. That force, the Yeomanry Cavalry, was the only one in which the volunteer system was applied to cavalry, becoming like a permanent auxiliary force in aid of the regular army for the defence of the country. Towards the close of the last century our Yeomanry Cavalry regiments were established, and they had been carried on steadily from that time to the present. He felt sure his noble friend the Lord Lieutenant would not suppose that he intended to traverse debatable ground if he made to him the appeal which he was about to make. He appealed to the noble lord, then, in two capacities—as an honourable and consistent supporter of the present Administration, but still more as an active and highly-esteemed lord lieutenant of an English county. He ventured to appeal to him in order to induce his lordship to use his influence with his friends in high places to cause them to cease their constant attacks upon the yeomanry of England. The force had nothing whatever to do with politics there. He did not think that the question had anything to do with politics. For his own part, he dealt not with politics, but with facts. He was now a public man of some years' standing; he had been in Parliament for a great many years, and in the course of the last thirty years, time after time had the friends of Lord Palmerston first hit out one fist and then the other fist to try if they could not knock down the yeomanry of England. The last of these attempts was made no further back than the month of August last; but the vitality of the yeomanry was most extraordinary. They had survived all these attacks, and he did not think his noble friend could take a course more worthy his high position or more befitting his high character than if instead of coming in Downing Street he would just whisper into the ears of his friends, "You had better leave the yeomanry of England alone." He looked upon the yeomanry as the right arm force of the great volunteer service of this country. At the same time he saw that lamented statesman, the late Lord Herbert of Lea, whose loss was deplored equally by men of all parties, Lord Herbert said there was one point upon which he had long made up his mind—that the volunteer principle could not be carried out with cavalry. The volunteer principle, according to his lordship, was very good for infantry, but for cavalry it would be too costly. They were aware there had been one or two instances of volunteer troops of cavalry; but those were exceptional cases, and no doubt Lord Herbert was quite right in the opinion that the volunteer principle could not be applied to cavalry on account of the costly nature of the force. But although the volunteer principle could not be applied in its entirety to cavalry, the yeomanry was never-theless the cavalry of the volunteer force; and, speaking for himself, he considered any Government that undervalued the services of the yeomanry of England made a great mistake. By way of illustration, he instanced the late strike of colliers in the South Staffordshire district, and observed that while that strike lasted there was great dissatisfaction, and very just dissatisfaction, in various districts which were stripped of the police force—the police being brought together in the districts to preserve order. He thought that the Government were perfectly right in appealing to the police in the first instance to interfere in case of any disturbance of the public peace, but when that disturbance of the public peace was continued for any lengthened period, it was injudicious and highly improper to take away from various parts of the country the force intended for the detection of crime and the preservation of the public peace, and to concentrate it for a long period in the one district which happened to be disturbed. He admitted that from the advance of education and the advance of more civilised habits on the part of the industrial classes, there was reason to hope that these disturbances of the public peace would be more rare than they had been in former times; but he held that if the yeomanry had been called out, instead of the police, during the late unfortunate strike in the colliery districts, the strike would have been much sooner than it did. He then proceeded to remark upon the political and social value of the volunteer force, and more especially, its utility in bringing public men of various parties into union for a common object."

CARNARVON.—The movement for the erection of a Welsh university is progressing favourably, and a large sum has already been subscribed towards the national fund of 50,000*l.* proposed to be raised prior to an appeal to the Government. Public meetings have been held in the principal towns of Wales and the adjoining counties, as well as in Manchester, Liverpool, London, &c., and the promoters expect that by next summer the whole of the 50,000*l.* will be fully subscribed.

DEAL.—Lord Clarence Paget addressed his constituents in this town on Friday evening, and made the following remarks on the state of the navy, and especially on the recent criticisms on the proceedings of the Admiralty in reference to the Royal Sovereign and the Victoria :—

"With regard to naval expenditure it had been his earnest endeavour to watch over, control, and limit it; and if any gentleman should ask him why he was not oftener amongst them paying them his personal respects, his answer must be that he was watching over their naval expenditure. That expenditure had been reduced very considerably within the last two or three years. Yet the naval estimates had amounted to no less a sum than 12,750,000*l.* The estimates for the present year were something like 10,750,000*l.*, showing a reduction of 2,000,000*l.* He spoke not out of disrespect to any previous government, but if he were asked why this enormous expenditure had been necessary he must frankly reply that in the year when the present government came into office the navy of this country was not in a satisfactory state. We had neither the quantity of ships, nor had we the number of men, which it was absolutely necessary we should maintain if we at the same time desired that England should maintain her position as a great naval power. The consequence had undoubtedly been an enormous expenditure, but the result of that expenditure was that we had now, either built or in various degrees of construction, no less than thirty armour-plated ships. Now, when he talked of thirty ships it was perhaps not easy to realise what that represented in money, but when he reminded them that each of our armour-plated ships cost nearer half a million than a quarter of a million, some idea would be formed of the expenditure which had been necessary in constructing our armour-plated fleet. They would remember perfectly well that in those days, some four years ago, we used to suffer from a sort of chronic panic. We used to hear that the country was utterly unfit to repel invasion, that we had neither ships nor troops, and that we were in fact at the mercy of any nation who chose to invade us or to insult our flag. We did not hear of these things now. Englishmen did not now express their apprehension of danger from invasion or insult, and he therefore asked whether he might not fairly claim continued confidence on this score in her Majesty's government." The noble lord then spoke of Mr. Cobden's views as expressed in his recent speech at Rochdale, and continued—"It was his fortune during the past session of parliament to be called on by the House of Commons to state, as chairman of a very important committee—that committee being appointed to inquire into the dock accommodation existing in our dockyards, in the country generally, and in the colonies—that our dock accommodation was wholly insufficient for the wants of the navy. It was true that it was his duty as chairman to frame the report of that committee, yet he nevertheless could not subscribe to every paragraph it contained, for he thought they were apt, when they went into inquiries upon these important matters, to forget that we had vast private establishments in this country which might always be counted upon, in the event of an emergency, both for repairing and docking our ships. Nevertheless he was bound to say that the evidence the committee received, and the conclusion to which they came, showed that the dock and basin accommodation for her Majesty's navy was insufficient for its wants. He alluded to this fact because he wished to put frankly before his audience what had been done and what had been left undone. He quite admitted that it required very great exertions on the part of the public to put our great naval establishments into the position which was befitting and necessary for the navy, and therefore in stating that which he now did he was sure they would believe that the estimates to be submitted to parliament for the maintenance of her Majesty's navy would be framed with the utmost regard to economy, although the views of Mr. Cobden with regard to sweeping reductions would not be entertained. Indeed, they must expect, and he was sure when they came to be acquainted with the details they would justify the government in proposing, a considerable increase in the votes for dock and basin accommodation. He had adverted generally to the policy of the government, both with regard to foreign affairs and with regard to the navy, and he now wished to allude to some points which would be interesting, more especially to the naval officers and friends he saw around him. A great many criticisms had been given out to the public with regard to the action of the Admiralty upon several matters to which he would briefly allude. He had told them the government was maintaining a very large force, indeed something like 75,000 men, yet they had doubtless read that in spite of this the admiralty had had difficulty in manning our ships. There was possibly not a corner of the country that had not been alarmed within the last few weeks by a report that there had been great difficulty in manning our line of battle ship Victoria. It was stated by one of the leading newspapers a few weeks ago, and the statement had occasioned considerable alarm, that great difficulty had been found in manning the Victoria three-decker, now fitting as a flag ship in the Mediterranean, and that the Admiralty, in order to make up her complement, had unmanned other ships, so averse were the seamen of this country to serve in her Majesty's navy. Now he would tell them what was really the fact. The Victoria was commissioned on the 2nd of November last. As soon as her officers had joined, orders were given to complete her complement, which was done in forty-eight hours, the only vacancies remaining in the ship being for five shipwrights. He was told the other day that the crew of the Victoria had been got together from the scum of society, and that they were not a real man-of-war's crew. He had, however, taken great pains to examine the report of the commander in chief at Portsmouth, who inspected the ship, and his report of the ship's company was this—'A good ship's company, and above the average in appearance and quality; clean and well clothed.' He desired to allude to one more point concerning naval administration. The recent experiments which had been made in gunnery, and likewise with regard to armour-plating had been watched with considerable interest. Among other systems, one had engaged public attention to a great extent—he meant the turret system. A very intelligent officer of the navy had brought this system to considerable perfection on board the Royal Sovereign, and many interesting trials had taken place during the past summer. Now he found it was generally supposed that there was a prejudice at the Admiralty against the turret system, and that consequently the Royal Sovereign was destined to be laid upon the shelf and kept out of the view of the public, Nothing could be more fallacious than this idea. It gave him sincere pleasure to state that as far as experience had gone in the working of the turret system, that system was a great success. It had been found that various difficulties which were anticipated by many vanished in practice. He was one of those who had always been very sanguine that this system of naval defence would take a high place in this country, and he had every reason to be equally sanguine now. But with respect to the Royal Sovereign, her own captain, one of the most distinguished officers of the navy, reported that although the turret system in his opinion, and in the opinion of all on board, worked most satisfactorily, the Royal Sovereign, as she was not sufficiently a cruising ship for sea-going purposes, the utmost that could be expected of her was that she should be used for the protection of our coast, or, in an emergency, sent to the Mediterranean. Under these circumstances the Admiralty thought it would be unwise to keep this ship in commission, as it was evident she could not fulfil all the conditions of a sea-going ship, but with the view and the earnest desire of carrying out fully experiments in this system they were making modifications in various matters of detail. Some accidents undoubtedly occurred to the ship. Her hawse holes were damaged, and in various other respects she required repair, but he could only say that the moment she was ready she would be put to sea. He would add one more word on the subject. So impressed were the Admiralty with the success of the turrets so far as they had worked, that they had now under consideration the conversion of one of our large armour plated ships which were now in course of construction into a ship upon the turret system."

DEVONPORT.—Another fire broke out on Saturday in the pitch-house in the Dockyard by the ignition of the boiling pitch. An engine was speedily on the spot, and the fire was extinguished in a very short time. The roof of the house, which is a small stone detached building, was, however, destroyed, and the house gutted.

DEWSBURY.—On Saturday Miss Martha Jane Gledhill, milliner, of Mirfield, near this town, the daughter of a widow who owns some landed property in that village, was brought before a magistrate, on remand, charged with having set fire to a stack of Wheat, the property of Mr. R. Hurst, maltster. The hearing lasted nearly eight hours. The evidence was to the effect that Mr. Hurst, who is the owner of some maltkilns built on land adjoining Mrs. Gledhill's property, claims a right of way over an occupation road which passes through one of her fields, and on the 10th ult., acting under legal advice, he set some men to work to dig up some chained posts which opposed the free passage of his carts, and with a horse dragged them away. Mrs. Gledhill, with the prisoner and another of her daughters, were present while this was done, and it was alleged that the prisoner made use of threats to the effect that she would stab Mr. Hurst, would be revenged upon him, and if she had a pistol she would shoot him. She returned home and made her appearance again, dressed in black, with a broad-brimmed hat of the same colour. She went towards a lane leading to Mr. Hurst's house and stackyard; a woman resembling her was seen in the lane itself immediately afterwards, and subsequently she was met on a path not far from the stacks—a foot-path, however, which did not lead to them. In a very short time a wheat stack standing close to the side of the lane into which the path runs was observed to be on fire at the part most easily accessible to a passenger that way, and was utterly destroyed, though the other produce in the yard was saved. A number of witnesses were examined for the defence, but their evidence failed to convince the Bench of the prisoner's innocence, and she was committed for trial at the assizes. Bail, however, was accepted.

DURHAM.—The fine old church of Sherburn Hospital, near this city, was entirely destroyed by fire on Sunday morning. The fire was discovered by the daughter of the Rev. J. Carr, the master, about three o'clock, when she was disturbed by hearing a crackling noise, and on looking through the window of her chamber in the master's residence she saw flames bursting through the roof of the church, which was close adjoining, and the whole edifice seemed to be in flames. Messengers were at once sent to Durham for the fire-engines, and the brigade was on the spot within an hour; but, from the mastery the flames had attained, it was found impossible to save the church, which is now little better than a blackened ruin. The fire seems to have originated through the overheating of the flue attached to the warming apparatus, the brickwork of which appears to have become red hot, and the fire had communicated with the wooden panelling of the wall in the north aisle immediately above. The church was beautifully fitted up; the sittings were open and of oak. The edifice was of pure Norman architecture, and was supposed to be coeval with the hospital, which was founded between the years 1181 and 1184. Five years ago the church was much damaged by fire, and was restored during the mastership of Archdeacon Prest. Most of the monuments of the old masters of the hospital are destroyed by this fire, and one of great beauty, to the memory of the late master, Dr. Faber, is burnt into small fragments. The tower, as well as the body of the church, is completely gutted. A new building for the inmates of the hospital has recently been erected at a cost of 14,000*l.* Fortunately the wind blew the flames away from this building and the master's residence, and both are uninjured.

FALMOUTH.—On Wednesday, the 30th ult., Albert Julius Wilhelm Rudolff, a native of Stettin, in Prussia, and a sailor on board the Bremen brig Germania, now lying in this harbour, was committed for trial on the verdict of a coroner's jury for the wilful murder of a young man named William Gibbins, aged 19, a fishmonger of Penryn. From the evidence it appeared that at about 11 o'clock on the previous Saturday night the prisoner and several shipmates, who had been drinking in company with the deceased, were turned out of the inn, it being closing time. A quarrel had previously taken place between the prisoner and deceased, and soon after getting into the street deceased was stabbed in the left breast, and almost immediately expired. On medical examination it was found that he had received a wound from a sharp instrument which penetrated the heart, and was 3¼ inches to 4 inches deep. The prisoner was traced on board the Germania by a constable, who found him sitting on a chest in the deckhouse; his coat and trousers were very wet. He admitted that he had been in town, but denied that he had been fighting or had a knife with him. On being asked where the knife was, he replied that he had let it fall overboard two days ago. He accounted for his clothes being wet by saying he had fallen into the water when coming on board. The constable then saw the prisoner put his foot on the chest on which he had been sitting, and pass something from under the leg of his trousers, which proved to be a knife and sheath. The blade of the knife was 5 inches long, and was smeared with blood. Several witnesses gave evidence as to the affray, one of whom swore that he saw the prisoner run away directly after deceased had been stabbed. On Saturday the mayor and magistrate fully committed the prisoner to take his trial at the next assizes for Wilful Murder.

FOLKESTONE.—Two girls were killed on Sunday afternoon on the line of rails between Dover and this town, on the South-Eastern Railway. They had been

visiting their parents at the Pelter coast-guard station, and on their return were walking along the line, when the mail train came up, and before it could be stopped, ran over both, killing them on the spot. The jury at the inquest returned a verdict of Accidental Death.

HARTLEPOOL.—On Wednesday week, as a large number of workmen were about to cross to their work in a ferry boat, a brig towed by a steamboat crushed the boat against the pier. Upwards of 30 persons were thrown into the water, and five of them are believed to have been drowned.

HERTFORD.—On Saturday a young man, called George Savage, was charged before the magistrates at the Town Hall, with robbing and attempting to murder Mr. Joseph Barker, farmer, on the highway, near Hertford, on the evening of the 29th October. The prisoner is a mere stripling in appearance, but his features show great resolution. Mr. Barker, who had not been out of doors since the night of the assault, was brought in a cab to the Town Hall. His head was still bandaged, and he was so extremely weak that he had to pause in giving his evidence, and to take wine before he could proceed. He gave a very clear account of the whole occurrence, and positively identified the prisoner as the man who attacked him. He had known and employed him, but had lost sight of him for about four years; but he, nevertheless, recognised him as his former servant by his voice and his step, though it was not light enough to distinguish his features. Mr. Barker said he was going home along the secluded avenue known as Morgan's Walk, about half a mile from Hertford, a little after 6 o'clock in the evening, when he overtook the prisoner, and spoke to him. After that the prisoner fell back, and then suddenly struck him from behind with something very heavy, like lead. He fell down upon the grass on the side of the road, but got up again on one knee, when the prisoner instantly knocked him down again. He got up on his knees twice again, but was knocked down each time, and then became insensible. When he recovered consciousness no one was near him, and he got up and crawled home as well as he was able. He was at this time bleeding so profusely that the impression on his mind was that some one had been throwing water over him. The coat worn by Mr. Barker at the time was produced; it was completely soaked with blood. The prosecutor described the dress worn by the prisoner, a low-crowned round hat, and a longish brown coat, on the left sleeve of which there appeared to be a dab of paint. The prisoner's hat and coat were produced, and found to answer the description. There was a hole in the left sleeve of the coat, through which the white lining showed. In answer to a question from the prisoner, who cross-examined him very sharply, the prosecutor said he could identify him more certainly now than when he was brought to his bedside, because at that time he was very weak. Mr. Odell, surgeon, of Hertford, described the nature of the injuries. He said he counted nine distinct wounds, caused by as many different blows. There was a blow on the side of each eye, and other blows at the back of the neck, and below the right ear. The most serious wound was on the top of the head, at the left side, and appeared to have been caused by a succession of blows, perhaps 20, which had fallen precisely on the same spot. The instrument used must have been a heavy blunt instrument—he believed a loaded stick, because wherever a blow had been struck there was a mark about the size of a nut. Mr. Barker's life was for a long time in the greatest danger. Much corroborative evidence was given, and the prisoner, who declined to say anything in defence, was committed for trial at the assizes on the charges of highway robbery and attempt to murder.

LIVERPOOL.—The Corporation of this town have taken counsel's opinion as to whether they were legally empowered to buy recreation grounds, or give their estates to the borough for that purpose. Mr. Rolt, Q.C., and another eminent barrister have given the opinion that the corporation have "no legal power, either to purchase property out of the borough fund, or to appropriate portions of their real estate" for the formation of public parks.

MAIDENHEAD. — Frederick Croft, *alias* William Smith, was again brought before the magistrates on Monday, on the charge of having murdered the old woman who kept the lodge at Sunning Hill Park near Old Windsor. The principal witness on this occasion was a Scripture Reader named Margaret Mayrick, who said that on Sunday morning after the murder she saw a man and woman quarrelling, and heard the woman charge the man with being a murderer. She did not hear what the man said in reply. She could not swear that the prisoner was the man, but to the best of her belief he was. The prisoner was again remanded to Wednesday, but as there was no further evidence forthcoming, and as the magistrates did not consider that the evidence already given was sufficient to warrant his commitment, they ordered him to be discharged from custody.

MANCHESTER.—Mr. Maclure, hon. secretary to the Central Executive Committee, issued the monthly report on Wednesday. It says that there was a partial revival of employment in the mills in the month of November, which has been still further increased during the past week. During the recent crisis in the trade of the district, viz., in the months of September, October, and November, no less than 120 manufacturers and spinners, chiefly the former, have suspended payment, their liabilities being estimated at about 750,000*l.*, and nearly 24,000 operatives have in consequence for a time lost their ordinary employment. Mr. Justice Blackburn, in his charge to the grand jury at the Manchester Assizes on Thursday, mentioned, as a highly gratifying fact, that there was not a single charge in the calendar connected with any of the distressed factory operatives.

PLYMOUTH.—A court-martial has been sitting for some days for the trial of Commander George Dogherty Broad, inspecting commander of coast-guard at Queenstown, on a charge made by Lieut. Marsden, in charge of the Roche Point station, that the prisoner had by written orders caused false entries to be made in the journals of Roche Point station, by directing that night visits should be recorded in the said journals as having been made by him on various occasions, whereas no such visits had been made, such conduct being in breach of the 20th and 24th articles of war. The Court was occupied the whole of Monday and Tuesday in hearing the evidence for the prosecution, and then adjourned to Wednesday to give the prisoner time to prepare his defence. The defence began on the latter day, and the prisoner, after noticing the amount of personal ill-feeling entertained by the prosecutor as the cause of the charge, endeavoured to show that he had in every way carried on the regulations of the service as an officer and a gentleman. The Court on Thursday decided that the charges were partly proved, and sentenced the prisoner to be admonished.

STRATFORD-ON-AVON.—The local papers state that in the offices of a firm of Birmingham solicitors, whose names at present they are not at liberty to publish, some dozen important deeds, including conveyances, grants, leases, &c., have been discovered relating to property adjoining Shakespeare's House in Henley Street, on the east side. These deeds bear dates from 1573 to about 1660. John Shakespeare, the father of the poet, was present at the signature of several, and the name of William Shakespeare himself is repeated a few times in some of them. The deeds are in excellent preservation; and the seals are in an unusually perfect condition. It is said that the seal attached to some of these deeds is likely to lead to some very interesting discoveries, and to throw considerable light on our known Shakespearean relics.

SOUTHAMPTON.—A cold-blooded murder was committed on Saturday night at the village of Shirley, about two miles from this town, followed immediately by the attempted suicide of the assassin. The murderer's name is Broomfield, formerly a butler in a gentleman's family in London, and his victim was Mrs. Coburn, now resident at Shirley. It appears that they formerly lived together in a family at Alresford, as butler and lady's-maid, and that Broomfield had paid her attention which she did not return, though she was not aware that he was a married man. She subsequently married from that situation, and Broomfield left and went to London, where he has since resided. On Saturday afternoon he came down from London by the 3 o'clock train, and went over at once to deceased's house at Shirley, where he was invited to take tea. After tea Mr. Coburn said to his wife that they had better go out and do their marketing, as it was Saturday evening, on which Broomfield said, "Well, don't go out and leave me here alone, but if you go your wife had better stop here with me." This was objected to, and they went out together, leaving Broomfield alone. After they had been back a little, while Mrs. Coburn was about to get supper, her husband left the room for a few moments, when Broomfield pulled out a revolver and fired at her. The wound was mortal, and as she ran to the back door she fell dead. He then fired two of the barrels at himself, and ran after her, falling on her at the back door. He was subsequently removed to the Infirmary, in this town, where it was found that one of the shots passed under his lungs, and the first apparently passed off from the chest without doing any serious injury. He is not expected to recover. Broomfield himself says that he came down from London to get Mrs. Coburn to go away to America with him, which she refused to do. He says that he did it all for love, and nothing else. The murder must have been deliberately planned in case of Mrs. Coburn's refusal to accede to his request, as he took the revolver down with him from London, having, it is said, purchased it at a shop in Oxford Street. Two shots were found in two of the barrels of the revolver after the affair. At the inquest on Monday the jury returned a verdict of Wilful Murder against Broomfield.

SWANSEA.—About two years ago a young woman, named Jane Lewis, was brutally murdered on her way to chapel on a Sunday evening, near the village of Cwm Ystrad, in the Rhondda valley. Suspicion fell at the time on a young man named Thomas Williams, who was known to be paying his addresses to the deceased, and was jealous of a collier, for whom the girl had shown a preference. He was therefore apprehended and committed for trial on the charge of murder. He was tried at the Glamorganshire assizes, but the evidence being incomplete, the jury returned a verdict of Not Guilty. Williams has just died, and a few hours before his death he made a full confession that he was the murderer of Jane Lewis, his former sweetheart.

WALSALL.—On Monday afternoon a lock-maker in this town, named Thomas Dobson, attempted to murder his wife, and afterwards cut his own throat. It appears that he had gone home in a state of intoxication, and requested his wife to give him money to sell in order to purchase drink, and on her refusing to comply with his request, he slipped behind her, stabbed her in the throat with a pocket-knife, ran into a neighbour's house and gave the alarm, and on her returning, she found her husband cutting his throat with a razor. There were two wounds in the throat, but neither of them were serious. The wound on the wife's throat was about three-quarters of an inch long, and rather deep, but no serious results are apprehended.

WEYMOUTH.—On Tuesday a telegram arrived stating that several hundred convicts had broken loose from Portland Island, caused great excitement at Weymouth, and a large body of military was despatched to quell them. On their arrival it was found that their services were not required, for in fact, no mutiny had occurred, the alarm having been caused by wrong signals having been given. It appears that a convict had attempted to escape, but was captured before the military arrived. When a convict is missing it is usual to make signals informing the warders of what has occurred, but instead of this, wrong ones were made. Hence the alarm, which was not only felt in Weymouth, but for miles around.

WINDSOR.—During the Queen's inspection of the barracks of the Coldstream Guards on Saturday her Majesty paid a visit to Mrs. Creagh, the regimental sergeant-major's wife, who has recently been confined. On Tuesday a letter was received by the colonel commanding the battalion, stating that the Queen, having heard that the child was yet unbaptised, desired that it might be named Victoria Alberta, in commemoration of her Majesty's visit to the barrack. With the letter a cheque for 5*l.* was forwarded, as a present from her Majesty to Mrs. Creagh.

Ireland.

THE BELFAST COMMISSION closed on Wednesday. It has sat for 22 days, during which time 33 witnesses have been examined. In announcing the close of the inquiry, Mr. Barry said that when the report appeared it would be found that the Commissioners had acted throughout "without fear, favour, or affection."

OUTRAGE IN THE COUNTY OF WICKLOW.—On Monday week an outrage of a very serious character took place in the hitherto peaceable county of Wicklow. An armed party, consisting of five men, with their faces blackened, entered through a window the house of the Rev. Henry Marshall, rector of Carnew, the rev. gentleman being absent at the time. The party at once proceeded to the kitchen, where they presented pistols at four of the servants, ordering them to turn their faces to the wall. Two of the men were then placed guard over them, while the remainder searched the house. After this they returned to the kitchen, and forced the servants into a small room which they locked, but before doing so they gave each of the servants a book, and swore them not to divulge what passed. Two men, named Dunn and Connor, were subsequently arrested and identified by the servants as having been of the party. The motive of this outrage is not known, but it is difficult to believe it was robbery, as they took nothing from the house excepting a small piece of bacon and a few bottles of porter.

OUTRAGE IN KING'S COUNTY.—On Wednesday a party of four men, two of whom were armed, knocked at the door of John Molloy, a bailiff, who lives about two miles from Tullamore, and having obtained admittance one of them presented a pistol at Molloy's wife, at the same time demanding firearms. The woman entreated them not to shoot her, and her cries having aroused her husband, who was lying in a bed in an adjoining room, he armed himself with a double-barrelled gun and went to the door, which the party were trying to force, and fired on them. One of the gang cried out that he was shot, upon which they all fled from the house, and there is no doubt that some of them were wounded, as drops of blood were seen on the ground where they were standing when fired at by Molloy. Robbery of arms would appear to be the motive of this outrage.

MURDER IN TYRONE.—A few days since Mr. White, a farmer, was returning from Castlederg, accompanied by Samuel Johnstone, another farmer, when they were attacked by five men, who severely beat them, breaking Johnstone's nose and jawbone, and fracturing White's skull behind the ear, from the effects of which he has since died. The brother of the latter identified two of the party, named Neil and Patrick Maguire, brothers, who have absconded. Where they taken some legal proceedings against the Maguires, and this is supposed to have been the motive for the murder.

MURDER AND SUICIDE AT SEA.—The captain of the Alciope, arrived at Queenstown, reports that on the night of the 2d November, the mate and cook were attacked and murdered by two of the Frenchmen. One of them afterwards attacked the captain while asleep in the cabin, and struck him with a hammer on the forehead. He, however, managed to escape. One of the murderers committed suicide, and the other died.

Scotland.

THE DUKE OF ARGYLL ON THE THEORY OF DEVELOPMENT. — The first ordinary meeting

…ety was held on Monday night in the …tion. The Duke of Argyll presided, …ed the opening address. After some in… …marks he addressed himself to the …cher, in the history of organic life, we …anything beyond a series of disconnected …ing in the nature of a law. Speaking …win's theory of "The Origin of Species by …tion," he said :—

"…even suggest the law by which, according to …w forms are introduced. Natural selection can …t with the materials presented to its hands. …ect except among the things open to selection. …al originate nothing; it can only pick out …ng the things which are originated by some …trictly speaking, therefore, Mr. Darwin's theory …ry on the origin of species at law, but only a …auses which lead to the relative success or …new forms as may be born into the world. It is …ant to remember this distinction, because it …that Mr. Darwin himself frequently forgets it. …e speak of natural selection producing this and …of structure, but he undertakes to affirm of …ges that they can be produced, and of another …not be produced by this process." His Grace …d to argue that Mr. Darwin's theory only ac… …hanges of form as were caused by the struggle …but the greater number of variations could not …ted for. "We could see that the various forms of …purpose and intention which we could appreciate …ed. But then, it might be asked, had this pur… …been attained without the use of means?— …al laws been used whereby new forms of beauty …the one from the other in a series so wonderful …ty in unity, and its unity in variety? He was not …swer this question in the negative; all he said …physical laws which were made subservient to …were entirely unknown to us. On the other hand, …asked whether he believed that every separate …been a separate creation—not born but separately …must answer that he did not believe it. He thought …suggest to the mind the working of some creative …as certainly as they convinced us that we knew …its nature, or of the conditions under which it did …k. The only senses, his Grace proceeded to …we get any glimpse of creation by law are …. That the close physical connection between diffe… …forms is probably due to the operation of some …common to them all; 2d. That these forces have …ed and worked with others equally unknown for …ment of such ends as the multiplication of life in …for new spheres of employment and for the display …of beauty. There was nothing in this conclusion …with such knowledge as we have from other sources …re and working of creative power. We know that …'dust of the ground'—that is, out of the ordinary …—are our own bodies formed, and the bodies …things. Nor is there anything which should shock …that the creation of new forms, any more than …tion, has been brought about by the use and in… …ity of means. In conclusion, the noble duke said …apprehension that scientific investigation was leading …. Let us look for a moment on the light, small …be, which physiology has cast on the great mystery …. We never see life separate from some material organi… …Yet what is the doctrine proclaimed, I believe—first …by the great John Hunter, and now emphatically repeated by …like Professor Huxley and Dr. Carpenter?—it is that …tion is not the cause of life, but life is the cause of …. Material organs are merely the special forms …fashioned by the vital forces—whatever these …—for the discharge of special functions. And it is well …to remark that some of the most clear and striking …ations of this truth are to be found in some of the lowest …of life revealed to us only by the microscope. Professor …and Dr. Carpenter both refer to the Foraminifera, in …the most beautiful and complicated forms of shell are …by the vital force working in creatures composed of …ay, without parts, without structure, without organs …ad. Thus, the deeper we go in science, the more …becomes that all the realities of nature are in the …of the invisible; so that the saying is literally true that …things which are seen are temporal, and it is only the …which are not seen that are eternal. Surely if this is …, it is materialism spiritualised. These doctrines …be rather to bring into the strict domain of science …ion, in the earlier stages of human knowledge, lay …within the region of faith or of belief. For example, …writer of the Epistle to the Hebrews specially declares that …by faith that we understand that 'the things which …were not made of the things which do appear.' Yet …now one of the most assured doctrines of science, that …forces are above and behind all visible phenomena, …them in forms of infinite variety, of all which forms …real knowledge which we possess lies in our percep… …of beauty and fitness—in short, of their being all the …to co-operant to an end." Creation by law means …their creative force directed by creative knowledge …all under the control of creative power, and in fulfilment …creative purpose."

The Yelverton Marriage Case.—This case was …on Saturday at the First Division of the Court of …for the purpose of hearing parties on the motion …Major Yelverton to apply the judgment of the …House of Lords, and on the counter motion of Mrs. Long… …worth Yelverton to supersede consideration of the …defender's motion, and allow a condescendence of *res …noviter* (a statement of new matter) to be added to the …record and remitted to proof. It may be necessary to …explain that the House of Lords in giving judgment on …appeals remits it to the Court below to apply …to carry out the judgment, and to grant the extract …brings it into operation. On the meeting of the …Court for the Winter Session the defender petitioned …the application of the judgment, and the pursuer for …leaving new evidence. By the pursuer's motion …the question is now raised whether the duty …of the Court below is purely ministerial or …to some extent discretionary. The pursuer prae… …asks the inferior Court to suspend the …judgment of the Court above, and reopen the whole …case. Mr. J. Campbell Smith, for Mrs. Yelverton, …opposed the application of the judgment, and asked …that the consideration of the motion should be delayed …until the question regarding the *res noviter* is dis… …posed of. Mr. Gordon, for Major Yelverton, contended …that the judgment of the House of Lords could not be …set aside by the new matter put forward, which, …besides, the petitioner might have procured before …judgment was given. The Lord Advocate replied that …the allegations if proved were sufficient to reduce the …judgment, and they were therefore sufficient to entitle …the pursuer to interpose before judgment was applied. …After a long argument the Lord President stated that …judgment would be given next week.

The Scottish Sabbath.—On Tuesday, the 29th ult., a public meeting was held in Queen Street Hall, Edinburgh, for the purpose of adopting measures in opposition to the recent running of railway trains for ordinary traffic on the Sunday. Sir James Gardiner Baird occupied the chair, and addresses were delivered by the chairman, the Rev. Sir Henry Moncrieff, Rev. Mr. Manson, of Perth; Rev. Mr. Graham, of Newhaven; and the Rev. Dr. Macfarlane, of Dalkeith, all of whom denounced the system of running both passenger and goods trains on the Sunday, which had been increased of late on the North British Railway. Resolutions were unanimously adopted to the effect that the Divine law of the Sabbath being one of the essential supports to vital and practical Christianity, it was incumbent to make every exertion for the maintenance of that law as it has hitherto been understood by the Scottish people, and that the running of railway trains was defended by reasons which, if allowed to prevail, would speedily lead to a most widespread and dangerous interference with the rest and sanctity of the Christian Sabbath, and tend especially to the injury of the working classes. It was also resolved to memorialise the directors of the railway company, and a committee was appointed for the purpose of giving effect to these resolutions.—On the following day, the Free Church Presbytery met in the vestry of the Free Church of Kirkcaldy, Mr. Jameson, of Pathhead, moderator. Mr. Ballingall, of Kinghorn, read the report of the Committee on Sabbath Observance. The report called attention specially to the running of luggage-trains by the directors of the North-British Railway on Sundays. Mr. Ballinghall stated that all the officials employed on the railway on Sundays, without exception, considered it a grievous hardship. Mr. Cooper, of Burntisland, corroborated this statement. Mr. Douglass, of Kirkcaldy, said there was a section of the community opposed to the proper observance of the Lord's Day, and if they could gather together those of whom that section was composed, the mass would be found to consist of infidels, of latitudinarians, and the blackguardism of the country—that class of men who take for their rule of life the opinions of Paris and other Continental cities, instead of the doctrines of the Bible. He was against strikes generally, but he would hail with joy the intelligence that all the officials of the North British Railway had combined not to do a stroke of work during the 24 hours of the Sabbath-day. Mr. Walker, of Dysart, said the railway companies were now becoming a great power, and that power seemed to be put forth for the purpose of leavening the community with the belief that there was no harm in running trains on the Sabbath-day. The Presbytery agreed unanimously that the committee should draw up a representation to the directors of the railway company against the running of luggage-trains on the Lord's-day; and further enjoin all the ministers within the bounds to direct the attention of their congregations to the subject on one or other of the Sabbath-days in December.

Murder in Aberdeenshire.—On Saturday afternoon the body of a woman, not quite dead, was found in a plantation at Thainston, near Kintore, and on investigation being made, it appeared she had been murdered, the back of the head being shattered by some instrument. A person resident in the locality had seen a man and woman enter the plantation, the man carrying an axe; and the police within an hour had in custody George Stephen, a wood merchant, residing in Port Elphinstone, in the vicinity. The deceased, the wife of a shoemaker in Aberdeen called Forbes, had been in the habit of meeting Stephen, and had been pressing him for money, which is believed to have been the motive for the crime. Stephen was taken to Aberdeen on Sunday, and committed by the Sheriff to prison on the charge of murder. He is unmarried, and about 55 years of age. The woman, who was about 50, had been twice married, and her present husband has for some time been bedridden.

Law.

Court of Queen's Bench: *The Rappahannock Case.—The Queen* v. *Rumble.*—This was an indictment removed into this court by certiorari for an alleged breach of the Foreign Enlistment Act by the defendant. The defendant pleaded Not Guilty. It will be remembered that Mr. Rumble, inspector of naval machinery at Sheerness, was charged with inciting persons to join the Confederate steamer Rappahannock while she was fitting out in the harbour, in breach of the Foreign Enlistment Act. Several witnesses were examined, and on one of them, named Newman giving evidence of which the defendant had not been apprised, the Lord Chief Justice adjourned the trial on the ground that the defendant had been taken by surprise, and ought to have time to procure rebutting evidence. The case will, therefore, not come on again during the present sittings.

Oxford Circuit: Stafford.—*The Sedgley Murder.—Richard Hale*, 30, puddler, and *Cecilia Baker*, 30, were charged with the wilful murder of Eliza Silletoe, on the 20th July, in the parish of Sedgley. The deceased was six years of age, the daughter of the male prisoner by his deceased wife before their marriage. The female prisoner is a woman with whom Hale cohabited after his return from gaol on being acquitted of the charge of manslaughter of his wife by starvation. In the afternoon of the 20th July the child was missed, and Hale was inquiring for the child on that night and for several days afterwards. Previously he had been heard to say that he would "as soon be hung for her as for anybody else," and it was also shown that he had expressed a wish to get rid of her. On the 2d August the child was found dead in a [illegible] Coseley. The body was nearly disarranged in the process of decomposition, the arms and legs alone being entire. The [illegible] were outstretched, with the fingers clenched; her bonnet had been placed by her shoulder, and her shoes, with the stockings tucked in them, by her side. After [illegible] stiff with blood, in a shape as the arm had been [illegible] in the hand, was found in another part of the [illegible]. This handkerchief was pinned round the deceased's [illegible] when she was last seen alive. On the 20th July both prisoners were seen together in the cornfield near the spot where the body was found. Mr. Smith, surgeon, of Coseley, deposed that in his opinion the child died in great agony, and that [illegible] portion of the child's clothes was saturated with [illegible], and also the ground on which the child was lying. Dr. Wi[illegible], analytical chemist, of Birmingham, found that the [illegible] human blood had been on the handkerchief. On [illegible] of it there was a cut, as from a sharp instrument, and [illegible] the cut a portion of a single hair of the same colour as that on the scalp of the deceased. He also found human blood on the strings of the bonnet, on the front of the frock, particularly on the breast, and also on the soil that had been beneath the body. Evidence to this extent was given before the coroner's jury, who found a verdict of Wilful Murder against Hale, but dismissed Baker. But she was subsequently re-arrested and committed by the magistrates on the authority of a barber, of Coseley, named John Jones, who deposed that about 2 o'clock on the 20th July he saw both prisoners sitting in the corn, Baker with a child in her lap. The child was tossed by Baker to Hale. The child escaped and ran off, but, followed by her father, was brought back and placed on the ground. The child screamed. Hale pulled a handkerchief from his pocket, and apparently tied it round or did something with it to the child's head, after which the cries died out. Counsel for the defence suggested that death had resulted accidentally, from the bursting of a blood vessel. The judge showed that the circumstances surrounding the child's death were incompatible with other than murder; and, relative to motive, reminded the jury that Hale had said that if the child were dead he could leave the country. Supposing that both the prisoners were guilty, the most that could be said in favour of Baker was that she was second principal. The trial lasted all day, and the jury, after an hour's absence, found both prisoners *Guilty*. Mr. Justice Byles sentenced both of them to *Death*; but the female being pregnant, her execution was respited until the delivery of her child or her Majesty's pleasure be known.—*The Audley Murder.—Charles Brough* was charged with the wilful murder of George Walker, at Audley, on the 28th July last. It appeared that the deceased was 74 years of age, and had property in Newcastle, but had built on a bit of waste land near Audley a hut of 6 feet square and 4 feet in height, in which he lived alone. He had no employment. A neighbour called upon him on the 27th July, and when he left promised to come at the same time on the following night. When he came on the 28th he found the door of the hut open, and the old man lying outside the door, and about a yard from it, dressed only in his shirt, and quite dead. The inside of the hut and the bed on which the old man slept was covered with blood. He had a scalp wound in front of the head. The skull was cracked at the side of the head behind the ear, and on the ground was found a piece of wood, the spoke of a thick cart-wheel, and a piece of iron, both covered with blood. A German silver watch, seal, and chain belonging to him were missed. On the Sunday before the old man's death a man named Obery was with him at his hut, when he observed the old man chalking something on the beam forming the top of the door. Obery asked him what he was doing, and he said putting down the number of his watch. Obery checked the number with that in the watch, and when it was found that the watch had been stolen Obery communicated the number to the police, who on the 29th gave information to, among others, Mr. Hulme, a pawnbroker at Tunstall. On the same afternoon the prisoner presented the watch with the number in it at Mr. Hulme's shop, asking for 12s., whereupon the assistant at the shop gave information to the police, who took the prisoner into custody. He stated that he had had the watch for three weeks, and had bought it of a man named Smith at Crackley. The prisoner's coat, waistcoat, and trousers had blood on them, but whether human or not was not ascertained. On the same evening the prisoner made a statement in his cell to a policeman to the effect that he took the watch, that he did not go with the intention to kill deceased, and that he and his father had had some words about his having no work, and that he could not work, for he was suffering from diabetes, and that he went to the old man's hut to try to get to sleep, and that the old man heard him and came to the door, that he took up a piece of wood and struck the old man on the head, and then he went in, struck a match, took the watch, and walked off. Subsequently, on the same night, the prisoner made a similar statement to an inspector of police. It appeared that when he made these statements the prisoner was suffering badly from diabetes, and was lying on a bench in a very weak state. His condition on his trial was much the same. A surgeon stated the wounds on the old man's head were probably caused by the piece of wood found in the hut. He also stated that diabetes was a regular drain on the system, that it would lead to much physical debility, conducing to mental weakness, which would cause a person to succumb to excitement. For the defence it was urged that the confessions were the result produced by excitement acting on a brain weakened by the loss of physical power, caused by diabetes, and were not, therefore, to be relied on, and that the watch found on the prisoner might have been received by him from the man Smith, as he mentioned, and did not, therefore, make him out the murderer; and that there appeared no adequate motive to account for the murder. It was also urged that if the prisoner went to the hut to get a lodging, and when the old man came to the door a sudden quarrel arose between them, and the old man was then killed, and the taking of the watch an afterthought, it would only amount to manslaughter. His lordship, however, in summing up, said that the latter suggestion, if true, did not reduce the offence to manslaughter, and that the crime, if committed by the prisoner, could be nothing less than murder. The jury in about half an hour returned a verdict of *Guilty*. Mr. Justice Byles assumed the black cap, and solemnly but briefly sentenced the prisoner to *Death* in the usual form.

Norfolk Circuit: Leicester.—*The Syston Murder.—Timothy Baum* was charged on the coroner's inquisition, and [illegible] on an indictment, with the murder of his wife and daughter, an infant 11 months old, at Syston, on the 25th November. The facts of the case were so recently noticed in our Provincial news that it is unnecessary to repeat them, especially as there was no doubt about the double murder, the only question at issue being the state of the prisoner's mind. Mr. Robinson, a surgeon at Syston, who had known the prisoner for some years, and had attended him professionally for 12 months prior to the murder, said that he saw him on the morning of that event, when he seemed composed and better, although a week before he was suffering from an attack of inflammation of the covering of the brain, with an appearance of slight suffusion

and that on the evening in question he was much exhausted, his eyes being bright and glassy, and his pulse very high. In cross-examination, the witness said delirium would be very probable in the disease the prisoner was labouring under, and likely to be brought on by an exciting cause. This he was aware of from the brightness of the eyes and other symptoms; and for this reason he had ordered him to bed, and given him a sedative solution of opium. In answer to the Judge, Mr. Robinson said the prisoner would not know that he was doing an act contrary to law, or the difference between right and wrong, but would be solely influenced by any impulse he might have upon him. Mr. Benfield, surgeon of Leicester County Gaol, who had had the prisoner under his charge since his committal, deposed to his great prostration, his vacant look, excitable pulse, and several symptoms at the time of his admission—symptoms attendant upon delirium. In answer to his lordship, Mr. Benfield said that he had heard Mr. Robinson's evidence, and from it he had no doubt that the prisoner was in a state of delirium, in which state a man would not know the difference between right and wrong, or that he was doing an unlawful act. His lordship told the jury that the facts were beyond doubt, and the real question upon the medical evidence for their consideration would be, what was the state and condition of the prisoner's mind at the time of the offence? Was he labouring under disease of the brain to such an extent as to be unable to know what he was doing, and that he was committing an act that was contrary to law? If that was their opinion, they would return a verdict accordingly. After a short deliberation the jury returned a verdict of *Not Guilty* on the ground of insanity.

WESTERN CIRCUIT, WINCHESTER.—*Murder on the High Seas.*—Adolph Egerssen, a German sailor, was indicted for the wilful murder of Henrich Scherck. It appeared that the prisoner was second mate and the deceased master of a ship called the Gustave Adolphe, registered in the name of Mr. Rehder, who is a denizen, but not a native of this country. While on the voyage from London to Hong Kong, on the night of the 21st June the prisoner attacked the captain in his cabin, and was found in the act of presenting a pistol to his head by the first mate, at whom he at once fired. The prisoner then went on deck, and shortly afterwards the captain came up, when he was instantly shot through the head by the prisoner. On his body being examined, it was found that there were two bullet wounds in the head, that the right arm was nearly cut off, and that there were several other wounds inflicted with such a weapon as a hatchet. The prisoner fortified himself in the cabin, and loaded several firearms. Early in the morning he went on deck with a double-barrelled gun in one hand, a double-barrelled pistol in the other, and a revolver in his belt. He ordered the crew to put his things in the lifeboat, which being done, he lowered it, got in, and hoisting a mast and sail, went off, the first mate giving him a parting shot, which he replied to by firing several times at the ship. At daylight the lifeboat was still in sight, and the ship went in pursuit, fired at the boat, and sunk it, the prisoner being captured and put in irons. A naval court at Pernambuco sent the case to England for trial. It was the opinion of the first mate that the prisoner was mad at the time. For the defence it was urged that the act was done either in self-defence or in the heat of blood, during a dispute with the captain. The jury returned a verdict of *Guilty of Manslaughter*, and Baron Channell reserved his sentence, subject to a reference to the Court of Crown Cases Reserved, on some points of law raised as to the precise ownership of the ship.

MIDLAND CIRCUIT, WARWICK.—*Child Murder.*—Lucy Thompson was indicted for the wilful murder of her illegitimate child. The circumstances of the case were of a very painful character. The prisoner was in great want, and had no settled abode. The father of the child refused to give her any money, and she was obliged to sleep several nights in a churchyard at Birmingham. On the 4th August the child died, and its body presented all the appearances of death by strychnine. A *post-mortem* examination was made, and strychnine was discovered in large quantities in its body. The prisoner was apprehended and admitted that she had killed the child. She was at that time, however, in a very wild and excited state. At another time she said that she had given the stuff to cure a bowel complaint. It was admitted in cross-examination by the witnesses for the prosecution that the prisoner had always been of weak intellect, and had once attempted to destroy herself. For the defence it was contended that the strychnine was given by mistake and in ignorance of its deadly nature, and that at the most the circumstances of the case only amounted to manslaughter. The jury returned a verdict of *Not Guilty* on the ground of insanity. Baron Bramwell ordered the prisoner to be detained during her Majesty's pleasure.

Sporting.

SALE OF BLAIR ATHOL.—Mr. J. Jackson, of Fairfield, has purchased this celebrated racer for the sum of seven thousand five hundred guineas, by far the largest sum given in modern times for a race-horse.!

Railways.

NEW RAILWAY PROJECTS.—About 400 notices of intended applications to Parliament in the ensuing Session have been given for railway, canal, and dock Bills, all connected with railways. Plans and sections have been deposited at the Board of Trade for 354 projected new railways and works, being 46 more than those deposited last year, and it is believed the largest number since the year 1846. In the last Session of Parliament it was found difficult to get through the work, and it appeared that several Bills had been delayed very late in the Session for want of chairmen of committees to consider and report on their merits. The railway business for next Session promises to be much heavier than last Session; at least, the Bills are more numerous, and probably cannot be so easily shelved as the 30 schemes for the metropolitan railways were last Session. Notices for 27 Bills have been given for lines and junction lines for the metropolis and the suburbs, but none of them equal in magnitude to any of those of last Session. The Metropolitan District Company (part of the inner circle) merely propose to divide their authorised double junction line with the West London Railway, from Kensington to Fulham, and to purchase land, houses, and property for the purpose. The East London (Thames Tunnel line) have come forward with a modified scheme for constructing a railway from the Great Eastern at West Place, Bethnal Green, passing through the Thames Tunnel to the London and Brighton Railway at Deptford, with a branch to the South-Eastern Railway, and also to the Great Eastern at Liverpool-street, to Whitechapel, and to the London and Blackwall Railway at Mile-end Old-town. The Eastern Metropolitan propose to construct a railway from Aldgate to Mile-end; the Metropolitan and St. John's-wood Railway Company ask for power to extend their line to Willow-road, Hampstead; the Waterloo and Whitehall Company propose to make a railway from Great Scotland-yard, passing under the Thames to the Waterloo station of the London and South-Western Railway Company. The London, Chatham, and Dover are very moderate this time; they propose to make a junction line from Lambeth to the London and Brighton Railway at the west end of Denmark-hill tunnel, a junction railway from their Peckham line at Camberwell to the London and Brighton Railway at Hanover-park-road, to oblige the Crystal Palace and South London Company to abandon the construction of the portion of their line from Camberwell to Denmark-hill, to make a junction line at Beckenham, and to abandon the whole of their Bickley and other authorized junctions. They also propose to enable the London and South-Western Company to work over and use with their engines and carriages the railways, sidings, and stations of the London, Chatham, and Dover Company in Surrey, Middlesex, and London, on such terms as may be agreed upon. The Tottenham and Hampstead Junction Company propose to make railways from Gordon-house-lane to the Metropolitan Extension of the Great Eastern Company at Tottenham; from Tatter-down-lane to the Alexandra-park, near the southern end of the main building. The North London Company propose to make a railway from Islington to near the toll-gate of the Highgate-archway and thence to the Alexandra-park Extension lines of the Edgware, Highgate, and London Railway at Hornsey. A company propose a line from the Edgware, Highgate, and London Railway at Hornsey to the North London Railway at Islington. The Edgware, Highgate, and London Company propose to make junctions with the Tottenham and Hampstead Railway from Crouch-hill to the Holloway-road, and also at Hornsey. A company propose to make a railway from Wood-green to Winchmore-hill and Enfield; and so do the Great Northern Railway Company, extending it from Enfield to Hertford. A company have given notice of a line from the London and North-Western, near Willesden, to Harrow and Rickmansworth New companies propose to make railways from Acton to Brentford, from Acton to Twickenham, from Balham to Brixton and Clapham, from King's-cross to Islington and Limehouse, and from Chalk-farm station to Finchley, Hendon, Totteridge, and Barnet. The London and Blackwall Company intend to extend their line to Millwall. The London and Brighton Company propose junction lines at Rotherhithe. The Metropolitan and South London Company propose a line from Little Moorfields, passing through the Thames Tunnel to Rotherhithe, and branches to the Great Eastern Railway at Bethnal-green and Tap-street; and branches at Rotherhithe to the North Kent, South-Eastern, and London and Brighton Railways. Two high-level branch railways to the Crystal Palace are proposed from the existing Crystal Palace line. A company propose to make railways from the Great Western and Brentford Railway at Isleworth to the Wimbledon and Croydon at Merton and Wimbledon, on the mixed gauge. These projects appear to be sufficiently numerous at least for one Session, within a circle of about ten miles of the General Post-office. The most important projects in the list of notices for new railways are the Lancashire and Yorkshire and Great Eastern Junction; the Leeds, North Yorkshire, and Durham; the London, Bucks, and East Gloucestershire; and the South Wales and Great Western Direct. The Lancashire and Yorkshire and Great Eastern Junction is promoted by those two companies jointly for the construction of a railway from the Great Eastern Railway at Long Stanton to the Askerne branch of the Lancashire and Yorkshire Railway at Askerne, with branches to Somersham, Ramsey, Standground, Bourn, Sleaford, Blyton, Kirksandall, Thorpe, and Burgwallis. This is nearly identical with the Great Eastern Northern Junction scheme of last Session, which was rejected by committees of both Houses as being a competing line to the loop line and branches of the Great Northern Railway; but at the same time they inserted facility clauses in the Great Northern Bill for the conveyance of coals and other traffic to and from the Great Eastern Railway. Those facilities not being considered sufficient by the Great Eastern Company for the development of the northern traffic between Lancashire and the Eastern Counties district, the project has been revived, and will, no doubt, be again opposed by the Great Northern Company. The Leeds, North Yorkshire, and Durham, is promoted by an "independent company" for constructing a railway from Leeds to Hartlepool, with branches to Scarborough, Farndale, Wortley, Armley, and other places, and junctions with the North-Eastern, Stockton and Darlington, and other railways in the north-eastern district. This scheme will be strenuously opposed by the North-Eastern Company; but it is supposed that running powers over the existing railways similar to those granted for 50 years to the Great Northern Company over the Manchester, Sheffield, and Lincolnshire Railway would obviate the necessity of making those two competing railways, at a cost of 3,000,000*l.* or 4,000,000*l.* The London, Bucks, and East Glocestershire is promoted by an "independent company" to make railways from the East Gloucestershire Railway at Yarnton to Risborough, Ellesborough, Rickmansworth, Watford, Stanmore, and Willesden to the Midland Railway at Hendon, with branches to Wolvercot, Great Kimble, Watford, and other places. This project appears to be intended as a competing line from the Midland Railway to Oxford, Gloucester, and Bristol. The South Wales and Great Western direct is promoted by an "independent company" to make a railway from the South Wales Railway near Chepstow across the Severn by means of a bridge to the Great Western Railway at Wootton Bassett. The Birkenhead and Liverpool is a project for making a railway from the Birkenhead line at Birkenhead, passing by means of a tunnel under the river Mersey into Toxteth-park, Liverpool, and thence to the Liverpool central station. The South Wales Junction is a project for constructing a railway from the Great and South Wales Union Railway, by means of a tunnel through rock under the river Severn, to the South Wales Railway near Portskewet. A similar tunnel project for next Session is for a railway from the Blackwall and North London Railways at Limehouse, passing under the Thames to Blackwall Point and the Greenwich-marshes to the North Kent Railway at Charlton. The other important engineering works to be submitted next Session are the high-level railway bridges over the Firth of Forth and the Firth of Tay. The North British and Edinburgh and Glasgow Company propose to construct a railway from the Edinburgh and Glasgow Railway at a point fifteen miles from Edinburgh, thence across the Firth of Forth by means of a high-level bridge about two miles in length, to the North British line at Charleston. The Tay Bridge and Dundee Union project is for making a railway from the North British Railway at Ferry-port-on-Craig, passing over the Firth of Tay on a high-level bridge, to the town of Dundee, with branches to the Scottish Central Railway and to the harbour of Dundee. The construction of those railway bridges would greatly facilitate the traffic from the north to the south of Scotland, and by which these two great ferries would be avoided. Those schemes are looked upon with great favour in Scotland, and are therefore likely to be sanctioned. The proposed leases, purchases, and amalgamations are rather numerous. The Great Eastern propose to lease the London and Blackwall Railway, to amalgamate the Bishop's Stortford, Dunmow, and Braintree and the Ramsay Railways with their undertaking. The Great Northern propose to amalgamate with the West Yorkshire and the Leeds, Bradford, and Halifax Junction; and, in conjunction with the Manchester, Sheffield, and Lincolnshire Company, to vest the Stockport and Woodley Junction, the Stockport, Timperley, and Altrincham Junction, the Cheshire Midland, and the West Cheshire Railways in their undertakings. The London and North-Western propose to give the Midland a joint interest in the lease, use, and working of the Lancaster and Carlisle, the Kendal and Windermere, and the Lancaster and Preston railways, and to amalgamate with the Bedford and Cambridge and South Staffordshire. The Caledonian propose to amalgamate with the Scottish Central, the General Terminus and Glasgow Harbour, the Dumfries and Lockerby, the Dumfries, Lochmaben, and Lockerby. The Scottish Central propose to amalgamate the Crieff Junction and the Dumblane, Doune, and Callander Railways with their undertaking. The Edinburgh and Glasgow propose to amalgamate the Monkland Railway with their undertaking. The North British intend to apply for power to amalgamate with the Edinburgh and Glasgow, and also to amalgamate with the St. Andrew's, the Devon Valley, and the Esk Valley Railway Companies. The Glasgow and South-Western intend to amalgamate the Maybole and Girvan, the Air and Maybole, the Castle Douglas and Bridge of Weir, and the Kircudbright Railways with their undertaking. The Scottish North-Eastern propose to amalgamate the Carmyllie line with their railways. It is intended to amalgamate the West Hartlepool and Clarence Railways with the North-Eastern. The North-Eastern propose to amalgamate the Clevelard Railway with their undertaking. The Inverness and Perth Junction have agreed to amalgamate with the Aberdeen and Inverness Junction Railway Company. The Bristol and Exeter intend to lease the Devon and Somerset Railway. The Vale of Neath intend to ask for power to amalgamate with the Great Western Railway. The Taff Vale Valley propose to lease their undertaking to the South Devon Company. The Maryport and Carlisle propose to amalgamate the Whitehaven Junction, the Cockermouth and Workington, the Whitehaven and Furness Junction, the Whitehaven, Cleator, and Egremont, and the Solway Junction Railways with their undertaking. The Whitehaven Junction and the Cockermouth and Workington, have agreed to amalgamate. The Metropolitan intend, in conjunction with the Great Western, to lease the Hammersmith and City Railway. The Great Western and London and North-Western intend jointly to purchase the Shrewsbury and Welshpool Railway. The Great Western propose to amalgamate the Bridport, the Great Western and Brentford, and the Wycombe Railways with their undertaking. The Manchester intend to amalgamate with the Aberystwith and Welsh Coast. The Brecon and Merthyr Tydvil Junction intend to amalgamate with the Hereford, Hay, and Brecon Railway. The Monmouthshire intend to purchase the Brecon and Abergavenny Canal, and the Newport and Brecon Railway Company have given notice to purchase the Swansea Canal. The Dublin and Belfast Junction and the Dublin and Drogheda Railway Company are proposed to be amalgamated. The London and North-Western, the Great Western, the Midland

...shire and Yorkshire, the North Eastern, the ...Northern, the Manchester, Sheffield, and Lincoln... the London and South-Western, the London and ... the South-Eastern, the Caledonian, the North ... the Glasgow and South-Western, the Great ... and other large companies have given notices of ...plication to Parliament in the ensuing session ...nal powers to construct various short branch, ... and spur lines; also to purchase lands, houses, ... for the purpose of enlarging sidings and ... with a view to afford ample accommodation for ...asing traffic of the country, and to facilitate the ...ange and conveyance of traffic. Nearly all the ...ify an intention of asking for powers to make ... other arrangements with neighbouring com... Many of them contain provisions for mutual ... powers, and the accommodation of trains at the ... stations and sidings; while the projects promoted ...dependent companies" invariably authorise esta... companies in the district to subscribe towards the ...dertakings, and to raise additional capital for the ...pose.

Obituary.

THE EARL OF CARLISLE died at Castle Howard on Monday, after a long illness, which recently compelled him to resign the Lord Lieutenancy of Ireland. George William Frederic Howard, K.G., seventh Earl of Carlisle, Viscount Howard of Morpeth, and Baron Dacre of Gillesland, a coheir to a moiety of the Barony of Greystock, was born in Hill Street, Berkeley Square, in 1802. He was the eldest son of the sixth Earl of Carlisle by the eldest daughter of the fifth Duke of Devonshire. His sister married the present Duke of Devonshire; another sister is the Duchess-Dowager of Sutherland; a third sister married a son of Earl Grey; a fourth married Lord Granville; the present Earl Granville is his first cousin; the Duke of Argyll married one of his nieces; Lord Carlisle married another. In this great federation of Howards, Cavendishes, Greys, Gowers, Grosvenors, and others, the late Lord Carlisle held a high place. He was educated at Eton and Christ Church, and earned high distinction as a graceful scholar. He was especially distinguished for his skill in versification, and in 1821 obtained two University prizes for his poems—the Chancellor's prize for Latin and the Newdigate for English verse. He took his degree in 1823, and was first-class in classics. Born to the service of the State, he was early apprenticed to the work. He accompanied his uncle, the late Duke of Devonshire, on his visit to Russia at the coronation of the Emperor Nicholas; and in 1830, at the general election, he was elected member for Morpeth. Afterwards he stood for the West Riding, but he did not appear much as a politician until, in 1835, Lord Melbourne, when he came into power, appointed him Chief Secretary of Ireland. As in this capacity he was the principal representative of the Irish Government in the House of Commons, and as, in those days when O'Connell was in his glory, the office was one of the most important in the Administration, it may be supposed that Lord Carlisle, then known as Lord Morpeth, had the confidence of his party. He made himself popular among the Irish, and Mr. Disraeli has publicly declared that he held his own in the stormy Parliamentary debates of those times. It is no light achievement to have carried through the House of Commons in those troublous times the Irish Tithes Bill, the Irish Municipal Reform Bill, and the Irish Poor Law Bill. At the general election which placed Sir Robert Peel in power, Lord Morpeth lost his seat for the West Riding, but took leave of his late constituents in a speech so kindly as to produce a strong revulsion in his favour. Being released from his Parliamentary duties, he took the opportunity of spending a year in America, and did not return to Parliament until 1846. Two years afterwards he succeeded to the peerage, when he at once re-entered office. The offices which he held at this period did not entail upon him much labour, but they were always accompanied with a seat in the Cabinet. From 1846 to 1850, he was Chief Commissioner of Woods and Forests. In 1850, he was appointed Chancellor of the Duchy of Lancaster, and retained that office till the accession of Lord Derby's Ministry to office in 1852. The great event of his political life was his appointment to the Lord-Lieutenancy of Ireland by Lord Palmerston, in 1855. He remained in this post to a very recent period, with the exception of the few months of Lord Derby's second Government. Few Viceroys have been more popular or more successful. Happily for him he had not many great political problems to solve, and he satisfied the ideal of Irishmen by keeping splendid state, entertaining magnificently, and displaying the qualities that are most appreciated in brilliant society. But to a man in failing health the duties of society became more burdensome than even the routine of office, and Lord Carlisle, after eight years of Viceregal state, felt the necessity of resigning his post, and since his return to England his strength has been gradually failing. He was appointed Lord Lieutenant of the East Riding in 1847, and was elected Lord Rector of the University of Aberdeen in 1853. His lordship was never married, and is succeeded in his title and estates by his brother, the Hon. and Rev. William George Howard, of Christ Church, Oxford, who was born in 1808, and has been rector of Londesborough, Yorkshire, since 1832. Like his deceased brother he is not married, and the heir presumptive is the Hon. Charles Wentworth George Howard, M.P., for East Cumberland, who married a daughter of Lord Wensleydale, and has issue.

THE COUNTESS OF BECTIVE died on the 4th inst. at the family residence in Grafton Street, Berkeley Square, after a long illness. She was the only child and heiress of Alderman Thompson, M.P. for Westmoreland. She married in 1842 the Earl of Bective, eldest son of the Marquis of Headfort, by whom she leaves an only son, Lord Kenlis, born in 1844, and four daughters.

THE RIGHT HON. LOUIS PERRIN, late one of the Judges of the Queen's Bench in Ireland, died on Wednesday morning, at his residence, Knockdromain, near Rush, at the venerable age of 87 years. During the latter period of his life he had been afflicted with a want of vitality in the heart, and a few years ago—at the urgent desire of his medical adviser—he resigned his judicial position. Since that time he had been in a very delicate state of health. He was the eldest son of the late Mr. Louis Perrin, of Clonmel, and was called to the Irish Bar in 1795. In 1835 he became a member of the Privy Council and Attorney-General for Ireland. He represented the county of Monaghan in Parliament from 1832 until 1835, and the borough of Cashel in 1836, in which year he was raised to the bench by Lord Melbourne's Government.

THE HON. MRS. HENRY FITZROY, widow of the Right Hon. Henry Fitzroy, only brother of Lord Southampton, died on the 2d inst. at 42, Upper Grosvenor Street, in her 48th year. She was a daughter of the late Baron Nathan Rothschild, and was consequently sister of Baron Lionel Rothschild, M.P., Sir Anthony Rothschild, and Baron Meyer Rothschild. She married in 1839 the Hon. Henry Fitzroy, who died in 1859, and left issue an only daughter.

SIR JAMES MATTHEW STRONGE, BART. died at his seat, Tynan Abbey, County Armagh, on the 1st inst. He was born in 1786, and succeeded his father in the title and estates in 1804. In 1810 he married the eldest daughter of Mr. Calvert, M.P. for Hertfordshire, by whom he leaves five sons and three daughters. He was chairman of various local boards, and took an active part in the affairs of the counties of Tyrone and Armagh, of which he was a Deputy Lieutenant. He was also a gentleman of the Privy Chamber. He is succeeded by his eldest son, Mr. James Matthew Stronge, M.P. for the county of Armagh.

THE HON. WILLIAM DAYTON, United States Minister at Paris, died in that city on the 1st inst. of apoplexy. He was born in New Jersey in 1807; graduated at Princeton College; was a lawyer by profession; a member of the State Senate of New Jersey in 1837; was appointed one of the Justices of the Superior Court of the State in 1838, and was a senator in Congress from 1842 to 1851. In 1857 he was appointed Attorney-General of New Jersey. He was the Republican candidate for the Vice Presidency on the ticket with General Fremont in 1856, and was appointed Minister to France in 1861. He leaves a widow and several children.

LIEUT.-COLONEL SOWERBY died a few days since. He entered the army as ensign in the Coldstream Guards in 1805, and served through nearly the whole of the Peninsular war; was at the passage of the Douro, the taking of Oporto, and the affair at Salamonde; the battles of Talavera, Salamanca, Vittoria, the Nive, and the Nivelle. He was with the covering army during the siege of Badajoz, and at the siege of Burgos and the sortie of Bayonne. He returned to England with the regiment in 1814, and in the following year went to Brussels, and was present at the battle of Waterloo. He received the war medal and five clasps for the Nive, the Nivelle, Vittoria, Salamanca, and Talavera, and the medal for Waterloo.

MR. CHARLES MANNERS LUSHINGTON, formerly M.P. for Canterbury, died on the 27th ult., at Boulogne, from an attack of paralysis. He was the eldest son of the Right Hon. Stephen Rumbold Lushington, D.C.L., of Norton Court, Kent, M.P. for Rye and Canterbury, Governor of Madras, joint Secretary of the Treasury, chairman of committees, &c., by the daughter of the first Lord Harris. He was born in 1819, and was educated at Eton and Oriel College, Oxford, and was elected fellow of All Souls'. He was married in 1846 the sister of Sir Stafford Northcote, Bart., M.P. for Stamford. He was a conspicuous opponent 10 years ago of the Church-rate Abolition Bills. He was returned as a Conservative, at the head of the poll, in 1854, but he did not offer himself as a candidate in 1857.

PROFESSOR SILLIMAN, the celebrated American chemist, died at his residence at New Haven, on the 24th ult. He was the son of General Gold Sellack Silliman, who rendered his country important service during the revolutionary war. He graduated at Yale in 1798, afterwards studied law, and was admitted to the bar in 1802. He afterwards accepted the chair of chemistry in Yale College, and visited Europe to prosecute his studies in a science which was at that time almost unknown in America. He returned after an absence of fourteen months, and published an account of his travels. In 1807 he made a chemical analysis of a meteorite of great size and brilliancy which had burst in the town of Western, Connecticut. He afterwards assisted Dr. Ware in his experiments with the oxyhydrogen blowpipe, to which he gave the name of "compound blowpipe," by which it is commonly known. In 1818 he founded the "American Journal of Science and Arts," better known both in Europe and America as "Silliman's Journal," of which he remained senior editor till 1846. He was one of the earliest Americans to give popular lectures on scientific subjects. In 1830 he visited Europe a second time. He resigned his professorship in 1853, but continued to give lectures for two years longer. He was a man of simple tastes and active habits, and his old age was remarkably free from mental or bodily infirmity.

MR. SERJEANT STEPHEN, for some years one of her Majesty's Commissioners in Bankruptcy, died on the 28th ult. at Clifton, in his 78th year. He was well known for his "Commentaries" and other legal works.

THE REV. DR. ARCHER, Minister of Oxendon Street Chapel, who has long been known as one of the most eloquent of London preachers, died on the 30th ult. at 18, Hans Place. He belonged to the United Presbyterian Church of Scotland, which is a separate body from both the Established Church and the Free Church, but with scarcely appreciable differences in doctrine or discipline. Thirty-three years ago Dr. Archer was elected minister of Oxendon Street Chapel, Haymarket, and during the whole of that long period he has continued to hold that appointment.

MISS BYRNE, of Cabinteely, county Dublin, died on the 29th ult. at her town house, 15, St. George's Place, Hyde Park. The estate of Cabinteely and the representation of this ancient branch of the O'Byrnes pass to Miss Byrne's cousin and heir, Mr. Wm. Richard O'Byrne, the well-known author of "The Naval Biography."

WILLS.—The will of Miss Ann Cranstoun Fryer, formerly of The Cedars, Hammersmith, but late of Reading, Bucks, has been sworn under 90,000*l.* personalty; Mr. Henry Seymer Ward, of St. James's Place, 30,000*l.*; Mrs. Lydia Symons, wife of the Rev. Dr. Symons, Warden of Wadham College, Oxford, 20,000*l*; Mr. William Stitt Wilson, banker, of Norwich, formerly of Whitehaven, 25,000*l.*; Mr. Richard Gibbs, late of the City of London, teabroker, and of Upper Tooting, Surrey, 100,000*l.*

Miscellaneous.

THE TOMB OF AN ANCIENT BRITON.—A barrow was recently opened near Seale House, Rylstone, under the direction of the Rev. Mr. Greenwell, in the presence of a great number of persons. It was 31 feet in diameter and about 7 feet high, and situate in a meadow. It was opened from the south-east, and immediately under the sod was found to consist of yellow clay to a considerable depth; there were then layers of blue clay, which had evidently been puddled, or worked to a finer consistency, doubtless to keep out the water. Exactly in the centre of the tumulus, at a depth of 7 feet, and on a level with the plane of the field, was found an oak coffin formed out of a tree which had been split and hollowed out, and placed due north and south, the head being placed to the south, as that was the larger part of the tree. When completely divested of the surrounding earth it was considered desirable to lift it out, so that it might be examined with greater care, but after being exposed to the air for about 10 minutes it parted at the sides, and it was found impossible to move it except by detached pieces. The body had been wrapped in a cloth or shroud of a texture resembling wool coarsely woven, of which there was a considerable quantity remaining, but the body itself was dissolved by the action of the water which had gained access to the interior of the coffin. Mr. Greenwell considered the interment to have been that of an ancient Briton, decidedly pre-Roman, and to have taken place 2,000 years ago. He said it was the only instance (with one exception, found at Gristhorp, near Scarborough) where an interment in an Oak tree hollowed out had a tumulus placed over it. The coffin was more than 6 feet in length inside, and about 7 feet 6 inches outside. The remains were carefully collected and replaced, and the mound restored to its former shape, a small leaden tablet being placed within stating that it had been opened A.D. 1864.

BIRTHS.—On the 5th inst, at 12, Onslow Crescent, the wife of the Hon. RODEN NOEL, of a daughter—4th inst, at 31, Bruton Street, the wife of the Hon. GERARD NOEL, M.P., of a son—3d inst, at Ashdown Villas, New Road, Hammersmith, the wife of Major-General R. R. RICKETTS, of a son.

MARRIAGES.—On the 6th inst, at Colesbill, Berkshire, AUGUSTUS F. W. KEPPEL STEPHENSON, Esq., of the Inner Temple, to EGLANTINE, second daughter of the Right Hon. EDWARD PLEYDELL BOUVERIE, M.P.—3d inst, at the parish church of Dunkerrin, King's County, Ireland, E. W. FETHERSTON WHITNEY, Esq., of New Pass, Westmeath, second son of the late Rev. Sir Thos. Fetherston, Bart., to GEORGIANA KATHERINE, second daughter of JAMES F. ROLLESTON, Esq., D.L., of Franckfort Castle, King's County—16th ult, at Lockington, Leicestershire, Lieutenant GEORGE E. PAGET, Royal Horse Guards, of Sutton Bonnington, Notts, to SOPHIA, third daughter of the late Colonel CHARLES HOLDEN—1st inst, at St. Paul's, Southsea, Captain J. H. STIRKE, 6th Royal Regt., to ADA SOPHIA, youngest daughter of Admiral PRITCHARD, of Southsea—1st inst, at Christ Church, Lancaster Gate, G. W. G. THOMAS, Esq., of Ystrad Mynach, Glamorganshire, to ELLEN, youngest daughter of R. W. KENNARD, Esq., M.P., of Porchester Terrace, Hyde Park.

DEATHS.—On the 5th inst, at 2, Buckingham Terrace, Edinburgh, MABEL ESME, only daughter of Lord and Lady WILLIAM KENNEDY, aged two years and one month—2d inst, at Ardwell, N.B., Lady M'TAGGART, wife of Sir John M'Taggart, Bart., aged 80—1st inst, at 82, George Street, Edinburgh, Major-General GLASFURD, H.M.'s Bengal Engineers—29th ult, at Ivy House, Richmond, ELIZABETH FRANCES, wife of Colonel WILTON, C.B., aged 50—26th ult, at Malta, Captain JOSEPH NATHANIEL PORTLOCK DADSON, Royal Artillery, aged 26—Oct. 5, lost in the Persia, on his home voyage, Captain HENRY M. CAULFEILD, 4th European Cavalry, eldest surviving son of the late General Caulfeild, aged 27—3d inst, Captain RICHARD APLIN, E.I.C.'s Marine Service, of Leamington, Warwickshire—4th inst, at his apartments, in Club Chambers, Regent Street, ROBERT COOPER, Esq., late Surgeon of the 4th Dragoon Guards—29th ult., at Blair Drummond, Mrs. CHRISTIAN HOME DRUMMOND, wife of Henry Home Drummond, Esq., of Blair Drummond—1st inst, at Brislington Hall, near Bristol, JAMES J. CLAYFIELD IRELAND, Esq., magistrate, and deputy-lieutenant for the county of Somerset, aged 60—29th ult, at Leamington, the Rev. E. PHILIP COOPER, late Fellow of St. John's College, Oxford, and for 15 years vicar of Burford, Oxon, aged 70—1st inst, in London, the Rev. JEREMY PEMBERTON, formerly rector of Foxearth, Essex, aged 80—29th ult, at Torquay, the Rev. GEORGE SHARP, late incumbent of Merther, Cornwall—30th ult, at Weston Colville Rectory, Cambridgeshire, the Rev. WILLIAM ACTON, aged 76—2d inst, at Church Hill Cottage, Southport, the Rev. JOSEPH D. MILLER, late of Aston, near Derby, aged 35—28th ult, at the Vicarage, Appleby, Westmoreland, the Rev. JOSEPH MILNER, M.A., aged 71—1st inst, at Barton, near Nottingham, the Rev. F. WINTOUR, aged 61—27th ult, at Mentone, Maritime Alps, the Rev. J. D. BURNS, M.A., minister of the English Presbyterian Church, Hampstead.

Markets.

COVENT GARDEN, Dec. 10.

Pears, consisting of Knight's Monarch, Passe Colmar, Beurré D'Aremberg, Winter Nelis, Glou Morceau, Easter Beurré, Beurré Diel, Crassane, and others are now plentiful. Apples may also now be obtained in abundance. Grapes are still sufficient for the demand. Of Pine Apples there is now a plentiful supply. Kent Filberts and Cobs fetch from 70s. to 80s. per 100 lbs. Walnuts are plentiful, and Oranges are abundant. Some Seakale and forced Kidney Beans may now be had. Lemons fetch from 5s. to 8s. per 100. Pomegranates may now be obtained. For Potatos prices are still comparatively high. Flowers chiefly consist of Orchids, Heaths, Chrysanthemums, Chinese Primulas, Azaleas, Camellias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 4s to 6s	Oranges, per 100, 4s to 8s
Grapes, per lb., 1s to 5s	Lemons, per 100, 5s to 8s
Melons, each, 1s to 4s	Nuts, Barcelona, p. bush., 16s
Pears, per doz., 1s 6d to 3s	— New Brazil, do., 14s.
Apples, per sieve, 1s to 2s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, about 2s per 100	Shallots, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 60s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Seakale, p. punn., 3s 6d to 4s
Carrots, per bunch, 4d to 9d	Endive, per score, 1s to 2s 6d
Turnips, p. bunch, 6d to 8d	Horse Radish, p. bunch, 1s to 4s
Cucumbers, each 4d to 1s	Mushrooms, p. pott., 1s to 1s 9d
	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

BRITISH WOOLS.—LONDON, Dec. 8.

According to expectation the lull in our trade spoken of last week continues, and to press sales would involve a reduction in price. This, however, is not submitted to in fleece descriptions, but skin wool is easier to buy, and at a small decline in price.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	2	0	to	2	1	Combing Skins	—				
Half-bred ditto	2	5	—	2	6	Flannel Wool	1	3½	to	1	4
Down Ewes	1	10	—	1	11	Blanket ditto	0	6	—	0	9
Kent Fleeces	2	2	—	2	2½	Leicest. Hoggs	2	3	—	2	6
						Ditto Wethers	2	1	—	2	2

COAL MARKET.—Dec. 7.

Cowpen Hartley, 19s.; Holywell Main, 19s.; Tanfield Moor, 18s. 3d.; Walker Primrose, 16s. 9d.; West Hartley, 18s. 9d.; Wylam, 19s.; Walls End Byron, 21s. 6d.; Walls End Gosforth, 21s. 3d.; Walls End Wharncliffe, 21s. 3d.; Walls End Haswell,

Wells End North Hatton, 21s. Wells End South Hatton, 23s
Wells End Tunstall, 19s. Wells End Hough Hall, 22s 3d.
Wells End Kelton, 22s. 3d.; Wells End East Hartlepool,
Wells End Kelton, 22s. 3d.; Wells End Evenwood,

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Dec. 4.

Prime Meadow Hay	90s to 100s		Clover, old	110s to 130s
Inferior do.	40 — 80		New Clover	— —
Inferior Hay	40 — 60		Do. second cut	— —
New do.	70 — 90		Straw	25 30
Superior do.	100 — 105			

HARVEY & FARMER.

CLERKENWELL MARKET, Thursday, Dec. 4.

Fine Meadow Hay	100s to 112s	Inferior Clover	105s to 114s
Inferior do.	80 — 90	New do.	— —
New do.	90 — —	Straw	31 34
Superior do.	100 — 102		

JOSHUA BAKER.

WHITECHAPEL, Thursday, Dec. 5.

Fine Meadow Hay	90s to 95s	Prime 1st cut Clover	120s to 124s
Inferior do.	70 — 90	Inferior do. do	110 115
Prime New Hay	— —	Prime 2d cut do.	115 120
Inferior do.	— —	Inferior do.	110 115
Straw	25 28	New Clover	— —

HOPS.—BOROUGH MARKET, FRIDAY, Dec. 9.

Messrs. Pattenden & Smith report continued activity in the demand for both new and old Hops of all descriptions. Fine samples of the former are very scarce indeed, and command, if anything, rather higher prices.

POTATOS.—SOUTHWARK, Monday, Dec. 5.

During the past week the arrivals coastwise have been small, but rather large by railway; the trade still continues steady. The following are this day's quotations:—Yorkshire Flukes, per ton, 70s. to 110s.; do. Regents, 80s. to 100s.; Dunbar Regents, 90s. to 100s.; Kent and Essex Regents, 80s. to 90s.; do. do. Rocks, 70s. to 75s.; Perth, Forfar, and Fife Regents, 70s. to 80s.; Belgian Whites, 55s. to 65s.

METROPOLITAN CATTLE MARKET.

MONDAY, Dec. 5.

We have a larger supply of Beasts than on Monday last. Trade is active for them, and there is scarcely a quotable reduction of price for the best qualities. There are also a few more Sheep. Trade is not so brisk, and generally lower prices are taken. Good Calves are scarce and dear. From Germany and Holland there are 1650 Beasts, 2530 Sheep, 110 Calves, and 70 Pigs; from Scotland, 140 Beasts; from Ireland, 650; and 1620 from the Northern and Midland Counties.

	s.	d.	s.	d.		s.	d.	s.	d.
Best Scots, Herefords, &c.	5	4	to 5	6	Best Long-wools	5	4	— 5	6
Best Short-horns	5	0	— 5	4	Do. Shorn	..	..	—	..
2d quality Beasts	3	4	— 4	0	Ewes & 2d quality	4	6	— 5	0
Best Downs and Half-breds	5	8	— 5	10	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	—	..
					Calves	..	..	4 0 — 5	8
					Pigs	..	..	3 0 — 5	0

Beasts, 4270; Sheep and Lambs, 17,630; Calves, 130; Pigs, 250.

THURSDAY, Dec. 8.

Our supply of Beasts is rather larger, but we are not overdone with choice qualities. In best descriptions, consequently, there is not much reduction in price. Trade generally is rather worse. The number of Sheep is small, but quite equal to the demand. Monday's quotations are not maintained throughout, and we have a very slow trade. Good Calves meet with a fair sale. Our foreign supply consists of 1270 Beasts, 2020 Sheep, 310 Calves, and 100 Pigs.

	s.	d.	s.	d.		s.	d.	s.	d.
Best Scots, Herefords, &c.	5	2	to 5	4	Best Long-wools	5	2	— 5	4
Best Short-horns	5	0	— 5	2	Do. Shorn	..	..	—	..
2d quality Beasts	3	0	— 4	0	Ewes & 2d quality	4	4	— 5	0
Best Downs and Half-breds	5	6	— 5	8	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	—	..
					Calves	..	..	4 0 — 5	4
					Pigs	..	..	3 0 — 5	0

Beasts, 1730; Sheep and Lambs, 3690; Calves, 330; Pigs, 220; Milch Cows, 74.

MARK LANE.—MONDAY, Dec. 5.

The supply of Wheat from Essex and Kent to this morning's market was small, and met a slow sale at the prices of this day se'nnight. The attendance was limited, and transactions in foreign Wheat were restricted. We do not alter our quotations. Barley of all descriptions meets a slow sale at about late rates. Beans and Peas are unaltered in value. The Oat trade is slow, and there is no alteration in prices, excepting for Russians, which bring an advance of 6d. per qr. Flour is steady at late quotations.

PRICE PER IMPERIAL QUARTER		s.	s.		s.	s.
WHEAT, Essex, Kent, & Suffolk	White	39	42	Red	36	41
— — fine selected runs	ditto	41	44	Red	39	42
— — Talavera		46	53			
— Norfolk		—		Red	—	
— Foreign		35	50			
BARLEY, grind. & dist.	26s to 30s	Chev.	32	35	Malting	30	33
— Foreign	grinding and distilling		21	27	Malting	26	31
OATS, Essex and Suffolk			20	22			
— Scotch and Lincolnshire	Potato		20	24	Feed	20	22
— Irish	Potato		19	22	Feed	—	
— Foreign	Poland and Brew		20	23	Feed	18	21
RYE			31	33	Foreign	—	
RYE-MEAL, Foreign			—				
BEANS, Mazagan	33s to 35s	Tick	24	26	Harrow	34	36
— Pigeon	35s to 40s	Winds	—		Longpod	—	
— Foreign		Small	34	38	Egyptian	33	34
PEAS, White, Essex and Kent		Boilers	36	40	Suffolk	38	41
— Maple	—s to —s	Grey	—		Foreign	32	40
MAIZE		White	—		Yellow	—	
FLOUR, best marks delivered	per sack		37	40			
— 2d do.		ditto	28	34	Country	28	34
— Foreign	per barrel		15	25	Per sack	32	36

FRIDAY Dec. 9.

The weather from the 3d to the 6th was fine and mild, but has since been damp, with heavy storms of rain during the night of the 7th and yesterday, to-day and after white frost. The Wheat trade during the past week has not revived from its late inactive state. Barley in some markets is quoted easier to purchase, but the previous value of Beans, Peas, and Oats has been generally well supported. Our quotations for Flour have been maintained with a moderate demand. Since Friday last 10 vessels have been reported off the coast. With small arrivals and a very limited inquiry for all descriptions of grain, the floating trade has been quiet, and late rates must be quoted unaltered with the exception of Barley, which has declined a little. Paris, Dec. 8.—Flour is very difficult to sell at late rates. The six marks for delivery this month are quoted equal to 31s. per 280 lb. The present stock of Flour is estimated at 31,600 cwt. Yesterday a fair business was done in Wheat at somewhat lower prices; to-day the trade is exceedingly quiet. The arrivals of English and Irish Wheat and foreign Oats have been to a moderate extent, of English Oats small, and of English and foreign Wheat very limited and also the Barley large. The attendance was very limited and also the business, which was interfered with until nearly the close of the market by a dense fog. Prices of both English and foreign Wheat and Spring Corn are unaltered from Monday.

ARRIVALS THIS WEEK.

	Wheat	Barley.	Oats.	Flour.
English	1610 qrs.	2820 qrs.	360 qrs.	1120 sks.
Irish	—	—	380	— ,,
Foreign	11,710 ,,	4600	19,490 ,,	— ,, 5200 brls

LIVERPOOL: Dec. 6.—Our corn exchange has been well attended this morning, but owing to the extreme prices asked for fine useful qualities of Wheat, the actual business done is in narrow compass. Flour slow of sale, but not quotably cheaper. Indian Corn dull, and Danubian may be bought ex ship a trifle easier than on Friday. Oats and Oatmeal steady. No change in Beans or Peas. Grinding Barley is offering freely, and must be quoted lower. Market inactive throughout.

FRIDAY, Dec. 9.—The Market fairly attended. Wheat in moderate demand, and at full rates. Flour steady. Indian Corn firm; mixed, 28s. Beans unaltered. Oats and Oatmeal in fair request.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Oct. 29	38s 9d	30s 2d	20s 1d	30s 9d	38s 0d	35s 0d
Nov. 5	38 11	30 3	20 2	29 9	37 9	35 5
— 12	38 9	30 1	19 11	33 0	37 11	35 9
— 19	38 9	29 9	19 5	29 9	37 9	34 11
— 26	38 8	29 3	20 0	30 0	37 10	35 1
Dec. 3	38 5	29 2	20 3	26 8	37 10	35 5
Agg. Aver.	38 9	29 9	20 0	31 8	37 10	35 2

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Oct. 29.	Nov. 5.	Nov. 12.	Nov. 19.	Oct. 26.	Dec. 3.
38s 11d	..		..	..	..	..
38 9		..			..	..
38 8	..	..	..	..		..
38 5	..	..	..	..	..	
..	..	..	..	..	..	..
..	..	..	..	..	..	..

Farm Bailiff.

WANTED, by a Single Gentleman, a BAILIFF and his WIFE, without incumbrance. The Man must understand Farming in all its branches, on modern principles, the purchase and sale of Stock, &c.; the Woman should be able to manage a Gentleman's house, and attend to a small Dairy. As entire confidence will be placed in those engaged, first-class references will be required. The Farm, chiefly arable, is about 350 Acres.—Address, stating ages, with full particulars of present and past engagements, to H. P., at Messrs. Layton's, 150, Fleet Street, London, E.C.

To Carpenters, &c.

WANTED, in a Nursery, near London, a steady honest industrious Man, as GENERAL CARPENTER. He must have a thoroughly good character in every respect, and will be expected to conform to the hours and regulations of the Establishment. A person from the country and with some knowledge of Greenhouse Construction will be preferred.—Apply by letter only to F. F., Post Office, Lower Norwood, S.

WANTED, a person of great experience and thorough knowledge of the Nursery business, to act as GENERAL FOREMAN and SALESMAN in an extensive Nursery. No one need apply unless his testimonials for integrity, and knowledge of the business are first-class.—Apply to WM. SKIRVING, Walton Nursery, Liverpool.

WANTED, under a first-class Propagator, an active Young Man, accustomed to the GROWING of PLANTS for MARKET; quick at Potting and Tying. Wages 15s. per week.—Address THOMAS ANSELL, Camden Nursery, Grafton Road, Kentish Town, N.W.

Seed Trade.

WANTED, as JUNIOR ASSISTANT, a Youth from 16 to 18 years of age, who has had one or two years' experience in a Seed Shop or Warehouse, to reside in the House and assist in Seed Shop.—Apply, stating age, salary expected, and names of last employers, to X., Miss Hindley, Beddington Schools, Croydon, Surrey.

WANTED, an efficient SECOND SHOPMAN; must be of good address and capable of executing Wholesale Orders correctly and expeditiously.—Apply, with full references, stating age and salary expected, to S. WARD & SON, Seed Merchants, Bristol.

WANT PLACES.—Letters to be Post Paid.

HOUSEKEEPER, or as COMPANION to a Lady.—A Lady, aged 35, who can be highly recommended, and who has had much experience. She would be willing to educate one or two little Girls, or to accept any position of trust.—A. A., 30, Avenue Road, New Road, Hammersmith, W.

GARDENERS, FORESTERS and BAILIFFS, or LAND STEWARDS.—The undersigned can always recommend the above, whose characters and abilities may be strictly relied on. Full particulars upon application.—JAMES DICKSON & SONS, The "Newton" Nurseries, Chester.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. E. G. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENERS.—B. S. WILLIAMS is now in Correspondence with several experienced Gardeners requiring situations, and will be pleased to recommend to any Gentleman requiring such, a thoroughly competent Man. Applications will receive immediate personal attention.—Paradise and Victoria Nurseries, Holloway, London, N.

GARDENER (HEAD).—Age 30, married; active, persevering; has had extensive practical experience. Character will be found satisfactory.—Y. Z., Post Office, Leytonstone, Essex.

GARDENER (HEAD).—Age 32, married, no incumbrance; has a thorough practical knowledge of his profession. Satisfactory references.—A. B., Royal Exotic Nursery, Chelsea, London, S.W.

GARDENER (HEAD).—Age 34, married, one child, age 7; thorough knowledge of his profession, and thoroughly competent in the Management of a good establishment. Nine years as Head in last situation. Good character. References given if required.—G. B., 5, Waddon Old Road, Croydon, Surrey, S.

GARDENER (HEAD).—Middle-aged, married; small incumbrance. A good practical man; will be disengaged 31st of December, in consequence of the death of his employer and breaking up of the establishment. Fourteen years' good character.—P. L., 9, Exchange Street, Norwich.

GARDENER (HEAD).—Age 35, [illegible] brance; will be disengaged the first week in [illegible] practical in all branches of his profession; [illegible] knowledge of Erecting and Heating Houses; [illegible] years' unexceptionable character.—W. [illegible] Brompton, S.W.

GARDENER (HEAD), age 37, [illegible] quence of the death of the late Sir [illegible] with whom he has lived upwards of 12 years; [illegible] his services in the above capacity to any [illegible] requiring the services of a first-class Gardener; [illegible] ences as to character and abilities can be [illegible]—Fawsley Park, Daventry.

GARDENER (HEAD).—Age [illegible] abstainer. Thoroughly practical in [illegible] profession, and wishes to engage where Garden [illegible] spirit. Will be at liberty Jan 2. Liberal wages [illegible] kindly permitted to present employer, with whom [illegible] years. No objection to any part of the United Kingdom.—GARDENER, Oxton Hall, Tadcaster.

GARDENER (HEAD, SINGLE-HANDED).—Age 34; is thoroughly competent in the [illegible] his profession.—W. M., Post Office, Lower Tooting, Surrey, S.

GARDENER (HEAD or SINGLE-HANDED) perfectly understands his profession; [illegible] Good character.—J. PEACH, Gr., Guilsborough, Northants.

GARDENER (HEAD or SINGLE-HANDED), single; thoroughly understands Stove and Greenhouse, Early and Late Forcing. Also the Flower and Kitchen Garden. Two years' good character.—J. W., Minesteed, Petworth.

GARDENER.—No incumbrance; the [illegible] charge of the House, or with a Single Gentleman; [illegible] good character—H. S., the Grange, Farnborough, Hants.

GARDENER, or GARDENER AND [illegible] Thoroughly practical; leaving his present [illegible] alterations in the Establishment. Referee to [illegible] his present employer, D. R. Davis, Esq., Mere Old Hall, Cheshire.—Address in first instance to JAMES [illegible], 23, Market Place, Manchester.

GARDENER (SECOND or UNDER), where [illegible] kept, and where he can improve himself in the [illegible] single; if with a practical Man will pay a small [illegible] years and a half good character.—E. H., Keswick Hall, [illegible] Norfolk.

GROUND FOREMAN, or to MANAGE a [illegible] Middle-aged; active, industrious. Is a first-class [illegible] and Propagator of Plants in general.—S. S., 15, [illegible] Notting Hill, W.

FOREMAN (UNDER) and PROPAGATOR, [illegible] active; has had experience in a leading London [illegible] ing to make himself generally useful.—J. W., 23, [illegible] John's Wood, N.W.

To Nurserymen.

PROPAGATOR of STOVE, GREENHOUSE, and SOFT-WOODED PLANTS; also Roses, Rhododendrons, [illegible] Has been several years in London and Provincial Nurseries. [illegible] character. Wages not so much object as a permanent [illegible] W. H., Post Office, Exeter.

To the Seed Trade.

TRAVELLER, and SHOPMAN or CLERK.—[illegible] Man, who has had 14 years' experience. First-class [illegible] C. B., *Gardeners' Chronicle* Office, W.C.

To Nurserymen, &c.

SALESMAN, CORRESPONDING CLERK, and SHOPMAN.—A Young Man with a good general knowledge of the Nursery Business is open for an engagement. Terms moderate. Reference.—BETA, 24, Torwood Street, Torquay.

SHOPMAN (UNDER).—Age 19; nearly [illegible] the business.—R. T., *Gardeners' Chronicle* Office.

FARM BAILIFF.—Age 38; has had great [illegible] in general Farming, Buying, Selling, &c., with [illegible] gentlemen. First-class reference.—A. B., Post Office, [illegible]

FARM BAILIFF.—Age 34; understands the [illegible] ment of Light and Heavy Land, Stock, &c. [illegible] Essex. No objection to Ireland.—HORATIO LOVE, Jun., [illegible] South Norwood.

TO NOBLEMEN and GENTLEMEN.—An [illegible] active, single man, who has had great practical [illegible] every branch of Gardening, also in Thinning, [illegible] Measurement of Timber, Laying-out New Grounds, &c. [illegible] situation.—B. C., 26, New Street, St. John's Wood, [illegible]

TWO FARMERS and AGENTS.—The friends [illegible] Man, age 20, who has lived with a Farmer two [illegible] anxious to obtain a situation for him with [illegible] requires assistance. A comfortable home [illegible] required for a time.—Applications addressed to [illegible] Hospital, New Bridge Street, Blackfriars, London, [illegible] with immediate attention.

COWMAN, or STOCKMAN.—Married, [illegible] good character. Wife understands Dairy. [illegible] C. ELMS, High Laver, Ongar, Essex.

CORNS and BUNIONS.—A Gentleman, [illegible] tormented with Corns, will be happy to afford [illegible] tion by which he obtained their complete removal [illegible] without pain or any inconvenience.—Forward address [illegible] envelope to W. GOODALL, Esq., Epsom, Surrey.

HARDS' FARINACEOUS FOOD, for INFANTS and INVALIDS.

"I have carefully examined and repeatedly [illegible] Farinaceous Food (see 'Pereira's Treatise on Food [illegible] 309 and 473, &c.), which is prepared from the [illegible] cereal grains. It combines both nitrogenised and [illegible] alimentary principles, and forms a very valuable [illegible] and invalids. "JOHN PEREIRA, M.D., [illegible]

"Physician to the [illegible]

"47, Finsbury Square, July 1, 1845."

"I have recently examined with much care, [illegible] and chemically, the article known as Hards Farinaceous [illegible] has now been before the public for so many years, [illegible] carefully prepared, to be perfectly genuine, and [illegible] these results being corroborated by many previous [illegible] the article made at various times, during the last [illegible] entirely without the knowledge of the proprietor, [illegible] certain important advantages over the majority [illegible] infants and invalids, it being more digestible, [illegible] portion of gluten which it contains, and which [illegible] flesh-producing constituent of the food. The [illegible] farinaceous foods sold, consist wholly of starch, [illegible] does not contain gluten or nitrogen in any [illegible] are therefore wholly destitute of any principle [illegible] flesh can be formed, so that infants fed exclusively [illegible] be in danger of dying of actual starvation. I [illegible] generally impressed upon mothers and all [illegible] rearing of children. "ARTHUR HILL [illegible]

"Analyst of the *London* [illegible]

"Author of 'Food and its [illegible]

"Wimpole Street, Cavendish Square, W.—Feb. [illegible]

Sold by all respectable Chemists and Patent [illegible] Tea Dealers, and Italian Warehouses, in packets [illegible] also in tin cases at 7s. 6d. for families and exportation. [illegible] against spurious imitations, it is necessary to observe [illegible] packets and cases are signed "JAS. HARDS."

Manufactured at the Victoria Mills, Dunstable.

The Gardeners' Chronicle Newspaper.

SATURDAY, DECEMBER 24, 1864.

ROYAL INTERNATIONAL EXHIBITION of FINE ARTS and MANUFACTURES, 1865.
Under the Special Patronage of HER MAJESTY THE QUEEN.
Intending Exhibitors are informed that December 31 is the latest day on which APPLICATIONS for SPACE will be received.
Forms can be obtained at the House of the Society of Arts, John Street, Adelphi, London, W.C.; or at the Exhibition Buildings, Dublin.
By Order. HENRY PARKINSON, Secretary.

ALBERT INSURANCE COMPANY (LIMITED).
(FIRE and MARINE).
Risks carefully estimated by the individual risk; the utmost liberality displayed in every transaction. Agents Wanted.
No. 8, Finch Lane, or 7, Waterloo Place, Pall Mall.
MORELL THEOBALD, Manager Fire Department.

SCOTTISH UNION INSURANCE COMPANY (FIRE and LIFE), 37, Cornhill, London, E.C. Established 1824.
Moderate Rates of Premium.
Liberal Conditions.
Prompt Settlements.
Prospectuses in full and Proposal Forms at the Company's Offices.
37, Cornhill, London. FREDK. G. SMITH, Secretary.

SCOTTISH UNION FIRE and LIFE INSURANCE COMPANY.
Head Office, 37, Cornhill; Edinburgh and Dublin.
ESTABLISHED 1824. CAPITAL, £5,000,000.
Incorporated by Royal Charter, and empowered by Act of Parliament.
Invested Funds at August 1, 1864, upwards of .. £900,000
Annual Income from all Sources 194,000
Amount of Life Insurances in force 3,300,000

The FORTIETH ANNUAL GENERAL MEETING of the Scottish Union Insurance Company was held in the Company's Office, 37, George Street, Edinburgh, on Wednesday, December 7, 1864.
The Report of the Directors, containing full and detailed statements of the Company's transactions for the year ending Aug. 1 last, was submitted to the Proprietors and unanimously approved of.
PROGRESS of the COMPANY.—The following statements exhibit the progress which has taken place in the Company's business, in the different departments, during the last few years:—

LIFE DEPARTMENT. PROGRESS during the LAST THREE YEARS.

Year	Number of New Life Policies Issued.	Insuring.	Yielding of New Premiums.
1861	915	£427,330	£13,197 9 1
1862	1071	488,264	15,382 1 0
1863	1116	514,425	17,039 1 6

FIRE DEPARTMENT.

In 1861 the Revenue amounted to		£35,479
In 1862 " "		45,699
In 1863 " "		52,596
In 1864 " "		54,000

Chairman.—His Grace the DUKE of HAMILTON and BRANDON.
DIRECTORS in LONDON.
Deputy-Chairman.—The Right Hon. the EARL of MANSFIELD.
Alexander Balfour, Esq. — John Kingston, Esq.
Robert Collum, Esq. — John Frank Miéville, Esq.
Charles Hanson, Esq. — J. R. Robertson, Esq.
J. R. Kennard, Esq. — Hugh F. Sandeman, Esq.
George Ramsay, Esq., *Manager*.
Secretary to the London Board—F. G. Smith, Esq.
Medical Officer—E. W. Duffin, Esq., M.D.
Solicitors—Messrs. Oliverson, Lavie, and Peachey.
Annual Report and Proposal Forms may be had on application at the Offices of the Company, 37, Cornhill, London.
F. G. SMITH, Secretary.

SCOTTISH UNION FIRE and LIFE INSURANCE COMPANY, 37, Cornhill, London, E.C.
Notice is Hereby Given, that a DIVIDEND of 10 per cent. (free of Income-tax) on the Capital Stock of this Corporation will become payable on January 2 next; and Proprietors resident in and near London will receive the same at the Office, 37, Cornhill, on that or the subsequent day, between the hours of 10 and 4 o'Clock.
By Order of the Board. F. G. SMITH, Secretary.
Cornhill, December 24.

Great Bargains in best TABLE GLASS, CHINA, GAS CHANDELIERS, LAMPS, &c.
Bonâ fide Selling Off, prior to Extensive Alterations.
T. R. GRIMES' SHOW ROOMS, 83, New Bond Street, W.
CASH ONLY.

THRESHER'S COLOURED FLANNEL SHIRTS.
Next Door to Somerset House, Strand, W.C.

Evening and Ball Dresses.
SEWELL AND CO. have, in anticipation of Christmas Festivities, prepared a choice variety of TULLE, NET, and SATIN DRESSES. They have also some beautiful patterns of EVENING ROBES exclusively designed for their house.
Sewell & Co., Compton House, Old Compton Street; and Frith Street, Soho Square, W.

French Cambric Handkerchiefs.
SEWELL AND CO. are offering several hundred dozen of Ladies' and Gentlemen's POCKET HANDKERCHIEFS in every variety and of different sizes. Also a remarkably cheap lot of Ladies' EMBROIDERED at 4s. 6d., 5s. 6d., & 7s. 6d. the half doz.
Sewell & Co., Compton House, Old Compton Street; and Frith Street, Soho Square, W.

HEAL AND SON'S EIDER-DOWN QUILTS, from 3 to 10 Guineas. Also GOOSE-DOWN QUILTS, from 10s. Lists of prices and sizes sent free by post. HEAL & SON'S Illustrated Catalogue of Bedsteads and Priced List of Bedding, also sent free on application to 196, Tottenham Court Road, W.

BORWICK'S BAKING POWDER, recommended by the Analyst to the *Lancet* and Author of "Adulterations Detected," for making DIGESTIVE BREAD without Yeast, and for Puddings and Pastry light and wholesome. Sold everywhere

TAYLOR BROTHERS' GENUINE MUSTARD.
Dr. Hassall having subjected this Mustard to a rigorous microscopical examination and chemical analysis, reports that it contains the three essential properties of good Mustard, viz., Purity Pungency, and Delicate Flavour. See that each Package bears their Trade Mark the "Prize Ox," and Dr. Hassall's Report. Sold by all Grocers, &c., throughout the kingdom.

Sauce.—Lea and Perrins'
WORCESTERSHIRE SAUCE.—The delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE," is prepared solely by LEA & PERRINS.
Purchasers are respectfully cautioned against worthless imitations and are requested to see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper. ASK FOR LEA & PERRINS' SAUCE.
Wholesale and for Export, by the Proprietors, Worcester; CROSSE & BLACKWELL; Messrs. BARCLAY & SONS, London, &c.; and Grocers and Oilmen universally.

DINNEFORD'S PURE FLUID MAGNESIA has been upwards of 25 years emphatically sanctioned by the Medical Faculty and universally accepted by the public, as the best remedy for Acidity of the Stomach, Heartburn, Headache, Gout, and Indigestion, and as a mild Aperient for delicate constitutions, more especially for Ladies and children. It is prepared in a state of perfect purity and of uniform strength by
DINNEFORD & Co., 172, New Bond Street, London, and sold by all respectable Chemists throughout the world.

CORNS and BUNIONS.—A Gentleman, many years afflicted with Corns, will be happy to afford others the information by which he obtained their complete removal in a short period without pain or any inconvenience.—Forward address on a stamped envelope to W. GOODALL, Esq., Epsom, Surrey.

Great Attraction for the Holidays.
COMMODORE NUTT and MINNIE WARREN will, on BOXING DAY, and during the HOLIDAYS, hold THREE GRAND LEVEES at ST. JAMES'S HALL, viz., at 11, 3, and 8 o'Clock. They will appear in each Levee in a variety of SONGS, DANCES, DUETS, &c., and at the 11 o'Clock LEVEE they will appear in the identical COSTUME worn by them at the Marriage of General Tom Thumb. The COMMODORE and Miss MINNIE will be drawn from their residence to and from the Hall in their MINIATURE CARRIAGE by four of the Smallest Ponies in the World—a present from General Tom Thumb. Admission, 1s. and 2s.; Reserved Stalls, 3s. Children under 10, half-price, in 2s. and 3s. places.

DR. TYNDALL, F.R.S., will commence a COURSE of EIGHT LECTURES on ELECTRICITY on WEDNESDAY, the 28th of December, at 8 o'Clock, P.M., to be continued on the evenings of the 29th and 30th, and the 2d, 3d, 4th, 5th, and 6th of January, 1865. Tickets may be had at the Royal School of Mines, Jermyn Street, price 5s. for the whole Course.
TRENHAM REEKS, Registrar.

News of the Week.

THE United States Congress met at Washington on the 5th inst., and President LINCOLN's Message was delivered on the following day. The Message says that any attempt to negotiate with the insurgent leader would not result in any good, as he will only accept disunion, which the North are resolved not to grant. The Southern people can have peace by laying down their arms and submitting to the national authority. The North will make no overtures for peace embracing the recognition of the independence of the Confederacy, but will cease the war when it shall have been discontinued by those who began it. Mr. LINCOLN retracts nothing he has heretofore said on slavery, and will not modify the Emancipation Proclamation. He recommends the passing of a constitutional amendment abolishing slavery throughout the United States, and believes that the next Congress will pass it if the present does not. With regard to foreign affairs, he says that the condition of the foreign relations of the country is "reasonably satisfactory;" that the relations with Mexico, which continues to be a theatre of "civil war," have undergone no change; and that his Government at the same time has maintained neutrality between the belligerents. He states that unforeseen political difficulties have arisen in Brazilian and British ports, and on the Canadian frontier, which have required a just and conciliatory spirit on the part of the United States and the nations interested. He says that, after the expiration of the stipulated six months' notice to Great Britain, it will be necessary for the United States to increase their naval force upon the great lakes; and he expresses his opinion that maritime Powers would not now, with the light before them, concede belligerent rights to the insurgents. In regard to the military situation, he says that all lines and positions held at the date of his last Message have been maintained, and that the armies have steadily advanced.

From the seat of war we have accounts which are far from justifying the confident tone of Mr. LINCOLN's Message. General SHERMAN, with great difficulty and after a good deal of fighting, during which he received more than one defeat, has passed Millen, as he passed Macon and Augusta, without venturing to attack it, and is now making his way towards the sea coast in the direction of Savannah, his track "marked by the bodies of men, dead animals, and abandoned *matériel*," and his troops, according to the statement of prisoners, being almost destitute of provisions. His cavalry, under General KILPATRICK, has been defeated with heavy loss by the Confederate cavalry under General WHEELER; and a force which had been despatched to his assistance from Port Royal, under General FOSTER, has been defeated at a point on the Savannah and Charleston Railroad, and driven back towards the coast. In Tennessee, General HOOD has succeeded in shutting up the Federals under General THOMAS within the lines of Nashville, and is now besieging them in that city with such confidence of success, that he has detached a strong force under General FORREST to invade Kentucky. The Confederates are said to have re-occupied Atlanta in great force, and the Federals have been compelled to evacuate Decatur, in Alabama, after destroying their ammunition and stores. In the Shenandoah Valley a portion of General EARLY'S cavalry, under General ROSSER, has captured two Federal forts and destroyed a large amount of stores, besides capturing many prisoners. General GRANT has been reinforced, and is massing his troops, preparatory, it is said, to a grand attack on General LEE's lines. Mr. SEWARD has peremptorily refused Lord WHARNCLIFFE's request to be permitted to give relief to the Confederate prisoners in the North from the funds raised at the Liverpool bazaar. Mr. CHASE has been appointed Chief Justice of the Supreme Court.

The Ministerial crisis in Spain has been brought to a close by the recall of General NARVAEZ and his entire Cabinet, the attempts of the Marquis of PAVIA, Señor LERSUNDI, Señor ISTURITZ, and the Marquis of MIRAFLORES to form a new administration having proved abortive. The Cortes were opened on Thursday by the QUEEN in person. The Speech from the Throne expressed a hope that the Peruvian question would soon be adjusted, and denied that Spain had any ambitious projects on the South American republics. It said that HER MAJESTY felt bound to state that the general condition of the Monarchy, considered in all its extent, was not very satisfactory, and that to remedy this a Bill of great importance would be laid before the Cortes. This paragraph is supposed to refer to the San Domingo question, but the Speech made no mention of that subject, and took no notice of the Ministerial crisis or of the causes which produced it.

By the Cape mail we learn that Governor WODEHOUSE has decided his arbitration in favour of all the Free State claims, and that the Basutos are so irritated by the decision that war between MOSHESH and the Free State was considered imminent. This award had also caused great excitement at the Cape, but it was hoped that the colony would not be involved in the qurrrel.

Home News.

DEPARTURE OF THE COURT FOR OSBORNE.—The Queen and Royal family left Windsor Castle on Saturday morning at a quarter before 11 for Osborne. The Royal party travelled to Basingstoke by a special train on the Great Western Railway, and proceeded thence by the South-Western to Gosport, where they embarked in the Royal Yacht Alberta for Osborne. Although the snow was falling heavily during the greater part of the day, the various stations were crowded with spectators, by whom her Majesty was received with every mark of respect. The Royal party arrived at Osborne shortly after 2 P.M. On Sunday morning her Majesty, Princess Helena, and Prince Leopold, attended Divine service at Osborne. The Rev. J. Protheroe officiated. On Monday morning the Queen and Princess Helena drove out. The Princess Louisa also drove out. Prince Leopold and Princess Beatrice walked in the groupds. In the afternoon the Queen and Princess Beatrice walked and drove on the grounds. On Tuesday morning the Queen walked in the grounds. Princess Louisa drove out. In the afternoon the Queen drove out with Princess Helena. Princess Louisa took an airing. On Wednesday the Queen and Princess Helena walked and drove. Princess Louisa, Prince Leopold, and Princess Beatrice went out in the grounds.

THE PRINCE AND PRINCESS OF WALES.—On Friday the Prince hunted with the West Norfolk hounds. The Princess drove to the meet at Cane Hill, and saw the hounds throw off. On Saturday the Prince went out shooting on the Frankfort part of the estate. On Sunday the Prince and Princess attended Divine service at Sandringham Church. The Rev. C. Tarver preached the sermon. On Tuesday the Prince attended a private meet of the West Norfolk foxhounds at Sandringham, but no run could be obtained, and his Royal Highness met with his first blank this season. On Wednesday the Prince went to Markham, on a visit to Mr. H. Villebois, the master of the West Norfolk Hunt. On Thursday the Princess joined his Royal Highness at Markham, and remained till yesterday, when they returned to Sandringham.

ORDER OF THE BATH.—The Queen has given orders for the appointment of Lieutenant-Colonel Charles George Gordon, of the Royal Engineers, lately in the service of the Emperor of China; Colonel Henry Harpur Greer, of the 68th Regiment; Charles Burslem Saunders, Esq., and Sir Theophilus John Metcalfe, Bart., of the Bengal Civil Service, to be Companions of the Bath.

MIDDLE CLASS SCHOOLS COMMISSION.—The Queen has directed Letters Patent to be passed under the Great Seal, appointing Lord Taunton, Lord Stanley, Lord Lyttelton, Sir Stafford Northcote, Bart.; Dr.

Hook, Dean of Chichester; the Rev. Dr. Temple, Head Master of Rugby School; the Rev. Anthony Wilson Thorold; Thomas Dyke Acland, Esq.; Edward Baines, Esq.; [illegible] Edward Forster, Esq.; Peter Erle, Esq., Q.C.; and Dr. Storrar, M.D., to be her Majesty's Commissioners to inquire into the education given in schools not comprised within the two former Commissions, bearing date respectively June 30, in the 22d year, and 18th July, in the 25th year of her Majesty's reign, and also to consider and report what measures, if any, are required for the improvement of such education, having especial regard to all endowments applicable or which can rightly be made applicable thereto.

THE CASE OF BISHOP COLENSO.—The pleadings before the Judicial Committee of the Privy Council in the case of Bishop Colenso were concluded on Monday, when Sir Hugh Cairns finished his argument on behalf of the Bishop of Cape Town. He contended that there were three questions to be decided:—1. Had the Bishop of Cape Town jurisdiction to try the Bishop of Natal for heresy and deprive him? 2. Had the Crown jurisdiction in the matter, at this stage, by way of appeal from the sentence? 3. Had the Crown original jurisdiction in this matter, visitatorial or otherwise? In reference to the first question, he contended that the jurisdiction arose from the nature of the case, and was both inherent and consensual. As to the second, he maintained that Court had no jurisdiction, because the letters patent give the appeal to the Archbishop of Canterbury; and if there was an appeal to the Crown at all, it could only arise after a judgment had been given by the Archbishop. And as to the third, he urged that the Crown had foregone any visitatorial power which it might ever have possessed by making the Bishop of Cape Town visitor. Mr. W. M. James then replied on the whole case, and on the conclusion of his address the Lord Chancellor stated that the Court would take time to consider their decision, and that notice would be given to all parties when they were prepared to pronounce judgment.

Foreign.

FRANCE.—The *Moniteur* announces that the Emperor and Empress will receive the *corps diplomatique* and great public bodies as usual on New Year's Day, but will not hold their customary levee on the 2d of January. The causes of this omission, not assigned by the *Moniteur*, but generally credited in society, are the Empress's health, which has been indifferent for some time past, the recent death of M. Mocquard, and the serious illness of Count Bacciochi, who shared to an equal degree with M. Mocquard the Emperor's confidence in matters personal as well as political, and held a high position at Court on account of his near relationship to the Bonaparte family. M. Conti has been appointed the Emperor's chef du cabinet. The confidential post of private secretary, which the late M. Mocquard combined with this appointment, has been conferred on M. Pietri, a relative of the late M. Pietri, famous for his co-operation in the *coup d'état*, and the success with which he managed the "plebiscite" which sanctioned the transfer of Nice to France. Both gentlemen are natives of Corsica. The message of President Lincoln has been received with great dissatisfaction in Paris, and the allusion to Mexico is considered to be especially insulting to the French Government. The *Patrie* describes the message as "the card announcing the death of the Union." M. Drouyn de Lhuys, the Minister of Foreign Affairs, has addressed a letter to the Mayor of Sunderland, in which he says:—

"The Emperor's Government is particularly sensible of the cordial reception given in October last by the authorities and population of Sunderland to the commander and crew of the Danae. Such manifestations cannot but strengthen the bonds of friendship which so happily unite France and England, and contribute to the development of friendly relations."

In anticipation of the meeting of the Chambers, various rumours have been current in Paris in reference to the policy of the Government in the ensuing session. Among these may be mentioned a report that it has been proposed to the Emperor, by some of the Ministers, to deprive the Senate and the Corps Legislatif of the right of voting an address in answer to the speech from the throne, and that the Emperor has declared the proposal to be impracticable. Another scheme, emanating it is said from Baron Haussmann, the Prefect of the Seine, proposes to disenfranchise Paris by suppressing the ten representatives of the capital in the Corps Legislatif. The *Moniteur* has not, as yet, contradicted this rumour, but the unanimity with which the proposal has been condemned by all parties has created a belief that the Emperor will not entertain it. Baron Haussmann has also, it is said, laid a memorial before his Majesty, by which he proposes the creation of a fresh municipal commission for Paris, to consist of 100 members, 30 of whom are to be functionaries having a seat *ex-officio*, and the others are to be nominated by the Crown. The Archbishop of Paris a few days since issued an interdict against M. de Ségur, a canon of St. Denis, a Roman priests and violent ultramontanist, forbidding him to preach or to act as confessor in any part of his diocese, on the ground that he had expressed an opinion in one of his writings that "a state independent of the church was an enormity, anti-Christian, and opposed to God's word, and that the Inquisition was of Divine right." It is now said that M. de Ségur has withdrawn or explained away this doctrine, and that the interdict has been withdrawn. The Archbishop of Paris and the Bishop of Nancy are now at the head of an active propagandism of Gallican principles among the French clergy. The *Sport* states that the Prince Imperial was permitted last week for the first time to go out shooting in the preserves at Compiègne, and that for his *coup d'essai* he killed three pheasants and four rabbits. The heart of Voltaire, which was long deposited at the Chateau de Villette, near Pont Saint-Maxence (Oise), was on the death of the late marquis presented by the heirs to the Minister of Public Instruction for the nation. The Emperor, to whom M. Duruy had referred the subject, decided that the relic should be placed in the Imperial Library, and the transfer of it took place a few days since in the presence of the Ministers of the Interior and of Public Instruction. The Emperor of China has decorated with the Order of the Dragon several French officers who took part in the capture of Nankin. This decoration, which is suspended to a yellow riband, represents the five-clawed imperial dragon, with the following inscription in Chinese characters:—"Before it the lion turns pale, and the tiger is silent!"

SPAIN.—The Queen, after accepting the resignation of the Narvaez Cabinet last week, intrusted the Marquis of Pavia with the formation of a new Ministry. The Marquis submitted to her Majesty a list of names, but the Queen would not accept them. Her Majesty then summoned Señor Lersundi to the Palace, and subsequently Señor Isturitz and the Marquis of Miraflores, with whom long conferences were held. The Ministerial crisis however continued, and Señor Isturitz was ultimately commissioned to form a Cabinet. His endeavours having proved futile, General Narvaez was recalled, and will retain office without any change taking place in the Cabinet. The Cortes were opened on Thursday by the Queen in person. The following is a summary of the Speech from the Throne:—

"The relations of Spain with foreign Powers remain satisfactory, except with Peru, the Government of which State will finally be convinced that justice is on our side. I hope that a perfect understanding will be arrived at without any stain upon the national honour. The official communication of the Archduke Maximilian's accession to the Mexican throne is the commencement of a new era in the political relations between Spain and Mexico, hitherto unfortunately interrupted. The South American republics will see that the sympathy of Spain has no admixture of ambitious projects. The Italian question is still pending, and the revolutionary movement which has been going on in that country has given rise to fresh diplomatic combinations. As soon as affairs are finally settled my Government will take this question into consideration in the manner dictated by prudence, without, however, failing in the respect and filial love which Spain as a Catholic nation professes for the common Father of the Faithful. I am bound to state to you that the general condition of the Monarchy, considered in all its extent, is not very satisfactory, and to remedy this I shall lay before you a bill of great importance. Bills will be introduced relative to financial questions and modifications in the present legislation affecting credit societies. A Bill on the press law, in harmony with the constitution, will also be brought forward."

It will be observed that the Speech made no mention of San Domingo, although it was understood that the Ministers submitted to the Queen a draught of the speech, proposing the abandonment of San Domingo. Marshal Concha has been nominated President of the Senate, and Señor Alexandre Castro has been selected as the Government candidate for the Presidency of the Chamber of Deputies. Queen Christina has arrived in Madrid. The *Official Gazette* publishes a decree offering interest at the rate of 8 per cent. on all sums deposited in the Government Bank of Deposit for fixed terms of from four to eight months, and 9 per cent. for periods of eight to 12 months.

PORTUGAL.—On the 13th inst., at about 9 A.M., a hurricane burst with great fury over Lisbon, causing great damage to the shipping. Several ships and lighters were sunk in the Tagus, and their cargoes lost. In the Alcantara Gardens, and other exposed places, large trees were blown down, and in Lisbon generally and the suburbs much damage was done to the houses and other property.

HESSE CASSEL.—On Thursday, after a long and animated debate, the Diet resolved by a majority of 25 to 17 that a committee should report on the question whether the Ministry should be accused by the Diet of having violated the Constitution of the country.

SCHLESWIG-HOLSTEIN.—The semi-official *Provinzial Correspondenz* of Wednesday says that in order to obtain a well-founded judgment upon all the hereditary claims to the Duchies, the Prussian Government will lay the succession question before the Crown lawyers for their opinion on the subject.

PRUSSIA.—The Guards who were engaged in the Danish war entered Berlin on Saturday. A large concourse of people assembled to witness their arrival, and received them with loud cheers. The King made a speech, in which he said that the Guards had added a new leaf to their glorious history. He announced that medals of commemoration would be granted to them, and special medals to those regiments who had borne a part in the assaults on Düppel and Alsen. It is rumoured that the King also intends to erect a monument in honour of the Prussian soldiers who fell during the war, and in memory of the sieges of Duppel and Alsen.

AUSTRIA.—Baron Halthuber, formerly Austrian Commissioner for Jutland, has been appointed Civil Commissioner for the Duchies. Herr von Lederer has returned to his post in Hamburg, as representative of Austria at the Hanse Towns.

ITALY.—In the sitting of the Italian Parliament on Saturday, General Della Marmora, in answer to Signor Bixio, demonstrated the necessity for the strictest economy, to guarantee the future resources for the maintenance of the army, without impairing the organisation either of the land or sea forces, or the patriotic zeal of the country in anticipating the payment of the taxes imposed upon them the duty of exhausting those resources which the country must always be ready to supply. Considerable reductions in the public expenses would have to be introduced, which, however, endangering the defences of the country. In the sitting of the Chamber of Deputies on Saturday the provisional Budget for the first three months of 1865 was agreed to. The Chamber then adjourned to the 5th of January. General Angioletti has been appointed Minister of Marine. A Royal decree was published on Wednesday, sanctioning the formation of a company for the sale of the Crown lands. The directors of the company are Signori Baldinino, Incisa, Lacosta, and Rossi. Another Royal decree was published yesterday, ordering as a measure of public safety the occupation of the convents, seminaries, and religious establishments in Florence necessary for the purposes of the State. The committee of the Chamber concur in the views of Signor Lanza, the Minister of the Interior, on the question of the administrative organisation of Italy. Among the high society of Turin a decision has been come to that every person whose name stands in the official *Gazette* as having given 500 francs to the Mendicity Asylum shall be considered to have fulfilled all the duties of politeness relative to visits on the first of the year. The Court of Cassation at Naples has rejected the appeal of the Marquis La Gala and his accomplices. The Pope has published an Encyclical Letter, condemning the principal modern errors concerning revealed religion, philosophy, and civil society. These errors are enumerated in 80 propositions, and are pointed out to the faithful to be refuted. In another Encyclical Letter the Pope grants a jubilee of one month, to be celebrated in 1865. The alleged plot against the life of the Pope and of Cardinal Antonelli, turns out to be a false alarm. The three pretended brothers who were arrested have been recognised by some French gendarmes as brigands, well-known on the Neapolitan frontier. Baron Meyendorff, the Russian Ambassador, has left Rome suddenly for Florence to avoid the Christmas receptions at the Vatican. The rumour that he received his passport was unfounded. It is stated that the Pope will only adopt that measure in the case of the Czar interdicting relations between Rome and the Catholic Church in Poland.

IONIAN ISLANDS.—The Paris papers publish a despatch from Messina announcing that disturbances have broken out in Zante from political causes, and that several persons have been wounded.

GREECE.—The Minister for Foreign Affairs has given in his resignation, which has been accepted by the King. He has been replaced by M. Demetrius Boudouris, formerly member of the Chamber of Representatives.

THE PRINCIPALITIES.—Prince Couza opened the Senate and the Chamber of Deputies on the 15th in person, in the presence of the Diplomatic Corps and the great bodies of the State. The Message delivered by the Prince was greatly applauded.

TUNIS.—Agitation has recommenced in the south. The Arabs who had submitted have thrown off their allegiance to the Bey, and surrounded the camp of General Rutten. Prince Aly set out on the 15th inst. with a body of troops for his relief.

MOROCCO.—The Emperor of Morocco has returned to Fez from Rabat, where he gave an audience to the French Minister. That visit has already produced a good effect, and the Emperor has decided that for the future all applications made to his Government by the representatives of European Powers are to be submitted to him, with the letters in support of them, in order that he may decide on the matter with full knowledge of the facts. Hitherto the Pasha of Tangier has decided these questions without referring to the Emperor. This first step is expected to lead to the more decisive measure so long called for, of allowing the foreign representatives to reside in one of the imperial cities in order to be in direct relations with the Emperor.

EGYPT.—The Egyptian Government has condemned the rumours current on the London and Paris Exchanges that it was about to issue treasury bonds to the amount of 2,500,000*l*.

CAPE OF GOOD HOPE.—Accounts from the Cape to the 20th ult. state that Governor Wodehouse had decided his arbitration virtually in favour of all the Free State claims. This had occasioned great excitement. The disputed lands are very valuable, and admirably adapted both for agricultural and pastoral purposes, and had been held by the Basutos for many years. Portions of the lands were under cultivation by them, but on the governor's decision being known the Free State authorities issued an immediate order to the Basutos to clear out within one month, and summoned the whole of the burghers to eject them, should it be necessary. Moshesh had sent a civil reply to the governor's award, merely saying that he would call a meeting of his councillors, and lay the document before them, but the governor's messenger was treated

...uptuously, and very disrespectful opinions of both ... Free State and the British Government were ... by the Basutos, who were greatly ... war between Moshesh and the Free State ... imminent. It was hoped that nothing ... negotiations might involve the Cape ... quarrel. The other native tribes on the ... quiet. Marcus, a convict, had been ... a further term of imprisonment for nine ... forging promissory notes to the amount of ... Armstrong, a clerk in the Post Office, had ... to six years' imprisonment for embezzling ... the value of 1800*l*.

...—The railway from Bombay to Ahmedabad ... on the 28th November. The Thull Ghaut line ... It is reported that about 10,000 men of the ... army, being the 10 years' men whose time has ... are about to quit the service. It is said they ... dissatisfied with the service on account of ... necessary drill, and a lower rate of pay than they ... to receive when recruited. It is understood ... many of them intend to take service in America.

...—The China news is unsatisfactory. The ... of rebels in the vicinity of Amoy has stopped ... trade. The Anglo and Franco-Chinese forces are to be ... withdrawn.

JAPAN.—The report that Sir Rutherford Alcock had ... recalled has caused great regret among the ... community. It appears however that he has ... been recalled, but has been ordered to come home ... leave of absence, in order to confer with her ... Government on the state of affairs in Japan.

UNITED STATES.—Congress assembled at Washington on the 5th inst. The following is a summary of President Lincoln's Message:—

"An attempt to negotiate with Mr. Davis, the insurgent ... would not result in any good. He would only accept ..., which the North will not grant. The Southern ... can have peace by laying down their arms and ... the national authority. He retracts nothing ... said on slavery, and will not modify the Emancipation Proclamation. The North will cease the war whenever it shall have ceased on the part of those who began it. He recommends the passing of a constitutional amendment abolishing slavery throughout the United States. Referring to the recognition of the Confederates as belligerents, Mr. Lincoln says:—"It is possible that if it were a new and ..., the maritime Powers, with the light they ..., would not concede the privileges of naval ... to the insurgents in the United States, ... as they are and always have been equally ... ports, and harbours. Disloyal emissaries have ... been neither less assiduous nor more successful during ... last year than they were before that time in their efforts, ... under that privilege, to embroil our country in foreign wars. ... desire and determination of the maritime States to ... that design are believed to be as sincere as and cannot ... more earnest than our own." Referring to the war, ... says:—"Since our last annual meeting all the ... positions then occupied by our forces have ... been maintained, and our armies have steadily advanced, ... the regions left in their rear, so that Missouri, ..., Tennessee, and parts of other States have produced ... reasonably fair crops. The most remarkable feature in the military operations of the year is Sherman's attempted march ... directly through the insurgent region. The result ... being known, conjecture in regard to it shall not be ..." Alluding to the State organisation, he says:—"Maryland presents an example of complete success. ... is secure to liberty and the Union for all future. ... genius of the rebellion will no more claim ... Like another foul spirit it has been driven ... It may seek to tear her, but it will do no more" ... the growth of the country during the war, he says:—"... is melancholy to reflect that the war has filled so many graves and carried sorrow to so many hearths, it is some relief to know that, compared with the surviving, the ... have been so few. While corps, and divisions, and ..., and regiments have formed and fought, and dwindled ... out of existence, a great majority of the men who ... formed them are still living, and the material resources of ... country are now more complete and abundant than ever. ... material resources are unexhausted and are believed to be ... inexhaustible. The public purpose is to re-establish and maintain ... The nation's authority is unchanged and believed to be ... unchangeable. Between the Southerners and ourselves the issue ... is distinct, simple, and inflexible. It is an issue which can ... be tried by war and decided by victory. If we yield we ... are beaten. If the Southern people fail their President, he is ... Either way it would be victory and defeat following ... What is true of him who heads the insurgent cause is ... necessarily true of those who follow him. Although ... cannot re-accept the Union they can. Some we ... already desire peace and reunion. They can at any ... moment have peace simply by laying down their arms and ... submitting to the national authority under the Constitution. ... After so much the Government could not, if it would, maintain war against them. The loyal people would not sustain or ... allow it. If questions should remain, we would adjust them ... by peaceful measures of legislation, conference courts and ... votes. The executive power itself would be greatly diminished ... by the cessation of the war. The actual way of pardon, and ... remission of forfeiture however would still be within the ... executive control. A year ago a general pardon and an ... amnesty were offered upon specified terms to all except ... certain designated classes. It was at the same time made ... clear that the excepted classes were within the contemplation ... of special clemency. During the year many ... have availed themselves of the general provisions, and many ... more would do so, only that signs of bad faith ... lead to such precautionary measures as ... a practical process less easy and less certain. ... During the same time also special pardons have ... been granted to the individuals of the excepted classes, and no ... application has been denied. Thus practically the door ... is open to all. It is still so open; but a time may come, ... probably will come, when the public duty shall demand ... it be closed, and that in lieu thereof more rigorous ... terms heretofore be adopted." The condition of ... affairs is reasonably satisfactory. In consequence of the ... injuries committed on the Canadian frontier, notice has ... been given to Great Britain that after the expiration of six ... months the United States must hold themselves at liberty to ... increase their naval armament upon the lakes if necessary. ... Serious political difficulties have arisen in British and ... Mexican affairs, and the northern boundary of the United ... States, which will continue to require the practice of constant ... vigilance and a just conciliatory spirit on the part of the ... United States and the nations concerned. Mexico continues to be the theatre of civil war, while the political relations with that country have undergone no change. The United States at the same time have maintained neutrality between the belligerents. The finances have been successfully administered. The treasury balance is nearly 19,000,000*l*., but the taxes should be further increased. The public debt on July 1 was 1,740,690,030. Another year's war will increase it 500,000,000. The debt is a national private property, and should be distributed among all the people. To secure this a limited amount of some future issue of public securities might be held by *bonâ fide* purchasers free from taxation and seizure for debt."

The report of Secretary Fessenden states the probable increase of the public debt during the present fiscal year at 482,374,188 dollars, and that the total public debt will amount to 2,223,064,677 dols. by the 1st of July, 1865. He disapproves foreign loans, advocates increased taxation, and says that since the people have pronounced for the continuation of the war until its object shall have been achieved, it is for them to decide whether they will provide the necessary means for prosecuting it by loans, or compel him to resort to a further issue of paper money. He expresses the opinion that if the duration and expense of the war had been foreseen, it would never have been undertaken. The Postmaster General's report shows an increased correspondence with Europe during the year. The receipts of the department were more than 200,000 dollars below the expenses. The Secretary of the Navy says that during the past four years he has made an official record of a series of naval enterprises and achievements wholly without precedent or parallel. The navy now comprises 670 vessels, carrying 4610 guns. The men employed are 50,000. The prizes captured during the year were 324, and the gross proceeds of prize money were over 14,000,000.—The accounts of General Sherman are still contradictory, and Mr. Lincoln himself in a speech at Washington has said that "all knew where Sherman went in at, but no one could tell where he would come out at." The latest news states that his principal force remained several days near Millen, gathering supplies. He resumed his march on the 2d from the north of Millen, and on the 3d was some distance south of that place. On the 4th a battle took place between his cavalry and General Wheeler's Confederate cavalry, in which the former were defeated with heavy loss, and the Federal General Kilpatrick was wounded. On the 7th Sherman was moving for the coast, in the direction of Savannah. The prisoners report that he was almost destitute of provisions. All supplies in his immediate front have been removed or destroyed; the country through which he is marching is generally marshy and unhealthy, and his track was marked by slain soldiers, dead animals, and abandoned *matériel*. Richmond papers state that there are troops in his front who will resolutely dispute his advance towards Savannah or Darien, after he passes a certain point. His advance is rumoured to be skirmishing with the outposts round Savannah. Confederate accounts report that, previous to setting out upon his march through Georgia, he ordered the burning of every house in East Tennessee, and the general devastation of the country. A Federal expedition under General Foster, which moved inland from Port Royal on the 30th November to meet Sherman, has been defeated and driven back at Grahamsville, on the Charleston and Savannah Railway, leaving 1300 dead and wounded on the field. Foster retired to his gunboats on Broad River, where he has received reinforcements, but up to the 3d he had not resumed the offensive. General Hood has closely besieged Thomas in Nashville. He has cut off communication by land and water, and broken the line connecting Nashville with the North. He has also established a battery on a bluff 14 miles down the Tennessee, which has effectually blockaded that river, and has repulsed seven gunboats which were sent to dislodge him. One brigade of his army has moved in the direction of Murfreesboro, and it is rumoured that his advance under Forrest has crossed the Cumberland River, and is moving towards Kentucky. General Grant is reported to have been reinforced by 4000 men of Sheridan's army. He has advanced the Second and Fifth Corps towards Stony Creek, preparatory, it is believed, to a general movement upon Richmond and Petersburg. Richmond papers of the 7th inst. state that the movement was expected by General Lee, and fully provided against. General Butler has sent three coloured regiments to oppose the Confederates who interfere with the completion of his canal. The Confederates are said to have reoccupied Atlanta in strong force. It is rumoured that General Early is about to advance against Sheridan, and that he has been reinforced by Breckinridge. The Confederate cavalry, under General Rosser, surprised and captured Fort Kelly at New Creek, on the 28th ult., taking eight pieces of artillery, eight stand of colours, and 800 prisoners, and destroying over 200 waggons. General Rosser afterwards captured Piedmont, and destroyed a large amount of Federal stores and all the Government buildings. The prisoners and artillery were all brought off, besides 1500 horses and 1000 head of cattle. Rosser's entire loss was only five men. General Beauregard reports that the Federals evacuated Decatur, Alabama, on the 26th November, after destroying their stores and ammunition. Mr. Chase has been appointed Chief Justice of the Supreme Court. Mr. Seward, in a letter to Mr. Adams, has indignantly refused the request of Lord Wharncliffe to distribute the 17,000*l*. raised at the Liverpool Bazaar among the Confederate prisoners in the North. He says:—

"The American people will be likely to reflect that the sum is insidiously tendered in the name of humanity, and constitutes no large portion of the profits which its contributors may be justly supposed to have derived from the insurgents by exchanging them arms and munitions of war for the coveted productions of imperial and enervating slave labour. Nor will any portion of the American people be disposed to regard the sum so ostentatiously offered for the relief of captured insurgents as a too generous equivalent for the devastation and dissolution which a civil war promoted and protracted by the British subjects has spread throughout the States which before were eminently prosperous and happy. The Southern people have not yet become debased, although they have sadly wandered from the paths of loyalty and patriotism; and therefore they will rejoice, in common with their Northern fellow-countrymen, in being saved by their considerate and loyal Government from the grave insult which Lord Wharncliffe and his associates, in their zeal for the overthrow of the United States, have prepared for the victims of this unnatural and hopeless rebellion."

The New York *Times* says that British impertinence is fitly rebuked in this letter. The *Tribune* says that it puts the possibility of a rejoinder beyond even British impudence; while the *News* denounces the letter as inhuman. The Provost Marshal has urged upon all officers to exercise extraordinary vigilance against the anticipated invasion by the Confederates from Canada. Lord Lyons took leave of the President and Secretary of State on the 6th on his return to England. The Federal House has adopted a joint resolution denationalising all persons who leave the country to avoid draft. 12,000 dollars from the cruiser Florida have been sent to the Navy Department. Captain Winslow has been made a commander, and Lieutenant Cushing a lieutenant commander. The Confederate Congress has passed a resolution denouncing the seizure of the Florida, and declaring that Brazil is bound to enforce the restoration of the vessel. Commissioners have been appointed to confer with Brazil. Resolutions have been introduced into the Confederate Senate vigorously opposing the arming of the slaves, on the ground that as yet no necessity existed for that measure. A Bill however has been introduced into Congress authorising the enrolment of 40,000 negroes for work on the fortifications and camp duties. Another Bill has been introduced sequestrating the property of persons liable to military service who depart from the Confederacy without permission. The Southern press ridicules the idea of Southerners attempting to fire the city of New York. The blockade runners Vixen, Mail, and General Armstrong have been captured.

CANADA.—Accounts from Toronto of Dec. 6 state that the excitement in regard to the Fenian Brotherhood is revived, and becoming more and more intensified. On the previous night an Orange Lodge was broken open, and all its property destroyed by the Fenians. Some fine portraits of the Queen were disgracefully mutilated. The excitement continued on the 6th, and fears of violence were entertained.

MEXICO.—The Emperor Maximilian returned to his capital on October 30, after having spent three months in visiting several important departments of the country. His Majesty has since issued a proclamation declaring the war ended and the empire established.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 89¼ to ⅛ for Money, and 89⅜ to ½ for Acct.; Reduced and New Three per Cents., 88½ to ⅞; India Stock, shut; Ditto Five per Cent. Stock, 102⅜ to ⅞; Exchequer Bills, par to 3*s*. pm.—FOREIGN: Brazilian, 1863, 83⅜; Egyptian, 95⅝; Ditto, second issue, 100*l*. Bonds, 96; Ditto 1864, 94½ to 95; Ditto Scrip, ¾ pm.; Mexican, 29⅜ to ⅝; Portuguese, 1856, &c., 48⅛; Russian, 1822, 88¼; Ditto 1850, 87¾; Spanish, 48¾; Ditto New Deferred, 41⅝ to ½; Ditto Passive, 32½ to ⅝; Ditto Certificates, 14½ to 14; Turkish, 1858, 70⅝; Ditto 1862, 100*l*. Bonds, 72⅜ to ¼; Ditto Guaranteed, 100; Venezuela, 1862, 52½; Ditto 1864, 44½ to ¾.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,174,930	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion ..	13,524,930
		Silver Bullion	
	£28,174,930		£28,174,930

BANKING DEPARTMENT

Proprietors' Capital ..	£14,553,000	Government Securities (including Dead Weight Annuity) ..	£10,474,502
Rest	3,342,857	Other Securities	19,784,155
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	7,694,616	Notes	8,957,300
	12,927,807	Gold and Silver Coin ..	793,840
Other Deposits	45,577		
Seven days and other bills			
	£38,959,357		£38,959,357

Dec. 22, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY: *Dec.* 16.—BANKRUPTS.—J. ASCOUGH West Tanfield, Yorkshire, Farmer—S. J. ADEY, Forest Row, Dalston Commission Agent—W. ARCHER, Norwich, Ropemaker—G. BETTS, Shoreditch Cheesemonger—G. BROOKE, Leeke, Staffordshire, Grocer—... BROWN, formerly of Gloshouse Yard Aldersgate Street, Licensed Victualler—B. BAILY, Wakefield, Yorkshire, Beerhouse Keeper—J. BUSHBY, Blackburn Lancashire, Currier—R. BAINSLEY, Crewe, Cheshire, Grocer—W. BINGHAM, Bilsthorpe, Nottingham shire, Butcher—J. BLOUNTRIN and D. BLOUNTRIN, West Hartlepool, Durham, Hawkers of Jewellery—H. H. COLEMAN, Fenchurch Street, City, Attorney—W. DAY, Lambeth Walk, Grocer—W. DYE, Dartford, Kent—J. DAWSON, Shuttleworth, Lancashire, Shuttle Maker—F. S. DAVIS, Shore Road, Hackney, Coal Merchant—J. EDWARDS, Penarth, Glamorganshire, Grocer—H. T. EDLIN, Solihull, Warwickshire, Railway Station Master—J. FLETCHER, Bradford, Yorkshire Carter—H. GOOCH, Ipswich, Suffolk, Corn and Seed Merchant—T. GRAVES, Seymour Street, Euston Square, Plumber—W. HARVEY, Hunmoyte, Leicestershire, Maltster—J. HOBBLETHORN, Fairgrave, Yorkshire, Miller—T. HOLLIDAY, Holme, Yorkshire, Grocer—E.

[illegible] Assistant [illegible] Machine Worker—D Jones [illegible] Carnarvon, Grocer—D James [illegible] Cattle [illegible] Tailor—H S Kemsley, Clarendon [illegible] Agent—J Lomax, Stretford, Lancashire, late Traveller [illegible] Lancashire [illegible] Wimbledon, Licensed [illegible] Manager—W H [illegible] Manufacturer—T Oldfield, Pelton Fell [illegible] Durham, Innkeeper—Parker, Sheffield, Yorkshire, Razor Manufacturer [illegible] Journeyman Baker—A Parker, Portland Street, Commercial Road East, Journeyman [illegible] Warwick, Painter—T Parkins, Burton-upon-Trent, Staffordshire, Proprietor—A Parker, King's Road, Brighton, [illegible] Hastings, Grocer, Bootmaker—J [illegible] Huddersfield, Yarn Spinner—[illegible], Hudderfield, Butcher—T Parker, [illegible] Cambridge, Dealer in Fancy Goods [illegible] Chatham, Hosier—[illegible] Accountant—J Parker, Warwick [illegible] Plumber—Benjamin Parker, Lavender Road, Battersea, Builder—[illegible] Lancashire, Joiner—C [illegible] Hampstead, Essex, Builder—[illegible] Manchester in Marsh, Worcestershire, Shoemaker—[illegible] Yorkshire, Joiner—H Smith, Leicester, Painter—[illegible] Paper Dealer—H Tomkins, Highley, Shropshire, Mariner—W Tate, Leeds, Overlooker in a Silk Manufactory—J. W. Tatham, late of Bayham Street, Camden Town, Photographer—G Thomas, Pontnewydd, Monmouthshire, Innkeeper—G. Thacker, Bradford, Yorkshire, Greengrocer—J Wilson, Pleasant Row, Holloway Road, Grocer—D Wilson, Capel, Surrey—M Walmsley, Rochdale, Innkeeper—W Williams, Merthyr Tydfil, Glamorganshire, Hawker—G. Waldram, Leicester, Wheelwright—J Watson, Rhuabon, Denbighshire, Shoemaker—W W[illegible], [illegible]ham, Journeyman Silversmith—E. Westwood and J Westwood, Smethwick, Staffordshire, Master Grinders.

SCOTCH SEQUESTRATIONS.—W Brown, Lanark, Grocer—R [illegible] Coal Merchant—R Gall, Glasgow, Cabinet Maker—J Lord, Watermarket Mills, near Edinburgh, Miller—R. Morrison, North-[illegible], General Merchant—H. L. Schweitzer, Glasgow, Yarn Merchant.

TUESDAY, Dec. 20.—BANKRUPTS—E. T. Ashley, Whitchurch, Shropshire, Innkeeper—J Ainsworth, Birmingham, Painter—W Ainsworth, Westhoughton, Lancashire, late Engineer—W. Bell, Littleport Fen, Cambridgeshire, Grocer—W. Brandon, Winlaton, Durham, Blacksmith—A F Beckwith, Clarendon Villas, Walthamstow, Schoolmaster—J J Bennett, [illegible] Hill—S Barker, St John Street, Smithfield, [illegible]—T J Coleman, Coventry, Plumber—R G. Coleman, Philpot Lane, City, Ship and Insurance Broker—G Clay, Adam's Court, Old Broad Street, City, Bill Broker—J Drake, Queensbury, Yorkshire, Builder—Joseph Dodgshun, late of Old Broad Street, City, Merchant—Robert Dixon, Bishopwearmouth, Durham, Sawyer—Arthur Dawson, Brick Lane, Spitalfields, Oil and Italian Warehouseman—R Dawman, Pancras Lane, Bucklersbury, Merchant—G Emden, Moorgate Street, Accountant—J. Foster, Newcastle-upon-Tyne, Commission Agent—Benjamin Gale, Kington, Saint Michael, Worcestershire, Baker—John Hoy, Worcester, Fishmonger—J. A. Haynes, Leman Street, Goodman's Fields, Trimming Seller—T Hayes, Cheddar, Somersetshire, Baker—W Hughes, New North Road, Hoxton, late Butcher—G Hobson, Mosborough Road, North, Hammersmith, Grocer—M Hazzledine, late of Brockmoor, Staffordshire, Licensed Victualler—J Hobson, Willcot Place, Kennington Road, Lambeth, Upholsterer and Undertaker—H. King, Southampton, Innkeeper—F Kennedy, Belgrave Street, Euston Road, Warehouseman—J Lord, Manchester, Commission Agent—G Lever, Bawtry, Yorkshire, Grocer—W H Lyons, Bromsgrove, Worcestershire—W Mantle, late of Walnut Tree Walk, Lambeth, Baker—J Mears, Ledbury, Notting Hill, Commission Traveller—S Morgan, late of Pencarry, Carmarthenshire, Innkeeper—J J Norrington, Leader Street, Chelsea, Baker—W. Nicholson, Carlisle, Corn Merchant—J Newsham, Burnley, Lancashire, Confectioner—J Oliver, Aston juxta Birmingham, late Engraver—W. O'Callaghan, Liverpool, General Dealer—A B. Ottaway, late of Princess Street, [illegible]—G H Paton, Westerham, Kent, News Agent—J. Parry, Charles Street, Old Kent Road, Stonemason—G Perrin, late of Hickman's Folly, Duckhead, Confectioner—W. V Peters, Plymstock, Devonshire, late Baker—W. J Patterson, York, Private Tutor—T. H. Reynolds, Swindon, Wiltshire, Cowkeeper—J. Read, Linford, Leicestershire, Wheelwright—J Rushbrook, Carnaby Pasture, Yorkshire, late Trainer of Racehorses—T Robinson, Shaw, Lancaster, Joiner—W. B. Rogers, Maidstone, Bricklayer—D Rushworth, Bradford, Yorkshire, Coal Agent—G G Rogers, Sheffield, Coach Builder—R.W Sykes, Bedford, Yorkshire Tailor—S. Stearn, St. Michael's House, Cornhill, Merchant—James Spencer, Loughborough, Leicestershire, Beer-house Keeper—W. Smith, Aberford, Yorkshire, Potato Dealer—J. Swindell, Woodfield Place, Harrow Road, Paddington, late Baker—J. Strong, late of Waterloo Road, Beer Retailer—Edward Scally, late of Fitt's Rents, Reeve's Place, Hoxton, Stonemason—Joseph Stoddart, Chilwell, Nottinghamshire, Stonemason—William Sinnett, Gravesend, Barge Master—W Scotland, Hampton, Middlesex, Carpenter—W J. Thomas, late of Llanelly, Carmarthenshire, Tanner—H J. West, Northend, Fulham, Clerk—J. S Whitaker, Carlinghow, Yorkshire, Journeyman Dyer—J. Woolley, Hyde, Cheshire, Farmer—J. S. Wagon, Great Grimsby, Lincolnshire, Grocer—W. Wyatt, Hagley, Worcestershire, Relieving Officer—J Walch, jun., Ainsworth, Hampshire, Carpenter—J. Williams, Merthyr Tydvil, Glamorganshire, Greengrocer—J Webster, Pudsey, Yorkshire, Tailor—J Walker, colne, Lancashire, Yarn Dealer—J. Woodcock, Harlaxton, Lincolnshire, Cottager—J. A. Young, Shooter's Hill, Kent, late Surgeon.

SCOTCH SEQUESTRATIONS.—A. Logan, Glasgow, Baker—T. M'Nab, Stonebrae, Perthshire, Farmer—J. Munn & Co., Glasgow, Manufacturers—W Halliday & Co., Bonnington, Edinburgh, Skinners—J. M'Kay, Forres, Elginshire, Miller—Stirling, Gordon, & Co., Glasgow, Merchants—J. Ross, Duffus, Elginshire, Agent.

Metropolis and its Vicinity.

Address to President Lincoln.—A deputation from the Emancipation Society waited upon the American Minister a few days since, at his residence in Portland Place, to present to his Excellency, for transmission to the United States, an address congratulating President Lincoln on his re-election, and praying that his exertions may shorten the duration of the war, and thoroughly purify his country from the crime and curse of slavery. After complimentary speeches from several members of the deputation, Mr. Adams replied as follows:—

"Mr. Chairman and Gentlemen,—I receive the address which you are pleased to commit to my care with great satisfaction. Coming as it does from an association of such respectability in this kingdom, it cannot fail to be regarded in America as a strong proof of the friendly interest taken by a considerable portion of the English people in the welfare of the United States while passing through their great perils. This will do great good, for I cannot disguise from myself or from you the painful fact that an opposite disposition has been manifested here in very influential circles, and that the knowledge of this has given rise to a general impression among my countrymen that the whole British nation really desires the disruption, and consequent downfall of the power of the United States. Hence has sprung up a corresponding degree of ill-will, which bids fair, if not counteracted, only to increase with time. If such passions be permitted a full indulgence between two nations, it needs little sagacity to foretell that, in the long run, the end is war. Very fortunately for us all in the present case, the demonstrations already made by yourselves, and many other associations whose friendly communications from various portions of the kingdom I am now continually receiving for transmission to America, will enable those who value the blessings of peace and international amity to prove that, whatever may be the hostility of some, it is by no means shared by the greater number of the British people, and ought not to be presumed to be a national impression. Permit me further to observe that the election to which you refer in your address has drawn out as full and general an expression of the opinion of the whole people of the region in which it has taken place as has ever been the case in the most peaceful times. Never was a canvass more perfectly free, nor more latitude taken in the discussion of public questions and of the characters of public men. Under those circumstances it is needless to point out to you how mistaken have been the notions of some that any essential variation has taken place in the general operation of free institutions in all that portion of the United States, constituting much the greatest part, but immediately the theatre of the war. I would further beg leave to call your attention to two points which the history of the late election appears clearly to establish. The first is the practical impossibility of making any effective separation of the personal and political interests of the two sections of America now involved in this deplorable struggle. This is indubitably shown by the fact that at no time in our history has so direct and persistent an effort at interference to control the event of the election of President been made by the people of the insurgent States as upon this last occasion, while they profess—and doubtless honestly—their desire to separate themselves wholly from it. The notorious projects devised by some of their agents at Niagara Falls in the autumn, followed as they were by the nomination at Chicago of a candidate for the Presidency committed to a policy dictated by that portion of the people well known to be most in sympathy, if not in absolute communication, with them, furnish evidence enough of this truth, if the same were not confirmed by the regrets unequivocally expressed since by certain prominent leaders in the Southern States at the failure of their expectations from that nomination. This shows that, whatever might be the sincerity with which either portion of the country might act in the supposition that it should consent to pledge itself to a complete separation, the fact that the political interest of the two are inextricably intertwined will, under every possible circumstance, render all such promises in practice futile and void. The second point to which I would advert is naturally suggested by the first. It is this—that the only real question of difference between the two parties in the election was that which directly involved the interests of the slaveholding insurgents, much more than those of the loyal States. The nomination at Chicago rested on an implied, if not an express engagement, to protect domestic slavery so far as not to make it a question in any plan of pacification or restoration of the Union. The policy of the Government, on the other hand, was well understood to be a restoration of the Union as a primary object, but the settlement of the slave question as a necessary preliminary to a durable re-establishment of peace. If this be a correct statement of the issue, it can be no cause of surprise to find the insurgents straining every nerve to bring about a result favourable to their interests. It was then the fate of slavery that made the turning point in the great decision to be made by the people of the United States on this occasion. If this be so, the result is one in which we may be permitted all to rejoice in common. It has continued a Government which had already done much towards emancipation in the progress of the war, and which might be depended upon to go on doing more, in proportion as matters should approach more nearly the great end of its perfect work. I will conclude, then, with the expression of a hope that, without regard to national distinction, all good men may have cause to rejoice in the termination of this melancholy struggle, if that end be at once the confirmation of a free Government in America, and the eradication of the most formidable evil with which its progress has been heretofore cursed."

The Ranelagh Sewer.—At the last meeting of the Metropolitan Board of Works, it was resolved to take immediate steps for covering in the Ranelagh open sewer at Paddington.

New Orphan Asylum.—A meeting was held at the Mansion House a few days since, the Lord Mayor in the chair, in support of a project for the establishment of a new asylum, to be called the Albert Orphan Asylum, to be erected on Bagshot Heath. It is proposed that the asylum, when complete, shall contain 1000 orphans, and that the subscribers shall elect the children without being subject to the annoyance of a canvass.

New Names of Streets.—The Metropolitan Board of Works on the recommendation of the Building Act Committee, has resolved that the thoroughfare extending from Rose Street on the north-eastern side, and from King Street on the south-western side to Long Acre, in the parishes of St. Paul, Covent Garden, and St. Martin-in-the-Fields, be renumbered; that the names King Street and New King Street be abolished; and that the line of thoroughfare be named Garrick Street; and also that the line of thoroughfare between Newington Causeway and Harper Street, now known as Union Road and Horsemonger Lane in the Borough, be all called Union Road.

General Tom Thumb at the Crystal Palace.—General Tom Thumb, Mrs. Stratton, and their infant daughter, with Miss Minnie Warren and Commodore Nutt, made their first appearance at the Crystal Palace on Monday, and were very well received by an immense concourse of visitors. Several children occupying places in the reserved seats were placed beside them by way of contrast. The levee lasted about half an hour. On Tuesday they held a levee in the Board Room of the Palace, when they appeared in the dresses worn at Tom Thumb's wedding; after which they showed themselves to the general visitors as they did on Monday. On Wednesday Commodore Nutt appeared in uniform, and also in the character of an Irishman, with a comic song. The whole party waltzed and promenaded the stage. The receptions have since continued daily, and will be concluded this afternoon.

Anti-Tobacco Society.—The Secretary of the British Anti-Tobacco Society was brought before the magistrate at Westminster Police Court on Monday on the charge of having attempted to extort money by menaces from a gentleman who had been smoking on the Barnes platform of the South-Western Railway. The special menace charged was said to consist in a letter sent to the gentleman, who was a clerk in the War Office, intimating that legal proceedings would not be taken against him if he confessed his fault, and paid 40*s.* to the informer. The magistrate held that the offence was not legally proved, as the law required that money should be positively demanded, while here the payment was only suggested. The summons was therefore dismissed. At the same time he suggested that it would be an improvement if the name of the Society were changed to the Anti British-Tobacco Society.

The late Explosion at Erith.—The good effects of the alarm arising from the late powder explosion are already manifest. Two men were brought before the magistrates at Stratford on Monday, charged with putting powder on board a ship while she was being towed down the river by a steam tug, and were fined, as this was the first time the law was enforced, in the mitigated penalty of 10*s.* and costs, with an intimation that in future the penalty would be more severe.

Charge of Scuttling a Ship.—Two men, named White and Sutton, who have been for some time in custody on the charge of scuttling the ship [illegible] of Newcastle, of which they were master and mate, were brought up on remand before the Lord Mayor on Friday for final examination. It was proved that the ship ran upon a reef of rocks in the Baltic. A carpenter deposed that she made no water until, by the direction of the prisoners, bored several holes in her bottom. The Lord Mayor committed them for trial, and refused bail.

The Late Murder of Mr. Briggs.—The case of Matthews, the cabman, was before the Bankruptcy Court a few days since. He was opposed by some of his creditors, but the Registrar ordered his release from custody, remarking, with regard to the murder expected in the affair of Mr. Briggs's murder, that application were made to Scotland Yard, Matthews's share in the reward would no doubt be assigned for the benefit of his creditors.

The Public Health.—The Registrar-General's Return states that the deaths in London in the week that ended Saturday December 17, were 1449. The average number in the corresponding week of the 10 years, 1854—63, corrected for increase of population was 1434. The present return is therefore 15 above the average, a great improvement over the last the preceding five weeks. During the week there were of 951 boys and 1001 girls, in all 1952 children registered in London. In the 10 corresponding weeks of the years 1854—63 the average number was 1967.

Provincial.

Chelmsford.—The High Sheriff of Essex has appointed Wednesday, the 28th inst., for the execution of Francis Wane, who was convicted last week of the murder of Emily Blunt, at Chadwell Heath. The culprit has confessed his crime, and made various statements confirmatory of the evidence adduced at the trial. He exhibits a lamentable state of ignorance and is unable to write or read.

Gateshead.—On Sunday morning a shocking murder was committed at the Spen, six miles from this town. On the previous day a pitman, named Matthew Atkinson, working at Garesfield Colliery, had been to a pigeon shooting match; and returned home, a little after midnight, drunk. His wife, who was very unwell, was then in bed, it is supposed drunk. They quarrelled shortly after he entered the house, and screams were heard from the cottage, but as they were always quarrelling on pay nights, the neighbours *did not* pay attention to them at first. At length, however, the screams became so agonising that several persons went to the door and could hear Atkinson beating his wife with the fire-irons. They attempted to force an entrance, but Atkinson threatened to shoot the first who entered his house. He came out shortly afterwards and walked about for a quarter of an hour talking to the neighbours. At the end of that time, with an oath, he said he would go back and finish his wife. No one stopped him, and he resumed his attack upon her, and continued to beat her until he found that she was dying. This appeared to have satisfied him. He then called in the neighbours, who found his wife upon the bed; but she expired in a few seconds. Atkinson was at once apprehended and removed to the lock-up at Blaydon-on-Tyne. The body of the murdered woman was shockingly bruised.

Manchester.—At a meeting of the Central Executive Relief Committee on Monday, Mr. Commissioner Farnall reported a decrease of 5503 in the number of persons receiving relief between the 19th November and the 10th inst. Ashton, Haslingden, Stockport and Burnley exhibited the largest decrease. Grants were made to the amount of 9500*l.* The Honorary Secretary reported that 273*l.* 4*s.* 6*d.* had been received during the last three weeks, and that the balance in the bank was 78,611*l.* 10*s.* 2*d.* He also reported on the defalcation of 2044*l.* in the moneys intrusted to Mr. Paine, the treasurer of the Hulme Relief Fund, and read a letter from the local secretary stating that the committee, acting under legal advice, have resolved to prosecute Mr. Paine, and have pledged themselves to use every effort to raise the amount deficient. The Central Committee then adjourned for a month.—On Saturday evening Mr. Samuel Crowther, pilot engraver, and his son, were killed by an explosion while the former was manufacturing gas from manganese and chlorate of potass. At the inquest on Tuesday it appeared that he was making the gas for Mr. Morgan, optician, the manganese he was using having been obtained from Mr. Hughes, chemist. Professor Hodges deposed that he had examined this manganese, and that it contained 25 per cent. of pulverised coal or soot, which would render the mixture of the manganese with chlorate of potass as dangerous as gunpowder. The jury found a verdict of Manslaughter against Mr. Hughes, and the coroner committed him for trial, but admitted him to bail.

Newbury.—On Saturday Mr. Murray, Assistant Under-Secretary at the Foreign Office, met with a serious accident at Aldermaston Court, while out shooting with Mr. Higford Burr and a party of friends. One of the party accidentally discharged his gun, and

... shots lodged in the left eye of Mr. Murray. ... was brought to town on Monday morning ... medical advice, and in order to save the remain... injured one was removed. The operation ... entirely successful, and Mr. Murray is doing well.

NEWCASTLE ON TYNE.—On Saturday morning an ... robbery was committed on the premises of ..., jeweller and watchmaker in Grey Street. ... effected an entrance from behind the ... by forcing the door with the aid of crowbars, ... the shop of rings, brooches, chains, ... and every description of jewellery. They got ... with the stolen property, which was worth ..., but they left behind them a full set of ... implements.

... —Sunday and day schools have been com... this city by Brother Ignatius and the ... of the English order of St. Benedict. Great ... are making by the monks for the celebra... services at Christmas, and it is said ... these occasions a charge of 2*s.* 6*d.* will be made ... into the chapel, and 1*s.* 6*d.* for permission ... the courtyard. A house is understood to have ... in the Cathedral Close for a Benedictine ... The nuns will live a cloistered life, but ... what is known as the third order will mix to ... extent with the world and undertake out-door ... The Rev. E. A. Hillyard has received from ... Law Board a final dismissal from his office as ... to the Norwich Workhouse. It is said that ... has been adopted in consequence of Mr. ...'s neglect of his duty at the workhouse, and ... consequence of his identifying himself with ... Ignatius. This matter the Poor Law Board ... to be dealt with by the Bishop. Mr. Hillyard's ...ings at the Church of St. Lawrence continue to ... a very high order, but he still contends that he is ...ating the discipline or ritual of the Church of ...and.

...ADING.—The Bishop of Oxford presided at a ...ting held in this town on the 12th inst. in aid of ... Society for the Propagation of the Gospel, and ... as follows on the duty of England towards ... —

"... who had at all reflected upon the period of history ... allusion had been made—the time of Alexander the ...—would see in what happened then a remarkable instance ... must be done if this country was faithful in its obliga... Alexander the Great was no vulgar slayer of men. It ... him as if God hardly ever raised up such a man, ... such great aspirations, and formed such wonderful ... It was perfectly clear, as they looked at what he ... and what he planned, that he intended, through the ...ority and power of Greek civilisation, to unite, as it ... into one empire the East and the West, marrying ... Indian wealth and Greek genius, and so bringing ... into one organised empire, civilising the East ... the *instrumentality* of the West. The situations ... chose for the cities were the leading points of the whole ...try; places naturally adapted as emporiums of com... ... upon which natural force would station ... from which the whole empire could be governed. ... provided for the marriage of his Grecian subjects ... the people of those distant parts, and he got the sol... ... he placed there, by offering them great rewards ... encouragement, to marry the native women there, in ... that it might not be a mere settling of foreigners in ..., but that it might be a taking up of Grecian civi..., and a reproduction out of the native materials of ...cian civilised world which he intended to spread ...out the East. But he whose mighty intellect had ... that great plan, and whose great arm could alone carry ... died of the Babylonian fever, caught in the marshes of ... land, his body being predisposed to it by the ... in which he indulged even in the civilisation of his ... By that event the civilisation of the East, through ... art and Grecian arms, was postponed; and now God ... to this land of ours, not only the like, but even a far ... power than even that mighty conqueror possessed of ... the true seeds of civilisation throughout that vast ... Far above the plasticity of Grecian genius—far ... the power of Grecian art—far above the influence of the ... language, which was to leaven the East, was the ... power of the Prince of Peace, and on the leavening ... of the everlasting Gospel and the blessed language of ... Eternal Truth in the hands of this nation of England ... the destinies of the East; because it, and only ... present, could bring thoroughly to bear upon ... Eastern mind its leavening power and its subduing ... And how had Great Britain hitherto fulfilled ...gations? Comparison was most humiliating if they ... at the way in which France had taken possession ... great tract of land, Cochin-China, and was pro... ...ying the foundation of a great French dominion. ... was a most striking feature to his eye that France had ... by avowing openly her Christianity, and made the ... persecution of her own faith the occasion of entering ...land. If they compared that with their own country ... and asked if she avowed her belief in the face of ... objects, they would find that she had been afraid ... it came to the question of whether she should avow her ... in her crucified Lord in the face of her Eastern multi... Now, the excuse made was that the Government of ... was not, in point of fact, in Christian England, but in a ..., body, and that commercial body naturally regarded ... more than any other consideration, and the fact ... great company was governed almost exclusively ... its early years by Scotch rather than by English ... and so was connected with Presbyterianism and not ... the English Church, that prevented the spread of ...ianity in India. That difficulty was removed, and ... was now part of the British Crown and was governed in ...'s name. Again, not very long ago all missionary ... of a direct kind was excluded from India. ... was at an end, and the vast country was ... to every lawful attempt to spread the Gospel, but ... not by force, or by giving temporal advantage to ... or by any such miserable means, to attempt ...read Christianity. And there could be no blessing ... such efforts. They desired neither to force the heathen ... into Christianity, nor cheat them into Christianity, nor ... them into Christianity. But here was where he thought ... offence as a nation had been. It was this,—they had ... indifferent to their own faith themselves, or fearful ...owing to that great Eastern dependency their real affec... ... for their faith, and that Christianity was the life, the governing power, and the heart of everything that was great in Britain. The timidity of the governing Power even to acknowledge its own faith had been a hindrance to the spread of the Gospel, and if that was so, and this trust was continued to England by a renewed lease, as it were, for the very purpose that she might undo the evils of the past, and if she be God's chosen instrument for spreading Christianity throughout the world, what was their duty? They had educated to a large degree the people of India; and what, he would ask, did they mean by that? They had taught them enough to shake their belief in their own ancient systems of unbelief. They had given them works of English Deists and deniers of Christianity in abundance, and taught them how to read and understand them. There had grown up in the masses of the population of Hindostan, through England's instrumentality in a great degree, a people of unbelievers, instead of a people of misbelievers. Well, then, what was to be done? What could a meeting like that do? It could do much. If every man and woman present was persuaded of this great truth, that they had a charge from God as for India, and would not rest until they knew they had done something towards its Christianisation, and allowed it to settle down in their hearts as an abiding principle, but let it come out in their prayers and in their actions, and spoke to one another as men did upon things that they cared much about, and felt that ruin must come from a neglect of their duty, they would begin to generate about them an interest in this question which would go far in leading to a redress of the wrong."

SHREWSBURY.—A serious accident occurred to Captain Dod, of "Dod's Peerage," on the 15th inst. He was for the day a guest of Mr. Barnes, M.P., at the Quinta, situated within two miles of Captain Dod's residence at Nant Issa. A shooting party having been organised by young Mr. Barnes, Captain Dod joined it, and while walking along with the muzzle of his gun downwards it is supposed that the trigger caught his watchguard, for in altering its position the gun was discharged, and the contents were lodged in one of his legs. He was promptly attended by two surgeons, who found it necessary to amputate the leg on the following morning.

TIPTON.—One of the enginemen engaged at Gospel Oak Colliery was sent to prison on Friday, for placing in jeopardy the lives of about 60 men. He had neglected to examine the boiler as he ought to have done, and on Friday morning, when about 60 miners were waiting to go down the pit, the boiler plates were seen to be red hot, and it is considered almost a miracle that no explosion took place.

YORK.—Alice Wilson, who was sentenced to death at the assizes on the 12th inst. for the wilful murder of her child at Howden, by suffocating it in a pig-stye, but recommended to mercy by the jury, has been respited during her Majesty's pleasure, and her sentence will be commuted to penal servitude for life.

Ireland.

GREAT TRIAL FOR LIBEL.—The Irish Court of Common Pleas was occupied during the whole of last week with an action for libel which created extraordinary interest in Dublin, and was argued with great eloquence by the advocates engaged. It was an action for libel, brought by Miss Travers, the daughter of Dr. Travers, Librarian of Marsh's Library, against Lady Wilde and her husband, Sir William Wilde. Both the ladies were distinguished for their literary attainments, and the position of the parties in Irish society naturally added to the interest of the cause. Lady Wilde was the sister of Judge Elgee, of Louisiana, whose death we noticed last week, and under the *nom de plume* of "Speranza," wrote for the Young Ireland party in '48, their patriotic poems and songs, one of which was so decided in its tone that part of the indictment on which the leaders of that movement were tried, was founded upon it. The case as presented to the jury was briefly as follows:—In 1854 Miss Travers, being then 19 years of age, had occasion to consult Sir William, then Dr., Wilde, an eminent oculist and aurist practising in Dublin. Being the daughter of a medical man, she was considered as a gratuitous patient, and an intimacy of a very singular character, considering that Sir W. Wilde was a married man, sprang up between them. They saw each other often, and letters constantly passed between them. Miss Travers's means were limited, and in 1859 Sir W. Wilde lent her small sums of money, took her watch out of pawn, and made her occasional presents. In the early part of 1862, Miss Travers alleges that while she was in Sir W. Wilde's study he caught her in his arms and refused to release her until she called him by his Christian name. She took offence at this, and returned to him unopened a letter he sent her on the following day; but shortly afterwards the intimacy was resumed on its former footing, and in the May of that year Miss Travers was present at an entertainment given by Lady Wilde. In the interim Miss Travers went to Liverpool with the intention of going to Australia, having borrowed 40*l.* from Sir W. Wilde for that purpose. She changed her mind, however, and returned to Dublin. A day or two after having been Lady Wilde's guest she paid that lady a visit, and, without invitation, went up to her bed-room. Lady Wilde was annoyed at what she considered an intrusion, and, having expressed herself to that effect, Miss Travers left the house in no amicable mood. Shortly afterwards she made an arrangement to take Lady Wilde's children to church, but, being behind time in her appointment, found that the children had gone to church with some one else. These two events, though trivial in themselves, are material so far as they show the only grounds of pique between Miss Travers and Lady Wilde. In October of the same year the event took place which gave to the trial its distinctive colouring. In that month Miss Travers swears that she was violated by Sir W. Wilde under the influence of chloroform in the room in which he was accustomed to receive his patients, and in the house in which his wife was living. She said that she told no one of the outrage to which she had been subjected, but nevertheless, on recovering from her unconscious state, she from that hour vowed vengeance against him. The intimacy, however, between her and Sir W. Wilde did not terminate. Letters continued to pass, loans of money were made by Sir. W. Wilde, and Miss Travers continued to visit him in his study. The character of the intimacy, however, speedily changed; angry altercations took place; and on one occasion Miss Travers swallowed, in Sir W. Wilde's presence, a dose of laudanum which would in all probability have killed her if an emetic had not been administered. Then began the realisation of her schemes of vengeance. She published a pamphlet in which, under assumed names, she told the story of her wrongs, but at the same time made no secret that the hero was Sir W. Wilde, and that the heroine was herself, and she publicly defied Sir W. Wilde to bring an action against her for libel. Lady Wilde, who was never pretended by Miss Travers to have injured her, was lampooned equally with her husband; and the *nom de plume* of "Speranza," under which she had been accustomed to write, was attached to broadsheets and tracts conveying the most scandalous imputations on her husband. Irritated by the constant receipt of these libels, Lady Wilde on the 6th of May, immediately after a most offensive placard had been thrust into the hands of one of her children in her own hall, wrote an indignant letter to Miss Travers's father complaining of his daughter's conduct. In this letter she professed to inform Dr. Travers of the "disreputable conduct" of his daughter, alleging that Miss Travers "consorted with all the low newspaper boys in the place," and employed them to disseminate offensive placards, and "tracts in which she made it appear that he had had an intrigue with Sir William Wilde." The letter went on to state that the object of Miss Travers in these proceedings was to extort money, but that "the wages of disgrace she had so basely treated for and demanded should never be given to her." In this note it was charged that the libel lay, and damages were laid at 2000*l.* The defence was that Lady Wilde had ample warrant for the remonstrance she had addressed to Miss Travers's father. The evidence and addresses of counsel on both sides were protracted through the whole week, and on Saturday afternoon Chief Justice Monahan summed up. He censured the correspondence which Sir William Wilde, a married man, appeared to have entered into with Miss Travers, but reminded the jury that the case they had to try was only whether the letter written by Lady Wilde to the plaintiff's father was a libel or whether it was a privileged communication. He gave his opinion that the letter amounted to libel, but if the jury agreed with him they would say how far the provocation received by Lady Wilde went in reducing damages. After a deliberation of two hours the jury returned a verdict for the plaintiff—damages, one farthing and costs.

THE DUBLIN SEWAGE.—The utilisation of the city sewage was brought before the Corporation on the 8th inst. by Mr. M'Clean. Nearly all the sewers of the city on the north and south sides are now emptied into the Liffey. When the tide is out it becomes a canal of black mud, the smell of which is most offensive, especially in summer. The miasma arising from it produces typhus, a disease which the officer of health states to be prevalent at the present time along the banks of the river. When the tide is full the filth is sent back through the sewers, and this is a source of disease as well as inconvenience to the inhabitants of the streets near the quays. The evil has now become quite intolerable, and it has been accordingly determined to construct intercepting sewers, so as to make the Liffey as pure as the Seine, which will be the more easily done, as there is a line of quays on each side of the river. The next thing was to utilise the sewage. The case of Edinburgh was referred to in order to show the immense value it gave to land, producing on an average eight crops of hay in the year, and raising land from 5*s.* to 30*l.* an acre. Dr. Cameron estimates the sewage of Dublin at 100,000*l.* a year. Messrs. Barrington and Jaffers have proposed to construct the intercepting sewers by means of a company, without any risk to the Corporation, which would have a portion of the profits under certain contingencies. The committee received the proposal with satisfaction. Mr. John Norwood, barrister, a new member of the council, moved an amendment, laying down the conditions on which the concession should be made to Messrs. Barrington and Jaffers, the object being to protect the Corporation from liability in connection with the works, and to prevent injury to the health of the community from the deposits of sewage in depôts, &c., by the proposed company; the conditions to be arranged by a committee of the whole house. This amendment was unanimously adopted.

Scotland.

THE YELVERTON MARRIAGE CASE.—The Court of Session on the 10th inst. gave judgment on the petition of

Major Yelverton to have the recent judgment of the House of Lords in his favour put into force, and on the application of Mrs. Longworth Yelverton to have the judgment suspended and the whole case reopened by the reception of new evidence. All the four judges—the Lord President and Lords Curriehill, Deas, and Ardmillan—were unanimous in rejecting the application of the pursuer, chiefly on the ground that the new evidence proposed to be offered was not of such a character as was likely to induce the judges in the House of Lords to alter the decision they had already given in the case; and it was also urged by Lord Ardmillan, on the authority of Lord Brougham, that the judgment of the House of Lords could only be altered by Act of Parliament. There was therefore no alternative but to apply the judgment of the House in accordance with the petition of Major Yelverton. The Lord Advocate, who appeared for the pursuer, then said that, before the judgment of the House of Lords was applied, he should move that a minute of reference be made to the oath of Major Yelverton with a view to still having the judgment suspended and the whole case reopened. The Solicitor-General, on behalf of Major Yelverton, objected to this, as no notice of such a motion had been given, and he was not prepared to oppose it. He submitted that the only matters before the Court were the petition of Major Yelverton and the application of the pursuer, and he therefore asked their lordships to pronounce judgment in accordance with the opinions they had already delivered. After some discussion on the point, it was ultimately decided that effect should at once be given to the judgment of the superior court, and the Lord Advocate, on the suggestion of the Lord President, agreed to give in a note asking leave to make the motion he had proposed. On the 13th the Lord Advocate lodged the minute of reference to oath of Major Yelverton, and a note was also lodged by counsel for the defender applying to allow the minute to be seen. The minute and note were referred without discussion to the summer roll.

MURDER AT DORNOCH.—The county of Sutherland was last week, for the first time for many years, disgraced by a murder rivalling in atrocity most of those that of late have been committed. Between 2 and 3 o'clock on Saturday morning a young married man, named Alexander Ross, a native of Dornoch, while in a state of intoxication, went to the house in Dornoch occupied by Mrs. Sutherland and others, and alarmed the inmates by drawing up the lower sash of a window in the house. In the room there were two persons sleeping, Mrs. Sutherland and a young girl. The latter escaped by a back window in her night dress on hearing the noise, and running to the next house, alarmed the inmates, who had recently gone to bed. While raising the alarm, the girl observed a light in another house, and running there, obtained entrance, and apprised the inmates that a man had entered the house of Mrs. Sutherland, and was then in it. For some unexplained reason no one went to Mrs. Sutherland's assistance, nor was the girl allowed to go to the house till nearly 6 in the morning, the hour of the north mail's arrival, when the master of the house to which the girl ran went and informed a relative of Mrs. Sutherland's of the girl's statement. Both then went to the house, and, forcing open the door, found Mrs. Sutherland lying on the floor in her night-dress, dead, and Ross lying by her side asleep. Ross was immediately taken in charge, and has since been committed to prison. He gives no intelligible account of himself, but it is believed that while under the influence of drink, and ignorant of the hour, he had gone to the house to visit the girl, with whom he had some previous acquaintance. The body underwent a *post-mortem* examination by two medical men, who have reported that Mrs. Sutherland, who is 75 years of age, died from violence.

MEMORIAL TO LORD CLYDE IN GLASGOW.—At a meeting of the committee of the Lord Clyde Memorial, held in Glasgow on the 14th inst., it was unanimously agreed to commission Mr. Foley to execute a bronze statue of the late Lord Clyde, to be placed in George Square.

PRICE OF LAND IN SCOTLAND.—Mr. Horsman, M.P., the present lessee of the Glenfeshie shootings, has purchased the fine property of Alvie from the trustees of the late Mr. Baillie of Kingussie for 20,000*l*. A few years since Mr. Baillie purchased the property from the late Duke of Gordon for 6500*l*.

Railways.

FATAL ACCIDENT IN THE BLACKHEATH TUNNEL.—On Friday afternoon a frightful accident took place on the North Kent line, by which five persons were killed on the spot and several others severely injured. A ballast train was passing through the Blackheath tunnel on the up line, when six trucks at the end became detached, and remained in the tunnel while the rest of the train proceeded on its journey. Shortly afterwards the express train which left Maidstone at 2.20, entered the tunnel at a speed of nearly 30 miles an hour, and dashed into the trucks of the ballast train which had been left behind. The trucks, upon which there were six or seven platelayers, were crushed up one on the other. The engine and tender of the express were thrown over on their sides, and the brake van following the engine, with the first two carriages, were capsized and nearly shivered to atoms. Five of the platelayers on the trucks were killed on the spot, the driver and fireman of the express were found under the engine so frightfully scalded and burnt, that the fireman has since died. The following passengers were seriously hurt:—Mrs. Gembling, of 32, Hereford Street, Portsea, was greatly shaken, and as she is near her confinement, danger is feared in consequence. Mrs. Ely, of Walthamstow, received a compound fracture of the right leg and frightful contusions of left leg and head. Mrs. Caroline Browning, of 7, London Wall, had concussion of brain. Miss Louisa Price, of Effra Road, Brixton, had fractured scapula and ribs and severe internal injuries. Miss Jane Price, aged 25, of Union Square, Trinity Square, had her leg fractured. Mr. Eric Windus, of 23, Terrace, Greenhithe, received severe contusions of left leg and arm, and Mrs. Windus, his wife, fracture of the right leg and severe injury to the left knee, and was also much bruised about the body and face. She also is far advanced in pregnancy. Miss Gillingham, of Forest Hill, sustained a fracture of the leg. John Cullin, of Charles Street, Peckham, had both legs broken, and it is expected that he will have to submit to amputation of both limbs. Mr. Joseph James Albert, of 14, Upper Porchester Street, Hyde Park, had his legs and ribs injured. Dr. Browne of the War Office was severely injured internally and is now lying at the Golden Cross, Strand, in a precarious state. Mr. E. G. Mayers and Mr. J. Hockley, also of the War Office, were crushed with others among the *débris*. Mr. Mayers' sustained a fracture of the left leg, severe laceration of the right leg, and contusions on the back and body. Mr. Hockley suffered severe contusions on the knee, besides other injuries of a more or less serious nature. The head guard had a narrow escape, as his brake was all but smashed, and though much injured, he is not dangerously so. The under guard was severely shaken and contused. Up to midnight on Friday the engine had not been removed from across the lines, so that the traffic was not resumed until late on Saturday. The coroner's inquest on the platelayers who were killed was opened on Monday at Blackheath, and that on the fireman who died subsequently was opened on Tuesday at Woolwich. After some formal evidence had been taken, both inquests were adjourned for a fortnight.

COLLISION ON THE GREENWICH.—On Monday morning a collision occurred on this line, and, like that of Friday in Blackheath Tunnel, through a failure in the signalling. The scene of this accident was the junction where the Greenwich line diverges between London Bridge and New Cross, at which spot, shortly before 8 o'clock, an engine was on the up-line preparing to run on the metals of the North Kent, when the passenger train from Greenwich came up and ran into it. The driver and stoker of the passenger train and some of the passengers were much injured, and it was rumoured that one of the men on the other engine was killed. The driver and stoker were conveyed to Guy's Hospital, where they still remain. The accident is said to have been caused by the signal "All clear" having been given at the last point which the passenger train passed, and the driver was proceeding in perfect security through a dense fog until the moment when the collision took place. A large body of men was employed till dark in repairing the damage done to the line, but the traffic was resumed soon after the accident.

COLLISIONS ON THE GREAT WESTERN.—On Thursday morning an alarming collision occurred at the Slough Station of the Great Western. Between one and two o'clock in the morning a goods train was shunted from the main line to a narrow-gauge line in the centre of the station, but the points which had been closed to admit its passing were left in that position. A parcels train which had to pass the station without stopping came up shortly afterwards at the rate of 30 miles an hour, passed upon the mid line, and dashed into the stationary train. Several waggons of the goods train were crushed or broken up, and their contents scattered over the line. A second-class and composite carriage of the parcels train had their sides nearly smashed in, the glass and windows being entirely destroyed, while the large break van was crushed like an egg-shell, and ultimately got off the rails into the six-foot, when it stopped. The works on the side of its engine, where it had dragged against the goods train, were nearly swept away, and the locomotive itself disabled, while several of the carriages, trucks, and vans of both trains were turned over, and the ruins piled up in a confused mass on the middle of the line, thus completely blocking it up. The driver and stoker of the parcels train escaped without injury, while the guard of the goods train also had a very narrow escape.—On Thursday night the 15th inst. the express train from Birmingham, due in Paddington at 10.25, ran into a narrow-gauge salt train which had been shunted on the up line at the Pangbourne station. The signal, when first seen by the driver of the express train, indicated that all was right, but was almost immediately reversed, showing that there was something on the line. He did all in his power to stop the train, but it was proceeding at express rate, and the space was too short to admit of the speed being much checked. The result was that the engine ran into the goods train, forcing the guard's van over the top of the salt vans, the first van being dashed into pieces, and the second extensively damaged, while the engine of the express left the rails and buried itself 2 or 3 inches in the gravel. The [illegible] injured in the ribs, but the passengers [illegible] severe shaking. The express, together with [illegible] in London at 11 P.M., did not arrive [illegible] until half-past 4 o'clock on Friday morning, in consequence of the company being able to run [illegible] one line, upwards of a dozen trains were waiting [illegible] Pangbourne Station.

COLLISION ON THE LANCASHIRE AND [illegible]. On Tuesday evening, a collision occurred [illegible] side of the Westhoughton Station. The train from Manchester to Liverpool ran into a coal train [illegible] out of a siding, scattering the trucks in all [illegible] The engine was fortunately free from the [illegible] was able to run forward to Wigan for assistance. Several of the passengers were much shaken, and [illegible] or two sustained severe injuries.

THE LUDGATE HILL STATION.—On Wednesday the London, Chatham, and Dover Railway Company [illegible] running trains across their bridge at Blackfriars to the new station of the Metropolitan Extension at Ludgate Hill. The first train crossed [illegible] Bridge and ran into the station a little before [illegible] and after that there was a regular stream [illegible] going both ways across the bridge. There are [illegible] lines of rails laid down, but for the present only [illegible] are used. The station opened is a temporary one, 300 feet long, built entirely of timber, and is entered from Bridge Street by way of Union Street and [illegible] Lane. The exit is in Earl Street. It is said that the permanent station, which is nearer [illegible] Hill, will be completed before March or April.

Law.

HOME CIRCUIT: MAIDSTONE.—*The Orpington Murder.* *Edward William Staples*, 23, and *James Turner*, [illegible] charged with the wilful murder of a man named [illegible] Orpington, near Bromley, on the 19th November. It was remembered that all three were labourers, and were drinking together at a public house in Orpington when a quarrel arose between them. Deceased was driven home, but the two prisoners went after him, and a policeman came up a few minutes afterwards and found him lying on the ground bleeding from what proved to be a fractured skull, and the prisoners were endeavouring to make up. The jury found them both *Guilty* of Manslaughter, with a recommendation to mercy; and Baron Channell sentenced them to penal servitude for five years.

OXFORD CIRCUIT: WORCESTER.—*The Ombersley Murder.* *John Butler* was indicted for the wilful murder of [illegible] Gulliver, at Ombersley, on the 13th August last. [illegible] was a lock-keeper at Holt Fleet, one of the locks on the Severn navigation. After the death of his wife [illegible] he took deceased to live with him as his housekeeper, according to the testimony of the neighbours, they often quarrelled, and lately deceased had been subjected to ill-treatment from him. On the day in question he was very ferocious to her, and having ill-used her [illegible] turned her out of doors. She ventured back late [illegible] shortly afterwards screams were heard from the [illegible] short time. In the morning Butler informed his son that the woman had not returned, but he expected [illegible] do so in a day or two. From a variety of circumstances suspicion was aroused, the river was dragged, and the deceased was taken out some yards from the mouth of the lock. Several marks of violence were found upon the body, and it was the opinion of medical men that deceased was stunned by blows before she was thrown into the water. The jury returned a verdict of *Wilful Murder*, with a recommendation to mercy on the ground of the prisoner's advanced age. Mr. Justice Byles assumed the black cap, and passed sentence of *Death* in the usual form. The prisoner remained unmoved throughout the whole of the proceedings.

NORTHERN CIRCUIT: LIVERPOOL.—*The Liverpool Murder.* *Henry Brown*, 32, and *Thomas Lindon*, 27, were indicted for the wilful murder of Thomas M'Carthy, at Liverpool, on the 1st inst. It appears that both the prisoners and the deceased were connected with disreputable houses, and had been drinking with some women at various public houses. On leaving [illegible] two prisoners and deceased went into the street, where [illegible] the girls saw Brown take a pistol from his pocket and strike [illegible] into deceased's eye. Deceased fell, and Linden then struck [illegible] him heavily in the side when he was lying on the ground. The prisoners then lifted him up, when Brown struck him a [illegible] time in the eye with the pistol, knocked him down, and [illegible] who wore heavy boots, again kicked deceased. It did not appear that he had given any provocation. Deceased died a few days after, and a *post-mortem* examination showed that death had been caused by inflamation of the brain, caused by a severe wound on the left eye such as the barrel [illegible] would cause. The jury returned a verdict of Guilty against both prisoners, but recommended Linden to mercy. Mr. Justice Byles said that the recommendation of the jury in favour of Linden would be forwarded to the proper quarter, but he could hold out no hope of a remission. He in the meantime he besought both of them to make the most of the time allotted to them in making their peace with God. In the case of Brown no doubt could be entertained of the clearness with which his guilt had been established. His lordship then passed sentence of *Death* in the usual form. *Ellis Green*, 46, was indicted for the murder of Elizabeth Jones, his sister-in-law, at Liverpool, on the 1st of October. The prisoner, his wife, and deceased lived together in a court leading from Harrington Street. On the night in question prisoner came home intoxicated, and almost immediately commenced an assault upon his wife and deceased. He knocked deceased down with a violent blow, and placing a box upon her chest, and with his nailed boots inflicted serious injuries upon her. He afterwards kicked her with great fury about the head and face, and not content with that he threw the box upon the breast of deceased, and struck several blows upon the head and face with his fist. She tried to get to her feet, but fell down again; blood ran from her mouth and nostrils, and she was removed to the Northern Hospital, where she died on the following Monday. In defence it was urged that the prisoner was not aware of the dreadful injuries which he was inflicting, as he was drunk, and he had no malicious intention; and that the crime was manslaughter. The jury returned a verdict of Guilty. Mr. Justice Mellor passed sentence of *Death* in the usual form.—

MIDLAND CIRCUIT: LEEDS.—*The Bradford Murder.* *John Hanson*, 22, warp dealer, was charged with the wilful murder of David Armitage, at Bradford, on the 31st October. It appeared that about 10 o'clock on the night named three men were walking along the high road near Bradford, and overtook the prisoner and deceased in company with a young woman. A dispute arose between them whether the prisoner should pass on the wall side [illegible]

...passed, and having gone a little further met deceased. ...followed him, and when he ...Hanson, he said, "What art thou going to do?" ...what the prisoner used some coarse expression, and ...struck at the back of the head, producing a wound ...broke the skin. There was some discrepancy in the ...those who first met the prisoner asserting that ...neither used bad language to nor struck any blow at ...street, whilst the prisoner's companion positively ...that deceased first applied a coarse epithet to the ...which caused him to stagger from the force of the ...struck him. On the evidence of this woman the ...counsel for the defence relied to induce the jury to find the ...guilty of manslaughter and not of murder. The jury ...found the prisoner *Guilty* of Manslaughter, and Mr. Justice ...sentenced him to six years' penal servitude.

Murder Nine Years ago.—*John Glynn*, aged 29, was ...for the murder of Richard Jowitt, on the 6th ...1855. The deceased was a boy of nine years of age, ...living with his parents at Otley. He was employed at Messrs. ...mill there, and on the night in question left home to ...with his companions. About half-past eight he was found ...in a field, in the public street, and on being conveyed ...he was found to have received a severe wound in the ...which caused his death the next day. Several boys ...to his bedside, but he failed to identify any of ... The main evidence against the prisoner was ...named Leathley, who, after keeping the secret ...in consequence of a quarrel with the prisoner ...told the police that the prisoner, on the ...night, was returning home with him, when ...behind, and, without saying a word, rushed upon ...him down, pulled out a knife, and stabbed ...The prisoner then ran away, and Leathley walked ...The only motive suggested was that the prisoner ...intended to thrash deceased on the first opportunity, ...he had fought and beaten his brother. The jury ...returned a verdict of *Not Guilty*. *The Forgeries on the Leeds Bank.*—*Thomas Scaife* was charged with having, on the 13th ...last, forged a bill of exchange for 171*l.* 2*s.* 6*d.* The prisoner ...was a clerk to John Woodhead Marsden, formerly an iron-...merchant of Leeds, who absconded in September last imme-...diately after the suspension of the Leeds Banking Company. ...A committee of shareholders examining the affairs of the ...bank, found that Marsden had paid into the bank forged ...bills to the amount of many thousands of pounds. Among ...them was the one which the prisoner was indicted for having ...forged, which, with two others, was paid into the bank by the ...prisoner on the 13th May. This bill was endorsed "Geo. ...Scaife, Cross Land Street, Holbeck;" and this was ...in the prisoner's writing, which several of the bank clerks proved to be in ...the writing of Scaife. Wilson was called, and proved ...that he had never accepted or authorised any one to accept the ...bill for him. Mr. Greenland, the manager of the bank, was ...called, and his appearance in the box excited a good deal of ...interest, but he was only asked a few questions of trifling ...importance. The jury found the prisoner *Guilty*, and Mr. ...Justice Keating sentenced him to penal servitude for 15 years.

Obituary.

...FITZHERBERT, wife of Sir William Fitzherbert, Bart., ...on the 14th inst. at her residence in Curzon Street, ...after a short illness. She was the second daughter of ...Sir Alexander Aleyne, Bart., and married Sir W. Fitz-...herbert, in 1836.

...HENRY PELLY, BART., of Warnham Court, Sussex, ...Tyler House, Essex, died on Tuesday last in his 55th ...year. He was the son of the first baronet, who was governor ...of the Bank of England, governor of the Hudson's Bay ...Company, and deputy master of the Trinity House. He suc-...ceeded his father in 1852, and was a deputy lieutenant for ...and for Middlesex. He married in 1840, the youngest ...daughter of the late John Carstairs, Esq., of Stratford Green, ...Hampshire, Hants. He is succeeded by his son, Henry ...Pelly, born in 1844.

...ROBERT WALLACE, Colonel-commandant of the 11th brigade ...of Royal Artillery, died on the 14th inst. at 3, Crescent ...Place, Westminster, in his 84th year. He entered the Royal ...Artillery as second lieutenant in 1797, and served on board the ...*Venus* letter of marque, when she beat off a French privateer ...of superior force in 1809. After he became captain he served ...at the siege of Flushing in 1809, and commanded the Artillery ...at the siege of Sacket's Harbour, in the United States, in ...1814. He attained the rank of major-general in 1854; lieute-...nant-general in 1854; and general in 1863.

...LIEUTENANT-GENERAL PALLISER died at Victoria Park, Dover, ...on the 14th inst, at the age of 71. He entered the Royal ...Artillery as Second Lieutenant in 1810, and served in the ...Peninsula and France from 1812 to 1814, and was employed ...with the army of occupation in France from 1815 to 1818 ...He also served also in the American war. He attained the rank ...of Lieutenant-General in 1863. He received the silver medal with ...clasps for his services

...LIEUTENANT-GENERAL SIR CHARLES HOPKINSON, C.B., died on the ...14th inst. in his 86th year. He had seen much active service ...during the year 1793, when he joined the Artillery in India as ...a cadet. In 1824 he was promoted to the rank of lieute-...nant-colonel and appointed to command the Madras Artillery, ...serving with the forces under Sir Archibald Campbell. ...For his services he was appointed "Commander of Artillery with ...the Forces," and served till the end of the war in Ava. In ...consequence of extreme deafness, he retired from the ...service, and received the honorary local rank of major-general ...in the East Indies. He received the honour of knighthood ...in 1836.

...THE HON. FREDERICK GREVILLE died on the 15th inst., ...at his brother-in-law's seat at Hillingdon, after a few hours' ...illness, in his 68th year. He was the second son of Mr. ...Charles Greville, by his marriage with Lady Charlotte ...Cavendish Bentinck, eldest daughter of the third Duke of Portland. He ...was born in 1795, and married, in 1823, the daughter of Mr. ...Robert Cox. He was formerly in the Grenadier ...Guards, was present at Quatre Bras, at Waterloo, and at ...the capture of Peronné. He was appointed shortly ...after aide-de-camp to General Sir John Lambert, with ...whom he served in the army of occupation in France until he ...became aide-de-camp to the Duke of Wellington, on ...whose staff he served until the army came home in 1818. ...He was appointed Master-General of the Ordnance's ...Office, and was selected to fill the office of aide-de-camp, ...the Duke having appointed Commander-in-Chief he ...became private secretary for the confidential position of his private ...secretary. Mr. Greville retained that position while the Duke ...was Commander-in-Chief. He was Bath King of Arms ...from 1854, and during the late Duke of Wellington's life ...was Clerk of the Cinque Ports. He was brother of Mr ...Charles Greville, for many years Clerk of the Privy Council, of ...Thomas Greville, gentleman usher, and of the Countess ...of Rosslyn. His eldest daughter is the present ...Duchess of Richmond.

...JAMES BURKE, J.P., of Elm Hall, county Tipperary, ...died on the 15th inst. at 17, Fitzwilliam Place, Dublin. He was ...formerly an assistant poor-law commissioner on the introduc-...tion of the poor law into Ireland, and held that office for 15 years, when he retired on a pension of 400*l.* a year. Mr. Burke was uncle of Sir Bernard Burke, Ulster King of Arms.

WILLS.—The will of Colonel Onslow Baker, of the Indian army, late of Tenterden Street, Hanover Square, has been sworn under 30,000*l.* personalty; Mr. Peter Dale, of North Shields, shipowner, 60,000*l.*; Miss Elizabeth Mary Gee, of Hyde Park Gardens, 80,000*l.*

Miscellaneous.

THE SHELL MOUNDS OF CAITHNESS.—At a recent meeting of the Anthropological Society, Mr. Laing, the late Finance Minister in India, read a paper on the shell mounds at Keiss, in Caithness, and the contents of some kists found in and near them. The place where these mounds have been collected is about seven miles to the north of Wick, extending for some distance along the coast and for a mile or two inland. The interest attached to them is that they resemble the "kitchen middens" of Denmark, which consist of heaps of shells and bones, the refuse of the food of the men who are supposed to have lived in the prehistoric period. Mr. Laing said that considerable confusion had arisen in the exploration of the kitchen middens from want of care, and the implements of the early stone period had thereby become mingled with those of bronze; but he had been careful in his excavations in Caithness to avoid such confusion. He described five of the shell mounds which he had examined, and the results had shown that the heaps had been accumulated at different periods. In the lowest stratum were found mingled with the shells of limpets and periwinkles, which appear to have constituted the principal articles of food of these ancient people, some bones of oxen, of horses, and pigs, and stone implements of the rudest possible kind. Specimens were also found of the bones of a bird that has long been extinct. In continuing his explorations he came to some kists consisting of slabs of stone just large enough to hold the body of a man, and inside, covered with sand, he discovered the skeletons of those who had been interred. Most of them were very short, not being more than 5 feet 4 inches long, and in those kists no implements of any kind were found; but in two instances he discovered kists of a much larger size, the skeletons in which measured 6 feet and 6 feet 4 inches. These were presumed to have been the chiefs of the race, and buried with one of them were 15 stone implements of small size and of the rudest character, exhibiting a lower degree of art than the flint implements found with the bones of extinct animals in tertiary geological deposits. Several of the skulls were exhibited on the table. The skulls of the chieftains presented little difference from those of ancient British skulls, but the others appeared to be of a lower type, and to resemble in some particulars the skulls of negroes. Among the shells and bones found in the mounds there were two human jawbones, one of which was the jawbone of a child about five years old, which bore the marks of having been gnawed, indicating that the child had been eaten. He also mentioned that on some of the shell mounds there are the remains of round bays built with the sandstone of the neighbourhood, and evidently constructed at different periods; the foundations of them being the heaps of shells constituting the lowest stratum of the mounds. The inference he drew from the small size of the implements found, and from the fact that most of them were made from the stone of the neighbourhood, was that the ancient people by whom the mounds had been accumulated had no communication with the inhabitants of districts from which flints or harder stones could have been procured. In the discussion which followed the reading of this paper, Professor Owen said that the skulls differed in several essential particulars from the form of the Ethiopian skull; one of them might be mistaken, from part of its configuration, for that of an Australian, but the small size of the molar teeth showed that it was of a different type. With respect to the jaw-bone of the child, he observed that he was well acquainted with the marks made by savages on the jaws of animals they devoured as food, and he feared the evidence which the child's jaw afforded tended to prove that our progenitors who inhabited Scotland at a remote period must have been cannibals. The dental cavity is filled with nerve pulp, which savages relish, and the child's jaw-bone indicated that it had been broken to extract that substance. The fact of chief interest deduced from the examination of the remains of the animals was the presence of bones of the great awk, now deemed extinct by ornithologists, but thus clearly proved to be entitled to a place in the records of British birds. The discussion was ultimately adjourned to Tuesday, the 20th inst., when Dr. Hunt, the President, adverted to the vague manner in which the subject had been hitherto treated, by adducing general resemblances between the skulls found in Caithness and those of negroes and Australians, and called attention to the points to which it was desirable to direct attention, with the view of ascertaining who were the primitive inhabitants of this island. Mr. Higgins, Mr. Mackenzie, Mr. Carter Blake, Dr. Miller, Mr. M'Clay, Mr. Prideaux, Mr. Reddie, Mr. Bendyshe, and other gentlemen took part in the discussion, which turned principally on the character of the skulls, the antiquity of the implements, and on the question whether those ancient inhabitants of Scotland were cannibals. Mr. Carter Blake compared the skulls with those of other types, for the purpose of showing that they did not correspond with the skulls of negroes or Australians, and he was especially desirous to disprove the opinion expressed by Professor Huxley at the last meeting of the Ethnological Society, that they belonged to what was called the "river-bed" class of skulls. The question of cannibalism was taken up rather warmly by Mr. M'Clay, a native of Caithness, who was anxious to exculpate his ancestors from such a charge. He considered the fact of the finding of a single jaw-bone of a child among the shells and bones, the refuse of food, was no proof of cannibalism; that it might have been gnawed by a wolf, or the child might have been murdered and her body thrown on the heap. Mr. Bendyshe quoted St. Jerome to show that the savages brought from the north of Scotland by the Romans preferred human flesh to that of oxen, and that there were certain parts of the body, such as the breasts, that they particularly relished as "tit bits." Captain Burton said that his experience as a traveller taught him that cannibalism was a necessary state through which mankind must pass in their progress to civilisation. He was willing, in consideration of the feelings of some gentlemen present, to except Caithness, but only Caithness. Mr. Laing, in reply, said that in regard to the question of cannibalism, he inclined to think, from the circumstances in which the jaw of the child was found, that in that instance at least the body had been eaten; and he referred to the evidence of Professor Owen respecting the manner in which the bone had been broken to extract the marrow, in confirmation of that opinion. Next, as to the character of the skulls, they were different from those found in the Danish "kitchen middens," for the latter were round, resembling those of the modern Esquimaux, while those from the kists in Caithness were of an opposite character, and indicated a southern origin. The proof of the great antiquity of the people was to be seen in the extreme rudeness of the weapons found in the kists and in the lowest stratum of shells. Those implements were of the rudest possible kind, and resembled some found in the kitchen middens of Denmark. In the museum at Copenhagen, the implements taken from the middens were classed in the order of antiquity according to the rudeness of their construction, and the most ancient exactly resembled those brought from Caithness. He did not attribute very great antiquity to them, not equal to that of the implements found in geological deposits, but he thought they might be dated several hundred years before the Christian era.

BIRTHS.—On the 19th inst, at 72, Eaton Place, the Hon Lady SIMEON, of a daughter—13th inst, in Paris, Lady CATHERINE BUCHANAN, of a son, stillborn—16th inst, at 35, Hill Street, Berkeley Square, Lady EMILY WALSH, of a son—16th inst, at 41, Grosvenor Place, Lady M'MAHON, wife of Colonel Sir Thomas M'Mahon, C.B., of a son—21st inst, at 18, St. James's Square, Lady WILLIAMS WYNN, of a daughter—11th inst, the Hon. Mrs. HENLEY EDEN, of a daughter—18th inst, at 28, Berkeley Square, the wife of Rear-Admiral the Hon. WALTER DEVEREUX, of a son—17th inst, at Cork, the Hon. Mrs. AUGUSTUS LANE FOX, of a son—18th inst, at 33, Cadogan Place, the Hon. Mrs CHARLES HAY, of a son—19th inst, at 43, Lowndes Street, the wife of Major-General NEWTON, of a son.

MARRIAGES.—On the 15th inst, at Withington Gloucestershire, JOHN BARNEBY LUTLEY, Esq., of Brockhampton, Herefordshire, to EMILY MARGARET, eldest daughter of the Hon. and Rev. GEORGE GUSTAVUS CHETWYND TALBOT, rector of Withington—15th inst, at Tittleshall, Norfolk, A. G WATSON, Esq., fellow of All Souls' College, Oxford, assistant-master of Harrow, to CAROLINE JANE, eldest daughter of the Hon. and Rev. K. H. DIGBY, M.A., rector of Tittleshall—15th inst, at St. Stephen's Church, Dublin, EDWARD W. VERNER, Esq., M.P., second son of Sir William Verner, Bart., M.P., to SELINA FLORENCE, daughter of THOMAS VESEY NUGENT, Esq.—13th inst, at St. George's, Hanover Square, JOHN HENRY WILLOCK, Esq., eldest son of Major George Willock, K.L.S., to CHARLOTTE MARIA, second daughter of the late M. T WEST, Esq., Lieutenant-Governor of Natal, Cape of Good Hope—15th inst, at the parish church, Brighton, JOHN C. FUSSELL, Esq., of Warminster, to MARGARET, daughter of the late Hon. J. B SKEETE, President of the Island of Barbadoes—15th inst, at St. James's Church, Paddington, Major YOUNG, H M 's 37th, to HARRIETT CHARLOTTE, eldest daughter of Lincluden, Dumfries, to HARRIETT CHARLOTTE, eldest daughter of Major-General RAMSAY, of Sussex Square, Hyde Park

DEATHS—On the 17th inst, at Clonbrock, Ireland, CAROLINE ELISABETH, Lady CLONBROCK, aged 59—17th inst, at Beckingham, near Gainsborough, Lady RUDSDELL, wife of Sir Joseph Rudsdell, K.C.M.G, late Lieut.-Col Grenadier Guards—14th inst, at Feering, Essex, the Hon EMILY ANNE STRUTT, aged 74—14th inst, at Scarthingwell, LAURA MARY, daughter of the Hon. HENRY MAXWELL—17th inst, at Brighton, CHARLOTTE SOPHIA, wife of Major-General CLARK, R.H, Col. 5th Reg—15th inst, at Hampton Court Palace, HELEN LOUISA, eldest daughter of the late Commodore WATSON, C.B., aged 15—16th inst, at Woodside, Fortrose, N.B, Lieut.-Colonel CHARLES MAXWELL MACLEAN, second son of the late William Maclean, Esq., of Dochgarroch, near Inverness, and late of the 72d Highlanders, in which Regiment he served nearly 44 years, aged 73—17th inst, at Maidstone, JANE, widow of the late Lieut.-Colonel PIPON, aged 79—14th inst, at Over Norton, Oxon, EMMA, widow of Colonel HENRY DAWKINS, of Over Norton, and late of the Coldstream Guards, eldest daughter of the late Thomas Duncombe, Esq., of Copgrove Yorkshire, aged 66—14th inst, EDWARD LYTTON, infant son of Lieutenant-Colonel BULWER, C.B, aged six months—16th inst, at Hastings, Major S. BENSON, paymaster 39th Regiment, aged 57—15th inst, at 8, Onslow Gardens, ANNE, widow of Major HENRY CARMICHAEL SMYTH, of the Bengal Engineers, and mother of the late Wm. Makepeace Thackeray, Esq.—15th inst, at Victoria Lodge, Hammersmith, SUSANNA MARIA wife of Commander MANSELL, R.N., and only daughter of the late John Sampson, Esq., of the Lodge, Great Malvern, and of Teddington Court, near Tewkesbury—Feb. 22, at Lucoja, at the confluence of the Nizer, Lieut. JOHN TENCH BEDFORD, R.N, only son of Commander D. B. Bedford, R.N.—16th inst, at Paris, FRANCIS BARRON, Esq., of Bilton Grange, Warwickshire late 16th Lancers aged 26—16th inst, at his residence, Fallowfield House, Cheltenham, ROBERT CHOLMELY, Esq, of Whitby Abbey—18th inst, from a fall from his horse, WILLIAM COWPER, Esq, of Farnborough Hill, near Banbury, aged 60—15th inst, at Holly Hill Lodge, Ditchingham, ROBERT WHITE, Esq., formerly Collector of the Customs at Great Yarmouth—15th

[illegible] inst. at Chet Hall, Smeeton, MARY CHARLOTTE, wife of GEORGE [illegible], Esq., and eldest daughter of Charles Knight—13th inst, at 28, Wimpole Street, the Rev JOHN COOK, rector of [illegible], aged 81—13th inst, at the Rectory, Stone Bliss, [illegible], the Rev T. B. M. HOLLAND, aged 71—15th inst, [illegible] Camberwell Road, South Lambeth, the Rev. W. TUCKNISS, B.A., chaplain to the Rescue Society, aged 31—15th inst, the Rev. EDWD GREEN, elder son of Bevis E. Green, Esq., of 5, Kensington Palace Gardens, aged 35.

Markets.

COVENT GARDEN, Dec. 24.

Fruit and Vegetables and Christmas trees and other Evergreens are abundantly supplied. Pears, consisting of Knight's Monarch, Passe Colmar, Beurré D'Aremberg, Winter Nelis, Glou Morceau, Easter Beurré, Beurré Diel, Crassane, and others may now be had in excellent condition. Apples may also now be obtained in abundance. Grapes are still sufficient for the demand, and of Pine Apples there is also a fair supply. Kent Cobs fetch from 70s to 80s per 100 lbs. Walnuts are plentiful, and Oranges are abundant and cheap. Some Seakale, Asparagus, and forced Kidney beans may now be had. Lemons fetch from 5s to 8s per hundred. For Potatoes prices are still comparatively high. Flowers chiefly consist of Orchids, Heaths, Chrysanthemums, Chinese Primulas, Azaleas, Camellias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 4s to 6s	Oranges, per 100, 4s to 8s
Grapes, per lb., 5s to 8s	Lemons, per 100, 5s to 8s
Melons, each, 1s to 4s	Nuts, Cob, p. 100 lb., 70s to 80s
Pears, per doz., 1s 6d to 3s	— Brazil, p. bush., 14s
Apples, per sieve, 1s to 2s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, 2s to 3s per 100	Shallots, per lb., 8d
Potatoes, York Regents, p. ton, 60s to 80s	Garlic, per lb., 8d
— Rocks, do., 45s to 60s	Lettuces, each, 1d to 2d
— Flukes, 60s to 90s	Seakale, p. punn., 3s to 3s 6d
Carrots, per bunch, 4d to 9d	Endive, per score, 1s to 2s 6d
Turnips, p. bunch, 6d to 8d	Horse Radish, p. bunch, 1s to 4s
Cucumbers, each, 1s to 2s	Mushrooms, p. pott., 1s to 1s 9d
	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

BRITISH WOOLS.—LONDON, Dec. 22.

There is a fair demand for all descriptions of wool at late rates. Skin combings have recovered their fall, and have made an advance over previous prices in proportion to their improved length.

	s.	d.		s.	d.		s.	d.		s.	d.
South-down Hoggets	2	0	to	2	1	Combing Skins	1	4	—	1	7
Half-bred ditto	2	5	—	2	6	Flannel Wool	1	3½	to	1	9
Down Ewes	1	10	—	1	11	Blanket ditto	0	6	—	0	9
Kent Fleeces	2	2	—	2	2½	Leicest. Hoggs	2	3	—	2	6
						Ditto Wethers	2	1	—	2	2

COAL MARKET.—Dec. 21.

Tanfield Moor, 18s. 3d.; West Hartley, 18s. 6d.; Wylam, 18s. 6d.; Walls End Haswell, 23s. 6d.; Walls End Hetton, 23s 6d; Walls End Shincliffe, 21s. 6d.—Ships at market, 18.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Dec. 22.

Prime Meadow Hay	95s to 105s	Clover, old	110s to 126s
Superior do.	— —	New Clover	— —
Inferior do.	— —	Do. second cut	— —
New do.	— —	Straw	25 30
Rowen	— —		

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, Dec. 22.

Sup. Meadow Hay	105s to 112s	Inferior Clover	105s to 115s
Inferior do.	90 96	New do.	— —
New do.	— —	Straw	32 35
Superior Clover	124 132		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Dec. 22.

Fine Meadow Hay	100s to 105s	Prime 1st cut Clover	120s to 126s
Inferior do.	95 100	Inferior do. do.	110 115
Prime New Hay	— —	Prime 2d cut do.	115 120
Inferior	— —	Inferior do.	— —
Straw	26 29	New Clover	— —

HOPS.—BOROUGH MARKET, FRIDAY, Dec. 23.

Messrs. Pattenden & Smith report continued activity in the trade, with a great scarcity of the better descriptions of the new growth. Prices are gradually advancing.

POTATOS.—SOUTHWARK, Monday, Dec. 19.

During the past week the arrivals coastwise have been small, but very great by rail. Trade very heavy, and the prices of the former week could not be maintained. The following are this day's quotations:—Yorkshire Flukes, per ton, 90s. to 110s.; do. Regents, 80s. to 95s.; Dunbar Regents, 85s. to 95s.; Kent and Essex Regents, 80s. to 85s.; do. do. Rocks, 70s. to 75s.; Perth, Forfar, and Fife Regents, 75s. to 80s.; do. do. Rocks, 65s. to 70s.; Belgian Whites, 65s. to 66s.

METROPOLITAN CATTLE MARKET.

MONDAY, Dec. 19.

The supply of Beasts is large as compared with the corresponding day of last year; but last Monday's supply being short, there is a demand for choice descriptions. Prices are well maintained throughout. The number of Sheep is large for the day, and trade for them very slow. On the average prices are lower. Good Calves are scarce and dearer. From Germany and Holland there are 810 Beasts, 470 Sheep, 20 Calves, and 130 Pigs; from Scotland, 180 Beasts; from Ireland, 150; from Norfolk and Suffolk, 1030; and 1200 from the Northern and Midland Counties.

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	5	6	to 5	10	Best Long-wools	5	2	— 5	6
Best Short-horns	5	4	— 5	8	Do. Shorn	..	..	—	..
2d quality Beasts	3	4	— 4	8	Ewes & 2d quality	4	4	— 4	10
Best Downs and Half-breds	5	6	— 5	10	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	—	..
					Calves	..	..	—	..
					Pigs	..	4	4 — 5	8
						..	3	4 — 5	0

Beasts, 1760; Sheep and Lambs, 15,350; Calves, 65; Pigs, 330.

THURSDAY, Dec. 22.

The supply of Beasts is large for the day, this being almost a holiday market. The number of Sheep is also large. There is but a very small amount of business transacted in either department. The few sales effected are at lower rates. Good Calves are scarce, and realise late quotations. Our foreign supply consists of 295 Beasts, 450 Sheep, and 22 Calves,

	s	d	s	d		s	d	s	d
Best Scots, Herefords, &c.	5	2	to 5	6	Best Long-wools	5	0	— 5	4
Best Short-horns	5	0	— 5	4	Do. Shorn	..	..	—	..
2d quality Beasts	3	0	— 4	4	Ewes & 2d quality	4	0	— 4	8
Best Downs and Half-breds	5	6	— 5	8	Do. Shorn	..	..	—	..
Do. Shorn	..	..	—	..	Lambs	..	..	—	..
					Calves	..	..	4 4 — 5	8
					Pigs	..	..	3 4 — 5	0

Beasts, 960; Sheep and Lambs, 1580; Calves, 41; Pigs, 140; Milch Cows, —.

MARK LANE.—MONDAY, Dec. 19.

There was a short supply of Wheat from Essex and Kent to this day's market, and a moderate quantity of spring corn, with fair arrivals of Scotch and Irish Oats. There have been large imports of foreign Oats, and a moderate addition of other articles. There was a fair business transacted in English Wheat at last Monday's prices for dry samples. Foreign Wheat was in retail request at no variation in prices. Town-made Flour was unaltered. Country marks brought about previous rates. American brands sold fully as high. Best malting Barley was more inquired for, at quite as high rates. Secondary sorts were dull, but grinding samples were more saleable. Malt realised about former quotations. Beans made previous rates. Peas commanded as high prices. The sales of Oats were to a fair extent at last Monday's currency.

PRICE PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk .. White	39—42	Red	36—41
— — fine selected runs .. ditto	41—44	Red	39—42
— — Talavera	46—53		
— Norfolk	—	Red	—
— Foreign	35—50		
BARLEY, grind. & dist, 24s to 28s .. Chev.	30—33	Malting ..	29—33
— Foreign .. grinding and distilling	20—25	Malting ..	25—27
OATS, Essex and Suffolk	20—22		
— Scotch and Lincolnshire—Potato	20—24	Feed	20—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	20—23	Feed	18—21
RYE	31—33	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....32s to 35s...Tick	34—36	Harrow ..	34—36
— Pigeon .... 35s to 40s .. Winds.	—	Longpod	—
— Foreign .....Small	32—38	Egyptian	33—34
PEAS, White, Essex and Kent .. Boilers	35—37	Suffolk ..	37—39
— Maple .... —s to —s .... Grey	—	Foreign ..	32—36
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered .. per sack	35—40		
— 2d do ..... ditto	28—34	Country .	28—34
— Foreign ..... per barrel	18—25	Per sack	32—36

FRIDAY, Dec. 23.

The arrivals of English Wheat fresh up this morning were limited, but in fair average condition. Very few buyers were in attendance, and the demand for both red and white qualities was inactive; nevertheless, Monday's prices were supported. We were well supplied with foreign Wheat. Importers generally were tolerably firm as to price, but the business doing was much restricted, at about previous quotations. Floating cargoes of grain commanded very little attention, at about last week's currency. The show of both English and foreign Barley was tolerably extensive. Malting parcels sold to a moderate extent, on former terms. Grinding and distilling qualities were very dull, but not cheaper. We have to report a dull sale for malt, the supply of which was seasonably extensive, at about stationary prices. Oats changed hands to a fair extent at Monday's quotations. The supply was rather on the increase. Beans met a heavy inquiry, at barely late rates. In Peas very little was passing. Prices, however, were supported. The Flour trade was in a sluggish state on former terms. Linseed and cakes were steady in price. In other articles very little was doing. This market will be closed on Monday next.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English ..	1450 qrs.	890 qrs.	630 qrs.	340 sks.
Irish	—	—	1700	— ,,
Foreign ..	2500 ,,	4340	36,050 ,,	140 ,, / 4790 brls

LIVERPOOL: Dec. 20.—We have had a fair attendance of millers and dealers at our Corn Exchange this morning, and Wheat has attracted a good consumptive demand at the extreme rates of last Friday. Flour meets a fair share of inquiry at former prices. Indian Corn is checked by the advance of 6d. per qr. demanded, at which holders remain firm. Oats and Oatmeal slow of sale. Beans, Peas, and Barley are each steady at late rates. Market closes firm, but cannot be called active.

FRIDAY, Dec. 23.—The market was fairly attended. Wheat, very little offering, and prices are 1d. per cental dearer; demand good. Flour quiet, at late rates. Indian Corn held for 3d. to 4d. advance. Beans, Oats, and Oatmeal firm, at late quotations.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Nov. 12	38s 9d	30s 1d	19s 11d	33s 0d	37s 11d	35s 9d
— 19	38 9	29 9	19 5	29 9	37 9	34 11
— 26	38 8	29 3	20 0	30 0	37 10	35 1
Dec. 3	38 5	29 2	20 3	26 8	37 10	35 5
— 10	38 4	28 8	19 10	26 7	37 2	34 11
— 17	38 1	28 4	19 9	29 1	37 2	35 3
Agg. Aver.	38 6	29 2	19 10	30 10	37 7	35 3

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Nov. 12.	Nov. 19.	Nov. 26.	Dec. 3.	Dec. 10.	Dec. 17.
38s 9d—						
38 8	..	..	..	..	..	..
38 5	..	..		..	..	..
38 4	..	..	..		..	..
38 1	..	..	..	..		..
..	..	..	..	.	..	
			..	..	..	..

A YOUNG MAN wishes to place himself with a Tenant Farmer, with a view of obtaining an insight into the PRACTICAL WORKING of Hop, Arable, and Pasture Land.—Address, with particulars, stating size of farm, &c., with Premium required, to Mr. T. SIMMONDS, Rock House, Farnham, Surrey.

WANTED, a FARMING PUPIL on a Farm of 650 Acres of Heavy and Light Land.—Mr. FAIRLEY, Holborn Farm, Huntingdon.

WANTED, a GROUND FOREMAN in a London Nursery.—To a man of experience, and possessing a thorough knowledge of Fruit Trees, a liberal salary will be given.—Address A. B. C. D., *Gardeners' Chronicle* Office, Wellington Street, Strand, London, W.C.

WANTED, IN-DOOR or GLASS FOREMAN.—Must have a thorough practical knowledge of Plants generally; of their Propagation and Culture for Sale. An Energetic Man of good business habits and address will alone be treated with. References to the two last situations required. To a really suitable man liberal wages will be given.—Apply, in own hand-writing, to JAMES DICKSON & SONS, The "Newton" Nurseries, Chester.

WANTED, as PROPAGATOR, [illegible] person.—Satisfactory testimonials required.—WILLIAM PAUL, Waltham Cross, N.

WANTED IMMEDIATELY, a [illegible] understands the Growing of Fruits, for the London market.—Address, stating wages to live in, to G. A. W., *Gardeners' Chronicle* [illegible]

WANTED, in a family near [illegible] COUPLE without incumbrance. Man useful; Wife, Laundress. To reside in the [illegible] particulars to E. R., care of Brigden, Florist, 32, [illegible] London, E.C.

WANTED, an Industrious YOUNG MAN for the Houses; he would have every [illegible] himself in all Departments, with an annual rise to prepare himself for a good situation as Propagator. Send age, wages expected, and previous [illegible] JEFFRIES, Arboretum Nurseries, Ipswich.

WANTED, in a large well-kept Garden, [illegible] quantity of Glass is erected and [illegible] YOUNG MAN of some experience to assist; also a clever active LABOURER.—Direct Gardener, Worksop, Notts.

WANTED, as CLERK, SHOPMAN, [illegible] an active intelligent Man.—Application to be made to LUCOMBE, PINCE & Co., Exeter Nurseries.

WANTED, an UNDER SHOPMAN [illegible] London Seed Warehouse.—Apply by letter, salary required, and where last employed—*Chronicle* Office, W.C.

WANTED, a YOUTH who can write [illegible] assist at the Counter in a Wholesale Seed [illegible] Apply by letter, A. O., *Gardeners' Chronicle* Office, W.C.

WANT PLACES.—Letters to be Post Paid

HOUSEKEEPER, or as COMPANION: A Lady, aged 35, who can be highly recommended, has had much experience. She would be willing to [illegible] two little Girls, or to accept any position of trust.—A. A., 4, Road, New Road, Hammersmith, W.

GARDENERS.—B. S. WILLIAMS [illegible] Correspondence with several experienced Gardeners [illegible] situations, and will be pleased to recommend to [illegible] requiring such, a thoroughly competent Man. All [illegible] receive immediate personal attention.—Paradise [illegible] Nurseries, Holloway, London, N.

GARDENERS, FORESTERS and BAILIFFS, LAND STEWARDS.—The undersigned can recommend the above, whose characters and abilities may be [illegible] on. Full particulars upon application.—JAMES D. [illegible] "Newton" Nurseries, Chester.

EXPERIENCED GARDENERS (or as Gardeners and BAILIFF), of various qualifications, [illegible] gentlemen.—Further particulars given on application to [illegible] HENDERSON & SON, Wellington Nursery, St. John's Wood.

FOREMAN, or SECOND GARDENER [illegible] single; steady and active. Has a good knowledge [illegible] and Flower Gardening, and understands Early [illegible] Management of Plants.—W. R., Ribston Gardens, Wetherby.

GARDENER (HEAD).—Middle-aged, [illegible] incumbrance. A good practical man; will [illegible] of December, in consequence of the death of [illegible] breaking up of the establishment. Fourteen years' [illegible] —P. I., 9, Exchange Street, Norwich.

GARDENER (HEAD), or GARDENER [illegible] —Middle-aged, married, one child; thoroughly [illegible] the Management of Pines, Vines, Peaches, Melons, Stove [illegible] house Plants, Flower and Kitchen Gardens, the erection [illegible] houses, &c. Character will bear the strictest investigation.—R. COOLING, Mile Ash Nurseries, Derby.

GARDENER, or GARDENER and BAILIFF. Advertiser, who is well known to be practical with most modern improvements in Horticulture and [illegible] will be disengaged in a few days, and he begs to offer [illegible] Nobleman or Gentleman requiring the service of [illegible] man in the prime of life. Can undertake the Laying [illegible] and all Estate improvements; he has been a successful [illegible] Fruit at the Metropolitan Shows, and is a good [illegible] The Advertiser is married, but without incumbrance; [illegible] a good manager of Poultry, which she will take charge [illegible] be desired. No objection to any part of England. [illegible] years' character from the Nobleman the advertiser has [illegible] W. C., Charles Turner, Esq., Royal Nursery, Slough.

GARDENER (SECOND or UNDER), where [illegible] kept, and where he can improve himself in [illegible] single; if with a practical Man will pay a small [illegible] years and a half good character.—E. H., Keswick Hall, [illegible] Norfolk.

GARDENER (UNDER).—Well [illegible] profession. Three years' good character.—DAVIS, [illegible] Ewell, Surrey.

PROPAGATOR.—Thoroughly acquainted [illegible] Propagation of Hard and Soft-wooded Plants, [illegible] Grafting, &c.—S. VINCE, Eden Town, Stanwix, near [illegible]

PROPAGATOR and GROWER.—Well [illegible] and Greenhouse Plants. Good references [illegible] character.—G. P. Y., Post Office, Wakefield.

STEWARD or BAILIFF with any [illegible] Gentleman.—An intelligent, active, single Man [illegible] great practical experience in the Management of [illegible] A. LAWIN, Esq., Agent, Baron Hill, Beaumaris, N. Wales.

STEWARD or BAILIFF.—A practical middle-aged Man, having the Management of an Estate in one of the Counties, is open to a re-engagement. Thoroughly [illegible] all the details of modern Agriculture on Heavy and [illegible] Growth and Management of Woods, Drainage, Levelling, [illegible] Messrs. Gibbs & Co., Half Moon Street, Piccadilly. [illegible]

LAND STEWARD or BAILIFF.—Scotch. [illegible] Management of an Estate in Wales: is accustomed [illegible] Rearing and Breeding, Sale and Purchase of Stock, [illegible] practically acquainted with all the details of modern [illegible] class references given.—BAILIFF, Brynbras Castle, [illegible]

FARM BAILIFF.—The Advertiser wishes [illegible] a Married Man of active business habits, [illegible] to Markets, good judge of Stock, used to the Steam [illegible] modern machinery.—J. H., Watt's Farm, Horley, [illegible]

BAILIFF (WORKING).—Age 40, married; [illegible] active, understands the Management of Heavy and [illegible] Breeding, Rearing, and Fatting Stock, Accounts, [illegible] all its Branches; is a good Butcher. The highest [illegible] and good character from last employer.—M. A., 14, [illegible] London, W.

SALESMAN, CORRESPONDING [illegible] SHOPMAN.—A Young Man with a good general [illegible] the Nursery Business is open for an engagement. The [illegible] rence.—BETA, 24, Torwood Street, Torquay.

To the Seed Trade.

SHOPMAN (HEAD).—First-class [illegible] Unexceptional references.—X., *Gardeners' Chronicle* [illegible]

Seed Trade.

SHOPMAN (HEAD).—Age 29; thoroughly up [illegible] business in every department; has a good knowledge of [illegible] First-class reference.—D. I., *Gardeners' Chronicle* Office, W.C.

The Gardeners' Chronicle Newspaper.

SATURDAY, DECEMBER 31, 1864.

ALBERT INSURANCE COMPANY (LIMITED).
(FIRE and MARINE).
Premiums charged estimated by the individual risk; the utmost liberality maintained in every transaction. Agents Wanted.
Offices: 8, Finch Lane, and 7, Waterloo Place, Pall Mall.
MORELL THEOBALD, Manager Fire Department.

SCOTTISH UNION FIRE and LIFE INSURANCE COMPANY.
London: 37, Cornhill; Edinburgh and Dublin.
ESTABLISHED 1824. CAPITAL, £5,000,000.
Incorporated by Royal Charter, and empowered by Act of Parliament.
Invested Funds at August 1, 1864, upwards of .. £900,000
Annual Revenue from all Sources 194,000
Amount of Life Insurances in force 3,300,000

The FORTIETH ANNUAL GENERAL MEETING of the Life Insurance Company was held in the Company's Office, 6, George Street, Edinburgh, on Wednesday, December 7, 1864. The Report of the Directors, containing full and detailed statements of the Company's transactions for the year ending Aug. 1 last, was submitted to the Proprietors and unanimously approved of.

The following statements exhibit the progress of the COMPANY.—The following statements exhibit the great increase which has taken place in the Company's business, in both departments, during the last few years:—

LIFE DEPARTMENT. PROGRESS during the LAST THREE YEARS.

For the Year ending July 31.	Number of New Life Policies Issued.	Insuring.	Yielding of New Premiums.
1862	915	£427,330	£13,197 9 1
1863	1071	488,264	15,382 1 0
1864	1116	514,425	17,039 1 6

FIRE DEPARTMENT.

In 1857 the Revenue amounted to			£35,479
In 1860	"	"	45,699
In 1863	"	"	52,596
In 1864	"	"	54,000

Governor—His Grace the DUKE of HAMILTON and BRANDON.

DIRECTORS in LONDON.

President—The Right Hon. the EARL of MANSFIELD.

Charles Balfour, Esq. — John Kingston, Esq.
Robert Collum, Esq. — John Frank Miéville, Esq.
Francis Fearon, Esq. — J. R. Robertson, Esq.
H. M. Kemshead, Esq. — Hugh F. Sandeman, Esq.

George Ramsay, Esq., *Manager*.
Secretary to the London Board—F. G. Smith, Esq.
Medical Officer—E. W. Duffin, Esq., M.D.
Solicitors—Messrs. Oliverson, Lavie, and Peachey.

The Annual Report and Proposal Forms may be had on application at the Offices of the Company, 37, Cornhill, London.
F. G. SMITH, Secretary.

SCOTTISH UNION FIRE and LIFE INSURANCE COMPANY, 37, Cornhill, London, E.C.

Notice is Hereby Given, that a DIVIDEND of 10 per cent. (free of Income Tax) on the Capital Stock of this Corporation will become PAYABLE on January 2 next; and Proprietors resident in and near London will receive the same at the Office, 37, Cornhill, on that or the following day, between the hours of 10 and 4 o'Clock.
By Order of the Board. F. G. SMITH, Secretary.
Cornhill, December 24.

THE GREENHOUSE in the STEREOSCOPE.
CRANSTON'S PATENT.
VIEWS of different Houses, Post free for 50 Stamps.
SETS OF 12, 12 Stamps each.
DESCRIPTIVE BOOK, fully illustrated (Second Thousand), Post free for 20 Stamps, from the Author and Patentee, JAMES CRANSTON, Architect, 1, Temple Row West, Birmingham.

THRESHER'S COLOURED FLANNEL SHIRTS.
Next Door to Somerset House, Strand, W.C.

Rich Lyons and Paris Silks.

SEWELL AND CO. having previously announced their large purchase of SILKS in the Lyons and Paris Markets, beg to call attention to the SALE, which will take place on TUESDAY, January 2, 1865, and following days. The SILKS are suitable for Morning, Walking, and Evening Dresses, and are from 1s. per yard to 5 guineas the full dress.
Compton House, Frith Street, Soho Square, W.

Evening and Ball Dresses.

SEWELL AND CO. have, in anticipation of Christmas Festivities, prepared a choice variety of TULLE, NET, and SATIN DRESSES. They have also some beautiful patterns of EVENING ROBES exclusively designed for their house.
Sewell & Co., Compton House, Old Compton Street; and Frith Street, Soho Square, W.

TAYLOR BROTHERS' GENUINE MUSTARD.
Dr. HASSALL having subjected this Mustard to a rigorous microscopical examination and chemical analysis, reports that it contains the three essential properties of good Mustard, viz., Purity Strength, and Delicate Flavour. See that each Package bears their Trade Mark the "Prize Ox," and Dr. Hassall's Report. Sold by all Grocers, &c., throughout the kingdom.

Sauce.—Lea and Perrins'

WORCESTERSHIRE SAUCE.—This delicious Condiment, pronounced by Connoisseurs "THE ONLY GOOD SAUCE," is prepared solely by LEA & PERRINS.
The public are respectfully cautioned against worthless imitations and should see that LEA & PERRINS' Names are on Wrapper, Label, Bottle, and Stopper. ASK FOR LEA & PERRINS' SAUCE.
Wholesale and for Export, by the Proprietors, Worcester; Messrs. CROSSE & BLACKWELL; Messrs. BARCLAY & SONS, London, &c.; and by Grocers and Oilmen universally.

DINNEFORD'S PURE FLUID MAGNESIA has been during 25 years emphatically sanctioned by the Medical Profession, and universally accepted by the public, as the best remedy for Acidity of the Stomach, Heartburn, Headache, Gout, and Indigestion, and as a mild Aperient for delicate constitutions, more especially for ladies and children. It is prepared in a state of perfect purity, and of uniform strength by
DINNEFORD & Co., 172, New Bond Street, London, and sold by all Wholesale Chemists throughout the world.

No More Medicine.

DR. BARRY'S delicious health-restoring REVALENTA ARABICA FOOD restores perfect Digestion, Healthy Nerves, Sound Lungs, Healthy Liver, Refreshing Sleep, Functional Regularity, and Energy to the most Disordered or Debilitated, removing speedily and effectually Indigestion (Dyspepsia), Habitual Constipation, Diarrhœa, all Gastric Derangements, Fevers, Nervousness, Bilious-ness, Liver Complaints, Flatulency, Nervousness, Bilious-ness, Sore Throats, Catarrhs, Colds, Influenza, Noises in the Head and Ears, Rheumatism, Gout, Impurities, Eruptions, Hysteria, Spasms, Irritability, Sleeplessness, Acidity, Palpitation, Heart-burn, Headache, Debility, Dropsy, Cramps, Spasms, Nausea, and Sinking, Fits, Cough, Asthma, Bronchitis, Incipient Con-sumption, Scrofula, Tightness of the Chest, Pains at the Pit of the Stomach, between the Shoulders, &c. 60,000 cures annually. In tins, 1s. 9d.; 12lb., 22s.—BARRY DU BARRY & Co., 77, Regent Street, London, W; FORTNUM & MASON; also at 61, Gracechurch Street, E.C.; 4, Cheapside, E.C.; 63, 150, and 298, Oxford Street, W.; 1, Vere Street, W.C.; and all Grocers and Chemists.

CARBOLIC ACID for Medical, Commercial, and Disinfecting purposes, at greatly reduced prices.
CALVERT, CLIFT, & Co., 7, Bond Street, Manchester.

HANCOCK'S IMPROVED HORSE-SINGEING APPARATUS, with India-rubber Tubing, Stop-cock, and Two Gas Burners Complete.
No. 1. Best quality, 9s. per Set. | No. 2. Second quality, 6s. per Set
INDIA-RUBBER TUBING for DO.

PLAIN (per foot).			SNAKE PATTERN (per foot).		
¼ in. 2d.	5/16 in. 2½d.	⅜ in. 3d.	⅜ in. 3½d.	7/16 in. 4d.	½ in. 5d.

HOSE PIPES for conveying Hot or Cold Water, Beer, Cyder, &c., for Brew Houses, Baths, Fire Engines, Gardens, &c.
Price Lists, with full particulars, on application.
JAMES LYNE HANCOCK, Vulcanized India-rubber Works, Goswell Mews, E.C.; and 266, Goswell Road, London, E.C.

E. T. ARCHER'S "FRIGI DOMO."—Patronised by her Majesty the Queen, the Duke of Northumberland for Syon House, his Grace the Duke of Devonshire for Chiswick Gardens, Professor Lindley for the Horticultural Society, Sir Joseph Paxton for the Crystal Palace, Royal Zoological Society &c.

PROTECTION from COLD WINDS and MORNING FROSTS.
"FRIGI DOMO," a Canvas made of patent prepared Hair and Wool, a perfect non-conductor of Heat and Cold, keeping, wherever it is applied, a fixed temperature. It is adapted for all horticultural and floricultural purposes, for preserving Fruits and Flowers from the scorching rays of the sun, from wind, from attacks of insects, and from morning frosts. To be had in any required lengths.

Two yards wide .. .. 1s. 9d. per yard run.
Four yards wide.. .. .. .. 3s. 6d. per yard.
An improved make, 2 yards wide .. 1s. 9d. per yard.
An improved make, 3 yards wide .. 2s. 8d. per yard run.
Also "Frigi Domo" Netting, 2 yards wide, 1s. 6d. per yard run.

ELISHA THOMAS ARCHER, Whole and Sole Manufacturer, 7, Great Trinity Lane, Cannon Street, City, and of all Nurserymen and Seedsmen throughout the kingdom.
"It is much cheaper than Mats as a covering."

Great Bargains in best
TABLE GLASS, CHINA, GAS CHANDELIERS, LAMPS, &c.
Bonâ fide Selling Off, prior to Extensive Alterations.
T. R. GRIMES' SHOW ROOMS,
83, New Bond Street, W.
CASH ONLY.

HEAL AND SON'S EIDER-DOWN QUILTS, from 24s. to 10 Guineas. Also GOOSE-DOWN QUILTS, from 10s. to 32s. Lists of prices and sizes sent free by post. HEAL & SON'S Illustrated Catalogue of Bedsteads and Priced List of Bedding, also sent post free on application to 196, Tottenham Court Road, W.

THE PERFECT SUBSTITUTE for SILVER.—The REAL NICKEL SILVER, introduced more than 30 years ago by WILLIAM S. BURTON, when PLATED by the patent process of Messrs. Elkington & Co., is beyond all comparison the very best article next to sterling silver that can be employed as such, either usefully or ornamentally, as by no possible test can it be distinguished from real silver.

A small useful set guaranteed of first quality for finish and durability, as follows:—

	Fiddle or Old Silver Pattern.	Bead Pattern.	Thread or Brunswick Pattern.	King's or Lily, &c.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
12 Table Forks	1 13 0	2 0 0	2 4 0	2 10 0
12 Table Spoons	1 13 0	2 0 0	2 4 0	2 10 0
12 Dessert Forks	1 4 0	1 10 0	1 12 0	1 15 0
12 Dessert Spoons	1 4 0	1 10 0	1 12 0	1 15 0
12 Tea Spoons	0 16 0	1 0 0	1 2 0	1 5 0
6 Egg Spoons, gt. bowls..	0 10 0	0 12 0	0 12 0	0 13 6
2 Sauce Ladles	0 6 0	0 8 0	0 8 0	0 9 0
1 Gravy Spoon	0 6 6	0 9 0	0 10 0	0 11 0
2 Salt Spoons, gt. bowls..	0 3 4	0 4 0	0 4 0	0 4 6
1 Mustard Spoon, gt. bwl.	0 1 8	0 2 0	0 2 0	0 2 3
1 Pair of Sugar Tongs ..	0 2 6	0 3 6	0 3 6	0 4 6
1 Pair of Fish Carvers ..	1 4 0	1 10 0	1 10 0	1 10 0
1 Butter Knife	0 2 6	0 4 0	0 5 6	0 6 0
1 Soup Ladle	0 10 0	0 12 0	0 16 0	0 17 0
1 Sugar Sifter	0 3 3	0 4 6	0 4 6	0 5 0
Total	9 19 9	12 9 0	13 9 6	14 17 3

Any article to be had singly at the same prices. An oak chest to contain the above, and a relative number of knives, &c., 2l. 15s. Tea and coffee sets, dish covers and corner dishes, cruet and liqueur frames, &c., at proportionate prices. All kinds of replating done by the patent process.

CUTLERY, WARRANTED.—The most varied assortment of TABLE CUTLERY in the world, all warranted, is on Sale at WILLIAM S. BURTON'S, at prices that are remunerative only because of the largeness of the sales.

Ivory Handles.	Table Knives per Dozen.	Dessert Knives per Dozen.	Carvers per Pair.
	s. d.	s. d.	s. d.
3¼-inch ivory handles	12 0	9 6	4 6
3½-inch fine ivory handles	15 0	11 6	4 6
4-inch ivory balance handles	18 0	14 0	5 0
4-inch fine ivory handles	24 0	18 0	7 3
4-inch finest African ivory handles	32 0	26 0	11 0
Ditto, with silver ferules	40 0	33 0	12 6
Ditto, carved handles, silver ferules ..	50 0	43 0	17 6
Nickel electro silver handles, any pattern ..	25 0	19 0	7 6
Silver handles, of any pattern	84 0	54 0	21 0
Bone and Horn Handles—Knives and Forks per dozen.			
White bone handles	11 0	8 6	2 6
Ditto, balance handles	21 0	17 0	4 6
Black horn rimmed shoulders	17 0	14 0	4 0
Ditto, very strong riveted handles ..	12 0	9 0	3 0

The largest stock in existence of Plated Dessert Knives and Forks, in cases and otherwise, and of the New Plated Fish Carvers.

DISH COVERS and HOT-WATER DISHES, in every material, in great variety, and of the newest and most recherché patterns, are on SHOW at WILLIAM S. BURTON'S. Tin Dish Covers, 6s. 6d. the set of six; Block Tin, 12s. 3d. to 28s. 9d. the set of six;

for the South, where it will no doubt co-operate with General SHERMAN in his future movements. From Tennessee we learn that General HOOD, who had shut up the Federal army in Nashville, has been routed by General THOMAS, with a loss of from 3000 to 5000 prisoners, and from 30 to 40 cannon. General GRANT has despatched an expedition under General WARREN to destroy the Weldon Railroad, with the mills and depots, in order to prevent the Confederates from receiving supplies by that road. General WARREN destroyed the bridge across the Notoway River, and 15 miles of railroad, but found the Confederates in such force and so strongly entrenched near Hicksford, that his further progress was effectually barred, and he returned forthwith to head-quarters. The House of Representatives has adopted by a majority of 85 to 51 the resolutions for terminating the Reciprocity Treaty with Great Britain.

A telegram from Calcutta states that the British forces have entered the Bhootan territory, and commenced operations against the hostile chiefs by assaulting the fortress of Dalimkote, which they captured with slight loss; but an accidental explosion of powder had caused the death of three officers and seven men.

Accounts from Japan state that the treaty between the European Powers and the TYCOON in reference to the Prince of NAGATO stipulates that an indemnity be paid of 18,000,000*l.*, and that a port of the Inland Sea be opened for trade.

Home News.

THE COURT.—The Queen and Royal family continue at Osborne. On Saturday Prince Arthur arrived at Osborne from Greenwich Park. Prince Leiningen arrived on a visit to her Majesty. In the afternoon the Queen distributed Christmas gifts to the wives of the labourers and others on the Osborne Estate and the children of the Whippingham School. The presents were laid out in the servants' hall, and consisted of articles of clothing for the women, and toys of various descriptions for the children, for whom also a Christmas tree was prepared. Her Majesty was assisted in the distribution of the gifts by the Princesses Helena, Louisa, and Beatrice, Prince Arthur and Prince Leopold. On Sunday afternoon the Queen, the Princess Helena, Prince Arthur, Prince Leopold, and Prince Leiningen, attended Divine Service at Whippingham Church. On Monday the Queen, Princess Helena, and Princess Louisa, walked in the grounds. On Tuesday the Queen, accompanied by Prince Arthur and Prince Leopold, walked out; Princess Louisa took a drive. On Wednesday the Queen and Royal family took their usual exercise in the grounds.

THE PRINCE AND PRINCESS OF WALES.—The Prince returned to Sandringham on Friday, from his visit to Mr. H. Villebois, the master of the West Norfolk Hunt. The Princess did not go to Marham House, as was expected, in consequence of the inclemency of the weather. The first day of the Prince's visit was spent in shooting the Narborough Contract, when about 500 head of game were bagged, and the second was spent in the Marham Scrubbs, when nearly 600 head were killed. On Saturday the school children on the Royal estate were presented by their Royal Highnesses with new scarlet cloaks, jackets, and caps, and every cottager received an allowance of beer according to the extent of his family. The Prince afterwards went out shooting. On Christmas-day their Royal Highnesses attended Divine service at Sandringham Church, and received the Sacrament. On Monday the Prince's labourers, numbering 120, and the children belonging to the Sandringham, West Newton, Wolferton, and Dersingham schools, numbering 150, making a total of 270, were entertained at dinner at Sandringham in the presence of the Prince and Princess and Prince Albert Victor. On Tuesday the Prince, accompanied by Prince Leiningen, the Marquis of Bowmont, Earl Cowper, Sir Frederick Johnstone, and the Hon. W. Carrington, who arrived on the previous day on a visit, went out cover shooting. On Wednesday the Prince and his guests again went out shooting. Their Royal Highnesses will proceed to Holkham on Monday, on a visit to the Earl and Countess of Leicester, who will give a grand ball on the 5th to a large number of the county aristocracy in honour of their Royal Highnesses.

CHURCH APPOINTMENTS.—The Honorary Canonry in St. Paul's Cathedral, vacant by the promotion of the Rev. Ernest Hawkins to the canonry of Westminster, has been conferred by the Bishop of London on the Rev. Dr Mortimer, Head Master of the City of London School. The Venerable R W. Evans, B.D., has resigned the archdeaconry of Westmoreland, and the Bishop of Carlisle has appointed the Rev. John Cooper, M.A., vicar of Kendal, as his successor.

ARRIVAL OF LORD LYONS.—The Royal mail steamer China, from New York, arrived at Liverpool on Sunday morning. Among her passengers were Lord Lyons, British Minister at Washington, and Professor Goldwin Smith.

Foreign.

FRANCE.—The *Moniteur* of Thursday publishes a Note, stating that the extraordinary Budget for 1866, which amounts to a higher figure than the previous year, will be entirely balanced without having recourse to any extraordinary financial measures. It is stated that all the men at present on leave have received notice that they are placed in the reserve. The number to which the measure applies amounts, it is said, to 120,000. The corps of occupation at Rome is also to be greatly reduced. The *Patrie* announces that the opening of the Legislative Session will take place between the 10th and the 15th of February, and that the Budget will be laid before the Corps Legislatif on the first day of the session, so as to afford ample time for its discussion. It is likewise said that the monthly allowance at present paid to the members of the Corps Législatif will be converted into a fixed sum for the Session, so that the deputies will no longer have any interest in protracting the sittings into the summer months as they did this year.—The Paris papers, with scarcely an exception, condemn the Pope's Encyclical Letter as a revival of mediæval doctrines, and consider that by its publication the Pope has irretrievably damaged his own cause, has widened the breach between himself and the Court of the Tuileries, and declared war against modern society. The *Constitutionnel*, in an article signed by M. Paulin Limayrac, states that the Letter has caused general surprise; that its application is impossible, and that if any danger exists, it is in the reaction to which such attempts may give rise. France, it says, will remain faithful to the principles inscribed at the head of the Constitution. The same paper of yesterday, in another article signed by M. Paulin Limayrac, says that the result of the Encyclical Letter is to "control the consciences of Catholics, to rejoice the enemies of the Church, and thus increase the difficulties of the mission which France has undertaken and which she pursues in the interest of the Holy See." The *Opinion Nationale* says that the Holy See has consummated in the most formal way its rupture with every Government founded on national sovereignty. The *Siècle* points out that moderate and enlightened Catholics like Count de Montalembert, who hold that liberty and the Papacy are not antagonistic, are reduced to silence, and that the modern Torquemadas, such as M. Veuillot, find their extreme doctrines ratified, endorsed, and adopted by the Pope himself. The *Temps* says:—

"The Holy See condemns wholesale and retail all that modern society has thought and accomplished since the middle ages . . . It is specially France, the 'eldest daughter of the Church,' who is charged with entertaining impudent and perverse opinions. We are no friends to the Concordat, but we must confess that such language is calculated to surprise us."

The *France* describes it as an interdict launched forth against the principles which at present serve as the basis of political society, and says:—

"Liberty of conscience, of worship, and of opinion, complete independence of the civil as regards the religious power, are therein designated as pernicious and detestable errors. The theory which results from the document is this:—The people in the hand of their princes; the princes under the authority of the Pope; the Pope, to an extent of which he alone is the judge, may interfere in temporal affairs; the princes cannot under any pretext do so in religious matters; the Roman Catholic religion alone is to possess the right of having a public worship; the princes are obliged to protect it, and to repress the celebration of other forms of worship, not only in the name of public order, but because those worships are contrary to the true religion; the Church has the right to inflict corporal punishments on those who violate its laws, and the crime of heresy, which has been effaced from all modern codes, is maintained and punished as in the middle age. The old public law, which in France served as the basis of the relations of the Church and the State, is not less reproved than our present one. What will be the effect of this new manifestation of the Roman Court? In our opinion it will be the same as that of the condemnation pronounced by Gregory XVI. against modern liberties in 1832."

The Duchess of Norfolk has recently visited France, accompanied by her son, the young duke, and other members of her family, for the purpose of taking a farewell of Lady Minna Fitzalan Howard, her Grace's second daughter, who, after passing through the customary course as a novitiate, has taken the black veil. The new nun only completed her 21st year last month.—A curious manuscript has just been purchased at a second-hand book shop at Lyons, and placed among the archives of that city. The volume, written on parchment, gives an account of the receipts and expenses of the province of the Lyonnais and of the city of Lyons for three years at the end of the 16th century, with numerous details connected with the history of that part of the country.—An old arm chair has just been disposed of at the sale rooms in the Rue Drouot, which possessed all the interest attaching to an historical relic. It was made for Maria Theresa, and occupied the post of honour in her boudoir. At her death it came into the possession of her daughter, Marie Antoinette; and was afterwards one of the few articles of furniture the Royal captives in the Temple were permitted to retain. After the tragical death of the King and Queen, his Majesty's valet, Clery, was permitted to take it away. He carried it to England, where it successively passed into the hands of the Prince Regent and the Duke of Cumberland. The latter took it with him to Berlin, where it was given to an upholsterer to repair. The workman engaged in the renovation discovered in the lining a diamond the miniature of a boy, and a collection of He appropriated the jewel, and gave the papers to a watchmaker named Naundorff. discovered the miniature to be the likeness young Prince, and the papers to be secret from Louis XVI. On the strength of these himself off as Louis XVII., and after sundry as the Duke de Normandie, died in Java ago. The upholsterer revealed what he had on his deathbed; and the arm chair was his relatives, hoping, probably, to find some in it. It then passed into the hands of a traveller, who brought it to Paris, where it possession of an old woman who died in an and, finally, was disposed of the other antiquarian, to whom it was knocked down francs.—This is the severest winter which known in Paris for many years, and the low temperature is occasioning great distress among poorer classes.

SPAIN.—A Council of War was held on the question of San Domingo. General P... nounced himself entirely opposed to the abandonment of the island from a military point of view, submitted to what might be recommended Government upon political or economical The other members of the Council, with the possibility of temporarily suppressing the rection, were in favour of abandoning the island. Spanish soldiers were sacrificed, falling victims the enemy, but the climate, without glory or the country.—It is said that the chief topic sation at the Spanish Court is the scandal the recent marriage of Mdlle. Balfe, the divorced Sir John Crampton, the English ambassador, to of the first class, in whose veins the purest is supposed to flow. It appears that the Queen notified to the duke her regret that it will be for her to receive his bride at Court, as she incur the risk of exposing the Ambassador of great Powers to the unpleasant situations which arise from his meeting his former wife at the The duke, on receiving this communication, returned to her Majesty not only all his orders, gold key as one of the Court Chamberlains.

THE DUCHIES.—It is announced that Bavaria decided on advancing her title to the Duchies. number of claimants is now raised to seven—the of Augustenburg, Prince Peter of Oldenburg, Prince of Hesse, the Ernestine branch of the House Saxony, Prussia, Austria, and Bavaria. There is a rumour that a claim has been preferred by the of Rantzau, formerly proprietor of the Rantzau, which was expropriated by Denmark another by Count Styrum, who is related to the House of Oldenburg.

HESSE CASSEL.—Several German journals speak the probability of the Elector of Hesse being set by the Diet as incapable of governing. The Landgrave William is the nearest agnate, but as he will be 77th year in the present month, his son Frederick aged 44, and married to the daughter of Prince of Prussia, will, it is expected, be appointed Regent should a change take place.

BAVARIA.—It is asserted that the negotiations Bamberg between Herr von der Ptordten and Baron von Beust have resulted in a complete understanding between the Saxon and Bavarian Governments relative to the further steps to be taken in the question of the Duchies. The conference also had reference to the scheme for dividing Germany into three Powers—Austria, Prussia, and the Middle States. This plan was agreed upon in principle.

AUSTRIA.—The Archduke Louis Joseph, youngest brother of the late Emperor, Francis I., died on the 22d inst., in his 80th year. He was born at Florence in 1784, and during the reigns of his brothers Ferdinand I. and Francis I., exercised a considerable influence on the government.

PRUSSIA.—Herr von Balan has been appointed Prussian Envoy at Brussels. Herr von Heydebrand, formerly Minister at Weimar, has been appointed representative of Prussia at the Papal Court. Judgment was delivered on Friday in the cases of the Polish prisoners indicted for high treason. The majority were acquitted. The remainder found guilty of acts tending to the commission of treason. Extenuating circumstances, however, admitted. Sentence of death was passed upon the following refugees, in accordance with the of the public prosecutor:—Dzialynski, Guttry, Wawicz, Skoraczewski, Taczanowski, Zakezewski, Latowski, Jaroczewski, Seytried, and Lukas. The following were sentenced to 12 months' ment:—Zorawski Mankowski, Czartoryski, Sezaniecki. Kurnatowski, Mielecki, Hulewicz, kowski, Zablocki, Moszczewski Mittelstadt, well, Natalis von Sulerzyski, Kalkstein, Chotomski, Ketezynski, and Schultz. To 15 imprisonment:—Rymarkiewicz and Jarochowski 18 months' imprisonment: Rustejko and Theodor Jackowski. To two years:—Kosinski and Niegolewski. The following were acquitted:—Laczynski, Swinarski, and Szoldrski. In the cases of Bronikowski, Jaraczewski, Oppen, Rozycki, and kowski, fresh proceedings will be instituted.

... of the counsel for the defence, all the accused ... ted to remain at large under certain ... they undergo the sentence; Martwell and ... foreigners, alone excepted.

...—Private advices from St. Petersburg state ... Gortschakoff seriously contemplates ... office. Baron de Budberg is spoken ... successor. M. Walinew, the Minister of ... would, it is said, then proceed to Paris ... Ambassador, and be replaced by General ... It is further stated that Admiral ... the Minister of Marine, would resign, and ... Admiral Glasenapp would assume the vacant ... The *Deutsche-Petersburger Zeitung* of ... commenting on the relations between Russia ... says that the object of Baron von Meyen- ... journey to Florence was to attend the Czare- ... and that the rumour of his passports having ... presented to him was unfounded. The same ... that the preservation of friendly relations ... Russia is of great importance to the Pope, on ... account of the effect which a rupture between the two ... governments would have upon the Pope's influence ... the Roman Catholic subjects of the Russian ..., whereas Russia would be but slightly injured ... an event.

...—The Pope's Encyclical Letter has been ... this week. It is a very lengthy document, ... more than two columns of the daily papers, ... of the appendix, which is still longer. It ... that it was drawn up and discussed some time ... by a body of ecclesiastics, and subsequently debated ... Congregation of the Holy Office. The con- ... propositions were submitted to the most learned ... of the Church for their opinions, and when ... were carefully gone over paragraph by para- ... by the Pope and the Cardinals. It may be taken, ..., as the unadulterated essence of the entire ... and learning of the Church. The Pope com- ... by reminding the prelates that his predecessors ... never failed to state and condemn the errors ... against the fundamental principles of religion spread ... out society, and in particular against the Roman ... Church. He adds that from the commence- ... his pontificate he has invariably rebuked these ... in his Allocutions delivered at the Consistories, ... in his frequent Encyclical letters to the Bishops. ..., therefore, that errors and false opinions are ... on the increase in religious and lay society, ... addresses himself to the Bishops on the present ... to excite their zeal to confute error, and to ... the evil which false ideas of religion, ..., and politics inflict upon the modern world. The Encyclical letter then proceeds to enunciate the ... errors which must first be confuted. These ... stated as the opinions of those who say that civil ... requires society to be governed without ... to religion, or without any difference being ... between the true faith and heresy; that liberty ... conscience and of public worship are essential in a ... organised government; that the will of the ..., as displayed by public opinion or by other ..., constitutes a supreme law and a true right, and ... accomplished facts in political affairs are to be ... as rightfully in force; that religious orders ... entitled to exist, and ought, consequently, to be ... pressed; that family society is dependent solely ... civil law, so that the Government has the ... right of regulating the relations between ... and children, and of directing instruction and ...; that the clergy should not be permitted to ... part in public instruction, because they are ... to progress; that the laws of the Church ... have binding force unless they are promulgated ... the civil authority; that excommunications pro- ... against usurpers of the rights and property of ... Church are an abuse; that the Church has not the ... of punishing those who violate her law; that the ... power is not by Divine right distinct from ... independent of the civil power; that obedience ... conscientiously be refused to those decrees and ... of the Holy See which do not affect points of ... All these opinions and several others are ..., proscribed and condemned, and the Pope pro- ... their being in future entertained by true believers.

... Encyclical letter is accompanied by an appendix ... propositions, containing the principal modern ..., with brief references to the ecclesiastical docu- ... in which they are anathematised. Seven refer to ..., naturalism, and absolute rationalism; 7 to ... rationalism, 4 to religious indifference, 20 to ... against the Church and her rights; 17 to errors ... in civil society and their relation to the Church; ... errors of philosophy, 10 to errors connected with ... marriage, and 6 to modern liberty and the ... Sovereignty of the Holy See. Among the ... errors are the following:—

The Pope can and ought to become reconciled to progress, ..., and modern civilisation. It is not fitting that in ... day the Catholic religion should be the exclusive ... of the State. It is untrue that civil liberty of worship ... of the press conduce to the corruption of morals ... propagate indifference. Every man is free to embrace ... religion he shall believe true, guided by the ... Men who have embraced any religion may ... obtain eternal salvation. The eternal salvation may ... be hoped for of all who have never been in the true ... of Christ. Protestantism is nothing more than another ... same true religion, in which it is possible to be ... pleasing to God as in the Catholic Church. Authority ... more than the union of material force and of numbers. A happy injustice of fact inflicts no injury upon the sanctity of right. It is allowable to oppose and revolt against legitimate princes. Violations of oaths and every act contrary to the eternal laws are permissible in the cause of patriotism."

The Pope further condemns Bible Societies, Secret Societies, Socialism, Communism, Clerico-Liberal Societies, the Protestant doctrine of private judgment, the subordination of the ecclesiastical to the civil power, civil marriage, the right of divorce, the abolition of the celibacy of priests, the preference due to the state of marriage over vows of chastity, and the doctrine that it is no longer necessary that the Catholic religion shall be held as the only religion of the state to the exclusion of all other modes of worship.—Baron von Meyendorff, the Russian representative at the Papal Court, has returned to Rome, and it is believed that he will be present at the reception of the Diplomatic Body at the Vatican on New Year's Day. On the night of the 26th inst. a detachment of French troops attacked the band of brigands under Cetoco, near Veroli, in the Papal States. Seven brigands were captured, and several French soldiers wounded. The *Giornale di Roma* of Wednesday, in reference to this encounter, says that the Pontifical Government does not encourage, but is rather the victim of brigandage. Cardinal Andrea has paid a visit to Prince Humbert, who has taken up his residence at Naples for the winter. His Eminence was received with all the honours due to his rank.

GREECE.—Advices from Athens state that the King has intrusted Professor Kyriaku, of the Moderate party, with the formation of a new Cabinet. It is asserted that M. Buduris, the Deputy from Hydra, will be the new Minister for Foreign Affairs.

TURKEY.—A very stringent Press law has been promulgated. The Tunisian Envoy has left Constantinople, having satisfactorily fulfilled his mission. The Porte has granted the concession for the construction of a railway from Jaffa to Jerusalem. The country palace or konak of Fuad Pasha, the Grand Vizier, was totally destroyed by fire on the 11th inst. Nearly the whole contents of the building were consumed, including a large collection of plate and jewellery, and the box containing his Highness's decorations and official seal.

MOROCCO.—The Emperor of Morocco has determined on erecting electric telegraphs in his States. The first line will connect the cities of Fez, Mequinez, and Morocco with Tangier. To understand all the importance of this innovation, the reader must know that the Emperor, who has hitherto done nothing without the advice of his astrologers, consulted them during his stay at Rabat, and they replied, after a whole night's study, that the electric telegraph was an infernal invention, which would bring calamities on the Sovereign and his dynasty. The Emperor, however, disregarded their predictions, and has decided, not only that the telegraph shall be established in his empire, but likewise that any who dare to destroy the apparatus or wires shall be beheaded.

EGYPT.—The English frigate Caradoc arrived at Alexandria from Constantinople on the 22d inst., having on board Sir Henry Bulwer, who will probably pass the winter in Egypt.

INDIA.—The *Bombay Gazette* says that Sir Charles Trevelyan is better, and that there is no immediate necessity for his proceeding to Europe. The *Friend of India*, on the other hand, says that he returns to England in February next, by the advice of his physician, as residence in India for another hot season is considered unsafe. Sir Hugh Rose met with a serious accident at Meerut on the 20th ult., when out hunting; in attempting to leap a stiff wall, his horse struck the top of the bank, and turned a complete somersault, falling on his Excellency. Sir Hugh has broken one of his ribs, but it is hoped that nothing more serious has occurred. Sir Hope Grant is to be the new commander-in-chief, relieving Sir Hugh in March next. Colonel Norman is to be the military member of Council, vice Sir Robert Napier, and is succeeded in the military secretariat by Colonel Stewart, deputy-adjutant-general. A proclamation was issued by the Governor General on the 12th ult., announcing the intention of Government to annex the Bengal Dooars of Bhootan to British territory. The campaign has opened with the capture of the strong fortress of Dalimkote, with slight loss of two officers and 50 men. An accidental explosion of powder caused the death of three officers and seven men. The invasion of the country by British troops has caused great consternation in Bhootan, and the feud between the rajahs, who are for peace, and the Pillos, who are for war, has almost broken out into civil war. The construction of the telegraphic line to the Bhootan Passes will be completed in December. The Government of India is in communication with the Rajah of Cashmere regarding cruel punishments and mutilations inflicted by his officers in Goozerat, some women having been found there with their tongues cut off by order of Rajah Motee Sing. The Ameer of Cabul having found that his breach of faith towards Afzul Khan was alienating all the Sirdars and warlike tribes, has released him, but still retains him under surveillance. The tribes of the Soleman hills have resolved on supporting the cause of Afzul Khan, and it is even said that they have formed an army to march against the Ameer in his cause. A grand khullut, consisting of diamond necklaces, &c., has been sent by the Emperor of Russia to the King of Bokhara. The Russians have of late been very busy in Central Asia, and it is said that the embassy to the King of Bokhara proposes a joint advance on Thibet, &c. There is also a report that the long reign of Sir Jung Bahadoor in Nepaul has come to an end, the King's party having placed him in prison. A pestilential fever has succeeded the late storm in Bengal. The fish in all the tanks south of Calcutta died, and the water became tainted. Sad intelligence has been received from almost all quarters of injury to the crops from want of rain, and there is every prospect of severe suffering during the coming season, throughout the whole country. The mail steamer Hydaspes has been wrecked in the Straits of Rhio, between Singapore and Batavia. The passengers and cargo were saved.

JAPAN.—The Paris papers publish news from Japan, stating that the treaty between the European Powers and the Tycoon, in reference to the Prince of Nagato, stipulates that an indemnity be paid of 18,000,000*l.*, and that a part of the Inland Sea be opened for trade.

UNITED STATES.—Admiral Dahlgren reported from Port Royal on the 12th the arrival of three scouts, bearing despatches from General Howard, announcing that Sherman had been perfectly successful thus far, and that his army was in fine spirits within a few miles of Savannah. The Richmond papers of the 16th state that Sherman carried Fort M'Allister by storm on the 14th. This capture put him in communication with the Federal fleet, and necessitated the reinforcement of Savannah. Fort M'Allister is on the Ogeechee River, 15 miles south-west of Savannah. It was garrisoned by only 150 men. A steamer from Charleston Bar, on the 14th inst., brings a report that news had reached there by a flag of truce that Sherman had captured Savannah and 11,000 prisoners, after eight hours' fighting. It is also said that the vessels off the harbour were seen by a passing gunboat decorated with flags, and salutes were being fired as though in honour of some great victory. No confirmation of this news has yet been received. The Richmond papers state that up to the 18th no attack had been made upon the defences of Savannah, which consist of a triple line of works. General Hardee commands the position. General Beauregard reached Charleston on the 7th inst. Some accounts represent that Sherman would attack Savannah at once, and would encounter a desperate resistance. Other theories are that he will, before making any attack, first establish his base on the coast at Darien, or at some point south of the Savannah River. General Thomas reports from Nashville that on the 15th he attacked General Hood's left, and drove it from the river below the city nearly to Franklin Pike, a distance of eight miles, capturing Chalmers's head-quarters and trains, 1000 prisoners, and 16 guns. He again attacked him on the 16th, and after a battle which continued all day, drove him from all his intrenched positions, and captured from 3000 to 5000 prisoners, and 30 to 40 cannon. Unofficial despatches announce that Hood was retreating and endeavouring to get away, while Thomas was pressing him vigorously, capturing guns and men. General Canby reports that the expeditionssent from Vicksburg and Baton Rouge to cut Hood's communications with Mobile, had completely successful. The Federal General Kilpatrick was reported mortally wounded. A naval and military expedition, under Admiral Porter and General Butler, left Fort Monroe on the 12th for the Southern coast. General Stoneman has made a raid in Breckenridge's rear, and captured Bristol, Abingdon, and Glade Springs, Western Virginia. He also burned the bridge over the Holston River, and has moved towards Saltville. General Grant is reported to have been reinforced by 4000 men of Sheridan's army. General Warren, with the 2d and 5th Corps of Grant's army, previously reported marching towards Stoney Creek, has returned to head-quarters. He proceeded to Hicksford, on the Weldon Railway, where he found the Confederates in force, strongly intrenched and effectually barring his further progress. He states that he destroyed 15 miles of the railway and the depôts, together with numerous mills, barns, and dwellings. No engagement of consequence occurred during the movement. It is understood that General Fremont will be appointed United States Minister at Paris, in the place of the late Mr. Dayton. The House of Representatives adopted on the 13th inst., by a majority of 85 to 51, Mr. Morrill's amended resolutions for terminating the Reciprocity Treaty with Great Britain. The acquittal of the St. Alban's raiders by the Canadian authorities has created a strong feeling of indignation throughout the North, and the military commanders on the frontier are directed by General Dix, in case of further acts of depredation, to shoot down the perpetrators, if possible; and, if necessary for their capture, to cross the Canadian boundaries and pursue them wherever they take refuge, and not to surrender them if captured, but send them on to head-quarters for trial by court-martial. Resolutions have been introduced into Congress, and referred to the Committee for Foreign Affairs, denouncing the conduct of the Canadians, recommending the organisation of an army corps for the protection of the frontier, and directing the Secretary of State to demand from the British Government payment for all cargoes and ships destroyed by British piratical vessels. The *New York Times* says that "Canada has been turned into a base of rebel operations, and Canadian territory must be respected no more than Virginian or South Carolinian territory. This may lead to war, and if so, let it come." Much excitement exists in the cities and

towns on the northern frontier in consequence of warnings received by the authorities of designs by the Confederates in Canada to enter and set fire to them. The Militia in Detroit have been ordered out by the Mayor, and nightly patrol the streets. The *New York Times* asserts that the Brazilian demand for reparation for the seizure of the Florida is insolent in tone, and that Mr. Seward's reply is firm and conciliatory. It does not endorse the seizure, and expresses a desire that the matter should be fairly and satisfactorily adjusted.

CANADA.—The St. Alban's and Lake Erie raiders have been discharged from custody by Judge Coursal of the Montreal Court, on the ground that the Governor-General had issued no warrant authorising their arrest, and that the Canadian Extradition Act of 1861 was not in force, because it had not been assented to by the Queen in Council. The Canadian Cabinet held a long Council at Quebec on the 15th, and unanimously denounced the judge's decision. Attorney-General Carter also decided that the decision was wrong, and ordered the re-arrest of the raiders. The police are making great efforts for their recapture; and as the officers are already on their track, there is little doubt that they will soon again be in custody. Another Cabinet Council was held at Quebec on the 16th, at which the subject of rebel raids across the border was again under consideration. Parliament has been summoned to meet on the 19th January, when laws will be passed to meet the urgency of the great change of public feeling towards the Confederates, since they have shown an intention of embroiling the two countries in war. Stipendiary magistrates have been appointed on the frontier, especially to take cognisance of breaches of the international laws, and they are to be aided by a strong police force. The chief of the police has refunded the money found upon the raiders. It is supposed that Judge Coursal will be dismissed. The *Toronto Globe* states that the Canadian authorities have been informed that a regiment of Confederate troops has been detailed and temporarily disbanded, with orders to proceed singly to Canada, there to reunite for incursions into the Federal States.

PERU.—Advices from Lima to the 27th November, received through New York, state that war with Spain was imminent. The Legislature was in session, discussing the advisability of notifying Spanish vessels to quit the ports of the Republic within a certain number of days. The flagship of the Spanish Admiral had been destroyed by fire at the Chinchas.

City Intelligence.

MONEY MARKET, FRIDAY.—BRITISH FUNDS: Consols closed at 89¼ to ⅜ for Money, and 89½ for Acct.; Reduced and New Three per Cents., 88⅜ to ½; New Five per Cents., 103¼ to 103; Bank Stock, 240; India Stock, 212; Ditto Bonds, 8s. to 10s. pm.—FOREIGN: Brazilian Old Five per Cents., 100½; Danish, 1825, 80; Ditto 1863, 80; Egyptian, second issue, 95⅝; Ditto 1864, 94¼ to 95¼; Greek, 23⅜ to ½; Mexican, 29⅜; Ditto for Acct., 29¼; Ditto 1864, 27⅝; Portuguese, 1856, &c., 48⅜ to ½; Russian, 1862, 88 to 88¼; Sardinian, for Acct., 81⅛; Ditto Certificates, 14⅜; Turkish, 1858, for Acct., 70¼ to ⅝; Ditto 1862, for Acct., 72⅛ to ¼.

Bank of England.

ISSUE DEPARTMENT.

Notes issued	£28,036,475	Government Debt	£11,015,100
		Other Securities	3,634,900
		Gold Coin and Bullion	13,386,475
		Silver Bullion	—
	£28,036,475		£28,036,475

BANKING DEPARTMENT.

Proprietors Capital	£14,553,000	Government Securities (including Dead Weight Annuity)	£10,824,542
Rest	3,356,854	Other Securities	19,786,541
Public Deposits (including Exchequer, Savings Banks, Commissioners of Nat. Debt, and Dividend Accts.)	8,601,125	Notes	8,663,490
Other Deposits	13,040,813	Gold and Silver Coin	714,499
Seven days and other bills	437,450		
	£39,989,072		£39,989,072

Dec. 29, 1864. W. MILLER, Chief Cashier.

Gazette of the Week.

FRIDAY *Dec.* 23.—BANKRUPTS.—J. ARCHER, Liverpool, Bookkeeper—R. ADAMS, King William St., City, Gun and Pistol Manufacturer—R. ADAMS, Oakfield, Kent, Manufacturer of Firearms—J. ANDREWS, Liverpool, Provision Dealer—H. ASHLEY, Bristol, Builder—F. W. ATTFIELD, Wrecclesham, Surrey, Licensed Victualler—R. G. BETT, Addle Street, City, Commission Agent—J. C. BRAGER, Liverpool, Metal Broker—W. BEWLEY, Carlisle, Cumberland, Grocer—G. BAYCROFT, Gortsage, Cheshire, Grocer—J. BANK, Eagle Farnsfield, Lincolnshire, Farmer—C. BEECHER, late of Lower Marsh, Lambeth, Shopman to a Hat and Cap Manufacturer—E. M. F. BERRYMAN, Norwich, Haberdasher—T. W. BURTON, Hastings, Sussex, Attorney-at-Law—W. BAXTER, Granville Terrace, Peckham Rye, Merchant's Clerk—J. J. BIRKETT, jun., Haverstock Hill, Wine Merchant—D. V. V. BOSANQUET, Lever Street, St. Luke's, late Watchmaker—H. COLEMAN, Regent Street, Wine Merchant—R. CLAPP, St. Sidwell's, Devonshire, Maker—W. CLARKE, Hemp, Lancashire, Reedmaker—S. CRAGG, sen., and S. CRAGG, jun., Leicester, Cabinet Makers—M. W. CLARKE, late of Bristol, Wine and Spirit Broker—T. DENNING, Penarth, Glamorganshire, Shipmaker—J. EDWARDS, late of Bristol, Clerk—J. V. FOWLER, Liverpool, Boarding House Keeper—J. FOWLER, Liverpool, Timber Merchant—J. GOODMAN, Piccadilly, Hertfordshire, Plant Dealer—J. C. GENGE, Landport, Hampshire, Beer Retailer—A. M. GARRARD, Norfolk Street, Islington, Oil and Colourman—W. HAWES, Chedworth, Gloucestershire, Farrier—W. HEAD, late of Denby Dale, Yorkshire, Fancy Goods Manufacturer—M. HEWSON, Longtown, Cumberland, Brewer—W. HEAD, late of Carlton, Yorkshire, Tailor—S. HOLDEN, High Street, Hoxton, Watch and Clock Maker—S. HOWARD, Everton, Liverpool, Builder—T. HOLDEN, late St. Martin's Street, Leicester Square, Waiter—E. HOLLAND, Cambridge, Publican—W. J. HOWARD, late of Sandown, Isle of Wight—S. HENSHALL, Joiner—B. S. HOWARD, Norwich, Blind Maker—D. JONES, Wandsworth Road, Eastland Place, late Plumber—F. JEFFERYMAN, Pantry, Carpenter—W. JONES, Merthyr Tydfil, Glamorgan, Shopkeeper—J. KENT, Brighton, Coach Painter—A. KEEN, St. John Street, Westminster, late Furniture Dealer—R. T. KING, Park Place, Regent's Park, Iron Merchant—C. KNIGHT, Archway Place, Upper Holloway, late Carpenter—J. LEES, Notting Hill Terrace, Notting Hill, Commission Agent—J. LEWIS, Liverpool, Carver and Gilder—F. LOCKYER, Bristol, late Dealer in Hay—G. LE CRAS, Fassett Square, Dalston, late Commission Clerk—J. R. LASKEY, Banner Street, St. Luke's, Cabinet Maker—W. LEONARD, late of Kingston upon Hull, Butcher—L. MURATORI and V. BUZZOLI, Hatton Garden, Italian Warehousemen—S. MITCHELL, Torquay, Devonshire, Currier—D. MUNOZ, Queen's Road, Bayswater, late Hotel Keeper—T. M'CABE, Hill Top, Durham, Labourer—B. NICHOLS, Layendon, Buckinghamshire, Grocer—R. MAYS, Derby Terrace, Plumstead, Pig Jobber—J. M'NAMARA, late of Lucan Place, Hoxton, Tailor—D. MOFFAT, Judd Street, Euston Road, Baker—R. NEWSON, Lowestoft, Suffolk, Bricklayer—J. NAWELLS, Whitehaven, Cumberland, Draper—W. PARR, Burslem, Staffordshire, Potter—W. PINKER, Great Western Terrace, Paddington, Stone Mason—N. PRICE, Loughton, Essex, Painter—W. RAY, Lower Belgrave Place, Pimlico, Wine Merchant—J. H. ROGERS, Leadenhall Street, City, Shipbroker—P. RYAN, Gateshead, Durham, Labourer—J. RYAN, Dipton, Durham, Labourer—R. ROSE, Rochdale, Lancashire, Joiner—R. RAWSTHORNE, Kirkdale, Liverpool, Licensed Victualler—T. RIDYARD, jun., Liverpool, Corn Merchant—C. SKINNER, Northampton, Shoe Manufacturer—J. SPALDING, Swaffham, Prior, Cambridgeshire, Grocer—J. STEER and S. STEER, Oxford Street, Bedstead Manufacturer—J. STONEY, late of Rastrick, Yorkshire, Weaver—S. SHELTON, Olney, Buckinghamshire, Shoe Manufacturer—F. ULLATHORNE, Kingston upon-Hull, Draper—J. WHITE and E. WHITE, Runcorn, Cheshire, Clothiers—J. WEAVIL, Milnsbridge, Yorkshire, Joiner—E. WOODWARD, late of Portobello Terrace, Kensington Park, Plumber—A. WOODHALL, Manchester, Joiner—W. R. WRIGHT, late of Chard, Somersetshire, Auctioneer—J. WARD, Hoyland, Yorkshire, Grocer's Assistant—J. WILLS, Wells, Somersetshire, Horse and Cattle Dealer—J. T. WHITE, Tonbridge, Kent, Innkeeper—T. J. H. WESTALL, late of Whitchurch, Herefordshire, Dentist—S. YOUNG, Cotterells, Hertfordshire, Straw Plait Dealer; and M. YOUNG, Harpenden, Journeyman Butcher.

SCOTCH SEQUESTRATIONS—J. M'FARLANE, Dundee, Horse Dealer—A. NISBET, Glasgow, Wholesale Jeweller.

TUESDAY: *Dec.* 27.—BANKRUPTS.—G. BARTON, Blackman Street, Southwark, late Farmer's Assistant—J. BAYLEY, late of James Street, Oxford Street, Eating House Keeper—G. BRADFORD, Robert Street, Brixton Road, Beer Retailer—W. BROWN, late of Drury Lane, Cheesemonger's Assistant—J. R. BARRAS, late of Queen's Road, Bayswater, Hotel Keeper—D. T. BAKER, Old Cavendish Street, St. Marylebone, Heraldic Artist—R. T. COWEN, Bedford Terrace, Lothian Road Camberwell, Musician—W. COLDMAN late of Oakfield Grove, Penge, Builder—H. L. DANIEL, Princess Terrace, Regent's Park, Manager to a Cemetery Mason—PETER DUMAS, late of Anchor Street, Bethnal Green, Silk Dealer—GEORGE FARL, late of Westfield, Sussex, Farmer—GEORGE FLETCHER, late of Lowestoft, Suffolk, Fish Dealer—F. FLETCHER, Bermondsey Square, Bermondsey, Furniture Dealer—J. GILL, late of Kingsbridge Place, Poplar, Shoemaker—F. H. GREEN, Denmark Place, Lower Norwood, Surrey, Carpenter—E. HANNAFORD, late of Chandos Street, Covent Garden, Dealer in Watches and Jewellery—J. HIRST, Shaftesbury Street, New North Road, Builder—J. C. HARWOOD, Hampstead Road, Baker—E. KEMP, late of Blossom Street, Norton Folgate, Timber Merchant—F. A. LAYTON, Beaufort Street, Chelsea, Mercantile Clerk—J. LUNTLEY, Liverpool Street, City, Undertaker—F. W. LANKSTONE, late of Walpole Street, New Cross Road, Builder—J. LEWIS, late of King's Head Court, Shoreditch, Mathematical Instrument Maker—H. MUSSETT, George Lane, Botolph Lane, late Stationer—H. M. MILTON, Weymouth Mews, Portland Place, Horse Dealer—J. MATTHEWS, late of Earl Street East, Paddington, Job Master and Cab Proprietor—R. MANN, late of Waterloo Road, Corn Chandler—J. MITCHELL, late of King Street, Hammersmith, Commission Agent—J. MORTIMER, late of Union Chambers Old Broad Street, City, Builder—J. PARKER, late of Old Ford Road, Bow, Plumber and Painter—H. C. PIKE, High Street, Peckham, Watchmaker and Jeweller—HENRY JOSEPH REED, late of Norwich, Saddler—CHARLES ROBINSON, late of West Ham, Essex, Builder—JOHN EBENEZER SIMKINS (sued as JOHN EDWARD SIMKINS), late of Boisover Street, Marylebone, Watchmaker—R. SOUTHEY, St. George's Mews, Kilburn, Cab Proprietor—R. SLATER, jun., De Beauvoir Road, Kingsland, Ironmonger's Assistant—S. S. SIMON, late of Duke's Place, Houndsditch, Jeweller—A. SENDER & G. SENDER, Hoxton Square, Shoe Manufacturers—D. TREACHER, late of George Place, Bermondsey, Publican—J. WHITEHEAD, Balaclava Road, Bermondsey, Grocer—D. WIGGETT, late of Bunhill Row, St. Luke's, Eating House Keeper—W. WARD, Hadfield Street, Blackfriars, Furniture Dealer

Metropolis and its Vicinity.

LORD WHARNCLIFFE AND MR. SEWARD.—In consequence of Mr. Seward's refusal to allow the distribution of the money raised at the Liverpool Bazaar among the Confederate prisoners in the North, Lord Wharncliffe has published in the *Times* the following correspondence between himself and Mr. Adams, the United States Minister in London. His lordship at the same time replies to some of Mr. Seward's statements, and says that the fund, so far from having been mainly contributed by those who had been engaged in trade with the South, included contributions from all parts of the United Kingdom, from the Continent, Canada, and even from the Northern States; and that the movement originated with, and was all but entirely carried out by the Southern ladies now in England. Lord Wharncliffe adds that the refusal of the Federal Government will not practically affect the distribution of the fund:—

"Wortley Hall, Nov. 12.

"Your Excellency,—A bazaar has been held in St. George's Hall, Liverpool, to provide a fund for the relief of Southern prisoners of war. It has produced a clear sum of about 17,000*l*. In preference to any attempt to reach the intended object by circuitous means, a committee of English gentlemen has been formed to address you on the subject. As chairman of this committee I venture to ask your Excellency to request the permission of your Government that an accredited agent may be sent out to visit the military prisons within the Northern States, and minister to the comfort of those for whom this fund is intended, under such supervision as your Government may direct. Permit me to state that no political end is aimed at by this movement. It has received support from many who are opposed to the political action of the South. Nor is it intended to impute that the Confederate prisoners are denied such attention as the ordinary rules enjoin. But those rules are narrow and stern. Winter is at hand, and the clothing which may satisfy the rules of war will not protect the natives of a warm climate from the severe cold of the North. Sir, the issue of this great contest will not be determined by individual suffering, be it greater or less; and you, whose family name is interwoven with American history, cannot view with indifference the suffering of American citizens, whatever their state or their opinions. On more than one occasion aid has been proffered by the people of one country to special classes under great affliction in another. May it not be permitted to us to follow these examples, especially when those we desire to solace are beyond the reach of their immediate kinsmen? I trust these precedents and the voice of humanity may plead with your Excellency and induce you to prefer to the Government of the United States the request I have the honour to submit.—I am, Sir, your most obedient servant,

"The Hon. C. F. Adams." "WHARNCLIFFE."

"Legation of the United States, Nov. 18.

"My Lord,—I have the honour to acknowledge the reception of your letter of the 12th inst., asking me to submit to the consideration of my Government a request of certain Englishmen made through your lordship, to send out an accredited agent to visit the military prisoners held by the United States, and afford them such aid, additional to that extended by the ordinary rules of war, as may be provided by the fund which has been raised here for the purpose. I am very sure that it has never been the desire of my Government to treat with unnecessary or vindictive severity any of the misguided individuals, parties in this deplorable rebellion, who have fallen into their hands in the regular course of war. I should greatly rejoice were the effects of your sympathy extended to the ministering to the mental ailment not less than the bodily sufferings of these unfortunate persons, thus contributing to put an end to a struggle which otherwise is too likely to be only procrastinated by your labours. Be this as it may, I shall be happy to promote any humane endeavours to alleviate the horrors of this strife, and in that sense shall very cheerfully comply with your lordship's desire, so far as to transmit by the earliest opportunity to my Government [illegible] of the application which has been addressed [illegible] your lordship to receive the assurance of my [illegible] consideration.

"CHARLES FRANCIS [illegible]

"Legation of the United States, [illegible]

"My Lord,—I have the honour to inform [illegible] submitted to the consideration of my Government [illegible] your lordship's note to me of the 12th of November [illegible] reply of the 18th of that month, and I have now [illegible] of the conclusion which has been reached. I am [illegible] say that permission for an agent of the commit[illegible] your lordship to visit the insurgents detained in the military prisons of the United States, and to distribute a money 17,000*l*. of British gold, cannot be granted. I am [illegible] further constrained to siguify to your lordship that [illegible] note my correspondence on this subject must [illegible] close.—I have the honour to be, my lord, your lordship's obedient servant,

"CHARLES FRANCIS [illegible]

"To the Lord Wharncliffe."

DECORATIONS OF ST. PAUL'S.—The large [illegible] under the dome of St. Paul's Cathedral, [illegible] Bishop of London to-morrow evening will inaugurate the special Sunday evening services for 1865. The [illegible] undergone some changes since the last series of [illegible] was brought to a close. Preparations are now [illegible] filling the eight spandrels formed by the great [illegible] of the dome under the Whispering Gallery with [illegible] of art, designed to represent the Church Militant [illegible] crowned by a blaze of golden light and colour [illegible] dome, embodying the conception of the Church Triumphant. Eleven of the principal windows of the fabric will be treated in a special manner, after designs by Professor Schnorr, of Dresden, and Mr. Penrose, the Cathedral surveyor. Four of them have been already painted, and two others are in progress. Of these the cost is borne by the Drapers' and Goldsmiths' Companies, and of two more by Dr. Rogers and Mr. Brown, of the firm of Longman & Co. Towards the general subscription for the general adornment of the Cathedral her Majesty has subscribed 100*l*., the Prince of Wales 50*l*., and the Duke of Cambridge 25*l*.

PROPOSED SCOTTISH HALL IN LONDON.—A meeting composed of representatives of the Highland Society of London, the Caledonian Society of London, the London Scottish Volunteers, the Scottish Hospital, and the Caledonian Asylum, held at the hall of the Scottish Hospital on the 21st inst., Sir J. Henry Maxwell in the chair, it was unanimously resolved "That it is very desirable to have a central building for the business purposes of the various Scottish Societies in London, and for other national objects." The meeting then resolved itself into a committee, and adjourned till the 31st of next month, when the propriety of calling a public meeting of the Scottish in London will be discussed.

THE PUBLIC RECORDS.—Sir John Romilly, Master of the Rolls, at the recommendation of the Chancellor of the Exchequer, has sent to the Ordnance Survey department in Southampton a collection of national documents, to be copied by the photographic process. This collection contains a series of charters, treaties, and letters, selected from the Record Office. They illustrate the history of the country from the commencement of the reign of William the Conqueror to the end of the reign of Queen Anne, and will be published in chronological order, with translations as to illustrate the gradual change in the language and in the mode of writing during the last 800 years. The seals attached to some of the documents are of great interest; that which is attached to the treaty of peace between Henry VIII. and Francis is in gold, measuring of four inches in diameter, and carved in relief by Benvenuto Cellini. The seal attached to the patent of knighthood conferred on Prince Edward by the King of Castile is also of gold, as is also the seal attached to the Pope's Bull conferring the title of Defender of the Faith on Henry VIII. Among the documents is an original copy of Magna Charta.

THE STREET BOARDMEN.—A few days since the Commissioners of Police issued an order prohibiting the practice of men parading the streets with boards containing the advertisements of exhibitions, musical and other performances. As many hundred men who are incapacitated by advanced age or other causes for more active labour were thrown out of employment by this order, some members of the musical profession had an interview with Sir R. Mayne respecting the hardship which it inflicted upon a poor but industrious class of men. The result is that Sir R. Mayne has given his sanction for the men to renew their occupation, on the distinct understanding that they are not to parade the streets in groups to the annoyance of the traffic.

FRANZ MÜLLER.—The *Odessa Gazette* says that Müller, the murderer of Mr. Briggs, was formerly in the Russian navy, but was dismissed the service in consequence of robbing the captain of his ship of his watch.

WORKING MEN'S EXHIBITIONS.—The working men of Lambeth have opened a second collection of industrial objects in the Ragged School near Lambeth Walk. The opening took place on Saturday evening, when Mr. Doulton, M.P., presided, and there was a large attendance. The present exhibition is of the same character with its predecessors, both in Lambeth and Islington, and is not inferior to them in interest. It also shows as usual that workmen seldom amuse their leisure hours with the construction of objects at which they daily work, and in the manufacture of which they might be supposed to excel. Another exhibition was opened on Tuesday at Stratford, in the presence of the Rev. A. J. Ram, vicar of West Ham, and the principal inhabitants of the district. The articles exhibited number nearly 500, and include a variety of works

executed by working men in their spare hours at the close of their daily labour. Among them are "The Dutch Lady;" a fruit piece; an "Old Mill in Norfolk," &c., by Peter Hyde Astley, a tailor; "High and Low Life," by George Bull, a journeyman painter on the Great Eastern Railway, and several landscape pieces by Mr. C. Taylor, a house decorator of the neighbourhood, who was formerly a silk weaver. There are also innumerable specimens of men's, women's, and children's handiwork, including models of every description, cases of stuffed birds and animals, shoes, sewing machines, drawings, carvings, and every description of needlework. Under the latter class appears an elaborately embroidered infant's long dress, entirely worked by Robert Barnes, a groom employed in the neighbourhood, which appeared to be an object of great interest to the ladies, by whom it was greatly admired.

DEMOLITION OF HAMPTON BRIDGE.—Workmen are now employed in taking down the old tottering wooden bridge at Hampton. It has, for the last few years, been in a dilapidated condition, and a new iron bridge will be constructed in its room. Foot passengers and vehicles are now conveyed across the Thames in a ferry or horse boat, at the same charges as the toll of the old bridge. As much of the new bridge has been already fixed, very little delay will be occasioned.

VALUE OF LAND IN THE CITY.—In the Sheriff's Court a few days since, in the case "Robinson v. The Metropolitan Railway," a special jury awarded 5000*l.* for a freehold house in Charterhouse Square, built 150 years ago when the place was a fashionable locality. In the Lord Mayor's Court, in the case of "Prince's Devisees v. The Metropolitan Railway," the Jury awarded 1700*l.* for the reversion of No. 17, Little Moorfields, at present let on lease for 18 years to come at 45*l.* a year. In the Sheriff's Court in the case of "Searly v. the Tottenham and Hampstead Railway," a special jury awarded 1200*l.* for land taken, and 1500*l.* for the depreciation of the other portion, in the Junction Road, between Kentish Town and Holloway, making together 2700*l.* The sum claimed was nearly 16,000*l.*

MURDER ON SAFFRON HILL.— On Monday night the neighbourhood of Saffron Hill was thrown into excitement by a report that four men had been stabbed at the Golden Anchor public-house, at the corner of Castle Street. It appears that on Saturday night some Italians were ejected from the house for making use of abusive language, and on Monday night some of them entered the tap-room for the avowed purpose of having revenge. They first abused the Englishmen they found there, and broke the seats, after which an Italian named Sarafini Polioni, a picture-frame maker, stabbed Alfred Ribbeck, the potman, and three other men, *named Harrington*, Bannister, and King. The assassin was immediately taken into custody, and the wounded men were removed to the hospital, where Ribbeck and Harrington were found to be so dangerously wounded that their depositions were taken in the presence of the prisoner, whom they both identified as the man by whom they had been stabbed; but Harrington refused to sign the paper, stating that he freely forgave the prisoner, and hoped God would forgive him also. He died in the hospital on Tuesday morning, and Ribbeck is not expected to survive. The assassin was taken before the magistrate on Tuesday afternoon, when the charge against him was proved by numerous witnesses. He was however remanded, as, from the state of the other man, there is reason to fear that he will have to answer for two murders instead of one. The coroner's inquest was held yesterday, when the jury returned a verdict of Wilful Murder against the prisoner.

THE PUBLIC HEALTH.—The Registrar-General's Weekly Return states that the deaths in London in the week that ended Saturday the 24th inst., were 1523. The average number in the corresponding week of the 10 years 1854–63, corrected for increase of population, was 1390. The present return is therefore 133 above the average. During the week the births of 947 boys and 900 girls, in all 1847 children, were registered in London. In the 10 corresponding weeks of the years 1854–63 the average number was 1858.

Provincial.

ALDERSHOT.—On Sunday morning a person named Hardy, a milkseller, and his wife were passing along a lane which skirts Aldershot Cemetery, when they found a man lying dead, covered with blood, and marks of a struggle around the body. They procured a light and assistance, and communicated with the police, who on examining the body found it to be that of a pensioner named James Raynsford, who had belonged to the 84th Regiment, and was about 55 years of age. His coat was off, his shirt-sleeves were turned up, his fist clenched, and his arms bent in the attitude of fighting. His face was covered with blood, there was a severe cut over his right eye, which was blackened, and his lips were much swollen, as if from bruises. From subsequent inquiries it appeared that he was last seen alive at half-past nine o'clock on the night before at the Royal Exchange Music Hall. He was then under the influence of drink. A man named Samuel Watmore had been seen out late on Saturday night near the spot where the body was found, and was known to have entered a beerhouse adjacent. The police therefore took him into custody on the charge of having caused the death of the deceased. On Monday morning he was taken before the magistrates at the Petty Sessions, and remanded for three days. At the inquest on Wednesday the evidence of the medical men showed that it was highly improbable that he had anything to do with the death of the deceased. The jury returned an unanimous verdict of death from exposure to cold while in a state of intoxication.

BRIGHTON.—On Christmas Eve the quiet village of Portslade, about four miles from this town, was the scene of a deliberate murder. A number of labourers were carousing in a cottage occupied by John Coom, who has been a cripple since childhood, and lives alone in the tenement in question. Among the company was a man named Joseph Sharp, farm labourer to Mr. Hudson, of Blatchington, with his wife and daughter, and during some "chaffing" a quarrel occurred between Coom and Sharp, who inflicted sundry slight blows on Coom, who sat perched on his bench by the window. Coom became exasperated, and said to Sharp, with an oath, that if he did that again he would do for him. The other labourers do not appear to have interposed between the men, but continued drinking. In the heat of the altercation Coom sprang from his bench, and hopping to the door of the washing-house adjoining the kitchen, seized a gun which hung upon the wall, and which was loaded and capped. Turning suddenly round he hopped towards Sharp, and taking deliberate aim, shot him through the head, causing instantaneous death. Coom was at once taken into custody, and conveyed in a cart to Hove Police Station on the charge of wilful murder. It appears that the murderer, who is about 35 years of age, is a perfect cripple, having lost the use of his limbs, which are doubled under his haunches, by accidentally drinking a quantity of vitriol when a child. Four or five years ago he kept a horse and cart, and maintained himself by carrying parcels between Portslade and Brighton. His cottage has long been famed as a rendezvous for men ejected from the village public-house at unseasonable hours; and, being passionate in temper, he inspired fear amongst his associates by carrying loaded fire arms, and has often threatened the lives of persons who have aroused his anger.

CHELMSFORD.—On Wednesday morning Francis Wane, who was condemned at the recent assizes for the murder of a woman named Blunt, with whom he formerly cohabited, but who was about to be married to another man, was executed in front of the county gaol. He made a full confession of his guilt, and died penitent. Although he had deformed feet, he mounted the steps leading to the scaffold without any assistance, and when the drop fell he appeared to die almost immediately. There was a considerable crowd assembled, but they conducted themselves in the most orderly manner.

COLESHILL.—At the petty sessions on Monday, Mr. Richard Barker, farmer, of Whitacre, was charged with trespassing in pursuit of game upon land in his own occupation, over which Sir Robert Peel reserved the exclusive right of shooting the game. This case had been adjourned from last petty sessions, at the request of the prosecutor, for further evidence. After this evidence had been given, the defendant's solicitor asked that the summons might be dismissed, on the ground that the defendant could not be a trespasser upon land in his own occupation, and also that he had been summoned upon a wrong section (the 30th instead of the 12th) of the Game Law Act. The bench convicted the defendant in the full penalty of 2*l.* and costs. A case for the superior courts was granted, and it will be brought in due course before the Court of Queen's Bench.

COVENTRY.—The late Mrs. Hill Morgan, of Cheltenham, has bequeathed the sum of 10,000*l.* for the erection of a new church in this city, and 2000*l.* as a fund, the interest of which is to be employed annually in the relief of the poor of the district in which such church is situate. The deceased lady was a native of Coventry.

DERBY.—On Friday morning at an early hour, a man called James Potter, a bailiff, aged 55, residing in Traffic Street in this town, met a police sergeant on duty to whom he was known, and said that he would not go home unless the officer would go with him. The officer, suspecting that something was wrong, accompanied him to the house and found the street door locked, upon which they made an entry through the window. They then examined the different rooms, and on arriving at one on the second floor, Potter refused to go in. The officer, therefore, went in alone, and there found Potter's wife lying on the bed, quite dead, with one leg out of it, her head towards the window, and one arm stretched out, while blood was trickling from the bed clothes. Two surgeons, on examining the body, found a short wound under the right breast, which on being probed was discovered to be of great depth. On searching the bedroom the officer found by the side of a chest of drawers a spike which had been unsheathed from a walking stick, with which the deed was perpetrated. Mrs. Potter was 50 years of age, and had a large family. On the previous evening she had gone to the inspector of police who lives in the same street, and said that her husband would have to be taken to the asylum, as he was abusing her very much. The man, who has been in a low desponding way for some time, and was jealous of his wife, was taken before the magistrates on Friday morning and remanded until Thursday, when he was committed for trial on the charge of Wilful Murder.

ECCLES.—James Britch, the poor man who found 6000 silver pennies in this neighbourhood in August last, has received from the office of the Duchy of Lancaster a Treasury warrant, authorising the payment to him at the Branch Bank of England at Manchester, of the sum of 73*l.* 2*s.* 6*d.*, being the metallic value of the coins as ascertained at the Royal Mint.

GATESHEAD.—The inquest on the woman who died at the Spen on Sunday week from the results of injuries inflicted by her husband, Matthew Atkinson, terminated on Thursday in a verdict of Wilful Murder against the prisoner, who was committed for trial at the assizes.

LEWES.—The marble bust of the late Duke of Richmond was placed in its position in the Assembly Rooms at the County Hall on the 21st instant, under the personal superintendence of the sculptor, Mr. M'Dowell. On the front of the pedestal is the following inscription:—

"Charles, fifth Duke of Richmond, &c., K.G.; born A.D. 1791; died A.D. 1860. In early life he served with distinction in the Peninsula and at Waterloo, and retained to the last his love for the army. As a peer of Parliament, as a Minister of the Crown, as a lord lieutenant of his native county, as a warm friend to agriculture, he performed honestly and ably the duties entrusted to him and the work which he undertook. In every relation of life his good sense and energy, the frank courtesy of his manners, and the kindness of his heart, won for him the respect and affection of all who knew him. This memorial has been placed here by his Sussex friends in grateful recollection of his virtues and his services."

LIVERPOOL.—Thomas Lindon, one of the two men who were condemned to death at the recent Assizes for the murder of M'Carthy, has been respited. A memorial in favour of Brown, his accomplice in the murder, is in course of signature. The execution of Brown and Ellis Green, who was condemned for the murder of his sister-in-law, is fixed for the 7th of January.

MALDON.—Mr. Chichester Fortescue, M.P., Under Secretary for the Colonies, attended the annual dinner of the Liberal Independent Club in this town on the 15th inst., and in returning thanks for the toast of her Majesty's Ministers, spoke as follows on the New Zealand war, on transportation to Australia, and on the proposed federation of British North America:—

"He wished he could announce to the meeting that the war in New Zealand was at an end. He was not, however, able to do so, and the last accounts from the colony were not quite so satisfactory as our hopes had led us to expect. The submission of the natives had not yet been secured, and it would evidently require another campaign before peace could be restored. However, in spite of certain *contretemps* and certain disappointments, all he could learn from the colony by the last mail, led him to the belief that the campaign which had lately begun would be the last of a war which he hoped and believed would not be witnessed again. He knew that fears had been entertained by many good men in this country that the Government of New Zealand was inclined to deal hardly with the natives, to deprive them in an unjustifiable degree of their land, and even to continue the war for the sake of the gain supposed to be derived from the imperial military expenditure in those islands. But he confessed that he did not believe in the desire of the New Zealand colonists to continue the war longer than it could be helped. His knowledge of the great sacrifices which they had been, and were still, making, by the shedding of colonial blood, by the spending of colonial money, and by the paralysis of colonial trade, led him to the conviction that they would not be inclined to continue the war a day longer than could be helped. He felt also sure that the natives would not be treated unjustly with regard to their land. Precautions had been most properly taken by Mr. Cardwell, the present head of the Colonial Office, that the large powers with respect to the confiscation of native land, which the Colonial Government had taken, should not be abused. It was impossible that the Government in the islands of New Zealand engaged in deadly conflict with another race could view these matters with that calmness and impartiality which the Imperial Government was able to bring to bear upon them; and, therefore, it was the duty of her Majesty's Government to take particular care that no wrong should be done to the native race in the terms of peace. At the same time he thought that portion of the natives of New Zealand who had been, to their great loss and ours, perversely shedding their blood and the blood of the colonists and of her Majesty's troops, should receive a severe lesson, which should prevent them from pursuing a similar line of conduct in the future. He believed that that was necessary and just, and the best thing which could happen both for us and for them; and this, he believed, would be the practical result of the powers given by her Majesty's Government to the Governor of New Zealand. He would add one word as to the general subject of our dealings with this interesting colony of New Zealand and its native population, because there had been in the public press and elsewhere a good deal of ignorant and unjust accusation indulged in with respect to our dealings with that remarkable native population. In the first place, could we be blamed for having taken the Government of New Zealand? Any one who knew anything of the history of that colony must feel that we were not open to blame upon that point. Our people had already gone to New Zealand in very considerable numbers before we assumed the Government; and it was perfectly certain that magnificent islands, equal in extent to the United Kingdom of Great Britain and Ireland, could not have been left in the possession of a small, sparse, and already diminishing native race, and must inevitably have been, sooner or later, occupied by some European Power. In fact, it was well known that it was a race between Great Britain and France as to which of those great Powers should obtain possession of New Zealand. Our Government went, then, to New Zealand, because they were forced to do so, and because it was their duty to keep order between British subjects already settled there and the native race. So far he thought that we were open to no blame; and what had happened since? In spite of the present unfortunate war, in spite of the prejudice which the power of a great country like this against a small native race might excite in some minds, he maintained that the war had been caused by no proceedings on our part. Let any one examine the history of our dealings with these natives, and he would find that, however much we might have failed in other respects, we had not oppressed them. In this war the natives had not risen against any violation of their liberties, against robbery of their property, against tyranny and wrong. We had, he admitted, failed to maintain for any length of time peaceful relations between races differing so greatly from one another; but this was a result which perhaps had not yet been achieved by any European nation. It was a result which we hoped to attain, but which we failed to attain; but our sins had been more those of omission than of commission. We had not been oppressive, but, on the contrary, we had been tolerant; we had tried

perhaps to do more than was possible, and had substituted theories for facts. For instance, we voted these natives to be British subjects, enjoying all the rights and privileges of British subjects. Our Ministers in their early despatches to colonial Governors enjoined them to treat the natives as British subjects, and above all to enforce law and order; but the fact is the natives of New Zealand declined the privileges offered when coupled with the conditions of law and order; the colonial Government had no power to enforce the principle laid down, and it was found impossible to reduce the theory to practice. Then came a change which was highly beneficial to the English race in New Zealand, but not so beneficial perhaps to the native race, viz., the introduction of responsible government into the colony. He did not mean to say that the responsible Government of New Zealand had oppressed the natives, but that change had increased the weakness of the executive Government, and had induced those difficulties of a double authority under which we were now labouring —a state of things in which it was most difficult, with a semi-savage race to deal with, to wage a war of any kind. In this war, and the difficulties with which we had to deal, we had been free from blame; we had not reached that beau idéal which we set before ourselves; but, on the other hand, he was ready to maintain that, compared with the relations of any European Power with any other race of savages the world ever saw, at any period of history, our relations with New Zealand stood out in favourable relief. Let them be compared with our dealings in former times with the natives of North America, or with the dealings of the Government of the United States at this moment with the natives of North America, and reason would be found, in spite of all drawbacks, to congratulate ourselves upon the degree of prosperity which in a very few years the young colony of New Zealand had attained with a comparative freedom from outrage or bloodshed, or putting the white man against the black man, or the dark man against the white man. He said this although war was raging at this moment, a war which he hoped would soon come to a termination, and which was being conducted even by the natives themselves to a very great degree upon the principles of civilisation. There were two other colonial questions of striking interest at this moment. The first was the question of transportation to Australia, and he could but congratulate the meeting upon the abolition of transportation in that direction. It was well known by the public press that that system was at an end, the Government having announced its intention to put an end, with the sanction of Parliament, to that small remnant of transportation which still remained to Western Australia. Upon this subject he must say that our patience had been rather tried by our fellow-countrymen on the other side of the world. They had taken the matter into their own hands with a degree of vigour and temper which had made it rather difficult for her Majesty's Government to deal calmly and justly with the question. However, he was glad to say that the act of shipping a certain number of ex-convicts back to these shores—rather a strong measure—had been the work of certain individuals at Melbourne, and not the act of the colonial Government; and in spite of this somewhat provoking conduct her Majesty's Government had announced to the colonists that in a short time transportation to Australia should cease. The other colonial topic to which he wished to allude was the project of the federation of the British provinces of North America. He had no authority to go into details upon that subject, or to express the opinion of her Majesty's Government; but he knew well that they would very well represent the feeling of this country if they entertained no jealousy whatever of the growing power and prosperity of those great provinces. On the contrary, her Majesty's Government, like all the rest of Englishmen, wished to see these provinces growing more and more in all the elements of power. He believed that the project in question would greatly contribute to such a result. He believed that it was our interest, and the interest of the human race, that an independent, self-reliant power should rise up in North America, and that the whole population of that vast continent should not be moulded upon one type. He had no doubt that the relations between this union of colonies and this country would remain the same as they were at present, and that they would remain under the sovereignty of the Queen. Their change would be that they would be rather better able than they had hitherto been to contribute towards their own defence, and that, instead of being several minor provinces, they would prove one great dependency of the Crown, the government of which would be an object worthy of the ambition of the greatest of our public men."

MOLD.—Great efforts have been made to get the bodies of the eight colliers who were drowned in the pit at Mold some days since, but hitherto without success. A singular incident is reported to have occurred during these proceedings. A horse was discovered standing up to his neck in water, and was fed with gruel till he was rescued.

OXFORD.—Dr. Newman has recently purchased some land in Oxford, for the purpose of erecting a college for Roman Catholics, if the scheme should find favour with his ecclesiastical superiors. A meeting of the Roman Catholic bishops was held at the residence of Cardinal Wiseman last week to discuss the project in all its bearings. The meeting was held with closed doors, but it is reported that the views of the prelates were in opposition to those of Dr. Newman, and that the result of their deliberations has been transmitted to Rome, and will not be made public until the Pope has given his decision.

PENZANCE.—The Norwegian bark Christine Agathe, in ballast, and the bark Havannah, of Liverpool, with a cargo of mahogany, came into collision on Saturday morning 30 miles south-west of the Lizard. The Christine Agathe has arrived at this port with five of the Havannah's crew on board. The fate of the Havannah is not known.

PICKERING.—At the last meeting of the local bench of magistrates, the surveyor of the highways for the parish of Kirbymisperton summoned the rector, the Rev. C. J. Sympson, and the following parishioners, Mr. Suggett, Mr. Hardcastle, and Mr. Hardcastle, jun., for refusing to pay the rate for the maintenance of the parish highway. The sums claimed were—from the rector, 20*l.* 11*s.*; Mr. Suggett, 14*l.* 16*s.* 6*d.*; Mr. Hardcastle, 3*l.* 10*s.* 6*d.*; and Mr. Hardcastle, jun. 16*l.* 16*s.* Rates proportionate to these charges had been paid by other parishioners, and it was shown that the rate was duly made, allowed, and published according to law. For the defence it was shown that the rate sued for was at the rate of 1*s.* in the pound, and was, therefore, 2*d.* in the pound in advance of the maximum sum allowed by the Highway Act, namely, 10*d.* in the pound. The objection was fatal, and the bench dismissed all the cases.

SOUTHAMPTON.—Mr. W. B. Page, the landscape gardener of this town, has received orders to lay out and plant the grounds surrounding Netley Hospital. An extensive terrace in front of the hospital has been adorned with cedars. A cemetery has also been ordered to be laid out and planted at the back of the hospital about a quarter of a mile distant. The Queen takes great interest in these improvements.

STAFFORD.—On Tuesday morning Richard Hale, who was condemned, with his paramour Cecilia Baker, at the recent Assizes, for the murder of his illegitimate child, Eliza Sillitoe, at Coseley; and Charles Brough, a miner, who at the same Assizes was condemned for the murder of an old man called George Walker, who lived by himself in a hut on a common at Bignall Hill, were executed in front of the county gaol in the presence of about 6000 persons. Some of the spectators took up their places during the night, but most of them began to assemble at 6 o'clock in the morning. Although the crowd was hardly so great as was expected, it was disgracefully noisy and riotous. Brough, who had all along been suffering much from illness, confessed his crime, but Hale denied his guilt to the last.

STRATFORD-UPON-AVON.—The Birmingham papers give the following particulars of the ancient deeds relating to properties adjoining Shakespeare's birthplace recently discovered in that town. The deeds are as follows:—August 28, 15th Elizabeth, 1573.—Grant of William Wedgwood, of Stratford-upon-Avon, to Richard Hornebye, of Stratford-upon-Avon, smith, of a piece of land at back of tenement belonging to said Horneby, fronting Henleye-streete. The seal in this deed bears the initials W.S., and the sealing was witnessed by John Shaxper and others. 45 Elizabeth, 1602.—Lease of tenement last mentioned with the land at the back, Richard Hornbye, Anne his wife, and Thomas, his son and heire, to Frauncis Horneby. April 16, 1614, 12th James.—Conveyance by Thomas Horneby to Thomas Jelffe, of Old Stratford, yeoman. March 12 1620, 17th James.—Conveyance by Thomas Jelfe to Thomas Nasshe, of Lyncolnes-inn, gentn., of tenement adjoining the Bell of Thomas Bragden. The above property is bequeathed in the will of Thomas Nash, of 1642, to his cousin, Edward Nash, but is not included in the Chancery proceedings between Edward Nash and Shakespeare's grand-daughter, Elizabeth Nash. 20th September, 17 Eliz., 1575.—Grant William Wedgwood to Edward Wyllies, of King's Norton, yeoman, of two tenements in Henlye-streete, adjoining the tenement of Richard Hornbye, and the tenement of John Shakespr., yeoman. The sealing of this deed is witnessed by John Shaxpr. and others, but the seal is gone. 20th July, 1609, 7 James I.—"Conveyance, by Edward Willys to Osborn and Austyne, Trustees, for Edward Wyllies and Thomas Wyllies, of Handsworth, of a tenement (formerly two) known by the signe of the Bell, adjoining the tenement late Willm. Shakspere. The word "late" is interlined in this deed.—April, 1611, 9 James I.—Conveyance by Edward Willis to Wastell and Willies, as Trustees for Symon Wastell, of Aston, of small piece of land, 17 footes square, behind the Bell, and adjoyning the freeholde of one John Shakespere. This piece of land was purchased from John Shakespere about 1589, but the conveyance is lost. January 22, 1613, 10th James.—Grant by Edward Wyliss to Edward Willys, Mary, his wife, and Thomas, his son, of the Bell, occupied by Robt. Brookes, adjoining tenement, late William Shakespere. December, 1613, 11th James I.—Conveyance of Edward Willis to Symon Wastell, of land 17 footes square. April 24, 1615, 13th James I.—Alice Bragden, widow of Thomas Bragden, release of dower on the Bell, occupied by Thomas Rumney, to Edd. Willis. March 5, 1637, 12th Charles I.—Grant of annuity, Thos. Willis and Son to Henry Osborn, of Perry Barr, in favour of Anne Willies, on the Bell, occupied by Joyce Rumney, widow. February 18, 1639, 14th Ch. I.—Conveyance by Allen Wastell, of Saltley, to Thos. Willis, of land 17 footes square, adjoining tenements late Willm. Shakspere. 1st of March, the 22d of Ch. I.—Conveyance by T. Willis and Wife, and Nash, of Stratford, and Osborn, of Great Barr, farmer, to Thomas Nash, of the Bell, adjoining premises occupied by John Rutter (the Maydenhead). The above property is not included in the will of Thomas Nash (being purchased only one month before his death), and therefore passed to Edward Nash, his cousin, as heir-at-law. The 14th of Ch. II., 1663.—Lease by Edward Nash, citizen of London, to James Strayner, of the Bell, adjoining the Maydenhead, then occupied by John Tomes. The witnesses to these documents comprise, besides John Shakspere, Frauncis Collyns, the executor and witness of, and a legatee under, the poet's will, George Nashe, John Nash, J. Green, Thomas Greene, &c. Both the properties are described as bounded on the north by the Gillpitts or Guyldpytts. To the deed of 1573 is affixed a seal, bearing the initials "W. S.," entwined with the true lovers' knot, and bearing a close resemblance to the engraved signet ring preserved in the Birthplace Museum as a relic of Shakespeare, but very much smaller. The whole of the deeds have been presented, through Mr. Halliwell, to the National Museum in this town.

WIGAN.—On Thursday week a colliery accident, by which two persons lost their lives and two others were injured, took place at Messrs. Mercer & Evans's Pearl Lane Colliery, at Ashton. A young man named Abraham Corns, the engineer, was lowering a party of four men to the four-feet mine, when he reversed the engine, believing that it required such a check to be applied to enable him to stop with ease at the mouthing where the cage was to rest. Unfortunately, however, as the cage neared the spot he forgot that he had already reversed the engine, and again altered the motion, the effect of which was to send the cage down the shaft with increasing rapidity. It dashed through the scaffolding, and the mistake having been discovered in the engine house it was brought to a stand about twenty-four yards below the mouth. The men in the cage seeing the position in which they were placed, one of them attempted to spring out at the mouthing as they passed, but fell to the bottom of the shaft, a distance of 61 yards, dragging with him one of his companions. These two were of course killed on the spot. The others, who held fast in the cage were saved, though they sustained a severe shock. The police, considering Corns's conduct culpable, took him into custody, and at the inquest on Friday the jury found that he had been guilty of censurable negligence, but ought to be committed for manslaughter. On Saturday the county magistrates discharged him from custody, and he will be proceeded against by his employers on the minor charge of breaking the special rules.

Ireland.

NEW NATIONAL ASSOCIATION.—A meeting of the citizens of Dublin, convened by the Lord Mayor, was held on Thursday, in the Rotunda, to organise an association for the overthrow of the Irish Church Establishment. It was feared that a riot would ensue, as a Protestant Committee had issued a placard inviting all Protestant citizens to attend the meeting. The Grand Orange Lodge, however, on Wednesday held a special meeting, at which they passed a resolution expressing their unfeigned surprise and indignation that the Lord Mayor should so far forget his position as to call a meeting of the citizens for an object which involved the violation of the solemn oath he had taken at his installation, and prohibiting all Orangemen from attending it. The demonstration, therefore, passed off without any disturbance. The attendance was respectable, but the large landed gentry were absent almost to a man. The room was packed, and bludgeon men were employed to repress opposition. Archbishop Cullen, Bishop Leahy, Bishop Keane, the Lord Mayor, and Mr. Maguire, M.P., spoke. Resolutions in accordance with the object of the meeting were passed, and the rules of the new organisation, which is to be called "The National Association of Ireland," were adopted.

BURNING A PRIEST IN EFFIGY.—The Roman Catholic clergy of Tralee on Sunday week denounced in their chapels the Fenian Society, the Society's Reading Room at Tralee, and a paper published in Dublin called the *Irish People*, and cautioned their congregations against the pernicious principles of the Society. The Rev. Mr. Collins, of Skibbereen, has since been burnt in effigy by the Fenians of that town, the first instance, it is said, of such an insult to a priest by members of his own creed, influenced by political feeling. The *Irish People*, although the entire Roman Catholic press has denounced its principles in consequence of the affair at Skibbereen, has since held up the priesthood to scorn, and declared that their flocks owe them no allegiance in political matters, and that they are the enemies of freedom.

AGRARIAN OUTRAGE.—Thomas Reynolds, petty sessions clerk at Rathcore, county Meath, was fired at on Tuesday evening, and died on Wednesday morning from the effects of the wounds. The constabulary have made several arrests.

Scotland.

UNIVERSITY OF EDINBURGH.—The Duke of Argyle has been elected President of the Associated Societies of the University of Edinburgh. There were four candidates, the Duke of Argyle, Lord Ardmillan, Professor Christison, and Sir Archibald Alison.

THE YELVERTON MARRIAGE CASE.—We stated last week that Mrs. Longworth Yelverton had attempted to re-open the whole question of her marriage before the Scotch courts on the strength of some new evidence embodied in affidavits. This evidence was to the effect that a woman named Sarah Mullins, who attended the major's brother in his last illness, had heard this brother declare that the major confessed to him that his Scotch marriage with Mrs. Longworth was a genuine and valid marriage. The Courts refused the application, but the friends of the major have now produced counter-affidavits, signed by the Hon. Mrs. Yelverton's coachman, Lord Avonmore's butler, Lady Avonmore's maid, and the medical attendant of the family—all deposing that they were in daily attendance on Mr. Yelverton during his last illness, and that, to their certain knowledge there was no woman of the name of Mullins in attendance on him, nor any female whatever, except his mother, wife, and sister.

THE GREENOCK MURDER.—At the Glasgow Circuit Court on Wednesday, Daniel Stewart was charged with

the murder on 22d November, of Robert Williams, a woman, by stabbing him with a knife in the abdomen. He pleaded guilty to the minor offence of culpable homicide. Lord Ardmillan, while admitting that provocation had been given by the deceased, commented severely on the use of the knife, which he characterised as an unmanly, and inhuman mode of conflict. His Lordship sentenced the prisoner to 21 years' penal servitude.

THE GOVAN OUTRAGE.—Mike M'Glinchy pleaded guilty at the Glasgow Circuit Court on Wednesday to the charge of a very brutal assault and rape on Margaret Addie, on the 16th July, on the high road across Govan Common. Lord Ardmillan, in passing sentence, said the prisoner should consider himself extremely fortunate that the public prosecutor had refrained from pressing for extreme punishment. The crime committed under the circumstances was, according to the law of Scotland, punishable by death. The public prosecutor had consented to the passing of an arbitrary sentence, and that would be penal servitude for life.

Railways.

COLLISION ON THE LONDON AND NORTH-WESTERN.—On Monday morning the mail train from Manchester, shortly after leaving the London Road Station, came in collision with an engine and tender, which were backing into a siding near Longsight. The tender only encountered the full force of the collision. There was no loss of life, but the stoker and engineman of one of the trains were much shaken.

THE FATAL ACCIDENT IN THE BLACKHEATH TUNNEL.—Another of the platelayers who were injured by the recent collision in the Blackheath Tunnel has died from the injuries he received, and two or three other persons remain in a precarious condition. The inquest was resumed on Thursday, and again adjourned for a fortnight.

COLLISION ON THE SOUTH DEVON.—The mail train from London, due at Plymouth at 5.25 on Sunday morning, while running through the Kingsbridge Road station came in collision with a goods train shunted to an adjoining siding. The tail of the goods train projected over the down line, and was struck by the front second-class carriage of the mail train. The ends of two compartments of the carriage were torn off, and two of the goods trucks were damaged. The passengers escaped with a few contusions, excepting one gentleman, who was thrown out of a damaged compartment, but it is hoped that he is not severely injured. The accident blocked up the line for four hours.

Law.

COURT OF CHANCERY.—*Camille* v. *Donato.—The One-legged Dancer.*—Mr. Rolt, Q.C., made a special application to Vice-Chancellor Wood a few days since for an interim order to restrain Signor Donato, the one-legged dancer, from appearing at the Royal English Opera, Covent Garden, where he had been announced as the leading attraction in the Christmas pantomime. The application was made on behalf of Messrs. Camille and Marnet, theatrical agents, who stated that they 12 months ago engaged Donato, and re-engaged him to Mr. Charles Morton, of the Oxford and Canterbury Halls, for his appearance at the Oxford. His Honour granted an interim injunction. On Monday defendant's counsel applied to Vice-Chancellor Kindersley, by special appointment, at his private residence. After arguments lasting nearly the whole day, the Vice-Chancellor discharged the order, remarking that had Vice-Chancellor Wood known the circumstances he would never have granted the interim order. His Honour also decided that the Covent Garden Opera Company are necessary parties to the proceeding. The plaintiffs are therefore at liberty to renew their motion for an injunction on the first day of term on amending their bill by making the English Opera Company parties, if they see fit to do so.

COURT OF QUEEN'S BENCH.—*Attchal Sing* v. *His Highness the Maharajah Dhuleep Singh.*—This was an action before the Lord Chief Justice for a breach of agreement and wrongful dismissal. It appeared from the evidence of the Maharajah that his Highness had engaged the plaintiff, who was a Sikh soldier, as a falconer, and had brought him with him to England. Two years ago he left his Highness's service, and now brought an action for salary, for loss of caste, for the loss of prize money which he might have gained if he had remained a soldier, and for many other charges, which the Maharajah declared to be extravagant, besides which the plaintiff had broken the contract entered into between them. The jury stopped the case, but the counsel for the Maharajah stated that his Highness was still willing to pay the plaintiff's passage to Calcutta.

MIDLAND CIRCUIT: LEEDS.—*The Attempted Wife Murder in Sheffield.—James Thompson*, 26, a butcher, was charged with maliciously cutting and wounding his wife Emma Thompson, with intent to murder her, at Sheffield, on the 1st August. The parties had been married in 1861, but shortly afterwards Mrs. Thompson returned to her mother, in consequence of the cruel treatment she experienced from her husband. He met her and assaulted her on subsequent occasions because she refused to live with him again. On the morning of the 1st August he went to a slaughter-house, procured a knife used for killing sheep, deliberately sharpened it, and, watching his opportunity, plunged it into his wife's right breast in the open street. By skilful surgical and medical treatment at the Sheffield Infirmary she was saved from death. The prisoner pleaded Guilty, and was sentenced to be kept in penal servitude for the term of his natural life. *The Attempted Murder at Halifax.—Thomas Drake* was indicted for feloniously attempting to drown Elizabeth Wilson, with intent to murder her, at Halifax, on the 6th of December. The prosecutrix and prisoner are only 17 years old, and had been living together for some weeks; but the prosecutrix had left the prisoner about a month before this occurrence took place. The prosecutrix then lived in a furnished room, and used to go to work every day in Halifax. On the 6th December she arrived too late at her work, and had to return home again. As she was returning she met the prisoner by the canal. He accompanied her towards her home. When they had got under the canal bridge he caught hold of her with one hand and put his other hand over her eyes and pushed her into the water. She sank three or four times, while the prisoner stood looking on without offering her any assistance, and he then walked away. John Furness, a man who happened to be passing, bravely jumped into the water, and saved the prosecutrix at great peril to his life. The prosecutrix was then laid on the grass, and while the people on the spot were attending to her, the prisoner threw himself into the water and attempted to drown himself. The defence was that the prisoner was not in his right mind at the time. Mr. Justice Keating, in summing up, said that the witness Furness had conducted himself in a most gallant and humane manner, which reflected the greatest credit on him, and he regretted that he was unable to grant him a public reward. It was for the jury to consider if the prisoner at the time was in a state of mind to form any intention at all, for it appeared that from an accident he had three or four years ago, he was subject to fits, and never was "himself" for some days after, and that he had a fit the night before; but still the jury must look at his conduct at the time to arrive at a right conclusion as to his state of mind. The jury found the prisoner *Guilty*, and told his lordship that they had made a subscription for the witness Furness to show their appreciation of his services. His lordship himself added a handsome donation, and said that they had better give the money to the officer of the Court, as probably there might be other persons in court who might be desirous of adding to it. He then said that, under the circumstances, he should only sentence the prisoner to 15 years' penal servitude. *Robbery.—Patrick Stenson* and *Joseph Smith* were indicted for robbing Francis Cundall of 7*s.* 6*d.*, at Leeds, on the 15th October. The prosecutor went in the evening of the 15th October to the Fountain publichouse, in the Army Road. At that time he was rather the worse for liquor. He found the two prisoners drinking at the bar with some women, all of whom were unknown to him. He told them that he lived in the Kirsdale Road, which is about two miles from the publichouse. The two prisoners said that they were going the same way, and were going to take a cab, and invited the prosecutor to go with them. A cab was called; the prosecutor, the two prisoners, and two women got inside, and two other men got outside. The cabman was told to drive towards Leeds, which is in a contrary direction to the prosecutor's house. When the prosecutor found this out he tried to stop the cab, but soon after Stenson seized the prosecutor by the throat, and another man put his hand over his mouth to prevent him screaming. He was then robbed. Stenson soon after got out of the cab and pulled the prosecutor out after him; Smith jumping out the other side. The prosecutor cried out "Murder," when a Mr. Kendall ran to his assistance, and found him struggling on the ground with Stenson. Smith then rushed at him, knocked him down, and kicked him in the face. The jury found the prisoners *Guilty*. A former conviction having been proved against Smith, the Judge sentenced him to 15 years' penal servitude, and the prisoner Stenson to 7 years' penal servitude. *Burglary.—Thomas Flint* and *William Surridge* were indicted for burglariously breaking into the house of Mr. Wilkinson, a mason, at Bolton-super-Deane. This burglary was committed with great violence, and the prisoners were guilty of great brutality towards the prosecutor and his housekeeper, the only inmates of the house. The prosecutor on the 8th December went to bed about 10 o'clock, having examined the house. About three o'clock he thought he heard a noise; he therefore lighted a candle and went down stairs, but finding all secure he went to bed again. Five minutes after he heard a crash, and got up again, and on reaching the bottom of the stairs saw three men, one of whom he identified as the prisoner Flint. They seized him, and told him they wanted his money and would have it. One of them knocked him down and held him by the throat with his head to the ground, and told him if he spoke he would cut his head off. His housekeeper, Emma Parkin, on hearing the noise, put her head out of the window and gave an alarm, whereupon the man who was holding the prosecutor told one of the prisoners to go up stairs and cut her throat. The two prisoners then went up stairs into the housekeeper's bedroom. Surridge, whom she knew by sight, held her down on the bed while Flint ransacked her boxes. He then dragged her down stairs in her night dress, threw her down on the floor, and attempted to ravish her. The prisoner Surridge asked her where the money was kept, and told her he would murder her in a few minutes if she did not tell him. At last the two prisoners and the other burglar were alarmed by some one throwing a stone through the window, whereupon they left the house, Flint having taken 11*l.* 6*s.* 6*d.* belonging to the prosecutor. For the defence an *alibi* was set up, and it was also said that the prosecutor was mistaken as to the prisoners. The jury found the prisoners *Guilty*, and they were sentenced to eight years' penal servitude.

OXFORD CIRCUIT: READING.—*Attempt to Murder a Brother.—Jesse Oakley*, a labouring man, 20 years of age, was indicted for feloniously cutting the throat, with intent to murder his brother Isaac Oakley, at Chieveley, on the 12th December. The prisoner pleaded guilty, but his lordship determined upon hearing the evidence. Several witnesses were then examined, and it appeared that the prisoner, who was in husbandry service about 10 miles from Hill Green, in the parish of Chieveley, where his parents resided, went unexpectedly to his father's house on the 11th inst., and in the evening attended Divine service at the chapel of the Primitive Methodists, for which body he acted as collector of subscriptions towards the chapel at Peasemore. After service he went home and sharpened a table knife for the purpose, as he stated, of cutting a piece of skin from his finger. On the following morning the prisoner's brother, a boy about nine years of age, named Isaac, went out for the purpose of going to school, when the prisoner met him, dragged him across a field to a chalk-pit, where he made him sit down, and then took the neckerchief from his neck, and inflicted in his throat a deep gash, three inches long, and an opening in his windpipe large enough to admit a finger. Soon after the prisoner's mother met him; and of his own accord he told her that Isaac was in the chalk pit, where she found him bleeding very much. He was conveyed home, where he was attended by a surgeon, who sewed up the wound, and the boy progressed favourably, but he was in a precarious state, and as he gave his evidence he was wrapped in a blanket, and looked exceedingly ill. There was no doubt about the facts, but there was some evidence that he was not in a sane state of mind. The Jury returned a verdict of *Not Guilty*, on the ground of insanity, and Mr. Justice Byles said that he concurred in the verdict. OXFORD: *Arson.—George Roberts, Robert Ballinger*, and *James Hamilton* were indicted for setting fire to a stack of straw, the property of Giles Brooks, on the 30th September, at Forest Hill. The three prisoners were seen running from the burning rick, and afterwards gave themselves up at Oxford for the crime. Roberts, who is only 16 years of age, was stated not to have taken an active part in the affair. He was found *Guilty*, but recommended to mercy by the jury, the other prisoners pleading guilty. The former was sentenced to five years' penal servitude, and the two latter to seven years's penal servitude each. *George White* and *Alexander Davidson* pleaded guilty to setting fire to a stack of Barley, two stacks of Wheat, two stacks of hay, and one stack of straw, the property of William Cother, at Middle Aston, on the 1st September. White, who had been previously convicted of felony, was sentenced to 12 years' and Davidson to 10 years' penal servitude.

NORFOLK CIRCUIT: AYLESBURY.—*Arson.—John Smith*, 32, and *William Mason*, 36, labourers, pleaded guilty to a charge of wilfully setting fire to a stack of hay, the property of Benjamin Baker, at Calverton, on the 23d November; and *James Devall*, 23, labourer, pleaded guilty to setting fire to a rick of straw, the property of John Read, at Turville, on the 13th September. Baron Bramwell, in passing sentence, said—Smith and Mason, yours is the common case of people who are in some sort of want, and to get taken care of burn down valuable property. Believe me it is a very great mistake. Why don't you go to the workhouse, where you will be taken care of, and can get out when you please? Or, if you must commit a crime, commit a smaller one, and do not destroy such a quantity of property. I sentence you to 8 years' penal servitude. As to you, Devall, your conduct is worse, as you were in work, and you did this because you did not like your master using a threshing machine. The use of these machines is of the greatest importance to poor people, as they are the means of giving them cheap bread; you might as well burn growing Wheat. I sentence you to 15 years' penal servitude.

Obituary.

SIR WILLIAM BERKELEY CALL, BART., of Whiteford House, Cornwall, the head of the banking house of Call, Marten, & Co., died on the 22d inst. at the Bank in Bond Street. He was born in 1815, and succeeded to the Baronetcy in 1851. In 1841 he married the daughter of the late C. W. Gardiner, Esq., of Coombe Lodge, Oxon, by whom he has left a son and two daughters.

MR. EDWARD WHITE, of Marlborough Street, head of the eminent solicitors' firm of White, Broughton, & White, died on the 23d inst, in his 69th year. Throughout a long professional career he was mixed up with the aristocracy, political affairs, and the Royal family. He was the private solicitor of the Queen and the Prince Consort, and as such conducted the prosecution of the publisher Strange, for pirating the Royal drawings. He conducted the prosecution of Prince Castelcicala in the affair in the Vectis, with which Lieut. Waghorn was mixed up, in the revolutionary attempts in Naples. He was also solicitor to the Earl of Lichfield, Lord Suffield, and Lord Vernon, and conducted his business with the highest discretion and respect, alike among the aristocracy and among his professional brethren.

WILLS.—The will of Hudson Gurney, Esq., of Keswick, Norfolk, and St. James's Square, Westminster, has been sworn under 1, 100,000*l.* personalty; Mr. John Leech, the artist, 6000*l.*; Mr. Commissioner Fane, of the Court of Bankruptcy, 40,000*l.*; Mr. Charles Lewis, of the Mansion, Albany, 25,000*l.*

BIRTHS.—On the 30th inst, in Hill Street, Berkeley Square, Lady LONDESBOROUGH, of a son and heir—25th inst, at the Hanoverian Legation in Grosvenor Place, Baroness BLOME, of a son—23d inst, at 24, Queen's Gate, the Lady ELIZABETH ARTHUR, of a son—23d inst, at 43, Lowndes Square, the Hon. Mrs. SOMERSET G. CALTHORPE, of a son—18th inst, at Llanarth, the Hon. Mrs. HERBERT, of Llanarth, of a son—24th inst, at 32, Albemarle Street, the Hon. Mrs. HUGHES, of Kinmel, of a son—25th inst, at Chalton Lodge, Bridge of Allan, the wife of Dr. THOMAS ELLIS, M.D., of a daughter.

MARRIAGES.—On the 19th inst, at St. George's, Hanover Square, WALTER BUCKLER LETHBRIDGE, Esq., youngest son of Sir John H. Lethbridge, Bart., to ELEANOR MARIE, daughter of M. BOYER, of Paris—20th inst, at St. Luke's, Cheetham Hill, Manchester, EDWARD DIGBY, son of the late Admiral R. MURRAY, to MARY, elder daughter of W. HOLDSWORTH, Esq., late of Wakefield—22d inst, at the Catholic Church, Rugby, J. A. FOX, Esq., of the General Post Office, London, to CLARA ELFRIDA WRATISLAW, youngest daughter of the late Count Wratislaw, of Rugby, Warwickshire—21st inst, at the Church of the Holy Trinity, Paddington, the Rev. R. S. HAWKER, vicar of Morwenstow, Cornwall, to PAULINE ANNE, only daughter of the late V. F. KUCZYNSKI, Esq., of Oszmiana, Lithuania, kingdom of Poland, and of H.M.'s State Paper Office—16th ult, at St. Paul's, Agra, B. HARDINGE, Esq., Bengal Civil Service, fourth son of the late Major-General R. Hardinge, K.H., Royal Artillery, to CAROLINE, second daughter of W. EDWARDS, Esq., judge of Sudder Court, Agra—27th inst, at St. Luke's, Chelsea, WILLIAM BULL, Esq., of Belmont, Edith Grove, West Brompton, and King's Road, Chelsea, to HENRIETTA EMMA, eldest daughter of C. E. STAHL, Esq., of Lansdowne Terrace, West Brompton.

DEATHS.—On the 20th inst, at Dunsany Castle, Ireland, the Hon. EDWARD REGINALD PLUNKETT, youngest son of Lord Dunsany, aged 18—19th inst, at 15, Sussex Square, Hyde Park, the Hon. GEORGIANA MAUNSELL, wife of John Edmond Maunsell, Esq., late of the Royal Horse Artillery, daughter of the Hon. William Cockayne, late of Rushton Hall, co. Northampton, and niece and coheiress of the sixth and last Viscount Cullen—22d inst, at Bournemouth, MARY VALENZA, only daughter of FRANCIS SOMERVILLE HEAD, Esq., and granddaughter of Sir Francis Bond Head, Bart., aged 17—27th inst, at 26, Wilton Place, SARAH JANE LE BLANC, youngest daughter of the late General Sir SAMUEL BENTHAM K.S.G.—25th inst, at Burnham, Norfolk, MARY ANNE, daughter of the late Captain Sir WILLIAM BOLTON, R.N., aged 51—26th inst, at 14, Cumberland Terrace, Regent's Park, MARY, daughter of the late Lieut.-General FANSHAWE, C.B.—27th inst, at Wallis Cottages, Kensington, CHRISTOPHER JOHN, second son of the late General C. HAMILTON, C.B.—20th inst, at Craig yr-Halen, Menai Bridge, HARRIOT, wife of Colonel H. C. SANDYS, late of the Bengal Army, aged 79—23d inst, at Vernon Street, Derby, FLORENCE, relict of Colonel MELLOR, of Derby, aged 79—19th inst, at Cheltenham, EMILY THERESA, widow of Major W. HUNTLEY, Her Majesty's 9th Lancers—25th inst, at Dublin, Captain ALEXANDER WILLIAM FORBES, R.N., aged 71—20th inst, at Brighton, Commander H. M. TYLDEN, R.N.—13th inst, at the head-quarters of the regiment, Captain G. F. W. POLEY, adjutant of the Queen's Own L. I. Militia, and late of the 20th Foot, aged 41—18th inst, at 11, Dorset Terrace, Clapham Road, Captain R ALLEN, late of H.M.'s 5th Foot, aged 75—23d inst, at Brighton, Captain WILLIAM PHILIP CONOLLY, H.M.S. Bengal Staff Corps, eldest son of the late William Conolly, Esq., Bengal Civil Service, aged 35—26th inst, at Thornton Lodge, near Northallerton, Yorkshire, FRANCIS PHILIP BEDINGFIELD, Esq., formerly Captain Royal Artillery, aged 80—23d inst, at Valognes, Department of the Manche, France, MARIE, widow of the late ALEXIS DE TOCQUEVILLE—20th inst, at Leslie Hill, Ballymoney, Ireland, SARAH, wife of J. E. LESLIE, Esq., J.P., D.L.—22d inst, at 3, Portland Place, Bath, Dr. T. S. HARRISON, M.D., J.P. for the county of Somerset, aged 64—10th inst, at Milan, G. W. BACON, Esq., late Judge in the Bengal Presidency, aged 63—26th inst, at St. George's Hospital, having been run over that morning by an express train at Balham Station, GEORGE GILSTRAP, Esq., of Newark-on-Trent, aged 42—21st inst, at Barnes, S. M. MARTINDALE, Esq., Barrister-at-law, of 10, Old Square, Lincoln's Inn—21st inst, at 2, Bedford Street South, Liverpool, Dr. HUGH NEILL, F.R.A.S., aged 58—22d inst, at The Rectory, Great Stanmore, Dr. ADOLPHUS BERNAYS, Ph.D., late Professor of the German Language and Literature at King's College, London, aged 69—28th inst, at 28, North Audley Street, the Rev. THOMAS STANLEY, only brother of Edward Stanley, Esq., of 14, Grosvenor Square,

and Crosse Hall, Lancashire, aged 65—23d inst., at The Rectory, Nutfield, the Rev. E. HUGHES, B.D., fellow of Jesus College, Oxford, aged 77—23d inst, at The Rectory, Bedhampton, the Rev. ST. JOHN ALDER, aged 79—25th inst, at Worcester, the Rev. ROBERT SARJEANT, rector of St. Swithin's and Spetchley, Chairman of the Board of Guardians, and Honorary Secretary to the Triennial Festival Committee, aged 57—21st inst, at Cadoxton, Glamorganshire, the Rev. THOMAS SIMS, M.A., aged 79—23d inst., at Plumtree Rectory, the Rev. JOHN BURNSIDE, rector of Plumtree, Notts, aged 73—23d inst, at Marlborough, the Rev. WILLIAM BATHURST BRADFORD, aged 55—23d inst, at Norman Cross, Huntingdonshire, the Rev. H. FREEMAN, rector of Folkworth, aged 59—15th Nov., at Nagercoil, South Travancore, India, of dysentery, the Rev. J. J. DENNIS, of the London Missionary Society, aged 34.

Markets.

COVENT GARDEN, Dec. 31.

Fruit and Vegetables continue to be supplied in quantities sufficient for the demand. Pears, consisting of Knight's Monarch, Passe Colmar, Beurré D'Aremberg, Winter Nelis, Glou Morceau, Easter Beurré, and others may now be had in excellent condition. Apples may also now be obtained in abundance. Grapes are still sufficient for the demand, and of Pine Apples there is also a fair supply. Kent Cobs fetch from 70s. to 80s. per 100 lbs. Walnuts are plentiful, and Oranges are abundant and cheap. Some Seakale, Asparagus, and forced Kidney Beans may now be had. Lemons fetch from 5s. to 8s. per hundred. New Potatos realise 2s. 6d. per lb. Flowers chiefly consist of Orchids, Heaths, Chrysanthemums, Chinese Primulas, Azaleas, Camellias, Mignonette, and Roses.

FRUIT.

Pine Apples, per lb., 4s to 6s	Oranges, per 100, 4s to 8s
Grapes, per lb., 5s to 8s	Lemons, per 100, 5s to 8s
Melons, each, 1s to 4s	Nuts, Cob, p. 100 lb., 70s to 80s
Pears, per doz., 1s 6d to 3s	— Brazil, p. bush., 14s
Apples, per sieve, 1s to 2s	Almonds, do., 18s to 20s

VEGETABLES.

Cabbages, per doz., 1s to 2s	Beet, per doz., 1s 6d to 2s
French Beans, 2s to 3s per 100	Shallots, per lb., 8d
Asparagus, per 100, 15s	Garlic, per lb., 8d
Potatos, York Regents, p. ton, 60s to 80s	Lettuces, each, 1d to 2d
— Rocks, do., 45s to 60s	Seakale, p. punn., 3s to 3s 6d
— Flukes, 60s to 90s	Endive, per score, 1s to 2s 6d
Carrots, per bunch, 4d to 9d	Horse Radish, p. bunch, 1s to 4s
Turnips, p. bunch, 4d to 6d	Mushrooms, p. pott., 1s to 1s9d
Cucumbers, each, 1s to 2s	Parsley, p. 12 bunches, 3s to 4s
	Herbs, per bunch, 6d

BRITISH WOOLS.—LONDON, Dec. 29.

Long wool continues in good demand, but the great advance in the prices asked by holders checks business. Short wool maintains late rates without much activity.

	s. d.		s. d.
South-down Hoggets	2 0 to 2	1	Combing Skins 1 4 — 1 7
Half-bred ditto	2 5 — 2	6	Flannel Wool 1 3½ to 1 9
Down Ewes	1 10 — 1	11	Blanket ditto 0 6 — 0 9
Kent Fleeces	2 2 — 2	2½	Leicest. Hoggs 2 3 — 2 6
			Ditto Wethers 2 1 — 2 2

COAL MARKET.—Dec. 28.

West Hartley, 20s. 6d.; Eden Main, 23s. 3d.; Walls End Haswell, 24s. 6d.; Walls End Hetton, 24s. 6d.; Walls End South Hetton, 21s. 6d.; Walls End Tunstall, 22s. 6d.; Walls End Kelloe, 23s. 6d.; Walls End East Hartlepool, 2 s. 6d.; Walls End South Hartlepool, 23s. 6d.—Ships at market, 22.

HAY.—Per Load of 36 Trusses.

SMITHFIELD, Thursday, Dec. 29.

Prime Meadow Hay	95s to 105s	Clover, old	110s to 126s
Superior do.	— —	New Clover	— —
Inferior do.	— —	Do. second cut	— —
New do.	— —	Straw	25 30
Rowen	— —		

HARVEY & EASTON.

CUMBERLAND MARKET, Thursday, Dec. 29.

Sup. Meadow Hay	105s to 114s	Inferior Clover	108s to 117s
Inferior do.	92 98	New do.	— —
New do.	— —	Straw	32 36
Superior Clover	126 132		

JOSHUA BAKER.

WHITECHAPEL, THURSDAY, Dec. 29.

Fine Meadow Hay	100s to 105s	Prime 1st cut Clover	120s to 128s
Inferior do.	95 100	Inferior do. do.	110 120
Prime New Hay	— —	Prime 2d cut do.	120 126
Inferior	— —	Inferior do.	— —
Straw	26 29	New Clover	— —

HOPS.—BOROUGH MARKET, FRIDAY, Dec. 30.

Messrs. Pattenden & Smith report more activity in the market this week than has shown itself during the last fortnight, and prices may be quoted the turn dearer.

NEWGATE.—Dec. 30.

Per 8 lbs. by the carcase.

Inferior Beef	3s 0d to 3s 4d	Inferior Mutton	2s 8d to 3s 0d
Middling	3 8 — 4 0	Middling do.	3 4 — 3 8
Prime large	4 4 — 4 8	Prime do.	4 4 — 4 8
Do. small	4 8 — 5 0	Lamb	— —
Large Pork	3 4 — 3 8	Veal	4 4 — 4 8
		Small Pork	4 4 — 4 8

BUTTER.

Best Fresh Butter .. .. 18s. per dozen lbs.
Second do. do. .. .. 14s. "
Pork, 4s. 0d. to 4s. 8d. per 8 lbs.

METROPOLITAN CATTLE MARKET.

MONDAY, Dec. 26.

We have a fair supply of Beasts for the day. Trade is active, and the best qualities are rather dearer than on Thursday last. The number of Sheep is very small. There is not much trade for inferior descriptions. Choice qualities are readily disposed of at full rates. There are very few Calves on offer, and they realise high prices.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 6	to 5 8	Best Long-wools	5 4	— 5 8
Best Short-horns	5 4	— 5 6	Do. Shorn	— —	
2d quality Beasts	3 4	— 4 8	Ewes & 2d quality	4 4	— 5 0
Best Downs and Half-breds	5 8	— 6 0	Do. Shorn	— —	
Do. Shorn	— —		Lambs	— —	
			Calves	— —	
			Pigs	4 4	— 6 0
				3 4	— 5 0

Beasts, 910; Sheep and Lambs, 3000; Calves, 10; Pigs, —

THURSDAY, Dec. 29.

We have a fair supply of Beasts, and trade is slow. Prices consequently are lower. The milder weather makes purchasers very cautious. The number of Sheep is fully equal to the demand. Trade is dull at a slight reduction in price. Good Calves are very scarce and dear. In some instances our top quotation is exceeded. Our foreign supply consists of 324 Beasts, 1910 Sheep, and 19 Calves.

	s d	s d		s d	s d
Best Scots, Herefords, &c.	5 2	to 5 4	Best Long-wools	5 4	— 5 6
Best Short-horns	5 0	— 5 2	Do. Shorn	— —	
2d quality Beasts	3 0	— 4 6	Ewes & 2d quality	4 4	— 4 10
Best Downs and Half-breds	5 8	— 5 10	Do. Shorn	— —	
Do. Shorn	— —		Lambs	— —	
			Calves	4 4	— 6 0
			Pigs	3 4	— 5 0

Beasts, 860; Sheep and Lambs, 4840; Calves, 45; Pigs, 80; Milch Cows, 50.

POTATOS.—SOUTHWARK, Monday, Dec. 26.

During the past week the arrivals coastwise have been small, but still large by rail. The trade still continues dull at about the former rates. The following are this day's quotations: — Yorkshire Flukes, per ton, 90s. to 110s.; do. Regents, 80s. to 95s.; Dunbar Regents, 85s. to 95s.; Kent and Essex Regents, 80s. to 95s.; do. do. Rocks, 70s. to 75s.; Perth, Forfar, and Fife Regents, 70s. to 80s.; do. do. Rocks, 65s. to 70s.; Belgian Whites, 55s. to 65s.

MARK LANE.—MONDAY, Dec. 26.

The Corn Exchange being closed, no business could be entered into. In the country markets held on Saturday prices of Wheat in good condition were well supported, and as the imports from American ports have almost ceased, and little being on the way, millers in the interior will have to use more English Wheat. The severe weather in the north of Europe will prevent shipments being made, and our growers will now have more prospect of selling their produce, so that the year is likely to open more cheeringly for them, and the lowest time may now be considred as past. Feeding stuffs will be in great demand throughout the remaining winter months, and grinding Barleys will be wanted, and this article may take more favour than of late.

PRICE PER IMPERIAL QUARTER.	s. s.		s. s.
WHEAT, Essex, Kent, & Suffolk.. White	39—42	Red	36—41
— — fine selected runs..ditto	41—44	Red	39—42
— — Talavera	46—53		
— Norfolk	—	Red	—
— Foreign	35—50		
BARLEY, grind. & dist., 24s to 28s..Chev.	30—33	Malting ..	29—33
— Foreign..grinding and distilling	20—25	Malting ..	25—27
OATS, Essex and Suffolk	20—22		
— Scotch and Lincolnshire—Potato	20—24	Feed	20—22
— Irish .....Potato	19—22	Feed	—
— Foreign .....Poland and Brew	20—23	Feed	18—21
RYE	31—33	Foreign ..	—
RYE-MEAL, Foreign	—		
BEANS, Mazagan....32s to 35s...Tick	34—36	Harrow ..	34—36
— Pigeon .... 35s to 40s..Winds.	—	Longpod	—
— Foreign .....Small	32—38	Egyptian	33—34
PEAS, White, Essex and Kent..Boilers	35—37	Suffolk ..	37—39
— Maple .... —s to —s .... Grey	—	Foreign ..	32—36
MAIZE .....White	—	Yellow ..	—
FLOUR, best marks delivered..per sack	35—40		
— 2d do ..... ditto	28—34	Country..	28—34
— Foreign ..... per barrel	18—25	Per sack	32—36

FRIDAY, Dec. 30.

The weather since the 23d was fine and frosty up to yesterday, but more or less foggy; since yesterday it has been milder. The Wheat trade during the above interval has been firm, and in several markets a slight advance in price has been established. Spring Corn of all kinds has maintained its previous value, with the exception of Oats in London, which, owing to large arrivals by steamer have, in some instances receded 6d. per qr. Flour has not undergone any change in price or demand. Since last Friday 27 grain and seed laden vessels have been reported as arrived at ports of call. The demand for floating cargoes of Wheat and Maize has been more active since Saturday, and we quote both 6d. per qr. dearer. Barley is likewise improving, and there is rather more disposition evinced to entertain forward business generally. Paris, Dec. 29.—The country markets are inactive, and Wheat buyers here show great reluctance to purchase. Flour is firm, and there is not much offering. The six marks for present delivery are quoted equal to 31s. 3d. per 280 lb. The present stock of Flour is estimated at 34,507 cwt. The arrivals of all grain, both English and foreign, this week have been very small. The attendance at to-day's market was limited. The little English Wheat fresh up met a quick sale at Wednesday's prices. Business in foreign was unimportant, and quite of a retail character, but on the sales effected late rates were fully supported. The value of spring corn was unaltered, with the exception of Oats, which were in some instances rather cheaper.

ARRIVALS THIS WEEK.

	Wheat.	Barley.	Oats.	Flour.
English	790 qrs.	1310 qrs.	2120 qrs.	1460 sks.
Irish	—	—	—	— "
Foreign	5850 "	—	9500 "	— "
				— brls

LIVERPOOL, FRIDAY, Dec. 30.—The market moderately attended. Wheat was held firmly at 2d. per cental advance, and little doing. Flour in better demand at late rates. Indian Corn steady; Galatz 27s. 6d, mixed 28s. Beans, Oats, and Oatmeal unchanged.

AVERAGES	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
Nov. 19	38s 9d	29s 9d	19s 5d	29s 9d	37s 9d	34s 11d
— 26	38 8	29 3	20 0	30 0	37 10	35 1
Dec. 3	38 5	29 2	20 3	26 8	37 10	35 5
— 10	38 4	28 8	19 10	26 7	37 2	34 11
— 17	38 1	28 4	19 9	29 1	37 2	35 3
— 24	37 10	28 0	19 1	30 4	36 3	35 6
Agg. Aver.	38 4	28 10	19 9	30 5	37 4	35 2

FLUCTUATIONS IN THE LAST SIX WEEKS' AVERAGES.

PRICES.	Nov. 19.	Nov. 26.	Dec. 3.	Dec. 10.	Dec. 17.	Dec. 24.
38s 9d—						
38 8	..	..	..	..	..	..
38 5	..	..	..	..	..	..
38 4	..	..	..	..	..	..
38 1	..	..	..	..	..	..
37 10	..	..	..	..	..	..

WANTED IMMEDIATELY, a YOUNG MAN who is practically acquainted with the Seed Business.—Address, stating salary and experience, BARR & SUGDEN, 12, King Street, Covent Garden, W.C.

WANTED, One or Two active YOUNG MEN, to work in a Market Forcing Garden in the neighbourhood of London.—Apply to C. W. ALDERSON, Langley Lane, South Lambeth.

WANTED, an efficient SECOND SHOPMAN.—Must be of good address, and capable of executing Wholesale Orders correctly and expeditiously.—Apply, with full references, stating age and salary expected, to S. WARD & SON, Seed Merchants, Bristol.

WANTED, an UNDER SHOPMAN in a Wholesale Seed Warehouse.—Apply by letter, stating where last employed, how long in the business, and salary expected, to H. A., *Gardeners' Chronicle* Office, W.C.

WANT PLACES.—Letters to be Post Paid.

HOUSEKEEPER, or as COMPANION to a Lady.—A Lady, aged 35, who can be highly recommended, and who has had much experience. She would be willing to educate one or two little Girls, or to accept any position of trust.—A. A., 30, Avenue Road, New Road, Hammersmith, W.

GARDENERS, FORESTERS and BAILIFFS, or LAND STEWARDS.—The undersigned can always recommend the above, whose characters and abilities may be strictly relied on. Full particulars upon application.—JAMES DICKSON & SONS, The "Newton" Nurseries, Chester.

EXPERIENCED GARDENERS (or as GARDENER and BAILIFF), of various qualifications, recommended to gentlemen.—Further particulars given on application to Messrs. HENDERSON & SON, Wellington Nursery, St. John's Wood, London, N.W.

GARDENER (HEAD).—Age 30, married; active and persevering. Has had extensive practical experience. Good reference, &c.—Rev. J. R. VERNON, Leytonstone, Essex.

GARDENER (HEAD).—Age 26, single; thoroughly understands Forcing Grapes, Peaches, Strawberries, Cucumbers and Melons, Mushrooms, &c., also the Management of Kitchen and Flower Gardens. Wages £1 1s.—S. BRADLEY, Elton, Nottingham.

GARDENER (HEAD).—Age 45, married; has a thorough practical knowledge of his profession in all its branches. Five years' character from the gentleman he is leaving.—E. Loyd, Esq., Lillisden, Hawkhurst.—W. B., Post Office, Hawkhurst.

GARDENER (HEAD), age 30.—A Gentleman is anxious to recommend his Gardener. He has proved himself thoroughly honest, sober, and industrious, and fully to understand his duties in the Flower and Kitchen Gardens, as well as the Management of Houses and Conservatory; he has also great taste in Floral Decorations.—H. A., Lyndhurst, Hants.

GARDENER (HEAD, WORKING).—Age 30, married; practical, persevering, honest, and sober.—G. P., 105, Gray's Inn Road, W.C.

GARDENER (HEAD), or GARDENER and BAILIFF.—Middle-aged, married, one child; thoroughly understands the Management of Pines, Vines, Peaches, Melons, Stove and Greenhouse Plants, Flower and Kitchen Gardens, the erection of Greenhouses, &c. Character will bear the strictest investigation.—MR. COOLING, Mile Ash Nurseries, Derby.

GARDENER.—Age 40, married; of active habits, and much experience in Gardening, Ground work, Transplanting large Shrubs, Building and Heating Hothouses included; his attention has been specially directed to keeping in good order and improving extensive Gardens and Pleasure Grounds, the supplying a large establishment with a regular succession of Forced and Hardy Fruits, Vegetables, &c., the Growing of Choice Flowers and Plants for Rooms, and keeping the Conservatory gay throughout the year. Eight years in his present place, and seven in a former one as Head Gardener. The testimony of the Gentleman in whose house the Advertiser now is will, he doubts not, satisfy any Nobleman or Gentleman of his unexceptionable character and superior qualifications.—J. BELL, The Gardens, Bretton Park, Wakefield.

GARDENER, or GARDENER and BAILIFF.—The Advertiser, who is well known to be practically acquainted with most modern improvements in Horticulture and Agriculture, will be disengaged in a few days, and begs to offer himself to any Nobleman or Gentleman requiring the service of an active business man in the prime of life. Can undertake the Laying-out new Grounds and all Estate improvements; he has been a successful Exhibitor of Fruit at the Metropolitan Shows, and is a good judge of Stock, &c. The Advertiser is married, but without incumbrance, and his Wife is a good manager of Poultry, which she will take charge of should it be desired. No objection to any part of England or Wales. Ten years' character from the Nobleman the Advertiser is now leaving.—W. C., Charles Turner, Esq., Royal Nursery, Slough, Bucks.

To Nurserymen and Florists.

FOREMAN and PROPAGATOR (UNDER).—Young, active; has had experience in the first London Establishments.—J. C., 18, Douro Cottages, St. John's Wood, London, N.W.

LAND STEWARD or BAILIFF.—Scotch; has the Management of an Estate in Wales; is accustomed and bred to Rearing and Breeding, Sale and Purchase of Stock, &c., and is practically acquainted with all the details of modern farming. First-class references given.—BAILIFF, Brynbras Castle, Carnarvon.

BAILIFF or LAND STEWARD.—A really practical Man, of middle age, is open for an engagement as Bailiff or Land Steward. Can produce first-class testimonials. Full particulars upon application to Messrs. JAMES DICKSON & SONS, 102, Eastgate Street, Chester.

STEWARD (UNDER), in a first-class place.—Age 20; wishes to improve. No objection to a Premium.—P. C., Head Gardener, Tarnham, Cavan, Ireland.

FARM BAILIFF.—Fully competent; Wife a first-class Dairy and Poultry Woman.—A. Z. P., Messrs. Dawson & Son, 74, Cannon Street, City, E.C.

FARM BAILIFF.—The Son of a Scotch Farmer. Has been practically brought up to Farming, in all its branches, from a youth, and has had the sole management of a Farm for the last 5 years. Can be well recommended.—A. B., care of Messrs. HARVEY & Co., 3, Tavistock Street, Covent Garden, London, W.C.

FARM BAILIFF (WORKING).—Middle-aged; of great experience in Agricultural pursuits; also the Management of Stock, &c. Can be highly recommended for fidelity and general knowledge of his business. Wife can manage Dairy if required.—R. L., Harvey & Co., Farm Agents, 3, Tavistock Street, Covent Garden, London, W.C.

BAILIFF, or to Assist a Gentleman.—A very respectable steady, active young Man.; has been bred to Farming. Salary not so much an object as a place where he can have an opportunity of learning everything essential for a practical farmer to know. Can obtain the highest reference from a gentleman with whom he has lived.—W. F., *Gardeners' Chronicle* Office, W.C.

SALESMAN, CORRESPONDING CLERK, and SHOPMAN.—A Young Man with a good general knowledge of the Nursery Business is open for an engagement. Thirteen years' reference.—BETA, 24, Torwood Street, Torquay.

SHOPMAN or SALESMAN, and to attend Markets.—Age 22, single; four years' good character from previous and present employers.—E. P., 3, Avernell Terrace, Libra Road, Old Ford, Bow, E.

SHOPMAN in a Nursery and Seed Business, or as ASSISTANT.—A London Wholesale House preferred. Six years in the Trade.—G. B., Grove House, Iver, Uxbridge.

IMPROVER.—Age 21; where he could improve himself for two years under a Nobleman's or Gentleman's Gardener. Country preferred.—H. S., Fortis Green, Finchley, London, N.

SHOPMAN (UNDER) in the SEED TRADE.—E. A., *Gardeners' Chronicle* Office, W.C.